Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

IDC ***01*** *00:01:14.5±0.3, 19.01N×120.29E, h0km, mb4.8/37, mb1 4.9/40, mb1mx4.8/53, mbtmp4.8/40, ML4.0/4, MS4.3/19, Ms1 4.3/19, ms1mx4.2/35, Error ellipse: s-maj=13.9km s-min=8.3km az=79.0*

MOS ***01*** *00:01:15.5±0.9, 19.04N×120.23E, h15km, mb5.3/63, MS4.6/6, Error ellipse: s-maj=7.2km s-min=4.3km az=107.6*

NEIC ***01*** *00:01:16.6±1.7, 19.09N±0.06×120.24E±0.07, h10km±2km, mb5.1/143, Error ellipse: s-maj=10.2km s-min=8.3km az=88.0*

GCMT ***01*** *00:01:17.6±0.2, 19.07N±0.01×120.12E±0.02, h12km, MW5.0/127, Moment Tensor Solution. s60,c72; s127,c206; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-4.36±.09; Mθθ3.20±.07; Mφφ1.17±.09; Mrθ-0.79±.30; Mθφ2.06±.07; Mφr1.65±.35; Best double couple: Mo4.76200×10^16 NP1:φs77.00000°, δ47.00000°, λ-62.00000°. NP2:φs219.00000°, δ50.00000°, λ-117.00000°. Principal axes: T 4.4860, Plg1.0000°, Azm328.0000°; N 0.5610, Plg20.0000°, Azm237.0000°; P -5.0370, Plg70.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***01*** *00:01:19.1±0.0, 19.41N×119.96E, h10km, mB5.4/48, mb4.9/69, ML4.8/1, Ms5.0/63, Ms7 4.8/59*

KLM ***01*** *00:01:23.0, 18.98N×120.40E, h70km, mb5.1*

BGR ***01*** *00:01:29.7±0.0, 22.73N×120.94E, h10km, mb4.8*

ISC 01 00:01:20.6±0.6, **19.10N**±0.03×**120.22E**±0.04, **h34**km±2km, **n552**, σ1.34/541, **mb5.0**/180, **MS4.6**/30, **28C-37D**,
Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	1.19	169	⇑iP	Pn	00 01 38.2	-2.5
SIPP				eS	Sb	00 02 15.9	+18
CVP	Callao Caves	2.06	132	⇑iP	Pn	00 01 52.3	-0.4
CVP				i S	Sb	00 02 38.0	+15
BBP	Basco	2.12	51	eP	Pn	00 01 52.5	-1.1
BBP				eS	Sn	00 02 16.5	-2.3
BOLP	Bolinao	2.71	186	eP	Pn	00 02 01.3	-0.5
BOLP				eS	Sn	00 02 31.2	-2.3
SCZP	Santa Cruz	3.31	185	eP	Pn	00 02 12.2	+2.2
SCZP				eS	Sb	00 03 19.0	+20
PCPH	Palayan	3.61	166	⇑iP	Pb	00 02 21.4	-2.4
PCPH				i S	Sn	00 02 57.7	+2.1
TWG	Pinlang	3.79	12		Pn	00 02 14.5	-2.1
TPUB	Ta-pu	4.20	5		Pn	00 02 19.1	-3.2
SSLB	Suanglung	4.72	8		Pn	00 02 26.8	-2.6
TGY	Tagaytay City	5.01	172	Pn	Pn	00 02 31.2	-2.2
	24nm,0.3s,baz=246,slow=2.9,SNR=3.8						
TGY				LR	LR	00 05 05.5	
	comp=Z,6µm,18.3s,baz=67,slow=47						
TGY	Tagaytay City	5.01	172	eP	Pb	00 02 55.5	+7.9
TGY				i S	Pg	00 03 00.1	
LQP	Lukban	5.12	165	⇑eP	Pn	00 02 34.6	-0.4
LQP				i S	Pg	00 02 56.5	
NACB	Ninganchiao	5.21	14		Pn	00 02 33.6	-2.6
GQP	Guinayangan	5.59	157	⇓eP	Pn	00 02 40.7	-0.6
KNMB	Chin-men Tao	5.61	343		Pn	00 02 38.4	-3.1
YHNB	Yeheng	5.65	11		Pn	00 02 40.5	-1.7
YOJ	Yonaguni jima	5.94	25	P	Pn	00 02 44.4	-1.7
YOJ	Yonaguni jima	5.94	25		Pn	00 02 44.4	-1.7
QZH	Quanzhou	6.01	346	Pn	Pn	00 02 44.2	-2.9
QZH				Sn	Sn	00 03 48.4	-6.4
QZH				LR	LR		
	comp=N,6µm,12.1s						
QZH				LR	LR		
	comp=E,4µm,11.1s						
QZH				LR	LR		
	comp=Z,6µm,13.3s						
HKPS	Hong Kong Po S	6.51	300		Pn	00 02 50.4	-3.6
QIZ	Qiongzhong	9.81	271	P	Pn	00 03 36.3	-3.0
QIZ				S	Sn	00 05 25.9	-2.4
QIZ				pmax	pmax		
	comp=Z,28nm,0.8s						
QIZ				LR	LR		
	comp=N,3µm,15.5s						
QIZ				LR	LR		
	comp=E,3µm,13.9s						
QIZ				LR	LR		
	comp=Z,3µm,13.5s						
QIZ	Qiongzhong	9.81	271		Pn	00 03 36.6	-2.8
JOW	Kunigami	10.69	42	Pn	Pn	00 03 49.6	-1.7
	0.6nm,0.3s,baz=193,slow=16,SNR=11						
JOW	Kunigami	10.69	42	Pn	Pn	00 03 48.9	-2.4
WHN	Wuhan	12.58	336	P	Pn	00 04 13.3	-3.8
WHN				S	Sn	00 06 28.2	-7.8
WHN				LR	LR		
	comp=N,7µm,12.5s						
WHN				LR	LR		
	comp=E,5µm,12.4s						
WHN				LR	LR		
	comp=Z,10µm,14.1s						
KCP	Kidapawan	12.91	158	⇑iP	Pn	00 04 26.2	+4.4
KCP				i S	S	00 04 49.1	
NJ2	Nanjing	12.96	355	eP	Pn	00 04 20.5	-1.8
NJ2				S	Sn	00 06 45.9	+0.6
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,200nm,3.8s						
NJ2				LR	LR		
	comp=N,4µm,10.0s						
NJ2				LR	LR		
	comp=E,4µm,11.2s						
NJ2				LR	LR		
	comp=Z,4µm,10.6s						
DAV	Davao City (W)	13.04	156	LR	LR	00 10 35.4	
	comp=Z,5µm,18.3s,baz=324,slow=43						
DAV	Davao City (W)	13.04	156	Pn	Pn	00 04 20.6	-3.0
KKM	Kota Kinabalu	13.55	197	Pn	Pn	00 04 28.9	-1.6
GYA	Guiyang	14.48	303	⇑iP	Pn	00 04 39.5	-3.8
GYA				PP	P	00 04 50.9	+1.4
GYA				S	Sn	00 07 21.6	-1.2
GYA				SS	S	00 07 37.0	-4.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,300nm,6.9s						
GYA				LR	LR		
	comp=N,1µm,12.0s						
GYA				LR	LR		
	comp=E,4µm,10.1s						
GYA				LR	LR		
	comp=Z,4µm,10.3s						
UBPT	Khong Chiam	14.59	257	Pn	Pn	00 04 42.2	-2.4
SPMM	Sapulut	14.76	195	P	Pn	00 04 48.0	+1.0
ENH	Enshi	14.79	321		Pn	00 04 45.8	-1.5
SLVN	Son La	15.47	281		Pn	00 04 54.6	-1.8
JNU	Nakatsue	16.92	32	Pn	Pn	00 05 14.4	-0.3
	0.8nm,0.3s,baz=225,slow=4.3,SNR=7.0						
JNU				LR	LR	00 11 59.5	
	comp=Z,385nm,20.2s,baz=223,slow=38						
JNU	Nakatsue	16.92	32	Pn	Pn	00 05 11.8	-2.9
JNU				IAmb	IAmb	00 05 27.8	
	comp=Z,165nm,1.0s						
KMI	Kunming	17.26	293	P	Pn	00 05 19.0	-0.3
KMI				pP	P	00 05 21.4	+0.9
KMI				sP	pP	00 05 23.6	-4.9
KMI				PP	pwP	00 05 35.0	+1.7
KMI				S	Sn	00 08 31.0	+0.5
KMI				sS	S	00 08 36.2	-2.5
KMI				pmax	pmax		
	comp=Z,23nm,1.4s						
KMI				pmax	pmax		
	comp=Z,730nm,4.5s						
KMI				LR	LR		
	comp=Z,3µm,13.5s						
KMI				LR	LR		
	comp=Z,3µm,13.3s						
KMI				LR	LR		
	comp=Z,3µm,13.6s						
KMI	Kunming	17.26	293	P	Pn	00 05 19.6	+0.3
KMI				pmax	pmax		
	comp=Z,31nm,1.0s						
KMI	Kunming	17.26	293	P	Pn	00 05 19.6	+0.3
TIA	Tai'an	17.27	352	P	P	00 05 20.5	+0.2
TIA				pmax	pmax		
	comp=Z,43nm,1.3s						
XAN	Xi'an	17.97	328	P	Pn	00 05 28.3	+0.5
XAN				PP	pwP	00 05 44.1	+3.2
XAN				S	Sn	00 08 34.8	-12
XAN				SS	SnSn	00 08 59.2	-2.0
XAN				pmax	pmax		
	comp=Z,43nm,1.6s						
XAN				pmax	pmax		
	comp=Z,1µm,10.3s						
XAN				LR	LR		
	comp=Z,3µm,12.8s						
XAN				LR	LR		
	comp=Z,2µm,10.8s						
XAN				LR	LR		
	comp=Z,4µm,11.2s						
XAN	Xi'an	17.97	328	P	Pn	00 05 26.6	-1.2
XAN				pmax	pmax		
	comp=Z,47nm,1.1s						
XAN	Xi'an	17.97	328	P	Pn	00 05 26.6	-1.2
SBUM	Sibu	18.30	206		P	00 05 30.8	-1.0
SBUM	Sibu	18.30	206	P	Pn	00 05 33.0	+1.1
TJN	Taejon	18.33	19	⇓eP	Pn	00 05 33.5	+1.4
PBKT	Sadao Pong	18.50	265	P	P	00 05 33.3	-0.6
MRSI	Marisa	18.58	175	P	P	00 05 35.1	+0.3
	comp=Z,1µmcomp=Z,62nm,1.6s						
MPSI	Mapaga	18.64	181	P	P	00 05 36.0	+0.5
	comp=Z,32nm,0.9s						
CD2	Chengdu	18.97	311	P	P	00 05 39.3	+0.2
CD2				pmax	pmax		
	comp=Z,80nm,1.2s						
CD2				LR	LR		
	comp=Z,4µm,14.9s						
CD2				LR	LR		
	comp=Z,5µm,14.2s						
CD2				LR	LR		
	comp=Z,6µm,12.1s						
INCN	Inchon	19.16	16	P	P	00 05 40.9	-0.2
INCN				pmax	pmax		
	comp=Z,80nm,1.1s						
INCN	Inchon	19.16	16	P	P	00 05 40.9	-0.2
INCN				IAmb	IAmb	00 05 51.4	
	comp=Z,80nm,1.1s						
KSAR	Wonju Array Be	19.47	19	P	P	00 05 44.6	+0.2
KSAR	Wonju Array Be	19.47	19	P	P	00 05 44.6	+0.2
KSRS	Korea Array	19.49	19	P	P	00 05 44.0	-0.6
	comp=Z,0.7nm,0.3s,baz=201,slow=12,SNR=30						
KSRS				LR	LR	00 13 19.0	
	comp=Z,705nm,19.8s,baz=206,slow=37						
KS19	Wonju Array Si	19.52	18	P	P	00 05 45.2	+0.1
KS19				IAmb	IAmb	00 05 54.8	
	comp=Z,55nm,0.9s						
SMKI	Samarinda	19.64	189	P	Pn	00 05 49.4	+1.3
DL2	Dalian	19.78	3	P	P	00 05 48.9	+1.1
DL2				pmax	pmax		
	comp=Z,70nm,1.0s						
DL2				pmax	pmax		
	comp=Z,1µm,9.7s						
DL2				LR	LR		
	comp=Z,2µm,13.5s						
DL2				LR	LR		
	comp=Z,1µm,16.3s						
DL2				LR	LR		
	comp=Z,1µm,11.8s						
APSI	Ampana	19.93	176	P	P	00 05 47.5	-2.1
	comp=Z,686nmcomp=Z,65nm,1.1s						
KSM	Kuching	20.02	210	P	P	00 05 50.5	-0.2
KSM				IAmb	IAmb	00 05 53.4	
	comp=Z,73nm,1.1s						
KSM	Kuching	20.02	210	P	P	00 05 51.0	+0.3
CHTO	Chiang Mai	20.12	273	P	P	00 05 51.7	-0.1
CHTO				pmax	pmax		
	comp=Z,55nm,1.2s						
CHTO	Chiang Mai	20.12	273	P	P	00 05 51.7	-0.1
CM31	Chiang Mai Arr	20.16	272	P	P	00 05 51.9	-0.2
CMAR	Chiang Mai Arr	20.16	272	P	P	00 05 52.2	+0.1
CMAR						00 10 06.8	
CMAR	Chiang Mai Arr	20.16	272	P	P	00 05 52.6	+0.5
	comp=Z,19nm,1.0s,baz=82,slow=8.5,SNR=85						
CMAR				PcP	PcP	00 10 06.7	+0.4
	comp=Z,3.9nm,0.8s,baz=64,slow=0.6,SNR=20						
CMAR				LR	LR	00 13 32.6	
	comp=Z,471nm,18.2s,baz=86,slow=36						
CMAR	Chiang Mai Arr	20.16	272	P	P	00 05 52.2	+0.1
CMAR					PcP	00 10 06.8	+0.6
LUWI	Luwuk	20.17	173	P	P	00 05 50.4	-1.8
	comp=Z,2µmcomp=Z,118nm,1.0s						
LUWI	Luwuk	20.17	173	IAmb	IAmb	00 05 57.1	
	comp=Z,91nm,0.9s						
BKB	Balikpapan	20.49	190	P	P	00 05 53.9	-1.9
BJT	Baijiatuau	21.14	351	P	P	00 06 03.5	+0.9
BJT				pmax	pmax		
	comp=Z,101nm,1.0s						
BJT	Baijiatuau	21.14	351	P	P	00 06 03.5	+0.9
BJT				IAmb	IAmb	00 06 13.4	
	comp=Z,101nm,1.0s						
JCJ	Chichijima	21.70	64	LR	LR	00 13 06.8	
	comp=Z,192nm,21.5s,baz=201,slow=33						
SANI	Sanana	21.77	164	P	P	00 06 04.8	-4.6
	comp=Z,637nmcomp=Z,87nm,0.7s						
INU	Inuyama	21.98	39	P	P	00 06 11.7	+0.1
INU				IAmb	IAmb	00 06 24.5	
	comp=Z,96nm,1.0s						
TTSI	Tana Toraja	22.00	181	P	P	00 06 12.2	+0.2
	comp=Z,1µmcomp=Z,84nm,1.2s						
LZH	Lanzhou	22.24	323	⇓P	P	00 06 15.4	+0.8
LZH				sP	pP	00 06 21.0	-1.8
LZH				sS	S	00 10 21.4	+3.8
LZH				pmax	pmax		
	comp=Z,95nm,1.3s						
LZH				pmax	pmax		
	comp=Z,1µm,4.6s						
LZH				LR	LR		
	comp=Z,3µm,10.3s						
LZH				LR	LR		
	comp=Z,3µm,10.5s						
LZH				LR	LR		
	comp=Z,3µm,13.2s						
SWI	Sorong	22.61	150	P	P	00 06 19.4	+0.9
	comp=Z,2µmcomp=Z,38nm,1.0s						
KBKI	Kotabaru	22.61	191	P	P	00 06 28.9	+10
SNY	Shenyang	22.84	6	⇓P	P	00 06 28.0	+7.3
SNY				S	Sn	00 10 39.0	-5.1
SNY				pmax	pmax		
	comp=Z,37nm,0.8s						
SNY				LR	LR		
	comp=N,770nm,10.3s						
SNY				LR	LR		
	comp=E,2µm,12.5s						
SNY				LR	LR		
	comp=Z,1µm,10.7s						
HHC	Hu-ho-hao-te	22.92	343	eP	P	00 06 21.2	-0.5
HHC				PP	PnPn	00 06 51.1	+4.2
HHC				S	S	00 10 26.8	-2.6
HHC				pmax	pmax		
	comp=Z,330nm,5.6s						
HHC				LR	LR		
	comp=Z,2µm,12.1s						
HHC				LR	LR		
	comp=Z,790nm,13.5s						
HHC				LR	LR		
	comp=Z,2µm,12.5s						
SPSI	Sidrap Palu	22.92	181	P	P	00 06 21.6	-0.1
	comp=Z,2µmcomp=Z,202nm,1.1s						
JRMM	Jerantut	23.00	231	P	P	00 06 23.0	+0.4
BTO	Baotou	23.16	340	eP	P	00 06 24.8	+0.7
NLAI	Namlea	23.20	162	P	P	00 06 26.6	+2.0
	comp=Z,1µmcomp=Z,100nm,1.1s						
BNSI	Bone	23.35	180	P	P	00 06 26.8	+0.8
	comp=Z,1µmcomp=Z,59nm,1.2s						
MAJO	Matsushiro	23.49	39	⇑eP	P	00 06 27.2	-0.2
MAJO				pmax	pmax		
	comp=Z,49nm,1.1s						
MAJO	Matsushiro	23.49	39	P	P	00 06 27.4	0.0
MAJO				IAmb	IAmb	00 06 38.9	
	comp=Z,51nm,1.1s						
MAT	Matsushiro	23.49	39	P	P	00 06 25.6	-1.8
MAT				eS	S	00 10 36.8	-2.0
MJAR	Matsushiro Arr	23.49	39	P	P	00 06 27.1	-0.3
MJAR				pmax	pmax		
	comp=Z,20nm,1.1s						
MJAR	Matsushiro Arr	23.49	39	P	P	00 06 25.9	-1.5
	comp=Z,6.2nm,1.0s,baz=230,slow=7.5,SNR=7.9						
MJAR	Matsushiro Arr	23.49	39	P	P	00 06 27.1	-0.3
MJB9	Matsu-Tunnel	23.49	39	IAmb	IAmb	00 06 38.8	
	comp=Z,50nm,1.1s						
KULM	Kulim	23.50	237	P	P	00 06 27.3	-0.3
KULM	Kulim	23.50	237	P	P	00 06 26.0	-1.6
MYKOM	Kota Tinggi	23.51	225	IAmb	IAmb	00 06 30.0	
	comp=Z,43nm,1.1s						
MYKOM	Kota Tinggi	23.51	225	P	P	00 06 27.0	-0.7
IPM	Ipoh	23.70	235	P	P	00 06 29.0	-0.6
MSAI	Masohi	23.89	158	P	P	00 06 32.6	+1.3
	comp=Z,346nmcomp=Z,18nm,1.2s						
AAI	Ambon	23.96	160	P	P	00 06 32.2	+0.3
	comp=Z,78nm,1.1s						
KAPI	Kappang	23.96	181	P	P	00 06 31.1	-0.8
KAPI				pmax	pmax		
	comp=Z,108nm,1.1s						
KAPI	Kappang	23.96	181	P	P	00 06 31.1	-0.8
BKSI	Bulukumba	24.26	180	P	P	00 06 33.9	-0.8
	comp=Z,59nm,0.9s						
GUMO	Guam	24.27	99	LR	LR	00 16 16.2	
	comp=Z,674nm,18.6s,baz=269,slow=37						
CN2	Changchun	25.02	9	eP	P	00 06 41.5	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PSI	Prapat	26.38	235	P	P	00 06 53.7	-0.4
PSI				pmax	pmax		
	comp=Z,16nm,0.9s						
RPSI	Rantau Prapat	26.45	235	P	P	00 06 53.7	-0.9
BKNI	Bangkinang	26.49	227	P	P	00 06 56.6	+1.6
	comp=Z,53nm,0.8s						
BKNI	Bangkinang	26.49	227	P	P	00 06 54.5	-0.5
BKNI				IAmb	IAmb	00 06 57.0	
	comp=Z,45nm,0.9s						
MDJ	Mudanjiang	26.62	15	P	P	00 06 55.9	0.0
GTA	Gaotai	26.84	323	⇓P	P	00 06 58.0	-0.1
GTA				pP	pP	00 07 02.6	-4.3
GTA				sP	sP	00 07 05.1	-5.6
GTA				PcP	PcP	00 10 21.0	+0.9
GTA				pmax	pmax		
	comp=Z,16nm,2.0s						
GTA				pmax	pmax		
	comp=Z,400nm,6.0s						
GTA				LR	LR		
	comp=Z,790nm,17.8s						
GTA				LR	LR		
	comp=Z,1µm,15.5s						
GTA				LR	LR		
	comp=Z,2µm,15.2s						
KCSI	Kotacane, Aceh	26.85	238	P	P	00 07 07.4	+9.2
USA0B	Ussuriysk Arra	26.90	19	P	P	00 06 58.2	-0.1
USA0B				pmax	pmax		
	comp=Z,34nm,1.0s						
USA0B	Ussuriysk Arra	26.90	19	P	P	00 06 58.2	-0.1
USA0B				IAmb	IAmb	00 07 11.1	
	comp=Z,34nm,0.9s						
USRK	Ussuriysk Ar.	26.90	19	P	P	00 06 58.2	-0.1
USRK	Ussuriysk Ar.	26.90	19	P	P	00 06 57.9	-0.4
	comp=Z,14nm,0.7s,baz=207,slow=7.2,SNR=45						
USRK				PcP	PcP	00 10 19.2	-0.8
	comp=Z,2.0nm,0.7s,baz=244,slow=4.6,SNR=4.8						
USRK				LR	LR	00 18 39.5	
	comp=Z,468nm,19.8s,baz=200,slow=39						
USRK	Ussuriysk Ar.	26.90	19	P	P	00 06 58.2	-0.1
SHL	Shillong	26.96	289	P	P	00 06 58.8	-0.5
SHL				pmax	pmax		
	comp=Z,40nm,0.9s						
SHL	Shillong	26.96	289	P	P	00 06 58.8	-0.5
SHL				IAmb	IAmb	00 07 01.6	
	comp=Z,40nm,0.9s						
MMRI	Maumere	27.63	176	P	P	00 07 06.8	+1.7
	comp=Z,1µmcomp=Z,82nm,1.1s						
PLAI	Plampang	27.85	185	P	P	00 07 08.7	+1.6
	comp=Z,47nm,1.1s						
MDSI	Maura Dua	28.26	216	P	P	00 07 14.0	+3.2
WOJI	Wonogiri, Jawa	28.29	200	P	P	00 07 13.2	+2.2
	comp=Z,53nm,1.0s						
GSI	Gunungsitoli	28.37	234	P	P	00 07 11.7	-0.1
	comp=Z,30nm,1.2s						
GSI	Gunungsitoli	28.37	234	P	P	00 07 10.1	-1.8
LSA	Lhasa	28.43	297	P	P	00 07 14.2	+1.5
LSA				pmax	pmax		
	comp=Z,100nm,0.9s						
LSA	Lhasa	28.43	297	P	P	00 07 12.6	-0.2
LSA				pmax	pmax		
	comp=Z,33nm,1.1s						
LSA	Lhasa	28.43	297	i P	P	00 07 13.2	+0.4
	SNR=7.0						
LSA	Lhasa	28.43	297	P	P	00 07 12.6	-0.2
LSA				IAmb	IAmb	00 07 15.2	
	comp=Z,33nm,1.1s						
SOEI	Soe	28.95	172	P	P	00 07 16.6	-0.4
SOEI				IAmb	IAmb	00 07 27.0	
	comp=Z,50nm,1.0s						
SISI	Saibi	29.03	228	P	P	00 07 18.9	+1.3
	comp=Z,21nm,1.6s						
SAUI	Saumlaki	29.04	157	P	P	00 07 16.2	-1.5
	comp=Z,4µmcomp=Z,94nm,0.9s						
SAUI	Saumlaki	29.04	157	P	P	00 07 16.0	-1.7
BATI	Baumata	29.31	173	P	P	00 07 16.6	-3.6
	comp=Z,75nm,0.8s,baz=332,slow=11,SNR=13						
BATI				LR	LR	00 20 12.7	
	comp=Z,620nm,20.8s,baz=24,slow=39						
JAY	Jayapura	29.45	135	LR	LR	00 20 57.4	
	comp=Z,357nm,18.2s,baz=334,slow=40						
HIA	Hailar	30.10	359	⇑eP	P	00 07 25.4	-1.5
HIA	Hailar	30.10	359	P	P	00 07 24.7	-2.2
HIA				IAmb	IAmb	00 07 40.0	
	comp=Z,18nm,1.1s						
ULN	Ulaanbaatar	30.64	342	⇓eP	P	00 07 32.2	+0.5
ULN				pmax	pmax		
	comp=Z,35nm,2.5s						
ULN	Ulaanbaatar	30.64	342	P	P	00 07 31.4	-0.3
SONM	Songino Array	30.80	342	P	P	00 07 33.1	-0.1
SONM						00 10 29.4	
SONM				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SONM	Songino Array	30.80	342	P	P	00 07 33.4	+0.3
	comp=Z,5.9nm,0.8s,baz=159,slow=10.0,SNR=43						
SONM				PcP	PcP	00 10 29.4	-0.5
	comp=Z,1.6nm,0.8s,baz=161,slow=2.3,SNR=3.6						
SONM				LR	LR	00 20 11.2	
	comp=Z,947nm,20.9s,baz=158,slow=37						
SONM	Songino Array	30.80	342	P	P	00 07 33.1	-0.1
TAPN	Taplejung	30.91	291	eP	P	00 07 35.2	+0.6
	comp=Z,92nm,1.1s						
ODAN	Odare	31.13	290	eP	P	00 07 36.8	+0.3
	comp=Z,62nm,0.8s						
ASAJ	Asahikawa	31.20	32	P	P	00 07 36.7	+0.2
	comp=Z,2.0nm,0.4s,baz=209,slow=13,SNR=7.8						
JKA	Kamikawa-asahi	31.20	32	P	P	00 07 36.7	+0.2
KLR	Kul'dur	31.46	15	d iP	P	00 07 39.2	+0.4
KLR				pmax	pmax		
	comp=Z,22nm,1.1s						
KLR	Kul'dur	31.46	15	P	P	00 07 39.2	+0.4
	comp=Z,13nm,1.1s,baz=222,slow=9.7						
KLR				PcP	PcP	00 10 31.9	+0.5
	comp=Z,1.9nm,0.7s,baz=196,slow=4.7,SNR=3.7						
RAMN	Ramite	31.84	290	eP	P	00 07 43.3	+0.6
	comp=Z,87nm,0.7s						
JIRN	Jiri	32.29	292	eP	P	00 07 47.3	+0.5
	comp=Z,146nm,1.0s						
GUN	Gumba	32.60	292	eP	P	00 07 50.0	+0.5
	comp=Z,138nm,0.9s						
PKI	Pulchoki	32.97	291	eP	P	00 07 52.5	-0.2
	comp=Z,6.5nm,1.0s						
PKIN	Phulchoki	32.98	291	eP	P	00 07 52.6	-0.1
	comp=Z,37nm,1.0s						
KKN	Kakani	33.11	292	eP	P	00 07 53.8	0.0
	comp=Z,58nm,0.9s						
DMN	Daman	33.24	291	eP	P	00 07 55.0	0.0
	comp=Z,57nm,0.9s						
YSS	Yuzh-Sakhalins	33.36	29	⇓eP	P	00 07 54.2	-1.2
YSS				pmax	pmax		
	comp=Z,32nm,1.0s						
YSS	Yuzh-Sakhalins	33.36	29	P	P	00 07 54.8	-0.7
ZAK	Zakamensk	34.01	341	eP	P	00 08 01.3	+0.1
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GRNR	Gornyy	34.12	18	⇓iP	P	00 07 58.2	-3.9
GRNR				eS	S	00 13 23.8	-2.0
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GRNR				smax	smax		
	comp=N,3.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,400nm,13.0s						
CHLP	Challavanipeta	34.20	275	eP	P	00 08 03.5	+0.4
CHLP				IAmb	IAmb	00 08 04.7	
	comp=Z,24nm,1.2s						
DANN	Dangsing	34.52	292	eP	P	00 08 06.0	-0.1
	comp=Z,111nm,1.0s						
ZEA	Zeya	35.00	7	eP	P	00 08 16.0	+6.4
ZEA				pmax	pmax		
	comp=Z,55nm,1.4s						

ZEA MLR MLR
comp=Z,2μm,13.0s
ZEA MLR MLR
comp=N,2μm,15.0s
TLY Talaya 35.04 342 *e*P P 00 08 03.6 -6.4
TLY pmax pmax
comp=Z,36nm,0.9s
TLY MLR MLR
comp=Z,2μm,12.0s
TLY Talaya 35.04 342 P P **00 08 10.2 +0.3**
TLY lAmb lAmb 00 08 13.5
comp=Z,16nm,1.0s
IRK Irkutsk 35.36 343 *e*P P **00 08 12.3 -0.4**
IRK pmax pmax
comp=Z,61nm,2.2s
KNRA Kununurra 35.56 166 P P **00 08 12.5 -2.3**
MOY Mondy 35.85 340 *e*P P **00 08 17.9 +0.8**
MOY pmax pmax
comp=Z,52nm,2.0s
TYV Tymovskoe 36.34 24 *e*P P 00 08 27.0 +5.8
TYV pmax pmax
comp=Z,8.0nm,1.2s
TYV pmax pmax
comp=Z,800nm,4.9s
PVM Polavaram 36.67 273 *e*P P **00 08 24.4 +0.1**
PVM lAmb lAmb 00 08 24.9
comp=Z,9.6nm,0.9s
WMQ Urumqi 36.73 319 P P **00 08 25.8 +1.2**
WMQ sP pP 00 08 34.1 +0.5
WMQ pmax pmax
comp=Z,16nm,1.7s
WMQ pmax pmax
comp=Z,1μm,8.7s
WMQ LR LR
comp=Z,870nm,12.5s
WMQ LR LR
comp=Z,760nm,12.5s
WMQ LR LR
comp=Z,620nm,16.1s
WMQ Urumqi 36.73 319 P P **00 08 24.2 -0.4**
WMQ pmax pmax
comp=Z,9.0nm,0.8s
WMQ Urumqi 36.73 319 P P **00 08 24.2 -0.4**
FITZ Fitzroy Crossi 37.34 171 P P **00 08 27.7 -2.3**
comp=Z,20nm,0.8s,baz=356,slow=7.8,SNR=34
FITZ Fitzroy Crossi 37.34 171 P P **00 08 27.8 -2.1**
FITZ lAmb lAmb 00 08 28.7
comp=Z,31nm,1.0s
ADKI Addanki 38.47 272 *e*P P **00 08 40.0 +0.4**
ADKI lAmb lAmb 00 08 40.6
comp=Z,13nm,1.1s
RPR Rampur 38.64 277 *e*P P **00 08 42.3 +1.2**
RPR lAmb lAmb 00 08 42.9
comp=Z,12nm,0.4s
PMG Port Moresby 38.83 135↓ *e*P P **00 08 41.0 -1.6**
PMG pmax pmax
comp=Z,45nm,1.7s
PMG Port Moresby 38.83 135 P P **00 08 40.3 -2.3**
comp=Z,4.1nm,0.7s,baz=344,slow=8.8,SNR=3.9
PMG LR LR 00 26 38.4
comp=Z,158nm,18.1s,baz=283,slow=39
PMG Port Moresby 38.83 135 P P **00 08 41.2 -1.3**
BOD Bodaibo 38.94 355 *e*P P **00 08 43.8 +0.8**
BOD pmax pmax
comp=Z,12nm,2.4s
NJS Nagarjunasagar 38.97 273 *e*P P **00 08 43.9 +0.1**
NJS lAmb lAmb 00 08 44.7
comp=Z,15nm,0.9s
KRVT Keravat (AS076 39.00 123 LR LR 00 21 45.4
comp=Z,716nm,21.3s,baz=292,slow=32
SKHT Srikalahasti 39.16 268 *e*P P **00 08 46.1 +0.7**
SKHT lAmb lAmb 00 08 46.9
comp=Z,24nm,0.9s
SRLM Srisailam 39.44 272 *e*P P **00 08 47.1 -0.7**
SRLM lAmb lAmb 00 08 47.9
comp=Z,13nm,1.2s
SRSP Sriramsagar 39.52 277 *e*P P **00 08 47.8 -0.7**
SRSP lAmb lAmb 00 08 49.0
comp=Z,8.7nm,1.1s
HYB Hyderabad 39.54 274 *i*P P **00 08 47.0 -1.6**
HYBB Hyderabad (bro 39.54 274 *e*P P **00 08 48.5 -0.2**
HYBB lAmb lAmb 00 08 48.9
comp=Z,10nm,0.9s
COEN Coen 39.88 144 P P **00 08 49.9 -1.5**
WRAB Tennant Creek 41.19 160*c i*P P **00 08 59.2 -2.9**
WRAB pmax pmax
comp=Z,33nm,1.0s
WRAB Tennant Creek 41.19 160 P P **00 09 00.1 -2.0**
WRAB lAmb lAmb 00 09 01.3
comp=Z,36nm,1.1s
WRA Warramunga Arr 41.19 160 P P **00 08 58.6 -3.5**
comp=Z,15nm,0.8s,baz=340,slow=9.0,SNR=71
WRA PcP **PcP** **00 11 00.5 -0.5**
comp=Z,1.3nm,0.5s,baz=344,slow=3.3,SNR=4.1
URV Uravakonda 41.21 271 *e*P P **00 09 02.1 -0.4**
URV lAmb lAmb 00 09 03.4
comp=Z,29nm,1.1s
WR0 Warramunga Arr 41.27 159 P P **00 09 00.5 -2.3**
KLRI Killari 41.28 276 *e*P P **00 09 02.4 -0.6**
KLRI lAmb lAmb 00 09 03.0
comp=Z,22nm,1.0s
MK31 Makanchi Array 41.52 320 *i*P P **00 09 04.8 +0.2**
MK31 Makanchi Array 41.52 320 P P **00 09 05.1 +0.5**
MKAR Makanchi Array 41.52 320 P P **00 09 05.0 +0.4**
MKAR 00 11 01.5
MKAR Makanchi Array 41.52 320 P P **00 09 05.4 +0.8**
comp=Z,13nm,0.8s,baz=114,slow=9.6,SNR=124
MKAR PcP **PcP** **00 11 01.5 -0.2**
comp=Z,6.3nm,0.9s,baz=101,slow=4.8,SNR=4.5
MKAR Makanchi Array 41.52 320 P P **00 09 05.0 +0.4**
MAKZ Makanchi 41.71 320 P P **00 09 06.3 +0.1**
MAKZ pmax pmax
comp=Z,17nm,1.0s
MAKZ Makanchi 41.71 320 P P **00 09 06.3 +0.1**
SKR Severo-Kuril's 42.42 34 *e*P P 00 09 17.2 +5.4
SKR pmax pmax
comp=Z,155nm,1.1s
SKR MLR MLR
comp=Z,400nm,15.0s
KSH Kashi 43.10 308 P P **00 09 19.5 +1.7**
KSH pP pP 00 09 22.7 -4.1
KSH PP **PP** **00 11 01.7 +3.5**
KSH S **S** **00 15 45.5 +3.7**
KSH sS pS 00 15 51.1 -0.8
KSH SS **SS** **00 18 51.1 -3.9**
KSH pmax pmax
comp=Z,2μm,10.4s
KSH LR LR
comp=Z,1μm,9.5s
KSH LR LR
comp=Z,830nm,8.2s
KSH LR LR
comp=Z,2μm,11.4s
YAK Yakutsk 43.40 6↓ *e*P P **00 09 19.8 +0.2**
YAK Yakutsk 43.40 6 P P **00 09 19.1 -0.5**
comp=Z,3.0nm,0.4s,baz=184,slow=14,SNR=6.2
YAK Yakutsk 43.40 6 lAmb lAmb 00 09 31.4
comp=Z,19nm,0.9s
NRN Naryn 43.62 311 P P **00 09 22.6 +0.5**
NRN pmax pmax
comp=Z,19nm,1.0s
NRN Naryn 43.62 311 P P **00 09 22.6 +0.5**
NRN lAmb lAmb 00 09 24.2
comp=Z,19nm,1.0s
H11S3 WAKE ISLAND Hy 43.89 83 T T 00 55 08.9
baz=276,slow=74,SNR=10
H11S1 WAKE ISLAND Hy 43.91 83 T T 00 55 09.5
baz=276,slow=74,SNR=5.4
H11S2 WAKE ISLAND Hy 43.91 83 T T 00 55 08.4
baz=276,slow=74,SNR=7.5
H11N1 WAKE ISLAND Hy 43.92 81 T T 00 55 14.9
baz=277,slow=75,SNR=5.6
H11N2 WAKE ISLAND Hy 43.92 81 T T 00 55 14.9
baz=277,slow=75,SNR=7.4
H11N3 WAKE ISLAND Hy 43.93 81 T T 00 55 17.7
baz=277,slow=75,SNR=4.2
ZAA0 Zalesovo Array 44.12 331 P P **00 09 25.6 +0.1**
ZAA0 lAmb lAmb 00 09 26.7
comp=Z,22nm,0.8s
ZALV Zalesovo Beam 44.12 331 P P **00 09 25.1 -0.4**
ZALV Zalesovo Beam 44.12 331 P P **00 09 25.2 -0.2**
comp=Z,22nm,0.8s,baz=121,slow=7.2,SNR=86
ZALV PcP **PP** **00 11 08.6 0.0**
comp=Z,0.7nm,0.4s,baz=149,slow=4.2,SNR=2.0
ZALV LR LR 00 28 37.7
comp=Z,720nm,19.6s,baz=148,slow=37

ZALV Zalesovo Beam 44.12 331 P P **00 09 25.1 -0.4**
NIL Nilore 44.14 299 P P **00 09 26.2 +0.1**
NIL pmax pmax
comp=Z,39nm,0.8s
NIL Nilore 44.14 299 P P **00 09 26.2 +0.1**
KZA Kyzart 44.34 311 P P **00 09 30.1 +2.1**
SNR=9.0
TKM2 Tokmak 2 44.35 312 P P **00 09 27.2 -0.6**
TKM2 Tokmak 2 44.35 312 P P **00 09 29.6 +1.7**
SNR=8.4
AS31 Alice Springs 44.55 162 P P **00 09 27.5 -1.8**
ASAR Alice Springs 44.55 162 P P **00 09 27.0 -2.3**
ASAR 00 11 11.8
ASAR Alice Springs 44.55 162 P P **00 09 27.6 -1.8**
comp=Z,18nm,0.8s,baz=341,slow=6.7,SNR=226
ASAR PcP **PcP** **00 11 11.8 -0.4**
comp=Z,1.1nm,0.8s,baz=347,slow=3.1,SNR=2.2
ASAR Alice Springs 44.55 162 P P **00 09 27.0 -2.3**
PEA0B Petropavlovsk- 44.61 31 P P **00 09 29.5 0.0**
PEA0B pmax pmax
comp=Z,92nm,1.1s
PEA0B Petropavlovsk- 44.61 31 P P **00 09 29.5 0.0**
PETK Petropavlovsk- 44.61 31 P P **00 09 29.1 -0.4**
comp=Z,12nm,0.7s,baz=200,slow=4.1,SNR=19
PETK PcP **PcP** **00 11 11.1 -0.8**
comp=Z,3.0nm,0.8s,baz=199,slow=4.0,SNR=3.3
PETK LR LR 00 28 23.9
comp=Z,318nm,18.7s,baz=241,slow=36
KBK Karagaybulak 44.73 312 P P **00 09 32.4 +1.6**
SNR=11
UCH Uchtor 44.91 311 P P **00 09 34.4 +1.8**
SNR=25
CHMS Chumysh 44.97 312 P P **00 09 33.4 +0.9**
SNR=12
FRU1 Bishkek 44.99 312 lAmb lAmb 00 09 37.0
comp=Z,20nm,1.1s
AAK Ala-Archa 45.04 312*de*P P **00 09 34.7 +1.4**
AAK pmax pmax
comp=Z,10.0nm,1.0s
AAK Ala-Archa 45.04 312 *i*P P **00 09 34.4 +1.2**
SNR=5.9
AAK Ala-Archa 45.04 312 P P **00 09 33.8 +0.5**
PET Petropavlovsk 45.04 32 *e*P P **00 09 34.3 +1.4**
PET pmax pmax
comp=Z,65nm,1.0s
PET Petropavlovsk 45.04 32 P P **00 09 33.3 +0.5**
USP Ospenovka 45.22 313 P P **00 09 36.1 +1.5**
SNR=7.7
AML Almayashu 45.47 311 P P **00 09 38.8 +1.8**
SNR=13
KURK Kurchatov 45.53 324*d i*P P **00 09 37.1 +0.3**
KURK pmax pmax
comp=Z,30nm,1.0s
KURK Kurchatov 45.53 324 P P **00 09 36.7 -0.1**
KURK lAmb lAmb 00 09 38.5
comp=Z,23nm,0.8s
ARSB Arslanbob 45.77 309 lAmb lAmb 00 09 41.6
comp=Z,19nm,1.1s
MA2 Magadan 46.02 21↓ *e*P P **00 09 42.2 +1.6**
MA2 pmax pmax
comp=Z,77nm,2.5s
MA2 Magadan 46.02 21 P P **00 09 39.3 -1.3**
comp=Z,25nm,1.1s,baz=192,slow=11
MA2 Magadan 46.02 21 lAmb lAmb 00 09 51.4
comp=Z,31nm,1.0s
CTA Charters Tower 46.56 145 P P **00 09 43.6 -1.6**
comp=Z,5.4nm,0.7s,baz=324,slow=9.4,SNR=15
BTK Batken 47.09 307 lAmb lAmb 00 10 05.1
comp=Z,19nm,1.1s
KBL Kabul 47.70 300 P P **00 09 54.4 0.0**
KBL pmax pmax
comp=Z,25nm,1.1s
KBL Kabul 47.70 300 P P **00 09 54.4 0.0**
KBL lAmb lAmb 00 10 00.8
comp=Z,24nm,1.1s
KK31 Karatay Array 47.99 311 P P **00 09 56.8 +0.6**
KK31 00 11 23.6
KK31 pmax pmax
comp=Z,32nm,0.9s
KK31 Karatay Array 47.99 311 P P **00 09 56.8 +0.6**
KK31 PcP **PcP** **00 11 23.6 -0.4**
KKAR Karatay Array 47.99 311 P P **00 09 56.8 +0.6**
KKAR 00 11 23.2
KKAR Karatay Array 47.99 311 P P **00 09 57.0 +0.8**
KKAR Karatay Array 47.99 311 P P **00 09 56.8 +0.6**
KKAR PcP **PcP** **00 11 23.2 -0.8**
MORW Morawa 48.05 185 lAmb lAmb 00 10 07.5
comp=Z,26nm,1.0s
HNR Honiara 48.35 122 P P **00 09 58.6 -0.6**
HNR pmax pmax
comp=Z,60nm,0.9s
HNR Honiara 48.35 122 LR LR 00 27 25.1
comp=Z,528nm,19.9s,baz=304,slow=33
HNR Honiara 48.35 122 P P **00 09 58.6 -0.6**
HNR PcP **PcP** **00 11 25.1 -0.6**
SEY Seymchan 49.05 19↑ *i*P P **00 10 04.3 +0.3**
SEY Seymchan 49.05 19 P P **00 10 03.7 -0.3**
comp=Z,12nm,0.7s,baz=212,slow=6.3,SNR=15
FORT Forrest 50.16 171 P P **00 10 11.9 -0.9**
BRVK Borovoye 51.20 324*d i*P P **00 10 21.1 +0.6**
BRVK pmax pmax
comp=Z,17nm,1.0s
BRVK Borovoye 51.20 324 P P **00 10 20.8 +0.3**
BRVK lAmb lAmb 00 10 22.4
comp=Z,13nm,0.9s
NWAO Narrogin (SRO) 51.81 183 P P **00 10 25.0 -0.2**
NWAO Narrogin (SRO) 51.81 183 P P **00 10 23.6 -1.6**
comp=Z,25nm,0.9s,baz=353,slow=5.1,SNR=8.7
NWAO Narrogin (SRO) 51.81 183 P P **00 10 25.0 -0.2**
TIXI Tiksi 52.80 3↓ *i*P P **00 10 30.7 -1.4**
TIXI pmax pmax
comp=Z,11nm,0.9s
TIXI Tiksi 52.80 3 P P **00 10 31.2 -0.9**
comp=Z,7.4nm,0.9s,baz=207,slow=7.3,SNR=21
HRA Herat 53.31 299 lAmb lAmb 00 10 37.7
comp=Z,19nm,1.1s
BBOO Buckleboo 53.79 163 P P **00 10 38.7 -1.2**
NRIK Noril'sk 54.09 346 *i*P P **00 10 41.7 +0.1**
NRIK Noril'sk 54.09 346 P P **00 10 41.9 +0.3**
comp=Z,19nm,0.7s,baz=133,slow=7.4,SNR=72
NRIK LR LR 00 35 21.0
comp=Z,963nm,18.7s,baz=146,slow=38
STKA Stephens Creek 54.67 158 P P **00 10 45.4 -0.9**
STKA pmax pmax
comp=Z,9.0nm,0.9s
STKA Stephens Creek 54.67 158 P P **00 10 45.2 -1.0**
comp=Z,34nm,0.8s,baz=336,slow=7.1,SNR=64
STKA Stephens Creek 54.67 158 P P **00 10 45.4 -0.9**
AB31 Akbulak array 56.44 317 *i*P P **00 10 58.9 +0.1**
ABKAR Akbulak array 56.44 317 P P **00 10 59.1 +0.3**
ABKAR lAmb lAmb 00 11 00.2
comp=Z,16nm,0.8s
GEYT Alibeck 56.70 303 P P **00 11 02.1 +1.0**
comp=Z,29nm,0.8s,baz=134,slow=4.3,SNR=100
GEYT LR LR 00 38 06.2
comp=Z,611nm,19.4s,baz=60,slow=39
GEYT Alibeck 56.70 303 P P **00 11 02.2 +1.2**
BILL Bilibino 56.76 19*d i*P P **00 11 00.8 0.0**
BILL pmax pmax
comp=Z,54nm,2.5s
BILL Bilibino 56.76 19 P P **00 11 00.9 +0.1**
BILL lAmb lAmb 00 11 11.1
comp=Z,24nm,0.8s
SVE Sverdlovsk 57.67 326*c i*P P **00 11 08.2 +0.8**
SVE pmax pmax
comp=Z,53nm,1.1s
ARMA Armidale 57.77 148 P P **00 11 08.0 -0.6**
AKTO Aktyubinsk 57.86 318 P P **00 11 09.3 +0.4**
ARU Arti 58.68 325*d i*P P **00 11 14.6 +0.1**
ARU 00 11 58.0
ARU S **S** **00 19 20.7 +4.0**
ARU SS **SS** **00 23 17.8 +8.1**
ARU pmax pmax
comp=Z,32nm,0.8s
ARU Arti 58.68 325 P P **00 11 14.3 -0.2**
BANOM Banah 58.95 289 P P **00 11 17.2 +0.2**
UOSS Minazif 59.17 288 P P **00 11 17.8 -0.7**
HATD Hatta, Dubai 59.25 288 P P **00 11 18.2 -0.8**
ASHO Ashiyiah 59.34 288 P P **00 11 19.7 0.0**
DZM Mont Dzumac 60.96 130 *e*P P **00 11 31.2 +0.4**
comp=Z,81nm,1.1s
DZM Mont Dzumac 60.96 130 *e*LR LR 00 29 36.2
comp=Z,630nm,23.1s
DZM Mont Dzumac 60.96 130 P P **00 11 31.0 +0.2**
comp=Z,23nm,0.9s,baz=326,slow=6.2,SNR=5.9

DZM Mont Dzumac 60.96 130 P P **00 11 30.4 -0.4**
DZM lAmb lAmb 00 11 33.2
comp=Z,23nm,0.9s
TOO Toolangi 61.18 157 P P **00 11 31.7 -0.2**
TOO pmax pmax
comp=Z,37nm,0.9s
TOO Toolangi 61.18 157 P P **00 11 31.7 -0.2**
AKT Akhty 64.64 308 *e*P P **00 11 55.8 +0.7**
AKT *e* 00 14 18.7
AKT pmax pmax
comp=Z,38nm,1.1s
PRGR Permogore 66.06 330 *e*P P **00 12 01.4 -2.4**
PRGR pmax pmax
comp=Z,31nm,0.8s
ANM Nome 66.23 27 P P **00 12 05.8 +1.0**
ANM pmax pmax
comp=Z,12nm,1.1s
ANM Nome 66.23 27 P P **00 12 05.8 +1.0**
ANM lAmb lAmb 00 12 17.9
comp=Z,12nm,1.1s
GNI Garni 67.01 306*d i*P P **00 12 10.7 +0.2**
GNI pmax pmax
comp=Z,92nm,1.5s
GNI Garni 67.01 306 *i*P P **00 12 10.3 -0.1**
SNR=5.7
GNI Garni 67.01 306 P P **00 12 11.1 +0.6**
GNI lAmb lAmb 00 12 26.3
comp=Z,15nm,1.1s
ZEI Tsey 67.37 309 *e*P P **00 12 10.7 -2.1**
ZEI pmax pmax
comp=Z,16nm,1.0s
RDOG Red Dog Mine 67.54 23 P P **00 12 13.5 +0.4**
RDOG lAmb lAmb 00 12 23.5
comp=Z,9.5nm,0.9s
GOF Gofitskoye 67.78 312↑ *e*P P **00 12 14.4 -0.6**
GOF pmax pmax
comp=Z,33nm,1.4s
AKH Akhalkalaki 67.81 308 lAmb lAmb 00 12 27.2
comp=Z,25nm,1.2s
KBZ Khabaz 68.01 310 P P **00 12 16.9 +0.5**
comp=Z,11nm,0.9s,baz=86,slow=4.1,SNR=22
KIV Kislovodsk 68.14 311*d i*P P **00 12 17.7 +0.3**
KIV *e* 00 12 38.3
KIV *e* 00 14 45.4
KIV *i* PPP PPP 00 16 21.8
KIV pmax pmax
comp=Z,30nm,1.0s
KIV MLR MLR
comp=Z,333nm,18.0s
KIV Kislovodsk 68.14 311 *i*P P **00 12 18.1 +0.6**
SNR=11
KIV Kislovodsk 68.14 311 P P **00 12 17.9 +0.5**
VRH Novokhopyorsk 68.20 318 *e*P P **00 12 16.6 -0.9**
VRH pmax pmax
comp=Z,40nm,0.7s
RAYN Ar Rayn 69.03 289 P P **00 12 22.9 -0.4**
RAYN pmax pmax
comp=Z,13nm,0.9s
RAYN Ar Rayn 69.03 289 *i*P P **00 12 23.0 -0.4**
SNR=13
RAYN Ar Rayn 69.03 289 P P **00 12 22.9 -0.4**
RAYN lAmb lAmb 00 12 24.1
comp=Z,13nm,0.9s
TMCR Tamitsa 69.59 332 *e*P P **00 12 24.5 -1.4**
TMCR pmax pmax
comp=Z,56nm,1.1s
VORD Divnogorie 69.74 318 *e*P P **00 12 26.2 -0.9**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VSR Storozhevoye 69.80 319 *e*P P **00 12 26.1 -1.4**
VSR pmax pmax
comp=Z,30nm,1.2s
LPSR Galich'ya Gora 69.82 320 *e*P P **00 12 26.8 -0.7**
LPSR pmax pmax
comp=Z,40nm,0.9s
MOS Moscow 70.30 323 *e*P P **00 12 28.4 -2.0**
MOS *e* 00 12 49.2
MOS *e* 00 15 04.4
MOS pmax pmax
comp=Z,46nm,1.1s
OBN Obninsk 70.96 323*de*P P **00 12 33.7 -0.7**
OBN *e* 00 12 54.1
OBN *e* 00 15 12.2
OBN *e*PPP PPP 00 16 53.8
OBN pmax pmax
comp=Z,54nm,1.7s
OBN MLR MLR
comp=Z,222nm,13.0s
OBN Obninsk 70.96 323 P P **00 12 34.5 +0.1**
IMAR Indian Mountai 71.13 26 P P **00 12 35.6 +0.3**
COLD Coldfoot 72.41 24 P P **00 12 43.0 -0.1**
TOLK Toolik Lake Re 72.46 23 P P **00 12 44.2 +0.8**
baz=277
KTH Kantishna Hill 72.59 28 lAmb lAmb 00 12 54.6
comp=Z,24nm,1.2s
WRH Wood River Hil 73.68 27 lAmb lAmb 00 13 01.6
comp=Z,25nm,1.1s
TCOL CIGO, UAF Yank 73.71 26 P P **00 12 50.3 -0.4**
baz=280
COLA College 73.71 26↓ *e*P P **00 12 50.3 -0.4**
COLA pmax pmax
comp=Z,10.0nm,0.9s
CCB Clear Creek Bu 73.77 27 lAmb lAmb 00 13 02.3
comp=Z,14nm,1.2s
POKR Poker Plat Res 73.84 26 P P **00 12 51.9 +0.3**
baz=280
ARCES ARCESS Array B 73.91 339 P P **00 12 51.4 -0.5**
comp=Z,5.0nm,0.8s,baz=66,slow=5.9,SNR=8.0
IL31 74.14 26 P P **00 12 53.0 -0.2**
ILAR Eielson Array 74.14 26 P P **00 12 51.8 -1.5**
comp=Z,2.9nm,0.8s,baz=269,slow=4.9,SNR=29
HDA Harding Lake 74.18 27 lAmb lAmb 00 13 02.6
comp=Z,24nm,1.1s
HDA Harding Lake 74.18 27 P P **00 12 52.8 -0.7**
baz=281
SPITS Spitsbergen Ar 74.25 348 P P **00 12 53.8 +0.1**
comp=Z,13nm,0.7s,baz=70,slow=9.3,SNR=6.1
BMAR Burnt Mountain 74.52 24 P P **00 12 55.8 +0.3**
PAX Paxson 75.12 28 P P **00 12 58.8 -0.3**
PAX pmax pmax
comp=Z,16nm,1.1s
PAX Paxson 75.12 28 P P **00 12 58.8 -0.3**
PAX lAmb lAmb 00 13 09.4
comp=Z,16nm,1.1s
FINES FINESS Array B 75.38 330 P P **00 13 00.0 -0.5**
FINES FINESS Array B 75.38 330 P P **00 12 60.0 -0.5**
comp=Z,7.0nm,0.9s,baz=46,slow=8.2,SNR=13
BR131 Keskin Array S 75.49 307 P P **00 13 01.3 -0.5**
BR131 pmax pmax
comp=Z,3.0nm,1.0s
BR131 Keskin Array S 75.49 307 P P **00 13 01.3 -0.5**
BRTR Keskin Array B 75.49 307 *i*P P **00 13 01.0 -0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 75.49 307 P P **00 13 01.2 -0.5**
comp=Z,0.6nm,0.8s,baz=144,slow=7.0,SNR=5.8
SCRK Sand Creek 75.54 27 lAmb lAmb 00 13 10.8
comp=Z,11nm,1.0s
VSU Vasula 75.73 327↑ *i*P P **00 13 02.6 +0.1**
VSU pmax pmax
comp=Z,244nm,2.5s
MENT Mentasta 75.91 28 lAmb lAmb 00 13 14.1
comp=Z,23nm,1.2s
AKASG Malin Array Be 76.08 319 *i*P P **00 13 03.7 -1.0**
AKASG pmax pmax
comp=Z,6.0nm,0.9s
AKASG Malin Array Be 76.08 319 P P **00 13 03.0 -1.7**
comp=Z,6.0nm,0.8s,baz=62,slow=5.6,SNR=18
AKASG Malin Array Be 76.08 319 P P **00 13 03.7 -1.0**
AKBB Malin Array Si 76.08 319 P P **00 13 03.6 -1.1**
AKBB pmax pmax
comp=Z,13nm,1.2s
AKBB Malin Array Si 76.08 319 P P **00 13 03.6 -1.1**
AKBB lAmb lAmb 00 13 13.3
comp=Z,13nm,1.1s
EGAK Eagle 76.52 26 P P **00 13 06.8 -0.2**
EGAK lAmb lAmb 00 13 16.9
comp=Z,19nm,1.0s
NACGM Naroch 76.54 324 *e* P P **00 13 07.0 -0.2**
CSS Mathiatis 76.84 303 P P **00 13 08.4 -1.0**
CSS lAmb lAmb 00 13 10.1
comp=Z,16nm,1.0s
SORM Soroca 77.24 317↑ P P **00 13 10.5 -0.8**
NOR Nord 77.28 354 *i*P P **00 13 10.5 -0.5**
comp=Z,4.1nm,0.8s

BARN	**Barnard Glacie**	**77.34**	**30**	IAmb	IAmb	00 13 22.6	
	comp=Z,26nm,1.1s						
DAWY	**Dawson**	**77.46**	**26**	IAmb	IAmb	00 13 22.7	
	comp=Z,20nm,1.0s						
EPYK	**Eagle Plains**	**77.79**	**24**	IAmb	IAmb	00 13 23.9	
	comp=Z,18nm,0.9s						
EPYK	**Eagle Plains**	**77.79**	**24**	P	**P**	**00 13 13.8**	**-0.3**
	baz=290						
RPZ	**Rata Peaks**	**77.93**	**145**	P	**P**	**00 13 13.0**	**-2.0**
	comp=Z,29nm,0.9s,baz=270,slow=14,SNR=2.3						
LTZ	**Lake Taylor**	**77.99**	**144**	P	**P**	**00 13 14.3**	**-1.1**
INK	**Inuvik**	**78.26**	**21**	P	**P**	**00 13 14.4**	**-2.2**
	comp=Z,5.5nm,1.0s,baz=296,slow=6.5,SNR=6.4						
INK	**Inuvik**	**78.26**	**21**	IAmb	IAmb	00 13 26.5	
	comp=Z,17nm,1.1s						
HARR	**Harsova**	**78.41**	**313**	⇑P	**P**	**00 13 18.0**	**+0.1**
ODBI	**Odobesti**	**78.71**	**315**	⇑P	**P**	**00 13 19.3**	**-0.2**
TESR	**Tescani**	**78.78**	**315**	⇑P	**P**	**00 13 19.9**	**-0.1**
SUW	**Suwalki**	**78.81**	**323**	P	**P**	**00 13 19.5**	**-0.3**
SUW				pmax	pmax		
	comp=Z,55nm,1.0s						
SUW	**Suwalki**	**78.81**	**323**	P	**P**	**00 13 19.5**	**-0.3**
VRI	**Vrincioaia**	**78.91**	**315**	⇑P	**P**	**00 13 21.4**	**+0.8**
PLOR	**Plostina**	**78.96**	**315**	⇓P	**P**	**00 13 22.0**	**+1.1**
BISRR	**Bisoca**	**79.01**	**314**	⇓P	**P**	**00 13 21.7**	**+0.4**
BIZ	**Bicaz**	**79.03**	**316**	⇑P	**P**	**00 13 21.4**	**+0.1**
HYT	**Haines Junctio**	**79.34**	**29**	IAmb	IAmb	00 13 33.9	
	comp=Z,22nm,1.0s						
BURAR	**Bucovina Array**	**79.42**	**317**	⇑P	**P**	**00 13 23.5**	**0.0**
BURAR	**Bucovina Array**	**79.42**	**317**	P	**P**	**00 13 22.8**	**-0.7**
LVV	**L'vov**	**79.53**	**319**	*e*P	**P**	**00 13 23.4**	**-0.5**
MLR	**Muntele Rosu**	**79.54**	**314**	⇓P	**P**	**00 13 24.6**	**+0.4**
SULR		**79.56**	**314**	⇑P	**P**	**00 13 24.9**	**+0.7**
VOIR		**80.16**	**315**	⇑P	**P**	**00 13 27.1**	**-0.4**
ELND	**Elena**	**80.32**	**312**	⇓P	**P**	**00 13 28.8**	**+0.4**
HUMR	**Humele**	**80.47**	**314**	⇓P	**P**	**00 13 28.4**	**-0.7**
WHY	**Whitehorse**	**80.61**	**29**	IAmb	IAmb	00 13 40.6	
	comp=Z,21nm,1.0s						
CJR	**Cluj-Napoca**	**80.74**	**316**	⇓P	**P**	**00 13 31.3**	**+0.7**
C36M	**Paulatuk**	**80.88**	**19**	P	**P**	**00 13 30.2**	**-0.6**
	baz=300						
KOLS	**Kolonicke sedl**	**80.89**	**319**	*e*P	**P**	**00 13 31.1**	**-0.2**
KOLS	**Kolonicke sedl**	**80.89**	**319**	*e*P	**P**	**00 13 31.1**	**-0.2**
TRPA	**Tarpa**	**80.98**	**318**	⇑P	**P**	**00 13 31.7**	**0.0**
PLVB	**Pleven**	**81.06**	**313**	⇑P	**P**	**00 13 32.4**	**0.0**
DAG	**Danmarks Havn**	**81.23**	**351**	⇓*i*P	**P**	**00 13 31.7**	**-0.9**
DAG				pmax	pmax		
	comp=Z,9.0nm,0.7s						
DAG	**Danmarks Havn**	**81.23**	**351**	⇓*i*P	**P**	**00 13 31.7**	**-0.9**
	comp=Z,9.1nm,0.7s						
DRGR		**81.29**	**316**	⇓P	**P**	**00 13 33.5**	**-0.1**
DEV	**Deva**	**81.45**	**316**	⇑P	**P**	**00 13 35.0**	**+0.7**
PUNG	**Punghina**	**81.95**	**314**	⇓P	**P**	**00 13 37.2**	**+0.3**
SIRR	**Siria**	**82.15**	**316**	⇑P	**P**	**00 13 38.2**	**+0.1**
VTS	**Vitosha**	**82.27**	**312**	⇓P	**P**	**00 13 39.1**	**+0.2**
VTS	**Vitosha**	**82.27**	**312**	IAmb	IAmb	00 13 39.6	
	comp=Z,16nm,1.1s						
NB2	**NORSAR Subarra**	**82.29**	**332**	P	**P**	**00 13 37.4**	**-1.1**
	comp=Z,7.6nm,0.8s,baz=66,slow=4.8						
NB2	**NORSAR Subarra**	**82.29**	**332**	P	**P**	**00 13 37.4**	**-1.1**
	baz=66,slow=4.8						
NOA	**NORSAR Array B**	**82.29**	**332**	P	**P**	**00 13 36.7**	**-1.8**
	comp=Z,5.5nm,0.9s,baz=65,slow=5.2,SNR=13						
BZS	**Buzias**	**82.39**	**316**	⇓P	**P**	**00 13 38.2**	**-1.1**
VYHS	**Vyhne**	**83.19**	**319**	*e*P	**P**	**00 13 43.6**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,16nm,1.4s						
VYHS	**Vyhne**	**83.19**	**319**	*e*P	**P**	**00 13 43.6**	**+0.2**
MORC	**Moravsky Berou**	**83.51**	**320**	*e*P	**P**	**00 13 45.2**	**+0.2**
KMBO	**Kilima Mbogo**	**83.72**	**267**	P	**P**	**00 13 46.7**	**-0.3**
KMBO				pmax	pmax		
	comp=Z,12nm,1.1s						
KMBO	**Kilima Mbogo**	**83.72**	**267**	P	**P**	**00 13 47.3**	**+0.3**
	comp=Z,4.8nm,0.9s,baz=59,slow=4.2,SNR=12						
KMBO	**Kilima Mbogo**	**83.72**	**267**	*i* P	**P**	**00 13 47.9**	**+0.9**
	SNR=6.9						
KMBO	**Kilima Mbogo**	**83.72**	**267**	P	**P**	**00 13 46.7**	**-0.3**
KMBO				IAmb	IAmb	00 13 48.5	
	comp=Z,12nm,1.1s						
RES	**Resolute Bay**	**83.80**	**9**	P	**P**	**00 13 45.9**	**-0.1**
RES				pmax	pmax		
	comp=Z,18nm,1.0s						
RES	**Resolute Bay**	**83.80**	**9**	P	**P**	**00 13 45.5**	**-0.5**
	comp=Z,8.2nm,0.9s,baz=324,slow=5.5,SNR=26						
RES	**Resolute Bay**	**83.80**	**9**	P	**P**	**00 13 45.9**	**-0.1**
RES				IAmb	IAmb	00 13 56.1	
	comp=Z,18nm,1.0s						
KRLC	**Kraliky**	**83.85**	**321**	*e*P	**P**	**00 13 46.8**	**0.0**
KRLC	**Kraliky**	**83.85**	**321**	*e*P	**P**	**00 13 46.8**	**0.0**
DPC	**Dobruska-Polom**	**84.02**	**321**	*e*P	**P**	**00 13 48.0**	**+0.4**
DPC	**Dobruska-Polom**	**84.02**	**321**	*e*P	**P**	**00 13 48.0**	**+0.4**
DPC				*e*x	x	00 13 57.4	
CHVC	**Chvalec**	**84.08**	**322**	*e*P	**P**	**00 13 48.4**	**+0.4**
CHVC				*e*x	x	00 13 56.8	
MORH	**Mrgy, Hungar**	**84.13**	**317**	*e*P	**P**	**00 13 47.7**	**-0.5**
UPC	**Upice**	**84.14**	**322**	*e*P	**P**	**00 13 48.5**	**+0.3**
UPC	**Upice**	**84.14**	**322**	*e*P	**P**	**00 13 48.5**	**+0.3**
UPC				*e*x	x	00 13 56.9	
VRAC	**Vranov**	**84.26**	**320**	⇑P	**P**	**00 13 49.0**	**+0.1**
VRAC	**Vranov**	**84.26**	**320**	*e*P	**P**	**00 13 49.1**	**+0.3**
KRUC	**Moravsky**	**84.47**	**320**	*e*P	**P**	**00 13 50.0**	**+0.1**
MPLH	**Magyarpolny**	**84.48**	**318**	*e*P	**P**	**00 13 49.2**	**-0.8**
PDG	**Podgorica**	**85.10**	**313**	⇓P	**P**	**00 13 52.2**	**-0.9**
GOPC	**GO Pecny, Ondr**	**85.10**	**321**	*e*P	**P**	**00 13 53.1**	**0.0**
GOPC	**GO Pecny, Ondr**	**85.10**	**321**	*e*P	**P**	**00 13 53.1**	**0.0**
GOPC				*e*x	x	00 14 02.6	
BRG	**Berggiesshubel**	**85.20**	**322**	*i* P	**P**	**00 13 53.2**	**-0.3**
	comp=Z,17nm,1.1s						
BRG				*i*		00 14 02.6	
	comp=Z,12nm,1.0s						
BRG	**Berggiesshubel**	**85.20**	**322**	*i* P	**P**	**00 13 53.2**	**-0.3**
BRG				pmax	pmax		
	comp=Z,17nm,1.1s						
BRG				pmax	pmax		
	comp=Z,12nm,1.0s						
PRU	**Pruhonice**	**85.21**	**321**	*e*P	**P**	**00 13 53.2**	**-0.4**
PRU	**Pruhonice**	**85.21**	**321**	*e*P	**P**	**00 13 53.2**	**-0.4**
PRU				*e*x	x	00 14 02.7	
CONA	**Conrad Observa**	**85.24**	**319**	*e*PcP	**P**	**00 13 53.8**	**-0.2**
	comp=Z,9.3nm,1.2s						
CLL	**Collm**	**85.56**	**323**	⇓*e*P	**P**	**00 13 55.0**	**-0.3**
CLL				pmax	pmax		
	comp=Z,15nm,1.0s						
CLL	**Collm**	**85.56**	**323**	⇓*i*P	**P**	**00 13 54.7**	**-0.6**
	comp=Z,15nm,1.0s						
CLL				*i* (pP)	**pP**	**00 14 04.2**	**-0.8**
	comp=Z,17nm,1.1s						
CLL				*i*		00 14 25.5	
BLY	**Banja Luka**	**85.63**	**316**	⇑P	**P**	**00 13 56.1**	**+0.3**
PBCC	**Pribram**	**85.66**	**321**	*e*P	**P**	**00 13 55.7**	**-0.2**
PBCC				*e*x	x	00 14 05.1	
KHC	**Kasperske Hory**	**86.14**	**321**	P	**P**	**00 13 57.5**	**-0.8**
KHC				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KHC	**Kasperske Hory**	**86.14**	**321**	*e*P	**P**	**00 13 58.1**	**-0.2**
KHC				*e*x	x	00 14 07.1	
KHC	**Kasperske Hory**	**86.14**	**321**	P	**P**	**00 13 57.5**	**-0.8**
GERES	**GERESS Array B**	**86.19**	**321**	P	**P**	**00 13 57.8**	**-0.8**
GERES	**GERESS Array B**	**86.19**	**321**	P	**P**	**00 13 58.2**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=63,slow=6.1,SNR=30						
GERES	**GERESS Array B**	**86.19**	**321**	P	**P**	**00 13 57.8**	**-0.8**
SOKA	**Soboth**	**86.26**	**318**	*e*P	**P**	**00 13 58.1**	**-0.9**
	comp=Z,4.7nm,0.7s						
MYKA	**Terra Mystica**	**87.15**	**319**	*e*P	**P**	**00 14 01.5**	**-1.9**
	comp=Z,5.8nm,1.2s						
GRF	**Grafenberg Arr**	**87.28**	**322**	*e*P	**P**	**00 14 03.7**	**-0.1**
	comp=Z,7.0nm,1.1s,baz=64,slow=4.4						
SUMG	**Summit**	**87.44**	**354**	*i* P	**P**	**00 14 04.3**	**-0.3**
SUMG				pmax	pmax		
	comp=Z,29nm,0.9s						
SUMG	**Summit**	**87.44**	**354**	*i* P	**P**	**00 14 04.3**	**-0.3**
	comp=Z,29nm,0.9s						
SUMG	**Summit**	**87.44**	**354**	P	**P**	**00 14 04.6**	**0.0**
SUMG				IAmb	IAmb	00 14 15.6	
	comp=Z,9.0nm,1.0s						
ABTA	**Abfaltersbach**	**87.80**	**319**	*e*P	**P**	**00 14 05.3**	**-1.2**
	comp=Z,5.3nm,1.2s						
YKA	**Yellowknife Ar**	**87.99**	**22**	P	**P**	**00 14 05.9**	**-1.0**
YKA	**Yellowknife Ar**	**87.99**	**22**	P	**P**	**00 14 06.8**	**-0.1**
	comp=Z,9.1nm,0.8s,baz=314,slow=4.5,SNR=130						
YKA	**Yellowknife Ar**	**87.99**	**22**	P	**P**	**00 14 05.9**	**-1.0**
WATA	**Walderalm**	**88.12**	**320**	*e*PcP	**P**	**00 14 07.0**	**-1.1**
	comp=Z,4.6nm,1.1s						
SQTA	**Sankt Quirin**	**88.40**	**320**	*e*P	**P**	**00 14 08.1**	**-1.2**
	comp=Z,8.5nm,1.0s,SNR=4.6						
MOTA	**Moosalm**	**88.41**	**320**	*e*PcP	**P**	**00 14 08.3**	**-1.1**
	comp=Z,2.8nm,0.8s,SNR=5.0						
FETA	**Feichten**	**88.78**	**320**	*e*PcP	**P**	**00 14 10.5**	**-0.7**
	comp=Z,8.9nm,1.0s						
FUORN	**Ofenpass-Fuorn**	**89.25**	**320**	IAmb	IAmb	00 14 28.0	
	comp=Z,12nm,1.1s						
MURB	**Monte Urbino**	**89.31**	**316**	IAmb	IAmb	00 14 15.4	
	comp=Z,17nm,1.0s						
VLC	**Villacollemand**	**90.30**	**317**	P	**P**	**00 14 18.4**	**+0.2**
VLC				IAmb	IAmb	00 14 27.5	
	comp=Z,12nm,1.1s						
ECH	**Echery**	**90.34**	**322**	P	**P**	**00 14 19.1**	**+0.8**
ECH				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ECH	**Echery**	**90.34**	**322**	P	**P**	**00 14 19.1**	**+0.8**
LLLB	**Lillooet**	**91.79**	**34**	IAmb	IAmb	00 14 43.1	
	comp=Z,8.0nm,0.9s						
BNI	**Bardonecchia**	**92.20**	**319**	P	**P**	**00 14 26.4**	**-0.8**
BNI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BNI	**Bardonecchia**	**92.20**	**319**	P	**P**	**00 14 26.4**	**-0.8**
BNI				IAmb	IAmb	00 14 36.3	
	comp=Z,9.2nm,1.0s						
D03D	**Eldon**	**92.79**	**37**	P	**P**	**00 14 30.0**	**+0.4**
	baz=302						
B08A	**Colville Reser**	**94.44**	**35**	P	**P**	**00 14 37.6**	**+0.3**
B08A				IAmb	IAmb	00 14 38.3	
	comp=Z,5.0nm,1.0s						
J04D	**Umpqua Nationa**	**95.68**	**41**	P	**P**	**00 14 43.7**	**+0.4**
	baz=303						
NEW	**Newport**	**95.68**	**34**	P	**P**	**00 14 43.3**	**+0.3**
	baz=307						
PPT2	**Papeete2**	**95.79**	**107**	*e*LR	LR	00 45 44.6	
	comp=Z,320nm,31.2s						
MAW	**Mawson**	**96.02**	**199**	LR	LR	00 54 24.5	
	comp=Z,71nm,18.8s,baz=56,slow=33						
PINE	**Pine Mountain**	**96.09**	**40**	IAmb	IAmb	00 14 52.4	
	comp=Z,6.3nm,1.1s						
LSZ	**Lusaka**	**96.75**	**256**	P	**P**	**00 14 47.8**	**-0.6**
LSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LSZ	**Lusaka**	**96.75**	**256**	P	**P**	**00 14 47.8**	**-0.6**
LSZ				IAmb	IAmb	00 14 48.0	
	comp=Z,5.3nm,0.8s						
O02D	**Mt. Diablo Mer**	**96.89**	**43**	P	**P**	**00 14 49.1**	**+0.5**
	baz=302						
MOD	**Modoc Plateau**	**97.53**	**41**	P	**P**	**00 14 51.6**	**0.0**
MOD				IAmb	IAmb	00 15 06.8	
	comp=Z,5.3nm,1.1s						
FFC	**Flin Flon**	**98.14**	**23**	P	**P**	**00 14 54.1**	**+0.3**
FFC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FFC	**Flin Flon**	**98.14**	**23**	P	**P**	**00 14 54.1**	**+0.3**
FFC				IAmb	IAmb	00 15 03.5	
	comp=Z,4.3nm,0.9s						
BEKR	**Beckworth**	**98.62**	**43**	P	**P**	**00 14 55.6**	**-1.0**
BEKR				IAmb	IAmb	00 15 06.8	
	comp=Z,3.8nm,1.1s						
PAHR	**Pah Rah Range**	**99.33**	**42**	P	**Pdif**	**00 15 00.2**	**+0.4**
PAHR				IAmb	IAmb	00 15 06.6	
	comp=Z,4.3nm,1.1s						
NVAR	**Mina Array Bea**	**100.75**	**43**	P	**Pdif**	**00 15 06.2**	**0.0**
	comp=Z,0.7nm,0.7s,baz=297,slow=6.3,SNR=6.9						
NVAR	**Mina Array Bea**	**100.75**	**43**		**Pdif**	**00 15 07.8**	**+1.6**
TAOE	**Nuku Hiva Isla**	**101.89**	**95**	*e*LR	LR	00 48 41.0	
	comp=Z,202nm,22.9s						
PDAR	**Pinedale Array**	**103.28**	**35**	PP	**PP**	**00 19 36.5**	**+4.5**
	comp=Z,0.5nm,0.8s,baz=298,slow=1.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**111.49**	**293**	PKiKP	**PKiKP**	**00 19 50.3**	**-1.9**
	comp=Z,0.8nm,0.8s,baz=68,slow=1.6,SNR=4.5						
TX31	**Lajitas Ar. Si**	**115.89**	**42**		**PKiKP**	**00 20 00.5**	**+0.1**
TX32	**Lajitas Array**	**115.89**	**42**		**PKiKP**	**00 20 00.2**	**-0.2**
TXAR	**Lajitas Array**	**115.89**	**42**	PKP	**PKiKP**	**00 20 00.5**	**0.0**
	comp=Z,1.4nm,0.6s,baz=264,slow=0.6,SNR=17						
TXAR				PP	**PP**	**00 21 05.4**	**+1.8**
	comp=Z,1.0nm,1.0s,baz=280,slow=6.3,SNR=5.0						
JCT	**Junction City**	**117.46**	**39**	PKIKP	**PKPdf**	**00 20 03.7**	**+0.3**
JCT	**Junction City**	**117.46**	**39**		**PKPdf**	**00 20 03.6**	**+0.3**
JCT	**Junction City**	**117.46**	**39**	P	**PKPdf**	**00 20 03.4**	**0.0**
	baz=317						
MIAR	**Mount Ida**	**117.72**	**31**	P	**PKPdf**	**00 20 04.0**	**+0.3**
	baz=324						
WVT	**Waverly**	**119.00**	**26**	PKIKP	**PKPdf**	**00 20 05.7**	**-0.4**
WVT	**Waverly**	**119.00**	**26**		**PKPdf**	**00 20 05.7**	**-0.4**
WVT	**Waverly**	**119.00**	**26**	P	**PKPdf**	**00 20 05.5**	**-0.6**
	baz=330						
T50A	**Nancy**	**119.39**	**23**	P	**PKPdf**	**00 20 06.1**	**-0.7**
	baz=333						
U49A	**Red Boiling Sp**	**119.48**	**24**	P	**PKPdf**	**00 20 06.2**	**-0.8**
	baz=332						
U50A	**Jamestown**	**119.92**	**23**	P	**PKPdf**	**00 20 07.4**	**-0.5**
	baz=333						
V52A	**Sevierville**	**120.89**	**22**		**PKPdf**	**00 20 09.7**	**-0.1**
V52A	**Sevierville**	**120.89**	**22**	P	**PKPdf**	**00 20 09.5**	**-0.2**
	baz=334						
W52A	**Murphy**	**121.43**	**23**	P	**PKPdf**	**00 20 10.5**	**-0.4**
	baz=333						
W53A	**Cullowhee**	**121.64**	**22**	P	**PKPdf**	**00 20 11.1**	**-0.3**
	baz=334						
X52A	**Dahlonega**	**121.88**	**23**	P	**PKPdf**	**00 20 11.6**	**-0.2**
	baz=333						
LRAL	**Lakeview Retre**	**122.00**	**27**	P	**PKPdf**	**00 20 11.4**	**-0.6**
	baz=329						
X53A	**Estanollee**	**122.19**	**23**	P	**PKPdf**	**00 20 11.9**	**-0.5**
	baz=334						
Z50A	**Ashland**	**122.27**	**26**	P	**PKPdf**	**00 20 12.0**	**-0.5**
	baz=331						
Y52A	**Lilburn**	**122.47**	**24**	P	**PKPdf**	**00 20 12.9**	**+0.1**
	baz=333						
X54A	**Belton**	**122.49**	**22**	P	**PKPdf**	**00 20 12.7**	**-0.2**
	baz=335						
X55A	**Gracelyn & Ava**	**122.82**	**21**	P	**PKPdf**	**00 20 13.0**	**-0.5**
	baz=335						
Y54A	**Tignall**	**122.99**	**23**	P	**PKPdf**	**00 20 13.7**	**-0.2**
	baz=334						
152A	**Waverly Hall**	**123.27**	**25**	P	**PKPdf**	**00 20 14.5**	**0.0**
	baz=332						
PMSA	**Palmer Station**	**134.26**	**177**		**PKPdf**	**00 20 32.7**	**-1.5**
SJCC	**San Jacinto, C**	**147.44**	**29**	*e*P	**PKPdf**	**00 21 00.7**	**+1.2**
CODC	**Agustn Codazz**	**148.16**	**26**	*e*P	**PKPdf**	**00 21 02.7**	**+2.1**
SMLC	**San Martn de**	**148.91**	**28**	*e*P	**PKPdf**	**00 21 02.4**	**+0.6**
UREC	**San Jos de Ur**	**149.13**	**32**	*e*P	**PKPdf**	**00 21 02.8**	**+0.6**
DBBC	**Dabeiba**	**149.41**	**33**	*e*P	**PKPdf**	**00 21 01.9**	**-0.9**
ZARC	**Zaragoza, Cauc**	**149.69**	**31**	*e*P	**PKPbc**	**00 21 06.9**	**-0.8**
OCAC	**Ocana**	**149.74**	**27**	*e*P	**PKPbc**	**00 21 08.0**	**0.0**
SDV	**Santo Domingo**	**150.21**	**22**	*e*P	**PKPbc**	**00 21 08.6**	**-0.6**
SDV	**Santo Domingo**	**150.21**	**22**		**PKPdf**	**00 21 03.6**	**-0.6**
SDV				PKPbc	**PKPbc**	**00 21 09.0**	**-0.2**
SDV				PKPab	**PKPab**	**00 21 16.3**	**+1.1**
HELC	**Santa Helena**	**150.47**	**33**	*e*P	**PKPdf**	**00 21 05.4**	**+0.6**
CBOC	**Ciudad Bolivar**	**150.49**	**34**	*e*P	**PKPbc**	**00 21 09.9**	**0.0**
BRRC	**Barranca, Sant**	**150.56**	**29**	*e*P	**PKPbc**	**00 21 10.1**	**+0.3**
SOCV	**Socops**	**150.69**	**23**	*e*P	**PKPbc**	**00 21 09.0**	**-1.1**
PTBC	**PUERTO BERRIO,**	**150.71**	**31**	*e*P	**PKPbc**	**00 21 09.5**	**-0.7**
PAMC	**Pamplona, Colo**	**150.81**	**27**	*e*P	**PKPbc**	**00 21 10.7**	**-0.4**
BARC	**Barichara**	**151.26**	**29**	*e*P	**PKPbc**	**00 21 11.4**	**-0.4**
NORC	**Norcasia**	**151.34**	**33**	*e*P	**PKPbc**	**00 21 10.9**	**-0.9**
GUY2C	**Guyana, Caldas**	**151.37**	**34**	*e*P	**PKPbc**	**00 21 12.1**	**-0.3**
RREF	**El Recreo**	**151.65**	**34**	*e*P	**PKPbc**	**00 21 13.2**	**0.0**
SPBC	**San Pablo de B**	**151.66**	**31**	*e*P	**PKPbc**	**00 21 12.2**	**-0.3**
YOTC	**Yotoco, Valle**	**151.86**	**37**	*e*P	**PKPbc**	**00 21 12.8**	**-0.2**
RUSC	**La Rusia**	**151.92**	**29**	*e*P	**PKPbc**	**00 21 13.4**	**-0.2**
TOLC	**Tolima**	**151.93**	**35**	*e*P	**PKPbc**	**00 21 13.6**	**+0.1**
ANIL	**Santa Ana**	**151.97**	**35**	*e*P	**PKPbc**	**00 21 13.6**	**+0.1**
ROSC	**El Rosal**	**152.24**	**32**	PKP	**PKPdf**	**00 21 08.2**	**+0.8**
	comp=Z,3.1nm,0.4s,baz=29,slow=7.7,SNR=3.5						
ROSC	**El Rosal**	**152.24**	**32**	*e*P	**PKPbc**	**00 21 14.3**	**+0.1**
ELOV	**Elorza**	**152.36**	**21**	*e*P	**PKPbc**	**00 21 14.3**	**+0.3**
ORTC	**Ortega, Tolima**	**152.54**	**35**	*e*P	**PKPbc**	**00 21 13.6**	**-0.9**
CHIC	**Chingaza**	**152.72**	**32**	*e*P	**PKPbc**	**00 21 15.5**	**+0.2**
BBAC	**Balboa, Cauca**	**152.89**	**41**	*e*P	**PKPbc**	**00 21 13.2**	**-2.2**
VILC	**Villavicencio,**	**153.18**	**32**	*e*P	**PKPbc**	**00 21 15.5**	**-0.5**
SOTA	**Rioblanco**	**153.19**	**40**	*e*P	**PKPbc**	**00 21 16.4**	**-0.1**
CRUC	**La Cruz**	**153.42**	**41**	*e*P	**PKPdf**	**00 21 08.7**	**-0.5**
FLOC	**Florencia**	**154.20**	**39**	*e*P	**PKPdf**	**00 21 10.7**	**+0.8**
PB11	**IPOC Station P**	**170.66**	**96**		**PKPdf**	**00 21 26.8**	**+0.7**
LPAZ	**La Paz**	**171.57**	**72**	PKP	**PKPdf**	**00 21 27.5**	**+0.3**
	comp=Z,2.5nm,1.0s,baz=21,slow=4.1,SNR=7.1						

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*BJI **01** 00:05:25.8±0.0, 18°.41S×175°.14W, h205km, mB5.3/4, mb4.7/14*

*IDC **01** 00:05:27.0±1.7, 18°.50S×175°.52W, h200km±15km, mb4.3/27, mb1 4.3/30, mb1mx4.2/44, mbtmp4.8/30, Error ellipse: s-maj=11.0km s-min=8.9km az=142.0*

*NEIC **01** 00:05:28.8±1.2, 18°.5S±0°.1×175°.5W±0°.1, h218km±5km, mb4.5/80, Error ellipse: s-maj=16.7km s-min=14.0km az=178.0*

ISC 01 00:05:26.9±0.3**, 18°.46S**±0°.07×**175°.54W**±0°.06**, h200**km**, n163,** σ1s.75/149**, mb4.5**/63**, 3C-6D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.35**	**97**		**Pn**	**00 06 47.3**	**+1.5**
AFI	**Afiamalu**	**5.79**	**39**	P	**Pn**	**00 06 51.5**	**0.0**
	15nm,0.3s,baz=174,slow=10,SNR=16						
AFI				S	**Sn**	**00 07 52.3**	**-6.2**
	20nm,0.3s,baz=45,slow=19,SNR=8.8						
AFI	**Afiamalu**	**5.79**	**39**		**Pn**	**00 06 50.0**	**-1.5**
MSVF	**Nonsavu**	**6.14**	**276**		Pn	00 07 04.7	+8.6
RAR	**Rarotonga**	**15.08**	**103**	P	**Pn**	**00 08 50.6**	**+0.4**
	1.0nm,0.3s,baz=262,slow=13,SNR=3.9						
DZM	**Mont Dzumac**	**17.28**	**255**	P	**P**	**00 09 14.3**	**-0.8**
	0.1nm,0.3s,baz=90,slow=11,SNR=2.5						
DZM	**Mont Dzumac**	**17.28**	**255**	IAmb	IAmb	00 09 20.6	
	comp=Z,41nm,0.8s						
URZ	**Urewera**	**20.74**	**197**	P	**P**	**00 09 50.9**	**-1.2**
	comp=Z,36nm,0.4s,baz=19,slow=5.8,SNR=36						
URZ				S	**S**	**00 13 23.5**	**-8.7**
	comp=Z,9.0nm,0.5s,baz=288,slow=20,SNR=3.1						
URZ	**Urewera**	**20.74**	**197**	P	**P**	**00 09 52.3**	**+0.2**
BFZ	**Birch Farm**	**23.25**	**196**	P	**P**	**00 10 16.6**	**+0.3**
HNR	**Honiara**	**25.40**	**287**	P	**P**	**00 10 34.8**	**-1.4**
	comp=Z,56nm,0.7s,baz=188,slow=13,SNR=2.8						
HNR	**Honiara**	**25.40**	**287**	IAmb	IAmb	00 10 38.6	
	comp=Z,58nm,0.9s						
LTZ	**Lake Taylor**	**26.36**	**200**	P	**P**	**00 10 44.6**	**+0.1**
RPZ	**Rata Peaks**	**27.59**	**201**	P	**P**	**00 10 54.7**	**-0.8**
	comp=Z,11nm,0.6s,baz=350,slow=8.7,SNR=6.0						
RPZ	**Rata Peaks**	**27.59**	**201**	IAmb	IAmb	00 10 58.1	
	comp=Z,13nm,0.6s						
WHZ	**Wether Hill Ro**	**30.59**	**203**	P	**P**	**00 11 22.4**	**+0.5**
WHZ				IAmb	IAmb	00 11 26.1	
	comp=Z,17nm,0.7s						
EIDS	**Eidsvold**	**31.66**	**251**	P	**P**	**00 11 32.6**	**+1.1**
EIDS				IAmb	IAmb	00 11 33.5	
	comp=Z,9.9nm,0.8s						
ARMA	**Armidale**	**32.06**	**242**	P	**P**	**00 11 36.5**	**+1.4**
ARMA				IAmb	IAmb	00 11 38.5	
	comp=Z,15nm,0.6s						
CTA	**Charters Tower**	**36.05**	**261**	P	**P**	**00 12 09.8**	**+0.3**
	comp=Z,28nm,0.6s,baz=83,slow=10,SNR=56						
PMG	**Port Moresby**	**37.24**	**279**	P	**P**	**00 12 20.0**	**+0.4**
	comp=Z,19nm,0.8s,baz=72,slow=7.0,SNR=11						
PMG	**Port Moresby**	**37.24**	**279**	P	**P**	**00 12 20.3**	**+0.7**
PMG				IAmb	IAmb	00 12 22.4	
	comp=Z,27nm,1.1s						
COEN	**Coen**	**39.84**	**270**	P	**P**	**00 12 41.8**	**+0.6**
COEN				IAmb	IAmb	00 12 43.9	
	comp=Z,16nm,0.8s						
STKA	**Stephens Creek**	**40.77**	**242**	P	**P**	**00 12 49.2**	**+0.5**
	comp=Z,6.6nm,0.4s,baz=90,slow=12,SNR=16						
STKA	**Stephens Creek**	**40.77**	**242**	P	**P**	**00 12 49.8**	**+1.1**
JAY	**Jayapura**	**45.68**	**285**	P	**P**	**00 13 29.1**	**+0.9**
	comp=Z,13nm,0.5s,baz=166,slow=8.0,SNR=11						
WR0	**Warramunga Arr**	**47.03**	**260**	P	**P**	**00 13 38.1**	**-0.5**
WR0				IAmb	IAmb	00 13 40.9	
	comp=Z,10nm,0.5s						
WRAB	**Tennant Creek**	**47.21**	**260**	P	**P**	**00 13 39.4**	**-0.5**
WRAB				IAmb	IAmb	00 13 40.7	
	comp=Z,11nm,0.7s						
WRA	**Warramunga Arr**	**47.22**	**260**	P	**P**	**00 13 39.5**	**-0.5**
	comp=Z,8.8nm,0.5s,baz=96,slow=6.8,SNR=89						
WRA				PcP	**PcP**	**00 15 08.1**	**-0.1**
	comp=Z,2.0nm,0.6s,baz=100,slow=3.2,SNR=4.3						
WRA				ScP	**ScP**	**00 18 41.2**	**-1.9**
	comp=Z,1.5nm,1.1s,baz=94,slow=3.7,SNR=3.1						
WRA				S	S	00 20 09.2	-8.7
	comp=Z,1.5nm,0.9s,baz=94,slow=14,SNR=6.7						
AS31	**Alice Springs**	**47.27**	**255**	P	**P**	**00 13 40.4**	**-0.1**
AS31				IAmb	IAmb	00 13 41.6	
	comp=Z,24nm,0.6s						
ASAR	**Alice Springs**	**47.27**	**255**	P	**P**	**00 13 40.4**	**-0.1**
	comp=Z,72nm,0.5s,baz=91,slow=8.7,SNR=611						
ASAR				PcP	**PcP**	**00 15 08.3**	**0.0**
	comp=Z,2.6nm,0.5s,baz=105,slow=4.1,SNR=3.8						
ASAR				S	**S**	**00 20 11.8**	**-6.9**
	comp=Z,4.6nm,0.8s,baz=92,slow=15,SNR=24						
ASAR	**Alice Springs**	**47.27**	**255**	P	**P**	**00 13 40.0**	**-0.5**
MTN	**Manton Dam**	**51.51**	**268**	P	**P**	**00 14 12.1**	**-0.4**
MTN				IAmb	IAmb	00 14 12.7	
	comp=Z,30nm,0.8s						
SAUI	**Saumlaki**	**52.62**	**274**	P	**P**	**00 14 21.3**	**+0.5**
KNRA	**Kununurra**	**53.15**	**264**	P	**P**	**00 14 24.3**	**-0.3**
SWI	**Sorong**	**55.03**	**282**	P	**P**	**00 14 38.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**55.63**	**260**	P	**P**	**00 14 42.5**	**+0.1**
	comp=Z,5.9nm,0.4s,baz=66,slow=5.3,SNR=51						
FITZ	**Fitzroy Crossi**	**55.63**	**260**	P	**P**	**00 14 42.8**	**+0.4**
FITZ				IAmb	IAmb	00 14 43.4	
	comp=Z,6.8nm,0.5s						
MSAI	**Masohi**	**56.32**	**278**	P	P	00 14 52.3	+4.9
AAI	**Ambon**	**56.90**	**278**	P	**P**	**00 14 52.1**	**+0.6**
	comp=Z,75nm,0.5s						
NLAI	**Namlea**	**58.08**	**278**	P	**P**	**00 15 00.2**	**+0.5**
	comp=Z,51nm,0.6s						
SOEI	**Soe**	**58.80**	**270**	P	**P**	**00 15 05.0**	**+0.2**
	comp=Z,73nm,1.3s						
SOEI	**Soe**	**58.80**	**270**	P	**P**	**00 15 05.3**	**+0.4**
TNTI	**Ternate**	**59.24**	**282**	P	**P**	**00 15 07.7**	**0.0**
BATI	**Baumata**	**59.25**	**269**	P	**P**	**00 15 09.0**	**+1.2**
	comp=Z,27nm,0.6s,baz=180,slow=1.0,SNR=7.4						
SANI	**Sanana**	**59.52**	**279**	P	**P**	**00 15 09.4**	**-0.3**
	comp=Z,58nm,0.8s						
SBA	**Scott Base**	**60.06**	**184**	P	**P**	**00 15 13.3**	**+1.1**
VNDA	**Vanda**	**60.14**	**186**	P	**P**	**00 15 14.1**	**+1.3**
	comp=Z,9.0nm,0.8s,baz=2.8,slow=7.2,SNR=4.2						
VNDA	**Vanda**	**60.14**	**186**	P	**P**	**00 15 13.8**	**+0.9**
VNDA				IAmb	IAmb	00 15 15.3	
	comp=Z,9.8nm,0.8s						
NWAO	**Narrogin (SRO)**	**61.36**	**242**	P	**P**	**00 15 21.6**	**-0.3**
	comp=Z,4.2nm,0.6s,baz=104,slow=7.8,SNR=3.2						
NWAO	**Narrogin (SRO)**	**61.36**	**242**	IAmb	IAmb	00 15 39.6	
	comp=Z,11nm,1.1s						
LUWI	**Luwuk**	**62.89**	**279**	P	**P**	**00 15 32.9**	**+0.7**
	comp=Z,66nm,1.0s						
LUWI	**Luwuk**	**62.89**	**279**	P	**P**	**00 15 32.5**	**+0.3**
MPSI	**Mapaga**	**66.06**	**279**	P	**P**	**00 15 52.8**	**0.0**
	comp=Z,26nm,0.9s						
MJAR	**Matsushiro Arr**	**70.00**	**322**	P	**P**	**00 16 16.5**	**-0.5**
	comp=Z,6.5nm,0.7s,baz=138,slow=6.1,SNR=23						
MJAR	**Matsushiro Arr**	**70.00**	**322**	P	**P**	**00 16 16.4**	**-0.5**
QSPA	**South Pole Qui**	**71.60**	**180**	P	**P**	**00 16 26.7**	**+0.5**
	comp=Z,35nm,0.8s,baz=22,slow=0.9,SNR=115						
QSPA	**South Pole Qui**	**71.60**	**180**	P	**P**	**00 16 26.7**	**+0.5**
NACB	**Ninganchiao**	**74.50**	**302**	P	**P**	**00 16 43.9**	**+0.2**
TPUB	**Ta-pu**	**74.87**	**301**	P	**P**	**00 16 45.4**	**-0.5**
LEM	**Lembang**	**75.42**	**268**	P	**P**	**00 16 49.4**	**-0.1**
	comp=Z,17nm,0.5s,baz=143,slow=20,SNR=4.5						
KMRM	**Mail Ridge**	**75.72**	**38**	IAmb	IAmb	00 16 52.4	
	comp=Z,11nm,0.8s						
KSRS	**Korea Array**	**76.95**	**317**	P	**P**	**00 16 59.0**	**+1.7**
	comp=Z,4.2nm,0.7s,baz=133,slow=6.6,SNR=11						
KSAR	**Wonju Array Be**	**76.96**	**317**	P	**P**	**00 16 58.1**	**+0.6**
MDPB	**Devils Postpil**	**77.00**	**43**	P	**P**	**00 16 58.4**	**+0.4**
GSC	**Goldstone, Bar**	**77.18**	**46**	P	**P**	**00 16 59.5**	**+0.7**
GLA	**Glamis**	**77.34**	**49**	P	**P**	**00 17 00.3**	**+0.6**
GLA				IAmb	IAmb	00 17 01.5	
	comp=Z,5.3nm,0.9s						
Y12C	**Blythe**	**77.93**	**48**	IAmb	IAmb	00 17 04.4	
	comp=Z,4.1nm,0.8s						
RYN	**Ryan**	**77.93**	**42**	P	**P**	**00 17 03.1**	**+0.1**
NVAR	**Mina Array Bea**	**77.96**	**42**	P	**P**	**00 17 03.8**	**+0.6**
	comp=Z,3.8nm,0.7s,baz=225,slow=9.3,SNR=32						
NVAR	**Mina Array Bea**	**77.96**	**42**	P	**P**	**00 17 03.4**	**+0.2**
TPNV	**Topopah Spring**	**78.47**	**45**	IAmb	IAmb	00 17 07.7	
	comp=Z,5.5nm,0.8s						
PINE	**Pine Mountain**	**79.56**	**37**	P	**P**	**00 17 12.1**	**+0.3**
TUC	**Tucson**	**79.90**	**51**	P	**P**	**00 17 14.2**	**+0.5**
NJ2	**Nanjing**	**80.41**	**308**	*e*P	**P**	**00 17 18.3**	**+2.0**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
X16A	**Lo Mia Camp, P**	**80.46**	**49**	IAmb	IAmb	00 17 18.9	
	comp=Z,4.5nm,0.8s						
319A	**Douglas**	**80.57**	**53**	IAmb	IAmb	00 17 19.4	
	comp=Z,6.5nm,0.9s						
U15A	**North Rim**	**80.88**	**47**	IAmb	IAmb	00 17 21.1	
	comp=Z,5.3nm,0.9s						
ELK	**Elko**	**81.22**	**42**	P	**P**	**00 17 20.9**	**+0.1**
KLR	**Kul'dur**	**82.00**	**328**	P	**P**	**00 17 25.2**	**+1.0**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.7nm,0.5s,baz=143,slow=10,SNR=3.4						
F10A	**Beach Ranch, E**	**82.98**	**37**	IAmb	IAmb	00 17 29.9	
	comp=Z,6.3nm,1.1s						
WHN	**Wuhan**	**83.14**	**305**	P	**P**	**00 17 33.4**	**+2.8**
MNTX	**Cornudas Mount**	**83.68**	**54**	IAmb	IAmb	00 17 35.5	
	comp=Z,8.1nm,1.0s						
TX31	**Lajitas Ar. Si**	**84.00**	**57**	IAmb	IAmb	00 17 37.6	
	comp=Z,15nm,1.1s						
TX32	**Lajitas Array**	**84.00**	**57**	IAmb	IAmb	00 17 37.6	
	comp=Z,15nm,1.1s						
TXAR	**Lajitas Array**	**84.00**	**57**	P	**P**	**00 17 36.3**	**+1.1**
	comp=Z,7.0nm,1.0s,baz=212,slow=4.4,SNR=42						
TXAR	**Lajitas Array**	**84.00**	**57**	P	**P**	**00 17 35.7**	**+0.5**
MAW	**Mawson**	**84.25**	**199**	P	**P**	**00 17 35.6**	**0.0**
	comp=Z,9.3nm,0.6s,baz=134,slow=7.2,SNR=17						
MAW	**Mawson**	**84.25**	**199**	P	**P**	**00 17 35.7**	**0.0**
ANMO	**Albuquerque**	**84.32**	**50**	P	**P**	**00 17 36.6**	**-0.3**
ANMO				IAmb	IAmb	00 17 38.5	
	comp=Z,7.0nm,1.1s						
MCK	**McKinley**	**84.51**	**12**	P	**P**	**00 17 36.9**	**0.0**
MCK				IAmb	IAmb	00 17 39.4	
	comp=Z,12nm,1.0s						
WRH	**Wood River Hil**	**85.33**	**12**	P	**P**	**00 17 40.8**	**-0.1**
WRH				IAmb	IAmb	00 17 41.4	
	comp=Z,8.6nm,0.8s						
HDA	**Harding Lake**	**85.50**	**12**	IAmb	IAmb	00 17 42.5	
	comp=Z,5.9nm,0.7s						
CCB	**Clear Creek Bu**	**85.55**	**12**	P	**P**	**00 17 41.7**	**-0.2**
CCB				IAmb	IAmb	00 17 42.2	
	comp=Z,6.4nm,0.7s						
ILAR	**Eielson Array**	**85.84**	**12**	P	**P**	**00 17 42.6**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=226,slow=6.3,SNR=15						
PDAR	**Pinedale Array**	**85.90**	**42**	P	**P**	**00 17 43.9**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=219,slow=1.9,SNR=5.4						
RPSI	**Rantau Prapat**	**86.61**	**274**	P	**P**	**00 17 48.5**	**+0.2**
RPSI				IAmb	IAmb	00 17 49.5	
	comp=Z,6.9nm,0.7s						
XAN	**Xi'an**	**88.77**	**306**	P	**P**	**00 17 59.8**	**+1.6**
XAN				pmax	pmax		
	comp=Z,11nm,1.0s						
XAN	**Xi'an**	**88.77**	**306**	P	**P**	**00 17 58.8**	**+0.6**
XAN				IAmb	IAmb	00 18 01.3	
	comp=Z,9.9nm,0.9s						
PLCA	**Paso Flores**	**88.96**	**133**	P	**P**	**00 17 58.5**	**-0.6**
	comp=Z,2.8nm,0.9s,baz=206,slow=1.6,SNR=3.1						
PLCA	**Paso Flores**	**88.96**	**133**	IAmb	IAmb	00 18 14.8	
	comp=Z,5.1nm,1.1s						
HHC	**Hu-ho-hao-te**	**89.62**	**314**	*e*P	**P**	**00 18 03.2**	**+1.1**
HHC				pmax	pmax		
	comp=Z,210nm,7.0s						
SNAA	**Sanae**	**89.96**	**178**	P	**P**	**00 18 02.2**	**-0.9**
SNAA	**Sanae**	**89.96**	**178**	P	**P**	**00 18 02.5**	**-0.7**
SNAA				IAmb	IAmb	00 18 03.2	
	comp=Z,7.6nm,0.8s						
VNA3	**Neumayer Olymp**	**90.00**	**175**	P	**P**	**00 18 02.6**	**-0.7**
VNA2	**Neumayer--Watz**	**90.47**	**176**	P	**P**	**00 18 05.1**	**-0.3**
	baz=189,slow=3.2						
VNA1	**Neumayer--Stat**	**90.68**	**176**	P	**P**	**00 18 06.1**	**-0.3**
W35A	**Tecumseh**	**91.58**	**53**	P	**P**	**00 18 11.5**	**+0.3**
CM31	**Chiang Mai Arr**	**91.64**	**289**	P	**P**	**00 18 12.7**	**+0.9**
CM31				IAmb	IAmb	00 18 14.3	
	comp=Z,3.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**91.64**	**289**	P	**P**	**00 18 12.8**	**+1.0**
	comp=Z,3.8nm,0.9s,baz=113,slow=2.5,SNR=23						
CMAR	**Chiang Mai Arr**	**91.64**	**289**	P	**P**	**00 18 13.1**	**+1.3**
INK	**Inuvik**	**91.72**	**14**	P	**P**	**00 18 10.7**	**-0.3**
	comp=Z,1.8nm,0.7s,baz=180,slow=6.7,SNR=4.5						
INK	**Inuvik**	**91.72**	**14**	IAmb	IAmb	00 18 11.1	
	comp=Z,2.8nm,0.9s						
CHTO	**Chiang Mai**	**91.76**	**289**	P	**P**	**00 18 13.2**	**+0.8**
CHTO				IAmb	IAmb	00 18 14.5	
	comp=Z,5.0nm,0.7s						
YKA	**Yellowknife Ar**	**93.71**	**24**	P	**P**	**00 18 19.8**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=242,slow=4.4,SNR=11						
YKA	**Yellowknife Ar**	**93.71**	**24**	P	**P**	**00 18 20.4**	**+0.1**
SONM	**Songino Array**	**95.76**	**319**	P	**P**	**00 18 31.4**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=127,slow=3.4,SNR=4.8						
SONM	**Songino Array**	**95.76**	**319**	IAmb	IAmb	00 18 36.2	
	comp=Z,0.9nm,1.0s						
ZALV	**Zalesovo Beam**	**110.36**	**322**	PKiKP	**PKiKP**	**00 23 33.0**	**-1.8**
	comp=Z,1.0nm,0.7s,baz=178,slow=2.7,SNR=3.9						
MKAR	**Makanchi Array**	**111.48**	**314**	Pdiff	**Pdif**	**00 19 40.1**	**-0.2**
	comp=Z,0.7nm,1.1s,baz=98,slow=4.4,SNR=2.6						
MKAR				PKiKP	**PKiKP**	**00 23 35.6**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=136,slow=0.5,SNR=12						
ARCES	**ARCESS Array B**	**127.32**	**351**	PKP	**PKPdf**	**00 24 05.9**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=7.1,slow=2.2,SNR=7.2						
BOSA	**Boshof**	**129.06**	**204**	PKP	**PKPdf**	**00 24 11.5**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=148,slow=4.5,SNR=5.5						
GEYT	**Alibeck**	**129.61**	**304**	PKP	**PKPdf**	**00 24 11.8**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=341,slow=3.1,SNR=4.8						
GEYT	**Alibeck**	**129.61**	**304**		**PKPdf**	**00 24 13.2**	**+0.8**
FINES	**FINESS Array B**	**134.43**	**346**	PKP	**PKPdf**	**00 24 20.7**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=357,slow=4.2,SNR=6.0						
AKASG	**Malin Array Be**	**142.28**	**334**	PKhKP	PKPpre	00 24 30.0	
	comp=Z,0.1nm,0.3s,baz=38,slow=3.7,SNR=5.6						
SORM	**Soroca**	**144.59**	**332**	⇓P	**PKPab**	**00 24 38.5**	**-0.1**
BURAR	**Bucovina Array**	**146.34**	**334**	⇓P	**PKPbc**	**00 24 45.5**	**+1.3**
KOLS	**Kolonicke sedl**	**146.36**	**339**	*e*PKP	**PKPdf**	**00 24 44.7**	**+2.2**
BIZ	**Bicaz**	**146.49**	**333**	⇑P	**PKPdf**	**00 24 45.2**	**+2.4**
CLL	**Collm**	**146.53**	**350**	*i* PKPbc	**PKPdf**	**00 24 44.0**	**+1.3**
	comp=Z,12nm,1.1s						
CLL	**Collm**	**146.53**	**350**	*i* (PKP)	PKiKP	00 24 58.6	+11
	comp=Z,8.0nm,0.8s						
OSTC	**Ostas**	**146.63**	**346**	*e*PKP	**PKPdf**	**00 24 45.5**	**+2.6**
OSTC				*e*x	x	00 24 59.2	
UPC	**Upice**	**146.72**	**347**	*e*PKP	**PKPdf**	**00 24 45.0**	**+1.9**
UPC				*e*x	x	00 24 59.0	
BRG	**Berggiesshubel**	**146.79**	**349**	*e*PKP	PKiKP	00 24 59.6	+12
	comp=Z,5.4nm,0.9s						
DPC	**Dobruska-Polom**	**146.80**	**346**	*e*PKP	**PKPdf**	**00 24 45.2**	**+2.0**
DPC				*e*x	x	00 24 59.8	
TRPA	**Tarpa**	**146.95**	**338**	⇓P	**PKPdf**	**00 24 45.7**	**+2.3**
LANS	**Liptovska Anna**	**147.07**	**342**	*e*PKP	**PKPdf**	**00 24 46.8**	**+3.1**
BRTR	**Keskin Array B**	**147.09**	**316**	PKP	**PKPdf**	**00 24 43.1**	**-1.1**
	comp=Z,3.1nm,0.9s,baz=67,slow=4.2,SNR=13						
BRTR				PKPbc	**PKPbc**	**00 24 46.5**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=136,slow=4.3,SNR=13						
PRU	**Pruhonice**	**147.52**	**348**	*e*PKP	**PKPdf**	**00 24 47.4**	**+3.0**
PRU				*e*x	x	00 25 01.6	
GOPC	**GO Pecny, Ondr**	**147.54**	**348**	*e*PKP	**PKPdf**	**00 24 47.3**	**+2.8**
GOPC				*e*x	x	00 25 01.7	
CJR	**Cluj-Napoca**	**147.72**	**335**	⇓P	**PKPdf**	**00 24 48.3**	**+3.4**
VYHS	**Vyhne**	**147.85**	**342**	*e*PKP	**PKPdf**	**00 24 48.0**	**+3.0**
DRGR		**148.00**	**336**	⇓P	**PKPdf**	**00 24 48.6**	**+3.2**
VOIR		**148.12**	**332**	⇑P	**PKPdf**	**00 24 49.3**	**+3.7**
GRF	**Grafenberg Arr**	**148.37**	**352**	*e*PKPbc	**PKPbc**	**00 24 49.7**	**+0.2**
	baz=11,slow=2.1						
KHC	**Kasperske Hory**	**148.53**	**349**	*e*PKP	**PKPdf**	**00 24 49.7**	**+3.6**
KHC				*e*x	x	00 24 54.7	
KHC				*e*x	x	00 25 04.3	
GERES	**GERESS Array B**	**148.78**	**348**	PKPbc	**PKPdf**	**00 24 50.5**	**+3.9**
	comp=Z,2.0nm,0.7s,baz=26,slow=2.5,SNR=25						
GERES	**GERESS Array B**	**148.78**	**348**		**PKPdf**	**00 24 50.2**	**+3.6**
SIRR	**Siria**	**148.84**	**337**	⇓P	**PKPbc**	**00 24 51.0**	**+0.1**
GZR	**Gura Zlata**	**149.12**	**334**	⇑P	**PKPdf**	**00 24 50.8**	**+3.6**
CONA	**Conrad Observa**	**149.17**	**345**	*e*PKiKP	**PKPbc**	**00 24 51.6**	**-0.1**
	comp=Z,5.4nm,1.1s						
SOKA	**Soboth**	**150.54**	**345**	*e*PKiKP	**PKPdf**	**00 24 54.1**	**+4.7**
	comp=Z,3.1nm,0.8s						
RETA	**Reutte**	**150.59**	**351**	*e*PKiKP	**PKPbc**	**00 24 54.5**	**-0.7**
	comp=Z,2.1nm,0.7s,SNR=4.4						
WATA	**Walderalm**	**150.62**	**350**	*e*PKiKP	**PKPbc**	**00 24 54.6**	**-0.7**
	comp=Z,4.5nm,0.6s,SNR=6.4						
MOTA	**Moosalm**	**150.68**	**351**	*e*PKiKP	**PKPbc**	**00 24 54.6**	**-0.8**
	comp=Z,6.1nm,1.0s,SNR=5.7						
SQTA	**Sankt Quirin**	**150.79**	**351**	*e*PKiKP	**PKPbc**	**00 24 55.3**	**-0.3**
	comp=Z,5.3nm,0.7s,SNR=5.8						
MYKA	**Terra Mystica**	**150.91**	**347**	*e*PKiKP	**PKPdf**	**00 24 54.9**	**+4.9**
	comp=Z,2.8nm,0.5s						
ABTA	**Abfaltersbach**	**151.02**	**349**	*e*PKiKP	**PKPbc**	**00 24 55.3**	**-0.9**
	comp=Z,8.4nm,0.6s,SNR=11						
FETA	**Feichten**	**151.06**	**351**	*e*PKiKP	**PKPbc**	**00 24 55.9**	**-0.5**
	comp=Z,6.7nm,0.8s,SNR=6.8						
ESDC	**Sonseca Array**	**157.64**	**17**	PKPab	**PKPab**	**00 25 32.6**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=332,slow=3.3,SNR=6.4						
ESDC	**Sonseca Array**	**157.64**	**17**		**PKPab**	**00 25 33.1**	**+0.5**
TORD	**Torodi Ar. Bea**	**174.08**	**153**	PKP	**PKPdf**	**00 25 11.3**	**-2.0**
	comp=Z,0.8nm,0.8s,baz=310,slow=1.7,SNR=4.3						
TORD				PKPab	**PKPab**	**00 26 44.8**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=205,slow=3.8,SNR=13						
TORD	**Torodi Ar. Bea**	**174.08**	**153**		**PKPab**	**00 26 45.0**	**-0.6**

IDC 01 00:06:44.9±9.0**, 20.17N×147.05E, h0km, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.5**/53**, mbtmp3.7**/5**, Error ellipse: s-maj=320.9km s-min=119.9km az=20.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**42.83**	**320**	P	P	00 14 45.0	+0.2
	0.1nm,0.4s,baz=133,slow=8.8,SNR=2.5						
ZALV	**Zalesovo Beam**	**57.65**	**322**	P	P	00 16 36.1	-0.8
	0.6nm,0.5s,baz=115,slow=6.5,SNR=3.6						
MKAR	**Makanchi Array**	**58.38**	**313**	P	P	00 16 42.4	+0.1
	0.4nm,0.8s,baz=96,slow=8.4,SNR=3.2						
KURBB	**Kurchatov Arra**	**61.10**	**317**	P	P	00 17 00.6	-0.2
	1.0nm,0.7s,baz=92,slow=7.6,SNR=8.3						
FINES	**FINESS Array B**	**86.09**	**336**	P	P	00 19 27.6	+0.1
	4.3nm,0.9s,baz=59,slow=5.4,SNR=7.1						

*IDC **01** 00:16:07.3±1.0, 19.01N×120.42E, h0km, mb3.6/9, mb1 3.7/9, mb1mx3.6/40, mbtmp3.6/9, Error ellipse: s-maj=40.2km s-min=18.8km az=64.0*

ISC 01 00:16:11.5±1.0**, 19.0N**±0.2×**120.4E**±0.2**, h28km, n9, σ0.56**/9**, mb3.5**/8**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**20.33**	**272**	P	**P**	**00 20 45.8**	**0.0**
	0.6nm,0.9s,baz=84,slow=7.3,SNR=4.5						
SONM	**Songino Array**	**30.94**	**342**	P	**P**	**00 22 25.7**	**-0.5**
	0.6nm,1.0s,baz=171,slow=9.9,SNR=3.2						
WRA	**Warramunga Arr**	**41.05**	**160**	P	**P**	**00 23 52.0**	**-0.7**
	0.5nm,0.8s,baz=339,slow=9.4,SNR=3.1						
MKAR	**Makanchi Array**	**41.70**	**320**	P	**P**	**00 23 58.2**	**+0.3**
	0.5nm,0.9s,baz=111,slow=7.9,SNR=4.3						
ZALV	**Zalesovo Beam**	**44.28**	**330**	P	**P**	**00 24 17.9**	**-0.7**
	0.3nm,0.3s,baz=109,slow=7.8,SNR=3.8						
ASAR	**Alice Springs**	**44.41**	**162**	P	**P**	**00 24 20.3**	**+0.3**
	0.5nm,0.8s,baz=340,slow=6.9,SNR=4.7						
NRIK	**Noril'sk**	**54.22**	**346**	P	**P**	**00 25 34.5**	**+0.2**
	0.4nm,0.4s,baz=127,slow=6.6,SNR=4.1						
GEYT	**Alibeck**	**56.90**	**303**	P	**P**	**00 25 54.5**	**+0.2**
	1.3nm,0.8s,baz=186,slow=4.5,SNR=5.5						
YKA	**Yellowknife Ar**	**88.01**	**22**	P	**P**	**00 28 59.5**	**+0.6**
	0.2nm,0.5s,baz=317,slow=4.7,SNR=6.7						

MAN 01 00:19:45.9, 6.11N×126.84E, h134km, mb4.7, ML3.6, MS3.5, Mindanao

YARS 01 00:23:40.8±0.0**, 56.12N×128.94E, h1km, ML3.6**/17**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BMKR	**Bomnak**	**1.41**	**182**	*e*Pg	Pn	00 24 06.1	-1.5
	0.1nm,0.2s						
KROS	**Kirovskiy**	**2.03**	**215**	*e*Pg	Pn	00 24 17.0	+0.9
	0.1nm,0.3s						
KROS				*e*Sg	Sn	00 24 42.8	+0.7
	0.3nm,0.3s						
IENR	**Iengra**	**2.29**	**274**	*e*Pg	Pb	00 24 21.9	-0.9
	0.0nm,0.1s						
IENR				*e*Sg	Sg	00 24 52.9	-1.2
	0.1nm,0.3s						
IENR				*e*Sg	Sg	00 24 52.9	-1.2
	0.1nm,0.3s						
CLNS	**Chul'man**	**2.36**	**290**	*e*Pg	Pb	00 24 23.3	-0.8
	0.0nm,0.2s						
CLNS				*e*Sn	Sn	00 24 51.5	+1.3
CLNS				*e*Sg	Sg	00 24 55.1	-1.4
	0.2nm,0.3s						
CLNS				*e*Sg	Sg	00 24 55.1	-1.4
	0.2nm,0.4s						
TNDR	**Tynda**	**2.58**	**250**	*e*Pg	Pb	00 24 27.9	+0.1
	0.0nm,0.2s						
TNDR				*e*Sg	Sb	00 25 01.3	+1.2
	0.0nm,0.2s						
TNDR				*e*Sg	Sb	00 25 01.3	+1.2
	0.1nm,0.3s						
CGD	**Chagda**	**2.79**	**18**	*e*Pg	Pb	00 24 32.0	+0.6
	0.0nm,0.5s						
CGD				*e*Sg	Sg	00 25 08.5	-1.9
	0.2nm,0.4s						
CGD				*e*Sg	Sg	00 25 08.5	-1.9
	0.2nm,0.3s						
ALDR	**Aldan**	**3.15**	**324**	*e*Pg	Pb	00 24 38.2	+0.7
	0.0nm,0.2s						
ALDR				*e*Sg	Sb	00 25 19.0	+2.7
	0.0nm,0.1s						
ALDR				*e*Sg	Sb	00 25 19.0	+2.7
	0.1nm,0.2s						
YKLR	**Yuktali**	**4.08**	**280**	*e*Pn	Pn	00 24 45.3	+1.0
YKLR				*e*Pg	Pb	00 24 54.7	+1.3
	0.0nm,0.2s						
YKLR				*e*Sn	Sn	00 25 33.2	+0.5
YKLR				*e*Sg	Sg	00 25 48.6	-3.1
	0.1nm,0.6s						
YKLR				*e*Sg	Sg	00 25 48.6	-3.1
	0.0nm,0.6s						
KHN	**Khani**	**5.13**	**283**	*e*Sg	Sb	00 26 17.4	+4.1
	0.0nm,0.1s						
TUP	**Tupik**	**5.41**	**255**	*e*Pg	Pb	00 25 16.5	+0.5
	0.0nm,0.5s						
TBGR	**Tabaga**	**5.73**	**3**	*e*Pg	Pb	00 25 23.9	+2.4
	0.0nm,0.4s						
TBGR				*e*Sn	Sn	00 26 13.0	-0.3
TBGR				*e*Sg	Sg	00 26 39.6	-5.2
	0.1nm,0.8s						
TBGR				*e*Sg	Sg	00 26 39.6	-5.2
	0.3nm,0.9s						
YAK	**Yakutsk**	**5.95**	**3**	*e*Sg	Sg	00 26 46.8	-4.8
OLMR	**Olekminsk**	**6.18**	**317**	*e*Sg	Sg	00 26 53.7	-5.4
	0.0nm,1.2s						

*ISK **01** 00:33:44.4, 35.90N×31.30E, h22km, ML2.8/14*
*NIC **01** 00:33:44.5±0.0, 36.15N×31.84E, h0km±3km, Ml2.8/5*

ISC 01 00:33:45.9±2.3**, 35.88N**±0.06×**31.3E**±0.1**, h27km**±17km**, n21, σ1.11**/29**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMS	**Akamas**	**1.20**	**135**	P	**Pn**	**00 34 06.5**	**-0.4**
AKMS				S	**Sn**	**00 34 25.9**	**+3.5**
AKMS				AML	AML	00 34 32.9	
	0.9nm,0.4s						
AKMS				AML	AML	00 34 32.9	
	0.9nm,0.4s						
AKMS				AML	AML	00 34 33.6	
	0.6nm,0.3s						
AKMS				AML	AML	00 34 33.6	
	0.6nm,0.3s						
ALFC	**Alefka**	**1.28**	**124**	P	**Pn**	**00 34 06.9**	**-1.1**
ALFC				S	**Sb**	**00 34 25.7**	**+0.4**
ALFC				AML	AML	00 34 33.8	
	0.6nm,0.2s						
ALFC				AML	AML	00 34 33.8	
	0.6nm,0.2s						
ALFC				AML	AML	00 34 34.1	
	0.6nm,0.2s						
ALFC				AML	AML	00 34 34.1	
	0.6nm,0.2s						
TEKE	**Tekeli-Mersin**	**1.49**	**79**	PN	**Pn**	**00 34 10.2**	**-0.7**
TEKE				SN	**Sn**	**00 34 29.7**	**+0.2**
NATA	**Nata**	**1.51**	**136**	P	**Pb**	**00 34 12.8**	**-0.4**
NATA				S	**Sb**	**00 34 34.3**	**+2.4**
NATA				AML	AML	00 34 44.2	
	1.2nm,0.6s						
NATA				AML	AML	00 34 44.2	
	1.2nm,0.6s						
NATA				AML	AML	00 34 45.3	
	1.7nm,0.7s						
NATA				AML	AML	00 34 45.3	
	1.7nm,0.7s						
BERE	**Bereket-Mersin**	**1.62**	**73**	PN	**Pn**	**00 34 12.5**	**-0.4**
BERE				SN	**Sn**	**00 34 32.9**	**-0.1**
SZAC	**Souni**	**1.71**	**130**	P	**Pb**	**00 34 15.3**	**-1.3**
SZAC				S	**Sb**	**00 34 38.2**	**+0.5**
SZAC				AML	AML	00 34 49.5	
	0.5nm,0.5s						
SZAC				AML	AML	00 34 49.5	
	0.5nm,0.5s						
SZAC				AML	AML	00 34 55.8	
	0.4nm,0.5s						
SZAC				AML	AML	00 34 55.8	
	0.4nm,0.5s						
TEVE	**Tevekalti-Mers**	**1.82**	**72**	PN	**Pn**	**00 34 15.3**	**-0.2**
AKKU	**Akkuyu-Mersin**	**1.84**	**81**	PN	**Pn**	**00 34 15.7**	**0.0**
ATHAL	**Athalassa**	**1.86**	**113**	S	**Sn**	**00 34 38.0**	**-0.6**
CSS	**Mathiatis**	**1.89**	**118**	PN	**Pn**	**00 34 16.6**	**+0.2**
CSS	**Mathiatis**	**1.89**	**118**	P	**Pn**	**00 34 15.1**	**-1.3**
CSS				S	**Sn**	**00 34 39.6**	**+0.2**
IKL	**Isikli**	**1.96**	**79**	PN	**Pn**	**00 34 17.4**	**0.0**
KEBE	**Keben-Mersin**	**2.03**	**73**	PN	**Pn**	**00 34 18.3**	**-0.1**
MVOU	**Mavrovouni**	**2.08**	**114**	P	**Pn**	**00 34 17.5**	**-1.6**
MVOU				S	**Sn**	**00 34 42.5**	**-1.7**
MVOU				AML	AML	00 34 55.5	
	0.1nm,0.5s						
MVOU				AML	AML	00 34 55.5	
	0.1nm,0.5s						
MVOU				AML	AML	00 34 57.7	
	0.2nm,0.5s						
MVOU				AML	AML	00 34 57.7	
	0.2nm,0.5s						
SILI	**Silifke-Mersin**	**2.18**	**76**	PN	**Pn**	**00 34 20.4**	**+0.1**
KONT	**Konya--Tatoy**	**2.23**	**22**	PN	**Pn**	**00 34 20.9**	**-0.2**
EREN	**Erenkoy**	**2.36**	**98**	PN	**Pn**	**00 34 23.1**	**+0.3**
KIZK	**Mersin**	**2.37**	**74**	PN	**Pn**	**00 34 23.2**	**+0.1**
LADK	**Ladik-KONYA**	**2.47**	**20**	PN	**Pn**	**00 34 24.3**	**-0.2**
MERS	**Mersin**	**2.78**	**68**	PN	**Pn**	**00 34 28.9**	**+0.2**
CMRD	**Camardi-Nigde**	**3.45**	**58**	PN	**Pn**	**00 34 38.5**	**+0.5**

*IDC **01** 00:49:58.9±1.4, 30.42N×130.77E, h74km±11km, mb3.5/12, mb1 3.6/15, mb1mx3.5/33, mbtmp3.8/15, MS2.4/1, Ms1 2.4/1, ms1mx2.2/33, Error ellipse: s-maj=22.0km s-min=9.1km az=105.0*
*JMA **01** 00:49:59.7±0.1, 30.46N×130.59E, h61km±1km, M3.5*

ISC 01 00:49:58.7±0.7**, 30.44N**±0.05×**130.62E**±0.06**, h67km**±5km**, n31, σ0.99**/41**, mb3.7**/12**, 2C-7D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAK	**Yakushimahirau**	**0.22**	**205**	⇑P	**Pn**	**00 50 09.4**	**+0.3**
JYAK				*e*S	**Sn**	**00 50 16.2**	**-0.4**
JMTN	**Minamitane**	**0.25**	**99**	⇑P	**Pn**	**00 50 09.8**	**+0.6**
JMTN				*e*S	**Sn**	**00 50 17.2**	**+0.3**
JKC	**Kuchinoerabu**	**0.36**	**274**	P	**Pn**	**00 50 10.3**	**+0.3**
JKC				*e*S	**Sn**	**00 50 17.9**	**-0.4**
JTN	**Tanegashima 3**	**0.38**	**55**	⇓P	**Pn**	**00 50 10.7**	**+0.5**
JTN				*e*S	**Sn**	**00 50 18.8**	**+0.2**
JTSR	**Tashiro 2**	**0.77**	**20**	⇓P	**Pn**	**00 50 14.7**	**+0.4**
JTSR				*e*S	**Sn**	**00 50 25.4**	**-0.4**
JNN	**Nakanoshima**	**0.88**	**227**	⇓P	**Pn**	**00 50 16.2**	**+0.7**
JNN				S	**Sn**	**00 50 28.5**	**+0.6**
JSU	**Suzuyama**	**1.07**	**353**	⇓P	**Pn**	**00 50 18.4**	**+0.4**
JNAR	**Kushima--Naru**	**1.22**	**27**	⇓P	**Pn**	**00 50 21.1**	**+1.2**
JNAR				*e*S	**Sn**	**00 50 36.8**	**+1.0**
JNKG	**Nichinankitago**	**1.38**	**28**	P	**Pn**	**00 50 23.5**	**+1.5**
JSJ	**Shimokoshiki**	**1.46**	**328**	⇓P	**Pn**	**00 50 22.9**	**-0.1**
JSJ				S	**Sn**	**00 50 40.6**	**-0.8**
JTZ	**Takazaki**	**1.52**	**15**	⇓P	**Pn**	**00 50 24.7**	**+0.9**
JTZ				S	**Sn**	**00 50 43.4**	**+0.7**
JNU	**Nakatsue**	**2.69**	**5**	P	**Pn**	**00 50 41.2**	**+1.6**
	14nm,0.3s,baz=344,slow=19,SNR=78						
JNU				S	**Sn**	**00 51 11.8**	**+0.7**
	5.0nm,0.3s,baz=192,slow=22,SNR=4.1						
JNU				LR	LR	00 51 30.9	
	comp=Z,71nm,20.3s,baz=180,slow=34						
JOW	**Kunigami**	**4.14**	**210**	P	**Pn**	**00 51 01.0**	**+1.5**
	0.8nm,0.3s,baz=93,slow=19,SNR=14						
JOW				S	**Sn**	**00 51 48.1**	**+1.5**
	0.6nm,0.3s,baz=90,slow=16,SNR=2.4						
KSRS	**Korea Array**	**7.35**	**343**	P	**Pn**	**00 51 45.9**	**+2.6**
	0.3nm,0.3s,baz=160,slow=13,SNR=5.0						
MJAR	**Matsushiro Arr**	**8.79**	**44**	P	**Pn**	**00 52 02.4**	**-0.6**
	0.1nm,0.3s,baz=217,slow=31,SNR=6.4						
SONM	**Songino Array**	**25.43**	**320**	P	**P**	**00 55 20.4**	**+0.3**
	2.7nm,0.5s,baz=139,slow=10,SNR=29						
H11N2	**WAKE ISLAND Hy**	**34.41**	**99**	T	T	01 32 54.8	
	baz=294						
H11N1	**WAKE ISLAND Hy**	**34.41**	**99**	T	T	01 32 53.0	
	baz=294						
H11N3	**WAKE ISLAND Hy**	**34.43**	**99**	T	T	01 32 54.2	
	baz=294						
ZALV	**Zalesovo Beam**	**40.31**	**319**	P	**P**	**00 57 29.4**	**+0.1**
	0.5nm,0.4s,baz=111,slow=8.1,SNR=2.9						
ZALV				PcP	**PcP**	**00 59 31.6**	**0.0**
	0.3nm,0.3s,baz=144,slow=5.2,SNR=2.6						
MKAR	**Makanchi Array**	**40.47**	**308**	P	**P**	**00 57 31.6**	**+0.8**
	0.5nm,0.6s,baz=88,slow=10,SNR=11						
MKAR				PcP	**PcP**	**00 59 32.6**	**+0.3**
	0.3nm,0.6s,baz=67,slow=3.3,SNR=3.6						
NRIK	**Noril'sk**	**45.96**	**340**	P	**P**	**00 58 14.0**	**-0.6**
	1.0nm,0.4s,baz=124,slow=7.5,SNR=3.9						
WRA	**Warramunga Arr**	**50.22**	**175**	P	**P**	**00 58 47.7**	**-0.3**
	0.1nm,0.5s,baz=355,slow=8.5,SNR=3.1						
ARCES	**ARCESS Array B**	**66.88**	**338**	P	**P**	**01 00 43.0**	**-0.3**
	5.1nm,1.1s,baz=67,slow=6.9,SNR=2.8						
FINES	**FINESS Array B**	**70.25**	**330**	P	**P**	**01 01 03.8**	**-0.6**
	3.0nm,0.7s,baz=61,slow=5.8,SNR=12						
AKASG	**Malin Array Be**	**73.71**	**319**	P	**P**	**01 01 24.6**	**-0.7**
	0.3nm,0.4s,baz=59,slow=6.6,SNR=4.2						
YKA	**Yellowknife Ar**	**73.84**	**26**	P	**P**	**01 01 26.2**	**+0.5**
	0.3nm,0.6s,baz=305,slow=6.1,SNR=5.9						
BRTR	**Keskin Array B**	**76.12**	**308**	P	**P**	**01 01 40.1**	**+0.5**
	0.7nm,0.8s,baz=79,slow=3.6,SNR=4.7						
NB2	**NORSAR Subarra**	**76.47**	**334**	P	**P**	**01 01 41.8**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=48,slow=5.9						
NOA	**NORSAR Array B**	**76.47**	**334**	P	**P**	**01 01 41.4**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=50,slow=5.8,SNR=4.9						
NVAR	**Mina Array Bea**	**86.10**	**47**	P	**P**	**01 02 29.7**	**-3.0**
	comp=Z,0.3nm,0.7s,baz=260,slow=5.4,SNR=2.7						

*SOME **01** 00:54:00.4, 40.25N×77.68E, h0km*
*NNC **01** 00:54:02.0±1.5, 40.21N×77.64E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=10.2km s-min=7.8km az=165.0*
*KRNET **01** 00:54:02.7±0.1, 40.33N×77.69E, h17km, mb3.1*

ISC 01 00:53:59.9±2.2**, 40.20N**±0.09×**77.58E**±0.04**, h17km**±14km**, n52, σ1.66**/83**, 29C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**1.54**	**6**	⇑*i*P	**Pg**	**00 54 29.6**	**+0.1**
	baz=3.0						
TARG				⇑*i*S	**Sg**	**00 54 48.7**	**-0.9**
	baz=3.0						
NRN	**Naryn**	**1.72**	**316**	⇑*e*P	**Pg**	**00 54 34.5**	**+1.5**
	baz=10.0						
NRN				⇑*i*S	**Sg**	**00 54 57.5**	**+2.1**
	baz=10.0						
KDJ	**Kajisay**	**1.95**	**351**	⇑*i*P	**Pb**	**00 54 37.0**	**+1.9**
	baz=48						
KDJ				⇑*i*S	**Sg**	**00 55 02.3**	**-0.5**
	baz=48						
ULHL	**Ulahol**	**2.28**	**334**	⇑*i*P	**Pb**	**00 54 42.9**	**+2.2**
	baz=31						
ULHL				⇑*i*S	**Sg**	**00 55 12.1**	**-1.1**
	baz=31						
KZA	**Kyzart**	**2.57**	**318**	⇑*i*P	**Pb**	**00 54 47.9**	**+2.1**
	baz=14						
KZA				⇑*i*S	**Sb**	**00 55 20.4**	**+3.1**
	baz=14						
ANVS	**Anan'yevo**	**2.58**	**1**	⇑*i*P	**Pb**	**00 54 46.1**	**+0.2**
	baz=60						
ANVS				⇑*i*S	**Sb**	**00 55 18.0**	**+0.6**
	baz=60						
BOOM	**Boomskoye usch**	**2.60**	**332**	⇑*i*P	**Pb**	**00 54 47.4**	**+1.2**
	baz=29						
BOOM				⇑*i*S	**Sb**	**00 55 19.9**	**+2.0**
	baz=29						
TNSS	**Tian-Shan**	**2.88**	**351**	*e*P	**Pg**	**00 54 54.8**	**-0.2**
	17nm,0.5s						
TNSS				*e*S	**Sg**	**00 55 33.9**	**+1.5**
	27nm,0.4s						
TNSS	**Tian-Shan**	**2.88**	**351**	Pg	**Pg**	**00 54 54.8**	**-0.2**
	17nm,0.5s						
TNSS				Lg	Lg	00 55 34.6	
	27nm,0.4s						
ARLS	**Aral**	**2.97**	**305**	⇑*i*P	**Pb**	**00 54 52.9**	**+0.4**
	baz=2.0						
ARLS				⇑*i*S	**Sb**	**00 55 30.5**	**+2.0**
	baz=2.0						
MDOK	**Medeo**	**2.99**	**353**	*e*P	**Pg**	**00 54 56.7**	**-0.4**
	9.5nm,0.4s						
MDOK				*e*S	**Sg**	**00 55 37.4**	**+1.5**
	30nm,0.6s						
MDOK	**Medeo**	**2.99**	**353**	Pg	**Pb**	**00 54 55.2**	**+2.5**
	5.5nm,0.4s						

MDOK				Lg	Lg	00 55 36.8	
	29nm,0.6s						
MDOK	Medeo	2.99	353	Pg	Pg	00 54 56.7	-0.4
	9.5nm,0.4s						
MDOK				Lg	Lg	00 55 37.4	
	30nm,0.6s						
ZHN	Zhinishke	3.04	12	eP	Pg	00 54 57.3	-0.7
	3.7nm,0.2s						
ZHN				eS	Sg	00 55 38.3	+0.9
	5.9nm,0.3s						
ZHN	Zhinishke	3.04	12	Pg	Pg	00 54 57.3	-0.7
	3.7nm,0.2s						
ZHN				Lg	Lg	00 55 38.3	
	5.9nm,0.3s						
KNDC	Almaty	3.05	352	⇓Pg	Pg	00 54 57.4	-0.9
	4.2nm,0.3s						
KNDC				⇑Lg	Lg	00 55 39.8	
	36nm,0.5s						
KOTS	Kotyrbulak	3.05	354	eP	Pg	00 54 57.8	-0.6
	12nm,0.4s						
KOTS				eS	Sg	00 55 38.9	+1.0
	81nm,0.6s						
KOTS	Kotyrbulak	3.05	354	Pg	Pg	00 54 57.8	-0.6
	12nm,0.4s						
KOTS				Lg	Lg	00 55 39.5	
	81nm,0.6s						
MTBS	Maitube	3.05	344	eP	Pg	00 54 57.9	-0.5
	3.9nm,0.2s						
MTBS				eS	Sg	00 55 39.0	+1.1
	13nm,0.3s						
MTBS	Maitube	3.05	344	Pg	Pg	00 54 57.9	-0.5
	3.9nm,0.2s						
MTBS				Lg	Lg	00 55 40.0	
	13nm,0.3s						
UCH	Uchtor	3.08	312	⇓iP	Pb	00 54 54.7	+0.3
	baz=9.0						
UCH				⇓iS	Sb	00 55 32.7	+0.9
	baz=9.0						
TKM2	Tokmak 2	3.10	332	⇑iP	Pb	00 54 54.5	-0.2
	baz=29						
TKM2				⇑iS	Sb	00 55 32.0	-0.3
	baz=29						
TKM2	Tokmak 2	3.10	332	⇑Pg	Pb	00 54 56.0	+1.4
	2.1nm,0.6s						
TKM2				⇓Lg	Lg	00 55 42.7	
	7.7nm,0.5s						
UZB	Uzynbulak	3.14	20	eP	Pg	00 54 58.6	-1.4
	5.2nm,0.5s						
UZB				eS	Sg	00 55 40.6	-0.1
	15nm,0.5s						
UZB	Uzynbulak	3.14	20	Pg	Pg	00 54 58.6	-1.4
	4.3nm,0.6s						
UZB				Lg	Lg	00 55 40.6	
	12nm,0.4s						
KBK	Karagaybulak	3.15	322	⇑iP	Pb	00 54 55.4	-0.2
	baz=19						
KBK				⇑iS	Sb	00 55 33.8	0.0
	baz=19						
SHLS	Shalkode	3.27	25	eP	Pg	00 55 03.2	+0.6
	7.9nm,0.5s						
SHLS				eS	Sg	00 55 48.4	+3.3
	23nm,0.5s						
SHLS	Shalkode	3.27	25	Pg	Pg	00 55 03.2	+0.6
	7.9nm,0.5s						
SHLS				Lg	Lg	00 55 48.4	
	23nm,0.5s						
KURS	Kuram	3.32	7	eP	Pg	00 55 02.0	-1.4
	2.9nm,0.5s						
KURS				eS	Sg	00 55 46.3	0.0
	8.5nm,0.4s						
KURS	Kuram	3.32	7	Pg	Pg	00 55 02.0	-1.4
	2.9nm,0.5s						
KURS				Lg	Lg	00 55 46.3	
	8.5nm,0.4s						
DGS	Degeres	3.33	337	eP	Pg	00 55 02.6	-1.0
	3.2nm,0.5s						
DGS				eS	Sg	00 55 46.9	+0.1
	16nm,0.4s						
DGS	Degeres	3.33	337	Pg	Pg	00 55 02.6	-1.0
	3.2nm,0.5s						
DGS				Lg	Lg	00 55 47.6	
	16nm,0.4s						
AAK	Ala-Archa	3.37	317	⇓iP	Pb	00 54 58.3	-0.9
	baz=15						
AAK				⇓iS	Sb	00 55 39.2	-0.7
	baz=15						
AAK	Ala-Archa	3.37	317	⇓Pg	Pb	00 55 03.9	+4.8
	8.1nm,1.0s						
AAK				⇑Lg	Lg	00 55 51.4	
	9.1nm,0.5s						
KPKS	Kokpek	3.37	14	eP	Pg	00 55 02.7	-1.7
	6.5nm,0.4s						
KPKS				eS	Sg	00 55 47.5	-0.5
	27nm,0.5s						
PDGK	Podgornoye	3.44	24	Pg	Pg	00 55 03.3	-2.4
	3.0nm,0.3s						
PDGK				Lg	Lg	00 55 48.6	
	7.0nm,0.4s						
PDGK	Podgornoye	3.44	24	⇓Pn	Pb	00 54 59.1	-1.3
	5.8nm,0.7s						
PDGK				⇑Lg	Lg	00 55 51.1	
	13nm,0.6s						
AML	Almayashu	3.51	305	⇑iP	Pb	00 55 01.2	-0.6
	baz=2.0						
AML				⇑iS	Sb	00 55 43.9	-0.4
	baz=2.0						
CHMS	Chumysh	3.51	324	⇓iP	Pb	00 55 00.1	-1.5
	baz=21						
CHMS				⇓iS	Sb	00 55 42.1	-1.8
	baz=21						
KTBS	Karatobe	3.57	349	eP	Pg	00 55 06.7	-1.6
	3.8nm,0.3s						
KTBS				eS	Sg	00 55 54.0	-0.6
	22nm,0.4s						
KTBS	Karatobe	3.57	349	Pg	Pg	00 55 06.7	-1.6
	3.8nm,0.3s						
KTBS				Lg	Lg	00 55 54.6	
	22nm,0.4s						
ARSB	Arslanbob	3.67	289	⇓iP	Pb	00 55 03.7	-0.6
	baz=87						
ARSB				⇓iS	Sb	00 55 48.3	-0.3
	baz=87						
EKS2	Erkin-Say	3.77	312	⇓iP	Pn	00 55 04.2	+6.8
	baz=10.0						
EKS2				⇓iS	Sb	00 55 48.9	-2.6
	baz=10.0						
KUU	Kurty	3.81	346	eP	Pg	00 55 11.0	-1.8
	1.3nm,0.3s						
KUU				eS	Sg	00 56 01.3	-0.7
	11nm,0.4s						
USP	Ospenovka	3.83	324	⇑iP	Pb	00 55 04.7	-2.4
	baz=22						
USP				⇑iS	Sb	00 55 49.5	-3.8
	baz=22						
ARXS	Arharly	4.02	3	eP	Pg	00 55 14.5	-2.2
	1.4nm,0.6s						
ARXS				eS	Sg	00 56 07.8	-1.0
	12nm,0.8s						
ARXS	Arharly	4.02	3	Pg	Pg	00 55 14.5	-2.2
	1.4nm,0.6s						
ARXS				Lg	Lg	00 56 07.8	
	12nm,0.8s						
MRKS	Merke	4.14	309	eP	Pg	00 55 18.4	-0.8
	2.9nm,0.4s						
MRKS				eS	Sg	00 56 14.5	+1.6
	7.0nm,0.7s						
MRKS	Merke	4.14	309	Pg	Pg	00 55 18.4	-0.8
	2.9nm,0.4s						
MRKS				Lg	Lg	00 56 14.5	
	7.0nm,0.7s						
DJR	Jarkent	4.44	21	eP	Pb	00 55 21.2	+3.7
	0.3nm,0.1s						
DJR				eS	Sg	00 56 18.8	-3.7
	6.5nm,0.4s						
DJR	Jarkent	4.44	21	Pg	Pb	00 55 21.3	+3.7
	0.5nm,0.3s						
DJR				Lg	Lg	00 56 19.7	
	3.7nm,0.4s						
KK31	Karatay Array	6.04	301	⇓Pg	Pg	00 55 54.6	-0.8
	0.2nm,0.4s,baz=126,slow=14						
KK31				⇑Lg	Lg	00 57 15.4	
	0.8nm,0.5s,baz=116,slow=26,SNR=5.8						

IDC 01 00:59:00.8±2.9, 6°.61S×128°.84E, h0km, mb3.6/1, mb1 3.4/3, mb1mx3.2/35, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=300.8km s-min=31.1km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.29	159	Pn	Pn	01 02 22.8	-1.9
	0.1nm,0.3s,baz=334,slow=14,SNR=4.6						
WRA				Sn	Sn	01 04 49.2	-15
	0.1nm,0.3s,baz=335,slow=23,SNR=3.5						
ASAR	Alice Springs	17.65	164	P	P	01 03 09.4	0.0
	0.1nm,0.3s,baz=347,slow=11,SNR=9.1						
MKAR	Makanchi Array	67.27	327	P	P	01 09 57.4	0.0
	0.2nm,0.3s,baz=116,slow=7.9,SNR=8.4						

*IDC **01** 01:00:06.2±1.0, 19°.08N×120°.47E, h0km, mb3.5/8, mb1 3.7/8, mb1mx3.6/40, mbtmp3.5/8, MS3.0/2, Ms1 3.0/2, ms1mx2.6/34, Error ellipse: s-maj=41.2km s-min=18.5km az=63.0*

ISC 01 01:00:10.3±1.1, 19°.1N±0°.2×120°.4E±0°.2, h28km, n10, σ0s.75/8, mb3.6/7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	19.46	18	LR	LR	01 11 34.1	
	comp=Z,20nm,20.5s,baz=335,slow=35						
CMAR	Chiang Mai Arr	20.36	272	P	P	01 04 44.5	-0.4
	0.5nm,0.7s,baz=83,slow=8.5,SNR=4.7						
BATI	Baumata	29.26	173	LR	LR	01 19 16.5	
	comp=Z,72nm,20.2s,baz=274,slow=39						
SONM	Songino Array	30.90	341	P	P	01 06 23.7	-0.9
	0.1nm,0.4s,baz=167,slow=8.7,SNR=2.4						
WRA	Warramunga Arr	41.09	160	P	P	01 07 51.3	-0.5
	0.6nm,0.9s,baz=338,slow=9.2,SNR=3.9						
MKAR	Makanchi Array	41.67	320	P	P	01 07 56.9	+0.4
	0.4nm,0.9s,baz=115,slow=9.9,SNR=5.1						
ZALV	Zalesovo Beam	44.25	330	P	P	01 08 16.7	-0.5
	0.6nm,0.6s,baz=129,slow=11,SNR=3.1						
ASAR	Alice Springs	44.45	162	P	P	01 08 19.3	+0.1
	0.8nm,0.8s,baz=332,slow=6.9,SNR=8.2						
GEYT	Alibeck	56.90	303	P	P	01 09 53.8	+0.8
	1.5nm,0.8s,baz=98,slow=2.9,SNR=4.9						
YKA	Yellowknife Ar	87.94	22	P	P	01 12 58.0	+0.7
	0.5nm,0.7s,baz=318,slow=4.7,SNR=8.3						

*IDC **01** 01:08:23.2±1.6, 6°.38S×153°.00E, h0km, mb3.8/5, mb1 4.1/7, mb1mx3.7/36, mbtmp3.9/7, ML2.1/1, Error ellipse: s-maj=50.1km s-min=20.9km az=119.0*

*NEIC **01** 01:08:27.2±1.6, 6°.2S±0°.2×152°.8E±0°.1, h41km±7km, mb4.2/5, Error ellipse: s-maj=28.1km s-min=14.6km az=155.0*

ISC 01 01:08:27.6±1.0, 6°.33S±0°.08×152°.8E±0°.1, h31km, n17, σ1s.50/20, mb3.8/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.13	340	Pn	Pn	01 09 01.9	+0.9
	293nm,0.3s,baz=215,slow=1.5,SNR=193						
KRVT				Sn	Sn	01 09 26.6	+0.1
	141nm,0.3s,baz=137,slow=23,SNR=17						
PMG	Port Moresby	6.33	241	Pn	Pn	01 10 01.7	+2.8
	2.4nm,0.3s,baz=97,slow=7.2,SNR=7.2						
PMG				Sn	Sn	01 11 09.3	-0.8
	0.7nm,0.3s,baz=69,slow=6.2,SNR=4.2						
PMG	Port Moresby	6.33	241		Pn	01 09 59.4	+0.6
PMG					Sn	01 11 07.2	-3.0
MTN	Manton Dam	22.27	251	P	P	01 13 21.1	-1.2
WRA	Warramunga Arr	22.43	231	P	P	01 13 25.1	+1.0
	2.1nm,1.2s,baz=56,slow=9.9,SNR=5.1						
WRA	Warramunga Arr	22.43	231	P	P	01 13 24.2	+0.2
ASAR	Alice Springs	25.02	224	P	P	01 13 50.7	+1.6
	0.7nm,0.7s,baz=61,slow=9.1,SNR=14						
ASAR	Alice Springs	25.02	224	P	P	01 13 49.5	+0.5
KNRA	Kununurra	25.29	246	P	P	01 13 50.7	-0.8
KNRA				IAmb	IAmb	01 14 06.9	
	comp=Z,8.6nm,1.1s						
MSVF	Nonsavu	27.17	117	P	P	01 14 07.4	-1.2
FITZ	Fitzroy Crossi	28.92	244	P	P	01 14 24.9	+0.8
	comp=Z,2.9nm,0.5s,baz=47,slow=8.3,SNR=20						
FITZ	Fitzroy Crossi	28.92	244	P	P	01 14 24.6	+0.5
FITZ				IAmb	IAmb	01 14 25.6	
	comp=Z,3.8nm,0.6s						
HIA	Hailar	62.40	336	P	P	01 18 45.1	-2.4
ZALV	Zalesovo Beam	82.39	326	P	P	01 20 48.3	+1.8
	comp=Z,0.6nm,0.6s,baz=120,slow=4.8,SNR=2.4						
ZALV	Zalesovo Beam	82.39	326	P	P	01 20 45.7	-0.8
ILAR	Eielson Array	83.58	22	P	P	01 20 52.5	0.0
	comp=Z,0.5nm,0.8s,baz=249,slow=4.5,SNR=3.2						
TORD	Torodi Ar. Bea	150.70	286	PKPbc	PKiKP	01 28 19.8	+1.4
	comp=Z,1.0nm,0.8s,baz=68,slow=3.5,SNR=5.6						

*MAN **01** 01:26:05.3, 19°.09N×119°.70E, h310km, mb5.1, ML4.1, MS4.2*

*IDC **01** 01:26:22.4±0.6, 19°.15N×120°.46E, h0km, mb4.0/15, mb1 4.2/16, mb1mx4.0/47, mbtmp4.0/16, MS3.5/5, Ms1 3.5/5, ms1mx3.0/41, Error ellipse: s-maj=24.3km s-min=13.4km az=68.0*

*NEIC **01** 01:26:23.0±1.6, 19°.15N±0°.08×120°.6E±0°.1, h10km±1km, mb4.3/26, Error ellipse: s-maj=21.8km s-min=12.7km az=266.0*

ISC 01 01:26:25.8±1.4, 19°.22N±0°.03×120°.45E±0°.07, h25km±11km, n62, σ1s.33/74, mb4.2/24, MS3.7/3, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	1.29	180	⇑eP	Pb	01 26 49.3	-0.2
SIPP				eS	Sb	01 27 24.8	+19
APYP	Conner	1.55	151	eP	Pb	01 26 52.8	-1.0
APYP				eS	Sb	01 27 16.0	+3.1
ABRA	Dolores	1.58	171	eP	Pn	01 26 51.2	-1.1
ABRA				eS	Sb	01 27 26.5	+12
SGCP	Mt. Cagua	1.80	123	eP	Pb	01 26 56.8	-1.2
SGCP				eS	Sb	01 27 23.4	+3.2
TPUB	Ta-pu	4.06	2	Pn	Pn	01 27 27.0	+0.7
TPUB					Sn	01 28 14.4	+1.3
SSLB	Suanglung	4.56	6	Pn	Pn	01 27 34.0	+0.7
SSLB					Pb	01 27 43.3	-1.9
SSLB				Sn	Sn	01 28 26.9	+1.3
YHNB	Yeheng	5.49	9	Pn	Pn	01 27 47.0	+1.0
YHNB					Pb	01 27 58.4	-2.6
JNU	Nakatsue	16.69	32	LR	LR	01 37 39.6	
	comp=Z,74nm,18.2s,baz=164,slow=40						
PBKT	Sadao Pong	18.73	265	P	Pn	01 30 44.5	+1.2
KSRS	Korea Array	19.30	18	P	P	01 30 47.5	-1.4
	baz=198,slow=9.6,SNR=2.7						
KSRS				LR	LR	01 39 38.3	
	comp=Z,64nm,18.4s,baz=222,slow=41						
KS19	Wonju Array Si	19.33	18	P	P	01 30 46.0	-3.2
KS19				IAmb	IAmb	01 30 53.2	
	comp=Z,12nm,1.1s						
CM31	Chiang Mai Arr	20.38	271	P	P	01 31 01.8	+1.1
CMAR	Chiang Mai Arr	20.38	271	P	P	01 30 59.5	-1.2
	comp=Z,2.2nm,0.7s,baz=80,slow=8.6,SNR=12						
CMAR				PcP	PcP	01 35 14.4	+1.2
	comp=Z,0.8nm,0.7s,baz=9.8,slow=0.1,SNR=7.3						
BJT	Baijiatuau	21.05	351	P	P	01 31 05.0	-2.8
BJT				IAmb	IAmb	01 31 23.0	
	comp=Z,11nm,0.7s						
USRK	Ussuriysk Ar.	26.71	19	P	P	01 32 03.9	+0.9
	comp=Z,2.6nm,0.8s,baz=170,slow=9.7,SNR=4.9						
USRK	Ussuriysk Ar.	26.71	19	P	P	01 32 03.1	+0.1
PMBI	Palembang	26.88	217	P	P	01 32 04.2	-0.6
SHL	Shillong	27.13	289	P	P	01 32 05.6	-1.6
SHL				IAmb	IAmb	01 32 08.7	
	comp=Z,5.4nm,0.8s						
SONM	Songino Array	30.75	341	P	P	01 32 38.9	-0.1
	comp=Z,0.9nm,0.8s,baz=142,slow=8.7,SNR=5.8						
SONM				LR	LR	01 45 06.1	
	comp=Z,169nm,18.3s,baz=190,slow=36						
SONM	Songino Array	30.75	341	P	P	01 32 40.0	+0.9
KLR	Kul'dur	31.29	14	LR	LR	01 44 56.2	
	comp=Z,72nm,19.8s,baz=242,slow=36						
PSAB1	Pilbara Seismi	40.55	181	P	P	01 34 01.3	-1.9
PSAB1				IAmb	IAmb	01 34 17.0	
	comp=Z,5.8nm,1.0s						
WRA	Warramunga Arr	41.24	160	P	P	01 34 07.5	-1.4
	comp=Z,3.1nm,1.0s,baz=341,slow=9.2,SNR=9.0						
WRA				PcP	PcP	01 36 08.3	+0.7
	comp=Z,0.6nm,0.5s,baz=346,slow=3.5,SNR=4.5						
WRA	Warramunga Arr	41.24	160	P	P	01 34 07.8	-1.1
WRA					PcP	01 36 07.0	-0.6
MKAR	Makanchi Array	41.56	320	P	P	01 34 13.2	+1.8
	comp=Z,2.2nm,0.9s,baz=115,slow=9.5,SNR=15						
MKAR				PcP	PcP	01 36 08.7	+0.3
	comp=Z,0.8nm,0.8s,baz=101,slow=5.1,SNR=4.0						
MKAR	Makanchi Array	41.56	320	P	P	01 34 12.3	+1.0
MKAR					PcP	01 36 08.0	-0.4
MAKZ	Makanchi	41.76	320	P	P	01 34 14.1	+1.1
ZALV	Zalesovo Beam	44.12	330	P	P	01 34 32.8	+0.9
	comp=Z,1.5nm,0.6s,baz=121,slow=6.7,SNR=10.0						
ZALV	Zalesovo Beam	44.12	330	P	P	01 34 33.0	+1.1
NIL	Nilore	44.27	299	P	P	01 34 33.5	0.0
NIL				IAmb	IAmb	01 34 35.9	
	comp=Z,7.1nm,0.8s						
AS31	Alice Springs	44.60	162	P	P	01 34 35.5	-0.7
ASAR	Alice Springs	44.60	162	P	P	01 34 35.9	-0.3
	comp=Z,2.3nm,0.8s,baz=334,slow=7.1,SNR=22						
ASAR				PcP	PcP	01 36 18.7	-0.1
	comp=Z,0.3nm,0.6s,baz=336,slow=2.0,SNR=3.4						
ASAR	Alice Springs	44.60	162	P	P	01 34 35.4	-0.7
ASAR					PcP	01 36 17.5	-1.4
KURK	Kurchatov	45.56	324	P	P	01 34 43.9	+0.5
KURK				IAmb	IAmb	01 34 46.1	
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	45.56	323	P	P	01 34 44.7	+1.2
	comp=Z,2.4nm,0.7s,baz=122,slow=8.0,SNR=13						
KK31	Karatay Array	48.07	311	P	P	01 35 03.5	+0.2
KK31				IAmb	IAmb	01 35 06.3	
	comp=Z,3.7nm,0.9s						
KKAR	Karatay Array	48.07	311	P	P	01 35 04.2	+1.0
KKAR				IAmb	IAmb	01 35 06.3	
	comp=Z,3.7nm,0.9s						
KKAR	Karatay Array	48.07	311	P	P	01 35 03.7	+0.5
FORT	Forrest	50.25	171	P	P	01 35 18.7	-1.2
TIXI	Tiksi	52.66	3	P	P	01 35 39.4	+1.9
	comp=Z,0.8nm,0.2s,baz=183,slow=3.2,SNR=4.0						
TIXI	Tiksi	52.66	3	P	P	01 35 36.7	-0.8
TIXI				IAmb	IAmb	01 35 42.9	
	comp=Z,1.8nm,0.8s						
HRA	Herat	53.44	299	P	P	01 35 44.4	+0.3
HRA				IAmb	IAmb	01 35 45.8	
	comp=Z,2.7nm,1.1s						
BBOO	Buckleboo	53.85	164	P	P	01 35 46.3	-0.5
STKA	Stephens Creek	54.70	158	P	P	01 35 53.5	+0.6
	comp=Z,3.7nm,0.7s,baz=344,slow=8.0,SNR=9.6						
STKA	Stephens Creek	54.70	158	P	P	01 35 51.9	-1.0
ABKAR	Akbulak array	56.49	317	P	P	01 36 06.7	+1.0
ABKAR				PcP	PcP	01 37 01.8	-0.5
ABKAR	Akbulak array	56.49	317	P	P	01 36 06.6	+1.0
ABKAR				IAmb	IAmb	01 36 08.8	
	comp=Z,2.3nm,0.9s						
GEYT	Alibeck	56.82	303	P	P	01 36 10.1	+1.8
	comp=Z,4.8nm,0.9s,baz=130,slow=6.0,SNR=15						
GEYT				LR	LR	02 05 34.2	
	comp=Z,78nm,18.0s,baz=345,slow=41						
GEYT	Alibeck	56.82	303	P	P	01 36 09.4	+1.1
GYA0B	ALIBECK ARRAY	56.82	303	P	P	01 36 08.9	+0.6
ARU	Arti	58.70	325	P	P	01 36 22.4	+1.2
ARU				IAmb	IAmb	01 36 31.5	
	comp=Z,3.1nm,0.9s						
DZM	Mont Dzumac	60.88	130	P	P	01 36 34.4	-2.2
ILAR	Eielson Array	73.92	26	P	P	01 37 58.7	+0.2
	comp=Z,0.8nm,0.9s,baz=289,slow=6.6,SNR=7.6						
ILAR	Eielson Array	73.92	26	P	P	01 37 58.5	0.0
BMAR	Burnt Mountain	74.31	24	P	P	01 38 00.4	-0.4
AKASG	Malin Array Be	76.13	319	P	P	01 38 11.0	-0.5
	comp=Z,0.1nm,0.3s,baz=64,slow=5.3,SNR=2.8						
BURAR	Bucovina Array	79.48	317	P	P	01 38 30.3	-0.1
GERES	GERESS Array B	86.23	321	P	P	01 39 05.1	-0.2
	comp=Z,0.9nm,0.9s,baz=37,slow=3.8,SNR=5.8						
GERES	GERESS Array B	86.23	321	P	P	01 39 05.3	0.0
YKA	Yellowknife Ar	87.79	22	P	P	01 39 14.6	+2.1
	comp=Z,1.8nm,0.8s						
TXAR	Lajitas Array	115.64	42	PKP	PKPdf	01 45 08.7	+2.2
	comp=Z,0.5nm,0.6s,baz=334,slow=1.1,SNR=7.4						
TXAR	Lajitas Array	115.64	42		PKiKP	01 45 05.4	-1.1

*IDC **01** 01:28:30.1±2.0, 32°.99N×140°.22E, h0km, mb3.9/5, mb1 3.9/7, mb1mx3.6/45, mbtmp3.8/7, ML2.9/2, MS3.6/3, Ms1 3.7/3, ms1mx2.8/39, Error ellipse: s-maj=64.8km s-min=20.4km az=66.0*

*JMA **01** 01:28:31.6±0.1, 33°.41N×141°.21E, h57km±5km, M3.5*

ISC 01 01:28:30.9±2.5, 33°.37N±0°.06×141°.2E±0°.1, h26km±16km, n23, σ0s.97/27, mb3.7/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.19	258	P	Pb	01 28 52.7	-0.2
JHJ2				eS	Sb	01 29 08.0	+0.1
JHCJ	Hachijojimakas	1.22	256	P	Pn	01 28 52.7	+0.4
JHCJ				S	Sb	01 29 08.2	-0.4
BSO1	Boso 1	1.29	352	P	Pn	01 28 53.4	+0.6
BSO1				S	Sn	01 29 09.2	+0.2
JMKN	Mikurajimanish	1.45	292	P	Pn	01 28 55.9	+0.5
JMKN				eS	Sb	01 29 14.4	-0.7
JAOM	Aogashimamukai	1.51	234	P	Pn	01 28 57.3	+1.0
BSO3	Boso 3	1.54	338	P	Pn	01 28 57.2	+0.8
BSO3				eS	Sn	01 29 15.9	+0.4
JIM2	Oshima 3	2.00	313	P	Pn	01 29 03.1	+0.1
JIZS	Izushimoda	2.35	305	P	Pn	01 29 08.9	+1.0
JOD2	Odawara 2	2.58	318	P	Pn	01 29 11.5	+0.5
JOD2				eS	Sn	01 29 40.1	-1.4
TK02	Tokai 2	2.93	282	P	Pn	01 29 17.3	+1.6
TK04	Tokai 4	2.95	291	P	Pn	01 29 17.6	+1.6
JYN	Shimob	3.06	315	eS	Sn	01 29 54.6	+1.2
MJAR	Matsushiro Arr	4.01	323	Pn	Pn	01 29 31.6	+1.0
	0.5nm,0.3s,baz=158,slow=13,SNR=30						
MJAR				Sn	Sn	01 30 16.0	-0.8
	0.5nm,0.3s,baz=173,slow=26,SNR=6.5						
MAT	Matsushiro	4.01	323	P	Pn	01 29 32.7	+2.0
MAT				S	Sn	01 30 16.3	-0.5
JNU	Nakatsue	8.66	271	Pn	Pn	01 30 26.3	-8.2
	0.2nm,0.3s,baz=113,slow=13,SNR=2.5						
GUMO	Guam	19.97	170	LR	LR	01 40 14.7	
	comp=Z,34nm,18.1s,baz=112,slow=36						
SONM	Songino Array	29.84	309	P	P	01 34 36.3	+0.3
	0.7nm,0.6s,baz=103,slow=9.6,SNR=4.8						
MKAR	Makanchi Array	46.00	305	P	P	01 36 51.0	-0.9
	0.4nm,0.5s,baz=84,slow=9.7,SNR=6.9						
KURBB	Kurchatov Arra	48.19	311	P	P	01 37 08.4	-0.5
	0.6nm,0.2s,baz=90,slow=7.7,SNR=4.1						
WRA	Warramunga Arr	53.42	188	P	P	01 37 47.7	-0.9
	1.7nm,0.3s,baz=4.7,slow=7.5,SNR=27						
ASAR	Alice Springs	57.15	188	P	P	01 38 15.8	+0.4
	0.4nm,0.6s,baz=1.6,slow=7.4,SNR=6.9						
ARCES	ARCESS Array B	67.36	340	LR	LR	02 12 56.5	
	comp=Z,62nm,18.6s,baz=190,slow=40						
ASF	Jabal al Asfar	83.41	304	LR	LR	02 23 02.1	
	comp=Z,116nm,18.6s,baz=278,slow=39						

*CRAAG **01** 01:39:08.2, 36°.31N×2°.20E, Ml3.2*

*MDD **01** 01:39:10.0±1.1, 36°.33N×2°.23E, h10km±15km, mb3.7/23, Error ellipse: s-maj=12.1km s-min=5.5km az=145.0, PRXIMO*

ISC 01 01:39:09.3±1.1, 36°.33N±0°.06×2°.23E±0°.04, h20km, n35, σ0s.94/50, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBNR	Beni Rached	0.57	266	P	Pb	01 39 19.8	-0.8
EMHD	Djebel Mahouad	0.60	102	P	Pb	01 39 21.0	-0.2
EMHD	Djebel Mahouad	0.60	102	P	Pb	01 39 21.0	-0.2
ECHA	Ech Chlef	0.72	256	P	Pb	01 39 23.4	+0.2
ECHF	Ech Chlef	0.74	257	P	Pb	01 39 23.4	-0.1
EANR	'Ain N'Sour	0.99	248	P	Pb	01 39 28.0	+0.2
EANR	'Ain N'Sour	0.99	248	P	Pb	01 39 28.0	+0.2
ETRT	Tiaret	1.20	219	P	Pb	01 39 32.3	+0.8
ETRT	Tiaret	1.20	219	P	Pb	01 39 32.3	+0.8
OKGL	Djebel Kef Gue	1.32	258	P	Pn	01 39 32.4	-0.2
	8.2nm,0.2s,SNR=7.9						
OKGL				S	Sb	01 39 50.6	+0.8
	48nm,0.2s,SNR=7.9						
EIBI	Ibiza	2.78	346	P	Pn	01 39 54.0	+1.2
	4.7nm,0.1s,SNR=11						
EIBI				S	Sn	01 40 25.1	-0.6
	5.5nm,0.2s,SNR=7.9						
EBEN2	Beniarda presa	3.03	321	P	Pn	01 39 57.5	+1.3
	1.8nm,0.1s,SNR=7.9						
EBEN2				S	Sn	01 40 31.1	-0.9
	7.5nm,0.2s,SNR=7.9						
EMUR	La Murta	3.16	300	P	Pn	01 39 58.8	+0.8
	1.2nm,0.2s,SNR=7.9						
EMUR				S	Sn	01 40 34.2	-0.8
	0.5nm,0.2s,SNR=7.9						

AFON	Font Roja	3.21	317	P	Pn	01 40 00.2	+1.5
	7.0nm,1.6s,SNR=7.9						
AFON				S	Sn	01 40 37.0	+0.6
	12nm,2.0s,SNR=7.9						
ETOS	Mallorca	3.46	7	P	Pn	01 40 02.6	+0.4
	2.9nm,0.2s,SNR=15						
ETOS				S	Sn	01 40 41.6	-1.0
	1.7nm,0.2s,SNR=5.9						
ENIJ	Nijar	3.62	282	P	Pn	01 40 04.8	+0.4
	11nm,10.5s,SNR=7.9						
ENIJ				S	Sn	01 40 45.7	-0.9
	2.6nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.79	309	P	Pn	01 40 07.1	+0.5
	1.5nm,0.4s,SNR=5.8						
ETOB				S	Sn	01 40 50.8	+0.1
	0.6nm,0.2s,SNR=7.9						
ECHE	Chera	4.12	323	P	Pn	01 40 12.1	+0.9
	0.1nm,0.2s,SNR=7.9						
ECHE				S	Sn	01 40 58.1	-0.8
	0.2nm,0.2s,SNR=7.9						
EBER	Berja	4.16	279	P	Pn	01 40 11.9	+0.1
	1.2nm,0.2s,SNR=10						
EBER				S	Sn	01 40 59.1	-0.8
	0.9nm,0.2s,SNR=6.6						
SESP	Santiago Espad	4.21	297	P	Pn	01 40 12.7	+0.2
	1.3nm,0.2s,SNR=7.9						
SESP				S	Sn	01 41 00.4	-0.8
	0.7nm,0.2s,SNR=7.9						
EQES	Quesada	4.49	291	P	Pn	01 40 17.3	+1.0
	1.7nm,0.9s,SNR=7.9						
EQES				S	Sn	01 41 06.6	-1.3
	0.3nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.55	333	P	Pn	01 40 18.5	+1.2
	1.7nm,0.2s,SNR=10						
EMOS				S	Sn	01 41 07.5	-2.2
	0.4nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	4.74	278	P	Pn	01 40 20.0	+0.3
	4.0nm,0.5s,SNR=7.9						
ERTA	Horta de San J	4.85	343	P	Pn	01 40 22.6	+1.3
	1.1nm,0.3s,SNR=7.9						
EPOB	Poblet	5.10	350	P	Pn	01 40 25.4	+0.8
	9.1nm,0.7s,SNR=7.9						
EGOR	Sierra Gorda,	5.15	281	P	Pn	01 40 26.3	+0.9
	0.7nm,0.2s,SNR=7.9						
EGOR				S	Sn	01 41 22.3	-2.1
	0.1nm,0.2s,SNR=7.9						
CFON	Fontmartina	5.43	2	P	Pn	01 40 29.8	+0.7
	3.9nm,0.4s,SNR=7.9						
CFON				S	Sn	01 41 28.9	-2.2
	0.5nm,0.1s,SNR=7.9						
EMIJ	Mijas	5.65	274	P	Pn	01 40 31.6	-0.5
	2.1nm,0.4s,SNR=7.9						
EADA	Adamuz	5.73	291	P	Pn	01 40 33.5	+0.2
	1.9nm,0.5s,SNR=7.9						
CSOR	Sort	6.10	352	P	Pn	01 40 39.2	+0.8
	1.1nm,0.6s,SNR=7.9						
PAB	San Pablo	6.11	304	P	Pn	01 40 38.6	+0.1
	2.4nm,1.1s,SNR=7.9						
EJON	La Jonquera	6.13	5	P	Pn	01 40 39.8	+1.0
	3.3nm,0.6s,SNR=7.9						
CLLI	Llivia	6.15	358	P	Pn	01 40 40.3	+1.2
	6.4nm,0.7s,SNR=7.9						
SJAF	Saint Jean de	6.17	4	P	Pn	01 40 39.3	0.0
	1.2nm,0.7s,SNR=4.0						
ECAB	El Cabril	6.35	288	P	Pn	01 40 42.3	+0.6
	0.5nm,0.3s,SNR=4.0						

MAN 01 01:46:49.0, 6°.23N×125°.63E, h86km, mb4.2, ML3.0, MS2.7, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.69	258	⇓iP	Pn	01 47 04.2	-1.0
GSPH				iS	Sn	01 47 16.4	-0.8
DMPH	Davao City--Mi	0.85	352	eP	Pn	01 47 08.2	+1.4
KCP	Kidapawan	0.94	325	⇓iP	Pn	01 47 09.6	+1.8
KCP				iS	Sn	01 47 24.3	+2.5
SKMP	Bagumbayan, Su	1.12	285	eP	Pn	01 47 09.4	-0.4
SKMP				eS	Sn	01 47 25.7	+0.3

IDC 01 02:23:18.4±1.9, 30°.87S×75°.11E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/32, mbtmp3.8/5, Error ellipse: s-maj=74.7km s-min=29.4km az=26.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	23.23	353	T	T	02 52 34.4	
	baz=175,slow=75,SNR=80						
H08S1	Diego Carcia H	23.23	353	T	T	02 52 36.0	
	baz=175,slow=75,SNR=28						
H08S3	Diego Garcia H	23.25	353	T	T	02 52 37.4	
	baz=175,slow=75,SNR=108						
H01W2	Cape Leeuwin H	32.88	108	T	T	03 04 19.5	
	baz=266,slow=74,SNR=12						
H01W3	Cape Leeuwin H	32.88	108	T	T	03 04 16.9	
	baz=266,slow=74,SNR=12						
H01W1	Cape Leeuwin H	32.89	108	T	T	03 04 19.5	
	baz=266,slow=74,SNR=9.8						
ASAR	Alice Springs	52.25	97	P	P	02 32 31.6	-0.1
	0.7nm,0.8s,baz=253,slow=6.5,SNR=10						
WRA	Warramunga Arr	54.06	93	P	P	02 32 44.7	-0.2
	1.0nm,1.0s,baz=244,slow=7.9,SNR=4.0						
MKAR	Makanchi Array	77.57	5	P	P	02 35 15.8	-0.1
	0.9nm,0.9s,baz=179,slow=6.1,SNR=7.5						
TORD	Torodi Ar. Bea	82.89	290	P	P	02 35 45.1	-0.2
	0.7nm,0.9s,baz=127,slow=5.1,SNR=3.5						
ZALV	Zalesovo Beam	84.88	6	P	P	02 35 54.5	0.0
	1.0nm,0.6s,baz=202,slow=4.4,SNR=5.8						
YKA	Yellowknife Ar	147.74	8	PKPbc	PKPbc	02 43 04.3	+0.1
	0.1nm,0.4s,baz=336,slow=3.2,SNR=4.1						

MAN 01 02:54:34.5, 7°.09N×126°.67E, h153km, mb4.2, ML3.0, MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.44	251	eP	Pn	02 54 57.0	+1.1
MATI				eS	Sn	02 55 14.4	+2.3
DDMP	Don Marcelino,	1.37	224	eP	Pn	02 55 03.6	+0.7
DDMP				eS	Sn	02 55 25.9	+1.2
BUKP	Musuan	1.78	296	eP	Pn	02 55 07.8	+0.5

IDC 01 02:57:40.9±1.2, 11°.11S×165°.33E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.8/32, mbtmp3.9/9, ML4.3/2, MS3.1/6, Ms1 3.2/6, ms1mx2.9/29, Error ellipse: s-maj=37.2km s-min=22.0km az=143.0

NEIC 01 02:57:45.7±0.6, 11°.1S±0°.1×165°.27E±0°.09, h38km±10km, mb4.1/3, Error ellipse: s-maj=20.6km s-min=13.2km az=175.0

ISC 01 02:57:45.2±0.9, 11°.1S±0°.1×165°.26E±0°.10, h30km, n21, σ0s.69/19, mb3.8/7, MS3.1/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.48	287	Pn	Pn	02 59 05.7	+0.9
	10nm,0.3s,baz=102,slow=19,SNR=2.5						
HNR				Sn	Sn	03 00 06.3	-0.7
	7.8nm,0.3s,baz=189,slow=13,SNR=2.3						
HNR				LR	LR	03 01 08.3	
	comp=Z,168nm,18.3s,baz=104,slow=37						
HNR	Honiara	5.48	287		Pn	02 59 05.3	+0.4
HNR					Sn	03 00 06.9	-0.1
DZM	Mont Dzumac	10.96	174	Pn	Pn	03 00 20.2	0.0
	1.9nm,0.3s,baz=126,slow=22,SNR=22						
DZM	Mont Dzumac	10.96	174		Pn	03 00 20.3	+0.2
PMG	Port Moresby	17.89	274	LR	LR	03 08 56.3	
	comp=Z,78nm,19.9s,baz=155,slow=38						
CTA	Charters Tower	20.35	242	P	Pn	03 02 20.6	-0.9
	3.4nm,0.9s,baz=67,slow=13,SNR=3.2						
COEN	Coen	21.74	260	P	P	03 02 34.0	-0.4
COEN				IAmb	IAmb	03 02 48.8	
	comp=Z,7.0nm,0.9s						
STKA	Stephens Creek	30.07	223	LR	LR	03 14 39.3	
	comp=Z,42nm,20.4s,baz=25,slow=34						
WRA	Warramunga Arr	31.01	250	P	P	03 04 00.6	+0.2
	comp=Z,0.6nm,0.5s,baz=81,slow=9.0,SNR=6.3						
WRA				LR	LR	03 16 48.1	
	comp=Z,37nm,18.5s,baz=140,slow=37						
WRA	Warramunga Arr	31.01	250	P	P	03 04 00.1	-0.3
ASAR	Alice Springs	32.34	243	P	P	03 04 12.2	+0.1
	comp=Z,0.9nm,0.8s,baz=71,slow=9.6,SNR=13						
ASAR	Alice Springs	32.34	243	P	P	03 04 11.6	-0.4
FITZ	Fitzroy Crossi	38.90	255	P	P	03 05 08.9	+0.5
	comp=Z,1.4nm,0.8s,baz=56,slow=11,SNR=2.5						
FITZ				LR	LR	03 21 01.3	
	comp=Z,27nm,19.5s,baz=352,slow=36						
FITZ	Fitzroy Crossi	38.90	255	P	P	03 05 07.9	-0.5
FITZ				IAmb	IAmb	03 05 13.2	
	comp=Z,4.0nm,1.2s						
CMAR	Chiang Mai Arr	71.70	294	LR	LR	03 38 24.2	
	comp=Z,13nm,20.5s,baz=266,slow=34						
ILAR	Eielson Array	83.72	19	P	P	03 10 11.2	+0.3
	comp=Z,0.4nm,0.6s,baz=231,slow=5.0,SNR=7.4						
ILAR	Eielson Array	83.72	19	P	P	03 10 11.3	+0.4
NVAR	Mina Array Bea	86.43	50	P	P	03 10 25.6	+0.3
	comp=Z,0.3nm,0.7s,baz=238,slow=6.2,SNR=4.4						
NVAR	Mina Array Bea	86.43	50	P	P	03 10 24.2	-1.1
MKAR	Makanchi Array	93.24	317	P	P	03 10 58.2	+1.2
	comp=Z,0.3nm,0.7s,baz=111,slow=3.2,SNR=2.6						
MKAR	Makanchi Array	93.24	317	P	P	03 10 55.5	-1.4

WEL 01 02:58:22.0, 38°S±1°×177°.2E±1°.0, h43km±1km, M3.4/86, ML3.6/35, MLv3.4/86, Error ellipse: s-maj=0.0km s-min=0.0km az=155.8, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.13	334	P	Pn	02 58 29.2	+0.1
URZ				S	Sn	02 58 34.8	+0.8
RAGZ	Rawiri	0.22	123	P	Pn	02 58 30.1	+0.3
RAGZ				S	Sn	02 58 35.7	+0.4
MWZ	Matawai	0.27	81	P	Pn	02 58 30.3	+0.1
MWZ				S	Sn	02 58 36.6	+0.6
RTZ	Ruatahuna	0.29	214	P	Pn	02 58 30.4	0.0
MUGZ	Murupara	0.34	253	P	Pn	02 58 31.1	+0.2
SNGZ	Shannon Statio	0.42	163	P	Pn	02 58 31.8	-0.1
EDRZ	Edgecumbe	0.44	307	P	Pn	02 58 32.5	+0.3
TKGZ	Te Karaka	0.53	97	P	Pn	02 58 34.5	+1.4
TKGZ				S	Sn	02 58 44.9	+3.9
RRRZ	Republican Roa	0.53	274	P	Pn	02 58 33.5	+0.3
MTHZ	Maungataniwha	0.55	209	P	Pn	02 58 33.5	0.0
WHRZ	Whale Island	0.55	342	P	Pn	02 58 33.7	+0.3
TARZ	Mount Tarawera	0.55	285	P	Pn	02 58 34.1	+0.5
RIGZ	Rimuhau	0.56	126	P	Pn	02 58 34.7	+1.0
RIGZ				S	Sn	02 58 45.2	+3.2
MARZ	Manawahe	0.56	314	P	Pn	02 58 33.8	+0.2
RUGZ	Raukumara Rang	0.56	44	P	Pn	02 58 33.6	-0.2
MKRZ	Makatiti	0.61	293	P	Pn	02 58 35.6	+1.2
PRRZ	Plateau Road	0.63	259	P	Pn	02 58 34.7	+0.1
HLRZ	Highlands Stat	0.67	280	P	Pn	02 58 35.4	+0.4
ALRZ	Allen Road	0.69	254	P	Pn	02 58 35.4	+0.2
OMRZ	Omania	0.69	293	P	Pn	02 58 35.5	+0.1
WHHZ	Waihua	0.70	177	P	Pn	02 58 36.8	+1.3
HRRZ	Handcock Road	0.71	269	P	Pn	02 58 35.8	+0.2
OPRZ	Ohinepanea	0.73	317	P	Pn	02 58 35.6	-0.2
HSRZ	Hossack Road	0.74	275	P	Pn	02 58 36.4	+0.4
KNZ	Kokohu	0.75	149	P	Pn	02 58 36.5	+0.4
MRHZ	Matea Rd	0.76	233	P	Pn	02 58 36.4	+0.1
PRGZ	Paritu Road	0.77	135	P	Pn	02 58 36.8	+0.3
HAZ	Te Kaha	0.78	37	P	Pn	02 58 35.8	-0.7
UTU	Utuhina	0.81	284	P	Pn	02 58 37.5	+0.6
CNGZ	Carnagh Statio	0.81	98	P	Pn	02 58 38.3	+1.3
WPRZ	Whakapapatarin	0.81	260	P	Pn	02 58 37.3	+0.3
KARZ	Kaharoa	0.82	295	P	Pn	02 58 37.1	0.0
NGRZ	Ngongotaha	0.83	289	P	Pn	02 58 37.9	+0.6
GRRZ	Galatos Road	0.84	271	P	Pn	02 58 38.0	+0.5
WIZ	White Island	0.85	0	P	Pn	02 58 37.1	-0.3
PKGZ	Pakihiroa	0.86	56	P	Pn	02 58 38.4	+0.8
ARHZ	Aropaoanui	0.90	189	P	Pn	02 58 39.4	+1.3
PUZ	Puketiti	0.90	71	P	Pn	02 58 38.7	+0.6
TGRZ	Tauranga	0.97	311	P	Pn	02 58 38.9	-0.3
KUTZ	Kaahu Road	1.07	264	P	Pn	02 58 40.8	+0.2
KMRZ	Kaimai	1.11	298	P	Pn	02 58 40.9	-0.3
WMGZ	Waiomatatini S	1.12	61	P	Pn	02 58 42.7	+1.6
MCHZ	McNeill Hill	1.13	199	P	Pn	02 58 42.6	+1.2
RITZ	Rihia Road	1.20	240	P	Pn	02 58 42.8	+0.5
KWHZ	Kaweka Forest	1.20	209	P	Pn	02 58 43.4	+1.0
MXZ	Matakaoa Point	1.20	48	P	Pn	02 58 43.4	+1.1
RATZ	Rangitukua	1.21	246	P	Pn	02 58 43.7	+1.3
CKHZ	Cape Kidnapper	1.28	184	P	Pn	02 58 43.4	0.0
TLZ	Tolley Road	1.29	272	P	Pn	02 58 43.5	-0.1
KATZ	Kakaramea	1.31	242	P	Pn	02 58 44.3	+0.4
KRVZ	Karewarewa	1.40	239	P	Pn	02 58 45.4	+0.2
BHHZ	Black Hill Sta	1.41	218	P	Pn	02 58 45.5	+0.3
KRHZ	Kereru	1.42	206	P	Pn	02 58 45.6	+0.3
KAHZ	Kahuranaki	1.44	190	P	Pn	02 58 45.7	+0.1
WTVZ	West Tongariro	1.45	239	P	Pn	02 58 46.1	+0.2
NGZ	Ngauruhoe	1.47	237	P	Pn	02 58 46.5	+0.3
TOZ	Tahuroa Road	1.48	295	P	Pn	02 58 45.9	-0.1
MOVZ	Moawhango	1.52	227	P	Pn	02 58 46.5	-0.2
TWVZ	Taurewa	1.53	243	P	Pn	02 58 48.7	+1.8
WHVZ	Whangaehu Hut	1.54	234	P	Pn	02 58 47.2	0.0
FWVZ	Far West T-bar	1.55	235	P	Pn	02 58 47.3	0.0
TRVZ	Turoa	1.58	234	P	Pn	02 58 47.7	+0.1
PXZ	Pawanui	1.67	189	P	Pn	02 58 47.7	-1.0
PNHZ	Pukenui	1.71	206	P	Pn	02 58 49.1	-0.3
WPHZ	Waipukurau	1.78	199	P	Pn	02 58 49.7	-0.6
HIZ	Hauiti	1.83	265	P	Pn	02 58 51.8	+0.8
TSZ	Takapari Road	1.93	209	P	Pn	02 58 52.8	+0.5
PRHZ	Porangahau	1.94	193	P	Pn	02 58 51.4	-1.0
KUZ	Kuaotunu	2.00	324	P	Pn	02 58 52.6	-0.7
VRZ	Vera Road	2.04	248	P	Pn	02 58 54.7	+0.9
MKAZ	Moumakai	2.05	308	P	Pn	02 58 53.7	-0.1
DVHZ	Dannevirke	2.08	202	P	Pn	02 58 52.9	-1.4
WAZ	Wanganui	2.20	231	P	Pn	02 58 57.0	+1.0
KBAZ	Karaka Road Bo	2.23	304	P	Pn	02 58 57.1	+0.8
WIAZ	Waiheke Island	2.27	314	P	Pn	02 58 57.1	+0.2
ETAZ	East Tamaki Re	2.29	308	P	Pn	02 58 57.5	+0.3
PRWZ	Pori Road	2.37	203	P	Pn	02 58 57.7	-0.6
AWAZ	Awhitu Peninsu	2.40	302	P	Pn	02 58 59.3	+0.5
BFZ	Birch Farm	2.41	197	P	Pn	02 58 57.0	-1.9
LREZ	Lake Rotokare	2.42	243	P	Pn	02 59 01.4	+2.3
GRZ	Great Barrier	2.53	327	P	Pn	02 59 00.1	-0.4
ABAZ	Army Bay	2.58	313	P	Pn	02 59 01.8	+0.7
MRZ	Mangatainoka R	2.60	208	P	Pn	02 59 00.6	-0.8
KHEZ	Kahui Hut	2.64	249	P	Pn	02 59 04.4	+2.3
HOWZ	Holdsworth Sta	2.83	207	P	Pn	02 59 02.5	-2.1
OGWZ	Otaki Gorge	2.89	212	P	Pn	02 59 05.1	-0.4
TMWZ	Te Maipa	2.90	200	P	Pn	02 59 03.1	-2.6
KIW	Kapiti Island	3.04	215	P	Pn	02 59 07.1	-0.4
CAW	Cannon Point	3.18	210	P	Pn	02 59 08.4	-1.1
WCZ	Waipu Caves	3.33	316	P	Pn	02 59 11.9	+0.4
DUWZ	D'Urville Isla	3.50	225	P	Pn	02 59 15.4	+1.6
TCW	Tory Channel	3.61	217	P	Pn	02 59 14.6	-0.7
TUWZ	Tuamarina	3.94	218	P	Pn	02 59 19.4	-0.4
NNZ	Nelson	4.08	225	P	Pn	02 59 23.3	+1.5
OUZ	Omahuta	4.27	316	P	Pn	02 59 25.5	+1.1
QRZ	Quartz Range	4.35	234	P	Pn	02 59 28.5	+3.0
THZ	Tophouse	4.71	223	P	Pn	02 59 28.6	-2.0
KHZ	Kahutara	4.90	213	P	Pn	02 59 32.6	-0.4
MQZ	McQueen's Vall	6.33	211	P	Pn	02 59 50.4	-2.3
CTZ	Chatham Island	7.11	141	P	Pn	03 00 02.5	-0.9
ODZ	Otahua Downs	8.26	214	P	Pn	03 00 17.1	-2.0

UCR 01 03:00:44.6±1.0, 9°.65N×84°.88W, h23km±3km, MD3.7, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRA1	San Ramn	0.59	42	eP	Pb	03 00 55.8	-0.5
JTS	Las Juntas de	0.64	354	eP	Pb	03 00 56.4	-0.8
CASO	Castillo	0.79	10	iP	Pb	03 00 59.5	-0.3
ARE1	Arenal 1	0.82	11	eP	Pb	03 01 00.1	-0.2
HDC	Heredia	0.83	65	eP	Pb	03 01 00.3	-0.2
FORC	Fortuna	0.84	14	iP	Pb	03 01 00.3	-0.3
CEDE	Laguna Cedeo	0.85	12	iP	Pb	03 01 00.6	-0.2
LCR2	La Lucha 2	0.87	84	eP	Pb	03 01 00.4	-0.8
AMAS	Alto Masis	0.96	353	iP	Pb	03 01 01.9	-0.8
ACAL	Aguas Claras	0.99	351	iP	Pn	03 01 02.4	-0.8
CUI	Cuipilapa	1.04	344	iP	Pn	03 01 03.3	-0.5
CUI				iS	Sn	03 01 17.6	-0.1
COLC	Colonia	1.06	343	iP	Pn	03 01 03.2	-0.9
COLC				iS	Sn	03 01 18.7	+0.5
NY14	Universidad de	1.18	327	iP	Pb	03 01 06.1	-0.3
GPS3	Bodega del ICE	1.20	337	iP	Pn	03 01 05.1	-0.9
BUEV	Buena Vista	1.25	336	iP	Pn	03 01 06.5	-0.3

DJA 01 03:20:13.7±0.2, 7°S±3°×12°8E±°, h252km±4km, M4.7/15, mb4.2/15, mB5.2/6, MLv5.1/6, Mw(mB)4.5/6, Mwp6.3/1

IDC 01 03:20:13.9±1.5, 7°.00S×127°.68E, h262km±16km, mb3.4/7, mb1 3.5/13, mb1mx3.3/32, mbtmp4.2/13, Error ellipse: s-maj=16.2km s-min=11.1km az=74.0

NEIC 01 03:20:13.5±1.6, 7°.00S±0°.07×127°.76E±0°.07, h268km±7km, mb4.1/20, Error ellipse: s-maj=10.7km s-min=9.9km az=161.0

ISC 01 03:20:12.8±0.4, 7°.06S±0°.05×127°.74E±0°.05, h250km, n74, σ1s.69/89, mb4.0/19, 1C, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.64	105	P	Pn	03 21 14.7	+2.2
SAUI				S	S	03 22 01.7	+1.9
SAUI	Saumlaki	3.64	105		Pn	03 21 14.9	+2.5
SAUI				S	S	03 22 00.6	+0.8
SOEI	Soe	4.36	232	P	Pn	03 21 23.4	+2.5
SOEI				S	S	03 22 16.3	+1.2
SOEI	Soe	4.36	232		Pn	03 21 23.5	+2.6
SOEI				S	S	03 22 15.8	+0.7
BATI	Baumata	5.10	232	P	Pn	03 21 32.1	+2.2
	600nm,0.3s,baz=95,slow=2.0,SNR=380						
BATI				S	S	03 22 30.2	-1.1
	26nm,0.3s,baz=36,slow=19,SNR=2.2						
MMRI	Maumere	5.67	254	Pn	Pn	03 21 38.5	+1.7
FAKI	Fak Fak	6.09	48	P	Pn	03 21 41.7	-0.4
	0.4nm3μm58nm,0.7s						
FAKI	Fak Fak	6.09	48		Pn	03 21 41.5	-0.6
FAKI				S	S	03 22 50.2	-3.3
MTN	Manton Dam	6.64	150		Pn	03 21 50.4	+1.4
MTN				S	S	03 23 01.8	-4.4
KMPI	Kaimana, Papua	6.83	61	P	Pn	03 21 51.4	0.0
	2.0nm8μm318nm,0.7s						
SIJI	Sorong	7.09	30	P	Pn	03 21 54.6	0.0
	15nm,0.3s,baz=197,slow=23,SNR=51						
SIJI				S	S	03 23 09.4	-6.9
	1.9nm,0.3s,baz=71,slow=17,SNR=3.7						
SWI	Sorong	7.09	30	P	Pn	03 21 54.5	-0.1
	0.5nm5μm104nm,0.8s						
WSI	Waingapu	7.81	250	P	Pn	03 22 03.5	-0.2
RKPI	Ransiki, Papua	8.46	50	P	Pn	03 22 12.0	0.0
	173μm7μm71nm,0.6s						
KNRA	Kununurra	8.62	173		Pn	03 22 15.3	+1.3
MRSI	Marisa	9.47	322	P	Pn	03 22 24.4	-0.3
PLAI	Plampang	10.03	259	P	Pn	03 22 31.4	-0.3
	39nm,0.6s						
FITZ	Fitzroy Crossi	11.16	190	P	Pn	03 22 45.6	-0.3
	0.7nm,0.3s,baz=7.4,slow=9.2,SNR=34						
FITZ				S	S	03 24 46.5	-4.3
	1.1nm,0.3s,baz=287,slow=19,SNR=4.3						
FITZ	Fitzroy Crossi	11.16	190		Pn	03 22 45.7	-0.2
FITZ					S	03 24 53.3	+2.5
SMPI	Sarmi	12.04	66	P	Pn	03 23 00.0	+3.1
	23nm,0.9s						
JAY	Jayapura	13.68	71	P	Pn	03 23 17.7	+0.5
	2.5nm,0.3s,baz=215,slow=5.2,SNR=7.4						
WRAB	Tennant Creek	14.31	154	P	Pn	03 23 24.8	+0.1
WRA	Warramunga Arr	14.31	154	P	Pn	03 23 24.9	+0.1
	0.7nm,0.3s,baz=326,slow=13,SNR=19						
WRA				S	S	03 25 59.6	-3.7
	0.3nm,0.3s,baz=331,slow=17,SNR=4.6						
WRA	Warramunga Arr	14.31	154	P	Pn	03 23 24.7	-0.1
WRA					S	03 26 02.9	-0.4
PSA00	Pilbara Seismi	16.32	207	P	P	03 23 47.6	+0.4
PSA00				IAmb	IAmb	03 23 53.8	
	comp=Z,12nm,1.1s						
COEN	Coen	16.64	116	P	P	03 23 51.4	+0.6
COEN				IAmb	IAmb	03 23 53.2	
	comp=Z,15nm,1.0s						
COEN				S	S	03 26 52.3	+0.4
KKM	Kota Kinabalu	17.37	318	P	P	03 23 57.9	-1.0
AS31	Alice Springs	17.54	161	P	Pn	03 24 02.0	-1.0
ASAR	Alice Springs	17.54	161	P	Pn	03 24 02.2	-0.8
	comp=Z,1.7nm,0.3s,baz=344,slow=12,SNR=156						
ASAR				S	S	03 27 04.5	-5.3
	baz=347,slow=23,SNR=2.6						
ASAR	Alice Springs	17.54	161	P	P	03 24 01.4	+0.9
ASAR					S	03 27 09.2	-0.5
SBUM	Sibu	18.15	301	P	P	03 24 07.2	+0.1
SBUM				IAmb	IAmb	03 24 11.1	
	comp=Z,4.4nm,0.7s						
KSM	Kuching	19.35	295	P	P	03 24 20.0	-0.1
PMG	Port Moresby	19.36	98	P	P	03 24 22.2	+2.1
	comp=Z,0.7nm,0.3s,baz=288,slow=2.9,SNR=5.4						
PMG	Port Moresby	19.36	98	P	P	03 24 20.1	-0.1
PMG				IAmb	IAmb	03 24 28.7	
	comp=Z,9.3nm,0.8s						
CISI	Cisompet, Garu	19.77	267	P	P	03 24 23.8	-0.8
PMBI	Palembang	23.24	279	P	P	03 24 51.7	-6.6
FORT	Forrest	23.60	179	P	P	03 25 01.5	+0.2
FORT				IAmb	IAmb	03 25 16.1	
	comp=Z,17nm,0.9s						
BBOO	Buckleboo	26.76	164	P	P	03 25 29.3	-0.5
BBOO				IAmb	IAmb	03 25 30.8	
	comp=Z,2.4nm,0.6s						
NWAO	Narrogin (SRO)	27.52	199	P	P	03 25 36.8	+0.3
	comp=Z,2.2nm,0.4s,baz=75,slow=12,SNR=4.8						
NWAO	Narrogin (SRO)	27.52	199	P	P	03 25 36.6	0.0
NWAO	Narrogin (SRO)	27.52	199	P	P	03 25 35.8	-0.7
NWAO				IAmb	IAmb	03 25 48.3	
	comp=Z,3.9nm,0.9s						
STKA	Stephens Creek	27.87	154	P	P	03 25 40.4	+0.8
	comp=Z,0.5nm,0.3s,baz=331,slow=19,SNR=2.7						
STKA	Stephens Creek	27.87	154	P	P	03 25 40.1	+0.5
RPSI	Rantau Prapat	30.35	288	P	P	03 26 01.1	-0.7
UBPT	Khong Chiam	31.30	315	P	P	03 26 10.4	+0.3
UBPT				IAmb	IAmb	03 26 14.5	
	comp=Z,3.2nm,0.8s						
CMAR	Chiang Mai Arr	38.08	312	P	P	03 27 08.2	+0.2
	comp=Z,1.2nm,0.6s,baz=139,slow=6.8,SNR=11						
CMAR	Chiang Mai Arr	38.08	312	P	P	03 27 08.0	0.0
CHTO	Chiang Mai	38.31	313	P	P	03 27 07.8	-2.0
XAN	Xi'an	44.60	338	P	P	03 27 58.0	-2.6
XAN				IAmb	IAmb	03 27 59.6	
	comp=Z,4.3nm,0.6s						
SHL	Shillong	47.62	314	P	P	03 28 20.8	-3.5
LZH	Lanzhou	48.44	334	⇑P	P	03 28 32.7	+2.3
LZH				pP	pP	03 29 25.6	+2.6
LZH				sP	sP	03 29 53.0	+2.4
LZH				PP	PP	03 30 28.5	+2.7
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,57nm,5.6s						
HHC	Hu-ho-hao-te	49.95	344	eP	P	03 28 44.4	+2.8
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,40nm,6.5s						
USRK	Ussuriysk Ar.	51.17	4	P	P	03 28 49.7	-0.8
	comp=Z,0.8nm,0.7s,baz=188,slow=9.5,SNR=4.3						
ODAN	Odare	51.63	312	eP	P	03 28 53.8	-0.7
	comp=Z,9.4nm,0.6s						
TAPN	Taplejung	51.67	313	eP	P	03 28 54.1	-0.9
	comp=Z,4.1nm,0.4s						
RAMN	Ramite	52.26	312	eP	P	03 28 58.7	-0.5
	comp=Z,24nm,0.8s						
JIRN	Jiri	52.96	313	eP	P	03 29 03.5	-1.0
GUN	Gumba	53.33	313	eP	P	03 29 06.2	-0.9
	comp=Z,7.5nm,0.4s						
KOLN	Koldanda	54.94	311	eP	P	03 29 18.0	-0.5
SONM	Songino Array	57.82	343	P	P	03 29 38.1	-0.3
	comp=Z,1.0nm,0.8s,baz=180,slow=5.9,SNR=5.7						
SONM	Songino Array	57.82	343	P	P	03 29 37.2	-1.2
WMQ	Urumqi	62.25	328	eP	P	03 30 11.4	+3.0
WMQ				PcP	PcP	03 30 44.5	-1.3
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,170nm,6.5s						
KSH	Kashi	66.57	319	P	P	03 30 39.3	+2.8
KSH				pP	pwP	03 31 38.1	+0.1
KSH				pmax	pmax		
	comp=Z,230nm,5.4s						
MKAR	Makanchi Array	67.07	328	P	P	03 30 38.6	-0.7
	comp=Z,1.3nm,0.5s,baz=121,slow=8.6,SNR=44						
ZALV	Zalesovo Beam	70.67	335	P	P	03 30 59.8	-1.5
	comp=Z,0.9nm,0.5s,baz=123,slow=4.7,SNR=5.3						
ZALV	Zalesovo Beam	70.67	335	P	P	03 30 59.3	-2.0
KURK	Kurchatov	71.42	330	P	P	03 31 04.9	-0.9
KURK				IAmb	IAmb	03 31 05.8	
	comp=Z,3.5nm,0.9s						
KKAR	Karatay Array	71.92	320	P	P	03 31 09.1	+0.1
TORD	Torodi Ar. Bea	126.62	281	PKP	PKPdf	03 38 45.9	-1.4
	comp=Z,0.5nm,0.6s,baz=80,slow=1.8,SNR=5.4						
TORD	Torodi Ar. Bea	126.62	281		PKPdf	03 38 45.5	-1.8
CPUP	Villa Florida	146.44	172	PKPbc	PKPdf	03 39 24.1	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.3nm,0.8s,baz=355,slow=12,SNR=3.2						
CPUP	**Villa Florida**	**146.44**	**172**		**PKPdf**	**03 39 24.2**	**+0.8**
LPAZ	**La Paz**	**151.98**	**146**	PKPab	**PKPab**	**03 39 50.7**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=213,slow=7.7,SNR=4.3						
LPAZ	**La Paz**	**151.98**	**146**	PKPbc	**PKPdf**	**03 39 36.7**	**+3.4**
LPAZ					**PKPab**	**03 39 48.5**	**-1.6**

MAN 01 03:22:12.3, 15°.86N×121°.82E, h32km, mb3.5, ML2.2, MS1.6, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	**Baler**	**0.26**	**243**	eP	Pn	03 22 21.2	+1.4
BALP				eS	Sn	03 22 27.0	+2.2
PCPH	**Palayan**	**0.75**	**247**	⇑iP	Pn	03 22 26.5	-0.2
PCPH				eS	Sb	03 22 35.9	-1.0
CAUP	**Cauayan**	**1.08**	**0**	eP	Pn	03 22 30.4	-0.8
CAUP				eS	Sb	03 23 11.0	+25

MAN 01 04:13:39.9, 10°.19N×126°.03E, h21km, mb4.5, ML3.3, MS3.1, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.15**	**267**	eP	Pn	04 14 00.3	-0.5
MSLP				eS	Sn	04 14 16.5	+0.6
BUTP	**Butuan**	**1.28**	**198**	eP	Pn	04 14 00.9	-1.7
BESP	**Borongan**	**1.52**	**338**	eP	Pn	04 14 06.5	+0.7
BESP				eS	Sb	04 14 26.3	+0.2
LLP	**Lapu-Lapu**	**2.03**	**274**	eP	Pn	04 14 13.7	+0.7
LLP				eS	Sn	04 14 38.9	+1.1
CGP	**Cagayan de Oro**	**2.17**	**217**	⇓eP	Pn	04 14 15.5	+0.7
CGP				eS	Sn	04 14 42.5	+1.4
CNP	**Catarman**	**2.67**	**330**	eP	Pn	04 14 21.6	-0.1
CNP				eS	Sn	04 14 54.7	+1.3
KCP	**Kidapawan**	**3.29**	**196**	⇑iP	Pn	04 14 31.2	+0.9
KCP				i S	Sn	04 15 09.9	+0.9

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*MAN **01** 04:18:01.7, 3°.18N×127°.04E, h30km, mb4.9, ML3.8, MS3.8*
*DJA **01** 04:18:04.9±0.5, 3°N±2°×12°7E±°, h10km, M4.2/4, mb4.5/1, MLv4.1/4*
*NEIC **01** 04:18:06.6±2.0, 3°.4N±0°.1×126°.8E±0°.1, h63km±11km, mb4.1/16, Error ellipse: s-maj=22.6km s-min=2.5km az=222.0*
*IDC **01** 04:18:08.3±4.4, 3°.39N×126°.80E, h66km±47km, mb3.5/8, mb1 3.7/9, mb1mx3.4/38, mbtmp3.9/9, ML4.2/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/28, Error ellipse: s-maj=50.9km s-min=16.4km az=67.0*
ISC 01 04:18:06.2±0.6, **3°.43N**±0°.06×**126°.8E**±0°.1, **h48**km, **n35**, σ**1s.79**/36, **mb4.1**/13, **1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.70**	**168**	P	**Pn**	**04 18 47.7**	**+0.5**
TNTI	**Ternate**	**2.70**	**168**	Pn	**Pn**	**04 18 47.5**	**+0.2**
KCP	**Kidapawan**	**3.94**	**334**	⇓eP	**Pn**	**04 19 06.8**	**+2.5**
KCP				i S	**Sn**	**04 19 50.7**	**+1.3**
CTBH	**Cotabato--PC H**	**4.54**	**326**	⇑iP	**Pn**	**04 19 16.6**	**+4.1**
MRSI	**Marisa**	**5.67**	**239**	P	**Pn**	**04 19 30.9**	**+2.9**
SWI	**Sorong**	**6.17**	**134**	P	**Pn**	**04 19 37.8**	**+3.0**
SIJI	**Sorong**	**6.18**	**134**	P	**Pn**	**04 19 37.7**	**+2.8**
	6.4nm,0.3s,baz=339,slow=21,SNR=19						
SIJI				S	**Sn**	**04 20 45.4**	**+1.0**
	baz=233,slow=20,SNR=2.0						
FAKI	**Fak Fak**	**8.33**	**139**	Pn	**Pn**	**04 20 05.2**	**+0.7**
TGY	**Tagaytay City**	**12.08**	**332**	LR	LR	04 25 57.6	
	comp=Z,142nm,18.2s,baz=210,slow=39						
MTN	**Manton Dam**	**16.73**	**165**	Pn	**Pn**	**04 21 55.9**	**-1.5**
MTN				IAmb	IAmb	04 22 01.7	
	comp=Z,6.5nm,1.0s						
KNRA	**Kununurra**	**19.08**	**174**	P	**P**	**04 22 24.2**	**-0.8**
KNRA				IAmb	IAmb	04 22 35.1	
	comp=Z,13nm,1.1s						
TPUB	**Ta-pu**	**20.64**	**344**	P	**P**	**04 22 39.7**	**-2.2**
TPUB				IAmb	IAmb	04 22 41.4	
	comp=Z,6.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**21.42**	**183**	P	**P**	**04 22 51.1**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=8.7,slow=7.8,SNR=3.9						
FITZ	**Fitzroy Crossi**	**21.42**	**183**	P	**P**	**04 22 49.8**	**-0.5**
YHNB	**Yeheng**	**21.75**	**347**	P	**P**	**04 22 52.4**	**-1.5**
YHNB				IAmb	IAmb	04 22 58.2	
	comp=Z,16nm,1.0s						
UBPT	**Khong Chiam**	**24.08**	**301**	P	**P**	**04 23 17.4**	**0.0**
UBPT				IAmb	IAmb	04 23 24.4	
	comp=Z,6.3nm,1.1s						
WRAB	**Tennant Creek**	**24.38**	**163**	P	**P**	**04 23 15.8**	**-4.3**
WRAB				IAmb	IAmb	04 23 21.2	
	comp=Z,9.6nm,1.1s						
WRA	**Warramunga Arr**	**24.38**	**163**	P	**P**	**04 23 19.8**	**-0.4**
	comp=Z,4.7nm,0.6s,baz=342,slow=10,SNR=26						
WRA	**Warramunga Arr**	**24.38**	**163**	P	**P**	**04 23 17.1**	**-3.1**
WR0	**Warramunga Arr**	**24.46**	**162**	P	**P**	**04 23 20.2**	**-0.7**
WR0				IAmb	IAmb	04 23 22.4	
	comp=Z,4.4nm,0.9s						
AS31	**Alice Springs**	**27.81**	**166**	P	**P**	**04 23 49.8**	**-1.3**
ASAR	**Alice Springs**	**27.81**	**166**	P	**P**	**04 23 51.0**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=350,slow=7.4,SNR=16						
ASAR				LR	LR	04 34 43.3	
	comp=Z,48nm,18.0s,baz=74,slow=36						
ASAR	**Alice Springs**	**27.81**	**166**	P	**P**	**04 23 50.0**	**-1.1**
CMAR	**Chiang Mai Arr**	**31.08**	**301**	P	**P**	**04 24 20.2**	**0.0**
	comp=Z,0.6nm,0.8s,baz=118,slow=7.2,SNR=4.5						
BBOO	**Buckleboo**	**37.10**	**167**	P	**P**	**04 25 12.2**	**+0.1**
STKA	**Stephens Creek**	**37.83**	**159**	P	**P**	**04 25 18.7**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=333,slow=6.1,SNR=4.6						
STKA	**Stephens Creek**	**37.83**	**159**	P	**P**	**04 25 18.1**	**-0.2**
SHL	**Shillong**	**40.11**	**307**	P	**P**	**04 25 36.9**	**-0.9**
SONM	**Songino Array**	**47.60**	**341**	P	**P**	**04 26 38.0**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=146,slow=7.7,SNR=3.2						
SONM	**Songino Array**	**47.60**	**341**	P	**P**	**04 26 36.4**	**-1.1**
MK31	**Makanchi Array**	**57.84**	**325**	P	**P**	**04 27 50.9**	**-2.1**
MK31				IAmb	IAmb	04 27 54.8	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**57.84**	**325**	P	**P**	**04 27 52.9**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=121,slow=8.7,SNR=23						
MKAR	**Makanchi Array**	**57.84**	**325**	P	**P**	**04 27 51.0**	**-2.1**
ZALV	**Zalesovo Beam**	**60.88**	**333**	P	**P**	**04 28 15.1**	**+1.2**
	comp=Z,0.4nm,0.4s,baz=146,slow=8.3,SNR=2.1						
KURK	**Kurchatov**	**62.03**	**328**	P	**P**	**04 28 21.4**	**-0.3**

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*NIED **01** 04:18:00, 33°.20N×139°.40E, h5km, Mw4.2 Best double couple: $M_0$2.00000×10^{15} NP1:ϕ_s313.00000°, δ74.00000°, λ-98.00000°. NP2:ϕ_s161.00000°, δ18.00000°, λ-63.00000°.*
*IDC **01** 04:18:08.7±0.8, 33°.02N×139°.64E, h0km, mb3.5/10, mb1 3.8/12, mb1mx3.7/41, mbtmp3.5/12, ML4.2/1, MS2.6/2, Ms1 2.6/2, ms1mx2.3/32, Error ellipse: s-maj=24.1km s-min=19.6km az=89.0*
*NEIC **01** 04:18:10.8±1.4, 33°.08N±0°.09×139°.48E±0°.04, h16km±2km, mb4.1/5, Error ellipse: s-maj=12.8km s-min=4.5km az=167.0*
*JMA **01** 04:18:10.5±0.1, 33°.25N×139°.46E, h12km±4km, M3.7*
JMA Felt I J1.
ISC 01 04:18:08.9±1.8, **33°.18N**±0°.04×**139°.48E**±0°.04, **h2**km±11km, **n53**, σ**1s.20**/60, **mb3.6**/13, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**0.29**	**111**	P	**Pb**	**04 18 17.2**	**+0.4**
JHCJ				S	**Sb**	**04 18 21.8**	**-0.2**
JHJ2	**Mitsune**	**0.29**	**103**	P	**Pb**	**04 18 17.1**	**+0.3**
JHJ2				eS	**Sb**	**04 18 21.9**	**-0.2**
JHJ2	**Mitsune**	**0.29**	**103**	Pg	**Pb**	**04 18 16.7**	**-0.1**
JHJ2				Sg	**Sb**	**04 18 21.9**	**-0.2**
JMKN	**Mikurajimanish**	**0.72**	**7**	P	**Pg**	**04 18 23.2**	**+0.4**
JAOM	**Aogashimamukai**	**0.75**	**161**	P	**Pn**	**04 18 26.3**	**-0.2**
JKO	**Kozu shima**	**1.05**	**344**	P	**Pg**	**04 18 28.4**	**-0.6**
JTHY	**Toshimahigashi**	**1.35**	**353**	P	**Pn**	**04 18 33.8**	**-1.0**
JIM2	**Oshima 3**	**1.54**	**359**	P	**Pn**	**04 18 36.2**	**-1.2**
TK03	**Tokai 3**	**1.60**	**308**	eS	**Sn**	**04 18 58.7**	**-0.6**
JIZS	**Izushimoda**	**1.62**	**342**	P	**Pn**	**04 18 37.2**	**-1.2**
TK02	**Tokai 2**	**1.63**	**299**	P	**Pn**	**04 18 37.8**	**-0.6**
TK02				eS	**Sn**	**04 18 59.0**	**-0.9**
TK01	**Tokai 1**	**1.69**	**291**	P	**Pn**	**04 18 38.7**	**-0.4**
TK01				eS	**Sn**	**04 18 59.7**	**-1.4**
KTJ3	**Kamata3**	**1.79**	**349**	P	**Pn**	**04 18 40.2**	**-0.6**
TK04	**Tokai 4**	**1.80**	**312**	P	**Pn**	**04 18 40.3**	**-0.6**
TK04				eS	**Sn**	**04 19 03.1**	**-1.1**
TTO5	**TONANKAI O.B.S**	**1.82**	**307**	P	**Pn**	**04 18 40.2**	**-0.9**
TTO5				eS	**Sn**	**04 19 02.8**	**-1.9**
BSO3	**Boso 3**	**1.83**	**28**	P	**Pn**	**04 18 39.9**	**-1.3**
BSO1	**Boso 1**	**1.93**	**40**	P	**Pn**	**04 18 40.3**	**-1.9**
BSO4	**Boso 4**	**1.94**	**21**	P	**Pn**	**04 18 41.9**	**-1.0**
INU	**Inuyama**	**2.98**	**317**		**Pn**	**04 18 56.6**	**-0.5**
INU				Sn	**Sn**	**04 19 31.5**	**-1.9**
MJAR	**Matsushiro Arr**	**3.52**	**343**	Pn	**Pn**	**04 19 06.2**	**+1.6**
	0.5nm,0.3s,baz=160,slow=12,SNR=25						
MJAR				Sn	**Sb**	**04 19 53.9**	**-1.2**
	baz=165,slow=15,SNR=2.6						
MJAR				LR	LR	04 20 31.8	
	comp=Z,50nm,18.1s,baz=110,slow=39						
MJAR	**Matsushiro Arr**	**3.52**	**343**		**Pn**	**04 19 06.2**	**+1.6**
MJAR					**Sn**	**04 19 50.0**	**+3.3**
MAJO	**Matsushiro**	**3.52**	**343**		**Pn**	**04 19 06.6**	**+1.9**
MAT	**Matsushiro**	**3.52**	**343**	P	**Pn**	**04 19 06.3**	**+1.7**
MAT				eS	**Sb**	**04 19 53.8**	**-1.3**
MJB9	**Matsu-Tunnel**	**3.52**	**343**		**Pn**	**04 19 06.5**	**+1.9**
JNU	**Nakatsue**	**7.21**	**272**	Pn	**Pn**	**04 19 56.6**	**+1.2**
	3.7nm,0.3s,baz=164,slow=9.8,SNR=19						
JNU				Sn	**Sn**	**04 21 16.7**	**-1.3**
	baz=48,slow=20,SNR=1.1						
JNU				LR	LR	04 22 47.4	
	comp=Z,68nm,19.9s,baz=130,slow=38						
JNU	**Nakatsue**	**7.21**	**272**		**Pn**	**04 19 56.2**	**+0.8**
JNU					**Sn**	**04 21 17.1**	**-0.8**
H11N2	**WAKE ISLAND Hy**	**27.86**	**112**	T	T	04 53 09.9	
	baz=305,slow=75,SNR=57						
H11N1	**WAKE ISLAND Hy**	**27.87**	**112**	T	T	04 52 57.7	
	baz=305,slow=75,SNR=44						
H11N3	**WAKE ISLAND Hy**	**27.88**	**112**	T	T	04 53 06.6	
	baz=305,slow=75,SNR=43						
H11S3	**WAKE ISLAND Hy**	**28.41**	**114**	T	T	04 53 28.2	
	baz=307,slow=76,SNR=9.1						
H11S1	**WAKE ISLAND Hy**	**28.41**	**114**	T	T	04 53 28.5	
	baz=307,slow=76,SNR=9.3						
H11S2	**WAKE ISLAND Hy**	**28.43**	**114**	T	T	04 53 53.0	
	baz=307,slow=76,SNR=6.6						
SONM	**Songino Array**	**28.85**	**310**	P	**P**	**04 24 10.6**	**+1.8**
	1.0nm,1.0s,baz=124,slow=7.9,SNR=5.6						
SONM	**Songino Array**	**28.85**	**310**	P	**P**	**04 24 09.1**	**+0.4**
MK31	**Makanchi Array**	**44.93**	**305**	P	**P**	**04 26 24.5**	**-0.6**
MK31				IAmb	IAmb	04 26 29.1	
	comp=Z,2.3nm,1.4s						
MKAR	**Makanchi Array**	**44.93**	**305**	P	**P**	**04 26 26.6**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=91,slow=7.8,SNR=3.2						
MKAR	**Makanchi Array**	**44.93**	**305**	P	**P**	**04 26 26.2**	**+1.1**
WRA	**Warramunga Arr**	**53.05**	**186**	P	**P**	**04 27 26.1**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=2.1,slow=7.8,SNR=5.0						
WRA	**Warramunga Arr**	**53.05**	**186**	P	**P**	**04 27 26.0**	**-1.5**
ILAR	**Eielson Array**	**53.60**	**31**	P	**P**	**04 27 31.8**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=276,slow=5.5,SNR=9.8						
ILAR	**Eielson Array**	**53.60**	**31**	P	**P**	**04 27 31.4**	**+0.2**
ASAR	**Alice Springs**	**56.77**	**186**	P	**P**	**04 27 53.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=1.8,slow=6.6,SNR=6.3						
ABKAR	**Akbulak array**	**59.25**	**311**	P	**P**	**04 28 12.1**	**+0.5**
ABKAR	**Akbulak array**	**59.25**	**311**	P	**P**	**04 28 11.3**	**-0.4**
ABKAR				IAmb	IAmb	04 28 23.9	
	comp=Z,1.3nm,1.1s						
EIDS	**Eidsvold**	**59.26**	**168**	P	**P**	**04 28 10.7**	**-1.1**
EIDS				IAmb	IAmb	04 28 21.9	
	comp=Z,5.9nm,1.2s						
YKA	**Yellowknife Ar**	**67.94**	**29**	P	**P**	**04 29 08.5**	**-0.3**
	comp=Z,0.2nm,0.8s,baz=298,slow=6.5,SNR=3.5						
NVAR	**Mina Array Bea**	**78.59**	**52**	P	**P**	**04 30 12.3**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=302,slow=5.2,SNR=2.3						
NVAR	**Mina Array Bea**	**78.59**	**52**	P	**P**	**04 30 11.9**	**-0.6**
PDAR	**Pinedale Array**	**81.52**	**44**	P	**P**	**04 30 29.2**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=298,slow=2.9,SNR=2.0						
GERES	**GERESS Array B**	**85.13**	**327**	P	**P**	**04 30 48.9**	**+2.4**
	comp=Z,0.3nm,0.6s,baz=57,slow=6.0,SNR=3.5						
GERES	**GERESS Array B**	**85.13**	**327**	P	**P**	**04 30 46.9**	**+0.3**
TXAR	**Lajitas Array**	**93.75**	**51**	P	**P**	**04 31 27.9**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=297,slow=4.0,SNR=6.1						
TXAR	**Lajitas Array**	**93.75**	**51**	P	**P**	**04 31 28.1**	**+0.3**

IDC 01 04:34:06.8±15.0, **23°.24S**×**178°.37W**, **h465**km±123km, **mb3.3**/5, **mb1 3.4**/6, **mb1mx3.0**/37, **mbtmp4.2**/6, **Error ellipse: s-maj=214.0km s-min=75.3km az=59.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.46**	**193**	P	P	04 37 22.5	+0.1
	1.0nm,0.3s,baz=272,slow=5.0,SNR=6.3						
URZ				S	S	04 39 51.3	-13
	0.3nm,0.3s,baz=66,slow=22,SNR=8.2						
CTA	**Charters Tower**	**32.98**	**269**	P	P	04 40 02.8	+0.7
	3.5nm,0.3s,baz=93,slow=11,SNR=17						
STKA	**Stephens Creek**	**36.35**	**247**	P	P	04 40 29.1	-1.2
	1.2nm,0.4s,baz=108,slow=5.5,SNR=3.6						
ASAR	**Alice Springs**	**43.62**	**260**	P	P	04 41 28.6	-0.5
	0.4nm,0.3s,baz=94,slow=7.5,SNR=14						
WRA	**Warramunga Arr**	**43.95**	**265**	P	P	04 41 31.4	-0.3
	1.2nm,0.3s,baz=98,slow=8.4,SNR=23						
FITZ	**Fitzroy Crossi**	**52.37**	**265**	P	P	04 42 35.2	+0.3
	0.7nm,0.3s,baz=111,slow=8.6,SNR=5.4						

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*IDC **01** 04:34:13.2±1.9, 3°.72N×126°.41E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/41, mbtmp3.4/4, Error ellipse: s-maj=127.5km s-min=23.8km az=69.0*
ISC 01 04:34:14.9±1.8, **3°.7N**±0°.3×**126°.4E**±0°.8, **h10**km, **n5**, σ**0s.96**/6, **mb3.4**/4, **1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**3.51**	**338**	⇓iP	**Pb**	**04 35 16.7**	**-0.4**
KCP				i S	**Sg**	**04 36 08.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**21.71**	**182**	P	**P**	**04 39 05.5**	**-0.8**
	0.8nm,0.5s,baz=7.4,slow=11,SNR=1.4						
WRA	**Warramunga Arr**	**24.79**	**162**	P	**P**	**04 39 36.3**	**-0.9**
	0.5nm,0.5s,baz=341,slow=11,SNR=9.4						
ASAR	**Alice Springs**	**28.20**	**165**	P	**P**	**04 40 08.9**	**+0.9**
	0.1nm,0.4s,baz=340,slow=9.7,SNR=1.9						
MKAR	**Makanchi Array**	**57.37**	**325**	P	**P**	**04 44 03.4**	**0.0**
	0.3nm,0.4s,baz=119,slow=7.5,SNR=11						

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*IDC **01** 04:46:26.1±0.7, 44°.61S×15°.50W, h0km, mb4.3/13, mb1 4.4/13, mb1mx4.2/23, mbtmp4.3/13, MS4.4/16, Ms1 4.4/16, ms1mx4.4/16, Error ellipse: s-maj=25.2km s-min=16.0km az=168.0*
*NEIC **01** 04:46:28.1±1.5, 44°.6S±0°.1×15°.5W±0°.2, h10km±2km, mb4.7/18, Error ellipse: s-maj=19.6km s-min=15.1km az=149.0*
*BJI **01** 04:46:29.6±0.0, 44°.60S×15°.40W, h10km, Ms5.0/1, Ms7 4.7/2*
*GCMT **01** 04:46:31.1±0.2, 44°.93S±0°.02×15°.29W±0°.01, h12km, MW5.0/125, Moment Tensor Solution. s59,c74; s125,c179; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.48±.08; $M_{\theta\theta}$1.44±.10; $M_{\phi\phi}$3.04±.08; $M_{r\theta}$0.60±.32; $M_{\theta\phi}$-1.87±.07; $M_{\phi r}$0.72±.25; Best double couple: $M_0$4.46900×10^{16} NP1:ϕ_s316.00000°, δ44.00000°, λ-105.00000°. NP2:ϕ_s157.00000°, δ48.00000°, λ-76.00000°. Principal axes: T 4.2820, Plg2.0000°, Azm237.0000°; N 0.3730, Plg10.0000°, Azm327.0000°; P -4.6550, Plg79.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 04:46:27.8±0.4, **44°.63S**±0°.09×**15°.48W**±0°.09, **h10**km, **n80**, σ**0s.71**/65, **mb4.6**/19, **MS4.4**/18, **Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**16.66**	**227**	Pn	**Pn**	**04 50 21.6**	**+0.4**
HOPE				IAmb	IAmb	04 50 25.8	
	comp=Z,71nm,1.1s						
VNA2	**Neumayer--Watz**	**26.66**	**174**	P	**P**	**04 52 05.4**	**-1.0**
	baz=345,slow=10						
VNA3	**Neumayer Olymp**	**26.84**	**176**	P	**P**	**04 52 07.2**	**-0.8**
SNAA	**Sanae**	**27.80**	**171**	LR	LR	05 00 22.6	
	comp=Z,455nm,20.7s,baz=342,slow=30						
TROLL	**Troll, Antarti**	**28.78**	**168**	P	**P**	**04 52 24.8**	**-0.7**
H10S2	**ASCENSION HYDR**	**35.55**	**1**	T	T	05 31 10.3	
	baz=180,slow=74,SNR=48						
H10S3	**ASCENSION HYDR**	**35.55**	**1**	T	T	05 31 10.8	
	baz=40,slow=74,SNR=47						
BOSA	**Boshof**	**35.98**	**78**	P	**P**	**04 53 29.4**	**+0.4**
	comp=Z,2.9nm,1.0s,baz=211,slow=11,SNR=2.9						
BOSA				LR	LR	05 05 00.8	
	comp=Z,443nm,20.9s,baz=220,slow=31						
BOSA	**Boshof**	**35.98**	**78**	P	**P**	**04 53 29.1**	**+0.1**
BOSA				IAmb	IAmb	04 53 41.8	
	comp=Z,11nm,1.1s						
H10N1	**ASCENSION HYDR**	**36.66**	**2**	T	T	05 32 40.8	
	baz=180,slow=74,SNR=10						
H10N3	**ASCENSION HYDR**	**36.66**	**2**	T	T	05 32 34.2	
	baz=180,slow=74,SNR=71						
H10N2	**ASCENSION HYDR**	**36.67**	**2**	T	T	05 32 35.4	
	baz=180,slow=74,SNR=15						
CPUP	**Villa Florida**	**38.17**	**284**	P	**P**	**04 53 46.9**	**-0.5**
	comp=Z,7.7nm,0.9s,baz=116,slow=7.8,SNR=11						
CPUP				LR	LR	05 06 56.4	
	comp=Z,340nm,21.7s,baz=146,slow=32						
CPUP	**Villa Florida**	**38.17**	**284**	P	**P**	**04 53 47.7**	**+0.4**
CPUP				IAmb	IAmb	04 53 50.7	
	comp=Z,16nm,1.1s						
LBTB	**Lobatse**	**38.49**	**73**	P	**P**	**04 53 49.5**	**-0.7**
	comp=Z,5.2nm,1.0s,baz=212,slow=12,SNR=4.3						
LBTB	**Lobatse**	**38.49**	**73**	P	**P**	**04 53 50.1**	**-0.1**
LBTB				IAmb	IAmb	04 53 57.6	
	comp=Z,12nm,1.1s						
BDFB	**Brasilia**	**39.87**	**306**	P	**P**	**04 54 01.2**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=179,slow=4.4,SNR=2.4						
BDFB				LR	LR	05 07 36.7	
	comp=Z,523nm,19.9s,baz=125,slow=32						
BDFB	**Brasilia**	**39.87**	**306**	P	**P**	**04 54 01.6**	**-0.2**
PLCA	**Paso Flores**	**40.02**	**256**	P	**P**	**04 54 03.1**	**+0.3**
	comp=Z,3.5nm,0.7s,baz=140,slow=7.2,SNR=9.4						
PLCA				LR	LR	05 08 18.9	
	comp=Z,860nm,20.6s,baz=148,slow=33						
PLCA	**Paso Flores**	**40.02**	**256**	P	**P**	**04 54 02.8**	**-0.1**
MAW	**Mawson**	**45.42**	**148**	LR	LR	05 10 53.6	
	comp=Z,200nm,18.1s,baz=242,slow=32						
QSPA	**South Pole Qui**	**45.63**	**180**	P	**P**	**04 54 48.3**	**+0.2**
QSPA				PcP	**PcP**	**04 56 26.8**	**+0.7**
LSZ	**Lusaka**	**47.02**	**66**	P	**P**	**04 54 59.4**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=197,slow=6.6,SNR=6.4						
LSZ	**Lusaka**	**47.02**	**66**	P	**P**	**04 54 59.8**	**+0.3**
LSZ				IAmb	IAmb	04 55 06.8	
	comp=Z,7.2nm,0.9s						
LVC	**Limon Verde**	**48.64**	**279**	P	**P**	**04 55 13.5**	**+1.1**
PB11	**IPOC Station P**	**51.03**	**281**	P	**P**	**04 55 30.2**	**-0.1**
PB11				IAmb	IAmb	04 55 33.1	
	comp=Z,12nm,0.9s						
LIC	**Lamto**	**51.49**	**13**	eP	**P**	**04 55 34.3**	**+0.8**
	comp=Z,28nm,1.1s						
KIC	**Kosan Boka**	**51.67**	**14**	eP	**P**	**04 55 35.6**	**+0.7**
	comp=Z,44nm,1.6s						
TIC	**Toumodi**	**51.91**	**13**	eP	**P**	**04 55 37.3**	**+0.7**
DBIC	**Dimbokro**	**51.96**	**13**	P	**P**	**04 55 36.2**	**-0.7**
	comp=Z,2.9nm,0.9s,baz=152,slow=11,SNR=3.6						
DBIC				LR	LR	05 12 00.2	
	comp=Z,282nm,22.0s,baz=166,slow=30						
LPAZ	**La Paz**	**52.33**	**285**	P	**P**	**04 55 39.5**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=84,slow=15,SNR=4.7						
LPAZ				LR	LR	05 18 04.9	
	comp=Z,623nm,18.2s,baz=126,slow=36						
LPAZ	**La Paz**	**52.33**	**285**	P	**P**	**04 55 39.9**	**-0.7**
SAML	**Samuel**	**54.34**	**296**	P	**P**	**04 55 55.2**	**+0.5**
SAML				IAmb	IAmb	04 56 09.1	
	comp=Z,7.4nm,1.1s						
VNDA	**Vanda**	**58.11**	**179**	P	**P**	**04 56 20.1**	**-0.7**
	comp=Z,6.0nm,1.1s,baz=180,slow=5.3,SNR=5.7						
VNDA				LR	LR	05 18 25.4	
	comp=Z,293nm,21.2s,baz=174,slow=33						
VNDA	**Vanda**	**58.11**	**179**	P	**P**	**04 56 20.8**	**+0.1**
TOA0	**Torodi Ar. Sit**	**59.59**	**19**	P	**P**	**04 56 32.3**	**+0.6**
TOA0				IAmb	IAmb	04 56 34.0	
	comp=Z,8.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**59.59**	**19**	P	**P**	**04 56 31.9**	**+0.2**
	comp=Z,6.3nm,1.0s,baz=204,slow=6.3,SNR=18						
TORD				LR	LR	05 17 14.1	
	comp=Z,237nm,20.1s,baz=230,slow=31						
TORD	**Torodi Ar. Bea**	**59.59**	**19**	P	**P**	**04 56 31.9**	**+0.2**
KMBO	**Kilima Mbogo**	**63.52**	**63**	LR	LR	05 22 57.6	
	comp=Z,562nm,18.2s,baz=161,slow=34						
TAM	**Tamanrasset**	**69.79**	**21**	P	**P**	**04 57 38.3**	**0.0**
TAM				IAmb	IAmb	04 57 47.8	
	comp=Z,4.0nm,0.9s						
ROSC	**El Rosal**	**71.97**	**296**	LR	LR	05 28 21.8	
	comp=Z,493nm,18.8s,baz=163,slow=35						
KEST	**Kesra**	**83.10**	**20**	P	**P**	**04 58 52.4**	**-1.0**
	comp=Z,12nm,1.1s,baz=273,slow=7.0,SNR=5.6						
KEST				LR	LR	05 31 32.7	
	comp=Z,224nm,19.8s,baz=226,slow=33						
H08S1	**Diego Carcia H**	**83.24**	**94**	T	T	06 30 31.7	
	baz=225						
H08S2	**Diego Garcia H**	**83.25**	**94**	T	T	06 30 31.9	
	baz=225						
H08S3	**Diego Garcia H**	**83.26**	**94**	T	T	06 30 32.4	
	baz=225						
ESDC	**Sonseca Array**	**84.56**	**9**	P	**P**	**04 58 59.8**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=187,slow=4.0,SNR=3.5						
ESDC				LR	LR	05 33 23.8	
	comp=Z,145nm,18.3s,baz=310,slow=33						
H01W2	**Cape Leeuwin H**	**88.59**	**141**	T	T	06 38 23.4	
	baz=216						
H01W1	**Cape Leeuwin H**	**88.61**	**141**	T	T	06 38 22.9	
	baz=216						
H01W3	**Cape Leeuwin H**	**88.61**	**141**	T	T	06 38 23.7	
	baz=216						
CSS	**Mathiatis**	**90.76**	**38**	P	**P**	**04 59 31.2**	**+0.5**
MANT	**Manisa**	**91.79**	**33**	P	**P**	**04 59 34.9**	**-0.8**
BR131	**Keskin Array S**	**94.89**	**36**	P	**P**	**04 59 49.5**	**-0.4**
BRTR	**Keskin Array B**	**94.89**	**36**	P	**P**	**04 59 50.0**	**+0.1**
	comp=Z,2.6nm,1.0s,baz=194,slow=5.2,SNR=14						
BRTR				LR	LR	05 40 56.6	
	comp=Z,86nm,20.7s,baz=171,slow=34						
BRTR	**Keskin Array B**	**94.89**	**36**	P	**P**	**04 59 50.2**	**+0.3**
GERES	**GERESS Array B**	**96.54**	**19**	LR	LR	05 40 27.0	
	comp=Z,137nm,20.7s,baz=258,slow=34						
TCUT	**Toone Canyon**	**120.95**	**299**		**PKPdf**	**05 05 20.0**	**-0.3**
ELK	**Elko**	**123.17**	**297**		**PKiKP**	**05 05 25.7**	**+1.0**
WMQ	**Urumqi**	**126.94**	**62**	ePKP	**PKiKP**	**05 05 34.6**	**+2.7**
WMQ				LR	LR		
	comp=Z,200nm,28.9s						
MOD	**Modoc Plateau**	**127.03**	**295**		**PKPdf**	**05 05 32.1**	**+0.3**
G08A	**Pilot Rock**	**127.83**	**300**		**PKiKP**	**05 05 33.9**	**+0.2**
QIZ	**Qiongzhong**	**128.13**	**101**	PKP	**PKiKP**	**05 05 35.9**	**+0.9**
QIZ				SS	SS	05 24 57.8	+5.3
QIZ				LR	LR		
	comp=Z,150nm,19.6s						
QIZ				LR	LR		
	comp=Z,180nm,19.6s						
RES	**Resolute Bay**	**129.80**	**340**		**PKiKP**	**05 05 37.1**	**+0.5**
CD2	**Chengdu**	**131.12**	**85**	PKP	**PKiKP**	**05 05 40.9**	**+0.2**
YKA	**Yellowknife Ar**	**132.27**	**322**	PKP	**PKiKP**	**05 05 41.5**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=103,slow=1.9,SNR=8.5						
YKA	**Yellowknife Ar**	**132.27**	**322**		**PKiKP**	**05 05 42.1**	**+0.2**
SONM	**Songino Array**	**140.48**	**64**	PKP	**PKPdf**	**05 05 56.4**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=268,slow=3.9,SNR=5.8						
SONM	**Songino Array**	**140.48**	**64**		**PKPdf**	**05 05 56.2**	**-0.6**
HHC	**Hu-ho-hao-te**	**141.49**	**77**	ePKP	**PKiKP**	**05 06 02.2**	**+0.6**
NJ2	**Nanjing**	**142.51**	**94**	ePKP	**PKiKP**	**05 06 03.1**	**-0.7**
BCAR	**Beaver Creek A**	**144.67**	**321**		**PKPdf**	**05 06 03.3**	**-0.3**
BARN	**Barnard Glacie**	**144.76**	**317**		**PKPdf**	**05 06 04.6**	**+0.6**
BMAR	**Burnt Mountain**	**145.06**	**328**		**PKPdf**	**05 06 04.4**	**+0.3**
IL31		**146.61**	**324**		**PKPbc**	**05 06 08.8**	**+0.5**
ILAR	**Eielson Array**	**146.61**	**324**	PKPbc	**PKPbc**	**05 06 08.9**	**+0.5**
	comp=Z,11nm,0.9s,baz=57,slow=1.0,SNR=58						
ILAR	**Eielson Array**	**146.61**	**324**	PKPdf	**PKPbc**	**05 06 08.1**	**-0.3**
CCB	**Clear Creek Bu**	**147.03**	**324**	PKPdf	**PKPbc**	**05 06 09.4**	**-0.2**
TIXI	**Tiksi**	**147.98**	**20**	PKPdf	**PKPbc**	**05 06 10.8**	**-1.2**
IMAR	**Indian Mountai**	**148.97**	**328**	PKPdf	**PKPdf**	**05 06 12.5**	**+1.9**
KSAR	**Wonju Array Be**	**151.63**	**92**	PKPdf	**PKPdf**	**05 06 15.4**	**-0.3**
KSRS	**Korea Array**	**151.66**	**92**	PKPbc	**PKPbc**	**05 06 21.6**	**-0.4**
	comp=Z,2.6nm,1.0s,baz=228,slow=1.5,SNR=4.9						

KRSC 01 04:51:36.8±2.2, **49°.74N**×**157°.01E**, **h7**km±35km, **ML4.0**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.10**	**329**	eP	Pg	04 51 56.7	-1.3
SKR				eS	Sg	04 52 10.9	-1.4
PAU	**Pauzhetka**	**1.73**	**356**	eP	Pn	04 52 07.8	+0.4
PAU				eS	Sn	04 52 30.0	+0.3
KDTR	**Khodutka, Kamc**	**2.18**	**18**	eP	Pn	04 52 14.6	+1.1
KDTR				eS	Sn	04 52 41.8	+1.1
ASAK	**Asacha**	**2.70**	**12**	eP	Pb	04 52 23.6	-2.0
MTVR	**Mutnovka**	**2.84**	**15**	eP	Pn	04 52 25.3	+2.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTVR				eS	Sb	04 53 00.6	-2.4
GRL	**Gorelyy**	**2.89**	**13**	eP	Pn	04 52 25.8	+2.4
GRL				eS	Sb	04 53 01.6	-2.8
KRMR	**Karymshinskiy**	**3.17**	**12**	eP	Pn	04 52 29.6	+2.5
KRMR				eS	Sb	04 53 09.4	-2.9
PET	**Petropavlovsk**	**3.44**	**17**	eS	Sn	04 53 15.6	+3.7
UGLR	**Uglovaya**	**3.65**	**17**	eP	Pn	04 52 37.4	+3.5
AVH	**Avacha**	**3.69**	**16**	eP	Pb	04 52 39.1	-3.3
AVH				eS	Sb	04 53 24.2	-3.1
KOK	**Koryaka**	**3.70**	**15**	eP	Pb	04 52 38.9	-3.6
KOK				eS	Sb	04 53 24.1	-3.4
SMAR	**Somma**	**3.70**	**17**	eP	Pb	04 52 39.5	-3.1
KRER	**Koryakskii**	**3.73**	**16**	eP	Pb	04 52 39.1	-4.0
KRER				eS	Sb	04 53 24.2	-4.3
SDLR	**Sedlovina**	**3.73**	**18**	eP	Pn	04 52 37.9	+3.0
KRX	**Arik**	**3.76**	**15**	eP	Pn	04 52 39.5	+4.1
KRX				eS	Sb	04 53 25.4	-4.1
SPN	**Mys Shipunski**	**3.85**	**28**	eP	Pn	04 52 39.1	+2.6
GNL	**Ganaly**	**4.00**	**8**	eP	Pb	04 52 43.4	-4.3
KZV	**Kizimen**	**5.74**	**19**	eP	Pn	04 53 06.3	+3.7
KBTR	**Krutoberegovo**	**7.36**	**26**	eP	Pn	04 53 26.9	+2.2

*IDC **01** 04:55:21.2±0.7, 3°.75N×126°.30E, h0km, mb3.7/13, mb1 3.8/15, mb1mx3.7/34, mbtmp3.8/15, ML4.0/2, MS3.8/3, Ms1 3.8/3, ms1mx2.9/30, Error ellipse: s-maj=37.3km s-min=13.8km az=71.0*
*DJA **01** 04:55:27.5±0.5, 4°N±10°×12°7E±°, h32km±11km, M4.2/7, mB4.8/2, mb4.3/5, MLv4.1/7, Mw(mB)4.0/2*
*MAN **01** 04:55:28.9, 3°.47N×125°.92E, h32km, mb5.0, ML4.0, MS4.0*
ISC 01 04:55:28.0±0.6**, 3°.53N**±0°.09×**126°.4E**±0°.1**, h53km, n26, σ2s.17**/28**, mb3.8**/14**, 3C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.92**	**330**	⇑iP	**Pn**	**04 56 10.8**	**-1.4**
SKMP	**Bagumbayan, Su**	**3.50**	**328**	eP	**Pn**	**04 56 20.5**	**+0.6**
SKMP				eS	**Sn**	**04 56 58.5**	**-1.7**
DAV	**Davao City (W)**	**3.61**	**347**	Pn	Pn	04 56 14.4	-7.0
	17nm,0.3s,baz=240,slow=20,SNR=1.7						
DAV				Sn	**Sn**	**04 57 06.5**	**+3.7**
	23nm,0.3s,baz=99,slow=14,SNR=1.9						
KCP	**Kidapawan**	**3.69**	**339**	⇑eP	**Pn**	**04 56 24.0**	**+1.3**
KCP				eS	**Sn**	**04 57 06.6**	**+1.6**
CTBH	**Cotabato--PC H**	**4.25**	**330**	⇑iP	**Pn**	**04 56 33.5**	**+3.2**
CTBH				i S	**Sn**	**04 57 20.6**	**+2.0**
BUKP	**Musuan**	**4.52**	**343**	eP	**Pn**	**04 56 33.4**	**-0.6**
BUKP				eS	**Sn**	**04 57 31.6**	**+6.3**
MRSI	**Marisa**	**5.39**	**236**	P	Pn	04 56 52.9	+7.0
	0.1nm1μm38nm,0.5s						
APSI	**Ampana**	**6.49**	**227**	P	Pn	04 57 08.7	+7.8
SIJI	**Sorong**	**6.54**	**132**	Pn	**Pn**	**04 57 03.0**	**+1.4**
	2.3nm,0.3s,baz=9.3,slow=17,SNR=7.0						
SIJI				Sn	**Sn**	**04 58 12.0**	**-2.8**
	baz=275,slow=23,SNR=0.8						
TGY	**Tagaytay City**	**11.81**	**333**	LR	LR	05 02 59.8	
	comp=Z,110nm,19.0s,baz=42,slow=40						
FITZ	**Fitzroy Crossi**	**21.50**	**182**	P	**P**	**05 00 14.9**	**+2.4**
	1.6nm,0.9s,baz=359,slow=10,SNR=2.8						
WRA	**Warramunga Arr**	**24.59**	**162**	P	**P**	**05 00 45.2**	**+1.9**
	0.9nm,0.7s,baz=339,slow=10,SNR=11						
ASAR	**Alice Springs**	**28.00**	**165**	P	**P**	**05 01 15.9**	**+1.8**
	0.2nm,0.9s,baz=338,slow=8.2,SNR=4.3						
CMAR	**Chiang Mai Arr**	**30.69**	**301**	P	**P**	**05 01 37.3**	**-0.8**
	0.3nm,0.3s,baz=110,slow=7.8,SNR=4.3						
KSRS	**Korea Array**	**33.79**	**2**	P	**P**	**05 02 04.0**	**-0.9**
	0.6nm,0.6s,baz=186,slow=9.2,SNR=4.0						
STKA	**Stephens Creek**	**38.06**	**159**	P	**P**	**05 02 43.6**	**+2.1**
	1.2nm,0.6s,baz=344,slow=12,SNR=3.1						
USRK	**Ussuriysk Ar.**	**40.80**	**6**	P	**P**	**05 03 02.8**	**-1.4**
	2.8nm,1.0s,baz=180,slow=7.1,SNR=3.9						
SONM	**Songino Array**	**47.38**	**342**	P	**P**	**05 03 55.7**	**-1.3**
	0.5nm,0.6s,baz=151,slow=8.5,SNR=5.5						
SONM				PcP	**PcP**	**05 05 27.4**	**+0.4**
	0.4nm,0.7s,baz=160,slow=1.8,SNR=3.5						
MKAR	**Makanchi Array**	**57.53**	**325**	P	**P**	**05 05 11.2**	**-0.9**
	0.7nm,0.4s,baz=117,slow=7.2,SNR=21						
ZALV	**Zalesovo Beam**	**60.62**	**333**	P	**P**	**05 05 31.4**	**-1.8**
	0.5nm,0.5s,baz=123,slow=5.3,SNR=2.3						
PPT	**Papeete**	**85.36**	**108**	LR	LR	05 44 30.6	
	comp=Z,65nm,18.1s,baz=113,slow=34						
ILAR	**Eielson Array**	**85.42**	**25**	P	**P**	**05 07 58.8**	**-0.8**
	0.8nm,1.1s,baz=269,slow=5.9,SNR=2.6						
BRTR	**Keskin Array B**	**89.90**	**310**	P	**P**	**05 08 20.9**	**-1.0**
	0.5nm,0.8s,baz=90,slow=4.3,SNR=4.3						
ARCES	**ARCESS Array B**	**90.52**	**340**	P	**P**	**05 08 23.7**	**-0.3**
	4.8nm,0.9s,baz=80,slow=6.5,SNR=3.0						
ARCES				LR	LR	05 53 40.4	
	comp=Z,88nm,18.1s,baz=184,slow=39						
AKASG	**Malin Array Be**	**91.84**	**321**	P	**P**	**05 08 28.7**	**-1.7**
	0.5nm,0.6s,baz=69,slow=5.4,SNR=2.7						
TORD	**Torodi Ar. Bea**	**122.67**	**288**	PKP	**PKPdf**	**05 14 19.2**	**+0.2**
	0.4nm,0.8s,baz=60,slow=2.5,SNR=2.7						

*IDC **01** 05:14:53.7±1.1, 25°.44N×142°.63E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/34, mbtmp3.7/6, Error ellipse: s-maj=59.6km s-min=17.3km az=82.0*
ISC 01 05:14:59.2±1.3**, 25°.5N**±0°.1×**142°.6E**±0°.5**, h38km, n14, σ0s.52**/9**, mb3.7**/6**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.68**	**347**	Pn	**Pn**	**05 15 25.4**	**-0.7**
	61nm,0.3s,baz=102,slow=5.0,SNR=16						
JCJ				Sn	**Sn**	**05 15 46.8**	**+0.5**
	44nm,0.3s,baz=282,slow=22,SNR=7.0						
H11N2	**WAKE ISLAND Hy**	**23.13**	**99**	T	T	05 44 20.0	
	baz=287,slow=74,SNR=12						
H11N1	**WAKE ISLAND Hy**	**23.13**	**99**	T	T	05 44 17.3	
	baz=287,slow=74,SNR=6.5						
H11N3	**WAKE ISLAND Hy**	**23.15**	**99**	T	T	05 44 15.7	
	baz=287,slow=74,SNR=9.1						
H11S3	**WAKE ISLAND Hy**	**23.37**	**102**	T	T	05 44 38.4	
	baz=291,slow=75,SNR=27						
H11S1	**WAKE ISLAND Hy**	**23.38**	**102**	T	T	05 44 40.3	
	baz=291,slow=75,SNR=18						
H11S2	**WAKE ISLAND Hy**	**23.39**	**102**	T	T	05 44 41.1	
	baz=291,slow=75,SNR=32						
KLR	**Kul'dur**	**25.20**	**343**	P	**P**	**05 20 21.7**	**+0.6**
	0.6nm,0.5s,baz=162,slow=20,SNR=2.4						
WRA	**Warramunga Arr**	**45.83**	**191**	P	**P**	**05 23 17.6**	**0.0**
	2.0nm,0.8s,baz=10,slow=8.6,SNR=5.4						
ASAR	**Alice Springs**	**49.55**	**190**	P	**P**	**05 23 46.5**	**+0.1**
	0.3nm,0.7s,baz=2.8,slow=5.4,SNR=7.3						
MKAR	**Makanchi Array**	**51.81**	**311**	P	**P**	**05 24 03.2**	**-0.1**
	0.1nm,0.4s,baz=99,slow=8.9,SNR=3.2						
FINES	**FINESS Array B**	**79.58**	**334**	P	**P**	**05 27 01.8**	**-0.3**
	3.4nm,0.9s,baz=53,slow=5.4,SNR=5.4						
NOA	**NORSAR Array B**	**85.27**	**339**	P	**P**	**05 27 32.5**	**+0.6**
	0.8nm,0.8s,baz=45,slow=4.8,SNR=2.9						
LPAZ	**La Paz**	**149.94**	**78**	PKPbc	**PKPbc**	**05 34 46.8**	**-0.2**
	0.6nm,0.7s,baz=280,slow=6.1,SNR=1.8						

*BJI **01** 05:30:36.0±0.0, 40°.97N×98°.75E, h7km, ML3.5/5*
ISC 01 05:30:31.7±4.8**, 41°.4N**±0°.3×**99°.5E**±0°.5**, h10km, n5, σ0s.94**/6**, 3C-1D, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	**1.98**	**173**	Pg	**Pn**	**05 31 05.9**	**+0.5**
GTA				Sg	**Sn**	**05 31 29.7**	**-0.7**
WMQ	**Urumqi**	**9.05**	**290**	Pg	**Pn**	**05 32 42.7**	**+0.3**
WMQ				Sg		05 32 52.1	
WMQ				smax	smax		
	comp=N,470nm,0.2s						
WMQ				smax	smax		
	comp=E,330nm,0.2s						
WMQ	**Urumqi**	**9.05**	**290**	eP	**Pn**	**05 32 42.6**	**+0.2**
WMQ				smax	smax		
	comp=E,29nm,0.7s						
WMQ				smax	smax		
	comp=E,30nm,0.7s						
MK31	**Makanchi Array**	**13.50**	**299**	⇑Pg	**Pn**	**05 33 43.6**	**+0.5**
	comp=E,0.1nm,0.3s,baz=127,slow=14,SNR=11						
MK31				⇑Lg	Lg	05 35 09.0	
	comp=E,0.3nm,0.5s,baz=134,slow=28,SNR=3.5						
MAKZ	**Makanchi**	**13.71**	**299**	⇓Pg	**Pn**	**05 33 44.8**	**-1.3**
	comp=E,0.4nm,0.4s						
MAKZ				⇑Lg	Lg	05 35 12.5	
	comp=E,1.1nm,1.1s						

MAN 01 05:31:42.4, 6°.38N×126°.88E, h1km, mb4.6, ML3.5, MS3.3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.19**	**257**	eP	Pg	05 32 04.5	-0.7
DDMP				eS	Sn	05 32 23.2	+0.1
KCP	**Kidapawan**	**1.88**	**290**	⇓iP	Pn	05 32 16.0	+0.1
KCP				i S	Sn	05 32 40.5	+0.2
GSPH	**General Santos**	**1.94**	**262**	⇑iP	Pn	05 32 12.7	-3.9

*IDC **01** 05:46:02.3±1.9, 15°.40S×173°.28W, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.6/42, mbtmp3.5/5, ML3.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.7/18, Error ellipse: s-maj=133.3km s-min=21.6km az=150.0*
ISC 01 05:46:07.6±2.3**, 15°S**±1°×**173°.4W**±0°.6**, h30km, n7, σ1s.20**/7**, mb3.5**/4**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.89**	**57**	Pn	**Pn**	**05 46 38.5**	**+0.6**
	40nm,0.3s,baz=229,slow=9.3,SNR=38						
AFI				Sn	**Sn**	**05 46 59.2**	**-1.7**
	144nm,0.3s,baz=270,slow=20,SNR=27						
DZM	**Mont Dzumac**	**20.36**	**247**	LR	LR	05 58 10.5	
	comp=Z,57nm,18.6s,baz=28,slow=36						
WRA	**Warramunga Arr**	**49.93**	**256**	P	**P**	**05 54 58.5**	**-0.5**
	0.3nm,0.7s,baz=94,slow=7.1,SNR=3.0						
ASAR	**Alice Springs**	**50.23**	**252**	P	**P**	**05 55 00.3**	**-1.1**
	0.5nm,0.7s,baz=86,slow=8.4,SNR=11						
NVAR	**Mina Array Bea**	**74.00**	**42**	P	**P**	**05 57 41.7**	**+0.9**
	0.7nm,0.8s,baz=215,slow=7.7,SNR=5.3						
TXAR	**Lajitas Array**	**80.37**	**56**	P	**P**	**05 58 16.9**	**+0.3**
	0.3nm,0.9s,baz=219,slow=7.0,SNR=2.4						
BRTR	**Keskin Array B**	**145.79**	**321**	PKPbc	**PKPbc**	**06 05 44.6**	**+0.3**
	0.3nm,0.6s,baz=46,slow=4.2,SNR=3.0						

*VAO **01** 05:48:48.0±1.8, 29°.33S×72°.49W, h103km±13km, mb4.0*
*IDC **01** 05:48:48.8±0.8, 28°.64S×71°.15W, h0km, mb4.1/7, mb1 4.1/11, mb1mx3.9/29, mbtmp4.0/11, ML3.6/4, MS3.2/6, Ms1 3.2/6, ms1mx3.0/25, Error ellipse: s-maj=27.4km s-min=20.6km az=86.0*
*GUC **01** 05:48:53.2±0.7, 28°.62S×71°.20W, h70km±22km, ML3.8*
*NEIC **01** 05:48:53.4±1.3, 28°.47S±0°.04×71°.4W±0°.1, h51km±8km, mb4.5/7, ML3.8(GUC), Error ellipse: s-maj=18.3km s-min=3.5km az=72.0*
ISC 01 05:48:52.4±0.6**, 28°.56S**±0°.05×**71°.3W**±0°.1**, h29km, n62, σ1s.67**/56**, mb4.4**/9**, 3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	**La Serena**	**1.34**	**179**	⇓iP	**Pb**	**05 49 16.6**	**-0.3**
LSCH				i S	**Sb**	**05 49 33.6**	**-0.1**
LSCH				IAML		05 49 36.2	
	comp=E,3μm,0.3s						
GO04	**Tololo Observa**	**1.66**	**166**	⇓iP	**Pb**	**05 49 21.4**	**-1.0**
GO04				i S	**Sb**	**05 49 42.5**	**-0.6**
GO04	**Tololo Observa**	**1.66**	**166**		**Pb**	**05 49 21.6**	**-0.8**
GO04				Sn	**Sb**	**05 49 43.5**	**+0.5**
CO02	**Combarbal**	**2.64**	**175**	⇓iP	**Pn**	**05 49 34.5**	**+1.3**
CO02				i S	**Sn**	**05 50 05.7**	**+1.4**
ROC1	**El Roble**	**4.40**	**177**		**Pn**	**05 50 01.1**	**+3.5**
PEL	**Peldehue**	**4.59**	**174**		**Pn**	**05 50 02.0**	**+2.0**
PB10	**IPOC Station P**	**5.07**	**8**	Pn	**Pn**	**05 50 05.9**	**-0.7**
PB04	**IPOC Station P**	**6.29**	**10**		**Pn**	**05 50 22.2**	**-1.2**
LVC	**Limon Verde**	**6.30**	**20**	Pn	**Pn**	**05 50 24.2**	**+0.5**
	comp=E,1.0nm,0.3s,baz=187,slow=8.2,SNR=10						
LVC				Lg	Lg	05 52 00.6	
	comp=E,10nm,0.3s,baz=162,slow=16,SNR=5.7						
LVC				LR	LR	05 52 57.6	
	comp=E,171nm,20.1s,baz=216,slow=39						
LVC	**Limon Verde**	**6.30**	**20**	eP	Pb	05 50 34.8	-6.8
LVC	**Limon Verde**	**6.30**	**20**		**Pn**	**05 50 24.4**	**+0.7**
PB11	**IPOC Station P**	**8.89**	**10**	Pn	**Pn**	**05 50 57.1**	**-2.0**
MNMC	**Minye Minye**	**9.52**	**10**	Pn	**Pn**	**05 51 06.2**	**-1.6**
PLCA	**Paso Flores**	**12.15**	**177**	Pn	**Pn**	**05 51 43.5**	**-0.1**
	comp=E,0.0nm,0.3s,baz=1.2,slow=15,SNR=2.0						
PLCA				LR	LR	05 56 39.0	
	comp=E,114nm,19.4s,baz=60,slow=39						
PLCA	**Paso Flores**	**12.15**	**177**		**Pn**	**05 51 43.4**	**-0.3**
LPAZ	**La Paz**	**12.56**	**14**	Pn	**Pn**	**05 51 49.0**	**-0.8**
	comp=E,0.2nm,0.3s,baz=191,slow=12,SNR=4.9						
LPAZ	**La Paz**	**12.56**	**14**	eP	Pn	05 51 55.2	+5.4
LPAZ	**La Paz**	**12.56**	**14**		**Pn**	**05 51 48.8**	**-1.0**
CPUP	**Villa Florida**	**12.59**	**83**	Pn	**Pn**	**05 51 48.3**	**-1.2**
	comp=E,0.2nm,0.3s,baz=231,slow=14,SNR=6.2						
CPUP				LR	LR	05 57 07.8	
	comp=E,128nm,18.7s,baz=254,slow=40						
CPUP	**Villa Florida**	**12.59**	**83**		**Pn**	**05 51 50.6**	**+1.1**
PLTB	**Pedras Altas**	**15.62**	**106**	eP	**Pn**	**05 52 31.9**	**+1.3**
SIV	**San Ignacio**	**15.66**	**39**	Pn	**Pn**	**05 52 27.3**	**-3.9**
	comp=E,0.1nm,0.3s,baz=360,slow=9.5,SNR=3.2						
SIV				LR	LR	05 58 01.2	
	comp=E,35nm,19.6s,baz=284,slow=35						
AQDB	**Aquidauana**	**16.29**	**64**	eP	**P**	**05 52 46.1**	**+4.1**
ITAB	**Concordia**	**16.98**	**90**	eP	**P**	**05 52 51.5**	**+2.0**
NNA	**Nana**	**17.29**	**341**	LR	LR	05 57 42.1	
	comp=E,42nm,20.1s,baz=98,slow=31						
PTGB	**Pitanga**	**17.60**	**82**	eP	**P**	**05 53 00.1**	**+3.6**
TRCB	**Terra Rica**	**17.75**	**75**	eP	**P**	**05 53 00.6**	**+2.4**
CNLB	**Canela**	**17.90**	**97**	eP	**P**	**05 53 00.2**	**+0.4**
PP1B	**Ponte de Pedra**	**18.60**	**58**	eP	**Pn**	**05 53 12.5**	**+4.6**
SAML	**Samuel**	**20.95**	**23**	P	**P**	**05 53 31.6**	**-1.4**
CLDB	**Colider**	**22.80**	**43**	eP	**P**	**05 53 53.5**	**+0.5**
BDFB	**Brasilia**	**25.04**	**64**	P	**P**	**05 54 14.3**	**-0.1**
	comp=E,1.6nm,0.6s,baz=225,slow=14,SNR=3.4						
BDFB	**Brasilia**	**25.04**	**64**	P	**P**	**05 54 13.3**	**-1.0**
BDFB				IAmb	IAmb	05 54 18.6	
	comp=Z,4.3nm,1.1s						
NBMA	**Muriti-CE**	**37.22**	**62**	eP	**P**	**05 56 00.9**	**-0.7**
NBPB	**Pedra_Branca-C**	**37.76**	**59**	eP	**P**	**05 56 04.3**	**-1.8**
VNA2	**Neumayer--Watz**	**54.79**	**159**	P	**P**	**05 58 19.0**	**-0.3**
	baz=295,slow=7.6						
SNAA	**Sanae**	**56.39**	**159**	P	**P**	**05 58 30.9**	**+0.2**
SNAA	**Sanae**	**56.39**	**159**	P	**P**	**05 58 31.0**	**+0.3**
	comp=Z,3.8nm,0.8s,baz=279,slow=8.3,SNR=21						
SNAA	**Sanae**	**56.39**	**159**	P	**P**	**05 58 30.4**	**-0.4**
SNAA				IAmb	IAmb	05 58 42.9	
	comp=Z,6.9nm,1.2s						
TROLL	**Troll, Antarti**	**58.11**	**159**	P	**P**	**05 58 43.5**	**+0.5**
QSPA	**South Pole Qui**	**61.66**	**180**	LR	LR	06 23 00.4	
	comp=Z,50nm,21.8s,baz=178,slow=33						
TXAR	**Lajitas Array**	**65.37**	**329**	P	**P**	**05 59 34.6**	**+2.3**
	comp=Z,0.2nm,0.6s,baz=145,slow=8.6,SNR=3.3						
TXAR	**Lajitas Array**	**65.37**	**329**	P	**P**	**05 59 30.2**	**-2.1**
DBIC	**Dimbokro**	**72.86**	**72**	P	**P**	**06 00 18.9**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=207,slow=6.1,SNR=4.4						
MAW	**Mawson**	**78.19**	**164**	P	**P**	**06 00 45.5**	**-3.2**
MAW				IAmb	IAmb	06 00 49.7	
	comp=Z,9.9nm,1.1s						
PDAR	**Pinedale Array**	**79.24**	**332**	P	**P**	**06 00 56.6**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=134,slow=4.3,SNR=4.7						
TOA0	**Torodi Ar. Sit**	**81.75**	**70**	P	**P**	**06 01 08.8**	**0.0**
TOA0				IAmb	IAmb	06 01 09.9	
	comp=Z,4.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**81.75**	**70**	P	**P**	**06 01 09.3**	**+0.5**
	comp=Z,3.5nm,0.6s,baz=278,slow=4.7,SNR=30						
BOSA	**Boshof**	**82.03**	**118**	P	**P**	**06 01 10.5**	**+0.1**
	comp=Z,2.0nm,0.5s,baz=242,slow=3.8,SNR=8.8						
BOSA	**Boshof**	**82.03**	**118**	P	**P**	**06 01 08.9**	**-1.5**
BOSA				IAmb	IAmb	06 01 22.7	
	comp=Z,3.3nm,0.8s						
ASAR	**Alice Springs**	**122.68**	**208**	PKP	**PKPdf**	**06 07 45.9**	**-0.1**
	comp=Z,0.4nm,0.9s,baz=133,slow=1.2,SNR=4.1						
WRA	**Warramunga Arr**	**125.80**	**210**	PKP	**PKPdf**	**06 07 52.1**	**0.0**
	comp=Z,0.9nm,0.9s,baz=156,slow=1.8,SNR=5.5						
H11S2	**WAKE ISLAND Hy**	**126.34**	**273**	T	T	08 26 59.0	
	baz=104,slow=73,SNR=16						
H11S1	**WAKE ISLAND Hy**	**126.35**	**273**	T	T	08 26 57.8	
	baz=104,slow=73,SNR=14						
H11S3	**WAKE ISLAND Hy**	**126.35**	**273**	T	T	08 27 01.1	
	baz=104,slow=73,SNR=13						
H11N3	**WAKE ISLAND Hy**	**126.61**	**274**	T	T	08 27 15.8	
	baz=113						
H11N1	**WAKE ISLAND Hy**	**126.62**	**274**	T	T	08 27 16.2	
	baz=113						
H11N2	**WAKE ISLAND Hy**	**126.63**	**274**	T	T	08 27 22.8	
	baz=113						
AAK	**Ala-Archa**	**149.06**	**54**	PKPbc	**PKiKP**	**06 08 39.4**	**+0.2**
	comp=Z,4.5nm,0.6s,baz=202,slow=3.9,SNR=15						
ZALV	**Zalesovo Beam**	**149.21**	**28**	PKPbc	**PKiKP**	**06 08 38.7**	**-0.2**
	comp=Z,6.0nm,0.5s,baz=300,slow=3.7,SNR=32						
ZALV	**Zalesovo Beam**	**149.21**	**28**		**PKPdf**	**06 08 34.6**	**+1.2**
MKAR	**Makanchi Array**	**152.47**	**41**	PKPbc	**PKiKP**	**06 08 46.3**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=322,slow=1.9,SNR=16						

IDC 01 05:57:35.5±1.7**, 3°.78N**×**126°.45E, h0km, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.2**/48**, mbtmp3.3**/4**, 1D, Error ellipse: s-maj=187.9km s-min=23.3km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**3.48**	**337**	⇓iP	Pb	05 58 39.4	+1.2
WRA	**Warramunga Arr**	**24.82**	**162**	P	P	06 02 59.1	-0.5
	0.2nm,0.4s,baz=341,slow=11,SNR=4.1						
ASAR	**Alice Springs**	**28.23**	**165**	P	P	06 03 31.0	+0.5
	0.2nm,0.9s,baz=342,slow=8.6,SNR=3.6						
SONM	**Songino Array**	**47.16**	**342**	P	P	06 06 09.8	-0.2
	0.2nm,0.5s,baz=165,slow=8.4,SNR=2.5						
MKAR	**Makanchi Array**	**57.35**	**325**	P	P	06 07 25.6	0.0
	0.4nm,0.4s,baz=118,slow=7.7,SNR=9.0						

*THR **01** 06:08:32.8±0.7, 28°.52N×54°.43E, h18km±8km, ML4.1*
*TEH **01** 06:08:33.2, 28°.53N×54°.36E, h18km, ML4.2*
*IDC **01** 06:08:35.3±2.4, 28°.51N×54°.29E, h44km±23km, mb3.7/28, mb1 3.9/32, mb1mx3.8/48, mbtmp4.0/32, ML3.4/4, MS3.2/9, Ms1 3.3/9, ms1mx3.0/37, Error ellipse: s-maj=14.0km s-min=11.5km az=177.0*
*NEIC **01** 06:08:35.9±1.5, 28°.51N±0°.07×54°.31E±0°.08, h51km±7km, Error ellipse: s-maj=10.4km s-min=9.7km az=51.0*
*OMAN **01** 06:08:37.2±0.6, 28°.58N×54°.72E, h34km, ml3.9/10, Error ellipse: s-maj=10.4km s-min=4.7km az=69.0*
*DSN **01** 06:08:37.7±1.3, 28°.39N×54°.95E, h10km, ML4.0/9, Error ellipse: s-maj=23.5km s-min=7.6km az=101.0*
ISC 01 06:08:30.1±0.4**, 28°.31N**±0°.03×**54°.26E**±0°.04**, h10km, n165, σ1s.67**/159**, mb4.1**/42**, MS3.3**/6**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**0.63**	**289**	ePg	**Pn**	**06 08 45.5**	**+0.3**
JHRM				e		06 09 09.8	
LMD1	**Lamerd**	**1.36**	**225**	ePn	Pg	06 09 03.6	+7.3
LMD1				e		06 09 32.6	
ISRV	**Sarvestan**	**1.47**	**317**	ePg	**Pg**	**06 09 00.0**	**+1.7**
ISRV				eSg	**Sg**	**06 09 19.5**	**+2.1**
ISRV				e		06 09 24.8	
BNDS	**Bandar-Abbas**	**1.92**	**118**	ePn	**Pg**	**06 09 07.9**	**+1.0**
BNDS	**Bandar-Abbas**	**1.92**	**118**	ePg	**Pg**	**06 09 07.9**	**+1.0**
SHI	**Shiraz**	**2.03**	**311**	e		06 09 43.4	
SHI				ePn	**Pg**	**06 09 08.6**	**-0.4**
NGRK	**Negar Kerman**	**2.54**	**58**	ePn	**Pn**	**06 09 13.1**	**+1.3**
NGRK				e		06 09 52.4	
IKAZ	**Kazeroun**	**2.58**	**305**	ePn	**Pb**	**06 09 14.7**	**-1.9**
IKAZ				e		06 10 03.0	
KRBR	**Kerman**	**2.75**	**52**	IAML		06 10 01.6	
	comp=E,830nm,0.5s						
KRBR				IAML		06 10 02.2	
	comp=N,636nm,0.5s						
TVBK	**TV Kerman**	**2.76**	**52**	ePn	**Pn**	**06 09 17.1**	**+2.4**
TVBK				e		06 10 07.4	
SHME	**Shamm**	**2.80**	**143**	P	**Pb**	**06 09 18.9**	**-1.4**
SHME	**Shamm**	**2.80**	**143**	ePn	**Pb**	**06 09 20.2**	**-0.1**
KHGB	**Koh Gabri**	**2.83**	**43**	ePn	**Pn**	**06 09 17.1**	**+1.5**
KHGB				e		06 09 55.8	
BANOM	**Banah**	**2.99**	**142**	eP	**Pb**	**06 09 22.7**	**-0.8**
	SNR=58						
BANOM	**Banah**	**2.99**	**142**	P	**Pb**	**06 09 22.7**	**-0.8**
	SNR=57						
IMEH	**Mehriz**	**3.09**	**6**	ePn	**Pn**	**06 09 20.0**	**+0.8**
IMEH				e		06 10 06.5	
CHMN	**Cheshme madani**	**3.26**	**61**	ePn	**Pn**	**06 09 23.2**	**+1.5**
MSFE	**Esma-Masafi**	**3.39**	**149**	i P	**Pb**	**06 09 29.2**	**-1.0**
	SNR=6.6						
MSFE	**Esma-Masafi**	**3.39**	**149**	ePn	**Pb**	**06 09 29.3**	**-1.0**
IBAF	**Bafgh**	**3.47**	**19**	ePn	**Pn**	**06 09 24.9**	**+0.6**
MDH	**Madha**	**3.50**	**148**	P	**Pb**	**06 09 29.3**	**-3.0**
MDH	**Madha**	**3.50**	**148**	ePn	**Pb**	**06 09 30.3**	**-1.9**
MDH	**Madha**	**3.50**	**148**	P	**Pb**	**06 09 30.6**	**-1.6**
MDH				S	**Sb**	**06 10 13.1**	**-1.8**
NAZ	**Nazwa, Dubai**	**3.53**	**159**	i P	**Pb**	**06 09 31.9**	**-0.8**
	SNR=9.4						
NAZ	**Nazwa, Dubai**	**3.53**	**159**	ePn	**Pb**	**06 09 32.0**	**-0.7**
NAZ	**Nazwa, Dubai**	**3.53**	**159**	P	**Pb**	**06 09 32.5**	**-0.2**
	SNR=9.4						
NAZ				S	**Sb**	**06 10 16.3**	**+0.6**
KLNJ	**Kolanjah**	**3.56**	**320**	ePn	**Pn**	**06 09 26.7**	**+1.0**
ISAD	**Sadrabad**	**3.63**	**352**	ePn	**Pn**	**06 09 27.8**	**+1.2**
FAQ	**Al Faqa, Dubai**	**3.74**	**161**	i P	**Pb**	**06 09 34.7**	**-1.5**
	SNR=7.8						
FAQ	**Al Faqa, Dubai**	**3.74**	**161**	ePn	**Pb**	**06 09 34.7**	**-1.5**
FAQ	**Al Faqa, Dubai**	**3.74**	**161**	P	**Pb**	**06 09 35.0**	**-1.3**
	SNR=7.8						
FAQ				S	**Sb**	**06 10 21.5**	**-0.2**
UOSS	**Minazif**	**3.77**	**152**	i P	**Pb**	**06 09 34.1**	**-2.7**
	SNR=6.3						
UOSS	**Minazif**	**3.77**	**152**	ePn	**Pb**	**06 09 34.1**	**-2.7**
UOSS	**Minazif**	**3.77**	**152**		**Pb**	**06 09 34.3**	**-2.5**
UOSS				Sn	**Sb**	**06 10 18.9**	**-3.6**
UOSS	**Minazif**	**3.77**	**152**	P	**Pb**	**06 09 34.2**	**-2.6**
UOSS				S	**Sb**	**06 10 19.1**	**-3.5**
ASUD	**Al Ashush, Dub**	**3.79**	**165**	i P	**Pb**	**06 09 36.1**	**-0.9**
	SNR=14						
ASUD				S	**Sb**	**06 10 21.6**	**-1.4**
ASUD	**Al Ashush, Dub**	**3.79**	**165**	ePn	**Pb**	**06 09 36.2**	**-0.8**
ASUD	**Al Ashush, Dub**	**3.79**	**165**	P	**Pb**	**06 09 36.2**	**-0.8**
	SNR=14						
ASUD				S	**Sb**	**06 10 22.8**	**-0.2**
HATD	**Hatta, Dubai**	**3.85**	**154**	i P	**Pb**	**06 09 35.5**	**-2.5**
	SNR=15						
HATD	**Hatta, Dubai**	**3.85**	**154**	ePn	**Pb**	**06 09 35.6**	**-2.5**
HATD	**Hatta, Dubai**	**3.85**	**154**	P	**Pb**	**06 09 36.0**	**-2.1**
	SNR=15						
HATD				S	**Sb**	**06 10 22.8**	**-2.1**
IRAM	**Ramesheh**	**3.85**	**335**	ePn	**Pn**	**06 09 31.0**	**+1.4**
ICHK	**Chekchek**	**3.93**	**2**	ePn	**Pn**	**06 09 31.7**	**+1.0**
ASHO	**Ashiyiah**	**3.95**	**155**	i P	**Pb**	**06 09 37.1**	**-2.7**
	SNR=142						
ASHO				i P	Pg	06 09 37.3	-8.5
	SNR=32						
ASHO	**Ashiyiah**	**3.95**	**155**	ePn	**Pb**	**06 09 37.1**	**-2.7**
ASHO	**Ashiyiah**	**3.95**	**155**	P	**Pb**	**06 09 37.2**	**-2.7**
	SNR=142						
YZKH	**Yazd**	**4.08**	**4**	ePn	**Pn**	**06 09 33.9**	**+1.2**
YZKH	**Yazd**	**4.08**	**4**	ePn	**Pn**	**06 09 33.9**	**+1.2**
YZKH				eSg	**Sb**	**06 10 32.9**	**+1.3**
IBRJ	**Brojen**	**4.43**	**325**	ePn	**Pn**	**06 09 39.4**	**+1.8**
ALNE	**Al Ain**	**4.44**	**162**	i P	**Pb**	**06 09 44.0**	**-4.2**
	SNR=7.4						
ALNE	**Al Ain**	**4.44**	**162**	ePn	**Pb**	**06 09 44.1**	**-4.1**
IZEF	**Zefreh**	**4.87**	**341**	ePn	**Pn**	**06 09 44.4**	**+0.8**
ANAR	**Anarak**	**4.89**	**355**	ePn	**Pn**	**06 09 44.3**	**+0.5**
JHBN	**Jahan bin**	**5.00**	**322**	ePn	**Pn**	**06 09 46.4**	**+1.0**
TPRV	**Parvadeh(Tabas**	**5.15**	**23**	ePn	**Pn**	**06 09 47.6**	**+0.2**
ARQ	**Araqi**	**5.35**	**157**	P	Pb	06 09 56.4	-7.4
	SNR=33						
ARQ				S	**Sb**	**06 10 59.7**	**-8.3**
HOQ	**Hoqain**	**5.45**	**149**	P	Pn	06 09 55.4	+4.1
	SNR=6.0						
IKOO	**Kooshah**	**5.80**	**44**	ePn	**Pn**	**06 09 58.4**	**+1.9**
TKDS	**Koohdasht(Taba**	**5.83**	**24**	ePn	**Pn**	**06 09 57.4**	**+0.6**
TABS	**Tabas**	**5.87**	**24**	ePn	**Pn**	**06 09 57.4**	**+0.2**
TABS	**Tabas**	**5.87**	**24**	ePn	**Pn**	**06 09 57.4**	**+0.2**
NHDN	**Nehbandan**	**5.90**	**57**	ePn	**Pn**	**06 09 59.7**	**+2.0**
KRSH	**Karshahi**	**5.93**	**343**	ePn	**Pn**	**06 09 58.7**	**+0.5**
TNSJ	**Nastanj**	**5.99**	**19**	ePn	**Pn**	**06 09 58.8**	**-0.1**
BSY	**Bisya**	**6.14**	**154**	P	Pn	06 10 06.7	+5.7
BSY				S	Sb	06 11 18.6	-12
CHBR	**Chabahar**	**6.17**	**114**	ePn	**Pn**	**06 10 04.0**	**+2.7**
CHBR	**Chabahar**	**6.17**	**114**	eP	**Pn**	**06 10 04.0**	**+2.7**
SMDO	**Samad**	**6.24**	**146**	P	Pn	06 10 08.4	+6.0
	SNR=21						
SMDO				S	**Sn**	**06 11 19.8**	**+5.9**
WSAR	**Wadi Sarin**	**6.40**	**141**	P	Pn	06 10 09.3	+4.8
	comp=N,6.0nm,0.3s,baz=320,slow=6.8,SNR=30						
WSAR				S	**Sn**	**06 11 18.8**	**+1.1**
	comp=N,1.8nm,0.3s,baz=40,slow=1.2,SNR=1.8						
WSAR	**Wadi Sarin**	**6.40**	**141**	P	Pn	06 10 09.2	+4.8
	SNR=22						
AFRZ	**Afriz**	**6.54**	**38**	ePn	**Pn**	**06 10 08.0**	**+1.5**
IMON	**Monand**	**6.74**	**42**	ePn	**Pn**	**06 10 09.9**	**+0.6**
JMDO	**Jabal Madar**	**6.86**	**149**	P	Pn	06 10 16.4	+5.7
JMDO				S	**Sn**	**06 11 34.5**	**+5.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	7.58	315	*e*Pn	Pn	06 10 21.0	+0.5
HSAM	Samen	7.62	322	*e*Pn	Pn	06 10 21.8	+0.4
HRA	Herat	9.13	46	Pn	Pn	06 10 42.8	+0.8
RAYN	Ar Rayn	9.21	241		Pn	06 10 46.5	+3.5
GEYT	Alibeck	10.13	18	P	Pn	06 10 55.1	-0.5
	comp=N,0.1nm,0.3s,baz=218,slow=9.1,SNR=5.6						
GEYT				LR	LR	06 14 42.3	
	comp=N,39nm,20.1s,baz=200,slow=37						
GEYT	Alibeck	10.13	18	Pn	Pn	06 10 56.1	+0.5
GYA0B	ALIBECK ARRAY	10.13	18	Pn	Pn	06 10 55.2	-0.4
GNI	Garni	14.19	329	LR	LR	06 17 42.4	
	comp=N,96nm,19.7s,baz=122,slow=39						
ASF	Jabal al Asfar	15.49	289	P	Pn	06 12 08.4	-0.3
	comp=N,0.2nm,0.3s,baz=90,slow=8.1,SNR=2.7						
SOCY	Socotra	16.04	181	Pn	Pn	06 12 15.7	-0.3
SOCY				IAmb	IAmb	06 12 16.1	
	comp=Z,13nm,0.9s						
GAZ	Gaziantep	16.83	306	Pn	Pn	06 12 25.9	0.0
GAZ				IAmb	IAmb	06 12 31.4	
	comp=Z,15nm,1.0s						
EIL	Elat	16.95	279	LR	LR	06 19 51.8	
	comp=Z,49nm,19.5s,baz=124,slow=40						
NIL	Nilore	17.13	67	Pn	Pn	06 12 29.2	-0.5
NIL				IAmb	IAmb	06 12 34.8	
	comp=Z,5.1nm,0.7s						
KBZ	Khabaz	17.90	332	P	Pn	06 12 39.0	0.0
	comp=Z,0.0nm,0.3s,baz=161,slow=14,SNR=2.2						
BTK	Batken	18.00	45		Pn	06 12 39.4	-1.1
KIV	Kislovodsk	18.17	332		P	06 12 43.8	+1.0
KIV				IAmb	IAmb	06 12 53.0	
	comp=Z,7.1nm,0.9s						
KK31	Karatay Array	19.75	37	P	P	06 12 59.9	-0.2
KKAR	Karatay Array	19.75	37	P	P	06 12 59.9	-0.2
KKAR	Karatay Array	19.75	37	P	P	06 13 00.2	+0.1
KKAR				IAmb	IAmb	06 13 08.8	
	comp=Z,3.4nm,1.1s						
ARSB	Arslanbob	20.07	45		P	06 13 04.7	+1.0
ARSB				IAmb	IAmb	06 13 08.7	
	comp=Z,5.1nm,0.8s						
BR131	Keskin Array S	20.49	309	P	Pn	06 13 09.7	-0.8
BR131				IAmb	IAmb	06 13 14.4	
	comp=Z,7.1nm,0.8s						
BRTR	Keskin Array B	20.49	309	P	P	06 13 09.0	+0.7
	comp=Z,4.5nm,0.8s,baz=129,slow=12,SNR=38						
BRTR				LR	LR	06 22 43.6	
	comp=Z,55nm,18.2s,baz=126,slow=42						
BRTR	Keskin Array B	20.49	309	P	P	06 13 08.5	+0.2
ANTO	Ankara	21.14	309	P	P	06 13 17.0	+1.8
ANTO				IAmb	IAmb	06 13 17.6	
	comp=Z,12nm,0.9s						
ABKAR	Akbulak array	21.37	10	P	P	06 13 17.0	-0.5
ABKAR				IAmb	IAmb	06 13 25.8	
	comp=Z,4.9nm,0.9s						
AAK	Ala-Archa	21.74	44	P	P	06 13 20.5	-1.3
	comp=Z,0.3nm,0.3s,baz=196,slow=15,SNR=2.0						
AAK				LR	LR	06 23 22.5	
	comp=Z,74nm,19.0s,baz=266,slow=41						
AAK	Ala-Archa	21.74	44	IAmb	IAmb	06 13 29.2	
	comp=Z,2.8nm,0.8s						
NRN	Naryn	22.06	48	P	P	06 13 25.1	-0.2
NRN				IAmb	IAmb	06 13 34.0	
	comp=Z,3.4nm,0.9s						
ELL	Elmali	22.15	299	P	P	06 13 27.9	+1.8
AKTO	Aktyubinsk	22.29	6	P	P	06 13 26.8	-0.6
	comp=Z,2.9nm,0.5s,baz=170,slow=14,SNR=16						
IDI	Anoyia	25.85	293	P	P	06 14 02.5	+0.6
	comp=Z,7.9nm,0.6s,baz=81,slow=8.3,SNR=13						
ALN	Alexandroupoli	26.28	306	P	P	06 14 07.7	+2.1
BVAR	Borovoye Array	27.43	21	P	P	06 14 14.9	-0.9
	comp=Z,2.4nm,0.7s,baz=214,slow=9.5,SNR=12						
MLR	Muntele Rosu	28.20	315	P	P	06 14 23.2	+0.2
	comp=Z,2.3nm,0.8s,baz=304,slow=11,SNR=4.2						
MLR	Muntele Rosu	28.20	315	IAmb	IAmb	06 14 28.4	
	comp=Z,5.7nm,1.1s						
ARU	Arti	28.27	5	LR	LR	06 25 58.4	
	comp=Z,113nm,19.2s,baz=286,slow=37						
MAKZ	Makanchi	28.48	42	P	P	06 14 25.2	-0.1
AGG	Agios Georgios	28.51	300	P	P	06 14 25.8	0.0
MK31	Makanchi Array	28.66	42	P	P	06 14 26.8	-0.2
MKAR	Makanchi Array	28.66	42	P	P	06 14 26.6	-0.3
	comp=Z,0.4nm,0.6s,baz=237,slow=11,SNR=5.7						
MKAR				LR	LR	06 26 55.2	
	comp=Z,67nm,18.7s,baz=316,slow=39						
KURBB	Kurchatov Arra	28.88	33	P	P	06 14 28.2	-0.6
	comp=Z,0.4nm,0.7s,baz=234,slow=8.3,SNR=3.8						
AKASG	Malin Array Be	29.30	327	P	P	06 14 31.4	-1.2
	comp=Z,2.3nm,0.8s,baz=131,slow=8.8,SNR=10						
AKASG	Malin Array Be	29.30	327	IAmb	IAmb	06 14 33.1	
	comp=Z,1.4nm,0.9s						
ZAA0	Zalesovo Array	33.98	33	IAmb	IAmb	06 15 13.8	
	comp=Z,2.0nm,0.7s						
ZALV	Zalesovo Beam	33.98	33	P	P	06 15 12.7	-1.0
	comp=Z,1.8nm,0.5s,baz=244,slow=9.6,SNR=9.8						
ZALV				LR	LR	06 31 04.5	
	comp=Z,79nm,19.8s,baz=338,slow=40						
ZALV	Zalesovo Beam	33.98	33	P	P	06 15 12.4	-1.2
OSTC	Ostas	36.27	318	*e*P	P	06 15 33.5	0.0
CHVC	Chvalec	36.38	318	*e*P	P	06 15 34.3	-0.1
MURB	Monte Urbino	36.60	305	P	P	06 15 38.3	+1.8
KBA	Koelnbreinsper	36.89	312	P	P	06 15 38.9	-0.1
	comp=Z,4.6nm,1.1s						
GERES	GERESS Array B	37.19	315	P	P	06 15 40.8	-0.6
	comp=Z,0.6nm,0.7s,baz=107,slow=8.3,SNR=6.2						
KHC	Kasperske Hory	37.35	315	*e*P	P	06 15 42.1	-0.7
KHC	Kasperske Hory	37.35	315	P	P	06 15 42.5	-0.3
ABTA	Abfaltersbach	37.36	311	P	P	06 15 41.5	-1.4
	comp=Z,3.9nm,1.2s						
WTTA	Wattenberg	38.07	312	P	P	06 15 47.9	-1.1
	comp=Z,3.0nm,0.6s						
FINES	FINESS Array B	38.08	338	P	P	06 15 47.9	-0.7
	comp=Z,2.7nm,0.6s,baz=154,slow=9.7,SNR=13						
WATA	Walderalm	38.12	312	P	P	06 15 47.6	-1.9
	comp=Z,3.3nm,1.0s						
SQTA	Sankt Quirin	38.34	311	P	P	06 15 50.8	-0.4
	comp=Z,4.8nm,0.7s						
CLL	Collm	38.44	318	*e*P	P	06 15 52.0	+0.2
MOTA	Moosalm	38.44	312	P	P	06 15 50.9	-1.2
	comp=Z,3.4nm,1.0s						
KEST	Kesra	38.53	293	P	P	06 15 53.0	+0.1
	comp=Z,3.7nm,1.0s,baz=90,slow=8.1,SNR=2.1						
KEST	Kesra	38.53	293	IAmb	IAmb	06 15 59.8	
	comp=Z,7.7nm,1.1s						
FETA	Feichten	38.61	311	P	P	06 15 52.9	-0.7
	comp=Z,3.7nm,0.8s						
GTA	Gaotai	39.05	61	*e*P	P	06 15 58.0	+0.7
GTA				pP	sP	06 16 05.6	+3.5
GTA				sP	pP	06 16 09.0	+8.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DAVA	Damuels	39.23	311	P	P	06 15 58.2	-0.6
	comp=Z,3.9nm,0.6s						
CMAR	Chiang Mai Arr	41.97	94	P	P	06 16 22.0	+0.5
	comp=Z,1.0nm,0.6s,baz=288,slow=7.2,SNR=7.2						
CMAR				LR	LR	06 35 56.1	
	comp=Z,34nm,18.5s,baz=340,slow=39						
NC405	NORSAR Array S	43.30	331	P	P	06 16 29.7	-2.0
NB2	NORSAR Subarra	43.47	331	P	P	06 16 32.0	-1.2
	comp=Z,11nm,0.6s,baz=118,slow=7.9						
NOA	NORSAR Array B	43.47	331	P	P	06 16 32.1	-1.1
	comp=Z,1.8nm,0.8s,baz=119,slow=8.1,SNR=5.6						
ARCES	ARCESS Array B	44.48	346	P	P	06 16 40.6	-0.6
	comp=Z,3.0nm,1.0s,baz=141,slow=9.3,SNR=5.0						
SONM	Songino Array	44.50	49	P	P	06 16 40.9	-0.9
	comp=Z,0.5nm,0.7s,baz=277,slow=7.7,SNR=4.8						
ESBB	Sonseca Array	48.83	299	P	P	06 17 15.3	-0.4
ESBB				IAmb	IAmb	06 17 17.7	
	comp=Z,0.8nm,0.8s						
ESDC	Sonseca Array	48.83	299	P	P	06 17 15.0	-0.7
	comp=Z,0.6nm,0.5s,baz=74,slow=7.6,SNR=8.1						
TOA0	Torodi Ar. Sit	51.04	264	P	P	06 17 33.9	+1.1
TORD	Torodi Ar. Bea	51.04	264	P	P	06 17 33.5	+0.8
	comp=Z,4.5nm,0.7s,baz=60,slow=7.4,SNR=32						
TORD	Torodi Ar. Bea	51.04	264	P	P	06 17 33.9	+1.1
DBIC	Dimbokro	59.73	261	P	P	06 18 35.3	-0.1
	comp=Z,2.0nm,0.8s,baz=104,slow=4.2,SNR=2.8						
LBTB	Lobatse	59.76	210	P	P	06 18 37.4	+2.0
	comp=Z,2.6nm,1.0s,baz=25,slow=7.7,SNR=3.3						
LBTB	Lobatse	59.76	210	IAmb	IAmb	06 18 41.4	
	comp=Z,5.8nm,1.1s						
KSRS	Korea Array	61.12	61	P	P	06 18 42.8	-1.8
	comp=Z,0.7nm,0.5s,baz=278,slow=7.2,SNR=4.2						
USRK	Ussuriysk Ar.	62.45	52	P	P	06 18 53.7	+0.2
	comp=Z,0.6nm,0.6s,baz=292,slow=5.1,SNR=3.3						
BOSA	Boshof	63.04	209	P	P	06 18 59.7	+2.1
	comp=Z,2.3nm,0.7s,baz=4.3,slow=2.8,SNR=4.8						
TOLK	Toolik Lake Re	81.75	9	P	P	06 20 49.0	+0.3
TOLK				IAmb	IAmb	06 20 51.7	
	comp=Z,1.4nm,0.8s						
BMAR	Burnt Mountain	83.51	7	P	P	06 20 57.8	0.0
ILAR	Eielson Array	85.77	9	P	P	06 21 08.0	-1.3
	comp=Z,0.6nm,0.8s,baz=322,slow=3.9,SNR=6.8						
ILAR	Eielson Array	85.77	9	P	P	06 21 08.1	-1.2
YKA	Yellowknife Ar	89.08	355	P	P	06 21 24.7	-0.5
	comp=Z,1.6nm,0.7s,baz=5.6,slow=5.0,SNR=22						
YKA	Yellowknife Ar	89.08	355	P	P	06 21 24.9	-0.3
WRA	Warramunga Arr	90.98	112	P	P	06 21 35.1	+0.3
	comp=Z,0.6nm,0.9s,baz=311,slow=4.1,SNR=5.1						
WRA	Warramunga Arr	90.98	112	P	P	06 21 34.8	0.0
ASAR	Alice Springs	92.46	115	P	P	06 21 42.0	+0.3
	comp=Z,0.5nm,0.7s,baz=306,slow=4.8,SNR=8.7						
TXAR	Lajitas Array	118.92	338	PKP	PKiKP	06 27 19.1	-0.4
	comp=Z,0.2nm,0.9s,baz=17,slow=3.8,SNR=2.8						

IDC 01 06:17:07.3±4.1**, 18°.95S×176°.11W, h0^{km}, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.7**/24**, mbtmp3.9**/4**, Error ellipse: s-maj=113.0km s-min=40.9km az=28.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.07	243	P	P	06 24 43.5	-1.2
	0.9nm,0.6s,baz=98,slow=14,SNR=3.5						
WRA	Warramunga Arr	46.60	260	P	P	06 25 37.9	+0.3
	0.3nm,0.3s,baz=96,slow=7.5,SNR=11						
ASAR	Alice Springs	46.62	255	P	P	06 25 38.0	+0.3
	1.7nm,0.6s,baz=92,slow=8.2,SNR=49						
ASAR				PcP	PcP	06 27 10.9	-1.0
	0.3nm,0.6s,baz=106,slow=3.9,SNR=5.7						
QSPA	South Pole Qui	71.11	180	P	P	06 28 27.8	+0.3
	1.1nm,0.7s,baz=19,slow=6.8,SNR=5.3						

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*IDC **01** 06:17:13.4±0.7, 44°.65S×37°.45E, h0^{km}, mb4.0/9, mb1 4.1/11, mb1mx3.9/32, mbtmp4.1/11, ML3.7/2, MS3.7/6, Ms1 3.7/6, ms1mx3.4/26, Error ellipse: s-maj=29.3km s-min=16.8km az=61.0*

*NEIC **01** 06:17:15.3±0.8, 44°.6S±0°.1×37°.4E±0°.2, h15^{km}±5^{km}, mb4.3/7, Error ellipse: s-maj=21.2km s-min=15.7km az=148.0*

ISC 01 06:17:14.8±0.7**, 44°.7S**±0°.1×**37°.4E**±0°.2**, h10^{km}, n27, σ0^{s}49**/17**, mb4.1**/9**, MS3.7**/4**, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	17.79	308	P	Pn	06 21 21.9	-0.8
	0.3nm,0.3s,baz=137,slow=17,SNR=5.5						
SUR				LR	LR	06 27 02.3	
	comp=Z,108nm,18.1s,baz=162,slow=33						
SUR	Sutherland	17.79	308	P	Pn	06 21 22.5	-0.2
SUR				IAmb	IAmb	06 21 26.4	
	comp=Z,22nm,1.2s						
BOSA	Boshof	18.70	325	P	P	06 21 33.0	-0.3
	comp=Z,0.1nm,0.3s,baz=135,slow=8.7,SNR=7.4						
BOSA				LR	LR	06 27 25.5	
	comp=Z,215nm,19.0s,baz=202,slow=33						
BOSA	Boshof	18.70	325	IAmb	IAmb	06 21 37.5	
	comp=Z,24nm,1.4s						
LBTB	Lobatse	21.80	330	P	P	06 22 07.8	+0.6
	comp=Z,4.0nm,0.9s,baz=180,slow=9.1,SNR=3.7						
LBTB				LR	LR	06 29 11.0	
	comp=Z,186nm,20.6s,baz=162,slow=33						
LBTB	Lobatse	21.80	330	IAmb	IAmb	06 22 22.0	
	comp=Z,15nm,1.2s						
MAW	Mawson	26.64	158	LR	LR	06 31 17.2	
	comp=Z,69nm,19.8s,baz=302,slow=32						
LSZ	Lusaka	30.30	342	P	P	06 23 25.7	-0.8
	comp=Z,1.8nm,0.7s,baz=167,slow=9.6,SNR=4.2						
LSZ	Lusaka	30.30	342	IAmb	IAmb	06 23 28.5	
	comp=Z,8.7nm,1.4s						
SNAA	Sanae	33.18	202	P	P	06 23 51.5	+0.3
	comp=Z,3.1nm,0.8s,baz=60,slow=6.9,SNR=8.0						
SNAA	Sanae	33.18	202	IAmb	IAmb	06 23 53.0	
	comp=Z,3.3nm,0.8s						
QSPA	South Pole Qui	45.56	180	P	P	06 25 34.4	-0.1
	comp=Z,1.9nm,0.6s,baz=254,slow=1.3,SNR=10						
QSPA	South Pole Qui	45.56	180	P	P	06 25 34.4	-0.1
H08N3	Diego Garcia H	48.12	48	T	T	07 17 52.8	
	baz=209						
H08N1	Diego Carcia H	48.14	48	T	T	07 17 50.9	
	baz=209						
H08N2	Diego Garcia H	48.14	48	T	T	07 17 47.2	
	baz=209						
VNDA	Vanda	53.43	167	LR	LR	06 47 19.9	
	comp=Z,107nm,21.5s,baz=203,slow=34						
TORD	Torodi Ar. Bea	66.02	322	P	P	06 28 02.3	+0.7
	comp=Z,0.7nm,0.6s,baz=150,slow=5.3,SNR=4.5						
STKA	Stephens Creek	77.36	122	P	P	06 29 09.3	-0.6
	comp=Z,2.7nm,0.7s,baz=268,slow=3.2,SNR=5.4						
ASAR	Alice Springs	78.17	111	P	P	06 29 14.4	-0.1
	comp=Z,1.0nm,0.8s,baz=222,slow=5.6,SNR=13						
ASAR	Alice Springs	78.17	111	P	P	06 29 14.3	-0.2
WRA	Warramunga Arr	81.03	109	P	P	06 29 30.1	0.0
	comp=Z,1.2nm,1.0s,baz=217,slow=4.4,SNR=6.2						
GEYT	Alibeck	84.32	16	P	P	06 29 47.4	+0.8
	comp=Z,0.8nm,0.7s,baz=237,slow=5.0,SNR=3.1						
ESDC	Sonseca Array	91.82	329	LR	LR	07 11 43.6	
	comp=Z,152nm,18.4s,baz=300,slow=36						
TXAR	Lajitas Array	145.68	257	PKPbc	PKPab	06 36 54.3	+0.2
	comp=Z,1.4nm,0.8s,baz=137,slow=5.8,SNR=13						
TXAR	Lajitas Array	145.68	257		PKPab	06 36 54.2	0.0
TX31	Lajitas Ar. Si	145.68	257		PKPab	06 36 54.2	0.0

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*IDC **01** 06:39:07.1±1.4, 3°.35N×79°.09W, h0^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.5/27, mbtmp3.6/5, ML2.6/1, Error ellipse: s-maj=46.4km s-min=26.6km az=58.0*

*RSNC **01** 06:39:14.0±1.6, 3°.43N×78°.77W, h32^{km}±32^{km}, ML3.2, Mw3.3*

ISC 01 06:39:09.9±1.1**, 3°.50N**±0°.05×**78°.91W**±0°.08**, h19^{km}, n26, σ1^{s}99**/39**, mb3.5**/4**, 7C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALC	Bahia Malaga	1.65	72⇑	*i*P	Pn	06 39 37.6	-0.3
MALC				*i*		06 39 37.8	
	comp=Z,439nm,0.2s						
MALC				*e*S	Sn	06 39 56.4	-2.2
BBAC	Balboa, Cauca	2.21	131⇑	*i*P	Pn	06 39 45.4	-0.4
BBAC				*e*S	Sn	06 40 10.1	-2.7
BBAC				*i*		06 40 11.5	
	comp=Z,166nm,0.6s						
YOTC	Yotoco, Valle	2.60	79	*e*P	Pn	06 39 49.9	-1.2
YOTC				*e*S	Sn	06 40 18.3	-3.9
YOTC				*i*		06 40 20.9	
	comp=Z,41nm,0.6s						
SOTA	Rioblanco	2.66	120⇑	*i*P	Pn	06 39 53.0	+0.7
SOTA				*e*S	Sn	06 40 22.6	-1.8
SOTA				*i*		06 40 27.6	
	comp=Z,148nm,1.1s						
CRUC	La Cruz	2.73	134	*e*P	Pn	06 39 54.4	+1.2
CRUC				*i*		06 40 41.6	
	comp=Z,102nm,0.5s						
CCUFI	Cufio, Nario	2.74	145	*e*P	Pn	06 39 54.0	+0.7
CCUFI				*e*S	Sn	06 40 25.3	-0.9
GCUF	Volcan Galeras	2.74	145⇑	*i*P	Pn	06 39 54.5	+1.1
GCUF				*e*S	Sn	06 40 24.9	-1.3
GCUF				*i*		06 40 32.0	
	comp=Z,115nm,0.4s						
PCON	Cinco Dias	2.76	115⇑	*i*P	Pn	06 39 54.3	+0.6
PCON				*e*S	Sn	06 40 24.1	-2.7
PCON				*i*		06 40 32.2	
	comp=Z,100nm,0.5s						
PLMC	San Jos del P	2.97	62	*e*P	Pn	06 39 53.3	-2.8
OTAV	Otavalo	3.27	172	*e*P	Pn	06 40 01.6	+1.1
OTAV				*e*S	Sn	06 40 37.2	-2.0
BETC	Betania	3.55	103	*e*P	Pn	06 40 07.1	+2.9
BETC				*e*S	Sn	06 40 47.2	+1.5
ANIL	Santa Ana	3.63	74	*e*P	Pn	06 40 05.5	+0.1
ANIL				*i*		06 40 08.2	
	comp=Z,120nm,0.2s						
ORTC	Ortega, Tolima	3.68	83⇑	*i*P	Pn	06 40 07.3	+1.5
ORTC				*i*		06 40 08.8	
	comp=Z,41nm,0.2s						
ORTC				*e*S	Sn	06 40 49.8	+1.1
TOLC	Tolima	3.74	73	*e*P	Pn	06 40 07.3	+0.4
FLOC	Florencia	3.77	120⇑	*i*P	Pn	06 40 09.1	+2.1
FLOC				*i*		06 40 56.2	
	comp=Z,32nm,0.6s						
GUY2C	Guyana, Caldas	3.93	64	*e*P	Pn	06 40 10.3	+0.7
GUY2C				*i*		06 40 38.7	
	comp=Z,10nm,0.5s						
ROSC	El Rosal	4.76	74	Pn	Pn	06 40 24.0	+2.9
	comp=Z,5.0nm,0.3s,baz=252,slow=20,SNR=16						
ROSC				Sn	Sn	06 41 19.3	+3.2
	comp=Z,1.5nm,0.3s,baz=290,slow=24,SNR=1.9						
MACC	Macarena, Meta	5.23	105	*e*P	Pn	06 40 29.0	+1.9
MACC				*i*		06 40 29.8	
	comp=Z,80nm,0.4s						
MACC				*e*S	Sn	06 41 23.1	-3.9
VILC	Villavicencio,	5.24	83	*e*P	Pn	06 40 29.7	+2.3
VILC				*i*		06 40 32.4	
	comp=Z,56nm,0.6s						
VILC				*e*S	Sn	06 41 25.6	-1.8
CHIC	Chingaza	5.28	78	*e*P	Pn	06 40 30.6	+2.3
CHIC				*i*		06 40 33.3	
	comp=Z,17nm,0.5s						
CHIC				*e*S	Sn	06 41 27.8	-1.1
LPAZ	La Paz	22.36	152	P	P	06 44 07.2	-0.5
	comp=Z,0.6nm,0.6s,baz=330,slow=8.1,SNR=1.2						
SIV	San Ignacio	26.19	138	P	P	06 44 44.8	+1.2
	comp=Z,0.8nm,0.7s,baz=328,slow=9.5,SNR=2.6						
YKA	Yellowknife Ar	64.53	343	P	P	06 49 46.7	+1.4
	comp=Z,0.5nm,0.7s,baz=134,slow=6.1,SNR=8.5						
TORD	Torodi Ar. Bea	80.07	77	P	P	06 51 19.7	+0.5
	comp=Z,0.3nm,0.6s,baz=271,slow=4.7,SNR=1.8						
ASAR	Alice Springs	142.50	235	PKP	PKPdf	06 58 39.7	-2.9
	comp=Z,0.3nm,0.4s,baz=119,slow=3.7,SNR=11						
WRA	Warramunga Arr	143.70	241	PKP	PKPbc	06 58 43.9	+1.7
	comp=Z,1.8nm,0.8s,baz=113,slow=3.2,SNR=10						

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*BJI **01** 07:03:57.7±0.0, 41°.77N×138°.08E, h285^{km}, mB4.7/47, mb5.0/70*

*NIED **01** 07:04:00, 41°.90N×137°.70E, h320^{km}, Mw5.0 Best double couple: $M_0$3.04000×10^{16} NP1:ϕ_s231.00000°, δ82.00000°, λ112.00000°. NP2:ϕ_s339.00000°, δ24.00000°, λ20.00000°.*

*MOS **01** 07:04:03.6±0.9, 41°.94N×137°.47E, h291^{km}, mb5.0/71, Error ellipse: s-maj=5.4km s-min=3.8km az=103.4*

*IDC **01** 07:04:04.6±0.6, 41°.89N×137°.42E, h289^{km}±5^{km}, mb4.6/47, mb1 4.6/56, mb1mx4.5/65, mbtmp5.2/56, Error ellipse: s-maj=6.7km s-min=5.3km az=94.0*

*NEIC **01** 07:04:04.2±1.9, 41°.91N±0°.06×137°.52E±0°.08, h285^{km}±4^{km}, mb4.9/346, Error ellipse: s-maj=8.8km s-min=8.7km az=125.0*

*JMA **01** 07:04:05.1±0.2, 41°.88N×137°.68E, h299^{km}±2^{km}, M4.9*

*KLM **01** 07:04:07.0, 41°.70N×138°.13E, h326^{km}, mb4.9*

*BGR **01** 07:04:12.1±0.0, 43°.25N×138°.09E, h311^{km}±2^{km}, mb5.0*

ISC 01 07:04:04.3±0.3**, 41°.88N**±0°.03×**137°.53E**±0°.03**, h290^{km}**±2^{km}**, h290^{km}:pP-P, n1111, σ1^{s}30**/1178**, mb4.8**/317**, 53C-73D, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	1.46	81	P	Pn	07 04 47.1	+0.9
JOSM				*e*S	S	07 05 19.8	+0.3
JHST	Hiyamasetana	1.83	72	P	Pn	07 04 49.9	+1.1
JHST				*e*S	S	07 05 24.8	+0.6
JOMM	Oshimamatsumae	1.89	100	P	Pn	07 04 50.2	+0.9
JOMM				*e*S	S	07 05 25.6	+0.5
JYM2	Yakumo 2	2.13	83	P	Pn	07 04 52.4	+1.1
JYM2				*e*S	S	07 05 29.6	+1.0
JKB	Kayabe	2.62	89	P	Pn	07 04 56.1	+0.5
JKB				*e*S	S	07 05 35.6	-0.8
JSK	Shakotan	2.63	55	P	Pn	07 04 56.5	+0.9
JSK				*e*S	S	07 05 36.0	-0.6
JOT	Ohata	2.68	99	P	Pn	07 04 56.5	+0.2
JEW	Eniwo	3.06	70	P	Pn	07 05 01.0	+1.1
JEW				*e*S	S	07 05 44.5	+0.2
TEY	Ternei	3.23	348⇑	*i*P	Pn	07 05 02.6	+1.0
TEY				*i* S	S	07 05 47.2	-0.1
TEY				pmax	pmax		
	comp=Z,2μm,0.6s						
TEY				pmax	pmax		
	comp=Z,3μm,1.9s						
TEY				pmax	pmax		
	comp=E,400nm,1.0s						
TEY				pmax	pmax		
	comp=N,2μm,1.9s						
TEY				pmax	pmax		
	comp=N,1μm,0.8s						
TEY				pmax	pmax		
	comp=E,380nm,0.7s						
TEY				smax	smax		
	comp=E,2μm,1.2s						
TEY				smax	smax		
	comp=N,370nm,0.8s						
JANG	Nango	3.37	115	P	Pn	07 05 02.1	-1.1
JANG				*e*S	S	07 05 48.0	-2.2
JHR	Hokuryu	3.60	57	P	Pn	07 05 06.6	+1.0
JHR				*e*S	S	07 05 54.4	-0.2
JYK	Kaneyama	3.66	143	P	Pn	07 05 06.5	+0.1
JYK				*e*S	S	07 05 54.7	-1.3
JAW	Awa shima	3.66	158	P	Pn	07 05 06.9	+0.5
JOM	Ohasama	3.74	129	P	Pn	07 05 06.0	-1.2
JOM				*e*S	S	07 05 56.9	-0.5
JYG	Yagishiri	3.82	47	P	Pn	07 05 08.5	+0.6
JYG				*e*S	S	07 05 57.0	-1.8
JNBK	Urakawa-nobuka	3.91	82	P	Pn	07 05 08.5	-0.4
JNBK				*e*S	S	07 05 58.0	-2.6
JFR	Furan	3.96	69	P	Pn	07 05 09.4	-0.1
JFR				*e*S	S	07 05 59.3	-2.3
JMK	Ichinoseki	4.06	135	P	Pn	07 05 09.6	-1.1
JMK				*e*S	S	07 06 00.8	-3.1
ERM	Erimo	4.20	86	*de*P	Pn	07 05 12.0	-0.2
ERM				pmax	pmax		
	comp=Z,1μm,0.8s						
ERM	Erimo	4.20	86		Pn	07 05 12.1	-0.2
ERM				S	S	07 06 01.0	-5.6
ASAJ	Asahikawa	4.34	57	P	Pn	07 05 14.1	+0.4
	comp=Z,190nm,0.3s,baz=251,slow=10,SNR=721						
ASAJ				S	S	07 06 05.8	-3.5
	comp=Z,18nm,0.3s,baz=341,slow=32,SNR=30						
JKA	Kamikawa-asahi	4.34	57		Pn	07 05 14.1	+0.4
JKA					S	07 06 05.8	-3.5
VLA	Vladivostok	4.35	288	*d i*P	Pn	07 05 14.9	+1.0
JCH	Churui	4.39	78	P	Pn	07 05 13.6	-0.8
JCH				*e*S	S	07 06 06.7	-3.8
JWK2	Keihoku	4.67	41	P	Pn	07 05 18.5	+1.0
JWK2				*e*S	S	07 06 15.9	-0.4
USA0B	Ussuriysk Arra	4.68	302	*d i*P	Pn	07 05 18.3	+0.7
USA0B	Ussuriysk Arra	4.68	302		Pn	07 05 18.4	+0.7
USA0B				S	S	07 06 14.7	-1.7
USRK	Ussuriysk Ar.	4.68	302	P	Pn	07 05 17.3	-0.3
USRK				S	S	07 06 13.7	-2.7
USRK	Ussuriysk Ar.	4.68	302	P	Pn	07 05 18.3	+0.7
	baz=114,slow=11,SNR=769						
USRK				S	S	07 06 15.6	-0.8
	baz=116,slow=18,SNR=8.5						
USRK	Ussuriysk Ar.	4.68	302		Pn	07 05 17.3	-0.3
USRK				S	S	07 06 13.7	-2.7
MSHR	Mys Shultsa	4.78	281	*d i*P	Pn	07 05 19.9	+1.0
JTKR	Abashiri--Toko	5.13	64	P	Pn	07 05 22.7	-0.2
JTKR				*e*S	S	07 06 22.6	-3.3
MJB9	Matsu-Tunnel	5.35	174		Pn	07 05 26.4	+0.7
MAJO	Matsushiro	5.36	174	*e*P	Pn	07 05 26.9	+1.1
MAJO	Matsushiro	5.36	174		Pn	07 05 26.5	+0.7
MAT	Matsushiro	5.36	174	P	Pn	07 05 25.8	0.0
MAT				S	S	07 06 31.5	+0.3
MJAR	Matsushiro Arr	5.36	174	P	Pn	07 05 26.8	+1.0
MJAR				S	S	07 06 29.6	-1.6
MJAR	Matsushiro Arr	5.36	174	P	Pn	07 05 26.0	+0.3
	comp=Z,2.1nm,0.3s,baz=259,slow=28,SNR=103						
MJAR				S	S	07 06 29.6	-1.6
	baz=352,slow=24,SNR=2.7						
MJAR	Matsushiro Arr	5.36	174		Pn	07 05 26.8	+1.0
JRY	Ryogami san	5.95	169	P	Pn	07 05 31.7	-1.2
JRY				*e*S	S	07 06 40.8	-3.4
GLVR	Golovnino	6.16	70⇓	*i*P	Pn	07 05 34.9	-0.3
NMR	Nemuro--Hokkai	6.23	73	*d i*P	Pn	07 05 33.5	-2.5
NMR				*i* S	S	07 06 42.9	-7.0
NEM2	Nemuro 2	6.24	73	P	Pn	07 05 34.1	-2.0
NEM2				*e*S	S	07 06 42.7	-7.4
YSS	Yuzh-Sakhalins	6.30	35	α *i*P	Pn	07 05 37.4	+0.5
YSS				*e*S	S	07 06 48.5	-2.9
YSS				pmax	pmax		
	comp=Z,1μm,1.0s						
YSS				pmax	pmax		
	comp=N,606nm,0.9s						

YSS pmax pmax
comp=E,436nm,1.0s
YSS smax smax
comp=N,2µm,2.5s
YSS smax smax
comp=E,2µm,1.9s
YSS smax smax
comp=N,750nm,1.1s
YSS smax smax
comp=E,227nm,0.9s
YSS MLR MLR
comp=Z,700nm,12.0s
YSS Yuzh-Sakhalins 6.30 35 Pn 07 05 37.0 +0.1
GRPR Tuman 6.41 68⇓iP Pn 07 05 37.5 -0.7
MDJ Mudanjiang 6.41 298 P Pn 07 05 39.0 +0.8
MDJ sP 07 06 39.9
MDJ S S 07 06 51.6 -2.3
MDJ pmax pmax
comp=Z,790nm,0.8s
MDJ pmax pmax
comp=Z,2µm,3.9s
MDJ Mudanjiang 6.41 298 Pn 07 05 39.1 +0.8
YUK Yuzh-Kuril'sk 6.48 68d iP Pn 07 05 38.7 -0.4
YUK iS S 07 06 52.3 -3.2
YUK pmax pmax
comp=N,386µm,0.4s
YUK pmax pmax
comp=Z,2127µm,0.4s
YUK pmax pmax
comp=E,522µm,0.5s
YUK pmax pmax
comp=Z,2µm,1.4s
YUK smax smax
comp=E,4µm,0.9s
YUK smax smax
comp=N,6µm,1.0s
JOI OKI 6.50 212 P Pn 07 05 40.6 +1.2
INU Inuyama 6.53 184 Pn 07 05 40.6 +0.8
JOD2 Odawara 2 6.72 169 P Pn 07 05 40.3 -1.9
JOD2 eS S 07 06 54.2 -6.9
SHO Shikotan 7.12 71d iP Pn 07 05 44.9 -1.9
SHO iS S 07 07 02.2 -7.4
SHO pmax pmax
comp=Z,1419µm,0.4s
SHO pmax pmax
comp=N,334µm,0.5s
SHO pmax pmax
comp=E,849µm,0.4s
UGL Uglegorsk 7.87 22 eP Pn 07 05 52.6 -3.4
UGL pmax pmax
comp=Z,258nm,1.0s
KUR Kuril'sk 8.22 62 eP Pn 07 06 00.8 +0.4
KUR eS S 07 07 31.8 -2.7
KUR pmax pmax
comp=Z,110nm,0.7s
KUR pmax pmax
comp=N,48nm,0.3s
KUR pmax pmax
comp=E,45nm,0.3s
KUR pmax pmax
comp=Z,452nm,1.3s
KUR smax smax
comp=E,135nm,0.6s
KUR smax smax
comp=N,1µm,1.9s
KUR smax smax
comp=E,517nm,1.3s
KLR Kul'dur 8.39 333 iP Pn 07 06 02.1 -0.4
KLR pmax pmax
comp=Z,249nm,1.0s
KLR Kul'dur 8.39 333 P Pn 07 06 02.0 -0.4
comp=Z,13nm,0.3s,baz=137,slow=12,SNR=294
KLR S S 07 07 37.1 -1.2
baz=214,slow=19,SNR=7.7
KSRS Korea Array 8.62 242 P Pn 07 06 06.6 +1.1
comp=Z,5.5nm,0.3s,baz=57,slow=13,SNR=176
KS19 Wonju Array Si 8.64 243 Pn 07 06 06.9 +1.2
KSAR Wonju Array Be 8.66 242 P Pn 07 06 05.8 -0.1
KSAR Wonju Array Be 8.66 242 Pn 07 06 05.8 -0.1
GRNR Gornyy 8.93 355⇑iP Pn 07 06 09.3 +0.3
GRNR eS S 07 07 48.7 -1.7
GRNR pmax pmax
comp=Z,30nm,0.7s
GRNR smax smax
comp=N,30nm,1.1s
GRNR MLR MLR
comp=Z,170nm,13.0s
JHJ2 Mitsune 8.94 168 Pn Pn 07 06 07.7 -1.8
CN2 Changchun 9.08 286 eP Pn 07 06 10.3 -0.8
CN2 eS S 07 07 49.9 -4.3
CN2 pmax pmax
comp=Z,230nm,1.0s
CN2 pmax pmax
comp=Z,790nm,3.5s
CN2 LR LR
comp=Z,490nm,8.0s
CN2 LR LR
comp=Z,330nm,8.0s
CN2 LR LR
comp=Z,410nm,9.0s
TJN Taejon 9.62 238ceP Pn 07 06 19.7 +1.9
TYV Tymovskoe 9.66 20 eP Pn 07 06 18.7 +0.7
TYV eS S 07 08 05.3 -1.7
TYV pmax pmax
comp=Z,300nm,1.7s
TYV pmax pmax
comp=Z,85nm,1.0s
TYV smax smax
comp=E,13nm,1.1s
TYV smax smax
comp=N,700nm,3.3s
JNU Nakatsue 10.21 213 P Pn 07 06 25.6 +0.5
comp=N,4.5nm,0.3s,baz=12,slow=3.8,SNR=26
JNU S S 07 08 19.9 -0.3
comp=N,0.5nm,0.3s,baz=101,slow=16,SNR=0.8
JNU Nakatsue 10.21 213 P Pn 07 06 25.2 +0.1
SNY Shenyang 10.41 274 ⇓P Pn 07 06 27.9 +0.4
SNY S S 07 08 25.8 +1.4
SNY pmax pmax
comp=N,230nm,0.9s
SNY LR LR
comp=N,260nm,8.2s
SNY LR LR
comp=N,310nm,8.2s
SNY LR LR
comp=N,260nm,9.3s
OKH Okha 12.23 15deP Pn 07 06 48.9 -0.6
OKH MLR MLR
comp=Z,200nm,3.0s
DL2 Dalian 12.48 262 P P 07 06 54.0 0.0
DL2 S S 07 09 12.2 +0.7
DL2 pmax pmax
comp=Z,320nm,0.9s
DL2 pmax pmax
comp=Z,850nm,3.5s
ZEA Zeya 13.71 333d iP P 07 07 07.2 -0.2
ZEA eS S 07 09 34.0 -4.6
ZEA pmax pmax
comp=N,1µm,2.0s
ZEA pmax pmax
comp=E,800nm,2.0s
ZEA pmax pmax
comp=Z,1µm,2.0s
ZEA pmax pmax
comp=N,370nm,1.0s
ZEA pmax pmax
comp=Z,850nm,1.0s
ZEA smax smax
comp=N,900nm,4.0s
ZEA smax smax
comp=E,800nm,4.0s
HIA Hailar 14.46 307 P P 07 07 15.1 -0.7
HIA Hailar 14.46 307 P P 07 07 15.1 -0.7
JCJ Chichijima 15.23 164 P P 07 07 23.5 -1.0
comp=E,60nm,0.3s,baz=274,slow=21,SNR=16
JCJ S S 07 10 02.2 -8.6
comp=E,25nm,0.3s,baz=290,slow=22,SNR=9.5
SKR Severo-Kuril's 15.54 49 eP Pn 07 07 29.3 +0.1
BJI Beijing 16.23 271 P P 07 07 35.4 +0.1
BJI S S 07 10 29.0 -1.5
BJI pmax pmax
comp=E,180nm,1.0s
BJT Baijiatuau 16.25 271 P P 07 07 35.2 -0.2
BJT pmax pmax
comp=Z,166nm,0.9s
BJT Baijiatuau 16.25 271 P P 07 07 35.2 -0.2
TIA Tai'an 16.82 257 P P 07 07 41.8 +0.1
TIA S S 07 10 40.7 -1.6
TIA pmax pmax
comp=Z,110nm,0.8s
TIA LR LR
comp=Z,130nm,4.5s
TIA LR LR
comp=Z,140nm,7.1s
JOW Kunigami 16.82 210 P P 07 07 41.5 -0.3
comp=Z,0.2nm,0.3s,baz=124,slow=14,SNR=5.8
JOW Kunigami 16.82 210 P P 07 07 41.1 -0.7
PEA0B Petropavlovsk- 17.59 43 P P 07 07 49.3 -0.6
PEA0B pmax pmax
comp=Z,72nm,1.3s
PEA0B Petropavlovsk- 17.59 43 P 07 07 49.2 -0.6
PEA0B IAmb IAmb 07 08 15.5
comp=Z,72nm,1.2s
PETK Petropavlovsk- 17.59 43 P P 07 07 49.9 0.0
PETK Petropavlovsk- 17.59 43 P P 07 07 49.5 -0.4
comp=Z,0.7nm,0.3s,baz=221,slow=9.9,SNR=15
PETK Petropavlovsk- 17.59 43 P P 07 07 49.9 0.0
NJ2 Nanjing 17.83 243 eP P 07 07 52.6 0.0
NJ2 pmax pmax
comp=Z,18nm,0.6s
PET Petropavlovsk 18.05 45 iP P 07 07 55.5 +0.8
CIT Chita 19.17 310 eP P 07 08 04.7 -2.2
CIT pmax pmax
comp=Z,188nm,1.5s
HHC Hu-ho-hao-te 19.50 276 eP P 07 08 11.3 +0.8
HHC pmax pmax
comp=Z,62nm,6.5s
MA2 Magadan 19.53 20 iP P 07 08 11.2 +0.7
MA2 Magadan 19.53 20 P P 07 08 10.2 -0.3
comp=Z,1.8nm,0.3s,baz=212,slow=12,SNR=10.0
MA2 ScP ScP 07 15 24.0 -0.7
comp=Z,0.3nm,0.3s,baz=0.0,slow=0.0,SNR=3.4
MA2 Magadan 19.53 20 P P 07 08 10.7 +0.1
MA2 IAmb IAmb 07 08 14.6
comp=Z,43nm,0.8s
TIY Taiyuan 19.70 266 eP P 07 08 12.0 -0.7
TIY sP sP 07 09 34.0 +1.0
TIY S S 07 11 36.2 -2.3
TIY pmax pmax
comp=Z,31nm,0.5s
TIY pmax pmax
comp=Z,260nm,6.4s
TIY LR LR
comp=Z,140nm,4.6s
TIY LR LR
comp=Z,180nm,5.4s
TIY LR LR
comp=Z,160nm,5.8s
BTO Baotou 20.70 276 eP P 07 08 21.3 -1.6
BTO S S 07 11 48.9 -6.5
YAK Yakutsk 20.72 350d iP P 07 08 20.4 -2.4
YAK eS S 07 11 52.2 -2.9
YAK e 07 19 07.5
YAK pmax pmax
comp=Z,215nm,1.3s
YAK pmax pmax
comp=N,172nm,1.1s
YAK pmax pmax
comp=E,37nm,1.1s
YAK smax smax
comp=E,85nm,0.9s
YAK smax smax
comp=N,940nm,2.2s
YAK Yakutsk 20.72 350 P P 07 08 20.3 -2.4
YAK S 07 11 51.2 -3.9
YOJ Yonaguni jima 21.15 219 P P 07 08 23.8 -3.5
YOJ pmax pmax
comp=Z,71nm,1.0s
YOJ Yonaguni jima 21.15 219 P P 07 08 23.8 -3.5
YOJ IAmb IAmb 07 08 42.4
comp=Z,71nm,1.0s
TATO Taipei 21.47 223 P P 07 08 28.1 -2.1
YHNB Yeheng 21.78 223 P P 07 08 32.9 -0.3
YHNB IAmb IAmb 07 09 28.3
comp=Z,129nm,1.9s
WHN Wuhan 21.79 246 P P 07 08 31.8 -1.3
NACB Ninganchiao 22.08 222 P P 07 08 32.5 -3.3
ULN Ulaanbaatar 22.32 296deP P 07 08 36.5 -1.5
ULN pmax pmax
comp=Z,32nm,0.8s
ULN Ulaanbaatar 22.32 296 P P 07 08 36.8 -1.2
ULN IAmb IAmb 07 08 38.1
comp=Z,49nm,0.7s
SSLB Suanglung 22.72 223 P P 07 08 41.9 +0.2
SONM Songino Array 22.76 296 P P 07 08 40.8 -1.1
comp=Z,12nm,0.6s,baz=99,slow=9.6,SNR=55
SONM PcP PcP 07 12 23.5 -0.1
comp=Z,2.0nm,0.6s,baz=138,slow=3.2,SNR=3.2
SONM ScP ScP 07 15 32.8 -0.3
comp=Z,9.8nm,0.9s,baz=93,slow=1.4,SNR=19
SONM Songino Array 22.76 296 P P 07 08 40.3 -1.6
SEY Seymchan 22.84 18 P P 07 08 43.5 +1.2
comp=Z,13nm,0.7s,baz=211,slow=6.6,SNR=33
SEY ScP ScP 07 15 32.6 -0.2
comp=Z,5.4nm,1.0s,baz=208,slow=4.3,SNR=4.6
TPUB Ta-pu 23.29 223 P P 07 08 45.1 -1.7
TPUB IAmb IAmb 07 08 50.1
comp=Z,24nm,0.7s
TWG Pinlang 23.47 221 P P 07 08 48.7 +0.2
XAN Xi'an 23.80 260 P P 07 08 50.3 -1.1
XAN pP pwP 07 09 43.6 -1.9
XAN S S 07 12 40.2 -5.0
XAN pmax pmax
comp=Z,38nm,0.8s
XAN pmax pmax
comp=Z,50nm,4.0s
IRK Irkutsk 24.71 306 eP P 07 08 57.7 -1.6
IRK pmax pmax
comp=Z,65nm,1.8s
TLY Talaya 24.98 305 eP P 07 09 01.3 -0.6
TLY eS S 07 13 07.8 +4.3
TLY pmax pmax
comp=Z,85nm,1.0s
TLY Talaya 24.98 305 P P 07 09 01.1 -0.8
comp=Z,18nm,0.6s,baz=152,slow=2.9,SNR=12
TLY ScP ScP 07 15 39.4 +0.4
comp=Z,11nm,0.7s,baz=170,slow=3.2,SNR=5.7
TLY Talaya 24.98 305 P P 07 09 01.3 -0.6
TLY IAmb IAmb 07 09 05.8
comp=Z,26nm,0.8s
ZAK Zakamensk 25.03 302 eP P 07 09 01.1 -1.3
ZAK pmax pmax
comp=Z,33nm,1.1s
ENH Enshi 25.34 252 IAmb IAmb 07 09 05.4
comp=Z,27nm,0.5s
MOY Mondy 26.62 304 eP P 07 09 15.1 -1.4
MOY pmax pmax
comp=Z,39nm,2.6s
LZH Lanzhou 26.70 269 ⇑P P 07 09 16.2 -1.4
LZH pP pP 07 10 10.2 -1.6
LZH PP PnPn 07 10 18.4 +0.2
LZH sP sP 07 10 43.6 -1.7
LZH SS SS 07 15 19.2 -18
LZH pmax pmax
comp=Z,61nm,1.0s
LZH pmax pmax
comp=Z,200nm,4.6s
GTA Gaotai 28.57 278 ⇓P P 07 09 33.1 -0.9
GTA PcP PcP 07 12 38.7 +1.6
GTA S S 07 14 00.0 -0.4
GTA ScP ScP 07 15 50.6 +0.4
GTA ScS ScS 07 19 42.5 -1.6
GTA pmax pmax
comp=Z,19nm,1.0s
GTA pmax pmax
comp=Z,140nm,7.0s
GTA LR LR
comp=Z,190nm,16.2s
GTA LR LR
comp=Z,170nm,15.2s
GTA LR LR
comp=Z,170nm,15.2s
GUMO Guam 28.90 165 P P 07 09 36.9 0.0
GUMO pmax pmax
comp=Z,873nm,1.8s
GUMO Guam 28.90 165 P P 07 09 36.6 -0.3
comp=Z,50nm,0.5s,baz=60,slow=8.9,SNR=4.2
GUMO Guam 28.90 165 P P 07 09 36.9 0.0
CD2 Chengdu 29.13 259 P P 07 09 38.2 -0.7
CD2 sP sP 07 11 05.1 -2.0
CD2 S S 07 14 08.9 -0.3
CD2 sS sS 07 15 48.7 -0.2
CD2 SS SS 07 16 16.4 -6.8
CD2 pmax pmax
comp=Z,50nm,0.5s
CD2 pmax pmax
comp=Z,120nm,5.9s
GYA Guiyang 29.62 249⇑iP P 07 09 42.5 -0.8
GYA pmax pmax
comp=Z,10.0nm,0.4s
TIXI Tiksi 30.16 355ceP P 07 09 47.2 -0.1
TIXI pmax pmax
comp=Z,56nm,0.9s
TIXI Tiksi 30.16 355 P P 07 09 47.3 -0.1
comp=Z,38nm,0.6s,baz=360,slow=24,SNR=128
TIXI ScP ScP 07 15 54.4 0.0
comp=Z,2.1nm,0.4s,baz=360,slow=24,SNR=3.6
TIXI Tiksi 30.16 355 P P 07 09 47.2 -0.1
BILL Bilibino 30.40 21ceP P 07 09 50.5 +1.0
BILL pmax pmax
comp=Z,12nm,0.8s
BILL Bilibino 30.40 21 P P 07 09 50.0 +0.4
KMI Kunming 33.20 251 P P 07 10 14.9 +0.2
KMI pmax pmax
comp=Z,29nm,0.6s
KMI pmax pmax
comp=Z,140nm,5.2s
SLVN Son La 34.89 245 P P 07 10 30.0 +1.0
WMQ Urumqi 36.15 290 eP P 07 10 38.9 -0.4
WMQ PP sP 07 12 11.7 +2.6
WMQ PcP PcP 07 12 59.9 +1.9
WMQ pmax pmax
comp=Z,19nm,0.9s
WMQ pmax pmax
comp=Z,180nm,4.7s
WMQ LR LR
comp=Z,480nm,25.1s
WMQ LR LR
comp=Z,850nm,23.7s
WMQ LR LR
comp=Z,130nm,23.1s
WMQ Urumqi 36.15 290 P P 07 10 39.2 -0.2
WMQ pmax pmax
comp=Z,20nm,0.5s
WMQ Urumqi 36.15 290 P P 07 10 39.2 -0.2
WMQ IAmb IAmb 07 10 40.7
comp=Z,20nm,0.5s
DAV Davao City (W) 36.25 200 P P 07 10 40.3 -0.1
comp=Z,81nm,0.4s,baz=210,slow=0.9,SNR=4.4
KCP Kidapawan 36.44 201⇑iP P 07 10 43.3 +1.2
CTBH Cotabato--PC H 36.47 203⇓iP P 07 10 44.4 +2.2
ZAA0 Zalesovo Array 36.50 308 P P 07 10 42.0 -0.1
ZALV Zalesovo Beam 36.50 308 P P 07 10 42.2 +0.1
ZALV Zalesovo Beam 36.50 308 P P 07 10 41.4 -0.7
comp=Z,107nm,0.6s,baz=86,slow=7.8,SNR=470
ZALV PcP PcP 07 12 58.8 0.0
comp=Z,5.8nm,0.5s,baz=89,slow=3.0,SNR=4.2
ZALV ScP ScP 07 16 16.8 -0.3
comp=Z,5.6nm,0.6s,baz=92,slow=3.4,SNR=9.4
ZALV ScS ScS 07 20 22.5 -1.6
comp=Z,0.5nm,0.3s,baz=74,slow=5.1,SNR=3.7
ZALV Zalesovo Beam 36.50 308 P P 07 10 42.2 +0.1
LSA Lhasa 39.10 267 P P 07 11 04.9 +0.3
MK31 Makanchi Array 39.12 297 P P 07 11 03.4 -0.7
MK31 pmax pmax
comp=Z,39nm,1.0s
MK31 Makanchi Array 39.12 297 P P 07 11 03.4 -0.7
MK31 IAmb IAmb 07 11 04.6
comp=Z,39nm,0.9s
MKAR Makanchi Array 39.12 297 P P 07 11 03.4 -0.7
comp=Z,24nm,0.6s,baz=85,slow=9.6,SNR=284
MKAR ScP ScP 07 16 26.8 -0.5
comp=Z,6.6nm,1.1s,baz=84,slow=3.8,SNR=5.9
ANM Nome 39.19 35 P P 07 11 05.3 +1.0
ANM pmax pmax
comp=Z,5.0nm,0.9s
ANM Nome 39.19 35 P P 07 11 05.3 +1.0
MAKZ Makanchi 39.33 297 P P 07 11 05.6 -0.2
MAKZ pmax pmax
comp=Z,48nm,0.7s
MAKZ Makanchi 39.33 297 P P 07 11 05.6 -0.2
MAKZ IAmb IAmb 07 11 07.6
comp=Z,48nm,0.7s
CHTO Chiang Mai 39.99 247 P P 07 11 11.3 -0.2
CHTO pmax pmax
comp=Z,21nm,0.6s
CHTO Chiang Mai 39.99 247 P P 07 11 11.3 -0.2
CHTO IAmb IAmb 07 11 14.9
comp=Z,21nm,0.6s
CM31 Chiang Mai Arr 40.24 246 P P 07 11 14.8 +1.3
CMAR Chiang Mai Arr 40.24 246 iP P 07 11 15.6 +2.1
CMAR pmax pmax
comp=Z,3.0nm,0.4s
CMAR Chiang Mai Arr 40.24 246 P P 07 11 13.2 -0.3
comp=Z,4.4nm,0.8s,baz=34,slow=7.0,SNR=21
CMAR PcP PcP 07 13 11.6 +0.4
comp=Z,2.2nm,0.7s,baz=12,slow=3.1,SNR=5.4
CMAR ScP ScP 07 16 32.2 +0.3
comp=Z,2.6nm,0.7s,baz=15,slow=3.0,SNR=12
CMAR Chiang Mai Arr 40.24 246 P P 07 11 13.0 -0.5
KKM Kota Kinabalu 40.41 214 P P 07 11 15.5 +0.5
KKM IAmb IAmb 07 11 17.3
comp=Z,70nm,1.2s
KURK Kurchatov 40.66 303deP P 07 11 15.9 -0.6
KURK pmax pmax
comp=Z,268nm,0.8s
KURK Kurchatov 40.66 303 P P 07 11 16.0 -0.5
KURBB Kurchatov Arra 40.74 303 P P 07 11 16.5 -0.7
comp=Z,180nm,0.7s,baz=80,slow=8.8,SNR=752
KURBB PcP PcP 07 13 12.2 0.0
comp=Z,3.4nm,0.7s,baz=82,slow=3.6,SNR=2.3
KURBB ScP ScP 07 16 33.0 -0.5
comp=Z,1.1nm,0.5s,baz=94,slow=3.1,SNR=7.1
SHL Shillong 40.80 261 P P 07 11 17.0 -1.2
SHL pmax pmax
comp=Z,29nm,0.6s
SHL Shillong 40.80 261 P P 07 11 17.0 -1.2
SHL IAmb IAmb 07 11 20.5
comp=Z,28nm,0.6s
TNTI Ternate 41.94 195 P P 07 11 28.0 +0.8
comp=Z,81nm,1.4s
PDGK Podgornoye 42.00 292 P P 07 11 26.2 -1.4
KMSI Cibinong 42.90 200 P P 07 11 35.2 +0.3
comp=Z,143nm,0.9s
TAPN Taplejung 42.90 267 eP P 07 11 35.1 -0.2
comp=Z,56nm,0.6s
SWI Sorong 42.92 189 P P 07 11 35.6 +0.5
comp=Z,1µmcomp=Z,160nm,0.8s
SIJI Sorong 42.93 189 P P 07 11 36.0 +0.9
comp=Z,81nm,0.5s,baz=1.6,slow=13,SNR=40
SIJI PcP PcP 07 13 19.9 -0.1
comp=Z,12nm,0.8s,baz=180,slow=1.0,SNR=3.0
PRZ Przheval'sk 43.03 291 P P 07 11 35.8 -0.2
PRZ pmax pmax
comp=Z,42nm,1.0s
PRZ Przheval'sk 43.03 291 P P 07 11 35.8 -0.2
PRZ IAmb IAmb 07 11 37.4
comp=Z,42nm,0.9s
LBMI Labuha 43.28 195 P P 07 11 49.2 +11
ODAN Odare 43.41 266 eP P 07 11 38.8 -0.4
comp=Z,67nm,0.6s
MRSI Marisa 43.55 203 P P 07 11 40.5 +0.4
comp=Z,1µmcomp=Z,192nm,0.7s
SVW2 Sparrevohn 43.64 40 P P 07 11 42.7 +2.4
TARG Taragay, Kyrgy 43.71 291 P P 07 11 41.3 -0.3
JIRN Jiri 43.87 268 eP P 07 11 42.8 -0.2
comp=Z,55nm,0.4s
RAMN Ramite 43.95 267 eP P 07 11 43.0 -0.5
comp=Z,67nm,0.6s
GUN Gumba 43.97 269 eP P 07 11 43.3 -0.4
comp=Z,231nm,0.7s
IMAR Indian Mountai 44.13 33 P P 07 11 44.5 +0.5
JAY Jayapura 44.28 175 P P 07 11 46.6 +0.7
comp=Z,49nm,0.5s,baz=338,slow=3.0,SNR=24
MPSI Mapaga 44.31 206 P P 07 11 46.2 +0.1
comp=Z,437nmcomp=Z,31nm,0.6s
KKN Kakani 44.48 269 eP P 07 11 47.1 -0.5
comp=Z,88nm,0.7s
PKI Pulchoki 44.50 268 eP P 07 11 47.3 -0.6
comp=Z,8.8nm,0.5s
PKIN Phulchoki 44.51 268 eP P 07 11 47.1 -0.8
comp=Z,47nm,0.5s
DMN Daman 44.71 269 eP P 07 11 49.1 -0.4
comp=Z,67nm,0.6s
BOOM Boomskoye usch 44.73 292 IAmb IAmb 07 11 51.9
comp=Z,38nm,0.7s
LUWI Luwuk 44.76 201 P P 07 11 49.1 -0.5

comp=Z,124nm,1.1s
LUWI Luwuk 44.76 201 P P 07 11 48.5 -1.2
TKM2 Tokmak 2 44.82 293 P P 07 11 50.3 +0.2
SNR=180
FAKI Fak Fak 44.84 187 P P 07 11 50.5 +0.2
comp=Z,2µmcomp=Z,308nm,0.8s
FAKI Fak Fak 44.84 187 P P 07 11 51.0 +0.7
GKN Gorkha 44.85 270 *eP* P 07 11 49.8 -0.6
comp=Z,188nm,0.6s
APSI Ampana 44.95 203 P P 07 11 50.2 -0.9
comp=Z,581nmcomp=Z,64nm,0.7s
SANI Sanana 44.96 196 P P 07 11 50.6 -0.6
PPLA Purkeypile 45.04 38 P P 07 11 54.0 +2.6
NRN Naryn 45.08 291 P P 07 11 51.5 -0.8
NRN pmax pmax
comp=Z,12nm,0.9s
NRN Naryn 45.08 291 P P 07 11 51.5 -0.8
RSO Redoubt South 45.09 41 P P 07 11 53.2 +1.2
BVAR Borovoye Array 45.15 308 P P 07 11 52.4 +0.1
comp=Z,132nm,0.5s,baz=73,slow=7.9,SNR=803
BVAR PcP **PcP** 07 13 27.5 +0.4
comp=Z,6.0nm,0.6s,baz=82,slow=4.3,SNR=2.2
BVAR ScP **ScP** 07 16 51.2 -0.1
comp=Z,5.7nm,0.8s,baz=90,slow=3.0,SNR=6.7
BRVK Borovoye 45.20 308 *deP* P 07 11 52.9 +0.2
BRVK pmax pmax
comp=Z,103nm,0.9s
BRVK Borovoye 45.20 308 P P 07 11 53.1 +0.4
DANN Dangsing 45.32 271 *eP* P 07 11 54.3 0.0
comp=Z,888nm,0.6s
SBUM Sibu 45.35 217 P P 07 11 54.2 -0.1
SBUM Sibu 45.35 217 P P 07 11 55.0 +0.7
KBK Karagaybulak 45.36 293 P P 07 11 54.5 +0.3
SNR=116
KZA Kyzart 45.36 292 P P 07 11 55.4 +0.8
SNR=33
CHMS Chumysh 45.37 294 P P 07 11 54.0 -0.1
SNR=20
USP Ospenovka 45.44 294 P P 07 11 54.7 -0.1
SNR=47
MLY Manley 45.45 34 P P 07 11 56.4 +1.9
COLD Coldfoot 45.48 31 P P 07 11 53.2 -1.4
FRU1 Bishkek 45.52 293 IAmb IAmb 07 11 57.4
comp=Z,45nm,0.8s
KTH Kantishna Hill 45.53 37 P P 07 11 57.2 +2.0
KTH IAmb IAmb 07 11 58.2
comp=Z,47nm,0.8s
TOLK Toolik Lake Re 45.63 29 P P 07 11 57.2 +1.3
TOLK Toolik Lake Re 45.63 29 P P 07 11 57.0 +1.2
baz=273
AAK Ala-Archa 45.68 293 *deP* P 07 11 56.4 -0.3
AAK pmax pmax
comp=Z,29nm,0.9s
AAK Ala-Archa 45.68 293 P P 07 11 56.6 -0.2
comp=Z,28nm,0.6s,baz=101,slow=5.5,SNR=105
AAK Ala-Archa 45.68 293 P P 07 11 56.8 0.0
SNR=11
AAK Ala-Archa 45.68 293 *i* P P 07 11 56.5 -0.3
SNR=64
AAK Ala-Archa 45.68 293 P P 07 11 56.5 -0.3
AAK IAmb IAmb 07 11 58.5
comp=Z,33nm,0.8s
KOLN Koldanda 45.74 270 *eP* P 07 11 57.3 -0.2
comp=Z,133nm,0.8s
UCH Uchtor 45.81 293 P P 07 11 58.2 +0.1
SNR=15
TRF Thorofare Moun 45.83 37 P P 07 11 59.7 +2.1
KSH Kashi 45.84 289 P P 07 12 01.4 +3.4
KSH pP pwP 07 13 01.4 -0.4
KSH PP **PP** 07 13 54.7 +4.9
KSH S **S** 07 18 24.1 +4.6
KSH sS sS 07 20 11.1 +6.4
KSH SS **SS** 07 21 49.1 +1.2
KSH pmax pmax
comp=Z,390nm,4.9s
KSH LR LR
comp=Z,250nm,4.7s
KSH LR LR
comp=Z,290nm,6.1s
KSH LR LR
comp=Z,280nm,5.1s
SUA Susitna One 45.91 39 P P 07 11 59.4 +1.2
EKS2 Erkin-Say 46.16 293 P P 07 12 00.3 -0.2
SNR=62
MCK McKinley 46.39 36 P P 07 12 03.4 +1.7
MCK pmax pmax
comp=Z,58nm,1.6s
MCK McKinley 46.39 36 P P 07 12 03.4 +1.7
MCK IAmb IAmb 07 12 05.6
comp=Z,58nm,1.6s
AML Almayashu 46.41 293 P P 07 12 03.2 +0.4
SNR=48
MDM Murphy Dome 46.52 34 P P 07 12 04.2 +1.4
WRH Wood River Hil 46.65 35 P P 07 12 05.2 +1.5
TCOL CIGO, UAF Yank 46.68 34 P P 07 12 05.7 +1.8
baz=278
COLA College 46.69 34 P P 07 12 05.7 +1.7
COLA pmax pmax
comp=Z,59nm,0.7s
COLA College 46.69 34 P P 07 12 05.7 +1.7
COLA IAmb IAmb 07 12 06.8
comp=Z,59nm,0.7s
GHO Glory Hole Cre 46.71 39 P P 07 12 05.9 +1.6
GHO IAmb IAmb 07 12 06.7
comp=Z,46nm,0.8s
CCB Clear Creek Bu 46.74 35 P P 07 12 05.8 +1.4
POKR Poker Plat Res 46.83 34 P P 07 12 06.8 +1.7
baz=278
SML Sawmill 46.98 39 IAmb IAmb 07 12 09.7
comp=Z,39nm,0.9s
KSM Kuching 47.09 219 P P 07 12 08.8 +1.1
KSM IAmb IAmb 07 12 10.1
comp=Z,55nm,0.8s
KSM Kuching 47.09 219 P P 07 12 08.0 +0.3
IL31 47.11 35 P P 07 12 08.2 +0.9
ILAR Eielson Array 47.11 35 P P 07 12 08.1 +0.8
comp=Z,14nm,0.8s,baz=272,slow=5.9,SNR=159
HDA Harding Lake 47.14 35 P P 07 12 08.1 +0.5
HDA Harding Lake 47.14 35 P P 07 12 08.2 +0.6
baz=280
SCM Sheep Creek Mo 47.45 39 IAmb IAmb 07 12 12.4
comp=Z,28nm,0.7s
FYU Fort Yukon 47.50 32 P P 07 12 12.6 +2.4
FYU IAmb IAmb 07 12 13.6
comp=Z,36nm,0.8s
TTSI Tana Toraja 47.52 204 P P 07 12 18.2 +7.2
BMAR Burnt Mountain 47.62 31 P P 07 12 12.6 +1.3
KK31 Karatay Array 48.21 295 *i* P P 07 12 15.4 -0.6
KK31 Karatay Array 48.21 295 IAmb IAmb 07 12 16.9
comp=Z,94nm,1.1s
KKAR Karatay Array 48.21 295 P P 07 12 15.6 -0.5
KKAR Karatay Array 48.21 295 P P 07 12 15.5 -0.5
KKAR IAmb IAmb 07 12 16.9
comp=Z,94nm,1.1s
KKAR Karatay Array 48.21 295 P P 07 12 15.6 -0.5
SCRK Sand Creek 48.50 35 P P 07 12 18.7 +0.7
SCRK IAmb IAmb 07 12 19.8
comp=Z,34nm,0.7s
BNSI Bone 48.72 203 P P 07 12 22.0 +1.9
comp=Z,66nm,1.2s
KULM Kulim 49.02 232 P P 07 12 23.4 +0.9
KULM Kulim 49.02 232 P P 07 12 24.0 +1.5
JRMM Jerantut 49.10 229 P P 07 12 24.0 +1.0
BTK Batken 49.24 291 IAmb IAmb 07 12 25.4
comp=Z,56nm,1.2s
KAPI Kappang 49.41 204 P P 07 12 25.8 +0.5
KAPI pmax pmax
comp=Z,99nm,0.9s
KAPI Kappang 49.41 204 P P 07 12 25.8 +0.5
IPM Ipoh 49.45 231 P P 07 12 27.0 +1.3
SVE Sverdlovsk 49.56 315 *c* *iP* P 07 12 26.9 +1.0
SVE pmax pmax
comp=Z,184nm,0.8s
BCAR Beaver Creek A 49.67 36 P P 07 12 28.8 +2.1
MYKOM Kota Tinggi 50.08 226 P P 07 12 31.2 +0.9
MYKOM Kota Tinggi 50.08 226 P P 07 12 31.0 +0.7
BARN Barnard Glacie 50.27 39 IAmb IAmb 07 12 34.2
comp=Z,23nm,0.7s
NIL Nilore 50.42 283 P P 07 12 33.1 +0.3
NIL pmax pmax
comp=Z,70nm,1.0s
NIL Nilore 50.42 283 P P 07 12 33.1 +0.3
NIL IAmb IAmb 07 12 35.0
comp=Z,70nm,1.0s
CTGM Chitina Glacie 50.45 39 P P 07 12 34.8 +2.1

ARU Arti 50.77 315 *d* *iP* P 07 12 35.3 +0.3
ARU *PP **pP** 07 13 36.3 +1.0
ARU 07 13 46.7
ARU 07 14 30.9
ARU S **S** 07 19 30.5 +3.0
ARU 07 21 50.6
ARU SS **SS** 07 23 03.4 -2.1
ARU pmax pmax
comp=Z,109nm,0.7s
ARU Arti 50.77 315 P P 07 12 35.1 +0.1
comp=Z,30nm,0.6s,baz=67,slow=4.7,SNR=214
ARU ScP **ScP** 07 17 14.5 -0.5
comp=Z,2.3nm,0.6s,baz=307,slow=4.0,SNR=4.6
ARU Arti 50.77 315 P P 07 12 34.8 -0.2
CHLP Challavanipeta 50.83 260 *eP* P 07 12 35.8 -0.2
CHLP IAmb IAmb 07 12 39.2
comp=Z,20nm,1.2s
EPYK Eagle Plains 50.88 31 IAmb IAmb 07 12 38.5
comp=Z,24nm,0.8s
EPYK Eagle Plains 50.88 31 P P 07 12 36.9 +1.2
baz=286
CHGR Chuyangaron 51.01 291 P P 07 12 36.9 -0.2
INK Inuvik 51.50 28 P P 07 12 41.4 +1.2
comp=Z,15nm,0.8s,baz=298,slow=7.0,SNR=42
INK ScP **ScP** 07 17 18.9 +1.0
comp=Z,2.1nm,0.9s,baz=261,slow=3.9,SNR=3.2
PMG Port Moresby 51.79 168 *ceP* P 07 12 43.2 +0.2
PMG pmax pmax
comp=Z,62nm,0.7s
PMG Port Moresby 51.79 168 P P 07 12 43.4 +0.4
PSI Prapat 52.04 232 P P 07 12 45.2 +0.3
comp=Z,16nm,0.8s,baz=360,slow=6.6,SNR=12
PSI ScP **ScP** 07 17 20.3 -1.0
comp=Z,4.3nm,0.6s,baz=23,slow=7.3,SNR=3.6
RPSI Rantau Prapat 52.12 232 P P 07 12 45.3 -0.1
HYT Haines Junctio 52.27 38 P P 07 12 48.2 +2.1
HYT IAmb IAmb 07 12 49.7
comp=Z,32nm,0.8s
AB31 Akbulak array 52.58 306 *i* P P 07 12 48.6 +0.2
ABKAR Akbulak array 52.58 306 P P 07 12 48.8 +0.4
ABKAR Akbulak array 52.58 306 P P 07 12 48.8 +0.4
ABKAR IAmb IAmb 07 12 49.7
comp=Z,139nm,0.9s
SOEI Soe 52.80 196 P P 07 12 51.0 +0.5
comp=Z,1µmcomp=Z,110nm,0.9s
SOEI Soe 52.80 196 P P 07 12 49.0 -1.5
BKNI Bangkinang 52.83 228 P P 07 12 52.3 +1.6
BKNI Bangkinang 52.83 228 P P 07 12 51.2 +0.5
KBL Kabul 53.03 286 P P 07 12 51.2 -1.0
KBL pmax pmax
comp=Z,117nm,1.0s
KBL Kabul 53.03 286 P P 07 12 51.2 -1.0
AKTO Aktyubinsk 53.26 308 P P 07 12 53.2 -0.1
AKTO Aktyubinsk 53.26 308 P P 07 12 53.0 -0.3
comp=Z,26nm,0.5s,baz=80,slow=8.1,SNR=79
AKTO ScP **ScP** 07 17 25.1 -0.9
comp=Z,5.2nm,1.0s,baz=92,slow=4.7,SNR=3.6
BATI Baumata 53.37 197 P P 07 12 54.6 +0.1
comp=Z,86nm,0.8s,baz=77,slow=19,SNR=3.9
PVM Polavaram 53.41 260 *eP* P 07 12 54.5 -0.4
PVM IAmb IAmb 07 12 55.8
comp=Z,20nm,0.9s
SDSI Sungai Dareh 53.66 227 P P 07 12 57.8 +1.2
TWSI Taliwang, Sumb 53.81 206 P P 07 12 57.4 -0.3
GSI Gunungsitoli 54.03 232 P P 07 13 00.9 +1.6
GSI Gunungsitoli 54.03 232 IAmb IAmb 07 13 01.0
comp=Z,92nm,1.4s
RPR Rampur 54.13 264 *eP* P 07 12 59.7 -0.3
RPR IAmb IAmb 07 13 01.1
comp=Z,42nm,1.1s
PDSI Padang 54.18 228 P P 07 13 01.8 +1.4
C36M Paulatuk 54.33 26 P P 07 13 01.8 +1.1
baz=295,SNR=16
KIRV Kirov 54.59 320 P P 07 13 03.0 +0.4
comp=Z,137nm,0.6s,baz=55,slow=2.3,SNR=24
SRSP Sriramsagar 54.79 264 *eP* P 07 13 04.5 -0.3
SRSP IAmb IAmb 07 13 05.1
comp=Z,40nm,0.7s
PRGR Permogore 55.08 324 ⇓ *iP* P 07 13 06.3 +0.2
PRGR *eS **S** 07 20 23.4 -1.7
PRGR pmax pmax
comp=Z,67nm,0.8s
SPA0 Spitsbergen Ar 55.17 348 *eP* P 07 13 07.2 +0.6
SPITS Spitsbergen Ar 55.17 348 P P 07 13 06.7 0.0
comp=Z,4.3nm,0.5s,baz=78,slow=9.5,SNR=16
MDSI Maura Dua 55.23 222 P P 07 13 08.6 +0.7
KPJI Karang Pucung 55.52 215 P P 07 13 09.9 0.0
ADKI Addanki 55.53 260 *eP* P 07 13 10.2 +0.2
ADKI IAmb IAmb 07 13 11.3
comp=Z,10nm,0.7s
NJS Nagarjunasagar 55.56 261 *eP* P 07 13 09.3 -1.0
NJS IAmb IAmb 07 13 10.7
comp=Z,11nm,0.9s
HYBB Hyderabad (bro 55.58 263 *eP* P 07 13 10.1 -0.3
HYBB IAmb IAmb 07 13 10.7
comp=Z,14nm,0.8s
HYB Hyderabad 55.58 263 *i* P P 07 13 10.0 -0.4
COEN Coen 55.80 173 IAmb IAmb 07 13 13.3
comp=Z,72nm,1.1s
NOR Nord 56.02 356 ⇓ *iP* P 07 13 12.6 +0.1
comp=Z,15nm,0.7s
HSPB Hornsund (broa 56.07 347 *eP* P 07 13 13.6 +0.7
SRLM Srisailam 56.16 261 *eP* P 07 13 14.1 -0.4
SRLM IAmb IAmb 07 13 15.1
comp=Z,12nm,0.8s
KLRI Killari 56.62 265 *eP* P 07 13 16.8 -1.0
KLRI IAmb IAmb 07 13 17.9
comp=Z,28nm,0.8s
TMCR Tamitsa 57.05 329 *eP* P 07 13 17.9 -2.1
TMCR pmax pmax
comp=Z,47nm,1.0s
SKHT Srikalahasti 57.08 258 *eP* P 07 13 21.0 +0.1
SKHT IAmb IAmb 07 13 22.5
comp=Z,15nm,0.8s
URV Uravakonda 58.10 261 *eP* P 07 13 27.6 -0.4
URV IAmb IAmb 07 13 28.3
comp=Z,13nm,0.6s
HAMF Hammerfest 58.24 339 *eP* P 07 13 28.3 +0.1
POO Poona 58.38 267 *eP* P 07 13 29.0 -1.0
ARCES ARCESS Array B 58.39 337 P P 07 13 29.1 -0.2
comp=Z,8.4nm,0.6s,baz=64,slow=8.3,SNR=63
ARCES PP **PP** 07 15 41.2 -0.4
comp=Z,8.0nm,0.7s,baz=64,slow=8.5,SNR=7.7
RES Resolute Bay 58.66 14 P P 07 13 31.1 +0.2
comp=Z,7.1nm,0.8s,baz=311,slow=6.3,SNR=28
GEYT Alibeck 58.96 295 P P 07 13 33.7 0.0
comp=Z,28nm,0.6s,baz=71,slow=4.4,SNR=96
GEYT Alibeck 58.96 295 P P 07 13 33.7 0.0
KTK1 Kautokeino 59.35 338 *eP* P 07 13 36.1 +0.3
TRO Tromso 60.14 339 *eP* P 07 13 40.1 -1.0
DAG Danmarks Havn 60.67 354 *i* P P 07 13 44.5 0.0
DAG pmax pmax
comp=Z,8.0nm,0.7s
DAG Danmarks Havn 60.67 354 *i* P P 07 13 44.5 0.0
comp=Z,8.3nm,0.7s
TULEG Thule 60.67 7 P P 07 13 44.5 -0.1
FITZ Fitzroy Crossi 60.68 193 P P 07 13 45.8 +0.4
comp=Z,33nm,0.8s,baz=8.4,slow=8.0,SNR=13
FITZ Fitzroy Crossi 60.68 193 IAmb IAmb 07 13 47.0
comp=Z,51nm,1.0s
PALK Pallekele 60.73 252 P P 07 13 46.3 +0.4
comp=Z,9.2nm,1.0s,baz=32,slow=9.5,SNR=2.3
YKA Yellowknife Ar 61.14 30 P P 07 13 48.5 +0.6
comp=Z,5.1nm,0.5s,baz=305,slow=6.4,SNR=85
YKA PcP **PcP** 07 14 28.2 +0.6
comp=Z,2.2nm,0.6s,baz=314,slow=3.8,SNR=7.5
YKA PKPPKP P'P'df 07 42 53.6 -12
comp=Z,0.3nm,0.7s,baz=160,slow=2.2,SNR=3.7
WRAB Tennant Creek 61.57 183 *ceP* P 07 13 51.0 -0.2
WRAB pmax pmax
comp=Z,48nm,1.0s
WRAB Tennant Creek 61.57 183 P P 07 13 51.0 -0.2
WRA Warramunga Arr 61.58 183 P P 07 13 51.0 -0.3
comp=Z,38nm,0.7s,baz=360,slow=7.4,SNR=357
WRA PcP **PcP** 07 14 30.6 +0.6
comp=Z,11nm,0.5s,baz=358,slow=4.7,SNR=12
WRA Warramunga Arr 61.58 183 P P 07 13 50.1 -1.2
MOS Moscow 61.59 321 *eP* P 07 13 49.9 -1.1
MOS *eP* **pwP** 07 14 57.0 -1.6
MOS *e* 07 16 07.6
MOS *eS **S** 07 21 47.0 -2.0
MOS pmax pmax
comp=Z,64nm,1.0s
WR0 Warramunga Arr 61.59 183 P P 07 13 51.6 +0.2
VRH Novokhopyorsk 62.00 315 *eP* P 07 13 52.9 -0.9

VRH pmax pmax
comp=Z,50nm,0.6s
STEI Steigen 62.29 339 *eP* P 07 13 55.5 +0.1
OBN Obninsk 62.43 320 *de* P P 07 13 56.4 -0.1
OBN *eP* **pwP** 07 15 03.7 -0.7
OBN *e* 07 16 14.6
OBN *i* S **S** 07 22 01.5 +1.9
OBN pmax pmax
comp=Z,32nm,0.9s
OBN Obninsk 62.43 320 P P 07 13 56.5 -0.1
PUL Pulkovo 62.49 327 *de* P P 07 13 57.8 +0.9
PUL pmax pmax
comp=Z,59nm,0.8s
LOF Lofoten 62.60 340 *eP* P 07 13 57.7 +0.3
LPSR Galich'ya Gora 62.68 317 *eP* P 07 13 57.8 -0.5
LPSR pmax pmax
comp=Z,60nm,0.7s
FIA1 FINESS Array S 63.12 330 P P 07 14 01.1 +0.1
FINES FINESS Array B 63.13 330 *ce* P P 07 14 01.0 0.0
FINES pmax pmax
comp=Z,62nm,0.7s
FINES FINESS Array B 63.13 330 P P 07 14 00.9 0.0
comp=Z,62nm,0.7s,baz=43,slow=8.4,SNR=148
FINES PP **PP** 07 16 20.2 -3.1
comp=Z,13nm,0.8s,baz=45,slow=11,SNR=7.2
FINES FINESS Array B 63.13 330 P P 07 14 01.1 0.0
VSR Storozhevoye 63.34 316 *eP* P 07 14 02.1 -0.5
VSR pmax pmax
comp=Z,100nm,1.0s
VORD Divnogorie 63.41 316 *eP* P 07 14 02.4 -0.7
VORD pmax pmax
comp=Z,40nm,0.9s
MOR8 Moi Rana 63.76 338 *eP* P 07 14 04.1 -1.1
AKT Akhty 63.84 303 *eP* P 07 14 06.1 -0.1
AKT *e* 07 14 38.9
AKT *eP* **pP** 07 15 10.0 +0.4
AKT pmax pmax
comp=Z,65nm,0.8s
KONS Konsvik 63.90 338 *eP* P 07 14 06.7 +0.8
GROC Groznyy 64.08 306 *eP* P 07 14 07.1 -0.4
GROC pmax pmax
comp=Z,26nm,0.7s
GOF Gofitskoye 64.67 309 ⇓ *iP* P 07 14 11.9 +0.5
GOF *eS **S** 07 22 28.4 +0.9
GOF pmax pmax
comp=Z,158nm,0.7s
GOF smax smax
comp=N,26nm,1.0s
GOF smax smax
comp=E,102nm,1.3s
VSU Vasula 64.76 327 *de* P P 07 14 11.8 +0.2
VSU pmax pmax
comp=Z,136nm,0.9s
VSU Vasula 64.76 327 *eP* P 07 14 11.9 +0.2
LLLB Lillooet 64.84 44 P P 07 14 13.5 +1.1
LLLB IAmb IAmb 07 14 14.7
comp=Z,15nm,0.9s
PSAD1 Pilbara Seismi 65.11 198 P P 07 14 14.5 +0.2
PGC Sidney 65.16 46 IAmb IAmb 07 14 16.9
comp=Z,20nm,0.7s
PSAC1 Pilbara Seismi 65.19 198 P P 07 14 15.1 +0.3
PSAC2 Pilbara Seismi 65.20 198 P P 07 14 15.2 +0.3
PSAB2 Pilbara Seismi 65.20 198 P P 07 14 15.0 +0.1
PSAA2 Pilbara Seismi 65.21 198 P P 07 14 15.1 +0.1
PSA00 Pilbara Seismi 65.22 198 P P 07 14 15.2 +0.2
PSA00 Pilbara Seismi 65.22 198 P P 07 14 15.1 +0.1
PSA00 IAmb IAmb 07 14 16.1
comp=Z,26nm,1.1s
PSAB1 Pilbara Seismi 65.22 198 P P 07 14 15.2 +0.1
PSAA3 Pilbara Seismi 65.22 198 P P 07 14 15.3 +0.2
PSAA1 Pilbara Seismi 65.23 198 P P 07 14 14.9 -0.1
PSAA1 IAmb IAmb 07 14 16.1
comp=Z,42nm,1.1s
PSAD2 Pilbara Seismi 65.24 198 P P 07 14 15.3 +0.2
PSAD2 IAmb IAmb 07 14 16.1
comp=Z,42nm,1.1s
PSAB3 Pilbara Seismi 65.24 198 P P 07 14 15.3 +0.1
PSAC3 Pilbara Seismi 65.27 198 P P 07 14 15.5 +0.1
PSAC3 IAmb IAmb 07 14 16.4
comp=Z,40nm,1.0s
AS31 Alice Springs 65.30 184 P P 07 14 15.6 +0.1
ASAR Alice Springs 65.30 184 P P 07 14 15.6 +0.1
comp=Z,16nm,0.7s,baz=0.9,slow=5.0,SNR=202
ASAR PKP2bc 07 42 55.3
comp=Z,0.4nm,0.7s,baz=170,slow=2.4,SNR=6.4
ASAR Alice Springs 65.30 184 P P 07 14 15.4 -0.1
PSAD3 Pilbara Seismi 65.30 198 P P 07 14 15.5 -0.1
PSAD3 IAmb IAmb 07 14 16.6
comp=Z,41nm,1.0s
ZEI Tsey 65.46 306 *eP* P 07 14 12.6 -4.1
ZEI pmax pmax
comp=Z,27nm,0.6s
A04D Lummi Island 65.51 46 P P 07 14 18.3 +1.7
baz=306,SNR=6.9
KIV Kislovodsk 65.51 308 *de* P P 07 14 17.5 +0.6
KIV *eP* **pP** 07 15 22.5 +1.9
KIV *e* 07 16 40.3
KIV *eP* PPP PPP 07 18 21.7
KIV pmax pmax
comp=Z,68nm,0.7s
KIV Kislovodsk 65.51 308 ⇓ P P 07 14 18.0 +1.1
KIV Kislovodsk 65.51 308 *i* P P 07 14 17.8 +0.9
SNR=50
KIV Kislovodsk 65.51 308 P P 07 14 17.4 +0.5
KBZ Khabaz 65.52 307 P P 07 14 17.2 +0.5
comp=Z,36nm,0.7s,baz=143,slow=0.6,SNR=145
TBLG Delisi 65.56 305 P P 07 14 17.0 -0.1
TBLG pmax pmax
comp=Z,30nm,1.0s
TBLG Delisi 65.56 305 P P 07 14 17.0 -0.1
TBLG IAmb IAmb 07 14 18.6
comp=Z,30nm,1.0s
NLWA Neilton Lookou 65.66 48 IAmb IAmb 07 14 20.8
comp=Z,20nm,0.9s
NSS Namsos 65.68 337 *eP* P 07 14 17.2 -0.2
SUMG Summit 65.81 359 ⇓ *iP* P 07 14 19.8 +1.1
SUMG pmax pmax
comp=Z,59nm,0.8s
SUMG Summit 65.81 359 ⇓ *iP* P 07 14 19.8 +1.1
comp=Z,59nm,0.8s
SUMG Summit 65.81 359 IAmb IAmb 07 14 20.6
comp=Z,25nm,0.8s
NEY Neytrino 65.90 307 *i* P P 07 14 20.2 +0.7
NEY pmax pmax
comp=Z,8.0nm,0.8s
D03D Eldon 66.01 47 P P 07 14 21.8 +2.0
baz=306,SNR=7.0
B05A Bryant 66.11 46 P P 07 14 22.0 +1.6
baz=307,SNR=12
D04E Lakebay 66.39 47 P P 07 14 24.5 +2.3
baz=307
GNI Garni 66.47 303 *ce* P P 07 14 23.9 +0.9
GNI pmax pmax
comp=Z,66nm,1.4s
GNI Garni 66.47 303 *i* P P 07 14 24.0 +0.9
SNR=8.1
GNI Garni 66.47 303 P P 07 14 24.1 +1.0
GNI IAmb IAmb 07 14 37.0
comp=Z,18nm,0.8s
AKH Akhalkalaki 66.50 305 ⇓ P P 07 14 24.3 +1.0
AKH Akhalkalaki 66.50 305 IAmb IAmb 07 14 25.2
comp=Z,25nm,0.8s
IZAR Zarasai 66.72 325 *eP* P 07 14 24.4 +0.3
MICGM Minsk 66.81 323 ⇑ *eP* P 07 14 24.0 -0.7
MICGM PM 07 14 25.0
comp=Z,0.2nm,1.0s
MICGM *e* 07 15 34.0
MNK Minsk 66.81 323 ⇑ *eP* P 07 14 24.0 -0.7
MNK *e* 07 15 34.0
MNK pmax pmax
comp=Z,150nm,1.0s
D05A Enumclaw 66.81 47 IAmb IAmb 07 14 28.1
comp=Z,26nm,1.0s
E04D Cinebar 66.88 48 P P 07 14 27.4 +2.1
baz=307,SNR=10
ISAL Salakas 66.88 325 *eP* P 07 14 25.8 +0.6
ISAL IAmb IAmb 07 14 26.9
comp=Z,26nm,0.7s
F04D Rainier, OR 66.91 48 P P 07 14 27.5 +1.9
baz=307
BANOM Banah 66.94 285 *i* P P 07 14 26.6 +0.5
SNR=12
C06D Leavenworth 66.96 46 P P 07 14 27.6 +1.7
baz=307
SHME Shamm 66.98 285 *i* P P 07 14 26.7 +0.3

SNR=9.1
IIGN Ignalina 66.99 325 *e*P **P** **07 14 26.4 +0.5**
IIGN IAmb IAmb 07 14 27.5
comp=Z,34nm,0.5s
NACGM Naroch 67.04 324 *e* **P** **07 14 25.0 -1.1**
NACGM Naroch 67.04 324 *e* 07 15 35.0
SLIT Slitere, Latvi 67.09 328 *e*P **P** **07 14 25.8 -0.6**
TBLU Trondheim 67.14 337 *e*P **P** **07 14 25.8 -0.9**
G03D McMinnville, O 67.30 49 P **P** **07 14 29.7 +1.7**
baz=307
F04A Amboy 67.33 48 P **P** **07 14 29.3 +1.1**
F04A IAmb IAmb 07 14 30.7
comp=Z,31nm,0.7s
MSFE Esma-Masafi 67.38 284 *i* P **P** **07 14 29.4 +0.6**
SNR=7.1
SOC Sochi 67.47 309 *e*P **P** **07 14 28.6 -0.5**
SOC *e**SP **sP** **07 16 03.1 -1.0**
SOC *e* 07 17 01.2
SOC *e*S **S** **07 23 01.8 +0.6**
SOC pmax pmax
comp=Z,41nm,0.6s
BATM Batumi 67.48 306 ⇑P **P** **07 14 29.4 +0.2**
LTY Liberty 67.49 46 IAmb IAmb 07 14 30.9
comp=Z,9.1nm,0.6s
B08A Colville Reser 67.52 45 P **P** **07 14 30.2 +0.8**
B08A IAmb IAmb 07 14 31.6
comp=Z,21nm,1.4s
UOSS Minazif 67.59 284 *i* P **P** **07 14 30.6 +0.4**
SNR=11
UOSS Minazif 67.59 284 P **P** **07 14 30.7 +0.5**
I02D Swisshome 67.63 50 P **P** **07 14 31.9 +1.9**
baz=307
COR Corvallis 67.65 50 P **P** **07 14 32.1 +2.0**
COR pmax pmax
comp=Z,42nm,1.0s
COR Corvallis 67.65 50 P **P** **07 14 32.1 +2.0**
HATD Hatta, Dubai 67.72 284 *i* P **P** **07 14 31.7 +0.7**
SNR=16
PABE Paberze 67.84 326 *e*P **P** **07 14 31.2 +0.1**
PABE IAmb IAmb 07 14 32.5
comp=Z,51nm,0.8s
ASHO Ashiyiah 67.86 284 *i* P **P** **07 14 32.4 +0.5**
SNR=9.8
F05D White Salmon 67.89 48 P **P** **07 14 33.3 +1.5**
baz=308
H04D Lebanon 68.01 49 P **P** **07 14 34.5 +2.1**
baz=308,SNR=7.2
ANN Anapa 68.05 311 ⇓ *i* P **P** **07 14 32.3 -0.3**
ANN pmax pmax
comp=Z,58nm,0.9s
EIDS Eidsvold 68.08 167 IAmb IAmb 07 14 34.7
comp=Z,23nm,0.8s
J01E Myrtle Point 68.15 51 P **P** **07 14 35.4 +2.2**
baz=307
I03D Drain, OR 68.16 50 P **P** **07 14 35.5 +2.2**
baz=308,SNR=14
PBUR Paburg 68.33 327 *e*P **P** **07 14 33.8 -0.4**
E07A Sunnyside 68.36 46 IAmb IAmb 07 14 37.1
comp=Z,17nm,0.7s
G05D Wamic, OR 68.37 48 P **P** **07 14 36.4 +1.7**
baz=308,SNR=7.6
ASUD Al Ashush, Dub 68.42 284 *i* P **P** **07 14 36.0 +0.7**
SNR=13
C09A Chrisman Ranch 68.42 45 IAmb IAmb 07 14 37.2
comp=Z,26nm,0.8s
DOMB Dombas 68.43 337 *e*P **P** **07 14 34.7 0.0**
ALNE Al Ain 68.46 283 *i* P **P** **07 14 36.2 +0.7**
SNR=12
NB2 NORSAR Subarra 68.55 335 P **P** **07 14 35.3 -0.2**
comp=Z,15nm,0.6s,baz=40,slow=6.5
NB2 NORSAR Subarra 68.55 335 P **P** **07 14 35.3 -0.2**
baz=40,slow=6.5
NOA NORSAR Array B 68.55 335 P **P** **07 14 35.3 -0.2**
comp=Z,11nm,0.7s,baz=39,slow=6.2,SNR=41
NOA PP **PP** **07 17 10.5 +0.2**
comp=Z,2.8nm,0.8s,baz=48,slow=8.8,SNR=5.0
K02D Willamette Mer 68.59 51 P **P** **07 14 37.8 +1.7**
baz=308,SNR=6.9
HAWA Hanford 68.64 46 IAmb IAmb 07 14 38.7
comp=Z,18nm,0.7s
I04A Tendick Farm, 68.64 50 P **P** **07 14 38.0 +1.6**
baz=308,SNR=26
AKASG Malin Array Be 68.65 320 P **P** **07 14 36.0 -0.2**
comp=Z,41nm,0.7s,baz=46,slow=6.1,SNR=207
AKASG PP **PP** **07 17 08.2 -3.2**
comp=Z,4.1nm,0.7s,baz=42,slow=9.2,SNR=5.8
AKASG Malin Array Be 68.65 320 P **P** **07 14 36.3 +0.1**
NC602 NORSAR Array S 68.68 335 P **P** **07 14 36.0 -0.3**
NBO00 NORSAR Array S 68.69 335 *e*P **P** **07 14 36.5 +0.1**
F07A Phinny Hill Vi 68.73 47 IAmb IAmb 07 14 39.5
comp=Z,21nm,0.8s
NEW Newport 68.73 44 P **P** **07 14 38.5 +1.6**
baz=310,SNR=14
NAO01 NORSAR Array S 68.80 335 P **P** **07 14 36.9 -0.1**
E08A Dider Farm, El 68.83 46 IAmb IAmb 07 14 39.8
comp=Z,20nm,0.8s
I05D Terrebonne, OR 68.91 49 P **P** **07 14 39.6 +1.5**
baz=308,SNR=13
AKN Aaknes 68.92 338 *e*P **P** **07 14 38.4 +0.6**
L02E Cave Junction 68.95 52 P **P** **07 14 40.1 +1.8**
baz=308
HUMO Hull Mountain 69.06 51 P **P** **07 14 40.7 +1.8**
HUMO IAmb IAmb 07 14 41.8
comp=Z,38nm,1.9s
J04D Umpqua Nationa 69.16 50 P **P** **07 14 41.6 +1.8**
baz=308,SNR=13
SUW Suwalki 69.20 325 *e*P **P** **07 14 39.2 -0.3**
SUW Suwalki 69.20 325 *e*P **P** **07 14 39.2 -0.3**
SUW Suwalki 69.20 325 P **P** **07 14 38.4 -1.1**
SUW IAmb IAmb 07 17 15.9
comp=Z,33nm,0.9s
OSL Oslo 69.55 335 *e*P **P** **07 14 42.0 +0.5**
J05D Fort Rock, OR 69.63 50 P **P** **07 14 44.7 +2.1**
baz=309,SNR=32
KHMM Horse Mountain 69.66 53 IAmb IAmb 07 14 46.0
comp=Z,27nm,1.2s
L04D Klamath Falls 69.67 51 P **P** **07 14 44.6 +1.7**
baz=308,SNR=16
SKAR Skarslia 69.73 336 *e*P **P** **07 14 43.0 +0.2**
K04D Chiloquin, OR 69.74 51 P **P** **07 14 44.7 +1.4**
baz=309
SIM Simferopol' 69.80 313 *e*P **P** **07 14 43.6 +0.2**
SIM *e**PP **pwP** **07 15 55.0 +2.3**
SIM pmax pmax
comp=Z,47nm,0.8s
WALA Waterton Lakes 69.84 42 IAmb IAmb 07 14 45.9
comp=Z,34nm,1.6s
M02C Callahan 69.86 52 P **P** **07 14 46.1 +2.1**
baz=308,SNR=7.0
FOO Floro 69.94 338 *e*P **P** **07 14 43.8 -0.1**
HYA Hoyanger 69.97 337 *e*P **P** **07 14 44.1 +0.1**
KMRM Mail Ridge 70.08 54 P **P** **07 14 47.6 +2.3**
KMRM IAmb IAmb 07 14 48.3
comp=Z,13nm,0.8s
KONO Kongsberg 70.14 335 P **P** **07 14 45.4 +0.3**
KONO pmax pmax
comp=Z,75nm,1.4s
KONO Kongsberg 70.14 335 *e*P **P** **07 14 45.5 +0.4**
KONO Kongsberg 70.14 335 P **P** **07 14 45.4 +0.3**
MSVF Nonsavu 70.14 139 P **P** **07 14 48.6 +2.8**
MSVF pmax pmax
comp=Z,46nm,1.1s
MSVF Nonsavu 70.14 139 P **P** **07 14 48.6 +2.8**
MSVF IAmb IAmb 07 14 49.6
comp=Z,46nm,1.1s
N02D Trinity Center 70.21 52 P **P** **07 14 47.9 +1.9**
baz=309,SNR=12
M04C Macdoel 70.22 51 P **P** **07 14 47.9 +1.7**
baz=309,SNR=20
SUE Sulen 70.46 338 *e*P **P** **07 14 47.5 +0.5**
KCPM Cahto Peak 70.49 54 IAmb IAmb 07 14 50.5
comp=Z,16nm,0.8s
JTMT Jette 70.52 43 P **P** **07 14 49.6 +1.7**
JTMT IAmb IAmb 07 14 50.5
comp=Z,16nm,0.9s
WDC Whiskeytown Da 70.56 53 IAmb IAmb 07 14 50.6
comp=Z,22nm,1.4s
O02D Mt. Diablo Mer 70.66 53 P **P** **07 14 50.8 +2.0**
baz=309,SNR=11
SORM Soroca 70.76 318 ⇓P **P** **07 14 48.9 -0.2**
ASK Askoy 70.81 337 *e*P **P** **07 14 49.5 +0.4**
ODD1 Odda 70.85 336 *e*P **P** **07 14 50.0 +0.6**
BER Bergen 70.85 337 *e*P **P** **07 14 50.0 +0.6**
PURM Purcari 71.05 316 ⇑P **P** **07 14 51.6 +0.8**
O03E Paynes Creek 71.17 53 P **P** **07 14 52.7 +0.9**
baz=309,SNR=16

FFC Flin Flon 71.22 32 P **P** **07 14 52.7 +1.0**
FFC pmax pmax
comp=Z,16nm,0.8s
FFC Flin Flon 71.22 32 P **P** **07 14 52.7 +1.0**
FFC IAmb IAmb 07 14 53.6
comp=Z,16nm,0.8s
HOPS Hopland Field 71.23 54 P **P** **07 14 53.2 +1.1**
HOPS IAmb IAmb 07 14 53.6
comp=Z,24nm,1.4s
DIKM Dikmen 71.25 309 ⇑P **P** **07 14 53.7 +1.5**
SFJD Kangerlussuaq 71.28 3 P **P** **07 14 52.1 +0.3**
comp=Z,7.3nm,0.9s,baz=351,slow=1.3,SNR=4.1
KIS Kishinev 71.28 317 *e*P **P** **07 14 52.0 -0.2**
KIS Kishinev 71.28 317 *e*P **P** **07 14 52.0 -0.2**
KIS *e* 07 16 03.0
BLS5 Blasjo 71.29 336 *e*P **P** **07 14 52.5 +0.4**
MSO Missoula 71.30 43 P **P** **07 14 53.5 +0.9**
baz=312
MILM Milestii Mici 71.34 317 ⇓P **P** **07 14 52.4 -0.2**
PLID Pearl Lake 71.37 46 P **P** **07 14 54.2 +1.0**
LVV L'vov 71.71 321 *e*P **P** **07 14 55.1 +0.4**
LVV *e* 07 16 05.7
BSD Bornholm Skovb 71.75 329 *i* P **P** **07 14 54.8 -0.1**
BSD pmax pmax
comp=Z,21nm,0.6s
BSD Bornholm Skovb 71.75 329 *i* P **P** **07 14 54.8 -0.1**
comp=Z,20nm,0.6s
BEL Belsk 71.76 324 *e*P **P** **07 14 56.1 +1.1**
BEL Belsk 71.76 324 *e*P **P** **07 14 56.1 +1.1**
BZK Bozkurt 71.78 310 ⇓P **P** **07 14 56.5 +1.2**
IAS Iasi 71.79 318 ⇑P **P** **07 14 55.6 +0.4**
ORV Oroville 71.82 53 IAmb IAmb 07 14 57.3
comp=Z,28nm,1.6s
VASR Vaslui 72.05 317 ⇓P **P** **07 14 57.6 +0.8**
BEKR Beckworth 72.30 52 IAmb IAmb 07 15 00.8
comp=Z,15nm,0.8s
BIR Birlad 72.38 317 ⇑P **P** **07 15 00.1 +1.3**
BORG Borgarnes 72.42 351 P **P** **07 14 59.2 +0.6**
comp=Z,40nm,1.1s,baz=0.0,slow=4.0,SNR=4.5
KWP Kalwaria Pacla 72.46 322 *e*P **P** **07 15 00.1 +0.9**
KWP Kalwaria Pacla 72.46 322 *e*P **P** **07 15 00.1 +0.9**
TLCR 72.50 315 ⇓P **P** **07 14 59.7 +0.3**
MFID Camas Ranch 72.56 47 IAmb IAmb 07 15 02.6
comp=Z,20nm,0.9s
EGMT Eagleton 72.58 40 P **P** **07 15 01.3 +1.3**
baz=314,SNR=26
GIUM Giurgiulesti 72.61 316 ⇓P **P** **07 15 00.4 +0.3**
GHRR 72.64 317 ⇑P **P** **07 15 01.5 +1.3**
BUR08 Bucovina Ar. S 72.66 319 IAmb IAmb 07 15 02.0
comp=Z,22nm,0.8s
BURAR Bucovina Array 72.67 319 ⇑P **P** **07 15 01.4 +0.9**
BURAR Bucovina Array 72.67 319 P **P** **07 15 00.8 +0.2**
BIZ Bicaz 72.69 318 ⇓P **P** **07 15 01.6 +1.0**
FRB Frobisher Bay 72.70 12 P **P** **07 15 00.6 +0.3**
comp=Z,32nm,0.6s,baz=345,slow=6.4,SNR=124
TESR Tescani 72.71 317 ⇑P **P** **07 15 01.4 +0.7**
MUD Monsted U'grnd 72.79 333 *e*P **P** **07 15 01.4 +0.5**
MUD pmax pmax
comp=Z,15nm,0.8s
MUD Monsted U'grnd 72.79 333 *i* P **P** **07 15 01.4 +0.5**
comp=Z,15nm,0.8s
TOPG Topolog 72.93 315 ⇓P **P** **07 15 02.7 +0.6**
PETR Petresti 72.95 317 ⇓P **P** **07 15 04.0 +1.9**
PAHR Pah Rah Range 72.98 52 IAmb IAmb 07 15 04.9
comp=Z,20nm,0.9s
ODBI Odobesti 73.02 317 ⇓P **P** **07 15 04.0 +1.5**
ARMA Armidale 73.11 167 P **P** **07 15 04.1 +0.9**
ARMA IAmb IAmb 07 15 06.0
comp=Z,21nm,1.1s
VRI Vrincioaia 73.11 317 ⇑P **P** **07 15 04.1 +1.0**
KOLS Kolonicke sedl 73.15 321 *e*P **P** **07 15 03.9 +0.7**
KOLS pmax pmax
comp=Z,23nm,1.6s
KOLS Kolonicke sedl 73.15 321 *e*P **P** **07 15 03.9 +0.7**
KOLS *e*PP **PP** **07 17 46.0 -3.8**
PLOR Plostina 73.17 317 ⇓P **P** **07 15 04.1 +0.7**
TIRR Tirgusor 73.20 315 P **P** **07 15 04.3 +0.8**
TIRR pmax pmax
comp=Z,80nm,1.4s
TIRR Tirgusor 73.20 315 P **P** **07 15 04.3 +0.8**
PNTR Pine Nut 73.25 52 P **P** **07 15 05.0 +0.8**
PNTR IAmb IAmb 07 15 06.9
comp=Z,12nm,0.8s
STHS Stebnicka Huta 73.28 322 *e*P **P** **07 15 04.7 +0.7**
STHS Stebnicka Huta 73.28 322 *e*P **P** **07 15 04.7 +0.7**
HARR Harsova 73.29 315 ⇓P **P** **07 15 04.5 +0.4**
BISRR Bisoca 73.34 317 ⇑P **P** **07 15 05.9 +1.4**
OJC Ojcow 73.35 324 *e*P **P** **07 15 05.2 +0.8**
OJC Ojcow 73.35 324 *e*P **P** **07 15 05.2 +0.8**
UZH Uzhgorod 73.36 321 ⇓ *i* P **P** **07 15 02.0 -2.4**
UZH *e* 07 15 13.2
UZH *i* 07 16 09.1
MFTR Murfatlar 73.38 315 ⇑P **P** **07 15 05.2 +0.5**
BR131 Keskin Array S 73.44 309 IAmb IAmb 07 15 06.1
comp=Z,11nm,0.7s
BRTR Keskin Array B 73.44 309 *ce*P **P** **07 15 05.5 +0.3**
BRTR pmax pmax
comp=Z,12nm,0.7s
BRTR Keskin Array B 73.44 309 P **P** **07 15 05.3 +0.1**
comp=Z,11nm,0.7s,baz=82,slow=3.7,SNR=80
BRTR PP **PP** **07 17 52.8 0.0**
comp=Z,3.8nm,0.8s,baz=64,slow=6.5,SNR=6.2
BRTR Keskin Array B 73.44 309 P **P** **07 15 05.5 +0.3**
ARCR ARCALIA 73.46 319 ⇑P **P** **07 15 06.8 +1.8**
BMR Baia Mare 73.46 320 ⇓P **P** **07 15 06.2 +1.2**
CMB Columbia Colle 73.46 54 IAmb IAmb 07 15 07.7
comp=Z,20nm,0.8s
STKA Stephens Creek 73.49 176 P **P** **07 15 06.5 +1.3**
comp=Z,29nm,0.6s,baz=345,slow=6.5,SNR=104
YERR Yerington 73.53 52 IAmb IAmb 07 15 08.4
comp=Z,22nm,0.8s
TRPA Tarpa 73.60 321 ⇓ *e*P **P** **07 15 06.8 +1.0**
TRPA Tarpa 73.60 321 ⇓P **P** **07 15 07.1 +1.3**
PGOR Pogoanele 73.64 316 ⇑P **P** **07 15 07.7 +1.7**
SAO San Andreas Ge 73.64 55 P **P** **07 15 07.8 +1.5**
SAO pmax pmax
comp=Z,11nm,0.9s
SAO San Andreas Ge 73.64 55 P **P** **07 15 07.8 +1.5**
NIE Niedzica 73.71 323 *e*P **P** **07 15 07.7 +1.2**
NIE Niedzica 73.71 323 *e*P **P** **07 15 07.7 +1.2**
ISR Istrita 73.72 316 ⇓P **P** **07 15 08.1 +1.4**
DOPR Dopca 73.72 318 ⇓P **P** **07 15 08.0 +1.3**
WAKR Walker 73.73 53 IAmb IAmb 07 15 09.8
comp=Z,11nm,0.7s
ICOR Ion Corvin 73.75 315 ⇑P **P** **07 15 08.1 +1.3**
BMN Battle Mountai 73.76 50 P **P** **07 15 08.5 +1.4**
BMN pmax pmax
comp=Z,19nm,0.8s
BMN Battle Mountai 73.76 50 P **P** **07 15 08.5 +1.4**
BMN IAmb IAmb 07 15 09.7
comp=Z,19nm,0.8s
MLR Muntele Rosu 73.77 317 ⇓P **P** **07 15 07.6 +0.5**
MLR Muntele Rosu 73.77 317 IAmb IAmb 07 15 09.3
comp=Z,54nm,1.8s
ANTO Ankara 73.83 309 P **P** **07 15 08.5 +1.1**
ANTO pmax pmax
comp=Z,34nm,0.8s
ANTO Ankara 73.83 309 P **P** **07 15 08.5 +1.1**
BR231 Keskin MP Arra 73.86 309 IAmb IAmb 07 15 09.3
comp=Z,31nm,0.8s
SECR 74.02 317 ⇑P **P** **07 15 09.5 +1.1**
CJR Cluj-Napoca 74.09 319 ⇑P **P** **07 15 10.3 +1.5**
PLAR PLOIESTI 74.13 317 ⇓P **P** **07 15 10.2 +1.3**
KVN Kaiserville 74.16 52 IAmb IAmb 07 15 12.0
comp=Z,30nm,1.1s
SULR 74.17 316 ⇑P **P** **07 15 10.3 +1.1**
VOIR 74.26 317 ⇑P **P** **07 15 10.6 +0.8**
LANS Liptovska Anna 74.28 323 *e*P **P** **07 15 11.5 +1.7**
LANS pmax pmax
comp=Z,8.0nm,0.9s
LANS Liptovska Anna 74.28 323 *e*P **P** **07 15 11.5 +1.7**
OKC Ostrava-Krasne 74.36 324 *e*P **P** **07 15 10.5 +0.3**
OKC *e* 07 16 21.8
OKC Ostrava-Krasne 74.36 324 *e*P **P** **07 15 10.5 +0.3**
OKC *e*pP **pwP** **07 16 21.8 +1.4**
BSEG Bad Segeberg 74.38 331 *e*P **P** **07 15 10.8 +0.7**
comp=Z,16nm,0.7s,baz=37,slow=5.6
KSP Ksiaz 74.41 326 *e*P **P** **07 15 11.4 +0.9**
KSP Ksiaz 74.41 326 *e*P **P** **07 15 11.4 +0.9**
NVAR Mina Array Bea 74.45 52 P **P** **07 15 12.5 +1.3**
comp=Z,14nm,0.7s,baz=296,slow=5.5,SNR=135
NVAR Mina Array Bea 74.45 52 P **P** **07 15 12.7 +1.5**
DRGR 74.46 320 ⇑P **P** **07 15 11.8 +0.9**

MDPB Devils Postpil 74.51 53 P **P** **07 15 12.4 +0.8**
ARR Arges 74.52 318 ⇑P **P** **07 15 12.9 +1.6**
SGRR Singureni 74.63 316 ⇓P **P** **07 15 09.5 -2.3**
OSTC Ostas 74.66 326 *e*P **P** **07 15 12.4 +0.5**
OSTC *ex* x 07 15 27.4
MLAC Mammoth, Mammo 74.66 53 P **P** **07 15 14.5 +2.0**
baz=311,SNR=7.4
MORC Moravsky Berou 74.67 324 ⇑P **P** **07 15 13.2 +1.2**
MORC Moravsky Berou 74.67 324 *e*P **P** **07 15 12.6 +0.6**
MORC *e* 07 16 23.6
MORC Moravsky Berou 74.67 324 IAmb IAmb 07 15 13.8
comp=Z,28nm,0.8s
H17A Grant Village 74.69 44 IAmb IAmb 07 15 16.8
comp=Z,28nm,0.9s
H17A Grant Village 74.69 44 P **P** **07 15 15.6 +3.1**
baz=314,SNR=24
CHVC Chvalec 74.70 326 *e*P **P** **07 15 13.1 +1.0**
CHVC *ex* x 07 15 26.8
CHVC *ex* x 07 16 23.5
GOLR 74.72 317 ⇑P **P** **07 15 12.3 -0.1**
DPC Dobruska-Polom 74.77 325 *e*P **P** **07 15 13.7 +1.1**
DPC *e* 07 15 30.3
DPC *e* 07 16 24.5
DPC Dobruska-Polom 74.77 325 *e*P **P** **07 15 13.7 +1.1**
DPC *ex* x 07 15 30.3
DPC *e*pP **pwP** **07 16 24.5 +1.8**
KRLC Kraliky 74.78 325 *e*P **P** **07 15 13.4 +0.8**
KRLC *e* 07 16 24.0
KRLC Kraliky 74.78 325 *e*P **P** **07 15 13.4 +0.8**
KRLC *e*pP **pwP** **07 16 24.0 +1.2**
UPC Upice 74.78 326 *e*P **P** **07 15 13.5 +0.9**
UPC *e* 07 15 29.2
UPC *e* 07 16 22.6
UPC Upice 74.78 326 *e*P **P** **07 15 13.5 +0.9**
UPC *e*PCP **PcP** **07 15 29.2 +4.0**
UPC *e*pP **pwP** **07 16 22.6 0.0**
RAZG Razgrad 74.81 315 ⇑P **P** **07 15 13.6 +0.7**
FLWY Flagg Ranch 74.84 44 IAmb IAmb 07 15 16.9
comp=Z,17nm,1.1s
IMW Indian Meadow 74.85 44 P **P** **07 15 15.6 +2.2**
IMW IAmb IAmb 07 15 16.7
comp=Z,17nm,0.8s
RLMT Red Lodge 74.85 42 IAmb IAmb 07 15 16.6
comp=Z,14nm,0.8s
RLMT Red Lodge 74.85 42 P **P** **07 15 14.8 +1.5**
baz=315,SNR=19
DGMT Dagmar 74.87 37 IAmb IAmb 07 15 15.1
comp=Z,28nm,0.9s
DGMT Dagmar 74.87 37 P **P** **07 15 14.3 +1.1**
baz=317,SNR=8.6
HUMR Humele 74.93 317 ⇑P **P** **07 15 13.3 -0.2**
PSZ Piszkesteto 74.98 322 ⇑P **P** **07 15 15.1 +1.2**
PSZ Piszkesteto 74.98 322 IAmb IAmb 07 15 15.9
comp=Z,25nm,1.1s
DEV Deva 75.02 319 ⇓P **P** **07 15 15.0 +1.1**
VYHS Vyhne 75.04 323 *e*P **P** **07 15 15.2 +1.1**
VYHS pmax pmax
comp=Z,20nm,1.5s
VYHS Vyhne 75.04 323 *e*P **P** **07 15 15.2 +1.1**
VYHS *e*pP **pwP** **07 16 25.8 +1.9**
VYHS *e*PP PP 07 17 54.2 -12
HLG Helgoland 75.05 332 *e*P **P** **07 15 14.1 +0.1**
comp=Z,188nm,0.9s,baz=37,slow=5.6
MOOW Moose Ponds 75.05 44 IAmb IAmb 07 15 17.7
comp=Z,23nm,1.1s
COPA Copaceanca 75.09 316 ⇓P **P** **07 15 14.5 +0.1**
KOLL Kolacno 75.18 323 *e*P **P** **07 15 16.0 +1.1**
VOG Valley Oaks Go 75.19 54 P **P** **07 15 16.3 +1.2**
baz=311
LAO LASA Array 75.22 40 P **P** **07 15 16.6 +1.4**
baz=316,SNR=8.8
REDW Red Top Meadow 75.26 45 IAmb IAmb 07 15 18.7
comp=Z,20nm,1.1s
JAVC Velka Javorina 75.29 324 *e*P **P** **07 15 17.5 +1.9**
JAVC *e* 07 16 28.4
SIRR Siria 75.35 320 ⇑P **P** **07 15 17.0 +1.1**
BRG Berggiesshubel 75.36 327 *i* P **P** **07 15 16.1 +0.3**
comp=Z,15nm,0.9s
BRG *e*PCP **PcP** **07 15 27.2 -0.4**
comp=Z,8.3nm,1.0s
BRG *e*pP **pwP** **07 16 26.7 +0.4**
comp=Z,12nm,1.1s
BRG *e*PP PP 07 17 56.6 -12
comp=Z,8.6nm,1.1s
BRG Berggiesshubel 75.36 327 *i* P **P** **07 15 16.1 +0.3**
BRG *e* 07 15 27.2
BRG *e**PP **pwP** **07 16 26.7 +0.4**
BRG pmax pmax
comp=Z,15nm,0.9s
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG pmax pmax
comp=Z,12nm,1.2s
BRG pmax pmax
comp=Z,9.0nm,1.1s
BRG Berggiesshubel 75.36 327 *e*P **P** **07 15 16.3 +0.5**
comp=Z,8.5nm,0.8s,baz=37,slow=5.6
BRG *e*pP **pwP** **07 16 27.2 +0.9**
PVCC Panska Ves 75.36 326 *e*P **P** **07 15 16.7 +0.8**
PVCC *e* 07 15 26.6
PVCC *e* 07 16 27.2
PVCC Panska Ves 75.36 326 *e*P **P** **07 15 16.7 +0.8**
PVCC *e*PCP **PcP** **07 15 26.6 -1.1**
PVCC *e*pP **pwP** **07 16 27.2 +1.3**
TIN Tinemaha, Big 75.40 53 P **P** **07 15 18.0 +1.6**
baz=312
CLL Collm 75.40 328 ⇓ *i* P **P** **07 15 16.3 +0.2**
CLL *e* 07 15 27.0
CLL *i* *PP **pwP** **07 16 26.8 +0.3**
CLL pmax pmax
comp=Z,28nm,1.2s
CLL Collm 75.40 328 ⇓ *i* P **P** **07 15 16.3 +0.2**
comp=Z,28nm,1.2s
CLL *e*PcP **PcP** **07 15 27.0 -0.8**
CLL *i* pP **pwP** **07 16 26.8 +0.3**
comp=Z,28nm,1.0s
CLL *e* 07 17 57.0
CLL *e*PP **PP** **07 18 08.0 -0.7**
comp=Z,12nm,1.0s
CLL Collm 75.40 328 *e*P **P** **07 15 16.6 +0.5**
comp=Z,21nm,1.0s,baz=37,slow=5.6
CLL *e*pP **pwP** **07 16 27.4 +0.9**
CLL Collm 75.40 328 IAmb IAmb 07 16 27.9
comp=Z,25nm,1.0s
GZR Gura Zlata 75.43 319 ⇑P **P** **07 15 17.3 +0.9**
VRAC Vranov 75.43 325 ⇑P **P** **07 15 17.7 +1.4**
VRAC Vranov 75.43 325 *e*P **P** **07 15 17.2 +0.9**
VRAC *e* 07 16 28.3
SMMC Simmler 75.47 56 P **P** **07 15 18.4 +1.5**
baz=311
FBE Freiberg 75.56 327 *e*P **P** **07 15 17.8 +0.8**
comp=Z,17nm,0.9s,baz=37,slow=5.6
ELND Elena 75.59 315 ⇓P **P** **07 15 17.8 +0.5**
NRDL Niedersach Rie 75.59 330 *e*P **P** **07 15 17.7 +0.7**
comp=Z,8.8nm,1.0s,baz=37,slow=5.6
VLAD Vladila 75.60 317 ⇓P **P** **07 15 17.8 +0.5**
SMOL Smolenice 75.66 324 *e*P **P** **07 15 19.1 +1.5**
SMOL pmax pmax
comp=Z,10.0nm,0.9s
SMOL Smolenice 75.66 324 *e*P **P** **07 15 19.1 +1.5**
VES Vestal, Richgr 75.69 55 P **P** **07 15 18.5 +0.5**
baz=312,SNR=17
KRUC Moravsky 75.70 324 *e*P **P** **07 15 18.7 +0.9**
KRUC *e* 07 16 29.7
BUD Budapest 75.70 322 ⇓ *e*P **P** **07 15 18.7 +0.9**
SRE Strehaia 75.74 318 ⇑P **P** **07 15 20.0 +1.9**
GOPC GO Pecny, Ondr 75.74 326 *e*P **P** **07 15 18.3 +0.2**
GOPC *e* 07 15 25.2
GOPC *e* 07 16 29.1
GOPC GO Pecny, Ondr 75.74 326 *e*P **P** **07 15 18.3 +0.2**
GOPC *ex* x 07 15 25.2
GOPC *e*pP **pwP** **07 16 29.1 +0.8**
PRA Prague 75.77 326 *e*P **P** **07 15 19.3 +1.1**
PRA Prague 75.77 326 *e*P **P** **07 15 19.3 +1.1**
PRU Pruhonice 75.79 326 *e*P **P** **07 15 18.8 +0.5**
PRU *e* 07 15 34.8
PRU *e* 07 16 29.8
PRU Pruhonice 75.79 326 *e*P **P** **07 15 18.8 +0.5**
PRU *e*PCP **PcP** **07 15 34.8 +5.3**
PRU *e*pP **pwP** **07 16 29.8 +1.3**
MODS Modra-Piesok 75.83 324 *e*P **P** **07 15 19.1 +0.5**
MODS pmax pmax
comp=Z,15nm,0.9s

MODS **Modra-Piesok** 75.83 324 *e*P **P** 07 15 19.1 +0.5
MODS *e*pP **pwP** 07 16 29.7 +0.8
BZS Buzias 75.84 319 ⇑P **P** 07 15 18.9 +0.3
PKM Mcpherson Peak 75.87 56 P **P** 07 15 20.9 +1.7
baz=311
CWC Cottonwood Cre 75.90 54 P **P** 07 15 20.6 +1.3
baz=312
PLVB Pleven 75.92 316 ⇓P **P** 07 15 19.7 +0.6
GRAC Grapevine Rang 75.95 53 P **P** 07 15 21.3 +1.8
baz=312,SNR=24
NEUB Neuenburg 75.97 328 *e*P **P** 07 15 19.7 +0.5
comp=Z,16nm,0.8s,baz=37,slow=5.6
CLZ Clausthal 76.01 329 *e*P **P** 07 15 20.4 +0.9
comp=Z,11nm,0.8s,baz=37,slow=5.6
R11A Troy Canyon, C 76.09 51 P **P** 07 15 21.8 +1.4
baz=313,SNR=15
HWUT Hardware Ranch 76.11 46 IAmb IAmb 07 15 23.2
comp=Z,21nm,0.8s
RAYN Ar Rayn 76.13 289 P **P** 07 15 20.2 -0.6
RAYN pmax pmax
comp=Z,14nm,0.7s
RAYN Ar Rayn 76.13 289 *i* P **P** 07 15 20.9 +0.2
SNR=14
RAYN Ar Rayn 76.13 289 P **P** 07 15 20.2 -0.6
RAYN IAmb IAmb 07 15 21.6
comp=Z,14nm,0.7s
CSKK Cskako 76.14 322 *e*P **P** 07 15 21.1 +0.8
PUNG Punghina 76.15 318 ⇑P **P** 07 15 21.4 +1.1
ISA Isabella, Lake 76.17 54 P **P** 07 15 21.2 +0.4
baz=312,SNR=9.2
KAC Achnashellach 76.20 340 *e*P **P** 07 15 20.7 +0.3
PBCC Pribram 76.25 326 *e*P **P** 07 15 21.1 +0.2
PBCC *ex* x 07 16 32.3
DAC Darwin (Calif) 76.30 53 P **P** 07 15 22.7 +1.0
DAC pmax pmax
comp=Z,13nm,0.8s
DAC Darwin (Calif) 76.30 53 P **P** 07 15 22.7 +1.0
DAC IAmb IAmb 07 15 26.3
comp=Z,13nm,0.8s
TANN Tannenbergstha 76.31 327 *e*P **P** 07 15 21.9 +0.6
comp=Z,8.9nm,0.9s,baz=37,slow=5.6
ARVC Arvin 76.31 55 P **P** 07 15 22.4 +0.9
baz=312
BW06 Boulder Array 76.36 44 IAmb IAmb 07 15 23.9
comp=Z,22nm,0.8s
BW06 Boulder Array 76.36 44 P **P** 07 15 23.0 +1.0
baz=315,SNR=29
PD31 Pinedale Array 76.36 44 IAmb IAmb 07 15 23.9
comp=Z,20nm,0.8s
PDAR Pinedale Array 76.36 44 P **P** 07 15 22.7 +0.8
comp=Z,16nm,0.8s,baz=313,slow=1.9,SNR=143
GTTG Gvttingen 76.40 329 *e*P **P** 07 15 22.4 +0.7
comp=Z,17nm,0.9s,baz=37,slow=5.6
DUG Dugway, Tooele 76.40 48 IAmb IAmb 07 15 24.8
comp=Z,19nm,0.8s
DUG Dugway, Tooele 76.40 48 P **P** 07 15 23.8 +1.7
baz=314,SNR=25
GUNZ Gunzen 76.40 327 *e*P **P** 07 15 22.4 +0.6
comp=Z,5.6nm,0.8s,baz=37,slow=5.6
GUNZ *e*pP **pwP** 07 16 33.5 +1.1
KPL Plockton 76.43 340 *e*P **P** 07 15 21.9 +0.2
WERN Wernitzgruen 76.44 327 *e*P **P** 07 15 22.7 +0.6
comp=Z,8.1nm,0.8s,baz=37,slow=5.6
WERN *e*pP **pwP** 07 16 33.9 +1.2
NKC Novy Kostel 76.46 327 *e*P **P** 07 15 22.3 +0.2
NKC Novy Kostel 76.46 327 *e*P **P** 07 15 22.3 +0.2
MOX Moxa 76.47 328 *e*P **P** 07 15 22.6 +0.5
comp=Z,6.4nm,0.9s,baz=37,slow=5.6
MOX *e*pP **pwP** 07 16 33.8 +1.1
MPMC Manual Prospec 76.51 54 P **P** 07 15 24.2 +1.3
baz=312,SNR=28
FURC Furnace Creek, 76.61 53 P **P** 07 15 24.8 +1.7
baz=312,SNR=27
IBBN Ibbenburen 76.61 331 *e*P **P** 07 15 23.5 +0.7
comp=Z,16nm,0.9s,baz=37,slow=5.6
IBBN *e*pP **pwP** 07 16 34.3 +0.9
MPLH Magyarpolny 76.61 323 ⇑*e*P P 07 15 14.8 -8.2
TPNV Topopah Spring 76.65 52 IAmb IAmb 07 15 26.0
comp=Z,34nm,1.0s
TPNV Topopah Spring 76.65 52 P **P** 07 15 25.1 +1.6
baz=313,SNR=44
OSI Osito Audit: C 76.72 55 P **P** 07 15 25.2 +1.3
baz=312
NWAO Narrogin (SRO) 76.75 197 P **P** 07 15 24.2 +0.5
NWAO pmax pmax
comp=Z,53nm,1.0s
NWAO Narrogin (SRO) 76.75 197 P **P** 07 15 24.2 +0.5
NWAO Narrogin (SRO) 76.75 197 IAmb IAmb 07 15 25.2
comp=Z,42nm,1.0s
CSS Mathiatis 76.77 305 IAmb IAmb 07 15 24.7
comp=Z,14nm,0.7s
LRMC Laurel Mtn Rad 76.78 54 P **P** 07 15 25.3 +1.0
baz=312,SNR=12
MANZ Manzenberg 76.79 327 *e*P **P** 07 15 24.6 +0.7
comp=Z,4.8nm,0.7s,baz=37,slow=5.6
CONA Conrad Observa 76.79 324 *e*P **P** 07 15 25.3 +1.3
comp=Z,13nm,0.6s,SNR=5.7
CONA *e*pP **pwP** 07 16 36.6 +2.3
comp=Z,9.9nm,0.9s
CONA PP **PP** 07 18 16.3 -4.2
comp=Z,9.7nm,1.4s
MORH Mrgy, Hungar 76.81 321 ⇓*i*P **P** 07 15 24.1 0.0
BLG Laguna Peak, P 76.84 56 P **P** 07 15 25.3 +0.8
baz=312
KHC Kasperske Hory 76.85 326 *e*P **P** 07 15 24.9 +0.6
KHC *e* 07 15 35.5
KHC *e* 07 16 36.3
KHC Kasperske Hory 76.85 326 *e*P **P** 07 15 24.9 +0.6
KHC *e*PCP **PcP** 07 15 35.5 +1.3
KHC *e*pP **pP** 07 16 28.0 -2.5
KHC *ex* x 07 16 36.3
KHC *ex* x 07 18 09.0
ROTZ Rotzenmuhle 76.92 327 *e*P **P** 07 15 25.5 +0.9
comp=Z,7.2nm,0.9s,baz=37,slow=5.6
ROTZ *e*pP **pwP** 07 16 36.5 +1.2
UBBA Unterbreizbach 76.96 329 *e*P **P** 07 15 24.9 +0.2
baz=37,slow=5.6
UBBA *e*pP **pwP** 07 16 36.2 +0.9
EDW2 Edwards Air Fo 76.99 55 P **P** 07 15 26.7 +1.4
baz=312,SNR=15
GEC2 GERESS Array S 77.02 326 *e*P **P** 07 15 25.9 +0.5
comp=Z,7.1nm,0.7s,baz=37,slow=5.6
GERES GERESS Array B 77.02 326 P **P** 07 15 25.7 +0.4
comp=Z,7.2nm,0.6s,baz=36,slow=5.8,SNR=62
GERES PP **PP** 07 18 17.4 -5.0
comp=Z,1.8nm,0.7s,baz=40,slow=7.7,SNR=4.7
GERES GERESS Array B 77.02 326 P **P** 07 15 25.4 +0.1
FRGS Fruska Gora 77.04 320 ⇓*i*P **P** 07 15 25.2 -0.2
ULM Lac du Bonnet 77.05 32 P **P** 07 15 25.4 +0.1
comp=Z,13nm,0.7s,baz=323,slow=6.7,SNR=24
ULM Lac du Bonnet 77.05 32 IAmb IAmb 07 15 26.6
comp=Z,16nm,0.8s
EAB Aberfoyle 77.11 339 *e*P **P** 07 15 26.4 +0.8
WET Wettzell 77.13 326 *e*P **P** 07 15 26.9 +1.1
comp=Z,8.1nm,0.9s,baz=37,slow=5.6
VTS Vitosha 77.18 316 ⇓P **P** 07 15 27.4 +1.0
VTS Vitosha 77.18 316 IAmb IAmb 07 15 28.4
comp=Z,37nm,0.9s
SOCY Socotra 77.20 275 P **P** 07 15 25.7 -1.1
SOCY IAmb IAmb 07 15 26.1
comp=Z,31nm,0.8s
SHOC Shoshone, Teco 77.34 53 P **P** 07 15 28.6 +1.3
baz=313,SNR=7.9
MDND Maddock 77.37 35 P **P** 07 15 28.1 +0.9
baz=320
GRA1 Grafenberg Arr 77.38 328 IAmb IAmb 07 15 29.1
comp=Z,30nm,0.8s
GRF Grafenberg Arr 77.38 328 *e*P **P** 07 15 28.1 +0.9
comp=Z,23nm,0.8s,baz=37,slow=5.6
MWC Mount Wilson 77.39 55 IAmb IAmb 07 15 29.6
comp=Z,27nm,1.4s
GSC Goldstone, Bar 77.43 54 IAmb IAmb 07 15 30.0
comp=Z,16nm,0.8s
GSC Goldstone, Bar 77.43 54 P **P** 07 15 29.1 +1.3
baz=313,SNR=17
ARSA Arzberg 77.45 324 *i* P **P** 07 15 28.5 +0.9
comp=Z,6.2nm,0.6s,SNR=6.4
ARSA *e*pP **pwP** 07 16 40.0 +2.1
comp=Z,7.5nm,0.9s
ARSA PP **PP** 07 18 18.8 -7.2
comp=Z,3.4nm,1.1s
BUG Bochum--Univer 77.49 331 *e*P **P** 07 15 28.0 +0.3
comp=Z,8.9nm,0.7s,baz=37,slow=5.6
BUG *e*pP **pwP** 07 16 39.4 +0.9
CAN Canberra 77.54 170 IAmb IAmb 07 15 30.9
comp=Z,20nm,0.9s

MOA Molln 77.54 325 *i* P **P** 07 15 29.1 +1.0
comp=Z,3.3nm,0.7s
MOA *e*pP **pwP** 07 16 40.3 +2.2
comp=Z,4.7nm,0.9s
EKA Eskdalemuir Ar 77.55 338 P **P** 07 15 28.2 +0.3
comp=Z,1.2nm,0.4s,baz=33,slow=5.5,SNR=11
EKA PP **PP** 07 18 25.7 -0.7
comp=Z,3.0nm,0.8s,baz=38,slow=8.1,SNR=3.5
SHPR Sheep Range 77.59 52 IAmb IAmb 07 15 31.6
comp=Z,17nm,1.0s
RRX Edison Barstow 77.60 54 P **P** 07 15 30.0 +1.3
baz=313
BFSC Mount Baldy Ra 77.62 55 P **P** 07 15 29.7 +0.8
baz=312,SNR=5.2
CIS Catalina Islan 77.72 56 P **P** 07 15 30.0 +0.7
baz=312
DIVS Divibare 77.73 319 ⇓*i*P **P** 07 15 29.5 +0.2
TUQ Turquoise Moun 77.86 53 P **P** 07 15 31.7 +1.4
baz=313,SNR=17
KALN Kalnik 77.89 322 *i* P **P** 07 15 30.1 +0.1
CCUT Cedar City 77.92 50 P **P** 07 15 32.4 +1.7
K22A Casper 78.00 43 P **P** 07 15 30.9 0.0
baz=317
HEC Hector,Ludlow 78.03 54 P **P** 07 15 32.5 +1.4
baz=313,SNR=7.9
TNS Taunus Mts 78.04 329 *e*P **P** 07 15 31.4 +0.5
comp=Z,7.4nm,0.7s,baz=37,slow=5.6
BBRC Big Bear Solar 78.06 55 P **P** 07 15 32.4 +0.9
baz=313
GROS Grobnik 78.06 323 *e*P **P** 07 15 31.3 +0.2
GROS *e* 07 16 38.1
GROS *e*pP **pwP** 07 16 42.5 +1.0
SOKA Soboth 78.11 324 *i* P **P** 07 15 32.2 +0.8
comp=Z,16nm,0.7s,SNR=10
SOKA *e*pP **pwP** 07 16 43.4 +1.8
comp=Z,17nm,0.9s,SNR=7.2
MOSL Moslavina 78.14 322 *i* P **P** 07 15 31.2 -0.2
RSSD Black Hills 78.15 40 P **P** 07 15 32.5 +0.7
RSSD pmax pmax
comp=Z,13nm,0.9s
RSSD Black Hills 78.15 40 P **P** 07 15 32.5 +0.7
RSSD IAmb IAmb 07 15 33.6
comp=Z,12nm,0.8s
RSSD Black Hills 78.15 40 P **P** 07 15 32.5 +0.7
baz=318
BBLS Lazići 78.19 319 ⇓*i*P **P** 07 15 32.5 +0.7
MTPU Mount Pierson 78.25 49 P **P** 07 15 34.5 +1.8
HAPS Han Pijesak,BI 78.25 320 ⇓*i*P **P** 07 15 32.1 -0.1
RJOB Jochberg 78.26 325 *e*P **P** 07 15 33.4 +1.3
comp=Z,12nm,0.8s,baz=37,slow=5.6
PTJ Puntijarka 78.28 323 *i* P **P** 07 15 32.2 -0.1
AHRW Bad Neuenahr-A 78.29 330 *e*P **P** 07 15 32.7 +0.6
comp=Z,9.9nm,0.8s,baz=37,slow=5.6
AHRW *e*pP **pwP** 07 16 44.4 +1.3
MURC Murrieta 78.34 55 P **P** 07 15 33.6 +0.9
baz=313,SNR=6.4
STIP Stip 78.39 316 *i* P **P** 07 15 32.6 -0.2
RUDO Rudo 78.39 319 *e*P **P** 07 15 32.7 -0.2
OBKA Obir 78.45 324 *i* P **P** 07 15 33.9 +0.6
comp=Z,8.3nm,0.6s
OBKA *e*pP **pwP** 07 16 44.3 +0.8
comp=Z,11nm,1.5s
OBKA PP PP 07 18 24.3 -10
comp=Z,5.4nm,0.8s
VAY Valandovo 78.46 316 *i* P **P** 07 15 34.2 +0.9
GMRC Granite Mounta 78.47 54 P **P** 07 15 34.9 +1.3
baz=313,SNR=17
KBA Koelnbreinsper 78.54 325 *e*P **P** 07 15 34.7 +0.9
comp=Z,24nm,1.2s,SNR=6.9
KBA *e*pP **pwP** 07 16 46.0 +2.2
comp=Z,18nm,1.3s
KBA PP PP 07 18 25.2 -10
comp=Z,17nm,1.1s
FUR Furstenfeldbru 78.56 327 *e*P **P** 07 15 34.5 +0.8
comp=Z,26nm,1.0s,baz=37,slow=5.6
SKO Skopje 78.57 317 *i* P **P** 07 15 35.0 +1.1
CRES Cresnjev 78.57 323 *e*P **P** 07 15 33.7 -0.1
BEBN Eben Emael 78.59 331 ⇓P **P** 07 15 33.9 +0.2
PDKS Podkum 78.60 323 *i* P **P** 07 15 33.9 0.0
PDKS *e*pP **pwP** 07 16 45.4 +1.0
MEM Membach 78.63 331 ⇓P **P** 07 15 34.0 0.0
MEM pP **pwP** 07 16 45.8 +0.8
OZLJ Ozalj 78.73 323 *i* P **P** 07 15 34.6 0.0
MYKA Terra Mystica 78.76 324 *i* P **P** 07 15 34.8 0.0
comp=Z,6.7nm,0.6s,SNR=5.1
MYKA *e*pP **pwP** 07 16 46.6 +1.6
comp=Z,6.1nm,0.6s
PFO Pinyon Flats O 78.78 55 P **P** 07 15 36.1 +0.8
PFO pmax pmax
comp=Z,18nm,0.8s
PFO Pinyon Flats O 78.78 55 P **P** 07 15 36.1 +0.8
PFO IAmb IAmb 07 15 37.3
comp=Z,18nm,0.8s
PFO Pinyon Flats O 78.78 55 P **P** 07 15 36.2 +0.9
baz=313,SNR=13
XPFO Pion Flat 78.78 55 P **P** 07 15 36.2 +0.9
XPFO IAmb IAmb 07 15 37.3
comp=Z,18nm,0.7s
BELC Belle Mtn. Jos 78.80 54 P **P** 07 15 36.2 +0.8
baz=313,SNR=11
LBWR Ladybower, Pea 78.82 337 *e*P **P** 07 15 35.5 +0.6
LBWR IAmb IAmb 07 15 37.1
comp=Z,45nm,0.9s
LJU Ljubljana 78.82 323 *e*P **P** 07 15 35.1 0.0
109C Camp Elliot, M 78.88 56 P **P** 07 15 36.5 +0.9
baz=313
MGRS Mrkonjic Grad 78.89 321 *e*P **P** 07 15 36.4 +0.8
STU Stuttgart 78.91 328 *e*P **P** 07 15 36.3 +0.7
comp=Z,19nm,0.8s,baz=37,slow=5.6
O20A White River Ci 78.93 45 IAmb IAmb 07 15 38.0
comp=Z,11nm,0.8s
O20A White River Ci 78.93 45 P **P** 07 15 36.8 +0.8
baz=316,SNR=10.0
UPM Unac-Piva 78.93 319 *e*P **P** 07 15 36.0 0.0
WATA Walderalm 79.09 326 *i* P **P** 07 15 37.2 +0.4
comp=Z,13nm,0.9s,SNR=5.3
WATA *e*pP **pwP** 07 16 49.0 +1.3
comp=Z,10nm,0.8s
CEY Cerknica 79.10 323 ⇓*i*P **P** 07 15 36.2 -0.5
NEE2 Needles Airpor 79.10 53 P **P** 07 15 37.9 +1.1
baz=314
WTTA Wattenberg 79.12 326 *i* P **P** 07 15 37.5 +0.6
comp=Z,15nm,0.8s
WTTA *e*pP **pwP** 07 16 49.3 +1.3
comp=Z,11nm,0.8s
ABTA Abfaltersbach 79.15 325 *i* P **P** 07 15 37.0 0.0
comp=Z,6.3nm,0.7s
ABTA *e*pP **pwP** 07 16 48.4 +0.3
comp=Z,9.5nm,1.3s
IRM Iron Mountain 79.20 54 P **P** 07 15 38.9 +1.4
baz=314,SNR=14
CWF Charnwood Fore 79.27 336 *e*P **P** 07 15 37.2 -0.2
MOTA Moosalm 79.28 326 *i* P **P** 07 15 38.1 +0.4
comp=Z,22nm,0.9s,SNR=8.3
MOTA *e*pP **pwP** 07 16 49.9 +1.1
comp=Z,19nm,0.9s
BAR Barrett 79.28 56 IAmb IAmb 07 15 39.7
comp=Z,13nm,0.7s
MONP2 Monument Peak 79.29 55 P **P** 07 15 39.1 +0.9
baz=313,SNR=6.8
RETA Reutte 79.31 326 *e*P **P** 07 15 38.6 +0.8
comp=Z,22nm,0.8s,SNR=10.0
RETA *e*pP **pwP** 07 16 50.3 +1.5
comp=Z,15nm,1.0s,SNR=5.2
BMRD Maredsous 79.33 331 ⇑P **P** 07 15 38.0 +0.3
BMRD pP **pwP** 07 16 49.6 +0.7
PDG Podgorica 79.33 318 ⇑P **P** 07 15 38.6 +0.7
PDG Podgorica 79.33 318 ⇓*i*P **P** 07 15 38.2 +0.3
BRY Bratogost 79.33 319 *e*P **P** 07 15 37.9 -0.2
SQTA Sankt Quirin 79.33 326 *i* P **P** 07 15 38.5 +0.5
comp=Z,11nm,0.6s,SNR=5.4
SQTA *e*pP **pwP** 07 16 50.3 +1.3
comp=Z,8.1nm,0.7s
WLF Walferdange 79.35 330 *e*P **P** 07 15 38.6 +0.7
comp=Z,5.6nm,0.7s,baz=37,slow=5.6
BC3 Big Chuckawall 79.36 54 P **P** 07 15 39.5 +1.0
baz=314,SNR=13
RIY Rijeka 79.39 323 *e*P **P** 07 15 38.1 -0.1
UBR Ueberruh 79.42 327 *e*P **P** 07 15 39.5 +1.1
baz=37,slow=5.6
UDBI Udbina 79.42 322 *i* P **P** 07 15 38.2 -0.2
KIJV Kijevo 79.52 321 *i* P **P** 07 15 39.2 +0.2
OHR Ohrid 79.52 317 *i* P P 07 15 31.6 -7.5
DRME Dracevica, Mon 79.55 318 ⇓*i*P **P** 07 15 39.2 +0.1
TREB Trebinje 79.56 319 *e*P **P** 07 15 38.1 -1.1
DOU Dourbes 79.56 331 ⇓P **P** 07 15 38.9 -0.1

DOU pP **pwP** 07 16 50.6 +0.4
N23A Red Feather La 79.58 44 P **P** 07 15 41.0 +1.3
baz=317,SNR=5.5
BFO Black Forest 79.61 328 P **P** 07 15 39.1 -0.3
BFO pmax pmax
comp=Z,21nm,0.8s
BFO Black Forest 79.61 328 *e*P **P** 07 15 39.8 +0.4
comp=Z,15nm,0.8s,baz=37,slow=5.6
BFO Black Forest 79.61 328 P **P** 07 15 39.1 -0.3
BFO IAmb IAmb 07 15 40.8
comp=Z,21nm,0.8s
SWSC Sam W. Stewart 79.64 55 P **P** 07 15 40.6 +0.9
baz=314
IKP In-Ko-Pah, Jac 79.65 55 P **P** 07 15 41.1 +1.2
baz=313,SNR=6.3
FETA Feichten 79.69 326 *i* P **P** 07 15 40.5 +0.5
comp=Z,14nm,0.8s,SNR=7.1
FETA *e*pP **pwP** 07 16 52.2 +1.1
comp=Z,5.2nm,0.8s
HCY Herceg Novi 79.69 319 *e*P **P** 07 15 39.1 -0.8
FOEL Foel Wylfa 79.70 337 *e*P **P** 07 15 40.0 +0.3
FOEL IAmb IAmb 07 15 42.0
comp=Z,119nm,1.5s
STON Ston 79.76 320 *i* P **P** 07 15 39.2 -1.0
STON Ston 79.76 320 *e*P **P** 07 15 38.3 -1.9
MAKA Makarska 79.77 320 *i* P **P** 07 15 39.9 -0.3
NVLJ Novalja 79.80 322 *i* P **P** 07 15 39.7 -0.7
DAVA Damuels 79.83 327 *e*P **P** 07 15 41.2 +0.5
comp=Z,24nm,0.6s,SNR=7.4
DAVA *e*pP **pwP** 07 16 53.1 +1.3
comp=Z,13nm,0.8s
Y12C Blythe 79.86 54 IAmb IAmb 07 15 43.4
comp=Z,22nm,0.8s
Y12C Blythe 79.86 54 P **P** 07 15 42.3 +1.4
baz=314,SNR=20
MORI Morici 79.95 321 *i* P **P** 07 15 41.1 -0.1
KARP Karpathos 80.04 309 P **P** 07 15 41.5 -0.4
ZIRJ Zirje 80.14 321 *i* P **P** 07 15 42.0 -0.2
DUGI Dugi Otok 80.16 322 *i* P **P** 07 15 42.2 -0.1
GLA Glamis 80.16 54 IAmb IAmb 07 15 44.9
comp=Z,22nm,0.8s
GLA Glamis 80.16 54 P **P** 07 15 43.9 +1.3
baz=314,SNR=12
ECH Echery 80.16 329 IAmb IAmb 07 15 43.3
comp=Z,16nm,0.8s
FUORN Ofenpass-Fuorn 80.20 326 P **P** 07 15 43.8 +1.0
AGG Agios Georgios 80.25 314 P **P** 07 15 42.3 -0.7
AGG pmax pmax
comp=Z,72nm,1.9s
AGG Agios Georgios 80.25 314 P **P** 07 15 42.3 -0.7
DSB Dublin 80.28 339 P **P** 07 15 43.3 +0.5
SUSD Miller 80.29 37 P **P** 07 15 43.7 +0.7
baz=321
SMCO Snowmass 80.29 45 IAmb IAmb 07 15 45.9
comp=Z,12nm,0.8s
STRD Stroud 80.37 336 *e*P **P** 07 15 43.1 -0.1
STRD IAmb IAmb 07 15 44.7
comp=Z,62nm,0.8s
MCH1 Michaelchurch 80.43 337 *e*P **P** 07 15 43.9 +0.3
MCH1 IAmb IAmb 07 15 46.1
comp=Z,26nm,0.8s
WUAZ Wupatki 80.48 51 IAmb IAmb 07 15 47.2
comp=Z,17nm,0.9s
WUAZ Wupatki 80.48 51 P **P** 07 15 46.2 +1.8
baz=315,SNR=17
WOL Wolverton 80.48 335 *e*P **P** 07 15 43.9 0.0
ISCO Idaho Springs 80.55 44 IAmb IAmb 07 15 47.2
comp=Z,8.8nm,0.7s
ISCO Idaho Springs 80.55 44 P **P** 07 15 46.2 +1.3
baz=318,SNR=13
TEOL Teolo 80.61 325 IAmb IAmb 07 15 46.0
comp=Z,25nm,0.8s
EYMN Ely 80.61 31 P **P** 07 15 44.8 +0.2
EYMN IAmb IAmb 07 16 58.4
comp=Z,14nm,1.0s
EYMN Ely 80.61 31 P **P** 07 15 44.8 +0.2
baz=325
Y14A Wickenburg 80.64 53 IAmb IAmb 07 15 47.5
comp=Z,14nm,0.9s
SALO Salr 80.89 325 P **P** 07 15 46.2 0.0
MVCO Mesa Verde 80.89 48 IAmb IAmb 07 15 49.0
comp=Z,14nm,0.8s
MVCO Mesa Verde 80.89 48 P **P** 07 15 47.9 +1.3
baz=316,SNR=15
113A Mohawk Valley, 81.00 54 IAmb IAmb 07 15 49.0
comp=Z,13nm,0.8s
X16A Lo Mia Camp, P 81.22 51 P **P** 07 15 49.4 +1.0
X16A IAmb IAmb 07 15 51.2
comp=Z,18nm,0.9s
Q24A Divide 81.41 44 P **P** 07 15 50.5 +1.1
baz=318,SNR=5.0
S22A 4UR Ranch, Cre 81.42 46 P **P** 07 15 50.9 +1.4
baz=312,SNR=10
SCHQ Schefferville 81.44 14 P **P** 07 15 49.0 +0.2
comp=Z,5.8nm,0.9s,baz=317,slow=4.1,SNR=6.7
SCHQ Schefferville 81.44 14 IAmb IAmb 07 18 51.0
comp=Z,23nm,1.5s
OGNE Ogallala 81.51 41 P **P** 07 15 50.3 +0.7
baz=320,SNR=5.6
SGRT San Giovanni R 81.55 320 P **P** 07 15 49.7 -0.1
SENIN Lac Senin/Sane 81.62 328 IAmb IAmb 07 15 51.3
comp=Z,13nm,0.7s
W18A Petrified Fore 81.70 50 P **P** 07 15 52.4 +1.5
baz=316,SNR=5.1
ZCCA Zocca 81.71 324 IAmb IAmb 07 15 56.7
comp=Z,19nm,0.8s
ITM Ithomi 81.81 313 P **P** 07 15 50.4 -0.8
MURB Monte Urbino 81.88 323 IAmb IAmb 07 15 55.5
comp=Z,22nm,1.2s
ECSD EROS Data Cent 81.89 36 IAmb IAmb 07 15 52.8
comp=Z,13nm,0.8s
ECSD EROS Data Cent 81.89 36 P **P** 07 15 51.8 +0.4
baz=322,SNR=11
NRCA Norcia 81.95 322 IAmb IAmb 07 15 53.6
comp=Z,22nm,0.8s
X18A Snowflake 82.00 50 IAmb IAmb 07 15 55.0
comp=Z,14nm,0.8s
SDCO Great Sand Dun 82.13 45 P **P** 07 15 54.2 +1.0
baz=318,SNR=10
214A Organ Pipe Nat 82.14 54 IAmb IAmb 07 15 55.2
comp=Z,10nm,0.8s
214A Organ Pipe Nat 82.14 54 P **P** 07 15 54.3 +1.3
baz=315,SNR=11
AQU L'Aquila 82.19 322 *e*P **P** 07 15 53.7 +0.6
INTR Introdacqua 82.22 321 IAmb IAmb 07 15 55.1
comp=Z,20nm,0.8s
SPMN Marine on St. 82.32 33 P **P** 07 15 53.9 +0.3
baz=325
KSCO Kaye Shedlock' 82.68 43 P **P** 07 15 56.5 +0.8
baz=319
LATE Laterza 82.72 323 IAmb IAmb 07 15 56.8
comp=Z,25nm,1.1s
BGNE Belgrade 83.02 39 P **P** 07 15 58.0 +0.6
baz=322
TIP Timpagrande 83.02 318 P **P** 07 15 58.1 +0.7
TUC Tucson 83.10 52 P **P** 07 15 59.3 +1.3
TUC pmax pmax
comp=Z,8.0nm,0.9s
TUC Tucson 83.10 52 P **P** 07 15 59.3 +1.3
TUC Tucson 83.10 52 P **P** 07 15 59.3 +1.3
baz=316
T25A Trinidad 83.16 45 P **P** 07 15 59.1 +0.8
baz=318,SNR=9.3
G40A Rib Lake 83.33 32 P **P** 07 15 59.8 +1.0
G40A IAmb IAmb 07 16 00.6
comp=Z,24nm,1.2s
SSB Saint Sauveur 83.60 329 IAmb IAmb 07 16 01.3
comp=Z,15nm,0.9s
ANMO Albuquerque 83.67 48 *ce*P **P** 07 16 00.5 -0.5
ANMO pmax pmax
comp=Z,9.0nm,1.1s
ANMO Albuquerque 83.67 48 P **P** 07 16 01.7 +0.7
ANMO Albuquerque 83.67 48 P **P** 07 16 02.5 +1.5
baz=318
BNM Barren Site 84.16 49 P **P** 07 16 03.9 +0.4
D46A Sault St. Mari 84.21 27 P **P** 07 16 03.2 0.0
baz=330
CBKS Cedar Bluff 84.28 41 P **P** 07 16 03.8 0.0
baz=321
I40A Norwalk 84.30 33 IAmb IAmb 07 16 05.0
comp=Z,18nm,1.0s
CHGQ Chibougamau 84.40 20 P **P** 07 16 03.7 -0.4
baz=337
LSQQ Lebel-sur-Quev 84.48 22 P **P** 07 16 04.6 +0.1
baz=335
121A Cookes Peak, D 84.69 50 P **P** 07 16 07.7 +1.7
baz=317,SNR=10

I42A	Draeger Farm,	84.98	32	P	P	07 16 07.8	+0.7
I42A				IAmb	IAmb	07 17 20.4	
	comp=Z,26nm,1.2s						
VLDQ	Val d'Or	85.20	23	IAmb	IAmb	07 16 08.4	
	comp=Z,12nm,0.8s						
JFWS	Jewell Farm	85.27	33	P	P	07 16 08.5	0.0
	baz=326						
KSU1	Kansas State U	85.56	39	P	P	07 16 10.4	+0.4
	baz=323						
L40A	Anamosa	85.57	34	IAmb	IAmb	07 16 11.1	
	comp=Z,17nm,0.9s						
I46A	Reed City	86.26	30	P	P	07 16 14.3	+0.9
	baz=329						
AMTX	Amarillo	86.31	45	P	P	07 16 14.9	+1.1
	baz=320						
H48A	Harrisville	86.36	28	P	P	07 16 14.3	+0.5
	baz=331						
MSTX	Muleshoe	86.42	46	P	P	07 16 15.1	+0.6
	baz=320						
MNTX	Cornudas Mount	86.68	49	P	P	07 16 16.7	+1.0
	baz=318,SNR=5.8						
E53A	Dumoine, Ponti	86.71	24	P	P	07 16 15.3	-0.1
	baz=334						
D56A	ZEC Mazanza, M	86.93	21	P	P	07 16 16.8	+0.3
	baz=336						
LATQ	La Tuque	87.14	20	P	P	07 16 17.7	+0.3
	baz=338						
I49A	Point Hope	87.20	28	P	P	07 16 18.1	+0.3
	baz=331						
K46A	Dorr	87.21	30	P	P	07 16 18.3	+0.3
	baz=329						
E56A	St. Veronique	87.32	22	P	P	07 16 18.9	+0.5
	baz=336						
D58A	Chemin du LacG	87.39	20	P	P	07 16 19.1	+0.4
	baz=338						
J48A	Bridge Port	87.42	29	P	P	07 16 19.3	+0.4
	baz=330						
G54A	Lake Saint Pet	87.46	24	P	P	07 16 19.5	+0.4
	baz=334						
K47A	Vermontville	87.52	30	P	P	07 16 20.2	+0.8
	baz=330						
L46A	Eue Claire	87.59	31	P	P	07 16 20.4	+0.6
	baz=329						
HDIL	Hopedale	87.63	34	P	P	07 16 20.5	+0.6
	baz=327						
K48A	Perry	87.73	29	P	P	07 16 20.9	+0.5
	baz=330						
WMOK	Wichita Mounta	87.93	43	P	P	07 16 22.2	+0.7
	baz=322						
E58A	La Victoria	87.95	21	P	P	07 16 21.6	+0.3
	baz=338						
D61A	St Aubert, Com	87.95	19	P	P	07 16 21.4	+0.1
	baz=340						
G55A	Calabogie	88.01	23	P	P	07 16 21.7	+0.1
	baz=335						
L47A	Sherwood	88.04	30	P	P	07 16 22.5	+0.6
	baz=330						
D60A	Saint Jean D'O	88.05	19	P	P	07 16 21.9	+0.2
	baz=339						
P43A	Skaggs, Pawnee	88.30	34	IAmb	IAmb	07 16 24.7	
	comp=Z,13nm,0.8s						
L48A	N Adams	88.36	30	P	P	07 16 23.7	+0.3
	baz=330						
L49A	Milan	88.46	29	P	P	07 16 25.0	+1.2
	baz=331						
TUL1	Leonard	88.50	41	IAmb	IAmb	07 16 25.9	
	comp=Z,8.8nm,0.7s						
TUL1	Leonard	88.50	41	P	P	07 16 24.7	+0.6
	baz=323						
G57A	Newington	88.65	22	P	P	07 16 25.1	+0.5
	baz=336						
M48A	Edgerton	88.65	30	IAmb	IAmb	07 16 26.6	
	comp=Z,16nm,0.8s						
M48A	Edgerton	88.65	30	P	P	07 16 25.2	+0.5
	baz=330						
SFIN	Lafayette	88.67	32	P	P	07 16 25.6	+0.8
	baz=328						
N47A	Urbana	88.80	31	P	P	07 16 25.7	+0.3
N47A				IAmb	IAmb	07 16 26.6	
	comp=Z,11nm,0.7s						
N47A	Urbana	88.80	31	P	P	07 16 25.8	+0.4
	baz=329						
CCM	Cathedral Cave	88.87	36	P	P	07 16 26.6	+0.8
CCM				pmax	pmax		
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	88.87	36	P	P	07 16 26.6	+0.8
CCM				IAmb	IAmb	07 16 27.5	
	comp=Z,16nm,0.8s						
CCM	Cathedral Cave	88.87	36	P	P	07 16 26.5	+0.7
	baz=326						
F61A	St Evariste	88.91	19	P	P	07 16 26.7	+0.9
	baz=339						
M49A	Liberty Center	88.94	30	P	P	07 16 27.1	+1.1
	baz=330						
K52A	Tillsonburg	88.95	27	P	P	07 16 27.0	+0.9
	baz=333						
N48A	Decatur	89.07	31	P	P	07 16 27.6	+0.9
	baz=330						
ABTX	Abilene, Hawle	89.13	45	P	P	07 16 27.8	+0.7
	baz=321						
N49A	Columbus Grove	89.34	30	IAmb	IAmb	07 16 29.9	
	comp=Z,16nm,0.8s						
N49A	Columbus Grove	89.34	30	P	P	07 16 28.9	+1.0
	baz=330,SNR=5.2						
M50A	Fremont	89.34	29	P	P	07 16 28.8	+0.8
	baz=331						
G61A	St-Isidore-de-	89.42	20	P	P	07 16 28.9	+0.7
	baz=339						
TX31	Lajitas Ar. Si	89.43	50	IAmb	IAmb	07 16 30.7	
	comp=Z,9.2nm,0.8s						
TX32	Lajitas Array	89.43	50	P	P	07 16 29.5	+0.8
TX32				IAmb	IAmb	07 16 30.7	
	comp=Z,9.4nm,0.8s						
TXAR	Lajitas Array	89.43	50	P	P	07 16 29.7	+1.0
	comp=Z,7.4nm,0.6s,baz=292,slow=3.0,SNR=116						
TXAR				PKiKP	PKiKP	07 21 25.2	+0.6
	comp=Z,0.2nm,0.6s,baz=85,slow=0.3,SNR=3.7						
TXAR				PKKPbc	PKKPbc	07 34 01.5	+1.2
	comp=Z,0.3nm,0.6s,baz=160,slow=7.1,SNR=5.7						
TXAR	Lajitas Array	89.43	50	P	P	07 16 29.3	+0.6
U40A	Yellville	89.53	38	IAmb	IAmb	07 16 30.4	
	comp=Z,13nm,0.8s						
U40A	Yellville	89.53	38	P	P	07 16 29.5	+0.5
	baz=325,SNR=11						
O48A	Farmland	89.54	31	P	P	07 16 29.5	+0.6
	baz=330,SNR=5.8						
M51A	Elyria	89.72	29	P	P	07 16 30.3	+0.6
	baz=332						
M52A	Chesterland	89.83	28	P	P	07 16 31.2	+1.0
	baz=332						
N50A	Nevada	89.86	30	P	P	07 16 31.2	+0.8
	baz=331						
K55A	Perry	89.87	25	P	P	07 16 31.1	+0.7
	baz=334						
O49A	Covington	89.92	31	P	P	07 16 31.4	+0.7
	baz=330						
H61A	Lyndonville	90.01	21	P	P	07 16 31.7	+0.7
	baz=338						
N51A	Ashland	90.01	29	P	P	07 16 32.3	+1.2
	baz=332						
P48A	Milroy	90.12	32	P	P	07 16 32.3	+0.7
	baz=330						
H62A	Milan	90.17	20	P	P	07 16 32.5	+0.8
	baz=339						
O50A	Cable	90.22	30	P	P	07 16 33.2	+1.1
	baz=331,SNR=5.4						
ACSO	Alum Creek Sta	90.39	30	IAmb	IAmb	07 16 34.8	
	comp=Z,14nm,0.8s						
ACSO	Alum Creek Sta	90.39	30	P	P	07 16 33.6	+0.8
	baz=331						
M54A	Oil Creek Stat	90.44	27	P	P	07 16 34.0	+0.9
	baz=333						
Q48A	North Vernon	90.46	32	P	P	07 16 34.2	+1.1
	baz=329						
O51A	Pataskala	90.60	30	P	P	07 16 34.8	+1.0
	baz=331						
P50A	Jamestown	90.62	31	P	P	07 16 35.0	+1.1
	baz=331						
N53A	Lisbon	90.66	28	P	P	07 16 35.2	+1.1
	baz=332						
MIAR	Mount Ida	90.67	40	IAmb	IAmb	07 16 36.2	
	comp=Z,8.5nm,0.8s						
MIAR	Mount Ida	90.67	40	P	P	07 16 35.2	+1.0
	baz=325,SNR=6.1						
JCT	Junction City	90.71	47	IAmb	IAmb	07 16 36.2	
	comp=Z,11nm,0.8s						
JCT	Junction City	90.71	47	P	P	07 16 35.2	+0.6
	baz=321,SNR=8.5						
Q49A	Aurora	90.72	32	P	P	07 16 35.3	+0.9
	baz=330						
WHTX	Lake Whitney,	90.77	44	P	P	07 16 35.9	+1.1
	baz=322						
M55A	Ridgway	90.78	26	P	P	07 16 35.5	+0.8
	baz=334						
W41B	Gary Mavity, V	90.78	39	P	P	07 16 35.5	+0.8
	baz=325						
I63A	Otisfield	90.81	20	P	P	07 16 35.8	+1.1
	baz=340						
N54A	Moraine State	90.82	27	P	P	07 16 35.7	+0.9
	baz=333						
WCI	Wyandotte Cave	90.83	33	P	P	07 16 35.9	+1.0
	baz=329						
BINY	Binghamton	91.00	24	P	P	07 16 36.7	+1.0
	baz=336						
P51A	Williamsport	91.01	30	P	P	07 16 36.1	+0.4
	baz=331						
O53A	New Philadelph	91.02	29	P	P	07 16 36.6	+0.9
	baz=332						
X40A	Basin Creek Fa	91.07	40	P	P	07 16 36.8	+0.8
	baz=325						
Q50A	Georgetown	91.22	31	P	P	07 16 37.7	+1.0
	baz=330						
P52A	Corning	91.23	30	P	P	07 16 37.3	+0.6
	baz=332						
L59A	Walton	91.30	24	P	P	07 16 37.5	+0.4
	baz=336						
Q51A	Peebles	91.30	31	P	P	07 16 38.0	+0.9
	baz=331						
N55A	Marion Center	91.32	27	P	P	07 16 37.9	+0.7
	baz=334						
O54A	Avella	91.37	28	P	P	07 16 38.2	+0.8
	baz=333						
N56A	West Decatur	91.43	26	P	P	07 16 38.2	+0.5
	baz=334						
M57A	Sunshine Farm,	91.43	25	P	P	07 16 38.0	+0.4
	baz=335						
T47A	Sharon Grove	91.55	34	IAmb	IAmb	07 16 40.1	
	comp=Z,11nm,0.8s						
R50A	Paris	91.57	32	P	P	07 16 39.0	+0.7
	baz=330						
M58A	Price's Panora	91.61	25	P	P	07 16 39.0	+0.6
	baz=335						
ESDC	Sonseca Array	91.61	331	P	P	07 16 38.0	-0.6
	comp=Z,0.8nm,0.6s,baz=26,slow=4.6,SNR=6.4						
ESDC				PP	PP	07 20 17.2	-3.1
	comp=Z,1.3nm,0.8s,baz=20,slow=7.5,SNR=3.4						
ESDC	Sonseca Array	91.61	331	P	P	07 16 38.6	0.0
S49A	Springfield	91.62	33	P	P	07 16 39.3	+0.8
	baz=330						
P53A	Whipple	91.63	29	P	P	07 16 39.2	+0.6
	baz=332						
O55A	Ligonier	91.72	27	P	P	07 16 39.7	+0.7
	baz=334						
N57A	Milroy	91.82	26	P	P	07 16 40.1	+0.7
	baz=335						
R51A	Hillsboro	91.84	31	P	P	07 16 40.4	+0.8
	baz=331						
P54A	Burton	91.85	28	P	P	07 16 40.5	+0.9
	baz=333						
O56A	Blue Knob Stat	91.92	27	P	P	07 16 40.7	+0.7
	baz=334						
WVT	Waverly	91.97	35	P	P	07 16 40.9	+0.7
	baz=328						
S50A	Richmond	92.06	32	P	P	07 16 41.4	+0.8
	baz=330						
T49A	Edmonton	92.10	33	IAmb	IAmb	07 16 42.6	
	comp=Z,8.5nm,0.9s						
T49A	Edmonton	92.10	33	P	P	07 16 41.8	+1.0
	baz=329						
Q53A	Leroy	92.13	29	P	P	07 16 41.7	+0.8
	baz=332						
P55A	Reedsville	92.17	28	P	P	07 16 41.8	+0.7
	baz=333						
R52A	Catlettsburg	92.17	31	P	P	07 16 41.7	+0.5
	baz=331						
T50A	Nancy	92.46	33	P	P	07 16 43.4	+0.9
	baz=330						
U49A	Red Boiling Sp	92.51	34	P	P	07 16 43.8	+1.1
	baz=329,SNR=6.0						
P56A	Dayton Farm, R	92.51	27	P	P	07 16 43.5	+0.9
	baz=334						
Q55A	Buckhannon	92.53	28	P	P	07 16 43.5	+0.6
	baz=333						
S52A	Salyersville	92.58	31	P	P	07 16 43.7	+0.6
	baz=331						
O58A	Lewisberry	92.59	26	P	P	07 16 43.9	+0.9
	baz=335						
T51A	Gray	92.86	32	P	P	07 16 44.9	+0.5
	baz=330						
U50A	Jamestown	92.98	33	P	P	07 16 45.8	+0.9
	baz=330						
S54A	Dingess, Beckl	93.14	30	P	P	07 16 45.4	-0.2
	baz=332						
TZTN	Tazewell	93.38	32	P	P	07 16 47.1	+0.3
	baz=331						
T53A	Wise	93.40	31	P	P	07 16 47.2	+0.4
	baz=331						
Q58A	Fox Den Farm,	93.41	27	P	P	07 16 46.9	+0.2
	baz=334						
W49A	Belvidere	93.50	35	P	P	07 16 47.6	+0.3
	baz=329						
T54A	Tazewell	93.69	30	P	P	07 16 48.9	+0.7
	baz=332						
V51A	Loudon	93.70	33	P	P	07 16 49.1	+0.9
	baz=330						
T55A	Pulaski	93.94	30	P	P	07 16 50.0	+0.7
	baz=332						
BLA	Blacksburg	93.99	29	P	P	07 16 50.1	+0.5
	baz=333						
U56A	King	94.77	30	P	P	07 16 53.1	+0.1
	baz=333						
X52A	Dahlonega	94.93	33	P	P	07 16 54.2	+0.3
	baz=330						
Y51A	Rockmart	95.05	34	P	P	07 16 54.8	+0.4
	baz=330						
V56A	Mocksville	95.21	30	P	P	07 16 55.6	+0.5
	baz=333						
Z50A	Ashland	95.24	35	P	P	07 16 55.6	+0.4
	baz=329						
X53A	Estanollee	95.26	33	P	P	07 16 55.9	+0.6
	baz=331						
X54A	Belton	95.59	32	P	P	07 16 57.2	+0.4
	baz=331						
Y53A	Monroe	95.70	33	P	P	07 16 57.9	+0.5
	baz=331						
W57A	Gilead	95.98	30	P	P	07 16 59.0	+0.5
	baz=333						
Y54A	Tignall	96.06	33	P	P	07 16 59.6	+0.7
	baz=331						
X56A	White Oak	96.17	31	P	P	07 16 59.9	+0.5
	baz=332						
U61A	Possum Corner	96.19	27	P	P	07 17 00.2	+0.8
	baz=335						
Z53A	Monticello	96.21	34	P	P	07 17 00.1	+0.5
	baz=330						
Y55A	Saluda	96.33	32	P	P	07 17 00.5	+0.3
	baz=332						
NHSC	New Hope	97.72	31	P	P	07 17 06.4	0.0
	baz=333						
TORD	Torodi Ar. Bea	111.81	313	PKiKP	PKiKP	07 22 04.6	-0.5
	comp=Z,0.4nm,0.4s,baz=7.9,slow=2.3,SNR=5.9						
TORD				PP	PP	07 22 51.0	-0.8
	comp=Z,4.5nm,1.0s,baz=37,slow=8.0,SNR=7.4						
TORD				PKKPbc	PKKPbc	07 32 56.3	-0.5
	comp=Z,1.3nm,0.8s,baz=223,slow=1.5,SNR=6.3						
VNDA	Vanda	120.07	174	PKP	PKiKP	07 22 19.4	+0.3
	comp=Z,3.6nm,0.7s,baz=312,slow=4.6,SNR=14						
DBIC	Dimbokro	120.72	315	PKP	PKPdf	07 22 21.9	-0.4
	comp=Z,2.9nm,0.5s,baz=358,slow=3.7,SNR=8.1						
SBA	Scott Base	120.79	173	PKIKP	PKiKP	07 22 22.0	+1.5
SBA	Scott Base	120.79	173		PKiKP	07 22 22.0	+1.5
CODC	Agustn Codazz	121.12	36	eP	PKPdf	07 22 22.7	-0.3
SMLC	San Martn de	121.84	38	eP	PKPdf	07 22 24.1	-0.2
MAW	Mawson	122.59	206	PKP	PKPdf	07 22 24.1	+0.1
	comp=Z,7.5nm,0.6s,baz=89,slow=2.7,SNR=11						
ZARC	Zaragoza, Cauc	122.62	39	eP	PKiKP	07 22 26.1	0.0
OCAC	Ocana	122.68	37	eP	PKPdf	07 22 26.1	-0.1
SDV	Santo Domingo	123.26	34	SKP	SKPdf	07 25 34.2	-0.4
	comp=Z,2.8nm,0.3s,baz=11,slow=2.0,SNR=5.6						
SDV	Santo Domingo	123.26	34	eP	PKPdf	07 22 26.9	-0.4
SDV	Santo Domingo	123.26	34		PKiKP	07 22 27.8	+0.2
CBOC	Ciudad Bolivar	123.48	41	eP	PKPdf	07 22 27.8	0.0
PTBC	PUERTO BERRIO,	123.65	39	eP	PKPdf	07 22 27.2	-0.7
SOCV	Socops	123.71	34	eP	PKPdf	07 22 26.9	-1.1
PLMC	San Jos del P	124.18	42	eP	PKiKP	07 22 29.8	+0.5
BARC	Barichara	124.19	38	eP	PKPdf	07 22 28.6	-0.6
GUY2C	Guyana, Caldas	124.36	41	eP	PKPdf	07 22 29.8	-0.1
BOSA	Boshof	124.45	261	PKP	PKPdf	07 22 29.2	+0.1
	comp=Z,1.9nm,0.8s,baz=50,slow=5.1,SNR=4.8						
BOSA				PKKPbc	PKKPab	07 32 14.0	+1.9
	comp=Z,3.8nm,0.7s,baz=220,slow=2.8,SNR=10						
SPBC	San Pablo de B	124.61	39	eP	PKPdf	07 22 28.4	-1.5
YOTC	Yotoco, Valle	124.94	43	eP	PKiKP	07 22 31.1	+0.3
ROSC	El Rosal	125.19	40	PKP	PKiKP	07 22 32.3	+0.6
	comp=Z,6.5nm,0.6s,baz=127,slow=8.9,SNR=4.6						
ROSC	El Rosal	125.19	40	eP	PKiKP	07 22 32.3	+0.6
ELOV	Elorza	125.44	34	eP	PKPdf	07 22 31.4	+0.1
ORTC	Ortega, Tolima	125.55	42	eP	PKPdf	07 22 30.9	-0.7
CHIC	Chingaza	125.66	40	eP	PKPdf	07 22 31.7	-0.5
VILC	Villavicencio,	126.13	40	eP	PKiKP	07 22 33.7	+0.4
PCON	Cinco Dias	126.32	44	eP	PKiKP	07 22 34.2	+0.1
SOTA	Rioblanco	126.38	44	eP	PKPdf	07 22 33.4	-0.3
TROLL	Troll, Antarti	142.77	201	PKPdf	PKPdf	07 22 59.4	-2.6
SNAA	Sanae	144.38	200	PKPdf	PKPbc	07 23 04.2	+0.3
SNAA	Sanae	144.38	200	PKIKP	PKPbc	07 23 04.2	+0.3
SNAA	Sanae	144.38	200		PKPbc	07 23 04.2	+0.2
VNA2	Neumayer--Watz	146.00	200	PKPdf	PKPbc	07 23 09.2	+0.4
	baz=97,slow=2.5						
LPAZ	La Paz	146.29	49	PKPbc	PKPbc	07 23 11.3	-0.6
	comp=Z,15nm,0.7s,baz=8.7,slow=3.1,SNR=59						
LPAZ				SKPbc	SKiKP	07 26 22.7	0.0
	comp=Z,2.4nm,0.9s,baz=343,slow=5.0,SNR=4.8						
VNA3	Neumayer Olymp	146.34	198	PKPdf	PKPbc	07 23 09.8	0.0
VNA1	Neumayer--Stat	146.40	200	PKPdf	PKPbc	07 23 10.3	+0.4
MNMC	Minye Minye	147.68	54		PKPbc	07 23 14.2	-1.1
SIV	San Ignacio	149.63	37	PKPbc	PKiKP	07 23 20.6	-0.2
	comp=Z,16nm,0.8s,baz=292,slow=2.6,SNR=54						
PB04	IPOC Station P	149.72	59		PKiKP	07 23 21.0	0.0
LVC	Limon Verde	150.71	57	PKPbc	PKiKP	07 23 24.1	+0.8
	comp=Z,16nm,0.6s,baz=254,slow=9.8,SNR=14						
BDFB	Brasilia	153.42	12	PKP	PKPdf	07 23 21.2	+0.4
	comp=Z,2.8nm,0.9s,baz=137,slow=9.0,SNR=4.8						
BDFB				PKPbc	PKPbc	07 23 28.7	0.0
	comp=Z,3.8nm,0.9s,baz=100,slow=2.7,SNR=6.9						
BDFB				PKPab	PKPab	07 23 42.2	+0.3
	comp=Z,1.7nm,0.5s,baz=21,slow=8.6,SNR=3.8						
PLCA	Paso Flores	158.91	96	PKPab	PKPab	07 24 05.4	+0.2
	comp=Z,3.0nm,1.0s,baz=308,slow=7.4,SNR=5.0						
CPUP	Villa Florida	160.25	43	PKPab	PKPab	07 24 11.0	-0.2
	comp=Z,4.4nm,0.9s,baz=347,slow=5.0,SNR=9.5						

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*MEX **01** 07:06:56.7±0.5, 14.°24N×91.°73W, h64^{km}±16^{km}, MD4.0*
*GCG **01** 07:06:56.8±0.3, 14.°40N×91.°76W, h70^{km}±32^{km}, MD3.8*
*SNET **01** 07:06:59.0±1.1, 13.°94N×91.°51W, h14^{km}±7^{km}, ML3.2*
ISC 01 07:06:55.1±2.1, **14.°2N**±0.°2×**91.°9W**±0.°1, **h67**^{km}±26^{km}, **n12**, σ**1.^{s}03**/19, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.83	332	i P	Pn	07 07 11.6	+0.1
THIG				eS	Sn	07 07 23.0	-0.6
FUG	Fuego 3	1.03	74	eP	Pn	07 07 14.5	+0.4
FUG				eS	Sn	07 07 28.4	+0.2
PCG	Pacaya	1.24	79	eS	Sn	07 07 34.0	+0.9
IXG	Ixpaco	1.38	89	eP	Pn	07 07 18.4	-0.2
IXG	Ixpaco	1.38	89	eP	Pn	07 07 19.8	+1.2
FAME	Alcalda de S	1.82	100	eP	Pn	07 07 23.7	-0.7
FAME				eS	Sn	07 07 44.4	-2.2
PCIG		2.02	320	eP	Pn	07 07 27.9	+1.0
PCIG				eS	Sn	07 07 51.2	+0.1
SBLS	San Blas	2.20	98	eP	Pn	07 07 30.4	+0.7
SBLS				eS	Sn	07 07 54.6	-1.4
CEVE	Cerro Verde	2.20	98	eP	Pn	07 07 30.9	+1.2
CEVE				AML	AML	07 08 08.9	
	comp=Z,199nm,0.2s						
SNJE	San Jose	2.21	97	eP	Pn	07 07 30.4	+0.5
SNJE				eS	Sn	07 07 55.6	-0.7
TGIG		2.87	335	i P	Pn	07 07 38.2	-0.4
TGIG				i S	Sn	07 08 11.3	-0.8
LCND	La Caada	3.96	102	eP	Pn	07 07 54.6	+1.2

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*IDC **01** 07:14:56.9±11.0, 0.°20N×123.°65E, h113^{km}±102^{km}, mb3.1/4, mb1 3.4/5, mb1mx3.0/42, mbtmp3.6/5, ML3.9/1, Error ellipse: s-maj=127.0km s-min=28.5km az=60.0*
*DJA **01** 07:15:00.2±0.6, 0˚S±4˚×12˚3E±˚, h119^{km}±8^{km}, M3.8/6, MLv3.8/6*
ISC 01 07:15:00.2±1.0, **0.°08S**±0.°10×**123.°27E**±0.°08, **h157**^{km}, **n11**, σ**2.^{s}87**/15, **mb3.4**/4, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.08	208	P	Pn	07 15 23.7	-2.6
LUWI				S	Sn	07 15 41.4	-4.9
MRSI	Marisa	1.44	293	P	Pn	07 15 27.3	-2.4
MRSI				S	Sn	07 15 47.4	-4.9
APSI	Ampana	1.82	243	P	Pn	07 15 32.3	-1.4
APSI				S	Sn	07 15 56.3	-3.2
SANI	Sanana	3.35	126	P	Pn	07 15 49.2	-3.0
MPSI	Mapaga	3.40	277	P	Pn	07 15 53.2	+0.3
TTSI	Tana Toraja	4.54	229	P	Pn	07 16 08.0	+0.3
FITZ	Fitzroy Crossi	18.06	173	P	P	07 19 01.5	+1.9
	0.3nm,0.3s,baz=5.5,slow=9.7,SNR=6.2						
WRA	Warramunga Arr	22.52	152	P	P	07 19 48.3	+1.2
	1.5nm,0.6s,baz=332,slow=10,SNR=11						
ASAR	Alice Springs	25.62	157	P	P	07 20 16.7	+1.5
	0.3nm,0.5s,baz=327,slow=8.8,SNR=4.3						
ASAR				PcP	PcP	07 23 43.9	+1.8
	0.2nm,0.5s,baz=351,slow=1.6,SNR=4.7						
STKA	Stephens Creek	36.06	153	P	P	07 21 48.9	+2.2
	0.5nm,0.4s,baz=319,slow=11,SNR=3.0						
MKAR	Makanchi Array	58.82	328	P	P	07 24 43.4	+1.2
	0.1nm,0.5s,baz=120,slow=8.3,SNR=3.5						

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*LDG **01** 07:34:40.3±0.2, 35.°46N×1.°41W, h15^{km}, Ml3.4/11, Error ellipse: s-maj=5.2km s-min=2.2km az=164.0*
*CRAAG **01** 07:34:41.2, 35.°58N×1.°37W, Ml2.9*
*IGIL **01** 07:34:42.5, 35.°41N×1.°35W, h15^{km}, ML3.2*
*IDC **01** 07:34:42.1±1.4, 35.°50N×1.°40W, h0^{km}, mb3.3/2, mb1 3.4/6, mb1mx3.2/38, mbtmp3.3/6, ML3.6/4, Error ellipse: s-maj=33.3km s-min=17.1km az=132.0*
*INMG **01** 07:34:43.7±1.6, 35.°51N×1.°41W, h20^{km}±9^{km}, ML3.1, Error ellipse: s-maj=5.2km s-min=4.2km az=2.0*
*MDD **01** 07:34:44.0±0.6, 35.°48N×1.°36W, h24^{km}±9^{km}, mbLg3.2/60, Error ellipse: s-maj=7.4km s-min=3.5km az=164.0, PRXIMO*
*CNRM **01** 07:34:46.0, 35.°64N×1.°78W, h11^{km}*
ISC 01 07:34:41.9±0.7, **35.°59N**±0.°03×**1.°39W**±0.°03, **h10**^{km}, **n170**, σ**2.^{s}41**/260, **3C-2D**, **Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTSS	Djebel Tessala	0.57	122	P	Pb	07 34 54.4	+0.3
OTSS	Djebel Tessala	0.57	122	P	Pb	07 34 54.4	+0.3
USTO	Oran	0.70	78	P	Pg	07 34 56.0	+0.6
USTO	Oran	0.70	78	P	Pg	07 34 56.0	+0.6
ODJA	Bouhanifia	1.04	104	P	Pn	07 35 09.0	+6.4
MELI	Melilla	1.29	257	⇑i P	Pn	07 35 05.2	-0.7
MELI				i S	Sb	07 35 21.4	-1.6
MELI	Melilla	1.29	257	⇑P	Pn	07 35 05.2	-0.7
	200nm,0.2s,SNR=18						
MELI				S	Sb	07 35 21.1	-1.8
	1µm,0.5s,SNR=7.9						
GOG	Mont Gurugu	1.36	255	P	Pn	07 35 05.9	-1.1
GOG				S	Sb	07 35 22.7	-2.2
EALB	Alboran	1.38	285	P	Pn	07 35 06.5	-0.7
	59nm,0.2s,SNR=12						
EALB				S	Sn	07 35 24.6	-1.0
	235nm,0.2s,SNR=7.9						
OJBR	Djebel Berber	1.42	90	P	Pn	07 35 04.0	-3.7
ENIJ	Nijar	1.53	335	⇓P	Pn	07 35 09.0	-0.3
	18nm,0.2s,SNR=18						
ENIJ				S	Sn	07 35 28.2	-1.1
	1µm,0.3s,SNR=7.9						
JBK	JBK	1.58	218	P	Pg	07 35 12.9	+0.8
JBK				S	Sg	07 35 33.1	+0.5
OKGL	Djebel Kef Gue	1.71	74	P	Pn	07 35 11.6	-0.3
	6.9nm,0.1s,SNR=4.0						
OKGL				S	Sn	07 35 32.0	-1.8
	643nm,0.3s,SNR=7.9						
EBER	Berja	1.78	318	⇓P	Pn	07 35 12.7	-0.2
	13nm,0.2s,SNR=18						
EBER				S	Sn	07 35 36.1	+0.3
	306nm,0.3s,SNR=7.0						
CART	Cartagena	2.02	9	eP	Pn	07 35 15.2	-0.8
CART	Cartagena	2.02	9	P	Pn	07 35 15.2	-0.8

EANR	**'Ain N'Sour**	**2.06**	**79**	P	**Pn**	**07 35 16.5**	**-0.1**
EANR	**'Ain N'Sour**	**2.06**	**79**	P	**Pn**	**07 35 16.5**	**-0.1**
TLOR	**Lorca, Murcia**	**2.08**	**353**	P	**Pn**	**07 35 17.6**	**+0.7**
	131nm,0.2s,SNR=7.9						
TLOR				S	**Sn**	**07 35 43.1**	**+0.3**
	594nm,0.3s,SNR=7.9						
PALE	**Palemas**	**2.11**	**261**	P	**Pn**	**07 35 16.7**	**-0.6**
ETRT	**Tiaret**	**2.21**	**94**	P	**Pn**	**07 35 18.5**	**-0.1**
ETRT	**Tiaret**	**2.21**	**94**	P	**Pn**	**07 35 18.5**	**-0.1**
ELGU	**Los Guajares,**	**2.21**	**306**	P	**Pn**	**07 35 17.9**	**-0.9**
	2.4nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**07 35 44.7**	**-1.5**
	218nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**2.26**	**3**	P	**Pn**	**07 35 18.9**	**-0.4**
	2.3nm,0.1s,SNR=44						
EMUR				S	**Sn**	**07 35 46.6**	**-0.6**
	161nm,0.4s,SNR=7.9						
ECHF	**Ech Chlef**	**2.29**	**75**	P	**Pn**	**07 35 19.2**	**-0.5**
ECHA	**Ech Chlef**	**2.31**	**75**	P	**Pn**	**07 35 19.2**	**-0.7**
GORA	**Gorafe**	**2.31**	**325**	P	**Pn**	**07 35 21.4**	**+1.4**
	14nm,0.1s,SNR=7.9						
GORA				S	**Sn**	**07 35 49.0**	**+0.4**
	101nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**2.31**	**315**	P	**Pn**	**07 35 21.5**	**+1.4**
	11nm,0.2s,SNR=72						
EQUE				S	**Sn**	**07 35 49.0**	**+0.3**
	143nm,0.5s,SNR=7.9						
PVLZ	**Peæn de**	**2.41**	**261**	*i* P	**Pn**	**07 35 21.4**	**+0.1**
PVLZ				*e*S	**Sn**	**07 35 49.9**	**-1.1**
PVLZ	**Peæn de**	**2.41**	**261**	P	**Pn**	**07 35 21.4**	**+0.1**
PVLZ				S	**Sn**	**07 35 49.9**	**-1.1**
EBNR	**Beni Rached**	**2.47**	**73**	P	**Pn**	**07 35 19.4**	**-2.9**
ETRV	**Los Montesinos**	**2.48**	**12**	P	**Pn**	**07 35 22.9**	**+0.6**
	5.2nm,0.1s,SNR=7.9						
EQES	**Quesada**	**2.59**	**329**	⇑P	**Pn**	**07 35 26.5**	**+2.6**
	45nm,0.3s,SNR=18						
EQES				S	**Sn**	**07 35 55.5**	**-0.1**
	271nm,0.3s,SNR=9.8						
TDRA	**Tendrara**	**2.59**	**192**	P	**Pg**	**07 35 30.6**	**-1.0**
TDRA				S	**Sg**	**07 36 02.6**	**-2.6**
EGOR	**Sierra Gorda,**	**2.67**	**306**	P	**Pn**	**07 35 26.1**	**+1.0**
	4.0nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**07 35 56.8**	**-0.8**
	101nm,0.6s,SNR=7.9						
SESP	**Santiago Espad**	**2.69**	**340**	P	**Pn**	**07 35 27.1**	**+1.6**
	25nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**07 35 58.1**	**-0.1**
	392nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**2.69**	**340**	P	**Pn**	**07 35 27.2**	**+1.8**
	SNR=46						
SESP				S	**Sn**	**07 35 59.2**	**+1.0**
EMAL	**Malaga-Limoner**	**2.72**	**296**	*e*P	**Pn**	**07 35 24.8**	**-0.9**
EMAL				*i* S	**Sn**	**07 35 56.9**	**-1.8**
EMAL	**Malaga-Limoner**	**2.72**	**296**	P	**Pn**	**07 35 24.8**	**-0.9**
EMAL				S	**Sn**	**07 35 56.9**	**-1.8**
EMIJ	**Mijas**	**2.91**	**291**	P	**Pn**	**07 35 27.5**	**-0.8**
	5.1nm,0.1s,SNR=100						
EMIJ				S	**Sn**	**07 36 01.4**	**-1.9**
	71nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**3.06**	**358**	P	**Pn**	**07 35 31.6**	**+1.2**
	16nm,0.3s,SNR=145						
ETOB				S	**Sn**	**07 36 06.3**	**-0.7**
	101nm,0.2s,SNR=9.5						
AFON	**Font Roja**	**3.15**	**12**	P	**Pn**	**07 35 33.4**	**+1.8**
	3.7nm,0.2s,SNR=7.9						
AFON				S	**Sn**	**07 36 07.7**	**-1.7**
	60nm,0.4s,SNR=7.9						
REAL	**Reales**	**3.22**	**287**	*e*P	**Pn**	**07 35 33.7**	**+1.0**
REAL	**Reales**	**3.22**	**287**	P	**Pn**	**07 35 33.7**	**+1.0**
EBEN2	**Beniarda presa**	**3.23**	**17**	P	**Pn**	**07 35 34.1**	**+1.4**
	1.9nm,0.1s,SNR=4.0						
EBEN2				S	**Sn**	**07 36 10.8**	**-0.5**
	46nm,0.2s,SNR=7.9						
SMIR	**Smir Dam**	**3.25**	**273**	P	**Pn**	**07 35 30.3**	**-2.6**
SMIR				S	**Sn**	**07 36 10.6**	**-1.1**
CEU	**Ceuta**	**3.25**	**277**	*e*P	**Pn**	**07 35 30.5**	**-2.4**
CEU				*e*S	**Sn**	**07 36 04.7**	**-7.0**
ECEU	**Ceuta**	**3.26**	**277**	S	**Sn**	**07 36 08.4**	**-3.4**
	21nm,0.3s,SNR=7.9						
FIGM	**Figuig**	**3.44**	**178**	P	**Pb**	**07 35 42.9**	**-0.1**
ALJ	**Aljibe**	**3.58**	**287**	*e*P	**Pn**	**07 35 40.9**	**+3.4**
EADA	**Adamuz**	**3.63**	**316**	P	**Pn**	**07 35 39.3**	**+1.2**
	3.1nm,0.1s,SNR=21						
EADA				S	**Sn**	**07 36 19.6**	**-1.5**
	18nm,0.3s,SNR=7.9						
RSA	**Sarsar**	**3.69**	**260**	P	**Pn**	**07 35 41.6**	**+2.5**
IFR	**Ifrane**	**3.71**	**237**	*e*P	**Pn**	**07 35 40.2**	**+0.8**
IFR				*e*S	**Sg**	**07 36 44.5**	**+3.5**
MDT	**Midelt**	**3.84**	**225**	Pn	**Pn**	**07 35 42.0**	**+0.9**
	0.7nm,0.3s,baz=240,slow=14,SNR=26						
MDT				Sn	**Sn**	**07 36 28.0**	**+1.7**
	4.5nm,0.3s,baz=288,slow=11,SNR=5.0						
MDT				Lg	Lg	07 36 42.4	
	5.2nm,0.3s,baz=303,slow=22,SNR=3.6						
MDT	**Midelt**	**3.84**	**225**	P	**Pn**	**07 35 42.5**	**+1.4**
	SNR=21						
MDT				Lg	Lg	07 36 41.1	
HORN	**Hornachuelos**	**3.84**	**307**	P	**Pn**	**07 35 41.4**	**+0.4**
	SNR=36						
HORN				S	**Sn**	**07 36 24.0**	**-2.2**
CNIL	**Conil**	**3.86**	**283**	*e*P	**Pn**	**07 35 44.5**	**+3.2**
MD31	**MD31**	**3.89**	**227**	P	**Pn**	**07 35 42.7**	**+0.9**
MD31				Lg	Lg	07 36 42.7	
ECHE	**Chera**	**4.01**	**5**	P	**Pn**	**07 35 45.1**	**+1.7**
	0.6nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	**07 36 28.2**	**-2.4**
	1.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**4.07**	**32**	P	**Pn**	**07 35 44.5**	**+0.4**
	4.1nm,0.1s,SNR=4.0						
EIBI				S	**Sn**	**07 36 28.9**	**-3.0**
	77nm,0.4s,SNR=7.9						
ECAB	**El Cabril**	**4.08**	**309**	P	**Pn**	**07 35 44.9**	**+0.6**
	0.6nm,0.2s,SNR=15						
ECAB				S	**Sn**	**07 36 30.2**	**-1.9**
	26nm,0.5s,SNR=7.9						
ESDC	**Sonseca Array**	**4.56**	**334**	Pn	**Pn**	**07 35 52.4**	**+1.4**
	2.9nm,0.3s,baz=153,slow=13,SNR=22						
ESDC				Sn	**Sn**	**07 36 40.9**	**-3.3**
	5.4nm,0.3s,baz=151,slow=22,SNR=6.4						
ESDC				Lg	Lg	07 36 57.4	
	6.6nm,0.3s,baz=149,slow=28,SNR=5.6						
ESDC	**Sonseca Array**	**4.56**	**334**	P	**Pn**	**07 35 52.4**	**+1.4**
	1.1nm,0.2s,baz=151,slow=14,SNR=22						
ESDC				S	**Sn**	**07 36 42.0**	**-2.1**
	1.7nm,0.3s,baz=153,slow=23,SNR=5.2						
PAB	**San Pablo**	**4.60**	**330**	P	**Pn**	**07 35 52.9**	**+1.3**
	2.3nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**07 36 42.3**	**-2.7**
	7.9nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.77**	**299**	P	**Pn**	**07 35 53.9**	**+0.1**
	0.9nm,0.1s,SNR=21						
EMIN				S	**Sn**	**07 36 46.2**	**-3.0**
	7.6nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**4.83**	**8**	P	**Pn**	**07 35 56.5**	**+1.8**
	0.7nm,0.2s,SNR=16						
EMOS				S	**Sn**	**07 36 47.6**	**-3.1**
	4.3nm,0.2s,SNR=7.9						
GOLM	**Goulmima**	**4.88**	**218**	Lg	Lg	07 37 15.7	
UCM	**Universidad Co**	**4.94**	**343**	*e*P	**Pn**	**07 35 58.2**	**+2.1**
UCM				*e*S	**Sn**	**07 36 52.3**	**-1.0**
ETOR	**Torete**	**5.25**	**354**	P	**Pn**	**07 36 02.2**	**+1.7**
	4.1nm,0.2s,SNR=14						
ETOR				S	**Sn**	**07 36 59.0**	**-2.1**
	17nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**5.28**	**293**	P	**Pn**	**07 36 00.9**	**+0.2**
	2.4nm,0.2s,SNR=12						
EGRO				S	**Sn**	**07 36 57.3**	**-4.2**
	16nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	**5.34**	**37**	P	**Pn**	**07 36 02.3**	**+0.6**
	2.3nm,0.2s,SNR=17						
ETOS				S	**Sn**	**07 37 00.2**	**-3.2**
	10.0nm,0.3s,SNR=7.9						
PVAQ	**Vaqueiros**	**5.41**	**291**	*e*Pn	**Pn**	**07 36 02.7**	**+0.1**
PVAQ				*e*Sn	**Sn**	**07 37 01.8**	**-3.1**
PVAQ				A	A	07 37 09.4	
	14nm,0.3s						
PVAQ	**Vaqueiros**	**5.41**	**291**	P	**Pn**	**07 36 02.7**	**+0.1**
PVAQ				S	**Sn**	**07 37 01.8**	**-3.1**
	14nm,0.3s						
PVAQ	**Vaqueiros**	**5.41**	**291**	P	**Pn**	**07 36 01.6**	**-1.0**
	SNR=16						
PVAQ				S	**Sn**	**07 37 01.6**	**-3.3**
EBAD	**Badajoz**	**5.49**	**307**	P	**Pn**	**07 36 04.3**	**+0.6**
	2.2nm,0.2s,SNR=13						
EBAD				S	**Sn**	**07 37 03.7**	**-3.2**
	20nm,0.2s,SNR=4.9						
GUD	**Guadarrama**	**5.50**	**337**	P	**Pn**	**07 36 05.4**	**+1.5**
	1.1nm,0.2s,SNR=4.0						
GUD				S	**Sn**	**07 37 04.7**	**-2.6**
	5.0nm,0.4s,SNR=4.0						
PBDV	**Barranco-do-Ve**	**5.53**	**289**	*e*Pn	**Pn**	**07 36 04.4**	**+0.2**
PBDV				*e*Sn	**Sn**	**07 37 05.1**	**-2.8**
PBDV				A	A	07 37 13.8	
	11nm,0.4s						
PBDV	**Barranco-do-Ve**	**5.53**	**289**	P	**Pn**	**07 36 04.4**	**+0.2**
PBDV				S	**Sn**	**07 37 05.1**	**-2.8**
	11nm,0.4s						
ERTA	**Horta de San J**	**5.53**	**14**	P	**Pn**	**07 36 05.6**	**+1.4**
	1.9nm,0.2s,SNR=14						
ERTA				S	**Sn**	**07 37 04.7**	**-3.3**
	6.0nm,0.4s,SNR=7.9						
TISM	**Timmit**	**5.71**	**229**	P	**Pn**	**07 36 07.9**	**+1.3**
PCVE	**Castro Verde**	**5.72**	**293**	*e*Pn	**Pn**	**07 36 07.5**	**+0.6**
PCVE				*e*Sn	**Sn**	**07 37 10.6**	**-2.1**
PCVE				A	A	07 37 14.5	
	8.5nm,0.5s						
PCVE	**Castro Verde**	**5.72**	**293**	P	**Pn**	**07 36 07.5**	**+0.6**
PBEJ	**Beja**	**5.74**	**297**	*e*Pn	**Pn**	**07 36 07.5**	**+0.4**
PBEJ				*e*Sn	**Sn**	**07 37 09.8**	**-3.2**
PBEJ				A	A	07 37 29.2	
	6.2nm,0.4s						
PBEJ	**Beja**	**5.74**	**297**	P	**Pn**	**07 36 07.5**	**+0.4**
PBEJ				S	**Sn**	**07 37 09.8**	**-3.2**
	3.1nm,0.4s						
EPLA	**Plasencia**	**5.81**	**322**	P	**Pn**	**07 36 09.3**	**+1.2**
	6.1nm,0.3s,SNR=9.7						
EPLA				S	**Sn**	**07 37 13.1**	**-1.7**
	2.5nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	**5.93**	**305**	*e*Pn	**Pn**	**07 36 10.5**	**+0.7**
PESTR				*e*Sn	**Sn**	**07 37 14.7**	**-3.1**
PESTR				A	A	07 37 15.0	
	11nm,0.5s						
EVO	**Evora**	**6.06**	**301**	*e*Pn	**Pn**	**07 36 12.1**	**+0.6**
EVO				*e*Sn	**Sn**	**07 37 17.6**	**-3.2**
EVO				A	A	07 37 19.6	
	12nm,0.4s						
EVO	**Evora**	**6.06**	**301**	*e*P	**Pn**	**07 36 12.0**	**+0.5**
EVO				*e*S	**Sn**	**07 37 19.2**	**-1.7**
EVO	**Evora**	**6.06**	**301**	P	**Pn**	**07 36 12.1**	**+0.6**
EVO				S	**Sn**	**07 37 17.6**	**-3.2**
	12nm,0.4s						
EPOB	**Poblet**	**6.08**	**18**	P	**Pn**	**07 36 13.1**	**+1.3**
	1.6nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**07 37 17.0**	**-4.4**
	7.4nm,0.4s,SNR=7.9						
MORF	**Marmelete**	**6.10**	**288**	*e*P	**Pn**	**07 36 11.2**	**-0.9**
MORF				*e*S	**Sn**	**07 37 15.9**	**-6.0**
MORF				AML	AML	07 37 23.1	
	comp=E,27nm,0.3s						
MORF	**Marmelete**	**6.10**	**288**	*e*Pn	**Pn**	**07 36 12.0**	**-0.1**
MORF				*e*Sn	**Sn**	**07 37 19.8**	**-2.2**
MORF				A	A	07 37 26.4	
	comp=E,8.4nm,0.4s						
MORF	**Marmelete**	**6.10**	**288**	P	**Pn**	**07 36 12.0**	**-0.1**
PMRV	**Marv??o**	**6.12**	**311**	*e*Pn	**Pn**	**07 36 13.0**	**+0.6**
PMRV				*e*Sn	**Sn**	**07 37 19.1**	**-3.3**
PMRV				A	A	07 37 49.3	
	comp=E,11nm,0.5s						
PMRV	**Marv??o**	**6.12**	**311**	P	**Pn**	**07 36 13.0**	**+0.6**
PMRV				S	**Sn**	**07 37 19.1**	**-3.3**
	comp=E,11nm,0.5s						
ESAC	**San Caprasio**	**6.17**	**6**	P	**Pn**	**07 36 14.8**	**+1.7**
	SNR=7.9						
ESAC				S	**Sn**	**07 37 20.6**	**-3.1**
	comp=E,16nm,1.1s,SNR=7.9						
PFVI	**Vila Bisbo**	**6.20**	**287**	*e*Pn	**Pn**	**07 36 13.5**	**+0.1**
PFVI				*e*Sn	**Sn**	**07 37 21.4**	**-2.9**
PFVI	**Vila Bisbo**	**6.20**	**287**	P	**Pn**	**07 36 13.7**	**+0.3**
	comp=E,3.8nm,0.2s,SNR=7.9						
PFVI				S	**Sn**	**07 37 19.8**	**-4.5**
	comp=E,27nm,0.3s,SNR=7.9						
PTEO	**Sao Teotonio**	**6.22**	**290**	*e*Pn	**Pn**	**07 36 14.8**	**+1.1**
PTEO				*e*Sn	**Sn**	**07 37 23.7**	**-1.1**
PTEO				A	A	07 37 30.6	
	comp=E,29nm,0.6s						
PTEO	**Sao Teotonio**	**6.22**	**290**	P	**Pn**	**07 36 14.8**	**+1.1**
PNCL	**Nicolau / Gran**	**6.25**	**296**	*e*Pn	**Pn**	**07 36 14.6**	**+0.4**
PNCL				*e*Sn	**Sn**	**07 37 23.2**	**-2.5**
PNCL				A	A	07 37 26.5	
	comp=E,8.4nm,0.5s						
PNCL	**Nicolau / Gran**	**6.25**	**296**	P	**Pn**	**07 36 14.6**	**+0.4**
PCBR	**Castelo Branco**	**6.43**	**313**	*e*Pn	**Pn**	**07 36 17.6**	**+1.1**
PCBR				*e*Sn	**Sn**	**07 37 27.2**	**-2.7**
PCBR				A	A	07 37 54.7	
	comp=E,8.7nm,0.5s						
PCBR	**Castelo Branco**	**6.43**	**313**	P	**Pn**	**07 36 17.6**	**+1.1**
PCBR				S	**Sn**	**07 37 27.2**	**-2.7**
	comp=E,4.3nm,0.5s						
PMTG	**Montargil**	**6.46**	**305**	*e*Pn	**Pn**	**07 36 18.4**	**+1.4**
PMTG				*e*Sn	**Sn**	**07 37 27.6**	**-3.2**
PMTG				A	A	07 37 27.6	
	comp=E,8.9nm,0.7s						
PMTG	**Montargil**	**6.46**	**305**	P	**Pn**	**07 36 18.4**	**+1.4**
PMTG				S	**Sn**	**07 37 27.6**	**-3.2**
	comp=E,8.9nm,0.7s						
MTE	**Manteigas**	**6.83**	**317**	*e*Pn	**Pn**	**07 36 24.2**	**+2.0**
MTE				*e*Sn	**Sn**	**07 37 36.9**	**-3.2**
MTE				A	A	07 38 20.3	
	comp=E,21nm,0.7s						
MTE	**Manteigas**	**6.83**	**317**	P	**Pn**	**07 36 24.2**	**+2.0**
MTE				S	**Sn**	**07 37 36.9**	**-3.2**
	comp=E,10nm,0.7s						
CFON	**Fontmartina**	**6.86**	**25**	P	**Pn**	**07 36 22.9**	**+0.4**
	comp=E,1.3nm,0.2s,SNR=7.9						
CFON				S	**Sn**	**07 37 35.5**	**-5.1**
	comp=E,6.0nm,0.3s,SNR=7.9						
PTOM	**Tomar**	**6.87**	**308**	*e*Pn	**Pn**	**07 36 24.3**	**+1.6**
PTOM				*e*Sn	**Sn**	**07 37 37.2**	**-3.7**
PTOM				A	A	07 38 41.5	
	comp=E,9.2nm,0.7s						
PTOM	**Tomar**	**6.87**	**308**	P	**Pn**	**07 36 24.3**	**+1.6**
PTOM				S	**Sn**	**07 37 37.2**	**-3.7**
	comp=E,4.6nm,0.7s						
CSOR	**Sort**	**7.06**	**15**	P	**Pn**	**07 36 26.9**	**+1.5**
	comp=E,0.5nm,0.2s,SNR=7.9						
CSOR				S	**Sn**	**07 37 41.7**	**-4.0**
	comp=E,1.6nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**7.12**	**323**	*e*Pn	**Pn**	**07 36 27.7**	**+1.6**
MVO				*e*Sn	**Sn**	**07 37 44.6**	**-2.4**
MVO				A	A	07 38 26.7	
	comp=E,14nm,0.7s						
MVO	**Moncorvo**	**7.12**	**323**	P	**Pn**	**07 36 27.6**	**+1.5**
	comp=E,2.3nm,0.2s,SNR=4.0						
MVO				S	**Sn**	**07 37 42.9**	**-4.1**
	comp=E,4.0nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**7.13**	**300**	P	**Pn**	**07 36 27.3**	**+1.0**
	comp=E,4.1nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**07 37 42.6**	**-4.8**
	comp=E,85nm,0.5s,SNR=7.9						
ECHI	**Chisagues Biel**	**7.18**	**9**	P	**Pn**	**07 36 28.5**	**+1.6**
	comp=E,0.2nm,0.1s,SNR=7.9						
EARA	**Aranguren**	**7.18**	**359**	P	**Pn**	**07 36 28.5**	**+1.6**
	comp=E,0.7nm,0.1s,SNR=7.9						
COI	**Coimbra**	**7.22**	**312**	*e*Pn	**Pn**	**07 36 28.9**	**+1.5**
COI	**Coimbra**	**7.22**	**312**	P	**Pn**	**07 36 28.9**	**+1.5**
PVIS	**Viseu**	**7.24**	**317**	*e*Pn	**Pn**	**07 36 28.9**	**+1.1**
PVIS				*e*Sn	**Sn**	**07 37 47.3**	**-2.8**
PVIS				A	A	07 37 50.1	
	comp=E,8.6nm,0.4s						
PVIS	**Viseu**	**7.24**	**317**	P	**Pn**	**07 36 28.9**	**+1.1**
PVIS				S	**Sn**	**07 37 47.3**	**-2.8**
	comp=E,4.3nm,0.4s						
EORO	**Oroz-Betelu**	**7.30**	**0**	P	**Pn**	**07 36 30.6**	**+2.1**
	comp=E,1.4nm,0.2s,SNR=7.9						
ETSF	**Etsaut**	**7.33**	**5**	*e*Pn	**Pn**	**07 36 25.9**	**-3.1**
ETSF	**Etsaut**	**7.33**	**5**	*e*P	**Pn**	**07 36 31.7**	**+2.7**
ETSF				*e*Sn	**Sn**	**07 37 46.1**	**-6.2**
	comp=E,1.1nm,0.2s						
ETSF	**Etsaut**	**7.33**	**5**	P	**Pn**	**07 36 31.7**	**+2.7**
ETSF				S	**Sn**	**07 37 46.1**	**-6.2**
	comp=E,0.6nm,0.2s						
CLLI	**Llivia**	**7.37**	**20**	P	**Pn**	**07 36 30.1**	**+0.6**
	comp=E,0.6nm,0.2s,SNR=7.9						
CLLI				S	**Sn**	**07 37 48.3**	**-4.9**
	comp=E,0.7nm,0.3s,SNR=7.9						
PBRG	**Braganca**	**7.49**	**328**	*e*Pn	**Pn**	**07 36 33.2**	**+2.1**
PBRG				A	A	07 38 36.6	
	comp=E,9.0nm,0.7s						
PBRG	**Braganca**	**7.49**	**328**	P	**Pn**	**07 36 33.2**	**+2.1**
ATE	**Arette**	**7.51**	**4**	P	**Pn**	**07 36 33.1**	**+1.7**
	comp=E,1.0nm,0.3s,SNR=7.9						
ATE				S	**Sn**	**07 37 52.1**	**-4.6**
	comp=E,1.7nm,0.3s,SNR=7.9						
SJPF	**Ste Jean**	**7.52**	**1**	*e*Pn	**Pn**	**07 36 29.1**	**-2.5**
SJPF	**Ste Jean**	**7.52**	**1**	*e*P	**Pn**	**07 36 34.2**	**+2.6**
SJPF				*e*Sn	**Sn**	**07 37 50.4**	**-6.5**
	comp=E,1.0nm,0.3s						
SJPF	**Ste Jean**	**7.52**	**1**	P	**Pn**	**07 36 34.2**	**+2.6**
SJPF				S	**Sn**	**07 37 50.4**	**-6.5**
	comp=E,0.0nm,0.3s						
PVRL	**Vila Real**	**7.54**	**321**	*e*Pn	**Pn**	**07 36 33.7**	**+1.8**
PVRL				*e*Sn	**Sn**	**07 37 55.1**	**-2.4**
PVRL	**Vila Real**	**7.54**	**321**	P	**Pn**	**07 36 33.7**	**+1.8**
EPF	**Esparros**	**7.56**	**10**	*e*P	**Pn**	**07 36 34.4**	**+2.3**
EPF				*e*Sn	**Sn**	**07 37 51.2**	**-6.6**
	comp=E,2.4nm,0.3s						
EPF	**Esparros**	**7.56**	**10**	P	**Pn**	**07 36 34.4**	**+2.3**
EPF				S	**Sn**	**07 37 51.2**	**-6.6**
	comp=E,1.2nm,0.3s						
EJON	**La Jonquera**	**7.62**	**25**	P	**Pn**	**07 36 34.4**	**+1.5**
	comp=E,0.5nm,0.2s,SNR=7.9						
EJON				S	**Sn**	**07 37 54.0**	**-5.3**
	comp=E,1.7nm,0.5s,SNR=7.9						
EALK	**Alkurruntz**	**7.62**	**359**	P	**Pn**	**07 36 34.9**	**+1.8**
	comp=E,2.4nm,0.3s,SNR=7.9						
SJAF	**Saint Jean de**	**7.65**	**24**	P	**Pn**	**07 36 34.9**	**+1.6**
	comp=E,0.4nm,0.2s,SNR=7.9						
SJAF				S	**Sn**	**07 37 55.0**	**-5.1**
	comp=E,0.8nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**7.80**	**349**	P	**Pn**	**07 36 37.0**	**+1.6**
	comp=E,1.0nm,0.2s,SNR=7.9						
ELAN				S	**Sn**	**07 37 59.1**	**-4.6**
	comp=E,2.5nm,0.4s,SNR=7.9						
PCAB	**Cabril**	**8.02**	**322**	*e*Pn	**Pn**	**07 36 39.2**	**+0.8**
PCAB	**Cabril**	**8.02**	**322**	P	**Pn**	**07 36 39.2**	**+0.8**
ELOB	**Lobios**	**8.15**	**322**	P	**Pn**	**07 36 42.0**	**+1.7**
	comp=E,0.8nm,0.2s,SNR=7.9						
ELOB				S	**Sn**	**07 38 07.3**	**-5.3**
	comp=E,3.8nm,0.2s,SNR=7.9						
MTLF	**Montolieu**	**8.23**	**19**	*e*P	**Pn**	**07 36 43.0**	**+1.7**
MTLF				*e*Sn	Sn	07 38 07.4	-7.0
	comp=E,2.3nm,0.4s						
MTLF	**Montolieu**	**8.23**	**19**	P	**Pn**	**07 36 43.0**	**+1.7**
MTLF				S	Sn	07 38 07.4	-7.0
	comp=E,1.2nm,0.4s						
EARI	**Arriondas**	**8.25**	**340**	P	**Pn**	**07 36 42.5**	**+0.8**
	comp=E,0.6nm,0.2s,SNR=7.9						
EARI				S	**Sn**	**07 38 10.2**	**-4.7**
	comp=E,2.4nm,0.5s,SNR=7.9						
KEST	**Kesra**	**8.74**	**86**	Pn	**Pn**	**07 36 49.5**	**+1.1**
	comp=E,0.5nm,0.3s,baz=277,slow=2.3,SNR=4.9						
EPON	**Pontenova**	**8.92**	**332**	P	**Pn**	**07 36 51.4**	**+0.7**
	comp=E,1.1nm,0.3s,SNR=7.9						
LFF	**La Frestale**	**9.48**	**9**	*e*Pn	**Pn**	**07 36 55.6**	**-2.9**
LFF	**La Frestale**	**9.48**	**9**	*e*P	**Pn**	**07 37 01.4**	**+2.9**
LFF				*e*Sn	Sn	07 38 37.3	-7.8
	comp=E,2.9nm,0.3s						
LFF	**La Frestale**	**9.48**	**9**	S	Sn	07 38 37.3	-7.8
	comp=E,1.4nm,0.3s						
CAF	**Calviac**	**9.70**	**15**	*e*Pn	**Pn**	**07 36 58.4**	**-3.0**
CAF	**Calviac**	**9.70**	**15**	*e*P	**Pn**	**07 37 04.5**	**+3.1**
CAF				*e*Sn	Sn	07 38 42.4	-8.0
	comp=E,1.0nm,0.3s						
CAF	**Calviac**	**9.70**	**15**	S	Sn	07 38 42.4	-8.0
	comp=E,0.5nm,0.3s						
LMR	**La Mourre**	**9.85**	**36**	*e*Pn	**Pn**	**07 37 00.8**	**-2.7**
LMR	**La Mourre**	**9.85**	**36**	*e*P	**Pn**	**07 37 06.2**	**+2.7**
LMR				*e*Sn	Sn	07 38 46.1	-8.1
	comp=E,1.1nm,0.2s						
LMR	**La Mourre**	**9.85**	**36**	S	Sn	07 38 46.1	-8.1
	comp=E,0.6nm,0.2s						
SMRF	**Simiane la Rot**	**9.94**	**30**	*e*Pn	**Pn**	**07 37 02.3**	**-2.5**
SMRF				*e*Sn	Sn	07 38 48.4	-8.1
	comp=E,1.4nm,0.3s						
SMRF	**Simiane la Rot**	**9.94**	**30**	S	Sn	07 38 48.4	-8.1
	comp=E,1.4nm,0.3s						
FRF	**La Foret Royal**	**10.09**	**35**	*e*P	**Pn**	**07 37 09.8**	**+3.0**
FRF				*e*Sn	Sn	07 38 51.9	-8.1
	comp=E,0.9nm,0.3s						
FRF	**La Foret Royal**	**10.09**	**35**	S	Sn	07 38 51.9	-8.1
	comp=E,0.4nm,0.3s						
PGF	**Pioggiola**	**10.65**	**46**	*e*Pn	**Pn**	**07 37 11.5**	**-3.1**
PGF	**Pioggiola**	**10.65**	**46**	*e*P	**Pn**	**07 37 17.2**	**+2.6**
PGF				*e*Sn	Sn	07 39 05.4	-8.6
	comp=E,9.5nm,0.7s						
PGF	**Pioggiola**	**10.65**	**46**	S	Sn	07 39 05.4	-8.6
	comp=E,4.8nm,0.7s						
SBF	**Sospel**	**10.70**	**37**	*e*Pn	**Pn**	**07 37 11.9**	**-3.2**
SBF	**Sospel**	**10.70**	**37**	*e*P	**Pn**	**07 37 18.1**	**+3.0**
SBF				*e*Sn	Sn	07 39 06.2	-8.8
	comp=E,1.9nm,0.3s						
SBF	**Sospel**	**10.70**	**37**	S	Sn	07 39 06.2	-8.8
	comp=E,0.9nm,0.3s						
GERES	**GERESS Array B**	**17.29**	**35**	Pn	**P**	**07 38 47.7**	**+2.9**
	comp=E,0.1nm,0.3s,baz=225,slow=12,SNR=4.8						
TORD	**Torodi Ar. Bea**	**22.51**	**172**	P	**P**	**07 39 42.1**	**+0.3**
	comp=E,0.6nm,0.7s,baz=354,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**61.15**	**51**	P	**P**	**07 44 58.7**	**+2.3**
	comp=E,0.5nm,0.8s,baz=304,slow=8.3,SNR=3.8						

WEL 01 07:35:48.1±1.2**,33°S**±23°×**17°8E**±5°0**,h255**km±62km**,**
M4.2/11**,mB4.5**/4**,MLv4.3**/11**,Mw(mB)3.7**/4**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.69**	**179**	P	Pn	07 37 00.5	+0.3
HAZ	**Te Kaha**	**4.89**	**184**	P	Pn	07 37 03.0	+0.4
WMGZ	**Waiomatatini S**	**4.95**	**178**	P	Pn	07 37 03.2	-0.1
WMGZ				S	S	07 38 03.3	-0.1
RUGZ	**Raukumara Rang**	**5.10**	**184**	P	Pn	07 37 06.5	+1.1
PUZ	**Puketiti**	**5.19**	**179**	P	Pn	07 37 07.5	+1.1
URZ	**Urewera**	**5.45**	**189**	P	Pn	07 37 09.7	+0.2
URZ				S	S	07 38 19.8	+5.3
MWZ	**Matawai**	**5.48**	**185**	P	Pn	07 37 10.3	+0.4
TKGZ	**Te Karaka**	**5.57**	**183**	P	Pn	07 37 10.4	-0.5
TKGZ				S	S	07 38 16.1	-1.1
CNGZ	**Carnagh Statio**	**5.60**	**180**	P	Pn	07 37 10.1	-1.3
RAGZ	**Rawiri**	**5.65**	**186**	P	Pn	07 37 09.9	-2.2
MUGZ	**Murupara**	**5.71**	**191**	P	Pn	07 37 14.7	+2.0
RTZ	**Ruatahuna**	**5.82**	**189**	P	Pn	07 37 15.1	+1.0
RIGZ	**Rimuhau**	**5.83**	**183**	P	Pn	07 37 12.9	-1.4
RIGZ				S	S	07 38 25.4	+2.1
SNGZ	**Shannon Statio**	**5.94**	**186**	P	Pn	07 37 15.6	+0.1
SNGZ	**Shannon Statio**	**5.94**	**186**	P	S	07 38 32.0	+6.4
PRGZ	**Paritu Road**	**6.05**	**182**	P	Pn	07 37 17.3	+0.4
KNZ	**Kokohu**	**6.15**	**184**	P	Pn	07 37 17.1	-1.1
WHHZ	**Waihua**	**6.24**	**187**	P	Pn	07 37 19.1	-0.2
WHHZ	**Waihua**	**6.24**	**187**	P	S	07 38 35.7	+3.3
ARHZ	**Aropaoanui**	**6.45**	**188**	P	Pn	07 37 21.8	-0.1
ARHZ	**Aropaoanui**	**6.45**	**188**	P	S	07 38 41.3	+4.2
MCHZ	**McNeill Hill**	**6.67**	**190**	P	Pn	07 37 24.4	-0.2
MCHZ	**McNeill Hill**	**6.67**	**190**	P	S	07 38 42.5	+0.4
KWHZ	**Kaweka Forest**	**6.69**	**192**	P	Pn	07 37 24.7	-0.3
KWHZ	**Kaweka Forest**	**6.69**	**192**	P	S	07 38 46.6	+3.9
KRHZ	**Kereru**	**6.92**	**192**	P	S	07 38 50.2	+2.4
KAHZ	**Kahuranaki**	**6.99**	**188**	P	Pn	07 37 27.4	-1.3
PNHZ	**Pukenui**	**7.21**	**192**	P	S	07 38 57.0	+2.5
WPHZ	**Waipukurau**	**7.32**	**190**	P	S	07 38 59.6	+2.7
TSZ	**Takapari Road**	**7.39**	**193**	P	S	07 38 57.6	-1.1
DVHZ	**Dannevirke**	**7.59**	**192**	P	S	07 39 02.3	-0.9

IDC 01 07:36:21.4±2.5**,5°91S**×**130°22E,h0**km**,mb3.5**/1**,**
mb1 3.4/3**,mb1mx3.2**/20**,mbtmp3.3**/3**,ML3.1**/2**,Error ellipse: s-maj=152.7km s-min=32.2km az=70.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.51**	**164**	Pn	Pn	07 39 48.0	-0.3
	0.1nm,0.3s,baz=347,slow=14,SNR=2.9						
WRA				Sn	Sn	07 42 12.7	-17
	0.1nm,0.3s,baz=346,slow=23,SNR=3.4						
ASAR	**Alice Springs**	**18.01**	**169**	P	Pn	07 40 33.3	-0.1
	0.1nm,0.3s,baz=353,slow=10,SNR=8.2						
MKAR	**Makanchi Array**	**67.44**	**326**	P	P	07 47 19.1	+0.1
	0.2nm,0.4s,baz=115,slow=7.3,SNR=4.7						

*IDC **01** 07:53:54.0±1.5, 18°48S×177°85W, h552km±17km, mb3.7/11, mb1 4.0/13, mb1mx3.6/28, mbtmp4.6/13, Error ellipse: s-maj=19.4km s-min=11.8km az=139.0*
*NEIC **01** 07:53:56.4±1.9, 18°4S±0°1×177°9W±0°1, h582km±3km,*

mb4.6/49, Error ellipse: s-maj=18.5km s-min=14.2km az=133.0

ISC 01 07:53:54.4±0.4, **18°.50S**±0°.07×**177°.82W**±0°.07, **h557**km, **n131**, σ**1s.52**/139, **mb4.7**/34, **17D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.00**	**280**	P	**P**	**07 55 20.3**	**+3.4**
AFI	**Afiamalu**	**7.38**	**53**	P	**P**	**07 55 46.1**	**-0.3**
	20nm,0.3s,baz=202,slow=2.7,SNR=7.7						
AFI				S	**S**	**07 57 14.8**	**-3.4**
	4.3nm,0.3s,baz=253,slow=23,SNR=2.1						
AFI	**Afiamalu**	**7.38**	**53**	P	**P**	**07 55 46.6**	**+0.2**
AFI				S	**S**	**07 57 18.1**	**-0.1**
NIUE	**Niue**	**7.50**	**96**	P	**P**	**07 55 50.6**	**+3.2**
DZM	**Mont Dzumac**	**15.19**	**254**	P	**P**	**07 57 05.5**	**-0.2**
	1.8nm,0.3s,baz=122,slow=17,SNR=16						
DZM	**Mont Dzumac**	**15.19**	**254**	P	**P**	**07 57 06.3**	**+0.6**
DZM				IAmb	IAmb	07 57 08.8	
	comp=Z,32nm,1.2s						
KNTN	**Kanton**	**16.73**	**22**	P	**P**	**07 57 19.0**	**-1.5**
OUZ	**Omahuta**	**18.31**	**203**	P	**P**	**07 57 37.6**	**+3.0**
OUZ				IAmb	IAmb	07 57 39.7	
	comp=Z,15nm,0.9s						
URZ	**Urewera**	**20.18**	**192**	P	**P**	**07 57 50.3**	**-1.2**
	comp=Z,17nm,0.5s,baz=48,slow=3.3,SNR=22						
URZ				S	**S**	**08 00 57.4**	**-6.2**
	comp=Z,4.6nm,0.7s,baz=186,slow=21,SNR=1.7						
URZ	**Urewera**	**20.18**	**192**	P	**P**	**07 57 50.7**	**-0.8**
URZ				IAmb	IAmb	07 57 52.5	
	comp=Z,20nm,0.8s						
QRZ	**Quartz Range**	**23.74**	**198**	P	**P**	**07 58 24.9**	**+1.5**
KHZ	**Kahutara**	**24.94**	**195**	P	**P**	**07 58 33.9**	**-0.1**
LTZ	**Lake Taylor**	**25.62**	**197**	P	**P**	**07 58 38.9**	**-1.2**
LTZ				IAmb	IAmb	07 58 39.2	
	comp=Z,24nm,1.2s						
MLZ	**Mavora Lakes**	**29.23**	**201**	P	**P**	**07 59 13.6**	**+2.0**
MLZ				IAmb	IAmb	07 59 30.9	
	comp=Z,5.5nm,0.9s						
EIDS	**Eidsvold**	**29.60**	**251**	P	**P**	**07 59 15.2**	**+0.1**
EIDS				IAmb	IAmb	07 59 16.0	
	comp=Z,17nm,0.7s						
WHZ	**Wether Hill Ro**	**29.75**	**200**	P	**P**	**07 59 16.9**	**+0.8**
WHZ				IAmb	IAmb	07 59 18.4	
	comp=Z,32nm,1.4s						
ARMA	**Armidale**	**30.14**	**241**	P	**P**	**07 59 21.2**	**+1.4**
ARMA				IAmb	IAmb	07 59 21.9	
	comp=Z,15nm,0.8s						
CAN	**Canberra**	**33.80**	**234**	P	**P**	**07 59 52.0**	**+1.3**
CAN				IAmb	IAmb	07 59 52.7	
	comp=Z,22nm,0.9s						
PMG	**Port Moresby**	**35.11**	**280**	P	**P**	**08 00 02.2**	**+0.3**
TOO	**Toolangi**	**37.24**	**232**	P	**P**	**08 00 20.3**	**+1.1**
TOO				IAmb	IAmb	08 00 21.2	
	comp=Z,22nm,0.7s						
COEN	**Coen**	**37.67**	**271**	P	**P**	**08 00 23.3**	**+0.3**
STKA	**Stephens Creek**	**38.84**	**242**	P	**P**	**08 00 33.4**	**+1.1**
	comp=Z,26nm,0.7s,baz=91,slow=9.3,SNR=43						
STKA	**Stephens Creek**	**38.84**	**242**	P	**P**	**08 00 33.4**	**+1.1**
STKA				IAmb	IAmb	08 00 34.2	
	comp=Z,6.6nm,0.9s						
BBOO	**Buckleboo**	**43.62**	**242**	P	**P**	**08 01 09.8**	**-0.2**
BBOO				IAmb	IAmb	08 01 11.2	
	comp=Z,28nm,0.8s						
WR0	**Warramunga Arr**	**44.89**	**260**	P	**P**	**08 01 19.3**	**-0.8**
WR0				IAmb	IAmb	08 01 20.9	
	comp=Z,13nm,1.0s						
WRAB	**Tennant Creek**	**45.07**	**260**	P	**P**	**08 01 20.6**	**-0.8**
WRA	**Warramunga Arr**	**45.08**	**260**	P	**P**	**08 01 20.6**	**-1.0**
	comp=Z,22nm,0.6s,baz=96,slow=7.1,SNR=261						
WRA				PcP	**PcP**	**08 02 50.1**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=91,slow=3.5,SNR=5.3						
WRA	**Warramunga Arr**	**45.08**	**260**	P	**P**	**08 01 20.4**	**-1.2**
AS31	**Alice Springs**	**45.17**	**255**	P	**P**	**08 01 21.9**	**-0.3**
AS31				IAmb	IAmb	08 01 23.2	
	comp=Z,18nm,0.6s						
ASAR	**Alice Springs**	**45.17**	**255**	P	**P**	**08 01 22.0**	**-0.2**
	comp=Z,61nm,0.7s,baz=94,slow=7.5,SNR=830						
ASAR				PcP	**PcP**	**08 02 50.2**	**-0.5**
	comp=Z,3.8nm,0.5s,baz=99,slow=3.9,SNR=7.2						
ASAR				ScP	**ScP**	**08 05 51.3**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=100,slow=4.7,SNR=4.3						
ASAR				S	**S**	**08 07 18.2**	**-3.7**
	comp=Z,1.5nm,0.8s,baz=89,slow=15,SNR=9.7						
ASAR	**Alice Springs**	**45.17**	**255**	P	**P**	**08 01 21.6**	**-0.6**
ASAR					**PcP**	**08 02 49.8**	**-0.9**
MTN	**Manton Dam**	**49.35**	**269**	P	**P**	**08 01 52.6**	**-0.9**
FORT	**Forrest**	**50.26**	**245**	P	**P**	**08 01 59.2**	**-0.9**
FORT				IAmb	IAmb	08 02 01.5	
	comp=Z,25nm,0.7s						
KNRA	**Kununurra**	**50.99**	**265**	P	**P**	**08 02 04.6**	**-0.9**
KNRA				IAmb	IAmb	08 02 05.7	
	comp=Z,27nm,0.8s						
FAKI	**Fak Fak**	**51.24**	**281**	P	**P**	**08 02 06.3**	**-1.1**
SWI	**Sorong**	**52.93**	**283**	P	**P**	**08 02 19.7**	**+0.2**
	comp=Z,97nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.49**	**261**	P	**P**	**08 02 23.1**	**-0.3**
FITZ				IAmb	IAmb	08 02 23.6	
	comp=Z,7.3nm,0.7s						
SOEI	**Soe**	**56.63**	**270**	P	**P**	**08 02 46.6**	**+1.0**
	comp=Z,74nm,0.8s						
SOEI	**Soe**	**56.63**	**270**	P	**P**	**08 02 44.2**	**-1.4**
SOEI				IAmb	IAmb	08 02 47.3	
	comp=Z,44nm,0.7s						
SANI	**Sanana**	**57.40**	**280**	P	**P**	**08 02 49.8**	**-0.8**
	comp=Z,30nm,0.8s						
PSA00	**Pilbara Seismi**	**58.30**	**256**	P	**P**	**08 02 55.2**	**-1.5**
PSA00	**Pilbara Seismi**	**58.30**	**256**	IAmb	IAmb	08 02 56.8	
	comp=Z,23nm,1.1s						
NWAO	**Narrogin (SRO)**	**59.43**	**242**	P	**P**	**08 03 02.8**	**-1.2**
NWAO				IAmb	IAmb	08 03 04.3	
	comp=Z,12nm,0.8s						
NWAO	**Narrogin (SRO)**	**59.43**	**242**	P	**P**	**08 03 01.8**	**-2.3**
NWAO				IAmb	IAmb	08 03 04.2	
	comp=Z,9.2nm,0.8s						
GIRL	**Giralia**	**63.26**	**253**	P	**P**	**08 03 29.6**	**+0.3**
MPSI	**Mapaga**	**63.93**	**280**	P	**P**	**08 03 34.0**	**+0.4**
	comp=Z,526nmcomp=Z,20nm,0.9s						
JAGI	**Jajag, Banyuwa**	**66.59**	**269**	P	**P**	**08 03 48.6**	**-1.8**
MJAR	**Matsushiro Arr**	**68.72**	**323**	P	**P**	**08 04 01.8**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=143,slow=5.4,SNR=8.6						
MJAR	**Matsushiro Arr**	**68.72**	**323**	P	**P**	**08 04 01.7**	**-1.0**
MAJO	**Matsushiro**	**68.72**	**323**	P	**P**	**08 04 02.2**	**-0.6**
MAJO				IAmb	IAmb	08 04 11.3	
	comp=Z,13nm,1.1s						
KKM	**Kota Kinabalu**	**69.43**	**284**	P	**P**	**08 04 07.1**	**-0.6**
KKM				IAmb	IAmb	08 04 13.9	
	comp=Z,25nm,1.2s						
PCJI	**Pacitan**	**69.49**	**268**	P	**P**	**08 04 07.9**	**0.0**
UGM	**Wanagama**	**70.19**	**268**	P	**P**	**08 04 11.6**	**-0.6**
QSPA	**South Pole Qui**	**71.55**	**180**	P	**P**	**08 04 20.8**	**+1.5**
SBUM	**Sibu**	**71.85**	**279**	P	**P**	**08 04 19.1**	**-2.7**
TPUB	**Ta-pu**	**73.05**	**302**	P	**P**	**08 04 26.9**	**-1.6**
TPUB				IAmb	IAmb	08 04 27.4	
	comp=Z,17nm,0.6s						
PETK	**Petropavlovsk-**	**74.40**	**345**	P	**P**	**08 04 35.2**	**-0.3**
	comp=Z,5.4nm,1.1s,baz=125,slow=9.1,SNR=2.9						
LWLI	**Liwa**	**77.17**	**269**	P	P	08 05 03.8	+12
YBH	**Yreka Blue Hor**	**78.63**	**39**	P	**P**	**08 05 00.0**	**+0.9**
NJ2	**Nanjing**	**78.75**	**309**	*e*P	**P**	**08 05 00.4**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
BEKR	**Beckworth**	**78.96**	**41**	P	**P**	**08 05 01.3**	**+0.3**
PNTR	**Pine Nut**	**79.00**	**42**	P	**P**	**08 05 01.9**	**+0.6**
YERR	**Yerington**	**79.17**	**43**	P	**P**	**08 05 02.2**	**+0.1**
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**08 05 04.5**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=224,slow=8.8,SNR=19						
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**08 05 04.3**	**+0.6**
MOD	**Modoc Plateau**	**80.18**	**40**	P	**P**	**08 05 08.2**	**+0.8**
PINE	**Pine Mountain**	**80.91**	**38**	P	**P**	**08 05 11.9**	**+0.8**
G08A	**Pilot Rock**	**82.94**	**38**	P	**P**	**08 05 21.7**	**+0.5**
RND	**Reindeer**	**84.72**	**13**	P	**P**	**08 05 29.5**	**-0.1**
TXAR	**Lajitas Array**	**85.84**	**57**	P	**P**	**08 05 37.6**	**+1.8**
	comp=Z,1.2nm,0.7s,baz=220,slow=6.1,SNR=18						
ILAR	**Eielson Array**	**86.34**	**13**	P	**P**	**08 05 36.1**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=218,slow=5.1,SNR=15						
ILAR	**Eielson Array**	**86.34**	**13**	P	**P**	**08 05 35.9**	**-1.4**
PDAR	**Pinedale Array**	**87.40**	**43**	P	**P**	**08 05 42.4**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=204,slow=3.3,SNR=5.4						
HHC	**Hu-ho-hao-te**	**88.09**	**314**	*e*P	**P**	**08 05 48.9**	**+2.7**
HHC				pmax	pmax		
	comp=Z,54nm,5.9s						
CMAR	**Chiang Mai Arr**	**89.61**	**290**	P	**P**	**08 05 54.2**	**+0.6**
	comp=Z,2.7nm,0.8s,baz=112,slow=3.2,SNR=22						
CMAR	**Chiang Mai Arr**	**89.61**	**290**	P	**P**	**08 05 52.7**	**-0.9**
TROLL	**Troll, Antarti**	**89.72**	**180**	P	**P**	**08 05 53.7**	**+0.4**
VNA3	**Neumayer Olymp**	**90.11**	**176**	P	**P**	**08 05 55.3**	**+0.3**
VNA2	**Neumayer--Watz**	**90.56**	**177**	P	**P**	**08 05 57.2**	**+0.2**
	baz=198,slow=3.3						
LZH	**Lanzhou**	**91.70**	**307**	⇓P	**P**	**08 06 02.8**	**-0.3**
LZH				pP	pwP	08 08 06.7	+1.6
LZH				sP	sP	08 09 02.1	+1.4
LZH				PP	**PP**	**08 09 54.2**	**+2.2**
LZH				pmax	pmax		
	comp=Z,19nm,1.4s						
LZH				pmax	pmax		
	comp=Z,87nm,7.2s						
MKAR	**Makanchi Array**	**109.95**	**314**	PKiKP	**PKiKP**	**08 11 21.0**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=87,slow=1.8,SNR=7.1						
KSH	**Kashi**	**113.88**	**306**	PKP	**PKiKP**	**08 11 36.0**	**+5.4**
KSH				PP	PP	08 12 42.9	+7.9
KSH				SKKS		08 18 38.8	
KSH				SS	**SS**	**08 27 51.2**	**+8.4**
ARCES	**ARCESS Array B**	**127.00**	**350**	PKP	**PKPdf**	**08 11 53.7**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=48,slow=1.8,SNR=8.3						
AKASG	**Malin Array Be**	**141.34**	**332**	PKhKP	PKPpre	08 12 15.6	
	comp=Z,0.7nm,0.3s,baz=47,slow=4.0,SNR=12						
SORM	**Soroca**	**143.58**	**330**	⇓P	**PKPdf**	**08 12 26.5**	**+0.5**
BUR08	**Bucovina Ar. S**	**145.38**	**332**		**PKPab**	**08 12 30.9**	**-0.9**
BURAR	**Bucovina Array**	**145.40**	**332**	⇓P	**PKPab**	**08 12 30.9**	**-1.0**
BURAR	**Bucovina Array**	**145.40**	**332**		**PKPbc**	**08 12 30.1**	**-0.4**
BIZ	**Bicaz**	**145.50**	**331**	⇓P	**PKPbc**	**08 12 30.4**	**-0.3**
TESR	**Tescani**	**145.55**	**330**	⇓P	**PKPbc**	**08 12 30.0**	**-1.0**
KOLS	**Kolonicke sedl**	**145.57**	**336**	*e*PKP	**PKPbc**	**08 12 31.0**	**+0.1**
BR131	**Keskin Array S**	**145.60**	**315**		**PKPbc**	**08 12 30.9**	**-0.6**
BRTR	**Keskin Array B**	**145.60**	**315**	PKPbc	**PKPbc**	**08 12 30.6**	**-0.9**
	comp=Z,4.5nm,0.9s,baz=126,slow=3.8,SNR=19						
BRTR	**Keskin Array B**	**145.60**	**315**		**PKPdf**	**08 12 29.7**	**-0.3**
OSTC	**Ostas**	**146.12**	**344**	*e*PKP	**PKPbc**	**08 12 32.5**	**+0.1**
TRPA	**Tarpa**	**146.12**	**335**	⇓P	**PKPbc**	**08 12 31.6**	**-0.8**
CHVC	**Chvalec**	**146.13**	**344**	*e*PKP	**PKPab**	**08 12 33.9**	**-0.7**
CLL	**Collm**	**146.16**	**348**	⇓*i*PKPbc	**PKPbc**	**08 12 32.0**	**-0.4**
	comp=Z,10.0nm,0.8s						
CLL	**Collm**	**146.16**	**348**		**PKPdf**	**08 12 29.8**	**-0.6**
HARR	**Harsova**	**146.18**	**326**	⇓P	**PKPbc**	**08 12 31.9**	**-0.8**
UPC	**Upice**	**146.21**	**344**	*e*PKP	**PKPbc**	**08 12 32.5**	**-0.1**
DPC	**Dobruska-Polom**	**146.28**	**344**	*e*PKP	**PKPbc**	**08 12 32.9**	**0.0**
BRG	**Berggiesshubel**	**146.37**	**347**	*i* PKP	**PKPbc**	**08 12 32.9**	**-0.2**
	comp=Z,3.7nm,0.8s						
LANS	**Liptovska Anna**	**146.39**	**339**	*e*PKP	**PKPbc**	**08 12 33.8**	**+0.6**
DOPR	**Dopca**	**146.55**	**330**	⇓P	**PKPbc**	**08 12 33.9**	**+0.2**
MLR	**Muntele Rosu**	**146.63**	**329**	⇓P	**PKPbc**	**08 12 33.2**	**-0.9**
CJR	**Cluj-Napoca**	**146.80**	**333**	⇓P	**PKPbc**	**08 12 34.3**	**-0.1**
PRU	**Pruhonice**	**147.06**	**345**	*e*PKP	**PKPbc**	**08 12 34.5**	**-0.4**
DRGR		**147.12**	**334**	⇓P	**PKPbc**	**08 12 34.8**	**-0.5**
VYHS	**Vyhne**	**147.17**	**339**	*e*PKP	**PKPbc**	**08 12 35.2**	**-0.1**
PSZ	**Piszkesteto**	**147.30**	**338**	⇓P	**PKPbc**	**08 12 35.8**	**0.0**
ARR	**Arges**	**147.35**	**330**	⇓P	**PKPbc**	**08 12 35.8**	**-0.1**
SIRR	**Siria**	**147.98**	**334**	⇓P	**PKPbc**	**08 12 37.2**	**-0.2**
BCLA	**Clavier**	**148.06**	**356**	PKiKP	**PKiKP**	**08 12 38.3**	**-0.5**
KHC	**Kasperske Hory**	**148.09**	**346**	*e*PKP	**PKPbc**	**08 12 36.8**	**-0.9**
KHC	**Kasperske Hory**	**148.09**	**346**		**PKPbc**	**08 12 36.6**	**-1.1**
GERES	**GERESS Array B**	**148.33**	**345**	PKPbc	**PKPbc**	**08 12 37.7**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=28,slow=3.9,SNR=16						
BZS	**Buzias**	**148.51**	**333**	⇓P	**PKPbc**	**08 12 38.0**	**-0.8**
CONA	**Conrad Observa**	**148.60**	**342**	*e*PKiKP	**PKPbc**	**08 12 38.9**	**-0.1**
	comp=Z,5.2nm,1.1s						
SOKA	**Soboth**	**149.97**	**342**	*e*PKiKP	**PKPbc**	**08 12 41.8**	**-0.6**
	comp=Z,1.3nm,0.5s						
VTS	**Vitosha**	**150.06**	**328**	⇓P	**PKPbc**	**08 12 39.8**	**-3.0**
WATA	**Walderalm**	**150.23**	**347**	*i* PKiKP	**PKPbc**	**08 12 42.1**	**-0.9**
	comp=Z,3.2nm,0.7s						
OBKA	**Obir**	**150.26**	**343**	*e*PKPbc	**PKPbc**	**08 12 41.6**	**-1.4**
	comp=Z,3.2nm,1.0s						
WTTA	**Wattenberg**	**150.28**	**347**	*e*PKiKP	**PKPbc**	**08 12 42.8**	**-0.4**
	comp=Z,5.4nm,0.6s						
MOTA	**Moosalm**	**150.32**	**348**	*e*PKiKP	**PKPbc**	**08 12 42.9**	**-0.3**
	comp=Z,7.5nm,1.0s						
MYKA	**Terra Mystica**	**150.40**	**344**	*e*PKiKP	**PKPbc**	**08 12 42.2**	**-1.1**
	comp=Z,4.6nm,0.8s						
SQTA	**Sankt Quirin**	**150.42**	**347**	*i* PKiKP	**PKPbc**	**08 12 43.0**	**-0.5**
	comp=Z,3.4nm,0.6s						
ABTA	**Abfaltersbach**	**150.57**	**345**	*e*PKiKP	**PKPbc**	**08 12 42.8**	**-1.0**
	comp=Z,4.8nm,0.6s						
FETA	**Feichten**	**150.70**	**348**	*i* PKiKP	**PKPbc**	**08 12 43.9**	**-0.3**
	comp=Z,3.3nm,0.8s						
STAL	**STALIGIAL**	**150.98**	**345**		**PKPbc**	**08 12 43.4**	**-1.2**
TORD	**Torodi Ar. Bea**	**174.65**	**175**	PKP	**PKPdf**	**08 13 00.5**	**-0.9**
	comp=Z,0.9nm,1.1s,baz=168,slow=1.7,SNR=3.4						
TORD				PKPab	**PKPab**	**08 14 38.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=194,slow=3.3,SNR=3.2						

NNC ***01*** *08:09:55.3±2.2, 38°.60N×69°.42E, h4km±8km, mb3.9, mpv3.5, Error ellipse: s-maj=17.3km s-min=9.4km az=178.0*

ISC 01 08:09:56.8±2.5, **38°.6N**±0°.1×**69°.35E**±0°.09, **h12**km, **n15**, σ**1s.45**/22, **10C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	**Tashkent**	**2.71**	**359**	*i* P	**Pg**	**08 10 47.0**	**-1.7**
TAS				*e*S	**Sb**	**08 11 18.2**	**-0.2**
CHRV	**Charvak**	**3.06**	**8**	*e*P	**Pn**	**08 10 42.2**	**-2.9**
CHRV				S	**Sb**	**08 11 28.2**	**-0.3**
KK31	**Karatay Array**	**4.57**	**11**	⇑Pn	**Pn**	**08 11 06.5**	**+0.7**
	1.4nm,0.4s,baz=196,slow=12,SNR=37						
KK31				⇑Pg	**Pb**	**08 11 19.3**	**+2.4**
	3.2nm,0.5s,baz=192,slow=17,SNR=9.4						
KK31				⇑Lg	Lg	08 12 19.6	
	11nm,0.6s,baz=196,slow=30,SNR=5.6						
AML	**Almayashu**	**4.83**	**42**	P	**Pn**	**08 11 08.7**	**-1.0**
	SNR=12						
EKS2	**Erkin-Say**	**5.26**	**38**	P	**Pn**	**08 11 14.9**	**-0.5**
	SNR=7.4						
UCH	**Uchtor**	**5.34**	**46**	P	**Pn**	**08 11 17.1**	**+0.3**
	SNR=5.3						
AAK	**Ala-Archa**	**5.61**	**43**	P	**Pn**	**08 11 18.7**	**-1.5**
	SNR=6.7						
AAK	**Ala-Archa**	**5.61**	**43**	⇑Pn	**Pn**	**08 11 18.3**	**-1.9**
	2.8nm,0.6s						
AAK				⇑Pg	**Pb**	**08 11 35.9**	**+1.1**
	5.4nm,0.6s						
AAK				⇓Sn	**Sn**	**08 12 25.1**	**+0.5**
	6.4nm,0.7s						
AAK				⇑Lg	Lg	08 12 53.5	
	11nm,0.8s						
KZA	**Kyzart**	**5.68**	**51**	P	**Pn**	**08 11 21.4**	**0.0**
	SNR=8.6						
KBK	**Karagaybulak**	**5.87**	**45**	P	**Pn**	**08 11 24.3**	**+0.5**
	SNR=6.4						
USP	**Ospenovka**	**6.07**	**38**	P	**Pn**	**08 11 24.9**	**-1.5**
	SNR=9.3						
TKM2	**Tokmak 2**	**6.40**	**46**	P	**Pn**	**08 11 30.0**	**-1.1**
	SNR=9.1						
TKM2	**Tokmak 2**	**6.40**	**46**	⇑Pn	**Pn**	**08 11 29.8**	**-1.3**
	3.3nm,0.6s						
TKM2				⇑Lg	Lg	08 13 18.7	
	3.6nm,0.7s						
AB31	**Akbulak array**	**12.60**	**331**	⇑Pn	**Pn**	**08 12 56.3**	**+0.5**
	0.7nm,0.5s,baz=137,slow=12,SNR=42						
AB31				⇓Sn	**Sn**	**08 15 15.5**	**-0.5**
	1.7nm,0.7s,baz=147,slow=23,SNR=9.0						
AKTO	**Aktyubinsk**	**14.30**	**329**	⇓Pn	**Pn**	**08 13 18.3**	**-0.7**
	2.9nm,0.8s						
AKTO				⇑Sn	**Sn**	**08 16 00.2**	**+2.8**
	2.9nm,1.0s						

AUST ***01*** *08:32:15.7±0.0, 31°.93S×138°.84E, h10km, Error ellipse: s-maj=0.1km s-min=0.1km az=275.0*
IDC ***01*** *08:32:16.8±4.7, 31°.50S×138°.85E, h0km, mb1 3.0/3, mb1mx2.9/30, mbtmp2.7/3, ML2.5/3, Error ellipse: s-maj=85.4km s-min=22.8km az=36.0*

ISC 01 08:32:14.2±1.3, **31°.92S**±0°.08×**138°.69E**±0°.06, **h10**km, **n9**, σ**2s.06**/11, **South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	**1.52**	**344**	P	**Pg**	**08 32 43.8**	**+0.5**
	baz=1.6						
HTT	**Hallett**	**1.52**	**173**	P	**Pn**	**08 32 42.3**	**+0.7**
	baz=1.5						
BBOO	**Buckleboo**	**2.40**	**247**	P	**Pn**	**08 32 55.2**	**+1.6**
	baz=2.5						
STKA	**Stephens Creek**	**2.47**	**90**	Pn	**Pn**	**08 32 56.5**	**+2.0**
	0.8nm,0.3s,baz=275,slow=15,SNR=25						
STKA				Sn	**Sb**	**08 33 28.9**	**-0.2**
	3.3nm,0.3s,baz=168,slow=20,SNR=11						
INKA	**Innaminka**	**4.53**	**24**	P	**Pn**	**08 33 26.0**	**+3.2**
	baz=4.5						
OOD	**Oodnadatta**	**4.87**	**327**	P	**Pn**	**08 33 30.2**	**+2.7**
	baz=5.0						
CMSA	**Cobar Meteorol**	**5.97**	**88**	P	**Pn**	**08 33 42.2**	**-0.5**
	baz=5.8						
ASAR	**Alice Springs**	**9.24**	**332**	Pn	**Pn**	**08 34 27.7**	**0.0**
	0.0nm,0.3s,baz=145,slow=13,SNR=3.1						
ASAR				Sn	**Sn**	**08 36 09.1**	**-2.8**
	0.0nm,0.3s,baz=151,slow=21,SNR=3.5						
WRA	**Warramunga Arr**	**12.55**	**341**	Pn	**Pn**	**08 35 11.9**	**-0.9**
	0.0nm,0.3s,baz=160,slow=12,SNR=3.9						

IDC 01 08:37:09.0±3.4, **20°.84N**×**146°.17E**, **h0**km, **mb3.7**/6, **mb1 3.8**/6, **mb1mx3.5**/48, **mbtmp3.7**/6, **Error ellipse: s-maj=143.0km s-min=21.6km az=81.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	**Songino Array**	**41.78**	**320**	P	P	08 44 59.4	-1.0
	0.2nm,0.3s,baz=131,slow=8.4,SNR=4.9						
WRA	**Warramunga Arr**	**42.15**	**197**	P	P	08 45 03.9	+0.4
	0.6nm,0.8s,baz=21,slow=8.8,SNR=6.1						
ASAR	**Alice Springs**	**45.82**	**196**	P	P	08 45 32.3	-0.7
	0.3nm,0.8s,baz=10,slow=5.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**56.61**	**322**	P	P	08 46 54.2	+0.6
	0.3nm,0.4s,baz=111,slow=6.3,SNR=3.6						
KURBB	**Kurchatov Arra**	**60.05**	**317**	P	P	08 47 16.8	-0.9
	3.2nm,0.2s,baz=98,slow=7.7,SNR=6.5						
BVAR	**Borovoye Array**	**65.13**	**320**	P	P	08 47 52.8	+1.1
	1.0nm,0.6s,baz=90,slow=7.4,SNR=7.5						
FINES	**FINESS Array B**	**85.14**	**335**	P	P	08 49 46.9	0.0
	3.8nm,1.0s,baz=51,slow=7.6,SNR=4.8						

IDC ***01*** *08:46:43.8±1.0, 39°.13N×106°.32E, h0km, mb3.6/7, mb1 3.6/9, mb1mx3.4/51, mbtmp3.5/9, ML2.8/1, Error ellipse: s-maj=35.9km s-min=15.4km az=62.0*

ISC 01 08:46:46.7±0.7, **39°.17N**±0°.06×**106°.17E**±0°.05, **h10**km, **n15**, σ**1s.77**/20, **mb3.7**/6, **Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	**Baotou**	**3.29**	**63**	*e*Pg	**Pn**	**08 47 37.7**	**-0.6**
BTO				Sg	**Sn**	**08 48 17.8**	**+0.2**
LZH	**Lanzhou**	**3.59**	**212**	*e*Pg	**Pb**	**08 47 49.3**	**-1.1**
LZH				Sg	**Sb**	**08 48 35.9**	**+1.8**
LZH				smax	smax		
	comp=N,280nm,1.0s						
LZH				smax	smax		
	comp=E,200nm,1.1s						
LZH				LR	LR		
	comp=N,260nm,5.4s						
LZH				LR	LR		
	comp=E,220nm,4.6s						
LZH				LR	LR		
	comp=Z,300nm,6.2s						
GTA	**Gaotai**	**4.94**	**275**	Pn	**Pn**	**08 47 59.8**	**-1.2**
GTA				Pg	**Pb**	**08 48 13.4**	**+0.2**
GTA				Sn	**Sn**	**08 48 57.3**	**-0.9**
GTA				Sg	**Sb**	**08 49 17.6**	**+4.9**
GTA				smax	smax		
	comp=N,99nm,1.0s						
GTA				smax	smax		
	comp=E,65nm,1.0s						
GTA				LR	LR		
	comp=N,150nm,4.7s						
GTA				LR	LR		
	comp=E,91nm,4.4s						
GTA				LR	LR		
	comp=Z,72nm,4.3s						
XAN	**Xi'an**	**5.58**	**156**	Pg	**Pb**	**08 48 26.8**	**+2.6**
XAN				Sg	**Sb**	**08 49 32.9**	**+1.7**
XAN				smax	smax		
	comp=N,34nm,0.9s						
XAN				smax	smax		
	comp=E,22nm,0.7s						
I34MN	**SONGINO INFRAS**	**8.63**	**1**	*i*		09 39 20.0	
	baz=176,slow=324,SNR=2.9						
SONM	**Songino Array**	**8.66**	**1**	Pn	**Pn**	**08 48 52.8**	**+0.7**
	baz=183,slow=13,SNR=2.9						
SONM				Lg	Lg	08 51 19.3	
	comp=E,0.4nm,0.3s,baz=167,slow=28,SNR=3.7						
WMQ	**Urumqi**	**14.60**	**294**	*e*P	**Pn**	**08 50 12.8**	**-0.4**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MKAR	**Makanchi Array**	**19.01**	**301**	P	**P**	**08 51 07.5**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=103,slow=10,SNR=3.7						
ZALV	**Zalesovo Beam**	**20.71**	**323**	P	**P**	**08 51 26.0**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=122,slow=9.7,SNR=5.4						
CMAR	**Chiang Mai Arr**	**21.58**	**199**	P	**P**	**08 51 35.3**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=12,slow=8.9,SNR=5.3						
KURBB	**Kurchatov Arra**	**22.54**	**310**	P	**P**	**08 51 46.8**	**+0.2**
	comp=Z,2.3nm,0.6s,baz=108,slow=13,SNR=3.3						
BVAR	**Borovoye Array**	**28.08**	**311**	P	**P**	**08 52 38.3**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=106,slow=8.3,SNR=7.1						
BRTR	**Keskin Array B**	**54.52**	**295**	P	**P**	**08 56 14.1**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=66,slow=8.4,SNR=3.4						
WRA	**Warramunga Arr**	**64.45**	**151**	P	**P**	**08 57 20.9**	**-2.4**
	comp=Z,0.3nm,0.7s,baz=319,slow=8.6,SNR=3.9						
ASAR	**Alice Springs**	**67.69**	**153**	P	**P**	**08 57 42.5**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=338,slow=6.6,SNR=20						

GCG ***01*** *09:31:12.7±0.5, 13°.55N×90°.89W, h38km±88km, MD3.6*
SNET ***01*** *09:31:14.1±1.3, 13°.66N×90°.70W, h34km±31km, ML3.2*

ISC 01 09:31:11.1±3.0, **13°.5N**±0°.1×**90°.81W**±0°.08, **h25**km±15km, **n10**, σ**0s.69**/17, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.80**	**27**	*e*P	**Pb**	**09 31 25.9**	**-0.6**
IXG	**Ixpaco**	**0.80**	**27**	*e*P	**Pb**	**09 31 27.2**	**+0.8**
FAME	**Alcalda de S**	**0.86**	**63**	*e*P	**Pb**	**09 31 27.6**	**+0.1**
FAME				*e*S	**Sb**	**09 31 38.2**	**-0.4**
FUG	**Fuego 3**	**0.99**	**358**	*e*P	**Pb**	**09 31 29.6**	**-0.1**
FUG				*e*S	**Sb**	**09 31 42.2**	**-0.2**
CEVE	**Cerro Verde**	**1.21**	**72**	*e*P	**Pn**	**09 31 33.2**	**+0.4**
CEVE				*e*S	**Sn**	**09 31 47.6**	**-0.9**
CEVE				AML	AML	09 31 51.1	
	comp=Z,598nm,0.2s						
NBG	**Las Nubes**	**1.21**	**22**	*e*S	**Sn**	**09 31 49.3**	**+0.8**
SBLS	**San Blas**	**1.22**	**72**	*e*P	**Pn**	**09 31 33.2**	**+0.4**
SBLS				*e*S	**Sn**	**09 31 48.6**	**0.0**
SNJE	**San Jose**	**1.24**	**71**	*e*P	**Pn**	**09 31 33.6**	**+0.5**
SNJE				*e*S	**Sn**	**09 31 48.2**	**-0.9**
UNIC	**Universidad Ca**	**1.33**	**67**	*e*P	**Pn**	**09 31 34.7**	**+0.5**
UNIC				*e*S	**Sn**	**09 31 50.9**	**-0.3**
STG3	**Santiaguito 3,**	**1.45**	**329**	*e*P	**Pn**	**09 31 36.6**	**+0.6**
STG3				*e*S	**Sn**	**09 31 53.1**	**-1.2**

IDC ***01*** *10:10:46.9±5.5, 4°.62N×95°.07E, h55km±46km, mb3.6/8, mb1 3.7/10, mb1mx3.5/54, mbtmp3.8/10, ML3.7/2, MS3.2/2, Ms1 3.3/2, ms1mx2.6/35, Error ellipse: s-maj=61.2km s-min=16.9km az=55.0*
NEIC ***01*** *10:10:47.9±1.3, 4°.7N±0°.1×95°.2E±0°.1, h56km±11km, mb4.0/4, Error ellipse: s-maj=15.0km s-min=14.1km az=225.0*

ISC 01 10:10:46.9±0.7, **4°.70N**±0°.08×**95°.09E**±0°.08, **h48**km, **n25**, σ**0s.91**/26, **mb3.9**/10, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**4.19**	**144**	Pn	**Pn**	**10 11 48.6**	**+0.3**
GSI				Sn	**Sn**	**10 12 35.0**	**-1.1**
PSI	**Prapat**	**4.27**	**116**	P	**Pn**	**10 11 51.4**	**+1.9**
	1.7nm,0.3s,baz=326,slow=14,SNR=6.5						
PSI				S	**Sn**	**10 12 38.9**	**+0.7**
	0.6nm,0.3s,baz=12,slow=20,SNR=2.4						
RPSI	**Rantau Prapat**	**4.32**	**117**		**Pn**	**10 11 51.4**	**+1.3**
RPSI					**Sn**	**10 12 38.9**	**-0.3**
RPSI	**Rantau Prapat**	**4.32**	**117**	Pn	**Pn**	**10 11 51.9**	**+1.8**
KULM	**Kulim**	**5.57**	**84**	Pn	**Pn**	**10 12 07.5**	**+0.2**
KULM				Sn	**Sn**	**10 13 09.9**	**-0.2**
IPM	**Ipoh**	**5.92**	**92**	Pn	**Pn**	**10 12 12.3**	**+0.1**
IPM				Sn	**Sn**	**10 13 17.5**	**-1.3**
CMAR	**Chiang Mai Arr**	**14.18**	**15**	P	**Pn**	**10 14 05.0**	**-0.1**
	0.2nm,0.3s,baz=205,slow=11,SNR=3.1						
CMAR				LR	LR	10 19 11.7	
	comp=Z,42nm,19.3s,baz=194,slow=35						
H08S2	**Diego Garcia H**	**25.67**	**242**	T	T	10 43 12.5	
	baz=62,slow=76,SNR=22						
H08S3	**Diego Garcia H**	**25.67**	**242**	T	T	10 43 15.1	

	baz=62,slow=76,SNR=29						
H08S1	**Diego Carcia H**	**25.68**	**242**	T	T	10 43 16.3	
	baz=62,slow=76,SNR=7.9						
MK31	**Makanchi Array**	**43.37**	**347**	P	**P**	**10 18 44.5**	**-0.1**
MKAR	**Makanchi Array**	**43.37**	**347**	P	**P**	**10 18 44.1**	**-0.5**
	1.0nm,0.6s,baz=167,slow=7.6,SNR=20						
MAKZ	**Makanchi**	**43.45**	**347**	P	**P**	**10 18 44.8**	**-0.5**
MAKZ				IAmb	IAmb	10 18 45.6	
	comp=Z,1.4nm,0.6s						
SONM	**Songino Array**	**44.05**	**11**	P	**P**	**10 18 51.1**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=216,slow=6.4,SNR=2.4						
WRA	**Warramunga Arr**	**45.70**	**124**	P	**P**	**10 19 02.5**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=301,slow=9.2,SNR=9.8						
WR0	**Warramunga Arr**	**45.87**	**124**	P	**P**	**10 19 04.7**	**-0.2**
ASAR	**Alice Springs**	**47.19**	**128**	P	**P**	**10 19 14.2**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=294,slow=7.8,SNR=6.8						
ZALV	**Zalesovo Beam**	**49.80**	**352**	P	**P**	**10 19 34.1**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=184,slow=7.2,SNR=6.3						
ABKAR	**Akbulak array**	**53.45**	**332**	P	**P**	**10 20 03.1**	**+1.0**
BRTR	**Keskin Array B**	**65.21**	**312**	P	**P**	**10 21 23.1**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=129,slow=11,SNR=4.1						
BURAR	**Bucovina Array**	**73.02**	**318**	P	**P**	**10 22 12.7**	**+0.7**
BUR08	**Bucovina Ar. S**	**73.04**	**318**	P	**P**	**10 22 12.7**	**+0.6**
BUR08				IAmb	IAmb	10 22 20.1	
	comp=Z,2.9nm,1.3s						
FINES	**FINESS Array B**	**75.94**	**332**	P	**P**	**10 22 28.0**	**-0.4**
	comp=Z,2.8nm,1.0s,baz=127,slow=8.2,SNR=3.5						
ARCES	**ARCESS Array B**	**78.55**	**340**	P	**P**	**10 22 42.5**	**-0.5**
	comp=Z,9.5nm,1.2s,baz=100,slow=6.6,SNR=6.4						
URZ	**Urewera**	**86.64**	**129**	LR	LR	11 05 55.8	
	comp=Z,30nm,18.2s,baz=298,slow=38						

*NNC **01** 10:26:16.3±0.9, 40°.80N×73°.32E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=7.6km s-min=3.4km az=171.0*
*SOME **01** 10:26:16.0, 40°.82N×73°.38E, h10km*
*KRNET **01** 10:26:17.1±0.1, 40°.83N×73°.37E, h17km, mb3.5*
ISC 01 10:26:14.9±1.2**, 40°.77N**±0°.04×**73°.51E**±0°.02**, h8**km±13km**, n74, σ1s.31**/114**, 22C-19D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.68**	**324**	⇑iP	**Pg**	**10 26 28.0**	**-0.2**
	baz=29						
ARSB				⇑iS	**Sg**	**10 26 36.3**	**-0.8**
	baz=29						
ANR	**Andizhan**	**0.88**	**269**	P	**Pg**	**10 26 31.3**	**-0.5**
ANR				S	**Sg**	**10 26 41.9**	**-1.3**
ARLS	**Aral**	**1.25**	**29**	⇓iP	**Pg**	**10 26 40.7**	**+1.8**
	baz=34						
ARLS				⇓iS	**Sg**	**10 26 57.7**	**+2.5**
	baz=34						
AML	**Almayashu**	**1.37**	**6**	⇑iP	**Pg**	**10 26 41.7**	**+0.5**
	baz=10.0						
AML				⇑iS	**Sg**	**10 26 59.6**	**+0.6**
	baz=10.0						
AML	**Almayashu**	**1.37**	**6**	P	**Pg**	**10 26 42.0**	**+0.7**
	SNR=241						
ARK	**Arkit**	**1.56**	**312**	⇓iP	**Pb**	**10 26 43.6**	**-0.4**
	baz=13						
ARK				⇓iS	**Sb**	**10 27 03.3**	**-0.6**
	baz=13						
SHAK	**Shakhimardan**	**1.58**	**240**	iP	Pn	10 26 34.3	-9.1
SHAK				iS	Sn	10 26 54.2	-10
UCH	**Uchtor**	**1.64**	**27**	⇑iP	**Pg**	**10 26 47.3**	**+0.9**
	baz=31						
UCH				⇑iS	**Sg**	**10 27 09.2**	**+1.5**
	baz=31						
UCH	**Uchtor**	**1.64**	**27**	P	**Pg**	**10 26 47.6**	**+1.1**
	SNR=175						
KZA	**Kyzart**	**1.85**	**44**	⇓iP	**Pg**	**10 26 51.5**	**+1.1**
	baz=48						
KZA				⇓iS	**Sg**	**10 27 16.9**	**+2.5**
	baz=48						
KZA	**Kyzart**	**1.85**	**44**	P	**Pg**	**10 26 51.5**	**+1.1**
	SNR=55						
EKS2	**Erkin-Say**	**1.90**	**6**	⇓iP	**Pg**	**10 26 51.1**	**-0.3**
	baz=9.0						
EKS2				⇓iS	**Sg**	**10 27 15.6**	**-0.5**
	baz=9.0						
EKS2	**Erkin-Say**	**1.90**	**6**	P	**Pg**	**10 26 51.1**	**-0.3**
	SNR=72						
MRKS	**Merke**	**1.99**	**354**	eP	**Pb**	**10 26 51.5**	**+0.2**
	89nm,0.3s						
MRKS				eS	**Sg**	**10 27 17.9**	**-0.8**
	160nm,0.3s						
MRKS	**Merke**	**1.99**	**354**	Pg	**Pb**	**10 26 51.5**	**+0.2**
	89nm,0.3s						
MRKS				Lg	Lg	10 27 17.9	
	160nm,0.3s						
NRN	**Naryn**	**1.99**	**70**	⇑iP	**Pg**	**10 26 54.2**	**+1.0**
	baz=72						
NRN				⇑iS	**Sg**	**10 27 20.8**	**+1.8**
	baz=72						
AAK	**Ala-Archa**	**2.01**	**21**	⇑iP	**Pg**	**10 26 53.0**	**-0.4**
	baz=25						
AAK				⇑iS	**Sg**	**10 27 19.3**	**-0.1**
	baz=25						
AAK	**Ala-Archa**	**2.01**	**21**	P	**Pg**	**10 26 53.2**	**-0.2**
	SNR=96						
AAK	**Ala-Archa**	**2.01**	**21**	⇑Pn	**Pg**	**10 26 53.0**	**-0.4**
	64nm,0.4s						
AAK				⇑Sn	**Sg**	**10 27 20.6**	**+1.2**
	100nm,0.6s						
KBK	**Karagaybulak**	**2.17**	**29**	⇓iP	**Pg**	**10 26 55.6**	**-0.9**
	baz=32						
KBK				⇓iS	**Sg**	**10 27 23.6**	**-1.1**
	baz=32						
KBK	**Karagaybulak**	**2.17**	**29**	P	**Pg**	**10 26 56.2**	**-0.4**
	SNR=48						
BTK	**Batken**	**2.18**	**252**	⇓eP	**Pb**	**10 26 53.9**	**-0.7**
	baz=49						
BTK				⇓iS	**Sb**	**10 27 21.5**	**-0.2**
	baz=49						
FRU1	**Bishkek**	**2.20**	**22**	⇑iP	**Pb**	**10 26 55.7**	**+0.6**
	baz=25						
FRU1				⇑iS	**Sg**	**10 27 24.0**	**-1.7**
	baz=25						
CHMS	**Chumysh**	**2.41**	**22**	⇑iP	**Pb**	**10 26 58.4**	**-0.2**
	baz=25						
CHMS				⇑iS	**Sb**	**10 27 28.8**	**+0.3**
	baz=25						
CHMS	**Chumysh**	**2.41**	**22**	P	**Pb**	**10 26 58.9**	**+0.3**
	SNR=23						
ULHL	**Ulahol**	**2.52**	**53**	⇓iP	**Pb**	**10 27 00.9**	**+0.3**
	baz=56						
ULHL				⇓iS	**Sg**	**10 27 33.5**	**-2.6**
	baz=56						
ULHL	**Ulahol**	**2.52**	**53**	P	**Pb**	**10 27 00.6**	**0.0**
	SNR=7.4						
USP	**Ospenovka**	**2.60**	**16**	⇓iP	**Pb**	**10 27 00.9**	**-0.9**
	baz=19						
USP				⇓iS	**Sb**	**10 27 33.1**	**-0.8**
	baz=19						
USP	**Ospenovka**	**2.60**	**16**	P	**Pb**	**10 27 01.1**	**-0.7**
	SNR=15						
TKM2	**Tokmak 2**	**2.65**	**35**	P	**Pb**	**10 27 02.5**	**-0.3**
	SNR=22						
TKM2	**Tokmak 2**	**2.65**	**35**	⇓Pn	**Pb**	**10 27 01.7**	**-1.1**
	8.2nm,0.4s						
TKM2				⇓Lg	Lg	10 27 41.2	
	17nm,0.5s						
DZA	**Taraz**	**2.67**	**323**	eP	**Pb**	**10 27 03.6**	**+0.6**
	102nm,0.1s						
DZA				eS	**Sg**	**10 27 38.2**	**-2.6**
	194nm,0.3s						
DZA	**Taraz**	**2.67**	**323**	Pg	**Pb**	**10 27 03.7**	**+0.6**
	102nm,0.1s						
DZA				Lg	Lg	10 27 38.2	
	194nm,0.3s						
SGDS	**Sogindy**	**2.81**	**17**	Pg	**Pg**	**10 27 07.2**	**-1.5**
	12nm,0.3s						
SGDS				Lg	Lg	10 27 44.0	
	29nm,0.4s						
CHRV	**Charvak**	**2.83**	**289**	eP	**Pb**	**10 27 05.9**	**+0.3**
CHRV				S	**Sg**	**10 27 49.7**	**+4.0**
KST	**Kastek**	**2.92**	**38**	eP	**Pg**	**10 27 11.0**	**+0.2**
	9.5nm,0.4s						
KST				eS	**Sg**	**10 27 51.1**	**+2.5**
	33nm,0.4s						
KST	**Kastek**	**2.92**	**38**	Pg	**Pg**	**10 27 11.0**	**+0.2**
	9.5nm,0.4s						
KST				Lg	Lg	10 27 51.1	
	33nm,0.4s						
IUG	**Iuzhnay**	**2.96**	**299**	eP	**Pb**	**10 27 07.8**	**-0.1**
	7.1nm,0.3s						
IUG				eS	**Sb**	**10 27 45.1**	**+0.9**
	116nm,0.3s						
IUG	**Iuzhnay**	**2.96**	**299**	Pg	**Pb**	**10 27 07.9**	**-0.1**
	7.1nm,0.3s						
IUG				Lg	Lg	10 27 45.1	
	116nm,0.3s						
DGS	**Degeres**	**2.99**	**34**	eP	**Pg**	**10 27 12.0**	**-0.2**
	16nm,0.6s						
DGS				eS	**Sg**	**10 27 52.5**	**+1.5**
	30nm,0.4s						
DGS	**Degeres**	**2.99**	**34**	Pg	**Pg**	**10 27 12.0**	**-0.2**
	16nm,0.6s						
DGS				Lg	Lg	10 27 52.5	
	30nm,0.4s						
KDJ	**Kajisay**	**3.07**	**63**	⇑iP	**Pb**	**10 27 09.0**	**-0.9**
	baz=64						
KDJ				⇑iS	**Sb**	**10 27 46.9**	**-0.7**
	baz=64						
MTBS	**Maitube**	**3.21**	**42**	eP	**Pg**	**10 27 15.8**	**-0.6**
	3.8nm,0.3s						
MTBS				eS	**Sg**	**10 27 59.0**	**+1.0**
	14nm,0.4s						
MTBS	**Maitube**	**3.21**	**42**	Pg	**Pg**	**10 27 15.8**	**-0.6**
	3.8nm,0.3s						
MTBS				Lg	Lg	10 27 59.0	
	14nm,0.4s						
KK31	**Karatay Array**	**3.23**	**317**	⇓Pn	**Pn**	**10 27 06.8**	**+0.8**
	0.7nm,0.4s,baz=135,slow=11,SNR=90						
KK31				⇑Pg	**Pb**	**10 27 13.2**	**+0.7**
	4.8nm,0.5s,baz=134,slow=15,SNR=32						
KK31				⇑Lg	Lg	10 27 53.9	
	15nm,0.3s,baz=144,slow=27,SNR=11						
TAS	**Tashkent**	**3.24**	**281**	eS	**Sb**	**10 27 54.8**	**+2.6**
TARG	**Taragay, Kyrgy**	**3.38**	**72**	⇑iP	**Pb**	**10 27 13.5**	**-1.7**
	baz=73						
TARG				⇑iS	**Sb**	**10 27 55.0**	**-1.5**
	baz=73						
TNSS	**Tian-Shan**	**3.42**	**47**	eP	**Pg**	**10 27 19.7**	**-0.8**
	6.8nm,0.4s						
TNSS				eS	**Sg**	**10 28 05.3**	**+0.4**
	27nm,0.4s						
TNSS	**Tian-Shan**	**3.42**	**47**	Pg	**Pg**	**10 27 19.7**	**-0.8**
	6.8nm,0.4s						
TNSS				Lg	Lg	10 28 06.2	
	23nm,0.5s						
BRLS	**Borolday**	**3.55**	**311**	eP	**Pb**	**10 27 17.8**	**-0.2**
	0.6nm,0.2s						
BRLS				eS	**Sb**	**10 28 02.2**	**+0.9**
	43nm,0.4s						
BRLS	**Borolday**	**3.55**	**311**	Pg	**Pb**	**10 27 17.8**	**-0.2**
	0.6nm,0.2s						
BRLS				Lg	Lg	10 28 02.2	
	5.6nm,0.3s						
MDOK	**Medeo**	**3.56**	**47**	eP	**Pg**	**10 27 23.0**	**-0.1**
	4.0nm,0.4s						
MDOK				eS	**Sg**	**10 28 11.3**	**+2.0**
	27nm,0.5s						
MDOK	**Medeo**	**3.56**	**47**	Pg	**Pg**	**10 27 21.9**	**-1.2**
	4.8nm,0.5s						
MDOK				Lg	Lg	10 28 10.2	
	22nm,0.6s						
MDOK	**Medeo**	**3.56**	**47**	Pg	**Pg**	**10 27 23.0**	**-0.1**
	4.0nm,0.4s						
MDOK				Lg	Lg	10 28 11.3	
	27nm,0.5s						
KOTS	**Kotyrbulak**	**3.64**	**46**	eP	**Pg**	**10 27 24.7**	**0.0**
	10nm,0.3s						
KOTS				eS	**Sg**	**10 28 14.4**	**+2.5**
	123nm,0.5s						
KOTS	**Kotyrbulak**	**3.64**	**46**	Pg	**Pg**	**10 27 24.7**	**0.0**
	10nm,0.3s						
KOTS				Lg	Lg	10 28 14.4	
	123nm,0.5s						
KUU	**Kurty**	**3.76**	**33**	eP	**Pg**	**10 27 25.5**	**-1.5**
	9.1nm,0.5s						
KUU				eS	**Sg**	**10 28 15.5**	**-0.2**
	30nm,0.4s						
KUU	**Kurty**	**3.76**	**33**	Pg	**Pg**	**10 27 25.5**	**-1.5**
	9.1nm,0.5s						
KUU				Lg	Lg	10 28 15.5	
	30nm,0.4s						
KTBS	**Karatobe**	**3.77**	**38**	eP	**Pg**	**10 27 25.8**	**-1.3**
	4.9nm,0.4s						
KTBS				eS	**Sg**	**10 28 16.0**	**+0.2**
	44nm,0.3s						
KTBS	**Karatobe**	**3.77**	**38**	Pg	**Pg**	**10 27 25.8**	**-1.3**
	4.9nm,0.4s						
KTBS				Lg	Lg	10 28 16.0	
	44nm,0.3s						
CHKK	**Chushkaly**	**4.02**	**39**	eP	**Pg**	**10 27 30.6**	**-1.3**
	4.1nm,0.3s						
CHKK				eS	**Sg**	**10 28 24.7**	**+0.8**
	20nm,0.3s						
CHKK	**Chushkaly**	**4.02**	**39**	Pg	**Pg**	**10 27 30.6**	**-1.3**
	4.1nm,0.3s						
CHKK				Lg	Lg	10 28 24.7	
	20nm,0.3s						
BTLS	**Baital**	**4.29**	**5**	eP	**Pb**	**10 27 33.4**	**+2.8**
	0.9nm,0.2s						
BTLS				eS	**Sg**	**10 28 28.6**	**-4.0**
	11nm,0.3s						
BTLS	**Baital**	**4.29**	**5**	Pg	**Pg**	**10 27 34.7**	**-2.3**
	0.9nm,0.2s						
BTLS				Lg	Lg	10 28 30.2	
SATY	**Saty**	**4.31**	**56**	eP	**Pg**	**10 27 36.4**	**-1.0**
	8.2nm,0.5s						
SATY				eS	**Sg**	**10 28 34.2**	**+1.0**
	22nm,0.4s						
SATY	**Saty**	**4.31**	**56**	Pg	**Pg**	**10 27 36.4**	**-1.0**
	8.2nm,0.5s						
SATY				Lg	Lg	10 28 34.2	
	18nm,0.7s						
ZHN	**Zhinishke**	**4.38**	**55**	eP	**Pg**	**10 27 37.8**	**-1.1**
	1.7nm,0.2s						
ZHN				eS	**Sg**	**10 28 36.2**	**+0.6**
	5.0nm,0.2s						
KURS	**Kuram**	**4.40**	**50**	eP	**Pg**	**10 27 38.0**	**-1.2**
	4.1nm,0.7s						
KURS				eS	**Sg**	**10 28 36.8**	**+0.6**
	9.5nm,0.8s						
KURS	**Kuram**	**4.40**	**50**	Pg	**Pg**	**10 27 38.0**	**-1.2**
	4.1nm,0.7s						
KURS				Lg	Lg	10 28 36.8	
	9.5nm,0.8s						
ARXS	**Arharly**	**4.69**	**41**	eP	**Pg**	**10 27 42.2**	**-2.6**
	2.4nm,0.5s						
ARXS				eS	**Sg**	**10 28 44.6**	**-1.0**
	24nm,0.5s						
ARXS	**Arharly**	**4.69**	**41**	Pg	**Pg**	**10 27 42.2**	**-2.6**
	2.4nm,0.5s						
ARXS				Lg	Lg	10 28 44.6	
	24nm,0.5s						
KPKS	**Kokpek**	**4.70**	**53**	eP	**Pg**	**10 27 43.6**	**-1.3**
	4.4nm,0.3s						
KPKS				eS	**Sg**	**10 28 46.4**	**+0.7**
	17nm,0.5s						
UZB	**Uzynbulak**	**4.75**	**58**	eP	**Pg**	**10 27 44.5**	**-1.3**
	2.3nm,0.2s						
UZB				eS	**Sg**	**10 28 47.8**	**+0.5**
	8.8nm,0.4s						
PDGK	**Podgornoye**	**5.13**	**58**	Pg	**Pg**	**10 27 50.9**	**-2.3**
	0.8nm,0.4s						
PDGK				Lg	Lg	10 28 59.0	
	4.9nm,0.6s						

*IDC **01** 10:55:14.3±1.2, 56°.39S×27°.35W, h0km, mb3.9/3, mb1 3.9/3, mb1mx3.6/28, mbtmp3.8/3, MS3.2/1, Ms1 3.2/1, ms1mx2.8/20, Error ellipse: s-maj=52.9km s-min=42.6km az=29.0*
*NEIC **01** 10:55:27.4±2.0, 56°.1S±0°.2×27°.6W±0°.2, h98km±8km, mb4.4/6, Error ellipse: s-maj=25.4km s-min=13.8km az=207.0*
ISC 01 10:55:29.6±0.7**, 56°.2S**±0°.1×**27°.9W**±0°.1**, h121**km**, n18, σ1s.15**/17**, mb4.1**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.29**	**287**		**Pn**	**10 56 47.2**	**+1.0**
HOPE				Sn	**Sn**	**10 57 43.8**	**-2.2**
SNAA	**Sanae**	**18.79**	**155**	P	**P**	**10 59 38.3**	**-0.9**
SNAA				IAmb	IAmb	10 59 38.9	
	comp=Z,9.3nm,0.5s						
QSPA	**South Pole Qui**	**34.09**	**180**	LR	LR	11 13 54.0	
	comp=Z,44nm,21.5s,baz=142,slow=33						
QSPA	**South Pole Qui**	**34.09**	**180**	P	**P**	**11 02 03.6**	**+1.4**
QSPA				IAmb	IAmb	11 02 12.2	
	comp=Z,10nm,1.8s						
BOSA	**Boshof**	**46.36**	**76**	P	**P**	**11 03 42.2**	**-1.3**
BOSA				IAmb	IAmb	11 03 48.6	
	comp=Z,15nm,1.6s						
VNDA	**Vanda**	**46.44**	**183**	P	**P**	**11 03 42.7**	**-0.7**
VNDA				IAmb	IAmb	11 03 53.0	
	comp=Z,7.2nm,1.8s						
PB11	**IPOC Station P**	**47.83**	**302**	P	**P**	**11 03 54.0**	**-1.0**
LPAZ	**La Paz**	**50.14**	**306**	P	**P**	**11 04 15.4**	**+2.2**
	comp=Z,0.3nm,0.3s,baz=173,slow=5.7,SNR=4.9						
LPAZ	**La Paz**	**50.14**	**306**	P	**P**	**11 04 13.9**	**+0.8**
TORD	**Torodi Ar. Bea**	**73.34**	**30**	P	**P**	**11 06 48.3**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=205,slow=5.5,SNR=3.0						
ASAR	**Alice Springs**	**98.99**	**163**	P	Pdif	11 08 56.2	-0.2
	comp=Z,0.2nm,0.7s,baz=190,slow=4.1,SNR=6.5						
YKA	**Yellowknife Ar**	**136.00**	**318**	PKP	**PKPdf**	**11 14 35.1**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=130,slow=2.5,SNR=3.7						
YKA	**Yellowknife Ar**	**136.00**	**318**		**PKiKP**	**11 14 35.8**	**-0.5**
INK	**Inuvik**	**145.65**	**321**	PKPbc	**PKPab**	**11 14 53.3**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=119,slow=3.5,SNR=4.1						
ILAR	**Eielson Array**	**149.91**	**312**	PKPbc	**PKiKP**	**11 15 04.6**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=128,slow=0.5,SNR=17						
ILAR	**Eielson Array**	**149.91**	**312**		**PKiKP**	**11 15 04.9**	**+0.1**
SONM	**Songino Array**	**151.10**	**87**	PKPbc	**PKPbc**	**11 15 07.3**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=241,slow=3.1,SNR=4.1						
SONM	**Songino Array**	**151.10**	**87**		**PKiKP**	**11 15 08.1**	**+0.1**

*TEH **01** 11:01:26.7, 37°.30N×57°.15E, h8km, ML3.5*
*THR **01** 11:01:27.6±0.5, 37°.30N×57°.16E, h14km±4km, ML3.3*
*NNC **01** 11:01:37.1±16.0, 38°.13N×56°.81E, h0km, mb3.7, Error ellipse: s-maj=149.0km s-min=87.1km az=34.0*
ISC 01 11:01:27.8±0.8**, 37°.35N**±0°.05×**57°.15E**±0°.05**, h10**km**, n49, σ1s.61**/50**, 4C-2D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJRD	**Bojnurd**	**0.41**	**30**	ePg	**Pg**	**11 01 36.6**	**+0.8**
BJRD	**Bojnurd**	**0.41**	**30**	ePg	**Pg**	**11 01 36.6**	**+0.8**
ISFR	**Sfrayin**	**0.74**	**113**	ePg	**Pg**	**11 01 41.3**	**-0.8**
ISFR				e		11 01 54.8	
SBZV	**Sabzevar**	**1.03**	**159**	ePg	Pg	11 01 45.5	-2.1
IEMG	**Emamgholi**	**1.20**	**86**	ePg	**Pb**	**11 01 50.0**	**-0.8**
IEMG				e		11 01 54.5	
IKRD	**Kardeh**	**1.23**	**117**	ePn	Pg	11 02 03.8	+12
IKRD				e		11 02 42.8	
IMND	**Minoodasht**	**1.39**	**267**	ePn	**Pn**	**11 01 52.5**	**-0.8**
IMND				e		11 01 59.3	
IAKL	**Akhelmad**	**1.49**	**120**	ePg	**Pn**	**11 01 54.7**	**-0.2**
IAKL				e		11 01 58.7	
SHRO	**Shahrood**	**1.64**	**214**	ePn	**Pn**	**11 01 56.3**	**-0.5**
SHRO	**Shahrood**	**1.64**	**214**	ePg	**Pn**	**11 01 56.3**	**-0.5**
SHRO				eSg	**Sn**	**11 02 17.8**	**-0.2**
SHRO				IAML		11 02 24.2	
	comp=E,264nm,0.5s						
IPAY	**Payeh**	**1.73**	**121**	ePn	**Pn**	**11 01 57.8**	**-0.4**
IPAY				e		11 02 02.4	
IMYA	**Miami**	**2.57**	**112**	ePn	**Pn**	**11 02 11.7**	**+2.0**
IMYA				e		11 02 17.4	
IGLO	**Ghaloghah**	**2.79**	**253**	ePn	**Pn**	**11 02 13.6**	**+0.9**
JRKH	**Jarkhoshk**	**2.95**	**118**	ePn	**Pn**	**11 02 16.7**	**+1.9**
IANJ	**Anjilo**	**3.22**	**235**	ePn	**Pn**	**11 02 19.3**	**+0.7**
IANJ				e		11 03 17.4	
TNSJ	**Nastanj**	**3.41**	**188**	ePn	**Pn**	**11 02 21.4**	**+0.3**
TNSJ				e		11 03 26.3	
ISHM	**Shahmirzad**	**3.47**	**245**	ePn	**Pn**	**11 02 24.2**	**+2.1**
ISHM				e		11 03 24.1	
TABS	**Tabas**	**3.69**	**180**	ePn	**Pn**	**11 02 25.7**	**+0.7**
TABS	**Tabas**	**3.69**	**180**	ePn	**Pn**	**11 02 25.7**	**+0.7**
IALA	**Alasht**	**3.71**	**251**	ePn	**Pn**	**11 02 27.4**	**+2.0**
TKDS	**Koohdasht(Taba**	**3.73**	**180**	ePn	**Pn**	**11 02 26.0**	**+0.5**
TKDS				e		11 03 33.6	
ILAS	**Lasjerd**	**3.91**	**241**	ePn	**Pn**	**11 02 29.3**	**+1.2**
IFIR	**Firoozkooh**	**3.93**	**246**	ePn	**Pn**	**11 02 29.6**	**+1.2**
IPRN	**Peran**	**4.02**	**255**	ePn	**Pn**	**11 02 31.1**	**+1.6**
AFRZ	**Afriz**	**4.20**	**158**	ePn	**Pn**	**11 02 32.7**	**+0.6**
TPRV	**Parvadeh(Tabas**	**4.33**	**185**	ePn	**Pn**	**11 02 34.4**	**+0.6**
TPRV				e		11 03 55.5	
IDMV	**Damavand**	**4.49**	**248**	ePn	**Pn**	**11 02 37.2**	**+1.1**
IDMV				e		11 02 55.7	
SHRT	**Shahrakht**	**4.50**	**144**	ePn	**Pn**	**11 02 36.6**	**+0.6**
SHRT	**Shahrakht**	**4.50**	**144**	ePn	**Pn**	**11 02 36.6**	**+0.6**
DAMV	**Damavand**	**4.51**	**249**	ePn	**Pn**	**11 02 38.0**	**+1.6**
DAMV	**Damavand**	**4.51**	**249**	ePn	**Pn**	**11 02 38.0**	**+1.6**
IMON	**Monand**	**4.63**	**153**	ePn	**Pn**	**11 02 39.3**	**+1.2**
IMON				e		11 02 58.2	
IDAH	**Dahanechah**	**5.11**	**153**	ePn	**Pn**	**11 02 45.4**	**+0.7**
IKOO	**Kooshah**	**5.15**	**162**	ePn	**Pn**	**11 02 45.2**	**+0.1**
KRSH	**Karshahi**	**5.29**	**232**	ePn	**Pn**	**11 02 47.6**	**+0.5**
YZKH	**Yazd**	**5.38**	**204**	ePn	**Pn**	**11 02 49.3**	**+1.1**
YZKH	**Yazd**	**5.38**	**204**	ePn	**Pn**	**11 02 49.3**	**+1.1**
YZKH				IAML		11 04 19.7	
	comp=N,11nm,0.5s						
YZKH				IAML		11 04 35.0	
	comp=E,14nm,0.7s						
BSRN	**Basiran**	**5.61**	**163**	ePn	**Pn**	**11 02 52.3**	**+0.8**
BSRN	**Basiran**	**5.61**	**163**	ePn	**Pn**	**11 02 52.3**	**+0.8**
IKLH	**Kolahrood**	**6.08**	**230**	ePn	**Pn**	**11 02 58.0**	**+0.1**
ASTR	**Astara**	**6.71**	**283**	ePn	**Pn**	**11 03 06.1**	**-0.3**
LRK	**Lerik**	**7.08**	**283**	ePn	**Pn**	**11 03 10.7**	**-0.8**
YRD	**Yardimli**	**7.19**	**285**	ePn	**Pn**	**11 03 12.2**	**-1.0**
SIZA	**Siyzn**	**7.41**	**303**	ePn	**Pn**	**11 03 16.8**	**+0.8**
XNQ	**Khinaliq**	**7.96**	**301**	ePn	**Pn**	**11 03 23.8**	**+0.1**
GDB	**GEDABAY**	**9.48**	**294**	ePn	**Pn**	**11 03 43.9**	**-0.6**
KK31	**Karatay Array**	**11.71**	**56**	⇑P	Pn	11 04 23.1	+8.1
	comp=E,0.9nm,0.7s,baz=254,slow=12,SNR=4.5						
KK31				⇓S	**Sn**	**11 06 30.0**	**+4.3**
	comp=E,0.3nm,0.5s						
AB31	**Akbulak array**	**12.07**	**9**	⇑P	**Pn**	**11 04 22.2**	**+2.4**
	comp=E,1.3nm,0.9s,baz=196,slow=12,SNR=5.9						
AB31				⇓S	**Sn**	**11 06 29.4**	**-5.0**
	comp=E,0.6nm,0.5s,baz=201,slow=23,SNR=4.2						
AKTO	**Aktyubinsk**	**13.10**	**2**	⇑P	**Pn**	**11 04 34.2**	**+0.4**
	comp=E,1.1nm,0.7s						
AKTO				⇑S	**Sn**	**11 06 54.1**	**-5.3**
	comp=E,1.6nm,0.8s						

*IDC **01** 11:08:07.5±1.1, 44°.62S×81°.89W, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.9/26, mbtmp3.8/9, ML3.3/1, MS4.0/15, Ms1 4.0/15, ms1mx3.9/20, Error ellipse: s-maj=36.5km s-min=23.4km az=123.0*
*NEIC **01** 11:08:09.8±1.8, 44°.46S±0°.10×82°.0W±0°.2, h10km±1km, mb4.6/41, Error ellipse: s-maj=21.4km s-min=16.2km az=288.0*
*GCMT **01** 11:08:11.9±0.4, 43°.98S±0°.04×82°.43W±0°.03, h18km±1km, MW4.9/77, Moment Tensor Solution. s20,c21; s77,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.46±.17; $M_{\theta\theta}$0.21±.10; $M_{\phi\phi}$2.25±.11; $M_{r\theta}$0.79±.29; $M_{\theta\phi}$-0.36±.07; $M_{\phi r}$0.27±.21; Best double couple: $M_0$2.51000×10^{16} NP1:ϕ_s335.00000°, δ46.00000°, λ-113.00000°. NP2: ϕ_s186.00000°, δ49.00000°, λ-68.00000°. Principal axes: T 2.3160, Plg2.0000°, Azm261.0000°; N 0.3840, Plg16.0000°, Azm351.0000°; P -2.7030, Plg74.0000°, Azm165.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 01 11:08:09.3±0.5**, 44°.46S**±0°.08×**82°.0W**±0°.1**, h10**km**, n73, σ0s.94**/62**, mb4.5**/24**, MS4.0**/16**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**9.25**	**70**	Pn	**Pn**	**11 10 23.1**	**+0.3**
	0.1nm,0.3s,baz=260,slow=15,SNR=2.7						
PLCA				LR	LR	11 13 28.4	
	comp=Z,2μm,19.1s,baz=320,slow=35						
PLCA	**Paso Flores**	**9.25**	**70**	Pn	**Pn**	**11 10 23.5**	**+0.7**
USHA	**Ushuaia**	**13.59**	**145**	LR	LR	11 16 20.9	
	comp=Z,370nm,19.0s,baz=298,slow=37						
ROC1	**El Roble**	**14.32**	**41**	Pn	**Pn**	**11 11 32.0**	**-0.3**
GO04	**Tololo Observa**	**16.81**	**36**		**Pn**	**11 12 04.4**	**-0.5**
GO04				IAmb	IAmb	11 12 15.8	
	comp=Z,76nm,1.4s						
PMSA	**Palmer Station**	**22.70**	**160**	LR	LR	11 19 49.1	
	comp=Z,118nm,19.7s,baz=304,slow=31						
PMSA	**Palmer Station**	**22.70**	**160**	P	**P**	**11 13 11.1**	**+0.4**
PB10	**IPOC Station P**	**22.92**	**28**	P	**P**	**11 13 11.5**	**-1.9**
PB10				IAmb	IAmb	11 13 20.9	
	comp=Z,25nm,1.0s						
PB04	**IPOC Station P**	**24.15**	**28**	P	**P**	**11 13 26.1**	**+0.5**
LVC	**Limon Verde**	**24.32**	**31**	P	**P**	**11 13 28.1**	**+0.6**

	comp=Z,3.9nm,0.7s,baz=197,slow=10.0,SNR=5.0						
LVC				LR	LR	11 20 36.3	
	comp=Z,268nm,20.5s,baz=212,slow=31						
LVC	**Limon Verde**	**24.32**	**31**	P	**P**	**11 13 28.0**	**+0.4**
CPUP	**Villa Florida**	**26.91**	**56**	P	**P**	**11 13 49.6**	**-0.8**
	comp=Z,2.5nm,1.1s,baz=236,slow=9.2,SNR=3.3						
CPUP				LR	LR	11 24 25.1	
	comp=Z,1µm,19.0s,baz=224,slow=36						
CPUP	**Villa Florida**	**26.91**	**56**	P	**P**	**11 13 50.1**	**-0.4**
CPUP				IAmb	IAmb	11 13 58.6	
	comp=Z,17nm,1.4s						
LPAZ	**La Paz**	**30.45**	**27**	P	**P**	**11 14 23.2**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=182,slow=8.0,SNR=7.3						
LPAZ	**La Paz**	**30.45**	**27**	P	**P**	**11 14 23.4**	**+0.7**
LPAZ				IAmb	IAmb	11 14 35.8	
	comp=Z,9.0nm,1.2s						
NNA	**Nana**	**32.67**	**9**	P	**P**	**11 14 42.2**	**+0.5**
NNA				IAmb	IAmb	11 14 59.4	
	comp=Z,14nm,1.4s						
SIV	**San Ignacio**	**33.46**	**39**	P	**P**	**11 14 47.9**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=252,slow=14,SNR=4.0						
SAML	**Samuel**	**38.98**	**30**	P	**P**	**11 15 35.5**	**-0.2**
BDFB	**Brasilia**	**40.64**	**56**	P	**P**	**11 15 49.9**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=219,slow=6.1,SNR=4.2						
BDFB				LR	LR	11 33 01.0	
	comp=Z,568nm,18.1s,baz=238,slow=37						
BDFB	**Brasilia**	**40.64**	**56**	P	**P**	**11 15 50.7**	**+1.0**
BDFB				IAmb	IAmb	11 15 58.0	
	comp=Z,13nm,1.1s						
OTAV	**Otavalo**	**44.62**	**5**	P	**P**	**11 16 21.2**	**-1.2**
SNAA	**Sanae**	**45.20**	**154**	P	**P**	**11 16 24.8**	**-1.2**
SNAA				IAmb	IAmb	11 16 32.8	
	comp=Z,10nm,1.1s						
QSPA	**South Pole Qui**	**45.78**	**180**	P	**P**	**11 16 28.4**	**-2.4**
	comp=Z,1.3nm,1.1s,baz=124,slow=3.6,SNR=2.2						
QSPA	**South Pole Qui**	**45.78**	**180**	P	**P**	**11 16 32.1**	**+1.3**
QSPA				IAmb	IAmb	11 16 42.9	
	comp=Z,11nm,1.4s						
ROSC	**El Rosal**	**49.56**	**10**	LR	LR	11 35 42.4	
	comp=Z,251nm,19.2s,baz=222,slow=33						
ROSC	**El Rosal**	**49.56**	**10**	P	**P**	**11 17 00.4**	**-0.5**
ROSC				IAmb	IAmb	11 17 02.9	
	comp=Z,5.2nm,1.2s						
SBA	**Scott Base**	**51.15**	**195**	P	**P**	**11 17 10.4**	**-1.3**
SBA				IAmb	IAmb	11 17 11.3	
	comp=Z,13nm,1.2s						
VNDA	**Vanda**	**52.21**	**194**	LR	LR	11 36 46.0	
	comp=Z,142nm,18.5s,baz=154,slow=33						
VNDA	**Vanda**	**52.21**	**194**	P	**P**	**11 17 20.3**	**+0.6**
VNDA				IAmb	IAmb	11 17 32.8	
	comp=Z,8.6nm,1.3s						
TBI	**Tubuai**	**58.15**	**268**	*e*LR	LR	11 34 49.7	
	comp=Z,260nm,28.5s,baz=142						
TGUH	**Tegucigalpa,Un**	**58.43**	**354**	P	**P**	**11 18 04.1**	**-1.2**
PPT2	**Papeete2**	**61.93**	**273**	*e*LR	LR	11 36 37.4	
	comp=Z,253nm,25.0s,baz=150						
PPT	**Papeete**	**61.94**	**273**	LR	LR	11 40 19.3	
	comp=Z,96nm,18.1s,baz=124,slow=31						
MAW	**Mawson**	**65.15**	**166**	LR	LR	11 46 59.2	
	comp=Z,63nm,19.1s,baz=237,slow=36						
HKT	**Hockley**	**75.12**	**348**	P	**P**	**11 19 52.3**	**+1.1**
TX31	**Lajitas Ar. Si**	**76.06**	**341**	P	**P**	**11 19 58.3**	**+1.5**
TX31				IAmb	IAmb	11 20 04.1	
	comp=Z,8.0nm,1.5s						
TX32	**Lajitas Array**	**76.06**	**341**	P	**P**	**11 19 56.0**	**-0.8**
TXAR	**Lajitas Array**	**76.06**	**341**	P	**P**	**11 19 57.0**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=148,slow=7.4,SNR=4.7						
TXAR	**Lajitas Array**	**76.06**	**341**	P	**P**	**11 19 56.4**	**-0.4**
250A	**Grady**	**76.17**	**356**	P	**P**	**11 19 57.8**	**+0.6**
435B	**Jarrell**	**76.22**	**346**	P	**P**	**11 19 58.4**	**+0.8**
435B				IAmb	IAmb	11 20 05.2	
	comp=Z,5.2nm,0.9s						
WHTX	**Lake Whitney,**	**77.38**	**347**	P	**P**	**11 20 04.4**	**+0.3**
WHTX				IAmb	IAmb	11 20 11.8	
	comp=Z,7.1nm,1.0s						
Z51A	**Franklin**	**77.46**	**357**	P	**P**	**11 20 05.1**	**+0.6**
Z51A				IAmb	IAmb	11 20 11.3	
	comp=Z,9.8nm,1.4s						
ABTX	**Abilene, Hawle**	**78.38**	**345**	P	**P**	**11 20 10.5**	**+0.8**
ABTX				IAmb	IAmb	11 20 19.5	
	comp=Z,3.4nm,0.7s						
WLAR	**White Oak Lake**	**78.43**	**351**	P	**P**	**11 20 10.0**	**+0.1**
121A	**Cookes Peak, D**	**80.14**	**338**	P	**P**	**11 20 20.7**	**+1.2**
WMOK	**Wichita Mounta**	**80.28**	**346**	P	**P**	**11 20 20.8**	**+0.7**
WMOK				IAmb	IAmb	11 20 26.7	
	comp=Z,8.2nm,1.3s						
AMTX	**Amarillo**	**80.97**	**344**	P	**P**	**11 20 25.0**	**+1.2**
AMTX				IAmb	IAmb	11 20 27.6	
	comp=Z,3.5nm,0.9s						
LENM	**Lemitar**	**81.48**	**339**	P	**P**	**11 20 27.7**	**+1.1**
BOSA	**Boshof**	**81.64**	**122**	LR	LR	11 53 22.9	
	comp=Z,69nm,18.1s,baz=211,slow=33						
BOSA	**Boshof**	**81.64**	**122**	P	**P**	**11 20 28.9**	**+1.1**
BOSA				IAmb	IAmb	11 20 38.0	
	comp=Z,4.7nm,1.0s						
S51A	**Beattyville**	**81.73**	**359**	P	**P**	**11 20 27.6**	**0.0**
ANMO	**Albuquerque**	**82.09**	**340**	P	**P**	**11 20 30.5**	**+0.7**
ANMO				IAmb	IAmb	11 20 39.9	
	comp=Z,5.2nm,1.3s						
CCM	**Cathedral Cave**	**82.56**	**353**	P	**P**	**11 20 31.8**	**-0.2**
S22A	**4UR Ranch, Cre**	**84.85**	**341**	P	**P**	**11 20 45.4**	**+1.3**
DBIC	**Dimbokro**	**85.57**	**76**	LR	LR	11 52 58.6	
	comp=Z,46nm,19.8s,baz=210,slow=32						
Q24A	**Divide**	**85.63**	**342**	P	**P**	**11 20 46.7**	**-1.3**
Q24A				IAmb	IAmb	11 21 04.6	
	comp=Z,5.2nm,0.9s						
SHPR	**Sheep Range**	**86.00**	**334**	P	**P**	**11 20 50.8**	**+1.1**
NLU	**North Lily Min**	**88.28**	**337**	P	**P**	**11 21 00.2**	**-0.6**
DUG	**Dugway, Tooele**	**88.71**	**337**	P	**P**	**11 21 04.1**	**+1.5**
NVAR	**Mina Array Bea**	**88.78**	**332**	P	**P**	**11 21 04.8**	**+1.7**
	comp=Z,0.3nm,0.8s,baz=140,slow=4.6,SNR=2.9						
NVAR				LR	LR	11 51 39.5	
	comp=Z,55nm,21.7s,baz=271,slow=29						
NVAR	**Mina Array Bea**	**88.78**	**332**	P	**P**	**11 21 04.3**	**+1.2**
DZM	**Mont Dzumac**	**89.02**	**240**	*e*LR	LR	11 49 18.8	
	comp=Z,292nm,23.3s						
TCUT	**Toone Canyon**	**89.19**	**338**	P	**P**	**11 21 05.3**	**+0.3**
K22A	**Casper**	**89.45**	**342**	P	**P**	**11 21 06.7**	**+0.5**
HWUT	**Hardware Ranch**	**89.69**	**338**	P	**P**	**11 21 07.2**	**-0.1**
STKA	**Stephens Creek**	**94.25**	**216**	LR	LR	11 55 06.0	
	comp=Z,82nm,21.2s,baz=201,slow=30						
TORD	**Torodi Ar. Bea**	**94.68**	**76**	LR	LR	11 58 35.9	
	comp=Z,55nm,21.4s,baz=340,slow=32						
GERES	**GERESS Array B**	**124.84**	**53**	PKP	**PKPdf**	**11 27 07.9**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=151,slow=2.2,SNR=4.6						
ABKAR	**Akbulak array**	**153.76**	**66**	PKPdf	**PKPdf**	**11 27 58.6**	**-1.3**
ABKAR				PKPbc	**PKiKP**	**11 28 08.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**154.06**	**182**	PKPbc	**PKiKP**	**11 28 10.0**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=215,slow=3.1,SNR=6.5						
CMAR	**Chiang Mai Arr**	**154.06**	**182**		**PKiKP**	**11 28 09.9**	**+0.5**
LZH	**Lanzhou**	**170.51**	**210**	*e*PKP	**PKPdf**	**11 28 18.2**	**+0.8**
LZH				pPKP	sPKPdf	11 28 21.5	+0.7
LZH				sPKP		11 28 22.8	
LZH				PKP	**sPKPab**	**11 29 38.0**	**+0.2**
LZH				LR	LR		
	comp=N,45nm,18.0s						
LZH				LR	LR		
	comp=E,51nm,18.2s						
LZH				LR	LR		
	comp=Z,62nm,20.1s						

*NEIC **01** 11:08:41.6±2.5, 21°.30S±0°.04×68°.1W±0°.1, h121km±10km, mb4.0/2, Error ellipse: s-maj=13.8km s-min=5.4km az=92.0*
*IDC **01** 11:08:42.9±0.8, 21°.30S×67°.93W, h119km±13km, mb3.5/2, mb1 3.3/5, mb1mx3.1/26, mbtmp3.8/5, Error ellipse: s-maj=28.5km s-min=9.5km az=111.0*
*GUC **01** 11:08:44.2±0.6, 21°.25S×68°.36W, h138km±4km, ML3.3*
ISC 01 11:08:42.6±0.8**, 21°.24S**±0°.04×**68°.27W**±0°.07**, h136**km±10km**, n28,** σ**1s.32**/49**, 11C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.06**	**238**	⇑ *i*P	**Pn**	**11 09 07.7**	**+0.9**
PB09				*e*S	**Sn**	**11 09 26.1**	**+0.9**
PB08	**IPOC Station P**	**1.37**	**323**	⇑ *i*P	**Pn**	**11 09 11.0**	**+0.9**
PB08				*e*S	**Sn**	**11 09 31.9**	**+1.0**
LVC	**Limon Verde**	**1.49**	**203**	⇓ *i*P	**Pn**	**11 09 12.2**	**+0.8**
LVC				*i* S	**Sn**	**11 09 34.1**	**+0.8**
LVC	**Limon Verde**	**1.49**	**203**	P	**Pn**	**11 09 12.2**	**+0.8**
	30nm,0.3s,baz=35,slow=14,SNR=254						
LVC				S	**Sn**	**11 09 33.4**	**0.0**
	11nm,0.3s,baz=180,slow=20,SNR=9.2						
LVC	**Limon Verde**	**1.49**	**203**		**Pn**	**11 09 12.3**	**+0.8**
LVC					**Sn**	**11 09 32.9**	**-0.4**
PB03	**IPOC Station P**	**1.60**	**239**	⇑ *i*P	**Pn**	**11 09 12.8**	**+0.4**
PB03				*e*S	**Sn**	**11 09 34.8**	**-0.4**
PB03				IAML		11 09 35.6	
	comp=E,390nm,0.1s						
PB03				IAML		11 09 36.0	
	comp=N,385nm,0.1s						
PB06	**IPOC Station P**	**1.90**	**219**	⇑ *i*P	**Pn**	**11 09 16.2**	**+0.4**
PB06				*e*S	**Sn**	**11 09 41.5**	**+0.3**
PB06				IAML		11 09 42.0	
	comp=E,243nm,0.4s						
TA01	**Diego Aracena**	**1.91**	**290**	⇑ *i*P	**Pn**	**11 09 15.6**	**-0.2**
TA01				*e*S	**Sn**	**11 09 39.5**	**-1.7**
TA01				IAML		11 09 42.0	
	comp=E,372nm,0.4s						
PB11	**IPOC Station P**	**1.96**	**318**	⇑ *i*P	**Pn**	**11 09 17.0**	**+0.4**
PB11				*e*S	**Sn**	**11 09 42.4**	**-0.1**
PB11				IAML		11 09 44.2	
	comp=E,220nm,0.2s						
PB11	**IPOC Station P**	**1.96**	**318**		**Pn**	**11 09 16.8**	**+0.2**
PB11				Sn	**Sn**	**11 09 42.8**	**+0.2**
PB04	**IPOC Station P**	**2.06**	**238**	⇑ *i*P	**Pn**	**11 09 18.0**	**+0.1**
PB04				*e*S	**Sn**	**11 09 43.7**	**-1.0**
PB04				IAML		11 09 50.1	
	comp=N,194nm,0.2s						
PB04	**IPOC Station P**	**2.06**	**238**		**Pn**	**11 09 17.9**	**+0.1**
PB04				Sn	**Sn**	**11 09 44.1**	**-0.6**
PB15	**IPOC Station P**	**2.26**	**209**	⇑ *i*P	**Pn**	**11 09 21.0**	**+0.8**
PB15				*e*S	**Sn**	**11 09 50.0**	**+0.8**
PSGC	**Pisagua**	**2.38**	**313**	⇑ *i*P	**Pn**	**11 09 21.5**	**-0.2**
PSGC				*e*S	**Sn**	**11 09 50.6**	**-1.1**
PSGC				IAML		11 09 54.1	
	comp=E,73nm,0.4s						
PB05	**IPOC Station P**	**2.41**	**228**	⇑ *i*P	**Pn**	**11 09 22.1**	**+0.1**
PB05				*i* S	**Sn**	**11 09 51.0**	**-1.4**
MNMC	**Minye Minye**	**2.44**	**329**	⇑ *i*P	**Pn**	**11 09 23.7**	**+1.1**
MNMC				*e*S	**Sn**	**11 09 53.6**	**+0.4**
MNMC				IAML		11 10 02.1	
	comp=E,282nm,0.2s						
MNMC	**Minye Minye**	**2.44**	**329**		**Pn**	**11 09 23.8**	**+1.2**
MNMC				Sn	**Sn**	**11 09 54.3**	**+1.1**
PB10	**IPOC Station P**	**3.10**	**223**	Pn	**Pn**	**11 09 30.8**	**+0.1**
PB10				Sn	**Sn**	**11 10 07.2**	**-0.7**
PB16	**IPOC Station P**	**3.11**	**338**	⇓ *e*P	**Pn**	**11 09 33.2**	**+1.7**
PB16				*e*S	**Sn**	**11 10 10.7**	**+1.6**
PB16				IAML		11 10 16.5	
	comp=N,34nm,0.5s						
LPAZ	**La Paz**	**4.92**	**2**	P	**Pn**	**11 09 56.9**	**+1.5**
	comp=N,1.3nm,0.3s,baz=171,slow=7.1,SNR=32						
LPAZ				S	**Sn**	**11 10 53.6**	**+1.7**
	baz=135,slow=5.3,SNR=1.9						
LPAZ	**La Paz**	**4.92**	**2**		**Pn**	**11 09 57.1**	**+1.7**
LPAZ					**Sn**	**11 10 52.8**	**+0.9**
SIV	**San Ignacio**	**8.59**	**54**	P	**Pn**	**11 10 41.0**	**-3.0**
	comp=N,1.5nm,0.3s,baz=256,slow=12,SNR=33						
SIV				S	**Sn**	**11 12 15.4**	**-4.0**
	comp=N,0.1nm,0.3s,baz=104,slow=12,SNR=3.3						
GO04	**Tololo Observa**	**9.19**	**194**	Pn	**Pn**	**11 10 49.2**	**-3.0**
BDFB	**Brasilia**	**20.00**	**77**	P	**P**	**11 13 03.9**	**-1.0**
	comp=N,0.3nm,0.3s,baz=253,slow=11,SNR=3.4						
BDFB	**Brasilia**	**20.00**	**77**	P	**P**	**11 13 03.0**	**-1.8**
BDFB				IAmb	IAmb	11 13 05.4	
	comp=Z,9.9nm,1.5s						
QSPA	**South Pole Qui**	**68.95**	**180**	P	**P**	**11 19 35.3**	**+2.3**
	comp=Z,0.3nm,0.4s,baz=225,slow=2.9,SNR=6.6						
TORD	**Torodi Ar. Bea**	**76.70**	**70**	P	**P**	**11 20 19.2**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=252,slow=5.2,SNR=7.7						
TORD	**Torodi Ar. Bea**	**76.70**	**70**	IAmb	IAmb	11 20 21.0	
	comp=Z,1.1nm,0.8s						

*IDC **01** 11:18:18.6±0.9, 0°.75N×125°.43E, h0km, mb3.8/10, mb1 3.8/10, mb1mx3.6/60, mbtmp3.8/10, Error ellipse: s-maj=162.5km s-min=14.8km az=65.0*
*NEIC **01** 11:18:23.0±2.1, 1°.0N±0°.1×126°.19E±0°.06, h40km±7km, mb4.1/13, Error ellipse: s-maj=16.3km s-min=8.8km az=188.0*
ISC 01 11:18:23.2±0.6**, 1°.0N**±0°.1×**126°.21E**±0°.07**, h44**km**, n29,** σ**1s.13**/31**, mb4.0**/14**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.19**	**103**		**Pn**	**11 18 43.0**	**-0.5**
TNTI				Sn	**Sn**	**11 18 57.3**	**-1.1**
LUWI	**Luwuk**	**4.01**	**239**	Pn	**Pn**	**11 19 21.9**	**-0.2**
WRAB	**Tennant Creek**	**22.32**	**159**	P	**P**	**11 23 18.5**	**+1.3**
WRAB				IAmb	IAmb	11 23 20.3	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**22.32**	**159**	P	**P**	**11 23 18.0**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=329,slow=11,SNR=16						
WRA	**Warramunga Arr**	**22.32**	**159**	P	**P**	**11 23 17.9**	**+0.5**
WR0	**Warramunga Arr**	**22.41**	**159**	P	**P**	**11 23 19.5**	**+1.2**
WR0				IAmb	IAmb	11 23 24.8	
	comp=Z,6.0nm,1.1s						
COEN	**Coen**	**22.46**	**132**	P	**P**	**11 23 18.2**	**-0.7**
AS31	**Alice Springs**	**25.67**	**164**	P	**P**	**11 23 49.4**	**+0.1**
ASAR	**Alice Springs**	**25.67**	**164**	P	**P**	**11 23 50.5**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=343,slow=8.2,SNR=31						
ASAR				PcP	**PcP**	**11 27 20.9**	**+1.8**
	comp=Z,0.2nm,0.5s,baz=348,slow=2.1,SNR=4.2						
ASAR	**Alice Springs**	**25.67**	**164**	P	**P**	**11 23 49.4**	**+0.2**
RPSI	**Rantau Prapat**	**27.32**	**274**	P	**P**	**11 24 03.7**	**-0.5**
RPSI				IAmb	IAmb	11 24 09.1	
	comp=Z,7.5nm,1.2s						
STKA	**Stephens Creek**	**35.84**	**157**	P	**P**	**11 25 20.2**	**+1.4**
	comp=Z,1.7nm,0.9s,baz=336,slow=12,SNR=2.6						
STKA	**Stephens Creek**	**35.84**	**157**	P	**P**	**11 25 18.6**	**-0.1**
STKA				IAmb	IAmb	11 25 25.0	
	comp=Z,2.4nm,1.4s						
ARMA	**Armidale**	**39.55**	**144**	P	**P**	**11 25 49.8**	**-0.6**
CAN	**Canberra**	**41.97**	**152**	P	**P**	**11 26 10.8**	**+0.6**
PALK	**Pallekele**	**45.78**	**279**	P	**P**	**11 26 39.0**	**-2.1**
SONM	**Songino Array**	**49.68**	**343**	P	**P**	**11 27 13.1**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=151,slow=7.6,SNR=2.9						
MK31	**Makanchi Array**	**59.48**	**326**	P	**P**	**11 28 21.9**	**0.0**
MKAR	**Makanchi Array**	**59.48**	**326**	P	**P**	**11 28 22.2**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=120,slow=7.7,SNR=8.6						
MKAR	**Makanchi Array**	**59.48**	**326**	P	**P**	**11 28 22.7**	**+0.9**
ZALV	**Zalesovo Beam**	**62.75**	**334**	P	**P**	**11 28 44.8**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=139,slow=7.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**62.75**	**334**	P	**P**	**11 28 45.4**	**+1.6**
KURBB	**Kurchatov Arra**	**63.73**	**328**	P	**P**	**11 28 50.6**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=127,slow=6.1,SNR=15						
KURK	**Kurchatov**	**63.73**	**328**	P	**P**	**11 28 50.7**	**+0.2**
KURK				IAmb	IAmb	11 28 54.5	
	comp=Z,2.3nm,0.8s						
KKAR	**Karatay Array**	**64.85**	**318**	P	**P**	**11 28 55.5**	**-2.5**
BVAR	**Borovoye Array**	**69.29**	**328**	P	**P**	**11 29 26.8**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=103,slow=6.5,SNR=2.8						
AKTO	**Aktyubinsk**	**75.44**	**322**	P	**P**	**11 30 03.9**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=146,slow=7.3,SNR=4.3						
ARU	**Arti**	**76.93**	**328**	P	**P**	**11 30 10.7**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=166,slow=8.3,SNR=4.8						
ARU	**Arti**	**76.93**	**328**	P	**P**	**11 30 10.6**	**-0.3**
ARU				IAmb	IAmb	11 30 11.4	
	comp=Z,2.9nm,0.9s						

*MDD **01** 11:24:28.8±0.8, 35°.48N×1°.38W, h26km±11km, mbLg2.6/24, Error ellipse: s-maj=9.7km s-min=4.7km az=158.0, PRXIMO*
*CNRM **01** 11:24:31.3±2.1, 35°.68N×1°.79W, h11km±12km, Error ellipse: s-maj=11.1km s-min=7.6km az=93.0*
*CRAAG **01** 11:24:34.1, 35°.23N×1°.20W, Ml2.8*
ISC 01 11:24:26.5±1.5**, 35°.63N**±0°.03×**1°.41W**±0°.03**, h11**km±12km**, n48,** σ**1s.62**/86**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTSS	**Djebel Tessala**	**0.61**	**124**	P	**Pb**	**11 24 39.0**	**-0.2**
OTSS	**Djebel Tessala**	**0.61**	**124**	P	**Pb**	**11 24 39.0**	**-0.2**
TAF	**Taforalt**	**1.15**	**226**	P	**Pb**	**11 24 49.3**	**+0.8**
TAF				S	**Sb**	**11 25 03.9**	**+0.5**
MELI	**Melilla**	**1.29**	**255**	P	**Pn**	**11 24 49.9**	**-0.4**
	18nm,0.1s,SNR=7.9						
MELI				S	**Sb**	**11 25 06.0**	**-1.2**
	39nm,0.1s,SNR=7.9						
EMEL	**Melilla**	**1.30**	**256**	P	**Pn**	**11 24 49.7**	**-0.9**
	41nm,0.2s,SNR=4.0						
EMEL				S	**Sn**	**11 25 06.7**	**-1.3**
	177nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.35**	**284**	P	**Pn**	**11 24 51.3**	**0.0**
	18nm,0.2s,SNR=7.9						
EALB				S	**Sn**	**11 25 09.3**	**0.0**
	34nm,0.2s,SNR=7.9						
GOG	**Mont Gurugu**	**1.36**	**253**	P	**Pn**	**11 24 50.9**	**-0.5**
GOG				S	**Sn**	**11 25 08.1**	**-1.4**
ENIJ	**Nijar**	**1.49**	**335**	P	**Pn**	**11 24 54.0**	**+0.8**
	3.2nm,0.2s,SNR=7.9						
ENIJ				S	**Sn**	**11 25 12.8**	**+0.2**
	61nm,0.2s,SNR=7.9						
JBK	**JBK**	**1.60**	**217**	P	**Pg**	**11 24 57.6**	**+0.4**
JBK				S	**Sn**	**11 25 16.1**	**+0.5**
OKGL	**Djebel Kef Gue**	**1.72**	**76**	P	**Pn**	**11 24 56.2**	**-0.2**
	9.7nm,0.2s,SNR=7.9						
OKGL				S	**Sn**	**11 25 17.3**	**-1.1**
	26nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.74**	**317**	P	**Pn**	**11 24 57.7**	**+0.8**
	4.7nm,0.2s,SNR=18						
EBER				S	**Sn**	**11 25 20.4**	**+1.3**
	13nm,0.2s,SNR=7.9						
CART	**Cartagena**	**1.98**	**9**	*e*P	**Pb**	**11 25 02.0**	**-0.5**
CART				*e*S	**Sn**	**11 25 21.0**	**-3.8**
CART				*e*		11 26 47.2	
CART	**Cartagena**	**1.98**	**9**	P	**Pb**	**11 25 02.0**	**-0.5**
PALE	**Palemas**	**2.10**	**259**	P	**Pn**	**11 25 03.5**	**+1.9**
PALE				S	**Sn**	**11 25 27.6**	**-0.2**
ELGU	**Los Guajares,**	**2.18**	**305**	P	**Pn**	**11 25 03.9**	**+1.2**
	2.8nm,0.2s,SNR=7.9						
ELGU				S	**Sn**	**11 25 29.0**	**-0.7**
	17nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**2.21**	**4**	P	**Pn**	**11 25 03.6**	**+0.5**
	3.0nm,0.3s,SNR=9.1						
EMUR				S	**Sn**	**11 25 31.1**	**+0.5**
	15nm,0.4s,SNR=7.5						
GORA	**Gorafe**	**2.27**	**325**	S	**Sn**	**11 25 33.7**	**+1.8**
	75nm,0.8s,SNR=7.9						
EQUE	**Quentar**	**2.27**	**314**	P	**Pn**	**11 25 06.2**	**+2.2**
	4.2nm,0.3s,SNR=7.9						
EQUE				S	**Sn**	**11 25 33.3**	**+1.3**
	14nm,0.5s,SNR=7.9						
AKLM	**AKL**	**2.30**	**242**	P	**Pb**	**11 25 07.1**	**-0.9**
AKLM				S	**Sn**	**11 25 34.3**	**+1.6**
ETRV	**Los Montesinos**	**2.44**	**12**	S	**Sn**	**11 25 37.2**	**+1.1**
	17nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.55**	**329**	P	**Pb**	**11 25 10.9**	**-1.3**
	3.3nm,0.2s,SNR=34						
EQES				S	**Sn**	**11 25 40.2**	**+1.4**
	17nm,0.3s,SNR=11						
EGOR	**Sierra Gorda,**	**2.63**	**305**	P	**Pn**	**11 25 10.5**	**+1.4**
	1.1nm,0.2s,SNR=7.9						
EGOR				S	**Sn**	**11 25 41.5**	**+0.5**
	8.4nm,0.4s,SNR=4.0						
TDRA	**Tendrara**	**2.63**	**191**	P	**Pg**	**11 25 16.9**	**0.0**
TDRA				S	**Sg**	**11 25 49.4**	**-1.7**
SESP	**Santiago Espad**	**2.65**	**340**	P	**Pn**	**11 25 11.5**	**+2.2**
	5.6nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**11 25 43.0**	**+1.6**
	17nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**2.65**	**340**	P	**Pn**	**11 25 12.1**	**+2.9**
SESP				S	**Sn**	**11 25 42.2**	**+0.8**
EMIJ	**Mijas**	**2.88**	**290**	P	**Pn**	**11 25 12.5**	**+0.2**
	1.1nm,0.2s,SNR=16						
EMIJ				S	**Sn**	**11 25 45.9**	**-1.0**
	5.3nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.01**	**358**	P	**Pn**	**11 25 16.3**	**+2.1**
	5.3nm,0.2s,SNR=37						
ETOB				S	**Sn**	**11 25 51.2**	**+0.9**
	8.8nm,0.2s,SNR=6.3						
AFON	**Font Roja**	**3.11**	**13**	S	**Sn**	**11 25 52.9**	**+0.1**
	2.0nm,0.2s,SNR=7.9						
EBEN2	**Beniarda presa**	**3.19**	**17**	P	**Pn**	**11 25 18.5**	**+1.8**
	1.6nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**11 25 54.8**	**+0.1**
	6.4nm,0.2s,SNR=7.9						
ECEU	**Ceuta**	**3.23**	**276**	P	**Pn**	**11 25 17.4**	**+0.2**
	1.0nm,0.2s,SNR=7.9						
ECEU				S	**Sn**	**11 25 53.7**	**-2.0**
	1.6nm,0.2s,SNR=7.9						
FIGM	**Figuig**	**3.49**	**178**	P	**Pb**	**11 25 30.1**	**+1.8**
FIGM				S	**Sb**	**11 26 09.4**	**-1.4**
EADA	**Adamuz**	**3.59**	**316**	P	**Pn**	**11 25 23.2**	**+1.2**
	0.8nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**11 26 03.9**	**-0.5**
	2.5nm,0.2s,SNR=7.9						
MDT	**Midelt**	**3.86**	**224**	P	**Pn**	**11 25 29.5**	**+3.6**
MDT				S	**Sn**	**11 26 14.3**	**+3.0**
ECAB	**El Cabril**	**4.04**	**308**	P	**Pn**	**11 25 29.7**	**+1.5**
	0.6nm,0.3s,SNR=7.9						
ECAB				S	**Sn**	**11 26 13.9**	**-1.6**
	0.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**4.04**	**32**	P	**Pn**	**11 25 29.6**	**+1.3**
	1.8nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**11 26 15.1**	**-0.5**
	2.8nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.52**	**334**	P	**Pn**	**11 25 37.6**	**+2.7**
	0.3nm,0.1s,baz=154,slow=14,SNR=3.9						
ESDC				S	**Sn**	**11 26 26.0**	**-1.4**
	0.6nm,0.1s,baz=153,slow=22,SNR=4.7						
PAB	**San Pablo**	**4.55**	**330**	P	**Pn**	**11 25 37.6**	**+2.2**
	0.4nm,0.2s,SNR=4.0						
PAB				S	**Sn**	**11 26 27.5**	**-0.8**
	0.7nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.74**	**298**	P	**Pn**	**11 25 39.0**	**+1.2**
	0.5nm,0.2s,SNR=6.7						
EMIN				S	**Sn**	**11 26 30.7**	**-2.0**
	0.7nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**4.79**	**9**	P	**Pn**	**11 25 41.0**	**+2.3**
	0.5nm,0.2s,SNR=7.9						
EMOS				S	**Sn**	**11 26 32.9**	**-1.3**
	0.5nm,0.2s,SNR=7.9						
ETOR	**Torete**	**5.21**	**355**	S	**Sn**	**11 26 42.8**	**-1.7**
	1.6nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**5.24**	**293**	P	**Pn**	**11 25 45.8**	**+1.0**
	0.7nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**11 26 41.8**	**-3.4**
	1.0nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**5.32**	**38**	P	**Pn**	**11 25 47.5**	**+1.6**
	0.5nm,0.2s,SNR=7.9						
ETOS				S	**Sn**	**11 26 44.6**	**-2.5**
	0.4nm,0.2s,SNR=7.9						
PVAQ	**Vaqueiros**	**5.38**	**291**	*e*Pn	**Pn**	**11 25 49.0**	**+2.4**
PVAQ				*e*Sn	**Sn**	**11 26 47.8**	**-0.7**
PVAQ	**Vaqueiros**	**5.38**	**291**	P	**Pn**	**11 25 49.0**	**+2.4**
EBAD	**Badajoz**	**5.45**	**307**	P	**Pn**	**11 25 49.6**	**+2.0**
	0.5nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**11 26 47.9**	**-2.5**
	4.3nm,0.2s,SNR=7.9						
PBDV	**Barranco-do-Ve**	**5.50**	**289**	*e*Pn	**Pn**	**11 25 49.4**	**+1.1**
PBDV	**Barranco-do-Ve**	**5.50**	**289**	P	**Pn**	**11 25 49.4**	**+1.1**
EPOB	**Poblet**	**6.04**	**18**	P	**Pn**	**11 25 58.1**	**+2.3**
	0.4nm,0.3s,SNR=7.9						
EPOB				S	**Sn**	**11 27 01.6**	**-3.4**
	0.6nm,0.3s,SNR=7.9						

*IDC **01** 11:24:38.4±11.0, 7°.59S×128°.00E, h150km±118km, mb3.0/1, mb1 3.8/5, mb1mx3.2/52, mbtmp4.1/5, ML4.2/4, Error ellipse: s-maj=138.4km s-min=28.8km az=46.0*
*NEIC **01** 11:24:39.0±2.7, 7°.69S±0°.07×127°.96E±0°.06, h181km±9km, mb4.2/7, Error ellipse: s-maj=10.5km s-min=8.9km az=164.0*
ISC 01 11:24:37.9±0.8**, 7°.77S**±0°.06×**128°.00E**±0°.06**, h150**km**, n23,** σ**2s.97**/35**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.28**	**94**	Pn	**Pn**	**11 25 31.3**	**+2.5**
SAUI					**Sn**	**11 26 09.8**	**+1.5**
SOEI	**Soe**	**4.18**	**242**		**Pn**	**11 25 44.6**	**+4.0**
SOEI				Sn	**Sn**	**11 26 31.1**	**+1.7**
BATI	**Baumata**	**4.92**	**240**	P	**Pn**	**11 25 52.9**	**+2.6**
	11nm,0.3s,baz=207,slow=1.3,SNR=14						
BATI				S	**Sn**	**11 26 47.8**	**+1.1**
	26nm,0.3s,baz=347,slow=19,SNR=16						
MTN	**Manton Dam**	**5.91**	**149**		Pn	11 26 08.8	+5.3
MTN				Sn	**Sn**	**11 27 14.4**	**+4.0**
FAKI	**Fak Fak**	**6.41**	**42**	Pn	**Pn**	**11 26 11.1**	**+0.9**
FAKI				Sn	**Sn**	**11 27 23.7**	**+1.3**
KNRA	**Kununurra**	**7.90**	**175**		**Pn**	**11 26 33.7**	**+3.8**
KNRA				Sn	**Sn**	**11 28 01.4**	**+3.4**
FITZ	**Fitzroy Crossi**	**10.52**	**192**	P	**Pn**	**11 27 05.8**	**+1.0**
	0.9nm,0.3s,baz=14,slow=13,SNR=23						
FITZ				S	**Sn**	**11 29 00.2**	**-1.1**
	1.9nm,0.3s,baz=144,slow=19,SNR=5.2						
FITZ	**Fitzroy Crossi**	**10.52**	**192**		**Pn**	**11 27 06.1**	**+1.3**

FITZ					Sn	11 29 03.6	+2.4
WRAB	Tennant Creek	13.57	154		Pn	11 27 45.3	+0.8
WRAB					Sn	11 30 11.4	-3.4
WRA	Warramunga Arr	13.57	154	P	Pn	11 27 46.8	+2.3
	1.1nm,0.3s,baz=333,slow=13,SNR=38						
WRA				S	Sn	11 30 08.5	-6.3
	1.8nm,0.3s,baz=326,slow=24,SNR=16						
WRA	Warramunga Arr	13.57	154		Pn	11 27 45.0	+0.5
WRA					Sn	11 30 11.1	-3.8
WR0	Warramunga Arr	13.68	153		Pn	11 27 47.2	+1.4
WR0					Sn	11 30 14.6	-2.8
PSAC1	Pilbara Seismi	15.80	209		P	11 28 13.3	+0.3
PSAC1				IAmb	IAmb	11 28 23.4	
	comp=Z,12nm,1.1s						
PSAC3	Pilbara Seismi	15.87	209		Pn	11 28 12.9	-0.2
PSAC3				IAmb	IAmb	11 28 17.8	
	comp=Z,8.1nm,0.9s						
AS31	Alice Springs	16.79	161	P	Pn	11 28 29.6	+5.3
AS31				IAmb	IAmb	11 28 32.0	
	comp=Z,2.6nm,0.7s						
ASAR	Alice Springs	16.79	161	P	Pn	11 28 28.1	+3.7
	comp=Z,0.9nm,0.3s,baz=344,slow=11,SNR=90						
ASAR				S	S	11 31 25.9	-5.2
	comp=Z,0.2nm,0.3s,baz=315,slow=18,SNR=3.9						
ASAR	Alice Springs	16.79	161	P	Pn	11 28 29.4	+5.0
KSM	Kuching	19.89	297	P	P	11 28 54.4	-3.4
KSM				IAmb	IAmb	11 29 06.3	
	comp=Z,25nm,1.1s						
NWAO	Narrogin (SRO)	26.95	200	P	P	11 30 03.6	-1.8
NWAO				IAmb	IAmb	11 30 11.8	
	comp=Z,9.7nm,1.1s						
STKA	Stephens Creek	27.13	154	P	P	11 30 05.8	-1.2
MCQ	Macquarie Isla	52.79	158	P	P	11 33 37.1	-0.3
MKAR	Makanchi Array	67.80	328	P	P	11 35 19.1	-0.5
	comp=Z,0.2nm,0.3s,baz=118,slow=8.1,SNR=8.5						
MKAR	Makanchi Array	67.80	328	P	P	11 35 19.0	-0.6

*ISK **01** 11:30:48.7, 34°.12N×25°.31E, h65km, ML3.4/15*
*IDC **01** 11:30:51.0±1.8, 34°.19N×25°.32E, h50km±14km, mb3.6/9, mb1 3.7/14, mb1mx3.4/47, mbtmp3.8/14, ML3.9/5, Error ellipse: s-maj=19.1km s-min=13.3km az=34.0*
*ATH **01** 11:30:51.7, 34°.41N×25°.22E, h73km±2km, ML3.1/8, Error ellipse: s-maj=4.1km s-min=1.4km az=356.0*
*THE **01** 11:30:52.8, 34°.30N×25°.19E, h21km±4km, ML3.3/4, Error ellipse: s-maj=4.6km s-min=1.6km az=142.0*
ISC 01 11:30:49.9±1.6**, 34°.20N**±0°.07×**25°.25E**±0°.03**, h28**km±10km**, n92, σ1^{s}12**/102**, mb3.8**/9**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.89	336	P	Pb	11 31 06.8	0.0
SIVA				S	Sn	11 31 18.7	+0.2
	4μm,0.7s						
SIVA	Sivas	0.89	336	P	Pb	11 31 06.7	-0.1
SIVA				S	Sn	11 31 19.2	+0.7
SIVA				AML	AML	11 31 24.6	
	comp=N,5596μm,1.1s						
SIVA				AML	AML	11 31 28.2	
	comp=E,11603μm,0.7s						
LAST	Lasithi	0.97	11	P	Pb	11 31 08.2	0.0
LAST	Lasithi	0.97	11	P	Pb	11 31 08.2	0.0
LAST				AML	AML	11 31 30.5	
	comp=E,1231μm,1.0s						
LAST				AML	AML	11 31 34.0	
	comp=N,1021μm,0.5s						
NPS	Neapolis	1.10	16	P	Pb	11 31 10.3	+0.1
NPS	Neapolis	1.10	16	P	Pb	11 31 10.4	+0.1
NPS				AML	AML	11 31 44.5	
	comp=E,1389μm,0.7s						
NPS				AML	AML	11 31 52.6	
	comp=N,699μm,0.6s						
KSTL	Kastelli Herak	1.11	352	P	Pb	11 31 09.2	-1.2
HRKL	Herakleio	1.11	354	P	Pb	11 31 10.7	+0.2
HRKL				S	Sb	11 31 24.0	-0.6
	comp=N,2μm,0.7s						
HRKL	Herakleio	1.11	354	PN	Pb	11 31 10.6	+0.1
HRKL				SN	Sn	11 31 26.2	+2.2
IDI	Anoyia	1.12	345	P	Pb	11 31 10.5	-0.2
	comp=N,11nm,0.3s,baz=198,slow=9.4,SNR=92						
IDI				S	Sn	11 31 26.2	+1.8
	comp=N,31nm,0.3s,baz=72,slow=19,SNR=13						
IDI	Anoyia	1.12	345	P	Pb	11 31 10.4	-0.2
IDI				S	Sb	11 31 23.9	-1.1
IDI				AML	AML	11 31 35.3	
	comp=N,1016μm,0.6s						
IDI				AML	AML	11 31 43.9	
	comp=E,1160μm,0.6s						
IDI	Anoyia	1.12	345	PN	Pb	11 31 10.3	-0.4
IDI				SN	Sn	11 31 26.4	+2.0
GVD	Gavdhos	1.15	304	P	Pb	11 31 10.7	-0.5
GVD				S	Sb	11 31 25.8	0.0
	comp=E,2μm,0.7s						
GVD	Gavdhos	1.15	304	P	Pb	11 31 10.9	-0.3
GVD				S	Sb	11 31 25.9	+0.2
GVD				AML	AML	11 31 36.9	
	comp=E,4397μm,0.6s						
GVD				AML	AML	11 31 46.6	
	comp=N,3821μm,0.8s						
GVD	Gavdhos	1.15	304	PN	Pb	11 31 10.9	-0.3
GVDS	Gavdos	1.15	304	PN	Pb	11 31 10.7	-0.5
ZKR	Zakros	1.21	41	P	Pn	11 31 12.4	+1.5
ZKR				S	Sb	11 31 26.5	-0.8
ZKR				AML	AML	11 31 40.1	
	comp=N,479μm,0.5s						
ZKR				AML	AML	11 31 46.9	
	comp=E,1038μm,0.8s						
ZKR	Zakros	1.21	41	PN	Pn	11 31 11.0	+0.1
ZKR				SN	Sb	11 31 26.9	-0.4
STIA	Sitia Lasithi	1.21	34	P	Pn	11 31 13.2	+2.3
VAM	Vamos	1.48	324	P	Pn	11 31 15.6	+0.9
VAM	Vamos	1.48	324	P	Pn	11 31 15.6	+0.9
VAM				AML	AML	11 31 47.4	
	comp=N,1467μm,0.6s						
VAM				AML	AML	11 31 51.7	
	comp=E,1611μm,0.6s						
IMMV	Iera Moni Meta	1.63	321	P	Pn	11 31 17.6	+0.9
IMMV				S	Sn	11 31 35.9	-1.0
	comp=E,722nm,0.8s						
IMMV	Iera Moni Meta	1.63	321	P	Pn	11 31 17.7	+0.9
IMMV				S	Sn	11 31 35.2	-1.6
IMMV				AML	AML	11 31 56.4	
	comp=N,1199μm,1.4s						
IMMV				AML	AML	11 32 01.6	
	comp=E,1774μm,1.0s						
IMMV	Iera Moni Meta	1.63	321	PN	Pn	11 31 18.0	+1.2
KNDR	Palaiochora Ch	1.65	309	PN	Pn	11 31 18.5	+1.5
RODP	Rodopos	1.83	318	PN	Pn	11 31 20.5	+1.0
KARP	Karpathos	2.06	49	P	Pn	11 31 24.6	+1.9
KARP	Karpathos	2.06	49	PN	Pn	11 31 22.7	0.0
THR6	Thira Island,	2.15	3	P	Pn	11 31 24.3	+0.4
SANT	Santorini	2.17	4	P	Pn	11 31 24.5	+0.4
SANT	Santorini	2.17	4	PN	Pn	11 31 24.6	+0.4
THR3	Thira Island,	2.20	3	P	Pn	11 31 24.9	+0.3
THR8	Santorini-Mono	2.21	5	P	Pn	11 31 24.8	+0.2
THR5	Thira Island,	2.21	2	P	Pn	11 31 25.2	+0.5
THT2	Imerovigli	2.23	3	PN	Pn	11 31 25.8	+0.8
ANKY	Antikythira Is	2.31	317	P	Pn	11 31 27.9	+1.9
IOSP	Ios island	2.52	1	P	Pn	11 31 28.9	0.0
MHLO	Agia Marina, M	2.58	345	P	Pn	11 31 29.7	0.0
MHLA	Plaka, Milos I	2.62	345	P	Pn	11 31 30.7	+0.3
AMGA	Amorgos Island	2.67	11	P	Pn	11 31 30.7	-0.4
KTHA	Kythira Island	2.72	319	P	Pn	11 31 33.2	+1.5
APE	Apeiranthos	2.87	4	P	Pn	11 31 33.5	-0.3
APE	Apeiranthos	2.87	4	PN	Pn	11 31 33.9	+0.1
ARG	Arkhangelos	3.09	49	P	Pn	11 31 38.4	+1.6
ARG	Arkhangelos	3.09	49	PN	Pn	11 31 37.5	+0.7
VLI	Veliai	3.14	324	P	Pn	11 31 36.7	-0.8
DAT	Datca	3.15	36	PN	Pn	11 31 38.3	+0.5
DATC	Datca-Mugla	3.22	37	PN	Pn	11 31 38.9	+0.4
BODT	Bodrum	3.31	30	PN	Pn	11 31 40.3	+0.5
KRND	KRANIDI	3.60	332	P	Pn	11 31 43.7	-0.2
DID	Didima	3.68	334	P	Pn	11 31 44.3	-0.6
MLSB	Milas	3.71	33	PN	Pn	11 31 46.0	+0.7
TURN	Turunc	3.81	45	PN	Pn	11 31 43.9	-2.8
YER	Yerkesik	3.83	39	PN	Pn	11 31 47.8	+0.8
VLY	Voula,Athens	3.83	342	P	Pn	11 31 47.1	+0.1
PYL	PYLOS	3.93	314	P	Pn	11 31 50.4	+2.2
FETY	Fethiye	3.96	51	PN	Pn	11 31 48.9	+0.2
PTL	Penteli	4.00	344	P	Pn	11 31 49.4	0.0
ITM	Ithomi	4.02	319	P	Pn	11 31 49.0	-0.5
AKAS	Kas	4.10	59	PN	Pn	11 31 51.0	+0.2
LTK	Loutraki	4.24	335	P	Pn	11 31 52.4	-0.2
AYDB	Zeytinkoy-Aydi	4.30	29	PN	Pn	11 31 54.4	+0.8
VIL2	Platees	4.31	339	P	Pn	11 31 52.3	-1.3
ELL	Elmali	4.57	55	PN	Pn	11 31 57.6	+0.4
KLV	Kalavryta, Ach	4.58	328	P	Pn	11 31 56.9	-0.4
MRKA	Markates	4.69	344	P	Pn	11 31 58.5	-0.3
DRO	Drossia	4.71	324	P	Pn	11 31 59.4	+0.3
LKR	Lokris	4.80	338	P	Pn	11 31 60.0	-0.2
LAKA	Lakka	4.82	328	P	Pn	11 32 00.8	+0.2
KALE	Kalithea	4.88	330	P	Pn	11 32 00.8	-0.6
AGG	Agios Georgios	5.35	335	P	Pn	11 32 07.4	-0.5
MAKR	Makrakomi, Fth	5.42	333	P	Pn	11 32 08.7	-0.1
MMAI	Mount Meron Ar	8.55	95	P	Pn	11 32 50.1	-1.7
	comp=E,1.7nm,0.3s,baz=278,slow=13,SNR=3.5						
MMAI				S	Sn	11 34 22.6	-4.7
	comp=E,4.9nm,0.3s,baz=309,slow=33,SNR=6.1						
BRTR	Keskin Array B	8.68	48	P	Pn	11 32 53.7	0.0
	comp=E,0.1nm,0.3s,baz=249,slow=12,SNR=3.3						
BRTR				S	Sn	11 34 29.8	-0.9
	comp=E,0.1nm,0.3s,baz=2.5,slow=15,SNR=3.2						
EIL	Elat	9.40	116	P	Pn	11 33 01.5	-1.9
	comp=E,0.6nm,0.3s,baz=325,slow=4.8,SNR=15						
EIL				S	Sn	11 34 41.4	-6.7
	comp=E,0.8nm,0.3s,baz=350,slow=19,SNR=3.4						
ABTA	Abfaltersbach	15.81	326	*e*Pn	Pn	11 34 34.2	+3.6
	comp=E,4.1nm,0.7s						
MOA	Molln	15.93	332	Pn	Pn	11 34 35.7	+3.7
	comp=E,1.0nm,0.6s						
VRAC	Vranov	16.40	340	P	Pn	11 34 38.0	+0.1
	comp=E,0.2nm,0.3s,baz=164,slow=12,SNR=4.5						
WTTA	Wattenberg	16.60	326	P	P	11 34 45.4	+2.4
	comp=E,1.5nm,0.5s						
AKASG	Malin Array Be	16.74	9	P	Pn	11 34 40.8	-1.4
	comp=E,1.1nm,0.3s,baz=198,slow=8.9,SNR=6.7						
FETA	Feichten	16.86	324	Pn	Pn	11 34 46.7	+2.7
	comp=E,1.6nm,0.8s						
GERES	GERESS Array B	16.96	333	P	Pn	11 34 45.0	-0.1
	comp=E,0.1nm,0.3s,baz=150,slow=12,SNR=11						
RETA	Reutte	17.17	325	*e*Pn	Pn	11 34 49.9	+2.1
	comp=E,0.5nm,0.3s						
ESDC	Sonseca Array	23.92	292	P	P	11 36 00.7	-0.8
	comp=E,0.5nm,0.6s,baz=79,slow=9.4,SNR=5.7						
HFS	Hagfors	27.02	347	P	P	11 36 27.6	-1.7
	comp=E,1.5nm,0.6s,baz=160,slow=10,SNR=12						
FINES	FINESS Array B	27.26	1	P	P	11 36 28.9	-2.5
	comp=E,3.1nm,0.9s,baz=175,slow=13,SNR=3.4						
NOA	NORSAR Array B	28.34	346	P	P	11 36 39.8	-1.4
	comp=E,0.4nm,0.7s,baz=156,slow=7.3,SNR=7.2						
TORD	Torodi Ar. Bea	29.94	231	P	P	11 36 55.7	0.0
	comp=E,0.5nm,0.5s,baz=39,slow=9.2,SNR=3.6						
ARCES	ARCESS Array B	35.38	0	P	P	11 37 39.9	-2.8
	comp=E,6.1nm,1.1s,baz=175,slow=8.5,SNR=6.6						
MKAR	Makanchi Array	44.24	56	P	P	11 38 56.3	-0.4
	comp=E,0.5nm,0.6s,baz=280,slow=6.1,SNR=10						
ZALV	Zalesovo Beam	45.61	45	P	P	11 39 06.5	-0.9
	comp=E,0.7nm,0.3s,baz=259,slow=9.0,SNR=4.5						
SONM	Songino Array	60.03	50	P	P	11 40 53.9	-0.3
	comp=E,0.4nm,0.3s,baz=283,slow=7.5,SNR=6.3						

*SOME **01** 11:49:43.9, 40°.92N×73°.33E, h0km*
*KRNET **01** 11:49:44.5±0.1, 40°.79N×73°.37E, h16km, mb2.8*
*NNC **01** 11:49:44.4±1.0, 40°.81N×73°.30E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=8.3km s-min=3.7km az=171.0*
ISC 01 11:49:40.3±1.6**, 40°.71N**±0°.06×**73°.35E**±0°.02**, h6**km±11km**, n60, σ1^{s}18**/94**, 21C-19D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.68	336	⇑*i*P	Pn	11 49 56.1	-0.5
	baz=31						
ARSB				⇑*i*S	Sb	11 50 04.4	+0.1
	baz=31						
ARLS	Aral	1.36	32	⇑*i*P	Pg	11 50 08.8	+2.4
	baz=34						
ARLS				⇑*i*S	Sn	11 50 26.0	+1.4
	baz=34						
AML	Almayashu	1.44	10	⇑*i*P	Pg	11 50 09.9	+1.9
	baz=10.0						
AML				⇑*i*S	Sn	11 50 28.2	+1.3
	baz=10.0						
AML	Almayashu	1.44	10	P	Pg	11 50 10.2	+2.1
	SNR=113						
ARK	Arkit	1.51	317	⇑*i*P	Pg	11 50 11.3	+2.1
	baz=14						
ARK				⇑*i*S	Sg	11 50 30.8	+2.0
	baz=14						
UCH	Uchtor	1.75	30	⇓*i*P	Pg	11 50 15.5	+1.6
	baz=31						
UCH				⇓*i*S	Sg	11 50 37.9	+1.3
	baz=31						
UCH	Uchtor	1.75	30	P	Pg	11 50 15.8	+2.0
	SNR=47						
EKS2	Erkin-Say	1.98	9	⇓*i*P	Pg	11 50 19.0	+0.8
	baz=9.0						
EKS2				⇓*i*S	Sg	11 50 44.0	+0.2
	baz=9.0						
EKS2	Erkin-Say	1.98	9	P	Pg	11 50 19.4	+1.2
	SNR=20						
KZA	Kyzart	1.98	46	⇓*i*P	Pg	11 50 19.5	+1.3
	baz=47						
KZA				⇓*i*S	Sg	11 50 45.3	+1.5
	baz=47						
KZA	Kyzart	1.98	46	P	Pg	11 50 19.6	+1.5
	SNR=20						
MRKS	Merke	2.04	357	*e*P	Pg	11 50 19.6	+0.2
	22nm,0.2s						
MRKS				*e*S	Sg	11 50 46.0	+0.3
	49nm,0.2s						
MRKS	Merke	2.04	357	Pg	Pg	11 50 19.6	+0.2
	22nm,0.2s						
MRKS				Lg	Lg	11 50 46.0	
	49nm,0.2s						
AAK	Ala-Archa	2.11	24	⇑*i*P	Pg	11 50 20.9	+0.2
	baz=24						
AAK				⇑*i*S	Sg	11 50 47.6	-0.4
	baz=24						
AAK	Ala-Archa	2.11	24	P	Pg	11 50 21.2	+0.4
	SNR=44						
AAK	Ala-Archa	2.11	24	⇓Pn	Pg	11 50 21.1	+0.4
	20nm,0.5s						
AAK				⇓Sn	Sg	11 50 48.5	+0.5
	16nm,0.4s						
NRN	Naryn	2.13	69	⇑*i*P	Pb	11 50 21.3	+1.8
	baz=71						
NRN				⇑*i*S	Sb	11 50 48.5	+2.2
	baz=71						
KBK	Karagaybulak	2.28	31	⇓*i*P	Pb	11 50 23.2	+1.2
	baz=32						
KBK				⇓*i*S	Sg	11 50 51.9	-1.8
	baz=32						
KBK	Karagaybulak	2.28	31	P	Pg	11 50 24.3	+0.2
	SNR=11						
FRU1	Bishkek	2.31	24	⇑*i*P	Pb	11 50 23.5	+1.1
	baz=25						
FRU1				⇑*i*S	Sg	11 50 52.5	-1.9
	baz=25						
CHMS	Chumysh	2.52	24	⇑*i*P	Pb	11 50 26.4	+0.5
	baz=25						
CHMS				⇑*i*S	Sg	11 50 57.2	-3.9
	baz=25						
CHMS	Chumysh	2.52	24	P	Pb	11 50 26.8	+0.9
	SNR=7.3						
BOOM	Boomskoye usch	2.63	47	⇓*i*P	Pb	11 50 28.8	+0.8
	baz=48						
BOOM				⇓*e*S	Sb	11 51 00.8	+0.1
	baz=48						
DZA	Taraz	2.65	326	Pg	Pg	11 50 31.4	+0.2
	88nm,0.1s						
DZA				Lg	Lg	11 51 05.9	
	44nm,0.2s						
ULHL	Ulahol	2.66	54	⇑*i*P	Pb	11 50 28.8	+0.3
	baz=55						
ULHL				⇑*i*S	Sb	11 51 01.5	+0.1
	baz=55						
USP	Ospenovka	2.69	18	⇑*i*P	Pb	11 50 28.8	-0.2
	baz=18						
USP				⇑*i*S	Sb	11 51 01.5	-0.8
	baz=18						
TKM2	Tokmak 2	2.77	36	⇓*i*P	Pb	11 50 29.9	-0.5
	baz=37						
TKM2				⇓*i*S	Sb	11 51 04.1	-0.7
	baz=37						
TKM2	Tokmak 2	2.77	36	⇓Pg	Pg	11 50 33.6	+0.1
	1.6nm,0.4s						
TKM2				⇓Lg	Lg	11 51 09.1	
	8.6nm,0.7s						
IUG	Iuzhnay	2.88	301	*e*P	Pg	11 50 35.8	+0.3
	0.8nm,0.2s						
IUG				*e*S	Sg	11 51 12.8	0.0
	45nm,0.3s						
IUG	Iuzhnay	2.88	301	Pg	Pg	11 50 35.7	+0.2
	0.8nm,0.2s						
IUG				Lg	Lg	11 51 12.8	
	45nm,0.3s						
SGDS	Sogindy	2.90	19	Pg	Pg	11 50 35.3	-0.6
	3.1nm,0.3s						
SGDS				Lg	Lg	11 51 12.8	
	10nm,0.3s						
KST	Kastek	3.04	39	*e*P	Pg	11 50 38.7	+0.2
	3.2nm,0.3s						
KST				*e*S	Sg	11 51 18.2	+0.3
	8.8nm,0.5s						
KST	Kastek	3.04	39	Pg	Pg	11 50 38.7	+0.2
	3.2nm,0.3s						
KST				Lg	Lg	11 51 18.2	
	8.8nm,0.5s						
DGS	Degeres	3.11	35	*e*P	Pg	11 50 39.8	0.0
	4.6nm,0.6s						
DGS				*e*S	Sg	11 51 20.4	+0.3
	11nm,0.5s						
DGS	Degeres	3.11	35	Pg	Pg	11 50 39.8	0.0
	4.6nm,0.6s						
DGS				Lg	Lg	11 51 20.4	
	11nm,0.5s						
KK31	Karatay Array	3.20	319	⇓Pg	Pg	11 50 40.6	-0.9
	0.8nm,0.4s,baz=136,slow=15,SNR=12						
KK31				⇑Lg	Lg	11 51 22.0	
	3.4nm,0.4s,baz=138,slow=28,SNR=8.1						
KDJ	Kajisay	3.21	62	⇓*e*P	Pb	11 50 37.0	-0.8
	baz=64						
KDJ				⇓*i*S	Sb	11 51 15.0	-2.2
	baz=64						
MTBS	Maitube	3.33	42	*e*P	Pg	11 50 44.4	+0.2
	4.1nm,0.3s						
MTBS				*e*S	Sg	11 51 27.9	+0.5
	6.4nm,0.3s						
MTBS	Maitube	3.33	42	Pg	Pg	11 50 44.4	+0.2
	4.1nm,0.3s						
MTBS				Lg	Lg	11 51 27.9	
	6.4nm,0.3s						
BRLS	Boroldy	3.50	313	*e*P	Pg	11 50 45.9	-1.5
	0.4nm,0.2s						
BRLS				*e*S	Sg	11 51 30.8	-2.0
	5.2nm,0.4s						
BRLS	Boroldy	3.50	313	Pg	Pg	11 50 45.9	-1.5
	0.4nm,0.2s						
BRLS				Lg	Lg	11 51 30.8	
	5.2nm,0.4s						
TNSS	Tian-Shan	3.55	48	*e*P	Pg	11 50 48.1	-0.2
	2.5nm,0.3s						
TNSS				*e*S	Sg	11 51 34.4	0.0
	6.7nm,0.4s						
TNSS	Tian-Shan	3.55	48	Pg	Pg	11 50 48.1	-0.2
	2.5nm,0.3s						
TNSS				Lg	Lg	11 51 34.4	
	6.7nm,0.4s						
MDOK	Medeo	3.69	47	*e*P	Pg	11 50 50.9	-0.1
	2.3nm,0.3s						
MDOK				*e*S	Sg	11 51 39.1	+0.3
	6.2nm,0.5s						
MDOK	Medeo	3.69	47	Pg	Pg	11 50 50.9	-0.1
	2.3nm,0.3s						
MDOK				Lg	Lg	11 51 39.1	
	6.2nm,0.5s						
KOTS	Kotyrbulak	3.77	47	*e*P	Pg	11 50 52.3	-0.2
	3.2nm,0.3s						
KOTS				*e*S	Sg	11 51 41.3	-0.1
	40nm,0.5s						
KOTS	Kotyrbulak	3.77	47	Pg	Pg	11 50 52.3	-0.2
	3.2nm,0.3s						
KOTS				Lg	Lg	11 51 42.1	
	40nm,0.5s						
KUU	Kurty	3.88	34	*e*P	Pg	11 50 53.2	-1.4
	3.0nm,0.5s						
KUU				*e*S	Sg	11 51 43.0	-1.7
	7.4nm,0.3s						
KUU	Kurty	3.88	34	Pg	Pg	11 50 53.2	-1.4
	3.0nm,0.5s						
KUU				Lg	Lg	11 51 43.0	
	7.4nm,0.3s						
KTBS	Karatobe	3.89	38	*e*P	Pg	11 50 54.2	-0.6
	1.4nm,0.4s						
KTBS				*e*S	Sg	11 51 44.8	-0.3
	11nm,0.5s						
KTBS	Karatobe	3.89	38	Pg	Pg	11 50 54.2	-0.6
	1.4nm,0.4s						
KTBS				Lg	Lg	11 51 44.8	
	11nm,0.5s						
CHKK	Chushkaly	4.14	39	*e*P	Pg	11 50 58.3	-1.3
	5.2nm,0.1s						
CHKK				*e*S	Sg	11 51 52.0	-1.2
	3.9nm,0.3s						
CHKK	Chushkaly	4.14	39	Pg	Pg	11 50 58.3	-1.3
	5.2nm,0.1s						
CHKK				Lg	Lg	11 51 52.0	
	3.9nm,0.3s						
BTLS	Baital	4.36	6	*e*P	Pg	11 51 02.9	-0.9
	0.7nm,0.4s						
BTLS				*e*S	Sg	11 51 59.3	-1.0
	3.0nm,0.4s						
BTLS	Baital	4.36	6	Pg	Pg	11 51 02.9	-0.9
	0.7nm,0.4s						
BTLS				Lg	Lg	11 51 59.3	
	3.0nm,0.4s						
SATY	Saty	4.44	56	*e*P	Pg	11 51 04.2	-1.2
	0.7nm,0.2s						
SATY				*e*S	Sg	11 52 01.7	-1.2
	9.0nm,0.3s						
SATY	Saty	4.44	56	Pg	Pg	11 51 04.2	-1.2
SATY				Lg	Lg	11 52 01.7	
ARXS	Arharly	4.82	42	*e*P	Pg	11 51 11.1	-1.4
	1.5nm,0.5s						
ARXS				*e*S	Sg	11 52 13.5	-1.5
	4.2nm,0.4s						
ARXS	Arharly	4.82	42	Pg	Pg	11 51 10.9	-1.7
	1.5nm,0.5s						
ARXS				Lg	Lg	11 52 13.6	
	4.1nm,0.5s						
UZB	Uzynbulak	4.88	58	*e*P	Pg	11 51 12.5	-1.2
	0.8nm,0.1s						
UZB				*e*S	Sg	11 52 15.9	-1.1
	2.4nm,0.2s						

WEL 01 11:50:15.1±1.0**, 34°S**±7°×**17°9E**±1°6**, h30**km±12km**, M4.1**/16**, mB4.3**/1**, ML4.3**/16**, MLv4.1**/16**, Mw(mB)3.4**/1**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	Te Kaha	4.04	190	P	Pn	11 51 17.3	+2.5
HAZ				S	Sn	11 52 03.5	+2.4
WMGZ	Waiomatatini S	4.04	182	P	Pn	11 51 16.5	+1.6
WMGZ				S	Sn	11 52 01.8	+0.5
RUGZ	Raukumara Rang	4.25	190	P	Pn	11 51 20.5	+2.5
PUZ	Puketiti	4.30	184	P	Pn	11 51 18.9	+0.4
PUZ				S	Sn	11 52 07.7	-0.1
MWZ	Matawai	4.64	191	P	Pn	11 51 24.1	+0.9
MWZ				S	Sn	11 52 16.7	+0.6
URZ	Urewera	4.64	195	P	Pn	11 51 24.8	+1.6
URZ				S	Sn	11 52 17.8	+1.7
TKGZ	Te Karaka	4.70	187	P	Pn	11 51 24.0	0.0
TKGZ				S	Sn	11 52 16.6	-0.9
CNGZ	Carnagh Statio	4.71	184	P	Pn	11 51 24.2	0.0
MUGZ	Murupara	4.93	197	P	Pn	11 51 28.4	+1.2
RIGZ	Rimuhau	4.97	188	P	Pn	11 51 26.9	-0.8
RTZ	Ruatahuna	5.01	195	P	Pn	11 51 29.0	+0.7
SNGZ	Shannon Statio	5.11	191	P	Pn	11 51 29.5	-0.1
KNZ	Kokohu	5.30	188	P	Pn	11 51 30.4	-1.8
MRHZ	Matea Rd	5.36	199	P	Pn	11 51 34.6	+1.5
GLKZ	Green Lake	5.38	34	S	Sn	11 52 35.0	+0.8
ARHZ	Aropaoanui	5.64	193	P	Pn	11 51 36.0	-0.8
MCHZ	McNeill Hill	5.87	195	P	Pn	11 51 39.8	-0.3
KAHZ	Kahuranaki	6.17	193	P	Pn	11 51 42.4	-1.9
PXZ	Pawanui	6.41	192	P	Pn	11 51 44.5	-2.8
TSZ	Takapari Road	6.63	198	P	Pn	11 51 48.2	-2.3
DVHZ	Dannevirke	6.80	196	P	Pn	11 51 50.0	-2.9

*IDC **01** 12:13:36.0±2.1, 19°.43N×145°.34E, h217km±22km, mb3.5/7, mb1 3.7/9, mb1mx3.3/39, mbtmp4.0/9, Error ellipse: s-maj=23.8km s-min=12.9km az=90.0*

*NEIC **01** 12:13:36.0±1.1, 19°.4N±0°.1×145°.2E±0°.2, h215km±10km, mb4.1/10, Error ellipse: s-maj=29.0km s-min=15.0km az=100.0*

ISC 01 12:13:34.0±0.9**, 19°.53N**±0°.07×**145°.2E**±0°.3**, h200**km**, n30,** σ**0.93**/20**, mb3.8**/13**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	**Sarigan**	**2.88**	**168**	Pn	**Pn**	**12 14 21.5**	**-0.8**
SARN					**Sn**	**12 15 02.1**	**+2.1**
GUMO	**Guam**	**5.92**	**183**	P	**Pn**	**12 15 01.6**	**+1.3**
	2.8nm,0.3s,baz=22,slow=19,SNR=2.1						
GUMO				S	**Sn**	**12 16 08.7**	**+0.2**
	4.9nm,0.3s,baz=17,slow=19,SNR=2.3						
GUMO	**Guam**	**5.92**	**183**		**Pn**	**12 15 00.8**	**+0.5**
GUMO					**Sn**	**12 16 07.0**	**-1.5**
MJAR	**Matsushiro Arr**	**18.02**	**342**	P	**Pn**	**12 17 32.8**	**+0.7**
	0.1nm,0.3s,baz=147,slow=9.0,SNR=6.4						
MJAR	**Matsushiro Arr**	**18.02**	**342**	P	**Pn**	**12 17 32.6**	**+0.5**
MJB9	**Matsu-Tunnel**	**18.02**	**342**	P	**Pn**	**12 17 33.6**	**+1.4**
H11S3	**WAKE ISLAND Hy**	**20.36**	**89**	T	T	12 39 02.5	
	baz=276						
H11S1	**WAKE ISLAND Hy**	**20.37**	**89**	T	T	12 39 19.1	
	baz=276						
H11S2	**WAKE ISLAND Hy**	**20.38**	**89**	T	T	12 39 19.5	
	baz=276						
WRAB	**Tennant Creek**	**40.63**	**196**	P	**P**	**12 20 53.9**	**-0.8**
WRAB				IAmb	IAmb	12 20 55.6	
	comp=Z,2.7nm,0.7s						
WRA	**Warramunga Arr**	**40.65**	**196**	P	**P**	**12 20 54.9**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=15,slow=8.7,SNR=20						
WRA	**Warramunga Arr**	**40.65**	**196**	P	**P**	**12 20 54.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**42.03**	**208**	P	**P**	**12 21 05.8**	**-0.2**
SONM	**Songino Array**	**42.19**	**321**	P	P	12 21 09.4	+2.2
	comp=Z,0.1nm,0.4s,baz=130,slow=6.9,SNR=2.2						
AS31	**Alice Springs**	**44.32**	**195**	P	**P**	**12 21 24.1**	**-0.3**
ASAR	**Alice Springs**	**44.32**	**195**	P	**P**	**12 21 24.1**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=14,slow=6.6,SNR=21						
ASAR	**Alice Springs**	**44.32**	**195**	P	**P**	**12 21 23.9**	**-0.5**
MKAR	**Makanchi Array**	**57.53**	**314**	P	P	12 23 04.1	+1.6
	comp=Z,0.1nm,0.5s,baz=87,slow=7.1,SNR=3.3						
MKAR	**Makanchi Array**	**57.53**	**314**	P	P	12 23 04.5	+1.9
SVW2	**Sparrevohn**	**58.34**	**29**	P	P	12 23 10.0	+2.1
SVW2				IAmb	IAmb	12 23 29.1	
	comp=Z,8.5nm,1.2s						
MLY	**Manley**	**61.58**	**26**	P	P	12 23 31.6	+1.7
MLY				IAmb	IAmb	12 23 44.3	
	comp=Z,3.7nm,1.2s						
TOLK	**Toolik Lake Re**	**63.00**	**22**	P	P	12 23 41.4	+2.1
TOLK				IAmb	IAmb	12 23 44.8	
	comp=Z,8.3nm,1.4s						
IL31		**63.12**	**26**	P	**P**	**12 23 39.9**	**-0.1**
ILAR	**Eielson Array**	**63.12**	**26**	P	**P**	**12 23 39.7**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=255,slow=5.7,SNR=8.7						
YKA	**Yellowknife Ar**	**77.48**	**28**	P	P	12 25 07.3	+0.3
	comp=Z,0.6nm,0.5s,baz=290,slow=5.8,SNR=9.2						
ARCES	**ARCESS Array B**	**81.55**	**342**	P	P	12 25 29.9	+1.0
	comp=Z,2.7nm,0.9s,baz=70,slow=7.8,SNR=5.1						
NVAR	**Mina Array Bea**	**83.01**	**52**	P	P	12 25 38.2	+0.8
	comp=Z,1.0nm,0.6s,baz=274,slow=5.9,SNR=11						
NVAR	**Mina Array Bea**	**83.01**	**52**	P	P	12 25 38.0	+0.6
FINES	**FINESS Array B**	**85.92**	**335**	P	**P**	**12 25 50.3**	**-0.9**
	comp=Z,2.5nm,1.0s,baz=68,slow=7.6,SNR=9.6						
FINES	**FINESS Array B**	**85.92**	**335**	P	**P**	**12 25 51.0**	**-0.2**

IDC 01 12:54:04.2±10.0**, 24°.01S**×**179°.89W, h558**km±141km**, mb2.6**/3**, mb1 3.0**/4**, mb1mx2.8**/31**, mbtmp3.7**/4**, Error ellipse: s-maj=93.8km s-min=32.5km az=7.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.43**	**190**	P	P	12 57 07.6	0.0
	0.6nm,0.3s,baz=95,slow=12,SNR=4.7						
URZ				S	S	12 59 38.5	+0.1
	0.4nm,0.3s,baz=150,slow=20,SNR=3.1						
ASAR	**Alice Springs**	**42.12**	**261**	P	P	13 01 08.6	+0.3
	0.5nm,0.8s,baz=98,slow=6.9,SNR=4.2						
WRA	**Warramunga Arr**	**42.50**	**266**	P	P	13 01 10.8	-0.6
	0.2nm,0.3s,baz=105,slow=8.3,SNR=6.3						
TXAR	**Lajitas Array**	**90.40**	**58**	P	P	13 06 06.7	-0.1
	0.3nm,0.7s,baz=216,slow=6.2,SNR=4.4						

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*IDC **01** 13:03:14.9±0.8, 11°.81N×85°.99W, h0km, mb3.7/7, mb1 4.1/8, mb1mx3.7/39, mbtmp3.8/8, ML3.8/1, Error ellipse: s-maj=59.2km s-min=17.4km az=60.0*
*UCR **01** 13:03:15.9±2.6, 10°.91N×86°.88W, h35km±19km, MD4.1, ML4.2, mb4.6(NEIC)*
*INET **01** 13:03:15.8, 10°.87N×86°.85W, h18km, ML3.7*
*NEIC **01** 13:03:18.8±1.4, 11°.03N±0°.10×86°.77W±0°.08, h48km±10km, mb4.6/73, Error ellipse: s-maj=15.0km s-min=9.8km az=209.0*
*SNET **01** 13:03:21.1±1.2, 11°.34N×86°.93W, h21km±36km, ML3.8*

ISC 01 13:03:17.3±1.7**, 11°.05N**±0°.06×**86°.75W**±0°.06**, h31**km±11km**, n124,** σ**1.15**/133**, mb4.5**/43**, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASN	**Masaya**	**1.10**	**32**	*e*P	**Pb**	**13 03 40.3**	**+2.5**
COPN	**Copaltepe**	**1.13**	**8**	⇓*e*P	**Pb**	**13 03 38.0**	**-0.4**
COPN	**Copaltepe**	**1.13**	**8**	⇓*e*P	**Pb**	**13 03 38.0**	**-0.4**
COPN				*e*S	**Sn**	**13 03 49.7**	**-1.7**
NY14	**Universidad de**	**1.26**	**108**	*i* P	**Pn**	**13 03 38.3**	**-0.5**
BUEV	**Buena Vista**	**1.35**	**101**	*i* P	**Pn**	**13 03 39.3**	**-0.8**
GB1A	**Borinquen Arri**	**1.35**	**100**	*i* P	**Pn**	**13 03 39.5**	**-0.7**
MOMN	**Momotombo**	**1.36**	**9**	*e*P	**Pn**	**13 03 41.1**	**+0.9**
MOMN	**Momotombo**	**1.36**	**9**	*e*P	**Pn**	**13 03 41.1**	**+0.9**
BUAI	**Buenos Aires**	**1.41**	**97**	*i* P	**Pn**	**13 03 40.9**	**0.0**
COLC	**Colonia**	**1.57**	**104**	*i* P	**Pn**	**13 03 42.3**	**-0.8**
CUI	**Cuipilapa**	**1.61**	**104**	*i* P	**Pn**	**13 03 43.1**	**-0.6**
CUI				*i* S	**Sb**	**13 04 06.3**	**-0.1**
ACON	**Acoyapa**	**1.79**	**59**	*e*P	**Pn**	**13 03 46.3**	**+0.1**
ACON	**Acoyapa**	**1.79**	**59**	Pn	**Pn**	**13 03 46.2**	**+0.1**
JTS	**Las Juntas de**	**1.93**	**113**	Pn	**Pn**	**13 03 45.9**	**-2.0**
	3.4nm,0.3s,baz=304,slow=7.3,SNR=22						
JTS				Sn	**Sn**	**13 04 11.3**	**+0.2**
	29nm,0.3s,baz=311,slow=20,SNR=9.1						
JTS	**Las Juntas de**	**1.93**	**113**	*e*P	**Pn**	**13 03 46.7**	**-1.3**
JTS	**Las Juntas de**	**1.93**	**113**		**Pn**	**13 03 46.1**	**-1.8**
MATN	**Matagalpa**	**2.03**	**23**	*e*P	**Pn**	**13 03 50.5**	**+1.0**
ESTN	**Estel**	**2.07**	**10**	*e*P	**Pn**	**13 03 51.4**	**+1.3**
ESTN	**Estel**	**2.07**	**10**	Pn	**Pn**	**13 03 51.2**	**+1.2**
CNCH	**Conchagua**	**2.45**	**335**	*e*P	**Pn**	**13 03 56.1**	**+0.8**
CNCH	**Conchagua**	**2.45**	**335**	*e*P	**Pn**	**13 03 56.1**	**+0.8**
LCND	**La Caada**	**2.50**	**334**	*e*P	**Pn**	**13 03 56.5**	**+0.6**
LCND	**La Caada**	**2.50**	**334**	*e*P	**Pn**	**13 03 56.5**	**+0.6**
LCND				*e*S	**Sn**	**13 04 22.5**	**-2.8**
LCND				AML	AML	13 04 29.8	
	comp=Z,406nm,0.3s						
JUCU	**Jucuar¡n**	**2.63**	**326**	*e*P	**Pn**	**13 03 57.4**	**-0.3**
JUCU				*e*S	**Sn**	**13 04 27.1**	**-1.5**
JUCU				AML	AML	13 04 32.5	
	comp=Z,277nm,0.3s						
ESPN	**Las Esperanzas**	**2.66**	**64**	Pn	**Pn**	**13 03 58.9**	**+0.9**
HDC	**Heredia**	**2.80**	**112**	Pn	**Pn**	**13 04 03.5**	**+3.5**
PACA	**Pacayal**	**2.85**	**328**	*e*P	**Pn**	**13 04 01.3**	**+0.6**
PACA				*e*S	**Sn**	**13 04 32.8**	**-1.3**
PACA				AML	AML	13 04 41.2	
	comp=Z,1µm,0.2s						
PACA	**Pacayal**	**2.85**	**328**	*e*P	**Pn**	**13 04 01.3**	**+0.6**
PACA				*e*S	**Sn**	**13 04 32.8**	**-1.3**
PACA				AML	AML	13 04 41.2	
	comp=Z,1µm,0.2s						
TECA	**Tecapa**	**2.97**	**325**	*e*P	**Pn**	**13 04 02.8**	**+0.4**
TECA	**Tecapa**	**2.97**	**325**	*e*P	**Pn**	**13 04 02.8**	**+0.4**
TECA				*e*S	**Sn**	**13 04 35.8**	**-1.4**
LCR2	**La Lucha 2**	**3.00**	**115**	*e*P	**Pn**	**13 04 03.5**	**+0.5**
TGUH	**Tegucigalpa,Un**	**3.03**	**350**		Pn	13 03 54.6	-8.6
TGUH					Pb	13 04 04.5	-6.1
COEG	**Centro de Oper**	**3.29**	**321**	*e*P	**Pn**	**13 04 06.9**	**+0.1**
COEG				*e*S	**Sn**	**13 04 41.2**	**-3.7**
COEG				*e*S	Sb	13 04 43.5	-11
LFRS	**El Faro**	**3.41**	**319**	*e*P	**Pn**	**13 04 08.3**	**-0.1**
LFRS				*e*S	**Sn**	**13 04 46.6**	**-1.2**
SNET	**Serv Nac Est T**	**3.56**	**317**	Pn	**Pn**	**13 04 08.4**	**-2.1**
CMIG	**Matias Romero**	**9.91**	**308**	Pn	**Pn**	**13 05 39.5**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=122,slow=10,SNR=5.4						
BANI	**BANI**	**17.45**	**63**	Pn	**Pn**	**13 07 15.4**	**-3.2**
Y49A	**Blount Mountai**	**22.70**	**1**	P	**P**	**13 08 17.3**	**+0.8**
Y49A				IAmb	IAmb	13 08 57.6	
	comp=Z,56nm,2.0s						
Y52A	**Lilburn**	**22.84**	**6**	P	**P**	**13 08 19.2**	**+1.3**
FPAL	**Fort Paine**	**23.40**	**2**	P	**P**	**13 08 23.7**	**+0.1**
X51A	**Calhoun**	**23.47**	**4**	P	**P**	**13 08 24.9**	**+0.6**
JSC	**Jenkinsville**	**23.66**	**11**	P	**P**	**13 08 27.2**	**+1.2**
SWET	**Sewanee**	**24.07**	**2**	P	**P**	**13 08 29.9**	**0.0**
W50A	**Signal Mountai**	**24.07**	**3**	P	**P**	**13 08 29.7**	**-0.3**
W50A				IAmb	IAmb	13 08 31.0	
	comp=Z,27nm,1.6s						
TXAR	**Lajitas Array**	**24.08**	**321**	P	**P**	**13 08 31.1**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=133,slow=10,SNR=23						
TXAR				PcP	**PcP**	**13 12 14.5**	**+3.2**
	comp=Z,0.2nm,0.5s,baz=150,slow=4.2,SNR=5.0						
TXAR	**Lajitas Array**	**24.08**	**321**	P	**P**	**13 08 31.0**	**+0.7**
BG3	**Lake Jocassee**	**24.08**	**8**	P	**P**	**13 08 30.8**	**+0.8**
BG3				IAmb	IAmb	13 08 31.6	
	comp=Z,20nm,1.8s						
TX31	**Lajitas Ar. Si**	**24.08**	**321**	P	**P**	**13 08 30.5**	**+0.3**
TX32	**Lajitas Array**	**24.08**	**321**	P	**P**	**13 08 31.0**	**+0.7**
MIAR	**Mount Ida**	**24.20**	**346**	P	**P**	**13 08 30.8**	**-0.3**
MIAR				IAmb	IAmb	13 09 10.0	
	comp=Z,23nm,1.9s						
CPCT	**Cooper Cave**	**24.37**	**4**	P	**P**	**13 08 32.7**	**0.0**
CPCT				IAmb	IAmb	13 08 35.3	
	comp=Z,7.4nm,0.7s						
KMSC	**Kings Mountain**	**24.48**	**11**	P	**P**	**13 08 34.1**	**+0.4**
V48A	**Smith Brothers**	**24.58**	**360**	P	**P**	**13 08 35.0**	**+0.4**
TKL	**Tuckaleechee C**	**24.64**	**6**	P	**P**	**13 08 35.2**	**0.0**
TKL				IAmb	IAmb	13 08 49.2	
	comp=Z,17nm,1.4s						
V53A	**Saluda**	**24.77**	**8**	P	**P**	**13 08 37.0**	**+0.7**
V53A				IAmb	IAmb	13 08 37.8	
	comp=Z,28nm,1.8s						
W57A	**Gilead**	**24.77**	**13**	P	**P**	**13 08 36.7**	**+0.4**
W57A				IAmb	IAmb	13 08 40.7	
	comp=Z,27nm,1.6s						
V52A	**Sevierville**	**24.84**	**6**	P	**P**	**13 08 38.6**	**+1.7**
V52A				IAmb	IAmb	13 09 36.0	
	comp=Z,18nm,1.6s						
W39A	**Magazine**	**24.87**	**346**	P	**P**	**13 08 37.9**	**+0.7**
W39A				IAmb	IAmb	13 08 48.4	
	comp=Z,28nm,1.8s						
V58A	**Windy Hill, Pi**	**25.59**	**14**	P	**P**	**13 08 43.5**	**-0.1**
V58A				IAmb	IAmb	13 08 44.8	
	comp=Z,8.5nm,0.7s						
U40A	**Yellville**	**25.79**	**349**	P	**P**	**13 08 45.7**	**+0.2**
T47A	**Sharon Grove**	**25.82**	**359**	P	**P**	**13 08 45.9**	**+0.1**
PBMO	**Poplar Bluff**	**25.83**	**353**	P	**P**	**13 08 46.0**	**+0.1**
T49A	**Edmonton**	**25.96**	**2**	P	**P**	**13 08 47.4**	**+0.3**
T49A				IAmb	IAmb	13 08 48.0	
	comp=Z,16nm,1.6s						
WMOK	**Wichita Mounta**	**26.00**	**337**	P	**P**	**13 08 48.7**	**+1.1**
S51A	**Beattyville**	**26.62**	**6**	P	**P**	**13 08 53.0**	**-0.1**
T57A	**Hurt**	**26.70**	**13**	P	**P**	**13 08 53.9**	**+0.1**
T57A				IAmb	IAmb	13 09 08.6	
	comp=Z,44nm,1.9s						
MNTX	**Cornudas Mount**	**26.80**	**323**	P	**P**	**13 08 55.9**	**+1.0**
WCI	**Wyandotte Cave**	**27.06**	**1**	P	**P**	**13 08 57.9**	**+0.9**
WCI				IAmb	IAmb	13 09 31.3	
	comp=Z,18nm,1.6s						
CCM	**Cathedral Cave**	**27.19**	**352**	P	**P**	**13 08 57.9**	**-0.3**
CCM				IAmb	IAmb	13 09 33.3	
	comp=Z,21nm,1.8s						
R55A	**Marlinton**	**27.76**	**11**	P	**P**	**13 09 03.9**	**+0.6**
Q51A	**Peebles**	**28.02**	**6**	P	**P**	**13 09 05.8**	**+0.2**
Q51A				IAmb	IAmb	13 09 06.9	
	comp=Z,10.0nm,0.9s						
Q56A	**Snyder Ridge,**	**28.68**	**12**	P	**P**	**13 09 10.9**	**-0.5**
P53A	**Whipple**	**28.71**	**9**	P	**P**	**13 09 11.5**	**-0.2**
P53A				IAmb	IAmb	13 09 12.9	
	comp=Z,8.6nm,0.7s						
SFIN	**Lafayette**	**29.21**	**359**	P	**P**	**13 09 15.8**	**-0.3**
SFIN				IAmb	IAmb	13 10 17.7	
	comp=Z,19nm,1.2s						
Y22D	**IRIS PASSCAL I**	**29.41**	**324**	P	**P**	**13 09 17.5**	**-0.7**
N49A	**Columbus Grove**	**29.84**	**4**	P	**P**	**13 09 20.5**	**-1.2**
N49A				IAmb	IAmb	13 09 21.4	
	comp=Z,7.6nm,0.8s						
O56A	**Blue Knob Stat**	**29.99**	**13**	P	**P**	**13 09 23.4**	**+0.3**
N53A	**Lisbon**	**30.09**	**9**	P	**P**	**13 09 23.7**	**-0.3**
PAGS	**Pennsylvania G**	**30.38**	**15**	P	**P**	**13 09 26.9**	**+0.4**
PAGS				IAmb	IAmb	13 09 27.7	
	comp=Z,11nm,0.8s						
SSPA	**Standing Stone**	**30.49**	**13**	P	**P**	**13 09 27.7**	**+0.2**
SSPA				IAmb	IAmb	13 10 08.5	
	comp=Z,22nm,1.4s						
N58A	**Sunbury**	**30.96**	**15**	P	**P**	**13 09 31.7**	**+0.1**
N58A				IAmb	IAmb	13 09 33.1	
	comp=Z,9.5nm,0.8s						
M54A	**Oil Creek Stat**	**30.97**	**10**	P	**P**	**13 09 31.1**	**-0.7**
M54A				IAmb	IAmb	13 09 52.1	
	comp=Z,25nm,1.3s						
N59A	**State Game Lan**	**31.28**	**16**	P	**P**	**13 09 34.8**	**+0.3**
N59A				IAmb	IAmb	13 09 50.4	
	comp=Z,27nm,1.4s						
M57A	**Sunshine Farm,**	**31.33**	**14**	P	**P**	**13 09 35.3**	**+0.4**
SDCO	**Great Sand Dun**	**31.46**	**331**	P	**P**	**13 09 37.5**	**+1.1**
ERPA	**Erie**	**31.51**	**10**	P	**P**	**13 09 36.5**	**+0.1**
ODNJ	**Ogdensburg**	**31.77**	**18**	P	**P**	**13 09 38.2**	**-0.6**
L59A	**Walton**	**32.67**	**16**	P	**P**	**13 09 46.9**	**+0.2**
K58A	**Earlville**	**33.04**	**15**	P	**P**	**13 09 48.9**	**-1.0**
ECSD	**EROS Data Cent**	**33.66**	**347**	P	**P**	**13 09 54.2**	**-1.1**
ECSD				IAmb	IAmb	13 09 59.9	
	comp=Z,22nm,1.9s						
J58A	**Remsen**	**33.69**	**15**	P	**P**	**13 09 55.3**	**-0.3**
SADO	**Sadowa**	**34.23**	**10**	P	**P**	**13 09 59.3**	**-0.9**
SPMN	**Marine on St.**	**34.44**	**352**	P	**P**	**13 10 00.5**	**-1.6**
SPMN				IAmb	IAmb	13 10 01.0	
	comp=Z,6.5nm,0.8s						
O20A	**White River Ci**	**34.65**	**330**	P	**P**	**13 10 06.1**	**+1.9**
O20A				IAmb	IAmb	13 10 15.6	
	comp=Z,18nm,1.8s						
SUSD	**Miller**	**34.89**	**345**	P	**P**	**13 10 04.9**	**-1.1**
SUSD				IAmb	IAmb	13 10 05.5	
	comp=Z,7.8nm,0.6s						
COWI	**Conover**	**34.98**	**357**	P	**P**	**13 10 05.5**	**-1.3**
COWI				IAmb	IAmb	13 10 07.5	
	comp=Z,16nm,1.2s						
SRU	**San Rafael Swe**	**35.05**	**327**	P	**P**	**13 10 07.8**	**+0.1**
LBNH	**Lisbon**	**35.46**	**18**	P	**P**	**13 10 10.4**	**-0.4**
PKME	**Peaks-Kenny Pk**	**37.23**	**21**	P	**P**	**13 10 25.8**	**-0.2**
PDAR	**Pinedale Array**	**37.32**	**332**	P	**P**	**13 10 26.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=125,slow=10,SNR=8.4						
PDAR	**Pinedale Array**	**37.32**	**332**	P	**P**	**13 10 26.7**	**-0.4**
AGMN	**Agassiz Nation**	**37.90**	**350**	P	**P**	**13 10 30.3**	**-1.3**
AGMN				IAmb	IAmb	13 11 24.1	
	comp=Z,26nm,1.9s						
F64A	**Sherman**	**38.08**	**21**	P	**P**	**13 10 33.0**	**-0.1**
REDW	**Red Top Meadow**	**38.38**	**331**	P	**P**	**13 10 36.7**	**+0.7**
REDW				IAmb	IAmb	13 10 46.3	
	comp=Z,8.1nm,1.6s						
NVAR	**Mina Array Bea**	**39.20**	**319**	P	**P**	**13 10 44.5**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=146,slow=7.4,SNR=5.4						
NVAR				PcP	**PcP**	**13 12 55.1**	**+3.3**
	comp=Z,0.3nm,0.6s,baz=134,slow=5.1,SNR=4.5						
ULM	**Lac du Bonnet**	**39.80**	**351**	P	**P**	**13 10 45.0**	**-2.5**
	comp=Z,2.6nm,0.6s,baz=166,slow=9.4,SNR=7.5						
ULM	**Lac du Bonnet**	**39.80**	**351**	IAmb	IAmb	13 10 46.0	
	comp=Z,3.6nm,0.8s						
DGMT	**Dagmar**	**40.05**	**342**	P	**P**	**13 10 49.6**	**-0.1**
DGMT				IAmb	IAmb	13 11 13.6	
	comp=Z,16nm,1.5s						
BATG	**Bathurst New B**	**40.11**	**22**	P	**P**	**13 10 48.5**	**-1.5**
SAO	**San Andreas Ge**	**40.39**	**315**	P	**P**	**13 10 52.5**	**0.0**
SAO				IAmb	IAmb	13 11 26.0	
	comp=Z,7.8nm,0.9s						
GBN	**Guysborough**	**40.47**	**28**	P	**P**	**13 10 53.1**	**0.0**
BEKR	**Beckworth**	**41.33**	**320**	P	**P**	**13 10 59.6**	**-0.9**
EGMT	**Eagleton**	**41.60**	**337**	P	**P**	**13 11 03.5**	**+1.0**
EGMT				IAmb	IAmb	13 12 13.8	
	comp=Z,14nm,1.5s						
PLID	**Pearl Lake**	**42.16**	**329**	P	**P**	**13 11 07.7**	**+0.3**
PLID				IAmb	IAmb	13 12 10.3	
	comp=Z,17nm,1.9s						
HAWA	**Hanford**	**44.87**	**328**	P	**P**	**13 11 29.5**	**+0.7**
HAWA				IAmb	IAmb	13 11 55.0	
	comp=Z,16nm,2.0s						
PLCA	**Paso Flores**	**53.66**	**165**	P	P	13 12 43.5	+7.3
	comp=Z,3.6nm,0.9s,baz=312,slow=10,SNR=3.6						
YKA	**Yellowknife Ar**	**55.13**	**345**	P	**P**	**13 12 45.0**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=137,slow=7.6,SNR=6.9						
BESE	**Bessie Mountai**	**59.62**	**333**	P	**P**	**13 13 17.4**	**-0.9**
ILAR	**Eielson Array**	**67.56**	**336**	P	**P**	**13 14 09.8**	**-0.7**
	comp=Z,0.3nm,0.9s,baz=130,slow=4.4,SNR=4.8						
KSRS	**Korea Array**	**121.81**	**328**	PKP	**PKiKP**	**13 22 10.2**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=23,slow=1.5,SNR=4.1						
ASAR	**Alice Springs**	**139.36**	**247**	PKP	**PKiKP**	**13 22 46.2**	**+1.6**
	comp=Z,0.3nm,0.8s,baz=100,slow=2.1,SNR=2.6						
WRA	**Warramunga Arr**	**139.52**	**252**	PKP	**PKiKP**	**13 22 46.5**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=93,slow=1.8,SNR=3.4						
CMAR	**Chiang Mai Arr**	**150.14**	**349**	PKPbc	**PKPbc**	**13 23 06.2**	**+0.1**
	comp=Z,1.3nm,1.1s,baz=15,slow=3.7,SNR=6.1						
CMAR	**Chiang Mai Arr**	**150.14**	**349**		**PKPbc**	**13 23 06.0**	**-0.1**

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*ISK **01** 13:04:26.8, 36°.72N×27°.53E, h15km, ML3.6/33*
*IDC **01** 13:04:26.2±1.3, 36°.67N×27°.62E, h0km, mb3.6/3, mb1 3.5/7, mb1mx3.3/46, mbtmp3.5/7, ML3.3/4, Error ellipse: s-maj=37.6km s-min=19.0km az=146.0*
*ATH **01** 13:04:27.5, 36°.74N×27°.51E, h28km, ML3.2/11, Error ellipse: s-maj=1.4km s-min=0.8km az=231.0*
*THE **01** 13:04:28.2, 36°.77N×27°.57E, h9km±1km, ML3.3/4, Error ellipse: s-maj=1.8km s-min=0.6km az=335.0*

ISC 01 13:04:27.7±1.0**, 36°.74N**±0°.02×**27°.56E**±0°.02**, h19**km±2km**, n91,** σ**1.43**/113**, mb3.5**/3**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NISR	**Nisiros**	**0.37**	**250**	P	**Pb**	**13 04 35.9**	**+0.2**
NISR				S	**Sb**	**13 04 41.8**	**+0.8**
	14µm,0.1s						
NISR	**Nisiros**	**0.37**	**250**	P	**Pb**	**13 04 35.8**	**+0.2**
NISR				S	**Sg**	**13 04 40.4**	**-0.2**
NISR				AML	AML	13 04 42.9	
	comp=N,15923µm,0.1s						
NISR				AML	AML	13 04 44.2	
	comp=E,38811µm,0.2s						
BODT	**Bodrum**	**0.38**	**329**	P	**Pg**	**13 04 35.4**	**-0.3**
BODT				S	**Sg**	**13 04 41.1**	**0.0**
BODT	**Bodrum**	**0.38**	**329**	PG	**Pg**	**13 04 35.4**	**-0.3**
BODT				SG	**Sg**	**13 04 40.9**	**-0.2**
YKAV	**Yalikavak-Bodr**	**0.45**	**330**	PG	**Pg**	**13 04 36.2**	**-0.6**
YKAV				SG	**Sg**	**13 04 43.0**	**0.0**
KOSK	**Kos Island**	**0.46**	**272**	P	**Pb**	**13 04 37.8**	**+0.5**
KOSK				S	**Sb**	**13 04 45.5**	**+1.7**
	comp=E,2µm,0.6s						
MLSB	**Milas**	**0.58**	**17**	PG	**Pg**	**13 04 38.8**	**-0.6**
MLSB				SG	**Sb**	**13 04 47.9**	**+0.7**
DIDI	**Didim-Aydin**	**0.69**	**338**	PG	**Pg**	**13 04 40.8**	**-0.5**
ARG	**Arkhangelos**	**0.69**	**138**	P	**Pb**	**13 04 41.4**	**+0.2**
ARG				S	**Sn**	**13 04 52.8**	**+0.1**
	comp=E,3µm,0.3s						
ARG	**Arkhangelos**	**0.69**	**138**	P	**Pb**	**13 04 41.3**	**+0.2**
ARG				S	**Sn**	**13 04 51.7**	**-1.0**
ARG				AML	AML	13 04 54.1	
	comp=N,5190µm,0.3s						
ARG				AML	AML	13 04 54.8	
	comp=E,7446µm,0.4s						
YER	**Yerkesik**	**0.70**	**55**	P	**Pb**	**13 04 41.2**	**-0.2**
YER				S	**Sb**	**13 04 51.6**	**+0.9**
YER	**Yerkesik**	**0.70**	**55**	PG	**Pg**	**13 04 41.1**	**-0.5**
YER				SG	**Sn**	**13 04 52.4**	**-0.8**
GCAM	**G?zelcaml?**	**1.00**	**345**	PG	**Pn**	**13 04 46.9**	**+0.2**
SMG	**Samos**	**1.13**	**330**	P	**Pb**	**13 04 48.5**	**-0.1**
SMG	**Samos**	**1.13**	**330**	P	**Pb**	**13 04 48.5**	**-0.1**
SMG				S	**Sb**	**13 05 03.1**	**+0.2**
SMG				AML	AML	13 05 07.1	
	comp=E,5029µm,0.5s						
SMG				AML	AML	13 05 11.1	
	comp=N,3420µm,0.3s						
KARP	**Karpathos**	**1.23**	**195**	P	**Pb**	**13 04 50.7**	**+0.4**
KARP				S	**Sg**	**13 05 07.2**	**-0.4**
	comp=N,2µm,0.7s						
KARP	**Karpathos**	**1.23**	**195**	P	**Pb**	**13 04 50.7**	**+0.4**
KARP				S	**Sg**	**13 05 07.1**	**-0.4**
KARP				AML	AML	13 05 11.4	
	comp=E,2625µm,0.7s						
KARP				AML	AML	13 05 13.2	
	comp=N,4055µm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**1.24**	**12**	PN	**Pb**	**13 04 50.4**	**-0.1**
AMGA	**Amorgos Island**	**1.34**	**275**	P	**Pn**	**13 04 51.5**	**+0.1**
AMGA				S	**Sn**	**13 05 08.1**	**-0.6**
AMGA				AML	AML	13 05 16.6	
	comp=E,920µm,0.3s						
AMGA				AML	AML	13 05 19.7	
	comp=N,1058µm,0.5s						
GMLD	**Gumuldur**	**1.43**	**339**	PN	**Pn**	**13 04 52.9**	**+0.2**
DENT	**Denizli**	**1.56**	**49**	PN	**Pb**	**13 04 55.2**	**-0.7**
APE	**Apeiranthos**	**1.66**	**282**	P	**Pn**	**13 04 56.2**	**+0.4**
APE				S	**Sn**	**13 05 16.3**	**-0.4**
APE				AML	AML	13 05 18.1	
	comp=E,616µm,0.4s						
APE				AML	AML	13 05 24.9	
	comp=N,525µm,0.5s						
BLCB	**Balcova**	**1.70**	**346**	PN	**Pn**	**13 04 56.2**	**-0.1**
THR8	**Santorini-Mono**	**1.70**	**260**	P	**Pn**	**13 04 57.2**	**+0.8**
SANT	**Santorini**	**1.73**	**258**	P	**Pb**	**13 04 58.2**	**-0.6**
SANT				AML	AML	13 05 35.1	
	comp=N,247µm,0.6s						
SANT				AML	AML	13 05 35.4	
	comp=E,482µm,0.3s						
THR3	**Thira Island,**	**1.77**	**260**	P	**Pn**	**13 04 56.9**	**-0.3**
THR6	**Thira Island,**	**1.78**	**258**	P	**Pn**	**13 04 58.3**	**+0.9**
URLA	**Izmir**	**1.79**	**335**	PN	**Pn**	**13 04 58.2**	**+0.5**
THR5	**Thira Island,**	**1.81**	**261**	P	**Pn**	**13 04 59.1**	**+1.3**
IOSP	**Ios island**	**1.82**	**270**	P	**Pn**	**13 04 58.5**	**+0.5**
IOSP				S	**Sn**	**13 05 20.0**	**-0.6**
ZKR	**Zakros**	**1.95**	**214**	P	**Pn**	**13 05 01.2**	**+1.4**
ZKR				S	**Sn**	**13 05 23.9**	**+0.1**
ZKR				AML	AML	13 05 32.1	
	comp=E,769µm,0.9s						
ZKR				AML	AML	13 05 37.4	
	comp=N,339µm,0.6s						
GOMA	**Golmarmara-Man**	**1.99**	**8**	PN	**Pn**	**13 05 01.8**	**+1.5**
CHOS	**Chios island**	**2.03**	**325**	P	**Pn**	**13 05 01.4**	**+0.3**
CHOS				AML	AML	13 05 38.8	
	comp=E,871µm,0.6s						
CHOS				AML	AML	13 05 39.8	
	comp=N,807µm,1.0s						
CHOS	**Chios island**	**2.03**	**325**	PN	**Pn**	**13 05 01.3**	**+0.3**
TNSA	**Tinos**	**2.07**	**293**	P	**Pn**	**13 05 02.9**	**+1.4**
NPS	**Neapolis**	**2.15**	**228**	P	**Pn**	**13 05 04.0**	**+1.4**
NPS				AML	AML	13 05 40.1	
	comp=E,415µm,0.3s						
NPS				AML	AML	13 05 40.3	
	comp=N,405µm,0.4s						
LAST	**Lasithi**	**2.31**	**228**	P	**Pn**	**13 05 06.0**	**+1.2**
BASM	**Basmaki-Afyon**	**2.31**	**59**	PN	**Pn**	**13 05 06.2**	**+1.3**
DKL	**Dikili**	**2.39**	**348**	PN	**Pn**	**13 05 06.7**	**+0.9**
IDI	**Anoyia**	**2.60**	**237**	Pn	**Pn**	**13 05 10.3**	**+1.5**
	comp=N,2.2nm,0.3s,baz=60,slow=10,SNR=17						
IDI				Sn	**Sn**	**13 05 40.9**	**+1.0**
	comp=N,3.1nm,0.3s,baz=252,slow=20,SNR=4.1						
IDI	**Anoyia**	**2.60**	**237**	P	**Pn**	**13 05 09.9**	**+1.1**
PRK	**Paraskevi**	**2.70**	**338**	P	**Pn**	**13 05 11.6**	**+1.5**
PRK				AML	AML	13 06 02.4	
	comp=E,993µm,0.9s						
PRK				AML	AML	13 06 04.0	
	comp=N,852µm,0.9s						
GEDZ	**Gediz**	**2.73**	**32**	PN	**Pn**	**13 05 12.1**	**+1.5**
KARY	**Karystos**	**2.80**	**298**	P	**Pn**	**13 05 12.7**	**+1.2**
SIGR	**SIGRI**	**2.81**	**332**	P	**Pn**	**13 05 12.0**	**+0.4**
SIGR	**SIGRI**	**2.81**	**332**	PN	**Pn**	**13 05 12.2**	**+0.6**
SIVA	**Sivas**	**2.81**	**233**	P	**Pn**	**13 05 13.7**	**+2.1**
BALB	**Balikesir**	**2.91**	**5**	PN	**Pn**	**13 05 14.4**	**+1.4**
SHUT	**Suhut-Afyon**	**2.99**	**52**	PN	**Pn**	**13 05 15.6**	**+1.4**
VAM	**Vamos**	**3.02**	**245**	P	**Pn**	**13 05 15.6**	**+1.1**
IMMV	**Iera Moni Meta**	**3.16**	**247**	P	**Pn**	**13 05 16.8**	**+0.3**
VLY	**Voula,Athens**	**3.20**	**292**	P	**Pn**	**13 05 18.1**	**+1.1**
PTL	**Penteli**	**3.22**	**295**	P	**Pn**	**13 05 18.3**	**+1.1**
EZN	**Ezine**	**3.23**	**343**	PN	**Pn**	**13 05 18.2**	**+0.8**
ATHU	**Athens Univers**	**3.25**	**293**	P	**Pn**	**13 05 18.8**	**+1.2**
GONE	**Gonen-Balikesi**	**3.31**	**2**	PN	**Pn**	**13 05 19.4**	**+1.0**
BOZC	**Bozcaada**	**3.32**	**340**	PN	**Pn**	**13 05 19.3**	**+0.7**
GVD	**Gavdhos**	**3.40**	**237**	P	**Pn**	**13 05 20.9**	**+1.3**
DID	**Didima**	**3.54**	**284**	P	**Pn**	**13 05 22.5**	**+0.8**
KCTX	**Karacabey (Bur**	**3.58**	**10**	PN	**Pn**	**13 05 24.1**	**+1.9**
EDC	**Edincik**	**3.61**	**4**	PN	**Pn**	**13 05 24.9**	**+2.2**
KRBG	**Karabiga-Canak**	**3.66**	**357**	PN	**Pn**	**13 05 25.2**	**+2.0**
LPK	**Lapseki**	**3.68**	**350**	PN	**Pn**	**13 05 25.3**	**+1.7**
GADA	**Gvkgeada**	**3.69**	**340**	PN	**Pn**	**13 05 24.4**	**+0.7**
MRKA	**Markates**	**3.71**	**303**	P	**Pn**	**13 05 25.4**	**+1.4**
VIL2	**Platees**	**3.71**	**295**	P	**Pn**	**13 05 25.1**	**+1.0**
GELI	**Tayfur-Gelibol**	**3.75**	**347**	PN	**Pn**	**13 05 25.7**	**+1.1**
MDNY	**Mudanya-Bursa**	**3.77**	**16**	PN	**Pn**	**13 05 26.9**	**+2.1**
MRMT	**Marmara Adasi**	**3.86**	**0**	PN	**Pn**	**13 05 28.0**	**+1.9**
LTK	**Loutraki**	**3.87**	**291**	P	**Pn**	**13 05 27.7**	**+1.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CAVI	**Cavuskoy**	**3.90**	**27**	PN	**Pn**	**13 05 28.6**	**+2.0**
RKY	**Sarkoy-Tekirda**	**3.96**	**356**	PN	**Pn**	**13 05 29.1**	**+1.7**
PROD	**Prodromos**	**4.00**	**294**	P	**Pn**	**13 05 29.7**	**+1.7**
SKIA	**Skiathos**	**4.04**	**308**	P	**Pn**	**13 05 30.5**	**+1.9**
SMTH	**Samothraki Isl**	**4.05**	**338**	P	**Pn**	**13 05 29.5**	**+0.8**
YLV	**Yalova**	**4.08**	**20**	PN	**Pn**	**13 05 30.7**	**+1.6**
SRCK	**Saricakaya, Es**	**4.09**	**35**	PN	**Pn**	**13 05 31.2**	**+2.0**
NEO	**Neokhori**	**4.28**	**308**	P	**Pn**	**13 05 33.2**	**+1.4**
ALN	**Alexandroupoli**	**4.32**	**345**	P	**Pn**	**13 05 33.1**	**+0.8**
ALN	**Alexandroupoli**	**4.32**	**345**	PN	**Pn**	**13 05 33.3**	**+1.0**
UKOP	**Uzunkopru-Edir**	**4.45**	**351**	PN	**Pn**	**13 05 35.6**	**+1.5**
KLV	**Kalavryta, Ach**	**4.50**	**288**	P	**Pn**	**13 05 37.0**	**+2.1**
KALE	**Kalithea**	**4.61**	**293**	P	**Pn**	**13 05 37.0**	**+0.6**
RDO	**Rodhopi**	**4.68**	**341**	PN	**Pn**	**13 05 38.3**	**+1.1**
AGG	**Agios Georgios**	**4.72**	**300**	P	**Pn**	**13 05 40.3**	**+2.3**
BRTR	**Keskin Array B**	**5.64**	**56**	Pn	**Pn**	**13 05 53.6**	**+3.0**
	comp=N,0.5nm,0.3s,baz=233,slow=15,SNR=10						
BRTR				Sn	**Sn**	**13 06 56.0**	**+0.9**
	comp=N,0.2nm,0.3s,baz=248,slow=23,SNR=2.9						
MMAI	**Mount Meron Ar**	**7.44**	**118**	Pn	**Pn**	**13 06 15.6**	**+0.3**
	comp=N,1.8nm,0.3s,baz=307,slow=12,SNR=4.6						
MMAI				Sn	**Sn**	**13 07 35.0**	**-4.2**
	comp=N,2.6nm,0.3s,baz=299,slow=24,SNR=3.3						
EIL	**Elat**	**9.38**	**137**	Pn	**Pn**	**13 06 41.3**	**-0.6**
	comp=N,0.4nm,0.3s,baz=294,slow=20,SNR=2.7						
EIL				Sn	**Sn**	**13 08 18.7**	**-8.1**
	comp=N,0.5nm,0.3s,baz=208,slow=18,SNR=2.6						
TORD	**Torodi Ar. Bea**	**32.99**	**231**	P	**P**	**13 11 02.6**	**+1.0**
	comp=N,0.4nm,0.4s,baz=33,slow=9.7,SNR=4.9						
MKAR	**Makanchi Array**	**41.29**	**58**	P	**P**	**13 12 13.2**	**+1.4**
	comp=N,0.4nm,0.5s,baz=269,slow=8.2,SNR=8.9						
ZALV	**Zalesovo Beam**	**42.51**	**47**	P	**P**	**13 12 22.8**	**+1.2**
	comp=N,0.5nm,0.5s,baz=267,slow=9.8,SNR=2.9						

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*ISK **01** 13:30:43.4, 33.42N×34.55E, h31km, ML3.2/12*
*NIC **01** 13:30:44.5±0.0, 33.47N×34.68E, h33km±26km, Ml3.0/4*
*JSO **01** 13:30:44.0±2.8, 33°N±19°×3°5E±1°4, h0km, M3.2/4, Mjma3.1/4, MLv3.2/4*
*HLW **01** 13:30:45.1, 33.20N×34.59E, h10km±14km, Md3.2*
*GRAL **01** 13:30:45.0±0.4, 33.46N×34.66E, h24km±4km, MD3.2*
ISC 01 13:30:43.1±1.3**, 33.43N**±0.02×**34.64E**±0.03**, h24**km±15km**, n48, σ1.02**/66**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DQRL	**Deir Qamar**	**0.83**	**70**	*e*P	**Pn**	**13 30 59.4**	**+0.2**
DQRL				*e*S	**Sb**	**13 31 09.8**	**+0.2**
BEYL	**Beirut**	**0.84**	**58**	*e*P	**Pn**	**13 30 59.2**	**-0.1**
BEYL				*e*S	**Sb**	**13 31 09.9**	**+0.1**
QRWL	**Qaraoun**	**0.88**	**82**	*e*P	**Pn**	**13 31 00.2**	**+0.2**
QRWL				*e*S	**Sb**	**13 31 11.4**	**+0.3**
KSDI	**Kefar Szold**	**0.89**	**105**	P	**Pn**	**13 31 00.7**	**+0.7**
KSDI	**Kefar Szold**	**0.89**	**105**	P	**Pn**	**13 31 00.6**	**+0.7**
KSDI				S	**Sn**	**13 31 11.8**	**-0.3**
SHBL	**Chebaa**	**0.93**	**95**	*e*P	**Pn**	**13 31 00.9**	**+0.2**
BHL	**Bhannes**	**0.97**	**61**	*e*P	**Pn**	**13 31 01.5**	**+0.2**
RCY	**Rachaya**	**1.00**	**86**	*e*P	**Pn**	**13 31 02.1**	**+0.4**
RCY				*e*S	**Sn**	**13 31 15.0**	**-0.2**
MMLI	**Mount Malkishu**	**1.19**	**146**	PN	**Pb**	**13 31 04.7**	**-0.3**
MMLI				SN	**Sb**	**13 31 20.4**	**+0.5**
MMLI	**Mount Malkishu**	**1.19**	**146**	P	**Pb**	**13 31 04.7**	**-0.3**
MMLI	**Mount Malkishu**	**1.19**	**146**	P	**Pb**	**13 31 04.6**	**-0.3**
MMLI				S	**Sb**	**13 31 20.2**	**+0.3**
HWQ	**Hawqa**	**1.38**	**52**	*e*P	**Pb**	**13 31 07.5**	**-0.7**
PARAL	**Paralimni**	**1.64**	**343**	P	**Pn**	**13 31 10.7**	**+0.4**
PARAL				S	**Sn**	**13 31 30.4**	**-0.2**
PARAL				AML	AML	13 31 31.2	
	0.4nm,0.4s						
PARAL				AML	AML	13 31 31.2	
	0.4nm,0.4s						
PARAL				AML	AML	13 31 32.3	
	0.4nm,0.5s						
PARAL				AML	AML	13 31 32.3	
	0.4nm,0.5s						
ASGA	**Asgata**	**1.78**	**320**	P	**Pn**	**13 31 12.1**	**-0.2**
ASGA				S	**Sn**	**13 31 33.7**	**-0.3**
ASGA				AML	AML	13 31 34.9	
	0.7nm,0.5s						
ASGA				AML	AML	13 31 34.9	
	0.7nm,0.5s						
MVOU	**Mavrovouni**	**1.79**	**333**	P	**Pn**	**13 31 12.8**	**+0.4**
MVOU				AML	AML	13 31 32.8	
	0.4nm,0.4s						
CSS	**Mathiatis**	**1.87**	**325**	PN	**Pn**	**13 31 13.5**	**-0.1**
CSS				SN	**Sn**	**13 31 35.3**	**-1.2**
CSS	**Mathiatis**	**1.87**	**325**	P	**Pn**	**13 31 14.0**	**+0.4**
CSS				S	**Sn**	**13 31 35.2**	**-1.3**
AMAZ	**Amatzia**	**1.91**	**173**	P	**Pn**	**13 31 15.3**	**+1.2**
AMAZ				S	**Sn**	**13 31 38.6**	**+1.3**
SZAC	**Souni**	**1.97**	**313**	P	**Pn**	**13 31 15.8**	**+0.9**
SZAC				S	**Sn**	**13 31 39.5**	**+0.7**
SZAC				AML	AML	13 31 42.1	
	1.1nm,0.2s						
SZAC				AML	AML	13 31 42.1	
	1.1nm,0.2s						
WALJ	**Wala**	**2.11**	**152**	P	**Pn**	**13 31 18.2**	**+1.4**
EREN	**Erenkoy**	**2.13**	**350**	PN	**Pn**	**13 31 17.8**	**+0.7**
EREN				SN	**Sn**	**13 31 43.1**	**+0.4**
ASF	**Jabal al Asfar**	**2.28**	**123**	P	**Pb**	**13 31 22.5**	**-1.1**
KZIT	**Kziot**	**2.52**	**185**	PN	**Pn**	**13 31 23.7**	**+1.2**
KZIT				SN	**Sn**	**13 31 51.7**	**-0.8**
KZIT	**Kziot**	**2.52**	**185**	P	**Pn**	**13 31 23.6**	**+1.1**
KZIT	**Kziot**	**2.52**	**185**	P	**Pn**	**13 31 23.7**	**+1.2**
KZIT				S	**Sn**	**13 31 52.4**	**-0.1**
RSH		**2.58**	**198**	P	**Pn**	**13 31 23.8**	**+0.4**
	baz=199						
TISA	**Tisan-Mersin**	**2.84**	**344**	PN	**Pn**	**13 31 27.5**	**+0.7**
AKKU	**Akkuyu-Mersin**	**2.87**	**342**	PN	**Pn**	**13 31 28.1**	**+0.9**
IKL	**Isikli**	**2.91**	**345**	PN	**Pn**	**13 31 28.4**	**+0.6**
TEKE	**Tekeli-Mersin**	**2.98**	**336**	PN	**Pn**	**13 31 29.8**	**+1.0**
KIZK	**Mersin**	**3.07**	**353**	PN	**Pn**	**13 31 31.1**	**+1.1**
KEBE	**Keben-Mersin**	**3.10**	**346**	PN	**Pn**	**13 31 31.7**	**+1.1**
BERE	**Bereket-Mersin**	**3.13**	**339**	PN	**Pn**	**13 31 31.7**	**+0.7**
TEVE	**Tevekalti-Mers**	**3.15**	**342**	PN	**Pn**	**13 31 32.2**	**+0.9**
KRTS	**Karatas**	**3.19**	**11**	PN	**Pn**	**13 31 33.1**	**+1.4**
GAZI	**Gazipasa**	**3.39**	**326**	PN	**Pn**	**13 31 35.3**	**+0.9**
YURE	**YUREGIR**	**3.48**	**13**	PN	**Pn**	**13 31 37.3**	**+1.5**
KARA	**Karaisali**	**3.84**	**5**	PN	**Pn**	**13 31 41.4**	**+0.8**
SUZ	**Suez**	**3.90**	**204**	P	**Pn**	**13 31 42.9**	**+1.4**
	baz=205						
HHAG	**Hagoal**	**4.09**	**213**	P	**Pn**	**13 31 45.0**	**+0.9**
	baz=214						
KOZT	**Kozan**	**4.16**	**13**	PN	**Pn**	**13 31 46.5**	**+1.5**
HBST	**Basata**	**4.20**	**179**	P	**Pn**	**13 31 46.9**	**+1.3**
	baz=178						
CMRD	**Camardi-Nigde**	**4.23**	**4**	PN	**Pn**	**13 31 47.7**	**+1.6**
KOT	**Kottamia**	**4.23**	**215**	P	**Pn**	**13 31 47.1**	**+1.0**
	baz=217						
ZAF	**Zafarana**	**4.50**	**204**	P	**Pn**	**13 31 50.8**	**+1.1**
	baz=205						
HDHB	**Dhahab**	**4.69**	**180**	P	**Pn**	**13 31 53.0**	**+0.6**
	baz=179						
HKAT	**Jabal Katrina**	**4.92**	**187**	P	**Pn**	**13 31 56.6**	**+0.9**
	baz=187						
HKAT				S	**Sn**	**13 32 48.1**	**-3.9**
	baz=187						
HNAT	**Natroun**	**5.11**	**223**	P	**Pn**	**13 31 58.9**	**+0.8**
	baz=225						
HNAT				S	**Sn**	**13 32 54.2**	**-2.1**
	baz=225						

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*SOME **01** 13:46:49.9, 47.00N×82.28E, h15km*
*ASRS **01** 13:46:50.8±0.2, 47°N±2°×8°2E±°, h9km, MLh3.8/9, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **01** 13:46:51.1±0.7, 46.88N×82.51E, h17km±6km, mb3.8, mpv3.7, Error ellipse: s-maj=8.0km s-min=1.8km az=61.0*
ISC 01 13:46:51.8±0.9**, 46.98N**±0.03×**82.54E**±0.04**, h15**km±7km**, n51, σ2.44**/87**, 8C-10D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**0.25**	**223**	P	**Pg**	**13 46 56.5**	**-0.9**
	80nm,0.2s,baz=60,slow=18						
MK31				⇓S	**Sg**	**13 47 01.5**	**+0.4**
	416nm,0.4s,baz=62,slow=27,SNR=7.4						
MKAR	**Makanchi Array**	**0.25**	**223**	Pg	**Pg**	**13 46 56.6**	**-0.8**
MKAR				Sg	**Sg**	**13 47 01.5**	**+0.4**
MAKZ	**Makanchi**	**0.42**	**246**	Pg	**Pg**	**13 46 59.7**	**-0.6**
MAKZ				Sg	**Sb**	**13 47 06.7**	**-0.5**
MAKZ	**Makanchi**	**0.42**	**246**	⇑P	**Pg**	**13 46 59.7**	**-0.6**
	100nm,0.2s						
MAKZ				⇓S	**Sb**	**13 47 06.9**	**-0.3**
	98nm,0.2s						
ZSN	**Zaisan**	**1.66**	**73**	*e*P	**Pn**	**13 47 18.0**	**-2.4**
	24nm,0.1s						
ZSN				*e*S	**Sn**	**13 47 40.1**	**-1.3**
	95nm,0.3s						
ZSN	**Zaisan**	**1.66**	**73**	P	**Pn**	**13 47 17.9**	**-2.4**
	46nm,0.2s						
ZSN				S	**Sn**	**13 47 39.6**	**-1.8**
	95nm,0.3s						
KAPS	**Kapalarasan**	**2.79**	**234**	*e*P	**Pn**	**13 47 36.8**	**+0.8**
	17nm,0.1s						
KAPS				*e*S	**Sn**	**13 48 11.9**	**+2.5**
	79nm,0.3s						
KAPS	**Kapalarasan**	**2.79**	**234**	Pg	**Pb**	**13 47 40.1**	**-1.3**
	16nm,0.2s						
KAPS				Lg	Lg	13 48 16.9	
	80nm,0.4s						
DJR	**Jarkent**	**3.27**	**217**	*e*P	**Pb**	**13 47 48.1**	**-1.6**
	1.1nm,0.2s						
DJR				*e*S	**Sb**	**13 48 31.4**	**+2.1**
	36nm,0.3s						
DJR	**Jarkent**	**3.27**	**217**	Pg	**Pb**	**13 47 51.7**	**+2.0**
	3.4nm,0.6s						
DJR				Lg	Lg	13 48 33.1	
	33nm,0.5s						
TDK	**Taldyqorghan**	**3.49**	**237**	*e*P	**Pb**	**13 47 51.3**	**-2.1**
	57nm,0.3s						
TDK				*e*S	**Sb**	**13 48 36.5**	**+0.9**
	148nm,0.5s						
TDK	**Taldyqorghan**	**3.49**	**237**	Pg	**Pb**	**13 47 53.9**	**+0.5**
	69nm,0.3s						
TDK				Lg	Lg	13 48 40.5	
	147nm,0.4s						
SEM	**Semipalatinsk**	**3.75**	**337**	*e*P	**Pb**	**13 47 54.9**	**-3.0**
	21nm,0.2s						
SEM				*e*S	**Sb**	**13 48 42.9**	**-0.3**
	19nm,0.1s						
SEM	**Semipalatinsk**	**3.75**	**337**	Pg	**Pn**	**13 47 51.8**	**+2.4**
	22nm,0.5s						
SEM				Lg	Lg	13 48 36.7	
	20nm,0.3s						
TUNR	**Tungur**	**4.06**	**37**	Pn	**Pn**	**13 47 54.2**	**+0.7**
TUNR				Pg	**Pb**	**13 48 05.8**	**+2.7**
TUNR				S	**Sn**	**13 48 41.5**	**+0.8**
PDGK	**Podgornoye**	**4.24**	**212**	Pg	**Pg**	**13 48 10.7**	**-2.3**
	1.9nm,0.2s						
PDGK				Lg	Lg	13 49 06.8	
	16nm,0.4s						
PDGK	**Podgornoye**	**4.24**	**212**	⇓Pg	**Pg**	**13 48 09.7**	**-3.3**
	2.9nm,0.5s						
PDGK				⇑Lg	Lg	13 49 02.5	
	17nm,0.5s						
DGZ	**Jazzator, Alta**	**4.25**	**48**	Pn	**Pn**	**13 47 56.3**	**+0.1**
DGZ				Pg	**Pb**	**13 48 07.7**	**+1.3**
DGZ				Sg	**Sb**	**13 48 59.5**	**+2.0**
ARXS	**Arharly**	**4.31**	**232**	*e*P	**Pb**	**13 48 04.5**	**-2.8**
	1.9nm,0.2s						
ARXS				*e*S	**Sb**	**13 48 59.1**	**-0.1**
	63nm,0.4s						
ARXS	**Arharly**	**4.31**	**232**	Pg	**Pb**	**13 48 09.0**	**+1.7**
	9.7nm,0.3s						
ARXS				Lg	Lg	13 49 07.0	
	63nm,0.5s						
SHLS	**Shalkode**	**4.40**	**211**	*e*P	**Pb**	**13 48 06.0**	**-2.9**
	7.1nm,0.2s						
SHLS				*e*S	**Sb**	**13 49 01.8**	**0.0**
	55nm,0.2s						
SHLS	**Shalkode**	**4.40**	**211**	Pg	**Pb**	**13 48 08.4**	**-0.5**
	11nm,0.3s						
SHLS				Lg	Lg	13 49 04.3	
	41nm,0.3s						
KPKS	**Kokpek**	**4.44**	**219**	*e*P	**Pb**	**13 48 09.6**	**0.0**
	18nm,0.1s						
KPKS				*e*S	**Sb**	**13 49 07.7**	**+4.7**
	112nm,0.4s						
KURBB	**Kurchatov Arra**	**4.51**	**325**	⇑Pg	**Pb**	**13 48 11.7**	**+1.1**
	5.6nm,0.5s						
KURBB				⇓Lg	Lg	13 49 12.7	
	95nm,0.5s						
KURK	**Kurchatov**	**4.55**	**327**	Pn	**Pn**	**13 47 59.0**	**-1.1**
KURK				Pg	**Pb**	**13 48 12.5**	**+1.2**
KURK				Sg	**Sg**	**13 49 14.5**	**-3.3**
KURK	**Kurchatov**	**4.55**	**327**	⇓Pg	**Pb**	**13 48 10.4**	**-0.9**
	3.3nm,0.6s						
KURK				⇑Lg	Lg	13 49 14.2	
	47nm,0.5s						
UZB	**Uzynbulak**	**4.57**	**214**	*e*P	**Pb**	**13 48 11.8**	**0.0**
	1.8nm,0.1s						
UZB				*e*S	**Sb**	**13 49 11.4**	**+4.7**
	31nm,0.2s						
UZB	**Uzynbulak**	**4.57**	**214**	Pg	**Pb**	**13 48 13.7**	**+1.9**
	2.9nm,0.2s						
UZB				Lg	Lg	13 49 13.3	
	31nm,0.3s						
KURS	**Kuram**	**4.66**	**223**	*e*P	**Pb**	**13 48 12.6**	**-0.7**
	2.0nm,0.3s						
KURS				*e*S	**Sb**	**13 49 12.7**	**+3.5**
	14nm,0.6s						
KURS	**Kuram**	**4.66**	**223**	Pg	**Pb**	**13 48 15.2**	**+2.0**
	3.1nm,0.4s						
KURS				Lg	Lg	13 49 16.9	
	12nm,0.5s						
CHBI	**Chibit, Altay**	**4.69**	**43**	Pn	**Pn**	**13 48 02.6**	**+0.5**
CHBI				Pg	**Pb**	**13 48 14.7**	**+1.0**
CHBI				S	**Sn**	**13 48 55.0**	**-1.2**
CHBI				Sg	**Sb**	**13 49 12.8**	**+2.8**
AKAR	**Aktash**	**4.75**	**43**	Pn	**Pn**	**13 48 03.8**	**+0.8**
AKAR				Pg	**Pb**	**13 48 15.7**	**+0.9**
AKAR				S	**Sn**	**13 48 57.9**	**+0.2**
AKAR				Sg	**Sb**	**13 49 16.8**	**+5.0**
ELDR	**Elanda**	**4.84**	**27**	Pn	**Pn**	**13 48 04.9**	**+0.7**
ELDR				Pg	**Pb**	**13 48 18.2**	**+1.9**
ELDR				S	**Sn**	**13 49 01.1**	**+1.2**
ELDR				Sg	**Sb**	**13 49 20.1**	**+5.8**
SATY	**Saty**	**4.89**	**218**	*e*P	**Pb**	**13 48 17.9**	**+0.7**
	11nm,0.1s						
SATY				*e*S	**Sb**	**13 49 21.9**	**+5.9**
	54nm,0.2s						
SATY	**Saty**	**4.89**	**218**	Pg	**Pb**	**13 48 19.7**	**+2.4**
	7.4nm,0.2s						
SATY				Lg	Lg	13 49 23.6	
	54nm,0.3s						
CHKK	**Chushkaly**	**5.00**	**233**	Pg	**Pb**	**13 48 20.7**	**+1.6**
	2.1nm,0.3s						
CHKK				Lg	Lg	13 49 26.8	
	16nm,0.2s						
ULGR	**Ulagan, Altay**	**5.11**	**42**	Pn	**Pn**	**13 48 08.2**	**+0.2**
ULGR				S	**Sn**	**13 49 06.8**	**+0.1**
ULGR				Sg	**Sb**	**13 49 28.7**	**+6.4**
KTBS	**Karatobe**	**5.26**	**234**	Pg	**Pb**	**13 48 26.4**	**+2.9**
	5.1nm,0.5s						
KTBS				Lg	Lg	13 49 36.2	
	37nm,0.6s						
KUU	**Kurty**	**5.34**	**237**	Pg	**Pb**	**13 48 26.8**	**+1.9**
	1.7nm,0.3s						
KUU				Lg	Lg	13 49 36.6	
	19nm,0.3s						
MDOK	**Medeo**	**5.45**	**228**	⇑Lg	Lg	13 49 41.1	
	12nm,0.8s						
MDOK	**Medeo**	**5.45**	**228**	Pg	**Pb**	**13 48 29.9**	**+3.2**
	2.9nm,0.3s						
MDOK				Lg	Lg	13 49 42.0	
	16nm,0.6s						
TNSS	**Tian-Shan**	**5.59**	**227**	Pg	**Pg**	**13 48 34.2**	**-4.6**
	4.1nm,0.7s						
TNSS				Lg	Lg	13 49 47.9	
	14nm,0.5s						
ARTR	**Artybash**	**5.73**	**31**	Pn	**Pn**	**13 48 17.1**	**+0.7**
ARTR				S	**Sn**	**13 49 20.3**	**-1.5**
ARTR				Sg	**Sb**	**13 49 45.1**	**+5.2**
MTBS	**Maitube**	**5.79**	**231**	Pg	**Pb**	**13 48 36.4**	**+3.9**
	4.2nm,0.3s						
MTBS				Lg	Lg	13 49 51.7	
	13nm,0.3s						
KST	**Kastek**	**6.10**	**232**	Pg	**Pb**	**13 48 41.9**	**+4.0**
	6.8nm,0.6s						
KST				Lg	Lg	13 50 02.7	
	6.1nm,0.6s						
TKM2	**Tokmak 2**	**6.38**	**233**	⇑Pg	**Pb**	**13 48 44.0**	**+1.3**
	0.8nm,0.4s						
TKM2				⇑Lg	Lg	13 50 11.4	
	3.5nm,0.6s						
ELT	**Eltsovka**	**6.72**	**19**	Pn	**Pn**	**13 48 29.5**	**-0.4**
ELT				Sg	**Sn**	**13 49 42.7**	**-3.5**
TASR	**Tashtagol**	**6.74**	**29**	Pn	**Pn**	**13 48 30.6**	**+0.4**
TASR				Sg	**Sn**	**13 49 45.6**	**-1.1**
ZAA0	**Zalesovo Array**	**7.13**	**11**	⇓Pn	**Pn**	**13 48 33.8**	**-1.7**
	0.1nm,0.4s						
ZAA0				⇓Sn	**Sn**	**13 49 51.9**	**-4.3**
	0.2nm,0.3s						
ZAA0				⇓Lg	Lg	13 50 37.5	
	2.1nm,0.9s						
AAK	**Ala-Archa**	**7.18**	**236**	⇓Lg	Lg	13 50 38.1	
	4.9nm,1.1s						
KK31	**Karatay Array**	**9.35**	**250**	⇓Pn	**Pn**	**13 49 04.5**	**-1.5**
	0.1nm,0.2s,baz=64,slow=13,SNR=14						
KK31				⇑Lg	Lg	13 51 46.3	
	1.7nm,0.5s						

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*NEIC **01** 13:54:23.0±1.2, 6.6S±0.1×147.6E±0.2, h64km±15km, mb4.0/8, Error ellipse: s-maj=26.1km s-min=15.6km az=75.0*
*IDC **01** 13:54:22.1±4.7, 6.48S×147.76E, h68km±29km, mb3.5/3, mb1 3.7/6, mb1mx3.3/28, mbtmp3.8/6, ML3.6/2, MS2.5/2, Ms1 2.5/2, ms1mx2.3/32, Error ellipse: s-maj=57.9km s-min=21.7km az=75.0*
ISC 01 13:54:21.6±2.0**, 6.5S**±0.1×**147.7E**±0.2**, h63**km**, n18, σ0.97**/19**, mb3.7**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.96**	**191**	P	**Pn**	**13 55 05.5**	**-0.7**
	3.3nm,0.3s,baz=13,slow=8.9,SNR=20						
PMG				S	**Sn**	**13 55 42.6**	**+2.1**
	4.7nm,0.3s,baz=29,slow=18,SNR=5.0						
PMG				LR	LR	13 56 47.8	
	comp=Z,101nm,21.1s,baz=254,slow=49						
PMG	**Port Moresby**	**2.96**	**191**		**Pn**	**13 55 05.2**	**-1.0**
JAY	**Jayapura**	**8.04**	**299**	P	**Pn**	**13 56 16.8**	**+0.9**
	0.8nm,0.3s,baz=124,slow=3.6,SNR=3.7						
JAY				LR	LR	13 59 09.8	
	comp=Z,31nm,20.1s,baz=146,slow=36						
COEN	**Coen**	**8.68**	**211**	Pn	**Pn**	**13 56 23.2**	**-1.3**
WR0	**Warramunga Arr**	**18.54**	**222**	P	**Pn**	**13 58 33.6**	**-0.5**
WR0				IAmb	IAmb	13 58 53.4	
	comp=Z,12nm,1.6s						
WRAB	**Tennant Creek**	**18.65**	**223**	P	**P**	**13 58 34.0**	**-0.5**
WRAB				IAmb	IAmb	13 59 22.2	
	comp=Z,20nm,1.9s						
WRA	**Warramunga Arr**	**18.66**	**223**	P	**P**	**13 58 33.9**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=52,slow=10,SNR=8.8						
WRA	**Warramunga Arr**	**18.66**	**223**	P	**P**	**13 58 33.7**	**-1.0**
KNRA	**Kununurra**	**20.73**	**242**	P	**P**	**13 58 56.0**	**-1.1**
KNRA				IAmb	IAmb	13 59 32.6	
	comp=Z,15nm,1.2s						
AS31	**Alice Springs**	**21.65**	**216**	P	**P**	**13 59 06.8**	**-0.2**
ASAR	**Alice Springs**	**21.65**	**216**	P	**P**	**13 59 07.0**	**0.0**
	comp=Z,1.5nm,0.6s,baz=53,slow=8.7,SNR=30						
ASAR	**Alice Springs**	**21.65**	**216**	P	**P**	**13 59 06.8**	**-0.2**
ARMA	**Armidale**	**24.09**	**172**	P	**P**	**13 59 31.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**24.45**	**240**	P	**P**	**13 59 34.4**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=62,slow=7.8,SNR=12						
FITZ	**Fitzroy Crossi**	**24.45**	**240**	P	**P**	**13 59 34.6**	**-0.1**
FITZ				IAmb	IAmb	14 00 05.9	
	comp=Z,27nm,2.0s						
STKA	**Stephens Creek**	**25.91**	**192**	P	**P**	**13 59 49.2**	**+1.3**
	comp=Z,1.0nm,0.4s,baz=19,slow=12,SNR=4.3						
STKA	**Stephens Creek**	**25.91**	**192**	P	**P**	**13 59 49.0**	**+1.1**
STKA				IAmb	IAmb	13 59 57.0	
	comp=Z,5.4nm,1.8s						
TORD	**Torodi Ar. Bea**	**145.92**	**284**	PKPbc	**PKPdf**	**14 13 54.4**	**0.0**
	comp=Z,0.5nm,0.8s,baz=77,slow=2.7,SNR=3.5						

MAN 01 14:06:52.8, 9.90N×124.11E, h0km**, mb4.1, ML2.9, MS2.5, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.44**	**341**	⇓*e*P	Pg	14 07 01.6	+0.3
LLP				*i* S	Sg	14 07 08.4	+1.4

IDC 01 14:14:56.9±1.3**, 28.08N×103.28E, h0**km**, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.3**/45**, mbtmp3.4**/4**, Error ellipse: s-maj=218.3km s-min=21.1km az=59.0, Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**24.90**	**324**	P	P	14 20 21.4	-0.1
	0.4nm,0.5s,baz=121,slow=11,SNR=8.2						
ZALV	**Zalesovo Beam**	**29.18**	**337**	P	P	14 20 59.8	0.0
	0.2nm,0.3s,baz=132,slow=8.5,SNR=2.4						
WRA	**Warramunga Arr**	**56.41**	**144**	P	P	14 24 39.9	-0.5
	0.4nm,0.7s,baz=332,slow=8.6,SNR=4.0						
ASAR	**Alice Springs**	**59.32**	**147**	P	P	14 25 01.1	+0.3
	0.1nm,0.4s,baz=326,slow=6.5,SNR=9.0						

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*IDC **01** 14:18:18.7±1.0, 13.19N×120.24E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/44, mbtmp3.6/5, MS3.3/1, Ms1 3.3/1, ms1mx2.5/56, Error ellipse: s-maj=21.2km s-min=12.6km az=113.0*
*MAN **01** 14:18:22.9, 13.35N×120.23E, h30km, mb4.6, ML3.5, MS3.3*
ISC 01 14:18:26.1±1.1**, 13.4N**±0.1×**120.4E**±0.1**, h70**km**, n11, σ2.66**/12**, mb3.7**/5**, 1C-2D, Mindoro**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.34**	**339**	*e*P	Pn	14 18 32.4	-5.2
LUBP				*e*S	**Sn**	**14 18 39.7**	**-6.3**
TGY	**Tagaytay City**	**0.88**	**39**	Pg	**Pn**	**14 18 41.5**	**-1.7**
	267nm,0.3s,baz=212,slow=18,SNR=15						
TGY				Lg	Lg	14 18 55.3	
	388nm,0.3s,baz=162,slow=20,SNR=37						
TGY				LR	LR	14 19 18.9	
	comp=Z,343nm,18.1s,baz=124,slow=53						
TGY	**Tagaytay City**	**0.88**	**39**	⇑*e*P	**Pn**	**14 18 41.5**	**-1.7**
TGY				*e*S	**Sn**	**14 18 55.3**	**-0.5**
LQP	**Lukban**	**1.33**	**58**	⇓*i*P	**Pn**	**14 18 47.4**	**-1.7**
LQP				*i* S	**Sn**	**14 19 06.2**	**0.0**
PCPH	**Palayan**	**2.25**	**18**	⇓*e*P	**Pn**	**14 19 00.5**	**-0.7**
WRA	**Warramunga Arr**	**35.88**	**157**	P	**P**	**14 25 18.7**	**-0.9**
	0.6nm,0.7s,baz=335,slow=10.0,SNR=4.2						
SONM	**Songino Array**	**36.24**	**344**	P	**P**	**14 25 24.2**	**+1.6**
	0.6nm,0.6s,baz=169,slow=9.6,SNR=6.0						
ASAR	**Alice Springs**	**39.16**	**160**	P	**P**	**14 25 47.5**	**+0.2**
	0.6nm,0.6s,baz=339,slow=7.1,SNR=12						
MKAR	**Makanchi Array**	**46.07**	**324**	P	**P**	**14 26 45.8**	**+2.7**
	0.5nm,0.8s,baz=128,slow=9.3,SNR=5.4						
ZALV	**Zalesovo Beam**	**49.16**	**333**	P	**P**	**14 27 08.9**	**+2.1**
	0.3nm,0.4s,baz=132,slow=8.7,SNR=2.6						
OBN	**Obninsk**	**75.58**	**324**	LR	LR	15 04 17.2	
	comp=Z,18nm,19.3s,baz=240,slow=36						

PGC 01 14:18:56.8±4.5**, 50.82N×138.93W, h10**km**, MLSn3.8**/3**, Mw4.4**/3**, 556km Wsw of Sandspit, Bc West Of Vancouver Island, West of Vancouver Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DIB	**Dawson Inlet,**	**4.65**	**57**	Pn	Pn	14 20 05.5	-1.4
DIB				Sn	Sn	14 20 57.2	-3.6
MOBC	**Moresby Island**	**4.89**	**59**	Pn	Pn	14 20 09.4	-0.9
MOBC				Sn	Sn	14 21 05.1	-1.9
LIB	**Langara Island**	**4.97**	**44**	Pn	Pn	14 20 11.1	-0.3
HG3B	**Hotspring**	**4.98**	**66**	Sn	Sn	14 21 06.9	-2.1
PLBC	**Pleasant Camp**	**8.78**	**9**	Pn	Pn	14 21 05.4	+1.8
PLBC				Sn	Sn	14 22 41.0	-1.5
PNL	**Peninsula**	**8.88**	**358**	Pn	Pn	14 21 06.2	+1.2
YUK7	**Dusty Glacier**	**9.75**	**2**	Pn	Pn	14 21 19.6	+2.5
GRNC	**Granite Creek**	**10.06**	**352**	Pn	Pn	14 21 21.5	+0.1
HYT	**Haines Junctio**	**10.06**	**4**	Pn	Pn	14 21 23.6	+2.2
WHY	**Whitehorse**	**10.12**	**11**	Pn	Pn	14 21 25.0	+2.8
WHY				Sn	Sn	14 23 15.7	0.0
YUK6	**Outpost Mounta**	**10.16**	**2**	Pn	Pn	14 21 25.1	+2.4
CTGM	**Chitina Glacie**	**10.26**	**353**	Pn	Pn	14 21 24.3	+0.3
KIAG	**Kiagna River**	**10.31**	**351**	Pn	Pn	14 21 24.3	-0.5
KIAG				Sn	Sn	14 23 15.3	-5.0
YUK4	**Talbot Arm**	**10.56**	**1**	Pn	Pn	14 21 32.1	+3.9
YUK2	**White River**	**11.05**	**355**	Pn	Pn	14 21 37.6	+2.8
YUK1	**Sand Pete Hill**	**11.40**	**356**	Pn	Pn	14 21 42.2	+2.6
DAWY	**Dawson**	**13.29**	**359**	Pn	Pn	14 22 07.9	+2.6

GCMT **01** *14:23:00.6±0.5, 35°.34S±0°.05×178°.62W±0°.03, h21km±1km, MW4.8/68, Moment Tensor Solution. s18,c20; s68,c88; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-2.27±.23; Mθθ0.06±.13; Mφφ2.21±.14; Mrθ0.08±.30; Mθφ0.25±.07; Mφr-0.74±.19; Best double couple: M0 2.37300×10^16 NP1:φs190.00000°,δ36.00000°,λ-84.00000°. NP2: φs3.00000°,δ54.00000°,λ-94.00000°. Principal axes: T 2.3510, Plg9.0000°, Azm96.0000°; N 0.0410, Plg4.0000°, Azm5.0000°; P -2.3940, Plg80.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

WEL **01** *14:23:00.8±2.0, 36°S±23°×17°8W±2°2, h243km±42km, mB4.9/12, ML5.5/11, MLv5.2/13, Mw(mB)4.2/12*

BJI **01** *14:23:01.6±0.0, 35°.40S×178°.74W, h51km, mB5.4/4, mb5.2/12, Ms5.1/4, Ms7 4.8/5*

IDC **01** *14:23:02.8±0.7, 35°.39S×179°.00W, h46km±5km, mb4.4/17, mb1 4.5/19, mb1mx4.3/41, mbtmp4.7/19, MS3.8/16, Ms1 3.8/16, ms1mx3.5/35, Error ellipse: s-maj=17.7km s-min=14.3km az=26.0*

NEIC **01** *14:23:03.6±1.7, 35°.30S±0°.04×179°.01W±0°.10, h54km±4km, mb4.9/44, Error ellipse: s-maj=13.1km s-min=1.1km az=115.0*

ISC 01 14:23:01.5±0.6**, 35°.48S**±0°.06×**178°.88W**±0°.06**, h34**km±1km**, h34km:pP-P, n268,** σ1**°.54**/272**, mb4.9**/33**, MS3.8**/20**, 10C-7D, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.07**	**227**		**Pn**	**14 23 47.2**	**-0.4**
URZ	**Urewera**	**4.25**	**228**	P	**Pn**	**14 24 03.1**	**-0.6**
	145nm,0.3s,baz=53,slow=6.2,SNR=751						
URZ				S	**Sn**	**14 24 53.0**	**+1.0**
	112nm,0.3s,baz=114,slow=20,SNR=20						
URZ	**Urewera**	**4.25**	**228**		**Pn**	**14 24 03.2**	**-0.5**
WHHZ	**Waihua**	**4.74**	**220**	P	**Pn**	**14 24 09.7**	**-0.8**
WHHZ				S	**Sn**	**14 25 05.9**	**+1.6**
MTHZ	**Maungataniwha**	**4.80**	**224**	P	**Pn**	**14 24 11.1**	**-0.2**
ARHZ	**Aropaoanui**	**5.00**	**220**	P	**Pn**	**14 24 13.7**	**-0.4**
ARHZ				S	**Sn**	**14 25 12.6**	**+1.8**
CKHZ	**Cape Kidnapper**	**5.26**	**216**	P	**Pn**	**14 24 15.7**	**-2.0**
CKHZ				S	**Sn**	**14 25 16.8**	**-0.3**
HATZ	**Hinemaiaia**	**5.26**	**228**	P	**Pn**	**14 24 16.9**	**-0.8**
MCHZ	**McNeill Hill**	**5.29**	**220**	P	**Pn**	**14 24 16.7**	**-1.4**
KWHZ	**Kaweka Forest**	**5.43**	**222**	P	**Pn**	**14 24 19.0**	**-0.9**
KWHZ				S	**Sn**	**14 25 21.4**	**+0.2**
KAHZ	**Kahuranaki**	**5.46**	**217**	P	**Pn**	**14 24 18.1**	**-2.4**
KATZ	**Kakaramea**	**5.56**	**230**	P	**Pn**	**14 24 22.7**	**+0.8**
KRHZ	**Kereru**	**5.61**	**221**	P	**Pn**	**14 24 21.0**	**-1.5**
PXZ	**Pawanui**	**5.66**	**215**	P	**Pn**	**14 24 20.5**	**-2.5**
KRVZ	**Karewarewa**	**5.66**	**229**	P	**Pn**	**14 24 22.9**	**-0.4**
NGZ	**Ngauruhoe**	**5.74**	**228**	P	**Pn**	**14 24 24.2**	**-0.1**
TUVZ	**Tukino**	**5.76**	**227**	P	**Pn**	**14 24 24.2**	**-0.5**
MOVZ	**Moawhango**	**5.79**	**226**	P	**Pn**	**14 24 24.2**	**-0.8**
HIZ	**Hauiti**	**5.86**	**237**		**Pn**	**14 24 25.3**	**-0.5**
WPHZ	**Waipukurau**	**5.89**	**218**	P	**Pn**	**14 24 24.0**	**-2.3**
PNHZ	**Pukenui**	**5.90**	**220**	P	**Pn**	**14 24 23.8**	**-2.7**
MTVZ	**Mangateitei**	**5.95**	**227**	P	**Pn**	**14 24 26.5**	**-0.7**
MTVZ				S	**Sn**	**14 25 33.1**	**-1.0**
PRHZ	**Porangahau**	**5.95**	**215**	P	**Pn**	**14 24 24.3**	**-2.8**
OUZ	**Omahuta**	**6.16**	**270**		**Pn**	**14 24 29.3**	**-0.7**
GLKZ	**Green Lake**	**6.25**	**8**	P	Pn	14 24 21.6	-10
GLKZ				S	Sn	14 25 28.8	-13
RAO	**Raoul Island**	**6.27**	**8**	P	**Pn**	**14 24 29.0**	**-2.5**
	32nm,0.3s,baz=163,slow=19,SNR=2.0						
RAO				S	Sn	14 25 31.1	-11
	116nm,0.3s,baz=270,slow=20,SNR=3.2						
BFZ	**Birch Farm**	**6.46**	**215**		**Pn**	**14 24 30.7**	**-3.4**
MRZ	**Mangatainoka R**	**6.77**	**219**	P	**Pn**	**14 24 34.8**	**-3.5**
MRZ				S	**Sn**	**14 25 51.6**	**-2.7**
MSWZ	**Moikau Station**	**7.50**	**216**		Pn	14 24 43.6	-4.9
PLWZ	**Palliser**	**7.62**	**215**		Pn	14 24 45.3	-4.7
BHW	**Baring Head**	**7.68**	**218**		Pn	14 24 46.4	-4.5
SNZO	**South Karori**	**7.70**	**219**		**Pn**	**14 24 48.0**	**-3.0**
TUWZ	**Tuamarina**	**8.18**	**221**		**Pn**	**14 24 53.7**	**-4.0**
NNZ	**Nelson**	**8.35**	**224**	Pn	**Pn**	**14 24 56.7**	**-3.3**
BSWZ	**Blackbirch Sta**	**8.42**	**220**	Pn	**Pn**	**14 24 57.7**	**-3.3**
QRZ	**Quartz Range**	**8.62**	**229**	Pn	**Pn**	**14 24 59.9**	**-3.7**
THZ	**Tophouse**	**8.98**	**223**		**Pn**	**14 25 04.9**	**-3.8**
KHZ	**Kahutara**	**9.10**	**218**		Pn	14 25 05.9	-4.3
LTZ	**Lake Taylor**	**10.02**	**221**		**Pn**	**14 25 19.1**	**-3.8**
CRLZ	**Canterbury Las**	**10.40**	**216**	Pn	**Pn**	**14 25 24.4**	**-3.7**
MQZ	**McQueen's Vall**	**10.49**	**216**	Pn	**Pn**	**14 25 25.2**	**-4.1**
OXZ	**Oxford**	**10.52**	**219**		Pn	14 25 25.0	-4.8
RPZ	**Rata Peaks**	**11.30**	**220**	P	**Pn**	**14 25 36.5**	**-4.0**
	4.7nm,0.3s,baz=96,slow=2.8,SNR=8.3						
RPZ				S	Sn	14 27 33.3	-12
	8.3nm,0.3s,baz=326,slow=21,SNR=12						
RPZ	**Rata Peaks**	**11.30**	**220**		Pn	14 25 36.2	-4.3
LBZ	**Lake Benmore**	**12.22**	**220**	Pn	Pn	14 25 48.8	-4.2
ODZ	**Otahua Downs**	**12.45**	**217**	Pn	Pn	14 25 51.9	-4.2
MSVF	**Nonsavu**	**17.89**	**350**	P	**Pn**	**14 27 03.7**	**-4.0**
DZM	**Mont Dzumac**	**18.52**	**312**	*e*P	**Pn**	**14 27 17.9**	**+2.5**
	58nm,1.1s						
DZM				*e*LQ	LQ	14 30 54.5	
	754nm,30.2s						
DZM				*e*LR	LR	14 31 42.3	
	comp=Z,546nm,33.5s						
DZM	**Mont Dzumac**	**18.52**	**312**	P	**P**	**14 27 15.0**	**-0.1**
	1.2nm,0.3s,baz=165,slow=14,SNR=12						
DZM	**Mont Dzumac**	**18.52**	**312**	P	**P**	**14 27 14.9**	**-0.2**
LHI	**Lord Howe Isla**	**18.81**	**276**	P	**P**	**14 27 17.1**	**-1.0**
LHI				IAmb	IAmb	14 27 19.2	
	comp=Z,112nm,1.4s						
RAR	**Rarotonga**	**21.96**	**55**	LR	LR	14 35 36.6	
	comp=Z,285nm,20.3s,baz=248,slow=34						
ARMA	**Armidale**	**25.21**	**273**	P	**P**	**14 28 24.8**	**+0.7**
EIDS	**Eidsvold**	**27.70**	**283**	P	**P**	**14 28 45.1**	**-1.5**
TBI	**Tubuai**	**28.22**	**73**	*e*LR	LR	14 35 44.3	
	comp=Z,302nm,29.2s						
TBI	**Tubuai**	**28.22**	**73**	*e*T	T	14 58 09.4	
	comp=Z,10.0nm,0.4s						
TOO	**Toolangi**	**28.61**	**255**	P	**P**	**14 28 54.5**	**-0.1**
TOO				IAmb	IAmb	14 29 01.4	
	comp=Z,43nm,1.6s						
PAE	**Paea**	**31.48**	**63**	*e*T	T	15 02 01.2	
	comp=Z,1.2nm,0.3s						
PPT2	**Papeete2**	**31.52**	**63**	*e*LR	LR	14 36 57.1	
	comp=Z,314nm,28.8s						
PPT2	**Papeete2**	**31.52**	**63**	*e*T	T	15 02 05.8	
	comp=Z,3.3nm,0.4s						
PPT	**Papeete**	**31.54**	**63**	LR	LR	14 40 35.0	
	comp=Z,189nm,18.2s,baz=248,slow=33						
HNR	**Honiara**	**32.33**	**318**	LR	LR	14 39 31.2	
	comp=Z,39nm,20.4s,baz=288,slow=31						
STKA	**Stephens Creek**	**32.94**	**265**	P	**P**	**14 29 33.0**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=99,slow=13,SNR=7.6						
STKA				PcP	**PcP**	**14 32 15.5**	**-1.0**
	comp=Z,1.8nm,0.7s,baz=126,slow=2.8,SNR=3.8						
STKA				LR	LR	14 41 03.6	
	comp=Z,100nm,21.8s,baz=56,slow=33						
CTA	**Charters Tower**	**34.24**	**287**	P	**P**	**14 29 44.2**	**0.0**
	comp=Z,13nm,0.7s,baz=121,slow=9.6,SNR=19						
BBOO	**Buckleboo**	**37.15**	**261**	P	**P**	**14 30 08.9**	**-0.2**
COEN	**Coen**	**40.24**	**292**	P	**P**	**14 30 34.4**	**-0.7**
COEN				IAmb	IAmb	14 30 38.4	
	comp=Z,17nm,0.9s						
PMG	**Port Moresby**	**40.38**	**302**	P	**P**	**14 30 35.4**	**-0.9**
	comp=Z,5.1nm,0.7s,baz=129,slow=6.5,SNR=2.3						
PMG				LR	LR	14 47 05.7	
	comp=Z,114nm,18.3s,baz=98,slow=36						
AS31	**Alice Springs**	**42.36**	**273**	P	**P**	**14 30 51.2**	**-1.3**
AS31				pP	**sP**	**14 31 05.1**	**+1.6**
ASAR	**Alice Springs**	**42.36**	**273**	P	**P**	**14 30 51.3**	**-1.3**
	comp=Z,20nm,0.7s,baz=115,slow=7.6,SNR=308						
ASAR				pP	**sP**	**14 31 04.2**	**+0.7**
	comp=Z,23nm,0.6s,baz=115,slow=7.3,SNR=18						
ASAR				PcP	**PcP**	**14 32 44.4**	**-1.2**
	comp=Z,1.7nm,0.7s,baz=123,slow=4.6,SNR=4.3						
ASAR				S	**S**	**14 37 08.3**	**-3.4**
	comp=Z,1.1nm,0.8s,baz=114,slow=15,SNR=4.4						
ASAR				LR	LR	14 49 24.8	
	comp=Z,137nm,18.2s,baz=119,slow=37						
ASAR	**Alice Springs**	**42.36**	**273**	P	**P**	**14 30 50.5**	**-2.0**
VNDA	**Vanda**	**42.98**	**186**	LR	LR	14 46 18.9	
	comp=Z,99nm,19.1s,baz=12,slow=32						
WR0	**Warramunga Arr**	**43.63**	**278**	P	**P**	**14 31 01.1**	**-1.8**
WR0				IAmb	IAmb	14 31 05.2	
	comp=Z,18nm,0.9s						
WRAB	**Tennant Creek**	**43.80**	**278**	P	**P**	**14 31 02.6**	**-1.6**
WRAB				IAmb	IAmb	14 31 05.9	
	comp=Z,27nm,1.1s						
WRA	**Warramunga Arr**	**43.81**	**278**	P	**P**	**14 31 02.7**	**-1.5**
	comp=Z,10nm,0.5s,baz=118,slow=7.7,SNR=62						
WRA				PcP	**PcP**	**14 32 49.7**	**-0.8**
	comp=Z,2.1nm,0.7s,baz=111,slow=3.4,SNR=5.6						
WRA				S	**S**	**14 37 27.8**	**-5.1**
	comp=Z,2.3nm,1.1s,baz=124,slow=13,SNR=5.1						
WRA				LR	LR	14 49 12.0	
	comp=Z,65nm,18.9s,baz=145,slow=36						
WRA	**Warramunga Arr**	**43.81**	**278**	P	**P**	**14 31 02.8**	**-1.5**
TAOE	**Nuku Hiva Isla**	**44.15**	**63**	P	**P**	**14 31 05.5**	**-1.6**
FORT	**Forrest**	**44.25**	**260**	P	**P**	**14 31 06.6**	**-1.1**
KNRA	**Kununurra**	**50.56**	**279**	P	**P**	**14 31 52.5**	**-4.3**
FITZ	**Fitzroy Crossi**	**51.81**	**274**	P	**P**	**14 32 04.8**	**-1.4**
	comp=Z,11nm,0.9s,baz=159,slow=8.4,SNR=8.5						
FITZ				LR	LR	14 53 28.9	
	comp=Z,105nm,21.3s,baz=115,slow=35						
FITZ	**Fitzroy Crossi**	**51.81**	**274**	P	**P**	**14 32 04.5**	**-1.8**
FITZ				IAmb	IAmb	14 32 08.9	
	comp=Z,20nm,1.2s						
NWAO	**Narrogin (SRO)**	**52.07**	**253**	LR	LR	14 52 26.5	
	comp=Z,67nm,18.4s,baz=348,slow=34						
NWAO	**Narrogin (SRO)**	**52.07**	**253**	P	**P**	**14 32 07.2**	**-0.9**
QSPA	**South Pole Qui**	**54.64**	**180**	P	**P**	**14 32 28.0**	**+1.4**
	comp=Z,10nm,0.8s,baz=28,slow=1.3,SNR=68						
QSPA				LR	LR	14 53 33.8	
	comp=Z,89nm,18.4s,baz=250,slow=34						
QSPA	**South Pole Qui**	**54.64**	**180**	P	**P**	**14 32 28.5**	**+1.9**
QSPA				IAmb	IAmb	14 32 29.8	
	comp=Z,13nm,0.8s						
PSAD2	**Pilbara Seismi**	**54.69**	**267**	P	**P**	**14 32 27.2**	**-0.2**
PSAD1	**Pilbara Seismi**	**54.88**	**267**	P	**P**	**14 32 28.2**	**-0.6**
SIJI	**Sorong**	**57.67**	**295**	P	**P**	**14 32 47.8**	**-1.0**
	comp=Z,9.5nm,0.8s,baz=93,slow=9.1,SNR=4.9						
MAW	**Mawson**	**67.31**	**201**	LR	LR	15 02 25.8	
	comp=Z,152nm,18.1s,baz=72,slow=35						
SYO	**Syowa Base**	**72.01**	**194**	⇑*i*P	**P**	**14 34 20.0**	**-1.3**
SYO	**Syowa Base**	**72.01**	**194**	⇑*e*pP	pP	14 34 36.4	+7.0
LEM	**Lembang**	**72.64**	**274**	LR	LR	15 05 34.9	
	comp=Z,49nm,21.1s,baz=198,slow=35						
TROLL	**Troll, Antarti**	**72.80**	**180**	P	**P**	**14 34 26.8**	**+0.7**
VNA3	**Neumayer Olymp**	**73.30**	**176**	P	**P**	**14 34 29.0**	**+0.1**
VNA1	**Neumayer--Stat**	**73.95**	**177**	P	**P**	**14 34 33.4**	**+0.7**
MDSI	**Maura Dua**	**76.78**	**274**	P	**P**	**14 34 52.5**	**+2.6**
PLCA	**Paso Flores**	**79.59**	**133**	P	**P**	**14 35 05.0**	**-0.3**
	comp=Z,4.3nm,1.0s,baz=243,slow=9.9,SNR=3.1						
PLCA				LR	LR	15 05 54.8	
	comp=Z,25nm,18.9s,baz=178,slow=32						
GSI	**Gunungsitoli**	**85.49**	**275**	P	**P**	**14 35 36.7**	**+0.5**
JKA	**Kamikawa-asahi**	**86.62**	**333**	P	**P**	**14 35 40.8**	**-0.2**
ASAJ	**Asahikawa**	**86.62**	**333**	P	**P**	**14 35 40.8**	**-0.2**
	comp=Z,8.1nm,0.7s,baz=119,slow=6.2,SNR=3.4						
KSRS	**Korea Array**	**87.76**	**320**	P	**P**	**14 35 46.5**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=149,slow=5.5,SNR=6.4						
NJ2	**Nanjing**	**89.01**	**311**	*e*P	**P**	**14 35 52.8**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
OSI	**Osito Audit: C**	**89.53**	**46**	P	**P**	**14 35 56.0**	**+0.8**
	baz=225						
MURC	**Murrieta**	**89.72**	**47**	P	**P**	**14 35 57.2**	**+1.1**
	baz=226						
ARVC	**Arvin**	**89.83**	**45**	P	**P**	**14 35 57.2**	**+0.7**
	baz=225						
BFSC	**Mount Baldy Ra**	**89.89**	**47**	P	**P**	**14 35 58.1**	**+1.0**
	baz=226						
SWSC	**Sam W. Stewart**	**90.12**	**49**	P	**P**	**14 35 58.9**	**+1.0**
	baz=227						
EDW2	**Edwards Air Fo**	**90.14**	**46**	P	**P**	**14 35 59.0**	**+0.9**
	baz=226						
PFO	**Pinyon Flats O**	**90.17**	**48**	P	**P**	**14 35 59.7**	**+1.3**
	baz=226						
VES	**Vestal, Richgr**	**90.19**	**45**	P	**P**	**14 35 58.9**	**+0.8**
	baz=225						
ISA	**Isabella, Lake**	**90.41**	**45**	P	**P**	**14 36 00.4**	**+1.0**
ISA	**Isabella, Lake**	**90.41**	**45**	P	**P**	**14 36 00.1**	**+0.8**
	baz=225						
PETK	**Petropavlovsk-**	**90.55**	**346**	P	**P**	**14 35 59.2**	**-0.2**
	comp=Z,13nm,0.8s,baz=130,slow=7.5,SNR=30						
PETK				pP	**sP**	**14 36 12.7**	**+1.6**
	comp=Z,12nm,0.7s,baz=129,slow=5.9,SNR=8.4						
PETK	**Petropavlovsk-**	**90.55**	**346**	P	**P**	**14 35 59.1**	**-0.3**
HSIG		**90.59**	**54**	P	**P**	**14 36 00.8**	**+0.6**
LRMC	**Laurel Mtn Rad**	**90.74**	**46**	P	**P**	**14 36 02.2**	**+1.2**
	baz=226						
GLA	**Glamis**	**90.79**	**49**	P	**P**	**14 36 02.7**	**+1.6**
	baz=227						
BC3	**Big Chuckawall**	**90.81**	**48**	P	**P**	**14 36 03.0**	**+1.7**
	baz=227						
WHN	**Wuhan**	**90.83**	**308**	P	**P**	**14 36 04.8**	**+3.5**
USRK	**Ussuriysk Ar.**	**91.00**	**327**	P	**P**	**14 36 01.5**	**-0.2**
	comp=Z,7.8nm,0.9s,baz=163,slow=5.1,SNR=9.8						
USRK				pP	**sP**	**14 36 14.5**	**+1.5**
	comp=Z,3.4nm,0.8s,baz=114,slow=6.3,SNR=4.1						
USRK	**Ussuriysk Ar.**	**91.00**	**327**	P	**P**	**14 36 01.4**	**-0.3**
CMB	**Columbia Colle**	**91.02**	**42**	P	**P**	**14 36 02.7**	**+0.6**
CMB				IAmb	IAmb	14 36 03.5	
	comp=Z,7.0nm,1.1s						
HEC	**Hector,Ludlow**	**91.09**	**47**	P	**P**	**14 36 03.8**	**+1.3**
	baz=226						
GSC	**Goldstone, Bar**	**91.13**	**46**	P	**P**	**14 36 03.7**	**+1.0**
GSC				IAmb	IAmb	14 36 04.3	
	comp=Z,8.8nm,1.3s						
GSC	**Goldstone, Bar**	**91.13**	**46**	P	**P**	**14 36 04.0**	**+1.3**
	baz=226						
113A	**Mohawk Valley,**	**91.25**	**50**	P	**P**	**14 36 04.1**	**+0.9**
113A				IAmb	IAmb	14 36 05.6	
	comp=Z,7.1nm,1.1s						
MPMC	**Manual Prospec**	**91.26**	**45**	P	**P**	**14 36 04.5**	**+1.1**
	baz=226						
O02D	**Mt. Diablo Mer**	**91.29**	**39**	P	**P**	**14 36 04.8**	**+1.5**
	baz=223						
214A	**Organ Pipe Nat**	**91.31**	**51**	P	**P**	**14 36 04.0**	**+0.4**
214A				IAmb	IAmb	14 36 05.3	
	comp=Z,5.6nm,1.0s						
214A	**Organ Pipe Nat**	**91.31**	**51**	P	**P**	**14 36 04.9**	**+1.3**
	baz=228						
IRM	**Iron Mountain**	**91.34**	**48**	P	**P**	**14 36 04.9**	**+1.3**
	baz=227						
AFDM	**Forest Hills D**	**91.36**	**41**	P	**P**	**14 36 04.0**	**+0.4**
AFDM				IAmb	IAmb	14 36 04.8	
	comp=Z,4.4nm,1.0s						
Y12C	**Blythe**	**91.45**	**49**	P	**P**	**14 36 04.9**	**+0.8**
Y12C	**Blythe**	**91.45**	**49**	P	**P**	**14 36 05.8**	**+1.7**
	baz=227						
GMRC	**Granite Mounta**	**91.46**	**47**	P	**P**	**14 36 05.3**	**+1.0**
	baz=227						
WDC	**Whiskeytown Da**	**91.71**	**39**	P	**P**	**14 36 05.8**	**+0.6**
WDC				IAmb	IAmb	14 36 06.1	
	comp=Z,5.5nm,1.1s						
SHOC	**Shoshone, Teco**	**91.86**	**46**	P	**P**	**14 36 06.5**	**+0.6**
	baz=226						
WAKR	**Walker**	**91.88**	**43**	P	**P**	**14 36 06.6**	**+0.4**
O03E	**Paynes Creek**	**91.89**	**40**	P	**P**	**14 36 06.2**	**+0.2**
	baz=223						
N02D	**Trinity Center**	**91.92**	**39**	P	**P**	**14 36 07.4**	**+1.2**
	baz=223						
PNTR	**Pine Nut**	**92.20**	**42**	P	**P**	**14 36 07.4**	**-0.3**
PNTR				IAmb	IAmb	14 36 09.1	
	comp=Z,5.4nm,0.9s						
BEKR	**Beckworth**	**92.34**	**41**	P	**P**	**14 36 08.3**	**0.0**
NVAR	**Mina Array Bea**	**92.45**	**43**	P	**P**	**14 36 09.1**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=220,slow=8.6,SNR=13						
NVAR				LR	LR	15 15 27.1	
	comp=Z,41nm,18.0s,baz=286,slow=34						
NVAR	**Mina Array Bea**	**92.45**	**43**	P	**P**	**14 36 09.3**	**+0.4**
Y14A	**Wickenburg**	**92.51**	**49**	P	**P**	**14 36 10.0**	**+0.9**
Y14A				IAmb	IAmb	14 36 11.2	
	comp=Z,5.7nm,0.9s						
TPNV	**Topopah Spring**	**92.59**	**45**	P	**P**	**14 36 10.7**	**+1.1**
	baz=227						
W13A	**Hualapai Mount**	**92.74**	**48**	P	**P**	**14 36 11.5**	**+1.2**
W13A				IAmb	IAmb	14 36 15.6	
	comp=Z,5.6nm,1.3s						
TUC	**Tucson**	**92.84**	**52**	P	**P**	**14 36 12.1**	**+1.4**
TUC				IAmb	IAmb	14 36 13.3	
	comp=Z,9.6nm,1.4s						
TUC	**Tucson**	**92.84**	**52**	P	**P**	**14 36 12.5**	**+1.8**
	baz=229						
M04C	**Macdoel**	**92.95**	**39**	P	**P**	**14 36 11.6**	**+0.6**
	baz=223						
HUMO	**Hull Mountain**	**92.99**	**38**	P	**P**	**14 36 11.6**	**+0.5**
L04D	**Klamath Falls**	**93.03**	**38**	P	**P**	**14 36 11.8**	**+0.4**
	baz=223						
I03D	**Drain, OR**	**93.60**	**37**	P	**P**	**14 36 14.5**	**+0.7**
	baz=222						
MNMC	**Minye Minye**	**93.81**	**117**	P	**P**	**14 36 15.3**	**-0.5**
ENH	**Enshi**	**93.86**	**305**	P	**P**	**14 36 14.3**	**-1.1**
J04D	**Umpqua Nationa**	**93.88**	**38**	P	**P**	**14 36 16.0**	**+0.7**
	baz=223						
J05D	**Fort Rock, OR**	**94.35**	**38**	P	**P**	**14 36 18.0**	**+0.6**
	baz=224						
CMAR	**Chiang Mai Arr**	**94.38**	**289**	P	**P**	**14 36 17.6**	**-0.5**
	comp=Z,0.9nm,1.0s,baz=155,slow=3.8,SNR=4.9						
CMAR				PP	**PP**	**14 40 04.5**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=127,slow=5.8,SNR=4.7						
CMAR	**Chiang Mai Arr**	**94.38**	**289**	P	**P**	**14 36 16.8**	**-1.2**
U15A	**North Rim**	**94.59**	**48**	P	**P**	**14 36 19.9**	**+0.9**
U15A				IAmb	IAmb	14 37 21.7	
	comp=Z,13nm,1.9s						
KNB	**Kanab**	**94.66**	**47**	P	**P**	**14 36 20.4**	**+1.3**
TXAR	**Lajitas Array**	**95.72**	**58**	P	**P**	**14 36 24.2**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=219,slow=9.7,SNR=7.7						
LPAZ	**La Paz**	**96.69**	**115**	P	**P**	**14 36 29.6**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=171,slow=6.8,SNR=3.5						
LPAZ	**La Paz**	**96.69**	**115**	IAmb	IAmb	14 37 16.8	
	comp=Z,9.0nm,1.7s						
CPUP	**Villa Florida**	**97.37**	**130**	LR	LR	15 15 35.8	
	comp=Z,94nm,18.7s,baz=215,slow=32						
HHC	**Hu-ho-hao-te**	**99.22**	**314**	*e*P	**Pdif**	**14 36 40.7**	**+1.2**
HHC				pmax	pmax		
	comp=Z,37nm,6.5s						
LZH	**Lanzhou**	**101.15**	**306**	*e*P	**Pdif**	**14 36 47.6**	**-0.7**
LZH				pP	pwP	14 37 05.3	-0.4
LZH				sP	sPdif	14 37 12.1	+12
LZH				*e*PP	**PP**	**14 40 59.7**	**+1.9**
LZH				pmax	pmax		
	comp=Z,20nm,1.4s						
LZH				LR	LR		
	comp=Z,170nm,17.0s						
LZH				LR	LR		
	comp=Z,170nm,17.3s						
LZH				LR	LR		
	comp=Z,270nm,19.7s						
ILAR	**Eielson Array**	**103.03**	**13**	PKiKP	**PKiKP**	**14 41 16.2**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=226,slow=2.4,SNR=4.4						
YKA	**Yellowknife Ar**	**110.32**	**26**	PKiKP	**PKiKP**	**14 41 28.0**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=245,slow=1.6,SNR=6.5						
YKA				PKKPbc	**PKKPbc**	**14 52 30.2**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=45,slow=3.5,SNR=6.5						
WMQ	**Urumqi**	**115.72**	**307**	*e*PKP	**PKPdf**	**14 41 39.2**	**-0.8**
WMQ				LR	LR		
	comp=Z,730nm,28.8s						
WMQ				LR	LR		
	comp=Z,130nm,28.8s						
MK31	**Makanchi Array**	**120.40**	**308**		**PKPdf**	**14 41 47.5**	**-1.3**
MKAR	**Makanchi Array**	**120.40**	**308**	PKP	**PKPdf**	**14 41 47.6**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=90,slow=2.6,SNR=20						
MKAR				PKKPbc	**PKKPbc**	**14 51 55.4**	**-0.2**
	comp=Z,0.5nm,0.9s,baz=270,slow=4.3,SNR=4.7						
MAKZ	**Makanchi**	**120.60**	**308**		**PKPdf**	**14 41 47.8**	**-1.4**
ZAA0	**Zalesovo Array**	**121.27**	**317**		**PKPdf**	**14 41 49.2**	**-1.0**
ZALV	**Zalesovo Beam**	**121.27**	**317**	PKP	**PKPdf**	**14 41 48.8**	**-1.4**
	comp=Z,1.4nm,0.5s,baz=138,slow=2.2,SNR=11						
KSH	**Kashi**	**122.09**	**298**	PKP	**PKiKP**	**14 41 56.1**	**+3.5**
KSH				sPKP		14 42 11.2	
KSH				PP	**PP**	**14 43 30.6**	**+2.6**
KSH				SKKS		14 50 20.5	
KSH				AMB	AMB		
	comp=Z,220nm,7.1s						
KSH				LR	LR		
	comp=Z,220nm,7.1s						
NRN	**Naryn**	**122.76**	**300**		**PKPdf**	**14 41 52.9**	**-1.0**
KURK	**Kurchatov**	**123.94**	**312**		**PKPdf**	**14 41 54.4**	**-1.0**
KBL	**Kabul**	**125.41**	**290**		**PKPdf**	**14 41 57.9**	**-1.2**
BTK	**Batken**	**126.00**	**297**		**PKPdf**	**14 41 59.0**	**-0.9**
GAR	**Garm**	**126.02**	**296**		**PKPdf**	**14 41 59.5**	**-0.5**
KK31	**Karatay Array**	**127.15**	**301**		**PKPdf**	**14 42 01.3**	**-0.6**
KKAR	**Karatay Array**	**127.15**	**301**		**PKPdf**	**14 42 01.4**	**-0.5**
KKAR	**Karatay Array**	**127.15**	**301**		**PKPdf**	**14 42 01.1**	**-0.8**
GEYT	**Alibeck**	**134.85**	**291**	PKP	**PKPdf**	**14 42 15.6**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=127,slow=3.0,SNR=6.7						
GEYT				SKP		14 45 47.0	
	comp=Z,0.4nm,0.3s,baz=150,slow=3.2,SNR=4.8						
ABKAR	**Akbulak array**	**135.51**	**307**		**PKPdf**	**14 42 17.1**	**-0.3**
ABKAR	**Akbulak array**	**135.51**	**307**		**PKPdf**	**14 42 17.3**	**-0.2**
ARU	**Arti**	**136.43**	**317**	PKP	**PKPdf**	**14 42 19.1**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=129,slow=2.9,SNR=6.0						
ARU	**Arti**	**136.43**	**317**		**PKPdf**	**14 42 18.7**	**-0.2**
AKTO	**Aktyubinsk**	**136.83**	**308**	PKP	**PKPdf**	**14 42 18.9**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=99,slow=0.9,SNR=6.4						
ARCES	**ARCESS Array B**	**143.36**	**346**	PKhKP	PKPbc	14 42 27.9	-0.5
	comp=Z,3.4nm,0.6s,baz=25,slow=3.3,SNR=16						
GNI	**Garni**	**145.49**	**291**	PKPbc	**PKPdf**	**14 42 35.8**	**-0.2**
	comp=Z,13nm,1.1s,baz=163,slow=7.1,SNR=6.8						
GNI	**Garni**	**145.49**	**291**		**PKPdf**	**14 42 35.4**	**-0.6**
TBLG	**Delisi**	**145.64**	**294**		**PKPdf**	**14 42 34.7**	**-1.3**
AKH	**Akhalkalaki**	**146.55**	**293**	⇓P	**PKPbc**	**14 42 39.0**	**-0.3**
AKH	**Akhalkalaki**	**146.55**	**293**		**PKPdf**	**14 42 38.2**	**+0.4**
KBZ	**Khabaz**	**147.06**	**297**	PKPbc	**PKPbc**	**14 42 39.7**	**-0.7**
	comp=Z,14nm,0.9s,baz=140,slow=3.2,SNR=25						
OBN	**Obninsk**	**148.76**	**320**	PKPbc	**PKPbc**	**14 42 43.5**	**-1.1**
	comp=Z,5.6nm,0.8s,baz=67,slow=5.3,SNR=6.9						
OBN	**Obninsk**	**148.76**	**320**	PKPbc	**PKPbc**	**14 42 43.4**	**-1.2**
FIA1	**FINESS Array S**	**149.58**	**336**		**PKPbc**	**14 42 45.9**	**-0.5**
FINES	**FINESS Array B**	**149.58**	**336**	PKPbc	**PKPbc**	**14 42 45.6**	**-0.8**
	comp=Z,29nm,0.8s,baz=42,slow=3.4,SNR=43						
FINES	**FINESS Array B**	**149.58**	**336**		**PKPbc**	**14 42 45.4**	**-1.0**
ASF	**Jabal al Asfar**	**150.20**	**274**	PKPbc	**PKPbc**	**14 42 48.9**	**-0.1**
	comp=Z,3.5nm,0.8s,baz=176,slow=3.1,SNR=7.6						
LIC	**Lamto**	**150.34**	**168**	*e*PKP1	**PKPbc**	**14 42 49.6**	**-0.2**
	comp=Z,57nm,0.9s						
KIC	**Kosan Boka**	**150.52**	**168**	*e*PKP1	**PKPbc**	**14 42 50.3**	**+0.1**
	comp=Z,51nm,1.0s						
TIC	**Toumodi**	**150.75**	**167**	*e*PKP1	**PKPbc**	**14 42 50.7**	**-0.1**
	comp=Z,53nm,1.0s						
DBIC	**Dimbokro**	**150.80**	**168**	PKPbc	**PKPbc**	**14 42 51.1**	**+0.2**
	comp=Z,15nm,0.8s,baz=154,slow=3.6,SNR=13						
DBIC				pPKPbc	**pPKPbc**	**14 43 05.0**	**+5.4**
	comp=Z,7.6nm,0.7s,baz=183,slow=4.4,SNR=4.9						
DBIC	**Dimbokro**	**150.80**	**168**		**PKPbc**	**14 42 51.0**	**+0.1**
GAZ	**Gaziantep**	**150.98**	**284**		**PKPbc**	**14 42 50.2**	**-0.5**
EIL	**Elat**	**151.00**	**268**	PKPbc	**PKPbc**	**14 42 50.9**	**0.0**
	comp=Z,14nm,0.8s,baz=54,slow=3.0,SNR=12						
QRWL	**Qaraoun**	**151.54**	**276**	*e*P	**PKiKP**	**14 42 52.5**	**-0.1**
MMAI	**Mount Meron Ar**	**151.64**	**275**	PKPbc	**PKPbc**	**14 42 52.5**	**+0.2**
	comp=Z,14nm,0.8s,baz=79,slow=3.7,SNR=6.0						
BHL	**Bhannes**	**151.65**	**277**	*e*P	**PKPbc**	**14 42 52.4**	**+0.1**
DQRL	**Deir Qamar**	**151.67**	**276**	*e*P	**PKiKP**	**14 42 52.8**	**0.0**
NB2	**NORSAR Subarra**	**153.62**	**349**	PKPdf	**PKPbc**	**14 42 54.7**	**-1.1**
	comp=Z,37nm,1.7s,baz=22,slow=1.8						
NB2	**NORSAR Subarra**	**153.62**	**349**	PKPdf	**PKPbc**	**14 42 54.7**	**-1.1**
	baz=22,slow=1.8						
NOA	**NORSAR Array B**	**153.62**	**349**	PKPbc	**PKPbc**	**14 42 55.0**	**-0.8**
	comp=Z,2.8nm,0.9s,baz=14,slow=3.8,SNR=5.3						
NOA				PKPab	**PKPab**	**14 43 06.9**	**-1.6**
	comp=Z,4.2nm,0.8s,baz=21,slow=2.8,SNR=9.4						
CSS	**Mathiatis**	**153.74**	**278**		**PKPbc**	**14 42 55.9**	**-1.0**
BR131	**Keskin Array S**	**153.97**	**289**		**PKPbc**	**14 42 55.5**	**-1.9**
BRTR	**Keskin Array B**	**153.97**	**289**	PKP	**PKPdf**	**14 42 48.1**	**-1.3**
	comp=Z,0.4nm,0.8s,baz=62,slow=3.4,SNR=3.6						
BRTR				PKPbc	**PKPbc**	**14 42 56.5**	**-1.0**
	comp=Z,4.3nm,0.9s,baz=129,slow=2.9,SNR=18						
BRTR	**Keskin Array B**	**153.97**	**289**		**PKPdf**	**14 42 47.8**	**-1.6**
BRTR				PKPbc	**PKPbc**	**14 42 55.6**	**-1.8**
AKASG	**Malin Array Be**	**154.66**	**316**	PKP	**PKPdf**	**14 42 48.8**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=63,slow=2.6,SNR=4.1						
AKASG				PKPbc	**PKPbc**	**14 42 57.5**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=64,slow=2.5,SNR=8.5						
AKASG				PKPab	**PKPab**	**14 43 10.9**	**-2.3**
	comp=Z,3.3nm,0.6s,baz=53,slow=4.2,SNR=15						
SUW	**Suwalki**	**155.91**	**327**	PKPdif	PKPdf	14 43 01.2	+10
SUW					**PKPab**	**14 43 16.3**	**-2.1**
TOA0	**Torodi Ar. Sit**	**157.76**	**181**	PKPdf	**PKPdf**	**14 42 54.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**157.76**	**181**	PKP	**PKPdf**	**14 42 54.8**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=188,slow=2.7,SNR=5.8						
TORD				PKPab	**PKPab**	**14 43 26.9**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=170,slow=3.8,SNR=11						
TORD	**Torodi Ar. Bea**	**157.76**	**181**		**PKPdf**	**14 42 54.6**	**-0.3**
TESR	**Tescani**	**157.90**	**308**	⇑P	**PKPab**	**14 43 26.6**	**-0.8**
VRI	**Vrincioaia**	**158.07**	**306**	⇑P	**PKPab**	**14 43 27.3**	**-0.8**
BIZ	**Bicaz**	**158.09**	**309**	⇓P	**PKPab**	**14 43 27.6**	**-0.5**
BUR08	**Bucovina Ar. S**	**158.37**	**312**		**PKPab**	**14 43 28.3**	**-1.2**
BURAR	**Bucovina Array**	**158.37**	**311**	⇓P	**PKPab**	**14 43 28.3**	**-1.2**
BURAR	**Bucovina Array**	**158.37**	**311**		**PKPab**	**14 43 28.4**	**-1.0**
MLR	**Muntele Rosu**	**158.71**	**306**	PKPab	**PKPab**	**14 43 29.8**	**-1.3**
	comp=Z,1.9nm,0.8s,baz=106,slow=10,SNR=3.8						
KWP	**Kalwaria Pacla**	**158.83**	**319**		**PKPab**	**14 43 30.0**	**-1.2**
ARCR	**ARCALIA**	**159.13**	**311**	⇑P	PKPdf	14 43 11.5	+16
TRPA	**Tarpa**	**159.72**	**315**	⇓P	**PKPab**	**14 43 34.5**	**-0.6**
CJR	**Cluj-Napoca**	**159.76**	**311**	⇑P	**PKPab**	**14 43 35.7**	**+0.3**

DRGR		160.27	312	⇓P	PKPab	14 43 36.8	-0.9
GZR	Gura Zlata	160.83	308	⇓P	PKPab	14 43 32.2	-8.0
SIRR	Siria	161.15	311	⇑P	PKPab	14 43 41.1	-0.4
MORC	Moravsky Berou	161.35	325	⇑P	PKPab	14 43 40.6	-1.6
MORC	Moravsky Berou	161.35	325	ePKP	PKPab	14 43 40.7	-1.6
BZS	Buzias	161.47	309	⇑P	PKPab	14 43 41.8	-1.1
KRLC	Kraliky	161.49	327	ePKPAB	PKPab	14 43 40.5	-2.3
DPC	Dobruska-Polom	161.49	328	ePKPAB	PKPab	14 43 41.8	-1.0
VYHS	Vyhne	161.55	320	ePKP	PKPab	14 43 42.4	-0.7
JAVC	Velka Javorina	161.91	323	ePKP	PKPab	14 43 44.7	0.0
CLL	Collm	162.02	335	⇑iPKPab	PKPab	14 43 43.4	-1.6
	comp=Z,10.0nm,0.8s						
VRAC	Vranov	162.12	325	PKPab	PKPab	14 43 44.4	-1.2
	comp=Z,6.5nm,0.9s,baz=26,slow=7.3,SNR=8.1						
VRAC	Vranov	162.12	325	⇓P	PKPab	14 43 45.0	-0.6
VRAC	Vranov	162.12	325	ePKP	PKPab	14 43 44.2	-1.4
SMOL	Smolenice	162.26	322	ePKP	PKPab	14 43 45.9	-0.3
KRUC	Moravsky	162.39	325	ePKP	PKPab	14 43 45.4	-1.3
NKC	Novy Kostel	163.11	334	ePKPAB	PKPab	14 43 48.5	-1.4
NKC				epPKP	pPKPab	14 44 01.5	+2.6
CONA	Conrad Observa	163.43	323	ePKPab	PKPab	14 43 50.6	-0.9
	comp=Z,2.2nm,0.7s						
KHC	Kasperske Hory	163.57	330	ePKPAB	PKPab	14 43 50.4	-1.6
KHC				epPKP	pPKPab	14 44 04.1	+3.2
GERES	GERESS Array B	163.75	329	PKPab	PKPab	14 43 50.9	-1.9
	comp=Z,1.9nm,0.8s,baz=55,slow=5.1,SNR=11						
GERES	GERESS Array B	163.75	329	PKPdf	PKPdf	14 43 00.5	0.0
GERES					PKPab	14 43 50.9	-1.9
ARSA	Arzberg	164.06	322	ePKPab	PKPab	14 43 53.1	-1.1
	comp=Z,0.6nm,0.3s						
MOA	Molln	164.25	326	ePKPab	PKPab	14 43 53.8	-1.2
	comp=Z,1.5nm,0.7s						
BLY	Banja Luka	164.64	312	PKPab	PKPab	14 43 55.2	-1.6
WTTA	Wattenberg	165.84	329	ePKPab	PKPab	14 43 59.5	-2.7
	comp=Z,0.5nm,0.3s						
ABTA	Abfaltersbach	165.86	326	ePKPab	PKPab	14 43 59.8	-2.4
	comp=Z,1.7nm,0.7s						
MOTA	Moosalm	166.00	331	ePKPab	PKPab	14 44 01.0	-1.8
	comp=Z,0.8nm,0.3s						
RETA	Reutte	166.01	332	ePKPab	PKPab	14 44 01.2	-1.6
	comp=Z,0.4nm,0.2s						
FETA	Feichten	166.41	331	ePKPab	PKPab	14 44 03.0	-1.7
	comp=Z,2.7nm,0.9s						
FUORN	Ofenpass-Fuorn	166.92	331		PKPab	14 44 05.7	-1.3
DAVOX	Davos/Dischmat	166.94	332	PKPab	PKPab	14 44 05.8	-1.2
	comp=Z,3.4nm,0.8s,baz=346,slow=4.2,SNR=4.0						
NRCA	Norcia	168.15	312		PKPab	14 44 10.8	-1.7

IDC 01 14:27:37.1±2.5, 5°.16S×129°.58E, h189km±37km, mb2.8/2, mb1 3.3/5, mb1mx3.0/43, mbtmp3.8/5, Error ellipse: s-maj=57.9km s-min=19.0km az=84.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	4.59	22	P	Pn	14 28 46.0	0.0
	8.8nm,0.3s,baz=205,slow=17,SNR=103						
SIJI				S	Sn	14 29 36.0	-4.1
	11nm,0.3s,baz=76,slow=23,SNR=28						
FITZ	Fitzroy Crossi	13.42	196	P	Pn	14 30 39.9	-0.4
	0.4nm,0.3s,baz=22,slow=11,SNR=14						
FITZ				S	Sn	14 33 01.8	-8.1
	0.0nm,0.3s,baz=158,slow=19,SNR=3.1						
WRA	Warramunga Arr	15.40	163	S	S	14 33 47.9	-8.7
	0.6nm,0.3s,baz=334,slow=21,SNR=6.0						
ASAR	Alice Springs	18.86	168	P	P	14 31 43.3	+0.2
	0.5nm,0.3s,baz=347,slow=11,SNR=7.8						
ASAR				S	S	14 35 01.4	-6.3
	0.1nm,0.3s,baz=346,slow=18,SNR=3.9						
CMAR	Chiang Mai Arr	38.25	309	P	P	14 34 39.4	0.0
	0.2nm,0.4s,baz=135,slow=6.7,SNR=6.4						
MKAR	Makanchi Array	66.47	327	P	P	14 38 06.2	-0.1
	0.1nm,0.3s,baz=122,slow=7.0,SNR=3.4						

*NIED **01** 14:39:00, 36°.70N×140°.90E, h53km, Mw4.1 Best double couple: M₀1.60000×10^15 NP1:φs9.00000°, δ65.00000°, λ73.00000°. NP2:φs224.00000°, δ29.00000°, λ122.00000°.*
*JMA **01** 14:39:24.9±0.1, 36°.64N×140°.94E, h49km±1km, M4.2 Broadband fault plane solution: P waves. NP1: φs192.00000°, δ38.00000°, λ87.00000°. NP2:φs16.00000°, δ52.00000°, λ92.00000°. Principal axes: T Plg83.0000°, Azm300.0000°; N Plg2.0000°, Azm194.0000°; P Plg7.0000°, Azm104.0000°;*
JMA Felt III J1.
*NEIC **01** 14:39:26.6±1.7, 36°.66N±0°.06×140°.94E±0°.09, h62km±5km, mb4.9/52 Error ellipse: s-maj=11.3km s-min=7.7km az=123.0*
*IDC **01** 14:39:27.2±0.8, 36°.63N×140°.88E, h67km±6km, mb3.8/34, mb1 4.0/37, mb1mx3.9/72, mbtmp4.1/37, MS3.0/6, Ms1 3.0/6, ms1mx2.7/49, Error ellipse: s-maj=11.4km s-min=8.8km az=151.0*
ISC 01 14:39:25.3±0.6, 36°.63N±0°.04×141°.00E±0°.06, h53km±5km, n139, σ1s.29/144, mb4.5/57, 2C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.35	267	⇓P	Pn	14 39 33.9	-1.2
JHO				S	Sn	14 39 40.0	-2.2
JHYU	Hitachinakayam	0.44	230	⇑P	Pn	14 39 35.1	-1.0
JHYU				S	Sn	14 39 42.0	-1.8
ONAJ	Iwakimizuishiy	0.50	341	⇑P	Pn	14 39 35.5	-1.3
ONAJ				S	Sn	14 39 42.7	-2.4
JFFD	Fukushimafurud	0.58	323	⇓P	Pn	14 39 36.6	-1.2
JFFD				S	Sn	14 39 44.4	-2.3
JFK	Kawauchi	0.74	352	⇓P	Pn	14 39 38.4	-1.4
JFK				S	Sn	14 39 47.8	-2.5
JYT	Yasato	0.76	239	⇓P	Pn	14 39 38.7	-1.3
JYT				S	Sn	14 39 48.5	-2.2
JFT	Otama	1.04	329	⇓P	Pn	14 39 43.2	-0.4
JFT				S	Sn	14 39 56.1	-1.0
JAG	Ashikaga	1.26	261	⇓P	Pn	14 39 45.6	-1.1
MJAR	Matsushiro Arr	2.25	269	P	Pn	14 39 59.9	-0.2
	20nm,0.3s,baz=84,slow=17,SNR=1544						
MJAR				S	Sn	14 40 28.2	+1.4
	8.8nm,0.3s,baz=94,slow=25,SNR=7.1						
MJAR				LR	LR	14 40 58.8	
	comp=Z,273nm,19.4s,baz=210,slow=43						
MJAR	Matsushiro Arr	2.25	269		Pn	14 39 59.2	-0.9
MAJO	Matsushiro	2.25	269		Pn	14 40 00.3	+0.2
MAT	Matsushiro	2.25	269	P	Pn	14 40 00.4	+0.3
MAT				S	Sn	14 40 28.6	+1.8
MJB9	Matsu-Tunnel	2.25	269		Pn	14 40 00.3	+0.1
INU	Inuyama	3.47	250		Pn	14 40 17.9	+1.0
JHJ2	Mitsune	3.64	196	Pn	Pn	14 40 19.4	+0.2
ASAJ	Asahikawa	7.58	9	P	Pn	14 41 12.4	-0.7
	3.5nm,0.3s,baz=208,slow=13,SNR=40						
ASAJ				S	Sn	14 42 36.4	-1.2
	0.9nm,0.3s,baz=114,slow=19,SNR=3.3						
JKA	Kamikawa-asahi	7.58	9		Pn	14 41 12.4	-0.7
JKA					Sn	14 42 36.4	-1.2
JNU	Nakatsue	9.02	250	P	Pn	14 41 35.3	+2.3
	0.5nm,0.3s,baz=76,slow=4.2,SNR=5.5						
JNU				LR	LR	14 45 17.2	
	comp=Z,66nm,19.6s,baz=65,slow=39						
JCJ	Chichijima	9.56	174	P	Pn	14 41 38.4	-1.9
	9.7nm,0.3s,baz=282,slow=19,SNR=3.3						
JCJ				S	Sn	14 43 15.9	-10
	9.9nm,0.3s,baz=287,slow=19,SNR=2.6						
USA0B	Ussuriysk Arra	10.21	321	Pn	Pn	14 41 49.3	+0.2
USRK	Ussuriysk Ar.	10.21	321	P	Pn	14 41 50.5	+1.4
	baz=131,slow=13,SNR=8.8						
USRK				LR	LR	14 45 37.4	
	comp=Z,80nm,18.3s,baz=136,slow=36						
USRK	Ussuriysk Ar.	10.21	321		Pn	14 41 48.8	-0.4
KSRS	Korea Array	10.49	278	P	Pn	14 41 56.0	+3.1
	0.3nm,0.3s,baz=93,slow=14,SNR=7.6						
KSRS				LR	LR	14 45 41.7	
	comp=Z,106nm,18.4s,baz=80,slow=36						
KSAR	Wonju Array Be	10.52	278	Pn	Pn	14 41 55.7	+2.3
KS19	Wonju Array Si	10.53	279	Pn	Pn	14 41 55.8	+2.2
YOJ	Yonaguni jima	19.64	237	P	Pn	14 43 50.8	-0.6
YOJ				IAmb	IAmb	14 43 51.3	
	comp=Z,59nm,1.0s						
PETK	Petropavlovsk-	20.20	30	P	Pn	14 43 58.1	+0.2
	comp=Z,1.1nm,0.6s,baz=222,slow=8.0,SNR=5.4						
PETK				LR	LR	14 51 07.6	
	comp=Z,35nm,21.6s,baz=243,slow=35						
TATO	Taipei	20.35	241	P	P	14 43 57.6	+0.3
TATO				IAmb	IAmb	14 44 15.6	
	comp=Z,203nm,1.6s						
SSLB	Suanglung	21.49	239	P	P	14 44 07.2	-2.5
SSLB				IAmb	IAmb	14 44 25.4	
	comp=Z,65nm,2.0s						
TPUB	Ta-pu	22.03	239	P	P	14 44 12.3	-3.2
TPUB				IAmb	IAmb	14 45 01.0	
	comp=Z,96nm,1.9s						
WHN	Wuhan	22.98	262	P	P	14 44 29.8	+4.4
MA2	Magadan	23.82	12	P	P	14 44 34.0	+0.8
	comp=Z,7.8nm,0.8s,baz=198,slow=12,SNR=4.3						
MA2	Magadan	23.82	12	IAmb	IAmb	14 45 11.9	
	comp=Z,134nm,1.8s						
XAN	Xi'an	26.24	274	P	P	14 44 54.2	-1.3
YAK	Yakutsk	26.39	348	P	P	14 44 55.6	-0.9
	comp=Z,3.6nm,0.6s,baz=149,slow=2.1,SNR=3.8						
YAK	Yakutsk	26.39	348	P	P	14 44 54.0	-2.5
ENH	Enshi	26.97	266	P	P	14 45 00.8	-1.4
SEY	Seymchan	27.25	11	P	P	14 45 07.3	+3.1
	comp=Z,6.7nm,1.0s,baz=203,slow=8.5,SNR=8.1						
ULN	Ulaanbaatar	27.31	305	P	P	14 45 05.2	0.0
SONM	Songino Array	27.74	305	P	P	14 45 08.3	-0.7
	comp=Z,3.3nm,0.6s,baz=104,slow=8.6,SNR=19						
SONM	Songino Array	27.74	305	P	P	14 45 08.3	-0.7
H11N2	WAKE ISLAND Hy	28.23	120	T	T	15 15 11.7	
	baz=313,slow=75,SNR=257						
H11N1	WAKE ISLAND Hy	28.24	120	T	T	15 15 19.1	
	baz=313,slow=75,SNR=240						
H11N3	WAKE ISLAND Hy	28.25	120	T	T	15 15 18.1	
	baz=313,slow=75,SNR=249						
H11S1	WAKE ISLAND Hy	28.92	122	T	T	15 16 04.5	
	baz=314,slow=76,SNR=494						
H11S3	WAKE ISLAND Hy	28.92	122	T	T	15 16 01.2	
	baz=314,slow=76,SNR=375						
H11S2	WAKE ISLAND Hy	28.94	122	T	T	15 16 02.4	
	baz=314,slow=76,SNR=390						
DAV	Davao City (W)	32.62	209	LR	LR	14 59 08.4	
	comp=Z,25nm,19.1s,baz=72,slow=36						
TIXI	Tiksi	35.65	353	P	P	14 46 16.0	-1.8
CMAR	Chiang Mai Arr	41.08	255	P	P	14 47 03.4	-0.7
	comp=Z,0.5nm,0.6s,baz=48,slow=6.1,SNR=5.4						
CMAR	Chiang Mai Arr	41.08	255	P	P	14 47 04.1	+0.1
ZAA0	Zalesovo Array	41.95	313	P	P	14 47 10.2	-0.6
ZALV	Zalesovo Beam	41.95	313	P	P	14 47 10.4	-0.3
	comp=Z,3.9nm,0.6s,baz=96,slow=6.9,SNR=26						
ZALV				PcP	PcP	14 49 05.1	-0.1
	comp=Z,1.0nm,0.6s,baz=84,slow=3.4,SNR=3.9						
ZALV	Zalesovo Beam	41.95	313	P	P	14 47 10.1	-0.6
MK31	Makanchi Array	44.05	302	P	P	14 47 27.7	-0.2
MKAR	Makanchi Array	44.05	302	P	P	14 47 27.7	-0.2
	comp=Z,1.0nm,0.6s,baz=83,slow=11,SNR=7.2						
MKAR				pP	pP	14 47 43.9	+2.1
	comp=Z,1.2nm,0.8s,baz=88,slow=9.1,SNR=5.6						
MKAR	Makanchi Array	44.05	302	P	P	14 47 27.8	-0.1
MAKZ	Makanchi	44.27	302	P	P	14 47 29.4	-0.2
KSM	Kuching	45.03	226	P	P	14 47 36.5	+0.5
KSM				IAmb	IAmb	14 47 47.2	
	comp=Z,50nm,1.6s						
SAUI	Saumlaki	45.30	194	P	P	14 47 38.3	+0.3
TAPN	Taplejung	45.64	274	eP	P	14 47 40.8	-0.3
	comp=Z,4.3nm,0.4s						
KURK	Kurchatov	45.92	308	P	P	14 47 42.0	-0.7
KURK				IAmb	IAmb	14 48 00.2	
	comp=Z,5.3nm,0.7s						
KURK	Kurchatov	45.92	308		pP	14 47 59.0	+2.4
KAPI	Kappang	45.95	210	P	P	14 47 42.2	-0.9
KAPI				IAmb	IAmb	14 49 21.7	
	comp=Z,40nm,1.3s						
KURBB	Kurchatov Arra	45.99	308	P	P	14 47 42.2	-0.9
	comp=Z,1.3nm,0.3s,baz=85,slow=8.0,SNR=6.4						
KURBB				pP	pP	14 47 59.0	+1.8
	comp=Z,4.6nm,0.7s,baz=85,slow=7.9,SNR=5.7						
RAMN	Ramite	46.70	274	eP	P	14 47 49.2	-0.2
	comp=Z,26nm,0.7s						
JIRN	Jiri	46.73	275	eP	P	14 47 49.8	+0.1
	comp=Z,19nm,0.7s						
GUN	Gumba	46.87	276	eP	P	14 47 50.7	-0.1
	comp=Z,14nm,0.8s						
KKN	Kakani	47.40	276	eP	P	14 47 54.5	-0.3
KDAK	Kodiak Island	47.62	42	P	P	14 47 57.5	+1.8
GKN	Gorkha	47.82	277	eP	P	14 47 57.7	-0.3
	comp=Z,20nm,0.7s						
KULM	Kulim	48.33	240	P	P	14 48 01.7	0.0
MLY	Manley	48.37	32	P	P	14 48 02.4	+0.8
MLY				IAmb	IAmb	14 48 04.8	
	comp=Z,15nm,1.6s						
DANN	Dangsing	48.37	277	eP	P	14 48 02.5	+0.1
	comp=Z,40nm,0.7s						
IPM	Ipoh	48.65	239	P	P	14 48 03.7	-0.5
SOEI	Soe	48.75	202	P	P	14 48 05.2	+0.1
SOEI				IAmb	IAmb	14 48 24.7	
	comp=Z,20nm,1.1s						
KOLN	Koldanda	48.75	277	eP	P	14 48 05.0	-0.2
PBA	Port Blair	49.92	253	P	P	14 48 13.9	0.0
SCM	Sheep Creek Mo	49.99	36	P	P	14 48 16.2	+2.2
IL31		50.01	32	P	P	14 48 15.5	+1.5
IL31				IAmb	IAmb	14 48 59.0	
	comp=Z,26nm,1.9s						
ILAR	Eielson Array	50.01	32	P	P	14 48 15.5	+1.4
	comp=Z,2.3nm,0.7s,baz=268,slow=6.0,SNR=39						
ILAR	Eielson Array	50.01	32	P	P	14 48 15.3	+1.3
MTN	Manton Dam	50.08	193	P	P	14 48 15.6	+0.6
MTN				IAmb	IAmb	14 48 50.9	
	comp=Z,18nm,1.4s						
BVAR	Borovoye Array	50.60	312	P	P	14 48 18.2	-0.5
	comp=Z,1.0nm,0.6s,baz=76,slow=7.5,SNR=7.5						
BVAR				pP	pP	14 48 35.4	+2.6
	comp=Z,0.6nm,0.4s,baz=61,slow=10,SNR=4.4						
BVAR				PcP	PcP	14 49 35.0	-0.6
	comp=Z,1.1nm,0.7s,baz=107,slow=2.0,SNR=5.7						
BRVK	Borovoye	50.66	313	P	P	14 48 19.1	0.0
BMAR	Burnt Mountain	50.85	29	P	P	14 48 20.8	+0.5
PSI	Prapat	51.30	239	P	P	14 48 24.1	-0.4
	comp=Z,3.3nm,0.7s,baz=41,slow=9.3,SNR=3.3						
SCRK	Sand Creek	51.33	33	P	P	14 48 21.9	-2.2
SCRK				IAmb	IAmb	14 49 44.9	
	comp=Z,11nm,1.0s						
RPSI	Rantau Prapat	51.38	239	P	P	14 48 23.9	-1.0
RPSI				IAmb	IAmb	14 48 24.8	
	comp=Z,6.0nm,1.0s						
RPSI	Rantau Prapat	51.38	239	P	P	14 48 24.1	-0.8
BCAR	Beaver Creek A	52.41	34	P	P	14 48 34.3	+2.1
EGAK	Eagle	52.46	32	P	P	14 48 33.4	+1.1
EGAK				IAmb	IAmb	14 49 25.1	
	comp=Z,28nm,1.6s						
BALM	Baldy	52.46	37	P	P	14 48 34.6	+2.0
KK31	Karatay Array	53.04	300	P	P	14 48 36.3	-0.7
KKAR	Karatay Array	53.04	300	P	P	14 48 36.3	-0.7
KKAR	Karatay Array	53.04	300	P	P	14 48 36.6	-0.4
KKAR				IAmb	IAmb	14 48 42.8	
	comp=Z,2.4nm,1.1s						
KNRA	Kununurra	53.29	195	P	P	14 48 39.4	+0.4
KNRA				IAmb	IAmb	14 48 56.2	
	comp=Z,37nm,1.6s						
GSI	Gunungsitoli	53.31	239	P	P	14 48 39.5	+0.3
DAWY	Dawson	53.32	33	P	P	14 48 40.4	+1.6
DAWY				IAmb	IAmb	14 50 25.5	
	comp=Z,34nm,2.0s						
EPYK	Eagle Plains	54.04	30	P	P	14 48 46.4	+2.4
YKU2	Yakutat	54.06	38	P	P	14 48 44.0	-0.2
MNAI	Manna	54.07	229	P	P	14 48 45.8	+1.0
INK	Inuvik	54.90	27	P	P	14 48 51.6	+1.5
	comp=Z,2.8nm,0.5s,baz=297,slow=6.5,SNR=17						
INK	Inuvik	54.90	27	P	P	14 48 51.6	+1.5
INK				IAmb	IAmb	14 48 52.5	
	comp=Z,3.7nm,0.6s						
CHGR	Chuyangaron	55.54	296	P	P	14 48 55.1	-0.3
CHGR				IAmb	IAmb	14 48 56.8	
	comp=Z,9.9nm,0.7s						
FITZ	Fitzroy Crossi	56.33	198	P	P	14 49 01.0	+0.1
	comp=Z,1.9nm,0.9s,baz=14,slow=8.3,SNR=4.2						
FITZ	Fitzroy Crossi	56.33	198	P	P	14 49 01.7	+0.8
FITZ				IAmb	IAmb	14 49 17.6	
	comp=Z,15nm,1.7s						
ARU	Arti	56.45	319	P	P	14 49 00.8	-0.6
	comp=Z,2.5nm,0.6s,baz=48,slow=4.1,SNR=16						
ARU	Arti	56.45	319	P	P	14 49 00.5	-0.9
ARU				IAmb	IAmb	14 49 01.7	
	comp=Z,6.3nm,0.7s						
WRAB	Tennant Creek	56.60	188	P	P	14 49 02.5	-0.4
WRAB				IAmb	IAmb	14 50 52.9	
	comp=Z,9.0nm,1.4s						
WR0	Warramunga Arr	56.61	187	P	P	14 49 02.6	-0.3
WR0				IAmb	IAmb	14 49 03.4	
	comp=Z,4.4nm,0.6s						
WRA	Warramunga Arr	56.62	188	P	P	14 49 02.5	-0.5
	comp=Z,3.1nm,0.5s,baz=3.5,slow=7.4,SNR=59						
WRA	Warramunga Arr	56.62	188	P	P	14 49 02.1	-0.8
ABKAR	Akbulak array	57.95	310	P	P	14 49 11.3	-0.8
ABKAR	Akbulak array	57.95	310	P	P	14 49 11.3	-0.8
ABKAR				IAmb	IAmb	14 49 11.9	
	comp=Z,2.3nm,0.6s						
ASAR	Alice Springs	60.34	187	P	P	14 49 28.6	-0.2
	comp=Z,1.4nm,0.7s,baz=18,slow=6.5,SNR=16						
KIRV	Kirov	60.37	323	P	P	14 49 28.1	-0.6
	comp=Z,11nm,0.7s,baz=40,slow=1.7,SNR=4.7						
SPITS	Spitsbergen Ar	60.86	349	P	P	14 49 31.6	-0.2
	comp=Z,5.1nm,0.8s,baz=91,slow=9.1,SNR=7.6						
GEYT	Alibeck	63.74	299	P	P	14 49 51.8	+0.1
	comp=Z,0.5nm,0.6s,baz=45,slow=2.2,SNR=4.1						
GEYT	Alibeck	63.74	299	P	P	14 49 51.8	+0.1
ARCES	ARCESS Array B	64.26	339	P	P	14 49 54.0	-0.6
	comp=Z,1.8nm,0.7s,baz=56,slow=8.9,SNR=8.2						
YKA	Yellowknife Ar	64.32	30	P	P	14 49 56.1	+1.1
	comp=Z,0.3nm,0.5s,baz=303,slow=6.7,SNR=8.0						
STKA	Stephens Creek	68.15	179	P	P	14 50 20.2	+0.4
	comp=Z,1.2nm,0.6s,baz=346,slow=12,SNR=4.2						
FINES	FINESS Array B	69.02	332	P	P	14 50 24.6	-0.3
	comp=Z,3.1nm,0.7s,baz=50,slow=7.1,SNR=10						
KBZ	Khabaz	70.92	311	P	P	14 50 36.0	-0.9
	comp=Z,2.2nm,0.9s,baz=154,slow=3.3,SNR=5.1						
HFS	Hagfors	74.32	336	P	P	14 50 57.1	+0.2
	comp=Z,2.4nm,0.7s,baz=76,slow=7.8,SNR=11						
AKASG	Malin Array Be	74.42	322	P	P	14 50 57.0	-0.5
	comp=Z,2.3nm,0.5s,baz=46,slow=6.2,SNR=18						
NB2	NORSAR Subarra	74.43	337	P	P	14 50 57.3	-0.3
	comp=Z,2.3nm,0.6s,baz=40,slow=6.2						
NOA	NORSAR Array B	74.43	337	P	P	14 50 57.4	-0.2
	comp=Z,2.0nm,0.6s,baz=38,slow=5.9,SNR=10.0						
NVAR	Mina Array Bea	75.50	53	P	P	14 51 06.1	+1.8
	comp=Z,0.3nm,0.6s,baz=316,slow=6.2,SNR=3.5						
PDAR	Pinedale Array	78.19	45	P	P	14 51 21.1	+1.7
	comp=Z,0.3nm,0.6s,baz=304,slow=2.1,SNR=3.1						
BRTR	Keskin Array B	78.87	311	P	P	14 51 23.1	0.0
	comp=Z,1.0nm,0.8s,baz=73,slow=5.5,SNR=5.4						
KOLS	Kolonicke sedl	78.95	324	eP	P	14 51 23.7	+0.4
ULM	Lac du Bonnet	80.02	33	P	P	14 51 29.2	+0.2
	comp=Z,0.9nm,0.5s,baz=318,slow=7.9,SNR=4.2						
ULM	Lac du Bonnet	80.02	33	IAmb	IAmb	14 52 37.8	
	comp=Z,22nm,1.9s						
MMAI	Mount Meron Ar	81.93	305	P	P	14 51 39.4	-0.2
	comp=Z,1.0nm,0.3s,baz=60,slow=8.5,SNR=3.7						
GERES	GERESS Array B	82.88	328	P	P	14 51 44.0	-0.2
	comp=Z,0.8nm,0.6s,baz=38,slow=6.8,SNR=8.8						
GERES				pP	pP	14 52 01.4	+2.1
	comp=Z,0.3nm,0.4s,baz=46,slow=7.6,SNR=2.4						
TXAR	Lajitas Array	90.63	52	P	P	14 52 24.1	+1.7
	comp=Z,0.4nm,0.7s,baz=289,slow=2.2,SNR=6.2						
LPAZ	La Paz	147.18	60	PKPbc	PKPbc	14 59 04.5	+0.6
	comp=Z,0.6nm,0.7s,baz=0.0,slow=2.0,SNR=4.5						

YARS 01 14:46:31.7±0.0, 73°.18N×132°.46E, h22km, ML3.8/6, Laptev Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIXI	Tiksi	1.89	217	ePn	Pn	14 47 03.5	+1.0
TIXI				ePg	Pb	14 47 05.8	+0.5
	0.1nm,0.5s						
TIXI				eSg	Sb	14 47 30.4	+2.0
	0.1nm,0.4s						
DEPR	Deputatskiy	4.50	144	ePn	Pn	14 47 40.3	+2.0
DEPR				ePg	Pb	14 47 53.5	+3.8
	0.0nm,0.4s						
DEPR				eSn	Sn	14 48 30.2	+0.4
DEPR				eSg	Sb	14 48 52.7	+9.2
	0.1nm,0.8s						
DEPR				eSg	Sb	14 48 52.7	+9.2
	0.1nm,0.8s						
BTGS	Batagay	5.61	171	ePn	Pn	14 47 54.7	+1.2
BTGS				ePg	Pb	14 48 13.1	+4.5
	0.0nm,0.4s						
BTGS				eSn	Sn	14 48 58.0	+0.9
BTGS				eSg	Sb	14 49 27.6	+12
	0.0nm,0.7s						
BTGS				eSg	Sb	14 49 27.6	+12
	0.1nm,0.8s						
YBGR	Belaya Gora	6.48	129	ePn	Pn	14 48 06.7	+1.1
YBGR				ePg	Pb	14 48 28.7	+5.2
	0.0nm,0.5s						
YBGR				eSn	Sn	14 49 18.8	+0.2
YBGR				eSg	Sb	14 49 54.1	+14
	0.1nm,1.1s						
MOMR	Moma	7.69	146	ePg	Pb	14 48 49.9	+5.9
	0.0nm,0.6s						
MOMR				eSn	Sn	14 49 48.8	+0.6
MOMR				eSg	Sb	14 50 31.8	+17
	0.0nm,1.0s						
MOMR				eSg	Sb	14 50 31.8	+17
	0.0nm,0.8s						

IDC 01 15:08:56.2±8.6, 20°.73N×146°.09E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/40, mbtmp3.4/4, Error ellipse: s-maj=333.5km s-min=25.8km az=79.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.02	197	P	P	15 16 50.2	+0.6
	0.4nm,0.7s,baz=17,slow=8.2,SNR=3.1						
ASAR	Alice Springs	45.69	196	P	P	15 17 18.2	-1.0
	0.2nm,0.7s,baz=12,slow=6.9,SNR=3.9						
ZALV	Zalesovo Beam	56.65	322	P	P	15 18 40.5	-0.5
	0.6nm,0.4s,baz=98,slow=8.1,SNR=5.1						
MKAR	Makanchi Array	57.34	313	P	P	15 18 46.7	+0.5
	0.4nm,0.7s,baz=87,slow=6.3,SNR=5.0						

*IDC **01** 15:17:44.0±4.0, 17°.10S×168°.12E, h0km, mb4.0/4, mb1 4.1/5, mb1mx3.7/37, mbtmp4.0/5, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/36, Error ellipse: s-maj=78.9km s-min=39.7km az=35.0*
*NEIC **01** 15:17:48.5±1.2, 17°.5S±0°.1×167°.81E±0°.09, h8km±10km, mb4.6/9, Error ellipse: s-maj=21.6km s-min=5.8km az=212.0*
ISC 01 15:17:50.6±1.4, 17°.5S±0°.1×167°.9E±0°.2, h27km, n19, σ0s.99/19, mb4.3/6, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.80	196	Pn	Pn	15 19 01.5	+0.3
	2.5nm,0.3s,baz=114,slow=15,SNR=28						
DZM				Sn	Sn	15 19 54.9	-1.2
	3.6nm,0.3s,baz=322,slow=20,SNR=6.6						
HNR	Honiara	11.10	315	LR	LR	15 24 02.9	
	comp=Z,66nm,18.5s,baz=148,slow=34						
HNR	Honiara	11.10	315	Pn	Pn	15 20 27.7	+0.1
OUZ	Omahuta	18.42	165	P	Pn	15 22 06.1	+2.2
OUZ				IAmb	IAmb	15 22 34.0	
	comp=Z,37nm,1.6s						
MSWZ	Moikau Station	24.71	167	P	P	15 23 08.7	-0.8
STKA	Stephens Creek	27.79	234	P	P	15 23 39.0	+1.5
	comp=Z,1.1nm,0.8s,baz=86,slow=13,SNR=3.0						
STKA	Stephens Creek	27.79	234	P	P	15 23 38.9	+1.4
MLZ	Mavora Lakes	27.84	180	P	P	15 23 37.8	+0.1
WR0	Warramunga Arr	31.67	260	P	P	15 24 11.9	-0.1
WR0				IAmb	IAmb	15 24 47.3	
	comp=Z,18nm,1.8s						
WRAB	Tennant Creek	31.85	260	P	P	15 24 13.6	+0.1
WRAB				IAmb	IAmb	15 25 22.3	
	comp=Z,18nm,1.9s						
WRA	Warramunga Arr	31.86	260	P	P	15 24 13.0	-0.6
	comp=Z,0.5nm,0.6s,baz=84,slow=8.3,SNR=7.8						
WRA	Warramunga Arr	31.86	260	P	P	15 24 13.8	+0.1
AS31	Alice Springs	32.37	253	P	P	15 24 18.0	-0.1
ASAR	Alice Springs	32.37	253	P	P	15 24 18.3	+0.1
	comp=Z,2.9nm,0.6s,baz=80,slow=8.8,SNR=73						
ASAR	Alice Springs	32.37	253	P	P	15 24 18.1	0.0
KNRA	Kununurra	37.51	267	P	P	15 25 02.4	-0.1
QSPA	South Pole Qui	72.60	180	P	P	15 29 15.3	-0.1
	comp=Z,1.5nm,0.8s,baz=4.0,slow=1.1,SNR=5.7						
QSPA	South Pole Qui	72.60	180	P	P	15 29 15.2	-0.1
QSPA				IAmb	IAmb	15 30 28.1	
	comp=Z,8.6nm,1.5s						
SYO	Syowa Base	86.29	196	⇑eP	P	15 30 27.6	-2.0

WEL 01 15:26:24.2, 40°.8S±0°.8×17°5E±°, h36km±1km, ML4.1/18, MLv3.8/97, Error ellipse: s-maj=0.0km s-min=0.0km az=114.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OGWZ	Otaki Gorge	0.05	251	P	Pn	15 26 30.4	+0.3
OGWZ				S	Sn	15 26 34.7	+0.5
HOWZ	Holdsworth Sta	0.24	114	P	Pn	15 26 31.7	-0.6
HOWZ				S	Sn	15 26 37.0	-2.1
KIW	Kapiti Island	0.25	256	P	Pn	15 26 31.9	-0.3
KIW				S	Sn	15 26 37.4	-1.5
MRZ	Mangatainoka R	0.30	62	P	Pn	15 26 32.2	0.0
MRZ				S	Sn	15 26 37.9	-0.8
CAW	Cannon Point	0.33	202	P	Pn	15 26 32.8	+0.3
CAW				S	Sn	15 26 39.0	+0.1
MTW	Mount Morrison	0.41	150	P	Pn	15 26 33.9	+0.4
MTW				S	Sn	15 26 41.4	+1.2
TIWZ	Tintock	0.50	87	P	Pn	15 26 35.1	+0.3
TIWZ				S	Sn	15 26 43.4	+1.2
POWZ	Post Office Ro	0.58	45	P	Pn	15 26 36.1	+0.1
TMWZ	Te Maipa	0.59	122	P	Pn	15 26 36.1	0.0
WEL	Wellington	0.60	216	P	Pn	15 26 36.5	+0.3
OHWZ	Ohakea	0.60	6	P	Pn	15 26 37.1	+0.8
PAWZ	Paruwai Farm	0.60	166	P	Pn	15 26 36.3	0.0
MSWZ	Moikau Station	0.61	179	P	Pn	15 26 36.6	0.0
PRWZ	Pori Road	0.61	67	P	Pn	15 26 37.0	+0.5
BHW	Baring Head	0.66	204	P	Pn	15 26 37.4	+0.2
TRWZ	Traveller	0.69	150	P	Pn	15 26 37.2	-0.3
CPWZ	Castlepoint	0.74	99	P	Pn	15 26 38.8	+0.6
PLWZ	Palliser	0.77	179	P	Pn	15 26 38.3	-0.3
BFZ	Birch Farm	0.78	82	P	Pn	15 26 38.7	0.0
TCW	Tory Channel	0.83	240	P	Pn	15 26 40.1	+0.7
DVHZ	Dannevirke	0.87	55	P	Pn	15 26 40.0	0.0
TSZ	Takapari Road	0.93	37	P	Pn	15 26 41.1	+0.3
DUWZ	D'Urville Isla	0.99	270	P	Pn	15 26 42.5	+0.9
ANWZ	Angora Road	1.01	71	P	Pn	15 26 41.6	-0.2
WAZ	Wanganui	1.06	350	P	Pn	15 26 44.4	+1.8
PNHZ	Pukenui	1.16	40	P	Pn	15 26 44.1	+0.2
TUWZ	Tuamarina	1.16	237	P	Pn	15 26 44.2	+0.3
WPHZ	Waipukurau	1.18	52	P	Pn	15 26 44.1	-0.1
PRHZ	Porangahau	1.20	64	P	Pn	15 26 42.0	-2.4
CMWZ	Cape Campbell	1.22	219	P	Pn	15 26 45.7	+1.0
BSWZ	Blackbirch Sta	1.37	228	P	Pn	15 26 47.1	+0.3
MTVZ	Mangateitei	1.43	7	P	Pn	15 26 49.2	+1.6
KRHZ	Kereru	1.45	37	P	Pn	15 26 47.9	0.0
MOVZ	Moawhango	1.45	16	P	Pn	15 26 48.7	+0.7
BHHZ	Black Hill Sta	1.46	26	P	Pn	15 26 48.6	+0.6
NNZ	Nelson	1.46	253	P	Pn	15 26 48.7	+0.7
PXZ	Pawanui	1.46	59	P	Pn	15 26 47.4	-0.6
LREZ	Lake Rotokare	1.48	334	P	Pn	15 26 50.6	+2.3
PKVZ	Pokaka	1.51	3	P	Pn	15 26 50.3	+1.5
TRVZ	Turoa	1.52	9	P	Pn	15 26 50.5	+1.5
WHVZ	Whangaehu Hut	1.54	10	P	Pn	15 26 50.7	+1.4
DRZ	Dome Shelter	1.54	10	P	Pn	15 26 51.2	+1.7
FWVZ	Far West T-bar	1.56	9	P	Pn	15 26 51.1	+1.4
TUVZ	Tukino	1.57	12	P	Pn	15 26 51.2	+1.5
KAHZ	Kahuranaki	1.61	52	P	Pn	15 26 49.7	-0.5
NGZ	Ngauruhoe	1.65	10	P	Pn	15 26 52.4	+1.6
KWHZ	Kaweka Forest	1.65	34	P	Pn	15 26 50.6	-0.1
PREZ	Palmer Road	1.67	330	P	Pn	15 26 53.6	+2.6
WTVZ	West Tongariro	1.71	9	P	Pn	15 26 53.0	+1.5
VRZ	Vera Road	1.71	348	P	Pn	15 26 53.5	+2.0
NMEZ	Namu Road	1.73	323	P	Pn	15 26 54.4	+2.7
KRVZ	Karewarewa	1.73	11	P	Pn	15 26 53.4	+1.5
TWVZ	Taurewa	1.74	5	P	Pn	15 26 53.2	+1.3
MCHZ	McNeill Hill	1.76	40	P	Pn	15 26 52.0	-0.2
KHEZ	Kahui Hut	1.77	328	P	Pn	15 26 55.0	+2.6
DREZ	Durham Road	1.79	334	P	Pn	15 26 55.3	+2.7
NBEZ	Newall Road No	1.85	325	P	Pn	15 26 56.1	+2.7
KATZ	Kakaramea	1.86	11	P	Pn	15 26 56.7	+3.0
MHEZ	Mangahewa	1.86	338	P	Pn	15 26 56.5	+3.0
PKE	Pukeiti	1.87	329	P	Pn	15 26 56.4	+2.7
RITZ	Rihia Road	1.89	15	P	Pn	15 26 54.9	+0.9
RATZ	Rangitukua	1.98	12	P	Pn	15 26 57.5	+2.3
THZ	Tophouse	2.00	241	P	Pn	15 26 55.3	-0.2
HATZ	Hinemaiaia	2.02	19	P	Pn	15 26 55.9	+0.1
ARHZ	Aropaoanui	2.05	42	P	Pn	15 26 55.4	-0.7
QRZ	Quartz Range	2.05	268	P	Pn	15 26 56.8	+0.7
KHZ	Kahutara	2.05	218	P	Pn	15 26 55.5	-0.6
WATZ	Wairara	2.13	11	P	Pn	15 27 00.1	+2.8
MRHZ	Matea Rd	2.17	25	P	Pn	15 26 57.4	-0.5
WHTZ	Whakaora	2.21	15	P	Pn	15 27 01.3	+2.9
HIZ	Hauiti	2.30	353	P	Pn	15 27 01.4	+1.7
MTHZ	Maungataniwha	2.31	33	P	Pn	15 26 58.9	-0.8
WHHZ	Waihua	2.31	42	P	Pn	15 26 58.9	-0.8
KUTZ	Kaahu Road	2.35	11	P	Pn	15 27 04.4	+4.1
WPRZ	Whakapapatarin	2.39	18	P	Pn	15 27 00.9	0.0
ALRZ	Allen Road	2.40	21	P	Pn	15 27 00.7	-0.3
PRRZ	Plateau Road	2.47	22	P	Pn	15 27 01.9	0.0
TLZ	Tolley Road	2.48	6	P	Pn	15 27 02.9	+0.8
RTZ	Ruatahuna	2.57	32	P	Pn	15 27 02.6	-0.7
KNZ	Kokohu	2.59	47	P	Pn	15 27 01.8	-1.7
SNGZ	Shannon Statio	2.59	40	P	Pn	15 27 02.2	-1.4
MUGZ	Murupara	2.61	28	P	Pn	15 27 03.0	-0.8
RRRZ	Republican Roa	2.65	22	P	Pn	15 27 03.7	-0.7
GVZ	Greta Valley S	2.71	216	P	Pn	15 27 04.2	-1.1
TARZ	Mount Tarawera	2.75	21	P	Pn	15 27 05.4	-0.4
DSZ	Denniston Nort	2.75	249	P	Pn	15 27 06.5	+0.7
PRGZ	Paritu Road	2.77	48	P	Pn	15 27 04.5	-1.6
RIGZ	Rimuhau	2.86	44	P	Pn	15 27 05.3	-2.0
URZ	Urewera	2.92	30	P	Pn	15 27 06.2	-2.0
LTZ	Lake Taylor	2.97	227	P	Pn	15 27 07.8	-1.0
MWZ	Matawai	3.04	37	P	Pn	15 27 07.3	-2.5
TOZ	Tahuroa Road	3.07	4	P	Pn	15 27 11.2	+1.0
TKGZ	Te Karaka	3.11	41	P	Pn	15 27 08.4	-2.3
OKCZ	Okains Bay	3.33	208	P	Pn	15 27 11.9	-1.9
RUGZ	Raukumara Rang	3.41	35	P	Pn	15 27 13.3	-1.6
INZ	Inchbonnie	3.42	235	P	Pn	15 27 14.1	-0.9
MQZ	McQueen's Vall	3.48	213	P	Pn	15 27 13.2	-2.5
AKCZ	Akaroa Harbour	3.52	209	P	Pn	15 27 14.3	-2.0
PUZ	Puketiti	3.59	42	P	Pn	15 27 14.9	-2.5
HAZ	Te Kaha	3.63	34	P	Pn	15 27 15.8	-2.1
PKGZ	Pakihiroa	3.65	38	P	Pn	15 27 16.3	-2.0
MKAZ	Moumakai	3.69	359	P	Pn	15 27 20.3	+1.6
KBAZ	Karaka Road Bo	3.71	356	P	Pn	15 27 20.9	+1.9
AWAZ	Awhitu Peninsu	3.76	353	P	Pn	15 27 22.4	+2.7
ETAZ	East Tamaki Re	3.85	356	P	Pn	15 27 23.1	+2.2
WTAZ	Waiatarua	3.90	352	P	Pn	15 27 26.5	+4.9
EPAZ	Eden Park BICE	3.94	354	P	Pn	15 27 29.7	+7.6
WIAZ	Waiheke Island	4.00	359	P	Pn	15 27 25.4	+2.4
MBAZ	Motutapu North	4.04	356	P	Pn	15 27 25.2	+1.8
ABAZ	Army Bay	4.21	356	P	Pn	15 27 29.7	+3.9
WCZ	Waipu Caves	4.90	352	P	Pn	15 27 39.1	+3.8
ODZ	Otahua Downs	5.41	217	P	Pn	15 27 40.4	-2.0
OUZ	Omahuta	5.72	346	P	Pn	15 27 50.0	+3.4
JCZ	Jackson Bay	5.78	233	P	Pn	15 27 53.4	+5.9
CTZ	Chatham Island	6.72	119	P	Pn	15 27 59.0	-1.2

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*MAN **01** 15:28:38.2, 6°.65N×127°.16E, h1km, mb5.0, ML3.9, MS3.9*
*IDC **01** 15:28:40.0±2.3, 6°.78N×127°.51E, h45km±21km, mb3.6/10, mb1 3.7/11, mb1mx3.5/46, mbtmp3.8/11, ML3.7/1, MS3.0/3, Ms1 3.1/3, ms1mx2.6/35, Error ellipse: s-maj=22.6km s-min=11.4km az=55.0*
*NEIC **01** 15:28:40.5±2.1, 6°.8N±0°.1×127°.40E±0°.08, h54km±7km, mb4.3/16, Error ellipse: s-maj=17.4km s-min=6.5km az=213.0*
ISC 01 15:28:39.7±0.5**, 6°.71N**±0°.06×**127°.48E**±0°.07**, h47km, n43,** σ1^{s}56/48**, mb4.0**/18**, 5C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.84	323	⇑iP	Pn	15 29 07.3	-1.5
BIPH				iS	Sn	15 29 28.3	-2.6
DDMP	Don Marcelino,	1.86	251	eP	Pn	15 29 06.1	-3.0
DDMP				eS	Sn	15 29 29.8	-1.7
DAV	Davao City (W)	1.92	281	P	Pn	15 29 09.5	-0.4
	128nm,0.3s,baz=97,slow=17,SNR=8.6						
DAV				S	Sn	15 29 34.2	+1.2
	92nm,0.3s,baz=79,slow=19,SNR=6.3						
DAV				LR	LR	15 30 04.3	
	comp=Z,510nm,20.0s,baz=64,slow=44						
DAV	Davao City (W)	1.92	281		Pn	15 29 08.6	-1.4
DMPH	Davao City--Mi	1.99	281	⇑eP	Pn	15 29 10.3	-0.7
KCP	Kidapawan	2.39	277	⇑iP	Pn	15 29 14.3	-2.2
KCP				eS	Sn	15 29 46.5	+1.9
GSPH	General Santos	2.59	256	⇑ip	Pn	15 29 14.0	-5.3
CTBH	Cotabato--PC H	3.25	279	⇑iP	Pn	15 29 26.3	-2.0
CGP	Cagayan de Oro	3.26	302	⇓eP	Pn	15 29 28.3	-0.1
SIJI	Sorong	8.43	153	P	Pn	15 30 40.1	+0.8
	0.9nm,0.3s,baz=334,slow=18,SNR=6.3						
SIJI				S	Sn	15 32 09.7	-3.5
	0.7nm,0.3s,baz=270,slow=20,SNR=3.0						
SAUI	Saumlaki	15.09	165	P	P	15 32 13.8	-0.6
SBUM	Sibu	15.79	255	Pn	Pn	15 32 19.1	+0.1
JAY	Jayapura	16.07	124	LR	LR	15 37 50.6	
	comp=Z,42nm,20.1s,baz=313,slow=34						
MTN	Manton Dam	19.76	169		Pn	15 33 07.7	-0.1
MTN				IAmb	IAmb	15 33 47.6	
	comp=Z,9.6nm,1.0s						
KNRA	Kununurra	22.28	177	P	P	15 33 33.5	+0.4
KNRA				IAmb	IAmb	15 34 24.5	
	comp=Z,17nm,1.2s						
LEM	Lembang	23.95	236	LR	LR	15 44 37.2	
	comp=Z,39nm,21.1s,baz=60,slow=40						
FITZ	Fitzroy Crossi	24.72	184	P	P	15 33 57.6	+0.9
	comp=Z,2.4nm,1.0s,baz=15,slow=9.1,SNR=5.1						
FITZ	Fitzroy Crossi	24.72	184	P	P	15 33 57.5	+0.7
FITZ				IAmb	IAmb	15 34 20.4	
	comp=Z,5.1nm,1.0s						
WRAB	Tennant Creek	27.33	166	P	P	15 34 22.4	+2.0
WRAB				IAmb	IAmb	15 34 31.4	
	comp=Z,7.5nm,1.2s						
WRA	Warramunga Arr	27.33	166	P	P	15 34 22.3	+1.8
	comp=Z,0.6nm,0.3s,baz=347,slow=10,SNR=14						
WRA	Warramunga Arr	27.33	166	P	P	15 34 21.9	+1.5
WR0	Warramunga Arr	27.40	165	P	P	15 34 23.1	+2.1
WR0				IAmb	IAmb	15 34 27.8	
	comp=Z,16nm,1.5s						
CMAR	Chiang Mai Arr	30.14	295	LR	LR	15 47 13.7	
	comp=Z,30nm,18.9s,baz=110,slow=37						
ASAR	Alice Springs	30.84	168	P	P	15 34 51.9	+0.3
	comp=Z,0.3nm,0.3s,baz=346,slow=7.1,SNR=14						
ASAR				PcP	PcP	15 37 49.4	+1.5
	comp=Z,0.2nm,0.5s,baz=354,slow=2.4,SNR=4.6						
ASAR				ScP	ScP	15 41 28.4	+1.5
	comp=Z,0.1nm,0.5s,baz=342,slow=2.9,SNR=4.8						
MAJO	Matsushiro	31.27	17	P	P	15 34 53.1	-2.1
MJB9	Matsu-Tunnel	31.27	17	P	P	15 34 52.9	-2.3
USRK	Ussuriysk Ar.	37.55	5	P	P	15 35 52.1	+2.8
	comp=Z,0.6nm,0.5s,baz=161,slow=7.2,SNR=4.6						
NWAO	Narrogin (SRO)	40.61	193	P	P	15 36 15.4	+0.4
NWAO				IAmb	IAmb	15 36 17.8	
	comp=Z,41nm,1.5s						
STKA	Stephens Creek	40.67	161	P	P	15 36 16.6	+1.0
	comp=Z,0.3nm,0.3s,baz=309,slow=13,SNR=1.9						
STKA	Stephens Creek	40.67	161	P	P	15 36 16.2	+0.6
KLR	Kul'dur	42.53	4	P	P	15 36 32.2	+1.6
	comp=Z,0.6nm,0.3s,baz=168,slow=8.8,SNR=4.4						
MK31	Makanchi Array	55.58	324	P	P	15 38 09.9	-0.7
MKAR	Makanchi Array	55.58	324	P	P	15 38 10.3	-0.3
	comp=Z,1.1nm,0.6s,baz=123,slow=7.9,SNR=16						
MKAR				pP	pP	15 38 23.2	+2.2
	comp=Z,1.4nm,0.7s,baz=119,slow=8.2,SNR=6.6						
MKAR	Makanchi Array	55.58	324	P	P	15 38 09.8	-0.8
MAKZ	Makanchi	55.77	324	P	P	15 38 11.5	-0.4
MAKZ				IAmb	IAmb	15 39 37.3	
	comp=Z,5.5nm,1.6s						
KDJ	Kajisay	56.66	317	P	P	15 38 16.8	-1.8
KDJ				IAmb	IAmb	15 39 52.4	
	comp=Z,3.2nm,0.8s						
ZALV	Zalesovo Beam	58.31	332	P	P	15 38 30.1	+0.4
	comp=Z,0.3nm,0.3s,baz=126,slow=5.4,SNR=2.7						
ZALV	Zalesovo Beam	58.31	332	P	P	15 38 28.3	-1.4
KURK	Kurchatov	59.67	326	P	P	15 38 37.6	-1.5
KURK				IAmb	IAmb	15 39 37.5	
	comp=Z,7.4nm,1.7s						
KURBB	Kurchatov Arra	59.67	326	P	P	15 38 38.9	-0.3
	comp=Z,0.4nm,0.3s,baz=127,slow=5.9,SNR=8.0						
ILAR	Eielson Array	82.11	26	P	P	15 40 54.9	-0.2
	comp=Z,0.3nm,0.8s,baz=258,slow=6.3,SNR=3.9						
ARCES	ARCESS Array B	87.92	340	P	P	15 41 23.9	-0.3
	comp=Z,2.9nm,1.0s,baz=92,slow=6.3,SNR=4.7						
ARCES				pP	pP	15 41 37.2	+1.6
	comp=Z,3.7nm,0.9s,baz=66,slow=5.3,SNR=1.9						
TORD	Torodi Ar. Bea	122.65	290	PKP	PKPdf	15 47 30.9	-0.5
	comp=Z,0.1nm,0.3s,baz=66,slow=2.2,SNR=2.8						

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*JMA **01** 15:35:44.0±0.2, 39°.64N×143°.37E, h26km±4km, M3.2*
*IDC **01** 15:35:49.9±2.2, 40°.06N×142°.09E, h0km, mb3.4/3, mb1 3.4/5, mb1mx3.2/51, mbtmp3.3/5, ML2.6/2, MS2.5/1, Ms1 2.5/1, ms1mx2.1/34, Error ellipse: s-maj=48.4km s-min=25.8km az=130.0*
ISC 01 15:35:44.0±1.8**, 39°.66N**±0°.07×**143°.3E**±0°.1**, h11km, n20,** σ0^{s}78/19**, mb3.4**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.13	285	P	Pb	15 36 05.3	-0.2
MIYJ	Miyakonagasawa	1.14	266	P	Pb	15 36 05.3	-0.3
MIYJ				eS	Sb	15 36 20.7	+0.3
JKEN	Kujiedanarisaw	1.33	295	P	Pn	15 36 08.0	-0.5
JANG	Nango	1.53	298	P	Pn	15 36 10.9	-0.4
JOM	Ohasama	1.55	264	P	Pn	15 36 11.8	+0.2
JOM				eS	Sn	15 36 31.8	+0.1
JMK	Ichinoseki	1.75	247	P	Pn	15 36 14.2	-0.1
JMK				eS	Sn	15 36 36.5	-0.1
JIO	Ouri	1.93	232	P	Pn	15 36 15.9	-0.9
JTM	Tenmabayashi	2.04	304	P	Pn	15 36 18.9	+0.7
JRG	Rokugo	2.07	263	P	Pn	15 36 19.9	+1.2
JAH	Hinai	2.10	285	P	Pn	15 36 19.9	+0.7
JYK	Kaneyama	2.39	253	P	Pn	15 36 24.3	+1.2
ASAJ	Asahikawa	4.48	354	Pn	Pn	15 36 53.1	+1.2
	0.5nm,0.3s,baz=193,slow=14,SNR=7.6						
ASAJ				Sn	Sn	15 37 43.0	-0.9
	0.3nm,0.3s,baz=106,slow=18,SNR=2.5						
MJAR	Matsushiro Arr	5.07	234	Pn	Pn	15 37 01.1	+1.1
	0.1nm,0.3s,baz=39,slow=11,SNR=15						
KSRS	Korea Array	12.23	264	LR	LR	15 42 55.6	
	comp=Z,23nm,18.3s,baz=55,slow=37						
H11N2	WAKE ISLAND Hy	28.40	128	T	T	16 12 30.6	
	baz=318,slow=74						
H11N1	WAKE ISLAND Hy	28.41	128	T	T	16 12 35.8	
	baz=318						
H11N3	WAKE ISLAND Hy	28.42	128	T	T	16 12 32.9	
	baz=318,slow=74						
MKAR	Makanchi Array	44.02	300	P	P	15 43 51.5	0.0
	0.5nm,0.8s,baz=78,slow=9.1,SNR=4.6						
KURBB	Kurchatov Arra	45.59	306	P	P	15 44 03.3	-0.6
	0.6nm,0.6s,baz=78,slow=8.4,SNR=5.4						
ILAR	Eielson Array	46.49	34	P	P	15 44 19.8	+9.0
	0.2nm,0.7s,baz=279,slow=6.6,SNR=3.8						

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*SSNC **01** 15:42:22.5±1.4, 19°.74N×76°.19W, h5km±9km, MD3.4, ML3.3, MW4.0*
*JSN **01** 15:42:24.9±1.2, 19°.74N×76°.02W, h30km±500km, MD3.8*
ISC 01 15:42:20.9±1.3**, 19°.88N**±0°.05×**76°.14W**±0°.03**, h17km**±11km**, n13,** σ1^{s}31/20**, 4C-4D, Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCC	Rio Carpintero	0.43	75	eP	Pn	15 42 33.1	+0.8
RCC				eS	Sn	15 42 39.8	-0.1
RCC				IAML		15 42 40.9	
	comp=N,946nm,0.2s						
RCC				IAML		15 42 41.2	
	comp=E,918nm,0.1s						
LMGC	Las Mercedes	0.83	283	eP	Pb	15 42 37.6	+0.7
LMGC				eS	Sg	15 42 48.1	-0.1
LMGC				IAML		15 42 49.1	
	comp=E,2μm,0.1s						
LMGC				IAML		15 42 50.2	
	comp=N,4μm,0.1s						
MOAC	Moa	1.35	55	eP	Pg	15 42 46.6	-0.4
MOAC				eS	Sg	15 43 04.5	-0.1
BNJ	Bonny Gate	1.73	206	⇓iP	Pn	15 42 50.8	+0.5
CMJ	Castle Mountai	1.75	187	⇑iP	Pn	15 42 49.2	-1.3
MASC	Masc	1.82	80	eP	Pb	15 42 53.2	-0.5
MASC				eS	Sb	15 43 17.5	+1.3
MASC				IAML		15 43 24.2	
	comp=E,191nm,0.2s						
MASC				IAML		15 43 25.1	
	comp=N,190nm,0.3s						
BBJ	Bamboo Saint A	1.83	216	⇑iP	Pn	15 42 51.9	+0.3
STH	Stony Hill	1.90	200	⇑iP	Pn	15 42 53.0	+0.4
HOJ	Hope	1.95	197	⇓iP	Pn	15 42 53.8	+0.5
CCCC	Cccc	2.01	311	eP	Pn	15 42 52.6	-1.5
CCCC				eS	Sn	15 43 15.6	-3.3
CCCC				IAML		15 43 18.5	
	comp=E,343nm,0.4s						
CCCC				IAML		15 43 18.5	
	comp=N,238nm,0.3s						
PCJ	Portland Cotta	2.34	205	⇓iP	Pn	15 42 59.5	+0.9
MCJ	Malvern	2.44	217	⇑iP	Pn	15 43 00.8	+0.8
MCJ				⇓iS	Sn	15 43 28.1	-1.4
MGV	Manicaragua	4.22	302	eP	Pn	15 43 26.5	+2.1
MGV				eS	Sn	15 44 14.5	+1.1
MGV				IAML		15 44 18.8	
	comp=N,19nm,0.4s						
MGV				IAML		15 44 20.0	
	comp=E,17nm,0.4s						

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*NEIC **01** 15:47:15.9±1.2, 35°.67N±0°.01×118°.47W±0°.01, h12km±3km, Error ellipse: s-maj=1.6km s-min=1.4km az=155.0*
*ANF **01** 15:47:15.3±0.1, 35°.68N×118°.45W, h12km±1km, ML3.1/29, ML3.1/29, Error ellipse: s-maj=1.1km s-min=1.0km az=151.0*
*SCEDC **01** 15:47:16.6, 35°.66N×118°.46W, h9km*
*PAS **01** 15:47:16.5±1.2, 35°.67N±0°.01×118°.47W±0°.01, h11km±3km, ML3.0/187, Error ellipse: s-maj=1.5km s-min=1.5km az=158.0*
ISC 01 15:47:16.0±0.8**, 35°.66N**±0°.01×**118°.47W**±0°.01**, h12km**±4km**, n134,** σ0^{s}70/170**, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISA	Isabella, Lake	0.01	322	Pg	Pg	15 47 18.1	-0.1
ISA	Isabella, Lake	0.01	322	P	Pg	15 47 18.1	-0.1
	baz=80,SNR=1000						
ISA				S	Sg	15 47 19.2	-0.4
	baz=80						
WHFM	Hanning Flat	0.10	69		Pg	15 47 18.9	-0.1
WASM	Alta Sierra Ca	0.11	318		Pg	15 47 19.1	0.0
WORM	Onyx Ranch	0.19	79		Pg	15 47 20.1	-0.1
WOFM	Oak Flat	0.23	238		Pg	15 47 21.3	+0.3
WCHM	Chimney Peak	0.39	55		Pg	15 47 23.6	-0.3
WCHM					Sg	15 47 28.8	-0.4
TEJ	El Tejon	0.46	203		Pg	15 47 25.1	0.0
TEJ					Sg	15 47 31.5	+0.2
MAGC	SCE Magundon P	0.47	231		Pg	15 47 25.8	+0.5
MAGC					Sg	15 47 31.8	+0.3
VES	Vestal, Richgr	0.53	290		Pg	15 47 26.5	+0.1
VES					Sg	15 47 33.5	0.0
VES	Vestal, Richgr	0.53	290	P	Pg	15 47 26.5	+0.1
	baz=109,SNR=224						
VES				S	Sg	15 47 33.6	+0.1
	baz=109						
RVCM	Rose Valley Ce	0.59	53		Pg	15 47 27.1	-0.4
SRTC	Snort	0.59	87		Pg	15 47 27.7	+0.2
SPG2	Springville 2	0.59	336		Pg	15 47 27.0	-0.5
SPG2					Sg	15 47 34.5	-0.9
TOW	Tower One	0.59	75		Pg	15 47 27.7	+0.1
BAKC	Calstate	0.60	239		Pg	15 47 28.3	+0.5
BAKC					Sb	15 47 37.5	+0.5
VPEM	Volcano Peak E	0.60	61		Pg	15 47 27.5	-0.3
ARVC	Arvin	0.61	209		Pg	15 47 28.1	+0.3
ARVC					Sg	15 47 36.1	+0.3
ARVC	Arvin	0.61	209	P	Pg	15 47 28.1	+0.3
	baz=29,SNR=53						
ARVC				S	Sg	15 47 36.4	+0.6
	baz=29						
JRC2	Joshua Ridge	0.63	59		Pg	15 47 27.9	-0.3
JRC2					Sg	15 47 36.3	-0.3
DTP	Desert Tortois	0.64	127		Pg	15 47 28.2	-0.3
LRMC	Laurel Mtn Rad	0.67	105		Pg	15 47 28.6	-0.4
LRMC					Sg	15 47 37.4	-0.4
LRMC	Laurel Mtn Rad	0.67	105	P	Pg	15 47 28.6	-0.4
	baz=286,SNR=122						
LRMC				S	Sg	15 47 37.3	-0.5
	baz=286						
MFS	McCloud Flat S	0.68	47		Pg	15 47 28.8	-0.4
WCSM	Coso Springs S	0.68	57		Pg	15 47 28.9	-0.3
WCSM					Sg	15 47 37.7	-0.5
JFS	Joseph F. Stat	0.72	115		Pg	15 47 29.6	-0.4
JFS					Sg	15 47 39.1	-0.4
CLC	China Lake	0.73	77		Pg	15 47 29.7	-0.4
CLC					Sg	15 47 40.0	+0.3
THC	Tehachapi Micr	0.77	192		Pg	15 47 30.5	-0.3
CWC	Cottonwood Cre	0.84	22		Pg	15 47 31.5	-0.8
CWC					Sg	15 47 42.4	-0.9
CWC	Cottonwood Cre	0.84	22	P	Pg	15 47 31.4	-0.8
	baz=202						
CWC				S	Sg	15 47 42.4	-0.9
	baz=202						
EDW2	Edwards Air Fo	0.87	153		Pg	15 47 32.1	-0.7
EDW2	Edwards Air Fo	0.87	153	P	Pg	15 47 32.1	-0.7
	baz=334,SNR=254						
EDW2				S	Sg	15 47 44.1	0.0
	baz=334						
STTC	Scott Ranch	0.87	180		Pg	15 47 32.8	0.0
MPMC	Manual Prospec	0.89	63		Pg	15 47 32.7	-0.5
MPMC					Sg	15 47 44.2	-0.7
MPMC	Manual Prospec	0.89	63	P	Pg	15 47 32.7	-0.5
	baz=244,SNR=201						
MPMC				S	Sg	15 47 44.2	-0.7
	baz=244						
RCTC	Rector, Farmer	0.90	316		Pg	15 47 32.6	-0.8
RCTC					Sg	15 47 44.0	-1.1
CCCA	Chr Cany lake	0.91	98		Pg	15 47 33.2	-0.4
CCCA					Sg	15 47 45.5	+0.1
QAL	Quail Lake	0.93	193		Pg	15 47 33.7	-0.2
FOXC	Fox Airport	0.93	168		Pg	15 47 33.7	-0.3
DAC	Darwin (Calif)	0.94	49	Pg	Pn	15 47 35.8	+0.6
ALPC	Antelope	0.98	172		Pg	15 47 34.5	-0.4
VOG	Valley Oaks Go	0.99	312		Pg	15 47 34.4	-0.7
VOG					Sg	15 47 46.5	-1.6
VOG	Valley Oaks Go	0.99	312	P	Pg	15 47 34.5	-0.7
	baz=131,SNR=10						
VOG				S	Sg	15 47 47.0	-1.1
	baz=131						
MPI	Mount Pinos, F	1.01	213		Sg	15 47 48.1	-0.5
ABL	Mount Abel	1.01	218		Pg	15 47 35.0	-0.5
LEOC	Leona Valley	1.03	172		Pb	15 47 35.3	-0.6
TMB	Temblor Range	1.04	237		Pb	15 47 35.8	-0.2
CGO	Cerro Gordo	1.04	31		Pg	15 47 35.5	-0.6
CGO					Sg	15 47 49.5	-0.2
BCW	Bitter Crk WRg	1.05	227		Pb	15 47 35.5	-0.8
BCW					Sg	15 47 49.9	-0.1
OSI	Osito Audit: C	1.06	191		Pb	15 47 35.8	-0.5
OSI	Osito Audit: C	1.06	191	P	Pb	15 47 36.0	-0.4
	baz=11,SNR=41						
OSI				S	Sb	15 47 49.9	-0.3
	baz=11						
HYS	Haystack Butte	1.08	137		Pb	15 47 35.9	-0.8
SBB	Saddle Back Bu	1.10	151		Pb	15 47 36.2	-0.9
SBB					Sb	15 47 51.0	-0.5
CRGC	Crocker Grade	1.11	248		Pb	15 47 36.8	-0.3
PYR	Pyramid	1.11	192		Pb	15 47 36.9	-0.4
BLKC	Black Mountain	1.17	119		Pb	15 47 37.7	-0.5
CARC	Carrizo Plain	1.18	253		Pb	15 47 38.0	-0.3
CARC					Sb	15 47 54.4	+0.9
LRRC	Littlerock Res	1.19	162		Pn	15 47 38.2	-0.2
YEG	Yeguas Mountai	1.23	260		Pn	15 47 38.7	-0.5
IR2C	Iron Canyon	1.27	177		Pn	15 47 39.5	-0.1
SMMC	Simmler	1.29	255		Pn	15 47 39.4	-0.5
SMMC	Simmler	1.29	255	P	Pn	15 47 39.4	-0.5
	baz=74,SNR=34						
SMMC				S	Sb	15 47 57.3	+0.5
	baz=74						
HOLC	Holcomb Ridge	1.30	157		Pn	15 47 39.9	-0.3
QSM	Queen of Sheba	1.34	76		Pn	15 47 40.8	+0.2
PKM	Mcpherson Peak	1.34	235		Pn	15 47 40.2	-0.6
PKM					Sb	15 47 57.9	-0.5
PKM	Mcpherson Peak	1.34	235	P	Pn	15 47 40.2	-0.6
	baz=54,SNR=42						
PKM				S	Sb	15 47 58.0	-0.5
	baz=54						
BCH	Branch Mountai	1.40	251		Pn	15 47 41.0	-0.4
GSC	Goldstone, Bar	1.40	104		Pn	15 47 40.6	-0.9
GSC	Goldstone, Bar	1.40	104		Sb	15 48 00.6	+0.4
GSC	Goldstone, Bar	1.40	104	P	Pn	15 47 40.8	-0.7
	baz=286,SNR=75						
GSC				S	Sn	15 47 59.5	-0.5
	baz=286						
DECC	Green Verdugo	1.41	175		Pg	15 47 43.2	+0.2
DECC	Green Verdugo	1.41	175	Pb	Pn	15 47 41.9	+0.4
	baz=356,SNR=27						
TIN	Tinemaha, Big	1.41	8		Pn	15 47 41.9	+0.3
TIN	Tinemaha, Big	1.41	8	Pg	Pn	15 47 41.9	+0.3
	baz=188,SNR=18						
BLCC	Black Canyon	1.42	187		Pn	15 47 39.6	-2.1
XTL	Crystal Lake,	1.45	160		Pn	15 47 42.4	+0.2
PAGB	Antelope Grade	1.45	273		Pn	15 47 41.3	-0.8
MWC	Mount Wilson	1.47	167		Pn	15 47 42.6	0.0
PASC	Pasadena Art C	1.50	171		Pn	15 47 42.9	+0.1
FURC	Furnace Creek,	1.53	58	Pg	Pb	15 47 44.6	+0.3

	baz=239						
DJJ	**Donna J Jenkin**	**1.55**	**180**		**Pn**	**15 47 43.9**	**+0.5**
BFSC	**Mount Baldy Ra**	**1.57**	**155**	P	**Pn**	**15 47 43.6**	**-0.1**
	baz=335,SNR=36						
PEM	**Pine Mountain**	**1.57**	**161**		**Pn**	**15 47 44.4**	**+0.8**
SSK	**Sunset Peak**	**1.58**	**156**		**Pn**	**15 47 44.2**	**+0.2**
SBC	**Santa Barbara**	**1.59**	**220**	Pb	**Pb**	**15 47 45.2**	**0.0**
	baz=40						
GVN	**Grapevine**	**1.62**	**34**		**Pb**	**15 47 46.7**	**+0.9**
BLG	**Laguna Peak, P**	**1.62**	**198**	Pb	**Pn**	**15 47 45.6**	**+1.1**
	baz=18						
BLG				S	**Sn**	**15 48 05.8**	**+0.4**
	baz=18						
PSRC	**Puddingstone R**	**1.66**	**161**		**Pn**	**15 47 45.6**	**+0.7**
FRI	**Friant**	**1.66**	**323**		**Pn**	**15 47 45.1**	**+0.1**
SHOC	**Shoshone, Teco**	**1.80**	**82**	P	**Pn**	**15 47 46.0**	**-0.9**
	baz=263,SNR=26						
BBRC	**Big Bear Solar**	**1.89**	**137**	Pg	**Pb**	**15 47 51.7**	**+1.2**
	baz=318						
BBRC				Sb	**Sb**	**15 48 15.7**	**+1.5**
	baz=318						
HEC	**Hector,Ludlow**	**1.93**	**115**	P	**Pn**	**15 47 48.0**	**-0.8**
	baz=296						
PMPB	**Monarch Peak**	**1.97**	**287**		**Pn**	**15 47 49.4**	**+0.1**
MLAC	**Mammoth, Mammo**	**1.99**	**352**		**Pb**	**15 47 52.1**	**-0.2**
MLAC	**Mammoth, Mammo**	**1.99**	**352**	Pb	**Pb**	**15 47 52.1**	**-0.2**
	baz=171						
BLDC	**Black Mountain**	**1.99**	**267**		**Pn**	**15 47 49.4**	**-0.2**
OMMB	**Old Mammoth Mi**	**2.00**	**348**		**Pb**	**15 47 51.7**	**-0.8**
MCSM	**Casa Diablo Ho**	**2.02**	**350**		**Pb**	**15 47 53.0**	**+0.1**
MDPB	**Devils Postpil**	**2.03**	**346**		**Pb**	**15 47 52.4**	**-0.6**
MMIM	**Miami Mountain**	**2.04**	**330**		**Pn**	**15 47 51.5**	**+1.2**
SME	**Santa Rosa Min**	**2.05**	**153**		**Pn**	**15 47 50.4**	**0.0**
TUQ	**Turquoise Moun**	**2.09**	**95**	Pb	**Pn**	**15 47 52.5**	**+1.5**
	baz=277						
TPNV	**Topopah Spring**	**2.21**	**54**		**Pn**	**15 47 52.6**	**0.0**
TPNV	**Topopah Spring**	**2.21**	**54**	P	**Pn**	**15 47 52.8**	**+0.1**
	baz=235,SNR=16						
CIS	**Catalina Islan**	**2.25**	**179**	P	**Pn**	**15 47 53.0**	**-0.1**
	baz=359						
MURC	**Murrieta**	**2.31**	**153**	P	**Pn**	**15 47 53.9**	**0.0**
	baz=334,SNR=8.5						
POB	**Polly Butte**	**2.34**	**147**		**Pn**	**15 47 54.9**	**+0.5**
GMRC	**Granite Mounta**	**2.46**	**110**	P	**Pn**	**15 47 55.1**	**-1.0**
	baz=292						
PFO	**Pinyon Flats O**	**2.63**	**140**	Pn	**Pn**	**15 47 58.2**	**-0.3**
PFO	**Pinyon Flats O**	**2.63**	**140**	P	**Pn**	**15 47 58.1**	**-0.3**
	baz=322,SNR=7.1						
XPFO	**Pion Flat**	**2.63**	**140**	Pn	**Pn**	**15 47 58.2**	**-0.2**
SAO	**San Andreas Ge**	**2.65**	**295**		**Pn**	**15 47 59.3**	**+0.7**
NVAR	**Mina Array Bea**	**2.77**	**3**	Pn	**Pn**	**15 48 01.2**	**+0.8**
NV11	**Mina Array Sit**	**2.78**	**5**	Pn	**Pn**	**15 48 01.6**	**+1.1**
SHPR	**Sheep Range**	**2.81**	**72**		**Pn**	**15 48 01.2**	**+0.2**
CMB	**Columbia Colle**	**2.83**	**328**		**Pn**	**15 48 01.7**	**+0.7**
WAKR	**Walker**	**2.94**	**345**		**Pn**	**15 48 04.2**	**+1.4**
RYN	**Ryan**	**2.96**	**359**	Pn	**Pn**	**15 48 05.1**	**+2.0**
HAY	**Hayfield**	**3.01**	**129**		**Pn**	**15 48 06.8**	**+3.3**
IRM	**Iron Mountain**	**3.12**	**118**	P	**Pn**	**15 48 04.2**	**-0.9**
	baz=300						
BAR	**Barrett**	**3.32**	**153**		**Pn**	**15 48 08.1**	**+0.2**
KVN	**Kaiserville**	**3.40**	**5**		**Pb**	**15 48 17.4**	**+1.1**
R11A	**Troy Canyon, C**	**3.54**	**40**	Pn	**Pn**	**15 48 11.6**	**+0.6**
RUBR	**Rubicon Trail**	**3.64**	**339**	Pn	**Pn**	**15 48 13.6**	**+1.2**
Y12C	**Blythe**	**3.77**	**119**	Pn	**Pn**	**15 48 14.9**	**+0.9**
W13A	**Hualapai Mount**	**3.79**	**97**		**Pn**	**15 48 14.3**	**-0.2**
PAHR	**Pah Rah Range**	**4.11**	**350**	Pn	**Pn**	**15 48 20.2**	**+1.5**
LCMT	**Little Creek M**	**4.43**	**71**	Pn	**Pn**	**15 48 24.2**	**+1.0**
CCUT	**Cedar City**	**4.52**	**64**	Pn	**Pn**	**15 48 25.7**	**+1.2**
ORV	**Oroville**	**4.57**	**329**	Pn	**Pn**	**15 48 26.3**	**+1.3**
PSUT	**Pine Spring**	**4.67**	**51**	Pg	**Pg**	**15 48 44.7**	**-0.9**
KNB	**Kanab**	**4.76**	**72**	Pn	**Pn**	**15 48 28.7**	**+1.0**
U15A	**North Rim**	**5.07**	**79**	Pn	**Pn**	**15 48 32.5**	**+0.4**
ELK	**Elko**	**5.68**	**26**	Pn	**Pn**	**15 48 41.4**	**+0.9**

*UPA **01** 15:49:16.9±1.9, 7°.46N×80°.63W, h0km±4km, MW4.2*
ISC 01 15:49:16.5±1.0**, 7°.37N**±0°.05×**80°.61W**±0°.02**, h13**km±7km**,**
n41, σ1s.26/71**, 16C-15D, Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSI3	**Tonosi**	**0.17**	**76**	⇓*i*P	**Pg**	**15 49 20.9**	**+0.4**
TOSI3				*e*S	**Sg**	**15 49 23.9**	**+0.7**
CACAO	**El Cacao, Vera**	**0.25**	**265**	⇑*i*P	**Pg**	**15 49 21.6**	**-0.3**
CACAO				*e*S	**Sg**	**15 49 25.5**	**0.0**
MACA3	**Macaracas**	**0.37**	**9**	⇑*i*P	**Pb**	**15 49 24.3**	**-0.6**
MACA3				*e*S	**Sb**	**15 49 29.1**	**-1.4**
AZU	**Azuero**	**0.54**	**38**	⇓*i*P	**Pg**	**15 49 26.8**	**-0.3**
	baz=241,slow=16						
AZU				*e*S	**Sb**	**15 49 35.2**	**-0.2**
PESE3	**Pese, Herrera**	**0.54**	**359**	⇓*e*P	**Pb**	**15 49 27.1**	**-0.7**
PESE3				*e*S	**Sb**	**15 49 34.7**	**-0.8**
OCU3	**Ocu, Herrera**	**0.60**	**344**	⇑*i*P	**Pb**	**15 49 28.2**	**-0.6**
OCU3				*e*S	**Sb**	**15 49 35.8**	**-1.4**
CHIT3	**Chitre**	**0.61**	**18**	⇓*i*P	**Pg**	**15 49 28.2**	**-0.3**
CHIT3				*e*S	**Sb**	**15 49 37.1**	**-0.5**
GMAL	**Guarumal, Vera**	**0.73**	**302**	⇑*i*P	**Pg**	**15 49 30.2**	**-0.6**
GMAL				*e*S	**Sb**	**15 49 41.7**	**+0.5**
STIA3	**Santiago, Vera**	**0.81**	**334**	⇑*i*P	**Pg**	**15 49 31.4**	**-0.9**
STIA3				*e*S	**Sb**	**15 49 42.5**	**-0.8**
CRIS3	**El Cristo, Coc**	**0.88**	**359**	⇓*e*P	**Pg**	**15 49 32.7**	**-0.9**
CRIS3				*e*S	**Sb**	**15 49 44.5**	**-0.8**
SFRA3	**San Francisco,**	**0.95**	**338**	⇑*i*P	**Pg**	**15 49 33.6**	**-1.2**
SFRA3				*e*S	**Sb**	**15 49 46.4**	**-0.9**
MESA3	**La Mesa, Verag**	**0.96**	**324**	⇓*e*P	**Pg**	**15 49 34.1**	**-1.1**
MESA3				*e*S	**Sn**	**15 49 49.2**	**-0.1**
CALO3	**Calobre, Verag**	**0.98**	**346**	⇑*e*P	**Pg**	**15 49 34.4**	**-1.0**
CALO3				*e*S	**Sb**	**15 49 47.9**	**-0.2**
PVID3	**Puerto Vidal,**	**1.20**	**304**	⇓*e*P	**Pg**	**15 49 38.6**	**-1.1**
PVID3				*e*S	**Sb**	**15 49 55.0**	**+0.4**
VTON	**El Valle, Cocl**	**1.33**	**22**	⇑*i*P	**Pg**	**15 49 40.3**	**-1.9**
VTON				*e*S	**Sb**	**15 49 58.1**	**-0.2**
NANC3	**Nancito, Chiri**	**1.41**	**308**	⇓*e*P	**Pg**	**15 49 41.1**	**-2.6**
NANC3				*e*S	**Sn**	**15 50 01.4**	**+1.0**
CHOR3	**La Chorrera**	**1.73**	**29**	⇓*i*P	**Pn**	**15 49 46.8**	**+0.5**
CHOR3				*e*S	**Sb**	**15 50 10.2**	**+0.3**
ZANG	**Zanguenga, Cho**	**1.74**	**25**	⇑*e*P	**Pn**	**15 49 47.1**	**+0.7**
ZANG				*e*S	**Sn**	**15 50 08.4**	**0.0**
FLAM	**Flamenco Islan**	**1.87**	**35**	⇓*e*P	**Pn**	**15 49 48.8**	**+0.7**
FLAM				*e*S	**Sn**	**15 50 13.0**	**+1.5**
UPA	**Univ. de Panam**	**1.92**	**33**	⇓*e*P	**Pn**	**15 49 49.3**	**+0.4**
UPA				*e*S	**Sn**	**15 50 14.6**	**+1.7**
BCIP	**Isla Barro Col**	**1.94**	**23**	*e*P	**Pn**	**15 49 50.2**	**+1.0**
BCIP				*e*S	**Sb**	**15 50 16.3**	**+0.3**
BCIP	**Isla Barro Col**	**1.94**	**23**	⇓*e*P	**Pn**	**15 49 50.3**	**+1.0**
BCIP				*e*P	**Pb**	**15 49 50.4**	**-1.4**
BCIP				*e*S	**Sb**	**15 50 16.0**	**+0.1**
PINA	**Piqa, Costa Ab**	**1.95**	**16**	⇑*e*P	**Pn**	**15 49 50.7**	**+1.4**
PINA				*e*S	**Sb**	**15 50 16.2**	**0.0**
CHIR3	**Chiriqui UPA,**	**1.99**	**301**	⇓*e*P	**Pn**	**15 49 50.8**	**+1.0**
CHIR3				*e*S	**Sn**	**15 50 15.9**	**+1.3**
MLIR	**Monte Lirio**	**2.01**	**22**	⇓*e*P	**Pn**	**15 49 51.4**	**+1.3**
MLIR				*e*S	**Sn**	**15 50 16.4**	**+1.4**
FRIJ	**El Hiral**	**2.04**	**25**	*e*P	**Pn**	**15 49 51.4**	**+0.9**
FRIJ				*e*S	**Sn**	**15 50 17.1**	**+1.3**
PEDE3	**Pedregal, Chir**	**2.06**	**299**	⇑*e*P	**Pn**	**15 49 52.9**	**+2.1**
LOCO3	**Loma Colorada,**	**2.07**	**300**	⇑*e*P	**Pn**	**15 49 52.5**	**+1.5**
DVD	**David**	**2.11**	**300**	*e*P	**Pn**	**15 49 51.1**	**-0.4**
DVD				*e*S	**Sb**	**15 50 20.4**	**-0.4**
CHGR2	**Aguacate**	**2.18**	**316**	*e*P	**Pn**	**15 49 53.4**	**+0.9**
CHGR2				*e*S	**Sb**	**15 50 22.6**	**-0.2**
BAGA3	**Bagala, Chiriq**	**2.19**	**300**	*e*P	**Pn**	**15 49 54.5**	**+1.9**
PTAR3	**Potrerillos Ar**	**2.29**	**305**	⇑*e*P	**Pn**	**15 49 56.0**	**+1.9**
CHPO	**Chepo, Panama**	**2.32**	**39**	⇑*e*P	**Pn**	**15 49 55.0**	**+0.6**
BCO2	**Palmira**	**2.33**	**305**	⇑*e*P	**Pn**	**15 49 56.6**	**+1.9**
BCO2				*e*S	**Sb**	**15 50 26.1**	**-1.1**
LESP3	**La Esperanza,**	**2.40**	**296**	⇑*e*P	**Pn**	**15 49 58.2**	**+2.8**
BRU2	**Volcan**	**2.50**	**305**	⇓*e*P	**Pn**	**15 49 58.8**	**+1.7**
CNI2	**El Empalme, Bo**	**2.75**	**318**	*e*P	**Pn**	**15 50 01.8**	**+1.4**
PTAC	**Punta Ardita,**	**2.79**	**94**	*e*P	**Pn**	**15 49 58.4**	**-2.3**
UPD2	**Meteti**	**2.82**	**65**	*e*P	**Pn**	**15 50 04.1**	**+2.8**
UPD2				*e*S	**Sn**	**15 50 38.1**	**+2.9**
CBOC	**Ciudad Bolivar**	**4.80**	**108**	*e*P	**Pn**	**15 50 27.4**	**-1.3**
YOTC	**Yotoco, Valle**	**5.41**	**128**	*e*P	Pn	15 50 34.7	-2.4

*KRSC **01** 15:52:14.2±1.2, 52°.50N×160°.32E, h28km±15km, ML3.8*
*IDC **01** 15:52:17.7±6.5, 52°.53N×160°.19E, h60km±44km, mb3.5/2, mb1 3.5/2, mb1mx2.9/54, mbtmp3.7/2, Error ellipse: s-maj=51.8km s-min=46.5km az=176.0*
ISC 01 15:52:15.1±1.8**, 52°.58N**±0°.05×**160°.15E**±0°.06**, h17**km±10km**,**
n35, σ1s.76/45**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.53**	**352**	*e*P	**Pb**	**15 52 27.1**	**+1.3**
SPN				*e*S	**Sn**	**15 52 35.1**	**-1.1**
NLC	**Nalytchevo**	**0.77**	**321**	*e*P	**Pn**	**15 52 31.2**	**+0.1**
NLC				*e*S	**Sn**	**15 52 42.8**	**+0.6**
PET	**Petropavlovsk**	**1.01**	**297**	*e*P	**Pn**	**15 52 34.7**	**+0.3**
PET				*e*S	**Sn**	**15 52 49.3**	**+1.1**
UGLR	**Uglovaya**	**1.02**	**309**	*e*P	**Pn**	**15 52 35.4**	**+0.7**
UGLR				*e*S	**Sn**	**15 52 52.1**	**+3.5**
SDLR	**Sedlovina**	**1.04**	**313**	*e*P	**Pn**	**15 52 35.4**	**+0.5**
SMAR	**Somma**	**1.07**	**310**	*e*P	**Pn**	**15 52 36.2**	**+0.8**
AVH	**Avacha**	**1.10**	**309**	*e*P	**Pn**	**15 52 36.6**	**+0.9**
KRER	**Koryakskii**	**1.12**	**311**	*e*P	**Pn**	**15 52 37.2**	**+1.1**
KOK	**Koryaka**	**1.16**	**308**	*e*P	**Pg**	**15 52 37.8**	**+0.3**
KRX	**Arik**	**1.20**	**311**	*e*P	**Pg**	**15 52 38.0**	**-0.2**
MTVR	**Mutnovka**	**1.21**	**266**	*e*P	**Pb**	**15 52 37.8**	**+0.3**
MTVR				*e*S	**Sn**	**15 52 54.9**	**+1.7**
KRMR	**Karymshinskiy**	**1.25**	**282**	*e*P	**Pn**	**15 52 38.1**	**+0.3**
KRMR				*e*S	**Sg**	**15 52 55.3**	**-0.4**
GRL	**Gorelyy**	**1.27**	**270**	*e*P	**Pg**	**15 52 39.3**	**-0.3**
ASAK	**Asacha**	**1.39**	**263**	*e*P	**Pb**	**15 52 41.0**	**+0.4**
ASAK				*e*S	**Sg**	**15 53 00.7**	**+0.7**
KDTR	**Khodutka, Kamc**	**1.49**	**240**	*e*P	**Pn**	**15 52 41.6**	**+0.6**
KDTR				*e*S	**Sb**	**15 53 01.4**	**+0.5**
PETK	**Petropavlovsk-**	**1.58**	**291**	P	**Pn**	**15 52 43.4**	**+1.1**
	21nm,0.3s,baz=102,slow=19,SNR=506						
PETK				S	**Sb**	**15 53 04.0**	**+0.6**
	11nm,0.3s,baz=110,slow=22,SNR=7.2						
GNL	**Ganaly**	**1.74**	**311**	*e*P	**Pb**	**15 52 46.8**	**+0.3**
GNL				*e*S	**Sg**	**15 53 10.5**	**-0.6**
APC	**Apacha**	**1.85**	**282**	*e*P	**Pb**	**15 52 48.7**	**+0.3**
PAU	**Pauzhetka**	**2.34**	**243**	*e*P	**Pn**	**15 52 54.3**	**+1.6**
KZV	**Kizimen**	**2.54**	**2**	*e*P	**Pn**	**15 52 57.4**	**+1.8**
KZV				*e*S	**Sn**	**15 53 28.7**	**+2.6**
TUMD	**Tumrok D**	**2.63**	**3**	*e*P	**Pn**	**15 52 58.0**	**+1.3**
TUMD				*e*S	**Sn**	**15 53 30.2**	**+2.0**
TUMR	**Tumrok**	**2.71**	**360**	*e*P	**Pn**	**15 53 00.0**	**+2.1**
TUMR				*e*S	**Sb**	**15 53 33.6**	**-2.4**
SKR	**Severo-Kuril's**	**3.15**	**235**	*e*S	**Sn**	**15 53 42.2**	**+1.3**
KMNR	**Kamenistaya**	**3.18**	**1**	*e*P	**Pb**	**15 53 08.7**	**-2.5**
BZGR	**Bezymyannyi-Gr**	**3.38**	**5**	*e*P	**Pn**	**15 53 09.5**	**+2.4**
ESO	**Esso**	**3.46**	**346**	*e*P	**Pn**	**15 53 11.0**	**+2.9**
ZLN	**Zelenaya**	**3.46**	**6**	*e*P	**Pn**	**15 53 11.9**	**+3.6**
KRSR	**Krestovskiy**	**3.65**	**4**	*e*P	**Pn**	**15 53 14.5**	**+3.7**
KBTR	**Krutoberegovo**	**3.96**	**22**	*e*P	**Pn**	**15 53 16.6**	**+1.7**
BDR	**Baidarnaya**	**4.04**	**8**	*e*P	**Pn**	**15 53 19.3**	**+3.1**
H11N2	**WAKE ISLAND Hy**	**33.20**	**168**	T	T	16 34 26.6	
	baz=353,slow=76,SNR=8.3						
H11N3	**WAKE ISLAND Hy**	**33.22**	**168**	T	T	16 34 34.1	
	baz=353,slow=76,SNR=5.8						
H11N1	**WAKE ISLAND Hy**	**33.22**	**168**	T	T	16 34 28.8	
	baz=353,slow=76,SNR=6.0						
MKAR	**Makanchi Array**	**48.41**	**296**	P	**P**	**16 00 52.8**	**-3.1**
	0.3nm,0.4s,baz=56,slow=6.6,SNR=8.8						
FINES	**FINESS Array B**	**60.60**	**337**	P	**P**	**16 02 23.0**	**-1.1**
	1.6nm,0.8s,baz=35,slow=5.1,SNR=5.2						

*BJI **01** 16:03:28.5±0.0, 13°.87S×167°.26E, h190km, mB6.5/69, mb6.5/93*

*NEIC **01** 16:03:29±1.6, 13°.86S±0°.07×167°.25E±0°.07, h187km±1km, mb6.3/405, Mwb6.6/80, Mwc6.5/112, Mww6.5, Mwc6.6(GCMT), Error ellipse: s-maj=12.6km s-min=11.4km az=58.0, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}8.11; $M_{\theta\theta}$-0.45; $M_{\phi\phi}$-7.66; $M_{r\theta}$-2.56; $M_{\theta\phi}$1.37; $M_{\phi r}$-0.34; Fault plane solution: $M_0$8.42000×10^{18} NP1:ϕ_s184.88000°, δ46.67000°, λ112.13000°. NP2:ϕ_s334.23000°, δ47.64000°, λ68.23000°. Principal axes: T 8.8486, Plg74.0000°, Azm171.0000°; N -0.9315, Plg16.0000°, Azm349.0000°; P -7.9171, Plg1.0000°, Azm79.0000°;*

*IDC **01** 16:03:29.8±0.3, 13°.86S×167°.28E, h188km±2km, mb5.8/47, mb1 5.8/50, mb1mx5.8/51, mbtmp6.3/50, MS5.6/15, Ms1 5.6/15, ms1mx5.2/41 Error ellipse: s-maj=6.6km s-min=6.1km az=36.0*

*MOS **01** 16:03:30.0±0.8, 13°.81S×167°.21E, h203km, mb6.6/54, MS5.6/6, Error ellipse: s-maj=6.1km s-min=5.1km az=109.3*

*KLM **01** 16:03:33.0, 13°.92S×167°.16E, h201km, mb6.8*

*GCMT **01** 16:03:34.0±0.0, 13°.89S×167°.10E, h198km, MW6.5/178, Moment Tensor Solution. s172,c443; s178,c773; Duration: 4s.5 Moment tensor: Scale 10^{19}Nm; M_{rr}0.74±.00; $M_{\theta\theta}$-0.04±.00; $M_{\phi\phi}$-0.70±.00; $M_{r\theta}$-0.24±.00; $M_{\theta\phi}$0.21±.00; $M_{\phi r}$-0.05±.00; Best double couple: $M_0$0.79500×10^{19} NP1:ϕ_s181.00000°, δ47.00000°, λ114.00000°. NP2:ϕ_s328.00000°, δ48.00000°, λ67.00000°. Principal axes: T 0.8210, Plg73.0000°, Azm166.0000°; N -0.0530, Plg17.0000°, Azm344.0000°; P -0.7680, Plg1.0000°, Azm74.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **01** 16:03:34, 13°.87S×166°.89E, h200km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}6.77; $M_{\theta\theta}$0.09; $M_{\phi\phi}$-6.86; $M_{r\theta}$-1.94; $M_{\theta\phi}$2.33; $M_{\phi r}$-1.05; Fault plane solution: $M_0$7.53000×10^{18} NP1:ϕ_s326.00000°, δ46.00000°, λ65.00000°. NP2:ϕ_s180.00000°, δ49.00000°, λ114.00000°. Principal axes: T 7.4795, Plg72.0000°, Azm158.0000°; N 0.1072, Plg18.0000°, Azm344.0000°; P -7.5867, Plg2.0000°, Azm254.0000°;*

*NEIC **01** 16:03:34, 13°.88S×167°.09E, h197km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}7.22; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$-6.94; $M_{r\theta}$-2.27; $M_{\theta\phi}$2.03; $M_{\phi r}$-0.51; Fault plane solution: $M_0$7.73000×10^{18} NP1:ϕ_s181.00000°, δ47.00000°, λ113.00000°. NP2:ϕ_s328.00000°, δ48.00000°, λ67.00000°. Principal axes: T 7.9303, Plg73.0000°, Azm166.0000°; N -0.4218, Plg17.0000°, Azm344.0000°; P -7.5085, Plg1.0000°, Azm74.0000°;*

*NEIC **01** 16:03:51.8, 13°.79S×166°.86E, h198km, Moment Tensor Solution. Moment tensor: Scale 10^{18}Nm; M_{rr}7.07; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$-6.94; $M_{r\theta}$-2.44; $M_{\theta\phi}$2.36; $M_{\phi r}$-0.53; Fault plane solution: $M_0$7.80000×10^{18} NP1:ϕ_s180.43000°, δ47.10000°, λ116.04000°. NP2:ϕ_s324.76000°, δ48.84000°, λ64.71000°. Principal axes: T 7.9171, Plg71.0000°, Azm165.0000°; N -0.2365, Plg19.0000°, Azm342.0000°; P -7.6805, Plg1.0000°, Azm72.0000°;*

ISC 01 16:03:29.8±0.2**, 13°.88S**±0°.03×**167°.27E**±0°.03**, h195**km±1km**,**
h195km:pP-P, n2611, σ1s.**28**/2781**, mb6.3**/398**, 165C-71D,**
Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.19**	**185**	*e*Pn	**Pn**	**16 05 25.6**	**0.0**
	4µm,1.1s						
DZM				*e*Sn	**Sn**	**16 06 49.8**	**-8.0**
	6µm,1.5s						
DZM	**Mont Dzumac**	**8.19**	**185**	P	**Pn**	**16 05 27.4**	**+1.8**
	73nm,0.3s,baz=43,slow=18,SNR=125						
DZM				S	**Sn**	**16 07 00.7**	**+2.9**
	30nm,0.3s,baz=297,slow=22,SNR=10						
DZM	**Mont Dzumac**	**8.19**	**185**		**Pn**	**16 05 27.2**	**+1.6**
HNR	**Honiara**	**8.43**	**301**	P	**Pn**	**16 05 29.4**	**+0.7**
	85nm,0.3s,baz=147,slow=5.7,SNR=300						
HNR				S	**Sn**	**16 07 11.2**	**+7.8**
	81nm,0.3s,baz=182,slow=18,SNR=2.2						
HNR				LR	LR	16 08 27.4	
	comp=Z,51µm,21.3s,baz=130,slow=35						
MSVF	**Nonsavu**	**11.06**	**112**	*d i*P	**P**	**16 06 08.3**	**-1.1**
MSVF	**Nonsavu**	**11.06**	**112**		**P**	**16 06 07.8**	**-1.6**
FUNA	**Funafuti**	**12.85**	**67**	P	**P**	**16 06 27.9**	**-1.3**
NFK	**Norfolk Island**	**15.11**	**178**	P	**P**	**16 06 56.4**	**+2.2**
	baz=15,SNR=50						
TARA	**Tarawa**	**16.14**	**21**	P	**Pn**	**16 07 06.9**	**+0.8**
TARA				IAmb	IAmb	16 07 51.9	
	comp=Z,3µm,1.1s						
KRVT	**Keravat (AS076**	**17.79**	**301**	P	**P**	**16 07 24.7**	**+0.9**
	comp=Z,21nm,0.3s,baz=1.0,slow=0.7,SNR=15						
EIDS	**Eidsvold**	**19.04**	**231**	P	**Pn**	**16 07 39.6**	**-0.7**
	baz=19,SNR=858						
EIDS	**Eidsvold**	**19.04**	**231**	P	**Pn**	**16 07 39.8**	**-0.5**
LHI	**Lord Howe Isla**	**19.11**	**202**	P	**Pn**	**16 07 40.5**	**-0.6**
	baz=19,SNR=80						
LHI	**Lord Howe Isla**	**19.11**	**202**	P	**P**	**16 07 39.1**	**+1.2**
PMG	**Port Moresby**	**20.19**	**281**	*de*P	**P**	**16 07 51.0**	**+1.3**
PMG	**Port Moresby**	**20.19**	**281**	P	**P**	**16 07 50.9**	**+1.1**
	comp=Z,3µm,1.0s,baz=88,slow=7.9,SNR=142						
PMG				ScP	**ScP**	**16 15 16.2**	**+2.2**
	comp=Z,89nm,1.2s,baz=202,slow=5.5,SNR=4.1						
PMG	**Port Moresby**	**20.19**	**281**	P	**P**	**16 07 50.7**	**+0.9**
AFI	**Afiamalu**	**20.34**	**93**	P	Pn	16 07 54.0	-2.3
AFI				pmax	pmax		
	comp=Z,5µm,1.4s						
AFI	**Afiamalu**	**20.34**	**93**	P	**P**	**16 07 52.0**	**+0.6**
	comp=Z,2µm,1.0s,baz=228,slow=4.4,SNR=70						
AFI	**Afiamalu**	**20.34**	**93**	P	Pn	16 07 54.0	-2.3
RAO	**Raoul Island**	**20.55**	**140**	P	**P**	**16 07 55.4**	**+2.0**
	comp=Z,1µm,0.9s,baz=171,slow=7.4,SNR=11						
RAO	**Raoul Island**	**20.55**	**140**	P	**P**	**16 07 54.2**	**+0.8**
CTA	**Charters Tower**	**21.02**	**250**	P	**P**	**16 07 59.4**	**+0.9**
	comp=Z,2µm,1.0s,baz=82,slow=12,SNR=326						
CTA				S	**S**	**16 11 41.2**	**-0.1**
	comp=Z,160nm,1.1s,baz=218,slow=15,SNR=3.8						
CTA				PcP	**PcP**	**16 11 58.9**	**+1.5**
	comp=Z,159nm,1.0s,baz=90,slow=4.0,SNR=4.5						
CTA				ScP	**ScP**	**16 15 18.4**	**+2.5**
	comp=Z,77nm,1.0s,baz=74,slow=4.5,SNR=5.4						
CTA				PKiKP	**PKiKP**	**16 19 44.9**	**-0.1**
	comp=Z,12nm,0.8s,baz=144,slow=3.0,SNR=6.7						
RMQ	**Roma**	**21.40**	**231**	P	**P**	**16 08 04.2**	**+1.8**
	baz=22,SNR=1000						
ARMA	**Armidale**	**21.89**	**219**	P	**P**	**16 08 09.2**	**+1.7**
	baz=22,SNR=1000						
ARMA	**Armidale**	**21.89**	**219**	P	**P**	**16 08 09.2**	**+1.7**
OUZ	**Omahuta**	**22.00**	**166**	P	**P**	**16 08 09.6**	**+1.2**
OUZ				IAmb	IAmb	16 08 12.5	
	comp=Z,2µm,1.6s						
PATS	**Pohnpei**	**22.42**	**336**	P	**P**	**16 08 13.0**	**+0.5**
	baz=22,SNR=38						
PATS	**Pohnpei**	**22.42**	**336**	P	**P**	**16 08 12.3**	**-0.2**
NIUE	**Niue**	**22.46**	**106**	P	**P**	**16 08 12.9**	**+0.1**
	baz=22,SNR=18						
NIUE	**Niue**	**22.46**	**106**	P	**P**	**16 08 13.7**	**+0.8**
NIUE				IAmb	IAmb	16 08 20.1	
	comp=Z,2µm,1.0s						
MTSU	**Mount Surprise**	**22.46**	**256**	P	**P**	**16 08 14.0**	**+1.1**
	baz=22,SNR=945						
KWAJ	**Kwajalein Atol**	**22.53**	**1**	P	**P**	**16 08 13.7**	**+0.2**
KWAJ				pmax	pmax		
	comp=Z,13µm,1.7s						
KWAJ	**Kwajalein Atol**	**22.53**	**1**	P	**P**	**16 08 13.7**	**+0.2**
WCZ	**Waipu Caves**	**22.87**	**165**	P	**P**	**16 08 19.7**	**+3.3**
WCZ				S	**S**	**16 12 11.9**	**+0.9**
MANU	**Manus Island**	**22.92**	**299**	P	**P**	**16 08 16.9**	**-0.2**
COEN	**Coen**	**23.39**	**267**	P	**P**	**16 08 22.6**	**+1.3**
	baz=23,SNR=771						
COEN	**Coen**	**23.39**	**267**	P	**P**	**16 08 22.5**	**+1.2**
COEN				IAmb	IAmb	16 08 24.5	
	comp=Z,1µm,0.9s						
GRZ	**Great Barrier**	**23.46**	**163**	P	**P**	**16 08 24.0**	**+2.3**
GRZ				S	**S**	**16 12 21.4**	**+0.9**
KNTN	**Kanton**	**23.50**	**64**	P	**P**	**16 08 23.0**	**+0.7**
KNTN				IAmb	IAmb	16 08 27.6	
	comp=Z,1µm,1.0s						
ABAZ	**Army Bay**	**23.62**	**165**	P	**P**	**16 08 25.4**	**+2.3**
ABAZ				S	**S**	**16 12 23.4**	**+0.4**
MBAZ	**Motutapu North**	**23.80**	**165**	P	**P**	**16 08 27.0**	**+2.3**
WTAZ	**Waiatarua**	**23.87**	**165**	P	**P**	**16 08 28.7**	**+3.2**
WIAZ	**Waiheke Island**	**23.88**	**164**	P	**P**	**16 08 27.1**	**+1.6**
WIAZ				S	**S**	**16 12 27.1**	**-0.2**
ETAZ	**East Tamaki Re**	**23.98**	**165**	P	**P**	**16 08 28.9**	**+2.5**
ETAZ				S	**S**	**16 12 28.1**	**-0.7**
KUZ	**Kuaotunu**	**24.00**	**163**	P	**P**	**16 08 28.0**	**+1.4**
KUZ				S	**S**	**16 12 29.4**	**+0.4**
AWAZ	**Awhitu Peninsu**	**24.01**	**165**	P	**P**	**16 08 30.0**	**+3.3**
MKAZ	**Moumakai**	**24.18**	**164**	P	**P**	**16 08 29.6**	**+1.3**
MGCD	**Mangrove Creek**	**24.23**	**215**	P	**P**	**16 08 30.7**	**+2.0**
	baz=24,SNR=298						
RIV	**Riverview**	**24.67**	**214**	P	**P**	**16 08 34.7**	**+2.0**
	baz=25,SNR=108						
QLP	**Quilpie**	**24.99**	**236**	P	**P**	**16 08 36.5**	**+0.8**
	baz=25,SNR=121						
HIZ	**Hauiti**	**25.44**	**166**	P	**P**	**16 08 41.2**	**+1.5**
HIZ				IAmb	IAmb	16 08 45.5	
	comp=Z,2µm,1.7s						
MXZ	**Matakaoa Point**	**25.55**	**159**	P	**P**	**16 08 41.0**	**+0.3**
MXZ				IAmb	IAmb	16 08 43.5	
	comp=Z,924nm,1.8s						
URZ	**Urewera**	**25.81**	**162**	P	**P**	**16 08 43.1**	**+0.2**
	comp=Z,44nm,0.5s,baz=317,slow=1.0,SNR=53						
URZ				PcP	**PcP**	**16 12 05.9**	**-1.3**
	comp=Z,109nm,0.9s,baz=302,slow=21,SNR=7.8						
URZ				S	**S**	**16 12 58.6**	**+0.9**
	comp=Z,38nm,0.8s,baz=342,slow=20,SNR=3.5						
URZ				PKiKP	**PKiKP**	**16 19 44.7**	**-2.2**
	comp=Z,7.8nm,0.7s,baz=338,slow=3.2,SNR=3.4						
URZ	**Urewera**	**25.81**	**162**	P	**P**	**16 08 42.7**	**-0.2**
CMSA	**Cobar Meteorol**	**26.47**	**225**	P	**P**	**16 08 49.9**	**+1.0**
	baz=27,SNR=628						
YNG	**Young**	**26.56**	**217**	P	**P**	**16 08 51.3**	**+1.6**
	baz=27,SNR=52						
CNB	**Canberra Magne**	**26.76**	**214**	P	**P**	**16 08 53.1**	**+1.5**
	baz=27,SNR=222						
MMPI	**Merauke**	**26.91**	**279**	P	**P**	**16 08 53.3**	**+0.2**
	comp=Z,54µmcomp=Z,28µmcomp=Z,3µm,0.9s						
CAN	**Canberra**	**26.96**	**214**	P	**P**	**16 08 54.7**	**+1.3**
CAN				pmax	pmax		
	comp=Z,4µm,1.5s						
CAN	**Canberra**	**26.96**	**214**	P	**P**	**16 08 54.6**	**+1.3**
QIS	**Mount Isa**	**27.22**	**252**	P	**P**	**16 08 56.0**	**+0.1**
	baz=27,SNR=425						
QRZ	**Quartz Range**	**27.24**	**171**	P	**P**	**16 08 56.5**	**+0.8**
QRZ				IAmb	IAmb	16 08 59.8	
	comp=Z,3µm,2.0s						
NNZ	**Nelson**	**27.75**	**170**	P	**P**	**16 09 01.2**	**+0.9**
NNZ				IAmb	IAmb	16 09 09.2	
	comp=Z,1µm,2.0s						
BFZ	**Birch Farm**	**27.84**	**165**	P	**P**	**16 09 00.7**	**-0.3**
BFZ				IAmb	IAmb	16 09 04.5	
	comp=Z,1µm,1.8s						
TUWZ	**Tuamarina**	**28.06**	**169**	P	**P**	**16 09 02.6**	**-0.3**
SNZO	**South Karori**	**28.09**	**168**	P	**P**	**16 09 02.6**	**-0.6**
SNZO				IAmb	IAmb	16 09 07.8	
	comp=Z,846nm,1.5s						
MILA	**Mila**	**28.19**	**212**	P	**P**	**16 09 05.6**	**+1.4**
	baz=28,SNR=81						
THZ	**Tophouse**	**28.21**	**171**	P	**P**	**16 09 04.4**	**0.0**
THZ				IAmb	IAmb	16 09 12.2	
	comp=Z,381nm,0.8s						
BHW	**Baring Head**	**28.22**	**168**	P	**P**	**16 09 04.0**	**-0.4**
MSWZ	**Moikau Station**	**28.30**	**167**	P	**P**	**16 09 04.6**	**-0.6**
BSWZ	**Blackbirch Sta**	**28.32**	**170**	P	**P**	**16 09 05.4**	**+0.1**
CMWZ	**Cape Campbell**	**28.42**	**169**	P	**P**	**16 09 06.6**	**+0.5**
PLWZ	**Palliser**	**28.45**	**167**	P	**P**	**16 09 06.2**	**-0.3**
JAY	**Jayapura**	**28.57**	**291**	P	**P**	**16 09 07.8**	**-0.2**
	comp=Z,166nm,0.9s,baz=138,slow=6.9,SNR=29						
JAY				PcP	**PcP**	**16 12 15.6**	**+1.2**
	comp=Z,286nm,1.2s,baz=332,slow=4.9,SNR=5.8						
JAY	**Jayapura**	**28.57**	**291**	P	**P**	**16 09 06.2**	**-1.7**
	comp=Z,3µmcomp=Z,194nm,1.2s						
KHZ	**Kahutara**	**28.95**	**170**	P	**P**	**16 09 10.7**	**-0.1**
GENI	**Genyem**	**29.03**	**290**	P	**P**	**16 09 12.0**	**+0.1**
	comp=Z,34µmcomp=Z,11µmcomp=Z,644nm,1.5s						
LTZ	**Lake Taylor**	**29.12**	**172**	P	**P**	**16 09 12.7**	**+0.3**
LTZ				IAmb	IAmb	16 09 21.8	
	comp=Z,366nm,0.8s						
STKA	**Stephens Creek**	**29.55**	**228**	P	**P**	**16 09 17.6**	**+1.3**
	comp=Z,1µm,0.7s,baz=47,slow=8.4,SNR=1382						
STKA				PcP	**PcP**	**16 12 16.7**	**+0.2**
	comp=Z,239nm,0.8s,baz=45,slow=2.6,SNR=6.9						
STKA				ScP	**ScP**	**16 15 43.2**	**+3.2**
	comp=Z,115nm,1.1s,baz=4.7,slow=6.4,SNR=4.4						
STKA				PKiKP	**PKiKP**	**16 19 48.1**	**-1.3**
	comp=Z,16nm,0.6s,baz=104,slow=2.3,SNR=12						
STKA				LR	LR	16 20 20.9	
	comp=Z,27µm,21.1s,baz=95,slow=34						
STKA	**Stephens Creek**	**29.55**	**228**	P	**P**	**16 09 17.6**	**+1.3**
STKA				IAmb	IAmb	16 09 19.5	
	comp=Z,556nm,1.0s						
OXZ	**Oxford**	**29.63**	**173**	P	**P**	**16 09 17.0**	**+0.1**
OXZ				IAmb	IAmb	16 09 20.2	
	comp=Z,488nm,0.7s						
FOZ	**Fox Glacier**	**29.63**	**176**	P	**P**	**16 09 18.1**	**+1.2**
FOZ				IAmb	IAmb	16 09 19.9	
	comp=Z,577nm,0.8s						
RPZ	**Rata Peaks**	**29.91**	**174**	P	**P**	**16 09 20.3**	**+1.0**
	comp=Z,270nm,0.6s,baz=323,slow=0.9,SNR=80						
RPZ				PcP	**PcP**	**16 12 17.9**	**+0.7**
	comp=Z,104nm,0.8s,baz=164,slow=6.7,SNR=3.8						
RPZ	**Rata Peaks**	**29.91**	**174**	P	**P**	**16 09 19.8**	**+0.4**

CRLZ Canterbury Las 29.95 172 P **P** **16 09 20.1 +0.5**
MQZ McQueen's Vall 30.08 172 P **P** **16 09 21.2 +0.4**
MQZ IAmb IAmb 16 09 24.6
comp=Z,2µm,1.9s
MQZ **PcP** **16 12 18.4 +0.8**
LBZ Lake Benmore 30.51 176 P **P** **16 09 24.6 0.0**
LBZ IAmb IAmb 16 09 27.9
comp=Z,3µm,1.8s
TOO Toolangi 30.54 215 P **P** **16 09 26.5 +1.5**
baz=31,SNR=593
TOO Toolangi 30.54 215 P **P** **16 09 26.7 +1.7**
TOO pmax pmax
comp=Z,8µm,1.5s
TOO Toolangi 30.54 215 P **P** **16 09 26.7 +1.7**
SMPI Sarmi 30.60 290 P **P** **16 09 26.6 +0.8**
comp=Z,34µmcomp=Z,3µm,1.4s
WKZ Wanaka 30.88 178 P **P** **16 09 28.5 +0.6**
ODZ Otahua Downs 31.20 175 P **P** **16 09 30.2 -0.4**
ODZ IAmb IAmb 16 09 32.9
comp=Z,2µm,1.7s
MLZ Mavora Lakes 31.39 179 P **P** **16 09 33.0 +0.6**
MLZ IAmb IAmb 16 09 36.0
comp=Z,1µm,1.3s
DCZ Deep Cove 31.48 180 P **P** **16 09 33.6 +0.6**
WR0 Warramunga Arr 31.86 255 P **P** **16 09 35.9 -0.9**
WR0 IAmb IAmb 16 09 37.8
comp=Z,1µm,1.1s
WHZ Wether Hill Ro 31.92 179 P **P** **16 09 37.0 +0.1**
WHZ IAmb IAmb 16 09 39.4
comp=Z,2µm,1.4s
WRAB Tennant Creek 32.03 255*ce***P** **P** **16 09 37.3 -1.0**
WRAB pmax pmax
comp=Z,2µm,1.2s
WRAB Tennant Creek 32.03 255 P **P** **16 09 37.4 -1.0**
WRAB IAmb IAmb 16 09 39.2
comp=Z,1µm,1.1s
WRA Warramunga Arr 32.04 255 P **P** **16 09 37.5 -0.9**
comp=Z,692nm,0.9s,baz=86,slow=9.1,SNR=462
WRA PcP **PcP** **16 12 23.7 +0.3**
comp=Z,386nm,1.2s,baz=76,slow=2.5,SNR=13
WRA S **S** **16 14 32.5 -3.5**
comp=Z,281nm,1.4s,baz=85,slow=15,SNR=9.1
WRA ScP **ScP** **16 15 51.0 +2.4**
comp=Z,61nm,0.9s,baz=82,slow=3.7,SNR=8.6
WRA PKiKP **PKiKP** **16 19 50.4 -1.0**
comp=Z,43nm,0.9s,baz=341,slow=0.5,SNR=51
WRA LR LR 16 22 33.6
comp=Z,34µm,18.7s,baz=75,slow=36
WRA P3KPbc 16 41 06.5
comp=Z,5.6nm,1.0s,baz=274,slow=2.9,SNR=16
WRA Warramunga Arr 32.04 255 P **P** **16 09 36.9 -1.5**
H11S2 WAKE ISLAND Hy 32.17 359 P **P** **16 09 38.9 -0.2**
baz=195,slow=4.9,SNR=5.8
H11S3 WAKE ISLAND Hy 32.17 359 P **P** **16 09 39.6 +0.5**
baz=195,slow=4.9,SNR=6.2
H11S1 WAKE ISLAND Hy 32.19 359 P **P** **16 09 40.1 +0.9**
baz=195,slow=4.9,SNR=5.1
ARPS Mount Arapiles 32.19 220 P **P** **16 09 40.7 +1.3**
baz=32,SNR=590
PYZ Puysegur Point 32.19 181 P **P** **16 09 39.5 +0.2**
PYZ IAmb IAmb 16 09 48.1
comp=Z,470nm,1.0s
RAR Rarotonga 32.21 108 P **P** **16 09 41.6 +1.8**
comp=Z,166nm,0.9s,baz=224,slow=6.6,SNR=16
RAR Rarotonga 32.21 108 P **P** **16 09 40.4 +0.7**
RAR IAmb IAmb 16 09 43.2
comp=Z,2µm,1.8s
HTT Hallett 32.28 228 P **P** **16 09 41.2 +0.9**
baz=32,SNR=1000
WAKE Wake Island 32.96 359 P **P** **16 09 46.5 +0.4**
WAKE IAmb IAmb 16 09 48.5
comp=Z,2µm,1.4s
AS31 Alice Springs 32.98 248 P **P** **16 09 45.8 -0.8**
AS31 IAmb IAmb 16 09 48.3
comp=Z,606nm,1.2s
ASAR Alice Springs 32.99 248 P **P** **16 09 45.5 -1.0**
comp=Z,1µm,0.8s,baz=73,slow=9.1,SNR=2816
ASAR PcP **PcP** **16 12 26.4 +0.5**
comp=Z,137nm,0.8s,baz=85,slow=3.1,SNR=8.4
ASAR S **S** **16 14 47.2 -3.3**
comp=Z,339nm,1.1s,baz=77,slow=16,SNR=20
ASAR ScP **ScP** **16 15 54.1 +2.4**
comp=Z,77nm,1.0s,baz=81,slow=3.2,SNR=8.6
ASAR PKiKP **PKiKP** **16 19 51.2 -0.8**
comp=Z,16nm,0.8s,baz=104,slow=1.2,SNR=38
ASAR LR LR 16 22 51.9
comp=Z,24µm,20.5s,baz=72,slow=35
ASAR P3KPbc 16 41 02.1
comp=Z,1.8nm,0.8s,baz=264,slow=4.6,SNR=9.1
ASAR Alice Springs 32.99 248 P **P** **16 09 45.4 -1.2**
MOO Moorlands 33.34 208 P **P** **16 09 51.1 +1.8**
baz=34,SNR=129
H11N1 WAKE ISLAND Hy 33.38 359 P **P** **16 09 50.7 +1.1**
baz=196,slow=11,SNR=6.2
H11N3 WAKE ISLAND Hy 33.38 359 P **P** **16 09 51.6 +1.9**
baz=196,slow=11,SNR=5.5
H11N2 WAKE ISLAND Hy 33.40 359 P **P** **16 09 50.9 +1.1**
baz=196,slow=11,SNR=5.7
TAU Tasmania Unive 33.66 207 P **P** **16 09 53.3 +1.3**
TAU pmax pmax
comp=Z,6µm,1.5s
TAU Tasmania Unive 33.66 207 P **P** **16 09 53.3 +1.3**
KDU Kakadu 33.87 268 P **P** **16 09 54.4 +0.1**
baz=34,SNR=615
BBOO Buckleboo 34.11 231 P **P** **16 09 56.5 +0.4**
baz=34,SNR=1000
BBOO Buckleboo 34.11 231 P **P** **16 09 56.7 +0.6**
KMPI Kaimana, Papua 34.64 284 P **P** **16 10 03.0 +2.1**
comp=Z,19µmcomp=Z,1µm,1.5s
RKPI Ransiki, Papua 34.96 288 P **P** **16 10 05.4 +1.8**
comp=Z,33µmcomp=Z,2µm,1.5s
MTN Manton Dam 35.16 267 P **P** **16 10 05.5 +0.2**
baz=35,SNR=304
MTN Manton Dam 35.16 267 P **P** **16 10 05.5 +0.2**
GUMO Guam 35.17 320 P **P** **16 10 05.1 -0.3**
comp=Z,269nm,0.7s,baz=157,slow=6.8,SNR=12
GUMO PcP **PcP** **16 12 33.3 +1.1**
comp=Z,549nm,1.2s,baz=167,slow=0.6,SNR=5.2
GUMO Guam 35.17 320 P **P** **16 10 05.3 0.0**
GUMO IAmb IAmb 16 10 06.2
comp=Z,440nm,0.8s
SAUI Saumlaki 35.77 276 P **P** **16 10 12.3 +1.7**
comp=Z,45µmcomp=Z,38µmcomp=Z,2µm,1.4s
SAUI Saumlaki 35.77 276 P **P** **16 10 11.6 +1.0**
FAKI Fak Fak 36.26 284 P **P** **16 10 15.5 +0.8**
comp=Z,28µmcomp=Z,20µmcomp=Z,1µm,1.6s
FAKI Fak Fak 36.26 284 P **P** **16 10 14.2 -0.4**
FAKI IAmb IAmb 16 10 16.6
comp=Z,2µm,1.2s
ANA2 Anatahan 36.82 324 P **P** **16 10 18.7 -0.6**
ANA2 IAmb IAmb 16 10 20.2
comp=Z,528nm,0.6s
SARN Sarigan 37.06 324 P **P** **16 10 20.8 -0.6**
KNRA Kununurra 37.25 262 P **P** **16 10 22.6 -0.3**
baz=37,SNR=765
KNRA Kununurra 37.25 262 P **P** **16 10 22.9 -0.1**
SWI Sorong 37.90 287 P **P** **16 10 28.8 +0.3**
comp=Z,20µmcomp=Z,25µmcomp=Z,3µm,1.2s
BNDI Bandanaira 37.99 281 P **P** **16 10 30.4 +1.2**
comp=Z,24µmcomp=Z,98µmcomp=Z,8µm,1.5s
JOHN Johnston Islan 38.08 38 P **P** **16 10 30.2 +0.3**
WRKA Warakurna 38.26 247 P **P** **16 10 31.0 -0.5**
baz=38,SNR=1000
XMAS Kiritimati 38.39 68 P **P** **16 10 33.1 +0.6**
XMAS IAmb IAmb 16 10 36.4
comp=Z,1µm,1.2s
MSAI Masohi 39.26 282 P **P** **16 10 40.2 +0.3**
comp=Z,2µmcomp=Z,279nm,1.2s
FORT Forrest 39.74 238 P **P** **16 10 43.7 +0.1**
baz=40,SNR=351
FORT Forrest 39.74 238 P **P** **16 10 43.6 +0.1**
AAI Ambon 39.86 281 P **P** **16 10 46.2 +1.4**
comp=Z,26µmcomp=Z,14µmcomp=Z,940nm,1.4s
FITZ Fitzroy Crossi 40.18 258 P **P** **16 10 47.3 -0.1**
baz=40,SNR=260
FITZ Fitzroy Crossi 40.18 258 P **P** **16 10 47.4 -0.1**
comp=Z,914nm,1.1s,baz=90,slow=11,SNR=442
FITZ PcP **PcP** **16 12 48.7 +1.0**
comp=Z,408nm,1.2s,baz=32,slow=4.1,SNR=5.5
FITZ Fitzroy Crossi 40.18 258 P **P** **16 10 47.3 -0.1**
FITZ IAmb IAmb 16 10 49.4
comp=Z,2µm,1.3s
NLAI Namlea 41.04 281 P **P** **16 10 55.3 +0.9**
comp=Z,36µmcomp=Z,3µm,1.4s
MCQ Macquarie Isla 41.05 187 P **P** **16 10 55.7 +1.8**
baz=41,SNR=32
MCQ Macquarie Isla 41.05 187 P **P** **16 10 55.4 +1.5**
MCQ pmax pmax
comp=Z,6µm,1.5s
MCQ Macquarie Isla 41.05 187 P **P** **16 10 55.4 +1.5**
LBMI Labuha 41.49 285 P **P** **16 11 00.5 +2.3**
comp=Z,21µmcomp=Z,1µm,1.3s
PAE Paea 41.63 101 *eP* **P** **16 11 00.0 +0.8**
PPT Papeete 41.63 101 P **P** **16 10 58.9 -0.4**
comp=Z,180nm,0.8s,baz=241,slow=5.0,SNR=14
PPT Papeete 41.63 101 P **P** **16 11 00.6 +1.3**
PPT2 Papeete2 41.63 101 *eP* **P** **16 11 00.2 +0.9**
comp=Z,556nm,1.4s
PPT2 *eS* **S** **16 17 01.3 0.0**
comp=Z,12µm,30.2s
PPTF Pamatai, Papee 41.65 101 P **P** **16 11 00.6 +1.2**
PPTF IAmb IAmb 16 11 06.1
comp=Z,1µm,1.5s
TBI Tubuai 41.94 110 *eP* **P** **16 11 02.6 +1.0**
comp=Z,347nm,0.9s
TBI *eS* **S** **16 17 05.7 +0.2**
comp=Z,12µm,28.5s
TVO Taravao 41.94 101 *eP* **P** **16 11 02.7 +0.9**
comp=Z,64nm,0.8s
TNTI Ternate 42.12 287 P **P** **16 11 04.1 +0.9**
comp=Z,14µmcomp=Z,10µmcomp=Z,597nm,1.6s
TNTI Ternate 42.12 287 P **P** **16 11 03.6 +0.3**
TNTI IAmb IAmb 16 11 12.5
comp=Z,983nm,1.3s
SOEI Soe 42.25 271 P **P** **16 11 05.5 +1.1**
comp=Z,36µmcomp=Z,23µmcomp=Z,2µm,1.2s
SOEI Soe 42.25 271 P **P** **16 11 05.5 +1.1**
SANI Sanana 42.46 282 P **P** **16 11 06.5 +0.6**
comp=Z,30µmcomp=Z,22µmcomp=Z,2µm,1.2s
BATI Baumata 42.76 270 P **P** **16 11 10.3 +1.9**
comp=Z,3µm,0.9s,baz=147,slow=2.1,SNR=349
BATI ScP **ScP** **16 16 32.6 +3.7**
comp=Z,50nm,0.6s,baz=263,slow=1.9,SNR=5.9
BATI PKiKP **PKiKP** **16 20 00.5 +0.3**
comp=Z,16nm,0.5s,baz=128,slow=2.9,SNR=6.9
MIDW Midway 44.41 20 P **P** **16 11 21.7 +0.5**
MMRI Maumere 44.42 272 P **P** **16 11 22.0 +0.3**
comp=Z,22µmcomp=Z,47µmcomp=Z,4µm,1.3s
MMRI Maumere 44.42 272 P **P** **16 11 21.4 -0.2**
BBSI Bau Bau 44.78 276 P **P** **16 11 27.8 +3.3**
comp=Z,9µmcomp=Z,621nm,1.5s
KMBL Kambalda 45.02 239 P **P** **16 11 25.7 -0.5**
baz=45,SNR=326
KMSI Cibinong 45.21 285 P **P** **16 11 28.4 +0.5**
comp=Z,1µmcomp=Z,19µmcomp=Z,2µm,1.2s
MATI Mati 45.66 294 *eP* **P** **16 11 29.2 -2.2**
PSA00 Pilbara Seismi 45.68 253 P **P** **16 11 31.9 +0.4**
PSA00 IAmb IAmb 16 11 33.8
comp=Z,3µm,1.2s
PSA00 Pilbara Seismi 45.68 253 P **P** **16 11 30.3 -1.2**
PSA00 IAmb IAmb 16 11 32.9
comp=Z,1µm,1.2s
LUWI Luwuk 45.82 282 P **P** **16 11 33.7 +1.0**
comp=Z,25µmcomp=Z,31µmcomp=Z,2µm,1.3s
LUWI Luwuk 45.82 282 P **P** **16 11 32.9 +0.3**
WSI Waingapu 46.12 270 P **P** **16 11 35.8 +0.8**
comp=Z,42µmcomp=Z,3µm,0.8s
DAV Davao City (W) 46.32 294 P **P** **16 11 37.5 +1.0**
comp=Z,366nm,0.8s,baz=88,slow=3.1,SNR=24
DAV Davao City (W) 46.32 294‖ *eP* **P** **16 11 33.3 -3.3**
DAV Davao City (W) 46.32 294 P **P** **16 11 36.2 -0.3**
DAV IAmb IAmb 16 11 39.3
comp=Z,741nm,1.0s
KCP Kidapawan 46.73 294‖ *iP* **P** **16 11 40.2 +0.5**
APSI Ampana 46.93 282 P **P** **16 11 42.3 +1.0**
comp=Z,16µmcomp=Z,19µmcomp=Z,2µm,1.3s
SKMP Bagumbayan, Su 47.00 293 *eP* **P** **16 11 41.5 -0.3**
MRSI Marisa 47.10 284 P **P** **16 11 41.6 -1.0**
comp=Z,19µmcomp=Z,8µmcomp=Z,670nm,1.2s
BUKP Musuan 47.14 295 *eP* **P** **16 11 42.9 -0.1**
BUTP Butuan 47.16 296 *eP* **P** **16 11 43.9 +0.9**
BKSI Bulukumba 47.19 276 P **P** **16 11 43.8 +0.5**
comp=Z,25µmcomp=Z,13µmcomp=Z,828nm,1.6s
BNSI Bone 47.43 277 P **P** **16 11 46.0 +0.9**
comp=Z,24µmcomp=Z,32µmcomp=Z,3µm,1.3s
JCJ Chichijima 47.46 329 P **P** **16 11 45.2 +0.2**
comp=Z,1µm,0.8s,baz=158,slow=4.4,SNR=28
CTBH Cotabato--PC H 47.57 293‖ *iP* **P** **16 11 46.6 +0.4**
KAPI Kappang 47.62 276 P **P** **16 11 47.2 +0.6**
KAPI pmax pmax
comp=Z,7µm,1.7s
KAPI Kappang 47.62 276 P **P** **16 11 47.2 +0.6**
CGP Cagayan de Oro 47.73 295‖ *eP* **P** **16 11 48.6 +1.2**
SPSI Sidrap Palu 47.86 277 P **P** **16 11 48.3 -0.2**
comp=Z,22µmcomp=Z,13µmcomp=Z,1µm,1.4s
TTSI Tana Toraja 48.06 278 P **P** **16 11 51.0 +1.0**
comp=Z,21µmcomp=Z,10µmcomp=Z,759nm,1.3s
KEKH Kekaha 48.15 43 P **P** **16 11 51.3 +0.8**
KEKH IAmb IAmb 16 12 42.0
comp=Z,755nm,1.1s
MSLP Maasin 48.37 297 *eP* **P** **16 11 53.2 +0.9**
MSLP *eS* **pP** **16 12 32.7 -0.7**
KLBR Kellerberrin 48.52 240 P **P** **16 11 52.6 -0.7**
baz=49,SNR=343
BESP Borongan 48.59 299 *eP* **P** **16 11 55.2 +1.2**
PAGZ Pagadian 48.62 294 *eP* **P** **16 11 53.9 -0.4**
PLAI Plampang 48.72 270 P **P** **16 11 55.2 +0.1**
comp=Z,27µmcomp=Z,39µmcomp=Z,3µm,1.6s
HON Honolulu 48.85 45 P **P** **16 11 56.5 +0.7**
HON pmax pmax
comp=Z,790nm,1.4s
HON Honolulu 48.85 45 P **P** **16 11 56.5 +0.7**
KIP Kipapa 48.91 45*ce***P** **P** **16 11 57.2 +0.9**
KIP pmax pmax
comp=Z,355nm,0.8s
KIP Kipapa 48.91 45 P **P** **16 11 57.2 +0.9**
DCPH Dipolog City 48.97 295‖ *eP* **P** **16 12 00.0 +3.1**
MPSI Mapaga 48.98 283 P **P** **16 11 56.6 -0.4**
comp=Z,20µmcomp=Z,20µmcomp=Z,2µm,1.4s
OCLP Ormoc 49.03 298 *eP* **P** **16 11 57.9 +0.6**
OPA Opana 49.09 45 P **P** **16 11 58.3 +0.6**
OPA pmax pmax
comp=Z,992nm,0.6s
OPA Opana 49.09 45 P **P** **16 11 58.3 +0.6**
OPA IAmb IAmb 16 12 00.3
comp=Z,992nm,0.6s
KKH Kailua Kona 49.15 48 P **P** **16 11 58.6 +0.4**
KKH Kailua Kona 49.15 48 P **P** **16 11 58.5 +0.4**
KHU Kahuku 49.18 49 P **P** **16 11 59.0 +0.3**
KHU pmax pmax
comp=Z,2µm,1.4s
KHU Kahuku 49.18 49 P **P** **16 11 59.0 +0.3**
KHU IAmb IAmb 16 12 49.8
comp=Z,2µm,1.4s
NWAO Narrogin (SRO) 49.19 238 P **P** **16 11 57.8 -0.6**
baz=49,SNR=509
NWAO Narrogin (SRO) 49.19 238 P **P** **16 11 58.0 -0.4**
NWAO Narrogin (SRO) 49.19 238 P **P** **16 11 57.9 -0.4**
comp=Z,2µm,1.1s,baz=82,slow=6.8,SNR=378
NWAO PP **PP** **16 13 55.0 +0.9**
comp=Z,487nm,1.2s,baz=74,slow=6.0,SNR=4.2
NWAO Narrogin (SRO) 49.19 238 P **P** **16 11 57.9 -0.5**
NWAO Narrogin (SRO) 49.19 238 P **P** **16 11 58.0 -0.4**
NWAO IAmb IAmb 16 12 00.6
comp=Z,5µm,1.4s
KHLU Kahalu`u 49.20 48 P **P** **16 11 59.2 +0.5**
KHLU IAmb IAmb 16 12 50.0
comp=Z,2µm,1.7s
BLDU Ballidu 49.26 241 P **P** **16 11 58.4 -0.6**
baz=49,SNR=96
HUH Hualalai 49.30 48 P **P** **16 12 00.5 +0.8**
HUH IAmb IAmb 16 12 50.9
comp=Z,908nm,1.2s
MWH Moku'aweowe 49.35 49 P **P** **16 12 00.4 +0.1**
AIN Ainahou 49.38 49 P **P** **16 12 00.8 +0.7**
AIN IAmb IAmb 16 12 03.9
comp=Z,713nm,0.8s
MLOA Mauna Loa Obse 49.40 49 P **P** **16 12 00.9 +0.4**
MLOA IAmb IAmb 16 12 50.7
comp=Z,2µm,1.7s
HLP Hilina Pali 49.44 49 P **P** **16 12 01.3 +0.9**
HMH Humu'ula Sheep 49.51 49 P **P** **16 12 01.9 +0.7**
HMH IAmb IAmb 16 12 05.3
comp=Z,1µm,1.0s
MLH Mauna Loa 49.51 49 P **P** **16 12 01.5 +0.3**
MLH IAmb IAmb 16 12 04.8
comp=Z,599nm,0.9s
SDHHI Sand Hill 49.51 49 P **P** **16 12 01.6 +0.6**
SDHHI IAmb IAmb 16 12 04.5
comp=Z,728nm,1.0s
WRMHI West Rim 49.52 49 P **P** **16 12 01.6 +0.5**
WRMHI IAmb IAmb 16 12 04.5
comp=Z,870nm,1.0s
RIM Rim 49.53 49 P **P** **16 12 01.6 +0.4**
RIM IAmb IAmb 16 12 04.6
comp=Z,554nm,0.9s
UWE Uwekahuna 49.53 49 P **P** **16 12 02.0 +0.8**
UWE IAmb IAmb 16 12 04.7
comp=Z,624nm,0.9s
OBL Observatory Le 49.53 49 P **P** **16 12 01.7 +0.5**
KKO Keanakako`i 49.53 49 P **P** **16 12 01.6 +0.4**
KKO IAmb IAmb 16 12 04.7
comp=Z,563nm,0.8s
UWB Uwekahuna B 49.54 49 P **P** **16 12 01.8 +0.5**
BYL Byron's Ledge 49.55 49 P **P** **16 12 02.0 +0.7**
SBLHI Steaming Bluff 49.55 49 P **P** **16 12 01.9 +0.6**
HATHI Halema'uma'u T 49.55 49 P **P** **16 12 01.4 0.0**
PUH Pauahi 49.56 49 P **P** **16 12 02.1 +0.8**
POHA Pohakuloa 49.57 48 P **P** **16 12 01.8 +0.2**
POHA IAmb IAmb 16 12 05.3
comp=Z,564nm,0.8s
TWSI Taliwang, Sumb 49.60 270 P **P** **16 12 02.4 +0.6**
comp=Z,20µmcomp=Z,60µmcomp=Z,6µm,1.2s
HPAH Hawaii Prepara 49.62 48 P **P** **16 12 02.3 +0.5**
HPAH IAmb IAmb 16 12 05.3
comp=Z,948nm,0.8s
STCH Steam Cracks 49.63 49 P **P** **16 12 02.6 +0.7**
STCH IAmb IAmb 16 12 05.4
comp=Z,720nm,0.9s
MORW Morawa 49.64 244 P **P** **16 12 01.7 -0.2**
baz=50,SNR=271
MORW Morawa 49.64 244 P **P** **16 12 01.9 0.0**
JCUZ Jacuzzi 49.65 49 P **P** **16 12 02.7 +0.7**
JCUZ IAmb IAmb 16 12 05.6
comp=Z,1µm,1.1s
KHLH Kahului Airpor 49.66 47 P **P** **16 12 02.8 +0.8**
KHLH IAmb IAmb 16 12 53.9
comp=Z,2µm,1.3s
HLK Haleakala 49.70 47 P **P** **16 12 03.2 +0.6**
HLK IAmb IAmb 16 12 05.0
comp=Z,1µm,1.2s
CNP Catarman 49.70 300 *eP* **P** **16 12 02.9 +0.4**
RKGY Rocky Gully 49.72 236 P **P** **16 12 02.5 +0.1**
baz=50,SNR=81
MUN Mundaring 49.89 240 P **P** **16 12 03.2 -0.4**
baz=50,SNR=146
GUIM Jordan 50.57 296 *eP* **P** **16 12 08.3 -0.7**
PVCP Virac 50.68 301 *eP* **P** **16 12 10.3 +0.6**
RCP Roxas 50.87 298‖ *eP* **P** **16 12 11.4 +0.2**
GIRL Giralia 50.90 252 P **P** **16 12 12.4 +1.1**
baz=51,SNR=36
GIRL Giralia 50.90 252 P **P** **16 12 12.8 +1.5**
DNP Denpasar 51.24 270 P **P** **16 12 15.2 +1.2**
comp=Z,57µmcomp=Z,5µm,1.0s
IGBI Denpasar 51.28 270 P **P** **16 12 15.2 +0.9**
comp=Z,18µmcomp=Z,60µmcomp=Z,6µm,1.2s
SMKI Samarinda 51.30 281 P **P** **16 12 17.0 +2.5**
comp=Z,48µmcomp=Z,33µmcomp=Z,3µm,1.5s
SRBI Singaraja 51.35 271 P **P** **16 12 15.5 +0.7**
comp=Z,31µmcomp=Z,34µmcomp=Z,3µm,1.5s
BKB Balikpapan 51.36 280 P **P** **16 12 17.9 +3.0**
comp=Z,44µmcomp=Z,28µmcomp=Z,2µm,1.2s
BKB Balikpapan 51.36 280 P **P** **16 12 17.0 +2.1**
KBKI Kotabaru 51.51 277 P **P** **16 12 16.7 +0.7**
comp=Z,588nmcomp=Z,6µmcomp=Z,650nm,0.9s
TAOE Nuku Hiva Isla 51.71 90 *eP* **P** **16 12 18.4 +0.8**
comp=Z,656nm,1.5s
TAOE *eS* **S** **16 19 23.7 -0.7**
comp=Z,11µm,24.1s
TAOE Nuku Hiva Isla 51.71 90 P **P** **16 12 18.6 +0.9**
OTRP Odiongan 51.88 298 *eP* **P** **16 12 18.6 -0.1**
H01W1 Cape Leeuwin H 52.06 236 P **P** **16 12 21.2 +1.7**
baz=99,slow=8.6,SNR=20
H01W3 Cape Leeuwin H 52.07 236 P **P** **16 12 21.4 +1.8**
baz=99,slow=8.6,SNR=20
H01W2 Cape Leeuwin H 52.08 236 P **P** **16 12 21.4 +1.8**
baz=99,slow=8.6,SNR=17
GQP Guinayangan 52.27 300‖ *eP* **P** **16 12 21.9 +0.3**
JAGI Jajag, Banyuwa 52.31 270 P **P** **16 12 21.4 -0.5**
comp=Z,20µmcomp=Z,25µmcomp=Z,2µm,1.6s
JAGI Jajag, Banyuwa 52.31 270 P **P** **16 12 20.8 -1.1**
BOAC Boac 52.56 299 *eP* **P** **16 12 24.7 +1.0**
KMMI Kalianget 52.77 272 P **P** **16 12 26.8 +1.5**
comp=Z,15µmcomp=Z,1µm,1.4s
POLP Polillo Island 53.10 301 *eP* **P** **16 12 27.9 +0.2**
JHJ2 Mitsune 53.58 331 P **P** **16 12 31.0 +0.2**
JHJ2 IAmb IAmb 16 12 34.7
comp=Z,2µm,1.5s
ENPP El Nido 53.59 295 *eP* **P** **16 12 31.9 +0.6**
TGY Tagaytay City 53.64 299‖ *iP* **P** **16 12 32.7 +1.1**
SPMM Sapulut 53.68 287 P **P** **16 12 33.0 +1.0**
BALP Baler 53.92 301 *eP* **P** **16 12 33.9 +0.4**
BATP Bataraza 54.02 292 *eP* **P** **16 12 35.0 +0.7**
BATP *eS* **pP** **16 13 18.8 +2.6**
PCPH Palayan 54.23 301‖ *iP* **P** **16 12 36.1 +0.4**
GRJI Gresik 54.24 271 P **P** **16 12 35.9 -0.1**
comp=Z,4µmcomp=Z,384nm,1.1s
CAUP Cauayan 54.33 303 *eP* **P** **16 12 37.5 +1.0**
KKM Kota Kinabalu 54.40 288 P **P** **16 12 37.4 +0.2**
PWJI Pagerwojo 54.67 270 P **P** **16 12 39.4 +0.3**
comp=Z,16µmcomp=Z,19µmcomp=Z,1µm,1.3s
SGCP Mt. Cagua 54.84 304 *eP* **P** **16 12 40.7 +0.6**
SMPP San Manuel, Pa 54.87 301 *eP* **P** **16 12 40.4 0.0**
TBJI Tambak Boyo 54.87 271 P **P** **16 12 41.7 +1.2**
comp=Z,14µmcomp=Z,882nm,1.5s
NGJI Ngawi 55.13 271 P **P** **16 12 44.6 +2.2**
comp=Z,35µmcomp=Z,25µmcomp=Z,2µm,1.6s
PCJI Pacitan 55.25 270 P **P** **16 12 44.0 +0.8**
comp=Z,19µmcomp=Z,66µmcomp=Z,6µm,1.3s
APYP Conner 55.28 303 *eP* **P** **16 12 43.3 0.0**
APYP *eS* pP 16 13 36.1 +10
SCZP Santa Cruz 55.32 301 *eP* **P** **16 12 42.5 -1.1**
JOW Kunigami 55.43 317 P **P** **16 12 45.2 +0.9**
JOW IAmb IAmb 16 12 47.0
comp=Z,590nm,0.8s
WOJI Wonogiri, Jawa 55.56 270 P **P** **16 12 46.2 +0.7**
comp=Z,11µmcomp=Z,23µmcomp=Z,2µm,1.5s
BOLP Bolinao 55.62 301 *eP* **P** **16 12 44.8 -1.0**
UWJI Ujung Watu 55.83 272 P **P** **16 12 48.4 +1.0**
comp=Z,1µmcomp=Z,10µmcomp=Z,866nm,1.4s
UGM Wanagama 55.94 270 P **P** **16 12 49.0 +0.8**
comp=Z,21µmcomp=Z,38µmcomp=Z,5µm,1.2s
UGM Wanagama 55.94 270 P **P** **16 12 48.5 +0.3**
YOGI Yogyakarta 56.18 270 P **P** **16 12 50.9 +1.0**
comp=Z,14µmcomp=Z,29µmcomp=Z,3µm,1.1s
SMRI Semarang 56.19 271 P **P** **16 12 51.4 +1.4**
comp=Z,37µmcomp=Z,40µmcomp=Z,3µm,1.3s
SMRI Semarang 56.19 271 P **P** **16 12 50.7 +0.7**
INU Inuyama 56.73 330 P **P** **16 12 53.6 +0.2**
INU IAmb IAmb 16 12 55.7
comp=Z,2µm,1.7s
SBUM Sibu 56.93 282 P **P** **16 12 55.8 +0.6**
SBUM IAmb IAmb 16 12 57.9
comp=Z,510nm,1.3s
STKI Sintang 56.93 279 P **P** **16 12 56.3 +1.1**
comp=Z,19µmcomp=Z,20µmcomp=Z,1µm,1.4s
MJAR Matsushiro Arr 57.16 332 P **P** **16 12 59.0 +2.7**
MJAR Matsushiro Arr 57.16 332 P **P** **16 12 55.9 -0.4**
comp=Z,289nm,0.9s,baz=154,slow=7.1,SNR=531
MJAR Matsushiro Arr 57.16 332 P **P** **16 12 59.0 +2.7**
MAJO Matsushiro 57.16 332*c* *iP* **P** **16 12 56.0 -0.3**
MAJO pmax pmax
comp=Z,922nm,1.4s
MAJO Matsushiro 57.16 332 P **P** **16 12 55.8 -0.5**
MAJO IAmb IAmb 16 12 57.9
comp=Z,1µm,1.4s
MAT Matsushiro 57.16 332 P **P** **16 12 55.9 -0.4**
MAT S **S** **16 20 32.0 -4.3**
MJB9 Matsu-Tunnel 57.16 332 P **P** **16 12 55.9 -0.5**
MJB9 IAmb IAmb 16 12 57.8
comp=Z,1µm,1.3s
KPJI Karang Pucung 57.60 270 P **P** **16 13 00.3 +0.5**
comp=Z,30µmcomp=Z,21µmcomp=Z,2µm,0.9s
YOJ Yonaguni jima 57.61 311 P **P** **16 12 59.8 +0.1**
YOJ pmax pmax
comp=Z,1µm,1.1s
YOJ Yonaguni jima 57.61 311 P **P** **16 12 59.8 +0.1**
YOJ IAmb IAmb 16 13 01.7
comp=Z,1µm,1.1s
CMJI Cimerak 57.98 269 P **P** **16 13 01.9 -0.6**
comp=Z,23µmcomp=Z,2µm,1.4s
TWG Pinlang 58.11 308 P **P** **16 13 01.8 -1.4**
JNU Nakatsue 58.23 324 LR LR 16 35 16.5
comp=Z,3µm,21.9s,baz=141,slow=33
JNU PKPPKP **P'P'df** **16 42 41.2 0.0**
comp=Z,23nm,1.0s,baz=12,slow=9.3,SNR=3.2

JNU	Nakatsue	58.23	324	P	P	16 13 03.8	-0.1
KSM	Kuching	58.45	280	P	P	16 13 05.8	0.0
KSM	Kuching	58.45	280	P	P	16 13 07.0	+1.2
NACB	Ninganchiao	58.49	310	P	P	16 13 05.6	-0.1
CISI	Cisompet, Garu	58.64	270	P	P	16 13 06.6	-0.5
	comp=Z,18µmcomp=Z,38µmcomp=Z,3µm,1.5s						
CISI	Cisompet, Garu	58.64	270	P	P	16 13 06.3	-0.8
TPUB	Ta-pu	58.72	309	P	P	16 13 06.8	-0.7
SSLB	Suanglung	58.74	309	P	P	16 13 07.1	-0.6
SSLB				IAmb	IAmb	16 13 08.7	
	comp=Z,671nm,0.8s						
YHNB	Yeheng	58.94	310	P	P	16 13 08.8	-0.1
LEM	Lembang	58.98	270	P	P	16 13 10.6	+1.0
	comp=Z,2µm,1.0s,baz=53,slow=8.9						
TATO	Taipei	59.03	311	P	P	16 13 09.6	+0.1
CNJI	Cibinong	59.35	270	P	P	16 13 11.8	-0.2
	comp=Z,32µmcomp=Z,3µm,1.4s						
CBJI	Citeko	59.81	271	P	P	16 13 14.8	-0.3
	comp=Z,47µmcomp=Z,4µm,1.4s						
TPI	Tanjungpandan	59.87	275	P	P	16 13 16.6	+1.1
	comp=Z,19µmcomp=Z,13µmcomp=Z,852nm,1.5s						
DBJI	Dramaga	59.88	270	P	P	16 13 15.8	+0.2
	comp=Z,29µmcomp=Z,55µmcomp=Z,4µm,1.4s						
ERM	Erimo	59.89	339	ceP	P	16 13 16.1	+1.1
ERM				pmax	pmax		
	comp=Z,1µm,2.0s						
ERM	Erimo	59.89	339	P	P	16 13 15.7	+0.7
ERM				IAmb	IAmb	16 13 19.7	
	comp=Z,374nm,0.8s						
SKJI	Sukabumi	59.97	270	P	P	16 13 16.2	0.0
	comp=Z,16µmcomp=Z,37µmcomp=Z,4µm,1.1s						
TNG	Tangerang	60.06	271	P	P	16 13 17.3	+0.5
	comp=Z,14µmcomp=Z,35µmcomp=Z,2µm,1.5s						
SBJI	Serang	60.57	271	P	P	16 13 20.4	+0.1
	comp=Z,38µmcomp=Z,3µm,1.4s						
YUK	Yuzh-Kuril'sk	60.85	342	eP	P	16 13 22.2	+0.7
YUK				i *PP	pwP	16 14 09.1	+1.1
YUK				i S	S	16 21 23.5	0.0
YUK				i *SS	SKKSac	16 22 49.8	-3.2
YUK				pmax	pmax		
	comp=Z,2µm,1.0s						
YUK				pmax	pmax		
	comp=N,160nm,0.6s						
YUK				pmax	pmax		
	comp=E,93nm,1.1s						
YUK				pmax	pmax		
	comp=Z,2µm,1.3s						
KNMB	Chin-men Tao	61.06	308	P	P	16 13 23.7	+0.4
KNMB				IAmb	IAmb	16 13 25.5	
	comp=Z,573nm,1.1s						
QZH	Quanzhou	61.17	309	⇑iP	P	16 13 24.6	+0.5
QZH				pP	pP	16 14 07.1	-1.1
QZH				S	S	16 21 25.0	-3.3
QZH				sS	sS	16 22 44.4	-0.1
QZH				pmax	pmax		
	comp=Z,720nm,0.7s						
QZH				pmax	pmax		
	comp=Z,5µm,5.8s						
QZH				LR	LR		
	comp=Z,3µm,17.1s						
QZH				LR	LR		
	comp=Z,2µm,18.9s						
QZH				LR	LR		
	comp=Z,5µm,20.8s						
KUR	Kuril'sk	61.41	344	c iP	P	16 13 26.4	+1.2
KUR				e		16 14 06.4	
KUR				e*PP	pwP	16 14 11.4	-0.6
KUR				e		16 15 41.8	
KUR				i S	S	16 21 31.3	+0.9
KUR				e		16 22 51.9	
KUR				eSSS	SSS	16 28 16.1	
KUR				pmax	pmax		
	comp=Z,3µm,1.5s						
KUR				pmax	pmax		
	comp=N,838nm,1.6s						
KUR				pmax	pmax		
	comp=E,535nm,1.1s						
KUR				pmax	pmax		
	comp=Z,9µm,4.7s						
JKA	Kamikawa-asahi	61.94	340	P	P	16 13 30.1	+1.3
ASAJ	Asahikawa	61.95	340	P	P	16 13 30.1	+1.3
	comp=Z,454nm,0.6s,baz=207,slow=7.2,SNR=304						
ASAJ				LR	LR	16 35 03.1	
	comp=Z,4µm,21.5s,baz=156,slow=31						
KASI	Kota Agung	62.29	271	P	P	16 13 30.9	-0.9
	comp=Z,14µmcomp=Z,26µmcomp=Z,3µm,1.2s						
TJN	Taejon	62.58	324	ceP	P	16 13 33.3	+0.1
PMBI	Palembang	62.62	274	P	P	16 13 35.4	+1.4
	comp=Z,21µmcomp=Z,27µmcomp=Z,2µm,1.4s						
PMBI	Palembang	62.62	274	P	P	16 13 34.6	+0.7
LWLI	Liwa	62.82	271	P	P	16 13 34.9	-0.6
	comp=Z,11µmcomp=Z,1µm,1.1s						
MDSI	Maura Dua	62.83	272	P	P	16 13 34.1	-1.2
	comp=Z,13µmcomp=Z,751nm,1.8s						
SSE	Sheshan	62.91	316	P	P	16 13 35.6	+0.1
SSE				pP	pP	16 14 17.9	-2.3
SSE				sP	sP	16 14 41.2	-0.5
SSE				S	S	16 21 49.4	-0.4
SSE				sS	sS	16 23 05.1	-2.3
SSE				pmax	pmax		
	comp=Z,470nm,1.3s						
SSE				pmax	pmax		
	comp=Z,3µm,4.1s						
SSE	Sheshan	62.91	316	P	P	16 13 35.5	+0.1
KSRS	Korea Array	63.04	326	P	P	16 13 37.0	+0.8
KSRS	Korea Array	63.04	326	P	P	16 13 37.0	+0.8
	comp=Z,202nm,0.8s,baz=139,slow=7.0,SNR=347						
KSRS				LR	LR	16 38 31.6	
	comp=Z,2µm,21.2s,baz=132,slow=33						
KSRS				PKPPKP	P'P'df	16 42 36.9	+3.5
	comp=Z,14nm,1.0s,baz=314,slow=3.2,SNR=14						
KSAR	Wonju Array Be	63.05	325	P	P	16 13 36.3	0.0
KSAR	Wonju Array Be	63.05	325	P	P	16 13 36.3	0.0
KSAR				PcP	PcP	16 14 13.2	+0.9
KS19	Wonju Array Si	63.11	326	P	P	16 13 36.7	0.0
KS19				IAmb	IAmb	16 13 39.8	
	comp=Z,420nm,1.1s						
KS19				PcP	PcP	16 14 13.3	+0.8
HKC	Hong Kong Obse	63.25	304	⇑P	P	16 13 39.0	+1.1
HKPS	Hong Kong Po S	63.26	304	P	P	16 13 38.9	+0.9
DSRI	Dabo	63.42	277	P	P	16 13 40.9	+1.7
DLV	T Lat	63.67	291	P	P	16 13 41.9	+0.9
VNDA	Vanda	63.71	181	P	P	16 13 40.9	+0.8
	comp=Z,579nm,1.2s,baz=356,slow=7.0,SNR=318						
VNDA				PKPPKP	P'P'df	16 42 32.9	0.0
	comp=Z,22nm,1.3s,baz=205,slow=7.0,SNR=7.4						
VNDA	Vanda	63.71	181	P	P	16 13 40.9	+0.8
INCN	Inchon	63.78	325	P	P	16 13 41.7	+0.6
INCN				pmax	pmax		
	comp=Z,918nm,1.1s						
INCN	Inchon	63.78	325	P	P	16 13 41.7	+0.6
INCN				IAmb	IAmb	16 13 43.7	
	comp=Z,918nm,1.1s						
TPRI	Tanjung Pinang	63.84	278	P	P	16 13 43.1	+1.1
	comp=Z,16µmcomp=Z,1µm,1.4s						
SBA	Scott Base	63.98	180	P	P	16 13 43.5	+1.7
SBA				pmax	pmax		
	comp=Z,4µm,1.5s						
SBA	Scott Base	63.98	180	P	P	16 13 43.5	+1.7
MNAI	Manna	64.04	272	P	P	16 13 42.2	-1.1
	comp=Z,20µmcomp=Z,43µmcomp=Z,3µm,1.5s						
MNAI	Manna	64.04	272	P	P	16 13 42.4	-0.9
GZH	Guangzhou	64.30	304	P	P	16 13 45.8	+1.0
GZH				pP	pwP	16 14 31.2	-2.1
GZH				S	S	16 22 08.4	+1.1
GZH				ScS	ScS	16 23 20.5	+0.3
GZH				pmax	pmax		
	comp=Z,6µm,6.4s						
CASY	Casey	64.31	202	P	P	16 13 44.0	-0.1
CASY				PcP	PcP	16 14 18.0	+1.0
YSS	Yuzh-Sakhalins	64.42	342	α iP	P	16 13 47.1	+2.0
YSS				e		16 14 19.2	
YSS				e*PP	pwP	16 14 31.6	-0.5
YSS				e*SP	sP	16 14 53.5	+2.8
YSS				e		16 16 10.7	
YSS				eS	S	16 22 10.3	+2.4
YSS				eSS	SS	16 26 15.0	-7.2
YSS				pmax	pmax		
	comp=E,3µm,3.7s						
YSS	Yuzh-Sakhalins	64.42	342	P	P	16 13 45.8	+0.7
KSI	Kapahiang	64.56	273	P	P	16 13 46.1	-0.7
	comp=E,15µmcomp=E,710nm,1.4s						
MYKOM	Kota Tinggi	64.73	279	P	P	16 13 48.1	+0.4
MYKOM				IAmb	IAmb	16 13 50.4	
	comp=Z,1µm,1.2s						
MYKOM	Kota Tinggi	64.73	279	P	P	16 13 49.0	+1.2
TEY	Ternei	64.90	336	⇑iP	P	16 13 49.4	+1.2
TEY				e		16 22 10.6	
TEY				pmax	pmax		
	comp=N,140nm,2.1s						
TEY				pmax	pmax		
	comp=Z,400nm,2.1s						
TEY				pmax	pmax		
	comp=E,800nm,2.1s						
TEY				pmax	pmax		
	comp=Z,3µm,2.2s						
TEY				smax	smax		
	comp=E,300nm,10.8s						
TEY				smax	smax		
	comp=N,400nm,11.0s						
SKR	Severo-Kuril's	65.02	352	eP	P	16 13 49.6	+0.8
SKR				e*PP	pP	16 14 33.6	0.0
SKR				eS	S	16 22 13.7	-1.3
SKR				pmax	pmax		
	comp=Z,588nm,0.9s						
SKR				pmax	pmax		
	comp=Z,4µm,9.0s						
SKR				pmax	pmax		
	comp=Z,2µm,10.0s						
SKR				MLR	MLR		
	comp=Z,2µm,17.0s						
SKR				MLR	MLR		
	comp=Z,2µm,18.0s						
NJ2	Nanjing	65.07	316	eP	P	16 13 50.2	+0.6
NJ2				PcP	PcP	16 14 21.2	+0.5
NJ2				pP	pP	16 14 34.5	-0.5
NJ2				sP	sP	16 14 56.3	+0.3
NJ2				S	S	16 22 15.6	-0.8
NJ2				sS	sS	16 23 30.2	-3.2
NJ2				SS	SS	16 26 38.4	+5.6
NJ2				pmax	pmax		
	comp=Z,1µm,1.1s						
NJ2				pmax	pmax		
	comp=Z,6µm,4.8s						
NJ2				LR	LR		
	comp=Z,7µm,17.7s						
NJ2				LR	LR		
	comp=Z,5µm,17.1s						
NJ2				LR	LR		
	comp=Z,6µm,20.2s						
MSHR	Mys Shultsa	65.24	331	c iP	P	16 13 51.0	+0.6
VLA	Vladivostok	65.33	332	c iP	P	16 13 51.9	+0.9
VLA				pmax	pmax		
	comp=Z,2µm,1.7s						
QIZ	Qiongzhong	65.33	299	P	P	16 13 52.7	+1.2
QIZ				pP	pP	16 14 37.3	+1.4
QIZ				PP	PP	16 16 16.0	-2.0
QIZ				S	S	16 22 21.8	+1.8
QIZ				sS	SKiKP	16 23 42.0	+1.6
QIZ				pmax	pmax		
	comp=Z,630nm,1.3s						
QIZ				pmax	pmax		
	comp=Z,4µm,10.8s						
QIZ	Qiongzhong	65.33	299	P	P	16 13 52.3	+0.8
RGRI	Rengat	65.62	276	P	P	16 13 55.5	+2.0
KRJI	Kerinci	66.03	274	P	P	16 13 55.6	-0.6
	comp=Z,15µmcomp=Z,22µmcomp=Z,2µm,1.2s						
USA0B	Ussuriysk Arra	66.13	333	c iP	P	16 13 57.2	+1.1
USA0B	Ussuriysk Arra	66.13	333	P	P	16 13 56.9	+0.8
USRK	Ussuriysk Ar.	66.13	333	P	P	16 13 57.3	+1.2
	comp=Z,415nm,0.9s,baz=133,slow=4.2,SNR=352						
USRK				PKPPKP		16 42 25.7	
	comp=Z,6.3nm,0.9s,baz=277,slow=3.3,SNR=6.9						
USRK	Ussuriysk Ar.	66.13	333	P	P	16 13 56.6	+0.5
SDSI	Sungai Dareh	66.34	275	P	P	16 13 58.0	-0.1
	comp=Z,23µmcomp=Z,11µmcomp=Z,565nm,1.4s						
SMY	Shemya	66.59	5	P	P	16 13 59.7	+0.9
SMY				pmax	pmax		
	comp=Z,3µm,2.0s						
SMY	Shemya	66.59	5	P	P	16 13 59.7	+0.9
JRMM	Jerantut	66.64	280	P	P	16 14 01.0	+1.0
KIWB	Kanaga Island	66.84	10	P	P	16 14 01.1	+0.7
KIWB				pP	pP	16 14 45.1	-0.1
ADK	Adak	66.95	11	P	P	16 14 01.6	+0.5
ADK				*PP	pP	16 14 45.6	-0.3
ADK	Adak	66.95	11	P	P	16 14 01.6	+0.5
ADK				pP	pP	16 14 45.6	-0.3
ADK				IAmb	IAmb	16 14 48.9	
	comp=Z,2µm,1.6s						
PET	Petropavlovsk	67.04	354	α iP	P	16 14 02.2	+0.6
PET				e*PP	pP	16 14 45.8	-0.9
PET				eS	S	16 22 40.3	+1.0
PET				pmax	pmax		
	comp=Z,942nm,1.4s						
PET				pmax	pmax		
	comp=Z,4µm,15.5s						
PET				pmax	pmax		
	comp=Z,4µm,12.5s						
PET				smax	smax		
	comp=N,6µm,9.4s						
PET				smax	smax		
	comp=E,3µm,8.0s						
PET	Petropavlovsk	67.04	354	P	P	16 14 02.2	+0.6
PET				IAmb	IAmb	16 14 04.2	
	comp=Z,2µm,1.4s						
BKNI	Bangkinang	67.04	276	P	P	16 14 03.3	+0.8
	comp=Z,22µmcomp=Z,42µmcomp=Z,3µm,1.4s						
BKNI	Bangkinang	67.04	276	P	P	16 14 03.0	+0.4
PEA0B	Petropavlovsk-	67.22	354	P	P	16 14 03.8	+1.0
PEA0B				pmax	pmax		
	comp=Z,4µm,1.7s						
PEA0B	Petropavlovsk-	67.22	354	P	P	16 14 03.8	+1.0
PETK	Petropavlovsk-	67.22	354	P	P	16 14 03.5	+0.8
	comp=Z,514nm,0.8s,baz=134,slow=6.3,SNR=452						
PETK				PKiKP	PKiKP	16 20 27.2	+0.1
	comp=Z,6.6nm,0.8s,baz=107,slow=3.6,SNR=9.7						
PETK	Petropavlovsk-	67.22	354	P	P	16 14 03.1	+0.3
GSTR	Great Sitkin T	67.27	11	P	P	16 14 03.5	+0.3
GSTR				pP	pP	16 14 47.1	-0.9
PPSI	Pulau Pagai	67.27	273	P	P	16 14 04.9	+0.9
	comp=Z,39µmcomp=Z,3µm,1.5s						
PDSI	Padang	67.28	275	P	P	16 14 02.4	-1.7
	comp=Z,10µmcomp=Z,5µmcomp=Z,429nm,1.1s						
WHN	Wuhan	67.38	312	P	P	16 14 04.5	+0.2
WHN				pP	pP	16 14 50.4	+1.0
WHN				S	S	16 22 41.7	-2.6
WHN				SS	SS	16 27 08.4	-0.2
WHN				pmax	pmax		
	comp=Z,5µm,1.5s						
WHN				pmax	pmax		
	comp=Z,9µm,10.7s						
WHN				LR	LR		
	comp=Z,11µm,22.6s						
WHN				LR	LR		
	comp=Z,6µm,15.9s						
WHN				LR	LR		
	comp=Z,10µm,23.0s						
MDJ	Mudanjiang	67.53	332	P	P	16 14 06.3	+1.3
MDJ				pP	pP	16 14 51.6	+1.2
MDJ				sP	sP	16 15 11.7	+0.7
MDJ				PP	PP	16 16 38.0	+1.3
MDJ				S	S	16 22 48.9	+3.3
MDJ				ScS	SKiKP	16 23 42.6	-0.1
MDJ				SS	SS	16 27 15.6	+5.0
MDJ				pmax	pmax		
	comp=Z,1µm,1.0s						
MDJ				pmax	pmax		
	comp=Z,9µm,3.5s						
MDJ	Mudanjiang	67.53	332	P	P	16 14 05.7	+0.8
DL2	Dalian	67.62	323	⇑P	P	16 14 06.4	+0.8
DL2				pP	pP	16 14 48.8	-2.4
DL2				PP	PP	16 16 36.2	-1.4
DL2				S	S	16 22 46.4	-0.5
DL2				ScS	ScS	16 23 46.2	+0.9
DL2				sS	sS	16 24 02.6	-0.9
DL2				pmax	pmax		
	comp=Z,2µm,0.8s						
DL2				pmax	pmax		
	comp=Z,7µm,4.7s						
UBPT	Khong Chiam	67.64	293	P	P	16 14 06.5	+0.3
UBPT				IAmb	IAmb	16 14 08.9	
	comp=Z,1µm,1.3s						
ATKA	Atka Island	67.74	12	P	P	16 14 05.8	-0.3
ATKA				IAmb	IAmb	16 14 53.3	
	comp=Z,1µm,1.5s						
TYV	Tymovskoe	67.97	343	eP	P	16 14 09.2	+1.7
TYV				eS	S	16 22 50.9	+0.5
TYV				pmax	pmax		
	comp=Z,782nm,1.6s						
TYV				pmax	pmax		
	comp=Z,7µm,6.3s						
TYV				smax	smax		
	comp=N,37nm,2.1s						
IPM	Ipoh	68.19	281	P	P	16 14 09.7	-0.1
IPM	Ipoh	68.19	281	P	P	16 14 11.0	+1.2
SNY	Shenyang	68.50	326	⇑P	P	16 14 09.1	-1.9
SNY				pP	pP	16 14 52.4	-4.1
SNY				sP	sP	16 15 18.3	+1.0
SNY				S	S	16 22 56.3	-0.8
SNY				sS	sS	16 24 14.8	+0.1
SNY				pmax	pmax		
	comp=N,550nm,1.4s						
SNY				LR	LR		
	comp=N,3µm,17.4s						
SNY				LR	LR		
	comp=N,3µm,24.2s						
SNY				LR	LR		
	comp=N,4µm,19.2s						
SISI	Saibi	68.51	274	P	P	16 14 12.1	+0.4
	comp=N,14µmcomp=N,10µmcomp=N,676nm,1.3s						
TIA	Tai'an	68.71	318	P	P	16 14 12.6	+0.1
TIA				S	S	16 22 58.1	-1.8
TIA				pmax	pmax		
	comp=N,1µm,0.9s						
TIA				pmax	pmax		
	comp=N,5µm,12.8s						
TIA				LR	LR		
	comp=N,3µm,20.6s						
TIA				LR	LR		
	comp=N,3µm,18.6s						
TIA				LR	LR		
	comp=N,7µm,25.0s						
KULM	Kulim	68.78	281	P	P	16 14 13.5	+0.1
KULM	Kulim	68.78	281	P	P	16 14 14.0	+0.6
CN2	Changchun	68.92	329	eP	P	16 14 14.2	+0.6
CN2				esP	sP	16 15 24.5	+4.5
CN2				ePP	PP	16 16 51.9	+3.2
CN2				eS	S	16 23 00.9	-1.1
CN2				eSS	SS	16 27 33.1	+1.1
CN2				pmax	pmax		
	comp=N,1µm,1.3s						
CN2				pmax	pmax		
	comp=N,8µm,5.0s						
CN2				LR	LR		
	comp=N,3µm,21.0s						
CN2				LR	LR		
	comp=N,4µm,21.0s						
CN2				LR	LR		
	comp=N,3µm,22.0s						
NIKH	Nikolski High	69.68	15	P	P	16 14 17.9	-0.1
RPSI	Rantau Prapat	69.71	278	P	P	16 14 18.7	-0.4
RPSI	Rantau Prapat	69.71	278	P	P	16 14 19.1	+0.1
PSI	Prapat	69.74	278	P	P	16 14 19.2	-0.3
	comp=N,638nm,0.9s,baz=135,slow=5.5,SNR=420						
PSI				PKPPKP		16 42 20.4	
	comp=N,4.8nm,0.9s,baz=239,slow=4.9,SNR=6.6						
GRNR	Gornyy	69.80	340	⇑iP	P	16 14 21.2	+2.4
GRNR				eS	S	16 23 15.8	+3.7
GRNR				eSS	SS	16 27 50.4	+5.2
GRNR				pmax	pmax		
	comp=Z,1µm,1.2s						
GRNR				smax	smax		
	comp=E,10.0nm,1.2s						
NKL	Nikolayevsk	70.56	343	eP	P	16 14 23.3	0.0
NKL				eS	S	16 23 19.4	-1.3
NKL				pmax	pmax		
	comp=Z,1µm,1.0s						
NKL				pmax	pmax		
	comp=E,27nm,0.9s						
NKL				pmax	pmax		
	comp=N,3.0nm,0.6s						
NKL				pmax	pmax		
	comp=Z,702nm,2.1s						
NKL				smax	smax		
	comp=E,35nm,3.0s						
NKL				smax	smax		
	comp=N,12nm,2.7s						
GSI	Gunungsitoli	70.64	276	P	P	16 14 24.9	+0.1
	comp=N,21µmcomp=N,29µmcomp=N,2µm,1.4s						
GSI	Gunungsitoli	70.64	276	P	P	16 14 25.1	+0.3
ENH	Enshi	70.83	309	P	P	16 14 25.5	-0.1
KCSI	Kotacane, Aceh	71.04	279	P	P	16 14 26.1	-1.1
	comp=N,16µmcomp=N,13µmcomp=N,846nm,1.7s						
UNV	Unalaska Valle	71.08	16	P	P	16 14 25.6	-0.8
UNV				pP	pP	16 15 11.5	-0.3
GYA	Guiyang	71.24	304	⇑iP	P	16 14 28.8	+0.6
GYA				pP	pP	16 15 12.0	-1.9
GYA				sP	sP	16 15 34.1	-0.4
GYA				PP	PP	16 17 09.5	+0.4
GYA				S	S	16 23 26.0	-3.9
GYA				sS	sS	16 24 45.9	-2.1
GYA				SS	SS	16 28 07.4	-1.0
GYA				pmax	pmax		
	comp=N,850nm,1.3s						
GYA				pmax	pmax		
	comp=N,4µm,7.0s						
GYA				LR	LR		
	comp=N,6µm,20.7s						
GYA				LR	LR		
	comp=N,6µm,14.3s						
GYA				LR	LR		
	comp=N,5µm,20.9s						
SLVN	Son La	71.36	298	P	P	16 14 29.5	+0.5
SLVN				IAmb	IAmb	16 14 32.1	
	comp=Z,2µm,1.8s						
AKUT	Akutan	71.53	16	P	P	16 14 28.9	-0.3
AKUT				IAmb	IAmb	16 15 18.4	
	comp=Z,1µm,1.7s						
TPTI		71.54	278	P	P	16 14 29.8	-0.3
	comp=Z,6µmcomp=Z,3µmcomp=Z,158nm,1.5s						
BJT	Baijiatuau	71.60	321	P	P	16 14 30.4	+0.4
BJT				pmax	pmax		
	comp=Z,2µm,1.6s						
BJT	Baijiatuau	71.60	321	P	P	16 14 30.4	+0.4
BJI	Beijing	71.61	321	P	P	16 14 30.8	+0.8
BJI				S	S	16 23 28.1	-5.2
BJI				SKS	SKSac	16 24 13.7	-1.0
BJI				sS	sS	16 24 52.1	+1.3
BJI				pmax	pmax		
	comp=Z,750nm,1.4s						
SNSI	Sinabang, Aceh	72.13	277	P	P	16 14 34.9	+1.2
	comp=Z,26µmcomp=Z,2µm,1.4s						
LHMI	Lhok Sumawe	72.30	280	P	P	16 14 36.3	+1.6
	comp=Z,25µmcomp=Z,24µmcomp=Z,2µm,1.4s						
LHMI	Lhok Sumawe	72.30	280	P	P	16 14 35.3	+0.6
MLSI	Meulaboh, Aceh	72.55	279	P	P	16 14 36.2	0.0
	comp=Z,16µmcomp=Z,33µmcomp=Z,4µm,1.1s						
TIY	Taiyuan	72.64	317	eP	P	16 14 37.5	+1.2
TIY				pP	pP	16 15 18.5	-3.9
TIY				sP	sP	16 15 47.9	+4.7
TIY				S	S	16 23 45.1	-0.3
TIY				sS	sS	16 25 10.1	+6.8
TIY				pmax	pmax		
	comp=Z,2µm,1.1s						
TIY				LR	LR		
	comp=Z,4µm,17.3s						
TIY				LR	LR		
	comp=Z,1µm,12.3s						
TIY				LR	LR		
	comp=Z,3µm,17.9s						
XAN	Xi'an	73.12	312	P	P	16 14 39.7	+0.6
XAN				PcP	PcP	16 14 55.9	+1.2
XAN				pP	pP	16 15 25.6	+0.1
XAN				S	S	16 23 43.5	-7.4
XAN				ScS	SKSac	16 24 23.2	-3.4
XAN				SS	SS	16 28 36.8	+0.1
XAN				pmax	pmax		
	comp=Z,920nm,1.3s						
XAN				pmax	pmax		
	comp=Z,7µm,3.3s						
XAN	Xi'an	73.12	312	P	P	16 14 39.6	+0.4
XAN				pmax	pmax		
	comp=Z,817nm,1.0s						
XAN	Xi'an	73.12	312	P	P	16 14 39.6	+0.4
XAN				IAmb	IAmb	16 14 40.9	
	comp=Z,817nm,1.0s						
KMI	Kunming	73.86	302	P	P	16 14 45.3	+1.4
KMI				pP	pwP	16 15 32.0	-1.3
KMI				sP	sP	16 15 52.8	+2.9
KMI				S	SKiKP	16 23 54.9	+2.0
KMI				sS	sS	16 25 24.2	+5.6
KMI				pmax	pmax		
	comp=Z,2µm,1.2s						
KMI				pmax	pmax		
	comp=Z,7µm,3.8s						

KMI LR LR
comp=Z,3μm,20.9s
KMI LR LR
comp=Z,4μm,22.2s
KMI LR LR
comp=Z,6μm,24.2s
KMI Kunming 73.86 302 P **P** **16 14 45.0 +1.1**
KMI pmax pmax
comp=Z,3μm,1.3s
KMI Kunming 73.86 302 P **P** **16 14 45.0 +1.1**
MA2 Magadan 74.41 351 *ce* P **P** **16 14 46.3 +0.3**
MA2 pmax pmax
comp=Z,1μm,1.9s
MA2 Magadan 74.41 351 P **P** **16 14 46.6 +0.6**
comp=Z,220nm,0.8s,baz=150,slow=5.2,SNR=84
MA2 LR LR 16 42 56.9
comp=Z,2μm,20.4s,baz=166,slow=32
MA2 Magadan 74.41 351 P **P** **16 14 45.9 -0.1**
MA2 IAmb IAmb 16 14 49.1
comp=Z,423nm,0.9s
CM31 Chiang Mai Arr 74.61 294 P **P** **16 14 48.9 +0.9**
CMAR Chiang Mai Arr 74.61 294 P **P** **16 14 49.8 +1.8**
comp=Z,483nm,0.9s,baz=133,slow=5.0,SNR=1762
CMAR PKiKP **PKiKP** **16 20 39.4 +0.7**
comp=Z,5.2nm,0.7s,baz=208,slow=0.8,SNR=8.6
CMAR PKKPbc **PKKPbc** **16 34 13.3 -0.2**
comp=Z,1.5nm,1.0s,baz=285,slow=3.5,SNR=4.1
CMAR PKPPKP **P'P'df** **16 42 15.8 -0.2**
comp=Z,3.0nm,1.0s,baz=277,slow=4.8,SNR=7.4
CMAR Chiang Mai Arr 74.61 294 P **P** **16 14 49.1 +1.1**
CHTO Chiang Mai 74.73 294 P **P** **16 14 49.7 +1.0**
CHTO pmax pmax
comp=Z,2μm,1.4s
CHTO Chiang Mai 74.73 294 P **P** **16 14 49.7 +1.0**
HHC Hu-ho-hao-te 74.94 320 *e* P **P** **16 14 52.9 +3.3**
HHC PP **PP** **16 17 47.4 +7.1**
HHC S **S** **16 24 13.6 +2.5**
HHC pmax pmax
comp=Z,230nm,1.4s
HHC pmax pmax
comp=Z,2μm,6.2s
HHC LR LR
comp=Z,3μm,21.0s
HHC LR LR
comp=Z,1μm,16.9s
HHC LR LR
comp=Z,2μm,18.1s
CD2 Chengdu 75.50 307 ⇑ *i* P **P** **16 14 53.0 +0.1**
CD2 pP pP 16 15 36.1 -3.4
CD2 sP sP 16 15 59.2 -1.0
CD2 PP **PP** **16 17 44.5 -0.6**
CD2 S **S** **16 24 16.9 -0.6**
CD2 SKS **SKSac** **16 24 42.5 -2.0**
CD2 sS sS 16 25 33.8 -2.6
CD2 pmax pmax
comp=Z,2μm,1.5s
CD2 pmax pmax
comp=Z,8μm,10.8s
ZEA Zeya 75.52 337 *c i* P **P** **16 14 53.8 +1.4**
ZEA *e**PP **pP** **16 15 38.5 -0.1**
ZEA *e* 16 17 48.0
ZEA *e*S **S** **16 24 11.0 -5.6**
ZEA *e*PS 16 25 10.0
ZEA pmax pmax
comp=N,2μm,1.6s
ZEA pmax pmax
comp=Z,3μm,1.8s
ZEA pmax pmax
comp=N,4μm,8.0s
ZEA pmax pmax
comp=Z,8μm,8.0s
ZEA smax smax
comp=E,6μm,13.0s
ZEA smax smax
comp=N,7μm,12.0s
HIA Hailar 75.55 330 P **P** **16 14 53.1 +0.3**
HIA pmax pmax
comp=Z,2μm,1.4s
HIA Hailar 75.55 330 P **P** **16 14 53.1 +0.3**
HIA IAmb IAmb 16 14 55.3
comp=Z,2μm,1.4s
BTO Baotou 75.79 319 *e* P **P** **16 14 56.3 +1.8**
QSPA South Pole Qui 76.14 180 PKKPbc PKKPbc 16 34 08.4 -4.0
comp=Z,7.1nm,0.5s,baz=287,slow=1.3,SNR=23
QSPA South Pole Qui 76.14 180 P **P** **16 14 56.8 +0.6**
SII Sitkinak Islan 77.17 21 P **P** **16 15 01.3 -0.4**
SII IAmb IAmb 16 15 52.5
comp=Z,1μm,1.3s
SEY Seymchan 77.44 353 *c i* P **P** **16 15 03.3 +0.3**
SEY Seymchan 77.44 353 P **P** **16 15 03.9 +0.8**
comp=Z,739nm,1.1s,baz=154,slow=5.5,SNR=432
SEY PKPPKP **P'P'df** **16 42 09.3 +1.9**
comp=Z,9.0nm,1.0s,baz=144,slow=1.0,SNR=5.3
LZH Lanzhou 77.75 312 ⇑ P **P** **16 15 07.3 +1.7**
LZH pP pP 16 15 52.2 -0.2
LZH sP sP 16 16 15.5 +2.5
LZH S **S** **16 24 42.3 +0.3**
LZH sS sS 16 26 03.2 +2.0
LZH SS **SS** **16 29 51.2 +4.2**
LZH pmax pmax
comp=Z,2μm,1.3s
LZH pmax pmax
comp=Z,10μm,6.5s
LZH LR LR
comp=Z,3μm,16.5s
LZH LR LR
comp=Z,4μm,16.0s
LZH LR LR
comp=Z,6μm,20.1s
OHAK Old Harbor 78.00 21 P **P** **16 15 06.2 0.0**
OHAK IAmb IAmb 16 15 57.2
comp=Z,1μm,1.3s
PBA Port Blair 78.11 285 P P 16 15 07.5 -0.4
KDAK Kodiak Island 78.67 21 P **P** **16 15 10.2 +0.3**
KDAK pmax pmax
comp=Z,572nm,1.3s
KDAK Kodiak Island 78.67 21 P **P** **16 15 10.2 +0.3**
KDAK IAmb IAmb 16 16 05.7
comp=Z,572nm,1.2s
GAMB Gambell 79.09 9 P **P** **16 15 12.4 +0.3**
SVW2 Sparrevohn 80.34 17 P **P** **16 15 19.4 +0.5**
SVW2 IAmb IAmb 16 16 11.2
comp=Z,708nm,1.4s
CIT Chita 80.34 330 *e* P **P** **16 15 20.6 +1.4**
CIT *e* 16 16 07.5
CIT *e* 16 16 31.9
CIT *e* 16 18 21.2
CIT *e*S **S** **16 25 09.3 +0.8**
SIMRM Sittwe 80.56 293 P **P** **16 15 22.9 +1.9**
SIMRM IAmb IAmb 16 15 25.0
comp=Z,2μm,1.5s
RSO Redoubt South 80.69 19 P **P** **16 15 20.0 -1.0**
RSO pP **pP** **16 16 06.7 -1.0**
BRLK Bradley Lake 80.76 20 P **P** **16 15 21.3 +0.1**
BRLK IAmb IAmb 16 16 14.6
comp=Z,580nm,1.2s
YAK Yakutsk 81.22 343 *c i* P **P** **16 15 24.3 +0.8**
YAK *e**PP **pwP** **16 16 14.6 +2.0**
YAK *e* 16 18 36.4
YAK *e*S **S** **16 25 15.4 -1.5**
YAK *e**SS **sS** **16 26 35.3 -3.4**
YAK *e*SS **SS** **16 30 34.1 -3.2**
YAK *e*SSS SSS 16 34 08.9
YAK pmax pmax
comp=Z,1μm,1.0s
YAK pmax pmax
comp=E,595nm,1.5s
YAK pmax pmax
comp=N,872nm,1.4s
YAK pmax pmax
comp=Z,360nm,1.8s
YAK pmax pmax
comp=E,385nm,1.8s
YAK pmax pmax
comp=N,310nm,1.8s
YAK smax smax
comp=E,400nm,2.2s
YAK smax smax
comp=N,705nm,2.8s
YAK Yakutsk 81.22 343 P **P** **16 15 24.3 +0.8**
comp=N,440nm,0.8s,baz=185,slow=0.5,SNR=508
YAK PKKPbc **PKKPbc** **16 33 58.1 -3.3**
comp=N,11nm,0.6s,baz=262,slow=1.1,SNR=11
YAK PKPPKP **P'P'df** **16 42 01.3 +0.5**
comp=N,3.9nm,0.7s,baz=260,slow=2.4,SNR=15

YAK Yakutsk 81.22 343 P **P** **16 15 23.7 +0.3**
ULN Ulaanbaatar 81.45 324 P **P** **16 15 26.0 +0.7**
ULN pmax pmax
comp=Z,5μm,2.0s
ULN Ulaanbaatar 81.45 324 P **P** **16 15 26.0 +0.7**
SEW Seward 81.49 20 P **P** **16 15 26.1 +1.2**
SEW IAmb IAmb 16 16 16.2
comp=Z,817nm,1.4s
BILL Bilibino 81.70 360 *ce* P **P** **16 15 25.7 -0.2**
BILL pmax pmax
comp=Z,2μm,1.4s
BILL MLR MLR
comp=Z,2μm,19.0s
BILL Bilibino 81.70 360 P **P** **16 15 26.4 +0.5**
SONM Songino Array 81.82 324 P **P** **16 15 27.6 +0.4**
comp=Z,312nm,1.1s,baz=142,slow=4.2,SNR=822
SONM PKiKP **PKiKP** **16 20 49.5 +0.5**
comp=Z,6.0nm,0.8s,baz=146,slow=0.7,SNR=8.5
SONM PKKPbc **PKKPbc** **16 33 57.5 -1.9**
comp=Z,8.7nm,0.9s,baz=288,slow=3.3,SNR=11
SONM PKPPKP 16 41 58.1
comp=Z,4.7nm,1.0s,baz=269,slow=0.8,SNR=11
SONM LR LR 16 50 01.9
comp=Z,2μm,21.9s,baz=118,slow=34
SONM Songino Array 81.82 324 P **P** **16 15 27.0 -0.1**
GTA Gaotai 82.08 314 P **P** **16 15 29.9 +1.2**
GTA pP pP 16 16 16.7 +0.6
GTA sP sP 16 16 36.5 -0.2
GTA PP **PP** **16 18 40.4 +0.6**
GTA S **S** **16 25 26.7 -0.4**
GTA SKS **SKSac** **16 25 28.4 -2.4**
GTA sS sS 16 26 47.9 +1.8
GTA pmax pmax
comp=Z,920nm,1.8s
GTA pmax pmax
comp=Z,8μm,5.6s
GTA LR LR
comp=Z,1μm,18.1s
GTA LR LR
comp=Z,3μm,18.7s
GTA LR LR
comp=Z,3μm,18.1s
SUA Susitna One 82.09 19 P **P** **16 15 28.1 -0.1**
SUA IAmb IAmb 16 16 19.0
comp=Z,1μm,1.4s
RC01 Rabbit Creek A 82.13 20 P **P** **16 15 28.6 +0.3**
RC01 IAmb IAmb 16 16 19.7
comp=Z,1μm,1.5s
SKT Skwentna 82.24 18 P **P** **16 15 28.8 -0.1**
MAW Mawson 82.67 202 P **P** **16 15 32.0 +0.9**
baz=83,SNR=431
MAW Mawson 82.67 202 P **P** **16 15 31.9 +0.9**
comp=Z,807nm,1.0s,baz=106,slow=6.4,SNR=279
MAW LR LR 16 46 22.0
comp=Z,5μm,21.5s,baz=92,slow=31
MAW Mawson 82.67 202 P **P** **16 15 31.9 +0.8**
MAW IAmb IAmb 16 15 34.1
comp=Z,732nm,1.5s
PMR Palmer 82.70 19 P **P** **16 15 31.3 +0.1**
PMR *PP **pP** **16 16 18.0 -0.1**
PMR Palmer 82.70 19 P **P** **16 15 31.3 +0.1**
PMR pP **pP** **16 16 18.0 -0.1**
PMR IAmb IAmb 16 16 22.4
comp=Z,2μm,1.6s
HIN Hinchinbrook I 82.72 21 P **P** **16 15 31.2 -0.2**
HIN IAmb IAmb 16 16 23.5
comp=Z,1μm,1.4s
PPLA Purkeypile 82.75 17 P **P** **16 15 30.7 -0.9**
KNK Knik Glacier 82.79 20 P **P** **16 15 32.1 +0.4**
KNK IAmb IAmb 16 16 23.2
comp=Z,1μm,1.5s
GLI Glacier Island 82.86 21 P **P** **16 15 31.8 -0.3**
GLI pP **pP** **16 16 18.8 -0.1**
GLI IAmb IAmb 16 16 24.0
comp=Z,1μm,1.4s
GHO Glory Hole Cre 82.90 19 P **P** **16 15 32.6 +0.2**
GHO IAmb IAmb 16 16 23.6
comp=Z,1μm,1.6s
FID Port Fidalgo 82.98 21 P **P** **16 15 32.4 -0.3**
FID IAmb IAmb 16 16 24.5
comp=Z,2μm,1.5s
EYAK Cordova Ski Ar 83.09 21 P **P** **16 15 33.5 +0.3**
EYAK IAmb IAmb 16 16 25.5
comp=Z,977nm,1.4s
SML Sawmill 83.12 20 P **P** **16 15 33.4 0.0**
SML IAmb IAmb 16 16 25.7
comp=Z,1μm,1.3s
SHL Shillong 83.17 298 P **P** **16 15 34.8 +0.1**
SHL pmax pmax
comp=Z,5μm,1.5s
SHL Shillong 83.17 298 P **P** **16 15 34.8 +0.1**
MCCM Marconi Confer 83.27 48 P **P** **16 15 35.0 +0.3**
RAGM Ragged Mountai 83.36 22 P **P** **16 15 35.4 +0.7**
RAGM pP **pP** **16 16 20.8 -0.7**
RAGM IAmb IAmb 16 16 27.1
comp=Z,2μm,1.5s
KCPM Cahto Peak 83.38 47 P **P** **16 15 35.7 +0.2**
KCPM IAmb IAmb 16 16 26.4
comp=Z,788nm,1.3s
SCM Sheep Creek Mo 83.47 20 P **P** **16 15 35.6 +0.3**
SCM pmax pmax
comp=Z,3μm,1.7s
SCM Sheep Creek Mo 83.47 20 P **P** **16 15 35.6 +0.3**
HOPS Hopland Field 83.47 47 P **P** **16 15 36.2 +0.5**
HOPS IAmb IAmb 16 16 26.5
comp=Z,778nm,1.4s
HMT Hamilton 83.48 22 P **P** **16 15 35.2 0.0**
HMT IAmb IAmb 16 16 27.7
comp=Z,2μm,1.5s
KMRM Mail Ridge 83.51 46 P **P** **16 15 36.4 +0.4**
KMRM IAmb IAmb 16 16 27.2
comp=Z,852nm,1.3s
JCC Jacoby Creek, 83.53 45 P **P** **16 15 36.5 +0.6**
JCC IAmb IAmb 16 16 27.2
comp=Z,782nm,1.4s
GDXM Geysers 83.59 48 P **P** **16 15 36.9 +0.5**
KTH Kantishna Hill 83.62 17 P **P** **16 15 34.6 -1.4**
BOD Bodaibo 83.71 334 ⇓ *i* P **P** **16 15 36.7 +0.2**
BOD pmax pmax
comp=Z,1μm,1.8s
TRF Thorofare Moun 83.73 18 P **P** **16 15 35.8 -0.9**
TRF IAmb IAmb 16 16 27.1
comp=Z,1μm,1.6s
KHMM Horse Mountain 83.77 45 P **P** **16 15 38.5 +1.1**
KHMM IAmb IAmb 16 16 28.6
comp=Z,624nm,1.4s
SAO San Andreas Ge 83.78 50 P **P** **16 15 37.9 +0.5**
SAO pmax pmax
comp=Z,308nm,1.3s
SAO San Andreas Ge 83.78 50 P **P** **16 15 37.9 +0.5**
KRMB Red Mountain 83.91 45 P **P** **16 15 38.6 +0.6**
KRMB IAmb IAmb 16 16 29.3
comp=Z,751nm,1.5s
SNCC San Nicolas Is 83.97 54 P **P** **16 15 39.2 +0.8**
SNCC IAmb IAmb 16 16 29.6
comp=Z,558nm,1.2s
SNCC San Nicolas Is 83.97 54 P **P** **16 15 39.1 +0.8**
baz=249
KBO Bosley Butte 83.98 44 P **P** **16 15 39.4 +1.0**
KBO IAmb IAmb 16 16 29.5
comp=Z,780nm,1.5s
BPAW Bear Paw Mtn. 84.02 17 P **P** **16 15 37.2 -0.8**
BPAW IAmb IAmb 16 15 39.3
comp=Z,999nm,2.0s
PMPB Monarch Peak 84.06 51 P **P** **16 15 39.6 +0.7**
PMPB IAmb IAmb 16 16 30.2
comp=Z,633nm,1.4s
RND Reindeer 84.13 18 P **P** **16 15 38.3 -0.3**
RND pmax pmax
comp=Z,3μm,1.8s
RND Reindeer 84.13 18 P **P** **16 15 38.3 -0.3**
O02D Mt. Diablo Mer 84.14 46 P **P** **16 15 40.2 +1.0**
baz=246,SNR=113
SCZ2 Santa Cruz Isl 84.14 53 P **P** **16 15 39.6 +0.3**
baz=249,SNR=8.1
CRQM Cirque 84.17 22 P **P** **16 15 39.3 +0.3**
CRQM pP **pP** **16 16 25.7 -0.2**
CRQM IAmb IAmb 16 16 28.2
comp=Z,1μm,1.3s
KEBM Edson Butte 84.18 43 P **P** **16 15 40.2 +0.9**
SBC Santa Barbara 84.24 53 P **P** **16 15 40.3 +0.6**
baz=249
TGL Tana Glacier 84.28 22 P **P** **16 15 39.8 +0.4**
TGL IAmb IAmb 16 16 28.7
comp=Z,1μm,1.4s

DIB Dawson Inlet, 84.29 32 P **P** **16 15 40.0 +0.5**
DIB IAmb IAmb 16 16 31.5
comp=Z,868nm,1.3s
H02S1 DAWSON INLET T 84.29 32 P **P** **16 15 40.9 +1.5**
SNR=87
PAGB Antelope Grade 84.30 51 P **P** **16 15 40.2 +0.2**
PKM Mcpherson Peak 84.33 52 P **P** **16 15 41.0 +0.6**
baz=249,SNR=19
SMMC Simmler 84.34 52 P **P** **16 15 41.0 +0.7**
baz=249,SNR=9.1
DHY Denali Highway 84.35 19 P **P** **16 15 39.4 -0.4**
DHY pP **pP** **16 16 26.2 -0.6**
DHY IAmb IAmb 16 16 28.9
comp=Z,1μm,1.4s
MCK McKinley 84.35 18 P **P** **16 15 38.6 -1.0**
MCK pmax pmax
comp=Z,2μm,1.3s
MCK McKinley 84.35 18 P **P** **16 15 38.6 -1.0**
MCK IAmb IAmb 16 16 31.3
comp=Z,2μm,1.3s
L02E Cave Junction 84.38 44 P **P** **16 15 41.1 +0.8**
baz=246,SNR=18
GLB Gilahina Butte 84.39 21 P **P** **16 15 39.4 -0.6**
GLB IAmb IAmb 16 16 29.0
comp=Z,911nm,1.4s
WDC Whiskeytown Da 84.47 46 P **P** **16 15 40.8 0.0**
WDC pmax pmax
comp=Z,648nm,1.5s
WDC Whiskeytown Da 84.47 46 P **P** **16 15 40.8 0.0**
WDC IAmb IAmb 16 16 31.7
comp=Z,648nm,1.4s
N02D Trinity Center 84.52 46 P **P** **16 15 42.0 +0.9**
baz=246,SNR=79
MOBC Moresby Island 84.52 32 P **P** **16 15 41.5 +0.8**
MOBC IAmb IAmb 16 16 30.6
comp=Z,689nm,1.4s
K02D Willamette Mer 84.56 44 P **P** **16 15 41.8 +0.6**
baz=246,SNR=44
J01E Myrtle Point 84.57 43 P **P** **16 15 41.8 +0.7**
baz=245,SNR=19
M02C Callahan 84.58 45 P **P** **16 15 42.5 +1.1**
baz=246,SNR=79
BLG Laguna Peak, P 84.63 53 P **P** **16 15 42.0 +0.3**
baz=249
MCARA McCarthy VSAT 84.64 22 P **P** **16 15 41.8 +0.7**
MCARA pP **pP** **16 16 27.4 -0.6**
MCARA IAmb IAmb 16 16 37.1
comp=Z,560nm,1.2s
SCI2 San Clemente I 84.64 54 P **P** **16 15 42.2 +0.4**
baz=250,SNR=7.3
BALM Baldy 84.65 22 P **P** **16 15 41.8 +0.5**
BALM IAmb IAmb 16 16 30.4
comp=Z,787nm,1.4s
IMAR Indian Mountai 84.75 15 P **P** **16 15 41.8 +0.3**
MLY Manley 84.80 17 P **P** **16 15 41.4 -0.5**
MLY pP **pP** **16 16 28.5 -0.2**
MLY IAmb IAmb 16 16 33.8
comp=Z,857nm,1.5s
ORV Oroville 84.81 47 P **P** **16 15 42.4 -0.1**
ORV pmax pmax
comp=Z,416nm,1.4s
ORV Oroville 84.81 47 P **P** **16 15 42.4 -0.1**
YBH Yreka Blue Hor 84.81 45 P **P** **16 15 43.2 +0.6**
comp=Z,57nm,0.9s,baz=134,slow=0.8,SNR=121
YBH pP **pP** **16 16 30.4 +0.7**
comp=Z,271nm,1.2s,baz=198,slow=2.6,SNR=9.4
YBH Yreka Blue Hor 84.81 45 P **P** **16 15 42.8 +0.3**
YBH IAmb IAmb 16 16 33.6
comp=Z,577nm,1.4s
PCA Pinnacle 84.83 24 P **P** **16 15 42.6 +0.5**
PCA IAmb IAmb 16 16 34.3
comp=Z,772nm,1.3s
ZAK Zakamensk 84.86 325 *e* P **P** **16 15 42.3 -0.3**
ZAK *e* 16 16 30.3
ZAK pmax pmax
comp=Z,743nm,1.6s
O03E Paynes Creek 84.88 47 P **P** **16 15 43.0 +0.1**
baz=247,SNR=93
PAX Paxson 84.89 20 P **P** **16 15 43.0 +0.6**
PAX pmax pmax
comp=Z,714nm,1.6s
PAX Paxson 84.89 20 P **P** **16 15 43.0 +0.6**
PAX IAmb IAmb 16 16 31.3
comp=Z,714nm,1.6s
CIS Catalina Islan 84.89 54 P **P** **16 15 43.1 +0.1**
baz=250,SNR=14
BARN Barnard Glacie 84.92 22 P **P** **16 15 43.4 +0.7**
BARN IAmb IAmb 16 16 32.8
comp=Z,860nm,1.2s
NEA Nenana 84.93 17 P **P** **16 15 42.8 +0.3**
NEA pP **pP** **16 16 28.9 -0.4**
AFDM Forest Hills D 84.96 48 P **P** **16 15 43.1 -0.1**
HUMO Hull Mountain 85.00 44 P **P** **16 15 43.7 +0.4**
I02D Swisshome 85.02 42 P **P** **16 15 44.1 +0.8**
baz=245,SNR=14
CMB Columbia Colle 85.04 49 P **P** **16 15 43.4 -0.3**
CMB pmax pmax
comp=Z,270nm,1.3s
CMB Columbia Colle 85.04 49 P **P** **16 15 43.4 -0.3**
SIT Sitka 85.05 28 P **P** **16 15 43.7 +0.5**
SIT pmax pmax
comp=Z,413nm,1.4s
SIT Sitka 85.05 28 P **P** **16 15 43.7 +0.5**
OSI Osito Audit: C 85.07 53 P **P** **16 15 44.2 +0.4**
OSI Osito Audit: C 85.07 53 P **P** **16 15 44.3 +0.4**
baz=250
FMP Fort Macarthur 85.09 54 P **P** **16 15 44.3 +0.4**
baz=250
LSA Lhasa 85.11 302 P **P** **16 15 45.7 +0.9**
LSA LR LR
comp=Z,533μm,15.4s
LSA LR LR
comp=Z,830μm,12.0s
LSA LR LR
comp=Z,535μm,15.5s
LSA Lhasa 85.11 302 P **P** **16 15 45.6 +0.8**
LSA pmax pmax
comp=Z,2μm,1.8s
LSA Lhasa 85.11 302 P **P** **16 15 45.3 +0.5**
LSA Lhasa 85.11 302 P **P** **16 15 45.6 +0.8**
WRH Wood River Hil 85.14 18 P **P** **16 15 42.9 -0.6**
WRH pP **pP** **16 16 29.8 -0.7**
WRH IAmb IAmb 16 16 32.0
comp=Z,881nm,1.2s
ARVC Arvin 85.17 52 P **P** **16 15 44.7 +0.4**
baz=249,SNR=26
VOG Valley Oaks Go 85.17 51 P **P** **16 15 44.3 +0.1**
baz=249,SNR=6.5
I03D Drain, OR 85.18 43 P **P** **16 15 44.6 +0.4**
baz=246,SNR=28
VES Vestal, Richgr 85.22 51 P **P** **16 15 44.5 -0.1**
baz=249,SNR=35
IRK Irkutsk 85.23 327 *e* P **P** **16 15 43.5 -0.8**
IRK *e* 16 25 49.4
IRK pmax pmax
comp=Z,2μm,2.1s
DECC Green Verdugo 85.25 53 P **P** **16 15 44.9 +0.1**
baz=250
L04D Klamath Falls 85.29 45 P **P** **16 15 45.4 +0.5**
baz=247,SNR=18
TLY Talaya 85.29 326 *c i* P **P** **16 15 44.6 0.0**
TLY *e*S **S** **16 25 50.5 -7.9**
TLY *e* 16 26 53.5
TLY *e*SS **SS** **16 31 41.5 +3.5**
TLY pmax pmax
comp=Z,3μm,1.6s
TLY Talaya 85.29 326 P **P** **16 15 44.5 0.0**
TLY IAmb IAmb 16 15 47.8
comp=Z,797nm,1.2s
PASC Pasadena Art C 85.33 53 P **P** **16 15 44.2 -1.0**
CCB Clear Creek Bu 85.36 18 P **P** **16 15 43.8 -0.8**
CCB pP **pP** **16 16 30.6 -0.8**
CCB IAmb IAmb 16 16 35.2
comp=Z,1μm,1.6s
M04C Macdoel 85.43 45 P **P** **16 15 46.3 +0.6**
baz=247,SNR=51
HDA Harding Lake 85.44 18 P **P** **16 15 44.3 -0.7**
HDA Harding Lake 85.44 18 P **P** **16 15 44.8 -0.2**
baz=224,SNR=63
MENT Mentasta 85.44 20 P **P** **16 15 44.7 -0.4**
MWC Mount Wilson 85.45 53 P **P** **16 15 45.8 -0.2**
MWC pmax pmax
comp=Z,666nm,1.4s
MWC Mount Wilson 85.45 53 P **P** **16 15 45.8 -0.2**
MWC IAmb IAmb 16 16 36.8

comp=Z,666nm,1.4s
MDM Murphy Dome 85.46 17 P P 16 15 44.4 -0.7
MDM IAmb IAmb 16 16 36.5
comp=Z,2µm,1.4s
TCOL CIGO, UAF Yank 85.50 18 P P 16 15 44.7 -0.6
baz=223,SNR=32
COLA College 85.51 18 P P 16 15 44.4 -0.9
COLA *PP **pP** 16 16 31.6 -0.6
COLA College 85.51 18 P P 16 15 44.4 -0.9
COLA pP **pP** 16 16 31.6 -0.6
COLA IAmb IAmb 16 16 33.8
comp=Z,1µm,1.2s
COR Corvallis 85.58 42 P P 16 15 45.2 -0.9
COR pmax pmax
comp=Z,615nm,1.5s
COR Corvallis 85.58 42 P P 16 15 45.2 -0.9
COR IAmb IAmb 16 16 37.1
comp=Z,614nm,1.4s
RUBR Rubicon Trail 85.59 48 P P 16 15 46.5 -0.1
RUBR IAmb IAmb 16 16 37.4
comp=Z,581nm,1.3s
RIDG Independent Ri 85.62 19 P P 16 15 45.8 -0.2
RIDG IAmb IAmb 16 16 38.3
comp=Z,2µm,1.4s
ISA Isabella, Lake 85.62 52 P P 16 15 46.5 -0.2
ISA pmax pmax
comp=Z,513nm,1.4s
ISA Isabella, Lake 85.62 52 P P 16 15 46.5 -0.2
ISA IAmb IAmb 16 16 37.7
comp=Z,513nm,1.4s
ISA Isabella, Lake 85.62 52 P P 16 15 47.2 +0.5
baz=250,SNR=39
IL31 85.72 18 P P 16 15 45.5 -0.8
IL31 pP **pP** 16 16 33.1 -0.2
IL31 IAmb IAmb 16 16 37.9
comp=Z,2µm,1.5s
ILAR Eielson Array 85.72 18 P P 16 15 45.5 -0.9
ILAR *PP **pP** 16 16 32.9 -0.4
ILAR Eielson Array 85.72 18 P P 16 15 45.2 -1.2
comp=Z,42nm,0.6s,baz=238,slow=4.2,SNR=355
ILAR pP **pP** 16 16 33.3 0.0
comp=Z,397nm,1.2s,baz=232,slow=5.3,SNR=8.5
ILAR PKiKP **PKiKP** 16 20 54.2 -0.4
comp=Z,2.7nm,0.7s,baz=269,slow=2.8,SNR=7.2
ILAR PKKPbc **PKKPdf** 16 33 43.4 0.0
comp=Z,2.0nm,0.5s,baz=2.5,slow=1.6,SNR=4.5
ILAR PKPPKP **P'P'df** 16 41 52.3 -0.4
comp=Z,6.8nm,1.1s,baz=3.4,slow=1.5,SNR=8.2
ILAR LR LR 16 51 16.2
comp=Z,3µm,19.5s,baz=228,slow=33
ILAR Eielson Array 85.72 18 P P 16 15 45.5 -0.9
ILAR pP **pP** 16 16 32.9 -0.4
EDW2 Edwards Air Fo 85.72 53 P P 16 15 47.8 +0.6
baz=250,SNR=117
BEKR Beckworth 85.74 47 P P 16 15 47.0 -0.3
BEKR IAmb IAmb 16 16 38.0
comp=Z,545nm,1.4s
109C Camp Elliot, M 85.75 55 P P 16 15 46.9 -0.4
109C IAmb IAmb 16 16 40.1
comp=Z,606nm,1.4s
109C Camp Elliot, M 85.75 55 P P 16 15 47.7 +0.5
baz=251,SNR=11
BFSC Mount Baldy Ra 85.77 53 P P 16 15 47.8 +0.3
baz=250,SNR=78
POKR Poker Plat Res 85.81 18 P P 16 15 46.2 -0.6
baz=224,SNR=57
DOT Dot Lake 85.81 20 P P 16 15 46.2 -0.7
DOT IAmb IAmb 16 16 43.4
comp=Z,486nm,1.1s
K04D Chiloquin, OR 85.82 44 P P 16 15 48.0 +0.5
baz=247,SNR=13
J04D Umpqua Nationa 85.82 44 P P 16 15 48.2 +0.6
baz=247,SNR=72
I04A Tendick Farm, 85.84 43 P P 16 15 47.9 +0.4
baz=246,SNR=46
G03D McMinnville, O 85.86 42 P P 16 15 48.2 +0.7
baz=246,SNR=29
MDPB Devils Postpil 85.86 50 P P 16 15 48.0 0.0
MDPB IAmb IAmb 16 16 38.8
comp=Z,423nm,1.3s
WAKR Walker 85.91 49 P P 16 15 48.6 +0.4
WAKR IAmb IAmb 16 16 39.4
comp=Z,607nm,1.3s
OMMB Old Mammoth Mi 85.91 50 P P 16 15 48.4 0.0
MURC Murrieta 85.92 54 P P 16 15 48.5 +0.4
baz=250,SNR=27
H04D Lebanon 85.92 42 P P 16 15 48.5 +0.7
baz=246,SNR=39
PNTR Pine Nut 86.00 48 P P 16 15 48.8 +0.2
PNTR IAmb IAmb 16 16 39.6
comp=Z,556nm,1.4s
BAR Barrett 86.03 55 P P 16 15 48.6 -0.1
BAR IAmb IAmb 16 16 41.4
comp=Z,701nm,1.8s
MLAC Mammoth, Mammo 86.04 50 P P 16 15 49.5 +0.6
baz=249,SNR=31
VCNR Virginia City 86.04 48 P P 16 15 49.1 +0.3
SCRK Sand Creek 86.06 19 P P 16 15 48.0 -0.2
SCRK IAmb IAmb 16 16 40.8
comp=Z,1µm,1.8s
BBB Bella Bella 86.07 34 P P 16 15 49.1 +0.7
comp=Z,35nm,0.9s,baz=250,slow=3.4,SNR=6.5
BBB pP **pP** 16 16 35.9 +0.1
comp=Z,100nm,1.1s,baz=238,slow=3.8,SNR=5.6
BBB Bella Bella 86.07 34 P P 16 15 48.2 -0.1
BESE Bessie Mountai 86.13 26 P P 16 15 49.3 +0.7
BESE IAmb IAmb 16 16 41.4
comp=Z,571nm,1.4s
LRMC Laurel Mtn Rad 86.17 52 P P 16 15 50.0 +0.6
baz=250,SNR=55
BCAR Beaver Creek A 86.19 21 P P 16 15 48.2 -0.6
CWC Cottonwood Cre 86.19 51 P P 16 15 50.1 +0.5
baz=250
YERR Yerington 86.23 48 P P 16 15 49.8 0.0
TIN Tinemaha, Big 86.29 51 P P 16 15 50.8 +0.8
baz=250,SNR=42
MONP2 Monument Peak 86.29 55 P P 16 15 50.9 +0.7
baz=251,SNR=63
BBRC Big Bear Solar 86.35 54 P P 16 15 50.8 +0.3
baz=251,SNR=15
HYT Haines Junctio 86.35 24 P P 16 15 50.1 +0.4
F04D Rainier, OR 86.38 41 P P 16 15 51.1 +1.0
baz=246,SNR=7.0
NLWA Neilton Lookou 86.38 39 P P 16 15 50.3 +0.2
NLWA IAmb IAmb 16 16 44.2
comp=Z,518nm,1.4s
PAHR Pah Rah Range 86.38 48 P P 16 15 50.5 +0.1
PAHR IAmb IAmb 16 16 41.2
comp=Z,496nm,1.3s
SKAG Skagway 86.43 26 P P 16 15 49.5 -0.5
SKAG IAmb IAmb 16 16 43.7
comp=Z,546nm,1.4s
J05D Fort Rock, OR 86.43 44 P P 16 15 51.4 +0.8
baz=247,SNR=195
IKP In-Ko-Pah, Jac 86.47 55 P P 16 15 51.7 +0.9
baz=251,SNR=39
RRX Edison Barstow 86.49 53 P P 16 15 51.6 +0.7
baz=250,SNR=6.0
PFO Pinyon Flats O 86.50 54 P P 16 15 51.7 +0.7
comp=Z,40nm,0.7s,baz=259,slow=4.4,SNR=69
PFO pP **pP** 16 16 39.5 +1.0
comp=Z,99nm,1.1s,baz=234,slow=4.5,SNR=7.2
PFO Pinyon Flats O 86.50 54 P P 16 15 50.9 -0.2
PFO Pinyon Flats O 86.50 54 P P 16 15 51.6 +0.5
baz=251,SNR=51
TPFO Pinon Flats 86.50 54 P P 16 15 51.5 +0.4
baz=251,SNR=44
XPFO Pion Flat 86.50 54 P P 16 15 50.9 -0.2
DAC Darwin (Calif) 86.51 51 P P 16 15 53.6 +2.4
DAC pmax pmax
comp=Z,376nm,1.4s
DAC Darwin (Calif) 86.51 51 P P 16 15 53.6 +2.4
MPMC Manual Prospec 86.51 52 P P 16 15 51.9 +0.7
baz=250,SNR=61
MOD Modoc Plateau 86.54 45 P P 16 15 51.1 0.0
COLD Coldfoot 86.61 15 P P 16 15 51.6 +0.9
RYN Ryan 86.62 49 P P 16 15 52.1 +0.5
PRP Porcupine Dome 86.66 18 P P 16 15 49.7 -1.5
F04A Amboy 86.69 41 P P 16 15 51.6 +0.1
F04A IAmb IAmb 16 16 42.0
comp=Z,763nm,1.5s
NVAR Mina Array Bea 86.72 49 P P 16 15 52.6 +0.5
comp=Z,41nm,0.8s,baz=232,slow=7.1,SNR=155
NVAR pP **pP** 16 16 40.4 +0.7
comp=Z,125nm,1.1s,baz=231,slow=6.9,SNR=9.0
NVAR PKiKP **PKiKP** 16 20 58.3 +1.0
comp=Z,1.4nm,0.7s,baz=234,slow=3.2,SNR=4.6
NVAR PKKPbc **PKKPbc** 16 33 47.0 -0.4
comp=Z,6.1nm,0.7s,baz=64,slow=4.1,SNR=16
NVAR PKPPKP **P'P'df** 16 41 54.1 +1.0
comp=Z,24nm,1.0s,baz=74,slow=3.9,SNR=20
NVAR LR LR 16 49 37.6
comp=Z,5µm,19.2s,baz=243,slow=32
NVAR Mina Array Bea 86.72 49 P P 16 15 51.6 -0.6
MOY Mondy 86.74 325 *eP* **P 16 15 51.7 -0.1**
MOY pmax pmax
comp=Z,1µm,2.5s
I05D Terrebonne, OR 86.77 43 P P 16 15 52.5 +0.4
baz=247,SNR=50
GSC Goldstone, Bar 86.78 53 P P 16 15 52.2 -0.2
GSC pmax pmax
comp=Z,578nm,1.7s
GSC Goldstone, Bar 86.78 53 P P 16 15 52.2 -0.2
GSC IAmb IAmb 16 16 46.6
comp=Z,578nm,1.6s
GSC Goldstone, Bar 86.78 53 P P 16 15 52.9 +0.5
baz=251,SNR=59
SWSC Sam W. Stewart 86.81 55 P P 16 15 53.0 +0.6
baz=251,SNR=55
PINE Pine Mountain 86.82 44 P P 16 15 52.7 +0.2
PINE IAmb IAmb 16 16 43.5
comp=Z,555nm,1.4s
NV11 Mina Array Sit 86.83 49 P P 16 15 52.4 -0.2
E04D Cinebar 86.85 41 P P 16 15 53.3 +1.0
baz=246,SNR=29
E04D S **S** 16 26 13.4 -0.2
baz=246
D03D Eldon 86.92 40 P P 16 15 53.5 +0.9
baz=246,SNR=56
D03D S **S** 16 26 14.8 +0.5
baz=246
GRAC Grapevine Rang 86.92 51 P P 16 15 53.6 +0.7
baz=250,SNR=61
GRAC S **S** 16 26 15.2 +0.3
baz=250
BWNR Bhubaneshwar 86.96 292 *i P* **P 16 15 52.5 -0.8**
BWNR *i* pP **pP** 16 16 39.5 -0.8
BWNR *ex* x 16 17 09.3
BWNR *eS* **SKSac** 16 26 00.1 -2.3
D04E Lakebay 86.97 40 P P 16 15 53.9 +1.1
baz=246,SNR=16
D04E S **S** 16 26 16.9 +2.1
baz=246
BELC Belle Mtn. Jos 86.99 54 P P 16 15 54.2 +0.7
baz=251,SNR=55
HEC Hector,Ludlow 86.99 53 P P 16 15 53.9 +0.6
baz=251,SNR=25
KVN Kaiserville 87.08 49 P P 16 15 53.8 -0.1
KVN pmax pmax
comp=Z,338nm,1.3s
KVN Kaiserville 87.08 49 P P 16 15 53.8 -0.1
FURC Furnace Creek, 87.12 52 P P 16 15 54.5 +0.7
baz=250,SNR=46
G05D Wamic, OR 87.13 42 P P 16 15 54.2 +0.4
baz=247,SNR=37
G05D S **S** 16 26 16.5 0.0
baz=247
PGC Sidney 87.16 38 P P 16 15 54.2 +0.5
TAPN Taplejung 87.27 299 *eP* **P 16 15 55.4 +0.2**
comp=Z,4µm,1.4s
F05D White Salmon 87.29 41 P P 16 15 55.0 +0.6
baz=247
WHY Whitehorse 87.30 25 P P 16 15 54.8 +0.5
BC3 Big Chuckawall 87.31 55 P P 16 15 55.8 +0.8
baz=251,SNR=38
SHOC Shoshone, Teco 87.39 52 P P 16 15 55.5 +0.4
baz=251,SNR=49
SHOC S **S** 16 26 22.6 +3.2
baz=251
ODAN Odare 87.40 298 *eP* **P 16 15 56.1 +0.4**
comp=Z,2µm,0.9s
LON Longmire 87.40 41 P P 16 15 55.1 +0.1
LON pmax pmax
comp=Z,199nm,1.5s
LON Longmire 87.40 41 P P 16 15 55.1 +0.1
D05A Enumclaw 87.47 40 P P 16 15 55.9 +0.6
GMRC Granite Mounta 87.50 53 P P 16 15 56.4 +0.5
baz=251,SNR=89
TUQ Turquoise Moun 87.51 53 P P 16 15 56.4 +0.5
baz=251,SNR=62
EGAK Eagle 87.52 20 P P 16 15 54.6 -0.4
EGAK pP **pP** 16 16 41.8 -0.6
GLA Glamis 87.62 55 P P 16 15 56.8 +0.5
GLA pmax pmax
comp=Z,613nm,1.3s
GLA Glamis 87.62 55 P P 16 15 56.8 +0.5
GLA IAmb IAmb 16 16 52.2
comp=Z,614nm,1.2s
GLA Glamis 87.62 55 P P 16 15 57.4 +1.0
baz=252,SNR=49
A04D Lummi Island 87.64 39 P P 16 15 56.8 +0.9
baz=246,SNR=99
DAWY Dawson 87.65 21 P P 16 15 55.0 -0.9
DAWY pP **pP** 16 16 42.4 -1.0
IRM Iron Mountain 87.71 54 P P 16 15 57.5 +0.8
baz=252,SNR=121
TPNV Topopah Spring 87.75 51 P P 16 15 57.1 +0.1
TPNV pmax pmax
comp=Z,407nm,1.5s
TPNV Topopah Spring 87.75 51 P P 16 15 57.1 +0.1
TPNV Topopah Spring 87.75 51 P P 16 15 57.6 +0.5
baz=251,SNR=69
B05A Bryant 87.83 39 P P 16 15 57.6 +0.7
baz=246,SNR=23
B05A S **S** 16 26 21.8 -1.1
baz=246
TOLK Toolik Lake Re 87.83 15 P P 16 15 56.9 +0.3
TOLK IAmb IAmb 16 16 46.7
comp=Z,697nm,1.4s
TOLK Toolik Lake Re 87.83 15 P P 16 15 57.5 +1.0
baz=222
TOLK S **S** 16 26 23.7 +1.4
baz=222
WVOR Wild Horse Val 87.89 45 P P 16 15 57.6 +0.1
WVOR pmax pmax
comp=Z,691nm,1.6s
WVOR Wild Horse Val 87.89 45 P P 16 15 57.6 +0.1
WVOR IAmb IAmb 16 16 48.6
comp=Z,692nm,1.6s
SRIG Santa Rosalia 88.05 61 P P 16 15 58.2 -0.2
SRIG IAmb IAmb 16 16 51.3
comp=Z,1µm,2.0s
CHLP Challavanipeta 88.07 289 *eP* **P 16 15 58.6 -0.1**
CHLP IAmb IAmb 16 16 00.8
comp=Z,796nm,1.4s
Y12C Blythe 88.07 55 P P 16 15 58.9 +0.5
Y12C IAmb IAmb 16 16 51.9
comp=Z,534nm,1.4s
Y12C Blythe 88.07 55 P P 16 15 59.4 +1.0
baz=252,SNR=82
RAMN Ramite 88.11 298 *eP* **P 16 15 59.1 0.0**
comp=Z,829nm,0.8s
BMN Battle Mountai 88.19 48 P P 16 15 58.8 -0.3
BMN Battle Mountai 88.19 48 P P 16 15 58.8 -0.3
BMAR Burnt Mountain 88.26 17 P P 16 15 59.1 +0.5
F07A Phinny Hill Vi 88.28 42 P P 16 15 59.3 +0.2
F07A IAmb IAmb 16 16 53.1
comp=Z,517nm,1.7s
NEE2 Needles Airpor 88.31 54 P P 16 16 00.4 +0.9
baz=252,SNR=23
LTY Liberty 88.32 40 P P 16 15 59.2 -0.1
113A Mohawk Valley, 88.38 56 P P 16 16 00.4 +0.5
113A IAmb IAmb 16 16 54.6
comp=Z,1µm,1.9s
PALK Pallekele 88.41 278 P P 16 16 01.7 +1.2
comp=Z,533nm,1.2s,baz=96,slow=5.1,SNR=76
PALK PKiKP **PKiKP** 16 20 59.9 -0.7
comp=Z,20nm,0.9s,baz=36,slow=6.5,SNR=3.7
PALK Pallekele 88.41 278 P P 16 16 01.7 +1.2
PALK Pallekele 88.41 278 P P 16 16 01.6 +1.1
C06D Leavenworth 88.44 40 P P 16 16 00.2 +0.4
baz=247,SNR=7.6
SHPR Sheep Range 88.44 52 P P 16 16 00.9 +0.6
SHPR IAmb IAmb 16 16 51.8
comp=Z,537nm,1.4s
E07A Sunnyside 88.58 41 P P 16 16 01.0 +0.4
E07A IAmb IAmb 16 16 51.3
comp=Z,768nm,1.7s
JIRN Jiri 88.65 299 *eP* **P 16 16 01.9 +0.1**
comp=Z,2µm,1.0s
R11A Troy Canyon, C 88.70 50 P P 16 16 01.3 -0.2
R11A Troy Canyon, C 88.70 50 P P 16 16 02.0 +0.5
baz=251,SNR=109
HAWA Hanford 88.72 42 P P 16 16 01.3 +0.1
HAWA IAmb IAmb 16 16 52.1
comp=Z,778nm,1.6s
LPIG La Paz 88.84 65 P P 16 16 02.7 +0.5
comp=Z,32nm,0.7s,baz=228,slow=5.9
LPIG pP **pP** 16 16 51.0 +1.0
comp=Z,49nm,0.8s,baz=66,slow=5.2,SNR=4.0
LLLB Lillooet 88.89 37 P P 16 16 02.0 +0.1
214A Organ Pipe Nat 88.91 57 P P 16 16 03.2 +0.7
214A IAmb IAmb 16 16 58.4
comp=Z,704nm,1.6s
214A Organ Pipe Nat 88.91 57 P P 16 16 03.6 +1.2
baz=253
W13A Hualapai Mount 88.99 54 P P 16 16 03.5 +0.5
W13A IAmb IAmb 16 16 56.5
comp=Z,555nm,1.6s
GUN Gumba 88.99 299 *eP* **P 16 16 03.4 +0.1**
comp=Z,1µm,0.9s
TIXI Tiksi 89.14 349 *ceP* **P 16 16 01.9 -0.6**
TIXI pmax pmax
comp=Z,248nm,1.1s
TIXI MLR MLR
comp=Z,2µm,18.0s
TIXI Tiksi 89.14 349 P **P 16 16 02.3 -0.2**
comp=Z,147nm,0.9s,baz=360,slow=24,SNR=176
TIXI PKiKP **PKiKP** 16 20 59.1 -0.9
comp=Z,8.4nm,0.8s,baz=118,slow=8.8,SNR=5.3
TIXI Tiksi 89.14 349 IAmb IAmb 16 16 05.4
comp=Z,235nm,1.1s
PKI Pulchoki 89.30 298 *eP* **P 16 16 04.6 -0.1**
comp=Z,562nm,1.5s
PKIN Phulchoki 89.31 298 *eP* **P 16 16 04.5 -0.2**
comp=Z,1µm,0.9s
Y14A Wickenburg 89.33 55 P P 16 16 04.7 +0.3
Y14A IAmb IAmb 16 16 59.2
comp=Z,543nm,2.0s
KKN Kakani 89.47 299 *eP* **P 16 16 05.4 0.0**
comp=Z,2µm,0.9s
SYO Syowa Base 89.52 197 *i iP* **P 16 16 03.2 -1.3**
SYO Syowa Base 89.52 197 *i iPcP* **PcP 16 16 06.0 +0.3**
DMN Daman 89.56 298 *eP* **P 16 16 06.1 +0.2**
comp=Z,2µm,1.1s
B08A Colville Reser 89.57 40 P P 16 16 04.9 -0.3
B08A IAmb IAmb 16 16 55.4
comp=Z,597nm,1.6s
HSIG 89.62 60 P P 16 16 05.8 0.0
HSIG IAmb IAmb 16 16 59.0
comp=Z,858nm,1.7s
BMO Blue Mountains 89.64 44 P P 16 16 05.4 -0.2
BMO pmax pmax
comp=Z,478nm,1.5s
BMO Blue Mountains 89.64 44 P P 16 16 05.4 -0.2
BMO IAmb IAmb 16 16 56.2
comp=Z,478nm,1.4s
ELK Elko 89.72 48 P P 16 16 06.8 +0.5
comp=Z,51nm,0.9s,baz=248,slow=5.0,SNR=91
ELK pP **pP** 16 16 54.9 +0.9
comp=Z,176nm,1.3s,baz=246,slow=4.5,SNR=6.8
ELK PP **PP** 16 19 41.9 +0.4
comp=Z,11nm,1.0s,baz=233,slow=7.0,SNR=3.3
ELK Elko 89.72 48 P P 16 16 06.5 +0.2
EPYK Eagle Plains 89.96 20 P P 16 16 05.8 -0.7
EPYK pP **pP** 16 16 53.5 -0.5
EPYK IAmb IAmb 16 16 56.1
comp=Z,420nm,1.6s
EPYK Eagle Plains 89.96 20 P P 16 16 06.2 -0.4
baz=234,SNR=18
PVM Polavaram 89.99 288 *eP* **P 16 16 07.2 -0.5**
PVM IAmb IAmb 16 16 09.2
comp=Z,725nm,1.7s
C09A Chrisman Ranch 90.03 41 P P 16 16 06.8 -0.5
PSUT Pine Spring 90.05 50 P P 16 16 08.0 +0.1
LCMT Little Creek M 90.06 52 P P 16 16 08.0 +0.2
F10A Beach Ranch, E 90.07 42 P P 16 16 07.3 -0.3
F10A IAmb IAmb 16 16 58.1
comp=Z,854nm,1.6s
GKN Gorkha 90.07 299 *eP* **P 16 16 07.5 -0.6**
comp=Z,4µm,1.5s
CCUT Cedar City 90.12 51 P P 16 16 08.6 +0.4
MFID Camas Ranch 90.16 45 P P 16 16 08.2 +0.1
MFID IAmb IAmb 16 16 59.0
comp=Z,405nm,1.5s
SZCU Shurtz Canyon 90.35 51 P P 16 16 09.5 +0.2
KNB Kanab 90.38 52 P P 16 16 09.9 +0.5
KNB pmax pmax
comp=Z,602nm,1.5s
KNB Kanab 90.38 52 P P 16 16 09.9 +0.5
U15A North Rim 90.62 53 P P 16 16 11.1 +0.5
U15A IAmb IAmb 16 17 03.7
comp=Z,428nm,1.3s
TUC Tucson 90.66 57 P P 16 16 11.4 +0.7
TUC pmax pmax
comp=Z,459nm,1.5s
TUC Tucson 90.66 57 P P 16 16 11.4 +0.7
TUC IAmb IAmb 16 17 04.6
comp=Z,459nm,1.5s
TUC Tucson 90.66 57 P P 16 16 11.5 +0.8
baz=254
TUC S **S** 16 26 53.7 +3.6
baz=254
X16A Lo Mia Camp, P 90.71 55 P P 16 16 11.4 +0.4
MYLAV Mylavaram 90.78 287 *eP* **P 16 16 11.5 +0.1**
KOLN Koldanda 90.89 298 *eP* **P 16 16 11.3 -0.7**
comp=Z,2µm,1.6s
DANN Dangsing 90.91 299 *eP* **P 16 16 11.3 -0.9**
comp=Z,2µm,1.1s
NEW Newport 90.92 40 P P 16 16 11.6 +0.2
comp=Z,43nm,0.8s,baz=236,slow=4.4,SNR=66
NEW pP **pP** 16 16 58.7 -0.5
comp=Z,40nm,1.0s,baz=238,slow=1.8,SNR=4.4
NEW Newport 90.92 40 P P 16 16 11.4 0.0
NEW Newport 90.92 40 P P 16 16 11.7 +0.2
baz=250
NEW S **S** 16 26 49.4 -2.2
baz=250
SKHT Srikalahasti 90.92 284 *eP* **P 16 16 11.7 -0.4**
SKHT IAmb IAmb 16 16 14.2
comp=Z,469nm,1.4s
WUAZ Wupatki 91.07 54 P P 16 16 12.9 +0.3
WUAZ IAmb IAmb 16 17 06.4
comp=Z,490nm,1.5s
WUAZ Wupatki 91.07 54 P P 16 16 13.5 +0.9
baz=254,SNR=11
WUAZ S **S** 16 26 58.0 +4.1
baz=254
TCRU Three Creeks R 91.13 51 P P 16 16 13.6 +0.7
MTPU Mount Pierson 91.16 51 P P 16 16 14.0 +0.8
ADKI Addanki 91.19 286 *eP* **P 16 16 12.9 -0.4**
ADKI IAmb IAmb 16 16 15.1
comp=Z,402nm,1.6s
MSU Marysvale 91.30 51 P P 16 16 14.5 +0.8
MSU Marysvale 91.30 51 P P 16 16 14.5 +0.8
DUG Dugway, Tooele 91.31 49 P P 16 16 13.3 -0.3
DUG pmax pmax
comp=Z,240nm,1.5s
DUG Dugway, Tooele 91.31 49 P P 16 16 13.3 -0.3
DUG Dugway, Tooele 91.31 49 P P 16 16 14.0 +0.4
baz=253
DUG S **S** 16 26 57.1 +1.3
baz=253
BGU Big Grassy Mou 91.37 48 P P 16 16 13.7 -0.1
GGR Gangavaram 91.45 288 *eP* **P 16 16 14.1 -0.4**
319A Douglas 91.64 58 P P 16 16 15.8 +0.5
319A IAmb IAmb 16 17 09.1
comp=Z,487nm,1.2s
NLU North Lily Min 91.79 49 P P 16 16 15.6 -0.3
HVU Hansel Valley 91.80 47 P P 16 16 16.0 +0.2
HVU pmax pmax
comp=Z,476nm,1.5s
HVU Hansel Valley 91.80 47 P P 16 16 16.0 +0.2
X18A Snowflake 91.93 55 P P 16 16 16.9 +0.2
X18A IAmb IAmb 16 17 10.4
comp=Z,492nm,1.9s
NJS Nagarjunasagar 91.97 286 *eP* **P 16 16 16.5 -0.5**
NJS IAmb IAmb 16 16 18.5
comp=Z,827nm,1.4s
INK Inuvik 92.08 19 P P 16 16 15.8 -0.5
comp=Z,9.3nm,1.1s,baz=218,slow=7.7,SNR=21
INK pP **pP** 16 17 02.8 -0.9
comp=Z,31nm,1.2s,baz=260,slow=6.3,SNR=4.2
INK PKiKP **PKiKP** 16 21 05.3 +0.2
comp=Z,9.1nm,0.8s,baz=116,slow=16,SNR=6.1
INK Inuvik 92.08 19 P P 16 16 14.8 -1.5
WMQ Urumqi 92.14 315 *i iP* **P 16 16 17.7 +0.5**
WMQ pP pP 16 17 06.3 +1.1

WMQ PP **PP** **16 19 58.5 -1.8**
WMQ SKS **SKSac** **16 26 30.9 -0.9**
WMQ S **S** **16 26 58.8 -4.0**
WMQ sS sS 16 28 19.6 -5.1
WMQ SS **SS** **16 33 16.0 -1.6**
WMQ pmax pmax
comp=Z,510nm,1.7s
WMQ pmax pmax
comp=Z,2µm,3.7s
WMQ LR LR
comp=Z,2µm,18.3s
WMQ LR LR
comp=Z,1µm,16.1s
WMQ LR LR
comp=Z,3µm,29.7s
WMQ Urumqi 92.14 315 P **P** **16 16 17.1 -0.1**
WMQ pmax pmax
comp=Z,3µm,1.8s
WMQ Urumqi 92.14 315 P **P** **16 16 17.1 -0.1**
Q16A Castle Valley 92.17 51 P **P** **16 16 18.1 +0.4**
TMUT Trail Mountain 92.25 50 P **P** **16 16 18.4 +0.2**
SRLM Srisailam 92.25 286 *e*P **P** **16 16 17.7 -0.6**
SRLM IAmb IAmb 16 16 19.8
comp=Z,1µm,1.4s
W18A Petrified Fore 92.25 55 P **P** **16 16 18.4 +0.2**
W18A Petrified Fore 92.25 55 P **P** **16 16 18.9 +0.8**
baz=255,SNR=7.1
W18A S **S** **16 27 08.6 +4.1**
baz=255
MSO Missoula 92.50 42 P **P** **16 16 18.4 -0.5**
MSO Missoula 92.50 42 P **P** **16 16 18.5 -0.3**
baz=252
RPR Rampur 92.53 289 *e*P **P** **16 16 19.3 -0.2**
RPR IAmb IAmb 16 16 20.7
comp=Z,596nm,1.0s
JTMT Jette 92.56 41 P **P** **16 16 18.8 -0.3**
PMSA Palmer Station 92.57 160 P **P** **16 16 19.3 +0.5**
comp=Z,176nm,1.0s,baz=201,slow=3.6
PMSA Palmer Station 92.57 160 *e*P **P** **16 16 20.0 +1.3**
PMSA Palmer Station 92.57 160 P **P** **16 16 18.9 +0.2**
TCUT Toone Canyon 92.60 48 P **P** **16 16 19.6 -0.1**
HWUT Hardware Ranch 92.62 48 P **P** **16 16 19.5 -0.2**
MCMT McKenzie Canyo 92.64 45 P **P** **16 16 19.9 +0.2**
P17A Butcher Ranch, 92.64 50 P **P** **16 16 19.6 -0.2**
SRU San Rafael Swe 92.71 51 P **P** **16 16 19.8 -0.3**
SRU pmax pmax
comp=Z,126nm,1.7s
SRU San Rafael Swe 92.71 51 P **P** **16 16 19.8 -0.3**
H08S2 Diego Garcia H 92.79 261 P **P** **16 16 21.4 +0.9**
baz=13,slow=5.7,SNR=19
H08S3 Diego Garcia H 92.81 261 P **P** **16 16 21.2 +0.6**
baz=13,slow=5.7,SNR=8.8
H08S1 Diego Garcia H 92.81 261 P **P** **16 16 21.2 +0.7**
baz=13,slow=5.7,SNR=4.9
HYB Hyderabad 92.88 287 *i* P **P** **16 16 20.5 -0.7**
comp=Z,570nm,1.0s
HYB *e*pP **pP** **16 17 07.0 -1.2**
HYB *e*sP **sP** **16 17 28.0 -0.2**
HYB *e*PP **PP** **16 20 04.0 -2.6**
HYB *e* 16 21 06.0
HYB *e*SKS **SKSac** **16 26 36.0 -0.9**
HYB *e*SKS ScS 16 28 02.0 +50
HYB *e* 16 28 30.0
HYB *e* 16 29 28.0
HYB *e*SS **SS** **16 33 28.0 -1.2**
HYB *e*PKPPKP 16 41 42.0
HYBB Hyderabad (bro 92.88 287 *e*P **P** **16 16 20.3 -0.8**
HYBB IAmb IAmb 16 16 22.2
comp=Z,557nm,1.3s
HYBB *e*pP **pP** **16 17 06.5 -1.8**
HYBB *e*sP **sP** **16 17 27.0 -1.2**
HYBB *e*PP **PP** **16 20 04.4 -2.2**
HYBB *e*SKSac **SKSac** **16 26 35.5 -1.5**
HYBB *e*sSKSac pS 16 28 01.9 -9.5
HYBB *e*P'P'df P'P'df 16 41 41.3 -1.6
DGAR Diego Garcia 92.89 262 P **P** **16 16 20.8 -0.5**
DGAR pmax pmax
comp=Z,1µm,1.5s
DGAR Diego Garcia 92.89 262 P **P** **16 16 20.8 -0.5**
JBP Jabalpur 92.92 293⇓ *e*P **P** **16 16 21.5 +0.4**
JBP AMB AMB 16 16 22.8
comp=Z,543nm,1.8s
JBP *ex* x 16 26 50.6
DLMT Dillon 92.96 44 P **P** **16 16 20.9 -0.2**
121A Cookes Peak, D 93.17 57 P **P** **16 16 22.4 0.0**
121A IAmb IAmb 16 17 18.2
comp=Z,278nm,1.4s
121A Cookes Peak, D 93.17 57 P **P** **16 16 23.3 +0.9**
baz=256
WALA Waterton Lakes 93.19 40 P **P** **16 16 21.9 -0.2**
WALA IAmb IAmb 16 17 16.1
comp=Z,266nm,1.6s
LRM Limekiln Ridge 93.19 44 P **P** **16 16 22.6 +0.4**
LRM pP **pP** **16 17 10.2 +0.1**
AHID Auburn Hatcher 93.27 47 P **P** **16 16 22.4 -0.2**
NGP Nagpur 93.29 291⇑ *i*P **P** **16 16 21.8 -1.2**
NGP *i* P **PcP** **16 16 22.2 -1.2**
NGP *i* x **pP** **16 17 08.3 -2.3**
NGP *i* S **SKSac** **16 26 36.1 -2.9**
SRSP Sriramsagar 93.42 289 *e*P **P** **16 16 22.6 -1.0**
SRSP IAmb IAmb 16 16 24.6
comp=Z,842nm,1.3s
URV Uravakonda 93.51 284 *e*P **P** **16 16 23.4 -0.7**
URV IAmb IAmb 16 16 25.5
comp=Z,2µm,1.9s
FXWY Fox Creek 93.56 46 P **P** **16 16 24.0 0.0**
TPAW Teton Pass 93.57 46 P **P** **16 16 24.0 -0.1**
QLMT Earthquake Lak 93.61 45 P **P** **16 16 24.5 +0.4**
REDW Red Top Meadow 93.61 45 P **P** **16 16 24.2 0.0**
DMPR Damasthipur 93.68 287 *e*P **P** **16 16 24.3 -0.6**
SNOW Snow King Moun 93.70 46 P **P** **16 16 24.8 +0.1**
TROLL Troll, Antarti 93.71 185 P **P** **16 16 24.4 +0.3**
YHB Horse Butte 93.75 45 P **P** **16 16 25.2 +0.4**
MVCO Mesa Verde 93.76 53 P **P** **16 16 25.2 +0.1**
MVCO Mesa Verde 93.76 53 P **P** **16 16 25.4 +0.3**
baz=256
MVCO S **S** **16 27 20.9 +3.1**
baz=256
YHL Hebgen Lake 93.78 45 P **P** **16 16 25.6 +0.5**
MOOW Moose Ponds 93.79 46 P **P** **16 16 24.4 -0.6**
YMR Madison River 93.88 45 P **P** **16 16 26.0 +0.6**
YPP Pitchstone Pla 93.89 45 P **P** **16 16 25.6 0.0**
NVL N'lazarevskaya 93.89 186⇓ *i*P **P** **16 16 22.9 -1.8**
NVL pmax pmax
comp=Z,561nm,1.7s
FLWY Flagg Ranch 93.91 46 P **P** **16 16 25.4 -0.2**
H17A Grant Village 94.08 45 P **P** **16 16 26.4 +0.1**
H17A Grant Village 94.08 45 P **P** **16 16 27.8 +1.4**
baz=255,SNR=22
YNR Norris Junctio 94.09 45 P **P** **16 16 27.0 +0.6**
YUF Upper Falls 94.20 45 P **P** **16 16 27.0 0.0**
LENM Lemitar 94.22 56 P **P** **16 16 27.1 -0.1**
Y22D IRIS PASSCAL I 94.24 56 P **P** **16 16 27.6 +0.4**
Y22D IAmb IAmb 16 17 27.9
comp=Z,266nm,1.6s
Y22D IRIS PASSCAL I 94.24 56 P **P** **16 16 27.4 +0.2**
baz=256
KAAM Kaadhehdhoo 94.27 269 P **P** **16 16 28.0 +0.4**
BW06 Boulder Array 94.37 47 P **P** **16 16 26.9 -0.8**
BW06 Boulder Array 94.37 47 P **P** **16 16 27.3 -0.4**
baz=255
BW06 S **S** **16 27 20.1 -2.8**
baz=255
PD31 Pinedale Array 94.37 47 P **P** **16 16 26.8 -1.0**
PDAR Pinedale Array 94.37 47 P **P** **16 16 28.0 +0.3**
comp=Z,8.4nm,0.8s,baz=222,slow=2.9,SNR=30
PDAR pP **pP** **16 17 15.4 -0.3**
comp=Z,17nm,1.1s,baz=259,slow=2.4,SNR=2.6
PDAR PP **PP** **16 20 15.6 -2.3**
comp=Z,4.0nm,0.9s,baz=245,slow=5.1,SNR=4.4
PDAR PKiKP **PKiKP** **16 21 11.5 +1.4**
comp=Z,2.1nm,0.8s,baz=191,slow=1.8,SNR=4.9
PDAR PKKPbc **PKKPdf** **16 33 26.4 -1.3**
comp=Z,7.4nm,0.7s,baz=90,slow=5.5,SNR=11
PDAR PKPPKP **P'P'df** **16 41 36.7 -1.9**
comp=Z,10nm,1.2s,baz=90,slow=4.4,SNR=11
PDAR LR LR 16 58 17.6
comp=Z,2µm,18.0s,baz=270,slow=35
PDAR Pinedale Array 94.37 47 P **P** **16 16 26.7 -1.0**
SNAA Sanae 94.39 183 P **P** **16 16 27.2 +0.1**
SNAA Sanae 94.39 183 *c* *i*P **P** **16 16 26.8 -0.4**
SNAA Sanae 94.39 183 PKKPbc PKKPbc 16 33 24.2 -4.4
comp=Z,5.5nm,0.7s,baz=243,slow=2.1,SNR=6.8
SNAA Sanae 94.39 183 P **P** **16 16 26.7 -0.4**

YMP Mirror Lake Pl 94.46 45 P **P** **16 16 28.6 +0.4**
BNM Barren Site 94.50 56 P **P** **16 16 28.7 +0.2**
LPM Los Pinos Moun 94.53 56 P **P** **16 16 28.7 +0.1**
H08N1 Diego Carcia H 94.53 262 P **P** **16 16 28.4 0.0**
baz=178,slow=3.8,SNR=5.7
H08N2 Diego Garcia H 94.55 262 P **P** **16 16 29.1 +0.6**
baz=178,slow=3.8,SNR=4.0
H08N3 Diego Garcia H 94.56 262 P **P** **16 16 28.1 -0.4**
baz=178,slow=3.8,SNR=3.9
YNE Yellowstone No 94.63 45 P **P** **16 16 28.8 -0.1**
O20A White River Ci 94.67 50 P **P** **16 16 29.2 +0.1**
O20A White River Ci 94.67 50 P **P** **16 16 29.3 +0.1**
baz=256
ANMO Albuquerque 94.82 55 P **P** **16 16 30.2 +0.3**
comp=Z,16nm,1.1s,baz=252,slow=4.0,SNR=26
ANMO pP **pP** **16 17 18.2 +0.3**
comp=Z,41nm,1.1s,baz=257,slow=5.4,SNR=8.5
ANMO PP **PP** **16 20 21.7 +0.1**
comp=Z,13nm,1.2s,baz=250,slow=6.2,SNR=8.5
ANMO PKiKP **PKiKP** **16 21 08.7 -2.4**
comp=Z,4.1nm,1.0s,baz=254,slow=5.7,SNR=5.6
ANMO PKKPbc **PKKPdf** **16 33 26.4 -0.1**
comp=Z,11nm,0.9s,baz=73,slow=4.5,SNR=14
ANMO Albuquerque 94.82 55 P **P** **16 16 29.7 -0.2**
ANMO Albuquerque 94.82 55 P **P** **16 16 30.0 +0.1**
baz=256
KLRI Killari 94.84 287 *e*P **P** **16 16 29.4 -0.8**
KLRI IAmb IAmb 16 16 30.9
comp=Z,791nm,1.8s
MNTX Cornudas Mount 94.95 59 P **P** **16 16 30.1 -0.2**
MNTX Cornudas Mount 94.95 59 P **P** **16 16 30.6 +0.3**
baz=257
ZSN Zaisan 95.04 318 *c* *i*P **P** **16 16 30.6 +0.2**
ZSN *i* *P **pP** **16 17 17.7 -0.6**
ZSN *i* S **SKSac** **16 26 47.0 -0.4**
ZSN pmax pmax
comp=Z,545nm,1.8s
ZSN smax smax
comp=E,669nm,5.6s
ZSN Zaisan 95.04 318⇑ *i*P **P** **16 16 30.6 +0.2**
comp=E,545nm,1.8s
ZSN *i* pP **pP** **16 17 17.8 -0.6**
ZSN *i* S **SKSac** **16 26 47.1 -0.4**
comp=E,669nm,5.6s
GCMT Greyclift 95.06 44 P **P** **16 16 30.2 -0.5**
VNA3 Neumayer Olymp 95.06 181 P **P** **16 16 29.8 -0.4**
RLMT Red Lodge 95.16 45 P **P** **16 16 30.9 -0.4**
RLMT Red Lodge 95.16 45 P **P** **16 16 31.5 +0.2**
baz=256
S22A 4UR Ranch, Cre 95.18 53 P **P** **16 16 31.5 -0.1**
S22A 4UR Ranch, Cre 95.18 53 P **P** **16 16 32.3 +0.7**
baz=256,SNR=7.1
SMCO Snowmass 95.40 51 P **P** **16 16 32.5 -0.2**
ZAIG Zacatecas 95.41 68 P **P** **16 16 33.3 +0.3**
ZAIG IAmb IAmb 16 17 27.3
comp=Z,237nm,1.5s
HMDM Hanimaadhoo 95.55 276 P **P** **16 16 34.5 +1.1**
EGMT Eagleton 95.56 42 P **P** **16 16 33.4 +0.5**
EGMT IAmb IAmb 16 17 26.7
comp=Z,281nm,1.8s
EGMT Eagleton 95.56 42 P **P** **16 16 32.6 -0.3**
baz=256
C36M Paulatuk 95.59 19 P **P** **16 16 31.2 -1.2**
C36M pP **pP** **16 17 18.1 -1.7**
C36M IAmb IAmb 16 17 20.5
comp=Z,275nm,1.6s
C36M Paulatuk 95.59 19 P **P** **16 16 31.4 -0.9**
baz=245
VNA1 Neumayer--Stat 95.63 181 P **P** **16 16 33.1 +0.4**
RWWY Rawlins 95.80 49 P **P** **16 16 33.1 -1.2**
TX31 Lajitas Ar. Si 95.87 61 P **P** **16 16 33.3 -1.4**
TX31 IAmb IAmb 16 17 29.3
comp=Z,420nm,1.9s
TX32 Lajitas Array 95.87 61 P **P** **16 16 33.7 -1.0**
TX32 IAmb IAmb 16 17 29.2
comp=Z,426nm,1.9s
TXAR Lajitas Array 95.87 61 P **P** **16 16 35.1 +0.4**
comp=Z,6.4nm,0.7s,baz=228,slow=4.7,SNR=49
TXAR pP **pP** **16 17 23.5 +0.9**
comp=Z,8.4nm,0.9s,baz=231,slow=4.3,SNR=3.5
TXAR PP **PP** **16 20 30.1 +0.4**
comp=Z,11nm,1.1s,baz=239,slow=9.7,SNR=8.7
TXAR PKiKP **PKiKP** **16 21 15.3 +2.3**
comp=Z,4.1nm,1.1s,baz=238,slow=0.9,SNR=2.8
TXAR PKKPbc **PKKPdf** **16 33 24.4 +0.1**
comp=Z,4.6nm,0.6s,baz=94,slow=3.5,SNR=5.2
TXAR PKPPKP **P'P'df** **16 41 37.7 +1.0**
comp=Z,9.2nm,1.1s,baz=108,slow=2.9,SNR=8.9
TXAR LR LR 16 55 22.7
comp=Z,1µm,19.0s,baz=0.0,slow=32
TXAR Lajitas Array 95.87 61 P **P** **16 16 33.5 -1.2**
TXAR Lajitas Array 95.87 61 PKKPdf 16 33 23.4 -0.8
GDL2 Guadalupe Moun 95.91 58 P **P** **16 16 34.0 -0.9**
MNCI Minicoy 96.01 277 P **P** **16 16 35.2 -0.4**
SDCO Great Sand Dun 96.20 53 P **P** **16 16 36.2 -0.1**
SDCO Great Sand Dun 96.20 53 P **P** **16 16 36.6 +0.3**
baz=257,SNR=6.0
K22A Casper 96.51 48 P **P** **16 16 36.6 -0.8**
K22A Casper 96.51 48 P **P** **16 16 37.1 -0.3**
baz=257
N23A Red Feather La 96.55 50 P **P** **16 16 37.8 +0.1**
N23A IAmb IAmb 16 17 34.5
comp=Z,292nm,2.0s
N23A Red Feather La 96.55 50 P **P** **16 16 37.9 +0.1**
baz=257
ISCO Idaho Springs 96.56 51 P **P** **16 16 37.5 -0.4**
ISCO pmax pmax
comp=Z,63nm,1.5s
ISCO Idaho Springs 96.56 51 P **P** **16 16 37.5 -0.4**
ISCO Idaho Springs 96.56 51 P **P** **16 16 38.0 +0.1**
baz=258
NDI New Delhi 96.58 298 *e*P **P** **16 16 37.0 -0.8**
MK31 Makanchi Array 96.59 316 P **P** **16 16 38.0 +0.5**
MK31 Makanchi Array 96.59 316 P **P** **16 16 37.5 +0.1**
MKAR Makanchi Array 96.59 316 P **P** **16 16 37.5 +0.1**
comp=Z,221nm,0.7s,baz=97,slow=6.0,SNR=1924
MKAR pP **pP** **16 17 24.4 -1.0**
comp=Z,76nm,1.0s,baz=96,slow=6.2,SNR=2.1
MKAR PP **PP** **16 20 31.7 -3.0**
comp=Z,22nm,0.9s,baz=98,slow=9.6,SNR=4.3
MKAR PKiKP **PKiKP** **16 21 14.0 +0.4**
comp=Z,9.7nm,0.5s,baz=217,slow=0.8,SNR=39
MKAR PKKPbc **PKKPbc** **16 33 19.8 -2.4**
comp=Z,12nm,0.9s,baz=258,slow=4.6,SNR=18
MKAR PKPPKP **P'P'df** **16 41 30.9 -3.0**
comp=Z,2.3nm,1.0s,baz=290,slow=3.5,SNR=8.0
ZAA0 Zalesovo Array 96.71 324 P **P** **16 16 36.9 -0.9**
ZALV Zalesovo Beach 96.71 324 P **P** **16 16 37.0 -0.8**
comp=Z,171nm,0.8s,baz=114,slow=4.3,SNR=648
ZALV pP **pP** **16 17 24.5 -1.3**
comp=Z,101nm,1.2s,baz=104,slow=3.6,SNR=3.0
ZALV PP **PP** **16 20 30.7 -4.7**
comp=Z,35nm,1.2s,baz=116,slow=9.8,SNR=3.6
ZALV PKiKP **PKiKP** **16 21 13.3 -0.2**
comp=Z,6.0nm,0.5s,baz=179,slow=1.8,SNR=13
ZALV PKKPbc **PKKPbc** **16 33 19.9 -2.3**
comp=Z,2.5nm,0.5s,baz=288,slow=2.6,SNR=6.8
ZALV PKPPKP **P'P'df** **16 41 31.3 -1.7**
comp=Z,1.8nm,0.8s,baz=248,slow=1.6,SNR=7.5
ZALV LR LR 16 57 57.0
comp=Z,3µm,21.9s,baz=97,slow=34
ZALV Zalesovo Beam 96.71 324 P **P** **16 16 36.9 -0.9**
ZALV pP **pP** **16 17 24.8 -1.0**
Q24A Divide 96.73 52 P **P** **16 16 38.6 -0.1**
Q24A Divide 96.73 52 P **P** **16 16 39.3 +0.6**
baz=258,SNR=8.8
YKA Yellowknife Ar 96.79 27 P **P** **16 16 36.5 -1.5**
YKA pP **pP** **16 17 23.9 -1.8**
MAKZ Makanchi 96.81 316 P **P** **16 16 38.4 -0.1**
MAKZ pmax pmax
comp=Z,843nm,1.3s
MAKZ Makanchi 96.81 316 P **P** **16 16 38.4 -0.1**
T25A Trinidad 96.92 54 P **P** **16 16 39.2 -0.2**
baz=258
PHWY Pilot Hill 97.00 49 P **P** **16 16 38.7 -1.1**
USHA Ushuaia 97.02 151 PKKPbc PKKPbc 16 33 19.5 -1.5
comp=Z,14nm,0.8s,baz=342,slow=4.6,SNR=6.0
USHA PKPPKP **P'P'df** **16 41 31.9 -1.8**
comp=Z,18nm,0.9s,baz=50,slow=2.4,SNR=4.8
GO09 Cerro Castillo 97.08 147 P Pdif 16 16 40.2 +0.5
GO09 IAmb IAmb 16 16 42.5
comp=Z,240nm,1.6s
POO Poona 97.49 287⇓ *i*P **P** **16 16 41.0 -1.2**
comp=Z,460nm,1.0s
POO *ex* x 16 19 52.5
POO *e*S **SKSac** **16 26 59.5 -1.9**

MSTX Muleshoe 97.58 57 P **P** **16 16 42.0 -0.3**
MSTX Muleshoe 97.58 57 P **P** **16 16 42.0 -0.3**
baz=258
LAO LASA Array 97.59 44 P Pdif 16 16 42.2 +0.1
LAO IAmb IAmb 16 17 38.7
comp=Z,154nm,1.6s
LAO LASA Array 97.59 44 P Pdif 16 16 42.8 +0.7
baz=258
SHLS Shalkode 97.77 312 *c* *i*P **P** **16 16 41.8 -1.2**
SHLS *e**PP **pP** **16 17 28.9 -2.2**
SHLS *e*S **SKSac** **16 27 00.3 -1.7**
SHLS pmax pmax
comp=Z,443nm,2.3s
SHLS smax smax
comp=N,133nm,2.9s
SHLS Shalkode 97.77 312⇑ *i*P **P** **16 16 41.8 -1.2**
comp=N,443nm,2.3s
SHLS *e*pP **pP** **16 17 29.0 -2.2**
SHLS *e*S **SKSac** **16 27 00.4 -1.7**
comp=N,133nm,2.9s
PDGK Podgornoye 97.79 313 P **P** **16 16 42.4 -0.7**
UZB Uzynbulak 98.09 312 *c* *i*P **P** **16 16 44.2 -0.2**
UZB *i* *PP **pP** **16 17 30.2 -2.4**
UZB *i* S **SKSac** **16 27 03.3 -0.3**
UZB pmax pmax
comp=Z,270nm,2.2s
UZB smax smax
comp=E,248nm,3.0s
UZB Uzynbulak 98.09 312⇑ *i*P **P** **16 16 44.2 -0.2**
comp=E,270nm,2.2s
UZB *i* pP **pP** **16 17 30.2 -2.4**
UZB *i* S **SKSac** **16 27 03.3 -0.3**
comp=E,248nm,3.0s
KPKS Kokpek 98.39 313 *c* *i*P **P** **16 16 44.8 -0.9**
KPKS *e**PP **pP** **16 17 32.8 -1.1**
KPKS *i* S **SKSac** **16 27 05.1 +0.1**
KPKS pmax pmax
comp=Z,368nm,2.1s
KPKS smax smax
comp=E,468nm,3.8s
KPKS Kokpek 98.39 313⇑ *i*P **P** **16 16 44.9 -0.9**
comp=E,368nm,2.1s
KPKS *e*pP **pP** **16 17 32.8 -1.1**
KPKS *i* S **SKSac** **16 27 05.2 +0.1**
comp=E,468nm,3.8s
PRZ Przheval'sk 98.41 312 P Pdif 16 16 46.3 +0.3
PRZ pmax pmax
comp=Z,531nm,1.7s
PRZ Przheval'sk 98.41 312 P Pdif 16 16 46.2 +0.3
SATY Saty 98.51 312 *i* P **P** **16 16 45.8 -0.5**
SATY *e**PP **pP** **16 17 33.3 -1.2**
SATY *e*S **SKSac** **16 27 06.1 +0.4**
SATY pmax pmax
comp=Z,269nm,2.2s
SATY smax smax
comp=E,514nm,3.1s
SATY Saty 98.51 312 *i* P **P** **16 16 45.9 -0.5**
comp=E,269nm,2.1s
SATY *e*pP **pP** **16 17 33.3 -1.2**
SATY *e*S **SKSac** **16 27 06.1 +0.4**
comp=E,514nm,3.1s
ZHN Zhinishke 98.51 312 *ce*P **P** **16 16 45.9 -0.4**
ZHN *e**PP **pP** **16 17 33.3 -1.2**
ZHN pmax pmax
comp=Z,129nm,2.2s
ZHN Zhinishke 98.51 312⇑ *e*P **P** **16 16 46.0 -0.4**
comp=Z,130nm,2.2s
ZHN *e*pP **pP** **16 17 33.4 -1.2**
RSSD Black Hills 98.59 47 P **P** **16 16 46.7 -0.1**
RSSD pmax pmax
comp=Z,44nm,1.6s
RSSD Black Hills 98.59 47 P **P** **16 16 46.7 -0.1**
RSSD Black Hills 98.59 47 Pdiff **P** **16 16 46.3 -0.5**
baz=259
AMTX Amarillo 98.64 56 P **P** **16 16 46.6 -0.5**
AMTX Amarillo 98.64 56 Pdiff **P** **16 16 46.2 -0.8**
baz=259
KSCO Kaye Shedlock' 98.67 52 Pdiff **P** **16 16 46.9 -0.3**
baz=259
SEM Semipalatinsk 98.68 320 *de*P **P** **16 16 45.6 -1.4**
SEM *e**PP **pP** **16 17 33.0 -2.0**
SEM *e*S **SKSac** **16 27 03.6 -2.8**
SEM pmax pmax
comp=Z,134nm,1.5s
SEM Semipalatinsk 98.68 320⇓ *e*P **P** **16 16 45.7 -1.4**
comp=Z,134nm,1.5s
SEM *e*pP **pP** **16 17 33.0 -2.0**
SEM *e*S **SKSac** **16 27 03.6 -2.8**
TARG Taragay, Kyrgy 98.70 311 P **P** **16 16 47.2 -0.3**
TARG IAmb IAmb 16 16 49.9
comp=Z,186nm,1.6s
TDK Taldyqorghan 98.88 314 *d* *i*P **P** **16 16 47.6 -0.2**
TDK *e**PP **pP** **16 17 35.3 -0.6**
TDK *e*S **SKSac** **16 27 06.3 -0.9**
TDK pmax pmax
comp=Z,395nm,1.9s
TDK Taldyqorghan 98.88 314⇓ *i*P **P** **16 16 47.6 -0.2**
comp=Z,396nm,1.9s
TDK *e*pP **pP** **16 17 35.4 -0.6**
TDK *e*S **SKSac** **16 27 06.3 -0.9**
KDJ Kajisay 99.23 311 P **Pdif** **16 16 49.7 +0.1**
KDJ pmax pmax
comp=Z,81nm,0.9s
KDJ Kajisay 99.23 311 **Pdif** **16 16 49.7 +0.1**
KDJ IAmb IAmb 16 16 52.4
comp=Z,80nm,0.9s
DGMT Dagmar 99.28 42 Pdiff **Pdif** **16 16 49.6 +0.1**
baz=260
833A Chaparral WMA, 99.34 63 Pdiff **Pdif** **16 16 49.9 -0.3**
baz=259
JCT Junction City 99.39 61 P **Pdif** **16 16 49.8 -0.6**
JCT pmax pmax
comp=Z,55nm,1.2s
JCT Junction City 99.39 61 Pdif **Pdif** **16 16 49.8 -0.6**
JCT Junction City 99.39 61 Pdiff **Pdif** **16 16 49.8 -0.6**
baz=259
OGNE Ogallala 99.47 50 Pdiff **Pdif** **16 16 50.4 -0.2**
baz=260
MDOK Medeo 99.51 312 *d* *i*P **Pdif** **16 16 50.6 -0.2**
MDOK *e**PP **pP** **16 17 37.8 -1.2**
MDOK *e*S **SKSac** **16 27 10.5 -0.2**
MDOK pmax pmax
comp=Z,988nm,2.2s
MDOK Medeo 99.51 312⇓ *i*P **Pdif** **16 16 50.6 -0.2**
comp=Z,988nm,2.1s
MDOK *e*pP **pP** **16 17 37.9 -1.2**
MDOK *e*S **SKSac** **16 27 10.6 -0.2**
TNSS Tian-Shan 99.56 312⇑ *i*P **Pdif** **16 16 51.1 -0.2**
TNSS Tian-Shan 99.56 312⇑ *i*P **Pdif** **16 16 51.2 -0.2**
AAA Alma-Ata 99.61 312 *e*P **Pdif** **16 16 51.8 +0.6**
AAA *e*S **SKSac** **16 27 12.6 +1.5**
AAA pmax pmax
comp=Z,800nm,8.8s
AAA Alma-Ata 99.61 312 *e*P **Pdif** **16 16 50.2 -0.9**
comp=Z,884nm,4.1s
AAA *e*PP **PP** **16 20 55.1 -2.8**
AAA *e*S **SKSac** **16 27 08.6 -2.5**
KSH Kashi 99.68 308⇑ *i*P **Pdif** **16 16 53.1 +1.5**
KSH pP pP 16 17 39.1 -0.4
KSH sP sP 16 18 02.9 +3.3
KSH PP **PP** **16 20 59.1 +0.5**
KSH SKS **SKSac** **16 27 15.1 +3.4**
KSH S **ScS** **16 28 07.9 -0.1**
KSH sS sS 16 29 32.2 +1.7
KSH SS **SS** **16 35 09.9 +5.5**
KSH pmax pmax
comp=Z,3µm,7.6s
KSH LR LR
comp=Z,1µm,11.8s
KSH LR LR
comp=Z,4µm,16.9s
KSH LR LR
comp=Z,4µm,18.4s
KURK Kurchatov 99.75 320 *c* *i*P **Pdif** **16 16 50.6 -0.9**
KURK pmax pmax
comp=Z,249nm,1.7s
KURK Kurchatov 99.75 320 **PKiKP** **16 21 19.8 +0.8**
KURBB Kurchatov Arra 99.80 320 PKiKP **PKiKP** **16 21 19.8 +0.7**
comp=Z,21nm,0.8s,baz=114,slow=1.8,SNR=14
KURBB PKKPbc **PKKPbc** **16 33 12.0 -1.4**
comp=Z,11nm,1.0s,baz=278,slow=3.7,SNR=19
KURBB PKPPKP 16 41 28.5
comp=Z,5.1nm,1.1s,baz=291,slow=3.1,SNR=12
ABTX Abilene, Hawle 99.90 59 Pdif **Pdif** **16 16 51.8 -0.9**
ABTX Abilene, Hawle 99.90 59 Pdiff **Pdif** **16 16 52.1 -0.6**

baz=260
ULHL Ulahol 99.94 311 P **Pdif** 16 16 53.8 +1.0
SNR=12
NRN Naryn 99.98 310 P **Pdif** 16 16 52.3 -0.9
NRN pmax pmax
comp=Z,138nm,1.7s
NRN Naryn 99.98 310 **Pdif** 16 16 52.3 -0.9
NRN IAmb IAmb 16 16 55.1
comp=Z,138nm,1.7s
KUU Kurty 100.14 313*c* *i*P **Pdif** 16 16 52.7 -0.7
KUU *i* S **SKSac** 16 27 13.9 +0.4
KUU pmax pmax
comp=Z,443nm,2.0s
KUU Kurty 100.14 313⇑ *i*P **Pdif** 16 16 52.8 -0.7
comp=Z,443nm,2.0s
KUU *i* pP **pPdif** 16 17 39.8 -1.8
KUU *i* S **SKSac** 16 27 13.9 +0.4
TKM2 Tokmak 2 100.52 312 P **Pdif** 16 16 55.6 +0.2
SNR=30
KZA Kyzart 100.64 311 P **Pdif** 16 16 56.5 +0.3
SNR=58
CBKS Cedar Bluff 100.86 53 Pdiff **Pdif** 16 16 56.5 -0.3
baz=261
KBK Karagaybulak 100.95 311 P **Pdif** 16 16 57.5 +0.3
SNR=18
WMOK Wichita Mounta 100.97 57 Pdiff **Pdif** 16 16 56.7 -0.7
baz=261
CHMS Chumysh 101.14 312 P **Pdif** 16 16 58.0 +0.1
SNR=28
UCH Uchtor 101.20 311 P **Pdif** 16 16 58.9 +0.2
SNR=52
AAK Ala-Archa 101.28 311*c* *i*P **Pdif** 16 16 57.3 -1.4
AAK Ala-Archa 101.28 311 P **Pdif** 16 16 58.9 +0.2
comp=Z,16nm,0.9s,baz=113,slow=3.4,SNR=4.4
AAK PKiKP **PKiKP** 16 21 23.0 +0.7
comp=Z,9.7nm,0.7s,baz=32,slow=2.7,SNR=7.3
AAK PKKPbc **PKKPbc** 16 33 08.8 -0.3
comp=Z,15nm,0.6s,baz=193,slow=1.8,SNR=21
AAK PKPPKP 16 41 25.9
comp=Z,12nm,1.2s,baz=192,slow=1.5,SNR=12
AAK Ala-Archa 101.28 311 P **Pdif** 16 16 59.1 +0.4
SNR=19
AAK Ala-Archa 101.28 311 P **Pdif** 16 16 58.6 -0.1
SGDS Sogindy 101.30 312⇑ *i*P **Pdif** 16 16 58.0 -0.7
comp=Z,117nm,2.5s
SGDS *i* pP **pPdif** 16 17 45.6 -1.2
SGDS *i* S **SKSac** 16 27 19.2 0.0
comp=Z,127nm,3.8s
435B Jarrell 101.32 61 Pdiff **Pdif** 16 16 58.7 -0.2
baz=260
USP Ospenovka 101.37 312 P **Pdif** 16 16 58.6 -0.3
SNR=36
WHTX Lake Whitney, 101.62 60 Pdiff **Pdif** 16 16 59.9 -0.3
baz=261
AML Almayashu 101.79 311 P **Pdif** 16 17 02.0 +0.7
SNR=51
EKS2 Erkin-Say 101.81 311 P **Pdif** 16 17 00.8 -0.2
SNR=15
BTLS Baital 101.94 314*d* *i*P **Pdif** 16 17 01.0 -0.3
BTLS *e*S **SKSac** 16 27 20.9 -1.1
BTLS pmax pmax
comp=Z,35nm,1.9s
BTLS Baital 101.94 314⇓ *i*P **Pdif** 16 17 01.0 -0.3
comp=Z,35nm,1.9s
BTLS *i* pP pP 16 17 48.5 -1.0
BTLS *e*S **SKSac** 16 27 20.9 -1.1
SUSD Miller 102.24 47 Pdiff **Pdif** 16 17 02.2 -0.6
baz=263
BGNE Belgrade 102.44 50 Pdiff **Pdif** 16 17 03.4 -0.3
baz=262
KSU1 Kansas State U 103.31 53 Pdiff **Pdif** 16 17 07.7 0.0
baz=263
BRZS Berezniki 103.43 319 *i* P **Pdif** 16 17 06.7 -1.1
BRZS *e* 16 21 26.0
BRZS *e*S **SKSac** 16 27 25.5 -3.3
BRZS Berezniki 103.43 319 *i* Pdif **Pdif** 16 17 06.8 -1.1
BRZS *e*PP **PP** 16 21 26.1 -0.2
BRZS *e*S **SKSac** 16 27 25.5 -3.3
TUL1 Leonard 103.55 56 Pdiff **Pdif** 16 17 08.1 -0.6
baz=263
DZA Taraz 103.62 311 *e*P **Pdif** 16 17 08.6 -0.3
DZA *e* 16 21 26.9
DZA Taraz 103.62 311 *e*Pdif **Pdif** 16 17 08.7 -0.3
DZA *e*PP **PKiKP** 16 21 26.9 +0.6
PLCA Paso Flores 103.78 139 Pdiff **Pdif** 16 17 10.7 +0.8
comp=Z,2.6nm,0.9s,baz=209,slow=7.7,SNR=4.2
PLCA PKiKP **PP** 16 21 27.8 -0.7
comp=Z,2.6nm,0.8s,baz=189,slow=5.6,SNR=2.5
PLCA PKKPbc **PKKPbc** 16 33 00.0 -1.4
comp=Z,16nm,1.1s,baz=94,slow=0.5,SNR=9.1
ECSD EROS Data Cent 103.84 48 **Pdif** 16 17 09.7 -0.2
ECSD EROS Data Cent 103.84 48 Pdiff **Pdif** 16 17 09.6 -0.2
baz=264
NATX Nacogdoches 103.94 60 Pdiff **Pdif** 16 17 10.5 -0.1
baz=262
JBG Jabagly 104.15 311 *i* P **Pdif** 16 17 11.3 -0.1
JBG *e* 16 21 27.5
KK31 Karatay Array 104.24 311 *i* P **Pdif** 16 17 10.6 -1.1
IUG Iuzhnay 104.50 310 *e*P **Pdif** 16 17 13.1 +0.1
IUG *e* 16 21 32.1
IUG Iuzhnay 104.50 310 *e*Pdif **Pdif** 16 17 13.1 +0.1
IUG *e*PP **PP** 16 21 32.2 -2.4
ULM Lac du Bonnet 104.90 41 Pdiff **Pdif** 16 17 14.6 +0.2
comp=Z,2.8nm,0.8s,baz=304,slow=6.7,SNR=5.5
ULM PKiKP **PKiKP** 16 21 28.0 -0.5
comp=Z,9.4nm,0.8s,baz=286,slow=2.8,SNR=13
ULM PKKPbc **PKKPbc** 16 32 54.1 -4.2
comp=Z,6.2nm,0.6s,baz=98,slow=2.0,SNR=9.9
ULM PKPPKP 16 41 17.6
comp=Z,13nm,1.1s,baz=49,slow=1.8,SNR=11
BVAR Borovoye Array 105.08 322 PKiKP **PKiKP** 16 21 30.1 +1.4
comp=Z,7.1nm,0.4s,baz=125,slow=2.0,SNR=24
BVAR PKKPbc **PKKPbc** 16 32 56.0 -2.0
comp=Z,2.8nm,0.7s,baz=298,slow=3.2,SNR=5.5
W39A Magazine 105.09 57 PKiKP **PKiKP** 16 21 28.0 -1.3
baz=264
BRVK Borovoye 105.15 322 P **Pdif** 16 17 14.4 -1.0
MIAR Mount Ida 105.19 58 PKiKP **PKiKP** 16 21 29.0 -0.5
baz=264
RES Resolute Bay 105.36 16 PKiKP **PKiKP** 16 21 28.5 -0.1
comp=Z,9.6nm,0.5s,baz=239,slow=1.1,SNR=11
RES Resolute Bay 105.36 16 **PKiKP** 16 21 29.2 +0.7
Z41A Richland Creek 105.68 59 PKiKP **PKiKP** 16 21 29.2 -1.2
baz=264
X40A Basin Creek Fa 105.79 58 PKiKP **PKiKP** 16 21 29.9 -0.6
baz=264
U40A Yellville 105.97 56 PKiKP **PKiKP** 16 21 30.0 -0.9
baz=264
SCIA State Center 106.16 50 PKiKP **PKiKP** 16 21 30.9 -0.2
baz=266
W41B Gary Mavity, V 106.34 57 PKiKP **PKiKP** 16 21 31.1 -0.4
baz=264
CCM Cathedral Cave 107.39 54 PKiKP **PKiKP** 16 21 32.8 -0.6
baz=266
X43A Marvell 107.40 58 PKiKP **PKiKP** 16 21 32.7 -0.9
baz=265
VBMS Vicksburg 107.49 60 PKiKP **PKiKP** 16 21 32.9 -0.8
baz=264
EYMN Ely 107.67 44 PKiKP **PKiKP** 16 21 33.2 -0.5
baz=269
JFWS Jewell Farm 108.41 49 PKiKP **PKiKP** 16 21 34.8 -0.4
baz=268
OXF Oxford 108.61 58 PKiKP **PKiKP** 16 21 35.4 -0.4
baz=266
HDIL Hopedale 109.04 52 PKiKP **PKiKP** 16 21 35.5 -1.0
baz=268
MSEY Mahe Island 109.88 260 *i* P **PKiKP** 16 21 39.9 +1.0
SNR=7.2
WVT Waverly 110.00 56 PKiKP **PKiKP** 16 21 37.1 -1.2
baz=267
L44A Lake County Fo 110.12 50 PKiKP **PKiKP** 16 21 37.9 -0.5
baz=269
BRAL Brewton 110.35 62 PKiKP **PKiKP** 16 21 38.8 -0.3
baz=266
LRAL Lakeview Retre 110.52 60 PKiKP **PKiKP** 16 21 38.8 -0.7
baz=266
SVE Sverdlovsk 110.61 326 *e*PKIKP **PKiKP** 16 21 39.4 +0.5
SVE pmax pmax
comp=Z,150nm,1.5s
SFIN Lafayette 110.71 52 PKiKP **PKiKP** 16 21 39.0 -0.6
baz=269
W49A Belvidere 111.23 58 PKiKP **PKiKP** 16 21 39.1 -1.7
baz=268
J45A Montague 111.24 49 PKiKP **PKiKP** 16 21 39.8 -0.7
baz=271
WCI Wyandotte Cave 111.30 54 PKiKP **PKiKP** 16 21 40.0 -0.8
baz=269

L46A Eue Claire 111.33 50 PKiKP **PKiKP** 16 21 39.9 -0.8
baz=270
Z50A Ashland 111.43 60 PKiKP **PKiKP** 16 21 40.3 -0.9
baz=267
NNA Nana 111.45 109 PKiKP **PKiKP** 16 21 42.6 +0.8
comp=Z,6.5nm,0.6s,baz=257,slow=5.8,SNR=4.9
NNA PKKPbc **PKKPbc** 16 32 37.0 +0.3
comp=Z,15nm,0.8s,baz=340,slow=1.7,SNR=9.0
NNA Nana 111.45 109 **PKiKP** 16 21 42.1 +0.3
H45A Beulah 111.47 47 PKiKP **PKiKP** 16 21 40.0 -0.8
baz=272
E44A Grand Marais A 111.48 45 PKiKP **PKiKP** 16 21 40.4 -0.4
baz=272
V49A McMinnville 111.55 57 PKiKP **PKiKP** 16 21 40.2 -1.2
baz=268
ATAH Atahualpa 111.57 104 PKiKP **PKiKP** 16 21 44.0 +1.4
comp=Z,7.5nm,0.8s,baz=253,slow=1.8,SNR=7.0
ATAH PKKPbc **PKKPbc** 16 32 35.4 -1.3
comp=Z,22nm,1.0s,baz=270,slow=5.1,SNR=2.1
U49A Red Boiling Sp 111.67 56 PKiKP **PKiKP** 16 21 40.4 -1.1
baz=268
AB31 Akbulak array 111.69 318 *i* P **Pdif** 16 17 43.0 -1.6
K46A Dorr 111.70 49 PKiKP **PKiKP** 16 21 40.5 -0.9
baz=271
Q48A North Vernon 111.75 53 PKiKP **PKiKP** 16 21 40.7 -0.9
baz=270
N47A Urbana 111.78 51 PKiKP **PKiKP** 16 21 40.3 -1.4
baz=270
J46A Howard City 111.78 49 PKiKP **PKiKP** 16 21 40.9 -0.7
baz=271
ARU Arti 111.79 325 P **Pdif** 16 17 44.1 -0.8
ARU *i* 16 21 40.6
ARU 16 22 25.3
ARU 16 28 33.5
ARU SP SP 16 31 35.4 -3.2
ARU SSS SSS 16 41 54.3
ARU Arti 111.79 325 PKiKP **PKiKP** 16 21 41.3 +0.2
comp=Z,22nm,0.5s,baz=88,slow=1.9,SNR=80
ARU PKKPbc **PKKPbc** 16 32 34.2 -2.6
comp=Z,3.7nm,0.8s,baz=347,slow=3.4,SNR=6.7
ARU PKPPKP **P'P'df** 16 41 04.7 +0.5
comp=Z,0.3nm,0.3s,baz=114,slow=9.1,SNR=2.9
ARU Arti 111.79 325 **PKiKP** 16 21 40.8 -0.4
ARU **PKKPbc** 16 32 34.9 -1.9
F45A CMU Biological 111.80 46 PKiKP **PKiKP** 16 21 40.5 -0.9
baz=272
M47A Cromwell 111.83 51 PKiKP **PKiKP** 16 21 41.0 -0.7
baz=271
T49A Edmonton 111.88 55 PKiKP **PKiKP** 16 21 40.8 -1.1
baz=269
I46A Reed City 111.91 48 PKiKP **PKiKP** 16 21 40.8 -1.0
baz=272
P48A Milroy 111.99 53 PKiKP **PKiKP** 16 21 40.9 -1.1
baz=270
W50A Signal Mountai 112.01 57 PKiKP **PKiKP** 16 21 41.3 -1.0
baz=268
H46A Fife Lake 112.07 47 PKiKP **PKiKP** 16 21 41.4 -0.7
baz=272
S49A Springfield 112.09 55 PKiKP **PKiKP** 16 21 41.5 -0.8
baz=269
L47A Sherwood 112.14 50 PKiKP **PKiKP** 16 21 41.2 -1.1
baz=271
Y51A Rockmart 112.17 59 PKiKP **PKiKP** 16 21 41.3 -1.3
baz=268
352A Blakely 112.18 61 PKiKP **PKiKP** 16 21 41.5 -1.1
baz=267
R49A Shelbyville 112.18 54 PKiKP **PKiKP** 16 21 41.7 -0.8
baz=270
O48A Farmland 112.20 52 PKiKP **PKiKP** 16 21 41.4 -1.0
baz=270
V50A Pikevile 112.20 57 PKiKP **PKiKP** 16 21 41.7 -0.9
baz=269
NOR Nord 112.22 1 *i* P **PKiKP** 16 21 40.6 -0.8
comp=Z,28nm,1.1s
K47A Vermontville 112.28 49 PKiKP **PKiKP** 16 21 42.2 -0.3
baz=272
WSAR Wadi Sarin 112.28 290 PKiKP **PKiKP** 16 21 43.6 +0.6
comp=Z,34nm,1.0s,baz=174,slow=2.7,SNR=15
WSAR PKKPbc **PKKPbc** 16 32 34.3 +0.2
comp=Z,10.0nm,0.6s,baz=248,slow=4.4,SNR=12
N48A Decatur 112.29 51 PKiKP **PKiKP** 16 21 42.1 -0.5
baz=271
X51A Calhoun 112.37 58 PKiKP **PKiKP** 16 21 42.1 -0.8
baz=268
252A Lumpkin 112.37 61 PKiKP **PKiKP** 16 21 42.3 -0.7
baz=267
J47A Sumner 112.39 49 PKiKP **PKiKP** 16 21 42.6 -0.1
baz=272
Q49A Aurora 112.40 53 PKiKP **PKiKP** 16 21 42.1 -0.8
baz=270
152A Waverly Hall 112.41 60 PKiKP **PKiKP** 16 21 42.6 -0.5
baz=268
U50A Jamestown 112.42 56 PKiKP **PKiKP** 16 21 42.1 -0.9
baz=269
T50A Nancy 112.44 55 PKiKP **PKiKP** 16 21 42.1 -0.8
baz=269
W51A Cleveland 112.46 58 PKiKP **PKiKP** 16 21 42.2 -0.9
baz=269
GLMI Grayling 112.47 47 PKiKP **PKiKP** 16 21 42.4 -0.4
baz=273
M48A Edgerton 112.51 51 PKiKP **PKiKP** 16 21 42.5 -0.5
baz=271
I47A Gladwin 112.59 48 PKiKP **PKiKP** 16 21 42.3 -0.8
baz=272
Z52A Williamson 112.69 60 PKiKP **PKiKP** 16 21 43.0 -0.6
baz=268
L48A N Adams 112.71 50 PKiKP **PKiKP** 16 21 42.8 -0.6
baz=272
OPO Ambohidratompo 112.73 243 Pdiff **Pdif** 16 17 50.4 +0.2
comp=Z,5.4nm,0.8s,baz=108,slow=6.7,SNR=4.0
OPO PKiKP **PKiKP** 16 21 44.9 +0.6
comp=Z,36nm,0.7s,baz=83,slow=2.1,SNR=32
D46A Sault St. Mari 112.76 45 PKiKP **PKiKP** 16 21 42.7 -0.6
baz=274
H47A Mio 112.78 47 PKiKP **PKiKP** 16 21 42.6 -0.8
baz=273
353A Camilla 112.78 62 PKiKP **PKiKP** 16 21 43.1 -0.7
baz=267
SMDO Samad 112.79 289 P **PKiKP** 16 21 44.8 +0.7
SNR=18
S50A Richmond 112.79 55 PKiKP **PKiKP** 16 21 42.8 -0.8
baz=270
V51A Loudon 112.81 57 PKiKP **PKiKP** 16 21 42.9 -0.8
baz=269
O49A Covington 112.83 52 PKiKP **PKiKP** 16 21 42.8 -0.9
baz=271
AKTO Aktyubinsk 112.83 319 PKiKP **PKiKP** 16 21 43.9 +0.6
comp=Z,51nm,0.7s,baz=92,slow=4.0,SNR=63
AKTO PKKPbc **PKKPbc** 16 32 31.6 -1.5
comp=Z,4.7nm,1.0s,baz=262,slow=2.9,SNR=5.0
R50A Paris 112.85 54 PKiKP **PKiKP** 16 21 43.0 -0.7
baz=270
253A Americus 112.89 61 PKiKP **PKiKP** 16 21 43.5 -0.5
baz=268
K48A Perry 112.92 49 PKiKP **PKiKP** 16 21 43.3 -0.5
baz=272
N49A Columbus Grove 112.93 51 PKiKP **PKiKP** 16 21 43.3 -0.5
baz=271
G47A Hillman 113.00 47 PKiKP **PKiKP** 16 21 43.4 -0.4
baz=273
Y52A Lilburn 113.00 59 PKiKP **PKiKP** 16 21 43.7 -0.4
baz=268
M49A Liberty Center 113.07 51 PKiKP **PKiKP** 16 21 43.6 -0.4
baz=272
U51A La Follette 113.09 56 PKiKP **PKiKP** 16 21 43.6 -0.6
baz=270
Q50A Georgetown 113.12 54 PKiKP **PKiKP** 16 21 43.6 -0.6
baz=271
J48A Bridge Port 113.14 49 PKiKP **PKiKP** 16 21 43.5 -0.6
baz=273
W52A Ashburn 113.14 58 PKiKP **PKiKP** 16 21 43.8 -0.6
baz=269
T51A Gray 113.15 56 PKiKP **PKiKP** 16 21 43.8 -0.6
baz=270
153A Fort Valley 113.16 60 PKiKP **PKiKP** 16 21 43.6 -0.8
baz=268
I48A Sherman Twp 113.16 48 PKiKP **PKiKP** 16 21 43.6 -0.5
baz=273
X52A Dahlonega 113.16 58 PKiKP **PKiKP** 16 21 43.8 -0.7
baz=269
L49A Milan 113.20 50 PKiKP **PKiKP** 16 21 43.9 -0.4
baz=272
P50A Jamestown 113.25 53 PKiKP **PKiKP** 16 21 43.8 -0.7
baz=271
TIGA Tifton 113.32 62 PKiKP **PKiKP** 16 21 44.5 -0.3
baz=268
O50A Cable 113.38 52 PKiKP **PKiKP** 16 21 43.8 -0.9
baz=271

Z53A Monticello 113.40 60 PKiKP **PKiKP** 16 21 44.3 -0.6
baz=268
H48A Harrisville 113.40 47 PKiKP **PKiKP** 16 21 43.8 -0.8
baz=274
Y53A Monroe 113.40 59 PKiKP **PKiKP** 16 21 44.4 -0.6
baz=269
K49A Clarkson 113.41 49 PKiKP **PKiKP** 16 21 44.1 -0.6
baz=273
V52A Sevierville 113.42 57 PKiKP **PKiKP** 16 21 44.6 -0.3
baz=270
S51A Beattyville 113.43 55 PKiKP **PKiKP** 16 21 44.2 -0.7
baz=270
R51A Hillsboro 113.43 54 PKiKP **PKiKP** 16 21 43.9 -0.9
baz=271
GEYT Alibeck 113.45 305 Pdiff **Pdif** 16 17 53.0 +0.2
comp=Z,4.9nm,1.2s,baz=42,slow=6.7,SNR=8.7
GEYT PKiKP **PKiKP** 16 21 45.8 +0.8
comp=Z,44nm,0.8s,baz=135,slow=0.6,SNR=32
GEYT PKKPbc **PKKPbc** 16 32 30.3 -0.4
comp=Z,4.3nm,0.8s,baz=306,slow=4.8,SNR=3.9
GEYT Alibeck 113.45 305 **Pdif** 16 17 52.3 -0.4
GYA0B ALIBECK ARRAY 113.45 305 **Pdif** 16 17 52.5 -0.2
TZTN Tazewell 113.47 56 PKiKP **PKiKP** 16 21 44.8 -0.2
baz=270
GOGA Godfrey 113.49 59 PKiKP **PKiKP** 16 21 44.5 -0.6
baz=268
HOQ Hoqain 113.52 290 P **PKiKP** 16 21 45.7 +0.2
SNR=12
BSY Bisya 113.54 289 P **PKiKP** 16 21 45.6 +0.1
SNR=12
254A Abbeville 113.59 61 PKiKP **PKiKP** 16 21 44.7 -0.7
baz=268
Q51A Peebles 113.61 53 PKiKP **PKiKP** 16 21 44.4 -0.8
baz=271
J49A Marlette 113.61 49 PKiKP **PKiKP** 16 21 44.4 -0.7
baz=273
U52A Thorn Hill 113.61 56 PKiKP **PKiKP** 16 21 45.0 -0.2
baz=270
X53A Estanollee 113.65 58 PKiKP **PKiKP** 16 21 45.2 -0.2
baz=269
N50A Nevada 113.72 51 PKiKP **PKiKP** 16 21 44.8 -0.5
baz=272
154A Montrose 113.77 60 PKiKP **PKiKP** 16 21 45.0 -0.7
baz=268
W53A Cullowhee 113.77 58 PKiKP **PKiKP** 16 21 45.2 -0.6
baz=270
M50A Fremont 113.77 51 PKiKP **PKiKP** 16 21 44.8 -0.6
baz=272
I49A Point Hope 113.81 48 PKiKP **PKiKP** 16 21 44.9 -0.4
baz=274
F48A Evansville 113.82 46 PKiKP **PKiKP** 16 21 44.6 -0.7
baz=275
P51A Williamsport 113.82 53 PKiKP **PKiKP** 16 21 44.4 -1.1
baz=271
S52A Salyersville 113.84 55 PKiKP **PKiKP** 16 21 44.9 -0.8
baz=271
ACSO Alum Creek Sta 113.86 52 PKiKP **PKiKP** 16 21 44.5 -1.1
baz=272
T52A Hallie 113.92 55 PKiKP **PKiKP** 16 21 45.1 -0.7
baz=270
L50A Kingsville 113.92 50 PKiKP **PKiKP** 16 21 44.6 -1.1
baz=273
Z54A Sparta 114.01 60 PKiKP PKPdf 16 21 45.3 -0.8
baz=269
K50A Casco 114.02 49 PKiKP PKPdf 16 21 44.9 -0.9
baz=273
V53A Saluda 114.06 57 PKiKP PKPdf 16 21 45.9 -0.3
baz=270
E48A Lockeyer 114.08 45 PKiKP PKPdf 16 21 45.2 -0.6
baz=275
SPA0 Spitsbergen Ar 114.09 354 *e*PKPdf **PKiKP** 16 21 45.5 +0.5
SPA0 IVmB_BB 16 21 45.9
comp=Z,2μm,1.4s
SPA0 *e*SKSac **SKSac** 16 28 09.4 -3.6
SPA0 *e*SP **SP** 16 31 57.5 -1.1
SPITS Spitsbergen Ar 114.09 354 PKKPbc PKKPbc 16 32 27.3 -2.3
comp=Z,31nm,0.7s,baz=174,slow=2.9,SNR=13
LVC Limon Verde 114.10 123 PKiKP **PKiKP** 16 21 47.9 +0.8
comp=Z,23nm,1.2s,baz=260,slow=3.8,SNR=7.5
LVC PKKPbc **PKKPbc** 16 32 28.2 -0.3
comp=Z,28nm,0.9s,baz=59,slow=2.3,SNR=19
Y54A Tignall 114.15 59 PKiKP PKPdf 16 21 45.9 -0.4
baz=269
O51A Pataskala 114.15 52 PKiKP PKPdf 16 21 45.5 -0.6
baz=272
R52A Catlettsburg 114.17 54 PKiKP PKPdf 16 21 45.4 -0.8
baz=271
ARQ Araqi 114.21 290 P **PKiKP** 16 21 46.9 +0.1
SNR=12
F49A Sandfield 114.23 46 PKiKP PKPdf 16 21 45.3 -0.8
baz=275
U53A Fall Branch 114.25 56 PKiKP PKPdf 16 21 46.1 -0.4
baz=270
D48A Paudash Townsh 114.26 44 PKiKP PKPdf 16 21 45.3 -0.8
baz=276
SOHO SOHO 114.27 290 P **PKiKP** 16 21 47.3 +0.5
SNR=59
T53A Wise 114.28 56 PKiKP PKPdf 16 21 46.5 -0.1
baz=271
255A Hazlehurst 114.28 61 PKiKP PKPdf 16 21 46.2 -0.4
baz=268
N51A Ashland 114.30 51 PKiKP PKPdf 16 21 45.4 -1.0
baz=272
155A Kite 114.31 60 PKiKP PKPdf 16 21 46.0 -0.7
baz=269
HOPEN Hopen 114.33 351 *e*PKPdf **PKiKP** 16 21 46.0 +0.5
HOPEN IVmB_BB 16 21 46.3
comp=Z,960nm,2.1s
HOPEN *e*SKSac **SKSac** 16 28 11.7 -2.1
HOPEN *e*PS **PS** 16 32 15.7 -8.9
X54A Belton 114.42 58 PKiKP PKPdf 16 21 46.7 -0.2
baz=270
M51A Elyria 114.42 51 PKiKP PKPdf 16 21 46.1 -0.5
baz=273
Q52A Bidwell 114.45 53 PKiKP PKPdf 16 21 46.0 -0.8
baz=272
SHAO Shalim 114.47 284 *i* P **PKiKP** 16 21 47.7 +0.3
SNR=18
SHAO Shalim 114.47 284 P **PKiKP** 16 21 47.7 +0.3
KULLO Kullorsuaq 114.52 12⇑ *i*PKIKP PKPdf 16 21 45.7 -0.1
KULLO pmax pmax
comp=Z,77nm,1.0s
KULLO Kullorsuaq 114.52 12⇑ *i*P PKPdf 16 21 45.7 -0.1
comp=Z,76nm,1.0s
P52A Corning 114.53 53 PKiKP PKPdf 16 21 46.1 -0.8
baz=272
W54A Cherokee Point 114.57 58 PKiKP PKPdf 16 21 47.0 -0.2
baz=270
MDH Madha 114.58 292 *i* P PKPdf 16 21 46.9 -0.5
SNR=9.9
MDH Madha 114.58 292 P PKPdf 16 21 47.1 -0.3
SNR=8.5
S53A Williamson 114.59 55 PKiKP PKPdf 16 21 46.7 -0.4
baz=271
Z55A Blythe 114.60 60 PKiKP PKPdf 16 21 46.7 -0.6
baz=269
BANOM Banah 114.62 292 *i* P **PKiKP** 16 21 47.8 +0.2
SNR=6.7
UOSS Minazif 114.64 291 *i* P PKPdf 16 21 47.2 -0.3
SNR=28
UOSS Minazif 114.64 291 P PKPdf 16 21 47.2 -0.4
HATD Hatta, Dubai 114.69 291 *i* P **PKiKP** 16 21 47.7 +0.1
SNR=71
HATD Hatta, Dubai 114.69 291 P **PKiKP** 16 21 47.9 +0.2
SNR=24
MSFE Esma-Masafi 114.71 292 *i* P PKPdf 16 21 47.7 0.0
SNR=22
R53A Hurricane 114.72 54 PKiKP PKPdf 16 21 46.8 -0.5
baz=272
O52A Adamsville 114.74 52 PKiKP PKPdf 16 21 46.5 -0.8
baz=272
ASHO Ashiyiah 114.75 291 *i* P **PKiKP** 16 21 47.9 0.0
SNR=13
ASHO Ashiyiah 114.75 291 P **PKiKP** 16 21 48.1 +0.3
SNR=25
V54A Nebo 114.77 57 PKiKP PKPdf 16 21 47.1 -0.4
baz=270
SHME Shamm 114.77 292 *i* P PKPdf 16 21 47.7 -0.1
SNR=11
256A Glennville 114.79 61 PKiKP PKPdf 16 21 46.8 -0.8
baz=269
N52A McGinn's Farm, 114.82 51 PKiKP PKPdf 16 21 46.9 -0.5
baz=273
Y55A Saluda 114.84 59 PKiKP PKPdf 16 21 47.0 -0.7
baz=270
K51A Iona Station 114.84 49 PKiKP PKPdf 16 21 46.8 -0.5
baz=274
U54A Nelsons Funny 114.86 56 PKiKP PKPdf 16 21 47.1 -0.6

	baz=271						
ALNE	Al Ain	114.98	290	*i* P	PKPdf	16 21 48.3	0.0
	SNR=26						
X55A	Gracelyn & Ava	115.03	58	PKiKP	PKiKP	16 21 47.7	-0.3
	baz=270						
M52A	Chesterland	115.03	50	PKiKP	PKiKP	16 21 47.2	-0.6
	baz=274						
Q53A	Leroy	115.03	53	PKiKP	PKiKP	16 21 46.8	-1.1
	baz=272						
DWPF	Disney Wildern	115.04	65	PKiKP	PKiKP	16 21 47.9	-0.3
	baz=267						
T54A	Tazewell	115.05	55	PKiKP	PKiKP	16 21 47.5	-0.6
	baz=271						
DMTO	DMTO	115.07	283	P	PKPdf	16 21 48.9	+0.4
	SNR=15						
P53A	Whipple	115.11	53		PKiKP	16 21 47.4	-0.6
P53A	Whipple	115.11	53	PKiKP	PKiKP	16 21 47.5	-0.5
	baz=272						
I51A	Listowel	115.11	48	PKiKP	PKiKP	16 21 47.3	-0.6
	baz=275						
156A	Sylvania	115.13	60	PKiKP	PKiKP	16 21 47.5	-0.7
	baz=269						
NAZ	Nazwa, Dubai	115.13	291	*i* P	PKPdf	16 21 48.6	+0.1
	SNR=36						
NAZ	Nazwa, Dubai	115.13	291	P	PKPdf	16 21 48.7	+0.1
	SNR=16						
SOCY	Socotra	115.17	277		PKPdf	16 21 48.6	-0.3
SOCY	Socotra	115.17	277	P	PKiKP	16 21 49.5	+0.6
	SNR=11						
HSPB	Hornsund (broa	115.20	353	*e*PKPdf	PKPdf	16 21 47.3	+0.2
HSPB				IVmBBB		16 21 47.9	
	comp=Z,1µm,2.3s						
HSPB				*e*SKSac	SKSac	16 28 17.5	+0.4
HSPB				*e*SP	SP	16 32 17.8	+9.1
HSPB				*e*SS	SS	16 38 33.5	+2.3
GO01	Chusmiza	115.20	120		PKiKP	16 21 48.1	-1.3
O53A	New Philadelph	115.21	52	PKiKP	PKiKP	16 21 47.4	-0.8
	baz=273						
S54A	Dingess, Beckl	115.24	55		PKiKP	16 21 48.0	-0.4
S54A	Dingess, Beckl	115.24	55	PKiKP	PKiKP	16 21 47.7	-0.6
	baz=272						
Z56A	Williston	115.24	60		PKPdf	16 21 47.5	-1.0
Z56A	Williston	115.24	60	PKiKP	PKPdf	16 21 48.3	-0.2
	baz=270						
KMSC	Kings Mountain	115.27	58		PKPdf	16 21 47.6	-0.9
KMSC	Kings Mountain	115.27	58	PKiKP	PKPdf	16 21 47.8	-0.7
	baz=270						
Y56A	Pelion	115.30	59	PKiKP	PKPdf	16 21 48.2	-0.3
	baz=270						
JSC	Jenkinsville	115.34	58	PKIKP	PKPdf	16 21 48.0	-0.6
JSC	Jenkinsville	115.34	58		PKPdf	16 21 48.0	-0.6
V55A	Taylorsville	115.36	57		PKPdf	16 21 47.7	-0.9
V55A	Taylorsville	115.36	57	PKiKP	PKPdf	16 21 48.1	-0.5
	baz=271						
061Z	Ochoppi	115.38	68	PKiKP	PKPdf	16 21 47.9	-1.0
	baz=266						
ASUD	Al Ashush, Dub	115.41	291	*i* P	PKiKP	16 21 49.5	+0.5
	SNR=15						
ASUD	Al Ashush, Dub	115.41	291	P	PKiKP	16 21 49.7	+0.6
	SNR=10.0						
K52A	Tillsonburg	115.42	49	PKiKP	PKPdf	16 21 47.7	-0.8
	baz=275						
N53A	Lisbon	115.47	51		PKPdf	16 21 48.2	-0.5
N53A	Lisbon	115.47	51	PKiKP	PKPdf	16 21 48.3	-0.4
	baz=274						
R54A	Victor	115.48	54	PKiKP	PKPdf	16 21 48.2	-0.7
	baz=272						
U55A	TA2, Sparta	115.48	56	PKiKP	PKPdf	16 21 48.5	-0.5
	baz=271						
257A	Skidaway Islan	115.52	61	PKiKP	PKPdf	16 21 48.5	-0.5
	baz=269						
X56A	White Oak	115.52	58	PKiKP	PKPdf	16 21 48.7	-0.3
	baz=270						
M53A	WI Miller and	115.55	51	PKiKP	PKPdf	16 21 48.3	-0.5
	baz=274						
157A	Early Branch	115.55	60	PKiKP	PKPdf	16 21 48.4	-0.6
	baz=270						
Q54A	Coxs Mills	115.57	53		PKPdf	16 21 47.9	-1.0
Q54A	Coxs Mills	115.57	53	PKiKP	PKPdf	16 21 48.4	-0.6
	baz=273						
D50A	G1974 Best Tow	115.59	44	PKiKP	PKPdf	16 21 47.9	-0.8
	baz=277						
T55A	Pulaski	115.68	55	PKiKP	PKPdf	16 21 48.3	-0.9
	baz=272						
F51A	Arnstein	115.69	46	PKiKP	PKPdf	16 21 48.1	-0.8
	baz=277						
I52A	Shelburne	115.70	48	PKiKP	PKPdf	16 21 48.6	-0.5
	baz=276						
RBK	Rabkut	115.75	283	P	PKiKP	16 21 50.4	+0.5
	SNR=31						
Z57A	Bowman	115.80	60	PKiKP	PKPdf	16 21 48.9	-0.6
	baz=270						
P54A	Burton	115.81	53	PKiKP	PKPdf	16 21 48.4	-1.0
	baz=273						
L53A	Girard	115.82	50	PKiKP	PKPdf	16 21 48.3	-1.0
	baz=274						
H52A	Wyevale	115.85	47	PKiKP	PKPdf	16 21 48.5	-0.8
	baz=276						
O54A	Avella	115.86	52		PKPdf	16 21 48.9	-0.6
O54A	Avella	115.86	52	PKiKP	PKPdf	16 21 49.0	-0.4
	baz=274						
S55A	Lewisburg	115.88	55	PKiKP	PKPdf	16 21 48.7	-0.9
	baz=272						
W56A	Indian Trail	115.89	58	PKiKP	PKPdf	16 21 49.4	-0.2
	baz=271						
POPC	Popayan, Colom	115.89	94	*e*P	PKPdf	16 21 49.0	-1.6
E51A	G1948 Merrick	115.91	45	PKiKP	PKPdf	16 21 48.5	-0.9
	baz=277						
CBCY	The Bluff, Cay	115.91	75		PKPdf	16 21 49.4	-0.7
D51A	Lot 18 Range I	115.92	44	PKiKP	PKPdf	16 21 48.4	-1.0
	baz=278						
ALLY	Alegheny Colle	115.93	50		PKPdf	16 21 49.3	-0.2
060A	Indiantown	115.94	67	PKiKP	PKPdf	16 21 48.7	-1.2
	baz=267						
V56A	Mocksville	115.94	57	PKiKP	PKPdf	16 21 49.6	-0.1
	baz=271						
BLA	Blacksburg	115.97	55	PKIKP	PKPdf	16 21 49.2	-0.6
BLA	Blacksburg	115.97	55		PKPdf	16 21 49.2	-0.6
BLA	Blacksburg	115.97	55	PKiKP	PKPdf	16 21 49.3	-0.6
	baz=272						
BIRD	Birdtown, Kers	115.99	58		PKPdf	16 21 49.5	-0.4
ERPA	Erie	116.01	50	PKiKP	PKPdf	16 21 48.9	-0.7
	baz=275						
U56A	King	116.02	56		PKPdf	16 21 49.7	-0.2
U56A	King	116.02	56	PKiKP	PKPdf	16 21 49.5	-0.4
	baz=272						
Y57A	Sumter	116.06	59	PKiKP	PKPdf	16 21 49.4	-0.5
	baz=270						
N54A	Moraine State	116.10	51		PKPdf	16 21 49.4	-0.5
N54A	Moraine State	116.10	51	PKiKP	PKPdf	16 21 49.6	-0.3
	baz=274						
F52A	Sundridge	116.12	46	PKiKP	PKPdf	16 21 49.1	-0.6
	baz=277						
I53A	Kortright Cn E	116.14	48	PKiKP	PKPdf	16 21 49.4	-0.5
	baz=276						
KIRV	Kirov	116.15	329	PKP	PKiKP	16 21 49.6	+0.2
	comp=Z,134nm,0.4s,baz=75,slow=1.0,SNR=102						
KIRV				PKKPbc	PKKPbc	16 32 20.1	-1.9
	comp=Z,15nm,1.0s,baz=246,slow=3.7,SNR=5.9						
Q55A	Buckhannon	116.15	53	PKiKP	PKPdf	16 21 49.6	-0.5
	baz=273						
R55A	Marlinton	116.16	54		PKPdf	16 21 49.5	-0.7
R55A	Marlinton	116.16	54	PKiKP	PKPdf	16 21 49.5	-0.7
	baz=273						
WHFO	Wadi Hawf	116.21	283	P	PKiKP	16 21 51.1	+0.4
	SNR=23						
158A	Hollywood	116.23	60	PKiKP	PKPdf	16 21 50.1	-0.2
	baz=270						
NHSC	New Hope	116.24	60		PKPdf	16 21 50.3	-0.1
NHSC	New Hope	116.24	60	PKiKP	PKPdf	16 21 49.6	-0.8
	baz=270						
T56A	Rocky Mt	116.28	55	PKiKP	PKPdf	16 21 49.7	-0.6
	baz=272						
MCWV	Mont Chateau	116.30	52	PKiKP	PKPdf	16 21 49.8	-0.5
	baz=274						
X57A	Johnson Farm,	116.30	58	PKiKP	PKPdf	16 21 49.8	-0.7
	baz=271						
M54A	Oil Creek Stat	116.30	50		PKPdf	16 21 49.7	-0.6
M54A	Oil Creek Stat	116.30	50	PKiKP	PKPdf	16 21 49.6	-0.6
	baz=275						
P55A	Reedsville	116.32	53	PKiKP	PKPdf	16 21 50.0	-0.4
	baz=274						
W57A	Gilead	116.37	58		PKPdf	16 21 49.7	-0.9
W57A	Gilead	116.37	58	PKiKP	PKPdf	16 21 50.3	-0.3
	baz=271						
L54A	Sinclairville	116.50	50	PKiKP	PKPdf	16 21 50.0	-0.6
	baz=275						

E52A	Mattawa	116.51	45	PKiKP	PKPdf	16 21 49.9	-0.6
	baz=278						
V57A	Coltrane Farms	116.53	57	PKiKP	PKPdf	16 21 50.6	-0.2
	baz=272						
Z58A	St. Stephen	116.55	60	PKiKP	PKPdf	16 21 50.7	-0.2
	baz=270						
ABTO	Aybut	116.59	283	P	PKiKP	16 21 52.4	+0.9
	SNR=23						
S56A	Natural Bridge	116.62	55	PKiKP	PKPdf	16 21 50.3	-0.8
	baz=273						
MATQ	Matagami	116.65	41	PKiKP	PKPdf	16 21 49.5	-1.1
	baz=280						
Y58A	Scranton	116.66	59		PKPdf	16 21 51.1	0.0
Y58A	Scranton	116.66	59	PKiKP	PKPdf	16 21 50.5	-0.6
	baz=271						
O55A	Ligonier	116.67	52	PKiKP	PKPdf	16 21 50.4	-0.6
	baz=274						
G53A	Haliburton	116.69	46	PKiKP	PKPdf	16 21 50.2	-0.7
	baz=277						
R56A	Bull Pasture M	116.72	54	PKiKP	PKPdf	16 21 50.7	-0.6
	baz=273						
H53A	Bobcaygeon	116.78	47	PKiKP	PKPdf	16 21 50.5	-0.5
	baz=277						
Q56A	Snyder Ridge,	116.84	53		PKPdf	16 21 50.6	-0.8
Q56A	Snyder Ridge,	116.84	53	PKiKP	PKPdf	16 21 50.9	-0.5
	baz=274						
BJO1	Bjornoya	116.85	351	*e*PKPdf	PKPdf	16 21 50.1	-0.3
BJO1				IVmBBB		16 21 52.5	
	comp=Z,2µm,1.4s						
BJO1				*e*SKSac	SKSac	16 28 23.8	+0.5
BJO1				*e*SP	SP	16 32 29.4	+5.7
U57A	Blanch	116.86	56	PKiKP	PKPdf	16 21 50.8	-0.6
	baz=272						
N55A	Marion Center	116.87	51	PKiKP	PKPdf	16 21 50.9	-0.5
	baz=275						
J54A	Appleton	116.89	48	PKiKP	PKPdf	16 21 50.8	-0.5
	baz=276						
T57A	Hurt	116.91	55		PKPdf	16 21 51.2	-0.3
T57A	Hurt	116.91	55	PKiKP	PKPdf	16 21 51.0	-0.5
	baz=273						
PRGR	Permogore	116.92	333⇓	*e*P	Pdif	16 18 05.4	-2.1
PRGR				*i*		16 21 50.6	
PRGR				pmax	pmax		
	comp=Z,23nm,1.4s						
X58A	Rowland	116.92	58		PKiKP	16 21 52.0	+0.3
X58A	Rowland	116.92	58	PKiKP	PKPdf	16 21 51.0	-0.7
	baz=271						
K54A	Basiliko Farm,	116.92	49	PKiKP	PKPdf	16 21 50.6	-0.9
	baz=276						
ALGO	Algonquin Park	116.98	45	PKiKP	PKPdf	16 21 50.5	-0.9
	baz=278						
M55A	Ridgway	116.98	50		PKPdf	16 21 51.3	-0.3
M55A	Ridgway	116.98	50	PKiKP	PKPdf	16 21 51.2	-0.4
	baz=275						
Z59A	Georgetown, SC	117.00	60	PKiKP	PKPdf	16 21 51.4	-0.5
	baz=271						
W58A	Raeford	117.00	58	PKiKP	PKPdf	16 21 51.4	-0.4
	baz=272						
WVNY	West Valley, N	117.01	49		PKiKP	16 21 51.7	0.0
DAG	Danmarks Havn	117.03	2⇑	*i*PKIKP	PKPdf	16 21 50.0	-0.6
DAG				pmax	pmax		
	comp=Z,43nm,0.7s						
DAG	Danmarks Havn	117.03	2⇑	*i*P	PKPdf	16 21 50.0	-0.6
	comp=Z,43nm,0.7s						
G54A	Lake Saint Pet	117.03	46	PKiKP	PKPdf	16 21 50.9	-0.7
	baz=278						
VLDQ	Val d'Or	117.05	43		PKPdf	16 21 50.5	-0.9
V58A	Windy Hill, Pi	117.07	57		PKPdf	16 21 51.5	-0.4
V58A	Windy Hill, Pi	117.07	57	PKiKP	PKPdf	16 21 51.5	-0.4
	baz=272						
P56A	Dayton Farm, R	117.08	53	PKiKP	PKPdf	16 21 51.1	-0.7
	baz=274						
PTLC	Puerto Leguiza	117.10	97	*e*P	PKPdf	16 21 51.6	-1.0
S57A	Dark Hollow, R	117.11	55	PKiKP	PKPdf	16 21 51.3	-0.7
	baz=273						
L55A	Hinsdale	117.15	50	PKiKP	PKPdf	16 21 51.5	-0.4
	baz=276						
E53A	Dumoine, Ponti	117.18	45	PKiKP	PKPdf	16 21 50.9	-0.9
	baz=279						
LSQQ	Lebel-sur-Quev	117.19	42	PKiKP	PKPdf	16 21 50.9	-0.8
	baz=280						
O56A	Blue Knob Stat	117.23	52		PKPdf	16 21 51.5	-0.7
O56A	Blue Knob Stat	117.23	52	PKiKP	PKPdf	16 21 51.4	-0.7
	baz=275						
Y59A	Loris	117.32	59		PKPdf	16 21 51.9	-0.5
Y59A	Loris	117.32	59	PKiKP	PKPdf	16 21 52.1	-0.3
	baz=271						
K55A	Perry	117.37	49	PKiKP	PKPdf	16 21 51.4	-0.9
	baz=276						
N56A	West Decatur	117.38	51	PKiKP	PKPdf	16 21 51.8	-0.6
	baz=275						
R57A	Stanardsville	117.41	54	PKiKP	PKPdf	16 21 52.0	-0.5
	baz=274						
Q57A	Strasburg	117.45	53	PKiKP	PKPdf	16 21 51.9	-0.7
	baz=274						
I55A	Frankford	117.47	47	PKiKP	PKPdf	16 21 51.7	-0.7
	baz=278						
T58A	Grand View Acr	117.48	55	PKiKP	PKPdf	16 21 52.3	-0.4
	baz=273						
MMNY	Mt. Morris Dam	117.48	49		PKPdf	16 21 52.4	0.0
J55A	Hilton	117.49	48	PKiKP	PKPdf	16 21 51.9	-0.6
	baz=277						
U58A	Oxford	117.50	56	PKiKP	PKPdf	16 21 52.4	-0.3
	baz=273						
X59A	McDuffie Farm,	117.53	58	PKiKP	PKPdf	16 21 52.4	-0.4
	baz=272						
LPAZ	La Paz	117.59	117	PKP	PKiKP	16 21 54.8	+0.4
	comp=Z,20nm,0.6s,baz=265,slow=1.8,SNR=26						
LPAZ				PKKPbc	PKKPbc	16 32 16.1	-0.5
	comp=Z,29nm,0.9s,baz=57,slow=1.9,SNR=21						
LPAZ	La Paz	117.59	117	*e*P	PKiKP	16 21 54.6	+0.4
LPAZ	La Paz	117.59	117		PKPdf	16 21 53.6	-0.7
LPAZ				PKKPbc	PKKPbc	16 32 14.2	-2.4
ORTC	Ortega, Tolima	117.60	93	*e*P	PKPdf	16 21 51.0	-2.7
W59A	Clinton	117.64	57	PKiKP	PKPdf	16 21 52.8	-0.2
	baz=272						
TOLC	Tolima	117.68	92	*e*P	PKiKP	16 21 55.0	+0.8
SSPA	Standing Stone	117.72	51		PKPdf	16 21 52.4	-0.6
SSPA	Standing Stone	117.72	51	PKiKP	PKPdf	16 21 52.6	-0.4
	baz=275						
P57A	Homestead Farm	117.72	53		PKPdf	16 21 52.2	-0.8
P57A	Homestead Farm	117.72	53	PKiKP	PKPdf	16 21 52.2	-0.8
	baz=275						
H55A	Tweed	117.78	47	PKiKP	PKPdf	16 21 52.1	-0.9
	baz=278						
V59A	Middlesex	117.78	57	PKiKP	PKPdf	16 21 53.0	-0.3
	baz=273						
GUY2C	Guyana, Caldas	117.78	91	*e*P	PKPdf	16 21 53.6	-0.9
PLVO	Plevna	117.78	46		PKPdf	16 21 52.7	-0.3
L56A	Greenwood	117.81	50		PKPdf	16 21 52.3	-0.9
L56A	Greenwood	117.81	50	PKiKP	PKPdf	16 21 52.7	-0.5
	baz=276						
R58A	Rapidan	117.82	54	PKiKP	PKPdf	16 21 52.4	-0.9
	baz=274						
S58A	Poland Farm, P	117.83	55		PKPdf	16 21 52.6	-0.7
S58A	Poland Farm, P	117.83	55	PKiKP	PKPdf	16 21 53.1	-0.2
	baz=274						
HELC	Santa Helena	117.83	90	*e*P	PKPdf	16 21 53.6	-0.8
Y60A	Bolivia	117.86	59	PKiKP	PKPdf	16 21 52.5	-0.9
	baz=272						
K56A	Middlesex	117.92	49	PKiKP	PKPdf	16 21 52.5	-0.9
	baz=277						
R58B	Mineral	117.94	54		PKPdf	16 21 52.6	-0.9
R58B	Mineral	117.94	54	PKiKP	PKPdf	16 21 52.9	-0.6
	baz=274						
O57A	Amberson	117.95	52	PKiKP	PKPdf	16 21 52.7	-0.8
	baz=275						
N57A	Milroy	117.96	51	PKiKP	PKPdf	16 21 52.8	-0.7
	baz=276						
LVZ	Lovozero	118.00	342*c*	*i*PKIKP	PKPdf	16 21 52.6	-0.2
LVZ	Lovozero	118.00	342		PKPdf	16 21 52.5	-0.2
G55A	Calabogie	118.00	46	PKiKP	PKPdf	16 21 52.9	-0.5
	baz=279						
Q58A	Fox Den Farm,	118.02	53	PKiKP	PKPdf	16 21 52.9	-0.7
	baz=275						
X60A	Albert Glenn T	118.04	58	PKiKP	PKPdf	16 21 53.0	-0.8
	baz=272						
CNNC	Cliffs of the	118.09	57	PKiKP	PKPdf	16 21 53.4	-0.4
	baz=273						
U59A	Littleton	118.11	56		PKPdf	16 21 53.2	-0.6
U59A	Littleton	118.11	56	PKiKP	PKPdf	16 21 53.2	-0.6
	baz=273						
F55A	Otter Lake	118.17	45	PKiKP	PKPdf	16 21 52.8	-0.9
	baz=279						
J56A	Wolcott	118.18	48	PKiKP	PKPdf	16 21 53.1	-0.7
	baz=278						

M57A	Sunshine Farm,	118.22	50		PKPdf	16 21 54.0	0.0
M57A	Sunshine Farm,	118.22	50	PKiKP	PKPdf	16 21 53.8	-0.1
	baz=276						
W60A	Pink Hill	118.24	58	PKiKP	PKPdf	16 21 53.2	-0.9
	baz=273						
E55A	Montcerf-Lytto	118.27	45	PKiKP	PKPdf	16 21 53.1	-0.7
	baz=280						
T59A	Double "B" Far	118.27	55		PKPdf	16 21 53.8	-0.3
T59A	Double "B" Far	118.27	55	PKiKP	PKPdf	16 21 54.0	-0.1
	baz=274						
P58A	Pank, Wackersv	118.27	53	PKiKP	PKPdf	16 21 53.1	-0.9
	baz=275						
CBN	Corbin Frederi	118.32	54		PKPdf	16 21 53.9	-0.3
CBN	Corbin Frederi	118.32	54	PKiKP	PKPdf	16 21 53.5	-0.7
	baz=274						
NORC	Norcasia	118.34	91	*e*P	PKPdf	16 21 55.0	-0.1
L57A	Andrews Acres	118.35	50	PKiKP	PKPdf	16 21 53.5	-0.7
	baz=277						
S59A	Mechanicsville	118.42	54	PKiKP	PKPdf	16 21 53.4	-1.0
	baz=274						
H56A	Elgin	118.42	47	PKiKP	PKPdf	16 21 53.4	-0.8
	baz=279						
O58A	Lewisberry	118.50	52	PKiKP	PKPdf	16 21 54.0	-0.6
	baz=276						
K57A	Scipio Center	118.50	49	PKiKP	PKPdf	16 21 53.6	-0.9
	baz=278						
R59A	King George, V	118.52	54	PKiKP	PKPdf	16 21 54.0	-0.6
	baz=275						
D55A	Sainte-Anne-du	118.56	44	PKiKP	PKPdf	16 21 53.7	-0.8
	baz=281						
V60A	Jim Taylor Roa	118.57	57		PKPdf	16 21 54.2	-0.6
V60A	Jim Taylor Roa	118.57	57	PKiKP	PKPdf	16 21 54.0	-0.8
	baz=273						
APA	Apatity	118.58	342⇓	*i*PKIKP	PKPdf	16 21 52.8	-1.0
APA				*i* *PP	pPKPdf	16 22 49.0	+5.0
APA				*i*		16 23 07.0	
APA				*i*		16 28 25.0	
N58A	Sunbury	118.58	51		PKPdf	16 21 54.0	-0.6
N58A	Sunbury	118.58	51	PKiKP	PKPdf	16 21 54.2	-0.4
	baz=276						
U60A	Pendleton	118.61	56	PKiKP	PKPdf	16 21 54.3	-0.5
	baz=274						
PAGS	Pennsylvania G	118.64	52		PKPdf	16 21 53.9	-0.9
CHGQ	Chibougamau	118.69	40	PKiKP	PKPdf	16 21 53.4	-1.2
	baz=283						
ROSC	El Rosal	118.71	92	PKP	PKPdf	16 21 56.1	-0.1
	comp=Z,21nm,0.5s,baz=64,slow=3.1,SNR=14						
ROSC				SKP		16 25 13.8	
	comp=Z,19nm,0.8s,baz=45,slow=15,SNR=4.4						
ROSC				PKKPbc	PKKPbc	16 32 13.0	+0.9
	comp=Z,26nm,0.6s,baz=136,slow=5.5,SNR=13						
M58A	Price's Panora	118.71	50	PKiKP	PKPdf	16 21 54.6	-0.3
	baz=277						
J57A	Williamstown	118.79	48	PKiKP	PKPdf	16 21 54.1	-0.8
	baz=278						
W61A	Ground Anchor	118.83	57	PKiKP	PKPdf	16 21 54.6	-0.7
	baz=273						
Q59A	Harwood	118.83	53	PKiKP	PKPdf	16 21 54.8	-0.4
	baz=275						
TMCR	Tamitsa	118.91	337	*e*PKIKP	PKPdf	16 21 53.8	-0.7
TMCR				pmax	pmax		
	comp=Z,365nm,1.4s						
T60A	Surry	118.91	55	PKiKP	PKPdf	16 21 54.7	-0.6
	baz=274						
P59A	Jarrettsville	118.93	52	PKiKP	PKPdf	16 21 54.6	-0.7
	baz=276						
S60A	Water View	118.93	54	PKiKP	PKPdf	16 21 55.0	-0.4
	baz=275						
R60A	Leonardtown, M	118.94	54	PKiKP	PKPdf	16 21 55.3	-0.1
	baz=275						
E56A	St. Veronique	118.95	44	PKiKP	PKPdf	16 21 54.5	-0.7
	baz=281						
PTBC	PUERTO BERRIO;	118.95	90	*e*P	PKiKP	16 21 56.3	+0.1
MVL	Millersville	118.95	52		PKPdf	16 21 54.5	-0.9
I57A	Carthage	118.95	47	PKiKP	PKPdf	16 21 54.9	-0.3
	baz=279						
BINY	Binghamton	118.96	49		PKPdf	16 21 54.5	-0.9
BINY	Binghamton	118.96	49	PKiKP	PKPdf	16 21 54.5	-0.9
	baz=278						
HAMF	Hammerfest	119.03	347	*e*PKPdf	PKPdf	16 21 53.9	-0.7
HAMF				*e*SKSac	SKSac	16 28 29.3	-2.0
HAMF				*e*SP	SP	16 32 43.7	+0.3
D56A	ZEC Mazanza, M	119.04	44	PKiKP	PKPdf	16 21 54.5	-0.9
	baz=281						
O59A	Robesonia	119.04	51	PKiKP	PKPdf	16 21 55.2	-0.3
	baz=276						
H57A	Richville	119.06	47	PKiKP	PKPdf	16 21 54.9	-0.6
	baz=279						
L58A	Harry Jones Me	119.08	49	PKiKP	PKPdf	16 21 55.3	-0.3
	baz=278						
V61A	Roper	119.13	57		PKPdf	16 21 55.3	-0.5
V61A	Roper	119.13	57	PKiKP	PKPdf	16 21 55.5	-0.3
	baz=274						
SPBC	San Pablo de B	119.13	91	*e*P	PKPdf	16 21 55.0	-1.7
K58A	Earlville	119.13	49		PKPdf	16 21 54.8	-0.9
K58A	Earlville	119.13	49	PKiKP	PKPdf	16 21 55.0	-0.7
	baz=278						
U61A	Possum Corner	119.20	56	PKiKP	PKPdf	16 21 55.4	-0.6
	baz=274						
KSPA	Keystone Colle	119.20	50		PKPdf	16 21 55.2	-0.6
CHIC	Chingaza	119.23	92	*e*P	PKPdf	16 21 55.0	-2.3
G57A	Newington	119.24	46	PKiKP	PKPdf	16 21 55.2	-0.6
	baz=280						
N59A	State Game Lan	119.28	51		PKPdf	16 21 55.5	-0.6
N59A	State Game Lan	119.28	51	PKiKP	PKPdf	16 21 55.8	-0.2
	baz=277						
J58A	Remsen	119.31	48		PKPdf	16 21 55.3	-0.7
J58A	Remsen	119.31	48	PKiKP	PKPdf	16 21 55.6	-0.4
	baz=279						
F57A	Harrington	119.31	45	PKiKP	PKPdf	16 21 55.0	-0.9
	baz=281						
TRQ	Mont Tremblant	119.33	45		PKPdf	16 21 55.4	-0.6
SUMG	Summit	119.40	9	PKIKP	PKiKP	16 21 55.9	0.0
SUMG	Summit	119.40	9	*i* P	PKPdf	16 21 55.8	0.0
SUMG	Summit	119.40	9		PKiKP	16 21 55.9	0.0
ARCES	ARCESS Array B	119.43	346	PKP	PKPdf	16 21 55.4	0.0
	comp=Z,152nm,0.5s,baz=52,slow=1.5,SNR=266						
ARCES				SKP		16 25 14.2	
	comp=Z,12nm,0.9s,baz=35,slow=3.3,SNR=4.4						
ARCES				PKKPbc	PKKPab	16 32 07.3	-2.5
	comp=Z,61nm,0.9s,baz=270,slow=2.4,SNR=13						
ARCES				PKKP	PKKPdf	16 32 38.7	-2.3
	comp=Z,12nm,0.9s,baz=270,slow=2.5,SNR=3.9						
ARCES	ARCESS Array B	119.43	346		PKPdf	16 21 55.0	-0.4
ARCES				PKKPbc	PKKPab	16 32 07.2	-2.6
ARE0	ARCESS Array S	119.43	346	*e*PKPdf	PKiKP	16 21 55.9	+0.3
ARE0				*e*SKSac	SKSac	16 28 33.9	+1.0
ARE0				*e*SP	SP	16 32 46.7	-0.4
ARE0	ARCESS Array S	119.43	346		PKPdf	16 21 55.1	-0.4
Q60A	Greensboro	119.44	53		PKPdf	16 21 56.2	-0.1
Q60A	Greensboro	119.44	53	PKiKP	PKPdf	16 21 55.4	-1.0
	baz=276						
M59A	Waymart	119.46	50	PKiKP	PKPdf	16 21 56.0	-0.3
	baz=278						
P60A	Greenville	119.52	52		PKPdf	16 21 56.0	-0.5
P60A	Greenville	119.52	52	PKiKP	PKPdf	16 21 55.9	-0.5
	baz=277						
LONY	Lake Ozonia	119.60	46		PKPdf	16 21 56.3	-0.3
LONY	Lake Ozonia	119.60	46	PKiKP	PKPdf	16 21 56.1	-0.4
	baz=280						
LUPA	Lehigh Univers	119.62	51		PKPdf	16 21 56.0	-0.7
D57A	Chemin Vers le	119.63	44	PKiKP	PKPdf	16 21 55.9	-0.6
	baz=282						
ILULI	Ilulissat	119.63	15⇑	*i*PKIKP	PKiKP	16 21 56.0	+0.1
ILULI	Ilulissat	119.63	15⇑	*i*P	PKiKP	16 21 56.0	+0.1
ILULI	Ilulissat	119.63	15		PKPdf	16 21 55.6	-0.2
O60A	Telford	119.63	51	PKiKP	PKPdf	16 21 56.6	-0.1
	baz=277						
PSUB	Penn St. - Bra	119.64	52		PKPdf	16 21 56.2	-0.5
V62A	Hyde County Ai	119.65	57	PKiKP	PKiKP	16 21 57.1	+0.2
	baz=274						
L59A	Walton	119.66	49		PKPdf	16 21 56.7	-0.1
L59A	Walton	119.66	49	PKiKP	PKPdf	16 21 56.3	-0.5
	baz=278						
S61A	Accomac	119.71	54	PKiKP	PKPdf	16 21 56.2	-0.7
	baz=275						
K59A	Cooperstown	119.71	49	PKiKP	PKPdf	16 21 56.3	-0.5
	baz=279						
N60A	Cedar Hill Far	119.79	51	PKiKP	PKPdf	16 21 56.5	-0.4
	baz=278						
GUVC	San Jose del G	119.81	95	*e*P	PKPdf	16 21 54.3	-3.5
J59A	Piesco	119.85	48		PKPdf	16 21 56.3	-0.7
J59A	Piesco	119.85	48	PKiKP	PKPdf	16 21 56.4	-0.7
	baz=279						
Q61A	Milford	119.86	53	PKiKP	PKPdf	16 21 56.9	-0.2
	baz=276						

G58A	Ormstown	119.88	46	PKiKP	PKPdf	16 21 55.9	-1.0
	baz=281						
R61A	Willards	119.91	54	PKiKP	PKPdf	16 21 56.3	-1.0
	baz=276						
F58A	St-Lin Laurent	119.91	45	PKiKP	PKPdf	16 21 56.4	-0.6
	baz=281						
H58A	Gabriels	119.92	47	PKiKP	PKPdf	16 21 56.3	-0.8
	baz=280						
NCB	Newcomb	119.97	47		PKPdf	16 21 56.7	-0.6
SMRC	Santa Marta, M	120.04	85	eP	PKiKP	16 21 58.3	0.0
PLTB	Pedras Altas	120.04	140	eP	PKiKP	16 22 00.5	+2.6
M60A	Port Jervis	120.09	50	PKiKP	PKPdf	16 21 56.7	-0.8
	baz=278						
ODNJ	Ogdensburg	120.14	50		PKPdf	16 21 56.9	-0.8
RUSC	La Rusia	120.14	91	eP	PKPdf	16 21 56.9	-2.1
E58A	La Victoria	120.17	44	PKiKP	PKPdf	16 21 56.7	-0.8
	baz=282						
P61A	Hammonton	120.18	52		PKPdf	16 21 57.4	-0.3
P61A	Hammonton	120.18	52	PKiKP	PKPdf	16 21 57.3	-0.4
	baz=277						
BARC	Barichara	120.20	90	eP	PKPpre	16 21 49.0	
BRNJ	Basking Ridge	120.22	51		PKPdf	16 21 57.4	-0.4
H59A	Cadyville	120.22	46	PKiKP	PKPdf	16 21 57.2	-0.5
	baz=281						
I59A	Olmsteadville	120.25	47	PKiKP	PKPdf	16 21 57.3	-0.5
	baz=280						
D58A	Chemin du LacG	120.28	43	PKiKP	PKPdf	16 21 56.9	-0.8
	baz=283						
LATQ	La Tuque	120.28	43		PKPdf	16 21 57.7	0.0
LATQ	La Tuque	120.28	43	PKiKP	PKPdf	16 21 57.1	-0.6
	baz=283						
L60A	Shokan	120.29	49	PKiKP	PKPdf	16 21 57.5	-0.4
	baz=279						
O61A	Allentown	120.31	52	PKiKP	PKPdf	16 21 57.2	-0.8
	baz=278						
KTK1	Kautokeino	120.37	346	ePKPdf	PKiKP	16 21 57.4	0.0
KTK1				eSKSac	SKSac	16 28 35.9	-0.2
OCAC	Ocana	120.39	89	eP	PKPdf	16 21 58.9	-0.2
N61A	South Mountain	120.41	51	PKiKP	PKPdf	16 21 58.1	-0.1
	baz=278						
K60A	Five Rivers En	120.44	49	PKiKP	PKPdf	16 21 58.1	0.0
	baz=279						
G59A	Clarenceville	120.50	46	PKiKP	PKPdf	16 21 57.7	-0.5
	baz=281						
TRY	Troy	120.58	48		PKPdf	16 21 58.2	-0.2
CODC	Agustn Codazz	120.59	87	eP	PKPdf	16 21 56.3	-3.0
F59A	Saint Guilaume	120.61	45	PKiKP	PKiKP	16 21 58.4	-0.1
	baz=282						
I60A	Shoreham	120.65	47	PKiKP	PKPdf	16 21 58.5	-0.1
	baz=281						
CPNY	Central Park	120.66	51		PKPdf	16 21 58.3	-0.3
E59A	St. Maurice	120.67	44	PKiKP	PKPdf	16 21 57.9	-0.5
	baz=283						
J60A	Lant Hill Farm	120.67	48	PKiKP	PKPdf	16 21 58.2	-0.4
	baz=280						
PAL	Palisades	120.67	50	PKIKP	PKPdf	16 21 58.3	-0.4
PAL	Palisades	120.67	50		PKPdf	16 21 58.2	-0.4
PAL	Palisades	120.67	50	PKiKP	PKPdf	16 21 58.3	-0.4
	baz=278						
M61A	Granite Spring	120.73	50	PKiKP	PKPdf	16 21 58.4	-0.4
	baz=279						
L61A	Hillsdale 1, H	120.75	49	PKiKP	PKPdf	16 21 58.6	-0.2
	baz=279						
PAMC	Pamplona, Colo	120.82	90	eP	PKPdf	16 22 00.3	-0.1
TRO	Tromso	120.84	348	ePKPdf	PKPdf	16 21 58.0	-0.2
TRO				eSKSac	SKSac	16 28 37.9	+0.3
TRO				eSKSac	SKSdf	16 28 40.0	-11
TRO				eSP	SP	16 32 51.0	-8.5
TRO				eSS	SS	16 39 46.4	+2.3
KSCT	Kent School, K	120.88	50		PKPdf	16 21 58.4	-0.7
K61A	Williamstown	120.88	48	PKiKP	PKPdf	16 21 59.1	0.0
	baz=280						
H60A	Morristown	120.94	46	PKiKP	PKPdf	16 21 58.9	-0.2
	baz=282						
VT1	Waterbury	120.94	46		PKPdf	16 21 58.8	-0.3
D59A	Saint-Raymond	121.00	43	PKiKP	PKPdf	16 21 58.3	-0.8
	baz=284						
N62A	Caumsett State	121.01	50	PKiKP	PKPdf	16 21 59.0	-0.3
	baz=279						
CPUP	Villa Florida	121.03	133	PKP	PKiKP	16 22 00.0	0.0
	comp=Z,60nm,0.9s,baz=258,slow=1.7,SNR=21						
CPUP				SKP		16 25 18.6	
	comp=Z,8.7nm,1.0s,baz=347,slow=2.8,SNR=3.6						
CPUP				PKKPbc	PKKPbc	16 32 03.2	-0.5
	comp=Z,28nm,1.0s,baz=55,slow=4.0,SNR=16						
CPUP				PKKP	PKKPdf	16 32 36.7	+0.1
	comp=Z,8.9nm,0.8s,baz=48,slow=2.9,SNR=7.9						
CPUP	Villa Florida	121.03	133	eP	PKiKP	16 22 00.3	+0.3
CPUP	Villa Florida	121.03	133		PKPdf	16 21 59.0	-0.8
CPUP					PKKPbc	16 32 02.3	-1.4
MAK	Makhachkala	121.05	312	deP	Pdif	16 18 23.1	-3.3
MAK				i		16 22 00.7	
MAK				e		16 28 39.2	
MAK				eSS	SS	16 39 49.8	+1.0
MAK				pmax	pmax		
	comp=Z,1μm,1.7s						
WSPT	Westport, CT	121.08	50		PKPdf	16 21 59.5	0.0
G60A	Masonville	121.08	46	PKiKP	PKPdf	16 21 58.6	-0.8
	baz=282						
AKT	Akhty	121.14	310	ePKIKP	PKiKP	16 22 00.5	+0.7
AKT				e		16 22 51.7	
AKT				e		16 23 31.4	
AKT				pmax	pmax		
	comp=Z,541nm,1.3s						
F60A	Warwick	121.16	44	PKiKP	PKPdf	16 21 58.7	-0.7
	baz=283						
J61A	Chester	121.27	48	PKiKP	PKiKP	16 21 59.9	0.0
	baz=281						
L61B	Northampton	121.34	49	PKiKP	PKPdf	16 21 59.5	-0.4
	baz=280						
YLE	Yale	121.35	50		PKPdf	16 21 59.4	-0.6
SFJD	Kangerlussuaq	121.36	16	PKIKP	PKPdf	16 21 58.8	-0.4
SFJD	Kangerlussuaq	121.36	16	iP	PKPdf	16 21 58.0	-1.2
SFJD	Kangerlussuaq	121.36	16		PKPdf	16 21 58.8	-0.4
M62A	Hamden	121.36	50	PKiKP	PKPdf	16 21 59.1	-0.8
	baz=280						
I61A	Oroboro, Fairl	121.41	47	PKiKP	PKPdf	16 21 59.7	-0.3
	baz=282						
E60A	Ste Agathe de	121.41	44	PKiKP	PKPdf	16 21 59.6	-0.3
	baz=284						
L62A	Suffield	121.43	49	PKiKP	PKPdf	16 21 59.4	-0.7
	baz=280						
H61A	Lyndonville	121.48	46	PKiKP	PKPdf	16 22 00.1	0.0
	baz=282						
LBNH	Lisbon	121.54	46	PKIKP	PKiKP	16 22 00.5	+0.1
LBNH	Lisbon	121.54	46		PKiKP	16 22 00.5	+0.1
LBNH	Lisbon	121.54	46	PKiKP	PKiKP	16 22 00.6	+0.2
	baz=282						
SCHQ	Schefferville	121.59	33	PKP	PKPdf	16 21 59.6	-0.4
	comp=Z,11nm,0.5s,baz=250,slow=6.0,SNR=20						
SCHQ				SKP		16 25 17.8	
	comp=Z,13nm,1.0s,baz=259,slow=10,SNR=2.5						
SCHQ				PKKPbc	PKKPab	16 32 01.4	+0.7
	comp=Z,44nm,0.6s,baz=99,slow=4.6,SNR=33						
SCHQ	Schefferville	121.59	33		PKPdf	16 21 59.5	-0.6
SCHQ					PKKPab	16 32 00.6	-0.2
G61A	St-Isidore-de-	121.60	45	PKiKP	PKPdf	16 22 00.1	-0.3
	baz=283						
QUA2	Belchertown	121.61	49		PKPdf	16 22 00.2	-0.2
D60A	Saint Jean D'O	121.63	43	PKiKP	PKPdf	16 21 59.8	-0.5
	baz=284						
K62A	Royalston	121.63	48		PKPdf	16 22 00.4	-0.1
K62A	Royalston	121.63	48	PKiKP	PKPdf	16 22 00.5	-0.1
	baz=281						
F61A	St Evariste	121.81	44	PKiKP	PKPdf	16 22 00.5	-0.2
	baz=284						
J62A	Henniker	121.83	48	PKiKP	PKiKP	16 22 01.0	0.0
	baz=281						
M63A	Gales Ferry	121.99	50	PKiKP	PKPdf	16 22 00.6	-0.6
	baz=280						
H62A	Milan	122.01	46		PKPdf	16 22 01.1	0.0
H62A	Milan	122.01	46	PKiKP	PKiKP	16 22 01.3	-0.1
	baz=283						
I62A	Tamworth	122.03	47		PKPdf	16 22 01.3	+0.1
I62A	Tamworth	122.03	47	PKiKP	PKPdf	16 22 01.1	-0.2
	baz=282						
E61A	Lac Etchemin	122.04	44	PKiKP	PKPdf	16 22 01.2	0.0
	baz=284						
D61A	St Aubert, Com	122.04	43	PKiKP	PKPdf	16 22 00.8	-0.3
	baz=285						
K63A	Dunstable	122.14	48	PKiKP	PKiKP	16 22 01.5	-0.1
	baz=281						
HRV	Adam Dziewonsk	122.15	48	PKiKP	PKPdf	16 22 01.4	-0.1
	baz=281						
L63A	North Scituate	122.23	49	PKiKP	PKPdf	16 22 01.4	-0.2
	baz=281						
GROC	Groznyy	122.23	313	iPKIKP	PKPdf	16 22 01.2	-0.4
GROC				e		16 22 54.3	
GROC				pmax	pmax		
	comp=Z,690nm,1.2s						
BRYW	Bryant College	122.28	49		PKPdf	16 22 01.5	-0.3
G62A	West of Eustis	122.30	45		PKPdf	16 22 01.1	-0.6
G62A	West of Eustis	122.30	45	PKiKP	PKPdf	16 22 01.5	-0.1
	baz=284						
J63A	Strafford	122.34	47	PKiKP	PKPdf	16 22 01.7	-0.1
	baz=282						
WES	Weston	122.34	48	PKIKP	PKPdf	16 22 01.7	-0.1
WES	Weston	122.34	48		PKPdf	16 22 01.6	-0.1
I63A	Otisfield	122.53	46		PKPdf	16 22 01.8	-0.4
I63A	Otisfield	122.53	46	PKiKP	PKPdf	16 22 02.2	0.0
	baz=283						
M64A	Tiverton	122.58	49	PKiKP	PKPdf	16 22 02.2	-0.1
	baz=281						
VRH	Novokhopyorsk	122.72	323	ePKIKP	PKiKP	16 22 02.6	+0.1
VRH				pmax	pmax		
	comp=Z,570nm,0.6s						
H63A	New Sharon	122.77	46	PKiKP	PKPdf	16 22 02.3	-0.3
	baz=284						
L64A	Middleborough	122.78	49	PKiKP	PKPdf	16 22 02.1	-0.6
	baz=281						
D62A	Allapoint, All	122.82	43		PKPdf	16 22 01.9	-0.7
D62A	Allapoint, All	122.82	43	PKiKP	PKPdf	16 22 02.0	-0.6
	baz=286						
G63A	Kingsbury	122.95	45	PKiKP	PKPdf	16 22 02.7	-0.3
	baz=284						
M65A	Busby, Falmout	123.00	49	PKiKP	PKiKP	16 22 03.2	-0.1
	baz=281						
STEI	Steigen	123.01	348	ePKPdf	PKiKP	16 22 02.4	-0.1
STEI				eSKSac	SKSac	16 28 44.2	-0.8
STEI				eSP	SP	16 33 21.8	+3.0
WVL	Waterville	123.06	46		PKPdf	16 22 02.4	-0.7
SDV	Santo Domingo	123.12	88	PKP	PKPdf	16 22 04.5	+0.1
	comp=Z,129nm,0.7s,baz=282,slow=12,SNR=13						
SDV				SKP		16 25 21.9	
	comp=Z,40nm,0.8s,baz=256,slow=2.5,SNR=6.6						
SDV	Santo Domingo	123.12	88	eP	PKPdf	16 22 04.6	+0.1
SDV	Santo Domingo	123.12	88		PKPdf	16 22 03.5	-0.9
SCO	Scoresbysund	123.14	4	PKIKP	PKiKP	16 22 02.7	0.0
SCO	Scoresbysund	123.14	4	iP	PKiKP	16 22 02.8	0.0
SCO	Scoresbysund	123.14	4		PKiKP	16 22 02.7	0.0
PKME	Peaks-Kenny Pk	123.14	45		PKPdf	16 22 03.0	-0.2
PKME	Peaks-Kenny Pk	123.14	45	PKiKP	PKiKP	16 22 03.4	-0.1
	baz=285						
F63A	Nahmakanta, Br	123.15	44		PKPdf	16 22 03.0	-0.3
F63A	Nahmakanta, Br	123.15	44	PKiKP	PKiKP	16 22 03.5	-0.1
	baz=285						
MOS	Moscow	123.16	329	iPKIKP	PKPdf	16 22 00.7	-2.3
MOS				e		16 22 49.0	
MOS				e		16 23 42.9	
MOS				e		16 28 41.2	
MOS				pmax	pmax		
	comp=Z,690nm,1.2s						
MOS				MLR	MLR		
	comp=Z,2μm,20.0s						
LOF	Lofoten	123.18	349	ePKPdf	PKiKP	16 22 03.3	+0.4
LOF				eSKSdf	SKSdf	16 28 52.4	-3.4
LOF				eSP	SP	16 33 25.1	+4.8
I64A	Boothbay	123.22	46	PKiKP	PKPdf	16 22 03.3	-0.1
	baz=284						
TBLG	Delisi	123.30	311	PKIKP	PKiKP	16 22 04.2	+0.2
TBLG	Delisi	123.30	311	P	PKiKP	16 22 04.9	+0.9
TBLG	Delisi	123.30	311		PKiKP	16 22 04.2	+0.2
H64A	Troy	123.34	45	PKiKP	PKPdf	16 22 03.5	-0.2
	baz=284						
E63A	Oxbow	123.42	43		PKPdf	16 22 03.2	-0.5
E63A	Oxbow	123.42	43	PKiKP	PKPdf	16 22 03.5	-0.2
	baz=286						
CNLB	Canela	123.45	140	eP	PKiKP	16 22 06.5	+1.7
D63A	Stockholm	123.45	42	PKiKP	PKPdf	16 22 03.2	-0.6
	baz=287						
G64A	Maxfield	123.51	45	PKiKP	PKPdf	16 22 03.6	-0.4
	baz=285						
GNI	Garni	123.60	309c	iPKIKP	PKPdf	16 22 02.9	-1.7
GNI	Garni	123.60	309	PKP	PKiKP	16 22 05.6	+0.8
	comp=Z,290nm,0.9s,baz=20,slow=0.1,SNR=91						
GNI	Garni	123.60	309	iP	PKiKP	16 22 05.9	+1.1
	SNR=65						
GNI	Garni	123.60	309	P	PKiKP	16 22 05.9	+1.1
GNI	Garni	123.60	309	PKPdf	PKiKP	16 22 05.8	+1.1
PQI	Presque Isle	123.62	43		PKPdf	16 22 03.4	-0.7
F64A	Sherman	123.62	44		PKPdf	16 22 03.8	-0.4
F64A	Sherman	123.62	44	PKiKP	PKPdf	16 22 04.0	-0.2
	baz=286						
ZEI	Tsey	123.68	312	iPKIKP	PKPdf	16 22 01.3	-3.4
ZEI				pmax	pmax		
	comp=Z,282nm,1.1s						
GOF	Gofitskoye	123.73	315	⇑iPKIKP	PKiKP	16 22 04.8	+0.1
GOF				pmax	pmax		
	comp=Z,484nm,1.1s						
SIV	San Ignacio	123.75	120	PKP	PKiKP	16 22 05.7	0.0
	comp=Z,24nm,0.5s,baz=260,slow=5.1,SNR=43						
SIV				PKKPbc	PKKPbc	16 31 53.1	0.0
	comp=Z,16nm,0.9s,baz=100,slow=5.2,SNR=19						
LPSR	Galich'ya Gora	123.80	325	ePKIKP	PKiKP	16 22 05.1	+0.5
LPSR				pmax	pmax		
	comp=Z,830nm,1.0s						
SDDR	Presa de Saban	123.81	76		PKPdf	16 22 04.7	-0.7
E64A	Bridgewater	123.81	43	PKiKP	PKPdf	16 22 04.3	-0.2
	baz=287						
SUR	Sutherland	123.91	214		PKiKP	16 22 05.7	-0.1
OBN	Obninsk	123.98	328c	iPKIKP	PKPdf	16 22 04.3	-0.2
OBN				e		16 22 58.6	
OBN				e		16 23 50.5	
OBN				ePPP	PPP	16 26 35.8	
OBN				e		16 28 51.1	
OBN				pmax	pmax		
	comp=Z,516nm,1.2s						
OBN	Obninsk	123.98	328	PKP	PKiKP	16 22 05.2	+0.4
	comp=Z,36nm,0.5s,baz=59,slow=2.6,SNR=63						
OBN	Obninsk	123.98	328		PKPdf	16 22 04.5	0.0
H65A	Eastbrook	124.00	45	PKiKP	PKPdf	16 22 04.7	-0.2
	baz=285						
TASB	TASBURUN-IGDIR	124.01	309	P	PKiKP	16 22 06.5	+1.0
VORR	Voronezh	124.01	324	ePKIKP	PKPdf	16 22 02.0	-2.7
VORR				pmax	pmax		
	comp=Z,2μm,1.6s						
BOSA	Boshof	124.02	221	iP	PKPdf	16 22 04.2	-1.5
BOSA	Boshof	124.02	221	PKIKP	PKPdf	16 22 05.6	-0.1
BOSA	Boshof	124.02	221	PKP	PKiKP	16 22 06.2	+0.2
	comp=Z,178nm,0.9s,baz=122,slow=1.9,SNR=84						
BOSA				PKKPbc	PKKPbc	16 31 52.3	-0.2
	comp=Z,3.1nm,0.5s,baz=285,slow=2.1,SNR=8.7						
BOSA	Boshof	124.02	221	iP	PKiKP	16 22 07.5	+1.5
BOSA	Boshof	124.02	221		PKPdf	16 22 05.6	-0.1
ITAB	Concordia	124.03	137	eP	PKiKP	16 22 07.7	+1.8
ONI	Oni	124.05	312	P	PKiKP	16 22 06.5	+1.0
KBZ	Khabaz	124.17	314c	iPKIKP	PKPdf	16 22 05.2	-0.1
KBZ	Khabaz	124.17	314	PKP	PKiKP	16 22 05.8	+0.3
	comp=Z,90nm,0.9s,baz=88,slow=3.0,SNR=70						
KBZ				PP	PP	16 23 53.5	+0.8
	comp=Z,24nm,1.0s,baz=140,slow=5.8,SNR=3.9						
KBZ				PKKPbc	PKKPab	16 31 50.8	+0.9
	comp=Z,2.2nm,0.8s,baz=223,slow=13,SNR=3.4						
VSR	Storozhevoye	124.21	323	ePKIKP	PKPdf	16 22 05.0	-0.1
VSR				pmax	pmax		
	comp=Z,820nm,1.2s						
VORD	Divnogorie	124.23	323	ePKIKP	PKPdf	16 22 05.2	0.0
VORD				pmax	pmax		
	comp=Z,550nm,1.3s						
KVAR	Kislovodsk Arr	124.26	314	PKP	PKiKP	16 22 07.5	+1.5
	comp=Z,54nm,1.0s,baz=90,slow=20,SNR=56						
KIV	Kislovodsk	124.26	314c	iPKIKP	PKPdf	16 22 05.2	-0.4
KIV				e		16 22 56.3	
KIV				e		16 23 54.1	
KIV				ePPP	PPP	16 26 36.5	
KIV				eSS	SS	16 40 42.1	+13
KIV				pmax	pmax		
	comp=Z,231nm,1.2s						
KIV				MLR	MLR		
	comp=Z,1μm,21.0s						
KIV	Kislovodsk	124.26	314	⇓P	PKiKP	16 22 07.0	+1.0
KIV	Kislovodsk	124.26	314	iP	PKiKP	16 22 06.5	+0.6
	SNR=62						
KIV	Kislovodsk	124.26	314	P	PKiKP	16 22 06.3	+0.4
KIV	Kislovodsk	124.26	314		PKiKP	16 22 05.8	-0.1
AKH	Akhalkalaki	124.28	311	PKIKP	PKiKP	16 22 06.5	+0.3
AKH	Akhalkalaki	124.28	311	⇑P	PKiKP	16 22 07.3	+1.2
AKH	Akhalkalaki	124.28	311	P	PKiKP	16 22 07.7	+1.6
AKH	Akhalkalaki	124.28	311		PKiKP	16 22 06.5	+0.3
RAYN	Ar Rayn	124.33	289	iP	PKiKP	16 22 07.3	+0.7
	SNR=83						
G65A	Princeton	124.33	44		PKPdf	16 22 05.4	-0.2
G65A	Princeton	124.33	44	PKiKP	PKPdf	16 22 05.5	0.0
	baz=286						
SHA1	Shidzhatmaz	124.34	314c	iPKIKP	PKPdf	16 22 05.8	-0.1
SC01	Santiago de lo	124.37	76		PKPdf	16 22 05.7	-0.7
PUL	Pulkovo	124.38	335c	iPKIKP	PKPdf	16 22 04.8	-0.4
CLDR	Caldiran	124.41	308	P	PKiKP	16 22 07.5	+1.0
NEY	Neytrino	124.41	313c	iPKIKP	PKiKP	16 22 06.5	+0.1
EMMW	East Machias	124.54	45		PKPdf	16 22 05.6	-0.4
H66A	Whiting	124.62	45	PKiKP	PKPdf	16 22 06.1	0.0
	baz=286						
MOR8	Moi Rana	124.67	347	ePKPdf	PKPdf	16 22 05.4	-0.2
MOR8				eSKSac	SKSac	16 28 47.2	-3.2
KONS	Konsvik	124.67	348	ePKPdf	PKPdf	16 22 05.4	-0.1
BATG	Bathurst New B	124.71	42		PKPdf	16 22 05.8	-0.4
DAMY	Dhamar	124.76	278		PKiKP	16 22 08.9	+1.0
MSNA	Messina	124.76	230	iP	PKPdf	16 22 07.1	-0.1
MSNA	Messina	124.76	230	iP	PKiKP	16 22 08.4	+0.8
STOK	Stokkvaagen	124.83	348	ePKPdf	PKPdf	16 22 05.9	+0.1
GGN	Saint George	124.84	44		PKPdf	16 22 06.2	-0.3
VANB	Van	124.91	308	P	PKiKP	16 22 08.0	+0.6
FIA1	FINESS Array S	124.94	338	PKPdf	PKPdf	16 22 05.9	-0.3
FINES	FINESS Array B	124.94	338	PKhKP	PKPpre	16 21 50.6	
	comp=Z,1.2nm,0.5s,baz=86,slow=4.6,SNR=7.9						
FINES				PKP	PKiKP	16 22 06.7	+0.1
	comp=Z,233nm,0.8s,baz=85,slow=4.0,SNR=98						
FINES				SKPbc	SKPbc	16 25 05.2	
	comp=Z,11nm,0.9s,baz=57,slow=5.9,SNR=2.2						
FINES				PKKPbc	PKKPab	16 31 47.2	+1.1
	comp=Z,2.7nm,0.6s,baz=188,slow=4.2,SNR=6.7						
FINES	FINESS Array B	124.94	338	PKPdf	PKPdf	16 22 05.8	-0.4
CUKT	Cukurca	124.98	306	P	PKiKP	16 22 07.8	+0.2
AGRB	Hanur-Agry	125.03	309	P	PKiKP	16 22 08.5	+0.8
SAML	Samuel	125.03	111	PKIKP	PKPdf	16 22 06.8	-1.0
SAML	Samuel	125.03	111	eP	PKiKP	16 22 09.5	+1.3
SAML	Samuel	125.03	111		PKPdf	16 22 06.8	-1.0
SENK	Senkaya-Erzuru	125.31	310	P	PKPdf	16 22 08.0	+0.1
MLAZ	Malazgirt-MUS	125.45	308	P	PKiKP	16 22 09.8	+1.3
BATM	Batumi	125.55	311	⇑P	PKiKP	16 22 09.2	+0.7
BATM	Batumi	125.55	311	P	PKiKP	16 22 09.1	+0.7
DR12	Loma Pena Alta	125.60	77		PKPdf	16 22 07.4	-1.4
ANGG	Ammassalik, Gr	125.63	12		PKPdf	16 22 06.9	-0.5
AQDB	Aquidauana	125.69	128	eP	PKiKP	16 22 10.2	+0.9
PTGB	Pitanga	125.73	135	eP	PKiKP	16 22 11.0	+1.5
KOPR	Koprukoy-ERZUR	125.80	309	P	PKiKP	16 22 10.1	+0.9
ATD	Arta Tunnel	125.83	274	PKP	PKiKP	16 22 12.0	+2.2
	comp=Z,458nm,1.2s,baz=83,slow=1.3,SNR=86						
ATD	Arta Tunnel	125.83	274		PKiKP	16 22 10.7	+0.8
SIRT	Sirnak	125.85	306	P	PKiKP	16 22 09.6	+0.3
GURO	Guroymak-BITLI	125.97	308	P	PKiKP	16 22 10.5	+1.0
LBTB	Lobatse	126.23	224	PKhKP	PKPpre	16 21 57.5	
	comp=Z,3.4nm,0.7s,baz=131,slow=5.4,SNR=4.7						
LBTB				PKP	PKPdf	16 22 10.2	+0.2
	comp=Z,140nm,0.7s,baz=152,slow=3.0,SNR=80						
LBTB	Lobatse	126.23	224	PKPdf	PKPdf	16 22 09.7	-0.3
IVI	Ivigtut	126.27	20		PKPdf	16 22 07.9	-0.8
VRTB	Varto-Mus	126.28	309	P	PKiKP	16 22 11.9	+1.7
CHOM	Cayeli-Rize	126.35	311	P	PKPdf	16 22 09.8	+0.2
SOC	Sochi	126.43	314	iPKIKP	PKPdf	16 22 08.3	-1.3
SOC				e		16 22 59.6	
SOC				e		16 24 03.6	
SOC				e		16 28 52.6	
SOC				ePS	SP	16 33 47.3	-3.3
SOC				eSS	SS	16 40 51.4	-5.1
SOC				eSSS	SSS	16 45 38.5	
SOC				pmax	pmax		
	comp=Z,519nm,1.6s						
KARO	Karliova-Bingo	126.56	309	P	PKiKP	16 22 11.6	+0.8
TRCB	Terra Rica	126.56	133	eP	PKiKP	16 22 12.2	+1.0
NSS	Namsos	126.61	347	ePKPdf	PKPdf	16 22 09.3	0.0
NSS				eSKPdf	SKPdf	16 25 25.2	-1.1
VSU	Vasula	126.64	335c	iPKIKP	PKPdf	16 22 09.3	-0.2
VSU	Vasula	126.64	335	eP	PKPdf	16 22 09.4	-0.2
SVAN	Silvan-Diyarba	126.69	307	P	PKiKP	16 22 11.4	+0.5
BNGB	Bingl	126.91	309	P	PKiKP	16 22 12.4	+1.0
BAYT	Aydıntepe-Bayb	126.98	310	P	PKiKP	16 22 13.2	+1.6
MATP	Matopo	127.04	231	iP	PKPdf	16 22 11.9	+0.2
HAL	Halifax	127.19	44	PKIKP	PKPdf	16 22 10.8	-0.2
HAL	Halifax	127.19	44		PKPdf	16 22 10.8	-0.2
NRS	Narsarsuaq	127.21	19	PKIKP	PKPdf	16 22 10.2	-0.4
NRS	Narsarsuaq	127.21	19	iP	PKPdf	16 22 10.0	-0.5
	comp=Z,291nm,1.1s						
NRS	Narsarsuaq	127.21	19		PKPdf	16 22 10.2	-0.4
MAZI	Mazidag	127.41	307	P	PKiKP	16 22 12.5	+0.1
ERZN	Erzincan	127.49	309	P	PKiKP	16 22 13.1	+0.6
DYBB	Diyarbakir	127.55	307	P	PKiKP	16 22 13.2	+0.6
ANN	Anapa	127.61	316c	iPKIKP	PKPdf	16 22 11.8	0.0
ANN				e		16 23 04.0	
ANN				i		16 24 15.6	
ANN				ePS	PS	16 34 28.2	+4.3
ANN				e		16 35 29.4	
ANN				eSS	SS	16 41 09.1	-1.8
ANN				pmax	pmax		
	comp=N,74nm,1.5s						
ANN				pmax	pmax		
	comp=Z,469nm,1.5s						
ANN				pmax	pmax		
	comp=E,89nm,1.5s						
ANN				pmax	pmax		
	comp=Z,1μm,5.6s						
MPR	Mayaguez	127.68	78		PKPdf	16 22 11.8	-0.9
CRPR	Cabo Rojo, PR	127.69	78		PKPdf	16 22 11.6	-1.1
AGPR	Aguadilla, PR	127.72	77		PKPdf	16 22 11.7	-1.1
MLPR	Magueyes Islan	127.75	78		PKPdf	16 22 11.9	-0.9
PP1B	Ponte de Pedra	127.96	126	eP	PKiKP	16 22 14.9	+1.0
AOPR	Arecibo Observ	128.06	77		PKPdf	16 22 12.6	-0.9
TBLU	Trondheim	128.10	347	ePKPdf	PKiKP	16 22 12.6	-0.3
TBLU				ePKSdf	PKSdf	16 25 46.1	-2.3
OBIP	Obispado Ponce	128.18	78		PKPdf	16 22 12.6	-1.1
SALV	Santo Antonio	128.24	123	eP	PKiKP	16 22 15.7	+1.2
ICMP	Isla Caja de M	128.24	78		PKPdf	16 22 13.4	-0.4
EMPR	Esperanza - Ma	128.28	77		PKPdf	16 22 13.5	-0.3
KMBO	Kilima Mbogo	128.30	257	PKP	PKiKP	16 22 15.6	+0.5
	comp=Z,163nm,1.1s,baz=75,slow=2.5,SNR=119						
KMBO	Kilima Mbogo	128.30	257	P	PKiKP	16 22 15.2	+0.1
KMBO	Kilima Mbogo	128.30	257	PKPdf	PKPdf	16 22 14.5	+0.1
GBN	Guysborough	128.31	42		PKiKP	16 22 13.6	-0.2
FRTB	Fartura	128.35	135	eP	PKiKP	16 22 15.3	+0.6
IZAR	Zarasai	128.57	333	eP	PKiKP	16 22 14.7	+0.7
MICGM	Minsk	128.58	331	⇓ePKP	PKiKP	16 22 15.0	+1.0
MICGM				PKPM		16 22 16.0	
	comp=Z,3.0nm,1.0s						
MICGM				PKPM		16 22 16.0	
	comp=N,0.4nm,1.0s						
MICGM				PKPM		16 22 17.0	
	comp=E,0.9nm,1.0s						
MICGM				PKPM		16 22 23.0	
	comp=Z,3.5nm,4.0s						
MICGM				epPKP	pPKPdf	16 23 02.0	-1.4
MICGM				ePP	PP	16 24 18.0	-3.1
MICGM				ePKS		16 25 02.0	
MICGM				ePPP	PPP	16 26 48.0	
MICGM				eSKS	SKSdf	16 29 06.0	-0.4
MICGM				ePS	PS	16 34 39.0	+7.1
MICGM				eSPP	SPP	16 35 00.0	
MICGM				ePPS	PPS	16 35 24.0	
MICGM				eSKKS	SKKSdf	16 39 12.0	-5.8
MICGM				eSS	SS	16 41 35.0	+13
MICGM				eSSS	SSS	16 46 25.0	
MNK	Minsk	128.58	331	⇓ePKIKP	PKiKP	16 22 15.0	+1.0
MNK				e		16 23 02.0	
MNK				e		16 24 18.0	
MNK				e		16 29 06.0	
MNK				pmax	pmax		
	comp=N,350nm,1.0s						
MNK				pmax	pmax		
	comp=Z,3μm,1.0s						
MNK				pmax	pmax		
	comp=E,940nm,1.0s						
MNK				pmax	pmax		
	comp=Z,3μm,4.0s						
SJG	San Juan	128.61	78	PKIKP	PKPdf	16 22 13.9	-0.6
SJG	San Juan	128.61	78		PKPdf	16 22 13.8	-0.6
URFA	Urfa	128.68	307	P	PKiKP	16 22 15.5	+0.6
GCPR	Guaynabo City	128.69	78		PKPdf	16 22 13.9	-0.7
PDPR	Patillas Dam,	128.73	78		PKPdf	16 22 14.2	-0.6
ISAL	Salakas	128.74	333	eP	PKiKP	16 22 15.0	+0.7
ISAL				IAML		16 22 18.2	
	comp=Z,25nm,0.4s						
MALT	Malatya	128.78	308	P	PKiKP	16 22 15.4	+0.3
IIGN	Ignalina	128.83	333	eP	PKiKP	16 22 15.3	+0.8

BORG Borgarnes 128.84 5 SKPbc SKPbc 16 25 18.3
baz=122,slow=0.8
NACGM Naroch 128.85 332 ePKP PKPdf 16 22 12.0 -1.9
NACGM PKPM 16 22 16.0
comp=Z,1.6nm,1.0s
NACGM epPKP pPKPdf 16 23 01.0 -2.9
NACGM ePP PP 16 24 20.0 -2.9
NACGM eSKP 16 25 10.0
NACGM ePKS 16 25 32.0
NACGM ePPP PPP 16 26 26.0
NACGM eSKS SKSdf 16 28 38.0 -29
NACGM eSKKS SKKSac 16 30 24.0 -36
NACGM eSS SS 16 40 32.0 -53
NACGM eSSS SSS 16 46 04.0
NACGM eLQ LQ 17 02 17.0
NACGM eLR LR 17 11 30.0
C2SB Chapadao do Su 128.87 128 eP PKiKP 16 22 17.2 +1.5
CBYP Canovanas 128.90 78 PKPdf 16 22 14.4 -0.7
SLIT Slitere, Latvi 128.96 337 eP PKPdf 16 22 12.9 -1.1
RSDY Resadiye-TOKAT 129.06 311 P PKiKP 16 22 16.1 +0.6
PCRV Puerto La Cruz 129.17 88 PKP PKPdf 16 22 15.9 +0.1
comp=Z,18nm,0.7s,baz=236,slow=6.1,SNR=6.4
DRLN Deer Lake 129.18 37 PKPdf 16 22 14.6 -0.1
MTP Monte Pirata 129.18 78 PKPdf 16 22 14.8 -0.8
PLCV Puerto La Cruz 129.22 88 PKPdf 16 22 15.9 +0.1
MOL Molde 129.28 348 ePKPdf PKiKP 16 22 15.9 +0.7
MOL eSKPdf SKiKP 16 25 38.7 +6.0
BBSR BB Station 129.29 59 PKPdf 16 22 15.1 -0.3
TRIS Tristan da Cun 129.33 180 PKPdf 16 22 15.3 -0.1
DARE Darende-Malaty 129.43 309 P PKiKP 16 22 17.0 +0.6
SVSK Karacayir 129.43 311 P PKiKP 16 22 16.3 +0.1
DOMB Dombas 129.43 347 ePKPdf PKPdf 16 22 14.3 -0.5
DOMB eSKPdf SKiKP 16 25 37.7 +4.5
NC303 NORSAR Array S 129.61 345 PKPdf 16 22 15.3 +0.1
SPB Sao Paulo 129.62 137 eP PKiKP 16 22 17.8 +0.7
TOKT Tokat 129.65 311 P PKiKP 16 22 16.9 +0.2
NC204 NORSAR Array S 129.71 346 PKPdf 16 22 15.2 -0.3
PABE Paberze 129.72 334 eP PKiKP 16 22 16.2 -0.1
PABE IAmb IAmb 16 22 19.1
comp=Z,2μm,1.4s
AKN Aaknes 129.75 348 ePKPdf PKiKP 16 22 16.4 +0.2
AKN eSKPdf SKiKP 16 25 35.6 +1.9
AKN eSKSac SKSac 16 29 05.8 0.0
SIM Simferopol' 129.75 318c ePKIKP PKiKP 16 22 16.9 +0.2
SIM e 16 23 12.0
SIM e 16 24 29.0
SIM ePS SP 16 34 16.0 -3.3
SIM pmax pmax
comp=Z,163nm,1.1s
SIM pmax pmax
comp=Z,510nm,10.2s
STVI Saint Thomas 129.76 78 PKPdf 16 22 15.5 -1.1
NB201 NORSAR Array S 129.78 345 PKPdf 16 22 15.4 -0.1
KVT Kavak 129.78 312 P PKiKP 16 22 17.3 +0.3
NB2 NORSAR Subarra 129.81 345 PKPdf PKPdf 16 22 15.4 -0.2
comp=Z,762nm,1.7s,baz=31,slow=1.9
NOA NORSAR Array B 129.81 345 PKhKP PKPpre 16 22 02.0
comp=Z,4.1nm,0.8s,baz=55,slow=2.0,SNR=9.0
NOA PKP PKiKP 16 22 16.4 -0.1
comp=Z,93nm,0.9s,baz=32,slow=2.0,SNR=88
NOA PP PP 16 24 23.8 -5.1
comp=Z,7.0nm,0.9s,baz=33,slow=5.8,SNR=2.7
NOA SKPbc SKPbc 16 25 21.9 +2.3
comp=Z,14nm,0.7s,baz=33,slow=2.9,SNR=9.9
NOA PKKPbc PKKPbc 16 31 29.6
comp=Z,0.9nm,0.6s,baz=213,slow=3.2,SNR=3.4
NOA PKKP Sdif 16 32 18.3 0.0
comp=Z,0.5nm,0.6s,baz=193,slow=1.4,SNR=8.3
HFS Hagfors 129.91 343 PKKPbc 16 31 29.0
comp=Z,3.5nm,0.8s,baz=186,slow=2.9,SNR=5.5
HFS PKKP PKKPdf 16 32 17.1 -3.5
comp=Z,6.0nm,0.7s,baz=188,slow=4.5,SNR=8.3
NBO00 NORSAR Array S 129.92 345 PKPdf 16 22 15.9 +0.1
NC602 NORSAR Array S 129.99 345 ePKPdf PKiKP 16 22 16.3 -0.3
NC602 IVmB_BB 16 22 16.9
comp=Z,3μm,1.5s
NC602 eSKPdf SKPdf 16 25 32.8 0.0
NC602 eSKSdf SKSdf 16 29 09.1 +0.3
NC602 NORSAR Array S 129.99 345 PKiKP 16 22 16.4 -0.3
GAZ Gaziantep 129.99 307 P PKiKP 16 22 17.8 +0.2
GAZ Gaziantep 129.99 307 PKPdf PKPdf 16 22 16.5 -0.2
AKASG Malin Array Be 130.03 326 PKhKP PKPpre 16 21 58.0
comp=Z,6.3nm,0.7s,baz=51,slow=3.3,SNR=23
AKASG PKP PKiKP 16 22 16.8 -0.3
comp=Z,137nm,0.9s,baz=49,slow=3.0,SNR=140
AKASG PP PP 16 24 23.6 -7.1
comp=Z,18nm,1.0s,baz=45,slow=6.5,SNR=4.6
AKASG SKPbc SKPbc 16 25 22.5 +1.8
comp=Z,24nm,0.6s,baz=49,slow=4.3,SNR=14
AKBB Malin Array Si 130.03 326 PKIKP PKPdf 16 22 16.5 +0.3
AKBB Malin Array Si 130.03 326 PKPdf PKPdf 16 22 16.5 +0.3
NAO01 NORSAR Array S 130.06 345 PKPdf PKPdf 16 22 15.8 -0.2
ITRB Iturama 130.15 131 eP PKiKP 16 22 18.8 +0.5
KMRS Kahramanmaras 130.15 308 P PKiKP 16 22 17.7 -0.1
DIKM Dikmen 130.16 313 ⇑P PKiKP 16 22 18.2 +0.5
DIKM Dikmen 130.16 313 P PKiKP 16 22 18.1 +0.5
SEVA Sevastopol 130.21 317 ⇑P PKiKP 16 22 18.1 +0.5
PBUR Paburg 130.22 335 eP PKiKP 16 22 17.0 -0.3
LSZ Lusaka 130.23 236 i P PKPdf 16 22 14.4 -3.4
LSZ Lusaka 130.23 236 PKhKP PKPpre 16 22 03.1
comp=Z,4.0nm,0.5s,baz=177,slow=3.6,SNR=5.4
LSZ PKP PKiKP 16 22 18.5 -0.2
comp=Z,210nm,1.0s,baz=125,slow=1.7,SNR=95
LSZ PP PP 16 24 32.5 -0.4
comp=Z,131nm,1.3s,baz=122,slow=6.7,SNR=6.6
LSZ Lusaka 130.23 236 i P PKiKP 16 22 19.4 +0.6
LSZ Lusaka 130.23 236 PKPdf PKPdf 16 22 17.6 -0.3
VAO Valinhos 130.33 137 eP PKiKP 16 22 19.5 +0.8
RCLB Rio Claro- Sao 130.36 136 eP PKiKP 16 22 19.5 +0.7
BB19B Bebedouro 130.58 134 eP PKiKP 16 22 20.6 +1.4
BNN Bunyan 130.59 310 P PKiKP 16 22 18.7 -0.1
FOO Floro 130.66 349 ePKPdf PKiKP 16 22 17.6 -0.3
FOO eSKPdf SKiKP 16 25 40.9 +5.3
CLDB Colider 130.71 118 eP PKPdf 16 22 19.1 +0.4
YOZ Yozgat 130.75 311 P PKiKP 16 22 18.9 -0.2
SKAR Skarslia 130.81 347 ePKPdf PKPdf 16 22 17.9 +0.4
SKAR ePKSdf PKSdf 16 25 45.3 -8.5
SKAR eSKSac SKSac 16 29 08.3 -0.6
HYA Hoyanger 130.83 348 ePKPdf PKiKP 16 22 17.9 -0.4
HYA ePP PP 16 24 36.6 +1.4
HYA ePKSdf PKSdf 16 25 44.8 -8.7
OSL Oslo 130.88 345 ePKPdf PKPdf 16 22 17.9 +0.4
OSL eSKPdf SKiKP 16 25 38.0 +1.9
BZK Bozkurt 130.94 314 ⇓P PKiKP 16 22 19.4 +0.3
BZK Bozkurt 130.94 314 P PKiKP 16 22 19.2 0.0
KOZT Kozan 130.98 308 P PKPdf 16 22 18.0 -0.5
SUW Suwalki 131.04 333 ePKIKP PKPdf 16 22 18.3 +0.2
SUW Suwalki 131.04 333 ePKP PKPdf 16 22 18.3 +0.2
SUW eSKPdf SKiKP 16 25 45.1 +8.5
SUW Suwalki 131.04 333 PKPdf PKPdf 16 22 18.3 +0.2
CEYT Ceyhan 131.16 307 P PKPdf 16 22 19.0 +0.2
SUE Sulen 131.21 349 ePKPdf PKiKP 16 22 18.8 -0.3
SUE ePKSdf PKSdf 16 25 47.5 -6.8
ASF Jabal al Asfar 131.29 301 PKhKP PKPpre 16 22 06.3
comp=Z,4.6nm,0.7s,baz=28,slow=2.6,SNR=11
ASF PKP PKiKP 16 22 20.5 +0.1
comp=Z,89nm,0.9s,baz=87,slow=0.7,SNR=13
ASF PP PP 16 24 41.6 +1.7
comp=Z,12nm,0.9s,baz=117,slow=4.5,SNR=3.1
ASF SKPbc SKPab 16 25 29.4 +2.7
comp=Z,45nm,1.0s,baz=36,slow=2.1,SNR=7.3
YURE YUREGIR 131.30 307 P PKiKP 16 22 21.1 +1.0
KONO Kongsberg 131.42 345 PKIKP PKiKP 16 22 19.1 -0.5
KONO Kongsberg 131.42 345 ePKPdf PKPdf 16 22 18.5 -0.1
KONO eSKPdf SKiKP 16 25 41.8 +4.6
KONO Kongsberg 131.42 345 PKiKP 16 22 19.1 -0.5
ARAG Araguaiana, MT 131.45 126 eP PKiKP 16 22 21.1 +0.1
KRTS Karatas 131.57 307 P PKiKP 16 22 20.9 +0.3
CMRD Camardi-Nigde 131.57 308 P PKiKP 16 22 20.9 +0.1
KARA Karaisali 131.63 308 P PKiKP 16 22 20.3 -0.5
ASK Askoy 131.65 348 ePKPdf PKPdf 16 22 19.1 +0.1
ASK ePKSdf PKSdf 16 25 55.5 +0.4
HWQ Hawqa 131.66 304 eP PKPdf 16 22 20.2 +0.2
CANT Cankiri 131.68 312 P PKiKP 16 22 20.8 0.0
ITZ Itezhi-Tezhi 131.69 234 i P PKPdf 16 22 18.4 -2.2
ITZ i 16 22 20.0
baz=191,slow=2.1
ITZ i S PP 16 24 36.9 -5.4
ITZ Itezhi-Tezhi 131.69 234 i P PKPdf 16 22 20.2 -0.4
ITZ i 16 23 05.5
ITZ i 16 23 15.0
ITZ i 16 23 20.7

ITZ Itezhi-Tezhi 131.69 234 i P PKPdf 16 22 18.3 -2.3
ITZ i 16 23 12.0
ITZ i 16 23 18.7
ITZ Itezhi-Tezhi 131.69 234 i P PKPdf 16 22 18.4 -2.2
ITZ i 16 22 20.0
baz=191,slow=2.1
ITZ i S PP 16 24 36.9 -5.4
BER Bergen 131.72 348 ePKPdf PKiKP 16 22 20.0 -0.2
BER ePKSdf PKSdf 16 25 48.4 -6.9
SKI Saint Kitts 131.81 79 PKIKP PKPdf 16 22 19.7 -0.9
SKI Saint Kitts 131.81 79 PKPdf 16 22 19.7 -0.9
KURC Kurucasile-Bar 131.86 314 P PKiKP 16 22 20.7 -0.3
SORM Soroca 131.86 324 ⇑PKIKP PKPdf 16 22 19.0 -0.8
SORM Soroca 131.86 324 ⇑P PKPdf 16 22 19.0 -0.8
ODD1 Odda 131.88 347 ePKPdf PKPdf 16 22 20.0 +0.5
ODD1 ePKSdf PKSdf 16 25 49.1 -6.6
RCY Rachaya 131.91 303 eP PKPdf 16 22 20.7 +0.1
KLNR Kaliningrad 131.92 335c iPKIKP PKPdf 16 22 19.9 +0.2
ESAR Angra dos Reis 131.95 139 eP PKiKP 16 22 21.7 -0.1
BR131 Keskin Array S 131.96 311c iPKIKP PKPdf 16 22 19.9 -0.6
BR131 Keskin Array S 131.96 311 PKPdf PKPdf 16 22 20.3 -0.2
BRTR Keskin Array B 131.96 311 PKhKP PKPpre 16 22 06.1
comp=Z,8.5nm,0.7s,baz=124,slow=2.1,SNR=22
BRTR PKP PKPdf 16 22 20.9 +0.4
comp=Z,46nm,0.7s,baz=145,slow=5.5,SNR=46
BRTR PP PP 16 24 42.5 -1.4
comp=Z,62nm,1.2s,baz=111,slow=3.2,SNR=8.2
BRTR SKPbc SKPab 16 25 30.1 +0.7
comp=Z,48nm,1.0s,baz=73,slow=2.2,SNR=8.8
BRTR PKKP PKKPdf 16 32 17.5 +0.9
comp=Z,4.0nm,0.8s,baz=191,slow=3.0,SNR=5.5
BRTR Keskin Array B 131.96 311 PKPdf PKPdf 16 22 20.1 -0.4
BHL Bhannes 131.97 303 eP PKPdf 16 22 20.9 +0.3
SHBL Chebaa 132.02 302 eP PKiKP 16 22 21.7 -0.2
QRWL Qaraoun 132.03 303 eP PKPdf 16 22 21.1 +0.4
YAYX Yaylak 132.08 310 P PKPdf 16 22 20.6 -0.1
DQRL Deir Qamar 132.08 303 eP PKiKP 16 22 21.4 -0.5
BEYL Beirut 132.11 303 eP PKPdf 16 22 21.1 +0.4
KIS Kishinev 132.16 322 ⇑iPKP PKPdf 16 22 20.0 -0.4
comp=Z,1μm,2.0s
KIS i pPKP pPKPdf 16 23 12.0 +1.4
KIS Kishinev 132.16 322 i PKS 16 25 48.0
KIS eSKS 16 28 08.0
KIS i SKKS SKKSac 16 31 20.0 -1.3
KIS Kishinev 132.16 322 ⇑iPKIKP PKPdf 16 22 20.0 -0.4
KIS i 16 23 12.0
KIS e 16 34 36.0
KIS pmax pmax
comp=Z,1μm,2.0s
KIS MLR MLR
comp=Z,2μm,20.0s
MILM Milestii Mici 132.21 322 ⇓P PKPdf 16 22 20.9 +0.4
SERE Sereflikochisa 132.26 310 P PKPdf 16 22 21.5 +0.5
BLS5 Blasjo 132.36 347 ePKPdf PKPdf 16 22 20.0 -0.4
GRGR Grenville 132.36 86 PKPdf 16 22 20.6 -1.2
MMAI Mount Meron Ar 132.37 302 PKhKP PKPpre 16 22 08.9
comp=Z,5.3nm,0.6s,baz=79,slow=4.3,SNR=14
MMAI PKP PKiKP 16 22 23.5 +1.0
comp=Z,41nm,0.5s,baz=5.7,slow=1.7,SNR=8.4
MMAI SKPbc SKPab 16 25 34.1 +2.8
comp=Z,57nm,0.9s,baz=66,slow=4.7,SNR=9.6
MMAI PKKP PKKPdf 16 32 15.5 -0.2
comp=Z,2.0nm,0.4s,baz=50,slow=2.5,SNR=5.0
AFSR Afar-Bala (An 132.46 311 P PKiKP 16 22 22.3 -0.2
MMLI Mount Malkishu 132.47 301 P PKiKP 16 22 22.9 +0.3
ANTO Ankara 132.52 312 ⇑PKIKP PKiKP 16 22 22.6 0.0
ANTO Ankara 132.52 312 ⇑P PKiKP 16 22 22.6 0.0
ANTO Ankara 132.52 312 P PKiKP 16 22 22.1 -0.5
ANTO Ankara 132.52 312 PKPdf PKPdf 16 22 21.9 +0.4
BR231 Keskin MP Arra 132.54 312 PKPdf 16 22 22.0 +0.4
KIZK Mersin 132.55 307 P PKiKP 16 22 22.1 -0.5
KULU Kulu 132.64 311 P PKiKP 16 22 22.7 -0.2
SILI Silifke-Mersin 132.75 307 P PKiKP 16 22 22.5 -0.5
LEOM Leova 132.77 322 P PKPdf 16 22 22.1 +0.6
EREN Erenkoy 132.78 306 P PKiKP 16 22 22.8 -0.3
IAS Iasi 132.81 323 ⇓PKIKP PKiKP 16 22 23.2 +0.4
IAS Iasi 132.81 323 ⇓P PKiKP 16 22 23.2 +0.4
IPMB Ipameri, GO 132.81 131 eP PKiKP 16 22 23.9 +0.1
KMY Karmoy 132.81 348 ePKPdf PKPdf 16 22 21.5 +0.3
KMY ePKSdf PKSdf 16 25 53.3 -4.0
CBE Ff, Capester 132.81 81 eP PKiKP 16 22 23.4 -0.3
CHBY Cihanbeyli 132.88 310 P PKPdf 16 22 22.5 +0.3
KEBE Keben-Mersin 132.89 307 P PKPdf 16 22 21.9 -0.3
SVB Belmont 132.89 85 eP PKPdf 16 22 22.4 -0.3
SVB Belmont 132.89 85 PKPdf 16 22 21.6 -1.2
HOMB Homborsund 132.90 345 ePKPdf PKPdf 16 22 21.5 +0.1
HOMB eSKPdf SKiKP 16 25 41.4 +1.2
VASR Vaslui 132.95 322 ⇓P PKiKP 16 22 22.5 -0.6
KDZE Karadeniz Ereo 132.96 314 ⇑P PKPdf 16 22 22.4 +0.3
IKL Isikli 132.97 307 P PKPdf 16 22 21.8 -0.5
LRW Lerwick 133.04 352 eP PKPpre 16 22 10.8
TLCR 133.04 320 ⇓PKIKP PKiKP 16 22 23.1 -0.2
TLCR 133.04 320 ⇓P PKiKP 16 22 23.1 -0.2
PCM Pelee Case Pet 133.09 83 eP PKiKP 16 22 24.2 -0.1
AKKU Akkuyu-Mersin 133.09 307 P PKPdf 16 22 21.9 -0.6
TEVE Tevekalti-Mers 133.10 307 P PKPdf 16 22 22.3 -0.3
PML Morne Lenard 133.12 83 eP PKiKP 16 22 25.1 +0.8
YUVA Yuva-Kibriscik 133.13 313 P PKPdf 16 22 22.7 +0.1
CXM Morne La Croix 133.13 83 eP PKiKP 16 22 24.6 +0.1
GBMF Grand Be 133.13 83 eP PKiKP 16 22 25.6 +1.1
SVN Savane Anatole 133.14 83 eP PKiKP 16 22 24.3 -0.1
FDF Fort de France 133.14 83 PKIKP PKPdf 16 22 23.0 -0.2
FDF Fort de France 133.14 83 eP PKiKP 16 22 24.2 -0.3
FDF Fort de France 133.14 83 PKPdf 16 22 23.0 -0.2
BAMF Morne Balai 133.15 83 eP PKiKP 16 22 24.5 0.0
SNART Snartemo 133.16 346 ePKPdf PKiKP 16 22 22.7 -0.5
SNART ePKSdf PKSdf 16 25 55.9 -2.1
BIM Bigot 133.20 83 eP PKiKP 16 22 24.2 -0.3
JURR Jurilovca 133.20 320 ⇓P PKiKP 16 22 24.6 +0.9
HRFI Mount Harif 133.22 298 P PKPdf 16 22 23.5 +0.5
TRMF Trois Ilets 133.22 83 eP PKiKP 16 22 26.0 +1.5
BIR Birlad 133.24 322 ⇑PKIKP PKiKP 16 22 23.8 +0.1
BIR Birlad 133.24 322 ⇑P PKiKP 16 22 23.8 +0.1
ZAM Aeronautique 133.25 83 eP PKiKP 16 22 24.5 0.0
GIUM Giurgiulesti 133.28 321 ⇑P PKiKP 16 22 23.3 -0.5
LVV L'vov 133.28 328d iPKIKP PKiKP 16 22 23.1 -0.6
LVV e 16 23 11.7
LVV e 16 24 49.9
LVV ePPP PPP 16 27 45.6
LVV e 16 29 11.6
LVV pmax pmax
comp=Z,1μm,7.6s
LVV MLR MLR
comp=E,1μm,22.0s
LVV MLR MLR
comp=N,1μm,23.0s
LVV MLR MLR
comp=Z,2μm,23.0s
BERE Bereket-Mersin 133.30 307 P PKiKP 16 22 23.9 -0.5
LPMF Morne Lapointe 133.31 83 eP PKiKP 16 22 24.5 -0.2
TOSP Speyside 133.33 87 PKPdf 16 22 23.8 +0.3
EIL Elat 133.35 298 PKhKP PKPpre 16 22 10.1
comp=Z,14nm,1.0s,baz=46,slow=1.3,SNR=4.5
EIL PKP PKiKP 16 22 24.8 +0.4
comp=Z,280nm,1.1s,baz=29,slow=0.7,SNR=41
EIL PP PP 16 24 47.4 -5.8
comp=Z,87nm,1.3s,baz=262,slow=7.4,SNR=3.6
EIL SKPbc SKPab 16 25 36.1 +0.5
comp=Z,27nm,0.8s,baz=318,slow=6.1,SNR=4.1
EIL Elat 133.35 298 i P PKiKP 16 22 24.5 0.0
LADK Ladik-KONYA 133.39 310 P PKPdf 16 22 22.9 -0.3
TEKE Tekeli-Mersin 133.44 307 P PKPdf 16 22 22.1 -1.1
TOPG Topolog 133.46 320 ⇑P PKPpre 16 22 10.1
KONT Konya--Tatoy 133.47 310 P PKPdf 16 22 23.3 +0.1
GHRR 133.48 322 ⇓P PKPpre 16 22 08.4
PRAR RASCA 133.49 324 ⇓P PKPpre 16 22 15.3
KIZT Kizilcal 133.52 311 P PKPdf 16 22 22.9 -0.5
TUDR 133.55 321 ⇑P PKiKP 16 22 24.3 0.0
BEL Belsk 133.57 332 ePKIKP PKiKP 16 22 24.4 +0.2
BEL e 16 24 53.7
BEL pmax pmax
comp=Z,6μm,2.8s
BEL Belsk 133.57 332 ePKP PKiKP 16 22 24.4 +0.2
BEL ePP PP 16 24 53.7 +0.5
BEL eSKPdf SKiKP 16 25 54.2 +12
AUSIV SIVRIHISAR 133.58 312 P PKPdf 16 22 24.1 +0.6
BSD Bornholm Skovb 133.58 338 i PKIKP PKPdf 16 22 23.4 +0.6
BSD pmax pmax
comp=Z,290nm,1.0s
BSD Bornholm Skovb 133.58 338 i P PKPdf 16 22 23.4 +0.6
comp=Z,288nm,1.0s
BSD i 16 25 35.7

CSS Mathiatis 133.59 305 P PKPdf 16 22 23.7 +0.2
CSS Mathiatis 133.59 305 PKPdf PKPdf 16 22 23.4 -0.2
KZIT Kziot 133.61 300 P PKPdf 16 22 24.1 +0.4
TIRR Tirgusor 133.64 319 ⇓PKIKP PKiKP 16 22 24.2 -0.4
TIRR Tirgusor 133.64 319 ⇓P PKiKP 16 22 24.2 -0.4
TIRR Tirgusor 133.64 319 PKPdf 16 22 23.5 +0.3
EFOR EFORIE 133.68 319 ⇓P PKiKP 16 22 24.8 +0.2
TESR Tescani 133.70 323 ⇑P PKPdf 16 22 23.8 +0.5
PMNB Patos De Minas 133.72 133 eP PKiKP 16 22 26.6 +0.9
PETR Petresti 133.75 321 ⇑P PKiKP 16 22 24.7 -0.1
MFTR Murfatlar 133.76 319 ⇓P PKiKP 16 22 24.9 +0.1
BIZ Bicaz 133.79 323 ⇓P PKiKP 16 22 25.4 +0.6
GOET G??ttrup 133.79 344 i P PKiKP 16 22 26.1 +1.7
comp=Z,509nm,1.0s
MANR Mangalia 133.82 319 ⇓P PKiKP 16 22 25.2 +0.2
HARR Harsova 133.83 320 ⇓PKHKP PKPpre 16 22 10.7
HARR Harsova 133.83 320 ⇓P PKPpre 16 22 10.7
ODBI Odobesti 133.84 322 ⇑P PKPpre 16 22 14.5
BUR08 Bucovina Ar. S 133.91 325 PKPdf PKiKP 16 22 24.6 -0.7
BURAR Bucovina Array 133.92 325 ⇓PKIKP PKiKP 16 22 26.0 +0.8
BURAR Bucovina Array 133.92 325 ⇓P PKiKP 16 22 26.0 +0.8
BURAR Bucovina Array 133.92 325 PKPdf PKiKP 16 22 24.7 -0.6
CIFT Cifteler, Eski 133.95 312 P PKPdf 16 22 23.1 -1.1
SAUV Serdivan-Sakar 133.96 314 P PKPdf 16 22 24.1 +0.1
COP Copenhagen 133.97 340 i PKIKP PKiKP 16 22 24.3 -0.5
COP pmax pmax
comp=Z,270nm,0.9s
COP Copenhagen 133.97 340 i P PKiKP 16 22 24.3 -0.5
comp=Z,267nm,0.9s
COP i 16 25 39.5
VRI Vrincioaia 133.98 322 ⇓PKHKP PKPpre 16 22 15.2
VRI Vrincioaia 133.98 322 ⇓P PKPpre 16 22 15.2
VRI Vrincioaia 133.98 322 P PKPdf 16 22 24.4 +0.5
SPNC Sapanca-Adapaz 133.99 314 P PKiKP 16 22 25.1 -0.3
SRCK Saricakaya, Es 134.01 313 P PKPdf 16 22 24.8 +0.6
GAZI Gazipasa 134.03 307 P PKPdf 16 22 23.3 -1.0
PLOR Plostina 134.04 322 ⇑PKHKP PKPpre 16 22 10.9
PLOR Plostina 134.04 322 ⇑P PKPpre 16 22 10.9
KWP Kalwaria Pacla 134.07 328 ePKIKP PKiKP 16 22 25.0 -0.4
KWP e 16 24 56.7
KWP Kalwaria Pacla 134.07 328 ePKP PKiKP 16 22 25.0 -0.4
KWP ePP PP 16 24 56.7 +0.2
KWP eSKPdf SKiKP 16 25 55.5 +13
KWP eSKS SKSac 16 29 19.9 +1.9
KWP Kalwaria Pacla 134.07 328 PKPdf 16 22 23.9 -0.1
ORH Orhaniye 134.09 314 eP PKiKP 16 22 30.3 +4.7
GKP Gorka Klasztor 134.10 335 ePKIKP PKPdf 16 22 24.5 +0.7
GKP Gorka Klasztor 134.10 335 ePKP PKPdf 16 22 24.5 +0.7
GKP eSKPdf SKiKP 16 25 56.2 +13
PSN Preselentsi 134.15 319 eP PKPdf 16 22 24.6 +0.3
BISRR Bisoca 134.16 322 ⇓P PKPdf 16 22 23.8 -0.5
ICOR Ion Corvin 134.19 319 ⇑P PKiKP 16 22 26.8 +1.1
BORA Eskisehir 134.20 313 P PKPdf 16 22 24.7 +0.1
SILT Sile 134.27 315 P PKPdf 16 22 24.5 -0.1
MUD Monsted U'grnd 134.31 343 i PKIKP PKiKP 16 22 26.1 +0.6
MUD pmax pmax
comp=Z,180nm,1.0s
MUD Monsted U'grnd 134.31 343 i P PKiKP 16 22 26.1 +0.6
comp=Z,175nm,1.0s
MUD i 16 25 37.8
PGOR Pogoanele 134.31 321 ⇑P PKiKP 16 22 26.0 +0.1
HRT Hereke 134.39 314 P PKPdf 16 22 25.2 +0.3
BDFB Brasilia 134.42 129 PKhKP PKPpre 16 22 14.1
comp=Z,9.0nm,0.6s,baz=223,slow=1.7,SNR=8.0
BDFB PKP PKiKP 16 22 27.3 +0.2
comp=Z,66nm,0.8s,baz=278,slow=1.1,SNR=25
BDFB SKPbc SKPbc 16 25 38.3 +1.0
comp=Z,23nm,0.8s,baz=246,slow=6.0,SNR=4.5
BDFB PKKP PKKPdf 16 32 11.4 +0.2
comp=Z,2.1nm,0.5s,baz=205,slow=19,SNR=2.7
BDFB Brasilia 134.42 129 PKPdf PKPdf 16 22 25.5 -0.2
OZUR 134.42 323 ⇓P PKPpre 16 22 12.3
ISR Istrita 134.48 321 ⇑PKIKP PKPdf 16 22 22.1 -2.8
ISR Istrita 134.48 321 ⇑P PKPdf 16 22 22.1 -2.8
ADVT Abdulvahap 134.49 314 P PKPdf 16 22 25.1 +0.1
CAVI Cavuskoy 134.51 313 P PKiKP 16 22 25.9 -0.6
RASA Rasa 134.55 320 ⇓P PKiKP 16 22 26.9 +0.4
RGN Rugen 134.59 339 eP PKiKP 16 22 25.5 -0.7
RGN IAmb IAmb 16 22 30.0
comp=Z,733nm,1.6s
SHUT Suhut-Afyon 134.61 311 P PKiKP 16 22 26.2 -0.7
MBAR Mbarara 134.62 255c iPKIKP PKPdf 16 22 26.5 +0.2
MBAR Mbarara 134.62 255 PKhKP PKPpre 16 22 14.6
comp=Z,5.4nm,0.2s,baz=65,slow=4.5,SNR=6.4
MBAR PKP PKiKP 16 22 27.9 +0.2
comp=Z,280nm,1.1s,baz=92,slow=3.7,SNR=42
MBAR SKPbc SKPab 16 25 40.6 -1.2
comp=Z,39nm,0.9s,baz=160,slow=5.7,SNR=5.7
MBAR Mbarara 134.62 255 PKPdf PKPdf 16 22 24.9 -1.4
LEHL Lehliu 134.63 320 ⇑P PKiKP 16 22 26.6 +0.1
KLYT Kilyos 134.64 315 P PKPdf 16 22 25.6 +0.4
MLR Muntele Rosu 134.65 322 PKhKP PKPpre 16 22 11.6
comp=Z,6.1nm,0.6s,baz=338,slow=7.8,SNR=12
MLR PKP PKPdf 16 22 25.5 +0.1
comp=Z,143nm,1.0s,baz=37,slow=4.1,SNR=29
MLR SKPbc SKPab 16 25 41.2 +0.3
comp=Z,28nm,1.0s,baz=333,slow=2.3,SNR=3.6
MLR Muntele Rosu 134.65 322 ⇓P PKPpre 16 22 11.8
YLV Yalova 134.69 314 ⇑PKIKP PKiKP 16 22 28.7 +1.7
YLV Yalova 134.69 314 ⇑P PKiKP 16 22 28.7 +1.7
YLV Yalova 134.69 314 P PKPdf 16 22 25.4 -0.1
ARCR ARCALIA 134.71 325 ⇑P PKiKP 16 22 27.3 +0.6
ISK Istanbul-Kandi 134.71 315 P PKPdf 16 22 25.7 +0.3
KAVV Kandilli-Istan 134.71 315 P PKPdf 16 22 25.8 +0.4
DOPR Dopca 134.73 323 ⇓P PKPpre 16 22 12.6
KOLS Kolonicke sedl 134.73 328 ePKIKP PKiKP 16 22 26.9 +0.2
KOLS Kolonicke sedl 134.73 328 e PKPpre 16 22 12.2
KOLS Kolonicke sedl 134.73 328 ePKP PKiKP 16 22 26.9 +0.2
KOLS eSKPDF SKPdf 16 25 42.0 +0.1
SECR 134.81 321 ⇑P PKPpre 16 22 13.2
BMR Baia Mare 134.84 326 ⇑PKIKP PKiKP 16 22 27.3 +0.4
BMR Baia Mare 134.84 326 ⇑P PKiKP 16 22 27.3 +0.4
BGKT Bogazkoy 134.86 315 P PKPdf 16 22 25.7 0.0
GEMT Gemlik 134.88 314 P PKPdf 16 22 26.0 +0.3
PRD Provadia 134.88 318 eP PKiKP 16 22 26.6 -0.5
SULR 134.88 321 ⇑P PKiKP 16 22 26.4 -0.7
PLAR PLOIESTI 134.90 321 ⇓P PKiKP 16 22 26.8 -0.3
UZH Uzhgorod 134.91 327 ePKHKP PKPpre 16 22 13.0
UZH i 16 22 26.7
UZH e 16 29 13.7
UZH e 16 35 06.1
UZH e 16 42 42.5
NEF NEVSHA 134.93 318 eP PKiKP 16 22 27.3 0.0
STHS Stebnicka Huta 134.95 329 ePKIKP PKiKP 16 22 26.7 -0.4
STHS Stebnicka Huta 134.95 329 ePKP PKiKP 16 22 26.7 -0.4
BCK Bucak 134.96 310 P PKPdf 16 22 25.9 -0.2
BIGH Upper Bighouse 134.98 353 eP PKPpre 16 22 16.5
CTKS Kestanelik-??a 135.02 315 P PKPdf 16 22 25.1 -0.8
TRPA Tarpa 135.08 327 ⇑P PKiKP 16 22 27.2 -0.1
MDNY Mudanya-Bursa 135.12 314 P PKPdf 16 22 26.7 +0.5
OJC Ojcow 135.13 331 ePKIKP PKPdf 16 22 26.5 +0.6
OJC e 16 25 05.0
OJC Ojcow 135.13 331 ePKP PKPdf 16 22 26.5 +0.6
OJC ePP PP 16 25 05.0 +1.9
OJC eSKS SKSdf 16 29 25.4 +7.0
OJC e 16 38 05.2
OJC Ojcow 135.13 331 PKPdf PKPdf 16 22 26.1 +0.2
SBT2 Guzelce-Avcila 135.16 315 P PKiKP 16 22 26.9 -0.7
BASM Basmaki-Afyon 135.20 310 P PKPdf 16 22 27.3 +0.8
VOIR 135.21 322 ⇑PKHKP PKPpre 16 22 15.5
VOIR 135.21 322 ⇑P PKPpre 16 22 15.5
MDB Medias 135.22 323 ⇓PKIKP PKPdf 16 22 26.5 +0.3
MDB Medias 135.22 323 ⇓P PKPdf 16 22 26.5 +0.3
SLVT Silivri 135.22 315 P PKPpre 16 22 21.8
GEDZ Gediz 135.26 312 P PKiKP 16 22 27.5 -0.7
RAZG Razgrad 135.27 319 ⇓P PKPdf 16 22 26.3 -0.1
CJR Cluj-Napoca 135.34 325 ⇑PKIKP PKiKP 16 22 27.8 -0.3
CJR Cluj-Napoca 135.34 325 ⇑P PKiKP 16 22 27.8 -0.3
CEI Carei 135.40 326 ⇓PKIKP PKiKP 16 22 28.2 +0.2
CEI Carei 135.40 326 ⇓P PKiKP 16 22 28.2 +0.2
NIE Niedzica 135.42 330 ePKIKP PKiKP 16 22 27.9 -0.2
NIE Niedzica 135.42 330 ePKP PKiKP 16 22 27.9 -0.2
NIE eSKPdf SKiKP 16 25 53.4 +7.6
ARR Arges 135.50 322 ⇓P PKiKP 16 22 29.1 +0.6
PHSR Pinarhisar 135.51 316 ⇑P PKiKP 16 22 29.8 +1.3
PHSR Pinarhisar 135.51 316 P PKPdf 16 22 27.2 +0.3
KCTX Karacabey (Bur 135.53 314 P PKPdf 16 22 26.7 -0.3
GOLR 135.58 322 ⇑P PKPdf 16 22 26.9 -0.1
CRLT Corlu 135.59 316 P PKiKP 16 22 28.1 -0.6
ELL Elmali 135.71 309 PKIKP PKPdf 16 22 27.4 -0.2
ELL Elmali 135.71 309 P PKPdf 16 22 28.0 +0.4

ELL	Elmali	135.71 309	PKPdf	PKPdf	16 22 27.4	-0.2
DRGR		135.79 325	⇑PKHKP	PKPpre	16 22 13.2	
DRGR		135.79 325	⇑P	PKPpre	16 22 13.2	
COPA	Copaceanca	135.79 321	⇑P	PKPpre	16 22 15.3	
EDC	Edincik	135.84 314	P	PKPdf	16 22 27.0	-0.5
LTVH	Ltavrtes, Hu	135.88 326	ePP	SKPdf	16 25 44.6	+0.6
GLHS	Glhisar (BURDU	135.88 310	P	PKPdf	16 22 27.8	-0.1
MRMT	Marmara Adasi	135.91 315	P	PKPdf	16 22 28.2	+0.4
KECS	Kecovo	135.93 328	ePKIKP	PKiKP	16 22 28.6	-0.5
KECS			e		16 25 09.0	
KECS	Kecovo	135.93 328	ePKP	PKiKP	16 22 28.6	-0.5
KECS			ePP	PP	16 25 08.9	+0.7
KECS			eSKPDF	SKPdf	16 25 44.3	+0.2
EDRB	Edirne	135.93 317	P	PKPdf	16 22 27.4	-0.3
ELND	Elena	135.99 319	⇑P	PKPpre	16 22 15.9	
LANS	Liptovska Anna	136.00 330	ePKIKP	PKiKP	16 22 29.5	+0.2
LANS			e		16 25 10.4	
LANS	Liptovska Anna	136.00 330	e	PKPpre	16 22 17.5	
LANS	Liptovska Anna	136.00 330	ePKP	PKiKP	16 22 29.5	+0.2
LANS			ePP	PP	16 25 10.4	+1.7
LANS			eSKPDF	SKPdf	16 25 47.2	+2.9
RUE	Ruedersdorf	136.06 337	ePKPbc	PKPpre	16 22 16.0	
	baz=39,slow=3.1					
RUE	Ruedersdorf	136.06 337	eP	PKPdf	16 22 27.0	-0.5
KAC	Achnashellach	136.10 354	eP	PKPpre	16 22 17.3	
BSEG	Bad Segeberg	136.10 340	ePKPbc	PKPpre	16 22 16.4	
	baz=39,slow=3.1					
AKAS	Kas	136.11 308	P	PKPdf	16 22 27.2	-1.2
BALB	Balikesir	136.12 314	P	PKPdf	16 22 27.8	-0.3
RKY	Sarkoy-Tekirda	136.16 315	P	PKPdf	16 22 28.7	+0.5
OKC	Ostrava-Krasne	136.16 331	ePKHKP	PKPpre	16 22 15.6	
OKC			e		16 22 28.2	
OKC			e		16 25 12.0	
OKC	Ostrava-Krasne	136.16 331	ePKPpre	PKPpre	16 22 15.6	
OKC			ePKPdf	PKPdf	16 22 28.2	+0.4
OKC			ePP	PP	16 25 12.0	+2.4
OKC			ex	x	16 37 31.7	
PVL	Pavlikeni	136.19 319	eP	PKPdf	16 22 28.8	+0.7
KRBG	Karabiga-Canak	136.21 315	P	PKPdf	16 22 28.4	+0.2
DEV	Deva	136.21 324	⇑PKIKP	PKPdf	16 22 24.5	-3.5
DEV	Deva	136.21 324	⇑P	PKPdf	16 22 24.5	-3.5
KSP	Ksiaz	136.28 334	ePKIKP	PKiKP	16 22 29.1	-0.7
KSP			e		16 25 09.0	
KSP	Ksiaz	136.28 334	ePKP	PKiKP	16 22 29.1	-0.7
KSP			ePP	PP	16 25 09.0	-1.3
KPL	Plockton	136.29 354	eP	PKPpre	16 22 15.4	
UKOP	Uzunkopru-Edir	136.34 316	P	PKiKP	16 22 29.7	-0.4
DRUM	Mains of Drumt	136.34 352	eP	PKPdf	16 22 24.8	-3.1
VLAD	Vladila	136.37 321	⇑P	PKiKP	16 22 29.7	-0.4
FETY	Fethiye	136.37 309	P	PKPdf	16 22 27.8	-0.9
MORC	Moravsky Berou	136.49 332	PKIKP	PKPdf	16 22 28.9	+0.4
MORC	Moravsky Berou	136.49 332	⇑P	PKPpre	16 22 18.0	
MORC	Moravsky Berou	136.49 332	e	PKPpre	16 22 17.8	
MORC	Moravsky Berou	136.49 332	ePKP	PKiKP	16 22 29.7	-0.6
MORC			ePP	PP	16 25 13.7	+2.0
MORC			e		16 25 44.8	
MORC			e		16 26 04.7	
MORC	Moravsky Berou	136.49 332	PKPdf	PKPdf	16 22 28.9	+0.4
OSTC	Ostas	136.52 333	ePKPpre	PKPpre	16 22 18.2	
OSTC			ePKPdf	PKiKP	16 22 30.2	-0.1
OSTC			ePP	PP	16 25 09.4	-2.4
OSTC			eSKKS		16 37 52.6	
PLVB	Pleven	136.55 320	⇓P	PKPpre	16 22 17.9	
GZR	Gura Zlata	136.57 323	⇑PKHKP	PKPpre	16 22 22.1	
GZR	Gura Zlata	136.57 323	⇑P	PKPpre	16 22 22.1	
CHVC	Chvalec	136.57 333	ePKPpre	PKPpre	16 22 16.9	
CHVC			ePKPdf	PKiKP	16 22 30.4	0.0
CHVC			ePP	PP	16 25 13.5	+1.4
LPK	Lapseki	136.59 315	P	PKPdf	16 22 29.7	+0.8
PSZ	Piszkesteto	136.60 328	PKIKP	PKPdf	16 22 29.0	+0.2
PSZ	Piszkesteto	136.60 328	⇑P	PKPdf	16 22 25.8	-3.0
PSZ	Piszkesteto	136.60 328	PKPdf	PKPdf	16 22 29.0	+0.2
KRLC	Kraliky	136.62 332	ePKHKP	PKPpre	16 22 18.3	
KRLC			e		16 22 29.6	
KRLC			e		16 25 10.2	
KRLC	Kraliky	136.62 332	ePKPpre	PKPpre	16 22 18.3	
KRLC			ePKPdf	PKPdf	16 22 29.6	+0.8
KRLC			ePP	PP	16 25 10.2	-2.3
KRLC			ex	x	16 37 58.4	
ERIK	Erikli-Kesan	136.62 316	P	PKPdf	16 22 28.6	-0.3
DPC	Dobruska-Polom	136.63 333	ePKHKP	PKPpre	16 22 19.0	
DPC			e		16 22 29.9	
DPC			e		16 25 09.1	
DPC			e		16 37 25.7	
DPC	Dobruska-Polom	136.63 333	ePKPpre	PKPpre	16 22 19.0	
DPC			ePKPdf	PKiKP	16 22 29.9	-0.7
DPC			ePP	PP	16 25 09.1	-3.4
DPC			eSKKS		16 37 25.7	
HLG	Helgoland	136.64 342	ePKPbc	PKPpre	16 22 18.4	
	baz=39,slow=3.1					
UPC	Upice	136.65 333	ePKHKP	PKPpre	16 22 18.6	
UPC			e		16 22 28.6	
UPC			e		16 25 10.2	
UPC			e		16 36 55.5	
UPC	Upice	136.65 333	ePKP	PKPpre	16 22 18.6	
UPC			ex	x	16 22 28.6	
UPC			ePP	PP	16 25 10.2	-2.3
UPC			eSKKS		16 36 55.5	
TURN	Turunc	136.65 310	P	PKiKP	16 22 30.8	-0.1
SIRR	Siria	136.69 325	⇓P	PKiKP	16 22 30.5	-0.3
SRE	Strehaia	136.73 322	⇑PKIKP	PKiKP	16 22 30.3	-0.6
SRE	Strehaia	136.73 322	⇑P	PKiKP	16 22 30.3	-0.6
VYHS	Vyhne	136.75 329	ePKHKP	PKPpre	16 22 16.9	
VYHS			e		16 22 30.1	
VYHS			e		16 25 13.6	
VYHS	Vyhne	136.75 329	e	PKPpre	16 22 16.9	
VYHS	Vyhne	136.75 329	ePKP	PKiKP	16 22 30.1	-0.7
VYHS			ePP	PP	16 25 13.6	+0.3
VYHS			eSKPDF	SKPdf	16 25 47.1	+1.5
GELI	Tayfur-Gelibol	136.77 315	P	PKPdf	16 22 29.4	+0.2
AYDB	Zeytinkoy-Aydi	136.78 311	P	PKPdf	16 22 30.4	+0.9
YER	Yerkesik	136.80 310	P	PKPdf	16 22 30.3	+0.8
BSZH	Besenyszg	136.80 327	ePP	SKPbc	16 25 44.6	+1.0
ALN	Alexandroupoli	136.84 316	P	PKPpre	16 22 18.0	
ALN	Alexandroupoli	136.84 316	PKIKP	PKPdf	16 22 29.0	-0.4
ALN	Alexandroupoli	136.84 316	P	PKPdf	16 22 29.4	+0.1
ALN	Alexandroupoli	136.84 316	PKPdf	PKPdf	16 22 28.9	-0.4
KDZ	Kurdzhali	136.90 317	P	PKPdf	16 22 29.9	+0.4
KOLL	Kolacno	136.91 330	ePKP	PKiKP	16 22 30.6	-0.5
KOLL			ePP	PP	16 25 14.5	+0.2
KOLL			eSKPDF	SKPdf	16 25 47.6	+1.8
BAIL	Bailesti	137.00 321	⇓P	PKiKP	16 22 30.8	-0.6
DKL	Dikili	137.04 313	P	PKPdf	16 22 30.2	+0.4
RDO	Rodhopi	137.06 317	P	PKPpre	16 22 18.6	
RDO	Rodhopi	137.06 317	P	PKPdf	16 22 29.9	+0.1
JAVC	Velka Javorina	137.07 331	e	PKPpre	16 22 20.0	
JAVC	Velka Javorina	137.07 331	ePKP	PKiKP	16 22 31.7	+0.2
BZS	Buzias	137.10 324	⇓PKIKP	PKPdf	16 22 30.6	+0.9
BZS	Buzias	137.10 324	⇓P	PKPdf	16 22 30.6	+0.9
PUNG	Punghina	137.10 322	⇑P	PKPpre	16 22 19.7	
MLSB	Milas	137.11 310	P	PKPpre	16 22 26.0	
EZN	Ezine	137.12 315	P	PKPdf	16 22 29.8	-0.1
PLD	Plovdiv	137.15 318	P	PKPdf	16 22 29.6	-0.3
BLCB	Balcova	137.22 312	P	PKPdf	16 22 30.5	+0.3
ARG	Arkhangelos	137.24 309	P	PKPdf	16 22 30.9	+0.6
BRG	Berggiesshubel	137.24 335	ePKP	PKPpre	16 22 18.2	
	comp=Z,9.5nm,1.2s					
BRG			i		16 22 30.9	
	comp=Z,1µm,1.9s					
BRG			i sPKP		16 23 27.2	
	comp=Z,236nm,1.7s					
BRG			i PP	PP	16 25 13.1	-3.0
	comp=Z,386nm,1.9s					
BRG			i SKP		16 25 46.9	
	comp=Z,223nm,1.6s					
BRG			SDIFF		16 33 05.0	
BRG			SS	SS	16 43 06.0	-0.3
BRG	Berggiesshubel	137.24 335	ePKHKP	PKPpre	16 22 18.2	
BRG			i		16 22 30.9	
BRG			i		16 23 27.2	
BRG			i		16 25 13.1	
BRG			SS	SS	16 43 06.0	-0.3
BRG			pmax	pmax		
	comp=Z,10.0nm,1.2s					
BRG			pmax	pmax		
	comp=Z,1µm,1.9s					
BRG			pmax	pmax		
	comp=Z,386nm,2.0s					
BRG			pmax	pmax		
	comp=N,223nm,1.6s					

BRG	Berggiesshubel	137.24 335	ePKPbc	PKPpre	16 22 19.2	
	baz=39,slow=3.1					
PVCC	Panska Ves	137.25 334	ePKHKP	PKPpre	16 22 19.5	
PVCC			e		16 22 29.2	
PVCC			e		16 25 17.2	
PVCC	Panska Ves	137.25 334	ePKPpre	PKPpre	16 22 19.5	
PVCC			ePKPdf	PKPdf	16 22 29.2	-0.6
PVCC			ePP	PP	16 25 17.2	+1.0
TIM	Timisoara	137.25 325	⇑PKIKP	PKiKP	16 22 31.8	-0.1
TIM	Timisoara	137.25 325	⇑P	PKiKP	16 22 31.8	-0.1
GADA	Gvkgeada	137.26 315	P	PKPdf	16 22 27.8	-2.4
VRAC	Vranov	137.26 332	PKhKP	PKPpre	16 22 19.0	
	comp=N,13nm,0.9s,baz=1.0,slow=4.2,SNR=2.4					
VRAC			PKP	PKiKP	16 22 31.4	-0.4
	comp=N,83nm,0.9s,baz=132,slow=1.1,SNR=15					
VRAC			PP	PP	16 25 18.1	+1.7
	comp=N,15nm,1.0s,baz=59,slow=7.9,SNR=6.5					
VRAC			SKPbc	SKPbc	16 25 48.0	+3.1
	comp=N,18nm,0.9s,baz=138,slow=1.0,SNR=3.7					
VRAC	Vranov	137.26 332	⇑P	PKPpre	16 22 22.0	
VRAC	Vranov	137.26 332	e	PKPpre	16 22 19.1	
VRAC	Vranov	137.26 332	ePKP	PKPdf	16 22 30.1	+0.2
VRAC			ePP	PP	16 25 18.0	+1.7
VRAC			e		16 25 46.6	
VRAC			e		16 26 05.7	
CLL	Collm	137.28 336	PKIKP	PKPdf	16 22 30.2	+0.3
CLL	Collm	137.28 336	e(Pdif)		16 19 46.0	
CLL			ePKPpre	PKPpre	16 22 19.0	
CLL			⇑iPKPdf	PKPdf	16 22 30.5	+0.6
	comp=Z,1µm,2.1s					
CLL			epPKPdf	pPKPdf	16 23 19.0	-1.1
CLL			ePP	PP	16 25 15.0	-1.4
CLL			eSKPbc	SKPbc	16 25 47.0	+2.2
CLL			ePKSbc	PKSbc	16 26 05.0	+0.5
CLL			epPKSbc		16 26 49.0	
CLL			e		16 26 57.0	
CLL			eSKKSac	SKKSac	16 31 48.0	-3.8
CLL			eSKSP		16 34 54.0	
CLL			ePPS	PPS	16 37 18.0	
CLL			e(pPPS)		16 38 06.0	
CLL			eSS	SS	16 43 06.0	-0.7
CLL			esSS		16 44 32.0	
CLL			e		16 46 18.0	
CLL			eSSS	SSS	16 48 18.0	
CLL	Collm	137.28 336	ePKPbc	PKPdf	16 22 19.5	-10
	baz=39,slow=3.1					
EAB	Aberfoyle	137.28 353	eP	PKPpre	16 22 20.7	
BSFB	Barra de Sao F	137.29 139	eP	PKiKP	16 22 32.6	-0.2
BOZC	Bozcaada	137.31 315	P	PKPdf	16 22 30.2	-0.1
ESY	Stoneypath	137.32 352	eP	PKPpre	16 22 21.5	
LAWE	Loch Awe, Argy	137.33 354	eP	PKPpre	16 22 22.2	
RZN	Rozhen	137.34 318	eP	PKPpre	16 22 18.4	
GCAM	G?zelcaml?	137.36 311	P	PKPdf	16 22 30.2	-0.2
NRDL	Niedersach Rie	137.38 339	ePKPbc	PKPpre	16 22 20.4	
	baz=39,slow=3.1					
SMTH	Samothraki Isl	137.38 316	P	PKPpre	16 22 19.4	
PRK	Paraskevi	137.41 314	P	PKPpre	16 22 21.0	
SMOL	Smolenice	137.42 330	ePKHKP	PKPpre	16 22 20.9	
SMOL			e		16 22 31.7	
SMOL	Smolenice	137.42 330	e	PKPpre	16 22 20.9	
SMOL	Smolenice	137.42 330	ePKP	PKiKP	16 22 31.7	-0.5
SMOL			eSKPDF	SKPdf	16 25 48.5	+1.7
FBE	Freiberg	137.44 336	ePKPbc	PKPpre	16 22 20.2	
	baz=39,slow=3.1					
SRO	Srobarova	137.47 329	ePKIKP	PKiKP	16 22 31.6	-0.6
SRO	Srobarova	137.47 329	ePKP	PKiKP	16 22 31.6	-0.6
DAT	Datca	137.47 310	P	PKPdf	16 22 30.4	-0.4
ASSE	Asse, Remlinge	137.48 339	ePKPbc	PKPpre	16 22 20.4	
	baz=39,slow=3.1					
EAU	Auchinoon	137.51 352	eP	PKPpre	16 22 21.2	
BANR	Banloc	137.51 324	⇓P	PKiKP	16 22 32.2	-0.2
KRUC	Moravsky	137.52 332	e	PKPpre	16 22 19.2	
KRUC	Moravsky	137.52 332	ePKP	PKPdf	16 22 31.3	+0.9
KRUC			ePP	PP	16 25 18.1	+0.1
KRUC			e		16 25 47.6	
KRUC			e		16 26 05.8	
EBL	Broad Law	137.53 352	eP	PKPpre	16 22 22.0	
MDVR	Moldovita	137.54 323	⇑P	PKPdf	16 22 31.5	+0.9
BODT	Bodrum	137.54 310	P	PKPdf	16 22 29.6	-1.2
URLA	Izmir	137.55 312	P	PKPdf	16 22 30.9	+0.1
MODS	Modra-Piesok	137.59 330	ePKHKP	PKPpre	16 22 20.3	
MODS			e		16 22 31.1	
MODS			e		16 25 18.1	
MODS	Modra-Piesok	137.59 330	e	PKPpre	16 22 20.3	
MODS	Modra-Piesok	137.59 330	ePKP	PKPdf	16 22 31.1	+0.5
MODS			ePP	PP	16 25 18.1	-0.4
MODS			eSKPDF	SKPdf	16 25 49.1	+2.0
GOPC	GO Pecny, Ondr	137.62 334	ePKHKP	PKPpre	16 22 20.4	
GOPC			e		16 22 32.0	
GOPC			e		16 25 16.5	
GOPC	GO Pecny, Ondr	137.62 334	ePKPpre	PKPpre	16 22 20.4	
GOPC			ePKPdf	PKiKP	16 22 32.0	-0.5
GOPC			ePP	PP	16 25 16.5	-2.1
SMG	Samos	137.64 311	P	PKPpre	16 22 22.1	
PRA	Prague	137.65 334	ePKIKP	PKPdf	16 22 27.3	-3.3
PRA			e		16 25 19.8	
PRA	Prague	137.65 334	ePKPdf	PKPdf	16 22 30.9	+0.3
PRA			ePP	PP	16 25 19.8	+1.1
PRU	Pruhonice	137.67 334	ePKHKP	PKPpre	16 22 18.8	
PRU			e		16 22 31.4	
PRU	Pruhonice	137.67 334	ePKPpre	PKPpre	16 22 18.8	
PRU			ePKPdf	PKPdf	16 22 31.4	+0.8
PRU			ePP	PP	16 25 14.6	-4.2
PRU			ex	x	16 37 47.8	
PGBU	Glenifferbraes	137.67 353	eP	PKPpre	16 22 25.7	
SIGR	SIGRI	137.72 314	P	PKPpre	16 22 21.1	
SIGR	SIGRI	137.72 314	P	PKPdf	16 22 31.5	+0.5
TREC	Trest	137.77 333	ePKHKP	PKPpre	16 22 21.9	
TREC			e		16 22 31.7	
TREC	Trest	137.77 333	ePKPpre	PKPpre	16 22 21.9	
TREC			ePKPdf	PKPdf	16 22 31.7	+0.8
TREC			eSKP		16 25 43.8	
ZST	Bratislava	137.80 330	ePKIKP	PKPdf	16 22 31.5	+0.6
ZST	Bratislava	137.80 330	ePKP	PKPdf	16 22 31.5	+0.6
ZST			e		16 26 07.3	
KAVA	Kavala	137.81 317	P	PKPpre	16 22 21.3	
VTS	Vitosha	137.82 320	PKIKP	PKPdf	16 22 31.2	-0.2
VTS	Vitosha	137.82 320	⇓P	PKPpre	16 22 21.8	
VTS	Vitosha	137.82 320	eP	PKPpre	16 22 18.9	
VTS	Vitosha	137.82 320	PKPdf	PKPdf	16 22 31.2	-0.2
CLZ	Clausthal	137.83 339	ePKPbc	PKPpre	16 22 21.8	
	baz=39,slow=3.1					
NEUB	Neuenburg	137.83 337	ePKPbc	PKPpre	16 22 21.5	
	baz=39,slow=3.1					
KOSK	Kos Island	137.91 310	P	PKPdf	16 22 30.2	-1.2
CHOS	Chios island	137.93 313	P	PKPpre	16 22 20.8	
CHOS	Chios island	137.93 313	P	PKPdf	16 22 30.4	-1.2
EKA	Eskdalemuir Ar	137.97 352	SKPbc	SKPbc	16 25 48.5	+1.8
	comp=Z,30nm,0.8s,baz=353,slow=2.7,SNR=11					
EKA			PKKP	PKKPdf	16 32 02.2	-2.7
	comp=Z,7.7nm,1.0s,baz=213,slow=2.2,SNR=6.5					
ESK	Eskdalemuir	137.99 352	eP	PKPpre	16 22 21.9	
ESK	Eskdalemuir	137.99 352	PKIKP	PKPdf	16 22 30.6	-0.4
ESK	Eskdalemuir	137.99 352	PKPdf	PKPdf	16 22 30.6	-0.4
MMB	Musomiste	138.03 318	eP	PKPpre	16 22 22.6	
NVR	Nevrokopi	138.07 318	P	PKPpre	16 22 21.8	
PBCC	Pribram	138.13 334	ePKPpre	PKPpre	16 22 24.2	
PBCC			ePKPdf	PKiKP	16 22 32.9	-0.7
PBCC			ePP	PP	16 25 16.5	-5.2
TANN	Tannenbergstha	138.19 336	ePKPbc	PKPpre	16 22 22.3	
	baz=39,slow=3.1					
KARP	Karpathos	138.21 308	P	PKPdf	16 22 30.4	-1.7
KARP	Karpathos	138.21 308	PKPdf	PKPdf	16 22 31.8	-0.3
GTTG	Gvttingen	138.22 339	ePKPbc	PKPpre	16 22 22.7	
	baz=39,slow=3.1					
EDMD	Edmundbyers	138.28 351	eP	PKPpre	16 22 22.7	
GUNZ	Gunzen	138.29 336	ePKPbc	PKPpre	16 22 22.4	
	baz=39,slow=3.1					
TIH	Tihany	138.29 328	ePP	PP	16 25 21.8	-1.1
IBBN	Ibbenburen	138.31 341	ePKPbc	PKPpre	16 22 23.2	
	baz=39,slow=3.1					
KKB	Krupnik	138.31 319	eP	PKPpre	16 22 22.3	
WERN	Wernitzgruen	138.33 336	ePKPbc	PKPpre	16 22 22.6	
	baz=39,slow=3.1					
MOX	Moxa	138.34 337	ePKPbc	PKPpre	16 22 22.5	
	baz=39,slow=3.1					
NKC	Novy Kostel	138.34 336	ePKHKP	PKPpre	16 22 22.7	
NKC	Novy Kostel	138.34 336	ePKPpre	PKPpre	16 22 22.7	
NKC			ePKPdf	PKiKP	16 22 35.2	+1.2
NKC			ePP	PP	16 25 09.8	-13
MORH	Mrgy, Hungar	138.35 327	eP	PKPpre	16 22 21.2	

FRGS	Fruska Gora	138.39 325	⇓iP	PKPpre	16 22 21.6	
GDLE	Glaisdale, N Y	138.48 350	eP	PKPpre	16 22 21.9	
OUR	Ouranopolis	138.49 316	P	PKPpre	16 22 22.2	
OUR	Ouranopolis	138.49 316	P	PKPpre	16 22 22.8	
CONA	Conrad Observa	138.58 331	ePKPdf	PKPpre	16 22 24.0	
	comp=Z,455nm,1.2s,SNR=15					
CONA			PP	PP	16 25 25.6	+0.9
	comp=Z,112nm,1.4s					
GAL1	Galloway	138.62 353	eP	PKPpre	16 22 24.8	
MANZ	Manzenberg	138.67 336	ePKPbc	PKPpre	16 22 23.6	
	baz=39,slow=3.1					
AMGA	Amorgos Island	138.68 311	P	PKPpre	16 22 23.9	
KHC	Kasperske Hory	138.72 334	ePKHKP	PKPpre	16 22 23.6	
KHC			e		16 22 34.2	
KHC	Kasperske Hory	138.72 334	ePKPpre	PKPpre	16 22 23.6	
KHC			ePKPdf	PKiKP	16 22 34.2	-0.7
KHC			ePP	PP	16 25 18.0	-7.4
KHC			eSKP		16 25 52.0	
KHC			eSKKP		16 35 13.1	
KHC			eSKKS		16 38 20.8	
KHC	Kasperske Hory	138.72 334	PKPdf	PKPdf	16 22 32.9	+0.3
KNT	Kendrikon	138.79 318	P	PKPpre	16 22 22.2	
KNT	Kendrikon	138.79 318	P	PKPpre	16 22 23.1	
UBBA	Unterbreizbach	138.80 338	ePKPbc	PKPpre	16 22 23.9	
	baz=39,slow=3.1					
ROTZ	Rotzenmuhle	138.81 335	ePKPbc	PKPpre	16 22 23.9	
	baz=39,slow=3.1					
PLG	Polygyros	138.83 317	P	PKPpre	16 22 23.8	
APE	Apeiranthos	138.85 311	P	PKPpre	16 22 25.9	
APE	Apeiranthos	138.85 311	⇑PKIKP	PKiKP	16 22 35.4	-0.1
APE	Apeiranthos	138.85 311	⇑P	PKiKP	16 22 35.4	-0.1
APE	Apeiranthos	138.85 311	P	PKPdf	16 22 32.1	-1.2
PAIG	Paliouri	138.89 316	P	PKPpre	16 22 23.2	
GEC2	GERESS Array S	138.89 333	ePKPbc	PKPpre	16 22 24.2	
	baz=39,slow=3.1					
GEC2	GERESS Array S	138.89 333	PKPdf	PKPdf	16 22 33.2	+0.2
GERES	GERESS Array B	138.89 333	PKhKP	PKPpre	16 22 24.1	
	comp=Z,5.4nm,0.5s,baz=38,slow=3.8,SNR=26					
GERES			PKP	PKiKP	16 22 35.1	-0.2
	comp=Z,72nm,0.8s,baz=44,slow=1.7,SNR=52					
GERES			SKPbc	SKiKP	16 25 52.2	-0.8
	comp=Z,23nm,0.9s,baz=36,slow=2.5,SNR=7.1					
GERES			PKKP	PKKPdf	16 32 01.1	-2.2
	comp=Z,2.1nm,0.7s,baz=215,slow=1.6,SNR=5.7					
GERES	GERESS Array B	138.89 333	PKPdf	PKPdf	16 22 33.3	+0.2
VAY	Valandovo	138.92 319	i P	PKPpre	16 22 23.2	
TEKS	Tekeris	138.93 324	eP	PKPpre	16 22 25.7	
DIVS	Divibare	138.94 324	eP	PKPpre	16 22 23.3	
HORT	Hortiatis	138.94 317	P	PKPpre	16 22 23.7	
HORT	Hortiatis	138.94 317	P	PKPdf	16 22 33.1	-0.3
STIP	Stip	138.97 319	i P	PKPpre	16 22 22.4	
WET	Wettzell	139.01 334	ePKPbc	PKPpre	16 22 24.8	
	baz=39,slow=3.1					
ZKR	Zakros	139.09 308	P	PKPdf	16 22 31.6	-2.1
AOS	Alonnisos	139.11 315	P	PKPpre	16 22 24.5	
AOS	Alonnisos	139.11 315	P	PKPdf	16 22 32.1	-1.5
IOSP	Ios island	139.17 311	P	PKPpre	16 22 24.8	
SANT	Santorini	139.18 310	PKPpre	PKPpre	16 22 23.9	
SANT			PKPdf	PKPdf	16 22 33.0	-0.9
THT2	Imerovigli	139.19 310	P	PKPdf	16 22 32.3	-1.6
IOMK	Kirk Michael	139.20 353	eP	PKPpre	16 22 25.9	
BUG	Bochum--Univer	139.21 341	ePKPbc	PKPpre	16 22 26.1	
	baz=39,slow=3.1					
THR3	Thira Island,	139.21 310	P	PKPpre	16 22 25.0	
GRG	Griva	139.22 318	P	PKPpre	16 22 24.0	
GRG	Griva	139.22 318	P	PKPdf	16 22 33.8	0.0
ARSA	Arzberg	139.22 330	ePKPdf	PKPpre	16 22 25.3	
	comp=Z,318nm,1.8s,SNR=13					
ARSA			PP	PP	16 25 28.6	0.0
	comp=Z,107nm,1.4s					
THR5	Thira Island,	139.25 310	P	PKPpre	16 22 26.6	
GRA1	Grafenberg Arr	139.26 336	PKPpre	PKPpre	16 22 25.1	
GRA1			PKPdf	PKPdf	16 22 34.0	+0.4
GRF	Grafenberg Arr	139.26 336	PKIKP	PKPdf	16 22 34.0	+0.4
GRF	Grafenberg Arr	139.26 336	ePKPbc	PKPpre	16 22 25.7	
	baz=39,slow=3.1					
SKO	Skopje	139.29 320	i P	PKPpre	16 22 25.4	
MOA	Molln	139.38 332	ePKPdf	PKPpre	16 22 24.6	
	comp=Z,245nm,1.2s,SNR=9.4					
BBLS	Lazići	139.41 324	eP	PKPpre	16 22 24.8	
KOGS	Kog	139.43 329	ePKPdf	PKPdf	16 22 34.3	+0.4
KOGS			ePKSbc	PKSbc	16 26 09.4	-1.3
XOR	Xorichti	139.49 316	P	PKPpre	16 22 26.4	
HAPS	Han Pijesak,Bl	139.54 324	eP	PKPpre	16 22 24.8	
KALN	Kalnik	139.54 328	i P	PKPpre	16 22 26.2	
RUDO	Rudo	139.58 323	eP	PKPpre	16 22 26.6	
LIT	Litokhoron	139.60 317	P	PKPpre	16 22 25.4	
DOB	Doboj	139.60 326	eP	PKPpre	16 22 25.6	
LBWR	Ladybower, Pea	139.62 350	eP	PKPpre	16 22 25.4	
PTL	Penteli	139.63 313	P	PKPpre	16 22 26.8	
MOSL	Moslavina	139.74 328	i P	PKPpre	16 22 27.5	
VLY	Voula,Athens	139.77 313	P	PKPpre	16 22 26.2	
WACR	West Acre	139.81 347	eP	PKPpre	16 22 29.5	
TNS	Taunus Mts	139.85 339	ePKPbc	PKPpre	16 22 28.0	
	baz=39,slow=3.1					
SOKA	Soboth	139.87 330	ePKPdf	PKPpre	16 22 27.3	
	comp=Z,576nm,1.8s,SNR=28					
LKR	Lokris	139.96 315	P	PKPpre	16 22 27.3	
KZN	Kozani	139.97 318	P	PKPpre	16 22 27.0	
FNA	Florina	139.97 319	P	PKPpre	16 22 28.2	
FNA	Florina	139.97 319	PKHKP	PKPpre	16 22 26.4	
FNA					16 22 35.0	
FNA	Florina	139.97 319	P	PKPpre	16 22 27.0	
FNA	Florina	139.97 319	PKPpre	PKPpre	16 22 26.4	
FNA			PKPdf	PKPdf	16 22 35.0	-0.2
ZAG	Zagreb	139.99 328	eP	PKiKP	16 22 36.4	-1.1
WME	Myndd Eilian	140.01 352	eP	PKPpre	16 22 29.4	
IDI	Anoyia	140.03 309	PKhKP	PKPpre	16 22 27.4	
	comp=Z,50nm,0.8s,baz=13,slow=12,SNR=31					
IDI			PKP	PKiKP	16 22 37.1	-0.9
	comp=Z,128nm,0.7s,baz=17,slow=14,SNR=21					
IDI			PP	PP	16 25 33.9	-0.5
	comp=Z,51nm,1.1s,baz=173,slow=9.3,SNR=4.0					
IDI	Anoyia	140.03 309	P	PKPpre	16 22 30.9	
AHRW	Bad Neuenahr-A	140.04 340	ePKPbc	PKPpre	16 22 28.9	
	baz=39,slow=3.1					
BLY	Banja Luka	140.09 326	⇑P	PKPpre	16 22 29.0	
BLY	Banja Luka	140.09 326		PKPpre	16 22 28.1	
BLY	Banja Luka	140.09 326	eP	PKPpre	16 22 28.5	
UPM	Unac-Piva	140.10 323	eP	PKPpre	16 22 27.1	
RJOB	Jochberg	140.12 333	ePKPbc	PKPpre	16 22 28.3	
	baz=39,slow=3.1					
WLF1	Llynfaes	140.13 352	eP	PKPpre	16 22 29.5	
OHR	Ohrid	140.16 319	i P	PKPpre	16 22 27.8	
CWF	Charnwood Fore	140.18 349	eP	PKPpre	16 22 26.5	
THL	Klokotos Trika	140.18 317	P	PKPpre	16 22 26.8	
YRC	Rhoscolyn	140.19 352	eP	PKPpre	16 22 28.1	
OBKA	Obir	140.22 330	ePKPdf	PKPpre	16 22 27.8	
	comp=Z,150nm,1.3s,SNR=20					
AGG	Agios Georgios	140.24 316	P	PKPpre	16 22 28.2	
AGG	Agios Georgios	140.24 316	PKHKP	PKPpre	16 22 27.1	
AGG					16 22 35.2	
AGG	Agios Georgios	140.24 316	P	PKPpre	16 22 30.1	
AGG	Agios Georgios	140.24 316		PKPpre	16 22 27.1	
AGG			PKPdf	PKPdf	16 22 35.2	-0.5
YLL	Llanberis	140.25 352	eP	PKPpre	16 22 29.5	
CRES	Cresnjev	140.26 329	⇓iP	PKPpre	16 22 28.1	
FOEL	Foel Wylfa	140.35 351	eP	PKPpre	16 22 28.7	
MGRS	Mrkonjic Grad	140.36 326	eP	PKPpre	16 22 29.3	
PDG	Podgorica	140.36 322	⇑P	PKPpre	16 22 28.6	
PDG	Podgorica	140.36 322		PKPpre	16 22 27.6	
PDG			PKPdf	PKPdf	16 22 35.6	-0.1
PDG	Podgorica	140.36 322	eP	PKPpre	16 22 27.9	
KBA	Koelnbreinsper	140.37 332	ePKPdf	PKPpre	16 22 28.6	
	comp=Z,136nm,1.1s,SNR=19					
OZLJ	Ozalj	140.40 329	i P	PKPpre	16 22 29.4	
DSB	Dublin	140.40 354		PKPdf	16 22 35.5	0.0
KPRO	Kipourio	140.41 317	P	PKPpre	16 22 28.9	
KRND	KRANIDI	140.44 313	P	PKPpre	16 22 27.7	
PENT	Pentalofos	140.44 318	P	PKPpre	16 22 28.6	
FUR	Furstenfeldbru	140.44 335	ePKPbc	PKPpre	16 22 29.4	
	baz=39,slow=3.1					
BRY	Bratogost	140.50 323	eP	PKPpre	16 22 28.0	
DRME	Dracevica, Mon	140.55 322	eP	PKPpre	16 22 28.5	
MYKA	Terra Mystica	140.56 331	ePKPdf	PKPpre	16 22 28.3	
	comp=Z,64nm,0.7s,SNR=28					
LJU	Ljubljana	140.57 330	e	PKPpre	16 22 28.6	
LJU			ePKPdf	PKPdf	16 22 36.8	+0.8
LJU			ePP	PP	16 25 36.1	-0.7
LJU			e		16 25 56.1	
LJU			ePKSbc	PKSbc	16 26 13.9	+0.1
LJU			e		16 26 20.5	

Code	Station Name	Δ° AZ°	Op	ISC	Time h m s	Res
LJU	Ljubljana	140.57 330	⇑iP	PKPpre	16 22 29.0	
BOJS	Bojanci	140.59 329	ePKPdf	PKPdf	16 22 37.2	+1.1
TIR	Tirane	140.62 320	⇓PKHKP	PKPpre	16 22 29.6	
TIR	Tirane	140.62 320	⇓P	PKPpre	16 22 29.6	
TIR	Tirane	140.62 320		PKPpre	16 22 28.5	
EVR	Evrytania	140.64 316	P	PKPpre	16 22 29.9	
IMMV	Iera Moni Meta	140.65 310	P	PKPpre	16 22 30.4	
HLM1	Long Mynd	140.66 351	eP	PKPpre	16 22 29.4	
TREB	Trebinje	140.72 323	eP	PKPpre	16 22 29.6	
STU	Stuttgart	140.78 337	PKHKP	PKPpre	16 22 29.6	
STU	Stuttgart	140.78 337	ePKPbc	PKPpre	16 22 30.5	
	baz=39,slow=3.1					
STU	Stuttgart	140.78 337		PKPpre	16 22 29.6	
HCY	Herceg Novi	140.80 323	eP	PKPpre	16 22 29.3	
GVDS	Gavdos	140.81 309	P	PKPpre	16 22 31.6	
GVD	Gavdhos	140.81 309	P	PKPpre	16 22 31.4	
CEY	Cerknica	140.83 330	eP	PKPpre	16 22 29.3	
KLV	Kalavryta, Ach	140.83 314	P	PKPpre	16 22 29.8	
KNDR	Palaiochora Ch	140.96 310	P	PKPpre	16 22 31.9	
WATA	Walderalm	140.96 334	ePKPdf	PKPpre	16 22 31.4	
	comp=Z,422nm,1.6s,SNR=31					
WTTA	Wattenberg	140.99 333	ePKPdf	PKPpre	16 22 31.3	
	comp=Z,631nm,1.4s,SNR=36					
UDBI	Udbina	140.99 327	iP	PKPpre	16 22 30.6	
KTHA	Kythira Island	140.99 311	P	PKPpre	16 22 32.2	
ABTA	Abfaltersbach	141.00 332	iPKPdf	PKPpre	16 22 30.3	
	comp=Z,355nm,1.1s,SNR=36					
STON	Ston	141.00 324	iP	PKPpre	16 22 30.4	
STON	Ston	141.00 324	eP	PKPpre	16 22 30.1	
RIY	Rijeka	141.10 329	eP	PKPpre	16 22 31.4	
WLF	Walferdange	141.10 340	PKHKP	PKPpre	16 22 30.3	
WLF	Walferdange	141.10 340	ePKPbc	PKPpre	16 22 31.9	
	baz=39,slow=3.1					
WLF	Walferdange	141.10 340		PKPpre	16 22 30.3	
MAKA	Makarska	141.13 325	iP	PKPpre	16 22 30.6	
MOTA	Moosalm	141.16 334	ePKPdf	PKPpre	16 22 31.4	
	comp=Z,180nm,0.8s,SNR=66					
MCH1	Michaelchurch	141.18 350	eP	PKPpre	16 22 30.7	
RETA	Reutte	141.19 334	ePKPdf	PKPpre	16 22 31.1	
	comp=Z,142nm,1.4s,SNR=29					
SQTA	Sankt Quirin	141.21 334	ePKPdf	PKPpre	16 22 31.6	
	comp=Z,122nm,0.7s,SNR=50					
STRD	Stroud	141.25 350	eP	PKPpre	16 22 30.4	
STAL	STALIGIAL	141.27 332		PKPpre	16 22 30.8	
UBR	Ueberruh	141.31 335	ePKPbc	PKPpre	16 22 31.8	
	baz=39,slow=3.1					
ITM	Ithomi	141.40 313	P	PKPpre	16 22 32.8	
ITM	Ithomi	141.40 313		PKPpre	16 22 32.0	
SWN1	Swindon	141.44 349	eP	PKPpre	16 22 32.3	
MORI	Morici	141.47 326	iP	PKPpre	16 22 32.4	
BFO	Black Forest	141.47 337	PKHKP	PKPpre	16 22 32.2	
BFO					16 22 37.4	
BFO	Black Forest	141.47 337	ePKPbc	PKPpre	16 22 32.7	
	baz=39,slow=3.1					
BFO	Black Forest	141.47 337		PKPpre	16 22 32.2	
BFO			PKPdf	PKPdf	16 22 37.4	-0.2
RSBS	Rosebush, Pemb	141.48 352	eP	PKPpre	16 22 32.1	
HVAR	Hvar	141.52 325	iP	PKPpre	16 22 31.9	
WOL	Wolverton	141.52 348	eP	PKPpre	16 22 32.1	
FETA	Feichten	141.57 334	ePKPdf	PKPpre	16 22 31.8	
	comp=Z,182nm,1.1s,SNR=77					
ZIRJ	Zirje	141.65 326	iP	PKPpre	16 22 32.4	
DAVA	Damuels	141.71 335	ePKPdf	PKPpre	16 22 33.0	
	comp=Z,252nm,1.2s,SNR=31					
DUGI	Dugi Otok	141.73 327	iP	PKPpre	16 22 32.9	
ECH	Echery	142.00 338	PKHKP	PKPpre	16 22 33.0	
ECH	Echery	142.00 338		PKPpre	16 22 33.0	
DAVOX	Davos/Dischmat	142.12 335	PKhKP	PKPpre	16 22 34.5	
	comp=Z,146nm,0.6s,baz=7.1,slow=2.8,SNR=112					
DAVOX			SKPbc	SKiKP	16 26 00.9	+1.0
	comp=Z,64nm,0.9s,baz=22,slow=5.8,SNR=5.7					
TEOL	Teolo	142.43 331		PKPpre	16 22 35.1	
BAI	Bari	142.58 322	eP	PKPpre	16 22 36.3	
TAR1	Taranto	142.68 321	eP	PKPpre	16 22 35.3	
MASS	Massafra	142.70 321	eP	PKPpre	16 22 35.0	
SG1	Sgolgore (BA)	142.86 322	eP	PKPpre	16 22 36.9	
MATE	Matera	142.96 322	⇓P	PKPpre	16 22 37.5	
SENIN	Lac Senin/Sane	143.50 337		PKPbc	16 22 39.6	+0.2
PRMA	PARMA	143.50 332		PKPbc	16 22 39.7	+0.6
ZCCA	Zocca	143.51 331		PKPdf	16 22 40.7	-0.7
MURB	Monte Urbino	143.55 328		PKPbc	16 22 39.8	+0.3
AQU	L'Aquila	143.73 327	PKIKP	PKPbc	16 22 40.0	0.0
AQU	L'Aquila	143.73 327	PKPpre	PKPpre	16 22 40.0	
AQU	L'Aquila	143.73 327	⇑iP	PKPbc	16 22 40.2	+0.2
CLF	Chambon-Foret	143.75 343		PKPdf	16 22 40.8	-0.8
TIP	Timpagrande	143.81 320	⇑P	PKPbc	16 22 41.2	+0.9
TIP	Timpagrande	143.81 320		PKPbc	16 22 41.0	+0.6
OSSC	Osservatorio P	144.00 330		PKPab	16 22 40.0	-0.1
MSSA	Maissana	144.21 332		PKPab	16 22 40.8	-0.2
LATE	Laterza	144.39 328		PKPbc	16 22 41.9	0.0
CASP	Castiglione de	144.73 329		PKPab	16 22 42.7	-0.2
BNI	Bardonecchia	144.83 336	PKIKP	PKPdf	16 22 44.2	+0.4
BNI	Bardonecchia	144.83 336		PKPdf	16 22 44.2	+0.4
CEL	Celeste	144.89 319		PKPbc	16 22 43.5	-0.1
SSB	Saint Sauveur	145.44 338	PKP2	PKPab	16 22 45.4	-0.1
SSB	Saint Sauveur	145.44 338		PKPab	16 22 45.4	-0.1
VAE	Valguarnera	146.30 319	PKPbc	PKPbc	16 22 48.0	+0.1
	comp=Z,95nm,0.7s,baz=350,slow=4.4,SNR=23					
CORL	Corleone	146.74 321		PKPdf	16 22 45.8	-1.3
CLTB	Caltabellotta	146.99 320		PKPdf	16 22 47.3	-0.3
CLTB			PKPbc	PKPbc	16 22 50.7	+0.8
WDD	Wied Dalam	147.19 317		PKPdf	16 22 47.1	-0.8
WDD			PKPbc	PKPbc	16 22 50.2	-0.2
NBLI	Livramento-PB	148.01 130	eP	PKPdf	16 22 51.5	+1.5
NBPA	Parau_RN	148.92 127	eP	PKPbc	16 22 54.3	-1.3
H07N1	FLORES T-PHASE	149.62 29	ePKP	PKPdf	16 22 52.7	+0.9
RCBR	Riachuelo	149.80 129	PKHKP	PKPpre	16 22 52.9	
RCBR	Riachuelo	149.80 129	PKPbc	PKPbc	16 22 57.9	+0.1
	comp=Z,263nm,1.0s,baz=176,slow=1.4,SNR=4.8					
RCBR	Riachuelo	149.80 129	eP	PKPdf	16 22 54.0	+1.2
RCBR	Riachuelo	149.80 129		PKPdf	16 22 52.9	+0.1
H07S1	FLORES T-PHASE	149.83 29	ePKP	PKPdf	16 22 52.7	+0.6
MAHO	Mahon	150.09 333	PKP1	PKPdf	16 22 52.1	-0.4
KEST	Kesra	150.55 322	PKP	PKPdf	16 22 54.6	+1.2
	comp=Z,86nm,1.0s,baz=180,slow=1.0,SNR=55					
KEST			PKPbc	PKiKP	16 23 00.2	+0.6
	comp=Z,1μm,0.9s,baz=339,slow=1.1,SNR=183					
KEST	Kesra	150.55 322		PKPdf	16 22 53.2	-0.2
CAEH	'Ain El Ouahch	151.25 326	P	PKPdf	16 22 55.2	+0.8
ABSA	Djebel Ababsia	151.27 325	P	PKPdf	16 22 54.8	+0.3
PGRA	Graciosa	151.55 25	ePKP	PKPdf	16 22 56.7	+1.9
PCED	Cedros	151.58 27	ePKP	PKPdf	16 22 56.7	+1.9
CKFL	Kef-Lekhel	151.60 326	P	PKPdf	16 22 56.2	+1.1
PBRG	Braganca	151.69 351	⇑ePKPdf	PKPdf	16 22 55.3	+0.4
PBRG	Braganca	151.69 351	ePKPbc	PKPbc	16 23 01.2	-0.2
PBRG	Braganca	151.69 351	ePKPab	PKPab	16 23 12.0	+1.2
HOR	Horta	151.69 27	ePKP	PKPdf	16 22 56.3	+1.4
ROSA	Rosais	151.70 26	ePKP	PKPbc	16 22 58.9	-2.6
ROSA	Rosais	151.70 26		PKiKP	16 23 02.4	+0.6
PICO	Pico	151.81 27	ePKP	PKPbc	16 23 00.3	-1.5
PCAN	Candelaria	151.81 27	ePKP	PKPdf	16 22 57.4	+2.2
CASM	Ain Smara	151.83 326	P	PKPdf	16 22 56.2	+0.9
PMAN	Manadas	151.84 26	ePKP	PKPdf	16 22 57.0	+1.8
DFRA	Djebel Bou Aff	151.95 327	P	PKPdf	16 22 57.2	+1.6
PCAB	Cabril	151.97 352	ePKPdf	PKPdf	16 22 55.7	+0.4
PCAB	Cabril	151.97 352	ePKPbc	PKiKP	16 23 03.0	+0.7
PCAB	Cabril	151.97 352	ePKPab	PKPab	16 23 13.6	+1.7
PCAB	Cabril	151.97 352	ePP	PP	16 26 46.0	+2.6
CTEI	Djebel Teioual	152.02 326	P	PKPdf	16 22 56.8	+1.1
ADH	Angra Heroismo	152.18 25	ePKP	PKPdf	16 22 57.3	+1.6
PVRL	Vila Real	152.35 352	ePKPdf	PKPdf	16 22 57.3	+1.4
PVRL	Vila Real	152.35 352	ePKPbc	PKiKP	16 23 04.0	+0.9
PVRL	Vila Real	152.35 352	ePKPab	PKPab	16 23 14.9	+1.3
MVO	Moncorvo	152.36 351	ePKPdf	PKPdf	16 22 56.6	+0.6
MVO	Moncorvo	152.36 351	ePKPbc	PKiKP	16 23 03.8	+0.6
MVO	Moncorvo	152.36 351	ePKPab	PKPab	16 23 15.1	+1.5
UCM	Universidad Co	152.39 344	PKP1	PKPdf	16 22 55.6	-0.4
SET	Setif	152.46 327	P	PKPbc	16 23 00.0	-3.4
CKHR	Kef el Ahmar	152.54 327	P	PKPdf	16 22 57.4	+0.9
PVIS	Viseu	152.93 352	ePKPdf	PKPdf	16 22 57.6	+0.8
PVIS	Viseu	152.93 352	ePKPbc	PKiKP	16 23 04.6	+0.2
PVIS	Viseu	152.93 352	ePKPab	PKPab	16 23 17.2	+1.2
ESBB	Sonseca Array	153.17 345		PKPdf	16 22 57.3	+0.1
ESBB			PKPbc	PKiKP	16 23 05.4	+0.5
ESDC	Sonseca Array	153.17 345	PKP	PKPdf	16 22 58.0	+0.8
	comp=Z,24nm,1.0s,baz=6.4,slow=2.7,SNR=52					
ESDC			PKPbc	PKiKP	16 23 05.5	+0.6
	comp=Z,88nm,0.8s,baz=4.2,slow=3.4,SNR=65					
ESDC			PP	PP	16 26 40.5	-10
	comp=Z,7.1nm,0.9s,baz=32,slow=7.8,SNR=3.8					
ESDC	Sonseca Array	153.17 345		PKPdf	16 22 57.5	+0.3
ESDC			PKPbc	PKiKP	16 23 05.6	+0.7
MTE	Manteigas	153.19 351	⇑ePKPdf	PKPdf	16 22 58.0	+0.8
MTE	Manteigas	153.19 351	ePKPab	PKPab	16 23 17.6	+0.5
MTE	Manteigas	153.19 351		PKPdf	16 22 57.5	+0.3
MTE			PKPbc	PKiKP	16 23 05.7	+0.7
PAB	San Pablo	153.39 345	PKIKP	PKiKP	16 23 06.3	+0.9
PAB	San Pablo	153.39 345		PKPdf	16 22 58.2	+0.6
PAB			PKPbc	PKiKP	16 23 06.3	+0.9
COI	Coimbra	153.50 353	⇑ePKPdf	PKPdf	16 22 58.3	+0.8
COI	Coimbra	153.50 353	ePKPab	PKPab	16 23 19.7	+1.4
COI	Coimbra	153.50 353	ePP	PP	16 26 54.0	+2.1
COI	Coimbra	153.50 353	PKIKP	PKPdf	16 22 57.5	0.0
COI	Coimbra	153.50 353		PKPdf	16 22 57.5	0.0
COI			PKPbc	PKiKP	16 23 06.0	+0.6
PSET	Sete Cidades	153.50 24	ePKP	PKPdf	16 22 58.5	+0.8
CMLA	Cha da Macela	153.63 23	ePKP	PKPdf	16 23 00.0	+2.2
PCBR	Castelo Branco	153.73 351	⇑ePKPdf	PKPdf	16 22 58.6	+0.7
PCBR	Castelo Branco	153.73 351	ePKPbc	PKiKP	16 23 07.4	+1.5
PCBR	Castelo Branco	153.73 351	ePKPab	PKPab	16 23 20.9	+1.6
PCBR	Castelo Branco	153.73 351	ePP	PP	16 26 51.7	-1.6
PTOM	Tomar	154.08 352	⇑ePKPdf	PKPdf	16 22 59.4	+1.0
PTOM	Tomar	154.08 352	ePKPbc	PKiKP	16 23 07.7	+1.0
PTOM	Tomar	154.08 352	ePKPab	PKPab	16 23 22.2	+1.4
PMRV	Marv??o	154.12 351	⇑ePKPdf	PKPdf	16 22 59.1	+0.6
PMRV	Marv??o	154.12 351	ePKPbc	PKiKP	16 23 08.0	+1.2
PMRV	Marv??o	154.12 351	ePKPab	PKPab	16 23 22.5	+1.5
CART	Cartagena	154.18 338	PKP1	PKPdf	16 22 55.8	-2.7
CART	Cartagena	154.18 338		PKPdf	16 22 58.0	-0.6
CART			PKPbc	PKiKP	16 23 07.1	+0.2
SESP	Santiago Espad	154.22 341	P	PKPdf	16 22 59.9	+1.0
	SNR=8.9					
EBNR	Beni Rached	154.28 333	P	PKPdf	16 23 00.0	+1.1
PSMA	Santa Maria	154.45 23	ePKP	PKPdf	16 23 00.0	+1.0
PSMN	Pico do Norte,	154.47 23	ePKP	PKPdf	16 22 59.4	+0.4
ECHA	Ech Chlef	154.47 333	P	PKPdf	16 23 01.2	+2.2
PMTG	Montargil	154.59 352	⇑ePKPdf	PKPdf	16 22 59.7	+0.6
PMTG	Montargil	154.59 352	ePKPbc	PKiKP	16 23 08.4	+0.6
PMTG	Montargil	154.59 352	ePKPab	PKPab	16 23 23.3	+0.3
PMTG			epPKPab	pPKPab	16 24 10.8	-0.4
PMTG	Montargil	154.59 352	ePP	PP	16 27 00.8	+2.7
PESTR	Estremoz	154.70 351		PKPdf	16 22 58.9	-0.4
PESTR			PKPbc	PKiKP	16 23 08.6	+0.5
PESTR			PKPab	PKPab	16 23 24.5	+0.9
PESTR	Estremoz	154.70 351	P	PKPdf	16 23 00.5	+1.2
	SNR=15					
EANR	'Ain N'Sour	154.75 333	P	PKPdf	16 22 59.4	-0.1
PMAFR	Mafra	154.84 354	ePKPdf	PKPdf	16 23 00.0	+0.5
PMAFR	Mafra	154.84 354	ePKPbc	PKiKP	16 23 09.8	+1.5
PMAFR	Mafra	154.84 354	ePKPab	PKPab	16 23 26.0	+1.9
PMAFR	Mafra	154.84 354	ePP	PP	16 27 01.4	+2.0
OKGL	Djebel Kef Gue	154.88 334	P	PKPbc	16 23 08.0	-0.5
LIS	Lisbon	155.06 353	ePKPdf	PKPdf	16 23 00.3	+0.6
EVO	Evora	155.09 351	⇑ePKPdf	PKPdf	16 23 00.4	+0.6
EVO	Evora	155.09 351	ePKPbc	PKPdf	16 23 09.7	+10
EVO	Evora	155.09 351	ePKPab	PKPab	16 23 26.9	+1.7
EVO			epPKPab	pPKPab	16 24 13.3	0.0
EVO	Evora	155.09 351	ePP	PP	16 26 59.9	-1.0
EVO	Evora	155.09 351	PKP1	PKPdf	16 22 58.5	-1.3
ETRT	Tiaret	155.13 332	P	PKPdf	16 23 01.5	+1.3
HORN	Hornachuelos	155.22 346	P	PKPdf	16 23 01.4	+1.3
	SNR=15					
OJGS	Djebel Guires	155.28 333	P	PKPdf	16 23 02.0	+1.7
OJBR	Djebel Berber	155.39 334	P	PKPdf	16 23 02.0	+1.6
PBEJ	Beja	155.56 351	⇑ePKPdf	PKPdf	16 23 01.7	+1.2
PBEJ	Beja	155.56 351	ePKPab	PKPab	16 23 29.0	+1.8
PBEJ			epPKPab	pPKPab	16 24 17.3	+1.9
PNCL	Nicolau / Gran	155.58 352	⇑ePKPdf	PKPdf	16 23 01.1	+0.6
PNCL	Nicolau / Gran	155.58 352	ePKPab	PKPab	16 23 27.7	+0.4
PNCL	Nicolau / Gran	155.58 352	ePP	PP	16 27 03.0	-0.5
ODJA	Bouhanifia	155.82 334	P	PKPdf	16 23 00.0	-1.0
PCVE	Castro Verde	155.98 351	⇑ePKPdf	PKPdf	16 23 02.1	+1.0
PCVE	Castro Verde	155.98 351	ePKPab	PKPab	16 23 30.8	+1.8
PCVE			epPKPab	pPKPab	16 24 18.0	+0.9
PCVE	Castro Verde	155.98 351	ePP	PP	16 27 07.8	+2.0
EMAL	Malaga-Limoner	156.03 343	PKP1	PKPdf	16 22 56.1	-5.1
PVAQ	Vaqueiros	156.15 350	⇑ePKPdf	PKPdf	16 23 02.2	+0.9
PVAQ	Vaqueiros	156.15 350	ePKPab	PKPab	16 23 31.8	+2.1
PVAQ			epPKPab	pPKPab	16 24 18.7	+0.8
PVAQ	Vaqueiros	156.15 350	ePP	PP	16 27 06.3	-0.4
PVAQ	Vaqueiros	156.15 350		PKPdf	16 23 01.9	+0.6
PVAQ	Vaqueiros	156.15 350	P	PKPdf	16 23 02.9	+1.6
	SNR=13					
PTEO	Sao Teotonio	156.16 352	⇑ePKPdf	PKPdf	16 23 02.5	+1.2
PTEO	Sao Teotonio	156.16 352	ePKPab	PKPab	16 23 31.7	+1.9
PBDV	Barranco-do-Ve	156.34 350	⇑ePKPdf	PKPdf	16 23 02.6	+1.0
PBDV	Barranco-do-Ve	156.34 350	ePKPab	PKPab	16 23 31.8	+1.2
MORF	Marmelete	156.38 352	ePKPdf	PKPdf	16 23 02.2	+0.6
MORF	Marmelete	156.38 352	⇑ePKPdf	PKPdf	16 23 02.6	+0.9
MORF	Marmelete	156.38 352	ePKPab	PKPab	16 23 32.9	+2.1
MORF			epPKPab	pPKPab	16 24 19.3	+0.3
PFVI	Vila Bisbo	156.58 352	⇑ePKPdf	PKPdf	16 23 02.8	+1.0
PFVI	Vila Bisbo	156.58 352	ePKPab	PKPab	16 23 33.3	+1.7
PFVI	Vila Bisbo	156.58 352		PKPdf	16 23 02.4	+0.6
PFVI	Vila Bisbo	156.58 352	P	PKPdf	16 23 03.2	+1.3
	SNR=8.0					
PFVI	Vila Bisbo	156.58 352	P	PKPab	16 23 34.3	+2.7
	SNR=5.5					
SFS	San Fernando	156.76 347	PKP1	PKPdf	16 23 00.4	-1.7
MELI	Melilla	156.92 339	PKP1	PKPdf	16 23 00.3	-2.0
GOG	Mont Gurugu	157.01 339	P	PKPdf	16 23 04.0	+1.4
	SNR=9.1					
GOG	Mont Gurugu	157.01 339	P	PKPab	16 23 36.0	+2.3
	SNR=5.5					
CEU	Ceuta	157.10 345	PKP1	PKPdf	16 23 00.2	-2.3
TAF	Taforalt	157.16 338	P	PKPdf	16 23 05.0	+2.2
	SNR=17					
SMIR	Smir Dam	157.30 344	P	PKPdf	16 23 04.0	+1.2
	SNR=14					
PALE	Palemas	157.32 341	P	PKPdf	16 23 04.1	+1.2
	SNR=10					
PVLZ	Peæn de	157.47 342	PKP1	PKPdf	16 22 59.9	-3.1
CHEFC	Chefchaouen	157.84 344	P	PKPdf	16 23 05.0	+1.4
	SNR=16					
AKLM	AKL	157.95 340	P	PKPdf	16 23 04.1	+0.3
	SNR=32					
ASCN	Ascension	158.27 176	PKPdf	PKPdf	16 23 05.1	+0.4
TDRA	Tendrara	158.58 335	P	PKPdf	16 23 06.0	+1.3
	SNR=46					
FIGM	Figuig	159.02 332	P	PKPdf	16 23 07.0	+1.8
	SNR=16					
LCRM	LCR	159.02 341	P	PKPdf	16 23 07.0	+1.8
	SNR=67					
IFR	Ifrane	159.26 342	PKP1	PKPdf	16 23 01.0	-4.5
RTC	Rabat Centre	159.28 346	P	PKPdf	16 23 07.4	+2.2
	SNR=6.5					
MDT	Midelt	159.75 340	PKP	PKPdf	16 23 07.1	+1.2
	comp=Z,151nm,1.3s,baz=73,slow=1.0,SNR=84					
MDT			PKPab	PKPab	16 23 46.8	+1.2
	comp=Z,57nm,0.9s,baz=42,slow=3.3,SNR=16					
MDT			PP	PP	16 27 23.6	-3.2
	comp=Z,13nm,0.9s,baz=344,slow=2.9,SNR=2.4					
MDT	Midelt	159.75 340	P	PKPdf	16 23 07.2	+1.2
	SNR=88					
ZHG	ZHG	159.75 345	P	PKPdf	16 23 08.0	+2.1
	SNR=9.0					
ZHG	ZHG	159.75 345	P	PKPab	16 23 49.0	+3.4
	SNR=9.1					
TAM	Tamanrasset	160.56 300	PKIKP	PKPdf	16 23 06.8	-0.4
TAM	Tamanrasset	160.56 300		PKPdf	16 23 06.8	-0.4
PMPST	Porto Santo, M	160.60 9	⇑ePKPdf	PKPdf	16 23 07.4	+0.6
PMPST	Porto Santo, M	160.60 9	ePKPab	PKPab	16 23 49.8	+0.6
PMPST	Porto Santo, M	160.60 9	ePP	PP	16 27 32.1	+1.1
PMPS	Porto Santo	160.62 9	⇑ePKPdf	PKPdf	16 23 08.1	+1.3
PMPS	Porto Santo	160.62 9	ePKPab	PKPab	16 23 50.7	+1.5
PMOZ	Porto Moniz, M	160.70 11	⇑ePKPdf	PKPdf	16 23 08.3	+1.3
PMOZ	Porto Moniz, M	160.70 11	ePKPab	PKPab	16 23 51.0	+1.3
PMOZ	Porto Moniz, M	160.70 11		PKPdf	16 23 07.5	+0.5
PMAR	Madeira	160.85 11	⇑ePKPdf	PKPdf	16 23 08.6	+1.3
PMAR	Madeira	160.85 11	ePKPab	PKPab	16 23 51.5	+1.0
PMAR			epPKPab	pPKPab	16 24 39.4	+1.0
ARF	Arif	160.86 337	P	PKPdf	16 23 09.0	+1.7
	SNR=33					
ARF	Arif	160.86 337	P	PKPab	16 23 54.0	+3.5
	SNR=6.1					
GOLM	Goulmima	160.88 339	P	PKPdf	16 23 10.0	+2.7
	SNR=13					
GOLM	Goulmima	160.88 339	P	PKPab	16 23 53.2	+2.6
	SNR=11					
FUL	Funchal	160.93 11	ePKPdf	PKPdf	16 23 08.8	+1.7
FUL	Funchal	160.93 11	ePKPab	PKPab	16 24 04.5	+14
FUL			epPKPab	pPKPab	16 24 47.5	+9.0
TISM	Timmit	161.33 343	P	PKPdf	16 23 09.0	+1.4
	SNR=63					
TZRR	Tazzarine	161.93 340	P	PKPdf	16 23 10.0	+1.6
	SNR=22					
EAH	EAH	162.08 351	P	PKPdf	16 23 10.0	+1.6
	SNR=16					
OUZM	OUZ	162.18 343	P	PKPdf	16 23 11.0	+2.3
	SNR=8.4					
OUK	Oukaimeden	162.18 346	P	PKPdf	16 23 10.0	+1.0
	SNR=121					
ZGR	Zagora	162.55 339	P	PKPdf	16 23 11.0	+1.9
	SNR=16					
ZGR	Zagora	162.55 339	P	PKPab	16 24 02.0	+4.0
	SNR=5.1					
TTIG	Tnine Tigouga,	162.94 347	P	PKPdf	16 23 11.0	+1.6
	SNR=9.2					
SFNM	Sidi Ifni	164.44 352	P	PKPdf	16 23 13.0	+2.4
	SNR=12					
MACI	Morro de la Ar	165.27 13		PKPdf	16 23 11.2	-0.4
TANT	Tantan	165.47 355	P	PKPdf	16 23 14.0	+2.4
	SNR=7.5					
TOA0	Torodi Ar. Sit	165.96 269		PKPdf	16 23 11.7	-0.6
TORD	Torodi Ar. Bea	165.96 269	PKP	PKPdf	16 23 12.5	+0.2
	comp=Z,258nm,1.1s,baz=53,slow=0.5,SNR=467					
TORD			PKPab	PKPab	16 24 14.5	+1.0
	comp=Z,396nm,1.1s,baz=81,slow=3.8,SNR=27					
TORD	Torodi Ar. Bea	165.96 269		PKPdf	16 23 10.4	-1.9
KIC	Kosan Boka	169.16 227	eP	PKPdf	16 23 10.9	-3.7
	comp=Z,4μm,1.8s					
LIC	Lamto	169.26 226	eP	PKPdf	16 23 13.3	-1.4
	comp=Z,4μm,2.0s					
SACV	Santiago Islan	169.40 83		PKPdf	16 23 13.7	-1.0
DBIC	Dimbokro	169.45 228	PKP	PKPdf	16 23 14.3	-0.5
	comp=Z,241nm,1.0s,baz=125,slow=1.4,SNR=101					
DBIC			PKPab	PKPab	16 24 29.3	+0.5
	comp=Z,85nm,0.8s,baz=98,slow=5.5,SNR=6.6					
DBIC			PP	PP	16 28 19.8	+1.6
	comp=Z,72nm,1.2s,baz=143,slow=7.6,SNR=4.2					
DBIC	Dimbokro	169.45 228		PKPdf	16 23 13.5	-1.3
TIC	Toumodi	169.55 227	eP	PKPdf	16 23 13.0	-1.9
	comp=Z,4μm,1.8s					

*NEIC **01** 16:07:37.0±0.3, 15°.94N±0°.07×98°.74W±0°.03, h15km±8km, mb4.2/3, Md4.0/16(MEX), Error ellipse: s-maj=10.4km s-min=3.9km az=165.0*

*MEX **01** 16:07:39.5±0.5, 15°.94N×98°.69W, h10km±10km, MD4.0*

ISC 01 16:07:37.1±1.5, **16°.0N**±0°.1×**98°.72W**±0°.04, **h17**km, **n10**, σ**0s.54**/17, **Off coast of Guerrero**

Code	Station Name	Δ° AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.72 52	iP	Pb	16 07 51.2	+0.1
PNIG			iS	Sg	16 08 01.1	+0.4
PNIG	Pinotepa	0.72 52		Pb	16 07 51.2	+0.1
PNIG				Sg	16 08 01.1	+0.4
CAIG	El Cayaco	1.84 306	eP	Pn	16 08 08.0	0.0
CAIG			iS	Sn	16 08 30.4	-0.4
CAIG	El Cayaco	1.84 306		Pn	16 08 08.0	0.0
CAIG				Sn	16 08 30.4	-0.4
VHO	Vista Hermosa	2.21 59	eP	Pn	16 08 13.1	-0.1
VHO			iS	Sn	16 08 39.4	-0.7
HUIG	Huatulco	2.52 94	iP	Pn	16 08 17.9	+0.6
HUIG			iS	Sn	16 08 46.6	-1.0
HUIG	Huatulco	2.52 94		Pn	16 08 17.9	+0.6
HUIG				Sn	16 08 46.6	-1.0
NATX	Nacogdoches	16.16 13		P	16 11 26.7	0.0
ABTX	Abilene, Hawle	16.62 357	P	P	16 11 32.0	+0.3
ABTX			IAmb	IAmb	16 12 07.7	
	comp=Z,7.8nm,0.6s					
SRIG	Santa Rosalia	16.89 314	Pn	Pn	16 11 32.8	0.0
SRIG			IAmb	IAmb	16 11 39.6	
	comp=Z,22nm,0.7s					

*NEIC **01** 16:14:14.4±1.5, 22°.42S±0°.07×66°.13W±0°.09, h241km±6km, mb4.9/49, ML5.0(GUC), Error ellipse: s-maj=11.6km s-min=10.4km az=72.0*

*IDC **01** 16:14:14.7±0.8, 22°.38S×66°.13W, h235km±6km, mb3.9/10, mb1 4.1/18, mb1mx3.9/48, mbtmp4.6/18, Error ellipse: s-maj=12.2km s-min=10.8km az=25.0*

*VAO **01** 16:14:15.6±0.4, 22°.40S×66°.18W, h252km±4km, mb4.5*

*GUC **01** 16:14:15.5±0.3, 22°.37S×66°.61W, h291km±6km, ML5.2*

*SJA **01** 16:14:15.5±0.6, 22°.40S×66°.31W, h243km±4km, ML4.1, MW4.1*

ISC 01 16:14:14.9±0.5, **22°.37S**±0°.04×**66°.29W**±0°.04, **h242**km±5km, **n170**, σ**1s.29**/197, **mb4.9**/34, **14C-1D, Jujuy Province**

Code	Station Name	Δ° AZ°	Op	ISC	Time h m s	Res ISC
YJA	Yavi	0.74 75	iP	Pn	16 14 49.9	+1.5
YJA			eS	S	16 15 15.5	+0.9
YJA			IAML		16 15 18.3	
	comp=Z,1μm,0.7s					
HJA	Humahuaca	1.16 136	iP	Pn	16 14 51.8	+1.2
HJA			eS	S	16 15 18.8	+0.2
HJA			IAML		16 15 20.6	
	comp=Z,706nm,0.8s					
AZAP	Zapla	2.16 149	iP	Pn	16 14 59.4	+0.9
AZAP			eS	S	16 15 32.4	-0.5
AZAP			IAML		16 15 33.6	
	comp=Z,397nm,0.6s					
LVC	Limon Verde	2.44 264	⇓iP	Pn	16 15 03.1	+1.7
LVC			iS	S	16 15 39.2	+1.3
LVC	Limon Verde	2.44 264	P	Pn	16 15 03.1	+1.7
	comp=Z,195nm,0.3s,baz=78,slow=6.6,SNR=2783					
LVC			S	S	16 15 39.2	+1.3
	comp=Z,146nm,0.3s,baz=206,slow=22,SNR=74					
LVC	Limon Verde	2.44 264	eP	Pn	16 15 03.0	+1.7
LVC	Limon Verde	2.44 264	iP	Pn	16 15 02.6	+1.3
LVC			eS	S	16 15 36.5	-1.4
LVC			IAML		16 15 40.5	
	comp=Z,749nm,0.7s					
LVC			IAML		16 15 41.1	
	comp=Z,654nm,0.5s					
SLA	San Lorenzo	2.45 163	iP	Pn	16 15 02.6	+1.3
SLA			IAML		16 15 04.4	
	comp=Z,289nm,0.6s					
SLA			IAML		16 15 53.1	
	comp=Z,235nm,1.0s					
PB09	IPOC Station P	2.80 281	⇑iP	Pn	16 15 06.9	+2.0
PB09			eS	S	16 15 45.4	+1.1
PB09			IAML		16 15 48.8	
	comp=E,2μm,0.5s					
PB09	IPOC Station P	2.80 281	iP	Pn	16 15 07.1	+2.2
PB15	IPOC Station P	3.05 254	⇑iP	Pn	16 15 09.0	+1.2
PB15			iS	S	16 15 49.9	+0.5
PB06	IPOC Station P	3.06 263	⇑iP	Pn	16 15 08.7	+1.0
PB06			iS	S	16 15 49.2	-0.1
PB03	IPOC Station P	3.23 275	⇑iP	Pn	16 15 10.6	+0.9
PB03			iS	S	16 15 52.6	-0.2
PB03	IPOC Station P	3.23 275	iP	Pn	16 15 10.2	+0.6
PB08	IPOC Station P	3.47 309	⇑iP	Pn	16 15 14.9	+2.2
PB08			iS	S	16 15 59.5	+1.3
PB04	IPOC Station P	3.58 270	⇑iP	Pn	16 15 14.3	+0.8
PB04			iS	S	16 15 59.2	-0.7
PB04	IPOC Station P	3.58 270		Pn	16 15 14.4	+0.8
PB04	IPOC Station P	3.58 270	iP	Pn	16 15 14.4	+0.8
PB05	IPOC Station P	3.65 262	⇑iP	Pn	16 15 15.2	+0.8
PB05			iS	S	16 16 00.2	-1.2
GO01	Chusmiza	3.82 314		Pn	16 15 18.4	+1.6
TA01	Diego Aracena	4.05 296	⇑iP	Pn	16 15 19.4	+0.4
TA01			iS	S	16 16 07.9	-1.8
PB11	IPOC Station P	4.08 309	⇑iP	Pn	16 15 20.3	+0.8
PB11			iS	S	16 16 09.4	-1.2
PB11	IPOC Station P	4.08 309		Pn	16 15 19.9	+0.4
PB10	IPOC Station P	4.09 253	⇑iP	Pn	16 15 20.2	+0.7
PB10			iS	S	16 16 08.9	-1.8
PB10	IPOC Station P	4.09 253		Pn	16 15 20.2	+0.7
PB10	IPOC Station P	4.09 253	iP	Pn	16 15 20.3	+0.8
GO02	Mina Guanaco	4.11 227		Pn	16 15 20.9	+0.9
PB14	IPOC Station P	4.40 238	⇑iP	Pn	16 15 24.2	+0.8
PB14			iS	S	16 16 15.3	-2.4
MNMC	Minye Minye	4.47 316	⇑iP	Pn	16 15 25.6	+1.2
MNMC			iS	S	16 16 18.7	-0.6
MNMC	Minye Minye	4.47 316		Pn	16 15 25.5	+1.2
MNMCX	Minye Minye	4.47 316	iP	Pn	16 15 25.5	+1.2
AHML	Horco Molle	4.48 169	iP	Pn	16 15 24.5	+0.4
AHML			IAML		16 16 21.3	
	comp=Z,37nm,1.4s					
PB16	IPOC Station P	5.02 322	iP	Pn	16 15 33.2	+1.8
PB16			iS	S	16 16 31.7	-0.4
AP01	Chacalluta	5.50 316	⇑iP	Pn	16 15 36.2	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AP01				*i* S	**S**	**16 16 38.0**	**-4.0**
CYA	**Choya**	**6.06**	**176**	*i* P	**Pn**	**16 15 44.6**	**+1.0**
CYA				IAML		16 16 56.0	
	comp=Z,46nm,2.1s						
LPAZ	**La Paz**	**6.29**	**344**	P	**Pn**	**16 15 48.6**	**+1.4**
	comp=Z,38nm,0.3s,baz=126,slow=6.1,SNR=439						
LPAZ				S	**S**	**16 17 01.2**	**+0.2**
	comp=Z,4.5nm,0.3s,baz=306,slow=18,SNR=9.3						
LPAZ	**La Paz**	**6.29**	**344**	*e*P	**Pn**	**16 15 48.9**	**+1.6**
LPAZ	**La Paz**	**6.29**	**344**		**Pn**	**16 15 48.4**	**+1.1**
GO03	**Copiap**	**6.31**	**214**		**Pn**	**16 15 45.4**	**-1.5**
SIV	**San Ignacio**	**8.03**	**39**	P	**Pn**	**16 16 07.3**	**-1.4**
	comp=Z,20nm,0.3s,baz=237,slow=9.3,SNR=276						
SIV				S	S	16 17 26.8	-13
	baz=227,slow=19,SNR=1.3						
GO04	**Tololo Observa**	**8.76**	**207**		**Pn**	**16 16 16.4**	**-1.7**
CPUP	**Villa Florida**	**9.07**	**118**	P	**Pn**	**16 16 19.7**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=304,slow=11,SNR=14						
CPUP	**Villa Florida**	**9.07**	**118**	*e*P	**Pn**	**16 16 19.9**	**-1.9**
CPUP	**Villa Florida**	**9.07**	**118**		**Pn**	**16 16 19.3**	**-2.4**
AQDB	**Aquidauana**	**10.04**	**81**	*e*P	**Pn**	**16 16 33.4**	**-0.7**
ITQB	**Itaqui**	**11.33**	**132**	*e*P	**Pn**	**16 16 49.4**	**-0.8**
ROC1	**El Roble**	**11.36**	**201**	Pn	**Pn**	**16 16 50.0**	**-0.9**
PEL	**Peldehue**	**11.41**	**199**		**Pn**	**16 16 51.1**	**-0.2**
PP1B	**Ponte de Pedra**	**11.73**	**68**	*e*P	**Pn**	**16 16 54.2**	**-1.2**
SALV	**Santo Antonio**	**11.90**	**59**	*e*P	**Pn**	**16 16 56.7**	**-0.8**
TRCB	**Terra Rica**	**12.62**	**95**	*e*P	**Pn**	**16 17 05.6**	**-0.9**
C2SB	**Chapadao do Su**	**13.10**	**77**	*e*P	**Pn**	**16 17 12.6**	**+0.3**
PTGB	**Pitanga**	**13.25**	**103**	*e*P	**Pn**	**16 17 14.0**	**-0.3**
GO05	**Huala**	**13.53**	**200**	P	**Pn**	**16 17 17.4**	**-0.1**
SAML	**Samuel**	**13.67**	**13**	*e*P	**P**	**16 17 20.1**	**-0.5**
SAML	**Samuel**	**13.67**	**13**	P	**Pn**	**16 17 19.9**	**+0.4**
ITAB	**Concordia**	**13.74**	**113**	*e*P	**Pn**	**16 17 19.4**	**-0.7**
PCMB	**Pacaembu**	**13.96**	**90**	*e*P	**Pn**	**16 17 21.9**	**-1.0**
NNA	**Nana**	**14.42**	**314**	P	**P**	**16 17 29.9**	**+0.9**
	comp=Z,2.3nm,0.3s,baz=160,slow=12,SNR=11						
NNA				S	**S**	**16 20 01.9**	**-6.5**
	comp=Z,2.7nm,0.3s,baz=177,slow=9.9,SNR=3.5						
NNA	**Nana**	**14.42**	**314**	P	**P**	**16 17 30.1**	**+1.1**
LPA	**La Plata**	**14.48**	**151**	*e*P	**P**	**16 17 30.8**	**+1.5**
LPA				S	**S**	**16 20 08.5**	**-0.7**
LPA				PCP	**PcP**	**16 22 22.5**	**-3.1**
LPA				SCS	**ScS**	**16 29 12.8**	**-1.1**
PLTB	**Pedras Altas**	**14.66**	**132**	*e*P	**Pn**	**16 17 29.9**	**-1.4**
ITRB	**Iturama**	**15.11**	**83**	*e*P	**P**	**16 17 36.0**	**-0.5**
ARAG	**Araguaiana, MT**	**15.20**	**67**	*e*P	**P**	**16 17 37.4**	**-0.1**
CLDB	**Colider**	**15.21**	**43**	*e*P	**P**	**16 17 37.0**	**-0.7**
FRTB	**Fartura**	**15.45**	**97**	*e*P	**P**	**16 17 39.7**	**-0.5**
CNLB	**Canela**	**15.51**	**120**	*e*P	**P**	**16 17 40.0**	**-0.9**
OGAUY	**Aigu**	**15.66**	**142**	*e*P	**P**	**16 17 41.9**	**-0.6**
BB19B	**Bebedouro**	**16.56**	**89**	*e*P	**P**	**16 17 51.9**	**-0.6**
RCLB	**Rio Claro- Sao**	**17.35**	**94**	*e*P	**P**	**16 18 00.3**	**-0.8**
SPB	**Sao Paulo**	**17.41**	**98**	*e*P	**P**	**16 18 01.1**	**-0.5**
IPMB	**Ipameri, GO**	**17.52**	**79**	*e*P	**P**	**16 18 02.4**	**-0.5**
GO06	**Curarrehue**	**17.72**	**193**	P	**P**	**16 18 05.3**	**+0.4**
GO06				IAmb	IAmb	16 18 07.4	
	comp=Z,40nm,0.9s						
VAO	**Valinhos**	**17.84**	**96**	*e*P	**P**	**16 18 05.9**	**-0.5**
BDFB	**Brasilia**	**18.52**	**72**	P	**P**	**16 18 14.1**	**+0.3**
	comp=Z,2.0nm,0.3s,baz=249,slow=12,SNR=52						
BDFB	**Brasilia**	**18.52**	**72**	P	**P**	**16 18 12.9**	**-1.0**
PLCA	**Paso Flores**	**18.66**	**190**	P	**P**	**16 18 15.3**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=31,slow=13,SNR=13						
PLCA	**Paso Flores**	**18.66**	**190**	*e*P	**P**	**16 18 15.2**	**+0.1**
PLCA	**Paso Flores**	**18.66**	**190**	P	**P**	**16 18 15.2**	**+0.2**
PMNB	**Patos De Minas**	**18.98**	**82**	*e*P	**P**	**16 18 18.3**	**-0.5**
ATAH	**Atahualpa**	**19.12**	**321**	P	**Pn**	**16 18 23.0**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=148,slow=8.0,SNR=6.3						
ESAR	**Angra dos Reis**	**20.17**	**96**	*e*P	**P**	**16 18 30.4**	**-0.9**
JANB	**Januaria**	**22.03**	**75**	*e*P	**P**	**16 18 48.1**	**-2.0**
SMTB	**Santa Maria do**	**22.43**	**56**	*e*P	**P**	**16 18 52.5**	**-1.1**
SJMB	**Sao Joao De Ma**	**23.78**	**86**	*e*P	**P**	**16 19 04.7**	**-1.2**
BSFB	**Barra de Sao F**	**24.06**	**86**	*e*P	**P**	**16 19 06.9**	**-1.5**
OTAV	**Otavalo**	**25.41**	**331**	*e*P	**P**	**16 19 21.9**	**+0.9**
NBIT	**Itapeh - BA**	**26.47**	**78**	*e*P	**P**	**16 19 29.5**	**-0.6**
NBPN	**Ponto Novo - B**	**27.45**	**70**	*e*P	**P**	**16 19 37.4**	**-1.4**
YOTC	**Yotoco, Valle**	**27.98**	**338**	*e*P	**P**	**16 19 44.2**	**+0.5**
RUSC	**La Rusia**	**28.86**	**346**	*e*P	**P**	**16 19 52.2**	**+0.3**
NBLA	**Lagarto - SE**	**29.49**	**72**	*e*P	**P**	**16 19 55.1**	**-1.8**
PTBC	**PUERTO BERRIO,**	**29.82**	**344**	*e*P	**P**	**16 19 57.6**	**-2.2**
NBPS	**Pedro II - PI**	**29.96**	**57**	*e*P	**P**	**16 19 59.4**	**-1.7**
NBTA	**Tacaratu-PE**	**30.12**	**69**	*e*P	**P**	**16 20 00.9**	**-1.6**
NBMA	**Muriti-CE**	**30.41**	**65**	*e*P	**P**	**16 20 03.9**	**-1.2**
NBPB	**Pedra_Branca-C**	**30.75**	**61**	*e*P	**P**	**16 20 06.9**	**-1.1**
ZARC	**Zaragoza, Cauc**	**30.84**	**343**	*e*P	**P**	**16 20 06.5**	**-2.2**
NBAN	**Anadia - AL**	**31.41**	**71**	*e*P	**P**	**16 20 11.9**	**-1.9**
SMLC	**San Martn de**	**31.90**	**345**	*e*P	**P**	**16 20 14.7**	**-3.3**
NBLI	**Livramento-PB**	**31.95**	**67**	*e*P	**P**	**16 20 17.8**	**-0.7**
NBCL	**Cascavel-CE**	**32.56**	**60**	*e*P	**P**	**16 20 23.2**	**-0.6**
NBPA	**Parau_RN**	**32.66**	**64**	*e*P	**P**	**16 20 24.1**	**-0.6**
RCBR	**Riachuelo**	**33.63**	**65**	*e*P	**P**	**16 20 32.8**	**-0.3**
RCBR	**Riachuelo**	**33.63**	**65**	P	**P**	**16 20 32.3**	**-0.8**
RCBR				IAmb	IAmb	16 20 33.4	
	comp=Z,33nm,0.9s						
NBPV	**Pedro Velho**	**33.84**	**67**	*e*P	**P**	**16 20 34.3**	**-0.6**
ESPN	**Las Esperanzas**	**38.62**	**331**	P	**P**	**16 21 18.0**	**+2.9**
ESPN				IAmb	IAmb	16 22 34.5	
	comp=Z,56nm,1.3s						
TEIG	**Tepich**	**47.47**	**332**	P	**P**	**16 22 26.2**	**+0.5**
TEIG				IAmb	IAmb	16 22 46.8	
	comp=Z,92nm,1.4s						
CMIG	**Matias Romero**	**48.18**	**322**	P	**P**	**16 22 33.1**	**+1.9**
	comp=Z,2.5nm,0.3s,baz=133,slow=5.8,SNR=13						
Y49A	**Blount Mountai**	**59.11**	**341**	P	**P**	**16 23 50.2**	**+0.1**
Y49A				IAmb	IAmb	16 23 51.4	
	comp=Z,72nm,1.9s						
833A	**Chaparral WMA,**	**59.67**	**326**	P	**P**	**16 23 55.3**	**+1.3**
833A				IAmb	IAmb	16 23 56.3	
	comp=Z,39nm,1.1s						
X48A	**Hartselle**	**59.86**	**340**	P	**P**	**16 23 55.3**	**+0.2**
X48A				IAmb	IAmb	16 23 56.4	
	comp=Z,26nm,1.0s						
W50A	**Signal Mountai**	**60.03**	**342**	P	**P**	**16 23 56.5**	**+0.1**
W50A				IAmb	IAmb	16 24 04.4	
	comp=Z,30nm,1.4s						
TKL	**Tuckaleechee C**	**60.04**	**344**	P	**P**	**16 23 56.5**	**+0.1**
TKL				IAmb	IAmb	16 25 03.6	
	comp=Z,37nm,1.5s						
CPCT	**Cooper Cave**	**60.05**	**343**	P	**P**	**16 23 56.3**	**-0.1**
CPCT				IAmb	IAmb	16 24 15.6	
	comp=Z,50nm,1.7s						
V52A	**Sevierville**	**60.17**	**344**	P	**P**	**16 23 57.1**	**-0.2**
SWET	**Sewanee**	**60.23**	**342**	P	**P**	**16 23 57.7**	**0.0**
SWET				IAmb	IAmb	16 23 58.7	
	comp=Z,20nm,0.8s						
V51A	**Loudon**	**60.33**	**343**	P	**P**	**16 23 58.3**	**-0.1**
OXF	**Oxford**	**60.69**	**338**	P	**P**	**16 24 00.5**	**-0.2**
OXF				IAmb	IAmb	16 25 04.8	
	comp=Z,31nm,1.3s						
V48A	**Smith Brothers**	**60.98**	**341**	P	**P**	**16 24 02.7**	**0.0**
V48A				IAmb	IAmb	16 24 05.3	
	comp=Z,47nm,1.7s						
CLTN	**Cedars of Leba**	**61.16**	**342**	P	**P**	**16 24 04.1**	**+0.3**
T49A	**Edmonton**	**61.88**	**343**	P	**P**	**16 24 08.5**	**-0.1**
MIAR	**Mount Ida**	**62.26**	**335**	P	**P**	**16 24 11.9**	**+0.6**
MIAR				IAmb	IAmb	16 24 14.2	
	comp=Z,47nm,1.7s						
R50A	**Paris**	**62.66**	**344**	P	**P**	**16 24 13.8**	**-0.1**
R50A				IAmb	IAmb	16 24 44.9	
	comp=Z,41nm,1.6s						
LCAR	**Lake Charles**	**62.70**	**337**	P	**P**	**16 24 14.5**	**+0.4**
LCAR				IAmb	IAmb	16 24 16.4	
	comp=Z,49nm,1.9s						
TXAR	**Lajitas Array**	**62.75**	**323**	P	**P**	**16 24 16.1**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=156,slow=8.6,SNR=15						
PARMO	**Parma**	**62.76**	**339**	P	**P**	**16 24 15.4**	**+0.9**
P53A	**Whipple**	**63.13**	**347**	P	**P**	**16 24 17.7**	**+0.8**
P53A				IAmb	IAmb	16 24 18.5	
	comp=Z,42nm,1.3s						
HHAR	**Hobbs**	**63.92**	**335**	P	**P**	**16 24 22.4**	**+0.3**
HHAR				IAmb	IAmb	16 26 16.4	
	comp=Z,60nm,2.0s						
P48A	**Milroy**	**64.06**	**344**	P	**P**	**16 24 22.4**	**-0.6**
P48A				IAmb	IAmb	16 25 01.7	
	comp=Z,27nm,1.4s						
MGMO	**Mountain Grove**	**64.07**	**337**	P	**P**	**16 24 23.5**	**+0.4**
MGMO				IAmb	IAmb	16 25 05.6	
	comp=Z,38nm,1.6s						
BLO	**Bloomington**	**64.08**	**343**	P	**P**	**16 24 22.9**	**-0.2**
BLO				IAmb	IAmb	16 24 23.6	
	comp=Z,24nm,1.0s						
N54A	**Moraine State**	**64.28**	**349**	P	**P**	**16 24 25.1**	**+0.7**
N53A	**Lisbon**	**64.29**	**348**	P	**P**	**16 24 25.1**	**+0.6**
CCM	**Cathedral Cave**	**64.52**	**338**	P	**P**	**16 24 26.0**	**+0.1**
CCM				IAmb	IAmb	16 24 27.0	
	comp=Z,21nm,0.9s						
N49A	**Columbus Grove**	**65.13**	**345**	P	**P**	**16 24 29.8**	**0.0**
N49A				IAmb	IAmb	16 24 30.6	
	comp=Z,28nm,1.1s						
DELO	**Deloro Mine**	**67.36**	**351**	P	**P**	**16 24 44.5**	**+0.6**
SADO	**Sadowa**	**67.84**	**350**	P	**P**	**16 24 47.0**	**+0.2**
K43A	**Burlington**	**67.87**	**343**	P	**P**	**16 24 47.1**	**0.0**
ANMO	**Albuquerque**	**68.58**	**325**	P	**P**	**16 24 52.3**	**+0.3**
	comp=Z,0.7nm,0.3s,baz=139,slow=4.1,SNR=3.3						
ANMO	**Albuquerque**	**68.58**	**325**	IAmb	IAmb	16 24 54.9	
	comp=Z,24nm,1.4s						
TRQ	**Mont Tremblant**	**68.68**	**354**	P	**P**	**16 24 52.6**	**+0.5**
I42A	**Draeger Farm,**	**69.13**	**343**	P	**P**	**16 24 54.8**	**0.0**
I42A				IAmb	IAmb	16 25 57.3	
	comp=Z,33nm,1.1s						
H43A	**Windswept, Lux**	**69.36**	**344**	P	**P**	**16 24 56.0**	**-0.2**
BGNE	**Belgrade**	**70.00**	**335**	P	**P**	**16 25 01.2**	**+0.9**
E46A	**Sault Ste Mari**	**70.33**	**347**	P	**P**	**16 25 02.3**	**+0.1**
EYMN	**Ely**	**73.56**	**343**	P	**P**	**16 25 21.2**	**0.0**
SYO	**Syowa Base**	**74.83**	**159**	⥣*e*P	**P**	**16 25 32.0**	**+3.7**
TORD	**Torodi Ar. Bea**	**75.37**	**69**	P	**P**	**16 25 30.9**	**-1.5**
	comp=Z,5.1nm,0.3s,baz=254,slow=5.6,SNR=16						
SUR	**Sutherland**	**76.04**	**119**	P	**P**	**16 25 37.0**	**+0.8**
	comp=Z,7.9nm,0.8s,baz=203,slow=2.7,SNR=7.5						
PDAR	**Pinedale Array**	**76.09**	**329**	P	**P**	**16 25 37.4**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=125,slow=9.3,SNR=12						
ULM	**Lac du Bonnet**	**76.90**	**341**	P	**P**	**16 25 40.5**	**+0.3**
	comp=Z,6.9nm,0.6s,baz=154,slow=3.0,SNR=9.4						
ULM	**Lac du Bonnet**	**76.90**	**341**	P	**P**	**16 25 40.2**	**0.0**
YNE	**Yellowstone No**	**78.00**	**330**	P	**P**	**16 25 47.7**	**+1.0**
GCMT	**Greycliff**	**78.44**	**331**	P	**P**	**16 25 50.3**	**+1.3**
PAHR	**Pah Rah Range**	**79.16**	**321**	P	**P**	**16 25 55.5**	**+2.4**
YBH	**Yreka Blue Hor**	**82.40**	**321**	P	**P**	**16 26 10.3**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=3.8,slow=4.6,SNR=4.3						
YBH	**Yreka Blue Hor**	**82.40**	**321**	IAmb	IAmb	16 26 18.1	
	comp=Z,32nm,2.0s						
NEW	**Newport**	**83.74**	**329**	P	**P**	**16 26 17.9**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=163,slow=11,SNR=2.6						
FCC	**Fort Churchill**	**84.04**	**346**	P	**P**	**16 26 18.8**	**+0.9**
FCC				IAmb	IAmb	16 27 36.4	
	comp=Z,43nm,1.7s						
YKA	**Yellowknife Ar**	**92.83**	**340**	P	**P**	**16 27 00.4**	**+1.0**
	comp=Z,1.9nm,0.5s,baz=131,slow=4.6,SNR=23						
YKA	**Yellowknife Ar**	**92.83**	**340**	P	**P**	**16 27 00.2**	**+0.7**
ASAR	**Alice Springs**	**130.20**	**204**	PKP	**PKPdf**	**16 32 57.1**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=121,slow=1.5,SNR=5.1						
ASAR				SKPbc	**SKPab**	**16 35 57.2**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=146,slow=3.6,SNR=6.5						
ASAR	**Alice Springs**	**130.20**	**204**		**PKPdf**	**16 32 56.8**	**-0.1**
WRA	**Warramunga Arr**	**133.37**	**207**	PKP	**PKiKP**	**16 33 03.9**	**-0.3**
	comp=Z,1.1nm,0.2s,baz=154,slow=1.8,SNR=24						
WRA				SKPbc	**SKPbc**	**16 36 09.1**	**+0.9**
	comp=Z,2.3nm,1.1s,baz=150,slow=3.3,SNR=5.9						
PETK	**Petropavlovsk-**	**134.70**	**324**	PKP	**PKiKP**	**16 33 06.0**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=106,slow=3.1,SNR=6.5						
KURK	**Kurchatov**	**140.68**	**35**		**PKPdf**	**16 33 13.0**	**-2.3**
FRU1	**Bishkek**	**141.72**	**48**		PKPpre	16 33 08.7	
KSH	**Kashi**	**143.71**	**53**	PKP	**PKiKP**	**16 33 23.9**	**-0.9**
KSH				pPKP	pPKPdf	16 34 16.0	-8.6
KSH				PP	**PP**	**16 36 39.6**	**+2.8**
KSH				SKS	**SKSdf**	**16 40 06.1**	**-1.6**
KSH				SKKS	**SKKSac**	**16 43 07.1**	**+2.0**
KSH				AMB	AMB		
	comp=Z,1μm,6.7s						
SONM	**Songino Array**	**153.92**	**11**	PKPbc	**PKiKP**	**16 33 46.2**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=302,slow=1.7,SNR=8.4						

*IDC **01** 16:47:49.8±0.5, 51.°93N×82.°38E, h0km, mb4.0/15, mb1 4.1/19, mb1mx3.9/58, mbtmp4.0/19, ML4.0/4, Error ellipse: s-maj=10.1km s-min=7.8km az=113.0*
*SOME **01** 16:47:51.8, 51.°87N×82.°07E, h0km, MS3.6*
*MOS **01** 16:47:51.2±1.8, 51.°93N×82.°09E, h13km, mb4.5/7, Error ellipse: s-maj=9.0km s-min=6.1km az=88.6*
*ASRS **01** 16:47:52.1±0.2, 51.°8N±0.°9×8.°2E±.°, h5km, MLh4.5/14, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NEIC **01** 16:47:53.9±1.7, 51.°90N±0.°06×82.°1E±0.°1, h24km±4km, mb4.6/29, Error ellipse: s-maj=10.6km s-min=7.4km az=133.0*
*BJI **01** 16:47:53.2±0.0, 51.°66N×82.°11E, h10km, mb3.9/2, ML4.2/4*
*NNC **01** 16:47:54.1±1.4, 51.°81N×82.°10E, h18km±11km, mb4.3, mpv4.0, Error ellipse: s-maj=11.4km s-min=7.4km az=127.0*

ISC 01 16:47:52.2±1.1**, 51.°83N**±0.°02×**82.°10E**±0.°02**, h12**km±7km**, n147, σ2.°02**/196**, mb4.3**/27**, 21C-7D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SEM	**Semipalatinsk**	**1.83**	**220**	*e*PN	**Pb**	**16 48 26.9**	**+1.1**
SEM				*e*S	**Sb**	**16 48 50.4**	**+1.6**
SEM	**Semipalatinsk**	**1.83**	**220**	*e*P	**Pb**	**16 48 26.9**	**+1.1**
	180nm,0.3s						
SEM				*e*S	**Sb**	**16 48 50.4**	**+1.6**
	830nm,0.2s						
UKR	**Ust'-Kan**	**1.90**	**117**	PN	**Pb**	**16 48 26.7**	**-0.1**
UKR				S	**Sb**	**16 48 50.5**	**0.0**
UKR	**Ust'-Kan**	**1.90**	**117**	Pg	**Pb**	**16 48 26.7**	**-0.1**
UKR				Sg	**Sb**	**16 48 50.5**	**0.0**
GALT	**Gorno-Altaysk,**	**2.39**	**85**	Pg	**Pg**	**16 48 37.3**	**-0.6**
GALT				Sg	**Sb**	**16 49 05.4**	**+0.9**
KURK	**Kurchatov**	**2.45**	**244**	*ce*PN	**Pb**	**16 48 35.3**	**-0.8**
KURK				pmax	pmax		
	comp=Z,49nm,0.6s						
KURK	**Kurchatov**	**2.45**	**244**	Pg	**Pg**	**16 48 38.9**	**-0.2**
KURK				Sg	**Sg**	**16 49 10.1**	**-0.7**
KURK	**Kurchatov**	**2.45**	**244**		**Pn**	**16 48 33.5**	**+1.5**
KURK	**Kurchatov**	**2.45**	**244**	⥣Pg	**Pg**	**16 48 39.2**	**+0.1**
	comp=Z,64nm,0.7s						
KURK				⥣Lg	Lg	16 49 10.2	
	comp=Z,370nm,0.6s						
KURBB	**Kurchatov Arra**	**2.54**	**243**	Pn	**Pn**	**16 48 35.2**	**+2.0**
	comp=Z,0.7nm,0.3s,baz=66,slow=14,SNR=51						
KURBB				Lg	Lg	16 49 14.9	
	comp=Z,20nm,0.3s,baz=66,slow=35,SNR=25						
KURBB	**Kurchatov Arra**	**2.54**	**243**	⥣Pn	**Pb**	**16 48 37.5**	**-0.3**
	comp=Z,29nm,0.3s						
KURBB				⥥Lg	Lg	16 49 14.6	
	comp=Z,745nm,0.7s						
ZAA0	**Zalesovo Array**	**2.69**	**37**		**Pn**	**16 48 36.9**	**+1.6**
ZAA0	**Zalesovo Array**	**2.69**	**37**	⥣Pn	**Pn**	**16 48 36.7**	**+1.4**
	comp=Z,7.0nm,0.5s						
ZAA0				⥣Lg	Lg	16 49 17.8	
	comp=Z,27nm,0.4s						
ZALV	**Zalesovo Beam**	**2.69**	**37**	Pg	**Pn**	**16 48 37.0**	**+1.8**
	comp=Z,8.0nm,0.3s,baz=223,slow=14,SNR=170						
ZALV				Lg	Lg	16 49 08.0	
	comp=Z,55nm,0.3s,baz=222,slow=29,SNR=14						
ZALV	**Zalesovo Beam**	**2.69**	**37**		**Pn**	**16 48 36.7**	**+1.4**
BSTK	**Bystrovka, Nov**	**2.77**	**7**	Pg	**Pg**	**16 48 44.5**	**-0.6**
BSTK				S	**Sb**	**16 49 12.5**	**-3.0**
BSTK				Sg	**Sg**	**16 49 26.8**	**+5.8**
ELT	**Eltsovka**	**2.91**	**59**	Pg	**Pg**	**16 48 47.7**	**-0.2**
ELT				S	**Sn**	**16 49 14.4**	**+1.2**
KHAR	**Kharino, NSO,**	**2.93**	**17**	Pn	**Pn**	**16 48 40.9**	**+2.2**
KHAR				S	**Sb**	**16 49 16.2**	**-4.0**
KHAR				Sg	**Sg**	**16 49 28.3**	**+1.9**
NHES	**Novosibirsk, N**	**3.09**	**10**	Pg	**Pg**	**16 48 49.7**	**-1.6**
NHES				S	**Sn**	**16 49 18.7**	**+1.1**
NHES				Sg	**Sg**	**16 49 33.8**	**+2.6**
NVS	**Novosibirsk**	**3.10**	**12**	Pg	**Pg**	**16 48 48.8**	**-2.7**
NVS				S	**Sn**	**16 49 18.9**	**+1.1**
NVS				Sg	**Sg**	**16 49 34.2**	**+2.6**
NVSII	**Novosibirsk**	**3.10**	**12**	Pg	**Pg**	**16 48 49.0**	**-2.5**
NVSII				S	**Sn**	**16 49 19.1**	**+1.3**
NVSII				Sg	**Sg**	**16 49 33.8**	**+2.2**
ARTR	**Artybash**	**3.22**	**88**	Pg	**Pb**	**16 48 51.0**	**+1.8**
ARTR				Sg	**Sb**	**16 49 30.1**	**+1.7**
SALR	**Pechorkino, Sa**	**3.39**	**39**	Pn	**Pn**	**16 48 46.1**	**+1.3**
SALR				S	**Sn**	**16 49 24.7**	**-0.2**
TASR	**Tashtagol**	**3.67**	**73**	Pg	**Pb**	**16 48 59.5**	**+2.5**
TASR				Sg	**Sg**	**16 49 48.4**	**-1.7**
CHBI	**Chibit, Altay**	**3.73**	**112**	Pn	**Pn**	**16 48 51.0**	**+1.3**
CHBI				Pg	**Pb**	**16 49 00.2**	**+2.1**
CHBI				S	**Sn**	**16 49 33.7**	**+0.1**
CHBI				Sg	**Sg**	**16 49 49.5**	**-2.4**
AKAR	**Aktash**	**3.79**	**111**	Pn	**Pn**	**16 48 51.9**	**+1.3**
AKAR				Pg	**Pb**	**16 49 01.9**	**+2.7**
AKAR				Sg	**Sg**	**16 49 51.8**	**-2.2**
ULGR	**Ulagan, Altay**	**3.88**	**106**	Pn	**Pn**	**16 48 53.6**	**+1.9**
ULGR				Pg	**Pb**	**16 49 03.3**	**+2.8**
ULGR				Sg	**Sg**	**16 49 54.5**	**-2.1**
DGZ	**Jazzator, Alta**	**4.00**	**120**	Pn	**Pn**	**16 48 55.7**	**+2.3**
DGZ				Pg	**Pb**	**16 49 06.0**	**+3.4**
DGZ				Sg	**Sg**	**16 49 57.6**	**-2.9**
KEM	**Kemerovo**	**4.25**	**32**	Pn	**Pn**	**16 48 59.6**	**+2.9**
KEM				S	**Sn**	**16 49 47.6**	**+1.4**
LUZB	**Luzhba, Kemero**	**4.53**	**63**	Pn	**Pn**	**16 49 02.4**	**+1.9**
LUZB				S	**Sn**	**16 49 52.8**	**-0.2**
LUZB				Sg	**Sg**	**16 50 12.1**	**-5.2**
ZSN	**Zaisan**	**4.73**	**157**	*e*P	**Pb**	**16 49 18.4**	**+3.3**
	comp=Z,114nm,0.6s						
ZSN				*e*S	**Sb**	**16 50 18.4**	**+6.4**
	comp=Z,420nm,0.7s						
MAKZ	**Makanchi**	**5.02**	**181**	PN	**Pn**	**16 49 10.5**	**+3.1**
MAKZ	**Makanchi**	**5.02**	**181**	Pn	**Pn**	**16 49 10.7**	**+3.3**
MAKZ				S	**Sn**	**16 50 04.2**	**-1.2**
MAKZ				Sg	**Sg**	**16 50 28.3**	**-5.0**
MAKZ	**Makanchi**	**5.02**	**181**		**Pn**	**16 49 10.5**	**+3.1**
MAKZ	**Makanchi**	**5.02**	**181**	⥣Pn	**Pn**	**16 49 10.5**	**+3.1**
	comp=Z,18nm,0.3s						
MAKZ				⥣Sn	**Sn**	**16 50 05.1**	**-0.2**
	comp=Z,39nm,0.6s						
MAKZ				⥥Lg	Lg	16 50 31.5	
	comp=Z,69nm,0.5s						
MK31	**Makanchi Array**	**5.04**	**178**	PN	**Pn**	**16 49 10.6**	**+3.0**
MK31	**Makanchi Array**	**5.04**	**178**		**Pn**	**16 49 10.2**	**+2.6**
MK31	**Makanchi Array**	**5.04**	**178**	⥣Pn	**Pn**	**16 49 10.8**	**+3.2**
	comp=Z,15nm,0.4s,baz=9.9,slow=14,SNR=1107						
MK31				⥣Sn	**Sn**	**16 50 05.3**	**-0.4**
	comp=Z,27nm,0.6s,baz=358,slow=23,SNR=3.6						
MK31				⥣Lg	Lg	16 50 32.4	
	comp=Z,133nm,0.6s,baz=10,slow=29,SNR=6.5						
MKAR	**Makanchi Array**	**5.04**	**178**	*ce*PN	**Pn**	**16 49 10.0**	**+2.4**
MKAR				pmax	pmax		
	comp=Z,29nm,0.3s						
MKAR	**Makanchi Array**	**5.04**	**178**	Pn	**Pn**	**16 49 10.0**	**+2.4**
	comp=Z,16nm,0.3s,baz=3.3,slow=11,SNR=947						
MKAR				Sn	**Sn**	**16 50 06.2**	**+0.4**
	comp=Z,12nm,0.3s,baz=11,slow=24,SNR=7.6						
MKAR				Lg	Lg	16 50 24.4	
	comp=Z,16nm,0.3s,baz=10,slow=25,SNR=6.6						
MKAR	**Makanchi Array**	**5.04**	**178**	Pn	**Pn**	**16 49 10.9**	**+3.3**
MKAR				S	**Sn**	**16 50 06.6**	**+0.9**
MKAR				Sg	**Sg**	**16 50 30.1**	**-3.7**
MKAR	**Makanchi Array**	**5.04**	**178**		**Pn**	**16 49 10.8**	**+3.3**
VEH	**Verkhnyaya Baz**	**5.22**	**71**	Pn	**Pn**	**16 49 11.3**	**+1.2**
VEH				S	**Sn**	**16 50 08.3**	**-1.9**
BRCR	**Berchikul'**	**5.32**	**42**	Pn	**Pn**	**16 49 12.8**	**+1.5**
BRCR				S	**Sn**	**16 50 11.4**	**-1.0**
DJO	**Djoy, Khakassi**	**5.68**	**77**	Pn	**Pn**	**16 49 18.2**	**+1.9**
DJO				S	**Sn**	**16 50 21.3**	**-0.1**
CERR	**Cheremushki**	**5.80**	**76**	Pn	**Pn**	**16 49 20.4**	**+2.3**
ABNR	**Abakan**	**5.98**	**68**	Pn	**Pn**	**16 49 21.2**	**+0.8**
ABNR				S	**Sn**	**16 50 28.1**	**-0.6**
BVAR	**Borovoye Array**	**7.26**	**284**	Pn	**Pn**	**16 49 39.7**	**+1.6**
	comp=Z,2.3nm,0.3s,baz=112,slow=14,SNR=30						
BVAR				Sn	**Sn**	**16 50 55.6**	**-4.8**
	comp=Z,12nm,0.3s,baz=94,slow=23,SNR=15						
BRVK	**Borovoye**	**7.33**	**284**	*ce*P	**Pn**	**16 49 40.8**	**+1.9**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.5s						
BRVK	**Borovoye**	**7.33**	**284**	Pn	**Pn**	**16 49 40.9**	**+1.9**
BRVK	**Borovoye**	**7.33**	**284**		**Pn**	**16 49 40.4**	**+1.4**
BRVK	**Borovoye**	**7.33**	**284**	⥣Pn	**Pn**	**16 49 40.8**	**+1.9**
	comp=Z,7.8nm,0.5s						
BRVK				⥥Sn	**Sn**	**16 51 01.2**	**-0.8**
	comp=Z,31nm,0.4s						
PDGK	**Podgornoye**	**8.68**	**193**	⥣Pn	**Pn**	**16 49 57.7**	**0.0**
	comp=Z,3.5nm,0.6s						
PDGK				⥥Lg	Lg	16 52 27.4	
	comp=Z,49nm,0.6s						
MDOK	**Medeo**	**9.31**	**203**	Pn	**Pn**	**16 50 06.4**	**0.0**
	comp=Z,7.9nm,0.7s						
MDOK				⥥Lg	Lg	16 52 49.1	
	comp=Z,31nm,0.7s						
TKM2	**Tokmak 2**	**9.93**	**209**	⥣Pn	**Pn**	**16 50 15.1**	**+0.2**
	comp=Z,4.4nm,0.8s						
TKM2				⥣Lg	Lg	16 53 08.1	
	comp=Z,38nm,0.9s						
KDJ	**Kajisay**	**10.26**	**201**	P	**Pn**	**16 50 21.8**	**+2.4**
KDJ	**Kajisay**	**10.26**	**201**	Pn	**Pn**	**16 50 21.8**	**+2.4**
FRU1	**Bishkek**	**10.34**	**212**	P	**Pn**	**16 50 22.1**	**+1.8**
FRU1	**Bishkek**	**10.34**	**212**		**Pn**	**16 50 22.1**	**+1.8**
TARG	**Taragay, Kyrgy**	**10.52**	**198**	Pn	**Pn**	**16 50 24.7**	**+1.6**
AAK	**Ala-Archa**	**10.54**	**212**	*ce*P	**Pn**	**16 50 25.3**	**+2.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AAK	**Ala-Archa**	**10.54**	**212**	Pn	**Pn**	**16 50 24.7**	**+1.6**
	comp=Z,1.2nm,0.3s,baz=81,slow=7.9,SNR=16						
AAK				Sn	**Sn**	**16 52 16.8**	**-4.3**
	comp=Z,0.6nm,0.3s,baz=54,slow=19,SNR=4.1						
AAK				Lg	Lg	16 53 24.0	
	comp=Z,1.0nm,0.3s,baz=238,slow=22,SNR=6.5						
AAK	**Ala-Archa**	**10.54**	**212**		**Pn**	**16 50 24.5**	**+1.4**
AAK	**Ala-Archa**	**10.54**	**212**	⥣Lg	Lg	16 53 25.1	
	comp=Z,45nm,0.8s						
NRN	**Naryn**	**11.20**	**204**	P	**Pn**	**16 50 34.2**	**+1.8**
NRN	**Naryn**	**11.20**	**204**	Pn	**Pn**	**16 50 34.2**	**+1.8**
KK31	**Karatay Array**	**11.72**	**226**	*e*P	**Pn**	**16 50 37.5**	**-1.6**
KK31	**Karatay Array**	**11.72**	**226**		**Pn**	**16 50 37.1**	**-2.0**
KK31	**Karatay Array**	**11.72**	**226**	⥥Pn	**Pn**	**16 50 37.2**	**-2.0**
	comp=Z,0.7nm,0.3s,baz=37,slow=12,SNR=34						
KK31				⥥Sn	**Sn**	**16 52 51.3**	**+1.5**
	comp=Z,4.0nm,0.6s,baz=42,slow=25,SNR=5.2						
KKAR	**Karatay Array**	**11.72**	**226**	P	**Pn**	**16 50 36.5**	**-2.6**
KKAR	**Karatay Array**	**11.72**	**226**		**Pn**	**16 50 36.5**	**-2.6**
TLY	**Talaya**	**13.35**	**82**	*i* P	**Pn**	**16 51 00.4**	**-0.9**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SVE	**Sverdlovsk**	**13.46**	**300**	*e*P	**Pn**	**16 51 05.4**	**+2.6**
SVE				*e*S	**Sn**	**16 53 31.2**	**-1.1**
SVE				pmax	pmax		
	comp=Z,11nm,0.8s						
BTK	**Batken**	**14.12**	**218**	P	**P**	**16 51 20.5**	**+0.8**
BTK	**Batken**	**14.12**	**218**	P	**P**	**16 51 20.5**	**+0.8**
ABKAR	**Akbulak array**	**14.31**	**268**		**Pn**	**16 51 12.2**	**-2.2**
ARU	**Arti**	**14.52**	**298**	P	**P**	**16 51 21.1**	**-2.8**
ARU				S	**Sn**	**16 54 04.7**	**+6.8**
ARU	**Arti**	**14.52**	**298**	Pn	**P**	**16 51 21.1**	**-2.8**
	comp=Z,0.0nm,0.3s,baz=87,slow=6.4,SNR=5.9						
ARU				Sn	Sn	16 53 43.1	-15
	comp=Z,0.0nm,0.3s,baz=229,slow=19,SNR=4.4						
ARU	**Arti**	**14.52**	**298**	P	**P**	**16 51 21.4**	**-2.4**
AKTO	**Aktyubinsk**	**15.17**	**274**	Pn	**Pn**	**16 51 23.1**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=95,slow=14,SNR=6.4						
GAR	**Garm**	**15.23**	**217**	P	**P**	**16 51 33.2**	**+1.1**
GAR				IAmb	IAmb	16 51 34.8	
	comp=Z,13nm,0.7s						
CHGR	**Chuyangaron**	**15.98**	**220**	P	**P**	**16 51 40.9**	**+0.6**
CHGR				IAmb	IAmb	16 51 42.6	
	comp=Z,30nm,0.7s						
SONM	**Songino Array**	**16.15**	**95**	P	**P**	**16 51 42.3**	**0.0**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.5s						
SONM	**Songino Array**	**16.15**	**95**	Pn	**Pn**	**16 51 39.3**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=289,slow=12,SNR=6.6						
SONM				Lg	Lg	16 56 22.9	
	comp=Z,0.1nm,0.3s,baz=288,slow=24,SNR=7.4						
SONM	**Songino Array**	**16.15**	**95**	P	**P**	**16 51 42.3**	**0.0**
ULN	**Ulaanbaatar**	**16.55**	**94**	*i* P	**Pn**	**16 51 43.2**	**-0.9**
ULN				pmax	pmax		
	comp=Z,11nm,3.3s						
NIL	**Nilore**	**19.26**	**203**	P	**Pn**	**16 52 18.7**	**+1.2**
NIL				pmax	pmax		
	comp=Z,14nm,0.7s						
NIL	**Nilore**	**19.26**	**203**	Pn	**Pn**	**16 52 18.7**	**+1.2**
NIL				IAmb	IAmb	16 52 25.7	
	comp=Z,14nm,0.7s						
KIRV	**Kirov**	**19.69**	**303**	P	**Pn**	**16 52 24.4**	**+2.1**
	comp=Z,1.1nm,0.3s,baz=250,slow=3.4,SNR=4.4						
GEYT	**Alibeck**	**21.82**	**240**	P	**P**	**16 52 45.2**	**+1.0**
	comp=Z,4.1nm,0.8s,baz=26,slow=7.1,SNR=8.4						
GEYT	**Alibeck**	**21.82**	**240**	P	**P**	**16 52 45.2**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**21.82**	**240**	P	**P**	**16 52 45.0**	**+0.8**
VSR	**Storozhevoye**	**26.44**	**286**	*i* P	**P**	**16 53 32.5**	**+3.9**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN	**Obninsk**	**26.93**	**295**	⥣*e*P	**P**	**16 53 36.1**	**+3.1**
OBN				*e*		16 54 18.8	
OBN				pmax	pmax		
	comp=Z,27nm,2.1s						
OBN				MLR	MLR		

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,1μm,17.0s						
TIXI	Tiksi	28.55	29	P	P	16 53 45.8	-1.6
	comp=Z,2.1nm,0.3s,baz=180,slow=24,SNR=8.8						
TIXI	Tiksi	28.55	29	P	P	16 53 45.8	-1.6
FINES	FINESS Array B	31.31	310	P	P	16 54 11.8	-0.1
	comp=Z,3.9nm,1.0s,baz=199,slow=28,SNR=3.9						
FINES				PcP	PcP	16 57 04.3	-1.2
	comp=Z,4.6nm,1.0s,baz=117,slow=1.6,SNR=4.6						
ARCES	ARCESS Array B	31.33	326	P	P	16 54 11.7	-0.3
ARCES	ARCESS Array B	31.33	326	P	P	16 54 11.5	-0.4
	comp=Z,1.7nm,0.8s,baz=74,slow=8.9,SNR=6.2						
ARCES	ARCESS Array B	31.33	326	P	P	16 54 11.7	-0.3
WHN	Wuhan	31.86	119	P	P	16 54 21.7	+4.7
AKASG	Malin Array Be	32.50	289	P	P	16 54 21.4	-1.0
	comp=Z,0.2nm,0.4s,baz=61,slow=8.8,SNR=3.4						
AKASG	Malin Array Be	32.50	289	IAmb	IAmb	16 54 28.6	
	comp=Z,1.3nm,1.1s						
SUW	Suwalki	34.70	297	P	P	16 54 40.6	-1.0
SUW				pmax	pmax		
	comp=Z,19nm,1.3s						
SUW	Suwalki	34.70	297	P	P	16 54 40.5	-1.0
SUW				IAmb	IAmb	16 54 53.0	
	comp=Z,19nm,1.3s						
BR131	Keskin Array S	35.26	269	P	P	16 54 47.3	+0.6
BR131				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BR131	Keskin Array S	35.26	269	P	P	16 54 47.3	+0.6
BRTR	Keskin Array B	35.26	269	*ce*P	P	16 54 53.2	+6.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	Keskin Array B	35.26	269	P	P	16 54 48.2	+1.5
	comp=Z,1.1nm,0.8s,baz=73,slow=9.6,SNR=9.0						
BRTR	Keskin Array B	35.26	269	P	P	16 54 47.5	+0.8
CMAR	Chiang Mai Arr	35.85	152	P	P	16 54 52.4	+0.7
CMAR						16 57 17.9	
CMAR	Chiang Mai Arr	35.85	152	P	P	16 54 51.5	-0.3
	comp=Z,0.6nm,0.8s,baz=339,slow=8.5,SNR=8.3						
CMAR				PcP	PcP	16 57 17.9	-1.0
	comp=Z,0.4nm,0.7s,baz=322,slow=5.7,SNR=4.0						
CMAR	Chiang Mai Arr	35.85	152	P	P	16 54 52.4	+0.7
BUR08	Bucovina Ar. S	36.21	286	P	P	16 54 54.6	-0.1
BUR08				IAmb	IAmb	16 54 56.4	
	comp=Z,7.3nm,1.4s						
BURAR	Bucovina Array	36.21	286	P	P	16 54 54.4	-0.3
HFS	Hagfors	37.52	310	P	P	16 55 04.4	-1.2
	comp=Z,4.6nm,1.0s,baz=80,slow=11,SNR=8.7						
NC405	NORSAR Array S	38.13	312	P	P	16 55 09.9	-0.8
NC303	NORSAR Array S	38.25	312	P	P	16 55 11.1	-0.6
NC602	NORSAR Array S	38.33	312	P	P	16 55 12.1	-0.3
NB2	NORSAR Subarra	38.38	312	P	P	16 55 11.7	-1.2
	comp=Z,0.6nm,0.5s,baz=68,slow=7.9						
NOA	NORSAR Array B	38.38	312	P	P	16 55 12.1	-0.8
	comp=Z,0.7nm,0.9s,baz=68,slow=8.1,SNR=4.6						
NBO00	NORSAR Array S	38.59	312	P	P	16 55 13.6	-0.9
BILL	Bilibino	41.39	34	P	P	16 55 37.5	-0.2
EKA	Eskdalemuir Ar	47.71	310	P	P	16 56 27.6	-0.8
	comp=Z,2.8nm,1.0s,baz=75,slow=6.8,SNR=5.3						
ANM	Nome	52.81	30	P	P	16 57 06.8	0.0
ANM				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ANM	Nome	52.81	30	P	P	16 57 06.8	0.0
TOLK	Toolik Lake Re	53.94	21	P	P	16 57 14.8	-0.4
COLD	Coldfoot	54.94	22	P	P	16 57 21.7	-0.7
COLD				IAmb	IAmb	16 57 40.0	
	comp=Z,6.1nm,1.3s						
IMAR	Indian Mountai	55.05	24	P	P	16 57 22.1	-1.1
NEA	Nenana	57.36	24	P	P	16 57 40.8	+1.1
COLA	College	57.42	23	P	P	16 57 40.2	+0.2
CCB	Clear Creek Bu	57.62	23	P	P	16 57 40.7	-0.8
CCB				IAmb	IAmb	16 57 40.8	
	comp=Z,9.3nm,1.4s						
WRH	Wood River Hil	57.69	23	P	P	16 57 40.8	-1.2
KTH	Kantishna Hill	57.73	25	P	P	16 57 41.4	-1.0
KTH				IAmb	IAmb	16 57 42.9	
	comp=Z,14nm,1.2s						
IL31		57.73	22	P	P	16 57 41.0	-1.3
IL31				IAmb	IAmb	16 57 41.9	
	comp=Z,5.1nm,0.7s						
ILAR	Eielson Array	57.73	22	P	P	16 57 41.1	-1.2
	comp=Z,3.2nm,0.6s,baz=323,slow=5.3,SNR=71						
ILAR	Eielson Array	57.73	22	P	P	16 57 40.9	-1.4
DHY	Denali Highway	59.03	24	P	P	16 57 50.0	-1.6
DHY				IAmb	IAmb	16 58 08.4	
	comp=Z,11nm,1.3s						
SUA	Susitna One	59.48	26	P	P	16 57 54.1	-0.6
SUA				IAmb	IAmb	16 58 11.9	
	comp=Z,8.9nm,1.2s						
PAX	Paxson	59.59	23	P	P	16 57 53.9	-1.5
PAX				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PAX	Paxson	59.59	23	P	P	16 57 53.9	-1.5
PAX				IAmb	IAmb	16 57 55.2	
	comp=Z,3.8nm,1.0s						
RC01	Rabbit Creek A	60.07	26	P	P	16 57 57.5	-1.1
YKA	Yellowknife Ar	65.26	8	P	P	16 58 31.9	-1.2
	comp=Z,2.9nm,0.6s,baz=348,slow=6.9,SNR=36						
YKA	Yellowknife Ar	65.26	8	P	P	16 58 31.3	-1.9
TORD	Torodi Ar. Bea	73.86	271	P	P	16 59 26.3	-0.6
	comp=Z,0.6nm,0.6s,baz=37,slow=5.5,SNR=3.8						
WRA	Warramunga Arr	84.74	132	P	P	17 00 24.9	-1.2
	comp=Z,0.4nm,0.4s,baz=338,slow=5.1,SNR=7.9						
ASAR	Alice Springs	87.77	134	P	P	17 00 39.8	-1.2
	comp=Z,0.6nm,0.7s,baz=331,slow=5.0,SNR=12						

*GUC **01** 16:50:28.7±0.7, 21°.81S×68°.54W, h119km±5km, ML2.9*
*SJA **01** 16:50:28.8±0.8, 21°.84S×68°.44W, h114km±6km, ML2.4, MW2.8*
ISC 01 16:50:30.0±1.6**, 21°.82S**±0°.04×**68°.51W**±0°.06**, h114**km±13km**, n16,** σ0s.**62**/28**, 2C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.68	272	⇑ *i*P	Pn	16 50 48.7	0.0
PB09				*i* S	Sn	16 51 03.3	+0.4
PB09				IAML		16 51 06.2	
	comp=E,128nm,0.2s						
PB09	IPOC Station P	0.68	272	*i* P	Pn	16 50 48.8	0.0
PB09				*e*S	Sn	16 51 03.6	+0.8
PB09				IAML		16 51 05.1	
	comp=Z,144nm,0.7s						
LVC	Limon Verde	0.87	205	*e*P	Pn	16 50 50.2	-0.5
LVC				*i* S	Sn	16 51 06.2	-0.1
LVC	Limon Verde	0.87	205	*i* P	Pn	16 50 50.2	-0.5
LVC				*e*S	Sn	16 51 06.8	+0.5
LVC				IAML		16 51 07.3	
	comp=Z,48nm,0.2s						
PB03	IPOC Station P	1.18	258	*e*P	Pn	16 50 52.9	-0.6
PB03				*i* S	Sn	16 51 11.1	-0.2
PB03				IAML		16 51 11.9	
	comp=E,396nm,0.2s						
PB06	IPOC Station P	1.32	228	⇓ *i*P	Pn	16 50 54.7	-0.4
PB06				*i* S	Sn	16 51 14.4	+0.2
PB06				IAML		16 51 16.7	
	comp=E,220nm,0.1s						
PB04	IPOC Station P	1.60	251	⇑ *i*P	Pn	16 50 57.6	-0.9
PB04				*i* S	Sn	16 51 19.3	-0.8
PB04				IAML		16 51 21.5	
	comp=N,172nm,0.2s						
PB04	IPOC Station P	1.60	251	*i* P	Pn	16 50 57.5	-0.9
PB04				*e*S	Sn	16 51 20.8	+0.7
PB15	IPOC Station P	1.64	212	*e*P	Pn	16 50 58.6	-0.4
PB15				*i* S	Sn	16 51 21.8	+0.7
PB15	IPOC Station P	1.64	212	*i* P	Pn	16 50 59.0	0.0
PB15				*e*S	Sn	16 51 21.5	+0.5
PB08	IPOC Station P	1.77	340	⇓ *i*P	Pn	16 51 00.8	+0.1
PB08				*i* S	Sn	16 51 24.6	+0.5
PB08				IAML		16 51 26.5	
	comp=E,109nm,0.6s						
PB11	IPOC Station P	2.31	332	⇓ *i*P	Pn	16 51 06.0	-1.2
PB11				*i* S	Sn	16 51 35.5	-0.4
PB11				IAML		16 51 36.5	
	comp=E,195nm,0.1s						
PB10	IPOC Station P	2.53	228	*i* P	Pn	16 51 10.7	+0.8
PB10				IAML		16 51 45.1	
	comp=Z,14nm,0.3s						
YJA	Yavi	2.81	98	*i* P	Pn	16 51 13.3	-0.6
HJA	Humahuaca	3.19	116	*i* P	Pn	16 51 18.5	-0.4
HJA				IAML		16 52 39.0	
	comp=Z,4.6nm,1.4s						
LPAZ	La Paz	5.51	4	*i* P	Pn	16 51 51.2	+0.8

*NEIC **01** 17:24:12.4±0.7, 51°.36N±0°.09×177°.66W±0°.07, h31km±14km, Error ellipse: s-maj=13.8km s-min=4.9km az=197.0*
AEIC 01 17:24:13.4±1.3**, 51°.42N**±0°.09×**177°.60W**±0°.05**, h33**km±8km**, ML3.6**/28**, Error ellipse: s-maj=13.0km s-min=3.6km az=195.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIMD	Kanaga Island	0.41	33		Pb	17 24 22.7	+0.1
KIMD					Sn	17 24 30.1	+0.5
TAPA	Tanaga Point A	0.42	342		Pb	17 24 23.0	+0.2
TASE	Tanaga Southea	0.50	327		Pb	17 24 24.1	+0.1
KIWB	Kanaga Island	0.52	32		Pb	17 24 24.0	-0.2
KIKV	Kanaga Island	0.54	30		Pb	17 24 24.6	+0.1
TAFP	Tanaga Falls P	0.54	334		Pb	17 24 24.3	-0.3
TAFP					Sn	17 24 32.8	0.0
KICM	Kanaga Island	0.56	26		Pn	17 24 25.1	0.0
KIRH	Kanaga Island	0.58	33		Pn	17 24 25.3	0.0
KINC	Kanaga Island	0.59	29		Pn	17 24 25.5	0.0
ADK	Adak	0.74	50		Pn	17 24 26.9	-0.6
ADAG	Mount Adagdak	0.84	47		Pn	17 24 29.0	+0.1
GSTD	Great Sitkin T	1.11	54		Pn	17 24 32.8	+0.2
GSTD					Sb	17 24 47.7	-0.5
GSMY	Great Sitkin M	1.15	56		Pn	17 24 33.1	0.0
GSTR	Great Sitkin T	1.17	54		Pn	17 24 33.3	-0.2
GSIG	Igitkin Island	1.19	61		Pn	17 24 33.8	+0.1
GSIG					Sb	17 24 49.9	-0.5
ATKA	Atka Island	2.25	68		Pn	17 24 48.8	+0.5
ATKA					Sn	17 25 15.8	+0.9
KOKL	Mount Kliuchef	2.29	65		Pn	17 24 50.1	+1.2
KOFP	Korovin Flat P	2.34	67		Pn	17 24 50.8	+1.3
KOSE	Korovin Southe	2.39	66		Pn	17 24 52.1	+1.9
NIKH	Nikolski High	5.60	70		Pn	17 25 36.0	+1.7
MREP	Makushin Rep't	7.03	66		Pn	17 25 55.3	+1.4

*IDC **01** 17:39:13.5±1.5, 31°.91S×69°.55W, h0km, mb3.8/4, mb1 3.9/8, mb1mx3.8/36, mbtmp3.7/8, ML3.5/4, Error ellipse: s-maj=40.4km s-min=31.4km az=7.0*
*SJA **01** 17:39:29.0±0.6, 31°.28S×69°.43W, h108km±2km, ML3.9, MW4.1*
ISC 01 17:39:29.0±0.8**, 31°.18S**±0°.06×**69°.51W**±0°.08**, h106**km±7km**, n23,** σ1s.**25**/29**, mb3.5**/4**, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.65	164	*i* P	Pn	17 39 46.9	0.0
RTLS				IAML		17 39 47.1	
	comp=Z,6μm,0.2s						
RTLS				*e*S	Sn	17 40 00.6	+0.3
ZON	Zonda	0.80	118	*i* P	Pn	17 39 48.0	0.0
ZON				*e*S	Sn	17 40 01.7	-0.6
ZON				IAML		17 40 02.5	
	comp=Z,991nm,0.3s						
RTLL	Cerro Villicun	0.90	100	*i* P	Pn	17 39 49.0	+0.1
RTLL				*e*S	Sn	17 40 03.9	0.0
RTLL				IAML		17 40 07.0	
	comp=E,21μm,0.3s						
AMOG	MOGNA	0.91	75	*i* P	Pn	17 39 49.7	+0.7
AMOG				*e*S	Sn	17 40 04.7	+0.7
RTCV	Cerro Valdivia	1.07	130	*i* P	Pn	17 39 50.7	-0.1
ASAL	Salagasta	1.52	158	*i* P	Pn	17 39 55.9	-0.1
ASAL				*e*S	Sn	17 40 15.3	-1.1
ARCO	CERRO ARCO	1.73	164	*i* P	Pn	17 39 58.4	-0.2
ARCO				IAML		17 40 22.9	
	comp=Z,1μm,0.3s						
ROC1	El Roble	2.20	215	*i* P	Pn	17 40 04.0	-0.6
ACAN	Cantantal	2.26	120	*i* P	Pn	17 40 04.9	-0.3
AVIZ	Vizcacheras	2.44	160	*i* P	Pn	17 40 07.1	-0.6
VCA	Vinchina	2.68	25	*i* P	Pn	17 40 13.1	+2.2
VCA				IAML		17 40 51.7	
	comp=Z,342nm,0.4s						
MRA	San Martin	3.46	112	*i* P	Pn	17 40 20.6	-0.5
MRA				IAML		17 41 28.3	
	comp=Z,77nm,0.4s						
CYA	Choya	4.22	51	*i* P	Pn	17 40 30.8	-0.5
CYA				IAML		17 41 19.8	
	comp=Z,32nm,0.6s						
LVC	Limon Verde	8.55	4	Pn	Pn	17 41 28.7	-1.7
	comp=Z,0.4nm,0.3s,baz=159,slow=11,SNR=4.2						
LVC				Sn	Sn	17 43 00.7	-4.6
	comp=Z,0.3nm,0.3s,baz=204,slow=7.3,SNR=2.6						
CPUP	Villa Florida	11.73	69	Pn	Pn	17 42 07.0	-5.9
	comp=Z,0.1nm,0.3s,baz=239,slow=19,SNR=1.5						
LPAZ	La Paz	14.88	5	Pn	Pn	17 42 55.7	+1.1
	comp=Z,0.1nm,0.3s,baz=22,slow=5.4,SNR=3.4						
SIV	San Ignacio	16.97	29	P	Pn	17 43 20.3	+0.2
	comp=Z,0.2nm,0.3s,baz=215,slow=14,SNR=7.2						
BDFB	Brasilia	24.99	57	P	P	17 44 42.9	-0.3
	comp=Z,1.1nm,0.5s,baz=208,slow=18,SNR=3.1						
TXAR	Lajitas Array	68.39	328	P	P	17 50 21.4	+1.9
	comp=Z,0.4nm,0.7s,baz=153,slow=8.1,SNR=5.5						
TORD	Torodi Ar. Bea	81.22	69	P	P	17 51 33.3	-0.3
	comp=Z,1.3nm,0.6s,baz=263,slow=4.6,SNR=7.2						
PDAR	Pinedale Array	82.26	331	P	P	17 51 39.5	+0.8
	comp=Z,0.3nm,0.7s,baz=133,slow=4.0,SNR=3.0						
ZALV	Zalesovo Beam	150.71	32	PKPbc	PKiKP	17 59 08.8	-0.1
	comp=Z,2.2nm,0.5s,baz=298,slow=3.4,SNR=12						
MKAR	Makanchi Array	153.29	46	PKPbc	PKPbc	17 59 14.1	-0.4
	comp=Z,0.4nm,0.8s,baz=307,slow=4.6,SNR=3.8						
MKAR				PKPab	PKPab	17 59 26.5	-0.3
	comp=Z,0.3nm,0.6s,baz=298,slow=4.3,SNR=3.5						

*NEIC **01** 17:43:18.6±1.4, 20°.43N±0°.09×145°.33E±0°.04, h99km±8km, mb4.7/30, Error ellipse: s-maj=13.8km s-min=5.4km az=189.0*
*IDC **01** 17:43:20.2±2.4, 20°.47N×145°.27E, h110km±22km, mb3.6/16, mb1 3.7/20, mb1mx3.6/51, mbtmp4.0/20, Error ellipse: s-maj=19.4km s-min=11.3km az=84.0*
ISC 01 17:43:17.5±0.5**, 20°.54N**±0°.05×**145°.33E**±0°.10**, h81**km**, n66,** σ1s.**46**/63**, mb4.4**/27**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARN	Sarigan	3.84	174		Pn	17 44 13.5	-0.8
ANA2	Anatahan	4.19	175	Pn	Pn	17 44 18.9	-0.2
GUMO	Guam	6.93	184	P	Pn	17 44 59.5	+3.2
	12nm,0.3s,baz=319,slow=3.8,SNR=12						
GUMO				S	Sn	17 46 18.7	+5.0
	4.9nm,0.3s,baz=162,slow=20,SNR=1.9						
GUMO	Guam	6.93	184		Pn	17 44 58.4	+2.0
JCJ	Chichijima	7.13	337	P	Pn	17 45 00.5	+1.4
	10nm,0.3s,baz=286,slow=20,SNR=4.0						
JCJ				S	Sn	17 46 18.3	-0.3
	12nm,0.3s,baz=308,slow=19,SNR=4.1						
INU	Inuyama	16.47	335	P	P	17 47 04.6	-0.2
INU				IAmb	IAmb	17 47 58.3	
	comp=Z,104nm,1.8s						
MJAR	Matsushiro Arr	17.11	340	P	Pn	17 47 11.0	-0.5
	comp=Z,0.1nm,0.3s,baz=342,slow=22,SNR=12						
MJAR	Matsushiro Arr	17.11	340	P	Pn	17 47 11.1	-0.5
MAJO	Matsushiro	17.12	340	P	P	17 47 13.4	+1.5
MAJO				IAmb	IAmb	17 47 24.5	
	comp=Z,61nm,1.7s						
MJB9	Matsu-Tunnel	17.12	340	P	P	17 47 13.4	+1.4
MJB9				IAmb	IAmb	17 47 24.4	
	comp=Z,63nm,1.7s						
JNU	Nakatsue	17.95	317	P	Pn	17 47 23.3	+1.6
	comp=Z,0.4nm,0.3s,baz=124,slow=3.6,SNR=2.7						
JNU	Nakatsue	17.95	317	P	P	17 47 21.4	+0.2
JNU				IAmb	IAmb	17 48 03.1	
	comp=Z,32nm,1.2s						
PATS	Pohnpei	18.55	135		P	17 47 27.2	-0.6
H11S3	WAKE ISLAND Hy	20.23	92	T	T	18 08 42.4	
	baz=276,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	20.25	92	T	T	18 08 24.4	
	baz=276,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	20.25	92	T	T	18 08 53.5	
	baz=276,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	20.27	89	T	T	18 09 05.1	
	baz=267						
H11N2	WAKE ISLAND Hy	20.27	89	T	T	18 09 12.5	
	baz=267						
H11N3	WAKE ISLAND Hy	20.28	89	T	T	18 09 04.7	
	baz=267						
TATO	Taipei	22.41	286	P	P	17 48 09.6	+0.1
KSRS	Korea Array	22.65	322	P	P	17 48 11.4	-0.4
	comp=Z,2.0nm,0.6s,baz=144,slow=9.5,SNR=9.1						
KKM	Kota Kinabalu	31.70	247	P	P	17 49 32.9	-0.9
PEA0B	Petropavlovsk-	33.88	13	P	P	17 49 54.8	+2.5
PETK	Petropavlovsk-	33.88	13	P	P	17 49 54.6	+2.4
	comp=Z,2.7nm,0.8s,baz=217,slow=4.5,SNR=11						
PETK	Petropavlovsk-	33.88	13	P	P	17 49 55.3	+3.0
MTN	Manton Dam	35.99	204	P	P	17 50 07.7	-3.1
MTN				IAmb	IAmb	17 50 31.0	
	comp=Z,11nm,1.1s						
SOEI	Soe	36.55	217	P	P	17 50 13.6	-2.1
SBUM	Sibu	36.95	245	P	P	17 50 19.9	+0.9
SBUM				IAmb	IAmb	17 50 20.4	
	comp=Z,6.3nm,0.5s						
KSM	Kuching	39.09	245	P	P	17 50 37.0	0.0
KSM				IAmb	IAmb	17 51 37.0	
	comp=Z,36nm,1.3s						
KNRA	Kununurra	39.50	206	P	P	17 50 39.3	-1.0
KNRA				IAmb	IAmb	17 51 25.1	
	comp=Z,28nm,1.4s						
SONM	Songino Array	41.50	320	P	P	17 50 56.7	-0.1
	comp=Z,0.4nm,0.3s,baz=130,slow=8.5,SNR=8.0						
SONM	Songino Array	41.50	320	P	P	17 50 55.3	-1.5
WRAB	Tennant Creek	41.64	196	P	P	17 50 56.7	-1.3
WRAB				IAmb	IAmb	17 51 30.1	
	comp=Z,14nm,1.7s						
WRA	Warramunga Arr	41.65	196	P	P	17 50 56.9	-1.1
	comp=Z,1.3nm,0.5s,baz=6.7,slow=8.5,SNR=17						
WRA	Warramunga Arr	41.65	196	P	P	17 50 56.4	-1.6
SEY	Seymchan	42.64	5	P	P	17 51 06.8	+1.2
	comp=Z,1.9nm,0.3s,baz=46,slow=2.4,SNR=10						
FITZ	Fitzroy Crossi	42.98	208	P	P	17 51 07.8	-1.0
FITZ				IAmb	IAmb	17 51 10.4	
	comp=Z,19nm,1.8s						
CMAR	Chiang Mai Arr	43.66	276	P	P	17 51 15.7	+1.2
	comp=Z,0.2nm,0.5s,baz=90,slow=5.6,SNR=7.0						
AS31	Alice Springs	45.33	195	P	P	17 51 25.8	-1.8
ASAR	Alice Springs	45.33	195	P	P	17 51 25.8	-1.8
	comp=Z,0.4nm,0.5s,baz=14,slow=6.4,SNR=25						
ASAR	Alice Springs	45.33	195	P	P	17 51 25.6	-2.1
DZM	Mont Dzumac	47.11	153	P	P	17 51 41.0	-0.6
	comp=Z,8.3nm,1.1s,baz=338,slow=11,SNR=3.0						
ZALV	Zalesovo Beam	56.35	322	P	P	17 52 49.2	-0.9
	comp=Z,0.4nm,0.4s,baz=111,slow=7.4,SNR=3.0						
MKAR	Makanchi Array	56.95	313	P	P	17 52 54.2	-0.2
	comp=Z,0.5nm,0.6s,baz=86,slow=8.2,SNR=8.8						
MKAR				PcP	PcP	17 53 47.6	-1.3
	comp=Z,0.5nm,0.5s,baz=71,slow=4.6,SNR=5.6						
MKAR	Makanchi Array	56.95	313	P	P	17 52 54.4	0.0
MAKZ	Makanchi	57.16	313	P	P	17 52 55.6	-0.3
TOLK	Toolik Lake Re	62.02	22	P	P	17 53 30.2	+1.2
TOLK				IAmb	IAmb	17 53 59.6	
	comp=Z,34nm,2.0s						
ILAR	Eielson Array	62.16	27	P	P	17 53 29.1	-0.8
	comp=Z,0.3nm,0.7s,baz=266,slow=4.6,SNR=6.0						
ILAR	Eielson Array	62.16	27	P	P	17 53 29.6	-0.3
CRQM	Cirque	63.28	31	P	P	17 53 36.1	-1.5
ARSB	Arslanbob	63.67	307	P	P	17 53 39.6	-1.0
ARSB				IAmb	IAmb	17 54 29.7	
	comp=Z,10.0nm,1.4s						
NIL	Nilore	64.34	298	P	P	17 53 45.1	+0.1
NIL				IAmb	IAmb	17 53 46.6	
	comp=Z,7.9nm,0.6s						
BRVK	Borovoye	64.91	320	P	P	17 53 48.1	-0.1
KK31	Karatay Array	65.34	309	P	P	17 53 51.3	0.0
KKAR	Karatay Array	65.34	309	P	P	17 53 50.9	-0.4
KKAR	Karatay Array	65.34	309	P	P	17 53 51.1	-0.1
KKAR				IAmb	IAmb	17 53 53.9	
	comp=Z,1.9nm,0.8s						
GAR	Garm	65.95	304	P	P	17 53 55.1	-0.3
GAR				IAmb	IAmb	17 53 57.5	
	comp=Z,23nm,1.6s						
CHGR	Chuyangaron	66.90	304	P	P	17 54 01.3	-0.1
CHGR				IAmb	IAmb	17 54 02.0	
	comp=Z,8.1nm,0.8s						
ABKAR	Akbulak array	71.76	317	P	P	17 54 29.9	-1.1
ABKAR	Akbulak array	71.76	317	P	P	17 54 29.8	-1.3
ABKAR				IAmb	IAmb	17 55 22.3	
	comp=Z,3.7nm,1.4s						
YKA	Yellowknife Ar	76.53	28	P	P	17 54 58.5	-0.1
	comp=Z,0.6nm,0.5s,baz=290,slow=5.7,SNR=7.5						
ARCES	ARCESS Array B	80.64	342	P	P	17 55 20.9	-0.2
	comp=Z,3.0nm,0.8s,baz=76,slow=7.6,SNR=7.0						
NVAR	Mina Array Bea	82.28	52	P	P	17 55 30.8	+0.1
	comp=Z,0.3nm,0.5s,baz=272,slow=6.3,SNR=4.4						
KBZ	Khabaz	84.61	315	P	P	17 55 42.3	+0.2
	comp=Z,0.7nm,0.7s,baz=202,slow=19,SNR=3.2						
FINES	FINESS Array B	85.07	335	P	P	17 55 42.3	-1.8
	comp=Z,1.4nm,0.3s,baz=67,slow=4.4,SNR=22						
FINES	FINESS Array B	85.07	335	P	P	17 55 42.4	-1.7

IDC 01 17:46:24.0±2.3**, 23°.01S**×**169°.93E, h0**km**, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/38**, mbtmp3.7**/5**, ML3.5**/1**, Error ellipse: s-maj=99.8km s-min=28.0km az=164.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.35	286	Pn	Pn	17 47 16.3	-1.5
	4.9nm,0.3s,baz=125,slow=14,SNR=301						
DZM				Sn	Sn	17 47 53.3	-5.1
	18nm,0.3s,baz=192,slow=22,SNR=7.2						
ASAR	Alice Springs	33.03	262	P	P	17 53 00.6	-0.8
	1.5nm,0.7s,baz=91,slow=8.9,SNR=16						
WRA	Warramunga Arr	33.21	268	P	P	17 53 04.1	+1.3
	0.1nm,0.4s,baz=100,slow=8.5,SNR=2.7						
NVAR	Mina Array Bea	90.81	48	P	P	17 59 28.2	-1.4
	0.4nm,0.7s,baz=224,slow=7.6,SNR=4.4						
ILAR	Eielson Array	93.63	17	P	P	17 59 43.2	+1.5
	0.5nm,0.9s,baz=231,slow=5.7,SNR=4.5						

IDC 01 18:13:32.7±2.3**, 5°.33S**×**130°.31E, h0**km**, mb3.4**/1**, mb1 3.4**/4**, mb1mx3.3**/27**, mbtmp3.2**/4**, ML3.0**/3**, Error ellipse: s-maj=104.6km s-min=27.9km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.48	199	Pn	Pn	18 16 46.0	+0.6
	0.1nm,0.3s,baz=30,slow=12,SNR=5.2						
FITZ				Sn	Sn	18 18 58.8	-17
	0.1nm,0.3s,baz=307,slow=5.1,SNR=4.7						
WRA	Warramunga Arr	15.05	165	Pn	Pn	18 17 08.2	+1.5
	0.1nm,0.3s,baz=348,slow=13,SNR=4.6						
WRA				Sn	Sn	18 19 37.5	-17
	0.1nm,0.3s,baz=105,slow=16,SNR=3.6						
ASAR	Alice Springs	18.56	170	P	P	18 17 50.0	-1.2
	0.0nm,0.3s,baz=348,slow=10,SNR=7.8						
ASAR				S	Sn	18 21 02.9	-17
	0.0nm,0.3s,baz=358,slow=26,SNR=3.1						
MKAR	Makanchi Array	67.01	326	P	P	18 24 27.6	+0.1
	0.3nm,0.7s,baz=124,slow=7.2,SNR=2.9						

*IDC **01** 18:31:54.3±1.1, 55°.55S×129°.81W, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.8/30, mbtmp3.9/5, MS3.8/1, Ms1 3.8/1, ms1mx3.4/20, Error ellipse: s-maj=153.5km s-min=27.6km az=165.0*
ISC 01 18:31:56.0±1.1**, 55°S**±1°×**130°.0W**±0°.3**, h10**km**, n18,** σ0s.**84**/8**, mb3.8**/5**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	38.86	262	P	P	18 39 21.4	+0.3
	6.4nm,0.7s,baz=144,slow=19,SNR=4.9						
PPT	Papeete	40.27	330	LR	LR	18 52 20.2	
	comp=Z,134nm,19.2s,baz=51,slow=30						
LPAZ	La Paz	60.77	76	P	P	18 42 08.6	-0.1
	0.4nm,0.5s,baz=213,slow=5.1,SNR=4.4						
ASAR	Alice Springs	74.30	251	P	P	18 43 33.0	-0.4
	0.5nm,0.8s,baz=149,slow=7.6,SNR=5.3						
H01W1	Cape Leeuwin H	74.96	230	T	T	20 07 02.4	
	baz=146,slow=76,SNR=18						
H01W2	Cape Leeuwin H	74.97	230	T	T	20 07 03.0	
	baz=146,slow=76,SNR=18						
H01W3	Cape Leeuwin H	74.98	230	T	T	20 06 56.5	
	baz=146,slow=76,SNR=23						
WRA	Warramunga Arr	77.05	254	P	P	18 43 48.6	-0.6
	0.4nm,0.6s,baz=149,slow=5.2,SNR=3.9						
FITZ	Fitzroy Crossi	83.29	248	P	P	18 44 23.5	+0.7
	1.6nm,0.9s,baz=197,slow=9.0,SNR=3.6						
H11S2	WAKE ISLAND Hy	90.67	302	T	T	20 25 41.9	
	baz=147,slow=74,SNR=13						
H11S3	WAKE ISLAND Hy	90.68	302	T	T	20 25 40.1	
	baz=147,slow=74,SNR=7.6						
H11S1	WAKE ISLAND Hy	90.69	302	T	T	20 25 40.9	
	baz=147,slow=74,SNR=8.7						
H11N3	WAKE ISLAND Hy	91.62	303	T	T	20 26 42.2	
	baz=147,slow=76						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
H11N1	WAKE ISLAND Hy	91.62	303	T	T	20 26 42.4	
	baz=147,slow=76						
H11N2	WAKE ISLAND Hy	91.64	303	T	T	20 26 43.6	
	baz=147,slow=76						
ILAR	Eielson Array	120.16	352	PKP	PKiKP	18 50 46.1	+0.6
	0.4nm,1.0s,baz=222,slow=0.7,SNR=3.5						
SONM	Songino Array	144.95	282	PKPbc	PKPdf	18 51 32.7	+0.2
	0.3nm,0.6s,baz=138,slow=2.4,SNR=3.7						
MKAR	Makanchi Array	158.18	261	PKPab	PKPab	18 52 24.9	-1.4
	0.5nm,0.8s,baz=137,slow=4.5,SNR=5.4						

*ATH **01** 18:42:41.2, 38.°59N×26.°15E, h30km±1km, ML2.7/7, Error ellipse: s-maj=1.9km s-min=1.0km az=254.0*
*DDA **01** 18:42:41.8, 38.°59N×26.°13E, h13km±3km, ML2.3*
*ISK **01** 18:42:41.4, 38.°62N×26.°12E, h17km, ML2.7/22*
*THE **01** 18:42:42.5, 38.°56N×26.°06E, h11km±1km, ML2.6/5, Error ellipse: s-maj=2.3km s-min=1.0km az=82.0*
ISC 01 18:42:41.6±0.9, **38.°60N**±0.°02×**26.°12E**±0.°02, **h15**km±8km, **n70**, σ**0.s47**/92, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOS	Chios island	0.21	193	P	Pb	18 42 47.3	0.0
CHOS				S	Sg	18 42 48.8	-1.0
	2µm,0.3s						
CHOS	Chios island	0.21	193	P	Pb	18 42 47.4	0.0
CHOS				AML	AML	18 42 49.7	
	comp=E,3784µm,0.3s						
CHOS				AML	AML	18 42 51.2	
	comp=N,2913µm,0.4s						
CHOS	Chios island	0.21	193	PG	Pb	18 42 47.3	0.0
CESE	eme	0.30	152	PG	Pb	18 42 48.6	-0.1
CESE				SG	Sb	18 42 53.5	0.0
KRBN	Karaburun	0.34	90	PG	Pg	18 42 48.9	+0.3
PSRA	Psara	0.44	263	P	Pn	18 42 52.3	-1.1
PSRA				S	Sb	18 42 58.0	+0.6
PSRA				AML	AML	18 42 58.9	
	comp=N,3100µm,0.2s						
PSRA				AML	AML	18 42 59.3	
	comp=E,3188µm,0.2s						
URLA	Izmir	0.44	122	PG	Pb	18 42 51.0	-0.2
URLA				SG	Sb	18 42 57.4	-0.2
URLA	Izmir	0.44	122	i P	Pb	18 42 51.2	0.0
URLA				IAML		18 42 57.0	
	comp=E,357nm,0.4s						
URLA				IAML		18 42 57.0	
	comp=N,212nm,0.3s						
URLA				i S	Sb	18 42 57.3	-0.4
ZEY	zmir	0.47	139	i P	Pb	18 42 51.4	-0.2
ZEY				i S	Sg	18 42 57.3	+0.1
ZEY				IAML		18 42 58.0	
	comp=E,573nm,0.4s						
ZEY				IAML		18 42 59.0	
	comp=N,621nm,0.4s						
FOCM	Foa	0.49	76	PG	Pg	18 42 51.7	+0.3
FOCM				SG	Sb	18 42 58.8	-0.3
SIGR	SIGRI	0.65	342	P	Pg	18 42 54.3	-0.1
SIGR				S	Sn	18 43 05.9	-0.4
	comp=N,742nm,0.4s						
SIGR	SIGRI	0.65	342	P	Pg	18 42 54.1	-0.2
SIGR				S	Sn	18 43 05.4	-0.9
SIGR				AML	AML	18 43 06.1	
	comp=N,3372µm,0.4s						
SIGR				AML	AML	18 43 06.2	
	comp=E,2772µm,0.4s						
SIGR	SIGRI	0.65	342	PG	Pg	18 42 54.2	-0.1
PRK	Paraskevi	0.66	10	P	Pb	18 42 55.2	+0.3
PRK				S	Sn	18 43 06.8	+0.1
	comp=E,588nm,0.5s						
BLCB	Balcova	0.76	106	PG	Pg	18 42 56.7	+0.4
DKL	Dikili	0.78	52	PG	Pg	18 42 57.3	+0.6
DGB	zmir	0.81	132	i P	Pb	18 42 57.3	-0.1
DGB				i S	Sb	18 43 07.7	-0.5
DGB				IAML		18 43 11.0	
	comp=E,114nm,0.3s						
DGB				IAML		18 43 11.0	
	comp=N,71nm,0.5s						
ZEDA	zmir-Bergama	0.84	63	i P	Pg	18 42 57.9	+0.1
ZEDA				i S	Sg	18 43 09.3	+0.5
ZEDA				IAML		18 43 11.0	
	comp=E,108nm,0.3s						
ZEDA				IAML		18 43 11.0	
	comp=N,93nm,0.5s						
AYVA	Ayvalik	0.84	32	i P	Pb	18 42 57.3	-0.7
AYVA				IAML		18 43 11.0	
	comp=E,83nm,0.3s						
AYVA				IAML		18 43 12.0	
	comp=N,193nm,0.3s						
GPNR	Gulpinar-Canak	0.86	1	PG	Pb	18 42 58.3	0.0
SMG	Samos	1.05	147	P	Pg	18 43 02.2	+0.3
SMG				S	Sn	18 43 16.8	+0.5
	comp=N,520nm,0.4s						
SMG	Samos	1.05	147	P	Pn	18 43 01.8	-0.1
SMG				S	Sn	18 43 16.1	-0.2
SMG				AML	AML	18 43 18.2	
	comp=E,1157µm,0.4s						
SMG				AML	AML	18 43 18.6	
	comp=N,1288µm,0.5s						
BAYC	CANAKKALE_Bayr	1.19	16	i P	Pn	18 43 03.1	-0.8
BAYC				i S	Sb	18 43 19.2	0.0
BAYC				IAML		18 43 24.0	
	comp=E,59nm,0.3s						
BAYC				IAML		18 43 26.0	
	comp=N,48nm,0.2s						
EZN	Ezine	1.24	7	PN	Pn	18 43 03.9	-0.5
BOZC	Bozcaada	1.25	358	PN	Pn	18 43 04.2	-0.4
BOZC	Bozcaada	1.25	358	i P	Pn	18 43 04.3	-0.2
BOZC				IAML		18 43 24.0	
	comp=E,36nm,0.3s						
BOZC				IAML		18 43 29.0	
	comp=N,53nm,0.3s						
GCAM	G?zelcaml?	1.25	135	PN	Pb	18 43 05.2	+0.2
GCAM	G?zelcaml?	1.25	135	i P	Pb	18 43 05.0	+0.1
GCAM				i S	Sg	18 43 22.7	+0.6
GCAM				IAML		18 43 25.0	
	comp=N,90nm,0.2s						
GCAM				IAML		18 43 26.0	
	comp=E,67nm,0.4s						
TNSA	Tinos	1.30	216	P	Pb	18 43 06.1	+0.4
TNSA				AML	AML	18 43 26.8	
	comp=N,499µm,0.3s						
TNSA				AML	AML	18 43 28.4	
	comp=E,287µm,0.3s						
AKHS	Akhisar	1.36	77	i P	Pg	18 43 07.5	-0.3
AKHS				IAML		18 43 27.0	
	comp=E,98nm,0.3s						
KARY	Karystos	1.44	247	P	Pn	18 43 07.1	-0.1
KARY				S	Sn	18 43 25.0	-0.8
	comp=E,120nm,0.6s						
KARY	Karystos	1.44	247	P	Pn	18 43 07.4	+0.2
KARY				AML	AML	18 43 29.9	
	comp=E,190µm,0.7s						
KARY				AML	AML	18 43 30.2	
	comp=N,172µm,0.3s						
STEP	BALIKESIR_Sava	1.47	57	i P	Pn	18 43 07.8	+0.1
STEP				i S	Sg	18 43 29.8	+0.7
STEP				IAML		18 43 33.0	
	comp=E,111nm,0.4s						
AYDB	Zeytinkoy-Aydi	1.54	114	PN	Pb	18 43 09.7	-0.2
APE	Apeiranthos	1.59	197	P	Pn	18 43 09.5	+0.1
APE				S	Sb	18 43 30.0	-0.8
APE				AML	AML	18 43 36.9	
	comp=E,170µm,0.4s						
APE				AML	AML	18 43 38.2	
	comp=N,129µm,0.3s						
APE	Apeiranthos	1.59	197	PN	Pn	18 43 09.9	+0.5
GADA	Gvkgeada	1.60	354	PN	Pn	18 43 09.3	-0.1
BALY	Balya	1.63	45	i P	Pn	18 43 09.8	-0.2
BALY				i S	Sg	18 43 35.3	+1.0
BALY				IAML		18 43 36.0	
	comp=N,75nm,0.7s						
BALY				IAML		18 43 37.0	
	comp=E,48nm,0.4s						
AYDN	Tasoluk	1.67	123	i P	Pg	18 43 13.2	-0.6
AYDN				IAML		18 43 38.0	
	comp=N,24nm,0.4s						
AYDN				IAML		18 43 40.0	
	comp=E,27nm,0.4s						
BALB	Balikesir	1.72	52	PN	Pn	18 43 11.1	0.0
AMGA	Amorgos Island	1.77	186	P	Pn	18 43 11.4	-0.4
AMGA				S	Sn	18 43 33.7	-0.4
BODT	Bodrum	1.80	148	PN	Pn	18 43 12.7	+0.5
GELI	Tayfur-Gelibol	1.82	9	PN	Pn	18 43 12.3	-0.2
AOS	Alonnisos	1.84	289	P	Pn	18 43 13.2	+0.5
PTL	Penteli	1.85	254	P	Pn	18 43 12.8	-0.1
MANT	Manisa	1.92	92	i P	Pg	18 43 18.9	+0.5
MANT				i S	Sg	18 43 42.3	-1.0
MANT				IAML		18 43 44.0	
	comp=E,36nm,0.6s						
MANT				IAML		18 43 44.0	
	comp=N,28nm,0.7s						
SMTH	Samothraki Isl	1.93	347	P	Pn	18 43 13.8	-0.2
SERI	Serifos	1.93	223	P	Pn	18 43 14.5	+0.6
VLY	Voula,Athens	1.98	249	P	Pn	18 43 14.8	+0.2
MRKA	Markates	1.98	274	P	Pn	18 43 15.2	+0.5
KRBG	Karabiga-Canak	2.01	27	PN	Pn	18 43 15.3	+0.2
DURS	Dursunbey	2.09	61	i P	Pn	18 43 16.8	+0.5
DURS				IAML		18 43 50.0	
	comp=E,27nm,0.4s						
DURS				IAML		18 43 51.0	
	comp=N,23nm,0.3s						
ERIK	Erikli-Kesan	2.10	8	PN	Pn	18 43 16.5	+0.3
SKIA	Skiathos	2.15	286	P	Pn	18 43 17.4	+0.5
EDC	Edincik	2.21	37	PN	Pn	18 43 17.3	-0.5
RKY	Sarkoy-Tekirda	2.24	21	PN	Pn	18 43 18.8	+0.5
KESN	Edirne-Kesan	2.27	11	i P	Pn	18 43 19.3	+0.3
KESN				IAML		18 44 00.0	
	comp=N,19nm,0.2s						
KESN				IAML		18 44 03.0	
	comp=E,27nm,0.3s						
VIL2	Platees	2.27	261	P	Pn	18 43 19.1	+0.4
ALN	Alexandroupoli	2.30	359	P	Pn	18 43 18.8	-0.2
ALN	Alexandroupoli	2.30	359	PN	Pn	18 43 18.8	-0.2
MRMT	Marmara Adasi	2.31	29	PN	Pn	18 43 19.2	0.0
OUR	Ouranopolis	2.40	317	PN	Pn	18 43 20.8	+0.4
DID	Didima	2.52	245	P	Pn	18 43 22.0	-0.1
LTK	Loutraki	2.54	258	P	Pn	18 43 22.8	+0.3
PROD	Prodromos	2.55	263	P	Pn	18 43 22.9	+0.4
RDO	Rodhopi	2.59	350	P	Pn	18 43 23.3	+0.3
AGG	Agios Georgios	2.99	279	P	Pn	18 43 29.2	+0.6
KARP	Karpathos	3.15	164	P	Pn	18 43 31.0	+0.2
KLV	Kalavryta, Ach	3.17	261	P	Pn	18 43 31.8	+0.8
LAKA	Lakka	3.27	265	P	Pn	18 43 33.9	+1.5

*IDC **01** 19:02:44.4±3.1, 13.°91N×120.°62E, h108km±21km, mb3.0/4, mb1 3.1/4, mb1mx2.9/51, mbtmp3.4/4, Error ellipse: s-maj=89.3km s-min=45.3km az=140.0*
*MAN **01** 19:02:47.9, 13.°94N×120.°76E, h18km, mb3.9, ML2.6, MS2.2*
ISC 01 19:02:42.7±1.3, **13.°6N**±0.°1×**120.°44E**±0.°09, **h100**km, **n8**, σ**1.s51**/11, **mb3.5**/4, **1C**, **Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.70	43	P	Pn	19 03 01.4	+1.1
	90nm,0.3s,baz=193,slow=5.8,SNR=10.0						
TGY				S	Sn	19 03 14.1	+0.8
	539nm,0.3s,baz=195,slow=23,SNR=44						
BOAC	Boac	1.37	95	eP	Pn	19 03 07.5	+0.1
BOAC				eS	Sn	19 03 25.3	-0.8
POLP	Polilio Island	1.84	52	eP	Pn	19 03 12.6	-0.7
POLP				eS	Sn	19 03 38.9	+2.3
PCPH	Palayan	2.06	18⥣	eP	Pn	19 03 15.3	-0.8
CMAR	Chiang Mai Arr	21.22	286	P	P	19 07 22.6	+2.0
	0.2nm,0.7s,baz=94,slow=8.6,SNR=4.3						
SONM	Songino Array	36.09	344	P	P	19 09 34.5	-0.5
	0.3nm,0.5s,baz=162,slow=7.7,SNR=3.1						
MKAR	Makanchi Array	45.97	324	P	P	19 10 55.9	0.0
	0.6nm,0.8s,baz=133,slow=8.4,SNR=6.2						
ZALV	Zalesovo Beam	49.04	333	P	P	19 11 17.1	-2.3
	0.4nm,0.3s,baz=123,slow=7.5,SNR=2.7						

*IDC **01** 19:17:55.7±4.4, 4.°73N×95.°84E, h82km±36km, mb3.6/8, mb1 3.6/10, mb1mx3.3/39, mbtmp3.8/10, Error ellipse: s-maj=61.7km s-min=16.1km az=58.0*
*NEIC **01** 19:17:56.1±2.0, 4.°53N±0.°08×95.°74E±0.°05, h95km±8km, mb4.3/11, Error ellipse: s-maj=12.6km s-min=4.5km az=202.0*
*DJA **01** 19:17:57.4±0.7, 4°N±3°×9°6E±°, h49km±9km, M4.0/8, mb3.9/3, MLv4.0/8*
ISC 01 19:17:53.3±0.6, **4.°58N**±0.°05×**95.°60E**±0.°07, **h63**km, **n47**, σ**1.s20**/51, **mb4.1**/13, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	Meulaboh, Aceh	0.85	111	P	Pn	19 18 10.7	+1.1
MLSI				S	Sn	19 18 22.7	+1.1
LHMI	Lhok Sumawe	1.49	64	P	Pn	19 18 20.6	+2.7
LHMI	Lhok Sumawe	1.49	64		Pn	19 18 20.1	+2.2
SNSI	Sinabang, Aceh	2.27	161	P	Pn	19 18 29.0	+0.5
SNSI				S	Sn	19 18 55.3	-0.1
KCSI	Kotacane, Aceh	2.40	116	P	Pn	19 18 31.7	+1.4
KCSI				S	Sn	19 18 57.8	-0.8
PSI	Prapat	3.75	118	P	Pn	19 18 51.2	+2.4
	16nm,0.3s,baz=321,slow=13,SNR=86						
PSI				S	Sn	19 19 33.1	+1.3
	7.5nm,0.3s,baz=358,slow=18,SNR=5.3						
GSI	Gunungsitoli	3.80	149	P	Pn	19 18 51.3	+1.9
GSI				S	Sn	19 19 32.0	-0.9
GSI	Gunungsitoli	3.80	149		Pn	19 18 49.5	+0.1
RPSI	Rantau Prapat	3.80	119		Pn	19 18 50.9	+1.4
RPSI	Rantau Prapat	3.80	119		Pn	19 18 51.2	+1.8
RPSI					Sn	19 19 33.1	+0.2
KULM	Kulim	5.08	82		Pn	19 19 07.7	+0.8
KULM					Sn	19 20 00.3	-3.9
IPM	Ipoh	5.41	91		Pn	19 19 11.6	+0.2
PDSI	Padang	7.30	138	P	Pn	19 19 45.5	+8.2
MDSI	Maura Dua	12.43	136	P	Pn	19 20 47.4	0.0
	7.9nm,2.1s						
CM31	Chiang Mai Arr	14.18	13	P	P	19 21 16.3	-0.4
CMAR	Chiang Mai Arr	14.18	13	P	Pn	19 21 10.8	-0.2
	0.0nm,0.3s,baz=205,slow=12,SNR=3.2						
CMAR	Chiang Mai Arr	14.18	13		P	19 21 17.2	+0.6
CHTO	Chiang Mai	14.52	13		P	19 21 18.9	-1.6
H08S2	Diego Garcia H	26.06	242	T	T	19 50 33.8	
	baz=61,slow=76,SNR=18						
H08S3	Diego Garcia H	26.06	242	T	T	19 50 37.5	
	baz=61,slow=76,SNR=11						
H08S1	Diego Carcia H	26.08	242	T	T	19 50 42.8	
	baz=61,slow=76,SNR=10						
NIL	Nilore	35.63	327	P	P	19 24 45.9	+0.6
NIL				IAmb	IAmb	19 24 46.6	
	comp=Z,3.5nm,0.7s						
MK31	Makanchi Array	43.61	347	P	P	19 25 50.5	-0.9
MK31				IAmb	IAmb	19 25 53.3	
	comp=Z,7.6nm,1.9s						
MKAR	Makanchi Array	43.61	347	P	P	19 25 50.5	-0.9
	comp=Z,0.5nm,0.6s,baz=157,slow=8.3,SNR=13						
MKAR	Makanchi Array	43.61	347	P	P	19 25 50.3	-1.1
SONM	Songino Array	44.09	10	P	P	19 25 54.3	-1.0
	comp=Z,0.8nm,0.6s,baz=191,slow=9.0,SNR=6.6						
SONM				PcP	PP	19 27 39.1	0.0
	comp=Z,0.3nm,0.4s,baz=187,slow=3.7,SNR=5.4						
SONM	Songino Array	44.09	10	P	P	19 25 54.1	-1.2
KK31	Karatay Array	44.34	334	P	P	19 25 57.9	+0.6
KK31				IAmb	IAmb	19 26 38.5	
	comp=Z,5.2nm,1.6s						
KKAR	Karatay Array	44.34	334	P	P	19 25 58.0	+0.6
KKAR	Karatay Array	44.34	334	P	P	19 25 57.9	+0.6
KKAR				IAmb	IAmb	19 26 38.5	
	comp=Z,5.2nm,1.6s						
WRA	Warramunga Arr	45.20	124	P	P	19 26 03.7	-0.7
	comp=Z,0.6nm,0.7s,baz=303,slow=9.2,SNR=5.1						
WRA	Warramunga Arr	45.20	124	P	P	19 26 03.6	-0.8
AS31	Alice Springs	46.71	129	P	P	19 26 15.7	-0.6
ASAR	Alice Springs	46.71	129	P	P	19 26 16.1	-0.2
	comp=Z,0.7nm,0.6s,baz=299,slow=7.8,SNR=15						
ASAR	Alice Springs	46.71	129	P	P	19 26 16.0	-0.4
ZAA0	Zalesovo Array	50.00	352	P	P	19 26 40.1	-1.0
ZAA0				IAmb	IAmb	19 28 16.6	
	comp=Z,14nm,1.9s						
ZALV	Zalesovo Beam	50.00	352	P	P	19 26 40.3	-0.8
	comp=Z,0.9nm,0.3s,baz=173,slow=6.6,SNR=6.2						
ZALV	Zalesovo Beam	50.00	352	P	P	19 26 40.4	-0.7
ABKAR	Akbulak array	53.81	332	P	P	19 27 09.7	+0.2
ABKAR				IAmb	IAmb	19 27 13.5	
	comp=Z,2.9nm,1.4s						
ABKAR	Akbulak array	53.81	332	P	P	19 27 09.7	+0.2
BURAR	Bucovina Array	73.46	318	P	P	19 29 20.6	+1.4
ARCES	ARCESS Array B	78.84	340	P	P	19 29 49.2	-0.1
	comp=Z,4.5nm,1.0s,baz=100,slow=6.7,SNR=11						
GERES	GERESS Array B	81.24	319	P	P	19 30 03.0	+0.3
	comp=Z,0.2nm,0.4s,baz=108,slow=4.3,SNR=4.6						
GERES	GERESS Array B	81.24	319	P	P	19 30 03.1	+0.4
STAL	STALIGIAL	81.80	316	P	P	19 30 06.8	+1.1
HFS	Hagfors	82.02	330	P	P	19 30 06.8	+0.4
	comp=Z,2.2nm,0.9s,baz=98,slow=6.4,SNR=5.8						
OSSC	Osservatorio P	82.78	313	P	P	19 30 09.7	-1.1

*JMA **01** 19:40:11.1±0.2, 31.°64N×142.°91E, h68km, M3.5*
*IDC **01** 19:40:14.7±3.6, 31.°04N×140.°76E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/31, mbtmp3.4/4, ML2.4/1, Error ellipse: s-maj=148.3km s-min=26.1km az=73.0*
ISC 01 19:40:14.8±1.8, **31.°7N**±0.°1×**142.°9E**±0.°3, **h68**km, **n11**, σ**1.s02**/12, **mb3.5**/3, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	3.33	332	P	Pn	19 41 03.2	-0.8
BSO3	Boso 3	3.65	328	P	Pn	19 41 07.8	-0.9
JOD2	Odawara 2	4.74	319	P	Pn	19 41 22.7	-1.0
JOD2				eS	Sn	19 42 18.4	+1.1
JHU	Hanno	5.09	325	P	Pn	19 41 27.4	-1.1
JHO	Hitachi	5.24	339	P	Pn	19 41 30.1	-0.5
JHO				S	Sn	19 42 30.0	+0.3
JRY	Ryogami san	5.41	324	P	Pn	19 41 32.4	-0.5
JAG	Ashikaga	5.48	330	P	Pn	19 41 33.2	-0.7
MJAR	Matsushiro Arr	6.17	323	Pn	Pn	19 41 41.6	-1.6
	0.1nm,0.3s,baz=161,slow=14,SNR=8.7						
MKAR	Makanchi Array	48.10	306	P	P	19 48 48.6	+0.9
	0.4nm,0.7s,baz=98,slow=8.7,SNR=4.5						
WRA	Warramunga Arr	52.00	190	P	P	19 49 17.4	0.0
	0.8nm,0.8s,baz=7.5,slow=7.9,SNR=4.0						
ASAR	Alice Springs	55.73	190	P	P	19 49 47.9	+3.4
	0.1nm,0.4s,baz=358,slow=6.1,SNR=4.3						

ROM 01 20:20:32.8±0.2, **43.°358N**±0.°004×**12.°521E**±0.°007, **h8**km±1km, **ML1.8**/10, **Error ellipse: s-maj=0.6km s-min=0.2km az=73.0**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATVO	AVT- Monte Val	0.09	286	P	Pg	20 20 35.2	+0.1
ATVO				S	Sg	20 20 37.1	+0.4
ATVO				AML	AML		
	comp=E,83µm,0.9s						
ATVO				AML	AML		
	comp=N,89µm,1.3s						
MURB	Monte Urbino	0.10	178	P	Pg	20 20 35.3	+0.1
MURB				S	Sg	20 20 37.5	+0.6
MURB				AML	AML		
	comp=E,324µm,0.8s						
MURB				AML	AML		
	comp=E,323µm,0.8s						
MURB				AML	AML		
	comp=N,421µm,0.9s						
ATPI	Pietralunga -	0.13	317	P	Pg	20 20 36.0	+0.3
ATPI				S	Sg	20 20 38.3	+0.6
ATPI				AML	AML		
	comp=E,41µm,0.9s						
ATPI				AML	AML		
	comp=N,58µm,0.4s						
PIEI	Pieia	0.18	3	P	Pg	20 20 37.0	+0.4
PIEI				S	Sg	20 20 40.6	+1.5
PIEI				AML	AML		
	comp=E,96µm,0.2s						
PIEI				AML	AML		
	comp=N,59µm,0.2s						
ATMI	Monte Miggiano	0.19	263	P	Pg	20 20 37.9	+1.2
ATMI				S	Sg	20 20 40.8	+1.5
ATCC	AVT- Casa Cast	0.19	153	P	Pg	20 20 37.3	+0.5
ATCC				S	Sg	20 20 41.3	+1.8
ATCC				AML	AML		
	comp=E,115µm,0.3s						
ATCC				AML	AML		
	comp=N,120µm,0.3s						
ATCC				AML	AML		
	comp=E,115µm,0.3s						
ATCC				AML	AML		
	comp=N,119µm,0.3s						
ATTE	AVT- Monte Tez	0.20	217	P	Pg	20 20 37.3	+0.3
ATTE				S	Sg	20 20 40.9	+1.1
ATTE				AML	AML		
	comp=E,51µm,0.3s						
ATTE				AML	AML		
	comp=N,58µm,1.2s						
FRON	Frontone	0.22	43	P	Pg	20 20 37.6	+0.4
BADI	Badiali	0.25	307	P	Pg	20 20 38.7	+0.8
BADI				S	Sb	20 20 43.2	-0.9
NARO	Abbazia di Nar	0.26	10	P	Pg	20 20 38.4	+0.5
NRCA	Norcia	0.68	140	S	Sb	20 20 57.0	+0.5
CESX	Cesi	0.75	177	S	Sn	20 20 60.0	-1.1
ARRO	Arrone	0.80	167	S	Sg	20 20 59.0	+0.5

ROM 01 20:20:48.6±0.1, **42.°549N**±0.°004×**13.°459E**±0.°007, **h15**km, **ML1.7**/1, **Error ellipse: s-maj=0.6km s-min=0.2km az=92.0**, **Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAMP	Campotosto	0.04	250	P	Pg	20 20 51.6	+0.1
CAMP				AML	AML		
	comp=E,344µm,0.2s						
CAMP				AML	AML		
	comp=N,522µm,0.2s						
CAMP				AML	AML		
	comp=N,522µm,0.2s						
CAMP				AML	AML		
	comp=E,344µm,0.2s						
CAMP	Campotosto	0.04	250	P	Pg	20 20 51.7	+0.2
CAMP				S	Sg	20 20 53.7	+0.3
SMA1	SAN MARTINO	0.12	312	P	Pg	20 20 52.3	+0.1
SMA1				AML	AML		
	comp=E,771µm,0.4s						
SMA1				AML	AML		
	comp=N,858µm,0.2s						
SMA1				AML	AML		
	comp=N,858µm,0.2s						
SMA1				AML	AML		
	comp=E,771µm,0.4s						
SMA1	SAN MARTINO	0.12	312	P	Pg	20 20 52.3	+0.1
SMA1				S	Sg	20 20 54.9	+0.2
TERO	Teramo	0.13	56	P	Pg	20 20 52.3	0.0
TERO				AML	AML		
	comp=E,443µm,0.4s						
TERO				AML	AML		
	comp=N,496µm,0.2s						
TERO				AML	AML		
	comp=N,496µm,0.2s						
TERO				AML	AML		
	comp=E,443µm,0.4s						
TERO	Teramo	0.13	56	P	Pg	20 20 52.4	+0.1
TERO				S	Sg	20 20 55.1	+0.4
AQU	L'Aquila	0.20	192	P	Pg	20 20 53.6	+0.3
AQU				AML	AML		
	comp=E,248µm,1.2s						
AQU				AML	AML		
	comp=N,341µm,0.7s						
AQU				AML	AML		
	comp=E,252µm,1.2s						
AQU				AML	AML		
	comp=N,328µm,0.7s						
AQU				AML	AML		
	comp=N,341µm,0.7s						
AQU				AML	AML		
	comp=N,328µm,0.7s						
AQU				AML	AML		
	comp=E,252µm,1.2s						
AQU				AML	AML		
	comp=E,248µm,1.2s						
AQU	L'Aquila	0.20	192	P	Pg	20 20 53.5	+0.3
AQU				S	Sb	20 20 57.3	-0.3
T0104	Madonna delle	0.21	205	P	Pg	20 20 53.8	+0.3
T0104				AML	AML		
	comp=E,538µm,1.6s						
T0104				AML	AML		
	comp=N,358µm,0.3s						
T0104				AML	AML		
	comp=E,538µm,1.6s						
T0104				AML	AML		
	comp=N,358µm,0.3s						
T0104	Madonna delle	0.21	205	P	Pg	20 20 53.7	+0.3
T0104				S	Sb	20 20 57.6	-0.3
FAGN	Fagnano	0.30	162	P	Pg	20 20 55.0	+0.1
FAGN				AML	AML		

comp=E,234µm,1.4s
FAGN AML AML
comp=N,166µm,0.4s
FAGN AML AML
comp=E,234µm,1.4s
FAGN AML AML
comp=N,166µm,0.4s
FAGN Fagnano 0.30 162 P Pg 20 20 55.0 +0.1
VCEL Villa Celiera 0.32 119 P Pb 20 20 55.9 -0.3
VCEL AML AML
comp=E,276µm,0.4s
VCEL AML AML
comp=N,266µm,0.2s
VCEL AML AML
comp=N,266µm,0.2s
VCEL AML AML
comp=E,276µm,0.4s
OFFI Offida 0.42 23 P Pb 20 20 57.8 0.0
OFFI AML AML
comp=N,148µm,0.8s
OFFI AML AML
comp=E,152µm,1.4s
OFFI AML AML
comp=N,148µm,0.8s
FDMO Fiordimonte 0.56 331 P Pg 20 20 59.3 -0.3
FDMO S Sb 20 21 07.6 -0.3
FDMO AML AML
comp=E,74µm,1.4s
FDMO AML AML
comp=N,117µm,0.3s
FDMO AML AML
comp=E,73µm,1.4s
FDMO AML AML
comp=N,116µm,0.3s
CSP1 Cessapalombo 0.57 341 P Pg 20 20 59.4 -0.5
CSP1 S Sb 20 21 08.3 -0.2
CESI CESI - Serrava 0.61 318 P Pg 20 21 00.2 -0.5
CESI AML AML
comp=E,30µm,0.3s
CESI AML AML
comp=E,30µm,0.3s
CESI AML AML
comp=N,47µm,1.2s
GUMA Gualdo di Mace 0.62 34 P Pg 20 20 59.0 -1.8
GUMA S Sg 20 21 07.5 -1.6
GUMA AML AML
comp=E,571µm,0.3s
GUMA AML AML
comp=N,480µm,0.2s
GUMA AML AML
comp=E,820µm,0.3s
GUMA AML AML
comp=N,318µm,0.2s
INTR Introdacqua 0.63 148 P Pg 20 21 00.4 -0.6
INTR AML AML
comp=E,37µm,1.6s
INTR AML AML
comp=N,52µm,1.0s
INTR AML AML
comp=N,52µm,1.0s
INTR AML AML
comp=E,37µm,1.6s
SNTG Esanatoglia 0.80 332 P Pg 20 21 03.7 -0.5
CING Cingoli 0.85 347 P Pb 20 21 04.4 -0.6
CING AML AML
comp=E,40µm,1.1s
CING AML AML
comp=N,36µm,1.5s
ARVD Arcevia 1.02 338 P Pb 20 21 07.5 -0.5

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*BJI **01** 21:11:31.3±0.0, 0°.73N×97°.07E, h21km, mB4.9/25, mb4.7/41, Ms4.2/10, Ms7 4.1/10*
*IDC **01** 21:11:32.0±0.9, 1°.01N×97°.09E, h0km, mb4.2/14, mb1 4.3/16, mb1mx4.1/37, mbtmp4.2/16, ML3.9/2, MS3.7/4, Ms1 3.8/4, ms1mx3.2/44, Error ellipse: s-maj=26.2km s-min=17.1km az=41.0*
*NEIC **01** 21:11:33.4±2.6, 0°.98N±0°.06×97°.01E±0°.05, h17km±2km, mb4.5/40, Error ellipse: s-maj=9.0km s-min=6.7km az=152.0*
*KLM **01** 21:11:37.0, 1°.15N×97°.11E, h20km, mb4.6*
*DJA **01** 21:11:41.9±0.4, 1°N±4°×9°7E±°, h28km±4km, M4.5/12, mB5.2/1, mb4.7/3, MLv4.4/12, Mw(mB)4.5/1*
ISC 01 21:11:35.6±0.5, **1°.01N**±0°.05×**97°.21E**±0°.05, **h25km**, **n116**, σ**1s.49**/110, **mb4.5**/37, **MS4.1**/5, **1C**, **Northern Sumatera**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res ISC
GSI Gunungsitoli 0.47 52 P **Pn 21 11 47.1 +0.3**
GSI S **Sn 21 11 55.7 +1.4**
GSI Gunungsitoli 0.47 52 **Pb 21 11 46.8 +1.5**
SNSI Sinabang, Aceh 1.64 328 P **Pb 21 12 09.3 +4.1**
RPSI Rantau Prapat 2.40 46 **Pn 21 12 13.9 +0.6**
RPSI Rantau Prapat 2.40 46 **Pn 21 12 14.5 +1.2**
PSI Prapat 2.47 44 Pn **Pn 21 12 14.5 +0.1**
5.6nm,0.3s,baz=211,slow=8.0,SNR=44
PSI LR LR 21 13 03.0
comp=Z,530nm,19.4s,baz=296,slow=37
KCSI Kotacane, Aceh 2.56 13 P **Pn 21 12 14.8 -0.7**
SISI Saibi 2.99 141 P **Pb 21 12 30.6 +2.4**
MLSI Meulaboh, Aceh 3.33 346 P **Pn 21 12 26.3 +0.1**
MLSI S **Sn 21 13 02.2 -2.8**
PDSI Padang 3.78 120 P **Pb 21 12 38.7 -2.9**
BKNI Bangkinang 3.89 100 P **Pn 21 12 37.0 +3.1**
BKNI Bangkinang 3.89 100 **Pn 21 12 36.7 +2.8**
BKNI **Sn 21 13 17.2 -1.7**
LHMI Lhok Sumawe 4.20 356 P **Pn 21 12 38.5 +0.4**
LHMI Lhok Sumawe 4.20 356 **Pn 21 12 36.9 -1.1**
IPM Ipoh 5.14 48 **Pn 21 12 52.6 +1.5**
IPM **Sn 21 13 49.0 -0.6**
IPM Ipoh 5.14 48 P **Pn 21 12 53.0 +1.9**
KRJI Kerinci 5.25 126 P Pn 21 13 00.2 +7.5
1.0nm2µm176nm,0.8s
KULM Kulim 5.47 39 **Pn 21 12 56.1 +0.5**
KULM Kulim 5.47 39 P **Pn 21 12 56.0 +0.5**
JRMM Jerantut 5.99 61 P **Pn 21 13 05.0 +2.2**
MYKOM Kota Tinggi 6.69 83 Pn **Pn 21 13 14.9 +2.7**
MYKOM Kota Tinggi 6.69 83 P **Pn 21 13 15.0 +2.7**
MNAI Manna 7.84 133 Pn **Pn 21 13 31.0 +2.8**
MNAI Sn **Sn 21 14 54.7 -1.5**
CISI Cisompet, Garu 13.58 129 Pn **Pn 21 14 49.0 +2.1**
SBUM Sibu 15.08 84 **Pn 21 15 06.8 -0.4**
DLV T Lat 15.60 45 **P 21 15 17.4 -0.8**
DLV IAmb IAmb 21 15 19.6
comp=Z,25nm,0.8s
PBKT Sadao Pong 15.90 13 **Pn 21 15 18.2 +0.4**
UBPT Khong Chiam 16.36 30 P **Pn 21 15 23.6 -0.1**
CM31 Chiang Mai Arr 17.42 6 P **Pn 21 15 35.5 -1.6**
CMAR Chiang Mai Arr 17.42 6 P **Pn 21 15 35.5 -1.7**
comp=Z,0.4nm,0.3s,baz=195,slow=12,SNR=24
CMAR Chiang Mai Arr 17.42 6 **P 21 15 37.9 -0.3**
PALK Pallekele 17.59 291 LR LR 21 21 53.2
comp=Z,132nm,18.6s,baz=111,slow=36
PALK Pallekele 17.59 291 **Pn 21 15 36.5 -2.8**
CHTO Chiang Mai 17.77 5 P **Pn 21 15 39.7 -1.8**
KKM Kota Kinabalu 19.61 75 P **P 21 16 02.7 +0.2**
KKM IAmb IAmb 21 16 06.6
comp=Z,38nm,1.3s
SLVN Son La 21.23 17 P **P 21 16 18.9 -1.0**
SLVN IAmb IAmb 21 16 24.2
comp=Z,21nm,0.8s
QIZ Qiongzhong 21.77 34 P **P 21 16 27.0 +1.3**
QIZ S **S 21 20 28.0 +2.4**
QIZ LR LR
comp=Z,160nm,10.8s
QIZ LR LR
comp=Z,210nm,14.5s
QIZ LR LR
comp=Z,150nm,9.3s
QIZ Qiongzhong 21.77 34 P **P 21 16 25.7 0.0**
QIZ IAmb IAmb 21 16 42.3
comp=Z,26nm,1.4s
KAPI Kappang 23.30 105 P **P 21 16 41.5 -0.4**
SHL Shillong 24.95 349 P **P 21 16 57.0 -0.3**
H08S2 Diego Garcia H 26.10 250 T T 21 44 11.2
baz=71,slow=75,SNR=1964
H08S3 Diego Garcia H 26.11 250 T T 21 44 05.9
baz=71,slow=75,SNR=1284
H08S1 Diego Carcia H 26.12 250 T T 21 44 08.4
baz=71,slow=75,SNR=2046
ODAN Odare 27.38 341 *e*P **P 21 17 20.2 +0.8**
comp=Z,36nm,1.0s
TAPN Taplejung 27.73 342 *e*P **P 21 17 23.8 +1.2**
comp=Z,45nm,0.8s
RAMN Ramite 27.73 339 *e*P **P 21 17 24.0 +1.5**
comp=Z,15nm,0.6s
JIRN Jiri 28.52 339 *e*P **P 21 17 30.8 +1.0**
comp=Z,25nm,0.7s
PKI Pulchoki 28.73 338 *e*P **P 21 17 32.2 +0.7**
PKIN Phulchoki 28.74 338 *e*P **P 21 17 32.1 +0.5**
GUN Gumba 28.86 339 *e*P **P 21 17 33.7 +0.9**
comp=Z,45nm,0.9s
DMN Daman 28.88 337 *e*P **P 21 17 34.1 +1.3**
comp=Z,16nm,0.8s
KKN Kakani 28.98 338 *e*P **P 21 17 34.1 +0.5**
comp=Z,18nm,0.8s
LSA Lhasa 29.11 349 P **P 21 17 34.5 -0.6**
DANN Dangsing 30.07 336 *e*P **P 21 17 44.3 +0.9**
comp=Z,12nm,0.6s
ENH Enshi 31.35 21 P **P 21 17 52.0 -2.4**
WHN Wuhan 33.58 27 P **P 21 18 17.7 +3.9**
XAN Xi'an 34.64 17 P **P 21 18 21.2 -1.9**
LZH Lanzhou 35.44 9 *e*P **P 21 18 32.0 +1.9**
LZH pP pP 21 18 38.2 +0.7
LZH sP sP 21 18 41.1 +0.5
LZH *e*PP **PP 21 19 52.3 +1.5**
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,67nm,5.3s
LZH LR LR
comp=Z,220nm,12.9s
LZH LR LR
comp=Z,230nm,13.2s
LZH LR LR
comp=Z,360nm,16.5s
NJ2 Nanjing 37.02 31 *e*P **P 21 18 44.6 +1.1**
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
GTA Gaotai 38.29 3 ⇑P **P 21 18 54.1 -0.2**
GTA pP pP 21 19 00.2 -1.6
GTA sP sP 21 19 03.6 -1.2
GTA PcP **PcP 21 21 09.7 +1.6**
GTA pmax pmax
comp=Z,11nm,1.0s
GTA pmax pmax
comp=Z,80nm,5.1s
GTA LR LR
comp=Z,100nm,15.2s
GTA LR LR
comp=Z,100nm,15.6s
GTA LR LR
comp=Z,130nm,15.2s
H01W3 Cape Leeuwin H 39.07 158 T T 22 00 33.6
baz=333,slow=76,SNR=48
H01W2 Cape Leeuwin H 39.08 158 T T 22 00 34.6
baz=333,slow=76,SNR=47
H01W1 Cape Leeuwin H 39.09 158 T T 22 00 40.3
baz=333,slow=76,SNR=46
NIL Nilore 39.48 328 P **P 21 19 03.7 -0.5**
NIL IAmb IAmb 21 19 05.3
comp=Z,9.6nm,0.9s
HHC Hu-ho-hao-te 41.74 16 *e*P **P 21 19 25.1 +2.3**
HHC pmax pmax
comp=Z,4.0nm,0.7s
HHC pmax pmax
comp=Z,160nm,6.0s
WRA Warramunga Arr 41.93 122 P **P 21 19 25.2 +0.6**
comp=Z,3.0nm,0.7s,baz=299,slow=9.0,SNR=23
WRA Warramunga Arr 41.93 122 IAmb IAmb 21 19 34.6
comp=Z,0.1nm,0.8s
WR0 Warramunga Arr 42.11 122 P **P 21 19 27.2 +1.1**
BJT Baijiatuau 42.49 22 P **P 21 19 29.5 +0.6**
BJT IAmb IAmb 21 19 30.8
comp=Z,7.6nm,0.7s
KSH Kashi 42.94 336 P **P 21 19 30.2 -2.5**
KSH pP pP 21 19 40.5 +0.3
KSH pmax pmax
comp=Z,290nm,4.5s
ASAR Alice Springs 43.28 127 P **P 21 19 36.7 +1.1**
comp=Z,1.6nm,0.8s,baz=308,slow=8.0,SNR=12
ASAR Alice Springs 43.28 127 P **P 21 19 35.0 -0.6**
WMQ Urumqi 43.46 350 *e*P **P 21 19 37.9 +1.2**
WMQ pP pP 21 19 44.7 +0.4
WMQ pmax pmax
comp=Z,7.0nm,1.1s
TARG Taragay, Kyrgy 44.15 339 P **P 21 19 41.0 -1.7**
TARG IAmb IAmb 21 19 48.9
comp=Z,5.1nm,0.8s
NRN Naryn 44.56 337 IAmb IAmb 21 19 47.6
comp=Z,7.5nm,1.1s
KDJ Kajisay 44.72 339 P **P 21 19 46.5 -0.6**
GAR Garm 45.10 330 P **P 21 19 48.3 -1.8**
GAR IAmb IAmb 21 19 51.5
comp=Z,9.6nm,1.1s
CHGR Chuyangaron 45.43 329 P **P 21 19 50.1 -2.5**
BTK Batken 45.68 332 IAmb IAmb 21 20 03.7
comp=Z,6.1nm,0.8s
UCH Uchtor 45.82 336 P **P 21 19 57.5 +1.4**
SNR=6.8
KSAR Wonju Array Be 45.97 34 P **P 21 19 56.0 -0.7**
TKM2 Tokmak 2 45.99 338 P **P 21 19 58.0 +0.8**
SNR=5.6
KSRS Korea Array 46.00 34 P **P 21 19 57.3 +0.3**
comp=Z,9.2nm,0.8s,baz=219,slow=9.1,SNR=24
KBK Karagaybulak 46.02 337 P **P 21 19 59.3 +2.0**
SNR=5.5
AAK Ala-Archa 46.18 337 P **P 21 19 59.7 +1.1**
EKS2 Erkin-Say 46.48 336 P **P 21 20 02.7 +1.7**
SNR=6.0
USP Ospenovka 46.71 337 P **P 21 20 03.6 +1.0**
SNR=14
SONM Songino Array 47.32 8 P **P 21 20 07.5 +0.1**
comp=Z,4.1nm,0.8s,baz=192,slow=9.5,SNR=19
SONM PcP **PcP 21 21 38.7 +0.7**
comp=Z,1.1nm,0.7s,baz=190,slow=3.1,SNR=5.0
SONM Songino Array 47.32 8 P **P 21 20 07.7 +0.4**
MK31 Makanchi Array 47.42 346 IAmb IAmb 21 20 09.4
comp=Z,3.6nm,0.8s
MKAR Makanchi Array 47.42 346 P **P 21 20 08.4 +0.3**
comp=Z,3.9nm,0.7s,baz=159,slow=7.8,SNR=56
MKAR Makanchi Array 47.42 346 P **P 21 20 08.2 +0.2**
ULN Ulaanbaatar 47.45 9 P **P 21 20 07.7 -0.7**
ULN IAmb IAmb 21 20 11.8
comp=Z,4.2nm,0.9s
MAKZ Makanchi 47.51 346 P **P 21 20 08.7 0.0**
MAKZ IAmb IAmb 21 20 10.0
comp=Z,2.9nm,0.8s
KK31 Karatay Array 48.23 334 IAmb IAmb 21 20 22.5
comp=Z,3.8nm,0.8s
KKAR Karatay Array 48.23 334 P **P 21 20 12.7 -1.7**
KKAR IAmb IAmb 21 20 22.5
comp=Z,3.8nm,0.8s
CN2 Changchun 49.47 27 *e*P **P 21 20 23.4 -0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
GEYT Alibeck 51.36 320 P **P 21 20 38.7 +0.4**
comp=Z,0.9nm,0.8s,baz=151,slow=3.3,SNR=4.9
GEYT Alibeck 51.36 320 P **P 21 20 38.9 +0.6**
KURK Kurchatov 51.97 345 P **P 21 20 41.9 -0.7**
KURK IAmb IAmb 21 20 44.1
comp=Z,6.8nm,1.0s
USRK Ussuriysk Ar. 52.93 31 P **P 21 20 50.3 +0.5**
comp=Z,8.2nm,0.8s,baz=234,slow=5.6,SNR=17
ZALV Zalesovo Beam 53.74 351 P **P 21 20 55.9 +0.3**
comp=Z,11nm,0.8s,baz=181,slow=6.1,SNR=53
BRVK Borovoye 56.49 341 P **P 21 21 14.0 -1.5**
BRVK IAmb IAmb 21 21 16.0
comp=Z,4.7nm,1.1s
ABKAR Akbulak array 57.68 332 P **P 21 21 23.6 -0.3**
ABKAR Akbulak array 57.68 332 IAmb IAmb 21 21 25.1
comp=Z,5.7nm,0.8s
KBZ Khabaz 64.22 319 P **P 21 22 08.9 +0.5**
comp=Z,1.7nm,0.8s,baz=86,slow=8.9,SNR=5.7
YAK Yakutsk 65.60 16 P **P 21 22 16.5 -0.6**
BRTR Keskin Array B 69.24 312 P **P 21 22 39.9 -0.9**
comp=Z,0.7nm,0.8s,baz=122,slow=7.8,SNR=6.2
TIXI Tiksi 73.37 10 P **P 21 23 02.6 -2.3**
TIXI IAmb IAmb 21 23 05.3
comp=Z,5.9nm,1.0s
AKASG Malin Array Be 75.41 322 P **P 21 23 16.6 -0.7**
comp=Z,0.5nm,0.5s,baz=90,slow=4.0,SNR=4.1
BURAR Bucovina Array 77.17 319 P **P 21 23 26.1 -1.4**
FINES FINESS Array B 80.17 333 P **P 21 23 43.6 +0.1**
comp=Z,3.8nm,1.0s,baz=97,slow=4.6,SNR=4.1
ARCES ARCESS Array B 82.71 340 P **P 21 23 57.6 +0.7**
comp=Z,1.7nm,0.7s,baz=97,slow=5.9,SNR=6.1
GERES GERESS Array B 84.96 319 P **P 21 24 09.5 +0.6**
comp=Z,1.1nm,0.9s,baz=83,slow=4.2,SNR=7.2
GERES LR LR 22 08 13.9
comp=Z,79nm,18.4s,baz=338,slow=40
ILAR Eielson Array 99.87 23 LR LR 22 15 04.0
comp=Z,79nm,18.3s,baz=324,slow=38
TXAR Lajitas Array 143.82 32 PKP **PKPdf 21 31 08.7 -1.0**
comp=Z,0.4nm,0.8s,baz=75,slow=1.8,SNR=3.8

ZUR 01 21:17:07.3, 46°.87N×8°.59E, h4km±1km, MLh0.8/4, 2C-2D, Error ellipse: s-maj=5.5km s-min=0.8km az=273.0, Switzerland

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res ISC
SALTS Altdorf, Kanto 0.04 62 ⇑Pg Pg 21 17 08.6 +0.2
0.3nm,SNR=1.9
SALTS ⇑Pg Pg 21 17 08.6 +0.2
SALTS Sg Sg 21 17 09.5 +0.3
BNALP Bannalp 0.11 273 Pg Pg 21 17 10.1 +0.4
BNALP Pg Pg 21 17 10.1 +0.4
0.1nm,SNR=0.6
BNALP Sg Sg 21 17 11.8 +0.5
LLS Linth-Limmern 0.29 94 Sg Sg 21 17 17.2 +0.5
HASLI Hasliberg/Brie 0.32 250 Sg Sg 21 17 18.6 +0.8
PANIX Pigniu (Panix) 0.36 96 ⇓Pg Pg 21 17 14.7 +0.4
0.1nm,SNR=0.7
PANIX ⇓Pg Pg 21 17 14.7 +0.4
PANIX Sg Sg 21 17 19.4 +0.4

ROM 01 21:18:51.2±0.1, **41°.374N**±0°.006×**14°.473E**±0°.007, **h15km**±1km, **ML2.3**/17, **Error ellipse: s-maj=0.7km s-min=0.4km az=334.0, Southern Italy**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res ISC
PTRJ Pietraroja 0.04 103 P Pg 21 18 54.1 +0.1
PTRJ S Sg 21 18 56.4 +0.4
PTRJ AML AML
comp=E,24200µm,0.4s
PTRJ AML AML
comp=N,18850µm,0.3s
PTRJ AML AML
comp=N,18850µm,0.3s
SACR S. Croce Del S 0.18 82 P Pb 21 18 55.9 -0.3
SACR S Sg 21 18 58.8 +0.3
SACR AML AML
comp=N,2270µm,0.4s
SACR AML AML
comp=E,1695µm,0.9s
SACR AML AML
comp=N,2330µm,0.4s
SACR AML AML
comp=E,1650µm,1.6s
VAGA Valle Agricola 0.18 283 P Pg 21 18 55.7 0.0
VAGA S Sb 21 18 59.8 +0.1
VAGA AML AML
comp=E,3700µm,0.6s
VAGA AML AML
comp=E,3850µm,0.6s
VAGA AML AML
comp=N,5305µm,0.8s
VAGA AML AML
comp=N,5130µm,0.8s
VAGA AML AML
comp=E,3695µm,0.6s
BSSO Busso 0.19 28 P Pb 21 18 56.4 -0.1
BSSO S Sg 21 18 59.2 +0.3
BSSO AML AML
comp=N,1620µm,0.6s
BSSO AML AML
comp=N,4035µm,0.7s
BSSO AML AML
comp=E,1119µm,0.7s
BSSO AML AML
comp=E,2705µm,1.5s
BSSO AML AML
comp=N,4040µm,0.7s
BSSO AML AML
comp=E,2700µm,1.5s
PIGN Pignataro Magg 0.28 232 P Pg 21 18 57.1 0.0
PIGN S Sg 21 19 01.8 +0.6
PIGN AML AML
comp=E,629µm,0.8s
PIGN AML AML
comp=N,648µm,0.3s
PIGN AML AML
comp=N,612µm,0.3s
PIGN AML AML
comp=N,612µm,0.3s
PIGN AML AML
comp=N,648µm,0.3s
PIGN AML AML
comp=E,589µm,0.8s
PIGN AML AML
comp=E,630µm,0.8s
PSB1 Pescosannita 0.30 120 P Pg 21 18 57.8 +0.3
PSB1 AML AML
comp=E,532µm,0.5s
PSB1 AML AML
comp=N,802µm,0.4s
PSB1 AML AML
comp=N,806µm,0.4s
PSB1 AML AML
comp=E,533µm,0.5s
PSB1 AML AML
comp=N,805µm,0.4s
PSB1 AML AML
comp=E,548µm,0.5s
MIDA Miranda 0.31 329 P Pg 21 18 57.7 0.0
MIDA S Sb 21 19 03.2 -0.3
MIDA AML AML
comp=N,844µm,0.5s
MIDA AML AML
comp=N,882µm,0.5s
MIDA AML AML
comp=E,1070µm,0.4s
MIDA AML AML
comp=E,1020µm,0.4s
GATE Gambatesa 0.36 67 P Pb 21 18 59.5 +0.2
GATE AML AML
comp=E,622µm,1.0s
GATE AML AML
comp=N,613µm,0.4s
GATE AML AML
comp=N,614µm,0.4s
GATE AML AML
comp=E,623µm,1.0s
GATE AML AML
comp=E,484µm,0.5s
TRIV Trivento 0.40 8 P Pb 21 18 59.6 -0.3
TRIV AML AML
comp=E,466µm,0.5s
TRIV AML AML
comp=N,577µm,0.4s
TRIV AML AML
comp=E,525µm,0.6s
TRIV AML AML
comp=N,580µm,0.4s
TRIV AML AML
comp=N,579µm,0.4s
RNI2 Rionero Sannit 0.41 324 P Pg 21 18 59.5 +0.1
RNI2 S Sg 21 19 04.9 -0.1
RNI2 AML AML
comp=N,778µm,0.5s
RNI2 AML AML
comp=N,758µm,0.5s
RNI2 AML AML
comp=E,778µm,0.4s
RNI2 AML AML
comp=E,778µm,0.4s
RNI2 AML AML
comp=E,802µm,0.4s
CERA Filignano 0.41 303 P Pb 21 18 59.9 -0.2
CERA AML AML
comp=E,625µm,0.7s
CERA AML AML
comp=E,622µm,0.7s
CERA AML AML
comp=N,620µm,0.4s
CERA AML AML
comp=N,638µm,0.4s
CIGN Sant'Elia a Pi 0.43 49 P Pb 21 19 00.5 0.0
CIGN AML AML
comp=E,332µm,0.5s
MODR Mondragone 0.50 243 P Pg 21 19 01.0 -0.2
MELA Melanico ??? S 0.59 56 AML AML

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,975µm,0.4s						
MELA				AML	AML		
	comp=N,441µm,0.5s						
MELA				AML	AML		
	comp=N,438µm,0.7s						
MELA				AML	AML		
	comp=E,1024µm,0.4s						
FRES	Fresagrandinar	0.62	14	P	Pg	21 19 02.9	-0.4
FRES				AML	AML		
	comp=N,169µm,0.7s						
POFI	Posta Fibreno	0.67	301	P	Pg	21 19 04.4	+0.1
POFI				AML	AML		
	comp=N,160µm,1.3s						
POFI				AML	AML		
	comp=E,160µm,0.3s						
LPEL	Lama dei Pelig	0.71	342	P	Pg	21 19 04.3	-0.7
LPEL				AML	AML		
	comp=N,189µm,0.8s						
LPEL				AML	AML		
	comp=E,324µm,0.6s						
SGTA	Sant Agata di	0.71	109	P	Pn	21 19 08.3	+1.5
SGTA				AML	AML		
	comp=E,246µm,0.5s						
SGTA				AML	AML		
	comp=N,246µm,0.5s						
INTR	Introdacqua	0.77	326	P	Pn	21 19 07.9	+0.4
INTR				S	Sn	21 19 18.0	-0.8
INTR				AML	AML		
	comp=N,442µm,0.8s						
INTR				AML	AML		
	comp=E,454µm,1.2s						
VVLD	Villa Vallelon	0.81	308	P	Pn	21 19 08.4	+0.3
VVLD				AML	AML		
	comp=N,179µm,0.4s						
VVLD				AML	AML		
	comp=E,163µm,0.3s						
CAFR	Castel Frentan	0.86	354	P	Pb	21 19 06.9	-0.8
GIUL	Giuliano Di Ro	0.93	282	P	Pb	21 19 09.0	-0.1
SGRT	San Giovanni R	1.03	68	P	Pn	21 19 12.4	+1.3
SGRT				AML	AML		
	comp=E,294µm,0.9s						
SGRT				AML	AML		
	comp=N,352µm,1.4s						
MSAG	Monte S. Angel	1.13	72	P	Pg	21 19 13.6	+0.6
MSAG				AML	AML		
	comp=E,328µm,1.5s						
TRTR	Tortoreto Alta	1.49	344	P	Pn	21 19 17.6	+0.2
HVAR	Hvar	2.32	38	*e*Pn	Pn	21 19 29.8	+0.9
ZIRJ	Zirje	2.44	20	*e*Pn	Pn	21 19 31.1	+0.7
DUGI	Dugi Otok	2.65	9	*i* Pn	Pn	21 19 33.6	+0.3
MORI	Morici	2.65	20	*e*Pn	Pn	21 19 33.9	+0.5
MAKA	Makarska	2.69	44	*i* Pn	Pn	21 19 34.9	+1.1
STON	Ston	2.83	57	*e*Pn	Pn	21 19 37.3	+1.6
KIJV	Kijevo	2.99	28	*e*Pn	Pn	21 19 39.1	+1.0
DBRK	Dubrovnik	3.03	63	*e*Pn	Pn	21 19 40.1	+1.6
NVLJ	Novalja	3.20	5	*e*Pn	Pn	21 19 41.5	+0.6
NVLJ				Sn	Sn	21 20 19.7	+0.9
UDBI	Udbina	3.29	16	*e*Pn	Pn	21 19 44.1	+1.9
MOSL	Moslavina	4.55	21	*e*Pn	Pn	21 20 00.1	+0.7

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*BJI **01** 21:25:42.5±0.0, 3°.70S×129°.77E, h35km, mB5.0/32, mb4.6/42, Ms4.7/7, Ms7 4.5/5*
*IDC **01** 21:25:44.7±0.5, 3°.03S×129°.42E, h0km, mb4.4/19, mb1 4.6/23, mb1mx4.5/32, mbtmp4.5/23, ML4.3/3, MS3.6/14, Ms1 3.6/14, ms1mx3.4/38, Error ellipse: s-maj=19.3km s-min=12.5km az=70.0*
*DJA **01** 21:25:49.1±0.5, 3°S±2°×12°9E±°, h25km±4km, M4.7/27, mB5.1/7, mb5.0/27, MLv4.8/13, Mw(mB)4.5/7, Mwp6.0/1*
*NEIC **01** 21:25:49.1±3.0, 3°.01S±0°.06×129°.46E±0°.06, h35km±2km, mb4.7/50, Error ellipse: s-maj=10.8km s-min=9.6km az=218.0*
*KLM **01** 21:25:54.0, 3°.01S×129°.58E, h78km, mb4.9*
ISC 01 21:25:48.5±0.3**, 3°.04S**±0°.04×**129°.43E**±0°.03**, h28km, n137, σ1s.56**/143**, mb4.7**/47**, MS3.6**/13**, 1C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	Masohi	0.58	238	P	Pn	21 26 01.7	+0.7
MSAI				S	Sn	21 26 11.7	+2.0
AAI	Ambon	1.39	242	P	Pb	21 26 15.2	+1.3
BNDI	Bandanaira	1.55	162	P	Pb	21 26 18.8	+2.2
BNDI				S	Sb	21 26 38.6	+2.8
NLAI	Namlea	2.33	265	P	Pb	21 26 27.6	-2.3
FAKI	Fak Fak	2.82	88	P	Pn	21 26 32.5	+0.7
FAKI				S	Sn	21 27 05.3	+0.4
FAKI	Fak Fak	2.82	88		Pn	21 26 32.4	+0.7
FAKI				Sn	Sn	21 26 54.6	-10
SWI	Sorong	2.83	40	P	Pn	21 26 31.2	-0.7
SWI				S	Sn	21 27 04.1	-1.0
LBMI	Labuha	3.06	321	P	Pn	21 26 35.0	-0.1
LBMI				S	Sn	21 27 10.7	-0.2
SANI	Sanana	3.57	286	P	Pn	21 26 42.3	+0.2
SANI				S	Sn	21 27 22.4	-1.1
TNTI	Ternate	4.31	331	P	Pn	21 26 52.2	0.0
TNTI	Ternate	4.31	331		Pn	21 26 52.1	-0.2
KMPI	Kaimana, Papua	4.32	98	P	Pn	21 26 53.7	+1.4
RKPI	Ransiki, Papua	4.98	72	P	Pn	21 27 02.0	+0.5
SAUI	Saumlaki	5.25	159		Pn	21 27 07.7	+2.4
KMSI	Cibinong	6.52	303	P	Pn	21 27 23.0	+0.3
	1.3nm148nm,0.6s						
LUWI	Luwuk	6.94	286	P	Pn	21 27 29.1	+0.7
	0.7nm181nm,0.9s						
LUWI	Luwuk	6.94	286		Pn	21 27 27.9	-0.6
LUWI					Sn	21 28 43.3	-3.2
APSI	Ampana	8.05	285	P	Pn	21 27 44.9	+1.1
	2µm182nm,0.8s						
MRSI	Marisa	8.26	295	P	Pn	21 27 45.9	-0.6
	1µm82nm,0.5s						
SOEI	Soe	8.42	217		Pn	21 27 56.9	+8.0
BATI	Baumata	9.14	219	Pn	Pn	21 28 02.0	+3.4
	0.9nm,0.3s,baz=48,slow=2.8,SNR=4.2						
BATI				LR	LR	21 31 51.0	
	comp=Z,1µm,21.6s,baz=40,slow=40						
SMPI	Sarmi	9.33	84	P	Pn	21 28 02.3	+1.0
	41nm,0.9s						
KAPI	Kappang	9.85	258		Pn	21 28 11.1	+2.7
MTN	Manton Dam	9.89	170		Pn	21 28 10.0	+1.1
MTN				Sn	Sn	21 29 59.2	+0.1
MPSI	Mapaga	10.10	289	P	Pn	21 28 12.4	+0.6
	481nm37nm,0.7s						
DAV	Davao City (W)	10.75	339	LR	LR	21 32 16.4	
	comp=Z,135nm,20.7s,baz=110,slow=36						
JAY	Jayapura	11.28	88	Pn	Pn	21 28 27.2	-0.8
	1.0nm,0.3s,baz=229,slow=4.6,SNR=3.8						
KNRA	Kununurra	12.58	183		Pn	21 28 46.7	+1.0
KNRA					Sn	21 31 00.8	-4.1
BKB	Balikpapan	12.65	278	Pn	Pn	21 28 49.0	+2.3
FITZ	Fitzroy Crossi	15.42	194	Pn	Pn	21 29 24.3	0.0
	0.6nm,0.3s,baz=31,slow=12,SNR=16						
FITZ				LR	LR	21 35 59.0	
	comp=Z,241nm,18.9s,baz=22,slow=40						
FITZ	Fitzroy Crossi	15.42	194		Pn	21 29 24.5	+0.2
KKM	Kota Kinabalu	15.98	304	Pn	Pn	21 29 31.3	-0.4
JAGI	Jajag, Banyuwa	16.12	250	P	P	21 29 35.2	-1.3
JAGI				IAmb	IAmb	21 29 37.0	
	comp=Z,55nm,0.9s						
COEN	Coen	17.38	129	P	Pn	21 29 48.9	-0.4
WRAB	Tennant Creek	17.47	164	P	Pn	21 29 49.2	-1.1
WRAB				S	Sn	21 32 58.9	-5.2
WRA	Warramunga Arr	17.47	164	P	Pn	21 29 48.5	-1.9
	comp=Z,2.3nm,0.3s,baz=344,slow=12,SNR=34						
WRA				S	Sn	21 32 56.2	-8.0
	comp=Z,0.2nm,0.3s,baz=350,slow=22,SNR=3.1						
WRA	Warramunga Arr	17.47	164		Pn	21 29 48.7	-1.7
WR0	Warramunga Arr	17.55	164	P	Pn	21 29 51.4	+0.2
SBUM	Sibu	18.04	287	P	P	21 29 57.4	-0.3
SBUM	Sibu	18.04	287	P	P	21 30 01.0	+3.3
PMG	Port Moresby	18.72	111	P	Pn	21 30 05.6	-0.1
	comp=Z,0.3nm,0.3s,baz=87,slow=18,SNR=3.7						
PMG	Port Moresby	18.72	111	P	P	21 30 02.6	-2.6
TGY	Tagaytay City	19.00	334	LR	LR	21 37 31.2	
	comp=Z,108nm,19.6s,baz=114,slow=37						
SMRI	Semarang	19.32	257	P	Pn	21 30 12.3	-0.7
KSM	Kuching	19.63	283	P	Pn	21 30 16.2	-0.4
KSM				IAmb	IAmb	21 30 19.0	
	comp=Z,50nm,1.0s						
KSM	Kuching	19.63	283	P	Pn	21 30 18.0	+1.4
PSA00	Pilbara Seismi	20.65	206	P	P	21 30 25.3	-0.8
PSA00				IAmb	IAmb	21 30 42.1	
	comp=Z,18nm,0.8s						
PSA00	Pilbara Seismi	20.65	206	P	P	21 30 25.5	-0.6
PSA00				IAmb	IAmb	21 30 44.9	
	comp=Z,6.6nm,0.9s						
KPJI	Karang Pucung	20.85	257	P	Pn	21 30 30.0	-1.0
	comp=Z,41nm,0.9s						
AS31	Alice Springs	20.96	168	P	P	21 30 29.6	+0.1
AS31				IAmb	IAmb	21 30 31.5	
	comp=Z,26nm,0.9s						
ASAR	Alice Springs	20.96	168	P	P	21 30 29.6	0.0
	comp=Z,70nm,0.8s,baz=346,slow=10,SNR=347						
ASAR				S	S	21 34 18.5	-3.4
	comp=Z,2.3nm,0.9s,baz=348,slow=20,SNR=6.4						
ASAR				PcP	PcP	21 34 37.4	+0.6
	comp=Z,3.3nm,0.6s,baz=338,slow=1.1,SNR=6.6						
CISI	Cisompet, Garu	21.98	257	P	P	21 30 39.4	-1.2
	comp=Z,70nm,0.9s						
CISI	Cisompet, Garu	21.98	257	P	P	21 30 39.4	-1.2
LEM	Lembang	22.05	259	P	P	21 30 40.9	-0.6
	comp=Z,26nm,0.7s,baz=46,slow=7.7,SNR=6.3						
LEM				LR	LR	21 40 50.6	
	comp=Z,356nm,18.3s,baz=107,slow=41						
KRVT	Keravat (AS076	22.59	94	LR	LR	21 39 42.7	
	comp=Z,172nm,18.8s,baz=261,slow=37						
CTA	Charters Tower	23.60	137	P	P	21 30 58.1	+0.8
	comp=Z,13nm,0.9s,baz=324,slow=12,SNR=13						
KASI	Kota Agung	24.98	263	P	P	21 31 08.7	-1.4
	comp=Z,27nm,0.9s						
MDSI	Maura Dua	25.23	266	P	P	21 31 13.4	+1.0
	comp=Z,21nm,0.9s						
FORT	Forrest	27.62	183	P	P	21 31 32.4	-1.3
KRJI	Kerinci	27.95	271	P	P	21 31 38.6	+1.5
	comp=Z,181nm,0.9s						
MORW	Morawa	28.85	205	P	P	21 31 45.0	+0.2
PDSI	Padang	29.02	274	P	P	21 31 47.6	+1.1
	comp=Z,38nm,0.8s						
IPM	Ipoh	29.34	285	P	P	21 31 49.6	+0.2
BBOO	Buckleboo	30.27	169	P	P	21 31 57.0	-0.3
BBOO				IAmb	IAmb	21 32 10.6	
	comp=Z,14nm,0.9s						
SISI	Saibi	30.36	273	P	P	21 31 59.0	+0.6
	comp=Z,43nm,0.9s						
STKA	Stephens Creek	30.89	160	P	P	21 32 03.0	+0.2
	comp=Z,2.2nm,0.5s,baz=357,slow=5.5,SNR=5.1						
STKA				LR	LR	21 45 39.1	
	comp=Z,155nm,18.4s,baz=353,slow=39						
STKA	Stephens Creek	30.89	160	P	P	21 32 01.8	-1.0
HNR	Honiara	30.98	103	LR	LR	21 44 37.6	
	comp=Z,89nm,20.3s,baz=249,slow=37						
RPSI	Rantau Prapat	31.02	280	P	P	21 32 04.0	-0.1
NWAO	Narrogin (SRO)	31.86	200	P	P	21 32 11.5	+0.2
	comp=Z,5.8nm,1.0s,baz=41,slow=9.3,SNR=2.5						
NWAO				LR	LR	21 45 49.1	
	comp=Z,190nm,20.1s,baz=54,slow=38						
NWAO	Narrogin (SRO)	31.86	200	P	P	21 32 09.9	-1.4
NWAO				IAmb	IAmb	21 32 19.6	
	comp=Z,25nm,1.4s						
ARMA	Armidale	34.39	145	P	P	21 32 34.7	+1.1
ARMA				IAmb	IAmb	21 32 50.0	
	comp=Z,11nm,1.1s						
SLVN	Son La	34.80	315	P	P	21 32 35.5	-1.7
SLVN				IAmb	IAmb	21 32 40.6	
	comp=Z,7.9nm,1.0s						
NJ2	Nanjing	36.31	345	*e*P	P	21 32 51.7	+1.8
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WHN	Wuhan	36.36	338	P	P	21 32 53.6	+3.2
CM31	Chiang Mai Arr	36.84	307	IAmb	IAmb	21 32 57.4	
	comp=Z,17nm,1.1s						
CMAR	Chiang Mai Arr	36.84	307	P	P	21 32 56.4	+1.7
	comp=Z,6.1nm,1.0s,baz=136,slow=7.4,SNR=55						
CMAR				PcP	PcP	21 35 18.6	+2.2
	comp=Z,2.4nm,0.8s,baz=169,slow=2.5,SNR=13						
CMAR				LR	LR	21 50 46.0	
	comp=Z,41nm,19.0s,baz=164,slow=41						
CMAR	Chiang Mai Arr	36.84	307	P	P	21 32 52.5	-2.1
CMAR					PcP	21 35 18.2	+1.8
CHTO	Chiang Mai	37.03	307	P	P	21 32 57.7	+1.5
TOO	Toolangi	37.40	159	P	P	21 32 60.0	+0.8
TOO				IAmb	IAmb	21 33 16.2	
	comp=Z,21nm,1.4s						
ENH	Enshi	38.21	332	P	P	21 33 04.1	-2.0
ENH				IAmb	IAmb	21 33 17.4	
	comp=Z,7.4nm,1.1s						
MJAR	Matsushiro Arr	40.22	11	P	P	21 33 23.6	+0.9
	comp=Z,1.3nm,0.6s,baz=180,slow=8.6,SNR=4.4						
MJAR				LR	LR	21 48 47.9	
	comp=Z,37nm,20.8s,baz=60,slow=34						
MJAR	Matsushiro Arr	40.22	11	P	P	21 33 20.7	-2.1
MAJO	Matsushiro	40.22	11	P	P	21 33 20.0	-2.8
MAJO				IAmb	IAmb	21 33 35.0	
	comp=Z,7.4nm,0.9s						
KSRS	Korea Array	40.31	358	P	P	21 33 23.8	+0.3
	comp=Z,0.8nm,0.6s,baz=181,slow=9.9,SNR=4.1						
KSRS				LR	LR	21 49 15.9	
	comp=Z,63nm,18.8s,baz=186,slow=35						
TARA	Tarawa	43.70	85	P	P	21 33 49.3	-2.3
LZH	Lanzhou	45.68	331	*e*P	P	21 34 08.5	+1.3
LZH				pP	sP	21 34 18.1	-1.0
LZH				sP	pP	21 34 22.3	+6.6
LZH				*e*PP	PP	21 35 56.2	+1.7
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
LZH				pmax	pmax		
	comp=Z,78nm,6.0s						
LZH				LR	LR		
	comp=Z,330nm,13.5s						
LZH				LR	LR		
	comp=Z,330nm,13.3s						
LZH				LR	LR		
	comp=Z,460nm,17.0s						
SHL	Shillong	46.17	310	P	P	21 34 10.7	-0.5
SHL				IAmb	IAmb	21 34 13.4	
	comp=Z,14nm,0.8s						
HHC	Hu-ho-hao-te	46.63	341	*e*P	P	21 34 17.2	+2.7
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
USRK	Ussuriysk Ar.	47.08	3	P	P	21 34 18.5	+0.7
	comp=Z,2.8nm,0.8s,baz=196,slow=6.6,SNR=7.3						
ASAJ	Asahikawa	48.41	13	LR	LR	21 53 40.5	
	comp=Z,59nm,20.3s,baz=346,slow=35						
LSA	Lhasa	48.99	314	P	P	21 34 34.8	+1.2
LSA				IAmb	IAmb	21 34 35.8	
	comp=Z,6.9nm,0.9s						
GTA	Gaotai	50.26	330	⇑P	P	21 34 43.0	+0.4
GTA				pP	pP	21 34 51.5	+0.3
GTA				sP	sP	21 34 56.0	+1.4
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,34nm,4.9s						
GTA				LR	LR		
	comp=Z,87nm,16.5s						
GTA				LR	LR		
	comp=Z,84nm,17.1s						
TAPN	Taplejung	50.28	310	*e*P	P	21 34 43.6	+0.4
ODAN	Odare	50.29	309	*e*P	P	21 34 43.5	+0.3
	comp=Z,17nm,0.8s						
RAMN	Ramite	50.95	309	*e*P	P	21 34 48.9	+0.7
	comp=Z,33nm,0.7s						
JIRN	Jiri	51.61	309	*e*P	P	21 34 53.6	+0.3
	comp=Z,15nm,0.6s						
GUN	Gumba	51.97	309	*e*P	P	21 34 56.2	+0.3
	comp=Z,24nm,0.7s						
PKI	Pulchoki	52.17	309	*e*P	P	21 34 57.3	-0.1
PKIN	Phulchoki	52.19	309	*e*P	P	21 34 57.3	-0.1
KKN	Kakani	52.38	309	*e*P	P	21 34 58.9	+0.1
	comp=Z,18nm,0.9s						
DMN	Daman	52.43	309	*e*P	P	21 34 59.4	+0.2
	comp=Z,19nm,0.9s						
DANN	Dangsing	53.83	309	*e*P	P	21 35 09.8	+0.2
	comp=Z,44nm,0.7s						
ULN	Ulaanbaatar	54.35	342	P	P	21 35 13.5	+0.7
ULN				IAmb	IAmb	21 35 14.8	
	comp=Z,4.9nm,0.9s						
SONM	Songino Array	54.53	341	P	P	21 35 14.4	+0.3
	comp=Z,2.1nm,0.7s,baz=145,slow=8.2,SNR=17						
SONM	Songino Array	54.53	341	P	P	21 35 14.6	+0.5
WMQ	Urumqi	59.79	326	*e*P	P	21 35 52.1	+0.7
WMQ				pP	pP	21 36 01.5	+1.4
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,89nm,4.3s						
WMQ				LR	LR		
	comp=Z,280nm,28.9s						
WMQ				LR	LR		
	comp=Z,930nm,29.0s						
PETK	Petropavlovsk-	60.77	19	P	P	21 35 58.8	+1.0
	comp=Z,9.1nm,0.7s,baz=178,slow=5.7,SNR=13						
PETK				LR	LR	21 58 28.5	
	comp=Z,43nm,22.0s,baz=241,slow=32						
PETK	Petropavlovsk-	60.77	19	P	P	21 35 59.2	+1.4
MK31	Makanchi Array	64.63	326	IAmb	IAmb	21 36 25.5	
	comp=Z,4.1nm,0.9s						
MKAR	Makanchi Array	64.63	326	P	P	21 36 23.8	+0.1
	comp=Z,2.3nm,0.6s,baz=120,slow=7.8,SNR=37						
MKAR	Makanchi Array	64.63	326	P	P	21 36 23.3	-0.4
KSH	Kashi	64.75	317	P	P	21 36 26.3	+1.6
KSH				pP	sP	21 36 37.8	+1.0
KSH				pmax	pmax		
	comp=Z,390nm,4.6s						
MAKZ	Makanchi	64.81	326	P	P	21 36 25.3	+0.4
MAKZ				IAmb	IAmb	21 36 26.6	
	comp=Z,6.8nm,1.1s						
YAK	Yakutsk	64.89	0	P	P	21 36 24.7	-0.2
AAK	Ala-Archa	67.18	319	P	P	21 36 38.7	-1.7
ZAA0	Zalesovo Array	67.80	333	P	P	21 36 42.3	-1.5
ZAA0				IAmb	IAmb	21 36 45.0	
	comp=Z,15nm,1.3s						
ZALV	Zalesovo Beam	67.80	333	P	P	21 36 43.4	-0.4
	comp=Z,6.3nm,0.9s,baz=110,slow=5.8,SNR=21						
KBL	Kabul	67.81	309	P	P	21 36 43.5	-1.1
KBL				IAmb	IAmb	21 36 45.2	
	comp=Z,5.7nm,0.9s						
KURK	Kurchatov	68.87	328	P	P	21 36 50.1	-0.4
KURK				IAmb	IAmb	21 36 51.8	
	comp=Z,12nm,0.9s						
KKAR	Karatay Array	70.01	318	P	P	21 36 56.9	-1.0
HRA	Herat	73.10	307	P	P	21 37 15.3	-1.7
BRVK	Borovoye	74.50	327	P	P	21 37 24.7	+0.2
BRVK				IAmb	IAmb	21 37 26.2	
	comp=Z,6.4nm,0.8s						
GEYT	Alibeck	77.24	310	P	P	21 37 40.9	+0.4
	comp=Z,1.9nm,0.8s,baz=156,slow=4.0,SNR=7.9						
GEYT	Alibeck	77.24	310	P	P	21 37 41.4	+0.9
ABKAR	Akbulak array	79.07	321	P	P	21 37 50.2	-0.1
ABKAR	Akbulak array	79.07	321	IAmb	IAmb	21 37 55.7	
	comp=Z,6.9nm,0.9s						
ARU	Arti	82.06	328	P	P	21 38 05.7	-0.5
ARU				IAmb	IAmb	21 38 08.7	
	comp=Z,12nm,1.2s						
RAYN	Ar Rayn	85.63	294	P	P	21 38 26.3	+1.1
KBZ	Khabaz	89.57	314	P	P	21 38 43.7	+0.1
	comp=Z,2.0nm,0.9s,baz=39,slow=1.6,SNR=4.3						
ILAR	Eielson Array	90.03	25	P	P	21 38 44.1	-1.2
	comp=Z,1.0nm,0.9s,baz=256,slow=5.1,SNR=6.4						
BMAR	Burnt Mountain	91.24	23	P	P	21 38 51.1	+0.1
KMBO	Kilima Mbogo	92.11	269	P	P	21 38 57.5	+1.1
	comp=Z,3.2nm,0.9s,baz=94,slow=3.1,SNR=6.0						
BRTR	Keskin Array B	96.38	309	P	P	21 39 14.5	-0.9
	comp=Z,0.6nm,0.8s,baz=101,slow=6.4,SNR=5.0						
ARCES	ARCESS Array B	97.69	340	P	P	21 39 19.7	-0.8
	comp=Z,3.4nm,0.9s,baz=90,slow=5.4,SNR=3.2						
TORD	Torodi Ar. Bea	127.39	284	PKP	PKiKP	21 44 52.2	-0.1
	comp=Z,2.3nm,0.9s,baz=62,slow=3.0,SNR=8.6						
CPUP	Villa Florida	150.08	168	PKPbc	PKiKP	21 45 38.3	0.0
	comp=Z,11nm,0.8s,baz=170,slow=2.6,SNR=25						

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*NEIC **01** 21:33:40.4±2.7, 6°.50S±0°.08×130°.0E±0°.1, h164km±13km, mb4.0/6, Error ellipse: s-maj=15.7km s-min=11.5km az=79.0*
*IDC **01** 21:33:49.4±6.0, 6°.93S×129°.58E, h242km±59km, mb3.1/2, mb1 3.5/5, mb1mx3.2/28, mbtmp4.1/5, Error ellipse: s-maj=62.2km s-min=17.7km az=58.0*
ISC 01 21:33:38.9±0.7**, 6°.69S**±0°.06×**130°.13E**±0°.06**, h146km, n21, σ2s.69**/32**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.73	138		Pn	21 34 16.6	+5.9
SAUI				Sn	Sn	21 34 37.3	+2.2
FAKI	Fak Fak	4.29	29		Pn	21 34 42.7	-0.3
MTN	Manton Dam	6.20	171		Pn	21 35 12.2	+4.0
MTN					Sn	21 36 20.0	+1.8
SOEI	Soe	6.56	242		Pn	21 35 14.6	+1.4
SOEI					Sn	21 36 27.8	+0.8
BATI	Baumata	7.29	241	P	Pn	21 35 25.9	+2.9
	16nm,0.3s,baz=108,slow=2.1,SNR=22						
BATI				S	Sn	21 36 44.8	+0.3
	9.6nm,0.3s,baz=206,slow=20,SNR=4.7						
KNRA	Kununurra	9.04	188		Pn	21 35 48.8	+2.6
KNRA					Sn	21 37 25.1	-1.4
FITZ	Fitzroy Crossi	12.16	201	P	Pn	21 36 28.9	+1.4
	0.5nm,0.3s,baz=19,slow=11,SNR=17						
FITZ				S	Sn	21 38 35.6	-6.3
	1.8nm,0.3s,baz=57,slow=20,SNR=8.8						
FITZ	Fitzroy Crossi	12.16	201	P	Pn	21 36 28.0	+0.5
FITZ					Sn	21 38 37.5	-4.4
WRAB	Tennant Creek	13.79	163	P	P	21 36 55.2	+3.1
WRAB					Sn	21 39 16.3	-4.9
WRA	Warramunga Arr	13.80	163	P	Pn	21 36 49.0	+0.5
	1.4nm,0.3s,baz=349,slow=11,SNR=13						
WRA				S	Sn	21 39 14.2	-7.1
	2.6nm,0.3s,baz=337,slow=20,SNR=9.9						
COEN	Coen	14.72	120		P	21 37 04.0	+1.6
COEN					Sn	21 39 39.4	-4.1
JAGI	Jajag, Banyuwa	15.94	263	P	Pn	21 37 13.6	-1.7
AS31	Alice Springs	17.27	168	P	Pn	21 37 33.9	+2.6
AS31				S	S	21 40 42.7	-0.5
ASAR	Alice Springs	17.27	168	P	Pn	21 37 34.4	+3.1
	1.4nm,0.3s,baz=344,slow=10,SNR=31						
ASAR				S	S	21 40 38.8	-4.4
	0.3nm,0.3s,baz=354,slow=26,SNR=4.0						
ASAR	Alice Springs	17.27	168	P	Pn	21 37 33.9	+2.5
ASAR					S	21 40 43.0	-0.1
PSA00	Pilbara Seismi	17.83	213	P	P	21 37 37.5	+0.8
PSA00				IAmb	IAmb	21 37 46.6	
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	39.63	310	P	P	21 40 55.4	-1.2
	comp=Z,0.3nm,0.6s,baz=134,slow=6.4,SNR=5.5						
SONM	Songino Array	58.19	341	P	P	21 43 15.8	-2.0
MK31	Makanchi Array	68.04	327	P	P	21 44 22.2	-0.4
MK31				IAmb	IAmb	21 44 22.5	
	comp=Z,3.3nm,1.5s						
MKAR	Makanchi Array	68.04	327	P	P	21 44 22.4	-0.3
	comp=Z,1.1nm,0.5s,baz=121,slow=7.8,SNR=24						
MAKZ	Makanchi	68.22	327	P	P	21 44 23.2	-0.5
MAKZ				IAmb	IAmb	21 44 24.1	
	comp=Z,3.1nm,1.4s						

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*IDC **01** 22:05:02.5±0.7, 45°.94S×13°.53W, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.0/30, mbtmp4.2/8, MS3.8/15, Ms1 3.7/15, ms1mx3.7/20, Error ellipse: s-maj=27.9km s-min=21.2km az=102.0*
*NEIC **01** 22:05:03.7±1.6, 45°.9S±0°.1×13°.5W±0°.2, h10km±1km, mb4.4/9, Error ellipse: s-maj=26.6km s-min=20.6km az=125.0*
ISC 01 22:05:03.8±0.6**, 45°.9S**±0°.1×**13°.5W**±0°.1**, h10km, n45, σ0s.69**/29**, mb4.4**/10**, MS3.8**/15**, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	16.86	232	Pn	Pn	22 08 59.8	+0.1
HOPE				IAmb	IAmb	22 09 04.2	
	comp=Z,25nm,0.9s						
SNAA	Sanae	26.31	172	P	P	22 10 39.3	0.0
	comp=Z,2.4nm,1.0s,baz=321,slow=10.0,SNR=4.6						
SNAA	Sanae	26.31	172	P	P	22 10 38.0	-1.3
SUR	Sutherland	29.63	75	LR	LR	22 20 06.2	
	comp=Z,441nm,20.8s,baz=215,slow=30						
BOSA	Boshof	34.97	74	LR	LR	22 23 11.3	
	comp=Z,326nm,20.9s,baz=224,slow=31						
LBTB	Lobatse	37.60	70	P	P	22 12 19.5	+0.8
	comp=Z,4.4nm,1.0s,baz=227,slow=13,SNR=3.7						
LBTB	Lobatse	37.60	70	IAmb	IAmb	22 12 22.3	
	comp=Z,21nm,1.4s						
CPUP	Villa Florida	39.82	284	LR	LR	22 25 52.3	
	comp=Z,74nm,19.8s,baz=174,slow=31						
PLCA	Paso Flores	41.04	256	LR	LR	22 26 46.3	
	comp=Z,81nm,19.8s,baz=148,slow=32						
BDFB	Brasilia	41.74	305	LR	LR	22 26 42.6	
	comp=Z,94nm,21.7s,baz=114,slow=31						
MAW	Mawson	43.58	147	LR	LR	22 27 41.3	
	comp=Z,55nm,20.2s,baz=254,slow=31						
QSPA	South Pole Qui	44.32	180	P	P	22 13 13.7	0.0
	comp=Z,5.5nm,0.8s,baz=207,slow=3.8,SNR=10.0						

QSPA	South Pole Qui	44.32	180	P	P	22 13 14.6	+0.9
QSPA				IAmb	IAmb	22 13 15.3	
	comp=Z,6.1nm,0.9s						
LSZ	Lusaka	46.35	63	P	P	22 13 30.4	0.0
	comp=Z,2.5nm,0.8s,baz=192,slow=6.1,SNR=8.4						
LSZ	Lusaka	46.35	63	P	P	22 13 29.9	-0.4
LSZ				IAmb	IAmb	22 13 32.3	
	comp=Z,4.5nm,1.0s						
SIV	San Ignacio	49.52	291	P	P	22 13 54.8	0.0
	comp=Z,1.0nm,0.5s,baz=151,slow=9.1,SNR=6.3						
DBIC	Dimbokro	52.95	11	LR	LR	22 30 46.2	
	comp=Z,86nm,21.8s,baz=159,slow=29						
LPAZ	La Paz	53.99	285	LR	LR	22 36 10.0	
	comp=Z,38nm,20.9s,baz=109,slow=35						
VNDA	Vanda	56.78	179	LR	LR	22 37 30.4	
	comp=Z,70nm,18.5s,baz=178,slow=34						
TOA0	Torodi Ar. Sit	60.40	17	P	P	22 15 11.5	-1.8
TOA0				IAmb	IAmb	22 15 18.1	
	comp=Z,3.5nm,1.1s						
TORD	Torodi Ar. Bea	60.40	17	P	P	22 15 12.2	-1.1
	comp=Z,2.6nm,1.1s,baz=183,slow=6.9,SNR=8.6						
TORD				PcP	PcP	22 15 58.4	+0.2
	comp=Z,1.6nm,1.0s,baz=187,slow=3.9,SNR=4.1						
TORD				LR	LR	22 35 19.4	
	comp=Z,91nm,20.7s,baz=315,slow=30						
TORD	Torodi Ar. Bea	60.40	17	P	P	22 15 12.7	-0.5
TORD				PcP	PcP	22 15 58.7	+0.5
KMBO	Kilima Mbogo	62.93	60	LR	LR	22 40 04.5	
	comp=Z,76nm,20.6s,baz=92,slow=33						
NNA	Nana	62.96	281	LR	LR	22 40 43.7	
	comp=Z,50nm,19.4s,baz=159,slow=34						
TAM	Tamanrasset	70.56	19	P	P	22 16 18.9	-0.2
TAM				IAmb	IAmb	22 16 22.0	
	comp=Z,4.1nm,1.0s						
ROSC	El Rosal	73.78	295	LR	LR	22 47 05.0	
	comp=Z,79nm,19.2s,baz=127,slow=34						
H08S1	Diego Carcia H	81.79	92	T	T	23 47 25.8	
	baz=225,slow=76,SNR=5.7						
H08S2	Diego Garcia H	81.80	92	T	T	23 47 25.6	
	baz=225,slow=76,SNR=5.2						
H08S3	Diego Garcia H	81.81	92	T	T	23 47 26.0	
	baz=225,slow=76,SNR=6.0						
KEST	Kesra	83.88	19	P	P	22 17 33.9	+0.4
	comp=Z,2.1nm,0.8s,baz=52,slow=11,SNR=3.7						
ESDC	Sonseca Array	85.67	7	P	P	22 17 43.6	+1.2
	comp=Z,2.9nm,0.9s,baz=186,slow=4.7,SNR=7.1						
ESDC	Sonseca Array	85.67	7	P	P	22 17 42.9	+0.6
BRTR	Keskin Array B	95.17	35	LR	LR	23 02 07.5	
	comp=Z,23nm,19.1s,baz=270,slow=36						
GERES	GERESS Array B	97.35	18	LR	LR	22 58 52.1	
	comp=Z,63nm,18.4s,baz=284,slow=33						
CMAR	Chiang Mai Arr	118.60	93	PKP	PKiKP	22 23 52.0	-0.1
	comp=Z,0.5nm,0.8s,baz=244,slow=3.3,SNR=5.3						
N23A	Red Feather La	119.30	300		PKPdf	22 23 52.5	-0.7
G08A	Pilot Rock	129.67	298		PKiKP	22 24 14.2	+0.8
YKA	Yellowknife Ar	134.16	321	PKP	PKiKP	22 24 21.6	-0.1
	comp=Z,0.4nm,0.8s,baz=117,slow=2.4,SNR=4.0						
SONM	Songino Array	139.81	65	PKhKP	PKPpre	22 24 25.3	
	comp=Z,0.3nm,0.9s,baz=124,slow=4.2,SNR=2.7						
SONM				PKP	PKPdf	22 24 30.8	-0.7
	comp=Z,0.6nm,0.8s,baz=216,slow=1.6,SNR=4.7						
DAWY	Dawson	145.39	321		PKPab	22 24 41.1	+0.2
BCAR	Beaver Creek A	146.56	320		PKPbc	22 24 44.5	+0.1
BMAR	Burnt Mountain	146.89	328		PKPab	22 24 46.4	-0.2
ILAR	Eielson Array	148.48	323	PKPbc	PKPbc	22 24 49.6	+0.2
	comp=Z,2.4nm,0.8s,baz=4.0,slow=0.8,SNR=12						
ILAR	Eielson Array	148.48	323		PKPbc	22 24 49.3	-0.2
KSRS	Korea Array	150.24	93	PKPbc	PKPbc	22 24 54.4	-0.3
	comp=Z,1.7nm,0.9s,baz=239,slow=2.5,SNR=6.3						

*IDC **01** 22:06:41.9±1.5, 1°.00N×97°.09E, h0km, mb3.9/5, mb1 3.8/7, mb1mx3.5/42, mbtmp3.7/7, ML2.9/2, MS2.4/1, Ms1 2.4/1, ms1mx2.3/37, Error ellipse: s-maj=27.9km s-min=23.1km az=142.0*
*DJA **01** 22:06:46.6±1.2, 1°N±9°×9°7E±°, h23km±4km, M3.6/6, MLv3.6/6*
ISC 01 22:06:45.8±1.6, **1°.1N**±0°.1×**97°.07E**±0°.09, **h25**km, **n15**, σ**0s.79**/11, **mb3.9**/5, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.54	69	P	Pb	22 06 57.1	+0.4
GSI				S	Sn	22 07 06.0	-0.1
SNSI	Sinabang, Aceh	1.49	330	P	Pb	22 07 12.6	-0.2
SNSI				S	Sb	22 07 31.4	0.0
PSI	Prapat	2.50	48	Pn	Pn	22 07 24.1	-0.9
	0.9nm,0.3s,baz=205,slow=8.5,SNR=9.3						
PSI				Lg	Lg	22 08 01.5	
	1.3nm,0.3s,baz=217,slow=19,SNR=4.7						
PSI				LR	LR	22 08 02.6	
	comp=Z,91nm,21.8s,baz=234,slow=32						
CMAR	Chiang Mai Arr	17.34	6	P	Pn	22 10 45.5	-0.7
	0.0nm,0.3s,baz=189,slow=12,SNR=7.6						
H08S2	Diego Garcia H	26.01	250	T	T	22 39 19.1	
	baz=71,slow=75						
H08S3	Diego Garcia H	26.02	250	T	T	22 39 18.9	
	baz=71,slow=75						
H08S1	Diego Carcia H	26.03	250	T	T	22 39 16.3	
	baz=71,slow=75						
H01W3	Cape Leeuwin H	39.21	158	T	T	22 55 38.3	
	baz=333,slow=76						
H01W2	Cape Leeuwin H	39.22	158	T	T	22 55 42.0	
	baz=333,slow=76						
H01W1	Cape Leeuwin H	39.22	158	T	T	22 55 38.8	
	baz=333,slow=76						
WRA	Warramunga Arr	42.09	122	P	P	22 14 35.3	-0.8
	0.9nm,0.8s,baz=298,slow=8.8,SNR=5.2						
KSRS	Korea Array	46.00	35	P	P	22 15 07.6	+0.5
	1.8nm,0.8s,baz=221,slow=9.1,SNR=4.6						
SONM	Songino Array	47.24	9	P	P	22 15 17.0	+0.1
	0.9nm,0.8s,baz=189,slow=8.7,SNR=6.8						
MKAR	Makanchi Array	47.30	346	P	P	22 15 18.4	+1.2
	0.8nm,0.7s,baz=160,slow=8.0,SNR=11						
ZALV	Zalesovo Beam	53.63	351	P	P	22 16 06.0	+1.1
	2.5nm,0.8s,baz=174,slow=5.8,SNR=11						

ROM 01 22:08:57.6±0.1, **41°.358N**±0°.005×**14°.455E**±0°.006, **h16**km±1km, **ML1.9**/14, **Error ellipse: s-maj=0.5km s-min=0.3km az=26.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTRJ	Pietraroja	0.06	84	P	Pg	22 09 00.6	-0.2
PTRJ				S	Sg	22 09 03.0	0.0
PTRJ				AML	AML		
	comp=E,6900µm,0.4s						
PTRJ				AML	AML		
	comp=N,6095µm,0.3s						
VAGA	Valle Agricola	0.18	289	P	Pb	22 09 02.3	-0.2
VAGA				S	Sb	22 09 06.2	+0.4
VAGA				AML	AML		
	comp=E,895µm,0.3s						
VAGA				AML	AML		
	comp=N,1240µm,0.5s						
VAGA				AML	AML		
	comp=N,1290µm,0.5s						
VAGA				AML	AML		
	comp=E,894µm,0.3s						
VAGA				AML	AML		
	comp=E,926µm,0.3s						
VAGA				AML	AML		
	comp=N,1245µm,0.5s						
VAGA				AML	AML		
	comp=E,894µm,0.3s						
SACR	S. Croce Del S	0.19	78	P	Pg	22 09 02.4	+0.1
SACR				S	Sb	22 09 06.1	-0.1
SACR				AML	AML		
	comp=N,743µm,0.5s						
SACR				AML	AML		
	comp=E,770µm,0.2s						
BSSO	Busso	0.21	29	P	Pg	22 09 02.9	+0.2
BSSO				S	Sb	22 09 07.0	+0.1
BSSO				AML	AML		
	comp=E,946µm,1.6s						
BSSO				AML	AML		
	comp=N,1146µm,0.5s						
BSSO				AML	AML		
	comp=E,412µm,0.7s						
BSSO				AML	AML		
	comp=N,464µm,0.6s						
BSSO				AML	AML		
	comp=N,1148µm,0.5s						
BSSO				AML	AML		
	comp=E,947µm,1.6s						
PIGN	Pignataro Magg	0.26	233	P	Pg	22 09 03.5	+0.2
PIGN				S	Sb	22 09 08.3	+0.2
PIGN				AML	AML		
	comp=N,184µm,0.7s						
PIGN				AML	AML		
	comp=E,225µm,0.7s						
PSB1	Pescosannita	0.30	117	P	Pg	22 09 04.2	+0.2
PSB1				S	Sb	22 09 09.4	+0.1
PSB1				AML	AML		
	comp=E,234µm,0.6s						
PSB1				AML	AML		
	comp=N,276µm,0.6s						
PSB1				AML	AML		
	comp=N,272µm,0.6s						
PSB1				AML	AML		
	comp=E,216µm,0.6s						
PSB1				AML	AML		
	comp=E,234µm,0.6s						
PSB1				AML	AML		
	comp=N,273µm,0.6s						
MIDA	Miranda	0.32	332	P	Pg	22 09 04.2	-0.2
MIDA				S	Sg	22 09 09.4	+0.3
MIDA				AML	AML		
	comp=N,218µm,0.5s						
MIDA				AML	AML		
	comp=E,364µm,0.4s						
GATE	Gambatesa	0.38	66	AML	AML		
	comp=N,198µm,0.4s						
GATE				AML	AML		
	comp=E,147µm,0.6s						
CERA	Filignano	0.41	306	AML	AML		
	comp=E,146µm,0.8s						
CERA				AML	AML		
	comp=N,172µm,0.4s						
RNI2	Rionero Sannit	0.41	327	P	Pg	22 09 06.1	+0.1
RNI2				AML	AML		
	comp=E,331µm,0.5s						
RNI2				AML	AML		
	comp=E,330µm,0.5s						
RNI2				AML	AML		
	comp=N,204µm,0.5s						
RNI2				AML	AML		
	comp=E,322µm,1.4s						
RNI2				AML	AML		
	comp=N,188µm,0.5s						
TRIV	Trivento	0.41	10	P	Pg	22 09 06.2	+0.2
TRIV				S	Sb	22 09 12.7	+0.1
TRIV				AML	AML		
	comp=N,170µm,0.3s						
TRIV				AML	AML		
	comp=E,174µm,0.5s						
CIGN	Sant'Elia a Pi	0.45	49	P	Pb	22 09 06.9	-0.2
CIGN				AML	AML		
	comp=E,99µm,0.5s						
CIGN				AML	AML		
	comp=N,104µm,0.6s						
CIGN				AML	AML		
	comp=E,98µm,0.5s						
CIGN				AML	AML		
	comp=N,104µm,1.6s						
CIGN				AML	AML		
	comp=N,104µm,1.6s						
MODR	Mondragone	0.48	244	AML	AML		
	comp=N,322µm,0.3s						
MODR				AML	AML		
	comp=E,336µm,0.7s						
MELA	Melanico ??? S	0.61	55	P	Pg	22 09 08.9	-0.7
MELA				S	Sb	22 09 18.5	+0.3
MELA				AML	AML		
	comp=N,162µm,0.4s						
MELA				AML	AML		
	comp=E,376µm,0.7s						
LPEL	Lama dei Pelig	0.72	344	P	Pn	22 09 13.2	+0.2
LPEL				AML	AML		
	comp=E,102µm,1.5s						
LPEL				AML	AML		
	comp=E,102µm,1.5s						
LPEL				AML	AML		
	comp=N,88µm,0.2s						
SGTA	Sant Agata di	0.72	108	P	Pn	22 09 14.0	+0.9
SGTA				AML	AML		
	comp=N,73µm,0.5s						
SGTA				AML	AML		
	comp=E,71µm,1.5s						
INTR	Introdacqua	0.77	328	P	Pn	22 09 14.2	+0.4
INTR				S	Sb	22 09 24.0	+1.1
INTR				AML	AML		
	comp=N,162µm,0.4s						
INTR				AML	AML		
	comp=E,139µm,1.3s						
GIUL	Giuliano Di Ro	0.92	283	P	Pn	22 09 16.0	+0.1
SGRT	San Giovanni R	1.04	67	S	Sn	22 09 34.0	+2.1
MSAG	Monte S. Angel	1.15	72	P	Pg	22 09 20.1	+0.3
MSAG				AML	AML		
	comp=E,96µm,1.0s						
TRTR	Tortoreto Alta	1.50	345	S	Sg	22 09 45.0	-1.1
NRCA	Norcia	1.78	326	S	Sb	22 09 52.0	+0.1

ROM 01 22:09:26.2±0.1, **41°.347N**±0°.004×**14°.472E**±0°.006, **h14**km±1km, **Md1.6**/6, **Error ellipse: s-maj=0.5km s-min=0.0km az=174.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTRJ	Pietraroja	0.05	68	P	Pg	22 09 29.0	0.0
PTRJ				S	Sg	22 09 31.4	+0.5
PTRJ				AML	AML		
	comp=E,4120µm,1.4s						
PTRJ				AML	AML		
	comp=N,3340µm,0.3s						
PTRJ				END			
PTRJ				END			
SACR	S. Croce Del S	0.18	74	P	Pg	22 09 30.8	+0.2
SACR				S	Sg	22 09 34.1	+0.6
SACR				END			
SACR				END			
VAGA	Valle Agricola	0.19	291	P	Pg	22 09 30.8	+0.1
VAGA				S	Sb	22 09 34.8	-0.4
VAGA				END			
VAGA				END			
BSSO	Busso	0.22	25	P	Pg	22 09 31.4	+0.2
BSSO				S	Sg	22 09 34.9	+0.3
BSSO				END			
BSSO				END			
PIGN	Pignataro Magg	0.26	237	P	Pg	22 09 32.0	+0.1
PIGN				S	Sb	22 09 36.8	-0.4
PIGN				END			
PIGN				END			
PSB1	Pescosannita	0.28	116	P	Pg	22 09 32.7	+0.4
PSB1				S	Sb	22 09 37.6	-0.1
PSB1				END			
MIDA	Miranda	0.34	331	P	Pg	22 09 32.9	-0.4
MIDA				S	Sb	22 09 39.0	-0.4
TRIV	Trivento	0.42	8	P	Pg	22 09 34.7	-0.1
TRIV				S	Sb	22 09 41.7	-0.1
RNI2	Rionero Sannit	0.43	326	P	Pg	22 09 34.7	-0.2
RNI2				S	Sb	22 09 41.7	-0.4
MELA	Melanico ??? S	0.61	54	P	Pg	22 09 38.2	0.0
MELA				S	Sb	22 09 46.9	-0.2

*KRNET **01** 22:10:47.4±0.1, 41°.75N×72°.84E, h20km, mb2.5*
*SOME **01** 22:10:47.1, 41°.73N×72°.83E, h10km*
*KNET **01** 22:10:48.3±0.6, 41°.82N×72°.89E, h0km, ml2.2, Error ellipse: s-maj=5.8km s-min=4.0km az=124.0*
*NNC **01** 22:10:50.1±1.2, 41°.92N×72°.89E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=16.2km s-min=4.5km az=171.0*
ISC 01 22:10:47.3±1.1, **41°.79N**±0°.03×**72°.86E**±0°.02, **h4**km±10km, **n44**, σ**1s.00**/73, **31C-20D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.47	169	⇓iP	Pg	22 10 55.9	-0.5
	baz=66						
ARSB				⇓iS	Sg	22 11 02.0	-0.6
	baz=66						
ARK	Arkit	0.67	271	⇑iP	Pg	22 10 59.7	-0.5
	baz=73						
ARK				⇑iS	Sg	22 11 08.6	-0.3
	baz=73						
AML	Almayashu	0.71	61	⇓iP	Pg	22 11 01.8	+1.0
	baz=59						
AML				⇓iS	Sb	22 11 11.9	-0.8
	baz=59						
AML	Almayashu	0.71	61	⇓P	Pb	22 11 02.0	-0.5
	36nm,0.2s,SNR=132						
AML				⇑S	Sb	22 11 12.2	-0.4
	30nm,0.1s						
MRKS	Merke	0.99	16	eP	Pb	22 11 07.0	-0.1
	6.5nm,0.1s						
MRKS				eS	Sb	22 11 20.6	0.0
	15nm,0.1s						
ARLS	Aral	1.09	86	⇑iP	Pg	22 11 08.2	0.0
	baz=83						
ARLS				⇑iS	Sb	22 11 23.2	-0.4
	baz=83						
EKS2	Erkin-Say	1.10	38	⇑iP	Pb	22 11 08.9	-0.1
	baz=37						
EKS2				⇑iS	Sn	22 11 24.1	-1.4
	baz=37						
EKS2	Erkin-Say	1.10	38	⇓P	Pb	22 11 09.1	+0.1
	2.0nm,0.1s,SNR=20						
EKS2				⇑S	Sn	22 11 24.6	-0.9
	6.8nm,0.1s						
UCH	Uchtor	1.30	70	⇑iP	Pn	22 11 12.1	-0.6
	baz=68						
UCH				⇑iS	Sn	22 11 29.9	-1.0
	baz=68						
UCH	Uchtor	1.30	70	⇓P	Pn	22 11 12.6	-0.1
	4.0nm,0.1s,SNR=17						
AAK	Ala-Archa	1.48	55	⇑iP	Pb	22 11 15.6	+0.2
	baz=53						
AAK				⇑iS	Sg	22 11 35.6	+0.9
	baz=53						
AAK	Ala-Archa	1.48	55	⇓P	Pb	22 11 15.3	-0.1
	3.0nm,0.2s,SNR=8.7						
AAK	Ala-Archa	1.48	55	P	Pb	22 11 15.6	+0.2
	2.2nm,0.4s						
AAK				S	Sg	22 11 35.3	+0.5
	3.5nm,0.3s						
FRU1	Bishkek	1.66	52	⇑iP	Pb	22 11 18.5	0.0
	baz=51						
FRU1				⇑iS	Sg	22 11 40.8	+0.2
	baz=51						
KBK	Karagaybulak	1.77	60	⇑iP	Pb	22 11 20.4	-0.1
	baz=59						
KBK				⇑iS	Sg	22 11 44.2	0.0
	baz=59						
KBK	Karagaybulak	1.77	60	⇑P	Pg	22 11 21.3	+0.1
	5.5nm,0.2s,SNR=14						
KZA	Kyzart	1.80	80	⇑iP	Pb	22 11 20.8	-0.3
	baz=79						
KZA				⇑iS	Sg	22 11 45.0	-0.2
	baz=79						
KZA	Kyzart	1.80	80	⇑P	Pg	22 11 21.9	+0.1
	4.7nm,0.2s,SNR=18						
CHMS	Chumysh	1.85	49	⇓iP	Pb	22 11 21.6	0.0
	baz=48						
CHMS				⇓iS	Sg	22 11 46.2	-0.4
	baz=48						
CHMS	Chumysh	1.85	49	⇑P	Pg	22 11 22.9	+0.2
	5.7nm,0.2s,SNR=10						
USP	Ospenovka	1.91	39	⇑iP	Pb	22 11 22.4	-0.3
	baz=38						
USP				⇑iS	Sg	22 11 47.7	-0.8
	baz=38						
USP	Ospenovka	1.91	39	⇓P	Pg	22 11 23.5	-0.3
	15nm,0.2s,SNR=14						
IUG	Iuzhnay	2.14	280	eP	Pb	22 11 27.3	+0.6
	1.0nm,0.2s						
IUG				eS	Sg	22 11 56.6	+0.6
	24nm,0.3s						
KK31	Karatay Array	2.18	308	⇓Pn	Pb	22 11 27.0	-0.3
	0.8nm,0.3s,baz=126,slow=16,SNR=45						
KK31				⇑Lg	Lg	22 11 57.1	
	1.8nm,0.3s,baz=120,slow=26,SNR=11						
TKM2	Tokmak 2	2.32	60	⇓iP	Pb	22 11 28.1	-1.7
	baz=59						
TKM2				⇓iS	Sb	22 11 57.5	-1.4
	baz=59						
TKM2	Tokmak 2	2.32	60	⇓P	Pb	22 11 30.6	+0.8
	4.9nm,0.2s,SNR=8.0						
TKM2	Tokmak 2	2.32	60	⇓Pn	Pb	22 11 30.5	+0.7
	6.7nm,0.7s						
TKM2				⇑Lg	Lg	22 12 02.6	
	13nm,0.5s						
BTK	Batken	2.32	223	⇑iP	Pn	22 11 26.9	+0.5
	baz=23						
BTK				⇑iS	Sn	22 11 55.9	+0.4
	baz=23						
NRN	Naryn	2.38	98	⇑iP	Pn	22 11 28.3	+0.9
	baz=97						
NRN				⇑iS	Sn	22 11 58.0	+0.8
	baz=97						
BOOM	Boomskoye usch	2.39	72	⇓iP	Pb	22 11 29.2	-1.8
	baz=71						
BOOM				⇓iS	Sb	22 11 59.6	-1.4
	baz=71						
ULHL	Ulahol	2.56	79	⇓iP	Pn	22 11 31.2	+1.4
	baz=78						
ULHL				⇓iS	Sb	22 12 03.0	-2.8
	baz=78						
BRLS	Borolday	2.56	300	eP	Pb	22 11 34.7	+0.9
	0.3nm,0.1s						
BRLS				eS	Sg	22 12 09.1	-0.4
	5.0nm,0.4s						
DGS	Degeres	2.59	55	eP	Pg	22 11 36.0	-1.0
	5.7nm,0.4s						
DGS				eS	Sg	22 12 11.8	+1.3
	15nm,0.5s						
KST	Kastek	2.61	60	eP	Pb	22 11 36.1	+1.4
	4.3nm,0.1s						
KST				eS	Sg	22 12 12.0	+0.8
	16nm,0.2s						
KST	Kastek	2.61	60	Pg	Pb	22 11 36.0	+1.2
	3.0nm,0.7s						
KST				Lg	Lg	22 12 11.9	
	14nm,0.5s						
KDJ	Kajisay	3.24	83	⇑iP	Pn	22 11 40.6	+1.5
	baz=82						
KDJ				⇑iS	Sn	22 12 19.3	+1.1
	baz=82						
TNSS	Tian-Shan	3.27	66	eP	Pb	22 11 48.1	+2.0
	1.7nm,0.2s						
TNSS				eS	Sg	22 12 32.1	-0.2
	7.3nm,0.5s						
KUU	Kurty	3.31	49	eP	Pb	22 11 48.6	+2.0
	0.8nm,0.1s						
KUU				eS	Sg	22 12 32.8	-0.7
	2.7nm,0.2s						
KUU	Kurty	3.31	49	Pg	Pb	22 11 48.0	+1.5
	0.7nm,0.5s						
KUU				Lg	Lg	22 12 31.8	
	3.9nm,0.6s						
MDOK	Medeo	3.38	65	eP	Pg	22 11 50.6	-1.6
	2.6nm,0.2s						
MDOK				eS	Sg	22 12 36.3	+0.3
	4.9nm,0.3s						
MDOK	Medeo	3.38	65	Pg	Pb	22 11 49.9	+2.0
	1.5nm,0.5s						
MDOK				Lg	Lg	22 12 34.6	
	6.7nm,0.8s						
MDOK	Medeo	3.38	65	Pg	Pb	22 11 50.0	+2.0
	2.1nm,0.3s						
MDOK				Lg	Lg	22 12 35.0	
	3.3nm,0.6s						
KTBS	Karatobe	3.41	54	Pg	Pb	22 11 50.1	+1.9
	1.4nm,0.6s						
KTBS				Lg	Lg	22 12 35.4	
	6.7nm,0.5s						
KOTS	Kotyrbulak	3.46	64	Pg	Pb	22 11 49.3	+0.1
	4.9nm,0.4s						
KOTS				Lg	Lg	22 12 34.4	
	5.7nm,0.9s						

IDC 01 22:19:06.1±2.3, **4°.68S**×**151°.24E**, **h67**km±34km, **mb3.3**/4, **mb1 3.6**/4, **mb1mx3.2**/35, **mbtmp3.6**/4, **Error ellipse: s-maj=108.3km s-min=23.3km az=133.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	0.86	65	P	Pn	22 19 22.9	+0.2
	34nm,0.3s,baz=209,slow=19,SNR=11						
KRVT				S	Sn	22 19 36.0	+0.9
	87nm,0.3s,baz=318,slow=23,SNR=34						
WRA	Warramunga Arr	22.39	226	P	P	22 23 58.9	-0.3
	0.8nm,0.6s,baz=51,slow=10.0,SNR=6.0						
ASAR	Alice Springs	25.22	220	P	P	22 24 25.9	-0.1
	0.6nm,0.5s,baz=56,slow=9.0,SNR=9.5						
FITZ	Fitzroy Crossi	28.37	240	P	P	22 24 54.5	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.3nm,0.3s,baz=74,slow=3.2,SNR=2.6						
ILAR	Eielson Array	82.63	22	P	P	22 31 22.1	+0.2
	0.5nm,1.1s,baz=260,slow=5.4,SNR=2.8						

IDC 01 22:27:39.5±7.9, 22°.29S×177°.75W, h377km±76km, mb3.5/7, mb1 3.6/8, mb1mx3.3/42, mbtmp4.2/8, Error ellipse: s-maj=41.8km s-min=35.4km az=23.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	16.52	194	P	P	22 31 09.1	-0.1
	0.4nm,0.3s,baz=325,slow=3.8,SNR=3.1						
URZ				S	S	22 34 03.8	+1.0
	0.2nm,0.3s,baz=145,slow=16,SNR=2.7						
CTA	Charters Tower	33.59	267	P	P	22 33 46.4	+0.3
	8.8nm,0.5s,baz=96,slow=10,SNR=20						
STKA	Stephens Creek	37.26	246	P	P	22 34 17.4	+0.5
	1.3nm,0.5s,baz=74,slow=9.1,SNR=4.7						
ASAR	Alice Springs	44.37	258	P	P	22 35 14.3	-0.1
	7.1nm,0.9s,baz=89,slow=8.1,SNR=41						
WRA	Warramunga Arr	44.62	264	P	P	22 35 15.4	-0.9
	3.3nm,0.8s,baz=162,slow=15,SNR=23						
FITZ	Fitzroy Crossi	53.05	264	P	P	22 36 18.9	-0.7
	1.9nm,0.6s,baz=102,slow=6.1,SNR=5.5						
ILAR	Eielson Array	90.00	13	P	P	22 39 56.4	-0.1
	0.3nm,0.8s,baz=222,slow=5.6,SNR=4.1						
CMAR	Chiang Mai Arr	90.93	289	P	P	22 40 03.3	+1.4
	0.6nm,0.9s,baz=116,slow=2.1,SNR=5.7						
AKASG	Malin Array Be	144.68	330	PKP	PKPbc	22 46 30.6	-0.8
	0.4nm,0.3s,baz=47,slow=4.4,SNR=5.8						
BRTR	Keskin Array B	148.19	310	PKPbc	PKPbc	22 46 41.0	-0.9
	0.3nm,0.6s,baz=158,slow=3.9,SNR=2.9						

*IDC **01** 22:33:48.7±2.9, 13°.82S×167°.35E, h186km±23km, mb3.9/13, mb1 4.0/13, mb1mx3.8/33, mbtmp4.4/13, Error ellipse: s-maj=23.4km s-min=15.6km az=108.0*
*NEIC **01** 22:33:51.3±2.0, 13°.75S±0°.09×167°.2E±0°.1, h206km±5km, mb4.6/16, Error ellipse: s-maj=18.1km s-min=11.8km az=120.0*
ISC 01 22:33:50.3±0.5, 13°.70S±0°.07×167°.26E±0°.10, h200km, n50, σ1s.15/57, mb4.3/18, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.36	185	P	Pn	22 35 50.7	+2.4
	1.5nm,0.3s,baz=163,slow=17,SNR=10						
DZM				S	Sn	22 37 23.0	+0.5
	0.2nm,0.3s,baz=128,slow=19,SNR=2.1						
DZM	Mont Dzumac	8.36	185		Pn	22 35 51.8	+3.4
MSVF	Nonsavu	11.14	112	Pn	P	22 36 28.4	-2.0
EIDS	Eidsvold	19.14	230	P	Pn	22 38 00.2	-1.6
EIDS				IAmb	IAmb	22 38 00.9	
	comp=Z,9.8nm,0.7s						
CTA	Charters Tower	21.07	250	P	P	22 38 20.4	+1.2
	comp=Z,4.0nm,0.8s,baz=75,slow=11,SNR=5.3						
ARMA	Armidale	22.01	218	P	P	22 38 30.0	+1.2
TUWZ	Tuamarina	28.23	169	P	P	22 39 23.9	-0.7
THZ	Tophouse	28.39	171	P	P	22 39 26.2	+0.2
THZ				IAmb	IAmb	22 39 27.7	
	comp=Z,16nm,1.1s						
KHZ	Kahutara	29.12	170	P	P	22 39 32.1	-0.4
STKA	Stephens Creek	29.66	228	P	P	22 39 37.7	+0.3
	comp=Z,13nm,0.5s,baz=52,slow=9.0,SNR=45						
STKA				PcP	PcP	22 42 36.6	-0.2
	comp=Z,0.7nm,0.2s,baz=62,slow=2.9,SNR=2.9						
STKA	Stephens Creek	29.66	228	P	P	22 39 38.0	+0.6
TOO	Toolangi	30.67	215	P	P	22 39 47.2	+0.9
TOO				IAmb	IAmb	22 40 03.0	
	comp=Z,14nm,1.1s						
LBZ	Lake Benmore	30.68	176	P	P	22 39 45.8	-0.4
WRA	Warramunga Arr	32.08	254	P	P	22 39 57.5	-1.3
	comp=Z,1.8nm,0.6s,baz=85,slow=9.3,SNR=23						
WRA				PcP	PcP	22 42 43.4	0.0
	comp=Z,1.4nm,0.8s,baz=83,slow=3.0,SNR=6.2						
WRA				ScP	ScP	22 46 08.9	+0.8
	comp=Z,0.4nm,0.9s,baz=78,slow=3.3,SNR=5.3						
WRA	Warramunga Arr	32.08	254	IAmb	IAmb	22 39 59.9	
	comp=Z,0.3nm,1.5s						
WRA					PcP	22 42 43.9	+0.5
AS31	Alice Springs	33.04	248	P	P	22 40 06.1	-1.1
ASAR	Alice Springs	33.04	248	P	P	22 40 06.0	-1.1
	comp=Z,4.2nm,0.5s,baz=74,slow=9.3,SNR=80						
ASAR				PcP	PcP	22 42 45.7	-0.4
	comp=Z,1.0nm,0.6s,baz=76,slow=2.3,SNR=6.2						
ASAR				S	S	22 45 06.9	-4.2
	comp=Z,0.5nm,0.8s,baz=84,slow=17,SNR=5.1						
ASAR				ScP	ScP	22 46 12.1	+0.7
	comp=Z,1.4nm,1.0s,baz=112,slow=4.1,SNR=5.6						
BBOO	Buckleboo	34.21	231	P	P	22 40 17.1	0.0
BBOO				IAmb	IAmb	22 40 18.1	
	comp=Z,9.0nm,0.6s						
KNRA	Kununurra	37.26	262	P	P	22 40 43.1	-0.1
KNRA				IAmb	IAmb	22 40 59.4	
	comp=Z,23nm,1.4s						
KNRA				PcP	PcP	22 42 58.7	+0.2
FORT	Forrest	39.82	238	P	P	22 41 03.6	-0.8
MJAR	Matsushiro Arr	57.00	332	P	P	22 43 14.9	-0.3
	comp=Z,2.8nm,0.8s,baz=165,slow=7.7,SNR=5.3						
VNDA	Vanda	63.88	181	P	P	22 44 00.3	-0.9
	comp=Z,1.1nm,0.6s,baz=8.0,slow=7.9,SNR=5.0						
CMAR	Chiang Mai Arr	74.53	294	P	P	22 45 09.2	+1.7
	comp=Z,2.3nm,0.7s,baz=131,slow=4.7,SNR=26						
CMAR	Chiang Mai Arr	74.53	294	P	P	22 45 08.3	+0.7
QSPA	South Pole Qui	76.32	180	P	P	22 45 16.9	-0.1
QSPA				IAmb	IAmb	22 45 17.3	
	comp=Z,6.3nm,0.7s						
SONM	Songino Array	81.67	324	P	P	22 45 47.4	+1.0
	comp=Z,0.5nm,0.5s,baz=139,slow=5.6,SNR=8.2						
SONM	Songino Array	81.67	324	IAmb	IAmb	22 45 48.7	
	comp=Z,1.6nm,1.2s						
MAW	Mawson	82.83	202	P	P	22 45 52.2	+0.4
	comp=Z,4.7nm,0.6s,baz=142,slow=8.4,SNR=9.9						
ILAR	Eielson Array	85.56	18	P	P	22 46 05.4	-0.2
	comp=Z,0.4nm,0.6s,baz=239,slow=5.0,SNR=9.6						
SYO	Syowa Base	89.68	197⇑	eP	P	22 46 26.0	+0.7
SNAA	Sanae	94.57	183	P	P	22 46 45.8	-2.1
	comp=Z,1.9nm,0.7s,baz=197,slow=5.2,SNR=7.4						
SNAA	Sanae	94.57	183	IAmb	IAmb	22 46 48.5	
	comp=Z,4.3nm,1.0s						
MK31	Makanchi Array	96.46	316	P	P	22 46 58.1	+1.3
MKAR	Makanchi Array	96.46	316	P	P	22 46 57.6	+0.7
	comp=Z,1.7nm,0.7s,baz=89,slow=6.3,SNR=22						
MKAR	Makanchi Array	96.46	316	P	P	22 46 57.7	+0.8
ZALV	Zalesovo Beam	96.56	324	P	P	22 46 56.9	-0.2
	comp=Z,0.8nm,0.5s,baz=111,slow=6.3,SNR=5.6						
ARCES	ARCESS Array B	119.26	346	PKP	PKiKP	22 52 15.2	0.0
	comp=Z,2.1nm,0.8s,baz=88,slow=2.8,SNR=15						
FINES	FINESS Array B	124.77	338	PKP	PKiKP	22 52 26.1	-0.1
	comp=Z,3.2nm,0.9s,baz=123,slow=5.1,SNR=6.9						
NOA	NORSAR Array B	129.63	345	PKP	PKPdf	22 52 35.6	+0.4
	comp=Z,0.5nm,0.8s,baz=0.0,slow=4.0,SNR=3.0						
AKASG	Malin Array Be	129.88	326	PKP	PKPdf	22 52 35.2	-0.7
	comp=Z,0.3nm,0.3s,baz=72,slow=1.5,SNR=4.7						
CONA	Conrad Observa	138.42	331	ePKiKP	PKiKP	22 52 55.2	+0.9
	comp=Z,0.6nm,0.4s						
GERES	GERESS Array B	138.73	334	PKP	PKPdf	22 52 53.6	+0.9
	comp=Z,0.6nm,0.7s,baz=35,slow=3.6,SNR=4.8						
MOA	Molln	139.22	332	ePKiKP	PKiKP	22 52 56.3	+0.4
	comp=Z,0.9nm,0.5s						
WATA	Walderalm	140.80	334	ePKiKP	PKiKP	22 52 59.7	+0.4
	comp=Z,0.4nm,0.3s						
WTTA	Wattenberg	140.83	334	ePKiKP	PKiKP	22 52 59.8	+0.4
	comp=Z,0.7nm,0.3s						
ABTA	Abfaltersbach	140.84	332	ePKiKP	PKiKP	22 52 59.2	-0.1
	comp=Z,1.3nm,0.6s						
FETA	Feichten	141.41	334	ePKiKP	PKPdf	22 52 58.6	+0.9
	comp=Z,0.6nm,0.5s						
KEST	Kesra	150.41	322	PKPbc	PKiKP	22 53 19.6	+0.3
	comp=Z,7.1nm,0.7s,baz=331,slow=1.1,SNR=15						
ESDC	Sonseca Array	153.00	345	PKPbc	PKiKP	22 53 25.1	+0.6
	comp=Z,0.6nm,0.8s,baz=30,slow=4.2,SNR=4.0						
TORD	Torodi Ar. Bea	165.94	269	PKP	PKPdf	22 53 31.7	-0.5
	comp=Z,1.0nm,0.7s,baz=139,slow=0.9,SNR=6.5						
TORD				PKPab	PKPab	22 54 32.8	-0.7
	comp=Z,1.0nm,0.6s,baz=87,slow=4.5,SNR=7.1						

*NEIC **01** 23:05:13.6±2.5, 17°.89N±0°.09×95°.62W±0°.06, h129km±9km, Error ellipse: s-maj=12.9km s-min=7.3km az=199.0*
*MEX **01** 23:05:16.4±1.0, 17°.77N×95°.66W, h120km±7km, MD4.0*
ISC 01 23:05:14.2±1.8, 17°.80N±0°.06×95°.64W±0°.04, h125km±17km, n12, σ1s.06/24, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	1.01	134	i P	Pn	23 05 37.7	+0.9
CMIG				eS	Sn	23 05 53.9	0.0
CMIG	Matias Romero	1.01	134		Pn	23 05 37.7	+0.9
CMIG					Sn	23 05 53.9	0.0
VHO	Vista Hermosa	1.27	235	eP	Pn	23 05 40.2	+0.6
VHO				i S	Sn	23 05 58.1	-0.7
TPIG	Tehuac#an	1.75	291	i P	Pn	23 05 46.1	+1.2
TPIG				i S	Sn	23 06 08.0	-0.5
TPIG	Tehuac#an	1.75	291		Pn	23 05 46.1	+1.2
TPIG					Sn	23 06 08.0	-0.5
HUIG	Huatulco	2.07	192	eP	Pn	23 05 49.6	+0.9
HUIG				eS	Sn	23 06 14.4	-0.9
HUIG	Huatulco	2.07	192		Pn	23 05 49.6	+0.9
HUIG					Sn	23 06 14.4	-0.9
PNIG	Pinotepa	2.76	240	eP	Pn	23 05 56.8	-0.7
PNIG				i S	Sn	23 06 30.5	-0.3
PNIG	Pinotepa	2.76	240		Pn	23 05 56.8	-0.7
PNIG					Sn	23 06 30.5	-0.3
PCIG		3.12	132	i P	Pn	23 06 02.5	+0.2
PCIG				i S	Sn	23 06 40.1	+0.8
PCIG		3.12	132		Pn	23 06 02.5	+0.2
PCIG					Sn	23 06 40.1	+0.8
TEIG	Tepich	7.38	70	Pn	Pn	23 06 58.2	-1.0
TEIG					Sn	23 08 18.2	-3.2

MAN 01 23:17:07.0, 9°.99N×123°.96E, h32km, mb3.7, ML2.5, MS2.0, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.33	2⇑	eP	Pn	23 17 16.6	+1.0
LLP				i S	Sn	23 17 22.9	+1.7
MSLP	Maasin	0.90	81	eP	Pn	23 17 23.3	-0.1
MSLP				eS	Sn	23 17 34.7	-0.7

*NEIC **01** 23:24:13.9±2.1, 6°.16S±0°.09×128°.35E±0°.09, h359km±9km, mb4.2/4, Error ellipse: s-maj=12.8km s-min=12.6km az=168.0*
*IDC **01** 23:24:14.9±3.0, 6°.19S×128°.29E, h366km±40km, mb3.2/7, mb1 3.4/11, mb1mx3.2/37, mbtmp4.1/11, Error ellipse: s-maj=37.1km s-min=14.6km az=46.0*
ISC 01 23:24:12.9±0.6, 6°.19S±0°.06×128°.44E±0°.07, h350km, n26, σ1s.72/34, mb3.7/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	3.35	122		Pn	23 25 18.8	+3.3
SAUI				S	S	23 26 03.6	-2.3
FAKI	Fak Fak	5.00	50	Pn	Pn	23 25 34.5	+2.0
SOEI	Soe	5.44	229		Pn	23 25 39.6	+2.1
SOEI					S	23 26 44.6	-1.4
BATI	Baumata	6.18	230	P	Pn	23 25 48.5	+2.6
	24nm,0.3s,baz=46,slow=1.7,SNR=21						
BATI				S	S	23 27 01.0	-0.3
	12nm,0.3s,baz=113,slow=4.5,SNR=18						
MTN	Manton Dam	7.12	158		Pn	23 25 57.0	+0.2
MTN				S	S	23 27 17.3	-3.9
LUWI	Luwuk	7.62	312	Pn	Pn	23 25 58.9	-3.8
KNRA	Kununurra	9.43	178	P	P	23 26 26.6	+0.6
FITZ	Fitzroy Crossi	12.14	193	P	Pn	23 26 57.3	+0.9
	0.4nm,0.3s,baz=24,slow=9.2,SNR=11						
FITZ				S	S	23 29 11.7	+0.5
	0.2nm,0.3s,baz=143,slow=20,SNR=2.2						
WRAB	Tennant Creek	14.82	158	P	Pn	23 27 27.1	-0.6
WRA	Warramunga Arr	14.82	158	P	Pn	23 27 26.9	-0.8
	2.0nm,0.3s,baz=335,slow=12,SNR=55						
WRA				S	S	23 30 03.3	-2.2
	0.3nm,0.3s,baz=334,slow=20,SNR=11						
WRA	Warramunga Arr	14.82	158	P	Pn	23 27 26.0	-1.8
WRA					S	23 30 03.7	-1.8
WR0	Warramunga Arr	14.91	157	P	Pn	23 27 28.4	-0.5
COEN	Coen	16.43	119	P	Pn	23 27 45.4	-1.0
COEN				IAmb	IAmb	23 27 46.0	
	comp=Z,18nm,0.8s						
AS31	Alice Springs	18.15	164	P	P	23 28 03.1	+1.6
AS31				IAmb	IAmb	23 28 04.0	
	comp=Z,1.9nm,0.8s						
ASAR	Alice Springs	18.15	164	P	P	23 28 03.1	+1.6
	comp=Z,0.7nm,0.3s,baz=344,slow=12,SNR=48						
ASAR				S	S	23 31 09.3	-1.9
	comp=Z,0.3nm,0.3s,baz=348,slow=23,SNR=14						
ASAR	Alice Springs	18.15	164	P	P	23 28 02.3	+0.7
ASAR				S	S	23 31 11.2	0.0
CTA	Charters Tower	22.14	130	P	P	23 28 42.6	+2.1
	comp=Z,2.8nm,0.7s,baz=306,slow=12,SNR=7.5						
CAN	Canberra	34.62	150	P	P	23 30 30.4	+0.1
CAN				IAmb	IAmb	23 30 37.0	
	comp=Z,24nm,1.4s						
CMAR	Chiang Mai Arr	38.03	311	P	P	23 30 59.0	0.0
	comp=Z,0.6nm,0.7s,baz=140,slow=7.3,SNR=5.4						
KSRS	Korea Array	43.42	359	P	P	23 31 42.8	+0.5
	comp=Z,0.8nm,0.5s,baz=181,slow=9.7,SNR=4.0						
SONM	Songino Array	57.20	342	P	P	23 33 25.0	+0.5
	comp=Z,0.4nm,0.6s,baz=169,slow=2.6,SNR=4.2						
SONM	Songino Array	57.20	342	IAmb	IAmb	23 33 26.5	
	comp=Z,0.5nm,0.8s						
PETK	Petropavlovsk-	64.06	19	P	P	23 34 10.3	+0.1
	comp=Z,3.8nm,1.1s,baz=174,slow=2.1,SNR=4.4						
MKAR	Makanchi Array	66.71	327	P	P	23 34 27.5	+0.3
	comp=Z,0.9nm,0.6s,baz=128,slow=7.5,SNR=14						
MKAR	Makanchi Array	66.71	327	PcP	PcP	23 34 53.0	-0.3
ZALV	Zalesovo Beam	70.18	334	P	P	23 34 47.7	-0.6
	comp=Z,0.9nm,0.5s,baz=123,slow=5.5,SNR=4.8						

*NEIC **01** 23:32:17.5±2.8, 24°.0S±0°.1×176°.82W±0°.09, h219km±12km, mb4.2/5, Error ellipse: s-maj=21.4km s-min=8.8km az=157.0*
*IDC **01** 23:32:26.8±10.0, 24°.53S×177°.38W, h276km±89km, mb3.5/4, mb1 3.7/6, mb1mx3.3/26, mbtmp4.2/6, Error ellipse: s-maj=55.8km s-min=41.8km az=56.0*
ISC 01 23:32:15.3±0.9, 24°.3S±0°.1×176°.7W±0°.1, h200km, n16, σ1s.33/15, mb3.8/4, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.03	192	Pn	Pn	23 33 37.9	+7.9
NIUE	Niue	8.20	52	Pn	Pn	23 34 10.9	-0.3
NIUE				S	Sn	23 35 34.2	-9.4
URZ	Urewera	14.86	199	P	P	23 35 38.9	+2.4
	0.9nm,0.3s,baz=276,slow=4.4,SNR=6.3						
URZ				S	S	23 38 18.4	-2.2
	1.0nm,0.3s,baz=107,slow=19,SNR=5.0						
URZ	Urewera	14.86	199	IAmb	IAmb	23 35 49.6	
	comp=Z,5.4nm,0.9s						
DZM	Mont Dzumac	15.63	275	P	P	23 35 46.5	+1.2
	comp=Z,0.4nm,0.3s,baz=88,slow=18,SNR=5.3						
DZM	Mont Dzumac	15.63	275	IAmb	IAmb	23 35 49.7	
	comp=Z,14nm,0.9s						
TUWZ	Tuamarina	18.75	202	P	P	23 36 19.8	+0.6
KHZ	Kahutara	19.77	202	P	Pn	23 36 34.2	+0.1
KHZ				S	S	23 40 00.1	-1.6
STKA	Stephens Creek	37.34	249	P	P	23 39 08.7	0.0
	comp=Z,1.7nm,0.6s,baz=90,slow=11,SNR=4.0						
ASAR	Alice Springs	44.91	260	P	P	23 40 10.0	-0.4
	comp=Z,3.0nm,0.9s,baz=91,slow=9.3,SNR=19						
WRA	Warramunga Arr	45.35	265	P	P	23 40 13.0	-0.9
	comp=Z,2.4nm,0.5s,baz=103,slow=8.2,SNR=26						
WRA	Warramunga Arr	45.35	265	P	P	23 40 13.3	-0.6
MJAR	Matsushiro Arr	73.96	324	P	P	23 43 27.1	-1.7
CMAR	Chiang Mai Arr	92.47	289	P	P	23 45 04.9	+0.9
	comp=Z,0.3nm,0.4s,baz=108,slow=2.9,SNR=4.1						
AKASG	Malin Array Be	146.89	329	PKPbc	PKPab	23 51 35.2	-0.4
	comp=Z,2.9nm,0.5s,baz=43,slow=4.5,SNR=17						
BRTR	Keskin Array B	150.19	308	PKPbc	PKiKP	23 51 44.6	+1.1
	comp=Z,0.6nm,0.7s,baz=114,slow=3.8,SNR=5.0						

*GUC **01** 23:42:15.9±0.5, 29°.90S×71°.62W, h39km±3km, ML4.0*
*NEIC **01** 23:42:15.0±4.1, 29°.79S±0°.08×71°.5W±0°.1, h60km±37km, Error ellipse: s-maj=21.7km s-min=4.4km az=122.0*
ISC 01 23:42:14.6±1.6, 29°.68S±0°.04×71°.6W±0°.2, h50km, n18, σ2s.23/28, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.40	124⇑	iP	Pn	23 42 24.6	-0.1
LSCH				i S	Sn	23 42 31.3	-0.6
GO04	Tololo Observa	0.87	124	i P	Pn	23 42 31.6	+0.9
GO04				i S	Sn	23 42 43.8	+1.2
GO04				IAML		23 42 48.7	
	comp=N,17µm,0.4s						
GO04	Tololo Observa	0.87	124		Pn	23 42 31.6	+0.8
CO02	Combarbal	1.61	161⇓	iP	Pn	23 42 41.5	+0.7
CO02				i S	Sn	23 43 00.7	+0.4
CO02				IAML		23 43 03.5	
	comp=E,5µm,0.1s						
GO03	Copiap	2.41	31	IAML		23 43 35.7	
	comp=E,406nm,0.5s						
GO03	Copiap	2.41	31		Pn	23 42 54.4	+2.6
GO03					Sn	23 43 18.9	-1.2
ROCH	El Roble	3.32	171⇑	iP	Pn	23 43 04.6	+0.4
ROCH				i S	Sn	23 43 42.5	-0.1
ROC1	El Roble	3.32	171		Pn	23 43 04.9	+0.6
PEL	Peldehue	3.54	167	eP	Pn	23 43 08.1	+0.9
PEL				i S	Sn	23 43 48.0	+0.2
PEL				IAML		23 44 00.3	
	comp=E,171nm,0.1s						
PEL	Peldehue	3.54	167		Pn	23 43 08.0	+0.9
PEL					Sn	23 43 39.9	-7.9
FCH	Farellones	3.81	163	eP	Pn	23 43 12.8	+1.7
FCH				i S	Sn	23 43 56.3	+1.6
CLCH	Cerro Calan	3.81	166	eP	Pn	23 43 12.4	+1.5
CLCH				i S	Sn	23 43 54.5	0.0
LMEL	Las Melosas	4.32	164	eP	Pn	23 43 19.8	+1.8
LMEL				i S	Sn	23 44 07.9	+0.7
GO02	Mina Guanaco	4.85	22		Pn	23 43 26.8	+1.4
GO05	Huala	5.32	183	Pn	Pn	23 43 29.6	-1.9
PB10	IPOC Station P	6.22	9	Pn	Pn	23 43 45.1	+1.3
PB10					Sn	23 44 48.3	-5.4
PB04	IPOC Station P	7.44	11	Pn	Pn	23 44 00.3	-0.4
LVC	Limon Verde	7.46	20	Pn	Pn	23 44 01.6	+0.4

*NEIC **02** 00:21:00.1±1.4, 37°.15S±0°.08×124°.6E±0°.1, h10km±2km, mb4.1/9, ML3.9(AUST), Error ellipse: s-maj=18.6km s-min=6.9km az=226.0*
*IDC **02** 00:21:01.4±3.4, 36°.91S×124°.84E, h0km, mb3.7/3, mb1 4.4/8, mb1mx4.1/24, mbtmp4.2/8, ML4.5/4, MS2.7/3, Ms1 2.8/3, ms1mx2.5/21, Error ellipse: s-maj=70.1km s-min=33.4km az=170.0*
ISC 02 00:21:02.3±1.0, 36°.73S±0°.08×124°.69E±0°.05, h10km, n41, σ3s.29/52, mb3.7/3, Off south coast of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBL	Kambalda	5.84	336	P	Pn	00 22 34.3	+5.3
	baz=5.6,SNR=9.9						
KMBL				S	Sn	00 23 35.8	-0.1
	baz=5.6						
FORT	Forrest	6.56	26	P	Pn	00 22 44.3	+5.4
	baz=6.6,SNR=63						
FORT	Forrest	6.56	26		Pn	00 22 43.9	+4.9
FORT				Sn	Sn	00 23 57.0	+3.2
RKGY	Rocky Gully	6.63	286	P	Pn	00 22 38.7	-1.1
	baz=6.3,SNR=399						
RKGY				S	Sn	00 23 47.4	-7.9
	baz=6.3						
NWAO	Narrogin (SRO)	7.21	300	P	Pn	00 22 48.6	+0.7
	baz=6.9,SNR=93						
NWAO	Narrogin (SRO)	7.21	300	Pn	Pn	00 22 48.5	+0.7
	16nm,0.3s,baz=123,slow=14,SNR=109						
NWAO				Sn	Sn	00 24 05.6	-4.2
	29nm,0.3s,baz=280,slow=23,SNR=17						
NWAO				LR	LR	00 25 20.7	
	comp=Z,49nm,20.1s,baz=209,slow=35						
NWAO	Narrogin (SRO)	7.21	300		Pn	00 22 47.6	-0.2
NWAO	Narrogin (SRO)	7.21	300		Pn	00 22 48.0	+0.2
KLBR	Kellerberrin	7.70	310	P	Pn	00 22 56.0	+1.4
	baz=7.4,SNR=13						
KLBR				S	Sn	00 24 19.3	-2.6
	baz=7.4						
MUN	Mundaring	8.46	302	P	Pn	00 23 04.6	-0.4
	baz=8.2,SNR=19						
MUN				S	Sn	00 24 33.4	-7.2
	baz=8.2						
H01W1	Cape Leeuwin H	8.76	279	Pn	Pn	00 23 06.4	-2.4
H01W1				Sn	Sn	00 24 35.5	-12
H01W2	Cape Leeuwin H	8.77	279	Pn	Pn	00 23 06.6	-2.4
H01W2				Sn	Sn	00 24 35.4	-12
H01W3	Cape Leeuwin H	8.77	279	Pn	Pn	00 23 06.6	-2.4
H01W3				Sn	Sn	00 24 35.9	-12
BLDU	Ballidu	9.02	310	P	Pn	00 23 12.8	+0.1
	baz=8.7,SNR=58						
BLDU				S	Sn	00 24 47.5	-6.9
	baz=8.7						
BBOO	Buckleboo	10.13	71	P	Pn	00 23 27.3	-0.6
	baz=10,SNR=5.0						
BBOO				S	Sn	00 25 16.0	-5.6
	baz=10						
BBOO	Buckleboo	10.13	71	Pn	Pn	00 23 28.0	+0.1
BBOO					Sn	00 25 15.9	-5.6
MORW	Morawa	10.54	314	P	Pn	00 23 34.0	+0.4
	baz=10,SNR=16						
MORW				S	Sn	00 25 24.9	-6.8
	baz=10						
MORW	Morawa	10.54	314		Pn	00 23 33.5	0.0
WRKA	Warakurna	12.06	16	P	Pn	00 23 58.9	+4.6
	baz=12,SNR=58						
WRKA				S	Sn	00 26 10.8	+1.9
	baz=12						
HTT	Hallett	12.11	78	P	Pn	00 23 55.4	+0.4
	baz=12,SNR=7.7						
HTT				S	Sn	00 26 01.6	-8.6
	baz=12						
ARPS	Mount Arapiles	13.75	95	P	Pn	00 24 16.6	-0.7
	baz=14,SNR=15						
STKA	Stephens Creek	14.78	76	Pn	Pn	00 24 30.0	-1.5
	1.1nm,0.3s,baz=260,slow=11,SNR=6.1						
STKA				Sn	Sn	00 27 04.9	-10
	0.8nm,0.3s,baz=342,slow=15,SNR=3.1						
STKA	Stephens Creek	14.78	76		Pn	00 24 31.5	+0.1
ASAR	Alice Springs	15.25	34	Pn	Pn	00 24 37.6	-0.2
	0.9nm,0.3s,baz=206,slow=12,SNR=45						
ASAR				Sn	Sn	00 27 21.9	-5.0
	0.9nm,0.3s,baz=208,slow=22,SNR=6.2						
ASAR	Alice Springs	15.25	34	Pn	Pn	00 24 38.2	+0.4
AS31	Alice Springs	15.25	34		Pn	00 24 38.5	+0.7
PSA00	Pilbara Seismi	15.68	343	Pn	Pn	00 24 43.4	-0.1
PSA00	Pilbara Seismi	15.68	343	Pn	Pn	00 24 44.1	+0.7
PSA00				IAmb	IAmb	00 24 44.7	
	comp=Z,27nm,0.6s						
TOO	Toolangi	16.61	99		Pn	00 24 56.7	+1.5
TOO				IAmb	IAmb	00 24 57.7	
	comp=Z,7.7nm,0.9s						
GIRL	Giralia	16.70	324	P	Pn	00 24 58.3	+1.8
	baz=16,SNR=4.6						
GIRL	Giralia	16.70	324	Pn	Pn	00 24 58.4	+1.8
FITZ	Fitzroy Crossi	18.58	3	P	Pn	00 25 23.0	+3.2
	baz=19,SNR=15						
FITZ	Fitzroy Crossi	18.58	3	P	Pn	00 25 21.7	+1.9
	comp=Z,2.0nm,0.3s,baz=194,slow=11,SNR=32						
FITZ				S	Sn	00 28 38.8	-8.7
	comp=Z,0.2nm,0.3s,baz=309,slow=19,SNR=3.5						
FITZ				LR	LR	00 31 53.6	
	comp=Z,24nm,19.8s,baz=194,slow=35						
FITZ	Fitzroy Crossi	18.58	3	P	Pn	00 25 21.9	+2.1
FITZ				IAmb	IAmb	00 25 27.0	
	comp=Z,9.1nm,0.8s						
FITZ					Sn	00 28 46.0	-1.5
WRA	Warramunga Arr	18.74	29	P	Pn	00 25 22.9	+1.1
	comp=Z,1.4nm,0.3s,baz=203,slow=13,SNR=45						
WRA				S	Sn	00 28 46.8	-4.6
	comp=Z,0.5nm,0.3s,baz=208,slow=23,SNR=6.1						
WRA	Warramunga Arr	18.74	29	P	Pn	00 25 24.9	+3.1
WRAB	Tennant Creek	18.75	29	P	Pn	00 25 25.3	+3.4
WRAB				IAmb	IAmb	00 25 27.6	
	comp=Z,8.3nm,0.7s						
KNRA	Kununurra	21.28	11	P	P	00 25 53.7	+4.7
CMAR	Chiang Mai Arr	60.04	332	P	P	00 31 13.2	+3.7
	comp=Z,0.4nm,0.3s,baz=165,slow=5.2,SNR=5.6						
CMAR				LR	LR	00 57 06.7	
	comp=Z,9.2nm,21.2s,baz=180,slow=36						
SONM	Songino Array	85.76	348	P	P	00 33 43.7	+2.3
	comp=Z,0.5nm,0.9s,baz=163,slow=5.4,SNR=3.3						
MKAR	Makanchi Array	91.44	332	P	P	00 34 08.3	-0.1
	comp=Z,0.2nm,0.7s,baz=132,slow=6.0,SNR=3.1						

*DDA **02** 00:48:54.4, 40°.07N×35°.65E, h10km±3km, MW3.8*
*ISK **02** 00:48:54.2, 40°.08N×35°.72E, h5km, ML3.7/20*
ISC 02 00:48:54.9±1.1, 40°.08N±0°.02×35°.68E±0°.01, h4km±10km,

n93,σ1s26/128,1C-3D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOZ	Yozgat	0.52	212	PG	Pg	00 49 05.4	+0.5
COAL	Corum-Alaca	0.56	288	*i* P	Pg	00 49 05.4	-0.2
COAL				*i* S	Sg	00 49 12.9	+0.1
COAL				IAML		00 49 14.0	
	comp=E,1µm,0.5s						
COAL				IAML		00 49 15.0	
	comp=N,1µm,0.6s						
AMSY	Amasya-Merkez	0.57	12	*i* P	Pg	00 49 06.4	+0.6
AMSY				*i* S	Sg	00 49 14.3	+1.1
AMSY				IAML		00 49 15.0	
	comp=E,5µm,0.7s						
AMSY				IAML		00 49 16.0	
	comp=N,5µm,0.3s						
TOKA	Tokat	0.66	68	*i* P	Pg	00 49 07.1	-0.5
TOKA				*i* S	Sb	00 49 17.6	-1.0
TOKA				IAML		00 49 36.0	
	comp=N,1µm,1.2s						
TOKT	Tokat	0.71	70	PG	Pg	00 49 08.2	-0.3
TOKT				SG	Sg	00 49 18.9	+1.2
CUSAR	Sarkisla-SIVAS	0.80	146	*i* P	Pg	00 49 10.0	-0.1
CUSAR				*i* S	Sg	00 49 20.4	0.0
CUSAR				IAML		00 49 22.0	
	comp=E,1µm,0.5s						
CUSAR				IAML		00 49 29.0	
	comp=N,1µm,0.3s						
CTAK	Corum_Osmancik	0.88	310	*i* P	Pg	00 49 11.8	0.0
CTAK				*i* S	Sg	00 49 23.4	+0.2
CTAK				IAML		00 49 27.0	
	comp=N,916nm,0.4s						
CTAK				IAML		00 49 27.0	
	comp=E,745nm,0.3s						
HAVZ	Havza	0.99	2	*i* P	Pn	00 49 14.8	-0.8
HAVZ				*i* S	Sb	00 49 28.1	-0.1
HAVZ				IAML		00 49 30.0	
	comp=N,2µm,0.3s						
HAVZ				IAML		00 49 30.0	
	comp=E,1µm,0.4s						
ERBA	Erbaa	1.02	54	*i* P	Pg	00 49 14.2	-0.2
ERBA				*i* S	Sb	00 49 29.2	+0.3
SVSK	Karacayir	1.03	99	PG	Pg	00 49 14.2	-0.4
SVSK				SG	Sb	00 49 29.4	+0.3
KVT	Kavak	1.04	16	PG	Pb	00 49 15.3	-0.1
KVT				SG	Sn	00 49 29.8	-1.4
CDAG	Cicekdag	1.10	246	*i* P	Pg	00 49 15.5	-0.5
CDAG				*i* S	Sg	00 49 30.5	+0.1
CDAG				IAML		00 49 35.0	
	comp=E,4µm,0.5s						
CDAG				IAML		00 49 36.0	
	comp=N,3µm,0.4s						
SCER	sogukcermik	1.14	101	*i* P	Pb	00 49 16.0	-1.2
SCER				*i* S	Sg	00 49 30.5	-1.0
SCER				IAML		00 49 39.0	
	comp=E,1µm,0.5s						
SCER				IAML		00 49 40.0	
	comp=N,1µm,0.4s						
CUALT	Altinyayla-SIV	1.16	134	*i* P	Pb	00 49 17.1	-0.5
CUALT				*i* S	Sn	00 49 34.2	-0.2
CUALT				IAML		00 49 40.0	
	comp=E,551nm,0.7s						
CUALT				IAML		00 49 41.0	
	comp=N,411nm,0.4s						
BNN	Bunyan	1.24	174	PN	Pn	00 49 18.1	-1.0
RSDY	Resadiye-TOKAT	1.30	75	PN	Pb	00 49 19.7	-0.3
RSDY				SN	Sg	00 49 38.5	+1.7
SAMS	Samsun-Alacam	1.34	17	*i* P	Pg	00 49 21.0	+0.5
SAMS				*i* S	Sg	00 49 38.5	+0.7
SAMS				IAML		00 49 46.0	
	comp=N,351nm,0.7s						
SAMS				IAML		00 49 46.0	
	comp=E,944nm,0.8s						
DELI	KIRIKKALE	1.35	267	*i* P	Pb	00 49 20.3	-0.5
DELI				*i* S	Sn	00 49 37.9	-1.1
DELI				IAML		00 49 43.0	
	comp=E,585nm,0.3s						
DELI				IAML		00 49 44.0	
	comp=N,662nm,0.5s						
KAGI	orum-Kargı	1.39	320	*i* P	Pn	00 49 20.5	-0.6
KAGI				*i* S	Sb	00 49 37.8	-1.9
KAGI				IAML		00 49 44.0	
	comp=E,330nm,0.8s						
KAGI				IAML		00 49 48.0	
	comp=N,429nm,0.9s						
AVNS	Nevsehir-Avano	1.43	207	*i* P	Pb	00 49 21.5	-0.6
AVNS				*i* S	Sg	00 49 41.8	+1.1
AVNS				IAML		00 49 45.0	
	comp=E,2µm,0.3s						
AVNS				IAML		00 49 48.0	
	comp=N,2µm,0.3s						
CUKAN	kangal_SIVAS	1.58	118	*i* P	Pb	00 49 24.0	-0.7
CUKAN				*i* S	Sg	00 49 45.9	+0.3
CUKAN				IAML		00 49 48.0	
	comp=N,377nm,0.5s						
CUKAN				IAML		00 49 56.0	
	comp=E,359nm,0.4s						
DIKM	Dikmen	1.60	349	PN	Pb	00 49 24.9	-0.1
DIKM				SN	Sg	00 49 47.1	+0.9
CUZAR	Zara_SIVAS	1.62	96	*i* P	Pb	00 49 25.0	-0.4
CUZAR				*i* S	Sg	00 49 47.8	+0.8
CUZAR				IAML		00 49 50.0	
	comp=N,581nm,0.4s						
CUZAR				IAML		00 49 54.0	
	comp=E,500nm,0.4s						
CANT	Cankiri	1.66	289	PN	Pg	00 49 26.3	-0.3
CANT				SN	Sg	00 49 49.2	+1.1
KIRS	Kırehir-Merke	1.66	236	*i* P	Pb	00 49 25.3	-0.7
KIRS				*i* S	Sb	00 49 47.2	-0.1
KIRS				IAML		00 49 52.0	
	comp=E,662nm,0.3s						
KIRS				IAML		00 49 53.0	
	comp=N,504nm,0.7s						
ELDT	Eldivan	1.77	284	*i* P	Pb	00 49 27.4	-0.5
ELDT				*i* S	Sg	00 49 51.7	0.0
ELDT				IAML		00 49 55.0	
	comp=N,456nm,0.5s						
ILGA	Ilgaz	1.78	304	*i* P	Pg	00 49 28.7	-0.3
ILGA				*i* S	Sg	00 49 52.2	+0.1
ILGA				IAML		00 49 58.0	
	comp=N,332nm,1.1s						
ILGA				IAML		00 49 59.0	
	comp=E,424nm,0.6s						
CUGUR	Gurin_SVAS	1.84	137	*i* P	Pb	00 49 29.0	-0.1
CUGUR				*i* S	Sg	00 49 53.6	-0.3
CUGUR				IAML		00 49 58.0	
	comp=E,672nm,0.9s						
CUGUR				IAML		00 50 05.0	
	comp=N,465nm,0.5s						
YAYX	Yaylak	1.84	232	PN	Pb	00 49 28.2	-0.9
YAYX				SN	Sg	00 49 53.8	-0.2
ORDU	Ordu-Boztepe	1.90	61	*i* P	Pb	00 49 28.9	-1.1
ORDU				IAML		00 50 01.0	
	comp=N,273nm,1.0s						
ORDU				IAML		00 50 08.0	
	comp=E,155nm,1.0s						
KAST	KASTAMONU	1.93	317	*i* P	Pb	00 49 30.8	+0.1
KAST				IAML		00 50 03.0	
	comp=E,476nm,0.6s						
SUSE	Susehri	1.94	85	*i* P	Pb	00 49 30.7	-0.3
SUSE				*i* S	Sg	00 49 57.9	+0.6
SUSE				IAML		00 50 03.0	
	comp=E,431nm,0.5s						
SUSE				IAML		00 50 05.0	
	comp=N,379nm,0.7s						
SINO	SINOP_Merkez	1.97	350	*i* P	Pn	00 49 29.2	+0.2
SINO				IAML		00 50 07.0	
	comp=E,284nm,0.6s						
SINO				IAML		00 50 08.0	
	comp=N,141nm,0.6s						
SERE	Sereflikochisa	1.99	236	PN	Pb	00 49 30.3	-1.4
SERE				SN	Sb	00 49 57.4	+0.6
YAHY	KAYSERI_Yahyal	2.00	187	*i* P	Pn	00 49 30.1	+0.5
YAHY				IAML		00 50 05.0	
	comp=E,94nm,0.7s						
BBAL	Bala	2.04	255	*i* P	Pb	00 49 31.4	-1.1
BBAL				*i* S	Sg	00 50 00.2	-0.2
BBAL				IAML		00 50 02.0	
	comp=N,463nm,0.7s						
BBAL				IAML		00 50 02.0	
	comp=E,804nm,0.9s						
DARE	Darende-Malaty	2.06	137	PN	Pb	00 49 31.4	-1.5
AKSY	AKSARAY - Alti	2.06	227	*i* P	Pb	00 49 31.5	-1.4
AKSY				*i* S	Sb	00 49 58.7	-0.2
AKSY				IAML		00 50 02.0	
	comp=E,247nm,0.3s						
AKSY				IAML		00 50 06.0	
	comp=N,350nm,0.4s						
ELBS	KAHRAMANMARAS	2.09	147	*i* P	Pb	00 49 33.8	+0.4
ELBS				*i* S	Sg	00 50 03.6	+1.7
ELBS				IAML		00 50 06.0	
	comp=N,692nm,0.7s						
ELBS				IAML		00 50 09.0	
	comp=E,537nm,1.0s						
AFSR	Afar-Bala (An	2.10	253	PN	Pb	00 49 32.6	-1.1
SAIM	ADANA	2.13	171	*i* P	Pn	00 49 32.1	+0.8
SAIM				IAML		00 50 06.0	
	comp=N,510nm,0.3s						
SAIM				IAML		00 50 11.0	
	comp=E,526nm,0.4s						
ANTO	Ankara	2.22	265	PN	Pb	00 49 34.2	-1.5
BZK	Bozkurt	2.26	327	PN	Pb	00 49 34.9	-1.4
KULU	Kulu	2.31	244	PN	Pb	00 49 35.5	-1.7
KKUL	Konya-Kulu	2.32	248	*i* P	Pn	00 49 34.9	+1.0
KKUL				*i* S	Sg	00 50 09.5	+0.2
KKUL				IAML		00 50 17.0	
	comp=N,506nm,0.5s						
KKUL				IAML		00 50 19.0	
	comp=E,475nm,1.1s						
KEMA	Kemaliye	2.32	110	*i* P	Pn	00 49 35.3	+1.4
KEMA				*i* S	Sb	00 50 07.4	+1.0
KEMA				IAML		00 50 10.0	
	comp=E,207nm,0.4s						
KEMA				IAML		00 50 13.0	
	comp=N,227nm,0.5s						
CMRD	Camardi-Nigde	2.48	193	PN	Pn	00 49 37.3	+1.2
REFA	Refahiye_ERZN	2.48	105	*i* P	Pb	00 49 38.1	-2.0
REFA				*i* S	Sn	00 50 08.3	+1.4
REFA				IAML		00 50 13.0	
	comp=E,103nm,1.0s						
REFA				IAML		00 50 17.0	
	comp=N,72nm,0.6s						
CMDR	Camlidere-ANKA	2.48	281	*i* P	Pn	00 49 37.0	+0.7
CMDR				IAML		00 50 21.0	
	comp=N,157nm,0.7s						
CMDR				IAML		00 50 24.0	
	comp=E,109nm,1.0s						
AKCD	Akcadag	2.50	135	*i* P	Pn	00 49 38.0	+1.6
AKCD				IAML		00 50 25.0	
	comp=N,192nm,0.6s						
AKCD				IAML		00 50 27.0	
	comp=E,145nm,0.7s						
ANDN	Andirin	2.55	168	*i* P	Pn	00 49 38.7	+1.5
ANDN				IAML		00 50 29.0	
	comp=N,251nm,0.8s						
ANDN				IAML		00 50 29.0	
	comp=E,178nm,0.6s						
KOZT	Kozan	2.60	177	PN	Pn	00 49 39.2	+1.5
AKO	Adana	2.62	184	*i* P	Pn	00 49 39.6	+1.6
AKO				IAML		00 50 22.0	
	comp=E,58nm,0.7s						
AKO				IAML		00 50 26.0	
	comp=N,74nm,1.0s						
CHBY	Cihanbeyli	2.63	236	PN	Pn	00 49 39.8	+1.6
KMRS	Kahramanmaras	2.75	159	PN	Pn	00 49 41.3	+1.6
KELT	Kelkit	2.75	87	*i* P	Pn	00 49 41.7	+1.8
KELT				IAML		00 50 34.0	
	comp=E,52nm,1.0s						
KELT				IAML		00 50 42.0	
	comp=N,90nm,1.5s						
BCAM	Yenicaga	2.85	286	*i* P	Pn	00 49 42.8	+1.6
BCAM				IAML		00 50 39.0	
	comp=E,48nm,1.4s						
KARA	Karaisali	2.86	190	PN	Pn	00 49 43.1	+1.8
HCB	Kahramanmara	2.90	160	*i* P	Pn	00 49 42.8	+1.0
HCB				IAML		00 50 31.0	
	comp=N,49nm,0.7s						
HCB				IAML		00 50 38.0	
	comp=E,50nm,0.6s						
KERG	Konya-Eregli	2.93	205	*i* P	Pb	00 49 48.1	+0.4
KIBS	BOLU	2.94	278	*i* P	Pn	00 49 44.1	+1.5
KIBS				IAML		00 50 37.0	
	comp=E,106nm,0.8s						
KIBS				IAML		00 50 48.0	
	comp=N,84nm,1.4s						
KAMA	Osmaniye	2.99	165	*i* P	Pn	00 49 43.9	+0.7
KAMA				IAML		00 50 42.0	
	comp=N,53nm,0.7s						
KAMA				IAML		00 50 44.0	
	comp=E,31nm,0.9s						
ELZG	Elazig	3.02	121	*i* P	Pn	00 49 45.2	+1.6
ELZG				IAML		00 50 37.0	
	comp=E,198nm,0.7s						
ELZG				IAML		00 50 40.0	
	comp=N,134nm,0.5s						
CEYT	Ceyhan	3.07	179	PN	Pn	00 49 45.9	+1.8
GZT	Gaziantep	3.10	151	*i* P	Pn	00 49 45.6	+0.9
GZT				IAML		00 50 45.0	
	comp=N,76nm,0.5s						
GZT				IAML		00 50 46.0	
	comp=E,97nm,0.8s						
EUZM	Uzumlu	3.12	96	*i* P	Pb	00 49 48.5	-2.5
EUZM				IAML		00 50 46.0	
	comp=E,46nm,1.1s						
EUZM				IAML		00 50 49.0	
	comp=N,38nm,0.9s						
TNCL	Tunceli-Merkez	3.14	107	*i* P	Pn	00 49 47.7	+2.5
TNCL				IAML		00 50 46.0	
	comp=E,99nm,0.7s						
TNCL				IAML		00 50 49.0	
	comp=N,98nm,0.7s						
DED	Mersin	3.19	193	*i* P	Pn	00 49 48.2	+2.3
DED				IAML		00 50 41.0	
	comp=E,29nm,0.8s						
DED				IAML		00 50 49.0	
	comp=N,30nm,0.8s						
MACK	Trabzon	3.24	73	*i* P	Pn	00 49 49.2	+2.7
MACK				IAML		00 50 46.0	
	comp=E,84nm,0.7s						
MACK				IAML		00 50 47.0	
	comp=N,54nm,0.3s						
AUSIV	SIVRIHISAR	3.25	260	*i* P	Pn	00 49 48.3	+1.5
AUSIV				IAML		00 50 46.0	
	comp=N,36nm,0.9s						
YIGI	Dzce	3.34	287	*i* P	Pn	00 49 50.2	+2.3
KONT	Konya--Tatoy	3.35	231	*i* P	Pb	00 49 54.7	-0.1
KUZU	Kuzuini	3.48	161	*i* P	Pn	00 49 51.9	+2.0
KUZU				IAML		00 50 49.0	
	comp=E,131nm,0.5s						
KUZU				IAML		00 50 52.0	
	comp=N,101nm,0.9s						
BAYB	BAYBURT	3.52	86	*i* P	Pb	00 49 54.0	-3.8
BAYB				IAML		00 51 04.0	
	comp=E,44nm,1.0s						
BAYB				IAML		00 51 10.0	
	comp=N,46nm,0.9s						
BTAS	Taskesti	3.61	279	*i* P	Pn	00 49 53.2	+1.6
BTAS				IAML		00 50 55.0	
	comp=E,47nm,1.3s						
BTAS				IAML		00 51 02.0	
	comp=N,67nm,1.4s						
CIFT	Cifteler, Eski	3.63	260	*i* P	Pn	00 49 52.8	+0.8
CIFT				IAML		00 50 39.0	
	comp=E,132nm,0.6s						
CIFT				IAML		00 50 56.0	
	comp=N,72nm,0.6s						
DOGA	KONYA_Doganhis	3.69	239	*i* P	Pn	00 49 53.4	+0.5
DOGA				IAML		00 51 03.0	
	comp=N,32nm,0.8s						
DOGA				IAML		00 51 09.0	
	comp=E,28nm,1.0s						
KOPT	Kop Dagi	3.70	89	*i* P	Pg	00 50 03.9	-1.9
SAHE	Sakarya_HENDEK	3.76	283	*i* P	Pn	00 49 55.7	+2.0
SAHE				IAML		00 51 02.0	
	comp=E,28nm,2.1s						
SAHE				IAML		00 51 08.0	
	comp=N,34nm,1.3s						
SRCK	Saricakaya, Es	3.88	271	*i* P	Pn	00 49 55.8	+0.6
SRCK				IAML		00 51 09.0	
	comp=E,33nm,0.9s						
SRCK				IAML		00 51 10.0	
	comp=N,35nm,0.9s						
BOLV	Bolvadin	3.91	251	*i* P	Pn	00 49 56.4	+0.6
BOLV				IAML		00 51 13.0	
	comp=N,27nm,1.1s						
BOLV				IAML		00 51 13.0	
	comp=E,51nm,0.8s						
BORA	Eskisehir	4.02	269	*i* P	Pn	00 49 57.7	+0.5
HANI	Diyarbakir_Han	4.03	113	*i* P	Pn	00 49 59.2	+1.8
HANI				IAML		00 51 29.0	
	comp=N,16nm,2.5s						
HANI				IAML		00 51 29.0	
	comp=E,17nm,1.6s						
KAND	Kocaeli-Kandir	4.29	285	*i* P	Pn	00 50 03.1	+2.1
KAND				IAML		00 51 29.0	
	comp=N,18nm,2.1s						
KAND				IAML		00 52 03.0	
	comp=E,19nm,1.8s						
KEPZ	Antalya-Kepez	4.50	226	*i* P	Pn	00 50 05.4	+1.5
KEPZ				IAML		00 51 37.0	
	comp=N,17nm,1.1s						
KEPZ				IAML		00 51 41.0	
	comp=E,14nm,1.0s						
KZIL	AFYON_Kizioren	4.67	249	*i* P	Pn	00 50 07.3	+1.0
KZIL				*i* S	Sn	00 51 00.3	-0.6
KZIL				IAML		00 51 05.0	
	comp=E,15nm,0.5s						
KZIL				IAML		00 51 06.0	
	comp=N,13nm,0.6s						
EPOS	Posof	5.54	73	*e* P	Pn	00 50 22.6	+4.4
EAK	Akyaka	6.09	82	*e* P	Pn	00 50 18.7	-7.0
EAK				*e* S	Pb	00 50 31.0	-11
EAK				IAML		00 50 49.0	
	comp=Z,5.4nm,1.8s						
IGDI	IGDIR	6.46	89	*e* P	Pn	00 50 36.2	+5.4
IGDI				*e* S	Pg	00 50 56.1	-2.5
IGDI				IAML		00 51 58.3	
	comp=Z,1.1nm,2.4s						
MILM	Milestii Mici	8.46	326	⇓P	Pn	00 50 57.9	-0.2
TESR	Tescani	9.19	317	⇓P	Pn	00 51 08.5	+0.3
SORM	Soroca	9.62	329	⇑P	Pn	00 51 13.3	-0.7
BURAR	Bucovina Array	10.66	318	⇓P	Pn	00 51 28.5	+0.2

IDC 02 01:00:47.6±2.4**,6°.51S**×**130°.40E,h0**km**,mb3.2**/1**, mb1 3.6**/4**,mb1mx3.4**/33**,mbtmp3.4**/4**,ML3.3**/3**,Error ellipse: s-maj=91.6km s-min=30.4km az=78.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.42	202	Pn	Pn	01 03 45.5	-0.4
	0.1nm,0.3s,baz=25,slow=11,SNR=5.9						
FITZ				Sn	Sn	01 05 44.0	-21
	0.3nm,0.3s,baz=36,slow=19,SNR=6.8						
WRA	Warramunga Arr	13.89	164	Pn	Pn	01 04 05.8	-0.2
	0.1nm,0.3s,baz=348,slow=13,SNR=7.4						
WRA				Sn	Sn	01 06 27.6	-14
	0.1nm,0.3s,baz=333,slow=23,SNR=4.6						
ASAR	Alice Springs	17.39	169	P	Pn	01 04 52.4	+0.5
	0.1nm,0.3s,baz=340,slow=8.9,SNR=6.6						
ASAR				S	Sn	01 07 55.7	-11
	0.1nm,0.3s,baz=351,slow=28,SNR=2.8						
MKAR	Makanchi Array	68.03	327	P	P	01 11 49.0	0.0
	0.1nm,0.5s,baz=123,slow=7.7,SNR=3.3						

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*NNC **02** 01:16:42.4±0.3,43°.48N×76°.91E,h0km,mb2.0,mpv1.9, Error ellipse: s-maj=2.1km s-min=1.1km az=47.0*
*KRNET **02** 01:16:46.6±0.1,43°.91N×75°.35E,h30km,mb1.8*
SOME 02 01:16:41.5,44°.08N×75°.50E,h5km,4C-9D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUU	Kurty	0.64	107	⇑*i*P	Pg	01 16 53.6	-0.1
	1.0nm,0.1s						
KUU				⇓*i*S	Sg	01 17 02.4	+0.5
	5.4nm,0.1s						
KUU	Kurty	0.64	107	P	Pg	01 16 53.5	-0.2
	1.0nm,0.2s						
KUU				S	Sg	01 17 02.3	+0.4
	4.5nm,0.2s						
DGS	Degeres	0.86	167	*e*P	Pg	01 16 57.8	-0.2
	0.6nm,0.2s						
DGS				*e*S	Sb	01 17 10.2	-0.8
	1.2nm,0.2s						
DGS	Degeres	0.86	167	P	Pb	01 16 58.7	-0.3
DGS				S	Sb	01 17 11.1	+0.2
KTBS	Karatobe	0.93	113	*e*P	Pg	01 16 59.4	0.0
	0.6nm,0.1s						
KTBS				⇓*i*S	Sb	01 17 12.2	-0.7
	2.1nm,0.2s						
USP	Ospenovka	1.09	222	⇓*i*P	Pn	01 17 03.6	+0.1
	baz=24						
USP				⇓*i*S	Sg	01 17 16.5	-0.1
	baz=24						
TKM2	Tokmak 2	1.16	177	⇑P	Pg	01 17 03.9	+0.1
	2.9nm,1.0s						
TKM2				⇓S	Sg	01 17 18.9	0.0
	0.8nm,0.6s						
CHMS	Chumysh	1.21	207	⇑*i*P	Pn	01 17 05.1	-0.1
	baz=6.0						
CHMS				⇑*i*S	Sg	01 17 18.7	-1.8
	baz=6.0						
KOTS	Kotyrbulak	1.45	125	*e*P	Pn	01 17 08.5	0.0
	0.7nm,0.2s						
KOTS				*e*S	Sg	01 17 28.2	+0.3
	1.1nm,0.5s						
BOOM	Boomskoye usch	1.62	168	⇓*i*P	Pg	01 17 13.4	+0.8
	baz=63						
BOOM				⇓*i*S	Sb	01 17 33.1	+0.2
	baz=63						
EKS2	Erkin-Say	1.90	222	⇓*e*P	Pb	01 17 16.4	-0.3
	baz=23						
EKS2				⇓*i*S	Sn	01 17 38.1	-0.9
	baz=23						

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*IDC **02** 01:16:42.8±10.0,8°.74S×115°.47E,h75km±104km,mb2.9/4, mb1 3.2/5,mb1mx3.0/41,mbtmp3.3/5,ML3.5/1,Error ellipse: s-maj=128.9km s-min=36.7km az=52.0*
*DJA **02** 01:16:48.3±0.6,9°S±10°×11°6E±°,h81km±7km,M3.5/8, MLv3.5/8*
ISC 02 01:16:46.2±0.8**,8°.8S**±0°.1×**115°.56E**±0°.05**,h98**km**,n15, σ1s76**/16**,mb3.2**/4**,Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DNP	Denpasar	0.35	283	P	Pn	01 17 02.9	+2.1
DNP				S	Sn	01 17 14.9	+3.1
IGBI	Denpasar	0.41	261	P	Pn	01 17 02.7	+1.5
IGBI				S	Sn	01 17 14.1	+1.7
SRBI	Singaraja	0.75	333	P	Pn	01 17 05.5	+1.5
TWSI	Taliwang, Sumb	1.31	89	P	Pn	01 17 11.3	+1.2
JAGI	Jajag, Banyuwa	1.42	281	P	Pn	01 17 12.2	+0.8
JAGI				S	Sn	01 17 30.7	+0.2
PLAI	Plampang	2.19	92	P	Pn	01 17 23.3	+2.0
PLAI				S	Sn	01 17 49.9	+1.8
PCJI	Pacitan	4.37	277	P	Pn	01 17 52.1	+1.7
FITZ	Fitzroy Crossi	13.50	134	P	Pn	01 19 52.6	-1.2
	0.2nm,0.3s,baz=323,slow=14,SNR=12						
FITZ				S	Sn	01 22 12.6	-10
	0.3nm,0.3s,baz=194,slow=23,SNR=7.6						
WRA	Warramunga Arr	21.30	123	P	P	01 21 24.4	-0.8
	0.3nm,0.4s,baz=298,slow=11,SNR=7.0						
ASAR	Alice Springs	22.98	132	P	P	01 21 42.1	-0.6
	1.0nm,0.8s,baz=312,slow=9.8,SNR=7.1						
H08S2	Diego Garcia H	42.62	268	T	T	02 10 21.7	
	baz=96						
H08S3	Diego Garcia H	42.63	268	T	T	02 10 25.5	
	baz=96,SNR=4.3						
H08S1	Diego Carcia H	42.64	268	T	T	02 10 26.7	
	baz=96						
SONM	Songino Array	56.92	353	P	P	01 26 20.5	-0.8
	0.2nm,0.5s,baz=156,slow=5.2,SNR=3.0						
MKAR	Makanchi Array	62.74	335	P	P	01 26 59.2	-1.8
	0.1nm,0.3s,baz=152,slow=6.5,SNR=5.5						

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*JMA **02** 01:34:54.7±0.1,37°.15N×141°.34E,h56km±1km,M3.9*
JMA Felt II J1.
*IDC **02** 01:34:57.5±3.9,37°.13N×141°.21E,h81km±34km,mb3.2/7, mb1 3.4/8,mb1mx3.2/42,mbtmp3.5/8,MS2.7/2,Ms1 2.7/2, ms1mx2.3/18,Error ellipse: s-maj=33.7km s-min=26.6km az=77.0*
ISC 02 01:34:54.0±1.1**,37°.14N**±0°.05×**141°.46E**±0°.09**,h51**km±8km**, n26,σ1s09**/33**,mb3.5**/7**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.52	296	P	Pn	01 35 05.5	0.0
JFK				*e*S	Sn	01 35 13.1	-0.8
ONAJ	Iwakimizuishiy	0.53	267	P	Pn	01 35 05.7	0.0

ONAJ				S	Sn	01 35 13.3	-0.8
JFFD	Fukushimafurud	0.72	267	P	Pn	01 35 07.8	-0.2
JFFD				eS	Sn	01 35 17.3	-0.9
JMST	Minamisoumatoc	0.74	322	P	Pn	01 35 08.2	-0.1
JMST				S	Sn	01 35 18.1	-0.6
JHO	Hitachi	0.89	234	P	Pn	01 35 09.9	-0.3
JHO				eS	Sn	01 35 20.8	-1.2
JMM	Marumori	0.90	324	P	Pn	01 35 10.5	+0.1
JMM				eS	Sn	01 35 22.3	-0.1
JFT	Otama	0.97	293	P	Pn	01 35 11.8	+0.4
JFT				S	Sn	01 35 24.1	-0.1
JIO	Ouri	1.32	356	P	Pn	01 35 16.7	+0.7
JIO				eS	Sn	01 35 32.6	+0.1
JOU	Okura	1.38	333	P	Pn	01 35 17.6	+0.7
JOU				eS	Sn	01 35 35.1	+1.1
JFY	Yanaizu	1.43	281	P	Pn	01 35 17.6	+0.1
JYS	Shirataka	1.55	315	P	Pn	01 35 19.9	+0.8
JYS				S	Sn	01 35 38.6	+0.5
MJAR	Matsushiro Arr	2.67	258	P	Pn	01 35 35.2	+0.7
	1.5nm,0.3s,baz=86,slow=25,SNR=62						
MJAR				S	Sn	01 36 08.6	+2.9
	0.9nm,0.3s,baz=84,slow=32,SNR=6.0						
MJAR				LR	LR	01 36 37.6	
	comp=Z,42nm,21.5s,baz=10.0,slow=41						
MAT	Matsushiro	2.68	258	P	Pn	01 35 35.7	+1.1
MAT				S	Sn	01 36 08.6	+2.8
SONM	Songino Array	27.76	304	P	P	01 40 37.3	-0.6
	0.6nm,0.5s,baz=106,slow=11,SNR=4.8						
SONM				LR	LR	01 53 08.4	
	comp=Z,67nm,18.1s,baz=269,slow=40						
H11N2	WAKE ISLAND Hy	28.17	121	T	T	02 10 47.3	
	baz=314,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	28.18	121	T	T	02 10 47.3	
	baz=314,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	28.18	121	T	T	02 10 47.3	
	baz=314,slow=75,SNR=16						
H11S1	WAKE ISLAND Hy	28.88	123	T	T	02 11 42.6	
	baz=316,slow=76,SNR=9.9						
H11S3	WAKE ISLAND Hy	28.88	123	T	T	02 11 45.2	
	baz=316,slow=76,SNR=15						
H11S2	WAKE ISLAND Hy	28.90	123	T	T	02 11 42.6	
	baz=316,slow=76,SNR=8.8						
ZALV	Zalesovo Beam	41.87	312	P	P	01 42 38.5	-0.4
	0.4nm,0.4s,baz=111,slow=8.0,SNR=2.6						
MKAR	Makanchi Array	44.10	302	P	P	01 42 56.3	-0.8
	0.2nm,0.5s,baz=89,slow=10,SNR=4.5						
ILAR	Eielson Array	49.39	32	P	P	01 43 39.4	+1.3
	0.4nm,0.6s,baz=259,slow=5.7,SNR=7.8						
WRA	Warramunga Arr	57.17	188	P	P	01 44 35.8	+0.1
	0.4nm,0.7s,baz=2.1,slow=7.1,SNR=5.3						
WRA				pP	pP	01 44 51.3	+1.8
	0.4nm,0.5s,baz=2.5,slow=7.4,SNR=6.6						
AKASG	Malin Array Be	74.24	322	P	P	01 46 24.7	-0.7
	0.4nm,0.4s,baz=50,slow=6.5,SNR=4.1						
GERES	GERESS Array B	82.64	328	P	P	01 47 10.1	-1.7
	0.1nm,0.3s,baz=46,slow=8.5,SNR=3.6						

MAN 02 02:22:03.7,10°03N×123°23E,h25km,mb4.0,ML2.7, MS2.7,Cebu

*JMA **02** 02:36:40.7±0.3,33°75N×137°07E,h368km±3km,M3.2*
*IDC **02** 02:36:41.2±1.1,33°71N×137°06E,h348km±9km,mb2.9/10, mb1 3.1/14,mb1mx3.0/38,mbtmp3.6/14,Error ellipse: s-maj=17.9km s-min=12.5km az=144.0*
ISC 02 02:36:41.9±0.8**,33°81N**±0°08×**137°08E**±0°06**,h356**km±6km**, n36,**σ**1s34**/48**,mb3.1**/10**,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTO2	TONANKAI O.B.S	0.09	209	P	Pn	02 37 27.1	+1.0
TTO3	TONANKAI O.B.S	0.27	79	P	Pn	02 37 27.6	+1.3
TTO1	TONANKAI O.B.S	0.31	232	P	Pn	02 37 27.0	+0.8
TTO4	TONANKAI O.B.S	0.43	63	P	Pn	02 37 27.6	+1.3
JIE	Ise	0.66	332	P	Pn	02 37 28.0	+0.9
JKN2	Miekihoku	0.79	303	P	Pn	02 37 28.0	+0.5
JKN2				eS	S	02 38 03.8	-0.4
JTNC	Tanabenakahech	1.22	271	P	Pn	02 37 29.3	0.0
JWY	Kouya	1.30	289	P	Pn	02 37 30.2	+0.5
JWT	Wachi	2.02	317	P	Pn	02 37 34.4	+0.6
JWT				eS	S	02 38 14.7	-0.9
JAI	Aioi	2.19	270	P	Pn	02 37 35.0	-0.1
JOD2	Odawara 2	2.20	48	P	Pn	02 37 36.2	+1.1
JRY	Ryogami san	2.66	34	P	Pn	02 37 39.8	+1.1
JRY				eS	S	02 38 25.3	+0.8
JMN	Monobe	2.67	269	P	Pn	02 37 38.9	0.0
JHU	Hanno	2.72	41	P	Pn	02 37 39.9	+0.7
JHU				eS	S	02 38 25.0	-0.5
MJAR	Matsushiro Arr	2.88	18	P	Pn	02 37 41.3	+0.7
	0.2nm,0.3s,baz=182,slow=6.9,SNR=24						
MJAR				S	S	02 38 26.9	-0.9
	baz=179,slow=13,SNR=3.0						
BSO4	Boso 4	2.94	66	P	Pn	02 37 41.1	+0.1
BSO4				eS	S	02 38 29.6	+1.0
BSO3	Boso 3	3.01	70	P	Pn	02 37 40.7	-0.7
BSO3				eS	S	02 38 29.5	+0.1
JAG	Ashikaga	3.25	36	P	Pn	02 37 43.8	-0.1
JAG				eS	S	02 38 32.0	-1.9
BSO1	Boso 1	3.34	74	P	Pn	02 37 42.9	-1.2
BSO1				S	S	02 38 33.9	-0.5
JYT	Yasato	3.51	46	eS	S	02 38 36.0	-2.3
JTO	Tosashimizu	3.71	256	P	Pn	02 37 47.3	-1.0
JHO	Hitachi	3.99	45	P	Pn	02 37 50.4	-0.7
JHO				S	S	02 38 42.9	-4.1
JFK	Kawauchi	4.70	40	P	Pn	02 37 57.9	-0.6
JFK				eS	S	02 38 56.3	-4.3
JNU	Nakatsue	5.23	264	P	Pn	02 38 04.2	-0.1
	0.3nm,0.3s,baz=22,slow=22,SNR=2.9						
JNU				S	S	02 39 09.6	-1.5
	0.2nm,0.3s,baz=16,slow=19,SNR=2.8						
KSRS	Korea Array	8.29	299	P	Pn	02 38 40.0	+0.6
	0.4nm,0.3s,baz=110,slow=12,SNR=6.8						
USRK	Ussuriysk Ar.	11.10	341	P	Pn	02 39 13.6	+0.9
	baz=142,slow=10,SNR=4.1						
SONM	Songino Array	26.91	311	P	P	02 41 53.9	+2.2
	0.6nm,0.7s,baz=123,slow=8.8,SNR=5.3						
CMAR	Chiang Mai Arr	37.26	256	P	P	02 43 20.0	-1.0
	0.6nm,0.4s,baz=48,slow=7.7,SNR=4.9						
MKAR	Makanchi Array	42.92	304	P	P	02 44 06.1	-0.7
	0.2nm,0.4s,baz=87,slow=9.2,SNR=6.2						
WRA	Warramunga Arr	53.52	183	P	P	02 45 25.3	-1.8
	0.1nm,0.3s,baz=360,slow=7.6,SNR=4.6						
ASAR	Alice Springs	57.24	183	P	P	02 45 53.3	0.0
	0.3nm,0.7s,baz=19,slow=12,SNR=3.0						
YKA	Yellowknife Ar	68.34	28	P	P	02 47 05.6	+0.4
	0.2nm,0.7s,baz=272,slow=6.5,SNR=5.8						
FINES	FINESS Array B	69.98	331	P	P	02 47 14.9	-0.3
	0.9nm,0.4s,baz=27,slow=2.1,SNR=8.4						
NVAR	Mina Array Bea	79.76	51	P	P	02 48 13.1	+1.6
	0.2nm,0.5s,baz=302,slow=5.9,SNR=3.0						
PDAR	Pinedale Array	82.44	43	P	P	02 48 26.6	+1.1
	0.5nm,0.7s,baz=316,slow=2.5,SNR=5.4						
TXAR	Lajitas Array	94.89	50	P	P	02 49 25.1	+0.5
	0.2nm,0.8s,baz=251,slow=4.7,SNR=3.1						

IDC 02 02:58:12.9±3.5**,7°27S×150°73E,h42**km±31km**,mb2.9**/2**, mb1 3.4**/3**,mb1mx3.0**/35**,mbtmp3.3**/3**,ML1.3**/1**,MS3.5**/1**, Ms1 3.5**/1**,ms1mx2.6**/12**,Error ellipse: s-maj=76.4km s-min=9.7km az=130.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	3.22	24	P	Pn	02 59 02.0	+1.0
	7.1nm,0.3s,baz=200,slow=16,SNR=2.6						
KRVT				S	Sn	02 59 38.2	0.0
	19nm,0.3s,baz=322,slow=20,SNR=5.6						
PMG	Port Moresby	4.12	239	P	Pn	02 59 15.1	+1.7
	1.3nm,0.3s,baz=312,slow=9.9,SNR=3.1						
PMG				S	Sn	03 00 00.4	+0.1
	1.7nm,0.3s,baz=157,slow=19,SNR=7.9						
WRA	Warramunga Arr	20.28	230	P	P	03 02 44.7	-0.5
	0.4nm,0.4s,baz=56,slow=12,SNR=7.1						
ASAR	Alice Springs	22.95	223	P	P	03 03 13.1	-0.8
	0.5nm,0.6s,baz=56,slow=9.0,SNR=8.4						
BATI	Baumata	26.90	262	LR	LR	03 15 08.9	
	comp=Z,97nm,20.8s,baz=3.0,slow=38						
TORD	Torodi Ar. Bea	148.99	283	PKPbc	PKPbc	03 17 57.6	+0.1
	0.4nm,0.5s,baz=59,slow=3.0,SNR=6.3						
TORD				pPKPbc	pPKPbc	03 18 08.7	-0.2
	0.3nm,0.5s,baz=83,slow=2.5,SNR=4.4						

*NEIC **02** 03:01:22.4±1.7,5°01N±0°07×127°3E±0°1,h122km±8km, mb4.3/14,Error ellipse: s-maj=21.7km s-min=7.2km az=69.0*
*MAN **02** 03:01:23.9,4°91N×126°71E,h130km,mb4.9,ML3.8, MS3.8*
*DJA **02** 03:01:23.0±0.4,5°N±4°×12°7E±°,h108km±5km,M4.3/12, mb4.5/12,mB4.8/5,MLv4.4/11,Mw(mB)4.1/5,Mwp5.8/1*
*IDC **02** 03:01:23.0±1.6,5°09N×127°51E,h111km±13km,mb3.9/12, mb1 3.9/14,mb1mx3.6/51,mbtmp4.3/14,MS2.8/2, Ms1 2.8/2,ms1mx2.4/45,Error ellipse: s-maj=31.8km s-min=9.5km az=65.0*
*BJI **02** 03:01:24.0±0.0,5°00N×127°10E,h112km,mB5.1/12, mb4.5/15*
ISC 02 03:01:22.0±0.5**,5°02N**±0°05×**127°33E**±0°09**,h108**km**,n75, σ1s83**/81**,mb4.4**/23**,4C-2D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	2.59	294	⇑iP	Pn	03 01 57.6	-5.1
DAV	Davao City (W)	2.68	320	P	Pn	03 02 04.8	+1.1
	134nm,0.3s,baz=358,slow=1.2,SNR=7.5						
DAV				S	Sn	03 02 39.4	+3.5
	120nm,0.3s,baz=2.9,slow=15,SNR=18						
DAV				LR	LR	03 02 50.2	
	comp=Z,102nm,19.9s,baz=178,slow=32						
DAV	Davao City (W)	2.68	320	Pn	Pn	03 02 04.4	+0.6
DAV					Sn	03 02 36.2	+0.3
DMPH	Davao City--Mi	2.73	319	⇑eP	Pn	03 02 04.0	-0.5
KCP	Kidapawan	2.98	312	⇑iP	Pn	03 02 06.5	-1.2
KCP				iS	Sn	03 02 45.4	+2.5
SKMP	Bagumbayan, Su	3.15	298	eP	Pn	03 02 06.9	-3.0
SKMP				eS	Sn	03 02 44.5	-2.4
BUKP	Musuan	3.62	322	eP	Pn	03 02 15.8	-0.5
BUKP				eS	Sn	03 02 57.2	-1.2
CTBH	Cotabato--PC H	3.77	306	⇓iP	Pn	03 02 16.4	-1.8
TNTI	Ternate	4.22	179	P	Pn	03 02 25.4	+1.1
TNTI	Ternate	4.22	179		Pn	03 02 25.3	+0.9
TNTI				Sn	Sn	03 03 12.8	+0.2
BUTP	Butuan	4.27	337	eP	Pn	03 02 26.8	+1.7
BUTP				eS	Sn	03 03 24.3	+10
CGP	Cagayan de Oro	4.30	323	⇓eP	Pn	03 02 26.6	+1.2
CGP				eS	Sn	03 03 11.6	-3.0
PAGZ	Pagadian	4.82	306	eP	Pn	03 02 28.7	-3.7
MRSI	Marisa	7.02	230	P	Pn	03 03 02.3	0.0
	0.2nm3μm28nm,0.4s						
SWI	Sorong	7.04	146	P	Pn	03 03 03.4	+0.9
	0.1nm40nm,0.6s						
SIJI	Sorong	7.05	146	P	Pn	03 03 03.8	+1.1
	4.3nm,0.3s,baz=341,slow=7.0,SNR=18						
SIJI				S	Sn	03 04 15.7	-5.6
	0.6nm,0.3s,baz=233,slow=20,SNR=1.7						
SANI	Sanana	7.15	191	P	Pn	03 03 07.4	+3.4
	0.2nm30nm,0.7s						
MPSI	Mapaga	8.76	238	P	Pn	03 03 26.8	+1.0
	4.7nm,1.7s						
FAKI	Fak Fak	9.29	148	P	Pn	03 03 35.8	+2.7
	28nm,1.6s						
FAKI	Fak Fak	9.29	148	Pn	Pn	03 03 33.7	+0.6
FAKI				Sn	Sn	03 05 15.6	-0.3
SOEI	Soe	14.99	192	Pn	Pn	03 04 47.8	-0.7
MTN	Manton Dam	18.14	168	P	P	03 05 24.4	-1.7
	baz=18,SNR=6.4						
MTN	Manton Dam	18.14	168	P	P	03 05 24.3	-1.7
MTN				IAmb	IAmb	03 05 36.3	
	comp=Z,9.7nm,1.0s						
KDU	Kakadu	18.32	164	P	Pn	03 05 29.4	+0.3
	baz=18,SNR=8.4						
KNRA	Kununurra	20.61	176	P	Pn	03 05 54.9	-1.1
	baz=21,SNR=16						
KNRA	Kununurra	20.61	176	P	P	03 05 51.3	-1.4
FITZ	Fitzroy Crossi	23.03	184	P	P	03 06 20.1	+2.1
	baz=23,SNR=5.4						
FITZ	Fitzroy Crossi	23.03	184	P	P	03 06 18.0	0.0
	comp=Z,1.9nm,0.6s,baz=7.6,slow=12,SNR=7.9						
FITZ	Fitzroy Crossi	23.03	184	P	P	03 06 17.8	-0.2
PMG	Port Moresby	24.41	126	LR	LR	03 17 02.6	
	comp=Z,42nm,21.8s,baz=136,slow=39						
WRAB	Tennant Creek	25.74	165	P	P	03 06 41.1	-1.5
WRA	Warramunga Arr	25.75	165	P	P	03 06 44.9	+2.2
	comp=Z,13nm,0.5s,baz=342,slow=10,SNR=144						
WRA	Warramunga Arr	25.75	165	P	P	03 06 41.3	-1.4
WR0	Warramunga Arr	25.82	164	P	P	03 06 41.5	-1.8
QIS	Mount Isa	28.13	155	P	P	03 07 06.0	+1.9
	baz=28,SNR=5.8						
GYA	Guiyang	29.06	319	eP	P	03 07 19.8	+7.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ASAR	Alice Springs	29.23	168	P	P	03 07 15.3	+1.6
	comp=Z,1.4nm,0.6s,baz=354,slow=7.3,SNR=27						
ASAR	Alice Springs	29.23	168	P	P	03 07 10.9	-2.9
WRKA	Warakurna	29.89	178	P	P	03 07 21.4	+1.8
	baz=30,SNR=5.4						
XAN	Xi'an	33.55	332	P	P	03 07 51.5	-0.2
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CD2	Chengdu	33.98	322	P	P	03 07 55.3	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
QLP	Quilpie	35.43	153	P	P	03 08 08.2	+0.3
	baz=36,SNR=16						
LZH	Lanzhou	37.71	328	eP	P	03 08 28.5	+1.1
LZH				pP	pwP	03 08 55.3	-0.8
LZH				sP	sP	03 09 07.2	+4.7
LZH				PP	PnPn	03 10 01.1	+3.1
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,4.9s						
HHC	Hu-ho-hao-te	38.38	341	eP	P	03 08 34.8	+2.0
HHC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,79nm,5.5s						
BBOO	Buckleboo	38.52	168	P	P	03 08 36.1	+2.1
	baz=39,SNR=8.4						
BBOO	Buckleboo	38.52	168	P	P	03 08 33.6	-0.4
STKA	Stephens Creek	39.13	161	P	P	03 08 38.5	-0.6
	comp=Z,5.8nm,0.7s,baz=343,slow=9.0,SNR=14						
STKA	Stephens Creek	39.13	161	P	P	03 08 38.3	-0.8
SHL	Shillong	39.62	305	P	P	03 08 42.5	-1.0
SONM	Songino Array	46.28	341	P	P	03 09 38.1	+1.3
	comp=Z,0.3nm,0.4s,baz=162,slow=12,SNR=4.5						
SONM	Songino Array	46.28	341	P	P	03 09 36.8	-0.1
NFK	Norfolk Island	51.67	133	P	P	03 10 18.9	+0.8
	baz=52,SNR=3.6						
WMQ	Urumqi	52.03	324	eP	P	03 10 23.6	+3.0
WMQ				pP	pwP	03 10 48.8	-0.8
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.1s						
WMQ				LR	LR		
	comp=Z,2μm,18.3s						
WMQ				LR	LR		
	comp=Z,2μm,24.5s						
WMQ				LR	LR		
	comp=Z,4μm,29.0s						
PETK	Petropavlovsk-	54.02	22	P	P	03 10 33.9	-1.1
	comp=Z,4.6nm,0.9s,baz=218,slow=11,SNR=2.8						
PETK	Petropavlovsk-	54.02	22	P	P	03 10 33.6	-1.3
MK31	Makanchi Array	56.85	325	P	P	03 10 55.0	-0.4
MK31				IAmb	IAmb	03 10 58.6	
	comp=Z,1.9nm,0.6s						
MKAR	Makanchi Array	56.85	325	P	P	03 10 56.2	+0.7
	comp=Z,3.0nm,0.4s,baz=114,slow=8.4,SNR=47						
MKAR	Makanchi Array	56.85	325	P	P	03 10 54.5	-0.9
MAKZ	Makanchi	57.04	324	P	P	03 10 56.7	0.0
MAKZ				IAmb	IAmb	03 10 60.0	
	comp=Z,2.5nm,0.7s						
KSH	Kashi	57.57	314	P	P	03 11 03.8	+3.0
KSH				pmax	pmax		
	comp=Z,370nm,4.7s						
ZALV	Zalesovo Beam	59.72	332	P	P	03 11 15.6	+0.4
	comp=Z,0.8nm,0.3s,baz=128,slow=6.4,SNR=5.3						
ZALV	Zalesovo Beam	59.72	332	P	P	03 11 14.2	-1.1
KURK	Kurchatov	60.99	327	P	P	03 11 23.8	-0.1
KURK				IAmb	IAmb	03 11 28.9	
	comp=Z,2.9nm,0.6s						
KKAR	Karatay Array	62.71	316	P	P	03 11 34.6	-1.1
BRVK	Borovoye	66.65	327	P	P	03 12 00.6	-0.4
BRVK				IAmb	IAmb	03 12 03.3	
	comp=Z,4.9nm,0.9s						
ABKAR	Akbulak array	71.54	320	P	P	03 12 30.1	-1.2
ASF	Jabal al Asfar	87.72	302	P	P	03 14 00.9	+1.6
	comp=Z,1.9nm,0.8s,baz=27,slow=2.3,SNR=5.1						
MMAI	Mount Meron Ar	88.91	303	P	P	03 14 05.4	+0.6
	comp=Z,0.5nm,0.5s,baz=94,slow=4.6,SNR=3.3						
ARCES	ARCESS Array B	89.45	340	P	P	03 14 07.7	+1.2
	comp=Z,5.5nm,1.1s,baz=80,slow=5.0,SNR=4.8						
ARCES	ARCESS Array B	89.45	340	P	P	03 14 03.3	-3.2
BRTR	Keskin Array B	89.66	310	P	P	03 14 08.3	-0.1
	comp=Z,0.5nm,0.7s,baz=124,slow=4.3,SNR=4.2						
FINES	FINESS Array B	90.98	332	P	P	03 14 14.7	+0.9
	comp=Z,2.2nm,1.0s,baz=45,slow=0.3,SNR=4.7						
FINES	FINESS Array B	90.98	332	P	P	03 14 11.7	-2.1
CEI	Carei	96.24	319	⇑P	PKiKP	03 19 11.5	-4.4
TORD	Torodi Ar. Bea	123.08	289	PKP	PKiKP	03 20 09.2	+2.1
	comp=Z,0.2nm,0.8s,baz=108,slow=0.9,SNR=2.8						

IDC 02 03:05:25.2±631.0**,14°63N×43°42W,h0**km**,Error ellipse: s-maj=390.4km s-min=154.8km az=76.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I51GB	BERMUDA INFRAS	26.22	316	i		05 44 20.0	
	baz=133,slow=320,SNR=1.6						
I09BR	BRASILIA INFRA	30.42	189	i		06 09 50.0	
	baz=9.9,slow=326,SNR=2.2						
I08BO	LAS PENAS INFR	39.38	220	i		07 10 30.0	
	baz=43,slow=327,SNR=1.9						

*IDC **02** 03:10:38.0±1.3,4°04S×121°84E,h0km,mb3.8/4, mb1 4.0/5,mb1mx3.7/58,mbtmp3.8/5,ML3.4/1,MS2.9/3, Ms1 2.9/3,ms1mx2.6/40,Error ellipse: s-maj=110.6km s-min=20.2km az=58.0*
*DJA **02** 03:10:40.0±0.2,4°S±2°×12°2E±°,h10km,M4.1/13,mB5.4/1, mb4.4/5,MLv4.0/13,Mw(mB)4.8/1*
ISC 02 03:10:41.1±0.8**,4°25S**±0°06×**121°54E**±0°05**,h10**km**,n18, σ2s06**/17**,mb3.8**/4**,Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNSI	Bone	1.44	264	P	Pn	03 11 04.8	-2.4
BNSI				S	Sn	03 11 26.9	+0.7
BBSI	Bau Bau	1.60	140	P	Pn	03 11 10.8	+1.3
BBSI				S	Sn	03 11 32.6	+2.3
BKSI	Bulukumba	1.77	233	P	Pn	03 11 10.6	-1.2
BKSI				S	Sn	03 11 36.1	+1.7
SPSI	Sidrap Palu	1.79	279	P	Pn	03 11 11.8	-0.3
SPSI				S	Sn	03 11 35.8	+0.9
TTSI	Tana Toraja	2.09	305	P	Pn	03 11 17.6	+1.3
APSI	Ampana	3.32	2	P	Pg	03 11 48.9	+4.1
LUWI	Luwuk	3.42	21	P	Pg	03 11 46.5	-0.2
MRSI	Marisa	4.71	5	P	Pn	03 11 49.8	-2.5
MPSI	Mapaga	4.84	340	P	Pn	03 11 51.1	-3.0
PLAI	Plampang	5.88	219	P	Pn	03 12 09.7	+1.2
	0.2nm33nm,1.1s						
DAV	Davao City (W)	11.95	20	LR	LR	03 19 13.9	
	comp=Z,23nm,19.5s,baz=3.0,slow=44						
WRA	Warramunga Arr	19.97	142	P	P	03 15 11.1	-2.7
	0.1nm,0.3s,baz=318,slow=12,SNR=11						
ASAR	Alice Springs	22.69	149	P	P	03 15 41.9	-1.2
	0.9nm,0.6s,baz=328,slow=8.9,SNR=17						
GUMO	Guam	29.16	52	LR	LR	03 28 55.3	
	comp=Z,27nm,18.3s,baz=113,slow=38						
CMAR	Chiang Mai Arr	31.70	316	P	P	03 17 04.5	-0.8
	0.6nm,0.4s,baz=148,slow=7.7,SNR=5.5						
STKA	Stephens Creek	33.31	148	P	P	03 17 18.3	-1.0
	2.4nm,0.8s,baz=330,slow=14,SNR=3.7						
JNU	Nakatsue	38.21	13	LR	LR	03 33 58.8	
	comp=Z,33nm,18.8s,baz=1.5,slow=37						
SONM	Songino Array	53.55	347	P	P	03 19 59.3	-3.0
	0.6nm,0.8s,baz=152,slow=5.5,SNR=4.0						

IDC 02 03:13:21.9±3.2**,22°49S×176°03W,h0**km**,mb3.7**/4**, mb1 4.0**/4**,mb1mx3.7**/39**,mbtmp3.7**/4**,Error ellipse: s-maj=287.9km s-min=33.7km az=163.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	35.17	267	P	P	03 20 18.3	+0.5
	4.0nm,1.1s,baz=79,slow=12,SNR=2.5						
ASAR	Alice Springs	45.89	258	P	P	03 21 46.2	-0.2
	0.3nm,0.4s,baz=94,slow=7.6,SNR=9.1						
WRA	Warramunga Arr	46.17	263	P	P	03 21 48.4	-0.4
	0.3nm,0.3s,baz=102,slow=8.2,SNR=8.1						
TXAR	Lajitas Array	86.60	56	P	P	03 26 07.6	0.0
	0.6nm,1.3s,baz=215,slow=4.2,SNR=3.7						

*MOS **02** 03:13:54.2±1.1,27°10N×54°43E,h13km,mb5.4/71, MS4.8/25,Error ellipse: s-maj=4.8km s-min=3.3km az=92.5*
*IDC **02** 03:13:54.3±0.3,27°17N×54°46E,h0km,mb5.2/43, mb1 5.2/48,mb1mx5.1/54,mbtmp5.2/48,ML4.8/4,MS4.8/41, Ms1 4.8/41,ms1mx4.7/53,Error ellipse: s-maj=9.9km s-min=8.8km az=177.0*
*NEIC **02** 03:13:54.6±1.4,27°15N±0°05×54°45E±0°04,h8km±1km, mb5.3/203,Mwb5.2/24,mb_Lg5.5(TEH),Mwc5.3(GCMT), Error ellipse: s-maj=8.3km s-min=6.2km az=201.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; Mrr5.90; Mθθ-4.99; Mφφ-0.91; Mrθ0.97; Mθφ5.53; Mφr0.99; Fault plane solution: M0 7.93000×10^{16} NP1: φs104.95000°,δ49.69000°,λ61.37000°. NP2: φs325.11000°,δ47.99000°,λ119.46000°. Principal axes: T 6.4435, Plg69.0000°, Azm307.0000°; N 2.4084, Plg21.0000°, Azm124.0000°; P -8.8519, Plg1.0000°, Azm215.0000°;*
*BJI **02** 03:13:55.0±0.0,27°30N×54°50E,h10km,mB5.4/58, mb5.3/74,Ms5.3/77,Ms7 5.0/71*
*THR **02** 03:13:56.9±0.3,27°16N×54°43E,h18km±10km,mb5.6*
*TEH **02** 03:13:56.2,27°16N×54°47E,h15km,ML5.5*
*GCMT **02** 03:13:56.6±0.1,26°95N±0°01×54°36E±0°01,h12km, MW5.3/122,Moment Tensor Solution. s82,c122; s122,c214; Duration: 1s1 Moment tensor: Scale 10^{17} Nm; Mrr0.70±.02; Mθθ-0.88±.02; Mφφ0.18±.02; Mrθ0.26±.04; Mθφ0.71±.01; Mφr0.29±.05; Best double couple: M0 1.12500×10^{17} NP1:φs329.00000°,δ54.00000°, λ141.00000°. NP2:φs85.00000°,δ59.00000°,λ43.00000°. Principal axes: T 1.0060, Plg51.0000°, Azm300.0000°; N 0.2390, Plg39.0000°, Azm113.0000°; P -1.2450, Plg3.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DSN **02** 03:13:57.1±0.4,27°13N×54°37E,h10km,mb5.8/5, ML5.4/10 Error ellipse: s-maj=8.5km s-min=4.8km az=51.0*
*GII **02** 03:13:57.3±0.0,27°22N×54°34E,h10km*
*NEIC **02** 03:13:58,26°99N×54°36E,h12km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; Mrr0.75; Mθθ-0.96; Mφφ0.22; Mrθ0.37; Mθφ0.75; Mφr-0.04; Fault plane solution: M0 1.21000×10^{17} NP1:φs321.00000°, δ41.00000°,λ128.00000°. NP2:φs95.00000°,δ59.00000°, λ62.00000°. Principal axes: T 0.8624, Plg64.0000°, Azm315.0000°; N 0.5233, Plg24.0000°, Azm111.0000°; P -1.3857, Plg9.0000°, Azm205.0000°;*
*OMAN **02** 03:14:03.6±0.2,26°75N×54°52E,h130km±2km,mb5.6/1, ml4.9/19,Mwp5.4/12 Error ellipse: s-maj=6.5km s-min=2.5km az=21.0*
*BGR **02** 03:14:22.6±0.0,28°29N×51°62E,h33km,mb4.7,Ms4.5*
ISC 02 03:13:55.7±0.5**,27°18N**±0°02×**54°41E**±0°02**,h9**km±2km**, n1194,σ1s88**/1240**,mb5.3**/305**,MS4.9**/86**,61C-40D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	1.12	279	ePg	Pn	03 14 19.4	+1.8
LMD1				eSg	Sn	03 14 34.2	+1.1
LMD1				e		03 14 56.2	
LMD1	Lamerd	1.12	279	Pn	Pn	03 14 20.0	+2.4
JHRM	Jahrom	1.51	331	ePn	Pg	03 14 24.9	+0.1
JHRM				e		03 14 59.4	
JHRM	Jahrom	1.51	331	Pn	Pg	03 14 25.9	+1.1
GENO	Geno	1.59	82	ePn	Pn	03 14 24.0	-0.1

GENO Geno 1.59 82 Pg Pb 03 14 25.4 +0.1
SHME Shamm 1.92 125 eP Pn 03 14 28.3 -0.3
SNR=107
SHME Shamm 1.92 125 ePn Pn 03 14 27.8 -0.8
UMQ Umm Al-Quwin 1.99 145 eP Pb 03 14 31.7 -0.4
SNR=45
UMQ Umm Al-Quwin 1.99 145 ePn Pb 03 14 31.3 -0.8
UMQ Umm Al-Quwin 1.99 145 P Pg 03 14 33.6 -0.4
SNR=45
UMQ P Pg 03 14 33.6 -0.4
SNR=45
BANOM Banah 2.10 126 eP Pn 03 14 31.1 0.0
SNR=84
BANOM Banah 2.10 126 P Pn 03 14 31.0 -0.2
SNR=608
NIAN Nian 2.19 79 ePn Pn 03 14 32.6 +0.3
NIAN Nian 2.19 79 Pn Pn 03 14 33.9 +1.6
MSFE Esma-Masafi 2.40 139 eP Pn 03 14 35.7 +0.5
SNR=129
MSFE Esma-Masafi 2.40 139 ePn Pn 03 14 36.0 +0.8
NAZ Nazwa, Dubai 2.45 152 eP Pn 03 14 37.4 +1.5
SNR=167
NAZ Nazwa, Dubai 2.45 152 ePn Pn 03 14 37.2 +1.3
NAZ Nazwa, Dubai 2.45 152 P Pb 03 14 38.0 -2.0
SNR=167
NAZ P Pb 03 14 38.0 -2.0
SNR=167
NAZ P Pb 03 14 38.0 -2.0
SNR=114
NAZ P Pb 03 14 38.0 -2.0
SNR=114
MDH Madha 2.53 137 eP Pn 03 14 38.9 +2.0
SNR=211
MDH Madha 2.53 137 ePn Pn 03 14 37.0 +0.1
MDH Madha 2.53 137 P Pn 03 14 39.0 +2.1
SNR=59
MDH P Pn 03 14 39.0 +2.1
SNR=59
FAQ Al Faqa, Dubai 2.65 156 eP Pn 03 14 40.5 +1.9
SNR=14
FAQ Al Faqa, Dubai 2.65 156 ePn Pb 03 14 41.0 -2.3
FAQ Al Faqa, Dubai 2.65 156 P Pb 03 14 42.0 -1.3
SNR=14
ASUD Al Ashush, Dub 2.67 162 eP Pn 03 14 40.9 +2.0
SNR=264
ASUD Al Ashush, Dub 2.67 162 ePn Pn 03 14 40.3 +1.4
ASUD Al Ashush, Dub 2.67 162 P Pn 03 14 41.0 +2.0
SNR=264
UOSS Minazif 2.75 144 eP Pn 03 14 41.2 +1.2
SNR=84
UOSS Minazif 2.75 144 ePn Pn 03 14 39.8 -0.2
UOSS Minazif 2.75 144 Pn 03 14 39.4 -0.6
UOSS Sn Sn 03 15 13.4 +0.1
HATD Hatta, Dubai 2.81 146 eP Pn 03 14 43.0 +2.2
SNR=99
HATD Hatta, Dubai 2.81 146 ePn Pn 03 14 42.6 +1.8
HATD Hatta, Dubai 2.81 146 P Pn 03 14 41.4 +0.5
SNR=99
ASHO Ashiyiah 2.89 149 eP Pn 03 14 43.5 +1.5
SNR=325
ASHO Ashiyiah 2.89 149 ePn Pn 03 14 43.0 +1.0
ASHO Ashiyiah 2.89 149 P Pn 03 14 42.5 +0.5
SNR=325
SHI Shiraz 2.97 326 ePn Pn 03 14 44.6 +1.4
SHI e 03 15 56.3
KHNJ Kahnooj 3.03 75 ePn Pn 03 14 43.8 0.0
KHNJ Kahnooj 3.03 75 Pn Pn 03 14 45.2 +1.4
NGRK Negar Kerman 3.20 39 ePn Pn 03 14 47.1 +0.6
NGRK e 03 15 55.3
NGRK Negar Kerman 3.20 39 Pn Pn 03 14 47.2 +0.7
ALNE Al Ain 3.34 158 iP Pn 03 14 49.9 +1.8
SNR=89
ALNE Al Ain 3.34 158 ePn Pn 03 14 50.2 +2.1
JSK1 Jask 3.38 116 ePn Pn 03 14 49.5 +0.8
KRBR Kerman 3.48 36 ePn Pn 03 14 52.7 +2.4
KRBR Kerman 3.48 36 ePn Pn 03 14 52.6 +2.4
KRBR Kerman 3.48 36 Pn Pn 03 14 52.0 +1.7
TVBK TV Kerman 3.48 36 ePn Pn 03 14 52.0 +1.6
TVBK e 03 15 41.0
TVBK TV Kerman 3.48 36 Pn Pn 03 14 52.5 +2.1
SOHO SOHO 3.59 147 P Pn 03 14 52.7 +1.3
SNR=16
KHGB Koh Gabri 3.67 29 ePn Pn 03 14 54.8 +2.0
KHGB Koh Gabri 3.67 29 Pn Pn 03 14 55.3 +2.5
CHMN Cheshme madani 3.84 45 ePn Pn 03 14 57.0 +1.7
CHMN Cheshme madani 3.84 45 Pn Pn 03 14 58.1 +2.8
SLWS 4.13 236 ePn Pn 03 15 00.8 +1.8
IMEH Mehriz 4.20 2 ePn Pn 03 15 02.2 +2.0
IMEH Mehriz 4.20 2 Pn Pn 03 15 02.4 +2.2
ARQ Araqi 4.28 153 P Pn 03 15 01.7 +0.6
SNR=41
ARQ P Pn 03 15 01.7 +0.6
SNR=41
HOQ Hoqain 4.44 143 P Pn 03 15 03.0 -0.3
SNR=38
HOQ P Pn 03 15 03.0 -0.3
SNR=38
BTHS 4.48 227 ePn Pn 03 15 05.3 +1.6
IBAF Bafgh 4.51 13 ePn Pn 03 15 06.1 +1.7
KLNJ Kolanjah 4.54 328 ePn Pn 03 15 06.7 +1.7
KLNJ Kolanjah 4.54 328 Pn Pn 03 15 05.6 +0.6
ISAD Sadrabad 4.76 353 ePn Pn 03 15 10.0 +2.1
ISAD Sadrabad 4.76 353 Pn Pn 03 15 10.7 +2.8
IRAM Ramesheh 4.94 340 ePn Pn 03 15 11.7 +1.4
IRAM Ramesheh 4.94 340 Pn Pn 03 15 13.0 +2.7
BIDO Bidbid 4.96 136 ePn Pn 03 15 11.3 +1.0
BIDO Bidbid 4.96 136 P Pn 03 15 11.0 +0.7
SNR=22
ICHK Chekchek 5.05 0 ePn Pn 03 15 13.7 +1.9
ICHK Chekchek 5.05 0 Pn Pn 03 15 15.0 +3.2
BSY Bisya 5.09 150 P Pn 03 15 13.5 +1.3
SNR=73
SMDO Samad 5.26 140 P Pn 03 15 15.6 +0.9
SNR=131
SMDO S Sn 03 16 19.5 +4.0
IBRJ Brojen 5.45 331 ePn Pn 03 15 19.3 +1.9
IBRJ Brojen 5.45 331 Pn Pn 03 15 19.4 +2.0
WSAR Wadi Sarin 5.48 135 Pn Pn 03 15 18.1 +0.6
24nm,0.3s,baz=320,slow=8.4,SNR=103
WSAR Sn Sn 03 16 18.6 -2.1
34nm,0.3s,baz=318,slow=22,SNR=5.0
WSAR LR LR 03 17 57.0
comp=Z,15µm,19.6s,baz=344,slow=45
WSAR Wadi Sarin 5.48 135 P Pn 03 15 18.4 +0.9
SNR=24
JMDO Jabal Madar 5.85 144 P Pn 03 15 25.0 +2.4
SNR=43
JMDO P Pb 03 15 26.0 -12
SNR=17
IZEF Zefreh 5.98 343 ePn Pn 03 15 25.2 +0.6
JHBN Jahan bin 6.00 328 ePn Pn 03 15 26.0 +1.1
ANAR Anarak 6.02 355 ePn Pn 03 15 26.0 +0.9
ZHSF Zahedan 6.11 65 ePn Pn 03 15 28.7 +2.3
ZHSF Zahedan 6.11 65 ePn Pn 03 15 28.7 +2.3
ZHSF Zahedan 6.11 65 Pn Pn 03 15 28.0 +1.6
SZD1 Zahaedan-tmp 6.14 66 ePn Pn 03 15 29.2 +2.5
WBK Wadi Bani Khal 6.15 137 P Pn 03 15 26.2 -0.5
SNR=138
TPRV Parvadeh(Tabas 6.16 18 ePn Pn 03 15 28.5 +1.6
IPIR Pirpir 6.28 332 ePn Pn 03 15 29.3 +0.5
NHDN Nehbandan 6.47 48 ePn Pn 03 15 33.2 +1.9
IKOO Kooshah 6.58 36 ePn Pn 03 15 34.2 +1.3
IKLH Kolahrood 6.59 339 ePn Pn 03 15 34.0 +1.0
ITEG Tejag 6.83 32 ePn Pn 03 15 37.4 +1.2
TKDS Koohdasht(Taba 6.83 19 ePn Pn 03 15 37.5 +1.3
TABS Tabas 6.86 19 ePn Pn 03 15 39.0 +2.4
TABS Tabas 6.86 19 ePn Pn 03 15 39.0 +2.4
TABS eSg Sg 03 17 28.8 -7.2
TABS Tabas 6.86 19 Pn Pn 03 15 38.0 +1.4
TABS Sg Sg 03 17 28.0 -8.0
TNSJ Nastanj 7.03 15 ePn Pn 03 15 39.9 +1.0
QAM Ghamsar 7.04 339 ePn Pn 03 15 40.8 +1.6
KRSH Karshahi 7.05 344 ePn Pn 03 15 40.8 +1.6
IDAH Dahanechah 7.29 39 ePn Pn 03 15 46.1 +3.5
AFRZ Afriz 7.39 31 ePn Pn 03 15 45.8 +1.9
IMON Monand 7.53 36 ePn Pn 03 15 48.5 +2.6
DQM DQM 7.76 158 P Pn 03 15 48.5 -0.4
SNR=51
IVRN Varamin 8.12 344 ePn Pn 03 15 54.2 +0.3
IQOM Qom 8.16 340 ePn Pn 03 15 56.2 +1.6
IKMR Kamar-syah 8.19 322 ePn Pn 03 15 54.0 -0.7
SHRT Shahrakht 8.21 37 ePn Pn 03 15 57.7 +2.6
SHRT Shahrakht 8.21 37 ePn Pn 03 15 57.7 +2.6
SHRT Shahrakht 8.21 37 Pn Pn 03 15 57.0 +2.0

BDRS Dareh Seyedi 8.26 326 ePn Pn 03 15 55.6 -0.4
ILAS Lasjerd 8.27 352 ePn Pn 03 15 58.1 +2.0
IANJ Anjilo 8.28 357 ePn Pn 03 15 57.4 +1.3
IKFM Kafar-mosalman 8.49 320 ePn Pn 03 15 59.4 +0.6
IDOB Doab 8.50 322 ePn Pn 03 15 58.7 -0.5
HSAM Samen 8.61 326 ePn Pn 03 16 00.4 -0.3
ISHM Shahmirzad 8.66 354 ePn Pn 03 16 04.2 +2.8
IHSB Hasanabad 8.66 343 ePn Pn 03 16 01.5 +0.2
RAYN Ar Rayn 8.84 248 P Pn 03 16 04.6 +0.9
RAYN S Sn 03 17 42.6 -0.8
RAYN Ar Rayn 8.84 248 iP Pn 03 16 03.3 -0.4
SNR=40
RAYN Ar Rayn 8.84 248 Pn 03 16 04.6 +0.9
RAYN Sn Sn 03 17 42.6 -0.8
HAGD Aghdareh 8.86 331 ePn Pn 03 16 04.5 +0.4
IALA Alasht 8.98 352 ePn Pn 03 16 09.6 +3.7
IRAZ Razeghan 9.05 336 ePn Pn 03 16 07.6 +0.9
IMHD Mahdasht 9.06 340 ePn Pn 03 16 07.7 +0.9
IKOM Komasi 9.16 321 ePn Pn 03 16 07.8 -0.4
SHAO Shalim 9.18 173 iP Pn 03 16 07.4 -1.0
SNR=273
SHAO Shalim 9.18 173 P Pn 03 16 07.2 -1.2
SNR=272
IBZA Bozab 9.19 324 ePn Pn 03 16 08.7 0.0
IPRN Peran 9.21 349 ePn Pn 03 16 11.1 +2.3
WHFO Wadi Hawf 9.23 184 P Pn 03 16 07.8 -1.3
SNR=494
WHFO S Sn 03 17 49.9 -3.3
SNR=5.7
IGLO Ghaloghah 9.31 357 ePn Pn 03 16 13.6 +3.3
DMTO DMTO 9.43 177 P Pn 03 16 11.0 -0.8
SNR=116
QABG Abgarm-Qazvin 9.45 335 ePn Pn 03 16 13.3 +1.1
KCHF Cheshme Sefid, 9.50 320 ePn Pn 03 16 12.7 -0.1
KER Kermanshah 9.52 321 ePn Pn 03 16 13.5 +0.3
SBZV Sabzevar 9.58 16 ePn Pn 03 16 14.8 +0.8
HSRG Sareghieh 9.60 328 ePn Pn 03 16 14.5 +0.2
RBK Rabkut 9.63 181 P Pn 03 16 14.8 +0.2
SNR=76
QALM Alamut, Qazvin 9.77 342 ePn Pn 03 16 18.4 +1.8
IVIS Veis 9.79 320 ePn Pn 03 16 16.8 +0.1
IGHG Ghaleghazi 9.81 319 ePn Pn 03 16 18.6 +1.4
ABTO Aybut 9.83 186 P Pn 03 16 16.5 -0.8
SNR=497
IMOG Moghan 9.84 24 ePn Pn 03 16 20.1 +2.4
IGZV Ghazvin 9.85 340 ePn Pn 03 16 19.3 +1.6
HRA Herat 9.85 41 Pn 03 16 16.5 -1.2
IPAY Payeh 10.03 22 ePn Pn 03 16 22.3 +2.1
JRKH Jarkhoshk 10.07 29 ePn Pn 03 16 24.7 +4.1
IMND Minoodasht 10.09 5 ePn Pn 03 16 22.9 +2.2
IAKL Akhelmad 10.10 20 ePn Pn 03 16 23.6 +2.5
IDHR Dehrash 10.18 319 ePn Pn 03 16 20.8 -1.4
IKRD Kardeh 10.19 19 ePn Pn 03 16 20.8 +6.5
ISFR Sfayin 10.31 16 ePn Pn 03 16 26.8 +2.8
IMYA Miami 10.34 27 ePn Pn 03 16 26.6 +2.2
IEMG Emamgholi 10.82 18 ePn Pn 03 16 33.7 +2.6
GEYT Alibeck 11.17 15 Pn Pn 03 16 38.7 +3.2
0.6nm,0.3s,baz=188,slow=10,SNR=45
GEYT LR LR 03 21 38.0
comp=Z,15µm,18.2s,baz=190,slow=42
GEYT Alibeck 11.17 15 Pn 03 16 34.8 -0.8
GYA0B ALIBECK ARRAY 11.17 15 Pn 03 16 34.6 -0.9
MAHB Mahabad 12.07 324 ePn Pn 03 16 47.2 -0.9
IHSH Hashtrud 12.62 333 ePn Pn 03 16 44.3 -11
IHRS Heris 12.71 333 ePn Pn 03 16 56.5 -0.4
ITBZ Tabriz 13.03 330 ePn Pn 03 17 01.8 +0.8
CUKT Cukurca 13.57 320 eP Pn 03 17 06.6 -1.9
SIRT Sirnak 14.42 319 eP Pn 03 17 16.7 -3.4
KBL Kabul 14.55 56 P Pn 03 17 19.7 -2.3
KBL Kabul 14.55 56 Pn 03 17 19.7 -2.3
MAKU Maku 14.60 329 IAmb IAmb 03 17 29.8
comp=Z,225nm,1.1s
VANB Van 14.66 324 eP Pn 03 17 22.3 -1.1
CLDR Caldiran 14.80 326 eP Pn 03 17 26.8 +1.4
SOCY Socotra 14.92 182 Pn 03 17 22.9 -4.1
GNI Garni 15.22 331 ceP Pn 03 17 30.4 -0.6
GNI pmax pmax
comp=Z,370nm,0.8s
GNI Garni 15.22 331 Pn Pn 03 17 33.3 +2.3
comp=Z,1.0nm,0.3s,baz=134,slow=1.5,SNR=35
GNI LR LR 03 24 08.5
comp=Z,4µm,18.1s,baz=132,slow=40
GNI Garni 15.22 331 iP Pn 03 17 33.3 +2.3
SNR=96
GNI Garni 15.22 331 eP Pn 03 17 32.9 +1.9
GNI Garni 15.22 331 Pn 03 17 30.1 -0.8
AKT Akhty 15.29 341 eP P 03 17 35.7 -1.0
AKT pmax pmax
comp=Z,161nm,0.7s
TASB TASBURUN-IGDIR 15.31 329 eP Pn 03 17 33.4 +1.3
GURO Guroymak-BITLI 15.37 321 eP P 03 17 41.1 +3.5
MLAZ Malazgirt-MUS 15.50 323 eP P 03 17 39.8 +0.6
SVAN Silvan-Diyarba 15.59 318 eP P 03 17 42.0 +2.1
AGRB Hanur-Agry 15.60 325 eP Pn 03 17 37.6 +1.7
DAMY Dhamar 15.64 219 Pn 03 17 32.3 -4.3
DAMY IAmb IAmb 03 17 51.1
comp=Z,115nm,0.7s
DAMY Dhamar 15.64 219 P Pn 03 17 33.7 -3.0
SNR=17
ASF Jabal al Asfar 16.01 292 Pn Pn 03 17 38.8 -2.4
comp=Z,0.9nm,0.3s,baz=71,slow=10.0,SNR=33
ASF Sn Sn 03 20 30.8 -8.1
comp=Z,1.2nm,0.3s,baz=255,slow=20,SNR=3.6
ASF LR LR 03 25 33.3
comp=Z,2µm,19.1s,baz=64,slow=44
THW Thamme Wali 16.02 65 P Pn 03 17 41.6 +0.2
DYBB Diyarbakir 16.11 315 eP P 03 17 45.2 -0.6
VRTB Varto-Mus 16.11 321 eP P 03 17 46.5 +0.6
BNGB Bingl 16.44 319 eP P 03 17 50.3 +0.8
KARO Karliova-Bingo 16.45 321 eP P 03 17 50.7 +1.1
CEP Cherat 16.46 62 P Pn 03 17 47.0 -0.1
KOPR Koprukoy-ERZUR 16.49 324 eP P 03 17 49.9 -0.2
TBLG Delisi 16.55 334 eP Pn 03 17 47.5 -0.5
URFA Urfa 16.66 312 eP Pn 03 17 49.3 -0.2
SENK Senkaya-Erzuru 16.66 326 eP P 03 17 51.5 -0.6
MAK Makhachkala 16.72 342 eP P 03 17 53.8 +1.4
MAK eS S 03 21 02.3 -4.7
MAK pmax pmax
comp=Z,1µm,1.0s
MAK MLR MLR
comp=Z,2µm,16.0s
AKH Akhalkalaki 16.80 330 P Pn 03 17 50.8 -0.5
AKH pmax pmax
comp=Z,80nm,0.9s
AKH Akhalkalaki 16.80 330 eP P 03 17 52.7 -0.8
AKH Akhalkalaki 16.80 330 P Pn 03 17 50.8 -0.5
YEDI Yedisu-Bingol 16.82 320 eP P 03 18 00.9 +7.1
BTLR Botlikh 16.83 339 iP Pn 03 17 52.3 +0.7
RCY Rachaya 17.21 296 eP Pn 03 17 56.6 0.0
HRFI Mount Harif 17.25 284 eP Pn 03 17 56.9 0.0
MMLI Mount Malkishu 17.29 292 eP Pn 03 17 57.9 +0.5
EIL Elat 17.30 283 P Pn 03 17 57.4 0.0
comp=Z,4.2nm,0.3s,baz=113,slow=4.0,SNR=28
EIL S Sn 03 21 13.9 +3.9
comp=Z,0.6nm,0.3s,baz=56,slow=14,SNR=2.3
EIL LR LR 03 25 07.3
comp=Z,2µm,18.0s,baz=98,slow=39
EIL Elat 17.30 283 eP Pn 03 17 58.1 +0.7
QRWL Qaraoun 17.35 296 eP Pn 03 17 58.5 +0.3
HWQ Hawqa 17.37 299 eP Pn 03 17 58.2 -0.2
MALT Malatya 17.41 314 eP P 03 18 00.4 +0.2
MMAI Mount Meron Ar 17.44 294 P Pn 03 17 59.4 +0.1
comp=Z,5.9nm,0.3s,baz=99,slow=14,SNR=90
MMAI S Sn 03 21 04.3 -9.2
comp=Z,1.8nm,0.3s,baz=98,slow=22,SNR=4.1
MMAI LR LR 03 26 29.7
comp=Z,4µm,19.0s,baz=90,slow=43
GROC Groznyy 17.45 339 eP P 03 18 02.3 +1.8
GROC eS S 03 21 19.8 -2.2
GROC pmax pmax
comp=Z,615nm,1.1s
GROC MLR MLR
comp=Z,1.0nm,8.0s
NIL Nilore 17.48 64 P Pn 03 17 58.9 -0.8
NIL pmax pmax
comp=Z,167nm,1.0s
NIL Nilore 17.48 64 P Pn 03 17 58.9 -0.8
NIL IAmb IAmb 03 18 03.9
comp=Z,167nm,0.9s
BHL Bhannes 17.48 297 eP Pn 03 17 59.7 -0.1
DQRL Deir Qamar 17.49 296 eP P 03 18 00.9 -0.2
CHCP Chirah Chowk 17.49 64 P Pn 03 17 59.9 0.0
GAZ Gaziantep 17.62 309 eP Pn 03 17 58.0 -0.2

GAZ Gaziantep 17.62 309 P Pn 03 18 00.1 -1.4
GAZ IAmb IAmb 03 18 07.4
comp=Z,175nm,0.9s
ZEI Tsey 17.77 334 eP Pn 03 18 03.2 -0.3
ZEI pmax pmax
comp=Z,464nm,0.9s
BATM Batumi 17.78 327 eP P 03 18 04.9 +0.7
ONI Oni 17.79 333 eP P 03 18 05.3 +1.0
CHOM Cayeli-Rize 17.87 324 eP Pn 03 18 03.5 -1.0
KZIT Kziot 17.89 287 eP P 03 18 05.9 +0.5
KMRS Kahramanmaras 18.00 309 eP Pn 03 18 05.8 -0.3
DARE Darende-Malaty 18.17 313 eP Pn 03 18 07.0 -1.3
CEYT Ceyhan 18.57 306 eP Pn 03 18 14.4 +1.2
YURE YUREGIR 18.58 306 eP Pn 03 18 15.2 +2.0
NEY Neytrino 18.63 332 iP Pn 03 18 15.0 +1.0
NEY pmax pmax
comp=Z,36nm,0.8s
TAS Tashkent 18.69 37 P P 03 18 13.0 -1.2
TAS pmax pmax
comp=Z,404nm,0.9s
TAS Tashkent 18.69 37 P P 03 18 13.0 -1.2
BTK Batken 18.72 43 P P 03 18 11.9 -2.7
BTK pmax pmax
comp=Z,119nm,1.0s
BTK Batken 18.72 43 P P 03 18 11.9 -2.7
KOZT Kozan 18.73 308 eP Pn 03 18 15.9 +0.8
KBZ Khabaz 18.96 334 ciP Pn 03 18 17.5 -0.2
KBZ Khabaz 18.96 334 P Pn 03 18 19.9 +2.2
comp=Z,1.1nm,0.3s,baz=134,slow=8.7,SNR=89
KBZ S Sn 03 21 49.6 -0.4
baz=96,slow=19,SNR=1.7
ATD Arta Tunnel 18.98 217 P Pn 03 18 19.9 +1.6
comp=Z,1.1nm,0.3s,baz=6.1,slow=17,SNR=7.0
ATD S S 03 21 53.3 -0.1
comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=1.6
ATD LR LR 03 26 50.3
comp=Z,4µm,20.0s,baz=32,slow=41
ATD Arta Tunnel 18.98 217 P P 03 18 17.5 -0.2
SHA1 Shidzhatmaz 19.06 333 iP P 03 18 18.6 +0.1
EREN Erenkoy 19.16 301 eP Pn 03 18 20.1 -0.2
PYA1 Pyatigorsk 19.16 334 iP Pn 03 18 20.3 0.0
KARA Karaisali 19.18 306 eP Pn 03 18 30.0 +9.5
KVAR Kislovodsk Arr 19.23 334 P Pn 03 18 22.1 +0.9
baz=90,slow=20,SNR=55
KVAR S Sn 03 21 57.1 +0.3
baz=349,slow=19,SNR=1.9
KIV Kislovodsk 19.23 334 ciP Pn 03 18 22.1 +0.9
KIV iS Sn 03 21 54.9 -1.9
KIV pmax pmax
comp=Z,460nm,1.3s
KIV MLR MLR
comp=Z,1µm,20.0s
KIV Kislovodsk 19.23 334 iP Pn 03 18 22.5 +1.3
SNR=142
KIV Kislovodsk 19.23 334 eP Pn 03 18 22.7 +1.5
KIV Kislovodsk 19.23 334 P P 03 18 19.1 -1.1
SVSK Karacayir 19.24 316 eP Pn 03 18 22.9 +1.7
RSDY Resadiye-TOKAT 19.33 317 eP Pn 03 18 23.9 +1.6
BNN Bunyan 19.40 312 eP Pn 03 18 24.3 +1.0
CMRD Camardi-Nigde 19.41 307 eP Pn 03 18 26.0 +2.6
KIZK Mersin 19.53 303 eP Pn 03 18 25.2 +0.5
CHM Chimkent 19.55 36 eP Pn 03 18 24.8 -0.2
CHM eS S 03 22 05.7 +1.2
CHM pmax pmax
comp=Z,153nm,0.9s
CHM Chimkent 19.55 36 eP Pn 03 18 24.8 -0.2
comp=Z,153nm,0.9s
CHM eS S 03 22 05.7 +1.2
CSS Mathiatis 19.63 298 eP Pn 03 18 25.9 0.0
CSS Mathiatis 19.63 298 P P 03 18 23.5 -1.1
CSS IAmb IAmb 03 18 30.4
comp=Z,244nm,0.9s
SILI Silifke-Mersin 19.65 303 eP P 03 18 25.3 +0.6
IUG luzhnay 19.65 37 eP P 03 18 25.4 +0.5
IUG eS S 03 21 58.7 -8.0
IUG luzhnay 19.65 37 eP P 03 18 25.5 +0.5
IUG eS S 03 21 58.7 -8.0
IUG eLR LR 03 28 01.4
DHRM DHARAMSHALA 19.67 70 eP P 03 18 24.6 -0.6
TOKT Tokat 19.76 316 eP Pn 03 18 28.5 +1.0
IKL Isikli 19.78 302 eP Pn 03 18 27.5 -0.2
KEBE Keben-Mersin 19.84 303 eP Pn 03 18 28.9 +0.5
AKKU Akkuyu-Mersin 19.85 302 eP Pn 03 18 28.0 -0.5
POO Poona 19.86 112 eP P 03 18 27.7 +0.5
POO IAmb IAmb 03 18 33.7
comp=Z,141nm,1.4s
GOF Gofitskoye 20.03 336 ⇓iP Pn 03 18 31.1 +0.5
GOF eS Sn 03 22 15.5 -0.4
GOF pmax pmax
comp=Z,251nm,1.1s
GOF smax smax
comp=E,145nm,1.8s
TEVE Tevekalti-Mers 20.03 303 eP Pn 03 18 31.9 +1.1
ANR Andizhan 20.08 43 P P 03 18 29.9 +0.5
JBG Jabagly 20.12 37 ceP Pn 03 18 31.2 -0.6
JBG eS S 03 22 16.0 -0.1
JBG pmax pmax
comp=Z,80nm,0.9s
YOZ Yozgat 20.16 313 eP P 03 18 29.9 -0.6
BERE Bereket-Mersin 20.17 302 eP Pn 03 18 31.9 -0.5
TEKE Tekeli-Mersin 20.18 302 eP Pn 03 18 32.2 -0.2
BRLS Boroldaу 20.18 34 eS S 03 22 13.5 -3.7
NDI New Delhi 20.21 80 ex P 03 18 34.0 +3.1
SOC Sochi 20.23 328 ciP P 03 18 31.0 0.0
SOC ePPP PPP 03 18 53.8
SOC eS S 03 22 17.1 -0.9
SOC eSSS SSS 03 22 48.1
SOC pmax pmax
comp=Z,407nm,0.9s
SOC MLR MLR
comp=Z,2µm,15.0s
SMLA Simla 20.26 73 eP Pn 03 18 32.8 -0.5
SMLA IAmb IAmb 03 18 38.7
comp=Z,122nm,1.0s
SMLA ex S 03 22 18.8 +0.1
KVT Kavak 20.52 317 eP Pn 03 18 36.3 -0.1
KK31 Karatay Array 20.58 35 iP P 03 18 35.5 +0.6
KK31 Karatay Array 20.58 35 IAmb IAmb 03 18 41.6
comp=Z,107nm,0.8s
KKAR Karatay Array 20.58 35 P P 03 18 33.6 -1.3
KKAR Karatay Array 20.58 35 P P 03 18 33.6 -1.3
KKAR Karatay Array 20.58 35 IAmb IAmb 03 18 41.6
comp=Z,107nm,0.8s
GAZI Gazipasa 20.82 301 eP Pn 03 18 38.7 -1.2
YAYX Yaylak 20.82 309 eP Pn 03 18 40.1 +0.1
DZA Taraz 20.86 37 eP P 03 18 38.4 +0.5
DZA Taraz 20.86 37 eP P 03 18 38.4 +0.5
DDI Dehra Dun 20.96 76 eP Pn 03 18 40.8 -0.9
DDI IAmb IAmb 03 18 46.6
comp=Z,135nm,1.3s
SERE Sereflikochisa 20.99 309 eP Pn 03 18 41.9 -0.2
BHPL Bhopal 21.18 96 eP P 03 18 44.3 +2.8
BHPL IAmb IAmb 03 18 46.1
comp=Z,171nm,1.3s
BHPL ⇑eS Sn 03 22 43.0 -1.1
CHBY Cihanbeyli 21.30 308 eP P 03 18 45.9 +3.1
BR131 Keskin Array S 21.32 311 iP P 03 18 43.4 +0.4
BR131 Keskin Array S 21.32 311 IAmb IAmb 03 18 46.5
comp=Z,121nm,0.7s
BR131 Keskin Array S 21.32 311 P P 03 18 43.8 +0.8
SNR=47
BRTR Keskin Array B 21.32 311 P P 03 18 44.3 +1.3
comp=Z,126nm,0.6s,baz=134,slow=12,SNR=536
BRTR PcP PcP 03 22 46.4 -0.9
comp=Z,4.7nm,0.8s,baz=152,slow=5.7,SNR=3.6
BRTR ScP ScP 03 26 23.1 -1.4
comp=Z,3.2nm,0.7s,baz=146,slow=5.2,SNR=8.4
BRTR LR LR 03 29 30.2
comp=Z,2µm,18.8s,baz=96,slow=44
BRTR Keskin Array B 21.32 311 P P 03 18 42.8 -0.2
BRTR ScP 03 26 23.3 -1.2
DIKM Dikmen 21.33 317 ⇑P P 03 18 45.9 +2.9
KONT Konya--Tatoy 21.41 306 eP P 03 18 46.0 +2.1
KULU Kulu 21.43 309 eP P 03 18 45.7 +1.6
LADK Ladik-KONYA 21.51 306 eP P 03 18 47.0 +1.9
AFSR Afar-Bala (An 21.57 310 eP P 03 18 47.9 +2.3
AML Almayashu 21.70 42 P P 03 18 48.8 +1.4
SNR=185
KSH Kashi 21.75 50 P P 03 18 41.4 -6.3
KSH pP pP 03 18 47.8 -2.7
KSH PP PnPn 03 19 07.2 -1.4
KSH S S 03 22 30.3 -18
KSH sS sS 03 22 39.1 -14

KSH SS **SnSn** **03 23 06.6 -6.4**
KSH pmax pmax
comp=Z,180nm,0.8s
KSH pmax pmax
comp=Z,990nm,4.0s
KSH LR LR
comp=Z,6μm,9.7s
KSH LR LR
comp=Z,8μm,9.2s
KSH LR LR
comp=Z,9μm,11.0s
CANT Cankiri **21.78 313** *eP* **P** **03 18 49.2 +1.4**
ILGA Ilgaz **21.95 314** IAmb IAmb 03 19 10.6
comp=Z,132nm,0.9s
ANTO Ankara **21.95 311** P **P** **03 18 49.7 -0.1**
ANTO pmax pmax
comp=Z,238nm,0.9s
ANTO Ankara **21.95 311** ⇓P **P** **03 18 51.2 +1.4**
ANTO Ankara **21.95 311** *eP* **P** **03 18 51.2 +1.4**
ANTO Ankara **21.95 311** P **P** **03 18 49.7 -0.1**
EKS2 Erkin-Say **22.08 41** P **P** **03 18 52.1 +1.0**
SNR=123
KIZT Kizilcal **22.14 307** *eP* **P** **03 18 51.7 -0.1**
ANN Anapa **22.24 327** *eP* **P** **03 18 53.1 +0.5**
ANN *eS* **S** **03 23 00.1 +2.7**
ANN pmax pmax
comp=Z,212nm,1.8s
ANN MLR MLR
comp=Z,1μm,11.0s
UCH Uchtor **22.25 42** P **P** **03 18 54.3 +0.9**
SNR=70
BZK Bozkurt **22.28 317** ⇑P **P** **03 18 56.9 +3.8**
KLRI Killari **22.37 109** *eP* **P** **03 18 56.2 +1.9**
KLRI IAmb IAmb 03 18 58.6
comp=Z,91nm,1.5s
AB31 Akbulak array **22.46 10** *eP* **P** **03 18 55.5 +0.6**
ABKAR Akbulak array **22.46 10** P **P** **03 18 54.4 -0.6**
AAK Ala-Arcka **22.48 42** *ceP* **P** **03 18 55.5 0.0**
AAK pmax pmax
comp=Z,144nm,0.9s
AAK Ala-Archa **22.48 42** P **P** **03 18 55.9 +0.4**
comp=Z,56nm,0.8s,baz=212,slow=7.7,SNR=160
AAK S **S** **03 22 58.2 -4.2**
comp=Z,5.0nm,0.8s,baz=240,slow=17,SNR=2.3
AAK LR LR 03 28 08.8
comp=Z,4μm,20.2s,baz=233,slow=38
AAK Ala-Archa **22.48 42** P **P** **03 18 57.4 +1.9**
SNR=86
AAK Ala-Archa **22.48 42** *i* P **P** **03 18 56.5 +1.0**
SNR=45
AAK Ala-Archa **22.48 42** P **P** **03 18 54.9 -0.7**
AAK IAmb IAmb 03 19 04.4
comp=Z,164nm,1.1s
KZA Kyzart **22.61 44** P **P** **03 18 58.6 +1.5**
SNR=88
SVRH Sivrihisar-ESK **22.63 309** *eP* **P** **03 18 58.3 +1.2**
FRU1 Bishkek **22.67 41** IAmb IAmb 03 19 06.9
comp=Z,145nm,0.8s
NRN Naryn **22.73 46** P **P** **03 18 56.9 -1.4**
NRN pmax pmax
comp=Z,74nm,1.0s
NRN Naryn **22.73 46** P **P** **03 18 56.9 -1.4**
NRN IAmb IAmb 03 19 13.6
comp=Z,74nm,0.9s
KBK Karagaybulak **22.76 42** P **P** **03 19 00.7 +2.1**
SNR=137
ELL Elmali **22.82 301** *eP* **P** **03 18 59.4 +0.3**
CHMS Chumysh **22.85 41** P **P** **03 19 02.9 +3.7**
SNR=80
USP Ospenovka **22.87 40** P **P** **03 19 02.6 +3.2**
SNR=81
AKAS Kas **22.90 299** *eP* **P** **03 19 00.9 +0.9**
CIFT Ciftceler, Eski **22.92 308** *eP* **P** **03 19 02.8 +2.8**
YUVA Yuva-Kibriscik **22.95 311** *eP* **P** **03 19 02.8 +2.4**
SHUT Suhut-Afyon **22.96 306** *eP* **P** **03 18 58.3 -2.2**
KURC Kurucasile-Bar **22.99 315** *eP* **P** **03 19 03.2 +2.5**
SGDS Sogindy **23.06 40** ⇓*iP* **P** **03 19 02.7 +1.2**
comp=Z,63nm,0.8s
SGDS *eS* **S** **03 23 15.6 +3.1**
BASM Basmaki-Afyon **23.09 304** *eP* **P** **03 19 04.7 +2.8**
NGP Nagpur **23.25 100** *eP* **P** **03 19 06.5 +3.0**
NGP IAmb IAmb 03 19 12.0
comp=Z,55nm,1.4s
NGP *eS* **S** **03 23 21.3 +5.3**
GLHS Gihisar (BURDU **23.26 302** *eP* **P** **03 19 05.6 +2.0**
TKM2 Tokmak 2 **23.30 42** P **P** **03 19 05.0 +0.9**
TKM2 Tokmak 2 **23.30 42** P **P** **03 19 05.0 +0.9**
SNR=77
ULHL Ulahol **23.32 44** P **P** **03 19 06.6 +2.4**
SNR=15
AKTO Aktyubinsk **23.39 6** P **P** **03 19 05.8 +1.1**
comp=Z,151nm,1.0s,baz=182,slow=11,SNR=220
AKTO S **S** **03 23 21.7 +4.0**
comp=Z,9.9nm,1.0s,baz=96,slow=20,SNR=7.7
AKTO LR LR 03 30 40.4
comp=Z,2μm,19.5s,baz=175,slow=43
FETY Fethiye **23.42 300** *eP* **P** **03 19 05.8 +0.7**
JBP Jabalpur **23.48 94** *eP* **P** **03 19 07.6 +1.8**
JBP *eS* **S** **03 23 23.5 +3.9**
SRSP Sriramsagar **23.48 105** *eP* **P** **03 19 07.4 +1.6**
SRSP IAmb IAmb 03 19 09.1
comp=Z,22nm,1.2s
SRCK Saricakaya, Es **23.52 309** *eP* **P** **03 19 06.8 +0.8**
KDZE Karadeniz Ereo **23.55 313** ⇑P **P** **03 19 08.5 +2.1**
DMPR Damasthipur **23.57 109** *eP* **P** **03 19 07.0 +0.2**
DMPR IAmb IAmb 03 19 09.9
comp=Z,52nm,1.4s
BTLS Baital **23.76 36** *ciP* **P** **03 19 10.1 +1.7**
BTLS pmax pmax
comp=Z,9.0nm,0.6s
BTLS Baital **23.76 36** ⇑*iP* **P** **03 19 10.1 +1.7**
comp=Z,9.2nm,0.6s
BTLS *eS* Sn 03 23 40.5 -4.9
GULT Gulveren **23.76 310** *eP* **P** **03 19 12.0 +3.5**
KDJ Kajisay **23.85 45** IAmb IAmb 03 19 14.7
comp=Z,75nm,1.0s
MTBS Maitube **23.93 43** ⇓*eP* **P** **03 19 12.3 +2.3**
MTBS Maitube **23.93 43** ⇓*eP* **P** **03 19 12.3 +2.3**
GEDZ Gediz **23.97 306** *eP* **P** **03 19 10.9 +0.4**
SEVA Sevastopol **24.02 322** ⇑P **P** **03 19 12.3 +1.5**
SPNC Sapanca-Adapaz **24.02 310** *eP* **P** **03 19 13.6 +2.8**
SAUV Serdivan-Sakar **24.03 310** *eP* **P** **03 19 11.7 +0.8**
SIM Simferopol' **24.05 323** *ciP* **P** **03 19 11.2 +0.1**
SIM *iS* **S** **03 23 32.6 +4.3**
SIM pmax pmax
comp=Z,91μm,1.3s
ARG Arkhangelos **24.05 299** P **P** **03 19 14.8 +3.6**
CAVI Cavuskoy **24.13 309** *eP* **P** **03 19 13.3 +1.4**
YER Yerkesik **24.18 301** *eP* **P** **03 19 13.5 +1.1**
TNSS Tian-Shan **24.19 43** *eP* **P** **03 19 14.4 +1.5**
TNSS Tian-Shan **24.19 43** *eP* **P** **03 19 14.4 +1.5**
AAA Alma-Ata **24.26 43** *eP* **P** **03 19 13.1 -0.1**
AAA *eS* **S** **03 23 35.8 +3.8**
AAA pmax pmax
comp=Z,1μm,9.2s
AAA smax smax
comp=N,1μm,14.3s
AAA MLR MLR
comp=Z,1μm,10.0s
AAA Alma-Ata **24.26 43** *eP* **P** **03 19 15.2 +2.0**
comp=Z,1μm,4.5s
AAA *eS* **S** **03 23 37.6 +5.6**
AAA *eLR* LR 03 28 20.8
comp=Z,909nm,11.8s
ADVT Abdulvahap **24.30 309** *eP* **P** **03 19 12.8 -0.6**
KUU Kurty **24.31 41** *diP* **P** **03 19 14.7 +1.1**
KUU pmax pmax
comp=Z,534nm,3.5s
KUU Kurty **24.31 41** ⇓*iP* **P** **03 19 14.7 +1.1**
comp=Z,534nm,3.5s
KUU *eS* **S** **03 23 40.5 +7.8**
HYBB Hyderabad (bro **24.32 109** *eP* **P** **03 19 15.8 +1.9**
HYBB IAmb IAmb 03 19 17.4
comp=Z,26nm,1.2s
HYB Hyderabad **24.32 109** *iP* **P** **03 19 15.5 +1.6**
HYB Hyderabad **24.32 109** *eP* **P** **03 19 13.4 -0.5**
HYB IAmb IAmb 03 19 20.9
comp=Z,78nm,1.7s
HYB *ex* **S** **03 23 33.1 -0.1**
RPR Rampur **24.32 105** *eP* **P** **03 19 16.4 +2.5**
RPR IAmb IAmb 03 19 19.2
comp=Z,36nm,1.5s
URV Uravakonda **24.50 115** *eP* **P** **03 19 18.1 +2.5**
URV IAmb IAmb 03 19 25.4
comp=Z,28nm,1.0s

HRT Hereke **24.51 310** *eP* **P** **03 19 16.9 +1.4**
YLV Yalova **24.61 309** *eP* **P** **03 19 17.5 +1.2**
KARP Karpathos **24.66 297** P **P** **03 19 19.1 +2.3**
KARP Karpathos **24.66 297** *eP* **P** **03 19 19.9 +3.1**
CHKK Chushkaly **24.67 42** ⇓*iP* **P** **03 19 18.5 +1.7**
CHKK Chushkaly **24.67 42** ⇓*iP* **P** **03 19 18.6 +1.7**
GEMT Gemlik **24.68 309** *eP* **P** **03 19 17.4 +0.5**
SILT Sile **24.68 311** *eP* **P** **03 19 18.2 +1.3**
AYDB Zeytinkoy-Aydi **24.71 302** *eP* **P** **03 19 19.5 +2.1**
MDNY Mudanya-Bursa **24.86 308** *eP* **P** **03 19 19.2 +0.7**
BODT Bodrum **24.90 300** *eP* **P** **03 19 22.0 +3.0**
KAVV Kandilli-Istan **25.03 310** *eP* **P** **03 19 22.2 +2.1**
ISK Istanbul-Kandi **25.03 310** *eP* **P** **03 19 21.9 +1.8**
SATY Saty **25.10 45** *diP* **P** **03 19 22.0 +1.2**
SATY pmax pmax
comp=Z,396nm,4.6s
SATY Saty **25.10 45** ⇓*iP* **P** **03 19 22.1 +1.2**
comp=Z,396nm,4.6s
SATY *eS* **S** **03 23 56.0 +10**
GCAM G?zelcaml? **25.14 301** *eP* **P** **03 19 19.9 -1.2**
KCTX Karacabey (Bur **25.19 308** *eP* **P** **03 19 28.0 +6.4**
SRLM Srisailam **25.24 111** *eP* **P** **03 19 24.3 +2.1**
SRLM IAmb IAmb 03 19 30.2
comp=Z,30nm,1.1s
BGKT Bogazkoy **25.28 310** *eP* **P** **03 19 19.0 -3.3**
ZKR Zakros **25.33 295** P **P** **03 19 27.5 +4.6**
NJS Nagarjunasagar **25.36 109** *eP* **P** **03 19 25.5 +2.2**
NJS IAmb IAmb 03 19 27.8
comp=Z,27nm,1.2s
SMG Samos **25.44 301** P **P** **03 19 26.4 +2.5**
BLCB Balcova **25.49 303** *eP* **P** **03 19 26.5 +2.3**
KPKS Kokpek **25.49 44** *eP* **P** **03 19 25.4 +1.1**
KPKS pmax pmax
comp=Z,90nm,1.5s
KPKS Kokpek **25.49 44** *eP* **P** **03 19 25.4 +1.1**
comp=Z,90nm,1.5s
KPKS *eS* **S** **03 24 01.0 +9.3**
UZB Uzynbulak **25.53 45** *eP* **P** **03 19 26.0 +1.2**
UZB pmax pmax
comp=Z,67nm,1.5s
UZB Uzynbulak **25.53 45** *eP* **P** **03 19 26.1 +1.2**
comp=Z,66nm,1.5s
GGR Gangavaram **25.54 106** *eP* **P** **03 19 27.1 +2.2**
GGR IAmb IAmb 03 19 29.4
comp=Z,55nm,1.3s
EDC Edincik **25.57 308** *eP* **P** **03 19 25.9 +0.9**
SLVT Silivri **25.68 310** *eP* **P** **03 19 27.9 +1.9**
DKL Dikili **25.80 304** *eP* **P** **03 19 30.1 +3.0**
URLA Izmir **25.81 303** *eP* **P** **03 19 30.3 +3.0**
SHLS Shalkode **25.82 45** *diP* **P** **03 19 31.0 +3.7**
SHLS pmax pmax
comp=Z,28nm,0.7s
SHLS Shalkode **25.82 45** ⇓*iP* **P** **03 19 31.1 +3.7**
comp=Z,28nm,0.7s
NPS Neapolis **25.84 295** P **P** **03 19 30.4 +2.8**
VRH Novokhopyorsk **25.85 342** *eP* **P** **03 19 27.7 +0.3**
VRH *eS* **S** **03 23 59.6 +2.5**
VRH pmax pmax
comp=Z,300nm,0.8s
VRH smax smax
comp=N,910nm,6.5s
KOLN Koldanda **25.88 82** *eP* **P** **03 19 30.2 +2.0**
comp=N,701nm,1.4s
PDGK Podgornoye **25.92 45** P **P** **03 19 29.7 +1.4**
LAST Lasithi **25.93 295** P **P** **03 19 31.0 +2.5**
AMGA Amorgos Island **25.94 299** P **P** **03 19 29.6 +1.2**
DANN Dangsing **25.98 81** *eP* **P** **03 19 30.4 +1.3**
comp=N,1μm,0.9s
TDK Taldyqorghan **26.16 41** *ceP* **P** **03 19 31.4 +1.1**
TDK *eS* **S** **03 24 03.5 +1.3**
TDK pmax pmax
comp=Z,2μm,9.2s
TDK Taldyqorghan **26.16 41** ⇑*eP* **P** **03 19 31.4 +1.1**
comp=Z,2μm,9.2s
TDK *eS* **S** **03 24 03.5 +1.3**
TDK *eLR* LR 03 32 00.2
THR8 Santorini-Mono **26.17 298** P **P** **03 19 31.6 +1.1**
SANT Santorini **26.18 298** P **P** **03 19 32.4 +1.8**
SAP2K Karterados **26.20 298** P **P** **03 19 32.6 +1.9**
THR7 Fira-Santorini **26.22 298** P **P** **03 19 33.1 +2.2**
CHOS Chios island **26.23 302** P **P** **03 19 32.9 +1.8**
THR6 Thira Island, **26.23 298** P **P** **03 19 32.9 +1.9**
SAP1 Santorini-Akro **26.23 298** P **P** **03 19 32.8 +1.8**
THR3 Thira Island, **26.24 298** P **P** **03 19 31.9 +0.9**
ADKI Addanki **26.26 110** *eP* **P** **03 19 32.6 +1.1**
ADKI IAmb IAmb 03 19 38.1
comp=Z,54nm,1.6s
THR5 Thira Island, **26.28 298** P **P** **03 19 33.5 +2.0**
APE Apeiranthos **26.28 299** P **P** **03 19 33.0 +1.5**
APE Apeiranthos **26.28 299** ⇑P **P** **03 19 33.0 +1.5**
PRK Paraskevi **26.33 304** P **P** **03 19 35.1 +3.3**
IOSP Ios island **26.39 298** P **P** **03 19 34.3 +1.8**
MYLAV Mylavaram **26.39 108** *eP* **P** **03 19 34.9 +2.3**
MYLAV IAmb IAmb 03 19 36.6
comp=Z,11nm,1.1s
VORD Divnogorie **26.39 338** *eP* **P** **03 19 33.5 +1.2**
VORD *eS* **S** **03 24 05.8 +0.2**
VORD pmax pmax
comp=Z,50nm,0.7s
VORD smax smax
comp=N,40nm,2.3s
IDI Anoyia **26.43 295** P **P** **03 19 34.1 +1.1**
comp=N,204nm,0.6s,baz=97,slow=7.9,SNR=114
IDI LR LR 03 33 25.6
comp=N,1μm,18.8s,baz=100,slow=44
IDI Anoyia **26.43 295** *eP* **P** **03 19 34.2 +1.3**
GELI Tayfur-Gelibol **26.57 307** *eP* **P** **03 19 35.5 +1.4**
VSR Storozhevoye **26.65 338** *eP* **P** **03 19 34.9 +0.3**
VSR *eS* **S** **03 24 05.3 -4.3**
VSR pmax pmax
comp=Z,120nm,1.7s
VSR smax smax
comp=N,300nm,4.5s
BOZC Bozcaada **26.68 305** *eP* **P** **03 19 36.2 +1.1**
UKOP Uzunkopru-Edir **26.73 309** *eP* **P** **03 19 37.8 +2.3**
BRZS Berezniki **26.74 27** *eP* **P** **03 19 37.1 +1.6**
BRZS pmax pmax
comp=Z,189nm,2.1s
BRZS Berezniki **26.74 27** *eP* **P** **03 19 37.1 +1.6**
comp=Z,189nm,2.1s
BRZS *eLR* LR 03 31 27.3
GKN Gorkha **26.78 81** *eP* **P** **03 19 37.3 +1.1**
MFTR Murtatlar **26.91 316** ⇑P **P** **03 19 39.4 +2.4**
EDRB Edirne **26.94 310** *eP* **P** **03 19 36.9 -0.5**
VAM Vamos **27.01 295** P **P** **03 19 40.7 +2.7**
PVM Polavaram **27.01 106** *eP* **P** **03 19 41.4 +3.2**
PVM IAmb IAmb 03 19 44.6
comp=Z,37nm,1.5s
VORR Voronezh **27.02 339** *eP* **P** **03 19 39.0 +1.0**
VORR pmax pmax
comp=Z,300nm,1.6s
ALN Alexandroupoli **27.06 308** P **P** **03 19 40.1 +1.7**
ALN Alexandroupoli **27.06 308** *eP* **P** **03 19 39.7 +1.3**
ALN Alexandroupoli **27.06 308** IAmb IAmb 03 19 44.8
comp=Z,40nm,0.8s
TIRR Tirgusor **27.06 316** ⇑P **P** **03 19 40.1 +1.7**
PRD Provadia **27.09 313** *eP* **P** **03 19 41.0 +2.3**
SKHT Srikalahasti **27.14 114** *eP* **P** **03 19 39.1 -0.3**
SKHT IAmb IAmb 03 19 43.1
comp=Z,27nm,1.3s
TLCR **27.20 318** ⇑P **P** **03 19 40.4 +0.7**
DMN Daman **27.23 82** *eP* **P** **03 19 42.0 +1.6**
SMTH Samothraki Isl **27.27 306** P **P** **03 19 42.1 +1.7**
TOPG Topolog **27.30 317** ⇑P **P** **03 19 41.8 +1.2**
KKN Kakani **27.36 82** *eP* **P** **03 19 43.0 +1.4**
HARR Harsova **27.48 316** ⇑P **P** **03 19 43.5 +1.4**
PKIN Phulchoki **27.49 82** *eP* **P** **03 19 44.1 +1.3**
PKI Pulchoki **27.50 82** *eP* **P** **03 19 44.3 +1.4**
comp=Z,55nm,1.3s
RDO Rodhopi **27.51 308** P **P** **03 19 44.3 +1.8**
RDO Rodhopi **27.51 308** *eP* **P** **03 19 44.2 +1.8**
RASA Rasa **27.73 315** ⇓P **P** **03 19 46.2 +1.8**
ANKY Antikythira Is **27.80 296** P **P** **03 19 46.9 +1.7**
DIM Dimitrovgrad **27.85 310** *eP* **P** **03 19 47.2 +1.7**
GUN Gumba **27.88 81** *eP* **P** **03 19 47.2 +0.9**
comp=Z,526nm,1.2s
LPSR Galich'ya Gora **27.91 340** *eP* **P** **03 19 47.0 +1.1**
LPSR *eS* **S** **03 24 30.5 +1.0**
LPSR pmax pmax
comp=Z,50nm,0.7s
LPSR smax smax
comp=E,60nm,2.7s
ELND Elena **27.98 312** ⇑P **P** **03 19 48.2 +1.6**

AOS Alonnisos **28.08 303** P **P** **03 19 52.2 +4.6**
SZH Strazhica **28.08 312** *eP* **P** **03 19 49.3 +1.7**
MILM Milestii Mici **28.17 321** ⇓P **P** **03 19 48.8 +0.5**
JIRN Jiri **28.18 82** *eP* **P** **03 19 50.4 +1.3**
comp=E,250nm,0.7s
KRND KRANIDI **28.20 299** P **P** **03 19 49.5 +0.8**
KIS Kishinev **28.22 321** *eP* P 03 19 55.0 +6.3
KIS *eS* **S** **03 24 40.0 +5.5**
KIS *eSS* **SnSn** **03 25 50.0 -0.6**
KIS *eLi* 03 27 32.0
KIS *eLQ* LQ 03 28 20.0
KIS *eL* L 03 29 30.0
KIS LRM MLR 03 31 56.0
comp=E,2μm,20.0s
KIS Kishinev **28.22 321** *eP* P 03 19 55.0 +6.3
KIS *eS* **S** **03 24 40.0 +5.5**
KIS *eSS* **SnSn** **03 25 50.0 -0.6**
KIS MLR MLR
comp=Z,2μm,20.0s
KIS MLR MLR
comp=N,1μm,20.0s
VLI Veliai **28.24 298** P **P** **03 19 50.0 +0.9**
LEOM Leova **28.24 320** ⇑P **P** **03 19 50.1 +1.2**
OUR Ouranopolis **28.34 305** *eP* **P** **03 19 51.3 +1.4**
BRVK Borovoye **28.43 20** *ceP* **P** **03 19 50.2 -0.4**
BRVK pmax pmax
comp=Z,39nm,0.7s
BRVK Borovoye **28.43 20** P **P** **03 19 50.0 -0.6**
BRVK IAmb IAmb 03 19 52.8
comp=Z,41nm,0.6s
BVAR Borovoye Array **28.43 20** P **P** **03 19 50.7 +0.1**
comp=Z,64nm,0.8s,baz=207,slow=6.8,SNR=277
BVAR PcP **PcP** **03 23 03.8 +1.1**
comp=Z,3.4nm,0.6s,baz=211,slow=2.5,SNR=7.0
BVAR P3KPbc 03 52 10.1
comp=Z,1.0nm,0.6s,baz=21,slow=5.4,SNR=8.2
PAIG Paliouri **28.44 304** P **P** **03 19 55.2 +4.4**
SGRR Singureni **28.48 314** ⇑P **P** **03 19 53.2 +2.1**
BIR Birlad **28.49 319** ⇓P **P** **03 19 52.9 +1.7**
SULR **28.51 315** ⇑P **P** **03 19 54.1 +2.8**
ISR Istrita **28.55 316** ⇓P **P** **03 19 52.4 +0.6**
VASR Vaslui **28.60 320** ⇓P **P** **03 19 53.5 +1.4**
CHLP Challavanipeta **28.60 101** *eP* **P** **03 19 54.3 +1.9**
CHLP IAmb IAmb 03 19 56.7
comp=Z,34nm,1.4s
RAMN Ramite **28.63 83** *eP* **P** **03 19 53.5 +0.6**
comp=Z,199nm,1.2s
BISRR Bisoca **28.66 317** ⇓P **P** **03 19 55.8 +3.0**
PLG Polygyros **28.75 305** P **P** **03 19 56.2 +2.6**
NVR Nevrokopi **28.76 307** P **P** **03 19 56.1 +2.4**
VRI Vrincioaia **28.81 318** ⇑P **P** **03 19 55.8 +1.7**
PLOR Plostina **28.85 318** ⇑P **P** **03 19 56.5 +2.0**
COPA Copaceanca **28.93 313** ⇓P **P** **03 19 57.3 +2.2**
MMB Musomiste **28.94 308** *eP* **P** **03 19 57.3 +2.0**
SOH Sokhos **28.95 306** P **P** **03 19 58.7 +3.3**
PLVB Pleven **29.00 312** ⇓P **P** **03 19 57.9 +2.2**
HORT Hortiatis **29.07 305** P **P** **03 19 58.4 +1.9**
HORT Hortiatis **29.07 305** *eP* **P** **03 19 58.2 +1.7**
MLR Muntele Rosu **29.10 316** P **P** **03 19 58.8 +2.1**
comp=Z,21nm,0.9s,baz=9.5,slow=4.2,SNR=25
MLR LR LR 03 32 35.2
comp=Z,2μm,21.6s,baz=112,slow=38
MLR Muntele Rosu **29.10 316** ⇑P **P** **03 19 58.2 +1.5**
MLR Muntele Rosu **29.10 316** IAmb IAmb 03 20 08.3
comp=Z,29nm,0.7s
KLV Kalavryta, Ach **29.12 300** P **P** **03 19 58.3 +1.3**
ITM Ithomi **29.12 298** P **P** **03 19 57.7 +0.8**
ITM Ithomi **29.12 298** IAmb IAmb 03 20 01.8
comp=Z,37nm,0.6s
TESR Tescani **29.19 319** ⇑P **P** **03 19 57.8 +0.4**
AGG Agios Georgios **29.20 302** P **P** **03 19 59.7 +2.0**
MAKZ Makanchi **29.24 41** P **P** **03 19 57.0 -0.9**
MAKZ pmax pmax
comp=Z,37nm,0.8s
MAKZ Makanchi **29.24 41** P **P** **03 19 57.0 -0.9**
MAKZ IAmb IAmb 03 20 03.6
comp=Z,37nm,0.8s
ODAN Odare **29.34 83** *eP* **P** **03 20 00.0 +0.8**
comp=Z,115nm,0.9s
LIT Litokhoron **29.37 304** P **P** **03 19 58.5 -0.6**
LIT pmax pmax
comp=Z,19nm,0.8s
LIT Litokhoron **29.37 304** P **P** **03 19 58.5 -0.6**
ARU Arti **29.38 5** *diP* **P** **03 20 00.8 +1.8**
ARU 03 20 55.3
ARU S **S** **03 24 58.1 +5.5**
ARU SS **SnSn** **03 26 23.0 +4.1**
ARU pmax pmax
comp=Z,35nm,1.1s
ARU MLR MLR
comp=Z,2μm,21.0s
ARU Arti **29.38 5** P **P** **03 20 01.1 +2.1**
comp=Z,6.7nm,0.9s,baz=179,slow=9.3,SNR=11
ARU LR LR 03 34 07.9
comp=Z,2μm,18.5s,baz=185,slow=41
ARU Arti **29.38 5** P **P** **03 19 58.6 -0.4**
KNT Kendrikon **29.39 306** P **P** **03 20 00.8 +1.6**
KNT Kendrikon **29.39 306** *eP* **P** **03 20 01.6 +2.4**
MK31 Makanchi Array **29.41 41** *iP* **P** **03 19 59.9 +0.5**
MKAR Makanchi Array **29.41 41** *ceP* **P** **03 19 59.0 -0.4**
MKAR pmax pmax
comp=Z,18nm,0.7s
MKAR Makanchi Array **29.41 41** P **P** **03 19 59.7 +0.3**
comp=Z,18nm,0.7s,baz=226,slow=8.3,SNR=163
MKAR ScP **ScP** **03 26 50.2 +3.0**
comp=Z,1.2nm,0.8s,baz=274,slow=5.6,SNR=3.6
MKAR LR LR 03 32 10.0
comp=Z,2μm,19.7s,baz=240,slow=37
MKAR P3KPbc 03 52 06.2
comp=Z,0.6nm,0.8s,baz=57,slow=3.8,SNR=6.5
MKAR Makanchi Array **29.41 41** P **P** **03 19 58.3 -1.1**
MKAR **ScP** **03 26 46.0 -1.2**
KKB Krupnik **29.48 308** *eP* **P** **03 20 01.9 +1.8**
GIRR Girov **29.51 319** ⇑P **P** **03 20 00.7 +0.4**
MTUR Matau **29.52 315** ⇑P **P** **03 20 01.5 +1.1**
TAPN Taplejung **29.56 82** *eP* **P** **03 20 01.8 +0.6**
comp=Z,74nm,0.8s
EVR Evrytania **29.57 302** P **P** **03 20 01.4 +0.4**
VOIR **29.62 316** ⇑P **P** **03 20 02.8 +1.4**
RLS Riolos of Patr **29.65 300** P **P** **03 20 04.0 +2.4**
DOPR Dopca **29.67 317** ⇓P **P** **03 20 02.3 +0.6**
VAY Valandovo **29.67 307** *iP* **P** **03 20 03.8 +2.1**
GRG Griva **29.68 306** P **P** **03 20 02.8 +0.9**
GRG Griva **29.68 306** *eP* **P** **03 20 03.9 +2.0**
BIZ Bicaz **29.73 319** ⇓P **P** **03 20 03.2 +1.0**
KURBB Kurchatov Arra **29.76 32** P **P** **03 20 01.8 -0.6**
comp=Z,22nm,0.7s,baz=233,slow=8.6,SNR=107
KURBB PcP **PcP** **03 23 06.4 +0.4**
comp=Z,5.6nm,0.8s,baz=238,slow=3.2,SNR=4.3
ARR Arges **29.85 315** ⇑P **P** **03 20 04.6 +1.2**
KURK Kurchatov **29.87 32** P **P** **03 20 01.8 -1.5**
KURK 03 23 06.4
KURK Kurchatov **29.87 32** P **P** **03 20 02.6 -0.7**
KURK IAmb IAmb 03 20 05.8
comp=Z,27nm,0.8s
KURK **PcP** **03 23 05.9 -0.3**
SVE Sverdlovsk **29.96 7** *eP* **P** **03 20 04.5 +0.4**
SVE *eS* **S** **03 25 08.9 +7.2**
SVE pmax pmax
comp=Z,43nm,1.2s
SVE MLR MLR
comp=Z,1μm,10.0s
STIP Stip **30.06 307** *iP* **P** **03 20 06.0 +0.8**
KPRO Kipourio **30.16 303** P **P** **03 20 07.2 +1.0**
AKASG Malin Array Be **30.31 328** ⇓*eP* **P** **03 20 07.6 +0.3**
AKASG pmax pmax
comp=Z,8.0nm,0.6s
AKASG Malin Array Be **30.31 328** P **P** **03 20 06.3 -1.0**
comp=Z,8.1nm,0.6s,baz=134,slow=8.2,SNR=40
AKASG PcP **PcP** **03 23 07.9 +0.5**
comp=Z,5.4nm,0.7s,baz=93,slow=2.4,SNR=5.6
AKASG LR LR 03 33 21.1
comp=Z,1μm,19.4s,baz=140,slow=38
AKASG Malin Array Be **30.31 328** P **P** **03 20 06.8 -0.5**
AKASG **PcP** **03 23 06.7 -0.7**
AKPB Malin Array Si **30.31 328** *iP* **P** **03 20 07.9 +0.6**
VLS Valsamata **30.35 300** P **P** **03 20 08.2 +0.4**
MDB Medias **30.37 317** ⇑P **P** **03 20 10.5 +2.7**
FNA Florina **30.37 305** P **P** **03 20 09.6 +1.6**
FNA Florina **30.37 305** *eP* **P** **03 20 08.8 +0.8**
FNA Florina **30.37 305** IAmb IAmb 03 20 14.3
comp=Z,32nm,0.8s
LKD2 Lefkada island **30.42 301** P **P** **03 20 09.0 +0.5**

SEM Semipalatinsk 30.44 33 eP P 03 20 08.0 -0.7
SEM Semipalatinsk 30.44 33 eP P 03 20 08.0 -0.7
NEST Nestorio 30.51 304 P P 03 20 10.8 +1.5
BURAR Bucovina Array 30.60 320 ⇓P P 03 20 10.4 +0.4
BURAR Bucovina Array 30.60 320 P P 03 20 10.1 +0.1
BUR08 Bucovina Ar. S 30.63 320 P P 03 20 09.5 -0.7
SKO Skopje 30.68 307 i P P 03 20 12.8 +2.1
OBN Obninsk 30.79 340 ceP P 03 20 11.1 -0.3
OBN e 03 21 12.0
OBN e 03 23 09.6
OBN i S S 03 25 14.4 -0.2
OBN i SS SnSn 03 26 56.0 +3.0
OBN pmax pmax
comp=Z,107nm,1.3s
OBN MLR MLR
comp=Z,996nm,21.0s
OBN Obninsk 30.79 340 ⇓P P 03 20 12.4 +1.0
OBN Obninsk 30.79 340 P P 03 20 11.1 -0.3
MOS Moscow 31.01 342 eP P 03 20 11.9 -1.5
MOS e 03 21 10.9
MOS e 03 21 38.6
MOS eS S 03 25 14.1 -4.1
MOS pmax pmax
comp=Z,97nm,1.4s
GZR Gura Zlata 31.04 314 ⇑P P 03 20 15.5 +1.7
ZSN Zaisan 31.26 42 eP P 03 20 15.5 -0.2
ZSN Zaisan 31.26 42 eP P 03 20 15.6 -0.2
ZSN eSS SS 03 26 49.7 -46
ZSN eLR LR 03 35 13.8
KEK Kerkira 31.27 302 P P 03 20 16.1 +0.2
WMQ Urumqi 31.52 49 P P 03 20 20.0 +1.9
WMQ pP sP 03 20 22.2 -0.2
WMQ PP PnPn 03 21 20.5 -0.6
WMQ S S 03 25 24.5 -2.0
WMQ ScP ScP 03 26 53.8 -0.5
WMQ pmax pmax
comp=Z,16nm,0.9s
WMQ pmax pmax
comp=Z,320nm,4.5s
WMQ LR LR
comp=Z,2µm,19.3s
WMQ LR LR
comp=Z,1µm,12.9s
WMQ LR LR
comp=Z,4µm,28.1s
WMQ Urumqi 31.52 49 IAmb IAmb 03 20 20.8
comp=Z,23nm,0.8s
TIR Tirane 31.63 306 ⇓P P 03 20 21.6 +2.6
DRGR 31.69 317 ⇓P P 03 20 20.5 +0.9
PALK Pallekele 31.85 124 LR LR 03 32 37.0
comp=Z,1µm,21.2s,baz=313,slow=35
BZS Buzias 31.87 314 ⇑P P 03 20 21.9 +0.8
BANR Banloc 32.09 313 ⇑P P 03 20 25.6 +2.6
SIRR Siria 32.12 315 ⇓P P 03 20 25.8 +2.5
LSA Lhasa 32.32 77 IAmb IAmb 03 20 29.2
comp=Z,23nm,0.8s
DRME Dracevica, Mon 32.35 307 eP P 03 20 25.2 -0.1
PDG Podgorica 32.37 307 ⇑P P 03 20 25.9 +0.5
PDG Podgorica 32.37 307 IAmb IAmb 03 20 38.1
comp=Z,34nm,0.8s
PDG Podgorica 32.37 307 eP P 03 20 25.9 +0.5
DIVS Divibare 32.38 310 eP P 03 20 27.0 +1.3
TRPA Tarpa 32.42 319 eP P 03 20 27.0 +1.1
TRPA Tarpa 32.42 319 ⇓P P 03 20 26.7 +0.9
LVV L'vov 32.44 322 eP P 03 20 28.5 +2.4
LVV eS S 03 25 43.1 +2.4
KMBO Kilima Mbogo 32.63 213 P P 03 20 28.4 +0.1
KMBO pmax pmax
comp=Z,14nm,0.9s
KMBO Kilima Mbogo 32.63 213 P P 03 20 29.9 +1.7
comp=Z,25nm,1.2s,baz=32,slow=12,SNR=17
KMBO LR LR 03 34 24.2
comp=Z,1µm,21.9s,baz=42,slow=38
KMBO Kilima Mbogo 32.63 213 P P 03 20 28.4 +0.1
RUDO Rudo 32.64 309 eP P 03 20 28.2 +0.3
BBLS Lazići 32.70 310 eP P 03 20 30.0 +1.5
UZH Uzhgorod 32.81 319 eP P 03 20 29.4 +0.2
UZH e 03 20 37.7
UPM Unac-Piva 32.84 308 eP P 03 20 30.2 +0.4
FRGS Fruska Gora 32.87 312 eP P 03 20 30.2 +0.3
HCY Herceg Novi 32.91 307 eP P 03 20 30.2 -0.1
KOLS Kolonicke sedl 32.97 320 eP P 03 20 32.9 +2.2
KOLS pmax pmax
comp=Z,58nm,1.1s
KOLS Kolonicke sedl 32.97 320 eP P 03 20 32.9 +2.2
BRY Bratogost 33.01 308 eP P 03 20 31.3 0.0
KWP Kalwaria Pacla 33.07 321 eP P 03 20 33.2 +1.6
HAPS Han Pijesak,BI 33.08 310 eP P 03 20 31.8 -0.1
TREB Trebinje 33.09 307 eP P 03 20 31.4 -0.4
DBRK Dubrovnik 33.22 307 i P P 03 20 33.2 +0.2
TIP Timpagrande 33.48 301 IAmb IAmb 03 20 39.0
comp=Z,33nm,0.8s
MICGM Minsk 33.49 332 eP P 03 20 44.0 +8.8
MICGM ePP PnPn 03 21 35.0 -11
MICGM ePPP PPP 03 22 08.0
MICGM eS S 03 26 09.0 +12
MICGM eSS SS 03 28 13.0 -8.3
MICGM eSSS SSS 03 28 56.0
MICGM eLQ LQ 03 32 20.0
MICGM eLR LR 03 34 00.0
MNK Minsk 33.49 332 eP P 03 20 44.0 +8.8
MNK e 03 22 08.0
SHL Shillong 33.54 84 P P 03 20 34.7 -1.4
SHL pmax pmax
comp=Z,17nm,0.9s
SHL Shillong 33.54 84 P P 03 20 34.7 -1.4
STON Ston 33.59 307 i P P 03 20 36.0 -0.1
STON Ston 33.59 307 eP P 03 20 36.1 -0.1
MATE Matera 33.79 303 ⇓P P 03 20 38.4 +0.5
KECS Kecovo 33.80 318 eP P 03 20 39.9 +2.0
KECS pmax pmax
comp=Z,21nm,1.3s
KECS Kecovo 33.80 318 eP P 03 20 39.9 +2.0
DOB Doboj 33.87 311 eP P 03 20 38.4 -0.2
PSZ Piszkesteto 33.91 317 ⇑P P 03 20 40.4 +1.5
MORH Mrgy, Hungar 34.02 313 eP P 03 20 40.0 +0.2
MAKA Makarska 34.18 308 i P P 03 20 41.2 -0.1
NACGM Naroch 34.24 332 eP P 03 20 41.0 -0.6
NACGM eLQ LQ 03 32 42.0
NACGM eLR LR 03 35 30.0
BUD Budapest 34.26 316 eP P 03 20 43.0 +1.0
NIE Niedzica 34.34 320 eP P 03 20 44.4 +1.8
ACER Acerenza 34.38 303 IAmb IAmb 03 20 48.4
comp=Z,32nm,0.6s
MGRS Mrkonjic Grad 34.46 310 eP P 03 20 44.7 +0.9
BLY Banja Luka 34.49 310 ⇓P P 03 20 45.4 +1.4
BLY Banja Luka 34.49 310 IAmb IAmb 03 20 54.4
comp=Z,22nm,0.6s
BLY Banja Luka 34.49 310 eP P 03 20 45.5 +1.5
HVAR Hvar 34.56 308 i P P 03 20 44.9 +0.4
LANS Liptovska Anna 34.70 319 eP P 03 20 47.6 +1.8
LANS pmax pmax
comp=Z,25nm,0.8s
LANS Liptovska Anna 34.70 319 eP P 03 20 47.6 +1.8
TIH Tihany 34.75 314 eP P 03 20 47.0 +0.8
VYHS Vyhne 34.79 317 eP P 03 20 48.0 +1.4
VYHS pmax pmax
comp=Z,16nm,1.0s
VYHS Vyhne 34.79 317 eP P 03 20 48.0 +1.4
KIJV Kijevo 34.81 309 i P P 03 20 47.1 +0.3
ZALV Zalesovo Beam 34.86 32 P P 03 20 45.9 -1.1
ZALV Zalesovo Beam 34.86 32 P P 03 20 46.8 -0.2
comp=Z,98nm,0.6s,baz=238,slow=9.1,SNR=311
ZALV LR LR 03 35 58.2
comp=Z,1µm,21.7s,baz=232,slow=38
ZALV Zalesovo Beam 34.86 32 P P 03 20 45.9 -1.1
PRGR Permogore 34.96 353 eP P 03 20 46.7 -1.0
PRGR e 03 22 03.2
PRGR e 03 23 19.3
PRGR pmax pmax
comp=Z,34nm,0.8s
ISAL Salakas 34.97 332 eP P 03 20 49.1 +1.2
ISAL IAmb IAmb 03 20 50.8
comp=Z,8.7nm,0.6s
OJC Ojcow 35.00 320 eP P 03 20 49.2 +0.9
OJC Ojcow 35.00 320 IAmb IAmb 03 20 54.4
comp=Z,47nm,1.0s
IZAR Zarasai 35.04 332 eP P 03 20 49.8 +1.3
IZAR IAmb IAmb 03 20 51.7
comp=Z,9.6nm,0.7s
MOSL Moslavina 35.05 312 i P P 03 20 49.5 +0.6
KOLL Kolacno 35.09 317 eP P 03 20 50.3 +1.2
ZIRJ Zirje 35.24 308 i P P 03 20 50.1 -0.3
MORI Morici 35.26 308 i P P 03 20 51.5 +0.9
SUW Suwalki 35.28 328 eP P 03 20 51.4 +0.8
SUW Suwalki 35.28 328 IAmb IAmb 03 21 08.0
comp=Z,66nm,1.0s
UDBI Udbina 35.40 310 i P P 03 20 53.1 +1.2
KALN Kalnik 35.41 312 i P P 03 20 53.0 +1.0
ZAG Zagreb 35.63 312 eP P 03 20 54.8 +1.0
JAVC Velka Javorina 35.65 317 eP P 03 20 55.0 +1.0
SMOL Smolenice 35.66 317 eP P 03 20 55.6 +1.6
SMOL pmax pmax
comp=Z,16nm,1.4s
SMOL Smolenice 35.66 317 eP P 03 20 55.6 +1.6
MODS Modra-Piesok 35.69 316 eP P 03 20 54.9 +0.6
MODS pmax pmax
comp=Z,54nm,1.8s
MODS Modra-Piesok 35.69 316 eP P 03 20 54.9 +0.6
DUGI Dugi Otok 35.74 308 i P P 03 20 55.4 +0.6
OKC Ostrava-Krasne 35.77 319 eP P 03 20 55.1 +0.1
OKC e 03 20 58.9
OKC MLR MLR
comp=Z,2µm,11.5s
OKC Ostrava-Krasne 35.77 319 eP P 03 20 55.1 +0.1
OKC epP sP 03 20 58.9 -0.3
OKC AMS AMS 03 40 40.0
comp=Z,2µm,11.5s
MBAR Mbarara 35.79 223 P P 03 20 55.5 -0.2
MBAR pmax pmax
comp=Z,11nm,1.0s
MBAR Mbarara 35.79 223 LR LR 03 35 48.1
comp=Z,4µm,21.2s,baz=42,slow=37
MBAR Mbarara 35.79 223 P P 03 20 55.5 -0.2
PABE Paberze 35.85 331 eP P 03 20 55.8 +0.3
PABE IAmb IAmb 03 20 58.1
comp=Z,40nm,0.8s
OZLJ Ozalj 35.91 311 i P P 03 20 57.0 +0.8
CRES Cresnjev 35.98 312 eP P 03 20 57.2 +0.3
CRES Cresnjev 35.98 312 eP P 03 20 56.9 +0.1
CORL Corleone 36.01 298 IAmb IAmb 03 21 07.2
comp=Z,41nm,0.8s
NVLJ Novalja 36.02 309 i P P 03 20 57.0 -0.2
CLTB Caltabellotta 36.05 297 IAmb IAmb 03 21 04.9
comp=Z,32nm,0.5s
MORC Moravsky Berou 36.10 319 ⇓P P 03 20 58.1 +0.2
MORC Moravsky Berou 36.10 319 eP P 03 20 58.1 +0.2
ARSA Arzberg 36.39 314 i pP P 03 21 01.7 +1.4
comp=Z,16nm,0.9s,SNR=10
ARSA i S S 03 26 40.0 -1.8
comp=Z,9.4nm,1.2s
CONA Conrad Observa 36.41 315 i pP P 03 21 01.6 +1.0
comp=Z,24nm,1.6s,SNR=7.8
VRAC Vranov 36.48 318 ⇓P P 03 21 02.6 +1.6
VRAC Vranov 36.48 318 eP P 03 21 01.2 +0.2
RIY Rijeka 36.49 310 eP P 03 21 02.1 +0.9
KRUC Moravsky 36.50 317 eP P 03 21 01.8 +0.6
SOKA Soboth 36.52 313 i pP P 03 21 02.9 +1.4
comp=Z,15nm,0.8s,SNR=10
PUL Pulkovo 36.55 340 ceP P 03 21 03.0 +1.6
PUL pmax pmax
comp=Z,84nm,1.0s
AQU L'Aquila 36.56 305 IAmb IAmb 03 21 12.9
comp=Z,52nm,0.8s
AQU L'Aquila 36.56 305 eP P 03 21 03.9 +2.1
CEY Cerknica 36.64 311 eP P 03 21 02.8 +0.3
LJU Ljubljana 36.66 312 eP P 03 21 04.5 +1.8
KRLC Kraliky 36.67 319 AMS AMS 03 38 20.0
comp=Z,1µm,16.6s
VSU Vasula 36.76 336 ceP P 03 21 03.8 +0.6
VSU pmax pmax
comp=Z,234nm,1.3s
VSU Vasula 36.76 336 eP P 03 21 04.1 +0.9
VSU IAmb IAmb 03 21 05.3
comp=Z,60nm,0.6s
OBKA Obir 36.79 312 i pP P 03 21 05.2 +1.3
comp=Z,33nm,1.4s,SNR=11
BRJN Brijuni 36.88 310 i P P 03 21 04.4 0.0
DPC Dobruska-Polom 37.06 319 eP P 03 21 06.7 +0.7
DPC e 03 21 13.6
DPC MLR MLR
comp=Z,1µm,10.4s
DPC Dobruska-Polom 37.06 319 eP P 03 21 06.7 +0.7
DPC ex x 03 21 13.6
DPC AMS AMS 03 41 00.0
comp=Z,1µm,10.4s
PBUR Paburg 37.07 330 eP P 03 21 06.3 +0.4
TREC Trest 37.14 317 AMS AMS 03 40 00.0
comp=Z,2µm,14.3s
OSTC Ostas 37.20 319 eP P 03 21 07.3 +0.1
OSTC ex x 03 21 14.8
OSTC AMS AMS 03 41 40.0
comp=Z,1µm,16.8s
KSP Ksiaz 37.28 320 eP P 03 21 09.1 +1.3
UPC Upice 37.30 319 eP P 03 21 08.8 +0.8
UPC MLR MLR
comp=Z,1µm,12.0s
UPC Upice 37.30 319 eP P 03 21 08.8 +0.8
UPC AMS AMS 03 40 20.0
comp=Z,1µm,12.0s
CHVC Chvalec 37.31 319 eP P 03 21 08.3 +0.2
CHVC ex x 03 21 15.4
CHVC AMS AMS 03 41 40.0
comp=Z,1µm,13.3s
MOA Molln 37.39 314 i pP P 03 21 09.2 +0.4
comp=Z,18nm,0.9s,SNR=7.2
MOA i S S 03 26 57.9 +0.9
comp=Z,13nm,1.5s
MYKA Terra Mystica 37.42 312 i pP P 03 21 10.5 +1.3
comp=Z,12nm,0.9s,SNR=9.8
KBA Koelnbreinsper 37.75 313 i pP P 03 21 12.4 +0.3
comp=Z,32nm,0.8s,SNR=18
KBA i ScP ScP 03 27 11.9 -4.7
comp=Z,11nm,1.5s
GOPC GO Pecny, Ondr 37.79 318 eP P 03 21 13.2 +1.0
GOPC MLR MLR
comp=Z,1µm,18.0s
GOPC GO Pecny, Ondr 37.79 318 eP P 03 21 13.2 +1.0
GOPC ex x 03 21 24.3
GOPC AMS AMS 03 41 30.0
comp=Z,1µm,18.0s
STAL STALIGIAL 37.94 311 IAmb IAmb 03 21 15.8
comp=Z,70nm,1.1s
PRU Pruhonice 37.97 318 eP P 03 21 14.2 +0.5
PRU MLR MLR
comp=Z,1µm,14.5s
PRU Pruhonice 37.97 318 eP P 03 21 14.2 +0.5
PRU ex x 03 21 28.9
PRU AMS AMS 03 41 20.0
comp=Z,1µm,14.5s
PRA Prague 38.06 318 eP P 03 21 15.8 +1.4
PRA MLR MLR
comp=Z,1µm,16.3s
PRA Prague 38.06 318 eP P 03 21 15.8 +1.4
PRA AMS AMS 03 40 10.0
comp=Z,1µm,16.3s
GEC2 GERESS Array S 38.08 316 eP P 03 21 15.3 +0.6
baz=110,slow=8.4
GERES GERESS Array B 38.08 316 P P 03 21 14.6 -0.1
comp=Z,4.4nm,0.6s,baz=104,slow=7.1,SNR=29
GERES PcP PcP 03 23 30.6 +0.8
comp=Z,5.1nm,0.7s,baz=140,slow=2.9,SNR=7.0
GERES ScP ScP 03 27 17.1 -0.6
comp=Z,1.9nm,0.9s,baz=128,slow=3.7,SNR=5.0
GERES LR LR 03 38 45.4
comp=Z,740nm,19.4s,baz=100,slow=39
GERES GERESS Array B 38.08 316 P P 03 21 13.6 -1.2
GERES PcP 03 23 29.4 -0.4
GERES ScP 03 27 17.1 -0.6
PVCC Panska Ves 38.16 319 eP P 03 21 16.0 +0.8
PVCC MLR MLR
comp=Z,1µm,19.5s
PVCC Panska Ves 38.16 319 eP P 03 21 16.0 +0.8
PVCC AMS AMS 03 38 40.0
comp=Z,1µm,19.5s
PBCC Pribram 38.19 317 eP P 03 21 16.0 +0.5
PBCC ex x 03 21 31.8
PBCC AMS AMS 03 40 40.0
comp=Z,400nm,17.8s
ABTA Abfaltersbach 38.20 312 i pP P 03 21 16.0 +0.2
comp=Z,31nm,0.9s,SNR=16
ABTA i ScP ScP 03 27 18.3 0.0
comp=Z,10.0nm,1.2s
KHC Kasperske Hory 38.25 316 eP P 03 21 15.8 -0.3
KHC MLR MLR
comp=Z,2µm,10.3s
KHC Kasperske Hory 38.25 316 eP P 03 21 15.8 -0.3
KHC ex x 03 21 28.0
KHC ex x 03 27 29.0
KHC AMS AMS 03 41 40.0
comp=Z,2µm,10.3s
RJOB Jochberg 38.30 314 eP P 03 21 16.9 +0.4
baz=110,slow=8.4
TEOL Teolo 38.42 310 IAmb IAmb 03 21 22.8
comp=Z,55nm,0.6s
TMCR Tamitsa 38.47 349 eP P 03 21 18.7 +1.0
TMCR pmax pmax
comp=Z,58nm,0.9s
BRG Berggiesshubel 38.66 319 eP P 03 21 20.1 +0.7
comp=Z,8.5nm,0.8s
comp=N,2µm,20.9s
comp=E,2µm,16.9s
comp=Z,1µm,12.2s
BRG Berggiesshubel 38.66 319 eP P 03 21 20.1 +0.7
BRG pmax pmax
comp=Z,9.0nm,0.8s
BRG MLR MLR
comp=N,2µm,20.9s
BRG MLR MLR
comp=E,2µm,16.9s
BRG MLR MLR
comp=Z,1µm,12.2s
BRG Berggiesshubel 38.66 319 eP P 03 21 20.2 +0.7
baz=110,slow=8.4
ZCCA Zocca 38.68 308 IAmb IAmb 03 21 26.7
comp=Z,85nm,0.8s
WET Wettzell 38.69 316 eP P 03 21 20.1 +0.3
comp=Z,6.4nm,0.8s,baz=110,slow=8.4
WTTA Wattenberg 38.92 313 i pP P 03 21 21.6 -0.3
comp=Z,43nm,0.6s,SNR=24
WTTA i ScP S 03 27 18.7 -1.7
comp=Z,21nm,1.2s
WATA Walderalm 38.98 313 i pP P 03 21 21.8 -0.6
comp=Z,128nm,1.0s,SNR=38
WATA i ScP S 03 27 18.9 -2.3
comp=Z,29nm,1.6s
VLC Villacollemand 39.06 307 IAmb IAmb 03 21 38.9
comp=Z,44nm,0.9s
KEST Kesra 39.09 294 P P 03 21 25.9 +2.5
comp=Z,26nm,0.6s,baz=51,slow=2.1,SNR=36
KEST PcP PcP 03 23 35.2 +2.0
comp=Z,13nm,0.9s,baz=344,slow=1.9,SNR=3.6
KEST Kesra 39.09 294 P P 03 21 23.1 -0.3
KEST PcP 03 23 34.5 +1.3
FINES FINESS Array B 39.18 339 P P 03 21 23.0 -0.6
FINES FINESS Array B 39.18 339 P P 03 21 23.4 -0.2
comp=Z,20nm,0.6s,baz=138,slow=8.3,SNR=89
FINES LR LR 03 39 41.1
comp=Z,841nm,20.2s,baz=138,slow=40
FINES FINESS Array B 39.18 339 P P 03 21 22.9 -0.6
SQTA Sankt Quirin 39.19 312 i P P 03 21 23.3 -0.8
comp=Z,91nm,0.8s,SNR=29
SQTA i ScP ScP 03 27 21.1 -1.0
comp=Z,24nm,1.5s
MOTA Moosalm 39.29 313 i P P 03 21 24.1 -0.9
comp=Z,67nm,0.9s,SNR=16
MOTA i S S 03 27 22.8 -3.2
comp=Z,25nm,1.0s
ROTZ Rotzenmuhle 39.31 317 eP P 03 21 26.0 +1.1
comp=Z,11nm,0.8s,baz=110,slow=8.4
NKC Novy Kostel 39.31 317 eP P 03 21 25.4 +0.4
NKC Novy Kostel 39.31 317 eP P 03 21 25.4 +0.4
CLL Collm 39.37 319 ⇓i P P 03 21 26.6 +1.2
CLL e 03 21 35.0
CLL eS S 03 27 27.0 +0.3
CLL pmax pmax
comp=Z,26nm,1.2s
CLL MLR MLR
comp=Z,1µm,18.5s
CLL Collm 39.37 319 ⇓i P P 03 21 26.6 +1.2
comp=Z,26nm,1.2s
CLL e 03 21 35.0
CLL i 03 21 50.0
CLL e 03 23 08.0
CLL ePPP PPP 03 23 18.0
CLL ePcP PcP 03 23 31.0 -2.6
CLL eS S 03 27 27.0 +0.3
CLL eSS SS 03 30 18.0 -2.3
CLL Lm MLR 03 42 00.0
comp=N,2µm,20.3s
CLL Lm MLR 03 42 00.0
comp=E,700nm,21.9s
CLL Lm MLR 03 42 00.0
comp=Z,1µm,18.5s
CLL Collm 39.37 319 eP P 03 21 26.5 +1.1
baz=110,slow=8.4
TANN Tannenbergstha 39.37 318 eP P 03 21 26.9 +1.4
baz=110,slow=8.4
WERN Wernitzgruen 39.38 317 eP P 03 21 27.2 +1.6
baz=110,slow=8.4
RUE Ruedersdorf 39.38 321 eP P 03 21 27.0 +1.6
comp=Z,26nm,0.7s,baz=110,slow=8.4
FUR Furstenfeldbru 39.40 314 eP P 03 21 26.1 +0.3
baz=110,slow=8.4
GUNZ Gunzen 39.43 317 eP P 03 21 27.3 +1.3
baz=110,slow=8.4
MANZ Manzenberg 39.44 317 eP P 03 21 26.9 +0.9
comp=Z,4.7nm,0.8s,baz=110,slow=8.4
FETA Feichten 39.45 312 i pP P 03 21 26.3 -0.1
comp=Z,83nm,0.8s,SNR=43
FETA i S S 03 27 27.2 -1.2
comp=Z,26nm,1.4s
GTA Gaotai 39.48 60 ⇑P P 03 21 27.0 +0.3
GTA pP sP 03 21 34.0 +3.0
GTA sP pP 03 21 38.4 +8.6
GTA S S 03 27 28.1 -1.0
GTA sS sS 03 27 39.4 +5.3
GTA SS SS 03 30 18.3 -5.0
GTA pmax pmax
comp=Z,7.0nm,1.0s
GTA pmax pmax
comp=Z,400nm,4.1s
GTA LR LR
comp=Z,2µm,15.9s
GTA LR LR
comp=Z,1µm,15.6s
GTA LR LR
comp=Z,1µm,15.2s
RETA Reutte 39.55 313 i P P 03 21 25.9 -1.1
comp=Z,25nm,0.7s,SNR=11
RETA i ScP ScP 03 27 22.5 -0.9
comp=Z,31nm,1.5s
FUORN Ofenpass-Fuorn 39.67 311 IAmb IAmb 03 21 42.0
comp=Z,37nm,0.8s
GRA1 Grafenberg Arr 39.89 316 IAmb IAmb 03 21 31.6
comp=Z,45nm,0.9s
GRF Grafenberg Arr 39.89 316 eP P 03 21 30.4 +0.7
comp=Z,26nm,0.8s,baz=110,slow=8.4
GRF eL L 03 41 35.9
comp=Z,818nm,18.9s
BSD Bornholm Skovb 39.93 325 i P P 03 21 29.0 -1.0
BSD pmax pmax
comp=Z,41nm,0.7s
BSD Bornholm Skovb 39.93 325 i P P 03 21 29.0 -1.0
comp=Z,41nm,0.7s
MOX Moxa 39.95 318 eP P 03 21 31.1 +0.8
baz=110,slow=8.4
MOX eL L 03 41 11.7
comp=Z,726nm,18.4s
DAVOX Davos/Dischmat 39.96 311 S S 03 27 32.6 -3.5
comp=Z,3.9nm,0.7s,baz=286,slow=23,SNR=6.4
UBR Ueberruh 40.03 313 eP P 03 21 30.6 -0.4
comp=Z,48nm,0.8s,baz=110,slow=8.4
DAVA Damuels 40.08 312 i P P 03 21 30.5 -1.1
comp=Z,154nm,0.6s,SNR=65
DAVA i S S 03 27 39.5 +1.6
comp=Z,31nm,1.3s
TUE Stuetta 40.25 311 P P 03 21 32.1 -0.9
CMAH Djebel Manchou 40.65 295 P P 03 21 39.0 +2.7
STU Stuttgart 40.90 314 eP P 03 21 38.2 +0.1
baz=110,slow=8.4
UBBA Unterbreizbach 40.98 317 eP P 03 21 39.7 +1.1
comp=Z,4.2nm,0.7s,baz=110,slow=8.4
ASSE Asse, Remlinge 41.02 320 eP P 03 21 40.4 +1.5
comp=Z,8.4nm,0.9s,baz=110,slow=8.4
CLZ Clausthal 41.09 319 eP P 03 21 41.0 +1.3
comp=Z,25nm,0.7s,baz=110,slow=8.4
CAEH 'Ain El Ouahch 41.10 296 P P 03 21 42.4 +2.4
CKFL Kef-Lekhel 41.21 295 P P 03 21 43.6 +2.5
GTTG Gvttingen 41.23 318 eP P 03 21 42.4 +1.6
baz=110,slow=8.4
BFO Black Forest 41.35 313 P P 03 21 41.5 -0.4
BFO pmax pmax
comp=Z,15nm,0.8s

BFO Black Forest 41.35 313 *e*P P **03 21 42.3 +0.5**
comp=Z,9.7nm,0.7s,baz=110,slow=8.4
BFO Black Forest 41.35 313 P P **03 21 41.5 -0.4**
CASM Ain Smara 41.40 295 P P **03 21 45.2 +2.7**
NRDL Niedersach Rie 41.47 320 *e*P P **03 21 44.7 +2.0**
comp=Z,31nm,0.8s,baz=110,slow=8.4
CTEI Djebel Teioual 41.48 295 P P **03 21 46.3 +3.1**
SENIN Lac Senin/Sane 41.61 310 P P **03 21 42.7 -1.6**
SENIN IAmb IAmb 03 21 46.1
comp=Z,47nm,0.8s
SENIN S **03 27 57.3 -3.6**
CHTO Chiang Mai 41.66 92 P P **03 21 44.3 -0.4**
CHTO pmax pmax
comp=Z,56nm,1.2s
CHTO Chiang Mai 41.66 92 P P **03 21 44.3 -0.4**
CHTO IAmb IAmb 03 21 47.6
comp=Z,56nm,1.1s
TNS Taunus Mts 41.76 316 *e*P P **03 21 46.4 +1.1**
comp=Z,12nm,0.9s,baz=110,slow=8.4
CM31 Chiang Mai Arr 41.78 92 P P **03 21 44.9 -0.8**
CMAR Chiang Mai Arr 41.78 92 P P **03 21 45.3 -0.5**
comp=Z,14nm,0.9s,baz=289,slow=8.7,SNR=43
CMAR PcP **PcP 03 23 42.7 +0.7**
comp=Z,8.2nm,0.7s,baz=283,slow=4.5,SNR=5.0
CMAR ScP **ScP 03 27 32.9 +0.3**
comp=Z,0.7nm,0.5s,baz=284,slow=3.6,SNR=4.5
CMAR LR LR 03 42 01.4
comp=Z,667nm,19.2s,baz=290,slow=40
CMAR Chiang Mai Arr 41.78 92 **PcP 03 23 41.0 -1.1**
CMAR **ScP 03 27 31.5 -1.1**
BNI Bardonecchia 41.82 308 IAmb IAmb 03 21 47.7
comp=Z,59nm,0.8s
BSEG Bad Segeberg 41.87 322 *e*P P **03 21 47.7 +1.8**
comp=Z,14nm,0.8s,baz=110,slow=8.4
DFRA Djebel Bou Aff 41.89 295 P P **03 21 48.7 +2.1**
ECH Echery 42.08 313 IAmb IAmb 03 21 49.7
comp=Z,46nm,1.0s
CKHR Kef el Ahmar 42.20 295 P P **03 21 52.1 +2.9**
SET Setif 42.28 295 P P 03 21 55.0 +5.2
APA Apatity 42.38 348 ⇓*i*P P **03 21 51.1 +1.1**
APA *i* 03 23 34.0
APA *i* S S **03 28 12.0 +0.9**
APA *i* SS SS **03 31 19.0 -0.7**
APA pmax pmax
comp=Z,51nm,1.0s
APA MLR MLR
comp=Z,1µm,18.0s
LVZ Lovozero 42.45 349 *ce*P P **03 21 52.3 +1.6**
LVZ pmax pmax
comp=Z,45nm,1.3s
LVZ Lovozero 42.45 349 P P **03 21 49.9 -0.7**
MOY Mondy 42.55 42 *e*P P **03 21 53.7 +2.0**
MOY pmax pmax
comp=Z,82nm,2.0s
LZH Lanzhou 42.64 65 ⇑P P **03 21 54.4 +1.6**
LZH pP sP 03 21 58.8 +1.7
LZH sP pP 03 22 02.3 +6.5
LZH S S **03 28 21.3 +5.2**
LZH pmax pmax
comp=Z,140nm,1.4s
LZH pmax pmax
comp=Z,310nm,4.3s
LZH LR LR
comp=Z,2µm,15.7s
LZH LR LR
comp=Z,1µm,14.6s
LZH LR LR
comp=Z,2µm,15.7s
AHRW Bad Neuenahr-A 42.69 316 *e*P P **03 21 55.1 +2.4**
comp=Z,13nm,0.8s,baz=110,slow=8.4
IBBN Ibbenburen 42.77 319 *e*P P **03 21 55.3 +1.9**
baz=110,slow=8.4
BUG Bochum--Univer 42.81 318 *e*P P **03 21 54.8 +1.1**
comp=Z,20nm,0.9s,baz=110,slow=8.4
CD2 Chengdu 43.03 73 ⇓*i*P P **03 21 56.6 +0.7**
CD2 PcP **PcP 03 23 41.2 -4.9**
CD2 S S **03 28 14.4 -7.4**
CD2 pmax pmax
comp=Z,70nm,0.9s
CD2 pmax pmax
comp=Z,410nm,8.0s
CD2 LR LR
comp=Z,11µm,19.7s
CD2 LR LR
comp=Z,3µm,16.0s
CD2 LR LR
comp=Z,5µm,17.4s
WLF Walferdange 43.05 315 *e*P P **03 21 56.7 +1.0**
comp=Z,22nm,0.8s,baz=110,slow=8.4
WLF Walferdange 43.05 315 IAmb IAmb 03 21 57.3
comp=Z,32nm,0.8s
KMI Kunming 43.22 81 P P **03 21 57.7 0.0**
KMI pP sP 03 22 01.7 -0.3
KMI sP pP 03 22 03.1 +2.3
KMI PP PP **03 23 36.9 -1.2**
KMI S S **03 28 25.0 -0.1**
KMI sS sS 03 28 31.2 +1.1
KMI pmax pmax
comp=Z,100nm,1.1s
KMI pmax pmax
comp=Z,350nm,4.2s
KMI LR LR
comp=Z,1µm,20.6s
KMI LR LR
comp=Z,680nm,20.9s
KMI LR LR
comp=Z,850nm,16.6s
KMI Kunming 43.22 81 IAmb IAmb 03 22 00.5
comp=Z,92nm,1.0s
SSB Saint Sauveur 43.35 308 IAmb IAmb 03 21 59.4
comp=Z,30nm,0.7s
MUD Monsted U'grnd 43.44 325 *e*P P **03 21 57.8 -0.9**
MUD Monsted U'grnd 43.44 325 *i* P P **03 21 57.8 -0.9**
ZAK Zakamensk 43.60 44 *e*P P **03 22 01.4 +1.1**
ZAK *e* 03 23 48.1
ZAK pmax pmax
comp=Z,14nm,1.0s
ZAK pmax pmax
comp=Z,13nm,0.9s
TLY Talaya 44.14 43 *e*P P **03 22 06.6 +2.1**
TLY *e* 03 23 56.0
TLY *e*S S **03 28 37.0 -0.4**
TLY *e*SS SS **03 31 49.4 -5.3**
TLY pmax pmax
comp=Z,56nm,1.4s
TLY MLR MLR
comp=Z,4µm,10.0s
TLY Talaya 44.14 43 P P **03 22 05.6 +1.2**
comp=Z,3.9nm,0.7s,baz=234,slow=4.3,SNR=12
TLY Talaya 44.14 43 P P **03 22 03.7 -0.8**
OSL Oslo 44.20 330 *e*P P **03 22 05.7 +0.9**
NC602 NORSAR Array S 44.23 331 *e*P P **03 22 05.7 +0.7**
TAM Tamanrasset 44.31 276 P P **03 22 05.8 -0.6**
TAM pmax pmax
comp=Z,47nm,0.7s
TAM Tamanrasset 44.31 276 P P **03 22 05.8 -0.6**
TAM IAmb IAmb 03 22 12.9
comp=Z,47nm,0.7s
NC405 NORSAR Array S 44.35 332 P P **03 22 05.2 -0.8**
NC405 IAmb IAmb 03 22 07.4
comp=Z,42nm,0.8s
NB2 NORSAR Subarra 44.52 332 P P **03 22 06.5 -0.9**
comp=Z,18nm,0.8s,baz=121,slow=8.6
NB2 NORSAR Subarra 44.52 332 P P **03 22 06.5 -0.9**
baz=121,slow=8.6
NOA NORSAR Array B 44.52 332 P P **03 22 06.1 -1.3**
comp=Z,8.9nm,0.6s,baz=120,slow=8.0,SNR=39
NOA PcP **PcP 03 23 50.5 0.0**
comp=Z,3.9nm,0.8s,baz=104,slow=4.0,SNR=4.6
NOA LR LR 03 42 51.1
comp=Z,952nm,21.7s,baz=125,slow=39
NAO01 NORSAR Array S 44.57 331 IAmb IAmb 03 22 11.9
comp=Z,41nm,1.1s
IRK Irkutsk 44.65 42 *e*P P **03 22 09.0 +0.4**
IRK pmax pmax
comp=Z,63nm,3.5s
SONM Songino Array 45.14 48 P P **03 22 11.7 -1.0**
SONM pmax pmax
comp=Z,27nm,1.0s
SONM Songino Array 45.14 48 P P **03 22 13.0 +0.3**
comp=Z,26nm,0.8s,baz=265,slow=7.2,SNR=144
SONM LR LR 03 41 59.2
comp=Z,2µm,21.1s,baz=258,slow=37
SONM PKP2ab 03 54 59.0
comp=Z,0.3nm,0.7s,baz=104,slow=4.6,SNR=3.6
SONM Songino Array 45.14 48 P P **03 22 11.7 -1.0**

EBNR Beni Rached 45.40 295 P P **03 22 16.7 +1.9**
ECHA Ech Chlef 45.55 295 P P **03 22 17.2 +1.3**
ULN Ulaanbaatar 45.59 49 *ce*P P **03 22 17.1 +0.9**
ULN pmax pmax
comp=Z,66nm,1.3s
ULN Ulaanbaatar 45.59 49 P P **03 22 15.3 -1.0**
ULN IAmb IAmb 03 22 18.6
comp=Z,37nm,0.7s
ARCES ARCESS Array B 45.61 346 P P **03 22 15.4 -0.5**
comp=Z,19nm,0.8s,baz=152,slow=8.7,SNR=64
ARCES PcP **PcP 03 23 55.5 +1.4**
comp=Z,6.1nm,0.8s,baz=152,slow=5.9,SNR=3.2
ARCES LR LR 03 43 18.4
comp=Z,1µm,21.9s,baz=150,slow=39
ARCES ARCESS Array B 45.61 346 P P **03 22 14.9 -1.0**
ARCES **PcP 03 23 54.1 0.0**
ARE0 ARCESS Array S 45.61 346 *e*P P **03 22 18.0 +2.1**
SKAR Skarsla 45.61 330 *e*P P **03 22 16.9 +0.8**
ETRT Tiaret 45.66 294 P P 03 22 22.0 +5.0
KTK1 Kautokeino 45.70 345 *e*P P **03 22 17.2 +0.5**
EANR `Ain N'Sour 45.78 295 P P **03 22 19.0 +1.2**
DOMB Dombas 45.91 332 *e*P P **03 22 19.4 +1.0**
BLS5 Blasjo 45.93 328 *e*P P **03 22 18.0 -0.7**
OPO Ambohidratompo 46.01 190 LR LR 03 40 03.5
comp=Z,1µm,20.1s,baz=189,slow=34
TBLU Trondheim 46.02 334 *e*P P **03 22 20.7 +1.5**
ODD1 Odda 46.05 329 *e*P P **03 22 20.6 +1.0**
NSS Namsos 46.06 336 *e*P P **03 22 20.3 +0.8**
MLSI Meulaboh, Aceh 46.07 112 P P **03 22 21.5 +1.3**
comp=Z,66nm,1.1s
MOR8 Moi Rana 46.17 339 *e*P P **03 22 20.6 +0.2**
GYA Guiyang 46.36 78 ⇑*i*P P **03 22 23.2 +0.6**
GYA PP PP **03 24 12.3 +0.9**
GYA S S **03 29 10.6 +0.3**
GYA SS ScS **03 32 26.3 +7.7**
GYA pmax pmax
comp=Z,30nm,0.7s
GYA pmax pmax
comp=Z,230nm,5.4s
GYA LR LR
comp=Z,2µm,17.2s
GYA LR LR
comp=Z,960nm,14.7s
GYA LR LR
comp=Z,590nm,16.9s
ABPO Ambohimpanom 46.44 189 P P **03 22 22.5 -0.7**
ABPO pmax pmax
comp=Z,35nm,1.0s
ABPO Ambohimpanom 46.44 189 P P **03 22 22.5 -0.7**
ABPO IAmb IAmb 03 22 29.7
comp=Z,35nm,1.0s
STOK Stokkvaagen 46.73 338 *i* P P **03 22 25.9 +1.1**
MOL Molde 46.78 332 *e*P P **03 22 26.4 +1.2**
KONS Konsvik 46.80 339 *e*P P **03 22 25.8 +0.6**
BER Bergen 46.83 329 *e*P P **03 22 26.8 +1.2**
AKN Aaknes 46.84 332 *e*P P **03 22 26.6 +0.9**
HAMF Hammerfest 46.87 347 *e*P P **03 22 27.5 +1.7**
ASK Askoy 46.93 329 *e*P P **03 22 27.2 +0.8**
XAN Xi'an 46.96 68 P P **03 22 27.2 +0.1**
XAN PcP **PcP 03 24 05.2 +5.6**
XAN PP **PP 03 24 12.2 -5.2**
XAN S S **03 29 13.4 -5.2**
XAN SS ScS **03 32 30.8 +8.6**
XAN pmax pmax
comp=Z,57nm,1.1s
XAN pmax pmax
comp=Z,180nm,3.1s
XAN LR LR
comp=Z,4µm,20.6s
XAN LR LR
comp=Z,1µm,21.6s
XAN LR LR
comp=Z,1µm,15.7s
STEI Steigen 47.03 341 *e*P P **03 22 27.6 +0.6**
TRO Tromso 47.19 344 *e*P P **03 22 29.4 +1.1**
BTO Baotou 47.34 59 *e*P P **03 22 30.4 +0.3**
LOF Lofoten 47.65 341 *e*P P **03 22 32.5 +0.6**
WOL Wolverton 47.98 316 *e*P P **03 22 35.1 +0.4**
WOL IAmb IAmb 03 22 37.0
comp=Z,252nm,0.9s
FIGM Figuig 48.19 290 P P **03 22 38.0 +1.3**
SNR=61
CWF Charnwood Fore 48.26 318 *e*P P **03 22 37.3 +0.5**
CWF IAmb IAmb 03 22 38.1
comp=Z,38nm,0.8s
SWN1 Swindon 48.37 316 *e*P P **03 22 38.1 +0.4**
SWN1 IAmb IAmb 03 22 40.7
comp=Z,299nm,1.3s
HHC Hu-ho-hao-te 48.51 58 *e*P P **03 22 41.4 +2.3**
HHC pP sP 03 22 45.7 +2.2
HHC sP pP 03 22 48.6 +6.4
HHC S S **03 29 40.6 0.0**
HHC sS sS 03 29 47.2 +1.5
HHC pmax pmax
comp=Z,46nm,1.0s
HHC pmax pmax
comp=Z,150nm,5.2s
HHC LR LR
comp=Z,940nm,19.4s
HHC LR LR
comp=Z,460nm,15.5s
HHC LR LR
comp=Z,370nm,20.1s
SESP Santiago Espad 48.51 298 P P **03 22 40.8 +1.6**
SNR=18
LBWR Ladybower, Pea 48.61 318 *e*P P **03 22 40.1 +0.5**
LBWR IAmb IAmb 03 22 41.2
comp=Z,55nm,0.8s
STRD Stroud 48.63 316 *e*P P **03 22 40.0 +0.3**
STRD IAmb IAmb 03 22 41.5
comp=Z,113nm,0.7s
TDRA Tendrara 48.68 291 P P **03 22 43.0 +2.3**
SNR=37
GSI Gunungsitoli 48.71 114 IAmb IAmb 03 22 43.9
comp=Z,47nm,1.0s
UBPT Khong Chiam 48.75 93 IAmb IAmb 03 22 43.0
comp=Z,37nm,1.1s
STNC Stoke 48.85 318 *e*P P **03 22 42.1 +0.7**
OLDB Oldbury-Upon-S 48.85 316 *e*P P **03 22 41.5 +0.1**
OLDB IAmb IAmb 03 22 42.7
comp=Z,90nm,0.8s
EDMD Edmundbyers 49.01 320 *e*P P **03 22 43.3 +0.7**
EDMD IAmb IAmb 03 22 44.5
comp=Z,84nm,0.8s
RPSI Rantau Prapat 49.02 112 IAmb IAmb 03 22 51.5
comp=Z,19nm,0.9s
KULM Kulim 49.07 108 P P **03 22 45.0 +1.4**
HLM1 Long Mynd 49.17 317 *e*P P **03 22 44.4 +0.5**
HLM1 IAmb IAmb 03 22 45.7
comp=Z,61nm,0.7s
MCH1 Michaelchurch 49.17 316 *e*P P **03 22 44.2 +0.3**
MCH1 IAmb IAmb 03 22 45.4
comp=Z,155nm,0.7s
LSZ Lusaka 49.28 214 *i* P P **03 22 44.0 -1.2**
LSZ Lusaka 49.28 214 P P **03 22 45.2 0.0**
LSZ pmax pmax
comp=Z,16nm,1.1s
LSZ Lusaka 49.28 214 *i* P P **03 22 46.9 +1.7**
LSZ Lusaka 49.28 214 P P **03 22 45.2 0.0**
TIY Taiyuan 49.40 62 *e*P P **03 22 47.4 +1.5**
TIY PP **PP 03 24 44.2 +4.3**
TIY S S **03 29 55.5 +2.4**
TIY pmax pmax
comp=Z,87nm,0.9s
TIY LR LR
comp=Z,1µm,14.3s
TIY LR LR
comp=Z,560nm,10.7s
TIY LR LR
comp=Z,750nm,17.3s
FOEL Foel Wylfa 49.41 318 *e*P P **03 22 46.1 +0.3**
FOEL IAmb IAmb 03 22 47.5
comp=Z,79nm,0.7s
ESBB Sonseca Array 49.50 300 IAmb IAmb 03 22 51.9
comp=Z,42nm,0.8s
ESDC Sonseca Array 49.50 300 P P **03 22 46.4 -0.2**
comp=Z,19nm,0.5s,baz=66,slow=7.6,SNR=96
ESDC Sonseca Array 49.50 300 P P **03 22 45.7 -1.0**
ESY Stoneypath 49.57 322 *e*P P **03 22 47.0 +0.1**
LLW Llanuwchllyn 49.69 318 *e*P P **03 22 47.8 0.0**
LLW IAmb IAmb 03 22 49.4
comp=Z,18nm,0.7s
EBL Broad Law 49.78 321 *e*P P **03 22 49.4 +0.8**
ESK Eskdalemuir 49.79 321 *e*P P **03 22 48.8 +0.2**

ESK IAmb IAmb 03 22 50.0
comp=Z,254nm,1.7s
ESK Eskdalemuir 49.79 321 P P **03 22 47.8 -0.8**
ESK pmax pmax
comp=Z,19nm,0.8s
ESK Eskdalemuir 49.79 321 P P **03 22 47.8 -0.8**
ESK IAmb IAmb 03 22 56.0
comp=Z,19nm,0.8s
PAB San Pablo 49.81 300 P P **03 22 48.2 -0.8**
PAB pmax pmax
comp=Z,71nm,0.8s
PAB San Pablo 49.81 300 P P **03 22 48.2 -0.8**
IPM Ipoh 49.81 108 P P **03 22 48.0 -1.3**
IPM Ipoh 49.81 108 P P **03 22 50.0 +0.7**
EDI Edinburgh 49.89 322 *e*P P **03 22 49.7 +0.5**
PALE Palemas 49.94 294 P P **03 22 53.0 +3.0**
SNR=12
YLL Llanberis 50.03 318 *e*P P **03 22 51.5 +1.1**
SBD Saint Breward 50.08 314 *e*P P **03 22 51.0 +0.2**
SBD IAmb IAmb 03 22 55.0
comp=Z,137nm,1.0s
WME Myndd Eilian 50.14 318 *e*P P **03 22 52.1 +0.8**
YRC Rhoscolyn 50.28 318 *e*P P **03 22 53.3 +1.0**
IOMK Kirk Michael 50.41 319 *e*P P **03 22 54.0 +0.7**
IOMK IAmb IAmb 03 22 54.8
comp=Z,87nm,0.8s
INVG Invergeldie, C 50.45 322 *e*P P **03 22 53.9 +0.3**
INVG IAmb IAmb 03 22 54.7
comp=Z,60nm,0.9s
GAL1 Galloway 50.58 320 *e*P P **03 22 55.1 +0.7**
GAL1 IAmb IAmb 03 22 56.0
comp=Z,54nm,0.7s
HORN Hornachuelos 50.67 298 P P **03 22 56.5 +0.9**
SNR=22
BJO1 Bjornoya 50.74 348 *e*P P **03 22 56.5 +1.1**
ARF Arif 50.79 290 P P **03 22 59.0 +2.4**
SNR=17
MDT Midelt 50.86 291 P P **03 22 59.6 +2.5**
SNR=36
SMIR Smir Dam 51.04 295 P P **03 22 60.0 +1.7**
SNR=9.4
TOA0 Torodi Ar. Sit 51.07 265 P P **03 22 57.7 -1.1**
TORD Torodi Ar. Bea 51.07 265 P P **03 22 58.0 -0.8**
comp=Z,43nm,0.7s,baz=65,slow=7.4,SNR=194
TORD S S **03 30 15.9 -0.8**
comp=Z,0.6nm,1.0s,baz=154,slow=34,SNR=3.0
TORD LR LR 03 45 08.6
comp=Z,912nm,19.6s,baz=50,slow=37
TORD Torodi Ar. Bea 51.07 265 P P **03 22 57.3 -1.4**
TORD S **03 30 15.5 -1.2**
CHEFC Chefchaouen 51.09 294 P P **03 23 01.1 +2.2**
SNR=11
LAWE Loch Awe, Argy 51.17 322 *e*P P **03 22 59.6 +0.7**
LAWE IAmb IAmb 03 23 00.8
comp=Z,48nm,0.7s
QIZ Qiongzhong 51.29 87 P P **03 23 00.6 +0.2**
QIZ S S **03 30 19.9 +0.2**
QIZ pmax pmax
comp=Z,41nm,1.0s
QIZ LR LR
comp=Z,660nm,23.0s
QIZ LR LR
comp=Z,180nm,21.6s
QIZ Qiongzhong 51.29 87 IAmb IAmb 03 23 02.9
comp=Z,50nm,1.1s
BOD Bodaibo 51.31 36 *e*P P **03 23 00.2 +0.2**
BOD pmax pmax
comp=Z,99nm,1.1s
KAC Achnashellach 51.32 323 *e*P P **03 23 00.5 +0.4**
GOLM Goulmima 51.35 290 P P **03 23 04.0 +3.2**
SNR=16
RSC Scourie 51.40 324 *e*P P **03 23 01.8 +1.2**
HOPEN Hopen 51.40 352 *e*P P **03 23 01.6 +1.2**
PBRG Braganca 51.46 303 *e*P P **03 23 02.2 +0.8**
comp=Z,74nm,1.5s
KPL Plockton 51.48 323 *e*P P **03 23 01.5 +0.3**
SISI Saibi 51.48 116 P P **03 23 04.3 +2.5**
comp=Z,28nm,1.2s
RSA Sarsar 51.52 294 P P **03 23 04.0 +2.0**
SNR=38
MVO Moncorvo 51.72 302 *e*P P **03 23 04.6 +1.2**
comp=Z,125nm,0.8s
TZRR Tazzarine 52.05 289 P P **03 23 08.0 +1.9**
SNR=38
BJT Baijiatuan 52.07 59 IAmb IAmb 03 23 08.3
comp=Z,34nm,1.0s
WHN Wuhan 52.07 71 P P **03 23 07.0 +0.9**
WHN S S **03 30 29.6 -0.6**
WHN LR LR
comp=Z,6µm,18.6s
WHN LR LR
comp=Z,770nm,8.4s
WHN LR LR
comp=Z,2µm,14.5s
BJI Beijing 52.07 59 P P **03 23 06.9 +0.9**
BJI pmax pmax
comp=Z,34nm,0.9s
BKNI Bangkinang 52.10 113 P P **03 23 08.8 +2.3**
comp=Z,96nm,0.5s
PMRV Marv??o 52.16 300 *e*P P **03 23 07.8 +1.1**
comp=Z,67nm,1.6s
MTE Manteigas 52.18 301 *e*P P **03 23 09.0 +2.1**
comp=Z,139nm,1.7s
MTE Manteigas 52.18 301 IAmb IAmb 03 23 09.4
comp=Z,39nm,0.9s
PCBR Castelo Branco 52.18 301 *e*P P **03 23 08.7 +1.9**
comp=Z,121nm,1.3s
PVRL Vila Real 52.23 303 *e*P P **03 23 08.7 +1.5**
comp=Z,129nm,1.4s
ZGR Zagora 52.23 288 P P **03 23 10.0 +2.5**
SNR=20
PDSI Padang 52.34 115 P P **03 23 08.8 +0.5**
PVIS Viseu 52.41 302 *e*P P **03 23 09.9 +1.3**
comp=Z,131nm,1.7s
PCAB Cabril 52.42 303 *e*P P **03 23 10.6 +2.0**
comp=Z,222nm,2.1s
PVAQ Vaqueiros 52.66 298 *e*P P **03 23 11.2 +0.8**
comp=Z,83nm,1.3s
PVAQ Vaqueiros 52.66 298 IAmb IAmb 03 23 22.3
comp=Z,43nm,1.1s
PBEJ Beja 52.70 299 *e*P P **03 23 11.9 +1.2**
comp=Z,81nm,1.5s
EVO Evora 52.75 299 *e*P P **03 23 12.2 +1.2**
comp=Z,82nm,1.5s
DLV T Lat 52.78 96 IAmb IAmb 03 23 13.7
comp=Z,42nm,1.1s
PMTG Montargil 52.85 300 *e*P P **03 23 13.2 +1.5**
comp=Z,76nm,1.2s
PBDV Barranco-do-Ve 52.86 298 *e*P P **03 23 11.9 0.0**
COI Coimbra 52.86 301 *e*P P **03 23 12.8 +1.0**
comp=Z,173nm,1.0s
PCVE Castro Verde 52.89 298 *e*P P **03 23 12.9 +0.8**
comp=Z,83nm,1.5s
PTOM Tomar 52.92 301 *e*P P **03 23 14.1 +1.8**
comp=Z,176nm,0.9s
SDSI Sungai Dareh 53.14 114 P P **03 23 14.9 +0.7**
comp=Z,26nm,1.0s
HSPB Hornsund (broa 53.16 350 *e*P P **03 23 15.2 +1.7**
PNCL Nicolau / Gran 53.20 299 *e*P P **03 23 16.0 +1.6**
comp=Z,67nm,1.6s
TIA Tai'an 53.31 64 P P **03 23 14.5 -0.7**
TIA S S **03 30 50.0 +2.9**
TIA pmax pmax
comp=Z,200nm,2.8s
TIA LR LR
comp=Z,2µm,17.8s
TIA LR LR
comp=Z,650nm,17.1s
TIA LR LR
comp=Z,700nm,26.3s
MORF Marmelete 53.41 298 *e*P P **03 23 17.9 +1.9**
comp=Z,95nm,1.8s
MATP Matopo 53.56 211 *i* P P **03 23 17.0 -0.2**
MATP Matopo 53.56 211 *i* P P **03 23 17.5 +0.3**
PFVI Vila Bisbo 53.58 298 *e*P P **03 23 18.3 +1.1**
OUK Oukaimeden 53.89 290 P P **03 23 22.4 +2.5**
SNR=20
SPA0 Spitsbergen Ar 53.90 351 *e*P P **03 23 22.2 +3.3**
SPA0 Spitsbergen Ar 53.90 351 IAmb IAmb 03 23 32.1
comp=Z,47nm,1.0s
HIA Hailar 54.07 47 IAmb IAmb 03 23 22.7
comp=Z,31nm,0.7s
MSNA Messina 54.59 208 *i* P P **03 23 27.0 +2.4**
MSNA Messina 54.59 208 *i* P P **03 23 24.6 0.0**
KBS Kingsbay 55.05 351 *ce*P P **03 23 28.0 +0.7**
KBS pmax pmax

KBS **Kingsbay** 55.05 351 *e*P **P** 03 23 27.7 +0.4
comp=Z,150nm,1.3s
NJ2 **Nanjing** 55.51 68 *e*P **P** 03 23 32.3 +1.0
NJ2 S **S** 03 31 13.6 -3.2
NJ2 sS **sS** 03 31 26.7 +4.7
NJ2 pmax pmax
comp=Z,44nm,0.9s
NJ2 pmax pmax
comp=Z,200nm,3.5s
NJ2 LR LR
comp=Z,1µm,16.1s
NJ2 LR LR
comp=Z,820nm,18.8s
NJ2 LR LR
comp=Z,2µm,19.1s
KSI **Kapahiang** 55.67 116 P **P** 03 23 34.1 +1.5
DL2 **Dalian** 56.41 60 P **P** 03 23 34.0 -3.6
DL2 PP **PP** 03 25 47.4 +4.4
DL2 *e*S **S** 03 31 24.0 -4.5
DL2 pmax pmax
comp=Z,31nm,1.4s
DL2 pmax pmax
comp=Z,220nm,7.8s
DL2 LR LR
comp=Z,1µm,19.7s
DL2 LR LR
comp=Z,710nm,24.2s
DL2 LR LR
comp=Z,1µm,18.8s
QZH **Quanzhou** 57.13 77 *i*P **P** 03 23 44.2 +1.3
QZH *e*S **S** 03 31 36.7 -1.8
QZH LR LR
comp=Z,2µm,15.2s
QZH LR LR
comp=Z,730nm,17.5s
QZH LR LR
comp=Z,810nm,18.0s
MDSI **Maura Dua** 57.43 115 P **P** 03 23 44.1 -1.0
comp=Z,34nm,0.9s
LWLI **Liwa** 57.65 116 P **P** 03 23 47.9 +1.1
comp=Z,13µmcomp=Z,74nm,0.7s
KLSI 57.99 115 P **P** 03 23 48.0 -1.1
comp=Z,16nm,0.7s
KASI **Kota Agung** 58.30 116 P **P** 03 23 51.3 +0.1
comp=Z,88nm,0.8s
CN2 **Changchun** 58.47 53 *e*P **P** 03 23 51.6 -0.5
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 pmax pmax
comp=Z,710nm,4.0s
CN2 LR LR
comp=Z,2µm,20.0s
CN2 LR LR
comp=Z,920nm,20.0s
CN2 LR LR
comp=Z,1µm,21.0s
ZEA **Zeya** 58.56 42 *e*P **P** 03 23 52.0 -0.5
ZEA pmax pmax
comp=N,21nm,0.8s
ZEA pmax pmax
comp=E,31nm,0.8s
ZEA pmax pmax
comp=Z,56nm,0.8s
ZEA MLR MLR
comp=Z,1µm,14.0s
ZEA MLR MLR
comp=E,1µm,12.0s
LBTB **Lobatse** 58.86 211 P **P** 03 23 54.1 -0.9
LBTB pmax pmax
comp=Z,43nm,1.0s
LBTB **Lobatse** 58.86 211 P **P** 03 23 54.1 -0.9
KSM **Kuching** 59.28 106 IAmb IAmb 03 23 60.0
comp=Z,26nm,1.1s
YAK **Yakutsk** 59.51 32 *e*P **P** 03 23 58.2 -0.7
YAK *e**PP **pP** 03 24 02.2 +0.1
YAK *e*S **S** 03 32 10.8 +2.4
YAK *e**SS sS 03 32 28.4 +15
YAK pmax pmax
comp=Z,47nm,0.9s
YAK pmax pmax
comp=E,23nm,1.1s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=N,265nm,2.7s
YAK pmax pmax
comp=Z,101nm,1.8s
YAK pmax pmax
comp=E,151nm,2.0s
YAK smax smax
comp=E,36nm,12.1s
YAK smax smax
comp=N,41nm,11.6s
YAK MLR MLR
comp=Z,1µm,18.0s
YAK MLR MLR
comp=E,870nm,18.0s
YAK MLR MLR
comp=N,475nm,17.0s
YAK **Yakutsk** 59.51 32 P **P** 03 23 57.9 -1.0
comp=N,29nm,0.7s,baz=259,slow=0.7,SNR=18
YAK **Yakutsk** 59.51 32 P **P** 03 23 58.0 -1.0
SSLB **Suanglung** 59.54 77 IAmb IAmb 03 24 06.5
comp=Z,24nm,0.8s
TIXI **Tiksi** 59.57 21 *ce*P **P** 03 23 59.3 +0.1
TIXI pmax pmax
comp=Z,21nm,0.8s
TIXI MLR MLR
comp=Z,1µm,17.0s
TIXI **Tiksi** 59.57 21 P **P** 03 23 59.5 +0.3
comp=Z,13nm,0.7s,baz=180,slow=24,SNR=34
TIXI **Tiksi** 59.57 21 P **P** 03 23 58.4 -0.8
TIXI IAmb IAmb 03 24 02.4
comp=Z,19nm,0.8s
DBIC **Dimbokro** 59.69 261 P **P** 03 24 00.2 -0.7
DBIC pmax pmax
comp=Z,72nm,0.7s
DBIC **Dimbokro** 59.69 261 P **P** 03 24 00.7 -0.2
comp=Z,72nm,0.7s,baz=50,slow=7.4,SNR=75
DBIC LR LR 03 50 01.4
comp=Z,520nm,18.1s,baz=42,slow=36
DBIC **Dimbokro** 59.69 261 P **P** 03 24 00.2 -0.7
KIC **Kosan Boka** 59.73 261 *e*PKP2 **P** 03 24 00.6 -0.6
comp=Z,163nm,1.0s
TIC **Toumodi** 59.85 262 *e*PKP2 **P** 03 24 01.2 -0.8
comp=Z,116nm,0.8s
DAG **Danmarks Havn** 59.88 345 *i* P **P** 03 24 01.4 +0.1
DAG pmax pmax
comp=Z,15nm,0.9s
DAG **Danmarks Havn** 59.88 345 *i* P **P** 03 24 01.4 +0.1
comp=Z,15nm,0.9s
LIC **Lamto** 60.05 261 *e*PKP2 **P** 03 24 01.9 -1.5
comp=Z,153nm,0.7s
SBUM **Sibu** 60.44 104 P **P** 03 24 07.0 +1.0
NOR **Nord** 60.54 351 *i* P **P** 03 24 06.0 +0.2
comp=Z,31nm,1.2s
INCN **Inchon** 60.55 60 P **P** 03 24 04.8 -1.8
INCN pmax pmax
comp=Z,46nm,1.1s
INCN **Inchon** 60.55 60 P **P** 03 24 04.8 -1.8
DBJI **Dramaga** 60.71 116 P **P** 03 24 08.7 +0.8
comp=Z,65nm,0.9s
SKJI **Sukabumi** 60.82 116 P **P** 03 24 10.2 +1.6
comp=Z,3µmcomp=Z,240nm,1.3s
MDJ **Mudanjiang** 61.27 52 P **P** 03 24 11.0 -0.3
MDJ pmax pmax
comp=Z,16nm,1.2s
MDJ pmax pmax
comp=Z,720nm,4.6s
TJN **Taejon** 61.38 62 *ce*P **P** 03 24 12.3 +0.1
CNJI **Cibinong** 61.46 116 P **P** 03 24 12.4 -0.5
comp=Z,1µmcomp=Z,143nm,1.2s
KS19 **Wonju Array Si** 61.50 60 IAmb IAmb 03 24 14.3
comp=Z,13nm,0.7s
KSAR **Wonju Array Be** 61.53 60 P **P** 03 24 11.0 -2.2
KSAR **Wonju Array Be** 61.53 60 P **P** 03 24 11.0 -2.2
KSRS **Korea Array** 61.56 60 P **P** 03 24 12.2 -1.1
comp=Z,14nm,0.7s,baz=278,slow=6.9,SNR=44
KSRS LR LR 03 55 24.8
comp=Z,649nm,19.7s,baz=288,slow=40
KLR **Kul'dur** 61.90 46 P **P** 03 24 15.1 -0.4
comp=Z,26nm,0.8s,baz=291,slow=7.3,SNR=58
KLR LR LR 03 53 44.6
comp=Z,934nm,21.0s,baz=282,slow=39
BOSA **Boshof** 62.12 209 *i* P **P** 03 24 17.1 -0.1
BOSA **Boshof** 62.12 209 P **P** 03 24 16.7 -0.6
BOSA pmax pmax
comp=Z,24nm,0.9s
BOSA **Boshof** 62.12 209 P **P** 03 24 16.9 -0.3
comp=Z,16nm,0.6s,baz=18,slow=5.9,SNR=32
BOSA LR LR 03 50 58.8
comp=Z,1µm,21.5s,baz=26,slow=36
BOSA **Boshof** 62.12 209 *i* P **P** 03 24 19.0 +1.7
BOSA **Boshof** 62.12 209 P **P** 03 24 16.7 -0.6
BOSA IAmb IAmb 03 24 19.4
comp=Z,24nm,0.9s
CISI **Cisompet, Garu** 62.15 116 P **P** 03 24 17.3 -0.4
comp=Z,3µmcomp=Z,114nm,1.2s
KKM **Kota Kinabalu** 62.22 98 IAmb IAmb 03 24 26.6
comp=Z,19nm,1.0s
CMJI **Cimerak** 62.79 116 P **P** 03 24 23.6 +1.7
comp=Z,53nm,0.7s
KPJI **Karang Pucung** 62.92 115 P **P** 03 24 22.6 -0.2
comp=Z,32nm,1.2s
USRK **Ussuriysk Ar.** 63.04 52 P **P** 03 24 21.5 -1.7
USRK **Ussuriysk Ar.** 63.04 52 P **P** 03 24 22.3 -0.9
comp=Z,11nm,0.7s,baz=273,slow=6.6,SNR=18
USRK LR LR 03 54 13.9
comp=Z,528nm,18.9s,baz=281,slow=38
USRK **Ussuriysk Ar.** 63.04 52 P **P** 03 24 21.5 -1.7
GRNR **Gornyy** 64.56 44 *i* P **P** 03 24 33.4 +0.3
GRNR *e*S **S** 03 33 15.7 +3.1
GRNR pmax pmax
comp=Z,30nm,1.1s
GRNR smax smax
comp=N,5.0nm,0.9s
GRNR MLR MLR
comp=Z,630nm,16.0s
NGJI **Ngawi** 65.00 113 P **P** 03 24 37.7 +1.3
comp=Z,45nm,1.0s
JNU **Nakatsue** 65.04 64 P **P** 03 24 36.1 -0.5
comp=Z,16nm,0.8s,baz=53,slow=5.9,SNR=5.9
JNU LR LR 03 57 56.0
comp=Z,1µm,19.4s,baz=287,slow=41
JNU **Nakatsue** 65.04 64 IAmb IAmb 03 24 44.8
comp=Z,21nm,0.9s
SUMG **Summit** 65.18 341 *i* P **P** 03 24 37.6 +0.3
SUMG pmax pmax
comp=Z,110nm,0.9s
SUMG **Summit** 65.18 341 *i* P **P** 03 24 37.6 +0.3
comp=Z,113nm,0.9s
SUMG **Summit** 65.18 341 P **P** 03 24 36.1 -1.2
KBKI **Kotabaru** 66.74 107 P **P** 03 24 50.2 +2.5
comp=Z,2µmcomp=Z,15nm,0.8s
SUR **Sutherland** 67.31 210 P **P** 03 24 50.8 -0.4
SUR IAmb IAmb 03 24 57.1
comp=Z,34nm,1.1s
JAGI **Jajag, Banyuwa** 67.82 113 P **P** 03 24 54.8 +0.3
comp=Z,48nm,1.2s
MPSI **Mapaga** 68.15 101 P **P** 03 24 58.1 +1.5
comp=Z,528nmcomp=Z,26nm,1.7s
TYV **Tymovskoe** 68.36 43 *e*P **P** 03 24 57.3 -0.1
TYV *e*S **S** 03 33 59.6 +0.9
TYV pmax pmax
comp=Z,48nm,0.8s
TYV smax smax
comp=E,30nm,2.4s
YSS **Yuzh-Sakhalins** 69.60 47 *e*P **P** 03 25 04.0 -1.2
YSS *e* 03 25 25.2
YSS *e* 03 27 38.4
YSS *e*PPP PPP 03 29 22.5
YSS *e*S **S** 03 34 09.3 -4.2
YSS *e* 03 34 46.0
YSS pmax pmax
comp=Z,110nm,0.9s
YSS pmax pmax
comp=N,40nm,0.7s
YSS pmax pmax
comp=E,50nm,0.7s
YSS pmax pmax
comp=Z,1µm,4.4s
YSS MLR MLR
comp=Z,2µm,14.0s
YSS **Yuzh-Sakhalins** 69.60 47 P **P** 03 25 04.2 -1.0
SEY **Seymchan** 69.67 29 *i* P **P** 03 25 06.2 +0.9
SEY **Seymchan** 69.67 29 P **P** 03 25 05.3 0.0
comp=Z,51nm,0.7s,baz=274,slow=6.4,SNR=113
MAJO **Matsushiro** 69.71 59 P **P** 03 25 05.2 -0.9
MAJO pmax pmax
comp=Z,19nm,0.8s
MAJO **Matsushiro** 69.71 59 P **P** 03 25 05.2 -0.9
MAJO IAmb IAmb 03 25 07.1
comp=Z,19nm,0.8s
MAT **Matsushiro** 69.71 59 P **P** 03 25 05.8 -0.3
MJAR **Matsushiro Arr** 69.71 59 P **P** 03 25 05.0 -1.1
MJAR **Matsushiro Arr** 69.71 59 P **P** 03 25 05.0 -1.1
comp=Z,5.9nm,0.7s,baz=281,slow=5.2,SNR=15
MJAR LR LR 03 59 33.1
comp=Z,377nm,19.8s,baz=295,slow=39
MJAR **Matsushiro Arr** 69.71 59 P **P** 03 25 05.0 -1.1
TTSI **Tana Toraja** 69.75 105 P **P** 03 25 06.2 -0.4
comp=Z,50nm,0.9s
MRSI **Marisa** 69.87 100 P **P** 03 25 09.0 +1.7
comp=Z,42nm,1.3s
MA2 **Magadan** 70.07 33 *ce*P **P** 03 25 08.4 +0.5
MA2 pmax pmax
comp=Z,78nm,1.7s
MA2 **Magadan** 70.07 33 LR LR 03 59 45.3
comp=Z,104nm,18.3s,baz=284,slow=39
MA2 **Magadan** 70.07 33 P **P** 03 25 07.4 -0.5
SPSI **Sidrap Palu** 70.17 105 P **P** 03 25 11.7 +2.5
comp=Z,35nm,0.9s
ASAJ **Asahikawa** 70.40 50 P **P** 03 25 09.6 -0.6
comp=Z,22nm,0.7s,baz=222,slow=4.9,SNR=6.1
ASAJ LR LR 03 58 29.7
comp=Z,732nm,19.1s,baz=287,slow=38
BNSI **Bone** 70.68 106 P **P** 03 25 14.2 +1.9
comp=Z,826nmcomp=Z,24nm,0.8s
KAPI **Kappang** 70.68 106 P **P** 03 25 11.4 -0.9
KAPI pmax pmax
comp=Z,73nm,1.1s
KAPI **Kappang** 70.68 106 P **P** 03 25 11.4 -0.9
BKSI **Bulukumba** 71.16 106 P **P** 03 25 16.7 +1.5
comp=Z,29nm,1.1s
BILL **Bilibino** 72.77 21 *ce*P **P** 03 25 24.9 +0.9
BILL *e* 03 25 43.5
BILL *i* 03 28 08.7
BILL *e*SS SS 03 39 38.3 +10
BILL pmax pmax
comp=Z,57nm,1.3s
BILL MLR MLR
comp=Z,773nm,19.0s
BILL **Bilibino** 72.77 21 P **P** 03 25 23.9 -0.2
BILL IAmb IAmb 03 25 26.7
comp=Z,34nm,0.8s
TNTI **Ternate** 74.51 97 P **P** 03 25 37.1 +2.0
comp=Z,1µmcomp=Z,93nm,1.4s
SANI **Sanana** 74.62 100 P **P** 03 25 36.8 +1.0
comp=Z,93nm,1.1s
NLAI **Namlea** 76.17 101 P P 03 25 50.6 +5.9
PETK **Petropavlovsk-** 76.17 37 P **P** 03 25 43.5 -0.6
comp=Z,14nm,0.9s,baz=232,slow=1.7,SNR=10
PETK LR LR 04 01 02.3
comp=Z,777nm,20.8s,baz=265,slow=37
PETK **Petropavlovsk-** 76.17 37 P **P** 03 25 42.9 -1.2
PET **Petropavlovsk** 76.72 37 *e*P **P** 03 25 44.1 -3.1
PET *e*S **S** 03 35 25.2 -8.9
PET pmax pmax
comp=Z,100nm,12.4s
PET MLR MLR
comp=Z,700nm,17.0s
SOEI **Soe** 76.95 108 P P 03 25 55.6 +6.4
SWI **Sorong** 78.71 97 P **P** 03 25 59.7 +0.8
comp=Z,902nmcomp=Z,41nm,1.0s
SIJI **Sorong** 78.72 97 P **P** 03 25 58.9 -0.1
comp=Z,24nm,0.7s,baz=311,slow=6.2,SNR=15
PSA00 **Pilbara Seismi** 79.71 121 P **P** 03 26 03.3 -0.9
SAUI **Saumlaki** 82.10 103 P **P** 03 26 20.2 +3.1
comp=Z,5µmcomp=Z,83nm,1.1s
GAMB **Gambell** 82.38 19 IAmb IAmb 03 26 19.6
comp=Z,19nm,0.9s
FITZ **Fitzroy Crossi** 82.40 115 IAmb IAmb 03 26 21.0
comp=Z,14nm,0.7s
TOLK **Toolik Lake Re** 82.85 9 IAmb IAmb 03 26 22.9
comp=Z,24nm,0.9s
TOLK **Toolik Lake Re** 82.85 9 P **P** 03 26 21.2 +1.1
baz=339
C36M **Paulatuk** 83.75 359 IAmb IAmb 03 26 26.1
comp=Z,23nm,0.8s
C36M **Paulatuk** 83.75 359 P **P** 03 26 24.2 -0.5
baz=1.3
SCHQ **Schefferville** 84.07 330 P **P** 03 26 26.2 -0.5
comp=Z,24nm,0.8s,baz=42,slow=4.9,SNR=22
COLD **Coldfoot** 84.08 9 IAmb IAmb 03 26 29.1
comp=Z,16nm,1.1s
MTN **Manton Dam** 84.31 107 IAmb IAmb 03 26 31.2
comp=Z,14nm,1.0s
NWAO **Narrogin (SRO)** 84.47 131 P **P** 03 26 27.2 -1.7
NWAO pmax pmax
comp=Z,34nm,1.2s
NWAO **Narrogin (SRO)** 84.47 131 P **P** 03 26 28.7 -0.2
comp=Z,11nm,0.6s,baz=338,slow=5.7,SNR=9.5
NWAO **Narrogin (SRO)** 84.47 131 P **P** 03 26 27.2 -1.7
NWAO IAmb IAmb 03 26 32.5
comp=Z,34nm,1.1s
BMAR **Burnt Mountain** 84.61 7 P **P** 03 26 28.0 -1.3
IMAR **Indian Mountai** 84.66 11 P **P** 03 26 28.3 -1.2
FYU **Fort Yukon** 85.36 8 IAmb IAmb 03 26 50.0
comp=Z,32nm,1.1s
MLY **Manley** 86.04 10 IAmb IAmb 03 26 38.7
comp=Z,21nm,0.9s
PRP **Porcupine Dome** 86.33 8 IAmb IAmb 03 26 41.1
comp=Z,22nm,1.0s
EPYK **Eagle Plains** 86.36 4 IAmb IAmb 03 26 42.0
comp=Z,32nm,1.1s
EPYK **Eagle Plains** 86.36 4 P **P** 03 26 38.7 +0.7
baz=350
POKR **Poker Plat Res** 86.46 9 P **P** 03 26 39.7 +1.2
baz=341
MDM **Murphy Dome** 86.49 9 IAmb IAmb 03 26 43.9
comp=Z,29nm,1.0s
COLA **College** 86.63 9 P **P** 03 26 37.9 -1.3
COLA pmax pmax
comp=Z,16nm,1.0s
COLA **College** 86.63 9 P **P** 03 26 37.9 -1.3
COLA IAmb IAmb 03 26 41.0
comp=Z,16nm,1.0s
ILAR **Eielson Array** 86.86 9 P **P** 03 26 39.2 -1.2
comp=Z,6.3nm,0.7s,baz=324,slow=3.9,SNR=61
ILAR PP **PP** 03 30 02.9 +0.6
comp=Z,0.9nm,0.9s,baz=336,slow=8.0,SNR=4.3
ILAR PKKPbc **PKKPbc** 03 44 34.5 -0.6
comp=Z,1.0nm,0.7s,baz=182,slow=2.0,SNR=14
ILAR LR LR 04 10 50.3
comp=Z,273nm,20.0s,baz=343,slow=39
ILAR **Eielson Array** 86.86 9 P **P** 03 26 39.3 -1.1
HDA **Harding Lake** 87.20 9 IAmb IAmb 03 26 42.8
comp=Z,13nm,0.8s
HDA **Harding Lake** 87.20 9 P **P** 03 26 41.7 -0.4
baz=341
KTH **Kantishna Hill** 87.38 11 IAmb IAmb 03 26 49.2
comp=Z,18nm,1.1s
GENI **Genyem** 87.40 94 P **P** 03 26 47.1 +3.2
comp=Z,101nm,1.2s
MCK **McKinley** 87.54 10 IAmb IAmb 03 26 47.4
comp=Z,22nm,0.9s
EGAK **Eagle** 87.55 7 IAmb IAmb 03 26 48.7
comp=Z,26nm,0.9s
TRF **Thorofare Moun** 87.58 11 IAmb IAmb 03 26 59.1
comp=Z,17nm,1.0s
JAY **Jayapura** 87.84 94 P **P** 03 26 47.0 +0.9
comp=Z,26nm,0.7s,baz=333,slow=11,SNR=3.9
RND **Reindeer** 87.86 10 IAmb IAmb 03 26 48.6
comp=Z,14nm,1.1s
SCRK **Sand Creek** 88.00 8 IAmb IAmb 03 26 48.5
comp=Z,25nm,1.0s
DOT **Dot Lake** 88.31 8 IAmb IAmb 03 26 49.5
comp=Z,13nm,0.9s
DAWY **Dawson** 88.42 6 IAmb IAmb 03 26 50.0
comp=Z,14nm,1.0s
BCAR **Beaver Creek A** 89.15 7 P **P** 03 26 50.9 -0.6
SUA **Susitna One** 89.35 12 IAmb IAmb 03 26 54.2
comp=Z,25nm,0.8s
RC01 **Rabbit Creek A** 89.88 11 IAmb IAmb 03 26 56.6
comp=Z,17nm,0.9s
YKA **Yellowknife Ar** 90.21 355 P **P** 03 26 55.4 -0.9
YKA **Yellowknife Ar** 90.21 355 P **P** 03 26 55.9 -0.4
comp=Z,8.7nm,0.7s,baz=6.5,slow=5.2,SNR=122
YKA PP **PP** 03 30 28.6 -0.4
comp=Z,0.9nm,0.8s,baz=7.8,slow=8.3,SNR=4.1
YKA PKKPbc **PKKPbc** 03 44 25.9 -1.0
comp=Z,0.5nm,0.6s,baz=183,slow=2.3,SNR=12
YKA **Yellowknife Ar** 90.21 355 P **P** 03 26 55.4 -0.9
WRA **Warramunga Arr** 90.43 112 *ce*P **P** 03 26 58.5 +0.4
WRA pmax pmax
comp=Z,10.0nm,0.9s
WRA **Warramunga Arr** 90.43 112 P **P** 03 26 58.1 +0.1
comp=Z,9.8nm,0.9s,baz=310,slow=3.9,SNR=52
WRA PKKPbc **PKKPbc** 03 44 27.2 +1.3
comp=Z,2.0nm,0.7s,baz=120,slow=2.3,SNR=15
WRA **Warramunga Arr** 90.43 112 P **P** 03 26 56.5 -1.6
WRAB **Tennant Creek** 90.44 112 *ce*P **P** 03 26 58.7 +0.6
WRAB pmax pmax
comp=Z,14nm,0.9s
WRAB **Tennant Creek** 90.44 112 P **P** 03 26 56.6 -1.5
WRAB IAmb IAmb 03 26 59.4
comp=Z,14nm,0.9s
D61A **St Aubert, Com** 90.72 326 P **P** 03 26 59.5 +0.5
baz=47
CHGQ **Chibougamau** 90.81 330 P **P** 03 26 59.9 +0.5
baz=44
HYT **Haines Junctio** 91.78 6 IAmb IAmb 03 27 06.5
comp=Z,11nm,0.9s
ASAR **Alice Springs** 91.86 116 P **P** 03 27 04.1 -0.6
comp=Z,7.9nm,0.8s,baz=301,slow=4.3,SNR=50
ASAR PKKPbc **PKKPbc** 03 44 23.6 +1.1
comp=Z,1.1nm,0.7s,baz=120,slow=2.7,SNR=13
ASAR LR LR 04 07 50.6
comp=Z,125nm,21.6s,baz=284,slow=35
ASAR **Alice Springs** 91.86 116 P **P** 03 27 03.1 -1.6
LSQQ **Lebel-sur-Quev** 92.59 330 P **P** 03 27 08.3 +0.7
baz=42
NBPV **Pedro Velho** 92.62 264 *e*P **P** 03 27 09.9 +1.5
RCBR **Riachuelo** 92.90 265 *e*P **P** 03 27 11.1 +1.3
D55A **Sainte-Anne-du** 93.41 328 P **P** 03 27 12.2 +0.8
baz=43
NBRF **Rio Formoso -** 93.49 262 *e*P **P** 03 27 13.6 +1.3
E56A **St. Veronique** 93.55 328 P **P** 03 27 12.5 +0.4
baz=43
NBPA **Parau_RN** 93.94 266 *e*P **P** 03 27 16.1 +1.6
E54A **Lac Daplat, Po** 94.64 329 P **P** 03 27 17.4 +0.3
baz=42
MAW **Mawson** 94.70 177 P **P** 03 27 16.5 -0.1
MAW pmax pmax
comp=Z,1.0nm,1.0s
MAW **Mawson** 94.70 177 P **P** 03 27 18.5 +1.9
comp=Z,4.1nm,0.7s,baz=327,slow=8.7,SNR=2.3
MAW LR LR 04 01 47.2
comp=Z,243nm,21.8s,baz=42,slow=30
MAW **Mawson** 94.70 177 P **P** 03 27 16.5 -0.1
LONY **Lake Ozonia** 94.72 326 P **P** 03 27 16.2 -1.3
LONY IAmb IAmb 03 27 19.6
comp=Z,16nm,1.1s
LONY **Lake Ozonia** 94.72 326 P **P** 03 27 18.6 +1.0
baz=44
E53A **Dumoine, Ponti** 94.90 329 P **P** 03 27 18.8 +0.5
baz=41
NBAN **Anadia - AL** 94.95 262 *e*P **P** 03 27 19.9 +0.8
COEN **Coen** 95.18 103 IAmb IAmb 03 27 21.4
comp=Z,11nm,0.9s
G55A **Calabogie** 95.30 328 P **P** 03 27 20.9 +0.7
baz=42
ALGO **Algonquin Park** 95.40 329 P **P** 03 27 20.9 +0.3
baz=41
E51A **G1948 Merrick** 95.61 330 P **P** 03 27 21.5 0.0
baz=40
NBPB **Pedra_Branca-C** 96.05 267 *e*P **P** 03 27 25.3 +1.2
F52A **Sundridge** 96.10 329 P **P** 03 27 23.4 -0.4
baz=40
SYO **Syowa Base** 96.52 185 *e*P **P** 03 27 25.4 +0.6
SYO **Syowa Base** 96.52 185 *i*pP pP 03 27 28.0 0.0
PMG **Port Moresby** 96.66 97 P **P** 03 27 24.9 -1.9
PMG pmax pmax
comp=Z,10.0nm,1.0s
PMG **Port Moresby** 96.66 97 P **P** 03 27 27.0 +0.1
comp=Z,7.7nm,0.7s,baz=218,slow=9.2,SNR=4.1
PMG **Port Moresby** 96.66 97 P **P** 03 27 24.9 -1.9
PMG IAmb IAmb 03 27 28.1
comp=Z,9.6nm,0.9s
L55A **Hinsdale** 98.41 327 P Pdif 03 27 34.4 0.0
baz=41
ULM **Lac du Bonnet** 98.53 341 P Pdif 03 27 35.2 +0.6
comp=Z,1.6nm,0.9s,baz=6.5,slow=6.5,SNR=3.0
ULM LR LR 04 13 39.3
comp=Z,343nm,20.3s,baz=28,slow=36
CTA **Charters Tower** 100.49 107 P **Pdif** 03 27 44.2 +0.3
comp=Z,3.2nm,0.7s,baz=285,slow=7.4,SNR=5.8
NVL **N'lazarevskaya** 102.19 193 *e*P **Pdif** 03 27 49.2 -1.0
NVL pmax pmax
comp=Z,3.0nm,0.6s

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
NVL				MLR	MLR		
	comp=Z,791nm,21.0s						
SNAA	Sanae	106.17	196	PKiKP	PKiKP	03 32 23.5	+3.9
PDAR	Pinedale Array	108.85	348	PKiKP	PKiKP	03 32 26.3	+0.4
	comp=Z,0.7nm,0.7s,baz=70,slow=2.1,SNR=6.7						
PDAR				PKKPbc	PKKPbc	03 43 33.7	-0.8
	comp=Z,0.4nm,0.6s,baz=188,slow=6.0,SNR=4.5						
PDAR				PKKP	PKKPdf	03 43 47.1	-1.0
	comp=Z,0.4nm,0.9s,baz=193,slow=4.0,SNR=4.2						
NVAR	Mina Array Bea	114.38	354	PKP	PKPdf	03 32 36.6	+0.1
	comp=Z,3.0nm,0.7s,baz=14,slow=0.5,SNR=28						
NVAR				PKKPbc	PKKPbc	03 43 16.0	-0.2
	comp=Z,0.5nm,0.7s,baz=188,slow=5.5,SNR=4.4						
NVAR	Mina Array Bea	114.38	354		PKiKP	03 32 34.9	-1.6
QSPA	South Pole Qui	117.02	180	PKP	PKPdf	03 32 40.1	-0.2
	comp=Z,6.1nm,0.8s,baz=288,slow=1.8,SNR=20						
QSPA	South Pole Qui	117.02	180		PKPdf	03 32 39.8	-0.5
CODC	Agustn Codazz	117.43	299	eP	PKPdf	03 32 41.8	-0.9
MNTX	Cornudas Mount	118.36	340		PKPdf	03 32 42.0	-2.1
MNTX	Cornudas Mount	118.36	340	P	PKiKP	03 32 44.4	+0.3
	baz=20						
Y12C	Blythe	118.50	350	P	PKiKP	03 32 45.4	+1.1
	baz=11						
SMLC	San Martn de	118.61	298	eP	PKiKP	03 32 45.0	+0.1
DZM	Mont Dzumac	118.67	101	eLR	LR	04 09 03.7	
	comp=Z,420nm,24.4s						
TUC	Tucson	119.19	346	PKIKP	PKPdf	03 32 43.3	-2.4
TUC	Tucson	119.19	346		PKPdf	03 32 43.3	-2.4
TUC	Tucson	119.19	346	P	PKiKP	03 32 46.2	+0.4
	baz=15						
BRRC	Barranca, Sant	119.33	296	eP	PKiKP	03 32 47.0	+0.6
CPUP	Villa Florida	119.77	254	PKIKP	PKPdf	03 32 45.0	-1.7
CPUP	Villa Florida	119.77	254	PKP	PKPdf	03 32 46.5	-0.2
	comp=Z,3.5nm,0.8s,baz=79,slow=3.3,SNR=11						
CPUP				PP	PP	03 34 10.0	-0.3
	comp=Z,1.4nm,0.8s,baz=65,slow=4.2,SNR=3.1						
CPUP	Villa Florida	119.77	254		PKPdf	03 32 45.0	-1.7
TXAR	Lajitas Array	120.01	338	PKIKP	PKPdf	03 32 45.7	-1.7
TXAR						03 34 08.7	
TXAR	Lajitas Array	120.01	338	PKP	PKPdf	03 32 46.9	-0.5
	comp=Z,1.2nm,0.7s,baz=119,slow=1.1,SNR=18						
TXAR				PP	PP	03 34 08.8	-1.5
	comp=Z,0.5nm,0.9s,baz=44,slow=8.2,SNR=2.0						
TXAR	Lajitas Array	120.01	338		PKPdf	03 32 45.7	-1.7
TXAR					PP	03 34 08.7	-1.7
VNDA	Vanda	120.10	166	PKP	PKiKP	03 32 46.4	+0.4
	comp=Z,1.0nm,0.8s,baz=338,slow=5.4,SNR=2.9						
PTBC	PUERTO BERRIO,	120.26	296	eP	PKPdf	03 32 47.2	-0.9
UREC	San Jos de Ur	120.39	298	eP	PKPdf	03 32 48.0	-0.3
SPBC	San Pablo de B	120.48	295	eP	PKPdf	03 32 48.0	-0.6
CHIC	Chingaza	120.80	294	eP	PKPdf	03 32 49.1	-0.6
ROSC	El Rosal	121.15	295	PKP	PKiKP	03 32 50.9	+0.5
	comp=Z,9.9nm,0.7s,baz=11,slow=23,SNR=11						
ROSC	El Rosal	121.15	295	eP	PKiKP	03 32 52.0	+1.6
NORC	Norcasia	121.17	296	eP	PKPdf	03 32 49.8	-0.1
DBBC	Dabeiba	121.37	298	eP	PKiKP	03 32 50.7	+0.3
GUY2C	Guyana, Caldas	121.77	296	eP	PKPdf	03 32 49.8	-1.8
CBOC	Ciudad Bolivar	121.91	297	eP	PKiKP	03 32 51.6	0.0
ORTC	Ortega, Tolima	122.44	294	eP	PKPdf	03 32 50.7	-1.6
YOTC	Yotoco, Valle	123.28	295	eP	PKPdf	03 32 52.5	-1.6
FLOC	Florencia	124.10	292	eP	PKiKP	03 32 56.2	+0.4
PCON	Cinco Dias	124.29	294	eP	PKiKP	03 32 57.3	+0.5
SOTA	Rioblanco	124.57	294	eP	PKiKP	03 32 58.4	+1.1
TGUH	Tegucigalpa,Un	124.65	313		PKPdf	03 32 54.2	-2.5
BBAC	Balboa, Cauca	125.16	294	eP	PKPdf	03 32 56.4	-1.4
GCUF	Volcan Galeras	125.69	293	eP	PKPdf	03 32 58.8	-0.4
LPAZ	La Paz	125.93	269	PKP	PKPdf	03 32 59.6	+0.1
	comp=Z,3.8nm,0.8s,baz=26,slow=3.5,SNR=16						
LPAZ	La Paz	125.93	269	eP	PKiKP	03 33 00.2	+0.3
PMSA	Palmer Station	126.33	208	eP	PKiKP	03 32 59.1	+0.6
OTAV	Otavalo	127.16	293	eP	PKiKP	03 33 03.2	+0.8
OTAV	Otavalo	127.16	293	eP	PKiKP	03 33 02.3	-0.1
PB11	IPOC Station P	128.51	266		PKPdf	03 33 01.4	-2.5
LVC	Limon Verde	128.74	262	eP	PKPdf	03 33 04.7	+0.2
PLCA	Paso Flores	133.09	239	PKIKP	PKPdf	03 33 09.8	-2.1
PLCA	Paso Flores	133.09	239	PKP	PKPdf	03 33 12.4	+0.5
	comp=Z,3.6nm,1.0s,baz=16,slow=1.5,SNR=3.7						
PLCA	Paso Flores	133.09	239	eP	PKPdf	03 33 12.3	+0.5
PLCA	Paso Flores	133.09	239		PKPdf	03 33 09.8	-2.1
PPT2	Papeete2	155.90	72	eLR	LR	04 26 11.8	
	comp=Z,419nm,23.8s						
TAOE	Nuku Hiva Isla	157.16	40	eLR	LR	04 26 48.2	
	comp=Z,396nm,28.6s						
TBI	Tubuai	158.09	85	eLR	LR	04 27 15.2	
	comp=Z,390nm,27.5s						

*MEX **02** 03:21:10.8±0.7, 18°51N×101°67W, h51km±13km, MD4.0*
ISC 02 03:21:09.3±1.1**, 18°50N**±0°04×**101°66W**±0°03**, h41**km±59km**, n19,** σ**0s.44**/36**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.91	168	eP	Pn	03 21 25.6	0.0
ZIIG				eS	Sn	03 21 38.0	+0.4
ZIIG	Zihuatanejo	0.91	168		Pn	03 21 25.6	0.0
ZIIG					Sn	03 21 38.0	+0.4
MOIG	Morelia	1.25	21	eP	Pn	03 21 29.9	-0.7
MOIG				i S	Sn	03 21 46.1	-0.2
MOIG	Morelia	1.25	21		Pn	03 21 31.1	+0.6
MOIG				Sn	Sn	03 21 47.7	+1.3
ARIG	Puente Sto Nin	1.27	100	eP	Pn	03 21 30.6	0.0
ARIG				eS	Sn	03 21 45.8	-0.6
ARIG	Puente Sto Nin	1.27	100		Pn	03 21 30.6	0.0
ARIG					Sn	03 21 45.8	-0.6
MMIG	Aquila	1.61	263	eP	Pn	03 21 35.4	+0.1
MMIG				i S	Sn	03 21 55.1	+0.2
MMIG	Aquila	1.61	263		Pn	03 21 35.4	+0.1
MMIG					Sn	03 21 55.1	+0.2
CAIG	El Cayaco	1.96	137	eP	Pn	03 21 39.9	-0.3
CAIG				i S	Sn	03 22 03.5	-0.1
CAIG	El Cayaco	1.96	137		Pn	03 21 39.9	-0.3
CAIG					Sn	03 22 03.5	-0.1
MEIG	Mezcala	2.02	106	eP	Pn	03 21 41.2	+0.2
MEIG				i S	Sn	03 22 04.7	-0.4
MEIG	Mezcala	2.02	106		Pn	03 21 41.2	+0.2
MEIG					Sn	03 22 04.7	-0.4
PLIG	Platanillo	2.05	93	eP	Pn	03 21 41.3	-0.1
PLIG				i S	Sn	03 22 06.4	+0.5
PLIG	Platanillo	2.05	93		Pn	03 21 41.3	-0.1
PLIG					Sn	03 22 06.4	+0.5
R15V		2.30	287	i P	Pn	03 21 44.7	-0.1
R15V				i S	Sn	03 22 11.5	-0.4
R15V		2.30	287		Pn	03 21 44.7	-0.1
PNIG	Pinotepa	3.97	121	i P	Pn	03 22 08.3	+0.5
PNIG				i S	Sn	03 22 53.4	+0.3
PNIG	Pinotepa	3.97	121		Pn	03 22 08.3	+0.5
PNIG					Sn	03 22 53.4	+0.3
MNTX	Cornudas Mount	13.56	346	Pn	Pn	03 24 19.0	-0.2

*IDC **02** 03:23:15.3±1.5, 27°17N×54°36E, h0km, mb3.8/7, mb1 3.9/8, mb1mx3.5/56, mbtmp3.8/8, ML3.2/1, Error ellipse: s-maj=30.6km s-min=27.8km az=172.0*
ISC 02 03:23:18.1±1.0**, 27°2N**±0°2×**54°4E**±0°2**, h18**km**, n8,** σ**1s.20**/8**, mb3.7**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	5.52	134	Pn	Pn	03 24 39.8	+0.4
	0.8nm,0.3s,baz=333,slow=11,SNR=5.3						
BRTR	Keskin Array B	21.27	311	P	P	03 28 04.0	+0.3
	1.1nm,0.6s,baz=151,slow=16,SNR=4.4						
AKTO	Aktyubinsk	23.39	6	P	P	03 28 27.2	+1.5
	0.9nm,0.4s,baz=189,slow=14,SNR=4.3						
ZALV	Zalesovo Beam	34.88	32	P	P	03 30 06.7	-1.5
	0.9nm,0.5s,baz=241,slow=11,SNR=3.2						
FINES	FINESS Array B	39.15	339	P	P	03 30 43.6	-0.8
	1.6nm,0.8s,baz=119,slow=14,SNR=3.2						
ARCES	ARCESS Array B	45.59	346	P	P	03 31 37.9	+1.2
	4.5nm,1.0s,baz=144,slow=11,SNR=3.7						
ESDC	Sonseca Array	49.45	300	P	P	03 32 07.5	+0.2
	0.4nm,0.6s,baz=64,slow=7.5,SNR=4.1						
TORD	Torodi Ar. Bea	51.02	265	P	P	03 32 18.9	-0.5
	0.6nm,0.6s,baz=72,slow=6.5,SNR=6.1						

*IDC **02** 03:24:18.1±0.4, 27°18N×54°49E, h0km, mb4.3/37, mb1 4.4/41, mb1mx4.3/59, mbtmp4.3/41, ML3.5/4, Error ellipse: s-maj=11.8km s-min=10.0km az=158.0*
*THR **02** 03:24:18.6±0.3, 27°14N×54°43E, h18km±6km, ML4.5*
*NEIC **02** 03:24:18.4±1.4, 27°02N±0°04×54°49E±0°05, h10km±1km, Error ellipse: s-maj=8.2km s-min=4.8km az=46.0*
*MOS **02** 03:24:19.3±1.1, 27°17N×54°46E, h23km, mb4.5/20, MS4.3/6, Error ellipse: s-maj=7.5km s-min=5.4km az=86.3*
*TEH **02** 03:24:21.5, 27°18N×54°43E, h20km, ML4.4*
ISC 02 03:24:21.6±1.2**, 27°10N**±0°04×**54°49E**±0°03**, h28**km±9km**, n233,** σ**1s.18**/242**, mb4.3**/77**, 7C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	1.20	282	ePg	Pb	03 24 43.7	-0.1
LMD1				e		03 25 13.8	
LMD1	Lamerd	1.20	282		Pb	03 24 43.7	-0.1
BNDS	Bandar-Abbas	1.53	78	ePn	Pn	03 24 47.8	+0.6
BNDS	Bandar-Abbas	1.53	78	ePn	Pn	03 24 47.8	+0.6
BNDS				IAML		03 25 18.3	
	comp=N,6μm,0.5s						
BNDS	Bandar-Abbas	1.53	78	Pn	Pn	03 24 47.0	-0.2
GENO	Geno	1.53	78	ePg	Pb	03 24 50.3	+0.9
GENO				e		03 25 16.7	
GENO	Geno	1.53	78	Pn	Pb	03 24 49.5	+0.1
JHRM	Jahrom	1.61	330	ePn	Pn	03 24 48.6	+0.2
JHRM				e		03 25 15.3	
JHRM	Jahrom	1.61	330	Pn	Pb	03 24 50.1	-0.7
JHRM				Sg	Sb	03 25 12.9	+2.1
SHME	Shamm	1.81	125	ePn	Pb	03 24 53.9	-0.3
UMQ	Umm Al-Quwin	1.89	146	ePn	Pb	03 24 56.5	+1.0
NIAN	Nian	2.14	77	ePn	Pn	03 24 57.5	+2.0
NIAN				e		03 25 36.8	
NIAN	Nian	2.14	77	Pn	Pb	03 24 57.8	-1.8
MSFE	Esma-Masafi	2.29	139	ePn	Pb	03 25 01.7	-0.7
NAZ	Nazwa, Dubai	2.35	153	ePn	Pb	03 25 01.7	-1.7
MDH	Madha	2.42	137	ePn	Pb	03 25 03.0	-1.5
FAQ	Al Faqa, Dubai	2.55	157	ePn	Pn	03 25 04.0	+2.9
ASUD	Al Ashush, Dub	2.58	163	ePn	Pb	03 25 05.8	-1.4
UOSS	Minazif	2.65	144	ePn	Pb	03 25 06.2	-2.1
UOSS	Minazif	2.65	144		Pn	03 25 01.5	-1.0
UOSS				Sn	Sn	03 25 36.9	+3.3
KHNJ	Kahnooj	2.98	73	ePn	Pn	03 25 08.4	+1.3
NGRK	Negar Kerman	3.21	37	ePn	Pn	03 25 11.7	+1.1
NGRK				e		03 25 56.5	
ALNE	Al Ain	3.24	159	ePn	Pn	03 25 14.3	+3.6
KRBR	Kerman	3.50	34	ePn	Pn	03 25 14.5	0.0
KRBR	Kerman	3.50	34	ePn	Pn	03 25 14.5	0.0
KRBR	Kerman	3.50	34	Pn	Pn	03 25 14.0	-0.5
TVBK	TV Kerman	3.50	34	ePn	Pn	03 25 16.7	+2.1
TVBK				e		03 26 04.1	
KHGB	Koh Gabri	3.70	28	ePn	Pn	03 25 19.2	+2.0
KHGB				e		03 26 06.6	
CHMN	Cheshme madani	3.84	44	ePn	Pn	03 25 21.7	+2.4
CHMN	Cheshme madani	3.84	44	Pn	Pn	03 25 22.4	+3.1
IMEH	Mehriz	4.27	1	ePn	Pn	03 25 26.0	+0.9
ISAD	Sadrabad	4.85	352	Pn	Pn	03 25 35.6	+2.6
WSAR	Wadi Sarin	5.37	135	Pn	Pn	03 25 42.4	+2.4
	comp=N,5.1nm,0.3s,baz=315,slow=4.8,SNR=22						
WSAR				Sn	Sn	03 26 42.2	+1.2
	comp=N,7.7nm,0.3s,baz=134,slow=21,SNR=5.9						
IBRJ	Brojen	5.55	330	ePn	Pn	03 25 43.4	+0.7
ANAR	Anarak	6.10	354	ePn	Pn	03 25 50.3	+0.2
TPRV	Parvadeh(Tabas	6.21	17	ePn	Pn	03 25 51.8	+0.3
NHDN	Nehbandan	6.47	47	ePn	Pn	03 25 57.2	+2.0
IKOO	Kooshah	6.60	35	ePn	Pn	03 25 58.5	+1.5
ITEG	Tejag	6.86	32	ePn	Pn	03 26 03.6	+3.1
TKDS	Koohdasht(Taba	6.88	19	ePn	Pn	03 26 01.6	+0.9
TABS	Tabas	6.91	19	ePn	Pn	03 26 01.1	-0.1
TABS	Tabas	6.91	19	ePn	Pn	03 26 01.1	-0.1
TABS	Tabas	6.91	19	Pn	Pn	03 26 01.0	-0.1
TNSJ	Nastanj	7.08	14	ePn	Pn	03 26 04.0	+0.5
AFRZ	Afriz	7.42	31	ePn	Pn	03 26 10.0	+1.8
IMON	Monand	7.54	35	ePn	Pn	03 26 11.4	+1.4
SHRT	Shahrakht	8.22	36	ePn	Pn	03 26 19.7	+0.5
SHRT	Shahrakht	8.22	36	ePn	Pn	03 26 19.7	+0.5
SHRT	Shahrakht	8.22	36	Pn	Pn	03 26 19.0	-0.2
RAYN	Ar Rayn	8.88	248	P	Pn	03 26 27.5	-0.7
RAYN	Ar Rayn	8.88	248	Pn	Pn	03 26 27.4	-0.7
IKOM	Komasi	9.26	321	ePn	Pn	03 26 34.2	+0.7
HRA	Herat	9.86	41		Pn	03 26 40.7	-1.0
GEYT	Alibeck	11.22	15	Pn	Pn	03 27 03.0	+2.8
	comp=N,0.2nm,0.3s,baz=201,slow=6.8,SNR=4.2						
GEYT	Alibeck	11.22	15	Pn	Pn	03 27 00.0	-0.2
KBL	Kabul	14.53	56	P	Pn	03 27 46.0	+0.4
KBL	Kabul	14.53	56		Pn	03 27 46.0	+0.4
SOCY	Socotra	14.85	182	Pn	Pn	03 27 44.3	-5.5
GNI	Garni	15.32	331	P	Pn	03 27 54.6	-1.5
GNI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GNI	Garni	15.32	331	Pn	P	03 27 58.7	-2.0
	comp=Z,1.1nm,0.3s,baz=236,slow=3.1,SNR=8.9						
GNI	Garni	15.32	331		Pn	03 27 54.6	-1.5
ASF	Jabal al Asfar	16.10	292	Pn	P	03 28 11.2	+1.9
	comp=Z,0.4nm,0.3s,baz=37,slow=10,SNR=5.0						
NIL	Nilore	17.45	64	P	Pn	03 28 21.6	-1.4
NIL				pmax	pmax		
	comp=Z,12nm,0.9s						
NIL	Nilore	17.45	64	P	Pn	03 28 21.6	-1.4
NIL				IAmb	IAmb	03 28 25.9	
	comp=Z,12nm,0.8s						
MMAI	Mount Meron Ar	17.53	294	P	P	03 28 24.8	-0.3
	comp=Z,0.7nm,0.3s,baz=96,slow=15,SNR=4.3						
GAR	Garm	17.77	44	Pn	Pn	03 28 25.8	-1.3
ZEI	Tsey	17.87	334	eP	P	03 28 29.7	+0.8
ZEI				pmax	pmax		
	comp=Z,25nm,0.9s						
BTK	Batken	18.72	42	P	P	03 28 36.9	-1.3
BTK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BTK	Batken	18.72	42	P	P	03 28 36.9	-1.3
NEY	Neytrino	18.73	332	i P	Pn	03 28 38.5	-0.3
KBZ	Khabaz	19.06	334	i P	P	03 28 41.8	+0.1
KBZ	Khabaz	19.06	334	P	Pn	03 28 43.0	+0.4
	comp=Z,0.1nm,0.3s,baz=132,slow=7.4,SNR=4.4						
SHA1	Shidzhatmaz	19.16	333	i P	P	03 28 41.8	-1.3
PYA1	Pyatigorsk	19.26	334	i P	P	03 28 44.3	+0.3
KVAR	Kislovodsk Arr	19.33	334	P	Pn	03 28 46.8	+0.8
	baz=270,slow=20,SNR=5.1						
KIV	Kislovodsk	19.33	333	i P	P	03 28 42.6	-2.2
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				MLR	MLR		
	comp=Z,213nm,15.0s						
KIV	Kislovodsk	19.33	333	P	Pn	03 28 45.4	-0.6
CSS	Mathiatis	19.73	299	P	P	03 28 47.8	-1.3
CSS				IAmb	IAmb	03 28 51.6	
	comp=Z,10.0nm,0.9s						
SOC	Sochi	20.33	328	eP	P	03 28 55.3	-0.3
SOC				ePPP	PPP	03 29 22.1	
SOC				eS	Sn	03 32 44.2	-1.8
SOC				pmax	pmax		
	comp=Z,26nm,1.0s						
KK31	Karatay Array	20.60	35	P	P	03 28 58.1	-0.4
KK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	Karatay Array	20.60	35	P	P	03 28 58.1	-0.4
KKAR	Karatay Array	20.60	35	P	P	03 28 57.2	-1.3
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KKAR	Karatay Array	20.60	35	P	P	03 28 57.2	-1.3
KKAR	Karatay Array	20.60	35	P	P	03 28 58.4	-0.2
KKAR				IAmb	IAmb	03 29 00.1	
	comp=Z,2.5nm,0.8s						
ARSB	Arslanbob	20.80	42	IAmb	IAmb	03 29 02.6	
	comp=Z,20nm,0.8s						
BR131	Keskin Array S	21.42	311	i P	P	03 29 07.7	+0.2
BR131	Keskin Array S	21.42	311	IAmb	IAmb	03 29 08.9	
	comp=Z,9.8nm,0.8s						
BRTR	Keskin Array B	21.42	311	P	P	03 29 08.0	+0.5
	comp=Z,8.6nm,0.7s,baz=131,slow=13,SNR=24						
BRTR				PcP	PcP	03 33 10.2	-0.2
	comp=Z,0.8nm,0.8s,baz=134,slow=3.5,SNR=3.4						
BRTR	Keskin Array B	21.42	311	P	P	03 29 07.0	-0.5
BRTR					PcP	03 33 09.7	-0.8
KSH	Kashi	21.75	50	P	P	03 29 04.8	-6.2
KSH				pP	pP	03 29 14.3	-4.5
KSH				pmax	pmax		
	comp=Z,28nm,0.7s						
KSH				pmax	pmax		
	comp=Z,3μm,8.5s						
BR231	Keskin MP Arra	22.06	311	P	P	03 29 13.3	-1.1
BR231				IAmb	IAmb	03 29 16.0	
	comp=Z,17nm,1.1s						
AAK	Ala-Archa	22.49	41	ceP	P	03 29 20.4	+1.3
AAK				pmax	pmax		
	comp=Z,26nm,1.7s						
AAK	Ala-Archa	22.49	41	P	P	03 29 20.3	+1.2
	comp=Z,8.8nm,0.9s,baz=188,slow=13,SNR=8.8						
AAK	Ala-Archa	22.49	41	P	P	03 29 18.5	-0.6
AAK				IAmb	IAmb	03 29 21.2	
	comp=Z,7.1nm,0.9s						
ABKAR	Akbulak array	22.52	9	P	P	03 29 18.4	-0.7
ABKAR	Akbulak array	22.52	9	IAmb	IAmb	03 29 21.6	
	comp=Z,10nm,0.8s						
NRN	Naryn	22.73	46	IAmb	IAmb	03 29 24.8	
	comp=Z,5.0nm,0.6s						
AKTO	Aktyubinsk	23.45	6	P	P	03 29 29.4	+0.7
	comp=Z,12nm,0.8s,baz=184,slow=10.0,SNR=19						
KARP	Karpathos	24.76	297	P	P	03 29 42.2	+1.2
SANT	Santorini	26.28	298	P	P	03 29 54.2	-0.6
IDI	Anoyia	26.53	295	P	P	03 29 58.2	+1.2
	comp=Z,12nm,0.7s,baz=93,slow=9.8,SNR=8.8						
VSR	Storozhevoye	26.74	338	i P	P	03 29 58.6	-0.1
VSR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	Borovoye	28.47	20	ceP	P	03 30 14.4	+0.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	Borovoye	28.47	20	P	P	03 30 14.2	0.0
BRVK				IAmb	IAmb	03 30 17.4	
	comp=Z,3.1nm,1.1s						
BVAR	Borovoye Array	28.48	20	P	P	03 30 14.7	+0.4
	comp=Z,7.6nm,0.7s,baz=211,slow=7.6,SNR=24						
BVAR				PcP	PcP	03 33 26.6	+1.0
	comp=Z,1.5nm,0.5s,baz=218,slow=2.9,SNR=7.1						
MLR	Muntele Rosu	29.20	316	P	P	03 30 20.6	-0.3
MLR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MLR	Muntele Rosu	29.20	316	P	P	03 30 22.3	+1.3
	comp=Z,0.8nm,0.5s,baz=341,slow=18,SNR=3.2						
MLR	Muntele Rosu	29.20	316	P	P	03 30 20.6	-0.3
MAKZ	Makanchi	29.25	40	P	P	03 30 20.9	-0.3
MAKZ				IAmb	IAmb	03 30 23.0	
	comp=Z,6.8nm,1.1s						
MK31	Makanchi Array	29.42	41	i P	P	03 30 23.5	+0.7
MKAR	Makanchi Array	29.42	41	ceP	P	03 30 23.3	+0.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	29.42	41	P	P	03 30 23.4	+0.7
	comp=Z,1.3nm,0.6s,baz=228,slow=11,SNR=12						
MKAR				PcP	PcP	03 33 27.8	-0.4
	comp=Z,0.5nm,0.9s,baz=237,slow=4.9,SNR=3.6						
MKAR	Makanchi Array	29.42	41	P	P	03 30 22.7	-0.1
MKAR					PcP	03 33 27.6	-0.6
ARU	Arti	29.45	5	i P	P	03 30 23.1	+0.3
ARU				pmax	pmax		
	comp=Z,11nm,2.0s						
ARU				MLR	MLR		
	comp=Z,374nm,16.0s						
KURBB	Kurchatov Arra	29.79	31	P	P	03 30 26.9	+1.1
	comp=Z,2.8nm,0.7s,baz=233,slow=8.5,SNR=13						
KURBB				PcP	PcP	03 33 27.8	-1.2
	comp=Z,0.8nm,0.7s,baz=233,slow=3.4,SNR=3.7						
KURK	Kurchatov	29.89	31	P	P	03 30 26.9	+0.1
KURK						03 33 27.9	
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	29.89	31	P	P	03 30 26.9	+0.1
KURK				IAmb	IAmb	03 30 28.5	
	comp=Z,3.1nm,0.8s						
KURK					PcP	03 33 27.9	-1.3
AKASG	Malin Array Be	30.41	328	P	P	03 30 31.0	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKASG	Malin Array Be	30.41	328	P	P	03 30 30.8	-0.6
	comp=Z,0.8nm,0.5s,baz=135,slow=7.4,SNR=3.4						
AKASG	Malin Array Be	30.41	328	P	P	03 30 31.0	-0.4
AKBB	Malin Array Si	30.41	328	i P	P	03 30 30.4	-1.0
BURAR	Bucovina Array	30.71	320	P	P	03 30 33.5	-0.7
OBN	Obninsk	30.88	340	eP	P	03 30 33.4	-2.1
OBN				e		03 31 35.8	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,352nm,16.0s						
WMQ	Urumqi	31.51	49	eP	P	03 30 43.3	+2.0
WMQ				pP	pP	03 30 47.8	-1.8
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,280nm,6.1s						
WMQ				LR	LR		
	comp=N,250nm,12.1s						
WMQ				LR	LR		
	comp=E,180nm,9.1s						
WMQ				LR	LR		
	comp=Z,220nm,16.3s						
PDG	Podgorica	32.47	307	P	P	03 30 48.1	-1.5
PDG				IAmb	IAmb	03 30 49.1	
	comp=Z,4.2nm,1.0s						
KOLS	Kolonicke sedl	33.07	320	eP	P	03 30 56.2	+1.4
KOLS	Kolonicke sedl	33.07	320	eP	Pb	03 30 56.2	+2.2
SHL	Shillong	33.47	84	P	P	03 30 59.2	+0.4
SHL				pmax	pmax		
	comp=Z,5.0nm,0.3s						
SHL	Shillong	33.47	84	P	P	03 30 59.2	+0.4
TIP	Timpagrande	33.58	301	P	P	03 31 00.3	+0.8
TIP				IAmb	IAmb	03 31 01.5	
	comp=Z,3.4nm,1.0s						
ZALV	Zalesovo Beam	34.88	31	P	P	03 31 10.7	+0.2
	comp=Z,12nm,0.5s,baz=240,slow=9.6,SNR=30						
ZALV				PcP	PcP	03 33 42.8	0.0
	comp=Z,1.1nm,0.7s,baz=204,slow=3.2,SNR=2.7						
ZALV	Zalesovo Beam	34.88	31	P	P	03 31 10.4	-0.1
MBAR	Mbarara	35.79	224	P	P	03 31 20.8	+1.9
	comp=Z,1.9nm,0.2s,baz=54,slow=19,SNR=2.8						
NRCA	Norcia	36.96	306	IAmb	IAmb	03 31 32.0	
	comp=Z,8.1nm,0.8s						
KBA	Koelnbreinsper	37.85	313	i P	P	03 31 36.0	-0.2
	comp=Z,6.7nm,1.0s						
GERES	GERESS Array B	38.18	316	P	P	03 31 38.1	-0.7
	comp=Z,0.2nm,0.5s,baz=106,slow=8.4,SNR=5.7						
GERES				PcP	PcP	03 33 53.5	+0.4
	comp=Z,0.5nm,0.9s,baz=338,slow=0.7,SNR=5.5						
GERES	GERESS Array B	38.18	316	P	P	03 31 38.3	-0.5
GERES					PcP	03 33 52.4	-0.6
ABTA	Abfaltersbach	38.30	312	i P	P	03 31 39.6	-0.2
	comp=Z,8.6nm,2.0s						
KHC	Kasperske Hory	38.35	316	i P	P	03 31 38.9	-1.3
KHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KHC	Kasperske Hory	38.35	316	eP	P	03 31 39.5	-0.7
WTTA	Wattenberg	39.02	313	i P	P	03 31 44.7	-1.3
	comp=Z,21nm,1.3s,SNR=4.3						
WATA	Walderalm	39.08	313	i P	P	03 31 45.3	-1.1
	comp=Z,9.5nm,1.3s						
KEST	Kesra	39.19	294	P	P	03 31 49.1	+1.7
	comp=Z,3.3nm,0.9s,baz=0.0,slow=5.1,SNR=3.7						
KEST	Kesra	39.19	294	P	P	03 31 47.1	-0.4
FINES	FINESS Array B	39.27	339	P	P	03 31 47.4	-0.2
	comp=Z,3.3nm,0.6s,baz=142,slow=9.3,SNR=21						
SQTA	Sankt Quirin	39.29	312	i P	P	03 31 47.4	-0.8
	comp=Z,4.6nm,0.8s,SNR=4.9						
MOTA	Moosalm	39.39	313	i P	P	03 31 47.9	-1.2
	comp=Z,11nm,1.4s						
GTA	Gaotai	39.46	60	P	P	03 31 51.2	+1.5
GTA				pP	pP	03 31 56.0	-2.1
GTA				sP	sP	03 31 58.8	-2.7
GTA				pmax	pmax		
	comp=Z,15nm,1.1s						
GTA				pmax	pmax		
	comp=Z,210nm,5.1s						
GTA				LR	LR		
	comp=N,2μm,16.5s						
GTA				LR	LR		
	comp=E,1μm,15.2s						
GTA				LR	LR		
	comp=Z,1μm,15.2s						
FETA	Feichten	39.56	312	i P	P	03 31 49.9	-0.5
	comp=Z,13nm,1.6s,SNR=4.5						
RETA	Reutte	39.65	313	i P	P	03 31 50.0	-1.1
	comp=Z,11nm,1.3s						
DAVOX	Davos/Dischmat	40.06	311	P	P	03 31 54.4	-0.3
	comp=Z,2.2nm,0.4s,baz=124,slow=6.0,SNR=12						
DAVA	Damuels	40.18	312	i P	P	03 31 54.9	-0.8
	comp=Z,9.8nm,0.5s						
CMAR	Chiang Mai Arr	41.70	92	P	P	03 32 08.5	+0.2
CMAR						03 34 03.3	
CMAR	Chiang Mai Arr	41.70	92	P	P	03 32 10.2	+1.9
	comp=Z,1.7nm,0.6s,baz=284,slow=9.2,SNR=10						
CMAR				PcP	PcP	03 34 06.0	+1.2
	comp=Z,1.5nm,0.6s,baz=290,slow=4.9,SNR=6.2						
CMAR	Chiang Mai Arr	41.70	92	P	P	03 32 08.5	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR					PcP	03 34 03.3	-1.4
LZH	Lanzhou	42.60	65	⇓P	P	03 32 17.5	+1.8
LZH				pP	pP	03 32 22.9	-1.2
LZH				sP	sP	03 32 26.6	-1.0
LZH				PP	PP	03 33 53.2	-1.4
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,66nm,4.3s						
LZH				LR	LR		
	comp=N,650nm,14.1s						
LZH				LR	LR		
	comp=E,600nm,12.5s						
LZH				LR	LR		
	comp=Z,740nm,15.1s						
TLY	Talaya	44.14	43	*i* P	P	03 32 28.5	+0.8
TLY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,246nm,16.0s						
PBKT	Sadao Pong	44.19	94	P	P	03 32 28.0	-0.4
TAM	Tamanrasset	44.39	276	P	P	03 32 28.9	-1.3
TAM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TAM	Tamanrasset	44.39	276	P	P	03 32 28.9	-1.3
TAM				IAmb	IAmb	03 32 32.1	
	comp=Z,3.7nm,0.8s						
NB2	NORSAR Subarra	44.62	332	P	P	03 32 30.4	-1.0
	comp=Z,0.6nm,0.5s,baz=119,slow=8.6						
NOA	NORSAR Array B	44.62	332	P	P	03 32 30.4	-1.0
	comp=Z,0.9nm,0.9s,baz=129,slow=8.0,SNR=4.4						
SONM	Songino Array	45.14	48	P	P	03 32 35.9	+0.1
SONM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	45.14	48	P	P	03 32 37.1	+1.3
	comp=Z,3.1nm,0.9s,baz=270,slow=8.3,SNR=16						
SONM	Songino Array	45.14	48	P	P	03 32 35.9	+0.1
ULN	Ulaanbaatar	45.58	48	*ce*P	P	03 32 40.3	+0.9
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULN	Ulaanbaatar	45.58	48	P	P	03 32 39.3	-0.1
ULN				IAmb	IAmb	03 32 41.2	
	comp=Z,6.2nm,1.0s						
ARCES	ARCESS Array B	45.70	346	P	P	03 32 39.3	-0.5
ARCES	ARCESS Array B	45.70	346	P	P	03 32 39.8	0.0
	comp=Z,3.8nm,0.9s,baz=156,slow=9.2,SNR=15						
ARCES	ARCESS Array B	45.70	346	P	P	03 32 39.3	-0.5
XAN	Xi'an	46.92	68	P	P	03 32 50.4	+0.5
XAN				pP	sP	03 33 27.0	+25
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
HHC	Hu-ho-hao-te	48.48	58	*e*P	P	03 33 03.5	+1.4
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,71nm,5.2s						
LSZ	Lusaka	49.26	214	P	P	03 33 10.4	+2.2
	comp=Z,1.8nm,0.8s,baz=39,slow=6.3,SNR=3.9						
LSZ	Lusaka	49.26	214	P	P	03 33 06.7	-1.5
ESDC	Sonseca Array	49.60	300	P	P	03 33 10.4	-0.2
	comp=Z,1.1nm,0.4s,baz=69,slow=7.5,SNR=15						
ESDC	Sonseca Array	49.60	300	P	P	03 33 09.9	-0.7
MDT	Midelt	50.95	292	P	P	03 33 22.3	+1.3
	comp=Z,3.9nm,0.8s,baz=266,slow=10,SNR=7.3						
TOA0	Torodi Ar. Sit	51.13	265	P	P	03 33 21.2	-1.2
TOA0				IAmb	IAmb	03 33 23.2	
	comp=Z,3.5nm,0.8s						
TORD	Torodi Ar. Bea	51.13	265	P	P	03 33 22.2	-0.2
	comp=Z,3.2nm,0.6s,baz=59,slow=7.2,SNR=13						
TORD	Torodi Ar. Bea	51.13	265	P	P	03 33 20.8	-1.6
HIA	Hailar	54.07	47	*i* P	P	03 33 43.8	+0.1
HIA				pmax	pmax		
	comp=Z,21nm,0.9s						
LBTB	Lobatse	58.83	211	P	P	03 34 19.6	+1.7
	comp=Z,1.6nm,0.5s,baz=26,slow=8.0,SNR=8.2						
LBTB	Lobatse	58.83	211	P	P	03 34 17.9	0.0
LBTB				IAmb	IAmb	03 34 21.4	
	comp=Z,1.0nm,0.6s						
YAK	Yakutsk	59.53	32	*i* P	P	03 34 20.7	-1.5
YAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YAK	Yakutsk	59.53	32	P	P	03 34 21.7	-0.4
	comp=Z,4.8nm,0.5s,baz=221,slow=2.9,SNR=3.7						
YAK	Yakutsk	59.53	32	P	P	03 34 21.9	-0.3
TIXI	Tiksi	59.61	21	*ce*P	P	03 34 23.3	+0.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TIXI				MLR	MLR		
	comp=Z,335nm,16.0s						
DBIC	Dimbokro	59.75	262	P	P	03 34 25.0	+0.5
DBIC	Dimbokro	59.75	262	P	P	03 34 24.9	+0.5
	comp=Z,7.9nm,0.8s,baz=42,slow=7.8,SNR=9.3						
DBIC	Dimbokro	59.75	262	P	P	03 34 24.3	-0.1
KIC	Kosan Boka	59.79	261	*e*P	P	03 34 24.9	+0.2
	comp=Z,15nm,0.8s						
TIC	Toumodi	59.91	262	*e*P	P	03 34 25.7	+0.1
LIC	Lamto	60.11	261	*e*P	P	03 34 27.1	+0.2
	comp=Z,23nm,0.7s						
KSRS	Korea Array	61.53	60	P	P	03 34 35.9	-0.4
	comp=Z,2.3nm,0.7s,baz=282,slow=7.7,SNR=8.3						
KLR	Kul'dur	61.90	46	*i* P	P	03 34 37.4	-1.2
KLR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KLR				MLR	MLR		
	comp=Z,369nm,17.0s						
KLR	Kul'dur	61.90	46	P	P	03 34 38.1	-0.4
	comp=Z,3.7nm,0.8s,baz=274,slow=7.7,SNR=8.7						
BOSA	Boshof	62.09	209	P	P	03 34 41.3	+1.1
	comp=Z,3.1nm,0.7s,baz=20,slow=6.7,SNR=7.3						
BOSA	Boshof	62.09	209	P	P	03 34 40.0	-0.1
USRK	Ussuriysk Ar.	63.02	52	P	P	03 34 45.9	-0.3
	comp=Z,1.1nm,0.6s,baz=263,slow=10.0,SNR=3.7						
USRK	Ussuriysk Ar.	63.02	52	P	P	03 34 46.1	-0.1
SUR	Sutherland	67.28	211	P	P	03 35 15.4	+1.3
	comp=Z,2.7nm,0.8s,baz=90,slow=2.0,SNR=3.6						
SUR	Sutherland	67.28	211	P	P	03 35 14.4	+0.4
SUR				IAmb	IAmb	03 35 18.7	
	comp=Z,4.1nm,1.1s						
MJAR	Matsushiro Arr	69.69	59	P	P	03 35 28.6	-0.4
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MJAR	Matsushiro Arr	69.69	59	P	P	03 35 28.9	-0.1
	comp=Z,1.8nm,0.8s,baz=285,slow=6.0,SNR=4.2						
MJAR	Matsushiro Arr	69.69	59	P	P	03 35 28.6	-0.4
SEY	Seymchan	69.70	29	*i* P	P	03 35 29.5	+0.9
ERM	Erimo	71.48	52	*ce*P	P	03 35 40.2	+0.4
ERM				pmax	pmax		
	comp=Z,190nm,2.5s						
BILL	Bilibino	72.82	21	*ce*P	P	03 35 47.1	-0.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,260nm,16.0s						
TOLK	Toolik Lake Re	82.91	9	P	P	03 36 44.0	+0.4
TOLK				IAmb	IAmb	03 36 45.1	
	comp=Z,3.0nm,0.8s						
C36M	Paulatuk	83.83	359	P	P	03 36 48.3	+0.2
SCHQ	Schefferville	84.17	330	P	P	03 36 50.2	0.0
	comp=Z,4.1nm,0.6s,baz=43,slow=5.3,SNR=4.8						
SCHQ	Schefferville	84.17	330	P	P	03 36 50.4	+0.2
BMAR	Burnt Mountain	84.68	7	P	P	03 36 53.3	+0.7
MLY	Manley	86.10	10	P	P	03 37 00.1	+0.4
MLY				IAmb	IAmb	03 37 00.9	
	comp=Z,2.6nm,0.7s						
ILAR	Eielson Array	86.92	9	P	P	03 37 02.9	-0.8
ILAR	Eielson Array	86.92	9	P	P	03 37 03.2	-0.5
	comp=Z,1.1nm,0.8s,baz=316,slow=3.6,SNR=10						
ILAR				PKKPbc	PKKPbc	03 54 57.9	-0.1
	comp=Z,0.4nm,0.8s,baz=176,slow=2.4,SNR=4.5						
ILAR	Eielson Array	86.92	9	P	P	03 37 02.9	-0.8
YKA	Yellowknife Ar	90.29	355	P	P	03 37 19.9	+0.2
YKA	Yellowknife Ar	90.29	355	P	P	03 37 20.2	+0.6
	comp=Z,1.1nm,0.7s,baz=7.2,slow=5.2,SNR=20						
YKA	Yellowknife Ar	90.29	355	P	P	03 37 19.9	+0.2
WRA	Warramunga Arr	90.34	112	P	P	03 37 20.6	0.0
WRA	Warramunga Arr	90.34	112	P	P	03 37 21.2	+0.6
	comp=Z,1.1nm,0.8s,baz=314,slow=4.5,SNR=8.0						
WRA	Warramunga Arr	90.34	112	P	P	03 37 20.6	0.0
ASAR	Alice Springs	91.76	116	P	P	03 37 27.0	-0.2
ASAR	Alice Springs	91.76	116	P	P	03 37 27.4	+0.3
	comp=Z,1.2nm,0.9s,baz=303,slow=5.3,SNR=7.9						
ASAR	Alice Springs	91.76	116	P	P	03 37 27.0	-0.2
NVAR	Mina Array Bea	114.46	354	PKP	PKPdf	03 43 01.0	+1.5
	comp=Z,0.7nm,0.7s,baz=44,slow=1.9,SNR=7.3						
TXAR	Lajitas Array	120.11	338	PKIKP	PKPdf	03 43 09.8	-0.7
TXAR	Lajitas Array	120.11	338	PKP	PKiKP	03 43 11.0	+0.4
	comp=Z,0.2nm,0.6s,baz=132,slow=1.9,SNR=4.0						
TXAR	Lajitas Array	120.11	338		PKPdf	03 43 09.8	-0.7
LPAZ	La Paz	126.00	269	PKIKP	PKPdf	03 43 20.6	-2.0
LPAZ	La Paz	126.00	269	PKP	PKiKP	03 43 23.5	+0.5
	comp=Z,0.5nm,0.5s,baz=45,slow=1.4,SNR=3.4						
LPAZ	La Paz	126.00	269		PKPdf	03 43 20.6	-2.0

VIE 02 03:28:52.7±0.3**, 47°.21N**×**11°.78E, h10**km±2km**, ml1.0**/5**,**
Error ellipse: s-maj=1.6km s-min=0.8km az=41.0 8 km
WNW of Mayrhofen, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTTA	Wattenberg	0.11	300	*i* Pg	Pg	03 28 56.0	+0.3
	1.4nm,0.1s						
WTTA				*i* Sg	Sg	03 28 58.2	+0.3
	2.2nm,0.1s						
WATA	Walderalm	0.19	313	*i* Pg	Pg	03 28 57.1	+0.2
	0.8nm,0.1s						
WATA				*i* Sg	Sg	03 28 59.8	+0.1
	4.0nm,0.1s						
SQTA	Sankt Quirin	0.39	272	*i* Pg	Pg	03 29 00.7	+0.2
	0.9nm,0.1s						
SQTA				*i* Sg	Sg	03 29 06.4	+0.7
	0.5nm,0.1s						
MOTA	Moosalm	0.48	287	*i* Pg	Pg	03 29 02.0	-0.1
	0.2nm,0.1s						
MOTA				*i* Sg	Sg	03 29 09.1	+0.6
	0.2nm,0.1s						
FETA	Feichten	0.74	256	*i* Sg	Sg	03 29 17.3	+0.6
	0.2nm,0.2s						
RETA	Reutte	0.74	292	*i* Sg	Sb	03 29 17.8	-0.3
	0.2nm,0.1s						
DAVA	Damuels	1.29	274	*i* Sg	Sg	03 29 35.8	+1.4
	0.5nm,0.2s						

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*IDC **02** 03:37:40.1±0.7, 27°.84N×56°.26E, h0km, mb3.7/21, mb1 3.8/24, mb1mx3.8/43, mbtmp3.7/24, ML3.5/3, Error ellipse: s-maj=16.8km s-min=15.2km az=161.0*
*TEH **02** 03:37:43.3, 27°.84N×56°.35E, h10km, ML3.8*
*OMAN **02** 03:37:44.2±2.2, 27°.87N×56°.15E, h137km±22km, ml4.0/9, Error ellipse: s-maj=34.8km s-min=18.3km az=86.0*
*DSN **02** 03:37:45.2±0.7, 27°.73N×56°.53E, h10km, ML4.1/9, Error ellipse: s-maj=20.2km s-min=5.4km az=90.0*
*THR **02** 03:37:46.5±0.4, 27°.97N×56°.30E, h14km±3km, ML3.9*
ISC 02 03:37:42.2±0.5**, 27°.83N**±0°.03×**56°.27E**±0°.04**, h10**km**, n103,**
σ**2s42**/109**, mb3.7**/20**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENO	Geno	0.44	192	*e*Pg	Pg	03 37 52.5	+1.7
GENO				*e*		03 38 06.0	
BNDS	Bandar-Abbas	0.44	192	*e*Pg	Pn	03 37 57.8	+3.1
BNDS	Bandar-Abbas	0.44	192	*e*Pg	Pn	03 37 57.8	+3.1
BNDS				IAML		03 38 08.5	
	comp=E,12µm,0.3s						
BNDS				IAML		03 38 10.5	
	comp=N,12µm,0.5s						
NIAN	Nian	0.57	118	*e*Pg	Pg	03 37 54.1	+0.9
NIAN				*e*		03 38 02.8	
KHNJ	Kahnooj	1.27	84	*e*Pg	Pn	03 38 06.0	-0.1
SHME	Shamm	1.78	184	*e*P	Pn	03 38 14.7	+1.7
	SNR=26						
SHME	Shamm	1.78	184	*e*Pn	Pn	03 38 14.8	+1.8
NGRK	Negar Kerman	1.85	12	*e*Pn	Pn	03 38 16.0	+1.6
NGRK				*e*		03 38 48.2	
BANOM	Banah	1.90	179	*e*P	Pn	03 38 16.8	+2.1
	SNR=79						
BANOM				S	Sn	03 38 40.7	+1.9
BANOM	Banah	1.90	179	P	Pn	03 38 16.7	+2.0
	SNR=79						
BANOM				S	Sg	03 38 44.5	+1.2
KRBR	Kerman	2.19	11	*e*Pn	Pb	03 38 22.9	+0.8
KRBR	Kerman	2.19	11	*e*Pn	Pb	03 38 22.9	+0.8
KRBR				*e*Sg	Sb	03 38 51.4	+2.0
KRBR				IAML		03 38 54.4	
	comp=E,440nm,0.6s						
KRBR				IAML		03 38 55.9	
	comp=N,430nm,0.5s						
TVBK	TV Kerman	2.19	11	*e*Pn	Pn	03 38 21.2	+2.2
TVBK				*e*		03 38 56.4	
CHMN	Cheshme madani	2.31	29	*e*Pn	Pn	03 38 23.2	+2.6
CHMN				*e*		03 38 30.6	
UMQ	Umm Al-Quwin	2.36	193	*e*Pn	Pn	03 38 24.5	+3.5
MSFE	Esma-Masafi	2.46	182	*e*P	Pn	03 38 24.7	+2.2
	SNR=9.3						
MSFE	Esma-Masafi	2.46	182	*e*Pn	Pn	03 38 25.2	+2.7
JHRM	Jahrom	2.47	286	*e*Pn	Pn	03 38 26.8	+4.2
MDH	Madha	2.52	179	*e*P	Pn	03 38 25.1	+1.9
	SNR=11						
MDH	Madha	2.52	179	*e*Pn	Pn	03 38 24.6	+1.4
KHGB	Koh Gabri	2.54	4	*e*Pn	Pn	03 38 26.5	+2.8
KHGB				*e*		03 38 33.2	
UOSS	Minazif	2.87	181	*e*P	Pn	03 38 29.8	+1.7
	SNR=9.5						
UOSS	Minazif	2.87	181	*e*Pn	Pn	03 38 30.2	+2.1
NAZ	Nazwa, Dubai	2.88	191	P	Pn	03 38 30.9	+2.8
NAZ	Nazwa, Dubai	2.88	191	*e*Pn	Pn	03 38 31.3	+3.1
HATD	Hatta, Dubai	3.00	182	P	Pn	03 38 31.9	+2.1
HATD	Hatta, Dubai	3.00	182	*e*Pn	Pn	03 38 32.4	+2.6
HATD	Hatta, Dubai	3.00	182	P	Pn	03 38 32.1	+2.4
HATD				S	Sn	03 39 09.9	+4.2
FAQ	Al Faqa, Dubai	3.13	191	*i* P	Pn	03 38 34.1	+2.5
	SNR=7.8						
FAQ	Al Faqa, Dubai	3.13	191	*e*Pn	Pn	03 38 34.5	+2.9
FAQ	Al Faqa, Dubai	3.13	191	P	Pn	03 38 34.6	+3.0
	SNR=7.7						
ASHO	Ashiyiah	3.14	184	*i* P	Pn	03 38 34.1	+2.4
	SNR=58						
ASHO	Ashiyiah	3.14	184	*e*Pn	Pn	03 38 34.6	+2.8
ASHO	Ashiyiah	3.14	184	P	Pn	03 38 34.5	+2.8
	SNR=22						
ASUD	Al Ashush, Dub	3.30	195	*i* P	Pn	03 38 36.8	+2.8
	SNR=46						
ASUD	Al Ashush, Dub	3.30	195	*e*Pn	Pn	03 38 37.5	+3.5
ASUD	Al Ashush, Dub	3.30	195	P	Pn	03 38 37.4	+3.4
	SNR=46						
ALNE	Al Ain	3.79	187	*e*Pn	Pn	03 38 43.9	+3.2
IBAF	Bafgh	3.80	351	*e*Pn	Pn	03 38 42.2	+1.3
IMEH	Mehriz	3.83	338	*e*Pn	Pn	03 38 43.8	+2.3
HOQ	Hoqain	4.33	167	P	Pn	03 38 48.3	+0.1
	SNR=18						
HOQ				S	Sn	03 39 37.6	-1.2
ZHSF	Zahedan	4.33	65	*e*Pn	Pn	03 38 53.3	+4.9
ZHSF	Zahedan	4.33	65	*e*Pn	Pn	03 38 53.3	+4.9
ARQ	Araqi	4.48	177	P	Pn	03 38 52.6	+2.4
	SNR=41						
ISAD	Sadrabad	4.65	332	*e*Pn	Pn	03 38 55.5	+2.8
ICHK	Chekchek	4.69	340	*e*Pn	Pn	03 38 54.9	+1.7
BSRN	Basiran	4.81	30	*e*Pn	Pn	03 38 59.1	+4.3
BSRN	Basiran	4.81	30	*e*Pn	Pn	03 38 59.1	+4.3
BSRN				*e*Sg	Sb	03 40 11.2	+6.5
NHDN	Nehbandan	4.84	42	*e*Pn	Pn	03 38 57.6	+2.4
WSAR	Wadi Sarin	5.04	154	Pn	Pn	03 38 58.9	+0.9
	comp=N,3.2nm,0.3s,baz=352,slow=12,SNR=17						
WSAR				Sn	Sn	03 39 54.3	-2.0
	comp=N,9.9nm,0.3s,baz=248,slow=18,SNR=8.5						
WSAR	Wadi Sarin	5.04	154	P	Pn	03 38 58.9	+0.9
	SNR=23						
BSY	Bisya	5.13	170	P	Pn	03 39 01.6	+2.4
	SNR=12						
BSY				S	Sn	03 40 04.2	+5.6
IKOO	Kooshah	5.15	27	*e*Pn	Pn	03 39 01.3	+1.6
KLNJ	Kolanjah	5.17	309	*e*Pn	Pn	03 39 01.9	+2.0
TPRV	Parvadeh(Tabas	5.19	4	*e*Pn	Pn	03 39 02.3	+2.2
IRAM	Ramesheh	5.21	321	*e*Pn	Pn	03 39 02.1	+1.7
ITEG	Tejag	5.48	22	*e*Pn	Pn	03 39 06.2	+2.1
WBK	Wadi Bani Khal	5.74	154	P	Pn	03 39 09.0	+1.4
	SNR=20						
WBK				S	Sn	03 40 13.9	+0.3
ANAR	Anarak	5.77	338	*e*Pn	Pn	03 39 09.5	+1.4
TKDS	Koohdasht(Taba	5.81	7	*e*Pn	Pn	03 39 09.3	+0.7
TABS	Tabas	5.85	7	*e*Pn	Pn	03 39 13.1	+4.1
TABS	Tabas	5.85	7	*e*Pn	Pn	03 39 13.1	+4.1
SLWS		5.88	240	*e*Pn	Pn	03 39 11.7	+2.2
IBRJ	Brojen	5.95	314	*e*Pn	Pn	03 39 12.3	+1.6
IZEF	Zefreh	6.09	327	*e*Pn	Pn	03 39 13.3	+0.8
IMON	Monand	6.09	28	*e*Pn	Pn	03 39 16.3	+3.7
TNSJ	Nastanj	6.12	3	*e*Pn	Pn	03 39 15.9	+3.1
BTHS		6.17	234	*e*Pn	Pn	03 39 14.5	+1.1
JHBN	Jahan bin	6.54	313	*e*Pn	Pn	03 39 20.0	+1.2
SHRT	Shahrakht	6.75	30	*e*Pn	Pn	03 39 25.9	+4.5
SHRT	Shahrakht	6.75	30	*e*Pn	Pn	03 39 25.9	+4.5
IKLH	Kolahrood	6.80	325	*e*Pn	Pn	03 39 24.0	+1.7
KRSH	Karshahi	7.08	331	*e*Pn	Pn	03 39 28.0	+2.0
QAM	Ghamsar	7.22	326	*e*Pn	Pn	03 39 29.8	+1.7
SHAO	Shalim	9.78	184	S	Sn	03 41 49.5	-3.5
WHFO	Wadi Hawf	10.13	194	S	Sn	03 41 56.4	-5.2
DMTO	DMTO	10.14	187	P	Pn	03 40 07.4	-0.5
	SNR=20						
DMTO				S	Sn	03 41 59.4	-2.3
GEYT	Alibeck	10.19	8	Lg	Lg	03 43 06.0	
	comp=N,0.7nm,0.3s,baz=209,slow=44,SNR=5.2						
ABTO	Aybut	10.78	195	S	Sn	03 42 10.4	-7.2
ASF	Jabal al Asfar	17.33	289	P	Pn	03 41 43.9	-0.4
	comp=N,0.1nm,0.3s,baz=87,slow=19,SNR=2.9						
MMAI	Mount Meron Ar	18.71	291	P	P	03 42 01.0	0.0
	comp=N,0.2nm,0.3s,baz=105,slow=17,SNR=3.2						
AAK	Ala-Archa	20.91	40	P	P	03 42 24.0	-0.9
	comp=N,0.9nm,0.7s,baz=197,slow=17,SNR=2.3						
BRTR	Keskin Array B	22.17	308	P	P	03 42 38.5	-0.1
	comp=N,1.7nm,0.8s,baz=125,slow=12,SNR=14						
AKTO	Aktyubinsk	22.61	3	P	P	03 42 44.0	+1.0
	comp=N,2.3nm,0.7s,baz=144,slow=14,SNR=8.9						
BVAR	Borovoye Array	27.26	19	P	P	03 43 26.0	-0.6
	comp=N,0.7nm,0.7s,baz=196,slow=20,SNR=4.5						
MKAR	Makanchi Array	27.84	40	P	P	03 43 31.5	-0.3
	comp=N,0.9nm,0.4s,baz=225,slow=8.5,SNR=30						
KURBB	Kurchatov Arra	28.35	31	P	P	03 43 34.0	-2.2
	comp=N,1.1nm,0.8s,baz=230,slow=8.7,SNR=4.9						
AKASG	Malin Array Be	30.68	325	P	P	03 43 56.0	-0.9
	comp=N,0.6nm,0.5s,baz=130,slow=7.8,SNR=3.4						
ZALV	Zalesovo Beam	33.44	31	P	P	03 44 20.3	-0.8
	comp=N,1.5nm,0.6s,baz=235,slow=10,SNR=7.4						
GERES	GERESS Array B	38.78	314	P	P	03 45 05.4	-1.6
	comp=N,0.2nm,0.4s,baz=97,slow=7.5,SNR=4.2						
FINES	FINESS Array B	39.19	338	P	P	03 45 09.4	-0.7
	comp=N,1.7nm,0.7s,baz=143,slow=7.7,SNR=11						
SONM	Songino Array	43.47	49	P	P	03 45 45.7	+0.1
	comp=N,0.4nm,0.5s,baz=280,slow=8.6,SNR=2.5						
NB2	NORSAR Subarra	44.75	331	P	P	03 45 54.1	-1.5
	comp=Z,0.3nm,0.5s,baz=108,slow=8.6						
NOA	NORSAR Array B	44.75	331	P	P	03 45 54.1	-1.5
	comp=Z,0.5nm,0.8s,baz=197,slow=1.8,SNR=3.9						
ARCES	ARCESS Array B	45.38	345	P	P	03 46 00.6	+0.1
	comp=Z,2.0nm,0.8s,baz=143,slow=9.4,SNR=10						
ESDC	Sonseca Array	50.61	300	P	P	03 46 40.7	-0.8
	comp=Z,0.3nm,0.6s,baz=74,slow=7.3,SNR=3.3						
TORD	Torodi Ar. Bea	52.77	266	P	P	03 46 56.5	-1.3
	comp=Z,0.9nm,0.6s,baz=61,slow=6.1,SNR=23						
KSRS	Korea Array	59.80	61	P	P	03 47 46.7	-1.0
	comp=Z,0.6nm,0.5s,baz=276,slow=6.7,SNR=2.9						
BOSA	Boshof	63.51	210	P	P	03 48 12.8	-0.1
	comp=Z,1.8nm,0.5s,baz=18,slow=7.7,SNR=7.8						
ILAR	Eielson Array	85.95	10	P	P	03 50 21.0	-1.2
	comp=Z,0.4nm,0.9s,baz=330,slow=5.2,SNR=2.8						
WRA	Warramunga Arr	89.15	113	P	P	03 50 38.0	-0.4
	comp=Z,0.4nm,0.8s,baz=328,slow=3.0,SNR=3.0						
YKA	Yellowknife Ar	89.69	356	P	P	03 50 39.6	-0.6
	comp=Z,0.3nm,0.7s,baz=3.4,slow=5.0,SNR=6.5						
ASAR	Alice Springs	90.66	116	P	P	03 50 44.6	-0.8
	comp=Z,0.3nm,0.7s,baz=312,slow=4.6,SNR=3.5						

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*DDA **02** 03:42:37.1, 36°.18N×31°.09E, h32km±1km, ML2.2*
*ISK **02** 03:42:37.6, 36°.18N×31°.22E, h8km, ML2.8/18*
*NIC **02** 03:42:42.6±0.0, 36°.19N×32°.17E, h0km±4km, Ml2.6/4*
ISC 02 03:42:37.5±1.3**, 36°.13N**±0°.03×**31°.18E**±0°.02**, h16**km±11km**,**
n54, σ**1s69**/73**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEMT	Kemer-ANTALYA	0.69	313	PG	Pb	03 42 51.2	0.0
KEMT				SG	Sb	03 43 01.0	+0.5
AKUM	Antalya-Kumluc	0.70	286	*i* P	Pb	03 42 52.6	+1.2
AKUM				*i* S	Sn	03 43 05.5	+2.1
AKUM				IAML		03 43 06.0	
	comp=N,209nm,0.4s						
AKUM				IAML		03 43 07.0	
	comp=E,219nm,0.5s						
ALAN	Alanya-ANTALYA	0.81	58	PG	Pb	03 42 52.9	-0.3
ALAN				SG	Sb	03 43 03.7	-0.2
KEPZ	Antalya-Kepez	0.84	24	*i* P	Pb	03 42 53.5	-0.2
KEPZ				*i* S	Sb	03 43 05.2	+0.4
KEPZ				IAML		03 43 06.0	
	comp=N,102nm,0.4s						
KEPZ				IAML		03 43 06.0	
	comp=E,99nm,0.2s						
GAZI	Gazipasa	0.92	83	PG	Pb	03 42 55.2	0.0
GAZI				SG	Sb	03 43 07.5	+0.3
GAZI	Gazipasa	0.92	83	*i* P	Pb	03 42 55.2	0.0
GAZI				IAML		03 43 08.0	
	comp=E,131nm,0.4s						
GAZI				IAML		03 43 08.0	
	comp=N,167nm,0.5s						
ELL	Elmali	1.20	301	PN	Pg	03 43 00.1	-0.6
ELL				SN	Sn	03 43 17.9	+2.1
AKAS	Kas	1.28	275	*i* P	Pn	03 43 00.2	-0.7
AKAS				*i* S	Sb	03 43 16.1	-1.5
AKAS				IAML		03 43 17.0	
	comp=E,47nm,0.5s						
AKAS				IAML		03 43 25.0	
	comp=N,64nm,0.6s						
AKMS	Akamas	1.46	139	P	Pb	03 43 05.3	+1.0
AKMS				S	Sn	03 43 23.9	+1.9
AKMS				AML	AML	03 43 30.6	
	comp=N,0.5nm,0.4s						
AKMS				AML	AML	03 43 30.6	
	comp=N,0.5nm,0.4s						
AKMS				AML	AML	03 43 36.0	
	comp=N,0.4nm,0.5s						
AKMS				AML	AML	03 43 36.0	
	comp=N,0.4nm,0.5s						
ERMK	Ermenek	1.49	70	*i* P	Pb	03 43 04.7	-0.2
ERMK				*i* S	Sg	03 43 26.8	+1.3
ERMK				IAML		03 43 30.0	
	comp=N,89nm,0.4s						
ERMK				IAML		03 43 32.0	
	comp=E,92nm,0.3s						
ALFC	Alefka	1.51	130	P	Pn	03 43 03.0	-0.9
ALFC				S	Sn	03 43 20.4	-3.0
ALFC				AML	AML	03 43 29.9	
	comp=E,0.4nm,0.2s						
ALFC				AML	AML	03 43 29.9	
	comp=E,0.4nm,0.2s						
ALFC				AML	AML	03 43 31.1	
	comp=E,0.4nm,0.3s						
ALFC				AML	AML	03 43 31.1	
	comp=E,0.4nm,0.3s						
TEKE	Tekeli-Mersin	1.56	89	PN	Pn	03 43 05.1	+0.4
TEKE				SN	Sg	03 43 26.8	-1.2
BERE	Bereket-Mersin	1.66	82	PN	Pb	03 43 07.4	-0.5
GOLH	Golhisar	1.71	311	*i* P	Pb	03 43 08.6	0.0
NATA	Nata	1.76	140	P	Pb	03 43 10.3	+0.8
NATA				S	Sn	03 43 32.1	+2.6
NATA				AML	AML	03 43 43.5	
	comp=E,1.4nm,0.7s						
NATA				AML	AML	03 43 43.5	
	comp=E,1.4nm,0.7s						
NATA				AML	AML	03 43 46.0	
	comp=E,0.7nm,0.5s						
NATA				AML	AML	03 43 46.0	
	comp=E,0.7nm,0.5s						
FETY	Fethiye	1.77	287	*i* P	Pn	03 43 07.2	-0.3
FETY				*i* S	Sn	03 43 28.9	-0.7
FETY				IAML		03 43 31.0	
	comp=E,18nm,0.2s						
FETY				IAML		03 43 31.0	
	comp=N,16nm,0.4s						
BRDR	BURDUR-Merkez	1.80	330	*i* P	Pn	03 43 09.1	+1.1
BRDR				IAML		03 43 33.0	
	comp=E,13nm,0.7s						
TEVE	Tevekalti-Mers	1.85	80	PN	Pn	03 43 10.2	+1.5
BAGO	Egridir - ISPA	1.88	350	*i* P	Pn	03 43 09.4	+0.2
BAGO				IAML		03 43 41.0	
	comp=E,8.5nm,0.6s						
BAGO				IAML		03 43 44.0	
	comp=N,3.9nm,0.4s						
KMER	Konya-Meram	1.89	30	*i* P	Pn	03 43 10.0	+0.8
KMER				*i* S	Sn	03 43 33.4	+0.5
KMER				IAML		03 43 34.0	
	comp=E,40nm,0.5s						
KMER				IAML		03 43 36.0	
	comp=N,50nm,0.6s						
GULN	MERSIN_Gulnar	1.91	88	*i* P	Pn	03 43 10.9	+1.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GULN				i S	Sn	03 43 34.1	+0.9
GULN				IAML		03 43 38.0	
	comp=E,25nm,0.6s						
GULN				IAML		03 43 38.0	
	comp=N,11nm,0.2s						
AKKU	Akkuyu-Mersin	1.92	89	PN	Pn	03 43 11.2	+1.7
SZAC	Souni	1.95	134	P	Pn	03 43 11.3	+1.2
SZAC				AML	AML	03 43 47.1	
	comp=N,0.3nm,0.5s						
SZAC				AML	AML	03 43 48.1	
	comp=N,0.3nm,0.9s						
DOGA	KONYA_Doganhis	2.01	11	i P	Pn	03 43 11.8	+0.8
DOGA				i S	Sn	03 43 35.8	0.0
DOGA				IAML		03 43 37.0	
	comp=N,61nm,0.4s						
DOGA				IAML		03 43 39.0	
	comp=E,38nm,0.3s						
TISA	Tisan-Mersin	2.02	88	PN	Pn	03 43 12.7	+1.8
IKL	Isikli	2.03	86	PN	Pn	03 43 12.8	+1.8
KONT	Konya--Tatoy	2.04	27	PN	Pn	03 43 12.1	+0.8
KONT	Konya--Tatoy	2.04	27	i P	Pn	03 43 11.9	+0.7
KONT				IAML		03 43 38.0	
	comp=E,23nm,1.0s						
KONT				IAML		03 43 38.0	
	comp=N,12nm,0.5s						
KEBE	Keben-Mersin	2.07	81	PN	Pn	03 43 13.4	+1.7
CSS	Mathiatis	2.11	123	PN	Pn	03 43 13.9	+1.8
CSS	Mathiatis	2.11	123	P	Pn	03 43 10.9	-1.2
CSS				S	Sn	03 43 34.5	-3.6
ASGA	Asgata	2.16	128	P	Pn	03 43 13.7	+0.9
TAVA	DENIZLI_Tavas	2.25	307	i P	Pn	03 43 14.5	+0.2
LADK	Ladik-KONYA	2.27	24	PN	Pn	03 43 15.3	+0.8
KZIL	AFYON_Kizioren	2.28	339	i P	Pn	03 43 15.7	+1.1
KZIL				IAML		03 43 48.0	
	comp=E,7.7nm,0.5s						
KZIL				IAML		03 43 49.0	
	comp=N,8.7nm,0.4s						
MVOU	Mavrovouni	2.29	118	P	Pn	03 43 13.1	-1.5
MVOU				S	Sn	03 43 36.7	-5.7
KIZK	Mersin	2.42	81	PN	Pn	03 43 18.1	+1.7
KIZK	Mersin	2.42	81	i P	Pb	03 43 19.1	-1.6
KIZK				IAML		03 43 59.0	
	comp=E,16nm,0.4s						
KIZK				IAML		03 44 01.0	
	comp=N,17nm,0.5s						
EREN	Erenkoy	2.50	103	PN	Pn	03 43 19.8	+2.2
EREN	Erenkoy	2.50	103	i P	Pn	03 43 20.2	+2.6
EREN				IAML		03 43 49.0	
	comp=N,35nm,1.2s						
EREN				IAML		03 43 53.0	
	comp=E,42nm,0.5s						
BOLV	Bolvadin	2.59	356	i P	Pn	03 43 17.5	-1.4
BOLV				i S	Sn	03 43 45.9	-4.2
BOLV				IAML		03 43 52.0	
	comp=E,16nm,0.8s						
BOLV				IAML		03 43 55.0	
	comp=N,21nm,0.5s						
KHAL	Karahalli	2.61	329	i P	Pn	03 43 20.1	+0.9
KERG	Konya-Eregli	2.69	61	i P	Pn	03 43 21.7	+1.4
AFYO	Afyonkarahisar	2.74	345	i P	Pn	03 43 21.9	+0.9
CHBY	Cihanbeyli	2.80	29	PN	Pn	03 43 22.2	+0.4
DED	Mersin	3.03	73	i P	Pn	03 43 27.1	+2.2
GULE	Gulek	3.11	67	i P	Pn	03 43 29.3	+3.3
CIFT	Cifteler, Eski	3.22	358	i P	Pn	03 43 27.6	0.0
KARA	Karaisali	3.31	69	PN	Pn	03 43 30.7	+2.0
KKUL	Konya-Kulu	3.33	24	i P	Pn	03 43 29.4	+0.3
KKUL				IAML		03 44 12.0	
	comp=E,3.1nm,0.6s						
KKUL				IAML		03 44 15.0	
	comp=N,2.8nm,0.3s						
CMRD	Camardi-Nigde	3.41	62	PN	Pn	03 43 32.1	+1.9
AKO	Adana	3.67	68	i P	Pn	03 43 37.0	+3.4
BBAL	Bala	3.73	24	i P	Pn	03 43 34.4	-0.2
KOZT	Kozan	3.96	69	PN	Pn	03 43 40.0	+2.3

IDC 02 03:56:36.7±2.1**,23°.09S**×**179°.82W,h0**km**,mb3.9**/5**, mb1 4.2**/5**,mb1mx3.8**/25**,mbtmp3.9**/5**,Error ellipse: s-maj=157.6km s-min=25.6km az=157.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.18	247	P	P	04 03 32.4	-0.2
	0.9nm,0.3s,baz=73,slow=11,SNR=5.3						
ASAR	Alice Springs	42.34	260	P	P	04 04 32.5	-0.2
	0.8nm,0.3s,baz=87,slow=7.0,SNR=22						
WRA	Warramunga Arr	42.63	265	P	P	04 04 35.7	+0.5
	2.9nm,0.4s,baz=99,slow=7.3,SNR=31						
NVAR	Mina Array Bea	84.05	44	P	P	04 09 10.6	+1.0
	0.2nm,0.6s,baz=223,slow=4.9,SNR=2.6						
TXAR	Lajitas Array	89.86	58	P	P	04 09 37.7	-0.2
	0.3nm,0.7s,baz=218,slow=5.3,SNR=3.9						
BRTR	Keskin Array B	147.21	308	PKPbc	PKPdf	04 16 19.9	-0.2
	0.5nm,0.6s,baz=97,slow=3.1,SNR=4.6						

*TIR **02** 04:23:10.4, 41°.37N×20°.96E, h7km, Md2.7/5*
*THE **02** 04:23:11.5, 41°.30N×20°.84E, h14km±1km, ML2.3/2, Error ellipse: s-maj=3.0km s-min=1.5km az=247.0*
*SKO **02** 04:23:11.2, 41°.35N×20°.94E, h15km*
*ATH **02** 04:23:11.0, 41°.41N×20°.99E, h10km±4km, ML2.1/4, Error ellipse: s-maj=4.5km s-min=1.1km az=119.0*
*BEO **02** 04:23:12.5±0.3, 41°.33N×21°.01E, h0km, ML1.9/6*
ISC 02 04:23:11.3±1.1**,41°.34N**±0°.02×**20°.95E**±0°.02**,h3**km±10km**, n42,**σ**1s.42**/70**,2C,Albania**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OHR	Ohrid	0.26	207	⇑i Pg	Pg	04 23 17.1	+0.8
OHR				i Sg	Sb	04 23 21.6	-2.0
OHR				eLg	Lg	04 23 21.6	
	comp=N,571nm,0.3s						
OHR				eLg	Lg	04 23 21.9	
	comp=E,257nm,0.5s						
PHP	Peshkopia	0.51	312	P	Pg	04 23 20.6	-0.6
PHP	Peshkopia	0.51	312	i PG	Pg	04 23 20.7	-0.4
PHP				i SG	Sg	04 23 27.9	+0.1
FNA	Florina	0.65	150	P	Pg	04 23 24.1	+0.5
FNA				S	Sb	04 23 33.9	-0.8
	comp=E,520nm,0.3s						
FNA	Florina	0.65	150	i PG	Pg	04 23 24.1	+0.5
FNA				i SG	Sb	04 23 33.7	-1.0
FNA	Florina	0.65	150	P	Pg	04 23 24.1	+0.5
FNA				S	Sb	04 23 34.1	-0.6
FNA				AML	AML	04 23 36.2	
	comp=E,1127μm,0.3s						
FNA				AML	AML	04 23 37.8	
	comp=N,910μm,0.2s						
SKO	Skopje	0.73	30	ePg	Pb	04 23 26.2	-0.4
SKO				eSg	Sg	04 23 34.5	-0.1
SKO	Skopje	0.73	30	i Pg	Pb	04 23 26.2	-0.4
SKO				i Sg	Sb	04 23 35.7	-1.3
SKO				eLg	Lg	04 23 36.0	
	comp=E,6.2nm,0.2s						
SKO				eLg	Lg	04 23 36.1	
	comp=N,12nm,0.3s						
TIR	Tirane	0.82	271	i PG	Pg	04 23 26.9	-0.1
TIR				i SG	Sb	04 23 39.9	+0.3
TIR	Tirane	0.82	271	P	Pg	04 23 27.1	+0.1
TIR				S	Sb	04 23 39.3	-0.3
NEST	Nestorio	0.93	175	P	Pg	04 23 29.3	+0.2
NEST				S	Sg	04 23 40.6	-0.6
	comp=N,130nm,0.5s						
NEST	Nestorio	0.93	175	P	Pg	04 23 29.4	+0.2
NEST				S	Sn	04 23 44.3	-1.0
NEST				AML	AML	04 23 48.9	
	comp=E,182μm,0.4s						
NEST				AML	AML	04 23 49.5	
	comp=N,220μm,0.3s						
STIP	Stip	0.99	69	⇑i Pg	Pn	04 23 34.1	+2.0
STIP				i Sg	Sn	04 23 50.6	+3.9
STIP				eLg	Lg	04 23 51.5	
	comp=N,7.9nm,0.2s						
STIP				eLg	Lg	04 23 52.1	
	comp=E,8.5nm,0.3s						
PUK	Puka	1.06	312	i PG	Pg	04 23 30.3	-1.3
PUK				i SG	Sn	04 23 46.8	-1.6
PENT	Pentalofos	1.16	173	P	Pn	04 23 33.6	-0.9
GRG	Griva	1.16	109	P	Pn	04 23 33.8	-0.7
GRG				S	Sn	04 23 50.2	-0.7
GRG	Griva	1.16	109	P	Pb	04 23 33.3	-0.7
GRG				S	Sn	04 23 49.4	-1.5
GRG				AML	AML	04 23 51.2	
	comp=N,106μm,0.4s						
GRG				AML	AML	04 23 55.8	
	comp=E,67μm,0.2s						
KZN	Kozani	1.21	149	P	Pg	04 23 34.5	0.0
KZN				S	Sn	04 23 52.3	+0.2
KZN				AML	AML	04 23 56.6	
	comp=N,96μm,0.4s						
KZN				AML	AML	04 23 57.4	
	comp=E,142μm,0.5s						
BCI	Bajram Curri	1.22	327	i PN	Pb	04 23 34.1	-0.9
BCI				i SN	Sn	04 23 53.1	+0.8
KPRO	Kipourio	1.42	167	P	Pg	04 23 38.6	0.0
KPRO				S	Sg	04 23 59.9	+2.9
KNT	Kendrikon	1.48	96	P	Pb	04 23 38.6	-0.9
KNT				S	Sb	04 23 58.0	-0.6
BARS	Barje	1.60	23	ePn	Pb	04 23 41.2	-0.4
BARS				eSg	Sg	04 24 03.1	+0.2
BOSS	Bosilegrad	1.62	44	ePn	Pb	04 23 40.8	-1.1
BOSS				eSg	Sg	04 24 02.6	-0.7
PDG	Podgorica	1.67	311	ePn	Pg	04 23 43.5	+0.2
PDG				eSg	Sg	04 24 06.8	+1.9
KEK	Kerkira	1.85	209	P	Pb	04 23 45.7	-0.1
IGT	Igoumenitsa	1.87	195	P	Pg	04 23 46.5	-0.6
SELS	Selova	1.88	4	ePn	Pb	04 23 46.0	-0.3
SJES	Sjenica	2.05	340	ePn	Pb	04 23 48.7	-0.5
SJES				eSg	Sg	04 24 18.1	+1.0
ZAPS	Zavoj	2.30	32	ePn	Pb	04 23 51.7	-1.7
ZAPS				eSg	Sg	04 24 26.4	+1.3
IVAS	Ivanjica	2.31	345	ePn	Pb	04 23 51.9	-1.7
BOVS	Bovan	2.36	13	ePn	Pb	04 23 53.6	-0.8
DBRK	Dubrovnik	2.48	303	ePn	Pb	04 23 54.5	-1.9
DBRK				Sn	Sb	04 24 25.5	-1.8
GRUS	Gruza	2.55	356	ePn	Pb	04 23 56.1	-1.6
ZAGS	Zajecar	2.64	21	ePn	Pb	04 23 56.5	-2.8
DIVS	Divibare	2.84	346	ePn	Pn	04 23 58.9	+1.2
STON	Ston	2.86	303	ePn	Pb	04 24 01.1	-1.9
STON				Sn	Sb	04 24 35.0	-3.4
MAKA	Makarska	3.50	305	ePn	Pn	04 24 09.1	+2.4
MAKA				Sn	Sn	04 24 49.9	+1.3
HVAR	Hvar	3.81	300	ePn	Pn	04 24 13.3	+2.4
KIJV	Kijevo	4.28	310	ePn	Pn	04 24 19.5	+2.2
KIJV				Sn	Sn	04 25 10.9	+3.1
ZIRJ	Zirje	4.55	302	ePn	Pn	04 24 22.7	+1.7
MORI	Morici	4.62	305	ePn	Pn	04 24 23.0	+1.0
DUGI	Dugi Otok	5.09	303	ePn	Pn	04 24 29.7	+1.3

*JMA **02** 04:33:37.3±0.1, 23°.75N×122°.00E, h32km±2km, M2.9*
*TAP **02** 04:33:38.9, 23°.83N×121°.98E, h35km, ML3.5, C*
ISC 02 04:33:37.8±1.0**,23°.79N**±0°.02×**122°.02E**±0°.02**,h30**km±9km**, n109,**σ**0s.59**/190**,4D,Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.40	287	eP	Pb	04 33 46.4	-0.2
	baz=282						
HWA	Hwalien	0.42	296	eP	Pn	04 33 47.8	0.0
	baz=290						
TWD	Chiawan	0.48	307	⇓iP	Pb	04 33 48.1	+0.1
	baz=306						
TWD				eS	Sb	04 33 54.9	0.0
	baz=306						
ESL	Shilin	0.53	273	⇓P	Pb	04 33 48.9	+0.1
	baz=260						
ESL				eS	Sb	04 33 56.0	-0.3
	baz=260						
NACB	Ninganchiao	0.54	315	⇓eP	Pb	04 33 48.8	-0.2
	baz=311						
NACB				eS	Sb	04 33 56.1	-0.4
	baz=311						
EGFH	Guangfu	0.55	258	eP	Pn	04 33 49.7	+0.1
	baz=245						
EGFH				eS	Sn	04 33 57.8	0.0
	baz=245						
HGSD	Ruisui	0.62	241	eP	Pb	04 33 50.4	+0.3
	baz=229						
HGSD				eS	Sn	04 33 59.0	-0.4
	baz=229						
ETLH	Xiulin Townshi	0.64	311	eP	Pn	04 33 50.4	-0.5
	baz=309						
ETLH				eS	Sb	04 33 59.0	-0.4
	baz=309						
NANB	Nanao	0.68	339	eP	Pn	04 33 51.1	-0.3
	baz=332						
NANB				eS	Sn	04 34 00.1	-0.9
	baz=332						
ENA	Nanau	0.68	339	P	Pn	04 33 51.1	-0.3
	baz=331						
ENA				eS	Sn	04 34 00.2	-0.8
	baz=331						
EHY	Hungye	0.70	246	eP	Pb	04 33 51.6	+0.1
	baz=256						
EHY				eS	Sb	04 34 01.4	+0.6
	baz=256						
EOS1	EOS1	0.76	8	i P	Pn	04 33 52.7	+0.3
	baz=20						
EOS1				eS	Sn	04 34 02.5	-0.5
	baz=20						
WHF	Hehuan Shan	0.77	297	P	Pn	04 33 52.6	-0.4
	baz=288						
WHF				eS	Sn	04 34 03.1	-0.8
	baz=288						
OWD	Renai	0.79	282	eP	Pb	04 33 53.0	0.0
	baz=279						
OWD				eS	Sn	04 34 03.1	-0.6
	baz=279						
TWF1	Yuli	0.79	237	P	Pb	04 33 53.3	+0.2
	baz=246						
TWF1				eS	Sb	04 34 03.7	+0.3
	baz=246						
VWDT	VWDT	0.80	268	eP	Pb	04 33 53.6	+0.4
	baz=264						
VWDT				eS	Sb	04 34 04.0	+0.2
	baz=264						
CHGB	Renai	0.82	289	⇓eP	Pb	04 33 53.5	-0.1
	baz=287						
CHGB				eS	Sb	04 34 04.4	0.0
	baz=287						
TWC	Suao	0.83	349	P	Pb	04 33 53.8	+0.1
	baz=352						
TWC				eS	Sn	04 34 04.1	-0.6
	baz=352						
NNSH	Datong	0.86	318	eP	Pn	04 33 54.0	0.0
	baz=317						
NNSH				eS	Sn	04 34 04.7	-0.9
	baz=317						
NNS	Nan Shan	0.87	318	eP	Pn	04 33 54.3	+0.1
	baz=317						
NNS				eS	Sn	04 34 05.3	-0.6
	baz=317						
FULB	Fuli	0.89	229	eP	Pn	04 33 54.1	-0.1
	baz=214						
FULB				eS	Sb	04 34 05.9	-0.3
	baz=214						
TWT	Tachien	0.90	301	eP	Pb	04 33 55.0	+0.1
	baz=299						
TWT				eS	Sb	04 34 06.9	+0.3
	baz=299						
TDCB	Techi	0.91	301	eP	Pb	04 33 55.0	-0.2
	baz=299						
TDCB				eS	Sn	04 34 06.3	-0.6
	baz=299						
CHKT	Chengkung	0.91	221	eP	Pn	04 33 54.2	-0.3
	baz=208						
CHKT				eS	Sn	04 34 05.2	-1.4
	baz=208						
NDT	Datong Townshi	0.93	331	P	Pn	04 33 55.1	+0.3
	baz=331						
NDT				eS	Sn	04 34 06.8	-0.4
	baz=331						
ENTT	Nioudou	0.94	334	eP	Pn	04 33 55.1	+0.1
	baz=335						
ENTT				eS	Sn	04 34 07.1	-0.3
	baz=335						
SSLB	Suanglung	0.97	270	eP	Pb	04 33 55.8	-0.4
	baz=267						
SSLB				eS	Sb	04 34 08.6	-0.1
	baz=267						
TWE	Neicheng	0.98	341	eP	Pn	04 33 55.8	+0.3
	baz=343						
TWE				eS	Sn	04 34 08.4	0.0
	baz=343						
SLBB	Yuanshan	1.02	340	eP	Pn	04 33 55.6	-0.5
	baz=341						
SLBB				eS	Sn	04 34 09.3	-0.1
	baz=341						
YUS	Yu-Shan	1.02	253	P	Pb	04 33 57.2	0.0
	baz=250						
YUS				eS	Sb	04 34 09.9	-0.5
	baz=250						
DPDB	Guoxing	1.03	284	eP	Pb	04 33 57.0	0.0
	baz=275						
DPDB				eS	Sb	04 34 09.5	-0.7
	baz=275						
SMLT	Sun Moon Lake	1.03	275	P	Pb	04 33 57.0	0.0
	baz=273						
SMLT				eS	Sb	04 34 10.1	-0.1
	baz=273						
EGS		1.05	356	eP	Pb	04 33 57.5	0.0
	baz=9.0						
EGS				eS	Sn	04 34 09.8	-0.4
	baz=9.0						
YHNB	Yeheng	1.05	326	eP	Pb	04 33 57.1	-0.4
	baz=315						
YHNB				eS	Sn	04 34 09.5	-0.8
	baz=315						
NSK	Sanguang	1.07	326	P	Pb	04 33 57.3	-0.4
	baz=315						
NSK				eS	Sn	04 34 09.9	-0.7
	baz=315						
TYC	Yuchr	1.07	276	P	Pb	04 33 57.5	-0.2
	baz=274						
TYC				eS	Sb	04 34 10.5	-0.7
	baz=274						
WHYT	Xinyi Township	1.07	265	eP	Pb	04 33 58.0	+0.2
	baz=268						
JYNG	Yonagunijimaku	1.07	52	P	Pn	04 33 57.2	+0.4
JYNG				eS	Sn	04 34 10.8	+0.1
NWLT	Wulai	1.09	335	eP	Pn	04 33 57.5	+0.4
	baz=323						
NWLT				eS	Sn	04 34 11.0	-0.1
	baz=323						
WHP	Taichung City	1.09	297	eP	Pb	04 33 58.4	+0.2
	baz=295						
WHP				eS	Sb	04 34 11.9	-0.2
	baz=295						
ELDTW	Lidau	1.09	237	eP	Pn	04 33 56.6	-0.6
	baz=223						
ELDTW				eS	Sn	04 34 10.2	-1.1
	baz=223						
YOJ	Yonaguni jima	1.13	53	eP	Pn	04 33 57.9	+0.3
	baz=56						
YOJ				eS	Sn	04 34 12.7	+0.7
	baz=56						
YOJ	Yonaguni jima	1.13	53	P	Pn	04 33 58.0	+0.5
YOJ				S	Sn	04 34 12.2	+0.2
ALS	Alishan	1.14	256	P	Pb	04 33 59.3	+0.1
	baz=253						
ALS				eS	Sb	04 34 13.3	-0.5
	baz=253						
WJS	Zhushan	1.18	272	eP	Pb	04 33 59.3	-0.3
	baz=269						
WJS				eS	Sb	04 34 15.5	+1.0
	baz=269						
TWH	Lutao	1.18	205	eP	Pn	04 33 58.3	0.0
	baz=201						
TWH				eS	Sn	04 34 12.5	-0.8
	baz=201						
TIPB	Shuangxi	1.19	352	eP	Pb	04 33 59.4	-0.4
	baz=5.0						
TIPB				eS	Sn	04 34 14.0	+0.4
	baz=5.0						
TWB1	Santiao Chiao	1.21	359	eP	Pn	04 33 59.2	+0.5
	baz=1.0						
WNT	Mingjian	1.22	274	eP	Pb	04 34 00.8	+0.5
	baz=272						
WNT				eS	Sb	04 34 16.8	+1.1
	baz=272						
CHN5	Tsauling	1.24	261	P	Pb	04 34 01.0	+0.4
	baz=250						
CHN5				eS	Sb	04 34 16.0	-0.3
	baz=250						
LIOB	Emei	1.25	313	eP	Pb	04 34 00.8	0.0
	baz=312						
LIOB				eS	Sb	04 34 16.2	-0.3
	baz=312						
NSTT	Nanjuang	1.25	312	eP	Pb	04 34 00.8	+0.1
	baz=311						
NSTT				eS	Sb	04 34 15.9	-0.6
	baz=311						
TWA	Mucha	1.25	342	eP	Pn	04 33 60.0	+0.7
	baz=331						
TWA				eS	Sb	04 34 16.0	-0.5
	baz=331						
TWQ1	Liyutan	1.26	296	eP	Pb	04 34 01.5	+0.4
	baz=294						
TWQ1				eS	Sb	04 34 16.7	-0.2
	baz=294						
WLTB	Daxi	1.27	327	eS	Sb	04 34 16.6	-0.4
	baz=326						
TATO	Taipei	1.27	338	eS	Sb	04 34 16.4	-0.9
	baz=338						
TCU	Taichung	1.28	286	eP	Pb	04 34 01.6	+0.4
	baz=284						
TCU				eS	Sb	04 34 17.3	+0.1
	baz=284						
NWF	Wu-fen Shan	1.29	351	eP	Pb	04 34 01.0	-0.6
	baz=351						
NWF				eS	Sn	04 34 16.7	+0.5
	baz=351						
WFSB	Wu-fen Shan	1.29	351	eP	Pb	04 34 01.0	-0.5
	baz=351						
WFSB				eS	Sn	04 34 16.8	+0.7
	baz=351						
TWGBT	Beinan	1.29	222	eP	Pn	04 33 59.7	-0.1
	baz=229						
TWGBT				eS	Sn	04 34 15.4	-0.8
	baz=229						
TWG	Pinlang	1.30	222	eP	Pn	04 33 59.9	+0.1
	baz=229						
TWG				eS	Sn	04 34 15.3	-0.9
	baz=229						
NSY	Sanyi	1.30	299	eP	Pb	04 34 01.8	0.0
	baz=297						
NSY				eS	Sb	04 34 17.6	-0.6
	baz=297						
WGK	Gukeng	1.34	266	eP	Pb	04 34 01.5	-0.7
	baz=264						
NMLH	Miaoli	1.34	304	eP	Pb	04 34 02.5	+0.1
	baz=302						
NMLH				eS	Sb	04 34 19.3	+0.1
	baz=302						
TPUB	Ta-pu	1.36	249	eP	Pb	04 34 02.8	+0.1
	baz=246						
TPUB				eS	Sb	04 34 19.7	-0.1
	baz=246						
PTSB	Yuanli	1.36	299	eS	Sb	04 34 20.1	+0.3
	baz=297						
WCHH	Zhanghua	1.36	283	eP	Pb	04 34 02.7	0.0
	baz=280						
WCHH				eS	Sb	04 34 20.8	+1.0
	baz=280						
SBCB	Hsinchu	1.37	317	eS	Sb	04 34 20.0	0.0
	baz=316						
CHN4	Tsaushan	1.38	252	eP	Pb	04 34 03.2	+0.3
	baz=249						
CHN4				eS	Sb	04 34 20.8	+0.6
	baz=249						
HSN	Hsinchu	1.39	317	eS	Sb	04 34 20.3	-0.2
	baz=318						
WTP	Ta-pu	1.40	247	eP	Pb	04 34 03.3	+0.1
	baz=244						
WTP				eS	Sb	04 34 20.8	+0.1
	baz=244						
NCUH	Zhongli	1.40	327	eS	Sb	04 34 19.6	-1.1
	baz=327						
NCU	National Centr	1.40	327	eS	Sn	04 34 19.4	+0.7
	baz=327						
YM01	YM01	1.41	343	eP	Pn	04 34 02.4	+0.9
	baz=328						
YM01				eS	Sn	04 34 19.6	+0.6
	baz=328						
TWS1	Kuangyinshan	1.41	337	eP	Pb	04 34 02.8	-0.7
	baz=338						
TWS1				eS	Sb	04 34 20.4	-0.9
	baz=338						
YM10	YM10	1.42	343	eP	Pn	04 34 02.4	+0.8
	baz=328						
YM10				eS	Sn	04 34 20.0	+0.7
	baz=328						
YM04	YM04	1.43	342	P	Pb	04 34 03.2	-0.6
	baz=327						
YM04				eS	Sn	04 34 19.6	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=327						
YM05	**YM05**	**1.43**	**343**	*e*P	**Pn**	**04 34 02.8**	**+1.0**
	baz=328						
YM11	**YM11**	**1.43**	**344**	*e*P	**Pn**	**04 34 02.5**	**+0.8**
	baz=328						
YM08	**YM08**	**1.45**	**345**	*e*P	**Pn**	**04 34 02.6**	**+0.7**
	baz=329						
SLGT	**Liugui**	**1.49**	**238**	*e*P	**Pb**	**04 34 04.5**	**-0.4**
	baz=227						
CHN1	**Nanshi**	**1.49**	**247**	*e*P	**Pb**	**04 34 04.9**	**0.0**
	baz=244						
CHN1				*e*S	**Sb**	**04 34 23.8**	**+0.3**
	baz=244						
SGST	**Jiashian**	**1.49**	**242**	*e*P	**Pb**	**04 34 05.1**	**+0.2**
	baz=229						
SGST				*e*S	**Sb**	**04 34 24.0**	**+0.6**
	baz=229						
TWK	**Hsinying**	**1.50**	**250**	*e*P	**Pb**	**04 34 04.5**	**-0.5**
	baz=247						
TWK				*e*S	**Sb**	**04 34 24.1**	**+0.6**
	baz=247						
SNST	**Tainan City**	**1.50**	**248**	*e*P	**Pb**	**04 34 05.5**	**+0.4**
	baz=245						
SNST				*e*S	**Sb**	**04 34 24.8**	**+0.9**
	baz=245						
RLNB	**Erlin**	**1.52**	**274**	*e*P	**Pb**	**04 34 05.3**	**-0.1**
	baz=272						
RLNB				*e*S	**Sb**	**04 34 24.3**	**+0.1**
	baz=272						
TWY	**Chenhua**	**1.53**	**346**	*e*P	**Pb**	**04 34 04.5**	**-0.9**
	baz=347						
SSD	**Sandimen**	**1.64**	**231**	*e*P	**Pb**	**04 34 06.1**	**-1.3**
	baz=224						
SSD				*e*S	**Sb**	**04 34 27.0**	**-0.7**
	baz=224						
WSF	**Szhu**	**1.65**	**265**	*e*S	**Sb**	**04 34 28.0**	**0.0**
	baz=262						
HATJ	**Hateruma jima**	**1.66**	**80**	P	**Pn**	**04 34 05.3**	**+0.5**
HATJ				S	**Sn**	**04 34 25.1**	**0.0**
IRIF	**Iriomote-Funau**	**1.66**	**71**	P	**Pn**	**04 34 05.6**	**+0.8**
IRIF				S	**Sn**	**04 34 25.6**	**+0.5**
MASBT	**Mashibuluo**	**1.73**	**228**	*e*P	**Pn**	**04 34 07.0**	**+1.2**
	baz=223						
MASBT				*e*S	**Sb**	**04 34 29.1**	**-1.2**
	baz=223						
LAY	**Lan-yu**	**1.79**	**194**	*e*P	**Pn**	**04 34 05.5**	**-1.2**
	baz=182						
JKRS	**Kuro-shima**	**1.88**	**76**	P	**Pn**	**04 34 08.8**	**+1.0**
JKRS				S	**Sn**	**04 34 31.2**	**+0.7**
SCZT	**Fangliau**	**1.91**	**223**	*e*P	**Pn**	**04 34 08.8**	**+0.5**
	baz=216						
JIJ	**Ishigaki jima**	**2.03**	**73**	P	**Pn**	**04 34 10.1**	**+0.2**
JIJ				S	**Sn**	**04 34 33.2**	**-1.0**
WDGT	**Dungji**	**2.23**	**257**	*e*P	**Pn**	**04 34 14.0**	**+1.4**
	baz=254						
WDGT				*e*S	**Sn**	**04 34 40.3**	**+1.2**
	baz=254						
JISG	**Ishigakijimahi**	**2.24**	**69**	P	**Pn**	**04 34 12.9**	**+0.1**
JISG				*e*S	**Sn**	**04 34 37.9**	**-1.6**
PHUB	**P'eng-hu**	**2.26**	**263**	*e*P	**Pn**	**04 34 14.3**	**+1.2**
	baz=248						
PHUB				*e*S	**Sn**	**04 34 40.5**	**+0.6**
	baz=248						
PNG	**Penghu**	**2.27**	**265**	*e*P	**Pn**	**04 34 14.7**	**+1.5**
	baz=262						
PNG				*e*S	**Sn**	**04 34 41.2**	**+1.1**
	baz=262						
VCHM	**Qimei**	**2.44**	**257**	*e*P	**Pn**	**04 34 17.0**	**+1.4**
	baz=255						
JTJ	**Tarama**	**2.59**	**70**	P	**Pn**	**04 34 18.1**	**+0.4**
JTJ				*e*S	**Sn**	**04 34 48.7**	**+0.5**
VWUC	**VWUC**	**2.63**	**298**	*e*P	**Pn**	**04 34 18.4**	**+0.3**
	baz=297						
PTMZ	**Houxiangcun**	**2.92**	**296**	*e*P	**Pn**	**04 34 22.4**	**+0.2**
	baz=295						
MATB	**Ma-tsu**	**3.01**	**322**	*e*P	**Pn**	**04 34 23.2**	**-0.3**
	baz=321						
JMJ	**Miyako jima 2**	**3.16**	**70**	*e*P	**Pn**	**04 34 26.5**	**+1.0**
	baz=72						
JMJ2	**Miyako jima3**	**3.17**	**72**	P	**Pn**	**04 34 26.5**	**+0.9**
KNMB	**Chin-men Tao**	**3.38**	**282**	*e*P	**Pn**	**04 34 29.1**	**+0.6**
	baz=281						
AXDP	**Jialang**	**3.85**	**288**	*e*P	**Pn**	**04 34 35.4**	**+0.4**
	baz=286						

*IDC **02** 04:54:39.9±1.1, 54°.23S×5°.99E, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.9/30, mbtmp4.0/7, ML3.5/1, MS3.5/9, Ms1 3.5/9, ms1mx3.3/29, Error ellipse: s-maj=40.0km s-min=23.8km az=67.0*

*NEIC **02** 04:54:41.1±1.1, 54°.4S±0°.2×5°.5E±0°.3, h15km±3km, mb4.6/8, Error ellipse: s-maj=25.2km s-min=23.5km az=73.0*

ISC 02 04:54:41.5±0.9**, 54°.4S**±0°.1×**5°.5E**±0°.2**, h10**km**, n34,** σ1s73/21**, mb4.4**/7**, MS3.6**/8**, 1C, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.46**	**195**	P	**Pn**	**04 58 46.1**	**+1.5**
SNAA	**Sanae**	**17.75**	**189**	P	**Pn**	**04 58 48.8**	**+0.4**
SNAA	**Sanae**	**17.75**	**189**	P	**Pn**	**04 58 48.6**	**+0.2**
	0.2nm,0.3s,baz=5.7,slow=14,SNR=22						
SNAA				LR	LR	05 04 08.0	
	comp=Z,177nm,20.1s,baz=305,slow=32						
SNAA	**Sanae**	**17.75**	**189**	P	**Pn**	**04 58 46.0**	**-2.4**
SYO	**Syowa Base**	**21.43**	**146**	⥣*i*pPn	**P**	**04 59 31.1**	**+2.0**
BOSA	**Boshof**	**29.48**	**37**	LR	LR	05 10 47.0	
	comp=Z,129nm,18.5s,baz=223,slow=33						
MAW	**Mawson**	**29.58**	**139**	LR	LR	05 10 46.8	
	comp=Z,48nm,20.7s,baz=244,slow=33						
QSPA	**South Pole Qui**	**35.88**	**180**	P	**P**	**05 01 41.8**	**+0.5**
	1.9nm,0.7s,baz=235,slow=3.6,SNR=4.0						
QSPA	**South Pole Qui**	**35.88**	**180**	P	**P**	**05 01 39.4**	**-1.9**
QSPA				IAmb	IAmb	05 01 44.7	
	comp=Z,8.7nm,1.3s						
EFI	**East Falkland**	**37.16**	**247**	P	**P**	**05 01 51.4**	**-0.7**
VNDA	**Vanda**	**47.57**	**173**	P	**P**	**05 03 18.1**	**+1.6**
	comp=Z,2.1nm,0.9s,baz=220,slow=5.2,SNR=5.1						
VNDA	**Vanda**	**47.57**	**173**	P	**P**	**05 03 15.4**	**-1.1**
VNDA				IAmb	IAmb	05 03 23.8	
	comp=Z,7.3nm,1.4s						
GO06	**Curarrehue**	**51.91**	**253**	P	**P**	**05 03 48.7**	**-1.5**
GO06				IAmb	IAmb	05 03 50.0	
	comp=Z,16nm,1.4s						
CPUP	**Villa Florida**	**53.28**	**275**	P	**P**	**05 04 04.0**	**+3.7**
	comp=Z,2.7nm,1.0s,baz=155,slow=4.4,SNR=4.5						
CPUP				LR	LR	05 25 22.7	
	comp=Z,40nm,18.8s,baz=191,slow=34						
CPUP	**Villa Florida**	**53.28**	**275**	P	**P**	**05 04 00.5**	**+0.2**
CPUP				IAmb	IAmb	05 04 01.1	
	comp=Z,18nm,1.6s						
KMBO	**Kilima Mbogo**	**59.12**	**38**	LR	LR	05 27 48.6	
	comp=Z,67nm,20.9s,baz=95,slow=34						
DBIC	**Dimbokro**	**61.41**	**348**	LR	LR	05 26 28.8	
	comp=Z,31nm,18.0s,baz=219,slow=31						
SIV	**San Ignacio**	**63.50**	**280**	LR	LR	05 28 36.6	
	comp=Z,41nm,20.8s,baz=97,slow=32						
TORD	**Torodi Ar. Bea**	**67.31**	**356**	P	**P**	**05 05 35.7**	**-0.5**
	comp=Z,0.2nm,0.8s,baz=162,slow=0.9,SNR=2.1						
TORD	**Torodi Ar. Bea**	**67.31**	**356**	P	**P**	**05 05 35.6**	**-0.7**
LPAZ	**La Paz**	**67.37**	**274**	P	**P**	**05 05 38.9**	**+1.4**
	comp=Z,1.4nm,0.7s,baz=190,slow=2.4,SNR=8.4						
LPAZ	**La Paz**	**67.37**	**274**	P	**P**	**05 05 36.3**	**-1.2**
LPAZ				IAmb	IAmb	05 05 40.2	
	comp=Z,3.9nm,1.2s						
H08N3	**Diego Garcia H**	**70.73**	**73**	T	T	06 23 23.1	
	baz=214						
H08N1	**Diego Carcia H**	**70.75**	**73**	T	T	06 23 25.4	
	baz=214,slow=74,SNR=7.6						
H08N2	**Diego Garcia H**	**70.75**	**73**	T	T	06 23 25.4	
	baz=214,slow=74,SNR=8.2						
H01W2	**Cape Leeuwin H**	**72.08**	**125**	T	T	06 25 45.4	
	baz=216,slow=75,SNR=13						
H01W3	**Cape Leeuwin H**	**72.09**	**125**	T	T	06 25 38.2	
	baz=216,slow=75,SNR=13						
H01W1	**Cape Leeuwin H**	**72.09**	**125**	T	T	06 25 39.2	
	baz=216,slow=75,SNR=12						
NNA	**Nana**	**75.88**	**269**	LR	LR	05 37 14.5	
	comp=Z,31nm,21.4s,baz=158,slow=34						
MDP	**Montagnes des**	**76.32**	**300**	LR	LR	05 35 30.0	
	comp=Z,47nm,21.8s,baz=200,slow=32						
ASAR	**Alice Springs**	**90.58**	**134**	P	**P**	**05 07 43.6**	**-0.3**
	comp=Z,1.0nm,0.8s,baz=202,slow=4.0,SNR=7.8						
ASAR	**Alice Springs**	**90.58**	**134**	P	**P**	**05 07 42.3**	**-1.6**
YKA	**Yellowknife Ar**	**148.68**	**309**	PKPbc	**PKPdf**	**05 14 26.6**	**+3.0**
	comp=Z,1.8nm,0.8s,baz=100,slow=2.6,SNR=27						
YKA	**Yellowknife Ar**	**148.68**	**309**	PKPdf	**PKPdf**	**05 14 22.3**	**-1.2**

*NEIC **02** 05:29:18.5±5.3, 34°.89N±0°.05×24°.23E±0°.04, h12km±2km, Error ellipse: s-maj=7.2km s-min=4.9km az=157.0*

*HLW **02** 05:29:18.2, 34°.97N×24°.48E, h16km±25km, Ml4.1*

*IDC **02** 05:29:20.4±1.3, 35°.08N×24°.31E, h35km±10km, mb3.8/16, mb1 3.9/24, mb1mx3.8/43, mbtmp4.0/24, ML3.8/7, MS3.0/5, Ms1 3.0/5, ms1mx2.7/51, Error ellipse: s-maj=17.1km s-min=13.2km az=165.0*

*ATH **02** 05:29:21.4, 35°.06N×24°.37E, h39km±1km, ML3.9/20, Error ellipse: s-maj=2.2km s-min=1.0km az=192.0*

*ISK **02** 05:29:22.1, 35°.06N×24°.40E, h26km, ML4.2/11*

*THE **02** 05:29:23.2, 35°.07N×24°.40E, h17km±1km, ML4.0/4, Error ellipse: s-maj=1.2km s-min=0.6km az=225.0*

*GII **02** 05:29:26.9±0.0, 34°.82N×25°.13E, h30km, mb4.4/2, MD4.2/2*

ISC 02 05:29:21.3±0.6**, 34°.97N**±0°.04×**24°.33E**±0°.03**, h41**km±7km**, n216,** σ2s06/249**, mb3.9**/23**, 15C-7D, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.24**	**236**	P	**Pn**	**05 29 29.8**	**+0.8**
GVD				S	**Sn**	**05 29 36.8**	**+2.4**
	68μm,0.5s						
GVD	**Gavdhos**	**0.24**	**236**	P	**Pn**	**05 29 29.7**	**+0.8**
GVD				S	**Sn**	**05 29 36.5**	**+2.1**
GVD				AML	AML	05 29 38.9	
GVD				AML	AML	05 29 39.6	
GVD	**Gavdhos**	**0.24**	**236**	PG	**Pn**	**05 29 29.9**	**+0.9**
GVD				SG	**Sn**	**05 29 36.5**	**+2.1**
GVD	**Gavdhos**	**0.24**	**236**		**Pn**	**05 29 29.8**	**+0.8**
TMBK	**Timbaki Herakl**	**0.37**	**75**	P	**Pn**	**05 29 29.6**	**-0.8**
TMBK				S	**Sn**	**05 29 34.3**	**-2.6**
	23μm,0.5s						
TMBK	**Timbaki Herakl**	**0.37**	**75**		**Pn**	**05 29 29.6**	**-0.8**
TMBK					**Sn**	**05 29 34.3**	**-2.6**
SIVA	**Sivas**	**0.40**	**83**	P	**Pn**	**05 29 30.2**	**-0.5**
SIVA				S	**Sn**	**05 29 37.6**	**+0.2**
SIVA				AML	AML	05 29 39.3	
SIVA				AML	AML	05 29 40.4	
VAM	**Vamos**	**0.45**	**346**	P	**Pn**	**05 29 31.2**	**-0.2**
VAM				S	**Sn**	**05 29 37.4**	**-1.1**
	38μm,0.5s						
VAM	**Vamos**	**0.45**	**346**	P	**Pn**	**05 29 31.1**	**-0.3**
VAM				S	**Sn**	**05 29 37.6**	**-0.9**
VAM				AML	AML	05 29 40.7	
	comp=N,69826μm,0.3s						
VAM				AML	AML	05 29 42.1	
	comp=E,93160μm,0.6s						
VAM	**Vamos**	**0.45**	**346**		**Pn**	**05 29 31.2**	**-0.2**
IDI	**Anoyia**	**0.56**	**56**	Pg	**Pn**	**05 29 32.2**	**-0.7**
	comp=E,706nm,0.3s,baz=210,slow=13,SNR=2753						
IDI				Lg	Lg	05 29 40.0	
	comp=E,1μm,0.3s,baz=144,slow=19,SNR=68						
IDI	**Anoyia**	**0.56**	**56**	P	**Pn**	**05 29 32.2**	**-0.7**
IDI				S	**Sn**	**05 29 40.1**	**-1.1**
IDI				AML	AML	05 29 42.1	
	comp=E,35771μm,0.5s						
IDI				AML	AML	05 29 42.3	
	comp=N,44947μm,0.6s						
IDI	**Anoyia**	**0.56**	**56**	PG	**Pn**	**05 29 32.2**	**-0.7**
IDI				SG	**Sn**	**05 29 40.2**	**-0.9**
IMMV	**Iera Moni Meta**	**0.56**	**330**	P	**Pn**	**05 29 33.2**	**+0.3**
IMMV	**Iera Moni Meta**	**0.56**	**330**	P	**Pn**	**05 29 33.2**	**+0.3**
IMMV				S	**Sn**	**05 29 41.7**	**+0.6**
IMMV				AML	AML	05 29 45.1	
	comp=N,58086μm,0.4s						
IMMV				AML	AML	05 29 45.5	
	comp=E,59154μm,0.4s						
IMMV	**Iera Moni Meta**	**0.56**	**330**	PG	**Pn**	**05 29 33.3**	**+0.3**
IMMV				SG	**Sn**	**05 29 42.3**	**+1.1**
IMMV	**Iera Moni Meta**	**0.56**	**330**		**Pn**	**05 29 33.2**	**+0.3**
CHAN	**Chania**	**0.59**	**337**	P	**Pn**	**05 29 33.7**	**+0.4**
CHAN	**Chania**	**0.59**	**337**		**Pn**	**05 29 33.7**	**+0.4**
KSTL	**Kastelli Herak**	**0.69**	**61**	P	**Pn**	**05 29 37.6**	**+3.0**
IACM	**Heraklion**	**0.69**	**61**	P	**Pn**	**05 29 34.5**	**-0.1**
IACM				S	**Sn**	**05 29 44.6**	**+0.3**
IACM	**Heraklion**	**0.69**	**61**	P	**Pn**	**05 29 34.7**	**+0.1**
IACM				S	**Sn**	**05 29 44.6**	**+0.3**
HRKL	**Herakleio**	**0.72**	**62**	P	**Pn**	**05 29 35.0**	**0.0**
HRKL	**Herakleio**	**0.72**	**62**	PG	**Pn**	**05 29 34.9**	**0.0**
RODP	**Rodopos**	**0.75**	**322**	P	**Pn**	**05 29 36.7**	**+1.3**
RODP	**Rodopos**	**0.75**	**322**	PG	**Pn**	**05 29 36.6**	**+1.2**
LAST	**Lasithi**	**0.96**	**78**	P	**Pn**	**05 29 39.3**	**+0.9**
LAST				S	**Sn**	**05 29 52.5**	**+1.5**
	comp=E,6μm,0.8s						
LAST	**Lasithi**	**0.96**	**78**	P	**Pn**	**05 29 39.2**	**+0.8**
LAST				S	**Sn**	**05 29 52.2**	**+1.2**
LAST				AML	AML	05 29 57.3	
	comp=N,13186μm,0.9s						
LAST				AML	AML	05 29 57.9	
	comp=E,12962μm,0.8s						
NPS	**Neapolis**	**1.09**	**74**	P	**Pn**	**05 29 41.5**	**+1.4**
NPS	**Neapolis**	**1.09**	**74**	P	**Pn**	**05 29 41.6**	**+1.4**
NPS				S	**Sn**	**05 29 56.3**	**+2.2**
NPS				AML	AML	05 30 02.7	
	comp=N,11604μm,0.7s						
NPS				AML	AML	05 30 04.5	
	comp=E,18952μm,0.7s						
FRMA	**Ierapetra Chan**	**1.16**	**88**	P	**Pn**	**05 29 43.9**	**+3.0**
ANKY	**Antikythira Is**	**1.22**	**317**	P	**Pn**	**05 29 43.8**	**+1.9**
ANKY				S	**Sn**	**05 30 00.0**	**+2.8**
ANKY				AML	AML	05 30 08.4	
	comp=N,9843μm,0.5s						
ANKY				AML	AML	05 30 18.2	
	comp=E,9263μm,0.6s						
ZKR	**Zakros**	**1.56**	**84**	P	**Pn**	**05 29 48.4**	**+1.9**
ZKR				S	**Sn**	**05 30 08.4**	**+2.9**
ZKR				AML	AML	05 30 19.7	
	comp=N,3132μm,1.1s						
ZKR				AML	AML	05 30 24.7	
	comp=E,9726μm,1.1s						
ZKR	**Zakros**	**1.56**	**84**	PN	**Pn**	**05 29 48.3**	**+1.8**
THR6	**Thira Island,**	**1.63**	**32**	P	**Pn**	**05 29 48.8**	**+1.3**
THR6	**Thira Island,**	**1.63**	**32**	P	**Pn**	**05 29 48.7**	**+1.2**
KTHA	**Kythira Island**	**1.64**	**322**	P	**Pn**	**05 29 49.4**	**+1.7**
KTHA				S	**Sn**	**05 30 10.5**	**+2.9**
KTHA				AML	AML	05 30 18.4	
	comp=N,4427μm,0.7s						
KTHA				AML	AML	05 30 21.2	
	comp=E,6908μm,0.6s						
THR5	**Thira Island,**	**1.66**	**30**	P	**Pn**	**05 29 48.9**	**+0.9**
THR5	**Thira Island,**	**1.66**	**30**	P	**Pn**	**05 29 48.8**	**+0.9**
SANT	**Santorini**	**1.67**	**33**	P	**Pn**	**05 29 48.2**	**+0.1**
SANT				AML	AML	05 30 20.7	
	comp=N,1468μm,0.6s						
SANT				AML	AML	05 30 29.6	
	comp=E,4179μm,0.5s						
SANT	**Santorini**	**1.67**	**33**	⥣P	**Pn**	**05 29 49.9**	**+1.8**
SANT	**Santorini**	**1.67**	**33**	⥣S	**Sn**	**05 30 10.8**	**+2.5**
SANT	**Santorini**	**1.67**	**33**	PN	**Pn**	**05 29 48.8**	**+0.7**
SANT	**Santorini**	**1.67**	**33**		**Pn**	**05 29 49.0**	**+0.9**
SANT				Sn	**Sn**	**05 30 10.2**	**+1.8**
THR3	**Thira Island,**	**1.68**	**31**	P	**Pn**	**05 29 48.9**	**+0.8**
SAP2K	**Karterados**	**1.70**	**32**	P	**Pn**	**05 29 49.5**	**+1.1**
THR7	**Fira-Santorini**	**1.70**	**31**	P	**Pn**	**05 29 50.5**	**+2.0**
THT2	**Imerovigli**	**1.71**	**31**	P	**Pn**	**05 29 49.8**	**+1.2**
THT2	**Imerovigli**	**1.71**	**31**	PN	**Pn**	**05 29 49.5**	**+0.9**
THR8	**Santorini-Mono**	**1.71**	**33**	P	**Pn**	**05 29 48.9**	**+0.3**
MHLO	**Agia Marina, M**	**1.71**	**2**	P	**Pn**	**05 29 49.6**	**+1.0**
MHLO				AML	AML	05 30 17.9	
	comp=N,18257μm,0.6s						
MHLO				AML	AML	05 30 21.2	
	comp=E,15027μm,0.4s						
MHLA	**Plaka, Milos I**	**1.77**	**2**	P	**Pn**	**05 29 50.3**	**+0.9**
MHLA				AML	AML	05 30 29.2	
	comp=N,9149μm,1.0s						
MHLA				AML	AML	05 30 36.8	
	comp=E,8363μm,1.2s						
IOSP	**Ios island**	**1.91**	**24**	P	**Pn**	**05 29 51.6**	**+0.2**
IOSP				AML	AML	05 30 27.3	
	comp=N,3560μm,0.5s						
IOSP				AML	AML	05 30 32.8	
	comp=E,3622μm,0.5s						
VLI	**Veliai**	**2.08**	**327**	P	**Pn**	**05 29 54.8**	**+1.2**
VLI				S	**Sn**	**05 30 18.6**	**+0.4**
VLI				AML	AML	05 30 35.9	
	comp=N,2184μm,0.8s						
VLI				AML	AML	05 30 48.5	
	comp=E,2175μm,0.8s						
AMGA	**Amorgos Island**	**2.25**	**34**	P	**Pn**	**05 29 56.6**	**+0.6**
AMGA				AML	AML	05 30 43.1	
	comp=N,2162μm,0.6s						
AMGA				AML	AML	05 30 44.1	
	comp=E,1614μm,0.7s						
APE	**Apeiranthos**	**2.31**	**25**	P	**Pn**	**05 29 56.8**	**0.0**
APE				AML	AML	05 30 29.0	
	comp=N,682μm,0.4s						
APE				AML	AML	05 30 34.4	
	comp=E,1167μm,0.4s						
APE	**Apeiranthos**	**2.31**	**25**	⥥P	**Pn**	**05 29 57.5**	**+0.7**
APE	**Apeiranthos**	**2.31**	**25**	⥣S	**Sn**	**05 30 25.3**	**+1.3**
APE	**Apeiranthos**	**2.31**	**25**	PN	**Pn**	**05 29 57.9**	**+1.1**
KARP	**Karpathos**	**2.39**	**75**	P	**Pn**	**05 29 59.2**	**+1.3**
KARP	**Karpathos**	**2.39**	**75**	PN	**Pn**	**05 29 59.8**	**+1.9**
KARP	**Karpathos**	**2.39**	**75**		**Pn**	**05 30 00.5**	**+2.5**
DID	**Didima**	**2.68**	**341**	P	**Pn**	**05 30 02.8**	**+0.9**
DID				AML	AML	05 30 41.2	
	comp=E,1527μm,0.5s						
DID				AML	AML	05 30 44.5	
	comp=N,1426μm,0.6s						
PYL	**PYLOS**	**2.84**	**313**	P	**Pn**	**05 30 04.2**	**0.0**
VLX	**Vlachokerasia**	**2.87**	**327**	P	**Pn**	**05 30 06.5**	**+2.0**
VLX				AML	AML	05 30 59.7	
	comp=N,1089μm,0.7s						
VLX				AML	AML	05 31 01.8	
	comp=E,991μm,0.6s						
VLY	**Voula,Athens**	**2.91**	**352**	P	**Pn**	**05 30 05.5**	**+0.4**
ITM	**Ithomi**	**2.94**	**319**	P	**Pn**	**05 30 06.4**	**+1.0**
ITM	**Ithomi**	**2.94**	**319**		**Pn**	**05 30 06.7**	**+1.3**
ATH	**Athens Observa**	**3.03**	**351**	P	**Pn**	**05 30 07.0**	**+0.3**
PTL	**Penteli**	**3.09**	**353**	P	**Pn**	**05 30 08.0**	**+0.4**
DAT	**Datca**	**3.17**	**55**	PN	**Pn**	**05 30 10.3**	**+1.6**
BODT	**Bodrum**	**3.19**	**48**	PN	**Pn**	**05 30 10.6**	**+1.6**
AMT	**Artemida-Makis**	**3.32**	**321**	P	**Pn**	**05 30 11.9**	**+1.3**
AMT				AML	AML	05 30 47.8	
	comp=N,875μm,0.7s						
AMT				AML	AML	05 31 01.8	
	comp=E,1030μm,0.8s						
ARG	**Arkhangelos**	**3.33**	**67**	P	**Pn**	**05 30 12.0**	**+1.1**
ARG	**Arkhangelos**	**3.33**	**67**	PN	**Pn**	**05 30 11.9**	**+1.0**
KLV	**Kalavryta, Ach**	**3.53**	**331**	P	**Pn**	**05 30 14.7**	**+1.1**
SLUM	**Salum**	**3.55**	**168**	P	**Pn**	**05 30 14.1**	**+0.2**
	baz=169						
SLUM				S	**Sn**	**05 30 51.5**	**-3.1**
	baz=169						
DRO	**Drossia**	**3.65**	**325**	P	**Pn**	**05 30 17.0**	**+1.8**
YER	**Yerkesik**	**3.86**	**55**	PN	**Pn**	**05 30 20.2**	**+2.0**
SERG	**Sergoula**	**3.89**	**333**	P	**Pn**	**05 30 19.4**	**+0.9**
TURN	**Turunc**	**3.95**	**60**	PN	**Pn**	**05 30 16.4**	**-3.0**
AGG	**Agios Georgios**	**4.35**	**339**		**Pn**	**05 30 26.4**	**+1.6**
ELL	**Elmali**	**4.87**	**67**		**Pn**	**05 30 33.0**	**+1.0**
ELL				Sn	**Sn**	**05 31 28.6**	**+1.4**
EZN	**Ezine**	**5.10**	**18**	⥣P	**Pn**	**05 30 35.6**	**+0.6**
LIT	**Litokhoron**	**5.32**	**345**		**Pn**	**05 30 39.9**	**+1.7**
SWA2		**5.79**	**170**	P	**Pn**	**05 30 44.3**	**-0.4**
	baz=171						
SWA2				S	**Sn**	**05 31 46.7**	**-3.1**
	baz=171						
ALN	**Alexandroupoli**	**6.07**	**12**	Pn	**Pn**	**05 30 49.5**	**+1.1**
FNA	**Florina**	**6.25**	**339**		**Pn**	**05 30 51.2**	**+0.2**
FNA				Sn	**Sn**	**05 32 00.5**	**-0.7**
YLV	**Yalova**	**6.87**	**34**	⥥P	**Pn**	**05 31 00.8**	**+1.4**
SCTE	**Santa Cesarea**	**6.90**	**319**		**Pn**	**05 30 59.5**	**-0.3**
STIP	**Stip**	**6.92**	**347**	*i* Pn	**Pn**	**05 31 02.3**	**+2.2**
TIR	**Tirane**	**7.27**	**332**	⥣P	**Pn**	**05 31 02.8**	**-2.1**
TIR	**Tirane**	**7.27**	**332**	⥥S	**Sn**	**05 32 22.0**	**-4.1**
TIR	**Tirane**	**7.27**	**332**	Pn	**Pn**	**05 31 05.6**	**+0.7**
TIR				Sn	**Sn**	**05 32 25.7**	**-0.4**
TIP	**Timpagrande**	**7.36**	**307**	⥥P	**Pn**	**05 31 04.5**	**-1.8**
TIP	**Timpagrande**	**7.36**	**307**	⥣S	**Sn**	**05 32 24.6**	**-3.9**
TIP	**Timpagrande**	**7.36**	**307**		**Pn**	**05 31 08.9**	**+2.7**
CSS	**Mathiatis**	**7.39**	**88**		**Pn**	**05 31 04.2**	**-2.4**
SILT	**Sile**	**7.46**	**33**	⥣P	**Pn**	**05 31 09.0**	**+1.5**
HNAT	**Natroun**	**7.53**	**133**	P	**Pn**	**05 31 07.1**	**-1.4**
	baz=134						
HNAT				AMP		05 32 00.0	
	baz=134						
HNAT				S	**Sn**	**05 32 27.3**	**-5.3**
	baz=134						
CEL	**Celeste**	**7.53**	**298**	Pn	**Pn**	**05 31 11.2**	**+2.7**
CEL				Sn	**Sn**	**05 32 31.1**	**-1.6**
VTS	**Vitosha**	**7.68**	**354**	⥣P	**Pn**	**05 31 09.5**	**-1.2**
VTS	**Vitosha**	**7.68**	**354**		**Pn**	**05 31 11.3**	**+0.6**
DRME	**Dracevica, Mon**	**8.25**	**332**	*e*Pn	**Pn**	**05 31 15.7**	**-2.6**
MATE	**Matera**	**8.27**	**315**	⥣P	**Pn**	**05 31 17.1**	**-1.6**
MATE	**Matera**	**8.27**	**315**	⥣S	**Sn**	**05 32 45.8**	**-4.9**
ANTO	**Ankara**	**8.32**	**52**	P	**Pn**	**05 31 22.1**	**+2.7**
VAE	**Valguarnera**	**8.39**	**290**	Sn	**Sn**	**05 32 50.9**	**-3.0**
	comp=E,2.7nm,0.3s,baz=170,slow=11,SNR=3.4						
PLVB	**Pleven**	**8.40**	**1**	⥣S	**Sn**	**05 32 50.5**	**-3.5**
PDG	**Podgorica**	**8.43**	**333**	⥣P	**Pn**	**05 31 19.1**	**-1.8**
PDG	**Podgorica**	**8.43**	**333**	⥥S	**Sn**	**05 32 52.1**	**-2.6**
PDG	**Podgorica**	**8.43**	**333**	Pn	**Pn**	**05 31 19.4**	**-1.4**
PDG					**Sn**	**05 32 50.8**	**-3.9**
PDG	**Podgorica**	**8.43**	**333**	*e*Pn	**Pn**	**05 31 18.7**	**-2.1**
HFRF	**Wahat Farafira**	**8.51**	**155**	P	**Pn**	**05 31 20.9**	**-1.1**
	baz=156						
HFRF				S	**Sn**	**05 32 51.6**	**-5.2**
	baz=156						
HFRF				AMP		05 33 00.0	
	baz=156						
NBNS	**Bani Suef**	**8.67**	**135**	P	**Pn**	**05 31 23.5**	**-0.7**
	baz=135						
NBNS				AMP		05 32 00.0	
	baz=135						
NBNS				S	**Sn**	**05 32 53.9**	**-6.8**
	baz=135						
HCY	**Herceg Novi**	**8.74**	**330**	*e*Pn	**Pn**	**05 31 22.6**	**-2.5**
BR131	**Keskin Array S**	**8.80**	**55**		**Pn**	**05 31 27.1**	**+1.1**
BRTR	**Keskin Array B**	**8.80**	**55**	Pn	**Pn**	**05 31 26.4**	**+0.4**
	comp=E,0.3nm,0.3s,baz=227,slow=15,SNR=18						
BRTR				LR	LR	05 35 29.9	
	comp=E,55nm,18.7s,baz=224,slow=42						
BRTR	**Keskin Array B**	**8.80**	**55**		**Pn**	**05 31 25.8**	**-0.3**
ACER	**Acerenza**	**8.81**	**314**	Pn	**Pn**	**05 31 26.9**	**+0.9**
TREB	**Trebinje**	**9.03**	**331**	*e*Pn	**Pn**	**05 31 25.0**	**-4.0**
DBRK	**Dubrovnik**	**9.07**	**330**	*e*Pn	**Pn**	**05 31 26.4**	**-3.2**
DBRK				Sn	Sn	05 33 00.2	-10
BRY	**Bratogost**	**9.11**	**332**	*e*Pn	**Pn**	**05 31 27.8**	**-2.4**
UPM	**Unac-Piva**	**9.23**	**334**	*e*Pn	**Pn**	**05 31 29.6**	**-2.4**
CORL	**Corleone**	**9.35**	**291**	Pn	**Pn**	**05 31 35.1**	**+1.6**
MMAI	**Mount Meron Ar**	**9.40**	**99**	Pn	**Pn**	**05 31 32.9**	**-1.4**
	comp=E,1.8nm,0.3s,baz=295,slow=12,SNR=5.1						
MMAI				Sn	**Sn**	**05 33 13.0**	**-5.7**
	comp=E,2.0nm,0.3s,baz=334,slow=22,SNR=3.5						
MMAI				LR	LR	05 37 11.9	
	comp=E,66nm,21.5s,baz=190,slow=50						
STON	**Ston**	**9.42**	**329**	*i* Pn	**Pn**	**05 31 31.1**	**-3.3**
STON				Sn	Sn	05 33 08.6	-10
STON	**Ston**	**9.42**	**329**	*e*Pn	**Pn**	**05 31 31.1**	**-3.3**
RUDO	**Rudo**	**9.45**	**338**	*e*Pn	**Pn**	**05 31 30.9**	**-3.8**
SGRT	**San Giovanni R**	**9.55**	**318**		**Pn**	**05 31 34.0**	**-2.3**
BBLS	**Lazići**	**9.66**	**338**	*e*Pn	**Pn**	**05 31 34.0**	**-3.7**
DIVS	**Divibare**	**9.71**	**341**	*e*Pn	**Pn**	**05 31 37.9**	**-0.5**
HAPS	**Han Pijesak,Bl**	**10.00**	**337**	*e*Pn	**Pn**	**05 31 38.5**	**-3.9**
MAKA	**Makarska**	**10.05**	**328**	*e*Pn	**Pn**	**05 31 40.2**	**-2.7**
MAKA				Sn	Sn	05 33 23.8	-11
HVAR	**Hvar**	**10.22**	**326**	*e*Pn	**Pn**	**05 31 42.5**	**-2.8**
HVAR				Sn	Sn	05 33 29.3	-9.3
EIL	**Elat**	**10.43**	**118**	Pn	**Pn**	**05 31 45.9**	**-2.3**
	comp=E,0.7nm,0.3s,baz=243,slow=1.2,SNR=15						
EIL				Sn	Sn	05 33 30.5	-13
	comp=E,0.6nm,0.3s,baz=90,slow=16,SNR=2.2						
VOIR		**10.47**	**3**	⥣P	**Pn**	**05 31 48.0**	**-0.8**
MLR	**Muntele Rosu**	**10.58**	**6**	Pn	**Pn**	**05 31 50.9**	**+0.6**
	comp=E,0.2nm,0.3s,baz=219,slow=8.2,SNR=5.3						
MLR	**Muntele Rosu**	**10.58**	**6**	⥣P	**Pn**	**05 31 49.9**	**-0.5**
BANR	**Banloc**	**10.68**	**348**	⥣P	**Pn**	**05 31 49.1**	**-2.4**
BZS	**Buzias**	**10.83**	**350**	⥥P	**Pn**	**05 31 53.1**	**-0.6**
ASF	**Jabal al Asfar**	**10.85**	**101**	Pn	**Pn**	**05 31 50.6**	**-3.5**
	comp=E,0.5nm,0.3s,baz=275,slow=4.0,SNR=4.5						
ASF				Sn	**Sn**	**05 33 55.5**	**+1.2**
	comp=E,0.2nm,0.3s,baz=270,slow=20,SNR=2.8						
KIJV	**Kijevo**	**10.89**	**328**	*e*Pn	**Pn**	**05 31 51.3**	**-3.2**
KIJV				Sn	Sn	05 33 45.1	-10
MGRS	**Mrkonjic Grad**	**10.95**	**332**	*e*Pn	**Pn**	**05 31 51.8**	**-3.6**
ZIRJ	**Zirje**	**10.96**	**325**	*e*Pn	**Pn**	**05 31 52.7**	**-2.8**
ZIRJ				Sn	Sn	05 33 45.8	-11
MORI	**Morici**	**11.10**	**326**	*i* Pn	**Pn**	**05 31 54.4**	**-2.9**
BLY	**Banja Luka**	**11.20**	**333**	⥥P	**Pn**	**05 31 56.3**	**-2.3**
BLY	**Banja Luka**	**11.20**	**333**	*e*Pn	**Pn**	**05 31 54.5**	**-4.1**
AQU	**L'Aquila**	**11.27**	**314**	Pn	**Pn**	**05 31 58.1**	**-1.7**
DUGI	**Dugi Otok**	**11.50**	**324**	*e*Pn	**Pn**	**05 32 00.0**	**-2.8**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
UDBI	Udbina	11.59	328	ePn	Pn	05 32 02.2	-1.9
NRCA	Norcia	11.73	315	Pn	Pn	05 32 05.8	-0.3
NVLJ	Novalja	12.02	326	ePn	Pn	05 32 06.5	-3.3
KEST	Kesra	12.26	278	Sn	Sn	05 34 21.2	-7.4
	comp=E,0.1nm,0.3s,baz=246,slow=20,SNR=2.5						
CRES	Cresnjev	12.77	331	ePn	Pn	05 32 17.8	-2.3
CEY	Cerknica	13.13	328	ePn	Pn	05 32 21.9	-3.1
OBKA	Obir	13.69	330	i Pn	Pn	05 32 30.9	-1.9
	comp=E,1.1nm,0.3s						
ARSA	Arzberg	13.93	334	i Pn	Pn	05 32 35.6	-0.5
	comp=E,1.4nm,0.4s						
CONA	Conrad Observa	14.40	337	i Pn	Pn	05 32 42.2	-0.3
	comp=E,0.9nm,0.4s						
KBA	Koelnbreinsper	14.64	329	i Pn	Pn	05 32 45.0	-0.7
	comp=E,2.1nm,0.6s						
ABTA	Abfaltersbach	14.75	326	i Pn	Pn	05 32 44.9	-2.2
	comp=E,0.7nm,0.4s						
MOA	Molln	14.90	333	i Pn	Pn	05 32 48.6	-0.3
	comp=E,1.2nm,0.3s						
WTTA	Wattenberg	15.54	326	i Pn	Pn	05 32 55.6	-1.9
	comp=E,3.9nm,0.4s,SNR=7.2						
SQTA	Sankt Quirin	15.70	325	i Pn	Pn	05 32 58.7	-0.9
	comp=E,2.3nm,0.4s						
FETA	Feichten	15.79	324	i Pn	Pn	05 33 02.1	+1.4
	comp=E,1.1nm,0.3s						
MOTA	Moosalm	15.84	325	i Pn	Pn	05 33 00.2	-1.2
	comp=E,0.5nm,0.3s						
GERES	GERESS Array B	15.94	334	Pn	Pn	05 33 02.5	0.0
	comp=E,0.7nm,0.3s,baz=156,slow=13,SNR=19						
GERES	GERESS Array B	15.94	334		P	05 33 04.5	-1.1
DAVOX	Davos/Dischmat	16.05	322	Pn	Pn	05 33 02.0	-2.1
	comp=E,0.1nm,0.3s,baz=158,slow=19,SNR=1.9						
DAVOX				Sn	Sn	05 35 55.8	-5.1
	comp=E,0.1nm,0.3s,baz=330,slow=20,SNR=2.6						
DAVOX				LR	LR	05 40 08.6	
	comp=E,76nm,20.8s,baz=86,slow=41						
RETA	Reutte	16.11	325	i Pn	Pn	05 33 04.7	0.0
	comp=E,1.0nm,0.3s						
AKASG	Malin Array Be	16.12	11	Pn	Pn	05 33 04.8	+0.1
	comp=E,4.7nm,0.3s,baz=204,slow=9.8,SNR=26						
AKASG	Malin Array Be	16.12	11	Pn	Pn	05 33 03.8	-1.0
AKBB	Malin Array Si	16.12	11		Pn	05 33 04.4	-0.3
AKBB				IAmb	IAmb	05 33 21.3	
	comp=Z,6.1nm,1.0s						
KHC	Kasperske Hory	16.22	334	eP	P	05 33 09.3	+0.6
KHC				ex	x	05 33 33.9	
KHC	Kasperske Hory	16.22	334		Pn	05 33 05.8	-0.3
DAVA	Damuels	16.39	323	i Pn	Pn	05 33 09.1	+0.7
	comp=Z,1.1nm,0.3s						
KIV	Kislovodsk	16.75	52	Pn	Pn	05 33 12.7	-0.2
KIV				IAmb	IAmb	05 33 28.6	
	comp=Z,6.0nm,0.8s						
KVAR	Kislovodsk Arr	16.75	52	Pn	Pn	05 33 13.5	+0.6
	baz=107,slow=19,SNR=2.7						
KBZ	Khabaz	16.79	53	Pn	P	05 33 14.7	-0.3
	comp=Z,0.1nm,0.3s,baz=258,slow=11,SNR=13						
GNI	Garni	16.98	66	Pn	P	05 33 16.9	-0.4
	comp=Z,0.1nm,0.3s,baz=201,slow=17,SNR=3.5						
GNI				LR	LR	05 40 54.6	
	comp=Z,73nm,19.5s,baz=266,slow=41						
GNI	Garni	16.98	66	Pn	Pn	05 33 12.0	-3.8
GNI				IAmb	IAmb	05 33 17.8	
	comp=Z,9.9nm,1.1s						
BFO	Black Forest	17.87	323	P	P	05 33 29.9	+3.0
BFO				IAmb	IAmb	05 33 42.5	
	comp=Z,3.7nm,0.9s						
CLL	Collm	18.26	337	eP	Pn	05 33 34.0	+2.7
CLL	Collm	18.26	337		Pn	05 33 32.8	+1.5
SUW	Suwalki	19.05	358	P	Pn	05 33 43.5	+2.6
TAM	Tamanrasset	20.41	239	P	Pn	05 34 00.9	+3.5
RAYN	Ar Rayn	21.67	116	P	P	05 34 12.2	+3.7
RAYN				IAmb	IAmb	05 34 12.8	
	comp=Z,6.2nm,1.2s						
ESDC	Sonseca Array	22.93	290	P	P	05 34 21.4	-0.5
	comp=Z,0.8nm,0.5s,baz=77,slow=8.3,SNR=8.4						
ESDC	Sonseca Array	22.93	290	P	P	05 34 23.2	+1.3
MDT	Midelt	24.08	273	P	P	05 34 35.5	+2.5
	comp=Z,1.1nm,0.7s,baz=114,slow=12,SNR=3.7						
MDT				LR	LR	05 44 45.4	
	comp=Z,52nm,18.5s,baz=212,slow=38						
HFS	Hagfors	26.11	348	P	P	05 34 49.5	-1.5
	comp=Z,1.5nm,0.3s,baz=149,slow=9.6,SNR=20						
FINES	FINESS Array B	26.51	2	P	P	05 34 53.0	-1.6
	comp=Z,2.0nm,0.8s,baz=182,slow=10,SNR=6.7						
GEYT	Alibeck	27.25	74	P	P	05 35 03.5	+1.9
	comp=Z,0.8nm,0.4s,baz=247,slow=17,SNR=2.0						
GEYT	Alibeck	27.25	74	P	P	05 35 05.2	+3.6
GYA0B	ALIBECK ARRAY	27.25	74	P	P	05 35 05.6	+4.0
NOA	NORSAR Array B	27.41	346	P	P	05 35 01.1	-1.7
	comp=Z,0.3nm,0.4s,baz=148,slow=9.0,SNR=8.8						
EKA	Eskdalemuir Ar	27.80	326	P	P	05 35 05.7	-0.6
	comp=Z,1.0nm,0.4s,baz=125,slow=8.8,SNR=14						
AKTO	Aktyubinsk	28.88	47	P	P	05 35 14.8	-1.1
	comp=Z,0.7nm,0.5s,baz=243,slow=11,SNR=2.7						
TORD	Torodi Ar. Bea	29.85	229	P	P	05 35 25.7	+0.9
	comp=Z,2.8nm,0.7s,baz=37,slow=8.7,SNR=31						
ARCES	ARCESS Array B	34.62	1	P	P	05 36 03.7	-2.4
	comp=Z,7.7nm,1.2s,baz=180,slow=8.7,SNR=12						
KK31	Karatay Array	36.40	63	P	P	05 36 22.0	+0.4
KK31				IAmb	IAmb	05 36 22.1	
	comp=Z,5.2nm,1.4s						
KKAR	Karatay Array	36.40	63	P	P	05 36 21.2	-0.5
DBIC	Dimbokro	38.92	230	P	P	05 36 43.3	+0.1
	comp=Z,2.5nm,0.5s,baz=22,slow=8.5,SNR=9.6						
TIC	Toumodi	39.04	231	eP	P	05 36 44.7	+0.4
KIC	Kosan Boka	39.08	230	eP	P	05 36 45.1	+0.5
	comp=Z,2.4nm,0.2s						
LIC	Lamto	39.37	230	eP	P	05 36 47.6	+0.6
	comp=Z,6.0nm,0.5s						
MK31	Makanchi Array	44.45	56	P	P	05 37 31.7	+3.5
MK31				IAmb	IAmb	05 37 43.7	
	comp=Z,2.6nm,1.3s						
MKAR	Makanchi Array	44.45	56	P	P	05 37 27.4	-0.8
	comp=Z,0.4nm,0.4s,baz=271,slow=7.8,SNR=12						
MKAR	Makanchi Array	44.45	56	P	P	05 37 31.5	+3.4
ZALV	Zalesovo Beam	45.62	46	P	P	05 37 35.7	-1.7
	comp=Z,1.9nm,0.4s,baz=271,slow=8.8,SNR=8.2						
PALK	Pallekele	58.47	104	P	P	05 39 18.5	+5.0
SONM	Songino Array	60.13	50	P	P	05 39 24.0	-0.6
	comp=Z,0.4nm,0.5s,baz=300,slow=8.3,SNR=4.9						
SCHQ	Schefferville	62.88	319	P	P	05 39 42.4	-0.5
	comp=Z,1.4nm,0.3s,baz=60,slow=4.4,SNR=7.5						
CMAR	Chiang Mai Arr	67.27	83	P	P	05 40 11.6	-0.3
	comp=Z,0.5nm,0.3s,baz=326,slow=4.6,SNR=3.4						
YKA	Yellowknife Ar	77.41	342	P	P	05 41 11.5	-0.1
	comp=Z,0.2nm,0.4s,baz=30,slow=5.2,SNR=5.4						
USRK	Ussuriysk Ar.	77.45	45	P	P	05 41 11.6	-0.7
	comp=Z,3.1nm,0.7s,baz=302,slow=4.8,SNR=7.9						

*TRN **02** 05:33:22.9, 11°.45N×61°.87W, h83^{km}, MD3.5*
*FUNV **02** 05:33:24.5, 11°.30N×61°.75W, h19^{km}, MW2.9*
ISC 02 05:33:23.5±1.3, **11°.43N**±0°.03×**61°.85W**±0°.04, **h94**^{km}±10^{km}, **n32**, σ1^{s}.**23**/55, **Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRGR	Grenville	0.72	15	eP	Pn	05 33 40.1	-0.6
GRGR				eS	Sn	05 33 52.3	-1.2
GRGR	Grenville	0.72	15	eP	Pn	05 33 40.1	-0.6
GRGR				eS	Sn	05 33 51.5	-2.0
GRHS	Sauteurs	0.82	14	eP	Pn	05 33 42.1	+0.6
GRHS				eS	Sn	05 33 54.6	-0.4
TRN	Trinidad (W)	0.89	150	eP	Pn	05 33 43.2	+0.9
TRN				eS	Sn	05 33 56.3	-0.1
GRSS	Sisters	0.90	15	eP	Pn	05 33 43.4	+1.0
GRSS				eS	Sn	05 33 56.7	+0.2
TBH	Brigand Hill	1.21	141	eP	Pn	05 33 46.5	+0.5
TBH				eS	Sn	05 34 02.9	0.0
TOSP	Speyside	1.30	96	eP	Pn	05 33 47.7	+0.8
TOSP				eS	Sn	05 34 05.8	+1.1
CRUV	Carupano	1.55	241	eP	Pn	05 33 50.8	+0.7
CRUV				eS	Sn	05 34 10.8	+0.5
GUNV	Guanoco	1.66	221	eP	Pn	05 33 51.7	+0.3
GUNV				eS	Sn	05 34 12.8	+0.2
SVB	Belmont	1.92	18	eP	Pn	05 33 54.5	-0.4
SVB				eS	Sn	05 34 19.2	+0.4
SVCV	St. Vincent, C	1.96	21	eP	Pn	05 33 55.2	-0.1
SVCV				eS	Sn	05 34 19.2	-0.4
MCLT	Moule a Chique	2.44	21	eP	Pn	05 34 02.0	+0.5
MCLT				eS	Sn	05 34 29.6	-1.2
SLBI	Saint Lucia, B	2.72	18	eP	Pn	05 34 05.2	-0.1
SLBI				eS	Sn	05 34 37.2	-0.3
ORIV	Oritupano	2.80	213	eP	Pn	05 34 08.3	+1.8
ORIV				eS	Sn	05 34 39.3	-0.2
ORIV	Oritupano	2.80	213	eP	Pn	05 34 07.4	+0.9
ORIV				eS	Sn	05 34 38.3	-1.2
PCRV	Puerto La Cruz	3.01	246	eP	Pn	05 34 11.7	+2.4
PCRV				eS	Sn	05 34 44.2	-0.3
MPOM	Morne Pois Mar	3.15	18	eP	Pn	05 34 12.1	+0.9
TRMF	Trois Ilets	3.19	14	eP	Pn	05 34 12.8	+1.2
ZAM	Aeronautique	3.23	14	eP	Pn	05 34 13.3	+1.1
LPMF	Morne Lapointe	3.24	15	eP	Pn	05 34 13.3	+0.9
MVM	Montagne Vaucl	3.24	17	eP	Pn	05 34 14.4	+2.0
RIOV	Rio Grande	3.34	179	eP	Pn	05 34 13.9	+0.1
RIOV				eS	Sn	05 34 49.0	-3.5
FDF	Fort de France	3.35	12	eP	Pn	05 34 13.6	-0.4
FDF				eS	Sn	05 34 51.8	-1.1
PML	Morne Lenard	3.40	11	eP	Pn	05 34 15.5	+1.0
PCM	Pelee Case Pet	3.42	10	eP	Pn	05 34 15.9	+1.0
PRGV	PARIAGUAN	3.82	226	eP	Pn	05 34 20.3	+0.1
PRGV				eS	Sn	05 35 03.5	-0.7
BIRV	Birongo	4.44	258	eP	Pn	05 34 30.6	+2.0
BIRV				eS	Sn	05 35 19.4	+0.2
MERV	Las Mercedes	4.88	244	eP	Pn	05 34 35.5	+1.0
MERV				eS	Sn	05 35 28.7	-1.2
BAUV	El Baul	6.58	249	eP	Pn	05 34 58.0	+0.3
BAUV	El Baul	6.58	249	eS	Sn	05 36 07.9	-3.3
BAUV	El Baul	6.58	249	eP	Pn	05 34 58.1	+0.5
BAUV				eS	Sn	05 36 09.3	-1.9
MAPV	Macapo	6.69	257	eP	Pn	05 35 00.8	+1.6
MAPV				eS	Sn	05 36 12.2	-1.8

*DJA **02** 05:37:53.9±0.3, 7°S±3°×12°9E±°, h151^{km}±6^{km}, M4.6/10, mb4.5/10, mB5.0/4, MLv4.8/7, Mw(mB)4.4/4, Mwp5.6/1*
*IDC **02** 05:37:54.5±1.8, 7°.31S×129°.48E, h138^{km}±17^{km}, mb3.6/7, mb1 3.9/12, mb1mx3.7/36, mbtmp4.3/12, Error ellipse: s-maj=26.2km s-min=14.4km az=78.0*
*NEIC **02** 05:37:55.4±1.6, 7°.25S±0°.06×129°.41E±0°.06, h159^{km}±9^{km}, mb4.3/22, Error ellipse: s-maj=9.5km s-min=8.0km az=167.0*
ISC 02 05:37:54.7±0.5, **7°.22S**±0°.04×**129°.34E**±0°.05, **h150**^{km}, **n60**, σ1^{s}.**58**/68, **mb4.1**/13, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.08	112	P	Pn	05 38 31.5	+0.7
SAUI				S	Sn	05 38 59.1	+0.5
SAUI	Saumlaki	2.08	112		Pn	05 38 32.1	+1.3
SAUI				Sn	Sn	05 38 57.1	-1.5
BNDI	Bandanaira	2.73	12	P	Pn	05 38 38.8	0.0
FAKI	Fak Fak	5.16	34	P	Pn	05 39 10.2	-0.1
	0.5nm2µm44nm,0.6s						
FAKI				S	Sn	05 40 07.2	-2.0
	0.5nm2µm44nm,0.6s						
FAKI	Fak Fak	5.16	34		Pn	05 39 10.5	+0.3
FAKI					Sn	05 40 06.7	-2.6
KMPI	Kaimana, Papua	5.60	51	P	Pn	05 39 16.8	+0.7
	1.8nm253nm,0.5s						
KMPI				S	Sn	05 40 17.6	-2.1
	1.8nm253nm,0.5s						
SOEI	Soe	5.62	243	P	Pn	05 39 15.8	-0.7
	1.3nm100nm,0.9s						
SOEI				S	Sn	05 40 19.9	-0.5
	1.3nm100nm,0.9s						
SOEI	Soe	5.62	243		Pn	05 39 17.8	+1.3
MTN	Manton Dam	5.86	163		Pn	05 39 19.4	-0.2
MTN				Sn	Sn	05 40 23.5	-2.6
BATI	Baumata	6.35	242	P	Pn	05 39 27.1	+0.9
	31nm,0.3s,baz=86,slow=3.1,SNR=14						
BATI				S	Sn	05 40 35.2	-2.5
	32nm,0.3s,baz=105,slow=23,SNR=20						
SIJI	Sorong	6.59	17	P	Pn	05 39 30.6	+1.3
	2.1nm,0.3s,baz=213,slow=21,SNR=14						
SIJI				S	Sn	05 40 39.9	-3.7
	6.5nm,0.3s,baz=207,slow=22,SNR=6.8						
SWI	Sorong	6.59	17	P	Pn	05 39 28.8	-0.6
	0.2nm17nm,0.8s						
RKPI	Ransiki, Papua	7.44	41	P	Pn	05 39 39.9	-0.8
	0.8nm68nm,0.5s						
KNRA	Kununurra	8.43	184		Pn	05 39 52.3	-1.6
MRSI	Marisa	10.63	316	P	Pn	05 40 28.4	+5.3
FITZ	Fitzroy Crossi	11.40	198	P	Pn	05 40 30.7	-2.5
	3.8nm,0.3s,baz=32,slow=11,SNR=105						
FITZ				S	Sn	05 42 26.3	-13
	3.7nm,0.3s,baz=62,slow=16,SNR=5.9						
FITZ	Fitzroy Crossi	11.40	198		Pn	05 40 30.9	-2.4
PLAI	Plampang	11.57	261	P	Pn	05 40 34.8	-0.6
	23nm,1.8s						
WRAB	Tennant Creek	13.54	159		Pn	05 40 48.7	-12
WRA	Warramunga Arr	13.55	160	P	Pn	05 40 58.1	-2.9
	4.0nm,0.3s,baz=330,slow=13,SNR=58						
WRA				S	Sn	05 43 14.6	-16
	1.5nm,0.3s,baz=340,slow=21,SNR=7.9						
WR0	Warramunga Arr	13.63	159		Pn	05 40 59.4	-2.7
COEN	Coen	15.15	117	Pn	Pn	05 41 20.2	-0.9
COEN				IAmb	IAmb	05 41 36.1	
	comp=Z,8.4nm,1.0s						
PSAD1	Pilbara Seismi	16.88	212	P	P	05 41 39.8	-1.9
PSAD1				IAmb	IAmb	05 41 43.9	
	comp=Z,11nm,0.7s						
AS31	Alice Springs	16.93	165	P	Pn	05 41 42.7	-0.2
AS31				IAmb	IAmb	05 41 46.6	
	comp=Z,5.9nm,0.4s						
ASAR	Alice Springs	16.93	166	P	Pn	05 41 43.3	+0.4
	comp=Z,2.6nm,0.3s,baz=342,slow=10.0,SNR=88						
ASAR				S	S	05 44 35.1	-16
	comp=Z,0.5nm,0.3s,baz=332,slow=15,SNR=8.1						
ASAR				ScP	ScP	05 49 42.8	+1.2
	comp=Z,0.1nm,0.3s,baz=0.8,slow=2.1,SNR=3.9						
ASAR	Alice Springs	16.93	166	P	Pn	05 41 42.9	0.0
PSAB2	Pilbara Seismi	16.94	212	P	Pn	05 41 42.9	-0.2
PSAB2				IAmb	IAmb	05 41 45.0	
	comp=Z,16nm,0.7s						
PSAC1	Pilbara Seismi	16.95	212	P	Pn	05 41 43.2	+0.1
PSAA2	Pilbara Seismi	16.96	212	P	Pn	05 41 42.5	-0.7
PSAA2				IAmb	IAmb	05 41 45.1	
	comp=Z,16nm,0.7s						
PSA00	Pilbara Seismi	16.97	212	P	Pn	05 41 42.6	-0.7
PSA00				IAmb	IAmb	05 41 45.3	
	comp=Z,14nm,0.7s						
PSA00	Pilbara Seismi	16.97	212	P	P	05 41 41.8	-1.0
PSA00				IAmb	IAmb	05 41 45.0	
	comp=Z,4.8nm,0.7s						
PSAA3	Pilbara Seismi	16.97	212	P	Pn	05 41 43.4	+0.1
PSAA3				IAmb	IAmb	05 41 45.3	
	comp=Z,15nm,0.7s						
PSAB1	Pilbara Seismi	16.98	212	P	Pn	05 41 43.2	-0.1
PSAB1				IAmb	IAmb	05 41 45.3	
	comp=Z,16nm,0.7s						
PSAC3	Pilbara Seismi	17.02	212	P	Pn	05 41 43.5	-0.3
PSAD3	Pilbara Seismi	17.06	212	P	Pn	05 41 44.1	-0.2
PSAD3				IAmb	IAmb	05 41 45.4	
	comp=Z,22nm,1.4s						
SBUM	Sibu	19.60	299	P	P	05 42 10.9	-0.7
FORT	Forrest	23.47	183	P	P	05 42 51.2	+0.4
MORW	Morawa	25.10	208	P	P	05 43 05.3	-0.2
MORW				IAmb	IAmb	05 43 16.8	
	comp=Z,11nm,1.4s						
BBOO	Buckleboo	26.22	167	P	P	05 43 14.9	-0.8
STKA	Stephens Creek	27.07	157	P	P	05 43 23.4	+0.1
	comp=Z,2.1nm,0.4s,baz=315,slow=5.7,SNR=9.0						
STKA	Stephens Creek	27.07	157	P	P	05 43 24.1	+0.8
CMAR	Chiang Mai Arr	39.38	311	P	P	05 45 12.2	+2.2
	comp=Z,1.1nm,0.4s,baz=149,slow=8.1,SNR=9.3						
CD2	Chengdu	45.14	328	P	P	05 45 57.7	+1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	49.29	333	eP	P	05 46 30.2	+1.5
LZH				pP	pwP	05 47 06.4	-0.8
LZH				sP	sP	05 47 25.2	+7.6
LZH				PP	PP	05 48 18.9	-5.2
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,49nm,4.3s						
HHC	Hu-ho-hao-te	50.55	343	eP	P	05 46 40.9	+2.9
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,59nm,5.1s						
SONM	Songino Array	58.44	342	P	P	05 47 37.3	+2.4
	comp=Z,0.2nm,0.3s,baz=156,slow=6.0,SNR=3.3						
WMQ	Urumqi	63.22	327	eP	P	05 48 09.3	+2.1
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,78nm,4.9s						
PETK	Petropavlovsk-	64.73	18	P	P	05 48 16.5	-0.2
	comp=Z,3.6nm,0.9s,baz=213,slow=10,SNR=3.0						
MK31	Makanchi Array	68.05	327	P	P	05 48 39.5	+1.4
MKAR	Makanchi Array	68.05	327	P	P	05 48 40.3	+2.3
	comp=Z,0.4nm,0.3s,baz=116,slow=8.2,SNR=14						
MKAR	Makanchi Array	68.05	327	P	P	05 48 38.1	+0.1
MAKZ	Makanchi	68.23	327	P	P	05 48 39.4	+0.2
MAKZ				IAmb	IAmb	05 48 40.6	
	comp=Z,4.3nm,1.4s						
ZALV	Zalesovo Beam	71.49	334	P	P	05 49 00.0	+1.2
	comp=Z,0.4nm,0.3s,baz=111,slow=7.9,SNR=3.4						
ZALV	Zalesovo Beam	71.49	334	P	P	05 48 58.7	-0.1
KURK	Kurchatov	72.36	329	P	P	05 49 06.2	+2.1
TIXI	Tiksi	78.70	360	P	P	05 49 41.9	+2.0
	comp=Z,0.7nm,0.3s,baz=210,slow=0.9,SNR=3.0						
SPIA	Saint Paul Isl	80.67	29	P	P	05 49 50.3	-0.4
ABKAR	Akbulak array	82.27	322	P	P	05 49 59.8	+0.5
ABKAR	Akbulak array	82.27	322	P	P	05 50 00.5	+1.1
ABKAR				IAmb	IAmb	05 50 03.6	
	comp=Z,1.1nm,0.7s						
TORD	Torodi Ar. Bea	128.21	281	PKP	PKiKP	05 56 46.7	+1.8
	comp=Z,0.2nm,0.5s,baz=90,slow=2.9,SNR=2.7						

*GCG **02** 05:43:29.2±0.3, 14°.08N×92°.26W, h4^{km}±6^{km}, MD3.8*
*MEX **02** 05:43:33.0±0.6, 14°.29N×92°.22W, h51^{km}±12^{km}, MD4.0*
*SNET **02** 05:43:34.4±1.1, 14°.30N×91°.99W, h56^{km}±9^{km}, ML3.8*
*UCR **02** 05:43:34.6±1.2, 14°.30N×91°.99W, h55^{km}±10^{km}, ML3.6, mb4.0(NEIC)*
ISC 02 05:43:31.4±1.4, **14°.24N**±0°.08×**92°.29W**±0°.05, **h41**^{km}±39^{km}, **n31**, σ1^{s}.**15**/46, **1C-1D**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.67	2	eP	Pn	05 43 44.5	+0.1
THIG				i S	Sn	05 43 53.1	-0.7
THIG		0.67	2		Pn	05 43 44.5	+0.1
THIG					Sn	05 43 53.1	-0.7
ERG	Entre ros, C	0.73	74	⇓iP	Pn	05 43 46.5	+1.2
ERG				eS	Sn	05 43 55.6	+0.3
STG3	Santiaguito 3,	0.84	56	eP	Pn	05 43 47.2	+0.2
FUG	Fuego 3	1.42	81	⇑eP	Pn	05 43 55.3	+0.4
PCIG		1.71	329	eP	Pn	05 43 58.9	+0.1
PCIG				eS	Sn	05 44 18.0	-1.5
PCIG		1.71	329		Pn	05 43 58.9	+0.1
PCIG					Sn	05 44 18.0	-1.5
IXG	Ixpaco	1.79	92	eP	Pn	05 43 59.6	-0.4
IXG	Ixpaco	1.79	92	eP	Pn	05 43 59.6	-0.4
IXG	Ixpaco	1.79	92	eP	Pn	05 44 00.8	+0.7
NBG	Las Nubes	1.92	79	eS	Sn	05 44 29.7	+4.9
FAME	Alcalda de S	2.24	100	eP	Pn	05 44 05.8	-0.3
SBLS	San Blas	2.62	98	eP	Pn	05 44 12.1	+0.6
SBLS				eS	Sn	05 44 39.9	-2.3
SBLS	San Blas	2.62	98	eP	Pn	05 44 12.1	+0.6
SBLS				eS	Sn	05 44 39.9	-2.3
CEVE	Cerro Verde	2.62	99	eP	Pn	05 44 11.6	+0.1
CEVE				eS	Sn	05 44 40.8	-1.4
CEVE				AML	AML	05 44 55.5	
	comp=Z,456nm,0.3s						
CEVE	Cerro Verde	2.62	99	eP	Pn	05 44 11.6	+0.1
CEVE				eS	Sn	05 44 40.8	-1.4
CEVE				AML	AML	05 44 55.5	
	comp=Z,456nm,0.3s						
SNJE	San Jose	2.63	98	eP	Pn	05 44 11.5	-0.1
SNJE	San Jose	2.63	98	eP	Pn	05 44 11.5	-0.1
TGIG		2.65	343	eP	Pn	05 44 11.8	+0.1
TGIG				i S	Sn	05 44 42.0	-0.8
TGIG		2.65	343		Pn	05 44 11.8	+0.1
TGIG					Sn	05 44 42.0	-0.8
MRL	Marmol	2.66	71	eP	Pn	05 44 12.2	+0.2
MRL	Marmol	2.66	71	eP	Pn	05 44 12.2	+0.2
MTO3	Montecristo	2.84	86	eP	Pn	05 44 14.1	-0.5
MTO3	Montecristo	2.84	86	eP	Pn	05 44 14.1	-0.5
SNET	Serv Nac Est T	3.02	100	Pn	Pn	05 44 15.5	-1.3
SNET				Sn	Sn	05 44 53.1	+1.3
CMIG	Matias Romero	3.78	319	eP	Pn	05 44 28.0	+0.8
CMIG				i S	Sn	05 45 10.6	+0.1
CMIG	Matias Romero	3.78	319		Pn	05 44 28.0	+0.8
CMIG					Sn	05 45 10.6	+0.1
HUIG	Huatulco	3.99	293	i P	Pn	05 44 30.6	+0.4
HUIG				i S	Sn	05 45 16.3	+0.6
HUIG	Huatulco	3.99	293		Pn	05 44 30.6	+0.4
HUIG					Sn	05 45 16.3	+0.6
TEIG	Tepich	7.08	32	Pn	Pn	05 45 13.1	+0.5
W18A	Petrified Fore	26.06	326	P	P	05 49 04.3	+3.0

*IDC **02** 05:48:20.2±0.7, 46°.60N×155°.26E, h0^{km}, mb3.8/20, mb1 4.0/23, mb1mx3.9/43, mbtmp3.8/23, ML3.3/3, MS3.2/3, Ms1 3.2/3, ms1mx2.7/40, Error ellipse: s-maj=19.2km s-min=13.7km az=148.0*
*NEIC **02** 05:48:22.0±1.6, 46°.7N±0°.1×155°.3E±0°.1, h10^{km}±3^{km}, mb4.4/13, Error ellipse: s-maj=18.5km s-min=10.2km az=135.0*
*MOS **02** 05:48:23.4±0.9, 46°.53N×155°.20E, h37^{km}, mb4.5/6, Error ellipse: s-maj=11.7km s-min=9.2km az=154.2*
*SKHL **02** 05:48:24.2±0.2, 46°.90N×154°.90E, h35^{km}±5^{km}, mb4.5/6*
*JMA **02** 05:48:24.3±0.6, 47°.45N×154°.72E, h30^{km}, M4.8*
ISC 02 05:48:23.2±0.6, **46°.71N**±0°.07×**155°.04E**±0°.07, **h18**^{km}, **n100**, σ**2**^{s}.**12**/106, **mb4.1**/29, **6C-2D**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	4.04	10	eP	Pn	05 49 22.6	-1.5
SKR				i S	Sn	05 50 05.8	-5.1
SKR				A	A	05 50 08.0	
	70nm,0.5s						
SKR				A	A	05 50 08.0	
	150nm,0.5s						
KUR	Kuril'sk	5.22	256	ePN	Pn	05 49 43.1	+2.9
KUR				pmax	pmax		
	comp=Z,158nm,0.3s						
KUR				pmax	pmax		
	comp=E,69nm,0.2s						
KUR				pmax	pmax		
	comp=N,150nm,0.1s						
KUR				pmax	pmax		
	comp=Z,366nm,1.1s						
KUR	Kuril'sk	5.22	256	eP	Pn	05 49 40.5	+0.3
KUR				AMB	AMB	05 49 45.2	
	comp=Z,70nm,0.6s						
KUR				eS	Sn	05 50 37.9	-2.0
KUR				A	A	05 50 42.9	
	comp=Z,270nm,0.6s						
KUR				A	A	05 50 42.9	
	comp=Z,350nm,0.6s						
SHO	Shikotan	6.45	247	ePN	Pn	05 49 57.4	+0.3
SHO				pmax	pmax		
	comp=E,20nm,0.3s						
SHO				pmax	pmax		
	comp=Z,47nm,0.3s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.2s						
SHO	Shikotan	6.45	247	⇓iP	Pn	05 49 57.5	+0.3
SHO				AMB	AMB	05 50 00.0	
	comp=N,30nm,0.4s						
SHO				eS	Sn	05 51 07.5	-2.8
SHO				A	A	05 51 14.0	
	comp=N,90nm,0.5s						
SHO				A	A	05 51 14.0	
	comp=N,160nm,0.5s						
PEA0B	Petropavlovsk-	6.63	14	Pn	Pn	05 49 58.6	-1.1
PEA0B					Pn	05 49 59.4	-0.2
PEA0B				Sn	Sn	05 51 16.0	+1.3
PETK	Petropavlovsk-	6.63	14	Pn	Pn	05 49 58.7	-0.9
	comp=N,0.6nm,0.3s,baz=175,slow=12,SNR=10						
PETK				Sn	Sn	05 51 15.6	+0.9
	comp=N,0.5nm,0.3s,baz=260,slow=16,SNR=2.7						
PETK				LR	LR	05 52 50.8	
	comp=N,81nm,19.9s,baz=243,slow=40						
PETK	Petropavlovsk-	6.63	14		Pn	05 49 58.3	-1.4
PETK					Sn	05 51 14.8	+0.1
PET	Petropavlovsk	6.74	19	⇑eP	Pn	05 49 59.0	-2.1
PET				AMB	AMB	05 50 00.5	
	comp=N,10.0nm,0.8s						
PET				AMB	AMB	05 50 00.5	
	comp=N,30nm,0.8s						
PET				⇑iS	Sn	05 51 10.0	-7.3
PET				A	A	05 51 12.4	
	comp=N,110nm,0.5s						
PET	Petropavlovsk	6.74	19	Pn	Pn	05 49 59.4	-1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PET				Sn	Sn	05 51 12.5	-4.8
YUK	Yuzh-Kuril'sk	7.00	251	ePN	Pn	05 50 06.5	+1.8
YUK				pmax	pmax		
	comp=Z,119nm,0.5s						
YUK				pmax	pmax		
	comp=E,80nm,0.4s						
YUK				pmax	pmax		
	comp=N,60nm,0.5s						
YUK				pmax	pmax		
	comp=Z,675nm,1.4s						
YUK	Yuzh-Kuril'sk	7.00	251	⇑iP	Pn	05 50 05.1	+0.4
YUK				AMB	AMB	05 50 10.1	
	comp=Z,30nm,0.6s						
YUK				AMB	AMB	05 50 10.1	
	comp=Z,40nm,0.6s						
YUK				AMB	AMB	05 50 10.1	
	comp=Z,60nm,0.6s						
YUK				iS	Sn	05 51 20.7	-3.0
YUK				A	A	05 51 29.7	
	comp=Z,650nm,1.0s						
GLVR	Golovnino	7.35	250	eS	Sn	05 51 29.4	-3.0
NEM2	Nemuro 2	7.39	246	P	Pn	05 50 10.6	+0.6
NEM2				eS	Sn	05 51 29.4	-3.9
NMR	Nemuro--Hokkai	7.39	247	ePN	Pn	05 50 10.4	+0.3
NMR	Nemuro--Hokkai	7.39	247	⇑iP	Pn	05 50 10.8	+0.7
NMR				⇓iS	Sn	05 51 30.0	-3.5
JAK	Akkeshi	8.23	247	P	Pn	05 50 22.0	+0.3
JAK				eS	Sn	05 51 48.9	-5.3
JTKR	Abashiri--Toko	8.31	255	P	Pn	05 50 25.5	+2.8
YSS	Yuzh-Sakhalins	8.43	276	erx	rx	05 50 26.0	
JAR	Ashorobuto	8.69	251	P	Pn	05 50 30.6	+2.7
JAR				eS	Sn	05 52 04.1	-1.2
JKK2	Kamakawa 2	9.12	256	P	Pn	05 50 37.0	+3.2
JKA	Kamikawa-asahi	9.13	258	eP	Pn	05 50 37.0	+3.0
JKA	Kamikawa-asahi	9.13	258		Pn	05 50 37.0	+3.0
JKA					Sn	05 52 14.3	-1.8
ASAJ	Asahikawa	9.13	258	PN	Pn	05 50 37.0	+3.0
ASAJ	Asahikawa	9.13	258	Pn	Pn	05 50 37.0	+3.0
	comp=Z,0.9nm,0.3s,baz=131,slow=16,SNR=3.8						
ASAJ				Sn	Sn	05 52 14.3	-1.9
	comp=Z,1.1nm,0.3s,baz=268,slow=32,SNR=7.5						
TYV	Tymovskoe	9.17	301	eP	Pn	05 50 33.1	-1.4
TYV				AMB	AMB	05 50 40.6	
	comp=Z,7.0nm,0.8s						
JCH	Churui	9.28	248	eS	Sn	05 52 14.8	-4.9
ERM	Erimo	9.72	245	PN	Pn	05 50 43.0	+1.0
ERM	Erimo	9.72	245	Pn	Pn	05 50 43.0	+1.0
JNBK	Urakawa-nobuka	9.83	248	P	Pn	05 50 43.1	-0.5
JNBK				eS	Sn	05 52 25.6	-7.8
JBT2	Biratori 2	9.84	251	P	Pn	05 50 45.1	+1.4
JNB	Noboribetsu	10.85	252	P	Pn	05 50 58.4	+0.9
JTM	Tenmabayashi	11.71	245	eS	Sn	05 53 10.4	-9.0
EKMR	Ekimchan	15.56	302	eP	Pn	05 51 58.0	-3.5
EKMR				AMB	AMB	05 52 09.8	
	comp=Z,10.0nm,0.6s						
MAJO	Matsushiro	16.14	237	P	Pn	05 52 08.1	-1.0
MAJO				pmax	pmax		
	comp=Z,18nm,1.3s						
MAJO	Matsushiro	16.14	237	P	Pn	05 52 08.1	-1.0
MAJO				IAmb	IAmb	05 52 15.7	
	comp=Z,18nm,1.3s						
MJB9	Matsu-Tunnel	16.14	237	Pn	Pn	05 52 08.0	-1.1
MJB9				IAmb	IAmb	05 52 15.7	
	comp=Z,18nm,1.3s						
USA0B	Ussuriysk Arra	16.36	270	P	P	05 52 13.5	-1.1
USA0B				pmax	pmax		
	comp=Z,10.0nm,1.1s						
USA0B	Ussuriysk Arra	16.36	270	Pn	P	05 52 13.5	-1.1
USRK	Ussuriysk Ar.	16.36	270	P	P	05 52 13.5	-1.1
USRK	Ussuriysk Ar.	16.36	270	Pn	Pn	05 52 13.0	+1.3
	baz=72,slow=12,SNR=10.0						
USRK	Ussuriysk Ar.	16.36	270		P	05 52 13.5	-1.1
BMKR	Bomnak	18.34	305	eP	Pn	05 52 35.0	-1.4
KROS	Kirovskiy	19.33	304	eP	Pn	05 52 48.5	+0.1
KROS				AMB	AMB	05 52 51.0	
	comp=Z,4.0nm,0.5s						
KSRS	Korea Array	22.06	255	P	P	05 53 17.9	+1.0
	comp=Z,0.7nm,0.6s,baz=54,slow=11,SNR=2.7						
BILL	Bilibino	22.15	11	⇑eP	P	05 53 17.4	-0.2
BILL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BILL	Bilibino	22.15	11	⇑eP	P	05 53 17.4	-0.2
H11N2	WAKE ISLAND Hy	28.61	156	T	T	06 25 44.1	
	baz=341,slow=76,SNR=25						
H11N1	WAKE ISLAND Hy	28.62	156	T	T	06 25 45.3	
	baz=341,slow=76,SNR=69						
H11N3	WAKE ISLAND Hy	28.62	156	T	T	06 25 36.6	
	baz=341,slow=76,SNR=32						
H11S1	WAKE ISLAND Hy	29.72	157	T	T	06 28 04.0	
	baz=342,slow=76,SNR=30						
H11S3	WAKE ISLAND Hy	29.73	157	T	T	06 28 17.8	
	baz=342,slow=76,SNR=38						
H11S2	WAKE ISLAND Hy	29.74	157	T	T	06 27 54.8	
	baz=342,slow=76,SNR=34						
SONM	Songino Array	32.60	290	P	P	05 54 55.1	+1.5
SONM				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SONM	Songino Array	32.60	290	P	P	05 54 54.6	+1.1
	comp=Z,0.5nm,0.7s,baz=57,slow=11,SNR=4.0						
SONM	Songino Array	32.60	290	P	P	05 54 55.1	+1.5
ILAR	Eielson Array	35.75	38	P	P	05 55 20.9	+0.3
	comp=Z,0.2nm,0.5s,baz=252,slow=7.6,SNR=3.9						
ZALV	Zalesovo Beam	43.71	306	P	P	05 56 28.1	+1.3
ZALV	Zalesovo Beam	43.71	306	P	P	05 56 26.5	-0.3
	comp=Z,1.0nm,0.5s,baz=63,slow=9.9,SNR=4.7						
ZALV	Zalesovo Beam	43.71	306	P	P	05 56 28.1	+1.3
MK31	Makanchi Array	48.13	298	P	P	05 57 02.6	+0.7
MK31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	Makanchi Array	48.13	298	P	P	05 57 02.6	+0.7
MKAR	Makanchi Array	48.13	298	P	P	05 57 02.8	+0.9
	comp=Z,0.9nm,0.6s,baz=67,slow=7.9,SNR=13						
MKAR	Makanchi Array	48.13	298	P	P	05 57 02.1	+0.3
KURK	Kurchatov	48.49	304	P	P	05 57 05.2	+0.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	48.49	304	eP	P	05 57 05.2	+0.7
KURK	Kurchatov	48.49	304	P	P	05 57 05.2	+0.7
KURK				IAmb	IAmb	05 57 05.9	
	comp=Z,2.8nm,0.8s						
YKA	Yellowknife Ar	50.16	37	P	P	05 57 17.2	+0.1
	comp=Z,0.2nm,0.9s,baz=304,slow=8.9						
BRVK	Borovoye	51.94	310	P	P	05 57 31.9	+1.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	51.94	310	eP	P	05 57 31.9	+1.3
BRVK	Borovoye	51.94	310	P	P	05 57 31.9	+1.3
BRVK				IAmb	IAmb	05 57 34.4	
	comp=Z,3.3nm,0.6s						
CMAR	Chiang Mai Arr	53.66	258	P	P	05 57 45.0	+1.3
	comp=Z,0.9nm,0.4s,baz=36,slow=8.1,SNR=4.1						
AAK	Ala-Archa	55.04	297	P	P	05 57 55.1	+1.4
	comp=Z,0.6nm,0.3s,baz=105,slow=12,SNR=4.3						
ARU	Arti	55.93	318	P	P	05 58 01.2	+1.5
ARU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARU	Arti	55.93	318	eP	P	05 58 01.2	+1.5
ARU	Arti	55.93	318	P	P	05 58 01.2	+1.5
HNR	Honiara	56.06	174	LR	LR	06 17 20.3	
	comp=Z,41nm,20.1s,baz=316,slow=31						
PMG	Port Moresby	56.30	189	LR	LR	06 17 58.5	
	comp=Z,21nm,20.2s,baz=122,slow=32						
KKAR	Karatay Array	57.18	300	P	P	05 58 10.5	+1.7
KKAR	Karatay Array	57.18	300	P	P	05 58 10.5	+1.7
ARCES	ARCESS Array B	58.32	341	P	P	05 58 17.1	+0.6
	comp=Z,2.3nm,0.9s,baz=40,slow=8.5,SNR=4.1						
ABKAR	Akbulak array	59.47	311	P	P	05 58 26.4	+1.7
ABKAR				IAmb	IAmb	05 58 28.7	
	comp=Z,3.1nm,0.7s						
NIL	Nilore	61.17	290	P	P	05 58 35.6	-1.0
NIL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NIL	Nilore	61.17	290	P	P	05 58 35.6	-1.0
NVAR	Mina Array Bea	61.27	63	P	P	05 58 37.3	-0.2
	comp=Z,0.1nm,0.4s,baz=324,slow=4.5,SNR=2.7						
PDAR	Pinedale Array	63.69	55	P	P	05 58 53.2	-0.4
	comp=Z,0.4nm,0.7s,baz=320,slow=2.7,SNR=3.6						
FINES	FINESS Array B	64.63	336	P	P	05 59 00.5	+1.4
	comp=Z,1.0nm,0.5s,baz=45,slow=8.1,SNR=10.0						
ULM	Lac du Bonnet	65.68	42	P	P	05 59 05.0	-1.1
	comp=Z,0.5nm,0.4s,baz=321,slow=6.5,SNR=2.6						
NOA	NORSAR Array B	68.69	342	P	P	05 59 28.0	+2.9
	comp=Z,1.3nm,1.0s,baz=28,slow=6.4,SNR=3.8						
WRA	Warramunga Arr	68.93	201	P	P	05 59 25.8	-1.2
	comp=Z,0.4nm,0.7s,baz=20,slow=6.6,SNR=7.0						
WRA	Warramunga Arr	68.93	201	IAmb	IAmb	05 59 27.2	
	comp=Z,0.1nm,0.9s						
KBZ	Khabaz	71.84	315	P	P	05 59 45.6	+1.0
	comp=Z,1.4nm,0.6s,baz=36,slow=14,SNR=2.7						
AKASG	Malin Array Be	72.31	327	P	P	05 59 47.8	+0.5
	comp=Z,0.7nm,0.5s,baz=34,slow=6.4,SNR=3.8						
ASAR	Alice Springs	72.61	200	P	P	05 59 49.3	0.0
	comp=Z,1.5nm,0.7s,baz=18,slow=5.7,SNR=24						
ASAR	Alice Springs	72.61	200	P	P	05 59 49.6	+0.2
TX31	Lajitas Ar. Si	76.35	62	P	P	06 00 10.7	-0.7
TX31				IAmb	IAmb	06 00 10.8	
	comp=Z,7.0nm,1.5s						
TX32	Lajitas Array	76.35	62	P	P	06 00 10.8	-0.5
TX32				IAmb	IAmb	06 00 10.8	
	comp=Z,6.5nm,1.4s						
TXAR	Lajitas Array	76.35	62	P	P	06 00 10.4	-0.9
	comp=Z,1.2nm,0.5s,baz=306,slow=5.1,SNR=26						
TXAR	Lajitas Array	76.35	62	P	P	06 00 10.7	-0.7
GERES	GERESS Array B	79.06	335	P	P	06 00 27.7	+1.6
	comp=Z,0.2nm,0.5s,baz=46,slow=5.6,SNR=3.2						

WEL 02 05:51:09.5±0.9**, 34°S**±17°×**17°9W**±2°5**, h207**km±29km**,**
M4.2/13**, mB4.7**/7**, ML4.5**/12**, MLv4.5**/13**, Mw(mB)3.9**/7**,**
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.33	206	P	Pn	05 52 15.6	+0.1
MXZ				S	S	05 53 07.9	+0.8
WMGZ	Waiomatatini S	4.52	203	P	Pn	05 52 18.2	+0.3
HAZ	Te Kaha	4.70	209	P	Pn	05 52 20.7	+0.5
HAZ				S	S	05 53 17.9	+2.3
PKGZ	Pakihiroa	4.70	206	P	Pn	05 52 20.6	+0.3
PKGZ				S	S	05 53 16.3	+0.5
PUZ	Puketiti	4.80	204	P	Pn	05 52 20.9	-0.6
PUZ				S	S	05 53 18.1	+0.1
RUGZ	Raukumara Rang	4.92	209	P	Pn	05 52 22.7	-0.5
CNGZ	Carnagh Statio	5.19	202	P	Pn	05 52 26.9	+0.4
TKGZ	Te Karaka	5.27	205	P	Pn	05 52 28.4	+0.9
TKGZ				S	S	05 53 28.9	+0.2
MWZ	Matawai	5.30	208	P	Pn	05 52 27.2	-0.7
MWZ				S	S	05 53 29.9	+0.4
URZ	Urewera	5.41	211	P	Pn	05 52 28.5	-0.7
URZ				S	S	05 53 32.9	+1.0
RIGZ	Rimuhau	5.54	204	S	S	05 53 36.8	+1.7
PRGZ	Paritu Road	5.70	203	P	Pn	05 52 33.6	+0.7
MUGZ	Murupara	5.74	212	P	Pn	05 52 33.1	-0.3
KNZ	Kokohu	5.85	204	P	Pn	05 52 33.4	-1.5
MHGZ	Mahia Peninsul	5.90	202	P	Pn	05 52 34.9	-0.5
RAHZ	Arahi	5.97	208	P	Pn	05 52 36.8	+0.3
MTHZ	Maungataniwha	6.02	210	P	Pn	05 52 37.6	+0.5
WHHZ	Waihua	6.06	206	P	Pn	05 52 37.8	+0.2
ARHZ	Aropaoanui	6.31	207	P	Pn	05 52 40.9	+0.2
MCHZ	McNeill Hill	6.58	208	P	Pn	05 52 46.3	+2.0
KWHZ	Kaweka Forest	6.68	210	P	Pn	05 52 44.8	-0.8
HIZ	Hauiti	6.74	223	P	Pn	05 52 47.5	+1.1
KAHZ	Kahuranaki	6.82	206	P	Pn	05 52 46.5	-0.9
BHHZ	Black Hill Sta	6.88	211	P	Pn	05 52 48.5	+0.3
KRHZ	Kereru	6.88	209	P	Pn	05 52 47.0	-1.2
PXZ	Pawanui	7.04	205	P	Pn	05 52 48.8	-1.4
PNHZ	Pukenui	7.18	209	P	Pn	05 52 50.5	-1.6
BFZ	Birch Farm	7.83	206	P	Pn	05 52 58.9	-1.5
TMWZ	Te Maipa	8.33	206	P	Pn	05 53 05.9	-1.1

*IDC **02** 05:54:04.0±1.1, 7°.63N×93°.38E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/34, mbtmp3.7/9, ML4.1/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/34, Error ellipse: s-maj=46.2km s-min=19.2km az=55.0*
ISC 02 05:54:10.7±1.2**, 7°.8N**±0°.2×**93°.6E**±0°.2**, h46**km**, n13, σ0s69**/9**,**
mb3.7/8**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.86	26	Pn	Pn	05 56 56.8	-0.6
	0.4nm,0.3s,baz=213,slow=16,SNR=3.0						
PALK	Pallekele	12.74	269	LR	LR	06 01 03.0	
	comp=Z,26nm,20.2s,baz=89,slow=33						
H08S3	Diego Garcia H	25.97	234	T	T	06 26 27.9	
	baz=54,slow=76,SNR=138						
H08S2	Diego Garcia H	25.98	234	T	T	06 26 19.3	
	baz=54,slow=76,SNR=209						
H08S1	Diego Carcia H	25.99	234	T	T	06 26 25.1	
	baz=54,slow=76,SNR=152						
MKAR	Makanchi Array	40.08	348	P	P	06 01 41.5	-0.2
	0.4nm,0.5s,baz=168,slow=8.0,SNR=9.2						
SONM	Songino Array	41.41	13	P	P	06 01 53.2	+0.5
	0.2nm,0.4s,baz=199,slow=12,SNR=2.3						
ZALV	Zalesovo Beam	46.60	353	P	P	06 02 34.8	+0.7
	0.9nm,0.4s,baz=179,slow=8.2,SNR=4.5						
WRA	Warramunga Arr	48.67	125	P	P	06 02 50.6	-0.1
	0.5nm,0.4s,baz=306,slow=8.5,SNR=19						
ASAR	Alice Springs	50.29	129	P	P	06 03 03.0	-0.1
	0.4nm,0.3s,baz=304,slow=7.7,SNR=14						
BRTR	Keskin Array B	62.06	311	P	P	06 04 25.9	-1.1
	0.2nm,0.4s,baz=122,slow=5.4,SNR=2.6						
ARCES	ARCESS Array B	75.18	340	P	P	06 05 48.6	+0.6
	1.9nm,0.9s,baz=96,slow=5.2,SNR=7.7						
GERES	GERESS Array B	77.52	318	P	P	06 06 02.1	+0.3
	0.3nm,0.5s,baz=58,slow=3.7,SNR=2.8						

*MEX **02** 05:56:35.2±0.7, 17°.03N×100°.82W, h16km±6km, MD4.1*
ISC 02 05:56:30.4±2.2**, 17°.09N**±0°.05×**100°.81W**±0°.04**, h4**km±15km**,**
n17, σ1s12/34**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.52	95	iP	Pb	05 56 43.5	+1.3
CAIG				eS	Sb	05 56 50.4	+0.3
CAIG	El Cayaco	0.52	95		Pb	05 56 43.5	+1.3
CAIG					Sb	05 56 50.4	+0.3
ZIIG	Zihuatanejo	0.81	309	eP	Pn	05 56 48.3	-0.3
ZIIG				eS	Sb	05 56 58.5	+0.2
ZIIG	Zihuatanejo	0.81	309		Pn	05 56 48.3	-0.3
ZIIG					Sb	05 56 58.5	+0.2
ARIG	Puente Sto Nin	1.26	20	iP	Pb	05 56 55.1	+0.3
ARIG				eS	Sg	05 57 10.6	-0.4
ARIG	Puente Sto Nin	1.26	20		Pb	05 56 55.1	+0.3
ARIG					Sg	05 57 10.6	-0.4
MEIG	Mezcala	1.41	54	eP	Pb	05 56 58.0	+0.7
MEIG				eS	Sg	05 57 13.9	-1.7
MEIG	Mezcala	1.41	54		Pb	05 56 58.0	+0.7
MEIG					Sg	05 57 13.9	-1.7
PLIG	Platanillo	1.80	44	eP	Pn	05 57 03.4	+1.0
PLIG				eS	Sn	05 57 24.5	-1.1
PLIG	Platanillo	1.80	44		Pn	05 57 03.4	+1.0
PLIG					Sn	05 57 24.5	-1.1
MOIG	Morelia	2.60	352	eP	Pn	05 57 15.0	+1.5
MOIG				iS	Sn	05 57 45.5	-0.1
MOIG	Morelia	2.60	352		Pb	05 57 17.4	-0.3
MOIG					Sb	05 57 50.9	+0.8
MOIG	Morelia	2.60	352		Pn	05 57 15.0	+1.5
MOIG					Sn	05 57 45.5	-0.1
PNIG	Pinotepa	2.66	105	eP	Pn	05 57 14.9	+0.7
PNIG				iS	Sn	05 57 44.7	-2.3
PNIG	Pinotepa	2.66	105		Pn	05 57 14.9	+0.7
PNIG					Sn	05 57 44.7	-2.3
MMIG	Aquila	2.69	297	eP	Pn	05 57 15.7	+1.2
MMIG				iS	Sn	05 57 46.5	-1.1
MMIG	Aquila	2.69	297		Pn	05 57 15.7	+1.2
MMIG					Sn	05 57 46.5	-1.1

*IDC **02** 05:57:09.9±1.5, 27°.13N×54°.45E, h0km, mb3.4/3, mb1 3.4/4, mb1mx3.2/31, mbtmp3.4/4, ML3.2/1, Error ellipse: s-maj=35.7km s-min=26.2km az=30.0*
*TEH **02** 05:57:12.3, 27°.10N×54°.48E, h14km, ML3.2*
ISC 02 05:57:12.7±0.8**, 26°.98N**±0°.08×**54°.38E**±0°.06**, h18**km**, n26,**
σ1s42/26**, mb3.5**/5**, 2C-2D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	1.14	289	ePg	Pg	05 57 34.9	+0.2
GENO	Geno	1.65	75	ePg	Pn	05 57 41.1	+0.1
GENO				e		05 58 12.1	
JHRM	Jahrom	1.68	335	ePn	Pn	05 57 41.6	+0.4
JHRM				e		05 57 43.0	
SHME	Shamm	1.83	120	ePn	Pb	05 57 43.9	-1.8
NIAN	Nian	2.26	75	ePn	Pn	05 57 49.8	+0.6
NIAN				e		05 58 13.3	
MSFE	Esma-Masafi	2.27	135	ePn	Pb	05 57 51.3	-1.9
NAZ	Nazwa, Dubai	2.29	149	ePn	Pb	05 57 52.1	-1.4
MDH	Madha	2.41	134	ePn	Pb	05 57 53.9	-1.5
ASUD	Al Ashush, Dub	2.50	160	ePn	Pb	05 57 55.7	-1.3
UOSS	Minazif	2.61	140	ePn	Pb	05 57 56.7	-2.2
HATD	Hatta, Dubai	2.66	143	ePn	Pb	05 57 59.1	-0.8
ASHO	Ashiyiah	2.74	146	ePn	Pb	05 57 58.8	-2.4
NGRK	Negar Kerman	3.37	37	ePn	Pn	05 58 03.8	-1.0
NGRK				e		05 58 56.1	
TVBK	TV Kerman	3.66	34	ePn	Pn	05 58 09.0	+0.3
TVBK				e		05 59 01.6	
KHGB	Koh Gabri	3.85	28	ePn	Pn	05 58 11.8	+0.5
KHGB				e		05 58 58.1	
CHMN	Cheshme madani	4.00	43	ePn	Pn	05 58 12.8	-0.6
CHMN				e		05 58 21.8	
IMEH	Mehriz	4.40	3	ePn	Pn	05 58 19.5	+0.7
KLNJ	Kolanjah	4.70	329	ePn	Pn	05 58 21.9	-1.1
ISAD	Sadrabad	4.95	353	ePn	Pn	05 58 26.2	-0.3
IRAM	Ramesheh	5.12	341	ePn	Pn	05 58 28.0	-0.6
WSAR	Wadi Sarin	5.36	133	Pn	Pn	05 58 32.9	+1.1
	0.8nm,0.3s,baz=7.6,slow=13,SNR=4.8						
WSAR				Sn	Sn	05 59 35.0	+1.9
	0.5nm,0.3s,baz=146,slow=18,SNR=3.1						
BRTR	Keskin Array B	21.43	312	P	P	06 01 59.8	0.0
	0.6nm,0.7s,baz=126,slow=13,SNR=5.5						
MAKZ	Makanchi	29.41	40	⇓Pg	P	06 03 20.4	+5.5
	2.2nm,1.3s						
MAKZ				⇓Lg	Lg	06 04 19.7	
	1.0nm,0.8s						
MK31	Makanchi Array	29.58	41	⇑Pg	P	06 03 19.7	+3.2
	0.4nm,0.5s,baz=143,slow=17,SNR=8.3						
MK31				⇑Lg	Lg	06 04 16.2	
	1.0nm,0.7s,baz=142,slow=31,SNR=4.3						
ZALV	Zalesovo Beam	35.04	31	P	P	06 04 02.5	-1.7
	0.3nm,0.3s,baz=229,slow=13,SNR=2.5						
TORD	Torodi Ar. Bea	51.02	265	P	P	06 06 14.2	+0.2
	0.2nm,0.3s,baz=69,slow=7.6,SNR=5.5						

*TIR **02** 06:06:36.6, 42°.12N×18°.89E, h7km, Md2.7/3*
*RHSSO **02** 06:06:37.8±0.8, 42°.03N×19°.10E, h4km±2km, ML2.1/7*
*PDG **02** 06:06:38.5±0.1, 42°.12N×19°.07E, h13km, MD2.4/1, ML2.2/11, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*BEO **02** 06:06:38.4±0.5, 42°.02N×19°.06E, h0km, ML2.1/9*
ISC 02 06:06:35.9±1.1**, 41°.94N**±0°.04×**19°.11E**±0°.02**, h14**km±6km**,**
n48, σ1s55/87**, 1C-2D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULC	Ulcinj	0.10	75	ePg	Pg	06 06 42.7	+3.7
ULC				eSg	Sg	06 06 46.2	+5.0
DRME	Dracevica, Mon	0.26	12	⇓iPg	Pb	06 06 41.6	-0.7
DRME				eSg	Sg	06 06 44.1	-0.9
DRME	Dracevica, Mon	0.26	12	ePg	Pb	06 06 41.6	-0.7
DRME				eSg	Sg	06 06 43.9	-1.1
BUM	Brajici-Budva	0.40	336	ePg	Pg	06 06 43.3	-0.6
BUM				eSg	Sg	06 06 47.5	-1.8
PDG	Podgorica	0.51	12	ePg	Pg	06 06 45.4	-0.4
PDG				eSg	Sg	06 06 51.2	-1.4
PDG	Podgorica	0.51	12	⇑iPg	Pg	06 06 45.3	-0.5
PDG				eSg	Sg	06 06 51.4	-1.2
TTG	Podgorica	0.51	12	ePg	Pg	06 06 45.0	-0.8
TTG				eSg	Sg	06 06 51.1	-1.5
PUK	Puka	0.59	79	iPG	Pn	06 06 50.5	+0.5
PUK				iSG	Sn	06 07 00.7	+1.2
CEME	Cevo	0.63	347	ePg	Pg	06 06 47.1	-1.0
CEME				eSg	Sg	06 06 54.2	-2.3
HCY	Herceg Novi	0.69	318	⇓iPg	Pb	06 06 48.6	-1.1
HCY				eSg	Sg	06 06 57.8	-0.5
HCY	Herceg Novi	0.69	318	ePg	Pb	06 06 48.7	-1.0
HCY				eSg	Sg	06 06 57.6	-0.7
BCI	Bajram Curri	0.83	58	iPN	Pn	06 06 59.1	+5.9
BCI				iSN	Sn	06 07 17.2	+12
NKME	Niksic	0.84	352	ePg	Pg	06 06 50.6	-1.5
NKME				eSg	Sg	06 07 01.0	-2.1
PVY	Plav	0.91	43	ePg	Pn	06 06 53.9	-0.5
PVY				eSg	Sb	06 07 06.7	+1.1
KOME	Kolasin	0.96	18	ePg	Pg	06 06 53.3	-1.2
KOME				eSg	Sg	06 07 06.1	-0.9
TREB	Trebinje	0.96	324	ePg	Pg	06 06 53.3	-1.2
TREB				eSg	Sg	06 07 05.9	-1.2
TREB	Trebinje	0.96	324	ePg	Pg	06 06 53.2	-1.2
TREB				eSg	Sg	06 07 06.1	-1.0
DBRK	Dubrovnik	1.02	316	iPg	Pg	06 06 54.6	-1.0
DBRK				Sg	Sg	06 07 08.2	-0.8
PHP	Peshkopia	1.02	104	iPG	Pg	06 06 53.2	-2.5
PHP				iSG	Sg	06 07 06.3	-2.8
BRY	Bratogost	1.05	336	ePg	Pg	06 06 54.8	-1.4
BRY				eSg	Sg	06 07 08.5	-1.5
BRY	Bratogost	1.05	336	ePg	Pg	06 06 54.8	-1.4
BRY				iSg	Sg	06 07 08.9	-1.1
IVA	Berane	1.10	31	ePg	Pb	06 06 56.7	-0.1
IVA				eSg	Sb	06 07 12.0	+1.0
UPM	Unac-Piva	1.27	353	ePg	Pg	06 06 59.3	-1.1
UPM				eSg	Sg	06 07 15.7	-1.4
UPM	Unac-Piva	1.27	353	ePg	Pg	06 06 58.7	-1.7
UPM				eSg	Sg	06 07 16.2	-0.9
STON	Ston	1.40	312	ePn	Pb	06 07 01.3	-0.5
STON				Sn	Sn	06 07 21.9	+2.5
STON	Ston	1.40	312	ePg	Pb	06 07 01.3	-0.5
STON				eSg	Sn	06 07 21.8	+2.5
STON	Ston	1.40	312	ePg	Pn	06 07 01.1	+0.1
STON				eSg	Sn	06 07 20.5	+1.2
SJES	Sjenica	1.47	25	ePg	Pg	06 07 04.3	+0.2
SJES				eSg	Sg	06 07 23.8	+0.6
RUDO	Rudo	1.69	6	ePn	Pb	06 07 07.0	+0.2
RUDO				eSn	Sn	06 07 28.2	+1.6
IVAS	Ivanjica	1.81	25	ePg	Pg	06 07 09.4	-1.2
IVAS				eSg	Sg	06 07 33.5	-0.6
BBLS	Lazići	1.94	6	ePn	Pg	06 07 12.2	-0.9
BBLS				eSg	Sg	06 07 38.6	+0.3
BBLS	Lazići	1.94	6	ePn	Pb	06 07 10.4	-0.7
BBLS				eSn	Sn	06 07 33.9	+1.1
SELS	Selova	1.96	48	ePn	Pb	06 07 11.4	0.0
MAKA	Makarska	2.05	312	ePn	Pb	06 07 12.4	-0.5
MAKA				Sn	Sb	06 07 38.2	-0.1
HAPS	Han Pijesak,Bl	2.15	357	ePn	Pb	06 07 13.6	-1.1
HAPS				eSg	Sg	06 07 43.7	-1.4
HAPS	Han Pijesak,Bl	2.15	357	ePn	Pb	06 07 13.2	-1.5
HAPS				eSn	Sn	06 07 39.4	+1.3
DIVS	Divibare	2.25	16	ePn	Pb	06 07 15.8	-0.6
DIVS				eSn	Sb	06 07 44.2	-0.1
DIVS	Divibare	2.25	16	ePn	Pb	06 07 14.7	-1.7
DIVS				eSn	Sn	06 07 41.3	+0.7
GRUS	Gruza	2.28	31	ePn	Pb	06 07 17.2	+0.4
GRUS				eSn	Sn	06 07 43.5	+2.5
HVAR	Hvar	2.33	303	ePn	Pb	06 07 15.5	-2.1
HVAR				Sn	Sn	06 07 43.3	+1.1
BOSS	Bosilegrad	2.56	76	ePn	Pb	06 07 22.1	+0.4
KIJV	Kijevo	2.87	317	ePn	Pb	06 07 23.9	-3.0
KIJV				Sn	Sn	06 07 59.0	+3.4
ZAPS	Zavoj	2.92	62	ePn	Pb	06 07 25.7	-2.1
ZAPS				eSn	Sb	06 08 02.5	-0.9
ZAGS	Zajecar	2.96	50	ePn	Pb	06 07 26.3	-2.1
ZIRJ	Zirje	3.08	305	ePn	Pn	06 07 26.7	+2.7
ZIRJ	Zirje	3.08	305	Sn	Sn	06 08 01.7	+1.1
UDBI	Udbina	3.56	318	ePn	Pn	06 07 33.9	+3.1
DUGI	Dugi Otok	3.62	306	ePn	Pn	06 07 34.2	+2.7
DUGI				Sn	Sn	06 08 15.7	+1.7

*VIE **02** 06:06:53.4±0.6, 45°.72N×14°.85E, h14km±6km, mb1.6/1, ml1.1/2, Error ellipse: s-maj=2.4km s-min=1.2km az=1.0 47 km SE of Ljubljana*
LJU 02 06:06:53.8, 45°.75N×14°.86E, h3km**, ML0.7, 1D,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VISS	Visnje	0.06	349	⇓iPg	Pg	06 06 54.8	-0.2
VISS				iSg	Sg	06 06 56.0	+0.1
	comp=Z,72nm,0.1s						
GBRS	Gornja Briga	0.22	188	iPg	Pg	06 06 58.1	0.0
GBRS				iSg	Sg	06 07 02.0	+1.1
	comp=Z,5.0nm,0.1s						
PDKS	Podkum	0.33	18	iPg	Pg	06 07 00.4	+0.2
PDKS				iSg	Sg	06 07 05.3	+0.9
	comp=Z,2.0nm,0.1s						
GBAS	Gorenja Brezov	0.34	303	iPg	Pg	06 07 00.9	+0.4
GBAS				iSg	Sg	06 07 05.4	+0.5
	comp=Z,6.0nm,0.2s						
BOJS	Bojanci	0.37	131	iPg	Pg	06 07 00.8	-0.1

LEGS	**Legarje**	**0.38**	**58**	*e*Pg		Pg	06 07 01.3	+0.2
KNDS	**Knezji Dol**	**0.40**	**237**	*i* Pg		Pg	06 07 01.5	0.0
CRES	**Cresnjev**	**0.43**	**79**	*i* Pg		Pg	06 07 02.4	+0.3
CRES				*i* Sg		Sg	06 07 08.1	+0.5
OZLJ	**Ozalj**	**0.45**	**107**	*e*Pg		Pg	06 07 02.3	-0.1
OZLJ				Sg		Sg	06 07 08.2	-0.1
OBKA	**Obir**	**0.79**	**344**	*i* Pg		Pg	06 07 09.5	+0.6
	comp=Z,0.3nm,0.1s							
OBKA				*i* Sg		Sb	06 07 20.7	-0.7
	comp=Z,0.7nm,0.2s							
MYKA	**Terra Mystica**	**1.22**	**317**	*i* Sg		Sb	06 07 34.1	+0.4
	comp=Z,0.2nm,0.1s							

NEIC ***02*** *06:13:08.9±2.1, 19°.64S×0°.08×169°.5E±0°.1, h128km±8km, mb4.3/12, Error ellipse: s-maj=19.6km s-min=10.2km az=107.0*
IDC ***02*** *06:13:09.3±3.4, 19°.54S×169°.30E, h128km±32km, mb3.9/5, mb1 4.1/6, mb1mx3.6/35, mbtmp4.3/6, Error ellipse: s-maj=69.9km s-min=26.3km az=143.0*
ISC 02 06:13:05.5±1.3, 19°.55S±0°.2×169.7E±0°.2, h100km, n30, σ1§38/31, mb4.2/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.92**	**229**	P	**Pn**	**06 14 05.5**	**+1.8**
	18nm,0.3s,baz=118,slow=18,SNR=1066						
DZM				S	**Sn**	**06 14 47.7**	**-1.2**
	36nm,0.3s,baz=356,slow=16,SNR=13						
DZM	**Mont Dzumac**	**3.92**	**229**		**Pn**	**06 14 05.8**	**+2.1**
DZM					**Sn**	**06 14 48.0**	**-0.8**
EIDS	**Eidsvold**	**18.11**	**248**	Pn	**P**	**06 17 11.0**	**+1.3**
ARMA	**Armidale**	**19.58**	**233**	P	**Pn**	**06 17 28.4**	**+0.4**
ARMA				IAmb	IAmb	06 17 41.9	
	comp=Z,4.7nm,1.0s						
CAN	**Canberra**	**24.08**	**225**	P	**P**	**06 18 12.7**	**+1.0**
CAN				IAmb	IAmb	06 18 17.0	
	comp=Z,34nm,1.4s						
COEN	**Coen**	**25.93**	**278**	P	**P**	**06 18 30.5**	**+1.8**
COEN				IAmb	IAmb	06 18 48.2	
	comp=Z,7.6nm,1.1s						
STKA	**Stephens Creek**	**28.02**	**238**	P	**P**	**06 18 47.1**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=71,slow=11,SNR=11						
STKA	**Stephens Creek**	**28.02**	**238**	P	**P**	**06 18 47.5**	**+0.3**
BBOO	**Buckleboo**	**32.77**	**239**	P	**P**	**06 19 27.9**	**-1.2**
WRA	**Warramunga Arr**	**33.20**	**263**	P	**P**	**06 19 30.5**	**-2.6**
	comp=Z,1.2nm,0.4s,baz=90,slow=8.3,SNR=23						
WRA	**Warramunga Arr**	**33.20**	**263**	P	P	06 19 30.1	-2.9
AS31	**Alice Springs**	**33.43**	**256**	P	**P**	**06 19 33.4**	**-1.6**
AS31				IAmb	IAmb	06 19 33.8	
	comp=Z,3.8nm,0.6s						
ASAR	**Alice Springs**	**33.44**	**256**	P	**P**	**06 19 33.2**	**-1.8**
	comp=Z,8.8nm,0.6s,baz=86,slow=9.0,SNR=218						
MTN	**Manton Dam**	**37.52**	**274**	P	**P**	**06 20 09.1**	**-1.0**
MTN				IAmb	IAmb	06 20 11.8	
	comp=Z,7.1nm,1.0s						
FORT	**Forrest**	**39.08**	**245**	P	**P**	**06 20 21.4**	**-1.5**
KNRA	**Kununurra**	**39.10**	**269**	P	**P**	**06 20 21.7**	**-1.5**
KNRA				IAmb	IAmb	06 20 26.9	
	comp=Z,19nm,1.4s						
FITZ	**Fitzroy Crossi**	**41.60**	**264**	P	**P**	**06 20 43.2**	**-0.6**
FITZ				IAmb	IAmb	06 20 43.6	
	comp=Z,2.7nm,0.7s						
PETK	**Petropavlovsk-**	**73.07**	**353**	P	**P**	**06 24 26.1**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=157,slow=7.8,SNR=4.4						
PETK	**Petropavlovsk-**	**73.07**	**353**	P	**P**	**06 24 26.6**	**+2.2**
ILAR	**Eielson Array**	**90.39**	**17**	P	**P**	**06 25 54.3**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=239,slow=5.3,SNR=3.5						
YKA	**Yellowknife Ar**	**100.75**	**27**	P	**Pdif**	**06 26 44.0**	**+1.8**
	comp=Z,0.1nm,0.5s,baz=253,slow=4.5,SNR=5.0						
ARCES	**ARCESS Array B**	**125.45**	**345**	PKP	**PKPdf**	**06 31 53.4**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=53,slow=2.3,SNR=8.2						
ARCES	**ARCESS Array B**	**125.45**	**345**		**PKPdf**	**06 31 54.0**	**-0.2**
CONA	**Conrad Observa**	**144.59**	**329**	*i* PKPdf	**PKPab**	**06 32 28.8**	**-0.4**
	comp=Z,0.8nm,0.6s						
GERES	**GERESS Array B**	**144.93**	**332**	PKP	**PKPbc**	**06 32 30.0**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=42,slow=6.1,SNR=8.1						
GERES	**GERESS Array B**	**144.93**	**332**		**PKPbc**	**06 32 30.3**	**-0.1**
MOA	**Molln**	**145.40**	**330**	*i* PKPbc	**PKPdf**	**06 32 29.9**	**-1.9**
	comp=Z,0.7nm,0.4s						
SOKA	**Soboth**	**145.86**	**328**	*i* PKPbc	**PKPdf**	**06 32 31.3**	**-1.3**
	comp=Z,0.4nm,0.2s						
KBA	**Koelnbreinsper**	**146.39**	**330**	*i* PKPbc	**PKPdf**	**06 32 33.0**	**-0.6**
	comp=Z,1.1nm,0.5s						
ABTA	**Abfaltersbach**	**147.02**	**331**	*i* PKPbc	**PKPdf**	**06 32 34.6**	**+0.1**
	comp=Z,0.9nm,0.4s						

GCG ***02*** *06:18:51.4±0.4, 13°.00N×91°.76W, h0km±54km, MD4.0, ML3.3*
IDC ***02*** *06:18:55.4±1.6, 13°.31N×91°.71W, h0km, mb3.7/3, mb1 4.0/8, mb1mx3.7/43, mbtmp3.7/8, ML3.6/4, Error ellipse: s-maj=29.3km s-min=19.0km az=140.0*
SNET ***02*** *06:18:58.9±1.2, 13°.56N±0°.10×91°.63W±0°.06, h28km, n38, σ1§64/47, mb3.9/3, 2C-2D, Near coast of Guatemala*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG3	**Santiaguito 3,**	**1.14**	**2**	*e*P	**Pb**	**06 19 22.9**	**+1.9**
FUG	**Fuego 3**	**1.15**	**40**	*e*P	**Pb**	**06 19 22.4**	**+1.3**
FUG				*e*S	Sb	06 19 46.9	+11
FUG				AML	AML	06 19 47.3	
	comp=Z,334nm,0.4s						
THIG		**1.48**	**335**	*e*P	**Pb**	**06 19 25.9**	**-0.7**
THIG				*i* S	**Sb**	**06 19 46.1**	**+1.0**
THIG		**1.48**	**335**		**Pb**	**06 19 25.9**	**-0.7**
THIG					**Sb**	**06 19 46.1**	**+1.0**
FAME	**Alcalda de S**	**1.57**	**80**	⇑*i* P	**Pn**	**06 19 24.4**	**-1.3**
FAME				*e*S	**Sb**	**06 19 46.1**	**-1.5**
NBG	**Las Nubes**	**1.59**	**50**	*e*P	**Pb**	**06 19 28.5**	**-0.1**
APG	**El Apazote**	**1.81**	**37**	Pn	**Pb**	**06 19 32.0**	**-0.3**
	comp=Z,22nm,0.3s,baz=213,slow=17,SNR=284						
APG				Lg	Lg	06 20 01.9	
	comp=Z,15nm,0.3s,baz=338,slow=17,SNR=8.0						
CEVE	**Cerro Verde**	**1.94**	**82**	*e*P	**Pn**	**06 19 31.9**	**+0.8**
CEVE				IAML		06 20 13.4	
	comp=Z,431nm,0.4s						
SBLS	**San Blas**	**1.95**	**82**	*e*P	**Pn**	**06 19 31.0**	**-0.1**
SNJE	**San Jose**	**1.97**	**81**	*e*P	**Pn**	**06 19 31.6**	**+0.2**
UNIC	**Universidad Ca**	**2.04**	**78**	*e*P	**Pn**	**06 19 32.9**	**+0.6**
UEES	**Universidad Ev**	**2.31**	**86**	*e*P	**Pn**	**06 19 35.4**	**-0.6**
SNET	**Serv Nac Est T**	**2.31**	**87**	*e*P	**Pn**	**06 19 35.5**	**-0.5**
SNET				IAML		06 19 36.6	
	comp=Z,213nm,0.3s						
SNET	**Serv Nac Est T**	**2.31**	**87**		**Pn**	**06 19 35.3**	**-0.7**
MTO3	**Montecristo**	**2.33**	**69**	⇑*i* P	**Pn**	**06 19 37.0**	**+0.6**
LFU	**La Fuente**	**2.43**	**85**	*e*P	**Pn**	**06 19 37.6**	**0.0**
PCIG		**2.64**	**324**	*e*P	**Pn**	**06 19 39.9**	**-0.6**
PCIG				*i* S	**Sn**	**06 20 09.8**	**-1.9**
PCIG		**2.64**	**324**		**Pn**	**06 19 39.9**	**-0.6**
PCIG					**Sn**	**06 20 09.8**	**-1.9**
COEG	**Centro de Oper**	**2.65**	**88**	*e*P	**Pn**	**06 19 40.4**	**-0.3**
JUCU	**Jucuarˌn**	**3.28**	**95**	⇓*e*P	**Pn**	**06 19 47.9**	**-1.4**
TGIG		**3.52**	**336**	*i* P	**Pn**	**06 19 50.5**	**-2.1**
TGIG				*e*S	**Sn**	**06 20 29.2**	**-4.1**
TGIG		**3.52**	**336**		**Pn**	**06 19 50.5**	**-2.1**
TGIG					**Sn**	**06 20 29.2**	**-4.1**
LCND	**La Caada**	**3.62**	**94**	⇓*i* P	**Pn**	**06 19 53.2**	**-0.8**
TGUH	**Tegucigalpa,Un**	**4.24**	**83**		**Pn**	**06 20 02.0**	**-0.6**
CMIG	**Matias Romero**	**4.72**	**318**	Pn	**Pn**	**06 20 09.5**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=144,slow=11,SNR=19						
CMIG				Sn	**Sn**	**06 21 05.4**	**+2.4**
	comp=Z,0.8nm,0.3s,baz=137,slow=14,SNR=4.3						
CMIG				Lg	Lg	06 21 26.4	
	comp=Z,2.3nm,0.3s,baz=36,slow=14,SNR=6.0						
CMIG	**Matias Romero**	**4.72**	**318**	*i* P	**Pn**	**06 20 07.5**	**-1.6**
CMIG				*i* S	**Sn**	**06 20 59.6**	**-3.5**
CMIG	**Matias Romero**	**4.72**	**318**		**Pn**	**06 20 07.5**	**-1.6**
CMIG					**Sn**	**06 20 59.6**	**-3.5**
ESTN	**Estel**	**5.12**	**95**		**Pn**	**06 20 12.9**	**-1.7**
ACON	**Acoyapa**	**6.47**	**103**	Pn	**Pn**	**06 20 30.9**	**-2.2**
JTS	**Las Juntas de**	**7.28**	**116**	Pn	**Pn**	**06 20 43.2**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=17,slow=21,SNR=6.7						
JTS	**Las Juntas de**	**7.28**	**116**		**Pn**	**06 20 43.9**	**-0.3**
TEIG	**Tepich**	**7.35**	**25**	Pn	Pn	06 20 48.7	+3.5
TXAR	**Lajitas Array**	**19.27**	**326**	P	**Pn**	**06 23 25.4**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=134,slow=11,SNR=6.7						
TKL	**Tuckaleechee C**	**23.11**	**16**	P	**P**	**06 24 04.2**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=181,slow=9.7,SNR=4.9						
GCMT	**Greycliff**	**35.58**	**338**	P	P	06 25 41.6	-13
YKA	**Yellowknife Ar**	**51.54**	**347**	P	**P**	**06 28 03.2**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=148,slow=7.5,SNR=8.9						
YKA				PcP	**PcP**	**06 29 17.1**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=153,slow=3.6,SNR=3.8						
ILAR	**Eielson Array**	**63.39**	**337**	P	**P**	**06 29 27.9**	**+1.5**
	comp=Z,1.2nm,1.0s,baz=119,slow=5.0,SNR=7.0						
CMAR	**Chiang Mai Arr**	**146.53**	**342**	PKPbc	**PKPab**	**06 38 40.5**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=329,slow=3.2,SNR=4.8						

IDC ***02*** *06:23:03.8±3.6, 40°.45N×124°.61W, h0km, mb3.5/2, mb1 3.8/6, mb1mx3.4/50, mbtmp3.5/6, ML3.8/4, MS2.9/4, Ms1 2.9/4, ms1mx2.6/27, Error ellipse: s-maj=43.1km s-min=10.5km az=107.0*
NCEDC ***02*** *06:23:09.7±1.9, 40°.29N±0°.03×124°.45W±0°.06, h20km±6km, Mwr4.0/5, mb4.1/2(NEIC), Error ellipse: s-maj=6.9km s-min=3.6km az=80.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.02; Mθθ=0.47; Mφφ=0.45; Mrθ=0.17; Mθφ=-1.22; Mφr=0.10;*
ANF ***02*** *06:23:10.0±0.5, 40°.38N×124°.31W, h20km, ML3.7/17 Error ellipse: s-maj=6.4km s-min=2.3km az=79.0*
ISC 02 06:23:07.2±1.5, 40°.28N±0°.03×124°.57W±0°.05, h13km±9km, n279, σ1§26/297, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCTM	**Capetown**	**0.27**	**43**		**Pb**	**06 23 15.4**	**+1.6**
KCTM					**Sb**	**06 23 20.4**	**+2.0**
KSMM	**Slide Mountain**	**0.32**	**107**		**Pb**	**06 23 15.7**	**+0.9**
KMPM	**Mount Pierce**	**0.37**	**68**		**Pb**	**06 23 16.4**	**+0.7**
KMPM					**Sb**	**06 23 21.7**	**+0.2**
KCRM	**Chalk Rock**	**0.59**	**76**		**Pb**	**06 23 20.0**	**+0.5**
KMRM	**Mail Ridge**	**0.66**	**95**		**Pb**	**06 23 21.2**	**+0.5**
KMRM				Sg	**Sb**	**06 23 30.5**	**+0.6**
JCC	**Jacoby Creek,**	**0.68**	**37**	Pg	**Pg**	**06 23 20.7**	**+0.3**
KBSM	**Bell Springs**	**0.83**	**116**		**Pg**	**06 23 23.4**	**+0.2**
KCSM	**Cold Springs**	**0.85**	**72**		**Pg**	**06 23 23.7**	**+0.1**
KHMM	**Horse Mountain**	**0.87**	**47**		**Pg**	**06 23 24.1**	**0.0**
KHMM					**Sg**	**06 23 34.7**	**-0.8**
KHMM				Sg	**Sb**	**06 23 35.0**	**-0.9**
KPPM	**Pickett Peak**	**0.93**	**86**		**Pg**	**06 23 25.0**	**-0.1**
KIPM	**Iron Peak**	**0.96**	**119**		**Pb**	**06 23 25.2**	**-0.6**
KCPM	**Cahto Peak**	**0.96**	**128**		**Pb**	**06 23 25.4**	**-0.5**
KRPM	**Rodgers**	**0.97**	**25**		**Pb**	**06 23 25.3**	**-0.6**
KRPM					**Sb**	**06 23 37.4**	**-1.3**
KFPM	**Farley Peak**	**1.09**	**126**		**Pb**	**06 23 27.0**	**-0.9**
KHBM	**Hayfork Bally**	**1.10**	**69**		**Pb**	**06 23 27.0**	**-1.2**
KBNM	**Bluenose Ridge**	**1.13**	**110**		**Pb**	**06 23 27.8**	**-0.8**
GTC	**Three Chop Rid**	**1.18**	**138**		**Pn**	**06 23 28.2**	**-1.2**
KRKM	**Rackout Spring**	**1.29**	**123**		**Pn**	**06 23 29.8**	**-1.2**
LBPM	**Beegum Peak**	**1.29**	**88**		**Pn**	**06 23 29.8**	**-1.2**
GNAM	**Navarro Ridge**	**1.30**	**146**		**Pn**	**06 23 30.1**	**-1.1**
KOMM	**Orleans Mounta**	**1.31**	**40**		**Pn**	**06 23 30.1**	**-1.2**
KRMB	**Red Mountain**	**1.34**	**22**		**Pn**	**06 23 30.5**	**-1.2**
KRMB				Sn	**Sb**	**06 23 45.8**	**-3.6**
O02D	**Mt. Diablo Mer**	**1.37**	**94**		**Pn**	**06 23 31.3**	**-0.8**
O02D	**Mt. Diablo Mer**	**1.37**	**94**	P	**Pn**	**06 23 31.3**	**-0.8**
	baz=276,SNR=367						
O02D				S	**Sn**	**06 23 46.7**	**-3.4**
	baz=276						
GHOM	**Hamilton Openi**	**1.47**	**147**		**Pn**	**06 23 32.3**	**-1.1**
LGPM	**Granite Peak**	**1.47**	**64**		**Pn**	**06 23 32.2**	**-1.3**
GHMM	**Hull Mountain**	**1.49**	**121**		**Pn**	**06 23 32.4**	**-1.4**
GROM	**Round Mountain**	**1.50**	**103**		**Pn**	**06 23 32.8**	**-1.1**
GVV	**Valley View**	**1.54**	**109**		**Pn**	**06 23 33.3**	**-1.2**
GASB	**Alder Springs**	**1.56**	**113**		**Pn**	**06 23 33.4**	**-1.3**
WDC	**Whiskeytown Da**	**1.58**	**78**		**Pn**	**06 23 33.5**	**-1.4**
WDC	**Whiskeytown Da**	**1.58**	**78**		**Pn**	**06 23 33.7**	**-1.2**
N02D	**Trinity Center**	**1.58**	**63**		**Pn**	**06 23 33.8**	**-1.2**
N02D	**Trinity Center**	**1.58**	**63**	P	**Pn**	**06 23 33.8**	**-1.2**
	baz=243,SNR=1000						
N02D				S	**Sn**	**06 23 51.4**	**-3.9**
	baz=243						
KSXB	**Camp Six Broad**	**1.64**	**19**		**Pn**	**06 23 34.7**	**-1.1**
GGUM	**Gualala**	**1.65**	**149**		**Pn**	**06 23 34.7**	**-1.2**
LBKM	**Bonanza King**	**1.66**	**60**		**Pn**	**06 23 34.9**	**-1.2**
GSNM	**Snow Mountain**	**1.71**	**141**		**Pn**	**06 23 35.8**	**-1.0**
M02C	**Callahan**	**1.71**	**49**		**Pn**	**06 23 35.7**	**-1.1**
M02C	**Callahan**	**1.71**	**49**	P	**Pn**	**06 23 35.8**	**-1.0**
	baz=228,SNR=1000						
M02C				S	**Sn**	**06 23 55.4**	**-3.2**
	baz=228						
GHLM	**Highland Sprin**	**1.72**	**135**		**Pn**	**06 23 35.8**	**-1.1**
HOPS	**Hopland Field**	**1.73**	**138**	Pn	**Pn**	**06 23 35.9**	**-1.1**
GCK	**Clark Valley**	**1.80**	**113**		**Pn**	**06 23 37.5**	**-0.4**
GTSM	**Trough Springs**	**1.80**	**122**		**Pn**	**06 23 37.0**	**-1.0**
GDCM	**Dry Creek**	**1.83**	**145**		**Pn**	**06 23 37.2**	**-1.2**
KTRM	**Thompson Ridge**	**1.86**	**29**		**Pn**	**06 23 37.9**	**-1.0**
LTCM	**Tuscan Springs**	**1.88**	**91**		**Pn**	**06 23 38.3**	**-0.7**
GMKM	**Mount Konoctai**	**1.90**	**133**		**Pn**	**06 23 38.5**	**-0.9**
GPMM	**Pine Mountain**	**1.91**	**138**		**Pn**	**06 23 38.6**	**-0.8**
GACM	**Adobe Creek**	**1.93**	**136**		**Pn**	**06 23 38.7**	**-1.1**
GCVM	**Cloverdale**	**1.93**	**141**		**Pn**	**06 23 38.7**	**-1.0**
KBO	**Bosley Butte**	**1.95**	**8**		**Pn**	**06 23 39.5**	**-0.6**
GBMM	**Baldy Mountain**	**1.97**	**125**		**Pn**	**06 23 39.4**	**-0.9**
GHCM	**House Creek**	**1.98**	**147**		**Pn**	**06 23 39.3**	**-1.2**
LAMM	**Antelope Mount**	**1.98**	**47**		**Pn**	**06 23 39.8**	**-0.8**
LSHM	**Sage Hen Hill**	**2.00**	**74**		**Pn**	**06 23 39.9**	**-0.8**
GFC	**Funks Creek**	**2.00**	**118**		**Pn**	**06 23 40.7**	**0.0**
LCSM	**College of the**	**2.00**	**55**		**Pn**	**06 23 40.4**	**-0.4**
GDXM	**Geysers**	**2.01**	**136**		**Pn**	**06 23 40.0**	**-0.9**
L02E	**Cave Junction**	**2.01**	**21**		**Pn**	**06 23 40.3**	**-0.6**
L02E	**Cave Junction**	**2.01**	**21**	P	**Pn**	**06 23 40.1**	**-0.8**
	baz=199,SNR=801						
L02E				S	**Sn**	**06 24 03.2**	**-2.7**
	baz=199						
GSGM	**Seigler Mounta**	**2.02**	**134**		**Pn**	**06 23 40.9**	**0.0**
GWKM	**Walker Ridge**	**2.02**	**127**		**Pn**	**06 23 40.3**	**-0.8**
YBH	**Yreka Blue Hor**	**2.02**	**44**	Pg	**Pn**	**06 23 40.2**	**-0.9**
	87nm,0.3s,baz=225,slow=11,SNR=4561						
YBH				Lg	Lg	06 24 03.9	
	51nm,0.3s,baz=342,slow=20,SNR=17						
YBH				LR	LR	06 24 13.8	
	comp=Z,87nm,20.8s,baz=218,slow=36						
YBH	**Yreka Blue Hor**	**2.02**	**44**		**Pn**	**06 23 40.4**	**-0.7**
FTR	**Fort Ross**	**2.07**	**148**		**Pn**	**06 23 40.6**	**-1.0**
GBGM	**Boggs Mountain**	**2.07**	**134**		**Pn**	**06 23 41.6**	**-0.1**
GCRM	**Castle Rock Sp**	**2.08**	**136**		**Pn**	**06 23 41.2**	**-0.7**
LGBM	**Gray Butte**	**2.10**	**59**		**Pn**	**06 23 41.9**	**-0.3**
GAXM	**Alexander Vall**	**2.11**	**138**		**Pn**	**06 23 41.1**	**-1.1**
M03C	**McCloud**	**2.11**	**61**		**Pn**	**06 23 42.0**	**-0.3**
O03E	**Paynes Creek**	**2.12**	**89**		**Pn**	**06 23 41.1**	**-1.2**
O03E	**Paynes Creek**	**2.12**	**89**	P	**Pn**	**06 23 41.2**	**-1.2**
	baz=271,SNR=152						
O03E				S	**Sn**	**06 24 05.8**	**-2.8**
	baz=271						
NMCNC	**Mill Creek, So**	**2.12**	**142**		**Pn**	**06 23 41.2**	**-1.1**
LDBM	**Digger Butte**	**2.13**	**85**		**Pn**	**06 23 41.3**	**-1.4**
MNRC	**McLaughlin Min**	**2.16**	**130**		**Pn**	**06 23 42.7**	**-0.2**
LMPM	**Military Pass**	**2.19**	**56**		**Pn**	**06 23 43.8**	**+0.3**
NMTM	**Middletown**	**2.21**	**131**		**Pn**	**06 23 42.8**	**-0.8**
NHSM	**Mount Saint He**	**2.22**	**136**		**Pn**	**06 23 43.0**	**-0.9**
LHEM	**Herd Peak**	**2.23**	**52**		**Pn**	**06 23 44.0**	**-0.1**
MAC	**Mark West Spri**	**2.24**	**140**		**Pn**	**06 23 43.0**	**-1.1**
LBFM	**Black Fox Moun**	**2.30**	**62**		**Pn**	**06 23 44.8**	**-0.2**
LMEM	**Manzanita Entr**	**2.31**	**83**		**Pn**	**06 23 44.3**	**-0.8**
NSHM	**Saint Helena R**	**2.33**	**138**		**Pn**	**06 23 44.1**	**-1.1**
LCMM	**Colby Mountain**	**2.34**	**92**		**Pn**	**06 23 45.0**	**-0.6**
MGL	**Magalia**	**2.36**	**100**		**Pn**	**06 23 44.5**	**-1.2**
LRDM	**Redding Peak**	**2.38**	**85**		**Pn**	**06 23 45.6**	**-0.4**
SUTB	**Sutter Butte**	**2.39**	**115**		**Pn**	**06 23 44.0**	**-2.0**
NTYM	**Taylor**	**2.40**	**141**		**Pn**	**06 23 45.2**	**-0.9**
HATC	**Hat Creek Radi**	**2.43**	**76**		**Pn**	**06 23 46.5**	**-0.1**
NBPM	**Berryessa Peak**	**2.45**	**130**		**Pn**	**06 23 46.8**	**0.0**
LGMM	**Garner Mountai**	**2.46**	**57**		**Pn**	**06 23 47.1**	**-0.1**
ORV	**Oroville**	**2.47**	**106**		**Pn**	**06 23 45.3**	**-1.9**
ORV	**Oroville**	**2.47**	**106**		**Pn**	**06 23 45.8**	**-1.4**
ORV	**Oroville**	**2.47**	**106**		**Pn**	**06 23 46.3**	**-0.9**
PAM	**Palermo**	**2.49**	**109**		**Pn**	**06 23 46.9**	**-0.5**
MCCM	**Marconi Confer**	**2.50**	**148**		**Pn**	**06 23 46.5**	**-1.1**
MCCM	**Marconi Confer**	**2.50**	**148**		**Pn**	**06 23 46.7**	**-0.9**
K02D	**Willamette Mer**	**2.51**	**15**	P	**Pn**	**06 23 47.6**	**-0.2**
	baz=194,SNR=502						
K02D				S	**Sn**	**06 24 15.1**	**-3.1**
	baz=194						
LTIM	**Timbered Crate**	**2.51**	**68**		**Pn**	**06 23 47.3**	**-0.4**
LBCM	**Butte Creek Ri**	**2.52**	**76**		**Pn**	**06 23 47.5**	**-0.4**
CVS	**Carmenet Viney**	**2.54**	**139**		**Pn**	**06 23 46.9**	**-1.1**
M04C	**Macdoel**	**2.55**	**53**		**Pn**	**06 23 48.3**	**-0.2**
M04C	**Macdoel**	**2.55**	**53**	P	**Pn**	**06 23 48.2**	**-0.2**
	baz=234,SNR=290						
NDHM	**Dunnigan Hills**	**2.55**	**125**		**Pn**	**06 23 47.6**	**-0.7**
OHCM	**Honcut**	**2.56**	**111**		**Pn**	**06 23 46.4**	**-2.0**
LMHM	**Little Mount H**	**2.56**	**59**		**Pn**	**06 23 48.2**	**-0.5**
NAPC	**Atlas Peak**	**2.57**	**135**		**Pn**	**06 23 47.9**	**-0.7**
L04D	**Klamath Falls**	**2.58**	**41**		**Pn**	**06 23 49.4**	**+0.6**
L04D	**Klamath Falls**	**2.58**	**41**	P	**Pn**	**06 23 49.3**	**+0.5**
	baz=221,SNR=339						
L04D				S	**Sn**	**06 24 19.0**	**-1.2**
	baz=221						
NPRM	**Point Reyes**	**2.58**	**152**		**Pn**	**06 23 47.5**	**-1.1**
KEBM	**Edson Butte**	**2.59**	**4**		**Pn**	**06 23 50.1**	**+1.1**
HUMO	**Hull Mountain**	**2.62**	**27**		**Pn**	**06 23 48.5**	**-0.8**
HUMO	**Hull Mountain**	**2.62**	**27**		**Pn**	**06 23 49.0**	**-0.3**
LASM	**Arnica Sink**	**2.62**	**59**		**Pn**	**06 23 48.9**	**-0.6**
NOLM	**Olema**	**2.63**	**148**		**Pn**	**06 23 48.2**	**-1.1**
NADM	**Allendale**	**2.71**	**131**		**Pn**	**06 23 49.9**	**-0.6**
CPMM	**Point Molate**	**2.87**	**143**		**Pn**	**06 23 51.7**	**-1.0**
CSPM	**San Pablo Ridg**	**2.91**	**142**		**Pn**	**06 23 52.7**	**-0.6**
HOG	**Hogback Mounta**	**2.92**	**47**		**Pn**	**06 23 53.2**	**-0.3**
J01E	**Myrtle Point**	**2.92**	**9**	P	**Pn**	**06 23 53.1**	**-0.2**
	baz=188,SNR=20						
J01E				S	**Sn**	**06 24 25.2**	**-3.0**
	baz=188						
VAK	**Adit at Lawren**	**3.00**	**142**		**Pn**	**06 23 53.9**	**-0.6**
BKS	**Berkeley--Byer**	**3.01**	**142**		**Pn**	**06 23 54.0**	**-0.6**
CVPM	**Vollmer Peak**	**3.01**	**142**		**Pn**	**06 23 54.1**	**-0.6**
BRIB	**Briones**	**3.02**	**141**		**Pn**	**06 23 54.5**	**-0.2**
AFDM	**Forest Hills D**	**3.08**	**114**		**Pn**	**06 23 55.1**	**-0.5**
BGC	**Bolinger Road**	**3.14**	**141**		**Pn**	**06 23 56.4**	**0.0**
K04D	**Chiloquin, OR**	**3.16**	**41**		**Pn**	**06 23 56.9**	**+0.1**
K04D	**Chiloquin, OR**	**3.16**	**41**	P	**Pn**	**06 23 56.8**	**+0.1**
	baz=222,SNR=35						
K04D				S	**Sn**	**06 24 32.6**	**-1.8**
	baz=222						
SAC	**San Andreas**	**3.18**	**147**		**Pn**	**06 23 55.8**	**-1.1**
CLCB	**Lake Chabot**	**3.20**	**142**		**Pn**	**06 23 57.2**	**-0.1**
JCPM	**Coyote Point**	**3.21**	**146**		**Pn**	**06 23 56.4**	**-0.9**
AASM	**Arroyo Seco**	**3.26**	**123**		**Pn**	**06 23 57.9**	**-0.1**
BECK	**Beckworth**	**3.26**	**96**		**Pn**	**06 23 57.9**	**-0.3**
CMOB	**Morgan Territo**	**3.28**	**138**		**Pn**	**06 23 59.0**	**+0.7**
JHPM	**Biddle Park**	**3.34**	**147**		**Pn**	**06 24 00.2**	**-0.9**
CNIC	**Niles Canyon**	**3.35**	**142**		**Pn**	**06 23 56.9**	**-2.4**
IND	**Independence**	**3.40**	**103**		**Pn**	**06 24 01.5**	**+1.3**

ISA	**Isabella, Lake**	**6.67**	**132**	P	**Pn**	**06 24 46.4**	**+1.5**
	baz=316						
LON	**Longmire**	**6.77**	**16**	Pn	**Pn**	**06 24 47.5**	**+1.2**
ARVC	**Arvin**	**6.87**	**137**	P	**Pn**	**06 24 48.8**	**+1.2**
	baz=321						
BMO	**Blue Mountains**	**7.04**	**47**		**Pn**	**06 24 52.1**	**+2.0**
ELK	**Elko**	**7.13**	**83**	Pn	**Pn**	**06 24 51.1**	**-0.3**
	0.2nm,0.3s,baz=271,slow=16,SNR=5.8						
ELK				Lg	Lg	06 26 41.1	
	0.2nm,0.3s,baz=280,slow=19,SNR=3.1						
HAWA	**Hanford**	**7.13**	**29**		**Pn**	**06 24 53.3**	**+2.2**
NLWA	**Neilton Lookou**	**7.13**	**4**	Pn	**Pn**	**06 24 52.8**	**+1.7**
D05A	**Enumclaw**	**7.15**	**14**	Pn	**Pn**	**06 24 52.8**	**+1.3**
R11A	**Troy Canyon, C**	**7.23**	**103**		**Pn**	**06 24 53.0**	**+0.3**
R11A	**Troy Canyon, C**	**7.23**	**103**	P	**Pn**	**06 24 52.2**	**-0.6**
	baz=289						
MFID	**Camas Ranch**	**7.24**	**62**		**Pn**	**06 24 52.4**	**-0.4**
LRMC	**Laurel Mtn Rad**	**7.25**	**129**	P	**Pn**	**06 24 53.8**	**+0.7**
	baz=314						
EDW2	**Edwards Air Fo**	**7.50**	**134**	P	**Pn**	**06 24 57.4**	**+1.1**
	baz=318						
LTY	**Liberty**	**7.52**	**21**		**Pn**	**06 24 57.1**	**+0.5**
E09A	**Wood Farm, Sta**	**7.79**	**35**	Pn	**Pn**	**06 25 01.0**	**+0.8**
GSC	**Goldstone, Bar**	**7.90**	**127**	Pn	**Pn**	**06 25 02.1**	**+0.2**
GSC	**Goldstone, Bar**	**7.90**	**127**	P	**Pn**	**06 25 03.3**	**+1.4**
	baz=312						
PASC	**Pasadena Art C**	**7.94**	**138**		**Pn**	**06 25 03.4**	**+1.1**
MWC	**Mount Wilson**	**7.97**	**137**		**Pn**	**06 25 03.2**	**+0.3**
RRX	**Edison Barstow**	**8.08**	**130**	P	**Pn**	**06 25 05.7**	**+1.5**
	baz=315						
BFSC	**Mount Baldy Ra**	**8.17**	**135**	P	**Pn**	**06 25 06.4**	**+0.8**
	baz=320						
HEC	**Hector,Ludlow**	**8.51**	**127**	P	**Pn**	**06 25 11.1**	**+0.9**
	baz=313						
BBRC	**Big Bear Solar**	**8.56**	**132**	P	**Pn**	**06 25 11.9**	**+0.9**
	baz=317						
GMRC	**Granite Mounta**	**8.95**	**125**	P	**Pn**	**06 25 17.7**	**+1.4**
	baz=311						
DUG	**Dugway, Tooele**	**8.99**	**87**		**Pn**	**06 25 17.0**	**+0.1**
DUG	**Dugway, Tooele**	**8.99**	**87**	P	**Pn**	**06 25 16.4**	**-0.5**
	baz=274						
SPUT	**South Promonto**	**9.25**	**80**		**Pn**	**06 25 23.2**	**+2.8**
BELC	**Belle Mtn. Jos**	**9.28**	**130**	P	**Pn**	**06 25 22.4**	**+1.6**
	baz=316						
PFO	**Pinyon Flats O**	**9.29**	**133**	Pn	**Pn**	**06 25 22.0**	**+1.0**
	1.3nm,0.3s,baz=319,slow=10,SNR=32						
PFO				LR	LR	06 29 01.0	
	comp=Z,45nm,20.6s,baz=13,slow=38						
PFO	**Pinyon Flats O**	**9.29**	**133**		**Pn**	**06 25 22.4**	**+1.4**
PFO	**Pinyon Flats O**	**9.29**	**133**	P	**Pn**	**06 25 21.8**	**+0.8**
	baz=319						
XPFO	**Pion Flat**	**9.30**	**133**		**Pn**	**06 25 22.3**	**+1.2**
NEW	**Newport**	**9.60**	**31**	LR	LR	06 29 07.5	
	comp=Z,70nm,21.0s,baz=301,slow=38						
IRM	**Iron Mountain**	**9.69**	**126**	P	**Pn**	**06 25 27.9**	**+1.7**
	baz=312						
MCMT	**McKenzie Canyo**	**9.77**	**58**	Pn	**Pn**	**06 25 27.8**	**+0.3**
BC3	**Big Chuckawall**	**9.84**	**129**	P	**Pn**	**06 25 29.6**	**+1.2**
	baz=315						
MONP2	**Monument Peak**	**9.86**	**136**	P	**Pn**	**06 25 30.1**	**+1.2**
	baz=321						
Y12C	**Blythe**	**10.34**	**126**	Pn	**Pn**	**06 25 36.2**	**+1.0**
GLA	**Glamis**	**10.64**	**130**	Pn	**Pn**	**06 25 40.6**	**+1.3**
PDAR	**Pinedale Array**	**11.53**	**73**	Pn	**Pn**	**06 25 52.1**	**+0.5**
	0.1nm,0.3s,baz=265,slow=9.6,SNR=2.6						
PDAR				LR	LR	06 31 11.7	
	comp=Z,39nm,19.7s,baz=303,slow=42						
TXAR	**Lajitas Array**	**20.30**	**116**	P	Pn	06 27 44.2	-0.7
	1.2nm,0.8s,baz=298,slow=9.7,SNR=12						
FFC	**Flin Flon**	**20.89**	**39**	P	**P**	**06 27 49.1**	**+0.1**
FFC				IAmb	IAmb	06 28 02.9	
	comp=Z,29nm,2.0s						
WMOK	**Wichita Mounta**	**21.16**	**97**	P	**P**	**06 27 52.5**	**+0.4**
WMOK				IAmb	IAmb	06 28 29.2	
	comp=Z,6.8nm,1.4s						
ULM	**Lac du Bonnet**	**22.40**	**54**	P	**P**	**06 28 02.5**	**-2.6**
	comp=Z,2.2nm,0.5s,baz=251,slow=8.3,SNR=7.8						
INK	**Inuvik**	**28.50**	**353**	LR	LR	06 41 10.8	
	comp=Z,45nm,19.1s,baz=66,slow=38						
H11S1	**WAKE ISLAND Hy**	**62.19**	**271**	T	T	07 41 41.9	
	baz=54,slow=75,SNR=34						
H11S2	**WAKE ISLAND Hy**	**62.19**	**271**	T	T	07 41 44.6	
	baz=54,slow=75,SNR=39						
H11S3	**WAKE ISLAND Hy**	**62.21**	**271**	T	T	07 41 39.6	
	baz=54,slow=75,SNR=25						
HHC	**Hu-ho-hao-te**	**84.48**	**321**	eP	**P**	**06 35 40.3**	**+0.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,95nm,5.1s						
WMQ	**Urumqi**	**91.37**	**337**	eP	**P**	**06 36 16.0**	**+3.2**
LZH	**Lanzhou**	**91.93**	**323**	eP	**P**	**06 36 15.2**	**-0.5**
LZH				pP	sP	06 36 24.0	+2.8
LZH				sP	pP	06 36 29.0	+9.3
LZH				PP	**PP**	**06 39 58.2**	**+4.0**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,79nm,5.4s						

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*NNC **02** 06:23:11.4±2.8, 44.°28N×81.°52E, h0km, mb2.7, mpv2.5, Error ellipse: s-maj=24.6km s-min=11.7km az=141.0*
*SOME **02** 06:23:11.5, 44.°25N×81.°48E, h5km*
ISC 02 06:23:10.7±2.3, **44.°2N**±0.°1×**81.°6E**±0.°1, **h10**km, **n8**, σ**0.s90**/12, **2C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.34**	**277**	eP	**Pn**	**06 23 34.9**	**-0.7**
	0.4nm,0.1s						
DJR				eS	**Sb**	**06 23 52.0**	**-1.3**
	1.6nm,0.7s						
KAPS	**Kapalarasan**	**1.97**	**305**	eP	**Pb**	**06 23 46.3**	**-0.4**
	1.2nm,0.4s						
KAPS				eS	**Sb**	**06 24 12.5**	**+1.1**
	6.1nm,1.1s						
KAPS	**Kapalarasan**	**1.97**	**305**	Pg	**Pb**	**06 23 46.7**	**0.0**
	1.0nm,0.3s						
KAPS				Lg	Lg	06 24 12.5	
	5.5nm,0.6s						
KPKS	**Kokpek**	**2.26**	**253**	eP	**Pb**	**06 23 51.8**	**+0.1**
	1.8nm,0.2s						
KPKS				eS	**Sb**	**06 24 20.8**	**+1.1**
	14nm,0.6s						
MAKZ	**Makanchi**	**2.64**	**5**	⇓Pg	**Pb**	**06 23 59.1**	**+0.9**
	1.4nm,1.1s						
MAKZ				⇑Lg	Lg	06 24 28.8	
	1.9nm,0.7s						
MK31	**Makanchi Array**	**2.66**	**10**	⇓Pg	**Pb**	**06 23 57.9**	**-0.5**
	1.4nm,1.1s,baz=185,slow=17,SNR=4.9						
MK31				⇑Lg	Lg	06 24 30.5	
	1.6nm,0.6s,baz=194,slow=31,SNR=14						
ARXS	**Arharly**	**2.75**	**272**	eP	**Pb**	**06 24 00.2**	**+0.3**
	1.4nm,0.4s						
ARXS				eS	**Sb**	**06 24 34.8**	**+1.1**
	3.4nm,0.6s						
ARXS	**Arharly**	**2.75**	**272**	Pg	**Pb**	**06 23 60.0**	**0.0**
	1.4nm,0.4s						
ARXS				Lg	Lg	06 24 35.0	
	3.4nm,0.6s						

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*KRSC **02** 06:58:11.7±1.1, 55.°43N×163.°08E, h81km±18km, ML5.0*
*MOS **02** 06:58:14.4±0.9, 55.°48N×162.°87E, h77km, mb4.6/23, Error ellipse: s-maj=6.2km s-min=4.0km az=77.7*
*IDC **02** 06:58:16.1±2.1, 55.°57N×162.°69E, h71km±20km, mb3.8/27, mb1 4.1/30, mb1mx3.9/51, mbtmp4.2/30, MS3.3/8, Ms1 3.3/8, ms1mx3.1/29, Error ellipse: s-maj=14.5km s-min=9.9km az=153.0*
*NEIC **02** 06:58:16.3±1.3, 55.°47N±0.°07×162.°9E±0.°1, h73km±7km, mb4.5/116, Error ellipse: s-maj=10.7km s-min=8.3km az=161.0*
ISC 02 06:58:14.7±0.7, **55.°45N**±0.°03×**162.°98E**±0.°03, **h64**km±6km, **n338**, σ**1.s49**/415, **mb4.5**/109, **13C-14D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.76**	**353**	PN	**Pn**	**06 58 28.8**	**-1.1**
KBTR				S	**Sn**	**06 58 40.0**	**-1.0**
KBTR	**Krutoberegovo**	**0.76**	**353**	eP	**Pn**	**06 58 28.8**	**-1.1**
KBTR				eS	**Sn**	**06 58 40.0**	**-1.0**
KBG	**Krutoberegovo**	**0.82**	**349**	PN	**Pn**	**06 58 29.6**	**-0.9**
KBG				S	**Sn**	**06 58 41.5**	**-0.7**
KBG	**Krutoberegovo**	**0.82**	**349**	eP	**Pn**	**06 58 29.6**	**-0.9**
KBG				eS	**Sn**	**06 58 41.5**	**-0.7**
ZLN	**Zelenaya**	**1.35**	**296**	PN	**Pn**	**06 58 38.3**	**+0.7**
ZLN	**Zelenaya**	**1.35**	**296**	eP	**Pn**	**06 58 38.3**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**1.38**	**292**	PN	**Pn**	**06 58 38.6**	**+0.7**
BZGR				S	**Sn**	**06 58 57.0**	**+1.6**
BZGR	**Bezymyannyi-Gr**	**1.38**	**292**	eP	**Pn**	**06 58 38.6**	**+0.7**
BZGR				eS	**Sn**	**06 58 57.0**	**+1.6**
SMKR	**Semkarok**	**1.41**	**324**	PN	**Pn**	**06 58 38.2**	**-0.2**
SMKR				S	**Sn**	**06 58 56.0**	**-0.1**
SMKR	**Semkarok**	**1.41**	**324**	eP	**Pn**	**06 58 38.2**	**-0.2**
SMKR				eS	**Sn**	**06 58 56.0**	**-0.1**
CIRR	**Tsirk**	**1.42**	**299**	PN	**Pn**	**06 58 39.0**	**+0.5**
CIRR	**Tsirk**	**1.42**	**299**	eP	**Pn**	**06 58 39.0**	**+0.5**
LGNR	**Loginova**	**1.44**	**297**	PN	**Pn**	**06 58 39.5**	**+0.6**
LGNR				S	**Sn**	**06 58 58.3**	**+1.3**
LGNR	**Loginova**	**1.44**	**297**	eP	**Pn**	**06 58 39.5**	**+0.6**
LGNR				eS	**Sn**	**06 58 58.3**	**+1.3**
BDR	**Baidarnaya**	**1.49**	**319**	PN	**Pn**	**06 58 39.9**	**+0.5**
BDR				S	**Sn**	**06 58 58.5**	**+0.4**
BDR	**Baidarnaya**	**1.49**	**319**	eP	**Pn**	**06 58 39.9**	**+0.5**
BDR				eS	**Sn**	**06 58 58.5**	**+0.4**
BZWR	**Bezymyannyi-We**	**1.49**	**291**	PN	**Pn**	**06 58 40.4**	**+0.9**
BZWR				S	**Sn**	**06 59 00.8**	**+2.6**
BZWR	**Bezymyannyi-We**	**1.49**	**291**	eP	**Pn**	**06 58 40.4**	**+0.9**
BZWR				eS	**Sn**	**06 59 00.8**	**+2.6**
TUMD	**Tumrok D**	**1.49**	**261**	eP	**Pn**	**06 58 40.0**	**+0.6**
TUMD				eS	**Sn**	**06 58 58.7**	**+0.7**
KRSR	**Krestovskiy**	**1.56**	**300**	PN	**Pn**	**06 58 40.3**	**-0.1**
KRSR				S	**Sn**	**06 59 00.3**	**+0.6**
KRSR	**Krestovskiy**	**1.56**	**300**	eP	**Pn**	**06 58 40.3**	**-0.1**
KRSR				eS	**Sn**	**06 59 00.3**	**+0.6**
KLY	**Klyuchi**	**1.57**	**304**	PN	**Pn**	**06 58 39.1**	**-1.2**
KLY				S	**Sn**	**06 58 57.6**	**-2.1**
KLY	**Klyuchi**	**1.57**	**304**	eP	**Pn**	**06 58 39.1**	**-1.2**
KLY				eS	**Sn**	**06 58 57.6**	**-2.1**
KIRR	**Kirishev**	**1.57**	**290**	PN	**Pn**	**06 58 41.3**	**+0.7**
KIRR				S	**Sn**	**06 59 01.9**	**+1.8**
KIRR	**Kirishev**	**1.57**	**290**	eP	**Pn**	**06 58 41.3**	**+0.7**
KIRR				eS	**Sn**	**06 59 01.9**	**+1.8**
KZV	**Kizimen**	**1.57**	**259**	PN	**Pn**	**06 58 40.8**	**+0.2**
KZV				S	**Sn**	**06 59 01.0**	**+0.9**
KZV	**Kizimen**	**1.57**	**259**	eP	**Pn**	**06 58 40.8**	**+0.2**
KZV				eS	**Sn**	**06 59 01.0**	**+0.9**
SRKR	**Sorokina**	**1.57**	**321**	PN	**Pn**	**06 58 41.0**	**+0.5**
SRKR				S	**Sn**	**06 59 02.1**	**+2.1**
SRKR	**Sorokina**	**1.57**	**321**	eP	**Pn**	**06 58 41.0**	**+0.5**
SRKR				eS	**Sn**	**06 59 02.1**	**+2.1**
KMNR	**Kamenistaya**	**1.58**	**282**	PN	**Pn**	**06 58 41.6**	**+0.9**
KMNR				S	**Sn**	**06 59 02.0**	**+1.8**
KMNR	**Kamenistaya**	**1.58**	**282**	eP	**Pn**	**06 58 41.6**	**+0.9**
KMNR				eS	**Sn**	**06 59 02.0**	**+1.8**
TUMR	**Tumrok**	**1.62**	**265**	PN	**Pn**	**06 58 42.2**	**+1.0**
TUMR				S	**Sn**	**06 59 02.6**	**+1.3**
TUMR	**Tumrok**	**1.62**	**265**	eP	**Pn**	**06 58 42.2**	**+1.0**
TUMR				eS	**Sn**	**06 59 02.6**	**+1.3**
KPT	**Kopyto**	**1.64**	**289**	PN	**Pn**	**06 58 42.3**	**+0.9**
KPT				S	**Sn**	**06 59 04.2**	**+2.6**
KPT	**Kopyto**	**1.64**	**289**	eP	**Pn**	**06 58 42.3**	**+0.9**
KPT				eS	**Sn**	**06 59 04.2**	**+2.6**
BKI	**Bering**	**1.73**	**97**	PN	**Pn**	**06 58 41.4**	**-1.1**
BKI				S	**Sn**	**06 59 01.8**	**-1.7**
BKI	**Bering**	**1.73**	**97**	eP	**Pn**	**06 58 41.4**	**-1.1**
BKI				eS	**Sn**	**06 59 01.8**	**-1.7**
KOZ	**Kozyrevsk**	**1.86**	**290**	PN	**Pn**	**06 58 45.5**	**+1.3**
KOZ				S	**Sn**	**06 59 09.3**	**+2.6**
KOZ	**Kozyrevsk**	**1.86**	**290**	eP	**Pn**	**06 58 45.5**	**+1.3**
KOZ				eS	**Sn**	**06 59 09.3**	**+2.6**
SRDR	**Sredinnyy**	**2.03**	**297**	PN	**Pn**	**06 58 47.3**	**+0.7**
SRDR				S	**Sn**	**06 59 13.7**	**+2.7**
SRDR	**Sredinnyy**	**2.03**	**297**	eP	**Pn**	**06 58 47.3**	**+0.7**
SRDR				eS	**Sn**	**06 59 13.7**	**+2.7**
ESO	**Esso**	**2.47**	**283**	PN	**Pn**	**06 58 52.9**	**+0.4**
ESO				S	**Sn**	**06 59 22.5**	**+1.0**
ESO	**Esso**	**2.47**	**283**	eP	**Pn**	**06 58 52.9**	**+0.4**
ESO				eS	**Sn**	**06 59 22.5**	**+1.0**
SPN	**Mys Shipunski**	**2.93**	**217**	PN	**Pn**	**06 58 57.6**	**-1.2**
SPN				S	**Sn**	**06 59 30.0**	**-2.7**
SPN	**Mys Shipunski**	**2.93**	**217**	eP	**Pn**	**06 58 57.6**	**-1.2**
SPN				eS	**Sn**	**06 59 30.0**	**-2.7**
NLC	**Nalytchevo**	**3.12**	**224**	PN	**Pn**	**06 59 01.4**	**0.0**
NLC				S	**Sn**	**06 59 36.1**	**-1.4**
NLC	**Nalytchevo**	**3.12**	**224**	eP	**Pn**	**06 59 01.4**	**0.0**
NLC				eS	**Sn**	**06 59 36.1**	**-1.4**
SDLR	**Sedlovina**	**3.24**	**229**	PN	**Pn**	**06 59 04.0**	**+0.8**
SDLR				S	**Sn**	**06 59 39.6**	**-0.9**
SDLR	**Sedlovina**	**3.24**	**229**	eP	**Pn**	**06 59 04.0**	**+0.8**
SDLR				eS	**Sn**	**06 59 39.6**	**-0.9**
KRER	**Koryakskii**	**3.28**	**231**	PN	**Pn**	**06 59 04.6**	**+0.8**
KRER				S	**Sn**	**06 59 41.3**	**-0.4**
KRER	**Koryakskii**	**3.28**	**231**	eP	**Pn**	**06 59 04.6**	**+0.8**
KRER				eS	**Sn**	**06 59 41.3**	**-0.4**
SMAR	**Somma**	**3.29**	**230**	PN	**Pn**	**06 59 04.9**	**+1.0**
SMAR				S	**Sn**	**06 59 41.0**	**-0.8**
SMAR	**Somma**	**3.29**	**230**	eP	**Pn**	**06 59 04.9**	**+1.0**
SMAR				eS	**Sn**	**06 59 41.0**	**-0.8**
KRX	**Arik**	**3.29**	**232**	PN	**Pn**	**06 59 05.0**	**+1.2**
KRX				S	**Sn**	**06 59 42.3**	**+0.5**
KRX	**Arik**	**3.29**	**232**	eP	**Pn**	**06 59 05.0**	**+1.2**
KRX				eS	**Sn**	**06 59 42.3**	**+0.5**
AVH	**Avacha**	**3.31**	**230**	PN	**Pn**	**06 59 05.3**	**+1.2**
AVH				S	**Sn**	**06 59 42.8**	**+0.6**
AVH	**Avacha**	**3.31**	**230**	eP	**Pn**	**06 59 05.3**	**+1.2**
AVH				eS	**Sn**	**06 59 42.8**	**+0.6**
UGLR	**Uglovaya**	**3.31**	**229**	PN	**Pn**	**06 59 05.1**	**+0.9**
UGLR				S	**Sn**	**06 59 42.5**	**+0.2**
UGLR	**Uglovaya**	**3.31**	**229**	eP	**Pn**	**06 59 05.1**	**+0.9**
UGLR				eS	**Sn**	**06 59 42.5**	**+0.2**
GNL	**Ganaly**	**3.42**	**241**	PN	**Pn**	**06 59 07.5**	**+1.9**
GNL	**Ganaly**	**3.42**	**241**	eP	**Pn**	**06 59 07.5**	**+1.9**
PET	**Petropavlovsk**	**3.52**	**228**	⇓iPN	**Pn**	**06 59 07.4**	**+0.6**
PET				eS	**Sn**	**06 59 46.5**	**-0.6**
PET				pmax	pmax		
	comp=Z,495nm,0.5s						
PET				smax	smax		
	comp=E,2μm,0.6s						
PET				smax	smax		
	comp=N,2μm,0.5s						
PET				MLR	MLR		
	comp=Z,400nm,22.0s						
PET	**Petropavlovsk**	**3.52**	**228**		**Pn**	**06 59 07.4**	**+0.6**
PET				Sn	**Sn**	**06 59 48.1**	**+1.0**
OSSR	**Ossora**	**3.81**	**1**	PN	**Pn**	**06 59 10.6**	**-0.1**
OSSR				S	**Sn**	**06 59 51.9**	**-2.3**
OSSR	**Ossora**	**3.81**	**1**	eP	**Pn**	**06 59 10.6**	**-0.1**
OSSR				eS	**Sn**	**06 59 51.9**	**-2.3**
KRMR	**Karymshinskiy**	**3.88**	**229**	PN	**Pn**	**06 59 12.4**	**+0.6**
KRMR				S	**Sn**	**06 59 56.2**	**+0.2**
KRMR	**Karymshinskiy**	**3.88**	**229**	eP	**Pn**	**06 59 12.4**	**+0.6**
KRMR				eS	**Sn**	**06 59 56.2**	**+0.2**
PEA0B	**Petropavlovsk-**	**3.88**	**235**	d iPN	**Pn**	**06 59 12.8**	**+0.9**
PEA0B	**Petropavlovsk-**	**3.88**	**235**		**Pn**	**06 59 13.0**	**+1.1**
PEA0B				Sn	**Sn**	**06 59 56.9**	**+0.7**
PETK	**Petropavlovsk-**	**3.88**	**235**	P	**Pn**	**06 59 13.0**	**+1.1**
	comp=Z,17nm,0.3s,baz=73,slow=18,SNR=102						
PETK				S	**Sn**	**06 59 57.4**	**+1.2**
	comp=Z,28nm,0.3s,baz=91,slow=20,SNR=6.9						
PALN	**Palana**	**3.99**	**337**	PN	**Pn**	**06 59 13.6**	**+0.3**
PALN	**Palana**	**3.99**	**337**	eP	**Pn**	**06 59 13.6**	**+0.3**
GRL	**Gorelyy**	**4.10**	**227**	PN	**Pn**	**06 59 16.0**	**+1.1**
GRL				S	**Sn**	**07 00 03.0**	**+1.3**
GRL	**Gorelyy**	**4.10**	**227**	eP	**Pn**	**06 59 16.0**	**+1.1**
GRL				eS	**Sn**	**07 00 03.0**	**+1.3**
MTVR	**Mutnovka**	**4.11**	**226**	PN	**Pn**	**06 59 15.7**	**+0.7**
MTVR				S	**Sn**	**06 59 59.7**	**-2.2**
MTVR	**Mutnovka**	**4.11**	**226**	eP	**Pn**	**06 59 15.7**	**+0.7**
MTVR				eS	**Sn**	**06 59 59.7**	**-2.2**
APC	**Apacha**	**4.25**	**236**	PN	**Pn**	**06 59 18.9**	**+2.0**
APC				S	**Sn**	**07 00 07.0**	**+1.8**
APC	**Apacha**	**4.25**	**236**	eP	**Pn**	**06 59 18.9**	**+2.0**
APC				eS	**Sn**	**07 00 07.0**	**+1.8**
ASAK	**Asacha**	**4.30**	**226**	PN	**Pn**	**06 59 18.9**	**+1.3**
ASAK				S	**Sn**	**07 00 06.1**	**-0.3**
ASAK	**Asacha**	**4.30**	**226**	eP	**Pn**	**06 59 18.9**	**+1.3**
ASAK				eS	**Sn**	**07 00 06.1**	**-0.3**
KDTR	**Khodutka, Kamc**	**4.67**	**221**	PN	**Pn**	**06 59 22.4**	**-0.2**
KDTR				S	**Sn**	**07 00 11.5**	**-4.0**
KDTR	**Khodutka, Kamc**	**4.67**	**221**	eP	**Pn**	**06 59 22.4**	**-0.2**
KDTR				eS	**Sn**	**07 00 11.5**	**-4.0**
TILK	**Tilichiki**	**5.28**	**17**	PN	**Pn**	**06 59 32.0**	**+1.1**
TILK				S	**Sn**	**07 00 29.2**	**-1.1**
TILK	**Tilichiki**	**5.28**	**17**	eP	**Pn**	**06 59 32.0**	**+1.1**
TILK				eS	**Sn**	**07 00 29.2**	**-1.1**
PAU	**Pauzhetka**	**5.43**	**225**	PN	**Pn**	**06 59 33.8**	**+0.8**
PAU	**Pauzhetka**	**5.43**	**225**	eP	**Pn**	**06 59 33.8**	**+0.8**
SKR	**Severo-Kuril's**	**6.32**	**224**	⇑ePN	**Pn**	**06 59 45.1**	**0.0**
SKR	**Severo-Kuril's**	**6.32**	**224**	eP	**Pn**	**06 59 45.2**	**+0.1**
SMY	**Shemya**	**7.09**	**108**	Pn	**Pn**	**06 59 57.9**	**+2.3**
SMY				Sn	**Sn**	**07 01 14.2**	**-0.5**
KMSK	**Kamenskaya**	**7.23**	**12**	PN	**Pn**	**06 59 58.8**	**+1.3**
KMSK	**Kamenskaya**	**7.23**	**12**	eP	**Pn**	**06 59 58.8**	**+1.3**
KMSK				eS	**Sn**	**07 01 16.3**	**-1.7**
MA2	**Magadan**	**7.76**	**307**	⇑iPN	**Pn**	**07 00 06.2**	**+1.4**
MA2	**Magadan**	**7.76**	**307**	P	**Pn**	**07 00 07.5**	**+2.7**
	comp=Z,0.7nm,0.3s,baz=108,slow=11,SNR=5.5						
MA2				LR	LR	07 03 23.0	
	comp=Z,82nm,21.7s,baz=73,slow=41						
MA2	**Magadan**	**7.76**	**307**	Pn	**Pn**	**07 00 07.2**	**+2.4**
MA2				Sn	**Sn**	**07 01 31.6**	**+0.5**
SEY	**Seymchan**	**9.25**	**328**	⇑ePN	**Pn**	**07 00 24.8**	**-0.3**
BILL	**Bilibino**	**12.72**	**6**	⇓ePN	**Pn**	**07 01 12.9**	**+0.4**
BILL				pmax	pmax		
	comp=Z,25nm,1.3s						
BILL	**Bilibino**	**12.72**	**6**	Pn	**Pn**	**07 01 13.0**	**+0.6**
ATKA	**Atka Island**	**13.85**	**94**	Pn	**Pn**	**07 01 29.6**	**+1.8**
KUR	**Kuril'sk**	**14.03**	**229**	⇑eP	**Pn**	**07 01 31.4**	**+1.3**
GAMB	**Gambell**	**15.18**	**47**		**Pn**	**07 01 46.1**	**+1.1**
YSS	**Yuzh-Sakhalins**	**15.22**	**244**	eP	**P**	**07 01 49.0**	**-0.2**
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**15.85**	**231**	i P	**Pn**	**07 01 50.2**	**-3.5**
GRNR	**Gornyy**	**16.57**	**265**	eP	**Pn**	**07 01 57.2**	**-5.4**
GRNR				eS	**Sn**	**07 04 55.4**	**-10**
GRNR				pmax	pmax		
	comp=Z,30nm,0.9s						
GRNR				smax	smax		
	comp=N,5.0nm,0.9s						
NIKH	**Nikolski High**	**16.61**	**87**	Pn	**P**	**07 02 03.9**	**-0.7**
JKA	**Kamikawa-asahi**	**17.30**	**238**	P	**P**	**07 02 12.5**	**+0.2**
ASAJ	**Asahikawa**	**17.30**	**238**	P	**P**	**07 02 12.5**	**+0.2**
	comp=N,3.4nm,0.3s,baz=278,slow=33,SNR=12						
ASAJ				LR	LR	07 08 34.4	
	comp=N,110nm,21.5s,baz=122,slow=36						
UNV	**Unalaska Valle**	**17.67**	**83**	P	**P**	**07 02 17.2**	**+1.0**
AKUT	**Akutan**	**17.99**	**81**	P	**Pn**	**07 02 21.1**	**+1.0**
ANM	**Nome**	**18.06**	**47**	P	**Pn**	**07 02 22.5**	**+1.6**
ANM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ANM	**Nome**	**18.06**	**47**	P	**Pn**	**07 02 22.5**	**+1.6**
YAK	**Yakutsk**	**18.32**	**305**	P	**P**	**07 02 23.7**	**+0.3**
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK	**Yakutsk**	**18.32**	**305**	P	**P**	**07 02 22.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=243,slow=3.2,SNR=7.2						
YAK	**Yakutsk**	**18.32**	**305**	P	**P**	**07 02 23.7**	**+0.3**
YAK				IAmb	IAmb	07 02 24.7	
	comp=Z,22nm,0.9s						
ERM	**Erimo**	**18.66**	**232**	⇓eP	**P**	**07 02 25.6**	**-1.7**
ERM	**Erimo**	**18.66**	**232**	P	**P**	**07 02 26.3**	**-1.0**
TIXI	**Tiksi**	**21.73**	**331**	⇑eP	**P**	**07 03 00.9**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,12nm,2.5s						
TIXI				MLR	MLR		
	comp=Z,41nm,15.0s						
TIXI	**Tiksi**	**21.73**	**331**	P	**P**	**07 03 00.5**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=124,slow=13,SNR=10						
TIXI				LR	LR	07 11 09.4	
	comp=Z,57nm,18.3s,baz=150,slow=36						
TIXI	**Tiksi**	**21.73**	**331**	P	**P**	**07 03 00.6**	**+0.5**
SVW2	**Sparrevohn**	**22.20**	**58**	P	**P**	**07 03 06.6**	**+1.1**
USA0B	**Ussuriysk Arra**	**22.74**	**253**	⇓eP	**P**	**07 03 08.4**	**-2.9**
USRK	**Ussuriysk Ar.**	**22.74**	**253**	P	**P**	**07 03 07.9**	**-3.4**
	comp=Z,1.1nm,0.5s,baz=50,slow=13,SNR=5.7						
IMAR	**Indian Mountai**	**23.12**	**46**	P	**P**	**07 03 15.5**	**+0.5**
RSO	**Redoubt South**	**23.65**	**60**	P	**P**	**07 03 21.0**	**+0.9**
PPLA	**Purkeypile**	**23.70**	**53**	P	**P**	**07 03 22.3**	**+1.8**
OHAK	**Old Harbor**	**24.00**	**68**	P	**P**	**07 03 23.5**	**+0.5**
OHAK				IAmb	IAmb	07 03 24.2	
	comp=Z,28nm,1.0s						
BPAW	**Bear Paw Mtn.**	**24.21**	**50**	P	**P**	**07 03 26.2**	**+1.3**
BPAW				IAmb	IAmb	07 03 27.1	
	comp=Z,19nm,0.8s						
KDAK	**Kodiak Island**	**24.23**	**66**	P	**P**	**07 03 25.2**	**+0.1**
KDAK				pmax	pmax		
	comp=Z,110nm,1.5s						
KDAK	**Kodiak Island**	**24.23**	**66**	P	**P**	**07 03 25.2**	**+0.1**
KTH	**Kantishna Hill**	**24.25**	**52**	P	**P**	**07 03 26.7**	**+1.3**
KTH				IAmb	IAmb	07 03 27.7	
	comp=Z,16nm,0.8s						
MSHR	**Mys Shultsa**	**24.27**	**251**	⇑eP	**P**	**07 03 27.7**	**+2.0**
MLY	**Manley**	**24.32**	**48**	P	**P**	**07 03 27.0**	**+1.0**
MLY				IAmb	IAmb	07 03 28.7	
	comp=Z,18nm,1.0s						
SUA	**Susitna One**	**24.50**	**57**	P	**P**	**07 03 28.4**	**+0.7**
SUA				IAmb	IAmb	07 03 30.1	
	comp=Z,21nm,0.7s						
TRF	**Thorofare Moun**	**24.54**	**52**	P	**P**	**07 03 29.2**	**+1.1**
COLD	**Coldfoot**	**24.66**	**43**	P	**P**	**07 03 31.3**	**+2.3**
BRLK	**Bradley Lake**	**24.68**	**61**	P	**P**	**07 03 29.5**	**+0.2**
RC01	**Rabbit Creek A**	**25.03**	**58**	P	**P**	**07 03 33.6**	**+1.2**
RC01				IAmb	IAmb	07 03 51.0	
	comp=Z,20nm,1.4s						
NEA	**Nenana**	**25.03**	**49**	P	**P**	**07 03 33.2**	**+0.9**
NEA				IAmb	IAmb	07 03 35.0	
	comp=Z,19nm,1.0s						
TOLK	**Toolik Lake Re**	**25.06**	**40**	P	**P**	**07 03 33.5**	**+0.8**
MCK	**McKinley**	**25.13**	**51**	IAmb	IAmb	07 03 34.7	
	comp=Z,18nm,1.1s						
MCK				P	**P**	**07 03 34.9**	**+1.6**
RND	**Reindeer**	**25.19**	**52**	P	**P**	**07 03 34.3**	**+0.4**
RND				pmax	pmax		
	comp=Z,14nm,0.9s						
RND	**Reindeer**	**25.19**	**52**	P	**P**	**07 03 34.3**	**+0.4**
RND				IAmb	IAmb	07 03 34.7	
	comp=Z,14nm,0.9s						
PMR	**Palmer**	**25.25**	**56**	P	**P**	**07 03 35.3**	**+1.0**
PMR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PMR	**Palmer**	**25.25**	**56**	P	**P**	**07 03 35.3**	**+1.0**
GHO	**Glory Hole Cre**	**25.32**	**56**	P	**P**	**07 03 35.9**	**+0.7**
GHO				IAmb	IAmb	07 03 46.5	
	comp=Z,24nm,1.5s						
SEW	**Seward**	**25.33**	**60**	P	**P**	**07 03 35.3**	**+0.2**
MJB9	**Matsu-Tunnel**	**25.34**	**232**	P	**P**	**07 03 36.1**	**+0.7**
MAJO	**Matsushiro**	**25.34**	**232**	deP	**P**	**07 03 35.4**	**0.0**
MAJO				pmax	pmax		
	comp=Z,67nm,1.9s						
MAJO	**Matsushiro**	**25.34**	**232**	P	**P**	**07 03 36.2**	**+0.8**
MAT	**Matsushiro**	**25.34**	**232**	P	**P**	**07 03 35.9**	**+0.5**
MJAR	**Matsushiro Arr**	**25.34**	**232**	P	**P**	**07 03 35.4**	**-0.1**
	comp=Z,8.3nm,0.6s,baz=33,slow=7.6,SNR=41						
MJAR				LR	LR	07 15 07.4	
	comp=Z,53nm,18.1s,baz=265,slow=40						
MJAR	**Matsushiro Arr**	**25.34**	**232**	P	**P**	**07 03 36.2**	**+0.8**
WRH	**Wood River Hil**	**25.46**	**49**	P	**P**	**07 03 37.5**	**+1.3**
WRH				IAmb	IAmb	07 03 38.5	
	comp=Z,27nm,1.0s						
COLA	**College**	**25.55**	**49**	⇑iP	**P**	**07 03 37.7**	**+0.7**
COLA				pmax	pmax		
	comp=Z,16nm,1.2s						
COLA	**College**	**25.55**	**49**	P	**P**	**07 03 37.4**	**+0.4**
COLA				IAmb	IAmb	07 03 38.6	
	comp=Z,32nm,1.4s						
CCB	**Clear Creek Bu**	**25.58**	**49**	P	**P**	**07 03 38.1**	**+0.8**
KNK	**Knik Glacier**	**25.59**	**57**	P	**P**	**07 03 38.5**	**+1.0**
SML	**Sawmill**	**25.59**	**56**	P	**P**	**07 03 38.3**	**+0.7**
SML				IAmb	IAmb	07 03 41.5	
	comp=Z,18nm,0.8s						
DHY	**Denali Highway**	**25.88**	**53**	P	**P**	**07 03 40.8**	**+0.5**
HDA	**Harding Lake**	**25.96**	**50**	P	**P**	**07 03 41.0**	**+0.2**
IL31		**25.96**	**49**	P	**P**	**07 03 41.6**	**+0.8**
IL31				IAmb	IAmb	07 03 45.3	
	comp=Z,14nm,1.0s						
ILAR	**Eielson Array**	**25.96**	**49**	P	**P**	**07 03 41.6**	**+0.7**
ILAR	**Eielson Array**	**25.96**	**49**	P	**P**	**07 03 40.9**	**0.0**
	comp=Z,6.6nm,0.8s,baz=265,slow=8.0,SNR=55						
ILAR	**Eielson Array**	**25.96**	**49**	P	**P**	**07 03 41.6**	**+0.7**
SCM	**Sheep Creek Mo**	**26.06**	**55**	P	**P**	**07 03 42.9**	**+1.0**
SCM				pmax	pmax		
	comp=Z,31nm,0.6s						
SCM	**Sheep Creek Mo**	**26.06**	**55**	P	**P**	**07 03 42.9**	**+1.0**
PRP	**Porcupine Dome**	**26.50**	**47**	P	**P**	**07 03 46.7**	**+0.8**
PRP				IAmb	IAmb	07 03 47.6	

	comp=Z,15nm,1.0s						
FYU	**Fort Yukon**	**26.59**	**45**	P	**P**	**07 03 47.6**	**+1.2**
FYU				IAmb	IAmb	07 03 50.9	
	comp=Z,11nm,0.6s						
BMAR	**Burnt Mountain**	**26.85**	**43**	P	**P**	**07 03 50.0**	**+1.2**
INU	**Inuyama**	**26.87**	**232**	P	**P**	**07 03 50.5**	**+1.3**
RIDG	**Independent Ri**	**26.94**	**51**	P	**P**	**07 03 49.5**	**-0.2**
RIDG				IAmb	IAmb	07 03 50.2	
	comp=Z,17nm,1.1s						
SCRK	**Sand Creek**	**27.29**	**50**	P	**P**	**07 03 52.9**	**0.0**
SCRK				IAmb	IAmb	07 03 53.9	
	comp=Z,16nm,1.0s						
DOT	**Dot Lake**	**27.30**	**51**	P	**P**	**07 03 53.7**	**+0.8**
DOT				IAmb	IAmb	07 03 54.4	
	comp=Z,25nm,1.4s						
GLB	**Gilahina Butte**	**27.79**	**56**	P	**P**	**07 03 58.5**	**+1.2**
GLB				IAmb	IAmb	07 04 06.7	
	comp=Z,16nm,1.3s						
MCARA	**McCarthy VSAT**	**28.17**	**56**	P	**P**	**07 04 02.1**	**+1.5**
MCARA				IAmb	IAmb	07 04 14.0	
	comp=Z,25nm,1.2s						
CRQM	**Cirque**	**28.25**	**57**	P	**P**	**07 04 03.1**	**+1.5**
BCAR	**Beaver Creek A**	**28.40**	**52**	P	**P**	**07 04 04.1**	**+1.4**
EGAK	**Eagle**	**28.41**	**48**	P	**P**	**07 04 02.8**	**+0.1**
EGAK				IAmb	IAmb	07 04 03.2	
	comp=Z,7.7nm,0.8s						
BALM	**Baldy**	**28.57**	**56**	P	**P**	**07 04 05.3**	**+1.0**
BALM				IAmb	IAmb	07 04 18.7	
	comp=Z,8.8nm,1.0s						
CTGM	**Chitina Glacie**	**29.06**	**56**	P	**P**	**07 04 10.5**	**+1.8**
CTGM				IAmb	IAmb	07 04 19.9	
	comp=Z,18nm,1.2s						
KSRS	**Korea Array**	**29.68**	**247**	P	**P**	**07 04 13.0**	**-1.2**
	comp=Z,2.7nm,0.7s,baz=34,slow=8.8,SNR=11						
KSRS				LR	LR	07 15 39.6	
	comp=Z,40nm,18.1s,baz=33,slow=35						
HYT	**Haines Junctio**	**30.90**	**55**	P	**P**	**07 04 27.2**	**+2.2**
HYT				IAmb	IAmb	07 04 27.9	
	comp=Z,11nm,0.9s						
INK	**Inuvik**	**30.96**	**40**	P	**P**	**07 04 26.3**	**+1.1**
INK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
INK	**Inuvik**	**30.96**	**40**	P	**P**	**07 04 26.3**	**+1.1**
WHY	**Whitehorse**	**32.18**	**55**	P	**P**	**07 04 38.3**	**+2.1**
WHY				IAmb	IAmb	07 04 38.6	
	comp=Z,7.4nm,0.9s						
JIS	**Juneau Island**	**33.27**	**59**	P	**P**	**07 04 48.0**	**+2.6**
C36M	**Paulatuk**	**34.14**	**37**	P	**P**	**07 04 53.9**	**+1.0**
C36M				IAmb	IAmb	07 04 54.5	
	comp=Z,8.4nm,0.9s						
ULN	**Ulaanbaatar**	**34.66**	**281**⇑	*e*P	**P**	**07 04 57.9**	**0.0**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ULN	**Ulaanbaatar**	**34.66**	**281**	P	**P**	**07 04 58.5**	**+0.6**
SONM	**Songino Array**	**35.04**	**282**	P	**P**	**07 04 59.4**	**-1.8**
	comp=Z,1.4nm,0.5s,baz=60,slow=8.5,SNR=12						
SONM				PcP	**PcP**	**07 07 32.1**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=68,slow=0.7,SNR=5.8						
SONM				LR	LR	07 20 40.0	
	comp=Z,62nm,19.2s,baz=302,slow=39						
H11N2	**WAKE ISLAND Hy**	**35.79**	**174**	T	T	07 42 39.5	
	baz=355,slow=76,SNR=197						
H11N3	**WAKE ISLAND Hy**	**35.80**	**174**	T	T	07 42 45.9	
	baz=355,slow=76,SNR=247						
H11N1	**WAKE ISLAND Hy**	**35.80**	**174**	T	T	07 42 46.1	
	baz=355,slow=76,SNR=223						
HHC	**Hu-ho-hao-te**	**36.39**	**268**	*e*P	**P**	**07 05 13.2**	**+0.5**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,69nm,5.0s						
H11S1	**WAKE ISLAND Hy**	**36.99**	**174**	T	T	07 45 56.1	
	baz=358,slow=76,SNR=5.2						
H11S3	**WAKE ISLAND Hy**	**37.00**	**174**	T	T	07 45 53.6	
	baz=358,slow=76,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**37.01**	**174**	T	T	07 45 55.0	
	baz=358,slow=76,SNR=5.2						
NJ2	**Nanjing**	**38.62**	**251**	*e*P	**P**	**07 05 31.2**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YKW3	**Yellowknife Ar**	**40.25**	**45**	P	**P**	**07 05 45.9**	**+1.2**
YKW3				IAmb	IAmb	07 05 46.1	
	comp=Z,3.1nm,0.6s						
YKA	**Yellowknife Ar**	**40.29**	**45**	P	**P**	**07 05 45.8**	**+0.8**
	comp=Z,2.4nm,0.5s,baz=299,slow=8.2,SNR=47						
YKA	**Yellowknife Ar**	**40.29**	**45**	P	**P**	**07 05 45.4**	**+0.4**
RES	**Resolute Bay**	**40.49**	**24**	P	**P**	**07 05 47.7**	**+1.2**
RES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RES	**Resolute Bay**	**40.49**	**24**	P	**P**	**07 05 47.7**	**+1.2**
LZH	**Lanzhou**	**44.05**	**269**	*e*P	**P**	**07 06 15.3**	**-0.9**
LZH				pP	pP	07 06 32.4	+0.8
LZH				sP	sP	07 06 43.4	+4.7
LZH				PP	**PcP**	**07 08 04.6**	**+4.1**
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,62nm,4.3s						
LZH				LR	LR		
	comp=N,220nm,12.9s						
LZH				LR	LR		
	comp=E,230nm,13.2s						
LZH				LR	LR		
	comp=Z,360nm,16.5s						
KBS	**Kingsbay**	**44.76**	**352**⇑	*e*P	**P**	**07 06 22.5**	**+1.4**
KBS				pmax	pmax		
	comp=Z,143nm,1.4s						
WMQ	**Urumqi**	**47.79**	**289**	*e*P	**P**	**07 06 45.5**	**+0.1**
WMQ				pP	pwP	07 07 03.9	-0.1
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.1s						
WMQ				LR	LR		
	comp=N,410nm,28.9s						
WMQ				LR	LR		
	comp=E,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,67nm,29.2s						
CD2	**Chengdu**	**47.88**	**265**	P	**P**	**07 06 45.5**	**-0.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
KURK	**Kurchatov**	**47.93**	**302**	*de*P	**P**	**07 06 44.7**	**-1.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**47.93**	**302**	P	**P**	**07 06 44.6**	**-1.6**
KURK				IAmb	IAmb	07 06 46.0	
	comp=Z,4.6nm,0.5s						
KURBB	**Kurchatov Arra**	**48.03**	**301**	P	**P**	**07 06 45.2**	**-1.8**
	comp=Z,3.3nm,0.5s,baz=55,slow=7.7,SNR=26						
MK31	**Makanchi Array**	**48.66**	**295**	P	**P**	**07 06 50.9**	**-1.1**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	**Makanchi Array**	**48.66**	**295**	P	**P**	**07 06 50.9**	**-1.1**
MKAR	**Makanchi Array**	**48.66**	**295**	*ce*P	**P**	**07 06 55.9**	**+3.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**48.66**	**295**	P	**P**	**07 06 50.0**	**-2.0**
	comp=Z,0.7nm,0.5s,baz=61,slow=6.9,SNR=16						
MKAR	**Makanchi Array**	**48.66**	**295**	P	**P**	**07 06 50.5**	**-1.6**
BMO	**Blue Mountains**	**49.46**	**67**	P	**P**	**07 06 59.9**	**+1.7**
BMO	**Blue Mountains**	**49.46**	**67**	P	**P**	**07 06 59.9**	**+1.7**
MSO	**Missoula**	**49.86**	**63**	P	**P**	**07 07 02.4**	**+1.2**
MOD	**Modoc Plateau**	**49.87**	**72**	P	**P**	**07 07 03.4**	**+1.9**
MOD				IAmb	IAmb	07 07 04.7	
	comp=Z,8.8nm,1.5s						
BVAR	**Borovoye Array**	**50.25**	**308**	P	**P**	**07 07 02.2**	**-1.8**
	comp=Z,1.4nm,0.6s,baz=50,slow=9.8,SNR=6.7						
BRVK	**Borovoye**	**50.27**	**308**⇓	*i*P	**P**	**07 07 01.9**	**-2.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FCC	**Fort Churchill**	**50.58**	**41**	P	**P**	**07 07 07.4**	**+1.1**
FCC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FCC	**Fort Churchill**	**50.58**	**41**	P	**P**	**07 07 07.4**	**+1.1**
BEKR	**Beckworth**	**51.25**	**74**	P	**P**	**07 07 13.7**	**+1.7**
MCMT	**McKenzie Canyo**	**51.79**	**64**	P	**P**	**07 07 17.4**	**+1.5**
PNTR	**Pine Nut**	**52.22**	**74**	P	**P**	**07 07 21.9**	**+2.8**
PNTR				IAmb	IAmb	07 07 22.9	
	comp=Z,2.6nm,0.7s						
YERR	**Yerington**	**52.49**	**74**	P	**P**	**07 07 23.4**	**+2.2**
WAKR	**Walker**	**52.72**	**74**	P	**P**	**07 07 25.4**	**+2.5**
WAKR				IAmb	IAmb	07 07 25.9	
	comp=Z,5.4nm,1.3s						
ARU	**Arti**	**52.80**	**318**	*d i*P	**P**	**07 07 20.0**	**-2.9**
ARU				S	**S**	**07 14 43.1**	**-3.1**
ARU				SS	**SS**	**07 18 17.1**	**-7.7**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NVAR	**Mina Array Bea**	**53.40**	**74**	P	**P**	**07 07 29.9**	**+2.1**
	comp=Z,1.8nm,0.7s,baz=302,slow=7.6,SNR=16						
NVAR	**Mina Array Bea**	**53.40**	**74**	P	**P**	**07 07 30.2**	**+2.3**
RLMT	**Red Lodge**	**53.40**	**62**	P	**P**	**07 07 29.8**	**+2.0**
RLMT				IAmb	IAmb	07 07 30.6	
	comp=Z,4.1nm,0.9s						
NV11	**Mina Array Sit**	**53.48**	**74**	P	**P**	**07 07 30.8**	**+2.4**
FXWY	**Fox Creek**	**53.55**	**64**	P	**P**	**07 07 31.2**	**+2.2**
BOOM	**Boomskoye usch**	**54.91**	**295**	P	**P**	**07 07 38.7**	**-0.1**
BOOM				pmax	pmax		
	comp=Z,12nm,1.5s						
BOOM	**Boomskoye usch**	**54.91**	**295**	P	**P**	**07 07 38.7**	**-0.1**
BOOM				IAmb	IAmb	07 07 56.3	
	comp=Z,12nm,1.5s						
PD31	**Pinedale Array**	**54.93**	**64**	P	**P**	**07 07 39.4**	**+0.4**
PDAR	**Pinedale Array**	**54.93**	**64**	P	**P**	**07 07 40.4**	**+1.4**
	comp=Z,1.1nm,0.6s,baz=337,slow=3.1,SNR=16						
R11A	**Troy Canyon, C**	**54.93**	**72**	P	**P**	**07 07 41.0**	**+2.0**
DUG	**Dugway, Tooele**	**55.08**	**68**	P	**P**	**07 07 42.2**	**+2.2**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DUG	**Dugway, Tooele**	**55.08**	**68**	P	**P**	**07 07 42.2**	**+2.2**
DUG				IAmb	IAmb	07 07 42.9	
	comp=Z,4.3nm,1.0s						
AAK	**Ala-Archa**	**55.54**	**297**⇓	*e*P	**P**	**07 07 41.5**	**-1.8**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AAK	**Ala-Archa**	**55.54**	**297**	P	**P**	**07 07 42.7**	**-0.6**
	comp=Z,1.8nm,0.5s,baz=98,slow=3.3,SNR=6.3						
AAK	**Ala-Archa**	**55.54**	**297**	P	**P**	**07 07 43.3**	**0.0**
TPNV	**Topopah Spring**	**55.59**	**73**	P	**P**	**07 07 45.6**	**+1.9**
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TPNV	**Topopah Spring**	**55.59**	**73**	P	**P**	**07 07 45.6**	**+1.9**
TPNV				IAmb	IAmb	07 07 46.8	
	comp=Z,4.8nm,1.1s						
NLU	**North Lily Min**	**55.65**	**68**	P	**P**	**07 07 45.3**	**+1.1**
PSUT	**Pine Spring**	**55.73**	**70**	P	**P**	**07 07 45.9**	**+1.1**
MPU	**Maple Canyon**	**55.84**	**68**	P	**P**	**07 07 47.2**	**+1.7**
ULM	**Lac du Bonnet**	**55.98**	**49**⇓	*e*P	**P**	**07 07 41.9**	**-4.2**
ULM	**Lac du Bonnet**	**55.98**	**49**	P	**P**	**07 07 47.1**	**+1.0**
	comp=Z,1.2nm,0.4s,baz=320,slow=6.2,SNR=4.4						
ULM				LR	LR	07 32 07.7	
	comp=Z,48nm,18.3s,baz=148,slow=36						
ULM	**Lac du Bonnet**	**55.98**	**49**	P	**P**	**07 07 47.4**	**+1.3**
ULM				IAmb	IAmb	07 07 48.4	
	comp=Z,6.2nm,1.2s						
GSC	**Goldstone, Bar**	**56.50**	**75**	P	**P**	**07 07 52.4**	**+2.3**
GSC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GSC	**Goldstone, Bar**	**56.50**	**75**	P	**P**	**07 07 52.4**	**+2.3**
GSC				IAmb	IAmb	07 07 52.9	
	comp=Z,4.6nm,0.9s						
RDMU	**Red Mountain**	**56.51**	**66**	P	**P**	**07 07 51.3**	**+1.0**
TMUT	**Trail Mountain**	**56.59**	**68**	P	**P**	**07 07 51.5**	**+0.6**
P17A	**Butcher Ranch,**	**56.70**	**68**	P	**P**	**07 07 53.6**	**+2.0**
SZCU	**Shurtz Canyon**	**56.83**	**71**	P	**P**	**07 07 54.3**	**+1.7**
Q16A	**Castle Valley**	**56.88**	**68**	P	**P**	**07 07 54.2**	**+1.3**
SRU	**San Rafael Swe**	**57.08**	**68**	P	**P**	**07 07 55.0**	**+0.7**
SRU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SRU	**San Rafael Swe**	**57.08**	**68**	P	**P**	**07 07 55.0**	**+0.7**
LCMT	**Little Creek M**	**57.18**	**71**	P	**P**	**07 07 57.4**	**+2.4**
KK31	**Karatay Array**	**57.20**	**299**	P	**P**	**07 07 53.8**	**-1.1**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	**Karatay Array**	**57.20**	**299**	P	**P**	**07 07 53.8**	**-1.1**
KK31				IAmb	IAmb	07 07 54.9	
	comp=Z,3.3nm,0.7s						
KKAR	**Karatay Array**	**57.20**	**299**	P	**P**	**07 07 53.8**	**-1.1**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	**Karatay Array**	**57.20**	**299**	P	**P**	**07 07 53.8**	**-1.1**
KKAR				IAmb	IAmb	07 07 54.9	
	comp=Z,3.3nm,0.7s						
AKTO	**Aktyubinsk**	**57.47**	**313**	P	**P**	**07 07 57.4**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=100,slow=1.9,SNR=4.2						
O20A	**White River Ci**	**57.52**	**65**	P	**P**	**07 07 59.3**	**+1.9**
ABKAR	**Akbulak array**	**57.54**	**311**	P	**P**	**07 07 56.5**	**-0.6**
ABKAR	**Akbulak array**	**57.54**	**311**	P	**P**	**07 07 56.2**	**-0.9**
D32A	**Dogwood Acres,**	**57.79**	**53**	P	**P**	**07 07 59.4**	**+0.5**
FINES	**FINESS Array B**	**58.60**	**337**	*i* P	**P**	**07 08 04.0**	**-0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**58.60**	**337**	P	**P**	**07 08 04.0**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=42,slow=8.3,SNR=6.2						
FINES	**FINESS Array B**	**58.60**	**337**	P	**P**	**07 08 04.6**	**+0.2**
SMCO	**Snowmass**	**58.89**	**65**	P	**P**	**07 08 09.5**	**+2.3**
SMCO				IAmb	IAmb	07 08 09.9	
	comp=Z,3.3nm,0.9s						
EYMN	**Ely**	**59.61**	**49**	P	**P**	**07 08 12.5**	**+0.9**
CHTO	**Chiang Mai**	**60.02**	**259**	P	**P**	**07 08 15.2**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHTO	**Chiang Mai**	**60.02**	**259**	P	**P**	**07 08 15.2**	**+0.4**
CHTO				IAmb	IAmb	07 08 15.7	
	comp=Z,4.4nm,1.0s						
CM31	**Chiang Mai Arr**	**60.30**	**259**	P	**P**	**07 08 17.1**	**+0.4**
CM31				IAmb	IAmb	07 08 18.0	
	comp=Z,4.2nm,0.8s						
CMAR	**Chiang Mai Arr**	**60.30**	**259**	P	**P**	**07 08 17.0**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=19,slow=6.2,SNR=13						
CMAR				PcP	**PcP**	**07 09 02.2**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=24,slow=3.1,SNR=4.3						
CMAR				LR	LR	07 35 18.5	
	comp=Z,29nm,20.9s,baz=1.5,slow=37						
CMAR	**Chiang Mai Arr**	**60.30**	**259**	P	**P**	**07 08 17.1**	**+0.4**
GUN	**Gumba**	**60.31**	**277**	*e*P	**P**	**07 08 16.0**	**-1.1**
	comp=Z,44nm,0.3s						
JIRN	**Jiri**	**60.33**	**276**	*e*P	**P**	**07 08 16.1**	**-1.1**
	comp=Z,23nm,0.4s						
RAMN	**Ramite**	**60.64**	**276**	*e*P	**P**	**07 08 18.1**	**-1.1**
	comp=Z,71nm,0.4s						
KKN	**Kakani**	**60.74**	**277**	*e*P	**P**	**07 08 19.2**	**-0.7**
	comp=Z,19nm,0.2s						
PKI	**Pulchoki**	**60.84**	**277**	*e*P	**P**	**07 08 19.6**	**-1.0**
	comp=Z,5.7nm,0.7s						
PKIN	**Phulchoki**	**60.84**	**277**	*e*P	**P**	**07 08 19.4**	**-1.2**
	comp=Z,30nm,0.6s						
GKN	**Gorkha**	**60.94**	**278**	*e*P	**P**	**07 08 20.1**	**-1.0**
	comp=Z,21nm,0.3s						
DMN	**Daman**	**60.98**	**277**	*e*P	**P**	**07 08 20.8**	**-0.7**
	comp=Z,21nm,0.4s						
DANN	**Dangsing**	**61.17**	**279**	*e*P	**P**	**07 08 22.2**	**-0.7**
	comp=Z,69nm,0.7s						
KOLN	**Koldanda**	**61.71**	**278**	*e*P	**P**	**07 08 25.4**	**-1.0**
	comp=Z,29nm,0.5s						
NOA	**NORSAR Array B**	**61.72**	**345**	P	**P**	**07 08 25.4**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=6.3,slow=5.1,SNR=3.3						
ANMO	**Albuquerque**	**62.35**	**68**⇑	*e*P	**P**	**07 08 28.1**	**-2.5**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.9s						
LENM	**Lemitar**	**62.67**	**69**	P	**P**	**07 08 34.3**	**+1.6**
E43A	**Lone Tree Farm**	**62.74**	**47**	P	**P**	**07 08 33.3**	**+0.5**
SCHQ	**Schefferville**	**62.76**	**30**	P	**P**	**07 08 32.4**	**-0.4**
	comp=Z,3.8nm,0.6s,baz=342,slow=8.4,SNR=7.1						
SCHQ	**Schefferville**	**62.76**	**30**	P	**P**	**07 08 33.1**	**+0.3**
SCHQ				IAmb	IAmb	07 08 46.9	
	comp=Z,10nm,1.4s						
CBKS	**Cedar Bluff**	**62.83**	**61**	P	**P**	**07 08 33.2**	**-0.3**
CBKS				pmax	pmax		
	comp=Z,12nm,0.9s						
CBKS	**Cedar Bluff**	**62.83**	**61**	P	**P**	**07 08 33.2**	**-0.3**
NIL	**Nilore**	**62.90**	**290**	P	**P**	**07 08 33.2**	**-0.8**
NIL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NIL	**Nilore**	**62.90**	**290**	P	**P**	**07 08 33.2**	**-0.8**
319A	**Douglas**	**63.58**	**73**	P	**P**	**07 08 39.4**	**+0.7**
319A				IAmb	IAmb	07 08 41.6	
	comp=Z,4.3nm,1.0s						
KBL	**Kabul**	**64.43**	**294**	P	**P**	**07 08 42.7**	**-1.6**
KBL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBL	**Kabul**	**64.43**	**294**	P	**P**	**07 08 42.7**	**-1.6**
KBL				IAmb	IAmb	07 08 43.0	
	comp=Z,4.5nm,0.8s						
KLNR	**Kaliningrad**	**66.13**	**337**⇓	*e*P	**P**	**07 08 54.3**	**-0.4**
KLNR				pmax	pmax		
	comp=Z,138nm,1.3s						
GEYT	**Alibeck**	**67.20**	**304**	P	**P**	**07 09 01.5**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=8.9,slow=4.8,SNR=3.5						
GEYT	**Alibeck**	**67.20**	**304**	P	**P**	**07 09 01.6**	**-0.2**
AKASG	**Malin Array Be**	**67.43**	**330**	P	**P**	**07 09 02.0**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=29,slow=6.3,SNR=5.6						
AKBB	**Malin Array Si**	**67.43**	**330**⇓	*e*P	**P**	**07 09 01.6**	**-1.4**
TX31	**Lajitas Ar. Si**	**68.19**	**70**	P	**P**	**07 09 09.5**	**+1.2**
TX32	**Lajitas Array**	**68.19**	**70**	P	**P**	**07 09 09.3**	**+1.0**
TXAR	**Lajitas Array**	**68.19**	**70**	P	**P**	**07 09 09.2**	**+0.9**
TXAR	**Lajitas Array**	**68.19**	**70**	P	**P**	**07 09 09.9**	**+1.5**
	comp=Z,2.3nm,0.7s,baz=298,slow=4.9,SNR=35						
TXAR	**Lajitas Array**	**68.19**	**70**	P	**P**	**07 09 09.2**	**+0.9**
KIV	**Kislovodsk**	**68.84**	**318**	*i* P	**P**	**07 09 12.1**	**0.0**
KIV				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PBMO	**Poplar Bluff**	**68.94**	**56**	P	**P**	**07 09 13.8**	**+1.0**
PBMO				IAmb	IAmb	07 09 13.9	
	comp=Z,4.4nm,0.7s						
KBZ	**Khabaz**	**68.95**	**318**⇓	*e*P	**P**	**07 09 11.8**	**-0.8**
KBZ	**Khabaz**	**68.95**	**318**	P	**P**	**07 09 12.6**	**0.0**
	comp=Z,2.2nm,0.9s,baz=97,slow=2.9,SNR=4.7						
JCT	**Junction City**	**69.33**	**66**	P	**P**	**07 09 15.9**	**+0.6**
JCT				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JCT	**Junction City**	**69.33**	**66**	P	**P**	**07 09 15.9**	**+0.6**
JCT				IAmb	IAmb	07 09 17.0	
	comp=Z,4.8nm,0.8s						
CLL	**Collm**	**70.72**	**341**	*e*pP	pP	07 09 41.0	+1.2
T49A	**Edmonton**	**70.92**	**52**	P	**P**	**07 09 25.5**	**+0.6**
T49A				IAmb	IAmb	07 09 25.7	
	comp=Z,5.6nm,0.8s						
GNI	**Garni**	**71.26**	**315**⇑	*e*P	**P**	**07 09 27.5**	**+0.4**
GNI				pmax	pmax		
	comp=Z,11nm,1.0s						
BURAR	**Bucovina Array**	**71.34**	**331**	P	**P**	**07 09 27.4**	**0.0**
GERES	**GERESS Array B**	**72.93**	**339**	P	**P**	**07 09 36.7**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=17,slow=4.4,SNR=3.3						
GERES	**GERESS Array B**	**72.93**	**339**	P	**P**	**07 09 37.2**	**+0.4**
MLR	**Muntele Rosu**	**73.08**	**330**	P	**P**	**07 09 38.3**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=58,slow=9.5,SNR=3.7						
MTN	**Manton Dam**	**73.12**	**213**	P	**P**	**07 09 38.7**	**+0.6**
Z50A	**Ashland**	**73.94**	**54**	P	**P**	**07 09 42.9**	**0.0**
Z50A				IAmb	IAmb	07 09 43.9	
	comp=Z,9.2nm,0.8s						
BRTR	**Keskin Array B**	**75.84**	**322**	*ce*P	**P**	**07 09 54.0**	**+0.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**75.84**	**322**	P	**P**	**07 09 53.6**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=48,slow=4.0,SNR=4.9						
BRTR	**Keskin Array B**	**75.84**	**322**	P	**P**	**07 09 53.3**	**-0.7**
WRA	**Warramunga Arr**	**78.95**	**207**	P	**P**	**07 10 11.5**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=12,slow=5.7,SNR=18						
WRA	**Warramunga Arr**	**78.95**	**207**	P	**P**	**07 10 11.9**	**+0.7**
AS31	**Alice Springs**	**82.62**	**207**	P	**P**	**07 10 31.9**	**+1.2**
ASAR	**Alice Springs**	**82.62**	**207**	P	**P**	**07 10 31.8**	**+1.0**
	comp=Z,2.8nm,0.8s,baz=16,slow=5.9,SNR=29						
PSAD3	**Pilbara Seismi**	**85.13**	**220**	P	**P**	**07 10 43.8**	**+0.3**
PSAD3				IAmb	IAmb	07 10 55.2	
	comp=Z,5.9nm,1.0s						
RAYN	**Ar Rayn**	**85.13**	**305**	P	**P**	**07 10 43.3**	**-0.5**
RAYN				pmax	pmax		
	comp=Z,9.0nm,1.5s						
RAYN	**Ar Rayn**	**85.13**	**305**	P	**P**	**07 10 43.3**	**-0.5**
RAYN				IAmb	IAmb	07 10 43.8	
	comp=Z,8.8nm,1.4s						

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*DSN **02** 06:58:44.7±1.6, 27°.63N×57°.98E, h10km, ML4.1/7, Error ellipse: s-maj=40.3km s-min=12.8km az=139.0*

*IDC **02** 06:58:47.1±1.2, 27°.14N×54°.38E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.7/49, mbtmp3.8/12, ML3.4/1, MS2.9/7, Ms1 2.9/7, ms1mx2.7/38, Error ellipse: s-maj=28.6km s-min=18.5km az=156.0*

*TEH **02** 06:58:50.1, 27°.13N×54°.47E, h17km, ML3.8*

*OMAN **02** 06:58:52.7±0.8, 27°.03N×54°.23E, h116km±24km, ml3.9/4, Error ellipse: s-maj=28.1km s-min=13.5km az=230.0*

ISC 02 06:58:50.1±0.5**, 27°.14N**±0°.05×**54°.43E**±0°.05**, h18**km**, n64, σ1§74**/66**, mb4.0**/19**, MS2.8**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**1.15**	**280**	*e*Pg	**Pg**	**06 59 12.7**	**+0.3**
LMD1				*e*		06 59 40.2	
JHRM	**Jahrom**	**1.56**	**331**	*e*Pn	**Pb**	**06 59 18.0**	**-0.5**
JHRM				*e*		06 59 44.1	
GENO	**Geno**	**1.57**	**80**	*e*Pn	**Pb**	**06 59 18.6**	**-0.2**
GENO				*e*		06 59 53.6	
SHME	**Shamm**	**1.88**	**125**	P	**Pn**	**06 59 21.6**	**+0.2**
SHME	**Shamm**	**1.88**	**125**	*e*Pn	**Pn**	**06 59 21.2**	**-0.2**
BANOM	**Banah**	**2.06**	**125**	*e*P	**Pn**	**06 59 23.9**	**-0.1**
	SNR=22						
BANOM				S	**Sb**	**06 59 51.3**	**-1.2**
BANOM	**Banah**	**2.06**	**125**	P	**Pn**	**06 59 24.5**	**+0.6**
BANOM				S	**Sg**	**06 59 55.7**	**-0.9**
NIAN	**Nian**	**2.18**	**78**	*e*Pn	**Pn**	**06 59 26.2**	**+0.7**
NIAN				*e*		07 00 17.5	
MSFE	**Esma-Masafi**	**2.35**	**138**	P	**Pn**	**06 59 29.9**	**+2.0**
MSFE	**Esma-Masafi**	**2.35**	**138**	*e*Pn	**Pn**	**06 59 30.1**	**+2.1**
NAZ	**Nazwa, Dubai**	**2.41**	**152**	*i* P	**Pg**	**06 59 38.0**	**+1.6**
	SNR=9.6						
NAZ	**Nazwa, Dubai**	**2.41**	**152**	*e*Pn	**Pn**	**06 59 30.9**	**+2.2**
MDH	**Madha**	**2.48**	**137**	P	**Pn**	**06 59 28.6**	**-1.1**
MDH	**Madha**	**2.48**	**137**	*e*Pn	**Pn**	**06 59 31.0**	**+1.3**
ASUD	**Al Ashush, Dub**	**2.63**	**162**	*e*Pn	**Pn**	**06 59 34.3**	**+2.6**
UOSS	**Minazif**	**2.70**	**144**	P	**Pn**	**06 59 34.0**	**+1.3**
UOSS	**Minazif**	**2.70**	**144**	*e*Pn	**Pn**	**06 59 33.3**	**+0.6**
HATD	**Hatta, Dubai**	**2.76**	**146**	P	**Pn**	**06 59 36.1**	**+2.5**
HATD	**Hatta, Dubai**	**2.76**	**146**	*e*Pn	**Pn**	**06 59 35.8**	**+2.2**
ASHO	**Ashiyiah**	**2.85**	**149**	*i* P	**Pn**	**06 59 37.0**	**+2.2**
	SNR=11						
ASHO	**Ashiyiah**	**2.85**	**149**	*e*Pn	**Pn**	**06 59 36.4**	**+1.6**
ASHO	**Ashiyiah**	**2.85**	**149**	P	**Pn**	**06 59 36.6**	**+1.8**
	SNR=11						
KHNJ	**Kahnooj**	**3.02**	**74**	*e*Pn	**Pn**	**06 59 37.5**	**+0.5**
NGRK	**Negar Kerman**	**3.21**	**38**	*e*Pn	**Pn**	**06 59 40.5**	**+0.4**
NGRK				*e*		07 00 46.5	
TVBK	**TV Kerman**	**3.50**	**35**	*e*Pn	**Pn**	**06 59 45.4**	**+1.4**
TVBK				*e*		07 00 35.9	
KHGB	**Koh Gabri**	**3.69**	**29**	*e*Pn	**Pn**	**06 59 48.3**	**+1.8**
KHGB				*e*		07 00 35.5	
CHMN	**Cheshme madani**	**3.85**	**44**	*e*Pn	**Pn**	**06 59 51.4**	**+2.6**
ARQ	**Araqi**	**4.23**	**153**	P	**Pn**	**06 59 56.0**	**+2.2**
	SNR=10						
ARQ				S	**Sn**	**07 00 44.6**	**+1.8**
IMEH	**Mehriz**	**4.24**	**2**	*e*Pn	**Pn**	**06 59 56.8**	**+2.7**
IBAF	**Bafgh**	**4.54**	**12**	*e*Pn	**Pn**	**06 59 59.8**	**+1.6**
ISAD	**Sadrabad**	**4.80**	**352**	*e*Pn	**Pn**	**07 00 04.1**	**+2.2**
IRAM	**Ramesheh**	**4.99**	**339**	*e*Pn	**Pn**	**07 00 05.0**	**+0.7**
BSY	**Bisya**	**5.04**	**150**	P	**Pn**	**07 00 07.0**	**+2.1**
	SNR=10.0						
BSY				S	**Sn**	**07 01 04.2**	**+1.4**
ICHK	**Chekchek**	**5.09**	**360**	*e*Pn	**Pn**	**07 00 08.6**	**+2.9**
WSAR	**Wadi Sarin**	**5.43**	**135**	Pn	**Pn**	**07 00 11.4**	**+1.1**
	1.3nm,0.3s,baz=305,slow=11,SNR=7.7						
WSAR				Sn	**Sn**	**07 01 10.6**	**-1.9**
	1.6nm,0.3s,baz=128,slow=18,SNR=7.6						
WSAR				LR	LR	07 02 49.1	
	comp=Z,150nm,20.0s,baz=338,slow=44						
NHDN	**Nehbandan**	**6.48**	**48**	*e*Pn	**Pn**	**07 00 26.0**	**+1.2**
IKOO	**Kooshah**	**6.60**	**36**	*e*Pn	**Pn**	**07 00 28.5**	**+2.0**
SHAO	**Shalim**	**9.14**	**173**	P	**Pn**	**07 01 01.0**	**-0.2**
	SNR=14						
WHFO	**Wadi Hawf**	**9.20**	**184**	P	**Pn**	**07 01 01.1**	**-0.9**
	SNR=32						
ABTO	**Aybut**	**9.79**	**186**	P	**Pn**	**07 01 10.0**	**-0.2**
	SNR=5.9						
GEYT	**Alibeck**	**11.20**	**15**	LR	LR	07 06 57.4	
	comp=Z,46nm,18.2s,baz=230,slow=44						
GNI	**Garni**	**15.27**	**331**	Pn	**P**	**07 02 30.7**	**+0.9**
	1.0nm,0.3s,baz=241,slow=1.3,SNR=6.3						
GNI				LR	LR	07 08 50.1	
	comp=Z,52nm,20.6s,baz=132,slow=40						
EIL	**Elat**	**17.33**	**283**	LR	LR	07 10 28.8	
	comp=Z,22nm,19.0s,baz=170,slow=41						
KBZ	**Khabaz**	**19.00**	**334**	P	**Pn**	**07 03 15.0**	**+3.4**
	0.0nm,0.3s,baz=104,slow=15,SNR=3.0						
BRTR	**Keskin Array B**	**21.36**	**311**	P	**P**	**07 03 37.0**	**+0.4**
	3.7nm,0.7s,baz=134,slow=12,SNR=21						
AAK	**Ala-Archa**	**22.50**	**41**	P	**P**	**07 03 49.1**	**+0.3**
	1.0nm,0.5s,baz=240,slow=10,SNR=4.5						
AAK				LR	LR	07 12 57.5	
	comp=Z,54nm,18.2s,baz=234,slow=38						
AKTO	**Aktyubinsk**	**23.42**	**6**	P	**P**	**07 03 58.6**	**+0.5**
	2.5nm,0.8s,baz=194,slow=9.5,SNR=8.3						
AKTO				LR	LR	07 14 04.3	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,34nm,18.8s,baz=187,slow=39						
IDI	Anoyia	26.47	295	LR	LR	07 16 49.9	
	comp=Z,16nm,19.1s,baz=334,slow=41						
MKAR	Makanchi Array	29.43	41	P	P	07 04 52.2	-0.4
	0.6nm,0.7s,baz=230,slow=8.8,SNR=6.5						
KURBB	Kurchatov Arra	29.78	32	P	P	07 04 55.7	0.0
	0.6nm,0.7s,baz=232,slow=8.6,SNR=5.6						
ZALV	Zalesovo Beam	34.88	32	P	P	07 05 39.7	-0.5
	2.5nm,0.5s,baz=242,slow=10,SNR=14						
WTTA	Wattenberg	38.96	313	*i* P	P	07 06 11.9	-3.5
	4.9nm,1.4s						
WATA	Walderalm	39.02	313	*i* P	P	07 06 13.0	-2.7
	5.8nm,1.2s						
FINES	FINESS Array B	39.22	339	P	P	07 06 16.2	-0.8
	0.8nm,0.4s,baz=153,slow=10,SNR=5.1						
SQTA	Sankt Quirin	39.23	312	*i* P	P	07 06 15.4	-2.1
	2.4nm,0.5s						
MOTA	Moosalm	39.33	313	*i* P	P	07 06 14.9	-3.6
	4.4nm,0.9s						
GTA	Gaotai	39.48	60	*e*P	P	07 06 20.7	+0.9
GTA				pP	sP	07 06 30.0	+2.2
GTA				sP	pP	07 06 33.8	+8.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FETA	Feichten	39.50	312	*i* P	P	07 06 15.6	-4.2
	comp=Z,5.2nm,1.2s						
RETA	Reutte	39.59	313	*i* P	P	07 06 19.2	-1.3
	comp=Z,11nm,1.8s						
DAVA	Damuels	40.12	312	*i* P	P	07 06 23.4	-1.6
	comp=Z,3.2nm,0.5s						
SONM	Songino Array	45.15	48	P	P	07 07 05.7	-0.1
	comp=Z,0.8nm,0.9s,baz=264,slow=8.5,SNR=4.6						
TORD	Torodi Ar. Bea	51.09	265	P	P	07 07 50.8	-1.2
	comp=Z,1.2nm,0.7s,baz=60,slow=7.5,SNR=8.6						
DBIC	Dimbokro	59.71	262	P	P	07 08 53.8	-0.3
	comp=Z,2.6nm,0.8s,baz=46,slow=8.1,SNR=4.0						
YKA	Yellowknife Ar	90.25	355	P	P	07 11 48.9	-0.5
	comp=Z,0.4nm,0.8s,baz=4.5,slow=4.7,SNR=5.7						

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*JMA **02** 07:06:01.7±0.2, 33°.72N×140°.99E, h38km, M2.7*
*IDC **02** 07:06:08.4±8.3, 33°.32N×139°.52E, h86km±116km, mb3.1/2, mb1 3.3/3, mb1mx2.8/38, mbtmp3.3/3, ML2.0/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/14, Error ellipse: s-maj=159.8km s-min=72.2km az=70.0*
ISC 02 07:06:01.2±1.4, **33°.65N**±0°.06×**141°.1E**±0°.1, **h48**km, **n11**, σ**0s.97**/15, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.00	355	P	Pn	07 06 18.4	0.0
BSO1				*e*S	Sn	07 06 31.1	-0.1
JHJ2	Mitsune	1.18	243	P	Pn	07 06 21.9	+0.5
JHJ2				*e*S	Sn	07 06 36.6	+0.3
JHCJ	Hachijojimakas	1.22	242	P	Pn	07 06 22.2	+0.4
BSO3	Boso 3	1.24	338	P	Pn	07 06 22.2	+0.3
BSO4	Boso 4	1.47	336	P	Pn	07 06 26.0	+0.8
KTJ3	Kamata3	2.10	308	P	Pn	07 06 33.9	+0.1
KTJ3				*e*S	Sn	07 06 57.4	-1.3
JOD2	Odawara 2	2.30	315	P	Pn	07 06 36.5	-0.1
JOD2				*e*S	Sn	07 07 02.9	-0.8
MJAR	Matsushiro Arr	3.72	322	P	Pn	07 06 58.8	+2.7
	0.2nm,0.3s,baz=161,slow=12,SNR=11						
MJAR				S	Sn	07 07 38.3	-0.4
	0.1nm,0.3s,baz=266,slow=30,SNR=4.3						
DAV	Davao City (W)	30.09	212	LR	LR	07 23 12.5	
	comp=Z,19nm,19.4s,baz=360,slow=35						
WRA	Warramunga Arr	53.68	188	P	P	07 15 17.7	-0.5
	0.6nm,0.5s,baz=5.2,slow=7.6,SNR=12						
ASAR	Alice Springs	57.41	188	P	P	07 15 44.6	-0.3
	0.3nm,0.7s,baz=12,slow=13,SNR=5.4						

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*BNS **02** 07:15:54.9±0.5, 51°.57N×6°.87E, h1km, ML2.0*
*BGR **02** 07:15:54.6±0.5, 51°.60N×6°.80E, h1km, ML2.3/6, Error ellipse: s-maj=5.6km s-min=3.3km az=149.0*
*BUG **02** 07:15:54.7±0.6, 51°.59N×6°.83E, h0km, ML2.1/3*
BUG Felt III EMS.
*LDG **02** 07:15:54.7±0.2, 51°.58N×6°.86E, h1km, Md2.7/2, Ml2.7/17, Error ellipse: s-maj=2.8km s-min=2.3km az=24.0, Suspected Mining induced.*
ISC 02 07:15:53.3±0.9, **51°.56N**±0°.03×**6°.77E**±0°.02, **h0**km, **n61**, σ**1s.31**/110, **4C-1D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAUG	Laupendahl	0.24	152	*e*Pg	Pg	07 15 59.1	+1.3
BAVN	Auguste-Victor	0.28	51	Pg	Pg	07 15 59.0	+0.2
BUG	Bochum--Univer	0.34	110	Pg	Pg	07 16 00.5	+0.7
BUG				Sg	Sg	07 16 04.7	+0.6
BKLB	Ruhr-Universit	0.34	111	Pg	Pg	07 16 00.5	+0.7
BTEZ	Ruhr-Universit	0.34	109	Pg	Pg	07 16 00.5	+0.7
ENTS	Ennepetalsperr	0.51	128⇓	*i*Pg	Pg	07 16 03.9	+0.7
ENTS				*e*Sg	Sg	07 16 11.1	+1.2
HKB	Herkenbosch	0.53	226	P	Pg	07 16 03.5	+0.1
HKB				S	Sb	07 16 13.2	-0.4
PLH	Pulheim	0.56	177	*e*Pg	Pg	07 16 05.4	+1.4
PLH				*e*Sg	Sg	07 16 13.4	+2.2
HOBG	Hohbusch	0.68	148	*e*Pg	Pg	07 16 07.6	+1.3
SORT	Sorpetalsperre	0.78	105⇑	*e*Pg	Pg	07 16 08.4	+0.1
SORT				*e*Sg	Sg	07 16 18.7	+0.3
	39nm,0.4s						
WBS	Wahnbachtalspe	0.82	156	*e*Pg	Pg	07 16 10.1	+1.1
WBS				*e*Sg	Sg	07 16 21.5	+1.8
	59nm,0.3s						
BOPT	Opiter	0.84	238	S	Sn	07 16 25.6	+0.3
GSH	Grosshau	0.86	197	*e*Pg	Pb	07 16 11.5	+0.4
GSH				*e*Sg	Sb	07 16 23.5	+0.3
	56nm,0.2s						
HGN	Heimansgroeve	0.95	214	*e*Pg	Pb	07 16 13.3	+0.6
HGN				*e*Sg	Sn	07 16 27.7	-0.6
DREG	Dreilaegerbach	0.96	201	*e*Pg	Pb	07 16 13.6	+0.7
KLL	Kalltalsperre	0.96	198	*e*Pg	Pb	07 16 13.5	+0.7
IBBN	Ibbenburen	0.97	39	*e*Pg	Pb	07 16 12.7	-0.3
STB	Steinbach	0.97	177	*e*Pg	Pb	07 16 13.7	+0.7
STB				*e*Sg	Sb	07 16 27.1	+0.8
	38nm,0.1s						
TDN	Todenfeld	0.99	173	*e*Pg	Pg	07 16 13.5	+1.2
TDN				*e*Sg	Sg	07 16 27.3	+2.1
	37nm,0.2s						
BEBN	Eben Emael	1.03	222	P	Pn	07 16 14.6	-0.3
BEBN				S	Sn	07 16 29.9	-0.1
AHRW	Bad Neuenahr-A	1.04	169	*e*Pg	Pb	07 16 14.7	+0.5
AHRW				*e*Sg	Sb	07 16 29.4	+1.1
MEM	Membach	1.06	207	⇑P	Pb	07 16 14.9	+0.3
MEM				S	Sb	07 16 29.3	+0.2
	comp=E,39nm,0.3s						
MEM	Membach	1.06	207	*e*Pg	Pb	07 16 14.9	+0.3
MEM				*e*Sg	Sb	07 16 30.2	+1.1
OLFT	Oleftalsperre	1.09	192⇑	*e*Pg	Pb	07 16 15.7	+0.6
OLFT				*e*Sg	Sb	07 16 30.9	+1.1
BMOL	Mol	1.11	252	P	Pn	07 16 19.5	+3.4
BMOL				S	Sn	07 16 33.8	+1.8
BLCH	La Chartreuse	1.18	219	P	Pb	07 16 16.6	0.0
BLCH				S	Sn	07 16 33.7	-0.1
BHE	Schloss Buerre	1.24	168	*e*Pg	Pg	07 16 17.8	+0.8
BHE				*e*Sg	Sg	07 16 34.4	+1.4
	comp=E,28nm,0.1s						
BSTI	Sart Tilman	1.24	218	P	Pb	07 16 17.6	+0.1
HILG	Hillesheim	1.27	183	*e*Pg	Pn	07 16 18.7	+0.3
BHOU	Houvegnez	1.30	202	P	Pn	07 16 19.2	+0.4
BHOU				S	Sn	07 16 37.2	+0.4
	comp=E,37nm,0.1s						
LOH	Wallersheim-Lo	1.39	186	*e*Pg	Pg	07 16 20.4	+0.6
LOH				*e*Sg	Sg	07 16 39.1	+1.3
	comp=E,55nm,0.5s						
BGG	Burgeitz	1.40	165	*e*Pg	Pn	07 16 20.1	0.0
BCLA	Clavier	1.47	220	⇑P	Pn	07 16 20.9	-0.1
BCLA				S	Sn	07 16 41.9	+1.0
	comp=E,13nm,0.1s						
BGES	Gesves	1.58	223	P	Pn	07 16 22.6	-0.1
BGES				S	Sn	07 16 42.7	-1.1
	comp=E,9.1nm,0.3s						
RCHB	Rochefort	1.71	215	P	Pn	07 16 24.4	0.0
RCHB				S	Sn	07 16 46.9	0.0
TNS	Taunus Mts	1.71	141	*e*Pn	Pn	07 16 24.7	+0.2
TNS				*e*Sg	Sb	07 16 49.4	+1.7
BMRD	Maredsous	1.78	226	S	Sn	07 16 48.5	-0.2
GIVF	Givet	1.91	221	*e*Pn	Pn	07 16 27.5	+0.4
GIVF	Givet	1.91	221	*e*Pg	Pg	07 16 31.6	+1.7
GIVF				*e*Sn	Sn	07 16 51.7	-0.1
GIVF				*e*Sg	Sg	07 16 55.2	+0.6
	comp=E,21nm,0.2s						
WLF	Walferdange	1.94	192	P	Pn	07 16 28.5	+1.0
WLF	Walferdange	1.94	192	*e*Pg	Pg	07 16 31.3	+0.8
WLF				*e*Sg	Sg	07 16 56.2	+0.7
DOU	Dourbes	2.01	224	S	Sn	07 16 54.3	0.0
BAIF	Baives	2.21	228	*e*Pn	Pn	07 16 31.8	+0.5
BAIF	Baives	2.21	228	*e*Pg	Pg	07 16 37.0	+1.3
BAIF				*e*Sn	Sn	07 16 58.8	-0.5
BAIF				*e*Sg	Sg	07 17 04.7	+0.4
	comp=E,8.0nm,0.2s						
PAGF	Fort de Pagny	3.08	193	*e*Sg	Sg	07 17 32.4	+0.1
	comp=E,3.8nm,0.3s						
CDF	Champ du Feu	3.17	174	*e*Pn	Pn	07 16 44.3	-0.2
CDF				*e*Sg	Sg	07 17 34.4	-0.7
	comp=E,2.7nm,0.4s						
SFTF	Sexfontaines	3.54	199	*e*Pg	Pg	07 17 01.2	+0.1
SFTF				*e*Sn	Sn	07 17 30.4	-1.7
SFTF				*e*Sg	Sg	07 17 46.9	-0.1
	comp=E,5.4nm,0.3s						
HAU	Haudompre	3.57	185	*e*Pn	Pn	07 16 50.1	+0.2
HAU	Haudompre	3.57	185	*e*Pg	Pg	07 17 01.8	+0.1
HAU				*e*Sn	Sn	07 17 30.4	-2.4
HAU				*e*Sg	Sg	07 17 47.4	-0.5
	comp=E,3.9nm,0.3s						
HINF	Hinteralfeld	3.75	179	*e*Pn	Pn	07 16 51.9	-0.5
HINF	Hinteralfeld	3.75	179	*e*Pg	Pg	07 17 04.6	-0.5
HINF				*e*Sn	Sn	07 17 34.3	-2.9
HINF				*e*Sg	Sg	07 17 52.7	-1.0
	comp=E,2.3nm,0.4s						
LOR	Lormes	4.70	205	*e*Pn	Pn	07 17 05.1	-0.3
	baz=25						
LOR				*e*Sn	Sn	07 17 57.7	-2.9
LOR				*e*Sg	Sg	07 18 23.1	-1.0
	comp=E,3.1nm,0.3s,baz=26						
CABF	La Chapelle	4.97	185	*e*Pn	Pn	07 17 09.4	+0.1
CABF				*e*Sn	Sn	07 18 03.9	-3.6
CABF				*e*Sg	Sg	07 18 31.2	-1.8
	comp=E,0.8nm,0.4s						
SSF	Saint Saulge	4.98	207	*e*Pn	Pn	07 17 09.1	-0.2
SSF				*e*Sn	Sn	07 18 04.5	-3.1
	comp=E,0.7nm,0.2s						
SSF				*e*Sg	Sg	07 18 32.4	-0.9
	comp=E,1.7nm,0.3s						
AVF	Avril sur Loir	5.27	206	*e*Pn	Pn	07 17 13.0	-0.3
AVF	Avril sur Loir	5.27	206	*e*Pg	Pg	07 17 33.7	-0.6
AVF				*e*Sn	Sn	07 18 11.3	-3.4
AVF				*e*Sg	Sg	07 18 41.3	-1.3
	comp=E,0.5nm,0.3s						
SMF	Signal de Mont	5.28	202	*e*Pn	Pn	07 17 13.1	-0.4
SMF				*e*Sn	Sn	07 18 11.9	-3.1
SMF				*e*Sg	Sg	07 18 41.3	-1.6
	comp=E,1.5nm,0.3s						
LDF	La Druitiere	5.34	239	*e*Pn	Pn	07 17 13.8	-0.4
LDF				*e*Sn	Sn	07 18 13.0	-3.3
	comp=E,0.9nm,0.2s						
BGF	Bois d'Agland	5.63	209	*e*Pn	Pn	07 17 18.1	-0.1
BGF				*e*Sn	Sn	07 18 19.9	-3.7
	comp=E,10nm,0.4s						
GRR	Gorron	5.85	240	*e*Pn	Pn	07 17 21.2	-0.1
GRR				*e*Sn	Sn	07 18 25.7	-3.3
	comp=E,6.0nm,0.3s						
TCF	Toulx Ste Croi	6.07	211	*e*Pn	Pn	07 17 23.9	-0.4

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*IDC **02** 07:19:11.6±2.2, 16°.16S×72°.37W, h110km±22km, mb3.0/2, mb1 3.2/6, mb1mx3.0/27, mbtmp3.5/6, Error ellipse: s-maj=37.7km s-min=19.2km az=15.0*
*GUC **02** 07:19:14.4±0.8, 16°.56S×72°.19W, h160km±34km, ML3.6*
ISC 02 07:19:09.5±0.9, **16°.27S**±0°.07×**72°.51W**±0°.08, **h76**km, **n13**, σ**2s.00**/23, **1C-3D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	3.52	126⇓	*i*P	Pn	07 20 05.4	+3.0
PB16				*i* S	Sn	07 20 44.3	+1.1
PB16				IAML		07 20 47.3	
	comp=N,82nm,0.4s						
MNMC	Minye Minye	3.97	136⇓	*i*P	Pn	07 20 10.4	+2.1
MNMC				*i* S	Sn	07 20 53.5	-0.3
PSGC	Pisagua	4.01	146⇑	*i*P	Pn	07 20 10.8	+2.2
PSGC				*i* S	Sn	07 20 53.9	-0.6
LPAZ	La Paz	4.20	91	P	Pn	07 20 14.3	+2.6
	comp=N,1.7nm,0.3s,baz=272,slow=9.1,SNR=85						
LPAZ				S	Sn	07 21 00.3	+0.5
	comp=N,0.3nm,0.3s,baz=208,slow=15,SNR=3.7						
PB11	IPOC Station P	4.40	142⇓	*i*P	Pn	07 20 15.8	+1.8
PB11				*i* S	Sn	07 21 02.3	-1.9
GO01	Chusmiza	4.62	137	*e*P	Pn	07 20 19.6	+2.3
GO01				*i* S	Sn	07 21 09.8	-0.1
TA01	Diego Aracena	4.81	153	*e*P	Pn	07 20 21.6	+2.3
TA01				*i* S	Sn	07 21 11.6	-2.1
PB08	IPOC Station P	5.00	141	*e*P	Pn	07 20 24.4	+2.1
PB08				*i* S	Sn	07 21 17.5	-1.5
NNA	Nana	5.99	315	P	Pn	07 20 37.5	+2.0
	comp=N,0.8nm,0.3s,baz=125,slow=12,SNR=3.5						
NNA				S	Sn	07 21 42.6	-0.2
	comp=N,1.3nm,0.3s,baz=231,slow=18,SNR=3.7						
LVC	Limon Verde	7.16	152	P	Pn	07 20 54.4	+2.6
	comp=N,0.7nm,0.3s,baz=315,slow=11,SNR=23						
LVC				S	Sn	07 22 11.5	-0.4
	comp=N,5.4nm,0.3s,baz=247,slow=22,SNR=17						
SIV	San Ignacio	10.99	90	P	Pn	07 21 42.2	-1.7
	comp=N,0.1nm,0.3s,baz=293,slow=13,SNR=4.4						
TORD	Torodi Ar. Bea	78.94	73	P	P	07 31 02.5	-2.9
	comp=N,0.4nm,0.9s,baz=256,slow=5.8,SNR=2.6						
YKA	Yellowknife Ar	85.17	342	P	P	07 31 35.3	-1.6
	comp=N,0.1nm,0.6s,baz=139,slow=5.4,SNR=4.3						

MAN 02 07:47:22.5, 7°.31N×124°.72E, h38km, mb3.8, ML2.6, MS2.1, Mindanao

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*NIED **02** 07:48:00, 35°.30N×140°.60E, h26km, Mw4.3 Best double couple: Mo2.68000×10^15 NP1:φs50.00000°, δ77.00000°, λ93.00000°. NP2:φs214.00000°, δ13.00000°, λ75.00000°.*
*BJI **02** 07:48:27.9±0.0, 35°.22N×140°.35E, h28km, mB4.9/20, mb4.4/27, Ms4.2/7, Ms7 4.0/6*
*MOS **02** 07:48:27.9±1.2, 35°.18N×140°.46E, h32km, mb4.5/25, Error ellipse: s-maj=11.1km s-min=6.2km az=106.3*
*JMA **02** 07:48:28.7±0.1, 35°.35N×140°.56E, h23km±2km, M3.9 Broadband fault plane solution: P waves. NP1: φs256.00000°, δ31.00000°, λ123.00000°. NP2: φs40.00000°, δ65.00000°, λ72.00000°. Principal axes: T Plg66.0000°, Azm278.0000°; N Plg16.0000°, Azm48.0000°; P Plg18.0000°, Azm143.0000°;*
JMA Felt II J1.
*NEIC **02** 07:48:30.0±1.6, 35°.25N±0°.04×140°.48E±0°.08, h35km±1km, mb4.5/37 Error ellipse: s-maj=10.3km s-min=5.7km az=72.0*
*IDC **02** 07:48:30.6±2.4, 35°.19N×140°.52E, h38km±21km, mb3.9/17, mb1 4.1/22, mb1mx4.0/43, mbtmp4.1/22, ML3.5/3, MS3.6/14, Ms1 3.6/14, ms1mx3.4/38, Error ellipse: s-maj=17.2km s-min=13.5km az=94.0*
ISC 02 07:48:29.2±0.8, **35°.31N**±0°.03×**140°.52E**±0°.04, **h26**km±5km, **n150**, σ**1s.38**/153, **mb4.3**/53, **MS3.8**/16, **19C-10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTR	Katsuura	0.23	225	⇑P	Pb	07 48 35.1	-0.3
KTR				S	Sb	07 48 39.9	+0.4
JCN	Nagara	0.28	292	⇓P	Pb	07 48 35.3	-0.7
JKUC	kamogawauchiur	0.30	239	P	Pb	07 48 36.0	-0.3
JKUC				*e*S	Sb	07 48 41.2	+0.1
JSMT	Sammumatsuo	0.33	351	⇓P	Pb	07 48 36.1	-0.7
BSO4	Boso 4	0.35	204	⇑P	Pb	07 48 37.5	+0.5
CHOJ	Chosi	0.48	36	P	Pb	07 48 37.5	-1.6
CHOJ				S	Sb	07 48 44.0	-1.9
BSO3	Boso 3	0.51	180	⇓P	Pb	07 48 39.7	+0.2
TOK	Tokyo	0.72	301	⇓P	Pn	07 48 42.9	-0.8
BSO1	Boso 1	0.76	150	⇓P	Pn	07 48 42.2	-1.5
JYT	Yasato	0.95	344	⇓P	Pn	07 48 45.0	-1.8
MJAR	Matsushiro Arr	2.24	304	Pn	Pn	07 49 04.7	+0.1
	1.8nm,0.3s,baz=136,slow=10.0,SNR=72						
MJAR				Sn	Sb	07 49 35.4	-0.9
	4.2nm,0.3s,baz=190,slow=20,SNR=6.5						
MJAR	Matsushiro Arr	2.24	304		Pn	07 49 04.2	-0.4
MJAR				Sn	Sn	07 49 29.7	-1.7
MAJO	Matsushiro	2.24	304*c*	*i*P	Pn	07 49 04.6	0.0
MAJO	Matsushiro	2.24	304		Pn	07 49 04.8	+0.2
MAJO				Sn	Sn	07 49 29.9	-1.5
MAT	Matsushiro	2.24	304	P	Pn	07 49 04.8	+0.2
MAT				S	Sb	07 49 32.9	-3.4
MJB9	Matsu-Tunnel	2.24	304		Pn	07 49 05.3	+0.6
MJB9				Sn	Sn	07 49 29.9	-1.6
JHJ2	Mitsune	2.27	195		Pn	07 49 04.5	-0.5
JHJ2				Sn	Sn	07 49 29.2	-3.0
INU	Inuyama	2.86	272		Pn	07 49 13.6	+0.5
ERM	Erimo	7.00	16⇑	*e*P	Pn	07 50 11.9	+1.9
ERM	Erimo	7.00	16	Pn	Pn	07 50 10.7	+0.7
JNU	Nakatsue	8.28	257	LR	LR	07 53 49.1	
	comp=Z,120nm,19.6s,baz=110,slow=39						
JCJ	Chichijima	8.31	170	Pn	Pn	07 50 26.5	-1.6
	22nm,0.3s,baz=278,slow=20,SNR=6.1						
JCJ				Sn	Sn	07 51 59.7	-1.5
	7.0nm,0.3s,baz=294,slow=19,SNR=2.8						
ASAJ	Asahikawa	8.94	10	Pn	Pn	07 50 37.4	+0.8
	1.8nm,0.3s,baz=198,slow=13,SNR=6.5						
JKA	Kamikawa-asahi	8.94	10		Pn	07 50 37.4	+0.8
KSRS	Korea Array	10.38	286	Pn	Pn	07 50 59.2	+2.9
	0.1nm,0.3s,baz=97,slow=14,SNR=6.2						
KSRS				LR	LR	07 55 01.9	
	comp=Z,341nm,20.1s,baz=81,slow=38						
USRK	Ussuriysk Ar.	11.03	326	Pn	Pn	07 51 08.8	+3.5
	baz=142,slow=14,SNR=3.6						
USRK				LR	LR	07 55 03.2	
	comp=Z,233nm,20.9s,baz=122,slow=35						
USRK	Ussuriysk Ar.	11.03	326		Pn	07 51 04.7	-0.5
YSS	Yuzh-Sakhalins	11.75	8⇑	*e*P	Pn	07 51 17.2	+2.2
NJ2	Nanjing	18.31	266	*e*P	Pn	07 52 39.2	-2.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA	Zeya	20.64	337	*e*P	Pn	07 53 08.2	-0.8
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
PETK	Petropavlovsk-	21.54	29	P	P	07 53 17.2	+0.9
	comp=Z,3.9nm,0.8s,baz=221,slow=10,SNR=2.7						
PETK				LR	LR	08 02 33.2	
	comp=Z,65nm,18.6s,baz=242,slow=39						
HHC	Hu-ho-hao-te	23.39	292	*e*P	P	07 53 34.7	-1.3
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MA2	Magadan	25.19	12	P	P	07 53 52.8	+0.5
MA2				pmax	pmax		
	comp=Z,33nm,1.3s						
MA2	Magadan	25.19	12	P	P	07 53 52.5	+0.3
	comp=Z,8.5nm,0.7s,baz=199,slow=12,SNR=3.8						
MA2				LR	LR	08 04 11.6	
	comp=Z,75nm,18.2s,baz=224,slow=37						
MA2	Magadan	25.19	12	P	P	07 53 52.8	+0.5
YAK	Yakutsk	27.60	349⇑	*e*P	P	07 54 15.4	+1.4
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
ULN	Ulaanbaatar	27.77	307⇓	*e*P	P	07 54 15.4	-0.5
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
H11N2	WAKE ISLAND Hy	27.96	117	T	T	08 23 35.9	
	baz=309,slow=75,SNR=384						
H11N1	WAKE ISLAND Hy	27.96	117	T	T	08 23 36.5	
	baz=309,slow=75,SNR=318						
H11N3	WAKE ISLAND Hy	27.98	117	T	T	08 23 37.4	
	baz=309,slow=75,SNR=306						
SONM	Songino Array	28.19	307	P	P	07 54 21.8	+2.2
	comp=Z,0.6nm,0.6s,baz=94,slow=7.9,SNR=5.9						
SONM				LR	LR	08 06 03.7	
	comp=Z,176nm,19.2s,baz=160,slow=37						
SONM	Songino Array	28.19	307	P	P	07 54 16.4	-3.3
H11S3	WAKE ISLAND Hy	28.60	119	T	T	08 24 17.3	
	baz=312,slow=75,SNR=252						
H11S1	WAKE ISLAND Hy	28.60	119	T	T	08 24 15.4	
	baz=312,slow=75,SNR=363						
H11S2	WAKE ISLAND Hy	28.61	119	T	T	08 24 24.7	
	baz=312,slow=75,SNR=222						
SEY	Seymchan	28.62	11⇑	*e*P	P	07 54 25.4	+2.3
SEY	Seymchan	28.62	11	P	P	07 54 25.6	+2.5
	comp=Z,1.8nm,0.7s,baz=195,slow=8.5,SNR=5.2						
LZH	Lanzhou	29.68	282	*e*P	P	07 54 33.4	+0.3
LZH				pP	sP	07 54 44.8	+0.8
LZH				sP	pP	07 54 49.7	+8.9
LZH				PP	PnPn	07 55 31.8	+3.3
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,61nm,5.4s						
LZH				LR	LR		
	comp=Z,220nm,12.1s						
LZH				LR	LR		
	comp=Z,150nm,11.8s						
LZH				LR	LR		
	comp=Z,260nm,12.3s						
TLY	Talaya	30.95	313	*e*P	P	07 54 48.8	+4.9
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,290nm,14.0s						
TLY	Talaya	30.95	313	P	P	07 54 43.4	-0.5
CD2	Chengdu	30.98	272	P	P	07 54 42.4	-2.1
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
GTA	Gaotai	32.41	290	*e*P	P	07 54 58.6	+1.5
GTA				pP	pP	07 55 03.8	-1.0
GTA				sP	sP	07 55 07.1	-0.9
BILL	Bilibino	35.88	16⇓	*e*P	P	07 55 29.0	+2.4
BILL				pmax	pmax		
	comp=Z,11nm,2.5s						
BILL				MLR	MLR		
	comp=Z,80nm,15.0s						
TIXI	Tiksi	36.91	354⇑	*e*P	P	07 55 35.3	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TIXI	Tiksi	36.91	354	P	P	07 55 35.2	-0.1
TIXI				IAmb	IAmb	07 55 42.8	
	comp=Z,7.5nm,1.4s						
CMAR	Chiang Mai Arr	40.37	256	LR	LR	08 14 52.0	
	comp=Z,66nm,18.2s,baz=144,slow=39						
WMQ	Urumqi	40.99	298	*e*P	P	07 56 10.5	+0.5
WMQ				sP	sP	07 56 27.0	+6.0
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,65nm,4.3s						
WMQ				LR	LR		
	comp=Z,860nm,28.8s						
WMQ				LR	LR		
	comp=Z,2μm,29.2s						
ZALV	Zalesovo Beam	42.56	314	LR	LR	08 14 15.3	
	comp=Z,46nm,19.0s,baz=71,slow=36						
ANM	Nome	43.44	31	P	P	07 56 31.6	+2.0
ANM				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ANM	Nome	43.44	31	P	P	07 56 31.6	+2.0
MK31	Makanchi Array	44.44	303	P	P	07 56 36.9	-0.9
MK31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK31	Makanchi Array	44.44	303	P	P	07 56 36.9	-0.9
MKAR	Makanchi Array	44.44	303	P	P	07 56 38.0	+0.1
MKAR	Makanchi Array	44.44	303	P	P	07 56 38.0	+0.1
	comp=Z,1.9nm,0.8s,baz=89,slow=9.8,SNR=18						
MKAR				LR	LR	08 15 57.9	
	comp=Z,106nm,19.5s,baz=66,slow=37						
MKAR	Makanchi Array	44.44	303	P	P	07 56 37.8	0.0
MAKZ	Makanchi	44.65	304	P	P	07 56 38.9	-0.6
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MAKZ	Makanchi	44.65	304	P	P	07 56 38.9	-0.6
MAKZ				IAmb	IAmb	07 56 42.9	
	comp=Z,7.3nm,1.4s						
KURK	Kurchatov	46.44	309*c*	*i*P	P	07 56 52.5	-1.1
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KURK	Kurchatov	46.44	309	P	P	07 56 52.3	-1.3
IMAR	Indian Mountai	48.50	30	P	P	07 57 10.4	+1.0
TARG	Taragay, Kyrgy	48.53	297	P	P	07 57 10.2	-0.3
TARG				IAmb	IAmb	07 57 27.4	
	comp=Z,5.7nm,0.8s						
MTN	Manton Dam	48.71	192	P	P	07 57 10.4	-1.1
PPLA	Purkeypile	48.99	34	P	P	07 57 13.2	-0.2
COEN	Coen	49.06	177	P	P	07 57 12.7	-1.5
MLY	Manley	49.69	31	P	P	07 57 19.3	+0.7
MLY				IAmb	IAmb	07 57 21.1	
	comp=Z,9.3nm,1.4s						
KSH	Kashi	50.46	295	P	P	07 57 28.1	+3.2
KSH				pP	sP	07 57 38.4	+2.4
KSH				PP	PP	07 59 24.2	+3.7
KSH				S	S	08 04 39.3	+2.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH				sS	sS	08 04 55.6	+5.3
KSH				SS	SS	08 08 08.4	-2.5
KSH				pmax	pmax		
	comp=Z,200nm,5.5s						
KSH				LR	LR		
	comp=Z,240nm,6.3s						
KSH				LR	LR		
	comp=Z,360nm,5.2s						
KSH				LR	LR		
	comp=Z,470nm,6.8s						
AAK	Ala-Archa	50.68	299	⇑eP	P	07 57 25.9	-0.7
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WRH	Wood River Hil	50.83	32	P	P	07 57 29.8	+2.7
COLA	College	50.92	31	⇑eP	P	07 57 30.2	+2.4
COLA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DHY	Denali Highway	51.19	34	P	P	07 57 29.8	-0.3
DHY				IAmb	IAmb	07 57 40.8	
	comp=Z,4.1nm,1.1s						
BRVK	Borovoye	51.26	313	⇑eP	P	07 57 32.1	+1.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BRVK	Borovoye	51.26	313	P	P	07 57 30.3	-0.3
BRVK				IAmb	IAmb	07 57 39.7	
	comp=Z,6.5nm,1.4s						
IL31		51.34	32	P	P	07 57 31.9	+1.1
IL31				IAmb	IAmb	07 57 34.3	
	comp=Z,6.6nm,0.9s						
ILAR	Eielson Array	51.34	32	P	P	07 57 31.5	+0.6
ILAR	Eielson Array	51.34	32	P	P	07 57 31.3	+0.3
	comp=Z,2.3nm,0.7s,baz=269,slow=6.3,SNR=24						
ILAR	Eielson Array	51.34	32	P	P	07 57 31.5	+0.6
KNRA	Kununurra	51.92	194	P	P	07 57 34.9	-0.9
ARSB	Arslanbob	52.12	298	P	P	07 57 35.2	-2.2
ARSB				IAmb	IAmb	07 57 49.5	
	comp=Z,4.5nm,0.9s						
BMAR	Burnt Mountain	52.19	28	P	P	07 57 38.7	+1.3
SCRK	Sand Creek	52.64	32	P	P	07 57 41.8	+1.0
SCRK				IAmb	IAmb	07 57 57.1	
	comp=Z,8.4nm,1.3s						
KK31	Karatay Array	53.37	301	P	P	07 57 46.5	+0.1
KK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KK31	Karatay Array	53.37	301	P	P	07 57 46.5	+0.1
KK31				IAmb	IAmb	07 58 02.1	
	comp=Z,2.3nm,0.9s						
KKAR	Karatay Array	53.37	301	P	P	07 57 46.3	-0.1
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KKAR	Karatay Array	53.37	301	P	P	07 57 45.1	-1.3
KKAR	Karatay Array	53.37	301	P	P	07 57 46.3	-0.1
KKAR				IAmb	IAmb	07 58 02.1	
	comp=Z,2.3nm,0.9s						
BCAR	Beaver Creek A	53.73	33	P	P	07 57 49.4	+0.6
EGAK	Eagle	53.78	31	P	P	07 57 51.0	+2.0
EGAK				IAmb	IAmb	07 58 06.1	
	comp=Z,3.4nm,1.2s						
WRAB	Tennant Creek	55.25	187	⇑eP	P	07 57 58.7	-1.5
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRAB	Tennant Creek	55.25	187	P	P	07 57 59.1	-1.1
WR0	Warramunga Arr	55.26	187	P	P	07 57 59.3	-1.0
WR0				IAmb	IAmb	07 58 01.8	
	comp=Z,8.5nm,1.1s						
WRA	Warramunga Arr	55.26	187	P	P	07 57 59.4	-0.9
WRA	Warramunga Arr	55.26	187	P	P	07 57 58.8	-1.4
	comp=Z,2.9nm,0.6s,baz=3.5,slow=7.6,SNR=33						
WRA	Warramunga Arr	55.26	187	P	P	07 57 59.4	-0.9
CHGR	Chuyangaron	55.76	296	P	P	07 58 02.4	-1.5
INK	Inuvik	56.25	26	P	P	07 58 07.9	+1.1
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
INK	Inuvik	56.25	26	P	P	07 58 06.8	0.0
	comp=Z,1.2nm,0.6s,baz=308,slow=7.4,SNR=9.9						
INK	Inuvik	56.25	26	P	P	07 58 07.9	+1.1
ARU	Arti	57.17	319	c iP	P	07 58 12.3	-1.3
ARU						08 00 16.0	
ARU				S	S	08 06 08.1	+0.9
ARU				SS	SS	08 09 52.3	-3.5
ARU				pmax	pmax		
	comp=Z,12nm,1.6s						
ARU	Arti	57.17	319	P	P	07 58 13.3	-0.3
ARU				IAmb	IAmb	07 58 17.8	
	comp=Z,6.6nm,1.0s						
ABKAR	Akbulak array	58.50	311	P	P	07 58 22.1	-0.9
ABKAR	Akbulak array	58.50	311	P	P	07 58 22.0	-1.0
ABKAR				IAmb	IAmb	07 58 32.3	
	comp=Z,2.5nm,0.7s						
AS31	Alice Springs	58.99	187	P	P	07 58 25.5	-1.1
AS31				IAmb	IAmb	07 58 39.2	
	comp=Z,4.1nm,1.5s						
ASAR	Alice Springs	58.99	187	P	P	07 58 25.5	-1.1
	comp=Z,1.2nm,0.7s,baz=16,slow=12,SNR=12						
ASAR	Alice Springs	58.99	187	P	P	07 58 24.9	-1.7
C36M	Paulatuk	59.29	24	P	P	07 58 29.3	+1.1
C36M				IAmb	IAmb	07 58 47.0	
	comp=Z,2.2nm,0.8s						
PSAD1	Pilbara Seismi	59.77	202	P	P	07 58 30.9	-1.1
PSAD2	Pilbara Seismi	59.88	202	P	P	07 58 32.0	-0.7
GEYT	Alibeck	64.04	299	LR	LR	08 28 46.1	
	comp=Z,58nm,19.1s,baz=280,slow=38						
YKA	Yellowknife Ar	65.66	30	P	P	07 59 10.9	+0.2
	comp=Z,0.6nm,0.7s,baz=302,slow=6.5,SNR=12						
OBN	Obninsk	69.04	323	⇑eP	P	07 59 32.1	-0.2
OBN				pmax	pmax		
	comp=Z,25nm,2.5s						
OBN				MLR	MLR		
	comp=Z,91nm,16.0s						
FINES	FINESS Array B	70.00	332	P	P	07 59 39.0	+0.9
FINES	FINESS Array B	70.00	332	P	P	07 59 39.0	+0.9
	comp=Z,2.5nm,0.8s,baz=69,slow=7.6,SNR=4.5						
FINES	FINESS Array B	70.00	332	P	P	07 59 38.3	+0.2
KBZ	Khabaz	71.47	311	P	P	07 59 47.7	+0.3
	comp=Z,1.8nm,0.8s,baz=82,slow=5.6,SNR=5.3						
KBZ				LR	LR	08 35 35.5	
	comp=Z,50nm,19.2s,baz=112,slow=40						
KIV	Kislovodsk	71.48	311	i P	P	07 59 47.4	-0.2
KIV				i		07 59 57.8	
KIV				i		08 00 05.7	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PINE	Pine Mountain	72.01	49	P	P	07 59 51.6	+0.6
PINE				IAmb	IAmb	07 59 55.9	
	comp=Z,5.1nm,0.8s						
BEKR	Beckworth	74.48	52	P	P	08 00 05.2	-0.4
AKASG	Malin Array Be	75.21	322	c eP	P	08 00 08.6	-0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	75.21	322	P	P	08 00 08.2	-1.1
	comp=Z,2.0nm,0.6s,baz=48,slow=6.2,SNR=9.6						
AKASG				LR	LR	08 36 02.0	
	comp=Z,64nm,19.4s,baz=280,slow=38						
AKASG	Malin Array Be	75.21	322	P	P	08 00 09.2	-0.1
AKBB	Malin Array Si	75.21	322	⇓eP	P	08 00 07.9	-1.4
AKBB	Malin Array Si	75.21	322	P	P	08 00 08.9	-0.4
AKBB				IAmb	IAmb	08 00 11.9	
	comp=Z,3.5nm,0.8s						
NB2	NORSAR Subarra	75.49	337	P	P	08 00 10.2	-0.6
	comp=Z,3.8nm,1.0s,baz=41,slow=6.2						
NOA	NORSAR Array B	75.49	337	P	P	08 00 09.7	-1.2
	comp=Z,2.1nm,0.9s,baz=39,slow=5.8,SNR=5.0						
NOA				LR	LR	08 36 54.9	
	comp=Z,52nm,18.4s,baz=35,slow=38						
NVAR	Mina Array Bea	76.61	52	P	P	08 00 18.6	+0.8
	comp=Z,1.1nm,0.7s,baz=290,slow=5.2,SNR=11						
NVAR	Mina Array Bea	76.61	52	P	P	08 00 17.7	-0.1
KONO	Kongsberg	77.07	337	⇓eP	P	08 00 18.5	-1.2
KONO				pmax	pmax		
	comp=Z,46nm,1.3s						
BW06	Boulder Array	79.39	45	P	P	08 00 32.2	-1.0
PDAR	Pinedale Array	79.39	45	P	P	08 00 33.9	+0.6
	comp=Z,0.6nm,0.6s,baz=270,slow=0.7,SNR=6.9						
BRTR	Keskin Array B	79.44	311	c eP	P	08 00 34.4	+0.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	Keskin Array B	79.44	311	P	P	08 00 34.2	+0.8
	comp=Z,1.2nm,0.8s,baz=128,slow=5.0,SNR=6.6						
PFO	Pinyon Flats O	80.61	55	⇑eP	P	08 00 41.0	+1.2
PFO				pmax	pmax		
	comp=Z,36nm,4.0s						
VYHS	Vyhne	81.72	325	eP	P	08 00 45.9	+0.6
VYHS	Vyhne	81.72	325	eP	P	08 00 45.9	+0.6
CLL	Collm	82.22	330	eP	P	08 00 48.0	+0.1
CLL	Collm	82.22	330	eP	P	08 00 48.0	+0.1
EIL	Elat	84.70	303	LR	LR	08 44 29.9	
	comp=Z,29nm,18.3s,baz=114,slow=40						
ANMO	Albuquerque	86.25	49	⇑eP	P	08 01 10.7	+1.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LPAZ	La Paz	148.18	61	PKPbc	PKPbc	08 08 14.1	+0.1
	comp=Z,0.9nm,0.6s,baz=332,slow=5.7,SNR=4.7						
SIV	San Ignacio	152.74	51	PKPbc	PKPbc	08 08 23.8	-0.4
	comp=Z,0.4nm,0.4s,baz=297,slow=4.5,SNR=5.8						

IDC 02 08:15:13.6±10.0, 22°.08S×176°.62W, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.6/20, mbtmp3.4/3, Error ellipse: s-maj=458.9km s-min=38.2km az=146.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	45.43	258	P	P	08 23 34.9	+0.3
	0.3nm,0.5s,baz=90,slow=8.1,SNR=6.9						
WRA	Warramunga Arr	45.67	263	P	P	08 23 36.1	-0.4
	0.5nm,0.9s,baz=96,slow=7.6,SNR=3.9						
ILAR	Eielson Array	89.56	12	P	P	08 28 13.5	+1.1
	0.1nm,0.3s,baz=226,slow=5.8,SNR=4.7						
AKASG	Malin Array Be	145.01	331	PKPbc	PKPbc	08 34 49.7	-2.3
	0.6nm,0.3s,baz=40,slow=3.8,SNR=4.8						

RHSSO 02 08:37:24.0±0.5, 43°.88N×16°.63E, h4km±3km, ML2.2/7
ISC 02 08:37:22.7±0.9, 43°.88N±0°.02×16°.56E±0°.02, h11km±8km, n25, σ0ˢ71/43, 1C-1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KIJV	Kijevo	0.17	317	i Pg	Pg	08 37 26.5	0.0
KIJV				Sg	Sg	08 37 29.4	+0.3
MORI	Morici	0.62	269	ePg	Pg	08 37 34.4	-0.4
MORI				Sg	Sg	08 37 44.2	+1.3
MGRS	Mrkonjic Grad	0.65	35	⇑iPg	Pg	08 37 35.4	0.0
MGRS				eSg	Sg	08 37 44.2	+0.2
MAKA	Makarska	0.68	151	i Pg	Pg	08 37 34.9	-1.0
MAKA				Sg	Sb	08 37 45.8	-0.1
ZIRJ	Zirje	0.70	251	i Pg	Pg	08 37 35.7	-0.6
ZIRJ				Sg	Sg	08 37 46.3	+0.7
HVAR	Hvar	0.71	187	ePg	Pg	08 37 35.5	-0.9
HVAR				Sg	Sb	08 37 47.2	+0.4
UDBI	Udbina	0.86	319	ePg	Pg	08 37 38.5	-0.9
UDBI				Sg	Sg	08 37 50.8	+0.1
BLY	Banja Luka	0.97	27	⇓iPg	Pg	08 37 40.7	-0.8
BLY				eSg	Sb	08 37 54.5	+0.1
DUGI	Dugi Otok	1.09	276	ePg	Pb	08 37 43.3	-0.2
DUGI				Sg	Sn	08 37 59.3	+0.3
STON	Ston	1.31	140	ePg	Pg	08 37 47.8	0.0
STON				Sg	Sg	08 38 05.4	+0.7
STON	Ston	1.31	140	ePg	Pn	08 37 46.3	-0.5
STON				eSg	Sg	08 38 05.1	+0.4
NVLJ	Novalja	1.40	300	ePn	Pn	08 37 48.1	+0.1
NVLJ				Sn	Sg	08 38 08.2	+0.7
DBRK	Dubrovnik	1.68	136	i Pn	Pb	08 37 53.7	+0.2
DBRK				Sn	Sg	08 38 16.1	-0.4
HAPS	Han Pijesak,BI	1.73	82	ePn	Pb	08 37 54.3	-0.3
HAPS				eSn	Sb	08 38 16.3	-0.1
MOSL	Moslavina	1.74	4	ePn	Pn	08 37 52.7	-0.1
BRY	Bratogost	1.74	124	ePn	Pb	08 37 54.1	-0.6
TREB	Trebinje	1.75	131	ePn	Pb	08 37 54.2	-0.5
TREB				eSn	Sb	08 38 17.6	+0.9
OZLJ	Ozalj	1.90	336	ePn	Pn	08 37 55.7	+0.7
HCY	Herceg Novi	2.01	135	ePn	Pb	08 37 58.4	-0.9
RUDO	Rudo	2.05	96	ePn	Pb	08 37 58.7	-1.2
BBLS	Lazići	2.06	89	ePn	Pn	08 37 58.7	+1.5
RIY	Rijeka	2.07	315	ePn	Pb	08 38 00.1	-0.2
RIY				eSn	Sb	08 38 26.6	+0.6
CRES	Cresnjev	2.10	338	ePn	Pb	08 38 00.0	-0.7
CRES				eSn	Sb	08 38 26.6	-0.1
CEY	Cerknica	2.40	321	ePn	Pb	08 38 04.7	-1.2
CEY				eSn	Sb	08 38 34.7	-0.8
DIVS	Divibare	2.48	84	ePn	Pn	08 38 04.6	+1.5

SKO 02 08:37:26.8, 41°.02N×20°.00E, h11km
PDG 02 08:37:27.5±0.4, 41°.15N×19°.99E, h9km, ML2.6/13, Error ellipse: s-maj=0.7km s-min=1.3km az=0.0
TIR 02 08:37:25.6, 41°.10N×20°.06E, h4km, Md2.5/7, 1C, Albania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TIR	Tirane	0.29	329	i PG	Pb	08 37 32.7	-0.7
TIR				i SG	Sb	08 37 36.9	-1.7
OHR	Ohrid	0.56	89	i Pg	Pb	08 37 38.1	+0.1
OHR				i Sg	Sb	08 37 47.5	+1.1
OHR				eLg	Lg	08 37 47.7	
	comp=N,79nm,0.3s						
OHR				eLg	Lg	08 37 48.3	
	comp=E,124nm,0.4s						
PHP	Peshkopia	0.65	26	i PG	Pb	08 37 39.0	-0.6
PHP				i SG	Sb	08 37 48.7	-0.3
TPE	Tepelena	0.81	183	i PG	Pb	08 37 41.7	-0.5
TPE				i SG	Sb	08 37 54.0	+0.6
PUK	Puka	0.95	352	i PG	Pb	08 37 44.5	-0.3
PUK				i SG	Sb	08 37 57.8	0.0
FNA	Florina	1.05	107	i PG	Pn	08 37 47.7	+0.5
FNA				i SG	Sn	08 38 02.3	+0.1
ULC	Ulcinj	1.06	325	ePg	Pg	08 37 45.8	-0.1
ULC				eSg	Sn	08 38 01.8	-0.7
SRN	Sarande	1.22	182	i PG	Pn	08 37 49.8	+0.3
SRN				i SG	Sn	08 38 07.7	+1.3
BCI	Bajram Curri	1.27	0	i PG	Pn	08 37 50.8	+0.6
BCI				i SG	Sn	08 38 09.6	+2.0
DRME	Dracevica, Mon	1.27	329	ePg	Pg	08 37 49.9	-0.1
DRME				eSg	Sn	08 38 09.1	+1.5
SKO	Skopje	1.35	49	i Pg	Pg	08 37 52.5	+0.9
SKO				i Sg	Sn	08 38 12.7	+2.9
SKO				eLg	Lg	08 38 13.5	
	comp=E,7.8nm,0.7s						
SKO				eLg	Lg	08 38 13.8	
	comp=N,8.9nm,0.4s						
TTG	Podgorica	1.46	336	ePg	Pb	08 37 53.1	-0.2
TTG				eSg	Sg	08 38 15.3	+2.8
BUM	Brajici-Budva	1.48	324	ePg	Pb	08 37 53.5	-0.3
BUM				eSg	Sg	08 38 15.9	+2.6
PVY	Plav	1.50	357	ePg	Pb	08 37 53.9	-0.1
PVY				eSg	Sg	08 38 17.1	+3.4
CEME	Cevo	1.68	330	ePn	Pn	08 37 56.2	+0.3
CEME				eSn	Sg	08 38 20.5	+0.9
STIP	Stip	1.71	69	i Pn	Pg	08 37 59.6	+1.3
IVA	Berane	1.77	356	ePn	Pb	08 37 58.5	-0.3
IVA				eSn	Sg	08 38 23.7	+1.0
HCY	Herceg Novi	1.79	319	ePn	Pn	08 37 57.5	+0.3
HCY				eSn	Sg	08 38 23.1	+0.1
HCY	Herceg Novi	1.79	319	eSn	Sg	08 38 23.3	+0.3
KOME	Kolasin	1.80	347	ePn	Pb	08 37 59.2	+0.1
KOME				eSn	Sg	08 38 24.1	+0.8
NKME	Niksic	1.86	334	ePn	Pb	08 38 00.1	-0.1
NKME				eSn	Sg	08 38 24.9	-0.5
NKY	Niksic	1.89	335	ePn	Pb	08 38 00.0	-0.7
NKY				eSn	Sg	08 38 26.3	0.0
BRY	Bratogost	2.13	328	⇑iPn	Pb	08 38 03.6	-1.2
BRY				eSn	Sb	08 38 31.4	-0.2
UPM	Unac-Piva	2.27	338	ePn	Pb	08 38 05.8	-1.5
UPM				eSn	Sb	08 38 34.8	-1.0
PLE	Pljevlja	2.28	348	ePn	Pb	08 38 06.1	-1.4
PLE				eSn	Sb	08 38 35.9	-0.2

MAN 02 08:56:56.5, 6°.71N×125°.57E, h237km, mb4.9, ML3.9, MS3.9, Mindanao

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IDC 02 08:59:29.8±0.9, 27°.19N×54°.37E, h0km, mb3.8/16, mb1 3.9/18, mb1mx3.8/38, mbtmp3.8/18, ML4.2/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/45, Error ellipse: s-maj=22.1km s-min=16.2km az=177.0
TEH 02 08:59:33.6, 27°.13N×54°.46E, h20km, ML3.8
DSN 02 08:59:34.3±1.8, 27°.19N×54°.67E, h10km, ML3.9/8, Error ellipse: s-maj=23.0km s-min=9.1km az=10.0
NEIC 02 08:59:35.2±1.9, 27°.10N±0°.06×54°.47E±0°.04, h40km±9km, Error ellipse: s-maj=9.7km s-min=4.3km az=193.0
OMAN 02 08:59:40.4±3.5, 26°.66N×54°.64E, h101km±90km, ml3.6/2, Error ellipse: s-maj=40.3km s-min=22.2km az=49.0
ISC 02 08:59:32.1±0.4, 27°.06N±0°.03×54°.44E±0°.04, h18km, n100, σ1ˢ55/109, mb3.9/21, Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	1.17	284	ePg	Pg	08 59 56.1	+1.4
LMD1				e		09 00 25.5	
LMD1	Lamerd	1.17	284		Pg	08 59 55.7	+1.0
LMD1					Sg	09 00 12.8	+2.8
GENO	Geno	1.58	77	ePn	Pb	09 00 01.2	+0.2
GENO				e		09 00 32.6	
GENO	Geno	1.58	77		Pn	08 59 59.3	-0.2
JHRM	Jahrom	1.63	332	e		09 00 03.6	
JHRM				ePn	Pb	09 00 01.9	+0.1
SHME	Shamm	1.83	123	eP	Pn	09 00 04.0	+1.4
	SNR=6.9						
SHME				S	Sb	09 00 27.7	+0.1
SHME	Shamm	1.83	123	ePn	Pn	09 00 04.1	+1.4
UMQ	Umm Al-Quwin	1.88	144	ePn	Pb	09 00 07.7	+1.8
BANOM	Banah	2.02	124	eP	Pn	09 00 07.0	+1.7
	SNR=12						
BANOM	Banah	2.02	124	P	Pn	09 00 07.0	+1.7
	SNR=12						
NIAN	Nian	2.19	76	ePn	Pb	09 00 10.1	-1.2
NIAN				e		09 00 51.3	
NIAN	Nian	2.19	76	Pn	Pb	09 00 10.9	-0.4
MSFE	Esma-Masafi	2.29	137	P	Pb	09 00 12.5	-0.5
MSFE	Esma-Masafi	2.29	137	ePn	Pb	09 00 12.2	-0.8
NAZ	Nazwa, Dubai	2.34	152	P	Pb	09 00 13.8	+0.1
NAZ	Nazwa, Dubai	2.34	152	ePn	Pb	09 00 13.7	0.0
MDH	Madha	2.42	136	P	Pn	09 00 13.5	+2.7
MDH	Madha	2.42	136	ePn	Pn	09 00 13.7	+2.9
FAQ	Al Faqa, Dubai	2.53	155	ePn	Pb	09 00 16.6	-0.4
ASUD	Al Ashush, Dub	2.55	161	eP	Pb	09 00 17.0	-0.4
	SNR=38						
ASUD	Al Ashush, Dub	2.55	161	ePn	Pb	09 00 17.0	-0.4
ASUD	Al Ashush, Dub	2.55	161	P	Pb	09 00 17.0	-0.4
	SNR=38						
UOSS	Minazif	2.64	142	P	Pn	09 00 16.4	+2.6
UOSS	Minazif	2.64	142	ePn	Pn	09 00 16.7	+2.9
UOSS	Minazif	2.64	142	Pn	Pn	09 00 16.1	+2.3
UOSS				Sn	Sn	09 00 47.0	+1.7
HATD	Hatta, Dubai	2.70	145	P	Pn	09 00 18.1	+3.5
HATD	Hatta, Dubai	2.70	145	ePn	Pb	09 00 19.3	-0.6
ASHO	Ashiyiah	2.78	148	P	Pb	09 00 19.9	-1.4
ASHO	Ashiyiah	2.78	148	ePn	Pn	09 00 18.6	+2.8
KHNJ	Kahnooj	3.04	72	ePn	Pn	09 00 19.7	+0.4
ALNE	Al Ain	3.21	158	P	Pn	09 00 24.7	+2.9
ALNE	Al Ain	3.21	158	ePn	Pn	09 00 25.2	+3.4
NGRK	Negar Kerman	3.28	38	ePn	Pn	09 00 24.0	+1.1
NGRK				e		09 01 24.8	
NGRK	Negar Kerman	3.28	38	Pn	Pn	09 00 23.3	+0.4
TVBK	TV Kerman	3.56	34	ePn	Pn	09 00 28.3	+1.4
TVBK				e		09 01 36.8	
KHGB	Koh Gabri	3.76	28	ePn	Pn	09 00 30.9	+1.4
KHGB				e		09 01 18.8	
KHGB	Koh Gabri	3.76	28	Pn	Pn	09 00 30.8	+1.3
CHMN	Cheshme madani	3.91	44	ePn	Pn	09 00 33.7	+2.1
CHMN				e		09 00 38.5	
CHMN	Cheshme madani	3.91	44	Pn	Pn	09 00 33.1	+1.5
IMEH	Mehriz	4.32	2	ePn	Pn	09 00 39.2	+2.0
IBAF	Bafgh	4.62	12	ePn	Pn	09 00 42.4	+1.1
ISAD	Sadrabad	4.88	352	ePn	Pn	09 00 46.3	+1.3
IRAM	Ramesheh	5.06	340	ePn	Pn	09 00 48.9	+1.5
WSAR	Wadi Sarin	5.38	134	Pn	Pn	09 00 54.1	+2.6
	4.0nm,0.3s,baz=350,slow=10,SNR=13						
WSAR				Sn	Sn	09 01 52.6	-0.3
	2.2nm,0.3s,baz=328,slow=24,SNR=7.3						
WSAR				LR	LR	09 03 28.9	
	comp=Z,66nm,18.3s,baz=296,slow=43						
ANAR	Anarak	6.14	354	ePn	Pn	09 01 02.2	+0.1
TPRV	Parvadeh(Tabas	6.26	18	ePn	Pn	09 01 04.9	+1.2
NHDN	Nehbandan	6.54	47	ePn	Pn	09 01 08.6	+1.1
IKOO	Kooshah	6.66	35	ePn	Pn	09 01 10.6	+1.2
TNSJ	Nastanj	7.13	15	ePn	Pn	09 01 15.8	+0.1
AFRZ	Afriz	7.48	31	ePn	Pn	09 01 21.3	+0.8
IMON	Monand	7.61	35	ePn	Pn	09 01 24.3	+2.0
DQM	DQM	7.64	157	P	Pn	09 01 24.3	+1.6
DQM				S	Sn	09 02 44.9	-4.0
RAYN	Ar Rayn	8.82	248		Pn	09 01 39.5	+0.8
RAYN				Sn	Sn	09 03 14.4	-3.3
SHAO	Shalim	9.06	173	P	Pn	09 01 43.2	+1.1
	SNR=21						
SHAO				S	Sn	09 03 22.6	-1.1
DMTO	DMTO	9.31	177	P	Pn	09 01 47.1	+1.6
RBK	Rabkut	9.51	181	P	Pn	09 01 51.4	+3.1
RBK				S	Sn	09 03 32.4	-2.4
ABTO	Aybut	9.71	186	S	Sn	09 03 34.8	-5.0
GNI	Garni	15.34	331	Pn	Pn	09 03 06.4	-1.4
GNI				IAmb	IAmb	09 03 19.4	
	comp=Z,14nm,1.1s						
MMAI	Mount Meron Ar	17.51	294	P	Pn	09 03 32.5	-2.9
	comp=Z,1.6nm,0.3s,baz=108,slow=14,SNR=2.9						
BTK	Batken	18.79	42	P	P	09 03 49.7	-0.9
BTK				IAmb	IAmb	09 03 54.9	
	comp=Z,9.2nm,1.4s						
CSS	Mathiatis	19.71	299	P	P	09 04 00.1	-0.5
CSS				IAmb	IAmb	09 04 04.6	
	comp=Z,14nm,1.0s						
KK31	Karatay Array	20.66	35	P	P	09 04 10.9	0.0
KKAR	Karatay Array	20.66	35	P	P	09 04 10.1	-0.8
KKAR	Karatay Array	20.66	35	P	P	09 04 10.7	-0.3
KKAR				IAmb	IAmb	09 04 13.7	
	comp=Z,5.5nm,1.4s						
ARSB	Arslanbob	20.86	42	P	P	09 04 12.4	-0.8
BR131	Keskin Array S	21.41	311	P	P	09 04 19.3	+0.2
BRTR	Keskin Array B	21.41	311	P	P	09 04 19.6	+0.4
	comp=Z,1.8nm,0.6s,baz=130,slow=13,SNR=12						
AAK	Ala-Archa	22.56	41	P	P	09 04 31.9	+0.5
	comp=Z,1.9nm,0.7s,baz=220,slow=15,SNR=5.8						
AAK	Ala-Archa	22.56	41	P	P	09 04 31.6	+0.1
AAK				IAmb	IAmb	09 04 42.5	
	comp=Z,4.1nm,0.9s						
ABKAR	Akbulak array	22.57	9	P	P	09 04 30.5	-0.8
ABKAR	Akbulak array	22.57	9	P	P	09 04 30.3	-1.0
ABKAR				IAmb	IAmb	09 04 33.2	
	comp=Z,4.6nm,0.9s						
NRN	Naryn	22.79	46	P	P	09 04 33.2	-0.9
NRN				IAmb	IAmb	09 04 41.5	
	comp=Z,4.7nm,1.2s						
AKTO	Aktyubinsk	23.50	6	P	P	09 04 41.7	+0.8
	comp=Z,4.5nm,0.7s,baz=184,slow=9.3,SNR=12						
BRVK	Borovoye	28.53	20	P	P	09 05 26.6	+0.1
BRVK				IAmb	IAmb	09 05 26.7	
	comp=Z,1.7nm,0.5s						
BVAR	Borovoye Array	28.54	20	P	P	09 05 26.2	-0.4
	comp=Z,1.6nm,0.5s,baz=208,slow=7.6,SNR=12						
BVAR				PcP	PcP	09 08 37.4	-0.4
	comp=Z,0.4nm,0.6s,baz=264,slow=4.3,SNR=3.5						
MK31	Makanchi Array	29.49	41	P	P	09 05 35.3	+0.1
MK31				IAmb	IAmb	09 05 45.7	
	comp=Z,3.2nm,1.5s						
MKAR	Makanchi Array	29.49	41	P	P	09 05 34.5	-0.7
	comp=Z,0.2nm,0.4s,baz=222,slow=8.2,SNR=3.8						
MKAR	Makanchi Array	29.49	41	P	P	09 05 35.0	-0.2
ZAA0	Zalesovo Array	34.95	31	P	P	09 06 22.8	0.0
ZAA0				IAmb	IAmb	09 06 23.1	
	comp=Z,2.5nm,0.8s						
ZALV	Zalesovo Beam	34.95	31	P	P	09 06 21.9	-0.9
	comp=Z,2.3nm,0.7s,baz=238,slow=10,SNR=11						
ZALV	Zalesovo Beam	34.95	31	P	P	09 06 22.2	-0.7
FINES	FINESS Array B	39.30	339	P	P	09 06 58.4	-1.3
	comp=Z,0.9nm,0.6s,baz=147,slow=11,SNR=3.3						
FINES	FINESS Array B	39.30	339	P	P	09 06 58.5	-1.2
CLL	Collm	39.48	319	eP	P	09 07 01.0	-0.3
CMAR	Chiang Mai Arr	41.75	92	P	P	09 07 21.7	+1.2
	comp=Z,1.3nm,0.4s,baz=289,slow=8.5,SNR=4.9						
NOA	NORSAR Array B	44.64	332	P	P	09 07 41.6	-1.8
	comp=Z,0.6nm,0.7s,baz=119,slow=7.7,SNR=2.9						
SONM	Songino Array	45.20	48	P	P	09 07 48.4	+0.2
	comp=Z,1.4nm,1.0s,baz=263,slow=8.7,SNR=7.6						
ESDC	Sonseca Array	49.58	300	P	P	09 08 21.8	-0.6
	comp=Z,0.4nm,0.4s,baz=81,slow=7.8,SNR=4.5						
TOA0	Torodi Ar. Sit	51.08	265	P	P	09 08 34.9	+1.0
TORD	Torodi Ar. Bea	51.08	265	P	P	09 08 33.9	0.0
	comp=Z,0.7nm,0.7s,baz=66,slow=8.6,SNR=5.6						
TORD	Torodi Ar. Bea	51.08	265	P	P	09 08 34.7	+0.8
DBIC	Dimbokro	59.70	262	P	P	09 09 37.2	+1.2
	comp=Z,0.7nm,0.4s,baz=37,slow=6.5,SNR=3.6						
ANM	Nome	83.56	16	P	P	09 11 59.5	+0.7
BMAR	Burnt Mountain	84.73	7	P	P	09 12 06.0	+1.2
IMAR	Indian Mountai	84.77	11	P	P	09 12 05.0	0.0
ILAR	Eielson Array	86.98	9	P	P	09 12 15.1	-0.9
	comp=Z,0.3nm,0.6s,baz=321,slow=4.8,SNR=5.0						
ILAR	Eielson Array	86.98	9	P	P	09 12 15.6	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**90.33**	**355**	P	**P**	**09 12 32.0**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=6.4,slow=5.2,SNR=9.7						
YKA	**Yellowknife Ar**	**90.33**	**355**	P	**P**	**09 12 32.3**	**+0.5**
WRA	**Warramunga Arr**	**90.36**	**112**	P	**P**	**09 12 33.4**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=308,slow=5.0,SNR=2.6						

*IDC **02** 09:20:40.6±4.7, 19°.80S×169°.35E, h96km±41km, mb3.4/5, mb1 3.7/7, mb1mx3.5/37, mbtmp3.9/7, MS2.8/1, Ms1 2.8/1, ms1mx2.5/17, Error ellipse: s-maj=40.6km s-min=28.2km az=5.0*

*NEIC **02** 09:20:42.8±2.4, 19°.90S±0°.07×169°.34E±0°.07, h122km±8km, mb4.3/7, Error ellipse: s-maj=11.0km s-min=8.5km az=158.0*

ISC 02 09:20:40.3±0.8**, 19°.8S**±0°.1×**169°.4E**±0°.1**, h100km, n19, σ0s.73/20, mb3.7/7, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.61**	**230**	P	**Pn**	**09 21 35.0**	**+0.7**
	36nm,0.3s,baz=100,slow=14,SNR=577						
DZM				S	**Sn**	**09 22 14.4**	**-1.8**
	50nm,0.3s,baz=117,slow=23,SNR=16						
DZM				LR	LR	09 22 36.2	
	comp=Z,158nm,21.1s,baz=148,slow=33						
DZM	**Mont Dzumac**	**3.61**	**230**		**Pn**	**09 21 34.9**	**+0.7**
OUZ	**Omahuta**	**15.85**	**167**		**P**	**09 24 18.8**	**-0.6**
OUZ				IAmb	IAmb	09 24 21.4	
	comp=Z,9.9nm,1.0s						
ARMA	**Armidale**	**19.27**	**233**	P	**P**	**09 24 57.4**	**+0.2**
ARMA				IAmb	IAmb	09 25 00.9	
	comp=Z,7.5nm,1.0s						
URZ	**Urewera**	**19.62**	**162**	P	**P**	**09 25 01.1**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=190,slow=14,SNR=8.0						
URZ	**Urewera**	**19.62**	**162**	P	**P**	**09 25 01.0**	**+0.2**
URZ				IAmb	IAmb	09 25 02.6	
	comp=Z,13nm,0.8s						
BFZ	**Birch Farm**	**21.67**	**166**	P	**P**	**09 25 22.0**	**-0.8**
BFZ				IAmb	IAmb	09 25 23.4	
	comp=Z,16nm,0.9s						
WHZ	**Wether Hill Ro**	**26.11**	**182**	P	**P**	**09 26 05.6**	**+1.0**
WHZ				IAmb	IAmb	09 26 22.5	
	comp=Z,58nm,1.4s						
STKA	**Stephens Creek**	**27.72**	**239**	P	**P**	**09 26 19.5**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=72,slow=9.6,SNR=3.3						
WRA	**Warramunga Arr**	**32.95**	**264**	P	**P**	**09 27 05.5**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=99,slow=8.5,SNR=4.1						
AS31	**Alice Springs**	**33.16**	**257**	P	**P**	**09 27 07.6**	**+0.1**
ASAR	**Alice Springs**	**33.17**	**257**	P	**P**	**09 27 07.6**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=88,slow=9.2,SNR=33						
ASAR	**Alice Springs**	**33.17**	**257**	P	**P**	**09 27 07.1**	**-0.4**
HPAH	**Hawaii Prepara**	**52.26**	**43**	P	**P**	**09 29 41.0**	**-0.7**
SONM	**Songino Array**	**87.72**	**323**	P	**P**	**09 33 19.0**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=148,slow=7.6,SNR=4.5						
ILAR	**Eielson Array**	**90.66**	**17**	P	**P**	**09 33 30.6**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=232,slow=4.4,SNR=4.7						
ILAR	**Eielson Array**	**90.66**	**17**	P	**P**	**09 33 30.2**	**-0.9**
GERES	**GERESS Array B**	**145.01**	**332**	PKPbc	**PKPdf**	**09 40 06.2**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=20,slow=3.1,SNR=11						
GERES	**GERESS Array B**	**145.01**	**332**		**PKPdf**	**09 40 05.9**	**0.0**

*NCEDC **02** 09:32:27.5±1.3, 38°.79N±0°.02×122°.74W±0°.05, h2km±7km, Mwr3.3/4, Error ellipse: s-maj=5.8km s-min=2.6km az=111.0, Moment Tensor Solution. Moment tensor: Scale 10^{13}Nm; M_{rr}-0.71; $M_{\theta\theta}$-0.31; $M_{\phi\phi}$1.02; $M_{r\theta}$0.19; $M_{\theta\phi}$0.27; $M_{\phi r}$0.15;*

NEIC 02 09:32:28.1±1.3**, 38°.81N**±0°.02×**122°.70W**±0°.02**, h4km**±5km **Error ellipse: s-maj=2.9km s-min=2.0km az=61.0, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GBGM	**Boggs Mountain**	**0.01**	**89**		Pg	09 32 29.0	0.0
GSGM	**Seigler Mounta**	**0.05**	**347**		Pg	09 32 29.9	+0.5
GAXM	**Alexander Vall**	**0.11**	**205**		Pg	09 32 30.5	+0.1
NHSM	**Mount Saint He**	**0.17**	**158**		Pg	09 32 30.9	-0.5
GMKM	**Mount Konoctai**	**0.17**	**335**		Pg	09 32 31.8	+0.3
GPMM	**Pine Mountain**	**0.20**	**280**		Pg	09 32 31.4	-0.6
MAC	**Mark West Spri**	**0.26**	**185**		Pg	09 32 32.6	-0.6
NMCNC	**Mill Creek, So**	**0.28**	**218**		Pg	09 32 32.6	-0.9
NSHM	**Saint Helena R**	**0.30**	**167**		Pg	09 32 33.4	-0.5
GHLM	**Highland Sprin**	**0.34**	**312**		Pg	09 32 34.5	-0.2
HOPS	**Hopland Field**	**0.34**	**301**		Pg	09 32 34.6	-0.2
GBMM	**Baldy Mountain**	**0.36**	**25**		Pb	09 32 36.7	-0.4
GSNM	**Snow Mountain**	**0.41**	**288**		Pg	09 32 35.8	-0.2
NTYM	**Taylor**	**0.42**	**177**		Pg	09 32 35.7	-0.5
GDCM	**Dry Creek**	**0.43**	**264**		Pg	09 32 35.8	-0.5
FTR	**Fort Ross**	**0.47**	**232**		Pg	09 32 36.4	-0.7
CVS	**Carmenet Viney**	**0.50**	**158**		Pg	09 32 37.3	-0.5
NAPC	**Atlas Peak**	**0.51**	**137**		Pg	09 32 37.8	0.0
GFC	**Funks Creek**	**0.60**	**32**		Pn	09 32 42.5	-0.8
GGUM	**Gualala**	**0.63**	**274**		Pg	09 32 39.7	-0.4
NGVM		**0.65**	**145**		Pg	09 32 40.4	-0.1
MCCM	**Marconi Confer**	**0.68**	**192**		Pg	09 32 40.9	-0.3
GHOM	**Hamilton Openi**	**0.70**	**290**		Pg	09 32 41.4	-0.1
GHMM	**Hull Mountain**	**0.70**	**345**		Pb	09 32 43.7	+0.7
GCK	**Clark Valley**	**0.76**	**15**		Pn	09 32 44.8	-0.8
NOLM	**Olema**	**0.78**	**186**		Pg	09 32 42.3	-0.7
NLHM	**Lake Herman**	**0.81**	**148**		Pg	09 32 43.7	0.0
SUTB	**Sutter Butte**	**0.82**	**59**		Pg	09 32 43.9	+0.1
GNAM	**Navarro Ridge**	**0.82**	**298**		Pg	09 32 44.1	+0.2
KRKM	**Rackout Spring**	**0.84**	**333**		Pb	09 32 45.3	0.0
GASB	**Alder Springs**	**0.84**	**359**		Pn	09 32 46.5	-0.2
NPRM	**Point Reyes**	**0.85**	**197**		Pg	09 32 43.6	-0.9
GTC	**Three Chop Rid**	**0.89**	**311**		Pg	09 32 45.1	-0.1
CPMM	**Point Molate**	**0.89**	**165**		Pg	09 32 44.4	-0.8
CPIM	**Pinole Ridge**	**0.91**	**155**		Pg	09 32 44.9	-0.6
CSPM	**San Pablo Ridg**	**0.91**	**160**		Pg	09 32 45.2	-0.2
GVV	**Valley View**	**0.96**	**1**		Pn	09 32 48.1	-0.3
HMR	**Hamilton Ranch**	**0.96**	**133**		Pg	09 32 46.6	+0.1
BRIB	**Briones**	**0.99**	**154**		Pg	09 32 46.0	-1.0
VAK	**Adit at Lawren**	**1.00**	**159**		Pg	09 32 46.5	-0.7
BRK	**Berkeley--Havi**	**1.00**	**160**		Pg	09 32 46.6	-0.6
CVPM	**Vollmer Peak**	**1.00**	**158**		Pg	09 32 46.0	-1.2
KFPM	**Farley Peak**	**1.00**	**326**		Pg	09 32 47.5	+0.3
BKS	**Berkeley--Byer**	**1.00**	**159**		Pg	09 32 46.0	-1.3
JPRM	**Presidio of Sa**	**1.03**	**170**		Pg	09 32 47.0	-0.8
CYBM	**Yerba Buena Is**	**1.03**	**165**		Pg	09 32 46.9	-1.0
OHCM	**Honcut**	**1.08**	**61**		Pg	09 32 47.6	-1.1
BDM	**Black Diamond**	**1.08**	**143**		Pg	09 32 47.3	-1.5
CRPB	**Russellman Par**	**1.09**	**145**		Pg	09 32 47.5	-1.5
CRHM	**Round Hill Res**	**1.10**	**150**		Pg	09 32 48.2	-1.0
GROM	**Round Mountain**	**1.10**	**1**		Pn	09 32 50.8	+0.4
CMCM	**Mills College**	**1.11**	**158**		Pg	09 32 47.8	-1.5
KCPM	**Cahto Peak**	**1.11**	**322**		Pb	09 32 50.2	+0.3
PAM	**Palermo**	**1.11**	**55**		Pg	09 32 47.9	-1.5
BGC	**Bolinger Road**	**1.11**	**153**		Pg	09 32 47.9	-1.5
FARB	**Farallon Islan**	**1.14**	**192**		Pg	09 32 47.8	-2.2
KIPM	**Iron Peak**	**1.17**	**329**		Pn	09 32 51.5	+0.2
CLCB	**Lake Chabot**	**1.18**	**155**		Pg	09 32 49.2	-1.5
ORV	**Oroville**	**1.19**	**51**		Pg	09 32 49.6	-1.2
ORV	**Oroville**	**1.19**	**51**		Pg	09 32 49.6	-1.2
CMOB	**Morgan Territo**	**1.22**	**145**		Pg	09 32 50.2	-1.3
SAC	**San Andreas**	**1.25**	**170**		Pg	09 32 50.0	-2.0
JCPM	**Coyote Point**	**1.26**	**166**		Pg	09 32 50.4	-1.7
KBSM	**Bell Springs**	**1.30**	**328**		Pb	09 32 54.3	+1.1
OXMT	**Ox Mountain**	**1.33**	**171**		Pn	09 32 50.5	-2.8
MGL	**Magalia**	**1.33**	**41**		Pn	09 32 52.5	-1.0
CNIC	**Niles Canyon**	**1.33**	**154**		Pn	09 32 51.0	-2.4
AFDM	**Forest Hills D**	**1.35**	**84**		Pn	09 32 51.6	-2.1
O02D	**Mt. Diablo Mer**	**1.36**	**357**		Pg	09 32 55.2	+1.0
CVLM	**Vallecito**	**1.36**	**150**		Pn	09 32 52.1	-1.8
WENL	**Wente Vineyard**	**1.40**	**148**		Pn	09 32 53.0	-1.3
JHPM	**Huddart Park**	**1.40**	**167**		Pn	09 32 51.8	-2.6
LTCM	**Tuscan Springs**	**1.46**	**17**		Pn	09 32 53.7	-1.5
JSFB	**Stanford Teles**	**1.47**	**164**		Pn	09 32 53.2	-2.0
BGH	**Bear Gulch**	**1.50**	**169**		Pn	09 32 54.9	-0.7
JFP	**Foothills Park**	**1.50**	**164**		Pn	09 32 52.9	-2.9
LBPM	**Beegum Peak**	**1.51**	**355**		Pb	09 32 56.5	-0.2
JJRM	**Joaquin Road**	**1.52**	**165**		Pn	09 32 53.8	-2.2
JBMM	**Black Mountain**	**1.55**	**164**		Pn	09 32 55.5	-1.1
CMLM	**Mount Lewis**	**1.57**	**148**		Pn	09 32 55.7	-1.0
ASMM	**Slate Mountain**	**1.57**	**89**		Pn	09 32 55.9	-0.9
JPC	**Peters Creek,**	**1.59**	**166**		Pn	09 32 54.4	-2.5
KMRM	**Mail Ridge**	**1.61**	**331**		Pg	09 32 58.9	-0.1
JSGM	**Saratoga Golf**	**1.61**	**161**		Pn	09 32 54.9	-2.4
LCMM	**Colby Mountain**	**1.61**	**34**		Pn	09 32 57.0	-0.5
MNHB	**New Hogan Dam**	**1.62**	**114**		Pn	09 32 55.6	-1.7
O03E	**Paynes Creek**	**1.63**	**25**		Pn	09 32 56.3	-1.3
JPSM		**1.64**	**170**		Pn	09 32 55.5	-2.0
CMMM	**Mount Mocho**	**1.65**	**145**		Pn	09 32 56.9	-1.0
MHC	**Mount Hamilton**	**1.69**	**150**		Pn	09 32 56.5	-1.9
JJOM	**Saint Joseph's**	**1.70**	**160**		Pn	09 32 55.8	-2.7
ARN	**Arnold Ranch**	**1.73**	**148**		Pn	09 32 57.2	-1.7
JBNB	**Ben Lomond Mou**	**1.74**	**166**		Pn	09 32 56.3	-2.7
CCOB	**Coe Ranch Numb**	**1.75**	**152**		Pn	09 32 57.6	-1.6
JSTM	**Santa Teresa H**	**1.75**	**156**		Pn	09 32 56.8	-2.4
LDBM	**Digger Butte**	**1.76**	**23**		Pn	09 32 59.8	+0.3
JUMM	**Mount Umunhum**	**1.77**	**159**		Pn	09 32 57.1	-2.4
WDC	**Whiskeytown Da**	**1.77**	**4**		Pn	09 32 58.6	-0.8
AMC	**Almaden**	**1.78**	**158**		Pn	09 32 57.1	-2.5
JLAB	**Laurel Hill**	**1.82**	**155**		Pn	09 32 57.8	-2.4
MCUB	**Copperopolis B**	**1.83**	**117**		Pn	09 32 59.0	-1.3
JHLM	**Holstrom Ranch**	**1.83**	**158**		Pn	09 32 57.5	-2.8
KHBM	**Hayfork Bally**	**1.89**	**348**		Pb	09 33 03.0	-0.2
JTGM	**Trout Gulch Ro**	**1.90**	**160**		Pn	09 32 59.3	-1.8
LRDM	**Redding Peak**	**1.90**	**30**		Pb	09 33 03.0	-0.4
DONR	**Donner Summit**	**1.92**	**73**		Pn	09 33 01.9	+0.1
HSPM	**Sheep**	**1.94**	**151**		Pn	09 33 00.1	-1.7
HLPM	**Lions Peak**	**1.96**	**154**		Pn	09 32 59.6	-2.4
IND	**Independence**	**1.97**	**71**		Pn	09 33 03.0	+0.6
CMB	**Columbia Colle**	**1.97**	**113**		Pn	09 33 01.6	-0.7
RUBR	**Rubicon Trail**	**2.00**	**82**		Pn	09 33 03.2	+0.5
TAHR	**Tahoe**	**2.00**	**80**		Pn	09 33 03.4	+0.6
JELB	**Ellicott, Sant**	**2.00**	**160**		Pn	09 33 00.2	-2.4
CDC	**Canada Road**	**2.03**	**151**		Pn	09 33 01.1	-1.9
EMB	**Emerald Bay**	**2.03**	**85**		Pn	09 33 03.5	+0.3
KBF	**Kyburz Flat**	**2.05**	**69**		Pn	09 33 04.0	+0.5
HCOM	**Corn Cob Canyo**	**2.08**	**158**		Pn	09 33 01.4	-2.2
HPCM	**Pacheco Lake**	**2.08**	**147**		Pn	09 33 01.6	-2.1
LOY	**Loyalton**	**2.09**	**65**		Pn	09 33 04.6	+0.6
SLD	**San Luis Dam**	**2.09**	**146**		Pn	09 33 02.2	-1.7
BEKR	**Beckworth**	**2.09**	**59**		Pn	09 33 04.6	+0.5
HFEM	**San Felipe**	**2.09**	**150**		Pn	09 33 01.7	-2.2
OCR	**O'Connell Ranc**	**2.11**	**153**		Pn	09 33 01.8	-2.3
ANZ	**Anzar Road**	**2.12**	**155**		Pn	09 33 01.9	-2.2
MPK	**Martis Peak**	**2.13**	**76**		Pn	09 33 05.3	+0.7
SFJWR	**San Luis Fatjo**	**2.13**	**145**		Pn	09 33 02.8	-1.6
HTUM	**Tustin Road**	**2.15**	**157**		Pn	09 33 02.1	-2.5
HATC	**Hat Creek Radi**	**2.21**	**25**		Pb	09 33 07.8	-0.9
GNO	**Genoa**	**2.22**	**86**		Pn	09 33 06.8	+1.0
BMRR	**Black Mountain**	**2.27**	**54**		Pn	09 33 04.0	-2.5
FRP	**Fremont Peak**	**2.27**	**155**		Pn	09 33 03.4	-3.0
PEAR	**Peavine Mounta**	**2.27**	**69**		Pn	09 33 07.1	+0.6
LBCM	**Butte Creek Ri**	**2.27**	**27**		Pn	09 33 07.1	+0.6
SAO	**San Andreas Ge**	**2.27**	**154**		Pn	09 33 04.0	-2.3
MYLM	**Yosemite Lake**	**2.29**	**128**		Pn	09 33 05.3	-1.3
BVYM	**Vineyard**	**2.30**	**153**		Pn	09 33 04.3	-2.5
BSRM	**Salinas Radio**	**2.34**	**156**		Pn	09 33 04.3	-2.9
BCGM	**Cienega Road**	**2.36**	**153**		Pn	09 33 05.2	-2.3
BHRM	**Hodges Ranch**	**2.37**	**151**		Pn	09 33 05.9	-1.8
BPCNC	**Pine Canyon**	**2.39**	**159**		Pn	09 33 05.8	-2.2
BFC	**Buffalo Canyon**	**2.41**	**87**		Pn	09 33 09.4	+0.9
VCNR	**Virginia City**	**2.42**	**78**		Pn	09 33 09.1	+0.5
BLRM	**Lewis Ranch**	**2.42**	**152**		Pn	09 33 06.2	-2.2
PNTR	**Pine Nut**	**2.43**	**83**		Pn	09 33 09.7	+1.0
SCZ	**Santa Cruz**	**2.44**	**155**		Pn	09 33 05.7	-2.9
BEHM	**Elkhorn Ranch**	**2.46**	**150**		Pn	09 33 07.1	-1.8
BRMM	**Rolling Bench**	**2.47**	**143**		Pn	09 33 08.2	-0.8
BEMM	**Emmet**	**2.50**	**149**		Pn	09 33 07.6	-1.8
BAVM	**Antelope Valle**	**2.54**	**148**		Pn	09 33 08.2	-1.8
WAKR	**Walker**	**2.57**	**96**		Pn	09 33 12.2	+1.6
HAST	**Hastings Reser**	**2.59**	**159**		Pn	09 33 07.8	-2.9
BBGB	**Big Mountain B**	**2.59**	**149**		Pn	09 33 09.7	-1.1
BPIM	**Pinnacles**	**2.62**	**152**		Pn	09 33 08.0	-3.1
BMSM	**Mercy Hot Spri**	**2.63**	**144**		Pn	09 33 09.9	-1.3
BSMM	**Soledad Missio**	**2.63**	**157**		Pn	09 33 08.9	-2.4
BBNM	**San Benito**	**2.63**	**150**		Pn	09 33 09.1	-2.3
YERR	**Yerington**	**2.70**	**85**		Pn	09 33 12.6	+0.2
PAHR	**Pah Rah Range**	**2.72**	**70**		Pn	09 33 12.8	+0.1
YBH	**Yreka Blue Hor**	**2.92**	**360**	Pn	Pb	09 33 18.1	-2.5
PMPB	**Monarch Peak**	**3.00**	**149**		Pn	09 33 15.5	-0.9
MDPB	**Devils Postpil**	**3.08**	**111**	Pn	Pn	09 33 18.6	+0.8
RYN	**Ryan**	**3.27**	**92**		Pn	09 33 19.9	-0.3
NVAR	**Mina Array Bea**	**3.46**	**95**		Pn	09 33 22.9	+0.1
MOD	**Modoc Plateau**	**3.59**	**30**	Pn	Pn	09 33 24.5	-0.1
KBO	**Bosley Butte**	**3.59**	**342**	Pn	Pn	09 33 24.9	+0.3
KVN	**Kaiserville**	**3.59**	**85**		Pn	09 33 24.7	0.0
HUMO	**Hull Mountain**	**3.79**	**357**	Pn	Pn	09 33 28.4	+1.1
ISA	**Isabella, Lake**	**4.61**	**132**		Pn	09 33 38.8	+0.3
WVOR	**Wild Horse Val**	**4.75**	**39**	Pn	Pn	09 33 41.8	+1.2
DAC	**Darwin (Calif)**	**4.78**	**120**	Pn	Pn	09 33 41.8	+0.8
TPNV	**Topopah Spring**	**5.43**	**108**	Pn	Pn	09 33 51.1	+1.2
R11A	**Troy Canyon, C**	**5.59**	**93**	Pn	Pn	09 33 52.4	+0.3
ELK	**Elko**	**6.06**	**69**		Pn	09 33 58.8	+0.1

MAN 02 09:56:13.5, 10°.45N×126°.44E, h20km, mb5.7, ML4.7, MS5.1, Philippine Islands region

*IDC **02** 09:56:10.0±0.4, 10°.35N×126°.21E, h0km, mb4.7/30, mb1 4.8/31, mb1mx4.7/44, mbtmp4.7/31, ML4.1/1, MS3.8/19, Ms1 3.8/19, ms1mx3.6/53, Error ellipse: s-maj=18.5km s-min=9.1km az=76.0*

*MAN **02** 09:56:11.1, 10°.45N×126°.64E, h15km, MS5.1*

MAN Intensity III - Burgos Surigao del Norte; Intensity II - Carmen Surigao del Norte.

*BJI **02** 09:56:13.4±0.0, 10°.09N×126°.52E, h62km, mB5.1/47, mb4.9/72, Ms4.5/44, Ms7 4.3/44*

*MOS **02** 09:56:15.0±1.0, 10°.40N×126°.28E, h52km, mb5.2/41, MS4.2/6, Error ellipse: s-maj=10.7km s-min=5.4km az=111.9*

*NEIC **02** 09:56:17.4±2.2, 10°.41N±0°.06×126°.35E±0°.09, h54km±4km, mb5.0/112, Error ellipse: s-maj=12.8km s-min=8.4km az=78.0*

*KLM **02** 09:56:18.0, 10°.39N×126°.85E, h69km, mb5.0*

*DJA **02** 09:56:18.5±0.6, 11°N±3°×12°7E±°, h69km±5km, M5.1/55, mb5.0/55, mB5.5/17, MLv5.7/1, Mw(mB)4.9/17, Mwp6.2/3*

ISC 02 09:56:18.0±0.5**, 10°.37N**±0°.03×**126°.45E**±0°.05**, h60km**±4km**, n494,** σ**1s.52**/488**, mb4.9**/143**, MS4.0**/35**, 32C-16D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.11**	**239**	⇓*e*P	**Pn**	**09 56 33.6**	**-4.0**
SCPH				*e*S	**Sn**	**09 56 49.8**	**-2.2**
MSLP	**Maasin**	**1.59**	**262**	*e*P	**Pn**	**09 56 40.7**	**-3.1**
MSLP				*e*S	**Sn**	**09 57 06.4**	**+3.0**
BIPH	**Bislig**	**2.17**	**182**	⇑*i*P	**Pn**	**09 56 48.3**	**-3.6**
BIPH				*i* S	**Sn**	**09 57 13.3**	**-4.3**
LLP	**Lapu-Lapu**	**2.45**	**269**	⇑*e*P	**Pn**	**09 56 53.9**	**-1.7**
LLP				*e*S	**Sn**	**09 57 26.1**	**+1.8**
CGP	**Cagayan de Oro**	**2.57**	**223**	⇓*e*P	**Pn**	**09 56 56.4**	**-0.9**
CGP				*e*S	**Sn**	**09 57 28.5**	**+1.1**
BUKP	**Musuan**	**2.83**	**209**	*e*P	**Pn**	**09 56 59.5**	**-1.4**
BUKP				*e*S	Sn	09 57 53.1	+19
DAV	**Davao City (W)**	**3.39**	**195**	Pn	**Pn**	**09 57 09.3**	**+0.8**
	181nm,0.3s,baz=29,slow=2.6,SNR=12						
DAV				Sn	**Sn**	**09 57 55.1**	**+7.6**
	40nm,0.3s,baz=60,slow=20,SNR=5.4						
DAV				LR	LR	09 58 33.3	
	comp=Z,4µm,18.3s,baz=10,slow=43						
DAV	**Davao City (W)**	**3.39**	**195**	P	**Pn**	**09 57 11.4**	**+2.9**
DAV	**Davao City (W)**	**3.39**	**195**		**Pn**	**09 57 09.7**	**+1.2**
DAV					**Sn**	**09 57 49.4**	**+1.9**
DMPH	**Davao City--Mi**	**3.40**	**196**	⇑*e*P	**Pn**	**09 57 10.4**	**+1.9**
MATI	**Mati**	**3.41**	**183**	*e*P	**Pn**	**09 57 06.6**	**-2.1**
MATI				*e*S	Sn	09 58 10.6	+23
KCP	**Kidapawan**	**3.60**	**202**	⇑*e*P	**Pn**	**09 57 11.7**	**+0.3**
KCP				*i* S	**Sn**	**09 57 53.8**	**+1.1**
CTBH	**Cotabato--PC H**	**3.81**	**215**	⇓*e*P	**Pn**	**09 57 12.8**	**-1.5**
RCP	**Roxas**	**3.83**	**288**	⇓*e*P	**Pn**	**09 57 13.2**	**-1.3**
DDMP	**Don Marcelino,**	**4.30**	**190**	*e*P	**Pn**	**09 57 17.7**	**-3.2**
GSPH	**General Santos**	**4.51**	**199**	⇓*i*P	**Pn**	**09 57 28.0**	**+4.1**
LQP	**Lukban**	**6.08**	**308**	⇑*e*P	**Pn**	**09 57 42.9**	**-2.5**
TGY	**Tagaytay City**	**6.54**	**305**	Pn	**Pn**	**09 57 50.8**	**-1.0**
	42nm,0.3s,baz=69,slow=8.6,SNR=2.8						
TNTI	**Ternate**	**9.58**	**175**	P	**Pn**	**09 58 35.3**	**+2.1**
	66nm,1.1s						
TNTI	**Ternate**	**9.58**	**175**	Pn	**Pn**	**09 58 32.6**	**-0.6**
MRSI	**Marisa**	**10.80**	**205**	P	**Pn**	**09 58 53.1**	**+3.1**
	37nm,0.7s						
KKM	**Kota Kinabalu**	**11.01**	**248**		**Pn**	**09 58 54.8**	**+1.9**
SPMM	**Sapulut**	**11.38**	**241**	P	Pn	09 59 04.0	+6.0
MPSI	**Mapaga**	**11.91**	**214**	P	**Pn**	**09 59 08.5**	**+3.4**
	14nm,0.9s						
LUWI	**Luwuk**	**11.91**	**198**	P	**Pn**	**09 59 07.9**	**+2.7**
	3µm176nm,1.2s						
LUWI	**Luwuk**	**11.91**	**198**		**Pn**	**09 59 06.0**	**+0.9**
APSI	**Ampana**	**12.18**	**203**	P	P	09 59 14.3	-5.1
	689nm53nm,1.2s						
SANI	**Sanana**	**12.35**	**182**	P	**Pn**	**09 59 10.9**	**-0.2**
	73nm,0.9s						
YULB	**Yu-li**	**13.86**	**340**	P	**Pn**	**09 59 33.9**	**+2.3**
TPUB	**Ta-pu**	**14.01**	**337**	P	**P**	**09 59 36.8**	**-3.0**
RKPI	**Ransiki, Papua**	**14.08**	**146**	P	**Pn**	**09 59 35.8**	**+1.2**
	2µm100nm,1.1s						
SSLB	**Suanglung**	**14.34**	**339**	P	**P**	**09 59 42.4**	**-1.0**
FAKI	**Fak Fak**	**14.41**	**156**	P	**Pn**	**09 59 37.3**	**-1.6**
	1µm68nm,1.0s						
FAKI	**Fak Fak**	**14.41**	**156**		**Pn**	**09 59 38.3**	**-0.6**
TTSI	**Tana Toraja**	**14.87**	**207**	P	**P**	**09 59 48.3**	**-1.0**
	66nm,0.8s						
SPSI	**Sidrap Palu**	**15.72**	**205**	P	**P**	**09 59 58.3**	**-0.4**
	834nm35nm,1.0s						
BNSI	**Bone**	**15.97**	**204**	P	**P**	**10 00 02.6**	**+1.0**
	1µm53nm,1.4s						
SBUM	**Sibu**	**16.18**	**242**	P	**P**	**10 00 03.4**	**-0.5**
SBUM	**Sibu**	**16.18**	**242**	P	**P**	**10 00 05.0**	**+1.2**
BKSI	**Bulukumba**	**16.81**	**202**	P	**P**	**10 00 12.3**	**+1.4**
	29nm,0.9s						
KBKI	**Kotabaru**	**17.01**	**218**	P	**P**	**10 00 15.5**	**+2.5**
	21nm,0.8s						
STKI	**Sintang**	**18.07**	**236**	P	Pn	10 00 36.9	+12
QIZ	**Qiongzhong**	**18.21**	**300**	P	**P**	**10 00 25.7**	**-0.7**
QIZ				sP	**sP**	**10 00 46.5**	**-0.1**
QIZ				S	**S**	**10 03 52.0**	**+0.4**
QIZ				LR	LR		
	comp=N,400nm,17.8s						
QIZ				LR	LR		
	comp=E,340nm,15.9s						
QIZ				LR	LR		
	comp=Z,490nm,16.9s						
GUMO	**Guam**	**18.30**	**78**	LR	LR	10 05 45.4	
	comp=Z,278nm,19.9s,baz=281,slow=31						
KSM	**Kuching**	**18.32**	**242**	P	**Pn**	**10 00 30.4**	**+2.3**
KSM	**Kuching**	**18.32**	**242**	P	**Pn**	**10 00 32.0**	**+4.0**
GENI	**Genyem**	**18.77**	**133**	P	Pn	10 00 48.7	+15
JAY	**Jayapura**	**19.11**	**131**	P	**Pn**	**10 00 36.7**	**-0.9**
	0.6nm,0.3s,baz=281,slow=3.5,SNR=4.4						
JAY	**Jayapura**	**19.11**	**131**	P	**P**	**10 00 35.6**	**-0.6**
	35nm,0.9s						
MMRI	**Maumere**	**19.34**	**193**	P	**Pn**	**10 00 42.5**	**+2.2**
	160nm,0.9s						
MMRI	**Maumere**	**19.34**	**193**		**Pn**	**10 00 40.4**	**+0.1**
MMRI				IAmb	IAmb	10 00 50.1	
	comp=Z,129nm,0.9s						
SOEI	**Soe**	**20.11**	**186**	P	Pn	10 00 48.5	-1.0
	comp=Z,1µmcomp=Z,161nm,0.8s						
SOEI	**Soe**	**20.11**	**186**		Sn	10 04 38.6	+3.2
BATI	**Baumata**	**20.63**	**188**	P	**P**	**10 00 52.2**	**-0.5**
	comp=Z,196nm,0.7s,baz=219,slow=0.3,SNR=40						
BATI				S	Sn	10 04 47.4	-0.3
	comp=Z,39nm,0.9s,baz=30,slow=20,SNR=4.0						
BATI	**Baumata**	**20.63**	**188**	P	**P**	**10 00 53.7**	**+1.0**
	comp=Z,1µmcomp=Z,149nm,0.8s						
UBPT	**Khong Chiam**	**21.03**	**286**	P	**P**	**10 00 56.3**	**-0.7**
UBPT				IAmb	IAmb	10 01 12.4	
	comp=Z,47nm,1.0s						
TWSI	**Taliwang, Sumb**	**21.24**	**207**	P	**P**	**10 01 00.3**	**+1.1**
	comp=Z,36nm,0.8s						
JCJ	**Chichijima**	**22.29**	**40**	LR	LR	10 10 13.9	
	comp=Z,325nm,18.0s,baz=224,slow=38						
NJ2	**Nanjing**	**22.69**	**343**	*e*P	**P**	**10 01 15.2**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,86nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,290nm,3.7s						
NJ2				LR	LR		
	comp=Z,260nm,14.7s						
NJ2				LR	LR		
	comp=Z,400nm,10.6s						
NJ2				LR	LR		
	comp=Z,430nm,18.0s						
JNU	**Nakatsue**	**23.01**	**10**	P	**P**	**10 01 17.2**	**-0.8**
	comp=Z,41nm,0.9s,baz=182,slow=4.7,SNR=19						
JNU	**Nakatsue**	**23.01**	**10**	IAmb	IAmb	10 01 19.2	
	comp=Z,55nm,1.0s						
WHN	**Wuhan**	**23.02**	**332**	⇑P	**P**	**10 01 17.3**	**-0.7**
WHN				sP	**pwP**	**10 01 40.6**	**+3.6**
WHN				pmax	pmax		
	comp=Z,64nm,0.9s						
WHN				LR	LR		
	comp=Z,980nm,14.4s						
WHN				LR	LR		
	comp=Z,1µm,20.8s						
WHN				LR	LR		
	comp=Z,1µm,16.4s						
NGJI	**Ngawi**	**23.09**	**221**	P	P	10 01 34.4	+15
MTN	**Manton Dam**	**23.52**	**169**	P	**P**	**10 01 21.7**	**-1.3**
	baz=24,SNR=15						
MTN	**Manton Dam**	**23.52**	**169**	P	**P**	**10 01 21.6**	**-1.3**
MTN				IAmb	IAmb	10 01 42.1	
	comp=Z,55nm,0.9s						
KDU	**Kakadu**	**23.67**	**165**	P	**P**	**10 01 23.1**	**-1.2**
	baz=24,SNR=22						
WOJI	**Wonogiri, Jawa**	**23.79**	**221**	P	**P**	**10 01 27.0**	**+1.5**
	comp=Z,54nm,1.3s						
MYKOM	**Kota Tinggi**	**24.02**	**251**	P	**P**	**10 01 32.0**	**+4.4**
GYA	**Guiyang**	**24.61**	**313**	⇑*i*P	**P**	**10 01 31.6**	**-1.4**
GYA				pP	pP	10 01 45.8	-1.2
GYA				PP	**PnPn**	**10 02 10.0**	**+2.7**
GYA				S	**S**	**10 05 51.8**	**+1.5**
GYA				sS	sS	10 06 10.1	-1.6
GYA				SS	**SnSn**	**10 06 43.4**	**+2.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=Z,350nm,14.3s						
GYA				LR	LR		
	comp=Z,340nm,16.1s						
GYA				LR	LR		
	comp=Z,630nm,14.3s						
JRMM	**Jerantut**	**24.63**	**257**	P	**P**	**10 01 34.0**	**+0.8**
LEM	**Lembang**	**25.37**	**228**	LR	LR	10 13 40.0	
	comp=Z,203nm,18.2s,baz=62,slow=42						
CBJI	**Citeko**	**25.68**	**230**	P	**P**	**10 01 45.5**	**+2.9**
IPM	**Ipoh**	**25.87**	**259**	P	**P**	**10 01 45.0**	**+0.5**
TJN	**Taejon**	**25.91**	**2**	⇑*e*P	**P**	**10 01 44.3**	**-0.2**
KNRA	**Kununurra**	**25.98**	**175**	P	**P**	**10 01 44.5**	**-0.8**
	baz=26,SNR=12						
KNRA	**Kununurra**	**25.98**	**175**	P	**P**	**10 01 44.4**	**-0.8**
KNRA				IAmb	IAmb	10 02 01.7	
	comp=Z,41nm,0.8s						
KULM	**Kulim**	**26.05**	**261**	P	**P**	**10 01 50.0**	**+4.0**
KLSI		**26.30**	**236**	P	**P**	**10 01 48.0**	**-0.3**
	comp=Z,20nm,1.2s						
MDSI	**Maura Dua**	**26.64**	**237**	P	**P**	**10 01 49.7**	**-1.7**
	comp=Z,20nm,0.9s						
INU	**Inuyama**	**26.66**	**20**	P	**P**	**10 01 50.1**	**-1.2**
INU				IAmb	IAmb	10 01 56.0	
	comp=Z,89nm,1.8s						
CGJI	**Cibinong**	**26.68**	**232**	P	**P**	**10 01 52.0**	**+0.3**
	comp=Z,34nm,0.7s						
KMI	**Kunming**	**26.86**	**306**	P	**P**	**10 01 54.8**	**+1.2**
KMI				pP	sP	10 02 08.6	-5.7
KMI				S	**S**	**10 06 28.7**	**+2.5**
KMI				sS	sS	10 06 51.6	+3.7
KMI				pmax	pmax		
	comp=Z,13nm,0.6s						
KMI				pmax	pmax		
	comp=Z,83nm,6.7s						
KMI				LR	LR		
	comp=Z,140nm,18.9s						
KMI				LR	LR		
	comp=Z,290nm,16.0s						
KMI				LR	LR		
	comp=Z,250nm,19.1s						
KASI	**Kota Agung**	**26.97**	**235**	P	**P**	**10 01 55.1**	**+0.8**
	comp=Z,650nmcomp=Z,35nm,1.2s						
KSRS	**Korea Array**	**27.00**	**3**	P	**P**	**10 01 54.5**	**+0.1**
	comp=Z,14nm,0.9s,baz=179,slow=10,SNR=50						
KSRS				PcP	**PcP**	**10 05 15.8**	**+1.2**
	comp=Z,2.3nm,0.6s,baz=171,slow=3.1,SNR=7.6						
KSRS				LR	LR	10 14 43.9	
	comp=Z,194nm,18.1s,baz=152,slow=41						
LWLI	**Liwa**	**27.04**	**237**	P	**P**	**10 01 56.3**	**+1.2**
	comp=Z,7µmcomp=Z,46nm,0.9s						
TIA	**Tai'an**	**27.08**	**343**	P	**P**	**10 01 54.3**	**-0.8**
TIA				pmax	pmax		
	comp=Z,13nm,0.9s						

SDSI Sungai Dareh 27.31 247 P **P** **10 02 00.5 +3.1**
comp=Z,4µmcomp=Z,36nm,0.7s
CM31 Chiang Mai Arr 27.80 290 P **P** **10 02 00.0 -1.8**
CMAR Chiang Mai Arr 27.80 290 P **P** **10 02 00.0 -1.8**
comp=Z,6.0nm,0.8s,baz=105,slow=7.2,SNR=30
CMAR ScP **ScP** **10 08 57.3 +4.4**
comp=Z,0.8nm,0.3s,baz=69,slow=1.4,SNR=11
CMAR LR LR 10 13 13.2
comp=Z,135nm,19.5s,baz=140,slow=37
CMAR Chiang Mai Arr 27.80 290 P **P** **10 02 01.0 -0.8**
CHTO Chiang Mai 27.88 291 P **P** **10 02 01.4 -1.1**
CHTO pmax pmax
comp=Z,8.0nm,1.0s
CHTO Chiang Mai 27.88 291 P **P** **10 02 01.4 -1.1**
MAJO Matsushiro 28.15 20⇑*e*P **P** **10 02 03.1 -1.5**
MAJO pmax pmax
comp=Z,6.0nm,1.0s
MJAR Matsushiro Arr 28.15 20 P **P** **10 02 03.0 -1.7**
MJAR pmax pmax
comp=Z,5.0nm,1.3s
MJAR Matsushiro Arr 28.15 20 P **P** **10 02 03.0 -1.7**
comp=Z,2.7nm,0.8s,baz=188,slow=8.1,SNR=6.8
MJAR PcP **PcP** **10 05 18.5 +1.0**
comp=Z,2.0nm,0.8s,baz=198,slow=5.5,SNR=4.7
MJAR LR LR 10 13 05.3
comp=Z,250nm,18.5s,baz=205,slow=36
PDSI Padang 28.18 248 P **P** **10 02 08.8 +3.6**
FITZ Fitzroy Crossi 28.30 182 P **P** **10 02 05.1 -1.0**
baz=28,SNR=17
FITZ Fitzroy Crossi 28.30 182 P **P** **10 02 05.3 -0.8**
comp=Z,15nm,0.8s,baz=358,slow=7.5,SNR=32
FITZ Fitzroy Crossi 28.30 182 P **P** **10 02 05.2 -0.8**
PSI Prapat 28.34 257 LR LR 10 15 39.7
comp=Z,242nm,18.5s,baz=60,slow=42
PMG Port Moresby 28.47 133⇓*e*P **P** **10 02 04.3 -3.4**
PMG pmax pmax
comp=Z,44nm,0.8s
PMG Port Moresby 28.47 133 P **P** **10 02 03.6 -4.1**
PMG lAmb lAmb 10 02 24.7
comp=Z,29nm,0.9s
XAN Xi'an 28.52 328 P **P** **10 02 06.6 -1.4**
XAN PcP **PcP** **10 05 19.0 +0.5**
XAN pmax pmax
comp=Z,20nm,0.7s
XAN LR LR
comp=Z,280nm,16.1s
XAN LR LR
comp=Z,190nm,12.0s
XAN LR LR
comp=Z,350nm,16.5s
XAN Xi'an 28.52 328 P **P** **10 02 06.6 -1.4**
XAN pmax pmax
comp=Z,16nm,0.6s
XAN Xi'an 28.52 328 P **P** **10 02 06.6 -1.4**
XAN lAmb lAmb 10 02 07.9
comp=Z,16nm,0.6s
DL2 Dalian 28.74 352 P **P** **10 02 10.8 +0.9**
DL2 *e*S **S** **10 06 57.8 +2.8**
DL2 *es*S **sS** **10 07 21.1 +4.4**
DL2 pmax pmax
comp=Z,34nm,0.8s
DL2 LR LR
comp=Z,330nm,14.3s
DL2 LR LR
comp=Z,240nm,12.6s
DL2 LR LR
comp=Z,340nm,12.4s
KCSI Kotacane, Aceh 29.25 259 P **P** **10 02 13.2 -1.5**
comp=Z,17nm,0.9s
COEN Coen 29.31 145 P **P** **10 02 14.8 -0.4**
baz=30,SNR=13
COEN Coen 29.31 145 P **P** **10 02 13.7 -1.5**
COEN lAmb lAmb 10 02 15.8
comp=Z,44nm,1.3s
CD2 Chengdu 29.36 317⇑*i*P **P** **10 02 13.8 -1.7**
CD2 sP pwP 10 02 33.9 -1.3
CD2 S **S** **10 07 05.7 +0.6**
CD2 sS sS 10 07 34.0 +7.3
CD2 pmax pmax
comp=Z,60nm,0.6s
CD2 pmax pmax
comp=Z,130nm,6.7s
CD2 LR LR
comp=Z,1µm,18.8s
CD2 LR LR
comp=Z,1µm,13.0s
CD2 LR LR
comp=Z,1µm,14.5s
GSI Gunungsitoli 30.08 254 P **P** **10 02 21.9 -0.1**
GSI lAmb lAmb 10 02 29.7
comp=Z,20nm,0.7s
WRAB Tennant Creek 31.10 166⇑*e*P **P** **10 02 28.3 -2.6**
WRAB pmax pmax
comp=Z,6.0nm,1.0s
WRAB Tennant Creek 31.10 166 P **P** **10 02 28.8 -2.1**
WRA Warramunga Arr 31.11 166 *i* P **P** **10 02 29.2 -1.8**
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 31.11 166 P **P** **10 02 29.0 -2.0**
comp=Z,4.7nm,0.9s,baz=342,slow=9.8,SNR=24
WRA PcP **PcP** **10 05 25.8 +0.5**
comp=Z,2.1nm,0.7s,baz=338,slow=2.9,SNR=7.6
WRA Warramunga Arr 31.11 166 P **P** **10 02 28.4 -2.5**
WR0 Warramunga Arr 31.17 165 P **P** **10 02 29.8 -1.7**
SNY Shenyang 31.44 356⇓P **P** **10 02 32.1 -1.5**
SNY pmax pmax
comp=Z,23nm,1.2s
SNY pmax pmax
comp=Z,180nm,5.5s
SNY LR LR
comp=Z,540nm,4.6s
SNY LR LR
comp=Z,360nm,4.9s
SNY LR LR
comp=Z,460nm,15.5s
PSA00 Pilbara Seismi 32.40 192 P **P** **10 02 41.3 -1.0**
PSA00 Pilbara Seismi 32.40 192 P P 10 02 37.5 -4.8
PSA00 lAmb lAmb 10 02 39.2
comp=Z,45nm,0.8s
LZH Lanzhou 32.80 325⇑P **P** **10 02 45.7 -0.2**
LZH pP pP 10 02 58.2 -1.2
LZH sP pwP 10 03 08.5 +3.2
LZH PP **PnPn** **10 03 53.8 -2.4**
LZH pmax pmax
comp=Z,22nm,1.4s
LZH pmax pmax
comp=Z,68nm,5.4s
LZH LR LR
comp=Z,220nm,13.0s
LZH LR LR
comp=Z,420nm,13.6s
LZH LR LR
comp=Z,620nm,14.6s
HHC Hu-ho-hao-te 33.09 339 *e*P **P** **10 02 49.3 +1.0**
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,29nm,5.0s
QIS Mount Isa 33.34 157 P **P** **10 02 50.1 -0.5**
baz=34,SNR=13
MTSU Mount Surprise 33.36 148 P **P** **10 02 51.2 +0.4**
baz=34,SNR=24
USA0B Ussuriysk Arra 34.05 7⇑*e*P **P** **10 02 54.8 -1.6**
USA0B Ussuriysk Arra 34.05 7 P **P** **10 02 55.9 -0.6**
USA0B lAmb lAmb 10 02 57.7
comp=Z,18nm,0.9s
USRK Ussuriysk Ar. 34.05 7 P **P** **10 02 55.9 -0.5**
USRK 10 05 33.3
USRK Ussuriysk Ar. 34.05 7 P **P** **10 02 56.9 +0.4**
comp=Z,12nm,0.7s,baz=190,slow=9.5,SNR=27
USRK PcP **PcP** **10 05 33.3 +0.3**
comp=Z,1.7nm,0.6s,baz=179,slow=3.4,SNR=5.3
USRK LR LR 10 17 26.6
comp=Z,80nm,18.2s,baz=171,slow=37
USRK Ussuriysk Ar. 34.05 7 P **P** **10 02 55.9 -0.5**
MDJ Mudanjiang 34.23 4 P **P** **10 02 58.7 +0.7**
MDJ pP sP 10 03 13.0 -3.5
MDJ sP pwP 10 03 20.0 -0.9
MDJ pmax pmax
comp=Z,38nm,1.1s
MDJ pmax pmax
comp=Z,130nm,3.7s
ASAR Alice Springs 34.60 168 P **P** **10 03 00.5 -1.0**
comp=Z,2.6nm,0.5s,baz=352,slow=7.4,SNR=62
ASAR PcP **PcP** **10 05 35.5 +0.5**
comp=Z,5.4nm,0.8s,baz=347,slow=2.8,SNR=10.0
ASAR S **S** **10 08 26.2 -0.5**
comp=Z,2.1nm,1.0s,baz=351,slow=21,SNR=4.2
ASAR ScP **ScP** **10 09 18.6 +3.3**
comp=Z,1.7nm,0.9s,baz=347,slow=2.5,SNR=5.5
ASAR Alice Springs 34.60 168 P **P** **10 02 59.8 -1.7**
WRKA Warakurna 35.24 177 P **P** **10 03 06.4 -0.6**
baz=35,SNR=17
CTA Charters Tower 36.00 147 P **P** **10 03 14.0 +0.5**
comp=Z,22nm,0.9s,baz=327,slow=12,SNR=24
SHL Shillong 36.05 299 P **P** **10 03 11.2 -3.0**
SHL pmax pmax
comp=Z,22nm,1.0s
SHL Shillong 36.05 299 P **P** **10 03 11.2 -3.0**
SHL lAmb lAmb 10 03 15.2
comp=Z,22nm,1.0s
GTA Gaotai 37.40 325⇓P **P** **10 03 24.8 -0.6**
GTA pP sP 10 03 40.6 -4.3
GTA sP pwP 10 03 47.1 +0.7
GTA PcP **PcP** **10 05 44.5 +1.2**
GTA pmax pmax
comp=Z,28nm,0.8s
GTA pmax pmax
comp=Z,110nm,4.1s
GTA LR LR
comp=Z,270nm,18.7s
GTA LR LR
comp=Z,280nm,18.4s
GTA LR LR
comp=Z,420nm,18.1s
LSA Lhasa 38.12 305 lAmb lAmb 10 03 35.4
comp=Z,13nm,1.1s
KLR Kul'dur 38.99 6⇓*e*P **P** **10 03 37.8 -0.7**
KLR pmax pmax
comp=Z,27nm,1.6s
KLR Kul'dur 38.99 6 P **P** **10 03 38.6 +0.2**
comp=Z,5.7nm,0.5s,baz=196,slow=5.7,SNR=38
KLR PcP **PcP** **10 05 48.5 +0.7**
comp=Z,5.3nm,0.8s,baz=317,slow=4.1,SNR=6.4
YSS Yuzh-Sakhalins 39.00 18 *e*P **P** **10 03 42.8 +4.3**
YSS *e* 10 04 01.7
YSS MLR MLR
comp=Z,200nm,15.0s
H11S3 WAKE ISLAND Hy 39.72 74 T T 10 46 49.0
baz=261,slow=73,SNR=28
H11S1 WAKE ISLAND Hy 39.73 74 T T 10 46 48.6
baz=261,slow=73,SNR=14
H11S2 WAKE ISLAND Hy 39.74 74 T T 10 46 48.4
baz=261,slow=73,SNR=11
H11N1 WAKE ISLAND Hy 40.05 72 T T 10 47 19.4
baz=264,slow=74,SNR=55
H11N2 WAKE ISLAND Hy 40.06 72 T T 10 47 17.3
baz=264,slow=74,SNR=40
H11N3 WAKE ISLAND Hy 40.07 72 T T 10 47 18.8
baz=264,slow=74,SNR=49
TAPN Taplejung 40.16 300 *e*P **P** **10 03 46.6 -2.3**
ODAN Odare 40.29 299 *e*P **P** **10 03 47.7 -2.2**
comp=Z,65nm,0.7s
MORW Morawa 40.47 194 P **P** **10 03 50.6 -0.4**
baz=41,SNR=8.6
MORW Morawa 40.47 194 P **P** **10 03 50.0 -1.1**
MORW lAmb lAmb 10 03 51.3
comp=Z,26nm,0.7s
QLP Quilpie 40.59 155 P **P** **10 03 51.3 -0.7**
baz=41,SNR=7.6
ULN Ulaanbaatar 40.79 340*d i*P **P** **10 03 53.7 0.0**
ULN pmax pmax
comp=Z,32nm,1.7s
ULN Ulaanbaatar 40.79 340 P **P** **10 03 53.7 0.0**
FORT Forrest 40.94 178 P **P** **10 03 54.7 -0.1**
baz=41,SNR=27
FORT Forrest 40.94 178 P **P** **10 03 54.5 -0.4**
RAMN Ramite 40.99 299 *e*P **P** **10 03 53.4 -2.3**
SONM Songino Array 40.99 339 P **P** **10 03 55.2 0.0**
SONM 10 05 55.1
SONM pmax pmax
comp=Z,22nm,1.6s
SONM Songino Array 40.99 339 P **P** **10 03 55.3 0.0**
comp=Z,4.5nm,0.7s,baz=156,slow=9.4,SNR=30
SONM PcP **PcP** **10 05 55.1 +0.7**
comp=Z,4.4nm,0.7s,baz=146,slow=2.2,SNR=8.4
SONM ScP **ScP** **10 09 44.1 +4.8**
comp=Z,0.8nm,0.9s,baz=150,slow=5.3,SNR=4.0
SONM LR LR 10 22 08.7
comp=Z,103nm,18.1s,baz=124,slow=38
SONM Songino Array 40.99 339 P **P** **10 03 55.2 0.0**
GRNR Gornyy 41.11 10⇓*i*P **P** **10 03 56.9 +0.9**
GRNR *e*S **S** **10 10 08.9 +4.3**
GRNR pmax pmax
comp=Z,30nm,1.1s
GRNR smax smax
comp=N,2.0nm,1.3s
GRNR MLR MLR
comp=Z,370nm,15.0s
JIRN Jiri 41.54 300 *e*P **P** **10 03 58.0 -2.3**
comp=Z,42nm,0.7s
KMBL Kambalda 41.73 186 P **P** **10 04 00.8 -0.5**
baz=42,SNR=24
CHLP Challavanipeta 41.76 286 *e*P **P** **10 04 00.8 -1.0**
CHLP lAmb lAmb 10 04 03.2
comp=Z,5.6nm,0.7s
BLDU Ballidu 41.81 193 P **P** **10 04 01.6 -0.4**
baz=42,SNR=5.5
GUN Gumba 41.87 300 *e*P **P** **10 04 00.7 -2.3**
comp=Z,56nm,0.9s
KKN Kakani 42.35 300 *e*P **P** **10 04 04.9 -1.9**
KLBR Kellerberrin 42.55 191 P **P** **10 04 07.6 -0.3**
baz=43,SNR=15
EIDS Eidsvold 42.87 146 P **P** **10 04 09.8 -0.9**
EIDS lAmb lAmb 10 04 11.2
comp=Z,21nm,1.1s
MUN Mundaring 43.23 193 P **P** **10 04 13.3 -0.2**
baz=43,SNR=9.0
ZEA Zeya 43.26 1 *e*P **P** **10 04 13.0 -0.4**
ZEA pmax pmax
comp=Z,21nm,1.2s
ZEA MLR MLR
comp=Z,400nm,17.0s
KOLN Koldanda 43.78 299 *e*P **P** **10 04 15.8 -2.5**
comp=Z,26nm,0.9s
DANN Dangsing 43.79 300 *e*P **P** **10 04 15.8 -2.7**
comp=Z,34nm,0.9s
BBOO Buckleboo 43.90 168 P **P** **10 04 18.9 0.0**
baz=44,SNR=22
BBOO Buckleboo 43.90 168 P **P** **10 04 18.6 -0.3**
NWAO Narrogin (SRO) 43.94 191 P **P** **10 04 19.4 +0.3**
baz=44,SNR=19
NWAO Narrogin (SRO) 43.94 191 P **P** **10 04 19.5 +0.3**
NWAO pmax pmax
comp=Z,47nm,0.8s
NWAO Narrogin (SRO) 43.94 191 P **P** **10 04 19.5 +0.3**
NWAO Narrogin (SRO) 43.94 191 P **P** **10 04 19.4 +0.3**
NWAO lAmb lAmb 10 04 20.5
comp=Z,37nm,0.8s
PVM Polavaram 43.99 284 *e*P **P** **10 04 18.5 -1.4**
PVM lAmb lAmb 10 04 19.4
comp=Z,4.7nm,0.7s
ZAK Zakamensk 44.24 339 *e*P **P** **10 04 20.9 -0.6**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
STKA Stephens Creek 44.44 161 P **P** **10 04 23.0 -0.2**
comp=Z,4.1nm,0.4s,baz=340,slow=9.2,SNR=28
MYLAV Mylavaram 44.91 283 *e*P **P** **10 04 25.7 -1.5**
MYLAV lAmb lAmb 10 04 27.0
comp=Z,6.0nm,0.9s
HTT Hallett 45.15 165 P **P** **10 04 30.6 +1.8**
baz=45,SNR=6.5
TLY Talaya 45.20 340 *e*P **P** **10 04 29.8 +0.7**
TLY pmax pmax
comp=Z,105nm,1.2s
TLY MLR MLR
comp=Z,576nm,17.0s
TLY Talaya 45.20 340 P **P** **10 04 29.6 +0.6**
comp=Z,19nm,0.7s,baz=175,slow=6.4,SNR=35
TLY Talaya 45.20 340 P **P** **10 04 28.7 -0.4**
TLY lAmb lAmb 10 04 31.3
comp=Z,24nm,0.7s
GGR Gangavaram 45.37 285 *e*P **P** **10 04 29.1 -1.9**
GGR lAmb lAmb 10 04 34.4
comp=Z,5.1nm,0.9s
ADKI Addanki 45.53 282 *e*P **P** **10 04 30.6 -1.5**
ADKI lAmb lAmb 10 04 32.0
comp=Z,3.8nm,0.8s
CMSA Cobar Meteorol 45.56 157 P **P** **10 04 32.7 +0.6**
baz=46,SNR=14
RKGY Rocky Gully 45.62 191 P **P** **10 04 33.3 +0.8**
baz=46,SNR=10
SKHT Srikalahasti 45.78 279 *e*P **P** **10 04 33.3 -0.9**
SKHT lAmb lAmb 10 04 37.0
comp=Z,13nm,0.9s
MOY Mondy 46.12 338 *e*P **P** **10 04 36.7 +0.3**
MOY pmax pmax
comp=Z,50nm,1.6s
NJS Nagarjunasagar 46.18 283 *e*P **P** **10 04 36.1 -1.2**
NJS lAmb lAmb 10 04 36.6
comp=Z,6.0nm,0.7s
SRLM Srisailam 46.57 282 *e*P **P** **10 04 38.5 -1.8**
SRLM lAmb lAmb 10 04 42.9
comp=Z,4.8nm,0.7s
HYB Hyderabad 46.92 284 *i* P **P** **10 04 41.5 -1.7**
HYBB Hyderabad (bro 46.93 284 *e*P **P** **10 04 42.0 -1.1**
HYBB lAmb lAmb 10 04 42.3
comp=Z,5.8nm,0.6s
SRSP Sriramsagar 47.20 286 *e*P **P** **10 04 44.1 -1.1**
SRSP lAmb lAmb 10 04 45.1
comp=Z,7.1nm,0.9s
ARMA Armidale 47.23 150 P **P** **10 04 45.7 +0.4**
ARMA lAmb lAmb 10 06 09.7
comp=Z,42nm,1.5s
WMQ Urumqi 47.26 322 *e*P **P** **10 04 44.6 -0.8**
WMQ pP pP 10 04 59.7 +0.7
WMQ pmax pmax
comp=Z,14nm,0.9s
WMQ pmax pmax
comp=Z,130nm,5.1s
WMQ LR LR
comp=Z,250nm,10.5s
WMQ LR LR
comp=Z,300nm,14.5s
WMQ LR LR
comp=Z,310nm,16.1s
WMQ Urumqi 47.26 322 lAmb lAmb 10 05 03.4
comp=Z,22nm,1.1s
DMPR Damasthipur 47.73 284 *e*P **P** **10 04 47.7 -1.7**
DMPR lAmb lAmb 10 04 48.4
comp=Z,5.4nm,0.7s
URV Uravakonda 48.14 281 *e*P **P** **10 04 50.8 -1.8**
URV lAmb lAmb 10 04 51.7
comp=Z,8.8nm,0.8s
BOD Bodaibo 48.30 351 *e*P **P** **10 04 51.3 -1.8**
BOD pmax pmax
comp=Z,17nm,1.4s
KLRI Killari 48.81 285 *e*P **P** **10 04 56.4 -1.3**
KLRI lAmb lAmb 10 04 56.6
comp=Z,13nm,0.7s
ARPS Mount Arapiles 49.07 164 P **P** **10 04 59.9 +0.6**
baz=49,SNR=8.0
PEA0B Petropavlovsk- 49.47 24⇓*e*P **P** **10 05 02.3 +0.1**
PETK Petropavlovsk- 49.47 24 P **P** **10 05 03.6 +1.4**
comp=Z,8.5nm,0.7s,baz=208,slow=5.3,SNR=23
PETK LR LR 10 26 53.1
comp=Z,171nm,18.5s,baz=241,slow=37
TOO Toolangi 50.92 160 P **P** **10 05 15.0 +1.6**
TOO pmax pmax
comp=Z,31nm,1.3s
TOO Toolangi 50.92 160 P **P** **10 05 14.9 +1.6**
TOO lAmb lAmb 10 05 15.6
comp=Z,31nm,1.3s
YAK Yakutsk 51.62 2 *e*P **P** **10 05 17.7 -0.5**
YAK pmax pmax
comp=Z,19nm,0.9s
YAK pmax pmax
comp=N,12nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.5s
YAK Yakutsk 51.62 2 P **P** **10 05 17.9 -0.3**
comp=E,3.8nm,0.4s,baz=360,slow=2.5,SNR=9.2
YAK Yakutsk 51.62 2 P **P** **10 05 18.3 +0.1**
MK31 Makanchi Array 52.06 323 *i* P **P** **10 05 20.3 -1.5**
MK31 Makanchi Array 52.06 323 lAmb lAmb 10 05 25.2
comp=Z,20nm,1.2s
MKAR Makanchi Array 52.06 323*ce*P **P** **10 05 21.0 -0.8**
MKAR pmax pmax
comp=Z,11nm,0.6s
MKAR Makanchi Array 52.06 323 P **P** **10 05 21.0 -0.8**
comp=Z,11nm,0.7s,baz=118,slow=8.1,SNR=119
MKAR PcP **PcP** **10 06 33.4 +0.2**
comp=Z,11nm,0.8s,baz=111,slow=5.2,SNR=6.4
MKAR LR LR 10 26 38.6
comp=Z,120nm,20.3s,baz=119,slow=35
MKAR Makanchi Array 52.06 323 P **P** **10 05 20.6 -1.2**
PDGK Podgornoye 52.25 318 P **P** **10 05 21.8 -1.6**
MAKZ Makanchi 52.25 323 P **P** **10 05 22.5 -0.7**
MAKZ pmax pmax
comp=Z,21nm,1.1s
MAKZ Makanchi 52.25 323 P **P** **10 05 22.5 -0.7**
MAKZ lAmb lAmb 10 05 35.5
comp=Z,21nm,1.1s
KSH Kashi 53.30 312 P **P** **10 05 31.5 +0.3**
KSH pP sP 10 05 48.9 -3.0
KSH PP **PP** **10 07 34.4 +2.5**
KSH S **S** **10 12 57.3 -1.4**
KSH sS sS 10 13 27.5 +2.2
KSH SS **SS** **10 16 37.5 -1.7**
KSH pmax pmax
comp=Z,280nm,5.1s
KSH LR LR
comp=Z,290nm,5.1s
KSH LR LR
comp=Z,460nm,6.3s
KSH LR LR
comp=Z,370nm,6.3s
ZAA0 Zalesovo Array 54.63 331 lAmb lAmb 10 05 41.0
comp=Z,11nm,0.8s
ZALV Zalesovo Beam 54.63 331 P **P** **10 05 39.5 -0.9**
comp=Z,9.4nm,0.6s,baz=122,slow=6.4,SNR=47
ZALV PcP **PcP** **10 06 42.0 -0.8**
comp=Z,9.1nm,0.8s,baz=124,slow=2.6,SNR=6.4
ZALV LR LR 10 29 51.1
comp=Z,75nm,18.8s,baz=95,slow=37
ZALV Zalesovo Beam 54.63 331 P **P** **10 05 39.1 -1.3**
KZA Kyzart 54.67 315 P **P** **10 05 41.0 -0.5**
SNR=12
TKM2 Tokmak 2 54.72 316 P **P** **10 05 39.7 -1.9**
TKM2 Tokmak 2 54.72 316 P **P** **10 05 40.8 -0.9**
SNR=6.8
KBK Karagaybulak 55.08 315 P **P** **10 05 43.7 -0.5**
SNR=5.4
UCH Uchtor 55.23 315 P **P** **10 05 45.0 -0.7**
SNR=26
CHMS Chumysh 55.33 316 P **P** **10 05 44.5 -1.3**
SNR=5.2
AAK Ala-Archa 55.38 315 P **P** **10 05 45.5 -0.9**
AAK Ala-Archa 55.38 315 P **P** **10 05 45.3 -1.0**
comp=Z,3.0nm,0.7s,baz=144,slow=10,SNR=6.8
AAK Ala-Archa 55.38 315 P **P** **10 05 45.6 -0.8**
USP Ospenovka 55.59 316 P **P** **10 05 46.6 -1.1**
SNR=8.2
SEY Seymchan 55.68 14⇓*e*P **P** **10 05 48.3 +0.4**
AML Almayashu 55.78 314 P **P** **10 05 49.0 -0.5**
SNR=16
EKS2 Erkin-Say 55.89 315 P **P** **10 05 49.4 -0.6**
SNR=11
KURK Kurchatov 56.09 325*d i*P **P** **10 05 50.0 -1.0**
KURK pmax pmax
comp=Z,24nm,0.8s
KURK Kurchatov 56.09 325 P **P** **10 05 50.2 -0.9**
BTK Batken 57.26 311 lAmb lAmb 10 06 02.9
comp=Z,7.1nm,0.8s
GAR Garm 57.37 310 P **P** **10 05 59.9 -0.6**
KK31 Karatay Array 58.31 315 *i* P **P** **10 06 05.1 -1.8**
KK31 Karatay Array 58.31 315 lAmb lAmb 10 06 06.6
comp=Z,9.6nm,0.8s
KKAR Karatay Array 58.31 315 P **P** **10 06 05.2 -1.7**
KKAR Karatay Array 58.31 315 P **P** **10 06 05.2 -1.7**
KKAR Karatay Array 58.31 315 lAmb lAmb 10 06 06.6
comp=Z,9.6nm,0.8s
TIXI Tiksi 61.25 1⇓*e*P **P** **10 06 25.4 -1.1**
TIXI pmax pmax
comp=Z,17nm,1.0s
TIXI Tiksi 61.25 1 P **P** **10 06 25.5 -1.1**
TIXI lAmb lAmb 10 06 27.2
comp=Z,15nm,1.0s
BRVK Borovoye 61.76 325 P **P** **10 06 29.0 -1.3**
BRVK Borovoye 61.76 325 P **P** **10 06 29.5 -0.8**
BRVK lAmb lAmb 10 06 31.7
comp=Z,13nm,0.8s
BILL Bilibino 63.26 16⇑*e*P **P** **10 06 40.5 +0.4**
BILL *i* *PP **sP** **10 06 57.5 -1.3**
BILL pmax pmax
comp=Z,14nm,1.7s
BILL MLR MLR
comp=Z,88nm,16.0s

BILL	**Bilibino**	**63.26**	**16**	P	**P**	**10 06 41.1**	**+1.0**
BILL				IAmb	IAmb	10 06 58.4	
	comp=Z,8.9nm,1.0s						
TOZ	**Tahuroa Road**	**66.28**	**139**	P	P	10 07 10.1	+10
GEYT	**Alibeck**	**66.63**	**307**	P	**P**	**10 07 01.1**	**-1.5**
	comp=Z,3.7nm,0.7s,baz=101,slow=3.0,SNR=8.3						
GEYT	**Alibeck**	**66.63**	**307**	P	**P**	**10 07 01.8**	**-0.8**
GYA0B	**ALIBECK ARRAY**	**66.63**	**307**	P	**P**	**10 07 00.9**	**-1.7**
GYA0B				IAmb	IAmb	10 07 08.0	
	comp=Z,11nm,1.1s						
AB31	**Akbulak array**	**66.92**	**319**	P	**P**	**10 07 01.8**	**-2.3**
ABKAR	**Akbulak array**	**66.92**	**319**	P	**P**	**10 07 02.5**	**-1.7**
ABKAR	**Akbulak array**	**66.92**	**319**	P	**P**	**10 07 02.1**	**-2.0**
ABKAR				IAmb	IAmb	10 07 04.2	
	comp=Z,14nm,1.4s						
MRHZ	**Matea Rd**	**67.50**	**140**	P	**P**	**10 07 05.9**	**-2.1**
URZ	**Urewera**	**67.62**	**139**	P	**P**	**10 07 05.5**	**-3.2**
BHHZ	**Black Hill Sta**	**67.66**	**140**	P	**P**	**10 07 10.5**	**+1.5**
HAZ	**Te Kaha**	**67.78**	**138**	P	**P**	**10 07 09.5**	**-0.1**
RUGZ	**Raukumara Rang**	**67.82**	**138**	P	**P**	**10 07 08.4**	**-1.8**
KWHZ	**Kaweka Forest**	**67.85**	**140**	P	**P**	**10 07 10.6**	**+0.4**
TSZ	**Takapari Road**	**67.93**	**141**	P	P	10 07 15.6	+5.0
MWZ	**Matawai**	**67.93**	**139**	P	**P**	**10 07 08.4**	**-2.3**
KRHZ	**Kereru**	**67.94**	**140**	P	**P**	**10 07 12.1**	**+1.4**
PKGZ	**Pakihiroa**	**68.04**	**138**	P	**P**	**10 07 13.0**	**+1.6**
MRZ	**Mangatainoka R**	**68.05**	**142**	P	P	10 07 21.7	+10
ARHZ	**Aropaoanui**	**68.12**	**140**	P	**P**	**10 07 10.8**	**-1.0**
SVE	**Sverdlovsk**	**68.23**	**327**	*e*P	**P**	**10 07 11.1**	**-1.1**
SVE				pmax	pmax		
	comp=Z,22nm,1.0s						
WMGZ	**Waiomatatini S**	**68.23**	**138**	P	**P**	**10 07 14.2**	**+1.7**
KAHZ	**Kahuranaki**	**68.35**	**140**	P	**P**	**10 07 14.9**	**+1.6**
BFZ	**Birch Farm**	**68.47**	**141**	P	**P**	**10 07 15.2**	**+1.2**
PXZ	**Pawanui**	**68.48**	**141**	P	P	10 07 08.4	-5.5
ANWZ	**Angora Road**	**68.48**	**141**	P	P	10 07 20.2	+6.1
ARU	**Arti**	**69.24**	**327**	*c i*P	**P**	**10 07 17.3**	**-1.3**
ARU						10 07 38.3	
ARU				S	**S**	**10 16 21.4**	**+1.2**
ARU				pmax	pmax		
	comp=Z,17nm,0.7s						
ARU	**Arti**	**69.24**	**327**	P	**P**	**10 07 17.7**	**-0.9**
ARU				IAmb	IAmb	10 07 18.2	
	comp=Z,18nm,0.6s						
SOCY	**Socotra**	**70.89**	**279**	P	**P**	**10 07 28.1**	**-1.5**
SOCY				IAmb	IAmb	10 07 31.5	
	comp=Z,25nm,1.0s						
ANM	**Nome**	**71.38**	**25**	P	**P**	**10 07 33.0**	**+1.5**
ANM				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ANM	**Nome**	**71.38**	**25**	P	**P**	**10 07 33.0**	**+1.5**
SVW2	**Sparrevohn**	**75.17**	**29**	P	**P**	**10 07 55.2**	**+1.3**
SVW2				IAmb	IAmb	10 07 56.5	
	comp=Z,24nm,1.0s						
IMAR	**Indian Mountai**	**76.44**	**24**	P	**P**	**10 08 01.8**	**+0.8**
KDAK	**Kodiak Island**	**76.48**	**33**	P	**P**	**10 08 02.8**	**+1.4**
KDAK				pmax	pmax		
	comp=Z,201nm,1.8s						
KDAK	**Kodiak Island**	**76.48**	**33**	P	**P**	**10 08 02.8**	**+1.4**
PRGR	**Permogore**	**76.58**	**331**	*e*P	**P**	**10 07 59.3**	**-2.6**
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PPLA	**Purkeypile**	**76.90**	**28**	P	**P**	**10 08 03.2**	**-0.6**
GNI	**Garni**	**77.08**	**309**	⇓*e*P	**P**	**10 08 04.1**	**-1.3**
GNI				pmax	pmax		
	comp=Z,24nm,1.5s						
BRLK	**Bradley Lake**	**77.42**	**31**	P	**P**	**10 08 06.4**	**-0.3**
BPAW	**Bear Paw Mtn.**	**77.49**	**26**	P	**P**	**10 08 07.7**	**+0.7**
KTH	**Kantishna Hill**	**77.50**	**27**	P	**P**	**10 08 06.5**	**-0.6**
KTH				IAmb	IAmb	10 08 21.2	
	comp=Z,14nm,1.2s						
ZEI	**Tsey**	**77.59**	**312**	*e*P	**P**	**10 08 06.2**	**-2.0**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MLY	**Manley**	**77.63**	**26**	P	**P**	**10 08 08.8**	**+1.0**
MLY				IAmb	IAmb	10 08 09.9	
	comp=Z,13nm,0.8s						
RAYN	**Ar Rayn**	**77.70**	**292**	P	**P**	**10 08 07.8**	**-1.2**
RAYN				pmax	pmax		
	comp=Z,14nm,0.8s						
RAYN	**Ar Rayn**	**77.70**	**292**	P	**P**	**10 08 07.8**	**-1.2**
RAYN				IAmb	IAmb	10 08 08.4	
	comp=Z,14nm,0.8s						
TRF	**Thorofare Moun**	**77.78**	**27**	P	**P**	**10 08 09.6**	**+0.8**
TRF				IAmb	IAmb	10 08 10.2	
	comp=Z,16nm,1.0s						
COLD	**Coldfoot**	**77.93**	**23**	P	**P**	**10 08 09.1**	**-0.2**
AKH	**Akhalkalaki**	**77.96**	**310**	⇑P	**P**	**10 08 10.3**	**0.0**
TOLK	**Toolik Lake Re**	**78.22**	**22**	IAmb	IAmb	10 08 13.4	
	comp=Z,16nm,0.8s						
TOLK	**Toolik Lake Re**	**78.22**	**22**	P	**P**	**10 08 12.2**	**+1.2**
	baz=268						
KBZ	**Khabaz**	**78.28**	**313**	P	**P**	**10 08 10.4**	**-1.2**
	comp=Z,4.7nm,1.0s,baz=92,slow=4.1,SNR=7.9						
MCK	**McKinley**	**78.39**	**27**	P	**P**	**10 08 12.6**	**+0.6**
MCK				pmax	pmax		
	comp=Z,32nm,0.9s						
MCK	**McKinley**	**78.39**	**27**	P	**P**	**10 08 12.6**	**+0.6**
KIV	**Kislovodsk**	**78.42**	**313**	*i* P	**P**	**10 08 11.9**	**-0.7**
KIV				*i*		10 08 21.5	
KIV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KIV				MLR	MLR		
	comp=Z,71nm,18.0s						
KIV	**Kislovodsk**	**78.42**	**313**	P	**P**	**10 08 12.5**	**-0.2**
RND	**Reindeer**	**78.43**	**27**	IAmb	IAmb	10 08 25.5	
	comp=Z,18nm,1.2s						
SML	**Sawmill**	**78.68**	**29**	P	**P**	**10 08 13.3**	**-0.4**
VRH	**Novokhopyorsk**	**78.71**	**320**	*e*P	**P**	**10 08 11.5**	**-2.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WRH	**Wood River Hil**	**78.76**	**26**	P	**P**	**10 08 14.3**	**+0.3**
WRH				IAmb	IAmb	10 08 15.4	
	comp=Z,26nm,1.4s						
COLA	**College**	**78.86**	**26**	⇑*e*P	**P**	**10 08 14.6**	**+0.1**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CCB	**Clear Creek Bu**	**78.88**	**26**	IAmb	IAmb	10 08 15.5	
	comp=Z,23nm,1.5s						
POKR	**Poker Plat Res**	**79.03**	**25**	P	**P**	**10 08 17.1**	**+1.6**
	baz=271						
DHY	**Denali Highway**	**79.10**	**28**	P	**P**	**10 08 13.2**	**-2.9**
SCM	**Sheep Creek Mo**	**79.15**	**29**	P	**P**	**10 08 14.2**	**-2.1**
SCM				pmax	pmax		
	comp=Z,149nm,2.0s						
SCM	**Sheep Creek Mo**	**79.15**	**29**	P	**P**	**10 08 14.2**	**-2.1**
HDA	**Harding Lake**	**79.26**	**26**	IAmb	IAmb	10 08 17.7	
	comp=Z,8.8nm,0.6s						
HDA	**Harding Lake**	**79.26**	**26**	P	**P**	**10 08 16.5**	**-0.2**
	baz=272						
ILAR	**Eielson Array**	**79.27**	**26**	P	**P**	**10 08 15.7**	**-1.1**
ILAR	**Eielson Array**	**79.27**	**26**	P	**P**	**10 08 16.1**	**-0.7**
	comp=Z,3.7nm,0.7s,baz=240,slow=5.0,SNR=63						
ILAR	**Eielson Array**	**79.27**	**26**	P	**P**	**10 08 15.7**	**-1.1**
FYU	**Fort Yukon**	**79.89**	**24**	IAmb	IAmb	10 08 22.9	
	comp=Z,26nm,1.2s						
PAX	**Paxson**	**79.97**	**28**	P	**P**	**10 08 20.9**	**+0.2**
PAX				pmax	pmax		
	comp=Z,73nm,2.0s						
PAX	**Paxson**	**79.97**	**28**	P	**P**	**10 08 20.9**	**+0.2**
BMAR	**Burnt Mountain**	**80.11**	**23**	P	**P**	**10 08 22.9**	**+1.6**
RIDG	**Independent Ri**	**80.21**	**27**	IAmb	IAmb	10 08 23.3	
	comp=Z,17nm,0.8s						
VORD	**Divnogorie**	**80.25**	**320**	*e*P	**P**	**10 08 20.5**	**-1.8**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR	**Storozhevoye**	**80.31**	**320**	*e*P	**P**	**10 08 20.2**	**-2.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LPSR	**Galich'ya Gora**	**80.35**	**322**	*e*P	**P**	**10 08 20.5**	**-2.3**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DOT	**Dot Lake**	**80.56**	**27**	IAmb	IAmb	10 09 18.9	
	comp=Z,21nm,1.4s						
SCRK	**Sand Creek**	**80.57**	**27**	IAmb	IAmb	10 08 37.2	
	comp=Z,27nm,1.8s						
GLB	**Gilahina Butte**	**80.85**	**29**	P	**P**	**10 08 25.9**	**+0.5**
GLB				IAmb	IAmb	10 10 04.0	
	comp=Z,51nm,1.7s						
OBN	**Obninsk**	**81.52**	**324**	*e*P	**P**	**10 08 26.6**	**-2.4**
OBN				*i*		10 08 37.4	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,92nm,17.0s						
BCAR	**Beaver Creek A**	**81.64**	**27**	P	**P**	**10 08 30.6**	**+1.0**
EGAK	**Eagle**	**81.72**	**26**	IAmb	IAmb	10 08 31.7	
	comp=Z,41nm,1.9s						
BARN	**Barnard Glacie**	**81.92**	**29**	P	**P**	**10 08 31.9**	**+0.7**
BARN				IAmb	IAmb	10 08 37.5	
	comp=Z,27nm,1.2s						
CTGM	**Chitina Glacie**	**82.09**	**29**	P	**P**	**10 08 29.9**	**-2.2**
EPYK	**Eagle Plains**	**83.31**	**24**	IAmb	IAmb	10 08 52.1	
	comp=Z,11nm,0.9s						
EPYK	**Eagle Plains**	**83.31**	**24**	P	**P**	**10 08 39.2**	**+1.0**
	baz=280						
SPA0	**Spitsbergen Ar**	**83.95**	**349**	*e*P	**P**	**10 08 41.7**	**+0.4**
SPA0	**Spitsbergen Ar**	**83.95**	**349**	P	**P**	**10 08 41.8**	**+0.4**
HYT	**Haines Junctio**	**83.97**	**29**	P	**P**	**10 08 43.2**	**+1.4**
HYT				IAmb	IAmb	10 08 44.6	
	comp=Z,17nm,1.0s						
INK	**Inuvik**	**84.13**	**22**	LR	LR	10 51 31.1	
	comp=Z,40nm,18.1s,baz=89,slow=39						
INK	**Inuvik**	**84.13**	**22**	IAmb	IAmb	10 08 44.7	
	comp=Z,33nm,1.6s						
ARCES	**ARCESS Array B**	**84.17**	**340**	P	**P**	**10 08 42.8**	**+0.3**
	comp=Z,36nm,0.8s,baz=84,slow=6.3,SNR=67						
ARE0	**ARCESS Array S**	**84.17**	**340**	*e*P	**P**	**10 08 42.9**	**+0.4**
KBS	**Kingsbay**	**84.46**	**350**	*ce*P	**P**	**10 08 43.7**	**-0.1**
KBS				pmax	pmax		
	comp=Z,135nm,1.0s						
KBS	**Kingsbay**	**84.46**	**350**	*e*P	**P**	**10 08 44.1**	**+0.3**
KBS	**Kingsbay**	**84.46**	**350**	P	**P**	**10 08 44.5**	**+0.7**
HAMF	**Hammerfest**	**84.49**	**341**	*e*P	**P**	**10 08 44.3**	**+0.2**
HSPB	**Hornsund (broa**	**84.57**	**348**	*e*P	**P**	**10 08 44.3**	**0.0**
KTK1	**Kautokeino**	**85.08**	**339**	*e*P	**P**	**10 08 47.0**	**-0.1**
WHY	**Whitehorse**	**85.26**	**29**	P	**P**	**10 08 48.5**	**+0.2**
BR131	**Keskin Array S**	**85.61**	**309**	*c i*P	**P**	**10 08 48.8**	**-1.7**
BRTR	**Keskin Array B**	**85.61**	**309**	*ce*P	**P**	**10 08 49.0**	**-1.5**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	**Keskin Array B**	**85.61**	**309**	P	**P**	**10 08 49.0**	**-1.5**
	comp=Z,2.6nm,0.7s,baz=109,slow=5.1,SNR=18						
BRTR				LR	LR	10 51 31.2	
	comp=Z,22nm,18.1s,baz=95,slow=39						
BRTR	**Keskin Array B**	**85.61**	**309**	P	**P**	**10 08 48.5**	**-2.0**
FINES	**FINESS Array B**	**85.89**	**332**	*i* P	**P**	**10 08 51.2**	**0.0**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FINES	**FINESS Array B**	**85.89**	**332**	P	**P**	**10 08 50.5**	**-0.7**
	comp=Z,4.4nm,0.6s,baz=71,slow=4.9,SNR=22						
FINES	**FINESS Array B**	**85.89**	**332**	P	**P**	**10 08 50.9**	**-0.3**
TRO	**Tromso**	**86.34**	**340**	*e*P	**P**	**10 08 53.4**	**+0.1**
NOR	**Nord**	**86.50**	**355**	*i* P	**P**	**10 08 53.9**	**0.0**
	comp=Z,11nm,0.9s						
AKASG	**Malin Array Be**	**86.60**	**321**	P	**P**	**10 08 53.7**	**-1.2**
	comp=Z,2.4nm,0.6s,baz=65,slow=4.6,SNR=11						
AKBB	**Malin Array Si**	**86.60**	**321**	⇑*e*P	**P**	**10 08 53.7**	**-1.2**
C36M	**Paulatuk**	**87.09**	**20**	P	**P**	**10 08 57.3**	**+0.4**
	baz=292						
SORM	**Soroca**	**87.71**	**318**	⇑P	**P**	**10 08 59.0**	**-1.4**
SORM	**Soroca**	**87.71**	**318**	⇑P	**P**	**10 08 59.0**	**-1.4**
STEI	**Steigen**	**88.22**	**339**	*e*P	**P**	**10 09 00.7**	**-1.6**
HARR	**Harsova**	**88.78**	**315**	⇑P	**P**	**10 09 04.6**	**-0.9**
HARR	**Harsova**	**88.78**	**315**	⇑P	**P**	**10 09 04.6**	**-0.9**
TESR	**Tescani**	**89.22**	**317**	⇑P	**P**	**10 09 06.3**	**-1.3**
MOR8	**Moi Rana**	**89.22**	**338**	*e*P	**P**	**10 09 05.4**	**-1.8**
MAW	**Mawson**	**89.85**	**200**	LR	LR	10 47 23.9	
	comp=Z,38nm,18.1s,baz=9.0,slow=34						
BURAR	**Bucovina Array**	**89.89**	**318**	⇑P	**P**	**10 09 10.5**	**-0.3**
BURAR	**Bucovina Array**	**89.89**	**318**	⇑P	**P**	**10 09 10.5**	**-0.3**
BURAR	**Bucovina Array**	**89.89**	**318**	P	**P**	**10 09 10.3**	**-0.4**
BUR08	**Bucovina Ar. S**	**89.89**	**318**	IAmb	IAmb	10 09 12.6	
	comp=Z,8.0nm,1.1s						
VNDA	**Vanda**	**90.00**	**173**	P	**P**	**10 09 11.2**	**+0.7**
VNDA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VNDA	**Vanda**	**90.00**	**173**	P	**P**	**10 09 11.1**	**+0.7**
	comp=Z,4.0nm,0.8s,baz=324,slow=6.0,SNR=14						
VNDA	**Vanda**	**90.00**	**173**	P	**P**	**10 09 11.2**	**+0.7**
VNDA				IAmb	IAmb	10 09 24.0	
	comp=Z,7.8nm,0.8s						
DAG	**Danmarks Havn**	**90.68**	**352**	*i* P	**P**	**10 09 12.9**	**-0.8**
DAG				pmax	pmax		
	comp=Z,18nm,0.9s						
DAG	**Danmarks Havn**	**90.68**	**352**	*i* P	**P**	**10 09 12.9**	**-0.8**
	comp=Z,18nm,0.9s						
NSS	**Namsos**	**90.86**	**337**	*e*P	**P**	**10 09 13.4**	**-1.4**
RES	**Resolute Bay**	**91.37**	**10**	P	**P**	**10 09 16.0**	**-0.9**
RES				pmax	pmax		
	comp=Z,8.0nm,0.9s						
RES	**Resolute Bay**	**91.37**	**10**	P	**P**	**10 09 16.0**	**-0.9**
RES				IAmb	IAmb	10 09 18.7	
	comp=Z,7.8nm,0.8s						
UZH	**Uzhgorod**	**91.48**	**320**	*e*P	**P**	**10 09 20.2**	**+2.2**
UZH				*i*		10 09 42.3	
DRGR		**91.76**	**318**	⇑P	**P**	**10 09 18.5**	**-0.9**
DRGR		**91.76**	**318**	⇑P	**P**	**10 09 18.5**	**-0.9**
NB2	**NORSAR Subarra**	**92.75**	**334**	P	**P**	**10 09 22.0**	**-1.7**
	comp=Z,12nm,1.1s,baz=66,slow=4.4						
NB2	**NORSAR Subarra**	**92.75**	**334**	P	**P**	**10 09 22.0**	**-1.7**
	baz=66,slow=4.4						
NOA	**NORSAR Array B**	**92.75**	**334**	P	**P**	**10 09 22.5**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=61,slow=4.7,SNR=7.4						
NOA				LR	LR	10 54 31.6	
	comp=Z,62nm,18.4s,baz=25,slow=38						
DOMB	**Dombas**	**93.19**	**335**	*e*P	**P**	**10 09 24.9**	**-0.8**
YKA	**Yellowknife Ar**	**93.59**	**24**	P	**P**	**10 09 27.5**	**+0.1**
YKA	**Yellowknife Ar**	**93.59**	**24**	P	**P**	**10 09 28.1**	**+0.7**
	comp=Z,3.6nm,0.8s,baz=301,slow=4.7,SNR=47						
YKA	**Yellowknife Ar**	**93.59**	**24**	P	**P**	**10 09 27.5**	**+0.1**
VYHS	**Vyhne**	**93.70**	**321**	*e*P	**P**	**10 09 26.5**	**-1.8**
VYHS	**Vyhne**	**93.70**	**321**	*e*P	**P**	**10 09 26.5**	**-1.8**
AKN	**Aaknes**	**93.96**	**336**	*e*P	**P**	**10 09 29.0**	**-0.2**
KONO	**Kongsberg**	**94.11**	**333**	⇑*e*P	**P**	**10 09 30.1**	**+0.2**
KONO				pmax	pmax		
	comp=Z,27nm,1.2s						
VRAC	**Vranov**	**94.79**	**322**	LR	LR	10 58 32.3	
	comp=Z,41nm,18.9s,baz=283,slow=40						
SUMG	**Summit**	**96.64**	**355**	*e*P	**P**	**10 09 40.4**	**-1.3**
SUMG	**Summit**	**96.64**	**355**	*i* P	**P**	**10 09 40.4**	**-1.3**
GERES	**GERESS Array B**	**96.73**	**322**	P	**P**	**10 09 41.6**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=46,slow=3.9,SNR=6.6						
GERES				LR	LR	10 55 18.6	
	comp=Z,47nm,18.5s,baz=308,slow=37						
I04A	**Tendick Farm,**	**97.68**	**43**	P	Pdif	10 09 47.3	+0.7
	baz=292						
NEW	**Newport**	**99.18**	**37**	P	**Pdif**	**10 09 54.5**	**+1.3**
	baz=297						
NVAR	**Mina Array Bea**	**102.64**	**47**	Pdiff	**Pdif**	**10 10 09.6**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=316,slow=2.5,SNR=2.5						
TXAR	**Lajitas Array**	**117.62**	**49**	PKP	**PKiKP**	**10 14 59.5**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=217,slow=1.2,SNR=8.7						
JCT	**Junction City**	**119.81**	**46**	P	**PKiKP**	**10 15 03.3**	**+1.0**
	baz=305						
CCM	**Cathedral Cave**	**120.32**	**34**	P	**PKiKP**	**10 15 03.4**	**+0.4**
	baz=316						
TOA0	**Torodi Ar. Sit**	**120.40**	**292**		**PKPdf**	**10 15 03.1**	**-0.6**
TORD	**Torodi Ar. Bea**	**120.40**	**292**	PKP	**PKPdf**	**10 15 03.1**	**-0.6**
	comp=Z,4.2nm,0.8s,baz=65,slow=1.8,SNR=19						
TORD	**Torodi Ar. Bea**	**120.40**	**292**		**PKPdf**	**10 15 02.5**	**-1.1**
U40A	**Yellville**	**120.60**	**36**	P	**PKiKP**	**10 15 04.0**	**+0.3**
	baz=314						
L48A	**N Adams**	**120.72**	**26**	P	**PKiKP**	**10 15 04.0**	**+0.3**
	baz=324						
W39A	**Magazine**	**120.83**	**38**	P	**PKiKP**	**10 15 04.7**	**+0.6**
	baz=312						
833A	**Chaparral WMA,**	**121.32**	**48**	P	**PKiKP**	**10 15 06.7**	**+1.4**
	baz=304						
MIAR	**Mount Ida**	**121.39**	**38**	P	**PKiKP**	**10 15 06.6**	**+1.3**
	baz=312						
O48A	**Farmland**	**121.75**	**28**	P	**PKPdf**	**10 15 05.1**	**-0.6**
	baz=323						
O49A	**Covington**	**122.18**	**28**	P	**PKiKP**	**10 15 06.9**	**+0.2**
	baz=324						
N50A	**Nevada**	**122.23**	**26**	P	**PKiKP**	**10 15 07.1**	**+0.4**
	baz=325						
P48A	**Milroy**	**122.25**	**29**	P	**PKiKP**	**10 15 06.9**	**+0.1**
	baz=322						
O50A	**Cable**	**122.53**	**27**	P	**PKiKP**	**10 15 07.6**	**+0.2**
	baz=324						
M53A	**WI Miller and**	**122.72**	**24**	P	**PKiKP**	**10 15 08.0**	**+0.4**
	baz=328						
ACSO	**Alum Creek Sta**	**122.75**	**27**	P	**PKiKP**	**10 15 08.3**	**+0.5**
	baz=325						
WCI	**Wyandotte Cave**	**122.79**	**30**	PKIKP	**PKiKP**	**10 15 08.5**	**+0.6**
WCI	**Wyandotte Cave**	**122.79**	**30**		**PKiKP**	**10 15 08.5**	**+0.6**
WCI	**Wyandotte Cave**	**122.79**	**30**	P	**PKiKP**	**10 15 08.4**	**+0.5**
	baz=321						
P50A	**Jamestown**	**122.89**	**28**	P	**PKiKP**	**10 15 08.1**	**0.0**
	baz=324						
L55A	**Hinsdale**	**122.94**	**22**	P	**PKiKP**	**10 15 08.2**	**0.0**
	baz=330						
J59A	**Piesco**	**123.12**	**18**	P	**PKiKP**	**10 15 08.9**	**+0.4**
	baz=335						
I60A	**Shoreham**	**123.13**	**17**	P	**PKiKP**	**10 15 09.4**	**+1.0**
	baz=337						
P51A	**Williamsport**	**123.33**	**27**	P	**PKiKP**	**10 15 08.9**	**0.0**
	baz=325						
WVT	**Waverly**	**123.58**	**33**	P	**PKiKP**	**10 15 09.9**	**+0.4**
	baz=318						
P52A	**Corning**	**123.61**	**26**	P	**PKiKP**	**10 15 09.6**	**+0.1**
	baz=326						
S49A	**Springfield**	**123.63**	**30**	P	**PKiKP**	**10 15 09.7**	**+0.1**
	baz=322						
OXF	**Oxford**	**123.89**	**36**	P	**PKiKP**	**10 15 10.9**	**+0.7**
	baz=316						
O54A	**Avella**	**123.90**	**25**	P	**PKiKP**	**10 15 10.8**	**+0.7**
	baz=328						
T49A	**Edmonton**	**124.04**	**31**	P	**PKiKP**	**10 15 11.0**	**+0.6**
	baz=321						
P53A	**Whipple**	**124.06**	**26**	P	**PKiKP**	**10 15 11.0**	**+0.6**
	baz=326						
Q52A	**Bidwell**	**124.11**	**27**	P	**PKiKP**	**10 15 10.8**	**+0.3**
	baz=325						
S50A	**Richmond**	**124.15**	**29**	P	**PKiKP**	**10 15 11.1**	**+0.4**
	baz=323						
U49A	**Red Boiling Sp**	**124.37**	**31**	P	**PKiKP**	**10 15 11.4**	**+0.3**
	baz=321						
T50A	**Nancy**	**124.45**	**30**	P	**PKiKP**	**10 15 11.4**	**+0.2**
	baz=322						
Q54A	**Coxs Mills**	**124.71**	**26**	P	**PKiKP**	**10 15 12.2**	**+0.4**
	baz=327						
R53A	**Hurricane**	**124.76**	**27**	P	**PKPdf**	**10 15 10.8**	**-0.7**
	baz=325						
V49A	**McMinnville**	**124.88**	**32**	P	**PKiKP**	**10 15 12.0**	**-0.2**
	baz=320						
U50A	**Jamestown**	**124.92**	**31**	P	**PKiKP**	**10 15 12.3**	**+0.1**
	baz=322						
P56A	**Dayton Farm, R**	**125.09**	**24**	P	**PKiKP**	**10 15 12.9**	**+0.4**
	baz=329						
W49A	**Belvidere**	**125.18**	**33**	P	**PKiKP**	**10 15 13.0**	**+0.2**
	baz=320						
S53A	**Williamson**	**125.22**	**28**	P	**PKiKP**	**10 15 13.3**	**+0.5**
	baz=325						
V50A	**Pikevile**	**125.37**	**32**	P	**PKiKP**	**10 15 13.2**	**0.0**
	baz=321						
W50A	**Signal Mountai**	**125.62**	**32**	P	**PKiKP**	**10 15 13.8**	**+0.1**
	baz=321						
V52A	**Sevierville**	**126.00**	**30**	P	**PKiKP**	**10 15 15.1**	**+0.7**
	baz=323						
LRAL	**Lakeview Retre**	**126.34**	**35**	P	**PKiKP**	**10 15 15.7**	**+0.6**
	baz=318						
W52A	**Murphy**	**126.42**	**31**	P	**PKiKP**	**10 15 16.0**	**+0.7**
	baz=322						
W53A	**Cullowhee**	**126.74**	**30**	P	**PKiKP**	**10 15 16.6**	**+0.6**
	baz=323						
Z50A	**Ashland**	**126.78**	**34**	P	**PKiKP**	**10 15 16.2**	**+0.2**
	baz=319						
R58B	**Mineral**	**126.80**	**24**	P	**PKiKP**	**10 15 16.4**	**+0.5**
	baz=330						
X52A	**Dahlonega**	**126.82**	**31**	P	**PKiKP**	**10 15 17.0**	**+0.9**
	baz=322						
V54A	**Nebo**	**126.85**	**29**	P	**PKiKP**	**10 15 16.7**	**+0.6**
	baz=324						
X53A	**Estanollee**	**127.20**	**31**	P	**PKiKP**	**10 15 17.9**	**+1.1**
	baz=322						
Y52A	**Lilburn**	**127.31**	**32**	P	**PKiKP**	**10 15 18.4**	**+1.4**
	baz=321						
Z52A	**Williamson**	**127.64**	**33**	P	**PKiKP**	**10 15 19.0**	**+1.2**
	baz=320						
KMSC	**Kings Mountain**	**127.65**	**29**	P	**PKiKP**	**10 15 17.7**	**0.0**
	baz=325						
V57A	**Coltrane Farms**	**127.76**	**27**	P	**PKiKP**	**10 15 18.2**	**+0.4**
	baz=327						
Z53A	**Monticello**	**128.02**	**32**	P	**PKiKP**	**10 15 19.5**	**+1.1**
	baz=322						
X55A	**Gracelyn & Ava**	**128.05**	**30**	P	**PKiKP**	**10 15 19.4**	**+0.9**
	baz=324						
KIC	**Kosan Boka**	**128.64**	**287**	*e*PKIKP	**PKPdf**	**10 15 19.7**	**+0.2**
	comp=Z,13nm,0.9s						
DBIC	**Dimbokro**	**128.65**	**287**	PKP	**PKiKP**	**10 15 19.9**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=94,slow=3.5,SNR=4.9						
TIC	**Toumodi**	**128.81**	**287**	*e*PKIKP	**PKPdf**	**10 15 20.0**	**+0.1**
LIC	**Lamto**	**128.95**	**287**	*e*PKIKP	**PKPdf**	**10 15 19.8**	**-0.3**
	comp=Z,21nm,1.0s						
PLCA	**Paso Flores**	**146.22**	**156**	PKPbc	**PKPab**	**10 15 53.9**	**+0.9**
	comp=Z,14nm,0.8s,baz=241,slow=3.2,SNR=31						
SOLC	**Bahia Solano**	**151.08**	**56**	*e*P	**PKiKP**	**10 16 06.8**	**+0.8**
UREC	**San Jos de Ur**	**151.66**	**51**	*e*P	**PKiKP**	**10 16 07.4**	**+0.2**
HELC	**Santa Helena**	**152.62**	**54**	*e*P	**PKPbc**	**10 16 08.8**	**-0.7**
OCAC	**Ocana**	**153.00**	**48**	*e*P	**PKiKP**	**10 16 10.8**	**+0.6**
OTAV	**Otavalo**	**153.08**	**68**	PKIKP	**PKiKP**	**10 16 12.2**	**+1.4**
OTAV	**Otavalo**	**153.08**	**68**		**PKiKP**	**10 16 12.2**	**+1.4**
YOTC	**Yotoco, Valle**	**153.19**	**59**	*e*P	**PKPbc**	**10 16 09.4**	**-1.0**
GUY2C	**Guyana, Caldas**	**153.31**	**56**	*e*P	**PKPdf**	**10 16 04.7**	**+1.1**
CRUC	**La Cruz**	**153.86**	**64**	*e*P	**PKPbc**	**10 16 12.1**	**-0.1**
SOTA	**Rioblanco**	**153.90**	**63**	*e*P	**PKPbc**	**10 16 12.1**	**-0.3**
PAMC	**Pamplona, Colo**	**154.06**	**48**	*e*P	**PKPbc**	**10 16 12.1**	**-0.6**
BARC	**Barichara**	**154.19**	**50**	*e*P	**PKiKP**	**10 16 12.8**	**0.0**
SDV	**Santo Domingo**	**154.41**	**42**		**PKiKP**	**10 16 14.2**	**+1.1**
CHIC	**Chingaza**	**154.98**	**54**	*e*P	**PKPdf**	**10 16 06.8**	**+1.0**
FLOC	**Florencia**	**155.00**	**63**	*e*P		10 16 12.8	
GUVC	**San Jose del G**	**157.08**	**57**	*e*P	**PKPdf**	**10 16 12.1**	**+4.0**
CPUP	**Villa Florida**	**163.72**	**168**	PKP2	**PKPab**	**10 17 08.0**	**+0.9**
CPUP	**Villa Florida**	**163.72**	**168**	PKP	**PKPdf**	**10 16 16.1**	**+1.1**
	comp=Z,3.4nm,1.0s,baz=70,slow=4.3,SNR=4.7						
CPUP				PKPab	**PKPab**	**10 17 08.0**	**+0.9**
	comp=Z,1.7nm,0.8s,baz=180,slow=5.1,SNR=3.3						
LPAZ	**La Paz**	**164.64**	**114**	PKP	**PKPdf**	**10 16 18.3**	**+1.4**
	comp=Z,5.6nm,1.0s,baz=350,slow=2.5,SNR=14						
LPAZ				PKPab	**PKPab**	**10 17 15.2**	**+2.8**
	comp=Z,3.1nm,0.8s,baz=222,slow=4.4,SNR=4.8						
SAML	**Samuel**	**170.40**	**82**	PKIKP	**PKPdf**	**10 16 21.2**	**+0.9**
SAML	**Samuel**	**170.40**	**82**		**PKPdf**	**10 16 21.2**	**+0.9**

*HLW **02** 10:14:40.8, 34.°51N×25.°85E, h17km±11km, Md3.8, Ml3.3*
*ISK **02** 10:14:41.2, 34.°69N×25.°34E, h25km, ML3.5/8*
*THE **02** 10:14:41.7, 34.°62N×25.°30E, h6km±1km, ML2.9/6, Error ellipse: s-maj=1.8km s-min=0.6km az=356.0*
*ATH **02** 10:14:42.8, 34.°85N×25.°30E, h44km±1km, ML3.0/7, Error ellipse: s-maj=3.1km s-min=1.3km az=353.0*
*IDC **02** 10:14:43.3±1.6, 34.°97N×24.°96E, h68km±9km, mb3.4/6, mb1 3.5/9, mb1mx3.2/50, mbtmp3.6/9, Error ellipse: s-maj=34.9km s-min=23.2km az=134.0*
ISC 02 10:14:39.7±1.1, **34.°57N**±0.°03×**25.°29E**±0.°03, **h31**km±9km, **n57**, σ**1§78**/77, **mb3.7**/6, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**0.57**	**39**	P	**Pn**	**10 14 53.4**	**+1.7**
FRMA				S	**Sn**	**10 15 03.3**	**+3.3**
SIVA	**Sivas**	**0.60**	**318**	P	**Pn**	**10 14 53.1**	**+1.0**
SIVA				S	**Sb**	**10 15 00.8**	**+0.8**
	10μm,0.5s						
SIVA	**Sivas**	**0.60**	**318**	P	**Pn**	**10 14 53.1**	**+1.0**
SIVA				S	**Sb**	**10 15 00.8**	**+0.8**
SIVA				AML	AML	10 15 03.7	
	comp=E,14378μm,0.3s						
SIVA				AML	AML	10 15 05.0	
	comp=N,15170μm,0.7s						
LAST	**Lasithi**	**0.61**	**15**	P	**Pb**	**10 14 52.3**	**+0.3**
LAST				S	**Sb**	**10 15 01.3**	**+0.9**
	comp=N,912nm,1.0s						
LAST	**Lasithi**	**0.61**	**15**	P	**Pb**	**10 14 52.1**	**+0.1**
LAST				S	**Sb**	**10 14 58.7**	**-1.7**
LAST				AML	AML	10 15 02.6	
	comp=E,3720μm,0.7s						
LAST				AML	AML	10 15 03.9	
	comp=N,2422μm,0.5s						
TMBK	**Timbaki Herakl**	**0.66**	**319**	P	**Pn**	**10 14 54.5**	**+1.6**
TMBK				S	**Sn**	**10 15 03.9**	**+1.6**
	comp=N,1μm,0.7s						
NPS	**Neapolis**	**0.74**	**21**	P	**Pb**	**10 14 54.4**	**+0.2**
NPS				S	**Sn**	**10 15 05.5**	**+1.3**
	comp=N,2μm,0.4s						
NPS	**Neapolis**	**0.74**	**21**	P	**Pb**	**10 14 54.3**	**+0.2**
NPS				S	**Sb**	**10 15 02.1**	**-1.8**
NPS				AML	AML	10 15 06.9	
	comp=E,2098μm,0.4s						
NPS				AML	AML	10 15 08.9	
	comp=N,2438μm,0.5s						
KSTL	**Kastelli Herak**	**0.75**	**346**	P	**Pb**	**10 14 53.3**	**-1.0**
KSTL				S	**Sb**	**10 15 02.3**	**-2.0**

HRKL	Herakleio	0.75	348	P	Pn	10 14 55.7	+1.5
HRKL	Herakleio	0.75	348	PG	Pb	10 14 54.8	+0.4
HRKL				SG	Sb	10 15 04.6	+0.2
IDI	Anoyia	0.79	335	LR	LR	10 14 47.6	
	comp=N,18nm,18.2s,baz=214,slow=13						
IDI				P	Pb	10 14 55.3	+0.3
	comp=N,39nm,0.3s,baz=152,slow=9.7,SNR=86						
IDI				S	Sb	10 15 05.1	-0.3
	comp=N,148nm,0.3s,baz=189,slow=19,SNR=38						
IDI	Anoyia	0.79	335	P	Pb	10 14 55.4	+0.4
IDI				S	Sb	10 15 03.9	-1.5
IDI				AML	AML	10 15 07.3	
	comp=E,1396μm,0.4s						
IDI				AML	AML	10 15 07.9	
	comp=N,2026μm,0.5s						
IDI	Anoyia	0.79	335	PG	Pb	10 14 55.5	+0.5
IDI				SG	Sn	10 15 06.1	+0.6
STIA	Sitia Lasithi	0.91	46	P	Pn	10 14 58.4	+2.1
STIA				S	Sn	10 15 10.8	+2.4
ZKR	Zakros	0.93	54	P	Pn	10 14 58.6	+1.9
ZKR				S	Sn	10 15 12.3	+3.3
	comp=N,548nm,0.8s						
ZKR	Zakros	0.93	54	P	Pn	10 14 58.8	+2.1
ZKR				S	Sb	10 15 09.6	+0.1
ZKR				AML	AML	10 15 15.5	
	comp=N,564μm,0.5s						
ZKR				AML	AML	10 15 20.2	
	comp=E,1656μm,0.6s						
ZKR	Zakros	0.93	54	PG	Pn	10 14 58.3	+1.6
GVDS	Gavdos	1.03	286	P	Pn	10 15 01.1	+3.1
GVDS	Gavdos	1.03	286	PG	Pn	10 15 00.9	+2.9
GVD	Gavdhos	1.03	285	P	Pn	10 15 00.8	+2.8
GVD	Gavdhos	1.03	285	P	Pn	10 15 00.7	+2.8
GVD	Gavdhos	1.03	285	PG	Pn	10 15 00.7	+2.8
VAM	Vamos	1.22	313	P	Pb	10 15 03.1	+0.8
VAM				S	Sn	10 15 20.8	+4.6
	comp=E,730nm,0.6s						
VAM	Vamos	1.22	313	P	Pb	10 15 03.0	+0.8
VAM				S	Sb	10 15 17.1	-0.6
VAM				AML	AML	10 15 23.5	
	comp=E,1628μm,0.7s						
VAM				AML	AML	10 15 24.8	
	comp=N,1803μm,0.4s						
IMMV	Iera Moni Meta	1.39	310	P	Pb	10 15 05.1	-0.1
IMMV				S	Sn	10 15 19.8	-0.6
IMMV				AML	AML	10 15 33.4	
	comp=E,1006μm,0.5s						
IMMV				AML	AML	10 15 38.1	
	comp=N,935μm,0.4s						
IMMV	Iera Moni Meta	1.39	310	PN	Pb	10 15 05.3	+0.2
THR6	Thira Island,	1.78	3	P	Pn	10 15 08.6	+0.3
SANT	Santorini	1.80	4	P	Pn	10 15 08.1	-0.5
SANT	Santorini	1.80	4	PN	Pn	10 15 08.9	+0.2
KARP	Karpathos	1.81	57	P	Pn	10 15 11.4	+2.5
KARP	Karpathos	1.81	57	PN	Pn	10 15 10.1	+1.2
THR3	Thira Island,	1.83	3	P	Pn	10 15 09.4	+0.3
THR5	Thira Island,	1.84	1	P	Pn	10 15 09.2	+0.1
THT2	Imerovigli	1.86	3	PN	Pn	10 15 10.3	+0.8
IOSP	Ios island	2.15	360	P	Pn	10 15 13.5	+0.1
AMGA	Amorgos Island	2.31	12	P	Pn	10 15 15.3	-0.3
KTHA	Kythira Island	2.48	313	P	Pn	10 15 19.4	+1.4
APE	Apeiranthos	2.50	4	P	Pn	10 15 18.1	-0.1
APE	Apeiranthos	2.50	4	PN	Pn	10 15 18.5	+0.2
DAT	Datca	2.84	40	PN	Pn	10 15 24.6	+1.5
VLI	Veliai	2.88	319	P	Pn	10 15 23.6	+0.2
SLUM	Salum	3.07	181	P	Pn	10 15 28.6	+2.5
	baz=191						
SLUM				S	Sn	10 16 03.6	+1.8
	baz=191						
DID	Didima	3.37	331	P	Pn	10 15 30.3	+0.1
ITM	Ithomi	3.77	315	P	Pn	10 15 36.6	+0.8
AKAS	Kas	3.89	64	PN	Pn	10 15 39.7	+2.2
SWA2		5.32	178	P	Pn	10 15 59.1	+2.1
	baz=184						
HFRF	Wahat Farafira	7.84	160	P	Pn	10 16 32.4	+0.8
	baz=163						
HFRF				AMP		10 17 00.0	
	baz=163						
HFRF				S	Sn	10 17 53.6	-5.7
	baz=163						
AKASG	Malin Array Be	16.37	9	P	Pn	10 18 22.7	-4.3
	comp=N,0.5nm,0.3s,baz=201,slow=10,SNR=4.6						
KBZ	Khabaz	16.41	51	P	P	10 18 30.9	+0.8
	comp=N,0.1nm,0.3s,baz=212,slow=7.3,SNR=7.7						
GERES	GERESS Array B	16.65	332	P	Pn	10 18 28.3	-2.5
	comp=N,0.1nm,0.3s,baz=148,slow=12,SNR=2.1						
TORD	Torodi Ar. Bea	30.20	231	P	P	10 20 48.6	+1.2
	comp=N,0.3nm,0.4s,baz=31,slow=8.9,SNR=3.3						
ARCES	ARCESS Array B	35.02	0	P	P	10 21 25.7	-3.4
	comp=N,2.0nm,0.9s,baz=187,slow=10,SNR=3.8						
MKAR	Makanchi Array	44.01	56	P	P	10 22 44.0	-0.3
	comp=N,0.4nm,0.5s,baz=281,slow=7.3,SNR=4.3						
MKAR				PcP	PP	10 24 27.5	+0.6
	comp=N,0.3nm,0.8s,baz=305,slow=5.1,SNR=2.7						
ZALV	Zalesovo Beam	45.33	46	P	P	10 22 53.8	-0.9
	comp=N,0.9nm,0.4s,baz=273,slow=8.6,SNR=3.5						
SONM	Songino Array	59.77	50	P	P	10 24 41.6	-0.2
	comp=N,0.4nm,0.4s,baz=292,slow=8.5,SNR=3.9						
YKA	Yellowknife Ar	78.04	342	P	P	10 26 31.1	-3.8
	comp=N,0.1nm,0.4s,baz=28,slow=5.1,SNR=4.1						

TAP ***02*** *10:20:57.1, 23°.67N×122°.97E, h19km±1km, ML2.8, C*
JMA ***02*** *10:20:57.7±0.1, 23°.71N×122°.96E, h46km, M2.0*
ISC 02 10:20:57.1±1.2**, 23°.68N**±0°.05×**122°.96E**±0°.03**, h29**km±13km**,**
n31, σ0ˢ94/51**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.77	359	P	Pn	10 21 11.8	-0.2
JYNG				S	Sb	10 21 22.3	+0.2
YOJ	Yonaguni jima	0.78	3	P	Pb	10 21 12.4	+0.2
	baz=2.0						
YOJ				S	Sb	10 21 22.8	+0.3
	baz=2.0						
YOJ	Yonaguni jima	0.78	3	P	Pn	10 21 12.1	-0.1
YOJ				S	Sn	10 21 21.7	-1.2
HATJ	Hateruma jima	0.86	64	P	Pn	10 21 13.4	+0.2
HATJ				eS	Sb	10 21 25.0	+0.4
IRIF	Iriomote-Funau	0.96	47	P	Pn	10 21 14.9	+0.3
IRIF				eS	Sb	10 21 28.1	+0.7
JKRS	Kuro-shima	1.11	60	P	Pb	10 21 17.3	-0.3
JKRS				eS	Sn	10 21 31.2	+0.3
EOS1	EOS1	1.16	319	P	Pb	10 21 18.2	-0.2
	baz=318						
EOS1				S	Sb	10 21 34.5	+1.5
	baz=318						
JIJ	Ishigaki jima	1.28	57	P	Pn	10 21 19.1	+0.1
JIJ				eS	Sn	10 21 34.8	-0.3
TWD	Chiawan	1.31	288	eP	Pb	10 21 21.6	+0.5
	baz=273						
NANB	Nanao	1.34	304	eP	Pb	10 21 21.1	-0.4
	baz=304						
NACB	Ninganchiao	1.35	292	eP	Pn	10 21 20.2	+0.3
	baz=277						
EGFH	Guangfu	1.41	270	eS	Sn	10 21 37.6	-0.7
	baz=270						
EHY	Hungye	1.52	264	P	Pn	10 21 22.9	+0.6
	baz=264						
EHY				S	Sn	10 21 41.4	+0.3
	baz=264						
JISG	Ishigakijimahi	1.53	53	P	Pn	10 21 22.3	-0.1
JISG				eS	Sn	10 21 41.0	-0.3
YULB	Yu-li	1.56	260	eP	Pn	10 21 22.9	+0.1
	baz=260						
YULB				eS	Sn	10 21 42.7	+0.6
	baz=260						
TWF1	Yuli	1.56	258	P	Pn	10 21 23.2	+0.3
	baz=258						
TWF1				eS	Sn	10 21 42.9	+0.7
	baz=258						
FULB	Fuli	1.60	253	eS	Sn	10 21 42.9	-0.4
	baz=253						
WHF	Hehuan Shan	1.62	287	eS	Sn	10 21 45.4	+1.1
	baz=273						
TIPB	Shuangxi	1.66	321	eP	Pb	10 21 25.8	-1.1
	baz=337						
TIPB				S	Sb	10 21 46.9	-0.5
	baz=337						
OWD	Renai	1.66	280	eS	Sn	10 21 45.4	+0.6
	baz=280						
TWH	Lutao	1.67	235	eP	Pn	10 21 24.4	0.0
	baz=247						
TWH				eS	Sn	10 21 43.8	-1.1
	baz=247						
VWDT	VWDT	1.67	273	eP	Pn	10 21 25.3	+0.9
	baz=273						
VWDT				eS	Sn	10 21 44.4	-0.5
	baz=273						
CHGB	Renai	1.68	283	eP	Pn	10 21 25.5	+0.7
	baz=271						
CHGB				eS	Sn	10 21 46.0	+0.6
	baz=271						
JTJ	Tarama	1.86	59	P	Pn	10 21 27.8	+0.9
JTJ				S	Sn	10 21 48.9	-0.5
TWGBT	Beinan	1.93	244	eS	Sn	10 21 51.8	+0.5
	baz=244						
TWG	Pinlang	1.94	244	S	Sn	10 21 51.2	-0.3
	baz=244						
WHP	Taichung City	1.94	288	eP	Pb	10 21 31.2	-0.6
	baz=275						
WHP				eS	Sb	10 21 53.8	-1.9
	baz=275						
CHN5	Tsauling	2.10	268	eS	Sb	10 21 58.3	-1.9
	baz=268						
TPUB	Ta-pu	2.17	261	eP	Pn	10 21 33.2	+1.9
	baz=260						
TPUB				eS	Sn	10 21 59.8	+2.4
	baz=260						
CHN4	Tsaushan	2.20	262	P	Pn	10 21 34.1	+2.4
	baz=262						
CHN4				S	Sb	10 22 01.4	-1.6
	baz=262						
CHN1	Nanshi	2.29	258	eS	Sb	10 22 04.7	-0.9
	baz=258						

MAN ***02*** *10:34:29.3, 5°.95N×126°.05E, h138km, mb4.7, ML3.6, MS3.5*
IDC ***02*** *10:34:31.4±0.7, 6°.10N×125°.85E, h145km±8km, mb3.2/6, mb1 3.5/8, mb1mx3.2/47, mbtmp3.8/8, Error ellipse: s-maj=49.8km s-min=14.2km az=73.0*
NEIC ***02*** *10:34:31.4±0.8, 6°.1N±0°.1×126°.1E±0°.2, h135km±11km, mb4.6/11, Error ellipse: s-maj=26.1km s-min=5.9km az=55.0*
ISC 02 10:34:31.5±0.7**, 6°.04N**±0°.05×**126°.05E**±0°.07**, h134**km±6km**,**
n33, σ1ˢ51/41**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.34	282	eP	Pn	10 34 49.7	-0.6
DDMP				eS	Sn	10 35 05.9	+1.5
MATI	Mati	0.93	13	eP	Pn	10 34 52.3	-1.9
MATI				eS	Sn	10 35 11.8	+0.5
GSPH	General Santos	1.09	273	⇑eP	Pn	10 34 55.7	-0.1
GSPH				i S	Sn	10 35 14.3	+0.2
DAV	Davao City (W)	1.13	336	P	Pn	10 34 56.0	0.0
	63nm,0.3s,baz=232,slow=5.4,SNR=8.5						
DAV				S	Sn	10 35 14.6	0.0
	138nm,0.3s,baz=65,slow=23,SNR=5.1						
DAV	Davao City (W)	1.13	336		Sn	10 35 13.4	-1.3
DMPH	Davao City--Mi	1.17	333	⇓eP	Pn	10 34 56.7	+0.3
DMPH				i S	Sn	10 35 16.8	+1.4
KCP	Kidapawan	1.36	315	⇓i P	Pn	10 34 58.6	+0.2
KCP				i S	Sn	10 35 19.5	+0.6
SKMP	Bagumbayan, Su	1.57	288	eP	Pn	10 34 59.5	-1.1
SKMP				eS	Sn	10 35 22.8	-0.2
BUKP	Musuan	2.08	332	eP	Pn	10 35 05.0	-1.7
BUKP				eS	Sn	10 35 33.9	+0.2
CTBH	Cotabato--PC H	2.14	303	⇑i P	Pn	10 35 07.6	+0.1
BUTP	Butuan	2.94	352	eP	Pn	10 35 18.4	+0.8
BUTP				eS	Sn	10 35 59.4	+6.2
PAGZ	Pagadian	3.20	304	eP	Pn	10 35 19.9	-1.0
PAGZ				eS	Sn	10 35 45.5	-14
TNTI	Ternate	5.39	166		Pn	10 35 50.2	+0.2
TNTI					Sn	10 36 51.8	+0.6
SIJI	Sorong	8.61	143	P	Pn	10 36 33.5	+0.2
	3.0nm,0.3s,baz=350,slow=11,SNR=4.3						
SBUM	Sibu	14.24	256	P	P	10 37 53.7	+3.1
BATI	Baumata	16.31	188	P	Pn	10 38 12.4	-0.6
	2.2nm,0.3s,baz=0.0,slow=6.1,SNR=2.0						
FITZ	Fitzroy Crossi	23.98	181	P	P	10 39 33.3	-0.6
	0.8nm,0.3s,baz=354,slow=7.1,SNR=7.8						
FITZ	Fitzroy Crossi	23.98	181	IAmb	IAmb	10 39 38.6	
	comp=Z,5.5nm,1.1s						
COEN	Coen	26.14	140	P	P	10 39 53.4	-0.1
COEN				IAmb	IAmb	10 39 57.0	
	comp=Z,8.7nm,1.2s						
WRAB	Tennant Creek	27.07	163	P	P	10 40 02.4	+0.6
WRAB				IAmb	IAmb	10 40 27.0	
	comp=Z,14nm,1.7s						
WRA	Warramunga Arr	27.07	163	P	P	10 40 01.9	+0.1
	comp=Z,0.3nm,0.4s,baz=342,slow=11,SNR=7.5						
WR0	Warramunga Arr	27.15	162	P	P	10 40 02.5	+0.1
WR0				IAmb	IAmb	10 41 01.7	
	comp=Z,24nm,2.0s						
PSA00	Pilbara Seismi	28.10	192	P	P	10 40 10.9	0.0
PSA00				IAmb	IAmb	10 41 00.6	
	comp=Z,21nm,1.4s						
ASAR	Alice Springs	30.50	166	P	P	10 40 32.2	+0.1
	comp=Z,0.2nm,0.3s,baz=339,slow=7.3,SNR=11						
FORT	Forrest	36.66	177	P	P	10 41 25.7	+0.4
FORT				IAmb	IAmb	10 41 35.5	
	comp=Z,51nm,1.4s						
USRK	Ussuriysk Ar.	38.37	7	P	P	10 41 38.2	-1.4
	comp=Z,1.3nm,0.7s,baz=189,slow=7.8,SNR=3.2						
NWAO	Narrogin (SRO)	39.64	192	P	P	10 41 50.4	0.0
NWAO	Narrogin (SRO)	39.64	192	P	P	10 41 50.5	+0.2
NWAO				IAmb	IAmb	10 42 22.7	
	comp=Z,51nm,1.5s						
BBOO	Buckleboo	39.79	167	P	P	10 41 52.1	+0.6
STKA	Stephens Creek	40.51	159	P	P	10 41 57.9	+0.4
	comp=Z,1.0nm,0.7s,baz=329,slow=8.9,SNR=2.2						
MKAR	Makanchi Array	55.29	325	P	P	10 43 48.0	-3.2
	comp=Z,0.2nm,0.4s,baz=128,slow=7.1,SNR=6.4						
MKAR	Makanchi Array	55.29	325	P	P	10 43 49.0	-2.1
SYO	Syowa Base	94.32	201	⇑eX	P	10 47 30.0	-5.4

NEIC ***02*** *10:37:23.3±0.9, 17°.90N±0°.03×99°.79W±0°.04, h51km±6km, Error ellipse: s-maj=5.9km s-min=4.0km az=132.0*
MEX ***02*** *10:37:24.7±0.6, 17°.94N×99°.78W, h55km±4km, MD4.0*
ISC 02 10:37:23.8±1.1**, 17°.92N**±0°.03×**99°.77W**±0°.03**, h51**km±7km**,**
n20, σ0ˢ84/38**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEIG	Mezcala	0.14	88	i P	Pn	10 37 31.6	-0.5
MEIG				i S	Sn	10 37 38.0	0.0
MEIG	Mezcala	0.14	88		Pn	10 37 31.6	-0.5
MEIG					Sn	10 37 38.0	0.0
PLIG	Platanillo	0.53	28	i P	Pn	10 37 35.1	-0.6
PLIG				i S	Sn	10 37 43.5	-0.7
PLIG	Platanillo	0.53	28		Pn	10 37 35.1	-0.6
PLIG					Sn	10 37 43.5	-0.7
ARIG	Puente Sto Nin	0.66	303	i P	Pn	10 37 36.6	-0.5
ARIG				eS	Sn	10 37 45.9	-0.8
ARIG	Puente Sto Nin	0.66	303		Pn	10 37 36.6	-0.5
ARIG					Sn	10 37 45.9	-0.8
CAIG	El Cayaco	0.99	209	eP	Pn	10 37 40.5	-0.9
CAIG				eS	Sn	10 37 53.8	-0.6
CAIG	El Cayaco	0.99	209		Pn	10 37 40.5	-0.9
CAIG					Sn	10 37 53.8	-0.6
YAIG	Yautepec	1.15	35	eP	Pn	10 37 42.6	-1.1
YAIG				i S	Sn	10 37 57.4	-1.1
YAIG	Yautepec	1.15	35		Pn	10 37 42.6	-1.1
YAIG					Sn	10 37 57.4	-1.1
UNM	Universidad Na	1.51	22	Pn	Pn	10 37 49.1	+0.4
UNM				Sn	Sn	10 38 07.6	+0.2
PPM	Popocatepetl	1.57	43	eP	Pn	10 37 49.0	-0.8
PPM				i S	Sn	10 38 07.5	-1.8
ZIIG	Zihuatanejo	1.65	259	i P	Pn	10 37 49.5	-0.8
ZIIG				i S	Sn	10 38 09.2	-1.1
ZIIG	Zihuatanejo	1.65	259		Pn	10 37 49.5	-0.8
ZIIG					Sn	10 38 09.2	-1.1
PNIG	Pinotepa	2.19	134	eP	Pn	10 37 57.4	-0.3
PNIG				i S	Sn	10 38 22.8	-0.8
PNIG	Pinotepa	2.19	134		Pn	10 37 57.4	-0.3
PNIG					Sn	10 38 22.8	-0.8
MOIG	Morelia	2.20	323	Pn	Pn	10 37 58.3	+0.1
MMIG	Aquila	3.42	277	eP	Pn	10 38 14.8	+0.2
MMIG				i S	Sn	10 38 53.6	-0.3
MMIG	Aquila	3.42	277		Pn	10 38 14.8	+0.2
MMIG					Sn	10 38 53.6	-0.3
ESTN	Estel	13.77	108	Pn	Pn	10 40 38.4	+1.8

IDC ***02*** *10:44:31.9±1.5, 33°.03S×179°.13W, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/49, mbtmp3.9/4, ML3.9/1, Error ellipse: s-maj=39.5km s-min=31.6km az=68.0*
WEL ***02*** *10:44:40.2±1.1, 34°S±24°×17°8W±2°0, h265km±36km, M4.2/10, mB4.5/3, MLv4.2/10, Mw(mB)3.6/3*
NEIC ***02*** *10:44:41.0±3.1, 33°.64S±0°.08×179°.2W±0°.2, h72km±10km, mb4.3/6, Error ellipse: s-maj=21.8km s-min=3.2km az=119.0*
ISC 02 10:44:38.4±1.2**, 33°.45S**±0°.08×**179°.0W**±0°.1**, h48**km**, n35,**
σ2ˢ52/44**, mb4.0**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.65	207	P	Pn	10 45 47.5	+1.4
MXZ				S	Sn	10 46 44.2	+5.5
MXZ	Matakaoa Point	4.65	207	Pn	Pn	10 45 45.8	-0.2
WMGZ	Waiomatatini S	4.84	205	P	Pn	10 45 50.8	+2.2
WMGZ				S	Sn	10 46 45.3	+2.0
PKGZ	Pakihiroa	5.02	207	P	Pn	10 45 52.6	+1.3
PKGZ				S	Sn	10 46 50.4	+2.3
HAZ	Te Kaha	5.03	210	P	Pn	10 45 52.8	+1.5
HAZ				S	Sn	10 46 51.2	+3.1
PUZ	Puketiti	5.12	205	P	Pn	10 45 52.7	+0.1
PUZ				S	Sn	10 46 52.7	+2.4
RUGZ	Raukumara Rang	5.25	210	P	Pn	10 45 56.6	+2.1
CNGZ	Carnagh Statio	5.51	203	P	Pn	10 45 58.6	+0.7
TKGZ	Te Karaka	5.59	206	P	Pn	10 46 01.3	+2.3
MWZ	Matawai	5.62	209	P	Pn	10 45 59.3	-0.2
OPRZ	Ohinepanea	5.68	218	P	Pn	10 46 02.3	+2.2
URZ	Urewera	5.74	212	Pn	Pn	10 46 01.0	0.0
	3.3nm,0.3s,baz=18,slow=16,SNR=59						
URZ				Sn	Sn	10 47 05.6	+0.1
	3.7nm,0.3s,baz=17,slow=22,SNR=6.6						
URZ	Urewera	5.74	212	P	Pn	10 46 01.0	0.0
URZ	Urewera	5.74	212		Pn	10 46 01.5	+0.4
RAGZ	Rawiri	5.81	209	P	Pn	10 46 04.9	+2.8
KARZ	Kaharoa	5.97	219	P	Pn	10 46 07.0	+2.8
MUGZ	Murupara	6.07	213	P	Pn	10 46 06.1	+0.5
OUZ	Omahuta	6.36	252		Pn	10 46 12.0	+2.5
HIZ	Hauiti	7.08	223	Pn	Pn	10 46 22.6	+3.1
BFZ	Birch Farm	8.15	206	Pn	Pn	10 46 32.4	-1.7
BFZ				Sn	Sn	10 48 01.4	-3.4
MSWZ	Moikau Station	9.16	208	Pn	Pn	10 46 48.2	+0.2
MSWZ				Sn	Sn	10 48 23.5	-6.2
THZ	Tophouse	10.48	215	Pn	Pn	10 47 03.5	-2.6
THZ				Sn	Sn	10 48 56.1	-5.9
KHZ	Kahutara	10.70	211	Pn	Pn	10 47 05.9	-3.2
LTZ	Lake Taylor	11.56	214	Pn	Pn	10 47 17.9	-3.0
AS31	Alice Springs	42.18	271	P	P	10 52 26.4	-0.3
ASAR	Alice Springs	42.18	271	P	P	10 52 25.9	-0.7
	0.4nm,0.3s,baz=110,slow=7.0,SNR=17						
WR0	Warramunga Arr	43.27	276	P	P	10 52 34.3	-1.2
WR0				IAmb	IAmb	10 52 37.4	
	comp=Z,7.2nm,1.4s						
WRAB	Tennant Creek	43.44	276	P	P	10 52 35.5	-1.4
WRAB				IAmb	IAmb	10 52 49.7	
	comp=Z,8.1nm,1.4s						
WRA	Warramunga Arr	43.45	276	P	P	10 52 35.7	-1.2
	comp=Z,0.5nm,0.3s,baz=116,slow=8.1,SNR=12						
WRA	Warramunga Arr	43.45	276	P	P	10 52 35.2	-1.7
QSPA	South Pole Qui	56.67	180	P	P	10 54 20.1	+3.4
	comp=Z,1.2nm,0.9s,baz=16,slow=8.2,SNR=9.7						
QSPA	South Pole Qui	56.67	180	P	P	10 54 19.9	+3.3
QSPA				IAmb	IAmb	10 54 22.4	
	comp=Z,2.7nm,1.2s						
KAPI	Kappang	63.35	282	P	P	10 55 02.4	-0.7
FINES	FINESS Array B	147.66	338	PKPbc	PKPbc	11 04 15.8	-1.1
	comp=Z,1.4nm,0.6s,baz=58,slow=4.7,SNR=8.9						
NOA	NORSAR Array B	151.60	350	PKPbc	PKiKP	11 04 25.6	-1.4
	comp=Z,1.2nm,0.9s,baz=14,slow=4.0,SNR=3.2						

BJI ***02*** *10:50:15.2±0.0, 27°.13N×54°.07E, h15km, mB4.8/26, mb4.7/38, Ms4.6/4, Ms7 4.5/2*
IDC ***02*** *10:50:16.0±0.5, 27°.13N×54°.41E, h0km, mb4.3/34, mb1 4.4/39, mb1mx4.3/62, mbtmp4.3/39, ML3.6/4, MS3.2/11, Ms1 3.2/11, ms1mx2.9/48, Error ellipse: s-maj=12.2km s-min=10.3km az=19.0*
NEIC ***02*** *10:50:18.2±1.4, 27°.21N±0°.07×54°.37E±0°.07, h11km±3km, Error ellipse: s-maj=9.9km s-min=8.1km az=206.0*
THR ***02*** *10:50:18.6±0.3, 27°.15N×54°.52E, h18km±5km, ML4.3*
DSN ***02*** *10:50:19.6±0.5, 27°.15N×54°.44E, h10km, mb5.3/2, ML4.4/10, Error ellipse: s-maj=10.7km s-min=4.7km az=41.0*
TEH ***02*** *10:50:19.0, 27°.16N×54°.44E, h16km, ML4.3*
MOS ***02*** *10:50:20.1±1.1, 27°.14N×54°.42E, h40km, mb4.6/32, Error ellipse: s-maj=6.8km s-min=4.7km az=103.8*
OMAN ***02*** *10:50:23.8±0.6, 26°.90N×54°.29E, h33km±10km, mb4.6/1, ml4.2/17, Error ellipse: s-maj=11.6km s-min=6.6km az=346.0*
ISC 02 10:50:20.4±1.1**, 27°.04N**±0°.03×**54°.33E**±0°.03**, h30**km±8km**,**
n340, σ1ˢ47/357**, mb4.5**/93**, 26C-11D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMD1	Lamerd	1.08	286	ePg	Pb	10 50 41.1	+0.6
LMD1				e		10 51 09.9	
JHRM	Jahrom	1.60	336	ePn	Pn	10 50 46.7	-0.1
JHRM				e		10 51 13.4	
GENO	Geno	1.68	77	ePn	Pn	10 50 47.4	-0.6
GENO				e		10 51 20.6	
SHME	Shamm	1.90	121	eP	Pn	10 50 51.3	+0.4
	SNR=17						
SHME	Shamm	1.90	121	ePn	Pn	10 50 51.3	+0.4
UMQ	Umm Al-Quwin	1.93	141	eP	Pn	10 50 52.0	+0.9
	SNR=7.3						
UMQ	Umm Al-Quwin	1.93	141	ePn	Pb	10 50 56.2	+1.3
UMQ	Umm Al-Quwin	1.93	141	P	Pb	10 50 56.5	+1.6
	SNR=8.2						
BANOM	Banah	2.09	122	eP	Pn	10 50 54.2	+0.8
	SNR=15						
BANOM				S	Sn	10 51 20.1	+1.7
BANOM	Banah	2.09	122	P	Pn	10 50 54.3	+0.8
	SNR=86						
NIAN	Nian	2.29	76	ePn	Pn	10 50 55.8	-0.4
NIAN				e		10 51 37.2	
MSFE	Esma-Masafi	2.35	135	eP	Pn	10 50 58.7	+1.7
	SNR=32						
MSFE	Esma-Masafi	2.35	135	ePn	Pn	10 50 59.1	+2.1
NAZ	Nazwa, Dubai	2.37	149	eP	Pb	10 50 59.8	-2.6
	SNR=27						
NAZ	Nazwa, Dubai	2.37	149	ePn	Pb	10 51 00.6	-1.8
NAZ	Nazwa, Dubai	2.37	149	P	Pn	10 50 59.4	+2.1
	SNR=19						
MDH	Madha	2.48	134	eP	Pn	10 51 00.2	+1.5
	SNR=8.8						
MDH	Madha	2.48	134	ePn	Pn	10 51 00.7	+1.9
MDH	Madha	2.48	134	P	Pn	10 51 00.6	+1.8
	SNR=10						
FAQ	Al Faqa, Dubai	2.56	153	eP	Pb	10 51 02.7	-2.9
	SNR=8.0						
FAQ	Al Faqa, Dubai	2.56	153	ePn	Pb	10 51 04.0	-1.6
FAQ	Al Faqa, Dubai	2.56	153	P	Pb	10 51 03.4	-2.1
	SNR=9.1						
ASUD	Al Ashush, Dub	2.57	159	eP	Pb	10 51 03.3	-2.5
	SNR=60						
ASUD	Al Ashush, Dub	2.57	159	ePn	Pb	10 51 04.5	-1.3
ASUD	Al Ashush, Dub	2.57	159	P	Pb	10 51 04.0	-1.8
	SNR=60						
UOSS	Minazif	2.69	141	eP	Pn	10 51 03.2	+1.6
	SNR=13						
UOSS	Minazif	2.69	141	ePn	Pn	10 51 03.6	+1.9
UOSS	Minazif	2.69	141		Pn	10 51 03.5	+1.9
UOSS				Sn	Sn	10 51 35.1	+2.0
HATD	Hatta, Dubai	2.74	143	eP	Pn	10 51 04.1	+1.7
	SNR=17						
HATD	Hatta, Dubai	2.74	143	ePn	Pn	10 51 04.8	+2.4
HATD	Hatta, Dubai	2.74	143	P	Pn	10 51 04.4	+2.0
	SNR=14						
ASHO	Ashiyiah	2.82	146	eP	Pn	10 51 06.0	+2.5
	SNR=28						
ASHO				eP	Pn	10 51 06.0	+2.5
	SNR=28						
ASHO	Ashiyiah	2.82	146	ePn	Pn	10 51 06.2	+2.7
ASHO	Ashiyiah	2.82	146	P	Pn	10 51 05.7	+2.3
	SNR=28						
ASHO				S	Sb	10 51 41.5	-2.7
SHI	Shiraz	3.04	329	ePn	Pn	10 51 08.0	+1.3
SHI				e		10 52 15.6	
KHNJ	Kahnooj	3.13	72	ePn	Pn	10 51 07.0	-0.8
ALNE	Al Ain	3.24	156	i P	Pn	10 51 12.5	+3.2

SNR=17
ALNE Al Ain 3.24 156 *e*Pn **Pn 10 51 12.6 +3.4**
NGRK Negar Kerman 3.35 39 *e*Pn **Pn 10 51 10.0 -1.1**
NGRK *e* 10 52 07.2
IKAZ Kazeroun 3.50 322 *e*Pn **Pn 10 51 14.8 +1.7**
IKAZ *e* 10 52 40.2
KRBR Kerman 3.63 36 IAML 10 52 02.7
comp=N,459nm,0.6s
TVBK TV Kerman 3.63 36 *e*Pn **Pn 10 51 15.3 +0.4**
TVBK *e* 10 52 01.8
KHGB Koh Gabri 3.82 29 *e*Pn **Pn 10 51 17.3 -0.1**
KHGB *e* 10 52 12.1
CHMN Cheshme madani 3.99 44 *e*Pn **Pn 10 51 20.1 +0.3**
CHMN *e* 10 52 10.2
SLWS 4.00 237 *e*Pn **Pn 10 51 23.2 +3.5**
ARQ Araqi 4.19 151 P **Pn 10 51 24.4 +2.0**
SNR=24
ARQ S **Sn 10 52 14.4 +4.0**
BTHS 4.33 227 *e*Pn **Pn 10 51 27.1 +2.8**
IMEH Mehriz 4.34 3 *e*Pn **Pn 10 51 24.5 -0.1**
HOQ Hoqain 4.38 141 P **Pn 10 51 26.8 +1.9**
SNR=13
HOQ S **Sn 10 52 18.7 +3.8**
KLNJ Kolanjah 4.62 329 *e*Pn **Pn 10 51 28.5 -0.1**
IBAF Bafgh 4.66 13 *e*Pn **Pn 10 51 28.5 -0.4**
ISAD Sadrabad 4.89 354 *e*Pn **Pn 10 51 32.8 +0.7**
BIDO Bidbid 4.91 135 *e*Pn **Pn 10 51 35.1 +2.9**
BSY Bisya 5.01 148 P **Pn 10 51 36.0 +2.4**
SNR=28
BSY S **Sn 10 52 31.1 +0.5**
IRAM Ramesheh 5.04 341 *e*Pn **Pn 10 51 34.3 0.0**
ICHK Chekchek 5.18 1 *e*Pn **Pn 10 51 36.4 +0.2**
SMDO Samad 5.21 139 P **Pn 10 51 38.5 +2.1**
SNR=17
SMDO S **Sn 10 52 39.6 +4.1**
SNR=12
YZKH Yazd 5.33 2 *e*Pn **Pn 10 51 38.3 +0.2**
YZKH Yazd 5.33 2 *e*Pn **Pn 10 51 38.3 +0.2**
WSAR Wadi Sarin 5.43 133 Pn **Pn 10 51 40.3 +0.9**
comp=N,10nm,0.3s,baz=310,slow=10,SNR=48
WSAR Sn **Sn 10 52 41.0 0.0**
comp=N,12nm,0.3s,baz=160,slow=23,SNR=17
WSAR LR LR 10 54 19.1
comp=N,152nm,20.1s,baz=320,slow=45
WSAR Wadi Sarin 5.43 133 P **Pn 10 51 40.6 +1.1**
SNR=16
WSAR S **Sn 10 52 41.9 +0.8**
IBRJ Brojen 5.54 332 *e*Pn **Pn 10 51 41.8 +0.7**
CHBR Chabahar 5.71 103 *e*Pn **Pn 10 51 42.9 -0.3**
CHBR Chabahar 5.71 103 *e*Pn **Pn 10 51 42.9 -0.3**
JMDO Jabal Madar 5.78 143 P **Pn 10 51 46.1 +1.9**
SNR=9.4
JHBN Jahan bin 6.07 329 *e*Pn **Pn 10 51 49.2 +0.7**
IZEF Zefreh 6.09 344 *e*Pn **Pn 10 51 47.2 -1.4**
WBK Wadi Bani Khal 6.10 135 P **Pn 10 51 49.4 +0.8**
SNR=36
WBK S **Sn 10 52 57.6 +0.1**
SNR=5.6
TPRV Parvadeh(Tabas 6.31 18 *e*Pn **Pn 10 51 51.3 -0.2**
IPIR Pirpir 6.37 333 *e*Pn **Pn 10 51 52.1 -0.4**
BSRN Basiran 6.45 39 *e*Pn **Pn 10 51 52.3 -1.1**
BSRN Basiran 6.45 39 *e*Pn **Pn 10 51 52.3 -1.1**
BSRN *e*Sg **Sb 10 53 31.8 +3.2**
NHDN Nehbandan 6.62 48 *e*Pn **Pn 10 51 55.4 -0.4**
IKLH Kolahrood 6.69 340 *e*Pn **Pn 10 51 56.5 -0.4**
IKOO Kooshah 6.73 36 *e*Pn **Pn 10 51 57.4 0.0**
TKDS Koohdasht(Taba 6.98 20 *e*Pn **Pn 10 52 00.6 -0.1**
ITEG Tejag 6.98 32 *e*Pn **Pn 10 52 01.1 +0.3**
QAM Ghamsar 7.15 340 *e*Pn **Pn 10 52 03.4 +0.3**
TNSJ Nastanj 7.17 15 *e*Pn **Pn 10 52 03.3 -1.1**
AFRZ Afriz 7.54 31 *e*Pn **Pn 10 52 08.8 +0.3**
IMON Monand 7.68 36 *e*Pn **Pn 10 52 11.4 +1.0**
IVRN Varamin 8.24 345 *e*Pn **Pn 10 52 16.7 -1.2**
IKMR Kamar-syah 8.25 323 *e*Pn **Pn 10 52 17.5 -0.5**
IQOM Qom 8.26 341 *e*Pn **Pn 10 52 17.1 -1.4**
BDRS Dareh Seyedi 8.34 327 *e*Pn **Pn 10 52 17.9 -1.6**
IANJ Anjilo 8.41 358 *e*Pn **Pn 10 52 20.0 -0.4**
IKFM Kafar-mosalman 8.55 321 *e*Pn **Pn 10 52 21.9 -0.2**
IDOB Doab 8.56 323 *e*Pn **Pn 10 52 22.7 +0.1**
HSAM Samen 8.68 327 *e*Pn **Pn 10 52 23.0 -1.2**
RAYN Ar Rayn 8.72 248 *i* P **Pn 10 52 25.4 +0.8**
SNR=9.3
RAYN Ar Rayn 8.72 248 **Pn 10 52 25.3 +0.7**
RAYN Sn **Sn 10 54 01.5 -0.5**
ISHM Shahmirzad 8.78 354 *e*Pn **Pn 10 52 26.1 +0.5**
HAGD Aghdareh 8.94 331 *e*Pn **Pn 10 52 26.5 -1.3**
SHAO Shalim 9.06 172 P **Pn 10 52 30.6 +1.5**
SNR=32
SHAO S **Sn 10 54 09.4 -0.7**
WHFO Wadi Hawf 9.09 183 P **Pn 10 52 31.0 +1.3**
SNR=108
IALA Alasht 9.11 352 *e*Pn **Pn 10 52 33.7 +3.6**
IRAZ Razeghan 9.15 337 *e*Pn **Pn 10 52 28.5 -2.0**
IKOM Komasi 9.22 322 *e*Pn **Pn 10 52 29.8 -1.7**
DMTO DMTO 9.30 176 P **Pn 10 52 33.6 +1.1**
SNR=11
DMTO S **Sn 10 54 15.1 -1.0**
IGLO Ghaloghah 9.44 358 *e*Pn **Pn 10 52 35.2 +0.6**
RBK Rabkut 9.49 181 P **Pn 10 52 36.0 +0.8**
SNR=12
QABG Abgarm-Qazvin 9.54 336 *e*Pn **Pn 10 52 34.5 -1.5**
HSRG Sareghieh 9.68 329 *e*Pn **Pn 10 52 36.8 -1.1**
ABTO Aybut 9.69 186 P **Pn 10 52 39.0 +1.1**
SNR=15
IVIS Veis 9.85 321 *e*Pn **Pn 10 52 37.0 -3.0**
IGHG Ghaleghazi 9.86 319 *e*Pn **Pn 10 52 40.4 0.0**
HRA Herat 10.00 41 **Pn 10 52 39.8 -2.4**
ILIN Lien 10.08 323 *e*Pn **Pn 10 52 41.9 -1.4**
IDHR Dehrash 10.23 320 *e*Pn **Pn 10 52 43.6 -1.8**
GEYT Alibeck 11.32 15 Pn **Pn 10 52 57.7 -2.4**
comp=N,0.4nm,0.3s,baz=206,slow=13,SNR=3.0
GEYT LR LR 10 58 25.9
comp=N,133nm,20.1s,baz=15,slow=44
GEYT Allbeck 11.32 15 **Pn 10 52 59.1 -1.0**
GYA0B ALIBECK ARRAY 11.32 15 Pn **Pn 10 52 57.3 -2.8**
KBL Kabul 14.68 56 P **Pn 10 53 49.0 +2.8**
KBL Kabul 14.68 56 P **Pn 10 53 49.0 +2.8**
SOCY Socotra 14.78 181 Pn **Pn 10 53 46.0 -1.6**
GNI Garni 15.30 331⇑ *e*P **Pn 10 53 55.7 +1.2**
GNI Garni 15.30 331 Pn **P 10 53 57.7 -1.3**
comp=N,2.3nm,0.3s,baz=338,slow=1.1,SNR=15
GNI LR LR 11 00 17.3
comp=N,73nm,18.1s,baz=136,slow=39
GNI Garni 15.30 331 *i* P **Pn 10 53 56.4 +1.9**
SNR=10
GNI Garni 15.30 331 Pn **Pn 10 53 53.6 -0.9**
ASF Jabal al Asfar 15.99 293 Pn **P 10 54 05.2 -1.4**
comp=N,0.6nm,0.3s,baz=51,slow=1.2,SNR=5.5
ASF Sn **Sn 10 56 51.6 -8.2**
comp=N,0.3nm,0.3s,baz=35,slow=12,SNR=2.6
CEP Cherat 16.59 62 P **Pn 10 54 11.8 +0.8**
CEP S **Sn 10 57 16.0 +1.6**
TBLG Delisi 16.64 334 P **Pn 10 54 10.9 -0.5**
TBLG pmax pmax
comp=Z,14nm,0.7s
TBLG Delisi 16.64 334 P **Pn 10 54 10.9 -0.5**
AKH Akhalkalaki 16.88 331 P **Pn 10 54 15.4 +0.8**
AKH pmax pmax
comp=Z,7.0nm,0.8s
AKH Akhalkalaki 16.88 331 P **Pn 10 54 15.4 +0.8**
CHGR Chuyangaron 16.99 43 P **Pn 10 54 16.2 +0.3**
EIL Elat 17.26 283 P **P 10 54 21.8 +1.3**
comp=Z,0.4nm,0.3s,baz=233,slow=3.5,SNR=6.3
MMAI Mount Meron Ar 17.43 295 P **P 10 54 22.0 -0.5**
baz=108,slow=14,SNR=2.7
MMAI LR LR 11 03 26.1
comp=Z,14nm,18.3s,baz=205,slow=45
GROC Groznyy 17.55 339⇓ *e*P **P 10 54 24.2 +0.5**
NIL Nilore 17.60 63 P **Pn 10 54 23.7 +0.2**
NIL pmax pmax
comp=Z,20nm,1.1s
NIL Nilore 17.60 63 P **Pn 10 54 23.7 +0.2**
CHCP Chirah Chowk 17.61 63 P **P 10 54 24.0 -0.5**
GAZ Gaziantep 17.65 309 P **P 10 54 24.7 -0.2**
ZEI Tsey 17.86 334 *e*P **P 10 54 27.5 +0.2**
ZEI pmax pmax
comp=Z,44nm,0.8s
GAR Garm 17.91 44 P **Pn 10 54 24.7 -2.7**
TAS Tashkent 18.84 37 P **P 10 54 35.7 -2.2**
TAS pmax pmax
comp=Z,57nm,0.4s
TAS Tashkent 18.84 37 P **P 10 54 35.7 -2.2**
BTK Batken 18.86 42 P **P 10 54 35.5 -2.8**
BTK pmax pmax
comp=Z,8.0nm,0.9s
BTK Batken 18.86 42 P **P 10 54 35.5 -2.8**
KBZ Khabaz 19.05 334⇓ *e*P **Pn 10 54 42.0 +1.0**
KBZ Khabaz 19.05 334 P **Pn 10 54 41.2 +0.3**
comp=Z,0.2nm,0.3s,baz=149,slow=8.0,SNR=15
KIV Kislovodsk 19.32 334 *i* P **Pn 10 54 44.1 -0.3**
KIV pmax pmax
comp=Z,25nm,1.1s
KIV Kislovodsk 19.32 334 *i* P **Pn 10 54 44.6 +0.2**
SNR=5.9
KIV Kislovodsk 19.32 334 P **P 10 54 42.5 -0.7**
KIV IAmb IAmb 10 54 53.9
comp=Z,17nm,0.8s
CSS Mathiatis 19.63 299 P **P 10 54 47.2 +0.6**
CSS IAmb IAmb 10 54 50.7
comp=Z,28nm,1.0s
SOC Sochi 20.31 328 *e*P **P 10 54 52.5 -1.4**
SOC *e*PPP PPP 10 55 17.0
SOC *e*S Sn 10 58 42.6 -1.3
SOC *e*SSS SSS 10 59 17.8
SOC pmax pmax
comp=Z,48nm,0.9s
KK31 Karatay Array 20.73 35 P **P 10 54 57.0 -1.5**
KK31 pmax pmax
comp=Z,13nm,1.2s
KK31 Karatay Array 20.73 35 P **P 10 54 57.0 -1.5**
KKAR Karatay Array 20.73 35 P **P 10 54 57.5 -1.0**
KKAR Karatay Array 20.73 35 P **P 10 54 57.5 -1.0**
KKAR Karatay Array 20.73 35 IAmb IAmb 10 55 03.2
comp=Z,13nm,1.1s
ARSB Arslanbob 20.94 42 P **P 10 54 59.7 -1.3**
ARSB IAmb IAmb 10 55 03.0
comp=Z,28nm,0.8s
BR131 Keskin Array S 21.35 312 *c* P **P 10 55 05.9 +0.6**
BR131 Keskin Array S 21.35 312 P **P 10 55 05.3 0.0**
BR131 IAmb IAmb 10 55 10.6
comp=Z,11nm,0.8s
BR131 Keskin Array S 21.35 312 P **P 10 55 06.2 +0.8**
SNR=16
BRTR Keskin Array B 21.35 312 P **P 10 55 06.0 +0.7**
comp=Z,10nm,0.6s,baz=132,slow=13,SNR=82
BRTR Keskin Array B 21.35 312 P **P 10 55 05.3 0.0**
AML Almayashu 21.85 42 P **P 10 55 10.1 -0.9**
SNR=28
KSH Kashi 21.90 50 P **P 10 55 04.2 -7.0**
KSH pP pP 10 55 17.7 -1.6
KSH PP **PnPn 10 55 29.6 -3.4**
KSH S S 10 58 51.1 -21
KSH sS pS 10 59 12.7 -10
KSH ScS **ScS 11 06 27.4 -2.3**
KSH pmax pmax
comp=Z,35nm,0.6s
KSH pmax pmax
comp=Z,460nm,5.4s
KSH LR LR
comp=Z,430nm,5.8s
KSH LR LR
comp=Z,430nm,5.9s
KSH LR LR
comp=Z,470nm,5.9s
BR231 Keskin MP Arra 21.99 311 P **P 10 55 13.0 +0.9**
BR231 IAmb IAmb 10 55 16.0
comp=Z,16nm,0.7s
ANTO Ankara 21.99 311 P **P 10 55 13.3 +1.2**
ANTO pmax pmax
comp=Z,37nm,1.2s
ANTO Ankara 21.99 311 P **P 10 55 13.3 +1.2**
ANTO IAmb IAmb 10 55 17.0
comp=Z,37nm,1.1s
EKS2 Erkin-Say 22.23 40 P **P 10 55 15.0 +0.3**
SNR=21
UCH Uchtor 22.40 42 P **P 10 55 15.9 -1.0**
SNR=23
ABKAR Akbulak array 22.60 10 P **P 10 55 17.4 -1.1**
ABKAR Akbulak array 22.60 10 IAmb IAmb 10 55 23.1
comp=Z,14nm,1.0s
AAK Ala-Archa 22.63 41 *de*P **P 10 55 19.0 0.0**
AAK pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 22.63 41 P **P 10 55 19.1 0.0**
comp=Z,7.9nm,0.7s,baz=224,slow=8.3,SNR=26
AAK LR LR 11 04 49.2
comp=Z,50nm,19.9s,baz=232,slow=39
AAK Ala-Archa 22.63 41 P **P 10 55 19.2 +0.2**
SNR=9.7
AAK Ala-Archa 22.63 41 P **P 10 55 18.6 -0.4**
AAK IAmb IAmb 10 55 25.4
comp=Z,15nm,0.8s
KZA Kyzart 22.76 43 P **P 10 55 20.2 -0.5**
SNR=12
FRU1 Bishkek 22.82 41 P **P 10 55 20.3 -0.6**
FRU1 pmax pmax
comp=Z,12nm,0.7s
FRU1 Bishkek 22.82 41 P **P 10 55 20.3 -0.6**
FRU1 IAmb IAmb 10 55 33.0
comp=Z,12nm,0.7s
NRN Naryn 22.87 46 P **P 10 55 20.5 -1.3**
NRN pmax pmax
comp=Z,9.0nm,0.8s
NRN Naryn 22.87 46 P **P 10 55 20.5 -1.3**
NRN IAmb IAmb 10 55 40.1
comp=Z,8.8nm,0.8s
KBK Karagaybulak 22.91 42 P **P 10 55 22.2 +0.2**
SNR=7.9
USP Ospenovka 23.02 40 P **P 10 55 23.9 +0.9**
SNR=13
TKM2 Tokmak 2 23.45 42 P **P 10 55 26.8 -0.7**
SNR=11
AKTO Aktyubinsk 23.53 6 P **P 10 55 28.2 +0.3**
comp=Z,6.5nm,0.7s,baz=188,slow=11,SNR=13
AKTO LR LR 11 06 18.2
comp=Z,43nm,19.2s,baz=187,slow=41
KDJ Kajisay 23.99 45 P **P 10 55 31.2 -1.4**
KDJ pmax pmax
comp=Z,8.0nm,1.0s
KDJ Kajisay 23.99 45 P **P 10 55 31.2 -1.4**
KDJ IAmb IAmb 10 55 37.8
comp=Z,8.1nm,0.9s
KARP Karpathos 24.66 297 P **P 10 55 39.6 +1.1**
VRH Novokhopyorsk 25.96 342 *e*P **P 10 55 49.3 -0.8**
VRH pmax pmax
comp=Z,40nm,1.5s
SANT Santorini 26.18 298 P **P 10 55 53.1 +0.7**
IDI Anoyia 26.42 295 P **P 10 55 55.6 +1.0**
comp=Z,14nm,0.5s,baz=84,slow=10,SNR=18
VORD Divnogorie 26.49 338 *e*P **P 10 55 58.4 +3.5**
VORD pmax pmax
comp=Z,9.0nm,0.8s
VSR Storozhevoye 26.75 339 *e*P **P 10 56 00.6 +3.3**
VSR pmax pmax
comp=Z,7.0nm,0.6s
TIRR Tirgusor 27.11 317⇑ P **P 10 56 00.3 -0.3**
TIRR Tirgusor 27.11 317⇑ P **P 10 56 00.3 -0.3**
TOPG Topolog 27.35 317⇓ P **P 10 56 04.3 +1.5**
BRVK Borovoye 28.58 20 *ce*P **P 10 56 12.7 -1.0**
BRVK pmax pmax
comp=Z,6.0nm,1.3s
BRVK Borovoye 28.58 20 P **P 10 56 13.0 -0.7**
BVAR Borovoye Array 28.58 20 P **P 10 56 13.0 -0.7**
comp=Z,5.8nm,0.8s,baz=208,slow=6.8,SNR=29
BVAR PcP **PcP 10 59 24.8 +0.5**
comp=Z,0.9nm,0.5s,baz=208,slow=2.3,SNR=5.7
PLOR Plostina 28.90 318⇓ P **P 10 56 17.1 +0.4**
PLOR Plostina 28.90 318⇓ P **P 10 56 17.1 +0.4**
ITM Ithomi 29.12 298 P **P 10 56 19.1 +0.4**
MLR Muntele Rosu 29.14 317 P **P 10 56 20.1 +1.2**
comp=Z,1.7nm,0.5s,baz=124,slow=7.3,SNR=2.4
AGG Agios Georgios 29.22 302 P **P 10 56 19.6 +0.1**
AGG pmax pmax
comp=Z,4.0nm,0.8s
AGG Agios Georgios 29.22 302 P **P 10 56 19.6 +0.1**
MAKZ Makanchi 29.39 41 P **P 10 56 20.7 -0.2**
MAKZ pmax pmax
comp=Z,5.0nm,1.0s
MAKZ Makanchi 29.39 41 P **P 10 56 20.7 -0.2**
ARU Arti 29.52 5 LR LR 11 09 10.9
comp=Z,64nm,18.7s,baz=230,slow=39
MK31 Makanchi Array 29.56 41 P **P 10 56 22.0 -0.5**
MK31 pmax pmax
comp=Z,2.0nm,1.1s
MK31 Makanchi Array 29.56 41 P **P 10 56 22.0 -0.5**
MKAR Makanchi Array 29.56 41 P **P 10 56 21.8 -0.7**
MKAR Makanchi Array 29.56 41 P **P 10 56 22.1 -0.4**
comp=Z,1.4nm,0.5s,baz=228,slow=12,SNR=28
MKAR Makanchi Array 29.56 41 P **P 10 56 21.8 -0.7**
VOIR 29.67 316⇑ P **P 10 56 24.4 +0.9**
VOIR 29.67 316⇑ P **P 10 56 24.4 +0.9**
VTS Vitosha 29.67 310⇑ P **P 10 56 23.8 +0.1**
VTS Vitosha 29.67 310⇑ P **P 10 56 23.8 +0.1**
DOPR Dopca 29.72 317⇑ P **P 10 56 24.5 +0.6**
ARR Arges 29.90 316⇑ P **P 10 56 26.3 +0.7**
KURBB Kurchatov Arra 29.91 32 P **P 10 56 22.9 -2.6**
comp=Z,0.8nm,0.2s,baz=233,slow=8.2,SNR=5.2
KURBB PcP **PcP 10 59 27.7 0.0**
comp=Z,0.6nm,0.8s,baz=230,slow=3.3,SNR=3.7
KURK Kurchatov 30.02 32 P **P 10 56 22.9 -3.5**
KURK 10 59 27.7
KURK Kurchatov 30.02 32 P **P 10 56 25.0 -1.5**
AKASG Malin Array Be 30.39 328 P **P 10 56 28.3 -1.4**
comp=Z,0.6nm,0.4s,baz=137,slow=8.2,SNR=6.8
AKBB Malin Array Si 30.39 328 P **P 10 56 28.9 -0.8**
AKBB pmax pmax
comp=Z,10.0nm,1.5s
AKBB Malin Array Si 30.39 328 P **P 10 56 28.9 -0.8**
AKBB IAmb IAmb 10 56 30.4
comp=Z,10nm,1.4s
FNA Florina 30.39 305 P **P 10 56 29.7 -0.3**
FNA pmax pmax
comp=Z,3.0nm,0.6s
FNA Florina 30.39 305 P **P 10 56 29.7 -0.3**
FNA IAmb IAmb 10 56 32.0
comp=Z,3.0nm,0.6s
BURAR Bucovina Array 30.66 320⇑ P **P 10 56 33.0 +0.7**
BURAR Bucovina Array 30.66 320⇑ P **P 10 56 33.0 +0.7**
BURAR Bucovina Array 30.66 320 P **P 10 56 32.5 +0.3**
OBN Obninsk 30.89 340⇑ *e*P **P 10 56 33.1 -0.9**
OBN pmax pmax
comp=Z,6.0nm,1.0s
TIR Tirane 31.65 306 P **P 10 56 41.2 +0.3**
TIR pmax pmax
comp=Z,47nm,1.5s
TIR Tirane 31.65 306 P **P 10 56 41.2 +0.3**
WMQ Urumqi 31.66 49 *e*P **P 10 56 43.0 +1.9**
WMQ sP pP 10 56 50.0 +0.1
WMQ pmax pmax
comp=Z,9.0nm,0.7s
WMQ pmax pmax
comp=Z,91nm,4.3s
WMQ LR LR
comp=Z,200nm,29.1s
WMQ LR LR
comp=Z,1μm,29.2s
KIRV Kirov 31.71 355 P **P 10 56 41.2 0.0**
comp=Z,7.7nm,0.4s,baz=202,slow=4.0,SNR=6.4
DRGR 31.74 317⇑ P **P 10 56 42.4 +0.6**
DRGR 31.74 317⇑ P **P 10 56 42.4 +0.6**
BZS Buzias 31.91 314⇑ P **P 10 56 43.7 +0.5**
BZS Buzias 31.91 314⇑ P **P 10 56 43.7 +0.5**
SIRR Siria 32.16 315⇑ P **P 10 56 45.8 +0.4**
KMBO Kilima Mbogo 32.48 213 P **P 10 56 51.1 +2.4**
comp=Z,0.8nm,0.3s,baz=49,slow=9.3,SNR=2.9
KOLS Kolonicke sedl 33.02 320 *e*P **P 10 56 54.4 +1.5**
KOLS pmax pmax
comp=Z,8.0nm,1.1s
KOLS Kolonicke sedl 33.02 320 *e*P **P 10 56 54.4 +1.5**
KIJV Kijevo 34.84 309 *i* P **P 10 57 08.4 -0.3**
VYHS Vyhne 34.84 317 *e*P **P 10 57 10.4 +1.7**
VYHS Vyhne 34.84 317 *e*P **P 10 57 10.4 +1.7**
ZALV Zalesovo Beam 35.01 32 P **P 10 57 09.1 -1.0**
comp=Z,6.9nm,0.5s,baz=244,slow=9.6,SNR=37
ZALV LR LR 11 11 11.8
comp=Z,45nm,18.2s,baz=148,slow=36
ZIRJ Mrje 35.27 308 *i* P **P 10 57 12.1 -0.3**
MORI Morici 35.28 309 *i* P **P 10 57 12.5 -0.1**
DUGI Dugi Otok 35.77 309 *i* P **P 10 57 16.9 +0.1**
MORC Moravsky Berou 36.16 319⇑ P **P 10 57 19.6 -0.5**
MORC Moravsky Berou 36.16 319⇑ P **P 10 57 19.6 -0.5**
SOKA Soboth 36.56 313 *i* P **P 10 57 24.0 +0.4**
comp=Z,0.4nm,0.4s
OBKA Obir 36.83 313 *i* P **P 10 57 26.5 +0.7**
comp=Z,6.6nm,1.2s
KBA Koelnbreinsper 37.79 313 *i* P **P 10 57 34.1 0.0**
comp=Z,5.3nm,1.1s
GERES GERESS Array B 38.12 316 P **P 10 57 36.3 -0.5**
GERES 10 59 50.7
GERES GERESS Array B 38.12 316 P **P 10 57 35.9 -0.9**
comp=Z,0.7nm,0.6s,baz=105,slow=8.6,SNR=5.4
GERES PcP **PcP 10 59 50.7 -0.6**
comp=Z,0.6nm,0.6s,baz=113,slow=2.6,SNR=3.3
GERES GERESS Array B 38.12 316 P **P 10 57 36.3 -0.5**
ABTA Abfaltersbach 38.24 312 *i* P **P 10 57 38.1 +0.3**
comp=Z,5.3nm,0.8s
KHC Kasperske Hory 38.30 316⇓ *e*P **P 10 57 38.1 -0.1**
KHC pmax pmax
comp=Z,8.0nm,1.1s
WTTA Wattenberg 38.96 313 *i* P **P 10 57 43.5 -0.4**
comp=Z,12nm,1.1s,SNR=7.6
WATA Walderalm 39.02 313 *i* P **P 10 57 43.7 -0.7**
comp=Z,17nm,1.1s
KEST Kesra 39.09 294 P **P 10 57 44.2 -0.9**
comp=Z,2.6nm,0.5s,baz=43,slow=5.1,SNR=4.1
KEST Kesra 39.09 294 IAmb IAmb 10 57 58.3
comp=Z,11nm,0.8s
SQTA Sankt Quirin 39.23 313 *i* P **P 10 57 45.6 -0.5**
comp=Z,6.6nm,0.5s,SNR=5.9
FIA1 FINESS Array S 39.28 339 P **P 10 57 45.8 -0.4**
FIA1 IAmb IAmb 10 57 58.8
comp=Z,23nm,1.3s
FINES FINESS Array B 39.28 339 P **P 10 57 45.5 -0.7**
comp=Z,3.1nm,0.5s,baz=145,slow=10,SNR=17
FINES LR LR 11 14 20.4
comp=Z,92nm,18.4s,baz=40,slow=37
FINES FINESS Array B 39.28 339 P **P 10 57 45.3 -0.8**
MOTA Moosalm 39.33 313 *i* P **P 10 57 46.7 -0.3**
comp=Z,16nm,1.2s,SNR=5.2
CLL Collm 39.42 319 *e*(P) **P 10 57 52.0 +4.5**
FETA Feichten 39.49 312 *i* P **P 10 57 48.0 -0.4**
comp=Z,12nm,1.0s,SNR=9.7
RETA Reutte 39.59 313 *i* P **P 10 57 48.8 -0.3**
comp=Z,4.2nm,0.6s
GTA Gaotai 39.61 60⇑ P **P 10 57 49.9 +0.4**
GTA pP pP 10 57 54.2 -4.3
GTA sP sP 10 57 56.8 -5.4
GTA pmax pmax
comp=Z,14nm,0.9s
GTA pmax pmax
comp=Z,54nm,5.2s
GTA LR LR
comp=Z,71nm,14.6s
GTA LR LR
comp=Z,71nm,15.9s
FUORN Ofenpass-Fuorn 39.70 311 P **P 10 57 49.9 -0.3**
FUORN IAmb IAmb 10 58 03.0
comp=Z,9.6nm,0.9s
MSSA Maissana 39.73 308 P **P 10 57 49.8 -0.5**
DAVA Damuels 40.12 312 *i* P **P 10 57 52.7 -0.9**
comp=Z,21nm,0.5s
SENIN Lac Senin/Sane 41.65 310 P **P 10 58 05.7 -0.6**
CMAR Chiang Mai Arr 41.85 92 P **P 10 58 08.8 +0.8**
comp=Z,2.7nm,0.8s,baz=283,slow=9.6,SNR=14
CMAR PcP **PcP 11 00 04.4 +0.8**
comp=Z,0.5nm,0.3s,baz=290,slow=5.9,SNR=4.1
BNI Bardonecchia 41.85 308 P **P 10 58 07.6 -0.3**
BNI pmax pmax
comp=Z,9.0nm,0.9s
BNI Bardonecchia 41.85 308 P **P 10 58 07.6 -0.3**
BNI IAmb IAmb 10 58 15.6
comp=Z,9.4nm,0.9s
MOY Mondy 42.69 42 *e*P **P 10 58 15.4 +0.8**
LZH Lanzhou 42.76 65 *e*P **P 10 58 16.2 +0.8**
LZH pP pP 10 58 20.1 -4.4
LZH sP sP 10 58 23.0 -5.2
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,66nm,4.9s
LZH LR LR
comp=Z,320nm,13.5s
LZH LR LR
comp=Z,320nm,13.3s
LZH LR LR
comp=Z,450nm,15.0s
HFS Hagfors 43.09 332 P **P 10 58 16.8 -0.7**
comp=Z,3.5nm,0.6s,baz=125,slow=9.5,SNR=19
CD2 Chengdu 43.14 73 P **P 10 58 17.7 -0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
KMI Kunming 43.31 81 P **P 10 58 21.5 +1.4**
KMI pP pP 10 58 23.9 -5.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI				sP	sP	10 58 25.9	-6.9
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NC405	NORSAR Array S	44.43	332	P	P	10 58 27.5	-0.8
NC405				IAmb	IAmb	10 58 31.5	
	comp=Z,6.1nm,0.8s						
NB2	NORSAR Subarra	44.61	332	P	P	10 58 28.3	-1.5
	comp=Z,0.7nm,0.4s,baz=120,slow=8.6						
NOA	NORSAR Array B	44.61	332	P	P	10 58 28.1	-1.7
	comp=Z,0.8nm,0.5s,baz=127,slow=7.8,SNR=5.5						
NOA				LR	LR	11 17 24.7	
	comp=Z,22nm,19.5s,baz=5.0,slow=36						
NC204	NORSAR Array S	44.91	332	P	P	10 58 31.6	-0.7
SONM	Songino Array	45.28	48	P	P	10 58 34.8	-0.7
	comp=Z,3.0nm,0.9s,baz=261,slow=8.3,SNR=12						
SONM	Songino Array	45.28	48	P	P	10 58 34.7	-0.7
ARCES	ARCESS Array B	45.72	346	P	P	10 58 38.4	0.0
	comp=Z,1.1nm,0.4s,baz=148,slow=9.1,SNR=13						
ULN	Ulaanbaatar	45.73	48⇓	eP	P	10 58 38.4	-0.6
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULN	Ulaanbaatar	45.73	48	P	P	10 58 37.6	-1.4
ULN				IAmb	IAmb	10 58 41.7	
	comp=Z,4.0nm,0.8s						
XAN	Xi'an	47.07	68	P	P	10 58 49.0	-0.7
XAN				pP	pP	10 58 56.9	-1.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,82nm,5.1s						
HHC	Hu-ho-hao-te	48.64	58	eP	P	10 59 02.3	+0.5
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,23nm,5.3s						
PSI	Prapat	48.98	112	P	P	10 59 04.2	-0.4
	comp=Z,3.2nm,0.5s,baz=322,slow=12,SNR=2.0						
RPSI	Rantau Prapat	49.04	112	P	P	10 59 04.2	-0.7
ESBB	Sonseca Array	49.51	300	P	P	10 59 08.5	+0.2
ESDC	Sonseca Array	49.51	300	P	P	10 59 08.6	+0.2
	comp=Z,2.1nm,0.5s,baz=68,slow=7.3,SNR=18						
ESDC	Sonseca Array	49.51	300	P	P	10 59 08.9	+0.5
PAB	San Pablo	49.81	300	P	P	10 59 11.5	+0.8
PAB				pmax	pmax		
	comp=Z,27nm,1.5s						
PAB	San Pablo	49.81	300	P	P	10 59 11.5	+0.8
TOA0	Torodi Ar. Sit	50.98	265	P	P	10 59 20.4	+0.6
TOA0				IAmb	IAmb	10 59 24.9	
	comp=Z,5.4nm,0.8s						
TORD	Torodi Ar. Bea	50.98	265	P	P	10 59 19.9	+0.2
	comp=Z,3.8nm,0.6s,baz=62,slow=7.6,SNR=31						
TORD	Torodi Ar. Bea	50.98	265	P	P	10 59 19.6	-0.2
BOD	Bodaibo	51.47	36	eP	P	10 59 21.0	-1.8
BOD				pmax	pmax		
	comp=Z,13nm,1.5s						
TIA	Tai'an	53.44	64	P	P	10 59 37.8	0.0
TIA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
NJ2	Nanjing	55.63	68	eP	P	10 59 52.6	-1.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
LBTB	Lobatse	58.71	211	P	P	11 00 17.5	+2.0
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LBTB	Lobatse	58.71	211	P	P	11 00 17.5	+2.0
LBTB				IAmb	IAmb	11 00 18.5	
	comp=Z,4.5nm,0.7s						
DBIC	Dimbokro	59.60	262	P	P	11 00 22.3	+0.4
	comp=Z,10nm,0.7s,baz=38,slow=6.9,SNR=14						
DBIC	Dimbokro	59.60	262	P	P	11 00 22.7	+0.8
KIC	Kosan Boka	59.64	261	eP	P	11 00 23.0	+0.8
	comp=Z,16nm,0.7s						
YAK	Yakutsk	59.66	32⇑	eP	P	11 00 21.8	+0.2
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIXI	Tiksi	59.72	21⇑	eP	P	11 00 23.1	+1.3
TIXI				pmax	pmax		
	comp=Z,8.0nm,2.5s						
TIC	Toumodi	59.76	262	eP	P	11 00 23.7	+0.7
	comp=Z,3.4nm,0.3s						
LIC	Lamto	59.95	261	eP	P	11 00 25.0	+0.7
	comp=Z,19nm,0.5s						
KSRS	Korea Array	61.69	60	P	P	11 00 34.3	-1.5
	comp=Z,1.9nm,0.9s,baz=277,slow=6.5,SNR=6.0						
BOSA	Boshof	61.97	209	P	P	11 00 39.3	+1.5
	comp=Z,3.0nm,0.6s,baz=30,slow=7.6,SNR=11						
BOSA				LR	LR	11 31 17.8	
	comp=Z,39nm,20.3s,baz=30,slow=40						
BOSA	Boshof	61.97	209	P	P	11 00 39.5	+1.7
BOSA				IAmb	IAmb	11 00 40.0	
	comp=Z,3.9nm,0.7s						
KLR	Kul'dur	62.04	46⇑	eP	P	11 00 37.3	-0.7
KLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLR	Kul'dur	62.04	46	P	P	11 00 36.6	-1.4
	baz=277,slow=8.0						
USRK	Ussuriysk Ar.	63.17	52	P	P	11 00 43.6	-2.0
	comp=Z,0.6nm,0.4s,baz=288,slow=6.2,SNR=4.3						
SUR	Sutherland	67.16	210	P	P	11 01 13.2	+1.5
SEY	Seymchan	69.82	29⇑	eP	P	11 01 27.9	+0.1
BILL	Bilibino	72.92	21⇓	eP	P	11 01 49.0	+2.5
BILL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
FRB	Frobisher Bay	79.06	338	P	P	11 02 21.4	0.0
	comp=Z,2.3nm,0.8s,baz=137,slow=0.2,SNR=3.2						
FITZ	Fitzroy Crossi	82.41	115	P	P	11 02 40.5	+0.4
	comp=Z,3.4nm,0.6s,baz=324,slow=5.3,SNR=16						
FITZ	Fitzroy Crossi	82.41	115	P	P	11 02 39.6	-0.5
FITZ				IAmb	IAmb	11 02 41.1	
	comp=Z,3.8nm,0.7s						
TOLK	Toolik Lake Re	82.99	9	P	P	11 02 42.9	+0.5
TOLK				IAmb	IAmb	11 02 43.5	
	comp=Z,4.9nm,1.3s						
BMAR	Burnt Mountain	84.75	7	P	P	11 02 52.2	+0.8
INK	Inuvik	84.76	3	P	P	11 02 50.3	-1.1
	comp=Z,0.5nm,0.9s,baz=323,slow=6.7,SNR=2.2						
IMAR	Indian Mountai	84.81	11	P	P	11 02 51.5	-0.2
COLA	College	86.77	9⇓	eP	P	11 03 02.3	+0.9
COLA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ILAR	Eielson Array	87.01	9	P	P	11 03 01.3	-1.3
ILAR	Eielson Array	87.01	9	P	P	11 03 01.7	-0.9
	comp=Z,1.1nm,1.1s,baz=349,slow=5.0,SNR=4.2						
ILAR	Eielson Array	87.01	9	P	P	11 03 01.3	-1.3
YKA	Yellowknife Ar	90.34	355	P	P	11 03 18.0	-0.3
YKA	Yellowknife Ar	90.34	355	P	P	11 03 18.0	-0.3
	comp=Z,0.5nm,0.7s,baz=3.6,slow=4.8,SNR=15						
YKA	Yellowknife Ar	90.34	355	P	P	11 03 18.3	0.0
WRA	Warramunga Arr	90.45	112	P	P	11 03 19.1	-0.5
	comp=Z,1.9nm,0.8s,baz=310,slow=4.3,SNR=12						
WRA	Warramunga Arr	90.45	112	P	P	11 03 19.1	-0.5
WRAB	Tennant Creek	90.45	112⇓	eP	P	11 03 20.3	+0.7
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR	Alice Springs	91.86	116	P	P	11 03 25.8	-0.3
	comp=Z,1.3nm,0.8s,baz=301,slow=4.5,SNR=12						
NVAR	Mina Array Bea	114.51	354	PKiKP	PKPdf	11 08 58.7	+0.6
	comp=Z,0.1nm,0.3s,baz=267,slow=1.5,SNR=3.9						

IDC 02 10:52:40.0±1.9, 5°.62N×124°.06E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.4/56, mbtmp3.7/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/36, Error ellipse: s-maj=274.8km s-min=19.5km az=64.0, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.34	159	P	P	10 58 27.6	+0.6
	0.2nm,0.4s,baz=333,slow=9.7,SNR=3.8						
ASAR	Alice Springs	30.66	162	P	P	10 58 57.0	+0.6
	0.6nm,0.3s,baz=340,slow=7.4,SNR=30						
STKA	Stephens Creek	40.87	157	P	P	11 00 22.6	-1.2
	1.1nm,0.6s,baz=321,slow=13,SNR=2.6						
ASAJ	Asahikawa	41.65	20	LR	LR	11 18 40.0	
	comp=Z,15nm,19.7s,baz=14,slow=38						
MKAR	Makanchi Array	54.50	326	P	P	11 02 10.3	+0.7
	0.3nm,0.4s,baz=127,slow=7.4,SNR=8.5						
KURBB	Kurchatov Arra	58.73	328	P	P	11 02 38.7	-0.9
	0.4nm,0.5s,baz=132,slow=6.5,SNR=6.2						

MAN 02 11:28:39.5, 10°.12N×126°.30E, h91km, mb4.9, ML3.8, MS3.8, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SCPH	Surigao	0.86	247⇑	eP	Pn	11 28 58.7	+0.9
SCPH				eS	Sn	11 29 13.2	+1.7
BUTP	Butuan	1.32	210	eP	Pn	11 29 05.8	+2.7
BUTP				eS	Sn	11 29 26.9	+6.0
MSLP	Maasin	1.42	271	eP	Pn	11 29 05.0	+0.8
MSLP				eS	Sn	11 29 31.8	+8.9
OCLP	Ormoc	1.90	299	eP	Pn	11 29 11.0	+0.6
OCLP				eS	Sn	11 29 42.3	+8.3

*SJA **02** 11:28:46.0±0.9, 21°.95S×68°.73W, h127km±7km, ML3.8, MW3.7*

*IDC **02** 11:28:46.0±0.8, 21°.86S×68°.43W, h107km±10km, mb3.4/4, mb1 3.7/7, mb1mx3.5/29, mbtmp3.9/7, Error ellipse: s-maj=27.1km s-min=17.8km az=143.0*

*GUC **02** 11:28:47.8±0.7, 21°.95S×68°.69W, h118km±3km, ML3.6*

ISC 02 11:28:46.1±0.8, 21°.91S±0°.04×68°.62W±0°.06, h116km±6km, n33, σ1s.61/53, 14C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.59	281⇑	iP	Pn	11 29 05.5	+1.1
PB09				eS	Sn	11 29 19.5	+1.3
LVC	Limon Verde	0.74	201⇑	iP	Pn	11 29 07.2	+1.3
LVC				eS	Sn	11 29 21.9	+1.1
LVC	Limon Verde	0.74	201	P	Pn	11 29 06.9	+1.0
	300nm,0.3s,baz=34,slow=7.6,SNR=2046						
LVC				S	Sn	11 29 21.7	+1.0
	740nm,0.3s,baz=151,slow=19,SNR=194						
LVC				LR	LR	11 29 38.0	
	comp=Z,131nm,18.9s,baz=176,slow=60						
LVC	Limon Verde	0.74	201	iP	Pn	11 29 06.8	+1.0
LVC				eS	Sn	11 29 22.4	+1.6
LVC				IAML		11 29 22.4	
	comp=Z,1μm,0.3s						
PB03	IPOC Station P	1.06	263⇑	iP	Pn	11 29 09.1	+0.5
PB03				eS	Sn	11 29 25.4	-0.3
PB03				IAML		11 29 26.5	
	comp=E,2μm,0.2s						
PB03	IPOC Station P	1.06	263	iP	Pn	11 29 08.9	+0.3
PB03				eS	Sn	11 29 26.2	+0.5
PB06	IPOC Station P	1.19	228⇑	iP	Pn	11 29 10.8	+0.9
PB06				eS	Sn	11 29 28.5	+0.5
PB06				IAML		11 29 30.3	
	comp=E,2μm,0.7s						
PB06	IPOC Station P	1.19	228	iP	Pn	11 29 10.4	+0.5
PB06				IAML		11 29 11.2	
	comp=Z,1μm,0.4s						
PB06				eS	Sn	11 29 28.7	+0.7
PB04	IPOC Station P	1.48	253⇑	iP	Pn	11 29 13.6	+0.4
PB04				iS	Sn	11 29 33.4	-0.4
PB04				IAML		11 29 36.0	
	comp=E,1μm,0.4s						
PB04	IPOC Station P	1.48	253	iP	Pn	11 29 13.5	+0.2
PB15	IPOC Station P	1.51	211⇑	iP	Pn	11 29 14.5	+0.9
PB15				iS	Sn	11 29 35.4	+0.8
PB05	IPOC Station P	1.74	237⇑	iP	Pn	11 29 16.6	+0.3
PB05				eS	Sn	11 29 38.7	-0.6
PB05				IAML		11 29 40.1	
	comp=E,473nm,0.2s						
PB05				IAML		11 29 43.3	
	comp=N,444nm,0.3s						
PB05	IPOC Station P	1.74	237	iP	Pn	11 29 16.5	+0.2
PB08	IPOC Station P	1.83	344⇑	iP	Pn	11 29 19.6	+1.9
PB08				eS	Sn	11 29 44.1	+2.3
PB08				IAML		11 29 45.4	
	comp=E,358nm,0.6s						
PB08	IPOC Station P	1.83	344	iP	Pn	11 29 20.0	+2.3
TA01	Diego Aracena	1.98	312	eP	Pn	11 29 19.6	+0.5
TA01				iS	Sn	11 29 44.1	-0.3
GO01	Chusmiza	2.30	346⇑	iP	Pn	11 29 25.6	+1.9
GO01				eS	Sn	11 29 54.2	+1.9
GO01				IAML		11 29 56.0	
	comp=N,407nm,0.6s						
PB11	IPOC Station P	2.35	335⇑	iP	Pn	11 29 24.8	+0.8
PB11				eS	Sn	11 29 53.5	+0.4
PB11				IAML		11 29 55.4	
	comp=E,325nm,0.6s						
PB11	IPOC Station P	2.35	335	iP	Pn	11 29 24.6	+0.6
PB10	IPOC Station P	2.40	228⇑	iP	Pn	11 29 24.4	0.0
PB10				eS	Sn	11 29 52.8	-1.0
PB10				IAML		11 29 58.8	
	comp=N,182nm,0.3s						
PB10	IPOC Station P	2.40	228	iP	Pn	11 29 24.4	0.0
PSGC	Pisagua	2.70	328⇑	iP	Pn	11 29 28.9	+0.4
PSGC				eS	Sn	11 30 00.8	-0.3
PSGC				IAML		11 30 10.7	
	comp=E,112nm,0.3s						
MNMC	Minye Minye	2.92	341⇑	iP	Pn	11 29 32.8	+1.3
MNMC				eS	Sn	11 30 07.9	+1.5
MNMC				IAML		11 30 09.4	
	comp=N,406nm,0.2s						
GO02	Mina Guanaco	3.36	195⇑	iP	Pn	11 29 37.2	-0.1
PB16	IPOC Station P	3.66	347	eP	Pn	11 29 43.4	+1.9
PB16				IAML		11 30 34.7	
	comp=E,41nm,0.5s						
LPAZ	La Paz	5.61	5	P	Pn	11 30 10.2	+2.3
	comp=E,2.4nm,0.3s,baz=186,slow=10,SNR=37						
SIV	San Ignacio	9.25	52	P	Pn	11 30 54.9	-1.7
	comp=E,2.8nm,0.3s,baz=244,slow=12,SNR=59						
SIV				S	Sn	11 32 32.6	-6.4
	comp=E,0.3nm,0.3s,baz=319,slow=20,SNR=2.7						
ATAH	Atahualpa	17.46	326	P	Pn	11 32 43.5	+0.5
	comp=E,0.4nm,0.3s,baz=138,slow=12,SNR=3.6						
PLCA	Paso Flores	18.83	185	P	P	11 32 57.1	+0.1
	comp=E,0.1nm,0.3s,baz=20,slow=9.6,SNR=3.1						
BDFB	Brasilia	20.47	76	P	P	11 33 14.1	-0.8
	comp=E,3.6nm,0.7s,baz=241,slow=12,SNR=4.4						
PDAR	Pinedale Array	74.60	330	P	P	11 40 13.6	+0.8
	comp=E,0.3nm,0.8s,baz=139,slow=8.4,SNR=2.8						
TORD	Torodi Ar. Bea	77.24	70	P	P	11 40 28.2	+0.3
	comp=E,1.4nm,0.4s,baz=251,slow=5.3,SNR=9.0						
YKA	Yellowknife Ar	91.67	340	P	P	11 41 40.6	+0.9
	comp=E,0.3nm,0.6s,baz=137,slow=4.4,SNR=11						
YKA				pP	pP	11 42 05.8	-5.3
	comp=E,0.2nm,0.6s,baz=125,slow=4.7,SNR=3.7						

IDC 02 11:35:26.0±27.0, 20°.42S×172°.58W, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/36, mbtmp3.7/4, MS3.3/1, Ms1 3.3/1, ms1mx2.5/38, Error ellipse: s-maj=505.7km s-min=162.5km az=74.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	38.55	263	P	P	11 42 50.8	+0.1
	2.2nm,0.8s,baz=91,slow=11,SNR=3.8						
STKA	Stephens Creek	42.41	245	P	P	11 43 22.5	-0.1
	1.6nm,0.7s,baz=21,slow=8.6,SNR=4.0						
ASAR	Alice Springs	49.48	256	P	P	11 44 17.5	-1.1
	0.1nm,0.4s,baz=96,slow=6.6,SNR=4.8						
ASAR				LR	LR	12 02 08.5	
	comp=Z,33nm,21.7s,baz=181,slow=32						
WRA	Warramunga Arr	49.64	261	P	P	11 44 20.5	+0.8
	0.4nm,0.3s,baz=99,slow=8.2,SNR=6.0						

IDC 02 11:36:42.3±2.8, 5°.84S×147°.75E, h0km, mb3.9/3, mb1 4.0/5, mb1mx3.6/37, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=61.5km s-min=37.6km az=90.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.59	189	Pn	Pn	11 37 40.4	+1.1
	3.4nm,0.3s,baz=58,slow=8.3,SNR=9.1						
PMG				Sn	Sn	11 38 20.3	-2.1
	3.2nm,0.3s,baz=225,slow=20,SNR=10						
WRA	Warramunga Arr	19.14	222	P	P	11 41 06.7	-0.6
	0.4nm,0.3s,baz=48,slow=11,SNR=16						
ASAR	Alice Springs	22.17	216	P	P	11 41 40.0	-0.2
	1.1nm,0.5s,baz=48,slow=9.6,SNR=56						
FITZ	Fitzroy Crossi	24.78	239	P	P	11 42 06.8	+0.6
	4.6nm,0.6s,baz=64,slow=7.9,SNR=18						
STKA	Stephens Creek	26.53	192	P	P	11 42 21.8	-0.1
	1.6nm,0.8s,baz=3.2,slow=11,SNR=4.2						
TORD	Torodi Ar. Bea	145.77	285	PKPbc	PKPdf	11 56 23.1	-1.0
	0.2nm,0.3s,baz=59,slow=2.8,SNR=2.6						

*SJA **02** 11:43:20.9±0.7, 21°.99S×68°.73W, h127km±4km, ML3.3, MW3.4*

*GUC **02** 11:43:21.4±0.7, 21°.94S×68°.72W, h128km±4km, ML3.3*

ISC 02 11:43:22.1±1.6, 21°.94S±0°.04×68°.77W±0°.06, h123km±11km, n23, σ0s.47/35, 5C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.46	289⇓	iP	Pn	11 43 40.1	-0.2
PB09				iS	Sn	11 43 54.4	+0.3
PB09				IAML		11 43 55.4	
	comp=E,682nm,0.3s						
PB09	IPOC Station P	0.46	289	iP	Pn	11 43 40.5	+0.1
PB09				eS	Sn	11 43 54.8	+0.7
PB09				IAML		11 43 55.0	
	comp=Z,472nm,0.3s						
LVC	Limon Verde	0.68	191⇑	iP	Pn	11 43 41.4	-0.6
LVC				iS	Sn	11 43 56.5	-0.6
LVC	Limon Verde	0.68	191	iP	Pn	11 43 41.6	-0.4
LVC				eS	Sn	11 43 56.8	-0.2
PB03	IPOC Station P	0.92	263⇑	iP	Pn	11 43 43.6	-0.1
PB03				iS	Sn	11 44 00.1	0.0
PB03				IAML		11 44 01.0	
	comp=E,1μm,0.2s						
PB03	IPOC Station P	0.92	263	iP	Pn	11 43 43.8	+0.1
PB06	IPOC Station P	1.06	224⇑	iP	Pn	11 43 45.1	-0.1
PB06				iS	Sn	11 44 03.1	+0.5
PB06				IAML		11 44 04.7	
	comp=E,396nm,0.2s						
PB06	IPOC Station P	1.06	224	iP	Pn	11 43 45.2	+0.1
PB04	IPOC Station P	1.33	253⇑	iP	Pn	11 43 47.9	-0.1
PB04				iS	Sn	11 44 08.0	+0.3
PB04				IAML		11 44 10.7	
	comp=N,455nm,0.1s						
PB04	IPOC Station P	1.33	253	iP	Pn	11 43 48.1	+0.1
PB04				IAML		11 44 13.3	
	comp=Z,277nm,0.1s						
PB15	IPOC Station P	1.41	207	iP	Pn	11 43 48.9	0.0
PB15				iS	Sn	11 44 10.0	+0.6
PB15	IPOC Station P	1.41	207	iP	Pn	11 43 49.1	+0.2
PB05	IPOC Station P	1.60	235⇑	iP	Pn	11 43 51.0	0.0
PB05	IPOC Station P	1.60	235	iP	Pn	11 43 51.1	0.0
PB08	IPOC Station P	1.83	349⇓	iP	Pn	11 43 53.9	-0.2
PB08				iS	Sn	11 44 18.7	+0.4
PB08				IAML		11 44 20.1	
	comp=E,135nm,0.4s						
TA01	Diego Aracena	1.90	316	iP	Pn	11 43 53.8	-0.6
TA01				iS	Sn	11 44 19.1	0.0
TA01				IAML		11 44 21.1	
	comp=N,266nm,0.2s						
PB10	IPOC Station P	2.27	226	iP	Pn	11 43 58.5	-0.5
GO01	Chusmiza	2.30	350⇓	iP	Pn	11 43 59.4	-0.5
GO01				iS	Sn	11 44 29.7	+0.8
GO01				IAML		11 44 34.3	
	comp=N,224nm,0.1s						
PB11	IPOC Station P	2.32	339⇓	iP	Pn	11 43 58.8	-1.2
PB11				iS	Sn	11 44 28.4	-0.5
PB11				IAML		11 44 31.1	
	comp=E,199nm,0.5s						
YJA	Yavi	3.03	95	iP	Pn	11 44 08.9	-0.4
PB14	IPOC Station P	3.06	209	iP	Pn	11 44 09.1	-0.5
HJA	Humahuaca	3.35	113	iP	Pn	11 44 13.6	+0.1
LPAZ	La Paz	5.66	6	iP	Pn	11 44 45.3	+0.8

*NEIC **02** 11:50:58.7±1.7, 6°.72S±0°.05×129°.98E±0°.06, h129km±6km, mb4.5/24, Error ellipse: s-maj=9.1km s-min=7.6km az=81.0*

*IDC **02** 11:50:59.4±1.4, 6°.73S×129°.88E, h132km±12km, mb4.0/17, mb1 4.1/22, mb1mx4.0/47, mbtmp4.5/22, MS2.7/5, Ms1 2.8/5, ms1mx2.5/39, Error ellipse: s-maj=12.6km s-min=10.8km az=76.0*

*DJA **02** 11:50:59.6±0.2, 7°S±2°×13°0E±°, h134km±3km, M4.6/31, mb4.7/31, mB5.1/13, MLv4.9/15, Mw(mB)4.5/13*

ISC 02 11:51:00.4±0.3, 6°.91S±0°.04×130°.00E±0°.04, h150km, n119, σ1s.89/125, mb4.6/37, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.67	130	P	Pn	11 51 32.4	+0.6
SAUI	Saumlaki	1.67	130		Pn	11 51 32.0	+0.2
SAUI				Sn	Sn	11 51 53.1	-2.8
BNDI	Bandanaira	2.37	358	P	Pn	11 51 38.1	-1.8
AAI	Ambon	3.67	331	P	Pn	11 51 54.7	-1.7
MSAI	Masohi	3.69	343	P	Pn	11 51 55.3	-1.4
FAKI	Fak Fak	4.55	30	P	Pn	11 52 03.8	-4.1
FAKI	Fak Fak	4.55	30		Pn	11 52 03.5	-4.4
FAKI				Sn	Sn	11 52 49.3	-11
NLAI	Namlea	4.65	321	P	Pn	11 52 08.3	-0.9
KMPI	Kaimana, Papua	4.89	49	P	Pn	11 52 09.8	-2.6
MTN	Manton Dam	6.00	169		Pn	11 52 27.6	+0.5
MTN				Sn	Sn	11 53 32.7	-2.4
SIJI	Sorong	6.13	12	P	Pn	11 52 24.6	-4.2
	7.6nm,0.3s,baz=28,slow=20,SNR=24						
SIJI				S	Sn	11 53 27.1	-11
	12nm,0.3s,baz=270,slow=20,SNR=6.0						
SWI	Sorong	6.13	12	P	Pn	11 52 24.9	-4.0
	0.6nm2μm36nm,1.1s						
SANI	Sanana	6.27	320	P	Pn	11 52 29.4	-1.3
	0.2nm733nm71nm,0.8s						
SOEI	Soe	6.34	243	P	Pn	11 52 31.9	+0.1
	1.9nm3μm168nm,0.6s						
SOEI	Soe	6.34	243		Pn	11 52 31.6	-0.2
SOEI				Sn	Sn	11 53 40.3	-3.1
LBMI	Labuha	6.71	338	P	Pn	11 52 35.3	-1.3
	0.5nm140nm,0.9s						
RKPI	Ransiki, Papua	6.79	38	P	Pn	11 52 35.4	-2.2
	2.5nm3μm112nm,0.6s						
BATI	Baumata	7.08	242	P	Pn	11 52 40.7	-0.8
	72nm,0.3s,baz=46,slow=2.5,SNR=31						
BATI				S	Sn	11 53 58.1	-2.7
	52nm,0.3s,baz=106,slow=23,SNR=18						
BATI	Baumata	7.08	242	P	Pn	11 52 40.9	-0.6
	1.1nm2μm126nm,0.6s						
BBSI	Bau Bau	7.52	280	P	Pn	11 52 48.2	+0.7
	0.1nm396nm29nm,0.9s						
MMRI	Maumere	7.88	257	P	Pn	11 52 52.0	-0.3
	0.4nm2μm119nm,1.2s						
MMRI	Maumere	7.88	257		Pn	11 52 51.1	-1.2
KNRA	Kununurra	8.80	188		Pn	11 53 03.9	-0.5
KNRA				Sn	Sn	11 54 38.2	-4.1
LUWI	Luwuk	9.27	309	P	Pn	11 53 10.7	-0.1
	1μm64nm,1.1s						
LUWI	Luwuk	9.27	309		Pn	11 53 08.2	-2.5
BKSI	Bulukumba	9.95	279	P	Pn	11 53 19.4	-0.4
	39nm,0.8s						
SMPI	Sarmi	9.96	61	P	Pn	11 53 18.3	-1.6
	26nm,1.1s						
APSI	Ampana	10.24	305	P	Pn	11 53 24.6	+1.0
	786nm76nm,1.0s						
TTSI	Tana Toraja	10.85	290	P	Pn	11 53 48.2	+17
MRSI	Marisa	10.89	312	P	Pn	11 53 32.3	+0.2
	99nm,0.9s						
JAY	Jayapura	11.52	68	P	Pn	11 53 41.2	+0.7
	3.3nm,0.3s,baz=220,slow=12,SNR=11						
JAY				LR	LR	11 58 21.2	
	comp=Z,46nm,21.7s,baz=282,slow=38						
FITZ	Fitzroy Crossi	11.91	201	P	Pn	11 53 43.7	-1.8
	2.3nm,0.3s,baz=29,slow=8.8,SNR=56						
FITZ				S	Sn	11 55 47.0	-10
	6.4nm,0.3s,baz=55,slow=12,SNR=7.2						
FITZ				LR	LR	11 58 36.2	
	comp=Z,28nm,21.7s,baz=350,slow=38						
FITZ	Fitzroy Crossi	11.91	201		Pn	11 53 44.2	-1.3
MPSI	Mapaga	12.39	305	P	Pn	11 53 51.8	+0.1
	7.8nm,1.6s						
WRAB	Tennant Creek	13.62	162		Pn	11 54 05.3	-2.2
WRA	Warramunga Arr	13.63	162	P	Pn	11 54 05.3	-2.4
	5.3nm,0.3s,baz=344,slow=13,SNR=119						
WRA				S	Sn	11 56 29.8	-8.8
	16nm,0.3s,baz=330,slow=22,SNR=12						
WRA				LR	LR	11 59 54.4	
	comp=Z,33nm,21.8s,baz=10.0,slow=39						
WRA	Warramunga Arr	13.63	162	P	Pn	11 54 04.5	-3.2
WR0	Warramunga Arr	13.70	162		Pn	11 54 06.8	-1.8
COEN	Coen	14.72	119		Pn	11 54 20.4	-1.0
JAGI	Jajag, Banyuwa	15.79	263		Pn	11 54 31.8	-2.8
AS31	Alice Springs	17.08	168	P	Pn	11 54 51.3	+0.9
AS31				IAmb	IAmb	11 54 55.2	
	comp=Z,11nm,0.4s						
ASAR	Alice Springs	17.08	168	P	P	11 54 51.0	+1.3
	comp=Z,3.1nm,0.3s,baz=349,slow=13,SNR=107						
ASAR				S	S	11 57 53.7	-6.5
	comp=Z,1.7nm,0.3s,baz=344,slow=26,SNR=6.4						
ASAR	Alice Springs	17.08	168	P	Pn	11 54 51.6	+1.3
PMG	Port Moresby	17.16	99	P	Pn	11 54 54.1	+2.8

	comp=Z,1.4nm,0.3s,baz=6.4,slow=8.7,SNR=4.8						
PMG				S	**S**	**11 57 54.9**	**-7.1**
	comp=Z,0.8nm,0.3s,baz=217,slow=18,SNR=4.3						
PMG	**Port Moresby**	**17.16**	**99**	P	**P**	**11 54 50.4**	**-0.2**
PMG				IAmb	IAmb	11 54 59.1	
	comp=Z,18nm,0.6s						
PSA00	**Pilbara Seismi**	**17.58**	**213**		**Pn**	**11 54 57.1**	**+0.9**
PSA00				IAmb	IAmb	11 55 03.1	
	comp=Z,15nm,0.7s						
KKM	**Kota Kinabalu**	**18.84**	**313**		**P**	**11 55 08.2**	**-0.8**
KKM				IAmb	IAmb	11 55 12.5	
	comp=Z,37nm,1.2s						
SBUM	**Sibu**	**20.04**	**297**	P	**P**	**11 55 20.8**	**-1.1**
CTA	**Charters Tower**	**20.50**	**131**	P	Pn	11 55 30.1	-0.6
	comp=Z,9.8nm,0.7s,baz=306,slow=11,SNR=17						
KPJI	**Karang Pucung**	**20.91**	**268**	P	**P**	**11 55 28.8**	**-2.5**
	comp=Z,25nm,0.7s						
CISI	**Cisompet, Garu**	**22.02**	**267**	P	**P**	**11 55 42.2**	**-0.8**
	comp=Z,80nm,0.8s						
CISI	**Cisompet, Garu**	**22.02**	**267**	P	**P**	**11 55 42.2**	**-0.8**
LEM	**Lembang**	**22.23**	**269**	P	**P**	**11 55 43.3**	**-1.9**
	comp=Z,22nm,0.4s,baz=348,slow=14,SNR=4.5						
CNJI	**Cibinong**	**22.70**	**268**	P	**P**	**11 55 49.6**	**0.0**
	comp=Z,3μmcomp=Z,139nm,0.8s						
FORT	**Forrest**	**23.82**	**184**	P	**P**	**11 56 01.4**	**+1.8**
MORW	**Morawa**	**25.68**	**209**	P	**P**	**11 56 18.6**	**+2.0**
MORW				IAmb	IAmb	11 56 32.8	
	comp=Z,16nm,1.2s						
MDSI	**Maura Dua**	**25.81**	**274**	P	**P**	**11 56 18.9**	**+1.1**
	comp=Z,4.3nm,1.2s						
BBOO	**Buckleboo**	**26.38**	**168**	P	**P**	**11 56 24.9**	**+2.1**
STKA	**Stephens Creek**	**27.10**	**158**	P	**P**	**11 56 31.3**	**+2.1**
	comp=Z,2.9nm,0.3s,baz=341,slow=8.3,SNR=14						
STKA	**Stephens Creek**	**27.10**	**158**	P	**P**	**11 56 31.1**	**+1.9**
RGRI	**Rengat**	**28.36**	**282**	P	P	11 56 58.1	+17
ARMA	**Armidale**	**30.97**	**142**	P	**P**	**11 57 05.5**	**+1.8**
RPSI	**Rantau Prapat**	**32.45**	**286**	P	**P**	**11 57 15.7**	**-1.1**
PSI	**Prapat**	**32.49**	**286**	P	**P**	**11 57 15.7**	**-1.5**
	comp=Z,4.2nm,0.6s,baz=138,slow=11,SNR=4.1						
CAN	**Canberra**	**33.23**	**151**	P	**P**	**11 57 25.8**	**+2.4**
GSI	**Gunungsitoli**	**33.37**	**283**	P	**P**	**11 57 24.8**	**+0.1**
GSI				IAmb	IAmb	11 57 36.7	
	comp=Z,14nm,1.2s						
CMAR	**Chiang Mai Arr**	**39.67**	**310**	P	**P**	**11 58 17.8**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=137,slow=7.5,SNR=16						
CMAR				ScP	**ScP**	**12 03 58.6**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=153,slow=3.0,SNR=4.3						
CMAR				LR	LR	12 16 53.7	
	comp=Z,7.9nm,19.1s,baz=15,slow=39						
NJ2	**Nanjing**	**40.17**	**345**	*e*P	**P**	**11 58 22.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
KSRS	**Korea Array**	**44.17**	**358**	P	**P**	**11 58 53.5**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=176,slow=8.8,SNR=3.7						
CD2	**Chengdu**	**45.23**	**328**	P	**P**	**11 59 02.2**	**-0.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
LZH	**Lanzhou**	**49.32**	**332**	*e*P	**P**	**11 59 35.8**	**+1.2**
LZH				pP	pP	12 00 08.8	+1.2
LZH				sP	sP	12 00 19.9	-3.9
LZH				PP	**PP**	**12 01 33.9**	**+3.8**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,53nm,4.8s						
HHC	**Hu-ho-hao-te**	**50.45**	**342**	*e*P	**P**	**11 59 45.3**	**+2.4**
HHC				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,72nm,5.0s						
USRK	**Ussuriysk Ar.**	**50.90**	**2**	P	**P**	**11 59 45.2**	**-0.8**
	comp=Z,2.5nm,0.5s,baz=178,slow=7.1,SNR=11						
USRK	**Ussuriysk Ar.**	**50.90**	**2**	P	**P**	**11 59 44.8**	**-1.3**
PALK	**Pallekele**	**51.15**	**285**	LR	LR	12 22 07.1	
	comp=Z,17nm,18.9s,baz=95,slow=37						
BHW	**Baring Head**	**52.55**	**138**	P	**P**	**11 59 58.9**	**+0.5**
TAPN	**Taplejung**	**53.23**	**312**	*e*P	**P**	**12 00 03.1**	**-0.9**
	comp=Z,6.2nm,0.3s						
RAMN	**Ramite**	**53.84**	**311**	*e*P	**P**	**12 00 07.9**	**-0.5**
	comp=Z,20nm,0.5s						
JIRN	**Jiri**	**54.53**	**311**	*e*P	**P**	**12 00 12.5**	**-1.0**
GUN	**Gumba**	**54.89**	**311**	*e*P	**P**	**12 00 15.9**	**-0.2**
	comp=Z,17nm,0.4s						
GKN	**Gorkha**	**55.88**	**311**	*e*P	**P**	**12 00 22.7**	**-0.2**
	comp=Z,16nm,0.3s						
KLR	**Kul'dur**	**55.92**	**1**	P	**P**	**12 00 21.9**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=231,slow=6.5,SNR=3.9						
KOLN	**Koldanda**	**56.54**	**310**	*e*P	**P**	**12 00 27.4**	**-0.3**
	comp=Z,6.9nm,0.3s						
DANN	**Dangsing**	**56.72**	**310**	*e*P	**P**	**12 00 28.4**	**-0.6**
ULN	**Ulaanbaatar**	**58.18**	**342**	P	**P**	**12 00 38.2**	**-0.5**
ULN				IAmb	IAmb	12 00 39.5	
	comp=Z,2.5nm,0.7s						
SONM	**Songino Array**	**58.35**	**342**	P	**P**	**12 00 39.7**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=163,slow=6.8,SNR=4.2						
WMQ	**Urumqi**	**63.32**	**327**	*e*P	**P**	**12 01 14.9**	**+1.4**
WMQ				pP	PcP	12 01 49.1	-0.1
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,130nm,5.1s						
PETK	**Petropavlovsk-**	**64.23**	**18**	P	**P**	**12 01 19.4**	**+0.3**
	comp=Z,8.8nm,1.0s,baz=179,slow=6.6,SNR=9.3						
PETK	**Petropavlovsk-**	**64.23**	**18**	P	**P**	**12 01 19.2**	**+0.1**
KSH	**Kashi**	**67.95**	**318**	P	**P**	**12 01 46.7**	**+3.3**
KSH				pP	pP	12 02 17.4	-1.4
KSH				PP	**PP**	**12 04 17.2**	**+1.9**
KSH				pmax	pmax		
	comp=Z,250nm,5.1s						
MK31	**Makanchi Array**	**68.15**	**327**	IAmb	IAmb	12 01 45.1	
	comp=Z,4.2nm,0.6s						
MKAR	**Makanchi Array**	**68.15**	**327**	P	**P**	**12 01 44.4**	**+0.1**
	comp=Z,6.6nm,0.4s,baz=117,slow=7.9,SNR=136						
MKAR	**Makanchi Array**	**68.15**	**327**	P	**P**	**12 01 44.1**	**-0.2**
MAKZ	**Makanchi**	**68.33**	**327**	P	**P**	**12 01 45.4**	**0.0**
MAKZ				IAmb	IAmb	12 01 46.0	
	comp=Z,5.7nm,0.5s						
AAK	**Ala-Archa**	**70.47**	**320**	P	**P**	**12 01 58.9**	**0.0**
ZALV	**Zalesovo Beam**	**71.50**	**334**	P	**P**	**12 02 03.6**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=124,slow=7.3,SNR=5.7						
ZALV	**Zalesovo Beam**	**71.50**	**334**	P	**P**	**12 02 03.8**	**-0.8**
SEY	**Seymchan**	**71.71**	**11**	P	**P**	**12 02 05.8**	**+0.1**
	comp=Z,3.7nm,0.3s,baz=58,slow=0.3,SNR=21						
KURBB	**Kurchatov Arra**	**72.43**	**328**	P	**P**	**12 02 10.1**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=127,slow=5.0,SNR=26						
KURK	**Kurchatov**	**72.44**	**329**	P	**P**	**12 02 10.0**	**-0.2**
VNDA	**Vanda**	**72.54**	**173**	P	**P**	**12 02 12.6**	**+2.2**
	comp=Z,1.1nm,0.6s,baz=326,slow=6.2,SNR=6.9						
VNDA	**Vanda**	**72.54**	**173**	P	**P**	**12 02 12.8**	**+2.4**
KKAR	**Karatay Array**	**73.27**	**319**	P	**P**	**12 02 15.4**	**0.0**
WSAR	**Wadi Sarin**	**75.83**	**296**	P	**P**	**12 02 32.5**	**+1.9**
	comp=Z,5.8nm,0.4s,baz=142,slow=6.0,SNR=8.0						
UOSS	**Minazif**	**78.38**	**297**	P	**P**	**12 02 47.2**	**+2.5**
UOSS				IAmb	IAmb	12 03 00.4	
	comp=Z,4.8nm,0.8s						
ABKAR	**Akbulak array**	**82.44**	**322**	P	**P**	**12 03 05.5**	**-0.4**
ABKAR	**Akbulak array**	**82.44**	**322**	IAmb	IAmb	12 03 10.8	
	comp=Z,2.1nm,1.2s						
QSPA	**South Pole Qui**	**83.07**	**180**	P	**P**	**12 03 10.5**	**+1.5**
QSPA				IAmb	IAmb	12 03 10.5	
	comp=Z,5.2nm,1.4s						
RAYN	**Ar Rayn**	**87.71**	**294**	P	**P**	**12 03 32.8**	**0.0**
RAYN				IAmb	IAmb	12 03 36.3	
	comp=Z,4.4nm,0.6s						
ILAR	**Eielson Array**	**93.26**	**25**	P	**P**	**12 03 56.3**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=258,slow=3.7,SNR=12						
BMAR	**Burnt Mountain**	**94.56**	**23**	P	**P**	**12 04 03.8**	**+0.2**
YKA	**Yellowknife Ar**	**107.67**	**26**	PKiKP	**PKiKP**	**12 09 09.4**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=293,slow=2.0,SNR=8.2						
YKA				PKKPbc	**PKKPbc**	**12 20 23.4**	**-2.9**
	comp=Z,0.1nm,0.5s,baz=107,slow=3.5,SNR=5.1						
GERES	**GERESS Array B**	**112.35**	**320**	PKiKP	**PKiKP**	**12 09 18.6**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=18,slow=3.4,SNR=3.5						
TORD	**Torodi Ar. Bea**	**128.79**	**281**	PKP	**PKiKP**	**12 09 51.5**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=129,slow=2.4,SNR=3.0						
PLCA	**Paso Flores**	**128.96**	**160**	PKP	**PKiKP**	**12 09 52.0**	**+0.5**
	comp=Z,2.8nm,1.0s,baz=168,slow=1.5,SNR=3.7						
DBIC	**Dimbokro**	**135.19**	**273**	PKP	**PKiKP**	**12 10 04.2**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=54,slow=1.3,SNR=3.7						
DBIC				SKPbc	**SKPbc**	**12 13 20.6**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=53,slow=10,SNR=4.7						
CPUP	**Villa Florida**	**146.20**	**168**	PKPbc	**PKPab**	**12 10 25.5**	**+0.7**
	comp=Z,3.0nm,0.6s,baz=167,slow=1.2,SNR=5.6						
LPAZ	**La Paz**	**150.79**	**142**	PKPbc	**PKiKP**	**12 10 39.2**	**+1.8**
	comp=Z,2.1nm,0.4s,baz=46,slow=2.9,SNR=18						
LPAZ	**La Paz**	**150.79**	**142**		**PKiKP**	**12 10 39.0**	**+1.6**

IDC ***02*** *11:52:13.7±2.1, 7°.62N×91°.85E, h0^{km}, mb3.8/4, mb1 3.9/7, mb1mx3.5/67, mbtmp3.8/7, ML3.6/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/38, Error ellipse: s-maj=40.5km s-min=32.5km az=27.0*

ISC 02 11:52:16.8±1.0**, 7°.5N**±0°.1×**91°.9E**±0°.1**, h24^{km}, n11, σ1^{s}32**/8**, mb3.8**/4**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.41**	**123**	Pn	**Pn**	**11 54 19.0**	**+1.6**
	0.2nm,0.3s,baz=330,slow=16,SNR=2.7						
PSI				Sn	**Sn**	**11 55 49.8**	**-2.0**
	0.4nm,0.3s,baz=109,slow=17,SNR=2.6						
PALK	**Pallekele**	**11.10**	**270**	Pn	**Pn**	**11 54 54.3**	**+0.1**
	1.5nm,0.3s,baz=83,slow=15,SNR=8.9						
PALK				Sn	Sn	11 56 43.1	-15
	1.1nm,0.3s,baz=217,slow=16,SNR=9.5						
PALK				LR	LR	11 58 54.9	
	comp=Z,27nm,18.3s,baz=107,slow=36						
CMAR	**Chiang Mai Arr**	**12.87**	**32**	Pn	**Pn**	**11 55 19.2**	**+0.8**
	0.1nm,0.3s,baz=229,slow=14,SNR=5.4						
H08S3	**Diego Garcia H**	**24.50**	**233**	T	T	12 23 48.6	
	baz=52,slow=76,SNR=18						
H08S2	**Diego Garcia H**	**24.50**	**233**	T	T	12 24 03.5	
	baz=52,slow=76,SNR=14						
H08S1	**Diego Carcia H**	**24.52**	**233**	T	T	12 24 00.7	
	baz=52,slow=76,SNR=14						
MKAR	**Makanchi Array**	**40.01**	**350**	P	**P**	**11 59 48.9**	**-0.9**
	1.0nm,0.8s,baz=163,slow=8.2,SNR=10.0						
SONM	**Songino Array**	**42.05**	**15**	P	**P**	**12 00 06.1**	**-0.5**
	1.9nm,0.8s,baz=196,slow=8.6,SNR=10						
KURBB	**Kurchatov Arra**	**44.40**	**348**	P	**P**	**12 00 25.1**	**-0.3**
	1.2nm,0.8s,baz=169,slow=6.6,SNR=14						
ZALV	**Zalesovo Beam**	**46.67**	**354**	P	**P**	**12 00 42.6**	**-0.7**
	0.6nm,0.5s,baz=161,slow=9.2,SNR=4.8						
MBAR	**Mbarara**	**61.51**	**265**	LR	LR	12 25 36.3	
	comp=Z,29nm,18.7s,baz=112,slow=33						

NEIC ***02*** *12:04:50.2±0.9, 39°.10N±0°.02×118°.11W±0°.03, h3^{km}±6^{km}, Error ellipse: s-maj=3.6km s-min=2.4km az=79.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}0.50; $M_{\theta\theta}$-0.93; $M_{\phi\phi}$0.43; $M_{r\theta}$1.05; $M_{\theta\phi}$1.11; $M_{\phi r}$0.44; Fault plane solution: $M_0$1.78000×10^{14} NP1:ϕ_s79.76000°, δ78.09000°, λ43.13000°. NP2:ϕ_s338.82000°, δ48.02000°, λ163.88000°. Principal axes: T 1.7674, Plg38.0000°, Azm309.0000°; N 0.0236, Plg46.0000°, Azm92.0000°; P -1.7910, Plg19.0000°, Azm203.0000°;*

REN ***02*** *12:04:50.7±1.3, 39°.06N±0°.02×118°.11W±0°.03, h6^{km}±3^{km}, Mwr3.4, Mwr3.4/34(NEIC) Error ellipse: s-maj=3.7km s-min=2.4km az=82.0*

ANF ***02*** *12:04:51.0±0.2, 39°.00N×118°.05W, h0^{km}, ML3.7/28, Error ellipse: s-maj=5.2km s-min=2.1km az=60.0*

ISC 02 12:04:50.8±0.9**, 39°.07N**±0°.02×**118°.13W**±0°.02**, h6**^{km}±6^{km}**, n91, σ1^{s}71**/116**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KVN	**Kaiserville**	**0.03**	**130**	Pg	**Pg**	**12 04 52.1**	**-0.1**
KVN					**Sg**	**12 04 53.2**	**-0.1**
RYN	**Ryan**	**0.54**	**215**		**Pg**	**12 05 01.2**	**0.0**
RYN				Sg	**Sg**	**12 05 07.4**	**-0.8**
NV11	**Mina Array Sit**	**0.64**	**182**		**Pg**	**12 05 02.6**	**-0.5**
NV11					**Sg**	**12 05 11.5**	**+0.1**
NVAR	**Mina Array Bea**	**0.66**	**192**	Pg	**Pg**	**12 05 02.6**	**-0.9**
YERR	**Yerington**	**0.87**	**265**		**Pg**	**12 05 07.6**	**+0.1**
PNTR	**Pine Nut**	**1.14**	**271**		**Pg**	**12 05 12.4**	**-0.3**
PNTR					**Sg**	**12 05 28.2**	**+0.6**
PNTR					**Sb**	**12 05 28.5**	**+0.3**
PAHR	**Pah Rah Range**	**1.16**	**304**		**Pg**	**12 05 12.5**	**-0.6**
WAKR	**Walker**	**1.17**	**241**		**Pg**	**12 05 12.9**	**-0.2**
WAKR					**Sg**	**12 05 28.9**	**+0.5**
VCNR	**Virginia City**	**1.20**	**281**		**Pg**	**12 05 13.1**	**-0.7**
VCNR					**Sg**	**12 05 29.9**	**+0.5**
BMN	**Battle Mountai**	**1.53**	**27**		**Pn**	**12 05 17.4**	**-1.4**
BMN					**Sn**	**12 05 37.0**	**-2.1**
MLAC	**Mammoth, Mammo**	**1.54**	**201**	P	**Pn**	**12 05 19.0**	**0.0**
	baz=22						
RUBR	**Rubicon Trail**	**1.57**	**270**		**Pn**	**12 05 18.9**	**-0.6**
OMMB	**Old Mammoth Mi**	**1.61**	**205**		**Pn**	**12 05 19.9**	**-0.1**
OMMB					**Sg**	**12 05 42.3**	**-0.2**
MDPB	**Devils Postpil**	**1.62**	**208**		**Pn**	**12 05 20.0**	**-0.1**
BEKR	**Beckworth**	**1.90**	**295**		**Pn**	**12 05 23.5**	**-0.4**
TIN	**Tinemaha, Big**	**2.02**	**182**	P	**Pn**	**12 05 25.3**	**-0.1**
	baz=2.7						
TIN				Sg	**Sg**	**12 05 55.5**	**-0.1**
	baz=2.7						
CMB	**Columbia Colle**	**2.05**	**240**		**Pn**	**12 05 26.1**	**+0.2**
CMB					LR	12 05 55.6	
R11A	**Troy Canyon, C**	**2.12**	**109**	Pn	**Pn**	**12 05 28.1**	**+1.1**
R11A	**Troy Canyon, C**	**2.12**	**109**	P	**Pn**	**12 05 25.7**	**-1.2**
	baz=291						
R11A				Sb	**Sb**	**12 05 56.1**	**-0.2**
	baz=291						
GRAC	**Grapevine Rang**	**2.16**	**163**	P	**Pn**	**12 05 26.7**	**-0.7**
	baz=344						
GRAC				Sg	**Sg**	**12 05 59.7**	**-0.5**
	baz=344						
AFDM	**Forest Hills D**	**2.21**	**268**		**Pn**	**12 05 27.8**	**-0.3**
TPNV	**Topopah Spring**	**2.59**	**144**		**Pn**	**12 05 33.5**	**+0.1**
TPNV	**Topopah Spring**	**2.59**	**144**	P	**Pn**	**12 05 32.6**	**-0.8**
	baz=326						
TPNV				Sb	**Sg**	**12 06 12.8**	**-1.2**
	baz=326						
CWC	**Cottonwood Cre**	**2.63**	**179**	P	**Pn**	**12 05 33.7**	**-0.2**
	baz=360						
CWC				Sb	**Sb**	**12 06 12.4**	**+1.4**
	baz=360						
ORV	**Oroville**	**2.66**	**281**		**Pn**	**12 05 34.1**	**0.0**
ELK	**Elko**	**2.78**	**52**	Pn	**Pn**	**12 05 35.3**	**-0.8**
FURC	**Furnace Creek,**	**2.79**	**158**	P	**Pn**	**12 05 35.6**	**-0.3**
	baz=340						
FURC				Sg	**Sg**	**12 06 19.8**	**-0.6**
	baz=340						
DAC	**Darwin (Calif)**	**2.82**	**171**		**Pn**	**12 05 38.8**	**+2.2**
VOG	**Valley Oaks Go**	**2.92**	**200**	P	**Pn**	**12 05 37.9**	**+0.1**
	baz=20						
VOG				Sb	**Sg**	**12 06 21.9**	**-2.7**
	baz=20						
MPMC	**Manual Prospec**	**3.05**	**170**	P	**Pn**	**12 05 39.3**	**-0.5**
	baz=351						
MPMC				Sb	**Sg**	**12 06 27.1**	**-1.7**
	baz=351						
O03E	**Paynes Creek**	**3.08**	**294**	P	**Pn**	**12 05 40.3**	**+0.2**
	baz=112,SNR=74						
O03E				Sb	**Sg**	**12 06 29.2**	**-0.6**
	baz=112						
WVOR	**Wild Horse Val**	**3.38**	**354**	Pn	**Pn**	**12 05 43.6**	**-0.6**
PSUT	**Pine Spring**	**3.39**	**98**		**Pn**	**12 05 44.4**	**0.0**
ISA	**Isabella, Lake**	**3.42**	**185**		**Pn**	**12 05 44.8**	**+0.2**
ISA	**Isabella, Lake**	**3.42**	**185**	P	**Pn**	**12 05 44.7**	**+0.1**
	baz=4.8						
ISA				Sb	**Sg**	**12 06 37.4**	**-3.1**
	baz=4.8						
SHPR	**Sheep Range**	**3.48**	**136**		**Pn**	**12 05 45.1**	**-0.6**
SAO	**San Andreas Ge**	**3.49**	**230**	Pn	**Pn**	**12 05 47.7**	**+2.1**
SHOC	**Shoshone, Teco**	**3.50**	**154**	P	**Pn**	**12 05 45.5**	**-0.2**
	baz=336						
LRMC	**Laurel Mtn Rad**	**3.60**	**174**	P	**Pn**	**12 05 47.0**	**-0.3**
	baz=355						
WDC	**Whiskeytown Da**	**3.71**	**295**		**Pn**	**12 05 48.7**	**0.0**
O02D	**Mt. Diablo Mer**	**3.76**	**289**	P	**Pn**	**12 05 49.5**	**+0.1**
	baz=106,SNR=7.2						
O02D				Sb	**Sg**	**12 06 49.5**	**-2.0**
	baz=106						
MCCM	**Marconi Confer**	**3.83**	**257**	Pn	**Pn**	**12 05 50.4**	**+0.2**
HOPS	**Hopland Field**	**3.85**	**270**	Pn	**Pn**	**12 05 50.5**	**-0.1**
GSC	**Goldstone, Bar**	**3.91**	**164**		**Pn**	**12 05 51.1**	**-0.4**
GSC	**Goldstone, Bar**	**3.91**	**164**	P	**Pn**	**12 05 51.2**	**-0.4**
	baz=345						
M04C	**Macdoel**	**3.92**	**315**	P	**Pn**	**12 05 53.5**	**+1.9**
	baz=133,SNR=11						
M04C				Sb	**Sg**	**12 06 54.2**	**-2.3**
	baz=133						
N02D	**Trinity Center**	**3.99**	**300**	P	**Pn**	**12 05 52.7**	**+0.1**
	baz=117,SNR=50						
N02D				Sb	**Sg**	**12 06 56.8**	**-2.2**
	baz=117						
CCUT	**Cedar City**	**4.05**	**111**		**Pn**	**12 05 53.2**	**-0.3**
EDW2	**Edwards Air Fo**	**4.18**	**178**	Sb	**Sg**	**12 07 00.3**	**-4.9**
	baz=359						
SZCU	**Shurtz Canyon**	**4.23**	**109**		**Pn**	**12 05 56.1**	**+0.1**
DUG	**Dugway, Tooele**	**4.26**	**73**	Sb	**Sb**	**12 07 00.9**	**+3.1**
	baz=256						
KCPM	**Cahto Peak**	**4.27**	**280**	Pn	**Pn**	**12 05 58.1**	**+1.7**
M02C	**Callahan**	**4.29**	**304**	P	**Pn**	**12 05 57.7**	**+1.0**
	baz=121,SNR=16						
M02C				Sb	**Sg**	**12 07 05.9**	**-2.7**
	baz=121						
BGU	**Big Grassy Mou**	**4.33**	**63**		**Pn**	**12 05 57.0**	**-0.3**
YBH	**Yreka Blue Hor**	**4.39**	**309**		**Pn**	**12 05 59.6**	**+1.6**
KMRM	**Mail Ridge**	**4.45**	**287**	Pn	**Pn**	**12 05 59.6**	**+0.7**
TCRU	**Three Creeks R**	**4.46**	**94**	Pn	**Pn**	**12 06 01.8**	**+2.6**
L04D	**Klamath Falls**	**4.46**	**316**	P	**Pn**	**12 06 01.0**	**+1.9**
	baz=133,SNR=78						
L04D				Sb	**Sg**	**12 07 11.2**	**-3.0**
	baz=133						
HEC	**Hector,Ludlow**	**4.47**	**161**	P	**Pn**	**12 05 58.8**	**-0.4**
	baz=342						
HEC				Sb	**Sg**	**12 07 09.2**	**-5.3**
	baz=342						
OSI	**Osito Audit: C**	**4.47**	**186**	Sb	**Sb**	**12 07 08.9**	**+4.8**
	baz=6.1						
K04D	**Chiloquin, OR**	**4.49**	**323**	Sb	**Sg**	**12 07 13.7**	**-1.1**
	baz=141						
KHMM	**Horse Mountain**	**4.66**	**294**	Pn	**Pn**	**12 06 03.4**	**+1.6**
KNB	**Kanab**	**4.67**	**114**		**Pn**	**12 06 02.7**	**+0.7**
MSU	**Marysvale**	**4.69**	**95**		**Pn**	**12 06 03.2**	**+0.9**
MTPU	**Mount Pierson**	**4.78**	**101**		**Pn**	**12 06 05.0**	**+1.4**
J05D	**Fort Rock, OR**	**4.81**	**332**	P	**Pn**	**12 06 06.7**	**+2.8**
	baz=150,SNR=9.5						
JCC	**Jacoby Creek,**	**4.86**	**293**	Pn	**Pn**	**12 06 05.1**	**+0.8**
PKCU	**Pink Cliffs**	**4.86**	**108**		**Pn**	**12 06 05.3**	**+0.5**
SPUT	**South Promonto**	**4.89**	**61**	Pn	**Pn**	**12 06 07.6**	**+2.5**
KRMB	**Red Mountain**	**5.05**	**301**	Pn	**Pn**	**12 06 08.4**	**+1.3**
HUMO	**Hull Mountain**	**5.08**	**316**		**Pn**	**12 06 09.7**	**+2.2**
J04D	**Umpqua Nationa**	**5.13**	**325**	P	**Pn**	**12 06 11.3**	**+2.9**
	baz=143,SNR=7.0						
L02E	**Cave Junction**	**5.18**	**308**	P	**Pn**	**12 06 11.6**	**+2.8**
	baz=125,SNR=25						
W13A	**Hualapai Mount**	**5.22**	**138**	Pn	**Pn**	**12 06 09.7**	**0.0**
BELC	**Belle Mtn. Jos**	**5.35**	**161**	P	**Pn**	**12 06 11.2**	**0.0**
	baz=342						
IRM	**Iron Mountain**	**5.46**	**153**	P	**Pn**	**12 06 13.2**	**+0.4**
	baz=335						
MURC	**Murrieta**	**5.51**	**172**	P	**Pn**	**12 06 14.2**	**+0.8**
	baz=353						
K02D	**Willamette Mer**	**5.54**	**313**	P	**Pn**	**12 06 17.5**	**+3.7**
	baz=129,SNR=21						
TCUT	**Toone Canyon**	**5.55**	**66**	Pn	**Pn**	**12 06 17.5**	**+3.4**
KBO	**Bosley Butte**	**5.59**	**306**	Pn	**Pn**	**12 06 15.8**	**+1.2**
PFO	**Pinyon Flats O**	**5.62**	**166**		**Pn**	**12 06 15.1**	**+0.2**
PFO	**Pinyon Flats O**	**5.62**	**166**	P	**Pn**	**12 06 15.2**	**+0.2**
	baz=347						
I04A	**Tendick Farm,**	**5.71**	**327**	P	**Pn**	**12 06 19.5**	**+3.4**
	baz=144,SNR=12						
I05D	**Terrebonne, OR**	**5.78**	**337**	P	**Pn**	**12 06 20.7**	**+3.5**
	baz=154,SNR=7.8						
SRU	**San Rafael Swe**	**5.92**	**87**	Pn	**Pn**	**12 06 22.9**	**+3.7**
KEBM	**Edson Butte**	**6.04**	**311**	Pn	**Pn**	**12 06 23.6**	**+3.0**
Y12C	**Blythe**	**6.06**	**150**	Pn	**Pn**	**12 06 21.8**	**+0.9**
I03D	**Drain, OR**	**6.06**	**321**	P	**Pn**	**12 06 24.5**	**+3.6**
	baz=138,SNR=5.8						
COR	**Corvallis**	**6.72**	**327**	Pn	**Pn**	**12 06 31.4**	**+1.3**
RDMU	**Red Mountain**	**6.76**	**75**	Pn	**Pn**	**12 06 32.9**	**+2.1**
X16A	**Lo Mia Camp, P**	**7.10**	**129**	Pn	**Pn**	**12 06 37.0**	**+1.6**

IDC ***02*** *12:27:12.6±0.9, 67°.19N×20°.85E, h0^{km}, mb1 3.3/4, mb1mx3.0/34, mbtmp3.2/4, ML2.8/4, Error ellipse: s-maj=14.9km s-min=6.7km az=113.0*

NAO ***02*** *12:27:13.0±0.6, 67°.14N×20°.91E, ML3.0*

HEL ***02*** *12:27:13.4±0.1, 67°.18N×20°.67E, h1^{km}, ML2.7, ML2.9(UPP), Confirmed Induced event*

BER ***02*** *12:27:15.2±3.3, 67°.09N×20°.97E, h0^{km}, ML2.5, ML3.0(NAO), Suspected explosion*

ISC 02 12:27:11.5±0.6**, 67°.12N**±0°.02×**20°.63E**±0°.02**, h0^{km}, n52, σ1^{s}38**/99**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASU	**Masugnsbyn**	**0.63**	**57**	*i* P	**Pg**	**12 27 23.9**	**+0.3**
MASU				*i* S	**Sg**	**12 27 31.8**	**+0.1**
RATU	**Laukkuluspa**	**0.81**	**331**	*i* P	**Pg**	**12 27 27.1**	**+0.1**
RATU				*i* S	**Sg**	**12 27 37.9**	**+0.3**
ERTU	**Ertsjaerv**	**0.84**	**132**	*e*P	**Pb**	**12 27 28.7**	**-0.1**
ERTU				*e*S	**Sb**	**12 27 40.2**	**-0.4**
KUA	**Kurravaara**	**0.85**	**352**	*i* P	**Pg**	**12 27 27.4**	**-0.3**
HARU	**Harads**	**0.97**	**172**	*e*P	**Pb**	**12 27 31.7**	**+0.6**
PAJU	**Pajala**	**0.98**	**94**	*e*P	**Pg**	**12 27 30.6**	**+0.4**
LANU	**Lannavaara**	**1.07**	**28**	*e*P	**Pg**	**12 27 31.4**	**-0.6**
LANU				*e*S	**Sg**	**12 27 44.6**	**-1.2**
SJUU	**Sjulsmark**	**1.67**	**166**	*e*P	**Pg**	**12 27 44.0**	**+0.7**
SJUU				*e*S	**Sg**	**12 28 06.9**	**+2.1**
KALU	**Kalix**	**1.67**	**138**	*e*P	**Pb**	**12 27 43.5**	**+0.4**
KALU				*e*S	**Sg**	**12 28 06.1**	**+1.0**
HEF	**Hetta**	**1.73**	**40**	Pg	**Pn**	**12 27 43.0**	**+0.1**
HEF				Lg	Lg	12 28 04.9	
HEF	**Hetta**	**1.73**	**40**	Pg	**Pn**	**12 27 43.0**	**+0.1**
TOF	**Tornio**	**1.81**	**124**	*e*PN	**Pb**	**12 27 45.8**	**+0.5**
TOF				*e*SN	**Sg**	**12 28 09.7**	**+0.2**
TOF				MSG		12 28 12.7	
	comp=Z,41nm,0.2s						
KIF	**Kilpisjarvi**	**1.90**	**2**	Pn	**Pb**	**12 27 46.3**	**-0.6**
KIF				Sn	**Sg**	**12 28 11.8**	**-0.6**
KIF	**Kilpisjarvi**	**1.90**	**2**	*e*P	**Pb**	**12 27 46.5**	**-0.4**
KIF				*e*S	**Sg**	**12 28 11.8**	**-0.6**
KIF				MSG		12 28 13.8	
	comp=Z,96nm,0.3s						
KIF	**Kilpisjarvi**	**1.90**	**2**	Pn	**Pb**	**12 27 46.3**	**-0.6**
KIF				Sn	**Sg**	**12 28 11.8**	**-0.6**
KTK1	**Kautokeino**	**2.14**	**26**	Pn	**Pb**	**12 27 50.4**	**-0.7**
KTK1				Sn	**Sn**	**12 28 15.7**	**+0.1**
KTK1				Lg	Lg	12 28 18.4	
KTK1	**Kautokeino**	**2.14**	**26**	*e*P	**Pb**	**12 27 50.1**	**-0.9**
KTK1				*e*S	**Sn**	**12 28 15.2**	**-0.5**
KTK1				IAML		12 28 18.4	
	comp=Z,130nm,0.4s						
RNF	**Rovaniemi**	**2.19**	**101**	*e*P	**Pb**	**12 27 51.1**	**-0.8**
RNF				*e*SG	**Sb**	**12 28 20.2**	**+0.7**
RNF				MSG		12 28 21.7	
	comp=Z,61nm,0.3s						
STEI	**Steigen**	**2.23**	**294**	Pn	**Pb**	**12 27 53.1**	**+0.6**
STEI				Sn	**Sg**	**12 28 22.8**	**-0.1**
STEI	**Steigen**	**2.23**	**294**	*e*P	**Pb**	**12 27 53.3**	**+0.8**
STEI				*e*S	**Sg**	**12 28 22.7**	**-0.1**
STEI				IAML		12 28 26.4	
	comp=Z,53nm,0.5s						
SGF	**Sodankyl**	**2.31**	**79**	*e*PB	**Pb**	**12 27 53.0**	**-1.0**
SGF				*e*SB	**Sb**	**12 28 22.0**	**-1.0**
SGF				MSG		12 28 26.0	
	comp=Z,41nm,0.3s						
BURU	**Burvik**	**2.56**	**173**	*e*P	**Pb**	**12 27 57.3**	**-1.0**
BURU				*e*S	**Sb**	**12 28 29.1**	**-1.1**
TRO	**Tromso**	**2.60**	**347**	Pn	**Pn**	**12 27 56.6**	**+1.9**
TRO				Sn	**Sn**	**12 28 28.6**	**+1.6**
TRO				Lg	Lg	12 28 33.5	
TRO	**Tromso**	**2.60**	**347**	*e*P	**Pb**	**12 27 58.5**	**-0.5**
TRO				*e*S	**Sb**	**12 28 29.6**	**-1.8**
TRO				IAML		12 28 37.2	
	comp=Z,36nm,0.5s						
MOR8	**Moi Rana**	**2.64**	**252**	Pn	**Pn**	**12 27 57.3**	**+2.0**
MOR8				Sn	**Sb**	**12 28 31.0**	**-1.6**
MOR8	**Moi Rana**	**2.64**	**252**	*e*P	**Pb**	**12 27 58.4**	**-1.2**
MOR8				*e*S	**Sn**	**12 28 29.1**	**+1.1**
MOR8				IAML		12 28 34.8	
	comp=Z,32nm,0.4s						
ARA0	**ARCESS Array S**	**3.03**	**34**	Pn	**Pn**	**12 28 01.3**	**+0.7**
	baz=211,slow=14						
ARA0				Sn	**Sn**	**12 28 37.3**	**-0.2**
	baz=208,slow=28						
ARA0	**ARCESS Array S**	**3.03**	**34**	Pn	**Pn**	**12 28 01.3**	**+0.7**
	baz=211,slow=14						
ARA0				Sn	**Sn**	**12 28 37.3**	**-0.2**
	baz=208,slow=28						
ARCES	**ARCESS Array B**	**3.03**	**34**	Pn	**Pn**	**12 28 01.3**	**+0.7**
	comp=Z,2.9nm,0.3s,baz=215,slow=13,SNR=202						
ARCES				Sn	**Sn**	**12 28 36.0**	**-1.5**
	comp=Z,4.8nm,0.3s,baz=218,slow=20,SNR=9.6						
ARCES				Lg	Lg	12 28 42.7	
	comp=Z,9.6nm,0.3s,baz=222,slow=31,SNR=16						
ARE0	**ARCESS Array S**	**3.03**	**34**	*e*P	**Pn**	**12 28 01.5**	**+0.9**
ARE0				*e*S	**Sn**	**12 28 37.3**	**-0.2**
ARE0	**ARCESS Array S**	**3.03**	**34**	*e*P	**Pn**	**12 28 01.5**	**+0.9**
KONS	**Konsvik**	**3.04**	**262**	Pn	**Pn**	**12 28 03.6**	**+2.9**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
KONS	Konsvik	3.04	262	Pn	Pn	12 28 03.6	+2.9
UMAU	Umeaa	3.25	180	eP	Pn	12 28 06.4	+2.8
UMAU				eS	Sn	12 28 44.8	+1.9
KEV	Kevo	3.54	39	Pn	Pn	12 28 08.3	+0.6
KEV				Pg	Pb	12 28 16.6	+1.7
KEV				Sn	Sn	12 28 49.5	-0.6
KEV				Lg	Lg	12 29 03.6	
KEV	Kevo	3.54	39	eP	Pn	12 28 08.2	+0.6
KEV				eS	Sn	12 28 49.3	-0.9
KEV	Kevo	3.54	39	Pn	Pn	12 28 08.3	+0.6
KEV				Pg	Pb	12 28 16.6	+1.7
KEV				Sn	Sn	12 28 49.5	-0.6
KEV				Sg	Sg	12 29 03.6	-1.6
APA0	Apatity Array	4.80	78	Pn	Pn	12 28 24.2	-0.7
	baz=273,slow=12						
APA0				Sn	Sn	12 29 19.2	-2.0
	baz=269,slow=28						
APA0				Lg	Lg	12 29 34.0	
	baz=243,slow=28						
APA0	Apatity Array	4.80	78	Pn	Pn	12 28 24.2	-0.7
	baz=273,slow=12						
APA0				Sn	Sn	12 29 19.2	-2.0
	baz=269,slow=28						
FIA0	FINESS Array S	6.17	155	Pn	Pn	12 28 46.3	+2.6
	baz=347,slow=14						
FIA0				Sn	Sn	12 29 55.8	+0.9
	baz=345,slow=28						
FIA0				Lg	Lg	12 30 26.5	
	baz=339,slow=28						
FIA0	FINESS Array S	6.17	155	Pn	Pn	12 28 46.3	+2.6
	baz=347,slow=14						
FIA0				Sg	Sg	12 30 26.5	-2.9
	baz=339,slow=28						
FINES	FINESS Array B	6.17	155	Pn	Pn	12 28 45.8	+2.1
	comp=Z,0.5nm,0.3s,baz=344,slow=15,SNR=20						
FINES				Sn	Sn	12 29 55.6	+0.8
	comp=Z,0.8nm,0.3s,baz=344,slow=25,SNR=5.8						
FINES				Lg	Lg	12 30 26.3	
	comp=Z,1.2nm,0.3s,baz=342,slow=29,SNR=9.8						
NB2	NORSAR Subarra	7.36	218	Pn	Pn	12 29 02.4	+2.4
	baz=26,slow=14						
NB2				Sn	Sn	12 30 21.4	-2.7
NB2				Lg	Lg	12 31 05.2	
NB2	NORSAR Subarra	7.36	218	Pn	Pn	12 29 02.4	+2.4
	baz=26,slow=14						
NB2				Sn	Sn	12 30 21.4	-2.7
NB2				Sg	Sg	12 31 05.2	-2.3
NOA	NORSAR Array B	7.36	218	Pn	Pn	12 29 01.5	+1.5
	comp=Z,0.0nm,0.3s,baz=27,slow=11,SNR=7.3						
NOA				Sn	Sn	12 30 23.4	-0.7
	comp=Z,0.0nm,0.3s,baz=318,slow=21,SNR=4.3						
NOA				Lg	Lg	12 31 04.1	
	comp=Z,0.1nm,0.3s,baz=96,slow=14,SNR=5.6						
NRA0	NORESS Array S	7.55	216	Pn	Pn	12 29 04.7	+2.1
	baz=31,slow=14						
NRA0				Sn	Sn	12 30 27.0	-1.7
	baz=44,slow=28						
NRA0				Lg	Lg	12 31 12.1	
	baz=28,slow=28						
NRA0	NORESS Array S	7.55	216	Pn	Pn	12 29 04.7	+2.1
	baz=31,slow=14						
NRA0				Sn	Sn	12 30 27.0	-1.7
	baz=44,slow=28						
NRA0				Sg	Sg	12 31 12.1	-1.4
	baz=28,slow=28						
HFS	Hagfors	7.66	207	Pn	Pn	12 29 05.4	+1.3
	baz=22,slow=14						
HFS				Sn	Sn	12 30 29.4	-2.0
	baz=36,slow=28						
HFS				Lg	Lg	12 31 15.8	
	baz=36,slow=28						
HFS	Hagfors	7.66	207	Pn	Pn	12 29 05.4	+1.3
	baz=22,slow=14						
HFS				Sn	Sn	12 30 29.4	-2.0
	baz=36,slow=28						
HFS				Sg	Sg	12 31 15.8	-1.3
	baz=36,slow=28						
SPA0	Spitsbergen Ar	11.19	355	Pn	Pn	12 29 52.4	0.0
	baz=156,slow=14						
SPA0	Spitsbergen Ar	11.19	355	Pn	Pn	12 29 52.4	0.0
	baz=156,slow=14						
AKASG	Malin Array Be	17.02	161	P	P	12 31 12.3	-0.3
	comp=Z,0.2nm,0.3s,baz=344,slow=12,SNR=2.3						

TAP 02 12:45:00.9,24°.26N×121°.46E,h8km±1km,ML0.9,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
ETLH	Xiulin Townshi	0.05	162	eP	Pg	12 45 03.6	+0.8
	baz=162						
ETLH				S	Sg	12 45 04.6	+0.6
	baz=162						
NACB	Ninganchiao	0.15	125	P	Pg	12 45 05.2	+1.2
	baz=125						
NACB				S	Sg	12 45 07.2	+1.1
	baz=125						
NNSH	Datong	0.18	336	eP	Pg	12 45 06.1	+1.4
	baz=336						
NNSH				S	Sg	12 45 08.8	+1.4
	baz=336						
NNS	Nan Shan	0.20	335	eS	Sg	12 45 09.5	+1.7
	baz=337						
WHF	Hehuan Shan	0.21	238	eP	Pg	12 45 06.5	+1.2
	baz=236						
WHF				eS	Sg	12 45 09.9	+1.5
	baz=236						
TDCB	Techi	0.28	269	eS	Sb	12 45 12.0	-1.3
	baz=268						

JMA 02 12:45:09.2±0.3,24°.86N×123°.18E,h139km±4km,M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.42	201	P	Pn	12 45 29.2	+0.3
IRIF	Iriomote-Funau	0.72	136	P	Pn	12 45 31.1	+0.4
IRIF				S	Sn	12 45 46.8	-0.2
JKRS	Kuro-shima	0.98	129	P	Pn	12 45 33.4	+0.7
JKRS				S	Sn	12 45 51.2	+0.6
JIJ	Ishigaki jima	1.01	119	P	Pn	12 45 33.1	+0.1
JIJ				S	Sn	12 45 50.4	-0.6
JISG	Ishigakijimahi	1.06	105	P	Pn	12 45 33.5	0.0
JISG				S	Sn	12 45 51.8	-0.1
JTJ	Tarama	1.40	99	P	Pn	12 45 37.0	+0.2
JTJ				S	Sn	12 45 57.8	-0.1
JIRB	Irabujima	1.81	91	P	Pn	12 45 41.8	+0.4
JIRB				S	Sn	12 46 06.1	0.0
JMJ2	Miyako jima3	1.96	93	S	Sn	12 46 07.6	-1.5

DJA 02 13:03:16.8±1.3,10°S±11°×10°6E±°,h10km,M4.5/12, mB5.3/2,mb4.6/7,MLv4.4/12,Mw(mB)4.7/2,South of Jawa

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CNJI	Cibinong	2.80	31	P	Pn	13 04 00.9	-0.8
CNJI				S	Sn	13 04 31.5	-4.1
SKJI	Sukabumi	2.84	18	P	Pn	13 04 01.8	-0.4
CISI	Cisompet, Garu	3.03	45	P	Pn	13 04 03.8	-1.1
CGJI	Cibinong	3.09	1	P	Pn	13 04 05.8	+0.2
DBJI	Dramaga	3.33	19	P	Pn	13 04 09.3	+0.4
CMJI	Cimerak	3.36	55	P	Pn	13 04 08.4	-1.0
LEM	Lembang	3.47	34	P	Pn	13 04 11.9	+0.9
KPJI	Karang Pucung	4.01	54	P	Pn	13 04 18.5	+0.1
KASI	Kota Agung	4.33	344	P	Pn	13 04 23.1	+0.4
KLSI		5.08	349	P	Pn	13 04 32.2	-0.9
	3.8nm,1.2s						
UGM	Wanagama	5.13	70	P	Pn	13 04 33.6	-0.2
	0.7nm106nm,1.4s						
PCJI	Pacitan	5.66	75	P	Pn	13 04 40.8	-0.2
	0.3nm33nm,0.8s						
MNAI	Manna	5.96	333	P	Pn	13 04 45.3	+0.1
	0.9nm154nm,1.3s						
PWJI	Pagerwojo	6.30	75	P	Pn	13 04 49.7	-0.1
JAGI	Jajag, Banyuwa	8.48	82	P	Pn	13 05 19.5	-0.3
	32nm,1.4s						

MAN 02 13:03:27.9,16°.57N×122°.17E,h19km,mb4.9,ML3.8, MS3.8,Luzon

MDD 02 13:04:02.7±2.2,34°.43N×8°.77W,h11km,mb3.8/7,Error ellipse: s-maj=20.1km s-min=17.2km az=54.0,PRXIMO
INMG 02 13:04:03.6±0.7,34°.44N×8°.78W,h10km,ML2.0,Error ellipse: s-maj=5.6km s-min=4.0km az=89.0
ISC 02 13:04:03.7±3.9,34°.6N±0°.2×8°.6W±0°.1,h10km,n21, σ0s.69/40,West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PBDV	Barranco-do-Ve	2.71	12	ePn	Pn	13 04 47.4	+0.1
PBDV				eSn	Sn	13 05 20.9	+0.8
PBDV				A	A	13 05 27.0	
	5.2nm,0.8s						
PBDV	Barranco-do-Ve	2.71	12	P	Pn	13 04 47.4	+0.1
PBDV				S	Sn	13 05 20.9	+0.8
	5.2nm,0.8s						
MORF	Marmelete	2.71	359	ePn	Pn	13 04 47.1	-0.3
MORF				eSn	Sn	13 05 20.3	0.0
MORF	Marmelete	2.71	359	P	Pn	13 04 47.1	-0.3
MORF				S	Sn	13 05 20.3	0.0
PVAQ	Vaqueiros	2.90	14	ePn	Pn	13 04 50.1	+0.2
PVAQ				eSn	Sn	13 05 25.0	+0.2
PVAQ				A	A	13 05 34.5	
	3.0nm,0.7s						
PVAQ	Vaqueiros	2.90	14	P	Pn	13 04 50.1	+0.2
PVAQ				S	Sn	13 05 25.0	+0.2
	3.0nm,0.7s						
PCVE	Castro Verde	3.07	8	ePn	Pn	13 04 52.6	+0.3
PCVE				eSn	Sn	13 05 29.7	+0.6
PCVE	Castro Verde	3.07	8	P	Pn	13 04 52.6	+0.3
PCVE				S	Sn	13 05 29.7	+0.6
EGRO	El Granado	3.08	17	P	Pn	13 04 52.7	+0.4
	6.9nm,0.4s,SNR=7.9						
EGRO				S	Sn	13 05 30.1	+0.9
	1.2nm,0.3s,SNR=7.9						
PNCL	Nicolau / Gran	3.52	1	ePn	Pn	13 04 59.0	+0.6
PNCL				eSn	Sn	13 05 39.6	-0.4
PNCL	Nicolau / Gran	3.52	1	P	Pn	13 04 59.0	+0.6
PNCL				S	Sn	13 05 39.6	-0.4
EMIN	Mina Concepcio	3.54	26	P	Pn	13 04 59.7	+1.1
	2.4nm,0.4s,SNR=7.9						
EMIN				S	Sn	13 05 40.6	0.0
	0.5nm,0.3s,SNR=7.9						
EMIJ	Mijas	3.70	57	P	Pn	13 05 01.6	+0.7
	3.4nm,0.4s,SNR=7.9						
EMIJ				S	Sn	13 05 44.2	-0.3
	65nm,2.6s,SNR=7.9						
ECAB	El Cabril	4.33	36	P	Pn	13 05 10.7	+1.2
	3.6nm,0.7s,SNR=7.9						
ECAB				S	Sn	13 05 59.7	-0.4
	0.2nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.35	17	P	Pn	13 05 09.9	+0.1
	2.4nm,0.5s,SNR=7.9						
EBAD				S	Sn	13 06 00.2	-0.4
	9.7nm,6.8s,SNR=7.9						
PMTG	Montargil	4.48	4	ePn	Pn	13 05 11.6	0.0
PMTG				eSn	Sn	13 06 02.5	-1.3
PMTG	Montargil	4.48	4	P	Pn	13 05 11.6	0.0
PMTG				S	Sn	13 06 02.5	-1.3
EADA	Adamuz	4.83	41	P	Pn	13 05 17.0	+0.5
	6.7nm,0.8s,SNR=7.9						
EADA				S	Sn	13 06 11.4	-1.1
	0.8nm,0.2s,SNR=7.9						
PMRV	Marv??o	4.93	11	ePn	Pn	13 05 17.7	-0.1
PMRV	Marv??o	4.93	11	P	Pn	13 05 17.7	-0.1
ETOB	Tobarra	6.97	52	P	Pn	13 05 46.1	+0.2
	4.5nm,1.1s,SNR=7.9						
ETOB				S	Sn	13 07 03.2	-2.1
	11nm,3.6s,SNR=7.9						

BJI 02 13:10:59.9±0.0,35°.19N×140°.76E,h27km,mB4.9/60, mb4.7/70,Ms4.9/71,Ms7 4.7/66
IDC 02 13:11:00.6±0.5,35°.29N×140°.37E,h0km,mb4.5/33, mb1 4.6/36,mb1mx4.5/54,mbtmp4.5/36,ML4.4/3,MS4.4/33, Ms1 4.4/33,ms1mx4.4/39,Error ellipse: s-maj=14.1km s-min=12.1km az=89.0
NIED 02 13:11:00,35°.30N×140°.60E,h32km,Mw4.9 Best double couple: M0 2.91000×10^16 NP1:φs44.00000°,δ71.00000°, λ57.00000°. NP2:φs287.00000°,δ38.00000°,λ148.00000°.
JMA 02 13:11:04.0±0.1,35°.35N×140°.57E,h26km±2km,M5.0 Broadband fault plane solution: P waves. NP1: φs255.00000°,δ29.00000°,λ127.00000°. NP2: φs34.00000°,δ67.00000°,λ71.00000°. Principal axes: T Plg63.0000°, Azm274.0000°; N Plg17.0000°, Azm42.0000°; P Plg20.0000°, Azm138.0000°;
JMA Felt III J1.
MOS 02 13:11:04.4±1.2,35°.35N×140°.39E,h36km,mb5.0/45, MS4.5/10 Error ellipse: s-maj=7.1km s-min=4.4km az=109.7
NEIC 02 13:11:05.3±2.5,35°.26N±0°.05×140°.51E±0°.08,h29km±4km, mb4.8/93,Error ellipse: s-maj=9.9km s-min=7.0km az=86.0
GCMT 02 13:11:07.3±0.3,35°.29N±0°.02×140°.54E±0°.02,h33km, MW5.0/83,Moment Tensor Solution. s54,c75; s83,c123; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr3.15±.15; Mθθ-2.47±.11; Mφφ-0.67±.10; Mrθ1.65±.12; Mθφ-1.47±.07; Mφr1.88±.12; Best double couple: M0 4.08100×10^16 NP1:φs252.00000°,δ28.00000°,λ111.00000°. NP2: φs49.00000°,δ64.00000°,λ79.00000°. Principal axes: T 4.0810, Plg69.0000°, Azm297.0000°; N 0.0060, Plg10.0000°, Azm54.0000°; P -4.0820, Plg18.0000°, Azm147.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function
BGR 02 13:11:11.8±0.0,36°.37N×142°.50E,h33km,mb5.0
ISC 02 13:11:05.0±0.5,35°.30N±0°.03×140°.55E±0°.03,h32km±3km, h32km:pP-P,n379,σ1s.80/401,mb4.8/128,MS4.6/51, 41C-31D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
KTR	Katsuura	0.24	233	⇑P	Pb	13 11 10.7	-1.2
JCN	Nagara	0.31	293	⇓P	Pb	13 11 11.7	-1.1
JCN				eS	Sb	13 11 17.8	-0.3
JKUC	kamogawauchiur	0.32	245	⇓P	Pb	13 11 11.6	-1.3
JKUC				eS	Sb	13 11 17.4	-0.8
BSO4	Boso 4	0.35	210	⇑P	Pb	13 11 13.2	0.0
JSMT	Sammumatsuo	0.36	346	⇓P	Pb	13 11 11.5	-1.9
CHOJ	Chosi	0.48	31	⇑P	Pb	13 11 12.9	-2.3
CHOJ				eS	Sb	13 11 19.6	-2.5
BSO3	Boso 3	0.49	184	P	Pb	13 11 15.3	+0.1
JIHU	Itakohorinouch	0.67	358	⇓P	Pn	13 11 16.3	-2.0
JIHU				S	Sb	13 11 25.5	-1.8
BSO1	Boso 1	0.73	151	⇓P	Pn	13 11 17.7	-0.9
TOK	Tokyo	0.76	301	⇓P	Pn	13 11 18.4	-1.0
JYT	Yasato	0.97	343	⇓P	Pn	13 11 20.3	-2.2
JHYU	Hitachinakayam	1.04	1	⇓P	Pn	13 11 21.4	-2.0
JIM2	Oshima 3	1.09	238	⇑P	Pn	13 11 22.4	-1.7
JIM2				eS	Sn	13 11 36.8	-1.2
JSGW	Sagamiharawaka	1.14	286	⇑P	Pn	13 11 23.7	-1.1
JOD2	Odawara 2	1.20	269	⇑P	Pn	13 11 24.5	-1.1
AJI	Ajiro2	1.22	259	⇑P	Pn	13 11 24.6	-1.3
JTHY	Toshimahigashi	1.29	234	P	Pn	13 11 25.6	-1.3
JTHY				S	Sn	13 11 41.9	-1.2
JIZS	Izushimoda	1.49	248	⇑P	Pn	13 11 28.3	-1.3
JIZS				S	Sn	13 11 46.6	-1.4
JFNN	Fujinakano	1.53	267	⇑P	Pn	13 11 29.5	-0.7
JFNN				S	Sn	13 11 48.8	-0.2
JYN	Shimob	1.65	278	⇑P	Pn	13 11 31.0	-0.9
JFFD	Fukushimafurud	1.79	0	⇓P	Pn	13 11 32.3	-1.5
SHZ3	Shizuoka 3	1.93	264	P	Pn	13 11 35.7	0.0
JNT	Takato	2.05	287	⇑P	Pn	13 11 37.4	0.0
JKKS	Kakegawashinom	2.18	256	S	Sn	13 12 07.2	+2.3
JNY	Yasuok	2.20	272	⇑P	Pn	13 11 40.1	+0.7
JHJ2	Mitsune	2.26	196	S	Sn	13 12 04.4	-2.6
JHJ2	Mitsune	2.26	196		Pn	13 11 39.5	-0.7
JHJ2				Sn	Sn	13 12 04.7	-2.3
MJAR	Matsushiro Arr	2.27	304	P	Pn	13 11 39.5	-0.9
MJAR	Matsushiro Arr	2.27	304	Pn	Pn	13 11 40.1	-0.3
	5.2nm,0.3s,baz=130,slow=9.7,SNR=190						
MJAR	Matsushiro Arr	2.27	304		Pn	13 11 39.5	-0.9
MAJO	Matsushiro	2.27	304c	iP	Pn	13 11 40.3	-0.1
MAJO	Matsushiro	2.27	304		Pn	13 11 40.9	+0.5
MAT	Matsushiro	2.27	304	P	Pn	13 11 40.4	0.0
MAT	Matsushiro	2.27	304	P	Pn	13 11 40.4	0.0
MAT				S	Sn	13 12 08.2	+0.8
MJB9	Matsu-Tunnel	2.28	304		Pn	13 11 40.4	-0.1
JNG	Nsakai	2.28	300	⇑P	Pn	13 11 40.7	+0.2
JYZW	Yoshizawa	2.33	263	P	Pn	13 11 41.2	+0.1
JGF	Kuroka	2.63	278	⇑P	Pn	13 11 46.1	+0.8
JAO	Obara	2.70	270	P	Pn	13 11 46.6	+0.4
JGN	Niukaw	2.79	290	P	Pn	13 11 48.1	+0.6
JAA	Atsumi	2.88	258	P	Pn	13 11 48.4	-0.2
INU	Inuyama	2.89	272		Pn	13 11 48.9	+0.1
JYTA	Yamagatataniai	3.13	277	P	Pn	13 11 52.5	+0.4
JAH	Hinai	4.88	1	P	Pn	13 12 18.0	+1.8
ERM	Erimo	7.01	16c	iP	Pn	13 12 45.4	0.0
ERM	Erimo	7.01	16		Pn	13 12 45.9	+0.5
JCJ	Chichijima	8.29	170	Pn	Pn	13 13 02.5	-0.6
	34nm,0.3s,baz=284,slow=21,SNR=9.5						
JCJ				Sn	Sn	13 14 30.8	-4.9
	5.1nm,0.3s,baz=270,slow=20,SNR=2.1						
JNU	Nakatsue	8.30	258	Pn	Pn	13 13 04.7	+1.5
	0.8nm,0.3s,baz=46,slow=4.4,SNR=9.1						
JNU	Nakatsue	8.30	258		Pn	13 13 03.6	+0.3
ASAJ	Asahikawa	8.95	10	Pn	Pn	13 13 11.6	-0.5
	3.8nm,0.3s,baz=247,slow=11,SNR=19						
JKA	Kamikawa-asahi	8.95	10		Pn	13 13 11.6	-0.5
TEY	Ternei	10.19	344	⇑eP	Pn	13 13 36.9	+8.0
TEY				pmax	pmax		
	comp=E,20nm,0.9s						
TEY				pmax	pmax		
	comp=N,20nm,0.8s						
TEY				pmax	pmax		
	comp=Z,20nm,1.0s						
TEY				MLR	MLR		
	comp=Z,200nm,22.0s						
TEY				MLR	MLR		
	comp=E,200nm,24.0s						
TEY				MLR	MLR		
	comp=N,200nm,18.0s						
MSHR	Mys Shultsa	10.31	318	⇑eP	Pn	13 13 29.6	-1.1
KSRS	Korea Array	10.41	286	Pn	Pn	13 13 32.0	0.0
	comp=N,0.3nm,0.3s,baz=103,slow=14,SNR=21						
KSRS				LR	LR	13 17 46.8	
	comp=N,5µm,18.1s,baz=82,slow=40						
KSAR	Wonju Array Be	10.44	286	P	Pn	13 13 32.3	-0.1
KSAR	Wonju Array Be	10.44	286		Pn	13 13 32.3	-0.1
KS19	Wonju Array Si	10.46	286		Pn	13 13 32.0	-0.7
TJN	Taejon	10.76	280	⇑eP	Pn	13 13 37.4	+0.5
USA0B	Ussuriysk Arra	11.06	326	⇑eP	Pn	13 13 40.0	-0.9
USA0B	Ussuriysk Arra	11.06	326		Pn	13 13 42.2	+1.2
USRK	Ussuriysk Ar.	11.06	326	P	Pn	13 13 42.5	+1.5
USRK	Ussuriysk Ar.	11.06	326	Pn	Pn	13 13 42.2	+1.3
	baz=132,slow=14,SNR=10						
USRK				LR	LR	13 17 38.9	
	comp=N,3µm,20.6s,baz=132,slow=36						
USRK	Ussuriysk Ar.	11.06	326		Pn	13 13 42.5	+1.5
YSS	Yuzh-Sakhalins	11.76	7	eP	Pn	13 13 51.0	+0.5
YSS				eS	Sn	13 15 57.0	-3.6
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
YSS				MLR	MLR		
	comp=Z,4µm,16.0s						
YSS	Yuzh-Sakhalins	11.76	7	Pn	Pn	13 13 51.8	+1.3
MDJ	Mudanjiang	12.53	321	P	Pn	13 14 02.5	+1.5
MDJ				pP	P	13 14 10.3	-2.0
MDJ				sP		13 14 12.0	
MDJ				S	Sn	13 16 21.3	+1.8
MDJ				sS		13 16 30.5	
MDJ				pmax	pmax		
	comp=Z,30nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,680nm,3.9s						
MDJ				LR	LR		
	comp=Z,3µm,15.7s						
MDJ				LR	LR		
	comp=Z,2µm,15.0s						
MDJ				LR	LR		
	comp=Z,4µm,19.9s						
MDJ	Mudanjiang	12.53	321		Pn	13 13 59.0	-2.0
CN2	Changchun	14.40	311	eP	P	13 14 30.9	-2.2
CN2				eS	Sn	13 16 59.5	-5.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,280nm,5.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
KLR	Kul'dur	15.36	338	⇑eP	Pn	13 14 40.9	+1.6
KLR	Kul'dur	15.36	338	Pn	Pn	13 14 37.9	-1.4
	comp=Z,0.2nm,0.3s,baz=158,slow=8.7,SNR=6.1						
KLR				LR	LR	13 20 23.3	
	comp=Z,3µm,19.1s,baz=150,slow=37						
DL2	Dalian	15.52	289	⇑iP	P	13 14 43.6	-1.9
DL2				eS	Sn	13 17 36.9	+4.5
DL2				pmax	pmax		
	comp=Z,41nm,1.1s						
DL2				pmax	pmax		
	comp=Z,580nm,11.6s						
DL2				LR	LR		
	comp=Z,1µm,13.0s						
DL2				LR	LR		
	comp=Z,3µm,16.3s						
DL2				LR	LR		
	comp=Z,4µm,16.9s						
TYV	Tymovskoe	15.63	5	eP	P	13 14 45.5	-1.2
TYV				pmax	pmax		
	comp=Z,28nm,0.8s						
TYV				pmax	pmax		
	comp=Z,600nm,2.5s						
GRNR	Gornyy	15.75	350	⇓iP	Pn	13 14 40.1	-4.3
GRNR				eS	Sn	13 17 31.4	-6.5
GRNR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GRNR				smax	smax		
	comp=N,6.0nm,0.6s						
GRNR				MLR	MLR		
	comp=Z,1µm,13.0s						
SSE	Sheshan	16.74	261	P	Pn	13 14 53.7	-3.4
SSE				S	Sn	13 17 57.7	-4.3
SSE				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SSE				pmax	pmax		
	comp=Z,210nm,6.4s						
SSE				LR	LR		
	comp=Z,910nm,13.4s						
SSE				LR	LR		
	comp=Z,1µm,14.8s						
NJ2	Nanjing	18.34	266	eP	P	13 15 16.6	-0.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,430nm,9.2s						
NJ2				LR	LR		
	comp=Z,980nm,13.3s						
NJ2				LR	LR		
	comp=Z,2µm,15.6s						
NJ2				LR	LR		
	comp=Z,2µm,16.2s						
TIA	Tai'an	19.03	280	P	Pn	13 15 26.9	+1.6
TIA				pP	sP	13 15 35.1	-1.7
TIA				S	S	13 19 02.2	+3.6
TIA				sS	sS	13 19 12.8	+0.7
TIA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TIA				pmax	pmax		
	comp=Z,180nm,3.9s						
TIA				LR	LR		
	comp=Z,1µm,13.5s						
TIA				LR	LR		
	comp=Z,2µm,13.5s						
TIA				LR	LR		
	comp=Z,3µm,13.5s						
SKR	Severo-Kuril's	19.07	31	eP	P	13 15 24.3	-0.3
SKR				eS	Sn	13 18 46.8	-11
SKR				MLR	MLR		
	comp=Z,600nm,15.0s						
ZEA	Zeya	20.67	337	eP	P	13 15 41.6	-0.5
ZEA				pmax	pmax		
	comp=N,58nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,100nm,1.4s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
ZEA				MLR	MLR		
	comp=N,1µm,17.0s						

ZEA MLR MLR
comp=E,1μm,17.0s
TPUB Ta-pu 21.04 241 P P 13 15 45.1 -1.3
PEA0B Petropavlovsk- 21.54 29 P P 13 15 51.6 +0.2
PEA0B pmax pmax
comp=Z,88nm,1.5s
PEA0B Petropavlovsk- 21.54 29 P P 13 15 51.6 +0.2
PEA0B IAmb IAmb 13 15 52.7
comp=Z,88nm,1.5s
PETK Petropavlovsk- 21.54 29 P P 13 15 52.7 +1.2
comp=Z,5.7nm,0.7s,baz=218,slow=9.4,SNR=8.3
PETK LR LR 13 25 08.6
comp=Z,614nm,18.7s,baz=227,slow=39
PETK Petropavlovsk- 21.54 29 P P 13 15 53.2 +1.8
QZH Quanzhou 21.57 247 *e*P **P 13 15 48.7 -3.3**
QZH LR LR
comp=Z,520nm,15.6s
QZH LR LR
comp=Z,770nm,16.6s
QZH LR LR
comp=Z,790nm,13.7s
WHN Wuhan 22.47 265 P P 13 15 59.8 -1.8
WHN S **S 13 20 00.8 -5.5**
WHN LR LR
comp=Z,2μm,11.9s
WHN LR LR
comp=Z,4μm,17.1s
WHN LR LR
comp=Z,3μm,14.2s
HHC Hu-ho-hao-te 23.43 292 *e*P **P 13 16 11.7 +0.2**
HHC S **S 13 20 18.9 -3.8**
HHC pmax pmax
comp=Z,10.0nm,1.1s
HHC pmax pmax
comp=Z,71nm,5.3s
HHC LR LR
comp=Z,530nm,15.9s
HHC LR LR
comp=Z,520nm,19.2s
HHC LR LR
comp=Z,830nm,18.8s
MA2 Magadan 25.20 12⇓ *e*P **P 13 16 29.6 +2.2**
MA2 pmax pmax
comp=Z,90nm,1.9s
MA2 Magadan 25.20 12 P **P 13 16 28.9 +1.5**
comp=Z,30nm,0.8s,baz=204,slow=8.7,SNR=11
MA2 Magadan 25.20 12 P **P 13 16 29.6 +2.2**
MA2 IAmb IAmb 13 16 33.3
comp=Z,31nm,0.8s
XAN Xi'an 25.99 276 P **P 13 16 33.7 -1.3**
XAN pmax pmax
comp=Z,9.0nm,1.3s
XAN pmax pmax
comp=Z,210nm,4.6s
XAN LR LR
comp=Z,1μm,18.1s
XAN LR LR
comp=Z,2μm,16.7s
XAN LR LR
comp=Z,2μm,22.5s
XAN Xi'an 25.99 276 P **P 13 16 34.4 -0.6**
XAN pmax pmax
comp=Z,14nm,1.0s
XAN Xi'an 25.99 276 P **P 13 16 34.4 -0.6**
ENH Enshi 26.53 268 P **P 13 16 38.3 -1.6**
YAK Yakutsk 27.62 349 *e*P **P 13 16 48.3 -1.0**
YAK *e**PP **pP 13 16 57.9 -0.6**
YAK *e* 13 17 38.6
YAK *e*S **S 13 21 30.9 +2.2**
YAK *e**SS **sS 13 21 49.1 +5.2**
YAK *e*SS **SnSn 13 22 45.3 +4.0**
YAK pmax pmax
comp=Z,32nm,1.5s
YAK pmax pmax
comp=E,9.0nm,1.3s
YAK pmax pmax
comp=N,32nm,1.5s
YAK pmax pmax
comp=Z,35nm,1.5s
YAK pmax pmax
comp=N,68nm,1.8s
YAK pmax pmax
comp=E,62nm,1.8s
YAK smax smax
comp=N,217nm,3.7s
YAK MLR MLR
comp=Z,1μm,20.0s
YAK MLR MLR
comp=E,278nm,15.0s
YAK MLR MLR
comp=N,1μm,18.0s
YAK Yakutsk 27.62 349 P **P 13 16 48.8 -0.5**
comp=N,9.1nm,0.7s,baz=129,slow=4.7,SNR=12
YAK LR LR 13 27 41.9
comp=N,1μm,20.6s,baz=159,slow=36
YAK Yakutsk 27.62 349 P **P 13 16 50.0 +0.7**
ULN Ulaanbaatar 27.80 307 *de*P **P 13 16 49.4 -1.9**
ULN pmax pmax
comp=Z,18nm,1.7s
ULN Ulaanbaatar 27.80 307 P **P 13 16 48.7 -2.6**
H11N2 WAKE ISLAND Hy 27.92 117 T T 13 46 06.6
baz=309,slow=75,SNR=946
H11N1 WAKE ISLAND Hy 27.93 117 T T 13 45 59.5
baz=309,slow=75,SNR=960
H11N3 WAKE ISLAND Hy 27.94 117 T T 13 46 04.7
baz=309,slow=75,SNR=768
SONM Songino Array 28.22 307 P **P 13 16 54.6 -0.4**
SONM pmax pmax
comp=Z,11nm,1.5s
SONM Songino Array 28.22 307 P **P 13 16 53.6 -1.4**
comp=Z,1.3nm,0.6s,baz=106,slow=6.5,SNR=12
SONM LR LR 13 28 39.5
comp=Z,2μm,20.2s,baz=108,slow=38
SONM Songino Array 28.22 307 P **P 13 16 54.6 -0.4**
H11S3 WAKE ISLAND Hy 28.56 119 T T 13 46 48.1
baz=312,slow=75,SNR=931
H11S1 WAKE ISLAND Hy 28.57 119 T T 13 46 48.1
baz=312,slow=75,SNR=1150
H11S2 WAKE ISLAND Hy 28.58 119 T T 13 46 49.3
baz=312,slow=75,SNR=849
SEY Seymchan 28.63 11⇑ *e*P **P 13 16 59.1 +0.8**
SEY Seymchan 28.63 11 P **P 13 16 58.7 +0.5**
comp=Z,6.2nm,0.7s,baz=211,slow=7.7,SNR=11
BOD Bodaibo 28.66 330 *e*P **P 13 16 57.5 -1.1**
BOD pmax pmax
comp=Z,33nm,1.6s
SMY Shemya 29.40 43 P **P 13 17 05.9 +0.7**
SMY pmax pmax
comp=Z,97nm,1.0s
SMY Shemya 29.40 43 P **P 13 17 05.9 +0.7**
LZH Lanzhou 29.71 282⇑ P **P 13 17 08.1 -0.3**
LZH pP pP 13 17 16.0 -1.6
LZH sS sS 13 22 13.1 -4.6
LZH SS **ScP 13 23 43.4 -8.2**
LZH pmax pmax
comp=Z,16nm,1.4s
LZH pmax pmax
comp=Z,140nm,5.4s
LZH LR LR
comp=Z,980nm,15.3s
LZH LR LR
comp=Z,1μm,15.2s
LZH LR LR
comp=Z,1μm,15.7s
GYA Guiyang 30.27 263 P **P 13 17 10.5 -2.9**
GYA pP pP 13 17 24.2 +1.6
GYA PP PP 13 18 06.6 -15
GYA S **S 13 22 05.5 -5.9**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,100nm,5.2s
GYA LR LR
comp=Z,480nm,11.4s
GYA LR LR
comp=Z,1μm,14.3s
GYA LR LR
comp=Z,2μm,12.4s
ZAK Zakamensk 30.84 311 *e*P **P 13 17 17.6 -0.5**
CD2 Chengdu 31.02 272⇓ *i*P **P 13 17 18.3 -1.5**
CD2 PP **PnPn 13 18 24.5 +3.1**
CD2 S **S 13 22 23.8 +1.0**
CD2 pmax pmax
comp=Z,20nm,0.5s
CD2 pmax pmax
comp=Z,260nm,6.3s
CD2 LR LR
comp=Z,4μm,16.1s
CD2 LR LR
comp=Z,7μm,16.7s
CD2 LR LR
comp=Z,8μm,15.9s
QIZ Qiongzhong 31.60 247 P **P 13 17 25.2 +0.2**
QIZ S **S 13 22 34.5 +2.6**
QIZ LR LR
comp=Z,440nm,25.0s
QIZ LR LR
comp=Z,450nm,17.7s
QIZ LR LR
comp=Z,490nm,15.7s
GTA Gaotai 32.45 290⇑ P **P 13 17 32.8 +0.4**
GTA pP pP 13 17 40.7 -1.0
GTA sP sP 13 17 44.1 -1.4
GTA sS sS 13 22 59.8 -0.6
GTA pmax pmax
comp=Z,5.0nm,1.8s
GTA pmax pmax
comp=Z,56nm,5.4s
GTA LR LR
comp=Z,650nm,17.1s
GTA LR LR
comp=Z,1μm,18.1s
GTA LR LR
comp=Z,1μm,19.7s
KMI Kunming 34.04 263 P **P 13 17 45.6 -0.9**
KMI pP pP 13 17 53.8 -2.0
KMI sP sP 13 17 56.5 -3.1
KMI S **S 13 23 10.4 +0.2**
KMI SS **SnSn 13 25 19.9 +1.4**
KMI pmax pmax
comp=Z,16nm,1.0s
KMI pmax pmax
comp=Z,77nm,3.4s
KMI LR LR
comp=Z,1μm,15.0s
KMI LR LR
comp=Z,1μm,16.6s
KMI LR LR
comp=Z,2μm,16.1s
BILL Bilibino 35.89 16⇑ *e*P **P 13 18 01.6 -0.1**
BILL *e*S **S 13 23 43.0 +5.7**
BILL pmax pmax
comp=Z,19nm,1.4s
BILL MLR MLR
comp=Z,616nm,17.0s
BILL Bilibino 35.89 16 P **P 13 18 01.4 -0.3**
BILL IAmb IAmb 13 18 05.4
comp=Z,18nm,1.3s
KKM Kota Kinabalu 36.74 223 P **P 13 18 10.0 +0.3**
TIXI Tiksi 36.93 354⇑ *e*P **P 13 18 09.8 -0.8**
TIXI pmax pmax
comp=Z,19nm,1.7s
TIXI Tiksi 36.93 354 P **P 13 18 09.8 -0.8**
comp=Z,2.1nm,0.3s,baz=0.0,slow=24,SNR=9.1
CHTO Chiang Mai 40.21 257 P **P 13 18 39.3 +0.6**
CHTO pmax pmax
comp=Z,4.0nm,0.9s
CHTO Chiang Mai 40.21 257 P **P 13 18 39.3 +0.6**
CMAR Chiang Mai Arr 40.40 257 *ce*P **P 13 18 40.7 +0.4**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 40.40 257 P **P 13 18 38.3 -2.0**
comp=Z,1.5nm,0.7s,baz=45,slow=7.9,SNR=8.2
CMAR LR LR 13 37 10.7
comp=Z,392nm,19.4s,baz=60,slow=39
CMAR Chiang Mai Arr 40.40 257 P **P 13 18 39.1 -1.2**
KRVT Keravat (AS076 40.84 162 LR LR 13 33 30.8
comp=Z,155nm,21.7s,baz=353,slow=33
WMQ Urumqi 41.03 298 *e*P **P 13 18 45.8 +0.5**
WMQ sP sP 13 18 57.8 -0.7
WMQ pmax pmax
comp=Z,46nm,1.5s
WMQ pmax pmax
comp=Z,130nm,3.7s
WMQ LR LR
comp=Z,360nm,16.3s
WMQ LR LR
comp=Z,350nm,13.1s
WMQ LR LR
comp=Z,710nm,21.3s
WMQ Urumqi 41.03 298 P **P 13 18 44.3 -1.0**
WMQ pmax pmax
comp=Z,105nm,1.4s
WMQ Urumqi 41.03 298 P **P 13 18 44.3 -1.0**
ZAA0 Zalesovo Array 42.59 314 P **P 13 18 58.8 +0.9**
ZAA0 IAmb IAmb 13 19 02.3
comp=Z,36nm,1.4s
ZALV Zalesovo Beam 42.59 314 P **P 13 18 57.4 -0.5**
comp=Z,6.0nm,0.6s,baz=91,slow=6.2,SNR=29
ZALV PcP **PcP 13 20 49.2 -0.5**
comp=Z,2.3nm,0.5s,baz=72,slow=2.2,SNR=4.6
ZALV LR LR 13 36 39.1
comp=Z,348nm,21.2s,baz=88,slow=36
ZALV Zalesovo Beam 42.59 314 P **P 13 18 58.2 +0.3**
ANM Nome 43.44 31 P **P 13 19 08.0 +3.4**
ANM pmax pmax
comp=Z,14nm,1.5s
ANM Nome 43.44 31 P **P 13 19 08.0 +3.4**
MK31 Makanchi Array 44.47 303 P **P 13 19 13.5 +0.3**
MK31 pmax pmax
comp=Z,24nm,1.4s
MK31 Makanchi Array 44.47 303 P **P 13 19 13.5 +0.3**
MK31 IAmb IAmb 13 19 14.4
comp=Z,24nm,1.4s
MKAR Makanchi Array 44.47 303 *ce*P **P 13 19 13.3 +0.2**
MKAR pmax pmax
comp=Z,6.0nm,0.9s
MKAR Makanchi Array 44.47 303 P **P 13 19 12.7 -0.5**
comp=Z,6.4nm,0.8s,baz=89,slow=9.7,SNR=41
MKAR LR LR 13 38 42.1
comp=Z,1μm,18.4s,baz=80,slow=38
MKAR Makanchi Array 44.47 303 P **P 13 19 13.4 +0.2**
MAKZ Makanchi 44.69 304 P **P 13 19 14.9 0.0**
MAKZ pmax pmax
comp=Z,39nm,1.5s
MAKZ Makanchi 44.69 304 P **P 13 19 14.9 0.0**
MAKZ IAmb IAmb 13 19 16.2
comp=Z,39nm,1.5s
TAPN Taplejung 45.38 275 *e*P **P 13 19 21.4 +0.4**
comp=Z,14nm,0.6s
ODAN Odare 45.84 275 *e*P **P 13 19 23.3 -1.3**
comp=Z,18nm,0.8s
RAMN Ramite 46.45 275 *e*P **P 13 19 28.4 -0.9**
comp=Z,36nm,0.8s
KURK Kurchatov 46.47 309 *ci*P **P 13 19 27.8 -1.1**
KURK pmax pmax
comp=Z,72nm,1.7s
KURK Kurchatov 46.47 309 P **P 13 19 27.9 -1.0**
JIRN Jiri 46.50 276 *e*P **P 13 19 29.5 -0.4**
comp=Z,37nm,0.7s
KURBB Kurchatov Arra 46.54 309 P **P 13 19 29.1 -0.3**
comp=Z,12nm,0.7s,baz=86,slow=8.3,SNR=44
GUN Gumba 46.65 277 *e*P **P 13 19 30.2 -0.8**
comp=Z,48nm,1.0s
PDGK Podgornoye 46.99 299 P **P 13 19 32.4 -0.8**
PKI Pulchoki 47.17 277 *e*P **P 13 19 34.0 -1.1**
PKIN Phulchoki 47.18 277 *e*P **P 13 19 33.8 -1.2**
KKN Kakani 47.19 277 *e*P **P 13 19 34.3 -0.8**
SOEI Soe 47.38 202 P **P 13 19 37.9 +1.5**
comp=Z,34nm,0.8s
SOEI Soe 47.38 202 P **P 13 19 36.0 -0.4**
SOEI IAmb IAmb 13 19 55.5
comp=Z,14nm,0.7s
DMN Daman 47.40 277 *e*P **P 13 19 36.0 -0.8**
GKN Gorkha 47.62 278 *e*P **P 13 19 37.7 -0.7**
HNR Honiara 48.11 154 LR LR 13 38 22.6
comp=Z,394nm,21.2s,baz=338,slow=34
DANN Dangsing 48.20 278 *e*P **P 13 19 42.6 -0.4**
comp=Z,156nm,1.2s
IMAR Indian Mountai 48.50 30 P **P 13 19 45.6 +1.2**
KOLN Koldanda 48.56 278 *e*P **P 13 19 45.0 -0.7**
comp=Z,152nm,1.6s
MTN Manton Dam 48.70 192 P **P 13 19 45.9 -0.6**
MTN IAmb IAmb 13 19 53.9
comp=Z,20nm,1.1s
KDJ Kajisay 48.92 298 P **P 13 19 48.2 0.0**
KDJ pmax pmax
comp=Z,11nm,1.1s
KDJ Kajisay 48.92 298 P **P 13 19 48.2 0.0**
KDJ IAmb IAmb 13 20 07.6
comp=Z,11nm,1.1s
COEN Coen 49.05 177 P **P 13 19 50.6 +1.5**
COEN IAmb IAmb 13 20 05.6
comp=Z,11nm,0.9s
MLY Manley 49.69 31 P **P 13 19 55.9 +2.2**
MLY IAmb IAmb 13 19 59.3
comp=Z,7.2nm,0.7s
TKM2 Tokmak 2 49.86 299 P **P 13 19 55.3 -0.1**
TKM2 Tokmak 2 49.86 299 P **P 13 19 56.7 +1.3**
SNR=14
NRN Naryn 49.95 297 P **P 13 19 55.9 -0.3**
NRN pmax pmax
comp=Z,15nm,1.5s
NRN Naryn 49.95 297 P **P 13 19 55.9 -0.3**
NRN IAmb IAmb 13 19 58.0
comp=Z,15nm,1.5s
KZA Kyzart 50.32 298 P **P 13 19 60.0 +0.8**
SNR=13
TOLK Toolik Lake Re 50.33 27 P **P 13 20 00.4 +2.0**
TOLK IAmb IAmb 13 20 11.7
comp=Z,15nm,1.4s
KBK Karagaybulak 50.39 299 P **P 13 20 00.7 +1.3**
SNR=9.3
NEA Nenana 50.40 32 P **P 13 20 02.3 +3.4**
NEA IAmb IAmb 13 20 03.5
comp=Z,13nm,1.0s
MCK McKinley 50.46 33 P **P 13 20 00.2 +0.7**
MCK pmax pmax
comp=Z,8.0nm,0.9s
MCK McKinley 50.46 33 P **P 13 20 00.2 +0.7**
MCK IAmb IAmb 13 20 04.3
comp=Z,7.9nm,0.9s
KSH Kashi 50.49 295 P **P 13 20 04.3 +4.1**
KSH pP sP 13 20 12.4 -1.1
KSH PP **PP 13 22 01.1 +5.2**
KSH S **S 13 27 17.4 +5.3**
KSH sS sS 13 27 31.6 +3.7
KSH ScS **ScS 13 29 52.7 +3.8**
KSH SS **SS 13 30 53.4 +7.4**
KSH pmax pmax
comp=Z,12nm,0.5s
KSH pmax pmax
comp=Z,190nm,5.0s
KSH LR LR
comp=Z,240nm,5.6s
KSH LR LR
comp=Z,220nm,6.7s
KSH LR LR
comp=Z,670nm,8.9s
RND Reindeer 50.51 33 P **P 13 20 01.6 +1.7**
RND pmax pmax
comp=Z,12nm,1.1s
RND Reindeer 50.51 33 P **P 13 20 01.6 +1.7**
RND IAmb IAmb 13 20 20.5
comp=Z,12nm,1.1s
USP Ospenovka 50.55 300 P **P 13 20 00.9 +0.4**
SNR=8.6
AAK Ala-Archa 50.72 299 *ce*P **P 13 20 01.7 -0.2**
AAK pmax pmax
comp=Z,8.0nm,0.8s
AAK Ala-Archa 50.72 299 P **P 13 20 01.9 +0.1**
comp=Z,2.5nm,0.7s,baz=78,slow=3.5,SNR=9.1
AAK LR LR 13 42 52.0
comp=Z,1μm,20.2s,baz=74,slow=38
AAK Ala-Archa 50.72 299 P **P 13 20 02.4 +0.5**
SNR=5.6
AAK Ala-Archa 50.72 299 P **P 13 20 02.5 +0.7**
MDM Murphy Dome 50.76 31 P **P 13 20 04.3 +2.7**
UCH Uchtor 50.81 299 P **P 13 20 04.2 +1.3**
SNR=6.5
WRH Wood River Hil 50.82 32 P **P 13 20 04.4 +2.3**
COLA College 50.92 31⇑ *e*P **P 13 20 05.8 +3.0**
COLA pmax pmax
comp=Z,30nm,1.9s
BVAR Borovoye Array 51.24 313 P **P 13 20 05.6 +0.2**
comp=Z,1.2nm,0.5s,baz=79,slow=6.9,SNR=13
BVAR PcP **PcP 13 21 20.2 -0.1**
comp=Z,2.1nm,0.6s,baz=96,slow=5.8,SNR=3.6
BRVK Borovoye 51.30 313⇓ *e*P **P 13 20 05.7 -0.1**
BRVK pmax pmax
comp=Z,13nm,1.1s
BRVK Borovoye 51.30 313 P **P 13 20 06.5 +0.7**
BRVK IAmb IAmb 13 20 15.0
comp=Z,8.3nm,0.9s
HDA Harding Lake 51.32 32 P **P 13 20 08.6 +2.7**
HDA IAmb IAmb 13 20 10.7
comp=Z,8.3nm,0.8s
IL31 51.33 32 P **P 13 20 08.8 +2.9**
IL31 IAmb IAmb 13 20 10.9
comp=Z,8.1nm,0.7s
ILAR Eielson Array 51.33 32 P **P 13 20 07.2 +1.2**
comp=Z,6.5nm,0.7s,baz=271,slow=3.5,SNR=48
ILAR LR LR 13 42 59.0
comp=Z,121nm,20.1s,baz=263,slow=37
AML Almayashu 51.42 299 P **P 13 20 07.8 +0.3**
SNR=27
PRP Porcupine Dome 51.88 31 P **P 13 20 12.3 +2.1**
KNRA Kununurra 51.91 194 P **P 13 20 09.9 -0.8**
KNRA IAmb IAmb 13 20 18.9
comp=Z,18nm,0.8s
FYU Fort Yukon 51.96 29 P **P 13 20 13.5 +3.0**
BMAR Burnt Mountain 52.19 28 P **P 13 20 14.7 +2.4**
RIDG Independent Ri 52.28 33 P **P 13 20 14.5 +1.4**
RIDG IAmb IAmb 13 20 23.6
comp=Z,13nm,1.3s
DOT Dot Lake 52.64 33 P **P 13 20 17.2 +1.5**
DOT IAmb IAmb 13 20 20.2
comp=Z,7.9nm,0.7s
SCRK Sand Creek 52.64 32 P **P 13 20 17.1 +1.3**
SCRK IAmb IAmb 13 20 21.1
comp=Z,10nm,0.8s
MENT Mentasta 52.86 34 P **P 13 20 20.5 +3.1**
MENT IAmb IAmb 13 20 23.2
comp=Z,9.0nm,0.8s
KK31 Karatay Array 53.41 301 P **P 13 20 22.6 +0.9**
KK31 pmax pmax
comp=Z,12nm,1.1s
KK31 Karatay Array 53.41 301 P **P 13 20 22.6 +0.9**
KK31 IAmb IAmb 13 20 32.6
comp=Z,12nm,1.1s
KKAR Karatay Array 53.41 301 P **P 13 20 23.1 +1.4**
KKAR Karatay Array 53.41 301 P **P 13 20 22.8 +1.1**
KKAR IAmb IAmb 13 20 32.6
comp=Z,12nm,1.1s
KKAR Karatay Array 53.41 301 P **P 13 20 23.1 +1.4**
BCAR Beaver Creek A 53.72 33 P **P 13 20 25.6 +1.8**
EGAK Eagle 53.78 31 P **P 13 20 26.8 +2.7**
EGAK IAmb IAmb 13 20 27.2
comp=Z,13nm,1.3s
GAR Garm 54.83 296 P **P 13 20 32.2 0.0**
GAR IAmb IAmb 13 20 50.5
comp=Z,17nm,0.9s
FITZ Fitzroy Crossi 54.95 197 P **P 13 20 33.1 +0.1**
FITZ IAmb IAmb 13 20 36.4
comp=Z,9.3nm,0.7s
WRAB Tennant Creek 55.24 187 *ce*P **P 13 20 34.3 -0.8**
WRAB pmax pmax
comp=Z,4.0nm,0.6s
WRAB Tennant Creek 55.24 187 P **P 13 20 34.9 -0.2**
WR0 Warramunga Arr 55.25 187 P **P 13 20 34.7 -0.5**
WRA Warramunga Arr 55.25 187 P **P 13 20 34.4 -0.8**
comp=Z,6.6nm,0.7s,baz=4.0,slow=7.6,SNR=78
WRA LR LR 13 44 08.9
comp=Z,113nm,19.8s,baz=20,slow=36
WRA Warramunga Arr 55.25 187 P **P 13 20 33.6 -1.5**
EPYK Eagle Plains 55.38 29 P **P 13 20 38.5 +2.8**
CHGR Chuyangaron 55.79 296 P **P 13 20 38.1 -1.1**
SVE Sverdlovsk 56.00 319 *ei*P **P 13 20 40.3 +0.1**
SVE pmax pmax
comp=Z,33nm,1.7s
SVE MLR MLR
comp=Z,784nm,20.0s
INK Inuvik 56.25 26 P **P 13 20 43.3 +1.5**
INK pmax pmax
comp=Z,6.0nm,0.7s
INK Inuvik 56.25 26 P **P 13 20 43.3 +1.5**
INK IAmb IAmb 13 20 46.7
comp=Z,6.4nm,0.7s
ARU Arti 57.21 319 *di*P **P 13 20 48.0 -0.8**
ARU *PP **pP 13 20 58.5 0.0**
ARU 13 22 53.5
ARU S **S 13 28 42.8 +0.7**
ARU SS **SS 13 32 24.4 -6.5**
ARU pmax pmax
comp=Z,38nm,1.6s
ARU MLR MLR
comp=Z,580nm,17.0s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARU	**Arti**	**57.21**	**319**	P	**P**	**13 20 48.3**	**-0.5**
	comp=Z,4.0nm,0.5s,baz=68,slow=3.7,SNR=23						
ARU				LR	LR	13 47 49.2	
	comp=Z,504nm,18.4s,baz=67,slow=39						
ARU	**Arti**	**57.21**	**319**	P	**P**	**13 20 48.5**	**-0.4**
AB31	**Akbulak array**	**58.53**	**311**	*i* P	**P**	**13 20 56.9**	**-1.3**
ABKAR	**Akbulak array**	**58.53**	**311**	P	**P**	**13 20 58.3**	**+0.1**
ABKAR	**Akbulak array**	**58.53**	**311**	P	**P**	**13 20 58.1**	**-0.1**
ABKAR				IAmb	IAmb	13 21 01.7	
	comp=Z,35nm,1.5s						
AS31	**Alice Springs**	**58.98**	**187**	P	**P**	**13 21 01.6**	**+0.1**
ASAR	**Alice Springs**	**58.98**	**187**	P	**P**	**13 21 01.7**	**+0.1**
ASAR	**Alice Springs**	**58.98**	**187**	P	**P**	**13 21 01.4**	**-0.2**
	comp=Z,3.1nm,0.7s,baz=20,slow=9.7,SNR=28						
ASAR				LR	LR	13 46 14.3	
	comp=Z,104nm,20.3s,baz=26,slow=36						
ASAR	**Alice Springs**	**58.98**	**187**	P	**P**	**13 21 01.6**	**+0.1**
C36M	**Paulatuk**	**59.30**	**24**	P	**P**	**13 21 04.5**	**+1.3**
AKTO	**Aktyubinsk**	**59.33**	**313**	P	**P**	**13 21 03.2**	**-0.5**
	comp=Z,4.5nm,0.6s,baz=75,slow=7.1,SNR=12						
KIRV	**Kirov**	**61.22**	**323**	P	**P**	**13 21 15.8**	**-0.6**
	comp=Z,11nm,0.6s,baz=75,slow=5.0,SNR=11						
PRGR	**Permogore**	**61.85**	**327**	*e*P	**P**	**13 21 18.6**	**-2.1**
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DZM	**Mont Dzumac**	**62.11**	**153**	*e*S	**S**	**13 29 43.7**	**-2.4**
	comp=Z,208nm,28.2s						
DZM	**Mont Dzumac**	**62.11**	**153**	*e*LR	LR	13 39 55.8	
	comp=Z,532nm,23.1s						
DZM	**Mont Dzumac**	**62.11**	**153**	LR	LR	13 48 09.7	
	comp=Z,400nm,19.3s,baz=6.0,slow=36						
GEYT	**Alibeck**	**64.07**	**299**	P	**P**	**13 21 37.3**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=336,slow=3.3,SNR=4.5						
GEYT				LR	LR	13 51 42.7	
	comp=Z,623nm,18.8s,baz=70,slow=38						
RES	**Resolute Bay**	**64.45**	**14**	P	**P**	**13 21 38.5**	**+0.7**
RES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
RES	**Resolute Bay**	**64.45**	**14**	P	**P**	**13 21 38.5**	**+0.7**
RES				IAmb	IAmb	13 21 42.6	
	comp=Z,7.2nm,0.8s						
ARCES	**ARCESS Array B**	**65.38**	**339**	P	**P**	**13 21 44.9**	**+1.0**
	comp=Z,3.6nm,0.8s,baz=89,slow=5.3,SNR=8.5						
ARCES				LR	LR	13 55 13.7	
	comp=Z,508nm,18.1s,baz=64,slow=41						
YKA	**Yellowknife Ar**	**65.66**	**30**	P	**P**	**13 21 46.4**	**+0.6**
	comp=Z,2.1nm,0.7s,baz=303,slow=6.6,SNR=9.0						
YKA				LR	LR	13 53 04.1	
	comp=Z,7.9nm,19.3s,baz=232,slow=38						
FORT	**Forrest**	**66.77**	**192**	P	**P**	**13 21 53.7**	**+0.6**
STKA	**Stephens Creek**	**66.83**	**179**	P	**P**	**13 21 55.6**	**+2.0**
	comp=Z,1.7nm,0.7s,baz=343,slow=7.2,SNR=7.9						
STKA				LR	LR	13 52 41.0	
	comp=Z,133nm,19.6s,baz=18,slow=37						
DAG	**Danmarks Havn**	**67.44**	**355**	*i* P	**P**	**13 21 56.0**	**-1.0**
DAG	**Danmarks Havn**	**67.44**	**355**	*i* P	**P**	**13 21 56.0**	**-1.0**
MOS	**Moscow**	**68.23**	**324**	*e*P	**P**	**13 22 00.8**	**-1.4**
MOS				pmax	pmax		
	comp=Z,39nm,1.2s						
VRH	**Novokhopyorsk**	**68.40**	**318**	*e*P	**P**	**13 22 02.1**	**-1.3**
VRH				pmax	pmax		
	comp=Z,40nm,1.6s						
NLWA	**Neilton Lookou**	**68.41**	**47**	P	**P**	**13 22 06.8**	**+3.2**
OBN	**Obninsk**	**69.07**	**323**	⇓*e*P	**P**	**13 22 07.5**	**0.0**
OBN				pmax	pmax		
	comp=Z,15nm,1.2s						
OBN				MLR	MLR		
	comp=Z,566nm,17.0s						
LPSR	**Galich'ya Gora**	**69.19**	**320**	*e*P	**P**	**13 22 08.0**	**-0.3**
LPSR				pmax	pmax		
	comp=Z,20nm,1.2s						
KULLO	**Kullorsuaq**	**69.77**	**5**	*e*P	**P**	**13 22 10.3**	**-1.2**
KULLO	**Kullorsuaq**	**69.77**	**5**	*i* P	**P**	**13 22 10.3**	**-1.2**
VSR	**Storozhevoye**	**69.78**	**319**	*e*P	**P**	**13 22 10.3**	**-1.7**
VSR				pmax	pmax		
	comp=Z,30nm,1.6s						
VORD	**Divnogorie**	**69.84**	**319**	*e*P	**P**	**13 22 11.4**	**-0.9**
VORD				pmax	pmax		
	comp=Z,20nm,1.7s						
FINES	**FINESS Array B**	**70.03**	**332**	P	**P**	**13 22 13.2**	**-0.1**
	comp=Z,5.8nm,0.7s,baz=50,slow=6.0,SNR=8.3						
FINES				LR	LR	13 58 02.3	
	comp=Z,445nm,18.2s,baz=27,slow=40						
HUMO	**Hull Mountain**	**71.35**	**51**	P	**P**	**13 22 22.7**	**+0.9**
KBZ	**Khabaz**	**71.50**	**311**	*ce*P	**P**	**13 22 22.3**	**-0.3**
KBZ	**Khabaz**	**71.50**	**311**	P	**P**	**13 22 22.9**	**+0.3**
	comp=Z,6.0nm,0.9s,baz=70,slow=5.6,SNR=10						
KBZ				LR	LR	13 55 41.2	
	comp=Z,365nm,20.6s,baz=48,slow=38						
KVAR	**Kislovodsk Arr**	**71.51**	**311**	P	**P**	**13 22 23.7**	**+0.9**
	comp=Z,4.7nm,0.9s,baz=270,slow=20,SNR=7.7						
KIV	**Kislovodsk**	**71.52**	**311**	*c i*P	**P**	**13 22 23.0**	**+0.2**
KIV				*i*		13 22 31.8	
KIV				*i*		13 22 45.7	
KIV				*i*		13 25 01.9	
KIV				*i* S	**S**	**13 31 37.8**	**-1.8**
KIV				pmax	pmax		
	comp=Z,22nm,1.4s						
KIV				MLR	MLR		
	comp=Z,329nm,18.0s						
VSU	**Vasula**	**71.60**	**330**	⇓*e*P	**P**	**13 22 24.6**	**+1.7**
VSU				pmax	pmax		
	comp=Z,65nm,1.2s						
YBH	**Yreka Blue Hor**	**71.96**	**51**	P	**P**	**13 22 28.0**	**+2.4**
YBH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YBH	**Yreka Blue Hor**	**71.96**	**51**	P	**P**	**13 22 28.0**	**+2.4**
PINE	**Pine Mountain**	**72.00**	**49**	P	**P**	**13 22 28.1**	**+2.2**
PINE				IAmb	IAmb	13 22 34.4	
	comp=Z,9.4nm,0.8s						
GNI	**Garni**	**72.19**	**307**	⇓*e*P	**P**	**13 22 28.1**	**+1.1**
GNI				pmax	pmax		
	comp=Z,82nm,1.4s						
GNI	**Garni**	**72.19**	**307**	P	**P**	**13 22 26.9**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=212,slow=3.7,SNR=7.3						
AKH	**Akhalkalaki**	**72.34**	**308**	⇑P	**P**	**13 22 31.2**	**+3.3**
SUMG	**Summit**	**72.42**	**360**	*i* P	**P**	**13 22 28.3**	**+0.2**
SUMG	**Summit**	**72.42**	**360**	*i* P	**P**	**13 22 28.3**	**+0.2**
SUMG	**Summit**	**72.42**	**360**	P	**P**	**13 22 27.7**	**-0.4**
SUMG				IAmb	IAmb	13 22 44.9	
	comp=Z,17nm,1.2s						
MOD	**Modoc Plateau**	**73.40**	**50**	P	**P**	**13 22 35.9**	**+1.7**
BMO	**Blue Mountains**	**73.62**	**46**	P	**P**	**13 22 36.2**	**+0.8**
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BMO	**Blue Mountains**	**73.62**	**46**	P	**P**	**13 22 36.2**	**+0.8**
JTMT	**Jette**	**73.74**	**43**	P	**P**	**13 22 37.4**	**+1.3**
JTMT				IAmb	IAmb	13 22 42.9	
	comp=Z,8.2nm,0.8s						
WVOR	**Wild Horse Val**	**74.15**	**49**	P	**P**	**13 22 38.4**	**-0.1**
WVOR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WVOR	**Wild Horse Val**	**74.15**	**49**	P	**P**	**13 22 38.4**	**-0.1**
BEKR	**Beckworth**	**74.47**	**52**	P	**P**	**13 22 40.6**	**+0.2**
BEKR				IAmb	IAmb	13 22 48.2	
	comp=Z,5.5nm,0.8s						
AKASG	**Malin Array Be**	**75.24**	**322**	P	**P**	**13 22 43.8**	**-0.7**
	comp=Z,4.8nm,0.5s,baz=48,slow=6.2,SNR=27						
AKASG				LR	LR	13 58 47.3	
	comp=Z,851nm,19.1s,baz=50,slow=38						
AKASG	**Malin Array Be**	**75.24**	**322**	P	**P**	**13 22 43.8**	**-0.7**
AKBB	**Malin Array Si**	**75.24**	**322**	⇑*e*P	**P**	**13 22 43.3**	**-1.2**
AKBB	**Malin Array Si**	**75.24**	**322**	P	**P**	**13 22 43.7**	**-0.8**
NC204	**NORSAR Array S**	**75.48**	**337**	P	**P**	**13 22 45.7**	**-0.1**
NB2	**NORSAR Subarra**	**75.52**	**337**	P	**P**	**13 22 45.8**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**75.52**	**337**	P	**P**	**13 22 45.5**	**-0.5**
	comp=Z,5.5nm,1.0s,baz=39,slow=5.7,SNR=7.8						
NOA				LR	LR	13 58 26.8	
	comp=Z,533nm,20.7s,baz=40,slow=38						
FFC	**Flin Flon**	**75.54**	**32**	P	**P**	**13 22 47.4**	**+1.2**
FFC	**Flin Flon**	**75.54**	**32**	P	**P**	**13 22 47.4**	**+1.2**
FFC				IAmb	IAmb	13 22 49.7	
	comp=Z,5.7nm,0.8s						
YERR	**Yerington**	**75.67**	**52**	P	**P**	**13 22 47.7**	**+0.2**
YERR				IAmb	IAmb	13 22 60.0	
	comp=Z,5.8nm,1.0s						
WAKR	**Walker**	**75.81**	**53**	P	**P**	**13 22 50.7**	**+2.4**
FCC	**Fort Churchill**	**75.86**	**26**	P	**P**	**13 22 48.5**	**+0.6**
FCC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FCC	**Fort Churchill**	**75.86**	**26**	P	**P**	**13 22 48.5**	**+0.6**
FCC				IAmb	IAmb	13 23 00.8	
	comp=Z,6.9nm,0.9s						
DLMT	**Dillon**	**76.07**	**44**	P	**P**	**13 22 52.0**	**+2.4**
DLMT				IAmb	IAmb	13 23 00.3	
	comp=Z,17nm,1.3s						
RYN	**Ryan**	**76.34**	**52**	P	**P**	**13 22 53.5**	**+2.2**
KVN	**Kaiserville**	**76.37**	**52**	P	**P**	**13 22 53.3**	**+1.9**
KVN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KVN	**Kaiserville**	**76.37**	**52**	P	**P**	**13 22 53.3**	**+1.9**
KVN				IAmb	IAmb	13 22 59.5	
	comp=Z,4.6nm,0.8s						
NVAR	**Mina Array Bea**	**76.59**	**52**	P	**P**	**13 22 54.7**	**+2.0**
	comp=Z,3.3nm,0.7s,baz=292,slow=5.7,SNR=21						
NVAR				LR	LR	13 48 41.9	
	comp=Z,107nm,21.8s,baz=292,slow=29						
NVAR	**Mina Array Bea**	**76.59**	**52**	P	**P**	**13 22 54.9**	**+2.2**
NV11	**Mina Array Sit**	**76.69**	**52**	P	**P**	**13 22 55.9**	**+2.7**
YHL	**Hebgen Lake**	**77.18**	**44**	P	**P**	**13 22 58.5**	**+2.4**
ELK	**Elko**	**77.21**	**49**	P	**P**	**13 22 59.0**	**+2.8**
ELK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ELK	**Elko**	**77.21**	**49**	P	**P**	**13 22 59.0**	**+2.8**
YHB	**Horse Butte**	**77.23**	**44**	P	**P**	**13 22 58.1**	**+1.8**
SORM	**Soroca**	**77.29**	**321**	⇓P	**P**	**13 22 54.7**	**-1.5**
SORM	**Soroca**	**77.29**	**321**	⇓P	**P**	**13 22 54.7**	**-1.5**
MOOW	**Moose Ponds**	**78.10**	**45**	P	**P**	**13 23 04.0**	**+2.9**
TPAW	**Teton Pass**	**78.14**	**45**	P	**P**	**13 23 04.5**	**+3.2**
R11A	**Troy Canyon, C**	**78.39**	**51**	P	**P**	**13 23 04.0**	**+1.3**
BGU	**Big Grassy Mou**	**78.45**	**48**	P	**P**	**13 23 05.2**	**+2.2**
TPNV	**Topopah Spring**	**78.78**	**53**	P	**P**	**13 23 05.7**	**+0.8**
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TPNV	**Topopah Spring**	**78.78**	**53**	P	**P**	**13 23 05.7**	**+0.8**
TPNV				IAmb	IAmb	13 23 08.7	
	comp=Z,10nm,1.4s						
KWP	**Kalwaria Pacla**	**79.13**	**324**	P	**P**	**13 23 08.1**	**+1.7**
KWP				pmax	pmax		
	comp=Z,397nm,1.3s						
KWP	**Kalwaria Pacla**	**79.13**	**324**	P	**P**	**13 23 08.1**	**+1.7**
BURAR	**Bucovina Array**	**79.24**	**322**	⇓P	**P**	**13 23 07.6**	**+0.5**
BURAR	**Bucovina Array**	**79.24**	**322**	⇓P	**P**	**13 23 07.6**	**+0.5**
PDAR	**Pinedale Array**	**79.38**	**45**	P	**P**	**13 23 08.9**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=323,slow=3.7,SNR=16						
PDAR				LR	LR	13 53 03.2	
	comp=Z,60nm,21.8s,baz=322,slow=32						
PDAR	**Pinedale Array**	**79.38**	**45**	P	**P**	**13 23 09.2**	**+1.0**
BR131	**Keskin Array S**	**79.48**	**311**	⇓*e*P	**P**	**13 23 08.6**	**0.0**
BRTR	**Keskin Array B**	**79.48**	**311**	P	**P**	**13 23 08.8**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=99,slow=3.9,SNR=15						
BRTR				LR	LR	14 02 54.1	
	comp=Z,123nm,18.6s,baz=23,slow=39						
BRTR	**Keskin Array B**	**79.48**	**311**	P	**P**	**13 23 09.9**	**+1.3**
KOLS	**Kolonicke sedl**	**79.81**	**324**	*e*P	**P**	**13 23 11.0**	**+0.9**
KOLS	**Kolonicke sedl**	**79.81**	**324**	*e*P	**P**	**13 23 11.0**	**+0.9**
TRPA	**Tarpa**	**80.23**	**323**	⇑P	**P**	**13 23 13.5**	**+1.2**
DOPR	**Dopca**	**80.24**	**320**	⇓P	**P**	**13 23 13.5**	**+1.1**
PFO	**Pinyon Flats O**	**80.59**	**56**	*de*P	**P**	**13 23 16.1**	**+1.4**
PFO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XPFO	**Pion Flat**	**80.59**	**56**	P	**P**	**13 23 16.8**	**+2.1**
XPFO				IAmb	IAmb	13 23 17.2	
	comp=Z,6.0nm,0.9s						
KNB	**Kanab**	**80.94**	**51**	P	**P**	**13 23 19.5**	**+2.9**
KNB				pmax	pmax		
	comp=Z,12nm,1.2s						
KNB	**Kanab**	**80.94**	**51**	P	**P**	**13 23 19.5**	**+2.9**
BAR	**Barrett**	**80.99**	**56**	P	**P**	**13 23 19.3**	**+2.5**
BAR				IAmb	IAmb	13 23 27.1	
	comp=Z,7.8nm,0.8s						
ARR	**Arges**	**81.03**	**320**	⇓P	**P**	**13 23 17.9**	**+1.1**
DRGR		**81.06**	**322**	⇓P	**P**	**13 23 18.7**	**+1.8**
DRGR		**81.06**	**322**	⇓P	**P**	**13 23 18.7**	**+1.8**
ULM	**Lac du Bonnet**	**81.34**	**33**	⇓*i*P	**P**	**13 23 18.1**	**-0.1**
ULM	**Lac du Bonnet**	**81.34**	**33**	P	**P**	**13 23 18.7**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=300,slow=5.2,SNR=4.1						
ULM	**Lac du Bonnet**	**81.34**	**33**	P	**P**	**13 23 18.9**	**+0.7**
ULM				IAmb	IAmb	13 23 18.9	
	comp=Z,9.6nm,1.3s						
ELND	**Elena**	**81.98**	**318**	⇓P	**P**	**13 23 22.4**	**+0.6**
BRG	**Berggiesshubel**	**82.19**	**329**	*e*P	**P**	**13 23 20.6**	**-2.1**
	comp=Z,8.9nm,1.4s						
BRG	**Berggiesshubel**	**82.19**	**329**	*e*P	**P**	**13 23 20.6**	**-2.1**
BRG				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CLL	**Collm**	**82.25**	**330**	*e*P	**P**	**13 23 23.0**	**0.0**
CLL				pmax	pmax		
	comp=Z,14nm,1.2s						
CLL				MLR	MLR		
	comp=Z,400nm,18.1s						
CLL	**Collm**	**82.25**	**330**	*e*P	**P**	**13 23 23.0**	**0.0**
	comp=Z,14nm,1.2s						
CLL				LmH		14 02 00.0	
	comp=N,200nm,20.9s						
CLL				LmH		14 02 00.0	
	comp=E,300nm,21.9s						
CLL				LmV		14 06 00.0	
	comp=Z,400nm,18.1s						
CONA	**Conrad Observa**	**83.54**	**326**	*i* P	**P**	**13 23 30.5**	**+0.7**
	comp=Z,17nm,1.7s						
VTS	**Vitosha**	**83.63**	**319**	⇑P	**P**	**13 23 31.1**	**+0.6**
VTS	**Vitosha**	**83.63**	**319**	⇑P	**P**	**13 23 31.1**	**+0.6**
VTS	**Vitosha**	**83.63**	**319**	P	**P**	**13 23 31.1**	**+0.6**
KHC	**Kasperske Hory**	**83.65**	**328**	⇓*e*P	**P**	**13 23 30.4**	**0.0**
KHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GERES	**GERESS Array B**	**83.81**	**328**	P	**P**	**13 23 30.9**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=57,slow=4.9,SNR=8.1						
GERES				LR	LR	14 05 07.2	
	comp=Z,366nm,18.2s,baz=30,slow=39						
ARSA	**Arzberg**	**84.19**	**326**	*i* P	**P**	**13 23 32.4**	**-0.7**
	comp=Z,7.4nm,1.2s						
GRF	**Grafenberg Arr**	**84.22**	**330**	*e*P	**P**	**13 23 36.6**	**+3.3**
	comp=Z,8.4nm,0.8s,baz=42,slow=4.3						
MOA	**Molln**	**84.31**	**327**	*i* PcP	**PcP**	**13 23 37.6**	**+0.2**
	comp=Z,10.0nm,1.5s						
PPT	**Papeete**	**84.49**	**116**	LR	LR	13 52 46.5	
	comp=Z,146nm,20.9s,baz=273,slow=30						
PPT2	**Papeete2**	**84.51**	**116**	*e*LR	LR	13 50 11.4	
	comp=Z,352nm,22.5s,baz=314						
PPT2	**Papeete2**	**84.51**	**116**	*e*T	T	14 56 35.9	
	comp=Z,4.4nm,0.3s						
SOKA	**Soboth**	**84.84**	**326**	*i* P	**P**	**13 23 36.4**	**-0.1**
	comp=Z,13nm,1.3s						
OBKA	**Obir**	**85.19**	**326**	*i* P	**P**	**13 23 37.5**	**-0.8**
	comp=Z,7.0nm,1.6s						
KBA	**Koelnbreinsper**	**85.31**	**327**	*i* P	**P**	**13 23 38.6**	**-0.3**
	comp=Z,5.6nm,1.3s						
MYKA	**Terra Mystica**	**85.51**	**326**	*i* P	**P**	**13 23 39.0**	**-0.8**
	comp=Z,6.2nm,0.9s						
WATA	**Walderalm**	**85.89**	**328**	*i* PcP	**P**	**13 23 42.2**	**+0.4**
	comp=Z,12nm,1.7s						
WTTA	**Wattenberg**	**85.92**	**328**	*i* pP	pP	13 23 50.1	-2.0
	comp=Z,9.8nm,1.6s						
ABTA	**Abfaltersbach**	**85.93**	**327**	*i* PcP	**PcP**	**13 23 43.4**	**-1.2**
	comp=Z,10nm,1.8s						
RETA	**Reutte**	**86.12**	**329**	*i* P	**P**	**13 23 42.9**	**0.0**
	comp=Z,4.9nm,1.0s						
ANMO	**Albuquerque**	**86.24**	**49**	⇑*e*P	**P**	**13 23 42.5**	**-1.4**
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TAOE	**Nuku Hiva Isla**	**86.44**	**103**	*e*LR	LR	13 51 06.9	
	comp=Z,488nm,23.7s,baz=311						
DAVA	**Damuels**	**86.65**	**329**	*i* P	**P**	**13 23 44.8**	**-0.8**
	comp=Z,13nm,1.4s						
SCHQ	**Schefferville**	**87.19**	**15**	LR	LR	14 06 44.3	
	comp=Z,107nm,18.1s,baz=46,slow=38						
TBI	**Tubuai**	**88.25**	**120**	*e*LR	LR	13 52 01.0	
	comp=Z,360nm,26.5s,baz=322						
TBI	**Tubuai**	**88.25**	**120**	*e*T	T	15 01 14.7	
	comp=Z,8.7nm,0.3s						
TXAR	**Lajitas Array**	**91.74**	**52**	LR	LR	14 00 38.9	
	comp=Z,127nm,20.8s,baz=0.0,slow=32						
KEST	**Kesra**	**95.97**	**322**	LR	LR	14 12 45.0	
	comp=Z,257nm,18.2s,baz=308,slow=39						
ESDC	**Sonseca Array**	**98.53**	**333**	LR	LR	14 14 41.9	
	comp=Z,222nm,18.9s,baz=320,slow=39						
TORD	**Torodi Ar. Bea**	**118.04**	**313**	PKP	**PKPdf**	**13 29 48.3**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=360,slow=1.0,SNR=4.0						
QSPA	**South Pole Qui**	**125.04**	**180**		**PKiKP**	**13 30 01.4**	**-0.1**
LPAZ	**La Paz**	**148.16**	**61**	PKPbc	**PKiKP**	**13 30 49.9**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=321,slow=2.3,SNR=9.7						
LPAZ	**La Paz**	**148.16**	**61**		**PKiKP**	**13 30 50.6**	**0.0**
PB11	**IPOC Station P**	**149.22**	**68**		**PKiKP**	**13 30 52.3**	**+0.1**

PRU ***02*** *13:22:25.8±0.0, 50.°17N×19.°10E, h0km*
ISC 02 13:22:25.1±1.1**, 50.°16N**±0.°06×**19.°10E**±0.°04**, h0**km**, n10,**
σ**0.s72**/14**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
OJC	**Ojcow**	**0.45**	**83**	*e*Pg	**Pg**	**13 22 34.3**	**+0.6**
OJC				*e*Sg	**Sb**	**13 22 42.1**	**-1.0**
OKC	**Ostrava-Krasne**	**0.70**	**242**	*e*SG	**Sb**	**13 22 49.9**	**-0.4**
	comp=Z,4.3nm,0.3s						
LANS	**Liptovska Anna**	**1.04**	**167**	*e*PG	**Pg**	**13 22 45.5**	**+0.5**
LANS				*e*SG	**Sg**	**13 22 59.3**	**+0.8**
LANS				*e*LG	Lg	13 22 59.9	
MORC	**Moravsky Berou**	**1.08**	**250**	*e*PG	**Pb**	**13 22 47.1**	**+0.4**
MORC				*e*SG	**Sb**	**13 23 01.6**	**+0.3**
VYHS	**Vyhne**	**1.68**	**186**	*e*PN	**Pn**	**13 22 55.5**	**-0.2**
VYHS				*e*SN	**Sn**	**13 23 16.8**	**-1.2**
DPC	**Dobruska-Polom**	**1.79**	**277**	*e*SG	**Sb**	**13 23 22.2**	**+0.3**
	comp=Z,6.7nm,0.8s						
OSTC	**Ostas**	**1.89**	**283**	*e*SG	**Sg**	**13 23 26.0**	**+0.2**
CHVC	**Chvalec**	**2.00**	**283**	*e*SG	**Sb**	**13 23 28.0**	**+0.3**
GOPC	**GO Pecny, Ondr**	**2.79**	**267**	*e*SG	**Sg**	**13 23 54.1**	**-0.7**
KHC	**Kasperske Hory**	**3.74**	**256**	*e*SG	**Sg**	**13 24 24.1**	**-0.9**

IDC ***02*** *13:26:51.5±15.0, 21.°09S×176.°40W, h170km±127km, mb3.9/5, mb1 4.0/6, mb1mx3.4/34, mbtmp4.4/6, Error ellipse: s-maj=72.3km s-min=31.2km az=42.0*
NEIC ***02*** *13:26:54.7±1.5, 21.°4S±0.°2×176.°3W±0.°2, h207km±4km, mb4.2/13, Error ellipse: s-maj=24.8km s-min=22.2km az=73.0*
ISC 02 13:26:54.1±1.3**, 21.°6S**±0.°1×**176.°3W**±0.°2**, h200**km**, n27,** σ**1.s82**/25**, mb4.1**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
MSVF	**Nonsavu**	**6.56**	**304**		**Pn**	**13 28 27.8**	**-1.0**
DZM	**Mont Dzumac**	**16.06**	**265**	P	**Pn**	**13 30 31.1**	**+1.7**
	0.7nm,0.3s,baz=91,slow=15,SNR=9.0						
DZM	**Mont Dzumac**	**16.06**	**265**	IAmb	IAmb	13 30 34.3	
	comp=Z,14nm,0.8s						
URZ	**Urewera**	**17.59**	**197**	P	**Pn**	**13 30 48.6**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=258,slow=4.6,SNR=18						
URZ				S	**S**	**13 33 51.7**	**-6.0**
	comp=Z,0.4nm,0.3s,baz=344,slow=20,SNR=4.7						
URZ	**Urewera**	**17.59**	**197**	IAmb	IAmb	13 30 52.2	
	comp=Z,22nm,1.2s						
RPZ	**Rata Peaks**	**24.48**	**203**	P	**P**	**13 31 59.2**	**+4.4**
	comp=Z,9.9nm,0.6s,baz=35,slow=1.5,SNR=5.3						
RPZ	**Rata Peaks**	**24.48**	**203**	IAmb	IAmb	13 31 59.9	
	comp=Z,42nm,1.1s						
EIDS	**Eidsvold**	**30.14**	**256**	P	**P**	**13 32 47.0**	**+1.5**
EIDS				IAmb	IAmb	13 32 51.1	
	comp=Z,11nm,1.5s						
CAN	**Canberra**	**33.29**	**238**	P	**P**	**13 33 13.4**	**+0.4**
TOO	**Toolangi**	**36.60**	**236**	P	**P**	**13 33 41.5**	**+0.3**
TOO				IAmb	IAmb	13 33 45.2	
	comp=Z,13nm,1.2s						
STKA	**Stephens Creek**	**38.80**	**246**	P	**P**	**13 34 00.5**	**+0.8**
	comp=Z,1.5nm,0.5s,baz=95,slow=10,SNR=7.0						
STKA	**Stephens Creek**	**38.80**	**246**	IAmb	IAmb	13 34 06.2	
	comp=Z,0.8nm,1.2s						
COEN	**Coen**	**39.26**	**274**	P	**P**	**13 34 04.4**	**+0.7**
COEN				IAmb	IAmb	13 34 14.5	
	comp=Z,4.1nm,1.1s						
BBOO	**Buckleboo**	**43.54**	**245**	P	**P**	**13 34 36.6**	**-1.7**
BBOO				IAmb	IAmb	13 34 47.6	
	comp=Z,9.5nm,0.9s						
AS31	**Alice Springs**	**45.85**	**257**	P	**P**	**13 34 56.8**	**0.0**
ASAR	**Alice Springs**	**45.85**	**257**	P	**P**	**13 34 56.8**	**+0.1**
	comp=Z,3.5nm,0.8s,baz=91,slow=8.1,SNR=32						
ASAR				PcP	**PcP**	**13 36 31.1**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=103,slow=3.7,SNR=5.4						
WR0	**Warramunga Arr**	**45.87**	**263**	P	**P**	**13 34 56.4**	**-0.4**
WR0				IAmb	IAmb	13 34 56.5	
	comp=Z,5.3nm,1.1s						
JAY	**Jayapura**	**45.91**	**288**	P	**P**	**13 34 56.2**	**-1.0**
	comp=Z,5.4nm,0.6s,baz=134,slow=9.8,SNR=4.1						
WRAB	**Tennant Creek**	**46.05**	**263**	P	**P**	**13 34 58.1**	**-0.1**
WRA	**Warramunga Arr**	**46.06**	**263**	P	**P**	**13 34 57.6**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=98,slow=9.1,SNR=24						
WRA	**Warramunga Arr**	**46.06**	**263**	P	**P**	**13 34 57.5**	**-0.8**
MKAR	**Makanchi Array**	**113.09**	**313**	PKiKP	**PKiKP**	**13 45 07.1**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=6.0,slow=0.5,SNR=4.8						
KURK	**Kurchatov**	**115.86**	**317**		**PKPdf**	**13 45 12.4**	**-0.3**
KURBB	**Kurchatov Arra**	**115.92**	**317**	PKP	**PKPdf**	**13 45 12.4**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=85,slow=1.8,SNR=5.8						
BVAR	**Borovoye Array**	**120.92**	**320**	PKP	**PKPdf**	**13 45 22.6**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=115,slow=1.7,SNR=8.5						
AKASG	**Malin Array Be**	**144.71**	**332**	PKP	**PKPab**	**13 46 04.8**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=44,slow=4.7,SNR=4.9						
BRTR	**Keskin Array B**	**148.74**	**312**	PKPbc	**PKPbc**	**13 46 18.1**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=90,slow=2.5,SNR=7.2						

NIED ***02*** *13:31:00, 35.°30N×140.°60E, h26km, Mw3.8 Best double couple: M₀6.05000×10¹⁴ NP1:φs59.00000°, δ81.00000°, λ84.00000°. NP2:φs275.00000°, δ11.00000°, λ126.00000°.*
IDC ***02*** *13:31:36.0±1.1, 35.°36N×140.°92E, h0km, mb3.6/7, mb1 3.7/9, mb1mx3.5/57, mbtmp3.6/9, ML2.9/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/30, Error ellipse: s-maj=28.3km s-min=18.5km az=66.0*
JMA ***02*** *13:31:41.3±0.1, 35.°36N×140.°54E, h25km±2km, M3.5 Broadband fault plane solution: P waves. NP1: φs262.00000°, δ28.00000°, λ112.00000°. NP2: φs57.00000°, δ64.00000°, λ78.00000°. Principal axes: T Plg69.0000°, Azm304.0000°; N Plg10.0000°, Azm63.0000°; P Plg18.0000°, Azm156.0000°;*
JMA Felt II J1.
ISC 02 13:31:40.9±1.0**, 35.°35N**±0.°04×**140.°60E**±0.°05**, h27**km±7km**, n25,** σ**0.s96**/24**, mb3.6**/7**, 3C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
KTR	**Katsuura**	**0.31**	**230**	⇑P	**Pb**	**13 31 47.7**	**-0.5**
KTR				S	**Sb**	**13 31 52.5**	**-0.7**
JSMT	**Sammumatsuo**	**0.32**	**337**	⇓P	**Pb**	**13 31 48.5**	**+0.1**
JCN	**Nagara**	**0.34**	**282**	⇓P	**Pb**	**13 31 48.5**	**-0.1**
JKUC	**kamogawauchiur**	**0.38**	**241**	⇑P	**Pb**	**13 31 48.6**	**-0.6**
JKUC				S	**Sb**	**13 31 54.4**	**-0.5**
CHOJ	**Chosi**	**0.41**	**30**	⇓P	**Pb**	**13 31 50.2**	**+0.5**
CHOJ				S	**Sb**	**13 31 56.8**	**+1.1**
BSO4	**Boso 4**	**0.42**	**211**	⇑P	**Pb**	**13 31 50.2**	**+0.4**
BSO3	**Boso 3**	**0.55**	**188**	⇓P	**Pb**	**13 31 52.3**	**+0.5**
BSO1	**Boso 1**	**0.76**	**156**	⇓P	**Pb**	**13 31 54.9**	**-0.2**
BSO1				*e*X		13 32 06.0	
JYT	**Yasato**	**0.94**	**339**	⇓P	**Pb**	**13 31 57.4**	**-1.1**
MJAR	**Matsushiro Arr**	**2.28**	**302**	Pn	**Pn**	**13 32 17.6**	**+0.8**
	0.7nm,0.3s,baz=201,slow=19,SNR=50						
MJAR				Sn	**Sb**	**13 32 48.4**	**-0.7**
	1.8nm,0.3s,baz=126,slow=28,SNR=5.8						
MJAR				LR	LR	13 33 31.0	
	comp=Z,265nm,19.2s,baz=140,slow=47						
MAT	**Matsushiro**	**2.28**	**302**	P	**Pn**	**13 32 17.8**	**+1.1**
MAT				S	**Sn**	**13 32 45.0**	**+1.0**
ASAJ	**Asahikawa**	**8.89**	**9**	Pn	**Pn**	**13 33 46.6**	**-0.9**
	0.3nm,0.3s,baz=197,slow=12,SNR=2.6						
H11N2	**WAKE ISLAND Hy**	**27.91**	**117**	T	T	14 06 41.2	
	baz=309,slow=75,SNR=46						
H11N1	**WAKE ISLAND Hy**	**27.92**	**117**	T	T	14 06 37.2	
	baz=309,slow=75,SNR=44						
H11N3	**WAKE ISLAND Hy**	**27.93**	**117**	T	T	14 06 44.3	
	baz=309,slow=75,SNR=44						
SONM	**Songino Array**	**28.23**	**307**	P	**P**	**13 37 33.2**	**+1.7**
	0.3nm,0.7s,baz=113,slow=8.6,SNR=2.3						
H11S1	**WAKE ISLAND Hy**	**28.55**	**119**	T	T	14 07 26.5	
	baz=312,slow=75,SNR=58						
H11S3	**WAKE ISLAND Hy**	**28.55**	**119**	T	T	14 07 28.1	
	baz=312,slow=75,SNR=57						
H11S2	**WAKE ISLAND Hy**	**28.57**	**119**	T	T	14 07 19.5	
	baz=312,slow=75,SNR=53						
ZALV	**Zalesovo Beam**	**42.59**	**314**	P	**P**	**13 39 35.0**	**+0.8**
	0.8nm,0.7s,baz=76,slow=6.6,SNR=3.8						
MKAR	**Makanchi Array**	**44.48**	**303**	P	**P**	**13 39 50.3**	**+0.7**
	0.7nm,1.0s,baz=90,slow=11,SNR=4.1						
KURBB	**Kurchatov Arra**	**46.54**	**309**	P	**P**	**13 40 05.6**	**-0.3**
	1.0nm,0.6s,baz=88,slow=7.7,SNR=11						
ILAR	**Eielson Array**	**51.27**	**32**	P	**P**	**13 40 39.6**	**-2.3**
	0.7nm,1.1s,baz=262,slow=6.1,SNR=3.4						
WRA	**Warramunga Arr**	**55.31**	**187**	P	**P**	**13 41 11.5**	**-0.5**
	1.1nm,0.7s,baz=2.3,slow=7.5,SNR=11						
ASAR	**Alice Springs**	**59.03**	**187**	P	**P**	**13 41 38.3**	**-0.1**
	0.4nm,0.8s,baz=2.1,slow=6.6,SNR=7.7						

TEH 02 13:31:51.6,36.79N×58.50E,h5km,ML3.8
THR 02 13:31:52.8±0.6,36.83N×58.55E,h14km±6km,ML3.7
IDC 02 13:31:53.9±1.2,36.86N×58.44E,h0km,mb3.5/5, mb1 3.6/10,mb1mx3.4/39,mbtmp3.6/10,ML2.9/4,Error ellipse: s-maj=17.7km s-min=13.1km az=61.0
ISC 02 13:31:53.7±0.6,36.85N±0.03×58.54E±0.03,h10km,n51, σ1^{s}45/57,mb3.6/4,2C-2D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IAKL	Akhelmad	0.30	146	ePg	Pg	13 31 58.3	-1.6
IAKL				eSg	Sg	13 32 02.5	-1.6
IAKL				e		13 32 04.4	
ISFR	Sfrayin	0.48	295	ePg	Pg	13 32 01.7	-1.4
ISFR				e		13 32 11.6	
IPAY	Payeh	0.54	138	e		13 32 12.9	
IPAY				ePg	Pg	13 32 02.3	-2.0
IPAY				eSg	Sg	13 32 09.7	-1.8
IEMG	Emamgholi	0.57	9	eSg	Sb	13 32 14.6	+0.4
IEMG				ePg	Pg	13 32 05.0	+0.2
IEMG				e		13 32 16.4	
SBZV	Sabzevar	0.88	239	ePg	Pg	13 32 07.3	-3.4
IMOG	Moghan	0.98	139	ePg	Pg	13 32 10.5	-2.2
IMOG				e		13 32 29.4	
GEYT	Alibeck	1.13	343	Pg	Pb	13 32 14.6	-0.7
	146nm,0.3s,baz=163,slow=17,SNR=598						
GEYT				Lg	Lg	13 32 31.1	
	112nm,0.3s,baz=168,slow=37,SNR=26						
BJRD	Bojnurd	1.24	313	ePg	Pn	13 32 16.0	-1.2
BJRD	Bojnurd	1.24	313	ePg	Pn	13 32 16.0	-1.2
BJRD				eSg	Sb	13 32 33.5	+0.2
IMYA	Miami	1.35	112	ePg	Pn	13 32 18.0	-0.9
IMYA				e		13 32 45.4	
JRKH	Jarkhoshk	1.74	122	ePn	Pn	13 32 23.5	-0.6
JRKH				e		13 32 56.6	
SHRO	Shahrood	2.22	248	ePn	Pn	13 32 30.7	0.0
SHRO	Shahrood	2.22	248	ePn	Pn	13 32 30.6	0.0
SHRO				IAML		13 33 05.4	
	comp=E,373nm,0.6s						
IMND	Minoodasht	2.54	280	ePn	Pn	13 32 36.7	+1.7
IMND				e		13 33 33.7	
TNSJ	Nastanj	3.29	209	ePn	Pn	13 32 45.8	+0.4
TNSJ				e		13 33 53.0	
TABS	Tabas	3.40	200	ePn	Pn	13 32 47.6	+0.6
TABS	Tabas	3.40	200	ePn	Pn	13 32 47.6	+0.6
TKDS	Koohdasht(Taba	3.44	200	ePn	Pn	13 32 48.4	+1.0
TKDS				e		13 34 04.8	
SHRT	Shahrakht	3.51	155	ePn	Pn	13 32 48.6	+0.2
SHRT	Shahrakht	3.51	155	ePn	Pn	13 32 48.6	+0.2
SHRT				eSg	Sb	13 33 41.0	+2.4
IMON	Monand	3.77	166	ePn	Pn	13 32 52.0	-0.1
IMON				e		13 33 06.7	
IGLO	Ghaloghah	3.81	266	ePn	Pn	13 32 54.4	+1.8
IGLO				e		13 34 12.2	
ITEG	Tejag	3.95	177	ePn	Pn	13 32 54.2	-0.4
ITEG				e		13 34 06.3	
IANJ	Anjilo	3.99	251	ePn	Pn	13 32 57.2	+2.0
TPRV	Parvadeh(Tabas	4.11	202	ePn	Pn	13 32 56.9	+0.2
IDAH	Dahanechah	4.25	165	ePn	Pn	13 32 59.3	+0.6
ISHM	Shahmirzad	4.37	258	ePn	Pn	13 33 00.8	+0.4
IKOO	Kooshah	4.44	175	ePn	Pn	13 33 00.5	-0.8
IALA	Alasht	4.68	262	ePn	Pn	13 33 05.4	+0.6
ILAS	Lasjerd	4.75	254	ePn	Pn	13 33 04.7	-1.0
IFIR	Firoozkooh	4.83	257	e		13 33 35.9	
IFIR				ePn	Pn	13 33 07.4	+0.6
BSRN	Basiran	4.90	174	ePn	Pn	13 33 07.9	+0.3
BSRN	Basiran	4.90	174	ePn	Pn	13 33 07.9	+0.3
IPRN	Peran	5.03	265	ePn	Pn	13 33 09.2	-0.2
ANAR	Anarak	5.38	229	ePn	Pn	13 33 14.2	0.0
IVRN	Varamin	5.83	253	ePn	Pn	13 33 20.1	-0.2
QALM	Alamut, Qazvin	6.36	269	ePn	Pn	13 33 29.6	+1.8
IZEF	Zefreh	6.46	234	ePn	Pn	13 33 29.8	+0.7
GNI	Garni	11.30	291	Pn	Pn	13 34 36.9	+1.5
	comp=E,0.3nm,0.3s,baz=101,slow=16,SNR=1.6						
AB31	Akbulak array	12.44	4	⇑P	Pn	13 34 50.9	+0.2
	comp=E,0.6nm,0.4s,baz=192,slow=12,SNR=5.2						
AB31				⇓S	Sn	13 37 06.3	-2.9
	comp=E,0.8nm,0.4s,baz=200,slow=24,SNR=5.9						
AAK	Ala-Archa	13.56	60	Pn	Pn	13 35 06.4	+0.2
	comp=E,0.3nm,0.3s,baz=200,slow=5.5,SNR=6.4						
AKTO	Aktyubinsk	13.58	359	Pn	Pn	13 35 04.2	-2.1
	comp=E,0.2nm,0.3s,baz=170,slow=16,SNR=3.6						
AKTO				Sn	Sn	13 37 33.3	-3.9
	comp=E,0.3nm,0.3s,baz=31,slow=18,SNR=4.1						
AKTO	Aktyubinsk	13.58	359	⇓P	Pn	13 35 03.7	-2.6
	comp=E,3.0nm,0.7s						
AKTO				⇑S	Sn	13 37 28.0	-9.2
	comp=E,5.1nm,0.7s						
BVAR	Borovoye Array	18.17	23	P	Pn	13 36 06.1	+0.1
	comp=E,0.2nm,0.3s,baz=230,slow=13,SNR=7.3						
ARU	Arti	19.58	0	P	P	13 36 22.3	+0.6
	comp=E,0.0nm,0.3s,baz=174,slow=4.1,SNR=5.9						
KURBB	Kurchatov Arra	19.86	40	P	Pn	13 36 27.7	+1.4
	comp=E,0.0nm,0.3s,baz=240,slow=12,SNR=3.7						
MKAR	Makanchi Array	20.22	53	P	Pn	13 36 31.6	+0.9
	comp=E,0.9nm,0.8s,baz=242,slow=12,SNR=6.5						
ZALV	Zalesovo Beam	24.93	38	P	P	13 37 18.8	+1.9
	comp=E,0.7nm,0.5s,baz=255,slow=11,SNR=4.5						
AKASG	Malin Array Be	25.09	313	P	P	13 37 19.7	+1.4
	comp=E,0.8nm,0.6s,baz=111,slow=8.9,SNR=3.0						
CMAR	Chiang Mai Arr	39.85	106	P	P	13 39 29.3	+1.8
	comp=E,1.2nm,0.9s,baz=298,slow=8.9,SNR=6.8						
TORD	Torodi Ar. Bea	55.79	260	P	P	13 41 33.3	+2.1
	comp=E,0.3nm,0.5s,baz=38,slow=8.1,SNR=2.5						

IDC 02 13:34:43.1±28.0,17.52S×173.97W,h0km,mb4.0/4, mb1 4.2/4,mb1mx3.7/24,mbtmp4.0/4,Error ellipse: s-maj=547.4km s-min=53.4km az=65.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	22.09	199	P	P	13 39 40.3	+0.4
	2.8nm,0.3s,baz=0.0,slow=9.1,SNR=6.2						
STKA	Stephens Creek	42.53	242	P	P	13 42 39.9	-0.8
	2.4nm,0.8s,baz=98,slow=15,SNR=3.7						
WRA	Warramunga Arr	48.86	259	P	P	13 43 30.7	-0.2
	0.4nm,0.4s,baz=98,slow=6.7,SNR=11						
ASAR	Alice Springs	48.97	254	P	P	13 43 31.8	+0.1
	2.2nm,0.6s,baz=90,slow=8.0,SNR=47						

KRNET 02 13:38:20.6±0.1,40.97N×74.07E,h15km,mb2.9
NNC 02 13:38:21.4±0.7,40.98N×74.09E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=5.1km s-min=3.3km az=167.0
SOME 02 13:38:21.0,41.00N×74.08E,h10km
KNET 02 13:38:22.3±0.5,41.08N×74.13E,h1km±2km,ml2.2,Error ellipse: s-maj=3.5km s-min=2.7km az=130.0
ISC 02 13:38:22.5±1.4,41.08N±0.05×73.98E±0.02,h8km±11km, n55,σ1^{s}48/92,35C-21D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.79	288	⇓iP	Pg	13 38 37.8	0.0
	baz=94						
ARSB				⇓iS	Sn	13 38 50.1	-2.3
	baz=94						
ARLS	Aral	0.82	18	⇑iP	Pb	13 38 37.7	-1.5
	baz=12						
ARLS				⇑iS	Sb	13 38 50.6	+0.1
	baz=12						
AML	Almayashu	1.07	348	⇓iP	Pb	13 38 43.1	-0.5
	baz=46						
AML				⇓iS	Sn	13 38 59.5	-0.1
	baz=46						
AML	Almayashu	1.07	348	⇑P	Pb	13 38 43.2	-0.4
	22nm,0.2s,SNR=32						
UCH	Uchtor	1.21	19	⇓iP	Pn	13 38 45.1	-1.2
	baz=15						
UCH				⇓iS	Sg	13 39 03.2	+1.5
	baz=15						
UCH	Uchtor	1.21	19	⇓P	Pn	13 38 45.3	-1.0
	16nm,0.2s,SNR=73						
UCH				⇓S	Sg	13 39 03.4	+1.8
	32nm,0.2s						
KZA	Kyzart	1.38	43	⇓iP	Pn	13 38 47.0	-1.5
	baz=38						
KZA				⇓iS	Sb	13 39 06.7	-0.1
	baz=38						
KZA	Kyzart	1.38	43	⇑P	Pn	13 38 47.1	-1.4
	5.4nm,0.1s,SNR=16						
KZA				⇓S	Sb	13 39 07.1	+0.3
	11nm,0.1s						
NRN	Naryn	1.56	76	⇑iP	Pn	13 38 48.8	-2.2
	baz=72						
NRN				⇑iS	Sn	13 39 08.8	-2.8
	baz=72						
EKS2	Erkin-Say	1.59	355	⇑iP	Pb	13 38 52.1	-0.2
	baz=53						
EKS2				⇑iS	Sg	13 39 15.3	+1.7
	baz=53						
EKS2	Erkin-Say	1.59	355	⇓P	Pb	13 38 52.5	+0.2
	4.5nm,0.2s,SNR=20						
EKS2				⇑S	Sg	13 39 15.8	+2.2
	6.3nm,0.1s						
AAK	Ala-Archa	1.60	14	⇑iP	Pb	13 38 52.0	-0.5
	baz=11						
AAK				⇑iS	Sg	13 39 15.0	+0.9
	baz=11						
AAK	Ala-Archa	1.60	14	⇓P	Pb	13 38 52.4	-0.1
	5.2nm,0.1s,SNR=21						
AAK				⇑S	Sg	13 39 15.4	+1.3
	15nm,0.2s						
AAK	Ala-Archa	1.60	14	⇑P	Pb	13 38 52.2	-0.3
	5.0nm,0.5s						
AAK				⇑S	Sg	13 39 14.7	+0.6
	11nm,0.4s						
ARK	Arkit	1.68	296	⇑iP	Pb	13 38 53.4	-0.4
	baz=98						
ARK				⇑iS	Sg	13 39 17.4	+0.9
	baz=98						
KBK	Karagaybulak	1.73	24	⇑iP	Pb	13 38 54.1	-0.7
	baz=21						
KBK				⇑iS	Sg	13 39 18.6	+0.4
	baz=21						
KBK	Karagaybulak	1.73	24	⇑P	Pb	13 38 54.7	-0.1
	11nm,0.1s,SNR=47						
KBK				⇑S	Sg	13 39 19.6	+1.4
	23nm,0.1s						
MRKS	Merke	1.76	342	eP	Pg	13 38 56.6	+0.4
	17nm,0.3s						
MRKS				eS	Sg	13 39 22.2	+3.2
	34nm,0.3s						
MRKS	Merke	1.76	342	Pg	Pg	13 38 56.6	+0.4
	9.8nm,0.2s						
MRKS				Lg	Lg	13 39 22.2	
	20nm,0.4s						
CHMS	Chumysh	2.00	16	⇓eP	Pb	13 38 58.1	-1.1
	baz=14						
CHMS				⇓iS	Sg	13 39 25.4	-1.4
	baz=14						
CHMS	Chumysh	2.00	16	⇓P	Pb	13 38 59.5	+0.3
	4.2nm,0.2s,SNR=9.7						
ULHL	Ulahol	2.06	55	⇑iP	Pn	13 38 57.8	+0.1
	baz=51						
ULHL				⇑iS	Sb	13 39 24.8	-1.3
	baz=51						
ULHL	Ulahol	2.06	55	⇑P	Pn	13 38 58.8	+1.1
	5.5nm,0.1s,SNR=30						
TKM2	Tokmak 2	2.20	33	⇑iP	Pn	13 39 00.3	+0.7
	baz=30						
TKM2				⇑iS	Sb	13 39 29.7	-0.5
	baz=30						
TKM2	Tokmak 2	2.20	33	⇑Pg	Pb	13 39 02.0	-0.7
	4.1nm,0.5s						
TKM2				⇑Lg	Lg	13 39 32.1	
	21nm,0.8s						
USP	Ospenovka	2.22	10	⇑iP	Pb	13 39 01.0	-2.0
	baz=8.0						
USP				⇑iS	Sb	13 39 31.0	+0.4
	baz=8.0						
USP	Ospenovka	2.22	10	⇓P	Pb	13 39 03.5	+0.5
	6.0nm,0.2s,SNR=6.5						
SGDS	Sogindy	2.42	11	Pg	Pb	13 39 07.4	+1.0
	9.7nm,0.2s						
SGDS				Lg	Lg	13 39 40.5	
	11nm,0.4s						
KST	Kastek	2.45	36	eP	Pb	13 39 07.4	+0.3
	6.6nm,0.3s						
KST				eS	Sg	13 39 40.7	-0.7
	16nm,0.5s						
KST	Kastek	2.45	36	Pg	Pb	13 39 07.4	+0.3
	6.6nm,0.3s						
KST				Lg	Lg	13 39 40.7	
	16nm,0.5s						
DGS	Degeres	2.54	31	eP	Pb	13 39 09.3	+0.8
	7.7nm,0.4s						
DGS				eS	Sg	13 39 44.2	+0.1
	25nm,0.7s						
DGS	Degeres	2.54	31	Pg	Pb	13 39 09.3	+0.8
	7.7nm,0.4s						
DGS				Lg	Lg	13 39 44.2	
	25nm,0.7s						
KDJ	Kajisay	2.62	65	⇓iP	Pn	13 39 05.4	0.0
	baz=63						
KDJ				⇓iS	Sn	13 39 37.8	+0.4
	baz=63						
BTK	Batken	2.62	248	⇑eP	Pn	13 39 05.8	+0.5
	baz=51						
BTK				⇑iS	Sn	13 39 38.8	+1.5
	baz=51						
IZV	Izvestkoviy	2.77	44	eP	Pb	13 39 14.3	+1.9
	6.4nm,0.3s						
IZV				eS	Sg	13 39 52.4	+0.9
	40nm,0.6s						
TARG	Taragay, Kyrgy	2.95	76	⇑iP	Pn	13 39 09.8	-0.3
	baz=74						
TARG				⇑iS	Sn	13 39 45.7	-0.2
	baz=74						
MDOK	Medeo	3.09	47	eP	Pb	13 39 18.2	+0.4
	2.9nm,0.4s						
MDOK				eS	Sg	13 39 59.1	-2.6
	15nm,0.8s						
MDOK	Medeo	3.09	47	Pg	Pb	13 39 17.5	-0.3
	3.4nm,0.6s						
MDOK				Lg	Lg	13 39 59.1	
	16nm,0.7s						
MDOK	Medeo	3.09	47	Pg	Pb	13 39 18.2	+0.4
	2.9nm,0.4s						
MDOK				Lg	Lg	13 39 59.1	
	15nm,0.8s						
IUG	Iuzhnay	3.15	291	eP	Pg	13 39 20.8	-2.1
	2.2nm,0.6s						
IUG				eS	Sg	13 40 04.4	+0.7
	20nm,0.6s						
IUG	Iuzhnay	3.15	291	Pg	Pg	13 39 20.8	-2.1
	2.2nm,0.6s						
IUG				Lg	Lg	13 40 04.4	
	20nm,0.6s						
KOTS	Kotyrbulak	3.17	46	eP	Pb	13 39 20.1	+0.9
	13nm,0.3s						
KOTS				eS	Sg	13 40 02.2	-2.1
	52nm,0.6s						
KOTS	Kotyrbulak	3.17	46	Pg	Pb	13 39 20.1	+0.9
	13nm,0.3s						
KOTS				Lg	Lg	13 40 02.2	
	52nm,0.6s						
ANVS	Anan'yevo	3.23	57	⇓iP	Pn	13 39 14.2	+0.4
	baz=55						
ANVS				⇓iS	Sn	13 39 52.8	+0.2
	baz=55						
KK31	Karatay Array	3.28	309	⇑Pg	Pb	13 39 21.8	+0.7
	2.0nm,0.6s,baz=129,slow=16,SNR=19						
KK31				⇑Lg	Lg	13 40 07.8	
	8.5nm,0.4s,baz=126,slow=28,SNR=16						
KTBS	Karatobe	3.30	36	eP	Pb	13 39 22.3	+0.8
	1.7nm,0.3s						
KTBS				eS	Sg	13 40 05.9	-2.7
	18nm,0.7s						
KTBS	Karatobe	3.30	36	Pg	Pb	13 39 22.3	+0.8
	1.3nm,0.3s						
KTBS				Lg	Lg	13 40 05.9	
	18nm,0.7s						
KUU	Kurty	3.31	31	eP	Pb	13 39 22.1	+0.6
	4.5nm,0.3s						
KUU				eS	Sg	13 40 06.4	-2.3
	16nm,0.5s						
BRLS	Borolday	3.65	304	eP	Pg	13 39 30.2	-2.3
	0.5nm,0.1s						
BRLS				eS	Sg	13 40 19.8	+0.1
	9.0nm,0.5s						
BRLS	Borolday	3.65	304	Pg	Pg	13 39 30.2	-2.3
	0.5nm,0.1s						
BRLS				Lg	Lg	13 40 19.8	
	9.0nm,0.5s						
SATY	Saty	3.84	58	eP	Pb	13 39 31.5	+0.8
	2.7nm,0.3s						
SATY				eS	Sb	13 40 21.9	+4.5
	9.9nm,0.3s						
SATY	Saty	3.84	58	Pg	Pb	13 39 31.6	+0.9
	2.7nm,0.3s						
SATY				Lg	Lg	13 40 21.9	
	11nm,0.4s						
KPKS	Kokpek	4.22	54	eP	Pb	13 39 38.2	+1.0
	2.5nm,0.4s						
KPKS				eS	Sb	13 40 33.4	+5.0
	12nm,0.5s						
UZB	Uzynbulak	4.28	59	eP	Pb	13 39 38.7	+0.5
	2.0nm,0.3s						
UZB				eS	Sb	13 40 34.1	+4.1
	5.1nm,0.6s						
UZB	Uzynbulak	4.28	59	Pg	Pb	13 39 38.7	+0.5
	1.3nm,0.5s						
UZB				Lg	Lg	13 40 34.1	
	5.1nm,0.6s						

IDC 02 13:43:32.1±1.0,27.26N×54.31E,h0km,mb3.8/9, mb1 3.8/10,mb1mx3.6/30,mbtmp3.8/10,ML3.1/1,Error ellipse: s-maj=26.5km s-min=18.6km az=175.0
DSN 02 13:43:34.9±1.5,27.18N×54.47E,h10km,ML3.6/6,Error ellipse: s-maj=21.5km s-min=9.2km az=12.0
TEH 02 13:43:35.0,27.15N×54.39E,h20km,ML3.4
OMAN 02 13:43:35.8±2.4,27.10N×54.21E,h115km±58km,ml3.4/7, Error ellipse: s-maj=34.8km s-min=24.1km az=88.0
ISC 02 13:43:32.9±0.6,26.91N±0.04×54.35E±0.04,h18km,n53, σ1^{s}23/49,mb3.8/9,Southern Iran

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	1.15	292	ePg	Pg	13 43 56.2	+1.1
LMD1				e		13 43 58.8	
GENO	Geno	1.69	73	e	Pg	13 44 35.3	+30
JHRM	Jahrom	1.74	337	ePn	Pb	13 44 02.3	-2.0
SHME	Shamm	1.81	118	P	Pg	13 44 06.8	-1.0
SHME	Shamm	1.81	118	ePn	Pb	13 44 05.8	+0.2
BANOM	Banah	2.00	119	eP	Pb	13 44 09.6	+0.9
	SNR=26						
BANOM				S	Sg	13 44 36.4	-0.9
BANOM	Banah	2.00	119	P	Pb	13 44 09.6	+0.9
	SNR=26						
MSFE	Esma-Masafi	2.24	133	P	Pg	13 44 15.0	-0.9
MSFE	Esma-Masafi	2.24	133	ePn	Pb	13 44 12.9	+0.1
NAZ	Nazwa, Dubai	2.24	148	eP	Pg	13 44 15.0	-0.9
	SNR=8.2						
NAZ	Nazwa, Dubai	2.24	148	ePn	Pg	13 44 15.5	-0.5
NIAN	Nian	2.30	73	ePn	Pn	13 44 11.8	+1.9
NIAN				e		13 44 54.0	
MDH	Madha	2.37	132	ePn	Pb	13 44 16.2	+1.2
MDH	Madha	2.37	132	P	Pb	13 44 16.3	+1.2
ASUD	Al Ashush, Dub	2.44	159	eP	Pg	13 44 17.5	-2.1
	SNR=8.2						
ASUD	Al Ashush, Dub	2.44	159	ePn	Pg	13 44 19.5	-0.1
ASUD	Al Ashush, Dub	2.44	159	P	Pg	13 44 19.6	0.0
	SNR=8.2						
UOSS	Minazif	2.57	139	P	Pb	13 44 18.1	-0.3
UOSS	Minazif	2.57	139	ePn	Pb	13 44 19.1	+0.7
UOSS	Minazif	2.57	139	P	Pb	13 44 19.1	+0.7
HATD	Hatta, Dubai	2.62	142	ePn	Pb	13 44 20.3	+1.0
ASHO	Ashiyiah	2.69	145	eP	Pb	13 44 21.2	+0.6
	SNR=12						
ASHO	Ashiyiah	2.69	145	ePn	Pb	13 44 21.3	+0.7
ASHO	Ashiyiah	2.69	145	P	Pb	13 44 21.2	+0.6
	SNR=12						
ALNE	Al Ain	3.11	156	ePn	Pb	13 44 27.5	-0.1
KHNJ	Kahnooj	3.15	70	ePn	Pn	13 44 24.1	+2.4
NGRK	Negar Kerman	3.44	37	ePn	Pn	13 44 25.7	-0.2
NGRK				e		13 45 22.2	
IKAZ	Kazeroun	3.62	323	ePn	Pn	13 44 29.0	+0.6
IKAZ				e		13 45 38.5	
KHGB	Koh Gabri	3.93	28	ePn	Pn	13 44 33.7	+1.2
KHGB				e		13 45 21.1	
ARQ	Araqi	4.06	151	P	Pb	13 44 40.0	-3.9
ARQ				S	Sb	13 45 30.2	-2.5
CHMN	Cheshme madani	4.07	43	ePn	Pn	13 44 36.2	+1.7
CHMN				e		13 44 50.5	
IMEH	Mehriz	4.47	3	ePn	Pn	13 44 39.9	-0.1
KLNJ	Kolanjah	4.75	330	ePn	Pn	13 44 44.2	+0.3
IBAF	Bafgh	4.79	13	ePn	Pn	13 44 44.1	-0.2
ISAD	Sadrabad	5.02	353	ePn	Pn	13 44 48.1	+0.5
IRAM	Ramesheh	5.18	341	ePn	Pn	13 44 50.2	+0.5
WSAR	Wadi Sarin	5.33	132	Pn	Pn	13 44 56.5	+4.9
	0.6nm,0.3s,baz=312,slow=11,SNR=11						
WBK	Wadi Bani Khal	5.99	135	P	Pn	13 45 05.3	+4.6
NHDN	Nehbandan	6.69	47	ePn	Pn	13 45 10.8	+0.4
IKOO	Kooshah	6.83	35	ePn	Pn	13 45 13.4	+1.0
IMON	Monand	7.77	35	ePn	Pn	13 45 26.8	+1.4
SHAO	Shalim	8.92	172	P	Pn	13 45 45.2	+4.3
	SNR=11						
WHFO	Wadi Hawf	8.96	184	P	Pn	13 45 46.0	+4.5
	SNR=31						
WHFO				S	Sn	13 47 23.2	+1.1
ABTO	Aybut	9.56	186	P	Pn	13 45 54.7	+5.0
BRTR	Keskin Array B	21.46	312	P	P	13 48 21.0	+0.6
	1.6nm,0.6s,baz=128,slow=13,SNR=12						
IDI	Anoyia	26.50	296	P	P	13 49 10.5	+1.1
	6.7nm,0.7s,baz=121,slow=12,SNR=3.5						
MKAR	Makanchi Array	29.65	41	P	P	13 49 36.3	-1.0
	0.2nm,0.4s,baz=227,slow=11,SNR=5.6						
ZALV	Zalesovo Beam	35.11	31	P	P	13 50 23.6	-1.4
	1.2nm,0.5s,baz=242,slow=9.0,SNR=6.9						
FINES	FINESS Array B	39.41	339	P	P	13 51 00.4	-1.0
	1.8nm,0.9s,baz=201,slow=3.3,SNR=5.1						
SONM	Songino Array	45.36	48	P	P	13 51 50.7	+0.5
	0.4nm,0.9s,baz=266,slow=6.6,SNR=2.8						
TORD	Torodi Ar. Bea	51.00	265	P	P	13 52 35.2	+1.1
	0.7nm,0.8s,baz=63,slow=7.4,SNR=4.1						
DBIC	Dimbokro	59.60	262	P	P	13 53 37.2	+1.1
	2.1nm,0.9s,baz=37,slow=5.7,SNR=3.2						
ASAR	Alice Springs	91.78	116	P	P	13 56 44.6	+4.5
	0.4nm,1.0s,baz=303,slow=4.8,SNR=3.6						

TAP 02 14:18:22.3,24.88N×122.22E,h7km,ML2.9,C
JMA 02 14:18:22.6±0.1,24.86N×122.29E,h11km,M2.3
ISC 02 14:18:22.4±1.0,24.87N±0.02×122.24E±0.02,h19km±2km, n53,σ0^{s}79/98,Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.27	301	P	Pg	14 18 27.8	-0.7
	baz=301						
TWB1				eS	Sg	14 18 31.9	-0.7
	baz=301						
EGS		0.28	265	eP	Pb	14 18 28.9	+0.1
	baz=261						
EGS				eS	Sg	14 18 33.8	+0.8
	baz=261						
EOS1	EOS1	0.33	198	eP	Pn	14 18 30.7	-1.6
	baz=194						
EOS1				eS	Sn	14 18 37.0	-1.5
	baz=194						
TIPB	Shuangxi	0.39	285	P	Pb	14 18 30.9	0.0
	baz=284						
TIPB				eS	Sb	14 18 36.6	0.0
	baz=284						
TWC	Suao	0.44	234	P	Pb	14 18 31.6	0.0
	baz=230						
TWC				eS	Sb	14 18 38.6	+0.7
	baz=230						
NWF	Wu-fen Shan	0.47	296	eP	Pb	14 18 32.1	0.0
	baz=295						
NWF				eS	Sb	14 18 39.3	+0.6
	baz=295						
WFSB	Wu-fen Shan	0.47	296	i P	Pb	14 18 32.1	0.0
	baz=295						
WFSB				eS	Sb	14 18 38.5	-0.1
	baz=295						
TWE	Neicheng	0.54	255	P	Pb	14 18 33.6	+0.3
	baz=251						
TWE				eS	Sb	14 18 41.5	+0.8
	baz=251						
SLBB	Yuanshan	0.56	259	eP	Pg	14 18 33.3	-0.4
	baz=256						
NANB	Nanao	0.63	226	P	Pn	14 18 35.3	-1.0
	baz=223						
NANB				eS	Sn	14 18 45.0	-0.8
	baz=223						
ENA	Nanau	0.63	226	P	Pg	14 18 35.1	+0.2
	baz=223						
ENA				eS	Sn	14 18 45.1	-0.9
	baz=223						
ENTT	Nioudou	0.66	250	eP	Pn	14 18 36.2	-0.6
	baz=247						
ENTT				S	Sn	14 18 44.7	-1.9
	baz=247						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YM01	YM01	0.67	295	P	Pg	14 18 35.6	0.0
	baz=294						
YM01				eS	Sg	14 18 44.7	+0.1
	baz=294						
YM08	YM08	0.67	298	P	Pb	14 18 35.5	0.0
	baz=298						
YM08				eS	Sb	14 18 44.5	0.0
	baz=298						
YM11	YM11	0.68	296	P	Pg	14 18 36.2	+0.5
	baz=295						
NWLT	Wulai	0.68	263	eP	Pn	14 18 36.4	-0.7
	baz=261						
NWLT				S	Sn	14 18 46.4	-0.8
	baz=261						
YM05	YM05	0.68	296	P	Pg	14 18 36.4	+0.5
	baz=295						
YM05				eS	Sg	14 18 45.9	+0.9
	baz=295						
YM10	YM10	0.68	295	P	Pg	14 18 36.1	+0.3
	baz=294						
YM10				eS	Sg	14 18 45.9	+0.9
	baz=294						
TATO	Taipei	0.69	279	eP	Pn	14 18 36.8	-0.5
	baz=278						
TATO				eS	Sn	14 18 46.7	-0.8
	baz=278						
YM04	YM04	0.70	294	P	Pg	14 18 36.2	0.0
	baz=293						
YM04				eS	Sg	14 18 46.5	+0.9
	baz=293						
TWY	Chenhua	0.71	305	eP	Pg	14 18 36.9	+0.5
	baz=305						
TWY				S	Sn	14 18 47.3	-0.6
	baz=305						
NDT	Datong Townshi	0.71	248	P	Pn	14 18 37.1	-0.4
	baz=246						
NDT				eS	Sn	14 18 47.4	-0.7
	baz=246						
ANP	Anpu	0.73	296	eP	Pg	14 18 36.7	0.0
	baz=295						
ANP				eS	Sg	14 18 46.9	+0.4
	baz=295						
JYNG	Yonagunijimaku	0.76	123	P	Pb	14 18 36.6	-0.4
JYNG				S	Sb	14 18 47.1	+0.1
NTST	Danshui	0.78	292	eP	Pb	14 18 35.7	-1.7
	baz=291						
TWS1	Kuangyinshan	0.78	287	eP	Pn	14 18 38.2	-0.2
	baz=286						
TWS1				eS	Sn	14 18 49.0	-0.8
	baz=286						
YOJ	Yonaguni jima	0.81	120	eP	Pb	14 18 37.7	-0.1
	baz=119						
YOJ				eS	Sb	14 18 48.0	-0.3
	baz=119						
YOJ	Yonaguni jima	0.81	120	P	Pb	14 18 37.0	-0.8
YOJ				eS	Sb	14 18 48.0	-0.3
YHNB	Yeheng	0.81	256	P	Pn	14 18 38.7	-0.3
	baz=254						
YHNB				eS	Sn	14 18 51.9	+1.3
	baz=254						
NNSH	Datong	0.90	241	eP	Pn	14 18 40.2	0.0
	baz=239						
NNSH				eS	Sn	14 18 52.4	-0.3
	baz=239						
NNS	Nan Shan	0.90	242	eP	Pn	14 18 40.5	+0.3
	baz=240						
NNS				eS	Sn	14 18 52.8	+0.1
	baz=240						
NACB	Ninganchiao	0.91	221	eP	Pn	14 18 40.0	-0.2
	baz=219						
NACB				eS	Sn	14 18 52.3	-0.5
	baz=219						
ETLH	Xiulin Townshi	0.96	227	P	Pn	14 18 41.4	+0.4
	baz=225						
ETLH				eS	Sn	14 18 55.1	+1.0
	baz=225						
TWD	Chiawan	0.98	217	eP	Pg	14 18 41.5	0.0
	baz=215						
TWD				eS	Sn	14 18 55.4	+0.8
	baz=215						
WHF	Hehuan Shan	1.15	231	eP	Pg	14 18 44.8	+0.1
	baz=229						
WHF				eS	Sg	14 19 00.1	+0.3
	baz=229						
TWT	Tachien	1.15	238	eP	Pg	14 18 45.1	+0.5
	baz=236						
TWT				eS	Sg	14 19 01.5	+1.7
	baz=236						
NSTT	Nanjuang	1.15	258	eP	Pg	14 18 44.2	-0.5
	baz=257						
NSTT				eS	Sg	14 19 03.0	+3.1
	baz=257						
TDCB	Techi	1.16	238	P	Pg	14 18 45.5	+0.5
	baz=237						
TDCB				eS	Sg	14 19 01.2	+1.0
	baz=237						
CHGB	Renai	1.26	231	eP	Pg	14 18 47.0	+0.2
	baz=229						
CHGB				eS	Sg	14 19 03.5	+0.1
	baz=229						
WHP	Taichung City	1.32	244	eP	Pg	14 18 48.3	+0.4
	baz=242						
WHP				eS	Sg	14 19 05.6	+0.4
	baz=242						
OWD	Renai	1.33	227	eP	Pg	14 18 48.3	+0.2
	baz=225						
OWD				eS	Sg	14 19 05.9	+0.3
	baz=225						
EGFH	Guangfu	1.41	212	eP	Pg	14 18 49.5	-0.1
	baz=211						
EGFH				eS	Sg	14 19 09.3	+1.4
	baz=211						
IRIF	Iriomote-Funau	1.45	111	P	Pb	14 18 49.4	+0.6
IRIF				S	Sb	14 19 07.8	+0.8
VWDT	VWDT	1.50	222	eP	Pg	14 18 50.8	-0.4
	baz=221						
VWDT				eS	Sg	14 19 10.9	+0.1
	baz=221						
HGSD	Ruisui	1.56	209	eP	Pb	14 18 50.5	-0.2
	baz=207						
SSLB	Suanglung	1.59	228	eP	Pb	14 18 51.2	-0.1
	baz=226						
SSLB				eS	Sg	14 19 12.3	-1.5
	baz=226						
EHY	Hungye	1.60	212	eP	Pb	14 18 51.4	+0.1
	baz=210						
YULB	Yu-li	1.70	211	eP	Pn	14 18 51.5	+0.4
	baz=209						
WHYT	Xinyi Township	1.72	228	eP	Pg	14 18 55.4	-0.2
	baz=226						
WHYT				eS	Sg	14 19 19.8	+1.8
	baz=226						
JIJ	Ishigaki jima	1.80	106	P	Pn	14 18 52.7	+0.3
JISG	Ishigakijimahi	1.90	98	S	Sn	14 19 18.1	+0.8
CHN5	Tsauling	1.91	229	eP	Pg	14 18 57.5	-1.6
	baz=227						
CHN5				eS	Sg	14 19 24.7	+0.8
	baz=227						
CHN4	Tsaushan	2.13	225	eP	Pb	14 18 59.9	-0.6
	baz=224						
CHN4				eS	Sg	14 19 30.6	-0.5
	baz=224						

IDC 02 14:29:02.8±2.1, 17°03S×177°31W, h0km, mb3.8/4, mb1 4.2/4, mb1mx3.8/29, mbtmp3.8/4, Error ellipse: s-maj=133.5km s-min=31.1km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	46.05	253	P	P	14 37 28.6	0.0
	1.3nm,0.4s,baz=91,slow=8.1,SNR=8.2						
NVAR	Mina Array Bea	78.06	43	P	P	14 41 04.8	+1.0
	0.6nm,0.7s,baz=229,slow=8.8,SNR=5.9						
TXAR	Lajitas Array	84.64	57	P	P	14 41 38.2	-0.5
	1.1nm,0.9s,baz=234,slow=3.0,SNR=4.1						
ILAR	Eielson Array	84.80	13	P	P	14 41 38.0	-0.7
	0.1nm,0.4s,baz=222,slow=5.0,SNR=7.8						

IDC 02 14:30:38.7±5.9, 6°74S×152°47E, h31km±42km, mb4.0/15, mb1 4.2/15, mb1mx4.1/27, mbtmp4.2/15, ML5.4/1, MS3.4/9, Ms1 3.4/9, ms1mx3.1/32, Error ellipse: s-maj=22.3km s-min=14.4km az=99.0
NEIC 02 14:30:40.5±2.0, 6°77S±0°09×152°53E±0°07, h46km±5km, mb4.5/20, Error ellipse: s-maj=13.2km s-min=10.3km az=191.0
DJA 02 14:30:44.3±0.8, 7°S±5°×15°2E±°, h49km±7km, M4.6/12, mb4.5/12, mB4.7/3, MLv4.7/2, Mw(mB)4.0/3
ISC 02 14:30:37.6±0.5, 6°67S±0°06×152°56E±0°07, h23km, n57, σ1s34/53, mb4.5/21, MS3.4/7, New Britain region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	2.40	347	Pn	Pn	14 31 14.7	-0.9
	921nm,0.3s,baz=205,slow=1.4,SNR=612						
KRVT				Sn	Sn	14 31 42.8	-1.6
	316nm,0.3s,baz=114,slow=22,SNR=8.0						
PMG	Port Moresby	6.00	243	Pn	Pn	14 32 06.8	+1.7
	7.7nm,0.3s,baz=82,slow=6.7,SNR=21						
PMG				Sn	Sn	14 33 12.6	-0.5
	6.7nm,0.3s,baz=65,slow=10,SNR=5.0						
PMG	Port Moresby	6.00	243		Pn	14 32 05.4	+0.4
PMG					Sn	14 33 12.8	-0.2
MANU	Manus Island	6.92	311		Pn	14 32 20.7	+3.0
HNR	Honiara	7.81	111	LR	LR	14 35 09.7	
	comp=Z,289nm,18.9s,baz=12,slow=34						
HNR	Honiara	7.81	111	Pn	Pn	14 32 32.3	+2.3
COEN	Coen	11.73	231	Pn	Pn	14 33 26.0	+2.2
JAY	Jayapura	12.51	289	LR	LR	14 39 00.4	
	comp=Z,136nm,18.2s,baz=26,slow=40						
EIDS	Eidsvold	18.65	184		Pn	14 34 54.7	+0.3
DZM	Mont Dzumac	20.35	140	P	Pn	14 35 14.6	-0.3
	16nm,0.9s,baz=219,slow=16,SNR=5.9						
DZM				LR	LR	14 41 38.0	
	comp=Z,184nm,21.3s,baz=212,slow=32						
DZM	Mont Dzumac	20.35	140	P	P	14 35 11.5	-1.2
DZM				IAmb	IAmb	14 35 20.6	
	comp=Z,18nm,0.9s						
FAKI	Fak Fak	20.57	279	P	P	14 35 13.4	-1.7
FAKI				IAmb	IAmb	14 35 28.4	
	comp=Z,19nm,1.0s						
WR0	Warramunga Arr	21.92	231	P	P	14 35 29.0	-0.5
WR0				IAmb	IAmb	14 35 39.9	
	comp=Z,10nm,0.9s						
MTN	Manton Dam	21.98	252	P	P	14 35 30.9	+0.7
MTN				IAmb	IAmb	14 35 39.3	
	comp=Z,34nm,1.0s						
WRAB	Tennant Creek	22.05	232	P	P	14 35 30.4	-0.6
WRA	Warramunga Arr	22.07	232	P	P	14 35 30.4	-0.8
	comp=Z,4.8nm,0.9s,baz=56,slow=10,SNR=20						
WRA				LR	LR	14 44 23.1	
	comp=Z,68nm,18.1s,baz=70,slow=38						
WRA	Warramunga Arr	22.07	232	P	P	14 35 32.9	+1.8
ARMA	Armidale	23.64	182	P	P	14 35 47.5	0.0
ARMA				IAmb	IAmb	14 35 49.9	
	comp=Z,22nm,1.2s						
AS31	Alice Springs	24.64	225	P	P	14 35 56.0	-0.7
ASAR	Alice Springs	24.64	225	P	P	14 35 56.4	-0.4
	comp=Z,15nm,0.9s,baz=60,slow=9.0,SNR=90						
ASAR	Alice Springs	24.64	225	P	P	14 35 56.1	-0.6
KNRA	Kununurra	24.98	247	P	P	14 35 59.5	-0.3
STKA	Stephens Creek	27.09	201	P	P	14 36 17.2	-1.6
	comp=Z,2.8nm,0.6s,baz=36,slow=13,SNR=8.0						
STKA				LR	LR	14 46 08.0	
	comp=Z,52nm,19.9s,baz=16,slow=34						
STKA	Stephens Creek	27.09	201	P	P	14 36 16.5	-2.3
MSVF	Nonsavu	27.19	116	P	P	14 36 18.7	-1.2
MSVF				IAmb	IAmb	14 36 35.7	
	comp=Z,12nm,1.3s						
FITZ	Fitzroy Crossi	28.59	244	P	P	14 36 31.1	-1.3
	comp=Z,7.1nm,0.6s,baz=72,slow=7.3,SNR=22						
FITZ	Fitzroy Crossi	28.59	244	P	P	14 36 31.5	-0.8
FITZ				IAmb	IAmb	14 36 35.3	
	comp=Z,6.8nm,0.6s						
CAN	Canberra	28.70	186	P	P	14 36 30.9	-2.3
TOO	Toolangi	31.43	191	P	P	14 36 55.1	-2.2
TOO				IAmb	IAmb	14 37 12.6	
	comp=Z,16nm,1.4s						
RPZ	Rata Peaks	40.32	159	LR	LR	14 53 34.7	
	comp=Z,103nm,21.3s,baz=323,slow=34						
JNU	Nakatsue	44.61	334	P	P	14 38 48.6	+0.2
KSRS	Korea Array	49.56	334	P	P	14 39 26.6	-0.2
	comp=Z,1.0nm,0.7s,baz=150,slow=8.4,SNR=4.7						
XAN	Xi'an	57.81	317	P	P	14 40 28.9	+1.4
XAN				pP	sP	14 40 37.6	+2.1
XAN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CMAR	Chiang Mai Arr	58.47	296	P	P	14 40 32.1	-0.2
	comp=Z,0.6nm,0.3s,baz=123,slow=5.7,SNR=9.0						
CMAR				LR	LR	15 06 46.9	
	comp=Z,5.8nm,18.4s,baz=220,slow=37						
PETK	Petropavlovsk-	59.71	4	P	P	14 40 41.5	+1.2
	comp=Z,6.7nm,0.8s,baz=167,slow=8.2,SNR=12						
SONM	Songino Array	67.77	328	P	P	14 41 34.1	+0.4
	comp=Z,3.9nm,1.0s,baz=133,slow=5.5,SNR=10						
SONM				LR	LR	15 10 15.4	
	comp=Z,26nm,19.6s,baz=214,slow=35						
SONM	Songino Array	67.77	328	P	P	14 41 35.1	+1.4
VNDA	Vanda	70.98	178	P	P	14 41 52.2	-0.8
	comp=Z,0.9nm,0.7s,baz=339,slow=8.7,SNR=4.1						
MKAR	Makanchi Array	81.57	319	P	P	14 42 55.0	+1.3
	comp=Z,2.0nm,0.9s,baz=116,slow=5.5,SNR=14						
IMAR	Indian Mountai	82.21	19	P	P	14 42 57.9	+1.3
ZALV	Zalesovo Beam	82.56	327	P	P	14 42 57.7	-1.0
	comp=Z,3.0nm,0.6s,baz=119,slow=5.1,SNR=12						
ZALV	Zalesovo Beam	82.56	327	P	P	14 42 58.1	-0.5
MLY	Manley	82.70	21	P	P	14 42 59.9	+0.7
MLY				IAmb	IAmb	14 43 11.2	
	comp=Z,7.4nm,1.1s						
KSH	Kashi	83.96	311	P	P	14 43 07.0	+0.6
KSH				pP	pwP	14 43 29.9	+11
KSH				pmax	pmax		
	comp=Z,410nm,5.7s						
ILAR	Eielson Array	83.97	22	P	P	14 43 05.3	-0.4
	comp=Z,1.7nm,0.9s,baz=246,slow=5.4,SNR=18						
ILAR	Eielson Array	83.97	22	P	P	14 43 05.6	-0.1
TOLK	Toolik Lake Re	85.05	18	IAmb	IAmb	14 43 18.7	
	comp=Z,7.1nm,1.2s						
BMAR	Burnt Mountain	86.07	20	P	P	14 43 17.4	+1.2
KKAR	Karatay Array	88.73	313	P	P	14 43 29.6	-0.1
NVAR	Mina Array Bea	93.42	52	P	P	14 43 53.0	+1.3
	comp=Z,0.3nm,0.7s,baz=244,slow=5.9,SNR=3.8						
YKA	Yellowknife Ar	97.18	28	P	Pdif	14 44 09.0	+0.9
	comp=Z,0.1nm,0.7s,baz=269,slow=4.6,SNR=4.1						
ARU	Arti	97.72	326	LR	LR	15 32 33.3	
	comp=Z,27nm,18.1s,baz=61,slow=38						
GERES	GERESS Array B	125.50	328	PKP	PKPdf	14 49 34.5	-2.7
	comp=Z,0.4nm,0.6s,baz=39,slow=5.1,SNR=4.1						
BDFB	Brasilia	149.89	138	PKPbc	PKPdf	14 50 25.1	+2.6
	comp=Z,1.0nm,0.3s,baz=229,slow=2.3,SNR=3.8						
TORD	Torodi Ar. Bea	150.60	285	PKPbc	PKPbc	14 50 27.4	-1.5
	comp=Z,2.0nm,0.7s,baz=65,slow=2.0,SNR=10						
TORD	Torodi Ar. Bea	150.60	285		PKPbc	14 50 28.4	-0.5
DBIC	Dimbokro	157.57	271	PKPab	PKPab	14 51 04.8	-0.4
	comp=Z,2.9nm,0.9s,baz=112,slow=11,SNR=3.6						

IDC 02 14:55:23.9±8.8, 11°34S×163°00E, h57km±63km, mb3.3/4, mb1 3.5/5, mb1mx3.2/42, mbtmp3.6/5, ML3.9/1, MS2.4/1, Ms1 2.4/1, ms1mx2.3/18, Error ellipse: s-maj=63.4km s-min=32.1km az=98.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.56	302	P	Pn	14 56 16.3	-0.4
	12nm,0.3s,baz=197,slow=3.4,SNR=11						
HNR				S	Sn	14 56 58.1	+0.6
	24nm,0.3s,baz=205,slow=23,SNR=5.6						
HNR				LR	LR	14 57 14.0	
	comp=Z,56nm,19.2s,baz=166,slow=31						
HNR	Honiara	3.56	302	P	Pn	14 56 16.0	-0.7
HNR				S	Sn	14 57 02.0	+4.5
WRA	Warramunga Arr	28.86	249	P	P	15 01 17.8	+0.4
	0.3nm,0.5s,baz=78,slow=9.3,SNR=3.8						
H11S2	WAKE ISLAND Hy	29.87	7	T	T	15 32 20.4	
	baz=188,slow=76,SNR=13						
H11S3	WAKE ISLAND Hy	29.87	7	T	T	15 32 50.7	
	baz=188,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.88	7	T	T	15 32 45.8	
	baz=188,slow=76,SNR=6.5						
ASAR	Alice Springs	30.27	242	P	P	15 01 29.5	-0.3
	0.2nm,0.6s,baz=61,slow=10,SNR=8.2						
H11N3	WAKE ISLAND Hy	31.10	7	T	T	15 33 51.2	
	baz=186,slow=74,SNR=4.4						
H11N2	WAKE ISLAND Hy	31.11	7	T	T	15 33 54.8	
	baz=88,slow=74,SNR=3.4						
SONM	Songino Array	77.33	325	P	P	15 07 13.9	+1.2
	0.7nm,0.8s,baz=132,slow=6.4,SNR=4.7						
MKAR	Makanchi Array	91.90	317	P	P	15 08 24.8	-1.4
	0.3nm,0.7s,baz=88,slow=4.5,SNR=3.0						

IDC 02 14:58:54.4±1.4, 44°53N×105°73W, h0km, mb1 3.4/3, mb1mx3.2/49, mbtmp3.1/3, ML2.5/3, Error ellipse: s-maj=41.6km s-min=9.1km az=141.0
NEIC 02 14:58:58.9±2.0, 44°07N±0°07×105°09W±0°05, h0km±2km, ML3.0/35, Error ellipse: s-maj=11.9km s-min=4.4km az=339.0
ISC 02 14:58:54.4±1.0, 44°50N±0°05×105°45W±0°04, h0km, n27, σ1s52/27, Wyoming

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	1.08	110		Pb	14 59 16.1	-0.1
K22A	Casper	2.00	203		Pn	14 59 30.6	+1.0
K22A				IAML		14 59 57.9	
	comp=E,143nm,0.7s						
K22A				IAML		14 59 58.8	
	comp=N,212nm,0.5s						
LAO	LASA Array	2.26	346		Pb	14 59 35.6	-0.5
RLMT	Red Lodge	2.79	284		Pn	14 59 41.2	+0.7
RLMT				IAML		15 00 28.9	
	comp=N,30nm,0.6s						
RLMT				IAML		15 00 33.6	
	comp=N,30nm,0.7s						
RWWY	Rawlins	3.09	205	Pn	Pn	14 59 45.2	+0.5
RWWY				IAML		15 00 37.2	
	comp=N,41nm,1.2s						
PHWY	Pilot Hill	3.19	180		Pn	14 59 46.0	-0.2
YNE	Yellowstone No	3.28	281		Pn	14 59 47.7	+0.4
BW06	Boulder Array	3.44	241		Pn	14 59 52.4	+2.8
BW06				IAML		15 00 41.9	
	comp=N,24nm,1.0s						
PD31	Pinedale Array	3.44	241		Pb	14 59 55.4	-1.1
PDAR	Pinedale Array	3.44	241	Pn	Pn	14 59 50.2	+0.6
	comp=N,0.5nm,0.3s,baz=60,slow=20,SNR=11						
PDAR				Pg	Pb	14 59 57.1	+0.6
	comp=N,2.1nm,0.3s,baz=63,slow=19,SNR=40						
PDAR				Lg	Lg	15 00 37.7	
	comp=N,3.2nm,0.3s,baz=63,slow=34,SNR=14						
PDAR	Pinedale Array	3.44	241		Pb	14 59 54.8	-1.7
LKWY	Lake	3.54	273		Pb	14 59 58.3	+0.3
LKWY				IAML		15 00 37.2	
	comp=N,26nm,4.9s						
LKWY				IAML		15 00 50.1	
	comp=N,21nm,4.0s						
N23A	Red Feather La	3.62	186		Pn	14 59 51.7	-0.3
N23A				IAML		15 00 50.6	
	comp=E,38nm,0.8s						
N23A				IAML		15 01 03.9	
	comp=N,52nm,0.8s						
YNR	Norris Junctio	3.74	275		Pb	15 00 02.9	+1.4
YMR	Madison River	3.94	274	Pn	Pb	15 00 06.6	+1.7
REDW	Red Top Meadow	4.06	256	Pn	Pb	15 00 06.7	-0.2
REDW				IAML		15 01 41.7	
	comp=N,25nm,4.0s						
REDW				IAML		15 01 58.3	
	comp=N,18nm,4.9s						
DGMT	Dagmar	4.07	12		Pb	15 00 08.3	+1.3
YHL	Hebgen Lake	4.10	277		Pb	15 00 07.5	-0.1
FXWY	Fox Creek	4.11	260		Pb	15 00 08.5	+0.8
FXWY				IAML		15 02 47.0	
	comp=N,13nm,4.8s						
YHB	Horse Butte	4.11	276		Pb	15 00 07.5	-0.2
O20A	White River Ci	4.82	206		Pn	15 00 08.9	+0.4
DLMT	Dillon	5.14	282		Pb	15 00 21.0	-4.4
TCUT	Toone Canyon	5.53	234	Pn	Pn	15 00 23.4	+5.2
P17A	Butcher Ranch,	6.38	220	Pn	Pn	15 00 32.6	+2.8
Q16A	Castle Valley	7.03	219	Pn	Pn	15 00 40.6	+1.8
ULM	Lac du Bonnet	8.68	45	Pn	Pn	15 01 01.1	-0.1
	comp=N,0.2nm,0.3s,baz=222,slow=12,SNR=3.3						
ULM				Lg	Lg	15 03 27.6	
	comp=N,0.1nm,0.3s,baz=143,slow=21,SNR=2.9						
YKA	Yellowknife Ar	18.80	347	P	P	15 03 13.4	-1.7
	comp=N,0.0nm,0.3s,baz=161,slow=13,SNR=3.8						

NEIC 02 15:00:02.1±1.4, 6°8N±0°1×123°8E±0°1, h514km±14km, mb4.1/14, Error ellipse: s-maj=22.3km s-min=13.0km az=200.0
IDC 02 15:00:08.2±15.0, 6°48N×123°43E, h590km±244km, mb3.0/5, mb1 3.1/5, mb1mx2.6/50, mbtmp4.0/5, Error ellipse: s-maj=132.1km s-min=32.8km az=54.0
ISC 02 15:00:01.3±1.2, 6°8N±0°2×123°8E±0°2, h500km, n20, σ0s56/19, mb3.9/11, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	24.76	176	P	P	15 04 43.1	+0.4
	1.7nm,1.1s,baz=340,slow=12,SNR=4.7						
FITZ	Fitzroy Crossi	24.76	176	P	P	15 04 42.9	+0.2
FITZ				IAmb	IAmb	15 05 01.8	
	comp=Z,5.0nm,1.3s						
LHMI	Lhok Sumawe	26.70	268	P	P	15 04 59.9	-0.2
COEN	Coen	28.19	137	P	P	15 05 13.5	+0.4
COEN				IAmb	IAmb	15 05 30.4	
	comp=Z,4.4nm,1.4s						
WRAB	Tennant Creek	28.49	159	P	P	15 05 15.8	+0.1
WRAB				IAmb	IAmb	15 05 16.1	
	comp=Z,3.9nm,0.3s						
WRA	Warramunga Arr	28.50	159	P	P	15 05 15.8	+0.2
	comp=Z,2.0nm,0.5s,baz=332,slow=10,SNR=34						
WRA	Warramunga Arr	28.50	159	P	P	15 05 14.3	-1.4
WR0	Warramunga Arr	28.59	158	P	P	15 05 16.2	-0.2
WR0				IAmb	IAmb	15 05 16.4	
	comp=Z,6.9nm,1.5s						
AS31	Alice Springs	31.82	162	P	P	15 05 45.0	+0.6
AS31				IAmb	IAmb	15 05 45.4	
	comp=Z,1.5nm,0.3s						
ASAR	Alice Springs	31.82	162	P	P	15 05 45.0	+0.6
	comp=Z,1.5nm,0.3s,baz=340,slow=7.3,SNR=125						
ASAR	Alice Springs	31.82	162	P	P	15 05 44.6	+0.2
FORT	Forrest	37.55	174	P	P	15 06 31.9	-0.4
BBOO	Buckleboo	41.05	164	P	P	15 07 00.3	-0.2
BBOO				IAmb	IAmb	15 07 06.9	
	comp=Z,38nm,1.4s						
STKA	Stephens Creek	42.02	157	P	P	15 07 07.8	-0.5
	comp=Z,1.0nm,0.5s,baz=330,slow=6.9,SNR=3.6						
STKA	Stephens Creek	42.02	157	P	P	15 07 07.6	-0.7
MK31	Makanchi Array	53.40	325	P	P	15 08 34.0	+0.4
MKAR	Makanchi Array	53.40	325	P	P	15 08 34.0	+0.4
	comp=Z,0.6nm,0.3s,baz=120,slow=7.7,SNR=20						
MAKZ	Makanchi	53.59	325	P	P	15 08 35.3	+0.3
KURK	Kurchatov	57.62	328	P	P	15 09 02.2	-0.6
KURK				IAmb	IAmb	15 09 17.0	
	comp=Z,4.8nm,1.6s						
AKUT	Akutan	73.15	35	P	P	15 10 39.2	-1.2

SJA 02 15:01:56.8±0.8, 22°63S×68°73W, h113km±6km, ML3.3, MW3.3
GUC 02 15:01:57.4±0.7, 22°60S×68°66W, h104km±3km, ML2.8
ISC 02 15:01:58.7±1.5, 22°63S±0°04×68°72W±0°06, h98km±10km, n20, σ0s81/34, 1C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.17	275	eP	Pn	15 02 12.0	-1.0
LVC				i S	Sn	15 02 22.8	-0.9
PB06	IPOC Station P	0.79	264	eP	Pn	15 02 16.2	-0.8
PB06				i S	Sn	15 02 31.2	+0.6
PB06				IAML		15 02 32.6	
	comp=N,440nm,0.1s						
PB06	IPOC Station P	0.79	264	i P	Pn	15 02 16.7	-0.3
PB06				eS	Sn	15 02 32.1	+1.5
PB06				IAML		15 02 33.9	
	comp=Z,164nm,0.1s						
PB15	IPOC Station P	0.90	230	⇓iP	Pn	15 02 17.8	-0.4
PB15				i S	Sn	15 02 33.5	+0.7
PB15	IPOC Station P	0.90	230	i P	Pn	15 02 17.8	-0.4
PB15				eS	Sn	15 02 34.3	+1.6
PB15				IAML		15 02 34.4	
	comp=Z,1μm,0.2s						
PB09	IPOC Station P	0.95	330	⇓iP	Pn	15 02 18.7	0.0
PB09				i S	Sn	15 02 34.0	+0.4
PB09				IAML		15 02 36.1	
	comp=E,139nm,0.2s						
PB09	IPOC Station P	0.95	330	i P	Pn	15 02 18.7	0.0
PB09				eS	Sn	15 02 35.1	+1.5
PB03	IPOC Station P	1.11	301	⇓iP	Pn	15 02 19.8	-0.6
PB03				i S	Sn	15 02 36.6	-0.1
PB03				IAML		15 02 37.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,357nm,0.3s						
PB04	**IPOC Station P**	**1.35**	**282**	⇓*i*P	**Pn**	**15 02 22.8**	**-0.4**
PB04				*i* S	**Sn**	**15 02 42.2**	**+0.5**
PB04				IAML		15 02 45.4	
	comp=N,281nm,0.2s						
PB04	**IPOC Station P**	**1.35**	**282**	*i* P	**Pn**	**15 02 23.2**	**0.0**
PB04				*e*S	**Sn**	**15 02 42.6**	**+0.9**
PB05	**IPOC Station P**	**1.38**	**260**	⇓*i*P	**Pn**	**15 02 22.7**	**-0.9**
PB05				*i* S	**Sn**	**15 02 42.4**	**+0.1**
PB05				IAML		15 02 45.5	
	comp=N,97nm,0.3s						
PB05	**IPOC Station P**	**1.38**	**260**	*i* P	**Pn**	**15 02 22.9**	**-0.7**
PB10	**IPOC Station P**	**1.90**	**242**	*e*P	**Pn**	**15 02 29.6**	**-0.3**
PB10				*e*S	**Sn**	**15 02 55.2**	**+1.4**
PB10				IAML		15 03 02.4	
	comp=E,94nm,0.5s						
PB10	**IPOC Station P**	**1.90**	**242**	*i* P	**Pn**	**15 02 29.9**	**-0.1**
TA01	**Diego Aracena**	**2.46**	**326**	*e*P	**Pn**	**15 02 36.3**	**-0.9**
TA01				*i* S	**Sn**	**15 03 05.8**	**-0.9**
TA01				IAML		15 03 15.2	
	comp=E,60nm,0.2s						
PB08	**IPOC Station P**	**2.50**	**351**	*e*P	**Pn**	**15 02 38.2**	**0.0**
PB14	**IPOC Station P**	**2.52**	**217**	*i* P	**Pn**	**15 02 38.4**	**+0.1**
GO02	**Mina Guanaco**	**2.65**	**197**	⇑*i*P	**Pn**	**15 02 38.8**	**-1.2**
GO02				*i* S	**Sn**	**15 03 11.1**	**-0.6**
GO01	**Chusmiza**	**2.97**	**351**	⇓*i*P	**Pn**	**15 02 44.2**	**-0.4**
HJA	**Humahuaca**	**3.11**	**101**	*i* P	**Pn**	**15 02 46.7**	**+0.4**

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*NEIC **02** 15:03:59.5±2.2, 5°.88S±0°.06×147°.2E±0°.1, h78km±12km, mb4.2/13, Error ellipse: s-maj=19.4km s-min=3.8km az=114.0*

*IDC **02** 15:04:01.1±5.0, 6°.03S×147°.57E, h96km±47km, mb3.7/4, mb1 3.9/6, mb1mx3.4/36, mbtmp4.0/6, Error ellipse: s-maj=53.9km s-min=29.8km az=133.0*

ISC 02 15:03:59.2±0.9**, 5°.90S**±0°.08×**147°.2E**±0°.1**, h77km, n24,** σ**1s.24**/27**, mb3.7**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.49**	**181**	P	**Pn**	**15 04 52.1**	**+0.9**
	8.8nm,0.3s,baz=15,slow=12,SNR=33						
PMG				S	**Sn**	**15 05 31.5**	**0.0**
	4.0nm,0.3s,baz=105,slow=20,SNR=3.0						
PMG	**Port Moresby**	**3.49**	**181**		**Pn**	**15 04 51.7**	**+0.4**
PMG					**Sn**	**15 05 29.0**	**-2.4**
COEN	**Coen**	**8.96**	**206**	Pn	**Pn**	**15 06 06.9**	**+1.0**
COEN				Sn	**Sn**	**15 07 42.7**	**-2.5**
MTN	**Manton Dam**	**17.32**	**245**	Pn	**Pn**	**15 07 54.2**	**-2.0**
MTN				IAmb	IAmb	15 07 59.1	
	comp=Z,16nm,1.1s						
WR0	**Warramunga Arr**	**18.65**	**220**	P	**P**	**15 08 11.1**	**0.0**
WRAB	**Tennant Creek**	**18.75**	**221**	P	**Pn**	**15 08 13.2**	**-0.3**
WRAB				IAmb	IAmb	15 08 16.6	
	comp=Z,7.6nm,0.7s						
WRA	**Warramunga Arr**	**18.77**	**221**	P	**Pn**	**15 08 13.6**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=41,slow=12,SNR=39						
WRA	**Warramunga Arr**	**18.77**	**221**	P	**P**	**15 08 12.7**	**+0.3**
GUMO	**Guam**	**19.50**	**353**	P	**P**	**15 08 18.8**	**-1.5**
EIDS	**Eidsvold**	**19.71**	**170**	P	**P**	**15 08 22.0**	**-0.6**
EIDS				IAmb	IAmb	15 08 23.3	
	comp=Z,12nm,1.4s						
KNRA	**Kununurra**	**20.57**	**240**	P	**P**	**15 08 33.0**	**+1.0**
KNRA				IAmb	IAmb	15 08 59.4	
	comp=Z,28nm,1.6s						
AS31	**Alice Springs**	**21.84**	**215**	P	**P**	**15 08 46.0**	**+0.5**
ASAR	**Alice Springs**	**21.84**	**215**	P	**P**	**15 08 46.8**	**+1.2**
	comp=Z,1.8nm,0.5s,baz=55,slow=8.7,SNR=70						
ASAR	**Alice Springs**	**21.84**	**215**	P	**P**	**15 08 46.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**24.32**	**238**	P	**P**	**15 09 12.1**	**+2.2**
	comp=Z,6.4nm,0.6s,baz=57,slow=8.7,SNR=32						
FITZ	**Fitzroy Crossi**	**24.32**	**238**	P	**P**	**15 09 12.2**	**+2.3**
FITZ				IAmb	IAmb	15 09 12.7	
	comp=Z,5.8nm,0.6s						
ARMA	**Armidale**	**24.74**	**171**	P	**P**	**15 09 15.1**	**+1.3**
ARMA				IAmb	IAmb	15 09 22.5	
	comp=Z,17nm,1.3s						
STKA	**Stephens Creek**	**26.38**	**191**	P	**P**	**15 09 29.0**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=14,slow=8.3,SNR=3.8						
STKA	**Stephens Creek**	**26.38**	**191**	P	**P**	**15 09 29.3**	**+0.8**
NWAO	**Narrogin (SRO)**	**38.77**	**222**	P	**P**	**15 11 16.1**	**-0.2**
NWAO	**Narrogin (SRO)**	**38.77**	**222**	P	**P**	**15 11 16.2**	**-0.2**
NWAO				IAmb	IAmb	15 11 29.1	
	comp=Z,23nm,1.1s						
CMWZ	**Cape Campbell**	**43.02**	**150**	P	**P**	**15 11 51.0**	**-0.2**
ILAR	**Eielson Array**	**85.29**	**23**	P	**P**	**15 16 26.8**	**-0.6**
	comp=Z,0.5nm,0.8s,baz=254,slow=4.9,SNR=6.2						
ILAR	**Eielson Array**	**85.29**	**23**	P	**P**	**15 16 27.3**	**0.0**

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*IDC **02** 15:19:45.0±0.8, 13°.97N×91°.60W, h68km±6km, mb3.9/8, mb1 4.2/10, mb1mx3.8/35, mbtmp4.2/10, MS3.3/7, Ms1 3.3/7, ms1mx3.1/22, Error ellipse: s-maj=14.3km s-min=11.1km az=145.0*

*NEIC **02** 15:19:45.3±3.0, 14°.16N±0°.07×91°.59W±0°.06, h62km±4km, mb4.5/113, Md4.8(SNET), Md4.8/20(MEX), Error ellipse: s-maj=12.2km s-min=5.4km az=214.0*

*MEX **02** 15:19:45.4±0.5, 14°.14N×91°.56W, h60km±13km, MD4.8*

*GCG **02** 15:19:45.7±0.7, 13°.95N×91°.47W, h23km±6km, MD4.5*

*UCR **02** 15:19:46.9±1.5, 14°.27N×91°.35W, h30km±33km, ML4.5, mb4.5(NEIC)*

*SNET **02** 15:19:46.7±1.4, 14°.28N×91°.27W, h16km±8km, ML4.8*

ISC 02 15:19:44.6±0.7**, 14°.10N**±0°.05×**91°.60W**±0°.03**, h67km**±5km**, n227,** σ**1s.35**/260**, mb4.5**/50**, 1C-4D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.34**	**6**	⇓*i*P	**Pn**	**15 19 55.6**	**-0.2**
STG3	**Santiaguito 3,**	**0.61**	**3**	⇓*i*P	**Pn**	**15 19 57.9**	**-0.6**
FUG	**Fuego 3**	**0.82**	**65**	⇓*e*P	**Pn**	**15 20 00.8**	**-0.1**
PCG	**Pacaya**	**1.01**	**73**	*e*P	**Pn**	**15 20 03.6**	**+0.2**
THIG		**1.03**	**322**	*e*P	**Pn**	**15 20 02.4**	**-0.9**
THIG				*e*S	**Sn**	**15 20 16.0**	**-1.3**
THIG		**1.03**	**322**		**Pn**	**15 20 02.4**	**-0.9**
THIG					**Sn**	**15 20 16.0**	**-1.3**
IXG	**Ixpaco**	**1.13**	**86**	⇑*i*P	**Pn**	**15 20 04.6**	**-0.2**
NBG	**Las Nubes**	**1.31**	**68**	⇓*i*P	**Pn**	**15 20 09.1**	**+1.8**
APG	**El Apazote**	**1.43**	**51**	P	**Pn**	**15 20 09.5**	**+0.8**
	302nm,0.3s,baz=274,slow=23,SNR=1158						
APG				S	**Sn**	**15 20 29.8**	**+3.0**
	519nm,0.3s,baz=104,slow=10.0,SNR=5.0						
APG				LR	LR	15 20 49.6	
	comp=Z,1μm,21.1s,baz=141,slow=43						
FAME	**Alcalda de S**	**1.56**	**99**	*e*P	**Pn**	**15 20 08.9**	**-1.4**
FAME				*e*S	**Sn**	**15 20 27.3**	**-2.5**
SBLS	**San Blas**	**1.94**	**97**	*e*P	**Pn**	**15 20 15.6**	**0.0**
SBLS				*e*S	**Sn**	**15 20 38.9**	**-0.2**
SBLS	**San Blas**	**1.94**	**97**	*e*P	**Pn**	**15 20 15.6**	**0.0**
SBLS				*e*S	**Sn**	**15 20 38.9**	**-0.2**
CEVE	**Cerro Verde**	**1.94**	**98**	*e*P	**Pn**	**15 20 15.7**	**+0.1**
CEVE				*e*S	**Sn**	**15 20 38.9**	**-0.3**
CEVE				IAML		15 20 50.1	
	comp=Z,19μm,0.4s						
CEVE	**Cerro Verde**	**1.94**	**98**	*e*P	**Pn**	**15 20 15.7**	**+0.1**
CEVE				*e*S	**Sn**	**15 20 38.9**	**-0.3**
CEVE				IAML		15 20 50.1	
	comp=Z,19μm,0.4s						
SNJE	**San Jose**	**1.95**	**96**	*e*P	**Pn**	**15 20 15.9**	**+0.2**
SNJE				*e*S	**Sn**	**15 20 38.1**	**-1.3**
SNJE	**San Jose**	**1.95**	**96**	*e*P	**Pn**	**15 20 15.9**	**+0.2**
SNJE				*e*S	**Sn**	**15 20 38.1**	**-1.3**
MRL	**Marmol**	**2.10**	**62**	*e*P	**Pn**	**15 20 19.3**	**+1.5**
MTO3	**Montecristo**	**2.20**	**82**	*e*P	**Pn**	**15 20 18.8**	**-0.3**
MTO3	**Montecristo**	**2.20**	**82**	*e*P	**Pn**	**15 20 18.8**	**-0.3**
PCIG		**2.24**	**316**	*e*P	**Pn**	**15 20 18.8**	**-0.6**
PCIG				*e*S	**Sn**	**15 20 44.3**	**-1.7**
PCIG		**2.24**	**316**		**Pn**	**15 20 18.8**	**-0.6**
PCIG					**Sn**	**15 20 44.3**	**-1.7**
BOQS	**Boqueron**	**2.28**	**99**	*e*P	**Pn**	**15 20 20.5**	**+0.3**
BOQS				*e*S	**Sn**	**15 20 46.6**	**-0.9**
SNET	**Serv Nac Est T**	**2.34**	**100**		**Pn**	**15 20 20.2**	**-0.7**
CUSC	**Alcaldia de Cu**	**2.38**	**99**	*e*P	**Pn**	**15 20 21.8**	**+0.4**
CUSC	**Alcaldia de Cu**	**2.38**	**99**	*e*P	**Pn**	**15 20 21.8**	**+0.4**
LFU	**La Fuente**	**2.44**	**98**	*e*P	**Pn**	**15 20 22.5**	**+0.2**
LFU	**La Fuente**	**2.44**	**98**	*e*P	**Pn**	**15 20 22.5**	**+0.2**
LBRS	**Las Brisas**	**2.51**	**98**	*e*P	**Pn**	**15 20 23.1**	**-0.1**
LFRS	**El Faro**	**2.51**	**100**	*e*P	**Pn**	**15 20 23.8**	**+0.5**
PAVA	**Las Pavas**	**2.62**	**98**	*e*P	**Pn**	**15 20 24.9**	**+0.2**
PAVA	**Las Pavas**	**2.62**	**98**	*e*P	**Pn**	**15 20 24.9**	**+0.2**
COEG	**Centro de Oper**	**2.69**	**100**	*e*P	**Pn**	**15 20 25.8**	**+0.2**
COEG				*e*S	**Sn**	**15 20 54.0**	**-3.1**
COEG				IAML		15 21 14.7	
	comp=Z,3μm,0.4s						
VICT	**Victoria**	**2.88**	**92**	*e*P	**Pn**	**15 20 27.5**	**-0.8**
VICT	**Victoria**	**2.88**	**92**	*e*P	**Pn**	**15 20 27.5**	**-0.8**
TGIG		**3.04**	**331**	*e*P	**Pn**	**15 20 30.0**	**-0.4**
TGIG				*i* S	**Sn**	**15 21 04.0**	**-1.7**
TGIG		**3.04**	**331**		**Pn**	**15 20 30.0**	**-0.4**
TGIG					**Sn**	**15 21 04.0**	**-1.7**
TECA	**Tecapa**	**3.07**	**101**	*e*P	**Pn**	**15 20 31.3**	**+0.4**
TECA	**Tecapa**	**3.07**	**101**	*e*P	**Pn**	**15 20 31.3**	**+0.4**
PACA	**Pacayal**	**3.25**	**101**	*e*P	**Pn**	**15 20 34.1**	**+0.8**
PACA	**Pacayal**	**3.25**	**101**	*e*P	**Pn**	**15 20 34.1**	**+0.8**
LCY	**Lacayo**	**3.28**	**101**	*e*P	**Pn**	**15 20 34.0**	**+0.3**
LCY	**Lacayo**	**3.28**	**101**	*e*P	**Pn**	**15 20 34.0**	**+0.3**
JUCU	**Jucuar¡n**	**3.37**	**104**	*e*P	**Pn**	**15 20 35.8**	**+0.9**
JUCU				*e*S	**Sn**	**15 21 12.2**	**-1.5**
LCND	**La Caada**	**3.69**	**102**	*e*P	**Pn**	**15 20 39.6**	**+0.4**
LCND				IAML		15 21 32.5	
	comp=Z,1μm,0.3s						
LCND	**La Caada**	**3.69**	**102**	*e*P	**Pn**	**15 20 39.6**	**+0.4**
LCND				IAML		15 21 32.5	
	comp=Z,1μm,0.3s						
CNCH	**Conchagua**	**3.75**	**102**	*e*P	**Pn**	**15 20 40.6**	**+0.4**
CNCH	**Conchagua**	**3.75**	**102**	*e*P	**Pn**	**15 20 40.6**	**+0.4**
TGUH	**Tegucigalpa,Un**	**4.20**	**90**		**Pn**	**15 20 46.2**	**-0.2**
CMIG	**Matias Romero**	**4.34**	**314**	P	**Pn**	**15 20 48.1**	**-0.1**
	comp=Z,18nm,0.3s,baz=121,slow=8.2,SNR=122						
CMIG				S	**Sn**	**15 21 35.7**	**-1.8**
	comp=Z,35nm,0.3s,baz=90,slow=6.6,SNR=6.7						
CMIG	**Matias Romero**	**4.34**	**314**	*e*P	**Pn**	**15 20 48.2**	**+0.1**
CMIG				*i* S	**Sn**	**15 21 37.5**	**-0.1**
CMIG	**Matias Romero**	**4.34**	**314**		**Pn**	**15 20 48.2**	**+0.1**
CMIG					**Sn**	**15 21 37.5**	**-0.1**
HUIG	**Huatulco**	**4.66**	**291**	*e*P	**Pn**	**15 20 52.6**	**+0.1**
HUIG				*i* S	**Sn**	**15 21 45.5**	**+0.1**
HUIG	**Huatulco**	**4.66**	**291**		**Pn**	**15 20 52.6**	**+0.1**
HUIG					**Sn**	**15 21 45.5**	**+0.1**
ESTN	**Estel**	**5.18**	**100**		**Pn**	**15 21 00.0**	**+0.3**
ACON	**Acoyapa**	**6.61**	**108**		**Pn**	**15 21 20.0**	**+0.7**
TEIG	**Tepich**	**6.88**	**27**	P	**Pn**	**15 21 23.6**	**+0.8**
TEIG				S	**Sn**	**15 22 39.3**	**-0.3**
TEIG	**Tepich**	**6.88**	**27**		**Pn**	**15 21 23.0**	**+0.2**
TEIG					**Sn**	**15 22 38.9**	**-0.7**
ESPN	**Las Esperanzas**	**7.36**	**104**		**Pn**	**15 21 30.6**	**+1.2**
JTS	**Las Juntas de**	**7.52**	**119**	P	**Pn**	**15 21 35.0**	**+3.3**
	comp=Z,4.0nm,0.3s,baz=12,slow=21,SNR=8.6						
JTS				S	**Sn**	**15 22 54.8**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=95,slow=14,SNR=1.4						
JTS	**Las Juntas de**	**7.52**	**119**		**Pn**	**15 21 34.8**	**+3.0**
HDC	**Heredia**	**8.38**	**118**		Pn	15 21 52.7	+9.1
MOIG	**Morelia**	**10.72**	**302**	Pn	**Pn**	**15 22 18.5**	**+2.9**
ZAIG	**Zacatecas**	**13.51**	**311**		**Pn**	**15 22 53.9**	**+0.3**
553A	**Crawfordville**	**17.33**	**21**	P	**P**	**15 23 44.7**	**+2.1**
ETX02	**Prairie Street**	**17.92**	**352**		**P**	**15 23 49.1**	**+0.1**
JCT	**Junction City**	**17.97**	**336**		**Pn**	**15 23 51.5**	**+1.5**
352A	**Blakely**	**18.36**	**18**	P	**Pn**	**15 23 54.5**	**0.0**
352A				IAmb	IAmb	15 24 07.4	
	comp=Z,48nm,1.2s						
TXAR	**Lajitas Array**	**18.83**	**326**	P	**Pn**	**15 24 01.8**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=154,slow=12,SNR=46						
TXAR				PcP	**PcP**	**15 28 24.9**	**+1.0**
	baz=160,slow=5.1,SNR=3.6						
TXAR	**Lajitas Array**	**18.83**	**326**	P	**Pn**	**15 24 02.4**	**+1.9**
TX31	**Lajitas Ar. Si**	**18.83**	**326**	P	**Pn**	**15 24 02.0**	**+1.5**
TX32	**Lajitas Array**	**18.83**	**326**	P	**Pn**	**15 24 02.3**	**+1.9**
LRAL	**Lakeview Retre**	**19.32**	**12**	P	**Pn**	**15 24 06.5**	**+0.4**
152A	**Waverly Hall**	**19.53**	**18**	P	**Pn**	**15 24 08.5**	**-0.1**
152A				IAmb	IAmb	15 24 40.4	
	comp=Z,63nm,1.9s						
Z50A	**Ashland**	**19.76**	**14**	P	**Pn**	**15 24 10.8**	**-0.5**
ABTX	**Abilene, Hawle**	**19.85**	**340**	P	**Pn**	**15 24 11.5**	**-0.9**
Z51A	**Franklin**	**20.01**	**16**	P	**Pn**	**15 24 13.3**	**-0.9**
Z51A				IAmb	IAmb	15 25 08.2	
	comp=Z,30nm,1.5s						
SDDR	**Presa de Saban**	**20.07**	**73**	P	Pn	15 24 14.6	-0.5
SDDR				IAmb	IAmb	15 24 29.3	
	comp=Z,14nm,0.9s						
Y49A	**Blount Mountai**	**20.23**	**13**	P	Pn	15 24 17.4	+0.5
Y49A				IAmb	IAmb	15 24 51.6	
	comp=Z,36nm,1.4s						
X40A	**Basin Creek Fa**	**20.33**	**357**	P	Pn	15 24 17.2	-0.8
MIAR	**Mount Ida**	**20.44**	**355**	P	**P**	**15 24 16.2**	**-0.3**
MIAR				IAmb	IAmb	15 24 36.9	
	comp=Z,39nm,1.6s						
UALR	**University of**	**20.60**	**358**	P	**P**	**15 24 18.6**	**+0.3**
UALR				IAmb	IAmb	15 24 22.2	
	comp=Z,16nm,0.5s						
GOGA	**Godfrey**	**20.60**	**20**	P	**P**	**15 24 19.6**	**+1.2**
GOGA				IAmb	IAmb	15 24 36.4	
	comp=Z,24nm,1.1s						
X48A	**Hartselle**	**20.68**	**11**	P	**P**	**15 24 19.3**	**+0.1**
X48A				IAmb	IAmb	15 24 28.0	
	comp=Z,39nm,1.6s						
X37A	**Clayton**	**20.69**	**351**	P	**P**	**15 24 19.3**	**0.0**
X37A				IAmb	IAmb	15 24 32.5	
	comp=Z,60nm,1.9s						
Y52A	**Lilburn**	**20.84**	**18**	P	**P**	**15 24 21.4**	**+0.5**
Y52A				IAmb	IAmb	15 24 39.7	
	comp=Z,47nm,1.5s						
FPAL	**Fort Paine**	**21.07**	**14**	P	**P**	**15 24 23.7**	**+0.3**
WHAR	**Wooly Hollow**	**21.11**	**358**	P	**P**	**15 24 23.6**	**-0.2**
WHAR				IAmb	IAmb	15 24 52.4	
	comp=Z,49nm,1.8s						
SDV	**Santo Domingo**	**21.18**	**102**	P	**P**	**15 24 27.2**	**+2.2**
	comp=Z,6.1nm,0.5s,baz=263,slow=7.3,SNR=5.5						
GDL2	**Guadalupe Moun**	**21.47**	**329**	P	**P**	**15 24 29.9**	**+2.1**
W35A	**Tecumseh**	**21.50**	**348**	P	**P**	**15 24 27.5**	**-0.4**
WMOK	**Wichita Mounta**	**21.55**	**344**	P	**P**	**15 24 23.6**	**-5.0**
MNTX	**Cornudas Mount**	**21.60**	**327**	P	**P**	**15 24 30.0**	**+1.0**
MNTX				IAmb	IAmb	15 24 33.5	
	comp=Z,14nm,0.8s						
SWET	**Sewanee**	**21.64**	**13**	P	**P**	**15 24 29.4**	**-0.1**
HODGE	**Hodges**	**21.76**	**21**	P	**P**	**15 24 32.0**	**+1.3**
HODGE				IAmb	IAmb	15 24 49.3	
	comp=Z,49nm,1.7s						
W50A	**Signal Mountai**	**21.77**	**14**	P	**P**	**15 24 32.0**	**+1.2**
W50A				IAmb	IAmb	15 24 48.5	
	comp=Z,23nm,1.1s						
LCAR	**Lake Charles**	**21.89**	**1**	P	**P**	**15 24 31.3**	**-0.8**
LCAR				IAmb	IAmb	15 24 33.6	
	comp=Z,17nm,0.6s						
V48A	**Smith Brothers**	**21.98**	**10**	P	**P**	**15 24 32.9**	**-0.1**
V48A				IAmb	IAmb	15 25 08.2	
	comp=Z,62nm,2.0s						
PEBM	**Pemiscott Bayo**	**21.98**	**4**	P	**P**	**15 24 31.1**	**-2.0**
HHAR	**Hobbs**	**22.19**	**355**	P	**P**	**15 24 34.1**	**-1.3**
HHAR				IAmb	IAmb	15 25 10.4	
	comp=Z,35nm,1.9s						
U40A	**Yellville**	**22.20**	**357**	P	**P**	**15 24 36.1**	**+0.7**
U40A				IAmb	IAmb	15 25 33.2	
	comp=Z,28nm,1.8s						
CPCT	**Cooper Cave**	**22.20**	**15**	P	**P**	**15 24 36.5**	**+1.0**
CPCT				IAmb	IAmb	15 25 14.3	
	comp=Z,52nm,1.9s						
WVT	**Waverly**	**22.20**	**8**	P	**P**	**15 24 35.0**	**-0.5**
WVT				IAmb	IAmb	15 25 11.4	
	comp=Z,30nm,1.7s						
MSTX	**Muleshoe**	**22.23**	**335**	P	**P**	**15 24 36.1**	**+0.2**
MSTX				IAmb	IAmb	15 24 40.5	
	comp=Z,8.0nm,0.6s						
BG3	**Lake Jocassee**	**22.23**	**19**	P	**P**	**15 24 36.3**	**+0.5**
BG3				IAmb	IAmb	15 24 58.0	
	comp=Z,26nm,1.5s						
V51A	**Loudon**	**22.58**	**16**	P	**P**	**15 24 40.3**	**+0.8**
V51A				IAmb	IAmb	15 25 19.2	
	comp=Z,29nm,1.3s						
TKL	**Tuckaleechee C**	**22.60**	**17**	P	**P**	**15 24 40.2**	**+0.4**
	comp=Z,3.9nm,0.5s,baz=181,slow=12,SNR=9.0						
TKL	**Tuckaleechee C**	**22.60**	**17**	P	**P**	**15 24 39.9**	**+0.1**
TKL				IAmb	IAmb	15 25 09.8	
	comp=Z,13nm,1.0s						
AMTX	**Amarillo**	**22.61**	**338**		**P**	**15 24 39.8**	**-0.2**
PBMO	**Poplar Bluff**	**22.61**	**2**	P	**P**	**15 24 38.9**	**-1.0**
V53A	**Saluda**	**22.89**	**19**	P	**P**	**15 24 43.1**	**+0.3**
V53A				IAmb	IAmb	15 25 00.8	
	comp=Z,43nm,1.4s						
MGMO	**Mountain Grove**	**22.97**	**359**	P	**P**	**15 24 42.4**	**-1.2**
MGMO				IAmb	IAmb	15 25 04.2	
	comp=Z,53nm,1.9s						
T47A	**Sharon Grove**	**23.15**	**9**	P	**P**	**15 24 44.0**	**-1.3**
T47A				IAmb	IAmb	15 25 02.2	
	comp=Z,46nm,1.6s						
U32A	**Winter Ranch,**	**23.16**	**345**	P	**P**	**15 24 44.8**	**-0.7**
TZTN	**Tazewell**	**23.49**	**16**	P	**P**	**15 24 48.5**	**0.0**
T49A	**Edmonton**	**23.55**	**12**	P	**P**	**15 24 48.8**	**-0.3**
121A	**Cookes Peak, D**	**23.56**	**324**	P	**P**	**15 24 50.0**	**+0.6**
121A				IAmb	IAmb	15 24 53.4	
	comp=Z,13nm,0.9s						
V55A	**Taylorsville**	**23.59**	**21**	P	**P**	**15 24 49.7**	**+0.3**
V55A				IAmb	IAmb	15 25 07.3	
	comp=Z,30nm,1.1s						
S44A	**Carbondale**	**23.60**	**5**	P	**P**	**15 24 49.1**	**-0.3**
S44A				IAmb	IAmb	15 25 05.5	
	comp=Z,36nm,1.1s						
SIUC	**Southern Illin**	**23.62**	**5**	P	**P**	**15 24 48.8**	**-0.9**
SIUC				IAmb	IAmb	15 25 05.7	
	comp=Z,26nm,0.9s						
319A	**Douglas**	**23.64**	**320**	P	**P**	**15 24 52.8**	**+2.7**
319A				IAmb	IAmb	15 24 54.0	
	comp=Z,15nm,0.9s						
CCM	**Cathedral Cave**	**23.87**	**1**	P	**P**	**15 24 50.8**	**-1.1**
CCM				IAmb	IAmb	15 25 07.5	
	comp=Z,24nm,1.4s						
U54A	**Nelsons Funny**	**23.99**	**20**	P	**P**	**15 24 53.3**	**+0.2**
BNM	**Barren Site**	**24.16**	**328**	P	**P**	**15 24 57.7**	**+2.7**
T52A	**Hallie**	**24.17**	**17**	P	**P**	**15 24 53.7**	**-1.1**
T52A				IAmb	IAmb	15 25 11.9	
	comp=Z,35nm,1.3s						
Y22D	**IRIS PASSCAL I**	**24.25**	**328**	P	**P**	**15 24 55.8**	**+0.1**
LPM	**Los Pinos Moun**	**24.29**	**329**	P	**P**	**15 24 57.9**	**+1.8**
LENM	**Lemitar**	**24.35**	**328**	P	**P**	**15 24 59.1**	**+2.5**
SLM	**Saint Louis**	**24.47**	**3**	P	**P**	**15 24 56.5**	**-0.9**
ANMO	**Albuquerque**	**24.71**	**330**	P	**P**	**15 25 01.5**	**+1.7**
	comp=Z,3.7nm,0.6s,baz=143,slow=11,SNR=11						
ANMO				LR	LR	15 36 42.1	
	comp=Z,38nm,19.6s,baz=142,slow=41						
ANMO	**Albuquerque**	**24.71**	**330**	P	**P**	**15 25 01.9**	**+2.0**
OLIL	**Olney**	**24.74**	**7**	P	**P**	**15 25 01.1**	**+1.3**
TUC	**Tucson**	**25.21**	**319**	P	**P**	**15 25 06.2**	**+1.9**
R55A	**Marlinton**	**26.15**	**21**	P	**P**	**15 25 12.0**	**-0.7**
X18A	**Snowflake**	**26.25**	**324**	P	**P**	**15 25 16.2**	**+2.4**
214A	**Organ Pipe Nat**	**26.31**	**316**	P	**P**	**15 25 15.9**	**+1.7**
214A				IAmb	IAmb	15 25 17.6	
	comp=Z,7.7nm,0.8s						
X16A	**Lo Mia Camp, P**	**27.04**	**322**	P	**P**	**15 25 23.2**	**+2.2**
MVCO	**Mesa Verde**	**27.51**	**330**	P	**P**	**15 25 26.9**	**+1.7**
Y14A	**Wickenburg**	**27.68**	**319**	P	**P**	**15 25 27.9**	**+1.4**
WUAZ	**Wupatki**	**27.77**	**324**	P	**P**	**15 25 29.8**	**+2.4**
U15A	**North Rim**	**28.94**	**324**	P	**P**	**15 25 39.7**	**+1.7**
W13A	**Hualapai Mount**	**28.99**	**320**	P	**P**	**15 25 39.8**	**+1.4**
SSPA	**Standing Stone**	**29.03**	**22**	P	**P**	**15 25 37.5**	**-0.9**
KNB	**Kanab**	**29.65**	**324**	P	**P**	**15 25 46.5**	**+2.3**
LCMT	**Little Creek M**	**29.89**	**324**	P	**P**	**15 25 48.6**	**+2.3**
MTPU	**Mount Pierson**	**30.04**	**326**	P	**P**	**15 25 50.3**	**+2.5**
SZCU	**Shurtz Canyon**	**30.21**	**325**	P	**P**	**15 25 51.4**	**+2.2**
CCUT	**Cedar City**	**30.34**	**324**	P	**P**	**15 25 53.3**	**+3.0**
P17A	**Butcher Ranch,**	**30.38**	**330**	P	**P**	**15 25 52.6**	**+2.1**
MSU	**Marysvale**	**30.38**	**327**	P	**P**	**15 25 53.2**	**+2.6**
TMUT	**Trail Mountain**	**30.47**	**329**	P	**P**	**15 25 53.2**	**+1.7**
SHPR	**Sheep Range**	**30.69**	**321**	P	**P**	**15 25 55.5**	**+2.1**
PSUT	**Pine Spring**	**31.30**	**325**	P	**P**	**15 26 01.2**	**+2.5**
K58A	**Earlville**	**31.71**	**23**	P	**P**	**15 26 01.2**	**-0.8**
DUG	**Dugway, Tooele**	**31.96**	**328**	P	**P**	**15 26 07.4**	**+3.0**
R11A	**Troy Canyon, C**	**32.16**	**323**	P	**P**	**15 26 08.8**	**+2.5**
E43A	**Lone Tree Farm**	**32.41**	**6**	P	**P**	**15 26 07.0**	**-1.1**
HWUT	**Hardware Ranch**	**32.43**	**331**	P	**P**	**15 26 09.1**	**+0.4**
PDAR	**Pinedale Array**	**32.49**	**335**	PcP	**PcP**	**15 28 55.4**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=134,slow=4.7,SNR=4.5						
PDAR				LR	LR	15 40 26.4	
	comp=Z,44nm,20.5s,baz=155,slow=38						
BGU	**Big Grassy Mou**	**32.61**	**329**	P	**P**	**15 26 11.8**	**+1.6**
SPUT	**South Promonto**	**32.62**	**330**	P	**P**	**15 26 11.8**	**+1.5**
PLVO	**Plevna**	**33.22**	**19**	P	**P**	**15 26 13.8**	**-1.4**
NCB	**Newcomb**	**33.28**	**23**	P	**P**	**15 26 15.3**	**-0.4**
ELK	**Elko**	**33.62**	**327**	P	**P**	**15 26 21.8**	**+2.7**
ELK				IAmb	IAmb	15 26 22.4	
	comp=Z,3.5nm,0.7s						
TPAW	**Teton Pass**	**33.67**	**334**	P	**P**	**15 26 22.2**	**+2.7**
TPAW				IAmb	IAmb	15 26 22.4	
	comp=Z,13nm,1.5s						
EYMN	**Ely**	**33.75**	**0**	P	**P**	**15 26 18.1**	**-1.7**
NV11	**Mina Array Sit**	**33.75**	**321**	P	**P**	**15 26 22.6**	**+2.5**
NV11				IAmb	IAmb	15 26 24.3	
	comp=Z,8.9nm,1.1s						
NVAR	**Mina Array Bea**	**33.84**	**321**	P	**P**	**15 26 23.6**	**+2.6**
	comp=Z,7.4nm,0.9s,baz=132,slow=8.9,SNR=36						
NVAR				pP	**pP**	**15 26 38.5**	**+1.4**
	comp=Z,2.7nm,0.8s,baz=131,slow=8.6,SNR=5.8						
NVAR				PcP	**PcP**	**15 29 00.4**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=132,slow=3.1,SNR=9.9						
NVAR				ScP	**ScP**	**15 32 41.3**	**+3.5**
	comp=Z,0.5nm,0.6s,baz=150,slow=4.2,SNR=4.5						
NVAR				LR	LR	15 40 42.6	
	comp=Z,63nm,21.2s,baz=188,slow=37						
NVAR	**Mina Array Bea**	**33.84**	**321**	P	**P**	**15 26 23.7**	**+2.7**
MDPB	**Devils Postpil**	**33.84**	**319**	P	**P**	**15 26 22.7**	**+1.7**
KVN	**Kaiserville**	**34.11**	**322**	P	**P**	**15 26 25.3**	**+2.0**
KVN				IAmb	IAmb	15 26 27.5	
	comp=Z,4.9nm,1.0s						
YERR	**Yerington**	**34.76**	**321**	P	**P**	**15 26 31.4**	**+2.5**
YERR				IAmb	IAmb	15 26 32.9	
	comp=Z,9.8nm,1.3s						
PNTR	**Pine Nut**	**35.04**	**320**	P	**P**	**15 26 33.1**	**+1.8**
PNTR				IAmb	IAmb	15 26 39.9	
	comp=Z,3.9nm,0.9s						
MCMT	**McKenzie Canyo**	**35.56**	**334**	P	**P**	**15 26 35.1**	**-0.6**
MFID	**Camas Ranch**	**35.85**	**329**	P	**P**	**15 26 39.8**	**+1.7**
MFID				IAmb	IAmb	15 26 42.2	
	comp=Z,4.1nm,0.6s						
BEKR	**Beckworth**	**35.98**	**321**	P	**P**	**15 26 41.5**	**+2.1**
BEKR				IAmb	IAmb	15 26 43.1	
	comp=Z,5.7nm,1.4s						
ULM	**Lac du Bonnet**	**36.22**	**355**	LR	LR	15 42 46.8	
	comp=Z,72nm,21.5s,baz=280,slow=38						
WVOR	**Wild Horse Val**	**36.63**	**326**	P	**P**	**15 26 46.3**	**+1.5**
WVOR				IAmb	IAmb	15 26 47.8	
	comp=Z,5.2nm,1.0s						
F10A	**Beach Ranch, E**	**38.41**	**331**	P	**P**	**15 27 00.3**	**+0.6**
YBH	**Yreka Blue Hor**	**38.53**	**322**	PcP	**PcP**	**15 29 13.0**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=255,slow=7.7,SNR=4.9						
PINE	**Pine Mountain**	**38.79**	**326**	P	**P**	**15 27 04.5**	**+1.4**
PINE				IAmb	IAmb	15 27 06.3	
	comp=Z,4.9nm,0.8s						
KRMB	**Red Mountain**	**39.14**	**321**	P	**P**	**15 27 07.3**	**+1.4**
KRMB				IAmb	IAmb	15 27 55.1	
	comp=Z,19nm,1.5s						
C09A	**Chrisman Ranch**	**40.25**	**332**	P	**P**	**15 27 16.0**	**+1.1**
LTY	**Liberty**	**40.99**	**330**	P	**P**	**15 27 22.1**	**+1.1**
LTY				PcP	**PcP**	**15 29 19.8**	**-0.4**
LON	**Longmire**	**41.21**	**328**	P	**P**	**15 27 24.2**	**+1.3**
LON				IAmb	IAmb	15 27 25.3	
	comp=Z,6.7nm,0.8s						
LON				PcP	**PcP**	**15 29 21.4**	**+0.5**
SIV	**San Ignacio**	**42.48**	**134**	P	**P**	**15 27 33.6**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=315,slow=8.0,SNR=5.5						
SIV				pP	**pP**	**15 27 49.2**	**-1.0**
	comp=Z,2.3nm,0.6s,baz=319,slow=7.8,SNR=7.3						
SCHQ	**Schefferville**	**45.00**	**20**	P	**P**	**15 27 51.8**	**-1.6**
	comp=Z,3.8nm,0.6s,baz=218,slow=8.4,SNR=9.8						
SCHQ	**Schefferville**	**45.00**	**20**	P	**P**	**15 27 51.7**	**-1.6**
SCHQ				PcP	**PcP**	**15 29 32.1**	**-1.3**
YKA	**Yellowknife Ar**	**51.02**	**347**	P	**P**	**15 28 39.2**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=149,slow=7.7,SNR=24						
YKA				PcP	**PcP**	**15 29 54.8**	**0.0**
	comp=Z,1.8nm,0.6s,baz=150,slow=3.7,SNR=19						
YKA	**Yellowknife Ar**	**51.02**	**347**	P	**P**	**15 28 38.9**	**-0.8**
YKA				PcP	**PcP**	**15 29 55.2**	**+0.4**
CPUP	**Villa Florida**	**52.21**	**140**	LR	LR	15 50 28.7	
	comp=Z,35nm,19.1s,baz=217,slow=35						
BCAR	**Beaver Creek A**	**60.11**	**336**	P	**P**	**15 29 45.1**	**+0.3**
BCAR				PcP	**PcP**	**15 30 30.1**	**0.0**
INK	**Inuvik**	**60.46**	**343**	P	**P**	**15 29 47.4**	**+0.3**
INK				IAmb	IAmb	15 30 16.9	
	comp=Z,12nm,1.7s						
INK				PcP	**PcP**	**15 30 29.6**	**-1.6**
RC01	**Rabbit Creek A**	**62.59**	**332**	P	**P**	**15 30 02.5**	**+1.0**
RC01				PcP	**PcP**	**15 30 40.3**	**+0.3**
IL31		**62.90**	**337**	P	**P**	**15 30 03.7**	**+0.2**
ILAR	**Eielson Array**	**62.90**	**337**	P	**P**	**15 30 03.8**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=114,slow=5.4,SNR=42						
ILAR	**Eielson Array**	**62.90**	**337**	P	**P**	**15 30 03.5**	**-0.2**
ILAR				PcP	**PcP**	**15 30 41.3**	**0.0**
RND	**Reindeer**	**63.11**	**335**	P	**P**	**15 30 05.8**	**+0.7**
RND				PcP	**PcP**	**15 30 42.9**	**+0.7**
BMAR	**Burnt Mountain**	**63.34**	**340**	P	**P**	**15 30 06.4**	**-0.1**
BMAR				PcP	**PcP**	**15 30 44.5**	**+1.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TRF	**Thorofare Moun**	**63.72**	**335**	P	**P**	**15 30 10.2**	**+1.0**
RSO	**Redoubt South**	**63.76**	**331**	P	**P**	**15 30 10.6**	**+1.0**
PPLA	**Purkeypile**	**64.32**	**334**	P	**P**	**15 30 13.7**	**+0.5**
PPLA				PcP	**PcP**	**15 30 44.2**	**-3.1**
MLY	**Manley**	**64.51**	**336**	P	**P**	**15 30 14.4**	**+0.2**
MLY				IAmb	IAmb	15 30 16.3	
	comp=Z,7.5nm,0.9s						
MLY				PcP	**PcP**	**15 30 46.5**	**-1.4**
TOLK	**Toolik Lake Re**	**65.56**	**340**	P	**P**	**15 30 21.9**	**+0.8**
TTA	**Tatalina**	**65.99**	**333**	P	**P**	**15 30 23.7**	**-0.2**
EKA	**Eskdalemuir Ar**	**77.66**	**36**	P	**P**	**15 31 31.6**	**-2.2**
	comp=Z,1.1nm,0.4s,baz=279,slow=6.6,SNR=8.6						
BILL	**Bilibino**	**81.51**	**338**	P	**P**	**15 31 54.2**	**-0.3**
BILL				IAmb	IAmb	15 32 00.9	
	comp=Z,12nm,1.5s						
NOA	**NORSAR Array B**	**83.88**	**29**	LR	LR	16 08 10.4	
	comp=Z,9.8nm,21.2s,baz=255,slow=35						
DBIC	**Dimbokro**	**85.26**	**84**	LR	LR	16 11 29.0	
	comp=Z,21nm,18.0s,baz=334,slow=36						
ARCES	**ARCESS Array B**	**85.93**	**18**	P	**P**	**15 32 16.0**	**-1.1**
	comp=Z,3.5nm,0.9s,baz=289,slow=3.7,SNR=7.1						
ARCES	**ARCESS Array B**	**85.93**	**18**	P	**P**	**15 32 15.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**89.98**	**77**	P	**P**	**15 32 35.7**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=301,slow=4.3,SNR=4.4						
TORD	**Torodi Ar. Bea**	**89.98**	**77**	P	**P**	**15 32 35.9**	**-1.6**
SONM	**Songino Array**	**116.29**	**347**	PKP	**PKPdf**	**15 38 21.3**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=322,slow=2.5,SNR=3.6						
SONM	**Songino Array**	**116.29**	**347**		**PKiKP**	**15 38 20.0**	**-0.9**
KSRS	**Korea Array**	**116.68**	**325**	PKP	**PKiKP**	**15 38 22.9**	**+1.3**
	comp=Z,0.7nm,0.5s,baz=346,slow=1.5,SNR=4.8						
MKAR	**Makanchi Array**	**119.14**	**5**	PKP	**PKPdf**	**15 38 25.7**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=321,slow=3.2,SNR=9.0						
MKAR	**Makanchi Array**	**119.14**	**5**		**PKPdf**	**15 38 25.3**	**-0.9**
BOSA	**Boshof**	**120.05**	**115**	PKP	**PKiKP**	**15 38 29.0**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=100,slow=2.4,SNR=4.5						
BOSA	**Boshof**	**120.05**	**115**		**PKPdf**	**15 38 28.6**	**0.0**
GEYT	**Alibeck**	**120.96**	**28**	PKP	**PKiKP**	**15 38 30.2**	**+0.1**
	comp=Z,1.6nm,0.6s,baz=222,slow=2.0,SNR=4.3						
GEYT	**Alibeck**	**120.96**	**28**		**PKPdf**	**15 38 29.8**	**-0.2**
STKA	**Stephens Creek**	**128.44**	**240**	PKP	**PKPdf**	**15 38 43.8**	**-0.6**
	comp=Z,2.0nm,1.0s,baz=298,slow=2.5,SNR=2.8						
WRA	**Warramunga Arr**	**135.79**	**256**	PKP	**PKPdf**	**15 38 59.3**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=70,slow=1.6,SNR=4.8						
WRA	**Warramunga Arr**	**135.79**	**256**		**PKiKP**	**15 38 59.7**	**-0.5**
ASAR	**Alice Springs**	**136.06**	**250**	PKhKP	PKPpre	15 38 54.4	
	comp=Z,0.4nm,0.8s,baz=102,slow=4.0,SNR=4.5						
ASAR	**Alice Springs**	**136.06**	**250**		PKPpre	15 38 51.3	
CMAR	**Chiang Mai Arr**	**146.02**	**342**	PKPbc	**PKPab**	**15 39 18.3**	**-0.2**
	comp=Z,9.8nm,0.5s,baz=333,slow=3.7,SNR=83						
CMAR				pPKPbc	pPKPbc	15 39 37.0	+0.1
	comp=Z,2.8nm,0.8s,baz=308,slow=4.7,SNR=3.1						

*NEIC **02** 16:00:30.9±2.5, 19°.09N±0°.08×120°.23E±0°.06, h8km±4km, mb4.3/28, Error ellipse: s-maj=11.3km s-min=7.4km az=196.0*

*IDC **02** 16:00:31.1±0.7, 19°.11N×120°.49E, h0km, mb3.9/11, mb1 3.9/13, mb1mx3.7/39, mbtmp3.8/13, ML2.9/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/37, Error ellipse: s-maj=25.7km s-min=14.9km az=70.0*

*MAN **02** 16:00:34.8, 18°.95N×120°.28E, h2km, mb5.5, ML4.5, MS4.8*

ISC 02 16:00:31.8±0.4**, 19°.12N**±0°.04×**120°.24E**±0°.05**, h10km, n66, σ1s.36**/69**, mb4.1**/21**, 2C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**1.21**	**170**	⇑iP	**Pn**	**16 00 56.0**	**+1.3**
ABRA	**Dolores**	**1.53**	**163**	eP	**Pb**	**16 00 59.7**	**-0.5**
ABRA				eS	**Sb**	**16 01 18.6**	**-1.0**
APYP	**Conner**	**1.57**	**143**	eP	**Pb**	**16 01 00.8**	**-0.2**
APYP				eS	**Sg**	**16 01 21.7**	**-0.7**
SGCP	**Mt. Cagua**	**1.92**	**117**	eP	**Pb**	**16 01 06.5**	**-0.5**
SGCP				eS	**Sg**	**16 01 32.3**	**-1.4**
CAUP	**Cauayan**	**2.64**	**145**	eP	**Pb**	**16 01 18.1**	**-1.0**
PCPH	**Palayan**	**3.63**	**167**	⇓eP	**Pn**	**16 01 30.6**	**+2.6**
TWG	**Pinlang**	**3.77**	**12**		**Pn**	**16 01 29.7**	**-0.2**
TPUB	**Ta-pu**	**4.18**	**5**		**Pn**	**16 01 34.7**	**-0.9**
YULB	**Yu-li**	**4.37**	**13**		**Pn**	**16 01 37.3**	**-0.9**
SSLB	**Suanglung**	**4.69**	**8**		**Pn**	**16 01 41.4**	**-1.3**
LQP	**Lukban**	**5.13**	**166**	⇑eP	**Pb**	**16 02 01.9**	**+0.1**
NACB	**Ninganchiao**	**5.19**	**14**	Pn	**Pn**	**16 01 50.1**	**+0.7**
KNMB	**Chin-men Tao**	**5.59**	**342**	Pn	**Pn**	**16 01 54.1**	**-0.9**
YHNB	**Yeheng**	**5.62**	**11**		**Pn**	**16 01 55.9**	**+0.3**
YOJ	**Yonaguni jima**	**5.91**	**25**	Pn	**Pn**	**16 02 01.5**	**+2.1**
HKPS	**Hong Kong Po S**	**6.51**	**300**	Pn	**Pn**	**16 02 06.9**	**-0.9**
QIZ	**Qiongzhong**	**9.83**	**271**	Pn	**Pn**	**16 02 52.8**	**-0.5**
QIZ					**Sn**	**16 04 41.2**	**-2.6**
JOW	**Kunigami**	**10.66**	**42**	Pn	**Pn**	**16 03 02.2**	**-2.4**
	0.1nm,0.3s,baz=188,slow=14,SNR=3.0						
JOW	**Kunigami**	**10.66**	**42**		**Pn**	**16 03 04.5**	**-0.1**
JNU	**Nakatsue**	**16.89**	**32**	Pn	**Pn**	**16 04 27.0**	**-1.3**
JNU				IAmb	IAmb	16 04 52.4	
	comp=Z,37nm,1.4s						
KSRS	**Korea Array**	**19.46**	**19**	P	**P**	**16 04 57.6**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=5.3						
KSRS				LR	LR	16 12 52.7	
	comp=Z,23nm,20.2s,baz=40,slow=38						
KSM	**Kuching**	**20.05**	**210**	P	**P**	**16 05 03.5**	**-1.8**
CHTO	**Chiang Mai**	**20.14**	**273**	P	**P**	**16 05 06.3**	**0.0**
CMAR	**Chiang Mai Arr**	**20.17**	**272**	P	Pn	16 05 09.3	+0.8
	comp=Z,1.0nm,1.0s,baz=87,slow=8.4,SNR=7.6						
CMAR	**Chiang Mai Arr**	**20.17**	**272**	P	**P**	**16 05 06.5**	**-0.1**
BJT	**Baijiatuau**	**21.12**	**351**	P	**P**	**16 05 16.2**	**-0.4**
BJT				IAmb	IAmb	16 05 32.5	
	comp=Z,19nm,1.1s						
INU	**Inuyama**	**21.94**	**39**	P	**P**	**16 05 25.2**	**-0.4**
INU				IAmb	IAmb	16 05 28.3	
	comp=Z,15nm,1.2s						
FAKI	**Fak Fak**	**24.88**	**150**	P	**P**	**16 05 53.9**	**-1.0**
USRK	**Ussuriysk Ar.**	**26.87**	**19**	P	**P**	**16 06 13.7**	**+1.0**
	comp=Z,1.6nm,0.7s,baz=211,slow=6.5,SNR=5.2						
USRK	**Ussuriysk Ar.**	**26.87**	**19**	P	**P**	**16 06 12.6**	**-0.1**
PBA	**Port Blair**	**27.50**	**258**	P	P	16 06 15.2	-3.4
SONM	**Songino Array**	**30.78**	**342**	P	**P**	**16 06 48.1**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=160,slow=7.0,SNR=2.7						
SONM	**Songino Array**	**30.78**	**342**	P	**P**	**16 06 47.6**	**0.0**
MTN	**Manton Dam**	**33.53**	**161**	P	**P**	**16 07 09.5**	**-2.3**
KNRA	**Kununurra**	**35.58**	**166**	P	**P**	**16 07 28.2**	**-1.4**
FITZ	**Fitzroy Crossi**	**37.36**	**172**	P	**P**	**16 07 43.6**	**-1.2**
FITZ				IAmb	IAmb	16 07 55.2	
	comp=Z,18nm,1.6s						
COEN	**Coen**	**39.88**	**144**	P	**P**	**16 08 05.7**	**-0.4**
PSAD3	**Pilbara Seismi**	**40.51**	**181**	P	**P**	**16 08 09.9**	**-1.3**
PSAD3				IAmb	IAmb	16 08 34.8	
	comp=Z,30nm,1.6s						
WRAB	**Tennant Creek**	**41.20**	**160**	P	**P**	**16 08 15.8**	**-1.0**
WRAB				IAmb	IAmb	16 08 35.8	
	comp=Z,5.6nm,1.2s						
WRA	**Warramunga Arr**	**41.21**	**160**	P	**P**	**16 08 15.9**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=342,slow=9.0,SNR=11						
WRA	**Warramunga Arr**	**41.21**	**160**	P	**P**	**16 08 15.9**	**-1.0**
WR0	**Warramunga Arr**	**41.29**	**159**	P	**P**	**16 08 16.6**	**-1.0**
WR0				IAmb	IAmb	16 08 31.0	
	comp=Z,7.6nm,1.4s						
MKAR	**Makanchi Array**	**41.51**	**320**	P	**P**	**16 08 21.2**	**+2.0**
	comp=Z,1.0nm,0.8s,baz=115,slow=9.7,SNR=0.4						
ZAA0	**Zalesovo Array**	**44.10**	**331**	P	**P**	**16 08 38.5**	**-1.6**
ZALV	**Zalesovo Beam**	**44.10**	**331**	P	**P**	**16 08 41.8**	**+1.7**
	comp=Z,1.6nm,0.7s,baz=112,slow=8.8,SNR=7.9						
ZALV	**Zalesovo Beam**	**44.10**	**331**	P	**P**	**16 08 41.4**	**+1.3**
AS31	**Alice Springs**	**44.57**	**162**	P	**P**	**16 08 44.7**	**+0.6**
ASAR	**Alice Springs**	**44.57**	**162**	P	**P**	**16 08 44.6**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=345,slow=7.0,SNR=72						
ASAR	**Alice Springs**	**44.57**	**162**	P	**P**	**16 08 44.5**	**+0.3**
KURK	**Kurchatov**	**45.52**	**324**	P	**P**	**16 08 53.2**	**+1.8**
KURK				IAmb	IAmb	16 08 56.8	
	comp=Z,2.7nm,0.9s						
KURBB	**Kurchatov Arra**	**45.52**	**324**	P	**P**	**16 08 53.7**	**+2.2**
	comp=Z,2.2nm,0.7s,baz=121,slow=7.9,SNR=21						
GAR	**Garm**	**47.28**	**306**	P	P	16 09 00.9	-4.8
KK31	**Karatay Array**	**47.98**	**311**	P	**P**	**16 09 13.2**	**+2.3**
KK31				IAmb	IAmb	16 09 14.5	
	comp=Z,1.6nm,0.8s						
KK31				PcP	**PcP**	**16 10 38.7**	**-0.4**
KKAR	**Karatay Array**	**47.98**	**311**	P	**P**	**16 09 13.1**	**+2.2**
KKAR				IAmb	IAmb	16 09 14.4	
	comp=Z,1.6nm,0.8s						
KKAR	**Karatay Array**	**47.98**	**311**	P	**P**	**16 09 12.8**	**+1.9**
KKAR				PcP	**PcP**	**16 10 39.9**	**+0.9**
CHGR	**Chuyangaron**	**48.12**	**305**	P	**P**	**16 09 09.5**	**-2.6**
CHGR				IAmb	IAmb	16 09 21.4	
	comp=Z,11nm,1.5s						
BBOO	**Buckleboo**	**53.81**	**163**	P	**P**	**16 09 55.3**	**+0.6**
STKA	**Stephens Creek**	**54.69**	**158**	P	**P**	**16 10 01.8**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=342,slow=4.2,SNR=5.0						
STKA	**Stephens Creek**	**54.69**	**158**	P	**P**	**16 10 01.2**	**+0.1**
STKA				IAmb	IAmb	16 10 17.5	
	comp=Z,3.3nm,1.6s						
ABKAR	**Akbulak array**	**56.43**	**317**	P	**P**	**16 10 15.1**	**+1.5**
ABKAR	**Akbulak array**	**56.43**	**317**	P	**P**	**16 10 15.5**	**+1.9**
ABKAR				IAmb	IAmb	16 10 17.6	
	comp=Z,1.4nm,0.8s						
GEYT	**Alibeck**	**56.71**	**303**	P	**P**	**16 10 19.0**	**+3.2**
	comp=Z,2.0nm,0.7s,baz=99,slow=7.7,SNR=4.0						
GEYT	**Alibeck**	**56.71**	**303**	P	**P**	**16 10 14.8**	**-1.0**
BILL	**Bilibino**	**56.73**	**19**	P	**P**	**16 10 16.7**	**+1.3**
BILL				IAmb	IAmb	16 10 33.7	
	comp=Z,1.8nm,0.9s						
YKA	**Yellowknife Ar**	**87.96**	**22**	P	**P**	**16 13 22.8**	**+1.1**
	comp=Z,0.5nm,0.8s,baz=314,slow=4.5,SNR=11						
YKA	**Yellowknife Ar**	**87.96**	**22**	P	**P**	**16 13 22.3**	**+0.5**

TAP 02 16:01:53.6, 25°.07N×121°.59E, h6km±1km, ML1.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAP1	**Taipei**	**0.07**	**244**	eP	Pg	16 01 55.9	+0.7
	baz=245						
TAP1				S	Sg	16 01 57.6	+1.3
	baz=245						
YM01	**YM01**	**0.08**	**348**	P	Pg	16 01 56.2	+0.8
	baz=347						
YM01				S	Sg	16 01 58.1	+1.3
	baz=347						
TAP	**Taipei**	**0.08**	**249**	eP	Pg	16 01 55.9	+0.5
	baz=245						
TAP				eS	Sg	16 01 57.8	+1.1
	baz=245						
TWA	**Mucha**	**0.09**	**183**	P	Pg	16 01 56.3	+0.7
	baz=177						
TWA				S	Sg	16 01 58.2	+1.3
	baz=177						
YM10	**YM10**	**0.09**	**344**	P	Pg	16 01 56.4	+0.8
	baz=343						
YM10				S	Sg	16 01 58.3	+1.2
	baz=343						
YM04	**YM04**	**0.10**	**331**	P	Pg	16 01 56.4	+0.6
	baz=330						
YM04				S	Sg	16 01 58.2	+0.9
	baz=330						
YM05	**YM05**	**0.10**	**347**	eP	Pg	16 01 56.5	+0.8
	baz=347						
YM05				S	Sg	16 01 58.4	+1.1
	baz=347						
YM11	**YM11**	**0.10**	**352**	P	Pg	16 01 56.6	+0.8
	baz=352						
YM11				S	Sg	16 01 58.6	+1.3
	baz=352						
YM08	**YM08**	**0.12**	**0**	eP	Pg	16 01 56.6	+0.5
YM08				S	Sg	16 01 58.4	+0.5
TATO	**Taipei**	**0.13**	**225**	eP	Pg	16 01 56.8	+0.5
	baz=221						
TATO				eS	Sg	16 01 58.9	+0.8
	baz=221						
ANP	**Anpu**	**0.13**	**332**	eP	Pg	16 01 57.0	+0.6
	baz=334						
ANP				S	Sg	16 01 59.0	+0.8
	baz=334						
NTST	**Danshui**	**0.16**	**307**	eP	Pg	16 01 57.9	+1.1
	baz=307						
NTST				eS	Sg	16 02 01.0	+2.0
	baz=307						
TWS1	**Kuangyinshan**	**0.16**	**282**	P	Pg	16 01 57.7	+0.9
	baz=282						
TWS1				S	Sg	16 02 00.6	+1.7
	baz=282						
TIPB	**Shuangxi**	**0.23**	**114**	eP	Pg	16 01 58.6	+0.4
	baz=114						

HEL 02 16:13:59.0±0.2**, 67°.63N×26°.58E, h0km, ML0.9, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SGF	**Sodankyl**	**0.19**	**186**	PG	Pg	16 14 02.1	-0.5
SGF				SG	Sg	16 14 04.8	-0.2
HEF	**Hetta**	**1.35**	**307**	PG	Pg	16 14 23.0	-1.8
HEF				MSG		16 14 39.7	
	comp=Z,0.8nm,0.2s						
HEF				SN	Sb	16 14 43.0	+0.1
TOF	**Tornio**	**1.79**	**211**	PG	Pn	16 14 31.7	+0.6
TOF				MSG		16 14 52.4	
	comp=Z,0.6nm,0.2s						
TOF				SG	Sn	16 14 54.3	-0.3
ARE0	**ARCESS Array S**	**1.95**	**349**	PG	Pn	16 14 34.2	+0.8
	baz=170						
ARE0				SG	Sn	16 14 59.1	+0.5
ERTU	**Ertsjaerv**	**2.03**	**240**	PB	Pn	16 14 34.1	-0.3
	baz=51						
ERTU				SB	Sb	16 15 01.5	-0.9

BER 02 16:14:18.6±0.8**, 68°.09N×15°.32E, h10km±3km, ML0.6, Confirmed Earthquake, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEI	**Steigen**	**0.16**	**190**	eP	Pg	16 14 21.9	-0.2
STEI				eS	Sg	16 14 24.7	+0.2
STEI				IAML		16 14 24.9	
	comp=Z,5.6nm,0.1s						
LOF	**Lofoten**	**0.67**	**274**	eP	Pg	16 14 30.1	-1.3
LOF				eS	Sg	16 14 40.0	-0.2
LOF				IAML		16 14 44.6	
	comp=Z,5.8nm,1.1s						

IDC 02 16:15:16.0±4.6**, 11°.39S×116°.38E, h0km, mb3.3**/2**, mb1 3.3**/3**, mb1mx3.1**/38**, mbtmp3.2**/3**, ML3.0**/1**, Error ellipse: s-maj=283.7km s-min=27.9km az=45.0, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.25**	**118**	P	P	16 19 42.5	+0.2
	0.0nm,0.3s,baz=294,slow=13,SNR=3.3						
WRA				S	Sn	16 22 59.7	-20
	0.1nm,0.3s,baz=290,slow=26,SNR=3.6						
ASAR	**Alice Springs**	**20.66**	**129**	P	P	16 19 57.4	-0.2
	0.5nm,0.7s,baz=306,slow=11,SNR=4.8						
ASAR				S	S	16 23 35.7	-14
	0.2nm,0.7s,baz=291,slow=23,SNR=3.7						
MKAR	**Makanchi Array**	**65.46**	**335**	P	P	16 26 00.8	0.0
	0.3nm,0.5s,baz=144,slow=6.7,SNR=6.6						

*IDC **02** 16:22:15.8±0.6, 40°.55N×51°.11E, h0km, mb4.0/20, mb1 4.1/30, mb1mx4.0/46, mbtmp4.1/30, ML3.5/6, MS2.8/9, Ms1 2.8/9, ms1mx2.6/47, Error ellipse: s-maj=13.9km s-min=7.8km az=169.0*

*THR **02** 16:22:17.7±0.6, 40°.65N×51°.20E, h15km, ML4.3*

*MOS **02** 16:22:19.7±1.1, 40°.79N×51°.23E, h38km, mb4.3/5, Error ellipse: s-maj=6.6km s-min=4.8km az=41.8*

*NEIC **02** 16:22:20.6±2.2, 40°.71N±0°.04×51°.24E±0°.07, h36km±7km, mb4.5/62, ML4.2(ISK), Error ellipse: s-maj=7.8km s-min=5.2km az=92.0*

*AZER **02** 16:22:21.6, 40°.52N×51°.19E, h59km, ML4.1*

*TEH **02** 16:22:21.6, 40°.53N×51°.28E, h50km, ML4.3*

*NNC **02** 16:22:27.4±3.0, 40°.96N×52°.48E, h0km, mb4.2, Error ellipse: s-maj=33.3km s-min=13.5km az=70.0*

ISC 02 16:22:20.6±0.7**, 40°.68N**±0°.03×**51°.32E**±0°.03**, h41km±8km, n348, σ1s.98**/408**, mb4.3**/63**, 31C-20D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	**Gala**	**0.93**	**253**	P	**Pn**	**16 22 41.3**	**+4.1**
	SNR=7.7						
GALA				S	**Sn**	**16 22 52.2**	**+2.9**
NDR	**Nardaran**	**1.02**	**265**	ePn	**Pn**	**16 22 42.3**	**+3.9**
NDR	**Nardaran**	**1.02**	**265**	P	**Pn**	**16 22 41.9**	**+3.5**
	SNR=39						
NDR				S	**Sn**	**16 22 56.0**	**+4.5**
GOBA	**Gobu**	**1.24**	**257**	P	**Pn**	**16 22 45.3**	**+3.8**
	SNR=4.7						
GOBA				S	**Sn**	**16 22 58.4**	**+1.4**
GBS	**Qobustan**	**1.81**	**266**	ePn	**Pn**	**16 22 52.2**	**+2.8**
GBS	**Qobustan**	**1.81**	**266**	P	**Pn**	**16 22 52.1**	**+2.7**
	SNR=25						
GBS				Sg	**Sn**	**16 23 16.8**	**+5.6**
ATGJ	**Altiaghaj**	**1.81**	**276**	ePn	**Pn**	**16 22 51.6**	**+2.1**
ATGJ	**Altiaghaj**	**1.81**	**276**	Pn	**Pn**	**16 22 51.5**	**+2.1**
	SNR=10						
ATGJ				Sn	**Sn**	**16 23 14.0**	**+2.7**
SIZA	**Siyzn**	**1.88**	**283**	ePn	**Pn**	**16 22 53.3**	**+3.0**
SIZA	**Siyzn**	**1.88**	**283**	Pn	**Pn**	**16 22 52.8**	**+2.5**
	SNR=123						
SIZA				Sn	**Sn**	**16 23 17.0**	**+4.2**
ALIB	**Äli-Bayra**	**1.91**	**248**	ePn	**Pn**	**16 22 53.2**	**+2.6**
ALIB	**Äli-Bayra**	**1.91**	**248**	Pn	**Pn**	**16 22 53.2**	**+2.6**
	SNR=11						
ALIB				Sn	**Sn**	**16 23 13.9**	**+0.4**
PQL	**Pirkuli**	**2.07**	**274**	ePn	**Pn**	**16 22 55.0**	**+1.9**
PQL	**Pirkuli**	**2.07**	**274**	Pn	**Pn**	**16 22 55.0**	**+1.9**
	SNR=28						
PQL				Sn	**Sn**	**16 23 19.4**	**+1.7**
QUBA	**Quba, Azerbaij**	**2.24**	**288**	Pn	**Pn**	**16 22 58.0**	**+2.8**
	SNR=42						
QUBA				Sn	**Sn**	**16 23 24.6**	**+2.9**
QUB	**Quba**	**2.34**	**288**	ePn	**Pn**	**16 22 58.0**	**+1.3**
SAAT	**Saatly**	**2.36**	**251**	ePn	**Pn**	**16 22 57.9**	**+1.0**
SAAT	**Saatly**	**2.36**	**251**	Pn	**Pn**	**16 22 57.9**	**+1.0**
SAAT				Sn	**Sn**	**16 23 26.9**	**+2.3**
IML	**Ismayilli**	**2.38**	**274**	ePn	**Pn**	**16 22 58.9**	**+1.6**
IML	**Ismayilli**	**2.38**	**274**	Pn	**Pn**	**16 22 58.8**	**+1.6**
	SNR=8.3						
IML				Sn	**Sn**	**16 23 25.9**	**+0.6**
KDMR	**Kurdemir**	**2.41**	**264**	ePn	**Pn**	**16 22 59.3**	**+1.8**
KDMR	**Kurdemir**	**2.41**	**264**	Pn	**Pn**	**16 22 59.3**	**+1.8**
KDMR				Sn	**Sn**	**16 23 27.3**	**+1.6**
QSAR	**Qusar**	**2.45**	**291**	ePn	**Pn**	**16 23 00.6**	**+2.4**
QSAR	**Qusar**	**2.45**	**291**	Pn	**Pn**	**16 23 00.6**	**+2.4**
	SNR=160						
QSAR				Sn	**Sn**	**16 23 30.2**	**+3.2**
XNQ	**Khinaliq**	**2.46**	**282**	ePn	**Pn**	**16 23 00.1**	**+1.7**
XNQ	**Khinaliq**	**2.46**	**282**	Pn	**Pn**	**16 23 00.1**	**+1.7**
	SNR=72						
XNQ				Sn	**Sn**	**16 23 29.1**	**+1.8**
QBL	**Gabala**	**2.65**	**277**	ePn	**Pn**	**16 23 02.0**	**+1.1**
QBL	**Gabala**	**2.65**	**277**	Pn	**Pn**	**16 23 02.0**	**+1.1**
	SNR=21						
QBL				Sn	**Sn**	**16 23 32.5**	**+0.5**
GLBA	**Clilabad**	**2.67**	**238**	ePn	**Pn**	**16 23 01.1**	**0.0**
GLBA	**Clilabad**	**2.67**	**238**	Pn	**Pn**	**16 23 01.1**	**0.0**
	SNR=17						
GLBA				Sn	**Sn**	**16 23 30.7**	**-1.5**
LKRN	**Lenkeran, Azer**	**2.78**	**226**	ePn	**Pn**	**16 23 02.1**	**-0.5**
LKRN	**Lenkeran, Azer**	**2.78**	**226**	Pn	**Pn**	**16 23 02.2**	**-0.5**
	SNR=22						
LKRN				Sn	**Sn**	**16 23 32.8**	**-2.0**
ZRD	**Zardab**	**2.80**	**263**	ePn	**Pn**	**16 23 04.2**	**+1.3**
ZRD	**Zardab**	**2.80**	**263**	Pn	**Pn**	**16 23 04.1**	**+1.2**
	SNR=10						
ZRD				Sn	**Sn**	**16 23 36.8**	**+1.4**
AKT	**Akhty**	**2.83**	**288**	⇓iP	**Pn**	**16 23 05.0**	**+1.6**
AKT				eS	**Sn**	**16 23 37.6**	**+1.4**
AKT				pmax	pmax		
	comp=Z,111nm,0.2s						
AKT				smax	smax		
	comp=E,1µm,0.4s						
AKT				smax	smax		
	comp=N,426nm,0.2s						
AKT				smax	smax		
	comp=E,793nm,0.4s						
AKT				MLR	MLR		
	comp=Z,173nm,2.0s						
ASTR	**Astara**	**2.88**	**223**	ePn	**Pn**	**16 23 03.8**	**-0.2**
ASTR	**Astara**	**2.88**	**223**	Pn	**Pn**	**16 23 03.9**	**-0.2**
	SNR=36						
ASTR				Sn	**Sn**	**16 23 34.6**	**-2.8**
YRD	**Yardimli**	**2.96**	**234**	ePn	**Pn**	**16 23 04.9**	**-0.3**
YRD	**Yardimli**	**2.96**	**234**	Pn	**Pn**	**16 23 05.0**	**-0.3**
	SNR=34						
YRD				Sn	**Sn**	**16 23 36.7**	**-2.9**
BLQ	**Beylaqan**	**3.03**	**253**	Pn	**Pn**	**16 23 06.9**	**+0.8**
	SNR=8.1						
BLQ				Sn	**Sn**	**16 23 39.6**	**-1.6**
LRK	**Lerik**	**3.07**	**229**	ePn	**Pn**	**16 23 06.3**	**-0.5**
LRK	**Lerik**	**3.07**	**229**	Pn	**Pn**	**16 23 06.3**	**-0.5**
	SNR=7.9						
LRK				Sn	**Sn**	**16 23 40.4**	**-2.0**
SEKA	**Sheki**	**3.16**	**281**	ePn	**Pn**	**16 23 09.4**	**+1.5**
SEKA	**Sheki**	**3.16**	**281**	Pn	**Pn**	**16 23 09.5**	**+1.5**
	SNR=21						
SEKA				Sn	**Sn**	**16 23 45.6**	**+1.1**
BRDA	**Brd**	**3.18**	**264**	ePn	**Pn**	**16 23 09.9**	**+1.8**
BRDA	**Brd**	**3.18**	**264**	Pn	**Pn**	**16 23 10.0**	**+1.8**
	SNR=3.2						
BRDA				Sn	**Sn**	**16 23 46.4**	**+1.5**
MNGR	**Mingechevir, A**	**3.22**	**273**	ePn	**Pn**	**16 23 10.4**	**+1.8**
MNGR	**Mingechevir, A**	**3.22**	**273**	Pn	**Pn**	**16 23 10.4**	**+1.8**
	SNR=4.9						
MNGR				Sn	**Sn**	**16 23 45.6**	**-0.1**
GRMI	**Germi**	**3.24**	**236**	ePn	**Pn**	**16 23 08.8**	**-0.3**
GRMI				IAML		16 23 45.7	
	comp=E,649nm,0.2s						
GRMI				IAML		16 23 45.8	
	comp=N,475nm,0.2s						
AGDM	**Agdam**	**3.27**	**261**	Pn	**Pn**	**16 23 09.7**	**+0.4**
	SNR=8.0						
AGDM				Sn	**Sn**	**16 23 46.4**	**-0.6**
QRD	**Qoradiz**	**3.30**	**250**	ePn	**Pn**	**16 23 08.3**	**-1.5**
QRD	**Qoradiz**	**3.30**	**250**	Pn	**Pn**	**16 23 08.4**	**-1.5**
	SNR=3.3						
QRD				Sn	**Sn**	**16 23 46.3**	**-1.4**
ZKT	**Zaqatala**	**3.64**	**287**	ePn	**Pn**	**16 23 16.7**	**+2.2**
MAK	**Makhachkala**	**3.65**	**310**	eP	**Pn**	**16 23 13.0**	**-1.5**
MAK				e		16 23 54.8	
MAK				pmax	pmax		
	comp=Z,80nm,0.6s						
MAK				pmax	pmax		
	comp=Z,80nm,0.6s						
MAK				smax	smax		
	comp=N,433nm,0.6s						
MAK				smax	smax		
	comp=N,508nm,0.4s						
ZKTA	**Zakatala**	**3.67**	**287**	Pn	**Pn**	**16 23 16.5**	**+1.6**
	SNR=21						
ZKTA				Sn	**Sn**	**16 23 58.1**	**+1.2**
GANJ	**Ganja**	**3.80**	**271**	ePn	**Pn**	**16 23 16.9**	**+0.2**
GANJ	**Ganja**	**3.80**	**271**	Pn	**Pn**	**16 23 16.7**	**0.0**
	SNR=4.1						
GANJ				Sn	**Sn**	**16 23 57.7**	**-2.4**
IHSH	**Hashtrud**	**3.93**	**234**	ePn	Pn	16 23 28.8	+10
IHSH				e		16 24 23.1	
LGD	**Lagodekhi**	**3.99**	**288**	P	**Pn**	**16 23 21.6**	**+2.2**
LGD				S	**Sn**	**16 24 06.6**	**+1.7**
DDFL	**Dedoflistskaro**	**4.00**	**283**	P	**Pn**	**16 23 22.1**	**+2.6**
DDFL				S	**Sn**	**16 24 05.9**	**+0.7**
IHRS	**Heris**	**4.06**	**236**	ePn	**Pn**	**16 23 19.9**	**-0.6**
IHRS				e		16 24 07.7	
GDB	**GEDABAY**	**4.23**	**272**	Pn	**Pn**	**16 23 23.0**	**+0.3**
	SNR=13						
GDB				Sn	**Sn**	**16 24 08.9**	**-2.0**
QALM	**Alamut, Qazvin**	**4.28**	**187**	ePn	**Pn**	**16 23 22.1**	**-1.4**
QALM				e		16 24 09.5	
IGZV	**Ghazvin**	**4.38**	**192**	ePn	**Pn**	**16 23 23.6**	**-1.2**
IGZV				e		16 24 13.0	
ORD	**Ordubad**	**4.46**	**249**	Pn	**Pn**	**16 23 26.7**	**+1.0**
	SNR=24						
ORD				Sn	**Sn**	**16 24 14.0**	**-2.4**
IPRN	**Peran**	**4.51**	**169**	ePn	**Pn**	**16 23 26.0**	**-0.5**
QZX	**Qazax, Azerbai**	**4.52**	**277**	Pn	**Pn**	**16 23 27.0**	**+0.4**
	SNR=23						
QZX				Sn	**Sn**	**16 24 17.1**	**-0.8**
SBZ	**Shahbuz**	**4.61**	**256**	Pn	**Pn**	**16 23 28.1**	**+0.2**
	SNR=14						
SBZ				Sn	**Sn**	**16 24 20.5**	**+0.4**
IGLO	**Ghaloghah**	**4.62**	**154**	ePn	**Pn**	**16 23 28.3**	**+0.2**
IMND	**Minoodasht**	**4.67**	**136**	ePn	**Pn**	**16 23 29.8**	**+1.1**
IMND				e		16 24 23.8	
ITBZ	**Tabriz**	**4.69**	**240**	ePn	**Pn**	**16 23 29.6**	**+0.6**
NAX	**Nakhchivan**	**4.72**	**253**	Pn	**Pn**	**16 23 29.7**	**+0.3**
NAX				Sn	**Sn**	**16 24 23.2**	**+0.3**
IALA	**Alasht**	**4.74**	**165**	ePn	**Pn**	**16 23 30.2**	**+0.3**
CHTH	**Charan**	**4.77**	**182**	ePn	**Pn**	**16 23 30.2**	**0.0**
CHTH	**Charan**	**4.77**	**182**	ePn	**Pn**	**16 23 30.2**	**0.0**
THKV	**Tehran--Karaj**	**4.77**	**184**	ePn	**Pn**	**16 23 31.3**	**+1.1**
THKV	**Tehran--Karaj**	**4.77**	**184**	ePn	**Pn**	**16 23 31.3**	**+1.1**

IMHD Mahdasht 5.02 186 *e*Pn **Pn** **16 23 34.4 +0.9**
BTNK Botanikuri 5.02 284 P **Pn** **16 23 33.8 +0.4**
BTNK S **Sn** **16 24 28.2 -2.0**
HYR Heyderabad 5.04 261 Pn **Pn** **16 23 35.3 +1.5**
SNR=4.5
HYR Sn **Sn** **16 24 30.9 +0.1**
GNI Garni 5.05 266 P **Pn** **16 23 35.1 +1.2**
GNI 16 24 27.8
GNI Garni 5.05 266 Pn **Pn** **16 23 35.7 +1.8**
comp=N,4.2nm,0.3s,baz=327,slow=17,SNR=19
GNI Sn **Sn** **16 24 28.8 -2.2**
comp=N,3.7nm,0.3s,baz=118,slow=7.0,SNR=3.5
GNI LR LR 16 25 28.5
comp=N,40nm,19.8s,baz=88,slow=40
GNI Garni 5.05 266 **Pn** **16 23 35.1 +1.2**
GNI **Sn** **16 24 27.8 -3.3**
DAMV Damavand 5.07 174 *e*Pn **Pn** **16 23 35.5 +1.1**
DAMV Damavand 5.07 174 *e*Pn **Pn** **16 23 35.5 +1.1**
DAMV IAML 16 24 33.5
comp=E,215nm,0.3s
TBLG Delisi 5.07 284 P **Pn** **16 23 34.7 +0.6**
TBLG S **Sn** **16 24 28.9 -2.5**
TBLG Delisi 5.07 284 **Pn** **16 23 34.5 +0.4**
TBLG **Sn** **16 24 28.2 -3.2**
ISHM Shahmirzad 5.11 162 *e*Pn **Pn** **16 23 36.5 +1.6**
IDMV Damavand 5.13 173 *e*Pn **Pn** **16 23 36.6 +1.4**
QABG Abgarm-Qazvin 5.15 196 *e*Pn **Pn** **16 23 34.8 -0.6**
QABG *e* 16 24 34.3
IFIR Firoozkooh 5.16 167 *e*Pn **Pn** **16 23 36.8 +1.2**
IHSB Hasanabad 5.24 180 *e*Pn **Pn** **16 23 37.7 +1.2**
IHSB *e* 16 24 42.3
MAKU Maku 5.26 258 *e*Pn **Pn** **16 23 36.9 0.0**
MAKU Maku 5.26 258 *e*Pn **Pn** **16 23 36.9 0.0**
KZRT Kazreti 5.28 280 P **Pn** **16 23 37.1 +0.1**
KZRT S **Sn** **16 24 32.2 -4.4**
IRAZ Razeghan 5.38 192 *e*Pn **Pn** **16 23 38.0 -0.6**
IRAZ *e* 16 24 41.2
ILAS Lasjerd 5.45 166 *e*Pn **Pn** **16 23 42.0 +2.5**
BJRD Bojnurd 5.59 120 *e*Pn **Pn** **16 23 43.5 +2.1**
BJRD Bojnurd 5.59 120 *e*Pn **Pn** **16 23 43.5 +2.1**
IANJ Anjilo 5.60 158 *e*Pn **Pn** **16 23 43.1 +1.5**
IVRN Varamin 5.69 177 *e*Pn **Pn** **16 23 43.6 +0.9**
IQOM Qom 5.83 182 *e*Pn **Pn** **16 23 44.5 -0.4**
IQOM *e* 16 25 00.6
HSRG Sareghieh 5.94 205 *e*Pn **Pn** **16 23 45.5 -0.8**
GEYT Alibeck 5.95 115 Pn **Pn** **16 23 47.3 +1.1**
comp=E,2.2nm,0.3s,baz=296,slow=16,SNR=23
GEYT Sn **Sn** **16 24 51.2 -1.8**
comp=E,4.3nm,0.3s,baz=294,slow=20,SNR=3.4
GEYT Alibeck 5.95 115 **Pn** **16 23 47.1 +1.0**
GEYT **Sn** **16 24 52.2 -0.9**
GYA0B ALIBECK ARRAY 5.95 115 P **Pn** **16 23 47.2 +1.0**
GYA0B ALIBECK ARRAY 5.95 115 ⇓P **Pn** **16 23 47.3 +1.0**
GYA0B ⇑S **Sn** **16 24 51.1 -1.9**
AKH Akhalkalaki 5.96 280 P **Pn** **16 23 46.8 +0.3**
AKH Akhalkalaki 5.96 280 **Pn** **16 23 46.8 +0.3**
HAGD Aghdareh 6.10 197 *e*Pn **Pn** **16 23 48.3 -0.2**
ONI Oni 6.19 290 P **Pn** **16 23 51.3 +1.7**
ASAO Ashtian 6.21 190 *e*Pn **Pn** **16 23 50.7 +0.7**
ASAO Ashtian 6.21 190 *e*Pn **Pn** **16 23 50.7 +0.7**
ISFR Sfrayin 6.35 123 *e*Pn **Pn** **16 23 53.6 +1.7**
ISFR *e* 16 25 11.8
SBZV Sabzevar 6.54 129 *e*Pn **Pn** **16 23 57.0 +2.6**
IEMG Emamgholi 6.58 117 *e*Pn **Pn** **16 23 56.0 +1.0**
IEMG *e* 16 25 21.4
IKRD Kardeh 6.85 122 *e*Pn Pn 16 24 09.9 +11
KBZ Khabaz 6.95 299⇑ *e*P **Pn** **16 23 59.1 -0.8**
KBZ Khabaz 6.95 299 Pn **Pn** **16 23 59.5 -0.4**
comp=E,0.8nm,0.3s,baz=117,slow=8.6,SNR=15
KBZ Sn **Sn** **16 25 14.1 -3.5**
comp=E,2.6nm,0.3s,baz=260,slow=19,SNR=3.9
BDRS Dareh Seyedi 6.99 197 *e*Pn **Pn** **16 24 02.2 +1.4**
IAKL Akhelmad 7.11 123 *e*Pn **Pn** **16 24 03.9 +1.6**
KVAR Kislovodsk Arr 7.18 300 Pn **Pn** **16 24 04.5 +1.4**
baz=90,slow=19,SNR=9.1
KVAR Sn **Sn** **16 25 17.6 -5.8**
baz=180,slow=13,SNR=3.7
KIV Kislovodsk 7.18 300 *i* P **Pn** **16 24 03.3 +0.2**
KIV *i* S **Sn** **16 25 19.4 -4.1**
KIV pmax pmax
comp=Z,2.0nm,0.2s
KIV smax smax
comp=Z,4.0nm,0.2s
KIV Kislovodsk 7.18 300 **Pn** **16 24 03.4 +0.2**
IDOB Doab 7.32 201 *e*Pn **Pn** **16 24 07.5 +2.2**
IPAY Payeh 7.35 123 *e*Pn **Pn** **16 24 07.5 +1.9**
IGHG Ghaleghazi 7.38 212 *e*Pn **Pn** **16 24 06.9 +0.9**
TNSJ Nastanj 7.92 146 *e*Pn **Pn** **16 24 14.9 +1.6**
IMYA Miami 8.13 119 *e*Pn **Pn** **16 24 19.4 +3.1**
IMYA *e* 16 26 04.1
TKDS Koohdasht(Taba 8.44 145 *e*Pn **Pn** **16 24 21.6 +1.1**
TPRV Parvadeh(Tabas 8.77 149 *e*Pn **Pn** **16 24 26.4 +1.5**
AFRZ Afriz 9.50 137 *e*Pn **Pn** **16 24 37.3 +2.3**
ITEG Tejag 9.79 140 *e*Pn **Pn** **16 24 41.2 +2.2**
AB31 Akbulak array 10.52 33 ⇓P **Pn** **16 24 48.6 -0.1**
comp=Z,4.7nm,0.4s,baz=209,slow=13,SNR=406
AB31 ⇑S **Sn** **16 26 43.1 -2.0**
comp=Z,6.5nm,0.3s,baz=208,slow=23,SNR=12
ABKAR Akbulak array 10.52 33 **Pn** **16 24 48.8 +0.1**
ABKAR Sn **Sn** **16 26 44.3 -0.9**
ABKAR Akbulak array 10.52 33 **Pn** **16 24 48.8 +0.1**
ABKAR Sn **Sn** **16 26 42.6 -2.5**
AKTO Aktyubinsk 10.82 23 Pn **Pn** **16 24 53.4 +0.6**
comp=Z,8.0nm,0.3s,baz=203,slow=11,SNR=112
AKTO Sn **Sn** **16 26 46.0 -6.4**
comp=Z,2.0nm,0.3s,baz=229,slow=19,SNR=6.6
AKTO LR LR 16 29 42.9
comp=Z,58nm,20.1s,baz=228,slow=41
AKTO Aktyubinsk 10.82 23 ⇑P **Pn** **16 24 53.1 +0.3**
comp=Z,17nm,0.5s
AKTO ⇑S **Sn** **16 26 50.9 -1.6**
comp=Z,50nm,0.7s
VORD Divnogorie 13.25 325 *e*P **Pn** **16 25 26.1 +0.1**
VORD pmax pmax
comp=Z,4.0nm,0.5s
VSR Storozhevoye 13.49 325⇑ *e*P **Pn** **16 25 27.0 -2.2**
BR131 Keskin Array S 13.55 272⇑ *e*P **Pn** **16 25 31.8 +1.5**
BR131 Keskin Array S 13.55 272 **Pn** **16 25 32.2 +1.9**
BRTR Keskin Array B 13.55 272 P **Pn** **16 25 34.0 +3.6**
BRTR Keskin Array B 13.55 272 Pn **Pn** **16 25 32.2 +1.8**
comp=Z,0.1nm,0.3s,baz=82,slow=11,SNR=5.6
BRTR Keskin Array B 13.55 272 **Pn** **16 25 34.0 +3.6**
CHGR Chuyangaron 13.89 93 **Pn** **16 25 35.6 +0.7**
CHGR **Sn** **16 28 09.3 +1.4**
ANTO Ankara 14.17 273 P **P** **16 25 43.7 -1.7**
ANTO Ankara 14.17 273 P **P** **16 25 43.7 -1.7**
BR231 Keskin MP Arra 14.19 273 P **P** **16 25 44.5 -1.1**
KK31 Karatay Array 14.50 74 P **Pn** **16 25 43.1 0.0**
KK31 Karatay Array 14.50 74 **Pn** **16 25 43.1 0.0**
KK31 Karatay Array 14.50 74 ⇓P **Pn** **16 25 40.4 -2.7**
comp=Z,3.5nm,0.6s,baz=256,slow=16,SNR=37
KK31 ⇑S **Sn** **16 28 15.7 -6.7**
comp=Z,9.4nm,0.8s,baz=274,slow=24,SNR=7.9
KKAR Karatay Array 14.50 74 P **Pn** **16 25 43.2 +0.1**
KKAR Karatay Array 14.50 74 **Pn** **16 25 43.2 +0.1**
KKAR Karatay Array 14.50 74 **Pn** **16 25 43.2 +0.1**
LPSR Galich'ya Gora 14.62 329 *e*P **Pn** **16 25 43.4 -1.1**
LPSR pmax pmax
comp=Z,8.0nm,0.6s
GAR Garm 14.70 90 **Pn** **16 25 46.8 +1.0**
GAR **Sn** **16 28 26.7 -0.7**
BTK Batken 14.88 86 P **Pn** **16 25 48.3 +0.1**
BTK Batken 14.88 86 **Pn** **16 25 48.3 +0.1**
ARU Arti 16.45 14*d* *i*P **Pn** **16 26 06.8 -1.5**
ARU S **Sn** **16 29 06.8 -2.9**
ARU pmax pmax
comp=Z,26nm,0.8s
ARU Arti 16.45 14 Pn **Pn** **16 26 06.9 -1.4**
comp=Z,0.0nm,0.3s,baz=207,slow=8.0,SNR=54
ARU Sn Sn 16 28 57.8 -12
comp=Z,0.0nm,0.3s,baz=4.7,slow=22,SNR=10
ARU LR LR 16 33 33.7
comp=Z,53nm,20.1s,baz=302,slow=41
ARU Arti 16.45 14 **Pn** **16 26 06.4 -1.9**
ARU IAmb IAmb 16 26 08.2
comp=Z,25nm,0.6s
ARU **Sn** **16 29 00.4 -9.3**
AML Almayashu 16.85 78 P **P** **16 26 15.9 +0.5**
SNR=9.1
EKS2 Erkin-Say 16.89 76 P **P** **16 26 16.2 +0.6**
SNR=6.7
TLCR 17.07 293⇑P Pn 16 26 08.6 -7.4
TLCR 17.07 293⇑P Pn 16 26 08.6 -7.4

ELL Elmali 17.16 264 P **P** **16 26 18.1 -0.5**
ELL pmax pmax
comp=Z,116nm,1.7s
ELL Elmali 17.16 264 P **P** **16 26 18.1 -0.5**
ELL IAmb IAmb 16 26 36.1
comp=Z,116nm,1.7s
SVE Sverdlovsk 17.26 17 *e*P **Pn** **16 26 18.5 +0.2**
SVE *e*S **Sn** **16 29 20.6 -8.5**
TIRR Tirgusor 17.27 290 P **Pn** **16 26 18.8 +0.2**
TIRR pmax pmax
comp=Z,22nm,1.1s
TIRR Tirgusor 17.27 290 P **Pn** **16 26 18.8 +0.2**
TIRR IAmb IAmb 16 26 39.4
comp=Z,22nm,1.1s
EIL Elat 17.28 236 LR LR 16 33 21.8
comp=Z,32nm,19.1s,baz=182,slow=39
MILM Milestii Mici 17.37 299⇓ P **Pn** **16 26 17.4 -2.4**
AAK Ala-Archa 17.42 76⇑ *e*P **P** **16 26 22.8 +1.3**
AAK Ala-Archa 17.42 76 P **P** **16 26 23.9 +2.4**
comp=Z,0.5nm,0.3s,baz=236,slow=4.0,SNR=19
AAK LR LR 16 33 59.4
comp=Z,41nm,18.2s,baz=280,slow=40
AAK Ala-Archa 17.42 76 P **P** **16 26 23.9 +2.4**
SNR=6.3
AAK Ala-Archa 17.42 76 P **P** **16 26 22.7 +1.2**
AAK Ala-Archa 17.42 76 ⇓P **Pn** **16 26 20.8 +0.2**
comp=Z,3.7nm,0.6s
AAK ⇑S **Sn** **16 29 26.3 -7.2**
comp=Z,3.6nm,0.8s
USP Ospenovka 17.42 74 P **P** **16 26 23.4 +2.0**
SNR=5.5
UCH Uchtor 17.45 77 P **P** **16 26 24.0 +1.8**
SNR=7.5
MOS Moscow 17.56 334 *e*P Pn 16 26 14.4 -7.6
MOS *e* 16 29 32.7
KBK Karagaybulak 17.75 76 P **P** **16 26 31.2 +6.0**
SNR=12
RAYN Ar Rayn 17.80 198 P **Pn** **16 26 25.9 +0.6**
RAYN pmax pmax
comp=Z,3.0nm,0.9s
RAYN Ar Rayn 17.80 198 P **Pn** **16 26 25.9 +0.6**
BRVK Borovoye 17.86 40⇑ *e*P **Pn** **16 26 26.1 +0.4**
BRVK pmax pmax
comp=Z,11nm,1.0s
BRVK Borovoye 17.86 40 P **Pn** **16 26 25.0 -0.7**
BRVK Borovoye 17.86 40⇑ P **Pn** **16 26 25.7 0.0**
comp=Z,7.7nm,0.8s
BRVK ⇑S **Sn** **16 29 39.0 -4.6**
comp=Z,12nm,0.9s
BVAR Borovoye Array 17.89 40 P **Pn** **16 26 25.4 -0.7**
comp=Z,1.1nm,0.3s,baz=225,slow=10,SNR=56
BVAR S **Sn** **16 29 37.4 -7.0**
comp=Z,1.3nm,0.3s,baz=240,slow=25,SNR=10
KIRV Kirov 17.96 357 P **Pn** **16 26 26.7 -0.2**
comp=Z,3.6nm,0.3s,baz=145,slow=2.2,SNR=12
SORM Soroca 17.98 302 ⇓P **P** **16 26 27.5 +0.1**
SORM Soroca 17.98 302 ⇓P **P** **16 26 27.5 +0.1**
KZA Kyzart 18.00 78 P **P** **16 26 31.5 +3.3**
SNR=12
TKM2 Tokmak 2 18.23 75 ⇓P **Pn** **16 26 32.1 +1.6**
comp=Z,4.7nm,0.6s
AKASG Malin Array Be 18.33 311*ce*P **Pn** **16 26 31.3 -0.2**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 18.33 311 P **P** **16 26 29.5 -1.8**
comp=Z,7.5nm,0.3s,baz=90,slow=8.7,SNR=33
AKASG S **Sn** **16 29 50.8 -4.4**
comp=Z,0.3nm,0.3s,baz=109,slow=22,SNR=4.4
AKASG Malin Array Be 18.33 311 P **P** **16 26 30.3 -1.0**
AKBB Malin Array Si 18.33 311⇑ *e*P **P** **16 26 30.3 -1.0**
AKBB Malin Array Si 18.33 311 P **P** **16 26 30.7 -0.6**
AKBB IAmb IAmb 16 26 33.7
comp=Z,13nm,0.6s
BOOM Boomskoye usch 18.49 76 P **Pn** **16 26 35.7 +1.9**
BOOM pmax pmax
comp=Z,7.0nm,0.7s
BOOM Boomskoye usch 18.49 76 P **Pn** **16 26 35.7 +1.9**
VRI Vrincioaia 18.61 294 ⇓P **P** **16 26 34.2 -0.2**
VRI Vrincioaia 18.61 294 ⇓P **P** **16 26 34.2 -0.2**
NRN Naryn 18.62 80 P **Pn** **16 26 37.3 +1.9**
NRN pmax pmax
comp=Z,3.0nm,0.9s
NRN Naryn 18.62 80 P **Pn** **16 26 37.3 +1.9**
PLOR Plostina 18.66 294 ⇑P **P** **16 26 34.5 -0.5**
PLOR Plostina 18.66 294 ⇑P **P** **16 26 34.5 -0.5**
MLR Muntele Rosu 19.11 293 ⇓P **P** **16 26 40.2 +0.2**
MLR Muntele Rosu 19.11 293 P **Pn** **16 26 42.3 +1.2**
comp=Z,0.5nm,0.3s,baz=4.8,slow=11,SNR=6.2
MLR Muntele Rosu 19.11 293 ⇓P **P** **16 26 40.2 +0.2**
MLR Muntele Rosu 19.11 293 P **P** **16 26 38.9 -1.1**
KDJ Kajisay 19.43 77 P **P** **16 26 44.0 +0.4**
KDJ pmax pmax
comp=Z,6.0nm,0.9s
KDJ Kajisay 19.43 77 P **P** **16 26 44.0 +0.4**
DOPR Dopca 19.55 294 ⇑P **P** **16 26 43.9 -0.8**
KARP Karpathos 19.66 263 P **P** **16 26 45.8 -0.2**
KARP IAmb IAmb 16 26 59.0
comp=Z,47nm,1.1s
VOIR 19.73 293 ⇑P **Pn** **16 26 47.5 -1.0**
VOIR 19.73 293 ⇑P **Pn** **16 26 47.5 -1.0**
BURAR Bucovina Array 19.91 299 ⇑P **P** **16 26 48.7 0.0**
BURAR Bucovina Array 19.91 299 ⇑P **P** **16 26 48.7 0.0**
BURAR Bucovina Array 19.91 299 P **P** **16 26 47.7 -1.0**
BUR08 Bucovina Ar. S 19.93 299 P **P** **16 26 48.6 -0.3**
ARR Arges 20.02 292 ⇓P **P** **16 26 50.1 +0.2**
VTS Vitosha 21.04 285 ⇑P **P** **16 27 01.8 +0.8**
VTS Vitosha 21.04 285 ⇑P **P** **16 27 01.8 +0.8**
VTS Vitosha 21.04 285 P **P** **16 27 01.5 +0.5**
PRGR Permogore 21.27 352 *e*P **P** **16 27 00.3 -2.8**
PRGR *e*S **S** **16 30 49.2 -7.7**
PRGR pmax pmax
comp=Z,6.0nm,0.6s
KURBB Kurchatov Arra 21.35 53 P **P** **16 27 07.1 +3.0**
comp=Z,1.6nm,0.5s,baz=260,slow=12,SNR=16
KURBB S **S** **16 31 02.3 +3.6**
comp=Z,0.7nm,0.8s,baz=254,slow=27,SNR=5.2
KURBB Kurchatov Arra 21.35 53 ⇓P **P** **16 27 07.5 +3.4**
comp=Z,6.7nm,0.8s
KURK Kurchatov 21.43 53⇑ *e*P **P** **16 27 08.1 +3.1**
KURK pmax pmax
comp=Z,19nm,1.6s
KURK Kurchatov 21.43 53 P **P** **16 27 07.2 +2.3**
KURK Kurchatov 21.43 53 ⇓P **P** **16 27 07.3 +2.3**
comp=Z,6.3nm,0.7s
IDI Anoyia 21.48 264 P **P** **16 27 04.3 -1.3**
comp=Z,6.6nm,0.7s,baz=73,slow=15,SNR=5.8
IDI LR LR 16 37 25.2
comp=Z,10nm,18.7s,baz=128,slow=43
DRGR 21.48 296⇑P **P** **16 27 05.9 +0.3**
DRGR 21.48 296⇑P **P** **16 27 05.9 +0.3**
KWP Kalwaria Pacla 21.96 304 P **P** **16 27 10.3 -0.3**
KWP pmax pmax
comp=Z,86nm,0.8s
KWP Kalwaria Pacla 21.96 304 P **P** **16 27 10.3 -0.3**
KOLS Kolonicke sedl 22.09 302 *e*P **P** **16 27 13.8 +1.7**
KOLS Kolonicke sedl 22.09 302 *e*P **P** **16 27 13.8 +1.7**
AGG Agios Georgios 22.27 275 P **P** **16 27 14.0 -0.2**
AGG pmax pmax
comp=Z,17nm,1.5s
AGG Agios Georgios 22.27 275 P **P** **16 27 14.0 -0.2**
AGG IAmb IAmb 16 27 22.6
comp=Z,17nm,1.5s
MAKZ Makanchi 22.89 64 P **P** **16 27 23.6 +3.0**
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
MAKZ Makanchi 22.89 64 P **P** **16 27 23.6 +3.0**
MAKZ Makanchi 22.89 64⇑P **P** **16 27 23.5 +2.9**
comp=Z,3.0nm,0.9s
SUW Suwalki 23.07 315 P **P** **16 27 23.2 +0.8**
SUW pmax pmax
comp=Z,19nm,0.9s
SUW Suwalki 23.07 315 P **P** **16 27 23.1 +0.8**
SUW IAmb IAmb 16 27 51.4
comp=Z,19nm,0.9s
ITM Ithomi 23.08 271 P **P** **16 27 20.7 -1.9**
ITM IAmb IAmb 16 27 27.0
comp=Z,20nm,1.3s
MK31 Makanchi Array 23.10 64 P **P** **16 27 25.1 +2.3**
MK31 pmax pmax
comp=Z,3.0nm,1.1s
MK31 Makanchi Array 23.10 64 P **P** **16 27 25.1 +2.3**
MK31 Makanchi Array 23.10 64 ⇓P **P** **16 27 24.9 +2.1**
comp=Z,1.2nm,0.5s,baz=257,slow=7.8,SNR=35
MKAR Makanchi Array 23.10 64 P **P** **16 27 25.5 +2.7**
comp=Z,0.8nm,0.4s,baz=258,slow=9.8,SNR=29
MKAR S Sn 16 31 41.8 -8.1
comp=Z,0.5nm,0.6s,baz=282,slow=28,SNR=5.0
MKAR Makanchi Array 23.10 64 P **P** **16 27 24.1 +1.4**
PUL Pulkovo 23.17 333*de*P **P** **16 27 21.9 -1.3**
PUL pmax pmax
comp=Z,23nm,0.7s
OJC Ojcow 23.92 304 P **P** **16 27 30.2 -0.3**
OJC pmax pmax
comp=Z,6.0nm,0.7s
OJC Ojcow 23.92 304 P **P** **16 27 30.2 -0.3**
OJC IAmb IAmb 16 27 31.9
comp=Z,6.0nm,0.7s
PDG Podgorica 23.98 285 P **P** **16 27 31.1 -0.1**
PDG IAmb IAmb 16 27 32.5
comp=Z,7.1nm,0.8s
VYHS Vyhne 24.27 300 *e*P **P** **16 27 34.6 +0.8**
VYHS Vyhne 24.27 300 *e*P **P** **16 27 34.6 +0.8**
SCTE Santa Cesarea 24.96 279 P **P** **16 27 39.0 -1.0**
SCTE IAmb IAmb 16 27 57.1
comp=Z,24nm,1.2s
MORC Moravsky Berou 25.28 302 P **P** **16 27 43.5 +0.5**
MORC pmax pmax
comp=Z,6.0nm,0.9s
MORC Moravsky Berou 25.28 302 P **P** **16 27 43.5 +0.5**
MODS Modra-Piesok 25.29 299 *e*P **P** **16 27 44.5 +1.4**
MODS Modra-Piesok 25.29 299 *e*P **P** **16 27 44.5 +1.4**
VRAC Vranov 25.84 301 P **P** **16 27 49.4 +1.4**
comp=Z,3.3nm,0.8s,baz=115,slow=11,SNR=4.8
FIA1 FINESS Array S 25.84 332 P **P** **16 27 48.1 +0.3**
FIA1 IAmb IAmb 16 28 02.0
comp=Z,18nm,1.2s
FINES FINESS Array B 25.84 332 P **P** **16 27 48.2 +0.3**
comp=Z,5.8nm,0.7s,baz=135,slow=10,SNR=24
FINES FINESS Array B 25.84 332 P **P** **16 27 48.0 +0.2**
ZAA0 Zalesovo Array 26.02 48 P **P** **16 27 52.1 +2.5**
ZALV Zalesovo Beam 26.02 48 *i* P **P** **16 27 54.0 +4.4**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 26.02 48 P **P** **16 27 52.4 +2.8**
comp=Z,1.0nm,0.3s,baz=257,slow=11,SNR=5.5
ZALV LR LR 16 39 04.1
comp=Z,38nm,21.4s,baz=293,slow=38
ZALV Zalesovo Beam 26.02 48 P **P** **16 27 49.3 -0.3**
CONA Conrad Observa 26.21 298 *i* P **P** **16 27 54.3 +2.8**
comp=Z,4.8nm,1.0s
ARSA Arzberg 26.42 296 *i* P **P** **16 27 54.7 +1.5**
comp=Z,5.5nm,1.0s
SGRT San Giovanni R 26.67 284 P **P** **16 27 55.0 -0.7**
SGRT IAmb IAmb 16 28 16.6
comp=Z,28nm,1.6s
SOKA Soboth 26.75 295 *i* P **P** **16 27 59.3 +3.0**
comp=Z,9.8nm,1.0s
OBKA Obir 27.08 295 *i* P **P** **16 28 03.6 +4.2**
comp=Z,6.8nm,1.1s
GEC2 GERESS Array S 27.69 300 P **P** **16 28 05.9 +1.1**
GEC2 IAmb IAmb 16 28 15.5
comp=Z,12nm,1.6s
GERES GERESS Array B 27.69 300 P **P** **16 28 05.3 +0.5**
comp=Z,0.4nm,0.5s,baz=97,slow=8.3,SNR=4.6
GERES GERESS Array B 27.69 300 P **P** **16 28 04.4 -0.4**
KBA Koelnbreinsper 27.90 296 *i* P **P** **16 28 06.3 -0.5**
comp=Z,4.9nm,1.0s
INTR Introdacqua 27.98 285 P **P** **16 28 05.9 -1.4**
INTR IAmb IAmb 16 28 31.8
comp=Z,19nm,1.4s
NRCA Norcia 28.42 287 P **P** **16 28 09.6 -1.7**
NRCA IAmb IAmb 16 28 37.5
comp=Z,9.7nm,1.3s
SOCY Socotra 28.48 175 P **P** **16 28 10.1 -1.9**
SOCY IAmb IAmb 16 28 20.5
comp=Z,18nm,1.1s
LVZ Lovozero 28.75 347 P **P** **16 28 12.0 -1.9**
LVZ pmax pmax
comp=Z,43nm,1.4s
LVZ Lovozero 28.75 347 P **P** **16 28 12.0 -1.9**
WTTA Wattenberg 29.06 296 *i* P **P** **16 28 17.2 +0.1**
comp=Z,2.7nm,0.5s
SQTA Sankt Quirin 29.36 296 *i* P **P** **16 28 16.6 -3.0**
comp=Z,5.6nm,1.0s
GRA1 Grafenberg Arr 29.36 301 P **P** **16 28 18.4 -1.1**
GRA1 IAmb IAmb 16 28 26.0
comp=Z,6.6nm,0.8s
GRF Grafenberg Arr 29.36 301 P **P** **16 28 18.4 -1.1**
GRF pmax pmax
comp=Z,7.0nm,0.8s
MOTA Moosalm 29.42 297 *i* P **P** **16 28 18.0 -2.3**
comp=Z,8.3nm,1.4s
FETA Feichten 29.69 296 *i* P **P** **16 28 22.6 -0.1**
comp=Z,7.6nm,1.3s
FUORN Ofenpass-Fuorn 30.03 295 P **P** **16 28 26.7 +1.0**
FUORN IAmb IAmb 16 28 29.7
comp=Z,16nm,1.4s
HFS Hagfors 30.27 323 P **P** **16 28 28.0 +0.6**
HFS Hagfors 30.27 323 P **P** **16 28 27.9 +0.6**
comp=Z,3.4nm,0.5s,baz=97,slow=8.3,SNR=20
NC602 NORSAR Array S 31.49 323 P **P** **16 28 38.5 +0.4**
NC405 NORSAR Array S 31.55 324 P **P** **16 28 39.3 +0.6**
NB201 NORSAR Array S 31.72 323 P **P** **16 28 40.2 0.0**
NC303 NORSAR Array S 31.75 324 P **P** **16 28 41.2 +0.8**
NB2 NORSAR Subarra 31.75 323 P **P** **16 28 40.4 -0.1**
comp=Z,0.8nm,0.5s,baz=116,slow=8.6
NOA NORSAR Array B 31.75 323 P **P** **16 28 40.5 -0.1**
comp=Z,1.5nm,0.6s,baz=130,slow=18,SNR=8.1
NOA LR LR 16 42 40.6
comp=Z,18nm,19.4s,baz=0.0,slow=39
NAO01 NORSAR Array S 31.83 323 P **P** **16 28 41.1 0.0**
ARCES ARCESS Array B 31.93 343 P **P** **16 28 43.0 +1.1**
comp=Z,3.5nm,1.0s,baz=150,slow=10.0,SNR=15
ARCES LR LR 16 42 27.7
comp=Z,28nm,18.6s,baz=270,slow=38
NBO00 NORSAR Array S 31.94 323 P **P** **16 28 42.2 0.0**
NC204 NORSAR Array S 32.04 324 P **P** **16 28 42.3 -0.8**
KONO Kongsberg 32.04 320 P **P** **16 28 42.6 -0.4**
KONO pmax pmax
comp=Z,56nm,1.6s
KONO Kongsberg 32.04 320 P **P** **16 28 42.6 -0.4**
SENIN Lac Senin/Sane 32.09 295 P **P** **16 28 43.4 -0.5**
SENIN IAmb IAmb 16 29 11.7
comp=Z,23nm,1.6s
BNI Bardonecchia 32.69 293 P **P** **16 28 49.4 +0.4**
BNI pmax pmax
comp=Z,38nm,1.6s
BNI Bardonecchia 32.69 293 P **P** **16 28 49.4 +0.4**
SSB Saint Sauveur 34.15 294 P **P** **16 29 01.6 0.0**
SSB pmax pmax
comp=Z,16nm,1.4s
SSB Saint Sauveur 34.15 294 P **P** **16 29 01.6 0.0**
SSB IAmb IAmb 16 29 03.1
comp=Z,16nm,1.4s
ULN Ulaanbaatar 39.79 60⇓ *e*P **P** **16 29 51.9 +2.3**
ULN pmax pmax
comp=Z,6.0nm,2.5s
ULN Ulaanbaatar 39.79 60 P **P** **16 29 52.3 +2.7**
SPA0 Spitsbergen Ar 40.19 349 P **P** **16 29 54.2 +1.8**
SPITS Spitsbergen Ar 40.19 349 P **P** **16 29 54.1 +1.7**
comp=Z,5.3nm,0.7s,baz=128,slow=11,SNR=18
ESDC Sonseca Array 41.65 287 P **P** **16 30 04.2 -0.7**
comp=Z,0.3nm,0.5s,baz=68,slow=10,SNR=4.1
CMAR Chiang Mai Arr 46.30 104 *i* P **P** **16 30 45.2 +2.8**
CMAR Chiang Mai Arr 46.30 104 P **P** **16 30 43.8 +1.4**
comp=Z,0.3nm,0.6s,baz=300,slow=8.0,SNR=4.7
TORD Torodi Ar. Bea 51.20 252 P **P** **16 31 18.8 -1.1**
comp=Z,0.2nm,0.3s,baz=70,slow=6.4,SNR=3.0
DGAR Diego Garcia 51.66 153⇑ *e*P P 16 31 31.1 +7.7
GSI Gunungsitoli 57.29 121 P **P** **16 32 04.9 +0.5**
SFJD Kangerlussuaq 57.64 333 P **P** **16 32 06.8 +0.7**
SFJD pmax pmax
comp=Z,9.0nm,0.9s
SFJD Kangerlussuaq 57.64 333 P **P** **16 32 06.8 +0.7**
SFJD IAmb IAmb 16 32 07.3
comp=Z,8.6nm,0.9s
KSRS Korea Array 57.76 66 P **P** **16 32 08.3 +0.9**
comp=Z,0.7nm,0.7s,baz=302,slow=7.6,SNR=3.5
DBIC Dimbokro 60.30 252 P **P** **16 32 24.9 -0.4**
DBIC pmax pmax
comp=Z,11nm,1.5s
DBIC Dimbokro 60.30 252 P **P** **16 32 24.7 -0.5**
comp=Z,0.8nm,0.5s,baz=63,slow=4.5,SNR=3.7
DBIC Dimbokro 60.30 252 P **P** **16 32 24.9 -0.4**
DBIC IAmb IAmb 16 32 52.5
comp=Z,11nm,1.5s
LBTB Lobatse 69.60 205 P **P** **16 33 26.9 +1.3**
LBTB pmax pmax
comp=Z,6.0nm,0.6s
LBTB Lobatse 69.60 205 P **P** **16 33 26.9 +1.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LBTB				IAmb	IAmb	16 33 27.4	
	comp=Z,5.6nm,0.6s						
TOLK	Toolik Lake Re	69.88	8	P	P	16 33 28.6	+1.8
TOLK				IAmb	IAmb	16 33 55.1	
	comp=Z,2.9nm,1.2s						
C36M	Paulatuk	70.23	358	P	P	16 33 28.1	-0.7
C36M				IAmb	IAmb	16 33 42.3	
	comp=Z,7.6nm,1.6s						
SCHQ	Schefferville	71.21	327	P	P	16 33 35.1	+0.1
	comp=Z,9.8nm,1.2s,baz=45,slow=8.6,SNR=3.4						
SCHQ	Schefferville	71.21	327	P	P	16 33 34.9	-0.2
IMAR	Indian Mountai	71.91	11	P	P	16 33 40.4	+1.4
BOSA	Boshof	73.07	204	P	P	16 33 47.1	+0.7
BOSA				pmax	pmax		
	comp=Z,12nm,1.5s						
BOSA	Boshof	73.07	204	P	P	16 33 47.0	+0.7
	comp=Z,1.5nm,0.4s,baz=9.7,slow=4.9,SNR=7.4						
BOSA	Boshof	73.07	204	P	P	16 33 47.1	+0.7
BOSA				IAmb	IAmb	16 33 58.1	
	comp=Z,12nm,1.5s						
MLY	Manley	73.22	10	P	P	16 33 48.7	+1.8
ILAR	Eielson Array	73.91	8	P	P	16 33 52.9	+2.0
ILAR	Eielson Array	73.91	8	P	P	16 33 52.1	+1.2
	comp=Z,0.4nm,0.9s,baz=330,slow=4.2,SNR=4.3						
ILAR	Eielson Array	73.91	8	P	P	16 33 52.9	+2.0
BPAW	Bear Paw Mtn.	74.08	10	P	P	16 33 54.0	+2.1
BPAW				IAmb	IAmb	16 34 22.0	
	comp=Z,7.5nm,1.4s						
KTH	Kantishna Hill	74.61	10	P	P	16 33 55.9	+0.8
KTH				IAmb	IAmb	16 34 13.5	
	comp=Z,20nm,1.6s						
RIDG	Independent Ri	75.13	7	P	P	16 33 58.4	+0.4
DOT	Dot Lake	75.29	7	P	P	16 34 00.5	+1.6
DOT				IAmb	IAmb	16 34 29.1	
	comp=Z,13nm,1.6s						
YKA	Yellowknife Ar	76.55	353	P	P	16 34 06.8	+0.8
YKA	Yellowknife Ar	76.55	353	P	P	16 34 06.6	+0.6
	comp=Z,0.4nm,0.6s,baz=9.7,slow=5.8,SNR=11						
YKA	Yellowknife Ar	76.55	353	P	P	16 34 06.8	+0.8
SML	Sawmill	76.62	9	P	P	16 34 06.5	-0.1
SUA	Susitna One	76.64	11	P	P	16 34 06.2	-0.5
SUA				IAmb	IAmb	16 34 33.4	
	comp=Z,5.8nm,1.1s						

IDC 02 16:37:32.4±1.1**, 19°.03N×121°.04E, h0km, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.4**/30**, mbtmp3.5**/4**, MS2.6**/1**, Ms1 2.8**/1**, ms1mx2.4**/26**, 1C, Error ellipse: s-maj=73.9km s-min=23.6km az=69.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LQP	Lukban	4.91	174	⇑eP	Pg	16 39 09.2	+2.6
CMAR	Chiang Mai Arr	20.93	272	LR	LR	16 51 28.0	
	comp=Z,17nm,19.2s,baz=20,slow=40						
WRA	Warramunga Arr	40.87	161	P	P	16 45 15.2	-1.1
	0.4nm,0.3s,baz=334,slow=10,SNR=8.8						
MKAR	Makanchi Array	42.06	320	P	P	16 45 26.2	+0.2
	0.2nm,0.6s,baz=110,slow=12,SNR=3.2						
ASAR	Alice Springs	44.25	163	P	P	16 45 45.0	+1.1
	0.2nm,0.5s,baz=345,slow=7.1,SNR=8.9						
YKA	Yellowknife Ar	87.75	23	P	P	16 50 22.6	-0.5
	0.4nm,0.7s,baz=311,slow=4.8,SNR=10.0						

IDC 02 16:54:58.3±2.8**, 10°.62S×113°.44E, h0km, mb3.3**/4**, mb1 3.4**/4**, mb1mx3.2**/36**, mbtmp3.3**/4**, Error ellipse: s-maj=140.1km s-min=23.6km az=46.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.17	117	P	P	16 59 57.0	+0.9
	0.3nm,0.7s,baz=291,slow=11,SNR=3.7						
ASAR	Alice Springs	23.43	126	P	P	17 00 08.6	-0.8
	0.3nm,0.7s,baz=304,slow=10.0,SNR=5.6						
MKAR	Makanchi Array	63.57	337	P	P	17 05 31.1	+0.3
	0.2nm,0.4s,baz=142,slow=7.8,SNR=5.7						
ZALV	Zalesovo Beam	68.75	342	P	P	17 06 03.5	-0.4
	0.6nm,0.5s,baz=148,slow=6.5,SNR=3.8						

*IDC **02** 16:55:31.6±3.1, 13°.66N×92°.57W, h0km, mb3.7/2, mb1 3.9/5, mb1mx3.5/43, mbtmp3.5/5, ML2.9/3, Error ellipse: s-maj=58.6km s-min=26.5km az=174.0*

ISC 02 16:55:36.2±2.0**, 13°.7N**±0°.2×**92°.52W**±0°.08**, h32km, n7,** σ**2.22**/9**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
APG	El Apazote	2.37	57	Pn	Pn	16 56 13.6	+0.4
	2.3nm,0.3s,baz=245,slow=6.0,SNR=35						
APG				Sn	Sb	16 56 45.0	-2.5
	4.0nm,0.3s,baz=114,slow=11,SNR=5.4						
CMIG	Matias Romero	4.07	326	Pn	Pn	16 56 33.1	-3.1
	0.3nm,0.3s,baz=130,slow=7.9,SNR=3.7						
CMIG				Sn	Sn	16 57 26.1	+3.3
	1.4nm,0.3s,baz=118,slow=9.2,SNR=4.9						
TEIG	Tepich	7.65	31	Pn	Pn	16 57 25.2	-0.3
TXAR	Lajitas Array	18.67	328	P	Pn	16 59 53.0	+0.7
	0.0nm,0.3s,baz=143,slow=12,SNR=3.6						
NVAR	Mina Array Bea	33.59	322	P	P	17 02 15.1	+1.3
	0.4nm,0.7s,baz=122,slow=9.3,SNR=4.1						
YKA	Yellowknife Ar	51.20	347	P	P	17 04 35.9	-0.3
	1.1nm,0.7s,baz=150,slow=7.6,SNR=10						
CMAR	Chiang Mai Arr	146.10	340	PKPbc	PKPbc	17 15 13.4	-0.6
	0.6nm,0.8s,baz=329,slow=4.5,SNR=4.8						

*IDC **02** 17:03:51.7±1.1, 34°.48N×138°.68E, h229km±10km, mb3.2/6, mb1 3.2/11, mb1mx3.0/48, mbtmp3.8/11, Error ellipse: s-maj=25.9km s-min=14.1km az=74.0*
*JMA **02** 17:03:51.9±0.1, 34°.52N×138°.55E, h234km±2km, M3.0*
*NEIC **02** 17:03:52.7±0.7, 34°.62N±0°.06×138°.59E±0°.08, h231km±10km, mb4.0/7, Error ellipse: s-maj=12.6km s-min=5.0km az=131.0*

ISC 02 17:03:52.3±0.8**, 34°.52N**±0°.06×**138°.53E**±0°.05**, h232km**±6km**, n46,** σ**0.66**/59**, mb3.6**/10**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSG	Sagara	0.32	299	P	Pn	17 04 23.2	+0.7
JIZS	Izushimoda	0.35	55	P	Pn	17 04 23.0	+0.4
JIZS				eS	S	17 04 46.6	+0.2
SHZ3	Shizuoka 3	0.60	335	P	Pn	17 04 23.8	+0.4
SHZ3				eS	S	17 04 48.3	+0.3
JFNN	Fujinakano	0.69	11	P	Pn	17 04 24.0	+0.3
JOD2	Odawara 2	0.88	32	P	Pn	17 04 24.9	+0.3
JOD2				eS	S	17 04 50.3	+0.3
JYN	Shimob	0.98	1	P	Pn	17 04 25.6	+0.4
INU	Inuyama	1.49	304	Pn	Pn	17 04 28.7	0.0
JIE	Ise	1.51	266	P	Pn	17 04 28.9	0.0
JIE				eS	S	17 04 56.5	-0.9
JRY	Ryogami san	1.53	12	P	Pn	17 04 28.8	-0.2
JRY				eS	S	17 04 57.2	-0.7
TTO1	TONANKAI O.B.S	1.70	239	P	Pn	17 04 30.6	+0.5
JHJ2	Mitsune	1.77	142	P	Pn	17 04 31.1	0.0
JHJ2	Mitsune	1.77	142	Pn	Pn	17 04 31.6	+0.5
JYTA	Yamagatataniai	1.82	307	P	Pn	17 04 31.8	+0.3
JYTA				eS	S	17 05 01.3	-0.9
BSO1	Boso 1	2.03	85	P	Pn	17 04 32.6	-0.2
BSO1				eS	S	17 05 04.2	-0.4
MJAR	Matsushiro Arr	2.04	353	P	Pn	17 04 33.7	+0.2
	2.0nm,0.3s,baz=165,slow=10.0,SNR=259						
MJAR				S	S	17 05 06.2	+0.2
	baz=246,slow=23,SNR=2.5						
MJAR	Matsushiro Arr	2.04	353		Pn	17 04 33.2	-0.3
MAJO	Matsushiro	2.04	353		Pn	17 04 33.9	+0.4
MAT	Matsushiro	2.04	353	P	Pn	17 04 33.9	+0.4
MAT				eS	S	17 05 05.8	-0.2
MAT	Matsushiro	2.04	353	P	Pn	17 04 34.0	+0.4
MAT				S	S	17 05 05.8	-0.2
MJB9	Matsu-Tunnel	2.04	353		Pn	17 04 34.0	+0.4
JAG	Ashikaga	2.05	21	P	Pn	17 04 33.4	-0.2
JAG				eS	S	17 05 04.7	-1.4
JWY	Kouya	2.44	264	P	Pn	17 04 37.5	-0.2
JWY				eS	S	17 05 12.2	-1.0
JTNC	Tanabenakahech	2.52	255	P	Pn	17 04 38.1	-0.3
JWT	Wachi	2.68	287	P	Pn	17 04 40.2	+0.1
JWT				eS	S	17 05 16.6	-0.9
JSZ	Suzu	3.07	342	P	Pn	17 04 44.1	-0.2
JNU	Nakatsue	6.51	260	P	Pn	17 05 26.3	-0.3
	0.5nm,0.3s,baz=97,slow=4.1,SNR=5.3						
KSRS	Korea Array	9.08	292	P	Pn	17 06 01.0	+1.8
	0.4nm,0.3s,baz=105,slow=13,SNR=9.6						
ASAJ	Asahikawa	10.09	17	P	Pn	17 06 10.6	-1.5
	0.9nm,0.3s,baz=242,slow=11,SNR=8.5						
JKA	Kamikawa-asahi	10.09	17		Pn	17 06 10.6	-1.5
KLR	Kul'dur	15.53	343	P	P	17 07 17.9	-1.0
	0.2nm,0.3s,baz=121,slow=12,SNR=5.7						
SONM	Songino Array	27.38	309	P	P	17 09 17.6	+1.3
	0.9nm,0.7s,baz=121,slow=7.8,SNR=6.0						
SONM	Songino Array	27.38	309	P	P	17 09 17.2	+0.9
TIXI	Tiksi	37.55	355	P	P	17 10 43.1	-0.6
ZALV	Zalesovo Beam	41.94	315	P	P	17 11 20.6	+0.5
	0.5nm,0.3s,baz=102,slow=7.4,SNR=3.6						
MK31	Makanchi Array	43.52	304	P	P	17 11 33.6	+0.6
MKAR	Makanchi Array	43.52	304	P	P	17 11 33.6	+0.6
	0.8nm,0.4s,baz=85,slow=10,SNR=28						
MAKZ	Makanchi	43.73	304	P	P	17 11 35.0	+0.4
MAKZ				IAmb	IAmb	17 11 42.9	
	comp=Z,10nm,1.8s						
KURK	Kurchatov	45.68	310	P	P	17 11 50.2	+0.3
KURK				IAmb	IAmb	17 11 50.7	
	comp=Z,2.3nm,0.7s						
KK31	Karatay Array	52.38	301	P	P	17 12 41.2	+0.4
KKAR	Karatay Array	52.38	301	P	P	17 12 41.1	+0.4
KKAR	Karatay Array	52.38	301	P	P	17 12 41.2	+0.4
KKAR				IAmb	IAmb	17 12 41.5	
	comp=Z,1.6nm,0.8s						
WRA	Warramunga Arr	54.30	185	P	P	17 12 54.3	-0.5
	comp=Z,0.3nm,0.3s,baz=360,slow=7.6,SNR=14						
CHGR	Chuyangaron	54.64	296	P	P	17 12 57.2	-0.1
CHGR				IAmb	IAmb	17 13 33.0	
	comp=Z,16nm,1.7s						
ABKAR	Akbulak array	57.78	311	P	P	17 13 19.5	+0.4
ABKAR				IAmb	IAmb	17 13 19.9	
	comp=Z,2.0nm,0.5s						
ASAR	Alice Springs	58.03	185	P	P	17 13 20.6	-0.5
	comp=Z,0.3nm,0.9s,baz=5.9,slow=4.9,SNR=8.2						
FINES	FINESS Array B	69.93	332	P	P	17 14 38.3	+0.4
	comp=Z,3.5nm,1.1s,baz=38,slow=3.4,SNR=3.7						

*TUL **02** 17:20:26.9±0.0, 36°.13N×96°.90W, h4km, ML3.2, Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*
*NEIC **02** 17:20:26.6±1.6, 36°.11N±0°.03×96°.92W±0°.05, h5km±2km, Error ellipse: s-maj=7.0km s-min=5.3km az=261.0*
*ANF **02** 17:20:27.9±0.6, 36°.03N×96°.86W, h0km, ML3.9/8, Error ellipse: s-maj=9.3km s-min=2.9km az=171.0*

ISC 02 17:20:26.3±0.7**, 36°.12N**±0°.04×**96°.90W**±0°.03**, h4km, n53,** σ**1.29**/61**, Oklahoma**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADOK	Arcadia Dam	0.60	219		Pg	17 20 37.6	-0.4
OKCFA	Oklahoma City	0.84	212		Pg	17 20 43.1	+0.7
OKCSW	OKLAHOMA CITY	0.84	211		Pg	17 20 41.0	-1.4
TUL1	Leonard	0.93	103		Pg	17 20 44.1	0.0
TUL1	Leonard	0.93	103	P	Pg	17 20 44.2	0.0
	baz=281						
TUL1				S	Sg	17 20 56.6	+0.5
	baz=281						
FNO	Franklin	0.95	205		Pb	17 20 46.0	+0.5
W35A	Tecumseh	0.97	179		Pg	17 20 44.8	-0.1
X34A	Smith Ranch, M	1.70	207		Pn	17 20 57.8	+1.0
U32A	Winter Ranch,	1.71	279		Pn	17 20 57.8	+0.8
X37A	Clayton	1.98	140		Pn	17 21 01.9	+1.3
WMOK	Wichita Mounta	2.06	229		Pn	17 21 02.8	+1.0
WMOK	Wichita Mounta	2.06	229	P	Pn	17 21 02.9	+1.1
	baz=48						
WMOK				S	Sb	17 21 30.8	+0.4
	baz=48						
HHAR	Hobbs	2.40	85		Pn	17 21 07.1	+0.6
W39A	Magazine	2.70	109		Pn	17 21 10.9	+0.4
W39A	Magazine	2.70	109	P	Pn	17 21 12.1	+1.6
	baz=290						
W39A				S	Sn	17 21 45.8	+2.1
	baz=290						
MIAR	Mount Ida	3.14	119		Pn	17 21 16.6	-0.1
MIAR	Mount Ida	3.14	119	P	Pn	17 21 18.2	+1.6
	baz=300						
MIAR				S	Sn	17 21 56.4	+1.8
	baz=300						
U40A	Yellville	3.28	85		Pn	17 21 18.9	+0.3
U40A	Yellville	3.28	85	P	Pn	17 21 19.4	+0.9
	baz=266						
U40A				Sb	Sg	17 22 09.3	-2.5
	baz=266						
CBKS	Cedar Bluff	3.51	321		Pb	17 21 30.7	+1.7
X40A	Basin Creek Fa	3.71	115		Pn	17 21 25.4	+1.0
X40A	Basin Creek Fa	3.71	115	P	Pn	17 21 25.8	+1.5
	baz=297						
WHAR	Wooly Hollow	3.85	101		Pn	17 21 27.0	+0.7
MGMO	Mountain Grove	3.87	73		Pn	17 21 26.2	-0.4
FCAR	Ozark Folk Cen	3.88	92	Pn	Pn	17 21 27.4	+0.6
W41B	Gary Mavity, V	3.91	103	P	Pn	17 21 28.3	+1.1
	baz=285						
W41B				S	Sn	17 22 14.2	+0.8
	baz=285						
UALR	University of	3.96	109	Pn	Pn	17 21 27.4	-0.5
AMTX	Amarillo	4.09	254	Pn	Pn	17 21 29.4	-0.3
WHTX	Lake Whitney,	4.15	187	Pg	Pb	17 21 40.2	+0.3
ABTX	Abilene, Hawle	4.16	214		Pb	17 21 39.0	-1.1
Z41A	Richland Creek	4.42	129	S	Sn	17 22 25.7	-0.5
	baz=311						
CCM	Cathedral Cave	4.92	65		Pn	17 21 40.6	-0.4
HBAR	Harrisburg	5.11	95	Pn	Pn	17 21 44.2	+0.6
PBMO	Poplar Bluff	5.26	81	Pg	Pb	17 21 54.4	-4.4
PBMO					Sn	17 22 44.3	-2.5
BGNE	Belgrade	5.37	350	Pn	Pn	17 21 48.4	+1.2
BGNE				Sn	Sn	17 22 47.2	-2.2
KSCO	Kaye Shedlock'	5.38	304	Pg	Pb	17 22 01.9	+0.9
PEBM	Pemiscott Bayo	5.70	88		Sb	17 23 17.1	+2.1
T25A	Trinidad	6.12	282	Pn	Pn	17 21 59.0	+1.2
JCT	Junction City	6.13	204	Pn	Pn	17 21 57.5	-0.2
OGNE	Ogallala	6.27	322	Pn	Pn	17 22 01.4	+1.7
S44A	Carbondale	6.33	73	Sn	Sn	17 23 11.4	-1.6
SIUC	Southern Illin	6.36	73	Sn	Sn	17 23 11.7	-2.1
SDCO	Great Sand Dun	7.07	286	Pn	Pn	17 22 12.1	+1.2
GDL2	Guadalupe Moun	7.32	240		Pb	17 22 33.2	-0.8
L40A	Anamosa	7.39	35	Pn	Pn	17 22 15.0	0.0
ECSD	EROS Data Cent	7.60	2	Pn	Pn	17 22 18.6	+0.7
ISCO	Idaho Springs	7.80	301		Pn	17 22 20.5	-0.3
T47A	Sharon Grove	7.93	81	Sn	Sn	17 23 52.9	+0.3
L42A	Oliver, Polo	8.13	42	Pn	Pn	17 22 25.0	-0.2
MNTX	Cornudas Mount	8.31	240	Pn	Pn	17 22 29.3	+1.6
TX31	Lajitas Ar. Si	8.85	222	Pn	Pn	17 22 34.7	-0.4
TX32	Lajitas Array	8.85	222	Pn	Pn	17 22 34.8	-0.3
RSSD	Black Hills	9.67	328	Pn	Pn	17 22 48.0	+1.5

*IDC **02** 17:43:15.8±0.7, 6°.27N×149°.15E, h0km, mb4.3/13, mb1 4.5/14, mb1mx4.3/33, mbtmp4.3/14, ML4.7/1, MS3.2/6, Ms1 3.2/6, ms1mx2.8/37, Error ellipse: s-maj=25.4km s-min=14.8km az=93.0*
*NEIC **02** 17:43:18.4±1.6, 6°.28N±0°.03×149°.1E±0°.1, h16km±4km, mb4.6/26, Error ellipse: s-maj=21.3km s-min=1.8km az=80.0*

ISC 02 17:43:17.3±0.5**, 6°.38N**±0°.06×**149°.07E**±0°.09**, h10km, n67,** σ**1.48**/66**, mb4.5**/25**, Eastern Caroline Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GUMO	Guam	8.27	330	Pn	Pn	17 45 17.5	+0.1
	9.1nm,0.3s,baz=154,slow=14,SNR=5.9						
GUMO				Sn	Sn	17 46 45.0	-6.0
	12nm,0.3s,baz=0.0,slow=20,SNR=3.0						
GUMO	Guam	8.27	330		Pn	17 45 16.9	-0.5
GUMO					Sn	17 46 45.0	-6.0
MANU	Manus Island	8.54	192	Pn	Pn	17 45 18.0	-3.1
PATS	Pohnpei	9.20	87	Pn	Pn	17 45 27.8	-2.4
KRVT	Keravat (AS076	11.02	164	LR	LR	17 49 55.5	
	comp=Z,78nm,18.1s,baz=47,slow=37						
JAY	Jayapura	12.15	224	LR	LR	17 50 06.5	
	comp=Z,113nm,19.0s,baz=43,slow=34						
SIJI	Sorong	19.17	249	P	Pn	17 47 44.4	+2.2
	0.3nm,0.3s,baz=114,slow=18,SNR=2.8						
SIJI				LR	LR	17 53 23.4	
	comp=Z,89nm,18.1s,baz=34,slow=32						
H11S3	WAKE ISLAND Hy	20.98	53	T	T	18 09 24.3	
	baz=236,slow=76,SNR=47						
H11S2	WAKE ISLAND Hy	20.99	53	T	T	18 09 20.7	
	baz=236,slow=76,SNR=54						
H11S1	WAKE ISLAND Hy	20.99	53	T	T	18 09 25.4	
	baz=236,slow=76,SNR=51						
COEN	Coen	21.03	196	P	P	17 48 01.6	0.0
H11N1	WAKE ISLAND Hy	21.81	51	T	T	18 10 22.0	
	baz=234,slow=75,SNR=29						
H11N2	WAKE ISLAND Hy	21.83	51	T	T	18 10 23.1	
	baz=234,slow=75,SNR=75						
H11N3	WAKE ISLAND Hy	21.83	51	T	T	18 10 23.1	
	baz=234,slow=75,SNR=37						
TNTI	Ternate	22.35	256	P	P	17 48 15.8	0.0
WR0	Warramunga Arr	29.82	208	P	P	17 49 24.8	0.0
WR0				IAmb	IAmb	17 49 25.8	
	comp=Z,10nm,1.3s						
WRAB	Tennant Creek	29.89	209	P	P	17 49 24.7	-0.7
WRAB				IAmb	IAmb	17 49 25.7	
	comp=Z,6.6nm,0.9s						
WRA	Warramunga Arr	29.90	209	P	P	17 49 24.6	-1.0
	comp=Z,2.7nm,0.8s,baz=34,slow=9.7,SNR=12						
WRA				PcP	PcP	17 52 28.1	-0.5
	comp=Z,0.7nm,0.6s,baz=24,slow=2.8,SNR=6.4						
WRA				LR	LR	18 00 36.0	
	comp=Z,48nm,19.7s,baz=40,slow=35						
WRA	Warramunga Arr	29.90	209	P	P	17 49 24.6	-1.0
AS31	Alice Springs	33.33	206	P	P	17 49 54.9	-0.8
ASAR	Alice Springs	33.33	206	P	P	17 49 55.0	-0.7
	comp=Z,2.3nm,0.6s,baz=33,slow=7.2,SNR=60						
ASAR				PcP	PcP	17 52 37.2	-0.6
	comp=Z,1.4nm,0.9s,baz=28,slow=2.3,SNR=8.2						
ASAR	Alice Springs	33.33	206	P	P	17 49 54.6	-1.2
ASAR					PcP	17 52 37.7	-0.1
FITZ	Fitzroy Crossi	33.56	223	P	P	17 49 56.8	-0.9
FITZ				IAmb	IAmb	17 49 57.9	
	comp=Z,7.3nm,0.7s						
KSRS	Korea Array	36.44	331	P	P	17 50 23.4	+1.0
	comp=Z,5.5nm,0.9s,baz=149,slow=9.2,SNR=16						
KSAR	Wonju Array Be	36.44	331	P	P	17 50 22.0	-0.4
STKA	Stephens Creek	38.70	190	P	P	17 50 40.5	-1.1
	comp=Z,1.7nm,0.6s,baz=329,slow=5.0,SNR=4.9						
STKA				LR	LR	18 07 14.6	
	comp=Z,34nm,18.1s,baz=189,slow=37						
ENH	Enshi	44.10	308	P	P	17 51 26.2	+0.1
ENH				IAmb	IAmb	17 51 28.2	
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	46.18	312	P	P	17 51 42.7	+0.1
PETK	Petropavlovsk-	47.12	7	P	P	17 51 51.1	+1.5
	comp=Z,2.4nm,0.7s,baz=73,slow=12,SNR=4.3						
PETK				PcP	PcP	17 53 21.8	+0.5
	comp=Z,7.2nm,1.1s,baz=241,slow=4.8,SNR=4.2						
CMAR	Chiang Mai Arr	50.24	289	P	P	17 52 15.7	+1.6
	comp=Z,2.2nm,0.4s,baz=94,slow=6.0,SNR=35						
CMAR				PcP	PcP	17 53 34.9	+1.6
	comp=Z,0.9nm,0.6s,baz=124,slow=1.1,SNR=4.9						
CMAR				LR	LR	18 11 51.3	
	comp=Z,12nm,21.5s,baz=165,slow=34						
CMAR	Chiang Mai Arr	50.24	289	P	P	17 52 14.7	+0.6
CHTO	Chiang Mai	50.28	289	P	P	17 52 15.4	+1.0
ULN	Ulaanbaatar	54.63	326	P	P	17 52 47.7	+1.2
ULN				IAmb	IAmb	17 52 49.9	
	comp=Z,7.3nm,1.1s						
SONM	Songino Array	54.98	326	P	P	17 52 50.8	+1.8
	comp=Z,7.8nm,0.9s,baz=141,slow=6.9,SNR=52						
SONM	Songino Array	54.98	326	P	P	17 52 50.5	+1.5
LSA	Lhasa	59.09	301	P	P	17 53 19.3	+0.5
LSA				IAmb	IAmb	17 53 21.4	
	comp=Z,3.9nm,0.8s						
MK31	Makanchi Array	69.55	318	P	P	17 54 27.4	+0.9
MKAR	Makanchi Array	69.55	318	P	P	17 54 27.6	+1.0
	comp=Z,3.3nm,0.8s,baz=97,slow=7.6,SNR=30						
MAKZ	Makanchi	69.76	318	P	P	17 54 28.1	+0.2
MAKZ				IAmb	IAmb	17 54 29.9	
	comp=Z,5.4nm,0.8s						
ZAA0	Zalesovo Array	69.86	325	P	P	17 54 28.1	-0.2
ZAA0				IAmb	IAmb	17 54 29.2	
	comp=Z,3.2nm,0.8s						
ZALV	Zalesovo Beam	69.86	325	P	P	17 54 28.4	+0.1
	comp=Z,3.1nm,0.7s,baz=103,slow=6.2,SNR=14						
ZALV	Zalesovo Beam	69.86	325	P	P	17 54 28.1	-0.2
KURK	Kurchatov	72.74	321	P	P	17 54 45.4	-0.4
IL31		73.37	24	P	P	17 54 48.5	-0.8
ILAR	Eielson Array	73.37	24	P	P	17 54 48.8	-0.5
	comp=Z,2.2nm,0.6s,baz=254,slow=5.6,SNR=38						
GLB	Gilahina Butte	73.59	27	P	P	17 54 51.4	+0.7
CTGM	Chitina Glacie	74.61	28	P	P	17 54 58.0	+1.2
NIL	Nilore	74.69	303	P	P	17 54 58.6	+0.9
BCAR	Beaver Creek A	74.97	26	P	P	17 54 59.9	+1.2
BMAR	Burnt Mountain	75.19	21	P	P	17 55 01.5	+1.6
EGAK	Eagle	75.70	25	P	P	17 55 04.7	+1.9
EGAK				IAmb	IAmb	17 55 05.2	
	comp=Z,7.7nm,0.9s						
KKAR	Karatay Array	77.31	313	P	P	17 55 13.0	+0.6
KKAR	Karatay Array	77.31	313	P	P	17 55 13.1	+0.6
KKAR				IAmb	IAmb	17 55 13.6	
	comp=Z,16nm,2.0s						
H02S1	DAWSON INLET T	78.01	37	T	T	19 20 53.3	
	SNR=7.5						
BRVK	Borovoye	78.19	323	P	P	17 55 17.8	+0.8
VNDA	Vanda	84.08	177	P	P	17 55 48.0	+0.2
	comp=Z,1.3nm,0.7s,baz=340,slow=3.5,SNR=4.2						
YBH	Yreka Blue Hor	84.48	49	P	P	17 55 52.3	+1.4
YBH				IAmb	IAmb	17 55 53.4	
	comp=Z,2.2nm,0.8s						
ABKAR	Akbulak array	84.64	319	P	P	17 55 51.3	0.0
BEKR	Beckworth	86.40	50	P	P	17 56 00.2	-0.4
BEKR				IAmb	IAmb	17 56 02.7	
	comp=Z,3.6nm,0.6s						
YKA	Yellowknife Ar	87.31	28	P	P	17 56 04.7	+0.5
	comp=Z,1.8nm,0.7s,baz=279,slow=5.1,SNR=36						
YKA	Yellowknife Ar	87.31	28	P	P	17 56 03.7	-0.5
NVAR	Mina Array Bea	88.14	52	P	P	17 56 10.2	+1.2
	comp=Z,0.6nm,0.8s,baz=264,slow=7.2,SNR=3.3						
DBIC	Dimbokro	150.93	296	PKPbc	PKPbc	18 03 11.0	-0.5
	comp=Z,4.0nm,0.6s,baz=51,slow=4.0,SNR=9.3						
DBIC				PKPab	PKPab	18 03 18.6	-0.2
	comp=Z,5.8nm,0.8s,baz=14,slow=5.3,SNR=8.0						
DBIC	Dimbokro	150.93	296		PKPbc	18 03 11.2	-0.3
KIC	Kosan Boka	150.96	295	ePKIKP	PKPbc	18 03 11.7	+0.1
	comp=Z,13nm,0.6s						
TIC	Toumodi	151.09	296	ePKIKP	PKPbc	18 03 11.8	-0.1
LIC	Lamto	151.27	295	ePKIKP	PKPbc	18 03 12.1	-0.2
	comp=Z,24nm,0.7s						

*UPP **02** 18:02:06.8±0.1, 67°.07N×20°.90E, h0km, ML1.9, Explosion*
*IDC **02** 18:02:07.1±1.0, 67°.11N×20°.86E, h0km, mb1 3.0/3, mb1mx2.8/38, mbtmp2.9/3, ML1.9/3, Error ellipse: s-maj=18.1km s-min=8.7km az=115.0*
*HEL **02** 18:02:07.6±0.1, 67°.07N×20°.92E, h0km, ML2.1, ML1.9(UPP), Explosion*
*NAO **02** 18:02:07.2±0.7, 67°.09N×20°.98E, ML2.4*
*BER **02** 18:02:09.9±3.9, 67°.03N×20°.97E, h0km, ML1.9, Suspected explosion*

ISC 02 18:02:06.3±0.7**, 67°.06N**±0°.02×**20°.83E**±0°.02**, h0km, n63,** σ**1.15**/93**, Sweden**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MASU	Masugnsbyn	0.60	48	i P	Pg	18 02 17.9	+0.1
MASU	Masugnsbyn	0.60	48	P	Pg	18 02 17.9	+0.1
PAJU	Pajala	0.90	91	i P	Pg	18 02 22.8	-0.5
PAJU				i S	Sg	18 02 34.4	-0.5
PAJU	Pajala	0.90	91	P	Pg	18 02 22.8	-0.5
PAJU				S	Sg	18 02 34.4	-0.5
RATU	Laukkuluspa	0.91	329	eP	Pg	18 02 23.9	+0.3
RATU	Laukkuluspa	0.91	329	P	Pg	18 02 23.9	+0.3
KUA	Kurravaara	0.92	348	eP	Pg	18 02 23.9	0.0
KUA	Kurravaara	0.92	348	P	Pg	18 02 23.9	0.0
LANU	Lannavaara	1.09	23	eSN	Sn	18 02 46.0	+1.5
LANU	Lannavaara	1.09	23	P	Pg	18 02 26.3	-0.8
KALU	Kalix	1.57	139	eP	Pn	18 02 35.3	-0.1
KALU	Kalix	1.57	139	P	Pn	18 02 35.3	-0.1
SJUU	Sjulsmark	1.59	168	eP	Pn	18 02 35.9	+0.4
SJUU	Sjulsmark	1.59	168	P	Pn	18 02 35.9	+0.4
TOF	Tornio	1.71	124	eP	Pn	18 02 37.5	+0.3
TOF				MSG		18 02 57.7	
	comp=Z,18nm,0.2s						
TOF				eSN	Sn	18 03 00.2	+0.5
HEF	Hetta	1.73	37	Pg	Pn	18 02 37.5	-0.1
HEF				Lg	Lg	18 02 59.8	
HEF	Hetta	1.73	37	ePG	Pn	18 02 37.9	+0.3
	baz=218						
HEF				MSG		18 02 59.3	
	comp=Z,16nm,0.2s						
HEF				eSN	Sn	18 03 00.8	+0.5
KIF	Kilpisjarvi	1.96	360	Pn	Pb	18 02 42.8	+0.1
KIF				Sn	Sg	18 03 08.7	-0.3

KIF	**Kilpisjarvi**	**1.96**	**360**	*e*PB	**Pb**	**18 02 42.3**	**-0.3**
KIF				MSG		18 03 06.3	
	comp=Z,22nm,0.2s						
KIF				*e*SG	**Sg**	**18 03 08.9**	**-0.1**
KIF	**Kilpisjarvi**	**1.96**	**360**	Pn	**Pb**	**18 02 42.8**	**+0.1**
KIF				Sn	**Sg**	**18 03 08.7**	**-0.3**
RNF	**Rovaniemi**	**2.10**	**100**	*e*PB	**Pn**	**18 02 43.6**	**+1.0**
RNF				*e*SG	**Sb**	**18 03 11.8**	**+0.1**
KTK1	**Kautokeino**	**2.16**	**24**	Pn	**Pn**	**18 02 44.8**	**+1.3**
KTK1				Sn	**Sn**	**18 03 12.0**	**+1.1**
KTK1	**Kautokeino**	**2.16**	**24**	*e*P	**Pb**	**18 02 45.6**	**-0.6**
KTK1				*e*S	**Sn**	**18 03 12.2**	**+1.3**
KTK1				IAML		18 03 19.0	
	comp=Z,9.2nm,0.3s						
SGF	**Sodankyl**	**2.25**	**77**	*e*P	**Pn**	**18 02 45.6**	**+1.0**
	baz=263						
SGF				*e*SG	**Sb**	**18 03 15.4**	**-0.6**
STEI	**Steigen**	**2.32**	**295**	Pn	**Pb**	**18 02 48.8**	**-0.1**
STEI				Sn	**Sb**	**18 03 17.0**	**-1.1**
STEI				Lg	Lg	18 03 21.5	
BURU	**Burvik**	**2.50**	**175**	*e*P	**Pn**	**18 02 49.8**	**+1.8**
	baz=358						
BURU	**Burvik**	**2.50**	**175**	P	**Pn**	**18 02 49.9**	**+1.8**
SVAU	**Svanoeiden**	**2.63**	**192**	*e*P	**Pn**	**18 02 51.5**	**+1.7**
SVAU	**Svanoeiden**	**2.63**	**192**	P	**Pn**	**18 02 51.5**	**+1.7**
ODEU	**Stanfors**	**2.66**	**181**	*e*P	**Pn**	**18 02 52.0**	**+1.7**
ODEU	**Stanfors**	**2.66**	**181**	P	**Pn**	**18 02 52.0**	**+1.7**
TRO	**Tromso**	**2.68**	**346**	Pn	**Pn**	**18 02 52.1**	**+1.5**
MOR8	**Moi Rana**	**2.70**	**254**	Pn	**Pn**	**18 02 52.0**	**+1.1**
MOR8				Sn	**Sb**	**18 03 28.0**	**-1.1**
OUL	**Oulu**	**2.86**	**131**	*e*PB	**Pn**	**18 02 55.5**	**+2.4**
OBF0	**Syolatti, Pyha**	**2.93**	**150**	*e*PB	**Pb**	**18 02 58.9**	**-0.4**
LOF	**Lofoten**	**2.99**	**294**	Pn	**Pn**	**18 02 55.7**	**+0.8**
LOF				Sn	**Sn**	**18 03 33.1**	**+1.8**
LOF				Lg	Lg	18 03 41.5	
LOF	**Lofoten**	**2.99**	**294**	*e*P	**Pb**	**18 02 59.1**	**-1.2**
LOF				*e*S	**Sb**	**18 03 34.5**	**-2.9**
LOF				IAML		18 04 20.6	
	comp=Z,15nm,0.9s						
ARA0	**ARCESS Array S**	**3.03**	**33**	Pn	**Pn**	**18 02 55.9**	**+0.4**
	baz=215,slow=14						
ARA0				Sn	**Sn**	**18 03 32.5**	**+0.1**
	baz=209,slow=18						
ARA0	**ARCESS Array S**	**3.03**	**33**	Pn	**Pn**	**18 02 55.9**	**+0.4**
	baz=215,slow=14						
ARA0				Sn	**Sn**	**18 03 32.5**	**+0.1**
	baz=209,slow=18						
ARCES	**ARCESS Array B**	**3.03**	**33**	Pn	**Pn**	**18 02 56.0**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=214,slow=13,SNR=40						
ARCES				Sn	**Sn**	**18 03 32.2**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=218,slow=17,SNR=5.9						
ARE0	**ARCESS Array S**	**3.03**	**33**	*e*P	**Pn**	**18 02 55.9**	**+0.4**
	baz=215						
KONS	**Konsvik**	**3.11**	**263**	Pn	**Pn**	**18 02 58.2**	**+1.8**
KONS				Sn	**Sb**	**18 03 39.5**	**-1.1**
OUF	**Merijarvi**	**3.15**	**147**	*e*P	**Pn**	**18 02 58.2**	**+1.3**
OUF				MSG		18 03 38.1	
	comp=Z,2.5nm,0.2s						
UMAU	**Umeaa**	**3.19**	**181**	*e*P	**Pn**	**18 02 59.1**	**+1.5**
VRF	**Varrio**	**3.46**	**74**	*e*P	**Pn**	**18 03 03.2**	**+1.9**
VRF				*e*SG	**Sb**	**18 03 52.5**	**+1.7**
KEV	**Kevo**	**3.54**	**37**	Pn	**Pn**	**18 03 02.8**	**+0.4**
KEV				Sn	**Sn**	**18 03 43.4**	**-1.5**
KEV	**Kevo**	**3.54**	**37**	*e*P	**Pn**	**18 03 02.9**	**+0.4**
KEV				*e*S	**Sn**	**18 03 46.4**	**+1.5**
KEV	**Kevo**	**3.54**	**37**	Pn	**Pn**	**18 03 02.8**	**+0.4**
KEV				Sn	**Sn**	**18 03 43.4**	**-1.5**
KU6	**Riekki**	**3.77**	**102**	*e*P	**Pn**	**18 03 07.5**	**+1.9**
HUSU	**Husum**	**3.79**	**191**	*e*P	**Pn**	**18 03 08.0**	**+2.1**
HUSU				*e*S	**Sn**	**18 03 53.3**	**+2.2**
VAF	**Ylistaro**	**4.11**	**168**	*e*P	**Pn**	**18 03 12.1**	**+2.0**
APA0	**Apatity Array**	**4.74**	**78**	Pn	**Pn**	**18 03 18.2**	**-0.6**
	baz=275,slow=11						
APA0				Sn	**Sn**	**18 04 13.5**	**-0.9**
	baz=281,slow=37						
APA0	**Apatity Array**	**4.74**	**78**	Pn	**Pn**	**18 03 18.2**	**-0.6**
	baz=275,slow=11						
APA0				Sn	**Sn**	**18 04 13.5**	**-0.9**
	baz=281,slow=37						
FIA0	**FINESS Array S**	**6.08**	**156**	Pn	**Pn**	**18 03 39.0**	**+1.7**
	baz=345,slow=14						
FIA0				Sn	**Sn**	**18 04 47.0**	**-0.4**
	baz=339,slow=28						
FIA0	**FINESS Array S**	**6.08**	**156**	Pn	**Pn**	**18 03 39.0**	**+1.7**
	baz=345,slow=14						
FIA0				Sn	**Sn**	**18 04 47.0**	**-0.4**
	baz=339,slow=28						
FINES	**FINESS Array B**	**6.08**	**156**	Pn	**Pn**	**18 03 39.2**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=349,slow=14,SNR=7.7						
FINES				Sn	**Sn**	**18 04 48.4**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=340,slow=23,SNR=7.6						
NB2	**NORSAR Subarra**	**7.36**	**219**	Pn	**Pn**	**18 03 55.5**	**+0.6**
	baz=22,slow=14						
NB2	**NORSAR Subarra**	**7.36**	**219**	Pn	**Pn**	**18 03 55.5**	**+0.6**
	baz=22,slow=14						
NOA	**NORSAR Array B**	**7.36**	**219**	Pn	**Pn**	**18 03 55.2**	**+0.4**
	comp=Z,0.0nm,0.3s,baz=16,slow=18,SNR=2.7						
NOA				Sn	**Sn**	**18 05 16.1**	**-2.9**
	comp=Z,0.0nm,0.3s,baz=87,slow=10,SNR=2.5						
NRA0	**NORESS Array S**	**7.55**	**217**	Pn	**Pn**	**18 03 57.9**	**+0.5**
	baz=11,slow=16						
NRA0	**NORESS Array S**	**7.55**	**217**	Pn	**Pn**	**18 03 57.9**	**+0.5**
	baz=11,slow=16						
HFS	**Hagfors**	**7.64**	**208**	Pn	**Pn**	**18 03 59.1**	**+0.5**
	baz=37,slow=14						
HFS	**Hagfors**	**7.64**	**208**	Pn	**Pn**	**18 03 59.1**	**+0.5**
	baz=37,slow=14						

NIED ***02*** *18:05:00,47.00N×153.00E,h5km,Mw4.3 Best double couple: M₀3.13000×10¹⁵ NP1:φ₀s335.00000°,δ55.00000°, λ78.00000°. NP2:φ₀s175.00000°,δ37.00000°,λ106.00000°.*
JMA ***02*** *18:05:35.2±0.7,47.03N×152.96E,h30km,M4.7*
SKHL ***02*** *18:05:36.6±0.4,46.70N×153.00E,h62km±5km,mb5.1/9, msh5.3/4*
MOS ***02*** *18:05:36.8±1.0,46.93N×152.81E,h52km,mb4.7/5, Error ellipse: s-maj=10.5km s-min=5.4km az=62.4*
NEIC ***02*** *18:05:37.1±2.0,46.90N±0.10×152.9E±0.1,h35km±2km, mb4.7/84, Error ellipse: s-maj=18.9km s-min=11.4km az=139.0*
IDC ***02*** *18:05:38.0±0.9,46.89N×152.81E,h48km±7km,mb3.9/18, mb1 4.1/22,mb1mx3.9/34,mbtmp4.2/22,MS3.4/15, Ms1 3.4/15,ms1mx3.2/40,Error ellipse: s-maj=16.8km s-min=11.2km az=146.0*

ISC 02 18:05:37.6±0.4, 46.76N±0.05×152.91E±0.05, h56km, n245, σ1s48/258, mb4.6/65, MS3.4/11, 24C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.83**	**248**	*e*PN	**Pn**	**18 06 37.2**	**+3.2**
KUR				*e*S	**Sn**	**18 07 21.6**	**+3.9**
KUR				pmax	pmax		
	comp=Z,262nm,0.6s						
KUR				pmax	pmax		
	comp=E,67nm,0.1s						
KUR				pmax	pmax		
	comp=N,114nm,0.2s						
KUR				smax	smax		
	comp=N,453nm,0.5s						
KUR				smax	smax		
	comp=E,242nm,0.2s						
KUR	**Kuril'sk**	**3.83**	**248**	*e*P	**Pn**	**18 06 34.2**	**+0.2**
KUR				AMB	AMB	18 06 37.0	
	comp=E,260nm,0.5s						
KUR				*e*S	**Sn**	**18 07 17.3**	**-0.4**
KUR				A	A	18 07 21.0	
	comp=E,6μm,6.0s						
KUR				A	A	18 07 21.0	
	comp=E,4μm,6.0s						
KUR				A	A	18 07 25.0	
	comp=E,460nm,0.5s						
KUR				A	A	18 07 25.0	
	comp=E,240nm,0.5s						
SKR	**Severo-Kuril's**	**4.46**	**27**	*c*e PN	**Pn**	**18 06 41.9**	**-0.8**
SKR	**Severo-Kuril's**	**4.46**	**27**	*i* P	**Pn**	**18 06 41.9**	**-0.8**
SKR				AMB	AMB	18 06 45.0	
	comp=E,280nm,0.5s						
SKR				*e*S	**Sn**	**18 07 30.5**	**-2.8**
SKR				A	A	18 07 32.0	
	comp=E,700nm,3.0s						
SKR				A	A	18 07 32.0	
	comp=E,1μm,3.0s						
SKR				A	A	18 07 38.0	
	comp=E,300nm,0.5s						
SKR				A	A	18 07 38.0	
	comp=E,710nm,0.5s						
SHO	**Shikotan**	**5.17**	**238**	*e*PN	**Pn**	**18 06 51.6**	**-0.7**
SHO				pmax	pmax		
	comp=Z,77nm,0.3s						
SHO				pmax	pmax		
	comp=N,16nm,0.2s						
SHO	**Shikotan**	**5.17**	**238**	*e*P	**Pn**	**18 06 51.8**	**-0.5**
SHO				AMB	AMB	18 06 55.0	
	comp=N,20nm,0.3s						
SHO				AMB	AMB	18 06 55.0	
	comp=N,80nm,0.3s						
SHO				*e*S	**Sn**	**18 07 48.5**	**-2.1**
SHO				A	A	18 07 53.0	
	comp=N,1μm,5.0s						
SHO				A	A	18 07 53.0	
	comp=N,3μm,5.0s						
SHO				A	A	18 07 59.6	
	comp=N,150nm,0.5s						
SHO				A	A	18 07 59.6	
	comp=N,220nm,0.5s						
PAU	**Pauzhetka**	**5.36**	**27**	*i* P	**Pn**	**18 06 54.4**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**5.66**	**244**	*e*PN	**Pn**	**18 07 00.6**	**+1.5**
YUK				*e*S	**Sn**	**18 08 03.8**	**+1.1**
YUK				pmax	pmax		
	comp=Z,271nm,0.4s						
YUK				pmax	pmax		
	comp=E,149nm,0.5s						
YUK				smax	smax		
	comp=N,435nm,0.5s						
YUK				smax	smax		
	comp=E,145nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.66**	**244**	*i* P	**Pn**	**18 07 00.6**	**+1.5**
YUK				AMB	AMB	18 07 01.0	
	comp=E,150nm,0.5s						
YUK				AMB	AMB	18 07 01.0	
	comp=E,270nm,0.5s						
YUK				*e*S	**Sn**	**18 08 03.8**	**+1.1**
YUK				A	A	18 08 06.5	
	comp=E,3μm,4.0s						
YUK				A	A	18 08 06.5	
	comp=E,4μm,4.0s						
YUK				A	A	18 08 09.6	
	comp=E,690nm,0.6s						
YUK				A	A	18 08 09.6	
	comp=E,250nm,0.6s						
NEM2	**Nemuro 2**	**6.10**	**239**	P	**Pn**	**18 07 04.6**	**-0.5**
NEM2				*e*S	**Sn**	**18 08 10.6**	**-3.0**
NMR	**Nemuro--Hokkai**	**6.11**	**239**	*e*PN	**Pn**	**18 07 04.2**	**-1.0**
NMR	**Nemuro--Hokkai**	**6.11**	**239**	*e*P	**Pn**	**18 07 04.2**	**-1.0**
NMR				*e*S	**Sn**	**18 08 11.1**	**-2.6**
JRA	**Rausu**	**6.17**	**246**	P	**Pn**	**18 07 08.8**	**+2.8**
JNK	**Nakash**	**6.60**	**244**	P	**Pn**	**18 07 13.4**	**+1.4**
JNK				*e*S	**Sn**	**18 08 26.3**	**+0.5**
JTKR	**Abashiri--Toko**	**6.92**	**250**	P	**Pn**	**18 07 18.9**	**+2.5**
JAK	**Akkeshi**	**6.94**	**240**	P	**Pn**	**18 07 16.1**	**-0.5**
JAK				*e*S	**Sn**	**18 08 30.8**	**-3.3**
YSS	**Yuzh-Sakhalins**	**6.96**	**275**	*e*PN	**Pn**	**18 07 18.6**	**+1.7**
YSS				*e*S	**Sn**	**18 08 37.6**	**+2.9**
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS	**Yuzh-Sakhalins**	**6.96**	**275**	*e*P	**Pn**	**18 07 19.0**	**+2.1**
YSS				AMB	AMB	18 07 19.6	
	comp=Z,70nm,0.9s						
YSS				*e*S	**Sn**	**18 08 33.9**	**-0.8**
YSS				A	A	18 08 39.0	
	comp=Z,200nm,0.3s						
YSS				A	A	18 08 39.0	
	comp=Z,120nm,0.3s						
YSS	**Yuzh-Sakhalins**	**6.96**	**275**	Pn	**Pn**	**18 07 17.0**	**0.0**
PEA0B	**Petropavlovsk-**	**7.07**	**24**	*i* PN	**Pn**	**18 07 17.2**	**-1.1**
PEA0B	**Petropavlovsk-**	**7.07**	**24**		**Pn**	**18 07 17.6**	**-0.7**
PETK	**Petropavlovsk-**	**7.07**	**24**	P	**Pn**	**18 07 18.8**	**+0.5**
	comp=Z,4.6nm,0.3s,baz=181,slow=12,SNR=58						
PETK				LR	LR	18 10 27.7	
	comp=Z,173nm,18.5s,baz=242,slow=42						
PETK	**Petropavlovsk-**	**7.07**	**24**		**Pn**	**18 07 17.9**	**-0.5**
JMP	**Maruseppu**	**7.26**	**251**	P	**Pn**	**18 07 24.1**	**+3.0**
PET	**Petropavlovsk**	**7.29**	**28**	*e*PN	**Pn**	**18 07 21.3**	**0.0**
PET	**Petropavlovsk**	**7.29**	**28**	*e*P	**Pn**	**18 07 21.3**	**0.0**
PET				AMB	AMB	18 07 30.1	
	comp=Z,70nm,1.0s						
PET				*e*S	**Sn**	**18 08 39.0**	**-3.5**
PET				A	A	18 08 45.4	
	comp=Z,200nm,0.5s						
PET				A	A	18 08 45.4	
	comp=Z,240nm,0.5s						
PET	**Petropavlovsk**	**7.29**	**28**	Pn	**Pn**	**18 07 19.9**	**-1.4**
JAR	**Ashorobuto**	**7.34**	**245**	P	**Pn**	**18 07 23.7**	**+1.6**
JAR				*e*S	**Sn**	**18 08 44.5**	**+0.6**
JOB	**Onbets**	**7.51**	**242**	P	**Pn**	**18 07 25.1**	**+0.7**
JOB				*e*S	**Sn**	**18 08 46.1**	**-2.0**
UGL	**Uglegorsk**	**7.64**	**292**	*e*P	**Pn**	**18 07 28.0**	**+1.8**
UGL				AMB	AMB	18 07 29.4	
	comp=Z,80nm,0.8s						
UGL				*e*S	**Sn**	**18 08 50.0**	**-1.3**
JKA	**Kamikawa-asahi**	**7.72**	**254**	*e*P	**Pn**	**18 07 30.6**	**+3.4**
JKA	**Kamikawa-asahi**	**7.72**	**254**		**Pn**	**18 07 30.6**	**+3.4**
ASAJ	**Asahikawa**	**7.72**	**254**	P	**Pn**	**18 07 30.7**	**+3.4**
ASAJ	**Asahikawa**	**7.72**	**254**	P	**Pn**	**18 07 30.6**	**+3.4**
	comp=Z,3.5nm,0.3s,baz=74,slow=18,SNR=16						
JKK2	**Kamakawa 2**	**7.72**	**252**	P	**Pn**	**18 07 30.3**	**+3.0**
TYV	**Tymovskoe**	**7.91**	**305**	*e*P	**Pn**	**18 07 32.5**	**+2.6**
TYV				*e*S	**Sn**	**18 08 58.3**	**+0.4**
TYV				A	A	18 09 02.0	
	comp=Z,30nm,1.0s						
JCH	**Churui**	**7.96**	**242**	P	**Pn**	**18 07 30.4**	**-0.2**
JCH				*e*S	**Sn**	**18 08 56.2**	**-3.0**
JFR	**Furan**	**8.15**	**248**	P	**Pn**	**18 07 35.4**	**+2.2**
ERM	**Erimo**	**8.44**	**239**	*i* PN	**Pn**	**18 07 38.3**	**+1.2**
ERM	**Erimo**	**8.44**	**239**	Pn	**Pn**	**18 07 38.5**	**+1.4**
JBT2	**Biratori 2**	**8.49**	**246**	P	**Pn**	**18 07 38.7**	**+0.9**
JNBK	**Urakawa-nobuka**	**8.52**	**242**	P	**Pn**	**18 07 37.8**	**-0.5**
JNBK				*e*S	**Sn**	**18 09 08.8**	**-4.1**
OKH	**Okha**	**9.33**	**320**	*e*P	**Pn**	**18 07 52.0**	**+2.7**
OKH				AMB	AMB	18 07 53.6	
	comp=Z,50nm,0.6s						
JKB	**Kayabe**	**9.80**	**244**	P	**Pn**	**18 07 54.8**	**-0.9**
JKB				*e*S	**Sn**	**18 09 38.8**	**-5.4**
JSH	**Shimam**	**10.04**	**250**	P	**Pn**	**18 08 00.7**	**+1.7**
JYM2	**Yakumo 2**	**10.09**	**247**	P	**Pn**	**18 07 59.9**	**+0.2**
JANG	**Nango**	**10.44**	**236**	P	**Pn**	**18 08 01.2**	**-3.3**
JANG				*e*S	Sn	18 09 50.3	-10
JTH	**Tanohata**	**10.54**	**234**	*e*S	Sn	18 09 51.7	-11
TEY	**Ternei**	**11.49**	**267**	*e*P	**Pn**	**18 08 18.7**	**-0.1**
TEY				AMB	AMB	18 08 22.2	
	comp=Z,40nm,1.0s						
MA2	**Magadan**	**12.90**	**355**	*i* PN	**Pn**	**18 08 33.6**	**-4.4**
MA2	**Magadan**	**12.90**	**355**	P	**Pn**	**18 08 39.0**	**+1.0**
	comp=Z,6.6nm,0.3s,baz=170,slow=11,SNR=31						
MA2				LR	LR	18 13 25.7	
	comp=Z,189nm,19.4s,baz=183,slow=37						
MA2	**Magadan**	**12.90**	**355**		**Pn**	**18 08 38.1**	**+0.2**
EKMR	**Ekimchan**	**14.30**	**304**	*e*P	**Pn**	**18 08 55.3**	**-1.6**
KLR	**Kul'dur**	**14.38**	**288**	P	**P**	**18 09 00.9**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=93,slow=15,SNR=1.6						
KLR				LR	LR	18 14 24.3	
	comp=Z,110nm,20.1s,baz=52,slow=37						
USRK	**Ussuriysk Ar.**	**14.89**	**268**	P	**Pn**	**18 09 05.3**	**+0.7**
	baz=71,slow=14,SNR=4.5						
USRK				LR	LR	18 14 23.7	
	comp=Z,140nm,20.6s,baz=73,slow=35						
SMY	**Shemya**	**14.92**	**59**	P	**Pn**	**18 09 05.3**	**+0.4**
SMY	**Shemya**	**14.92**	**59**	Pn	**Pn**	**18 09 05.3**	**+0.4**
MJA0	**Matsu Arr-Jizo**	**14.95**	**232**	*e*P	**P**	**18 09 12.2**	**+2.3**
MJAR	**Matsushiro Arr**	**14.97**	**232**	P	**Pn**	**18 09 07.5**	**+1.7**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJAR	**Matsushiro Arr**	**14.97**	**232**	P	**Pn**	**18 09 05.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=30,slow=16,SNR=11						
MJAR	**Matsushiro Arr**	**14.97**	**232**	P	**Pn**	**18 09 07.5**	**+1.7**
MJB9	**Matsu-Tunnel**	**14.97**	**232**	P	**P**	**18 09 11.2**	**+1.0**
MAJO	**Matsushiro**	**14.97**	**232**	*e*P	**P**	**18 09 09.3**	**-0.8**
MAJO	**Matsushiro**	**14.97**	**232**	P	**P**	**18 09 11.4**	**+1.3**
SEY	**Seymchan**	**16.21**	**359**	P	**Pn**	**18 09 21.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=153,slow=18,SNR=5.7						
BMKR	**Bomnak**	**17.12**	**307**	*e*P	**Pn**	**18 09 31.0**	**-1.8**
YAK	**Yakutsk**	**20.24**	**327**	P	**Pn**	**18 10 06.1**	**-1.7**
YAK				pmax	pmax		
	comp=Z,16nm,0.8s						
YAK	**Yakutsk**	**20.24**	**327**	P	**P**	**18 10 09.0**	**+1.2**
	comp=Z,3.6nm,0.5s,baz=74,slow=0.9,SNR=5.3						
YAK	**Yakutsk**	**20.24**	**327**	*e*P	**P**	**18 10 08.8**	**+1.0**
YAK	**Yakutsk**	**20.24**	**327**	P	**P**	**18 10 06.1**	**-1.7**
KSRS	**Korea Array**	**20.66**	**252**	P	Pn	18 10 15.3	-0.1
	comp=Z,2.4nm,0.7s,baz=58,slow=11,SNR=8.9						
JNU	**Nakatsue**	**21.60**	**239**	P	**P**	**18 10 24.2**	**+1.5**
	comp=Z,9.4nm,1.0s,baz=234,slow=4.0,SNR=4.6						
BILL	**Bilibino**	**22.41**	**13**	*e*P	**P**	**18 10 30.6**	**-0.6**
BILL				*e*S	**S**	**18 14 34.3**	**+0.9**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	**Bilibino**	**22.41**	**13**	*e*P	**P**	**18 10 30.6**	**-0.6**
BILL	**Bilibino**	**22.41**	**13**	P	**P**	**18 10 30.4**	**-0.7**
GAMB	**Gambell**	**25.90**	**36**	P	**P**	**18 11 04.7**	**+0.8**
GAMB				IAmb	IAmb	18 11 20.0	
	comp=Z,19nm,1.0s						
TIXI	**Tiksi**	**27.42**	**344**	LR	LR	18 22 05.6	
	comp=Z,97nm,19.7s,baz=100,slow=36						
ANM	**Nome**	**28.77**	**37**	P	**P**	**18 11 30.9**	**+1.3**
ANM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANM	**Nome**	**28.77**	**37**	P	**P**	**18 11 30.9**	**+1.3**
H11N2	**WAKE ISLAND Hy**	**29.29**	**152**	T	T	18 43 02.1	
	baz=340,slow=76,SNR=643						
H11N1	**WAKE ISLAND Hy**	**29.31**	**152**	T	T	18 43 18.6	
	baz=340,slow=76,SNR=508						
H11N3	**WAKE ISLAND Hy**	**29.31**	**152**	T	T	18 43 03.4	
	baz=340,slow=76,SNR=340						
H11S1	**WAKE ISLAND Hy**	**30.38**	**153**	T	T	18 44 37.5	
	baz=341,slow=76,SNR=694						
H11S3	**WAKE ISLAND Hy**	**30.39**	**153**	T	T	18 44 34.9	
	baz=341,slow=76,SNR=843						
H11S2	**WAKE ISLAND Hy**	**30.40**	**153**	T	T	18 44 38.9	
	baz=341,slow=76,SNR=634						
RDOG	**Red Dog Mine**	**30.88**	**31**	P	**P**	**18 11 48.7**	**+0.4**
RDOG				IAmb	IAmb	18 11 50.2	
	comp=Z,10nm,0.7s						
SONM	**Songino Array**	**31.20**	**289**	LR	LR	18 25 10.4	
	comp=Z,44nm,20.1s,baz=179,slow=38						
IMAR	**Indian Mountai**	**33.84**	**36**	P	**P**	**18 12 14.8**	**+0.6**
BPAW	**Bear Paw Mtn.**	**34.84**	**40**	P	**P**	**18 12 24.1**	**+1.3**
BPAW				IAmb	IAmb	18 12 25.0	
	comp=Z,6.2nm,0.8s						
KTH	**Kantishna Hill**	**34.85**	**41**	P	**P**	**18 12 24.7**	**+1.7**
MLY	**Manley**	**35.00**	**38**	P	**P**	**18 12 25.8**	**+1.6**
MLY				IAmb	IAmb	18 12 26.6	
	comp=Z,7.0nm,0.8s						
TRF	**Thorofare Moun**	**35.13**	**41**	P	**P**	**18 12 26.6**	**+1.1**
TRF				IAmb	IAmb	18 12 28.2	
	comp=Z,18nm,1.2s						
COLD	**Coldfoot**	**35.41**	**34**	P	**P**	**18 12 28.8**	**+1.2**
COLD				IAmb	IAmb	18 12 42.1	
	comp=Z,10nm,1.4s						
BWN	**Browne**	**35.51**	**40**	P	**P**	**18 12 30.8**	**+2.2**
MCK	**McKinley**	**35.74**	**40**	P	**P**	**18 12 31.2**	**+0.6**
MCK				pmax	pmax		
	comp=Z,11nm,0.9s						
MCK	**McKinley**	**35.74**	**40**	P	**P**	**18 12 31.2**	**+0.6**
MCK				IAmb	IAmb	18 12 46.0	
	comp=Z,11nm,0.9s						
RND	**Reindeer**	**35.77**	**41**	P	**P**	**18 12 31.4**	**+0.4**
RND				pmax	pmax		
	comp=Z,12nm,0.9s						
RND	**Reindeer**	**35.77**	**41**	P	**P**	**18 12 31.4**	**+0.4**
RND				IAmb	IAmb	18 12 46.1	
	comp=Z,12nm,0.9s						
TOLK	**Toolik Lake Re**	**35.81**	**32**	P	**P**	**18 12 32.6**	**+1.4**
MDM	**Murphy Dome**	**36.06**	**38**	P	**P**	**18 12 34.1**	**+0.8**
MDM				IAmb	IAmb	18 12 35.5	
	comp=Z,10nm,0.9s						
SML	**Sawmill**	**36.06**	**44**	P	**P**	**18 12 34.1**	**+0.7**
WRH	**Wood River Hil**	**36.11**	**39**	P	**P**	**18 12 34.6**	**+0.9**
COLA	**College**	**36.22**	**38**	*c*e P	**P**	**18 12 36.2**	**+1.6**
COLA				pmax	pmax		
	comp=Z,12nm,0.9s						
COLA	**College**	**36.22**	**38**	P	**P**	**18 12 35.8**	**+1.2**
CCB	**Clear Creek Bu**	**36.23**	**39**	P	**P**	**18 12 35.5**	**+0.8**
CCB				IAmb	IAmb	18 12 50.4	
	comp=Z,4.5nm,0.5s						
DHY	**Denali Highway**	**36.45**	**41**	P	**P**	**18 12 37.2**	**+0.4**
HDA	**Harding Lake**	**36.61**	**39**	P	**P**	**18 12 38.2**	**+0.3**
IL31		**36.63**	**39**	P	**P**	**18 12 38.8**	**+0.7**
ILAR	**Eielson Array**	**36.63**	**39**	P	**P**	**18 12 38.5**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=261,slow=7.4,SNR=36						
ILAR				pP	**pP**	**18 12 51.8**	**+0.1**
	comp=Z,3.1nm,0.6s,baz=280,slow=5.8,SNR=11						
ILAR				LR	LR	18 29 37.7	
	comp=Z,96nm,18.0s,baz=276,slow=39						
ILAR	**Eielson Array**	**36.63**	**39**	P	**P**	**18 12 38.0**	**-0.2**
PRP	**Porcupine Dome**	**37.20**	**37**	P	**P**	**18 12 44.5**	**+1.4**
PRP				IAmb	IAmb	18 12 59.0	
	comp=Z,9.1nm,0.8s						
FYU	**Fort Yukon**	**37.32**	**36**	P	**P**	**18 12 45.3**	**+1.4**
BMAR	**Burnt Mountain**	**37.59**	**34**	P	**P**	**18 12 48.0**	**+1.7**
DOT	**Dot Lake**	**37.91**	**40**	P	**P**	**18 12 48.8**	**-0.2**
DOT				IAmb	IAmb	18 13 06.9	
	comp=Z,29nm,1.8s				

BMO pmax pmax
comp=Z,4.0nm,1.0s
BMO Blue Mountains 59.19 56 P **P 18 15 33.5 +0.8**
MOD Modoc Plateau 59.21 60 P **P 18 15 34.4 +1.4**
MOD IAmb IAmb 18 15 35.8
comp=Z,6.9nm,1.0s
MSO Missoula 59.87 52 P **P 18 15 38.3 +0.9**
WVOR Wild Horse Val 59.88 59 P **P 18 15 39.2 +1.7**
WVOR pmax pmax
comp=Z,7.0nm,1.0s
WVOR Wild Horse Val 59.88 59 P **P 18 15 39.2 +1.7**
WVOR IAmb IAmb 18 15 40.8
comp=Z,7.1nm,1.0s
BEKR Beckworth 60.41 62 P **P 18 15 42.6 +1.4**
SUMG Summit 60.70 4 *i* P **P 18 15 43.5 +0.5**
SUMG pmax pmax
comp=Z,41nm,0.9s
SUMG Summit 60.70 4 *i* P **P 18 15 43.5 +0.5**
comp=Z,41nm,0.9s
SUMG Summit 60.70 4 P **P 18 15 43.0 0.0**
FFC Flin Flon 60.82 40 P **P 18 15 43.9 +0.3**
FFC pmax pmax
comp=Z,7.0nm,1.0s
FFC Flin Flon 60.82 40 P **P 18 15 43.9 +0.3**
FFC IAmb IAmb 18 15 46.2
comp=Z,7.2nm,1.0s
PAHR Pah Rah Range 61.10 62 P **P 18 15 47.2 +1.2**
EGMT Eagleton 61.36 49 P **P 18 15 48.8 +1.3**
YERR Yerington 61.64 62 P **P 18 15 51.5 +1.8**
YERR IAmb IAmb 18 15 52.5
comp=Z,8.0nm,1.1s
BMN Battle Mountai 61.95 60 P **P 18 15 53.2 +1.6**
BMN pmax pmax
comp=Z,3.0nm,0.8s
BMN Battle Mountai 61.95 60 P **P 18 15 53.2 +1.6**
KVN Kaiserville 62.29 62 P **P 18 15 55.8 +1.8**
KVN pmax pmax
comp=Z,6.0nm,1.1s
KVN Kaiserville 62.29 62 P **P 18 15 55.8 +1.8**
KVN IAmb IAmb 18 15 56.7
comp=Z,6.0nm,1.1s
NVAR Mina Array Bea 62.55 62 P **P 18 15 57.5 +1.7**
comp=Z,3.1nm,0.8s,baz=294,slow=6.8,SNR=11
NVAR LR LR 18 41 38.7
comp=Z,22nm,19.1s,baz=331,slow=34
NVAR Mina Array Bea 62.55 62 P **P 18 15 57.1 +1.3**
MDPB Devils Postpil 62.58 63 P **P 18 15 57.8 +1.8**
YHL Hebgen Lake 62.61 53 P **P 18 15 57.9 +1.7**
YHB Horse Butte 62.67 53 P **P 18 15 58.4 +1.9**
H17A Grant Village 63.23 53 P **P 18 16 02.6 +2.3**
H17A IAmb IAmb 18 16 04.5
comp=Z,5.2nm,0.9s
MOOW Moose Ponds 63.56 54 P **P 18 16 04.2 +1.8**
MOOW IAmb IAmb 18 16 10.0
comp=Z,13nm,1.8s
TPAW Teton Pass 63.61 54 P **P 18 16 04.2 +1.4**
TPAW IAmb IAmb 18 16 06.2
comp=Z,8.6nm,0.9s
REDW Red Top Meadow 63.75 54 P **P 18 16 04.8 +1.2**
REDW IAmb IAmb 18 16 14.7
comp=Z,17nm,1.7s
DGMT Dagmar 63.90 46 P **P 18 16 05.8 +1.5**
FINES FINESS Array B 63.97 335 P **P 18 16 04.3 -0.2**
comp=Z,2.6nm,0.4s,baz=36,slow=7.9,SNR=27
FINES LR LR 18 47 45.3
comp=Z,56nm,19.0s,baz=23,slow=40
FINES FINESS Array B 63.97 335 P **P 18 16 04.1 -0.4**
LAO LASA Array 64.06 49 P **P 18 16 07.0 +1.6**
SPUT South Promonto 64.18 57 P **P 18 16 08.2 +1.8**
R11A Troy Canyon, C 64.25 61 P **P 18 16 07.3 +0.4**
HWUT Hardware Ranch 64.49 56 P **P 18 16 09.6 +1.1**
HWUT IAmb IAmb 18 16 11.3
comp=Z,11nm,1.4s
DUG Dugway, Tooele 64.69 58 P **P 18 16 11.2 +1.4**
DUG pmax pmax
comp=Z,7.0nm,1.1s
DUG Dugway, Tooele 64.69 58 P **P 18 16 11.2 +1.4**
DUG IAmb IAmb 18 16 12.5
comp=Z,6.8nm,1.1s
TPNV Topopah Spring 64.75 62 P **P 18 16 11.2 +0.9**
TPNV pmax pmax
comp=Z,13nm,1.8s
TPNV Topopah Spring 64.75 62 P **P 18 16 11.2 +0.9**
TPNV IAmb IAmb 18 16 38.7
comp=Z,13nm,1.8s
BW06 Boulder Array 64.86 54 P **P 18 16 10.9 0.0**
BW06 IAmb IAmb 18 16 13.1
comp=Z,5.3nm,0.9s
PD31 Pinedale Array 64.86 54 P **P 18 16 11.4 +0.5**
PD31 IAmb IAmb 18 16 13.1
comp=Z,4.9nm,0.9s
PDAR Pinedale Array 64.86 54 P **P 18 16 12.2 +1.2**
comp=Z,3.4nm,0.9s,baz=298,slow=1.5,SNR=27
PDAR Pinedale Array 64.86 54 P **P 18 16 11.2 +0.3**
LCMT Little Creek M 66.53 61 P **P 18 16 23.5 +1.8**
ULM Lac du Bonnet 66.61 41 P **P 18 16 22.0 +0.3**
comp=Z,1.4nm,0.5s,baz=313,slow=8.0,SNR=4.7
SRU San Rafael Swe 66.73 57 P **P 18 16 23.0 0.0**
SRU pmax pmax
comp=Z,6.0nm,1.0s
SRU San Rafael Swe 66.73 57 P **P 18 16 23.0 0.0**
RSSD Black Hills 66.93 50 P **P 18 16 24.5 +0.3**
RSSD pmax pmax
comp=Z,7.0nm,0.9s
RSSD Black Hills 66.93 50 P **P 18 16 24.5 +0.3**
RSSD IAmb IAmb 18 16 25.9
comp=Z,6.9nm,0.8s
NB2 NORSAR Subarra 68.17 341 P **P 18 16 31.3 -0.2**
comp=Z,2.3nm,0.6s,baz=26,slow=6.5
NOA NORSAR Array B 68.17 341 P **P 18 16 31.6 0.0**
comp=Z,2.8nm,0.6s,baz=27,slow=6.5,SNR=15
NOA LR LR 18 50 00.8
comp=Z,29nm,19.2s,baz=5.0,slow=39
WRA Warramunga Arr 68.47 199 *e*P **P 18 16 35.4 +1.6**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 68.47 199 P **P 18 16 34.6 +0.8**
comp=Z,0.9nm,0.7s,baz=14,slow=6.9,SNR=7.1
WRA Warramunga Ar 68.47 199 P **P 18 16 35.1 +1.3**
ISCO Idaho Springs 69.05 54 P **P 18 16 38.6 +0.9**
ISCO pmax pmax
comp=Z,4.0nm,1.0s
ISCO Idaho Springs 69.05 54 P **P 18 16 38.5 +0.9**
S22A 4UR Ranch, Cre 69.78 56 P **P 18 16 42.3 0.0**
KIV Kislovodsk 70.69 314 *e*P **P 18 16 45.6 -1.8**
KIV pmax pmax
comp=Z,2.0nm,1.3s
ECSD EROS Data Cent 70.98 46 P **P 18 16 48.7 -0.4**
ECSD IAmb IAmb 18 16 50.5
comp=Z,13nm,1.1s
E38A The Farm, Brul 71.24 41 P **P 18 16 50.5 -0.1**
AKASG Malin Array Be 71.46 326 P **P 18 16 51.5 -0.3**
comp=Z,2.7nm,0.4s,baz=33,slow=6.2,SNR=16
AKASG LR LR 18 50 12.9
comp=Z,24nm,18.4s,baz=285,slow=38
AKASG Malin Array Be 71.46 326 P **P 18 16 51.1 -0.7**
ASAR Alice Springs 72.17 198 P **P 18 16 58.4 +2.0**
comp=Z,1.8nm,0.7s,baz=14,slow=5.1,SNR=34
ASAR Alice Springs 72.17 198 P **P 18 16 57.2 +0.9**
319A Douglas 72.77 63 P **P 18 16 58.3 -1.8**
319A IAmb IAmb 18 17 02.6
comp=Z,6.7nm,0.9s
SORM Soroca 73.86 325 ⇑P **P 18 17 05.0 -1.1**
SORM Soroca 73.86 325 ⇑P **P 18 17 05.0 -1.1**
BUR08 Bucovina Ar. S 75.48 326 P **P 18 17 15.6 0.0**
KOLS Kolonicke sedl 75.48 329 *e*P **P 18 17 15.9 +0.4**
KOLS Kolonicke sedl 75.48 329 *e*P **P 18 17 15.9 +0.4**
BURAR Bucovina Array 75.50 326 ⇑P **P 18 17 16.3 +0.5**
BURAR Bucovina Array 75.50 326 ⇑P **P 18 17 16.3 +0.5**
BURAR Bucovina Array 75.50 326 P **P 18 17 16.0 +0.2**
TESR Tescani 75.86 325 ⇑P **P 18 17 18.1 +0.5**
TRPA Tarpa 76.06 328 ⇑P **P 18 17 19.8 +1.0**
CLL Collm 76.40 335 *e*P **P 18 17 20.0 -0.6**
MLR Muntele Rosu 76.98 325 ⇑P **P 18 17 25.4 +1.2**
MLR Muntele Rosu 76.98 325 ⇑P **P 18 17 25.4 +1.2**
VYHS Vyhne 77.05 331 *e*P **P 18 17 24.9 +0.5**
VYHS Vyhne 77.05 331 *e*P **P 18 17 24.9 +0.5**
DRGR 77.13 327 ⇑P **P 18 17 25.5 +0.5**
DRGR 77.13 327 ⇑P **P 18 17 25.5 +0.5**
VOIR 77.37 325 ⇑P **P 18 17 27.3 +0.9**
VOIR 77.37 325 ⇑P **P 18 17 27.3 +0.9**
ARR Arges 77.59 325 ⇑P **P 18 17 29.2 +1.7**
TX31 Lajitas Ar. Si 77.61 60 P **P 18 17 27.9 0.0**
TX32 Lajitas Array 77.61 60 P **P 18 17 28.5 +0.5**
TXAR Lajitas Array 77.61 60 P **P 18 17 29.3 +1.3**
comp=Z,1.2nm,0.5s,baz=297,slow=4.2,SNR=16
TXAR Lajitas Array 77.61 60 P **P 18 17 28.0 0.0**
BRTR Keskin Array B 78.29 317 P **P 18 17 33.0 +1.4**
BRTR Keskin Array B 78.29 317 P **P 18 17 33.0 +1.4**
comp=Z,1.3nm,1.0s,baz=49,slow=3.8,SNR=5.6
BRTR Keskin Array B 78.29 317 P **P 18 17 31.9 +0.3**
GERES GERESS Array B 78.39 334 *e*P **P 18 17 32.8 +0.9**
GERES GERESS Array B 78.39 334 P **P 18 17 32.0 0.0**
comp=Z,0.7nm,0.6s,baz=27,slow=6.1,SNR=5.2
GERES GERESS Array B 78.39 334 P **P 18 17 31.8 -0.2**
U40A Yellville 78.42 49 P **P 18 17 32.2 0.0**
U40A IAmb IAmb 18 17 32.8
comp=Z,7.2nm,0.8s
BZS Buzias 78.53 327 ⇑P **P 18 17 33.2 +0.5**
BZS Buzias 78.53 327 ⇑P **P 18 17 33.2 +0.5**
NRCA Norcia 83.93 331 P **P 18 18 02.1 +0.6**
NRCA IAmb IAmb 18 18 03.4
comp=Z,9.4nm,1.1s
PLCA Paso Flores 148.35 95 PKPbc **PKPbc 18 25 17.6 +0.4**
comp=Z,3.2nm,0.9s,baz=30,slow=3.8,SNR=4.0
CPUP Villa Florida 148.59 60 PKPbc **PKPbc 18 25 18.7 +0.5**
comp=Z,0.7nm,0.5s,baz=327,slow=4.0,SNR=3.9

MAN 02 18:13:45.3, 16°.18N×121°.52E, h34km, mb4.1, ML2.9, MS2.5, Luzon

SKO ***02*** *18:15:09.9, 40°.67N×22°.83E, h8km*
ATH ***02*** *18:15:10.8, 40°.71N×22°.83E, h9km±4km, ML1.1/6, Error ellipse: s-maj=4.4km s-min=0.9km az=159.0*
ISC 02 18:15:10.5±1.1, 40°.70N±0°.04×22°.81E±0°.04, h12km±9km, n11, σ0°.37/19, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
THE	**Thessaloniki**	**0.14**	**121**	P		**Pg**	**Pg**	**18 15 13.9**	**+0.1**
THE				S		**Sg**	**Sg**	**18 15 15.9**	**-0.2**
THE				AML		AML	AML	18 15 16.3	
	comp=E,278μm,0.1s								
THE				AML		AML	AML	18 15 16.5	
	comp=N,284μm,0.1s								
HORT	**Hortiatis**	**0.24**	**116**	P		**Pg**	**Pg**	**18 15 15.5**	**-0.1**
HORT				S		**Sg**	**Sg**	**18 15 19.0**	**0.0**
HORT				AML		AML	AML	18 15 20.4	
	comp=E,76μm,0.1s								
HORT				AML		AML	AML	18 15 21.8	
	comp=N,67μm,0.1s								
GRG	**Griva**	**0.40**	**309**	P		**Pg**	**Pg**	**18 15 18.3**	**-0.1**
GRG				S		**Sg**	**Sg**	**18 15 24.6**	**+0.8**
GRG				AML		AML	AML	18 15 25.2	
	comp=E,93μm,0.2s								
GRG				AML		AML	AML	18 15 25.3	
	comp=N,63μm,0.1s								
SOH	**Sokhos**	**0.43**	**74**	P		**Pg**	**Pg**	**18 15 18.9**	**-0.1**
SOH				S		**Sg**	**Sg**	**18 15 24.9**	**+0.2**
SOH				AML		AML	AML	18 15 25.9	
	comp=E,75μm,0.2s								
SOH				AML		AML	AML	18 15 26.4	
	comp=N,71μm,0.2s								
KNT	**Kendrikon**	**0.46**	**8**	P		**Pg**	**Pg**	**18 15 19.5**	**-0.1**
KNT				S		**Sg**	**Sg**	**18 15 25.6**	**-0.1**
KNT				AML		AML	AML	18 15 26.5	
	comp=N,61μm,0.1s								
KNT				AML		AML	AML	18 15 27.1	
	comp=E,61μm,0.1s								
PLG	**Polygyros**	**0.58**	**124**	P		**Pg**	**Pg**	**18 15 21.9**	**0.0**
PLG				S		**Sg**	**Sg**	**18 15 29.7**	**+0.1**
PLG				AML		AML	AML	18 15 30.9	
	comp=E,42μm,0.1s								
PLG				AML		AML	AML	18 15 31.0	
	comp=N,36μm,0.2s								
VAY	**Valandovo**	**0.64**	**344**	*i*	Pg	**Pg**	**Pg**	**18 15 22.7**	**-0.3**
VAY				*i*	Sg	**Sg**	**Sg**	**18 15 31.4**	**-0.1**
VAY				*e*	Lg	Lg	Lg	18 15 31.8	
	comp=E,7.2nm,0.2s								
VAY				*e*	Lg	Lg	Lg	18 15 31.8	
	comp=N,6.3nm,0.2s								
LIT	**Litokhoron**	**0.65**	**202**	P		**Pb**	**Pb**	**18 15 23.4**	**-0.3**
OUR	**Ouranopolis**	**0.97**	**112**	P		**Pb**	**Pb**	**18 15 29.4**	**+0.2**
PAIG	**Paliouri**	**1.02**	**139**	P		**Pb**	**Pb**	**18 15 29.9**	**-0.2**
NVR	**Nevrokopi**	**1.02**	**51**	P		**Pg**	**Pg**	**18 15 29.5**	**-0.7**
NVR				S		**Sb**	**Sb**	**18 15 44.3**	**+0.6**

TAP ***02*** *18:26:02.6, 23°.72N×121°.74E, h42km, ML3.3, D*
JMA ***02*** *18:26:02.6±0.1, 23°.72N×121°.64E, h48km±3km, M2.7*
ISC 02 18:26:04.1±1.2, 23°.73N±0°.02×121°.69E±0°.02, h42km, n77, σ0°.64/139, 2C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.19**	**334**	⇑P		**Pn**	**18 26 10.3**	**-1.3**
	baz=326							
ENLB				S		**Sn**	**18 26 17.1**	**+0.4**
	baz=326							
ESL	**Shilin**	**0.25**	**289**	P		**Pn**	**18 26 11.2**	**-0.9**
	baz=289							
ESL				*e*S		**Sn**	**18 26 18.2**	**+0.6**
	baz=289							
EGFH	**Guangfu**	**0.25**	**255**	P		**Pn**	**18 26 11.4**	**-0.7**
	baz=260							
EGFH				*e*S		**Sn**	**18 26 18.1**	**+0.4**
	baz=260							
HWA	**Hwalien**	**0.26**	**342**	P		**Pn**	**18 26 11.7**	**-0.5**
	baz=336							
HGSD	**Ruisui**	**0.34**	**226**	*e*P		**Pn**	**18 26 13.3**	**+0.2**
	baz=231							
HGSD				*e*S		**Sn**	**18 26 20.9**	**+1.6**
	baz=231							
TWD	**Chiawan**	**0.35**	**346**	⇑ *i*P		**Pn**	**18 26 12.3**	**-0.8**
	baz=341							
TWD				*e*S		**Sn**	**18 26 20.0**	**+0.5**
	baz=341							
EHY	**Hungye**	**0.41**	**236**	P		**Pn**	**18 26 12.7**	**-1.1**
	baz=240							
EHY				*e*S		**Sn**	**18 26 19.9**	**-0.7**
	baz=240							
NACB	**Ninganchiao**	**0.45**	**348**	*i*P		**Pn**	**18 26 13.1**	**-1.2**
	baz=344							
NACB				S		**Sn**	**18 26 21.7**	**+0.2**
	baz=344							
YULB	**Yu-li**	**0.50**	**227**	P		**Pn**	**18 26 13.8**	**-1.2**
	baz=231							
YULB				*e*S		**Sn**	**18 26 21.6**	**-0.9**
	baz=231							
VWDT	**VWDT**	**0.51**	**272**	P		**Pn**	**18 26 14.4**	**-0.6**
	baz=273							
VWDT				S		**Sn**	**18 26 22.6**	**-0.1**
	baz=273							
ETLH	**Xiulin Townshi**	**0.51**	**338**	*e*P		**Pn**	**18 26 13.8**	**-1.4**
	baz=334							
ETLH				*e*S		**Sn**	**18 26 21.6**	**-1.4**
	baz=334							
OWD	**Renai**	**0.52**	**295**	*e*P		**Pn**	**18 26 14.4**	**-1.0**
	baz=294							
OWD				*e*S		**Sn**	**18 26 22.3**	**-1.1**
	baz=294							
TWF1	**Yuli**	**0.53**	**224**	P		**Pn**	**18 26 14.3**	**-1.1**
	baz=227							
TWF1				*e*S		**Sn**	**18 26 22.4**	**-0.8**
	baz=227							
WHF	**Hehuan Shan**	**0.57**	**316**	P		**Pn**	**18 26 14.9**	**-1.3**
	baz=315							
WHF				*e*S		**Sn**	**18 26 24.5**	**-0.3**
	baz=315							
CHGB	**Renai**	**0.57**	**304**	*i*P		**Pn**	**18 26 15.3**	**-0.8**
	baz=303							
FULB	**Fuli**	**0.65**	**215**	*e*P		**Pn**	**18 26 16.5**	**-0.4**
	baz=218							
FULB				*e*S		**Sn**	**18 26 25.8**	**-0.2**
	baz=218							
SSLB	**Suanglung**	**0.68**	**275**	*i*P		**Pn**	**18 26 16.5**	**-0.8**
	baz=275							
ENA	**Nanau**	**0.69**	**4**	P		**Pn**	**18 26 16.8**	**-0.7**
	baz=1.0							
ENA				*e*S		**Sn**	**18 26 27.1**	**-0.1**
	baz=1.0							
NANB	**Nanao**	**0.69**	**4**	P		**Pn**	**18 26 16.6**	**-0.9**
	baz=1.0							
CHKT	**Chengkung**	**0.70**	**205**	P		**Pn**	**18 26 17.4**	**-0.2**
	baz=208							
CHKT				*e*S		**Sn**	**18 26 26.9**	**-0.4**
	baz=208							
TWT	**Tachien**	**0.70**	**318**	P		**Pn**	**18 26 17.2**	**-0.6**
	baz=315							
TWT				*e*S		**Sn**	**18 26 28.1**	**+0.5**
	baz=315							
TDCB	**Techi**	**0.71**	**317**	*i*P		**Pn**	**18 26 17.2**	**-0.7**
	baz=315							
YUS	**Yu-Shan**	**0.72**	**250**	P		**Pn**	**18 26 17.3**	**-1.1**
	baz=252							
YUS				*e*S		**Sn**	**18 26 28.4**	**-0.2**
	baz=252							
SMLT	**Sun Moon Lake**	**0.74**	**282**	P		**Pn**	**18 26 17.7**	**-0.6**
	baz=282							
SMLT				S		**Sn**	**18 26 29.0**	**+0.5**
	baz=282							
NNSH	**Datong**	**0.75**	**338**	P		**Pn**	**18 26 17.3**	**-1.1**
	baz=335							
NNSH				*e*S		**Sn**	**18 26 28.9**	**+0.2**
	baz=335							
NNS	**Nan Shan**	**0.76**	**338**	P		**Pn**	**18 26 17.3**	**-1.3**
	baz=335							
NNS				*e*S		**Sn**	**18 26 29.1**	**+0.1**
	baz=335							
DPDB	**Guoxing**	**0.76**	**293**	P		**Pn**	**18 26 18.2**	**-0.3**
	baz=293							
DPDB				*e*S		**Sn**	**18 26 29.5**	**+0.6**
	baz=293							
WHYT	**Xinyi Township**	**0.77**	**267**	*i*P		**Pn**	**18 26 18.4**	**-0.2**
	baz=268							
TYC	**Yuchr**	**0.78**	**283**	P		**Pn**	**18 26 18.2**	**-0.5**
	baz=283							
TYC				*e*S		**Sn**	**18 26 29.8**	**+0.5**
	baz=283							
ELDTW	**Lidau**	**0.82**	**229**	*e*P		**Pn**	**18 26 18.1**	**-1.3**
	baz=230							
ELDTW				*e*S		**Sn**	**18 26 30.4**	**-0.1**
	baz=230							
ALS	**Alishan**	**0.84**	**255**	P		**Pn**	**18 26 19.6**	**-0.3**
	baz=256							
ALS				*e*S		**Sn**	**18 26 30.1**	**-1.1**
	baz=256							
WHP	**Taichung City**	**0.87**	**309**	*i*P		**Pn**	**18 26 19.7**	**-0.4**
	baz=307							
NDT	**Datong Townshi**	**0.88**	**349**	P		**Pn**	**18 26 19.9**	**-0.2**
	baz=347							
NDT				*e*S		**Sn**	**18 26 32.0**	**+0.3**
	baz=347							
TWC	**Suao**	**0.88**	**9**	P		**Pn**	**18 26 19.8**	**-0.4**
	baz=7.0							
TWC				*e*S		**Sn**	**18 26 31.7**	**0.0**
	baz=7.0							
WJS	**Zhushan**	**0.89**	**276**	P		**Pn**	**18 26 20.3**	**+0.1**
	baz=276							
WJS				*e*S		**Sn**	**18 26 32.6**	**+0.7**
	baz=276							
ENTT	**Nioudou**	**0.91**	**353**	P		**Pn**	**18 26 19.6**	**-0.9**
	baz=350							
ENTT				*e*S		**Sn**	**18 26 32.5**	**+0.1**
	baz=350							
WNT	**Mingjian**	**0.94**	**279**	P		**Pn**	**18 26 21.1**	**+0.3**
	baz=279							
WNT				*e*S		**Sn**	**18 26 33.6**	**+0.6**
	baz=279							
CHN5	**Tsauling**	**0.94**	**262**	P		**Pn**	**18 26 21.0**	**0.0**
	baz=262							
CHN5				*e*S		**Sn**	**18 26 33.8**	**+0.5**
	baz=262							
YHNB	**Yeheng**	**0.97**	**343**	P		**Pn**	**18 26 20.7**	**-0.7**
	baz=340							
TWE	**Neicheng**	**0.98**	**359**	P		**Pn**	**18 26 20.7**	**-0.8**
	baz=357							
TWE				*e*S		**Sn**	**18 26 34.3**	**+0.1**
	baz=357							
NSK	**Sanguang**	**0.99**	**342**	P		**Pn**	**18 26 20.8**	**-0.8**
	baz=340							
NSK				*e*S		**Sn**	**18 26 34.6**	**+0.2**
	baz=340							
TCU	**Taichung**	**1.02**	**294**	*e*P		**Pn**	**18 26 22.3**	**+0.4**
	baz=293							
TCU				*e*S		**Sn**	**18 26 36.0**	**+0.9**
	baz=293							
STYT	**Tauyuan**	**1.03**	**237**	*e*P		**Pn**	**18 26 21.6**	**-0.6**
	baz=238							
STYT				S		**Sn**	**18 26 36.2**	**+0.7**
	baz=238							
WGK	**Gukeng**	**1.04**	**268**	P		**Pn**	**18 26 22.1**	**-0.1**
	baz=268							
WGK				*e*S		**Sn**	**18 26 36.1**	**+0.5**
	baz=268							
TWH	**Lutao**	**1.04**	**191**	P		**Pn**	**18 26 22.1**	**-0.1**
	baz=192							
TWH				*e*S		**Sn**	**18 26 35.9**	**+0.3**
	baz=192							
TWQ1	**Liyutan**	**1.04**	**306**	P		**Pn**	**18 26 22.1**	**-0.2**
	baz=305							
TWQ1				*e*S		**Sn**	**18 26 36.4**	**+0.7**
	baz=305							
NWLT	**Wulai**	**1.05**	**351**	P		**Pn**	**18 26 22.4**	**-0.1**
	baz=348							
NWLT				*e*S		**Sn**	**18 26 36.2**	**+0.3**
	baz=348							
TPUB	**Ta-pu**	**1.07**	**246**	*e*P		**Pn**	**18 26 23.0**	**+0.3**
	baz=247							
TPUB				*e*S		**Sn**	**18 26 36.5**	**+0.2**
	baz=247							
TWGBT	**Beinan**	**1.07**	**212**	P		**Pn**	**18 26 22.1**	**-0.7**
	baz=213							
TWG	**Pinlang**	**1.07**	**212**	P		**Pn**	**18 26 22.1**	**-0.7**
	baz=213							
TWG				*e*S		**Sn**	**18 26 36.3**	**-0.1**
	baz=213							
CHN4	**Tsaushan**	**1.08**	**250**	*e*P		**Pn**	**18 26 22.5**	**-0.3**
	baz=250							
CHN4				*e*S		**Sn**	**18 26 37.0**	**+0.5**
	baz=250							
NSY	**Sanyi**	**1.09**	**309**	P		**Pn**	**18 26 23.0**	**+0.1**
	baz=308							
NSY				*e*S		**Sn**	**18 26 37.4**	**+0.6**
	baz=308							
NSTT	**Nanjuang**	**1.09**	**325**	P		**Pn**	**18 26 23.3**	**+0.3**
	baz=323							
NSTT				*e*S		**Sn**	**18 26 37.5**	**+0.5**
	baz=323							
WCHH	**Zhanghua**	**1.09**	**289**	*e*P		**Pn**	**18 26 23.4**	**+0.4**
	baz=288							
LIOB	**Emei**	**1.10**	**326**	P		**Pn**	**18 26 23.4**	**+0.3**
	baz=324							
WTP	**Ta-pu**	**1.10**	**244**	*e*P		**Pn**	**18 26 22.7**	**-0.5**
	baz=245							
WTP				*e*S		**Sn**	**18 26 37.5**	**+0.2**
	baz=245							
TWK	**Hsinying**	**1.20**	**247**	*e*P		**Pn**	**18 26 24.1**	**-0.4**
	baz=248							
TWK				S		**Sn**	**18 26 40.8**	**+1.1**
	baz=248							
CHN1	**Nanshi**	**1.20**	**243**	*e*P		**Pn**	**18 26 24.2**	**-0.3**
	baz=244							
CHN1				*e*S		**Sn**	**18 26 40.0**	**+0.4**
	baz=244							
RLNB	**Erlin**	**1.23**	**278**	P		**Pn**	**18 26 25.2**	**+0.3**
	baz=277							
RLNB				S		**Sn**	**18 26 41.1**	**+0.9**
	baz=277							
TIPB	**Shuangxi**	**1.24**	**6**	*e*P		**Pn**	**18 26 24.5**	**-0.5**
	baz=3.0							
TIPB				*e*S		**Sn**	**18 26 40.6**	**0.0**
	baz=3.0							
TWA	**Mucha**	**1.24**	**355**	*e*P		**Pn**	**18 26 24.7**	**-0.4**
	baz=354							
TWA				*e*S		**Sn**	**18 26 40.8**	**+0.1**
	baz=354							
WFSB	**Wu-fen Shan**	**1.33**	**3**	*e*P		**Pn**	**18 26 25.9**	**-0.4**
	baz=1.0							
WFSB				*e*S		**Sn**	**18 26 43.0**	**+0.2**
	baz=1.0							
JYNG	**Yonagunijimaku**	**1.35**	**58**	P		**Pn**	**18 26 27.0**	**+0.5**
JYNG				S		**Sn**	**18 26 43.4**	**+0.2**
WSF	**Szhu**	**1.35**	**266**	*e*P		**Pn**	**18 26 27.0**	**+0.5**
	baz=266							
WSF				S		**Sn**	**18 26 43.9**	**+0.6**
	baz=266							
YOJ	**Yonaguni jima**	**1.41**	**59**	P		**Pn**	**18 26 27.7**	**+0.4**
YOJ				*e*S		**Sn**	**18 26 44.7**	**+0.1**
YM01	**YM01**	**1.41**	**355**	P		**Pn**	**18 26 27.8**	**+0.4**
	baz=353							
CHN8	**Yiju**	**1.41**	**254**	*e*P		**Pn**	**18 26 27.2**	**-0.2**
	baz=255							
CHN8				*e*S		**Sn**	**18 26 46.1**	**+1.3**
	baz=255							
YM04	**YM04**	**1.42**	**354**	*e*P		**Pn**	**18 26 27.2**	**-0.3**

	baz=352								
YM04					*e*S		**Sn**	**18 26 45.3**	**+0.3**
	baz=352								
YM10	**YM10**	**1.42**	**355**		P		**Pn**	**18 26 27.4**	**-0.1**
	baz=353								
YM05	**YM05**	**1.43**	**355**		P		**Pn**	**18 26 28.0**	**+0.4**
	baz=353								
YM05					*e*S		**Sn**	**18 26 45.5**	**+0.2**
	baz=353								
MASBT	**Mashibuluo**	**1.48**	**221**		*e*P		**Pn**	**18 26 28.0**	**-0.3**
	baz=222								
IRIF	**Iriomote-Funau**	**1.96**	**72**		P		**Pn**	**18 26 35.8**	**+1.0**
IRIF					S		**Sn**	**18 26 58.6**	**+0.4**
HATJ	**Hateruma jima**	**1.96**	**80**		*e*S		**Sn**	**18 26 58.3**	**0.0**
JKRS	**Kuro-shima**	**2.18**	**76**		P		**Pn**	**18 26 38.2**	**+0.3**
JKRS					*e*S		**Sn**	**18 27 04.2**	**+0.6**
JIJ	**Ishigaki jima**	**2.33**	**74**		P		**Pn**	**18 26 39.7**	**-0.2**
JIJ					*e*S		**Sn**	**18 27 06.6**	**-0.7**
JISG	**Ishigakijimahi**	**2.54**	**70**		P		**Pn**	**18 26 42.5**	**-0.3**
JISG					S		**Sn**	**18 27 11.3**	**-1.2**
JTJ	**Tarama**	**2.89**	**71**		P		**Pn**	**18 26 47.6**	**-0.1**
JTJ					*e*S		**Sn**	**18 27 21.6**	**+0.4**

*IDC **02** 18:34:32.8±1.5, 17˚.69S×167˚.72E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.9/32, mbtmp3.9/8, ML3.5/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/27, Error ellipse: s-maj=42.9km s-min=23.1km az=122.0*
*NEIC **02** 18:34:35.6±2.3, 17˚.6S±0˚.1×167˚.81E±0˚.08, h30km±6km, mb4.1/6, Error ellipse: s-maj=19.0km s-min=10.1km az=168.0*

ISC 02 18:34:35.9±0.7, 17˚.65S±0˚.09×167˚.8E±0˚.1, h27km, n27, σ1§37/27, mb3.9/8, MS3.5/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.57**	**196**	*e*Pn			**Pn**	**18 35 44.9**	**+1.5**
	12nm,0.3s								
DZM				*e*Sn			**Sn**	**18 36 34.9**	**-0.8**
	28nm,0.3s								
DZM	**Mont Dzumac**	**4.57**	**196**	Pn			**Pn**	**18 35 43.7**	**+0.3**
	2.1nm,0.3s,baz=83,slow=17,SNR=48								
DZM					LR		LR	18 36 33.8	
	comp=Z,128nm,18.3s,baz=20,slow=27								
DZM					Sn		**Sn**	**18 36 35.1**	**-0.6**
	5.8nm,0.3s,baz=92,slow=22,SNR=7.4								
DZM	**Mont Dzumac**	**4.57**	**196**				**Pn**	**18 35 43.9**	**+0.4**
MSVF	**Nonsavu**	**9.80**	**92**	Pn			**Pn**	**18 36 54.6**	**-0.6**
HNR	**Honiara**	**11.16**	**316**	LR			LR	18 40 56.3	
	comp=Z,204nm,19.9s,baz=122,slow=34								
CTA	**Charters Tower**	**20.50**	**260**	P			**P**	**18 39 10.8**	**-1.4**
	3.5nm,0.7s,baz=81,slow=10,SNR=5.0								
STKA	**Stephens Creek**	**27.57**	**234**	P			**P**	**18 40 21.4**	**+0.5**
	1.6nm,0.6s,baz=71,slow=8.4,SNR=5.5								
STKA					LR		LR	18 51 03.6	
	comp=Z,103nm,18.1s,baz=26,slow=36								
STKA	**Stephens Creek**	**27.57**	**234**	P			**P**	**18 40 21.0**	**+0.1**
WRA	**Warramunga Arr**	**31.70**	**261**	P			**P**	**18 40 56.4**	**-1.3**
	1.2nm,0.9s,baz=87,slow=8.6,SNR=6.3								
WRA	**Warramunga Arr**	**31.70**	**261**				**P**	**18 40 56.0**	**-1.7**
AS31	**Alice Springs**	**32.20**	**254**	P			**P**	**18 41 01.0**	**-1.0**
AS31					IAmb		IAmb	18 41 03.7	
	comp=Z,1.3nm,0.9s								
ASAR	**Alice Springs**	**32.20**	**254**	P			**P**	**18 41 02.5**	**+0.5**
	comp=Z,2.5nm,0.8s,baz=80,slow=8.1,SNR=25								
ASAR					LR		LR	18 53 51.1	
	comp=Z,122nm,18.1s,baz=88,slow=36								
ASAR	**Alice Springs**	**32.20**	**254**	P			**P**	**18 41 02.0**	**0.0**
FITZ	**Fitzroy Crossi**	**40.04**	**263**	P			**P**	**18 42 09.6**	**+0.5**
FITZ					IAmb		IAmb	18 42 19.2	
	comp=Z,8.7nm,1.1s								
PPT2	**Papeete2**	**40.59**	**97**	*e*LR			LR	18 53 47.0	
	comp=Z,96nm,27.2s								
QSPA	**South Pole Qui**	**72.39**	**180**	P			**P**	**18 46 00.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**76.58**	**294**	P			**P**	**18 46 27.2**	**+2.7**
	comp=Z,1.0nm,0.9s,baz=134,slow=5.0,SNR=8.6								
CMAR	**Chiang Mai Arr**	**76.58**	**294**	P			**P**	**18 46 26.2**	**+1.7**
SONM	**Songino Array**	**85.12**	**324**	P			**P**	**18 47 10.7**	**+1.0**
	comp=Z,1.2nm,1.1s,baz=123,slow=5.3,SNR=5.2								
SONM	**Songino Array**	**85.12**	**324**	P			**P**	**18 47 06.2**	**-3.4**
ILAR	**Eielson Array**	**89.15**	**18**	P			**P**	**18 47 28.9**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=236,slow=4.9,SNR=3.8								
ILAR	**Eielson Array**	**89.15**	**18**	P			**P**	**18 47 28.1**	**-0.4**
ARCES	**ARCESS Array B**	**123.19**	**345**	PKP			**PKiKP**	**18 53 30.9**	**+1.2**
	comp=Z,3.8nm,0.8s,baz=28,slow=5.5,SNR=3.5								
MOTA	**Moosalm**	**144.72**	**332**	*i* PKiKP			**PKPdf**	**18 54 11.3**	**+0.8**
	comp=Z,8.2nm,1.1s								
SQTA	**Sankt Quirin**	**144.77**	**332**	*i* PKiKP			**PKPdf**	**18 54 11.5**	**+1.0**
	comp=Z,6.9nm,1.0s								
FETA	**Feichten**	**145.14**	**332**	*i* PKiKP			**PKPdf**	**18 54 12.3**	**+1.1**
	comp=Z,6.2nm,0.9s								
DAVA	**Damuels**	**145.30**	**333**	*i* PKiKP			**PKiKP**	**18 54 13.1**	**-2.4**
	comp=Z,11nm,1.1s								

*KRNET **02** 18:36:05.6±0.1, 42˚.59N×74˚.58E, h17km, mb3.1*
*KNET **02** 18:36:05.4±0.4, 42˚.56N×74˚.57E, h9km, 6km, ml2.5, Error ellipse: s-maj=3.0km s-min=2.0km az=153.0*
*SOME **02** 18:36:06.2, 42˚.60N×74˚.58E, h10km*
*NNC **02** 18:36:06.7±0.2, 42˚.66N×74˚.61E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=7.1km s-min=1.1km az=159.0*

ISC 02 18:36:06.4±0.8, 42˚.59N±0˚.02×74˚.59E±0˚.01, h7km±5km, n71, σ1§25/130, 46C-36D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**0.08**	**307**	⇑*i*P			**Pg**	**18 36 08.2**	**-0.5**
	baz=10.0								
AAK				⇑*i*S			**Sg**	**18 36 09.9**	**-0.3**
	baz=10.0								
AAK	**Ala-Archa**	**0.08**	**307**	⇓P			**Pg**	**18 36 08.1**	**-0.5**
	746nm,0.1s,SNR=4025								
AAK				S			**Sg**	**18 36 10.0**	**-0.3**
	6µm,0.2s								
AAK	**Ala-Archa**	**0.08**	**307**	⇑P			**Pg**	**18 36 08.3**	**-0.4**
	161nm,0.2s								
AAK				⇑S			**Sg**	**18 36 09.9**	**-0.3**
	2µm,0.3s								
KBK	**Karagaybulak**	**0.28**	**75**	⇑*i*P			**Pg**	**18 36 11.8**	**-0.2**
	baz=75								
KBK				⇑*i*S			**Sg**	**18 36 15.9**	**+0.2**
	baz=75								
KBK	**Karagaybulak**	**0.28**	**75**	P			**Pg**	**18 36 12.0**	**0.0**
	93nm,0.1s,SNR=400								
KBK				⇑S			**Sg**	**18 36 16.4**	**+0.7**
	907nm,0.1s								
UCH	**Uchtor**	**0.36**	**188**	⇓*i*P			**Pg**	**18 36 13.0**	**-0.7**
	baz=88								
UCH				⇓*i*S			**Sg**	**18 36 17.9**	**-0.6**
	211nm,0.1s,SNR=1059								
UCH	**Uchtor**	**0.36**	**188**	⇑P			**Pg**	**18 36 13.1**	**-0.6**
CHMS	**Chumysh**	**0.43**	**17**	⇑*i*P			**Pg**	**18 36 14.3**	**-0.5**
	baz=17								
CHMS				⇑*i*S			**Sg**	**18 36 20.3**	**-0.2**
	baz=17								
CHMS	**Chumysh**	**0.43**	**17**	⇓P			**Pg**	**18 36 14.5**	**-0.3**
	75nm,0.1s,SNR=213								
CHMS				⇑S			**Sg**	**18 36 20.6**	**+0.1**
	266nm,0.1s								
EKS2	**Erkin-Say**	**0.60**	**277**	⇓*i*P			**Pg**	**18 36 17.5**	**-0.6**
	baz=78								
EKS2				⇓*i*S			**Sg**	**18 36 25.5**	**-0.4**
	baz=78								
EKS2	**Erkin-Say**	**0.60**	**277**	⇓P			**Pg**	**18 36 17.8**	**-0.3**
	24nm,0.1s,SNR=38								
EKS2				⇑S			**Sg**	**18 36 26.4**	**+0.5**
	162nm,0.1s								
USP	**Ospenovka**	**0.68**	**355**	⇑*i*P			**Pg**	**18 36 18.9**	**-0.7**
	baz=55								
USP				⇑*i*S			**Sg**	**18 36 28.0**	**-0.5**
	baz=55								
USP	**Ospenovka**	**0.68**	**355**	⇓P			**Pg**	**18 36 19.0**	**-0.6**
	90nm,0.2s,SNR=668								
USP				⇑S			**Sg**	**18 36 28.3**	**-0.2**
	152nm,0.2s								
KZA	**Kyzart**	**0.71**	**136**	⇓*i*P			**Pg**	**18 36 19.5**	**-0.6**
	baz=35								
KZA				⇓*i*S			**Sg**	**18 36 29.1**	**-0.3**
	baz=35								
KZA	**Kyzart**	**0.71**	**136**	⇓P			**Pg**	**18 36 19.6**	**-0.5**
	22nm,0.2s,SNR=48								
KZA				⇑S			**Sg**	**18 36 29.0**	**-0.3**
	106nm,0.1s								
ARLS	**Aral**	**0.75**	**195**	⇓*e*P			**Pg**	**18 36 20.0**	**-0.9**
	baz=95								
ARLS				⇓*i*S			**Sg**	**18 36 30.0**	**-0.7**
	baz=95								
AML	**Almayashu**	**0.80**	**236**	⇑*i*P			**Pg**	**18 36 20.9**	**-1.0**
	baz=36								
AML				⇑*i*S			**Sg**	**18 36 31.5**	**-0.8**
	baz=36								
AML	**Almayashu**	**0.80**	**236**	P			**Pg**	**18 36 21.0**	**-0.9**
	14nm,0.1s,SNR=50								
AML				⇓S			**Sg**	**18 36 31.3**	**-1.1**
	101nm,0.2s								
TKM2	**Tokmak 2**	**0.82**	**66**	⇓*i*P			**Pg**	**18 36 21.1**	**-1.0**
	baz=66								
TKM2				⇓*i*S			**Sg**	**18 36 32.3**	**-0.5**
	baz=66								
TKM2	**Tokmak 2**	**0.82**	**66**	⇑P			**Pg**	**18 36 21.3**	**-0.9**
	24nm,0.1s,SNR=13								
TKM2				⇑S			**Sg**	**18 36 32.7**	**-0.1**
	235nm,0.1s								
TKM2	**Tokmak 2**	**0.82**	**66**	⇑P			**Pg**	**18 36 21.1**	**-1.0**
	7.1nm,0.3s								
TKM2				⇑S			**Sg**	**18 36 31.9**	**-0.9**
	16nm,0.2s								
SGDS	**Sogindy**	**0.86**	**2**	P			**Pg**	**18 36 22.2**	**-0.9**
	17nm,0.1s								
SGDS				S			**Sg**	**18 36 33.9**	**-0.5**
	69nm,0.1s								
BOOM	**Boomskoye usch**	**1.01**	**95**	⇑*i*P			**Pg**	**18 36 24.8**	**-1.0**
	baz=95								
BOOM				⇑*e*S			**Sg**	**18 36 38.5**	**-0.3**
	baz=95								
MRKS	**Merke**	**1.01**	**279**	⇓*i*P			**Pg**	**18 36 25.1**	**-0.9**
	baz=80								
MRKS				⇓*i*S			**Sg**	**18 36 38.4**	**-0.8**
	baz=80								
MRKS	**Merke**	**1.01**	**279**	⇓*i*P			**Pg**	**18 36 25.1**	**-0.9**
	26nm,0.1s								
MRKS				⇓*i*S			**Sg**	**18 36 38.3**	**-0.8**
	113nm,0.2s								
MRKS	**Merke**	**1.01**	**279**	P			**Pg**	**18 36 25.0**	**-0.9**
	11nm,0.1s								
MRKS				S			**Sg**	**18 36 38.3**	**-0.8**
	113nm,0.2s								
DGS	**Degeres**	**1.09**	**53**	⇓*i*P			**Pg**	**18 36 26.5**	**-0.9**
	baz=53								
DGS				⇑*e*S			**Sg**	**18 36 40.9**	**-0.6**
	baz=53								
DGS	**Degeres**	**1.09**	**53**	⇓*i*P			**Pg**	**18 36 26.5**	**-0.9**
	6.8nm,0.1s								
DGS				⇑*e*S			**Sg**	**18 36 40.9**	**-0.6**
	50nm,0.3s								
DGS	**Degeres**	**1.09**	**53**	P			**Pg**	**18 36 26.5**	**-0.9**
	6.8nm,0.1s								
DGS				S			**Sg**	**18 36 40.9**	**-0.6**
	47nm,0.2s								
KST	**Kastek**	**1.11**	**65**	⇑*i*P			**Pg**	**18 36 26.8**	**-1.0**
	baz=65								
KST				⇓*e*S			**Sg**	**18 36 41.5**	**-0.7**
	baz=65								
KST	**Kastek**	**1.11**	**65**	⇑*i*P			**Pg**	**18 36 26.8**	**-1.0**
	26nm,0.2s								
KST				⇓*e*S			**Sg**	**18 36 41.5**	**-0.7**
	62nm,0.4s								
ULHL	**Ulahol**	**1.27**	**105**	⇑*i*P			**Pn**	**18 36 29.0**	**-1.8**
	baz=5.0								
ULHL				⇑*i*S			**Sb**	**18 36 46.1**	**-1.4**
	baz=5.0								
ULHL	**Ulahol**	**1.27**	**105**	⇓P			**Pn**	**18 36 29.4**	**-1.4**
	11nm,0.1s,SNR=72								
KRBS	**Karabastau**	**1.37**	**35**	*e*P			**Pb**	**18 36 31.5**	**-0.8**
	7.3nm,0.1s								
KRBS				*e*S			**Sn**	**18 36 49.4**	**-0.9**
	71nm,0.2s								
NRN	**Naryn**	**1.56**	**137**	⇑*i*P			**Pn**	**18 36 34.2**	**-0.7**
	baz=38								
NRN				⇑*i*S			**Sn**	**18 36 55.1**	**-0.4**
	baz=38								
ARSB	**Arslanbob**	**1.74**	**224**	⇑*i*P			**Pn**	**18 36 37.5**	**+0.4**
	baz=24								
ARSB				⇑*i*S			**Sb**	**18 37 00.4**	**-0.4**
	baz=24								
AAA	**Alma-Ata**	**1.82**	**69**	*e*P			**Pb**	**18 36 40.0**	**-0.1**
	20nm,0.1s								
AAA				*e*S			**Sg**	**18 37 04.1**	**-0.8**
	41nm,0.1s								
AAA	**Alma-Ata**	**1.82**	**69**	P			**Pb**	**18 36 40.0**	**-0.1**
	20nm,0.1s								
AAA				S			**Sg**	**18 37 04.1**	**-0.8**
	41nm,0.1s								
KUU	**Kurty**	**1.83**	**44**	⇑*i*P			**Pb**	**18 36 39.4**	**-0.8**
	baz=44								
KUU				⇓*i*S			**Sb**	**18 37 03.6**	**+0.3**
	baz=44								
KUU	**Kurty**	**1.83**	**44**	⇑*i*P			**Pb**	**18 36 39.4**	**-0.8**
	14nm,0.3s								
KUU				⇓*i*S			**Sb**	**18 37 03.6**	**+0.3**
	70nm,0.2s								
KUU	**Kurty**	**1.83**	**44**	P			**Pb**	**18 36 39.4**	**-0.8**
	11nm,0.2s								
KUU				S			**Sb**	**18 37 03.6**	**+0.3**
	70nm,0.2s								
KNDC	**Almaty**	**1.86**	**69**	⇑P			**Pb**	**18 36 40.5**	**-0.3**
	12nm,0.4s								
KNDC				⇑S			**Sg**	**18 37 05.8**	**-0.3**
	29nm,0.3s								
MDOK	**Medeo**	**1.90**	**72**	*e*P			**Pb**	**18 36 40.9**	**-0.6**
	14nm,0.2s								
MDOK				*e*S			**Sg**	**18 37 06.5**	**-0.9**
	32nm,0.3s								
MDOK	**Medeo**	**1.90**	**72**	P			**Pb**	**18 36 40.8**	**-0.7**
	6.6nm,0.4s								
MDOK				S			**Sb**	**18 37 05.8**	**+0.3**
	14nm,0.4s								
MDOK	**Medeo**	**1.90**	**72**	Pg			**Pb**	**18 36 40.9**	**-0.6**
	14nm,0.2s								
MDOK					Lg		Lg	18 37 06.5	
	32nm,0.3s								
KOTS	**Kotyrbulak**	**1.97**	**70**	*e*P			**Pb**	**18 36 42.2**	**-0.4**
	32nm,0.2s								
KOTS				*e*S			**Sg**	**18 37 08.1**	**-1.5**
	34nm,0.5s								
KOTS	**Kotyrbulak**	**1.97**	**70**	Pg			**Pb**	**18 36 42.2**	**-0.4**
	32nm,0.2s								
KOTS					Lg		Lg	18 37 08.1	
	129nm,0.3s								
KDJ	**Kajisay**	**1.98**	**102**	⇑*i*P			**Pn**	**18 36 41.1**	**+0.7**
	baz=2.0								
KDJ				⇑*i*S			**Sb**	**18 37 06.7**	**-1.0**
	baz=2.0								
ARK	**Arkit**	**2.10**	**249**	⇑*i*P			**Pn**	**18 36 42.5**	**+0.4**
	baz=48								
ARK				⇑*i*S			**Sn**	**18 37 09.2**	**+0.7**
	baz=48								
CHKK	**Chushkaly**	**2.17**	**53**	*e*P			**Pb**	**18 36 45.1**	**-0.8**
	7.6nm,0.4s								
CHKK				*e*S			**Sb**	**18 37 13.6**	**+0.6**
	81nm,0.3s								
CHKK	**Chushkaly**	**2.17**	**53**	Pg			**Pb**	**18 36 45.1**	**-0.8**
	7.6nm,0.4s								
CHKK					Lg		Lg	18 37 13.6	
	81nm,0.3s								
ANVS	**Anan'yevo**	**2.28**	**84**	⇓*i*P			**Pn**	**18 36 45.2**	**+0.6**
	baz=84								
ANVS				⇓*i*S			**Sn**	**18 37 14.0**	**+0.9**
	baz=84								
BTLS	**Baital**	**2.48**	**351**	*e*P			**Pb**	**18 36 50.6**	**-0.8**
	1.9nm,0.2s								
BTLS				*e*S			**Sb**	**18 37 23.0**	**+0.9**
	17nm,0.3s								
BTLS	**Baital**	**2.48**	**351**	Pg			**Pb**	**18 36 50.6**	**-0.8**
	1.9nm,0.2s								
BTLS					Lg		Lg	18 37 23.0	
	17nm,0.3s								
TARG	**Taragay, Kyrgy**	**2.54**	**109**	⇑*e*P			**Pn**	**18 36 49.1**	**+0.7**
	baz=9.0								
TARG				⇑*i*S			**Sn**	**18 37 20.6**	**+0.8**
	baz=9.0								
KURS	**Kuram**	**2.78**	**70**	*e*P			**Pb**	**18 36 56.4**	**0.0**
	3.6nm,0.4s								
KURS				*e*S			**Sg**	**18 37 33.0**	**-2.7**
	11nm,0.5s								
KURS	**Kuram**	**2.78**	**70**	Pg			**Pb**	**18 36 56.4**	**0.0**
	3.6nm,0.4s								
KURS					Lg		Lg	18 37 33.0	
	11nm,0.5s								
PRZ	**Przheval'sk**	**2.82**	**91**	⇓*i*P			**Pn**	**18 36 52.5**	**+0.4**
	baz=91								
PRZ				⇓*i*S			**Sn**	**18 37 27.4**	**+1.0**
	baz=91								
SATY	**Saty**	**2.85**	**79**	*e*P			**Pb**	**18 36 57.3**	**-0.4**
	17nm,0.2s								
SATY				*e*S			**Sb**	**18 37 34.0**	**+1.2**
	31nm,0.3s								
SATY	**Saty**	**2.85**	**79**	Pg			**Pb**	**18 36 57.3**	**-0.4**
	17nm,0.2s								
SATY					Lg		Lg	18 37 34.0	
	31nm,0.3s								
KK31	**Karatay Array**	**3.04**	**281**	⇓Pg			**Pg**	**18 37 03.6**	**-1.1**
	1.8nm,0.3s,baz=95,slow=16,SNR=6.0								
KK31				⇑Lg			Lg	18 37 41.7	
	10nm,0.5s,baz=102,slow=29,SNR=30								
KPKS	**Kokpek**	**3.13**	**72**	*e*P			**Pb**	**18 37 02.4**	**-0.1**
	11nm,0.2s								
KPKS				*e*S			**Sb**	**18 37 42.5**	**+1.7**
	30nm,0.4s								
IUG	**Iuzhnay**	**3.40**	**264**	*e*P			**Pb**	**18 37 08.8**	**+1.7**
	0.5nm,0.5s								
IUG				*e*S			**Sg**	**18 37 53.4**	**-2.3**
	14nm,0.6s								
IUG	**Iuzhnay**	**3.40**	**264**	Pg			**Pb**	**18 37 08.8**	**+1.7**
	0.5nm,0.5s								
IUG					Lg		Lg	18 37 53.4	
	14nm,0.6s								
BRLS	**Borolday**	**3.52**	**279**	*e*P			**Pb**	**18 37 11.0**	**+1.9**
	0.6nm,0.1s								
BRLS				*e*S			**Sg**	**18 37 57.3**	**-2.2**
	5.8nm,0.3s								
BRLS	**Borolday**	**3.52**	**279**	Pg			**Pb**	**18 37 11.0**	**+1.9**
	0.6nm,0.1s								
BRLS					Lg		Lg	18 37 57.3	
	5.8nm,0.3s								
SHLS	**Shalkode**	**3.63**	**79**	*e*P			**Pg**	**18 37 18.4**	**+2.5**
	4.1nm,0.3s								
SHLS				*e*S			**Sg**	**18 38 10.0**	**+7.0**
	19nm,0.7s								
PDGK	**Podgornoye**	**3.68**	**77**	⇓Pg			**Pb**	**18 37 11.0**	**-0.7**
	2.2nm,0.5s								
PDGK				⇓Lg			Lg	18 38 02.5	
	13nm,0.6s								
DJR	**Jarkent**	**4.17**	**64**	*e*P			**Pb**	**18 37 21.3**	**+1.2**
	1.4nm,0.4s								
DJR				*e*S			**Sg**	**18 38 15.5**	**-4.9**
	4.8nm,0.5s								
KAPS	**Kapalarasan**	**4.38**	**50**	*e*P			**Pb**	**18 37 26.2**	**+2.5**
	0.6nm,0.3s								
KAPS				*e*S			**Sg**	**18 38 22.9**	**-4.0**
	9.3nm,0.5s								
MK31	**Makanchi Array**	**6.92**	**50**	⇓Pn			**Pn**	**18 37 49.9**	**+1.8**
	0.4nm,0.4s,baz=228,slow=13,SNR=9.6								
MK31				⇓Sn			**Sn**	**18 39 07.0**	**0.0**
	0.5nm,0.5s								
MK31				⇑Lg			Lg	18 39 44.7	
	0.8nm,0.6s								

*IDC **02** 18:43:49.9±3.2, 5˚.33N×126˚.06E, h0km, mb3.4/3, mb1 3.5/3, mb1mx3.3/30, mbtmp3.4/3, Error ellipse: s-maj=321.0km s-min=24.4km az=65.0*
*MAN **02** 18:44:06.7, 6˚.09N×127˚.09E, h13km, mb4.7, ML3.5, MS3.4*

ISC 02 18:43:57.9±1.7, 4˚.8N±0˚.2×126˚.8E±0˚.3, h10km, n6, σ1§02/8, mb3.1/3, 2C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.67**	**320**	*e*P			**Pb**	**18 44 28.5**	**-0.1**
DDMP				*e*S			**Sg**	**18 44 51.2**	**-0.2**
GSPH	**General Santos**	**2.22**	**305**	⇑*i*P			**Pb**	**18 44 38.3**	**+0.1**
GSPH				*i* S			**Sn**	**18 45 02.7**	**+0.3**
KCP	**Kidapawan**	**2.75**	**322**	⇑*e*P			**Pn**	**18 44 43.4**	**+1.2**
KCP				*i* S			**Sg**	**18 45 24.8**	**-1.6**
WRA	**Warramunga Arr**	**25.70**	**163**	P			**P**	**18 49 28.8**	**+0.3**
	0.3nm,0.7s,baz=348,slow=10,SNR=4.2								
ASAR	**Alice Springs**	**29.15**	**167**	P			**P**	**18 49 58.5**	**-0.9**
	0.3nm,0.8s,baz=340,slow=7.0,SNR=8.6								
MKAR	**Makanchi Array**	**56.70**	**325**	P			P	18 53 29.4	-12
	0.6nm,0.5s,baz=116,slow=7.5,SNR=14								

*DJA **02** 18:47:57.5±0.5, 11˚.S±2˚.×11˚.3E±˚, h34km±9km, M4.6/19, mB5.0/6, mb4.8/14, MLv4.7/19, Mw(mB)4.4/6, Mwp5.3/1*
*IDC **02** 18:47:58.3±0.9, 10˚.91S×113˚.14E, h31km±3km, mb3.8/11, mb1 3.9/13, mb1mx3.8/33, mbtmp4.0/13, ML3.5/2, MS3.4/4, Ms1 3.4/4, ms1mx2.9/30, Error ellipse: s-maj=33.3km s-min=11.5km az=45.0*
*NEIC **02** 18:47:58.2±1.7, 10˚.89S±0˚.08×113˚.15E±0˚.06, h40km±6km, mb4.6/30, Error ellipse: s-maj=12.3km s-min=9.0km az=193.0*

ISC 02 18:47:57.4±0.5, 11˚.01S±0˚.06×113˚.08E±0˚.05, h35km, n128, σ1§46/122, mb4.6/38, 1C, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**2.74**	**23**	P			**Pn**	**18 48 37.7**	**-1.2**
JAGI				S			**Sn**	**18 49 11.6**	**+0.8**
JAGI	**Jajag, Banyuwa**	**2.74**	**23**				**Pn**	**18 48 37.5**	**-1.4**
JAGI					Sn		**Sn**	**18 49 08.2**	**-2.5**
GMJI	**Gumukmas**	**2.74**	**8**	P			**Pn**	**18 48 37.9**	**-1.1**
IGBI	**Denpasar**	**2.98**	**43**	P			**Pn**	**18 48 41.4**	**-0.8**
DNP	**Denpasar**	**3.13**	**42**	P			**Pn**	**18 48 45.0**	**+0.8**
PWJI	**Pagerwojo**	**3.23**	**337**	P			**Pn**	**18 48 44.1**	**-1.5**
PWJI				S			**Sn**

TNTI	**Ternate**	**18.41**	**51**	P	Pn	18 52 19.5	+10		
TNTI	**Ternate**	**18.41**	**51**	P	**P**	**18 52 08.4**	**-1.3**		
GSI	**Gunungsitoli**	**19.68**	**307**	P	**P**	**18 52 22.8**	**-1.0**		
GSI				IAmb	IAmb	18 52 36.5			
	comp=Z,11nm,0.6s								
FAKI	**Fak Fak**	**20.64**	**68**	P	**P**	**18 52 33.9**	**-0.3**		
	comp=Z,37nm,0.9s								
SIJI	**Sorong**	**20.68**	**62**	P	**P**	**18 52 30.6**	**-4.1**		
	comp=Z,15nm,1.1s,baz=296,slow=11,SNR=5.8								
SIJI				pP	**pP**	**18 52 42.1**	**-0.2**		
	comp=Z,34nm,0.8s,baz=275,slow=5.5,SNR=15								
WRA	**Warramunga Arr**	**22.31**	**116**	P	**P**	**18 52 52.0**	**-0.1**		
	comp=Z,2.2nm,0.7s,baz=290,slow=11,SNR=15								
WRA	**Warramunga Arr**	**22.31**	**116**	P	**P**	**18 52 52.5**	**+0.4**		
WRAB	**Tennant Creek**	**22.32**	**116**	P	**P**	**18 52 52.6**	**+0.4**		
MLSI	**Meulaboh, Aceh**	**22.49**	**312**	P	P	18 53 08.0	+14		
WR0	**Warramunga Arr**	**22.49**	**116**	P	**P**	**18 52 53.9**	**-0.2**		
RKPI	**Ransiki, Papua**	**22.98**	**67**	P	P	18 53 12.3	+13		
ASAR	**Alice Springs**	**23.48**	**125**	P	**P**	**18 53 04.5**	**+0.3**		
	comp=Z,2.7nm,0.7s,baz=296,slow=9.1,SNR=46								
ASAR				S	**S**	**18 57 20.5**	**+4.8**		
	comp=Z,1.5nm,1.1s,baz=301,slow=25,SNR=3.0								
ASAR				LR	LR	19 03 55.3			
	comp=Z,52nm,18.1s,baz=295,slow=41								
ASAR	**Alice Springs**	**23.48**	**125**	P	**P**	**18 53 04.4**	**+0.2**		
AS31	**Alice Springs**	**23.49**	**125**	P	**P**	**18 53 04.6**	**+0.4**		
CMAR	**Chiang Mai Arr**	**32.43**	**334**	P	**P**	**18 54 25.6**	**+1.2**		
	comp=Z,1.3nm,0.8s,baz=170,slow=7.7,SNR=9.5								
CMAR				pP	**sP**	**18 54 35.6**	**-1.0**		
	comp=Z,5.5nm,0.8s,baz=169,slow=8.2,SNR=23								
CMAR	**Chiang Mai Arr**	**32.43**	**334**	P	**P**	**18 54 24.2**	**-0.3**		
STKA	**Stephens Creek**	**33.52**	**133**	P	**P**	**18 54 34.3**	**+0.5**		
	comp=Z,1.9nm,0.8s,baz=305,slow=5.4,SNR=5.6								
H08S2	**Diego Garcia H**	**40.17**	**271**	T	T	19 38 46.9			
	baz=96,slow=74,SNR=9.3								
H08S3	**Diego Garcia H**	**40.18**	**271**	T	T	19 38 44.0			
	baz=96,slow=74,SNR=16								
H08S1	**Diego Garcia H**	**40.19**	**271**	T	T	19 38 50.2			
	baz=96,slow=74,SNR=5.0								
CD2	**Chengdu**	**42.63**	**348**	P	**P**	**18 55 51.9**	**+1.3**		
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
NJ2	**Nanjing**	**43.17**	**7**	*e*P	**P**	**18 55 57.2**	**+2.3**		
NJ2				pmax	pmax				
	comp=Z,8.0nm,0.5s								
ODAN	**Odare**	**45.16**	**327**	*e*P	P	18 56 21.6	+10		
	comp=Z,31nm,0.8s								
TAPN	**Taplejung**	**45.38**	**328**	*e*P	P	18 56 23.7	+11		
	comp=Z,31nm,0.8s								
RAMN	**Ramite**	**45.66**	**326**	*e*P	P	18 56 25.5	+10		
JIRN	**Jiri**	**46.44**	**326**	*e*P	P	18 56 32.0	+11		
	comp=Z,50nm,0.8s								
PKI	**Pulchoki**	**46.80**	**326**	*e*P	P	18 56 34.1	+10		
GUN	**Gumba**	**46.81**	**326**	*e*P	P	18 56 34.6	+10		
	comp=Z,29nm,0.7s								
PKIN	**Phulchoki**	**46.81**	**326**	*e*P	P	18 56 34.2	+10		
	comp=Z,10nm,0.9s								
DMN	**Daman**	**47.00**	**325**	*e*P	P	18 56 35.8	+10		
	comp=Z,33nm,0.8s								
KKN	**Kakani**	**47.04**	**326**	*e*P	P	18 56 36.1	+10		
	comp=Z,20nm,0.8s								
LZH	**Lanzhou**	**47.65**	**350**	⇑P	**P**	**18 56 32.8**	**+2.3**		
LZH				pP	pP	18 56 38.0	-1.3		
LZH				sP	sP	18 56 39.6	-3.3		
LZH				pmax	pmax				
	comp=Z,16nm,1.1s								
LZH				pmax	pmax				
	comp=Z,58nm,5.4s								
LZH				LR	LR				
	comp=Z,330nm,14.5s								
LZH				LR	LR				
	comp=Z,330nm,14.3s								
LZH				LR	LR				
	comp=Z,460nm,17.0s								
DANN	**Dangsing**	**48.33**	**325**	*e*P	P	18 56 46.0	+10		
	comp=Z,41nm,0.8s								
KSAR	**Wonju Array Be**	**50.16**	**15**	P	**P**	**18 56 49.0**	**-0.5**		
KSRS	**Korea Array**	**50.18**	**15**	P	**P**	**18 56 49.8**	**+0.1**		
	comp=Z,3.0nm,1.0s,baz=193,slow=6.7,SNR=7.7								
KSRS				pP	**sP**	**18 57 00.1**	**-2.0**		
	comp=Z,4.9nm,0.8s,baz=200,slow=7.0,SNR=13								
HHC	**Hu-ho-hao-te**	**51.62**	**359**	*e*P	**P**	**18 57 04.8**	**+4.2**		
HHC				pmax	pmax				
	comp=Z,4.0nm,1.0s								
HHC				pmax	pmax				
	comp=Z,36nm,5.4s								
HHC				LR	LR				
	comp=Z,380nm,11.0s								
HHC				LR	LR				
	comp=Z,210nm,11.1s								
HHC				LR	LR				
	comp=Z,350nm,12.4s								
GTA	**Gaotai**	**51.66**	**347**	*e*P	P	18 57 12.8	+12		
GTA				pP	pwP	18 57 17.5	+1.0		
GTA				sP	sP	18 57 19.6	+6.2		
GTA				pmax	pmax				
	comp=Z,2.0nm,0.9s								
DZM	**Mont Dzumac**	**52.09**	**109**	LR	LR	19 20 45.2			
	comp=Z,27nm,18.2s,baz=30,slow=38								
MJAR	**Matsushiro Arr**	**52.89**	**25**	LR	LR	19 21 13.4			
	comp=Z,65nm,18.5s,baz=235,slow=38								
USRK	**Ussuriysk Ar.**	**57.57**	**16**	P	**P**	**18 57 44.1**	**+0.5**		
	comp=Z,2.3nm,0.8s,baz=250,slow=3.9,SNR=4.3								
USRK				pP	**pP**	**18 57 53.6**	**+1.0**		
	comp=Z,7.8nm,0.8s,baz=217,slow=6.2,SNR=8.5								
NIL	**Nilore**	**58.38**	**321**	P	**P**	**18 57 48.7**	**-0.8**		
NIL				IAmb	IAmb	18 58 00.4			
	comp=Z,7.5nm,0.9s								
SONM	**Songino Array**	**58.88**	**355**	P	**P**	**18 57 53.0**	**+0.2**		
	comp=Z,0.8nm,0.8s,baz=178,slow=7.8,SNR=5.6								
SONM				pP	**pP**	**18 58 02.7**	**+0.7**		
	comp=Z,1.8nm,0.8s,baz=168,slow=8.4,SNR=10								
SONM	**Songino Array**	**58.88**	**355**	P	**P**	**18 57 52.4**	**-0.5**		
WMQ	**Urumqi**	**59.26**	**339**	*e*P	**P**	**18 57 58.7**	**+3.2**		
WMQ				pP	pP	18 58 01.2	-3.3		
WMQ				pmax	pmax				
	comp=Z,9.0nm,0.7s								
WMQ				pmax	pmax				
	comp=Z,130nm,4.3s								
WMQ				LR	LR				
	comp=Z,570nm,28.9s								
WMQ				LR	LR				
	comp=Z,490nm,29.1s								
WMQ				LR	LR				
	comp=Z,250nm,22.1s								
KSH	**Kashi**	**60.96**	**328**	P	**P**	**18 58 10.1**	**+2.8**		
KSH				pP	pP	18 58 15.8	-0.6		
KSH				pmax	pmax				
	comp=Z,200nm,5.3s								
KZA	**Kyzart**	**63.22**	**329**	P	**P**	**18 58 24.8**	**+2.0**		
	SNR=6.3								
TKM2	**Tokmak 2**	**63.67**	**330**	P	**P**	**18 58 25.6**	**+0.1**		
	SNR=6.4								
GAR	**Garm**	**63.72**	**324**	P	**P**	**18 58 26.6**	**+0.8**		
MXZ	**Matakaoa Point**	**63.76**	**126**	P	**P**	**18 58 25.6**	**-0.4**		
MK31	**Makanchi Array**	**63.79**	**337**	P	**P**	**18 58 26.9**	**+1.0**		
MK31				IAmb	IAmb	18 58 37.6			
	comp=Z,5.0nm,1.1s								
MKAR	**Makanchi Array**	**63.79**	**337**	P	**P**	**18 58 26.9**	**+0.9**		
	comp=Z,1.1nm,0.5s,baz=150,slow=7.8,SNR=15								
MKAR				pP	**sP**	**18 58 36.9**	**-1.7**		
	comp=Z,2.2nm,0.6s,baz=145,slow=7.8,SNR=14								
MKAR	**Makanchi Array**	**63.79**	**337**	P	**P**	**18 58 26.1**	**+0.1**		
KBK	**Karagaybulak**	**63.79**	**329**	P	**P**	**18 58 28.4**	**+2.2**		
	SNR=10.0								
ARSB	**Arslanbob**	**63.84**	**327**	P	**P**	**18 58 27.3**	**+0.7**		
MAKZ	**Makanchi**	**63.92**	**337**	P	**P**	**18 58 27.3**	**+0.4**		
MAKZ				IAmb	IAmb	18 58 28.7			
	comp=Z,8.0nm,1.4s								
AAK	**Ala-Archa**	**64.01**	**329**	P	**P**	**18 58 29.7**	**+2.1**		
	SNR=6.9								
AAK	**Ala-Archa**	**64.01**	**329**	P	**P**	**18 58 29.0**	**+1.4**		
AAK				IAmb	IAmb	18 58 40.0			
	comp=Z,9.3nm,1.1s								
AML	**Almayashu**	**64.05**	**328**	P	**P**	**18 58 30.1**	**+1.9**		
	SNR=6.3								
BTK	**Batken**	**64.15**	**325**	P	**P**	**18 58 29.4**	**+0.8**		
BTK				IAmb	IAmb	18 58 40.4			
	comp=Z,5.9nm,1.0s								
CHGR	**Chuyangaron**	**64.17**	**323**	P	**P**	**18 58 27.8**	**-1.0**		
EKS2	**Erkin-Say**	**64.39**	**329**	P	**P**	**18 58 31.9**	**+1.8**		
	SNR=7.9								
USP	**Ospenovka**	**64.47**	**330**	P	**P**	**18 58 32.1**	**+1.6**		
	SNR=6.3								
KK31	**Karatay Array**	**66.40**	**327**	P	**P**	**18 58 42.9**	**-0.1**		
KK31				IAmb	IAmb	18 58 56.0			
	comp=Z,3.9nm,0.9s								
KKAR	**Karatay Array**	**66.40**	**327**	P	**P**	**18 58 43.0**	**0.0**		
KKAR	**Karatay Array**	**66.40**	**327**	P	**P**	**18 58 43.4**	**+0.4**		
KKAR				IAmb	IAmb	18 58 56.0			
	comp=Z,3.9nm,0.9s								
KURK	**Kurchatov**	**68.40**	**337**	P	**P**	**18 58 56.0**	**+0.6**		
ZAA0	**Zalesovo Array**	**69.02**	**343**	P	**P**	**18 58 59.2**	**+0.1**		
ZAA0				IAmb	IAmb	18 59 10.6			
	comp=Z,7.2nm,0.9s								
ZALV	**Zalesovo Beam**	**69.02**	**343**	P	**P**	**18 58 59.6**	**+0.4**		
	comp=Z,2.2nm,0.5s,baz=152,slow=4.4,SNR=15								
ZALV				pP	**pP**	**18 59 09.0**	**+0.7**		
	comp=Z,6.9nm,0.8s,baz=150,slow=4.1,SNR=15								
ZALV	**Zalesovo Beam**	**69.02**	**343**	P	**P**	**18 58 58.6**	**-0.6**		
GEYT	**Alibeck**	**70.76**	**317**	P	**P**	**18 59 11.0**	**+0.7**		
	comp=Z,0.8nm,0.5s,baz=92,slow=11,SNR=4.6								
GEYT	**Alibeck**	**70.76**	**317**	P	**P**	**18 59 10.3**	**0.0**		
VNDA	**Vanda**	**70.97**	**170**	P	**P**	**18 59 13.2**	**+2.2**		
VNDA				IAmb	IAmb	18 59 28.1			
	comp=Z,4.8nm,1.4s								
YAK	**Yakutsk**	**73.96**	**8**	P	**P**	**18 59 28.1**	**-0.8**		
YAK				IAmb	IAmb	18 59 47.5			
	comp=Z,11nm,1.0s								
RAYN	**Ar Rayn**	**74.43**	**298**	P	**P**	**18 59 33.8**	**+1.3**		
ABKAR	**Akbulak array**	**75.96**	**327**	P	**P**	**18 59 41.1**	**+0.4**		
ABKAR	**Akbulak array**	**75.96**	**327**	P	**P**	**18 59 41.2**	**+0.5**		
ABKAR				IAmb	IAmb	18 59 53.0			
	comp=Z,9.2nm,0.8s								
TIXI	**Tiksi**	**83.15**	**5**	P	**P**	**19 00 18.6**	**-0.7**		
TIXI				IAmb	IAmb	19 00 20.1			
	comp=Z,6.4nm,1.1s								
KBZ	**Khabaz**	**83.65**	**317**	pP	pP	19 00 35.0	+3.1		
	comp=Z,2.4nm,1.0s,baz=117,slow=4.5,SNR=5.6								
BR131	**Keskin Array S**	**88.97**	**311**	P	**P**	**19 00 49.2**	**+0.3**		
BR131				IAmb	IAmb	19 00 51.4			
	comp=Z,4.6nm,1.4s								
BRTR	**Keskin Array B**	**88.97**	**311**	P	**P**	**19 00 50.9**	**+1.9**		
BRTR				pP	**sP**	**19 01 00.8**	**-1.0**		
	comp=Z,1.1nm,1.0s,baz=149,slow=5.8,SNR=6.3								
BRTR	**Keskin Array B**	**88.97**	**311**	P	**P**	**19 00 47.4**	**-1.5**		
PPT	**Papeete**	**93.60**	**109**	P	**P**	**19 01 08.3**	**-2.5**		
PPTF	**Pamatai, Papee**	**93.61**	**109**	P	**P**	**19 01 09.2**	**-1.6**		
YKA	**Yellowknife Ar**	**118.36**	**23**	PKP	**PKiKP**	**19 06 41.9**	**+1.1**		
	comp=Z,0.7nm,1.0s,baz=309,slow=1.9,SNR=6.6								
YKA				pPKP	**sPKPdf**	**19 06 52.2**	**-1.6**		
	comp=Z,1.2nm,0.8s,baz=304,slow=1.7,SNR=11								
YKA	**Yellowknife Ar**	**118.36**	**23**	PKPdf	**PKiKP**	**19 06 40.9**	**0.0**		
NVAR	**Mina Array Bea**	**126.78**	**50**	pPKP	pPKPdf	19 07 10.2	+2.5		
	comp=Z,0.3nm,0.7s,baz=268,slow=2.2,SNR=4.0								

MOS ***02*** *19:02:22.5±0.9, 19°.11N×120°.31E, h13km, mb5.2/30, MS4.0/4, Error ellipse: s-maj=6.7km s-min=4.1km az=107.8*

BJI ***02*** *19:02:22.0±0.0, 19°.10N×120°.30E, h10km, mB4.9/56, mb4.6/66, ML4.8/4, Ms4.5/73, Ms7 4.3/68*

IDC ***02*** *19:02:22.5±0.3, 19°.08N×120°.33E, h0km, mb4.7/30, mb1 4.8/33, mb1mx4.7/44, mbtmp4.7/33, ML3.8/3, MS3.7/14, Ms1 3.7/14, ms1mx3.5/37, Error ellipse: s-maj=14.1km s-min=8.3km az=75.0*

NEIC ***02*** *19:02:24.6±2.1, 19°.16N±0°.06×120°.22E±0°.08, h15km±3km, mb5.0/151, Error ellipse: s-maj=10.5km s-min=8.5km az=91.0*

MAN ***02*** *19:02:25.7, 19°.18N×120°.42E, h13km, mb5.6, ML4.6, MS4.9*

GCMT ***02*** *19:02:25.6±0.3, 19°.15N±0°.03×120°.16E±0°.03, h14km±1km, MW4.8/73, Moment Tensor Solution. s17,c19; s73,c103; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=1.87±.15; Mθθ=0.49±.07; Mφφ=1.38±.10; Mrθ=-0.06±.20; Mθφ=0.66±.06; Mφr=0.60±.19; Best double couple: M0=1.89700×10^16 NP1:φs=36.00000°, δ38.00000°, λ-76.00000°. NP2: φs=199.00000°, δ53.00000°, λ-101.00000°. Principal axes: T 1.8040, Plg8.0000°, Azm296.0000°; N 0.1840, Plg9.0000°, Azm205.0000°; P -1.9900, Plg78.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***02*** *19:02:29.0, 19°.26N×120°.46E, h70km, mb4.8*

ISC 02 19:02:26.4±0.7, 19°.16N±0°.03×120°.21E±0°.04, h25km±5km, n=12, σ=1§46/542, mb4.9/160, MS4.0/23, 39C-15D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**1.25**	**169**	*i*P	**Pn**	**19 02 47.1**	**-1.2**
SIPP				*e*S	Sb	19 03 18.5	+13
BBP	**Basco**	**2.09**	**52**	*e*P	**Pn**	**19 02 58.6**	**-1.2**
BBP				*e*S	**Sn**	**19 03 22.8**	**-2.2**
CVP	**Callao Caves**	**2.11**	**133**	*i* P	**Pb**	**19 03 05.7**	**+1.8**
CVP				*i* S	**Sn**	**19 03 26.6**	**+1.1**
PCPH	**Palayan**	**3.68**	**167**	*e*P	**Pn**	**19 03 21.6**	**-0.1**
PCPH				*e*S	**Pb**	**19 03 33.3**	**+2.6**
TWG	**Pinlang**	**3.73**	**12**		**Pn**	**19 03 21.4**	**-1.0**
TPUB	**Ta-pu**	**4.14**	**5**		**Pn**	**19 03 25.9**	**-2.1**
YULB	**Yu-li**	**4.33**	**13**		**Pn**	**19 03 28.3**	**-2.4**
SSLB	**Suanglung**	**4.66**	**8**		**Pn**	**19 03 33.4**	**-1.8**
TGY	**Tagaytay City**	**5.08**	**172**	Pn	**Pn**	**19 03 38.2**	**-2.8**
	93nm,0.3s,baz=333,slow=2.3,SNR=2.6						
TGY				LR	LR	19 06 24.5	
	comp=Z,1μm,18.4s,baz=46,slow=48						
TGY	**Tagaytay City**	**5.08**	**172**	*e*P	**Pn**	**19 03 42.5**	**+1.5**
NACB	**Ninganchiao**	**5.15**	**14**		**Pn**	**19 03 41.6**	**-0.4**
LQP	**Lukban**	**5.18**	**166**	⇑*e*P	**Pn**	**19 03 42.8**	**+0.2**
KNMB	**Chin-men Tao**	**5.54**	**343**		**Pn**	**19 03 45.0**	**-2.3**
YHNB	**Yeheng**	**5.59**	**11**		**Pn**	**19 03 48.2**	**+0.2**
YOJ	**Yonaguni jima**	**5.88**	**26**	P	**Pn**	**19 03 52.2**	**+0.2**
YOJ	**Yonaguni jima**	**5.88**	**26**		**Pn**	**19 03 52.1**	**+0.2**
TATO	**Taipei**	**5.91**	**11**		**Pn**	**19 03 50.0**	**-2.3**
QZH	**Quanzhou**	**5.95**	**346**	⇓*i*Pn	**Pn**	**19 03 50.8**	**-2.1**
QZH				Sn	**Sn**	**19 04 54.0**	**-6.2**
QZH				smax	smax		
	comp=N,91nm,0.5s						
QZH				smax	smax		
	comp=E,120nm,0.8s						
QZH				LR	LR		
	comp=N,2μm,10.3s						
QZH				LR	LR		
	comp=E,690nm,10.4s						
QZH				LR	LR		
	comp=Z,2μm,10.9s						
HKPS	**Hong Kong Po S**	**6.47**	**300**		**Pn**	**19 03 57.5**	**-2.6**
QIZ	**Qiongzhong**	**9.80**	**271**	P	**Pn**	**19 04 43.6**	**-2.2**
QIZ				S	**Sn**	**19 06 32.3**	**-2.9**
QIZ				pmax	pmax		
	comp=Z,13nm,1.1s						
QIZ				LR	LR		
	comp=N,1μm,16.2s						
QIZ				LR	LR		
	comp=E,450nm,16.2s						
QIZ				LR	LR		
	comp=Z,930nm,10.2s						
QIZ	**Qiongzhong**	**9.80**	**271**		**Pn**	**19 04 43.1**	**-2.8**
JOW	**Kunigami**	**10.65**	**43**	Pn	**Pn**	**19 04 55.1**	**-2.3**
	0.4nm,0.3s,baz=199,slow=17,SNR=8.7						
JOW	**Kunigami**	**10.65**	**43**		**Pn**	**19 04 54.7**	**-2.7**
PAGZ	**Pagadian**	**11.66**	**164**	*e*P	**Pn**	**19 05 11.6**	**+0.3**
WHN	**Wuhan**	**12.52**	**336**	P	**Pn**	**19 05 21.8**	**-1.1**
WHN				LR	LR		
	comp=N,2μm,9.9s						
WHN				LR	LR		
	comp=E,2μm,10.0s						
WHN				LR	LR		
	comp=Z,3μm,12.5s						
NJ2	**Nanjing**	**12.89**	**355**	*e*P	**Pn**	**19 05 28.1**	**0.0**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
NJ2				LR	LR		
	comp=N,910nm,11.6s						
NJ2				LR	LR		
	comp=E,880nm,10.7s						
NJ2				LR	LR		
	comp=Z,790nm,13.7s						
KCP	**Kidapawan**	**12.98**	**158**	⇓*e*P	**P**	**19 05 43.2**	**+3.5**
DAV	**Davao City (W)**	**13.10**	**156**	LR	LR	19 11 56.6	
	comp=Z,706nm,18.0s,baz=326,slow=44						
GYA	**Guiyang**	**14.44**	**303**	⇑*i*P	**Pn**	**19 05 47.7**	**-1.7**
GYA				PP	**PnPn**	**19 05 59.7**	**+2.3**
GYA				S	**Sn**	**19 08 25.8**	**-3.0**
GYA				SS	**S**	**19 08 45.1**	**-3.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA				pmax	pmax		
	comp=Z,100nm,5.5s						
GYA				LR	LR		
	comp=N,730nm,13.5s						
GYA				LR	LR		
	comp=E,920nm,10.5s						
GYA				LR	LR		
	comp=Z,1μm,8.7s						
UBPT	**Khong Chiam**	**14.60**	**257**		**Pn**	**19 05 52.9**	**+1.5**
ENH	**Enshi**	**14.73**	**321**		**Pn**	**19 05 51.7**	**-1.5**
SLVN	**Son La**	**15.45**	**281**	P	**Pn**	**19 06 00.4**	**-2.5**
JNU	**Nakatsue**	**16.87**	**32**	Pn	**Pn**	**19 06 19.8**	**-1.1**
	0.6nm,0.3s,baz=272,slow=5.3,SNR=10						
JNU				LR	LR	19 13 35.4	
	comp=Z,239nm,20.5s,baz=204,slow=40						
JNU	**Nakatsue**	**16.87**	**32**		**Pn**	**19 06 18.6**	**-2.3**
JNU				IAmb	IAmb	19 06 34.4	
	comp=Z,72nm,0.9s						
TIA	**Tai'an**	**17.20**	**352**	P	**P**	**19 06 28.9**	**+2.5**
TIA				S	**S**	**19 09 43.5**	**-0.9**
TIA				pmax	pmax		
	comp=Z,15nm,0.8s						
TIA				LR	LR		
	comp=Z,570nm,12.8s						
TIA				LR	LR		
	comp=Z,330nm,7.8s						
TIA				LR	LR		
	comp=Z,660nm,10.7s						
KMI	**Kunming**	**17.23**	**293**	P	**P**	**19 06 26.5**	**-0.6**
KMI				sP	sP	19 06 34.4	-1.2
KMI				S	**Sn**	**19 09 38.8**	**+2.0**
KMI				pmax	pmax		
	comp=Z,12nm,1.8s						
KMI				pmax	pmax		
	comp=Z,190nm,3.7s						
KMI				LR	LR		
	comp=Z,530nm,13.8s						
KMI				LR	LR		
	comp=Z,950nm,12.6s						
KMI				LR	LR		
	comp=Z,800nm,16.3s						
KMI	**Kunming**	**17.23**	**293**	P	**Pn**	**19 06 25.7**	**0.0**
KMI				pmax	pmax		
	comp=Z,54nm,1.4s						
KMI	**Kunming**	**17.23**	**293**	P	**Pn**	**19 06 25.7**	**0.0**
XAN	**Xi'an**	**17.91**	**328**	P	**Pn**	**19 06 33.6**	**-0.2**
XAN				pP	pP	19 06 38.5	-1.6
XAN				PP	**PnPn**	**19 06 47.9**	**+3.0**
XAN				S	**Sn**	**19 09 51.1**	**-1.8**
XAN				SS	**SnSn**	**19 10 14.7**	**+7.9**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.5s						
XAN				pmax	pmax		
	comp=Z,190nm,4.8s						
XAN				LR	LR		
	comp=Z,610nm,12.8s						
XAN				LR	LR		
	comp=Z,650nm,10.3s						
XAN				LR	LR		
	comp=Z,1μm,12.3s						
XAN	**Xi'an**	**17.91**	**328**	P	**Pn**	**19 06 33.3**	**-0.5**
XAN				pmax	pmax		
	comp=Z,47nm,1.3s						
XAN	**Xi'an**	**17.91**	**328**	P	**Pn**	**19 06 33.3**	**-0.5**
TJN	**Taejon**	**18.27**	**19**	⇑*e*P	**Pn**	**19 06 37.5**	**-0.7**
SBUM	**Sibu**	**18.36**	**206**	P	**P**	**19 06 36.4**	**-2.9**
MRSI	**Marisa**	**18.64**	**175**	P	**Pn**	**19 06 43.0**	**+0.1**
	comp=Z,32nm,1.2s						
MPSI	**Mapaga**	**18.71**	**181**	P	**Pn**	**19 06 44.8**	**+1.2**
	comp=Z,111nm,0.9s						
KMSI	**Cibinong**	**18.84**	**168**	P	Pn	19 06 59.2	+14
CD2	**Chengdu**	**18.92**	**311**	P	**Pn**	**19 06 46.4**	**+0.2**
CD2				S	**S**	**19 10 21.2**	**+2.2**
CD2				sS	sS	19 10 26.9	-2.1
CD2				PcS	**PcS**	**19 14 48.5**	**+0.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,390nm,6.2s						
CD2				LR	LR		
	comp=Z,1μm,12.6s						
CD2				LR	LR		
	comp=Z,1μm,12.3s						
CD2				LR	LR		
	comp=Z,2μm,11.0s						
INCN	**Inchon**	**19.10**	**16**	P	**P**	**19 06 46.5**	**-0.9**
INCN				pmax	pmax		
	comp=Z,33nm,1.1s						
INCN	**Inchon**	**19.10**	**16**	P	**P**	**19 06 46.5**	**-0.9**
KSAR	**Wonju Array Be**	**19.41**	**19**	P	**P**	**19 06 50.1**	**-0.6**
KSAR	**Wonju Array Be**	**19.41**	**19**	P	**P**	**19 06 50.1**	**-0.6**
KSAR					**PcP**	**19 11 11.6**	**-0.1**
KSRS	**Korea Array**	**19.43**	**19**	P	**P**	**19 06 50.9**	**-0.1**
	comp=Z,0.8nm,0.3s,baz=202,slow=12,SNR=37						
KSRS				PcP	**PcP**	**19 11 12.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=132,slow=1.9,SNR=5.9						
KSRS				LR	LR	19 15 13.9	
	comp=Z,106nm,18.0s,baz=198,slow=40						
KS19	**Wonju Array Si**	**19.46**	**19**	P	**P**	**19 06 49.9**	**-1.4**
TNTI	**Ternate**	**19.58**	**158**	P	**P**	**19 06 52.7**	**0.0**
	comp=Z,383nmcomp=Z,22nm,1.7s						
TNTI	**Ternate**	**19.58**	**158**	P	**P**	**19 06 50.0**	**-2.7**
TIY	**Taiyuan**	**19.69**	**341**	*e*P	**Pn**	**19 06 58.1**	**+2.7**
TIY				pP	**pwP**	**19 07 03.6**	**-0.6**
TIY				S	**Sn**	**19 10 35.5**	**-0.5**
TIY				sS	**sS**	**19 10 42.0**	**-2.5**
TIY				pmax	pmax		
	comp=Z,180nm,5.3s						
TIY				LR	LR		
	comp=Z,550nm,9.1s						
TIY				LR	LR		
	comp=Z,660nm,11.3s						
TIY				LR	LR		
	comp=Z,570nm

BJI LR LR
comp=Z,670nm,61.2s
JCJ Chichijima 21.68 65 LR LR 19 15 30.1
comp=Z,91nm,18.4s,baz=280,slow=36
SANI Sanana 21.83 164 P **P** **19 07 14.4 -2.6**
INU Inuyama 21.93 39 P **P** **19 07 17.8 -0.2**
INU IAmb IAmb 19 07 21.5
comp=Z,132nm,1.4s
TTSI Tana Toraja 22.07 181 P **P** **19 07 21.8 +2.2**
comp=Z,1µmcomp=Z,38nm,1.3s
LZH Lanzhou 22.18 323 ⇑P **P** **19 07 22.7 +1.8**
LZH sP sP 19 07 30.4 +0.9
LZH PP **PnPn** **19 07 47.3 +3.7**
LZH pmax pmax
comp=Z,41nm,1.6s
LZH pmax pmax
comp=Z,260nm,4.3s
LZH LR LR
comp=Z,930nm,14.1s
LZH LR LR
comp=Z,950nm,10.8s
LZH LR LR
comp=Z,820nm,12.5s
SWI Sorong 22.66 150 P **P** **19 07 25.8 -0.2**
comp=Z,33nm,0.9s
KBKI Kotabaru 22.67 191 P **P** **19 07 27.7 +1.6**
comp=Z,161nmcomp=Z,16nm,0.8s
SIJI Sorong 22.67 150 P **P** **19 07 25.9 -0.2**
comp=Z,17nm,0.8s,baz=311,slow=2.4,SNR=12
SIJI LR LR 19 16 29.8
comp=Z,180nm,21.6s,baz=324,slow=38
HHC Hu-ho-hao-te 22.85 343 *eP* **P** **19 07 29.9 +2.0**
HHC S **S** **19 11 35.3 -0.7**
HHC sS sS 19 11 46.6 +0.7
HHC pmax pmax
comp=Z,14nm,1.2s
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=Z,390nm,12.0s
HHC LR LR
comp=Z,210nm,15.1s
HHC LR LR
comp=Z,320nm,17.3s
SPSI Sidrap Palu 22.98 181 P **P** **19 07 29.8 +0.5**
comp=Z,670nmcomp=Z,92nm,1.1s
JRMM Jerantut 23.03 231 P **P** **19 07 31.0 +1.1**
BTO Baotou 23.09 340 *eP* **P** **19 07 27.3 -3.1**
NLAI Namlea 23.27 162 P **P** **19 07 34.6 +2.4**
comp=Z,1µmcomp=Z,61nm,0.9s
BNSI Bone 23.41 180 P **P** **19 07 35.3 +1.7**
comp=Z,686nmcomp=Z,39nm,1.8s
MAJO Matsushiro 23.45 39‖ *eP* **P** **19 07 31.1 -2.8**
MAJO pmax pmax
comp=Z,38nm,1.7s
MAJO Matsushiro 23.45 39 P **P** **19 07 32.0 -1.9**
MAJO IAmb IAmb 19 07 55.6
comp=Z,38nm,1.1s
MAT Matsushiro 23.45 39 P **P** **19 07 32.0 -1.9**
MAT S **S** **19 11 47.6 +1.7**
MJAR Matsushiro Arr 23.45 39 P **P** **19 07 32.1 -1.8**
MJAR pmax pmax
comp=Z,8.0nm,1.0s
MJAR Matsushiro Arr 23.45 39 P **P** **19 07 32.6 -1.3**
comp=Z,3.6nm,0.8s,baz=210,slow=8.0,SNR=13
MJAR Matsushiro Arr 23.45 39 P **P** **19 07 32.1 -1.8**
MJB9 Matsu-Tunnel 23.45 39 P **P** **19 07 32.0 -1.9**
MJB9 IAmb IAmb 19 07 55.6
comp=Z,41nm,1.2s
KULM Kulim 23.53 237 P **P** **19 07 34.9 +0.1**
KULM IAmb IAmb 19 07 44.5
comp=Z,41nm,1.3s
KULM Kulim 23.53 237 P **P** **19 07 35.0 +0.2**
MYKOM Kota Tinggi 23.55 225 P **P** **19 07 33.7 -1.3**
MYKOM IAmb IAmb 19 07 37.0
comp=Z,27nm,0.9s
MYKOM Kota Tinggi 23.55 225 P **P** **19 07 36.0 +1.0**
IPM Ipoh 23.74 234 P **P** **19 07 35.7 -1.1**
IPM IAmb IAmb 19 07 45.6
comp=Z,46nm,1.2s
IPM Ipoh 23.74 234 P **P** **19 07 37.0 +0.1**
KAPI Kappang 24.03 181 P **P** **19 07 39.4 -0.1**
KAPI pmax pmax
comp=Z,280nm,2.0s
KAPI Kappang 24.03 181 P **P** **19 07 39.4 -0.1**
GUMO Guam 24.29 99 LR LR 19 14 59.6
comp=Z,232nm,21.7s,baz=333,slow=31
BKSI Bulukumba 24.33 180 P **P** **19 07 42.3 0.0**
comp=Z,38nm,0.9s
CN2 Changchun 24.96 9 *eP* **P** **19 07 48.5 +0.7**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,170nm,4.0s
CN2 LR LR
comp=Z,470nm,12.0s
CN2 LR LR
comp=Z,660nm,12.0s
CN2 LR LR
comp=Z,450nm,16.0s
TPI Tanjungpandan 25.04 211 P **P** **19 07 49.4 +0.7**
PSI Prapat 26.41 235 P **P** **19 08 01.8 +0.4**
PSI pmax pmax
comp=Z,29nm,1.2s
PSI Prapat 26.41 235 P **P** **19 08 01.8 +0.4**
comp=Z,16nm,1.1s,baz=19,slow=4.1,SNR=10
PSI PcP **PcP** **19 11 26.9 +0.1**
comp=Z,8.7nm,0.9s,baz=327,slow=1.6,SNR=5.4
PSI LR LR 19 18 19.6
comp=Z,118nm,18.8s,baz=32,slow=36
RPSI Rantau Prapat 26.48 234 P **P** **19 08 00.2 -1.7**
RPSI IAmb IAmb 19 08 02.6
comp=Z,29nm,1.2s
RPSI Rantau Prapat 26.48 234 P **P** **19 08 01.8 -0.1**
RPSI **PcP** **19 11 26.9 +0.2**
BKNI Bangkinang 26.53 227 P **P** **19 08 01.5 -0.8**
MDJ Mudanjiang 26.56 15 P **P** **19 08 03.0 +0.7**
MDJ pP pP 19 08 06.0 -2.6
MDJ sP sP 19 08 07.4 -3.8
MDJ PP **PnPn** **19 08 43.9 +0.7**
MDJ S **S** **19 12 39.1 +3.7**
MDJ sS sS 19 12 44.5 -1.1
MDJ SS 19 13 42.8
MDJ pmax pmax
comp=Z,53nm,1.0s
MDJ pmax pmax
comp=Z,320nm,3.6s
MDJ LR LR
comp=Z,710nm,24.2s
MDJ LR LR
comp=Z,770nm,15.0s
MDJ LR LR
comp=Z,570nm,14.2s
MDJ Mudanjiang 26.56 15 P **P** **19 08 02.3 0.0**
MDJ IAmb IAmb 19 08 04.3
comp=Z,50nm,1.0s
GTA Gaotai 26.79 323 ⇑P **P** **19 08 06.2 +1.6**
GTA pP pP 19 08 10.4 -0.4
GTA sP sP 19 08 13.3 -0.1
GTA PcP **PcP** **19 11 28.3 +1.1**
GTA sS sS 19 12 54.1 +4.7
GTA pmax pmax
comp=Z,5.0nm,1.7s
GTA pmax pmax
comp=Z,71nm,4.1s
GTA LR LR
comp=Z,320nm,16.5s
GTA LR LR
comp=Z,440nm,15.2s
GTA LR LR
comp=Z,490nm,15.9s
USA0B Ussuriysk Arra 26.84 19 *de*P **P** **19 08 04.1 -0.8**
USA0B Ussuriysk Arra 26.84 19 P **P** **19 08 04.7 -0.2**
USA0B IAmb IAmb 19 08 23.1
comp=Z,44nm,1.4s
USRK Ussuriysk Ar. 26.84 19 P **P** **19 08 04.3 -0.6**
USRK Ussuriysk Ar. 26.84 19 P **P** **19 08 06.4 +1.6**
comp=Z,14nm,0.7s,baz=210,slow=6.1,SNR=24
USRK Ussuriysk Ar. 26.84 19 P **P** **19 08 04.3 -0.6**
SHL Shillong 26.93 289 P **P** **19 08 04.2 -1.8**
SHL pmax pmax
comp=Z,21nm,1.2s
SHL Shillong 26.93 289 P **P** **19 08 04.2 -1.8**
KLSI 28.18 214 P **P** **19 08 18.9 +1.8**
PWJI Pagerwojo 28.25 198 P **P** **19 08 18.8 +1.1**

MDSI Maura Dua 28.31 215 P **P** **19 08 18.9 +0.7**
LSA Lhasa 28.39 297 P **P** **19 08 20.0 +0.6**
LSA pmax pmax
comp=Z,13nm,1.1s
LSA Lhasa 28.39 297 P **P** **19 08 20.0 +0.6**
GSI Gunungsitoli 28.40 234 P **P** **19 08 16.2 -2.9**
GSI IAmb IAmb 19 08 18.7
comp=Z,53nm,1.6s
LEM Lembang 28.65 207 P **P** **19 08 22.1 +0.7**
comp=Z,6.1nm,0.3s,baz=58,slow=6.3,SNR=4.5
SOEI Soe 29.01 172 P **P** **19 08 25.0 +0.4**
comp=Z,26nm,1.0s
BATI Baumata 29.38 173 P **P** **19 08 25.8 -2.0**
comp=Z,44nm,0.9s,baz=311,slow=0.8,SNR=19
BATI PcP **PcP** **19 11 34.2 +0.4**
comp=Z,16nm,0.8s,baz=153,slow=2.3,SNR=5.3
JAY Jayapura 29.50 135 LR LR 19 17 47.7
comp=Z,239nm,21.9s,baz=310,slow=32
ULN Ulaanbaatar 30.57 342 *ce*P **P** **19 08 39.6 +1.4**
ULN pmax pmax
comp=Z,9.0nm,1.7s
ULN Ulaanbaatar 30.57 342 P **P** **19 08 39.0 +0.8**
SONM Songino Array 30.73 342 P **P** **19 08 39.8 +0.2**
SONM pmax pmax
comp=Z,3.0nm,0.9s
SONM Songino Array 30.73 342 P **P** **19 08 40.6 +1.0**
comp=Z,1.9nm,0.7s,baz=158,slow=9.3,SNR=16
SONM Songino Array 30.73 342 P **P** **19 08 39.8 +0.2**
TAPN Taplejung 30.88 291 *eP* **P** **19 08 43.0 +1.6**
comp=Z,52nm,1.3s
ODAN Odare 31.10 290 *eP* **P** **19 08 43.9 +0.7**
comp=Z,45nm,1.1s
KLR Kul'dur 31.40 15 *ciP* **P** **19 08 46.3 +1.0**
KLR pmax pmax
comp=Z,15nm,0.9s
RAMN Ramite 31.81 290 *eP* **P** **19 08 50.8 +1.3**
comp=Z,55nm,1.0s
JIRN Jiri 32.26 292 *eP* **P** **19 08 55.1 +1.5**
comp=Z,150nm,1.5s
GUN Gumba 32.57 292 *eP* **P** **19 08 57.5 +1.2**
comp=Z,84nm,1.1s
PKI Pulchoki 32.94 291 *eP* **P** **19 09 00.2 +0.7**
comp=Z,6.7nm,1.3s
PKIN Phulchoki 32.95 291 *eP* **P** **19 09 00.2 +0.7**
KKN Kakani 33.08 292 *eP* **P** **19 09 01.4 +0.8**
comp=Z,44nm,1.0s
DMN Daman 33.21 291 *eP* **P** **19 09 02.8 +1.0**
comp=Z,61nm,1.2s
YSS Yuzh-Sakhalins 33.31 29 *eP* **P** **19 09 03.2 +1.2**
YSS *e* 19 09 13.5
ZAK Zakamensk 33.95 340 *eP* **P** **19 09 08.2 +0.5**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
GRNR Gornyy 34.06 18 *eP* **P** **19 09 06.0 -2.6**
DANN Dangsing 34.48 292 *eP* **P** **19 09 13.6 +0.7**
comp=Z,58nm,1.1s
ZEA Zeya 34.94 7 *eP* **P** **19 09 18.2 +2.1**
ZEA pmax pmax
comp=Z,26nm,0.8s
ZEA MLR MLR
comp=Z,400nm,12.0s
ZEA MLR MLR
comp=N,200nm,13.0s
MOY Mondy 35.79 339 *eP* **P** **19 09 24.7 +1.1**
WMQ Urumqi 36.67 319 *eP* **P** **19 09 33.0 +1.8**
WMQ sP sP 19 09 40.0 -0.4
WMQ pmax pmax
comp=N,9.0nm,1.7s
WMQ pmax pmax
comp=N,120nm,5.1s
WMQ LR LR
comp=N,470nm,28.9s
WMQ LR LR
comp=N,850nm,28.9s
WMQ LR LR
comp=N,250nm,17.9s
WMQ Urumqi 36.67 319 P **P** **19 09 31.4 +0.2**
WMQ pmax pmax
comp=Z,36nm,1.8s
WMQ Urumqi 36.67 319 P **P** **19 09 31.4 +0.2**
WMQ IAmb IAmb 19 09 43.4
comp=Z,36nm,1.8s
FITZ Fitzroy Crossi 37.41 171 P **P** **19 09 35.6 -1.9**
comp=Z,8.3nm,0.7s,baz=4.1,slow=7.3,SNR=19
FITZ PcP **PcP** **19 11 55.8 -0.4**
comp=Z,1.9nm,0.8s,baz=64,slow=7.7,SNR=3.1
FITZ Fitzroy Crossi 37.41 171 P **P** **19 09 35.2 -2.3**
COEN Coen 39.93 144 P **P** **19 09 56.5 -2.3**
PSAC1 Pilbara Seismi 40.45 181 P **P** **19 09 59.2 -3.8**
PSAC1 IAmb IAmb 19 10 02.6
comp=Z,43nm,1.4s
PSAB2 Pilbara Seismi 40.47 180 P **P** **19 10 01.7 -1.4**
PSAB2 IAmb IAmb 19 10 12.8
comp=Z,23nm,1.1s
PSAC2 Pilbara Seismi 40.47 180 P **P** **19 10 02.0 -1.2**
PSA00 Pilbara Seismi 40.48 181 P **P** **19 09 59.8 -3.5**
WRAB Tennant Creek 41.25 160 *ce*P **P** **19 10 07.9 -1.8**
WRAB pmax pmax
comp=Z,13nm,1.3s
WRAB Tennant Creek 41.25 160 P **P** **19 10 07.1 -2.5**
WRA Warramunga Arr 41.26 160 P **P** **19 10 07.6 -2.1**
comp=Z,5.7nm,0.7s,baz=341,slow=8.9,SNR=19
WRA PcP **PcP** **19 12 07.6 -0.8**
comp=Z,3.5nm,0.7s,baz=341,slow=3.5,SNR=9.4
WRA S **S** **19 16 15.2 -7.1**
comp=Z,1.8nm,0.9s,baz=343,slow=15,SNR=4.7
WRA Warramunga Arr 41.26 160 P **P** **19 10 06.8 -3.0**
WR0 Warramunga Arr 41.34 159 P **P** **19 10 08.0 -2.4**
MK31 Makanchi Array 41.46 320 *i*P **P** **19 10 12.4 +1.2**
MK31 Makanchi Array 41.46 320 P **P** **19 10 11.6 +0.4**
MKAR Makanchi Array 41.46 320 P **P** **19 10 13.0 +1.8**
comp=Z,3.9nm,0.8s,baz=112,slow=10.0,SNR=39
MKAR PcP **PcP** **19 12 08.8 +0.1**
comp=Z,5.8nm,1.0s,baz=93,slow=4.9,SNR=4.7
MKAR Makanchi Array 41.46 320 P **P** **19 10 12.1 +0.9**
MAKZ Makanchi 41.66 320 P **P** **19 10 14.1 +1.3**
MAKZ pmax pmax
comp=Z,13nm,1.1s
MAKZ Makanchi 41.66 320 P **P** **19 10 14.1 +1.3**
PDGK Podgornoye 41.77 314 P **P** **19 10 14.9 +1.0**
PRZ Przheval'sk 42.21 313 P **P** **19 10 19.9 +2.3**
PRZ pmax pmax
comp=Z,12nm,1.0s
PRZ Przheval'sk 42.21 313 P **P** **19 10 19.9 +2.3**
TARG Taragay, Kyrgy 42.37 311 P **P** **19 10 19.4 +0.2**
KDJ Kajisay 42.94 312 P **P** **19 10 23.7 +0.2**
KDJ pmax pmax
comp=Z,10.0nm,1.1s
KDJ Kajisay 42.94 312 P **P** **19 10 23.7 +0.2**
KSH Kashi 43.06 308 P **P** **19 10 28.7 +4.2**
KSH PP **PP** **19 12 08.9 +4.3**
KSH S **S** **19 16 53.0 +4.0**
KSH sS sS 19 17 01.2 +1.9
KSH SS **SS** **19 19 58.1 -3.6**
KSH pmax pmax
comp=Z,13nm,0.7s
KSH pmax pmax
comp=Z,360nm,4.7s
KSH LR LR
comp=Z,210nm,4.4s
KSH LR LR
comp=Z,200nm,4.6s
KSH LR LR
comp=Z,400nm,6.7s
YAK Yakutsk 43.34 6 *eP* **P** **19 10 25.5 -0.7**
YAK pmax pmax
comp=Z,14nm,1.0s
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK Yakutsk 43.34 6 P **P** **19 10 25.4 -0.7**
NRN Naryn 43.57 310 P **P** **19 10 30.2 +1.4**
NRN pmax pmax
comp=Z,12nm,1.1s
NRN Naryn 43.57 310 P **P** **19 10 30.1 +1.4**
H11S3 WAKE ISLAND Hy 43.89 83 T T 19 56 22.5
baz=282,SNR=4.2
H11S1 WAKE ISLAND Hy 43.90 83 T T 19 56 15.0
baz=282
H11S2 WAKE ISLAND Hy 43.91 83 T T 19 56 12.3
baz=282
H11N1 WAKE ISLAND Hy 43.91 81 T T 19 56 27.6
baz=279
H11N2 WAKE ISLAND Hy 43.92 81 T T 19 56 22.4
baz=279
H11N3 WAKE ISLAND Hy 43.93 81 T T 19 56 27.1
baz=279

ZAA0 Zalesovo Array 44.06 331 P **P** **19 10 31.5 -0.6**
ZALV Zalesovo Beam 44.06 331 P **P** **19 10 33.0 +0.9**
comp=Z,5.9nm,0.7s,baz=119,slow=8.2,SNR=30
ZALV PcP **PP** **19 12 15.9 +1.0**
comp=Z,1.2nm,0.6s,baz=120,slow=4.7,SNR=2.3
ZALV Zalesovo Beam 44.06 331 P **P** **19 10 32.5 +0.4**
NIL Nilore 44.10 299 P **P** **19 10 33.2 +0.4**
NIL pmax pmax
comp=Z,24nm,0.7s
NIL Nilore 44.10 299 P **P** **19 10 33.2 +0.4**
NIL IAmb IAmb 19 10 44.7
comp=Z,24nm,0.7s
KZA Kyzart 44.29 311 P **P** **19 10 37.4 +2.7**
SNR=8.1
PEA0B Petropavlovsk- 44.56 32‖ *e*P **P** **19 10 36.7 +0.5**
PETK Petropavlovsk- 44.56 32 P **P** **19 10 35.7 -0.5**
PETK Petropavlovsk- 44.56 32 P **P** **19 10 36.6 +0.5**
comp=Z,25nm,0.8s,baz=245,slow=4.0,SNR=16
PETK PcP **PcP** **19 12 18.8 -0.2**
comp=Z,5.7nm,0.9s,baz=207,slow=1.7,SNR=4.6
PETK LR LR 19 28 53.9
comp=Z,47nm,18.1s,baz=241,slow=36
PETK Petropavlovsk- 44.56 32 P **P** **19 10 35.6 -0.5**
AS31 Alice Springs 44.61 162 P **P** **19 10 35.7 -1.2**
ASAR Alice Springs 44.61 162 P **P** **19 10 35.6 -1.3**
comp=Z,5.6nm,0.6s,baz=341,slow=6.4,SNR=121
ASAR S **S** **19 17 10.8 -0.9**
comp=Z,0.9nm,0.8s,baz=355,slow=19,SNR=5.1
ASAR LR LR 19 32 21.3
comp=Z,39nm,18.8s,baz=336,slow=40
KBK Karagaybulak 44.68 312 P **P** **19 10 40.9 +3.5**
SNR=6.9
UCH Uchtor 44.86 311 P **P** **19 10 42.1 +2.8**
SNR=11
CHMS Chumysh 44.92 312 P **P** **19 10 42.0 +2.8**
SNR=7.2
AAK Ala-Archa 44.99 312⇑ *e*P **P** **19 10 42.1 +2.1**
AAK pmax pmax
comp=Z,6.0nm,1.5s
AAK Ala-Archa 44.99 312 P **P** **19 10 41.9 +1.9**
AAK IAmb IAmb 19 12 22.1
comp=Z,19nm,1.8s
USP Ospenovka 45.17 313 P **P** **19 10 44.2 +2.9**
SNR=6.3
AML Almayashu 45.42 311 P **P** **19 10 45.7 +2.1**
SNR=5.2
KURK Kurchatov 45.47 324 *di*P **P** **19 10 44.4 +1.0**
KURK pmax pmax
comp=Z,26nm,1.7s
KURK Kurchatov 45.47 324 P **P** **19 10 44.1 +0.7**
KURK IAmb IAmb 19 10 55.8
comp=Z,20nm,0.9s
EKS2 Erkin-Say 45.51 311 P **P** **19 10 46.6 +2.6**
SNR=8.2
ARSB Arslanbob 45.73 309 P **P** **19 10 47.1 +1.3**
ARSB IAmb IAmb 19 10 49.4
comp=Z,23nm,1.4s
MA2 Magadan 45.96 21⇑ *e*P **P** **19 10 47.5 +0.3**
MA2 pmax pmax
comp=Z,127nm,2.5s
CTA Charters Tower 46.62 145 P **P** **19 10 52.4 -0.4**
comp=Z,1.9nm,0.6s,baz=309,slow=8.6,SNR=5.2
CTA PcP **PcP** **19 12 27.2 +0.6**
comp=Z,4.1nm,0.9s,baz=341,slow=2.5,SNR=3.7
BTK Batken 47.05 307 P **P** **19 10 54.9 -1.3**
BTK pmax pmax
comp=Z,14nm,1.3s
BTK Batken 47.05 307 P **P** **19 10 54.9 -1.3**
BTK IAmb IAmb 19 11 33.7
comp=Z,14nm,1.3s
GAR Garm 47.23 306 P **P** **19 10 58.9 +1.2**
KBL Kabul 47.67 300 P **P** **19 11 02.2 +1.0**
KBL pmax pmax
comp=Z,14nm,1.1s
KBL Kabul 47.67 300 P **P** **19 11 02.2 +1.0**
KBL IAmb IAmb 19 11 19.3
comp=Z,14nm,1.1s
KK31 Karatay Array 47.94 311 P **P** **19 11 04.1 +1.2**
KK31 Karatay Array 47.94 311 P **P** **19 11 03.9 +1.0**
KK31 IAmb IAmb 19 11 05.6
comp=Z,13nm,0.9s
KKAR Karatay Array 47.94 311 P **P** **19 11 02.9 0.0**
KKAR 19 11 03.4
KKAR pmax pmax
comp=Z,13nm,1.0s
KKAR Karatay Array 47.94 311 P **P** **19 11 02.9 0.0**
KKAR Karatay Array 47.94 311 P **P** **19 11 03.4 +0.5**
KKAR IAmb IAmb 19 11 05.6
comp=Z,13nm,0.9s
CHGR Chuyangaron 48.07 305 P **P** **19 11 03.4 -0.7**
CHGR IAmb IAmb 19 11 30.9
comp=Z,16nm,1.2s
MORW Morawa 48.12 185 P **P** **19 11 03.8 -0.5**
TAS Tashkent 48.43 309 P **P** **19 11 08.6 +1.8**
TAS pmax pmax
comp=Z,21nm,0.8s
TAS Tashkent 48.43 309 P **P** **19 11 08.6 +1.8**
SEY Seymchan 48.99 19⇑ *e*P **P** **19 11 11.9 +1.2**
FORT Forrest 50.22 171 P **P** **19 11 19.1 -1.3**
BRVK Borovoye 51.14 324 P **P** **19 11 28.2 +1.1**
BRVK Borovoye 51.14 324 P **P** **19 11 28.2 +1.1**
NWAO Narrogin (SRO) 51.87 183 P **P** **19 11 32.5 -0.3**
NWAO pmax pmax
comp=Z,28nm,1.1s
NWAO Narrogin (SRO) 51.87 183 P **P** **19 11 32.4 -0.3**
NWAO Narrogin (SRO) 51.87 183 P **P** **19 11 32.5 -0.3**
NWAO IAmb IAmb 19 11 33.8
comp=Z,28nm,1.1s
TIXI Tiksi 52.74 3⇑ *e*P **P** **19 11 38.9 +0.2**
TIXI pmax pmax
comp=Z,8.0nm,1.0s
TIXI Tiksi 52.74 3 P **P** **19 11 37.8 -0.9**
HRA Herat 53.27 299 P **P** **19 11 44.6 +1.0**
HRA IAmb IAmb 19 11 45.7
comp=Z,19nm,1.4s
BBOO Buckleboo 53.85 163 P **P** **19 11 45.6 -1.8**
STKA Stephens Creek 54.73 158 P **P** **19 11 52.6 -1.2**
STKA Stephens Creek 54.73 158 P **P** **19 11 53.3 -0.5**
comp=Z,14nm,0.7s,baz=338,slow=7.3,SNR=32
STKA Stephens Creek 54.73 158 P **P** **19 11 52.6 -1.2**
ABKAR Akbulak array 56.38 317 P **P** **19 12 05.6 0.0**
ABKAR Akbulak array 56.38 317 P **P** **19 12 06.3 +0.8**
ABKAR IAmb IAmb 19 12 08.1
comp=Z,28nm,1.6s
ASHT Ashkhabad 56.45 303 P **P** **19 12 08.3 +2.1**
ASHT pmax pmax
comp=Z,55nm,0.4s
ASHT Ashkhabad 56.45 303 P **P** **19 12 08.3 +2.1**
GEYT Alibeck 56.66 303 P **P** **19 12 09.8 +2.0**
comp=Z,12nm,0.8s,baz=114,slow=3.7,SNR=43
GEYT LR LR 19 39 06.0
comp=Z,176nm,20.5s,baz=45,slow=39
GEYT Alibeck 56.66 303 P **P** **19 12 09.3 +1.5**
GYA0B ALIBECK ARRAY 56.66 303 P **P** **19 12 09.7 +1.9**
GYA0B IAmb IAmb 19 12 11.0
comp=Z,25nm,1.0s
BILL Bilibino 56.70 19‖ *i*P **P** **19 12 07.9 +0.4**
BILL *i* 19 12 15.6
BILL *e* 19 13 02.9
BILL *e* 19 14 14.0
BILL pmax pmax
comp=Z,23nm,0.7s
BILL MLR MLR
comp=Z,80nm,15.0s
BILL Bilibino 56.70 19 P **P** **19 12 07.3 -0.2**
SVE Sverdlovsk 57.61 326‖ *i*P **P** **19 12 15.8 +1.7**
SVE pmax pmax
comp=Z,26nm,1.5s
ARU Arti 58.62 325 *ci*P **P** **19 12 21.9 +0.7**
ARU 19 13 07.8
ARU S **S** **19 20 28.4 +4.5**
ARU SS **SS** **19 24 15.5 -1.1**
ARU pmax pmax
comp=Z,38nm,1.7s
ARU Arti 58.62 325 P **P** **19 12 21.3 +0.1**
DZM Mont Dzumac 61.01 130 *e*P **P** **19 12 38.2 0.0**
comp=Z,43nm,1.2s
DZM Mont Dzumac 61.01 130 *e*LR LR 19 30 43.9
comp=Z,262nm,22.6s
DZM Mont Dzumac 61.01 130 P **P** **19 12 39.2 +0.9**
comp=Z,12nm,0.9s,baz=290,slow=19,SNR=6.1
DZM Mont Dzumac 61.01 130 P **P** **19 12 38.6 +0.4**
DZM IAmb IAmb 19 12 40.0
comp=Z,17nm,1.0s
TOO Toolangi 61.24 157 P **P** **19 12 40.2 +0.8**

TOO pmax pmax
comp=Z,21nm,0.9s
TOO Toolangi 61.24 157 P **P** **19 12 40.2 +0.8**
GAMB Gambell 63.32 27 P **P** **19 12 53.8 +0.9**
GAMB IAmb IAmb 19 12 54.9
comp=Z,16nm,1.0s
AKT Akhty 64.59 308 *eP* **P** **19 13 03.0 +1.1**
AKT *e* 19 13 35.2
AKT pmax pmax
comp=Z,17nm,1.0s
PRGR Permogore 66.00 330 *eP* **P** **19 13 09.4 -1.1**
PRGR *eS* **S** **19 21 54.0 -2.6**
PRGR pmax pmax
comp=Z,24nm,0.9s
ANM Nome 66.18 27 P **P** **19 13 11.6 0.0**
ANM pmax pmax
comp=Z,20nm,1.4s
ANM Nome 66.18 27 P **P** **19 13 11.6 0.0**
ANM IAmb IAmb 19 13 13.9
comp=Z,20nm,1.4s
TBLG Delisi 66.81 308 P **P** **19 13 15.7 -0.4**
TBLG pmax pmax
comp=Z,8.0nm,1.0s
TBLG Delisi 66.81 308 P **P** **19 13 15.7 -0.4**
TBLG IAmb IAmb 19 13 26.2
comp=Z,8.3nm,1.0s
GNI Garni 66.96 306 *ceP* **P** **19 13 19.6 +2.3**
GNI pmax pmax
comp=Z,73nm,1.3s
GNI Garni 66.96 306 P **P** **19 13 17.5 +0.2**
ZEI Tsey 67.32 309 *eP* **P** **19 13 19.7 +0.1**
ZEI pmax pmax
comp=Z,14nm,1.1s
RDOG Red Dog Mine 67.48 23 P **P** **19 13 20.3 +0.4**
MSVF Nonsavu 67.62 119⇓ *eP* **P** **19 13 23.9 +2.3**
MSVF pmax pmax
comp=Z,26nm,1.0s
AKH Akhalkalaki 67.77 308 P **P** **19 13 24.2 +1.8**
AKH pmax pmax
comp=Z,22nm,1.2s
AKH Akhalkalaki 67.77 308 ⇓ P **P** **19 13 24.8 +2.4**
AKH Akhalkalaki 67.77 308 P **P** **19 13 24.2 +1.8**
AKH IAmb IAmb 19 13 25.5
comp=Z,22nm,1.2s
KBZ Khabaz 67.96 310⇑ *eP* **P** **19 13 24.6 +1.3**
KBZ Khabaz 67.96 310 P **P** **19 13 24.8 +1.5**
comp=Z,8.4nm,0.9s,baz=114,slow=3.1,SNR=19
KBZ LR LR 19 46 30.9
comp=Z,117nm,20.3s,baz=66,slow=39
KIV Kislovodsk 68.09 311 *d iP* **P** **19 13 25.3 +1.0**
KIV *i* 19 13 29.5
KIV *i* 19 13 48.6
KIV pmax pmax
comp=Z,23nm,1.0s
KIV MLR MLR
comp=Z,97nm,25.0s
KIV Kislovodsk 68.09 311 ⇑ P **P** **19 13 26.0 +1.7**
KIV Kislovodsk 68.09 311 P **P** **19 13 24.5 +0.2**
VRH Novokhopyorsk 68.14 318 *eP* **P** **19 13 24.1 -0.2**
VRH pmax pmax
comp=Z,30nm,0.8s
RAYN Ar Rayn 69.00 288 P **P** **19 13 29.5 -0.8**
RAYN pmax pmax
comp=Z,10.0nm,1.0s
RAYN Ar Rayn 69.00 288 P **P** **19 13 29.5 -0.8**
RAYN IAmb IAmb 19 13 31.7
comp=Z,10.0nm,1.0s
TMCR Tamitsa 69.53 332 *eP* **P** **19 13 33.0 +0.3**
TMCR pmax pmax
comp=Z,44nm,1.3s
VORD Divnogorie 69.69 318 *eP* **P** **19 13 33.7 -0.2**
VORD pmax pmax
comp=Z,30nm,1.6s
VSR Storozhevoye 69.75 319 *eP* **P** **19 13 33.8 -0.5**
VSR pmax pmax
comp=Z,30nm,1.4s
LPSR Galich'ya Gora 69.76 320 *eP* **P** **19 13 34.4 +0.1**
LPSR pmax pmax
comp=Z,20nm,0.8s
MOS Moscow 70.24 323 *eP* **P** **19 13 35.6 -1.6**
MOS pmax pmax
comp=Z,57nm,1.4s
OBN Obninsk 70.90 323⇑ *iP* **P** **19 13 41.8 +0.6**
OBN *i* 19 13 49.7
OBN *e* 19 14 01.1
OBN pmax pmax
comp=Z,34nm,1.3s
OBN MLR MLR
comp=Z,93nm,16.0s
OBN Obninsk 70.90 323 P **P** **19 13 40.0 -1.3**
IMAR Indian Mountai 71.07 26 P **P** **19 13 41.9 -0.3**
RSO Redoubt South 72.08 31 P **P** **19 13 48.0 -0.6**
OHAK Old Harbor 72.23 35 P **P** **19 13 49.1 -0.1**
COLD Coldfoot 72.35 24 P **P** **19 13 49.0 -0.9**
TOLK Toolik Lake Re 72.41 23 P **P** **19 13 50.7 +0.5**
TOLK IAmb IAmb 19 13 52.0
comp=Z,14nm,1.0s
TOLK Toolik Lake Re 72.41 23 P **P** **19 13 50.8 +0.7**
baz=277
MLY Manley 72.42 26 P **P** **19 13 50.9 +0.5**
MLY IAmb IAmb 19 13 52.2
comp=Z,22nm,1.0s
BPAW Bear Paw Mtn. 72.44 27 P **P** **19 13 50.9 +0.4**
SKT Skwentna 72.47 30 P **P** **19 13 50.1 -0.6**
SKT IAmb IAmb 19 14 06.8
comp=Z,9.0nm,0.8s
KTH Kantishna Hill 72.54 28 P **P** **19 13 51.1 0.0**
KTH IAmb IAmb 19 13 52.3
comp=Z,11nm,1.0s
TRF Thorofare Moun 72.83 28 P **P** **19 13 52.7 -0.2**
SUA Susitna One 72.92 30 P **P** **19 13 52.8 -0.6**
BWN Browne 73.09 27 P **P** **19 13 55.2 +0.9**
BWN IAmb IAmb 19 13 57.3
comp=Z,22nm,1.0s
GAZ Gaziantep 73.24 304 P **P** **19 13 54.4 -1.4**
MCK McKinley 73.39 28 P **P** **19 13 56.0 -0.1**
MCK pmax pmax
comp=Z,33nm,1.1s
MCK McKinley 73.39 28 P **P** **19 13 56.0 -0.1**
RND Reindeer 73.48 28 P **P** **19 13 56.4 -0.3**
RND pmax pmax
comp=Z,33nm,1.0s
RND Reindeer 73.48 28 P **P** **19 13 56.4 -0.3**
MDM Murphy Dome 73.48 26 P **P** **19 13 57.2 +0.6**
WRH Wood River Hil 73.63 27 P **P** **19 13 57.8 +0.4**
WRH IAmb IAmb 19 13 59.3
comp=Z,24nm,1.3s
COLA College 73.66 26⇑ *eP* **P** **19 13 57.7 +0.2**
COLA pmax pmax
comp=Z,9.0nm,1.0s
COLA College 73.66 26 P **P** **19 13 56.7 -0.9**
COLA IAmb IAmb 19 13 58.9
comp=Z,8.8nm,0.8s
PMR Palmer 73.66 30 P **P** **19 13 56.9 -0.7**
PMR pmax pmax
comp=Z,18nm,1.0s
PMR Palmer 73.66 30 P **P** **19 13 56.9 -0.7**
PMR IAmb IAmb 19 13 58.0
comp=Z,18nm,1.0s
CCB Clear Creek Bu 73.72 27 P **P** **19 13 57.4 -0.5**
CCB IAmb IAmb 19 13 59.5
comp=Z,9.7nm,1.1s
GHO Glory Hole Cre 73.73 30 P **P** **19 13 58.2 +0.1**
GHO IAmb IAmb 19 14 30.9
comp=Z,25nm,1.2s
POKR Poker Plat Res 73.79 26 P **P** **19 13 59.4 +1.0**
baz=280
ARCES ARCESS Array B 73.85 339 P **P** **19 13 59.3 +0.6**
ARCES ARCESS Array B 73.85 339 P **P** **19 13 58.0 -0.7**
comp=Z,6.6nm,0.9s,baz=87,slow=7.4,SNR=5.4
ARCES ARCESS Array B 73.85 339 P **P** **19 13 59.3 +0.6**
SML Sawmill 74.00 30 P **P** **19 13 59.7 0.0**
KNK Knik Glacier 74.01 30 P **P** **19 13 59.6 -0.1**
KNK IAmb IAmb 19 14 00.1
comp=Z,20nm,0.9s
IL31 74.08 26 P **P** **19 13 59.0 -1.0**
IL31 IAmb IAmb 19 15 00.9
comp=Z,30nm,2.0s
ILAR Eielson Array 74.08 26 P **P** **19 13 58.4 -1.7**
ILAR Eielson Array 74.08 26 P **P** **19 13 59.0 -1.1**
comp=Z,3.0nm,0.8s,baz=275,slow=4.0,SNR=27
ILAR Eielson Array 74.08 26 P **P** **19 13 58.4 -1.7**
HDA Harding Lake 74.13 27 P **P** **19 13 59.5 -0.8**
HDA IAmb IAmb 19 14 00.3
comp=Z,14nm,1.1s
HDA Harding Lake 74.13 27 P **P** **19 13 59.3 -1.0**
baz=281
DHY Denali Highway 74.20 28 P **P** **19 14 00.8 -0.1**
SCM Sheep Creek Mo 74.46 29 P **P** **19 14 02.7 +0.2**
SCM pmax pmax
comp=Z,59nm,1.2s
SCM Sheep Creek Mo 74.46 29 P **P** **19 14 02.6 +0.2**
BMAR Burnt Mountain 74.47 24 P **P** **19 14 03.0 +0.7**
PRP Porcupine Dome 74.50 26 P **P** **19 14 02.1 -0.6**
PAX Paxson 75.07 28 P **P** **19 14 05.5 -0.4**
PAX pmax pmax
comp=Z,12nm,1.2s
PAX Paxson 75.07 28 P **P** **19 14 05.5 -0.4**
PAX IAmb IAmb 19 14 06.6
comp=Z,12nm,1.2s
RIDG Independent Ri 75.17 27 P **P** **19 14 06.0 -0.5**
FIA1 FINESS Array S 75.32 330 P **P** **19 14 07.3 +0.1**
FIA1 IAmb IAmb 19 14 08.7
comp=Z,26nm,1.1s
FINES FINESS Array B 75.32 330 *i* P P 19 14 13.3 +6.0
FINES pmax pmax
comp=Z,6.0nm,0.8s
FINES FINESS Array B 75.32 330 P **P** **19 14 07.7 +0.4**
comp=Z,9.6nm,0.9s,baz=140,slow=14,SNR=10
BR131 Keskin Array S 75.45 307 P **P** **19 14 05.8 -2.9**
BR131 pmax pmax
comp=Z,5.0nm,1.4s
BR131 Keskin Array S 75.45 307 P **P** **19 14 05.8 -2.9**
BRTR Keskin Array B 75.45 307 P **P** **19 14 09.2 +0.5**
comp=Z,0.7nm,0.8s,baz=116,slow=2.9,SNR=5.1
BRTR Keskin Array B 75.45 307 P **P** **19 14 08.0 -0.7**
SCRK Sand Creek 75.49 27 P **P** **19 14 07.4 -1.0**
DOT Dot Lake 75.53 27 P **P** **19 14 08.0 -0.5**
DOT IAmb IAmb 19 14 09.8
comp=Z,22nm,1.3s
VSU Vasula 75.67 327 *ceP* **P** **19 14 10.0 +0.7**
VSU pmax pmax
comp=Z,91nm,1.3s
MENT Mentasta 75.85 28 P **P** **19 14 10.9 +0.6**
MENT IAmb IAmb 19 14 20.3
comp=Z,14nm,1.2s
AKASG Malin Array Be 76.03 319 *i* P **P** **19 14 11.3 -0.2**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 76.03 319 P **P** **19 14 11.3 -0.2**
comp=Z,3.1nm,0.8s,baz=62,slow=5.8,SNR=15
AKASG Malin Array Be 76.03 319 P **P** **19 14 10.2 -1.3**
AKBB Malin Array Si 76.03 319⇓ *eP* **P** **19 14 10.6 -1.0**
AKBB Malin Array Si 76.03 319 P **P** **19 14 10.5 -1.0**
AKBB IAmb IAmb 19 14 12.9
comp=Z,18nm,1.5s
GLB Gilahina Butte 76.19 29 P **P** **19 14 12.8 +0.5**
EGAK Eagle 76.47 26 P **P** **19 14 13.5 -0.3**
EGAK IAmb IAmb 19 14 14.8
comp=Z,11nm,0.9s
NACGM Naroch 76.48 324 *e* P 19 14 08.0 -6.0
BCAR Beaver Creek A 76.67 28 P **P** **19 14 15.1 0.0**
SORM Soroca 77.19 317⇑ P **P** **19 14 18.0 -0.2**
NOR Nord 77.22 354 *i* P **P** **19 14 17.8 0.0**
BARN Barnard Glacie 77.29 30 P **P** **19 14 19.5 +0.7**
BARN IAmb IAmb 19 14 20.3
comp=Z,21nm,1.1s
CTGM Chitina Glacie 77.47 30 P **P** **19 14 20.4 +0.7**
EPYK Eagle Plains 77.74 24 P **P** **19 14 20.4 -0.6**
EPYK IAmb IAmb 19 14 21.6
comp=Z,11nm,0.8s
EPYK Eagle Plains 77.74 24 P **P** **19 14 20.3 -0.7**
baz=290
RPZ Rata Peaks 77.99 145 P **P** **19 14 23.1 +0.6**
comp=Z,26nm,0.9s,baz=9.4,slow=13,SNR=4.1
TOPG Topolog 78.00 313⇑ P **P** **19 14 23.5 +0.7**
INK Inuvik 78.20 21 P **P** **19 14 23.2 -0.2**
INK pmax pmax
comp=Z,38nm,1.7s
INK Inuvik 78.20 21 P **P** **19 14 23.2 -0.2**
INK IAmb IAmb 19 14 25.0
comp=Z,38nm,1.7s
HARR Harsova 78.36 313⇑ P **P** **19 14 25.2 +0.5**
SUW Suwalki 78.75 323 P **P** **19 14 26.1 -0.6**
SUW pmax pmax
comp=Z,45nm,1.0s
SUW Suwalki 78.75 323 P **P** **19 14 26.1 -0.6**
VRI Vrincioaia 78.86 315⇑ P **P** **19 14 28.8 +1.3**
PLOR Plostina 78.91 315⇑ P **P** **19 14 29.0 +1.2**
BISRR Bisoca 78.96 314⇑ P **P** **19 14 29.7 +1.6**
HYT Haines Junctio 79.29 29 P **P** **19 14 30.3 +0.6**
HYT IAmb IAmb 19 14 31.7
comp=Z,29nm,1.1s
BURAR Bucovina Array 79.36 317⇑ P **P** **19 14 30.5 +0.1**
BURAR Bucovina Array 79.36 317 P **P** **19 14 30.0 -0.3**
BUR08 Bucovina Ar. S 79.37 317 P **P** **19 14 31.0 +0.6**
OZUR 79.42 315⇑ P **P** **19 14 31.6 +1.0**
LVV L'vov 79.48 319 *eP* **P** **19 14 31.6 +0.8**
MLR Muntele Rosu 79.49 314 P **P** **19 14 31.2 +0.1**
MLR pmax pmax
comp=Z,7.0nm,0.9s
MLR Muntele Rosu 79.49 314⇑ P **P** **19 14 32.3 +1.1**
MLR Muntele Rosu 79.49 314 P **P** **19 14 31.2 +0.1**
VOIR 80.11 315⇑ P **P** **19 14 34.6 +0.2**
KWP Kalwaria Pacla 80.35 319 P **P** **19 14 35.5 -0.1**
KWP pmax pmax
comp=Z,274nm,1.2s
KWP Kalwaria Pacla 80.35 319 P **P** **19 14 35.5 -0.1**
ARR Arges 80.41 315⇑ P **P** **19 14 36.0 0.0**
HUMR Humele 80.42 314⇑ P **P** **19 14 36.3 +0.3**
CJR Cluj-Napoca 80.69 316⇑ P **P** **19 14 38.8 +1.3**
C36M Paulatuk 80.82 19 P **P** **19 14 37.2 -0.4**
C36M IAmb IAmb 19 14 39.0
comp=Z,16nm,1.1s
C36M Paulatuk 80.82 19 P **P** **19 14 37.0 -0.6**
baz=300
KOLS Kolonicke sedl 80.84 319 *eP* **P** **19 14 39.4 +1.2**
KOLS Kolonicke sedl 80.84 319 *eP* **P** **19 14 39.4 +1.2**
UZH Uzhgorod 80.92 318 *eP* **P** **19 14 36.5 -2.1**
UZH *i* 19 14 42.2
TRPA Tarpa 80.93 318⇑ P **P** **19 14 38.9 +0.2**
DAG Danmarks Havn 81.17 351 *iP* **P** **19 14 38.9 -0.5**
DAG pmax pmax
comp=Z,10.0nm,0.7s
DAG Danmarks Havn 81.17 351 *i* P **P** **19 14 38.9 -0.5**
comp=Z,10nm,0.7s
DRGR 81.24 316⇑ P **P** **19 14 41.2 +0.8**
PUNG Punghina 81.90 314⇑ P **P** **19 14 45.2 +1.4**
OJC Ojcow 81.94 320 P **P** **19 14 43.7 -0.3**
OJC pmax pmax
comp=Z,9.0nm,0.8s
OJC Ojcow 81.94 320 P **P** **19 14 43.7 -0.3**
OJC IAmb IAmb 19 14 45.3
comp=Z,8.8nm,0.8s
VTS Vitosha 82.22 312 P **P** **19 14 45.9 +0.1**
VTS pmax pmax
comp=Z,16nm,1.2s
VTS Vitosha 82.22 312⇑ P **P** **19 14 46.7 +0.9**
VTS Vitosha 82.22 312 P **P** **19 14 45.9 +0.1**
VTS IAmb IAmb 19 14 47.5
comp=Z,16nm,1.2s
NB2 NORSAR Subarra 82.23 332 P **P** **19 14 44.5 -0.8**
comp=Z,0.5nm,0.6s,baz=59,slow=4.8
NOA NORSAR Array B 82.23 332 P **P** **19 14 44.9 -0.4**
comp=Z,3.8nm,0.9s,baz=63,slow=5.1,SNR=8.1
BZS Buzias 82.34 316⇑ P **P** **19 14 46.3 +0.1**
VYHS Vyhne 83.13 319 *eP* **P** **19 14 50.8 +0.5**
VYHS pmax pmax
comp=Z,15nm,1.6s
VYHS Vyhne 83.13 319 *eP* **P** **19 14 50.8 +0.5**
MORC Moravsky Berou 83.45 320⇑ P **P** **19 14 52.6 +0.6**
MORC Moravsky Berou 83.45 320 *eP* **P** **19 14 52.8 +0.9**
LIT Litokhoron 83.57 310 P **P** **19 14 52.1 -0.6**
LIT pmax pmax
comp=Z,15nm,1.4s
LIT Litokhoron 83.57 310 P **P** **19 14 52.1 -0.6**
LIT IAmb IAmb 19 14 52.9
comp=Z,15nm,1.4s
KMBO Kilima Mbogo 83.71 267 P **P** **19 14 54.3 +0.2**
KMBO pmax pmax
comp=Z,16nm,1.5s
KMBO Kilima Mbogo 83.71 267 P **P** **19 14 55.3 +1.1**
comp=Z,4.0nm,1.0s,baz=57,slow=5.7,SNR=5.9
KMBO Kilima Mbogo 83.71 267 P **P** **19 14 54.3 +0.2**
KMBO IAmb IAmb 19 14 56.8
comp=Z,16nm,1.4s
JAVC Velka Javorina 83.72 320 *eP* **P** **19 14 55.3 +2.0**
RES Resolute Bay 83.74 9 P **P** **19 14 53.0 +0.2**
RES IAmb IAmb 19 14 54.0
comp=Z,14nm,0.9s
KRLC Kraliky 83.80 321 *eP* **P** **19 14 54.2 +0.5**
KRLC Kraliky 83.80 321 *eP* **P** **19 14 54.2 +0.5**
DPC Dobruska-Polom 83.96 321 *eP* **P** **19 14 55.3 +0.8**
DPC Dobruska-Polom 83.96 321 *eP* **P** **19 14 55.3 +0.8**
MORH Mrgy, Hungar 84.08 317 *eP* **P** **19 14 55.2 +0.1**
VRAC Vranov 84.20 320⇑ P **P** **19 14 56.4 +0.7**
VRAC Vranov 84.20 320 *eP* **P** **19 14 56.8 +1.1**
KRUC Moravsky 84.42 320 *eP* **P** **19 14 57.7 +0.9**
GOPC GO Pecny, Ondr 85.04 321 *eP* **P** **19 15 00.4 +0.4**
GOPC GO Pecny, Ondr 85.04 321 *eP* **P** **19 15 00.4 +0.4**
BRG Berggiesshubel 85.14 322 *eP* **P** **19 15 00.9 +0.5**
comp=Z,20nm,1.1s
BRG Berggiesshubel 85.14 322 *eP* **P** **19 15 00.9 +0.5**
BRG pmax pmax
comp=Z,20nm,1.2s
PRU Pruhonice 85.16 321 *eP* **P** **19 15 01.1 +0.6**
PRU Pruhonice 85.16 321 *eP* **P** **19 15 01.1 +0.6**
CONA Conrad Observa 85.19 319 *i* P **P** **19 15 00.3 -0.6**
comp=Z,11nm,1.6s
CLL Collm 85.50 323 P **P** **19 15 00.9 -1.3**
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 85.50 323 *i* P **P** **19 15 02.3 +0.1**
comp=Z,16nm,1.1s
CLL Collm 85.50 323 P **P** **19 15 00.9 -1.3**
CLL IAmb IAmb 19 15 03.1
comp=Z,12nm,1.0s
KHC Kasperske Hory 86.08 321 *eP* **P** **19 15 05.3 +0.1**
KHC Kasperske Hory 86.08 321 *eP* **P** **19 15 05.3 +0.1**
GEC2 GERESS Array S 86.13 321 P **P** **19 15 04.6 -0.9**
GEC2 IAmb IAmb 19 15 06.7
comp=Z,5.8nm,1.0s
GERES GERESS Array B 86.13 321 P **P** **19 15 04.7 -0.8**
GERES GERESS Array B 86.13 321 P **P** **19 15 05.8 +0.3**
comp=Z,2.9nm,0.9s,baz=64,slow=6.1,SNR=18
GERES GERESS Array B 86.13 321 P **P** **19 15 04.7 -0.8**
MOA Molln 86.20 320 *i* PcP **P** **19 15 06.3 +0.5**
comp=Z,11nm,1.3s
SOKA Soboth 86.20 318 *i* PcP **P** **19 15 06.0 +0.1**
comp=Z,6.4nm,1.4s
KBA Koelnbreinsper 87.09 319 *i* PcP **P** **19 15 10.0 -0.3**
comp=Z,6.4nm,1.1s
SUMG Summit 87.37 354 P **P** **19 15 11.2 -0.3**
SUMG pmax pmax
comp=Z,9.0nm,0.9s
SUMG Summit 87.37 354 *i* P **P** **19 15 11.0 -0.5**
SUMG Summit 87.37 354 P **P** **19 15 11.2 -0.3**
SUMG IAmb IAmb 19 15 12.6
comp=Z,9.2nm,0.9s
YKA Yellowknife Ar 87.93 22 P **P** **19 15 13.3 -0.5**
YKA Yellowknife Ar 87.93 22 P **P** **19 15 13.9 +0.1**
comp=Z,8.6nm,0.8s,baz=314,slow=4.6,SNR=162
YKA Yellowknife Ar 87.93 22 P **P** **19 15 13.3 -0.5**
WTTA Wattenberg 88.06 320 *i* PcP **P** **19 15 14.9 -0.1**
comp=Z,11nm,1.0s
WATA Walderalm 88.07 320 *i* PcP **P** **19 15 14.7 -0.3**
comp=Z,3.0nm,0.7s
FETA Feichten 88.72 320 *i* PcP **P** **19 15 18.7 +0.6**
comp=Z,9.3nm,1.5s
SALO Salr 89.49 319 P **P** **19 15 20.3 -1.3**
LLLB Lillooet 91.75 34 P **P** **19 15 29.8 -2.2**
D03D Eldon 92.74 37 P **P** **19 15 37.9 +1.3**
baz=302
J01E Myrtle Point 94.55 41 P **P** **19 15 46.3 +1.3**
baz=302
I03D Drain, OR 94.63 41 P **P** **19 15 46.6 +1.3**
baz=302
H04A Detroit Lake 94.81 39 P **P** **19 15 44.8 -1.4**
H04A IAmb IAmb 19 15 48.4
comp=Z,14nm,1.5s
K02D Willamette Mer 94.96 42 P **P** **19 15 47.6 +0.6**
baz=302
G05D Wamic, OR 95.02 39 P **P** **19 15 48.9 +1.7**
baz=304
I04A Tendick Farm, 95.15 40 P **P** **19 15 48.4 +0.6**
baz=303
HUMO Hull Mountain 95.45 41 P **P** **19 15 49.7 +0.5**
HUMO IAmb IAmb 19 15 51.2
comp=Z,6.0nm,1.2s
PPT2 Papeete2 95.82 107 *e* LR LR 19 46 49.5
comp=Z,107nm,24.5s
PINE Pine Mountain 96.05 40 P **P** **19 15 52.5 +0.4**
L04D Klamath Falls 96.06 42 P **P** **19 15 52.5 +0.4**
baz=302
YBH Yreka Blue Hor 96.07 42 P **P** **19 15 52.3 +0.2**
YBH pmax pmax
comp=Z,6.0nm,1.2s
YBH Yreka Blue Hor 96.07 42 P **P** **19 15 52.3 +0.2**
YBH IAmb IAmb 19 15 53.8
comp=Z,5.5nm,1.2s
MAW Mawson 96.08 199 P **P** **19 15 50.7 -0.5**
MAW pmax pmax
comp=Z,14nm,1.8s
MAW Mawson 96.08 199 P **P** **19 15 50.6 -0.5**
comp=Z,6.8nm,1.0s,baz=47,slow=6.8,SNR=3.8
MAW Mawson 96.08 199 P **P** **19 15 50.7 -0.5**
MAW IAmb IAmb 19 15 59.9
comp=Z,14nm,1.8s
J05D Fort Rock, OR 96.15 40 P **P** **19 15 53.3 +0.8**
baz=303
M04C Macdoel 96.59 42 P **P** **19 15 54.9 +0.3**
baz=303
LSZ Lusaka 96.75 256 P **P** **19 15 54.7 -1.0**
LSZ pmax pmax
comp=Z,17nm,1.8s
LSZ Lusaka 96.75 256 P **P** **19 15 54.7 -1.0**
O02D Mt. Diablo Mer 96.84 43 P **P** **19 15 56.2 +0.6**
baz=302
MOD Modoc Plateau 97.48 41 P **P** **19 15 58.3 -0.3**
MOD IAmb IAmb 19 16 00.7
comp=Z,5.0nm,1.1s
BEKR Beckworth 98.58 43 P **P** **19 16 03.0 -0.7**
BEKR IAmb IAmb 19 16 04.5
comp=Z,3.4nm,0.8s
VNDA Vanda 99.48 172 P **Pdif** **19 16 07.3 +0.9**
comp=Z,1.1nm,0.9s,baz=304,slow=7.4,SNR=3.8
KVN Kaiserville 100.48 42 *iP* **Pdif** **19 16 12.1 0.0**
KVN Kaiserville 100.48 42 **Pdif** **19 16 12.1 0.0**
NVAR Mina Array Bea 100.71 43 P **Pdif** **19 16 14.7 +1.5**
comp=Z,0.9nm,0.7s,baz=293,slow=5.5,SNR=9.5
NVAR Mina Array Bea 100.71 43 **Pdif** **19 16 12.2 -1.0**
PDAR Pinedale Array 103.23 35 PP **PP** **19 20 34.0 -4.9**
comp=Z,0.1nm,0.4s,baz=328,slow=5.3,SNR=3.9
ULM Lac du Bonnet 103.90 23 PP **PP** **19 20 44.5 +1.3**
comp=Z,0.8nm,0.4s,baz=270,slow=4.0,SNR=3.4
TORD Torodi Ar. Bea 111.46 293 PKiKP **PKiKP** **19 20 57.6 -1.8**
comp=Z,0.7nm,0.8s,baz=28,slow=1.9,SNR=4.3
TORD PKKPbc **PKKPab** **19 32 03.0 -1.4**
comp=Z,0.9nm,0.9s,baz=223,slow=2.2,SNR=4.0
TX31 Lajitas Ar. Si 115.85 42 **PKPdf** **19 21 07.7 +0.1**
TX32 Lajitas Array 115.85 42 **PKPdf** **19 21 07.6 0.0**
TXAR Lajitas Array 115.85 42 PKiKP **PKiKP** **19 21 07.2 -0.4**
TXAR Lajitas Array 115.85 42 PKP **PKPdf** **19 21 08.0 +0.4**
comp=Z,2.5nm,0.7s,baz=203,slow=0.7,SNR=27
TXAR Lajitas Array 115.85 42 **PKiKP** **19 21 07.2 -0.4**
JCT Junction City 117.41 39 PKiKP **PKPdf** **19 21 10.2 -0.3**
JCT Junction City 117.41 39 **PKPdf** **19 21 10.2 -0.3**
WVT Waverly 118.94 26 P **PKPdf** **19 21 12.9 -0.3**
baz=330
U50A Jamestown 119.86 23 P **PKPdf** **19 21 14.7 -0.4**
baz=333
TZTN Tazewell 120.22 22 P **PKPdf** **19 21 15.4 -0.3**
baz=334
V50A Pikevile 120.42 24 P **PKPdf** **19 21 15.7 -0.4**
baz=332
V52A Sevierville 120.83 22 P **PKPdf** **19 21 16.9 0.0**
baz=334
X52A Dahlonega 121.83 23 P **PKPdf** **19 21 18.5 -0.4**
baz=333
Y54A Tignall 122.93 23 P **PKPdf** **19 21 20.8 -0.2**
baz=334
BANI BANI 141.26 16 **PKPdf** **19 21 54.4 -1.5**
SDV Santo Domingo 150.15 22 **PKPdf** **19 22 11.0 -0.2**
ROSC El Rosal 152.19 32 PKPbc **PKiKP** **19 22 21.9 +0.2**
comp=Z,20nm,0.6s,baz=355,slow=3.6,SNR=12
ROSC El Rosal 152.19 32 **PKPdf** **19 22 14.8 +0.1**
OTAV Otavalo 153.41 46 PKiKP **PKPdf** **19 22 18.1 +1.5**
OTAV Otavalo 153.41 46 **PKPdf** **19 22 18.1 +1.5**
PLCA Paso Flores 156.60 159 PKPab **PKPab** **19 22 49.6 +1.1**
comp=Z,5.5nm,1.0s,baz=212,slow=4.7,SNR=3.3

SAML	**Samuel**	**169.33**	**18**	PKP2	**PKPab**	**19 23 42.1**	**-2.6**
SAML						20 22 32.0	
SAML	**Samuel**	**169.33**	**18**		**PKPdf**	**19 22 32.0**	**-0.6**
SAML				PKPab	**PKPab**	**19 23 42.1**	**-2.6**
LPAZ	**La Paz**	**171.55**	**72**	PKIKP	**PKPdf**	**19 22 35.4**	**+1.0**
LPAZ	**La Paz**	**171.55**	**72**	PKP	**PKPdf**	**19 22 35.6**	**+1.2**
	comp=Z,3.1nm,0.9s,baz=11,slow=1.5,SNR=9.8						
LPAZ	**La Paz**	**171.55**	**72**		**PKPdf**	**19 22 35.4**	**+1.0**

MAN 02 19:13:10.6, 15.27N×122.03E, h22km, mb5.2, ML4.1, MS4.2, Philippine Islands region

MOS ***02*** *19:30:51.7±1.0, 19.17N×120.29E, h11km, mb5.4/40, MS4.3/10, Error ellipse: s-maj=6.2km s-min=3.8km az=108.3*
IDC ***02*** *19:30:51.5±0.4, 19.13N×120.35E, h0km, mb4.9/29, mb1 5.0/31, mb1mx4.9/40, mbtmp4.9/31, ML3.8/3, MS4.1/30, Ms1 4.1/30, ms1mx4.1/35, Error ellipse: s-maj=14.1km s-min=10.1km az=85.0*
BJI ***02*** *19:30:52.1±0.0, 19.20N×120.30E, h10km, mB5.1/62, mb4.9/75, ML4.7/1, Ms4.8/77, Ms7 4.6/73*
NEIC ***02*** *19:30:54.0±1.8, 19.27N±0.06×120.18E±0.07, h14km±3km, mb5.3/192, Error ellipse: s-maj=9.9km s-min=8.5km az=91.0*
MAN ***02*** *19:30:53.1, 19.23N×120.32E, h9km, mb4.6, ML4.6, MS4.9*
GCMT ***02*** *19:30:54.0±0.2, 19.16N±0.02×120.16E±0.02, h12km, MW5.0/116, Moment Tensor Solution. s45,c61; s116,c174; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=3.54±.07; Mθθ 1.04±.07; Mϕϕ 2.51±.08; Mrθ=0.47±.28; Mθϕ 1.53±.06; Mϕr 1.64±.25; Best double couple: Mo 3.88100×10^16 NP1:ϕs 47.00000°, δ 38.00000°, λ=63.00000°. NP2:ϕs 195.00000°, δ 56.00000°, λ=109.00000°. Principal axes: T 3.6640, Plg 10.0000°, Azm 299.0000°; N 0.4460, Plg 16.0000°, Azm 206.0000°; P =4.0990, Plg 71.0000°, Azm 58.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
KLM ***02*** *19:30:56.0, 19.31N×120.45E, h44km, mb5.1*
BGR ***02*** *19:31:15.1±0.0, 22.02N×118.26E, h33km, mb5.1*
ISC 02 19:30:56.2±0.5, 19.19N±0.02×120.24E±0.03, h28km±3km, h29km:pP-P, n711, σ1s40/736, mb5.2/236, MS4.3/48, 52C-23D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**1.27**	**171**	⇑*e*P		**Pn**	**19 31 17.7**	**-0.4**
SIPP				*e*S		Sb	19 31 48.3	+13
ABRA	**Dolores**	**1.59**	**164**	*e*P		**Pn**	**19 31 19.9**	**-2.5**
ABRA				*e*S		**Sn**	**19 31 40.0**	**-2.1**
APYP	**Conner**	**1.62**	**144**	*e*P		**Pn**	**19 31 20.8**	**-2.1**
APYP				*e*S		**Sn**	**19 31 34.8**	**-8.0**
SGCP	**Mt. Cagua**	**1.95**	**118**	*e*P		**Pn**	**19 31 26.5**	**-0.9**
SGCP				*e*S		**Sn**	**19 31 51.3**	**+0.4**
BBP	**Basco**	**2.05**	**52**	⇓*e*P		**Pn**	**19 31 26.8**	**-1.9**
BBP				*e*S		**Sn**	**19 31 52.8**	**-0.5**
CVP	**Callao Caves**	**2.10**	**134**	⇑*i*P		**Pn**	**19 31 28.5**	**-1.0**
CVP				*i* S		**Sb**	**19 31 58.5**	**-0.8**
CAUP	**Cauayan**	**2.69**	**146**	*e*P		**Pn**	**19 31 38.7**	**+1.1**
CAUP				*e*S		Sb	19 32 42.7	+27
BOLP	**Bolinao**	**2.81**	**186**	*e*P		**Pn**	**19 31 37.0**	**-2.2**
BOLP				*e*S		**Sn**	**19 32 15.1**	**+3.0**
SMPP	**San Manuel, Pa**	**3.05**	**172**	*e*P		**Pn**	**19 31 42.1**	**-0.4**
SCZP	**Santa Cruz**	**3.41**	**185**	*e*P		**Pn**	**19 31 48.2**	**+0.8**
SCZP				*e*S		**Sb**	**19 32 44.1**	**+7.3**
PCPH	**Palayan**	**3.69**	**167**	⇑*e*P		**Pn**	**19 31 51.6**	**+0.2**
TWG	**Pinlang**	**3.70**	**12**			**Pn**	**19 31 49.6**	**-1.9**
TPUB	**Ta-pu**	**4.11**	**5**			**Pn**	**19 31 53.7**	**-3.4**
YULB	**Yu-li**	**4.30**	**13**			**Pn**	**19 31 56.5**	**-3.3**
SSLB	**Suanglung**	**4.63**	**8**			**Pn**	**19 32 01.7**	**-2.5**
POLP	**Polilio Island**	**4.72**	**160**	*e*P		**Pn**	**19 32 05.9**	**+0.4**
POLP				*e*S		**Sn**	**19 32 56.6**	**-2.7**
TGY	**Tagaytay City**	**5.10**	**172**	Pn		**Pn**	**19 32 11.7**	**+0.9**
	24nm,0.3s,baz=31,slow=5.9,SNR=3.0							
TGY				LR		LR	19 34 35.7	
	comp=Z,4μm,18.2s,baz=66,slow=45							
TGY	**Tagaytay City**	**5.10**	**172**	⇓*e*P		Pn	19 32 17.6	+6.8
NACB	**Ninganchiao**	**5.12**	**14**			**Pn**	**19 32 09.9**	**-1.1**
KNMB	**Chin-men Tao**	**5.53**	**342**			**Pn**	**19 32 13.6**	**-3.0**
YHNB	**Yeheng**	**5.56**	**11**			**Pn**	**19 32 15.6**	**-1.5**
YOJ	**Yonaguni jima**	**5.85**	**26**	P		**Pn**	**19 32 20.1**	**-0.9**
YOJ	**Yonaguni jima**	**5.85**	**26**			**Pn**	**19 32 20.1**	**-0.9**
TATO	**Taipei**	**5.88**	**11**			**Pn**	**19 32 19.9**	**-1.5**
BOAC	**Boac**	**5.90**	**165**	*e*P		**Pn**	**19 32 23.7**	**+2.0**
QZH	**Quanzhou**	**5.93**	**345**	⇓*i*Pn		**Pn**	**19 32 19.1**	**-3.0**
QZH				Sn		**Sn**	**19 33 22.9**	**-6.3**
QZH				LR		LR		
	comp=N,3μm,17.1s							
QZH				LR		LR		
	comp=E,4μm,17.1s							
QZH				LR		LR		
	comp=Z,3μm,10.4s							
HKPS	**Hong Kong Po S**	**6.49**	**299**			**Pn**	**19 32 27.1**	**-2.7**
PVCP	**Virac**	**6.71**	**145**	*e*P		**Pb**	**19 32 50.0**	**-2.0**
QIZ	**Qiongzhong**	**9.83**	**271**	P		**Pn**	**19 33 12.9**	**-2.9**
QIZ				S		**Sn**	**19 35 02.9**	**-2.4**
QIZ				LR		LR		
	comp=N,2μm,12.4s							
QIZ				LR		LR		
	comp=E,2μm,12.1s							
QIZ				LR		LR		
	comp=Z,2μm,9.8s							
QIZ	**Qiongzhong**	**9.83**	**271**			**Pn**	**19 33 12.8**	**-2.9**
JOW	**Kunigami**	**10.61**	**43**	Pn		**Pn**	**19 33 25.2**	**-1.1**
	0.6nm,0.3s,baz=186,slow=13,SNR=9.1							
JOW	**Kunigami**	**10.61**	**43**			**Pn**	**19 33 25.1**	**-1.3**
SSE	**Sheshan**	**11.89**	**4**	P		**Pn**	**19 33 44.0**	**+0.2**
SSE				S		**Sn**	**19 35 56.8**	**+1.2**
SSE				pmax		pmax		
	comp=Z,4.0nm,0.3s							
SSE				pmax		pmax		
	comp=Z,42nm,6.5s							
SSE				LR		LR		
	comp=N,460nm,12.2s							
SSE				LR		LR		
	comp=E,980nm,14.2s							
BUKP	**Musuan**	**12.17**	**157**	*e*P		**P**	**19 34 04.3**	**+4.2**
WHN	**Wuhan**	**12.51**	**336**	⇑P		**Pn**	**19 33 55.6**	**+3.3**
WHN				S		**Sn**	**19 36 10.6**	**-0.1**
WHN				LR		LR		
	comp=N,3μm,9.5s							
WHN				LR		LR		
	comp=E,4μm,11.0s							
WHN				LR		LR		
	comp=Z,6μm,13.5s							
CTBH	**Cotabato--PC H**	**12.51**	**161**	⇓*i*P		**P**	**19 34 06.4**	**+2.6**
NJ2	**Nanjing**	**12.87**	**355**	*e*P		**Pn**	**19 33 56.7**	**-0.6**
NJ2				pmax		pmax		
	comp=Z,11nm,0.5s							
NJ2				pmax		pmax		
	comp=Z,82nm,3.5s							
NJ2				LR		LR		
	comp=N,2μm,10.6s							
NJ2				LR		LR		
	comp=E,2μm,11.4s							
NJ2				LR		LR		
	comp=Z,2μm,10.0s							
KCP	**Kidapawan**	**12.99**	**158**	⇓*e*P		**P**	**19 34 05.8**	**-3.4**
DAV	**Davao City (W)**	**13.11**	**156**	LR		LR	19 40 23.6	
	comp=Z,2μm,18.7s,baz=340,slow=44							
DAV	**Davao City (W)**	**13.11**	**156**	P		**Pn**	**19 34 02.0**	**+1.4**
SKMP	**Bagumbayan, Su**	**13.27**	**161**	*e*P		**P**	**19 34 09.8**	**-2.4**
DLV	**T Lat**	**13.42**	**239**			**Pn**	**19 34 03.9**	**-1.1**
DDMP	**Don Marcelino,**	**14.05**	**157**	*e*P		**Pn**	**19 34 16.6**	**+3.2**
GYA	**Guiyang**	**14.46**	**303**	⇑*i*P		**Pn**	**19 34 17.9**	**-1.2**
GYA				PP		**PnPn**	**19 34 27.3**	**+0.2**
GYA				S		**Sn**	**19 36 57.6**	**-0.9**
GYA				SS		**S**	**19 37 16.6**	**-1.1**
GYA				pmax		pmax		
	comp=Z,20nm,1.1s							
GYA				pmax		pmax		
	comp=Z,110nm,4.3s							
GYA				LR		LR		
	comp=N,2μm,11.4s							
GYA				LR		LR		
	comp=E,2μm,10.7s							
GYA				LR		LR		
	comp=Z,2μm,9.8s							
UBPT	**Khong Chiam**	**14.64**	**257**			**Pn**	**19 34 21.2**	**-0.3**
ENH	**Enshi**	**14.73**	**321**			**Pn**	**19 34 20.4**	**-2.2**
SLVN	**Son La**	**15.48**	**281**	P		**Pn**	**19 34 31.5**	**-1.3**
JNU	**Nakatsue**	**16.83**	**32**	Pn		**Pn**	**19 34 48.5**	**-1.3**
	0.4nm,0.3s,baz=173,slow=7.6,SNR=13							
JNU	**Nakatsue**	**16.83**	**32**	P		**Pn**	**19 34 48.3**	**-1.5**
JNU				IAmb		IAmb	19 34 54.9	
	comp=Z,300nm,1.3s							
KMI	**Kunming**	**17.25**	**293**	P		**Pn**	**19 34 55.2**	**-0.2**
KMI				pP		pP	19 35 03.5	+0.4
KMI				sP		pwP	19 35 07.2	-1.3
KMI				S		**Sn**	**19 38 08.3**	**+1.7**
KMI				SS		**SnSn**	**19 38 26.6**	**+6.5**
KMI				pmax		pmax		
	comp=Z,14nm,2.0s							
KMI				pmax		pmax		
	comp=Z,390nm,3.9s							
KMI				LR		LR		
	comp=Z,2μm,10.3s							
KMI				LR		LR		
	comp=Z,2μm,10.3s							
KMI				LR		LR		
	comp=Z,2μm,17.4s							
KMI	**Kunming**	**17.25**	**293**	P		**P**	**19 34 56.0**	**-0.7**
KMI				pmax		pmax		
	comp=Z,145nm,1.4s							
KMI	**Kunming**	**17.25**	**293**	P		**P**	**19 34 56.0**	**-0.7**
XAN	**Xi'an**	**17.90**	**328**	P		**Pn**	**19 35 02.9**	**-0.3**
XAN				pP		pP	19 35 08.7	-1.4
XAN				PP		**pwP**	**19 35 17.4**	**+2.0**
XAN				S		**Sn**	**19 38 21.6**	**-0.5**
XAN				SS		**SnSn**	**19 38 43.6**	**+7.6**
XAN				pmax		pmax		
	comp=Z,29nm,1.5s							
XAN				pmax		pmax		
	comp=Z,220nm,4.1s							
XAN				LR		LR		
	comp=Z,1μm,13.2s							
XAN				LR		LR		
	comp=Z,2μm,10.8s							
XAN				LR		LR		
	comp=Z,2μm,11.8s							
XAN	**Xi'an**	**17.90**	**328**	P		**Pn**	**19 35 02.2**	**-1.0**
XAN				pmax		pmax		
	comp=Z,64nm,1.1s							
XAN	**Xi'an**	**17.90**	**328**	P		**Pn**	**19 35 02.1**	**-1.0**
TJN	**Taejon**	**18.24**	**19**	*ce*P		**P**	**19 35 07.2**	**0.0**
SBUM	**Sibu**	**18.39**	**206**	P		**Pn**	**19 35 09.3**	**0.0**
SBUM	**Sibu**	**18.39**	**206**	P		**Pn**	**19 35 11.0**	**+1.8**
MRSI	**Marisa**	**18.67**	**175**	P		**Pn**	**19 35 14.0**	**+1.4**
	comp=Z,715nmcomp=Z,74nm,1.0s							
MPSI	**Mapaga**	**18.73**	**181**	P		**Pn**	**19 35 16.3**	**+2.9**
	comp=Z,493nmcomp=Z,43nm,0.9s							
KMSI	**Cibinong**	**18.86**	**168**	P		Pn	19 35 27.0	+12
CD2	**Chengdu**	**18.93**	**311**	P		**P**	**19 35 12.4**	**-2.6**
CD2				S		**S**	**19 38 49.8**	**+1.3**
CD2				sS		sS	19 38 56.3	-2.9
CD2				PcS		**PcS**	**19 43 17.4**	**-0.1**
CD2				pmax		pmax		
	comp=Z,30nm,0.5s							
CD2				pmax		pmax		
	comp=Z,370nm,7.9s							
CD2				LR		LR		
	comp=Z,4μm,10.1s							
CD2				LR		LR		
	comp=Z,3μm,10.3s							
CD2				LR		LR		
	comp=Z,4μm,10.0s							
INCN	**Inchon**	**19.07**	**16**	P		**P**	**19 35 16.2**	**-0.2**
INCN				pmax		pmax		
	comp=Z,73nm,1.3s							
INCN	**Inchon**	**19.07**	**16**	P		**P**	**19 35 16.2**	**-0.2**
KSAR	**Wonju Array Be**	**19.38**	**19**	P		**P**	**19 35 18.3**	**-1.5**
KSAR	**Wonju Array Be**	**19.38**	**19**	P		**P**	**19 35 18.2**	**-1.5**
KSAR						**PcP**	**19 39 39.9**	**-1.1**
KSRS	**Korea Array**	**19.40**	**19**	P		**P**	**19 35 19.5**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=202,slow=12,SNR=28							
KSRS				PcP		**PcP**	**19 39 41.8**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=192,slow=3.2,SNR=5.4							
KSRS				LR		LR	19 44 13.0	
	comp=Z,288nm,19.9s,baz=200,slow=41							
KS19	**Wonju Array Si**	**19.43**	**18**	P		**P**	**19 35 19.8**	**-0.5**
TNTI	**Ternate**	**19.59**	**158**	P		**Pn**	**19 35 26.6**	**+3.0**
TNTI	**Ternate**	**19.59**	**158**	P		**Pn**	**19 35 25.3**	**+1.6**
TIY	**Taiyuan**	**19.68**	**341**	*e*P		**Pn**	**19 35 25.0**	**+0.3**
TIY				pP		**sP**	**19 35 31.5**	**-1.5**
TIY				sP		**pwP**	**19 35 37.9**	**+3.5**
TIY				S		**Sn**	**19 39 07.8**	**+2.8**
TIY				sS		**sS**	**19 39 12.9**	**-1.3**
TIY				SS		**SnSn**	**19 39 26.3**	**+6.7**
TIY				pmax		pmax		
	comp=Z,24nm,0.6s							
TIY				pmax		pmax		
	comp=Z,240nm,2.7s							
TIY				LR		LR		
	comp=Z,1μm,11.6s							
TIY				LR		LR		
	comp=Z,1μm,8.5s							
TIY				LR		LR		
	comp=Z,2μm,9.4s							
DL2	**Dalian**	**19.69**	**3**	P		**P**	**19 35 22.3**	**-0.8**
DL2				sP		**pwP**	**19 35 33.4**	**-0.4**
DL2				S		**Sn**	**19 39 07.6**	**+2.6**
DL2				pmax		pmax		
	comp=Z,120nm,1.3s							
DL2				pmax		pmax		
	comp=Z,270nm,4.4s							
DL2				LR		LR		
	comp=Z,1μm,10.9s							
DL2				LR		LR		
	comp=Z,1μm,11.3s							
DL2				LR		LR		
	comp=Z,800nm,11.2s							
SMKI	**Samarinda**	**19.73**	**189**	P		Pn	19 35 33.8	+8.4
APSI	**Ampana**	**20.02**	**176**	P		Pn	19 35 28.5	-0.2
	comp=Z,766nmcomp=Z,72nm,1.3s							
KSM	**Kuching**	**20.11**	**210**	P		**P**	**19 35 28.3**	**+0.4**
KSM				IAmb		IAmb	19 35 39.5	
	comp=Z,117nm,1.1s							
KSM	**Kuching**	**20.11**	**210**	P		Pn	19 35 29.0	-0.9
CHTO	**Chiang Mai**	**20.14**	**272**	P		**P**	**19 35 29.0**	**+0.7**
CHTO				pmax		pmax		
	comp=Z,51nm,1.0s							
CHTO	**Chiang Mai**	**20.14**	**272**			**P**	**19 35 29.0**	**+0.7**
CM31	**Chiang Mai Arr**	**20.18**	**271**	P		**P**	**19 35 28.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**20.18**	**271**	*i* P		Pn	19 35 30.1	-0.6
CMAR				pmax		pmax		
	comp=Z,29nm,1.1s							
CMAR	**Chiang Mai Arr**	**20.18**	**271**	P		Pn	19 35 30.1	-0.6
	comp=Z,28nm,1.1s,baz=80,slow=8.6,SNR=119							
CMAR				PcP		**PcP**	**19 39 43.7**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=85,slow=0.3,SNR=8.1							
CMAR				LR		LR	19 42 44.9	
	comp=Z,368nm,20.4s,baz=98,slow=35							
CMAR	**Chiang Mai Arr**	**20.18**	**271**	P		**P**	**19 35 29.0**	**+0.3**
CMAR						**PcP**	**19 39 40.7**	**-2.1**
LUWI	**Luwuk**	**20.25**	**173**	P		Pn	19 35 45.3	+14
BKB	**Balikpapan**	**20.58**	**190**	P		Pn	19 35 35.2	-0.2
	comp=Z,3μmcomp=Z,228nm,1.3s							
BKB	**Balikpapan**	**20.58**	**190**	P		**P**	**19 35 33.1**	**+0.1**
STKI	**Sintang**	**20.86**	**205**	P		**P**	**19 35 36.5**	**+0.5**
	comp=Z,2μmcomp=Z,110nm,1.4s							
BJT	**Baijiatuao**	**21.06**	**351**	P		**P**	**19 35 38.8**	**+0.8**
BJT				pmax		pmax		
	comp=Z,307nm,1.3s							
BJT	**Baijiatuao**	**21.06**	**351**	P		**P**	**19 35 38.8**	**+0.8**
BJT				IAmb		IAmb	19 35 49.0	
	comp=Z,307nm,1.3s							
BJI	**Beijing**	**21.08**	**351**	P		**P**	**19 35 39.2**	**+1.0**
BJI				pmax		pmax		
	comp=Z,120nm,1.3s							
JCJ	**Chichijima**	**21.64**	**65**	LR		LR	19 42 11.1	
	comp=Z,464nm,21.8s,baz=250,slow=32							
SANI	**Sanana**	**21.84**	**164**	P		**P**	**19 35 43.9**	**-2.7**
	comp=Z,939nmcomp=Z,110nm,0.8s							
INU	**Inuyama**	**21.89**	**39**	P		**P**	**19 35 47.3**	**+0.3**
INU				IAmb		IAmb	19 35 58.6	
	comp=Z,295nm,1.6s							
TTSI	**Tana Toraja**	**22.09**	**181**	P		**P**	**19 35 52.1**	**+2.8**
	comp=Z,1μmcomp=Z,68nm,1.0s							
LZH	**Lanzhou**	**22.18**	**323**	⇑P		**P**	**19 35 51.8**	**+1.5**
LZH				pP		pP	19 35 54.8	-2.2
LZH				sP		sP	19 35 57.1	-3.2
LZH				PP		**PnPn**	**19 36 16.5**	**+3.4**
LZH				SS		Sn	19 40 26.8	+22
LZH				pmax		pmax		
	comp=Z,110nm,1.6s							
LZH				pmax		pmax		
	comp=Z,490nm,4.9s							
LZH				LR		LR		
	comp=Z,2μm,10.8s							
LZH				LR		LR		
	comp=Z,2μm,10.8s							
LZH				LR		LR		
	comp=Z,2μm,10.8s							
SWI	**Sorong**	**22.67**	**150**	P		**P**	**19 35 57.2**	**+1.7**
	comp=Z,1μmcomp=Z,30nm,1.0s							
SIJI	**Sorong**	**22.68**	**150**	P		**P**	**19 35 53.8**	**-1.8**
	comp=Z,19nm,0.7s,baz=0.8,slow=4.0,SNR=14							
SIJI				LR		LR	19 44 58.9	
	comp=Z,440nm,21.6s,baz=306,slow=38							
KBKI	**Kotabaru**	**22.70**	**191**	P		**P**	**19 35 55.5**	**-0.3**
	comp=Z,340nmcomp=Z,34nm,1.2s							
SNY	**Shenyang**	**22.75**	**6**	⇓P		**P**	19 36 06.1	+10
SNY				S		**S**	**19 40 06.8**	**+3.8**
SNY				pmax		pmax		
	comp=Z,39nm,0.8s							
SNY				pmax		pmax		
	comp=Z,500nm,4.9s							
SNY				LR		LR		
	comp=N,870nm,11.0s							
SNY				LR		LR		
	comp=E,1μm,12.0s							
SNY				LR		LR		
	comp=Z,2μm,11.6s							
HHC	**Hu-ho-hao-te**	**22.84**	**343**	⇑*i*P		**P**	**19 35 58.4**	**+1.2**
HHC				sP		sP	19 36 05.3	-1.8
HHC				S		**S**	**19 40 02.4**	**-2.5**
HHC				sS		pS	19 40 11.7	-0.5
HHC				pmax		pmax		
	comp=Z,40nm,1.1s							
HHC				pmax		pmax		
	comp=Z,270nm,5.4s							
HHC				LR		LR		
	comp=Z,850nm,12.7s							
HHC				LR		LR		
	comp=Z,550nm,13.9s							
HHC				LR		LR		
	comp=Z,810nm,12.9s							
SPSI	**Sidrap Palu**	**23.01**	**181**	P		**P**	**19 35 59.6**	**+0.6**
	comp=Z,2μmcomp=Z,180nm,1.2s							
BTO	**Baotou**	**23.08**	**340**	*e*P		**P**	**19 36 01.0**	**+1.3**
NLAI	**Namlea**	**23.28**	**162**	P		**P**	**19 36 04.6**	**+2.9**
	comp=Z,1μmcomp=Z,80nm,1.2s							
MAJO	**Matsushiro**	**23.41**	**39**	⇓*e*P		**P**	**19 36 01.9**	**-1.0**
MAJO				pmax		pmax		
	comp=Z,73nm,2.4s							
MAJO	**Matsushiro**	**23.41**	**39**	P		**P**	**19 36 02.3**	**-0.6**
MAJO				IAmb		IAmb	19 36 22.2	
	comp=Z,65nm,1.1s							
MAT	**Matsushiro**	**23.41**	**39**	P		**P**	**19 36 01.1**	**-1.8**
MAT				S		**S**	**19 40 20.8**	**+6.5**
MJAR	**Matsushiro Arr**	**23.41**	**39**	P		**P**	**19 36 02.7**	**-0.2**
MJAR				pmax		pmax		
	comp=Z,30nm,1.1s							
MJAR	**Matsushiro Arr**	**23.41**	**39**	P		**P**	**19 36 00.8**	**-2.1**
	comp=Z,2.2nm,0.6s,baz=230,slow=6.0,SNR=7.0							
MJAR				PcP		**PcP**	**19 39 49.0**	**+0.1**
	comp=Z,3.2nm,1.0s,baz=197,slow=2.5,SNR=5.2							
MJAR	**Matsushiro Arr**	**23.41**	**39**	P		**P**	**19 36 02.7**	**-0.2**
MJB9	**Matsu-Tunnel**	**23.41**	**39**	P		**P**	**19 36 02.1**	**-0.8**
MJB9				IAmb		IAmb	19 36 22.2	
	comp=Z,69nm,1.1s							
BNSI	**Bone**	**23.44**	**180**	P		**P**	**19 36 04.3**	**+1.0**
	comp=Z,1μmcomp=Z,110nm,1.4s							
KULM	**Kulim**	**23.57**	**237**	P		**P**	**19 36 04.1**	**-0.4**
KULM	**Kulim**	**23.57**	**237**	P		**P**	**19 36 06.0**	**+1.4**
MYKOM	**Kota Tinggi**	**23.59**	**225**	P		**P**	**19 36 05.1**	**+0.3**
MYKOM				IAmb		IAmb	19 36 06.3	
	comp=Z,74nm,1.1s							
MYKOM	**Kota Tinggi**	**23.59**	**225**	P		**P**	**19 36 06.0**	**+1.2**
IPM	**Ipoh**	**23.78**	**234**	P		**P**	**19 36 05.5**	**-1.1**
IPM				IAmb		IAmb	19 36 07.4	
	comp=Z,114nm,1.3s							
IPM	**Ipoh**	**23.78**	**234**	P		**P**	**19 36 06.0**	**-0.6**
AAI	**Ambon**	**24.04**	**160**	P		**P**	**19 36 11.5**	**+2.5**
KAPI	**Kappang**	**24.05**	**181**	P		**P**	**19 36 09.7**	**+0.6**
KAPI				pmax		pmax		
	comp=Z,601nm,1.7s							
KAPI	**Kappang**	**24.05**	**181**	P		**P**	**19 36 09.7**	**+0.6**
GUMO	**Guam**	**24.26**	**100**	LR		LR	19 45 50.9	
	comp=Z,588nm,18.4s,baz=288,slow=37							
BKSI	**Bulukumba**	**24.35**	**180**	P		**P**	**19 36 13.7**	**+1.8**
	comp=Z,930nmcomp=Z,86nm,0.9s							
CN2	**Changchun**	**24.93**	**9**	*e*P		**P**	**19 36 18.3**	**+1.4**
CN2				pmax		pmax		
	comp=Z,20nm,1.3s							
CN2				pmax		pmax		
	comp=Z,310nm,4.0s							
CN2				LR		LR		
	comp=Z,890nm,14.0s							
CN2				LR		LR		
	comp=Z,930nm,14.0s							
CN2				LR		LR		
	comp=Z,780nm,16.0s							
SIMRM	**Sittwe**	**25.77**	**277**	P		**P**	**19 36 23.8**	**-1.0**
PSI	**Prapat**	**26.45**	**235**	P		**P**	**19 36 30.4**	**-0.7**
PSI							19 39 56.2	
PSI				pmax		pmax		
	comp=Z,72nm,1.3s							
PSI	**Prapat**	**26.45**	**235**	P		**P**	**19 36 30.4**	**-0.7**
	comp=Z,35nm,1.2s,baz=39,slow=7.0,SNR=16							
PSI				PcP		**PcP**	**19 39 56.0**	**-0.2**
	comp=Z,5.1nm,0.8s,baz=261,slow=6.6,SNR=4.2							
PSI				LR		LR	19 47 40.4	
	comp=Z,276nm,18.0s,baz=42,slow=38							
RPSI	**Rantau Prapat**	**26.52**	**234**	P		**P**	**19 36 30.9**	**-0.7**
RPSI				IAmb		IAmb	19 36 32.5	
	comp=Z,72nm,1.3s							
RPSI				PcP		**PcP**	**19 39 56.2**	**+0.1**
RPSI	**Rantau Prapat**	**26.52**	**234**	P		**P**	**19 36 30.4**	**-1.2**
RPSI						**PcP**	**19 39 56.0**	**-0.2**
MDJ	**Mudanjiang**	**26.53**	**15**	P		**P**	**19 36 32.0**	**+0.6**
MDJ				pP		pP	19 36 35.0	-3.7
MDJ				sP		sP	19 36 36.3	-5.5
MDJ				PP		**PnPn**	**19 37 11.7**	**-0.5**
MDJ				S		**S**	**19 41 06.0**	**+2.1**
MDJ				SS		**SnSn**	**19 42 08.6**	**+1.5**
MDJ				pmax		pmax		
	comp=Z,58nm,1.1s							
MDJ				pmax		pmax		
	comp=Z,360nm,3.1s							
MDJ				LR		LR		
	comp=Z,930nm,15.

SHL Shillong 26.95 289 P **P** **19 36 35.8 +0.2**
SHL IAmb IAmb 19 36 37.4
comp=Z,58nm,1.3s
SDSI Sungai Dareh 27.22 225 P **P** **19 36 38.7 +0.8**
MLSI Meulaboh, Aceh 27.59 240 P P 19 36 55.4 +14 **19 36 44.9 +2.6**
MMRI Maumere 27.71 176 P **P**
comp=Z,890nmcomp=Z,62nm,1.4s
MMRI Maumere 27.71 176 P **P** **19 36 43.1 +0.9**
NGJI Ngawi 27.77 199 P P 19 36 50.0 +7.3
PDSI Padang 27.86 226 P **P** **19 36 46.5 +2.9**
PLAI Plampang 27.94 185 P **P** **19 36 45.5 +1.2**
comp=Z,917nmcomp=Z,58nm,1.2s
TWSI Taliwang, Sumb 27.94 187 P P 19 36 56.4 +12
JAGI Jajag, Banyuwa 28.13 193 P P 19 37 02.9 +17
KLSI 28.22 214 P **P** **19 36 47.7 +0.9**
comp=Z,20nm,1.0s
PWJI Pagerwojo 28.29 198 P **P** **19 36 48.2 +0.8**
comp=Z,82nm,1.1s
MDSI Maura Dua 28.34 216 P **P** **19 36 48.2 +0.3**
comp=Z,18nm,1.0s
WOJI Wonogiri, Jawa 28.38 200 P **P** **19 36 49.5 +1.3**
LSA Lhasa 28.41 297 P **P** **19 36 51.0 +2.1**
LSA pmax pmax
comp=Z,120nm,0.9s
LSA Lhasa 28.41 297 P **P** **19 36 50.7 +1.8**
LSA pmax pmax
comp=Z,52nm,1.1s
LSA Lhasa 28.41 297 *i* P **P** **19 36 50.6 +1.6**
SNR=25
LSA Lhasa 28.41 297 P **P** **19 36 50.7 +1.8**
LSA IAmb IAmb 19 37 01.3
comp=Z,52nm,1.1s
KSI Kapahiang 28.58 219 P P 19 36 59.0 +8.9
UGM Wanagama 28.58 200 P **P** **19 36 50.7 +0.6**
KPJI Karang Pucung 28.61 204 P **P** **19 36 52.4 +2.1**
comp=Z,50nm,1.6s
LEM Lembang 28.69 207 P **P** **19 36 50.8 -0.3**
comp=Z,40nm,1.1s,baz=120,slow=7.7,SNR=6.2
LWLI Liwa 28.85 215 P P 19 36 57.5 +4.9
comp=Z,21nm,1.1s
SOEI Soe 29.03 172 P **P** **19 36 55.4 +1.3**
comp=Z,37nm,0.8s
SOEI Soe 29.03 172 P **P** **19 36 54.4 +0.3**
SOEI IAmb IAmb 19 37 27.1
comp=Z,50nm,1.1s
KASI Kota Agung 29.04 214 P **P** **19 36 56.5 +2.4**
comp=Z,36nm,1.0s
SISI Saibi 29.11 228 P P 19 37 02.7 +8.0
SAUI Saumlaki 29.11 157 P P 19 37 01.9 +7.2
CISI Cisompet, Garu 29.26 206 P **P** **19 37 00.7 +4.6**
comp=Z,71nm,1.4s
CISI Cisompet, Garu 29.26 206 P **P** **19 36 55.9 -0.2**
CISI IAmb IAmb 19 37 10.0
comp=Z,84nm,1.1s
BATI Baumata 29.40 173 P **P** **19 36 55.4 -1.9**
comp=Z,36nm,0.9s,baz=339,slow=1.2,SNR=16
BATI PcP **PcP** **19 40 03.5 +0.4**
comp=Z,20nm,1.0s,baz=240,slow=22,SNR=5.1
BATI LR LR 19 50 13.8
comp=Z,447nm,21.7s,baz=5.0,slow=40
JAY Jayapura 29.49 135 LR LR 19 46 27.9
comp=Z,482nm,21.3s,baz=318,slow=32
HIA Hailar 30.01 359 P **P** **19 37 01.7 -0.7**
HIA pmax pmax
comp=Z,13nm,1.0s
HIA Hailar 30.01 359 P **P** **19 37 01.7 -0.7**
ULN Ulaanbaatar 30.56 342 *de*P **P** **19 37 07.4 0.0**
ULN pmax pmax
comp=Z,35nm,1.7s
ULN Ulaanbaatar 30.56 342 P **P** **19 37 07.5 +0.1**
ULN IAmb IAmb 19 37 18.2
comp=Z,63nm,1.6s
SONM Songino Array 30.72 342 P **P** **19 37 08.5 -0.3**
SONM pmax pmax
comp=Z,45nm,1.6s
SONM Songino Array 30.72 342 P **P** **19 37 09.3 +0.5**
comp=Z,6.8nm,0.8s,baz=162,slow=8.2,SNR=43
SONM PcP **PcP** **19 40 06.0 -0.2**
comp=Z,2.6nm,1.1s,baz=204,slow=3.3,SNR=3.9
SONM LR LR 19 49 44.9
comp=Z,606nm,19.3s,baz=158,slow=37
SONM Songino Array 30.72 342 P **P** **19 37 08.5 -0.3**
TAPN Taplejung 30.90 291 *e*P **P** **19 37 11.7 +0.8**
comp=Z,176nm,1.3s
ODAN Odare 31.12 290 *e*P **P** **19 37 13.4 +0.6**
comp=Z,84nm,1.0s
KLR Kul'dur 31.37 15 *ce*P **P** **19 37 15.2 +0.8**
KLR pmax pmax
comp=Z,36nm,1.1s
RAMN Ramite 31.83 290 *e*P **P** **19 37 20.0 +1.0**
comp=Z,95nm,0.9s
JIRN Jiri 32.28 292 *e*P **P** **19 37 24.1 +1.0**
comp=Z,479nm,1.5s
GUN Gumba 32.59 292 *e*P **P** **19 37 26.7 +0.9**
comp=Z,178nm,0.9s
PKI Pulchoki 32.96 291 *e*P **P** **19 37 29.1 +0.1**
comp=Z,13nm,1.3s
PKIN Phulchoki 32.97 291 *e*P **P** **19 37 29.1 +0.1**
comp=Z,82nm,1.3s
KKN Kakani 33.10 292 *e*P **P** **19 37 30.5 +0.4**
comp=Z,103nm,1.2s
CIT Chita 33.19 352 *e*P **P** **19 37 30.9 +0.5**
CIT *e* 19 37 37.9
DMN Daman 33.23 291 *e*P **P** **19 37 31.7 +0.4**
comp=Z,120nm,1.1s
YSS Yuzh-Sakhalins 33.27 29 *e*P **P** **19 37 32.0 +0.9**
YSS MLR MLR
comp=Z,300nm,18.0s
ZAK Zakamensk 33.93 340 *e*P **P** **19 37 36.9 0.0**
ZAK pmax pmax
comp=Z,12nm,1.3s
GRNR Gornyy 34.03 18⇓ *i*P **P** **19 37 37.2 -0.5**
GRNR *e*S **S** **19 43 03.6 +2.3**
GRNR pmax pmax
comp=Z,10.0nm,1.1s
GRNR smax smax
comp=N,2.0nm,1.1s
GRNR MLR MLR
comp=Z,290nm,15.0s
CHLP Challavanipeta 34.22 275 *e*P **P** **19 37 41.0 +1.4**
CHLP IAmb IAmb 19 37 42.3
comp=Z,25nm,1.2s
DANN Dangsing 34.50 292 *e*P **P** **19 37 42.7 +0.3**
comp=Z,262nm,1.2s
ZEA Zeya 34.91 7 *e*P **P** **19 37 45.6 +0.4**
ZEA pmax pmax
comp=N,29nm,1.2s
ZEA pmax pmax
comp=Z,55nm,1.4s
ZEA MLR MLR
comp=Z,1μm,14.0s
ZEA MLR MLR
comp=E,600nm,15.0s
ZEA MLR MLR
comp=N,700nm,14.0s
TLY Talaya 34.96 342 *e*P **P** **19 37 46.4 +0.7**
TLY MLR MLR
comp=Z,932nm,10.0s
TLY Talaya 34.96 342 P **P** **19 37 45.0 -0.7**
IRK Irkutsk 35.28 343 *e*P **P** **19 37 47.0 -1.5**
IRK pmax pmax
comp=Z,58nm,1.4s
KNRA Kununurra 35.64 166 P **P** **19 37 50.8 -1.1**
MOY Mondy 35.78 339 *e*P **P** **19 37 54.0 +1.1**
MOY pmax pmax
comp=Z,47nm,1.4s
WMQ Urumqi 36.67 319 *e*P **P** **19 38 01.3 +0.7**
WMQ Urumqi 36.67 319 P **P** **19 38 02.4 +1.8**
WMQ sP sP 19 38 11.1 +0.2
WMQ pmax pmax
comp=Z,21nm,1.7s
WMQ pmax pmax
comp=Z,140nm,5.3s
WMQ LR LR
comp=Z,740nm,13.7s
WMQ LR LR
comp=Z,480nm,10.9s
WMQ LR LR
comp=Z,410nm,16.7s
WMQ Urumqi 36.67 319 P **P** **19 38 00.4 -0.2**
WMQ pmax pmax
comp=Z,55nm,1.4s
WMQ Urumqi 36.67 319 P **P** **19 38 00.4 -0.2**
WMQ IAmb IAmb 19 38 12.3
comp=Z,55nm,1.4s
PVM Polavaram 36.69 273 *e*P **P** **19 38 01.1 +0.2**
PVM IAmb IAmb 19 38 02.9
comp=Z,16nm,1.1s
FITZ Fitzroy Crossi 37.43 172 P **P** **19 38 05.4 -1.6**
MYLAV Mylavaram 37.70 273 *e*P **P** **19 38 08.6 -0.9**
MYLAV IAmb IAmb 19 38 11.0
comp=Z,26nm,1.5s
GGR Gangavaram 37.94 275 *e*P **P** **19 38 12.2 +0.6**
GGR IAmb IAmb 19 38 12.7
comp=Z,24nm,1.3s
ADKI Addanki 38.49 272 *e*P **P** **19 38 16.8 +0.6**
ADKI IAmb IAmb 19 38 17.9
comp=Z,20nm,1.2s
RPR Rampur 38.65 276 *e*P **P** **19 38 17.2 -0.3**
RPR IAmb IAmb 19 38 19.2
comp=Z,26nm,1.3s
BOD Bodaibo 38.85 355 *e*P **P** **19 38 18.2 -0.5**
BOD pmax pmax
comp=Z,14nm,1.3s
PMG Port Moresby 38.87 135⇓ *e*P **P** **19 38 22.5 +3.2**
PMG pmax pmax
comp=Z,41nm,1.0s
NJS Nagarjunasagar 38.99 273 *e*P **P** **19 38 20.2 -0.2**
NJS IAmb IAmb 19 38 21.6
comp=Z,16nm,1.1s
SKHT Srikalahasti 39.18 268 *e*P **P** **19 38 22.6 +0.6**
SKHT IAmb IAmb 19 38 24.3
comp=Z,54nm,1.3s
SRLM Srisailam 39.46 272 *e*P **P** **19 38 23.6 -0.8**
SRLM IAmb IAmb 19 38 25.3
comp=Z,19nm,1.4s
SRSP Sriramsagar 39.53 277 *e*P **P** **19 38 24.4 -0.5**
SRSP IAmb IAmb 19 38 26.4
comp=Z,17nm,1.2s
HYB Hyderabad 39.56 274 *i* P **P** **19 38 25.0 -0.2**
HYBB Hyderabad (bro 39.56 274 *e*P **P** **19 38 24.8 -0.4**
HYBB IAmb IAmb 19 38 27.4
comp=Z,10nm,1.0s
COEN Coen 39.93 144 P **P** **19 38 26.1 -2.1**
PALK Pallekele 40.17 258⇑ *e*P **P** **19 38 30.9 +0.6**
PALK pmax pmax
comp=Z,34nm,1.1s
PALK Pallekele 40.17 258 P **P** **19 38 30.3 0.0**
DMPR Damasthipur 40.34 275 *e*P **P** **19 38 32.1 +0.4**
DMPR IAmb IAmb 19 38 33.3
comp=Z,27nm,1.2s
PSA00 Pilbara Seismi 40.51 181 P **P** **19 38 32.5 -0.3**
PSA00 IAmb IAmb 19 38 45.1
comp=Z,170nm,1.9s
URV Uravakonda 41.23 271 *e*P **P** **19 38 39.0 -0.1**
URV IAmb IAmb 19 38 40.8
comp=Z,32nm,1.1s
WRAB Tennant Creek 41.26 160 *ce*P **P** **19 38 37.3 -1.8**
WRAB pmax pmax
comp=Z,20nm,1.1s
WRAB Tennant Creek 41.26 160 P **P** **19 38 37.0 -2.2**
WRA Warramunga Arr 41.27 160 P **P** **19 38 36.5 -2.7**
WRA pmax pmax
comp=Z,1.0nm,1.0s
WRA Warramunga Arr 41.27 160 P **P** **19 38 36.2 -3.0**
comp=Z,9.0nm,0.8s,baz=341,slow=8.9,SNR=35
WRA PcP **PcP** **19 40 37.0 -0.7**
comp=Z,2.7nm,0.8s,baz=347,slow=3.1,SNR=5.2
WRA LR LR 19 56 53.4
comp=Z,140nm,19.5s,baz=295,slow=38
WRA Warramunga Arr 41.27 160 P **P** **19 38 36.5 -2.7**
KLRI Killari 41.30 276 *e*P **P** **19 38 38.7 -0.8**
KLRI IAmb IAmb 19 38 40.9
comp=Z,32nm,1.2s
WR0 Warramunga Arr 41.35 159 P **P** **19 38 37.3 -2.5**
MK31 Makanchi Array 41.46 320 *i* P **P** **19 38 41.2 +0.7**
MK31 Makanchi Array 41.46 320 P **P** **19 38 41.1 +0.5**
MKAR Makanchi Array 41.46 320 P **P** **19 38 41.7 +1.1**
comp=Z,18nm,1.0s,baz=115,slow=8.6,SNR=75
MKAR PcP **PcP** **19 40 38.2 +0.2**
comp=Z,6.5nm,1.0s,baz=115,slow=5.8,SNR=3.8
MKAR LR LR 19 56 49.8
comp=Z,352nm,19.1s,baz=118,slow=38
MKAR Makanchi Array 41.46 320 P **P** **19 38 40.9 +0.4**
MKAR **PcP** **19 40 38.0 0.0**
MAKZ Makanchi 41.66 320 P **P** **19 38 43.5 +1.3**
MAKZ Makanchi 41.66 320 P **P** **19 38 42.1 -0.1**
PDGK Podgornoye 41.77 314 P **P** **19 38 44.0 +0.7**
PRZ Przheval'sk 42.21 313 P **P** **19 38 49.4 +2.4**
PRZ pmax pmax
comp=Z,52nm,1.3s
PRZ Przheval'sk 42.21 313 P **P** **19 38 49.4 +2.4**
PRZ IAmb IAmb 19 38 51.5
comp=Z,52nm,1.2s
KDJ Kajisay 42.95 312 P **P** **19 38 52.7 -0.2**
KDJ pmax pmax
comp=Z,22nm,1.2s
KDJ Kajisay 42.95 312 P **P** **19 38 52.7 -0.2**
YAK Yakutsk 43.31 6 *e*P **P** **19 38 55.0 -0.3**
YAK pmax pmax
comp=Z,20nm,1.1s
YAK pmax pmax
comp=N,19nm,1.4s
YAK Yakutsk 43.31 6 P **P** **19 38 54.8 -0.5**
NRN Naryn 43.58 310 P **P** **19 38 59.7 +1.5**
NRN pmax pmax
comp=Z,51nm,1.3s
NRN Naryn 43.58 310 P **P** **19 38 59.7 +1.5**
NRN IAmb IAmb 19 39 01.9
comp=Z,51nm,1.2s
H11S3 WAKE ISLAND Hy 43.86 83 T T 20 24 55.9
baz=278
H11S1 WAKE ISLAND Hy 43.87 83 T T 20 24 40.8
baz=278
H11S2 WAKE ISLAND Hy 43.88 83 T T 20 24 51.5
baz=278
H11N1 WAKE ISLAND Hy 43.88 81 T T 20 25 04.5
baz=284,SNR=3.4
H11N2 WAKE ISLAND Hy 43.88 81 T T 20 24 55.4
baz=284
H11N3 WAKE ISLAND Hy 43.90 81 T T 20 24 52.2
baz=284
ZAA0 Zalesovo Array 44.05 330 P **P** **19 39 01.3 -0.1**
ZAA0 IAmb IAmb 19 39 02.8
comp=Z,48nm,1.3s
ZALV Zalesovo Beam 44.05 330 P **P** **19 39 00.9 -0.5**
ZALV Zalesovo Beam 44.05 330 P **P** **19 39 02.0 +0.6**
comp=Z,6.9nm,0.5s,baz=115,slow=7.0,SNR=52
ZALV LR LR 19 57 47.7
comp=Z,244nm,19.6s,baz=130,slow=37
ZALV Zalesovo Beam 44.05 330 P **P** **19 39 00.9 -0.5**
NIL Nilore 44.12 299 P **P** **19 39 02.5 +0.2**
NIL pmax pmax
comp=Z,38nm,0.9s
NIL Nilore 44.12 299 P **P** **19 39 02.5 +0.2**
NIL IAmb IAmb 19 39 06.3
comp=Z,38nm,0.8s
KZA Kyzart 44.30 311 P **P** **19 39 06.8 +2.7**
SNR=30
TKM2 Tokmak 2 44.31 312 P **P** **19 39 04.8 +0.9**
TKM2 Tokmak 2 44.31 312 P **P** **19 39 05.9 +2.0**
SNR=7.7
PEA0B Petropavlovsk- 44.52 32⇑ *e*P **P** **19 39 06.3 +1.1**
PETK Petropavlovsk- 44.52 32 P **P** **19 39 05.1 -0.1**
PETK Petropavlovsk- 44.52 32 P **P** **19 39 05.3 +0.1**
comp=Z,41nm,1.2s,baz=248,slow=5.6,SNR=13
PETK LR LR 19 57 41.4
comp=Z,130nm,20.6s,baz=241,slow=36
PETK Petropavlovsk- 44.52 32 P **P** **19 39 05.1 -0.1**
AS31 Alice Springs 44.63 162 P **P** **19 39 05.1 -1.2**
ASAR Alice Springs 44.63 162 P **P** **19 39 05.0 -1.4**
ASAR Alice Springs 44.63 162 P **P** **19 39 05.5 -0.9**
comp=Z,7.0nm,0.6s,baz=341,slow=6.8,SNR=164
ASAR LR LR 19 59 47.9
comp=Z,111nm,20.3s,baz=355,slow=39
ASAR Alice Springs 44.63 162 P **P** **19 39 05.0 -1.4**
KBK Karagaybulak 44.68 312 P **P** **19 39 09.0 +2.1**
SNR=20
UCH Uchtor 44.87 311 P **P** **19 39 11.3 +2.6**
SNR=44
CHMS Chumysh 44.92 312 P **P** **19 39 10.3 +1.7**
SNR=26
PET Petropavlovsk 44.95 32 P **P** **19 39 09.1 +0.5**
PET pmax pmax
comp=Z,331nm,1.7s
PET Petropavlovsk 44.95 32 P **P** **19 39 09.1 +0.5**
AAK Ala-Archa 45.00 312⇑ *e*P **P** **19 39 11.4 +2.0**
AAK pmax pmax
comp=Z,19nm,1.4s
AAK Ala-Archa 45.00 312 P **P** **19 39 11.1 +1.8**
SNR=10
AAK Ala-Archa 45.00 312 *i* P **P** **19 39 11.1 +1.8**
SNR=14
AAK Ala-Archa 45.00 312 P **P** **19 39 10.7 +1.3**
USP Ospenovka 45.18 312 P **P** **19 39 12.3 +1.7**
SNR=26
AML Almayashu 45.43 311 P **P** **19 39 15.4 +2.4**
SNR=46
KURK Kurchatov 45.47 324 *de*P **P** **19 39 13.3 +0.6**
KURK pmax pmax
comp=Z,64nm,1.7s
KURK Kurchatov 45.47 324 P **P** **19 39 12.8 +0.1**
KURK IAmb IAmb 19 39 25.5
comp=Z,70nm,1.2s
EKS2 Erkin-Say 45.51 311 P **P** **19 39 15.6 +2.2**
SNR=21
ARSB Arslanbob 45.73 309 P **P** **19 39 13.5 -1.7**
ARSB IAmb IAmb 19 39 18.6
comp=Z,49nm,1.4s
MA2 Magadan 45.93 21⇑ *e*P **P** **19 39 16.8 +0.6**
MA2 pmax pmax
comp=Z,80nm,2.5s
BTK Batken 47.06 307 P **P** **19 39 26.8 +1.2**
BTK pmax pmax
comp=Z,37nm,1.3s
BTK Batken 47.06 307 P **P** **19 39 26.8 +1.2**
BTK IAmb IAmb 19 39 28.8
comp=Z,37nm,1.3s
GAR Garm 47.25 306 P **P** **19 39 28.3 +1.2**
KBL Kabul 47.68 300 P **P** **19 39 31.3 +0.7**
KBL pmax pmax
comp=Z,64nm,1.4s
KBL Kabul 47.68 300 P **P** **19 39 31.3 +0.7**
KBL IAmb IAmb 19 39 33.6
comp=Z,64nm,1.4s
KK31 Karatay Array 47.95 311 P **P** **19 39 33.5 +1.2**
KK31 Karatay Array 47.95 311 P **P** **19 39 33.1 +0.8**
KKAR Karatay Array 47.95 311 P **P** **19 39 33.5 +1.2**
KKAR pmax pmax
comp=Z,68nm,1.3s
KKAR Karatay Array 47.95 311 P **P** **19 39 32.8 +0.5**
KKAR Karatay Array 47.95 311 P **P** **19 39 33.5 +1.2**
KKAR IAmb IAmb 19 39 35.2
comp=Z,68nm,1.3s
CHGR Chuyangaron 48.08 305 P **P** **19 39 34.4 +0.9**
CHGR IAmb IAmb 19 39 35.5
comp=Z,49nm,1.2s
MORW Morawa 48.14 185 P **P** **19 39 33.2 -0.6**
TAS Tashkent 48.44 309 P **P** **19 39 35.9 -0.3**
TAS pmax pmax
comp=Z,184nm,1.6s
TAS Tashkent 48.44 309 P **P** **19 39 35.9 -0.3**
SEY Seymchan 48.96 19⇑ *e*P **P** **19 39 41.0 +1.3**
FORT Forrest 50.24 171 P **P** **19 39 49.2 -0.7**
BRVK Borovoye 51.14 324 *d* P **P** **19 39 56.7 +0.3**
BRVK pmax pmax
comp=Z,28nm,1.3s
BRVK Borovoye 51.14 324 P **P** **19 39 57.5 +1.0**
NWAO Narrogin (SRO) 51.90 183 P **P** **19 40 01.5 -0.8**
NWAO pmax pmax
comp=Z,131nm,1.5s
NWAO Narrogin (SRO) 51.90 183 P **P** **19 40 01.4 -0.8**
NWAO Narrogin (SRO) 51.90 183 P **P** **19 40 01.4 -0.8**
NWAO IAmb IAmb 19 40 12.8
comp=Z,104nm,1.5s
TIXI Tiksi 52.71 3⇑ *e*P **P** **19 40 07.3 -0.6**
TIXI pmax pmax
comp=Z,34nm,1.7s
TIXI Tiksi 52.71 3 P **P** **19 40 07.2 -0.6**
HRA Herat 53.28 299 P **P** **19 40 13.5 +0.5**
HRA IAmb IAmb 19 40 15.6
comp=Z,54nm,1.3s
BBOO Buckleboo 53.87 163 P **P** **19 40 15.9 -1.0**
STKA Stephens Creek 54.74 158 P **P** **19 40 22.7 -0.5**
STKA pmax pmax
comp=Z,5.0nm,0.7s
STKA Stephens Creek 54.74 158 P **P** **19 40 22.8 -0.5**
comp=Z,20nm,0.9s,baz=338,slow=6.9,SNR=28
STKA LR LR 20 05 53.1
comp=Z,140nm,20.2s,baz=0.7,slow=38
STKA Stephens Creek 54.74 158 P **P** **19 40 22.7 -0.5**
AB31 Akbulak array 56.39 317 P **P** **19 40 35.0 +0.1**
ABKAR Akbulak array 56.39 317 P **P** **19 40 35.0 +0.1**
ABKAR Akbulak array 56.39 317 P **P** **19 40 34.5 -0.4**
ABKAR IAmb IAmb 19 40 37.0
comp=Z,63nm,1.6s
BILL Bilibino 56.67 19⇓ *i*P **P** **19 40 36.7 +0.1**
BILL *i* 19 40 45.1
BILL *e*S **S** **19 48 29.0 +2.1**
BILL pmax pmax
comp=Z,68nm,1.7s
BILL MLR MLR
comp=Z,182nm,16.0s
BILL Bilibino 56.67 19 P **P** **19 40 36.0 -0.6**
BILL IAmb IAmb 19 40 46.6
comp=Z,33nm,0.7s
GEYT Alibeck 56.68 303 P **P** **19 40 38.9 +1.7**
comp=Z,83nm,1.2s,baz=103,slow=4.7,SNR=91
GEYT LR LR 20 07 34.6
comp=Z,427nm,20.7s,baz=105,slow=39
GEYT Alibeck 56.68 303 P **P** **19 40 38.0 +0.8**
GYA0B ALIBECK ARRAY 56.68 303 P **P** **19 40 39.1 +1.8**
SVE Sverdlovsk 57.60 326⇓ *i*P **P** **19 40 44.8 +1.4**
SVE pmax pmax
comp=Z,78nm,1.6s
ARU Arti 58.62 325 *c i*P **P** **19 40 50.6 +0.1**
ARU 19 41 36.7
ARU S **S** **19 48 53.5 +0.6**
ARU SS **SS** **19 52 42.8 -2.9**
ARU pmax pmax
comp=Z,71nm,1.4s
ARU MLR MLR
comp=Z,239nm,21.0s
ARU Arti 58.62 325 P **P** **19 40 50.0 -0.5**
BANOM Banah 58.94 289 P **P** **19 40 54.7 +1.4**
ASHO Ashiyiah 59.33 288 *i* P **P** **19 40 55.4 -0.7**
SNR=5.9
DZM Mont Dzumac 61.00 130 *e*P **P** **19 41 08.3 +0.8**
comp=Z,102nm,1.3s
DZM *e*S **S** **19 49 24.8 +0.2**
comp=Z,138nm,29.2s
DZM *e*LR LR 19 59 14.0
comp=Z,718nm,22.9s
DZM Mont Dzumac 61.00 130 P **P** **19 41 08.0 +0.5**
DZM IAmb IAmb 19 41 10.2
comp=Z,43nm,1.1s
TOO Toolangi 61.26 157 P **P** **19 41 09.7 +0.9**
TOO pmax pmax
comp=Z,62nm,1.4s
TOO Toolangi 61.26 157 P **P** **19 41 09.7 +0.9**
GAMB Gambell 63.28 27 P **P** **19 41 22.7 +0.7**
GAMB IAmb IAmb 19 41 24.8
comp=Z,32nm,1.3s
AKT Akhty 64.60 308 *e*P **P** **19 41 32.0 +0.7**
AKT *e* 19 43 54.4
AKT pmax pmax
comp=Z,58nm,1.1s
GROC Groznyy 65.91 309 *e*P **P** **19 41 40.3 +0.7**
GROC *e* 19 42 09.6
GROC *e* 19 44 07.3
GROC pmax pmax
comp=Z,54nm,1.2s
PRGR Permogore 66.00 330 *e*P **P** **19 41 38.6 -1.2**
PRGR pmax pmax
comp=Z,27nm,0.9s
TBLG Delisi 66.82 308 P **P** **19 41 45.5 0.0**
TBLG pmax pmax
comp=Z,52nm,1.5s
TBLG Delisi 66.82 308 P **P** **19 41 45.5 0.0**
TBLG IAmb IAmb 19 41 48.3
comp=Z,52nm,1.5s
GNI Garni 66.97 306 *de*P **P** **19 41 48.0 +1.3**
GNI pmax pmax
comp=Z,193nm,1.3s
GNI Garni 66.97 306 *i* P **P** **19 41 47.7 +1.0**
SNR=12
GNI Garni 66.97 306 P **P** **19 41 47.3 +0.6**
ZEI Tsey 67.33 309 *e*P **P** **19 41 47.3 -1.7**
ZEI pmax pmax
comp=Z,32nm,1.1s
MSVF Nonsavu 67.60 119⇑ *e*P **P** **19 41 54.1 +3.3**
MSVF pmax pmax
comp=Z,30nm,1.0s
MSVF Nonsavu 67.60 119 P **P** **19 41 52.9 +2.1**
MSVF IAmb IAmb 19 41 56.5
comp=Z,32nm,1.1s

AKH Akhalkalaki 67.78 308 P P 19 41 52.6 +0.8
AKH pmax pmax
comp=Z,74nm,1.3s
AKH Akhalkalaki 67.78 308 ⇑P P 19 41 53.9 +2.1
AKH Akhalkalaki 67.78 308 P P 19 41 52.5 +0.8
KBZ Khabaz 67.97 310 P P 19 41 53.1 +0.5
comp=Z,27nm,1.1s,baz=89,slow=6.2,SNR=33
KBZ LR LR 20 14 37.5
comp=Z,280nm,21.2s,baz=70,slow=39
KIV Kislovodsk 68.10 311 *d* **iP P 19 41 53.8 +0.2**
KIV *i* 19 42 01.8
KIV *i* 19 42 18.4
KIV *i* SS SS 19 55 14.4 +0.2
KIV pmax pmax
comp=Z,46nm,1.3s
KIV MLR MLR
comp=Z,202nm,22.0s
KIV Kislovodsk 68.10 311 ⇑P P 19 41 55.0 +1.3
KIV Kislovodsk 68.10 311 *i* **P P 19 41 55.0 +1.3**
SNR=23
KIV Kislovodsk 68.10 311 P P 19 41 53.5 -0.1
VRH Novokhopyorsk 68.15 318 *e* **P P 19 41 53.3 -0.3**
VRH pmax pmax
comp=Z,170nm,1.7s
RAYN Ar Rayn 69.03 288 P P 19 41 59.6 -0.1
RAYN pmax pmax
comp=Z,47nm,1.4s
RAYN Ar Rayn 69.03 288 *i* **P P 19 41 59.9 +0.2**
SNR=24
RAYN Ar Rayn 69.03 288 P P 19 41 59.6 -0.1
RAYN IAmb IAmb 19 42 01.5
comp=Z,47nm,1.4s
TMCR Tamitsa 69.53 332 *e* **P P 19 42 00.6 -1.4**
TMCR pmax pmax
comp=Z,114nm,1.2s
VORD Divnogorie 69.69 318 *e* **P P 19 42 02.9 -0.4**
VORD pmax pmax
comp=Z,30nm,1.1s
VSR Storozhevoye 69.75 319 *e* **P P 19 42 02.8 -0.8**
VSR pmax pmax
comp=Z,70nm,1.3s
LPSR Galich'ya Gora 69.76 320 *e* **P P 19 42 03.3 -0.4**
LPSR pmax pmax
comp=Z,110nm,1.6s
MOS Moscow 70.24 323 *e* **P P 19 42 04.5 -2.0**
MOS pmax pmax
comp=Z,133nm,1.4s
SOC Sochi 70.28 310 *e* **P P 19 42 06.4 -0.6**
SOC *e* 19 44 38.7
SOC *e* S **S 19 51 16.1 -1.2**
SOC *e* SS **SS 19 55 44.8 -2.8**
SOC pmax pmax
comp=Z,2.0nm,0.5s
SOC MLR MLR
comp=Z,259nm,17.0s
SVW2 Sparrevohn 70.60 31 P P 19 42 09.8 +1.1
SVW2 IAmb IAmb 19 42 17.5
comp=Z,29nm,1.3s
OBN Obninsk 70.90 323 *d* **iP P 19 42 10.2 -0.4**
OBN *e* 19 42 32.1
OBN *e* 19 44 47.8
OBN pmax pmax
comp=Z,131nm,1.7s
OBN MLR MLR
comp=Z,150nm,16.0s
OBN Obninsk 70.90 323 ⇑P P 19 42 10.9 +0.4
OBN Obninsk 70.90 323 P P 19 42 09.3 -1.3
IMAR Indian Mountai 71.04 26 P P 19 42 10.8 -0.5
ANN Anapa 71.72 312 *e* **P P 19 42 15.1 -0.6**
ANN pmax pmax
comp=Z,53nm,1.2s
PPLA Purkeypile 72.02 29 P P 19 42 17.9 +0.5
RSO Redoubt South 72.05 31 P P 19 42 17.6 -0.1
OHAK Old Harbor 72.19 35 P P 19 42 18.0 -0.3
OHAK IAmb IAmb 19 42 27.9
comp=Z,41nm,1.0s
COLD Coldfoot 72.32 24 P P 19 42 19.4 +0.5
TOLK Toolik Lake Re 72.37 23 P P 19 42 19.6 +0.3
TOLK IAmb IAmb 19 42 31.3
comp=Z,20nm,0.9s
TOLK Toolik Lake Re 72.37 23 P P 19 42 20.3 +1.0
baz=278
MLY Manley 72.38 26 P P 19 42 19.4 0.0
MLY IAmb IAmb 19 42 22.7
comp=Z,28nm,1.1s
BPAW Bear Paw Mtn. 72.40 27 P P 19 42 19.9 +0.4
SKT Skwentna 72.44 30 P P 19 42 19.3 -0.5
SKT IAmb IAmb 19 42 22.0
comp=Z,58nm,1.5s
KDAK Kodiak Island 72.49 34 P P 19 42 20.3 +0.2
KDAK pmax pmax
comp=Z,112nm,1.4s
KDAK Kodiak Island 72.49 34 P P 19 42 20.3 +0.2
KTH Kantishna Hill 72.50 28 P P 19 42 20.5 +0.4
KTH IAmb IAmb 19 42 30.3
comp=Z,22nm,1.1s
TRF Thorofare Moun 72.80 28 P P 19 42 21.6 -0.4
TRF IAmb IAmb 19 42 32.2
comp=Z,28nm,1.2s
SUA Susitna One 72.88 30 P P 19 42 20.7 -1.8
SUA IAmb IAmb 19 42 36.0
comp=Z,51nm,1.1s
NEA Nenana 73.15 27 P P 19 42 24.1 +0.2
NEA IAmb IAmb 19 42 38.2
comp=Z,30nm,1.0s
MCK McKinley 73.35 28 P P 19 42 24.5 -0.6
MCK pmax pmax
comp=Z,105nm,1.5s
MCK McKinley 73.35 28 P P 19 42 24.5 -0.6
RND Reindeer 73.44 28 P P 19 42 24.8 -1.0
RND pmax pmax
comp=Z,47nm,1.0s
RND Reindeer 73.44 28 P P 19 42 24.8 -1.0
RND IAmb IAmb 19 42 35.1
comp=Z,47nm,1.0s
MDM Murphy Dome 73.45 26 P P 19 42 25.9 +0.2
WRH Wood River Hil 73.59 27 P P 19 42 26.6 +0.1
WRH IAmb IAmb 19 42 37.3
comp=Z,51nm,1.5s
PUL Pulkovo 73.59 328 *de* **P P 19 42 28.1 +1.5**
PUL pmax pmax
comp=Z,37nm,0.7s
COLA College 73.62 26 *ce* **P P 19 42 27.7 +1.1**
COLA pmax pmax
comp=Z,13nm,1.2s
COLA College 73.62 26 P P 19 42 26.5 -0.2
PMR Palmer 73.62 30 P P 19 42 26.0 -0.7
PMR pmax pmax
comp=Z,50nm,1.3s
PMR Palmer 73.62 30 P P 19 42 26.0 -0.7
PMR IAmb IAmb 19 42 36.5
comp=Z,50nm,1.3s
CCB Clear Creek Bu 73.68 27 P P 19 42 26.4 -0.7
GHO Glory Hole Cre 73.69 30 P P 19 42 27.2 0.0
GHO IAmb IAmb 19 42 37.3
comp=Z,20nm,0.9s
SEW Seward 73.73 31 P P 19 42 27.1 -0.3
POKR Poker Plat Res 73.75 26 P P 19 42 28.1 +0.6
baz=280
ARCES ARCESS Array B 73.84 339 P P 19 42 25.9 -2.0
ARCES ARCESS Array B 73.84 339 P P 19 42 26.3 -1.6
comp=Z,27nm,1.2s,baz=61,slow=5.8,SNR=8.6
ARCES LR LR 20 18 26.6
comp=Z,99nm,18.5s,baz=138,slow=39
ARCES ARCESS Array B 73.84 339 P P 19 42 25.9 -2.0
SML Sawmill 73.96 30 P P 19 42 28.8 0.0
SML IAmb IAmb 19 42 31.2
comp=Z,64nm,1.3s
KNK Knik Glacier 73.97 30 P P 19 42 28.8 -0.1
KNK IAmb IAmb 19 42 38.7
comp=Z,63nm,1.3s
SIM Simferopol' 74.02 313 *c* **iP P 19 42 29.9 +0.5**
SIM pmax pmax
comp=Z,22nm,0.9s
SIM MLR MLR
comp=Z,62nm,16.3s
IL31 74.05 26 P P 19 42 27.9 -1.2
ILAR Eielson Array 74.05 26 P P 19 42 27.5 -1.7
ILAR Eielson Array 74.05 26 P P 19 42 27.9 -1.3
comp=Z,1.6nm,0.6s,baz=268,slow=5.1,SNR=20
ILAR Eielson Array 74.05 26 P P 19 42 27.5 -1.7
OUZ Omahuta 74.08 137 P P 19 42 30.9 +1.1
OUZ IAmb IAmb 19 42 44.8
comp=Z,31nm,1.2s
HDA Harding Lake 74.09 27 P P 19 42 27.9 -1.6
HDA IAmb IAmb 19 42 38.3
comp=Z,30nm,1.2s
HDA Harding Lake 74.09 27 P P 19 42 28.8 -0.6
baz=281
DHY Denali Highway 74.16 28 P P 19 42 29.7 -0.3
SPA0 Spitsbergen Ar 74.16 348 P P 19 42 30.3 +0.6
FYU Fort Yukon 74.36 24 P P 19 42 30.7 -0.2
FYU IAmb IAmb 19 42 47.7
comp=Z,31nm,1.3s
SCM Sheep Creek Mo 74.42 29 P P 19 42 31.5 0.0
SCM pmax pmax
comp=Z,62nm,1.0s
SCM Sheep Creek Mo 74.42 29 P P 19 42 31.5 0.0
BMAR Burnt Mountain 74.43 24 P P 19 42 30.3 -1.1
PRP Porcupine Dome 74.46 26 P P 19 42 31.3 -0.4
GLI Glacier Island 74.72 30 P P 19 42 31.5 -1.7
GLI IAmb IAmb 19 42 42.9
comp=Z,52nm,1.0s
PAX Paxson 75.03 28 P P 19 42 34.5 -0.5
PAX pmax pmax
comp=Z,21nm,1.1s
PAX Paxson 75.03 28 P P 19 42 34.5 -0.5
RIDG Independent Ri 75.13 27 P P 19 42 35.0 -0.6
RIDG IAmb IAmb 19 42 45.6
comp=Z,37nm,1.0s
FIA1 FINESS Array S 75.31 330 P P 19 42 35.6 -0.9
FINES FINESS Array B 75.32 330 P P 19 42 34.8 -1.7
FINES FINESS Array B 75.32 330 P P 19 42 36.7 +0.1
comp=Z,28nm,1.2s,baz=69,slow=6.3,SNR=16
FINES LR LR 20 18 48.4
comp=Z,325nm,18.7s,baz=62,slow=38
FINES FINESS Array B 75.32 330 P P 19 42 34.8 -1.7
SCRK Sand Creek 75.45 27 P P 19 42 36.6 -0.8
SCRK IAmb IAmb 19 42 39.1
comp=Z,51nm,1.6s
BR131 Keskin Array S 75.46 307 *de* **P P 19 42 38.3 +0.3**
BR131 Keskin Array S 75.46 307 P P 19 42 37.7 -0.3
BRTR Keskin Array B 75.46 307 P P 19 42 36.6 -1.4
BRTR Keskin Array B 75.46 307 P P 19 42 37.9 -0.1
comp=Z,6.6nm,1.3s,baz=114,slow=3.0,SNR=12
BRTR PKKPbc PKKPbc 20 02 11.4 +13
comp=Z,0.7nm,1.0s,baz=299,slow=2.5,SNR=3.9
BRTR LR LR 20 19 59.9
comp=Z,103nm,21.6s,baz=61,slow=39
BRTR Keskin Array B 75.46 307 P P 19 42 36.5 -1.4
DOT Dot Lake 75.49 27 P P 19 42 37.0 -0.6
DOT IAmb IAmb 19 42 39.1
comp=Z,40nm,1.4s
VSU Vasula 75.67 327 *de* **P P 19 42 39.8 +1.2**
VSU pmax pmax
comp=Z,278nm,1.3s
MENT Mentasta 75.82 28 P P 19 42 39.0 -0.5
AKASG Malin Array Be 76.03 319 P P 19 42 39.8 -1.0
AKASG pmax pmax
comp=Z,15nm,1.3s
AKASG Malin Array Be 76.03 319 P P 19 42 40.5 -0.4
comp=Z,16nm,1.1s,baz=64,slow=5.8,SNR=33
AKASG LR LR 20 17 42.0
comp=Z,104nm,19.0s,baz=70,slow=37
AKASG Malin Array Be 76.03 319 P P 19 42 39.8 -1.0
AKBB Malin Array Si 76.03 319 *ce* **P P 19 42 40.3 -0.6**
AKBB Malin Array Si 76.03 319 P P 19 42 39.8 -1.0
AKBB IAmb IAmb 19 42 42.1
comp=Z,35nm,1.3s
GLB Gilahina Butte 76.15 29 P P 19 42 40.8 -0.6
GLB IAmb IAmb 19 42 44.3
comp=Z,41nm,1.3s
EGAK Eagle 76.43 26 P P 19 42 41.3 -1.5
EGAK IAmb IAmb 19 42 52.7
comp=Z,20nm,0.9s
NACGM Naroch 76.48 324 *e* **P P 19 42 42.0 -1.4**
BCAR Beaver Creek A 76.64 28 P P 19 42 44.2 0.0
TGL Tana Glacier 76.78 30 P P 19 42 44.6 -0.6
CSS Mathiatis 76.81 303 P P 19 42 45.7 +0.1
SORM Soroca 77.19 317 ⇑P P 19 42 47.3 -0.2
NOR Nord 77.20 354 *i* **P P 19 42 46.4 -0.6**
comp=Z,11nm,1.4s
BARN Barnard Glacie 77.25 30 P P 19 42 47.7 -0.2
BARN IAmb IAmb 19 42 58.3
comp=Z,61nm,1.4s
EPYK Eagle Plains 77.70 24 P P 19 42 49.1 -0.9
EPYK IAmb IAmb 19 43 01.1
comp=Z,18nm,0.8s
EPYK Eagle Plains 77.70 24 P P 19 42 50.0 0.0
baz=290
TOPG Topolog 78.00 313 ⇑P P 19 42 52.6 +0.5
TIRR Tirgusor 78.09 313 P P 19 42 52.1 -0.5
TIRR pmax pmax
comp=Z,109nm,1.5s
TIRR Tirgusor 78.09 313 ⇑P P 19 42 52.8 +0.3
TIRR Tirgusor 78.09 313 P P 19 42 52.1 -0.5
INK Inuvik 78.17 21 P P 19 42 51.7 -0.8
INK pmax pmax
comp=Z,52nm,1.5s
INK Inuvik 78.17 21 P P 19 42 52.5 -0.1
comp=Z,12nm,1.1s,baz=278,slow=5.6,SNR=15
INK Inuvik 78.17 21 P P 19 42 51.7 -0.8
INK IAmb IAmb 19 42 53.5
comp=Z,52nm,1.5s
ODBI Odobesti 78.67 315 ⇓P P 19 42 57.7 +2.0
TESR Tescani 78.74 315 ⇑P P 19 42 56.4 +0.3
SUW Suwalki 78.75 323 *eP* **P 19 42 55.3 -0.7**
SUW Suwalki 78.75 323 P P 19 42 55.3 -0.7
VRI Vrincioaia 78.86 315 ⇑P P 19 42 57.9 +1.1
PLOR Plostina 78.92 315 ⇑P P 19 42 57.8 +0.6
ELL Elmali 79.04 305 P P 19 42 57.9 -0.3
ELL pmax pmax
comp=Z,174nm,1.6s
ELL Elmali 79.04 305 P P 19 42 57.9 -0.3
HYT Haines Junctio 79.25 29 P P 19 42 60.0 +1.1
HYT IAmb IAmb 19 43 09.7
comp=Z,29nm,1.1s
BURAR Bucovina Array 79.37 317 P P 19 42 59.5 -0.2
BUR08 Bucovina Ar. S 79.37 317 P P 19 42 59.5 -0.2
LVV L'vov 79.48 319 *eP* **P 19 43 00.0 -0.1**
MLR Muntele Rosu 79.49 314 P P 19 43 00.3 -0.2
MLR pmax pmax
comp=Z,39nm,1.4s
MLR Muntele Rosu 79.49 314 ⇑P P 19 43 01.2 +0.7
MLR Muntele Rosu 79.49 314 P P 19 43 00.3 -0.2
MLR IAmb IAmb 19 43 04.6
comp=Z,39nm,1.4s
RAZG Razgrad 79.66 312 ⇑P P 19 43 01.6 +0.4
DOPR Dopca 79.73 315 ⇑P P 19 43 01.7 +0.1
ARCR ARCALIA 80.08 316 ⇑P P 19 43 04.4 +0.9
VOIR 80.11 315 ⇑P P 19 43 05.2 +1.4
ELND Elena 80.28 312 ⇑P P 19 43 05.0 +0.3
KWP Kalwaria Pacla 80.35 319 *eP* **P 19 43 05.5 +0.6**
KWP Kalwaria Pacla 80.35 319 P P 19 43 05.0 +0.1
ARR Arges 80.41 315 ⇑P P 19 43 05.9 +0.6
HUMR Humsele 80.43 314 ⇑P P 19 43 05.4 0.0
WHY Whitehorse 80.52 29 P P 19 43 05.6 0.0
WHY IAmb IAmb 19 43 08.4
comp=Z,28nm,1.3s
ALN Alexandroupoli 80.76 310 P P 19 43 06.6 -0.6
ALN pmax pmax
comp=Z,20nm,1.4s
ALN Alexandroupoli 80.76 310 P P 19 43 06.6 -0.6
C36M Paulatuk 80.79 19 P P 19 43 06.0 -0.8
C36M IAmb IAmb 19 43 08.7
comp=Z,69nm,1.5s
C36M Paulatuk 80.79 19 P P 19 43 06.3 -0.4
baz=300
BEL Belsk 80.80 322 *eP* **P 19 43 07.9 +0.7**
KOLS Kolonicke sedl 80.84 319 *eP* **P 19 43 07.6 +0.1**
KOLS Kolonicke sedl 80.84 319 *eP* **P 19 43 07.6 +0.1**
UZH Uzhgorod 80.93 318 *eP* **P 19 43 06.0 -1.9**
UZH *i* 19 43 11.4
TRPA Tarpa 80.93 318 ⇑P P 19 43 08.4 +0.4
LOT Lotru 80.97 315 ⇑P P 19 43 09.0 +0.6
VLAD Vladila 80.98 313 ⇑P P 19 43 08.7 +0.4
PLVB Pleven 81.02 313 ⇑P P 19 43 09.0 +0.5
ABPO Ambohimpanom 81.06 246 P P 19 43 06.7 -2.6
ABPO pmax pmax
comp=Z,55nm,1.5s
ABPO Ambohimpanom 81.06 246 P P 19 43 06.7 -2.6
ABPO IAmb IAmb 19 43 10.3
comp=Z,55nm,1.4s
DAG Danmarks Havn 81.15 351 *i* **P P 19 43 07.8 -0.8**
DAG pmax pmax
comp=Z,10.0nm,0.9s
DAG Danmarks Havn 81.15 351 *i* **P P 19 43 07.8 -0.8**
comp=Z,9.6nm,0.9s
DRGR 81.25 316 ⇑P P 19 43 10.3 +0.5
DEV Deva 81.41 316 ⇑P P 19 43 11.7 +1.1
KARP Karpathos 81.51 305 P P 19 43 07.4 -4.0
NIE Niedzica 81.91 319 *eP* **P 19 43 13.1 -0.1**
OJC Ojcow 81.94 320 *eP* **P 19 43 12.9 -0.4**
OJC Ojcow 81.94 320 P P 19 43 12.5 -0.8
OJC IAmb IAmb 19 43 14.6
comp=Z,35nm,1.3s
NC405 NORSAR Array S 81.97 332 P P 19 43 12.4 -0.8
SIRR Siria 82.10 316 ⇑P P 19 43 15.0 +0.7
NB2 NORSAR Subarra 82.22 332 P P 19 43 13.7 -0.9
comp=Z,40nm,1.7s,baz=66,slow=5.6
NB2 NORSAR Subarra 82.22 332 P P 19 43 13.7 -0.9
baz=66,slow=5.6
NOA NORSAR Array B 82.22 332 P P 19 43 15.2 +0.6
comp=Z,7.4nm,0.9s,baz=64,slow=5.1,SNR=6.3
NOA LR LR 20 22 34.9
comp=Z,314nm,19.3s,baz=60,slow=38
VTS Vitosha 82.23 312 P P 19 43 14.7 -0.5
VTS pmax pmax
comp=Z,44nm,1.3s
VTS Vitosha 82.23 312 ⇑P P 19 43 15.8 +0.7
VTS Vitosha 82.23 312 P P 19 43 14.7 -0.5
VTS IAmb IAmb 19 43 17.4
comp=Z,44nm,1.3s
GKP Gorka Klasztor 82.33 324 *eP* **P 19 43 15.6 +0.4**
BZS Buzias 82.35 316 ⇑P P 19 43 15.3 -0.2
LANS Liptovska Anna 82.51 319 *eP* **P 19 43 18.7 +2.3**
LANS Liptovska Anna 82.51 319 *eP* **P 19 43 18.7 +2.3**
VAY Valandovo 83.12 311 *i* **P P 19 43 19.1 -0.5**
VYHS Vyhne 83.13 319 *eP* **P 19 43 20.2 +0.6**
VYHS pmax pmax
comp=Z,37nm,1.6s
VYHS Vyhne 83.13 319 *eP* **P 19 43 20.2 +0.6**
STIP Stip 83.27 312 *i* **P P 19 43 18.9 -1.5**
MORC Moravsky Berou 83.45 320 P P 19 43 21.3 +0.1
MORC pmax pmax
comp=Z,21nm,1.4s
MORC Moravsky Berou 83.45 320 ⇑P P 19 43 22.0 +0.7
MORC Moravsky Berou 83.45 320 *eP* **P 19 43 21.6 +0.4**
MORC Moravsky Berou 83.45 320 P P 19 43 21.3 +0.1
MORC IAmb IAmb 19 43 22.7
comp=Z,21nm,1.4s
LIT Litokhoron 83.58 310 P P 19 43 20.7 -1.4
LIT pmax pmax
comp=Z,40nm,1.4s
LIT Litokhoron 83.58 310 P P 19 43 20.7 -1.4
LIT IAmb IAmb 19 43 22.7
comp=Z,40nm,1.4s
SKO Skopje 83.70 312 *i* **P P 19 43 22.6 0.0**
SRO Srobarova 83.71 318 *eP* **P 19 43 23.4 +0.9**
SRO pmax pmax
comp=Z,14nm,1.2s
SRO Srobarova 83.71 318 *eP* **P 19 43 23.4 +0.9**
RES Resolute Bay 83.71 9 P P 19 43 21.8 -0.2
RES pmax pmax
comp=Z,17nm,0.9s
RES Resolute Bay 83.71 9 P P 19 43 21.8 -0.2
RES IAmb IAmb 19 43 31.9
comp=Z,17nm,0.9s
JAVC Velka Javorina 83.72 320 *eP* **P 19 43 24.4 +1.8**
KMBO Kilima Mbogo 83.75 267 P P 19 43 23.7 +0.1
KMBO pmax pmax
comp=Z,37nm,1.4s
KMBO Kilima Mbogo 83.75 267 P P 19 43 25.1 +1.4
comp=Z,14nm,1.2s,baz=54,slow=6.4,SNR=15
KMBO Kilima Mbogo 83.75 267 P P 19 43 23.7 +0.1
KMBO IAmb IAmb 19 43 25.9
comp=Z,37nm,1.4s
KSP Ksiaz 83.79 322 *eP* **P 19 43 23.2 +0.3**
KRLC Kraliky 83.80 321 *eP* **P 19 43 23.2 +0.2**
KRLC *e* 19 43 32.4
KRLC Kraliky 83.80 321 *eP* **P 19 43 23.2 +0.2**
KRLC *ex* x 19 43 32.4
CSKK Cskako 83.91 318 *eP* **P 19 43 24.8 +1.3**
OSTC Ostas 83.95 322 *eP* **P 19 43 25.2 +1.5**
DPC Dobruska-Polom 83.96 321 *eP* **P 19 43 24.4 +0.6**
DPC *e* 19 43 32.9
DPC Dobruska-Polom 83.96 321 *eP* **P 19 43 24.4 +0.6**
DPC *ex* x 19 43 32.9
CHVC Chvalec 84.03 322 *eP* **P 19 43 24.2 +0.1**
AGG Agios Georgios 84.06 309 P P 19 43 22.5 -2.1
AGG pmax pmax
comp=Z,25nm,1.3s
AGG Agios Georgios 84.06 309 P P 19 43 22.5 -2.1
AGG IAmb IAmb 19 43 24.1
comp=Z,25nm,1.3s
UPC Upice 84.09 322 *eP* **P 19 43 24.9 +0.5**
UPC Upice 84.09 322 *eP* **P 19 43 24.9 +0.5**
MODS Modra-Piesok 84.14 319 *eP* **P 19 43 25.0 +0.2**
MODS pmax pmax
comp=Z,46nm,1.9s
MODS Modra-Piesok 84.14 319 *eP* **P 19 43 25.0 +0.2**
FNA Florina 84.15 311 P P 19 43 23.5 -1.5
FNA pmax pmax
comp=Z,30nm,1.5s
FNA Florina 84.15 311 P P 19 43 23.4 -1.5
FNA IAmb IAmb 19 43 24.6
comp=Z,30nm,1.5s
VRAC Vranov 84.20 320 ⇑P P 19 43 26.0 +1.0
VRAC Vranov 84.20 320 *eP* **P 19 43 25.6 +0.6**
KRUC Moravsky 84.42 320 *eP* **P 19 43 26.6 +0.5**
OHR Ohrid 84.45 312 *i* **P P 19 43 24.3 -2.2**
RUE Ruedersdorf 84.57 324 *eP* **P 19 43 27.1 +0.3**
baz=63,slow=5.1
ITM Ithomi 84.99 308 P P 19 43 27.7 -1.5
GOPC GO Pecny, Ondr 85.04 321 *eP* **P 19 43 29.0 -0.3**
GOPC *e* 19 43 38.5
GOPC GO Pecny, Ondr 85.04 321 *eP* **P 19 43 29.0 -0.3**
GOPC *ex* x 19 43 38.5
BRG Berggiesshubel 85.14 322 *eP* **P 19 43 29.8 +0.1**
comp=Z,34nm,1.3s
BRG Berggiesshubel 85.14 322 *eP* **P 19 43 29.8 +0.1**
BRG pmax pmax
comp=Z,34nm,1.3s
BRG Berggiesshubel 85.14 322 *eP* **P 19 43 29.8 +0.1**
baz=63,slow=5.1
PRU Pruhonice 85.16 321 *eP* **P 19 43 30.0 +0.2**
PRU *e* 19 43 38.5
PRU Pruhonice 85.16 321 *eP* **P 19 43 30.0 +0.2**
PRU *ex* x 19 43 38.5
CONA Conrad Observa 85.19 319 *i* PcP **P 19 43 30.6 +0.4**
comp=Z,25nm,1.4s,SNR=9.3
FBE Freiberg 85.46 323 *eP* **P 19 43 31.5 +0.2**
comp=Z,18nm,1.0s,baz=63,slow=5.1
CLL Collm 85.50 323 *i* **P P 19 43 30.5 -1.0**
CLL *i* 19 43 39.9
CLL pmax pmax
comp=Z,31nm,1.3s
CLL Collm 85.50 323 *i* **P P 19 43 30.5 -1.0**
comp=Z,31nm,1.3s
CLL *i* sP **pP 19 43 39.9 +0.3**
CLL LmV 20 25 00.0
comp=Z,200nm,18.0s
CLL Collm 85.50 323 *eP* **P 19 43 31.6 +0.1**
comp=Z,20nm,1.1s,baz=63,slow=5.1
CLL Collm 85.50 323 P P 19 43 30.8 -0.7
CLL IAmb IAmb 19 43 33.1
comp=Z,32nm,1.3s
CASY Casey 85.52 184 P P 19 43 30.8 -0.2
CASY IAmb IAmb 19 43 33.0
comp=Z,26nm,1.2s
KOGS Kog 85.53 318 *eP* **P 19 43 31.9 +0.2**
BLY Banja Luka 85.58 316 P P 19 43 31.7 -0.3
BLY IAmb IAmb 19 43 34.0
comp=Z,30nm,1.3s
ARSA Arzberg 85.67 319 *i* **P P 19 43 30.8 -1.7**
comp=Z,16nm,1.4s,SNR=6.6
BSEG Bad Segeberg 85.81 326 *eP* **P 19 43 33.2 +0.2**
baz=63,slow=5.1
KHC Kasperske Hory 86.08 321 *eP* **P 19 43 34.5 0.0**
KHC *e* 19 43 43.1
KHC Kasperske Hory 86.08 321 *eP* **P 19 43 34.5 0.0**
KHC *ex* x 19 43 43.1
KHC Kasperske Hory 86.08 321 P P 19 43 34.0 -0.5
GEC2 GERESS Array S 86.13 321 *eP* **P 19 43 35.0 +0.1**
baz=63,slow=5.1
GEC2 GERESS Array S 86.13 321 P P 19 43 34.5 -0.4
GEC2 IAmb IAmb 19 43 36.5
comp=Z,22nm,1.4s
GERES GERESS Array B 86.13 321 P P 19 43 34.2 -0.6
GERES GERESS Array B 86.13 321 P P 19 43 34.9 +0.1
comp=Z,6.3nm,1.1s,baz=56,slow=5.0,SNR=22
GERES LR LR 20 22 23.6
comp=Z,101nm,18.5s,baz=98,slow=36

GERES	**GERESS Array B**	**86.13**	**321**	P		**P**	**19 43 34.2**	**-0.6**
PERS	**Pernice**	**86.17**	**318**	*i* P		**P**	**19 43 35.0**	**0.0**
TANN	**Tannenbergstha**	**86.19**	**322**	*e*P		**P**	**19 43 35.3**	**+0.2**
	comp=Z,16nm,1.1s,baz=63,slow=5.1							
MOA	**Molin**	**86.20**	**320**	*i* PcP		**P**	**19 43 35.4**	**+0.3**
	comp=Z,32nm,1.4s,SNR=13							
SOKA	**Soboth**	**86.21**	**318**	*i* PcP		**P**	**19 43 35.1**	**-0.1**
	comp=Z,19nm,1.4s,SNR=6.3							
NEUB	**Neuenburg**	**86.24**	**323**	*e*P		**P**	**19 43 35.6**	**+0.4**
	comp=Z,37nm,1.2s,baz=63,slow=5.1							
NKC	**Novy Kostel**	**86.28**	**322**	*e*P		**P**	**19 43 36.1**	**+0.7**
NKC	**Novy Kostel**	**86.28**	**322**	*e*P		**P**	**19 43 36.1**	**+0.7**
GUNZ	**Gunzen**	**86.29**	**322**	*e*P		**P**	**19 43 35.8**	**+0.3**
	comp=Z,18nm,1.2s,baz=63,slow=5.1							
WERN	**Wernitzgruen**	**86.30**	**322**	*e*P		**P**	**19 43 36.0**	**+0.5**
	comp=Z,7.8nm,1.0s,baz=63,slow=5.1							
KULLO	**Kullorsuaq**	**86.44**	**359**	*e*P		**P**	**19 43 35.3**	**-0.4**
KULLO				pmax		pmax		
	comp=Z,16nm,0.9s							
KULLO	**Kullorsuaq**	**86.44**	**359**	*i* P		**P**	**19 43 35.3**	**-0.4**
	comp=Z,16nm,0.9s							
WET	**Wettzell**	**86.50**	**321**	*e*P		**P**	**19 43 37.0**	**+0.5**
	comp=Z,7.4nm,1.2s,baz=63,slow=5.1							
MOX	**Moxa**	**86.58**	**323**	*e*P		**P**	**19 43 37.4**	**+0.5**
	comp=Z,6.9nm,1.2s,baz=63,slow=5.1							
OBKA	**Obir**	**86.58**	**318**	*i* PcP		**P**	**19 43 36.3**	**-0.8**
	comp=Z,14nm,1.4s							
MANZ	**Manzenberg**	**86.58**	**322**	*e*P		**P**	**19 43 37.7**	**+0.8**
	comp=Z,6.9nm,1.1s,baz=63,slow=5.1							
NRDL	**Niedersach Rie**	**86.59**	**325**	*e*P		**P**	**19 43 37.5**	**+0.8**
	comp=Z,7.6nm,1.0s,baz=63,slow=5.1							
ROTZ	**Rotzenmuhle**	**86.62**	**322**	*e*P		**P**	**19 43 38.0**	**+0.9**
	comp=Z,10nm,1.2s,baz=63,slow=5.1							
CLZ	**Clausthal**	**86.74**	**324**	*e*P		**P**	**19 43 38.4**	**+0.8**
	baz=63,slow=5.1							
KBA	**Koelnbreinsper**	**87.09**	**319**	*i* PcP		**P**	**19 43 39.4**	**-0.2**
	comp=Z,5.7nm,1.1s							
GRF	**Grafenberg Arr**	**87.23**	**322**	*e*P		**P**	**19 43 40.9**	**+0.8**
	comp=Z,73nm,1.9s,baz=63,slow=5.1							
SUMG	**Summit**	**87.35**	**354**	*i* P		**P**	**19 43 40.8**	**+0.1**
SUMG				pmax		pmax		
	comp=Z,54nm,1.3s							
SUMG	**Summit**	**87.35**	**354**	*i* P		**P**	**19 43 40.8**	**+0.1**
	comp=Z,54nm,1.3s							
SUMG	**Summit**	**87.35**	**354**	P		**P**	**19 43 40.0**	**-0.6**
SUMG				IAmb		IAmb	19 43 52.3	
	comp=Z,20nm,0.9s							
ABTA	**Abfaltersbach**	**87.75**	**319**	*i* P		**P**	**19 43 40.3**	**-2.4**
	comp=Z,14nm,1.3s							
STAL	**STALIGIAL**	**87.84**	**319**	P		**P**	**19 43 42.3**	**-0.8**
STAL				IAmb		IAmb	19 43 43.3	
	comp=Z,23nm,1.3s							
YKA	**Yellowknife Ar**	**87.90**	**22**	P		**P**	**19 43 42.3**	**-0.6**
YKA	**Yellowknife Ar**	**87.90**	**22**	P		**P**	**19 43 42.6**	**-0.3**
	comp=Z,10nm,0.9s,baz=313,slow=4.7,SNR=77							
YKA	**Yellowknife Ar**	**87.90**	**22**	P		**P**	**19 43 42.3**	**-0.6**
ACER	**Acerenza**	**87.98**	**313**	P		**P**	**19 43 43.5**	**-0.4**
TIP	**Timpagrande**	**88.04**	**311**	P		**P**	**19 43 43.5**	**-0.8**
WTTA	**Wattenberg**	**88.06**	**320**	*i* PcP		**P**	**19 43 42.7**	**-1.6**
	comp=Z,19nm,1.4s							
WATA	**Walderalm**	**88.07**	**320**	*i* PcP		**P**	**19 43 43.3**	**-1.0**
	comp=Z,21nm,1.7s							
SQTA	**Sankt Quirin**	**88.34**	**320**	*i* PcP		**P**	**19 43 45.0**	**-0.6**
	comp=Z,17nm,1.3s							
MOTA	**Moosalm**	**88.35**	**320**	*i* PcP		**P**	**19 43 44.5**	**-1.1**
	comp=Z,13nm,1.3s							
FETA	**Feichten**	**88.73**	**320**	*i* PcP		**P**	**19 43 47.1**	**-0.3**
	comp=Z,12nm,1.2s							
CEL	**Celeste**	**89.02**	**310**	P		**P**	**19 43 47.9**	**-1.0**
NRCA	**Norcia**	**89.05**	**315**	P		**P**	**19 43 48.4**	**-0.6**
NRCA				IAmb		IAmb	19 43 50.0	
	comp=Z,19nm,1.3s							
DAVA	**Damuels**	**89.12**	**320**	*i* PcP		**P**	**19 43 49.1**	**-0.1**
	comp=Z,11nm,1.3s							
FUORN	**Ofenpass-Fuorn**	**89.19**	**320**	P		**P**	**19 43 49.3**	**-0.4**
FUORN				IAmb		IAmb	19 44 04.6	
	comp=Z,17nm,1.1s							
MURB	**Monte Urbino**	**89.26**	**316**	P		**P**	**19 43 49.2**	**-0.7**
MURB				IAmb		IAmb	19 44 02.0	
	comp=Z,32nm,1.1s							
SALO	**Salr**	**89.49**	**319**	P		**P**	**19 43 49.4**	**-1.5**
SALO				IAmb		IAmb	19 44 01.2	
	comp=Z,21nm,0.9s							
ZCCA	**Zocca**	**89.78**	**317**	P		**P**	**19 43 53.6**	**+1.3**
LLLB	**Lillooet**	**91.71**	**34**	P		**P**	**19 44 02.1**	**+1.0**
BNI	**Bardonecchia**	**92.14**	**319**	P		**P**	**19 44 02.9**	**-0.5**
BNI				pmax		pmax		
	comp=Z,33nm,1.2s							
BNI	**Bardonecchia**	**92.14**	**319**	P		**P**	**19 44 02.9**	**-0.5**
D03D	**Eldon**	**92.70**	**37**	P		**P**	**19 44 08.5**	**+2.8**
	baz=302							
LON	**Longmire**	**93.86**	**38**	P		**P**	**19 44 10.9**	**-0.3**
LON				pmax		pmax		
	comp=Z,8.0nm,1.1s							
LON	**Longmire**	**93.86**	**38**	P		**P**	**19 44 10.9**	**-0.3**
F04A	**Amboy**	**93.95**	**38**	P		**P**	**19 44 12.7**	**+1.1**
F04A				IAmb		IAmb	19 44 22.0	
	comp=Z,16nm,0.9s							
I03D	**Drain, OR**	**94.59**	**41**	P		**P**	**19 44 15.6**	**+1.2**
	baz=302							
H04A	**Detroit Lake**	**94.77**	**39**	P		**P**	**19 44 15.1**	**-0.2**
H04A				IAmb		IAmb	19 44 17.7	
	comp=Z,26nm,1.4s							
KEST	**Kesra**	**94.84**	**310**	LR		LR	20 34 25.1	
	comp=Z,86nm,19.8s,baz=296,slow=40							
K02D	**Willamette Mer**	**94.92**	**42**	P		**P**	**19 44 16.2**	**+0.1**
	baz=302							
I04A	**Tendick Farm,**	**95.11**	**40**	P		**P**	**19 44 17.4**	**+0.5**
	baz=303							
L02E	**Cave Junction**	**95.24**	**42**	P		**P**	**19 44 18.6**	**+1.0**
	baz=302							
HUMO	**Hull Mountain**	**95.41**	**41**	P		**P**	**19 44 17.3**	**-1.0**
I05D	**Terrebonne, OR**	**95.46**	**39**	P		**P**	**19 44 19.5**	**+1.0**
	baz=304							
J04D	**Umpqua Nationa**	**95.60**	**41**	P		**P**	**19 44 20.4**	**+1.0**
	baz=303							
NEW	**Newport**	**95.60**	**34**	P		**P**	**19 44 17.5**	**-1.5**
NEW				pmax		pmax		
	comp=Z,8.0nm,1.1s							
NEW	**Newport**	**95.60**	**34**	P		**P**	**19 44 20.4**	**+1.4**
	comp=Z,3.7nm,1.0s,baz=213,slow=4.6,SNR=3.5							
NEW	**Newport**	**95.60**	**34**	P		**P**	**19 44 17.5**	**-1.5**
NEW	**Newport**	**95.60**	**34**	P		**P**	**19 44 19.8**	**+0.8**
	baz=307							
PPT	**Papeete**	**95.79**	**106**	LR		LR	20 17 28.4	
	comp=Z,100nm,20.9s,baz=285,slow=29							
PPT2	**Papeete2**	**95.79**	**107**	*e*LR		LR	20 15 18.0	
	comp=Z,414nm,30.2s,baz=290							
PINE	**Pine Mountain**	**96.01**	**40**	P		**P**	**19 44 22.1**	**+0.8**
L04D	**Klamath Falls**	**96.03**	**42**	P		**P**	**19 44 21.6**	**+0.4**
	baz=303							
YBH	**Yreka Blue Hor**	**96.03**	**42**	P		**P**	**19 44 21.2**	**-0.1**
YBH				pmax		pmax		
	comp=Z,8.0nm,1.2s							
YBH	**Yreka Blue Hor**	**96.03**	**42**	P		**P**	**19 44 21.8**	**+0.5**
	comp=Z,1.7nm,1.0s,baz=124,slow=1.4,SNR=5.8							
YBH	**Yreka Blue Hor**	**96.03**	**42**	P		**P**	**19 44 21.1**	**-0.1**
J05D	**Fort Rock, OR**	**96.11**	**40**	P		**P**	**19 44 23.0**	**+1.4**
	baz=304							
MAW	**Mawson**	**96.11**	**199**	LR		LR	20 21 32.1	
	comp=Z,37nm,21.2s,baz=50,slow=32							
WDC	**Whiskeytown Da**	**96.75**	**43**	P		**P**	**19 44 24.6**	**+0.2**
WDC				pmax		pmax		
	comp=Z,6.0nm,1.0s							
WDC	**Whiskeytown Da**	**96.75**	**43**	P		**P**	**19 44 24.6**	**+0.2**
LSZ	**Lusaka**	**96.79**	**256**	P		**P**	**19 44 24.6**	**-0.5**
LSZ				pmax		pmax		
	comp=Z,11nm,1.3s							
LSZ	**Lusaka**	**96.79**	**256**	P		**P**	**19 44 24.6**	**-0.5**
LSZ				IAmb		IAmb	19 44 26.1	
	comp=Z,11nm,1.3s							
O02D	**Mt. Diablo Mer**	**96.81**	**43**	P		**P**	**19 44 25.3**	**+0.5**
	baz=302							
FRB	**Frobisher Bay**	**97.06**	**4**	P		**P**	**19 44 23.9**	**-1.3**
	comp=Z,3.2nm,0.8s,baz=27,slow=9.0,SNR=3.5							
TBI	**Tubuai**	**97.66**	**112**	*e*LR		LR	20 16 15.0	
	comp=Z,282nm,34.5s							
ORV	**Oroville**	**97.97**	**43**	P		**P**	**19 44 28.8**	**-1.2**
ORV				pmax		pmax		
	comp=Z,11nm,1.5s							
ORV	**Oroville**	**97.97**	**43**	P		**P**	**19 44 28.8**	**-1.2**
ORV				IAmb		IAmb	19 44 31.5	
	comp=Z,10nm,1.5s							
FFC	**Flin Flon**	**98.04**	**23**	P		**P**	**19 44 29.4**	**-0.5**
FFC				pmax		pmax		
	comp=Z,12nm,1.3s							
FFC	**Flin Flon**	**98.04**	**23**	P		**P**	**19 44 29.4**	**-0.5**
FFC				IAmb		IAmb	19 44 39.3	
	comp=Z,12nm,1.2s							
BEKR	**Beckworth**	**98.54**	**43**	P		**P**	**19 44 31.8**	**-0.9**
BEKR				IAmb		IAmb	19 44 43.2	
	comp=Z,6.5nm,1.1s							
PAHR	**Pah Rah Range**	**99.25**	**42**	P		**Pdif**	**19 44 35.8**	**-0.1**
PAHR				IAmb		IAmb	19 44 46.6	
	comp=Z,7.6nm,1.1s							
PNTR	**Pine Nut**	**99.46**	**43**	P		**Pdif**	**19 44 35.8**	**-1.1**
PNTR				IAmb		IAmb	19 44 47.9	
	comp=Z,21nm,1.6s							
VNDA	**Vanda**	**99.50**	**172**	P		**Pdif**	**19 44 37.0**	**+1.2**
	comp=Z,1.4nm,1.0s,baz=257,slow=2.0,SNR=3.8							
VNDA				LR		LR	20 31 20.6	
	comp=Z,47nm,19.9s,baz=334,slow=36							
CMB	**Columbia Colle**	**99.53**	**44**	P		**Pdif**	**19 44 36.7**	**-0.3**
CMB				pmax		pmax		
	comp=Z,8.0nm,1.4s							
CMB	**Columbia Colle**	**99.53**	**44**	P		**Pdif**	**19 44 36.7**	**-0.3**
CMB				IAmb		IAmb	19 44 39.5	
	comp=Z,8.3nm,1.4s							
NVAR	**Mina Array Bea**	**100.67**	**43**	P		**Pdif**	**19 44 43.7**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=301,slow=4.0,SNR=10							
NVAR	**Mina Array Bea**	**100.67**	**43**			**Pdif**	**19 44 42.4**	**+0.1**
TAOE	**Nuku Hiva Isla**	**101.88**	**95**	*e*LR		LR	20 18 10.4	
	comp=Z,286nm,25.5s							
SYO	**Syowa Base**	**104.44**	**202**	⇑ *i*Pdiff		pDif	19 45 04.7	-1.3
SYO	**Syowa Base**	**104.44**	**202**	⇑ *e*PKiKP		**PKiKP**	**19 49 16.3**	**+2.4**
ANMO	**Albuquerque**	**110.26**	**40**	⇓ *i*PKiKP		**PKiKP**	**19 49 27.6**	**+1.4**
ANMO				pmax		pmax		
	comp=Z,8.0nm,2.5s							
TORD	**Torodi Ar. Bea**	**111.48**	**293**	PKiKP		**PKiKP**	**19 49 27.4**	**-1.3**
	comp=Z,0.9nm,1.0s,baz=61,slow=1.5,SNR=3.9							
TORD				PP		**PP**	**19 50 08.4**	**-1.0**
	comp=Z,1.2nm,0.9s,baz=70,slow=6.2,SNR=5.5							
TORD				PKKPbc		**PKKPab**	**20 00 31.6**	**-2.0**
	comp=Z,1.7nm,1.1s,baz=223,slow=2.6,SNR=3.6							
TORD	**Torodi Ar. Bea**	**111.48**	**293**	PKiKP		**PKiKP**	**19 49 25.9**	**-2.8**
MNTX	**Cornudas Mount**	**113.12**	**41**	P		**PKiKP**	**19 49 32.0**	**+0.6**
	baz=313							
TX31	**Lajitas Arr. Si**	**115.81**	**42**			**PKiKP**	**19 49 35.3**	**-1.5**
TX32	**Lajitas Array**	**115.81**	**42**			**PKiKP**	**19 49 35.0**	**-1.9**
TXAR	**Lajitas Array**	**115.81**	**42**	PKiKP		**PKiKP**	**19 49 36.4**	**-0.4**
TXAR	**Lajitas Array**	**115.81**	**42**	PKP		**PKiKP**	**19 49 36.8**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=318,slow=1.7,SNR=11							
TXAR	**Lajitas Array**	**115.81**	**42**			**PKiKP**	**19 49 36.4**	**-0.4**
U40A	**Yellville**	**116.51**	**30**			**PKiKP**	**19 49 37.9**	**+0.1**
U40A	**Yellville**	**116.51**	**30**	P		**PKPdf**	**19 49 36.6**	**-1.2**
	baz=325							
MIAR	**Mount Ida**	**117.63**	**31**	PKiKP		**PKPdf**	**19 49 39.4**	**-0.6**
MIAR	**Mount Ida**	**117.63**	**31**			**PKPdf**	**19 49 39.4**	**-0.6**
MIAR	**Mount Ida**	**117.63**	**31**	P		**PKPdf**	**19 49 39.7**	**-0.3**
	baz=324							
WVT	**Waverly**	**118.91**	**26**	PKiKP		**PKPdf**	**19 49 41.6**	**-0.8**
WVT	**Waverly**	**118.91**	**26**			**PKPdf**	**19 49 41.6**	**-0.8**
U50A	**Jamestown**	**119.83**	**23**	P		**PKPdf**	**19 49 43.8**	**-0.4**
	baz=333							
V52A	**Sevierville**	**120.80**	**22**	P		**PKiKP**	**19 49 46.2**	**0.0**
	baz=334							
TKL	**Tuckaleechee C**	**120.89**	**23**	PKiKP		**PKPdf**	**19 49 43.9**	**-2.4**
TKL	**Tuckaleechee C**	**120.89**	**23**	PKP		**PKPdf**	**19 49 45.7**	**-0.6**
	comp=Z,3.8nm,0.6s,baz=114,slow=5.9,SNR=3.6							
TKL	**Tuckaleechee C**	**120.89**	**23**			**PKPdf**	**19 49 43.9**	**-2.4**
Z58A	**St. Stephen**	**124.37**	**20**	P		**PKiKP**	**19 49 54.0**	**+0.7**
	baz=337							
SDV	**Santo Domingo**	**150.12**	**22**			**PKPdf**	**19 50 39.4**	**-1.1**
ROSC	**El Rosal**	**152.15**	**32**	PKPbc		**PKPbc**	**19 50 50.5**	**0.0**
	comp=Z,36nm,0.9s,baz=141,slow=0.2,SNR=23							
ROSC	**El Rosal**	**152.15**	**32**			**PKPdf**	**19 50 44.3**	**+0.4**
OTAV	**Otavalo**	**153.37**	**46**	PKiKP		**PKPdf**	**19 50 45.7**	**-0.1**
OTAV	**Otavalo**	**153.37**	**46**			**PKPdf**	**19 50 45.6**	**-0.1**
BDFB	**Brasilia**	**168.25**	**286**	PKiKP		**PKPdf**	**19 50 57.8**	**-3.4**
BDFB	**Brasilia**	**168.25**	**286**	PKP		**PKPdf**	**19 51 00.9**	**-0.3**
	comp=Z,4.5nm,0.9s,baz=345,slow=5.2,SNR=5.4							
BDFB	**Brasilia**	**168.25**	**286**			**PKPdf**	**19 50 57.8**	**-3.4**
SAML	**Samuel**	**169.30**	**19**	PKiKP		**PKPdf**	**19 51 00.7**	**-1.1**
SAML	**Samuel**	**169.30**	**19**			**PKPdf**	**19 51 00.7**	**-1.1**
PB11	**IPOC Station P**	**170.64**	**95**			**PKPdf**	**19 51 03.1**	**+0.5**
MNMC	**Minye Minye**	**170.70**	**91**			**PKPdf**	**19 51 03.7**	**+0.9**
LPAZ	**La Paz**	**171.52**	**71**	PKiKP		**PKPdf**	**19 51 03.8**	**+0.1**
LPAZ	**La Paz**	**171.52**	**71**	PKP		**PKPdf**	**19 51 04.8**	**+1.1**
	comp=Z,15nm,1.3s,baz=54,slow=2.2,SNR=18							
LPAZ	**La Paz**	**171.52**	**71**			**PKPdf**	**19 51 03.8**	**+0.1**

MAN 02 19:33:12.7, 8.78N×124.12E, h391km, mb4.4, ML3.2, MS3.0, Mindanao

*SJA **02** 20:19:00.6±0.8, 23.56S×66.72W, h227km±7km, ML3.2, MW3.4*
*IDC **02** 20:19:01.4±2.0, 23.56S×66.59W, h197km±22km, mb3.7/1, mb1 3.5/5, mb1mx3.1/36, mbtmp4.0/5, Error ellipse: s-maj=34.1km s-min=23.5km az=143.0*
*GUC **02** 20:19:03.1±0.5, 23.60S×67.00W, h234km±8km, ML4.1*
ISC 02 20:19:01.5±0.9, 23.59S±0.06×66.77W±0.04, h218km±8km, n29, σ0.87/46, 9C-1D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.62**	**134**	*i* P	**Pn**	**20 19 38.3**	**+0.4**
SLA				IAML		20 19 39.0	
	comp=Z,90nm,0.5s						
SLA				*e*S	**S**	**20 20 06.2**	**-0.1**
AZAP	**Zapla**	**1.69**	**112**	*i* P	**Pn**	**20 19 38.3**	**-0.3**
AZAP				IAML		20 19 38.5	
	comp=Z,204nm,0.5s						
AZAP				*e*S	**S**	**20 20 07.6**	**+0.2**
YJA	**Yavi**	**1.82**	**40**	⇓ *i*P	**Pn**	**20 19 40.2**	**0.0**
YJA				IAML		20 19 44.4	
	comp=Z,37nm,0.4s						
YJA				*e*S	**S**	**20 20 10.0**	**-0.1**
LVC	**Limon Verde**	**2.20**	**296**	*e*P	**Pn**	**20 19 44.5**	**+0.8**
LVC				*i* S	**S**	**20 20 16.2**	**-0.2**
LVC	**Limon Verde**	**2.20**	**296**	P	**Pn**	**20 19 44.5**	**+0.8**
	comp=Z,36nm,0.3s,baz=104,slow=8.3,SNR=174						
LVC				S	**S**	**20 20 16.4**	**0.0**
	comp=Z,6.7nm,0.3s,baz=240,slow=20,SNR=3.9						
LVC	**Limon Verde**	**2.20**	**296**	*i* P	**Pn**	**20 19 44.5**	**+0.8**
LVC				*e*S	**S**	**20 20 16.4**	**0.0**
LVC				IAML		20 20 17.6	
	comp=Z,80nm,0.4s						
PB15	**IPOC Station P**	**2.51**	**278**	⇑ *i*P	**Pn**	**20 19 47.7**	**+0.9**
PB15				*i* S	**S**	**20 20 22.3**	**+0.4**
PB15	**IPOC Station P**	**2.51**	**278**	*i* P	**Pn**	**20 19 47.6**	**+0.8**
PB06	**IPOC Station P**	**2.72**	**288**	⇑ *i*P	**Pn**	**20 19 50.0**	**+0.9**
PB06				*i* S	**S**	**20 20 25.4**	**-0.6**
PB06				IAML		20 20 26.1	
	comp=N,586nm,0.2s						
PB06	**IPOC Station P**	**2.72**	**288**	*i* P	**Pn**	**20 19 49.9**	**+0.7**
PB09	**IPOC Station P**	**2.90**	**308**	⇑ *i*P	**Pn**	**20 19 52.3**	**+1.2**
PB09				*i* S	**S**	**20 20 29.3**	**-0.3**
PB09				IAML		20 20 33.1	
	comp=E,171nm,0.2s						
PB09	**IPOC Station P**	**2.90**	**308**	*i* P	**Pn**	**20 19 52.0**	**+0.9**
GO02	**Mina Guanaco**	**3.01**	**238**	⇑ *i*P	**Pn**	**20 19 53.2**	**+0.8**
GO02				*i* S	**S**	**20 20 32.0**	**-0.1**
GO02				IAML		20 20 34.6	
	comp=N,334nm,0.5s						
PB03	**IPOC Station P**	**3.15**	**299**	⇑ *i*P	**Pn**	**20 19 54.5**	**+0.6**
PB03				*i* S	**S**	**20 20 33.2**	**-1.6**
PB05	**IPOC Station P**	**3.24**	**282**	⇑ *i*P	**Pn**	**20 19 55.3**	**+0.4**
PB05				*i* S	**S**	**20 20 34.7**	**-1.9**
PB05	**IPOC Station P**	**3.24**	**282**	*i* P	**Pn**	**20 19 55.6**	**+0.6**
PB04	**IPOC Station P**	**3.35**	**291**	⇑ *i*P	**Pn**	**20 19 56.9**	**+0.6**
PB04				*i* S	**S**	**20 20 38.0**	**-1.2**
PB04	**IPOC Station P**	**3.35**	**291**	*i* P	**Pn**	**20 19 56.9**	**+0.6**
PB10	**IPOC Station P**	**3.47**	**271**	⇑ *i*P	**Pn**	**20 19 58.3**	**+0.7**
PB10				*i* S	**S**	**20 20 39.2**	**-2.1**
PB10	**IPOC Station P**	**3.47**	**271**	*i* P	**Pn**	**20 19 58.2**	**+0.7**
PB14	**IPOC Station P**	**3.47**	**252**	*i* P	**Pn**	**20 19 58.2**	**+0.3**
PB08	**IPOC Station P**	**4.08**	**327**	⇑ *i*P	**Pn**	**20 20 06.4**	**+1.0**
PB08				*i* S	**S**	**20 20 55.0**	**-0.4**
GO01	**Chusmiza**	**4.50**	**330**	*i* P	**Pn**	**20 20 12.0**	**+1.3**
GO01				*i* S	**S**	**20 21 05.5**	**+0.6**
LPAZ	**La Paz**	**7.38**	**350**	P	**Pn**	**20 20 48.3**	**+1.0**
	comp=N,0.6nm,0.3s,baz=157,slow=5.8,SNR=13						
LPAZ				S	**S**	**20 22 11.2**	**-0.4**
	comp=N,0.1nm,0.3s,baz=90,slow=20,SNR=2.1						
ASAL	**Salagasta**	**9.15**	**191**	*i* P	**Pn**	**20 21 10.1**	**+0.5**
SIV	**San Ignacio**	**9.27**	**36**	P	**Pn**	**20 21 09.5**	**-1.6**
	comp=N,0.7nm,0.3s,baz=231,slow=10,SNR=13						
BDFB	**Brasilia**	**19.34**	**69**	P	**P**	**20 23 10.9**	**0.0**
	comp=N,0.3nm,0.3s,baz=248,slow=9.8,SNR=6.3						
TORD	**Torodi Ar. Bea**	**76.23**	**69**	P	**P**	**20 30 27.1**	**+0.7**
	comp=N,1.1nm,0.4s,baz=256,slow=5.8,SNR=15						
MKAR	**Makanchi Array**	**146.08**	**39**	PKPbc	**PKiKP**	**20 38 17.7**	**-1.1**
	comp=N,0.8nm,0.6s,baz=296,slow=3.3,SNR=9.3						

*NEIC **02** 20:22:29.4±1.0, 7.09S±0.05×129.7E±0.1, h134km±14km, mb4.2/5, Error ellipse: s-maj=20.7km s-min=4.9km az=103.0*
*IDC **02** 20:22:30.3±3.9, 7.37S×129.35E, h139km±30km, mb3.3/2, mb1 3.6/5, mb1mx3.2/27, mbtmp3.9/5, Error ellipse: s-maj=77.4km s-min=22.5km az=67.0*
ISC 02 20:22:29.9±0.8, 7.50S±0.07×129.66E±0.08, h150km, n22, σ2.921/25, mb4.0/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.69**	**106**		**Pn**	**20 23 01.7**	**+0.2**
FAKI	**Fak Fak**	**5.23**	**30**		Pn	20 23 40.4	-6.0
MTN	**Manton Dam**	**5.50**	**165**		**Pn**	**20 23 53.9**	**+4.0**
SOEI	**Soe**	**5.78**	**247**		**Pn**	**20 23 56.2**	**+2.3**
SIJI	**Sorong**	**6.78**	**14**	S	Sn	20 25 08.2	-15
	baz=240,slow=20						
KNRA	**Kununurra**	**8.17**	**186**		**Pn**	**20 24 28.4**	**+2.8**
KNRA					**Sn**	**20 25 59.0**	**+2.4**
FITZ	**Fitzroy Crossi**	**11.24**	**200**	P	**Pn**	**20 25 07.6**	**+1.4**
	0.7nm,0.3s,baz=21,slow=12,SNR=32						
FITZ				S	**Sn**	**20 27 07.0**	**-3.4**
	0.9nm,0.3s,baz=75,slow=20,SNR=4.9						
WRAB	**Tennant Creek**	**13.17**	**160**	P	**P**	**20 25 33.3**	**-2.5**
WRA	**Warramunga Arr**	**13.17**	**160**	P	**P**	**20 25 33.5**	**-2.4**
	1.1nm,0.3s,baz=333,slow=13,SNR=33						
WRA				S	**Sn**	**20 27 53.8**	**-3.4**
	2.0nm,0.3s,baz=334,slow=22,SNR=18						
WRA	**Warramunga Arr**	**13.17**	**160**	P	**Pn**	**20 25 32.7**	**+1.4**
WR0	**Warramunga Arr**	**13.26**	**160**	P	**P**	**20 25 34.8**	**-2.0**
COEN	**Coen**	**14.74**	**117**	P	**Pn**	**20 25 51.6**	**+0.4**
JAGI	**Jajag, Banyuwa**	**15.39**	**265**	P	**Pn**	**20 25 58.8**	**-0.4**
AS31	**Alice Springs**	**16.58**	**166**	P	**Pn**	**20 26 13.7**	**-0.1**
ASAR	**Alice Springs**	**16.58**	**166**	P	**Pn**	**20 26 18.2**	**+4.4**
	0.5nm,0.3s,baz=341,slow=9.5,SNR=34						
ASAR				S	**S**	**20 29 16.9**	**-1.3**
	0.6nm,0.3s,baz=355,slow=28,SNR=5.7						
ASAR				ScP	**ScP**	**20 34 18.4**	**+2.4**
	0.1nm,0.3s,baz=341,slow=2.0,SNR=5.4						
ASAR	**Alice Springs**	**16.58**	**166**	P	**P**	**20 26 13.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**39.80**	**311**	P	**P**	**20 29 47.2**	**-1.4**
	0.2nm,0.4s,baz=140,slow=7.1,SNR=4.1						
MK31	**Makanchi Array**	**68.46**	**327**	P	**P**	**20 33 15.4**	**-0.4**
MK31				IAmb	IAmb	20 35 22.9	
	comp=Z,3.6nm,1.6s						
MKAR	**Makanchi Array**	**68.46**	**327**	P	**P**	**20 33 15.7**	**0.0**
	comp=Z,0.9nm,0.5s,baz=117,slow=8.1,SNR=22						
MKAR	**Makanchi Array**	**68.46**	**327**	P	**P**	**20 33 15.5**	**-0.2**
MAKZ	**Makanchi**	**68.64**	**327**	P	**P**	**20 33 16.8**	**0.0**
MAKZ				IAmb	IAmb	20 33 38.8

KAHC	Katmai Hardscr	1.57	215			Pn	20 49 53.9 +1.0
KAHG	Katmai Hook Gl	1.59	205			Pn	20 49 54.4 +1.3
SLKM	Skilak Lake	1.62	68			Pn	20 49 53.2 -0.2
SLKM						Sn	20 50 15.3 -1.1
SVW2	Sparrevohn	1.63	317			Pn	20 49 52.4 -1.0
SEW	Seward	1.92	83	Pn		Pn	20 49 56.8 +0.1
FIS	Fire Island	1.93	50			Pn	20 49 58.1 +1.3
SUA	Susitna One	1.97	38			Pn	20 49 57.7 +0.3
ACHA	Angle Creek He	2.03	212			Pn	20 49 59.3 +1.2
RC01	Rabbit Creek A	2.10	55			Pn	20 49 58.6 -0.2
RC01	Rabbit Creek A	2.10	55			Sn	20 50 25.8 -0.4
CAHL	Cahill	2.16	210			Pn	20 50 01.1 +1.4
KDAK	Kodiak Island	2.19	170			Pn	20 49 58.1 -1.8
SKT	Skwentna	2.22	22			Pn	20 50 00.2 -0.1
KJL	Kejulik	2.23	213			Pn	20 50 01.9 +1.4
PWL	Port Wells	2.62	67			Pn	20 50 04.5 -0.7
PMR	Palmer	2.62	49			Pn	20 50 04.3 -0.9
PLK2	Peulik 2	2.70	217			Pn	20 50 08.0 +1.7
OHAK	Old Harbor	2.72	180			Pn	20 50 04.3 -2.2
PLK3	Peulik 3	2.74	216			Pn	20 50 08.5 +1.7
PLK1	Peulik 1	2.75	220			Pn	20 50 08.6 +1.7
KNK	Knik Glacier	2.79	56			Pn	20 50 06.7 -0.7
GHO	Glory Hole Cre	2.81	47			Pn	20 50 06.7 -1.1
PPLA	Purkeypile	3.02	9			Pn	20 50 11.0 +0.6
SML	Sawmill	3.06	50			Pn	20 50 09.8 -1.1
GLI	Glacier Island	3.20	70			Pn	20 50 11.2 -1.5
TT01	Tatalina	3.26	337			Pn	20 50 12.7 -0.7
TTA	Tatalina	3.28	337			Pn	20 50 12.9 -0.9
SII	Sitkinak Islan	3.42	189	Pn		Pn	20 50 13.2 -2.4
FID	Port Fidalgo	3.47	73	Pn		Pn	20 50 15.5 -0.6
SCM	Sheep Creek Mo	3.47	54			Pn	20 50 15.5 -0.7
JPK	Jack Peak	3.48	68			Pn	20 50 14.6 -1.8
HUR	Hurricane	3.52	28			Pn	20 50 16.5 -0.2
MID	Middleton Isla	3.55	95			Pn	20 50 17.4 +0.3
WAT1	Susitna Watana	3.68	36			Pn	20 50 18.5 -0.5
WAT6	Susitna Watana	3.76	43			Pn	20 50 19.3 -0.8
WAT2	Susitna Watana	3.78	34			Pn	20 50 19.8 -0.5
EYAK	Cordova Ski Ar	3.80	77			Pn	20 50 20.6 +0.2
KTH	Kantishna Hill	3.80	16			Pn	20 50 20.1 -0.4
TRF	Thorofare Moun	3.80	21			Pn	20 50 20.4 -0.3
RND	Reindeer	4.07	29			Pn	20 50 23.6 -0.4
DHY	Denali Highway	4.23	39			Pn	20 50 25.6 -0.6
PS12	TAPS Pump St12	4.28	65			Pn	20 50 26.6 -0.2
GOAT	Goat Mountain	4.30	78			Pn	20 50 26.8 -0.3
CHIR	Chirikof Islan	4.31	198	Pn		Pn	20 50 24.6 -2.6
BPAW	Bear Paw Mtn.	4.32	13			Pn	20 50 26.4 -0.8
RAGM	Ragged Mountai	4.32	80	Pn		Pn	20 50 27.6 +0.3
MCK	McKinley	4.33	26			Pn	20 50 27.4 0.0
PS11	TAPS Pump St11	4.36	57			Pn	20 50 27.7 -0.1
HMT	Hamilton	4.52	81	Pn		Pn	20 50 30.0 0.0
SWN	Browne	4.61	21			Pn	20 50 31.0 -0.1
PAX	Paxson	4.82	48			Pn	20 50 34.0 0.0
GLB	Gilahina Butte	4.89	68			Pn	20 50 34.7 -0.1
GRIN	Grindle Hills	4.99	82			Pn	20 50 36.5 +0.2
PS10	TAPS Pump St10	5.00	42			Pn	20 50 37.2 +0.9
NEA	Nenana	5.05	21			Pn	20 50 36.4 -0.6
CRQM	Cirque	5.10	76	Pn		Pn	20 50 38.0 +0.3
WRH	Wood River Hil	5.16	26			Pn	20 50 37.3 -1.0
MCARA	McCarthy VSAT	5.24	70			Pn	20 50 40.4 +0.8
MLY	Manley	5.25	12			Pn	20 50 38.7 -0.9
TGL	Tana Glacier	5.25	76	Pn		Pn	20 50 39.9 +0.2
CCB	Clear Creek Bu	5.37	26			Pn	20 50 40.2 -1.0
HDA	Harding Lake	5.38	31			Pn	20 50 40.4 -0.9
HDA	Harding Lake baz=216	5.38	31	P		Pn	20 50 40.5 -0.8
PTPK	Patty Peak	5.47	72			Pn	20 50 43.9 +1.0
KIAG	Kiagna River	5.49	75			Pn	20 50 43.9 +0.8
BALM	Baldy	5.51	74			Pn	20 50 43.6 +0.3
BALM						Sn	20 51 43.2 -2.5
PS08	TAPS Pump Stn8	5.52	30			Pn	20 50 42.5 -0.6
RIDG	Independent Ri	5.52	43			Pn	20 50 43.2 -0.1
TCOL	CIGO, UAF Yank	5.55	25			Pn	20 50 43.1 -0.5
TCOL	CIGO, UAF Yank baz=210	5.55	25	P		Pn	20 50 43.0 -0.5
MDM	Murphy Dome	5.56	23			Pn	20 50 43.0 -0.7
COLA	College	5.56	25			Pn	20 50 43.0 -0.7
IL01		5.69	29			Pn	20 50 44.7 -0.7
IL31		5.69	29			Pn	20 50 44.5 -0.9
ILAR	Eielson Array 7.2nm,0.3s,baz=216,slow=14,SNR=348	5.69	29	P		Pn	20 50 44.8 -0.6
ILAR				S		Sn	20 51 47.4 -2.3
	1.6nm,0.3s,baz=338,slow=24,SNR=7.5						
ILAR	Eielson Array	5.69	29			Pn	20 50 44.1 -1.3
DOT	Dot Lake	5.74	46			Pn	20 50 45.8 -0.3
GRNC	Granite Creek	5.78	77			Pn	20 50 47.1 +0.3
BARN	Barnard Glacie	5.85	74			Pn	20 50 48.8 +1.0
POKR	Poker Plat Res	5.86	25			Pn	20 50 47.1 -0.6
POKR	Poker Plat Res baz=210	5.86	25	P		Pn	20 50 47.0 -0.6
SCRK	Sand Creek	5.96	43			Pn	20 50 48.2 -1.0
CTGM	Chitina Glacie	6.00	75			Pn	20 50 50.8 +1.1
SDPT	Sand Point	6.01	223	Pn		Pn	20 50 48.0 -1.8
IM03		6.03	358			Pn	20 50 50.7 +0.1
IMAR	Indian Mountai	6.08	358			Pn	20 50 50.4 -0.2
BC03		6.33	55			Pn	20 50 54.4 +0.4
BCAR	Beaver Creek A	6.33	55			Pn	20 50 53.7 -0.4
YUK3	Moose Creek	6.52	68			Pn	20 50 57.6 +0.8
PRP	Porcupine Dome	6.63	29			Pn	20 50 57.5 -0.7
PNL	Peninsula	7.00	86			Pn	20 51 03.4 +0.3
EGAK	Eagle	7.43	44			Pn	20 51 08.2 -0.5
COLD	Coldfoot	7.45	9			Pn	20 51 09.6 +0.6
FYU	Fort Yukon	7.57	25			Pn	20 51 09.7 -0.9
BM03	Burnt Mountain	8.43	23			Pn	20 51 20.5 -1.6
BMAR	Burnt Mountain	8.44	23			Pn	20 51 20.7 -1.6
TOLK	Toolik Lake Re	8.88	9			Pn	20 51 28.3 0.0
TOLK	Toolik Lake Re baz=192	8.88	9	P		Pn	20 51 28.6 +0.4
INK	Inuvik 0.4nm,0.3s,baz=233,slow=19,SNR=5.6	11.97	37	P		Pn	20 52 10.7 +1.7
INK	Inuvik	11.97	37			Pn	20 52 10.5 +1.5
YKA	Yellowknife Ar 0.1nm,0.3s,baz=279,slow=11,SNR=11	18.60	65	P		P	20 53 30.6 +1.3
YKA	Yellowknife Ar	18.60	65	P		P	20 53 30.4 +1.1
SONM	Songino Array 0.7nm,0.8s,baz=47,slow=6.1,SNR=5.0	54.72	306	P		P	20 58 38.7 +1.1
ZALV	Zalesovo Beam 2.2nm,0.5s,baz=33,slow=7.3,SNR=12	57.35	323	P		P	20 58 56.3 +0.3
ZALV	Zalesovo Beam	57.35	323	P		P	20 58 55.9 -0.1
MKAR	Makanchi Array 0.2nm,0.5s,baz=23,slow=6.6,SNR=5.2	64.40	321	P		P	20 59 43.3 -0.5

IDC ***02*** *21:07:19.1±3.0, 32°.29S×178°.60W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.6/25, mbtmp3.7/3, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/22, Error ellipse: s-maj=69.5km s-min=36.0km az=111.0*

NEIC ***02*** *21:07:19.3±1.0, 32°.31S±0°.10×178°.4W±0°.2, h10km±2km, mb4.1/5, Error ellipse: s-maj=24.7km s-min=3.9km az=122.0*

ISC 02 21:07:21.2±1.3, 32°.4S±0°.1×178°.3W±0°.2, h33km, n17, σ1s67/17, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	5.87	207	Pn		Pn	21 08 46.6 +0.7
URZ	Urewera	6.95	211	Pn		Pn	21 09 02.1 +1.4
	0.8nm,0.3s,baz=333,slow=4.5,SNR=15						
URZ				Sn		Sn	21 10 19.7 +1.0
	1.4nm,0.3s,baz=308,slow=19,SNR=2.6						
OUZ	Omahuta	7.30	245			Pn	21 09 08.0 +2.4
HIZ	Hauiti	8.27	220	Pn		Pn	21 09 19.4 +0.5
THZ	Tophouse	11.69	214	Pn		Pn	21 10 02.7 -3.0
KHZ	Kahutara	11.92	211	Pn		Pn	21 10 09.2 +0.4
LTZ	Lake Taylor	12.78	213	Pn		Pn	21 10 21.3 +0.8
RPZ	Rata Peaks	14.06	213	Pn		Pn	21 10 37.8 -0.2
LBZ	Lake Benmore	14.98	214	Pn		Pn	21 10 52.2 +1.7
MLZ	Mavora Lakes	16.69	215	Pn		Pn	21 11 13.2 +0.6
DZM	Mont Dzumac	16.98	303	LR		LR	21 16 03.2
	comp=Z,101nm,19.5s,baz=40,slow=31						
BBOO	Buckleboo	38.21	257	P		P	21 14 34.2 -3.8
BBOO				IAmb		IAmb	21 14 40.2
	comp=Z,4.2nm,0.9s						
ASAR	Alice Springs	42.77	269	P		P	21 15 16.6 +0.7
	comp=Z,0.3nm,0.4s,baz=110,slow=7.5,SNR=6.2						
WRAB	Tennant Creek	43.93	274	P		P	21 15 25.9 +0.6
WRAB				IAmb		IAmb	21 15 42.2
	comp=Z,3.5nm,1.1s						
WRA	Warramunga Arr	43.94	274	P		P	21 15 26.1 +0.8
	comp=Z,0.6nm,0.4s,baz=114,slow=7.7,SNR=9.7						
DAC	Darwin (Calif)	88.83	45	P		P	21 20 13.0 +0.9
FINES	FINESS Array B	146.89	339	PKPbc		PKPab	21 27 01.3 +0.4
	comp=Z,2.6nm,0.8s,baz=46,slow=4.0,SNR=5.5						

MAN 02 21:29:41.4, 9°.42N×126°.19E, h8km, mb3.8, ML2.6, MS2.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.71	232	eP		Pg	21 29 55.4 +0.2
SCPH	Surigao	0.78	298	eP		Pg	21 29 56.5 0.0
SCPH				eS		Sg	21 30 05.6 -1.0
MSLP	Maasin	1.49	299	eP		Pn	21 30 07.7 -0.9
MSLP				eS		Sn	21 30 28.4 +0.1

IDC 02 22:19:58.1±7.8, 19°.71S×177°.93W, h623km±92km, mb2.8/5, mb1 3.1/5, mb1mx2.8/30, mbtmp3.7/5, Error ellipse: s-maj=48.3km s-min=38.2km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	43.86	288	P		22 27 12.4	+0.8
	45nm,1.2s,baz=207,slow=4.5,SNR=3.4						
ASAR	Alice Springs	44.77	256	P		22 27 18.5	0.0
	0.7nm,0.4s,baz=88,slow=8.2,SNR=12						
WRA	Warramunga Arr	44.78	261	P		22 27 18.2	-0.5
	0.4nm,0.3s,baz=97,slow=7.9,SNR=13						
MJAR	Matsushiro Arr	69.61	323	P		22 30 06.2	-0.4
	0.8nm,0.6s,baz=129,slow=6.2,SNR=3.3						
TXAR	Lajitas Array	86.58	57	P		22 31 37.6	+0.4
	0.1nm,0.6s,baz=228,slow=3.5,SNR=2.2						
ILAR	Eielson Array	87.53	13	P		22 31 40.3	-0.5
	0.5nm,1.0s,baz=216,slow=5.6,SNR=3.6						
BRTR	Keskin Array B	146.35	313	PKPbc	PKPbc	22 38 30.9	-0.1
	0.4nm,0.6s,baz=108,slow=4.0,SNR=3.6						
GERES	GERESS Array B	149.46	345	PKPbc	PKPbc	22 38 38.1	-0.3
	0.4nm,0.6s,baz=46,slow=4.8,SNR=5.8						

RSNC ***02*** *22:21:19.9±1.1, 6°.81N×73°.16W, h145km±5km, ML3.4, Mw3.5, Fault plane solution: NP1:∅s70.00000°, δ70.00000°, λ-180.00000°.*

FUNV ***02*** *22:21:19.8, 6°.77N×73°.01W, h14km, MW3.3*

IDC ***02*** *22:21:20.1±2.8, 6°.66N×73°.14W, h174km±24km, mb3.2/3, mb1 3.5/4, mb1mx3.1/27, mbtmp3.8/4, Error ellipse: s-maj=59.8km s-min=31.5km az=99.0*

ISC 02 22:21:18.1±0.8, 6°.84N±0°.03×73°.08W±0°.03, h155km±6km, n56, σ1s84/104, mb3.4/3, 7C-4D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.27	203	iP		22 21 39.9	+0.4
BARC				eS		22 21 54.6	-1.1
BARC				i		22 21 56.5	
	comp=Z,1μm,0.5s						
PAMC	Pamplona, Colo	0.62	37	iP		22 21 42.7	+1.4
PAMC				eS		22 21 59.5	+0.7
PAMC				i		22 22 01.8	
	comp=Z,793nm,0.5s						
BRRC	Barranca, Sant	0.68	293	iP		22 21 41.8	+0.8
BRRC				eS		22 21 57.1	-1.4
BRRC				i		22 21 59.8	
	comp=Z,440nm,0.2s						
BRRC				i		22 22 00.9	
	comp=Z,368nm,0.2s						
RUSC	La Rusia	0.94	180	iP		22 21 43.8	+0.3
RUSC				eS		22 22 01.9	-0.9
RUSC				i		22 22 03.6	
	comp=Z,589nm,0.2s						
RUSC				i		22 22 03.8	
	comp=Z,557nm,0.3s						
TAMC	Tame, Arauca	1.34	107	iP		22 21 48.3	+1.8
TAMC				eS		22 22 09.6	+1.5
TAMC				i		22 22 13.5	
	comp=Z,72nm,0.3s						
TAMC				i		22 22 17.6	
	comp=Z,62nm,0.4s						
PTBC	PUERTO BERRIO,	1.40	258	eP		22 21 46.2	-0.9
PTBC				eS		22 22 07.4	-1.8
PTBC				i		22 22 14.2	
	comp=Z,418nm,0.4s						
PTBC				i		22 22 14.7	
	comp=Z,394nm,0.6s						
OCAC	Ocana	1.41	350	eP		22 21 47.7	+0.4
OCAC				eS		22 22 09.1	-0.6
OCAC				i		22 22 13.1	
	comp=Z,277nm,0.4s						
OCAC				i		22 22 17.1	
	comp=Z,228nm,0.4s						
SPBC	San Pablo de B	1.54	220	iP		22 21 48.6	0.0
SPBC				eS		22 22 10.6	-1.3
SPBC				i		22 22 13.3	
	comp=Z,745nm,0.3s						
SPBC				i		22 22 13.3	
	comp=Z,687nm,0.3s						
ZARC	Zaragoza, Cauc	1.88	290	eS		Sn	22 22 17.3 -1.1
SMLC	San Martn de	2.18	333	eP		Pn	22 21 55.9 +0.3
SMLC				eS		Sn	22 22 25.4 +0.7
SMLC				i		22 22 28.2	
	comp=Z,295nm,0.1s						
SMLC				i		22 22 28.3	
	comp=Z,362nm,0.3s						
NORC	Norcasia	2.19	235	eP		Pn	22 21 55.5 -0.3
NORC				eS		Sn	22 22 23.3 -1.5
NORC				i		22 22 28.3	
	comp=Z,246nm,0.5s						
NORC				i		22 22 31.7	
	comp=Z,249nm,0.2s						
CHIC	Chingaza	2.29	197	iP		22 21 57.7	+0.3
CHIC				eS		22 22 26.7	-1.0
CHIC				i		22 22 30.5	
	comp=Z,250nm,0.4s						
CHIC				i		22 22 30.9	
	comp=Z,213nm,0.5s						
ROSC	El Rosal	2.34	212	P		Pn	22 21 59.8 +1.9
	comp=Z,117nm,0.3s,baz=52,slow=17,SNR=211						
ROSC				S		Sn	22 22 29.1 +0.5
	comp=Z,96nm,0.3s,baz=359,slow=23,SNR=18						
ROSC	El Rosal	2.34	212	iP		22 21 59.5	+1.5
ROSC				eS		Sn	22 22 28.2 -0.4
ROSC				i		22 22 33.5	
	comp=Z,316nm,0.5s						
HELC	Santa Helena	2.52	255	eP		22 22 00.4	+0.3
HELC				eS		Sn	22 22 30.9 -1.5
HELC				i		22 22 37.8	
	comp=Z,196nm,0.3s						
HELC				i		22 22 38.0	
	comp=Z,191nm,0.3s						
HELC	Santa Helena	2.52	255	eP		Pn	22 22 01.1 +1.0
HELC				eS		Sn	22 22 31.1 -1.2
UREC	San Jos de Ur	2.60	291	eP		Pn	22 21 59.6 -1.0
UREC				eS		Sn	22 22 30.8 -2.8
UREC				i		22 22 42.5	
	comp=Z,222nm,0.2s						
UREC				i		22 22 42.6	
	comp=Z,203nm,0.2s						
VIGV	El Vigia	2.61	40	eP		Pn	22 22 02.4 +1.5
VIGV				eS		Sn	22 22 31.9 -2.1
SOCV	Socops	2.63	57	eP		Pn	22 22 01.7 +0.7
SOCV				eS		Sn	22 22 31.3 -2.9
VILC	Villavicencio,	2.78	193	eP		Pn	22 22 02.4 -0.7
VILC				eS		Sn	22 22 36.9 -1.0
VILC				i		22 22 40.1	
	comp=Z,283nm,0.5s						
GUY2C	Guyana, Caldas	2.79	235	eP		Pn	22 22 03.7 +0.3
GUY2C				eS		Sn	22 22 38.1 -0.3
GUY2C				i		22 22 45.9	
	comp=Z,187nm,0.3s						
GUY2C				i		22 22 46.0	
	comp=Z,185nm,0.3s						
PTGC	Puerto Gaitan,	2.79	160	iP		22 22 03.1	0.0
PTGC				eS		Sn	22 22 35.6 -2.3
PTGC				i		22 22 41.1	
	comp=Z,240nm,0.3s						
PTGC				i		22 22 41.3	
	comp=Z,241nm,0.3s						
RREF	El Recreo	2.97	230	eP		Pn	22 22 06.2 +0.3
RREF				eS		Sn	22 22 42.6 -0.1
RREF				i		22 22 51.7	
	comp=Z,218nm,0.5s						
RREF				i		22 22 52.1	
	comp=Z,248nm,0.4s						
CBOC	Ciudad Bolivar	3.07	252	eP		Pn	22 22 07.4 +0.7
CBOC				eS		Sn	22 22 42.4 -2.0
CBOC				i			22 22 48.3
	comp=Z,36nm,0.4s						
CBOC				i			22 22 58.3
	comp=Z,69nm,0.6s						
CODC	Agustn Codazz	3.09	353	iP		Pn	22 22 07.0 +0.1
CODC				eS		Sn	22 22 45.2 +0.5
CODC				i			22 22 53.5
	comp=Z,74nm,0.6s						
CODC				i			22 22 54.1
	comp=Z,57nm,0.7s						
DBBC	Dabeiba	3.11	273	eP		Pn	22 22 07.2 +0.1
DBBC				eS		Sn	22 22 42.3 -2.9
DBBC				i			22 22 45.5
	comp=Z,195nm,0.3s						
SDV	Santo Domingo	3.16	50	eP		Pn	22 22 09.2 +1.3
SDV				eS		Sn	22 22 44.1 -2.3
TOLC	Tolima	3.16	225	eP		Pn	22 22 08.6 +0.5
TOLC				eS		Sn	22 22 46.0 -0.7
TOLC				i			22 22 53.3
	comp=Z,93nm,0.6s						
ARGC	Ariguani, Magd	3.21	339	eP		Pn	22 22 09.9 +1.5
ARGC				eS		Sn	22 22 48.2 +0.8
ARGC				i			22 22 48.4
	comp=Z,66nm,0.4s						
ARGC				i			22 23 00.1
	comp=Z,103nm,0.2s						
ELOV	Elorza	3.57	87	eP		Pn	22 22 14.1 +1.2
ELOV				eS		Sn	22 22 51.5 -4.0
ORTC	Ortega, Tolima	3.63	217	eP		Pn	22 22 14.1 +0.4
ORTC				eS		Sn	22 22 56.7 -0.2
ORTC				i			22 23 01.2
	comp=Z,107nm,0.3s						
ORTC				i			22 23 02.7
	comp=Z,104nm,0.4s						
SJCC	San Jacinto, C	3.68	326	eP		Pn	22 22 13.4 -1.0
SJCC				eS		Sn	22 22 54.3 -3.8
SJCC				i			22 23 01.5
	comp=Z,63nm,0.7s						
SJCC				i			22 23 02.7
	comp=Z,47nm,0.7s						
QARV	Quebrada Arrib	4.19	37	iP		Pn	22 22 22.3 +1.3
QARV				eS		Sn	22 23 08.6 -1.4
GUVC	San Jose del G	4.29	174	eP		Pn	22 22 20.9 -1.4
GUVC				eS		Sn	22 23 10.1 -2.3
GUVC				i			22 23 16.9
	comp=Z,125nm,0.3s						
YOTC	Yotoco, Valle	4.32	229	eP		Pn	22 22 22.3 -0.4
YOTC				eS		Sn	22 23 14.7 +1.6
YOTC				i			22 23 19.0
	comp=Z,16nm,1.1s						
YOTC				i			22 23 24.6
	comp=Z,28nm,0.9s						
CURV	Curarigua	4.41	44	eP		Pn	22 22 24.8 +0.9
CURV				eS		Sn	22 23 13.3 -1.9
SMRC	Santa Marta, M	4.44	345	eP		Pn	22 22 24.6 +0.3
SMRC				eS		Sn	22 23 11.1 -4.8
SMRC				i			22 23 16.1
	comp=Z,61nm,0.4s						
SMRC				i			22 23 16.3
	comp=Z,60nm,0.2s						
DABV	Dabajuro	4.72	31	eP		Pn	22 22 29.3 +1.4
DABV				eS		Sn	22 23 21.0 -1.4
MACC	Macarena, Meta	4.73	189	eP		Pn	22 22 26.6 -1.5
MACC				eS		Sn	22 23 17.8 -4.9
MACC				i			22 23 21.1
	comp=Z,44nm,1.0s						
MACC				i			22 23 22.3
	comp=Z,32nm,0.4s						
TEPV	Terepaima	4.94	51	eP		Pn	22 22 31.8 +0.9
TEPV				eS		Sn	22 23 24.7 -2.9
URIC	Uribia, Colomb	4.95	12	eP		Pn	22 22 30.2 -0.7
URIC				eS		Sn	22 23 21.1 -6.6
URIC				i			22 23 40.0
	comp=Z,14nm,0.2s						
URIC				i			22 23 40.0
	comp=Z,13nm,0.3s						
SIQV	Siquisique	4.97	40	eP		Pn	22 22 31.7 +0.4
SIQV				eS		Sn	22 23 26.6 -1.9
BAUV	El Baul	5.41	67	eP		Pn	22 22 37.2 +0.2
BAUV				eS		Sn	22 23 35.6 -3.1
MAPV	Macapo	5.45	57	eP		Pn	22 22 37.9 +0.3
MAPV				eS		Sn	22 23 37.0 -2.8
PAYV	Puerto Ayacuch	5.57	104	eP		Pn	22 22 38.7 -0.5
PAYV				eS		Sn	22 23 38.0 -4.6
POPC	Popayan, Colom	5.58	220	eP		Pn	22 22 39.2 -0.3
POPC				eS		Sn	22 23 40.0 -3.2
POPC				i			22 23 49.4
	comp=Z,4.5nm,0.6s						
FLOC	Florencia	5.82	206	eP		Pn	22 22 41.9 -0.7
FLOC				eS		Sn	22 23 46.4 -2.2
FLOC				i			22 24 19.8
	comp=Z,10.0nm,0.5s						
FLOC				i			22 24 24.6
	comp=Z,13nm,0.8s						
MONV	Montecano	5.93	31	eP		Pn	22 22 44.1 +0.1
TURV	Turiamo	6.30	55	eP		Pn	22 22 50.1 +1.2
TURV				eS		Sn	22 23 56.9 -3.0
BBAC	Balboa, Cauca	6.34	221	eP		Pn	22 22 51.0 +1.3
BBAC				eS		Sn	22 23 59.3 -2.0
BBAC				i			22 24 08.6
	comp=Z,8.5nm,0.3s						
BBAC				i			22 24 11.9
	comp=Z,6.1nm,0.2s						
MERV	Las Mercedes	7.13	70	eS		Sn	22 24 16.8 -3.0
CUPV	Cpira	7.89	66	eP		Pn	22 23 11.6 +1.5
TXAR	Lajitas Array	36.48	312	P		P	22 28 09.6 +1.1
	comp=Z,0.4nm,0.7s,baz=121,slow=8.5,SNR=4.3						
SCHQ	Schefferville	48.12	5	P		P	22 29 43.5 +1.4
	comp=Z,2.0nm,0.6s,baz=214,slow=15,SNR=3.6						
YKA	Yellowknife Ar	63.26	340	P		P	22 31 30.4 +0.5
	comp=Z,0.3nm,0.6s,baz=131,slow=6.7,SNR=8.7						
WRA	Warramunga Arr	150.38	241	PKPbc		PKPbc	22 40 51.2 -0.9
	comp=Z,0.3nm,0.4s,baz=106,slow=2.8,SNR=3.7						

IDC ***02*** *22:27:47.7±0.8, 11°.08S×78°.21W, h35km±4km, mb3.9/9, mb1 4.2/10, mb1mx3.9/29, mbtmp4.1/10, ML3.7/1, MS3.4/8, Ms1 3.4/8, ms1mx3.1/32, Error ellipse: s-maj=30.6km s-min=13.5km az=50.0*

NEIC ***02*** *22:27:48.6±1.5, 11°.14S±0°.01×78°.07W±0°.09, h52km±5km, mb4.6/51, ML4.1(ARE), Error ellipse: s-maj=13.0km s-min=0.9km az=82.0*

ISC 02 22:27:48.5±0.5, 11°.13S±0°.06×78°.09W±0°.09, h54km, n98, σ1s55/92, mb4.5/32, MS3.3/3, Off coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res

comp=Z,53nm,20.0s,baz=179,slow=33
ROC1 El Roble 22.69 164 P P 22 32 41.4 -4.6
CPUP Villa Florida 24.74 131 P P 22 33 06.3 +1.2
GRGR Grenville 28.30 36 P P 22 33 35.5 -1.7
APG El Apazote 28.72 334 LR LR 22 43 12.7
comp=Z,78nm,18.8s,baz=104,slow=32
MDP Montagnes des 30.03 59 LR LR 22 46 37.9
comp=Z,67nm,20.4s,baz=181,slow=38
PLCA Paso Flores 30.23 169 P **P 22 33 55.8 +1.6**
comp=Z,3.3nm,0.6s,baz=4.0,slow=10,SNR=10.0
PLCA Paso Flores 30.23 169 P P **22 33 54.7 +0.5**
BANI BANI 30.31 15 PcP 22 36 55.2 +0.6
PCDR Punta Cana, DR 30.98 18 P P **22 34 01.1 +0.2**
GTBY Guantanamo Bay 31.00 5 P P **22 34 02.5 +1.5**
GTBY IAmb IAmb 22 34 09.4
comp=Z,20nm,0.9s
PDPR Patillas Dam, 31.32 23 P P **22 34 05.0 +1.1**
PDPR IAmb IAmb 22 34 14.2
comp=Z,20nm,1.1s
TEIG Tepich 32.73 342 P P **22 34 13.6 -2.7**
TEIG IAmb IAmb 22 34 32.2
comp=Z,12nm,1.1s
NHSC New Hope 44.03 357 P P **22 35 48.3 -2.7**
TXAR Lajitas Array 47.20 329 P P **22 36 17.2 +1.0**
comp=Z,1.1nm,0.6s,baz=148,slow=8.6,SNR=15
TXAR Lajitas Array 47.20 329 P P **22 36 16.7 +0.5**
TX31 Lajitas Ar. Si 47.20 329 P P **22 36 16.5 +0.3**
TX32 Lajitas Array 47.20 329 P P **22 36 16.5 +0.3**
T57A Hurt 47.88 359 P P **22 36 21.5 +0.3**
T57A IAmb IAmb 22 36 33.7
comp=Z,7.6nm,1.1s
R58B Mineral 48.84 0 P P **22 36 29.7 +1.1**
R58B IAmb IAmb 22 36 41.9
comp=Z,5.4nm,0.8s
U40A Yellville 49.24 344 P P **22 36 31.9 +0.2**
U40A IAmb IAmb 22 36 33.2
comp=Z,6.7nm,0.7s
MNTX Cornudas Mount 49.97 329 P P **22 36 38.0 +0.6**
MNTX IAmb IAmb 22 36 38.9
comp=Z,3.0nm,0.9s
CCM Cathedral Cave 50.46 347 P P **22 36 41.2 +0.3**
MCWV Mont Chateau 50.55 358 P P **22 36 37.3 -4.4**
ANMO Albuquerque 53.13 331 P P **22 37 01.4 +0.3**
NCB Newcomb 54.95 3 P P **22 37 14.7 +0.6**
NCB IAmb IAmb 22 37 14.9
comp=Z,10.0nm,1.1s
SDCO Great Sand Dun 54.99 334 P P **22 37 13.6 -1.2**
I42A Draeger Farm, 55.64 351 P P **22 37 19.0 0.0**
ECSD EROS Data Cent 57.15 344 P P **22 37 29.6 -0.2**
ECSD IAmb IAmb 22 37 29.9
comp=Z,2.6nm,0.6s
LMN Caledonia Moun 57.97 11 P P **22 37 35.9 +0.5**
RDMU Red Mountain 59.12 332 P P **22 37 43.8 -0.1**
RSSD Black Hills 59.83 339 P P **22 37 49.2 +0.5**
EYMN Ely 60.01 350 P P **22 37 49.3 -0.3**
EYMN IAmb IAmb 22 37 52.4
comp=Z,2.8nm,1.0s
DUG Dugway, Tooele 60.36 330 P P **22 37 52.3 0.0**
DUG IAmb IAmb 22 37 54.7
comp=Z,3.0nm,0.7s
R11A Troy Canyon, C 60.41 327 P P **22 37 53.6 +0.9**
HWUT Hardware Ranch 60.85 332 P P **22 37 55.6 -0.1**
HWUT IAmb IAmb 22 38 08.8
comp=Z,5.5nm,1.0s
PD31 Pinedale Array 60.88 334 P P **22 37 55.5 -0.4**
PDAR Pinedale Array 60.88 334 P P **22 37 56.2 +0.3**
comp=Z,0.6nm,0.6s,baz=127,slow=7.8,SNR=7.1
PDAR pP **pP 22 38 08.0 -2.6**
comp=Z,0.7nm,0.7s,baz=131,slow=9.7,SNR=3.6
PDAR Pinedale Array 60.88 334 P P **22 37 55.7 -0.2**
OMMB Old Mammoth Mi 61.81 324 P P **22 38 02.5 +0.2**
OMMB IAmb IAmb 22 38 17.0
comp=Z,5.9nm,1.1s
MDPB Devils Postpil 61.87 324 P P **22 38 02.5 -0.2**
MDPB IAmb IAmb 22 38 04.8
comp=Z,3.2nm,0.9s
NV11 Mina Array Sit 61.89 325 P P **22 38 03.0 +0.2**
NV11 IAmb IAmb 22 38 17.5
comp=Z,3.4nm,1.1s
NVAR Mina Array Bea 61.97 325 P P **22 38 04.9 +1.5**
comp=Z,1.9nm,0.7s,baz=135,slow=6.9,SNR=17
NVAR pP **pP 22 38 15.2 -2.9**
comp=Z,2.7nm,1.0s,baz=137,slow=6.7,SNR=7.4
NVAR Mina Array Bea 61.97 325 P P **22 38 04.7 +1.3**
ELK Elko 61.99 329 P P **22 38 04.0 +0.6**
ULM Lac du Bonnet 63.07 347 P P **22 38 10.3 +0.2**
comp=Z,6.7nm,0.8s,baz=169,slow=8.3,SNR=13
ULM pP **pP 22 38 21.3 -3.7**
comp=Z,5.1nm,0.8s,baz=156,slow=6.2,SNR=6.3
ULM Lac du Bonnet 63.07 347 IAmb IAmb 22 38 10.9
comp=Z,6.6nm,0.8s
YHL Hebgen Lake 63.25 334 P P **22 38 13.0 +1.2**
RUBR Rubicon Trail 63.45 324 P P **22 38 14.1 +0.9**
PAHR Pah Rah Range 63.46 325 P P **22 38 14.7 +1.5**
PAHR IAmb IAmb 22 38 27.6
comp=Z,4.4nm,1.0s
MCMT McKenzie Canyo 63.96 333 P P **22 38 16.7 +0.3**
BEKR Beckworth 64.12 325 P P **22 38 18.6 +1.0**
BEKR IAmb IAmb 22 38 20.0
comp=Z,3.3nm,0.9s
MOD Modoc Plateau 65.48 327 IAmb IAmb 22 38 28.5
comp=Z,4.5nm,0.9s
PPTF Pamatai, Papee 69.20 255 P P **22 38 51.1 +0.8**
SHEL Horse Pasture 70.20 103 P P **22 38 54.7 -1.7**
FCC Fort Churchill 70.86 351 P P **22 38 59.0 -0.4**
FCC IAmb IAmb 22 39 12.5
comp=Z,4.3nm,0.8s
NLWA Neilton Lookou 71.08 329 P P **22 39 00.7 -0.4**
NLWA IAmb IAmb 22 39 14.2
comp=Z,6.5nm,1.1s
YKA Yellowknife Ar 78.68 344 P P **22 39 44.9 +0.4**
comp=Z,1.0nm,0.6s,baz=142,slow=6.0,SNR=26
YKA pP **PcP 22 39 55.6 +2.3**
comp=Z,0.9nm,0.5s,baz=143,slow=5.8,SNR=13
YKA Yellowknife Ar 78.68 344 P P **22 39 45.2 +0.7**
MOBC Moresby Island 78.73 330 P P **22 39 46.3 +1.1**
DLBC Dease Lake 81.08 335 P P **22 39 58.6 +0.8**
PVAQ Vaqueiros 81.58 49 P P **22 40 00.7 -0.1**
TORD Torodi Ar. Bea 82.75 75 P P **22 40 09.1 +1.7**
comp=Z,1.8nm,1.0s,baz=260,slow=2.6,SNR=4.1
TORD pP **pP 22 40 20.2 -2.5**
comp=Z,2.1nm,1.1s,baz=276,slow=4.5,SNR=4.7
BCAR Beaver Creek A 88.44 336 P P **22 40 35.4 +0.8**
EGAK Eagle 89.02 338 P P **22 40 38.5 +1.3**
EGAK IAmb IAmb 22 40 38.8
comp=Z,2.0nm,0.8s
ILAR Eielson Array 91.21 336 P P **22 40 48.1 +0.5**
comp=Z,0.4nm,0.8s,baz=113,slow=2.3,SNR=3.3
ILAR pP **pP 22 40 59.6 -3.4**
comp=Z,0.4nm,0.8s,baz=171,slow=2.5,SNR=3.4
BPAW Bear Paw Mtn. 92.61 335 P P **22 40 54.6 +0.6**
BPAW IAmb IAmb 22 40 55.9
comp=Z,1.6nm,0.7s
MLY Manley 92.83 336 P P **22 40 55.7 +0.6**
MLY IAmb IAmb 22 40 56.1
comp=Z,2.0nm,1.1s
H11N3 WAKE ISLAND Hy 117.07 286 T T 00 53 56.4
baz=93,slow=75,SNR=13
H11N2 WAKE ISLAND Hy 117.08 287 T T 00 53 59.5
baz=93,slow=75,SNR=17
H11N1 WAKE ISLAND Hy 117.09 286 T T 00 53 59.9
baz=93,slow=75,SNR=14
H11S2 WAKE ISLAND Hy 117.20 285 T T 00 54 01.4
baz=95,slow=75,SNR=60
H11S1 WAKE ISLAND Hy 117.21 285 T T 00 54 27.0
baz=95,slow=75,SNR=57
H11S3 WAKE ISLAND Hy 117.22 285 T T 00 54 02.7
baz=95,slow=75,SNR=67
ASAR Alice Springs 133.36 222 PKP **PKiKP 22 47 00.7 -0.1**
comp=Z,0.5nm,0.6s,baz=122,slow=2.2,SNR=7.6
ZALV Zalesovo Beam 135.17 14 PKP **PKPdf 22 47 01.8 -0.1**
comp=Z,0.7nm,0.5s,baz=297,slow=4.6,SNR=4.1
ZALV Zalesovo Beam 135.17 14 PKPdf **PKPdf 22 47 02.4 +0.5**
WRA Warramunga Arr 135.58 226 PKP **PKPdf 22 47 04.5 +0.8**
comp=Z,1.3nm,0.8s,baz=136,slow=1.6,SNR=6.4
WRA Warramunga Arr 135.58 226 **PKPdf 22 47 04.3 +0.5**
MKAR Makanchi Array 140.76 21 PKP **PKPdf 22 47 11.3 -1.2**
comp=Z,0.4nm,0.8s,baz=270,slow=1.2,SNR=4.0
SONM Songino Array 143.22 355 PKhKP PKPpre 22 47 15.0
comp=Z,0.7nm,0.5s,baz=330,slow=2.1,SNR=7.6
KSRS Korea Array 144.89 323 PKP **PKPdf 22 47 20.1 +0.1**
comp=Z,1.3nm,0.4s,baz=48,slow=3.3,SNR=5.2
CD2 Chengdu 160.24 355 PKP **PKPdf 22 47 41.7 -1.0**

*DJA **02** 22:34:47.7±0.3,3°S±3°×12°8E±°,h10km,M4.0/9,mB5.0/2, mb4.8/2,MLv3.6/9,Mw(mB)4.4/2*
ISC 02 22:34:50.4±1.2,**2°76S**±0°08×**128°09E**±0°05,**h38**km,**n8,** σ1**s06**/14,**Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
AAI	**Ambon**	**0.93**	**173**	P		**Pn**	**22 35 05.2**	**-1.8**
AAI				S		**Sn**	**22 35 19.4**	**+0.3**
MSAI	**Masohi**	**1.03**	**125**	P		**Pn**	**22 35 08.8**	**+0.5**
MSAI				S		**Sn**	**22 35 22.8**	**+1.4**
NLAI	**Namlea**	**1.09**	**244**	P		**Pn**	**22 35 09.0**	**-0.2**
NLAI				S		**Sn**	**22 35 23.6**	**+0.5**
SANI	**Sanana**	**2.21**	**288**	P		**Pn**	**22 35 23.9**	**-0.6**
SANI				S		**Sn**	**22 35 49.8**	**-0.8**
SWI	**Sorong**	**3.69**	**59**	P		**Pn**	**22 35 45.3**	**+0.4**
FAKI	**Fak Fak**	**4.16**	**92**	P		**Pn**	**22 35 50.8**	**-0.6**
FAKI				S		**Sn**	**22 36 37.7**	**-1.1**
LUWI	**Luwuk**	**5.58**	**288**	P		**Pn**	**22 36 10.6**	**-0.3**
	0.2nm2µm27nm,0.5s							
APSI	**Ampana**	**6.69**	**286**	P		**Pn**	**22 36 27.5**	**+1.3**
APSI				S		**Sn**	**22 37 42.5**	**+1.3**

*VAO **02** 22:39:38.0±0.6,32°99S×71°40W,h10km,mb4.8*
*BJI **02** 22:39:42.7±0.0,32°49S×70°77W,h48km,mB5.1/6, Ms4.9/2,Ms7.4/3*
*NEIC **02** 22:39:43.8±2.1,32°79S±0°06×71°3W±0°1,h49km±3km, Error ellipse: s-maj=15.2km s-min=7.4km az=76.0*
*IDC **02** 22:39:44.0±0.3,32°83S×71°28W,h51km±2km,mb4.4/22, mb1 4.5/26,mb1mx4.4/40,mbtmp4.7/26,MS3.7/5, Ms1 3.7/5,ms1mx3.4/14,Error ellipse: s-maj=14.1km s-min=8.7km az=77.0*
*GUC **02** 22:39:44.3±0.6,32°96S×71°39W,h45km±2km,ML4.9*
*SJA **02** 22:39:46.7±0.8,32°92S×71°20W,h44km±5km,ML4.8, MW4.6*
ISC 02 22:39:43.6±0.3,**32°84S**±0°04×**71°44W**±0°04,**h49**km±2km, **h49**km:**pP-P,n484,** σ1**s20**/464,**mb4.8**/74,**MS3.9**/6,**13C-7D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
					Op			
VA01	**Torpederas**	**0.26**	**224**	↓*iP*		**Pn**	**22 39 52.7**	**+0.5**
VA01				*i* S		**Sn**	**22 39 59.0**	**+0.7**
VA01				IAML			22 39 59.8	
	comp=E,326µm,0.1s							
ROC1	**El Roble**	**0.38**	**111**			**Pn**	**22 39 53.9**	**+0.2**
ROC1	**El Roble**	**0.38**	**111**	*i* P		**Pn**	**22 39 55.0**	**+1.3**
ROC1				*e*S		**Sn**	**22 40 01.3**	**+0.4**
ROCH	**El Roble**	**0.38**	**110**	↓*iP*		**Pn**	**22 39 54.3**	**+0.7**
ROCH				*i* S		**Sn**	**22 40 01.8**	**+1.0**
ROCH				IAML			22 40 03.6	
	comp=N,257µm,0.4s							
PEL	**Peldehue**	**0.70**	**116**	*e*P		**Pn**	**22 39 57.1**	**-0.3**
PEL				*i* S		**Sn**	**22 40 07.9**	**+0.6**
PEL				IAML			22 40 09.3	
	comp=E,105µm,0.5s							
PEL	**Peldehue**	**0.70**	**116**			**Pn**	**22 39 57.4**	**0.0**
PEL	**Peldehue**	**0.70**	**116**	*i* P		**Pn**	**22 39 57.9**	**+0.6**
PEL				*e*S		**Sn**	**22 40 07.0**	**-0.3**
CLCH	**Cerro Calan**	**0.94**	**127**	↓*iP*		**Pn**	**22 40 01.0**	**+0.5**
CLCH				*i* S		**Sn**	**22 40 13.5**	**+0.6**
CLCH				IAML			22 40 21.1	
	comp=N,33µm,0.3s							
ANTU	**Antumapu**	**0.99**	**137**	↓*iP*		**Pn**	**22 40 02.9**	**+1.7**
ANTU				*i* S		**Sn**	**22 40 16.1**	**+1.9**
ANTU				IAML			22 40 17.2	
	comp=E,75µm,0.4s							
FSR	**Penalolen**	**0.99**	**130**	↓*iP*		**Pn**	**22 40 02.8**	**+1.5**
FSR				*i* S		**Sn**	**22 40 15.7**	**+1.4**
LMEL	**Las Melosas**	**1.44**	**135**	↓*iP*		**Pn**	**22 40 08.2**	**+0.7**
LMEL				*i* S		**Sn**	**22 40 26.4**	**+1.1**
LMEL				IAML			22 40 28.3	
	comp=N,36µm,0.1s							
CO02	**Combarbal**	**1.67**	**13**	↓*iP*		**Pn**	**22 40 12.2**	**+1.7**
CO02				*i* S		**Sn**	**22 40 34.2**	**+3.3**
RTLS	**Leoncito**	**2.09**	**61**	*i* P		Pn	22 40 20.0	+3.6
RTLS				*e*S		**Sn**	**22 40 44.5**	**+3.1**
RTLS				IAML			22 40 48.9	
	comp=Z,7µm,0.3s							
ARCO	**CERRO ARCO**	**2.11**	**91**	*i* P		Pn	22 40 20.0	+3.4
ARCO				IAML			22 40 37.7	
	comp=Z,5µm,0.4s							
AAGR	**Agrelo**	**2.21**	**97**	*i* P		**Pn**	**22 40 20.8**	**+2.9**
AAGR				*e*S		**Sn**	**22 40 44.4**	**+0.4**
ASAL	**Salagasta**	**2.21**	**84**	*i* P		Pn	22 40 21.4	+3.6
AVIZ	**Vizcacheras**	**2.53**	**105**	*i* P		**Pn**	**22 40 24.5**	**+2.2**
RTCV	**Cerro Valdivia**	**2.64**	**69**	*i* P		**Pn**	**22 40 26.7**	**+3.0**
ZON	**Zonda**	**2.67**	**62**	*i* P		**Pn**	**22 40 27.5**	**+3.3**
ZON				IAML			22 40 46.9	
	comp=Z,1µm,0.5s							
GO04	**Tololo Observa**	**2.71**	**12**			**Pn**	**22 40 26.6**	**+1.7**
SJA	**San Juan**	**2.77**	**63**	*i* P		**Pn**	**22 40 28.7**	**+3.2**
RTLL	**Cerro Villicun**	**2.93**	**60**	*i* P		Pn	22 40 31.4	+3.7
RTLL				IAML			22 41 37.6	
	comp=E,11µm,0.5s							
AMOG	**MOGNA**	**3.14**	**54**	*i* P		**Pn**	**22 40 34.0**	**+3.3**
ACAN	**Cantantal**	**3.63**	**82**	*i* P		**Pn**	**22 40 40.2**	**+2.9**
VCA	**Vinchina**	**4.95**	**35**	*i* P		**Pn**	**22 40 58.8**	**+3.3**
VCA				IAML			22 41 30.5	
	comp=Z,939nm,0.5s							
PLCA	**Paso Flores**	**7.91**	**175**	P		**Pn**	**22 41 36.1**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=6.6,slow=12,SNR=34							
PLCA	**Paso Flores**	**7.91**	**175**			**Pn**	**22 41 36.3**	**+0.2**
PB10	**IPOC Station P**	**9.32**	**5**			Pn	22 42 02.5	+7.1
LVC	**Limon Verde**	**10.43**	**13**	P		**Pn**	**22 42 07.7**	**-3.2**
	comp=Z,1.0nm,0.3s,baz=162,slow=9.2,SNR=8.1							
LVC				S		**Sn**	**22 44 00.3**	**-6.3**
	comp=Z,1.3nm,0.3s,baz=330,slow=20,SNR=3.0							
LVC				LR		LR	22 46 24.7	
	comp=Z,292nm,21.3s,baz=201,slow=39							
LVC	**Limon Verde**	**10.43**	**13**	*e*P		**Pn**	**22 42 10.4**	**-0.5**
LVC	**Limon Verde**	**10.43**	**13**			**Pn**	**22 42 07.4**	**-3.5**
PB04	**IPOC Station P**	**10.53**	**7**			**Pn**	**22 42 08.9**	**-3.1**
ITQB	**Itaqui**	**13.06**	**80**	*e*P		**Pn**	**22 42 44.0**	**-2.5**
PB11	**IPOC Station P**	**13.12**	**7**			**Pn**	**22 42 44.5**	**-3.0**
MNMC	**Minye Minye**	**13.75**	**7**			**Pn**	**22 42 56.3**	**+0.1**
CPUP	**Villa Florida**	**13.88**	**66**	P		**Pn**	**22 42 56.5**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=225,slow=14,SNR=2.8							
CPUP				LR		LR	22 48 41.1	
	comp=Z,340nm,20.4s,baz=248,slow=39							
CPUP	**Villa Florida**	**13.88**	**66**	*e*P		**Pn**	**22 42 56.2**	**-1.4**
CPUP	**Villa Florida**	**13.88**	**66**	P		**Pn**	**22 42 55.1**	**-2.5**
PLTB	**Pedras Altas**	**15.12**	**91**	*e*P		**Pn**	**22 43 12.0**	**-2.0**
LPAZ	**La Paz**	**16.75**	**11**	P		**P**	**22 43 36.5**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=185,slow=3.4,SNR=14							
LPAZ				pP		**pP**	**22 43 45.7**	**-2.6**
	comp=Z,0.4nm,0.3s,baz=183,slow=8.1,SNR=7.2							
LPAZ	**La Paz**	**16.75**	**11**	*e*P		**Pn**	**22 43 36.1**	**+0.6**
LPAZ	**La Paz**	**16.75**	**11**			**P**	**22 43 36.5**	**-0.6**
ITAB	**Concordia**	**17.62**	**77**	*e*P		**Pn**	**22 43 44.3**	**-1.2**
CNLB	**Canela**	**17.98**	**84**	*e*P		**Pn**	**22 43 48.6**	**-1.4**
AQDB	**Aquidauana**	**18.66**	**53**	*e*P		**Pn**	**22 43 57.3**	**-1.1**
PTGB	**Pitanga**	**18.79**	**69**	*e*P		**Pn**	**22 43 59.1**	**-0.8**
SIV	**San Ignacio**	**19.23**	**32**	P		**P**	**22 44 03.3**	**-0.5**
	comp=Z,2.3nm,0.3s,baz=225,slow=9.0,SNR=32							
SIV				pP		**pP**	**22 44 16.3**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=220,slow=11,SNR=6.3							
TRCB	**Terra Rica**	**19.38**	**64**	*e*P		**P**	**22 44 05.1**	**-0.4**
PCMB	**Pacaembu**	**21.11**	**63**	*e*P		**P**	**22 44 22.9**	**-1.3**
EFI	**East Falkland**	**21.20**	**157**	P		**P**	**22 44 22.5**	**-2.4**
EFI				IAmb		IAmb	22 44 39.6	
	comp=Z,113nm,1.4s							
PP1B	**Ponte de Pedra**	**21.28**	**49**	*e*P		**P**	**22 44 25.1**	**-0.9**
NNA	**Nana**	**21.34**	**345**	P		**P**	**22 44 30.0**	**+3.3**
	comp=Z,4.0nm,0.3s,baz=162,slow=8.8,SNR=3.8							
FRTB	**Fartura**	**21.46**	**69**	*e*P		**P**	**22 44 27.4**	**-0.5**
C2SB	**Chapadao do Su**	**21.79**	**55**	*e*P		**P**	**22 44 31.1**	**-0.3**
SALV	**Santo Antonio**	**22.09**	**44**	*e*P		**P**	**22 44 33.8**	**-0.9**
USHA	**Ushuaia**	**22.09**	**175**	P		**P**	**22 44 34.8**	**+0.5**
	comp=Z,12nm,0.6s,baz=5.5,slow=8.1,SNR=7.3							
ITRB	**Iturama**	**22.93**	**60**	*e*P		**P**	**22 44 41.7**	**-1.9**
SPB	**Sao Paulo**	**23.03**	**73**	*e*P		**P**	**22 44 44.5**	**-0.1**
BB19B	**Bebedouro**	**23.49**	**66**	*e*P		**P**	**22 44 46.7**	**-2.5**
RCLB	**Rio Claro- Sao**	**23.54**	**70**	*e*P		**P**	**22 44 48.6**	**-1.0**
VAO	**Valinhos**	**23.69**	**72**	*e*P		**P**	**22 44 50.0**	**-1.1**
ARAG	**Araguaiana, MT**	**24.64**	**51**	*e*P		**P**	**22 44 58.5**	**-1.2**
SAML	**Samuel**	**24.97**	**20**	*e*P		**P**	**22 45 03.8**	**+1.1**
SAML	**Samuel**	**24.97**	**20**	P		**P**	**22 45 01.6**	**-1.1**
IPMB	**Ipameri, GO**	**25.59**	**60**	*e*P		**P**	**22 45 06.9**	**-1.4**
CLDB	**Colider**	**26.17**	**37**	*e*P		**P**	**22 45 13.4**	**-0.2**
PMNB	**Patos De Minas**	**26.56**	**64**	*e*P		**P**	**22 45 15.8**	**-1.5**

BDFB Brasilia 27.27 57 P **P 22 45 22.7 -0.9**
comp=Z,9.3nm,0.7s,baz=241,slow=9.7,SNR=17
BDFB pP **pP 22 45 37.7 +1.2**
comp=Z,21nm,0.9s,baz=222,slow=8.4,SNR=9.8
BDFB LR LR 22 57 17.9
comp=Z,298nm,18.7s,baz=235,slow=39
BDFB Brasilia 27.27 57 P **P 22 45 23.1 -0.5**
BDFB IAmb IAmb 22 45 42.5
comp=Z,40nm,1.2s
JANB Januaria 30.32 61 *e*P **P 22 45 49.5 -1.2**
SJMB Sao Joao De Ma 30.54 70 *e*P **P 22 45 51.7 -0.8**
BSFB Barra de Sao F 30.73 71 *e*P **P 22 45 53.2 -1.0**
PMSA Palmer Station 32.28 174 *e*P **P 22 46 05.9 -1.4**
SMTB Santa Maria do 32.49 48 *e*P **P 22 46 09.5 -0.2**
HOPE Hope Point 32.67 142 P **P 22 46 10.4 -0.4**
NBPN Ponto Novo - B 36.10 60 *e*P **P 22 46 39.6 -1.4**
NBLA Lagarto - SE 37.78 63 *e*P **P 22 46 53.9 -1.4**
NBTA Tacaratu-PE 38.81 60 *e*P **P 22 47 01.7 -2.2**
NBMA Muriti-CE 39.50 57 *e*P **P 22 47 09.0 -0.7**
NBCL Cascavel-CE 42.06 54 *e*P **P 22 47 32.0 +1.2**
VNA3 Neumayer Olymp 50.24 158 P **P 22 48 34.7 +0.3**
SNAA Sanae 52.47 158 P **P 22 48 51.1 0.0**
SNAA Sanae 52.47 158 P **P 22 48 51.0 -0.2**
comp=Z,9.4nm,0.7s,baz=276,slow=7.4,SNR=22
SNAA pP **pP 22 49 05.7 +1.1**
comp=Z,13nm,0.7s,baz=267,slow=6.5,SNR=15
SNAA sP **sP 22 49 11.8 +1.6**
comp=Z,26nm,0.9s,baz=248,slow=6.2,SNR=12
SNAA Sanae 52.47 158 P **P 22 48 51.2 +0.1**
TEIG Tepich 55.17 341 P **P 22 49 11.9 +0.6**
comp=Z,21nm,0.5s
TEIG pP **pP 22 49 25.5 +0.9**
QSPA South Pole Qui 57.39 180 P **P 22 49 27.4 +0.5**
comp=Z,25nm,0.6s,baz=149,slow=2.3,SNR=77
QSPA pP **pP 22 49 42.7 +2.2**
comp=Z,9.7nm,0.7s,baz=122,slow=1.3,SNR=5.6
QSPA South Pole Qui 57.39 180 P **P 22 49 27.5 +0.6**
H06S1 SOCORRO T 63.70 318 T T 23 59 24.2
SNR=8.7
H06E1 SOCORRO T-PHAS 63.72 318 T T 23 59 25.0
SNR=19
VNDA Vanda 65.33 191 P **P 22 50 21.1 +0.9**
comp=Z,4.1nm,0.9s,baz=111,slow=4.5,SNR=14
VNDA Vanda 65.33 191 P **P 22 50 21.4 +1.3**
253A Americus 65.66 348 P **P 22 50 22.0 -0.6**
baz=168
833A Chaparral WMA, 66.37 333 P **P 22 50 26.9 -0.5**
baz=154
Z54A Sparta 66.60 350 P **P 22 50 28.4 -0.3**
baz=170
Z53A Monticello 66.75 349 P **P 22 50 29.3 -0.3**
baz=169
SYO Syowa Base 66.76 159 ↓*iX* P 22 50 19.6 -10
GOGA Godfrey 66.87 349 P **P 22 50 30.3 0.0**
baz=169
Y55A Saluda 67.14 351 P **P 22 50 32.0 -0.1**
baz=170
Z50A Ashland 67.14 347 P **P 22 50 32.3 +0.1**
baz=167
LRAL Lakeview Retre 67.14 346 P **P 22 50 32.3 +0.2**
baz=166
Y54A Tignall 67.19 350 P **P 22 50 32.3 -0.1**
baz=170
Y53A Monroe 67.32 349 P **P 22 50 32.9 -0.4**
baz=169
X60A Albert Glenn T 67.34 354 P **P 22 50 33.6 +0.2**
baz=174
TAOE Nuku Hiva Isla 67.38 274 *e*LR LR 23 10 59.7
comp=Z,196nm,26.4s
Y52A Lilburn 67.41 349 P **P 22 50 34.0 +0.1**
baz=168
X58A Rowland 67.45 353 P **P 22 50 34.6 +0.5**
baz=173
X56A White Oak 67.58 351 P **P 22 50 35.0 +0.1**
baz=171
Y51A Rockmart 67.61 348 P **P 22 50 34.9 -0.2**
baz=168
X54A Belton 67.82 350 P **P 22 50 36.2 -0.2**
baz=170
W58A Raeford 67.90 353 P **P 22 50 37.0 +0.1**
baz=173
X53A Estanollee 67.91 349 P **P 22 50 36.9 -0.1**
baz=169
TBI Tubuai 68.08 256 *e*LR LR 23 11 29.7
comp=Z,349nm,25.2s
TBI Tubuai 68.08 256 *e*T T 00 04 43.3
comp=Z,12nm,0.3s
X52A Dahlonega 68.10 349 P **P 22 50 38.4 +0.2**
baz=169
X51A Calhoun 68.23 348 P **P 22 50 39.1 +0.1**
baz=168
W54A Cherokee Point 68.32 351 P **P 22 50 39.9 +0.3**
baz=170
JCT Junction City 68.46 334 IAmb IAmb 22 50 56.4
comp=Z,18nm,1.1s
JCT Junction City 68.46 334 P **P 22 50 41.5 +0.9**
baz=154
V60A Jim Taylor Roa 68.47 355 P **P 22 50 40.8 +0.4**
baz=175
X48A Hartselle 68.53 346 IAmb IAmb 22 50 42.0
comp=Z,16nm,0.9s
W53A Cullowhee 68.54 350 P **P 22 50 41.2 +0.2**
baz=169
V58A Windy Hill, Pi 68.65 353 P **P 22 50 41.9 +0.3**
baz=173
Z41A Richland Creek 68.76 341 P **P 22 50 43.3 +1.0**
baz=161
W51A Cleveland 68.79 348 P **P 22 50 42.9 +0.4**
baz=168
V56A Mocksville 68.82 352 P **P 22 50 43.3 +0.7**
baz=172
W50A Signal Mountai 68.92 348 IAmb IAmb 22 50 58.2
comp=Z,14nm,0.8s
W50A Signal Mountai 68.92 348 P **P 22 50 43.8 +0.4**
baz=167
V55A Taylorsville 68.94 351 P **P 22 50 44.0 +0.5**
baz=171
V54A Nebo 68.97 351 P **P 22 50 44.0 +0.4**
baz=170
U61A Possum Corner 68.97 356 P **P 22 50 44.5 +1.0**
baz=175
TXAR Lajitas Array 68.98 330 P **P 22 50 44.9 +1.0**
comp=Z,3.5nm,0.6s,baz=154,slow=8.5,SNR=35
TXAR pP **pP 22 50 59.2 +1.5**
comp=Z,1.3nm,0.5s,baz=153,slow=9.0,SNR=6.7
TXAR Lajitas Array 68.98 330 P **P 22 50 44.7 +0.8**
V53A Saluda 68.98 350 P **P 22 50 44.2 +0.5**
baz=170
WHTX Lake Whitney, 69.01 336 P **P 22 50 45.0 +1.2**
baz=157
W49A Belvidere 69.02 347 P **P 22 50 44.3 +0.4**
baz=167
SWET Sewanee 69.05 347 IAmb IAmb 22 50 45.2
comp=Z,15nm,0.7s
U59A Littleton 69.09 355 P **P 22 50 45.3 +1.0**
baz=174
OXF Oxford 69.09 344 P **P 22 50 44.4 +0.1**
baz=164
TKL Tuckaleechee C 69.11 349 P **P 22 50 44.4 0.0**
comp=Z,4.7nm,0.5s,baz=168,slow=8.5,SNR=13
U60A Pendleton 69.16 355 P **P 22 50 45.3 +0.6**
baz=175
U58A Oxford 69.20 354 P **P 22 50 45.7 +0.7**
baz=174
V52A Sevierville 69.27 349 P **P 22 50 45.3 -0.1**
baz=169
U56A King 69.33 352 P **P 22 50 46.2 +0.4**
baz=172
V50A Pikevile 69.35 348 P **P 22 50 46.2 +0.3**
baz=168
V51A Loudon 69.35 349 P **P 22 50 46.1 +0.1**
baz=168
X43A Marvell 69.45 343 P **P 22 50 47.4 +0.9**
baz=162
V49A McMinnville 69.58 347 P **P 22 50 47.3 0.0**
baz=167
U53A Fall Branch 69.63 350 P **P 22 50 47.5 -0.2**
baz=170
U54A Nelsons Funny 69.68 351 P **P 22 50 47.8 -0.3**
baz=171
T59A Double "B" Far 69.69 355 P **P 22 50 48.5 +0.6**
baz=174
T58A Grand View Acr 69.74 354 P **P 22 50 49.0 +0.7**
baz=174
T60A Surry 69.80 355 P **P 22 50 49.5 +0.9**
baz=175
U51A La Follette 69.86 349 P **P 22 50 49.2 +0.1**

baz=169
T56A **Rocky Mt** 69.97 353 P P 22 50 50.0 +0.2
baz=172
U50A **Jamestown** 70.03 349 P P 22 50 50.5 +0.4
baz=168
T54A **Tazewell** 70.18 351 P P 22 50 51.2 +0.1
baz=171
MIAR **Mount Ida** 70.18 341 P P 22 50 51.2 +0.1
baz=160
T53A **Wise** 70.23 351 P P 22 50 51.2 -0.2
baz=170
U49A **Red Boiling Sp** 70.29 348 P P 22 50 51.7 0.0
baz=167
WVT **Waverly** 70.31 346 P P 22 50 51.9 +0.1
WVT **Waverly** 70.31 346 P P 22 50 52.1 +0.4
baz=165
ABTX **Abilene, Hawle** 70.34 335 P P 22 50 52.8 +0.7
baz=155
S58A **Poland Farm, P** 70.36 354 P P 22 50 52.8 +0.8
baz=174
W41B **Gary Mavity, V** 70.42 342 P P 22 50 52.8 +0.3
baz=161
T51A **Gray** 70.42 349 P P 22 50 52.6 +0.1
baz=169
S59A **Mechanicsville** 70.45 355 P P 22 50 53.3 +0.7
baz=175
S56A **Natural Bridge** 70.56 353 P P 22 50 53.8 +0.4
baz=173
S57A **Dark Hollow, R** 70.59 354 P P 22 50 54.1 +0.6
baz=173
R58B **Mineral** 70.70 355 P P 22 50 54.7 +0.6
baz=174
S55A **Lewisburg** 70.76 352 P P 22 50 55.3 +0.7
baz=172
T49A **Edmonton** 70.82 348 P P 22 50 54.9 0.0
baz=167
W39A **Magazine** 70.85 341 P P 22 50 56.1 +1.0
baz=160,SNR=12
PPT2 **Papeete2** 70.91 261 *e*LR LR 23 12 25.3
comp=Z,69nm,28.2s
R60A **Leonardtown, M** 70.91 356 P P 22 50 56.6 +1.2
baz=175
T47A **Sharon Grove** 70.99 347 IAmb IAmb 22 50 56.7
comp=Z,9.6nm,0.8s
S51A **Beattyville** 71.03 350 P P 22 50 56.2 0.0
baz=169
R58A **Rapidan** 71.04 355 P P 22 50 56.8 +0.6
baz=174
R57A **Stanardsville** 71.08 354 P P 22 50 57.2 +0.8
baz=174
S50A **Richmond** 71.19 349 P P 22 50 57.4 +0.2
baz=168
R54A **Victor** 71.22 352 P P 22 50 57.4 +0.1
baz=171
R55A **Marlinton** 71.22 353 P P 22 50 58.1 +0.7
baz=172
R56A **Bull Pasture M** 71.27 353 P P 22 50 57.9 +0.2
baz=173
R53A **Hurricane** 71.48 351 P P 22 50 59.1 +0.2
baz=171
Q58A **Fox Den Farm,** 71.65 355 P P 22 51 00.7 +0.8
baz=174
R51A **Hillsboro** 71.67 350 P P 22 51 00.3 +0.3
baz=169
U40A **Yellville** 71.69 342 IAmb IAmb 22 51 01.4
comp=Z,16nm,0.9s
U40A **Yellville** 71.69 342 P P 22 51 00.5 +0.2
baz=161,SNR=8.4
MNTX **Cornudas Mount** 71.76 330 IAmb IAmb 22 51 01.5
comp=Z,12nm,0.7s
MNTX **Cornudas Mount** 71.76 330 P P 22 51 01.0 +0.3
baz=150
Q57A **Strasburg** 71.81 354 P P 22 51 02.0 +1.2
baz=174
Q56A **Snyder Ridge,** 71.88 354 P P 22 51 01.9 +0.6
baz=173
HHAR **Hobbs** 71.91 341 IAmb IAmb 22 51 02.2
comp=Z,12nm,0.7s
R49A **Shelbyville** 71.92 349 P P 22 51 01.3 -0.2
baz=168
Q55A **Buckhannon** 71.92 353 P P 22 51 02.4 +0.8
baz=172
WMOK **Wichita Mounta** 71.96 337 P P 22 51 01.9 0.0
baz=156
HSIG 72.04 324 IAmb IAmb 22 51 04.3
comp=Z,7.1nm,0.9s
TUL1 **Leonard** 72.10 339 P P 22 51 02.8 +0.1
baz=159
Q52A **Bidwell** 72.14 351 P P 22 51 03.2 +0.4
baz=170
P57A **Homestead Farm** 72.22 355 P P 22 51 04.2 +0.9
baz=174
P59A **Jarrettsville** 72.23 356 P P 22 51 04.6 +1.2
baz=176
MGMO **Mountain Grove** 72.30 343 IAmb IAmb 22 51 05.1
comp=Z,7.1nm,0.9s
Q51A **Peebles** 72.35 350 P P 22 51 04.2 +0.1
baz=169
P55A **Reedsville** 72.40 353 P P 22 51 05.0 +0.6
baz=172
P53A **Whipple** 72.55 352 P P 22 51 04.3 -1.0
baz=171
P54A **Burton** 72.56 353 P P 22 51 04.9 -0.4
baz=172
Q49A **Aurora** 72.57 349 P P 22 51 05.2 -0.1
baz=168
Q48A **North Vernon** 72.63 348 P P 22 51 05.7 0.0
baz=167
MSTX **Muleshoe** 72.70 333 IAmb IAmb 22 51 07.8
comp=Z,17nm,0.8s
MSTX **Muleshoe** 72.70 333 P P 22 51 06.3 -0.1
baz=153
P51A **Williamsport** 72.76 351 P P 22 51 06.4 -0.1
baz=170
P52A **Corning** 72.79 351 P P 22 51 07.1 +0.5
baz=170
O60A **Telford** 72.89 357 P P 22 51 07.9 +0.7
baz=176
CCM **Cathedral Cave** 72.91 344 P P 22 51 07.8 +0.4
CCM **Cathedral Cave** 72.91 344 P P 22 51 08.2 +0.8
baz=163
O59A **Robesonia** 72.92 356 P P 22 51 08.4 +0.9
baz=176
P50A **Jamestown** 72.99 350 P P 22 51 08.3 +0.4
baz=169
O55A **Ligonier** 73.05 354 P P 22 51 08.7 +0.5
baz=173
P48A **Milroy** 73.10 349 P P 22 51 08.3 -0.2
baz=168
AMTX **Amarillo** 73.11 334 IAmb IAmb 22 51 11.2
comp=Z,17nm,1.1s
AMTX **Amarillo** 73.11 334 P P 22 51 09.4 +0.6
baz=154
319A **Douglas** 73.20 327 IAmb IAmb 22 51 12.1
comp=Z,18nm,1.2s
O52A **Adamsville** 73.23 352 P P 22 51 09.2 -0.1
baz=171
N61A **South Mountain** 73.27 358 P P 22 51 09.7 +0.2
baz=177
O51A **Pataskala** 73.35 351 P P 22 51 09.9 -0.1
baz=170
N60A **Cedar Hill Far** 73.42 357 P P 22 51 10.8 +0.4
baz=177
N57A **Milroy** 73.45 355 P P 22 51 10.8 +0.3
baz=174
N58A **Sunbury** 73.48 356 P P 22 51 11.3 +0.6
baz=175
ACSO **Alum Creek Sta** 73.49 351 P P 22 51 10.7 0.0
baz=170
O50A **Cable** 73.49 350 P P 22 51 10.7 -0.1
baz=169
121A **Cookes Peak, D** 73.51 329 IAmb IAmb 22 51 14.0
comp=Z,15nm,0.8s
121A **Cookes Peak, D** 73.51 329 P P 22 51 13.1 +1.8
baz=149
N55A **Marion Center** 73.59 354 P P 22 51 12.0 +0.6
baz=173
O49A **Covington** 73.64 350 P P 22 51 11.5 -0.1
baz=169
N56A **West Decatur** 73.66 355 P P 22 51 10.6 -1.3
baz=174
O48A **Farmland** 73.83 349 P P 22 51 12.5 -0.3
baz=168
M60A **Port Jervis** 73.86 358 P P 22 51 13.8 +0.9
baz=177
N54A **Moraine State** 73.86 353 P P 22 51 13.4 +0.4
baz=172
M62A **Hamden** 73.93 359 P P 22 51 14.2 +0.9
baz=179
LIC **Lamto** 73.93 71 *e*PKP1 P 22 51 14.4 +0.4
comp=Z,7.9nm,0.7s
N50A **Nevada** 74.04 351 P P 22 51 13.9 -0.1
baz=170
MAW **Mawson** 74.15 163 P P 22 51 14.6 +0.2
comp=Z,7.7nm,0.7s,baz=228,slow=6.2,SNR=8.6
MAW **Mawson** 74.15 163 P P 22 51 14.9 +0.5
TIC **Toumodi** 74.19 71 *e*PKP1 P 22 51 14.2 -1.3
KIC **Kosan Boka** 74.24 72 *e*PKP1 P 22 51 15.3 -0.5
comp=Z,9.6nm,0.8s
DBIC **Dimbokro** 74.33 71 P P 22 51 16.1 -0.3
comp=Z,3.6nm,0.6s,baz=233,slow=4.7,SNR=11
DBIC pP pP 22 51 30.3 -0.2
comp=Z,9.2nm,0.6s,baz=222,slow=5.7,SNR=8.6
DBIC LR LR 23 20 48.7
comp=Z,31nm,21.4s,baz=216,slow=33
DBIC **Dimbokro** 74.33 71 P P 22 51 17.9 +1.5
DBIC IAmb IAmb 22 51 30.7
comp=Z,11nm,0.7s
N49A **Columbus Grove** 74.33 350 P P 22 51 15.5 -0.2
baz=169
N48A **Decatur** 74.40 349 P P 22 51 16.0 -0.1
baz=168
M53A **Wl Miller and** 74.40 353 P P 22 51 15.7 -0.4
baz=172
N47A **Urbana** 74.53 349 P P 22 51 16.3 -0.5
baz=168
M52A **Chesterland** 74.58 352 P P 22 51 16.8 -0.4
baz=171
TUC **Tucson** 74.68 326 P P 22 51 19.7 +1.6
TUC **Tucson** 74.68 326 P P 22 51 19.4 +1.3
baz=146
BINY **Binghamton** 74.79 356 P P 22 51 18.4 +0.1
baz=176
L56A **Greenwood** 74.82 355 P P 22 51 19.1 +0.6
baz=175
M49A **Liberty Center** 74.85 350 P P 22 51 18.5 -0.2
baz=169
HDIL **Hopedale** 74.87 346 P P 22 51 19.1 +0.2
baz=164
L61B **Northampton** 74.93 359 P P 22 51 18.8 -0.4
baz=179
L55A **Hinsdale** 74.93 355 P P 22 51 19.4 +0.2
baz=174
M48A **Edgerton** 74.96 350 P P 22 51 19.2 -0.2
baz=168
ANMO **Albuquerque** 75.01 331 P P 22 51 21.0 +1.0
comp=Z,3.9nm,0.9s,baz=143,slow=9.2,SNR=7.5
ANMO **Albuquerque** 75.01 331 P P 22 51 21.7 +1.7
ANMO **Albuquerque** 75.01 331 P P 22 51 21.4 +1.4
baz=150
L54A **Sinclairville** 75.06 354 P P 22 51 20.5 +0.6
baz=173
KSU1 **Kansas State U** 75.30 340 P P 22 51 21.7 +0.3
baz=158
214A **Organ Pipe Nat** 75.36 324 P P 22 51 23.4 +1.5
baz=145
L49A **Milan** 75.44 351 P P 22 51 22.1 0.0
baz=169
L47A **Sherwood** 75.52 349 P P 22 51 22.2 -0.4
baz=168
CBKS **Cedar Bluff** 75.99 338 P P 22 51 26.2 +0.9
baz=156,SNR=5.1
T25A **Trinidad** 76.12 333 P P 22 51 28.1 +1.7
baz=152,SNR=12
W18A **Petrified Fore** 76.56 329 IAmb IAmb 22 51 31.4
comp=Z,15nm,1.1s
W18A **Petrified Fore** 76.56 329 P P 22 51 30.1 +1.2
baz=148
J48A **Bridge Port** 76.61 351 P P 22 51 28.9 +0.2
baz=169
I53A **Kortright Cn E** 76.66 354 P P 22 51 29.1 +0.2
baz=178
J47A **Sumner** 76.70 350 P P 22 51 29.2 0.0
baz=168
X16A **Lo Mia Camp, P** 76.74 327 IAmb IAmb 22 51 32.6
comp=Z,12nm,1.1s
I51A **Listowel** 76.78 353 P P 22 51 29.8 +0.1
baz=172
H61A **Lyndonville** 77.01 360 P P 22 51 32.6 +1.6
baz=180
SCIA **State Center** 77.03 343 P P 22 51 31.8 +0.7
baz=173
SDCO **Great Sand Dun** 77.07 333 P P 22 51 33.0 +1.2
baz=151,SNR=7.2
Y14A **Wickenburg** 77.07 326 IAmb IAmb 22 51 34.1
comp=Z,7.9nm,1.2s
H56A **Elgin** 77.19 356 P P 22 51 32.3 +0.4
baz=176
H55A **Tweed** 77.20 356 P P 22 51 34.0 +2.0
baz=175
JFWS **Jeff Farm** 77.33 346 P P 22 51 33.0 +0.2
baz=164
I48A **Sherman Twp** 77.47 351 P P 22 51 33.8 +0.3
baz=169
I46A **Reed City** 77.48 350 P P 22 51 32.9 -0.7
baz=168
SADO **Sadowa** 77.56 354 P P 22 51 34.0 0.0
comp=Z,7.0nm,0.7s,baz=218,slow=2.6,SNR=8.3
SADO pP pP 22 51 48.8 +0.7
comp=Z,9.5nm,1.0s,baz=132,slow=3.0,SNR=1.1
IKP **In-Ko-Pah, Jac** 77.57 323 P P 22 51 36.3 +1.8
baz=143
S22A **4UR Ranch, Cre** 77.58 332 P P 22 51 36.0 +1.3
baz=150
WUAZ **Wupatki** 77.62 328 PcP 22 51 46.0 +1.1
WUAZ **Wupatki** 77.62 328 P P 22 51 36.2 +1.4
baz=146,SNR=5.5
Y12C **Blythe** 77.66 324 P P 22 51 36.4 +1.6
baz=144
G61A **St-Isidore-de-** 77.75 360 P P 22 51 35.7 +0.6
baz=180
MVCO **Mesa Verde** 77.80 331 IAmb IAmb 22 51 52.2
comp=Z,9.9nm,1.1s
MVCO **Mesa Verde** 77.80 331 P P 22 51 37.1 +1.2
baz=149
G53A **Haliburton** 77.87 355 P P 22 51 36.1 +0.4
baz=174
BGNE **Belgrade** 77.88 340 P P 22 51 36.7 +0.8
baz=157
MONP2 **Monument Peak** 77.92 323 P P 22 51 38.3 +1.7
baz=142
Q24A **Divide** 78.00 334 IAmb IAmb 22 51 39.2
comp=Z,15nm,0.8s
BC3 **Big Chuckawall** 78.04 324 P P 22 51 38.7 +1.6
baz=143,SNR=7.9
IRM **Iron Mountain** 78.29 324 P P 22 51 39.7 +1.4
baz=144,SNR=5.4
F59A **Saint Guillaume** 78.33 359 P P 22 51 40.0 +1.8
baz=179
F64A **Sherman** 78.39 2 P P 22 51 39.0 +0.5
baz=182
XPFO **Pion Flat** 78.51 323 P P 22 51 41.9 +2.2
XPFO IAmb IAmb 22 51 42.6
comp=Z,8.5nm,0.9s
PFO **Pinyon Flats O** 78.51 323 P P 22 51 41.5 +1.8
comp=Z,4.7nm,0.7s,baz=124,slow=6.0,SNR=8.2
PFO **Pinyon Flats O** 78.51 323 P P 22 51 41.9 +2.2
PFO IAmb IAmb 22 51 42.6
comp=Z,9.2nm,1.0s
PFO **Pinyon Flats O** 78.51 323 P P 22 51 41.7 +2.0
baz=143
BELC **Belle Mtn. Jos** 78.59 324 P P 22 51 41.8 +1.7
baz=143
ALGO **Algonquin Park** 78.66 355 P P 22 51 40.1 +0.1
baz=174
F51A **Arnstein** 78.78 354 P P 22 51 40.8 +0.1
baz=173
F49A **Sandfield** 78.82 352 P P 22 51 42.5 +1.5
baz=171
E58A **La Victoria** 78.86 359 P P 22 51 41.8 +0.6
baz=178
MURC **Murrieta** 78.88 322 P P 22 51 43.4 +1.8
baz=142
SMCO **Snowmass** 78.88 333 IAmb IAmb 22 51 58.7
comp=Z,9.3nm,0.9s
ISCO **Idaho Springs** 78.90 334 P P 22 51 43.3 +1.4
baz=151
F48A **Evansville** 78.95 352 P P 22 51 41.8 +0.2
baz=170
GMRC **Granite Mounta** 79.04 324 P P 22 51 44.5 +1.8
baz=143,SNR=6.3
E56A **St. Veronique** 79.08 357 P P 22 51 42.8 +0.4
baz=177
HEC **Hector,Ludlow** 79.41 324 P P 22 51 46.7 +2.1
baz=143,SNR=9.2
D57A **Chemin Vers le** 79.52 358 P P 22 51 45.4 +0.6
baz=178
E48A **Lockeyer** 79.55 352 P P 22 51 46.0 +1.0
baz=171
D58A **Chemin du LacG** 79.58 359 P P 22 51 45.9 +0.8
baz=179
ECSD **EROS Data Cent** 79.60 342 P P 22 51 45.8 +0.5
baz=159
BFSC **Mount Baldy Ra** 79.62 323 P P 22 51 47.4 +1.7
baz=142
TUQ **Turquoise Moun** 79.69 324 P P 22 51 47.9 +1.8
baz=143,SNR=7.8
N23A **Red Feather La** 79.98 334 P P 22 51 48.3 +0.5
baz=151
GSC **Goldstone, Bar** 80.02 324 P P 22 51 49.5 +1.6
baz=142,SNR=5.4
SPMN **Marine on St.** 80.08 345 P P 22 51 47.7 -0.1
baz=162
BOSA **Boshof** 80.16 118 P P 22 51 48.3 -0.8
comp=Z,3.4nm,0.6s,baz=245,slow=2.4,SNR=7.2
BOSA pP pP 22 52 03.0 -0.3
comp=Z,8.0nm,0.6s,baz=244,slow=3.8,SNR=11
BOSA **Boshof** 80.16 118 P P 22 51 49.0 -0.1
BOSA IAmb IAmb 22 52 03.6
comp=Z,8.8nm,0.7s
O20A **White River Ci** 80.20 332 P P 22 51 49.8 +0.9
baz=149
SHOC **Shoshone, Teco** 80.24 324 P P 22 51 50.4 +1.5
baz=143
EDW2 **Edwards Air Fo** 80.29 323 P P 22 51 50.6 +1.3
baz=142,SNR=5.5
SCZ2 **Santa Cruz Isl** 80.45 321 P P 22 51 51.5 +1.4
baz=140
LRMC **Laurel Mtn Rad** 80.60 323 P P 22 51 52.6 +1.5
baz=142
MPMC **Manual Prospec** 80.96 324 P P 22 51 54.4 +1.3
baz=142
FURC **Furnace Creek,** 80.97 324 P P 22 51 54.7 +1.9
baz=143
TPNV **Topopah Spring** 81.06 325 P P 22 51 55.4 +1.8
baz=143,SNR=7.2
ISA **Isabella, Lake** 81.14 323 P P 22 51 55.8 +1.9
baz=141,SNR=6.8
CASY **Casey** 81.19 181 P P 22 51 54.5 +0.8
CASY IAmb IAmb 22 51 55.2
comp=Z,14nm,0.9s
PKM **Mcpherson Peak** 81.24 322 P P 22 51 56.4 +1.8
baz=140,SNR=7.4
CWC **Cottonwood Cre** 81.56 324 P P 22 51 57.6 +1.4
baz=142
VES **Vestal, Richgr** 81.59 323 P P 22 51 57.8 +1.7
baz=141
LSQQ **Lebel-sur-Quev** 81.68 356 P P 22 51 56.4 +0.1
baz=175
K22A **Casper** 81.73 335 IAmb IAmb 22 51 59.0
comp=Z,26nm,1.4s
K22A **Casper** 81.73 335 P P 22 51 58.1 +1.2
baz=151
R11A **Troy Canyon, C** 81.87 326 P P 22 51 59.1 +1.3
baz=144,SNR=7.5
TIN **Tinemaha, Big** 82.11 324 P P 22 52 00.8 +1.8
baz=142
DUG **Dugway, Tooele** 82.13 329 IAmb IAmb 22 52 01.9
comp=Z,17nm,1.5s
DUG **Dugway, Tooele** 82.13 329 P P 22 52 00.2 +1.1
baz=146
RSSD **Black Hills** 82.16 337 P P 22 52 00.1 +0.9
RSSD IAmb IAmb 22 52 01.2
comp=Z,12nm,1.2s
RSSD **Black Hills** 82.16 337 P P 22 51 60.0 +0.8
baz=153
EYMN **Ely** 82.41 347 IAmb IAmb 22 52 01.2
comp=Z,17nm,1.3s
EYMN **Ely** 82.41 347 P P 22 52 00.6 +0.5
baz=163
HWUT **Hardware Ranch** 82.78 331 IAmb IAmb 22 52 03.5
comp=Z,6.0nm,0.8s
PDAR **Pinedale Array** 82.96 333 P P 22 52 03.6 +0.2
comp=Z,1.5nm,0.6s,baz=135,slow=6.7,SNR=15
PDAR pP pP 22 52 19.1 +1.5
comp=Z,1.2nm,0.9s,baz=138,slow=7.1,SNR=3.7
PDAR **Pinedale Array** 82.96 333 P P 22 52 03.3 -0.1
BW06 **Boulder Array** 82.96 333 P P 22 52 04.1 +0.7
baz=148
NVAR **Mina Array Bea** 83.22 325 P P 22 52 05.9 +1.0
comp=Z,3.8nm,0.6s,baz=150,slow=5.8,SNR=36
NVAR pP pP 22 52 20.6 +1.6
comp=Z,1.8nm,0.8s,baz=169,slow=5.7,SNR=4.6
NVAR **Mina Array Bea** 83.22 325 P P 22 52 06.1 +1.2
TOA0 **Torodi Ar. Sit** 83.34 70 P P 22 52 05.8 +0.1
TOA0 IAmb IAmb 22 52 20.4
comp=Z,8.9nm,0.8s
TORD **Torodi Ar. Bea** 83.34 70 P P 22 52 05.4 -0.4
comp=Z,6.4nm,0.8s,baz=273,slow=4.2,SNR=28
TORD pP pP 22 52 19.7 -0.3
comp=Z,7.5nm,0.8s,baz=260,slow=4.6,SNR=13
TORD LR LR 23 25 48.3
comp=Z,48nm,21.9s,baz=325,slow=33
TORD **Torodi Ar. Bea** 83.34 70 P P 22 52 05.0 -0.8
RYN **Ryan** 83.49 325 IAmb IAmb 22 52 08.3
comp=Z,8.0nm,1.1s
KVN **Kaiserville** 83.61 325 IAmb IAmb 22 52 08.7
comp=Z,14nm,1.2s
ELK **Elko** 83.64 328 P P 22 52 07.7 +0.7
comp=Z,5.2nm,0.9s,baz=144,slow=3.0,SNR=18
ELK **Elko** 83.64 328 IAmb IAmb 22 52 08.7
comp=Z,5.3nm,0.8s
WAKR **Walker** 83.84 324 IAmb IAmb 22 52 10.9
comp=Z,10nm,1.4s
REDW **Red Top Meadow** 83.97 332 IAmb IAmb 22 52 09.9
comp=Z,8.0nm,1.3s
YERR **Yerington** 84.12 325 IAmb IAmb 22 52 11.9
comp=Z,7.3nm,1.0s
MDND **Maddock** 84.20 341 P P 22 52 10.1 +0.7
baz=156
PNTR **Pine Nut** 84.37 324 IAmb IAmb 22 52 13.2
comp=Z,9.9nm,0.9s
FLWY **Flagg Ranch** 84.52 333 IAmb IAmb 22 52 13.2
comp=Z,9.1nm,0.9s
H17A **Grant Village** 84.73 333 P P 22 52 13.4 +0.9
baz=148
PAHR **Pah Rah Range** 84.75 325 IAmb IAmb 22 52 14.5
comp=Z,5.0nm,0.8s
RLMT **Red Lodge** 84.86 334 IAmb IAmb 22 52 13.9
comp=Z,5.0nm,0.7s
RLMT **Red Lodge** 84.86 334 P P 22 52 13.6 +0.5
baz=149
AFDM **Forest Hills D** 84.94 323 IAmb IAmb 22 52 16.1
comp=Z,6.5nm,1.3s
LAO **LASA Array** 85.15 337 P P 22 52 14.9 +0.7
baz=151
BEKR **Beckworth** 85.35 324 IAmb IAmb 22 52 17.8
comp=Z,10nm,1.5s
ULM **Lac du Bonnet** 85.51 345 P P 22 52 15.6 -0.3
comp=Z,6.8nm,0.8s,baz=163,slow=4.7,SNR=15
ULM pP pP 22 52 29.8 -0.4
comp=Z,5.6nm,0.8s,baz=171,slow=5.3,SNR=6.5
ULM **Lac du Bonnet** 85.51 345 IAmb IAmb 22 52 16.4
comp=Z,9.0nm,0.9s
ORV **Oroville** 85.67 324 IAmb IAmb 22 52 19.5
comp=Z,14nm,1.3s
MFID **Camas Ranch** 86.06 329 IAmb IAmb 22 52 20.7
comp=Z,5.2nm,1.0s
DGMT **Dagmar** 86.08 339 P P 22 52 19.7 +0.9
baz=153
O03E **Paynes Creek** 86.39 324 P P 22 52 21.1 +0.6
baz=140
WVOR **Wild Horse Val** 86.53 327 IAmb IAmb 22 52 23.8
comp=Z,6.3nm,1.1s
O02D **Mt. Diablo Mer** 86.79 323 P P 22 52 23.8 +1.2
baz=139
MOD **Modoc Plateau** 86.89 326 IAmb IAmb 22 52 25.0
comp=Z,6.3nm,0.8s
WDC **Whiskeytown Da** 86.97 324 IAmb IAmb 22 52 24.1
comp=Z,6.3nm,1.1s
N02D **Trinity Center** 87.35 324 P P 22 52 25.8 +0.6
baz=139
SCHQ **Schefferville** 87.41 3 P P 22 52 24.8 -0.3
comp=Z,3.7nm,0.7s,baz=191,slow=6.0,SNR=5.1
SCHQ **Schefferville** 87.41 3 IAmb IAmb 22 52 33.7
comp=Z,8.4nm,1.2s
EGMT **Eagleton** 87.52 335 P P 22 52 26.1 +0.3
baz=148
M04C **Macdoel** 87.53 325 P P 22 52 27.1 +0.9
baz=140
M02C **Callahan** 87.74 324 P P 22 52 27.8 +0.7
baz=139
BMO **Blue Mountains** 87.85 329 IAmb IAmb 22 52 28.9
comp=Z,4.4nm,0.7s

YBH	Yreka Blue Hor	87.92	324	P		P		22 52 28.1	+0.1
	comp=Z,5.0nm,0.8s,baz=86,slow=4.3,SNR=20								
YBH				pP		pP		22 52 44.9	+2.7
	comp=Z,1.7nm,0.8s,baz=157,slow=10.0,SNR=2.7								
YBH	Yreka Blue Hor	87.92	324	IAmb		IAmb		22 52 29.4	
	comp=Z,8.4nm,1.1s								
MSO	Missoula	88.07	332	P		P		22 52 30.7	+2.1
	baz=145								
L04D	Klamath Falls	88.09	325	P		P		22 52 29.4	+0.5
	baz=139								
J05D	Fort Rock, OR	88.39	326	P		P		22 52 31.6	+1.3
	baz=140								
PINE	Pine Mountain	88.64	327	IAmb		IAmb		22 52 33.9	
	comp=Z,8.1nm,0.9s								
L02E	Cave Junction	88.68	324	P		P		22 52 33.0	+1.5
	baz=138								
F10A	Beach Ranch, E	88.71	330	IAmb		IAmb		22 52 37.6	
	comp=Z,4.7nm,0.9s								
K02D	Willamette Mer	89.11	324	P		P		22 52 34.9	+1.4
	baz=138								
I05D	Terrebonne, OR	89.25	327	P		P		22 52 35.2	+1.0
	baz=140								
I04A	Tendick Farm,	89.33	326	P		P		22 52 35.4	+0.8
	baz=139								
HAWA	Hanford	90.02	329	IAmb		IAmb		22 52 39.6	
	comp=Z,8.9nm,1.1s								
NEW	Newport	90.49	331	P		P		22 52 39.5	-0.3
	comp=Z,1.8nm,0.5s,baz=123,slow=5.0,SNR=5.2								
NEW	Newport	90.49	331	IAmb		IAmb		22 52 39.9	
	comp=Z,2.2nm,0.5s								
NEW	Newport	90.49	331	P		P		22 52 39.6	-0.2
	baz=143								
YKA	Yellowknife Ar	101.12	341	P		Pdif		22 53 27.3	-0.4
	comp=Z,0.7nm,0.5s,baz=144,slow=4.6,SNR=18								
YKA				pP		pPdif		22 53 41.5	-0.6
	comp=Z,0.2nm,0.5s,baz=137,slow=4.6,SNR=4.8								
GERES	GERESS Array B	110.98	45	PKiKP		PKiKP		22 58 10.8	-0.4
	comp=Z,0.3nm,0.5s,baz=201,slow=1.1,SNR=4.6								
VTS	Vitosha	114.50	54	⇑P		PKPdf		22 58 16.5	-1.7
DRGR		115.72	50	⇑P		PKPdf		22 58 19.3	-1.0
TRPA	Tarpa	116.09	48	⇑P		PKPdf		22 58 20.3	-0.5
HUMR	Humele	116.39	53	⇑P		PKPdf		22 58 20.4	-1.1
VOIR		116.76	52	⇑P		PKPdf		22 58 19.6	-2.7
MLR	Muntele Rosu	117.37	52	⇑P		PKPdf		22 58 21.8	-1.8
PLOR	Plostina	117.95	52	⇑P		PKPdf		22 58 23.3	-1.2
TESR	Tescani	118.17	51	⇑P		PKPdf		22 58 23.0	-1.9
TIRR	Tirgusor	118.67	54	⇑P		PKPdf		22 58 23.3	-2.6
TOPG	Topolog	118.79	53	⇑P		PKPdf		22 58 25.5	-0.7
ASAR	Alice Springs	118.83	207	PKP		PKPdf		22 58 25.6	-1.4
	comp=Z,1.0nm,0.5s,baz=136,slow=1.8,SNR=16								
ASAR				pPKP		pPKPdf		22 58 41.1	-0.8
	comp=Z,1.0nm,0.5s,baz=139,slow=1.8,SNR=5.6								
MILM	Milestii Mici	119.71	51	⇑P		PKPdf		22 58 27.0	-0.8
SORM	Soroca	119.78	50	⇑P		PKPdf		22 58 26.2	-1.7
BRTR	Keskin Array B	120.83	60	PKP		PKPdf		22 58 29.4	-1.0
	comp=Z,0.9nm,0.6s,baz=188,slow=3.2,SNR=6.8								
BRTR				pPKP		pPKPdf		22 58 43.9	-1.4
	comp=Z,0.3nm,0.5s,baz=187,slow=3.3,SNR=1.9								
AKASG	Malin Array Be	121.04	47	PKP		PKPdf		22 58 28.9	-1.4
	comp=Z,1.3nm,0.5s,baz=261,slow=2.4,SNR=12								
AKASG				pPKP		pPKPdf		22 58 43.5	-1.7
	comp=Z,0.4nm,0.4s,baz=254,slow=2.9,SNR=2.6								
AKASG	Malin Array Be	121.04	47			PKPdf		22 58 29.0	-1.2
WRA	Warramunga Arr	122.02	209	PKP		PKPdf		22 58 32.2	-1.0
	comp=Z,2.7nm,0.5s,baz=162,slow=1.7,SNR=40								
WRA				pPKP		pPKPdf		22 58 47.5	-0.6
	comp=Z,2.5nm,0.5s,baz=160,slow=1.7,SNR=11								
ARCES	ARCESS Array B	122.75	25	PKP		PKPdf		22 58 32.8	-0.3
	comp=Z,4.5nm,1.1s,baz=224,slow=3.8,SNR=4.2								
H11S2	WAKE ISLAND Hy	126.29	270	T		T		01 17 43.3	
	baz=118,slow=75,SNR=594								
H11S1	WAKE ISLAND Hy	126.30	270	T		T		01 17 44.2	
	baz=118,slow=75,SNR=570								
H11S3	WAKE ISLAND Hy	126.30	270	T		T		01 17 44.6	
	baz=118,slow=75,SNR=444								
H11N3	WAKE ISLAND Hy	126.67	271	T		T		01 18 12.6	
	baz=117,slow=76,SNR=150								
H11N1	WAKE ISLAND Hy	126.68	271	T		T		01 18 14.0	
	baz=117,slow=76,SNR=339								
H11N2	WAKE ISLAND Hy	126.69	271	T		T		01 18 13.7	
	baz=117,slow=76,SNR=339								
FITZ	Fitzroy Crossi	126.78	200	PKP		PKPdf		22 58 42.0	-0.3
	comp=Z,1.5nm,0.6s,baz=180,slow=1.0,SNR=4.6								
FITZ				pPKP		pPKPdf		22 58 57.0	-0.2
	comp=Z,2.8nm,0.7s,baz=159,slow=3.1,SNR=3.9								
KBZ	Khabaz	128.55	58	PKP		PKPdf		22 58 45.2	+0.4
	comp=Z,1.9nm,0.9s,baz=270,slow=2.0,SNR=4.9								
SEY	Seymchan	139.27	331	PKP		PKPdf		22 59 05.4	+1.0
	comp=Z,2.3nm,0.6s,baz=166,slow=5.4,SNR=3.9								
SEY				pPKP		pPKPdf		22 59 20.0	+0.8
	comp=Z,2.2nm,0.7s,baz=181,slow=4.1,SNR=2.7								
ABKAR	Akbulak array	140.57	51			PKPpre		22 58 59.5	
BRVK	Borovoye	146.01	42			PKPbc		22 59 17.4	-0.1
URV	Uravakonda	146.47	115	ePKPbc		PKPdf		22 59 19.3	+0.7
KBL	Kabul	147.21	76			PKPdf		22 59 20.0	+0.4
SKHT	Srikalahasti	147.55	119	ePKPbc		PKPbc		22 59 22.4	-0.5
KLRI	Killari	147.76	109	ePKPbc		PKPbc		22 59 22.9	-0.7
YAK	Yakutsk	147.80	341	PKPbc		PKPbc		22 59 21.6	-0.6
	comp=Z,6.8nm,0.4s,baz=357,slow=1.4,SNR=9.1								
YAK				pPKPbc		pPKPbc		22 59 36.8	-0.2
	comp=Z,13nm,0.6s,baz=115,slow=0.3,SNR=4.1								
DMPR	Damasthipur	148.32	111	ePKPbc		PKPbc		22 59 24.4	-0.7
SRLM	Srisailam	148.42	115	ePKPbc		PKPbc		22 59 24.5	-0.8
KKAR	Karatay Array	148.54	60			PKPbc		22 59 24.5	-0.4
RPSI	Rantau Prapat	148.68	161			PKPbc		22 59 24.8	-1.2
HYB	Hyderabad	148.93	112	*i* PKP		PKPbc		22 59 26.0	-0.6
HYB				*e*				22 59 41.0	
HYBB	Hyderabad (bro	148.93	112	ePKPbc		PKPbc		22 59 26.2	-0.4
NJS	Nagarjunasagar	149.01	114	ePKPbc		PKPbc		22 59 26.3	-0.5
SRSP	Sriramsagar	149.61	110	ePKPbc		PKPbc		22 59 28.0	-0.3
MYLAV	Mylavaram	150.14	116	ePKPbc		PKPbc		22 59 29.6	0.0
RPR	Rampur	150.32	111	ePKPbc		PKPbc		22 59 29.4	-0.6
GGR	Gangavaram	150.44	113	ePKPbc		PKPbc		22 59 29.7	-0.6
NIL	Nilore	150.54	79			PKPbc		22 59 30.0	-0.1
IPM	Ipoh	150.92	164			PKPbc		22 59 31.0	-0.6
PVM	Polavaram	151.19	116	ePKPbc		PKPbc		22 59 31.7	-0.3
AAK	Ala-Archa	151.50	60			PKPdf		22 59 27.0	+0.9
KULM	Kulim	151.61	163			PKPbc		22 59 32.3	-0.8
KURK	Kurchatov	151.69	42			PKPbc		22 59 32.3	+0.1
KSH	Kashi	152.96	66	PKPbc		PKPbc		22 59 35.5	-0.1
KSH				sPKP				22 59 46.2	
KSH				PP		PP		23 03 23.0	+2.1
KSH				SKS		SKSdf		23 06 30.1	-1.4
ZAA0	Zalesovo Array	152.98	32			PKPdf		22 59 27.9	+0.2
ZALV	Zalesovo Beam	152.98	32	PKP		PKPdf		22 59 27.2	-0.4
	comp=Z,0.7nm,0.5s,baz=276,slow=2.8,SNR=6.0								
ZALV				PKPbc		PKPbc		22 59 34.9	-0.1
	comp=Z,11nm,0.6s,baz=301,slow=3.3,SNR=53								
ZALV				pPKPbc		pPKPbc		22 59 49.9	0.0
	comp=Z,10nm,0.7s,baz=295,slow=3.5,SNR=12								
MKAR	Makanchi Array	155.62	47	PKP		PKPdf		22 59 31.0	-0.7
	comp=Z,0.9nm,0.8s,baz=350,slow=1.3,SNR=7.2								
MKAR				PKPbc		pPKPdf		22 59 40.5	-6.2
	comp=Z,0.7nm,0.5s,baz=286,slow=2.5,SNR=12								
MKAR				PKPab		PKPab		22 59 57.4	-0.6
	comp=Z,1.5nm,0.6s,baz=276,slow=3.8,SNR=7.2								
MKAR				pPKPab		pPKPab		23 00 11.7	-0.8
	comp=Z,1.5nm,0.6s,baz=295,slow=2.8,SNR=5.7								
MKAR	Makanchi Array	155.62	47			PKPdf		22 59 31.0	-0.7
MKAR						pPKPdf		22 59 43.2	-3.5
KLR	Kul'dur	156.19	320	PKPab		PKPab		23 00 00.7	+0.5
	comp=Z,2.8nm,0.9s,baz=5.1,slow=4.7,SNR=6.2								
WMQ	Urumqi	160.35	50	ePKP		PKPdf		22 59 37.1	-0.5
WMQ				sPKP				22 59 58.4	
WMQ				AMB		AMB			
	comp=Z,65nm,4.9s								
WMQ				LR		LR			
	comp=Z,140nm,29.1s								
CMAR	Chiang Mai Arr	163.27	147	PKP		PKPdf		22 59 40.7	-0.5
	comp=Z,1.2nm,0.8s,baz=247,slow=2.3,SNR=10								
CMAR				pPKP		pPKPdf		22 59 56.4	+0.2
	comp=Z,1.4nm,0.9s,baz=248,slow=2.7,SNR=6.1								
CMAR				PKPab		PKPab		23 00 30.4	-1.4
	comp=Z,0.4nm,0.6s,baz=251,slow=2.8,SNR=3.4								
CMAR	Chiang Mai Arr	163.27	147			PKPdf		22 59 39.7	-1.6
CMAR						pPKPdf		22 59 55.9	-0.2
KSRS	Korea Array	163.51	292	PKP		PKPdf		22 59 40.5	-0.4
	comp=Z,0.6nm,0.3s,baz=132,slow=1.9,SNR=4.3								
KSRS				PKPab		PKPab		23 00 33.7	+1.1
	comp=Z,0.6nm,0.4s,baz=177,slow=2.5,SNR=4.3								
KSAR	Wonju Array Be	163.55	292			PKPab		23 00 33.9	+1.2
SONM	Songino Array	164.93	6	PKPab		PKPab		23 00 38.6	+0.1
	comp=Z,1.9nm,1.1s,baz=336,slow=2.2,SNR=6.8								
ULN	Ulaanbaatar	164.95	4			PKPab		23 00 39.6	+1.0
GTA	Gaotai	170.36	45	*e*PKP		PKPdf		22 59 46.3	+0.1
GTA				pPKP		pPKPdf		23 00 01.7	+0.6
GTA				sPKP				23 00 10.0	
NJ2	Nanjing	171.27	268	*e*PKP		PKPdf		22 59 47.6	+0.9
HHC	Hu-ho-hao-te	171.65	344	*e*PKP		PKPdf		22 59 48.9	+2.1
LZH	Lanzhou	174.93	49	*e*PKP		PKPdf		22 59 49.8	+1.5
LZH				pPKP		pPKPdf		23 00 01.2	-2.0
LZH				sPKP				23 00 05.2	
LZH				LR		LR			
	comp=Z,45nm,18.0s								
LZH				LR		LR			
	comp=Z,51nm,18.2s								
LZH				LR		LR			
	comp=Z,62nm,20.1s								
CD2	Chengdu	175.48	114	PKP		PKPdf		22 59 47.9	-0.5
XAN	Xi'an	178.77	346	PKP		PKPdf		22 59 47.2	-1.7

IDC 02 22:57:21.6±2.7, 6°59S×130°00E, h163km±37km, mb2.8/1, mb1 2.9/5, mb1mx2.7/44, mbtmp3.3/5, Error ellipse: s-maj=70.8km s-min=20.7km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.82	13	P	Pn	22 58 46.3	+0.1
	0.7nm,0.3s,baz=162,slow=20,SNR=4.1						
SIJI				S	Sn	22 59 49.1	-3.3
	1.1nm,0.3s,baz=103,slow=24,SNR=6.4						
FITZ	Fitzroy Crossi	12.20	200	P	Pn	23 00 10.7	+0.5
	0.1nm,0.3s,baz=32,slow=9.5,SNR=2.3						
FITZ				S	Sn	23 02 16.5	-8.9
	0.1nm,0.3s,baz=260,slow=12,SNR=3.1						
WRA	Warramunga Arr	13.93	163	P	Pn	23 00 30.2	-2.0
	0.1nm,0.3s,baz=345,slow=12,SNR=3.0						
WRA				S	Sn	23 02 51.9	-15
	0.0nm,0.3s,baz=352,slow=21,SNR=2.4						
ASAR	Alice Springs	17.39	168	P	Pn	23 01 14.6	0.0
	0.1nm,0.3s,baz=341,slow=8.3,SNR=4.5						
MKAR	Makanchi Array	67.88	327	P	P	23 08 02.5	0.0
	0.1nm,0.5s,baz=128,slow=8.2,SNR=2.7						

MAN 02 22:58:45.7, 7°98N×127°22E, h2km, mb5.4, ML4.3, MS4.5, Philippine Islands region

*IDC **02** 23:02:22.1±0.8, 53°87N×164°33W, h0km, mb4.0/29, mb1 4.1/30, mb1mx4.0/61, mbtmp4.0/30, ML3.4/1, MS3.4/8, Ms1 3.4/8, ms1mx3.1/29, Error ellipse: s-maj=22.1km s-min=12.7km az=1.0*

*MOS **02** 23:02:23.6±1.0, 53°88N×164°15W, h22km, mb4.5/12, Error ellipse: s-maj=12.6km s-min=6.7km az=91.1*

*AEIC **02** 23:02:26.7±2.2, 53°77N±0°06×164°15W±0°06, h26km±2km, ML4.1/44, mb4.4/52(NEIC), Error ellipse: s-maj=9.0km s-min=4.4km az=156.0*

*NEIC **02** 23:02:27.6±1.9, 53°82N±0°04×164°18W±0°07, h44km±6km, Error ellipse: s-maj=7.0km s-min=5.0km az=147.0*

ISC 02 23:02:28.6±0.9, 53°86N±0°06×164°19W±0°04, h50km±8km, n273, σ1°14/267, mb4.3/72, MS3.5/8, 19C-10D, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WESE	West Dahl East	0.66	339		Pn	23 02 41.1	-0.8
WESP	Westdahl Peak	0.71	334		Pn	23 02 41.9	-0.5
WESP					Sn	23 02 53.3	+0.8
WEBT	Westdahl Beart	0.80	336		Pn	23 02 43.2	-0.5
SSBA	Shishaldin	0.91	2		Pn	23 02 44.6	-0.7
SSBA					Sn	23 02 57.9	+0.5
AKSA	Akutan Strait	0.93	288		Pn	23 02 44.2	-1.1
AKSA					Sn	23 02 57.5	-0.1
AKUT	Akutan	0.97	287		Pn	23 02 44.9	-1.0
AKUT					Sn	23 02 58.2	-0.4
HSB	Akutan Spr's B	1.07	288		Pn	23 02 46.4	-0.8
ZRO	Akutan Zero	1.08	283		Pn	23 02 46.5	-0.9
AKLV	Akutan Long Va	1.08	287		Pn	23 02 46.4	-1.0
FALS	False Pass	1.09	24		Pn	23 02 47.0	-0.5
FALS					Sn	23 03 02.2	+0.7
AKMO	Akutan Morgan	1.10	283		Pn	23 02 46.7	-0.9
AKGG	Akutan Green G	1.12	288		Pn	23 02 47.1	-0.7
AKGG					Sn	23 03 02.8	+0.7
AKRB	Akutan Reef Bi	1.14	284		Pn	23 02 47.3	-0.9
AKRB					Sn	23 03 02.5	-0.3
UNV	Unalaska Valle	1.37	270		Pn	23 02 49.5	-1.8
UNV					Sn	23 03 07.0	-1.3
MTBL	Makushin Table	1.48	275		Pn	23 02 52.0	-0.8
MREP	Makushin Rep't	1.52	269		Pn	23 02 52.3	-1.0
MSW	Makushin Switc	1.54	273		Pn	23 02 52.5	-1.1
MSW					Sn	23 03 11.4	-1.0
MGOD	Makushin Gods	1.59	269		Pn	23 02 53.5	-0.8
MCIR	Makushin Cirqu	1.60	274		Pn	23 02 53.8	-0.7
OKFG	Magazine Ridge	2.26	260		Pn	23 03 03.6	+0.1
OKNC	Okmok New Cone	2.38	262		Pn	23 03 05.3	+0.3
OKCE	Okmok Cone E	2.41	261		Pn	23 03 05.9	+0.4
OKSP	Okmok Steeple	2.52	258		Pn	23 03 06.6	-0.5
SDPT	Sand Point	2.62	54		Pn	23 03 08.8	+0.4
CNBA	Chernabura Isl	2.86	69	Pn	Pn	23 05 11.2	-0.4
NIKH	Nikolski High	2.93	254		Pn	23 03 11.6	-1.0
VNWF	Veniaminof 8	3.52	47		Pn	23 03 22.3	+1.5
VNSS	Veniaminof 8	3.61	47		Pn	23 03 23.9	+1.8
VNNF	Veniaminof 3	3.71	47		Pn	23 03 24.9	+1.5
SPIA	Saint Paul Isl	4.78	316	Pn	Pn	23 03 35.8	-2.3
CHIR	Chirikof Islan	5.33	65	Pn	Pn	23 03 44.2	-1.2
KOFP	Korovin Flat P	6.18	259		Pn	23 03 59.0	+1.7
ATKA	Atka Island	6.26	259		Pn	23 03 58.9	+0.6
SII	Sitkinak Islan	6.33	61		Pn	23 03 59.2	-0.1
OHAK	Old Harbor	7.04	57		Pn	23 04 09.1	+0.2
GSTR	Great Sitkin T	7.38	261	Pn	Pn	23 04 12.0	-1.7
KDAK	Kodiak Island	7.62	54	P	Pn	23 04 16.3	-0.6
KDAK	Kodiak Island	7.62	54	Pn	Pn	23 04 16.3	-0.6
ADK	Adak	7.82	260	P	Pn	23 04 21.5	+1.9
ADK	Adak	7.82	260	Pn	Pn	23 04 21.5	+1.9
SVW2	Sparrevohn	8.60	29		Pn	23 04 31.5	+1.2
RED	Redoubt Volcan	9.03	39		Pn	23 04 39.2	+2.9
RSO	Redoubt South	9.06	39		Pn	23 04 36.7	-0.1
BRLK	Bradley Lake	9.38	46	Pn	Pn	23 04 39.5	-1.5
SPNN	North Nagishla	9.71	35		Pn	23 04 48.5	+2.8
SEW	Seward	10.17	46	Pn	Pn	23 04 51.1	-0.7
RC01	Rabbit Creek A	10.61	41	Pn	Pn	23 04 57.7	-0.1
GAMB	Gambell	10.67	342		Pn	23 05 01.7	+3.2
ANM	Nome	10.75	357	P	Pn	23 05 01.7	+2.0
ANM	Nome	10.75	357	Pn	Pn	23 05 01.7	+2.0
PPLA	Purkeypile	11.01	30		Pn	23 05 05.6	+2.2
KNK	Knik Glacier	11.30	42		Pn	23 05 06.7	-0.6
GHO	Glory Hole Cre	11.34	40	Pn	Pn	23 05 05.5	-2.3
GLI	Glacier Island	11.57	46	Pn	Pn	23 05 11.2	+0.3
SML	Sawmill	11.58	40	Pn	Pn	23 05 10.2	-0.8
FID	Port Fidalgo	11.78	47	Pn	Pn	23 05 12.6	-1.1
KTH	Kantishna Hill	11.88	30		Pn	23 05 16.9	+1.6
SCM	Sheep Creek Mo	11.99	42	P	Pn	23 05 16.1	-0.5
SCM	Sheep Creek Mo	11.99	42		Pn	23 05 16.1	-0.5
TRF	Thorofare Moun	12.00	31		Pn	23 05 17.6	+0.7
BPAW	Bear Paw Mtn.	12.28	28		Pn	23 05 22.1	+1.5
RAGM	Ragged Mountai	12.42	50	Pn	Pn	23 05 21.6	-1.0
RND	Reindeer	12.42	34	P	Pn	23 05 22.4	-0.2
RND	Reindeer	12.42	34		Pn	23 05 22.4	-0.2
HMT	Hamilton	12.59	51	Pn	Pn	23 05 25.3	+0.5
DHY	Denali Highway	12.71	37		Pn	23 05 26.3	-0.2
MLY	Manley	13.08	26		Pn	23 05 33.3	+1.8
IMAR	Indian Mountai	13.21	19		Pn	23 05 34.7	+1.5
GLB	Gilahina Butte	13.25	47		Pn	23 05 32.7	-1.1
CRQM	Cirque	13.27	50	Pn	Pn	23 05 33.8	-0.4
TGL	Tana Glacier	13.41	50	Pn	Pn	23 05 35.0	-1.0
WRH	Wood River Hil	13.41	31		Pn	23 05 34.9	-1.1
MCARA	McCarthy VSAT	13.56	48		Pn	23 05 37.2	-0.8
MESA	MESA	13.62	53	Pn	Pn	23 05 37.9	-1.1
CCB	Clear Creek Bu	13.62	31		Pn	23 05 37.5	-1.3
HDA	Harding Lake	13.73	33		Pn	23 05 39.0	-1.3
BALM	Baldy	13.73	50		Pn	23 05 38.9	-1.6
COLA	College	13.77	30	⇑*e*P	P	23 05 44.8	-3.2
IL31		13.99	32		Pn	23 05 42.2	-1.6
ILAR	Eielson Array	13.99	32	P	Pn	23 05 41.5	-2.4
ILAR	Eielson Array	13.99	32	Pn	Pn	23 05 41.0	-2.8
	0.2nm,0.3s,baz=229,slow=12,SNR=11						
ILAR				LR	LR	23 11 38.3	
	comp=Z,226nm,19.2s,baz=249,slow=40						
ILAR	Eielson Array	13.99	32		Pn	23 05 41.5	-2.4
MENT	Mentasta	14.00	41		Pn	23 05 42.2	-1.8
RIDG	Independent Ri	14.02	37		Pn	23 05 43.2	-1.1
BARN	Barnard Glacie	14.05	50		Pn	23 05 44.9	+0.1
CTGM	Chitina Glacie	14.16	51	Pn	Pn	23 05 46.1	-0.2
DOT	Dot Lake	14.25	39		Pn	23 05 47.5	+0.1
YKU2	Yakutat	14.56	57	Pn	Pn	23 05 51.7	+0.3
BCAR	Beaver Creek A	14.83	43		Pn	23 05 53.8	-1.2
COLD	Coldfoot	15.01	21		Pn	23 05 58.0	+0.8
FYU	Fort Yukon	15.74	29	Pn	Pn	23 06 06.4	-0.2
HYT	Haines Junctio	15.91	53	P	P	23 06 10.9	-1.1
EGAK	Eagle	15.94	38	P	Pn	23 06 09.8	+0.7
TOLK	Toolik Lake Re	16.33	19	P	P	23 06 15.2	-1.2
BMAR	Burnt Mountain	16.54	27	P	Pn	23 06 17.1	+0.3
SKAG	Skagway	16.74	59	Pn	Pn	23 06 18.2	-1.1
WHY	Whitehorse	17.14	55		Pn	23 06 24.1	-0.4
CRAG	Craig	17.97	72	Pn	Pn	23 06 31.0	-3.5
BILL	Bilibino	19.89	327	⇑*e*P	P	23 06 55.5	+0.1
BILL				pmax	pmax		
	comp=Z,3.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,210nm,17.0s						
INK	Inuvik	20.39	33	P	P	23 07 00.0	-0.8
INK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
INK	Inuvik	20.39	33	P	P	23 06 59.8	-1.0
	comp=Z,5.5nm,0.6s,baz=246,slow=8.4,SNR=7.3						
INK	Inuvik	20.39	33	P	P	23 07 00.0	-0.8
PEA0B	Petropavlovsk-	22.52	284	P	P	23 07 23.2	-0.6
PEA0B				pmax	pmax		
	comp=Z,11nm,1.0s						
PEA0B	Petropavlovsk-	22.52	284	P	P	23 07 23.1	-0.6
PEA0B				IAmb	IAmb	23 07 42.4	
	comp=Z,11nm,1.0s						
PETK	Petropavlovsk-	22.52	284	P	P	23 07 23.7	-0.1
PETK	Petropavlovsk-	22.52	284	P	P	23 07 22.9	-0.9
	comp=Z,2.6nm,0.4s,baz=85,slow=12,SNR=19						
PETK				LR	LR	23 15 53.0	
	comp=Z,38nm,21.2s,baz=61,slow=36						
PETK	Petropavlovsk-	22.52	284	P	P	23 07 23.7	-0.1
C36M	Paulatuk	23.94	34	P	P	23 07 36.0	-1.6
C36M				IAmb	IAmb	23 07 39.4	
	comp=Z,8.2nm,0.8s						
SEY	Seymchan	24.04	309	⇓*e*P	P	23 07 38.2	-0.4
NLWA	Neilton Lookou	26.10	88	P	P	23 07 57.4	-0.1
NLWA				IAmb	IAmb	23 08 01.7	
	comp=Z,6.2nm,0.9s						
YKW3	Yellowknife Ar	26.88	51	P	P	23 08 05.0	+0.8
YKA	Yellowknife Ar	26.89	51	P	P	23 08 05.7	+1.3
YKA	Yellowknife Ar	26.89	51	P	P	23 08 05.0	+0.6
	comp=Z,1.7nm,0.6s,baz=285,slow=8.9,SNR=16						
YKA	Yellowknife Ar	26.89	51	P	P	23 08 05.7	+1.3
YBH	Yreka Blue Hor	29.95	97	P	P	23 08 32.7	+0.7
	comp=Z,0.3nm,0.3s,baz=297,slow=9.0,SNR=2.3						
YBH	Yreka Blue Hor	29.95	97	IAmb	IAmb	23 08 36.7	
	comp=Z,0.4nm,0.8s						
KCPM	Cahto Peak	30.74	101	P	P	23 08 36.0	-3.0
KCPM				IAmb	IAmb	23 08 51.1	
	comp=Z,6.8nm,1.2s						
WVOR	Wild Horse Val	31.93	92	P	P	23 08 48.4	-1.0
WVOR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WVOR	Wild Horse Val	31.93	92	P	P	23 08 48.4	-1.0
WVOR				IAmb	IAmb	23 09 03.1	
	comp=Z,3.5nm,0.9s						
MCCM	Marconi Confer	32

BVAR				PcP	**PcP**	**23 13 32.2**	**-0.2**	
	comp=Z,1.1nm,0.7s,baz=56,slow=3.7,SNR=4.4							
BRVK	**Borovoye**	**64.24 327**	*e*	P	**P**	**23 12 58.9**	**+1.0**	
BRVK				pmax	pmax			
	comp=Z,4.0nm,1.3s							
BRVK	**Borovoye**	**64.24 327**		P	**P**	**23 12 59.0**	**+1.0**	
BRVK				IAmb	IAmb	23 13 00.0		
	comp=Z,3.9nm,1.1s							
ARU	**Arti**	**64.64 335**	*c*	*i* P	**P**	**23 13 00.1**	**-0.4**	
ARU				S	**S**	**23 21 35.4**	**-0.9**	
ARU				SS	**SS**	**23 25 44.3**	**-2.3**	
ARU				pmax	pmax			
	comp=Z,7.0nm,1.2s							
ARU	**Arti**	**64.64 335**		P	**P**	**23 13 00.6**	**0.0**	
	comp=Z,1.1nm,0.8s,baz=358,slow=8.8,SNR=4.8							
ARU	**Arti**	**64.64 335**		IAmb	IAmb	23 13 01.1		
	comp=Z,2.9nm,0.7s							
FINES	**FINESS Array B**	**64.75 355**	*i*	P	**P**	**23 13 01.0**	**-0.2**	
FINES				pmax	pmax			
	comp=Z,2.0nm,0.8s							
FINES	**FINESS Array B**	**64.75 355**		P	**P**	**23 13 00.9**	**-0.3**	
	comp=Z,2.0nm,0.8s,baz=7.2,slow=6.1,SNR=11							
MKAR	**Makanchi Array**	**64.97 316**	*ce*	P	P	23 13 07.3	+4.4	
MKAR	**Makanchi Array**	**64.97 316**		P	**P**	**23 13 02.3**	**-0.6**	
	comp=Z,0.6nm,0.7s,baz=49,slow=5.5,SNR=8.1							
MKAR				LR	LR	23 42 40.7		
	comp=Z,48nm,18.9s,baz=20,slow=37							
WMQ	**Urumqi**	**65.00 311**	*e*	P	**P**	**23 13 06.4**	**+3.2**	
NB2	**NORSAR Subarra**	**65.39 2**		P	**P**	**23 13 04.9**	**-0.5**	
	comp=Z,0.6nm,0.6s,baz=356,slow=6.9							
NOA	**NORSAR Array B**	**65.39 2**		P	**P**	**23 13 05.0**	**-0.3**	
	comp=Z,1.7nm,0.8s,baz=358,slow=6.4,SNR=4.1							
NOA				LR	LR	23 41 57.0		
	comp=Z,13nm,19.1s,baz=245,slow=36							
CD2	**Chengdu**	**66.82 291**		P	**P**	**23 13 13.4**	**-1.7**	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
OBN	**Obninsk**	**70.05 347**	⇓	*i* P	**P**	**23 13 34.3**	**-0.4**	
OBN				*e*		23 13 58.1		
OBN				*e*		23 16 10.4		
OBN				pmax	pmax			
	comp=Z,4.0nm,0.9s							
AKTO	**Aktyubinsk**	**70.19 333**		P	**P**	**23 13 36.3**	**+0.6**	
	comp=Z,7.7nm,0.8s,baz=39,slow=6.6,SNR=22							
ABKAR	**Akbulak array**	**70.72 331**		P	**P**	**23 13 39.1**	**+0.1**	
ABKAR	**Akbulak array**	**70.72 331**		IAmb	IAmb	23 13 40.7		
	comp=Z,5.7nm,1.0s							
AAK	**Ala-Archa**	**71.54 318**	⇓	*e* P	**P**	**23 13 45.0**	**+0.7**	
AAK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
AAK	**Ala-Archa**	**71.54 318**		P	**P**	**23 13 44.8**	**+0.6**	
	comp=Z,2.0nm,0.7s,baz=148,slow=5.6,SNR=7.7							
AAK	**Ala-Archa**	**71.54 318**		P	**P**	**23 13 45.2**	**+1.0**	
AAK				IAmb	IAmb	23 13 45.8		
	comp=Z,2.0nm,0.7s							
KMI	**Kunming**	**71.85 288**		P	**P**	**23 13 42.9**	**-3.5**	
KMI				pmax	pmax			
	comp=Z,5.0nm,1.4s							
PPT	**Papeete**	**72.24 165**		P	**P**	**23 13 48.2**	**-0.1**	
PPT	**Papeete**	**72.24 165**		LR	LR	23 38 39.5		
	comp=Z,42nm,21.4s,baz=330,slow=30							
PPT	**Papeete**	**72.24 165**		P	**P**	**23 13 48.2**	**-0.1**	
PPTF	**Pamatai, Papee**	**72.26 165**		P	**P**	**23 13 48.9**	**+0.3**	
KKAR	**Karatay Array**	**72.67 321**		P	**P**	**23 13 50.6**	**-0.2**	
KKAR	**Karatay Array**	**72.67 321**		P	**P**	**23 13 50.6**	**-0.2**	
ARSB	**Arslanbob**	**73.25 319**		P	**P**	**23 13 54.2**	**-0.2**	
ARSB				IAmb	IAmb	23 13 56.8		
	comp=Z,4.8nm,0.9s							
VSR	**Storozhevoye**	**73.48 345**	⇓	*e* P	**P**	**23 13 54.2**	**-1.2**	
VSR				pmax	pmax			
	comp=Z,4.0nm,0.7s							
LSA	**Lhasa**	**74.53 299**		P	**P**	**23 14 02.5**	**0.0**	
LSA				pmax	pmax			
	comp=Z,6.0nm,1.0s							
LSA	**Lhasa**	**74.53 299**		P	**P**	**23 14 02.5**	**0.0**	
LSA				IAmb	IAmb	23 14 05.2		
	comp=Z,6.2nm,1.0s							
BTK	**Batken**	**75.18 319**		P	**P**	**23 14 05.9**	**+0.3**	
BTK				pmax	pmax			
	comp=Z,8.0nm,1.1s							
BTK	**Batken**	**75.18 319**		P	**P**	**23 14 05.9**	**+0.3**	
AKASG	**Malin Array Be**	**75.20 351**		P	**P**	**23 14 05.0**	**-0.4**	
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.8s							
AKASG	**Malin Array Be**	**75.20 351**		P	**P**	**23 14 05.0**	**-0.4**	
	comp=Z,2.1nm,0.5s,baz=15,slow=6.0,SNR=9.9							
AKASG	**Malin Array Be**	**75.20 351**		IAmb	IAmb	23 14 05.2		
	comp=Z,0.9nm,0.8s							
AKBB	**Malin Array Si**	**75.20 351**	⇑	*e* P	**P**	**23 14 04.3**	**-1.1**	
AKBB	**Malin Array Si**	**75.20 351**		IAmb	IAmb	23 14 05.5		
	comp=Z,5.3nm,0.9s							
GAR	**Garm**	**76.29 319**		P	**P**	**23 14 11.4**	**-0.7**	
CHGR	**Chuyangaron**	**77.03 320**		P	**P**	**23 14 15.8**	**-0.3**	
KOLS	**Kolonicke sedl**	**77.43 356**	*e*	P	**P**	**23 14 19.6**	**+1.5**	
KOLS	**Kolonicke sedl**	**77.43 356**	*e*	P	**P**	**23 14 19.6**	**+1.5**	
GERES	**GERESS Array B**	**77.65 1**		P	**P**	**23 14 19.1**	**-0.3**	
GERES	**GERESS Array B**	**77.65 1**		P	**P**	**23 14 19.9**	**+0.4**	
	comp=Z,0.6nm,0.8s,baz=6.8,slow=6.0,SNR=4.0							
GERES	**GERESS Array B**	**77.65 1**		P	**P**	**23 14 19.1**	**-0.3**	
SORM	**Soroca**	**77.82 351**	⇓	P	**P**	**23 14 19.7**	**-0.6**	
VYHS	**Vyhne**	**77.99 358**	*e*	P	**P**	**23 14 22.0**	**+0.8**	
VYHS	**Vyhne**	**77.99 358**	*e*	P	**P**	**23 14 22.0**	**+0.8**	
TAPN	**Taplejung**	**78.20 300**	*e*	P	**P**	**23 14 23.9**	**+0.8**	
	comp=Z,13nm,1.0s							
TRPA	**Tarpa**	**78.22 355**	⇑	P	**P**	**23 14 22.9**	**+0.4**	
PSZ	**Piszkesteto**	**78.54 357**		P	**P**	**23 14 22.5**	**-1.8**	
PSZ				pmax	pmax			
	comp=Z,5.0nm,1.1s							
PSZ	**Piszkesteto**	**78.54 357**		P	**P**	**23 14 22.5**	**-1.8**	
PSZ				IAmb	IAmb	23 14 40.7		
	comp=Z,4.8nm,1.1s							
BUR08	**Bucovina Ar. S**	**78.56 354**		P	**P**	**23 14 24.3**	**-0.2**	
BUR08				IAmb	IAmb	23 14 25.8		
	comp=Z,5.3nm,1.1s							
BURAR	**Bucovina Array**	**78.58 354**	⇑	P	**P**	**23 14 24.8**	**+0.1**	
BURAR	**Bucovina Array**	**78.58 354**		P	**P**	**23 14 24.7**	**+0.1**	
CONA	**Conrad Observa**	**78.58 360**	*i*	P	**P**	**23 14 24.3**	**-0.3**	
	comp=Z,3.7nm,1.1s							
GUN	**Gumba**	**78.67 302**	*e*	P	**P**	**23 14 26.0**	**+0.3**	
	comp=Z,17nm,0.7s							
JIRN	**Jiri**	**78.72 302**	*e*	P	**P**	**23 14 26.6**	**+0.6**	
	comp=Z,45nm,0.8s							
RETA	**Reutte**	**78.94 3**	*i*	P	**P**	**23 14 25.4**	**-1.1**	
	comp=Z,7.2nm,1.5s							
MILM	**Milestii Mici**	**78.99 351**	⇑	P	**P**	**23 14 26.7**	**0.0**	
KKN	**Kakani**	**79.07 302**	*e*	P	**P**	**23 14 28.7**	**+0.9**	
MOTA	**Moosalm**	**79.09 3**	*i*	P	**P**	**23 14 25.5**	**-2.0**	
	comp=Z,11nm,2.3s							
RAMN	**Ramite**	**79.09 301**	*e*	P	**P**	**23 14 27.9**	**0.0**	
	comp=Z,15nm,0.7s							
PKI	**Pulchoki**	**79.18 302**	*e*	P	**P**	**23 14 28.2**	**-0.3**	
PKIN	**Phulchoki**	**79.19 302**	*e*	P	**P**	**23 14 28.4**	**-0.1**	
	comp=Z,4.5nm,0.6s							
WTTA	**Wattenberg**	**79.19 3**	*i*	P	**P**	**23 14 25.6**	**-2.4**	
	comp=Z,6.3nm,1.2s							
CMAR	**Chiang Mai Arr**	**79.26 286**		P	**P**	**23 14 29.1**	**+0.5**	
	comp=Z,1.7nm,0.9s,baz=18,slow=5.4,SNR=12							
CMAR	**Chiang Mai Arr**	**79.26 286**		P	**P**	**23 14 28.1**	**-0.6**	
DMN	**Daman**	**79.31 302**	*e*	P	**P**	**23 14 29.4**	**+0.3**	
DANN	**Dangsing**	**79.36 304**	*e*	P	**P**	**23 14 30.0**	**+0.5**	
	comp=Z,43nm,0.7s							
FETA	**Feichten**	**79.40 4**	*i*	P	**P**	**23 14 27.4**	**-1.8**	
	comp=Z,5.8nm,1.0s							
DRGR		**79.55 355**	⇑	P	**P**	**23 14 29.9**	**0.0**	
PYA1	**Pyatigorsk**	**79.70 340**	⇓	*e* P	**P**	**23 14 31.8**	**+1.1**	
DZM	**Mont Dzumac**	**79.76 208**		P	**P**	**23 14 31.4**	**+0.2**	
DZM				IAmb	IAmb	23 14 50.7		
	comp=Z,5.4nm,1.0s							
KIV	**Kislovodsk**	**79.88 341**	*i*	P	**P**	**23 14 32.7**	**+0.9**	
KIV				pmax	pmax			
	comp=Z,6.0nm,1.1s							
KIV				MLR	MLR			
	comp=Z,50nm,17.0s							
KIV	**Kislovodsk**	**79.88 341**	⇑	P	**P**	**23 14 32.1**	**+0.3**	
KIV	**Kislovodsk**	**79.88 341**		P	**P**	**23 14 31.9**	**+0.1**	
KIV				IAmb	IAmb	23 14 34.0		
	comp=Z,4.9nm,0.8s							
KBZ	**Khabaz**	**80.06 340**	*de*	P	**P**	**23 14 33.8**	**+1.3**	
KBZ	**Khabaz**	**80.06 340**		P	**P**	**23 14 34.1**	**+1.6**	
	comp=Z,5.1nm,0.9s,baz=278,slow=1.4,SNR=15							
SHA1	**Shidzhatmaz**	**80.09 341**	⇓	*e* P	**P**	**23 14 33.9**	**+0.8**	
DOPR	**Dopca**	**80.21 353**	⇑	P	**P**	**23 14 34.5**	**+1.1**	
MLR	**Muntele Rosu**	**80.65 353**		P	**P**	**23 14 35.8**	**-0.1**	
MLR				pmax	pmax			
	comp=Z,2.0nm,1.0s							
MLR	**Muntele Rosu**	**80.65 353**		P	**P**	**23 14 37.1**	**+1.2**	
	comp=Z,0.9nm,0.8s,baz=49,slow=9.3,SNR=3.2							
MLR	**Muntele Rosu**	**80.65 353**		P	**P**	**23 14 35.8**	**-0.1**	
MLR				IAmb	IAmb	23 14 40.9		
	comp=Z,1.8nm,1.0s							
VOIR		**80.76 353**	⇑	P	**P**	**23 14 37.1**	**+0.6**	
BZS	**Buzias**	**80.77 356**	⇑	P	**P**	**23 14 37.0**	**+0.6**	
GZR	**Gura Zlata**	**80.94 355**	⇑	P	**P**	**23 14 38.1**	**+0.7**	
GEYT	**Alibeck**	**81.56 327**		P	**P**	**23 14 41.5**	**+0.8**	
	comp=Z,3.2nm,0.9s,baz=220,slow=6.6,SNR=6.9							
GEYT	**Alibeck**	**81.56 327**		P	**P**	**23 14 42.0**	**+1.2**	
TBLG	**Delisi**	**81.59 339**		P	**P**	**23 14 41.8**	**+0.9**	
TBLG				pmax	pmax			
	comp=Z,11nm,0.6s							
TBLG	**Delisi**	**81.59 339**		P	**P**	**23 14 41.8**	**+0.9**	
AKH	**Akhalkalaki**	**82.16 339**	⇑	P	**P**	**23 14 44.7**	**+0.7**	
VTS	**Vitosha**	**83.68 354**	⇑	P	**P**	**23 14 51.9**	**0.0**	
VTS	**Vitosha**	**83.68 354**		IAmb	IAmb	23 14 52.7		
	comp=Z,1.6nm,0.7s							
ALN	**Alexandroupoli**	**85.20 352**		P	**P**	**23 14 57.0**	**-2.4**	
ALN				pmax	pmax			
	comp=Z,5.0nm,1.2s							
ALN	**Alexandroupoli**	**85.20 352**		P	**P**	**23 14 57.0**	**-2.4**	
ALN				IAmb	IAmb	23 14 59.0		
	comp=Z,4.9nm,1.2s							
ESBB	**Sonseca Array**	**85.29 15**		P	**P**	**23 15 00.4**	**+0.5**	
ESBB				IAmb	IAmb	23 15 12.2		
	comp=Z,4.2nm,1.1s							
ESDC	**Sonseca Array**	**85.29 15**		P	**P**	**23 15 00.5**	**+0.6**	
	comp=Z,1.4nm,0.6s,baz=342,slow=5.1,SNR=8.1							
ESDC	**Sonseca Array**	**85.29 15**		P	**P**	**23 15 00.6**	**+0.7**	
BR131	**Keskin Array S**	**85.53 346**	*de*	P	**P**	**23 15 01.9**	**+0.7**	
BR131	**Keskin Array S**	**85.53 346**		IAmb	IAmb	23 15 02.9		
	comp=Z,3.4nm,0.8s							
BRTR	**Keskin Array B**	**85.53 346**	*ce*	P	**P**	**23 15 02.2**	**+1.0**	
BRTR				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BRTR	**Keskin Array B**	**85.53 346**		P	**P**	**23 15 02.0**	**+0.7**	
	comp=Z,2.9nm,0.8s,baz=25,slow=2.7,SNR=20							
BRTR	**Keskin Array B**	**85.53 346**		P	**P**	**23 15 01.7**	**+0.5**	
FNA	**Florina**	**85.61 356**		P	**P**	**23 15 01.8**	**+0.3**	
FNA				pmax	pmax			
	comp=Z,4.0nm,0.8s							
FNA	**Florina**	**85.61 356**		P	**P**	**23 15 01.8**	**+0.3**	
SCTE	**Santa Cesarea**	**86.41 358**		P	**P**	**23 15 05.2**	**-0.2**	
AGG	**Agios Georgios**	**87.32 355**		P	**P**	**23 15 09.5**	**-0.4**	
AGG				pmax	pmax			
	comp=Z,4.0nm,1.0s							
AGG	**Agios Georgios**	**87.32 355**		P	**P**	**23 15 09.5**	**-0.4**	
AGG				IAmb	IAmb	23 15 10.0		
	comp=Z,3.6nm,1.0s							
TIP	**Timpagrande**	**87.33 359**		P	**P**	**23 15 11.0**	**+1.1**	
ITM	**Ithomi**	**89.17 355**		P	**P**	**23 15 18.8**	**+0.1**	
CSS	**Mathiatis**	**90.25 346**		P	**P**	**23 15 22.6**	**-1.1**	
ASAR	**Alice Springs**	**93.78 234**		P	**P**	**23 15 40.5**	**+0.5**	
	comp=Z,0.4nm,0.7s,baz=22,slow=4.5,SNR=4.0							

MAN 02 23:15:07.1, 9.92N×123.80E, h31km, mb3.6, ML2.3, MS1.7, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.43**	**22**	⇓ *i* P		Pn		23 15 17.4	+0.2
LLP				*e* S		Sn		23 15 23.6	-0.4

*FUNV **02** 23:39:59.6, 10.65N×62.37W, h27km, MW3.0*
*TRN **02** 23:39:59.2, 10.70N×62.35W, h74km, MD3.2*
ISC 02 23:39:58.6±1.2, 10.69N±0.04×62.42W±0.04, h71km±13km, n23, σ1s19/41, 1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUNV	**Guanoco**	**0.74**	**225**	*e* P		**Pn**		**23 40 14.4**	**+0.3**
GUNV				*e* S		**Sn**		**23 40 24.8**	**-0.6**
CRUV	**Carupano**	**0.81**	**269**	⇓ *i* P		**Pn**		**23 40 14.7**	**-0.1**
CRUV				*e* S		**Sn**		**23 40 25.9**	**-0.9**
TRN	**Trinidad (W)**	**1.00**	**92**	*e* P		**Pn**		**23 40 18.3**	**+1.2**
TRN				*e* S		**Sn**		**23 40 30.4**	**-0.5**
GRGR	**Grenville**	**1.61**	**27**	*e* P		**Pn**		**23 40 25.9**	**+0.8**
GRGR				*e* S		**Sn**		**23 40 45.5**	**+0.3**
GRGR	**Grenville**	**1.61**	**27**	*e* P		**Pn**		**23 40 26.0**	**+0.8**
GRGR				*e* S		**Sn**		**23 40 45.6**	**+0.3**
GRHS	**Sauteurs**	**1.70**	**26**	*e* S		**Sn**		**23 40 46.3**	**-1.0**
GRSS	**Sisters**	**1.78**	**26**	*e* S		**Sn**		**23 40 48.9**	**-0.2**
ORIV	**Oritupano**	**1.89**	**211**	*e* P		**Pn**		**23 40 30.2**	**+1.5**
ORIV				*e* S		**Sn**		**23 40 52.8**	**+1.2**
ORIV	**Oritupano**	**1.89**	**211**	*e* P		**Pn**		**23 40 29.4**	**+0.7**
ORIV				*e* S		**Sn**		**23 40 51.5**	**-0.1**
TOSP	**Speyside**	**1.94**	**72**	*e* P		**Pn**		**23 40 30.2**	**+0.7**
TOSP				*e* S		**Sn**		**23 40 51.1**	**-1.9**
PCRV	**Puerto La Cruz**	**2.24**	**257**	*e* P		**Pn**		**23 40 34.5**	**+0.8**
PCRV				*e* S		**Sn**		**23 41 00.1**	**-0.3**
RIOV	**Rio Grande**	**2.67**	**167**	*e* P		**Pn**		**23 40 40.0**	**+0.6**
RIOV				*e* S		**Sn**		**23 41 08.4**	**-2.3**
SVB	**Belmont**	**2.81**	**24**	*e* P		**Pn**		**23 40 41.5**	**+0.3**
SVB				*e* S		**Sn**		**23 41 13.6**	**-0.4**
SVCV	**St. Vincent, C**	**2.85**	**26**	*e* P		**Pn**		**23 40 42.6**	**+0.8**
SVCV				*e* S		**Sn**		**23 41 13.9**	**-1.2**
PRGV	**PARIAGUAN**	**2.92**	**229**	*e* P		**Pn**		**23 40 43.6**	**+0.8**
PRGV				*e* S		**Sn**		**23 41 16.2**	**-0.6**
MCLT	**Moule a Chique**	**3.33**	**26**	*e* P		**Pn**		**23 40 49.2**	**+0.9**
MCLT				*e* S		**Sn**		**23 41 25.2**	**-1.6**
CUPV	**Cpira**	**3.38**	**260**	*e* P		**Pn**		**23 40 50.2**	**+1.2**
CUPV				*e* S		**Sn**		**23 41 27.6**	**-0.4**
SLBI	**Saint Lucia, B**	**3.60**	**23**	*e* P		**Pn**		**23 40 51.9**	**-0.2**
SLBI				*e* S		**Sn**		**23 41 31.3**	**-2.0**
BIRV	**Birongo**	**3.79**	**267**	*e* P		**Pn**		**23 40 55.6**	**+0.9**
BIRV				*e* S		**Sn**		**23 41 37.3**	**-0.9**
MPOM	**Morne Pois Mar**	**4.03**	**22**	*e* P		**Pn**		**23 40 59.3**	**+1.5**
PCM	**Pelee Case Pet**	**4.26**	**16**	*e* P		**Pn**		**23 41 02.9**	**+1.8**
BAUV	**El Baul**	**5.81**	**253**	*e* P		**Pn**		**23 41 23.7**	**+1.4**
BAUV	**El Baul**	**5.81**	**253**	*e* P		**Pn**		**23 41 22.7**	**+0.5**
BAUV				*e* S		**Sn**		**23 42 24.2**	**-3.4**

*IDC **02** 23:53:56.8±0.7, 16.09N×97.82W, h19km±4km, mb4.3/20, mb1 4.4/24, mb1mx4.3/38, mbtmp4.4/24, ML3.9/3, MS3.7/19, Ms1 3.7/19, ms1mx3.6/28, Error ellipse: s-maj=14.8km s-min=10.1km az=43.0*
*MEX **02** 23:53:57.0±0.5, 16.07N×97.97W, h5km, MD4.7*
*NEIC **02** 23:53:58.0±2.7, 16.16N±0.05×97.90W±0.04, h19km±3km, Error ellipse: s-maj=8.6km s-min=2.8km az=211.0*
*GCMT **02** 23:54:01.0±0.4, 16.31N±0.02×97.85W±0.04, h23km±1km, MW4.8/80, Moment Tensor Solution. s23,c28; s80,c100; Duration: 0 Moment tensor: Scalar 10^16 Nm; Mrr2.09±.17; Mθθ-2.13±.10; Mϕϕ0.03±.10; Mrθ-0.19±.11; Mrϕ0.48±.07; Mθϕ-0.74±.17; Best double couple: Mo2.29300×10^16 NP1:ϕs120.00000°, δ48.00000°, λ116.00000°. NP2: ϕs264.00000°, δ48.00000°, λ64.00000°. Principal axes: T 2.3520, Plg71.0000°, Azm103.0000°; N -0.1200, Plg19.0000°, Azm282.0000°; P -2.2340, Plg0.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 02 23:53:56.6±0.6, 16.10N±0.04×97.93W±0.03, h18km±2km, h18km:pP-P, n551, σ1s29/530, mb4.8/113, MS3.8/15, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.35**	**327**	*i* P		**Pg**		**23 54 03.4**	**-0.6**
PNIG				*i* S		**Sg**		**23 54 08.2**	**-0.8**
PNIG	**Pinotepa**	**0.35**	**327**			**Pg**		**23 54 03.4**	**-0.6**
PNIG						**Sg**		**23 54 08.2**	**-0.8**
VHO	**Vista Hermosa**	**1.50**	**50**	*e* P		**Pn**		**23 54 21.8**	**-1.0**
VHO				*e* S		**Sn**		**23 54 40.9**	**-1.2**
OXBJ	**Oaxaca**	**1.51**	**50**	*e* P		**Pn**		**23 54 21.8**	**-1.1**
OXBJ				*e* S		**Sn**		**23 54 41.5**	**-0.7**
OXBJ	**Oaxaca**	**1.51**	**50**			**Pn**		**23 54 21.8**	**-1.1**
OXBJ						**Sn**		**23 54 41.5**	**-0.7**
HUIG	**Huatulco**	**1.79**	**100**	*e* P		**Pn**		**23 54 25.1**	**-1.4**
HUIG				*i* S		**Sn**		**23 54 47.7**	**-1.0**
HUIG	**Huatulco**	**1.79**	**100**			**Pn**		**23 54 25.1**	**-1.4**
HUIG						**Sn**		**23 54 47.7**	**-1.0**
TPIG	**Tehuac#an**	**2.37**	**13**	*e* P		**Pn**		**23 54 34.0**	**-0.7**
TPIG				*i* S		**Sn**		**23 55 02.2**	**-1.2**
TPIG	**Tehuac#an**	**2.37**	**13**			**Pn**		**23 54 34.0**	**-0.7**
TPIG						**Sn**		**23 55 02.2**	**-1.2**
CAIG	**El Cayaco**	**2.43**	**293**	*e* P		**Pn**		**23 54 33.0**	**-2.4**
CAIG				*e* S		**Sn**		**23 55 03.2**	**-1.5**
CAIG	**El Cayaco**	**2.43**	**293**			**Pn**		**23 54 33.0**	**-2.4**
CAIG						**Sn**		**23 55 03.2**	**-1.5**
MEIG	**Mezcala**	**2.43**	**319**	*e* P		**Pn**		**23 54 34.5**	**-1.0**
MEIG				*i* S		**Sn**		**23 55 03.6**	**-1.2**
MEIG	**Mezcala**	**2.43**	**319**			**Pn**		**23 54 34.5**	**-1.0**
MEIG						**Sn**		**23 55 03.6**	**-1.2**
PLIG	**Platanillo**	**2.73**	**327**	*e* P		**Pn**		**23 54 39.2**	**-0.4**
PLIG				*e* S		**Sn**		**23 55 11.8**	**-0.5**
PLIG	**Platanillo**	**2.73**	**327**			**Pn**		**23 54 39.2**	**-0.4**
PLIG						**Sn**		**23 55 11.8**	**-0.5**
PHPU	**Puebla**	**2.94**	**356**	*i* P		**Pn**		**23 54 42.4**	**-0.3**
PHPU	**Puebla**	**2.94**	**356**			**Pn**		**23 54 42.4**	**-0.3**
YAIG	**Yautepec**	**2.95**	**339**	*e* P		**Pn**		**23 54 42.8**	**0.0**
YAIG				*e* S		**Sn**		**23 55 17.6**	**-0.2**
YAIG	**Yautepec**	**2.95**	**339**			**Pn**		**23 54 42.8**	**0.0**
YAIG						**Sn**		**23 55 17.6**	**-0.2**
PPM	**Popocatepetl**	**3.03**	**347**	*e* P		**Pn**		**23 54 43.9**	**-0.1**
PPM				*i* S		**Sn**		**23 55 19.7**	**-0.4**
CMIG	**Matias Romero**	**3.08**	**71**	Pn		**Pn**		**23 54 43.3**	**-1.1**
	29nm,0.3s,baz=249,slow=12,SNR=177								
CMIG				Sn		**Sn**		**23 55 19.6**	**-1.2**
	240nm,0.3s,baz=198,slow=20,SNR=9.7								
CMIG				Lg		Lg		23 55 30.7	
	151nm,0.3s,baz=354,slow=11,SNR=5.8								
CMIG				LR		LR		23 55 48.0	
	comp=Z,421nm,21.9s,baz=124,slow=37								
CMIG	**Matias Romero**	**3.08**	**71**	*e* P		**Pn**		**23 54 43.5**	**-0.9**
CMIG				*i* S		**Sn**		**23 55 21.0**	**+0.2**
CMIG	**Matias Romero**	**3.08**	**71**			**Pn**		**23 54 43.5**	**-0.9**
CMIG						**Sn**		**23 55 21.0**	**+0.2**
ARIG	**Puente Sto Nin**	**3.17**	**314**	*e* P		**Pn**		**23 54 45.1**	**-0.5**
ARIG				*i* S		**Sn**		**23 55 22.5**	**-0.5**
ARIG	**Puente Sto Nin**	**3.17**	**314**			**Pn**		**23 54 45.1**	**-0.5**
ARIG						**Sn**		**23 55 22.5**	**-0.5**
UNM	**Universidad Na**	**3.43**	**340**	Pn		**Pn**		**23 54 52.3**	**+2.9**
TOVM	**TOLUCA**	**3.58**	**333**	*e* P		**Pn**		**23 54 50.6**	**-0.9**
TOVM				*i* S		**Sn**		**23 55 33.5**	**0.0**
TOVM	**TOLUCA**	**3.58**	**333**			**Pn**		**23 54 50.6**	**-0.9**
TOVM						**Sn**		**23 55 33.5**	**0.0**
PTVM	**Pico Tres Padr**	**3.65**	**342**	*e* P		**Pn**		**23 54 52.5**	**0.0**
PTVM				*i* S		**Sn**		**23 55 34.6**	**-0.6**
PTVM	**Pico Tres Padr**	**3.65**	**342**			**Pn**		**23 54 52.5**	**0.0**
PTVM						**Sn**		**23 55 34.6**	**-0.6**
ZIIG	**Zihuatanejo**	**3.70**	**294**	*i* P		**Pn**		**23 54 51.8**	**-1.1**
ZIIG				*i* S		**Sn**		**23 55 35.1**	**-0.9**
ZIIG	**Zihuatanejo**	**3.70**	**294**			**Pn**		**23 54 51.8**	**-1.1**
ZIIG						**Sn**		**23 55 35.1**	**-0.9**
VTVM	**Tizayuca**	**3.74**	**348**	*e* P		**Pn**		**23 54 54.1**	**+0.4**
VTVM				*i* S		**Sn**		**23 55 37.9**	**+0.5**
VTVM	**Tizayuca**	**3.74**	**348**			**Pn**		**23 54 54.1**	**+0.4**
VTVM						**Sn**		**23 55 37.9**	**+0.5**
LVIG	**Laguna Verde**	**3.88**	**22**	*i* P		**Pn**		**23 54 52.3**	**-3.0**
LVIG	**Laguna Verde**	**3.88**	**22**			**Pn**		**23 54 52.3**	**-3.0**
PCIG		**4.55**	**94**	*i* P		**Pn**		**23 55 04.0**	**-0.5**
PCIG				*e* S		**Sn**		**23 55 57.5**	**+0.4**
PCIG		**4.

		baz=213									
BNM	Barren Site		19.61	338	P		P		23 58 25.4	+1.3	
W41B	Gary Mavity, V		19.67	14	P		P		23 58 22.9	-1.7	
	baz=196										
LENM	Lemitar		19.75	337	P		Pn		23 58 27.4	+0.2	
LPM	Los Pinos Moun		19.75	338	P		Pn		23 58 27.6	+0.3	
TUL1	Leonard		19.82	5	IAmb		IAmb	23 58 36.2			
	comp=Z,59nm,0.9s										
TUL1	Leonard		19.82	5	P		P		23 58 24.4	-1.9	
	baz=186,SNR=15										
OXF	Oxford		19.87	21	IAmb		IAmb	23 58 36.4			
	comp=Z,64nm,0.8s										
OXF	Oxford		19.87	21	P		P		23 58 24.8	-2.0	
	baz=204,SNR=5.4										
TUC	Tucson		19.92	326	P		P		23 58 28.9	+1.5	
TUC	Tucson		19.92	326	P		Pn		23 58 29.4	+0.3	
	baz=140										
U32A	Winter Ranch,		20.22	358	IAmb		IAmb	23 58 41.9			
	comp=Z,55nm,0.8s										
Z50A	Ashland		20.24	30	IAmb		IAmb	23 58 47.5			
	comp=Z,29nm,0.8s										
Z50A	Ashland		20.24	30	P		P		23 58 29.4	-1.5	
	baz=215										
ANMO	Albuquerque		20.27	339	P		P		23 58 32.2	+0.9	
	comp=Z,20nm,1.0s,baz=148,slow=12,SNR=27										
ANMO	Albuquerque		20.27	339	P		P		23 58 32.4	+1.1	
ANMO	Albuquerque		20.27	339	P		P		23 58 32.4	+1.1	
	baz=155										
FCAR	Ozark Folk Cen		20.38	14	P		P		23 58 31.9	-0.5	
FCAR					IAmb		IAmb	23 58 41.8			
	comp=Z,35nm,0.9s										
152A	Waverly Hall		20.39	34	P		P		23 58 31.1	-1.4	
	baz=219										
U40A	Yellville		20.68	12	IAmb		IAmb	23 58 49.0			
	comp=Z,48nm,0.8s										
U40A	Yellville		20.68	12	P		P		23 58 33.9	-1.6	
	baz=194,SNR=23										
PLAL	Pickwick Lake		20.78	23	P		P		23 58 38.6	+1.9	
PLAL					IAmb		IAmb	23 58 47.0			
	comp=Z,62nm,1.1s										
214A	Organ Pipe Nat		20.79	322	P		P		23 58 38.5	+1.6	
	baz=135,SNR=11										
Z52A	Williamson		20.95	33	P		P		23 58 37.3	-1.2	
	baz=219										
255A	Hazlehurst		21.11	39	P		P		23 58 38.3	-2.0	
	baz=225										
Y51A	Rockmart		21.18	31	P		P		23 58 39.5	-1.5	
	baz=216										
PEBM	Pemiscott Bayo		21.19	18	P		P		23 58 42.6	+1.5	
154A	Montrose		21.24	37	P		P		23 58 38.9	-2.7	
	baz=223										
X18A	Snowflake		21.29	332	IAmb		IAmb	23 58 55.2			
	comp=Z,83nm,1.1s										
FPAL	Fort Paine		21.44	29	P		P		23 58 49.2	+5.4	
Z53A	Monticello		21.47	35	P		P		23 58 41.9	-2.2	
	baz=220										
MGMO	Mountain Grove		21.57	12	P		P		23 58 47.1	+2.0	
155A	Kite		21.61	38	P		P		23 58 43.9	-1.8	
	baz=224										
GOGA	Godfrey		21.63	35	IAmb		IAmb	23 58 51.7			
	comp=Z,21nm,0.7s										
GOGA	Godfrey		21.63	35	P		P		23 58 43.9	-1.9	
	baz=220										
W49A	Belvidere		21.63	27	P		P		23 58 43.7	-2.1	
	baz=212										
PBMO	Poplar Bluff		21.65	17	P		P		23 58 47.5	+1.5	
Y52A	Lilburn		21.66	33	IAmb		IAmb	23 58 55.1			
	comp=Z,32nm,0.9s										
Y52A	Lilburn		21.66	33	P		P		23 58 43.6	-2.6	
	baz=218,SNR=5.5										
W18A	Petrified Fore		21.69	333	IAmb		IAmb	23 58 58.4			
	comp=Z,34nm,1.0s										
W18A	Petrified Fore		21.69	333	P		P		23 58 48.3	+1.6	
	baz=147										
T25A	Trinidad		21.73	346	P		P		23 58 48.0	+0.9	
	baz=162,SNR=41										
X51A	Calhoun		21.82	30	P		P		23 58 45.7	-2.1	
	baz=216										
Z54A	Sparta		21.84	36	P		P		23 58 46.2	-2.0	
	baz=222										
SWET	Sewanee		21.86	27	P		P		23 58 47.9	-0.5	
SWET					IAmb		IAmb	23 58 55.7			
	comp=Z,46nm,0.7s										
WVT	Waverly		21.89	22	P		P		23 58 48.4	-0.1	
WVT					IAmb		IAmb	23 58 57.6			
	comp=Z,32nm,0.9s										
WVT	Waverly		21.89	22	P		P		23 58 46.1	-2.5	
	baz=207										
Y53A	Monroe		21.90	34	P		P		23 58 46.9	-1.9	
	baz=220										
X16A	Lo Mia Camp, P		21.91	329	IAmb		IAmb	23 59 04.7			
	comp=Z,52nm,0.8s										
V48A	Smith Brothers		21.93	25	P		P		23 58 47.5	-1.5	
V48A					IAmb		IAmb	23 58 58.1			
	comp=Z,48nm,1.0s										
113A	Mohawk Valley,		21.94	322	P		P		23 58 51.0	+1.8	
GTBY	Guantanamo Bay		22.03	77	P		P		23 58 51.2	+1.0	
GTBY					IAmb		IAmb	23 59 03.1			
	comp=Z,41nm,0.9s										
W50A	Signal Mountai		22.12	28	P		P		23 58 49.1	-2.1	
	baz=214,SNR=6.2										
156A	Sylvania		22.22	39	P		P		23 58 50.4	-1.7	
	baz=226										
X52A	Dahlonega		22.32	32	P		P		23 58 51.9	-1.5	
	baz=218										
V49A	McMinnville		22.34	26	P		P		23 58 52.9	-0.5	
	baz=212,SNR=6.3										
W51A	Cleveland		22.35	29	P		P		23 58 51.7	-1.9	
	baz=215										
Y14A	Wickenburg		22.36	325	P		P		23 58 55.0	+1.2	
Y14A					IAmb		IAmb	23 59 06.8			
	comp=Z,40nm,1.0s										
Y54A	Tignall		22.39	35	P		P		23 58 51.9	-2.2	
	baz=221										
CLTN	Cedars of Leba		22.43	25	IAmb		IAmb	23 59 07.0			
	comp=Z,25nm,1.1s										
X53A	Estanollee		22.55	33	P		P		23 58 53.9	-1.9	
	baz=219										
SDCO	Great Sand Dun		22.58	344	IAmb		IAmb	23 58 57.8			
	comp=Z,21nm,0.9s										
SDCO	Great Sand Dun		22.58	344	P		P		23 58 56.1	-0.2	
	baz=160,SNR=29										
V50A	Pikevile		22.61	28	P		P		23 58 54.3	-2.1	
	baz=214										
CCM	Cathedral Cave		22.65	14	P		P		23 58 54.8	-1.9	
CCM					IAmb		IAmb	23 59 13.9			
	comp=Z,42nm,0.9s										
CCM	Cathedral Cave		22.65	14	P		P		23 58 56.1	-0.6	
	baz=197										
CBKS	Cedar Bluff		22.69	356	IAmb		IAmb	23 59 06.8			
	comp=Z,28nm,0.9s										
CBKS	Cedar Bluff		22.69	356	P		P		23 58 56.7	-0.5	
	baz=175										
CPCT	Cooper Cave		22.70	29	IAmb		IAmb	23 59 07.3			
	comp=Z,50nm,1.0s										
W52A	Murphy		22.70	31	P		P		23 58 59.3	+2.0	
W52A					IAmb		IAmb	23 59 12.7			
	comp=Z,43nm,0.9s										
W52A	Murphy		22.70	31	P		P		23 58 54.8	-2.5	
	baz=217										
Z56A	Williston		22.76	38	P		P		23 58 56.1	-1.9	
	baz=225										
WUAZ	Wupatki		22.77	331	IAmb		IAmb	23 59 01.7			
	comp=Z,44nm,0.9s										
WUAZ	Wupatki		22.77	331	P		P		23 58 59.5	+1.3	
	baz=144,SNR=37										
GLA	Glamis		22.77	321	P		P		23 58 59.7	+1.6	
GLA					IAmb		IAmb	23 59 08.1			
	comp=Z,28nm,0.9s										
GLA	Glamis		22.77	321	P		P		23 58 59.3	+1.1	
	baz=133										
SIUC	Southern Illin		22.87	18	P		P		23 58 58.6	-0.4	
HODGE	Hodges		22.91	35	IAmb		IAmb	23 59 09.4			
	comp=Z,27nm,0.9s										
T47A	Sharon Grove		22.91	23	IAmb		IAmb	23 59 12.7			
	comp=Z,34nm,0.9s										
Y55A	Saluda		22.91	36	P		P		23 58 58.0	-1.6	
	baz=223										
KSU1	Kansas State U		22.95	3	P		P		23 58 59.4	-0.5	
	baz=183,SNR=7.4										
S22A	4UR Ranch, Cre		22.95	342	P		P		23 59 00.5	+0.3	
S22A					IAmb		IAmb	23 59 10.6			
	comp=Z,18nm,0.8s										
S22A	4UR Ranch, Cre		22.95	342	P		P		23 59 00.5	+0.3	
	baz=157										
MVCO	Mesa Verde		23.02	338	IAmb		IAmb	23 59 13.6			
	comp=Z,63nm,1.1s										
MVCO	Mesa Verde		23.02	338	P		P		23 59 01.4	+0.5	
	baz=153,SNR=27										
U49A	Red Boiling Sp		23.02	26	P		P		23 58 59.8	-0.9	
	baz=211,SNR=7.2										
V51A	Loudon		23.07	29	IAmb		IAmb	23 59 09.7			
	comp=Z,32nm,1.0s										
V51A	Loudon		23.07	29	P		P		23 58 59.8	-1.3	
	baz=215										
Y12C	Blythe		23.08	323	P		P		23 59 02.5	+1.2	
Y12C	Blythe		23.08	323	P		P		23 59 03.2	+1.9	
	baz=135										
X54A	Belton		23.08	34	P		P		23 59 00.5	-0.8	
	baz=221										
BG3	Lake Jocassee		23.12	33	P		P		23 59 04.0	+2.2	
BG3					IAmb		IAmb	23 59 10.8			
	comp=Z,18nm,0.9s										
Y56A	Pelion		23.13	37	P		P		23 59 00.9	-0.8	
	baz=224										
Z57A	Bowman		23.14	39	P		P		23 59 00.5	-1.4	
	baz=226										
W53A	Cullowhee		23.14	32	P		P		23 59 01.5	-0.6	
	baz=218										
RGRS	Roger Stewart		23.19	41	P		P		23 59 02.5	+0.1	
KSCO	Kaye Shedlock'		23.20	351	IAmb		IAmb	23 59 12.2			
	comp=Z,36nm,0.8s										
KSCO	Kaye Shedlock'		23.20	351	P		P		23 59 02.3	-0.2	
	baz=168										
TKL	Tuckaleechee C		23.22	30	P		P		23 59 00.7	-2.0	
	comp=Z,9.2nm,1.0s,baz=187,slow=8.1,SNR=5.2										
TKL	Tuckaleechee C		23.22	30	IAmb		IAmb	23 59 11.7			
	comp=Z,17nm,0.8s										
SWSC	Sam W. Stewart		23.30	319	P		P		23 59 05.4	+1.9	
	baz=131										
IKP	In-Ko-Pah, Jac		23.30	318	P		P		23 59 05.8	+2.2	
	baz=130										
NHSC	New Hope		23.33	40	P		P		23 59 03.8	0.0	
	baz=228										
U50A	Jamestown		23.34	27	P		P		23 59 03.0	-0.9	
	baz=213,SNR=5.1										
X55A	Gracelyn & Ava		23.43	36	P		P		23 59 03.9	-0.9	
	baz=223										
V52A	Sevierville		23.46	30	P		P		23 59 04.1	-1.0	
	baz=216										
BC3	Big Chuckawall		23.57	321	P		P		23 59 06.6	+0.3	
	baz=133,SNR=12										
W54A	Cherokee Point		23.59	34	P		P		23 59 06.0	-0.3	
	baz=220										
PAULI	Pauline		23.59	35	P		P		23 59 08.7	+2.4	
PAULI					IAmb		IAmb	23 59 16.1			
	comp=Z,24nm,1.0s										
T49A	Edmonton		23.63	25	P		P		23 59 07.3	+0.5	
T49A					IAmb		IAmb	23 59 14.6			
	comp=Z,15nm,0.7s										
T49A	Edmonton		23.63	25	P		P		23 59 05.8	-1.0	
	baz=211										
Q24A	Divide		23.64	346	P		P		23 59 07.8	+0.5	
Q24A					IAmb		IAmb	23 59 18.6			
	comp=Z,29nm,1.1s										
Q24A	Divide		23.64	346	P		P		23 59 07.1	-0.1	
	baz=162										
MONP2	Monument Peak		23.66	318	P		P		23 59 08.4	+1.1	
	baz=130										
BAR	Barrett		23.68	318	P		P		23 59 09.2	+1.9	
U51A	La Follette		23.69	29	P		P		23 59 06.0	-1.4	
	baz=215										
V53A	Saluda		23.71	32	IAmb		IAmb	23 59 18.7			
	comp=Z,26nm,1.1s										
V53A	Saluda		23.71	32	P		P		23 59 06.7	-0.9	
	baz=218										
IRM	Iron Mountain		23.73	322	P		P		23 59 08.8	+1.0	
	baz=134,SNR=5.9										
X56A	White Oak		23.79	37	P		P		23 59 07.3	-1.0	
	baz=224										
Y57A	Sumter		23.83	38	P		P		23 59 07.2	-1.4	
	baz=226										
T50A	Nancy		23.85	27	P		P		23 59 08.1	-0.8	
	baz=212,SNR=5.4										
U15A	North Rim		23.94	330	P		P		23 59 11.6	+1.6	
U15A					IAmb		IAmb	23 59 24.8			
	comp=Z,28nm,1.0s										
U52A	Thorn Hill		24.01	30	P		P		23 59 09.3	-1.1	
	baz=216										
TZTN	Tazewell		24.04	29	IAmb		IAmb	23 59 20.3			
	comp=Z,32nm,1.1s										
TZTN	Tazewell		24.04	29	P		P		23 59 09.6	-1.1	
	baz=219										
KMSC	Kings Mountain		24.09	35	IAmb		IAmb	23 59 22.3			
	comp=Z,32nm,1.1s										
KMSC	Kings Mountain		24.09	35	P		P		23 59 09.9	-1.3	
	baz=222										
BELC	Belle Mtn. Jos		24.13	321	P		P		23 59 13.3	+1.6	
	baz=133,SNR=9.0										
TPFO	Pinon Flats		24.14	320	P		P		23 59 12.3	+0.5	
	baz=131										
OLIL	Olney		24.15	19	P		P		23 59 11.2	-0.3	
XPFO	Pion Flat		24.15	320	P		P		23 59 14.0	+2.2	
PFO	Pinyon Flats O		24.15	320	P		P		23 59 13.6	+1.7	
	comp=Z,1.9nm,0.8s,baz=129,slow=14,SNR=4.7										
PFO	Pinyon Flats O		24.15	320	P		P		23 59 13.3	+1.5	
	baz=131										
Y58A	Scranton		24.19	40	P		P		23 59 12.1	+0.1	
Y58A					IAmb		IAmb	23 59 14.0			
	comp=Z,42nm,1.0s										
T51A	Gray		24.20	28	P		P		23 59 11.6	-0.5	
	baz=214										
V54A	Nebo		24.24	33	P		P		23 59 12.2	-0.3	
	baz=220										
WCI	Wyandotte Cave		24.31	23	P		P		23 59 12.2	-1.0	
WCI					IAmb		IAmb	23 59 22.9			
	comp=Z,35nm,0.9s										
WCI	Wyandotte Cave		24.31	23	P		P		23 59 11.8	-1.3	
	baz=208										
S49A	Springfield		24.32	25	P		P		23 59 11.7	-1.5	
	baz=210										
SMCO	Snowmass		24.32	343	IAmb		IAmb	23 59 27.8			
	comp=Z,34nm,1.1s										
GMRC	Granite Mounta		24.47	323	P		P		23 59 16.4	+1.5	
	baz=134										
W56A	Indian Trail		24.51	36	P		P		23 59 14.3	-0.7	
	baz=224										
ISCO	Idaho Springs		24.55	346	P		P		23 59 16.5	+0.9	
	baz=162										
S50A	Richmond		24.60	26	P		P		23 59 15.2	-0.5	
	baz=212										
V55A	Taylorsville		24.68	34	IAmb		IAmb	23 59 24.2			
	comp=Z,27nm,0.8s										
V55A	Taylorsville		24.68	34	P		P		23 59 16.2	-0.4	
	baz=221										
T52A	Hallie		24.76	29	P		P		23 59 16.9	-0.4	
	baz=216										
R49A	Shelbyville		24.80	24	P		P		23 59 17.6	+0.1	
R49A					IAmb		IAmb	23 59 30.4			
	comp=Z,32nm,1.1s										
R49A	Shelbyville		24.80	24	P		P		23 59 17.3	-0.3	
	baz=210										
X58A	Rowland		24.83	39	P		P		23 59 17.4	-0.4	
	baz=227										
OTAV	Otavalo		24.86	127	eP		P		23 59 19.0	+0.2	
W57A	Gilead		24.86	37	P		P		23 59 19.8	+1.7	
W57A					IAmb		IAmb	23 59 30.6			
	comp=Z,14nm,0.9s										
W57A	Gilead		24.86	37	P		P		23 59 17.9	-0.2	
	baz=225										
LCMT	Little Creek M		24.86	330	P		P		23 59 20.0	+1.7	
U54A	Nelsons Funny		24.88	32	P		P		23 59 20.4	+2.1	
U54A	Nelsons Funny		24.88	32	P		P		23 59 17.4	-0.9	
	baz=219										
S51A	Beattyville		24.92	28	P		P		23 59 18.0	-0.6	
	baz=214										
OGNE	Ogallala		25.01	353	P		P		23 59 20.7	+1.1	
	baz=170,SNR=7.9										
V56A	Mocksville		25.05	35	P		P		23 59 18.2	-1.6	
	baz=223										
BLO	Bloomington		25.07	21	P		P		23 59 21.0	+1.1	
BLO					IAmb		IAmb	23 59 29.6			
	comp=Z,29nm,0.8s										
TUQ	Turquoise Moun		25.09	323	P		P		23 59 21.5	+1.1	
	baz=135,SNR=16										
R50A	Paris		25.14	26	P		P		23 59 19.7	-0.9	
	baz=212										
Q48A	North Vernon		25.14	23	P		P		23 59 19.8	-0.8	
	baz=208										
W58A	Raeford		25.21	38	P		P		23 59 19.8	-1.5	
	baz=226										
BGNE	Belgrade		25.22	360	P		P		23 59 20.8	-0.6	
	baz=179										
U55A	TA2, Sparta		25.26	33	P		P		23 59 21.8	-0.1	
	baz=221										
CIS	Catalina Islan		25.27	317	P		P		23 59 22.5	+0.6	
	baz=128										
N41A	Harden Midland		25.28	13	P		P		23 59 21.1	-0.8	
BFSC	Mount Baldy Ra		25.32	319	P		P		23 59 23.1	+0.7	
	baz=130										
T54A	Tazewell		25.42	32	P		P		23 59 22.4	-0.9	
	baz=219										
SHPR	Sheep Range		25.45	326	P		P		23 59 24.1	+0.4	
R51A	Hillsboro		25.47	27	P		P		23 59 23.6	0.0	
	baz=213										
HDIL	Hopedale		25.50	15	P		P		23 59 23.2	-0.6	
	baz=199										
U56A	King		25.50	34	P		P		23 59 24.7	+0.8	
U56A					IAmb		IAmb	23 59 34.9			
	comp=Z,24nm,0.9s										
U56A	King		25.50	34	P		P		23 59 23.4	-0.5	
	baz=222										
V57A	Coltrane Farms		25.50	36	P		P		23 59 23.7	-0.3	
	baz=224										
GSC	Goldstone, Bar		25.51	322	P		P		23 59 25.9	+1.7	
GSC	Goldstone, Bar		25.51	322	P		P		23 59 26.5	+2.4	
	baz=133,SNR=7.1										
Q49A	Aurora		25.52	24	P		P		23 59 23.5	-0.6	
	baz=210										
MWC	Mount Wilson		25.56	319	P		P		23 59 26.4	+1.7	
SDDR	Presa de Saban		25.56	80	P		P		23 59 25.6	+1.0	
SDDR					IAmb		IAmb	23 59 27.3			
	comp=Z,25nm,1.0s										
O20A	White River Ci		25.58	341	P		P		23 59 26.4	+1.5	
	baz=156,SNR=19										
PASC	Pasadena Art C		25.61	318	P		P		23 59 26.0	+1.1	
N23A	Red Feather La		25.67	346	P		P		23 59 26.3	+0.6	
	baz=162										
P48A	Milroy		25.72	23	P		P		23 59 27.9	+2.0	
P48A					IAmb		IAmb	23 59 39.3			
	comp=Z,10nm,0.6s										
ROSC	El Rosal		25.74	113	P		P		23 59 27.2	+0.5	
	comp=Z,11nm,0.7s,baz=305,slow=14,SNR=10										
ROSC					LR		LR	00 09 39.5			
	comp=Z,111nm,20.0s,baz=302,slow=37										
ROSC	El Rosal		25.74	113	P		P		23 59 27.0	+0.3	
ROSC					IAmb		IAmb	23 59 33.4			
	comp=Z,22nm,1.1s										
Q50A	Georgetown		25.75	26	P		P		23 59 25.7	-0.5	
	baz=212										
TCRU	Three Creeks R		25.80	333	P		P		23 59 27.7	+0.8	
V58A	Windy Hill, Pi		25.82	37	IAmb		IAmb	23 59 36.5			
	comp=Z,39nm,1.1s										
V58A	Windy Hill, Pi		25.82	37	P		P		23 59 26.3	-0.5	
	baz=225										
T55A	Pulaski		25.86	33	P		P		23 59 27.1	-0.2	
	baz=220										
TMUT	Trail Mountain		25.87	336	P		P		23 59 29.0	+1.4	
R52A	Catlettsburg		25.92	28	P		P		23 59 27.5	-0.2	
	baz=215										
SNCC	San Nicolas Is		25.92	315	P		P		23 59 28.9	+1.1	
SNCC					IAmb		IAmb	23 59 46.1			
	comp=Z,31nm,1.1s										
EDW2	Edwards Air Fo		25.94	320	P		P		23 59 27.5	-0.6	
	baz=131										
SFIN	Lafayette		25.96	19	IAmb		IAmb	23 59 38.2			
	comp=Z,24nm,0.8s										
SFIN	Lafayette		25.96	19	P		P		23 59 27.5	-0.5	
	baz=204										
SCIA	State Center		26.04	8	P		P		23 59 28.0	-0.7	
	baz=190,SNR=10										
SC01	Santiago de lo		26.11	79	P		P		23 59 30.5	+0.9	
S54A	Dingess, Beckl		26.12	31	P		P		23 59 31.2	+1.6	
S54A					IAmb		IAmb	23 59 39.3			
	comp=Z,21nm,1.0s										
S54A	Dingess, Beckl		26.12	31	P		P		23 59 29.0	-0.6	
	baz=218										
BLA	Blacksburg		26.13	33	IAmb		IAmb	23 59 45.3			
	comp=Z,29nm,0.9s										
BLA	Blacksburg		26.13	33	P		P		23 59 28.8	-0.9	
	baz=221										
U57A	Blanch		26.14	36	P		P		23 59 29.1	-0.7	
	baz=224										
CNNC	Cliffs of the		26.17	40	P		P		23 59 29.7	-0.3	
T56A	Rocky Mt		26.20	34	P		P		23 59 28.9	-1.4	
	baz=222										
R53A	Hurricane		26.23	29	P		P		23 59 30.9	+0.4	
R53A	Hurricane		26.23	29	P		P		23 59 29.4	-1.2	
	baz=217										
V59A	Middlesex		26.31	38	P		P		23 59 30.2	-1.1	
	baz=227										
TPNV	Topopah Spring		26.36	325	P		P		23 59 35.0	+3.1	
TPNV	Topopah Spring		26.36	325	P		P		23 59 34.3	+2.4	
	baz=137,SNR=10.0										
MPMC	Manual Prospec		26.43	322	P		P		23 59 34.7	+2.1	
	baz=133										
P50A	Jamestown		26.48	25	P		P		23 59 31.4	-1.3	
	baz=212										
S55A	Lewisburg		26.51	32	P		P		23 59 31.3	-1.8	
	baz=220										
L40A	Anamosa		26.51	11	P		P		23 59 32.7	-0.3	
O48A	Farmland		26.51	22	P		P		23 59 31.4	-1.7	
	baz=208,SNR=5.2										
U58A	Oxford		26.56	37	P		P		23 59 33.0	-0.5	
	baz=225										
R54A	Victor		26.58	31	P		P		23 59 33.4	-0.3	
	baz=219										
T57A	Hurt		26.60	35	P		P		23 59 34.8	+0.9	
T57A					IAmb		IAmb	23 59 45.9			
	comp=Z,41nm,1.1s								

comp=Z,38nm,1.1s
K22A Casper 27.47 346 P P 23 59 42.2 +0.4
baz=161
JFWS Jewell Farm 27.52 12 P P 23 59 42.8 +0.7
JFWS IAmb IAmb 23 59 49.7
comp=Z,24nm,0.8s
JFWS Jewell Farm 27.52 12 P P 23 59 41.9 -0.2
baz=196
T59A Double "B" Far 27.54 37 IAmb IAmb 23 59 52.1
comp=Z,26nm,1.1s
T59A Double "B" Far 27.54 37 P P 23 59 41.9 -0.4
baz=226
R56A Bull Pasture M 27.55 33 P P 23 59 41.7 -0.9
baz=221
ECSD EROS Data Cent 27.57 2 IAmb IAmb 23 59 52.4
comp=Z,17nm,0.9s
ECSD EROS Data Cent 27.57 2 P P 23 59 42.3 -0.2
baz=182
SDV Santo Domingo 27.58 102 P P 23 59 43.4 +0.3
comp=Z,17nm,0.9s,baz=280,slow=1.9,SNR=14
SDV Santo Domingo 27.58 102 *eP* **P 23 59 42.8 -0.4**
SDV Santo Domingo 27.58 102 P P 23 59 44.2 +1.1
SDV IAmb IAmb 23 59 45.5
comp=Z,17nm,0.9s
P54A Burton 27.94 30 P P 23 59 45.5 -0.4
baz=218
HWUT Hardware Ranch 28.01 338 IAmb IAmb 00 00 02.4
comp=Z,11nm,0.9s
R58B Mineral 28.05 35 P P 23 59 47.0 +0.1
baz=224
Q56A Snyder Ridge, 28.14 32 P P 23 59 50.2 +2.4
Q56A IAmb IAmb 00 00 06.6
comp=Z,15nm,1.0s
R58A Rapidan 28.22 35 P P 23 59 48.8 +0.4
baz=224
L48A N Adams 28.26 22 P P 23 59 47.8 -0.9
baz=208
BW06 Boulder Array 28.38 342 P P 23 59 50.9 +0.8
baz=156
PDAR Pinedale Array 28.38 342 P P 23 59 51.3 +1.2
comp=Z,2.7nm,0.8s,baz=147,slow=9.1,SNR=17
PDAR PcP **PcP 00 03 01.4 -1.0**
comp=Z,1.0nm,0.9s,baz=134,slow=5.1,SNR=3.9
PDAR LR LR 00 12 15.4
comp=Z,481nm,18.2s,baz=166,slow=39
PDAR Pinedale Array 28.38 342 P P 23 59 51.4 +1.3
RSSD Black Hills 28.41 351 P P 23 59 51.1 +0.9
MDPB Devils Postpil 28.44 323 P P 23 59 52.8 +2.1
NV11 Mina Array Sit 28.48 325 IAmb IAmb
comp=Z,11nm,1.0s
Q57A Strasburg 28.54 33 P P 23 59 50.4 -0.8
baz=222
NVAR Mina Array Bea 28.56 325 P P 23 59 53.9 +2.2
comp=Z,5.6nm,1.0s,baz=143,slow=9.1,SNR=17
NVAR PcP **PcP 00 03 03.0 +0.1**
comp=Z,1.3nm,1.0s,baz=132,slow=3.1,SNR=4.3
NVAR LR LR 00 10 47.2
comp=Z,211nm,19.5s,baz=145,slow=35
NVAR Mina Array Bea 28.56 325 P P 23 59 53.6 +1.9
N53A Lisbon 28.73 28 P P 23 59 54.3 +1.3
N53A IAmb IAmb 00 00 10.6
comp=Z,28nm,1.1s
I42A Draeger Farm, 28.74 14 P P 23 59 55.7 +2.7
I42A IAmb IAmb 00 00 03.4
comp=Z,32nm,1.1s
ELK Elko 28.78 332 P P 23 59 55.5 +1.8
comp=Z,3.4nm,1.0s,baz=140,slow=12,SNR=8.2
RYN Ryan 28.82 325 P P 23 59 55.8 +1.8
KVN Kaiserville 28.89 326 P P 23 59 56.3 +1.7
SPMN Marine on St. 29.36 7 IAmb IAmb 00 00 09.3
comp=Z,16nm,0.7s
SPMN Marine on St. 29.36 7 P P 23 59 57.7 -0.7
baz=190
SNOW Snow King Moun 29.38 341 P P 00 00 00.9 +1.9
SNOW IAmb IAmb 00 00 18.3
comp=Z,20nm,1.1s
YERR Yerington 29.47 325 P P 00 00 02.4 +2.6
TPAW Teton Pass 29.47 341 P P 00 00 01.8 +2.0
TPAW IAmb IAmb 00 00 19.9
comp=Z,9.6nm,0.9s
BMN Battle Mountai 29.47 329 P P 00 00 01.7 +2.0
FXWY Fox Creek 29.63 341 P P 00 00 02.5 +1.3
PNTR Pine Nut 29.74 325 P P 00 00 04.4 +2.2
PNTR IAmb IAmb 00 00 14.5
comp=Z,8.2nm,0.8s
R61A Willards 29.75 38 P P 00 00 00.3 -1.7
baz=228
ATAH Atahualpa 30.12 139 P P 00 00 08.7 +2.8
comp=Z,16nm,0.8s,baz=334,slow=6.9,SNR=8.4
RLMT Red Lodge 30.47 344 IAmb IAmb 00 00 20.0
comp=Z,7.5nm,0.6s
RLMT Red Lodge 30.47 344 P P 00 00 09.7 +1.2
baz=158
YMR Madison River 30.54 342 P P 00 00 10.9 +1.8
E38A The Farm, Brul 30.88 9 P
E38A IAmb IAmb 00 00 19.6
comp=Z,11nm,0.8s
MCMT McKenzie Canyo 31.28 339 P P 00 00 17.2 +1.5
DLMT Dillon 31.67 340 IAmb IAmb 00 00 27.8
comp=Z,13nm,0.8s
WVOR Wild Horse Val 31.69 330 IAmb IAmb 00 00 30.8
comp=Z,22nm,1.1s
MDND Maddock 31.69 358 P P 00 00 19.5 +0.5
baz=177
MOD Modoc Plateau 32.12 328 IAmb IAmb 00 00 31.6
comp=Z,11nm,0.9s
EYMN Ely 32.20 8 P P 00 00 21.9 -1.6
baz=191
SADO Sadowa 32.69 25 LR LR 00 15 50.4
comp=Z,76nm,18.4s,baz=321,slow=40
BMO Blue Mountains 32.99 334 P P 00 00 32.0 +1.3
EGMT Eagleton 33.29 345 P P 00 00 33.2 +0.1
baz=159
MSO Missoula 33.41 340 P P 00 00 34.8 +0.5
baz=151
J05D Fort Rock, OR 33.59 329 P P 00 00 36.6 +0.7
baz=136
PINE Pine Mountain 33.82 329 IAmb IAmb 00 00 47.5
comp=Z,8.4nm,0.9s
K61A Williamstown 33.86 34 P P 00 00 38.4 +0.3
baz=226
F10A Beach Ranch, E 33.88 336 IAmb IAmb 00 00 47.5
comp=Z,8.6nm,0.8s
J04D Umpqua Nationa 34.01 328 P P 00 00 41.2 +1.6
baz=135
H57A Richville 34.09 29 P P 00 00 39.3 -0.8
baz=221
ULM Lac du Bonnet 34.10 2 P P 00 00 39.2 -0.8
comp=Z,4.0nm,0.7s,baz=191,slow=9.1,SNR=8.6
ULM PcP **PcP 00 03 15.8 -1.4**
comp=Z,2.5nm,0.8s,baz=144,slow=8.7,SNR=2.8
ULM LR LR 00 14 44.6
comp=Z,110nm,19.4s,baz=184,slow=37
ULM Lac du Bonnet 34.10 2 IAmb IAmb 00 00 49.6
comp=Z,15nm,1.1s
I04A Tendick Farm, 34.55 328 P P 00 00 44.6 +0.4
baz=135
J01E Myrtle Point 34.91 326 P P 00 00 48.7 +1.5
baz=132
I03D Drain, OR 34.97 327 P P 00 00 49.3 +1.7
baz=134
H04A Detroit Lake 35.08 329 IAmb IAmb 00 00 56.7
comp=Z,29nm,1.1s
F05D White Salmon 35.63 331 P P 00 00 55.1 +1.8
baz=138
FFC Flin Flon 38.67 356 P P 00 01 18.7 -0.4
FFC IAmb IAmb 00 01 29.1
comp=Z,19nm,1.1s
LLLB Lillooet 39.45 336 IAmb IAmb 00 01 36.3
comp=Z,12nm,0.8s
SAML Samuel 42.46 123 *eP* **P 00 01 49.3 -1.5**
SAML Samuel 42.46 123 P P 00 01 49.3 -1.5
SAML IAmb IAmb 00 01 50.2
comp=Z,14nm,0.9s
FCC Fort Churchill 42.69 3 P P 00 01 54.8 +2.7
LPAZ La Paz 43.59 136 P P 00 02 00.8 +0.1
comp=Z,7.4nm,0.8s,baz=333,slow=7.4,SNR=31
LPAZ LR LR 00 18 54.7
comp=Z,158nm,18.8s,baz=307,slow=34
LPAZ La Paz 43.59 136 *eP* **P 00 02 00.4 -0.2**
LPAZ La Paz 43.59 136 IAmb IAmb 00 02 01.7
comp=Z,9.3nm,0.8s
MNMC Minye Minye 44.75 140 IAmb IAmb 00 02 21.1
comp=Z,18nm,1.1s
SCHQ Schefferville 45.49 25 P P 00 02 14.5 -0.2
comp=Z,6.2nm,1.0s,baz=217,slow=10,SNR=2.8
SCHQ Schefferville 45.49 25 IAmb IAmb 00 02 27.9
comp=Z,6.8nm,0.8s
YKA Yellowknife Ar 47.81 350 P P 00 02 31.9 -0.8
comp=Z,1.2nm,0.7s,baz=155,slow=7.2,SNR=17
YKA PcP **PcP 00 04 00.4 -1.0**
comp=Z,1.0nm,0.8s,baz=155,slow=3.9,SNR=5.6
YKA pPcP 00 04 07.3
comp=Z,1.4nm,0.8s,baz=155,slow=3.4,SNR=6.9
YKA LR LR 00 24 43.9
comp=Z,23nm,18.4s,baz=164,slow=39
LVC Limon Verde 47.83 143 *eP* **P 00 02 34.0 +0.2**
LVC Limon Verde 47.83 143 P P 00 02 35.2 +1.4
LVC IAmb IAmb 00 02 35.5
comp=Z,9.9nm,1.1s
CLDB Colider 49.57 120 *eP* **P 00 02 44.4 -2.6**
FRB Frobisher Bay 51.73 16 P P 00 03 03.5 +1.0
comp=Z,3.1nm,1.0s,baz=216,slow=11
SALV Santo Antonio 52.43 125 *eP* **P 00 03 07.2 -1.2**
PP1B Ponte de Pedra 54.05 126 *eP* **P 00 03 19.4 -0.9**
AQDB Aquidauana 55.15 130 *eP* **P 00 03 27.1 -1.1**
ARAG Araguaiana, MT 55.42 123 *eP* **P 00 03 29.4 -0.9**
SMTB Santa Maria do 55.66 113 *eP* **P 00 03 31.9 -0.2**
BCAR Beaver Creek A 55.87 338 P P 00 03 34.2 +1.3
C2SB Chapadao do Su 56.30 126 *eP* **P 00 03 36.1 -0.5**
EGAK Eagle 56.69 339 P P 00 03 45.8 +7.1
EGAK IAmb IAmb 00 03 46.4
comp=Z,6.3nm,0.9s
INK Inuvik 56.88 345 IAmb IAmb 00 03 47.4
comp=Z,13nm,0.8s
DOT Dot Lake 57.05 337 IAmb IAmb 00 03 50.0
comp=Z,16nm,1.2s
PAX Paxson 57.21 336 IAmb IAmb 00 03 50.8
comp=Z,10nm,1.0s
SCRK Sand Creek 57.21 338 IAmb IAmb 00 03 51.3
comp=Z,7.8nm,0.9s
CPUP Villa Florida 57.76 136 P P 00 03 45.5 -1.3
comp=Z,5.7nm,1.0s,baz=310,slow=8.6,SNR=6.1
CPUP LR LR 00 27 57.6
comp=Z,77nm,20.7s,baz=344,slow=35
CPUP Villa Florida 57.76 136 *eP* **P 00 03 44.7 -2.1**
CPUP Villa Florida 57.76 136 P P 00 03 46.1 -0.7
BDFB Brasilia 58.50 120 P P 00 03 51.8 -0.5
comp=Z,18nm,0.8s,baz=295,slow=8.0,SNR=29
BDFB LR LR 00 27 06.9
comp=Z,79nm,20.8s,baz=149,slow=34
HDA Harding Lake 58.53 337 P P 00 03 58.9 +7.2
RES Resolute Bay 58.62 1 P P 00 03 56.9 +4.8
comp=Z,2.4nm,0.9s,baz=194,slow=13,SNR=4.9
RES Resolute Bay 58.62 1 IAmb IAmb 00 04 01.8
comp=Z,2.0nm,0.8s
PRP Porcupine Dome 58.62 339 IAmb IAmb 00 04 00.7
comp=Z,15nm,1.1s
ILAR Eielson Array 58.70 338 P P 00 03 53.3 +0.5
comp=Z,1.7nm,0.3s,baz=125,slow=5.3,SNR=50
ILAR LR LR 00 29 21.5
comp=Z,111nm,19.5s,baz=129,slow=36
ILAR Eielson Array 58.70 338 P P 00 03 53.1 +0.3
RND Reindeer 58.75 336 pP 00 04 01.1 +2.0
ITRB Iturama 58.76 126 *eP* **P 00 03 53.7 -0.2**
TRCB Terra Rica 58.81 130 *eP* **P 00 03 53.3 -0.9**
MCK McKinley 58.94 336 P P 00 04 02.0 +7.4
WRH Wood River Hil 58.99 337 P P 00 04 01.6 +6.8
WRH IAmb IAmb 00 04 05.1
comp=Z,5.5nm,0.8s
POKR Poker Plat Res 59.08 338 P P 00 03 54.1 -1.4
baz=121
COLA College 59.11 338 P P 00 03 56.4 +0.8
TCOL CIGO, UAF Yank 59.11 338 P P 00 03 56.1 +0.5
baz=121
PCMB Pacaembu 59.14 128 *eP* **P 00 03 55.5 -1.0**
BMAR Burnt Mountain 59.41 341 P P 00 03 57.7 -0.1
NBPS Pedro II - PI 59.45 105 *eP* **P 00 03 58.6 -0.4**
IPMB Ipameri, GO 59.54 123 *eP* **P 00 03 58.7 -0.7**
BPAW Bear Paw Mtn. 59.91 336 P P 00 04 08.2 +6.9
BPAW IAmb IAmb 00 04 08.4
comp=Z,9.4nm,1.0s
NBMO Morrinhos-CE 60.38 103 *eP* **P 00 04 05.2 -0.1**
ITQB Itaqui 60.48 139 *eP* **P 00 04 05.3 -0.2**
SVW2 Sparrevohn 60.61 332 P P 00 04 12.8 +6.8
SVW2 IAmb IAmb 00 04 13.5
comp=Z,12nm,0.9s
BB19B Bebedouro 60.94 126 *eP* **P 00 04 08.3 -0.6**
PMNB Patos De Minas 61.27 122 *eP* **P 00 04 10.7 -0.6**
JANB Januaria 61.34 118 *eP* **P 00 04 11.3 -0.4**
FRTB Fartura 61.42 129 *eP* **P 00 04 12.7 +0.6**
NBPB Pedra_Branca-C 61.60 106 *eP* **P 00 04 13.2 -0.3**
TOLK Toolik Lake Re 61.64 341 IAmb IAmb 00 04 20.6
comp=Z,7.7nm,0.8s
TOLK Toolik Lake Re 61.64 341 P P 00 04 13.3 +0.3
baz=121
ITAB Concordia 61.88 134 *eP* **P 00 04 14.5 -0.7**
PLCA Paso Flores 62.00 157 P P 00 04 15.5 -0.2
comp=Z,9.1nm,1.0s,baz=358,slow=8.5,SNR=8.1
PLCA LR LR 00 25 52.6
comp=Z,93nm,18.7s,baz=296,slow=31
PLCA Paso Flores 62.00 157 *eP* **P 00 04 16.4 +0.6**
PLCA Paso Flores 62.00 157 P P 00 04 16.2 +0.4
PLCA IAmb IAmb 00 04 16.8
comp=Z,11nm,1.0s
RCLB Rio Claro- Sao 62.45 126 *eP* **P 00 04 18.9 -0.2**
NBMA Muriti-CE 63.03 107 *eP* **P 00 04 23.1 0.0**
NBPN Ponto Novo - B 63.09 111 *eP* **P 00 04 23.3 -0.2**
SPB Sao Paulo 63.17 128 *eP* **P 00 04 23.7 -0.2**
VAO Valinhos 63.21 127 *eP* **P 00 04 23.2 -1.0**
PLTB Pedras Altas 63.81 138 *eP* **P 00 04 27.4 -0.5**
NBPA Parau_RN 63.96 105 *eP* **P 00 04 29.4 +0.2**
CNLB Canela 64.06 135 *eP* **P 00 04 29.1 -0.6**
NBTA Tacaratu-PE 64.33 109 *eP* **P 00 04 31.6 -0.2**
RCBR Riachuelo 65.12 104 *eP* **P 00 04 37.1 +0.2**
NBLA Lagarto - SE 65.31 110 *eP* **P 00 04 37.4 -0.7**
NBIT Itapeh - BA 65.48 115 *eP* **P 00 04 39.3 +0.2**
SJMB Sao Joao De Ma 65.68 120 *eP* **P 00 04 40.4 0.0**
NBPV Pedro Velho 65.89 105 *eP* **P 00 04 41.9 0.0**
BSFB Barra de Sao F 66.03 120 *eP* **P 00 04 42.4 -0.1**
NBRF Rio Formoso - 66.86 107 *eP* **P 00 04 47.9 -0.1**
BILL Bilibino 77.36 337 P P 00 05 50.4 +0.4
BILL IAmb IAmb 00 05 58.2
comp=Z,8.8nm,1.1s
PCAS Casmilo, Conde 79.40 51 *eP* **P 00 06 01.2 -0.7**
comp=Z,100nm,2.0s
PMTG Montargil 79.82 52 *eP* **P 00 06 03.7 -0.4**
comp=Z,39nm,1.6s
PCBR Castelo Branco 80.21 51 *eP* **P 00 06 05.3 -0.9**
PCVE Castro Verde 80.27 54 *eP* **P 00 06 06.4 -0.2**
comp=Z,64nm,1.8s
PBEJ Beja 80.32 53 *eP* **P 00 06 06.5 -0.4**
PMRV Marv??o 80.37 52 *eP* **P 00 06 06.7 -0.4**
comp=Z,39nm,2.3s
ESDC Sonseca Array 82.88 51 P P 00 06 20.1 -0.4
comp=Z,2.2nm,0.8s,baz=302,slow=5.1,SNR=11
ESDC pP **pP 00 06 27.4 +0.8**
comp=Z,2.8nm,0.8s,baz=303,slow=5.5,SNR=7.9
ESDC Sonseca Array 82.88 51 P P 00 06 20.1 -0.4
ESDC **pP 00 06 27.3 +0.8**
PMSA Palmer Station 84.66 166 *eP* **P 00 06 30.0 +1.3**
NOA NORSAR Array B 84.99 27 P P 00 06 31.7 +0.9
comp=Z,1.0nm,1.0s,baz=302,slow=5.1,SNR=2.4
ARCES ARCESS Array B 85.89 17 LR LR 00 47 37.1
comp=Z,30nm,18.3s,baz=136,slow=38
ASCN Ascension 86.05 99 P P 00 06 38.9 +2.0
FINES FINESS Array B 90.95 23 LR LR 00 51 58.3
comp=Z,58nm,18.1s,baz=296,slow=38
DBIC Dimbokro 91.11 83 LR LR 00 48 05.7
comp=Z,18nm,19.2s,baz=262,slow=36
TORD Torodi Ar. Bea 95.41 75 P P 00 07 18.6 -2.1
comp=Z,1.0nm,0.9s,baz=286,slow=4.4,SNR=3.9
TORD pP **pP 00 07 25.9 -1.0**
comp=Z,1.1nm,0.9s,baz=288,slow=4.9,SNR=4.3
TORD Torodi Ar. Bea 95.41 75 IAmb IAmb 00 07 27.0
comp=Z,1.2nm,1.0s
BRTR Keskin Array B 108.45 37 PKiKP PKiKP 00 12 23.4 -1.3
comp=Z,0.6nm,0.7s,baz=64,slow=3.4,SNR=4.1
HHC Hu-ho-hao-te 117.08 335 *e*PKP **PKiKP 00 12 41.8 +0.8**
MKAR Makanchi Array 117.40 360 PKP PKPdf 00 12 39.4 -1.9
comp=Z,0.3nm,0.6s,baz=25,slow=3.2,SNR=4.3
MKAR pPKP **pPKPdf 00 12 46.6 -0.9**
comp=Z,0.7nm,0.8s,baz=44,slow=3.7,SNR=5.9
WMQ Urumqi 120.15 355 *e*PKP **PKPdf 00 12 47.3 +0.5**
WMQ LR LR
comp=Z,420nm,29.0s
WMQ LR LR
comp=Z,120nm,29.0s
NJ2 Nanjing 120.55 324 *e*PKP **PKPdf 00 12 48.3 +0.6**
GEYT Alibeck 121.74 22 PKP PKPdf 00 12 49.2 -0.7
comp=Z,1.6nm,0.7s,baz=60,slow=3.6,SNR=4.0
STKA Stephens Creek 124.03 242 PKP PKPdf 00 12 53.6 -0.8
comp=Z,1.9nm,0.7s,baz=315,slow=2.9,SNR=4.4
STKA pPKP **pPKPdf 00 13 01.5 +0.9**
comp=Z,2.5nm,0.7s,baz=133,slow=0.7,SNR=3.4
LZH Lanzhou 124.16 339 *e*PKP **PKiKP 00 12 56.3 +1.2**
LZH sPKP 00 13 09.1
KSH Kashi 124.38 6 PKP PKPdf 00 12 53.9 -1.2
KSH sPKP 00 13 11.3
KSH PP **PP 00 14 45.2 +5.9**
HRA Herat 126.37 20 PKPdf 00 12 58.5 -0.6
BOSA Boshof 126.44 114 PKP PKPdf 00 12 58.2 -1.0
comp=Z,3.7nm,0.8s,baz=240,slow=3.7,SNR=5.1
RAYN Ar Rayn 126.82 43 PKPdf 00 12 59.6 -0.5
CD2 Chengdu 128.82 336 Pdif Pdif 00 09 47.2 -2.2
WRA Warramunga Arr 130.30 257 PKP PKPdf 00 13 06.0 -0.6
comp=Z,3.6nm,1.0s,baz=89,slow=1.7,SNR=15
WRA Warramunga Arr 130.30 257 PKPdf 00 13 06.2 -0.5
ASAR Alice Springs 130.89 252 PKP PKPdf 00 13 07.2 -0.6
comp=Z,2.4nm,1.0s,baz=82,slow=2.3,SNR=12
ASAR pPKP **pPKPdf 00 13 13.8 -0.1**
comp=Z,2.1nm,1.0s,baz=96,slow=2.7,SNR=7.5
ASAR Alice Springs 130.89 252 PKPdf 00 13 06.5 -1.3
CMAR Chiang Mai Arr 141.85 334 PKP PKPdf 00 13 27.3 -0.9
comp=Z,1.4nm,0.8s,baz=338,slow=2.4,SNR=11
SRSP Sriramsagar 145.00 6 *e*PKPbc **PKPab 00 13 32.2 -0.7**
RPR Rampur 145.16 5 *e*PKPbc **PKPbc 00 13 34.1 +0.7**
KLRI Killari 145.62 9 *e*PKPdf **PKPdf 00 13 33.5 -1.3**
GGR Gangavaram 146.24 3 *e*PKPdf **PKPdf 00 13 36.5 +0.6**
DMPR Damasthipur 146.33 8 *e*PKPdf **PKPdf 00 13 36.2 +0.2**
HYBB Hyderabad (bro 146.51 6 *e*PKPdf **PKPdf 00 13 36.7 +0.3**
HYB Hyderabad 146.52 6 *i* PKP **PKPdf 00 13 35.0 -1.4**
CUPL Choutuppal 146.67 5 *e*PKPdf **PKPdf 00 13 37.1 +0.5**
ABPO Ambohimpanom 146.69 100 PKPbc 00 13 38.8 +0.5
PVM Polavaram 146.86 1 *e*PKPdf **PKPdf 00 13 37.6 +0.7**
KSM Kuching 147.09 299 PKPbc 00 13 39.3 -0.2
KSM PKPab **pPKPbc 00 13 46.3 +0.6**
MYLAV Mylavaram 147.33 3 *e*PKPdf **PKPdf 00 13 38.5 +0.8**
NJIS Nagarjunasagar 147.44 5 *e*PKPdf **PKPdf 00 13 38.6 +0.7**
SRLM Srisailam 147.85 6 *e*PKPdf **PKPdf 00 13 39.1 +0.5**
ADKI Addanki 148.19 4 *e*PKPdf **PKPdf 00 13 39.7 +0.6**
URV Uravakonda 148.79 9 *e*PKPdf **PKPdf 00 13 40.6 +0.4**
SKHT Srikalahasti 150.26 5 *e*PKPdf **PKPdf 00 13 42.6 +0.2**

*IDC **03** 00:07:31.6±0.6, 61°.41N×59°.21W, h0km, mb3.7/14, mb1 4.0/16, mb1mx3.8/40, mbtmp3.8/16, ML4.1/3, MS3.4/3, Ms1 3.4/3, ms1mx2.7/40, Error ellipse: s-maj=17.4km s-min=11.6km az=148.0*
*NEIC **03** 00:07:32.7±2.4, 61°.25N±0°.07×59°.3W±0°.1, h14km±4km, Error ellipse: s-maj=11.3km s-min=8.6km az=145.0*
*OTT **03** 00:07:33.3±0.1, 61°.43N×59°.53W, h18km, ML4.2/12, LAlbertaRADOR Sea Seismic Zone. 287km east from Resolution Island, Nu*

ISC 03 00:07:31.0±0.5, 61°.34N±0°.04×59°.61W±0°.05, h10km, n116,
σ2s89/126, mb3.8/16, Davis Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAJQ	**Kangiqsualujju**	**4.13**	**233**	PN	**Pn**	**00 08 36.6**	**+2.5**
KAJQ				SN	**Sn**	**00 09 23.2**	**+0.8**
KAJQ				SN	Sb	00 09 23.3	-10
KAJQ				Trac		00 09 26.7	
	comp=Z,54nm,0.2s						
KAJQ	**Kangiqsualujju**	**4.13**	**233**		**Pn**	**00 08 36.6**	**+2.5**
FRB	**Frobisher Bay**	**4.79**	**304**	Pn	**Pn**	**00 08 44.1**	**+1.0**
	4.5nm,0.3s,baz=125,slow=12,SNR=79						
FRB				Sn	Sn	00 09 33.8	-4.7
	2.8nm,0.3s,baz=204,slow=20,SNR=3.6						
FRB	**Frobisher Bay**	**4.79**	**304**	PN	**Pn**	**00 08 43.9**	**+0.8**
FRB				SN	**Sn**	**00 09 35.6**	**-2.9**
FRB				Trac		00 09 39.5	
	comp=Z,20nm,0.1s						
NANL	**Nain**	**4.94**	**193**	PN	**Pn**	**00 08 47.6**	**+2.5**
NANL				SN	**Sn**	**00 09 43.3**	**+1.1**
NANL				Trac		00 09 45.6	
	comp=Z,37nm,0.1s						
IVI	**Ivigtut**	**5.52**	**86**	Pn	**Pn**	**00 08 51.8**	**-1.3**
KNGQ	**Kangiqsujuaq**	**5.92**	**278**	PN	**Pn**	**00 09 00.6**	**+2.0**
KNGQ				SN	**Sn**	**00 10 04.2**	**-2.2**
KNGQ				Trac		00 10 07.3	
	comp=Z,20nm,0.1s						
MKVL	**Makkovik**	**6.27**	**178**	PN	**Pn**	**00 09 03.9**	**+0.5**
MKVL				SN	**Sn**	**00 10 11.5**	**-3.5**
MKVL				Trac		00 10 16.7	
	comp=Z,1.6nm,0.0s						
NRS	**Narsarsuaq**	**6.85**	**85**	*i* P	**Pn**	**00 09 10.4**	**-1.0**
NRS	**Narsarsuaq**	**6.85**	**85**	Pn	**Pn**	**00 09 10.9**	**-0.4**
SFJD	**Kangerlussuaq**	**6.90**	**31**	Pn	**Pn**	**00 09 11.9**	**-0.1**
	16nm,0.3s,baz=214,slow=15,SNR=124						
SFJD				Sn	**Sn**	**00 10 23.4**	**-7.0**
	baz=129,slow=19,SNR=2.6						
SFJD	**Kangerlussuaq**	**6.90**	**31**	*i* P	**Pn**	**00 09 12.0**	**0.0**
SFJD	**Kangerlussuaq**	**6.90**	**31**	PN	**Pn**	**00 09 12.5**	**+0.6**
SFJD				SN	**Sn**	**00 10 24.3**	**-6.1**
SFJD				Trac		00 10 35.6	
	comp=Z,153nm,1.1s						
SFJD	**Kangerlussuaq**	**6.90**	**31**		**Pn**	**00 09 12.6**	**+0.6**
SCHQ	**Schefferville**	**7.56**	**214**	Pn	**Pn**	**00 09 23.8**	**+2.6**
	17nm,0.3s,baz=22,slow=9.0,SNR=187						
SCHQ				Sn	**Sn**	**00 10 44.6**	**-2.1**
	16nm,0.3s,baz=308,slow=19,SNR=11						
SCHQ				LR	LR	00 12 46.4	
	comp=Z,168nm,18.1s,baz=78,slow=41						
SCHQ	**Schefferville**	**7.56**	**214**	PN	**Pn**	**00 09 23.8**	**+2.6**
SCHQ				SN	**Sn**	**00 10 44.8**	**-2.1**
SCHQ				Trac		00 10 50.2	
	comp=Z,52nm,0.3s						
SCHQ	**Schefferville**	**7.56**	**214**		**Pn**	**00 09 23.8**	**+2.6**
SCHQ					**Sn**	**00 10 46.9**	**+0.1**
ILULI	**Ilulissat**	**8.66**	**21**	Pn	Pn	00 09 32.8	-3.3
ANGG	**Ammassalik, Gr**	**10.69**	**57**	Pn	**Pn**	**00 10 03.0**	**-0.8**
LG4Q	**La Grande 4**	**10.96**	**232**	PN	**Pn**	**00 10 07.3**	**-0.3**
LG4Q				SN	**Sn**	**00 12 03.5**	**-6.6**
LG4Q				Trac		00 12 09.0	
	comp=Z,5.9nm,0.1s						
NATG	**Natashquan Que**	**11.22**	**191**	PN	**Pn**	**00 10 11.7**	**+0.5**
NATG				SN	**Sn**	**00 12 11.2**	**-5.3**
NATG				Trac		00 12 19.4	
	comp=Z,275nm,1.5s						
KJKQ	**Kuujjuarapik**	**11.28**	**246**	PN	**Pn**	**00 10 12.5**	**+0.4**
KJKQ				SN	**Sn**	**00 12 11.7**	**-6.3**
KJKQ				Trac		00 12 14.7	
	comp=Z,24nm,0.2s						
SMQ	**Clarke City**	**11.82**	**203**	PN	**Pn**	**00 10 19.3**	**-0.3**
SMQ				SN	**Sn**	**00 12 24.3**	**-7.1**
SMQ				Trac		00 12 26.5	
	comp=Z,20nm,0.4s						
MNQ	**Manicouagan**	**11.97**	**209**	PN	**Pn**	**00 10 22.4**	**+0.9**
MNQ				SN	**Sn**	**00 12 28.9**	**-6.1**
MNQ				Trac		00 12 31.9	
	comp=Z,3.7nm,0.1s						
DRLN	**Deer Lake**	**12.17**	**173**	PN	**Pn**	**00 10 24.6**	**+0.4**
DRLN				SN	**Sn**	**00 12 33.0**	**-6.8**
DRLN				Trac		00 12 36.5	
	comp=Z,1μm,3.5s						
DRLN	**Deer Lake**	**12.17**	**173**	Pn	**Pn**	**00 10 24.8**	**+0.6**
ILON	**Igloolik, Nuna**	**12.20**	**321**	PN	**Pn**	**00 10 22.9**	**-1.6**
ILON				SN	Sn	00 12 30.9	-9.4
ILON				Trac		00 12 34.0	
	comp=Z,33nm,0.8s						
ICQ	**Pointe Anglais**	**12.60**	**203**	PN	**Pn**	**00 10 29.1**	**-1.1**
ICQ				SN	**Sn**	**00 12 42.9**	**-7.5**
ICQ				Trac		00 12 55.8	
	comp=Z,343nm,2.2s						
CNQ	**Baie Comeau**	**12.97**	**205**	PN	**Pn**	**00 10 33.8**	**-1.4**
CNQ				SN	**Sn**	**00 12 53.2**	**-6.2**
CNQ				Trac		00 12 57.8	
	comp=Z,3.4nm,0.1s						
GSQ	**Grosses Roches**	**13.16**	**202**	PN	**Pn**	**00 10 36.7**	**-1.1**
GSQ				SN	**Sn**	**00 12 56.2**	**-7.8**
GSQ				Trac		00 12 58.9	
	comp=Z,5.5nm,0.2s						
NMSQ	**Nemaska Statio**	**13.19**	**230**	SN	**Sn**	**00 12 58.2**	**-6.4**
SUMG	**Summit**	**13.87**	**27**	*i* P	**Pn**	**00 10 44.1**	**-3.5**
SUMG	**Summit**	**13.87**	**27**		**Pn**	**00 10 44.5**	**-3.1**
DMCQ	**Dolbeau-Mistas**	**14.26**	**215**	PN	**Pn**	**00 10 52.0**	**-0.8**
DMCQ				SN	**Sn**	**00 13 22.8**	**-8.0**
DMCQ				Trac		00 13 34.7	
	comp=Z,44nm,0.7s						
BATG	**Bathurst New B**	**14.57**	**198**	PN	**Pn**	**00 10 56.5**	**-0.5**
BATG	**Bathurst New B**	**14.57**	**198**	Pn	**Pn**	**00 10 55.2**	**-1.8**
D63A	**Stockholm**	**15.15**	**203**	P	**Pn**	**00 11 02.7**	**-2.1**
	baz=16						

D62A	**Allapoint, All**	**15.29 205**	Pn	**Pn**	**00 11 04.9**	**-1.8**
D62A			lAmb	lAmb	00 11 15.4	
	comp=Z,11nm,0.9s					
D62A	**Allapoint, All**	**15.29 205**	P	**Pn**	**00 11 04.5**	**-2.1**
	baz=17					
MATQ	**Matagami**	**15.38 229**	P	**Pn**	**00 11 04.6**	**-3.2**
	baz=34					
D61A	**St Aubert, Com**	**15.42 208**	P	**Pn**	**00 11 06.2**	**-2.1**
	baz=19					
PQI	**Presque Isle**	**15.48 202**	Pn	**Pn**	**00 11 07.1**	**-2.0**
E64A	**Bridgewater**	**15.69 201**	P	**Pn**	**00 11 10.1**	**-1.8**
	baz=15					
LSQQ	**Lebel-sur-Quev**	**15.73 226**	P	**Pn**	**00 11 09.8**	**-2.6**
	baz=32					
E63A	**Oxbow**	**15.80 203**	Pn	**Pn**	**00 11 11.0**	**-2.3**
E63A	**Oxbow**	**15.80 203**	P	**Pn**	**00 11 10.8**	**-2.5**
	baz=16					
LMN	**Caledonia Moun**	**15.81 193**	Pn	**Pn**	**00 11 11.9**	**-1.6**
D60A	**Saint Jean D'O**	**15.86 209**	P	**Pn**	**00 11 12.0**	**-2.1**
	baz=20					
LATQ	**La Tuque**	**15.90 214**	Pn	**Pn**	**00 11 12.6**	**-2.0**
GBN	**Guysborough**	**16.00 185**	Pn	**Pn**	**00 11 14.7**	**-1.2**
D58A	**Chemin du LacG**	**16.19 214**	P	**Pn**	**00 11 15.9**	**-2.5**
	baz=23					
E61A	**Lac Etchemin**	**16.22 208**	P	**Pn**	**00 11 17.2**	**-1.5**
	baz=19					
F64A	**Sherman**	**16.32 202**	Pn	**Pn**	**00 11 17.6**	**-2.4**
F64A	**Sherman**	**16.32 202**	P	**Pn**	**00 11 17.6**	**-2.4**
	baz=15					
VLDQ	**Val d'Or**	**16.70 226**	Pn	**Pn**	**00 11 23.1**	**-1.7**
VLDQ			lAmb	lAmb	00 11 24.1	
	comp=Z,12nm,0.9s					
GGN	**Saint George**	**16.80 198**	Pn	**Pn**	**00 11 25.5**	**-0.5**
GGN			lAmb	lAmb	00 11 30.0	
	comp=Z,13nm,0.9s					
HAL	**Halifax**	**16.90 190**	Pn	**Pn**	**00 11 27.4**	**+0.2**
HAL			lAmb	lAmb	00 11 29.2	
	comp=Z,22nm,1.0s					
E58A	**La Victoria**	**16.96 214**	P	**Pn**	**00 11 26.6**	**-1.5**
	baz=23					
PKME	**Peaks-Kenny Pk**	**17.08 204**	Pn	**Pn**	**00 11 27.1**	**-2.5**
FCC	**Fort Churchill**	**17.28 277**	Pn	**Pn**	**00 11 30.3**	**-1.7**
FCC			lAmb	lAmb	00 11 45.8	
	comp=Z,16nm,0.9s					
EMMW	**East Machias**	**17.29 199**	Pn	**Pn**	**00 11 29.7**	**-2.6**
G62A	**West of Eustis**	**17.38 207**	Pn	**Pn**	**00 11 32.4**	**-0.9**
G62A			lAmb	lAmb	00 11 32.8	
	comp=Z,19nm,1.1s					
TRQ	**Mont Tremblant**	**17.46 217**	Pn	**Pn**	**00 11 34.4**	**0.0**
SCO	**Scoresbysund**	**17.56 43**	*i* P	**Pn**	**00 11 33.1**	**-2.3**
SCO	**Scoresbysund**	**17.56 43**	Pn	**Pn**	**00 11 32.7**	**-2.7**
H62A	**Milan**	**18.13 207**	Pn	**P**	**00 11 43.1**	**+0.2**
H62A			lAmb	lAmb	00 11 48.1	
	comp=Z,20nm,1.1s					
E53A	**Dumoine, Ponti**	**18.28 223**	P	**Pn**	**00 11 43.6**	**-0.9**
	baz=28					
RES	**Resolute Bay**	**18.34 331**	P	**P**	**00 11 43.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=123,slow=10,SNR=3.4					
D50A	**G1974 Best Tow**	**18.35 229**	P	**Pn**	**00 11 43.3**	**-2.1**
	baz=32					
FRNY	**Flat Rock**	**18.47 213**	P	**Pn**	**00 11 47.4**	**+0.6**
I63A	**Otisfield**	**18.50 206**	P	**Pn**	**00 11 48.2**	**+1.0**
LBNH	**Lisbon**	**18.62 209**	P	**Pn**	**00 11 48.8**	**+0.2**
LBNH			lAmb	lAmb	00 12 07.3	
	comp=Z,13nm,1.1s					
I62A	**Tamworth**	**18.83 207**	P	**Pn**	**00 11 51.4**	**+0.2**
I62A			lAmb	lAmb	00 11 54.3	
	comp=Z,14nm,0.9s					
LONY	**Lake Ozonia**	**18.93 215**	P	**Pn**	**00 11 53.5**	**+1.1**
HNH	**Hanover**	**19.21 209**	P	**Pn**	**00 11 56.6**	**+0.9**
HNH			lAmb	lAmb	00 12 02.9	
	comp=Z,18nm,1.0s					
PLVO	**Plevna**	**19.28 220**	P	**Pn**	**00 11 56.7**	**+0.1**
PLVO			lAmb	lAmb	00 12 05.7	
	comp=Z,9.6nm,1.0s					
NCB	**Newcomb**	**19.44 213**	P	**Pn**	**00 11 59.8**	**+1.3**
DELO	**Deloro Mine**	**19.92 220**	P	**Pn**	**00 12 05.1**	**+0.8**
DELO			lAmb	lAmb	00 12 17.9	
	comp=Z,21nm,1.2s					
J59A	**Piesco**	**19.98 213**	P	**Pn**	**00 12 06.1**	**+1.1**
J59A			lAmb	lAmb	00 12 14.2	
	comp=Z,7.8nm,0.9s					
K62A	**Royalston**	**20.18 208**	P	Pn	00 12 07.6	+0.3
SADO	**Sadowa**	**20.19 224**	P	Pn	00 12 08.7	+1.3
	comp=Z,5.9nm,0.9s,baz=75,slow=11,SNR=4.8					
SADO	**Sadowa**	**20.19 224**	P	Pn	00 12 07.6	+0.2
SADO			lAmb	lAmb	00 12 26.3	
	comp=Z,12nm,1.1s					
J58A	**Remsen**	**20.29 215**	P	**P**	**00 12 07.8**	**+1.2**
J58A			lAmb	lAmb	00 12 13.1	
	comp=Z,13nm,1.0s					
E46A	**Sault Ste Mari**	**20.71 235**	P	**P**	**00 12 13.0**	**+1.9**
E46A			lAmb	lAmb	00 12 15.9	
	comp=Z,11nm,1.1s					
H48A	**Harrisville**	**21.73 231**	P	**P**	**00 12 22.5**	**+0.4**
E43A	**Lone Tree Farm**	**21.79 239**	P	**P**	**00 12 26.4**	**+3.6**
L56A	**Greenwood**	**22.07 218**	P	**P**	**00 12 29.0**	**+3.2**
L56A			lAmb	lAmb	00 12 40.4	
	comp=Z,9.0nm,1.1s					
PAL	**Palisades**	**22.15 210**	P	**P**	**00 12 25.8**	**-0.8**
ULM	**Lac du Bonnet**	**22.89 258**	P	**P**	**00 12 36.7**	**+2.3**
	comp=Z,2.4nm,0.5s,baz=47,slow=12,SNR=8.5					
ULM			S	**S**	**00 16 38.9**	**-4.9**
	comp=Z,1.5nm,0.5s,baz=336,slow=18,SNR=2.7					
ULM	**Lac du Bonnet**	**22.89 258**	lAmb	lAmb	00 12 45.4	
	comp=Z,9.8nm,0.8s					
FFC	**Flin Flon**	**23.03 273**	lAmb	lAmb	00 12 49.0	
	comp=Z,6.5nm,1.1s					
YKA	**Yellowknife Ar**	**25.26 297**	P	**P**	**00 12 59.0**	**+2.2**
	comp=Z,1.1nm,0.6s,baz=64,slow=9.6,SNR=15					
YKA	**Yellowknife Ar**	**25.26 297**	P	**P**	**00 13 00.1**	**+3.3**
ARCES	**ARCESS Array B**	**33.43 40**	P	**P**	**00 14 10.3**	**+0.9**
	comp=Z,2.7nm,0.9s,baz=300,slow=9.0,SNR=7.0					
PDAR	**Pinedale Array**	**34.80 261**	P	**P**	**00 14 25.3**	**+3.6**
	comp=Z,0.7nm,0.6s,baz=59,slow=8.9,SNR=8.8					
PDAR	**Pinedale Array**	**34.80 261**	P	**P**	**00 14 25.8**	**+4.1**
ILAR	**Eielson Array**	**36.74 314**	P	**P**	**00 14 41.2**	**+3.4**
	comp=Z,1.9nm,1.1s,baz=54,slow=7.7,SNR=13					
FINES	**FINESS Array B**	**38.21 51**	P	**P**	**00 14 52.0**	**+1.6**
	comp=Z,2.8nm,0.9s,baz=329,slow=9.7,SNR=4.8					
IMAR	**Indian Mountai**	**38.27 319**	P	**P**	**00 14 54.0**	**+3.2**
BPAW	**Bear Paw Mtn.**	**38.55 315**	P	**P**	**00 14 56.8**	**+3.5**
BPAW			lAmb	lAmb	00 15 05.2	
	comp=Z,5.9nm,1.1s					
KTH	**Kantishna Hill**	**38.88 315**	P	**P**	**00 14 59.2**	**+3.1**
FID	**Port Fidalgo**	**39.09 309**	P	**P**	**00 14 60.0**	**+2.2**
ESDC	**Sonseca Array**	**39.91 97**	P	**P**	**00 15 04.9**	**0.0**
	comp=Z,0.2nm,0.4s,baz=326,slow=8.2,SNR=3.2					
PSUT	**Pine Spring**	**40.14 261**	P	pP	00 15 13.3	+3.9
NVAR	**Mina Array Bea**	**42.35 265**	P	P	00 15 30.1	+5.0
	comp=Z,1.5nm,0.9s,baz=52,slow=6.8,SNR=9.9					
NVAR			PcP	**PcP**	**00 17 21.2**	**+2.8**
	comp=Z,0.3nm,0.7s,baz=49,slow=3.3,SNR=3.0					
NVAR	**Mina Array Bea**	**42.35 265**	P	**P**	**00 15 26.8**	**+1.7**
TXAR	**Lajitas Array**	**43.15 243**	P	P	00 15 37.0	+5.4
	comp=Z,0.5nm,0.8s,baz=77,slow=5.6,SNR=4.2					
TXAR			PcP	**PcP**	**00 17 24.1**	**+3.1**
	comp=Z,0.4nm,0.5s,baz=46,slow=3.9,SNR=5.1					
TXAR			LR	LR	00 33 32.1	
	comp=Z,35nm,18.0s,baz=0.0,slow=36					
ZALV	**Zalesovo Beam**	**61.65 23**	P	**P**	**00 17 49.5**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=352,slow=8.7,SNR=2.7					
TORD	**Torodi Ar. Bea**	**64.94 109**	P	**P**	**00 18 10.4**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=324,slow=7.7,SNR=7.7					
TORD	**Torodi Ar. Bea**	**64.94 109**	lAmb	lAmb	00 18 11.0	
	comp=Z,1.0nm,1.1s					
MKAR	**Makanchi Array**	**67.92 27**	P	**P**	**00 18 30.1**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=350,slow=5.4,SNR=8.5					
SONM	**Songino Array**	**70.60 10**	P	**P**	**00 18 48.3**	**+2.3**
	comp=Z,0.4nm,0.8s,baz=340,slow=6.7,SNR=2.8					
SONM	**Songino Array**	**70.60 10**	lAmb	lAmb	00 18 53.8	
	comp=Z,0.9nm,1.2s					
CPUP	**Villa Florida**	**87.37 178**	LR	LR	01 02 44.1	
	comp=Z,37nm,18.4s,baz=222,slow=38					
WRA	**Warramunga Arr**	**137.50 340**	PKP	**PKiKP**	**00 26 56.7**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=10,slow=2.3,SNR=3.6					
ASAR	**Alice Springs**	**141.22 340**	PKhKP	PKPpre	00 26 56.7	
	comp=Z,0.3nm,0.8s,baz=24,slow=2.5,SNR=3.5					

*LDG **03** 00:08:32.5±0.0,49.°14N×6.°70E,h10km,Md2.6/2,Ml2.5/17, Error ellipse: s-maj=0.8km s-min=0.6km az=86.0*
*STR **03** 00:08:32.8±1.0,49.°N±2.°×±.°,h20km±15km,MLv2.3/6*
*BGR **03** 00:08:32.6±0.3,49.°13N×6.°70E,h10km,ML2.0/4,Error ellipse: s-maj=4.4km s-min=2.2km az=68.0*

*BNS **03** 00:08:33.5±0.3,49.°19N×6.°81E,h10km,ML1.6*
ISC 03 00:08:32.7±1.0,49.°17N±0.°02×6.°70E±0.°02,h23km±9km, n71,σ1.°953/124,1C-5D,Germany

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
DUP	**Duppenweiler**	**0.25**	**12**	⇓Pg		**Pb**	**00 08 38.7**	**-0.1**
DUP				PmP			00 08 39.5	
DUP				Sg		**Sb**	**00 08 42.8**	**-0.2**
RIVT	**Riveris**	**0.54**	**4**	*e*Pg		**Pb**	**00 08 43.4**	**-0.2**
RIVT				Sg		**Sb**	**00 08 50.5**	**-0.4**
WLF	**Walferdange**	**0.61**	**324**	⇓P		**Pn**	**00 08 45.0**	**-0.9**
WLF				S		**Sb**	**00 08 52.2**	**-0.8**
WLF	**Walferdange**	**0.61**	**324**	*e*Pg		**Pn**	**00 08 45.1**	**-0.9**
WLF				*e*Sg		**Sb**	**00 08 53.4**	**+0.4**
PEB	**Petersbachel**	**0.67**	**98**	Pg		**Pb**	**00 08 44.7**	**-1.0**
PEB				Sg		**Sb**	**00 08 53.1**	**-1.5**
LANF	**Langenberg**	**0.75**	**104**	Pg		**Pn**	**00 08 46.9**	**-0.9**
LANF	**Langenberg**	**0.75**	**104**	Pg		**Pn**	**00 08 46.8**	**-0.9**
LANF				Sg		**Sb**	**00 08 56.4**	**-0.4**
SUBF	**Surbourg**	**0.79**	**108**	Pg		**Pn**	**00 08 47.8**	**-0.5**
SUBF				Sg		**Sn**	**00 08 58.5**	**-1.0**
LVIA	**Vianden**	**0.83**	**337**	⇑P		**Pn**	**00 08 49.1**	**+0.1**
LVIA				S		**Sb**	**00 08 58.8**	**-0.5**
	comp=E,19nm,0.1s							
CDF	**Champ du Feu**	**0.84**	**153**	*e*Pg		**Pb**	**00 08 47.8**	**-0.9**
CDF	**Champ du Feu**	**0.84**	**153**	*e*Pn		**Pn**	**00 08 48.5**	**-0.7**
CDF				*e*Sg		**Sb**	**00 08 58.7**	**-1.0**
	comp=E,6.6nm,0.2s							
CDF				*e*Sn		**Sn**	**00 09 00.2**	**-0.7**
	comp=E,44nm,0.2s							
WLS	**Welschbruch**	**0.87**	**150**	Pg		**Pn**	**00 08 48.4**	**-1.1**
WLS				Sg		**Sn**	**00 09 00.4**	**-1.0**
WLS	**Welschbruch**	**0.87**	**150**	⇓P*		**Pn**	**00 08 48.3**	**-1.1**
IMS	**Imsbach**	**0.89**	**61**	*e*P*		**Pn**	**00 08 49.1**	**-0.6**
IMS				PmP			00 08 49.7	
IMS				SmS			00 09 02.5	
PAGF	**Fort de Pagny**	**0.89**	**227**	*e*Pg		**Pn**	**00 08 48.8**	**-1.0**
	baz=45							
PAGF	**Fort de Pagny**	**0.89**	**227**	*e*P		**Pn**	**00 08 49.8**	**0.0**
PAGF				*e*Sg		**Sn**	**00 09 00.1**	**-1.8**
	comp=E,16nm,0.2s,baz=44							
PAGF				*e*Sn		**Sb**	**00 09 01.5**	**+0.6**
	comp=E,13nm,0.2s							
ABH	**Alteburg**	**0.90**	**37**	Pg		**Pn**	**00 08 49.6**	**-0.3**
ABH	**Alteburg**	**0.90**	**37**	P*		**Pn**	**00 08 49.6**	**-0.3**
ABH				*e*Sg		**Sn**	**00 09 02.1**	**-0.1**
KTD	**Kalmit**	**0.92**	**80**	*e*Sg		**Sn**	**00 09 02.5**	**-0.2**
ECH	**Echery**	**1.00**	**162**	Pn		**Pn**	**00 08 50.4**	**-0.9**
ECH				Pg		**Pb**	**00 08 50.9**	**-0.4**
ECH	**Echery**	**1.00**	**162**	⇓Pn		**Pn**	**00 08 50.4**	**-0.9**
ECH				Sg		**Sn**	**00 09 03.6**	**-1.0**
ECH				SmS			00 09 04.7	
LKLB	**Kalborn**	**1.01**	**338**	⇓P		**Pn**	**00 08 51.2**	**-0.2**
LKLB				S		**Sn**	**00 09 04.6**	**-0.3**
	comp=N,4.5nm,0.1s							
BLI	**Bleialf**	**1.10**	**346**	Pg		**Pb**	**00 08 53.9**	**+0.9**
BGG	**Burgeitz**	**1.12**	**21**	*e*Pg		**Pb**	**00 08 53.0**	**-0.2**
BGG				*e*Sg		**Sn**	**00 09 07.5**	**-0.1**
	comp=N,19nm,0.1s							
HILG	**Hillesheim**	**1.13**	**359**	*e*Pg		**Pb**	**00 08 53.7**	**+0.2**
HAU	**Haudompre**	**1.19**	**192**	*e*Pn		**Pb**	**00 08 53.2**	**-1.3**
HAU	**Haudompre**	**1.19**	**192**	*e*Pg		**Pb**	**00 08 54.0**	**-0.5**
HAU	**Haudompre**	**1.19**	**192**	*e*P		**Pb**	**00 08 54.9**	**+0.4**
HAU				*e*Sn		**Sn**	**00 09 07.9**	**-1.4**
	comp=N,4.7nm,0.2s							
HAU				*e*Sg		**Sb**	**00 09 09.2**	**-0.2**
	comp=N,19nm,0.2s							
LAGB	**Langenfeld Gru**	**1.22**	**12**	Pg		**Pb**	**00 08 55.6**	**+0.5**
LAGB				Sg		**Sb**	**00 09 12.4**	**+2.0**
BHOU	**Houvegnez**	**1.27**	**339**	P		**Pb**	**00 08 55.0**	**-0.9**
BRET	**Bretten**	**1.31**	**96**	Sg		**Sb**	**00 09 13.8**	**+0.8**
SWS	**Schriesheim-Wi**	**1.34**	**76**	Sg		**Sb**	**00 09 14.5**	**+0.6**
MOF	**Molkenrain**	**1.35**	**168**	Pg		**Pb**	**00 08 57.4**	**+0.2**
MOF				Sg		**Sb**	**00 09 14.8**	**+0.8**
HINF	**Hinteralfeld**	**1.36**	**176**	*e*Pg		**Pb**	**00 08 57.3**	**-0.1**
HINF				*e*Sn		**Sn**	**00 09 11.6**	**-1.9**
HINF				*e*Sg		**Sb**	**00 09 14.2**	**-0.1**
	comp=N,16nm,0.2s							
BFO	**Black Forest**	**1.36**	**127**	Pn		**Pn**	**00 08 55.8**	**-0.5**
BFO				PmP			00 08 58.5	
BFO				Sn		**Sn**	**00 09 11.6**	**-2.1**
BFO				SmS			00 09 15.0	
RCHB	**Rochefort**	**1.38**	**316**	P		**Pb**	**00 08 56.5**	**-1.2**
RCHB				S		**Sn**	**00 09 12.6**	**-1.3**
	comp=E,7.4nm,0.2s							
AHRW	**Bad Neuenahr-A**	**1.40**	**10**	Pg		**Pb**	**00 08 59.2**	**+1.2**
FACH	**Fachingen**	**1.46**	**35**	Sn		**Sn**	**00 09 14.7**	**-1.1**
KIZ	**Kirchzarten**	**1.46**	**146**	Pg		**Pb**	**00 08 59.3**	**+0.2**
KIZ				Sn		**Sn**	**00 09 13.4**	**-2.5**
SFTF	**Sexfontaines**	**1.47**	**230**	*e*Pn		**Pb**	**00 08 57.1**	**-2.1**
	baz=50							
SFTF	**Sexfontaines**	**1.47**	**230**	*e*Pg		**Pb**	**00 08 59.4**	**+0.2**
SFTF				*e*Sn		**Sn**	**00 09 14.8**	**-1.3**
	comp=E,9.3nm,0.2s							
SFTF				*e*Sg		**Sb**	**00 09 18.4**	**+1.0**
	comp=E,7.0nm,0.2s,baz=45							
LBG	**Lerchenberg**	**1.47**	**109**	Pg		**Pb**	**00 09 00.1**	**+0.9**
LBG				Sg		**Sb**	**00 09 18.5**	**+1.0**
KLL	**Kalltalsperre**	**1.50**	**350**	*e*Pg		**Pn**	**00 08 58.2**	**0.0**
MEM	**Membach**	**1.51**	**343**	P		**Pn**	**00 08 58.5**	**+0.2**
BCLA	**Clavier**	**1.55**	**325**	P		**Pb**	**00 08 59.1**	**-1.5**
TNS	**Taunus Mts**	**1.55**	**46**	Pn		**Pn**	**00 08 58.7**	**-0.2**
TNS				Sg		**Sb**	**00 09 21.4**	**+1.6**
FELD	**Feldberg im Sc**	**1.56**	**146**	Pg		**Pb**	**00 09 01.5**	**+0.7**
FELD				Sn		**Sn**	**00 09 16.2**	**-2.3**
BGES	**Gesves**	**1.61**	**320**	P		**Pb**	**00 09 00.3**	**-1.3**
BGES				S		**Sn**	**00 09 19.6**	**-0.1**
	comp=N,4.2nm,0.1s							
ENDD	**Endenburg**	**1.61**	**154**	Pg		**Pb**	**00 09 02.4**	**+0.8**
ENDD				Sg		**Sb**	**00 09 22.7**	**+1.2**
BERGE	**Lenzkirch (DE)**	**1.62**	**142**	Pg		**Pb**	**00 09 02.8**	**+0.8**
BERGE				Sg		**Sb**	**00 09 22.9**	**+0.8**
DOU	**Dourbes**	**1.66**	**305**	P		**Pb**	**00 09 01.1**	**-1.4**
DOU				S		**Sn**	**00 09 19.9**	**-0.9**
	comp=E,4.5nm,0.1s							
LOMF	**Lomont**	**1.82**	**177**	Pg		**Pb**	**00 09 04.3**	**-1.0**
LOMF				Sg		**Sb**	**00 09 28.6**	**+1.0**
SLE	**Schleitheim**	**1.84**	**139**	Pg		**Pb**	**00 09 06.8**	**+1.2**
SLE				Sg		**Sb**	**00 09 30.1**	**+1.9**
BAIF	**Baives**	**1.85**	**300**	*e*Pn		**Pn**	**00 09 03.1**	**+0.1**
BAIF	**Baives**	**1.85**	**300**	*e*P		**Pb**	**00 09 05.0**	**-0.8**
BAIF	**Baives**	**1.85**	**300**	*e*Pg		**Pb**	**00 09 07.3**	**+1.5**
BAIF				*e*Sn		**Sn**	**00 09 25.0**	**-0.6**
	comp=E,8.2nm,0.3s							
BAIF				*e*Sg		**Sb**	**00 09 31.3**	**+2.8**
SULZ	**Cheisacher**	**1.89**	**150**	Pg		**Pb**	**00 09 07.6**	**+1.1**
BUCH	**Bad Urach**	**1.89**	**111**	Sg		**Sb**	**00 09 32.3**	**+2.6**
EMING	**Emmingen-Lipti**	**1.91**	**131**	*e*Pg		**Pb**	**00 09 08.2**	**+1.4**
EMING				*e*Sg		**Sb**	**00 09 32.1**	**+1.9**
CHMF	**Charmoille**	**1.92**	**181**	Pg		**Pn**	**00 09 03.5**	**-0.4**
CHMF				Pg		**Pn**	**00 09 03.6**	**-0.4**
GUT	**Gutenstein**	**1.94**	**124**	Sg		**Sb**	**00 09 34.0**	**+2.9**
CABF	**La Chapelle**	**2.59**	**189**	*e*Pn		**Pn**	**00 09 13.0**	**-0.2**
CABF				*e*Sn		**Sn**	**00 09 41.7**	**-2.3**
	comp=E,1.8nm,0.3s							
CABF				*e*Sg		**Sb**	**00 09 53.5**	**+3.6**
LOR	**Lormes**	**2.69**	**226**	*e*Pn		**Pn**	**00 09 13.6**	**-0.9**
	baz=47							
LOR	**Lormes**	**2.69**	**226**	*e*Pg		**Pb**	**00 09 21.9**	**+1.8**
LOR				*e*Sn		**Sn**	**00 09 44.1**	**-2.2**
	comp=E,3.5nm,0.2s							
LOR				*e*Sg		**Sb**	**00 09 56.3**	**+3.7**
	comp=E,2.5nm,0.2s							
UBR	**Ueberruh**	**2.71**	**122**	*e*Sg		**Sb**	**00 09 58.0**	**+4.7**
SSF	**Saint Saulge**	**3.00**	**227**	*e*Pn		**Pn**	**00 09 17.7**	**-1.1**
SSF	**Saint Saulge**	**3.00**	**227**	*e*Pg		**Pb**	**00 09 27.6**	**+2.2**
SSF				*e*Sn		**Sn**	**00 09 52.0**	**-2.1**
	comp=E,1.7nm,0.2s							
SSF				*e*Sg		**Sb**	**00 10 05.5**	**+3.8**
SMF	**Signal de Mont**	**3.17**	**218**	*e*Pn		**Pn**	**00 09 19.8**	**-1.4**
SMF	**Signal de Mont**	**3.17**	**218**	*e*P		**Pn**	**00 09 23.3**	**+2.1**
SMF				*e*Sn		**Sn**	**00 09 55.7**	**-2.6**
	comp=E,1.0nm,0.2s							
SMF				*e*Sg		**Sb**	**00 10 11.0**	**+4.4**
	comp=E,5.1nm,0.3s							
AVF	**Avril sur Loir**	**3.27**	**225**	*e*Pn		**Pn**	**00 09 22.1**	**-0.4**
AVF				*e*Sn		**Sn**	**00 09 58.0**	**-2.7**
	comp=E,0.8nm,0.2s							
AVF				*e*Sg		**Sb**	**00 10 13.7**	**+4.3**
BGF	**Bois d'Agland**	**3.68**	**226**	*e*Pn		**Pn**	**00 09 27.2**	**-0.9**
BGF				*e*Sn		**Sn**	**00 10 08.0**	**-2.8**
	comp=E,2.2nm,0.2s							

MAN 03 00:34:35.0,7.°24N×123.°86E,h33km,mb4.0,ML2.8,MS2.4, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
CTBH	**Cotabato--PC H**	**0.39**	**92**	⇑*i*P		Pn	00 34 45.5	+1.1
CTBH				*i* S		Sn	00 34 52.5	+1.9
KCP	**Kidapawan**	**1.25**	**100**	⇓*e*P		Sn	00 35 10.2	-1.7

*ATH **03** 00:38:38.4,36.°42N×28.°08E,h19km±5km,ML2.5/1,Error ellipse: s-maj=7.8km s-min=1.6km az=129.0*
*ISK **03** 00:38:39.3,36.°29N×27.°94E,h9km,ML2.6/9*
*THE **03** 00:38:39.9,36.°38N×28.°07E,h4km±9km,ML2.4/2,Error ellipse: s-maj=11.4km s-min=1.0km az=93.0*
ISC 03 00:38:39.6±1.1,36.°40N±0.°03×27.°99E±0.°04,h7km±11km, n18,σ0.°38/25,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
ARG	**Arkhangelos**	**0.21**	**148**	P		**Pg**	**00 38 43.7**	**-0.1**
ARG				S		**Sg**	**00 38 46.4**	**-0.2**
	2μm,0.3s							
ARG	**Arkhangelos**	**0.21**	**148**	P		**Pg**	**00 38 43.8**	**-0.1**
ARG				S		**Sg**	**00 38 46.7**	**+0.1**
ARG				AML	AML		00 38 47.4	
	comp=N,2446μm,0.3s							
ARG				AML	AML		00 38 48.9	
	comp=E,4244μm,0.2s							
DATC	**Datca-Mugla**	**0.45**	**324**	PG		**Pb**	**00 38 49.8**	**0.0**
DATC				SG		**Sb**	**00 38 57.4**	**+0.7**
DAT	**Datca**	**0.47**	**315**	PG		**Pb**	**00 38 49.9**	**-0.3**
DAT				SG		**Sb**	**00 38 57.8**	**+0.4**
YER	**Yerkesik**	**0.78**	**18**	PG		**Pn**	**00 38 56.8**	**-0.2**
BODT	**Bodrum**	**0.86**	**321**	PG		**Pb**	**00 38 57.4**	**+0.6**
BODT				SG		**Sn**	**00 39 10.4**	**-0.6**
MLSB	**Milas**	**0.91**	**349**	PG		**Pn**	**00 38 58.7**	**-0.2**
KARP	**Karpathos**	**1.08**	**219**	P		**Pg**	**00 38 59.9**	**-0.4**
KARP				S		**Sn**	**00 39 16.1**	**-0.3**
	comp=E,200nm,0.2s							
KARP	**Karpathos**	**1.08**	**219**	P		**Pg**	**00 39 00.1**	**-0.2**
KARP				S		**Sn**	**00 39 16.2**	**-0.2**
AKAS	**Kas**	**1.32**	**97**	PN		**Pn**	**00 39 04.5**	**-0.1**
GLHS	**Glhisar (BURDU**	**1.43**	**58**	PN		**Pg**	**00 39 07.4**	**+0.3**
GCAM	**G?zelcaml?**	**1.43**	**335**	PN		**Pg**	**00 39 07.3**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.55**	**357**	PN		**Pg**	**00 39 09.2**	**-0.1**
ELL	**Elmali**	**1.59**	**77**	PN		**Pb**	**00 39 09.3**	**0.0**
SMG	**Samos**	**1.60**	**325**	P		**Pn**	**00 39 07.8**	**-0.5**
SMG	**Samos**	**1.60**	**325**	P		**Pn**	**00 39 08.1**	**-0.2**
ZKR	**Zakros**	**1.92**	**229**	P		**Pn**	**00 39 13.1**	**+0.3**
ZKR	**Zakros**	**1.92**	**229**	P		**Pn**	**00 39 13.5**	**+0.7**

MAN 03 01:06:34.5,5.°62N×124.°06E,h36km,mb4.3,ML3.1,MS2.8, 1C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
GSPH	**General Santos**	**1.00**	**62**	⇓*i*P		Pn	01 06 55.8	+3.7
GSPH				*i* S		Sn	01 07 12.3	+7.2
SKMP	**Bagumbayan, Su**	**1.02**	**28**	*e*P		Pn	01 06 52.9	+0.7
SKMP				*e*S		Sn	01 07 05.9	+0.5
CTBH	**Cotabato--PC H**	**1.61**	**7**	⇓*i*P		Pn	01 07 01.3	+1.0
KCP	**Kidapawan**	**1.73**	**37**	⇑*e*P		Pn	01 07 04.8

BEKR	Beckworth	3.55	315	Pn	Pn	01 42 32.1 -0.3
ELK	Elko	3.66	23	Pn	Pn	01 42 33.7 -0.3
U15A	North Rim	3.98	102	Pn	Pn	01 42 38.2 -0.2
MSU	Marysvale	4.07	72	Pn	Pn	01 42 38.7 -0.9

NIED ***03*** *01:50:00,36˚.10N×140˚.10E,h68km,Mw3.8 Best double couple: M₀5.56000×10¹⁴ NP1:φs1.00000°,δ64.00000°, λ84.00000°. NP2:φs194.00000°,δ27.00000°,λ101.00000°.*

JMA ***03*** *01:50:22.7±0.1,36˚.03N×140˚.09E,h63km±1km,M3.8 Broadband fault plane solution: P waves. NP1: φs204.00000°,δ27.00000°,λ110.00000°. NP2:φs1.00000°, δ64.00000°,λ80.00000°. Principal axes: T Plg69.0000°, Azm251.0000°; N Plg9.0000°, Azm6.0000°; P Plg19.0000°, Azm99.0000°;*

JMA Felt II J1.

IDC ***03*** *01:50:24.9±2.2,36˚.01N×139˚.98E,h91km±17km,mb3.6/12, mb1 3.7/13,mb1mx3.4/51,mbtmp3.9/13,MS2.8/3, Ms1 2.8/3,ms1mx2.5/44 Error ellipse: s-maj=26.3km s-min=17.1km az=73.0*

NEIC ***03*** *01:50:24.2±0.9,35˚.99N±0˚.09×140˚.0E±0˚.1,h86km±8km, mb4.2/10, Error ellipse: s-maj=17.2km s-min=8.4km az=52.0*

ISC 03 01:50:22.1±0.8,36˚.00N±0˚.03×140˚.12E±0˚.05,h67km±6km, n52,σ0$96/55,mb3.9/14,2C-8D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JYT	Yasato	0.23	16	⇑P		Pn	Pn	01 50 32.6	+0.1
JYT				S			Sn	01 50 39.6	-0.4
JIHU	Itakohorinouch	0.34	96	⇑P		Pn	Pn	01 50 34.0	+0.9
JAG	Ashikaga	0.68	308	⇓P		Pn	Pn	01 50 36.8	+0.3
JAG				S			Sn	01 50 47.0	-0.2
JRY	Ryogami san	0.98	271	⇓P		Pn	Pn	01 50 40.6	+0.4
JRY				S			Sn	01 50 53.6	-0.1
JKT	Katashina	1.03	318	⇓P		Pn	Pn	01 50 41.0	+0.1
JKT				S			Sn	01 50 54.8	-0.1
JOD2	Odawara 2	1.12	229	⇓P		Pn	Pn	01 50 42.1	+0.2
JOD2				S			Sn	01 50 56.1	-0.6
BSO3	Boso 3	1.24	165	P		Pn	Pn	01 50 43.5	+0.2
JYN	Shimob	1.37	249	⇓P		Pn	Pn	01 50 46.1	+0.8
JYN				S			Sn	01 51 03.1	+0.3
JIM2	Oshima 3	1.40	204	P		Pn	Pn	01 50 45.2	-0.4
JIM2				S			Sn	01 51 01.8	-1.5
JFNN	Fujinakano	1.42	236	⇓P		Pn	Pn	01 50 46.3	+0.5
JFNN				eS			Sn	01 51 03.2	-0.5
JFY	Yanaizu	1.44	347	⇓P		Pn	Pn	01 50 46.7	+0.6
JFK	Kawauchi	1.49	24	P		Pn	Pn	01 50 47.1	+0.3
JFK				S			Sn	01 51 05.9	+0.4
JFT	Otama	1.52	7	P		Pn	Pn	01 50 47.5	+0.3
JFT				S			Sn	01 51 06.4	+0.2
JHK	Hiroka	1.52	325	⇓P		Pn	Pn	01 50 47.7	+0.5
MJAR	Matsushiro Arr	1.63	290	P		Pn	Pn	01 50 49.2	+0.5
	16nm,0.3s,baz=93,slow=9.0,SNR=1137								
MJAR				S			Sn	01 51 10.3	+1.5
	3.6nm,0.3s,baz=99,slow=23,SNR=10								
MJAR				LR		LR		01 51 38.3	
	comp=Z,40nm,21.2s,baz=0.0,slow=49								
MJAR	Matsushiro Arr	1.63	290	Pn		Pn		01 50 52.0	+3.3
MAJO	Matsushiro	1.63	290			Pn		01 50 49.3	+0.6
MAT	Matsushiro	1.63	290	P		Pn		01 50 48.7	0.0
MAT				S		Sn		01 51 09.8	+0.9
MJB9	Matsu-Tunnel	1.64	290			Pn		01 50 49.3	+0.5
INU	Inuyama	2.60	256			Pn		01 51 02.7	+0.8
JHJ2	Mitsune	2.90	185	Pn		Pn		01 51 07.8	+2.0
JHJ2				Sn		Sn		01 51 40.2	+0.8
JNU	Nakatsue	8.14	252	LR		LR		01 55 47.2	
	comp=Z,51nm,18.2s,baz=20,slow=40								
KSRS	Korea Array	9.89	282	P		Pn		01 52 44.6	+3.1
	0.3nm,0.3s,baz=96,slow=14,SNR=3.3								
KSRS				LR		LR		01 56 48.2	
	comp=Z,13nm,18.1s,baz=90,slow=39								
SONM	Songino Array	27.52	306	P		P		01 56 01.0	-1.4
	1.2nm,0.6s,baz=102,slow=9.1,SNR=8.5								
SONM	Songino Array	27.52	306	IAmb		IAmb		01 56 04.1	
	comp=Z,0.8nm,0.7s								
H11N2	WAKE ISLAND Hy	28.56	117	T		T		02 27 14.2	
	baz=310								
H11N1	WAKE ISLAND Hy	28.57	117	T		T		02 27 24.3	
	baz=310								
H11N3	WAKE ISLAND Hy	28.58	117	T		T		02 26 31.6	
	baz=310								
H11S1	WAKE ISLAND Hy	29.22	120	T		T		02 27 15.0	
	baz=310								
H11S3	WAKE ISLAND Hy	29.22	120	T		T		02 27 09.9	
	baz=310								
H11S2	WAKE ISLAND Hy	29.24	120	T		T		02 27 17.6	
	baz=310								
ZAA0	Zalesovo Array	41.85	313	P		P		01 58 04.9	-0.3
ZAA0				IAmb		IAmb		01 58 06.2	
	comp=Z,6.8nm,1.4s								
ZALV	Zalesovo Beam	41.85	313	P		P		01 58 05.1	-0.1
	comp=Z,1.0nm,0.3s,baz=91,slow=7.4,SNR=8.0								
MK31	Makanchi Array	43.79	303	P		P		01 58 20.8	-0.3
MKAR	Makanchi Array	43.79	303	P		P		01 58 21.1	+0.1
	comp=Z,1.9nm,0.7s,baz=90,slow=10,SNR=21								
MKAR	Makanchi Array	43.79	303	P		P		01 58 20.3	-0.8
MAKZ	Makanchi	44.00	303	P		P		01 58 22.4	-0.3
MAKZ				IAmb		IAmb		01 58 23.6	
	comp=Z,2.4nm,0.8s								
KURK	Kurchatov	45.75	309	P		P		01 58 36.0	-0.6
ILAR	Eielson Array	50.92	32	P		P		01 59 17.0	+0.9
	comp=Z,0.8nm,0.7s,baz=268,slow=5.7,SNR=9.2								
KK31	Karatay Array	52.74	300	P		P		01 59 29.5	-0.5
KKAR	Karatay Array	52.74	300	P		P		01 59 29.8	-0.2
WRA	Warramunga Arr	55.91	187	P		P		01 59 52.2	-0.9
	comp=Z,0.8nm,0.4s,baz=1.1,slow=7.5,SNR=11								
ARU	Arti	56.44	319	P		P		01 59 56.2	-0.4
	comp=Z,0.5nm,0.3s,baz=92,slow=6.7,SNR=5.3								
ARU	Arti	56.44	319	IAmb		IAmb		02 00 01.1	
	comp=Z,14nm,1.5s								
ABKAR	Akbulak array	57.80	310	P		P		02 00 05.7	-0.6
ASAR	Alice Springs	59.64	187	P		P		02 00 20.9	+1.7
	comp=Z,0.3nm,0.5s,baz=20,slow=11,SNR=4.5								
ARCES	ARCESS Array B	64.59	339	P		P		02 00 51.6	-0.3
	comp=Z,5.3nm,0.9s,baz=54,slow=7.9,SNR=4.2								
STKA	Stephens Creek	67.54	179	LR		LR		02 30 46.6	
	comp=Z,28nm,19.7s,baz=206,slow=36								
FINES	FINESS Array B	69.23	332	P		P		02 01 20.9	-0.5
	comp=Z,0.4nm,0.5s,baz=61,slow=6.5,SNR=3.4								
AKASG	Malin Array Be	74.47	322	P		P		02 01 52.3	-0.7
	comp=Z,1.1nm,0.8s,baz=49,slow=6.2,SNR=4.8								
NOA	NORSAR Array B	74.73	337	P		P		02 01 54.0	-0.4
	comp=Z,0.8nm,0.8s,baz=41,slow=5.9,SNR=3.6								
TXAR	Lajitas Array	91.58	52	P		P		02 03 22.6	+0.7
	comp=Z,0.2nm,0.6s,baz=279,slow=2.4,SNR=2.5								

NIED ***03*** *02:40:00,37˚.50N×141˚.50E,h44km,Mw3.5 Best double couple: M₀1.69000×10¹⁴ NP1:φs11.00000°,δ65.00000°, λ75.00000°. NP2:φs223.00000°,δ29.00000°,λ119.00000°.*

JMA 03 02:40:01.3±0.1,37˚.52N×141˚.45E,h49km±1km,M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	0.48	252	P		Pn		02 40 12.2	-0.1
JFK				S		Sn		02 40 19.7	-0.5
JMST	Minamisoumatoc	0.49	295	P		Pn		02 40 12.3	-0.1
JMST				S		Sn		02 40 20.1	-0.2
JMM	Marumori	0.62	304	P		Pn		02 40 14.2	+0.2
JMM				S		Sn		02 40 23.2	0.0
ONAJ	Iwakimizuishiy	0.67	231	P		Pn		02 40 14.4	-0.2
ONAJ				S		Sn		02 40 23.4	-0.8
JIKH	Ishinomakikobu	0.79	1	P		Pn		02 40 16.1	-0.1
JIKH				S		Sn		02 40 26.3	-0.7
JFFD	Fukushimafurud	0.83	239	P		Pn		02 40 16.7	0.0
JFFD				S		Sn		02 40 27.2	-0.8
JFT	Otama	0.89	270	P		Pn		02 40 18.2	+0.7
JFT				S		Sn		02 40 29.9	+0.6
JIO	Ouri	0.94	355	P		Pn		02 40 18.2	+0.1
JIO				S		Sn		02 40 29.9	-0.6
JOU	Okura	1.05	324	P		Pn		02 40 19.7	0.0
JOU				S		Sn		02 40 34.0	+0.8
JYS	Shirataka	1.30	303	P		Pn		02 40 23.8	+0.7
JYS				S		Sn		02 40 39.7	+0.4
JFY	Yanaizu	1.39	266	P		Pn		02 40 24.9	+0.5
JFY				S		Sn		02 40 42.7	+1.1
JMK	Ichinoseki	1.44	353	P		Pn		02 40 25.1	+0.1
JMK				S		Sn		02 40 42.8	+0.1
MAT	Matsushiro	2.77	250	P		Pn		02 40 45.6	+2.4
MAT				S		Sn		02 41 20.4	+4.9

IDC ***03*** *02:48:35.5±0.9,18˚.99N×120˚.36E,h0km,mb3.7/9, mb1 3.8/10,mb1mx3.5/53,mbtmp3.6/10,ML3.6/1,MS2.7/2, Ms1 2.8/2,ms1mx2.4/37,Error ellipse: s-maj=33.7km s-min=17.8km az=70.0*

NEIC ***03*** *02:48:37.1±1.2,19˚.1N±0˚.1×120˚.36E±0˚.09,h10km±2km, mb4.1/5,Error ellipse: s-maj=18.3km s-min=14.3km az=174.0*

ISC 03 02:48:40.3±0.7,19˚.18N±0˚.05×120˚.5E±0˚.1,h28km,n20, σ1$09/20,mb3.7/11,1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SJPP	Brgy, Tapao	1.25	181	↓P		Pn		02 49 02.3	+0.5
SJPP				eS		Sb		02 49 21.6	+2.8
APYP	Conner	1.50	151	eP		Pn		02 49 05.2	-0.1
APYP				eS		Sb		02 49 26.4	+0.3
TWG	Pinlang	3.67	9	Pn		Pn		02 49 35.5	+0.3
YULB	Yu-li	4.26	10	Pn		Pn		02 49 43.7	+0.3
KSRS	Korea Array	19.34	18	P		Pn		02 53 05.0	+0.3
	0.2nm,0.3s,baz=201,slow=9.3,SNR=3.8								
KSRS	Korea Array	19.34	18	P		Pn		02 53 05.0	+0.3
CMAR	Chiang Mai Arr	20.39	272	LR		LR		03 01 40.2	
	comp=Z,13nm,18.6s,baz=50,slow=39								
SIJI	Sorong	22.57	151	LR		LR		03 02 41.3	
	comp=Z,37nm,20.2s,baz=282,slow=38								
MJAR	Matsushiro Arr	25.28	38	P		P		02 53 46.9	+1.1
	0.6nm,0.5s,baz=226,slow=9.2,SNR=2.7								
SONM	Songino Array	30.80	341	P		P		02 54 54.2	+0.6
	0.4nm,0.6s,baz=142,slow=7.3,SNR=2.7								
WRA	Warramunga Arr	41.19	160	P		P		02 56 20.2	-2.4
	0.5nm,0.4s,baz=338,slow=9.5,SNR=6.3								
MK31	Makanchi Array	41.61	320	P		P		02 56 25.6	-0.3
MK31				IAmb		IAmb		02 56 42.4	
	comp=Z,2.7nm,1.4s								
MKAR	Makanchi Array	41.61	320	P		P		02 56 25.9	+0.1
	comp=Z,0.5nm,0.7s,baz=110,slow=8.9,SNR=5.2								
ZALV	Zalesovo Beam	44.16	330	P		P		02 56 46.8	+0.4
	comp=Z,0.6nm,0.5s,baz=111,slow=7.9,SNR=3.8								
NIL	Nilore	44.31	299	P		P		02 56 47.0	-1.0
NIL				IAmb		IAmb		02 58 01.6	
	comp=Z,9.7nm,1.4s								
ASAR	Alice Springs	44.55	162	P		P		02 56 48.5	-1.4
	comp=Z,0.5nm,0.5s,baz=336,slow=6.9,SNR=8.9								
KURK	Kurchatov	45.60	324	P		P		02 56 58.2	+0.3
KURBB	Kurchatov Arra	45.61	323	P		P		02 56 58.2	+0.2
	comp=Z,1.3nm,0.6s,baz=122,slow=7.9,SNR=8.6								
AKTO	Aktyubinsk	57.96	318	P		P		02 58 29.4	-0.8
	comp=Z,0.9nm,0.7s,baz=86,slow=13,SNR=3.8								
YKA	Yellowknife Ar	87.82	22	P		P		03 01 27.4	+0.7
	comp=Z,0.6nm,0.7s,baz=315,slow=4.9,SNR=9.5								

GUC ***03*** *03:06:24.4±0.7,21˚.08S×68˚.92W,h119km±4km,ML3.6*

SJA ***03*** *03:06:24.8±1.1,21˚.10S×68˚.94W,h117km±6km,ML3.4, MW3.5*

ISC 03 03:06:26.2±1.5,21˚.09S±0˚.03×68˚.98W±0˚.06, h115km±11km,n27,σ0$51/43,6C-5D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.74	199	⇑eP		Pn		03 06 45.3	-0.3
PB09				i S		Sn		03 07 00.8	+0.7
PB09	IPOC Station P	0.74	199	i P		Pn		03 06 45.3	-0.3
PB09				eS		Sn		03 07 00.3	+0.2
PB09				IAML				03 07 01.7	
	comp=Z,553nm,0.6s								
PB08	IPOC Station P	0.96	350	⇓i P		Pn		03 06 47.5	-0.4
PB08				i S		Sn		03 07 04.0	-0.1
PB08				IAML				03 07 05.5	
	comp=N,1μm,0.2s								
PB08	IPOC Station P	0.96	350	i P		Pn		03 06 47.5	-0.4
PB08				eS		Sn		03 07 04.0	-0.1
PB08				IAML				03 07 04.9	
	comp=Z,463nm,0.2s								
PB03	IPOC Station P	1.19	217	⇑i P		Pn		03 06 49.9	-0.1
PB03				i S		Sn		03 07 08.4	+0.4
PB03				IAML				03 07 10.3	
	comp=E,991nm,0.1s								
PB03	IPOC Station P	1.19	217	i P		Pn		03 06 49.9	-0.1
PB03				IAML				03 07 10.6	
	comp=Z,901nm,0.2s								
TA01	Diego Aracena	1.24	295	i P		Pn		03 06 50.0	-0.3
TA01				i S		Sn		03 07 09.2	+0.6
TA01				IAML				03 07 09.9	
	comp=E,2μm,0.2s								
PB11	IPOC Station P	1.47	334	⇓i P		Pn		03 06 52.5	-0.6
PB11				i S		Sn		03 07 13.8	+0.2
PB11				IAML				03 07 14.5	
	comp=E,1μm,0.2s								
LVC	Limon Verde	1.51	178	⇑i P		Pn		03 06 53.6	-0.2
LVC				i S		Sn		03 07 14.9	+0.2
LVC	Limon Verde	1.51	178	i P		Pn		03 06 53.5	-0.3
LVC				eS		Sn		03 07 14.3	-0.4
LVC				IAML				03 07 17.4	
	comp=Z,115nm,0.3s								
PB04	IPOC Station P	1.65	221	⇑i P		Pn		03 06 55.1	-0.1
PB04				i S		Sn		03 07 18.6	+1.4
PB04				IAML				03 07 25.0	
	comp=N,464nm,0.1s								
PB04	IPOC Station P	1.65	221	i P		Pn		03 06 55.2	0.0
PB04				eS		Sn		03 07 17.1	-0.1
PB06	IPOC Station P	1.70	199	⇑i P		Pn		03 06 55.7	-0.1
PB06				i S		Sn		03 07 18.8	+0.4
PB06				IAML				03 07 19.6	
	comp=E,816nm,0.4s								
PB06	IPOC Station P	1.70	199	i P		Pn		03 06 55.8	-0.1
PB06				IAML				03 07 20.6	
	comp=Z,466nm,0.2s								
PSGC	Pisagua	1.84	324	⇓i P		Pn		03 06 56.5	-1.0
PSGC				i S		Sn		03 07 21.4	+0.1
MNMC	Minye Minye	2.04	343	⇓i P		Pn		03 06 59.7	-0.5
MNMC				eS		Sn		03 07 26.7	+0.6
PB05	IPOC Station P	2.09	213	eP		Pn		03 07 00.2	-0.4
PB05	IPOC Station P	2.09	213	i P		Pn		03 07 00.3	-0.4
PB05				IAML				03 07 34.2	
	comp=Z,110nm,0.4s								
PB15	IPOC Station P	2.15	192	⇑i P		Pn		03 07 01.4	-0.2
PB15				i S		Sn		03 07 29.2	+0.6
PB15	IPOC Station P	2.15	192	i P		Pn		03 07 01.9	+0.3
PB15				IAML				03 07 34.5	
	comp=Z,1μm,0.2s								
PB16	IPOC Station P	2.79	350	⇓i P		Pn		03 07 09.9	-0.2
PB16				i S		Sn		03 07 44.5	+0.6
PB10	IPOC Station P	2.82	211	i P		Pn		03 07 09.1	-0.8
PB10				IAML				03 07 44.0	
	comp=Z,43nm,0.3s								
YJA	Yavi	3.40	109	i P		Pn		03 07 17.2	-0.8
PB14	IPOC Station P	3.75	200	i P		Pn		03 07 21.6	-1.1
PB14				IAML				03 08 06.5	
	comp=Z,45nm,0.5s								
HJA	Humahuaca	3.92	123	i P		Pn		03 07 24.9	0.0
SLA	San Lorenzo	4.83	139	i P		Pn		03 07 36.7	-0.2
LPAZ	La Paz	4.85	10	i P		Pn		03 07 38.4	+0.7

GCMT ***03*** *03:06:22.4±0.5,18˚.13N±0˚.03×106˚.18W±0˚.03,h20km±2km, MW4.8/82,Moment Tensor Solution. s11,c11; s82,c101; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-0.32±.08; Mθθ-0.20±.06; Mφφ 0.51±.07; Mrθ-0.31±.13; Mθφ-1.36±.06; Mφr 1.20±.19; Best double couple: M₀1.82900×10¹⁶ NP1:φs275.00000°,δ48.00000°,λ-176.00000°. NP2: φs182.00000°,δ87.00000°,λ-42.00000°. Principal axes: T 2.1150, Plg26.0000°, Azm236.0000°; N -0.5710, Plg48.0000°, Azm359.0000°; P -1.5430, Plg31.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***03*** *03:06:23.4±2.1,18˚.1N±0˚.1×105˚.9W±0˚.1,h10km±3km, mb4.2/78 Error ellipse: s-maj=19.9km s-min=16.5km az=210.0*

IDC ***03*** *03:06:29.3±5.4,18˚.53N×106˚.10W,h0km,mb3.6/5, mb1 4.0/8,mb1mx3.8/36,mbtmp3.7/8,ML3.5/3,MS3.7/22, Ms1 3.7/22,ms1mx3.7/39,Error ellipse: s-maj=88.9km s-min=72.2km az=143.0*

ISC 03 03:06:27.3±2.3,18˚.1N±0˚.2×105˚.9W±0˚.1,h29km,n187,

σ1$26/150,mb4.0/20,MS3.8/17,Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MOIG	Morelia	4.69	70	Pn		Pn		03 07 35.5	-0.9
H06E1	SOCORRO T-PHAS	4.86	279	T		T		03 12 24.3	
	SNR=1715								
ZAIG	Zacatecas	5.59	33	Pn		Pn		03 07 46.5	-2.3
LPIG	La Paz	7.29	326	LR		LR		03 10 17.5	
	comp=Z,992nm,21.6s,baz=178,slow=34								
TX31	Lajitas Ar. Si	11.38	10			Pn		03 09 09.0	+1.0
TX32	Lajitas Array	11.38	10			Pn		03 09 07.5	-0.5
TXAR	Lajitas Array	11.38	10	Pn		Pn		03 09 08.1	+0.1
	0.1nm,0.3s,baz=184,slow=13,SNR=16								
TXAR				LR		LR		03 13 59.8	
	comp=Z,131nm,18.8s,baz=0.0,slow=41								
TXAR	Lajitas Array	11.38	10			Pn		03 09 08.7	+0.7
833A	Chaparral WMA,	11.79	29	P		Pn		03 09 15.8	+2.2
	baz=212								
JCT	Junction City	13.51	23			Pn		03 09 38.3	+1.1
JCT	Junction City	13.51	23	P		Pn		03 09 39.2	+2.1
	baz=206								
MNTX	Cornudas Mount	13.56	2	P		Pn		03 09 39.4	+1.5
	baz=182								
319A	Douglas	13.59	347			Pn		03 09 38.7	+0.4
121A	Cookes Peak, D	14.49	353	Pn		Pn		03 09 50.9	+0.2
121A	Cookes Peak, D	14.49	353	P		Pn		03 09 51.2	+0.5
	baz=173								
435B	Jarrell	14.71	29			Pn		03 09 53.5	+0.1
TUC	Tucson	14.85	343			Pn		03 09 54.6	-0.7
TUC	Tucson	14.85	343	P		Pn		03 09 55.6	+0.2
	baz=162								
APG	El Apazote	15.07	99	LR		LR		03 15 08.7	
	comp=Z,270nm,19.5s,baz=303,slow=34								
214A	Organ Pipe Nat	15.18	337	P		P		03 10 04.4	-0.1
ABTX	Abilene, Hawle	15.52	20	Pn		Pn		03 10 02.3	-1.9
ABTX				IAmb		IAmb		03 10 16.9	
	comp=Z,11nm,1.1s								
ABTX	Abilene, Hawle	15.52	20	P		P		03 10 07.5	-0.8
	baz=203								
WHTX	Lake Whitney,	15.79	27			Pn		03 10 06.7	-1.0
WHTX				IAmb		IAmb		03 10 15.5	
	comp=Z,27nm,1.4s								
WHTX	Lake Whitney,	15.79	27	P		P		03 10 10.4	-0.9
	baz=211								
BNM	Barren Site	16.02	358	Pn		Pn		03 10 08.9	-1.9
LENM	Lemitar	16.05	357	Pn		Pn		03 10 09.2	-1.9
MSTX	Muleshoe	16.06	9	Pn		Pn		03 10 09.3	-1.9
MSTX	Muleshoe	16.06	9	P		Pn		03 10 13.0	+1.8
	baz=191,SNR=7.1								
LPM	Los Pinos Moun	16.18	358	Pn		Pn		03 10 12.1	-0.7
113A	Mohawk Valley,	16.26	336	P		Pn		03 10 13.7	0.0
TEIG	Tepich	16.74	80	LR		LR		03 17 01.2	
	comp=Z,212nm,21.3s,slow=37								
X18A	Snowflake	16.78	348	Pn		Pn		03 10 17.7	-2.8
ANMO	Albuquerque	16.80	358	Pn		Pn		03 10 21.8	+1.1
	comp=Z,0.1nm,0.3s,baz=170,slow=12,SNR=5.8								
ANMO				LR		LR		03 16 44.9	
	comp=Z,314nm,19.2s,baz=184,slow=38								
ANMO	Albuquerque	16.80	358	Pn		Pn		03 10 19.3	-1.4
ANMO	Albuquerque	16.80	358	P		Pn		03 10 21.2	+0.4
	baz=178								
GLA	Glamis	16.95	333	Pn		Pn		03 10 20.3	-2.1
GLA				IAmb		IAmb		03 10 25.9	
	comp=Z,26nm,1.2s								
GLA	Glamis	16.95	333	P		Pn		03 10 22.4	0.0
	baz=150								
NATX	Nacogdoches	16.97	35	P		P		03 10 24.3	0.0
	baz=219								
Y14A	Wickenburg	17.04	339	IAmb		IAmb		03 10 27.7	
	comp=Z,24nm,1.4s								
AMTX	Amarillo	17.14	12	P		P		03 10 26.6	+0.3
	baz=194								
IKP	In-Ko-Pah, Jac	17.19	329	P		Pn		03 10 24.9	-0.7
	baz=145,SNR=7.2								
SWSC	Sam W. Stewart	17.29	331	P		Pn		03 10 26.3	-0.4
	baz=147,SNR=7.1								
W18A	Petrified Fore	17.31	349	P		Pn		03 10 27.5	+0.3
	baz=168								
Y12C	Blythe	17.43	335			Pn		03 10 26.7	-1.7
Y12C				IAmb		IAmb		03 10 42.6	
	comp=Z,34nm,1.5s								
Y12C	Blythe	17.43	335	P		Pn		03 10 27.9	-0.4
	baz=152								
BAR	Barrett	17.50	328			Pn		03 10 27.4	-1.8
MONP2	Monument Peak	17.54	329	P		Pn		03 10 29.1	-0.9
	baz=145,SNR=12								
BC3	Big Chuckawall	17.73	333	P		Pn		03 10 31.8	-0.4
	baz=149								
WMOK	Wichita Mounta	17.74	19	P		P		03 10 33.9	+1.0
	baz=203								
109C	Camp Elliot, M	17.88	328	P		Pn		03 10 33.1	-0.8
	baz=143								
X34A	Smith Ranch, M	17.94	22			Pn		03 10 33.3	-1.3
IRM	Iron Mountain	18.03	334	P		Pn		03 10 34.8	-1.1
	baz=151,SNR=10								
WUAZ	Wupatki	18.04	345	P		Pn		03 10 36.1	0.0
	baz=163								
XPFO	Pion Flat	18.15	330			Pn		03 10 34.4	-3.0
PFO	Pinyon Flats O	18.15	330	P		Pn		03 10 36.9	-0.5
	comp=Z,0.1nm,0.3s,baz=144,slow=11,SNR=7.4								

baz=144
Q24A Divide 20.81 2 P P 03 11 06.9 +0.1
baz=182
PKM Mcpherson Peak 20.85 326 P P 03 11 05.8 -1.2
baz=140
DAC Darwin (Calif) 20.88 333 IAmb IAmb 03 11 14.5
comp=Z,14nm,1.4s
TPNV Topopah Spring 20.90 336 IAmb IAmb 03 11 13.7
comp=Z,16nm,1.2s
TPNV Topopah Spring 20.90 336 P P 03 11 07.3 -0.4
baz=152
HHAR Hobbs 20.96 28 P P 03 11 08.0 -0.1
HHAR IAmb IAmb 03 11 11.3
comp=Z,16nm,1.2s
SMCO Snowmass 21.04 358 IAmb IAmb 03 11 23.9
comp=Z,19nm,1.5s
VES Vestal, Richgr 21.22 329 P P 03 11 10.2 -0.6
baz=143
CWC Cottonwood Cre 21.23 332 P P 03 11 10.6 -0.6
baz=146
TCRU Three Creeks R 21.24 346 P P 03 11 09.7 -1.7
SMMC Simmler 21.27 327 P P 03 11 10.2 -1.2
baz=140
CBKS Cedar Bluff 21.33 13 P P 03 11 11.4 -0.7
CBKS Cedar Bluff 21.33 13 P P 03 11 13.4 +1.4
baz=196
GRAC Grapevine Rang 21.39 334 P P 03 11 12.4 -0.3
baz=149
ISCO Idaho Springs 21.64 1 P P 03 11 13.7 -1.9
R11A Troy Canyon, C 21.91 339 IAmb IAmb 03 11 28.9
comp=Z,9.0nm,1.4s
R11A Troy Canyon, C 21.91 339 P P 03 11 18.1 -0.4
baz=155
OXF Oxford 21.97 39 P P 03 11 20.6 +1.7
baz=226
O20A White River Ci 22.07 355 IAmb IAmb 03 11 33.5
comp=Z,12nm,1.1s
O20A White River Ci 22.07 355 P P 03 11 21.1 +0.9
baz=174
KSU1 Kansas State U 22.43 19 P P 03 11 24.0 +0.1
baz=204
250A Grady 22.45 48 P P 03 11 24.1 0.0
LRAL Lakeview Retre 22.55 45 P P 03 11 24.7 -0.4
LRAL Lakeview Retre 22.55 45 P P 03 11 26.3 +1.1
baz=233
GNAR Gosnell 22.66 35 P P 03 11 25.6 -0.7
MDPB Devils Postpil 22.67 332 IAmb IAmb 03 11 42.9
comp=Z,8.0nm,1.3s
DUG Dugway, Tooele 22.84 346 P P 03 11 28.1 -0.2
baz=163
NVAR Mina Array Bea 23.00 334 P P 03 11 30.0 -0.1
comp=Z,2.0nm,1.2s,baz=150,slow=12,SNR=7.3
NVAR LR LR 03 19 32.8
comp=Z,185nm,19.1s,baz=170,slow=35
OGNE Ogallala 23.02 7 P P 03 11 31.0 +0.9
baz=190
352A Blakely 23.16 51 P P 03 11 32.9 +1.4
baz=240
RYN Ryan 23.26 334 P P 03 11 30.9 -1.7
Z50A Ashland 23.41 46 P P 03 11 35.1 +1.2
baz=235
KVN Kaiserville 23.45 335 IAmb IAmb 03 11 45.7
comp=Z,6.3nm,1.2s
WAKR Walker 23.55 333 IAmb IAmb 03 11 37.0
comp=Z,15nm,1.5s
CCM Cathedral Cave 23.65 30 P P 03 11 35.4 -0.8
CCM Cathedral Cave 23.65 30 P P 03 11 35.9 -0.4
baz=217
YERR Yerington 23.86 334 IAmb IAmb 03 11 49.8
comp=Z,7.1nm,1.2s
ELK Elko 23.99 342 LR LR 03 20 20.6
comp=Z,191nm,19.3s,baz=176,slow=35
ELK Elko 23.99 342 IAmb IAmb 03 11 40.2
comp=Z,7.2nm,1.5s
PNTR Pine Nut 24.10 333 IAmb IAmb 03 11 47.0
comp=Z,5.5nm,1.0s
VCNR Virginia City 24.30 333 IAmb IAmb 03 11 54.1
comp=Z,6.1nm,1.1s
W49A Belvidere 24.31 42 P P 03 11 42.3 -0.2
baz=231
Y51A Rockmart 24.36 46 P P 03 11 43.5 +0.5
baz=235
FPAL Fort Paine 24.38 44 P P 03 11 45.3 +2.2
Z52A Williamson 24.42 48 P P 03 11 44.0 +0.6
baz=237
PAHR Pah Rah Range 24.53 334 P P 03 11 43.3 -1.2
153A Fort Valley 24.55 50 P P 03 11 44.9 +0.2
baz=239
254A Abbeville 24.60 52 P P 03 11 45.3 +0.2
baz=241
BW06 Boulder Array 24.80 353 P P 03 11 46.9 -0.2
baz=172
PDAR Pinedale Array 24.80 353 P P 03 11 50.4 +3.2
comp=Z,0.9nm,0.7s,baz=171,slow=9.9,SNR=4.2
PDAR LR LR 03 21 18.4
comp=Z,167nm,18.9s,baz=180,slow=36
PDAR Pinedale Array 24.80 353 P P 03 11 44.4 -2.8
X51A Calhoun 24.89 45 P P 03 11 48.8 +1.1
baz=234
V49A McMinnville 24.95 41 P P 03 11 48.3 +0.1
baz=230
Y52A Lilburn 25.03 47 P P 03 11 49.9 +0.9
baz=237
154A Montrose 25.06 50 P P 03 11 48.4 -0.9
154A Montrose 25.06 50 P P 03 11 50.0 +0.7
baz=240
Z53A Monticello 25.07 49 P P 03 11 49.7 +0.4
baz=238,SNR=5.6
BEKR Beckworth 25.07 333 P P 03 11 48.4 -1.2
BEKR IAmb IAmb 03 12 01.9
comp=Z,7.3nm,1.5s
060A Indiantown 25.13 65 P P 03 11 50.3 +0.4
baz=255
GOGA Godfrey 25.21 48 P P 03 11 50.2 -0.4
GOGA Godfrey 25.21 48 P P 03 11 51.0 +0.4
baz=238,SNR=6.4
V50A Pikevile 25.40 42 P P 03 11 52.8 +0.5
baz=232
155A Kite 25.54 51 P P 03 11 55.1 +1.5
baz=241
X52A Dahlonega 25.56 46 P P 03 11 54.8 +1.0
baz=236
Z54A Sparta 25.57 49 P P 03 11 55.4 +1.5
baz=240
TPAW Teton Pass 25.69 351 IAmb IAmb 03 12 10.1
comp=Z,9.3nm,1.2s
W52A Murphy 25.82 45 P P 03 11 56.6 +0.4
baz=235
FXWY Fox Creek 25.85 351 P P 03 11 54.8 -1.8
FXWY IAmb IAmb 03 12 02.8
comp=Z,3.5nm,0.9s
X53A Estanollee 25.91 46 P P 03 11 58.8 +1.8
baz=237
MOOW Moose Ponds 25.92 352 P P 03 11 56.2 -0.9
MOOW IAmb IAmb 03 12 12.7
comp=Z,4.9nm,1.2s
V51A Loudon 25.96 43 P P 03 11 58.3 +0.9
baz=233
Y54A Tignall 26.00 48 P P 03 11 59.3 +1.5
baz=239
TKL Tuckaleechee C 26.25 44 LR LR 03 24 45.8
comp=Z,210nm,21.2s,baz=260,slow=42
W53A Cullowhee 26.38 45 P P 03 12 02.5 +1.2
baz=236
Y55A Saluda 26.63 49 P P 03 12 04.8 +1.4
baz=240
S49A Springfield 26.64 38 P P 03 12 04.7 +1.2
baz=228
JSC Jenkinsville 27.23 49 P P 03 12 07.9 -1.0
NHSC New Hope 27.47 52 P P 03 12 12.3 +1.3
baz=243
YBH Yreka Blue Hor 27.63 332 LR LR 03 22 22.9
comp=Z,127nm,19.4s,baz=148,slow=35
W56A Indian Trail 28.14 48 P P 03 12 18.1 +1.1
baz=240
G08A Pilot Rock 29.25 341 IAmb IAmb 03 12 29.2
comp=Z,4.0nm,0.7s
YKA Yellowknife Ar 44.78 354 P P 03 14 40.8 +2.7
comp=Z,0.4nm,0.8s,baz=166,slow=7.5,SNR=5.9
YKA LR LR 03 34 10.6
comp=Z,11nm,18.5s,baz=160,slow=37
LPAZ La Paz 50.46 130 LR LR 03 33 40.4
comp=Z,112nm,21.4s,baz=320,slow=32
INK Inuvik 53.16 348 P P 03 15 44.9 +2.7
comp=Z,2.8nm,1.0s,baz=139,slow=5.2,SNR=6.9
INK Inuvik 53.16 348 IAmb IAmb 03 15 48.2
comp=Z,4.4nm,1.1s

IL31 54.11 340 P P 03 15 49.1 -0.1
ILAR Eielson Array 54.11 340 P P 03 15 51.5 +2.3
comp=Z,1.3nm,1.1s,baz=142,slow=8.9,SNR=4.3
ILAR LR LR 03 40 10.8
comp=Z,36nm,20.0s,baz=124,slow=38
ILAR Eielson Array 54.11 340 P P 03 15 47.1 -2.2
CPUP Villa Florida 64.58 132 LR LR 03 44 51.6
comp=Z,64nm,18.4s,baz=262,slow=35
PLCA Paso Flores 67.08 152 LR LR 03 40 36.6
comp=Z,112nm,20.2s,baz=344,slow=30
AFI Afiamalu 72.35 248 LR LR 03 41 58.0
comp=Z,123nm,18.2s,baz=51,slow=29
PETK Petropavlovsk- 79.53 322 LR LR 03 46 53.8
comp=Z,54nm,18.5s,baz=61,slow=31
ARCES ARCESS Array B 86.11 15 LR LR 04 00 29.6
comp=Z,78nm,18.2s,baz=353,slow=38
NOA NORSAR Array B 86.63 26 LR LR 03 56 56.8
comp=Z,43nm,18.8s,baz=240,slow=35
HFS Hagfors 88.15 26 LR LR 03 57 56.3
comp=Z,113nm,18.5s,baz=259,slow=35
GERES GERESS Array B 94.49 35 LR LR 04 03 56.6
comp=Z,64nm,18.3s,baz=284,slow=37
MJAR Matsushiro Arr 98.75 313 LR LR 03 58 59.2
comp=Z,17nm,19.4s,baz=340,slow=32

IDC 03 03:17:33.7±1.4, 2.76S×139.17E, h0km, mb3.2/2, mb1 3.5/3, mb1mx3.2/34, mbtmp3.3/3, ML3.4/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/20, Error ellipse: s-maj=30.1km s-min=15.0km az=168.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.56**	**81**	Pg	Pb	03 18 03.4	-0.1
	5.0nm,0.3s,baz=243,slow=15,SNR=11						
JAY				Lg	Lg	03 18 21.9	
	12nm,0.3s,baz=217,slow=14,SNR=5.3						
WRA	**Warramunga Arr**	**17.71**	**195**	P	Pn	03 21 42.5	+0.5
	0.1nm,0.3s,baz=12,slow=13,SNR=5.1						
ASAR	**Alice Springs**	**21.40**	**193**	P	P	03 22 22.9	-0.4
	0.7nm,0.7s,baz=23,slow=8.7,SNR=7.5						
JCJ	**Chichijima**	**29.82**	**5**	LR	LR	03 34 16.9	
	comp=Z,20nm,18.4s,baz=188,slow=34						
MKAR	**Makanchi Array**	**70.11**	**322**	P	P	03 28 47.9	-0.1
	0.1nm,0.6s,baz=117,slow=7.7,SNR=2.4						

*IDC **03** 03:34:34.5±1.2, 29.71S×177.15W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/29, mbtmp4.0/4, ML3.3/1, MS3.3/2, Ms1 3.3/2, ms1mx2.7/32, Error ellipse: s-maj=30.6km s-min=26.8km az=35.0*

ISC 03 03:34:39.1±1.1, 29.64S±0.09×177.2W±0.1, h31km, n16, σ0.92/13, mb3.9/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.75**	**301**	Pn	**Pn**	**03 34 53.2**	**-0.3**
	1μm,0.3s,baz=83,slow=17,SNR=38						
RAO				Sn	**Sb**	**03 35 03.3**	**-0.2**
	4μm,0.3s,baz=47,slow=19,SNR=24						
RAO				LR	LR	03 35 12.5	
	comp=Z,243nm,19.0s,baz=1.0,slow=47						
URZ	**Urewera**	**9.81**	**207**	Pn	**Pn**	**03 36 57.1**	**-1.0**
	0.3nm,0.3s,baz=56,slow=11,SNR=2.2						
URZ				Sn	**Sn**	**03 38 48.0**	**+0.8**
	0.9nm,0.3s,baz=111,slow=23,SNR=7.7						
DZM	**Mont Dzumac**	**16.54**	**293**	LR	LR	03 43 25.5	
	comp=Z,60nm,18.7s,baz=208,slow=32						
CTA	**Charters Tower**	**34.39**	**278**	P	**P**	**03 41 25.4**	**+1.7**
	1.4nm,0.6s,baz=107,slow=7.3,SNR=5.6						
ASAR	**Alice Springs**	**43.86**	**266**	P	**P**	**03 42 42.4**	**-0.5**
	0.7nm,0.5s,baz=106,slow=7.7,SNR=9.8						
WRA	**Warramunga Arr**	**44.78**	**271**	P	**P**	**03 42 49.4**	**-0.9**
	0.6nm,0.4s,baz=110,slow=7.4,SNR=10						
NNA	**Nana**	**92.95**	**105**	LR	LR	04 21 33.4	
	comp=Z,23nm,19.0s,baz=281,slow=30						
MKAR	**Makanchi Array**	**117.82**	**310**	PKP	**PKPdf**	**03 53 21.8**	**-0.3**
	0.5nm,0.9s,baz=49,slow=2.7,SNR=3.7						
H10N3	**ASCENSION HYDR**	**139.18**	**153**	T	T	06 30 45.3	
	baz=203						
H10N1	**ASCENSION HYDR**	**139.19**	**153**	T	T	06 30 47.6	
	baz=203,slow=74						
H10N2	**ASCENSION HYDR**	**139.20**	**153**	T	T	06 30 45.3	
	baz=203,slow=74						
FINES	**FINESS Array B**	**144.67**	**341**	PKP	**PKPab**	**03 54 10.0**	**-0.7**
	3.0nm,0.9s,baz=37,slow=4.1,SNR=7.1						
HFS	**Hagfors**	**148.63**	**350**	PKPbc	**PKiKP**	**03 54 24.6**	**+0.7**
	1.3nm,0.8s,baz=22,slow=4.7,SNR=4.2						
AKASG	**Malin Array Be**	**151.11**	**324**	PKPbc	**PKPbc**	**03 54 28.4**	**-0.4**
	1.5nm,0.6s,baz=46,slow=3.2,SNR=6.7						
MMAI	**Mount Meron Ar**	**152.02**	**285**	PKPbc	**PKiKP**	**03 54 33.1**	**+1.2**
	1.5nm,0.4s,baz=100,slow=6.8,SNR=9.1						
BRTR	**Keskin Array B**	**152.84**	**300**	PKPbc	**PKPbc**	**03 54 33.0**	**-0.3**
	0.5nm,0.5s,baz=145,slow=4.4,SNR=4.6						

*TRN **03** 03:34:41.6, 16.09N×61.89W, h182km, MD3.9*
*IDC **03** 03:34:43.2±1.1, 15.92N×61.96W, h169km±8km, mb3.6/9, mb1 3.9/12, mb1mx3.5/39, mbtmp4.2/12, Error ellipse: s-maj=25.4km s-min=11.4km az=19.0*
*NEIC **03** 03:34:43.3±1.7, 16.01N±0.06×61.86W±0.06, h166km±6km, mb4.2/41, Error ellipse: s-maj=9.7km s-min=7.6km az=48.0*

ISC 03 03:34:43.7±0.6, 16.03N±0.04×61.90W±0.05, h173km±5km, n112, σ1.9/104, mb4.2/23, 1C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBE	**Ff, Capester**	**0.28**	**82**	*e*P	**Pn**	**03 35 07.0**	**-0.1**
TDBA	**Terre de Bas,**	**0.31**	**125**	*e*P	**Pn**	**03 35 07.1**	**0.0**
ABD	**La Joyeuse, An**	**0.59**	**42**	*e*P	**Pn**	**03 35 07.8**	**-0.3**
MDPO	**Dominica; Chan**	**0.62**	**136**	*e*P	**Pn**	**03 35 08.2**	**-0.2**
MDPO				*e*S	**Sn**	**03 35 27.2**	**0.0**
BBL	**Barber's Block**	**0.65**	**140**	*e*P	**Pn**	**03 35 08.2**	**-0.3**
BBL				*e*S	**Sn**	**03 35 28.4**	**+0.8**
DWS	**Wesley**	**0.73**	**129**	*e*P	**Pn**	**03 35 08.8**	**-0.1**
DWS				*e*S	**Sn**	**03 35 28.0**	**-0.3**
MLYT	**Lee's Yard**	**0.74**	**338**	*e*P	**Pn**	**03 35 08.8**	**-0.3**
MLYT				*e*S	**Sn**	**03 35 28.4**	**-0.2**
DEG	**La Desirade**	**0.85**	**71**	*e*P	**Pn**	**03 35 09.2**	**-0.6**
DEG				*e*S	**Sn**	**03 35 30.3**	**+0.5**
H05N1	**Guadeloupe/Mar**	**0.86**	**70**	P	**Pn**	**03 35 09.2**	**-0.6**
H05N1				S	**Sn**	**03 35 27.4**	**-2.4**
	SNR=7645						
MDN	**Morne-Daniel**	**0.86**	**145**	*i*P	**Pn**	**03 35 10.9**	**+1.1**
MDN				*e*S	**Sn**	**03 35 29.7**	**-0.1**
DPMT	**Pointe Michel**	**0.91**	**147**	*e*P	**Pn**	**03 35 11.1**	**+1.0**
DPMT				*e*S	**Sn**	**03 35 31.8**	**+1.3**
DBCT	**Belle View Cho**	**0.92**	**145**	*e*P	**Pn**	**03 35 11.3**	**+1.1**
DBCT				*e*S	**Sn**	**03 35 32.0**	**+1.3**
NVDO	**Nevis, Disaste**	**1.28**	**328**	*e*S	**Sn**	**03 35 35.4**	**-0.5**
SVN	**Savane Anatole**	**1.38**	**149**	*e*P	**Pn**	**03 35 13.8**	**-0.2**
PCM	**Pelee Case Pet**	**1.38**	**151**	*e*P	**Pn**	**03 35 13.6**	**-0.4**
CXM	**Morne La Croix**	**1.40**	**150**	*e*P	**Pn**	**03 35 14.1**	**-0.2**
BAMF	**Morne Balai**	**1.41**	**149**	*e*P	**Pn**	**03 35 14.1**	**-0.2**
GBMF	**Grand Be**	**1.42**	**150**	*e*P	**Pn**	**03 35 14.1**	**-0.3**
PML	**Morne Lenard**	**1.42**	**151**	*e*P	**Pn**	**03 35 14.0**	**-0.4**
FDF	**Fort de France**	**1.48**	**151**	*e*P	**Pn**	**03 35 14.3**	**-0.6**
FDF				*e*S	**Sn**	**03 35 40.2**	**+1.1**
FDF	**Fort de France**	**1.48**	**151**		**Pn**	**03 35 14.1**	**-0.9**
SKOC	**St. Kitts, UWI**	**1.49**	**328**	*e*P	**Pn**	**03 35 14.2**	**-0.7**
SKOC				*e*S	**Sn**	**03 35 38.6**	**-0.7**
SKI	**Saint Kitts**	**1.53**	**328**	*e*P	**Pn**	**03 35 15.2**	**-0.2**
SKI				*e*S	**Sn**	**03 35 38.7**	**-1.3**
SKI	**Saint Kitts**	**1.53**	**328**	Pn	**Pn**	**03 35 14.9**	**-0.4**
SKI					**Sn**	**03 35 39.3**	**-0.7**
ILAM	**Ilet Lapin Mar**	**1.59**	**141**	*e*P	**Pn**	**03 35 15.7**	**-0.3**
ANWB	**Willy Bob**	**1.63**	**4**	*e*P	**Pn**	**03 35 15.5**	**-0.9**
ANWB				*e*S	**Sn**	**03 35 39.7**	**-2.2**
ANWB	**Willy Bob**	**1.63**	**4**		**Pn**	**03 35 15.6**	**-0.9**
ZAM	**Aeronautique**	**1.67**	**150**	*e*P	**Pn**	**03 35 16.6**	**-0.2**
TRMF	**Trois Ilets**	**1.69**	**151**	*e*P	**Pn**	**03 35 17.1**	**0.0**
BIM	**Bigot**	**1.70**	**152**	*e*P	**Pn**	**03 35 17.0**	**-0.2**
LPMF	**Morne Lapointe**	**1.70**	**148**	*e*P	**Pn**	**03 35 16.6**	**-0.5**
MVM	**Montagne Vaucl**	**1.76**	**146**	*e*P	**Pn**	**03 35 17.6**	**-0.2**
SEUS	**St. Eustatius**	**1.79**	**325**	*e*P	**Pn**	**03 35 17.9**	**-0.1**
SEUS				*e*S	**Sn**	**03 35 42.6**	**-2.1**
MPOM	**Morne Pois Mar**	**1.87**	**147**	*e*P	**Pn**	**03 35 18.5**	**-0.4**
SABA	**Saba**	**2.04**	**321**	*e*P	**Pn**	**03 35 19.7**	**-1.1**
SABA				*e*S	**Sn**	**03 35 47.4**	**-2.2**
SLBI	**Saint Lucia, B**	**2.19**	**156**	*i*P	**Pn**	**03 35 22.0**	**-0.5**
SLBI				*e*S	**Sn**	**03 35 51.6**	**-0.8**
SMRT	**St. Maarten**	**2.30**	**331**	*e*P	**Pn**	**03 35 22.0**	**-1.8**
SMRT				*e*S	**Sn**	**03 35 51.7**	**-3.2**
SMRT	**St. Maarten**	**2.30**	**331**		**Pn**	**03 35 22.7**	**-1.1**
MCLT	**Moule a Chique**	**2.48**	**158**	*e*P	**Pn**	**03 35 25.5**	**-0.4**
MCLT				*e*S	**Sn**	**03 35 58.6**	**-0.1**
MCLT	**Moule a Chique**	**2.48**	**158**		**Pn**	**03 35 25.6**	**-0.4**
SVB	**Belmont**	**2.81**	**167**	*i*P	**Pn**	**03 35 29.7**	**-0.1**
SVB				*e*S	**Sn**	**03 36 04.7**	**-1.0**
SVB	**Belmont**	**2.81**	**167**		**Pn**	**03 35 29.6**	**-0.2**
SVCV	**St. Vincent, C**	**2.84**	**165**	*e*P	**Pn**	**03 35 29.9**	**-0.2**
SVCV				*e*S	**Sn**	**03 36 05.0**	**-1.2**
BCHC	**Barbados, Cave**	**3.62**	**142**	*e*P	**Pn**	**03 35 39.4**	**-0.4**
BCHC				*e*S	**Sn**	**03 36 22.6**	**-1.0**
BBGH	**Gun Hill**	**3.66**	**141**	*e*P	**Pn**	**03 35 40.7**	**+0.5**
BBGH				*e*S	**Sn**	**03 36 22.3**	**-2.1**
BBGH	**Gun Hill**	**3.66**	**141**	Pn	**Pn**	**03 35 40.0**	**-0.3**
GRSS	**Sisters**	**3.72**	**176**	*e*P	**Pn**	**03 35 41.0**	**0.0**
GRSS				*e*S	**Sn**	**03 36 24.8**	**-1.1**
STVI	**Saint Thomas**	**3.72**	**309**		**Pn**	**03 35 40.5**	**-0.5**
BBSP	**Saint Philip**	**3.75**	**141**	*e*P	**Pn**	**03 35 41.5**	**+0.1**
BBSP				*e*S	**Sn**	**03 36 24.2**	**-2.2**
GRHS	**Sauteurs**	**3.79**	**176**	*e*P	**Pn**	**03 35 42.4**	**+0.4**
GRHS				*e*S	**Sn**	**03 36 25.5**	**-2.0**
GRGR	**Grenville**	**3.88**	**176**	*e*P	**Pn**	**03 35 42.9**	**-0.2**
GRGR				*e*S	**Sn**	**03 36 27.5**	**-2.2**
GRGR	**Grenville**	**3.88**	**176**	Pn	**Pn**	**03 35 42.3**	**-0.9**
MTP	**Monte Pirata**	**4.05**	**301**		**Pn**	**03 35 45.1**	**-0.2**
HUMP	**Col San Antoni**	**4.32**	**300**		**Pn**	**03 35 48.8**	**0.0**
HUMP					**Sn**	**03 36 40.7**	**+1.0**
CBYP	**Canovanas**	**4.39**	**301**		**Pn**	**03 35 49.5**	**-0.3**
PDPR	**Patillas Dam,**	**4.41**	**297**		**Pn**	**03 35 51.2**	**+1.3**
IGPR	**InterUniversit**	**4.46**	**296**		**Pn**	**03 35 51.4**	**+0.9**
SJG	**San Juan**	**4.56**	**298**	P	**Pn**	**03 35 52.4**	**+0.6**
	9.7nm,0.3s,baz=105,slow=13,SNR=30						
SJG				S	**Sn**	**03 36 45.4**	**+0.2**
	7.3nm,0.3s,baz=56,slow=22,SNR=10.0						
SJG	**San Juan**	**4.56**	**298**		**Pn**	**03 35 52.8**	**+1.0**
GCPR	**Guaynabo City**	**4.60**	**300**		**Pn**	**03 35 52.3**	**0.0**
TOSP	**Speyside**	**4.89**	**164**	*e*P	**Pn**	**03 35 55.9**	**-0.2**
TOSP	**Speyside**	**4.89**	**164**	*e*S	**Sn**	**03 36 49.7**	**-3.1**
TOSP	**Speyside**	**4.89**	**164**	Pn	**Pn**	**03 35 54.0**	**-2.1**
AOPR	**Arecibo Observ**	**5.18**	**297**		**Pn**	**03 35 59.9**	**-0.1**
TRN	**Trinidad (W)**	**5.37**	**175**	*e*P	**Pn**	**03 36 02.5**	**+0.1**
TRN	**Trinidad (W)**	**5.37**	**175**	*e*S	**Sn**	**03 37 00.5**	**-3.7**
ORIV	**Oritupano**	**7.07**	**192**	*e*P	**Pn**	**03 36 24.7**	**-0.1**
BAUV	**El Baul**	**9.25**	**221**	*e*P	**Pn**	**03 36 52.5**	**-1.0**
SDV	**Santo Domingo**	**11.10**	**231**	P	**Pn**	**03 37 16.6**	**-1.3**
	0.6nm,0.3s,baz=69,slow=3.9,SNR=4.0						
MDP	**Montagnes des**	**14.16**	**139**	P	**Pn**	**03 37 55.1**	**-1.7**
	baz=360,slow=9.2						
MDP				S	Sn	03 40 22.2	-12
	baz=0.0,slow=15						
P43A	**Skaggs, Pawnee**	**33.67**	**320**	P	**P**	**03 41 09.0**	**+0.9**
HHAR	**Hobbs**	**34.88**	**311**	IAmb	IAmb	03 41 19.8	
	comp=Z,6.0nm,1.0s						
TUL1	**Leonard**	**36.08**	**310**	P	**P**	**03 41 29.1**	**+0.3**
JCT	**Junction City**	**37.48**	**299**	P	**P**	**03 41 39.8**	**-1.0**
WMOK	**Wichita Mounta**	**37.90**	**306**	IAmb	IAmb	03 41 44.5	
	comp=Z,4.4nm,0.6s						
ABTX	**Abilene, Hawle**	**37.92**	**303**	P	**P**	**03 41 44.0**	**-0.4**
SCHQ	**Schefferville**	**38.91**	**355**	P	**P**	**03 41 54.1**	**+1.8**
	comp=Z,2.2nm,0.5s,baz=180,slow=7.1,SNR=8.7						
ECSD	**EROS Data Cent**	**40.36**	**320**	P	**P**	**03 42 04.6**	**+0.1**
ECSD				IAmb	IAmb	03 42 05.3	
	comp=Z,4.9nm,0.8s						
TX31	**Lajitas Ar. Si**	**40.54**	**296**	IAmb	IAmb	03 43 10.2	
	comp=Z,15nm,1.9s						
TX32	**Lajitas Array**	**40.54**	**296**	IAmb	IAmb	03 43 10.2	
	comp=Z,15nm,1.9s						
TXAR	**Lajitas Array**	**40.54**	**296**	P	**P**	**03 42 05.8**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=120,slow=8.2,SNR=28						
MNTX	**Cornudas Mount**	**42.42**	**300**	P	**P**	**03 42 21.1**	**-0.3**
ULM	**Lac du Bonnet**	**43.75**	**329**	P	**P**	**03 42 31.4**	**-0.4**
	comp=Z,5.2nm,0.4s,baz=131,slow=8.2,SNR=19						
ULM	**Lac du Bonnet**	**43.75**	**329**	IAmb	IAmb	03 42 31.8	
	comp=Z,6.6nm,0.5s						
SDCO	**Great Sand Dun**	**44.01**	**308**	IAmb	IAmb	03 43 14.7	
	comp=Z,9.4nm,1.9s						
319A	**Douglas**	**45.65**	**298**	IAmb	IAmb	03 42 49.5	
	comp=Z,9.3nm,0.9s						
X18A	**Snowflake**	**46.72**	**302**	IAmb	IAmb	03 42 57.4	
	comp=Z,5.0nm,0.7s						
TUC	**Tucson**	**47.05**	**299**	P	**P**	**03 42 58.7**	**+0.6**
WUAZ	**Wupatki**	**48.05**	**304**	IAmb	IAmb	03 43 07.7	
	comp=Z,6.5nm,0.8s						
BW06	**Boulder Array**	**48.50**	**313**	IAmb	IAmb	03 43 09.9	
	comp=Z,3.5nm,0.6s						
PD31	**Pinedale Array**	**48.50**	**313**	IAmb	IAmb	03 43 09.9	
	comp=Z,3.2nm,0.6s						
PDAR	**Pinedale Array**	**48.50**	**313**	P	**P**	**03 43 09.4**	**+0.1**
	comp=Z,3.7nm,0.6s,baz=119,slow=10,SNR=33						
PDAR	**Pinedale Array**	**48.50**	**313**	P	**P**	**03 43 09.2**	**-0.1**
Y14A	**Wickenburg**	**49.12**	**301**	IAmb	IAmb	03 43 15.6	
	comp=Z,3.1nm,0.7s						
JLU	**Jordanelle**	**49.24**	**310**	P	**P**	**03 43 15.9**	**+1.0**
TPAW	**Teton Pass**	**49.70**	**314**	IAmb	IAmb	03 44 16.1	
	comp=Z,12nm,1.8s						
DUG	**Dugway, Tooele**	**50.15**	**309**	IAmb	IAmb	03 43 23.1	
	comp=Z,5.3nm,1.1s						
QLMT	**Earthquake Lak**	**50.44**	**315**	P	**P**	**03 43 25.2**	**+1.3**
PSUT	**Pine Spring**	**50.58**	**307**	P	**P**	**03 43 25.6**	**+0.5**
TPNV	**Topopah Spring**	**52.18**	**304**	P	**P**	**03 43 37.4**	**+0.5**
H10N3	**ASCENSION HYDR**	**52.57**	**113**	T	T	04 40 18.0	
	baz=294						
H10N2	**ASCENSION HYDR**	**52.58**	**113**	T	T	04 40 19.3	
	baz=294						
H10N1	**ASCENSION HYDR**	**52.59**	**113**	T	T	04 40 20.2	
	baz=294						
NVAR	**Mina Array Bea**	**54.00**	**306**	P	**P**	**03 43 51.0**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=91,slow=7.2,SNR=16						
YKA	**Yellowknife Ar**	**59.10**	**335**	P	**P**	**03 44 25.4**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=106,slow=7.4,SNR=68						
YKA	**Yellowknife Ar**	**59.10**	**335**	P	**P**	**03 44 25.2**	**-0.3**
TORD	**Torodi Ar. Bea**	**61.40**	**84**	P	**P**	**03 44 42.9**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=275,slow=6.3,SNR=8.4						
INK	**Inuvik**	**68.44**	**338**	P	**P**	**03 45 26.6**	**+0.1**
INK				IAmb	IAmb	03 45 27.3	
	comp=Z,3.6nm,0.7s						
BCAR	**Beaver Creek A**	**71.26**	**332**	P	**P**	**03 45 45.1**	**+1.2**
ILAR	**Eielson Array**	**73.50**	**334**	P	**P**	**03 45 57.2**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=95,slow=4.7,SNR=29						
ILAR	**Eielson Array**	**73.50**	**334**	P	**P**	**03 45 56.9**	**-0.1**
BRTR	**Keskin Array B**	**84.08**	**51**	P	**P**	**03 46 56.5**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=300,slow=2.8,SNR=3.0						

MAN 03 03:36:19.5, 6.90N×124.36E, h34km, mb3.6, ML2.3, MS1.7, Mindanao

*IDC **03** 03:45:10.4±1.5, 10.15N×124.18E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/45, m

MKAR Makanchi Array 50.87 324 P **P** **03 54 13.5 +0.6**
0.5nm,0.8s,baz=127,slow=8.4,SNR=4.4

*GUC **03** 03:52:56.8±0.4, 36°22'S×73°14'W, h17km±215km, ML3.8*
*IDC **03** 03:52:56.0±1.1, 36°36'S×73°64'W, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.6/30, mbtmp3.5/6, ML3.3/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/28, Error ellipse: s-maj=45.2km s-min=17.3km az=78.0*
ISC 03 03:52:59.7±1.1, 36°33'S±0'06×73°50'W±0'09, h27km, n12, σ1°27/13, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.60**	**148**	*i* P	**Pb**	**03 53 08.9**	**-2.7**
CCSP				*i* S	**Sb**	**03 53 19.4**	**-0.4**
CCSP				IAML		03 53 26.6	
	comp=E,6μm,0.3s						
COCH	**Cobquecura**	**0.61**	**71**	⇑*i* P	**Pb**	**03 53 10.2**	**-1.6**
COCH				*i* S	**Sb**	**03 53 20.3**	**+0.2**
COCH				IAML		03 53 22.0	
	comp=N,6μm,0.3s						
BI03	**Tigo**	**0.64**	**143**	*i* P	**Pb**	**03 53 11.5**	**-0.8**
BI03				*i* S	**Sn**	**03 53 22.7**	**+0.4**
CCHI	**Chillan**	**1.18**	**104**	*i* P	**Pn**	**03 53 20.1**	**-0.3**
CCHI				*i* S	**Sb**	**03 53 38.1**	**+1.8**
CCHI				IAML		03 53 53.0	
	comp=E,4μm,0.7s						
PLCA	**Paso Flores**	**4.96**	**153**	Pn	**Pn**	**03 54 13.6**	**+1.1**
	comp=E,0.3nm,0.3s,baz=336,slow=16,SNR=11						
PLCA				Lg	Lg	03 55 32.6	
	comp=E,0.6nm,0.3s,baz=241,slow=19,SNR=3.8						
CPUP	**Villa Florida**	**17.02**	**59**	LR	LR	04 04 51.0	
	comp=E,56nm,19.1s,baz=226,slow=42						
USHA	**Ushuaia**	**18.83**	**171**	LR	LR	04 05 43.9	
	comp=E,167nm,18.1s,baz=183,slow=41						
LPAZ	**La Paz**	**20.53**	**15**	P	Pn	03 57 39.1	+0.2
	comp=E,1.2nm,0.8s,baz=181,slow=12,SNR=4.1						
SIV	**San Ignacio**	**23.09**	**32**	P	**P**	**03 58 03.6**	**+0.2**
	comp=E,0.9nm,0.8s,baz=234,slow=13,SNR=4.4						
SIV				LR	LR	04 08 57.0	
	comp=E,121nm,18.8s,baz=112,slow=42						
SNAA	**Sanae**	**49.90**	**157**	P	**P**	**04 01 50.7**	**+0.3**
	comp=E,2.2nm,0.9s,baz=268,slow=8.2,SNR=4.8						
QSPA	**South Pole Qui**	**53.91**	**180**	P	**P**	**04 02 21.2**	**+0.8**
	comp=E,1.7nm,1.0s,baz=138,slow=6.0,SNR=3.0						
TXAR	**Lajitas Array**	**71.21**	**332**	P	**P**	**04 04 16.1**	**-0.1**
	comp=E,0.2nm,0.7s,baz=155,slow=6.9,SNR=2.2						

*IDC **03** 04:18:04.7±6.2, 13°54N×92°11W, h0km, mb3.1/2, mb1 3.6/6, mb1mx3.4/33, mbtmp3.3/6, ML3.0/3, Error ellipse: s-maj=99.8km s-min=27.0km az=168.0*
*GCG **03** 04:18:06.4±0.5, 14°78N×91°95W, h158km±4km, MD3.7*
*MEX **03** 04:18:09.6±0.5, 13°84N×92°09W, h85km±19km, MD4.1*
*NEIC **03** 04:18:10.6±1.4, 13°86N±0°09×92°23W±0°08, h46km±29km, Md4.1/16(MEX), Error ellipse: s-maj=14.0km s-min=10.2km az=206.0*
ISC 03 04:18:08.6±2.3, 13°8N±0°1×92°30W±0°05, h11km±13km, n18, σ1°86/31, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.93**	**50**	*eP*	**Pg**	**04 18 27.0**	**+0.4**
ERG				*eS*	**Sn**	**04 18 46.3**	**+5.4**
THIG		**1.06**	**2**	*eP*	**Pb**	**04 18 28.8**	**-0.3**
THIG				*eS*	**Sb**	**04 18 43.1**	**+0.1**
THIG		**1.06**	**2**		**Pb**	**04 18 28.8**	**-0.3**
THIG					**Sb**	**04 18 43.1**	**+0.1**
STG3	**Santiaguito 3,**	**1.12**	**39**	*eP*	**Pb**	**04 18 29.1**	**-1.0**
STG3				*eS*	**Sn**	**04 18 46.4**	**+0.5**
FUG	**Fuego 3**	**1.54**	**67**	*eP*	**Pn**	**04 18 33.6**	**-2.5**
FUG				*eS*	**Sn**	**04 18 55.3**	**-1.0**
PCIG		**2.06**	**334**	*eP*	**Pn**	**04 18 42.8**	**-0.4**
PCIG				*i* S	**Sn**	**04 19 07.4**	**-1.5**
PCIG		**2.06**	**334**		**Pn**	**04 18 42.8**	**-0.4**
PCIG					**Sn**	**04 19 07.4**	**-1.5**
APG	**El Apazote**	**2.12**	**57**	Pn	**Pn**	**04 18 42.8**	**-1.5**
	5.1nm,0.3s,baz=225,slow=13,SNR=14						
APG				Sn	**Sn**	**04 19 10.8**	**+0.1**
	9.1nm,0.3s,baz=188,slow=22,SNR=21						
TGIG		**3.03**	**345**	*i* P	**Pn**	**04 18 54.6**	**-2.0**
TGIG				*i* S	**Sn**	**04 19 30.6**	**-2.4**
TGIG		**3.03**	**345**		**Pn**	**04 18 54.6**	**-2.0**
TGIG					**Sn**	**04 19 30.6**	**-2.4**
CMIG	**Matias Romero**	**4.08**	**323**	Pn	**Pn**	**04 19 12.0**	**+1.0**
	0.2nm,0.3s,baz=141,slow=11,SNR=6.8						
CMIG				Sn	**Sn**	**04 20 02.8**	**+3.9**
	0.9nm,0.3s,baz=103,slow=18,SNR=2.9						
CMIG	**Matias Romero**	**4.08**	**323**	*eP*	**Pn**	**04 19 11.0**	**0.0**
CMIG				*i* S	**Sn**	**04 19 58.3**	**-0.6**
CMIG	**Matias Romero**	**4.08**	**323**		**Pn**	**04 19 11.0**	**0.0**
CMIG					**Sn**	**04 19 58.3**	**-0.6**
ESTN	**Estel**	**5.81**	**97**	Pn	**Pn**	**04 19 34.0**	**-0.9**
TEIG	**Tepich**	**7.43**	**31**	Pn	**Pn**	**04 19 57.3**	**+0.3**
TXAR	**Lajitas Array**	**18.68**	**327**	P	**Pn**	**04 22 29.4**	**+2.1**
	0.0nm,0.3s,baz=140,slow=13,SNR=3.5						
NVAR	**Mina Array Bea**	**33.62**	**322**	P	**P**	**04 24 51.5**	**+2.0**
	0.3nm,0.8s,baz=122,slow=9.6,SNR=2.9						
YKA	**Yellowknife Ar**	**51.12**	**347**	P	**P**	**04 27 09.5**	**-1.6**
	0.2nm,0.7s,baz=146,slow=7.3,SNR=4.1						

*SJA **03** 04:18:28.0±0.6, 24°25S×67°19W, h194km±6km, ML3.2, MW3.4*
*GUC **03** 04:18:30.8±0.6, 24°06S×67°61W, h210km±10km, ML3.6*
*IDC **03** 04:18:33.9±2.6, 23°85S×66°90W, h201km±28km, mb3.3/1, mb1 3.3/4, mb1mx3.1/27, mbtmp3.8/4, Error ellipse: s-maj=32.9km s-min=21.1km az=102.0*
ISC 03 04:18:30.0±0.9, 24°18S±0°06×67°22W±0°04, h179km±9km, n23, σ1°41/36, 3C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.65**	**109**	*i* P	**Pn**	**04 19 03.0**	**-0.5**
SLA				*eS*	**Sn**	**04 19 28.9**	**-0.7**
HJA	**Humahuaca**	**1.92**	**60**	*i* P	**Pn**	**04 19 06.6**	**0.0**
AZAP	**Zapla**	**1.97**	**92**	*i* P	**Pn**	**04 19 06.2**	**-0.8**
AZAP				*eS*	**Sn**	**04 19 34.9**	**-0.5**
LVC	**Limon Verde**	**2.20**	**315**	⇓*i* P	**Pn**	**04 19 10.3**	**+0.6**
LVC				*i* S	**Sn**	**04 19 40.4**	**0.0**
LVC	**Limon Verde**	**2.20**	**315**	*i* P	**Pn**	**04 19 09.9**	**+0.3**
LVC				*eS*	**Sn**	**04 19 41.0**	**+0.6**
LVC				IAML		04 19 42.3	
	comp=Z,48nm,0.5s						
PB15	**IPOC Station P**	**2.28**	**295**	⇑*i* P	**Pn**	**04 19 10.7**	**+0.4**
PB15				*i* S	**Sn**	**04 19 41.4**	**-0.2**
YJA	**Yavi**	**2.54**	**39**	*i* P	**Pn**	**04 19 13.9**	**+0.4**
YJA				*eS*	**Sn**	**04 19 48.1**	**+0.8**
PB06	**IPOC Station P**	**2.61**	**304**	⇑*i* P	**Pn**	**04 19 14.4**	**+0.3**
PB06				*i* S	**Sn**	**04 19 47.8**	**-0.6**
PB06				IAML		04 19 50.1	
	comp=N,233nm,0.1s						
PB14	**IPOC Station P**	**2.94**	**261**	*i* P	**Pn**	**04 19 17.3**	**-0.8**
PB14				IAML		04 19 55.7	
	comp=Z,52nm,0.4s						
PB09	**IPOC Station P**	**3.01**	**321**	⇓*i* P	**Pn**	**04 19 20.0**	**+1.0**
PB09				*i* S	**Sn**	**04 19 57.4**	**+0.2**
PB09				IAML		04 19 58.4	
	comp=N,150nm,0.5s						
PB05	**IPOC Station P**	**3.04**	**295**	⇑*i* P	**Pn**	**04 19 18.9**	**-0.3**
PB05				*i* S	**Sn**	**04 19 55.4**	**-2.1**
PB05				IAML		04 19 57.1	
	comp=E,80nm,0.4s						
PB05	**IPOC Station P**	**3.04**	**295**	*i* P	**Pn**	**04 19 19.2**	**0.0**
PB05				IAML		04 20 04.4	
	comp=Z,41nm,0.4s						
AHML	**Horco Molle**	**3.11**	**147**	*i* P	**Pn**	**04 19 18.6**	**-1.4**
PB10	**IPOC Station P**	**3.12**	**282**	*i* P	**Pn**	**04 19 19.9**	**-0.3**
PB10				*i* S	**Sn**	**04 19 57.1**	**-2.1**
PB10				IAML		04 20 00.7	
	comp=N,58nm,0.5s						
PB10	**IPOC Station P**	**3.12**	**282**	*i* P	**Pn**	**04 19 20.0**	**-0.1**
PB10				IAML		04 20 00.8	
	comp=Z,43nm,0.4s						
PB03	**IPOC Station P**	**3.15**	**312**	⇓*i* P	**Pn**	**04 19 20.8**	**+0.2**
PB03				*i* S	**Sn**	**04 19 58.5**	**-1.6**
PB03				IAML		04 20 00.5	
	comp=N,127nm,0.3s						
PB03	**IPOC Station P**	**3.15**	**312**	*i* P	**Pn**	**04 19 21.3**	**+0.6**
PB03				IAML		04 20 03.5	
	comp=Z,121nm,0.3s						

PB04	**IPOC Station P**	**3.26**	**304**	⇓*i* P	**Pn**	**04 19 21.9**	**-0.1**
PB04				*i* S	**Sn**	**04 20 00.4**	**-2.1**
PB04				IAML		04 20 03.0	
	comp=N,130nm,0.4s						
LPAZ	**La Paz**	**7.89**	**354**	P	**Pn**	**04 20 22.6**	**0.0**
	comp=N,0.9nm,0.3s,baz=154,slow=7.9,SNR=25						
LPAZ				S	**Sn**	**04 21 49.9**	**-1.6**
	comp=N,0.1nm,0.3s,baz=38,slow=18,SNR=2.6						
PLCA	**Paso Flores**	**16.74**	**189**	P	**Pn**	**04 22 20.0**	**+5.7**
	comp=N,0.1nm,0.3s,baz=10,slow=12,SNR=5.6						
BDFB	**Brasilia**	**19.94**	**68**	P	**P**	**04 22 46.9**	**-1.5**
	comp=N,0.7nm,0.3s,baz=243,slow=8.3,SNR=6.0						
TORD	**Torodi Ar. Bea**	**76.82**	**69**	P	**P**	**04 30 01.1**	**-1.3**
	comp=N,0.2nm,0.4s,baz=242,slow=6.0,SNR=4.9						
MKAR	**Makanchi Array**	**146.79**	**40**	PKPbc	**PKPbc**	**04 37 50.5**	**-0.3**
	comp=N,0.1nm,0.6s,baz=297,slow=4.7,SNR=2.6						

*IDC **03** 05:03:35.4±1.2, 7°64N×93°98E, h0km, mb3.8/8, mb1 3.8/8, mb1mx3.6/54, mbtmp3.8/8, MS2.6/1, Ms1 2.8/1, ms1mx2.4/47, Error ellipse: s-maj=63.9km s-min=18.8km az=51.0*
*NEIC **03** 05:03:42.9±1.6, 7°9N±0°1×94°6E±0°1, h54km±11km, mb4.4/8, Error ellipse: s-maj=19.8km s-min=12.9km az=215.0*
ISC 03 05:03:38.9±0.6, 7°78N±0°07×94°29E±0°08, h21km, n31, σ1°37/29, mb4.1/13, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**0.84**	**205**	*eP*	**Pb**	**05 03 53.7**	**-1.1**
CMBY				*eS*	**Sb**	**05 04 04.7**	**-0.9**
CMBY				IAML		05 04 06.8	
	comp=N,6μm,0.2s						
CMBY				IAML		05 04 07.2	
	comp=E,8μm,0.3s						
LHMI	**Lhok Sumawe**	**3.66**	**134**	Pn	**Pn**	**05 04 35.0**	**+0.7**
LHMI				Sn	**Sn**	**05 05 19.4**	**+2.5**
KULM	**Kulim**	**6.79**	**111**	Pn	**Pn**	**05 05 16.8**	**-0.6**
RPSI	**Rantau Prapat**	**6.84**	**137**	Pn	**Pn**	**05 05 19.9**	**+1.8**
IPM	**Ipoh**	**7.46**	**116**	Pn	**Pn**	**05 05 25.4**	**-1.2**
CMAR	**Chiang Mai Arr**	**11.54**	**23**	LR	LR	05 10 38.2	
	comp=E,28nm,18.5s,baz=209,slow=36						
BKB	**Balikpapan**	**24.27**	**111**		**P**	**05 08 55.6**	**+0.7**
H08S3	**Diego Garcia H**	**26.58**	**235**	T	T	05 35 56.6	
	baz=54,slow=75,SNR=114						
H08S2	**Diego Garcia H**	**26.59**	**235**	T	T	05 35 57.2	
	baz=54,slow=75,SNR=121						
H08S1	**Diego Garcia H**	**26.60**	**235**	T	T	05 35 57.2	
	baz=54,slow=75,SNR=101						
SOEI	**Soe**	**34.57**	**120**	P	**P**	**05 10 22.7**	**-3.9**
SOEI				IAmb	IAmb	05 10 37.9	
	comp=Z,7.8nm,0.6s						
MK31	**Makanchi Array**	**40.22**	**347**	P	**P**	**05 11 14.1**	**+0.1**
MKAR	**Makanchi Array**	**40.22**	**347**	P	**P**	**05 11 14.0**	**0.0**
	comp=Z,1.2nm,0.7s,baz=173,slow=7.9,SNR=9.5						
MKAR	**Makanchi Array**	**40.22**	**347**	P	**P**	**05 11 13.8**	**-0.2**
MAKZ	**Makanchi**	**40.30**	**347**	P	**P**	**05 11 14.7**	**0.0**
MAKZ				IAmb	IAmb	05 11 32.1	
	comp=Z,3.8nm,1.4s						
KKAR	**Karatay Array**	**40.92**	**333**	P	**P**	**05 11 20.4**	**+0.6**
GEYT	**Alibeck**	**44.37**	**318**	P	**P**	**05 11 48.2**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=120,slow=11,SNR=2.9						
GEYT	**Alibeck**	**44.37**	**318**	P	**P**	**05 11 48.6**	**+0.6**
KURBB	**Kurchatov Arra**	**44.68**	**346**	P	**P**	**05 11 50.0**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=167,slow=7.1,SNR=9.0						
KURK	**Kurchatov**	**44.74**	**346**	P	**P**	**05 11 49.4**	**-1.3**
KURK				IAmb	IAmb	05 11 53.0	
	comp=Z,1.8nm,0.6s						
ZALV	**Zalesovo Beam**	**46.67**	**352**	P	**P**	**05 12 06.6**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=187,slow=8.0,SNR=6.7						
ZALV	**Zalesovo Beam**	**46.67**	**352**	P	**P**	**05 12 06.8**	**+0.9**
WRA	**Warramunga Ar**	**48.09**	**126**	P	**P**	**05 12 18.0**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=307,slow=8.3,SNR=2.9						
RAYN	**Ar Rayn**	**49.26**	**294**	P	**P**	**05 12 28.3**	**+1.7**
RAYN				IAmb	IAmb	05 12 35.7	
	comp=Z,1.7nm,0.8s						
ASAR	**Alice Springs**	**49.74**	**130**	P	**P**	**05 12 31.5**	**+1.4**
	comp=Z,0.2nm,0.7s,baz=302,slow=7.1,SNR=2.7						
ABKAR	**Akbulak array**	**50.39**	**331**	P	**P**	**05 12 34.7**	**+0.1**
BRTR	**Keskin Array B**	**62.60**	**311**	P	**P**	**05 14 00.2**	**-1.8**
	comp=Z,2.0nm,0.6s,baz=114,slow=8.9,SNR=2.8						
BRTR	**Keskin Array B**	**62.60**	**311**	P	**P**	**05 14 00.5**	**-1.5**
SANT	**Santorini**	**68.40**	**306**	P	**P**	**05 14 41.4**	**+2.0**
SANT				IAmb	IAmb	05 14 49.5	
	comp=Z,18nm,0.9s						
FINES	**FINESS Array B**	**72.87**	**332**	P	**P**	**05 15 05.3**	**-0.8**
	comp=Z,4.6nm,1.0s,baz=97,slow=7.7,SNR=4.5						
FINES	**FINESS Array B**	**72.87**	**332**	P	**P**	**05 15 05.8**	**-0.3**

*IDC **03** 05:11:06.6±0.7, 52°73S×12°02E, h0km, mb4.2/10, mb1 4.4/10, mb1mx4.1/31, mbtmp4.3/10, MS3.6/9, Ms1 3.5/9, ms1mx3.4/28, Error ellipse: s-maj=25.5km s-min=18.2km az=93.0*
*NEIC **03** 05:11:08.8±0.5, 52°8S±0°1×12°0E±0°2, h10km±1km, mb4.7/8, Error ellipse: s-maj=23.6km s-min=21.6km az=101.0*
ISC 03 05:11:08.3±0.6, 52°71S±0°10×12°0E±0°1, h10km, n38, σ0°55/28, mb4.5/9, MS3.5/9, 1C-1D, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**20.13**	**194**	P	**P**	**05 15 42.3**	**+0.2**
SNAA	**Sanae**	**20.13**	**194**	P	**P**	**05 15 42.3**	**+0.2**
	7.6nm,0.9s,baz=26,slow=12,SNR=16						
SNAA				LR	LR	05 20 35.0	
	comp=Z,81nm,20.9s,baz=352,slow=28						
SNAA	**Sanae**	**20.13**	**194**	P	**P**	**05 15 42.0**	**-0.1**
VNA1	**Neumayer--Stat**	**20.21**	**200**	P	Pn	05 15 44.0	-0.8
SYO	**Syowa Base**	**20.83**	**152**	⇓Pn	**P**	**05 15 50.0**	**+0.4**
SYO	**Syowa Base**	**20.83**	**152**	⇓eX	Pn	05 16 00.2	+8.1
VNA3	**Neumayer Olymp**	**20.96**	**200**	P	**P**	**05 15 51.1**	**+0.1**
SUR	**Sutherland**	**21.29**	**21**	P	**P**	**05 15 54.9**	**-0.2**
	12nm,1.1s,baz=191,slow=10,SNR=2.0						
SUR				LR	LR	05 21 57.9	
	comp=Z,146nm,19.2s,baz=188,slow=31						
SUR	**Sutherland**	**21.29**	**21**	P	**P**	**05 15 53.7**	**-1.4**
SUR				IAmb	IAmb	05 16 40.9	
	comp=Z,78nm,1.9s						
BOSA	**Boshof**	**26.00**	**27**	LR	LR	05 25 19.2	
	comp=Z,84nm,18.9s,baz=208,slow=33						
MAW	**Mawson**	**28.33**	**141**	LR	LR	05 27 35.7	
	comp=Z,82nm,18.6s,baz=236,slow=35						
QSPA	**South Pole Qui**	**37.52**	**180**	P	**P**	**05 18 21.6**	**-0.5**
	comp=Z,3.6nm,0.9s,baz=219,slow=6.1,SNR=7.6						
QSPA	**South Pole Qui**	**37.52**	**180**	P	**P**	**05 18 22.2**	**+0.1**
QSPA				IAmb	IAmb	05 18 23.1	
	comp=Z,7.7nm,1.1s						
USHA	**Ushuaia**	**45.11**	**234**	P	**P**	**05 19 23.8**	**-0.5**
	comp=Z,2.8nm,0.4s,baz=112,slow=5.4,SNR=4.6						
VNDA	**Vanda**	**48.69**	**172**	P	**P**	**05 19 51.4**	**-0.6**
	comp=Z,6.0nm,0.6s,baz=190,slow=7.7,SNR=35						
VNDA				LR	LR	05 39 08.4	
	comp=Z,124nm,20.4s,baz=198,slow=35						
VNDA	**Vanda**	**48.69**	**172**	P	**P**	**05 19 52.0**	**0.0**
VNDA				IAmb	IAmb	05 19 53.7	
	comp=Z,7.5nm,0.7s						
CPUP	**Villa Florida**	**57.13**	**269**	P	**P**	**05 20 54.5**	**-0.4**
	comp=Z,4.5nm,0.9s,baz=123,slow=6.9,SNR=7.1						
CPUP	**Villa Florida**	**57.13**	**269**	P	**P**	**05 20 55.3**	**+0.4**
CPUP				IAmb	IAmb	05 21 50.2	
	comp=Z,18nm,1.4s						
BDFB	**Brasilia**	**59.64**	**285**	P	**P**	**05 21 12.5**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=151,slow=3.7,SNR=5.3						
BDFB	**Brasilia**	**59.64**	**285**	P	**P**	**05 21 12.2**	**-0.5**
DBIC	**Dimbokro**	**60.87**	**341**	LR	LR	05 44 30.3	
	comp=Z,48nm,18.1s,baz=61,slow=33						
TORD	**Torodi Ar. Bea**	**66.19**	**349**	P	**P**	**05 21 56.1**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=158,slow=4.7,SNR=2.9						
TORD				LR	LR	05 44 32.1	
	comp=Z,30nm,21.9s,baz=330,slow=30						
TORD	**Torodi Ar. Bea**	**66.19**	**349**	P	**P**	**05 21 56.9**	**+0.9**
H01W2	**Cape Leeuwin H**	**69.69**	**121**	T	T	06 39 21.0	
	baz=219						
H01W3	**Cape Leeuwin H**	**69.71**	**121**	T	T	06 39 21.4	
	baz=219,slow=74						
H01W1	**Cape Leeuwin H**	**69.71**	**121**	T	T	06 39 21.9	
	baz=219,slow=74						
LPAZ	**La Paz**	**71.27**	**268**	P	**P**	**05 22 28.9**	**+0.4**
	comp=Z,3.8nm,1.0s,baz=170,slow=6.1,SNR=10						
LPAZ	**La Paz**	**71.27**	**268**	P	**P**	**05 22 29.4**	**+0.9**
LPAZ				IAmb	IAmb	05 22 31.0	
	comp=Z,7.1nm,1.2s						

EIL	**Elat**	**84.44**	**20**	LR	LR	06 00 03.4	
	comp=Z,35nm,20.0s,baz=134,slow=35						
IDI	**Anoyia**	**88.35**	**11**	LR	LR	06 05 41.0	
	comp=Z,47nm,18.1s,baz=246,slow=37						
ASAR	**Alice Springs**	**88.73**	**129**	P	**P**	**05 24 02.0**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=194,slow=5.0,SNR=4.2						
ASAR	**Alice Springs**	**88.73**	**129**	P	**P**	**05 24 02.3**	**+0.1**
BVAR	**Borovoye Array**	**116.09**	**35**	PKP	**PKiKP**	**05 29 51.0**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=298,slow=3.1,SNR=2.3						
WVOR	**Wild Horse Val**	**145.79**	**273**		**PKPbc**	**05 30 47.0**	**-0.1**
TIXI	**Tiksi**	**147.12**	**31**	PKPbc	**PKPdf**	**05 30 48.7**	**+1.0**
	comp=Z,3.6nm,0.7s,baz=354,slow=1.5,SNR=6.1						
TIXI	**Tiksi**	**147.12**	**31**		**PKiKP**	**05 30 52.0**	**-0.2**
YKA	**Yellowknife Ar**	**150.62**	**311**	PKPbc	**PKPbc**	**05 30 59.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=94,slow=2.5,SNR=17						
YKA	**Yellowknife Ar**	**150.62**	**311**		**PKPbc**	**05 30 58.4**	**-0.6**

*IDC **03** 05:12:43.1±1.9, 1°66N×126°77E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.5/38, mbtmp3.6/4, ML3.3/1, Error ellipse: s-maj=114.2km s-min=24.3km az=69.0*
*NEIC **03** 05:12:54.0±2.3, 1°4N±0°1×125°89E±0°09, h64km±10km, mb4.1/8, Error ellipse: s-maj=15.4km s-min=11.8km az=206.0*
*DJA **03** 05:12:56.0±1.1, 2°N±4°×12°7E±°, h105km±12km, M3.9/6, MLv3.9/6*
ISC 03 05:12:52.3±1.1, 1°3N±0°1×126°14E±0°10, h47km, n20, σ2°14/17, mb3.9/6, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.33**	**113**	P	Pn	05 13 18.8	+4.3
TNTI				S	**Sn**	**05 13 34.1**	**+3.1**
TNTI	**Ternate**	**1.33**	**113**		Pn	05 13 19.9	+5.4
SANI	**Sanana**	**3.32**	**183**	P	Pn	05 13 54.3	+12
LUWI	**Luwuk**	**4.09**	**236**		**Pn**	**05 13 51.5**	**-0.8**
SAUI	**Saumlaki**	**10.55**	**151**	Pn	Pn	05 15 27.3	+6.3
SBUM	**Sibu**	**13.96**	**275**	P	**Pn**	**05 16 10.7**	**+3.1**
MTN	**Manton Dam**	**14.89**	**161**	Pn	**P**	**05 16 21.9**	**-2.9**
MTN				IAmb	IAmb	05 16 34.9	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**17.06**	**171**	P	**P**	**05 16 51.7**	**+2.9**
KNRA				IAmb	IAmb	05 16 55.6	
	comp=Z,8.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**19.27**	**181**	P	**Pn**	**05 17 14.1**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=354,slow=10,SNR=2.4						
FITZ	**Fitzroy Crossi**	**19.27**	**181**	P	**Pn**	**05 17 14.3**	**-0.3**
WRA	**Warramunga Arr**	**22.58**	**160**	P	**P**	**05 17 46.2**	**-2.7**
	comp=Z,1.5nm,0.3s,baz=340,slow=11,SNR=16						
WRA	**Warramunga Arr**	**22.58**	**160**	P	**P**	**05 17 47.0**	**-2.0**
ASAR	**Alice Springs**	**25.93**	**164**	P	**P**	**05 18 19.3**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=348,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**25.93**	**164**	P	**P**	**05 18 22.2**	**+1.9**
NWAO	**Narrogin (SRO)**	**35.06**	**193**	P	**P**	**05 19 40.0**	**-0.8**
MK31	**Makanchi Array**	**59.23**	**326**	P	**P**	**05 22 48.3**	**-0.6**
MK31				IAmb	IAmb	05 22 48.8	
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**05 22 46.5**	**-2.4**
	comp=Z,0.7nm,0.6s,baz=116,slow=8.1,SNR=5.9						
MKAR	**Makanchi Array**	**59.23**	**326**	P	**P**	**05 22 48.2**	**-0.7**
MAKZ	**Makanchi**	**59.41**	**326**	P	**P**	**05 22 49.0**	**-1.2**
MAKZ				IAmb	IAmb	05 22 51.3	
	comp=Z,3.4nm,1.4s						
KURK	**Kurchatov**	**63.48**	**328**	P	**P**	**05 23 15.8**	**-1.7**
KURK				IAmb	IAmb	05 23 17.9	
	comp=Z,1.9nm,0.6s						

IDC 03 05:14:30.8±2.9, 3°35S×151°08E, h174km±25km, mb3.5/3, mb1 3.7/3, mb1mx3.0/41, mbtmp3.9/3, Error ellipse: s-maj=69.4km s-min=29.2km az=146.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.34**	**135**	P	Pn	05 15 00.7	-0.1
	9.5nm,0.3s,baz=311,slow=9.3,SNR=3.4						
KRVT				S	Sn	05 15 31.1	+7.1
	7.9nm,0.3s,baz=309,slow=9.4,SNR=2.9						
WRA	**Warramunga Arr**	**23.21**	**223**	P	P	05 19 22.6	+0.2
	6.3nm,0.5s,baz=50,slow=9.9,SNR=56						
ASAR	**Alice Springs**	**26.14**	**218**	P	P	05 19 47.2	-1.7
	0.3nm,0.4s,baz=48,slow=8.4,SNR=4.7						
FITZ	**Fitzroy Crossi**	**28.91**	**238**	P	P	05 20 14.9	+1.3
	1.6nm,0.8s,baz=68,slow=10,SNR=5.5						
TORD	**Torodi Ar. Bea**	**146.22**

*FUNV **03** 05:36:07.1,6˝.82N×73˝.22W,h173km,MW3.1*
*IDC **03** 05:36:08.2±1.8,7˝.10N×73˝.32W,h134km±97km,mb3.4/2,*
mb1 3.6/4,mb1mx3.0/39,mbtmp3.9/4,ML3.0/2,MS3.0/1,
Ms1 3.0/1,ms1mx2.3/23,Error ellipse: s-maj=194.9km
s-min=7.9km az=132.0
*NEIC **03** 05:36:08.6±1.5,7˝.3N±0˝.1×73˝.53W±0˝.07,h118km±19km,*
mb4.0/4,Error ellipse: s-maj=17.8km s-min=7.9km
az=157.0
*RSNC **03** 05:36:09.4±1.4,6˝.82N×73˝.13W,h148km±5km,ML3.3,*
Mw3.5,Fault plane solution: NP1:φs71.00000°,
δ30.00000°,λ-162.00000°.

ISC 03 05:36:08.0±0.8,**6˝.85N**±0˝.03×**73˝.10W**±0˝.03,**h155**km±6km,
n58,σ1§**36**/93,**mb3.8**/4,**5C-6D**,**Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**198**	⇓*i*P	**Pn**		**05 36 29.6**	**+0.2**
BARC				*e*S	**Sn**		**05 36 44.5**	**-1.2**
BARC				*i*			05 36 47.5	
	comp=Z,531nm,0.4s							
PAMC	**Pamplona, Colo**	**0.63**	**39**	⇓*i*P	**Pn**		**05 36 32.3**	**+1.1**
PAMC				*e*S	**Sn**		**05 36 49.2**	**+0.3**
PAMC				*i*			05 36 51.4	
	comp=Z,310nm,0.5s							
BRRC	**Barranca, Sant**	**0.66**	**293**	⇑*i*P	**Pn**		**05 36 31.4**	**+0.6**
BRRC				*e*S	**Sn**		**05 36 48.1**	**-0.1**
BRRC				*i*			05 36 50.2	
	comp=Z,120nm,0.1s							
RUSC	**La Rusia**	**0.95**	**179**	⇑*i*P	**Pn**		**05 36 33.6**	**+0.2**
RUSC				*e*S	**Sn**		**05 36 52.0**	**-0.9**
RUSC				*i*			05 36 53.8	
	comp=Z,202nm,0.3s							
RUSC	**La Rusia**	**0.95**	**179**	*e*P	**Pn**		**05 36 33.5**	**0.0**
RUSC				*e*S	**Sn**		**05 36 51.8**	**-1.1**
TAMC	**Tame, Arauca**	**1.36**	**108**	⇓*i*P	**Pn**		**05 36 38.0**	**+1.3**
TAMC				*e*S	**Sn**		**05 36 59.3**	**+0.8**
TAMC				*i*			05 37 09.1	
	comp=Z,147nm,1.2s							
PTBC	**PUERTO BERRIO,**	**1.38**	**257**	⇑*i*P	**Pn**		**05 36 36.1**	**-0.7**
PTBC				*e*S	**Sn**		**05 36 57.3**	**-1.5**
PTBC				*i*			05 36 59.2	
	comp=Z,248nm,0.5s							
OCAC	**Ocana**	**1.40**	**351**	*e*P	**Pn**		**05 36 37.7**	**+0.6**
OCAC				*e*S	**Sn**		**05 36 59.6**	**+0.2**
OCAC				*i*			05 37 05.0	
	comp=Z,239nm,0.2s							
SPBC	**San Pablo de B**	**1.53**	**219**	*e*P	**Pn**		**05 36 38.5**	**+0.1**
SPBC				*e*S	**Sn**		**05 37 01.2**	**-0.6**
SPBC				*i*			05 37 07.8	
	comp=Z,369nm,0.4s							
ZARC	**Zaragoza, Cauc**	**1.86**	**290**	*e*P	**Pn**		**05 36 42.2**	**+0.3**
ZARC				*e*S	**Sn**		**05 37 07.4**	**-0.4**
ZARC				*i*			05 37 13.5	
	comp=Z,147nm,0.8s							
SMLC	**San Martn de**	**2.17**	**334**	*e*P	**Pn**		**05 36 45.4**	**+0.1**
SMLC				*e*S	**Sn**		**05 37 13.4**	**-0.8**
SMLC				*i*			05 37 21.5	
	comp=Z,139nm,0.1s							
NORC	**Norcasia**	**2.17**	**234**	*e*P	**Pn**		**05 36 45.4**	**-0.2**
NORC				*e*S	**Sn**		**05 37 13.1**	**-1.4**
NORC				*i*			05 37 18.8	
	comp=Z,194nm,0.7s							
CHIC	**Chingaza**	**2.29**	**196**	⇑*i*P	**Pn**		**05 36 47.6**	**+0.2**
CHIC				*e*S	**Sn**		**05 37 17.2**	**-0.4**
CHIC				*i*			05 37 23.2	
	comp=Z,125nm,0.3s							
ROSC	**El Rosal**	**2.34**	**211**	P	**Pn**		**05 36 49.8**	**+1.9**
	comp=Z,54nm,0.3s,baz=224,slow=2.4,SNR=122							
ROSC				S	**Sn**		**05 37 19.3**	**+0.8**
	comp=Z,71nm,0.3s,baz=128,slow=23,SNR=13							
ROSC	**El Rosal**	**2.34**	**211**	⇑*i*P	**Pn**		**05 36 49.7**	**+1.8**
ROSC				*e*S	**Sn**		**05 37 17.8**	**-0.7**
ROSC				*i*			05 37 24.6	
	comp=Z,202nm,0.4s							
ROSC	**El Rosal**	**2.34**	**211**		**Pn**		**05 36 49.4**	**+1.6**
ROSC				Sn	**Sn**		**05 37 20.6**	**+2.2**
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**		**05 36 50.6**	**+0.8**
HELC				*e*S	**Sn**		**05 37 21.4**	**-0.5**
HELC				*i*			05 37 29.6	
	comp=Z,134nm,0.5s							
HELC	**Santa Helena**	**2.50**	**255**	*e*P	**Pn**		**05 36 47.4**	**-2.3**
HELC				*e*S	**Sn**		**05 37 17.4**	**-4.5**
UREC	**San Jos de Ur**	**2.58**	**291**	*e*P	**Pn**		**05 36 49.4**	**-0.9**
UREC				*e*S	**Sn**		**05 37 21.3**	**-1.7**
UREC				*i*			05 37 29.4	
	comp=Z,76nm,0.4s							
VIGV	**El Vigia**	**2.62**	**41**	⇓*e*P	**Pn**		**05 36 51.9**	**+1.0**
VIGV				*e*S	**Sn**		**05 37 23.7**	**-0.4**
SOCV	**Socops**	**2.64**	**57**	⇓*i*P	**Pn**		**05 36 51.8**	**+0.7**
SOCV	**Socops**	**2.64**	**57**	*e*P	**Pn**		**05 36 51.8**	**+0.7**
SOCV				*e*S	**Sn**		**05 37 24.2**	**-0.2**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	*e*P	**Pn**		**05 36 54.0**	**+0.7**
GUY2C				*e*S	**Sn**		**05 37 29.1**	**+1.0**
GUY2C				*i*			05 37 37.6	
	comp=Z,163nm,0.6s							
VILC	**Villavicencio,**	**2.78**	**192**	*e*P	**Pn**		**05 36 52.9**	**-0.1**
VILC				*e*S	**Sn**		**05 37 26.0**	**-1.9**
VILC				*i*			05 37 31.4	
	comp=Z,118nm,0.5s							
PTGC	**Puerto Gaitan,**	**2.80**	**160**	*e*P	**Pn**		**05 36 52.8**	**-0.4**
PTGC				*e*S	**Sn**		**05 37 26.1**	**-2.0**
PTGC				*i*			05 37 27.6	
	comp=Z,82nm,0.5s							
RREF	**El Recreo**	**2.96**	**229**	*e*P	**Pn**		**05 36 57.1**	**+1.5**
RREF				*e*S	**Sn**		**05 37 32.6**	**+0.1**
RREF				*i*			05 37 44.4	
	comp=Z,96nm,0.5s							
CBOC	**Ciudad Bolivar**	**3.06**	**251**	*e*P	**Pn**		**05 36 57.4**	**+0.9**
CBOC				*e*S	**Sn**		**05 37 33.3**	**-0.7**
CBOC				*i*			05 37 44.9	
	comp=Z,49nm,0.5s							
CODC	**Agustn Codazz**	**3.08**	**354**	*e*P	**Pn**		**05 36 57.4**	**+0.7**
CODC				*e*S	**Sn**		**05 37 35.3**	**+0.9**
CODC				*i*			05 37 45.5	
	comp=Z,33nm,0.5s							
DBBC	**Dabeiba**	**3.09**	**273**	*e*P	**Pn**		**05 36 57.0**	**+0.2**
TOLC	**Tolima**	**3.15**	**225**	*e*P	**Pn**		**05 36 58.9**	**+1.0**
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**		**05 36 59.1**	**+1.2**
	comp=Z,18nm,0.3s,baz=257,slow=5.5,SNR=57							
SDV				S	**Sn**		**05 37 36.0**	**-0.6**
	comp=Z,14nm,0.3s,baz=47,slow=22,SNR=26							
SDV				LR	LR		05 37 55.2	
	comp=Z,242nm,21.9s,baz=78,slow=33							
SDV	**Santo Domingo**	**3.17**	**50**	*e*P	**Pn**		**05 36 59.0**	**+1.0**
SDV	**Santo Domingo**	**3.17**	**50**	*e*P	**Pn**		**05 36 57.2**	**-0.7**
SDV				*e*S	**Sn**		**05 37 35.7**	**-0.9**
SDV	**Santo Domingo**	**3.17**	**50**		**Pn**		**05 36 58.8**	**+0.9**
SDV				Sn	**Sn**		**05 37 35.9**	**-0.8**
ARGC	**Ariguani, Magd**	**3.20**	**339**	*e*P	**Pn**		**05 36 59.7**	**+1.6**
ARGC				*e*S	**Sn**		**05 37 37.9**	**+0.9**
ARGC				*i*			05 37 45.0	
	comp=Z,31nm,0.4s							
ANIL	**Santa Ana**	**3.28**	**224**	*e*P	**Pn**		**05 37 01.2**	**+1.8**
ANIL				*e*S	**Sn**		**05 37 39.4**	**+0.2**
ANIL				*i*			05 37 44.3	
	comp=Z,235nm,0.4s							
ELOV	**Elorza**	**3.59**	**87**	⇓*i*P	**Pn**		**05 37 03.8**	**+0.6**
ORTC	**Ortega, Tolima**	**3.62**	**216**	*e*P	**Pn**		**05 37 03.8**	**+0.2**
ORTC				*e*S	**Sn**		**05 37 45.6**	**-1.1**
ORTC				*i*			05 37 51.9	
	comp=Z,66nm,0.5s							
SJCC	**San Jacinto, C**	**3.66**	**326**	*e*P	**Pn**		**05 37 03.3**	**-0.8**
SJCC				*i*			05 37 50.6	
	comp=Z,31nm,0.4s							
PLMC	**San Jos del P**	**3.71**	**239**	*e*P	**Pn**		**05 37 05.4**	**+0.6**
PLMC				*i*			05 37 53.8	
	comp=Z,55nm,0.3s							
GUVC	**San Jose del G**	**4.30**	**174**	*e*P	**Pn**		**05 37 12.4**	**0.0**
GUVC				*i*			05 38 08.7	
	comp=Z,47nm,0.2s							
YOTC	**Yotoco, Valle**	**4.31**	**229**	*e*P	**Pn**		**05 37 11.9**	**-0.7**
YOTC				*i*			05 38 15.3	
	comp=Z,10.0nm,1.1s							
SMRC	**Santa Marta, M**	**4.43**	**346**	*e*P	**Pn**		**05 37 13.9**	**-0.1**
SMRC				*i*			05 38 08.7	
	comp=Z,18nm,0.3s							
MACC	**Macarena, Meta**	**4.73**	**189**	*e*P	**Pn**		**05 37 16.8**	**-1.3**
MACC				*i*			05 38 12.4	
	comp=Z,22nm,0.7s							
TEPV	**Terepaima**	**4.95**	**51**	*e*S	**Sn**		**05 38 13.9**	**-3.9**
BAUV	**El Baul**	**5.42**	**67**	*e*P	**Pn**		**05 37 25.6**	**-1.5**
BAUV				*e*S	**Sn**		**05 38 25.2**	**-3.8**
MAPV	**Macapo**	**5.46**	**57**	*e*P	**Pn**		**05 37 27.4**	**-0.4**
MAPV				*e*S	**Sn**		**05 38 26.0**	**-4.0**
FLOC	**Florencia**	**5.82**	**206**	*e*P	**Pn**		**05 37 32.2**	**-0.3**
FLOC				*i*			05 39 06.9	
	comp=Z,12nm,1.0s							
BBAC	**Balboa, Cauca**	**6.33**	**221**	*e*P	**Pn**		**05 37 40.6**	**+1.1**
BBAC				*e*S	**Sn**		**05 38 47.9**	**-3.1**
BBAC				*i*			05 38 53.5	
	comp=Z,5.5nm,0.9s							
OTAV	**Otavalo**	**8.46**	**219**	Pn	**Pn**		**05 38 09.0**	**+0.9**
JTS	**Las Juntas de**	**12.21**	**287**		Pn		05 38 51.3	-5.7
Z50A	**Ashland**	**28.84**	**337**		**P**		**05 41 50.2**	**-1.7**
Z50A				IAmb	IAmb		05 42 01.6	
	comp=Z,3.3nm,1.0s							
E46A	**Sault Ste Mari**	**40.54**	**348**	P	**P**		**05 43 33.9**	**+1.9**
E46A				IAmb	IAmb		05 43 35.8	
	comp=Z,2.9nm,0.8s							
BATG	**Bathurst New B**	**40.73**	**7**	P	**P**		**05 43 35.1**	**+1.6**
ULM	**Lac du Bonnet**	**47.27**	**340**	P	**P**		**05 44 25.4**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=153,slow=6.8,SNR=3.8							
ULM	**Lac du Bonnet**	**47.27**	**340**	P	**P**		**05 44 25.8**	**+0.3**
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**		**05 46 19.8**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=132,slow=6.7,SNR=19							
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**		**05 46 20.0**	**+0.3**

*MDD **03** 05:38:31.8±2.2,32˝.53N×5˝.03W,h0km,mb3.6/8,Error*
ellipse: s-maj=20.0km s-min=16.9km az=178.0,PRXIMO
*CNRM **03** 05:38:32.1,32˝.61N×4˝.74W,h0km*
*IGIL **03** 05:38:33.1,32˝.51N×4˝.88W,h10km*
*INMG **03** 05:38:33.5±0.9,32˝.67N×4˝.87W,h10km,ML2.5,Error*
ellipse: s-maj=8.8km s-min=5.1km az=73.0

ISC 03 05:38:33.1±0.8,**32˝.71N**±0˝.03×**4˝.87W**±0˝.04,**h10**km,**n51**,
σ1§**58**/85,**1C**,**Morocco**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
MD31	**MD31**	**0.19**	**31**	P	**Pg**		**05 38 37.8**	**+0.6**
MD31				S	**Sg**		**05 38 42.1**	**+2.1**
GOLM	**Goulmima**	**1.00**	**184**	P	**Pg**		**05 38 50.1**	**-2.2**
GOLM				S	**Sg**		**05 39 03.4**	**-2.0**
TISM	**Timmit**	**1.65**	**234**	P	**Pb**		**05 39 04.8**	**+1.2**
TISM				S	**Sg**		**05 39 30.0**	**+3.8**
TZRR	**Tazzarine**	**2.00**	**197**	P	**Pn**		**05 39 05.9**	**-1.2**
TZRR				S	**Sn**		**05 39 33.3**	**+1.0**
RSA	**Sarsar**	**2.31**	**340**	P	**Pb**		**05 39 14.0**	**-1.0**
TDRA	**Tendrara**	**2.42**	**81**	P	**Pn**		**05 39 11.7**	**-1.2**
TDRA				S	**Sn**		**05 39 40.4**	**-2.2**
JBK	**JBK**	**2.52**	**49**	P	**Pn**		**05 39 13.0**	**-1.3**
JBK				S	**Sn**		**05 39 44.6**	**-0.6**
SRHM	**Skhour des Reh**	**2.56**	**266**	P	**Pn**		**05 39 16.7**	**+1.9**
PALE	**Palemas**	**2.62**	**17**	P	**Pn**		**05 39 15.7**	**+0.2**
ZGR	**Zagora**	**2.66**	**194**	P	**Pn**		**05 39 14.9**	**-1.2**
ZGR				S	**Sn**		**05 39 51.8**	**+3.4**
OUK	**Oukaimeden**	**2.95**	**240**	P	**Pn**		**05 39 21.9**	**+1.6**
GOG	**Mont Gurugu**	**2.96**	**31**	P	**Pn**		**05 39 21.0**	**+0.8**
SMIR	**Smir Dam**	**3.00**	**352**	P	**Pn**		**05 39 21.8**	**+1.1**
FIGM	**Figuig**	**3.11**	**100**	P	**Pn**		05 39 18.0	-4.3
TTIG	**Tnine Tigouga,**	**3.73**	**236**	P	**Pn**		**05 39 32.7**	**+1.8**
EMIJ	**Mijas**	**3.85**	**1**	P	**Pn**		**05 39 32.2**	**-0.3**
	17nm,2.9s,SNR=7.9							
EMIJ				S	**Sn**		**05 40 18.6**	**+0.9**
	3.8nm,0.4s,SNR=4.0							
ELGU	**Los Guajares,**	**4.28**	**14**	P	**Pn**		**05 39 39.2**	**+0.9**
	9.9nm,4.1s,SNR=7.9							
ELGU				S	**Sn**		**05 40 30.0**	**+1.6**
	4.5nm,0.2s,SNR=4.0							
EBER	**Berja**	**4.49**	**21**	P	**Pn**		**05 39 43.6**	**+2.3**
	2.1nm,2.9s,SNR=7.9							
EBER				S	**Sn**		**05 40 35.2**	**+1.5**
	0.2nm,0.1s,SNR=7.9							
HORN	**Hornachuelos**	**5.14**	**357**	P	**Pn**		**05 39 49.7**	**-0.4**
PBDV	**Barranco-do-Ve**	**5.18**	**332**	*e*Pn	**Pn**		**05 39 50.9**	**+0.2**
PBDV				*e*Sn	**Sn**		**05 40 48.8**	**-1.6**
PBDV				A	A		05 41 04.3	
	4.6nm,0.8s							
PBDV	**Barranco-do-Ve**	**5.18**	**332**	P	**Pn**		**05 39 50.9**	**+0.2**
PBDV				S	**Sn**		**05 40 48.8**	**-1.6**
	4.6nm,0.8s							
PVAQ	**Vaqueiros**	**5.24**	**334**	⇑*e*Pn	**Pn**		**05 39 51.6**	**+0.2**
PVAQ				*e*Sn	**Sn**		**05 40 49.8**	**-2.1**
PVAQ				A	A		05 40 56.5	
	4.8nm,0.5s							
PVAQ	**Vaqueiros**	**5.24**	**334**	P	**Pn**		**05 39 51.6**	**+0.2**
PVAQ				S	**Sn**		**05 40 49.8**	**-2.1**
	4.8nm,0.5s							
EMIN	**Mina Concepcio**	**5.26**	**344**	P	**Pn**		**05 39 51.6**	**-0.2**
	0.7nm,0.2s,SNR=7.9							
EMIN				S	**Sn**		**05 40 51.1**	**-1.4**
	0.4nm,0.1s,SNR=7.9							
EGRO	**El Granado**	**5.27**	**337**	P	**Pn**		**05 39 52.0**	**+0.1**
	3.6nm,0.1s,SNR=28							
EGRO				S	**Sn**		**05 40 51.0**	**-1.7**
	1.9nm,0.2s,SNR=89							
EQES	**Quesada**	**5.30**	**16**	P	**Pn**		**05 39 54.5**	**+2.2**
	0.2nm,0.1s,SNR=7.9							
EQES				S	**Sn**		**05 40 54.9**	**+1.4**
	1.2nm,0.3s,SNR=7.9							
ECAB	**El Cabril**	**5.38**	**355**	P	**Pn**		**05 39 54.4**	**+0.9**
	0.3nm,0.2s,SNR=5.9							
ECAB				S	**Sn**		**05 40 55.4**	**0.0**
	0.8nm,0.3s,SNR=7.9							
EADA	**Adamuz**	**5.46**	**2**	P	**Pn**		**05 39 55.5**	**+1.1**
	0.4nm,0.2s,SNR=7.9							
EADA				S	**Sn**		**05 40 57.8**	**+0.5**
	1.1nm,0.1s,SNR=7.9							
PFVI	**Vila Bisbo**	**5.48**	**325**	*e*Pn	**Pn**		**05 39 55.1**	**+0.3**
PFVI				*e*Sn	**Sn**		**05 40 55.4**	**-2.5**
PFVI	**Vila Bisbo**	**5.48**	**325**	P	**Pn**		**05 39 54.4**	**-0.4**
	8.2nm,1.7s,SNR=7.9							
MORF	**Marmelete**	**5.54**	**327**	*e*P	**Pn**		**05 39 55.8**	**+0.1**
MORF	**Marmelete**	**5.54**	**327**	*e*Pn	**Pn**		**05 39 56.4**	**+0.8**
MORF				*e*Sn	**Sn**		**05 40 56.9**	**-2.5**
MORF				A	A		05 41 08.5	
	3.5nm,0.2s							
MORF	**Marmelete**	**5.54**	**327**	P	**Pn**		**05 39 55.8**	**+0.1**
MORF				S	**Sn**		**05 40 56.9**	**-2.5**
	3.5nm,0.2s							
PTEO	**Sao Teotonio**	**5.77**	**328**	*e*Pn	**Pn**		**05 39 59.3**	**+0.6**
PTEO				*e*Sn	**Sn**		**05 41 04.0**	**-1.0**
PTEO	**Sao Teotonio**	**5.77**	**328**	P	**Pn**		**05 39 59.3**	**+0.6**
PNCL	**Nicolau / Gran**	**6.17**	**332**	*e*Pn	**Pn**		**05 40 04.4**	**+0.2**
PNCL				*e*Sn	**Sn**		**05 41 12.6**	**-2.1**
PNCL				A	A		05 41 23.9	
	2.9nm,0.6s							
PNCL	**Nicolau / Gran**	**6.17**	**332**	P	**Pn**		**05 40 04.4**	**+0.2**
PNCL				S	**Sn**		**05 41 12.6**	**-2.1**
	2.9nm,0.6s							
EBAD	**Badajoz**	**6.28**	**345**	P	**Pn**		**05 40 05.8**	**0.0**
	1.8nm,0.1s,SNR=11							
EBAD				S	**Sn**		**05 41 15.6**	**-2.0**
	1.5nm,0.2s,SNR=5.1							
EVO	**Evora**	**6.35**	**337**	*e*Pn	**Pn**		**05 40 07.1**	**+0.3**
EVO				*e*Sn	**Sn**		**05 41 17.2**	**-2.1**
EVO				A	A		05 41 27.0	
	3.9nm,0.6s							
EVO	**Evora**	**6.35**	**337**	P	**Pn**		**05 40 07.1**	**+0.3**
EVO				S	**Sn**		**05 41 17.2**	**-2.1**
	3.9nm,0.6s							
ETOB	**Tobarra**	**6.51**	**24**	P	**Pn**		**05 40 11.1**	**+2.0**
	1.0nm,1.2s,SNR=7.9							
PESTR	**Estremoz**	**6.53**	**341**	*e*Pn	**Pn**		**05 40 09.5**	**+0.2**
PESTR				*e*Sn	**Sn**		**05 41 21.4**	**-2.4**
PAB	**San Pablo**	**6.84**	**3**	P	**Pn**		**05 40 14.9**	**+1.4**
	1.2nm,5.3s,SNR=7.9							
PAB				S	**Sn**		**05 41 30.4**	**-1.1**
	0.4nm,0.2s,SNR=7.9							
PMTG	**Montargil**	**6.91**	**338**	*e*Pn	**Pn**		**05 40 14.7**	**+0.3**
PMTG				*e*Sn	**Sn**		**05 41 30.4**	**-2.6**
PMTG	**Montargil**	**6.91**	**338**	P	**Pn**		**05 40 14.7**	**+0.3**
PMTG				S	**Sn**		**05 41 30.4**	**-2.6**
PMRV	**Marv??o**	**7.01**	**344**	*e*Pn	**Pn**		**05 40 16.0**	**+0.2**
PMRV				*e*Sn	**Sn**		**05 41 36.7**	**+1.1**
PMRV	**Marv??o**	**7.01**	**344**	P	**Pn**		**05 40 16.0**	**+0.2**
PMAFR	**Mafra**	**7.19**	**331**	*e*Pn	**Pn**		**05 40 19.6**	**+1.3**
PCBR	**Castelo Branco**	**7.42**	**344**	*e*Pn	**Pn**		**05 40 21.8**	**+0.3**
PCBR				*e*Sn	**Sn**		**05 41 42.2**	**-3.5**
PCBR	**Castelo Branco**	**7.42**	**344**	P	**Pn**		**05 40 21.8**	**+0.3**
PCBR				S	**Sn**		**05 41 42.2**	**-3.5**
MVO	**Moncorvo**	**8.62**	**349**	*e*Pn	**Pn**		**05 40 38.2**	**+0.3**

*PGC **03** 05:42:28.4±0.1,55˝.27N×135˝.22W,h1km,ML3.2/4, 198km*
south of Sitka, Ak Off Coast Of Southeastern Alaska
*NEIC **03** 05:42:29.3±2.7,55˝.43N±0˝.04×134˝.97W±0˝.10,h13km±6km,*
Error ellipse: s-maj=9.2km s-min=4.6km az=54.0

ISC 03 05:42:27.4±1.1,**55˝.35N**±0˝.05×**135˝.03W**±0˝.07,**h9**km,**n20**,
σ1§**73**/29,**Off coast of southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CRAG	**Craig**	**1.09**	**83**	Pg	**Pb**		**05 42 48.9**	**+0.5**
CRAG					**Sb**		**05 43 03.6**	**+0.9**
LIB	**Langara Island**	**1.58**	**133**	Pn	**Pb**		**05 42 57.1**	**+0.3**
LIB	**Langara Island**	**1.58**	**133**	Pn	**Pb**		**05 42 57.1**	**+0.3**
WRAK	**Wrangell Islan**	**1.85**	**54**	Pn	**Pn**		**05 42 59.7**	**+0.4**
DIB	**Dawson Inlet,**	**2.62**	**144**	Pn	**Pn**		**05 43 11.6**	**+1.7**
DIB				Sn	**Sn**		**05 43 42.1**	**+0.4**
DIB				Sg	**Sg**		**05 43 50.9**	**-0.6**
DIB	**Dawson Inlet,**	**2.62**	**144**	Pn	**Pn**		**05 43 11.6**	**+1.7**
DIB				Sn	**Sn**		**05 43 42.1**	**+0.4**
DIB				Sg	**Sg**		**05 43 50.9**	**-0.6**
DIB	**Dawson Inlet,**	**2.62**	**144**	Pn	**Pn**		**05 43 11.9**	**+2.1**
MOBC	**Moresby Island**	**2.84**	**140**	Pn	**Pn**		**05 43 14.6**	**+1.6**
MOBC				Sg	**Sg**		**05 43 56.9**	**-1.8**
MOBC	**Moresby Island**	**2.84**	**140**	Pn	**Pn**		**05 43 14.6**	**+1.6**
MOBC				Sg	**Sg**		**05 43 56.9**	**-1.8**
MOBC	**Moresby Island**	**2.84**	**140**	Pn	**Pn**		**05 43 14.8**	**+1.7**
RUBB	**Prince Rupert**	**2.94**	**108**	Pn	**Pn**		**05 43 16.6**	**+2.2**
RUBB	**Prince Rupert**	**2.94**	**108**	Pn	**Pn**		**05 43 16.6**	**+2.2**
JIS	**Juneau Island**	**2.96**	**7**	Pn	**Pn**		**05 43 15.9**	**+1.5**
BNB	**Barry Inlet**	**3.38**	**144**	Pn	**Pn**		**05 43 22.2**	**+1.8**
BNB	**Barry Inlet**	**3.38**	**144**	Pn	**Pn**		**05 43 22.2**	**+1.8**
HG3B	**Hotspring**	**3.49**	**141**	Pn	**Pn**		**05 43 23.0**	**+1.1**
HG3B				Sg	**Sg**		**05 44 17.9**	**-1.6**
HG3B	**Hotspring**	**3.49**	**141**	Pn	**Pn**		**05 43 23.0**	**+1.1**
HG3B				Sg	**Sg**		**05 44 17.9**	**-1.6**
SKAG	**Skagway**	**4.13**	**358**	Pn	**Pn**		**05 43 32.9**	**+2.4**
YKU2	**Yakutat**	**4.87**	**331**	Pg	**Pg**		**05 43 57.5**	**-3.1**
PCA	**Pinnacle**	**5.52**	**332**	Pn	**Pn**		**05 43 52.9**	**+3.1**

*IDC **03** 05:57:22.5±2.4,52˝.49N×173˝.29E,h0km,mb3.5/4,*
mb1 3.7/4,mb1mx3.3/49,mbtmp3.5/4,Error ellipse:
s-maj=103.9km s-min=25.3km az=161.0
*NEIC **03** 05:57:31.5±1.2,53˝.1N±0˝.2×172˝.9E±0˝.1,h54km±13km,*
mb3.9/12,Error ellipse: s-maj=31.0km s-min=11.3km
az=193.0

ISC 03 05:57:29.8±1.3,**53˝.1N**±0˝.2×**172˝.8E**±0˝.1,**h41**km,**n29**,
σ1§**26**/24,**mb3.8**/10,**Near Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SMY	**Shemya**	**0.89**	**113**	Pn	**Pn**		**05 57 44.5**	**-1.3**
SMY					**Sn**		**05 57 59.2**	**+1.7**
ADK	**Adak**	**6.57**	**96**	Pn	**Pn**		**05 59 05.4**	**+1.7**
OHAK	**Old Harbor**	**19.71**	**64**	P	**P**		**06 01 55.3**	**-0.2**
KDAK	**Kodiak Island**	**20.07**	**63**	P	**P**		**06 01 58.9**	**-0.4**
IMAR	**Indian Mountai**	**21.00**	**39**	P	**P**		**06 02 12.1**	**+2.8**
SUA	**Susitna One**	**21.18**	**52**	P	**P**		**06 02 10.5**	**-1.0**
SUA				IAmb	IAmb		06 02 25.8	
	comp=Z,6.9nm,1.3s							
RC01	**Rabbit Creek A**	**21.63**	**53**	P	**P**		**06 02 14.3**	**-1.9**
RC01				IAmb	IAmb		06 02 15.0	
	comp=Z,5.6nm,0.6s							
RND	**Reindeer**	**22.33**	**47**	P	**P**		**06 02 24.8**	**+1.1**
RND				IAmb	IAmb		06 02 30.1	
	comp=Z,10nm,1.5s							
SCM	**Sheep Creek Mo**	**22.84**	**52**	P	**P**		**06 02 30.6**	**+1.4**
ILAR	**Eielson Array**	**23.42**	**44**	P	**P**		**06 02 34.0**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=253,slow=8.1,SNR=5.4							
ILAR	**Eielson Array**	**23.42**	**44**	P	**P**		**06 02 34.4**	**-0.4**
PRP	**Porcupine Dome**	**24.13**	**43**	P	**P**		**06 02 41.1**	**-0.5**
RIDG	**Independent Ri**	**24.15**	**47**	P	**P**		**06 02 41

COEN Coen 37.10 270 P P 06 22 54.9 +0.4
MANU Manus Island 37.10 291 P P 06 22 55.5 +0.9
TOO Toolangi 37.15 231 P P 06 22 55.0 +0.3
baz=37,SNR=15
TOO Toolangi 37.15 231 P P 06 22 55.2 +0.5
TAU Tasmania Unive 38.22 222 P P 06 23 03.2 0.0
STKA Stephens Creek 38.61 241 P P 06 23 07.1 +0.5
comp=Z,36nm,0.7s,baz=92,slow=10,SNR=63
STKA Stephens Creek 38.61 241 P P 06 23 06.5 -0.1
STKA IAmb IAmb 06 23 07.9
comp=Z,9.4nm,1.0s
ARPS Mount Arapiles 39.63 234 P P 06 23 14.7 0.0
baz=40,SNR=5.2
QIS Mount Isa 39.64 259 P P 06 23 14.1 -1.0
baz=40,SNR=5.9
HTT Hallett 41.12 240 P P 06 23 26.9 +0.2
baz=41,SNR=17
KHU Kahuku 43.21 32 P P 06 23 44.4 +1.0
BBOO Buckleboo 43.39 241 P P 06 23 44.3 -0.1
baz=44,SNR=16
BBOO Buckleboo 43.39 241 P P 06 23 44.2 -0.1
AIN Ainahou 43.39 32 P P 06 23 45.9 +1.1
MLH Mauna Loa 43.53 32 P P 06 23 46.2 +0.4
HMH Humu'ula Sheep 43.57 32 P P 06 23 46.6 +0.3
WR0 Warramunga Arr 44.43 260 P P 06 23 51.4 -1.2
WR0 IAmb IAmb 06 23 54.9
comp=Z,13nm,0.6s
WRAB Tennant Creek 44.61 260 P P 06 23 53.0 -1.0
WRA Warramunga Arr 44.62 260 P P 06 23 52.9 -1.2
comp=Z,28nm,0.7s,baz=96,slow=7.0,SNR=312
WRA PcP PcP 06 25 24.1 -0.1
comp=Z,1.7nm,0.4s,baz=91,slow=3.6,SNR=3.9
WRA ScP ScP 06 28 22.3 +0.2
comp=Z,0.5nm,0.6s,baz=66,slow=4.0,SNR=3.5
WRA Warramunga Arr 44.62 260 P P 06 23 52.6 -1.4
WRA PcP PcP 06 25 22.3 -2.0
WRA ScP 06 28 21.6 -0.4
AS31 Alice Springs 44.77 254 P P 06 23 54.9 -0.3
ASAR Alice Springs 44.78 254 P P 06 23 54.9 -0.4
comp=Z,170nm,0.6s,baz=88,slow=8.5,SNR=2094
ASAR PcP PcP 06 25 24.5 -0.3
comp=Z,2.8nm,0.5s,baz=95,slow=4.4,SNR=4.6
ASAR ScP ScP 06 28 23.1 +0.5
comp=Z,1.4nm,1.0s,baz=100,slow=4.1,SNR=3.8
ASAR S S 06 29 47.1 -4.2
comp=Z,2.1nm,1.1s,baz=85,slow=15,SNR=8.9
ASAR Alice Springs 44.78 254 P P 06 23 54.1 -1.1
ASAR PcP PcP 06 25 23.8 -1.0
ASAR ScP 06 28 22.8 +0.1
KDU Kakadu 47.55 269 P P 06 24 15.5 -0.7
baz=48,SNR=46
MTN Manton Dam 48.79 268 P P 06 24 24.5 -1.0
baz=49,SNR=15
MTN Manton Dam 48.79 268 P P 06 24 24.4 -1.0
WRKA Warakurna 49.83 252 P P 06 24 32.7 -0.4
baz=50,SNR=61
FORT Forrest 49.99 245 P P 06 24 33.2 -0.9
baz=50,SNR=26
FORT Forrest 49.99 245 P P 06 24 32.8 -1.3
FORT PcP PcP 06 25 43.4 -0.1
KNRA Kununurra 50.48 264 P P 06 24 37.2 -0.7
baz=50,SNR=27
KNRA Kununurra 50.48 264 P P 06 24 37.0 -0.9
SWI Sorong 52.24 283 P P 06 24 50.6 0.0
comp=Z,1µmcomp=Z,127nm,0.7s
FITZ Fitzroy Crossi 53.02 261 P P 06 24 55.8 -0.3
baz=53,SNR=30
FITZ Fitzroy Crossi 53.02 261 P P 06 24 55.5 -0.6
FITZ IAmb IAmb 06 24 56.2
comp=Z,6.8nm,0.6s
KMBL Kambalda 55.29 244 P P 06 25 10.8 -1.1
baz=55,SNR=7.9
NLAI Namlea 55.29 279 P P 06 25 11.8 -0.3
comp=Z,1µmcomp=Z,58nm,0.6s
SOEI Soe 56.06 270 P P 06 25 17.5 -0.1
comp=Z,110nm,0.8s
SOEI Soe 56.06 270 P P 06 25 18.6 +1.0
SANI Sanana 56.74 280 P P 06 25 21.5 -0.6
comp=Z,53nm,0.9s
PSA00 Pilbara Seismi 57.90 255 P P 06 25 29.1 -0.7
PSA00 IAmb IAmb 06 25 29.8
comp=Z,31nm,0.7s
PSA00 Pilbara Seismi 57.90 255 P P 06 25 28.3 -1.6
PSA00 IAmb IAmb 06 25 29.3
comp=Z,17nm,0.6s
KLBR Kellerberrin 58.81 244 P P 06 25 34.8 -1.0
baz=59,SNR=26
NWAO Narrogin (SRO) 59.19 242 P P 06 25 38.2 -0.2
baz=59,SNR=5.8
NWAO Narrogin (SRO) 59.19 242 P P 06 25 37.7 -0.7
NWAO IAmb IAmb 06 25 38.5
comp=Z,13nm,0.8s
NWAO Narrogin (SRO) 59.19 242 P P 06 25 37.9 -0.5
NWAO IAmb IAmb 06 25 38.5
comp=Z,17nm,0.8s
BLDU Ballidu 59.76 245 P P 06 25 41.6 -0.6
baz=60,SNR=8.9
LUWI Luwuk 60.10 279 P P 06 25 44.6 -0.1
MUN Mundaring 60.10 243 P P 06 25 44.2 -0.3
baz=60,SNR=3.1
SBA Scott Base 60.39 184 P P 06 25 47.5 +2.0
VNDA Vanda 60.42 185 P P 06 25 45.9 +0.2
comp=Z,0.8nm,0.8s,baz=12,slow=8.4,SNR=3.1
VNDA Vanda 60.42 185 P P 06 25 46.4 +0.7
MORW Morawa 60.46 246 P P 06 25 46.0 -0.9
baz=60,SNR=8.3
MORW Morawa 60.46 246 P P 06 25 46.2 -0.7
MORW IAmb IAmb 06 25 54.5
comp=Z,44nm,1.5s
GIRL Giralia 62.88 253 P P 06 26 03.2 +0.6
baz=63,SNR=8.6
GIRL Giralia 62.88 253 P P 06 26 02.9 +0.2
MPSI Mapaga 63.27 280 P P 06 26 04.7 -0.6
comp=Z,27nm,0.8s
TWSI Taliwang, Sumb 63.36 269 P P 06 26 05.7 -0.2
comp=Z,62nm,0.8s
JAGI Jajag, Banyuwa 66.03 269 P P 06 26 21.2 -1.5
comp=Z,66nm,1.0s
JAGI Jajag, Banyuwa 66.03 269 P P 06 26 21.2 -1.5
CASY Casey 66.11 205 P P 06 26 21.9 -0.3
MJAR Matsushiro Arr 67.92 323 P P 06 26 33.0 -0.8
comp=Z,2.9nm,0.5s,baz=138,slow=6.1,SNR=16
MJAR Matsushiro Arr 67.92 323 P P 06 26 33.0 -0.8
MAJO Matsushiro 67.92 323 P P 06 26 33.9 0.0
MAJO IAmb IAmb 06 26 39.0
comp=Z,13nm,1.4s
MJB9 Matsu-Tunnel 67.93 323 P P 06 26 33.8 -0.1
MJB9 IAmb IAmb 06 26 39.0
comp=Z,13nm,1.3s
KKM Kota Kinabalu 68.74 284 P P 06 26 39.7 +0.3
KKM IAmb IAmb 06 26 45.4
comp=Z,34nm,1.3s
PCJI Pacitan 68.94 268 P P 06 26 40.5 +0.1
comp=Z,4µmcomp=Z,162nm,0.7s
ADK Adak 69.54 1 P P 06 26 43.2 +0.1
UGM Wanagama 69.64 268 P P 06 26 44.4 -0.3
KPJI Karang Pucung 71.31 268 P P 06 26 54.3 -0.2
QSPA South Pole Qui 72.12 180 P P 06 26 58.6 +0.2
UNV Unalaska Valle 72.22 7 P P 06 26 57.6 -1.2
TPUB Ta-pu 72.27 302 P P 06 26 58.8 -1.0
CISI Cisompet, Garu 72.31 268 P P 06 26 58.5 -1.9
KSM Kuching 72.68 277 P P 06 27 02.5 +0.1
PEA0B Petropavlovsk- 73.70 345 P P 06 27 08.2 +0.8
PETK Petropavlovsk- 73.70 345 P P 06 27 07.2 -0.2
comp=Z,2.9nm,0.6s,baz=106,slow=7.0,SNR=9.0
PETK Petropavlovsk- 73.70 345 P P 06 27 07.8 +0.4
SNCC San Nicolas Is 75.81 48 P P 06 27 21.9 +2.2
baz=237
CHIR Chirikof Islan 75.96 13 P P 06 27 20.4 +0.6
SCZ2 Santa Cruz Isl 76.14 47 P P 06 27 22.8 +1.3
baz=237
MCCM Marconi Confer 76.32 42 P P 06 27 23.4 +1.1
MCCM IAmb IAmb 06 27 29.9
comp=Z,25nm,1.1s
SCI2 San Clemente I 76.36 48 P P 06 27 23.9 +1.3
baz=238
SAO San Andreas Ge 76.45 44 P P 06 27 24.4 +1.3
SAO IAmb IAmb 06 27 25.2
comp=Z,16nm,0.8s
PKM Mcpherson Peak 76.50 46 P P 06 27 24.5 +0.9
baz=237
PMPB Monarch Peak 76.57 45 P P 06 27 25.1 +1.3
PMPB IAmb IAmb 06 27 26.1
comp=Z,27nm,1.3s
SMMC Simmler 76.61 46 P P 06 27 25.5 +1.4
baz=236
USRK Ussuriysk Ar. 76.63 326 P P 06 27 25.5 +1.7
comp=Z,0.5nm,0.5s,baz=146,slow=5.7,SNR=4.5
USRK Ussuriysk Ar. 76.63 326 P P 06 27 25.7 +1.8
CIS Catalina Islan 76.68 48 P P 06 27 25.6 +1.2
baz=238
HOPS Hopland Field 76.70 41 P P 06 27 25.8 +1.4
KCPM Cahto Peak 76.80 40 P P 06 27 26.1 +1.1
KCPM IAmb IAmb 06 27 28.2
comp=Z,22nm,1.4s
SII Sitkinak Islan 76.95 13 P P 06 27 25.7 +0.3
KMRM Mail Ridge 77.04 40 P P 06 27 27.6 +1.4
KMRM IAmb IAmb 06 27 28.8
comp=Z,20nm,0.8s
PASC Pasadena Art C 77.25 48 P P 06 27 28.1 +0.6
PASC IAmb IAmb 06 27 29.1
comp=Z,11nm,0.8s
ARVC Arvin 77.31 46 P P 06 27 29.0 +1.2
baz=237
109C Camp Elliot, M 77.34 49 P P 06 27 29.0 +1.1
baz=239
MWC Mount Wilson 77.36 48 P P 06 27 29.0 +0.7
MWC IAmb IAmb 06 27 29.9
comp=Z,12nm,0.7s
KHMM Horse Mountain 77.42 39 P P 06 27 29.3 +0.9
VES Vestal, Richgr 77.52 46 P P 06 27 29.6 +0.7
baz=237,SNR=6.4
BAR Barrett 77.55 50 P P 06 27 29.7 +0.6
O02D Mt. Diablo Mer 77.58 40 P P 06 27 30.8 +1.6
baz=234,SNR=12
MURC Murrieta 77.65 48 P P 06 27 30.7 +1.0
baz=239
BFSC Mount Baldy Ra 77.65 48 P P 06 27 30.5 +0.7
baz=238,SNR=8.3
KRMB Red Mountain 77.71 39 P P 06 27 30.9 +1.0
EDW2 Edwards Air Fo 77.76 47 P P 06 27 31.4 +1.2
baz=238,SNR=15
OHAK Old Harbor 77.76 14 P P 06 27 29.9 +0.3
OHAK IAmb IAmb 06 27 48.2
comp=Z,58nm,1.5s
MONP2 Monument Peak 77.84 49 P P 06 27 32.3 +1.4
baz=239,SNR=23
ISA Isabella, Lake 77.84 46 P P 06 27 31.7 +1.0
ISA IAmb IAmb 06 27 32.9
comp=Z,11nm,0.9s
ISA Isabella, Lake 77.84 46 P P 06 27 31.9 +1.2
baz=238,SNR=15
CMB Columbia Colle 77.86 43 P P 06 27 31.5 +0.7
KBO Bosley Butte 77.94 38 P P 06 27 32.1 +1.0
KBO IAmb IAmb 06 27 44.7
comp=Z,18nm,1.4s
IKP In-Ko-Pah, Jac 77.94 50 P P 06 27 32.7 +1.3
baz=240,SNR=13
NJ2 Nanjing 77.95 309 eP P 06 27 33.1 +1.8
NJ2 pmax pmax
comp=Z,14nm,0.7s
AFDM Forest Hills D 78.00 42 P P 06 27 32.0 +0.5
ORV Oroville 78.02 41 P P 06 27 31.9 +0.4
N02D Trinity Center 78.10 40 P P 06 27 33.3 +1.3
baz=234,SNR=8.6
PFO Pinyon Flats O 78.18 49 P P 06 27 33.2 +0.6
PFO Pinyon Flats O 78.18 49 P P 06 27 33.5 +0.9
baz=239
XPFO Pion Flat 78.18 49 P P 06 27 33.7 +1.0
O03E Paynes Creek 78.26 41 P P 06 27 33.5 +0.7
baz=234
M02C Callahan 78.26 39 P P 06 27 34.3 +1.5
baz=233,SNR=8.7
L02E Cave Junction 78.28 38 P P 06 27 34.3 +1.5
baz=233
LRMC Laurel Mtn Rad 78.29 47 P P 06 27 34.4 +1.1
baz=238
SWSC Sam W. Stewart 78.32 50 P P 06 27 34.3 +1.1
baz=240,SNR=5.3
KDAK Kodiak Island 78.43 14 P P 06 27 33.6 +0.4
KDAK IAmb IAmb 06 27 41.4
comp=Z,20nm,1.2s
MDPB Devils Postpil 78.50 44 P P 06 27 35.3 +0.9
MDPB IAmb IAmb 06 27 36.4
comp=Z,12nm,0.8s
CWC Cottonwood Cre 78.53 46 P P 06 27 35.7 +1.2
baz=238
OMMB Old Mammoth Mi 78.54 44 P P 06 27 35.7 +0.9
YBH Yreka Blue Hor 78.55 39 P P 06 27 35.7 +1.3
comp=Z,9.0nm,0.7s,baz=171,slow=3.3,SNR=11
YBH Yreka Blue Hor 78.55 39 P P 06 27 35.5 +1.1
YBH IAmb IAmb 06 27 36.6
comp=Z,7.9nm,0.8s
K02D Willamette Mer 78.56 38 P P 06 27 35.6 +1.2
baz=232
J01E Myrtle Point 78.69 37 P P 06 27 36.4 +1.5
baz=232
BELC Belle Mtn. Jos 78.71 49 P P 06 27 36.6 +1.1
baz=239,SNR=8.4
MPMC Manual Prospec 78.73 46 P P 06 27 36.8 +1.2
baz=238
WAKR Walker 78.75 43 P P 06 27 36.7 +1.1
WAKR IAmb IAmb 06 27 37.9
comp=Z,12nm,0.9s
TIN Tinemaha, Big 78.75 45 P P 06 27 36.9 +1.3
baz=237
GSC Goldstone, Bar 78.81 47 P P 06 27 36.8 +0.9
GSC Goldstone, Bar 78.81 47 P P 06 27 37.0 +1.1
baz=239
HEC Hector,Ludlow 78.89 48 P P 06 27 37.2 +0.9
baz=239,SNR=8.8
BEKR Beckworth 78.92 42 P P 06 27 37.4 +0.9
BEKR IAmb IAmb 06 27 37.9
comp=Z,8.3nm,0.6s
BC3 Big Chuckawall 78.92 49 P P 06 27 38.1 +1.6
baz=240
HUMO Hull Mountain 78.93 38 P P 06 27 37.4 +1.1
PNTR Pine Nut 78.97 43 P P 06 27 37.9 +1.1
PNTR IAmb IAmb 06 27 39.0
comp=Z,20nm,0.9s
VCNR Virginia City 79.05 43 P P 06 27 38.2 +1.0
GLA Glamis 79.08 50 P P 06 27 38.9 +1.6
baz=240
L04D Klamath Falls 79.08 39 P P 06 27 38.3 +1.0
baz=234,SNR=8.7
M04C Macdoel 79.11 39 P P 06 27 38.6 +1.2
baz=234,SNR=6.7
YERR Yerington 79.14 43 IAmb IAmb 06 27 39.2
comp=Z,12nm,0.6s
GRAC Grapevine Rang 79.31 45 P P 06 27 40.0 +1.5
baz=238,SNR=7.3
GMRC Granite Mounta 79.35 48 P P 06 27 40.0 +1.2
baz=240
I03D Drain, OR 79.36 37 P P 06 27 40.0 +1.6
baz=233
FURC Furnace Creek, 79.37 46 P P 06 27 39.9 +1.2
baz=238,SNR=6.1
IRM Iron Mountain 79.40 49 P P 06 27 40.3 +1.3
baz=240,SNR=5.4
PAHR Pah Rah Range 79.45 42 P P 06 27 39.9 +0.6
NVAR Mina Array Bea 79.45 44 P P 06 27 40.4 +1.0
comp=Z,6.2nm,0.7s,baz=224,slow=8.6,SNR=62
TUQ Turquoise Moun 79.49 47 P P 06 27 40.6 +1.0
baz=239,SNR=9.4
Y12C Blythe 79.64 50 P P 06 27 41.7 +1.5
baz=240
J04D Umpqua Nationa 79.81 38 P P 06 27 42.2 +1.1
baz=234,SNR=7.0
I04A Tendick Farm, 79.96 38 P P 06 27 42.7 +1.0
baz=233
214A Organ Pipe Nat 80.04 52 P P 06 27 44.0 +1.7
baz=242
CN2 Changchun 80.04 322 eP P 06 27 42.8 +0.8
CN2 pmax pmax
comp=Z,10.0nm,1.2s
TPNV Topopah Spring 80.04 46 P P 06 27 43.5 +1.0
baz=239,SNR=7.5
MOD Modoc Plateau 80.11 40 IAmb IAmb 06 27 44.5
comp=Z,13nm,0.7s
J05D Fort Rock, OR 80.35 38 P P 06 27 45.2 +1.3
baz=234,SNR=20
BRLK Bradley Lake 80.60 14 P P 06 27 44.4 -0.2
BRLK IAmb IAmb 06 27 45.2
comp=Z,7.7nm,0.7s
H04A Detroit Lake 80.62 37 IAmb IAmb 06 27 46.1
comp=Z,11nm,0.6s
PINE Pine Mountain 80.82 38 P P 06 27 47.8 +1.5
PINE IAmb IAmb 06 27 48.7
comp=Z,18nm,0.9s
Y14A Wickenburg 80.84 50 P P 06 27 47.6 +1.1
Y14A IAmb IAmb 06 27 48.6
comp=Z,5.1nm,0.6s
SVW2 Sparrevohn 80.87 11 P P 06 27 45.9 -0.1
I05D Terrebonne, OR 80.90 38 P P 06 27 47.9 +1.3
baz=234
R11A Troy Canyon, C 81.22 45 P P 06 27 49.3 +0.8
baz=239,SNR=6.5
WVOR Wild Horse Val 81.43 40 IAmb IAmb 06 27 51.5
comp=Z,13nm,0.9s
G05D Wamic, OR 81.45 37 P P 06 27 50.3 +1.0
baz=234
E04D Cinebar 81.53 35 P P 06 27 51.1 +1.4
baz=233
TUC Tucson 81.72 52 P P 06 27 52.8 +1.7
TUC IAmb IAmb 06 27 54.0
comp=Z,10nm,1.1s
TUC Tucson 81.72 52 P P 06 27 53.0 +1.9
baz=243
D03D Eldon 81.84 34 P P 06 27 52.7 +1.5
baz=232
SUA Susitna One 82.16 13 IAmb IAmb 06 27 52.9
comp=Z,11nm,0.7s
X16A Lo Mia Camp, P 82.21 50 IAmb IAmb 06 27 56.3
comp=Z,11nm,1.0s
BBB Bella Bella 82.35 29 P P 06 27 53.6 0.0
comp=Z,13nm,1.0s,baz=256,slow=4.2,SNR=3.5
BBB Bella Bella 82.35 29 P P 06 27 54.8 +1.1
319A Douglas 82.45 54 IAmb IAmb 06 27 57.8
comp=Z,14nm,0.9s
U15A North Rim 82.54 48 IAmb IAmb 06 27 57.9
comp=Z,16nm,0.8s
KNK Knik Glacier 82.62 14 IAmb IAmb 06 27 55.4
comp=Z,12nm,0.8s
PMR Palmer 82.63 14 IAmb IAmb 06 27 55.2
comp=Z,28nm,1.4s
ELK Elko 82.68 43 P P 06 27 56.5 +0.5
WUAZ Wupatki 82.77 49 IAmb IAmb 06 27 59.4
comp=Z,11nm,1.0s
WUAZ Wupatki 82.77 49 P P 06 27 58.3 +1.8
baz=242
B05A Bryant 82.82 34 P P 06 27 57.1 +1.0
baz=233
G08A Pilot Rock 82.84 38 IAmb IAmb 06 27 58.2
comp=Z,5.8nm,0.7s
GHO Glory Hole Cre 82.84 14 IAmb IAmb 06 27 56.6
comp=Z,17nm,0.6s
LTY Liberty 82.99 35 P P 06 27 57.4 +0.3
LTY IAmb IAmb 06 27 58.5
comp=Z,8.8nm,1.1s
SML Sawmill 83.00 14 P P 06 27 56.4 -0.4
SML IAmb IAmb 06 28 10.9
comp=Z,16nm,1.1s
E07A Sunnyside 83.04 36 IAmb IAmb 06 27 59.2
comp=Z,12nm,0.9s
HAWA Hanford 83.13 37 P P 06 27 58.5 +0.8
HAWA IAmb IAmb 06 27 59.7
comp=Z,14nm,1.0s
C06D Leavenworth 83.26 35 P P 06 27 59.6 +1.2
baz=234
TGL Tana Glacier 83.48 17 P P 06 27 59.5 +0.2
TGL IAmb IAmb 06 28 16.8
comp=Z,21nm,1.4s
BMO Blue Mountains 83.57 39 P P 06 28 00.5 +0.3
VRDI Verde Repeater 83.71 16 IAmb IAmb 06 28 01.3
comp=Z,22nm,1.3s
SEY Seymchan 83.80 347 P P 06 28 00.4 -0.2
comp=Z,3.4nm,0.6s,baz=225,slow=20,SNR=9.9
RPSI Rantau Prapat 83.84 275 P P 06 28 01.5 -0.6
RPSI IAmb IAmb 06 28 02.4
comp=Z,13nm,0.8s
KTH Kantishna Hill 84.00 12 IAmb IAmb 06 28 03.0
comp=Z,9.2nm,1.0s
DUG Dugway, Tooele 84.00 45 P P 06 28 03.4 +0.9
baz=241
TRF Thorofare Moun 84.04 12 IAmb IAmb 06 28 03.1
comp=Z,16nm,0.8s
BARN Barnard Glacie 84.06 17 P P 06 28 02.1 -0.2
BARN IAmb IAmb 06 28 03.2
comp=Z,10nm,0.8s
121A Cookes Peak, D 84.09 53 IAmb IAmb 06 28 06.1
comp=Z,4.5nm,0.7s
121A Cookes Peak, D 84.09 53 P P 06 28 05.1 +2.0
baz=245
F10A Beach Ranch, E 84.23 38 IAmb IAmb 06 28 04.7
comp=Z,16nm,1.0s
RND Reindeer 84.30 13 IAmb IAmb 06 28 03.7
comp=Z,13nm,0.7s
DHY Denali Highway 84.33 14 P P 06 28 02.8 -0.7
MCK McKinley 84.57 13 IAmb IAmb 06 28 05.4
comp=Z,10.0nm,0.8s
C09A Chrisman Ranch 84.64 36 IAmb IAmb 06 28 06.5
comp=Z,6.8nm,0.8s
WRH Wood River Hil 85.40 13 IAmb IAmb 06 28 09.4
comp=Z,9.6nm,1.0s
NEW Newport 85.54 36 P P 06 28 09.6 +0.1
comp=Z,3.6nm,0.7s,baz=250,slow=2.4,SNR=8.6
NEW Newport 85.54 36 P P 06 28 09.7 +0.2
baz=237
HDA Harding Lake 85.59 13 IAmb IAmb 06 28 09.6
comp=Z,7.4nm,1.0s
HDA Harding Lake 85.59 13 P P 06 28 09.1 -0.2
baz=210
MNTX Cornudas Mount 85.60 55 P P 06 28 11.5 +1.3
baz=246
MVCO Mesa Verde 85.60 49 P P 06 28 11.3 +0.9
baz=244
CCB Clear Creek Bu 85.61 13 IAmb IAmb 06 28 09.0
comp=Z,4.9nm,0.6s
IMAR Indian Mountai 85.71 10 P P 06 28 09.7 -0.2
TCOL CIGO, UAF Yank 85.80 13 P P 06 28 09.8 -0.5
baz=209
COLA College 85.80 13 P P 06 28 09.7 -0.6
COLA IAmb IAmb 06 28 10.3
comp=Z,24nm,1.4s
IL31 85.92 13 IAmb IAmb 06 28 11.0
comp=Z,3.5nm,0.6s
ILAR Eielson Array 85.92 13 P P 06 28 09.9 -1.0
comp=Z,2.2nm,0.4s,baz=221,slow=5.0,SNR=65
ILAR Eielson Array 85.92 13 P P 06 28 09.8 -1.1
TX31 Lajitas Ar. Si 86.02 58 IAmb IAmb 06 28 15.3
comp=Z,9.8nm,0.9s
TX32 Lajitas Array 86.02 58 IAmb IAmb 06 28 15.3
comp=Z,10nm,0.9s
TXAR Lajitas Array 86.02 58 P P 06 28 14.2 +1.8
comp=Z,7.5nm,0.8s,baz=219,slow=6.1,SNR=87
TXAR Lajitas Array 86.02 58 P P 06 28 13.7 +1.4
POKR Poker Plat Res 86.10 13 P P 06 28 11.0 -0.8
baz=210
ANMO Albuquerque 86.12 52 P P 06 28 13.8 +0.9
ANMO Albuquerque 86.12 52 P P 06 28 14.0 +1.2
baz=245
XAN Xi'an 86.27 307 P P 06 28 14.4 +1.0
XAN pP PcP 06 28 21.8 +6.8
XAN pmax pmax
comp=Z,7.0nm,1.1s
MSO Missoula 86.61 38 P P 06 28 15.5 +0.7
baz=239
DLMT Dillon 86.68 40 IAmb IAmb 06 28 17.1
comp=Z,6.5nm,0.9s
TPAW Teton Pass 86.81 42 IAmb IAmb 06 28 18.2
comp=Z,7.8nm,1.1s
REDW Red Top Meadow 86.81 42 IAmb IAmb 06 28 18.0
comp=Z,9.9nm,1.0s
SNOW Snow King Moun 86.92 42 IAmb IAmb 06 28 18.5
comp=Z,12nm,1.1s
S22A 4UR Ranch, Cre 87.03 49 P P 06 28 18.1 +0.9
baz=245
O20A White River Ci 87.08 46 P P 06 28 18.8 +1.5
baz=244
FLWY Flagg Ranch 87.25 42 IAmb IAmb 06 28 20.4
comp=Z,11nm,1.0s
HHC Hu-ho-hao-te 87.29 314 eP P 06 28 22.7 +4.6
BW06 Boulder Array 87.38 43 IAmb IAmb 06 28 19.8
comp=Z,5.3nm,0.7s
BW06 Boulder Array 87.38 43 P P 06 28 19.3 +0.6
baz=243
PD31 Pinedale Array 87.38 43 IAmb IAmb 06 28 19.8
comp=Z,4.8nm,0.7s
PDAR Pinedale Array 87.38 43 P P 06 28 19.1 +0.5
comp=Z,4.2nm,0.6s,baz=221,slow=2.9,SNR=46
PDAR Pinedale Array 87.38 43 P P 06 28 19.0 +0.4
H17A Grant Village 87.48 42 IAmb IAmb 06 28 22.1
comp=Z,7.5nm,0.8s
H17A Grant Village 87.48 42 P P 06 28 21.5 +2.5
baz=242
SDCO Great Sand Dun 87.99 49 P P 06 28 22.3 +0.6
baz=246
MSTX Muleshoe 88.51 54 IAmb IAmb 06 28 25.5
comp=Z,11nm,1.1s

MSTX	**Muleshoe**	**88.51**	**54**	P		**P**	**06 28 25.1**	**+1.1**
	baz=247							
T25A	**Trinidad**	**88.53**	**50**	P		**P**	**06 28 26.1**	**+1.9**
	baz=246							
RLMT	**Red Lodge**	**88.64**	**41**	P		**P**	**06 28 26.0**	**+1.6**
	baz=243							
BMAR	**Burnt Mountain**	**88.69**	**12**	P		**P**	**06 28 24.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**88.89**	**290**	P		**P**	**06 28 27.0**	**+1.1**
	comp=Z,0.9nm,0.3s,baz=108,slow=2.9,SNR=14							
CMAR	**Chiang Mai Arr**	**88.89**	**290**	P		**P**	**06 28 26.3**	**+0.5**
CD2	**Chengdu**	**89.08**	**303**	*e*P		**P**	**06 28 26.1**	**-0.5**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
K22A	**Casper**	**89.33**	**45**	P		**P**	**06 28 28.0**	**+0.3**
	baz=245							
JCT	**Junction City**	**89.56**	**58**	IAmb		IAmb	06 28 30.2	
	comp=Z,4.5nm,0.8s							
JCT	**Junction City**	**89.56**	**58**	P		**P**	**06 28 29.6**	**+0.8**
	baz=249							
EPYK	**Eagle Plains**	**89.63**	**16**	P		**P**	**06 28 28.6**	**+0.3**
	baz=219							
AMTX	**Amarillo**	**89.69**	**53**	P		**P**	**06 28 29.8**	**+0.4**
	baz=248							
ABTX	**Abilene, Hawle**	**90.45**	**56**	P		**P**	**06 28 33.5**	**+0.7**
	baz=249							
LZH	**Lanzhou**	**90.90**	**308**	*e*P		**P**	**06 28 38.9**	**+3.9**
LZH				pP		pP	06 30 45.7	+5.0
LZH				sP		sP	06 31 26.6	-12
LZH				PP		**PP**	**06 32 24.1**	**+2.2**
LZH				pmax		pmax		
	comp=Z,16nm,1.0s							
LZH				pmax		pmax		
	comp=Z,59nm,5.4s							
RSSD	**Black Hills**	**91.59**	**44**	P		**P**	**06 28 38.4**	**+0.3**
RSSD				IAmb		IAmb	06 28 39.1	
	comp=Z,5.1nm,0.9s							
RSSD	**Black Hills**	**91.59**	**44**	P		**P**	**06 28 38.5**	**+0.4**
	baz=247							
OGNE	**Ogallala**	**91.72**	**47**	P		**P**	**06 28 39.5**	**+0.9**
	baz=248							
INK	**Inuvik**	**91.91**	**15**	P		**P**	**06 28 38.3**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=222,slow=3.0,SNR=14							
INK	**Inuvik**	**91.91**	**15**	P		**P**	**06 28 38.5**	**-0.2**
INK				IAmb		IAmb	06 28 38.9	
	comp=Z,3.7nm,0.8s							
WHTX	**Lake Whitney,**	**91.96**	**57**	P		**P**	**06 28 40.4**	**+0.6**
	baz=250							
DGMT	**Dagmar**	**93.22**	**40**	P		**P**	**06 28 46.4**	**+1.2**
	baz=247							
SONM	**Songino Array**	**93.57**	**319**	P		**P**	**06 28 47.5**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=123,slow=4.8,SNR=2.4							
SONM	**Songino Array**	**93.57**	**319**	P		**P**	**06 28 47.3**	**+0.3**
YKA	**Yellowknife Ar**	**94.36**	**25**	P		**P**	**06 28 49.6**	**-0.3**
	comp=Z,0.8nm,0.5s,baz=238,slow=4.6,SNR=26							
MKAR	**Makanchi Array**	**109.15**	**314**	PKiKP		**PKiKP**	**06 33 55.2**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=220,slow=0.4,SNR=5.1							
KSH	**Kashi**	**113.09**	**306**	PKP		**PKiKP**	**06 34 03.1**	**-1.5**
BVAR	**Borovoye Array**	**116.86**	**321**	PKP		**PKPdf**	**06 34 10.2**	**-1.1**
	comp=Z,0.5nm,0.4s,baz=151,slow=2.5,SNR=5.8							
BURAR	**Bucovina Array**	**144.63**	**332**	PKPdf		**PKPdf**	**06 35 03.5**	**0.0**
BR131	**Keskin Array S**	**144.80**	**315**			**PKPdf**	**06 35 04.1**	**+0.1**
BRTR	**Keskin Array B**	**144.80**	**315**	PKP		**PKPdf**	**06 35 04.2**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=92,slow=2.9,SNR=10							
BRTR	**Keskin Array B**	**144.80**	**315**			**PKPdf**	**06 35 02.6**	**-1.4**
CLL	**Collm**	**145.49**	**347**	*e*PKPbc		**PKPbc**	**06 35 06.0**	**-0.1**
MLR	**Muntele Rosu**	**145.85**	**329**	PKPbc		**PKPab**	**06 35 09.3**	**-0.1**
VYHS	**Vyhne**	**146.44**	**339**	*e*PKP		**PKPbc**	**06 35 09.9**	**+1.0**
KHC	**Kasperske Hory**	**147.40**	**345**	PKPbc		**PKPbc**	**06 35 12.1**	**+0.7**
GEC2	**GERESS Array S**	**147.64**	**345**	PKPbc		**PKPbc**	**06 35 12.0**	**-0.1**
GERES	**GERESS Array B**	**147.64**	**345**	PKPbc		**PKPbc**	**06 35 12.2**	**0.0**
	comp=Z,0.8nm,0.5s,baz=30,slow=3.3,SNR=11							
GERES	**GERESS Array B**	**147.64**	**345**	PKPbc		**PKPbc**	**06 35 12.4**	**-0.3**
CONA	**Conrad Observa**	**147.89**	**342**	*i* PKiKP		**PKPbc**	**06 35 13.4**	**+0.6**
	comp=Z,6.6nm,1.9s							
WATA	**Walderalm**	**149.55**	**347**	*i* PKPdf		**PKPdf**	**06 35 08.4**	**-3.2**
	comp=Z,5.4nm,1.5s							
WTTA	**Wattenberg**	**149.60**	**346**	*i* PKPdf		**PKPdf**	**06 35 11.4**	**-0.4**
	comp=Z,1.8nm,0.5s							
MOTA	**Moosalm**	**149.64**	**347**	*i* PKPdf		**PKPdf**	**06 35 10.4**	**-1.4**
	comp=Z,6.0nm,1.6s							
SQTA	**Sankt Quirin**	**149.74**	**347**	*i* PKPdf		**PKPdf**	**06 35 10.7**	**-1.2**
	comp=Z,1.9nm,0.7s							
ABTA	**Abfaltersbach**	**149.88**	**345**	*i* PKPdf		**PKPdf**	**06 35 08.0**	**-4.1**
	comp=Z,7.6nm,1.5s							
FETA	**Feichten**	**150.03**	**347**	*i* PKPdf		**PKPdf**	**06 35 12.1**	**-0.3**
	comp=Z,4.1nm,1.2s							
FUORN	**Ofenpass-Fuorn**	**150.51**	**348**	PKPbc		**PKiKP**	**06 35 19.9**	**+0.2**
FNA	**Florina**	**151.56**	**327**	PKPbc		**PKPbc**	**06 35 20.7**	**-1.0**

*NNC **03** 06:32:46.0±0.4, 43°.31N×77°.78E, h0km, mb1.7, mpv2.6, Error ellipse: s-maj=3.6km s-min=2.0km az=17.0*
*KRNET **03** 06:32:46.2±0.1, 43°.27N×77°.81E, h25km, mb2.1*
*SOME **03** 06:32:46.6, 43°.30N×77°.78E, h10km*

ISC 03 06:32:46.2±0.9, 43°.30N±0°.03×77°.79E±0°.02, h17km±8km, n26, σ0s29/52, 8C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KURS	**Kuram**	**0.33**	**55**	*e*P	**Pg**	**06 32 53.3**	**0.0**
	baz=50						
KURS				*e*S	**Sg**	**06 32 58.2**	**+0.1**
	baz=50						
KURS	**Kuram**	**0.33**	**55**	*e*P	**Pg**	**06 32 53.3**	**0.0**
	1.4nm,0.1s						
KURS				*e*S	**Sg**	**06 32 58.2**	**+0.1**
	4.9nm,0.2s						
KURS	**Kuram**	**0.33**	**55**	P	**Pg**	**06 32 53.3**	**0.0**
	1.4nm,0.1s						
KURS				S	**Sg**	**06 32 58.2**	**+0.1**
	4.9nm,0.2s						
ZHN	**Zhinishke**	**0.49**	**105**	*e*P	**Pg**	**06 32 56.0**	**0.0**
	baz=2.0						
ZHN				*e*S	**Sg**	**06 33 02.8**	**+0.2**
	baz=2.0						
ZHN	**Zhinishke**	**0.49**	**105**	*e*P	**Pg**	**06 32 56.0**	**0.0**
	1.4nm,0.1s						
ZHN				*e*S	**Sg**	**06 33 02.8**	**+0.2**
	2.5nm,0.1s						
ZHN	**Zhinishke**	**0.49**	**105**	P	**Pg**	**06 32 56.0**	**0.0**
	1.4nm,0.1s						
ZHN				S	**Sg**	**06 33 02.8**	**+0.2**
	2.5nm,0.1s						
SATY	**Saty**	**0.51**	**118**	*e*P	**Pg**	**06 32 56.7**	**+0.2**
	6.3nm,0.1s						
SATY				*e*S	**Sb**	**06 33 03.9**	**0.0**
	28nm,0.1s						
SATY	**Saty**	**0.51**	**118**	P	**Pg**	**06 32 56.7**	**+0.2**
	6.3nm,0.1s						
SATY				S	**Sb**	**06 33 03.9**	**0.0**
	28nm,0.1s						
ANVS	**Anan'yevo**	**0.52**	**190**	↑*i*P	**Pg**	**06 32 56.3**	**-0.4**
	baz=92						
ANVS				↑*i*S	**Sg**	**06 33 03.6**	**-0.2**
	baz=92						
KPKS	**Kokpek**	**0.67**	**75**	*e*P	**Pg**	**06 32 59.2**	**-0.2**
	baz=75						
KPKS				*e*S	**Sg**	**06 33 08.2**	**-0.2**
	baz=75						
KPKS	**Kokpek**	**0.67**	**75**	*e*P	**Pg**	**06 32 59.2**	**-0.2**
	4.2nm,0.1s						
KPKS				*e*S	**Sg**	**06 33 08.2**	**-0.2**
	9.8nm,0.1s						
TNSS	**Tian-Shan**	**0.67**	**248**	*e*P	**Pb**	**06 32 59.8**	**0.0**
	baz=50						
TNSS				*e*S	**Sb**	**06 33 09.2**	**+0.2**
	baz=50						
TNSS	**Tian-Shan**	**0.67**	**248**	*e*P	**Pb**	**06 32 59.8**	**0.0**
	0.5nm,0.1s						
TNSS				*e*S	**Sb**	**06 33 09.1**	**+0.2**
	0.6nm,0.1s						
KTBS	**Karatobe**	**0.91**	**298**	*e*P	**Pb**	**06 33 03.7**	**+0.1**
	1.1nm,0.1s						
KTBS				*e*S	**Sg**	**06 33 16.0**	**+0.1**
	3.7nm,0.3s						
KTBS	**Karatobe**	**0.91**	**298**	P	**Pb**	**06 33 03.7**	**+0.1**
	1.1nm,0.1s						
KTBS				S	**Sg**	**06 33 16.0**	**+0.1**
	3.7nm,0.3s						
UZB	**Uzynbulak**	**0.91**	**99**	*e*P	**Pb**	**06 33 03.6**	**-0.1**
	baz=98						
UZB				*e*S	**Sb**	**06 33 15.9**	**+0.3**
	baz=98						
UZB	**Uzynbulak**	**0.91**	**99**	*e*P	**Pb**	**06 33 03.6**	**-0.1**
	3.2nm,0.1s						
UZB				*e*S	**Sb**	**06 33 15.8**	**+0.3**
	3.6nm,0.1s						
UZB	**Uzynbulak**	**0.91**	**99**	P	**Pb**	**06 33 03.5**	**-0.2**
	3.2nm,0.1s						
UZB				S	**Sb**	**06 33 15.5**	**-0.1**
	3.6nm,0.1s						
ARXS	**Arharly**	**0.92**	**1**	*e*P	**Pb**	**06 33 03.4**	**-0.4**
	0.6nm,0.1s						
ARXS				*e*S	**Sb**	**06 33 15.4**	**-0.3**
	2.5nm,0.1s						
ARXS	**Arharly**	**0.92**	**1**	P	**Pb**	**06 33 03.4**	**-0.4**
	0.6nm,0.1s						
ARXS				S	**Sb**	**06 33 15.4**	**-0.3**
	2.5nm,0.1s						
KDJ	**Kajisay**	**1.25**	**201**	⇓*i*P	**Pn**	**06 33 08.7**	**-0.4**
	baz=2.0						
KDJ				⇓*i*S	**Sb**	**06 33 24.6**	**-0.8**
	baz=2.0						
ULHL	**Ulahol**	**1.55**	**228**	⇓*i*P	**Pn**	**06 33 14.1**	**+0.8**
	baz=29						
ULHL				⇓*i*S	**Sb**	**06 33 34.0**	**-0.1**
	baz=29						
TARG	**Taragay, Kyrgy**	**1.57**	**180**	⇑*e*P	**Pn**	**06 33 14.0**	**+0.3**
	baz=80						
TARG				⇑*i*S	**Sn**	**06 33 33.8**	**0.0**
	baz=80						
BOOM	**Boomskoye usch**	**1.58**	**240**	⇑*i*P	**Pb**	**06 33 14.7**	**-0.5**
	baz=41						
BOOM				⇑*i*S	**Sb**	**06 33 35.5**	**+0.6**
	baz=41						
TKM2	**Tokmak 2**	**1.65**	**258**	⇓*i*P	**Pb**	**06 33 15.9**	**-0.5**
	baz=59						
TKM2				⇓*i*S	**Sb**	**06 33 37.6**	**+0.6**
	baz=59						
TKM2	**Tokmak 2**	**1.65**	**258**	⇑Pn	**Pb**	**06 33 16.2**	**-0.1**
	0.4nm,0.7s						
TKM2				⇑Sn	**Sg**	**06 33 39.2**	**-0.4**
	0.6nm,0.3s						

*RSPR **03** 07:01:39.8, 19°.34N×68°.16W, h15km±6km, MD3.5/15*
*NEIC **03** 07:01:39.9±1.6, 19°.17N±0°.04×67°.95W±0°.01, h8km±6km, Error ellipse: s-maj=5.9km s-min=1.7km az=185.0*
*OSPL **03** 07:01:42.9±1.7, 19°.05N×67°.96W, h0km±13km, ML3.0*

ISC 03 07:01:39.2±1.5, 19°.17N±0°.06×67°.97W±0°.02, h2km±10km, n58, σ0s64/76, 18C, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.76**	**211**	↑*e*P	**Pg**	**07 01 53.7**	**0.0**
PCDR				*e*S	**Sb**	**07 02 05.5**	**-0.4**
PCDR	**Punta Cana, DR**	**0.76**	**211**	*e*P	**Pg**	**07 01 53.9**	**+0.1**
PCDR	**Punta Cana, DR**	**0.76**	**211**	*i* P	**Pg**	**07 01 53.9**	**+0.1**
PCDR				*e*S	**Sg**	**07 02 03.8**	**+0.2**
PCDR				IAML		07 02 12.7	
	comp=Z,485nm,0.3s						
PCDR	**Punta Cana, DR**	**0.76**	**211**		**Pg**	**07 01 53.8**	**0.0**
PCDR					**Sb**	**07 02 05.1**	**-0.9**
AGPR	**Aguadilla, PR**	**1.07**	**131**	↑*e*P	**Pb**	**07 02 00.7**	**+0.3**
AGPR	**Aguadilla, PR**	**1.07**	**131**	*e*S	**Sn**	**07 02 16.4**	**-0.2**
AGPR	**Aguadilla, PR**	**1.07**	**131**	*i* P	**Pg**	**07 01 59.9**	**+0.2**
AGPR				*e*S	**Sg**	**07 02 14.2**	**+0.7**
AGPR				IAML		07 02 21.0	
	comp=Z,383nm,0.2s						
AGPR	**Aguadilla, PR**	**1.07**	**131**		**Pb**	**07 02 00.5**	**+0.1**
AGPR					**Sn**	**07 02 16.5**	**-0.1**
MPR	**Mayaguez**	**1.23**	**140**	↑*e*P	**Pg**	**07 02 03.1**	**+0.3**
MPR	**Mayaguez**	**1.23**	**140**	*i* P	**Pg**	**07 02 03.3**	**+0.1**
MPR				*e*S	**Sg**	**07 02 19.0**	**+0.2**
MPR				IAML		07 02 23.9	
	comp=Z,96nm,0.6s						
MPR	**Mayaguez**	**1.23**	**140**		**Pg**	**07 02 02.9**	**+0.1**
LSP	**Las Mesas**	**1.29**	**140**	↑*e*P	**Pg**	**07 02 03.6**	**-0.4**
LSP	**Las Mesas**	**1.29**	**140**		**Pg**	**07 02 03.6**	**-0.4**
DR12	**Loma Pena Alta**	**1.39**	**254**		**Pn**	**07 02 04.4**	**-1.3**
AOPR	**Arecibo Observ**	**1.41**	**125**	*e*S	**Sn**	**07 02 25.1**	**0.0**
AOPR	**Arecibo Observ**	**1.41**	**125**	↑*e*P	**Pn**	**07 02 05.1**	**-0.8**
AOPR	**Arecibo Observ**	**1.41**	**125**		**Pn**	**07 02 05.3**	**-0.7**
AOPR					**Sn**	**07 02 25.8**	**+0.7**
CRPR	**Cabo Rojo, PR**	**1.41**	**145**	*e*S	**Sn**	**07 02 25.4**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.41**	**145**	↑*e*P	**Pn**	**07 02 05.8**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.41**	**145**		**Pn**	**07 02 06.2**	**-0.1**
MLPR	**Magueyes Islan**	**1.48**	**144**	*e*S	**Sg**	**07 02 27.3**	**+0.6**
MLPR	**Magueyes Islan**	**1.48**	**144**	↑*e*P	**Pn**	**07 02 04.0**	**-2.8**
MLPR	**Magueyes Islan**	**1.48**	**144**		**Pn**	**07 02 05.4**	**-1.4**
MLPR					**Sn**	**07 02 26.9**	**+0.1**
EMPR	**Esperanza - Ma**	**1.52**	**117**	*e*S	**Sg**	**07 02 28.4**	**+0.2**
EMPR	**Esperanza - Ma**	**1.52**	**117**	↑*e*P	**Pn**	**07 02 06.9**	**-0.6**
EMPR	**Esperanza - Ma**	**1.52**	**117**		**Pn**	**07 02 06.9**	**-0.6**
EMPR					**Sg**	**07 02 28.4**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.57**	**139**	*e*S	**Sb**	**07 02 29.7**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.57**	**139**	↑*e*P	**Pn**	**07 02 08.5**	**+0.4**
GBPR	**Guanica, Bosqu**	**1.57**	**139**		**Pn**	**07 02 08.5**	**+0.4**
GBPR					**Sb**	**07 02 29.7**	**+0.3**
CELP	**Cerrillos**	**1.71**	**129**	↑*e*P	**Pn**	**07 02 10.0**	**0.0**
CELP				*e*S	**Sb**	**07 02 33.1**	**-0.1**
CELP	**Cerrillos**	**1.71**	**129**		**Pn**	**07 02 10.0**	**0.0**
CELP					**Sb**	**07 02 33.1**	**-0.1**
OBIP	**Obispado Ponce**	**1.71**	**131**	↑*e*P	**Pn**	**07 02 10.1**	**+0.1**
OBIP	**Obispado Ponce**	**1.71**	**131**	*e*S	**Sn**	**07 02 32.5**	**+0.1**
OBIP	**Obispado Ponce**	**1.71**	**131**		**Pn**	**07 02 10.1**	**+0.1**
OBIP					**Sn**	**07 02 32.5**	**+0.1**
SDD	**Santo Domingo**	**1.98**	**249**	*i* P	**Pn**	**07 02 14.7**	**+1.0**
SDD				*e*S	**Sn**	**07 02 39.4**	**+0.4**
SDD	**Santo Domingo**	**1.98**	**249**	Pg	**Pn**	**07 02 13.9**	**+0.2**
GCPR	**Guaynabo City**	**1.98**	**115**	Pn	**Pn**	**07 02 13.3**	**-0.5**
SJG	**San Juan**	**2.02**	**121**		**Pn**	**07 02 13.6**	**-0.6**
IGPR	**InterUniversit**	**2.13**	**124**	↑*e*P	**Pn**	**07 02 15.8**	**0.0**
IGPR	**InterUniversit**	**2.13**	**124**	*e*S	**Sb**	**07 02 44.2**	**-1.2**
PDPR	**Patillas Dam,**	**2.17**	**121**		**Pn**	**07 02 16.2**	**-0.1**
CBYP	**Canovanas**	**2.19**	**114**	↑*e*P	**Pn**	**07 02 17.0**	**+0.3**
CBYP	**Canovanas**	**2.19**	**114**	*e*S	**Sn**	**07 02 44.8**	**+0.4**
CBYP	**Canovanas**	**2.19**	**114**		**Pn**	**07 02 17.0**	**+0.3**
CBYP					**Sn**	**07 02 44.8**	**+0.4**
HUMP	**Col San Antoni**	**2.25**	**117**	↑*e*P	**Pn**	**07 02 16.9**	**-0.6**
HUMP	**Col San Antoni**	**2.25**	**117**	↑*e*P	**Pn**	**07 02 17.5**	**+0.1**
HUMP				*e*S	**Sn**	**07 02 46.9**	**+1.0**
HUMP	**Col San Antoni**	**2.25**	**117**		**Pn**	**07 02 17.8**	**+0.4**
BON1	**Bonao**	**2.31**	**265**	*i* P	**Pb**	**07 02 21.2**	**-0.4**
BON1				*e*S	**Sn**	**07 02 48.0**	**+0.8**
BANI	**BANI**	**2.39**	**252**		**Pn**	**07 02 20.8**	**+1.2**
MTP	**Monte Pirata**	**2.52**	**115**	↑*e*P	**Pn**	**07 02 20.8**	**-0.4**
MTP	**Monte Pirata**	**2.52**	**115**	*e*S	**Sn**	**07 02 53.1**	**+0.5**
MTP	**Monte Pirata**	**2.52**	**115**		**Pn**	**07 02 20.6**	**-0.6**
SC01	**Santiago de lo**	**2.62**	**276**	*i* P	**Pb**	**07 02 25.6**	**-1.4**
SC01				IAML		07 03 18.4	
	comp=Z,76nm,0.6s						
STVI	**Saint Thomas**	**2.97**	**105**	↑*e*P	**Pn**	**07 02 26.7**	**-0.6**
STVI	**Saint Thomas**	**2.97**	**105**	*e*S	**Sn**	**07 03 03.9**	**+0.4**
STVI	**Saint Thomas**	**2.97**	**105**	*e*S	**Sn**	**07 03 03.9**	**+0.4**
STVI	**Saint Thomas**	**2.97**	**105**		**Pn**	**07 02 27.2**	**-0.1**
SDDR	**Presa de Saban**	**3.15**	**267**	*i* P	**Pn**	**07 02 30.7**	**+0.8**
SDDR				*e*S	**Sn**	**07 03 08.7**	**+0.6**
SDDR				IAML		07 03 23.3	
	comp=Z,64nm,0.5s						

IDC 03 07:07:31.6±1.3, 54°.08N×153°.08E, h626km±19km, mb2.5/6, mb1 2.8/8, mb1mx2.5/40, mbtmp3.5/8, Error ellipse: s-maj=23.9km s-min=17.4km az=116.0, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**2.92**	**108**	P	P	07 08 52.0	-0.5
	0.7nm,0.3s,baz=256,slow=2.5,SNR=20						
KLR	**Kul'dur**	**14.08**	**259**	P	P	07 10 32.4	+2.2
	0.2nm,0.3s,baz=75,slow=7.7,SNR=5.1						
ILAR	**Eielson Array**	**31.11**	**46**	P	P	07 13 01.5	+0.6
	0.2nm,0.3s,baz=268,slow=5.9,SNR=7.8						
MKAR	**Makanchi Array**	**43.92**	**291**	P	P	07 14 45.0	+0.3
	0.1nm,0.3s,baz=58,slow=6.1,SNR=4.4						
YKA	**Yellowknife Ar**	**45.20**	**41**	P	P	07 14 54.2	0.0
	0.1nm,0.3s,baz=306,slow=7.0,SNR=4.3						
ARCES	**ARCESS Array B**	**50.95**	**339**	P	P	07 15 36.1	-0.5
	4.8nm,1.0s,baz=49,slow=8.6,SNR=2.8						
WRA	**Warramunga Arr**	**75.47**	**198**	P	P	07 18 12.9	-0.2
	0.5nm,0.7s,baz=12,slow=5.6,SNR=3.1						
ASAR	**Alice Springs**	**79.18**	**198**	P	P	07 18 33.4	+0.3
	0.4nm,0.5s,baz=14,slow=4.9,SNR=6.0						

IDC 03 07:12:02.0±2.0, 16°.22S×177°.36W, h0km, mb3.8/5, mb1 4.2/5, mb1mx3.8/27, mbtmp3.8/5, Error ellipse: s-maj=131.1km s-min=24.9km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.94**	**258**	P	P	07 20 26.7	-0.4
	0.2nm,0.4s,baz=86,slow=6.9,SNR=6.4						
ASAR	**Alice Springs**	**46.23**	**253**	P	P	07 20 29.4	+0.1
	1.9nm,0.5s,baz=87,slow=8.0,SNR=4.5						
NVAR	**Mina Array Bea**	**77.52**	**44**	P	P	07 24 00.0	0.0
	0.3nm,0.7s,baz=236,slow=9.6,SNR=3.5						
ILAR	**Eielson Array**	**84.03**	**13**	P	P	07 24 33.9	-0.1
	1.4nm,1.1s,baz=224,slow=5.0,SNR=5.9						
TXAR	**Lajitas Array**	**84.25**	**57**	P	P	07 24 36.1	+0.1
	0.4nm,0.8s,baz=205,slow=8.0,SNR=4.8						

*NIED **03** 07:40:00, 44°.00N×140°.70E, h5km, Mw3.6 Best double couple: M0 3.16000×10^14 NP1:φ▷75.00000°, δ64.00000°, λ101.00000°. NP2:φ▷230.00000°, δ28.00000°, λ68.00000°.*
*IDC **03** 07:40:48.3±1.0, 44°.09N×140°.60E, h0km, mb3.4/5, mb1 3.7/6, mb1mx3.4/38, mbtmp3.4/6, ML1.9/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/35, Error ellipse: s-maj=29.2km s-min=13.7km az=177.0*
*JMA **03** 07:40:49.2±0.1, 43°.98N×140°.67E, h0km±1km, M3.9*

ISC 03 07:40:49.0±1.7, 44°.02N±0°.06×140°.64E±0°.05, h6km±13km, n17, σ0s67/23, mb3.3/5, 2C-2D, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSK	**Shakotan**	**0.68**	**190**	P	**Pg**	**07 41 02.2**	**+0.2**
JSK				*e*S	**Sg**	**07 41 11.2**	**+0.4**
JYG	**Yagishiri**	**0.70**	**54**	↑P	**Pb**	**07 41 02.9**	**-0.6**
JYG				*e*S	**Sb**	**07 41 12.6**	**-0.8**
JHR	**Hokuryu**	**0.83**	**109**	⇓P	**Pg**	**07 41 05.2**	**+0.3**
JHR				*e*S	**Sg**	**07 41 16.2**	**+0.5**
JISS	**Ishikarishitsu**	**0.93**	**143**	⇓P	**Pg**	**07 41 07.0**	**+0.1**
JISS				*e*S	**Sg**	**07 41 19.7**	**+0.8**
JSS	**Shosan**	**0.95**	**66**	↑P	**Pb**	**07 41 07.8**	**-0.1**
JSS				S	**Sb**	**07 41 21.5**	**+0.8**
JRR	**Rishiri**	**1.22**	**23**	P	**Pn**	**07 41 13.1**	**+0.6**
JRR				*e*S	**Sn**	**07 41 30.1**	**+0.8**
JAB	**Ashibetsu**	**1.25**	**114**	P	**Pg**	**07 41 12.8**	**-0.3**
JAB				*e*S	**Sb**	**07 41 30.2**	**+0.7**
JEW	**Eniwo**	**1.32**	**153**	P	**Pg**	**07 41 13.2**	**-1.0**
JEW				*e*S	**Sg**	**07 41 30.5**	**-0.8**
ASAJ	**Asahikawa**	**1.41**	**85**	Pg	**Pn**	**07 41 15.2**	**0.0**
	79nm,0.3s,baz=248,slow=12,SNR=927						
ASAJ				Lg	Lg	07 41 34.5	
	98nm,0.3s,baz=252,slow=30,SNR=13						
USRK	**Ussuriysk Ar.**	**6.23**	**275**	Pn	**Pn**	**07 42 21.7**	**+0.2**
	baz=80,slow=15,SNR=6.2						
KLR	**Kul'dur**	**8.04**	**314**	LR	LR	07 46 06.9	
	comp=Z,53nm,19.9s,baz=214,slow=40						
SONM	**Songino Array**	**24.01**	**291**	P	**P**	**07 46 04.8**	**+0.3**
	0.7nm,1.0s,baz=91,slow=7.2,SNR=2.8						
ILAR	**Eielson Array**	**44.05**	**36**	P	**P**	**07 48 56.1**	**-1.1**
	0.3nm,0.9s,baz=272,slow=6.1,SNR=4.5						
YKA	**Yellowknife Ar**	**58.13**	**32**	P	**P**	**07 50 42.1**	**-0.8**
	0.2nm,0.6s,baz=307,slow=6.6,SNR=7.2						
OBN	**Obninsk**	**62.23**	**321**	LR	LR	08 19 28.0	
	comp=Z,27nm,18.9s,baz=34,slow=37						
ASAR	**Alice Springs**	**67.63**	**187**	P	**P**	**07 51 46.9**	**+0.3**
	0.4nm,1.0s,baz=18,slow=6.2,SNR=3.1						
PDAR	**Pinedale Array**	**73.23**	**46**	P	**P**	**07 52 21.9**	**+0.8**
	0.6nm,0.6s,baz=294,slow=1.9,SNR=7.6						

*IDC **03** 07:50:03.4±2.8, 5°.99S×103°.30E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/58, mbtmp3.7/8, Error ellipse: s-maj=134.4km s-min=17.1km az=52.0*
*DJA **03** 07:50:07.1±0.8, 6°.S±6°×10°.4E±°, h10km, M4.3/6, MLv4.3/6*

ISC 03 07:50:09.6±1.0, 5°.97S±0°.09×103°.53E±0°.09, h38km, n14, σ1s02/17, mb3.7/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.06**	**65**	P	**

comp=Z,3.4nm,1.0s
BRTR Keskin Array B 78.54 312 P **P** **08 02 26.9 -0.3**
comp=Z,0.9nm,0.7s,baz=130,slow=7.4,SNR=5.3
BRTR Keskin Array B 78.54 312 P **P** **08 02 27.9 +0.7**
TXAR Lajitas Array 145.22 45 PKPbc **PKPdf** **08 10 05.1 +1.3**
comp=Z,2.1nm,0.8s,baz=278,slow=1.8,SNR=14
TXAR Lajitas Array 145.22 45 **PKPdf** **08 10 04.8 +1.0**

*IDC **03** 07:51:11.9±0.6,5°.79S×103°.54E, h0km, mb4.4/29, mb1 4.5/29,mb1mx4.3/58,mbtmp4.4/29,MS3.2/2, Ms1 3.2/2,ms1mx2.7/32,Error ellipse: s-maj=21.2km s-min=11.4km az=52.0*
*NEIC **03** 07:51:20.8±1.5,5°.7S±0°.1×103°.5E±0°.1, h65km±6km, mb4.7/32, Error ellipse: s-maj=21.5km s-min=12.9km az=219.0*
ISC 03 07:51:18.8±0.5,**5°.7S**±0°.1×**103°.5E**±0°.1,**h47**km,**n112,** σ1**9**01/111,**mb4.7**/42,**8C-6D,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**4.63**	**113**	Pn	**Pn**	**07 52 30.2**	**+3.8**
UGM	**Wanagama**	**7.28**	**108**	Pn	**Pn**	**07 53 02.9**	**+0.2**
JAGI	**Jajag, Banyuwa**	**10.89**	**105**		**Pn**	**07 53 54.2**	**+2.0**
BATI	**Baumata**	**20.43**	**104**	P	**P**	**07 55 51.4**	**-1.1**
	29nm,0.5s,baz=309,slow=6.5,SNR=2.9						
BATI				LR	LR	08 04 21.1	
	comp=Z,90nm,20.6s,baz=314,slow=39						
SOEI	**Soe**	**20.94**	**102**	P	**P**	**07 55 57.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**24.46**	**349**	P	**P**	**07 56 33.2**	**-0.3**
	2.8nm,0.6s,baz=182,slow=9.1,SNR=8.1						
CMAR	**Chiang Mai Arr**	**24.46**	**349**	P	**P**	**07 56 32.2**	**-1.4**
CHTO	**Chiang Mai**	**24.81**	**350**	P	**P**	**07 56 35.1**	**-1.7**
FITZ	**Fitzroy Crossi**	**24.84**	**122**	P	**P**	**07 56 35.5**	**-1.6**
	11nm,0.7s,baz=311,slow=5.1,SNR=12						
FITZ	**Fitzroy Crossi**	**24.84**	**122**	P	**P**	**07 56 35.2**	**-1.9**
FITZ				IAmb	IAmb	07 56 37.5	
	comp=Z,12nm,0.8s						
PALK	**Pallekele**	**26.18**	**299**	LR	LR	08 05 23.2	
	comp=Z,37nm,21.1s,baz=128,slow=32						
H08S2	**Diego Garcia H**	**30.87**	**265**	T	T	08 29 36.5	
	baz=89,slow=75,SNR=23						
H08S3	**Diego Garcia H**	**30.88**	**265**	T	T	08 29 37.9	
	baz=89,slow=75,SNR=24						
H08S1	**Diego Garcia H**	**30.89**	**265**	T	T	08 29 36.5	
	baz=89,slow=75,SNR=20						
WRA	**Warramunga Arr**	**33.11**	**118**	P	**P**	**07 57 48.8**	**-2.0**
	comp=Z,2.4nm,0.9s,baz=267,slow=12,SNR=7.9						
WRA				PcP	**PcP**	**08 00 33.5**	**+0.1**
	comp=Z,3.1nm,1.3s,baz=295,slow=2.2,SNR=5.8						
WRA	**Warramunga Arr**	**33.11**	**118**	P	**P**	**07 57 49.6**	**-1.1**
ASAR	**Alice Springs**	**34.24**	**124**	P	**P**	**07 57 59.5**	**-1.0**
	comp=Z,3.8nm,0.8s,baz=299,slow=7.9,SNR=13						
ASAR				PcP	**PcP**	**08 00 36.8**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=304,slow=2.0,SNR=11						
AS31	**Alice Springs**	**34.24**	**124**	P	**P**	**07 57 59.5**	**-1.0**
RAMN	**Ramite**	**36.39**	**334**	*eP*	**P**	**07 58 19.7**	**+0.6**
JIRN	**Jiri**	**37.19**	**334**	*eP*	**P**	**07 58 26.9**	**+0.8**
	comp=Z,29nm,0.6s						
GUN	**Gumba**	**37.54**	**334**	*eP*	**P**	**07 58 29.7**	**+0.7**
	comp=Z,38nm,0.6s						
KKN	**Kakani**	**37.70**	**333**	*eP*	**P**	**07 58 30.4**	**+0.2**
KOLN	**Koldanda**	**38.47**	**331**	*eP*	**P**	**07 58 37.4**	**+0.7**
	comp=Z,23nm,0.7s						
DANN	**Dangsing**	**38.88**	**332**	*eP*	**P**	**07 58 40.2**	**0.0**
	comp=Z,30nm,0.6s						
STKA	**Stephens Creek**	**44.06**	**131**	P	**P**	**07 59 21.0**	**-1.3**
	comp=Z,8.6nm,0.7s,baz=299,slow=7.6,SNR=12						
STKA				PcP	**PcP**	**08 01 07.0**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=326,slow=3.6,SNR=3.2						
STKA	**Stephens Creek**	**44.06**	**131**	P	**P**	**07 59 21.4**	**-1.0**
JNU	**Nakatsue**	**46.56**	**32**	P	**P**	**07 59 42.0**	**-0.1**
	comp=Z,5.9nm,0.7s,baz=155,slow=5.8,SNR=5.2						
JNU	**Nakatsue**	**46.56**	**32**	P	**P**	**07 59 42.3**	**+0.2**
JNU				IAmb	IAmb	07 59 52.0	
	comp=Z,14nm,1.1s						
NIL	**Nilore**	**48.54**	**326**	P	**P**	**07 59 58.0**	**+0.4**
KSRS	**Korea Array**	**48.62**	**26**	P	**P**	**07 59 58.3**	**+0.3**
	comp=Z,4.3nm,0.6s,baz=222,slow=8.0,SNR=14						
CAN	**Canberra**	**51.12**	**131**	P	**P**	**08 00 17.4**	**+0.3**
CAN				IAmb	IAmb	08 00 18.2	
	comp=Z,11nm,0.9s						
TARG	**Taragay, Kyrgy**	**52.76**	**336**	P	**P**	**08 00 31.2**	**+1.5**
TARG				IAmb	IAmb	08 00 40.0	
	comp=Z,5.1nm,0.8s						
MJAR	**Matsushiro Arr**	**53.13**	**35**	P	**P**	**08 00 30.0**	**-2.0**
	comp=Z,0.6nm,0.5s,baz=206,slow=7.4,SNR=3.8						
NRN	**Naryn**	**53.27**	**334**	P	**P**	**08 00 32.9**	**-0.4**
NRN				IAmb	IAmb	08 00 34.4	
	comp=Z,8.9nm,0.9s						
KDJ	**Kajisay**	**53.35**	**336**	P	**P**	**08 00 34.5**	**+0.8**
SONM	**Songino Array**	**53.40**	**2**	P	**P**	**08 00 33.7**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=179,slow=8.4,SNR=15						
SONM				PcP	**PcP**	**08 01 41.3**	**+0.6**
	comp=Z,2.5nm,0.6s,baz=183,slow=4.2,SNR=10						
SONM	**Songino Array**	**53.40**	**2**	P	**P**	**08 00 34.4**	**+0.4**
GAR	**Garm**	**54.09**	**328**	P	**P**	**08 00 37.8**	**-1.3**
KZA	**Kyzart**	**54.12**	**334**	P	**P**	**08 00 40.6**	**+1.0**
	SNR=5.9						
ARSB	**Arslanbob**	**54.54**	**332**	P	**P**	**08 00 42.7**	**+0.3**
UCH	**Uchtor**	**54.56**	**334**	P	**P**	**08 00 43.7**	**+0.8**
	SNR=5.8						
BTK	**Batken**	**54.62**	**329**	P	**P**	**08 00 43.0**	**+0.1**
BTK				IAmb	IAmb	08 00 43.9	
	comp=Z,6.9nm,0.6s						
TKM2	**Tokmak 2**	**54.66**	**335**	P	**P**	**08 00 43.3**	**0.0**
	SNR=16						
AML	**Almayashu**	**54.85**	**333**	P	**P**	**08 00 45.4**	**+0.5**
	SNR=7.6						
AAK	**Ala-Archa**	**54.90**	**334**	P	**P**	**08 00 45.1**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=146,slow=6.8,SNR=6.1						
AAK	**Ala-Archa**	**54.90**	**334**	P	**P**	**08 00 45.1**	**+0.1**
FRU1	**Bishkek**	**54.98**	**334**	P	**P**	**08 00 46.2**	**+0.8**
EKS2	**Erkin-Say**	**55.23**	**334**	P	**P**	**08 00 48.2**	**+0.9**
	SNR=14						
USP	**Ospenovka**	**55.41**	**335**	P	**P**	**08 00 48.8**	**+0.3**
	SNR=5.4						
MK31	**Makanchi Array**	**55.59**	**342**	P	**P**	**08 00 49.5**	**-0.2**
MK31				IAmb	IAmb	08 00 50.5	
	comp=Z,6.4nm,0.6s						
MKAR	**Makanchi Array**	**55.59**	**342**	P	**P**	**08 00 49.8**	**+0.1**
	comp=Z,9.1nm,0.6s,baz=145,slow=7.7,SNR=38						
MKAR	**Makanchi Array**	**55.59**	**342**	P	**P**	**08 00 49.5**	**-0.2**
USRK	**Ussuriysk Ar.**	**55.93**	**24**	P	**P**	**08 00 52.3**	**+0.2**
	comp=Z,4.9nm,0.6s,baz=201,slow=5.3,SNR=9.6						
USRK	**Ussuriysk Ar.**	**55.93**	**24**	P	**P**	**08 00 50.4**	**-1.8**
KK31	**Karatay Array**	**57.08**	**332**	P	**P**	**08 00 59.3**	**-1.1**
KKAR	**Karatay Array**	**57.08**	**332**	P	**P**	**08 00 59.4**	**-1.0**
KKAR	**Karatay Array**	**57.08**	**332**	P	**P**	**08 00 59.8**	**-0.6**
KKAR				IAmb	IAmb	08 01 02.8	
	comp=Z,3.1nm,0.9s						
KLR	**Kul'dur**	**60.02**	**21**	P	**P**	**08 01 20.4**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=244,slow=2.6,SNR=5.7						
KURBB	**Kurchatov Arra**	**60.14**	**342**	P	**P**	**08 01 21.5**	**+0.1**
	comp=Z,4.3nm,0.7s,baz=159,slow=6.1,SNR=7.7						
KURBB				PcP	**PcP**	**08 02 07.4**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=164,slow=3.8,SNR=4.4						
KURK	**Kurchatov**	**60.19**	**342**	P	**P**	**08 01 21.7**	**-0.1**
KURK				IAmb	IAmb	08 01 22.8	
	comp=Z,7.8nm,0.8s						
GEYT	**Alibeck**	**60.55**	**320**	P	**P**	**08 01 24.4**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=144,slow=11,SNR=4.0						
GEYT	**Alibeck**	**60.55**	**320**	P	**P**	**08 01 24.8**	**+0.2**
ZAA0	**Zalesovo Array**	**61.51**	**348**	P	**P**	**08 01 30.8**	**+0.1**
ZALV	**Zalesovo Beam**	**61.51**	**348**	P	**P**	**08 01 30.3**	**-0.4**
	comp=Z,6.2nm,0.4s,baz=168,slow=5.0,SNR=24						
ZALV	**Zalesovo Beam**	**61.51**	**348**	P	**P**	**08 01 30.0**	**-0.7**
BVAR	**Borovoye Array**	**64.90**	**339**	P	**P**	**08 01 53.0**	**-0.2**
	comp=Z,5.6nm,0.7s,baz=143,slow=8.6,SNR=14						
BRVK	**Borovoye**	**64.97**	**339**	P	**P**	**08 01 52.8**	**-0.8**
BRVK				IAmb	IAmb	08 01 54.3	
	comp=Z,5.5nm,0.7s						
ABKAR	**Akbulak array**	**66.59**	**331**	P	**P**	**08 02 03.8**	**-0.4**
ABKAR	**Akbulak array**	**66.59**	**331**	P	**P**	**08 02 04.0**	**-0.2**
ABKAR				IAmb	IAmb	08 02 05.1	
	comp=Z,8.7nm,0.8s						
AKTO	**Aktyubinsk**	**68.31**	**331**	P	**P**	**08 02 14.9**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=286,slow=1.8,SNR=4.4						
ARU	**Arti**	**72.03**	**336**	P	**P**	**08 02 37.9**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=131,slow=4.4,SNR=7.9						
ARU	**Arti**	**72.03**	**336**	P	**P**	**08 02 37.7**	**+0.1**
ARU				IAmb	IAmb	08 02 38.3	
	comp=Z,5.2nm,0.8s						
MSVF	**Nonsavu**	**73.56**	**107**	P	**P**	**08 02 48.0**	**+0.3**
PETK	**Petropavlovsk-**	**74.22**	**31**	P	**P**	**08 02 50.8**	**+0.1**
	comp=Z,6.2nm,0.9s,baz=239,slow=2.4,SNR=4.8						
SEY	**Seymchan**	**77.81**	**21**	P	**P**	**08 03 11.3**	**+0.4**
	comp=Z,3.3nm,0.8s,baz=203,slow=23,SNR=4.6						
BR131	**Keskin Array S**	**78.42**	**312**	P	**P**	**08 03 15.2**	**+0.1**
BR131				IAmb	IAmb	08 03 16.0	
	comp=Z,4.2nm,0.8s						
BRTR	**Keskin Array B**	**78.42**	**312**	P	**P**	**08 03 15.1**	**+0.1**
	comp=Z,3.7nm,0.7s,baz=135,slow=7.3,SNR=15						
BRTR	**Keskin Array B**	**78.42**	**312**	P	**P**	**08 03 15.3**	**+0.3**
QSPA	**South Pole Qui**	**84.25**	**180**	P	**P**	**08 03 44.4**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=230,slow=0.8,SNR=5.4						
QSPA	**South Pole Qui**	**84.25**	**180**	P	**P**	**08 03 44.3**	**-1.1**
SORM	**Soroca**	**84.44**	**319**	⇑P	**P**	**08 03 47.3**	**+0.8**
AKASG	**Malin Array Be**	**84.57**	**322**	P	**P**	**08 03 46.9**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=91,slow=4.2,SNR=5.4						
AKASG	**Malin Array Be**	**84.57**	**322**	P	**P**	**08 03 47.0**	**0.0**
VRI	**Vrincioaia**	**84.96**	**317**	⇓P	**P**	**08 03 51.0**	**+1.7**
PLOR	**Plostina**	**85.01**	**317**	⇑P	**P**	**08 03 51.6**	**+2.1**
TESR	**Tescani**	**85.17**	**318**	⇓P	**P**	**08 03 51.8**	**+1.6**
MLR	**Muntele Rosu**	**85.41**	**316**	P	**P**	**08 03 52.8**	**+1.1**
	comp=Z,5.0nm,0.9s,baz=189,slow=2.8,SNR=9.1						
MLR	**Muntele Rosu**	**85.41**	**316**	⇑P	**P**	**08 03 53.1**	**+1.5**
DOPR	**Dopca**	**85.90**	**317**	⇓P	**P**	**08 03 55.2**	**+1.3**
VOIR		**86.02**	**316**	⇓P	**P**	**08 03 55.5**	**+0.9**
BURAR	**Bucovina Array**	**86.37**	**318**	⇑P	**P**	**08 03 59.0**	**+2.7**
BURAR	**Bucovina Array**	**86.37**	**318**	P	**P**	**08 03 58.4**	**+2.1**
VTS	**Vitosha**	**86.74**	**313**	⇑P	**P**	**08 03 59.4**	**+1.1**
BMR	**Baia Mare**	**87.52**	**318**	⇑P	P	08 03 53.9	-7.8
DEV	**Deva**	**87.58**	**316**	⇓P	**P**	**08 04 04.6**	**+2.5**
DRGR		**87.88**	**317**	⇑P	**P**	**08 04 04.7**	**+1.2**
BZS	**Buzias**	**88.42**	**316**	⇑P	**P**	**08 04 06.9**	**+0.8**
FINES	**FINESS Array B**	**89.03**	**332**	P	**P**	**08 04 08.3**	**-0.3**
	comp=Z,10.0nm,1.1s,baz=182,slow=7.2,SNR=6.5						
FINES	**FINESS Array B**	**89.03**	**332**	P	**P**	**08 04 08.8**	**+0.2**
PDG	**Podgorica**	**89.61**	**313**	⇓P	**P**	**08 04 13.2**	**+1.6**
SNAA	**Sanae**	**89.68**	**198**	P	**P**	**08 04 11.7**	**+0.1**
SNAA				IAmb	IAmb	08 04 13.7	
	comp=Z,7.7nm,1.0s						
ARCES	**ARCESS Array B**	**91.16**	**340**	P	**P**	**08 04 18.0**	**-0.4**
	comp=Z,4.6nm,1.0s,baz=85,slow=3.0,SNR=4.1						
GERES	**GERESS Array B**	**94.16**	**319**	P	**P**	**08 04 33.6**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=60,slow=7.9,SNR=5.4						
BDFB	**Brasilia**	**144.70**	**233**	PKP	PKPbc	08 10 51.0	+0.4
	comp=Z,1.4nm,0.5s,baz=115,slow=3.7,SNR=3.1						
ACSO	**Alum Creek Sta**	**145.16**		**9**	**PKPbc**	**08 10 50.9**	**-0.3**
TX31	**Lajitas Ar. Si**	**145.21**		**44**	**PKPdf**	**08 10 52.7**	**+0.5**
TX32	**Lajitas Array**	**145.21**		**44**	**PKPdf**	**08 10 52.8**	**+0.6**
TXAR	**Lajitas Array**	**145.21**		**44**	PKPbc **PKPdf**	**08 10 52.6**	**+0.4**
	comp=Z,7.2nm,0.7s,baz=250,slow=1.2,SNR=32						
TXAR	**Lajitas Array**	**145.21**		**44**	**PKPdf**	**08 10 52.9**	**+0.7**
U40A	**Yellville**	**146.03**		**24**	**PKPdf**	**08 10 53.6**	**+0.4**
JCT	**Junction City**	**147.03**		**39**	**PKPbc**	**08 10 57.5**	**+0.3**
SIV	**San Ignacio**	**153.57**	**215**	PKPbc	**PKPbc**	**08 11 13.6**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=88,slow=7.3,SNR=4.5						

*TIF **03** 08:00:44.8, 42°.56N×43°.49E, h14km*
*NORS **03** 08:00:44.3±0.0, 42°.52N×43°.47E, h11km, MPVA3.6*
ISC 03 08:00:45.2±0.9,**42°.55N**±0°.02×**43°.48E**±0°.02,**h14**km±6km, **n17,** σ0**9**74/34,**Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.04**	**338**	P	**Pg**	**08 00 47.7**	**-0.1**
ONI				S	**Sg**	**08 00 49.5**	**-0.2**
DIGR	**Digorskoe uzhe**	**0.36**	**12**	*e*Pg	**Pg**	**08 00 52.4**	**-0.2**
DIGR				*e*Sg	**Sg**	**08 00 57.8**	**+0.2**
ZEI	**Tsey**	**0.40**	**53**	*e*Pg	**Pg**	**08 00 53.4**	**+0.2**
ZEI				*e*Sg	**Sg**	**08 00 59.1**	**+0.5**
TKB	**Tkibuli**	**0.41**	**241**	P	**Pb**	**08 00 53.9**	**-0.3**
TKB				S	**Sb**	**08 01 00.1**	**-0.2**
LACR	**Lac**	**0.67**	**65**	*e*Pg	**Pg**	**08 00 57.3**	**-0.9**
LACR				*e*Sg	**Sg**	**08 01 06.5**	**-0.6**
KORR	**Kora**	**0.69**	**39**	*e*Pg	**Pb**	**08 00 59.2**	**+0.1**
KORR				*e*Sg	**Sn**	**08 01 09.7**	**-1.5**
GUDG	**Gudauri**	**0.75**	**96**	P	**Pg**	**08 00 58.8**	**-0.9**
GUDG				S	**Sb**	**08 01 10.1**	**-0.1**
LSNR	**Lesken**	**0.77**	**19**	*e*Pg	**Pb**	**08 01 00.5**	**0.0**
LSNR				*e*Sg	**Sn**	**08 01 12.3**	**-1.0**
NEY	**Neytrino**	**0.89**	**322**	*e*Pg	**Pg**	**08 01 02.2**	**-0.3**
NEY				*e*Sg	**Sg**	**08 01 14.0**	**-0.2**
STDR	**Stavd-Durt**	**0.93**	**28**	*e*Pg	**Pn**	**08 01 04.7**	**+0.9**
STDR				*e*Sg	**Sn**	**08 01 17.2**	**+0.3**
AKH	**Akhalkalaki**	**1.14**	**179**	P	**Pg**	**08 01 07.3**	**+0.2**
AKH				S	**Sn**	**08 01 23.2**	**+0.8**
TBLG	**Delisi**	**1.25**	**131**	P	**Pb**	**08 01 08.5**	**0.0**
TBLG				S	**Sg**	**08 01 26.6**	**+1.3**
KBTC	**Kuba-Taba**	**1.27**	**358**	*e*Pg	**Pg**	**08 01 09.9**	**+0.3**
KBTC				*e*Sg	**Sg**	**08 01 27.7**	**+1.6**
BTNK	**Botanikuri**	**1.31**	**131**	P	**Pg**	**08 01 10.4**	**+0.1**
BTNK				S	**Sg**	**08 01 28.7**	**+1.2**
SHA1	**Shidzhatmaz**	**1.33**	**334**	*e*Pg	**Pg**	**08 01 10.5**	**-0.3**
SHA1				*e*Sg	**Sg**	**08 01 27.9**	**-0.2**
BATM	**Batumi**	**1.63**	**235**	P	**Pb**	**08 01 14.8**	**-0.2**
BATM				S	**Sg**	**08 01 36.7**	**-0.9**
LGD	**Lagodekhi**	**2.18**	**108**	P	**Pg**	**08 01 26.1**	**-0.8**
LGD				S	**Sg**	**08 01 53.9**	**-1.2**

*IDC **03** 08:19:02.9±2.9, 17°.83S×178°.62W, h621km±36km, mb3.3/10, mb1 3.6/11, mb1mx3.4/32, mbtmp4.3/11, Error ellipse: s-maj=40.3km s-min=13.2km az=152.0*
*NEIC **03** 08:19:03.5±1.2, 17°.8S±0°.2×178°.6W±0°.2, h626km±6km, mb4.2/44, Error ellipse: s-maj=33.0km s-min=10.3km az=143.0*
ISC 03 08:18:59.4±0.9,**17°.9S**±0°.2×**178°.5W**±0°.2,**h579**km,**n66,** σ0**8**81/66,**mb4.1**/31,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.30**	**272**	P	P	08 20 24.9	+6.1
DZM	**Mont Dzumac**	**14.77**	**251**	P	**P**	**08 22 07.0**	**+0.8**
	0.7nm,0.3s,baz=140,slow=18,SNR=8.2						
DZM	**Mont Dzumac**	**14.77**	**251**	P	**P**	**08 22 07.2**	**+1.0**
KNTN	**Kanton**	**16.39**	**25**	P	**P**	**08 22 21.9**	**+0.4**
EIDS	**Eidsvold**	**29.21**	**250**	P	**P**	**08 24 16.6**	**+1.0**
EIDS				IAmb	IAmb	08 24 18.6	
	comp=Z,4.4nm,1.0s						
PMG	**Port Moresby**	**34.38**	**280**	P	**P**	**08 25 01.5**	**+1.9**
COEN	**Coen**	**37.03**	**270**	P	**P**	**08 25 22.9**	**+1.4**
STKA	**Stephens Creek**	**38.59**	**241**	P	**P**	**08 25 34.4**	**+0.4**
	comp=Z,1.9nm,0.5s,baz=88,slow=8.6,SNR=9.7						
STKA	**Stephens Creek**	**38.59**	**241**	P	**P**	**08 25 34.1**	**+0.1**
BBOO	**Buckleboo**	**43.37**	**241**	P	**P**	**08 26 11.5**	**-0.2**
HMH	**Humu'ula Sheep**	**43.54**	**32**	P	**P**	**08 26 14.6**	**+1.1**
WRA	**Warramunga Arr**	**44.57**	**259**	P	**P**	**08 26 20.5**	**-0.7**
	comp=Z,1.9nm,0.3s,baz=95,slow=7.2,SNR=47						
WRA	**Warramunga Arr**	**44.57**	**259**	P	**P**	**08 26 20.5**	**-0.7**
AS31	**Alice Springs**	**44.73**	**254**	P	**P**	**08 26 21.9**	**-0.5**
AS31				IAmb	IAmb	08 26 23.4	
	comp=Z,3.8nm,0.5s						
ASAR	**Alice Springs**	**44.73**	**254**	P	**P**	**08 26 22.4**	**0.0**
	comp=Z,11nm,0.4s,baz=86,slow=8.8,SNR=200						
ASAR				S	**S**	**08 32 15.2**	**-2.9**
	comp=Z,1.1nm,0.8s,baz=89,slow=15,SNR=6.2						
FORT	**Forrest**	**49.96**	**245**	P	**P**	**08 27 00.6**	**-0.8**
MJAR	**Matsushiro Arr**	**67.82**	**323**	P	**P**	**08 29 00.4**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=134,slow=5.4,SNR=4.1						
MJAR	**Matsushiro Arr**	**67.82**	**323**	P	**P**	**08 29 00.6**	**-0.1**
PEA0B	**Petropavlovsk-**	**73.61**	**345**	P	**P**	**08 29 33.9**	**-0.4**
PETK	**Petropavlovsk-**	**73.61**	**345**	P	**P**	**08 29 34.7**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=125,slow=7.1,SNR=5.5						
CMB	**Columbia Colle**	**77.85**	**43**	P	**P**	**08 29 56.9**	**-1.2**
SRIG	**Santa Rosalia**	**78.33**	**56**	P	**P**	**08 30 01.0**	**+0.2**
YBH	**Yreka Blue Hor**	**78.53**	**39**	P	**P**	**08 30 02.3**	**+0.5**
BEKR	**Beckwith**	**78.90**	**42**	P	**P**	**08 30 03.9**	**0.0**
HUMO	**Hull Mountain**	**78.91**	**38**	P	**P**	**08 30 04.3**	**+0.7**
PNTR	**Pine Nut**	**78.95**	**43**	P	**P**	**08 30 04.8**	**+0.6**
PNTR				IAmb	IAmb	08 30 05.5	
	comp=Z,4.7nm,0.9s						
YERR	**Yerington**	**79.13**	**43**	P	**P**	**08 30 05.3**	**+0.2**
PAHR	**Pah Rah Range**	**79.43**	**42**	P	**P**	**08 30 07.2**	**+0.5**
NVAR	**Mina Array Bea**	**79.44**	**44**	P	**P**	**08 30 07.3**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=227,slow=8.9,SNR=14						
KVN	**Kaiserville**	**79.91**	**43**	P	**P**	**08 30 09.0**	**-0.2**
MOD	**Modoc Plateau**	**80.09**	**40**	P	**P**	**08 30 10.6**	**+0.6**
BRLK	**Bradley Lake**	**80.54**	**14**	P	**P**	**08 30 10.9**	**-0.9**
H04A	**Detroit Lake**	**80.59**	**37**	P	**P**	**08 30 12.5**	**+0.1**
H04A				IAmb	IAmb	08 30 18.4	
	comp=Z,13nm,1.3s						
WVOR	**Wild Horse Val**	**81.42**	**40**	P	**P**	**08 30 16.7**	**-0.1**
WVOR				IAmb	IAmb	08 30 18.0	
	comp=Z,5.9nm,1.1s						
SUA	**Susitna One**	**82.10**	**13**	P	**P**	**08 30 19.0**	**-0.8**
SUA				IAmb	IAmb	08 30 19.2	
	comp=Z,21nm,1.4s						
GLI	**Glacier Island**	**82.42**	**15**	P	**P**	**08 30 20.5**	**-0.8**
GLI				IAmb	IAmb	08 30 25.1	
	comp=Z,13nm,1.0s						
PSUT	**Pine Spring**	**82.47**	**46**	P	**P**	**08 30 22.8**	**+0.4**
U15A	**North Rim**	**82.54**	**48**	P	**P**	**08 30 23.4**	**+0.5**
KNK	**Knik Glacier**	**82.56**	**14**	P	**P**	**08 30 21.6**	**-0.5**
KNK				IAmb	IAmb	08 30 34.5	
	comp=Z,6.7nm,1.3s						
PMR	**Palmer**	**82.57**	**14**	P	**P**	**08 30 21.4**	**-0.6**
PMR				IAmb	IAmb	08 30 27.1	
	comp=Z,7.4nm,1.4s						
GHO	**Glory Hole Cre**	**82.77**	**14**	P	**P**	**08 30 22.7**	**-0.5**
GHO				IAmb	IAmb	08 30 23.2	
	comp=Z,6.1nm,0.6s						
SML	**Sawmill**	**82.94**	**14**	P	**P**	**08 30 23.3**	**-0.7**
SML				IAmb	IAmb	08 30 23.4	
	comp=Z,10nm,1.4s						
MESA	**MESA**	**83.19**	**17**	P	**P**	**08 30 25.4**	**0.0**
SCM	**Sheep Creek Mo**	**83.19**	**14**	P	**P**	**08 30 24.6**	**-0.7**
SCM				IAmb	IAmb	08 30 43.5	
	comp=Z,15nm,1.4s						
VRDI	**Verde Repeater**	**83.65**	**16**	P	**P**	**08 30 27.3**	**-0.3**
VRDI				IAmb	IAmb	08 30 46.1	
	comp=Z,7.1nm,1.3s						
GLB	**Gilahina Butte**	**83.73**	**16**	P	**P**	**08 30 27.3**	**-0.6**
GLB				IAmb	IAmb	08 30 44.8	
	comp=Z,6.3nm,1.2s						
BALM	**Baldy**	**83.79**	**17**	P	**P**	**08 30 28.0**	**-0.3**
BALM				IAmb	IAmb	08 30 37.8	
	comp=Z,13nm,1.4s						
TRF	**Thorofare Moun**	**83.97**	**12**	P	**P**	**08 30 28.2**	**-1.0**
TRF				IAmb	IAmb	08 30 29.9	
	comp=Z,7.9nm,0.9s						
CTGM	**Chitina Glacie**	**84.01**	**17**	P	**P**	**08 30 29.2**	**-0.2**
CTGM				IAmb	IAmb	08 30 29.9	
	comp=Z,10nm,1.1s						
RND	**Reindeer**	**84.23**	**13**	P	**P**	**08 30 29.8**	**-0.6**
RND				IAmb	IAmb	08 30 30.4	
	comp=Z,5.4nm,0.8s						
DHY	**Denali Highway**	**84.27**	**14**	P	**P**	**08 30 29.9**	**-0.8**
DHY				IAmb	IAmb	08 30 40.1	
	comp=Z,4.8nm,1.4s						
ILAR	**Eielson Array**	**85.85**	**13**	P	**P**	**08 30 36.8**	**-1.2**
	comp=Z,0.9nm,0.4s,baz=224,slow=4.9,SNR=6.9						
TX31	**Lajitas Ar. Si**	**86.03**	**58**	P	**P**	**08 30 41.0**	**+1.2**
TX31				IAmb	IAmb	08 30 41.5	
	comp=Z,4.4nm,1.1s						
TX32	**Lajitas Array**	**86.03**	**58**	P	**P**	**08 30 40.7**	**+0.8**
TX32				IAmb	IAmb	08 30 41.5	
	comp=Z,4.4nm,1.1s						
TXAR	**Lajitas Array**	**86.03

comp=Z,106nm,19.7s,baz=174,slow=37
CMAR Chiang Mai Arr 23.96 350 P **P** **08 25 52.9 -1.6**
CHTO Chiang Mai 24.31 350 P **P** **08 25 56.9 -0.8**
KCP Kidapawan 24.90 61 ⇓*i*P **P** **08 26 04.6 +1.4**
FITZ Fitzroy Crossi 25.26 122 P **P** **08 26 06.3 -0.1**
comp=Z,7.5nm,1.0s,baz=304,slow=7.7,SNR=13
FITZ LR LR 08 38 16.0
comp=Z,50nm,19.1s,baz=298,slow=42
FITZ Fitzroy Crossi 25.26 122 P **P** **08 26 06.1 -0.3**
DAV Davao City (W) 25.35 61 LR LR 08 37 02.6
comp=Z,87nm,18.5s,baz=184,slow=39
PALK Pallekele 25.79 299 LR LR 08 35 30.2
comp=Z,59nm,19.0s,baz=117,slow=34
KNRA Kununurra 27.03 114 P **P** **08 26 21.9 -0.5**
KNRA IAmb IAmb 08 26 22.7
comp=Z,15nm,0.7s
SIJI Sorong 28.22 82 LR LR 08 40 17.9
comp=Z,50nm,18.9s,baz=112,slow=42
KMI Kunming 30.20 359 P **P** **08 26 55.0 +4.2**
KMI pmax pmax
comp=Z,9.0nm,0.8s
KMI LR LR
comp=N,220nm,24.0s
KMI LR LR
comp=E,100nm,17.5s
KMI LR LR
comp=Z,250nm,20.5s
H08S2 Diego Garcia H 30.73 264 T T 08 59 37.1
baz=86,slow=76,SNR=85
H08S3 Diego Garcia H 30.74 264 T T 08 59 19.5
baz=86,slow=76,SNR=59
H08S1 Diego Carcia H 30.75 264 T T 08 59 39.0
baz=86,slow=76,SNR=57
H01W3 Cape Leeuwin H 31.13 163 T T 09 00 16.6
baz=340,slow=76,SNR=40
H01W2 Cape Leeuwin H 31.14 163 T T 09 00 17.7
baz=340,slow=76,SNR=42
H01W1 Cape Leeuwin H 31.14 163 T T 09 00 19.9
baz=340,slow=76,SNR=40
SHL Shillong 32.60 341 P **P** **08 27 10.3 -1.5**
WRA Warramunga Arr 33.50 119 P **P** **08 27 19.1 -0.5**
comp=Z,6.3nm,0.8s,baz=293,slow=10,SNR=29
WRA PcP **PcP** **08 30 00.5 +0.5**
comp=Z,0.8nm,0.4s,baz=312,slow=2.6,SNR=4.5
WRA LR LR 08 42 58.1
comp=Z,54nm,20.6s,baz=50,slow=40
WRA Warramunga Arr 33.50 119 IAmb IAmb 08 27 22.0
comp=Z,0.3nm,1.0s
WRAB Tennant Creek 33.51 119 P **P** **08 27 19.8 +0.1**
WRAB IAmb IAmb 08 27 20.7
comp=Z,14nm,0.9s
WR0 Warramunga Arr 33.69 119 P **P** **08 27 21.3 0.0**
WR0 IAmb IAmb 08 27 22.4
comp=Z,10nm,0.8s
AS31 Alice Springs 34.66 125 P **P** **08 27 30.4 +0.6**
ASAR Alice Springs 34.66 125 P **P** **08 27 30.2 +0.4**
comp=Z,4.2nm,0.6s,baz=302,slow=8.1,SNR=31
ASAR PcP **PcP** **08 30 03.9 +0.6**
comp=Z,1.6nm,0.9s,baz=299,slow=3.1,SNR=4.4
ASAR S **S** **08 32 52.5 -3.9**
comp=Z,1.8nm,1.0s,baz=287,slow=16,SNR=5.4
ASAR LR LR 08 44 33.3
comp=Z,42nm,18.0s,baz=294,slow=41
ODAN Odare 35.46 335 *e*P **P** **08 27 36.0 -0.7**
comp=Z,30nm,0.8s
TAPN Taplejung 35.76 336 *e*P **P** **08 27 39.0 -0.4**
comp=Z,42nm,0.8s
RAMN Ramite 35.88 334 *e*P **P** **08 27 39.6 -0.7**
comp=Z,11nm,0.5s
CD2 Chengdu 35.97 1 *e*P **P** **08 27 41.3 +0.5**
CD2 pmax pmax
comp=Z,20nm,0.5s
JIRN Jiri 36.67 334 *e*P **P** **08 27 47.1 -0.2**
comp=Z,49nm,0.8s
PKIN Phulchoki 36.96 333 *e*P **P** **08 27 49.6 +0.1**
GUN Gumba 37.03 334 *e*P **P** **08 27 49.9 -0.3**
comp=Z,37nm,0.8s
WHN Wuhan 37.13 16 P **P** **08 27 54.8 +4.2**
KOLN Koldanda 37.96 331 *e*P **P** **08 27 57.9 -0.1**
comp=Z,27nm,1.0s
DANN Dangsing 38.37 332 *e*P **P** **08 28 01.3 -0.2**
comp=Z,44nm,0.9s
XAN Xi'an 39.44 7 P **P** **08 28 09.6 -0.5**
XAN sP sP 08 28 26.4 -2.4
XAN pmax pmax
comp=Z,17nm,0.8s
XAN pmax pmax
comp=Z,58nm,3.7s
XAN Xi'an 39.44 7 P **P** **08 28 09.4 -0.7**
NJ2 Nanjing 39.94 21 *e*P **P** **08 28 16.3 +2.1**
NJ2 pmax pmax
comp=Z,22nm,0.6s
COEN Coen 40.17 105 P **P** **08 28 15.9 -0.5**
COEN IAmb IAmb 08 28 30.8
comp=Z,8.4nm,1.1s
BBOO Buckleboo 41.01 136 P **P** **08 28 23.7 +0.6**
LZH Lanzhou 41.13 1 *e*P **P** **08 28 25.9 +1.7**
LZH pP sP 08 28 42.5 0.0
LZH sP pP 08 28 48.5 +11
LZH PP **PP** **08 29 58.4 -1.5**
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,60nm,4.9s
LZH LR LR
comp=N,330nm,14.5s
LZH LR LR
comp=E,330nm,14.3s
LZH LR LR
comp=Z,460nm,16.0s
STKA Stephens Creek 44.51 131 P **P** **08 28 52.6 +1.1**
comp=Z,12nm,0.7s,baz=300,slow=8.7,SNR=24
STKA LR LR 08 50 15.5
comp=Z,25nm,18.6s,baz=350,slow=40
STKA Stephens Creek 44.51 131 P **P** **08 28 52.7 +1.1**
GTA Gaotai 44.56 356 *e*P **P** **08 28 51.6 -0.3**
GTA pP pP 08 28 56.2 -8.5
GTA sP sP 08 28 58.8 -11
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,65nm,5.7s
GTA LR LR
comp=N,130nm,16.5s
GTA LR LR
comp=E,120nm,16.5s
GTA LR LR
comp=Z,210nm,17.8s
HHC Hu-ho-hao-te 46.50 9 *e*P **P** **08 29 08.9 +1.7**
NIL Nilore 48.04 326 P **P** **08 29 18.4 -0.8**
KSAR Wonju Array Be 48.25 26 P **P** **08 29 20.4 -0.3**
KSRS Korea Array 48.28 26 P **P** **08 29 20.6 -0.3**
comp=Z,3.6nm,0.8s,baz=229,slow=8.0,SNR=12
KSRS LR LR 08 50 04.7
comp=Z,21nm,20.0s,baz=205,slow=36
KS19 Wonju Array Si 48.29 26 P **P** **08 29 20.4 -0.7**
KS19 IAmb IAmb 08 29 23.3
comp=Z,12nm,1.1s
WMQ Urumqi 50.85 345 *e*P **P** **08 29 41.1 +0.6**
WMQ pP sP 08 29 58.6 -0.5
WMQ pmax pmax
comp=Z,15nm,1.5s
WMQ pmax pmax
comp=Z,160nm,6.7s
WMQ LR LR
comp=N,510nm,29.0s
WMQ LR LR
comp=E,780nm,28.9s
WMQ LR LR
comp=Z,87nm,29.0s
KBL Kabul 51.11 323 P **P** **08 29 42.1 -0.7**
KBL IAmb IAmb 08 29 43.0
comp=Z,8.0nm,1.1s
KSH Kashi 51.21 333 P **P** **08 29 41.9 -1.5**
KSH pP sP 08 30 03.7 +1.8
KSH PP **PP** **08 31 45.1 +4.4**
KSH S **S** **08 36 52.7 -5.8**
KSH sS sS 08 37 24.0 +4.0
KSH Kashi 51.21 333 SS **SS** **08 40 31.2 -3.5**
KSH pmax pmax
comp=Z,23nm,0.7s
KSH pmax pmax
comp=Z,200nm,6.5s
KSH LR LR
comp=N,150nm,3.8s
KSH LR LR
comp=E,190nm,4.5s
KSH LR LR
comp=Z,550nm,7.2s
NRN Naryn 52.76 334 IAmb IAmb 08 29 55.6
comp=Z,8.7nm,0.8s
MJAR Matsushiro Arr 52.84 35 P **P** **08 29 54.0 -1.5**
comp=Z,5.3nm,0.9s,baz=222,slow=6.0,SNR=16
MJAR Matsushiro Arr 52.84 35 P **P** **08 29 56.5 +1.1**
SONM Songino Array 52.94 3 P **P** **08 29 55.8 -0.3**
comp=Z,12nm,0.8s,baz=180,slow=7.8,SNR=87
SONM pP **sP** **08 30 13.8 -0.9**
comp=Z,4.2nm,0.7s,baz=178,slow=8.1,SNR=4.4
SONM PcP **PcP** **08 31 04.6 +0.1**
comp=Z,2.0nm,0.3s,baz=193,slow=4.4,SNR=14
SONM LR LR 08 55 48.1
comp=Z,84nm,18.7s,baz=166,slow=40
SONM Songino Array 52.94 3 P **P** **08 29 55.7 -0.3**
ULN Ulaanbaatar 53.00 3 P **P** **08 29 56.6 +0.1**
ULN IAmb IAmb 08 29 57.6
comp=Z,10nm,1.1s
GAR Garm 53.59 328 P **P** **08 29 59.6 -1.4**
CHGR Chuyangaron 53.95 327 P **P** **08 30 01.8 -1.8**
BTK Batken 54.11 329 IAmb IAmb 08 30 05.8
comp=Z,7.3nm,0.7s
TKM2 Tokmak 2 54.15 335 P **P** **08 30 05.1 0.0**
SNR=6.6
KBK Karagaybulak 54.21 334 P **P** **08 30 05.7 +0.2**
SNR=6.1
AML Almayashu 54.34 333 P **P** **08 30 06.6 -0.2**
SNR=6.1
AAK Ala-Archa 54.39 334 P **P** **08 30 07.0 +0.2**
EKS2 Erkin-Say 54.72 334 P **P** **08 30 09.3 +0.1**
SNR=12
USP Ospenovka 54.90 334 P **P** **08 30 09.9 -0.4**
SNR=5.4
MK31 Makanchi Array 55.08 342 P **P** **08 30 10.9 -0.6**
MK31 IAmb IAmb 08 30 12.4
comp=Z,6.3nm,0.8s
MKAR Makanchi Array 55.08 342 P **P** **08 30 10.9 -0.7**
comp=Z,5.3nm,0.5s,baz=146,slow=8.4,SNR=77
MKAR LR LR 08 56 47.9
comp=Z,48nm,18.1s,baz=294,slow=39
MKAR Makanchi Array 55.08 342 P **P** **08 30 10.5 -1.1**
MAKZ Makanchi 55.19 342 P **P** **08 30 11.3 -1.1**
MAKZ IAmb IAmb 08 30 12.6
comp=Z,4.9nm,0.9s
USRK Ussuriysk Ar. 55.58 25 P **P** **08 30 14.7 -0.4**
comp=Z,13nm,0.8s,baz=221,slow=5.0,SNR=20
USRK pP **sP** **08 30 32.9 -1.2**
comp=Z,6.1nm,0.8s,baz=224,slow=5.4,SNR=4.8
USRK Ussuriysk Ar. 55.58 25 P **P** **08 30 14.2 -1.0**
TAS Tashkent 55.83 329 P **P** **08 30 16.7 -0.4**
KK31 Karatay Array 56.57 332 P **P** **08 30 21.2 -1.1**
KKAR Karatay Array 56.57 332 P **P** **08 30 21.5 -0.8**
KKAR Karatay Array 56.57 332 P **P** **08 30 20.7 -1.6**
KURBB Kurchatov Arra 59.63 342 ⇓Pg **P** **08 30 39.9 -3.5**
comp=Z,14nm,1.1s,baz=308,slow=18
KURBB ⇓Lg Lg 08 31 09.7
comp=Z,31nm,0.7s,baz=309,slow=27
KURK Kurchatov 59.68 342 P **P** **08 30 41.9 -2.0**
KURK Kurchatov 59.68 342 ⇓Pg **P** **08 30 39.6 -4.2**
comp=Z,10nm,0.8s
KURK ⇑Lg Lg 08 31 07.6
comp=Z,16nm,0.9s
GEYT Alibeck 60.07 320 P **P** **08 30 46.4 -0.4**
comp=Z,4.4nm,0.8s,baz=141,slow=7.5,SNR=9.1
GEYT LR LR 08 58 09.8
comp=Z,55nm,19.9s,baz=265,slow=37
GEYT Alibeck 60.07 320 P **P** **08 30 46.5 -0.4**
GYA0B ALIBECK ARRAY 60.07 320 P **P** **08 30 46.9 0.0**
GYA0B IAmb IAmb 08 30 48.1
comp=Z,8.2nm,0.9s
ZALV Zalesovo Beam 61.00 348 P **P** **08 30 51.9 -0.9**
comp=Z,5.2nm,0.3s,baz=160,slow=4.7,SNR=38
ZALV LR LR 09 00 17.4
comp=Z,111nm,18.0s,baz=136,slow=39
RAYN Ar Rayn 63.22 300 P **P** **08 31 08.0 -0.4**
BRVK Borovoye 64.45 339 P **P** **08 31 15.1 -0.8**
BRVK IAmb IAmb 08 31 15.8
comp=Z,6.7nm,0.7s
ABKAR Akbulak array 66.08 331 P **P** **08 31 25.5 -1.0**
MAW Mawson 68.01 196 LR LR 08 55 37.6
comp=Z,120nm,21.1s,baz=56,slow=31
ARU Arti 71.52 336 P **P** **08 31 59.0 -1.1**
ARU IAmb IAmb 08 32 00.8
comp=Z,11nm,0.8s
KBZ Khabaz 72.93 319 P **P** **08 32 08.9 0.0**
comp=Z,5.8nm,0.8s,baz=131,slow=5.9,SNR=17
PETK Petropavlovsk- 73.91 31 P **P** **08 32 13.3 -1.1**
comp=Z,3.2nm,0.9s,baz=236,slow=2.6,SNR=3.4
SYO Syowa Base 75.90 199⇓ *e*P **P** **08 32 26.8 +1.2**
BOSA Boshof 77.04 242 LR LR 09 00 07.2
comp=Z,68nm,18.1s,baz=34,slow=31
BRTR Keskin Array B 77.96 312 P **P** **08 32 37.8 -0.3**
comp=Z,3.8nm,0.8s,baz=134,slow=8.3,SNR=23
BRTR LR LR 09 09 07.7
comp=Z,24nm,18.3s,baz=258,slow=37
VNDA Vanda 78.35 169 P **P** **08 32 40.2 +0.9**
comp=Z,2.3nm,0.9s,baz=244,slow=3.0,SNR=7.2
VNDA LR LR 09 04 13.9
comp=Z,28nm,19.6s,baz=262,slow=33
VNDA Vanda 78.35 169 P **P** **08 32 40.3 +1.1**
TIXI Tiksi 78.56 8 P **P** **08 32 39.0 -1.4**
TIRR Tirgusor 82.99 316 ⇑P **P** **08 33 04.9 +0.3**
SORM Soroca 83.96 319 ⇑P **P** **08 33 09.7 +0.2**
AKASG Malin Array Be 84.08 322 P **P** **08 33 09.6 -0.5**
comp=Z,0.4nm,0.3s,baz=87,slow=4.7,SNR=11
AKASG pP **sP** **08 33 31.0 +1.7**
comp=Z,2.5nm,0.7s,baz=89,slow=4.4,SNR=3.9
ELND Elena 84.43 314 ⇑P **P** **08 33 12.7 +0.6**
VRI Vrincioaia 84.49 317 ⇑P **P** **08 33 13.7 +1.4**
TESR Tescani 84.69 318 ⇑P **P** **08 33 14.5 +1.2**
MLR Muntele Rosu 84.94 316 ⇑P **P** **08 33 15.7 +1.0**
MLR Muntele Rosu 84.94 316 P **P** **08 33 15.6 +0.8**
MLR IAmb IAmb 08 33 16.8
comp=Z,12nm,1.1s
BURAR Bucovina Array 85.89 318 ⇑P **P** **08 33 21.0 +1.5**
BURAR Bucovina Array 85.89 318 P **P** **08 33 20.4 +1.0**
BUR08 Bucovina Ar. S 85.91 318 P **P** **08 33 20.1 +0.6**
BUR08 IAmb IAmb 08 33 22.0
comp=Z,4.4nm,0.8s
DRGR 87.40 317 ⇑P **P** **08 33 28.1 +1.3**
TRPA Tarpa 87.76 319 ⇑P **P** **08 33 29.1 +0.7**
BZS Buzias 87.94 316 ⇓P **P** **08 33 30.3 +0.9**
SIRR Siria 88.02 317 ⇑P **P** **08 33 30.9 +1.2**
KOLS Kolonicke sedl 88.07 319 *e*P **P** **08 33 31.6 +1.7**
FINES FINESS Array B 88.53 332 P **P** **08 33 31.8 +0.1**
comp=Z,3.4nm,0.7s,baz=120,slow=6.8,SNR=7.3
VYHS Vyhne 90.25 319 *e*P **P** **08 33 41.4 +1.3**
ARCES ARCESS Array B 90.65 340 P **P** **08 33 41.1 -0.4**
comp=Z,3.0nm,0.9s,baz=116,slow=3.4,SNR=9.6
GERES GERESS Array B 93.68 319 P **P** **08 33 56.5 +0.4**
comp=Z,1.0nm,0.7s,baz=53,slow=5.3,SNR=5.4
YKA Yellowknife Ar 116.44 19 PKP **PKPdf** **08 39 21.7 -0.9**
comp=Z,0.6nm,0.7s,baz=357,slow=2.5,SNR=13
KHMM Horse Mountain 125.01 43 **PKiKP** **08 39 41.4 +1.0**
NVAR Mina Array Bea 129.86 43 PKP **PKiKP** **08 39 50.1 -0.1**
comp=Z,0.7nm,0.7s,baz=255,slow=2.6,SNR=6.1
SNOW Snow King Moun 131.52 33 PKPdf **PKiKP** **08 39 54.4 +0.9**
REDW Red Top Meadow 131.54 33 PKPdf **PKiKP** **08 39 53.9 +0.4**
HWUT Hardware Ranch 132.28 35 **PKiKP** **08 39 54.6 -0.3**
ULM Lac du Bonnet 132.34 17 PKP **PKPdf** **08 39 52.8 -0.6**
comp=Z,1.3nm,0.3s,baz=332,slow=3.4,SNR=5.7
PDAR Pinedale Array 132.64 33 PKP **PKPdf** **08 39 54.4 -0.2**
comp=Z,0.6nm,0.8s,baz=78,slow=1.0,SNR=4.4
EYMN Ely 135.61 14 PKPdf **PKiKP** **08 40 01.2 -0.1**
ECSD EROS Data Cent 137.84 22 PKPdf **PKPdf** **08 40 04.7 +0.7**
M57A Sunshine Farm, 144.07 1 PKPdf **PKPdf** **08 40 14.5 -0.7**
WMOK Wichita Mounta 144.24 32 PKPdf PKPbc 08 40 14.4 +0.4
N59A State Game Lan 144.49 359 PKPdf **PKPab** **08 40 14.3 0.0**
ACSO Alum Creek Sta 144.72 8 **PKPab** **08 40 14.6 -0.6**
TUL1 Leonard 144.78 27 **PKPab** **08 40 15.1 -0.4**
BDFB Brasilia 144.84 233 PKP PKPbc 08 40 16.9 +0.4
comp=Z,3.6nm,0.6s,baz=135,slow=3.3,SNR=5.5
O52A Adamsville 144.99 7 **PKPab** **08 40 15.3 -0.9**
TX31 Lajitas Ar. Si 145.00 44 PKPbc 08 40 16.7 0.0
TX32 Lajitas Array 145.00 44 PKPbc 08 40 16.7 0.0
TXAR Lajitas Array 145.00 44 PKP PKPbc 08 40 16.9 +0.2
comp=Z,1.2nm,0.6s,baz=243,slow=1.0,SNR=22
TXAR Lajitas Array 145.00 44 **PKPab** **08 40 16.4 -0.3**
BLO Bloomington 145.08 13 **PKPab** **08 40 16.6 +0.1**
OLIL Olney 145.10 16 **PKPbc** **08 40 15.5 -1.0**
WCI Wyandotte Cave 146.03 14 **PKPbc** **08 40 19.7 +0.2**
JCT Junction City 146.77 38 **PKPbc** **08 40 21.2 -0.8**
MIAR Mount Ida 146.91 26 **PKPbc** **08 40 22.6 +0.4**
WVT Waverly 147.61 17 **PKPbc** **08 40 23.7 -0.4**
HKT Hockley 149.50 34 **PKPbc** **08 40 29.4 +0.3**
LPAZ La Paz 156.99 201 PKPab **PKPab** **08 41 06.4 -0.2**
comp=Z,0.5nm,0.5s,baz=162,slow=6.4,SNR=3.0

IDC 03 08:51:21.8±3.6, 15°45S×173°12W, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.7/29, mbtmp3.7/5, ML4.2/1, MS3.1/3, Ms1 3.1/3, ms1mx2.8/39, Error ellipse: s-maj=191.9km s-min=20.4km az=140.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.01**	**40**	Pn	Pn	08 51 54.9	-2.1
	81nm,0.3s,baz=229,slow=11,SNR=11						
AFI				Sn	Sn	08 52 13.9	-9.0
	336nm,0.3s,baz=69,slow=20,SNR=17						
RAR	**Rarotonga**	**13.90**	**116**	LR	LR	08 59 00.9	
	comp=Z,28nm,18.4s,baz=290,slow=33						
DZM	**Mont Dzumac**	**20.43**	**248**	*e*LR	LR	09 01 12.9	
	comp=Z,119nm,24.6s						
PPT	**Papeete**	**22.66**	**99**	LR	LR	09 03 58.6	
	comp=Z,60nm,18.0s,baz=210,slow=33						
PPT2	**Papeete2**	**22.66**	**99**	*e*LR	LR	09 01 49.6	
	comp=Z,65nm,24.0s						
TBI	**Tubuai**	**23.63**	**113**	*e*T	T	09 20 52.4	
	8.5nm,0.4s						
RPZ	**Rata Peaks**	**31.23**	**202**	LR	LR	09 08 00.1	
	comp=Z,66nm,19.8s,baz=201,slow=32						
H11S2	**WAKE ISLAND Hy**	**39.15**	**329**	T	T	09 40 15.2	
	baz=149,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**39.16**	**329**	T	T	09 39 55.9	
	baz=149,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**39.17**	**329**	T	T	09 39 56.3	
	baz=149,slow=76,SNR=25						
H11N3	**WAKE ISLAND Hy**	**40.09**	**330**	T	T	09 41 34.5	
	baz=150,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**40.10**	**330**	T	T	09 41 06.1	
	baz=150,slow=76,SNR=29						
H11N2	**WAKE ISLAND Hy**	**40.11**	**330**	T	T	09 41 36.8	
	baz=150,slow=76,SNR=14						
STKA	**Stephens Creek**	**44.25**	**240**	P	P	08 59 32.7	-0.5
	2.5nm,0.9s,baz=85,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**50.10**	**257**	P	P	09 00 18.5	-0.6
	0.8nm,0.8s,baz=91,slow=6.9,SNR=6.7						
ASAR	**Alice Springs**	**50.35**	**252**	P	P	09 00 20.9	-0.2
	1.4nm,0.6s,baz=87,slow=7.9,SNR=28						
ILAR	**Eielson Array**	**92.44**	**11**	P	P	09 03 45.8	+0.1
	0.1nm,0.6s,baz=201,slow=4.8,SNR=2.7						
YKA	**Yellowknife Ar**	**90.04**	**23**	P	P	09 04 24.2	+1.1
	0.1nm,0.8s,baz=234,slow=5.2						
BRTR	**Keskin Array B**	**146.37**	**321**	PKPbc	PKPbc	09 11 05.2	0.0
	0.5nm,0.7s,baz=31,slow=3.4,SNR=3.4						

*IDC **03** 09:05:25.0±2.6, 6°04S×103°31E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/43, mbtmp3.7/5, MS3.0/1, Ms1 3.0/1, ms1mx2.4/39, Error ellipse: s-maj=100.0km s-min=22.9km az=54.0*
*DJA **03** 09:05:28.4±0.9, 6°S±8°×10°4E±°, h10km, M3.7/5, MLv3.7/5*
ISC 03 09:05:30.9±1.2, 6°0S±0°1×103°52E±0°09, h38km, n16, σ0s72/13, mb3.7/6, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.08**	**64**	P	**Pn**	**09 05 48.3**	**-1.1**
KASI				S	**Sn**	**09 06 02.7**	**-0.5**
LWLI	**Liwa**	**1.11**	**29**	S	**Sn**	**09 06 04.4**	**+0.3**
MDSI	**Maura Dua**	**1.64**	**24**	P	**Pn**	**09 05 57.0**	**-0.1**
MNAI	**Manna**	**1.72**	**341**	P	**Pn**	**09 05 58.0**	**-0.3**
KLSI		**1.77**	**43**	P	**Pn**	**09 05 59.8**	**+0.8**
PALK	**Pallekele**	**26.31**	**300**	LR	LR	09 19 53.1	
	comp=Z,30nm,19.0s,baz=30,slow=33						
H08S2	**Diego Garcia H**	**30.85**	**265**	T	T	09 43 46.9	
	baz=88,slow=75,SNR=4.0						
H08S3	**Diego Garcia H**	**30.86**	**265**	T	T	09 43 27.5	
	baz=88,slow=75,SNR=3.1						
H08S1	**Diego Carcia H**	**30.87**	**265**	T	T	09 43 26.7	
	baz=88,slow=75,SNR=3.3						
WRA	**Warramunga Arr**	**32.99**	**118**	P	**P**	**09 12 03.3**	**+0.7**
	0.2nm,0.4s,baz=288,slow=9.1,SNR=3.3						
ASAR	**Alice Springs**	**34.09**	**124**	P	**P**	**09 12 12.4**	**+0.2**
	0.4nm,0.9s,baz=302,slow=8.7,SNR=4.0						
KSRS	**Korea Array**	**48.85**	**26**	P	**P**	**09 14 13.2**	**+0.4**
	0.8nm,0.6s,baz=213,slow=7.3,SNR=2.8						
SONM	**Songino Array**	**53.66**	**2**	P	**P**	**09 14 48.3**	**-0.5**
	0.4nm,0.7s,baz=186,slow=7.0,SNR=3.2						
MKAR	**Makanchi Array**	**55.83**	**342**	P	**P**	**09 15 03.8**	**-0.7**
	0.8nm,0.5s,baz=145,slow=8.1,SNR=11						
ZALV	**Zalesovo Beam**	**61.76**	**348**	P	**P**	**09 15 44.9**	**-0.5**
	0.8nm,0.4s,baz=162,slow=5.8,SNR=4.7						
TXAR	**Lajitas Array**	**145.39**	**45**	PKPbc	**PKPab**	**09 25 06.8**	**+1.0**
	0.6nm,0.7s,baz=258,slow=1.0,SNR=9.5						

*IDC **03** 09:13:40.3±2.0, 20°50S×178°16W, h533km±21km, mb3.6/16, mb1 3.8/19, mb1mx3.6/40, mbtmp4.5/19, Error ellipse: s-maj=20.6km s-min=12.5km az=149.0*
*NEIC **03** 09:13:41.7±1.7, 20°45S±0°1×178°2W±0°1, h554km±6km, mb4.6/33, Error ellipse: s-maj=17.0km s-min=14.9km az=125.0*
ISC 03 09:13:40.1±0.4, 20°42S±0°07×178°13W±0°07, h534km, n130, σ1s47/141, mb4.4/30, 19C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.49**	**306**	P	**P**	**09 15 09.3**	**+4.4**
NIUE	**Niue**	**7.84**	**82**	P	**P**	**09 15 36.6**	**+0.8**
NIUE				S	**S**	**09 17 14.9**	**+4.3**
AFI	**Afiamalu**	**8.87**	**44**	P	**P**	**09 15 46.4**	**+0.1**
	17nm,0.3s,baz=264,slow=10,SNR=3.7						
AFI				S	**S**	**09 17 25.8**	**-4.2**
	3.6nm,0.3s,baz=124,slow=17,SNR=2.7						
AFI	**Afiamalu**	**8.87**	**44**	P	**P**	**09 15 47.1**	**+0.7**
AFI					**S**	**09 17 22.5**	**-7.5**
DZM	**Mont Dzumac**	**14.48**	**261**	P	**P**	**09 16 45.3**	**+0.7**
	0.4nm,0.3s,baz=78,slow=18,SNR=5.4						
DZM	**Mont Dzumac**	**14.48**	**261**	P	**P**	**09 16 44.9**	**+0.3**
OUZ	**Omahuta**	**16.45**	**205**	P	**P**	**09 17 07.2**	**+3.0**
OUZ				IAmb	IAmb	09 17 08.4	
	comp=Z,29nm,0.8s						
URZ	**Urewera**	**18.25**	**192**	P	**P**	**09 17 19.1**	**-1.8**
	comp=Z,2.4nm,0.3s,baz=11,slow=9.9,SNR=12						
URZ				S	**S**	**09 20 12.8**	**-7.8**
	comp=Z,0.2nm,0.3s,baz=345,slow=18,SNR=2.2						
URZ	**Urewera**	**18.25**	**192**	P	**P**	**09 17 19.6**	**-1.3**
URZ				IAmb	IAmb	09 17 20.5	
	comp=Z,36nm,1.2s						
SNZO	**South Karori**	**21.70**	**195**	P	**P**	**09 17 50.2**	**-1.9**
BHW	**Baring Head**	**21.75**	**194**	P	**P**	**09 17 52.6**	**0.0**
PLWZ	**Palliser**	**21.82**	**193**	P	**P**	**09 17 51.6**	**-1.6**
QRZ	**Quartz Range**	**21.85**	**199**	P	**P**	**09 17 54.4**	**+1.0**
NNZ	**Nelson**	**21.96**	**197**	P	**P**	**09 17 54.8**	**+0.4**
THZ	**Tophouse**	**22.60**	**198**	P	**P**	**09 17 59.8**	**-0.4**
KHZ	**Kahutara**	**23.03**	**196**	P	**P**	**09 18 03.7**	**-0.3**
FOZ	**Fox Glacier**	**25.16**	**201**	P	**P**	**09 18 24.1**	**+1.2**
WKZ	**Wanaka**	**26.57**	**201**	P	**P**	**09 18 35.5**	**+0.1**
PAE	**Paea**	**27.11**	**89**	*e*T	T	09 19 28.2	
	comp=Z,2.2nm,0.3s						
PPT2	**Papeete2**	**27.13**	**89**	*e*T	T	09 19 28.8	
	comp=Z,2.1nm,0.3s						
MLZ	**Mavora Lakes**	**27.35**	**201**	P	**P**	**09 18 42.4**	**+0.1**
MLZ				IAmb	IAmb	09 18 46.0	
	comp=Z,20nm,0.9s						
TVO	**Taravao**	**27.40**	**89**	*e*T	T	09 19 50.0	
	comp=Z,1.3nm,0.4s						
WHZ	**Wether Hill Ro**	**27.87**	**201**	P	**P**	**09 18 48.8**	**+2.1**
EIDS	**Eidsvold**	**28.75**	**254**	P	**P**	**09 18 55.0**	**+0.3**
CTA	**Charters Tower**	**33.38**	**264**	P	**P**	**09 19 34.8**	**+0.3**
	comp=Z,6.5nm,0.4s,baz=89,slow=10,SNR=31						
PMG	**Port Moresby**	**35.20**	**283**	P	**P**	**09 19 49.9**	**+0.1**
	comp=Z,17nm,1.0s,baz=93,slow=4.0,SNR=5.5						
PMG	**Port Moresby**	**35.20**	**283**	P	**P**	**09 19 50.3**	**+0.5**
PMG				IAmb	IAmb	09 19 51.0	
	comp=Z,21nm,1.0s						
COEN	**Coen**	**37.45**	**274**	P	**P**	**09 20 08.9**	**+0.5**
COEN				IAmb	IAmb	09 20 09.8	
	comp=Z,20nm,1.1s						
STKA	**Stephens Creek**	**37.72**	**244**	P	**P**	**09 20 10.6**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=102,slow=13,SNR=4.1						
BBOO	**Buckleboo**	**42.48**	**243**	P	**P**	**09 20 48.5**	**+0.1**
BBOO				IAmb	IAmb	09 20 48.8	
	comp=Z,46nm,1.4s						
WR0	**Warramunga Arr**	**44.30**	**262**	P	**P**	**09 21 03.0**	**+0.2**
AS31	**Alice Springs**	**44.42**	**257**	P	**P**	**09 21 03.6**	**-0.1**

ASAR	**Alice Springs**	**44.42**	**257**	P	**P**	**09 21 03.5**	**-0.2**
	comp=Z,11nm,0.5s,baz=84,slow=8.8,SNR=197							
ASAR				PcP	**PcP**	**09 22 35.6**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=100,slow=4.1,SNR=7.4							
ASAR				S	**S**	**09 26 55.0**	**-4.8**
	comp=Z,2.5nm,1.1s,baz=91,slow=15,SNR=7.5							
WRA	**Warramunga Arr**	**44.49**	**262**	P	**P**	**09 21 03.6**	**-0.6**
	comp=Z,6.5nm,0.3s,baz=96,slow=7.6,SNR=184							
WRA	**Warramunga Arr**	**44.49**	**262**	P	**P**	**09 21 03.2**	**-1.1**
MTN	**Manton Dam**	**49.04**	**271**	P	**P**	**09 21 38.3**	**-0.4**
FORT	**Forrest**	**49.22**	**247**	P	**P**	**09 21 39.8**	**0.0**
FORT				IAmb	IAmb	09 21 44.1		
	comp=Z,17nm,1.1s							
KNRA	**Kununurra**	**50.54**	**266**	P	**P**	**09 21 49.6**	**0.0**
KNRA				IAmb	IAmb	09 21 53.2		
	comp=Z,25nm,1.4s							
FITZ	**Fitzroy Crossi**	**52.92**	**262**	P	**P**	**09 22 06.8**	**0.0**
	comp=Z,1.9nm,0.6s,baz=75,slow=5.5,SNR=7.1							
FITZ	**Fitzroy Crossi**	**52.92**	**262**	P	**P**	**09 22 06.7**	**0.0**
SIJI	**Sorong**	**53.10**	**285**	P	**P**	**09 22 07.9**	**-0.3**
	comp=Z,29nm,0.7s,baz=50,slow=6.8,SNR=7.7							
VNDA	**Vanda**	**57.98**	**185**	P	**P**	**09 22 43.2**	**+2.2**
	comp=Z,1.5nm,0.6s,baz=350,slow=6.9,SNR=13							
VNDA	**Vanda**	**57.98**	**185**	P	**P**	**09 22 43.5**	**+2.5**
CASY	**Casey**	**63.99**	**205**	P	**P**	**09 23 21.3**	**+0.7**
QSPA	**South Pole Qui**	**69.65**	**180**	P	**P**	**09 23 55.1**	**-0.7**
QSPA				IAmb	IAmb	09 23 58.2		
	comp=Z,11nm,0.9s							
MJAR	**Matsushiro Arr**	**70.07**	**324**	P	**P**	**09 23 58.5**	**0.0**
	comp=Z,0.7nm,0.5s,baz=145,slow=6.6,SNR=3.6							
PETK	**Petropavlovsk-**	**76.16**	**345**	P	**P**	**09 24 33.1**	**+0.1**
	comp=Z,4.9nm,0.7s,baz=122,slow=7.3,SNR=16							
USRK	**Ussuriysk Ar.**	**78.83**	**326**	P	**P**	**09 24 49.0**	**+1.3**
	comp=Z,3.0nm,0.8s,baz=174,slow=5.6,SNR=6.7							
USRK	**Ussuriysk Ar.**	**78.83**	**326**	P	**P**	**09 24 48.1**	**+0.4**
NVAR	**Mina Array Bea**	**81.05**	**43**	P	**P**	**09 25 01.3**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=223,slow=10,SNR=8.5							
SUA	**Susitna One**	**84.50**	**13**	P	**P**	**09 25 16.5**	**+0.1**
TRF	**Thorofare Moun**	**86.39**	**12**	P	**P**	**09 25 25.4**	**-0.2**
TRF				IAmb	IAmb	09 25 26.1		
	comp=Z,6.2nm,0.8s							
RND	**Reindeer**	**86.64**	**13**	P	**P**	**09 25 27.4**	**+0.8**
RND				IAmb	IAmb	09 25 27.7		
	comp=Z,12nm,0.9s							
SYO	**Syowa Base**	**86.78**	**193**↑	*eP*	**P**	**09 25 25.7**	**-1.5**
TXAR	**Lajitas Array**	**87.11**	**57**	P	**P**	**09 25 31.6**	**+1.9**
	comp=Z,0.7nm,0.8s,baz=216,slow=4.5,SNR=6.0							
MLY	**Manley**	**87.74**	**11**	P	**P**	**09 25 30.9**	**-0.7**
MLY				IAmb	IAmb	09 25 33.0		
	comp=Z,9.0nm,1.3s							
WRH	**Wood River Hil**	**87.75**	**13**	P	**P**	**09 25 31.8**	**+0.2**
WRH				IAmb	IAmb	09 25 32.1		
	comp=Z,5.9nm,0.8s							
HDA	**Harding Lake**	**87.93**	**13**	P	**P**	**09 25 32.8**	**+0.2**
HDA				IAmb	IAmb	09 25 33.2		
	comp=Z,4.8nm,0.8s							
CCB	**Clear Creek Bu**	**87.96**	**13**	P	**P**	**09 25 32.5**	**-0.1**
CCB				IAmb	IAmb	09 25 33.3		
	comp=Z,5.2nm,0.8s							
IMAR	**Indian Mountai**	**88.09**	**10**	P	**P**	**09 25 33.5**	**+0.3**
IL31		**88.26**	**13**	P	**P**	**09 25 34.1**	**+0.1**
ILAR	**Eielson Array**	**88.26**	**13**	P	**P**	**09 25 33.8**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=222,slow=5.4,SNR=17							
ILAR	**Eielson Array**	**88.26**	**13**	P	**P**	**09 25 34.0**	**0.0**
PDAR	**Pinedale Array**	**88.98**	**43**	P	**P**	**09 25 39.4**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=225,slow=3.8,SNR=7.3							
PDAR	**Pinedale Array**	**88.98**	**43**	P	**P**	**09 25 38.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**89.97**	**290**	P	**P**	**09 25 44.0**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=123,slow=2.9,SNR=12							
CMAR	**Chiang Mai Arr**	**89.97**	**290**	P	**P**	**09 25 41.4**	**-1.7**
PHWY	**Pilot Hill**	**91.00**	**46**	P	**P**	**09 25 47.6**	**-0.1**
PHWY				IAmb	IAmb	09 25 51.9		
	comp=Z,15nm,1.2s							
SONM	**Songino Array**	**95.61**	**319**	P	**P**	**09 26 08.9**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=134,slow=4.2,SNR=2.4							
ZALV	**Zalesovo Beam**	**110.35**	**321**	Pdiff	**Pdif**	**09 27 13.5**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=92,slow=3.8,SNR=3.8							
ZALV	**Zalesovo Beam**	**110.35**	**321**	Pdif	**Pdif**	**09 27 12.8**	**-0.8**
MKAR	**Makanchi Array**	**111.05**	**313**	PKiKP	**PKiKP**	**09 31 12.1**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=88,slow=1.1,SNR=5.0							
MKAR	**Makanchi Array**	**111.05**	**313**		**PKiKP**	**09 31 11.7**	**-1.1**
KURBB	**Kurchatov Arra**	**113.90**	**317**	PKiKP	**PKiKP**	**09 31 16.8**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=94,slow=1.8,SNR=7.3							
BVAR	**Borovoye Array**	**118.94**	**320**	PKP	**PKPdf**	**09 31 26.9**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=101,slow=2.9,SNR=6.4							
ARCES	**ARCESS Array B**	**128.82**	**350**	PKP	**PKPdf**	**09 31 46.2**	**0.0**
	comp=Z,2.6nm,1.0s,baz=72,slow=4.0,SNR=5.7							
ARCES	**ARCESS Array B**	**128.82**	**350**		**PKPdf**	**09 31 46.5**	**+0.3**
AKASG	**Malin Array Be**	**142.88**	**331**	PKhKP	PKPpre	09 32 09.3		
	comp=Z,7.9nm,0.7s,baz=42,slow=4.5,SNR=41							
SORM	**Soroca**	**145.07**	**329**	⇓P	**PKPdf**	**09 32 16.7**	**+0.2**
BZK	**Bozkurt**	**145.43**	**316**	⇓P	**PKPbc**	**09 32 18.5**	**-0.1**
VASR	**Vaslui**	**146.36**	**327**	⇑P	**PKPbc**	**09 32 20.7**	**-0.4**
BR131	**Keskin Array S**	**146.69**	**312**	PKPbc	**PKPbc**	**09 32 21.8**	**-0.6**
BRTR	**Keskin Array B**	**146.69**	**312**	PKPbc	**PKPbc**	**09 32 21.9**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=130,slow=4.9,SNR=13							
BRTR	**Keskin Array B**	**146.69**	**312**		**PKPbc**	**09 32 21.5**	**-1.0**
BUR08	**Bucovina Ar. S**	**146.91**	**331**		**PKPbc**	**09 32 23.4**	**+0.7**
BURAR	**Bucovina Array**	**146.93**	**331**	⇓P	**PKiKP**	**09 32 24.7**	**0.0**
BURAR	**Bucovina Array**	**146.93**	**331**		**PKPbc**	**09 32 22.9**	**+0.2**
GHRR		**146.95**	**327**	⇑P	**PKiKP**	**09 32 23.9**	**-0.7**
TESR	**Tescani**	**147.03**	**328**	⇓P	**PKPbc**	**09 32 22.9**	**0.0**
KOLS	**Kolonicke sedl**	**147.18**	**335**	*e*PKP	**PKPbc**	**09 32 23.8**	**+0.5**
TOPG	**Topolog**	**147.21**	**324**	⇓P	**PKPbc**	**09 32 23.0**	**-0.4**
VRI	**Vrincioaia**	**147.43**	**327**	⇑P	**PKPdf**	**09 32 22.2**	**+1.5**
TIRR	**Tirgusor**	**147.45**	**324**	⇓P	**PKPbc**	**09 32 24.0**	**-0.1**
HARR	**Harsova**	**147.57**	**324**	⇑P	**PKPbc**	**09 32 24.2**	**-0.1**
TRPA	**Tarpa**	**147.71**	**334**	⇑P	**PKPbc**	**09 32 24.9**	**+0.3**
OZUR		**147.75**	**328**	⇑P	**PKPbc**	**09 32 24.9**	**0.0**
OSTC	**Ostas**	**147.85**	**343**↑	*e*PKP	**PKPbc**	**09 32 25.3**	**+0.3**
CLL	**Collm**	**147.95**	**347**	*e*PKPdf	**PKPbc**	**09 32 24.0**	**-1.1**
CLL				⇓*i*PKPbc	**PKiKP**	**09 32 25.2**	**-1.3**
	comp=Z,14nm,0.9s							
CLL				*i* PKPab	**PKPab**	**09 32 29.9**	**+0.2**
CLL	**Collm**	**147.95**	**347**		**PKPbc**	**09 32 25.4**	**+0.3**
DPC	**Dobruska-Polom**	**148.01**	**342**↑	*e*PKP	**PKPbc**	**09 32 26.0**	**+0.6**
DOPR	**Dopca**	**148.03**	**328**	⇓P	**PKPbc**	**09 32 25.9**	**+0.4**
LANS	**Liptovska Anna**	**148.06**	**338**	*e*PKP	**PKiKP**	**09 32 26.9**	**0.0**
MLR	**Muntele Rosu**	**148.09**	**327**	⇑P	**PKPbc**	**09 32 25.7**	**-0.1**
MLR	**Muntele Rosu**	**148.09**	**327**		**PKPbc**	**09 32 25.9**	**0.0**
KRLC	**Kraliky**	**148.12**	**342**↑	*e*PKP	**PKPbc**	**09 32 26.2**	**+0.5**
BRG	**Berggiesshubel**	**148.15**	**345**	*i* PKP	**PKPbc**	**09 32 26.3**	**+0.6**
	comp=Z,6.3nm,0.9s							
BRG				*e*	**PKPab**	**09 32 30.5**	**0.0**
	comp=Z,4.8nm,0.8s							
MORC	**Moravsky Berou**	**148.16**	**341**	⇑P	**PKPbc**	**09 32 25.3**	**-0.5**
DRGR		**148.68**	**332**	⇑P	**PKPbc**	**09 32 26.8**	**-0.4**
EIL	**Elat**	**148.73**	**294**	PKPbc	**PKPbc**	**09 32 27.9**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=168,slow=9.3,SNR=3.5							
PRU	**Pruhonice**	**148.82**	**344**↑	*e*PKP	**PKPbc**	**09 32 27.4**	**+0.1**
PRU				*e*PKPAB	**PKPab**	**09 32 34.0**	**+0.7**
GOPC	**GO Pecny, Ondr**	**148.82**	**344**	*e*PKP	**PKPbc**	**09 32 27.6**	**+0.2**
VYHS	**Vyhne**	**148.84**	**338**	*e*PKP	**PKiKP**	**09 32 28.0**	**-0.5**
VYHS				*e*	**PKPab**	**09 32 34.3**	**+0.8**
VRAC	**Vranov**	**148.86**	**341**	⇑P	**PKPab**	**09 32 34.5**	**+0.9**
PSZ	**Piszkesteto**	**148.93**	**336**	⇑P	**PKPbc**	**09 32 27.7**	**-0.1**
NKC	**Novy Kostel**	**149.09**	**347**↑	*e*PKP	**PKiKP**	**09 32 28.9**	**0.0**
MODS	**Modra-Piesok**	**149.47**	**340**	*e*PKP	**PKPbc**	**09 32 28.9**	**-0.1**
SIRR	**Siria**	**149.54**	**332**	⇑P	**PKPbc**	**09 32 29.5**	**+0.3**
KHC	**Kasperske Hory**	**149.85**	**345**↑	*e*PKP	**PKPbc**	**09 32 30.1**	**+0.2**
KHC				*e*PKPAB	**PKPab**	**09 32 38.6**	**+0.9**
GERES	**GERESS Array B**	**150.09**	**344**	PKPbc	**PKPbc**	**09 32 30.5**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=45,slow=2.1,SNR=10							
GERES				PKPab	**PKPab**	**09 32 38.5**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=26,slow=3.4,SNR=4.4							
GERES	**GERESS Array B**	**150.09**	**344**		**PKPbc**	**09 32 29.6**	**-0.9**
GERES					**PKPab**	**09 32 37.9**	**-0.9**
CONA	**Conrad Observa**	**150.31**	**341**	*i* PKiKP	**PKPbc**	**09 32 31.3**	**+0.2**
	comp=Z,11nm,1.6s							
VTS	**Vitosha**	**151.49**	**326**	⇓P	**PKPbc**	**09 32 33.0**	**-1.0**
SOKA	**Soboth**	**151.68**	**341**	*i* PKiKP	**PKPbc**	**09 32 33.3**	**-0.9**
	comp=Z,5.3nm,1.1s							
KBA	**Koelnbreinsper**	**151.81**	**343**	*i* PKiKP	**PKPbc**	**09 32 33.6**	**-1.0**
	comp=Z,4.4nm,0.8s							
WTTA	**Wattenberg**	**152.06**	**346**	*i* PKiKP	**PKPbc**	**09 32 34.8**	**-0.4**
	comp=Z,4.9nm,0.8s							
MYKA	**Terra Mystica**	**152.14**	**342**	*i* PKiKP	**PKPbc**	**09 32 34.3**	**-0.9**
	comp=Z,5.1nm,1.1s							
ABTA	**Abfaltersbach**	**152.33**	**344**	*i* PKiKP	**PKPbc**	**09 32 34.5**	**-1.2**
	comp=Z,5.6nm,0.9s							
FETA	**Feichten**	**152.50**	**347**	*i* PKPdf	**PKPdf**	**09 32 26.7**	**-2.0**
	comp=Z,11nm,1.6s							
TORD	**Torodi Ar. Bea**	**172.77**	**179**	PKPab	**PKPab**	**09 34 18.2**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=163,slow=2.4,SNR=2.8							
TORD	**Torodi Ar. Bea**	**172.77**	**179**	PKPdf	**PKPdf**	**09 32 45.6**	**-3.1**
TORD					**PKPab**	**09 34 18.1**	**-0.2**

*IDC **03** 09:14:24.3±3.0,5.71S×103.27E, h0km, mb3.9/6, mb1 3.9/6, mb1mx3.6/50, mbtmp3.9/6, MS2.7/1, Ms1 2.7/1, ms1mx2.3/36, Error ellipse: s-maj=81.2km s-min=60.7km az=37.0*

*DJA **03** 09:14:25.3±0.8, 6°S±.5°×107.4E±.°, h10km, M4.2/7, MLv4.2/7*

*NEIC **03** 09:14:31.1±0.7, 5.8S±0.2°×103.5E±0.4, h58km±8km, mb4.0/5, Error ellipse: s-maj=57.5km s-min=6.8km az=64.0*

ISC 03 09:14:24.3±2.2, 5.94S±0.09×103.44E±0.06, h9km±11km, n28, σ0.95/30, mb4.1/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**1.10**	**34**	P	**Pn**	**09 14 46.9**	**+0.9**
LWLI				S	**Sn**	**09 15 02.6**	**+1.2**
KASI	**Kota Agung**	**1.13**	**69**	P	**Pg**	**09 14 45.3**	**-0.7**
KASI				S	**Sg**	**09 15 00.2**	**-0.4**
MDSI	**Maura Dua**	**1.62**	**27**	P	**Pb**	**09 14 54.4**	**0.0**
MDSI				S	**Sg**	**09 15 16.6**	**+0.2**
MNAI	**Manna**	**1.64**	**343**	P	**Pb**	**09 14 54.5**	**-0.3**
MNAI				S	**Sg**	**09 15 19.6**	**+2.4**
MNAI	**Manna**	**1.64**	**343**	Pn	**Pg**	**09 14 55.8**	**-0.1**
MNAI				Sn	**Sn**	**09 15 12.8**	**-1.8**
KLSI		**1.78**	**46**	P	**Pg**	**09 14 58.0**	**-0.6**
KLSI				S	**Sg**	**09 15 22.2**	**+0.5**
KSI	**Kapahiang**	**2.42**	**339**	P	**Pb**	**09 15 07.5**	**-0.7**
PMBI	**Palembang**	**3.27**	**24**	P	**Pn**	**09 15 15.0**	**-0.8**
LEM	**Lembang**	**4.24**	**102**	LR	LR	09 17 38.4	
	comp=Z,85nm,20.3s,baz=306,slow=44						
FITZ	**Fitzroy Crossi**	**24.81**	**121**	P	**P**	**09 19 48.8**	**+1.9**
H08S2	**Diego Garcia H**	**30.78**	**265**	T	T	09 53 09.7	
	baz=87,slow=75,SNR=8.3						
H08S3	**Diego Garcia H**	**30.79**	**265**	T	T	09 52 54.3	
	baz=87,slow=75,SNR=8.7						
H08S1	**Diego Garcia H**	**30.80**	**265**	T	T	09 53 17.1	
	baz=87,slow=75,SNR=4.0						
WRAB	**Tennant Creek**	**33.09**	**118**	P	**P**	**09 21 02.1**	**+1.2**
SONM	**Songino Array**	**53.60**	**2**	P	**P**	**09 23 46.0**	**+0.1**
	0.5nm,0.6s,baz=176,slow=8.8,SNR=6.3						
SONM	**Songino Array**	**53.60**	**2**	P	**P**	**09 23 46.7**	**+0.7**
MK31	**Makanchi Array**	**55.76**	**343**	P	**P**	**09 24 01.1**	**-0.4**
MK31				IAmb	IAmb	09 24 01.9	
	comp=Z,1.2nm,0.6s						
MKAR	**Makanchi Array**	**55.76**	**343**	P	**P**	**09 24 01.0**	**-0.5**
	comp=Z,1.6nm,0.6s,baz=148,slow=7.9,SNR=23						
MKAR	**Makanchi Array**	**55.76**	**343**		**P**	**09 24 00.8**	**-0.6**
KURBB	**Kurchatov Arra**	**60.30**	**342**	P	**P**	**09 24 32.7**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=161,slow=6.5,SNR=6.5						
ZALV	**Zalesovo Beam**	**61.69**	**348**	P	**P**	**09 24 41.9**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=173,slow=5.3,SNR=6.2						
BVAR	**Borovoye Array**	**65.06**	**339**	P	**P**	**09 25 04.6**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=141,slow=7.1,SNR=4.7						
ABKAR	**Akbulak array**	**66.73**	**331**	P	**P**	**09 25 15.3**	**-0.5**
ABKAR	**Akbulak array**	**66.73**	**331**	P	**P**	**09 25 14.8**	**-1.0**
ABKAR				IAmb	IAmb	09 25 25.3	
	comp=Z,1.4nm,0.8s						
BRTR	**Keskin Array B**	**78.50**	**312**	P	**P**	**09 26 26.4**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=127,slow=6.2,SNR=4.3						
BRTR	**Keskin Array B**	**78.50**	**312**	P	**P**	**09 26 26.3**	**0.0**
TXAR	**Lajitas Array**	**145.41**	**44**	PKPbc	**PKPbc**	**09 34 04.0**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=268,slow=1.5,SNR=15						
TXAR	**Lajitas Array**	**145.41**	**44**		**PKPbc**	**09 34 02.8**	**-0.7**

*NIED **03** 09:16:00, 38.50N×141.80E, h59km, Mw3.7 Best double couple: M0 4.51000×10^14 NP1:φ≈2.00000°, δ59.00000°, λ92.00000°. NP2:φ≈177.00000°, δ31.00000°, λ86.00000°.*

*IDC **03** 09:16:47.7±2.9, 38.55N×141.82E, h66km±23km, mb3.4/5, mb1 3.5/8, mb1mx3.2/43, mbtmp3.6/8, MS2.9/1, Ms1 2.9/1, ms1mx2.3/30, Error ellipse: s-maj=39.6km s-min=18.5km az=102.0*

*JMA **03** 09:16:47.1, 38.54N×141.72E, h54km±1km, M3.8*

JMA Felt I J1.

ISC 03 09:16:46.1±1.1, 38.50N±0.05×141.81E±0.09, h49km±6km, n28, σ0.91/35, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**0.33**	**235**	P	**Pn**	**09 16 56.5**	**+1.0**
JIKH				S	**Sn**	**09 17 03.0**	**+0.9**
JIO	**Ouri**	**0.37**	**262**	P	**Pn**	**09 16 56.6**	**+0.8**
JIO				S	**Sn**	**09 17 03.0**	**+0.3**
JKMT	**Kesennumamotoy**	**0.41**	**319**	P	**Pn**	**09 16 57.0**	**+0.8**
JKMT				*i* S	**Sn**	**09 17 03.7**	**+0.3**
OFUJ	**Ofunato**	**0.59**	**349**	P	**Pn**	**09 16 59.1**	**+0.7**
OFUJ				S	**Sn**	**09 17 07.4**	**+0.2**
JMK	**Ichinoseki**	**0.64**	**314**	P	**Pn**	**09 16 59.6**	**+0.5**
JMK				S	**Sn**	**09 17 08.3**	**-0.2**
JOU	**Okura**	**0.91**	**262**	P	**Pn**	**09 17 02.8**	**+0.1**
JOU				S	**Sn**	**09 17 14.5**	**-0.3**
JMM	**Marumori**	**1.02**	**232**	P	**Pn**	**09 17 04.2**	**0.0**
JMM				S	**Sn**	**09 17 17.1**	**-0.3**
JOM	**Ohasama**	**1.05**	**337**	P	**Pn**	**09 17 04.9**	**+0.4**
JOM				S	**Sn**	**09 17 18.3**	**+0.2**
JYK	**Kaneyama**	**1.21**	**290**	P	**Pn**	**09 17 06.8**	**+0.1**
JRG	**Rokugo**	**1.28**	**314**	P	**Pn**	**09 17 07.8**	**+0.2**
JFK	**Kawauchi**	**1.36**	**213**	P	**Pn**	**09 17 09.3**	**+0.6**
JFK				*e*S	**Sn**	**09 17 25.6**	**0.0**
JYS	**Shirataka**	**1.40**	**259**	P	**Pn**	**09 17 09.7**	**+0.4**
JYS				*e*S	**Sn**	**09 17 26.9**	**+0.3**
MJAR	**Matsushiro Arr**	**3.47**	**237**	P	**Pn**	**09 17 39.9**	**+2.2**
	0.3nm,0.3s,baz=38,slow=14,SNR=30						
MAT	**Matsushiro**	**3.47**	**237**	P	**Pn**	**09 17 39.7**	**+2.0**
MAT				*e*S	**Sn**	**09 18 19.6**	**+2.1**
ASAJ	**Asahikawa**	**5.64**	**6**	P	**Pn**	**09 18 07.6**	**+0.2**
	0.8nm,0.3s,baz=190,slow=6.1,SNR=8.3						
ASAJ				S	**Sn**	**09 19 12.3**	**+1.6**
	0.6nm,0.3s,baz=85,slow=31,SNR=1.7						
USRK	**Ussuriysk Ar.**	**9.32**	**111**	P	**Pn**	**09 18 58.7**	**+0.9**
	baz=126,slow=14,SNR=4.6						
MA2	**Magadan**	**21.85**	**12**	LR	LR	09 29 29.6	
	comp=Z,34nm,20.2s,baz=119,slow=35						
H11N2	**WAKE ISLAND Hy**	**28.66**	**124**	T	T	09 53 09.6	
	baz=316,slow=75,SNR=144						
H11N1	**WAKE ISLAND Hy**	**28.67**	**124**	T	T	09 52 58.3	
	baz=316,slow=75,SNR=144						
H11N3	**WAKE ISLAND Hy**	**28.68**	**124**	T	T	09 52 59.0	
	baz=316,slow=75,SNR=130						
H11S1	**WAKE ISLAND Hy**	**29.42**	**126**	T	T	09 53 58.3	
	baz=318,slow=76,SNR=80						
H11S3	**WAKE ISLAND Hy**	**29.43**	**126**	T	T	09 53 52.0	
	baz=318,slow=76,SNR=91						
H11S2	**WAKE ISLAND Hy**	**29.44**	**126**	T	T	09 53 59.6	
	baz=318,slow=76,SNR=76						
ZALV	**Zalesovo Beam**	**41.17**	**311**	P	**P**	**09 24 25.5**	**-0.1**
	0.5nm,0.5s,baz=107,slow=9.2,SNR=2.8						
MKAR	**Makanchi Array**	**43.62**	**301**	P	**P**	**09 24 45.1**	**-0.5**
	0.5nm,0.6s,baz=83,slow=9.9,SNR=3.9						
MKAR				pP	**sP**	**09 25 04.5**	**+0.1**
	0.8nm,0.7s,baz=90,slow=8.6,SNR=4.2						
KURBB	**Kurchatov Arra**	**45.36**	**307**	P	**P**	**09 24 59.0**	**-0.4**
	1.7nm,0.5s,baz=80,slow=8.0,SNR=20						
KURBB				pP	**sP**	**09 25 16.6**	**-1.6**
	2.4nm,0.7s,baz=82,slow=8.1,SNR=10						
BVAR	**Borovoye Array**	**49.83**	**311**	P	**P**	**09 25 33.4**	**-0.6**
	0.3nm,0.5s,baz=74,slow=9.3,SNR=2.9						
WRA	**Warramunga Arr**	**58.56**	**188**	P	**P**	**09 26 37.3**	**-0.5**
	0.3nm,0.5s,baz=6.1,slow=7.2,SNR=3.0						

*IDC **03** 09:16:55.6±5.1, 5.81S×103.20E, h0km, mb3.5/3, mb1 3.5/3, mb1mx3.3/50, mbtmp3.5/3, Error ellipse: s-maj=175.5km s-min=72.8km az=49.0*

*DJA **03** 09:16:57.4±0.9, 6°S±.9°×107.4E±.°, h13km±13km, M3.9/5, MLv3.9/5*

ISC 03 09:16:57.7±1.7, 6.2S±0.1×103.57E±0.09, h38km, n11, σ0.52/12, mb3.6/3, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.15**	**54**	P	**Pn**	**09 17 17.2**	**0.0**
KASI				S	**Sn**	**09 17 31.9**	**+0.2**
LWLI	**Liwa**	**1.28**	**23**	P	**Pn**	**09 17 18.6**	**-0.6**
LWLI				S	**Sn**	**09 17 34.4**	**-0.7**
MDSI	**Maura Dua**	**1.81**	**20**	P	**Pn**	**09 17 26.8**	**+0.4**
MDSI				S	**Sn**	**09 17 48.5**	**+0.3**
MNAI	**Manna**	**1.93**	**342**	P	**Pn**	**09 17 27.9**	**-0.2**
MNAI				S	**Sn**	**09 17 51.1**	**0.0**
H08S2	**Diego Garcia H**	**30.88**	**266**	T	T	09 54 57.5	
	baz=88						
H08S3	**Diego Garcia H**	**30.88**	**266**	T	T	09 54 55.3	
	baz=88						
H08S1	**Diego Garcia H**	**30.89**	**266**	T	T	09 54 52.8	
	baz=88						
SONM	**Songino Array**	**53.87**	**2**	P	**P**	**09 26 17.8**	**+0.7**
	0.4nm,0.8s,baz=170,slow=8.8,SNR=2.7						
MKAR	**Makanchi Array**	**56.05**	**343**	P	**P**	**09 26 32.8**	**0.0**
	0.6nm,0.5s,baz=154,slow=8.6,SNR=7.3						
KURBB	**Kurchatov Arra**	**60.59**	**342**	P	**P**	**09 27 04.6**	**+0.2**
	0.3nm,0.6s,baz=160,slow=5.2,SNR=3.0						
TXAR	**Lajitas Array**	**145.51**	**45**	PKPbc	**PKiKP**	**09 36 35.8**	**-0.9**
	0.4nm,0.7s,baz=252,slow=1.2,SNR=4.8						

*NEIC **03** 09:20:23.4±1.0, 15.77N±0.07°×93.66W±0.02, h86km±15km, Error ellipse: s-maj=10.6km s-min=1.5km az=188.0*

*MEX **03** 09:20:24.6±0.5, 15.71N×93.69W, h86km±5km, MD4.0*

ISC 03 09:20:23.0±1.5, 15.72N±0.06°×93.60W±0.05, h88km±11km, n12, σ1.66/24, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.36**	**93**	*eP*	**Pn**	**09 20 37.2**	**+0.7**
PCIG				*eS*	**Sn**	**09 20 47.2**	**+0.6**
PCIG		**0.36**	**93**		**Pn**	**09 20 37.2**	**+0.7**
PCIG					**Sn**	**09 20 47.2**	**+0.6**
TGIG		**1.14**	**23**	*i* P	**Pn**	**09 20 45.6**	**+1.3**
TGIG				*eS*	**Sn**	**09 21 00.8**	**+0.5**
TGIG		**1.14**	**23**		**Pn**	**09 20 45.6**	**+1.3**
TGIG					**Sn**	**09 21 00.8**	**+0.5**
THIG		**1.52**	**122**	*eP*	**Pn**	**09 20 50.3**	**+1.3**
THIG				*i* S	**Sn**	**09 21 10.1**	**+1.6**
THIG		**1.52**	**122**		**Pn**	**09 20 50.3**	**+1.3**
THIG					**Sn**	**09 21 10.1**	**+1.6**
CMIG	**Matias Romero**	**1.84**	**318**	*eP*	**Pn**	**09 20 53.9**	**+0.8**
CMIG				*eS*	**Sn**	**09 21 14.3**	**-1.6**
CMIG	**Matias Romero**	**1.84**	**318**		**Pn**	**09 20 53.9**	**+0.8**
CMIG					**Sn**	**09 21 14.3**	**-1.6**
HUIG	**Huatulco**	**2.42**	**271**	*eP*	**Pn**	**09 20 59.9**	**-0.8**
HUIG				*i* S	**Sn**	**09 21 27.7**	**-1.9**
HUIG	**Huatulco**	**2.42**	**271**		**Pn**	**09 20 59.

1.0nm,0.6s,baz=336,slow=9.4,SNR=5.8
SONM Songino Array 36.15 345 P **P** **10 09 48.6 -0.2**
0.3nm,0.4s,baz=163,slow=7.5,SNR=2.6
KLR Kul'dur 37.13 13 P **P** **10 09 55.9 -1.0**
1.3nm,0.7s,baz=231,slow=8.5,SNR=5.1
ASAR Alice Springs 39.30 159 P **P** **10 10 16.2 +0.7**
1.2nm,0.5s,baz=336,slow=7.4,SNR=24
ASAR pP **pwP** **10 10 29.1 -1.7**
1.3nm,0.5s,baz=340,slow=7.0,SNR=8.6
MKAR Makanchi Array 45.77 324 P **P** **10 11 08.8 +0.9**
0.4nm,0.5s,baz=113,slow=8.2,SNR=4.6
MKAR sP **pwP** **10 11 26.4 +2.3**
0.3nm,0.6s,baz=131,slow=6.5,SNR=2.6
KURBB Kurchatov Arra 49.97 327 P **P** **10 11 40.6 +0.4**
0.5nm,0.4s,baz=120,slow=8.8,SNR=4.7
KURBB pP **sP** **10 11 54.6 -1.0**
0.8nm,0.7s,baz=112,slow=9.6,SNR=4.7
ARCES ARCESS Array B 79.09 339 P **P** **10 14 51.5 +1.4**
0.8nm,0.6s,baz=77,slow=7.8,SNR=3.7
YKA Yellowknife Ar 93.46 22 P **P** **10 16 00.9 -0.4**
0.1nm,0.4s,baz=308,slow=4.6,SNR=5.7

*IDC **03** 10:09:36.4±0.7, 10.˚19S×75.˚35W, h0km, mb3.9/10, mb1 4.2/13,mb1mx4.1/38,mbtmp4.0/13,ML3.8/3, MS3.4/9, Ms1 3.4/9,ms1mx3.2/29,Error ellipse: s-maj=22.0km s-min=14.6km az=83.0*
*ARE **03** 10:09:38±2.5, 10.˚17S±0.˚04×75.˚64W±0.˚06, h20km±4km, Error ellipse: s-maj=9.3km s-min=4.1km az=123.0*
*NEIC **03** 10:09:42.3±1.3, 10.˚23S±0.˚04×75.˚33W×0.˚05, h36km±7km, mb4.5/34,ML4.5(ARE), Error ellipse: s-maj=9.0km s-min=2.3km az=129.0*
ISC 03 10:09:40.1±0.4, 10.˚27S±0.˚05×75.˚33W×0.˚06, h25km, n74, σ1§02/74, mb4.5/25, MS3.2/7, Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
NNA	**Nana**	**2.26**	**221**	Pn		**Pn**	**10 10 15.7**	**-0.3**
	84nm,0.3s,baz=26,slow=19,SNR=94							
NNA				Pg		**Pb**	**10 10 18.5**	**-1.9**
	132nm,0.3s,baz=31,slow=17,SNR=98							
NNA				Sn		**Sn**	**10 10 42.4**	**-0.8**
	90nm,0.3s,baz=307,slow=20,SNR=18							
NNA				Lg		Lg	10 10 49.4	
	311nm,0.3s,baz=160,slow=22,SNR=14							
NNA	**Nana**	**2.26**	**221**			**Pn**	**10 10 16.2**	**+0.2**
NNA						**Sn**	**10 10 42.6**	**-0.6**
ATAH	**Atahualpa**	**4.34**	**316**	Pn		**Pn**	**10 10 47.4**	**+2.4**
	8.3nm,0.3s,baz=180,slow=5.0,SNR=30							
ATAH				Lg		Lg	10 11 46.2	
	6.4nm,0.3s,baz=344,slow=22,SNR=1.1							
LPAZ	**La Paz**	**9.21**	**131**	Pn		**Pn**	**10 11 55.6**	**+3.6**
	0.2nm,0.3s,baz=340,slow=17,SNR=12							
LPAZ				Lg		Lg	10 14 28.8	
	0.5nm,0.3s,baz=34,slow=18,SNR=3.2							
MNMC	**Minye Minye**	**10.41**	**148**	Pn		**Pn**	**10 12 08.5**	**+0.3**
MNMC				Sn		**Sn**	**10 14 03.8**	**-0.4**
OTAV	**Otavalo**	**10.89**	**343**	Pn		**Pn**	**10 12 16.1**	**+1.2**
OTAV				Sn		**Sn**	**10 14 14.0**	**-2.3**
PB11	**IPOC Station P**	**10.91**	**151**	Pn		**Pn**	**10 12 17.2**	**+2.4**
SAML	**Samuel**	**12.05**	**85**			**Pn**	**10 12 29.9**	**-0.5**
SAML				Sn		**Sn**	**10 14 42.8**	**-1.3**
LVC	**Limon Verde**	**13.72**	**154**	LR		LR	10 17 48.8	
	comp=Z,97nm,21.1s,baz=320,slow=36							
LVC	**Limon Verde**	**13.72**	**154**	Pn		**Pn**	**10 12 53.5**	**-0.1**
SIV	**San Ignacio**	**15.00**	**114**	Pn		**Pn**	**10 13 10.0**	**-0.6**
	0.7nm,0.3s,baz=303,slow=13,SNR=11							
SIV				Lg		Lg	10 17 25.5	
	0.9nm,0.3s,baz=58,slow=22,SNR=3.4							
ROSC	**El Rosal**	**15.04**	**4**	LR		LR	10 20 19.4	
	comp=Z,123nm,19.5s,baz=56,slow=43							
SDV	**Santo Domingo**	**19.60**	**14**	P		**P**	**10 14 06.3**	**-0.6**
	0.8nm,0.3s,baz=174,slow=12,SNR=4.0							
CFA	**Coronel Fontan**	**22.23**	**164**	P		**P**	**10 14 36.4**	**+1.4**
	3.5nm,0.7s,baz=340,slow=14,SNR=4.8							
CPUP	**Villa Florida**	**23.34**	**136**	P		**P**	**10 14 47.8**	**+1.2**
	3.8nm,1.0s,baz=327,slow=9.6,SNR=6.1							
CPUP				LR		LR	10 26 04.0	
	comp=Z,73nm,19.4s,baz=310,slow=42							
CPUP	**Villa Florida**	**23.34**	**136**	P		**P**	**10 14 48.8**	**+2.1**
BDFB	**Brasilia**	**27.14**	**104**	LR		LR	10 26 46.6	
	comp=Z,262nm,18.9s,baz=285,slow=38							
MDP	**Montagnes des**	**27.27**	**57**	LR		LR	10 25 11.9	
	comp=Z,71nm,19.2s,baz=172,slow=34							
PLCA	**Paso Flores**	**30.63**	**173**	P		**P**	**10 15 52.6**	**+0.1**
	0.8nm,0.7s,baz=0.0,slow=10,SNR=2.7							
PLCA				LR		LR	10 26 57.3	
	comp=Z,69nm,19.0s,baz=53,slow=34							
PLCA	**Paso Flores**	**30.63**	**173**	P		**P**	**10 15 53.5**	**+1.0**
PLCA				IAmb		IAmb	10 15 59.9	
	comp=Z,12nm,1.4s							
CMIG	**Matias Romero**	**33.36**	**324**	LR		LR	10 28 20.3	
	comp=Z,42nm,20.3s,baz=16,slow=34							
RPN	**Rapa Nui**	**36.15**	**238**	LR		LR	10 28 35.0	
	comp=Z,22nm,18.5s,baz=26,slow=32							
V53A	**Saluda**	**46.23**	**352**	P		**P**	**10 18 02.1**	**-1.3**
TX31	**Lajitas Ar. Si**	**47.93**	**326**	P		**P**	**10 18 17.6**	**+0.8**
TX32	**Lajitas Array**	**47.93**	**326**	P		**P**	**10 18 17.5**	**+0.7**
TXAR	**Lajitas Array**	**47.93**	**326**	P		**P**	**10 18 16.5**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=149,slow=9.2,SNR=14							
TXAR				PcP		**PcP**	**10 19 45.3**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=151,slow=6.4,SNR=4.2							
TXAR	**Lajitas Array**	**47.93**	**326**	P		**P**	**10 18 17.4**	**+0.6**
WHAR	**Wooly Hollow**	**48.07**	**341**	P		**P**	**10 18 17.3**	**-0.3**
WHAR				IAmb		IAmb	10 18 28.0	
	comp=Z,8.9nm,1.4s							
MNTX	**Cornudas Mount**	**50.69**	**327**	P		**P**	**10 18 38.1**	**+0.3**
319A	**Douglas**	**52.66**	**323**	P		**P**	**10 18 53.4**	**+0.7**
319A				IAmb		IAmb	10 18 54.6	
	comp=Z,5.5nm,0.9s							
SDCO	**Great Sand Dun**	**55.49**	**331**	P		**P**	**10 19 13.6**	**+0.1**
W18A	**Petrified Fore**	**55.65**	**326**	P		**P**	**10 19 15.4**	**+0.9**
W18A				IAmb		IAmb	10 19 15.9	
	comp=Z,6.7nm,1.0s							
X16A	**Lo Mia Camp, P**	**56.11**	**324**	P		**P**	**10 19 18.1**	**+0.4**
WUAZ	**Wupatki**	**56.86**	**325**	P		**P**	**10 19 24.3**	**+1.2**
Y12C	**Blythe**	**57.48**	**321**	P		**P**	**10 19 27.7**	**+0.4**
Y12C				IAmb		IAmb	10 19 29.4	
	comp=Z,4.0nm,0.9s							
W13A	**Hualapai Mount**	**58.02**	**323**	P		**P**	**10 19 32.8**	**+1.5**
W13A				IAmb		IAmb	10 19 34.6	
	comp=Z,4.7nm,1.1s							
XPFO	**Pion Flat**	**58.59**	**320**	P		**P**	**10 19 36.1**	**+0.8**
PFO	**Pinyon Flats O**	**58.60**	**320**	P		**P**	**10 19 36.5**	**+1.2**
PFO				IAmb		IAmb	10 19 39.9	
	comp=Z,3.7nm,1.1s							
KNB	**Kanab**	**58.75**	**325**	P		**P**	**10 19 37.2**	**+0.9**
MSU	**Marysvale**	**59.47**	**327**	P		**P**	**10 19 41.8**	**+0.5**
MWC	**Mount Wilson**	**60.01**	**320**	P		**P**	**10 19 45.4**	**+0.3**
MWC				IAmb		IAmb	10 19 46.5	
	comp=Z,3.6nm,0.8s							
PASC	**Pasadena Art C**	**60.06**	**319**	P		**P**	**10 19 46.7**	**+1.5**
TPNV	**Topopah Spring**	**60.68**	**323**	P		**P**	**10 19 49.7**	**+0.1**
DUG	**Dugway, Tooele**	**61.03**	**328**	P		**P**	**10 19 51.9**	**0.0**
DUG				IAmb		IAmb	10 19 54.0	
	comp=Z,4.6nm,1.0s							
PDAR	**Pinedale Array**	**61.35**	**332**	P		**P**	**10 19 53.7**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=117,slow=8.5,SNR=4.4							
PDAR	**Pinedale Array**	**61.35**	**332**	P		**P**	**10 19 54.4**	**+0.2**
OMMB	**Old Mammoth Mi**	**62.76**	**322**	P		**P**	**10 20 04.0**	**+0.2**
MDPB	**Devils Postpil**	**62.82**	**322**	P		**P**	**10 20 04.3**	**+0.1**
MDPB				IAmb		IAmb	10 20 11.7	
	comp=Z,4.8nm,1.2s							
NVAR	**Mina Array Bea**	**62.88**	**323**	P		**P**	**10 20 04.8**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=144,slow=6.3,SNR=8.7							
ULM	**Lac du Bonnet**	**62.88**	**345**	P		**P**	**10 20 03.1**	**-0.8**
	comp=Z,3.1nm,0.7s,baz=154,slow=8.5,SNR=7.8							
ULM	**Lac du Bonnet**	**62.88**	**345**	P		**P**	**10 20 02.8**	**-1.1**
YHL	**Hebgen Lake**	**63.71**	**332**	P		**P**	**10 20 10.9**	**+1.0**
GCMT	**Greycliff**	**63.77**	**334**	P		**P**	**10 20 10.8**	**+0.6**
YERR	**Yerington**	**63.79**	**323**	P		**P**	**10 20 11.1**	**+0.6**
YERR				IAmb		IAmb	10 20 14.1	
	comp=Z,6.2nm,1.3s							
VCNR	**Virginia City**	**64.24**	**323**	P		**P**	**10 20 14.2**	**+0.7**
VCNR				IAmb		IAmb	10 20 17.6	
	comp=Z,5.7nm,1.1s							
PAHR	**Pah Rah Range**	**64.35**	**323**	P		**P**	**10 20 14.9**	**+0.8**
PAHR				IAmb		IAmb	10 20 15.9	
	comp=Z,4.3nm,1.0s							
MFID	**Camas Ranch**	**64.91**	**328**	P		**P**	**10 20 18.5**	**+0.9**
MFID				IAmb		IAmb	10 20 19.4	
	comp=Z,8.9nm,1.3s							
BEKR	**Beckworth**	**65.02**	**323**	P		**P**	**10 20 19.0**	**+0.5**
BEKR				IAmb		IAmb	10 20 20.7	
	comp=Z,6.3nm,1.3s							

ORV	**Oroville**	**65.51**	**322**	P		**P**	**10 20 22.5**	**+1.0**
DBIC	**Dimbokro**	**72.16**	**80**	LR		LR	10 49 49.8	
	comp=Z,50nm,20.4s,baz=294,slow=33							
YKA	**Yellowknife Ar**	**78.65**	**343**	P		**P**	**10 21 39.1**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=140,slow=5.9,SNR=17							
YKA	**Yellowknife Ar**	**78.65**	**343**	P		**P**	**10 21 39.9**	**+0.3**
QSPA	**South Pole Qui**	**79.85**	**180**	P		**P**	**10 21 47.7**	**+1.3**
QSPA				IAmb		IAmb	10 21 49.0	
	comp=Z,8.5nm,1.4s							
TORD	**Torodi Ar. Bea**	**79.91**	**75**	P		**P**	**10 21 47.7**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=264,slow=5.1,SNR=8.7							
INK	**Inuvik**	**88.37**	**342**	P		**P**	**10 22 29.5**	**+0.1**
BCAR	**Beaver Creek A**	**88.78**	**335**	P		**P**	**10 22 32.4**	**+0.9**
EGAK	**Eagle**	**89.28**	**337**	P		**P**	**10 22 34.4**	**+0.7**
ILAR	**Eielson Array**	**91.52**	**336**	P		**P**	**10 22 43.8**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=160,slow=2.3,SNR=6.4							
ILAR	**Eielson Array**	**91.52**	**336**	P		**P**	**10 22 44.5**	**+0.3**
ZALV	**Zalesovo Beam**	**133.63**	**16**	PKP		**PKPdf**	**10 28 55.0**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=316,slow=4.1,SNR=3.6							
ASAR	**Alice Springs**	**135.79**	**220**	PKP		**PKPdf**	**10 28 59.5**	**0.0**
	comp=Z,0.7nm,0.8s,baz=117,slow=2.1,SNR=5.3							
ASAR	**Alice Springs**	**135.79**	**220**			**PKPdf**	**10 28 59.4**	**-0.1**
WRA	**Warramunga Arr**	**138.11**	**224**	PKP		**PKPdf**	**10 29 04.2**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=138,slow=1.5,SNR=4.7							
WRA	**Warramunga Arr**	**138.11**	**224**			**PKPdf**	**10 29 02.8**	**-1.1**

*IDC **03** 10:14:51.5±1.0, 19.˚33N×67.˚90W, h0km, mb3.5/5, mb1 4.0/8,mb1mx3.6/38,mbtmp3.7/8,ML3.6/3,Error ellipse: s-maj=35.4km s-min=17.3km az=42.0*
*RSPR **03** 10:14:54.9,19.˚44N×68.˚00W,h31km±22km,MD3.7/17*
*NEIC **03** 10:14:54.3±2.2, 19.˚32N±0.˚05×67.˚96W±0.˚04, h23km±6km, Error ellipse: s-maj=8.1km s-min=4.0km az=203.0*
*BJI **03** 10:14:55.0±0.0, 19.˚10N×68.˚00W, h40km, Ms5.3/1, Ms7 5.0/1*
*OSPL **03** 10:14:56.0±1.2, 19.˚10N×67.˚97W, h0km±9km, MD3.9, ML4.0*
ISC 03 10:14:50.9±1.4, 19.˚35N±0.˚04×67.˚98W±0.˚02, h3km±9km, n91, σ1§37/122, mb3.8/7, 8C-9D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.91**	**204**	*i* P		**Pg**	**10 15 08.2**	**-0.2**
PCDR				*e*S		**Sg**	**10 15 17.5**	**-2.7**
PCDR				IAML			10 15 26.8	
	comp=Z,4μm,0.5s							
PCDR	**Punta Cana, DR**	**0.91**	**204**			**Pg**	**10 15 08.2**	**-0.2**
PCDR				Sn		**Sg**	**10 15 20.0**	**-0.2**
AGPR	**Aguadilla, PR**	**1.20**	**137**	↑*e*P		**Pg**	**10 15 14.8**	**+0.9**
AGPR	**Aguadilla, PR**	**1.20**	**137**	*e*S		**Sn**	**10 15 30.3**	**-1.2**
AGPR	**Aguadilla, PR**	**1.20**	**137**	*i* P		**Pg**	**10 15 14.1**	**+0.1**
AGPR				*e*S		**Sb**	**10 15 28.0**	**-2.2**
AGPR				IAML			10 15 31.7	
	comp=Z,3μm,0.3s							
AGPR	**Aguadilla, PR**	**1.20**	**137**			**Pb**	**10 15 13.4**	**-0.9**
AGPR				Sn		**Sn**	**10 15 30.8**	**-0.6**
MPR	**Mayaguez**	**1.38**	**145**	*i* P		**Pg**	**10 15 17.6**	**+0.2**
MPR				*e*S		**Sb**	**10 15 33.1**	**-2.3**
MPR				IAML			10 15 38.5	
	comp=Z,896nm,0.6s							
MPR	**Mayaguez**	**1.38**	**145**			**Pn**	**10 15 16.0**	**-1.1**
MPR				Sn		**Sg**	**10 15 35.7**	**+0.3**
DR12	**Loma Pena Alta**	**1.43**	**247**			**Pb**	**10 15 18.4**	**+0.1**
DR12				Sn		**Sb**	**10 15 36.9**	**0.0**
LSP	**Las Mesas**	**1.44**	**144**	↓*e*P		**Pg**	**10 15 18.6**	**0.0**
LSP	**Las Mesas**	**1.44**	**144**	*e*S		**Sg**	**10 15 37.3**	**0.0**
LSP	**Las Mesas**	**1.44**	**144**			**Pg**	**10 15 18.6**	**0.0**
LSP						**Sg**	**10 15 37.3**	**0.0**
AOPR	**Arecibo Observ**	**1.53**	**130**	↓*e*P		**Pn**	**10 15 18.9**	**-0.3**
AOPR	**Arecibo Observ**	**1.53**	**130**	*e*S		**Sb**	**10 15 39.2**	**-0.5**
AOPR	**Arecibo Observ**	**1.53**	**130**			**Pb**	**10 15 19.1**	**-0.9**
AOPR				Sn		**Sg**	**10 15 40.8**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.57**	**148**	↓*e*P		**Pb**	**10 15 20.4**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.57**	**148**	*e*S		**Sb**	**10 15 40.3**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.57**	**148**			**Pb**	**10 15 20.6**	**0.0**
CRPR				Sn		**Sb**	**10 15 40.5**	**-0.3**
EMPR	**Esperanza - Ma**	**1.63**	**122**	↓*e*P		**Pb**	**10 15 21.2**	**-0.4**
EMPR	**Esperanza - Ma**	**1.63**	**122**	*e*S		**Sb**	**10 15 41.4**	**-1.0**
EMPR	**Esperanza - Ma**	**1.63**	**122**			**Pg**	**10 15 21.6**	**-0.5**
EMPR				Sn		**Sg**	**10 15 43.2**	**0.0**
MLPR	**Magueyes Islan**	**1.64**	**147**	↑*e*P		**Pb**	**10 15 20.8**	**-0.8**
MLPR	**Magueyes Islan**	**1.64**	**147**	*e*S		**Sn**	**10 15 41.3**	**-0.8**
MLPR	**Magueyes Islan**	**1.64**	**147**			**Pn**	**10 15 20.5**	**0.0**
MLPR				Sn		**Sn**	**10 15 40.8**	**-1.3**
GBPR	**Guanica, Bosqu**	**1.72**	**142**	↓*e*P		**Pb**	**10 15 22.6**	**-0.5**
GBPR	**Guanica, Bosqu**	**1.72**	**142**	*e*S		**Sb**	**10 15 44.2**	**-0.9**
GBPR	**Guanica, Bosqu**	**1.72**	**142**			**Pb**	**10 15 22.6**	**-0.5**
GBPR				Sn		**Sb**	**10 15 44.2**	**-0.9**
CELP	**Cerrillos**	**1.84**	**133**	↓*e*P		**Pb**	**10 15 23.7**	**-1.4**
CELP	**Cerrillos**	**1.84**	**133**			**Pb**	**10 15 23.7**	**-1.4**
OBIP	**Obispado Ponce**	**1.84**	**135**	↓*e*P		**Pb**	**10 15 24.3**	**-0.9**
OBIP	**Obispado Ponce**	**1.84**	**135**	*e*S		**Sb**	**10 15 46.1**	**-1.8**
OBIP	**Obispado Ponce**	**1.84**	**135**			**Pb**	**10 15 24.7**	**-0.5**
OBIP						**Sb**	**10 15 47.0**	**-1.6**
ICMP	**Isla Caja de M**	**2.01**	**136**	↑*e*P		**Pb**	**10 15 27.4**	**-0.6**
ICMP	**Isla Caja de M**	**2.01**	**136**	*e*S		**Sb**	**10 15 51.9**	**-1.5**
ICMP	**Isla Caja de M**	**2.01**	**136**	Pn		**Pb**	**10 15 27.6**	**-0.4**
ICMP				Sn		**Sn**	**10 15 50.5**	**-0.8**
SDD	**Santo Domingo**	**2.03**	**244**	*i* P		**Pb**	**10 15 28.2**	**-0.2**
SDD				*e*S		**Sb**	**10 15 53.2**	**-0.9**
SDD	**Santo Domingo**	**2.03**	**244**			**Pb**	**10 15 27.9**	**-0.5**
SDD				Sn		**Sn**	**10 15 51.2**	**-0.6**
GCPR	**Guaynabo City**	**2.08**	**120**			**Pn**	**10 15 27.2**	**+0.6**
GCPR				Sn		**Sn**	**10 15 52.0**	**-1.0**
SJG	**San Juan**	**2.13**	**125**	Pn		**Pn**	**10 15 28.0**	**+0.7**
	comp=Z,40nm,0.3s,baz=308,slow=9.8,SNR=34							
SJG				Sn		**Sn**	**10 15 53.3**	**-1.0**
	comp=Z,119nm,0.3s,baz=282,slow=24,SNR=6.5							
SJG	**San Juan**	**2.13**	**125**			**Pb**	**10 15 28.2**	**-1.9**
SJG				Sn		**Sb**	**10 15 54.6**	**-2.3**
IGPR	**InterUniversit**	**2.25**	**127**	↓*e*P		**Pn**	**10 15 29.6**	**+0.7**
IGPR	**InterUniversit**	**2.25**	**127**	*e*S		**Sn**	**10 15 56.5**	**-0.8**
CBYP	**Canovanas**	**2.28**	**118**	↑*e*P		**Pn**	**10 15 29.8**	**+0.3**
CBYP	**Canovanas**	**2.28**	**118**			**Pn**	**10 15 30.2**	**+0.8**
CBYP				Sn		**Sn**	**10 15 56.4**	**-1.7**
PDPR	**Patillas Dam,**	**2.28**	**125**	↑*e*P		**Pn**	**10 15 30.2**	**+0.7**
PDPR	**Patillas Dam,**	**2.28**	**125**	Pn		**Pn**	**10 15 30.2**	**+0.7**
PDPR				Sn		**Sn**	**10 15 58.4**	**+0.4**
BON1	**Bonao**	**2.31**	**260**	*i* P		**Pb**	**10 15 32.9**	**-0.4**
BON1				*e*S		**Sb**	**10 16 01.4**	**-0.9**
BON1				IAML			10 16 04.7	
	comp=Z,2μm,0.6s							
HUMP	**Col San Antoni**	**2.35**	**120**	↓*e*P		**Pn**	**10 15 30.8**	**+0.4**
HUMP	**Col San Antoni**	**2.35**	**120**	*e*S		**Sn**	**10 15 59.6**	**-0.2**
HUMP	**Col San Antoni**	**2.35**	**120**			**Pn**	**10 15 31.1**	**+0.7**
HUMP				Sn		**Sn**	**10 15 59.4**	**-0.4**
BANI	**BANI**	**2.44**	**247**			**Pb**	**10 15 34.6**	**-0.9**
SC01	**Santiago de lo**	**2.59**	**272**	*i* P		**Pb**	**10 15 38.0**	**0.0**
SC01				*e*S		**Sb**	**10 16 08.2**	**-2.1**
SC01				IAML			10 16 32.5	
	comp=Z,728nm,0.6s							
SC01	**Santiago de lo**	**2.59**	**272**			**Pb**	**10 15 36.6**	**-1.4**
MTP	**Monte Pirata**	**2.62**	**118**	↑*e*P		**Pn**	**10 15 34.7**	**+0.7**
MTP	**Monte Pirata**	**2.62**	**118**	*e*S		**Sn**	**10 16 05.6**	**-0.8**
MTP	**Monte Pirata**	**2.62**	**118**			**Pn**	**10 15 35.2**	**+1.2**
MTP	**Monte Pirata**	**2.62**	**118**			**Sn**	**10 16 05.6**	**-0.8**
MTP	**Monte Pirata**	**2.62**	**118**			**Sn**	**10 16 06.0**	**-0.4**
STVI	**Saint Thomas**	**3.04**	**109**	↑*e*P		**Pn**	**10 15 40.0**	**+0.2**
STVI	**Saint Thomas**	**3.04**	**109**	*e*S		**Sn**	**10 16 15.5**	**-1.1**
STVI	**Saint Thomas**	**3.04**	**109**			**Pn**	**10 15 40.4**	**+0.6**
STVI	**Saint Thomas**	**3.04**	**109**			**Sn**	**10 16 15.5**	**-1.1**
STVI	**Saint Thomas**	**3.04**	**109**			Lg	10 16 15.9	
SJM1	**San Juan de la**	**3.11**	**260**	*i* P		**Pb**	**10 15 44.0**	**-2.8**
SDDR	**Presa de Saban**	**3.14**	**264**	*i* P		**Pb**	**10 15 44.9**	**-2.6**
SDDR				*e*S		**Sn**	**10 16 22.2**	**+2.7**
SDDR				IAML			10 16 37.6	
	comp=Z,575nm,0.5s							
SDDR	**Presa de Saban**	**3.14**	**264**	Pn		**Pb**	**10 15 44.9**	**-2.6**
SDDR				Sn		**Sn**	**10 16 18.0**	**-1.4**
TBVI	**Tortola**	**3.32**	**106**	↑*e*P		**Pn**	**10 15 45.2**	**+1.5**
TBVI	**Tortola**	**3.32**	**106**	*e*S		**Sn**	**10 16 22.6**	**-1.1**
TBVI	**Tortola**	**3.32**	**106**			**Pn**	**10 15 45.2**	**+1.5**
TBVI				Sn		**Sn**	**10 16 22.6**	**-1.1**
GRTK	**Grand Turk**	**3.65**	**307**	Pn		**Pn**	**10 15 50.0**	**+1.6**
GRTK				Sn		**Sn**	**10 16 29.6**	**-2.3**
LGNH	**Logne**	**4.45**	**260**	Pn		**Pn**	**10 16 00.4**	**+1.1**
LGNH				Sn		**Sn**	**10 16 52.4**	**+0.7**
SMRT	**St. Maarten**	**4.83**	**105**			**Pn**	**10 16 04.9**	**+0.4**
SMRT				Sn		**Sn**	**10 17 00.4**	**-0.6**
SKI	**Saint Kitts**	**5.37**	**111**	Pn		**Pn**	**10 16 10.4**	**-1.5**

GTBY	**Guantanamo Bay**	**6.74**	**276**	Pn		**Pn**	**10 16 29.8**	**-0.9**
GTBY				Sn		**Sn**	**10 17 46.3**	**-1.8**
PCRV	**Puerto La Cruz**	**9.68**	**160**	Pn		**Pn**	**10 17 12.3**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=4.5,slow=11,SNR=4.9							
PCRV				Sn		Sn	10 18 50.3	-10
	comp=Z,0.4nm,0.3s,baz=37,slow=20,SNR=3.0							
PLCV	**Puerto La Cruz**	**9.70**	**160**			**Pn**	**10 17 12.3**	**+0.8**
PLCV						Sn	10 18 50.3	-11
SDV	**Santo Domingo**	**10.71**	**194**	Pn		**Pn**	**10 17 26.4**	**+0.9**
	comp=Z,1.3nm,0.3s,baz=16,slow=9.9,SNR=3.0							
SDV				Sn		Sn	10 19 14.1	-12
	comp=Z,0.7nm,0.3s,baz=68,slow=20,SNR=1.4							
SDV	**Santo Domingo**	**10.71**	**194**	Pn		**Pn**	**10 17 27.1**	**+1.6**
JSC	**Jenkinsville**	**18.99**	**324**	P		**P**	**10 19 09.8**	**-3.8**
V53A	**Saluda**	**20.87**	**324**	P		**P**	**10 19 33.7**	**-0.5**
V53A				IAmb		IAmb	10 19 43.1	
	comp=Z,20nm,1.5s							
Z50A	**Ashland**	**21.18**	**314**	P		**P**	**10 19 36.2**	**-1.3**
Z50A				IAmb		IAmb	10 19 49.0	
	comp=Z,12nm,1.1s							
TKL	**Tuckaleechee C**	**21.40**	**323**	S		**S**	**10 23 31.5**	**-6.5**
	comp=Z,2.7nm,0.6s,baz=57,slow=17,SNR=1.3							
R55A	**Marlinton**	**21.62**	**333**	P		**P**	**10 19 41.1**	**-1.1**
R55A				IAmb		IAmb	10 19 58.1	
	comp=Z,24nm,1.2s							
TX31	**Lajitas Ar. Si**	**33.88**	**294**	P		**P**	**10 21 37.3**	**+2.1**
TX32	**Lajitas Array**	**33.88**	**294**	P		**P**	**10 21 37.3**	**+2.1**
TXAR	**Lajitas Array**	**33.88**	**294**	P		**P**	**10 21 36.8**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=112,slow=9.3,SNR=11							
SDCO	**Great Sand Dun**	**37.40**	**307**	P		**P**	**10 22 07.3**	**+1.8**
NVAR	**Mina Array Bea**	**47.36**	**305**	P		**P**	**10 23 27.8**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=107,slow=7.3,SNR=3.8							
YKA	**Yellowknife Ar**	**53.65**	**335**	P		**P**	**10 24 14.9**	**+1.5**
	comp=Z,0.1nm,0.5s,baz=108,slow=7.4,SNR=5.3							
TORD	**Torodi Ar. Bea**	**66.81**	**84**	P		**P**	**10 25 44.7**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=295,slow=6.7,SNR=3.5							
ILAR	**Eielson Array**	**67.95**	**333**	P		**P**	**10 25 52.8**	**+2.0**
	comp=Z,0.3nm,0.8s,baz=95,slow=6.8,SNR=3.1							

**IDC 03 10:20:49.0±1.4, 19.˚01N×120.˚49E, h0km, mb3.4/4, mb1 3.8/4,mb1mx3.4/41,mbtmp3.4/4, Error ell

WHN Wuhan 12.52 336 P Pn 10 27 26.8 -5.8
WHN S Sn 10 29 39.8 -12
WHN LR LR
comp=N,3µm,11.7s
WHN LR LR
comp=E,2µm,12.5s
WHN LR LR
comp=Z,4µm,12.4s
NJ2 Nanjing 12.91 355 *e*P **Pn 10 27 38.2 +0.3**
NJ2 PP **P 10 27 50.8 +2.4**
NJ2 pmax pmax
comp=Z,12nm,1.1s
NJ2 LR LR
comp=Z,1µm,9.0s
NJ2 LR LR
comp=Z,1µm,10.9s
NJ2 LR LR
comp=Z,980nm,10.9s
KCP Kidapawan 12.97 158⇓ *e*P **P 10 27 45.0 -4.2**
DAV Davao City (W) 13.10 156 LR LR 10 33 54.5
comp=Z,2µm,19.0s,baz=356,slow=43
DAV Davao City (W) 13.10 156⇓ *e*P **Pn 10 27 43.4 +2.9**
GYA Guiyang 14.43 303⇑ *i*P **Pn 10 27 57.7 -1.1**
GYA PP **PnPn 10 28 11.0 +4.2**
GYA S **Sn 10 30 34.0 -4.1**
GYA SS **S 10 30 54.0 -3.7**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,50nm,4.8s
GYA LR LR
comp=Z,960nm,8.9s
GYA LR LR
comp=Z,1µm,10.7s
GYA LR LR
comp=Z,2µm,8.9s
ENH Enshi 14.73 321 Pn **Pn 10 28 01.4 -1.3**
SLVN Son La 15.43 281 Pn **Pn 10 28 11.8 -0.4**
JNU Nakatsue 16.90 32 Pn **Pn 10 28 29.2 -1.6**
comp=Z,0.8nm,0.3s,baz=239,slow=6.0,SNR=17
JNU LR LR 10 36 15.7
comp=Z,298nm,18.2s,baz=212,slow=42
JNU Nakatsue 16.90 32 **Pn 10 28 29.9 -0.9**
JNU IAmb IAmb 10 28 35.1
comp=Z,210nm,1.5s
KMI Kunming 17.21 293 P **P 10 28 38.6 +2.1**
KMI pP sP 10 28 44.3 -0.1
KMI sP pwP 10 28 47.9 +1.4
KMI PP **PnPn 10 28 52.9 +7.8**
KMI S **S 10 31 53.0 -1.8**
KMI pmax pmax
comp=Z,20nm,1.3s
KMI pmax pmax
comp=Z,230nm,3.4s
KMI LR LR
comp=Z,990nm,11.6s
KMI LR LR
comp=Z,1µm,12.8s
KMI LR LR
comp=Z,1µm,12.2s
KMI Kunming 17.21 293 P **Pn 10 28 35.6 +0.6**
KMI pmax pmax
comp=Z,65nm,1.3s
KMI Kunming 17.21 293 P **Pn 10 28 35.6 +0.6**
TIA Tai'an 17.22 352 P **P 10 28 37.8 +1.6**
TIA pmax pmax
comp=Z,25nm,1.3s
TIA pmax pmax
comp=Z,270nm,7.2s
TIA LR LR
comp=Z,520nm,11.5s
TIA LR LR
comp=Z,580nm,13.0s
TIA LR LR
comp=Z,840nm,13.4s
XAN Xi'an 17.91 328 P **P 10 28 45.1 +1.2**
XAN sP sP 10 28 52.0 -0.2
XAN PP **PnPn 10 28 59.2 +4.7**
XAN pmax pmax
comp=Z,15nm,1.5s
XAN pmax pmax
comp=Z,120nm,5.1s
XAN LR LR
comp=Z,1µm,12.3s
XAN LR LR
comp=Z,800nm,12.8s
XAN LR LR
comp=Z,1µm,10.8s
XAN Xi'an 17.91 328 P **Pn 10 28 41.8 -1.6**
XAN pmax pmax
comp=Z,36nm,1.2s
XAN Xi'an 17.91 328 **Pn 10 28 41.8 -1.6**
TJN Taejon 18.30 19*ce*P **Pn 10 28 47.9 -0.2**
SBUM Sibu 18.32 206 **P 10 28 46.1 -2.4**
SBUM Sibu 18.32 206 P **Pn 10 28 52.0 +3.5**
MRSI Marisa 18.63 174 P **Pn 10 28 54.1 +1.9**
comp=Z,592nmcomp=Z,40nm,1.1s
MPSI Mapaga 18.69 181 P Pn 10 29 04.1 +11
CD2 Chengdu 18.91 311⇑ *i*P **Pn 10 28 56.4 +0.7**
CD2 sP pwP 10 29 07.3 +2.2
CD2 PP sP 10 29 13.5 +10
CD2 S **Sn 10 32 27.4 +0.5**
CD2 sS sS 10 32 36.6 -1.3
CD2 pmax pmax
comp=Z,30nm,0.7s
CD2 pmax pmax
comp=Z,470nm,5.1s
CD2 LR LR
comp=Z,2µm,10.2s
CD2 LR LR
comp=Z,2µm,12.8s
CD2 LR LR
comp=Z,2µm,10.8s
KSAR Wonju Array Be 19.44 19 P **P 10 28 59.1 -1.5**
KSAR PcP **PcP 10 33 22.5 +1.1**
KSRS Korea Array 19.46 19 P **P 10 29 00.6 -0.2**
comp=Z,0.7nm,0.3s,baz=200,slow=12,SNR=41
KSRS PcP **PcP 10 33 21.8 +0.3**
comp=Z,0.1nm,0.3s,baz=222,slow=3.1,SNR=4.3
KSRS LR LR 10 35 46.5
comp=Z,122nm,21.6s,baz=211,slow=35
KS19 Wonju Array Si 19.49 19 P **P 10 29 00.9 -0.3**
TIY Taiyuan 19.70 342 *e*P **Pn 10 29 05.4 +0.3**
TIY S **Sn 10 32 46.8 +1.0**
TIY pmax pmax
comp=Z,190nm,5.4s
TIY LR LR
comp=Z,830nm,9.9s
TIY LR LR
comp=Z,770nm,8.8s
TIY LR LR
comp=Z,810nm,10.2s
DL2 Dalian 19.74 3 P **Pn 10 29 05.6 +0.2**
DL2 S **Sn 10 32 50.5 +4.0**
DL2 pmax pmax
comp=Z,57nm,1.1s
DL2 pmax pmax
comp=Z,260nm,11.5s
DL2 LR LR
comp=Z,630nm,14.6s
DL2 LR LR
comp=Z,730nm,13.6s
DL2 LR LR
comp=Z,630nm,9.8s
KSM Kuching 20.04 210 P Pn 10 29 09.0 -0.2
CM31 Chiang Mai Arr 20.12 272 P **P 10 29 07.6 -0.6**
CM31 IAmb IAmb 10 29 16.8
comp=Z,122nm,1.9s
CMAR Chiang Mai Arr 20.12 272 P Pn 10 29 09.9 -0.2
CMAR 10 33 24.0
CMAR Chiang Mai Arr 20.12 272 P Pn 10 29 10.5 +0.4
comp=Z,11nm,0.9s,baz=81,slow=8.7,SNR=56
CMAR PcP **PcP 10 33 24.1 +1.0**
comp=Z,3.6nm,0.7s,baz=77,slow=0.5,SNR=15
CMAR LR LR 10 36 34.3
comp=Z,140nm,18.3s,baz=90,slow=36
CMAR Chiang Mai Arr 20.12 272 P Pn 10 29 09.9 -0.2
CMAR PcP **PcP 10 33 24.0 +1.0**
LUWI Luwuk 20.22 172 P Pn 10 29 15.5 +4.3
LUWI Luwuk 20.22 172 P **P 10 29 08.0 -1.2**
STKI Sintang 20.79 205 P Pn 10 29 29.7 +12
BJT Baijiatuau 21.09 351 P **P 10 29 19.7 +1.2**
BJT pmax pmax
comp=Z,142nm,1.2s
BJT Baijiatuau 21.09 351 P **P 10 29 19.7 +1.2**
BJT IAmb IAmb 10 29 30.0
comp=Z,142nm,1.2s
BJI Beijing 21.11 351 P **P 10 29 20.0 +1.3**
BJI pmax pmax
comp=Z,74nm,1.1s
BJI LR LR
comp=Z,430nm,12.2s
BJI LR LR
comp=Z,320nm,9.2s
JCJ Chichijima 21.71 65 LR LR 10 36 39.3
comp=Z,84nm,18.2s,baz=255,slow=34
SANI Sanana 21.82 164 P **P 10 29 25.1 -1.4**
INU Inuyama 21.96 39 P **P 10 29 27.5 -0.4**
INU IAmb IAmb 10 29 30.8
comp=Z,115nm,1.3s
TTSI Tana Toraja 22.05 181 P P 10 29 45.2 +16
LZH Lanzhou 22.18 323⇓ P **P 10 29 32.5 +2.0**
LZH sP sP 10 29 38.0 -0.9
LZH PP **PnPn 10 29 57.6 +4.5**
LZH pmax pmax
comp=Z,48nm,1.1s
LZH pmax pmax
comp=Z,380nm,4.8s
LZH LR LR
comp=Z,1µm,11.9s
LZH LR LR
comp=Z,980nm,10.3s
LZH LR LR
comp=Z,1µm,10.8s
KBKI Kotabaru 22.64 190 P P 10 29 50.8 +15
SIJI Sorong 22.67 150 LR LR 10 40 22.2
comp=Z,144nm,18.0s,baz=324,slow=42
HHC Hu-ho-hao-te 22.86 343 *e*P **P 10 29 38.8 +1.2**
HHC S **S 10 33 42.3 -3.6**
HHC pmax pmax
comp=Z,15nm,1.0s
HHC LR LR
comp=Z,430nm,13.2s
HHC LR LR
comp=Z,310nm,14.5s
HHC LR LR
comp=Z,710nm,12.8s
SPSI Sidrap Palu 22.96 181 P **P 10 29 44.9 +6.2**
BTO Baotou 23.10 340 *e*P **P 10 29 41.5 +1.4**
NLAI Namlea 23.26 162 P **P 10 29 47.2 +5.5**
BNSI Bone 23.39 180 P P 10 29 50.6 +7.6
MAJO Matsushiro 23.48 39 *i* P **P 10 29 43.6 -0.2**
MAJO pmax pmax
comp=Z,9.0nm,1.1s
MAJO Matsushiro 23.48 39 P **P 10 29 41.5 -2.4**
MAT Matsushiro 23.48 39 P **P 10 29 41.9 -1.9**
MAT S **S 10 33 58.4 +2.2**
MJAR Matsushiro Arr 23.48 39 P **P 10 29 42.0 -1.8**
MJAR pmax pmax
comp=Z,10.0nm,1.0s
MJAR Matsushiro Arr 23.48 39 P **P 10 29 42.3 -1.5**
comp=Z,3.9nm,1.0s,baz=240,slow=12,SNR=9.3
MJAR Matsushiro Arr 23.48 39 P **P 10 29 42.0 -1.8**
MJB9 Matsu-Tunnel 23.48 39 P **P 10 29 41.7 -2.1**
KULM Kulim 23.49 237 P **P 10 29 44.4 +0.3**
KULM IAmb IAmb 10 30 00.7
comp=Z,102nm,1.7s
KULM Kulim 23.49 237 P **P 10 29 45.0 +0.9**
MYKOM Kota Tinggi 23.52 225 P **P 10 29 44.7 +0.4**
MYKOM IAmb IAmb 10 29 46.2
comp=Z,67nm,1.3s
MYKOM Kota Tinggi 23.52 225 P **P 10 29 46.0 +1.7**
IPM Ipoh 23.70 234 P **P 10 29 44.3 -1.8**
IPM IAmb IAmb 10 29 48.1
comp=Z,64nm,1.3s
IPM Ipoh 23.70 234 P **P 10 29 46.0 -0.1**
KAPI Kappang 24.00 181 P **P 10 29 49.1 +0.2**
KAPI pmax pmax
comp=Z,174nm,1.5s
KAPI Kappang 24.00 181 P **P 10 29 49.1 +0.2**
GUMO Guam 24.31 99 LR LR 10 37 51.5
comp=Z,251nm,18.6s,baz=258,slow=33
CN2 Changchun 24.98 9⇑ P **P 10 29 58.1 +0.5**
CN2 *es*P sP 10 30 05.0 -1.3
CN2 *es*S **S 10 34 18.8 -1.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=Z,500nm,13.0s
CN2 LR LR
comp=Z,600nm,13.0s
CN2 LR LR
comp=Z,500nm,11.0s
MSHR Mys Shultsa 25.15 19 *i* P **P 10 29 58.6 -0.5**
SAIH SAIHA 25.62 282 *e*P **P 10 30 04.4 +0.6**
SAIH IAmb IAmb 10 30 09.8
comp=Z,33nm,1.2s
PSI Prapat 26.38 235 P **P 10 30 10.2 -0.5**
PSI pmax pmax
comp=Z,34nm,1.2s
RPSI Rantau Prapat 26.45 234 P **P 10 30 10.2 -0.9**
RPSI IAmb IAmb 10 30 12.4
comp=Z,34nm,1.2s
MDJ Mudanjiang 26.59 15 P **P 10 30 12.8 +0.6**
MDJ pmax pmax
comp=Z,65nm,1.3s
MDJ pmax pmax
comp=Z,110nm,2.6s
MDJ Mudanjiang 26.59 15 P **P 10 30 12.3 +0.1**
MDJ IAmb IAmb 10 30 13.7
comp=Z,47nm,0.9s
GTA Gaotai 26.79 323⇓ P **P 10 30 15.4 +1.2**
GTA pP pP 10 30 20.5 +0.2
GTA sP pwP 10 30 23.6 -0.7
GTA PcP **PcP 10 33 37.8 +0.9**
GTA sS sS 10 35 05.1 +6.3
GTA pmax pmax
comp=Z,12nm,1.3s
GTA pmax pmax
comp=Z,150nm,4.1s
GTA LR LR
comp=Z,300nm,13.3s
GTA LR LR
comp=Z,580nm,13.3s
GTA LR LR
comp=Z,750nm,12.4s
USA0B Ussuriysk Arra 26.87 19 P **P 10 30 15.4 +0.7**
USA0B pmax pmax
comp=Z,19nm,1.0s
USA0B Ussuriysk Arra 26.87 19 P **P 10 30 15.4 +0.7**
USRK Ussuriysk Ar. 26.87 19 P **P 10 30 13.6 -1.1**
USRK Ussuriysk Ar. 26.87 19 P **P 10 30 15.4 +0.6**
comp=Z,13nm,0.7s,baz=210,slow=6.8,SNR=22
USRK LR LR 10 42 14.8
comp=Z,177nm,18.6s,baz=197,slow=40
USRK Ussuriysk Ar. 26.87 19 P **P 10 30 13.6 -1.1**
SHL Shillong 26.91 289 P **P 10 30 15.7 +0.2**
SHL pmax pmax
comp=Z,18nm,0.8s
SHL Shillong 26.91 289 P **P 10 30 15.7 +0.2**
LSA Lhasa 28.37 297 P **P 10 30 29.9 +1.0**
LSA pmax pmax
comp=Z,26nm,1.2s
LSA Lhasa 28.37 297 P **P 10 30 29.9 +1.0**
LSA IAmb IAmb 10 30 48.5
comp=Z,26nm,1.2s
BATI Baumata 29.36 173 P **P 10 30 36.8 -0.4**
comp=Z,17nm,0.5s,baz=0.0,slow=4.0,SNR=3.4
BATI LR LR 10 43 31.2
comp=Z,194nm,21.6s,baz=12,slow=39
JAY Jayapura 29.50 135 LR LR 10 40 30.3
comp=Z,202nm,21.0s,baz=350,slow=33
ULN Ulaanbaatar 30.58 343*ce*P **P 10 30 48.4 +0.5**
ULN pmax pmax
comp=Z,22nm,1.7s
ULN Ulaanbaatar 30.58 343 P **P 10 30 48.1 +0.2**
ULN IAmb IAmb 10 30 50.2
comp=Z,36nm,1.7s
SONM Songino Array 30.75 342 P **P 10 30 49.7 +0.4**
SONM 10 33 46.7
SONM pmax pmax
comp=Z,16nm,1.5s
SONM Songino Array 30.75 342 P **P 10 30 49.8 +0.5**
comp=Z,3.8nm,0.8s,baz=163,slow=9.1,SNR=22
SONM PcP **PcP 10 33 46.7 +0.1**
comp=Z,2.4nm,1.1s,baz=159,slow=5.0,SNR=4.1
SONM LR LR 10 43 26.4
comp=Z,361nm,20.3s,baz=155,slow=37
SONM Songino Array 30.75 342 P **P 10 30 49.7 +0.4**
SONM **PcP 10 33 46.7 +0.1**
TAPN Taplejung 30.86 291 *e*P **P 10 30 52.4 +1.6**
comp=Z,74nm,1.1s
ODAN Odare 31.08 290 *e*P **P 10 30 53.8 +1.2**
comp=Z,93nm,1.2s
KLR Kul'dur 31.43 15 *i* P **P 10 30 55.0 -0.2**
KLR pmax pmax
comp=Z,20nm,1.0s
KLR Kul'dur 31.43 15 P **P 10 30 55.9 +0.7**
comp=Z,13nm,0.9s,baz=217,slow=7.5,SNR=34
RAMN Ramite 31.79 290 *e*P **P 10 31 00.6 +1.7**
comp=Z,79nm,0.9s
JIRN Jiri 32.24 292 *e*P **P 10 31 04.6 +1.6**
comp=Z,188nm,1.4s
GUN Gumba 32.55 292 *e*P **P 10 31 07.0 +1.3**
comp=Z,134nm,1.0s
PKI Pulchoki 32.92 291 *e*P **P 10 31 09.6 +0.7**
comp=Z,9.8nm,1.3s
PKIN Phulchoki 32.93 291 *e*P **P 10 31 09.7 +0.8**
KKN Kakani 33.06 292 *e*P **P 10 31 11.1 +1.1**
comp=Z,62nm,1.0s
DMN Daman 33.19 291 *e*P **P 10 31 12.2 +1.0**
comp=Z,85nm,1.2s
YSS Yuzh-Sakhalins 33.34 29 *e*P **P 10 31 12.2 +0.3**
YSS MLR MLR
comp=Z,600nm,18.0s
MTN Manton Dam 33.56 160 P **P 10 31 12.5 -1.7**
GKN Gorkha 33.65 292 *e*P **P 10 31 15.7 +0.6**
comp=Z,108nm,1.1s
ZAK Zakamensk 33.95 341 *e*P **P 10 31 18.0 +0.6**
ZAK pmax pmax
comp=Z,8.0nm,1.2s
GRNR Gornyy 34.09 18⇓ *i*P **P 10 31 18.0 -0.5**
GRNR *e*S **S 10 36 43.4 +0.5**
GRNR pmax pmax
comp=Z,5.0nm,1.1s
GRNR smax smax
comp=N,10.0nm,0.9s
GRNR MLR MLR
comp=Z,200nm,14.0s
DANN Dangsing 34.46 292 *e*P **P 10 31 23.2 +0.9**
comp=Z,137nm,1.3s
KOLN Koldanda 34.54 291 *e*P **P 10 31 24.0 +1.2**
comp=Z,101nm,1.2s
ZEA Zeya 34.96 7 *e*P **P 10 31 26.8 +0.9**
ZEA pmax pmax
comp=Z,23nm,1.0s
ZEA MLR MLR
comp=Z,1µm,16.0s
ZEA MLR MLR
comp=E,400nm,13.0s
ZEA MLR MLR
comp=N,700nm,16.0s
TLY Talaya 34.98 342 *i* P **P 10 31 25.6 -0.6**
TLY pmax pmax
comp=Z,9.0nm,1.2s
TLY Talaya 34.98 342 P **P 10 31 27.6 +1.4**
comp=Z,4.3nm,0.7s,baz=161,slow=14,SNR=3.8
TLY Talaya 34.98 342 P **P 10 31 23.0 -3.2**
IRK Irkutsk 35.31 343 *e*P **P 10 31 29.0 +0.1**
IRK pmax pmax
comp=Z,35nm,3.1s
MOY Mondy 35.80 340 *e*P **P 10 31 34.5 +1.2**
MOY pmax pmax
comp=Z,28nm,1.8s
PVM Polavaram 36.63 273 *e*P **P 10 31 41.7 +1.0**
PVM IAmb IAmb 10 31 43.0
comp=Z,15nm,1.3s
WMQ Urumqi 36.67 319 *e*P **P 10 31 42.7 +1.9**
WMQ sP pwP 10 31 51.4 +0.3
WMQ PP **PnPn 10 33 02.9 -1.4**
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ pmax pmax
comp=Z,180nm,4.1s
WMQ LR LR
comp=Z,310nm,25.3s
WMQ LR LR
comp=Z,510nm,27.1s
WMQ LR LR
comp=Z,220nm,17.5s
WMQ Urumqi 36.67 319 P **P 10 31 38.2 -2.6**
WMQ pmax pmax
comp=Z,23nm,1.2s
WMQ Urumqi 36.67 319 P **P 10 31 38.2 -2.6**
FITZ Fitzroy Crossi 37.39 171 P **P 10 31 45.5 -1.5**
comp=Z,8.0nm,0.8s,baz=3.6,slow=8.9,SNR=14
FITZ PcP **PcP 10 34 05.7 0.0**
comp=Z,2.7nm,0.7s,baz=321,slow=6.5,SNR=3.7
FITZ Fitzroy Crossi 37.39 171 P **P 10 31 45.2 -1.8**
MYLAV Mylavaram 37.64 273 *e*P **P 10 31 50.5 +1.3**
MYLAV IAmb IAmb 10 31 51.7
comp=Z,11nm,1.3s
GGR Gangavaram 37.88 275 *e*P **P 10 31 52.2 +0.8**
ADKI Addanki 38.43 272 *e*P **P 10 31 54.9 -1.0**
ADKI IAmb IAmb 10 31 58.6
comp=Z,11nm,1.0s
BOD Bodaibo 38.89 355 *e*P **P 10 32 02.2 +2.9**
BOD pmax pmax
comp=Z,10.0nm,1.5s
NJS Nagarjunasagar 38.93 273 *e*P **P 10 32 01.1 +1.0**
NJS IAmb IAmb 10 32 02.3
comp=Z,9.1nm,0.8s
SKHT Srikalahasti 39.12 268 *e*P **P 10 32 03.2 +1.5**
SKHT IAmb IAmb 10 32 04.4
comp=Z,24nm,1.0s
SRLM Srisailam 39.40 272 *e*P **P 10 32 04.8 +0.7**
SRLM IAmb IAmb 10 32 06.6
comp=Z,11nm,1.1s
SRSP Sriramsagar 39.48 277 *e*P **P 10 32 05.1 +0.4**
SRSP IAmb IAmb 10 32 06.4
comp=Z,6.8nm,0.9s
HYB Hyderabad 39.50 274 *i* P **P 10 32 06.0 +1.1**
HYBB Hyderabad (bro 39.50 274 *e*P **P 10 32 05.9 +0.9**
HYBB IAmb IAmb 10 32 06.8
comp=Z,14nm,1.3s
DMPR Damasthipur 40.28 275 *e*P **P 10 32 12.1 +0.7**
PSAD1 Pilbara Seismi 40.35 181 P **P 10 32 10.9 -0.9**
PSAC1 Pilbara Seismi 40.42 181 P **P 10 32 10.4 -1.9**
PSAB2 Pilbara Seismi 40.45 180 P **P 10 32 10.2 -2.4**
PSAA2 Pilbara Seismi 40.45 180 P **P 10 32 11.6 -1.0**
PSAC2 Pilbara Seismi 40.45 180 P **P 10 32 10.9 -1.7**
PSAC2 IAmb IAmb 10 32 29.4
comp=Z,45nm,1.4s
PSAB1 Pilbara Seismi 40.46 181 P **P 10 32 11.8 -0.9**
PSAB1 IAmb IAmb 10 32 19.4
comp=Z,45nm,1.6s
PSA00 Pilbara Seismi 40.46 180 P **P 10 32 11.7 -1.0**
PSA00 IAmb IAmb 10 32 26.3
comp=Z,31nm,1.2s
PSA00 Pilbara Seismi 40.46 180 P **P 10 32 09.4 -3.3**
PSA00 IAmb IAmb 10 33 19.1
comp=Z,9.5nm,0.8s
PSAA1 Pilbara Seismi 40.47 180 P **P 10 32 11.6 -1.1**
PSAA3 Pilbara Seismi 40.47 180 P **P 10 32 12.0 -0.7**
PSAA3 IAmb IAmb 10 32 26.4
comp=Z,31nm,1.2s
PSAB3 Pilbara Seismi 40.48 180 P **P 10 32 11.8 -1.1**
SMLA Simla 40.50 296 *e*P **P 10 32 14.4 +1.4**
SMLA IAmb IAmb 10 32 31.4
comp=Z,20nm,0.8s
PSAD2 Pilbara Seismi 40.51 180 P **P 10 32 10.0 -3.1**
PSAD2 IAmb IAmb 10 32 25.9
comp=Z,55nm,1.5s
PSAC3 Pilbara Seismi 40.51 181 P **P 10 32 11.0 -2.1**
PSAD3 Pilbara Seismi 40.53 181 P **P 10 32 11.2 -2.1**
PSAD3 IAmb IAmb 10 32 26.2
comp=Z,49nm,1.4s
URV Uravakonda 41.17 271 *e*P **P 10 32 19.4 +0.5**
URV IAmb IAmb 10 32 20.8
comp=Z,23nm,1.1s
KLRI Killari 41.24 276 *e*P **P 10 32 20.0 +0.6**
KLRI IAmb IAmb 10 32 20.9
comp=Z,20nm,1.0s
WRAB Tennant Creek 41.24 160 *i* P **P 10 32 17.7 -1.5**
WRAB pmax pmax
comp=Z,10.0nm,1.1s
WRAB Tennant Creek 41.24 160 P **P 10 32 17.1 -2.1**
WRA Warramunga Arr 41.25 160 P **P 10 32 17.4 -1.9**
WRA pmax pmax
comp=Z,1.0nm,1.1s
WRA Warramunga Arr 41.25 160 P **P 10 32 17.3 -1.9**
comp=Z,14nm,1.2s,baz=339,slow=9.2,SNR=18
WRA PcP **PcP 10 34 18.1 +0.2**

comp=Z,2.7nm,0.7s,baz=342,slow=3.4,SNR=7.2
WRA S **S** **10 38 25.6 -6.3**
comp=Z,1.8nm,0.9s,baz=341,slow=15,SNR=4.5
WRA Warramunga Arr 41.25 160 P **P** **10 32 17.4 -1.9**
MK31 Makanchi Array 41.46 320 P **P** **10 32 22.0 +1.2**
MK31 pmax pmax
comp=Z,20nm,1.1s
MK31 Makanchi Array 41.46 320 P **P** **10 32 22.0 +1.2**
MKAR Makanchi Array 41.46 320 P **P** **10 32 22.0 +1.2**
MKAR 10 34 18.4
MKAR Makanchi Array 41.46 320 P **P** **10 32 22.4 +1.6**
comp=Z,14nm,0.9s,baz=112,slow=9.6,SNR=72
MKAR PcP **PcP** **10 34 18.6 +0.3**
comp=Z,6.7nm,1.0s,baz=108,slow=4.0,SNR=5.1
MKAR LR LR 10 50 30.8
comp=Z,255nm,19.6s,baz=94,slow=38
MKAR Makanchi Array 41.46 320 P **P** **10 32 22.0 +1.2**
MKAR PcP **PcP** **10 34 18.4 0.0**
MAKZ Makanchi 41.66 320 P **P** **10 32 22.9 +0.5**
MAKZ Makanchi 41.66 320 P **P** **10 32 23.8 +1.5**
PDGK Podgornoye 41.76 314 P **P** **10 32 25.7 +2.3**
TARG Taragay, Kyrgy 42.36 312 P **P** **10 32 26.5 -2.2**
KDJ Kajisay 42.93 312 P **P** **10 32 35.7 +2.6**
KDJ pmax pmax
comp=Z,18nm,1.3s
KDJ Kajisay 42.93 312 P **P** **10 32 35.7 +2.6**
KSH Kashi 43.05 308 P **P** **10 32 38.2 +4.2**
KSH pP sP 10 32 42.1 -0.6
KSH PP **PP** **10 34 17.6 +3.5**
KSH S **S** **10 39 02.9 +4.3**
KSH sS sS 10 39 09.7 +1.1
KSH SS **SS** **10 42 09.4 -1.7**
KSH pmax pmax
comp=Z,28nm,0.9s
KSH pmax pmax
comp=Z,380nm,5.0s
KSH LR LR
comp=Z,510nm,5.9s
KSH LR LR
comp=Z,420nm,8.1s
KSH LR LR
comp=Z,510nm,6.9s
YAK Yakutsk 43.36 7 *eP* **P** **10 32 36.1 +0.1**
YAK pmax pmax
comp=Z,18nm,0.9s
YAK Yakutsk 43.36 7 P **P** **10 32 35.0 -0.9**
YAK IAmb IAmb 10 32 39.1
comp=Z,19nm,0.9s
NRN Naryn 43.56 310 P **P** **10 32 40.2 +1.9**
NRN pmax pmax
comp=Z,33nm,1.3s
NRN Naryn 43.56 310 P **P** **10 32 40.2 +1.9**
NRN IAmb IAmb 10 32 41.9
comp=Z,33nm,1.2s
ULHL Ulahol 43.63 312 P **P** **10 32 41.6 +2.8**
SNR=11
H11S3 WAKE ISLAND Hy 43.92 83 T T 11 18 11.1
baz=276
H11S1 WAKE ISLAND Hy 43.94 83 T T 11 18 23.9
baz=276
H11S2 WAKE ISLAND Hy 43.94 83 T T 11 18 21.9
baz=276
ZAA0 Zalesovo Array 44.06 331 P **P** **10 32 41.2 -0.5**
ZAA0 IAmb IAmb 10 32 43.6
comp=Z,22nm,0.9s
ZALV Zalesovo Beam 44.06 331 P **P** **10 32 41.3 -0.4**
ZALV Zalesovo Beam 44.06 331 P **P** **10 32 42.5 +0.8**
comp=Z,13nm,0.7s,baz=122,slow=7.7,SNR=42
ZALV LR LR 10 51 52.0
comp=Z,245nm,18.3s,baz=126,slow=37
ZALV Zalesovo Beam 44.06 331 P **P** **10 32 41.3 -0.4**
NIL Nilore 44.09 299 P **P** **10 32 41.0 -1.3**
NIL pmax pmax
comp=Z,28nm,0.8s
NIL Nilore 44.09 299 P **P** **10 32 41.0 -1.3**
NIL IAmb IAmb 10 32 45.8
comp=Z,28nm,0.8s
KZA Kyzart 44.28 311 P **P** **10 32 47.3 +3.1**
SNR=15
TKM2 Tokmak 2 44.29 312 P **P** **10 32 45.6 +1.5**
TKM2 Tokmak 2 44.29 312 P **P** **10 32 46.1 +2.0**
SNR=12
PEA0B Petropavlovsk- 44.59 32 P **P** **10 32 45.3 -0.8**
PEA0B pmax pmax
comp=Z,48nm,1.0s
PEA0B Petropavlovsk- 44.59 32 P **P** **10 32 45.2 -0.8**
PETK Petropavlovsk- 44.59 32 P **P** **10 32 45.5 -0.5**
PETK Petropavlovsk- 44.59 32 P **P** **10 32 46.1 0.0**
comp=Z,22nm,0.9s,baz=258,slow=5.9,SNR=19
PETK PcP **PcP** **10 34 28.6 -0.1**
comp=Z,6.4nm,0.9s,baz=198,slow=4.1,SNR=5.2
PETK LR LR 10 51 38.8
comp=Z,83nm,21.9s,baz=240,slow=36
PETK Petropavlovsk- 44.59 32 P **P** **10 32 45.5 -0.5**
AS31 Alice Springs 44.60 162 P **P** **10 32 45.6 -0.8**
ASAR Alice Springs 44.60 162 P **P** **10 32 44.7 -1.7**
ASAR Alice Springs 44.60 162 P **P** **10 32 45.4 -1.0**
comp=Z,4.8nm,0.6s,baz=342,slow=6.9,SNR=57
ASAR PcP **PcP** **10 34 29.1 0.0**
comp=Z,1.9nm,0.8s,baz=343,slow=4.6,SNR=4.0
ASAR S **S** **10 39 20.4 -0.8**
comp=Z,0.8nm,0.7s,baz=354,slow=19,SNR=5.5
ASAR LR LR 10 53 49.5
comp=Z,40nm,18.6s,baz=350,slow=40
ASAR Alice Springs 44.60 162 P **P** **10 32 44.7 -1.7**
ASAR PcP **PcP** **10 34 29.4 +0.3**
KBK Karagaybulak 44.67 312 P **P** **10 32 50.0 +3.0**
SNR=9.4
UCH Uchtor 44.85 311 P **P** **10 32 51.8 +3.0**
SNR=30
CHMS Chumysh 44.91 312 P **P** **10 32 51.3 +2.5**
SNR=9.4
AAK Ala-Archa 44.98 312 P **P** **10 32 51.6 +2.1**
AAK Ala-Archa 44.98 312 P **P** **10 32 51.2 +1.7**
comp=Z,8.1nm,1.2s,baz=106,slow=7.3,SNR=10
AAK Ala-Archa 44.98 312 P **P** **10 32 51.9 +2.4**
SNR=5.9
AAK Ala-Archa 44.98 312 *i* P **P** **10 32 51.2 +1.7**
SNR=7.8
AAK Ala-Archa 44.98 312 P **P** **10 32 49.5 0.0**
PET Petropavlovsk 45.02 32 *i* P **P** **10 32 48.7 -0.7**
PET pmax pmax
comp=Z,42nm,1.1s
USP Ospenovka 45.16 313 P **P** **10 32 53.2 +2.4**
SNR=14
AML Almayashu 45.41 311 P **P** **10 32 55.9 +2.7**
SNR=29
KURK Kurchatov 45.47 324 P **P** **10 32 53.8 +0.8**
KURK Kurchatov 45.47 324 P **P** **10 32 50.9 -2.1**
KURK IAmb IAmb 10 32 55.5
comp=Z,27nm,0.9s
EKS2 Erkin-Say 45.50 311 P **P** **10 32 56.2 +2.6**
SNR=11
ARSB Arslanbob 45.72 309 P **P** **10 32 53.0 -2.3**
ARSB IAmb IAmb 10 32 58.7
comp=Z,26nm,1.1s
MA2 Magadan 45.99 21 *i* P **P** **10 32 56.2 -0.8**
MA2 pmax pmax
comp=Z,32nm,1.2s
BTK Batken 47.04 307 P **P** **10 33 06.7 +1.1**
BTK pmax pmax
comp=Z,34nm,1.4s
BTK Batken 47.04 307 P **P** **10 33 06.7 +1.1**
BTK IAmb IAmb 10 33 08.9
comp=Z,34nm,1.4s
GAR Garm 47.22 306 P **P** **10 33 06.4 -0.8**
KBL Kabul 47.65 300 P **P** **10 33 10.9 +0.2**
KBL pmax pmax
comp=Z,29nm,1.1s
KBL Kabul 47.65 300 P **P** **10 33 10.9 +0.2**
KBL IAmb IAmb 10 33 14.4
comp=Z,29nm,1.1s
KK31 Karatay Array 47.93 311 P **P** **10 33 12.7 +0.2**
KK31 10 34 40.1
KK31 pmax pmax
comp=Z,29nm,1.0s
KK31 Karatay Array 47.93 311 P **P** **10 33 12.7 +0.2**
KK31 PcP **PcP** **10 34 40.1 -0.5**
KKAR Karatay Array 47.93 311 P **P** **10 33 10.7 -1.8**
KKAR 10 34 40.1
KKAR pmax pmax
comp=Z,29nm,1.0s
KKAR Karatay Array 47.93 311 P **P** **10 33 10.7 -1.8**
KKAR PcP **PcP** **10 34 40.1 -0.5**
CHGR Chuyangaron 48.06 305 P **P** **10 33 12.6 -1.0**

SEY Seymchan 49.02 19 *i* P **P** **10 33 20.0 -0.5**
BRVK Borovoye 51.14 324 P **P** **10 33 37.4 +0.7**
BRVK Borovoye 51.14 324 P **P** **10 33 36.8 0.0**
BRVK IAmb IAmb 10 33 39.4
comp=Z,16nm,0.9s
NWAO Narrogin (SRO) 51.85 183 P **P** **10 33 42.1 -0.1**
NWAO pmax pmax
comp=Z,72nm,1.6s
NWAO Narrogin (SRO) 51.85 183 P **P** **10 33 42.1 -0.1**
TIXI Tiksi 52.76 3 *ce*P **P** **10 33 46.5 -2.0**
TIXI pmax pmax
comp=Z,43nm,2.5s
TIXI Tiksi 52.76 3 P **P** **10 33 46.8 -1.7**
TIXI IAmb IAmb 10 33 50.3
comp=Z,19nm,1.2s
HRA Herat 53.25 299 P **P** **10 33 53.9 +0.9**
HRA IAmb IAmb 10 33 55.6
comp=Z,37nm,1.3s
BBOO Buckleboo 53.84 163 P **P** **10 33 56.4 -0.5**
STKA Stephens Creek 54.72 158 P **P** **10 34 03.1 -0.3**
STKA pmax pmax
comp=Z,3.0nm,0.9s
STKA Stephens Creek 54.72 158 P **P** **10 34 03.1 -0.3**
comp=Z,15nm,0.9s,baz=348,slow=8.7,SNR=10
STKA LR LR 10 59 33.5
comp=Z,63nm,20.2s,baz=8.2,slow=38
STKA Stephens Creek 54.72 158 P **P** **10 34 03.1 -0.3**
ABKAR Akbulak array 56.38 317 P **P** **10 34 15.9 +0.8**
ABKAR Akbulak array 56.38 317 P **P** **10 34 14.6 -0.5**
ABKAR IAmb IAmb 10 34 17.9
comp=Z,55nm,1.7s
GEYT Alibeck 56.65 303 P **P** **10 34 19.5 +2.2**
comp=Z,43nm,1.1s,baz=104,slow=4.7,SNR=48
GEYT LR LR 11 02 19.4
comp=Z,203nm,18.1s,baz=120,slow=40
GEYT Alibeck 56.65 303 P **P** **10 34 19.4 +2.0**
BILL Bilibino 56.73 19 *d* iP **P** **10 34 17.6 +0.3**
BILL *PP **sP** **10 34 27.0 +0.8**
BILL *e* 10 35 13.7
BILL S **S** **10 42 13.0 +4.5**
BILL pmax pmax
comp=Z,84nm,2.5s
BILL MLR MLR
comp=Z,112nm,18.0s
BILL Bilibino 56.73 19 P **P** **10 34 17.1 -0.3**
BILL IAmb IAmb 10 34 18.2
comp=Z,21nm,0.7s
SVE Sverdlovsk 57.61 326 *c* iP **P** **10 34 25.2 +1.5**
SVE pmax pmax
comp=Z,47nm,1.5s
ARU Arti 58.62 325 *d* iP **P** **10 34 31.6 +0.8**
ARU 10 36 41.0
ARU S **S** **10 42 36.1 +2.5**
ARU SS **SS** **10 46 24.5 -1.8**
ARU pmax pmax
comp=Z,70nm,1.8s
ARU Arti 58.62 325 P **P** **10 34 31.1 +0.3**
BANOM Banah 58.90 289 P **P** **10 34 35.1 +1.8**
MSFE Esma-Masafi 59.10 289 P **P** **10 34 37.2 +2.4**
HATD Hatta, Dubai 59.20 288 P **P** **10 34 36.3 +0.9**
ASUD Al Ashush, Dub 59.95 288 P **P** **10 34 41.7 +1.1**
DZM Mont Dzumac 61.02 130 *e*P **P** **10 34 48.9 +1.0**
comp=Z,66nm,1.2s
DZM Mont Dzumac 61.02 130 *e*LR LR 10 52 55.7
comp=Z,322nm,23.0s
DZM Mont Dzumac 61.02 130 P **P** **10 34 47.3 -0.6**
DZM IAmb IAmb 10 35 02.9
comp=Z,25nm,1.1s
AKT Akhty 64.58 308 *e*P **P** **10 35 12.7 +1.2**
AKT *e* 10 35 44.9
AKT pmax pmax
comp=Z,47nm,1.2s
PRGR Permogore 66.01 330 *e*P **P** **10 35 17.6 -2.6**
PRGR pmax pmax
comp=Z,37nm,0.9s
GNI Garni 66.95 306 *ce*P **P** **10 35 28.8 +1.9**
GNI pmax pmax
comp=Z,108nm,1.3s
ZEI Tsey 67.31 309 *e*P **P** **10 35 26.4 -2.8**
ZEI pmax pmax
comp=Z,22nm,1.1s
MSVF Nonsavu 67.63 119⇑ *i*P **P** **10 35 31.5 +0.2**
MSVF pmax pmax
comp=Z,16nm,0.9s
MSVF Nonsavu 67.63 119 P **P** **10 35 30.3 -1.0**
AKH Akhalkalaki 67.76 308⇑P **P** **10 35 34.6 +2.7**
KBZ Khabaz 67.95 310 P **P** **10 35 34.1 +1.2**
comp=Z,16nm,1.0s,baz=100,slow=3.4,SNR=30
KBZ LR LR 11 08 37.4
comp=Z,141nm,19.0s,baz=58,slow=39
KIV Kislovodsk 68.08 311 *d* iP **P** **10 35 35.2 +1.4**
KIV *e*PP **pwP** **10 35 45.1 +0.4**
KIV 10 36 03.0
KIV pmax pmax
comp=Z,40nm,1.0s
KIV MLR MLR
comp=Z,110nm,20.0s
KIV Kislovodsk 68.08 311 *i* P **P** **10 35 35.6 +1.8**
SNR=6.4
SHA1 Shidzhatmaz 68.12 310 *c* iP **P** **10 35 35.6 +1.3**
NEY Neytrino 68.13 310 *i* P **P** **10 35 34.7 +0.4**
NEY pmax pmax
comp=Z,2.0nm,0.8s
VRH Novokhopyorsk 68.14 318 *e*P **P** **10 35 33.8 -0.1**
VRH pmax pmax
comp=Z,60nm,1.0s
SDPT Sand Point 68.45 37 P **P** **10 35 34.9 -0.8**
RAYN Ar Rayn 68.98 288 P **P** **10 35 38.5 -1.2**
RAYN pmax pmax
comp=Z,19nm,1.1s
RAYN Ar Rayn 68.98 288 *i* P **P** **10 35 40.5 +0.7**
SNR=15
RAYN Ar Rayn 68.98 288 P **P** **10 35 38.5 -1.2**
RAYN IAmb IAmb 10 35 41.5
comp=Z,19nm,1.1s
CNBA Chernabura Isl 68.98 38 P **P** **10 35 38.5 -0.6**
TMCR Tamitsa 69.54 332 *e*P **P** **10 35 40.8 -1.5**
TMCR pmax pmax
comp=Z,55nm,1.0s
VORD Divnogorie 69.69 318 *e*P **P** **10 35 43.5 0.0**
VORD pmax pmax
comp=Z,30nm,1.4s
VSR Storozhevoye 69.74 319 *e*P **P** **10 35 43.4 -0.5**
VSR pmax pmax
comp=Z,50nm,1.2s
LPSR Galich'ya Gora 69.76 320 *e*P **P** **10 35 44.0 +0.1**
LPSR pmax pmax
comp=Z,60nm,1.1s
MOS Moscow 70.24 323 *e*P **P** **10 35 46.2 -0.6**
MOS pmax pmax
comp=Z,53nm,1.4s
OBN Obninsk 70.90 323 *ce*P **P** **10 35 51.6 +0.7**
OBN *PP **pwP** **10 36 01.0 -0.7**
OBN 10 36 11.0
OBN SS SS 10 49 48.0 +11
OBN pmax pmax
comp=Z,85nm,1.7s
IMAR Indian Mountai 71.10 26 P **P** **10 35 52.4 +0.5**
CHIR Chirikof Islan 71.16 36 P **P** **10 35 52.9 +0.4**
ANN Anapa 71.71 312 *e*P **P** **10 35 56.3 +0.3**
ANN pmax pmax
comp=Z,50nm,1.2s
PPLA Purkeypile 72.08 29 P **P** **10 35 58.7 +0.6**
OHAK Old Harbor 72.27 35 P **P** **10 35 58.7 -0.3**
TOLK Toolik Lake Re 72.44 23 P **P** **10 35 59.8 -0.2**
TOLK IAmb IAmb 10 36 01.9
comp=Z,21nm,1.1s
TOLK Toolik Lake Re 72.44 23 P **P** **10 36 01.0 +1.0**
baz=278
MLY Manley 72.45 26 P **P** **10 36 00.3 +0.2**
MLY IAmb IAmb 10 36 02.1
comp=Z,26nm,1.0s
KDAK Kodiak Island 72.57 34 P **P** **10 36 00.6 -0.2**
KDAK pmax pmax
comp=Z,35nm,1.2s
KDAK Kodiak Island 72.57 34 P **P** **10 36 00.6 -0.2**
KTH Kantishna Hill 72.57 28 P **P** **10 36 01.2 +0.3**
KTH IAmb IAmb 10 36 02.8
comp=Z,12nm,1.0s
TRF Thorofare Moun 72.87 28 P **P** **10 36 02.8 0.0**
SUA Susitna One 72.95 30 P **P** **10 36 02.9 -0.4**
MCK McKinley 73.42 28 P **P** **10 36 06.0 +0.1**
MCK pmax pmax
comp=Z,35nm,1.1s

MCK McKinley 73.42 28 P **P** **10 36 06.0 +0.1**
RC01 Rabbit Creek A 73.49 30 P **P** **10 36 06.5 +0.2**
RC01 IAmb IAmb 10 36 52.0
comp=Z,24nm,1.5s
RND Reindeer 73.51 28 P **P** **10 36 06.1 -0.4**
RND pmax pmax
comp=Z,42nm,1.1s
RND Reindeer 73.51 28 P **P** **10 36 06.0 -0.4**
WRH Wood River Hil 73.66 27 P **P** **10 36 06.8 -0.4**
WRH IAmb IAmb 10 36 09.2
comp=Z,27nm,1.2s
TCOL CIGO, UAF Yank 73.69 26 P **P** **10 36 07.7 +0.4**
baz=280
COLA College 73.69 26 *i* P **P** **10 36 06.8 -0.5**
COLA pmax pmax
comp=Z,10.0nm,1.0s
COLA College 73.69 26 P **P** **10 36 07.5 +0.2**
COLA IAmb IAmb 10 36 08.8
comp=Z,12nm,1.1s
PMR Palmer 73.69 30 P **P** **10 36 06.6 -0.8**
PMR pmax pmax
comp=Z,17nm,1.0s
PMR Palmer 73.69 30 P **P** **10 36 06.6 -0.8**
PMR IAmb IAmb 10 36 17.3
comp=Z,17nm,1.0s
CCB Clear Creek Bu 73.75 27 P **P** **10 36 07.1 -0.6**
GHO Glory Hole Cre 73.76 30 P **P** **10 36 07.5 -0.4**
GHO IAmb IAmb 10 36 18.0
comp=Z,18nm,1.0s
SEW Seward 73.80 31 P **P** **10 36 07.9 -0.2**
POKR Poker Plat Res 73.82 26 P **P** **10 36 09.3 +1.1**
baz=280
ARCES ARCESS Array B 73.86 339 P **P** **10 36 07.8 -0.5**
ARCES ARCESS Array B 73.86 339 P **P** **10 36 08.5 +0.2**
comp=Z,9.0nm,0.9s,baz=67,slow=7.1,SNR=8.6
ARCES LR LR 11 11 50.5
comp=Z,94nm,18.8s,baz=326,slow=38
ARCES ARCESS Array B 73.86 339 P **P** **10 36 07.8 -0.5**
SML Sawmill 74.03 30 P **P** **10 36 09.4 -0.1**
KNK Knik Glacier 74.04 30 P **P** **10 36 09.3 -0.2**
KNK IAmb IAmb 10 36 19.4
comp=Z,32nm,1.1s
IL31 74.11 26 P **P** **10 36 08.8 -1.0**
IL31 IAmb IAmb 10 36 33.3
comp=Z,28nm,1.8s
ILAR Eielson Array 74.11 26 P **P** **10 36 08.0 -1.9**
ILAR Eielson Array 74.11 26 P **P** **10 36 08.7 -1.2**
comp=Z,3.0nm,0.8s,baz=272,slow=4.2,SNR=24
ILAR LR LR 11 13 15.9
comp=Z,58nm,18.3s,baz=310,slow=40
ILAR Eielson Array 74.11 26 P **P** **10 36 08.0 -1.9**
HDA Harding Lake 74.16 27 P **P** **10 36 09.2 -0.9**
HDA IAmb IAmb 10 36 10.3
comp=Z,21nm,1.2s
HDA Harding Lake 74.16 27 P **P** **10 36 09.3 -0.9**
baz=281
SPA0 Spitsbergen Ar 74.19 348 P **P** **10 36 11.0 +0.8**
DHY Denali Highway 74.23 28 P **P** **10 36 10.4 -0.4**
SCM Sheep Creek Mo 74.49 29 P **P** **10 36 12.0 -0.2**
SCM pmax pmax
comp=Z,46nm,1.1s
SCM Sheep Creek Mo 74.49 29 P **P** **10 36 12.0 -0.2**
BMAR Burnt Mountain 74.50 24 P **P** **10 36 12.2 +0.1**
PRP Porcupine Dome 74.53 26 P **P** **10 36 11.4 -1.1**
GLI Glacier Island 74.80 30 P **P** **10 36 13.5 -0.4**
GLI IAmb IAmb 10 36 24.2
comp=Z,25nm,1.0s
RIDG Independent Ri 75.20 27 P **P** **10 36 16.1 -0.2**
FINES FINESS Array B 75.33 330 P **P** **10 36 17.2 +0.3**
FINES FINESS Array B 75.33 330 P **P** **10 36 17.4 +0.5**
comp=Z,8.5nm,0.9s,baz=76,slow=8.0,SNR=10
FINES LR LR 11 10 44.0
comp=Z,185nm,18.6s,baz=22,slow=37
FINES FINESS Array B 75.33 330 P **P** **10 36 17.2 +0.3**
BRTR Keskin Array B 75.44 307 *i* P **P** **10 36 18.7 +0.5**
BRTR pmax pmax
comp=Z,2.0nm,1.1s
BRTR Keskin Array B 75.44 307 P **P** **10 36 18.1 -0.1**
comp=Z,1.8nm,1.1s,baz=140,slow=6.5,SNR=7.0
BRTR LR LR 11 13 38.4
comp=Z,50nm,20.5s,baz=336,slow=39
SCRK Sand Creek 75.52 27 P **P** **10 36 17.9 -0.3**
SCRK IAmb IAmb 10 36 19.1
comp=Z,13nm,1.1s
DOT Dot Lake 75.56 27 P **P** **10 36 17.8 -0.6**
DOT IAmb IAmb 10 36 19.2
comp=Z,14nm,1.0s
VSU Vasula 75.68 327 *ce*P **P** **10 36 19.0 0.0**
VSU pmax pmax
comp=Z,264nm,1.7s
MENT Mentasta 75.89 28 P **P** **10 36 18.1 -2.1**
MENT IAmb IAmb 10 36 21.9
comp=Z,11nm,1.0s
AKASG Malin Array Be 76.03 319 *i* P **P** **10 36 21.0 -0.2**
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKASG Malin Array Be 76.03 319 P **P** **10 36 20.9 -0.2**
comp=Z,5.5nm,0.9s,baz=63,slow=5.8,SNR=22
AKASG Malin Array Be 76.03 319 P **P** **10 36 20.9 -0.2**
GLB Gilahina Butte 76.22 29 P **P** **10 36 22.5 +0.3**
GLB IAmb IAmb 10 36 23.6
comp=Z,30nm,1.2s
HMT Hamilton 76.28 31 P **P** **10 36 22.5 0.0**
VRDI Verde Repeater 76.44 30 P **P** **10 36 23.3 -0.3**
VRDI IAmb IAmb 10 36 25.0
comp=Z,29nm,1.3s
EGAK Eagle 76.50 26 P **P** **10 36 23.3 -0.3**
EGAK IAmb IAmb 10 36 24.6
comp=Z,12nm,1.0s
MCARA McCarthy VSAT 76.60 29 P **P** **10 36 24.3 +0.1**
MCARA IAmb IAmb 10 36 26.5
comp=Z,24nm,1.1s
BCAR Beaver Creek A 76.70 28 P **P** **10 36 25.9 +1.0**
TGL Tana Glacier 76.86 30 P **P** **10 36 26.2 +0.3**
TGL IAmb IAmb 10 36 27.0
comp=Z,21nm,1.1s
BALM Baldy 77.01 30 P **P** **10 36 27.1 +0.4**
BALM IAmb IAmb 10 36 46.9
comp=Z,31nm,1.6s
SORM Soroca 77.19 317⇓P **P** **10 36 27.9 +0.1**
NOR Nord 77.24 354 *i* P **P** **10 36 27.8 +0.3**
comp=Z,9.4nm,1.1s
CTGM Chitina Glacie 77.50 30 P **P** **10 36 30.5 +1.0**
EPYK Eagle Plains 77.77 24 P **P** **10 36 30.5 -0.3**
EPYK IAmb IAmb 10 36 31.6
comp=Z,37nm,1.4s
EPYK Eagle Plains 77.77 24 P **P** **10 36 30.3 -0.4**
baz=290
TOPG Topolog 77.99 313⇓P **P** **10 36 33.0 +0.7**
TIRR Tirgusor 78.08 313⇓P **P** **10 36 33.3 +0.5**
INK Inuvik 78.23 21 P **P** **10 36 32.9 -0.3**
INK pmax pmax
comp=Z,22nm,1.2s
INK Inuvik 78.23 21 P **P** **10 36 32.9 -0.3**
INK IAmb IAmb 10 36 34.2
comp=Z,22nm,1.2s
HARR Harsova 78.35 313⇑P **P** **10 36 35.3 +1.0**
SUW Suwalki 78.75 323 P **P** **10 36 37.0 +0.7**
SUW pmax pmax
comp=Z,72nm,1.1s
SUW Suwalki 78.75 323 P **P** **10 36 37.0 +0.7**
VRI Vrincioaia 78.85 315⇑P **P** **10 36 38.6 +1.5**
PLOR Plostina 78.91 315⇓P **P** **10 36 38.2 +0.8**
BISRR Bisoca 78.95 314⇑P **P** **10 36 39.6 +1.9**
BURAR Bucovina Array 79.36 317⇑P **P** **10 36 41.0 +1.0**
BURAR Bucovina Array 79.36 317 P **P** **10 36 40.3 +0.3**
BUR08 Bucovina Ar. S 79.36 317 P **P** **10 36 39.5 -0.5**
OZUR 79.42 315⇑P **P** **10 36 41.3 +1.0**
LVV L'vov 79.47 319 *e*P **P** **10 36 40.6 +0.2**
MLR Muntele Rosu 79.48 314⇑P **P** **10 36 41.7 +1.0**
DOPR Dopca 79.72 315⇑P **P** **10 36 42.6 +0.8**
VOIR 80.10 315⇑P **P** **10 36 44.3 +0.3**
KLNR Kaliningrad 80.22 324 *i* P **P** **10 36 45.9 +1.6**
KLNR pmax pmax
comp=Z,65nm,0.9s
ELND Elena 80.27 312⇑P **P** **10 36 45.6 +0.8**
ARR Arges 80.40 315⇑P **P** **10 36 46.5 +0.8**
HUMR Humele 80.42 314⇑P **P** **10 36 45.5 -0.1**
CJR Cluj-Napoca 80.68 316⇓P **P** **10 36 48.4 +1.3**
ALN Alexandroupoli 80.74 310 P **P** **10 36 46.8 -0.6**
ALN pmax pmax
comp=Z,10.0nm,1.3s
ALN Alexandroupoli 80.74 310 P **P** **10 36 46.8 -0.6**
KOLS Kolonicke sedl 80.84 319 *e*P **P** **10 36 48.6 +0.8**

KOLS	**Kolonicke sedl**	**80.84**	**319**	*e*P		**P**	**10 36 48.6**	**+0.8**
C36M	**Paulatuk**	**80.85**	**19**	P		**P**	**10 36 47.2**	**-0.2**
C36M				IAmb		IAmb	10 36 48.9	
	comp=Z,35nm,1.3s							
C36M	**Paulatuk**	**80.85**	**19**	P		**P**	**10 36 47.4**	**0.0**
	baz=300							
UZH	**Uzhgorod**	**80.92**	**318**⇑	*i*P		**P**	**10 36 49.3**	**+1.1**
UZH				*e*			10 36 51.2	
UZH				*e*			10 36 55.4	
TRPA	**Tarpa**	**80.92**	**318**	*e*P		**P**	**10 36 48.6**	**+0.4**
TRPA	**Tarpa**	**80.92**	**318**	⇓P		**P**	**10 36 48.1**	**-0.1**
DAG	**Danmarks Havn**	**81.19**	**351**	*i*P		**P**	**10 36 48.4**	**-0.7**
DAG				pmax		pmax		
	comp=Z,12nm,0.7s							
DAG	**Danmarks Havn**	**81.19**	**351**	*i*P		**P**	**10 36 48.4**	**-0.7**
	comp=Z,12nm,0.7s							
DRGR		**81.24**	**316**	⇑P		**P**	**10 36 51.0**	**+0.9**
DEV	**Deva**	**81.40**	**316**	⇑P		**P**	**10 36 52.3**	**+1.5**
LTVH	**Ltavrtes, Hu**	**81.57**	**317**	*e*P		**P**	**10 36 54.1**	**+2.4**
NIE	**Niedzica**	**81.90**	**319**	*e*P		**P**	**10 36 54.5**	**+1.0**
NIE	**Niedzica**	**81.90**	**319**	*e*P		**P**	**10 36 54.5**	**+1.0**
SIRR	**Siria**	**82.09**	**316**	⇑P		**P**	**10 36 55.5**	**+1.0**
VTS	**Vitosha**	**82.21**	**312**	P		**P**	**10 36 55.7**	**+0.3**
VTS				pmax		pmax		
	comp=Z,28nm,1.2s							
VTS	**Vitosha**	**82.21**	**312**	P		**P**	**10 36 55.7**	**+0.3**
VTS				IAmb		IAmb	10 36 57.4	
	comp=Z,28nm,1.2s							
NB2	**NORSAR Subarra**	**82.23**	**332**	P		**P**	**10 36 54.4**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=61,slow=5.1							
NOA	**NORSAR Array B**	**82.23**	**332**	P		**P**	**10 36 54.4**	**-0.5**
	comp=Z,4.9nm,0.9s,baz=64,slow=5.2,SNR=11							
NOA				LR		LR	11 16 14.6	
	comp=Z,159nm,18.9s,baz=70,slow=38							
BZS	**Buzias**	**82.34**	**316**	⇓P		**P**	**10 36 55.8**	**0.0**
VYHS	**Vyhne**	**83.13**	**319**	*e*P		**P**	**10 37 00.1**	**+0.2**
VYHS				pmax		pmax		
	comp=Z,15nm,1.3s							
VYHS	**Vyhne**	**83.13**	**319**	*e*P		**P**	**10 37 00.0**	**+0.2**
MORC	**Moravsky Berou**	**83.45**	**320**	P		**P**	**10 37 01.2**	**-0.3**
MORC				pmax		pmax		
	comp=Z,16nm,1.4s							
MORC	**Moravsky Berou**	**83.45**	**320**	*e*P		**P**	**10 37 02.0**	**+0.5**
MORC	**Moravsky Berou**	**83.45**	**320**	P		**P**	**10 37 01.2**	**-0.3**
MORC				IAmb		IAmb	10 37 02.7	
	comp=Z,16nm,1.4s							
LIT	**Litokhoron**	**83.56**	**310**	P		**P**	**10 37 00.3**	**-2.0**
LIT				pmax		pmax		
	comp=Z,29nm,1.4s							
LIT	**Litokhoron**	**83.56**	**310**	P		**P**	**10 37 00.3**	**-2.0**
LIT				IAmb		IAmb	10 37 03.4	
	comp=Z,29nm,1.4s							
KMBO	**Kilima Mbogo**	**83.68**	**267**	P		**P**	**10 37 02.0**	**-1.6**
KMBO				pmax		pmax		
	comp=Z,24nm,1.4s							
KMBO	**Kilima Mbogo**	**83.68**	**267**	P		**P**	**10 37 05.0**	**+1.4**
	comp=Z,1.5nm,0.3s,baz=56,slow=7.2,SNR=11							
KMBO	**Kilima Mbogo**	**83.68**	**267**	P		**P**	**10 37 01.9**	**-1.6**
KMBO				IAmb		IAmb	10 37 06.7	
	comp=Z,24nm,1.4s							
JAVC	**Velka Javorina**	**83.71**	**320**	*e*P		**P**	**10 37 04.9**	**+2.0**
RES	**Resolute Bay**	**83.77**	**9**	P		**P**	**10 37 02.8**	**+0.2**
RES				pmax		pmax		
	comp=Z,19nm,1.0s							
RES	**Resolute Bay**	**83.77**	**9**	P		**P**	**10 37 02.8**	**+0.2**
RES				IAmb		IAmb	10 37 03.9	
	comp=Z,19nm,1.0s							
KSP	**Ksiaz**	**83.79**	**322**	*e*P		**P**	**10 37 04.5**	**+1.3**
KSP	**Ksiaz**	**83.79**	**322**	*e*P		**P**	**10 37 04.5**	**+1.3**
KRLC	**Kraliky**	**83.79**	**321**	*e*P		**P**	**10 37 03.6**	**+0.3**
KRLC	**Kraliky**	**83.79**	**321**	*e*P		**P**	**10 37 03.6**	**+0.3**
OSTC	**Ostas**	**83.94**	**322**	*e*P		**P**	**10 37 05.5**	**+1.5**
DPC	**Dobruska-Polom**	**83.96**	**321**	*e*P		**P**	**10 37 04.8**	**+0.7**
DPC	**Dobruska-Polom**	**83.96**	**321**	*e*P		**P**	**10 37 04.8**	**+0.7**
CHVC	**Chvalec**	**84.03**	**322**	*e*P		**P**	**10 37 05.3**	**+0.9**
MORH	**Mrgy, Hungar**	**84.07**	**317**	*e*P		**P**	**10 37 05.3**	**+0.6**
FNA	**Florina**	**84.13**	**311**	P		**P**	**10 37 03.3**	**-1.9**
FNA	**Florina**	**84.13**	**311**	P		**P**	**10 37 03.3**	**-1.9**
VRAC	**Vranov**	**84.20**	**320**	⇑P		**P**	**10 37 05.6**	**+0.3**
VRAC	**Vranov**	**84.20**	**320**	*e*P		**P**	**10 37 06.1**	**+0.8**
TIH	**Tihany**	**84.30**	**318**	*e*P		**P**	**10 37 04.8**	**-1.1**
KRUC	**Moravsky**	**84.42**	**320**	*e*P		**P**	**10 37 07.1**	**+0.7**
ITM	**Ithomi**	**84.97**	**307**	P		**P**	**10 37 08.3**	**-1.2**
GOPC	**GO Pecny, Ondr**	**85.04**	**321**	*e*P		**P**	**10 37 10.3**	**+0.7**
GOPC	**GO Pecny, Ondr**	**85.04**	**321**	*e*P		**P**	**10 37 10.3**	**+0.7**
BRG	**Berggiesshubel**	**85.14**	**322**	*i*P		**P**	**10 37 10.4**	**+0.4**
	comp=Z,23nm,1.2s							
BRG	**Berggiesshubel**	**85.14**	**322**	*i*P		**P**	**10 37 10.4**	**+0.4**
BRG				pmax		pmax		
	comp=Z,23nm,1.2s							
BRG	**Berggiesshubel**	**85.14**	**322**	*e*P		**P**	**10 37 10.8**	**+0.8**
	comp=Z,7.6nm,0.9s,baz=64,slow=4.8							
PRU	**Pruhonice**	**85.16**	**321**	*e*P		**P**	**10 37 10.8**	**+0.7**
PRU	**Pruhonice**	**85.16**	**321**	*e*P		**P**	**10 37 10.8**	**+0.7**
CONA	**Conrad Observa**	**85.18**	**319**	*i*PcP		**P**	**10 37 10.3**	**-0.1**
	comp=Z,11nm,1.3s							
FBE	**Freiberg**	**85.46**	**323**	*e*P		**P**	**10 37 12.1**	**+0.5**
	comp=Z,17nm,1.0s,baz=64,slow=4.8							
CASY	**Casey**	**85.47**	**184**	P		**P**	**10 37 10.2**	**-0.9**
CASY				IAmb		IAmb	10 37 13.0	
	comp=Z,19nm,1.2s							
CLL	**Collm**	**85.50**	**323**	P		**P**	**10 37 10.0**	**-1.8**
CLL				pmax		pmax		
	comp=Z,14nm,1.0s							
CLL	**Collm**	**85.50**	**323**	*i*P		**P**	**10 37 12.1**	**+0.3**
	comp=Z,17nm,1.0s							
CLL	**Collm**	**85.50**	**323**	*e*P		**P**	**10 37 12.4**	**+0.6**
	comp=Z,9.1nm,0.9s,baz=64,slow=4.8							
CLL	**Collm**	**85.50**	**323**	P		**P**	**10 37 09.9**	**-1.8**
CLL				IAmb		IAmb	10 37 13.1	
	comp=Z,14nm,1.0s							
ARSA	**Arzberg**	**85.66**	**319**	*i*PcP		**P**	**10 37 12.5**	**-0.3**
	comp=Z,9.1nm,1.2s							
BSEG	**Bad Segeberg**	**85.82**	**326**	*e*P		**P**	**10 37 14.4**	**+1.1**
	baz=64,slow=4.8							
KHC	**Kasperske Hory**	**86.08**	**321**	*e*P		**P**	**10 37 15.4**	**+0.6**
KHC				pmax		pmax		
	comp=Z,5.0nm,0.4s							
KHC	**Kasperske Hory**	**86.08**	**321**	*e*P		**P**	**10 37 15.4**	**+0.6**
GEC2	**GERESS Array S**	**86.13**	**321**	*e*P		**P**	**10 37 15.4**	**+0.3**
	comp=Z,7.4nm,1.0s,baz=64,slow=4.8							
GEC2	**GERESS Array S**	**86.13**	**321**	P		**P**	**10 37 12.9**	**-2.2**
GEC2				IAmb		IAmb	10 37 16.6	
	comp=Z,16nm,1.1s							
GERES	**GERESS Array B**	**86.13**	**321**	P		**P**	**10 37 14.3**	**-0.8**
GERES	**GERESS Array B**	**86.13**	**321**	P		**P**	**10 37 15.1**	**0.0**
	comp=Z,4.1nm,0.9s,baz=57,slow=4.9,SNR=22							
GERES	**GERESS Array B**	**86.13**	**321**	P		**P**	**10 37 14.3**	**-0.8**
TANN	**Tannenbergstha**	**86.19**	**322**	*e*P		**P**	**10 37 15.8**	**+0.5**
	comp=Z,6.7nm,1.0s,baz=64,slow=4.8							
MOA	**Molln**	**86.20**	**320**	*i*PcP		**P**	**10 37 15.1**	**-0.3**
	comp=Z,24nm,1.4s							
SOKA	**Soboth**	**86.20**	**318**	*i*P		**P**	**10 37 14.7**	**-0.8**
	comp=Z,7.1nm,1.0s							
GUNZ	**Gunzen**	**86.29**	**322**	*e*P		**P**	**10 37 16.2**	**+0.4**
	comp=Z,7.0nm,1.0s,baz=64,slow=4.8							
WERN	**Wernitzgruen**	**86.30**	**322**	*e*P		**P**	**10 37 16.5**	**+0.6**
	comp=Z,11nm,1.2s,baz=64,slow=4.8							
WET	**Wettzell**	**86.49**	**321**	*e*P		**P**	**10 37 17.2**	**+0.3**
	baz=64,slow=4.8							
OBKA	**Obir**	**86.57**	**318**	*i*PcP		**P**	**10 37 17.8**	**+0.4**
	comp=Z,12nm,1.2s							
MANZ	**Manzenberg**	**86.58**	**322**	*e*P		**P**	**10 37 17.4**	**+0.2**
	baz=64,slow=4.8							
NRDL	**Niedersach Rie**	**86.59**	**325**	*e*P		**P**	**10 37 17.6**	**+0.5**
	comp=Z,6.3nm,1.1s,baz=64,slow=4.8							
ROTZ	**Rotzenmuhle**	**86.62**	**322**	*e*P		**P**	**10 37 17.8**	**+0.4**
	comp=Z,9.7nm,1.3s,baz=64,slow=4.8							
KBA	**Koelnbreinsper**	**87.09**	**319**	*i*PcP		**P**	**10 37 19.3**	**-0.7**
	comp=Z,6.5nm,1.2s							
GTTG	**Gvttingen**	**87.10**	**324**	*e*P		**P**	**10 37 20.3**	**+0.7**
	baz=64,slow=4.8							
RJOB	**Jochberg**	**87.15**	**320**	*e*P		**P**	**10 37 20.2**	**+0.1**
	comp=Z,4.7nm,1.0s,baz=64,slow=4.8							
GRF	**Grafenberg Arr**	**87.23**	**322**	*e*P		**P**	**10 37 20.6**	**+0.2**
	baz=64,slow=4.8							
SUMG	**Summit**	**87.39**	**354**	P		**P**	**10 37 21.0**	**-0.2**
SUMG				pmax		pmax		
	comp=Z,21nm,1.5s							
SUMG	**Summit**	**87.39**	**354**	*i*P		**P**	**10 37 21.3**	**+0.1**
	comp=Z,39nm,0.9s							
SUMG	**Summit**	**87.39**	**354**	P		**P**	**10 37 21.0**	**-0.2**
SUMG				IAmb		IAmb	10 38 10.1	
	comp=Z,21nm,1.5s							
ABTA	**Abfaltersbach**	**87.75**	**319**	*i*PcP		**P**	**10 37 22.3**	**-0.7**
	comp=Z,9.7nm,1.2s							
YKA	**Yellowknife Ar**	**87.96**	**22**	P		**P**	**10 37 23.3**	**-0.3**
YKA	**Yellowknife Ar**	**87.96**	**22**	P		**P**	**10 37 23.6**	**+0.1**
	comp=Z,11nm,0.8s,baz=315,slow=4.6,SNR=195							
YKA				PKiKP		**PKiKP**	**10 42 25.4**	**-0.3**
	comp=Z,0.2nm,0.8s,baz=325,slow=1.7,SNR=3.8							
YKA				PKKPbc		**PKKPdf**	**10 55 07.5**	**+3.5**
	comp=Z,0.2nm,0.6s,baz=132,slow=2.6,SNR=6.5							
YKA	**Yellowknife Ar**	**87.96**	**22**	P		**P**	**10 37 23.3**	**-0.3**
WTTA	**Wattenberg**	**88.06**	**320**	*i*PcP		**P**	**10 37 24.1**	**-0.5**
	comp=Z,9.2nm,0.9s							
WATA	**Walderalm**	**88.06**	**320**	*i*P		**P**	**10 37 23.2**	**-1.4**
	comp=Z,14nm,1.7s							
SQTA	**Sankt Quirin**	**88.34**	**320**	*i*PcP		**P**	**10 37 25.9**	**0.0**
	comp=Z,8.9nm,1.0s							
MOTA	**Moosalm**	**88.35**	**320**	*i*P		**P**	**10 37 24.7**	**-1.2**
	comp=Z,6.9nm,1.0s							
FETA	**Feichten**	**88.72**	**320**	*i*PcP		**P**	**10 37 27.6**	**-0.2**
	comp=Z,8.8nm,1.0s							
UBR	**Ueberruh**	**88.80**	**321**	*e*P		**P**	**10 37 27.9**	**0.0**
	comp=Z,4.5nm,0.9s,baz=64,slow=4.8							
DAVA	**Damuels**	**89.12**	**320**	*i*P		**P**	**10 37 28.0**	**-1.6**
	comp=Z,17nm,1.7s							
SALO	**Salr**	**89.49**	**319**	P		**P**	**10 37 30.1**	**-1.1**
BNI	**Bardonecchia**	**92.14**	**319**	P		**P**	**10 37 43.1**	**-0.6**
BNI				pmax		pmax		
	comp=Z,30nm,1.3s							
BNI	**Bardonecchia**	**92.14**	**319**	P		**P**	**10 37 43.1**	**-0.6**
PPT	**Papeete**	**95.83**	**106**	LR		LR	11 12 22.5	
	comp=Z,39nm,20.2s,baz=304,slow=30							
PPT2	**Papeete2**	**95.84**	**107**	*e*LR		LR	11 09 01.3	
	comp=Z,200nm,32.0s							
L04D	**Klamath Falls**	**96.10**	**41**	P		**P**	**10 38 02.4**	**+0.4**
	baz=303							
J05D	**Fort Rock, OR**	**96.18**	**40**	P		**P**	**10 38 03.1**	**+0.8**
	baz=304							
M04C	**Macdoel**	**96.63**	**42**	P		**P**	**10 38 04.9**	**+0.6**
	baz=303							
LSZ	**Lusaka**	**96.72**	**256**	P		**P**	**10 38 05.1**	**0.0**
LSZ				pmax		pmax		
	comp=Z,9.0nm,1.4s							
LSZ	**Lusaka**	**96.72**	**256**	P		**P**	**10 38 05.1**	**0.0**
LSZ				IAmb		IAmb	10 38 38.6	
	comp=Z,9.1nm,1.4s							
O02D	**Mt. Diablo Mer**	**96.88**	**43**	P		**P**	**10 38 06.6**	**+1.1**
	baz=302							
MOD	**Modoc Plateau**	**97.52**	**41**	P		**P**	**10 38 08.1**	**-0.3**
MOD				IAmb		IAmb	10 38 10.7	
	comp=Z,6.1nm,1.1s							
TBI	**Tubuai**	**97.69**	**112**	*e*LR		LR	11 09 55.0	
	comp=Z,125nm,36.8s							
ORV	**Oroville**	**98.05**	**43**	P		**P**	**10 38 10.2**	**-0.4**
ORV				pmax		pmax		
	comp=Z,3.0nm,0.9s							
ORV	**Oroville**	**98.05**	**43**	P		**P**	**10 38 10.2**	**-0.4**
ORV				IAmb		IAmb	10 38 10.8	
	comp=Z,2.9nm,0.9s							
BEKR	**Beckworth**	**98.61**	**43**	P		**P**	**10 38 13.4**	**0.0**
BEKR				IAmb		IAmb	10 38 14.5	
	comp=Z,3.8nm,0.9s							
VNDA	**Vanda**	**99.47**	**172**	LR		LR	11 23 06.9	
	comp=Z,30nm,21.2s,baz=321,slow=35							
NVAR	**Mina Array Bea**	**100.74**	**43**	P		**Pdif**	**10 38 22.8**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=302,slow=5.2,SNR=9.4							
TORD	**Torodi Ar. Bea**	**111.44**	**293**	PKiKP		**PKiKP**	**10 43 08.4**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=100,slow=1.3,SNR=5.1							
TX31	**Lajitas Ar. Si**	**115.88**	**42**			**PKPdf**	**10 43 17.8**	**+0.5**
TX32	**Lajitas Array**	**115.88**	**42**			**PKPdf**	**10 43 18.0**	**+0.7**
TXAR	**Lajitas Array**	**115.88**	**42**	PKiKP		**PKiKP**	**10 43 17.5**	**+0.2**
TXAR	**Lajitas Array**	**115.88**	**42**	PKP		**PKPdf**	**10 43 17.8**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=230,slow=0.5,SNR=26							
TXAR	**Lajitas Array**	**115.88**	**42**			**PKiKP**	**10 43 17.5**	**+0.2**
U40A	**Yellville**	**116.58**	**29**			**PKPdf**	**10 43 17.9**	**-0.4**
U40A	**Yellville**	**116.58**	**29**	P		**PKPdf**	**10 43 18.0**	**-0.4**
	baz=325							
JCT	**Junction City**	**117.44**	**39**	PKiKP		**PKPdf**	**10 43 20.5**	**+0.3**
JCT	**Junction City**	**117.44**	**39**			**PKPdf**	**10 43 20.5**	**+0.3**
JCT	**Junction City**	**117.44**	**39**	P		**PKPdf**	**10 43 20.4**	**+0.3**
	baz=317							
WVT	**Waverly**	**118.97**	**26**	PKiKP		**PKPdf**	**10 43 22.3**	**-0.6**
WVT	**Waverly**	**118.97**	**26**			**PKPdf**	**10 43 22.3**	**-0.6**
WVT	**Waverly**	**118.97**	**26**	P		**PKPdf**	**10 43 22.9**	**-0.1**
	baz=330							
U50A	**Jamestown**	**119.89**	**23**	P		**PKPdf**	**10 43 24.4**	**-0.3**
	baz=333							
V52A	**Sevierville**	**120.86**	**22**	P		**PKPdf**	**10 43 26.7**	**+0.1**
	baz=334							
W53A	**Cullowhee**	**121.62**	**22**	P		**PKPdf**	**10 43 28.2**	**0.0**
	baz=334							
V55A	**Taylorsville**	**121.67**	**20**	P		**PKPdf**	**10 43 28.2**	**0.0**
	baz=336							
Z52A	**Williamson**	**122.91**	**25**	P		**PKPdf**	**10 43 31.0**	**+0.4**
	baz=332							
OCAC	**Ocana**	**149.72**	**27**	*e*P		**PKPbc**	**10 44 24.4**	**-0.4**
SDV	**Santo Domingo**	**150.18**	**22**	PKPbc		**PKPbc**	**10 44 25.4**	**-0.6**
SDV				PKPab		**PKPab**	**10 44 31.5**	**-0.3**
CBOC	**Ciudad Bolivar**	**150.47**	**34**	*e*P		**PKPbc**	**10 44 25.1**	**-1.6**
PTBC	**PUERTO BERRIO**	**150.69**	**31**	*e*P		**PKPbc**	**10 44 25.8**	**-1.2**
PLMC	**San Jos del P**	**151.13**	**36**	*e*P		**PKPbc**	**10 44 27.8**	**-0.3**
BARC	**Barichara**	**151.24**	**29**	*e*P		**PKPbc**	**10 44 28.4**	**-0.1**
NORC	**Norcasia**	**151.32**	**33**	*e*P		**PKPbc**	**10 44 28.4**	**-0.1**
GUY2C	**Guyana, Caldas**	**151.36**	**34**	*e*P		**PKPbc**	**10 44 29.1**	**0.0**
SPBC	**San Pablo de B**	**151.65**	**31**	*e*P		**PKPbc**	**10 44 28.4**	**-0.9**
YOTC	**Yotoco, Valle**	**151.85**	**37**	*e*P		**PKiKP**	**10 44 30.4**	**+0.2**
RUSC	**La Rusia**	**151.90**	**29**	*e*P		**PKPbc**	**10 44 30.4**	**0.0**
ROSC	**El Rosal**	**152.22**	**32**	PKPbc		**PKiKP**	**10 44 32.1**	**+0.8**
	comp=Z,15nm,0.6s,baz=337,slow=6.1,SNR=14							
ROSC	**El Rosal**	**152.22**	**32**			**PKiKP**	**10 44 31.9**	**+0.6**
ORTC	**Ortega, Tolima**	**152.52**	**35**	*e*P		**PKiKP**	**10 44 32.4**	**+0.9**
CHIC	**Chingaza**	**152.70**	**31**	*e*P		**PKPdf**	**10 44 27.8**	**+2.7**
BBAC	**Balboa, Cauca**	**152.88**	**41**	*e*P		**PKPbc**	**10 44 30.4**	**-1.8**
SOTA	**Rioblanco**	**153.18**	**40**	*e*P		**PKiKP**	**10 44 33.8**	**+0.3**
CRUC	**La Cruz**	**153.41**	**41**	*e*P		**PKiKP**	**10 44 34.4**	**+0.7**
OTAV	**Otavalo**	**153.45**	**46**	PKIKP		**PKPdf**	**10 44 27.5**	**+1.3**
OTAV	**Otavalo**	**153.45**	**46**			**PKPdf**	**10 44 27.5**	**+1.3**
PLCA	**Paso Flores**	**156.59**	**159**	PKPbc		PKPbc	10 44 40.0	
	comp=Z,7.7nm,1.0s,baz=239,slow=3.9,SNR=3.5							
BDFB	**Brasilia**	**158.21**	**285**	PKP		**PKPdf**	**10 44 41.2**	**-0.3**
	comp=Z,4.1nm,0.9s,baz=130,slow=1.8,SNR=4.1							
SAML	**Samuel**	**169.36**	**18**	PKP2		**PKPab**	**10 45 53.0**	**-1.5**
SAML							11 44 41.6	
SAML	**Samuel**	**169.36**	**18**			**PKPdf**	**10 44 41.6**	**-0.5**
SAML						**PKPab**	**10 45 53.0**	**-1.5**
MNMC	**Minye Minye**	**170.76**	**92**	PKPdf		**PKPdf**	**10 44 45.4**	**+2.2**
LPAZ	**La Paz**	**171.59**	**72**	PKIKP		**PKPdf**	**10 44 45.3**	**+1.2**
LPAZ	**La Paz**	**171.59**	**72**	PKP		**PKPdf**	**10 44 44.2**	**+0.1**
	comp=Z,4.7nm,1.0s,baz=323,slow=1.7,SNR=12							
LPAZ	**La Paz**	**171.59**	**72**	PKPdf		**PKPdf**	**10 44 45.3**	**+1.2**
FITZ	**Fitzroy Crossi**	**15.70**	**195**			**Pn**	**10 58 14.1**	**+1.0**
WRA	**Warramunga Arr**	**17.58**	**166**	P		**Pn**	**10 58 34.9**	**-2.0**
	0.6nm,0.3s,baz=345,slow=12,SNR=17							
WRA				S		**Sn**	**11 01 43.4**	**-8.7**
	0.1nm,0.3s,baz=342,slow=22,SNR=3.0							
WRA				LR		LR	11 06 44.4	
	comp=Z,24nm,18.9s,baz=295,slow=42							
WRA	**Warramunga Arr**	**17.58**	**166**	Pn		**Pn**	**10 58 35.2**	**-1.7**
WRA				Sn		**Sn**	**11 01 51.0**	**-1.1**
PMG	**Port Moresby**	**18.48**	**111**	LR		LR	11 07 23.1	
	comp=Z,46nm,19.0s,baz=224,slow=42							
PSA00	**Pilbara Seismi**	**20.98**	**207**	P		**P**	**10 59 13.8**	**-1.2**
PSA00				IAmb		IAmb	11 00 10.1	
	comp=Z,21nm,1.4s							
AS31	**Alice Springs**	**21.10**	**169**	P		**P**	**10 59 16.8**	**+0.6**
AS31				IAmb		IAmb	10 59 22.0	
	comp=Z,3.0nm,0.7s							
ASAR	**Alice Springs**	**21.10**	**169**	P		**P**	**10 59 15.0**	**-1.2**
	comp=Z,5.6nm,0.6s,baz=351,slow=10,SNR=54							
ASAR				S		**S**	**11 03 09.4**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=352,slow=27,SNR=3.3							
ASAR				PcP		**PcP**	**11 03 23.2**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=345,slow=2.6,SNR=5.0							
ASAR	**Alice Springs**	**21.10**	**169**	P		**P**	**10 59 17.0**	**+0.8**
CTA	**Charters Tower**	**23.52**	**138**	P		**P**	**10 59 43.1**	**+1.3**
	comp=Z,2.6nm,0.8s,baz=329,slow=10,SNR=3.6							
MAJO	**Matsushiro**	**39.95**	**11**	P		**P**	**11 02 05.1**	**-0.7**
MAJO				IAmb		IAmb	11 02 33.9	
	comp=Z,24nm,1.1s							
MJAR	**Matsushiro Arr**	**39.95**	**11**	P		**P**	**11 02 04.9**	**-1.0**
MJB9	**Matsu-Tunnel**	**39.96**	**11**	P		**P**	**11 02 05.1**	**-0.8**
MK31	**Makanchi Array**	**64.65**	**326**	P		**P**	**11 05 08.7**	**-0.3**
MK31				IAmb		IAmb	11 05 53.2	
	comp=Z,3.2nm,1.4s							
MKAR	**Makanchi Array**	**64.65**	**326**	P		**P**	**11 05 09.3**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=131,slow=8.2,SNR=3.8							
MKAR	**Makanchi Array**	**64.65**	**326**	P		**P**	**11 05 08.9**	**-0.1**
ZALV	**Zalesovo Beam**	**67.77**	**333**	P		**P**	**11 05 28.7**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=123,slow=7.1,SNR=3.0							
KURK	**Kurchatov**	**68.87**	**328**	P		**P**	**11 05 35.9**	**+0.1**
KURK				IAmb		IAmb	11 05 36.8	
	comp=Z,2.8nm,0.7s							
GEYT	**Alibeck**	**77.37**	**310**	LR		LR	11 45 30.3	
	comp=Z,35nm,18.4s,baz=10.0,slow=40							

*IDC **03** 10:54:29.7±1.1,2.87S×129.61E,h0km,mb3.9/4, mb1 4.1/7,mb1mx3.8/29,mbtmp4.0/7,ML3.8/3,MS3.0/4, Ms1 3.0/4,ms1mx2.7/30,Error ellipse: s-maj=38.8km s-min=20.5km az=78.0*

*DJA **03** 10:54:34.9±1.0,3°S±6°×13°0E±°,h97km±27km,M3.6/7, MLv3.6/7*

*NEIC **03** 10:54:35.5±1.5,2.81S±0.06×129.8E±0.1,h46km±11km, mb4.3/9,Error ellipse: s-maj=19.3km s-min=7.8km az=96.0*

ISC 03 10:54:33.7±0.7,2.83S±0.05×129.76E±0.05,h28km,n31, σ1s92/35,mb4.1/8,Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.98**	**238**	P	**Pb**	**10 54 54.6**	**+2.5**
BNDI	**Bandanaira**	**1.69**	**175**	P	**Pb**	**10 55 06.0**	**+1.9**
AAI	**Ambon**	**1.78**	**241**	P	**Pb**	**10 55 06.6**	**+0.8**
SIJI	**Sorong**	**2.46**	**38**	Pn	**Pn**	**10 55 12.2**	**+0.1**
	18nm,0.3s,baz=225,slow=13,SNR=276						
SIJI				Sn	**Sn**	**10 55 40.3**	**-0.9**
	9.3nm,0.3s,baz=273,slow=11,SNR=3.7						
SIJI				LR	LR	10 56 27.5	
	comp=Z,119nm,18.1s,baz=194,slow=46						
SWI	**Sorong**	**2.46**	**37**	P	**Pn**	**10 55 12.6**	**+0.6**
FAKI	**Fak Fak**	**2.48**	**92**	P	**Pn**	**10 55 13.8**	**+1.5**
FAKI	**Fak Fak**	**2.48**	**92**		**Pn**	**10 55 13.9**	**+1.5**
NLAI	**Namlea**	**2.69**	**261**	P	**Pn**	**10 55 16.3**	**+1.1**
LBMI	**Labuha**	**3.14**	**314**	P	**Pn**	**10 55 22.5**	**+1.1**
SANI	**Sanana**	**3.85**	**282**	P	**Pn**	**10 55 29.9**	**-1.3**
MTN	**Manton Dam**	**10.04**	**172**	Pn	**Pn**	**10 56 57.5**	**+1.2**
MTN				Sn	**Sn**	**10 58 47.0**	**-1.0**
KNRA	**Kununurra**	**12.80**	**184**	Pn	**Pn**	**10 57 35.2**	**+1.2**
FITZ	**Fitzroy Crossi**	**15.70**	**195**	Pn	**Pn**	**10 58 13.0**	**-0.1**
	0.2nm,0.3s,baz=13,slow=5.2,SNR=3.5						

**IDC 03 11:20:59.8±10.0,12.43N×41.44E,h0km,mb3.6/5, mb1 3.7/5,mb1m

	comp=E,320μm,0.5s						
FNA				AML	AML	11 34 17.3	
	comp=N,204μm,0.3s						
LIT	**Litokhoron**	**1.20**	**188**	P	**Pg**	**11 33 56.0**	**-1.4**
LIT	**Litokhoron**	**1.20**	**188**	P	**Pg**	**11 33 56.0**	**-1.4**
LIT				S	**Sg**	**11 34 12.1**	**-0.9**
LIT				AML	AML	11 34 16.4	
	comp=E,158μm,0.3s						
LIT				AML	AML	11 34 17.3	
	comp=N,105μm,0.3s						
KZN	**Kozani**	**1.22**	**216**	P	**Pg**	**11 33 56.8**	**-0.9**
KZN				S	**Sb**	**11 34 13.7**	**+0.8**
KZN				AML	AML	11 34 20.0	
	comp=E,290μm,0.4s						
KZN				AML	AML	11 34 22.6	
	comp=N,112μm,0.3s						
BOSS	**Bosilegrad**	**1.22**	**352**	*e*Pg	**Pg**	**11 33 57.1**	**-0.5**
BOSS				*e*Sg	**Sg**	**11 34 13.5**	**0.0**
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**11 33 59.2**	**+0.2**
OUR				S	**Sg**	**11 34 17.5**	**-0.5**
	comp=N,162nm,0.5s						
OUR	**Ouranopolis**	**1.36**	**134**	P	**Pn**	**11 33 59.1**	**+0.1**
OUR				AML	AML	11 34 20.9	
	comp=E,284μm,0.3s						
OUR				AML	AML	11 34 22.7	
	comp=N,302μm,0.3s						
VTS	**Vitosha**	**1.38**	**16**	P	**Pn**	**11 33 59.9**	**+0.5**
VTS	**Vitosha**	**1.38**	**16**	*e*Pg	**Pn**	**11 33 59.6**	**+0.1**
VTS				*e*Sg	**Sb**	**11 34 17.8**	**0.0**
VTS	**Vitosha**	**1.38**	**16**	P	**Pn**	**11 33 60.0**	**+0.5**
VTS				⇑S	**Sb**	**11 34 15.8**	**-2.0**
VTS	**Vitosha**	**1.38**	**16**	P	**Pn**	**11 34 00.1**	**+0.6**
KAVA	**Kavala**	**1.39**	**102**	P	**Pn**	**11 34 00.1**	**+0.6**
KAVA	**Kavala**	**1.39**	**102**	P	**Pb**	**11 34 00.3**	**+0.1**
KAVA				S	**Sn**	**11 34 19.2**	**+1.4**
KAVA				AML	AML	11 34 21.5	
	comp=E,296μm,0.5s						
KAVA				AML	AML	11 34 22.3	
	comp=N,212μm,0.6s						
NEST	**Nestorio**	**1.53**	**236**	P	**Pn**	**11 34 02.4**	**+0.9**
NEST	**Nestorio**	**1.53**	**236**	P	**Pb**	**11 34 02.8**	**+0.1**
NEST				AML	AML	11 34 31.1	
	comp=E,121μm,0.5s						
NEST				AML	AML	11 34 33.7	
	comp=N,118μm,0.5s						
PAIG	**Paliouri**	**1.55**	**151**	P	**Pn**	**11 34 02.2**	**+0.5**
PAIG	**Paliouri**	**1.55**	**151**	P	**Pn**	**11 34 02.1**	**+0.5**
PAIG				AML	AML	11 34 25.8	
	comp=E,170μm,0.8s						
PAIG				AML	AML	11 34 27.4	
	comp=N,257μm,0.7s						
RZN	**Rozhen**	**1.56**	**75**	P	**Pb**	**11 34 03.4**	**+0.3**
PENT	**Pentalofos**	**1.62**	**228**	P	**Pn**	**11 34 03.2**	**+0.5**
BARS	**Barje**	**1.66**	**337**	*e*Pn	**Pb**	**11 34 04.9**	**+0.1**
BARS				*e*Sg	**Sn**	**11 34 26.4**	**+1.9**
PGB	**Panagyurishte**	**1.66**	**40**	P	**Pb**	**11 34 05.5**	**+0.7**
THAS	**Thassos island**	**1.67**	**114**	P	**Pn**	**11 34 03.4**	**+0.1**
THAS	**Thassos island**	**1.67**	**114**	P	**Pn**	**11 34 04.2**	**+1.0**
THAS				S	**Sb**	**11 34 26.5**	**+0.7**
THAS				AML	AML	11 34 28.4	
	comp=N,269μm,0.4s						
THAS				AML	AML	11 34 28.8	
	comp=E,143μm,0.3s						
KPRO	**Kipourio**	**1.68**	**218**	P	**Pn**	**11 34 04.4**	**+0.9**
THL	**Klokotos Trika**	**1.81**	**197**	P	**Pn**	**11 34 06.0**	**+0.9**
THL				AML	AML	11 34 37.1	
	comp=E,82μm,0.5s						
THL				AML	AML	11 34 39.0	
	comp=N,34μm,0.6s						
XOR	**Xorichti**	**1.96**	**169**	P	**Pn**	**11 34 07.6**	**+0.3**
XOR	**Xorichti**	**1.96**	**169**	P	**Pn**	**11 34 07.7**	**+0.4**
ZAPS	**Zavoj**	**1.98**	**358**	*e*Pn	**Pn**	**11 34 09.0**	**+1.4**
RDO	**Rodhopi**	**2.14**	**93**	P	**Pn**	**11 34 10.3**	**+0.6**
RDO				AML	AML	11 34 49.2	
	comp=E,98μm,0.4s						
RDO				AML	AML	11 34 51.5	
	comp=N,87μm,0.2s						
MPEP	**Malo Peshtene**	**2.20**	**20**	P	**Pg**	**11 34 15.9**	**-0.5**
SELS	**Selova**	**2.26**	**329**	*e*Pn	**Pn**	**11 34 13.5**	**+2.1**
AGG	**Agios Georgios**	**2.29**	**187**	P	**Pn**	**11 34 12.7**	**+0.9**
SMTH	**Samothraki isl**	**2.29**	**110**	P	**Pn**	**11 34 12.8**	**+0.9**
BLKB	**Belogradchik**	**2.33**	**359**	⇑S	**Sn**	**11 34 39.6**	**-1.4**
BOVS	**Bovan**	**2.46**	**343**	*e*Pn	**Pn**	**11 34 15.4**	**+1.3**
BOVS				*e*Sg	**Sg**	**11 34 52.9**	**-0.3**
PLVB	**Pleven**	**2.53**	**33**	⇓P	**Pn**	**11 34 17.7**	**+2.7**
PLVB	**Pleven**	**2.53**	**33**	⇓S	**Sb**	**11 34 49.5**	**-1.0**
ZAGS	**Zajecar**	**2.54**	**352**	*e*Pn	**Pn**	**11 34 17.1**	**+1.8**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn	**Pn**	**11 34 22.2**	**+0.9**
DIVS	**Divibare**	**3.45**	**325**	*e*Pn	**Pn**	**11 34 29.2**	**+1.4**
MDVR	**Moldovita**	**3.56**	**349**	⇑P	**Pn**	**11 34 29.6**	**+0.2**
MDVR	**Moldovita**	**3.56**	**349**	⇑S	**Sn**	**11 35 09.4**	**-2.0**
BZS	**Buzias**	**4.40**	**350**	⇓P	**Pn**	**11 34 40.4**	**-0.3**
BZS	**Buzias**	**4.40**	**350**	⇓S	**Sb**	**11 35 42.6**	**-1.7**
VOIR		**4.48**	**22**	⇑P	**Pn**	**11 34 44.7**	**+2.7**
MLR	**Muntele Rosu**	**4.81**	**28**	⇑P	**Pn**	**11 34 49.8**	**+3.1**

*CRAAG **03** 11:46:02.2, 36°.54N×0°.71E, Ml2.9*
*MDD **03** 11:46:03.2±1.1, 36°.56N×0°.75E, h23km±24km, mbLg2.3/10, Error ellipse: s-maj=17.6km s-min=8.4km az=157.0, PRXIMO*
ISC 03 11:46:02.5±2.1, 36°.6N±0°.1×0°.74E±0°.08, h35km±13km, n20, σ1℘04/34, 1D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKGL	**Djebel Kef Gue**	**0.52**	**189**	⇓P	**Pb**	**11 46 13.1**	**-0.5**
	40nm,0.1s,SNR=18						
OKGL				S	**Sb**	**11 46 21.2**	**0.0**
	487nm,0.5s,SNR=7.9						
EANR	**'Ain N'Sour**	**0.67**	**154**	P	**Pb**	**11 46 15.7**	**-0.3**
EANR	**'Ain N'Sour**	**0.67**	**154**	P	**Pb**	**11 46 15.7**	**-0.3**
EBNR	**Beni Rached**	**0.69**	**112**	P	**Pn**	**11 46 16.5**	**+0.2**
ETRV	**Los Montesinos**	**1.89**	**321**	P	**Pn**	**11 46 33.1**	**+0.8**
	33nm,0.1s,SNR=7.9						
ETRV				S	**Sn**	**11 46 56.0**	**+1.0**
	56nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**2.04**	**310**	P	**Pn**	**11 46 34.6**	**+0.2**
	1.7nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**11 46 58.4**	**-0.2**
	2.3nm,0.6s,SNR=7.9						
EBEN2	**Beniarda presa**	**2.24**	**341**	P	**Pn**	**11 46 38.3**	**+1.1**
	3.3nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**11 47 03.3**	**-0.4**
	5.0nm,0.2s,SNR=7.9						
AFON	**Font Roja**	**2.34**	**335**	S	**Sn**	**11 47 06.5**	**+0.3**
	4.7nm,0.3s,SNR=4.0						
EIBI	**Ibiza**	**2.51**	**11**	P	**Pn**	**11 46 42.1**	**+1.2**
	3.9nm,0.2s,SNR=8.2						
EIBI				S	**Sn**	**11 47 09.4**	**-0.9**
	9.0nm,0.4s,SNR=10						
ETOB	**Tobarra**	**2.77**	**320**	P	**Pn**	**11 46 46.0**	**+1.5**
	3.2nm,0.1s,SNR=24						
ETOB				S	**Sn**	**11 47 15.8**	**-0.9**
	4.1nm,0.3s,SNR=5.0						
EBER	**Berja**	**2.94**	**278**	P	**Pn**	**11 46 48.0**	**+1.1**
	0.5nm,0.1s,SNR=4.0						
SESP	**Santiago Espad**	**3.05**	**302**	P	**Pn**	**11 46 49.6**	**+1.2**
	17nm,1.8s,SNR=7.9						
SESP				S	**Sn**	**11 47 23.5**	**-0.2**
	11nm,0.1s,SNR=7.9						
EQES	**Quesada**	**3.29**	**293**	P	**Pn**	**11 46 53.0**	**+1.3**
	5.7nm,0.1s,SNR=16						
EQES				S	**Sn**	**11 47 29.4**	**-0.3**
	1.2nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.60**	**26**	P	**Pn**	**11 46 56.3**	**+0.5**
	2.3nm,8.3s,SNR=7.9						
ETOS				S	**Sn**	**11 47 36.6**	**-0.5**
	0.5nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**3.92**	**346**	P	**Pn**	**11 47 01.5**	**+1.1**
	1.1nm,0.2s,SNR=15						
EMOS				S	**Sn**	**11 47 44.1**	**-1.2**
	0.8nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**4.41**	**356**	P	**Pn**	**11 47 07.4**	**+0.4**
	3.6nm,4.7s,SNR=7.9						
ERTA				S	**Sn**	**11 47 55.6**	**-1.5**
	2.0nm,0.5s,SNR=7.9						
EADA	**Adamuz**	**4.53**	**292**	P	**Pn**	**11 47 09.0**	**+0.3**
	0.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**11 47 59.0**	**-1.2**
	0.4nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.80**	**3**	P	**Pn**	**11 47 13.9**	**+1.5**
	3.7nm,7.7s,SNR=7.9						
EPOB				S	**Sn**	**11 48 04.6**	**-2.1**
	0.9nm,0.2s,SNR=7.9						

ESDC	**Sonseca Array**	**4.84**	**311**	P	**Pn**	**11 47 13.3**	**+0.3**
	SNR=7.9						
ESDC				S	**Sn**	**11 48 05.8**	**-2.1**
	SNR=7.9						
PAB	**San Pablo**	**5.00**	**308**	P	**Pn**	**11 47 15.8**	**+0.6**
	1.1nm,0.1s,SNR=7.9						

*NCEDC **03** 11:52:17.4±1.5, 37°.324N±0°.010×122°.16W±0°.01, h10km±1km, Md2.9/214, Error ellipse: s-maj=1.8km s-min=1.1km az=224.0*
NEIC 03 11:52:17.0±0.9, 37°.29N±0°.01×122°.19W±0°.01, h15km±1km, Error ellipse: s-maj=1.6km s-min=1.1km az=205.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHUM	**Huhtala Lane,**	**0.08**	**169**		Pg	11 52 20.4	+0.4
JSGM	**Saratoga Golf**	**0.11**	**93**		Pg	11 52 20.0	-0.4
JSFB	**Stanford Teles**	**0.12**	**5**		Pg	11 52 20.0	-0.4
JRSC	**Jasper Ridge**	**0.12**	**341**		Pg	11 52 20.1	-0.4
BGH	**Bear Gulch**	**0.13**	**294**		Pb	11 52 21.2	0.0
JPSM		**0.15**	**235**		Pb	11 52 22.0	+0.4
JBNB	**Ben Lomond Mou**	**0.17**	**171**		Pb	11 52 21.7	-0.2
JHPM	**Huddart Park**	**0.18**	**330**		Pg	11 52 21.5	+0.2
JJOM	**Saint Joseph's**	**0.19**	**116**		Pg	11 52 21.3	-0.2
SCCB	**Santa Clara Co**	**0.26**	**90**		Pg	11 52 22.6	-0.1
JUMM	**Mount Umunhum**	**0.27**	**119**		Pg	11 52 22.8	+0.1
OXMT	**Ox Mountain**	**0.28**	**318**		Pg	11 52 23.2	+0.3
CYD1	**Coyote D'meter**	**0.28**	**15**		Pg	11 52 22.6	-0.4
AMC	**Almaden**	**0.30**	**115**		Pg	11 52 23.4	0.0
JCPM	**Coyote Point**	**0.32**	**341**		Pg	11 52 23.7	+0.1
JSTM	**Santa Teresa H**	**0.32**	**105**		Pg	11 52 23.7	0.0
JHLM	**Holstrom Ranch**	**0.34**	**122**		Pg	11 52 24.1	+0.1
CMJM	**Mission San Jo**	**0.34**	**47**		Pg	11 52 23.9	-0.2
SAC	**San Andreas**	**0.34**	**328**		Pg	11 52 24.4	+0.3
CALM	**Calaveras Res.**	**0.35**	**62**		Pg	11 52 24.1	-0.1
JTGM	**Trout Gulch Ro**	**0.36**	**136**		Pb	11 52 25.0	-0.1
CNIC	**Niles Canyon**	**0.36**	**29**		Pg	11 52 24.4	-0.1
C055	**Cottonwood Ave**	**0.37**	**10**		Pg	11 52 24.5	-0.1
JLAB	**Laurel Hill**	**0.39**	**110**		Pg	11 52 24.9	+0.1
CSUI	**Sunol Dilatome**	**0.41**	**29**		Pg	11 52 25.1	-0.1
CCOB	**Coe Ranch Numb**	**0.41**	**94**		Pb	11 52 25.8	-0.3
CVLM	**Vallecito**	**0.44**	**40**		Pb	11 52 26.1	-0.3
MHC	**Mount Hamilton**	**0.44**	**83**		Pg	11 52 25.9	0.0
CLCB	**Lake Chabot**	**0.46**	**12**		Pg	11 52 26.3	+0.1
JELB	**Ellicott, Sant**	**0.46**	**141**		Pb	11 52 26.8	-0.1
CADM	**Anderson Res.**	**0.47**	**105**		Pg	11 52 26.4	+0.1
CMLM	**Mount Lewis**	**0.47**	**66**		Pg	11 52 26.3	-0.1
WENL	**Wente Vineyard**	**0.48**	**46**		Pg	11 52 26.7	+0.1
CMCM	**Mills College**	**0.49**	**1**		Pg	11 52 26.8	0.0
HLPM	**Lions Peak**	**0.51**	**119**		Pg	11 52 27.1	0.0
ARN	**Arnold Ranch**	**0.53**	**83**		Pg	11 52 27.2	-0.2
BGC	**Bolinger Road**	**0.54**	**11**		Pg	11 52 27.7	+0.1
CYBM	**Yerba Buena Is**	**0.54**	**345**		Pg	11 52 27.6	-0.1
JPRM	**Presidio of Sa**	**0.55**	**336**		Pg	11 52 28.1	+0.1
HCOM	**Corn Cob Canyo**	**0.56**	**136**		Pb	11 52 28.6	+0.1
HSPM	**Sheep**	**0.56**	**108**		Pg	11 52 28.3	+0.1
CMMM	**Mount Mocho**	**0.58**	**73**		Pg	11 52 28.3	-0.1
BRK	**Berkeley--Havi**	**0.59**	**354**		Pg	11 52 28.4	-0.2
BKS	**Berkeley--Byer**	**0.59**	**356**		Pg	11 52 28.6	0.0
BL67	**Building 67, L**	**0.59**	**355**		Pg	11 52 28.6	0.0
BL88	**Building 88, L**	**0.59**	**355**		Pg	11 52 28.6	0.0
VAK	**Adit at Lawren**	**0.59**	**355**		Pg	11 52 28.6	-0.1
CRHM	**Round Hill Res**	**0.59**	**15**		Pb	11 52 29.4	+0.4
CVPM	**Vollmer Peak**	**0.59**	**358**		Pg	11 52 28.9	+0.2
MOBB	**Monterey Bay O**	**0.60**	**178**		Pn	11 52 30.2	-0.6
CMOB	**Morgan Territo**	**0.60**	**30**		Pb	11 52 29.6	+0.2
CDC	**Canada Road**	**0.62**	**115**		Pg	11 52 29.3	0.0
HERM	**Elkhorn Road**	**0.62**	**142**		Pb	11 52 29.5	-0.1
GHS	**Gilroy Hot Spr**	**0.62**	**108**		Pb	11 52 29.6	-0.1
ANZ	**Anzar Road**	**0.63**	**130**		Pg	11 52 29.3	0.0
BRIB	**Briones**	**0.63**	**3**		Pb	11 52 29.6	-0.1
HTUM	**Tustin Road**	**0.64**	**136**		Pg	11 52 29.5	+0.1
RFSB	**Richmond Field**	**0.64**	**350**		Pg	11 52 29.5	0.0
OCR	**O'Connell Ranc**	**0.66**	**124**		Pg	11 52 29.9	0.0
CRPB	**Russellman Par**	**0.66**	**20**		Pb	11 52 30.2	-0.1
HBTM	**San Juan Bauti**	**0.67**	**130**		Pg	11 52 30.1	-0.1
CSPM	**San Pablo Ridg**	**0.67**	**352**		Pg	11 52 30.3	+0.2
CPMM	**Point Molate**	**0.68**	**345**		Pb	11 52 30.2	-0.1
CBSNC	**Byron Hot Spri**	**0.68**	**39**		Pb	11 52 31.0	+0.3
CPIM	**Pinole Ridge**	**0.70**	**358**		Pb	11 52 31.1	+0.2
HFEM	**San Felipe**	**0.70**	**116**		Pg	11 52 30.6	-0.1
BDM	**Black Diamond**	**0.71**	**21**		Pb	11 52 31.4	+0.2
HMOM	**Monterey**	**0.72**	**162**		Pb	11 52 31.2	-0.1
FARB	**Farallon Islan**	**0.76**	**303**		Pg	11 52 31.4	-0.5
HPCM	**Pacheco Lake**	**0.77**	**107**		Pg	11 52 31.9	0.0
FRP	**Fremont Peak**	**0.77**	**133**		Pg	11 52 31.7	-0.4
PACP	**Pacheco Peak**	**0.77**	**111**		Pg	11 52 32.0	-0.1
SAO	**San Andreas Ge**	**0.79**	**131**	Pg	Pg	11 52 32.0	-0.4
SAO				Sg	Sb	11 52 43.6	+0.5
SLD	**San Luis Dam**	**0.80**	**105**		Pg	11 52 32.6	0.0
HLTM	**Lone Tree Road**	**0.81**	**120**		Pb	11 52 32.9	0.0
BSRM	**Salinas Radio**	**0.82**	**139**		Pg	11 52 32.5	-0.4
BVYM	**Vineyard**	**0.82**	**131**		Pg	11 52 32.7	-0.3
NLHM	**Lake Herman**	**0.83**	**2**		Pb	11 52 33.2	+0.1
BPCNC	**Pine Canyon**	**0.84**	**148**		Pg	11 52 33.6	+0.2
BSLM	**Silva Ranch**	**0.85**	**127**		Pg	11 52 33.9	+0.4
SFJWR	**San Luis Fatjo**	**0.85**	**106**		Pb	11 52 33.3	-0.2
NOLM	**Olema**	**0.89**	**328**		Pb	11 52 33.7	-0.4
BCGM	**Cienega Road**	**0.89**	**130**		Pg	11 52 34.4	+0.1
BHRM	**Hodges Ranch**	**0.93**	**127**		Pg	11 52 35.1	+0.1
SCZ	**Santa Cruz**	**0.94**	**137**		Pb	11 52 34.3	-0.6
BLRM	**Lewis Ranch**	**0.96**	**130**		Pb	11 52 35.4	0.0
BJOM	**Mount Johnson**	**0.96**	**133**		Pb	11 52 35.2	-0.2
NPRM	**Point Reyes**	**0.96**	**317**		Pb	11 52 35.2	-0.2
MCCM	**Marconi Confer**	**1.01**	**328**	Pg	Pb	11 52 35.6	-0.7
MCCM				Sg	Sg	11 52 50.3	+0.4
BEHM	**Elkhorn Ranch**	**1.02**	**127**		Pb	11 52 36.1	-0.4
HAST	**Hastings Reser**	**1.03**	**150**		Pb	11 52 36.2	-0.5
CVS	**Carmenet Viney**	**1.07**	**349**		Pb	11 52 36.1	-1.2
BEMM	**Emmet**	**1.08**	**125**		Pb	11 52 37.1	-0.3
BSMM	**Soledad Missio**	**1.09**	**146**		Pb	11 52 37.1	-0.5
BPOM	**Post Ranch**	**1.11**	**162**		Pb	11 52 37.0	-0.9
BAVM	**Antelope Valle**	**1.13**	**124**		Pb	11 52 37.2	-1.0
BPIM	**Pinnacles**	**1.14**	**134**		Pb	11 52 37.5	-1.0
NAPC	**Atlas Peak**	**1.15**	**358**		Pb	11 52 38.0	-0.7
BSGM	**Shirttail Gulc**	**1.15**	**139**		Pn	11 52 37.9	-0.7
NTYM	**Taylor**	**1.16**	**341**		Pn	11 52 37.9	-0.9
BBGB	**Big Mountain B**	**1.16**	**127**		Pn	11 52 38.4	-0.5
NADM	**Allendale**	**1.18**	**8**		Pn	11 52 38.6	-0.4
BRMM	**Rolling Bench**	**1.18**	**112**		Pn	11 52 37.8	-1.2
BBNM	**San Benito**	**1.18**	**131**		Pb	11 52 39.3	+0.1
BAPM	**Anderson Peak**	**1.20**	**158**		Pn	11 52 38.6	-0.7
NSHM	**Saint Helena R**	**1.27**	**345**		Pn	11 52 39.3	-1.0
LRV	**Little Rabbit**	**1.28**	**132**		Pn	11 52 39.9	-0.4
BMSM	**Mercy Hot Spri**	**1.28**	**119**		Pn	11 52 40.4	-0.1
MAC	**Mark West Spri**	**1.33**	**342**		Pn	11 52 40.3	-0.8
NBPM	**Berryessa Peak**	**1.38**	**360**		Pn	11 52 41.5	-0.1
MNHB	**New Hogan Dam**	**1.39**	**52**		Pn	11 52 40.6	-1.2
LRC	**Lone Oak Road**	**1.39**	**138**		Pn	11 52 41.4	-0.5
NHSM	**Mount Saint He**	**1.41**	**346**		Pn	11 52 42.0	-0.2
MYLM	**Yosemite Lake**	**1.41**	**86**		Pn	11 52 41.3	-0.9
NMCNC	**Mill Creek, So**	**1.42**	**336**		Pn	11 52 41.0	-1.3
MCUB	**Copperopolis B**	**1.42**	**61**		Pn	11 52 41.5	-0.9
AASM	**Arroyo Seco**	**1.42**	**37**		Pn	11 52 41.0	-1.3
PCCM	**Crazy Canyon**	**1.45**	**145**		Pn	11 52 42.8	0.0
GAXM	**Alexander Vall**	**1.49**	**343**		Pn	11 52 42.5	-0.8
NDHM	**Dunnigan Hills**	**1.49**	**8**		Pn	11 52 43.0	-0.2
NMTM	**Middletown**	**1.53**	**352**		Pn	11 52 42.9	-0.9
PAPM	**Alder Peak**	**1.53**	**154**		Pn	11 52 43.3	-0.5
GHCM	**House Creek**	**1.54**	**329**		Pn	11 52 43.1	-0.8
GCRM	**Castle Rock Sp**	**1.54**	**345**		Pn	11 52 43.4	-0.6
PMPB	**Monarch Peak**	**1.55**	**133**		Pn	11 52 44.4	+0.3
PMPB				Sn	Sb	11 53 05.4	+0.6
GDXM	**Geysers**	**1.59**	**343**		Pb	11 52 45.8	-0.3
GDXM				Sn	Sb	11 53 05.8	-0.3
MNRC	**McLaughlin Min**	**1.60**	**353**		Pn	11 52 44.6	-0.2
CMB	**Columbia Colle**	**1.61**	**62**	Pn	Pn	11 52 44.9	-0.1
CMB				Sn	Sn	11 53 04.7	-0.9
GSGM	**Seigler Mounta**	**1.63**	**346**		Pn	11 52 44.6	-0.5
PSAM	**San Ardo**	**1.64**	**140**		Pn	11 52 45.2	-0.1
PPTM	**Peach Tree Val**	**1.67**	**135**		Pn	11 52 45.7	0.0
GDCM	**Dry Creek**	**1.69**	**331**		Pn	11 52 45.7	-0.4
PHSB	**Hesperia Broad**	**1.73**	**148**		Pn	11 52 46.2	-0.3
PSMM	**Smith Mountain**	**1.77**	**133**		Pn	11 52 47.5	+0.3
PHCM	**Hearst Castle**	**1.81**	**152**		Pn	11 52 48.0	+0.3
PARM	**Anticline Ridg**	**1.81**	**124**		Pn	11 52 48.6	+0.9
PHPM	**Hope Ranch**	**1.82**	**135**		Pn	11 52 48.0	+0.1
PANM	**San Antonio Re**	**1.83**	**145**		Pn	11 52 47.6	-0.4
GSNM	**Snow Mountain**	**1.83**	**335**		Pn	11 52 47.2	-0.7
HOPS	**Hopland Field**	**1.84**	**338**	Pn	Pn	11 52 47.2	-0.8
MHDM	**Hidden Dam**	**1.84**	**95**		Pn	11 52 47.3	-0.7
GGUM	**Gualala**	**1.88**	**327**		Pn	11 52 48.4	-0.2
PKD	**Bear Valley Ra**	**1.89**	**135**		Pn	11 52 48.6	-0.1
PPO	**Portuguese Can**	**1.90**	**138**		Pn	11 52 49.2	+0.2
PVCM	**Vineyard Canyo**	**1.91**	**135**		Pn	11 52 49.0	-0.1
AFDM	**Forest Hills D**	**1.91**	**30**		Pn	11 52 48.8	-0.4
AFDM				Sn	Sn	11 53 11.8	-1.2
PSTM	**Stockdale Moun**	**1.92**	**135**		Pn	11 52 49.2	+0.1
ASMM	**Slate Mountain**	**1.94**	**37**		Pn	11 52 50.0	+0.4
MMIM	**Miami Mountain**	**1.95**	**85**		Pn	11 52 49.8	+0.1
RAMR	**Ramage Ranch**	**1.96**	**147**		Pn	11 52 49.6	-0.1
SUTB	**Sutter Butte**	**1.96**	**9**		Pn	11 52 49.1	-0.6
PCBM	**Cambria**	**1.99**	**152**		Pn	11 52 50.1	0.0
BLDC	**Black Mountain**	**2.04**	**149**		Pn	11 52 50.6	-0.1
BLDC	**Black Mountain**	**2.04**	**149**		Pn	11 52 50.8	0.0
PCMM	**Cholame Hills**	**2.06**	**135**		Pn	11 52 51.2	0.0
ARDC	**Alexander Ranc**	**2.07**	**151**		Pn	11 52 51.0	-0.2
PSRM	**Scobie Ranch**	**2.10**	**132**		Pn	11 52 52.7	+1.1
OHCM	**Honcut**	**2.12**	**15**		Pn	11 52 51.1	-0.8
PKLM	**Kerr Lake**	**2.12**	**135**		Pn	11 52 52.2	+0.2
PSNM	**Stone Corral**	**2.14**	**134**		Pn	11 52 52.4	+0.2
PMCM	**McMillan Canyo**	**2.14**	**136**		Pn	11 52 52.6	+0.4
TCHL	**Shandon**	**2.15**	**137**		Pn	11 52 52.6	+0.2
PMRM	**Maxey Ranch**	**2.17**	**133**		Pn	11 52 53.0	+0.3
PAGB	**Antelope Grade**	**2.21**	**134**		Pn	11 52 53.6	+0.5
GNAM	**Navarro Ridge**	**2.22**	**330**		Pn	11 52 52.6	-0.7
PAM	**Palermo**	**2.22**	**14**		Pn	11 52 52.7	-0.5
PTAM	**Tassajara Cree**	**2.24**	**147**		Pn	11 52 53.6	0.0
KCC	**Kaiser Creek**	**2.29**	**88**		Pn	11 52 55.0	+0.7
TSCN	**Private Proper**	**2.29**	**139**		Pn	11 52 54.5	+0.3
ORV	**Oroville**	**2.33**	**13**	Pn	Pn	11 52 54.2	-0.6
ORV				Sn	Sn	11 53 21.3	-1.8
DPD	**Davis Peak**	**2.35**	**151**		Pn	11 52 55.1	+0.1
EMB	**Emerald Bay**	**2.35**	**44**		Pn	11 52 56.1	+0.7
RUBR	**Rubicon Trail**	**2.38**	**42**		Pn	11 52 56.5	+0.7
RUBR				Sn	Sn	11 53 25.2	+0.5
PBPM	**Bitterwater Pu**	**2.41**	**134**		Pn	11 52 56.6	+0.6
TAHR	**Tahoe**	**2.45**	**40**		Pn	11 52 58.5	+1.8
GNO	**Genoa**	**2.46**	**48**		Pn	11 52 58.7	+1.8
WAKR	**Walker**	**2.49**	**60**		Pn	11 52 58.2	+1.0
MDPB	**Devils Postpil**	**2.50**	**81**		Pn	11 52 57.6	+0.2
MRDM	**Red Cones**	**2.51**	**82**		Pn	11 52 58.6	+1.0
MINS	**Minaret Summit**	**2.52**	**81**		Pn	11 52 58

ISC 03 12:47:41.6±0.7, 26°93N±0'05×54°42E±0'05, h18km, n48, σ1ᵍ14/51, mb3.8/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**1.19**	**290**	*e*		12 48 06.5	
LMD1				*e*Pg	**Pg**	**12 48 05.5**	**+0.9**
GENO	**Geno**	**1.63**	**73**	*e*Sg	**Sb**	**12 48 32.9**	**+1.4**
GENO				*e*Pn	**Pn**	**12 48 09.9**	**+0.3**
GENO				*e*		12 48 38.1	
JHRM	**Jahrom**	**1.74**	**335**	*e*Pn	**Pn**	**12 48 11.4**	**+0.4**
SHME	**Shamm** SNR=10	**1.77**	**119**	*e*P	**Pb**	**12 48 13.4**	**-0.2**
SHME	**Shamm**	**1.77**	**119**	*e*Pn	**Pb**	**12 48 13.3**	**-0.3**
BANOM	**Banah** SNR=38	**1.96**	**120**	*e*P	**Pb**	**12 48 16.5**	**-0.2**
BANOM				S	**Sb**	**12 48 42.6**	**+1.7**
BANOM	**Banah** SNR=39	**1.96**	**120**	P	**Pb**	**12 48 16.6**	**-0.2**
MSFE	**Esma-Masafi** SNR=7.1	**2.21**	**135**	*e*P	**Pb**	**12 48 21.0**	**-0.1**
MSFE	**Esma-Masafi**	**2.21**	**135**	*e*Pn	**Pb**	**12 48 21.6**	**+0.5**
NAZ	**Nazwa, Dubai**	**2.23**	**150**	*e*Pn	**Pg**	**12 48 23.7**	**-0.7**
NAZ	**Nazwa, Dubai**	**2.23**	**150**	P	**Pg**	**12 48 23.8**	**-0.7**
NAZ				S	**Sb**	**12 48 49.5**	**+0.7**
NIAN	**Nian**	**2.24**	**73**	*e*Pn	**Pn**	**12 48 18.1**	**+0.3**
NIAN				*e*		12 48 58.2	
MDH	**Madha**	**2.34**	**133**	*e*Pn	**Pb**	**12 48 23.4**	**+0.1**
MDH	**Madha**	**2.34**	**133**	P	**Pb**	**12 48 23.0**	**-0.3**
ASUD	**Al Ashush, Dub** SNR=33	**2.44**	**160**	*e*P	**Pg**	**12 48 26.3**	**-2.1**
ASUD	**Al Ashush, Dub**	**2.44**	**160**	*e*Pn	**Pg**	**12 48 26.3**	**-2.1**
ASUD	**Al Ashush, Dub** SNR=33	**2.44**	**160**	P	**Pg**	**12 48 26.7**	**-1.7**
UOSS	**Minazif**	**2.55**	**141**	*e*Pn	**Pb**	**12 48 25.3**	**-1.5**
UOSS	**Minazif**	**2.55**	**141**	P	**Pb**	**12 48 26.3**	**-0.5**
HATD	**Hatta, Dubai**	**2.60**	**143**	P	**Pb**	**12 48 27.0**	**-0.7**
HATD	**Hatta, Dubai**	**2.60**	**143**	*e*Pn	**Pb**	**12 48 27.7**	**0.0**
ASHO	**Ashiyiah** SNR=17	**2.68**	**146**	*e*P	**Pb**	**12 48 28.2**	**-0.9**
ASHO	**Ashiyiah**	**2.68**	**146**	*e*Pn	**Pb**	**12 48 28.3**	**-0.8**
ASHO	**Ashiyiah** SNR=17	**2.68**	**146**	P	**Pb**	**12 48 28.6**	**-0.5**
ISRV	**Sarvestan**	**2.70**	**335**	*e*Pn	**Pn**	**12 48 25.0**	**+0.6**
ISRV				*e*		12 49 16.0	
KHNJ	**Kahnooj**	**3.09**	**70**	*e*Pn	**Pn**	**12 48 29.9**	**+0.4**
ALNE	**Al Ain**	**3.10**	**157**	*e*Pn	**Pb**	**12 48 34.8**	**-1.5**
NGRK	**Negar Kerman**	**3.38**	**36**	*e*Pn	**Pn**	**12 48 33.0**	**-0.9**
IKAZ	**Kazeroun**	**3.64**	**322**	*e*Pn	**Pn**	**12 48 38.6**	**+1.3**
IKAZ				*e*		12 49 27.9	
TVBK	**TV Kerman**	**3.68**	**34**	*e*Pn	**Pn**	**12 48 38.0**	**+0.1**
TVBK				*e*		12 48 58.4	
KHGB	**Koh Gabri**	**3.88**	**27**	*e*Pn	**Pn**	**12 48 40.7**	**+0.2**
CHMN	**Cheshme madani**	**4.01**	**43**	*e*Pn	**Pn**	**12 48 43.5**	**+1.1**
CHMN				*e*		12 48 50.1	
IMEH	**Mehriz**	**4.45**	**2**	*e*Pn	**Pn**	**12 48 48.6**	**+0.2**
IBAF	**Bafgh**	**4.75**	**12**	*e*Pn	**Pn**	**12 48 52.0**	**-0.2**
KLNJ	**Kolanjah**	**4.76**	**329**	*e*Pn	**Pn**	**12 48 51.8**	**-0.9**
ISAD	**Sadrabad**	**5.01**	**353**	*e*Pn	**Pn**	**12 48 56.3**	**+0.2**
IRAM	**Ramesheh**	**5.18**	**340**	*e*Pn	**Pn**	**12 48 57.5**	**-0.9**
WSAR	**Wadi Sarin** 0.9nm,0.3s,baz=316,slow=6.4,SNR=23	**5.30**	**133**	Pn	**Pn**	**12 49 02.5**	**+2.6**
WSAR				S	**Sn**	**12 50 02.7**	**+2.2**
	2.1nm,0.3s,baz=96,slow=19,SNR=5.4						
NHDN	**Nehbandan**	**6.63**	**47**	*e*Pn	**Pn**	**12 49 18.3**	**0.0**
RAYN	**Ar Rayn** SNR=9.4	**8.76**	**249**	*i* P	**Pn**	**12 49 48.5**	**+1.1**
SHAO	**Shalim** SNR=11	**8.94**	**173**	*i* P	**Pn**	**12 49 53.0**	**+3.2**
BRTR	**Keskin Array B** 1.4nm,0.8s,baz=134,slow=14,SNR=6.2	**21.48**	**312**	P	**P**	**12 52 28.9**	**-0.5**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=235,slow=10,SNR=3.5	**29.59**	**41**	P	**P**	**12 53 44.6**	**-0.9**
ZALV	**Zalesovo Beam** 0.8nm,0.5s,baz=246,slow=8.4,SNR=3.0	**35.06**	**31**	P	**P**	**12 54 32.4**	**-0.9**
FINES	**FINESS Array B** 3.5nm,0.9s,baz=146,slow=10,SNR=4.4	**39.41**	**339**	P	**P**	**12 55 08.2**	**-1.9**
NOA	**NORSAR Array B** comp=Z,51nm,19.8s,baz=255,slow=37	**44.74**	**332**	LR	LR	13 15 04.8	
ARCES	**ARCESS Array B** 3.1nm,1.0s,baz=144,slow=7.8,SNR=3.3	**45.85**	**346**	P	**P**	**12 56 01.2**	**-1.1**
TORD	**Torodi Ar. Bea** 0.7nm,0.6s,baz=68,slow=8.1,SNR=5.2	**51.06**	**265**	P	**P**	**12 56 42.5**	**-0.6**

*IDC **03** 12:57:48.7±8.2, 5.°31S×146.°68E, h159km±77km, mb4.0/2, mb1 4.2/4, mb1mx3.3/34, mbtmp4.5/4, Error ellipse: s-maj=112.7km s-min=50.6km az=143.0*
*NEIC **03** 12:57:57.6±2.3, 6.°72S±0.°09×145.°04E±0.°10, h10km±1km, mb4.5/13, Error ellipse: s-maj=18.7km s-min=12.3km az=230.0*

ISC 03 12:58:00.9±0.7, 6.°70S±0'07×144.°95E±0'07, h35km, n28, σ1ᵍ82/30, mb4.6/5, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 13nm,0.3s,baz=12,slow=9.3,SNR=121	**3.47**	**141**	P	**Pn**	**12 58 50.5**	**-1.9**
PMG				S	**Sn**	**12 59 36.5**	**+4.2**
	6.9nm,0.3s,baz=319,slow=20,SNR=6.8						
PMG	**Port Moresby**	**3.47**	**141**		**Pn**	**12 58 50.5**	**-1.9**
PMG				Sn	**Sn**	**12 59 33.4**	**+1.1**
COEN	**Coen**	**7.42**	**193**	Pn	**Pn**	**12 59 46.0**	**-0.8**
FAKI	**Fak Fak**	**13.20**	**286**	Pn	**Pn**	**13 01 05.1**	**-0.9**
MTN	**Manton Dam**	**14.92**	**245**	P	**P**	**13 01 32.0**	**-2.4**
HNR	**Honiara**	**15.09**	**101**	P	**P**	**13 01 36.0**	**-0.5**
WR0	**Warramunga Arr**	**16.61**	**216**		**Pn**	**13 01 50.1**	**-1.1**
WR0				IAmb	IAmb	13 01 57.0	
	comp=Z,17nm,0.5s						
WRA	**Warramunga Arr** comp=Z,4.2nm,0.3s,baz=38,slow=11,SNR=111	**16.72**	**217**	P	**P**	**13 01 57.1**	**+2.5**
WRA				S	S	13 05 19.5	+12
	comp=Z,0.1nm,0.3s,baz=40,slow=20,SNR=4.7						
WRA	**Warramunga Arr**	**16.72**	**217**	P	**P**	**13 01 53.9**	**-0.8**
KNRA	**Kununurra**	**18.20**	**239**	P	**P**	**13 02 12.1**	**+1.1**
AS31	**Alice Springs**	**19.93**	**211**	P	**P**	**13 02 30.2**	**+0.2**
ASAR	**Alice Springs** comp=Z,3.3nm,0.5s,baz=46,slow=8.4,SNR=128	**19.94**	**211**	P	**P**	**13 02 30.1**	**+0.1**
ASAR				S	**Sn**	**13 06 18.7**	**+3.5**
	comp=Z,0.9nm,1.0s,baz=30,slow=18,SNR=4.2						
ASAR	**Alice Springs**	**19.94**	**211**	P	**P**	**13 02 29.7**	**-0.3**
SOEI	**Soe**	**20.69**	**260**	P	**P**	**13 02 38.0**	**-0.4**
FITZ	**Fitzroy Crossi** comp=Z,12nm,0.5s,baz=52,slow=8.3,SNR=82	**21.98**	**237**	P	**P**	**13 02 50.3**	**-1.7**
FITZ	**Fitzroy Crossi**	**21.98**	**237**		**P**	**13 02 50.2**	**-1.8**
FITZ				IAmb	IAmb	13 02 53.3	
	comp=Z,14nm,0.6s						
LUWI	**Luwuk**	**22.82**	**283**	P	**P**	**13 03 02.2**	**+1.1**
LUWI				IAmb	IAmb	13 03 11.3	
	comp=Z,18nm,1.1s						
STKA	**Stephens Creek**	**25.25**	**187**	P	**P**	**13 03 22.6**	**-1.2**
MAJO	**Matsushiro**	**43.47**	**352**	P	**P**	**13 06 03.3**	**+2.5**
MAJO				IAmb	IAmb	13 06 10.9	
	comp=Z,19nm,1.4s						
MJB9	**Matsu-Tunnel**	**43.48**	**352**	P	**P**	**13 06 03.3**	**+2.5**
MJB9				IAmb	IAmb	13 06 10.9	
	comp=Z,21nm,1.5s						
CMWZ	**Cape Campbell**	**43.51**	**148**	P	**P**	**13 06 00.5**	**-0.6**
BFZ	**Birch Farm**	**43.89**	**145**	P	**P**	**13 06 02.9**	**-1.3**
KSAR	**Wonju Array Be**	**46.71**	**341**	P	**P**	**13 06 27.7**	**+1.1**
PETK	**Petropavlovsk-**	**60.55**	**9**	P	**P**	**13 08 08.1**	**+0.5**
ZALV	**Zalesovo Beam**	**78.52**	**328**	P	**P**	**13 09 56.3**	**-2.2**
KKAR	**Karatay Array**	**83.32**	**315**	P	**P**	**13 10 25.9**	**+1.4**
KKAR	**Karatay Array**	**83.32**	**315**	P	**P**	**13 10 25.8**	**+1.4**
KKAR				IAmb	IAmb	13 10 29.0	
	comp=Z,1.8nm,0.8s						
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.7s,baz=104,slow=3.0,SNR=2.5	**143.28**	**283**	PKP	PKPab	13 17 07.4	-21

*IDC **03** 13:01:45.1±1.1, 19.°18N×120.°60E, h0km, mb3.5/7, mb1 3.7/7, mb1mx3.5/45, mbtmp3.5/7, MS3.6/1, Ms1 3.6/1, ms1mx2.5/34, Error ellipse: s-maj=43.4km s-min=20.6km az=65.0*

ISC 03 13:01:49.1±0.9, 19°2N±0'1×120°6E±0'2, h28km, n9, σ0ᵍ76/8, mb3.5/6, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LQP	**Lukban**	**5.10**	**169**	⇑*e*P	**Pb**	**13 03 17.5**	**-0.2**
CMAR	**Chiang Mai Arr** 0.4nm,0.5s,baz=83,slow=9.1,SNR=5.0	**20.48**	**272**	P	**P**	**13 06 24.7**	**-0.3**
SONM	**Songino Array** 0.2nm,0.3s,baz=157,slow=7.8,SNR=4.1	**30.85**	**341**	P	**P**	**13 08 02.3**	**-0.7**
WRA	**Warramunga Arr** 0.5nm,0.9s,baz=349,slow=8.6,SNR=3.1	**41.13**	**160**	P	**P**	**13 09 30.5**	**-0.5**
MKAR	**Makanchi Array** 1.2nm,1.1s,baz=106,slow=9.8,SNR=5.0	**41.68**	**320**	P	**P**	**13 09 36.4**	**+1.1**
ZALV	**Zalesovo Beam** 1.2nm,0.8s,baz=114,slow=9.6,SNR=4.6	**44.23**	**330**	P	**P**	**13 09 55.5**	**-0.2**
ASAR	**Alice Springs** 0.2nm,0.4s,baz=343,slow=8.5,SNR=7.1	**44.50**	**162**	P	**P**	**13 09 59.1**	**+0.8**
AAK	**Ala-Archa** comp=Z,63nm,18.9s,baz=15,slow=40	**45.25**	**312**	LR	LR	13 31 34.9	
YKA	**Yellowknife Ar** 0.4nm,0.9s,baz=319,slow=4.5,SNR=8.5	**87.82**	**22**	P	**P**	**13 14 35.9**	**+0.3**

*IDC **03** 13:02:36.6±1.1, 19.°08N×120.°44E, h0km, mb3.4/7, mb1 3.6/7, mb1mx3.5/45, mbtmp3.4/7, Error ellipse: s-maj=45.9km s-min=21.8km az=64.0*

ISC 03 13:02:40.8±1.1, 19°1N±0'2×120°4E±0'2, h28km, n7, σ0ᵍ68/7, mb3.3/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.5nm,0.5s,baz=76,slow=7.5,SNR=3.4	**20.34**	**272**	P	**P**	**13 07 15.1**	**0.0**
SONM	**Songino Array** 0.1nm,0.3s,baz=140,slow=7.0,SNR=2.5	**30.89**	**341**	P	**P**	**13 08 55.4**	**+0.4**
WRA	**Warramunga Arr** 0.4nm,0.7s,baz=344,slow=8.9,SNR=2.5	**41.10**	**160**	P	**P**	**13 10 22.3**	**-0.1**
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=108,slow=9.4,SNR=2.8	**41.66**	**320**	P	**P**	**13 10 27.1**	**+0.3**
ZALV	**Zalesovo Beam** 0.5nm,0.4s,baz=120,slow=8.5,SNR=3.6	**44.23**	**330**	P	**P**	**13 10 46.3**	**-1.2**
ASAR	**Alice Springs** 0.4nm,0.9s,baz=342,slow=6.6,SNR=4.1	**44.46**	**162**	P	**P**	**13 10 49.7**	**0.0**
YKA	**Yellowknife Ar** 0.5nm,0.9s,baz=314,slow=4.7,SNR=5.7	**87.95**	**22**	P	**P**	**13 15 28.1**	**+0.3**

*NEIC **03** 13:06:32.9±2.8, 0.°20S±0.°06×122.°94E±0.°06, h90km±6km, mb4.9/47, Error ellipse: s-maj=9.8km s-min=8.4km az=145.0*
*IDC **03** 13:06:33.3±0.8, 0.°09S×122.°98E, h96km±6km, mb4.3/23, mb1 4.4/26, mb1mx4.2/44, mbtmp4.6/26, MS3.3/11, Ms1 3.3/11, ms1mx3.1/45, Error ellipse: s-maj=16.3km s-min=8.5km az=66.0*
*DJA **03** 13:06:33.4±0.1, 0.°3S±2.°×12.°3E±.°, h85km±2km, M4.9/40, mB5.4/18, mB5.3/1, mb5.1/25, mb5.0/40, MLv5.0/24, Mw(mB)4.8/18, Mw(mB)4.7/1, Mwp5.7/1*
*KLM **03** 13:06:34.0, 0.°21S×122.°96E, h88km, mb4.9*

ISC 03 13:06:33.7±0.3, 0.°19S±0.°04×122.°94E±0.°04, h100km, n174, σ1ᵍ41/191, mb4.8/55, 3C-4D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.86**	**191**	P	**Pn**	**13 06 50.9**	**-1.8**
LUWI				S	**Sn**	**13 07 03.8**	**-3.2**
LUWI	**Luwuk**	**0.86**	**191**		**Pn**	**13 06 50.8**	**-2.0**
LUWI					**Sn**	**13 07 05.0**	**-2.0**
MRSI	**Marisa**	**1.20**	**304**	P	**Pn**	**13 06 54.0**	**-2.3**
MRSI				S	**Sn**	**13 07 10.3**	**-3.1**
KMSI	**Cibinong**	**1.29**	**54**	P	**Pn**	**13 06 56.2**	**-1.2**
KMSI				S	**Sn**	**13 07 13.0**	**-2.3**
APSI	**Ampana**	**1.48**	**241**	P	**Pn**	**13 06 58.9**	**-0.8**
MPSI	**Mapaga**	**3.08**	**280**	P	**Pn**	**13 07 21.2**	**+0.6**
SANI	**Sanana**	**3.56**	**121**	P	**Pn**	**13 07 24.0**	**-3.1**
TTSI	**Tana Toraja**	**4.22**	**228**	P	**Pn**	**13 07 36.2**	**+0.4**
TNTI	**Ternate**	**4.53**	**78**	P	**Pn**	**13 07 40.3**	**+0.2**
TNTI	**Ternate**	**4.53**	**78**		**Pn**	**13 07 40.5**	**+0.4**
TNTI				Sn	**Sn**	**13 08 33.7**	**+2.0**
LBMI	**Labuha**	**4.58**	**96**	P	**Pn**	**13 07 42.4**	**+1.6**
SPSI	**Sidrap Palu**	**4.91**	**220**	P	**Pn**	**13 07 45.4**	**+0.2**
BNSI	**Bone** 1.0nm3µm292nm,0.7s	**5.05**	**214**	P	**Pn**	**13 07 47.3**	**+0.2**
NLAI	**Namlea** 5.4nm14µm556nm,0.7s	**5.15**	**126**	P	**Pn**	**13 07 47.7**	**-0.7**
BBSI	**Bau Bau** 0.3nm581nm61nm,0.6s	**5.28**	**184**	P	**Pn**	**13 07 51.0**	**+0.8**
SMKI	**Samarinda** 1.4nm285nm,0.8s	**5.74**	**267**	P	**Pn**	**13 07 57.4**	**+1.0**
KAPI	**Kappang**	**5.75**	**214**		**Pn**	**13 07 56.6**	**-0.1**
BKSI	**Bulukumba** 0.5nm1µm74nm,0.6s	**5.82**	**209**	P	**Pn**	**13 07 58.4**	**+0.8**
BKB	**Balikpapan**	**6.13**	**260**		**Pn**	**13 08 04.5**	**+2.7**
AAI	**Ambon** 2.8nm7µm783nm,0.8s	**6.30**	**124**	P	**Pn**	**13 08 04.8**	**+0.7**
MSAI	**Masohi** 0.5nm881nm86nm,0.8s	**6.76**	**118**	P	**Pn**	**13 08 10.9**	**+0.5**
KBKI	**Kotabaru** 0.4nm1µm102nm,0.5s	**7.44**	**245**	P	**Pn**	**13 08 19.3**	**-0.3**
KCP	**Kidapawan**	**7.46**	**17**	⇓*e*P	**Pn**	**13 08 20.5**	**+0.4**
KCP				*e*S	**Sn**	**13 09 44.1**	**+0.9**
CTBH	**Cotabato--PC H**	**7.47**	**10**	⇓*i*P	**Pn**	**13 08 19.6**	**-0.5**
BNDI	**Bandanaira** 20µm601nm,0.8s	**8.18**	**122**	P	**Pn**	**13 08 29.6**	**-0.1**
BUKP	**Musuan**	**8.29**	**15**	*e*P	**Pn**	**13 08 31.9**	**+0.7**
SWI	**Sorong** 0.5nm1µm111nm,0.7s	**8.35**	**95**	P	**Pn**	**13 08 32.0**	**0.0**
SIJI	**Sorong** 15nm,0.3s,baz=319,slow=22,SNR=28	**8.35**	**95**	P	**Pn**	**13 08 31.2**	**-0.9**
SIJI				S	**Sn**	**13 10 04.0**	**-0.8**
	1.2nm,0.3s,baz=253,slow=19,SNR=2.5						
KKM	**Kota Kinabalu**	**9.13**	**313**		**Pn**	**13 08 43.8**	**+1.1**
SOEI	**Soe** 1µm79nm,0.8s	**9.60**	**172**	P	**Pn**	**13 08 49.9**	**+0.8**
FAKI	**Fak Fak** 2µm2µm160nm,0.9s	**9.69**	**106**	P	**Pn**	**13 08 47.3**	**-3.0**
FAKI	**Fak Fak**	**9.69**	**106**		**Pn**	**13 08 47.5**	**-2.8**
BATI	**Baumata** 1.2nm,0.3s,baz=45,slow=2.9,SNR=1.9	**9.98**	**176**	P	Pn	13 08 59.1	+4.9
BATI				LR	LR	13 12 48.2	
	comp=Z,229nm,21.4s,baz=350,slow=37						
SBUM	**Sibu**	**11.03**	**284**		**Pn**	**13 09 08.6**	**+0.1**
SBUM	**Sibu**	**11.03**	**284**	P	**Pn**	**13 09 09.0**	**+0.5**
SAUI	**Saumlaki** 178nm,0.8s	**11.38**	**133**	P	**Pn**	**13 09 14.5**	**+1.4**
STKI	**Sintang**	**11.46**	**271**	P	**Pn**	**13 09 16.1**	**+1.8**
MTN	**Manton Dam**	**14.97**	**147**		**Pn**	**13 09 59.3**	**-0.9**
KPJI	**Karang Pucung** 109nm,0.9s	**15.67**	**243**	P	**P**	**13 10 12.6**	**+1.6**
SMPI	**Sarmi** 108nm,1.2s	**15.87**	**97**	P	**Pn**	**13 10 11.4**	**-0.1**
KNRA	**Kununurra**	**16.43**	**160**	P	**P**	**13 10 19.5**	**+0.1**
KNRA				IAmb	IAmb	13 10 25.7	
	comp=Z,41nm,0.7s						
LEM	**Lembang** comp=Z,4.0nm,0.3s,baz=147,slow=22,SNR=7.3	**16.65**	**246**	P	**P**	**13 10 25.5**	**+3.5**
LEM				LR	LR	13 16 47.4	
	comp=Z,86nm,20.5s,baz=74,slow=37						
CISI	**Cisompet, Garu** comp=Z,22µmcomp=Z,68nm,0.7s	**16.76**	**244**	P	**Pn**	**13 10 16.1**	**-6.5**
CBJI	**Citeko** comp=Z,204nm,0.5s	**17.21**	**249**	P	**P**	**13 10 30.5**	**+2.5**
GENI	**Genyem** comp=Z,82nm,1.2s	**17.39**	**98**	P	**Pn**	**13 10 30.1**	**-0.1**
JAY	**Jayapura** comp=Z,0.8nm,0.3s,baz=221,slow=9.3,SNR=2.8	**17.91**	**98**	P	**Pn**	**13 10 36.1**	**-0.4**
JAY				LR	LR	13 18 03.1	
	comp=Z,88nm,20.0s,baz=306,slow=39						
FITZ	**Fitzroy Crossi** comp=Z,2.0nm,0.3s,baz=5.7,slow=7.9,SNR=59	**18.00**	**172**	P	**Pn**	**13 10 37.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**18.00**	**172**	P	**Pn**	**13 10 37.9**	**+0.5**
CGJI	**Cibinong** comp=Z,115nm,1.1s	**18.35**	**249**	P	**Pn**	**13 10 40.9**	**-0.9**
DLV	**T Lat**	**18.74**	**311**	P	**Pn**	**13 10 48.2**	**+1.6**
DLV				IAmb	IAmb	13 10 48.3	
	comp=Z,45nm,0.9s						
KASI	**Kota Agung** comp=Z,50nm,1.0s	**19.16**	**254**	P	**Pn**	**13 10 50.1**	**-1.3**
MYKOM	**Kota Tinggi**	**19.19**	**276**		**Pn**	**13 10 50.8**	**-0.9**
MYKOM	**Kota Tinggi**	**19.19**	**276**	P	**Pn**	**13 10 51.0**	**-0.7**
MDSI	**Maura Dua** comp=Z,42nm,1.0s	**19.22**	**257**	P	**Pn**	**13 10 51.0**	**-1.1**
MNAI	**Manna**	**20.39**	**258**	P	Pn	13 11 03.8	-1.9
PSA00	**Pilbara Seismi**	**21.47**	**188**	P	**P**	**13 11 14.4**	**+0.2**
SDSI	**Sungai Dareh** comp=Z,3µmcomp=Z,39nm,1.0s	**21.52**	**268**	P	**P**	**13 11 15.8**	**+0.9**
IPM	**Ipoh**	**22.38**	**282**	P	**P**	**13 11 25.0**	**+1.0**
WRA	**Warramunga Arr** comp=Z,17nm,0.8s,baz=328,slow=10,SNR=94	**22.59**	**151**	P	**P**	**13 11 25.4**	**-0.7**
WRA				pP	**pP**	**13 11 46.1**	**+0.5**
	comp=Z,11nm,0.7s,baz=337,slow=9.4,SNR=6.4						
WRA				ScP	**ScP**	**13 18 45.5**	**+0.8**
	comp=Z,4.1nm,0.9s,baz=337,slow=2.9,SNR=11						
WRA				LR	LR	13 21 53.1	
	comp=Z,32nm,18.7s,baz=340,slow=41						
WRA	**Warramunga Arr**	**22.59**	**151**	P	**P**	**13 11 24.9**	**-1.1**
WR0	**Warramunga Arr**	**22.70**	**151**	P	**P**	**13 11 26.7**	**-0.5**
WR0				IAmb	IAmb	13 11 27.9	
	comp=Z,32nm,0.7s						
KULM	**Kulim**	**22.91**	**284**	P	**P**	**13 11 28.3**	**-1.1**
KULM	**Kulim**	**22.91**	**284**	P	**P**	**13 11 30.0**	**+0.6**
TWG	**Pinlang**	**22.94**	**356**	P	**P**	**13 11 29.3**	**-0.3**
QIZ	**Qiongzhong**	**23.02**	**327**	P	**P**	**13 11 31.1**	**+0.7**
UBPT	**Khong Chiam**	**23.11**	**312**	P	**P**	**13 11 32.8**	**+1.5**
TPUB	**Ta-pu**	**23.46**	**355**	P	**P**	**13 11 34.3**	**-0.1**
TPUB				IAmb	IAmb	13 11 37.5	
	comp=Z,66nm,0.8s						
YULB	**Yu-li**	**23.49**	**356**	P	**P**	**13 11 33.6**	**-1.1**
SSLB	**Suanglung**	**23.91**	**356**	P	**P**	**13 11 37.9**	**-0.6**
SSLB				IAmb	IAmb	13 11 41.6	
	comp=Z,74nm,0.9s						
RPSI	**Rantau Prapat**	**24.18**	**277**	P	**P**	**13 11 41.5**	**+0.6**
RPSI				IAmb	IAmb	13 11 42.7	
	comp=Z,35nm,0.9s						
COEN	**Coen**	**24.26**	**125**	P	**P**	**13 11 41.9**	**+0.2**
YHNB	**Yeheng**	**24.76**	**357**	P	**P**	**13 11 46.4**	**+0.2**
YHNB				IAmb	IAmb	13 11 48.3	
	comp=Z,47nm,0.7s						
GSI	**Gunungsitoli** comp=Z,72nm,1.0s	**25.41**	**273**	P	**P**	**13 11 54.2**	**+2.0**
GSI	**Gunungsitoli**	**25.41**	**273**	P	**P**	**13 11 51.4**	**-0.8**
GSI				IAmb	IAmb	13 12 18.3	
	comp=Z,64nm,1.0s						
AS31	**Alice Springs**	**25.65**	**156**	P	**P**	**13 11 55.3**	**+1.0**
ASAR	**Alice Springs** comp=Z,7.6nm,0.7s,baz=342,slow=15,SNR=86	**25.65**	**156**	P	**P**	**13 11 54.9**	**+0.5**
ASAR				PcP	**PcP**	**13 15 23.1**	**+0.4**
	comp=Z,1.3nm,0.5s,baz=341,slow=1.9,SNR=6.3						
ASAR				ScP	**ScP**	**13 18 54.0**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=343,slow=2.5,SNR=13						
ASAR	**Alice Springs**	**25.65**	**156**	P	**P**	**13 11 55.0**	**+0.7**
ASAR					**PcP**	**13 15 23.6**	**+1.0**
ASAR					**ScP**	**13 18 54.9**	**+1.7**
PMG	**Port Moresby** comp=Z,20nm,0.7s,baz=283,slow=5.7,SNR=10	**25.79**	**111**	P	**P**	**13 11 55.6**	**-0.1**
PMG	**Port Moresby**	**25.79**	**111**	P	**P**	**13 11 55.1**	**-0.6**
PMG				IAmb	IAmb	13 11 59.6	
	comp=Z,21nm,0.8s						
PBKT	**Sadao Pong**	**27.32**	**309**	P	**P**	**13 12 09.4**	**+0.1**
CMAR	**Chiang Mai Arr** comp=Z,9.1nm,0.9s,baz=137,slow=7.3,SNR=80	**29.99**	**309**	P	**P**	**13 12 34.5**	**+1.4**
CMAR				LR	LR	13 25 07.9	
	comp=Z,50nm,21.1s,baz=148,slow=37						
CMAR	**Chiang Mai Arr**	**29.99**	**309**	P	**P**	**13 12 35.3**	**+2.2**
CHTO	**Chiang Mai**	**30.20**	**310**	P	**P**	**13 12 33.2**	**-1.7**
CHTO				IAmb	IAmb	13 12 37.7	
	comp=Z,38nm,1.0s						
GYA	**Guiyang**	**30.79**	**331**	⇓*i*P	**P**	**13 12 42.5**	**+2.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
FORT	**Forrest**	**30.81**	**171**		**P**	**13 12 40.6**	**+0.5**
KMI	**Kunming**	**31.86**	**324**	P	**P**	**13 12 51.7**	**+2.0**
KMI				pmax	pmax		
	comp=Z,9.0nm,1.5s						
NJ2	**Nanjing**	**32.30**	**354**	*e*P	**P**	**13 12 54.9**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.9s						
JCJ	**Chichijima** comp=Z,131nm,0.5s,baz=235,slow=3.7,SNR=17	**32.84**	**33**	P	**P**	**13 12 56.8**	**-1.2**
ENH	**Enshi**	**32.89**	**338**	P	**P**	**13 12 59.5**	**+1.1**
BBOO	**Buckleboo**	**34.73**	**160**	P	**P**	**13 13 13.1**	**-1.2**
BBOO				IAmb	IAmb	13 13 50.1	
	comp=Z,27nm,1.2s						
CD2	**Chengdu**	**35.89**	**331**	⇓*i*P	**P**	**13 13 25.3**	**+0.9**
CD2				pmax	pmax		
	comp=Z,60nm,0.8s						
STKA	**Stephens Creek** comp=Z,12nm,0.7s,baz=325,slow=9.0,SNR=26	**36.12**	**153**	P	**P**	**13 13 26.8**	**+0.6**
STKA	**Stephens Creek**	**36.12**	**153**	P	**P**	**13 13 27.3**	**+1.1**
XAN	**Xi'an**	**36.50**	**340**	P	**P**	**13 13 29.9**	**+0.4**
XAN				pP	sP	13 13 57.4	-6.5
XAN				pmax	pmax		
	comp=Z,12nm,1.1s						
XAN				pmax	pmax		
	comp=Z,140nm,7.5s						
EIDS	**Eidsvold**	**36.95**	**135**	P	**P**	**13 13 31.3**	**-2.1**
EIDS				IAmb	IAmb

GKN	**Gorkha**	**46.18**	**311**	*e*P		**P**		**13 14 49.0**	**+0.1**
	comp=Z,39nm,0.5s								
KOLN	**Koldanda**	**46.86**	**310**	*e*P		**P**		**13 14 54.6**	**+0.3**
	comp=Z,59nm,0.7s								
DANN	**Dangsing**	**47.02**	**310**	*e*P		**P**		**13 14 55.9**	**+0.2**
	comp=Z,98nm,0.7s								
ASAJ	**Asahikawa**	**47.47**	**19**	P		**P**		**13 14 58.0**	**-0.4**
	comp=Z,20nm,0.8s,baz=216,slow=11,SNR=13								
JKA	**Kamikawa-asahi**	**47.47**	**19**	P		**P**		**13 14 58.0**	**-0.4**
DZM	**Mont Dzumac**	**47.62**	**120**	LR		LR		13 34 09.8	
	comp=Z,50nm,20.1s,baz=216,slow=35								
KLR	**Kul'dur**	**49.81**	**8**	P		**P**		**13 15 14.8**	**-1.5**
	comp=Z,2.2nm,0.6s,baz=192,slow=6.6,SNR=9.4								
SONM	**Songino Array**	**49.95**	**345**	P		**P**		**13 15 17.5**	**-0.1**
	comp=Z,4.5nm,0.7s,baz=164,slow=8.2,SNR=33								
SONM				LR		LR		13 38 25.9	
	comp=Z,76nm,18.7s,baz=312,slow=38								
SONM	**Songino Array**	**49.95**	**345**	P		**P**		**13 15 16.9**	**-0.6**
WMQ	**Urumqi**	**53.92**	**329**	*e*P		**P**		**13 15 48.0**	**+0.9**
WMQ				pP		pwP		13 16 11.3	+0.4
WMQ				pmax		pmax			
	comp=Z,8.0nm,0.9s								
WMQ				pmax		pmax			
	comp=Z,170nm,6.1s								
WMQ				LR		LR			
	comp=Z,790nm,29.1s								
WMQ				LR		LR			
	comp=Z,340nm,28.8s								
WMQ				LR		LR			
	comp=Z,160nm,29.2s								
MSVF	**Nonsavu**	**56.90**	**111**	P		**P**		**13 16 10.4**	**+1.5**
MSVF				IAmb		IAmb		13 16 12.0	
	comp=Z,12nm,1.0s								
KSH	**Kashi**	**58.28**	**318**	P		**P**		**13 16 19.1**	**+0.9**
KSH				pP		pwP		13 16 45.5	+1.1
KSH				PP		**PP**		**13 18 33.4**	**+5.0**
KSH				S		**S**		**13 24 11.7**	**-1.2**
KSH				sS		sS		13 24 56.7	+2.8
KSH				SS		**SS**		**13 28 09.4**	**+2.9**
KSH				pmax		pmax			
	comp=Z,13nm,0.5s								
KSH				pmax		pmax			
	comp=Z,220nm,5.6s								
KSH				LR		LR			
	comp=Z,220nm,3.8s								
KSH				LR		LR			
	comp=Z,240nm,5.0s								
KSH				LR		LR			
	comp=Z,510nm,6.0s								
MK31	**Makanchi Array**	**58.74**	**328**	P		**P**		**13 16 20.0**	**-1.2**
MK31				IAmb		IAmb		13 16 48.7	
	comp=Z,5.4nm,0.8s								
MKAR	**Makanchi Array**	**58.74**	**328**	P		**P**		**13 16 21.0**	**-0.2**
	comp=Z,3.8nm,0.5s,baz=127,slow=8.7,SNR=88								
MKAR				pP		**pP**		**13 16 44.3**	**-0.9**
	comp=Z,6.5nm,0.8s,baz=146,slow=7.8,SNR=7.3								
MKAR				ScP		**ScP**		**13 21 00.8**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=145,slow=5.3,SNR=4.6								
MKAR	**Makanchi Array**	**58.74**	**328**	P		**P**		**13 16 20.7**	**-0.5**
MKAR						**ScP**		**13 21 03.2**	**+1.7**
MAKZ	**Makanchi**	**58.91**	**328**	P		**P**		**13 16 20.9**	**-1.5**
MAKZ				IAmb		IAmb		13 16 49.9	
	comp=Z,5.6nm,0.8s								
TKM2	**Tokmak 2**	**60.30**	**322**	P		**P**		**13 16 32.5**	**+0.3**
	SNR=7.4								
PEA0B	**Petropavlovsk-**	**60.48**	**23**	P		**P**		**13 16 33.4**	**+0.4**
PETK	**Petropavlovsk-**	**60.48**	**23**	P		**P**		**13 16 33.2**	**+0.3**
	comp=Z,7.7nm,0.6s,baz=202,slow=4.3,SNR=24								
PETK	**Petropavlovsk-**	**60.48**	**23**	P		**P**		**13 16 33.5**	**+0.6**
UCH	**Uchtor**	**60.62**	**320**	P		**P**		**13 16 35.3**	**+0.7**
	SNR=5.8								
AAK	**Ala-Archa**	**60.84**	**321**	P		**P**		**13 16 35.7**	**-0.1**
RPZ	**Rata Peaks**	**60.90**	**142**	P		**P**		**13 16 37.1**	**+1.1**
	comp=Z,38nm,1.1s,baz=0.0,slow=1.0,SNR=4.1								
AML	**Almayashu**	**61.09**	**320**	P		**P**		**13 16 38.2**	**+0.4**
	SNR=6.9								
USP	**Ospenovka**	**61.16**	**321**	P		**P**		**13 16 38.0**	**+0.1**
	SNR=8.3								
EKS2	**Erkin-Say**	**61.30**	**320**	P		**P**		**13 16 39.4**	**+0.5**
	SNR=7.0								
GAR	**Garm**	**61.90**	**315**	P		**P**		**13 16 42.4**	**-0.6**
GAR				IAmb		IAmb		13 16 45.3	
	comp=Z,18nm,0.9s								
YAK	**Yakutsk**	**62.27**	**4**	P		**P**		**13 16 44.2**	**-0.6**
URZ	**Urewera**	**62.43**	**134**	P		**P**		**13 16 46.8**	**+0.4**
	comp=Z,6.5nm,0.4s,baz=254,slow=9.1,SNR=7.2								
URZ	**Urewera**	**62.43**	**134**	IAmb		IAmb		13 16 47.0	
	comp=Z,78nm,1.4s								
ZALV	**Zalesovo Beam**	**62.46**	**336**	P		**P**		**13 16 45.0**	**-1.3**
	comp=Z,3.1nm,0.8s,baz=121,slow=5.7,SNR=15								
ZALV				pP		**pP**		**13 17 10.2**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=128,slow=5.6,SNR=3.6								
ZALV				PP		**PP**		**13 19 05.4**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=124,slow=7.4,SNR=3.9								
KURK	**Kurchatov**	**63.11**	**330**	P		**P**		**13 16 49.8**	**-0.8**
KURK				IAmb		IAmb		13 16 51.1	
	comp=Z,10.0nm,0.8s								
MA2	**Magadan**	**63.43**	**15**	P		**P**		**13 16 53.1**	**+0.6**
GEYT	**Alibeck**	**70.46**	**311**	P		**P**		**13 17 38.0**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=93,slow=7.2,SNR=5.4								
GEYT	**Alibeck**	**70.46**	**311**	IAmb		IAmb		13 17 39.1	
	comp=Z,2.2nm,0.8s								
TIXI	**Tiksi**	**71.82**	**2**	P		**P**		**13 17 44.1**	**-1.0**
TIXI				IAmb		IAmb		13 17 46.5	
	comp=Z,13nm,1.1s								
VNDA	**Vanda**	**80.07**	**172**	P		**P**		**13 18 32.5**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=335,slow=6.1,SNR=6.1								
KBZ	**Khabaz**	**82.93**	**314**	P		**P**		**13 18 47.1**	**-0.5**
	comp=Z,2.7nm,0.9s,baz=84,slow=3.6,SNR=7.9								
KMBO	**Kilima Mbogo**	**85.68**	**269**	LR		LR		13 54 29.5	
	comp=Z,33nm,21.6s,baz=88,slow=34								
SYO	**Syowa Base**	**87.43**	**201⇑**	*e*P		**P**		**13 19 09.0**	**-0.5**
SYO	**Syowa Base**	**87.43**	**201⇑**	*e*PcP		**PcP**		**13 19 11.4**	**0.0**
BRTR	**Keskin Array B**	**89.58**	**310**	P		**P**		**13 19 18.6**	**-1.9**
	comp=Z,1.4nm,1.0s,baz=105,slow=4.9,SNR=4.7								
ILAR	**Eielson Array**	**90.24**	**25**	P		**P**		**13 19 21.3**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=242,slow=5.3,SNR=30								
ILAR	**Eielson Array**	**90.24**	**25**	P		**P**		**13 19 20.9**	**-2.1**
BMAR	**Burnt Mountain**	**91.13**	**23**	P		**P**		**13 19 27.9**	**+0.8**
AKASG	**Malin Array Be**	**92.51**	**321**	P		**P**		**13 19 31.6**	**-2.1**
	comp=Z,0.9nm,0.7s,baz=69,slow=4.3,SNR=3.7								
BCAR	**Beaver Creek A**	**92.57**	**27**	P		**P**		**13 19 34.2**	**+0.4**
ARCES	**ARCESS Array B**	**92.78**	**340**	P		**P**		**13 19 35.0**	**+0.4**
	comp=Z,3.9nm,0.9s,baz=69,slow=9.9,SNR=5.0								
YKA	**Yellowknife Ar**	**104.60**	**24**	Pdiff		**Pdif**		**13 20 29.0**	**+1.2**
	baz=296,slow=4.4								
YKA				PKKPbc		**PKKPbc**		**13 36 11.8**	**-3.4**
	comp=Z,0.4nm,0.7s,baz=109,slow=2.4,SNR=7.1								
NVAR	**Mina Array Bea**	**112.33**	**48**	PKiKP		**PKiKP**		**13 24 58.9**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=211,slow=0.5,SNR=5.0								
PDAR	**Pinedale Array**	**116.78**	**41**	PKKPab		PKKPab		13 35 37.6	-1.0
	comp=Z,0.6nm,0.6s,baz=119,slow=7.3,SNR=7.5								
ULM	**Lac du Bonnet**	**120.18**	**28**	PKP		**PKPdf**		**13 25 12.3**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=36,slow=2.0,SNR=3.8								
TORD	**Torodi Ar. Bea**	**120.40**	**285**	PKP		**PKPdf**		**13 25 13.3**	**-1.2**
	comp=Z,1.7nm,0.9s,baz=37,slow=1.7,SNR=6.5								
TORD				PKKPab		**PKKPab**		**13 35 24.0**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=271,slow=3.5,SNR=3.6								
TXAR	**Lajitas Array**	**126.98**	**53**	PKP		**PKiKP**		**13 25 27.7**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=270,slow=0.9,SNR=6.6								
TXAR				SKPbc		SKiKP		13 28 37.7	-17
	comp=Z,0.4nm,0.8s,baz=257,slow=3.3,SNR=4.0								

BEO 03 13:06:35.8±0.8, 41.91N×22.05E, h0km, ML1.6/5, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTS	**Vitosha**	**1.13**	**51**	*e*Pg	Pg	13 06 54.9	-2.6
VTS				*e*Sg	Sg	13 07 10.0	-2.2
ZAPS	**Zavoj**	**1.44**	**17**	*e*Pg	Pn	13 07 02.2	-0.9
ZAPS				*e*Sg	Sg	13 07 21.9	0.0
SELS	**Selova**	**1.48**	**333**	*e*Pn	Pn	13 07 03.4	-0.4
BOVS	**Bovan**	**1.75**	**352**	*e*Pn	Pn	13 07 06.5	-0.9
ZAGS	**Zajecar**	**1.91**	**4**	*e*Pg	Pb	13 07 10.9	-0.6
ZAGS				*e*Sg	Sb	13 07 36.3	+0.3
SJES	**Sjenica**	**2.05**	**312**	*e*Pn	Pn	13 07 12.4	+0.8
SJES				*e*Sg	Sb	13 07 39.6	-0.3
IVAS	**Ivanjica**	**2.18**	**321**	*e*Pn	Pn	13 07 12.8	-0.6
IVAS				*e*Sg	Sg	13 07 45.1	-0.7

TIR 03 13:06:45.5, 41.70N×20.18E, h12km, Md2.0/3, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.20**	**94**	*i* PG	Pg	13 06 50.2	+0.4
PHP				*i* SG	Sg	13 06 53.4	+0.6
PUK	**Puka**	**0.40**	**328**	*i* PG	Pg	13 06 53.9	+0.4
PUK				*i* SG	Sb	13 07 00.2	-0.6
BCI	**Bajram Curri**	**0.67**	**353**	*i* PG	Pg	13 06 58.7	+0.2
BCI				*i* SG	Sb	13 07 09.1	+0.6
STIP	**Stip**	**1.50**	**90**	*i* Pn	Pn	13 07 08.6	-3.6

IDC 03 13:16:03.4±2.1, 14.94S×173.87W, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.7/39, mbtmp3.8/5, ML4.6/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/31, Error ellipse: s-maj=120.3km s-min=21.6km az=152.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.27**	**64**	Pn	Pn	13 16 42.2	0.0
	154nm,0.3s,baz=178,slow=1.9,SNR=19						
AFI				Sn	Sn	13 17 03.7	-7.4
	215nm,0.3s,baz=94,slow=23,SNR=17						
AFI				LR	LR	13 17 40.7	
	comp=Z,87nm,20.4s,baz=19,slow=43						
H11S2	**WAKE ISLAND Hy**	**38.34**	**329**	T	T	14 04 14.1	
	baz=147,slow=76						
H11S3	**WAKE ISLAND Hy**	**38.35**	**329**	T	T	14 04 10.1	
	baz=147,slow=76						
H11S1	**WAKE ISLAND Hy**	**38.35**	**329**	T	T	14 04 15.7	
	baz=147,slow=76						
H11N3	**WAKE ISLAND Hy**	**39.29**	**331**	T	T	14 05 24.7	
	baz=149,slow=76						
H11N1	**WAKE ISLAND Hy**	**39.29**	**331**	T	T	14 05 17.9	
	baz=149,slow=76						
H11N2	**WAKE ISLAND Hy**	**39.30**	**331**	T	T	14 05 25.0	
	baz=149,slow=76						
WRA	**Warramunga Arr**	**49.51**	**256**	P	P	13 24 56.2	+0.1
	0.6nm,0.7s,baz=92,slow=7.0,SNR=9.3						
ASAR	**Alice Springs**	**49.82**	**252**	P	P	13 24 58.1	-0.5
	2.9nm,0.7s,baz=85,slow=8.2,SNR=44						
NWAO	**Narrogin (SRO)**	**64.45**	**240**	LR	LR	13 52 40.9	
	comp=Z,44nm,20.9s,baz=106,slow=34						
NVAR	**Mina Array Bea**	**74.29**	**42**	P	P	13 27 43.0	0.0
	0.4nm,0.7s,baz=229,slow=8.2,SNR=4.3						
ILAR	**Eielson Array**	**82.08**	**11**	P	P	13 28 24.6	-0.7
	0.4nm,0.9s,baz=224,slow=7.5,SNR=3.6						
BRTR	**Keskin Array B**	**145.51**	**321**	PKPbc	PKPdf	13 35 43.4	-0.7
	0.4nm,0.6s,baz=4.8,slow=1.7,SNR=2.8						
GERES	**GERESS Array B**	**145.62**	**351**	PKPbc	PKPab	13 35 44.4	+0.1
	0.5nm,0.7s,baz=2.3,slow=4.9,SNR=3.3						

IDC 03 13:33:01.6±2.1, 7.77S×127.52E, h159km±25km, mb3.0/1, mb1 3.3/6, mb1mx3.1/43, mbtmp3.8/6, Error ellipse: s-maj=24.1km s-min=21.6km az=122.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.52**	**237**	P	Pn	13 34 09.6	+0.7
	2.3nm,0.3s,baz=0.0,slow=3.0,SNR=4.2						
BATI				S	Sn	13 35 01.9	+0.5
	3.2nm,0.3s,baz=113,slow=7.7,SNR=3.8						
SIJI	**Sorong**	**7.80**	**29**	P	Pn	13 34 52.3	-0.1
	0.8nm,0.3s,baz=203,slow=18,SNR=2.7						
FITZ	**Fitzroy Crossi**	**10.43**	**190**	P	Pn	13 35 26.0	-1.2
	0.5nm,0.3s,baz=14,slow=8.2,SNR=21						
FITZ				S	Sn	13 37 17.3	-5.6
	0.3nm,0.3s,baz=105,slow=20,SNR=3.6						
WRA	**Warramunga Arr**	**13.79**	**152**	P	Pn	13 36 10.4	-0.1
	0.8nm,0.3s,baz=328,slow=13,SNR=28						
WRA				S	Sn	13 38 34.0	-10
	0.2nm,0.3s,baz=327,slow=22,SNR=4.8						
ASAR	**Alice Springs**	**16.95**	**160**	P	Pn	13 36 50.0	+0.5
	0.2nm,0.3s,baz=324,slow=9.4,SNR=17						
ASAR				S	S	13 39 51.9	-5.6
	0.1nm,0.3s,baz=332,slow=22,SNR=4.2						
MKAR	**Makanchi Array**	**67.55**	**328**	P	P	13 43 40.8	0.0
	0.3nm,0.7s,baz=115,slow=6.5,SNR=3.1						

*BJI **03** 13:39:46.6±0.0, 46.50N×153.48E, h7km, mB5.0/19, mb4.6/26, Ms4.7/3, Ms7 4.4/1*
*IDC **03** 13:39:49.3±0.7, 46.44N×153.11E, h0km, mb4.0/21, mb1 4.2/25, mb1mx4.1/40, mbtmp4.0/25, ML3.4/4, MS3.2/6, Ms1 3.2/6, ms1mx2.8/47, Error ellipse: s-maj=20.9km s-min=13.0km az=160.0*
*NEIC **03** 13:39:51.6±2.6, 46.3N±0.1×153.1E±0.1, h19km±3km, mb4.6/17, Error ellipse: s-maj=19.2km s-min=10.3km az=146.0*
*MOS **03** 13:39:52.4±1.5, 46.22N×153.15E, h42km, mb4.7/13, Error ellipse: s-maj=7.9km s-min=6.5km az=74.9*
*SKHL **03** 13:39:52.7±0.4, 46.20N×153.30E, h56km±5km, mb4.8/7, msh5.0/4*

ISC 03 13:39:53.0±1.3, 46.35N±0.07×153.06E±0.06, h26km±8km, n154, σ1§62/158, mb4.5/54, MS3.2/5, 2C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**3.80**	**255**	*e*PN	**Pn**	**13 40 51.7**	**+1.9**
KUR				S	**Sn**	**13 41 37.0**	**+3.3**
KUR				pmax	pmax		
	comp=Z,373nm,0.4s						
KUR				pmax	pmax		
	comp=N,112nm,0.3s						
KUR				pmax	pmax		
	comp=E,26nm,0.3s						
KUR				smax	smax		
	comp=N,179nm,0.5s						
KUR				smax	smax		
	comp=E,22nm,0.4s						
KUR	**Kuril'sk**	**3.80**	**255**	*i* P	**Pn**	**13 40 51.5**	**+1.7**
KUR				AMB	AMB	13 40 52.3	
	comp=E,110nm,0.4s						
KUR				AMB	AMB	13 40 52.3	
	comp=E,30nm,0.4s						
KUR				AMB	AMB	13 40 52.3	
	comp=E,250nm,0.4s						
KUR				*e*S	**Sn**	**13 41 35.3**	**+1.6**
KUR				A	A	13 41 46.0	
	comp=E,2μm,3.0s						
KUR				A	A	13 41 46.0	
	comp=E,2μm,3.0s						
KUR				A	A	13 41 47.9	
	comp=E,150nm,0.4s						
KUR				A	A	13 41 47.9	
	comp=E,290nm,0.4s						
SKR	**Severo-Kuril's**	**4.79**	**24**	*e*PN	**Pn**	**13 41 04.4**	**+1.1**
SKR				pmax	pmax		
	comp=Z,65nm,1.0s						
SKR	**Severo-Kuril's**	**4.79**	**24**	*i* P	**Pn**	**13 41 03.9**	**+0.6**
SKR				AMB	AMB	13 41 08.0	
	comp=Z,70nm,0.5s						
SKR				*e*S	**Sn**	**13 41 57.6**	**-0.2**
SKR				A	A	13 41 58.1	
	comp=Z,80nm,0.5s						
SKR				A	A	13 41 58.1	
	comp=Z,90nm,0.5s						
SKR				A	A	13 42 06.0	
	comp=Z,1μm,4.0s						
SKR				A	A	13 42 06.0	
	comp=Z,700nm,4.0s						
SHO	**Shikotan**	**5.06**	**243**	*e*PN	**Pn**	**13 41 04.7**	**-2.4**
SHO				pmax	pmax		
	comp=N,14nm,0.3s						
SHO				pmax	pmax		
	comp=Z,21nm,0.3s						
SHO				pmax	pmax		
	comp=E,19nm,0.2s						
SHO	**Shikotan**	**5.06**	**243**	*i* P	**Pn**	**13 41 05.7**	**-1.4**
SHO				AMB	AMB	13 41 10.0	
	comp=E,20nm,0.3s						
SHO				*e*S	**Sn**	**13 42 01.8**	**-2.9**
SHO				A	A	13 42 07.5	
	comp=E,800nm,4.0s						
SHO				A	A	13 42 07.5	
	comp=E,1μm,4.0s						
SHO				A	A	13 42 10.0	
	comp=E,90nm,0.4s						
SHO				A	A	13 42 10.0	
	comp=E,120nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**5.59**	**248**	*e*PN	**Pn**	**13 41 13.5**	**-0.9**
YUK				pmax	pmax		
	comp=Z,75nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.59**	**248**	*e*P	**Pn**	**13 41 15.3**	**+0.9**
YUK				AMB	AMB	13 41 16.0	
	comp=Z,80nm,0.4s						
YUK				*e*S	**Sn**	**13 42 16.6**	**-1.2**
YUK				A	A	13 42 20.7	
	comp=Z,1μm,4.0s						
YUK				A	A	13 42 20.7	
	comp=Z,1μm,4.0s						
YUK				A	A	13 42 24.0	
	comp=Z,150nm,0.6s						
YUK				A	A	13 42 24.0	
	comp=Z,80nm,0.6s						
PAU	**Pauzhetka**	**5.68**	**24**	*e*S	**Sn**	**13 42 21.5**	**+1.5**
GLVR	**Golovnino**	**5.95**	**247**	*e*PN	**Pn**	**13 41 17.3**	**-2.0**
GLVR				pmax	pmax		
	comp=Z,233nm,0.6s						
GLVR	**Golovnino**	**5.95**	**247**	*e*P	**Pn**	**13 41 19.3**	**0.0**
GLVR				AMB	AMB	13 41 20.0	
	comp=Z,230nm,0.6s						
GLVR				*e*S	**Sn**	**13 42 25.3**	**-1.2**
GLVR				A	A	13 42 28.0	
	comp=Z,390nm,0.8s						
GLVR				A	A	13 42 28.0	
	comp=Z,310nm,0.8s						
NMR	**Nemuro--Hokkai**	**6.00**	**243**	*e*PN	**Pn**	**13 41 17.9**	**-2.2**
NMR	**Nemuro--Hokkai**	**6.00**	**243**	*i* P	**Pn**	**13 41 18.4**	**-1.7**
NMR				*i* S	**Sn**	**13 42 25.1**	**-2.8**
YSS	**Yuzh-Sakhalins**	**7.12**	**279**	*e*PN	Pn	13 41 40.6	+5.2
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS	**Yuzh-Sakhalins**	**7.12**	**279**	*e*P	**Pn**	**13 41 37.3**	**+1.9**
YSS				AMB	AMB	13 41 42.5	
	comp=Z,30nm,0.9s						
PEA0B	**Petropavlovsk-**	**7.40**	**22**	PN	**Pn**	**13 41 39.6**	**+0.4**
PEA0B	**Petropavlovsk-**	**7.40**	**22**	Pn	**Pn**	**13 41 39.6**	**+0.4**
PETK	**Petropavlovsk-**	**7.40**	**22**	Pn	**Pn**	**13 41 38.8**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=187,slow=10,SNR=26						
PET	**Petropavlovsk**	**7.60**	**26**	*e*P	**Pn**	**13 41 42.8**	**+0.9**
PET				AMB	AMB	13 41 45.8	
	comp=Z,20nm,1.0s						
JKA	**Kamikawa-asahi**	**7.72**	**257**	*e*P	**Pn**	**13 41 45.7**	**+2.1**
JKA	**Kamikawa-asahi**	**7.72**	**257**		**Pn**	**13 41 45.6**	**+2.1**
ASAJ	**Asahikawa**	**7.72**	**257**	Pn	**Pn**	**13 41 45.6**	**+2.0**
	comp=Z,1.5nm,0.3s,baz=69,slow=20,SNR=14						
ERM	**Erimo**	**8.33**	**242**	PN	**Pn**	**13 41 54.3**	**+2.3**
ERM	**Erimo**	**8.33**	**242**	Pn	**Pn**	**13 41 54.3**	**+2.3**
MA2	**Magadan**	**13.32**	**355**	LR	LR	13 48 49.7	
	comp=Z,60nm,19.5s,baz=234,slow=41						
KLR	**Kul'dur**	**14.60**	**289**	Pn	**P**	**13 43 21.2**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=94,slow=18,SNR=8.8						
KLR				LR	LR	13 49 24.0	
	comp=Z,67nm,18.1s,baz=100,slow=39						
EKMR	**Ekimchan**	**14.62**	**305**	*e*P	**Pn**	**13 43 18.0**	**+0.1**
MAJO	**Matsushiro**	**14.81**	**234**	P	**Pn**	**13 43 19.6**	**-1.1**
MAJO	**Matsushiro**	**14.81**	**234**	Pn	**Pn**	**13 43 19.6**	**-1.1**
MJAR	**Matsushiro Arr**	**14.81**	**234**	P	**Pn**	**13 43 18.7**	**-2.0**
MJAR	**Matsushiro Arr**	**14.81**	**234**	Pn	**Pn**	**13 43 17.1**	**-3.6**
	comp=Z,0.0nm,0.3s,baz=33,slow=14,SNR=3.7						
MJAR	**Matsushiro Arr**	**14.81**	**234**		**Pn**	**13 43 18.7**	**-2.0**
MJB9	**Matsu-Tunnel**	**14.81**	**234**	Pn	**Pn**	**13 43 18.2**	**-2.5**
USRK	**Ussuriysk Ar.**	**14.99**	**269**	Pn	**Pn**	**13 43 23.8**	**+0.8**
	baz=66,slow=12,SNR=9.9						
USRK	**Ussuriysk Ar.**	**14.99**	**269**		**Pn**	**13 43 21.6**	**-1.4**
SEY	**Seymchan**	**16.62**	**359**	Pn	**Pn**	**13 43 44.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=189,slow=19,SNR=2.3						
BMKR	**Bomnak**	**17.45**	**307**	*e*P	**Pn**	**13 43 51.5**	**-2.8**
ZEA	**Zeya**	**18.08**	**304**	*e*P	**P**	**13 44 04.4**	**+2.1**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,400nm,12.0s						
ZEA	**Zeya**	**18.08**	**304**	*e*P	**P**	**13 44 04.4**	**+2.1**
ZEA				AMB	AMB	13 44 06.2	
	comp=Z,10.0nm,1.0s						
CN2	**Changchun**	**19.63**	**273**	*e*P	**Pn**	**13 44 21.5**	**+0.6**
CN2				*es*P	pP	13 44 27.0	+1.3
CN2				*e*S	**S**	**13 47 58.5**	**-0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
CN2				LR	LR		
	comp=Z,200nm,11.0s						
YAK	**Yakutsk**	**20.64**	**328**	P	**P**	**13 44 29.3**	**-0.9**
YAK				pmax	pmax		
	comp=Z,11nm,0.6s						
YAK	**Yakutsk**	**20.64**	**328**	P	**P**	**13 44 30.5**	**+0.4**
	comp=Z,3.9nm,0.4s,baz=180,slow=3.6,SNR=4.2						
YAK				LR	LR	13 52 51.1	
	comp=Z,43nm,19.1s,baz=128,slow=38						
YAK	**Yakutsk**	**20.64**	**328**	P	**P**	**13 44 29.3**	**-0.9**
YAK				IAmb	IAmb	13 44 36.5	
	comp=Z,11nm,0.6s						
KSRS	**Korea Array**	**20.65**	**253**	P	Pn	13 44 32.4	-0.5
	comp=Z,2.9nm,0.7s,baz=55,slow=11,SNR=7.9						
BILL	**Bilibino**	**22.79**	**13**	*e*P	**P**	**13 44 54.2**	**+1.0**
BILL				*PP	**pwP**	**13 45 03.0**	**-0.5**
BILL				*SP	sP	13 45 11.0	+8.8
BILL						13 45 20.0	
BILL				PPP	PPP	13 45 29.0	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BILL				MLR	M

MKAR PcP **PcP** **13 49 54.0 0.0**
comp=Z,0.6nm,0.8s,baz=85,slow=3.5,SNR=3.0
MKAR Makanchi Array 47.09 298 *i* P **P** **13 48 22.7 +0.2**
MKAR Makanchi Array 47.09 298 P **P** **13 48 22.5 0.0**
MKAR **PcP** **13 49 52.7 -1.3**
MAKZ Makanchi 47.28 298 P **P** **13 48 23.6 -0.3**
MAKZ pmax pmax
comp=Z,6.0nm,1.1s
MAKZ Makanchi 47.28 298 P **P** **13 48 23.6 -0.3**
MAKZ lAmb lAmb 13 48 24.9
comp=Z,6.3nm,1.1s
KURK Kurchatov 47.55 304 *i* P **P** **13 48 25.3 -0.6**
KURK pmax pmax
comp=Z,7.0nm,0.9s
KURK Kurchatov 47.55 304 *i* P **P** **13 48 25.3 -0.6**
KURK Kurchatov 47.55 304 P **P** **13 48 25.1 -0.8**
KURK lAmb lAmb 13 48 26.8
comp=Z,6.1nm,0.8s
BRVK Borovoye 51.12 310 *i* P **P** **13 48 52.8 -0.4**
BRVK pmax pmax
comp=Z,2.0nm,0.9s
BRVK Borovoye 51.12 310 *i* P **P** **13 48 52.8 -0.4**
BRVK Borovoye 51.12 310 P **P** **13 48 52.7 -0.4**
YKA Yellowknife Ar 51.26 36 P **P** **13 48 53.9 -0.1**
comp=Z,0.8nm,0.8s,baz=295,slow=7.0,SNR=11
YKA Yellowknife Ar 51.26 36 P **P** **13 48 53.6 -0.5**
CMAR Chiang Mai Arr 52.24 257 P **P** **13 49 02.9 +0.9**
comp=Z,0.5nm,0.4s,baz=34,slow=7.6,SNR=8.1
AAK Ala-Archa 53.98 297 *i* P **P** **13 49 14.7 0.0**
AAK pmax pmax
comp=Z,4.0nm,0.9s
AAK Ala-Archa 53.98 297 *i* P **P** **13 49 14.7 0.0**
AAK Ala-Archa 53.98 297 P **P** **13 49 15.6 +0.9**
AAK lAmb lAmb 13 49 16.8
comp=Z,3.9nm,0.9s
TAPN Taplejung 54.09 273 *e*P **P** **13 49 16.9 +1.1**
KSH Kashi 54.77 293 P **P** **13 49 25.1 +4.6**
KSH pP sP 13 49 29.3 -0.8
KSH pmax pmax
comp=Z,10.0nm,0.6s
KSH pmax pmax
comp=Z,360nm,6.5s
JIRN Jiri 54.94 275 *e*P **P** **13 49 23.6 +1.5**
comp=Z,17nm,0.5s
GUN Gumba 55.00 275 *e*P **P** **13 49 23.6 +1.1**
comp=Z,6.9nm,0.5s
RAMN Ramite 55.10 274 *e*P **P** **13 49 24.0 +0.8**
comp=Z,12nm,0.4s
ARU Arti 55.28 318 *d i*P **P** **13 49 24.0 +0.3**
ARU 13 51 27.5
ARU S **S** **13 57 07.5 +1.9**
ARU SS **SS** **14 00 48.0 -1.3**
ARU pmax pmax
comp=Z,9.0nm,1.8s
ARU Arti 55.28 318 *i*↓*i*P **P** **13 49 24.0 +0.3**
KKN Kakani 55.49 276 *e*P **P** **13 49 27.1 +1.2**
PKI Pulchoki 55.54 275 *e*P **P** **13 49 27.2 +0.8**
PKIN Phulchoki 55.54 275 *e*P **P** **13 49 27.2 +0.9**
comp=Z,6.0nm,0.4s
DMN Daman 55.72 275 *e*P **P** **13 49 29.2 +1.6**
comp=Z,23nm,0.9s
GKN Gorkha 55.80 276 *e*P **P** **13 49 29.5 +1.5**
comp=Z,9.8nm,0.4s
KKAR Karatay Array 56.16 299 P **P** **13 49 31.3 +1.1**
KKAR Karatay Array 56.16 299 P **P** **13 49 31.3 +1.1**
DANN Dangsing 56.19 277 *e*P **P** **13 49 32.8 +1.8**
comp=Z,34nm,0.5s
KOLN Koldanda 56.66 277 *e*P **P** **13 49 35.7 +1.5**
comp=Z,29nm,0.9s
PRGR Permogore 57.68 327 *e*P **P** **13 49 40.1 -0.6**
PRGR pmax pmax
comp=Z,10.0nm,0.4s
ARCES ARCESS Array B 58.22 341 P **P** **13 49 44.7 +0.3**
comp=Z,4.4nm,1.1s,baz=27,slow=7.6,SNR=3.9
GAR Garm 58.65 295 P **P** **13 49 48.6 +0.6**
ABKAR Akbulak array 58.65 310 P **P** **13 49 47.0 -0.7**
ABKAR Akbulak array 58.65 310 P **P** **13 49 47.5 -0.2**
ABKAR lAmb lAmb 13 49 49.5
comp=Z,2.8nm,0.7s
NIL Nilore 60.00 289 P **P** **13 49 58.6 +1.3**
NIL pmax pmax
comp=Z,20nm,0.9s
NIL Nilore 60.00 289 P **P** **13 49 58.6 +1.3**
SUMG Summit 61.10 4 P **P** **13 50 06.7 +2.1**
SUMG pmax pmax
comp=Z,8.0nm,0.9s
SUMG Summit 61.10 4 *i* P **P** **13 50 06.6 +2.0**
comp=Z,13nm,0.7s
SUMG Summit 61.10 4 P **P** **13 50 06.7 +2.0**
SUMG lAmb lAmb 13 50 23.5
comp=Z,8.1nm,0.9s
NVAR Mina Array Bea 62.65 62 P **P** **13 50 15.9 +0.6**
comp=Z,1.0nm,0.8s,baz=291,slow=7.6,SNR=8.8
FINES FINESS Array B 64.38 335 *i* P **P** **13 50 26.3 +0.2**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES FINESS Array B 64.38 335 P **P** **13 50 26.0 -0.1**
comp=Z,4.0nm,0.6s,baz=39,slow=7.0,SNR=17
PDAR Pinedale Array 65.01 54 P **P** **13 50 30.6 -0.3**
comp=Z,0.7nm,0.8s,baz=349,slow=1.5,SNR=6.2
GEYT Alibeck 66.78 301 P **P** **13 50 42.8 +0.7**
comp=Z,2.9nm,0.7s,baz=18,slow=5.2,SNR=7.5
GEYT Alibeck 66.78 301 P **P** **13 50 43.4 +1.3**
NB2 NORSAR Subarra 68.59 341 P **P** **13 50 53.2 +0.1**
comp=Z,1.9nm,0.7s,baz=29,slow=6.5
NOA NORSAR Array B 68.59 341 P **P** **13 50 53.2 +0.1**
comp=Z,2.5nm,0.9s,baz=27,slow=6.6,SNR=4.6
AKT Akhty 70.22 310 *e*P **P** **13 51 05.3 +1.6**
AKT *e* 13 51 24.1
AKT pmax pmax
comp=Z,9.0nm,0.8s
KIV Kislovodsk 71.05 314↓*e*P **P** **13 51 10.8 +2.2**
KIV *e* 13 51 27.1
KIV S **S** **14 00 18.0 -5.2**
KIV pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 71.11 314 P **P** **13 51 09.8 +1.0**
comp=Z,7.0nm,0.9s,baz=24,slow=1.4,SNR=19
ASAR Alice Springs 71.82 198 P **P** **13 51 14.6 +1.3**
comp=Z,0.5nm,0.8s,baz=14,slow=6.2,SNR=5.8
AKASG Malin Array Be 71.86 326 *i* P **P** **13 51 13.5 +0.3**
AKASG pmax pmax
comp=Z,6.0nm,0.8s
AKASG Malin Array Be 71.86 326 P **P** **13 51 13.2 0.0**
comp=Z,5.3nm,0.8s,baz=34,slow=6.4,SNR=20
AKBB Malin Array Si 71.86 326 P **P** **13 51 11.3 -1.9**
AKBB pmax pmax
comp=Z,6.0nm,0.9s
AKBB Malin Array Si 71.86 326 P **P** **13 51 11.3 -1.9**
AKBB lAmb lAmb 13 51 15.1
comp=Z,6.4nm,0.9s
KOLS Kolonicke sedl 75.89 329 *e*P **P** **13 51 39.0 +2.1**
KOLS Kolonicke sedl 75.89 329 *e*P **P** **13 51 39.0 +2.1**
BURAR Bucovina Array 75.90 327 P **P** **13 51 36.7 -0.4**
UZH Uzhgorod 76.13 329 *e*P P 13 51 33.4 -4.8
UZH *e* 13 51 47.3
LANS Liptovska Anna 76.68 331 *e*P **P** **13 51 44.1 +2.7**
LANS pmax pmax
comp=Z,4.0nm,1.1s
LANS Liptovska Anna 76.68 331 *e*P **P** **13 51 44.1 +2.7**
VYHS Vyhne 77.45 331 *e*P **P** **13 51 47.3 +1.5**
VYHS Vyhne 77.45 331 *e*P **P** **13 51 47.3 +1.5**
TXAR Lajitas Array 77.72 60 P **P** **13 51 46.9 -0.8**
comp=Z,1.6nm,0.8s,baz=304,slow=4.0,SNR=15
KHC Kasperske Hory 78.58 334 *e*P **P** **13 51 53.9 +1.9**
KHC Kasperske Hory 78.58 334 *e*P **P** **13 51 53.9 +1.9**
BRTR Keskin Array B 78.65 317 P **P** **13 51 51.6 -1.1**
comp=Z,0.6nm,0.7s,baz=32,slow=4.8,SNR=4.2
GERES GERESS Array B 78.80 334 P **P** **13 51 53.1 -0.2**
comp=Z,1.0nm,0.8s,baz=27,slow=4.6,SNR=5.3
CONA Conrad Observa 78.93 332 *i* pP **P** **13 51 55.7 +1.7**
comp=Z,1.5nm,0.7s
SOKA Soboth 80.30 332 *e*pP **P** **13 52 03.5 +2.0**
comp=Z,0.9nm,0.5s
KBA Koelnbreinsper 80.48 333 *e*pP **P** **13 52 05.7 +3.1**
comp=Z,5.1nm,0.9s
WATA Walderalm 80.78 335 *i* pP **P** **13 52 07.2 +3.0**
comp=Z,1.2nm,0.3s
WTTA Wattenberg 80.83 335 *i* pP **P** **13 52 06.8 +2.3**
comp=Z,3.6nm,0.5s
MOTA Moosalm 80.92 335 *e*pP **P** **13 52 07.0 +2.1**
comp=Z,2.1nm,0.7s
SQTA Sankt Quirin 81.00 335 *i* pP **P** **13 52 08.5 +3.2**
comp=Z,0.8nm,0.3s
ABTA Abfaltersbach 81.03 334 *e*PcP **P** **13 52 08.6 +3.2**
comp=Z,1.2nm,0.5s
FETA Feichten 81.32 335 *e*PcP **P** **13 52 09.2 +2.2**
comp=Z,2.7nm,1.1s
CPUP Villa Florida 148.69 61 PKPbc **PKPbc** **13 59 37.5 -0.2**
comp=Z,1.5nm,0.8s,baz=3.6,slow=4.4,SNR=3.1

*JMA **03** 13:48:11.6±0.1, 40.97N×143.24E, h22km, M3.3*
*IDC **03** 13:48:18.3±3.3, 41.45N×141.82E, h100km±51km, mb3.1/2, mb1 3.2/4, mb1mx2.9/31, mbtmp3.3/4, Error ellipse: s-maj=204.7km s-min=20.5km az=111.0*
ISC 03 13:48:11.7±2.6, 40.95N±0.05×143.40E±0.07, h27km±21km, n26,σ1s35/31, 4C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.08**	**350**	P		**Pn**	**13 48 30.8**	**-0.2**
JEM				*e*S		**Sb**	**13 48 45.0**	**-0.3**
JTHR	**Tokachihiroo**	**1.34**	**357**	P		**Pn**	**13 48 34.7**	**+0.1**
JNBK	**Urakawa-nobuka**	**1.41**	**340**	P		**Pn**	**13 48 35.6**	**0.0**
JNBK				*e*S		**Sn**	**13 48 53.7**	**+0.4**
JKEN	**Kujiedanarisaw**	**1.49**	**240**	↑P		**Pn**	**13 48 35.6**	**-1.0**
JANG	**Nango**	**1.55**	**249**	↑P		**Pn**	**13 48 36.8**	**-0.7**
JANG				*e*S		**Sn**	**13 48 55.5**	**-1.1**
JCH	**Churui**	**1.66**	**359**	P		**Pn**	**13 48 39.0**	**0.0**
JCH				*e*S		**Sn**	**13 48 58.8**	**-0.6**
JTM	**Tenmabayashi**	**1.77**	**265**	P		**Pn**	**13 48 40.4**	**-0.2**
JTM				*e*S		**Sn**	**13 49 00.9**	**-1.4**
JOT	**Ohata**	**1.82**	**284**	P		**Pn**	**13 48 40.8**	**-0.5**
JOT				*e*S		**Sn**	**13 49 03.1**	**-0.4**
JBT2	**Biratori 2**	**1.98**	**337**	P		**Pn**	**13 48 44.5**	**+1.1**
JBT2				*e*S		**Sn**	**13 49 08.5**	**+1.2**
JKB	**Kayabe**	**2.01**	**298**	P		**Pn**	**13 48 43.7**	**-0.1**
JOM	**Ohasama**	**2.19**	**228**	↑P		**Pn**	**13 48 46.9**	**+0.6**
JAK	**Akkeshi**	**2.26**	**25**	P		**Pn**	**13 48 47.6**	**+0.4**
JAK				*e*S		**Sn**	**13 49 13.3**	**-0.9**
JFR	**Furan**	**2.29**	**345**	P		**Pn**	**13 48 49.0**	**+1.3**
JAR	**Ashorobuto**	**2.36**	**7**	P		**Pn**	**13 48 48.6**	**0.0**
JAR				*e*S		**Sn**	**13 49 14.9**	**-1.8**
JEW	**Eniwo**	**2.38**	**323**	P		**Pn**	**13 48 50.2**	**+1.3**
JEW				*e*S		**Sn**	**13 49 19.6**	**+2.4**
JMK	**Ichinoseki**	**2.61**	**221**	↑P		**Pn**	**13 48 52.9**	**+0.9**
ASAJ	**Asahikawa**	**3.22**	**350**	P		**Pn**	**13 49 01.5**	**+1.1**
	0.7nm,0.3s,baz=196,slow=11,SNR=14							
ASAJ				S		**Sn**	**13 49 33.0**	**-4.9**
	1.1nm,0.3s,baz=346,slow=19,SNR=2.9							
MJAR	**Matsushiro Arr**	**5.99**	**224**	P		**Pn**	**13 49 39.6**	**+1.1**
	0.1nm,0.3s,baz=31,slow=14,SNR=15							
H11N2	**WAKE ISLAND Hy**	**29.14**	**130**	T		T	14 24 50.1	
	baz=322,slow=75							
H11N1	**WAKE ISLAND Hy**	**29.15**	**130**	T		T	14 24 54.1	
	baz=322,slow=75							
H11N3	**WAKE ISLAND Hy**	**29.16**	**130**	T		T	14 24 54.2	
	baz=322,slow=75							
H11S1	**WAKE ISLAND Hy**	**29.99**	**131**	T		T	14 25 57.5	
	baz=324							
H11S3	**WAKE ISLAND Hy**	**29.99**	**131**	T		T	14 25 57.1	
	baz=324							
H11S2	**WAKE ISLAND Hy**	**30.01**	**131**	T		T	14 26 02.9	
	baz=324							
WRA	**Warramunga Arr**	**61.17**	**190**	P		**P**	**13 58 23.9**	**+0.1**
	0.2nm,0.4s,baz=6.2,slow=6.7,SNR=3.3							
ASAR	**Alice Springs**	**64.89**	**190**	P		**P**	**13 58 49.3**	**+0.8**
	0.3nm,0.7s,baz=11,slow=4.4,SNR=4.1							

SKO 03 13:49:17.8, 41.71N×22.31E, h15km, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
STIP	**Stip**	**0.09**	**260**	↑*i*Pg		Pg	13 49 21.2	+0.2
STIP				*i* Sg		Sg	13 49 23.2	+0.1
STIP				*e*Lg		Lg	13 49 24.1	
	comp=N,40nm,0.4s							
STIP				*e*Lg		Lg	13 49 24.5	
	comp=E,150nm,0.6s							
VAY	**Valandovo**	**0.43**	**153**	*i* Pg		Pg	13 49 26.8	+0.3
VAY				*i* Sg		Sg	13 49 32.9	+0.5
VAY				*e*Lg		Lg	13 49 32.9	
	comp=N,85nm,0.7s							
VAY				*e*Lg		Lg	13 49 33.0	
	comp=E,20nm,0.4s							

*IDC **03** 13:49:38.6±2.0, 6.39N×126.59E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/33, mbtmp3.3/3, Error ellipse: s-maj=212.9km s-min=26.6km az=67.0*
*MAN **03** 13:49:51.8, 6.24N×126.44E, h47km, mb4.7, ML3.5, MS3.4*
ISC 03 13:49:50.0±1.2, 6.09N±0.08×126.42E±0.10, h85km±10km, n10,σ1s07/18, mb3.1/3, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.71**	**271**	*e*P		**Pn**	**13 50 06.8**	**+0.7**
DDMP				*e*S		**Sn**	**13 50 19.1**	**+0.9**
MATI	**Mati**	**0.86**	**349**	*e*P		**Pn**	**13 50 07.0**	**-0.8**
MATI				*e*S		**Sn**	**13 50 21.0**	**0.0**
GSPH	**General Santos**	**1.47**	**270**	↓*i*P		**Pn**	**13 50 14.5**	**-0.7**
GSPH				*i* S		**Sn**	**13 50 33.5**	**-0.8**
KCP	**Kidapawan**	**1.61**	**305**	↓*i*P		**Pn**	**13 50 16.9**	**-0.1**
KCP				*i* S		**Sn**	**13 50 36.9**	**-0.5**
SKMP	**Bagumbayan, Su**	**1.92**	**283**	*e*P		**Pn**	**13 50 21.6**	**+0.7**
SKMP				*e*S		**Sn**	**13 50 43.7**	**-0.8**
CTBH	**Cotabato--PC H**	**2.44**	**297**	↑*i*P		**Pn**	**13 50 29.2**	**+1.4**
CGP	**Cagayan de Oro**	**2.91**	**324**	↓*e*P		**Pn**	**13 50 36.5**	**+2.3**
CGP				*e*S		**Sn**	**13 51 08.4**	**+0.2**
WRA	**Warramunga Arr**	**27.02**	**163**	P		**P**	**13 55 24.7**	**+0.4**
	0.5nm,0.8s,baz=344,slow=10,SNR=3.4							
ASAR	**Alice Springs**	**30.47**	**166**	P		**P**	**13 55 56.0**	**+1.0**
	0.2nm,0.5s,baz=341,slow=7.5,SNR=6.5							
ASAR				PcP		**PcP**	**13 58 53.1**	**+0.5**
	0.4nm,0.8s,baz=359,slow=3.7,SNR=4.2							
MKAR	**Makanchi Array**	**55.46**	**324**	P		**P**	**13 59 15.0**	**-1.0**
	0.2nm,0.6s,baz=123,slow=7.1,SNR=2.7							
MKAR				PcP		**PcP**	**14 00 13.7**	**-1.5**
	0.4nm,0.9s,baz=122,slow=5.0,SNR=3.2							

*IDC **03** 14:17:42.8±0.6, 5.78S×103.50E, h0km, mb4.6/23, mb1 4.7/24, mb1mx4.4/54, mbtmp4.6/24, ML3.3/1, MS3.3/4, Ms1 3.4/4, ms1mx3.0/28, Error ellipse: s-maj=24.3km s-min=11.8km az=49.0*
*BJI **03** 14:17:45.9±0.0, 5.90S×103.50E, h30km, mB5.0/30, mb4.7/41, Ms4.6/13, Ms7 4.4/11*
*DJA **03** 14:17:47.4±0.3, 6°S±3'×10°3E±', h26km±3km, M4.9/28, mb4.8/28, mB5.4/8, mb4.8/2, MLv4.8/20, MLv4.8/5, Mw(mB)4.8/8, Mwp6.0/4*
*NEIC **03** 14:17:50.7±2.2, 5.88S±0.05×103.45E±0.06, h65km±2km, mb4.8/37, Error ellipse: s-maj=9.6km s-min=6.1km az=117.0*
ISC 03 14:17:46.4±1.3, 5.88S±0.05×103.44E±0.05, h24km±8km, n184,σ1s29/191, mb4.8/55, MS4.1/9, 14C-3D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.06**	**36**	P		**Pn**	**14 18 05.7**	**-0.2**
LWLI				S		**Sb**	**14 18 19.3**	**-0.3**
KASI	**Kota Agung**	**1.11**	**71**	P		**Pn**	**14 18 05.0**	**-1.5**
KASI				S		**Sn**	**14 18 19.7**	**-1.4**
MDSI	**Maura Dua**	**1.57**	**28**	P		**Pn**	**14 18 13.8**	**+1.0**
MNAI	**Manna**	**1.58**	**342**	P		**Pb**	**14 18 15.1**	**0.0**
MNAI	**Manna**	**1.58**	**342**			**Pn**	**14 18 14.2**	**+1.1**
KLSI		**1.75**	**47**	P		**Pn**	**14 18 15.7**	**+0.4**
KSI	**Kapahiang**	**2.37**	**339**	P		**Pn**	**14 18 25.4**	**+1.5**
SBJI	**Serang**	**2.69**	**95**	P		**Pn**	**14 18 29.5**	**+1.3**
PMBI	**Palembang**	**3.22**	**24**	P		**Pn**	**14 18 37.6**	**+2.0**
PMBI	**Palembang**	**3.22**	**24**			**Pn**	**14 18 36.8**	**+1.3**
SKJI	**Sukabumi**	**3.29**	**110**	P		**Pn**	**14 18 35.4**	**-1.2**
DBJI	**Dramaga**	**3.36**	**102**	P		**Pn**	**14 18 38.2**	**+0.7**
CBJI	**Citeko**	**3.43**	**99**	P		**Pb**	**14 18 43.8**	**-2.8**
CNJI	**Cibinong**	**3.93**	**111**	P		**Pn**	**14 18 44.2**	**-1.1**
KRJI	**Kerinci**	**4.25**	**332**	P		**Pn**	**14 18 52.2**	**+2.4**
LEM	**Lembang**	**4.26**	**103**	Pn		**Pn**	**14 18 50.6**	**+0.6**
	1.9nm,0.3s,baz=324,slow=19,SNR=1.5							
LEM				Sn		**Sn**	**14 19 42.0**	**+2.9**
	2.0nm,0.3s,baz=319,slow=19,SNR=2.5							
LEM				LR		LR	14 20 43.8	
	comp=Z,451nm,20.8s,baz=266,slow=43							
PPSI	**Pulau Pagai**	**4.61**	**312**	P		**Pn**	**14 18 55.3**	**+0.6**
CISI	**Cisompet, Garu**	**4.66**	**111**	P		**Pn**	**14 18 56.8**	**+1.4**
CISI	**Cisompet, Garu**	**4.66**	**111**			**Pn**	**14 18 55.5**	**+0.2**
TPI	**Tanjungpandan**	**5.22**	**54**	P		**Pn**	**14 19 04.0**	**+0.9**
	0.4nm64µm27nm,1.3s							
SDSI	**Sungai Dareh**	**5.31**	**338**	P		**Pn**	**14 19 05.5**	**+1.2**
	0.3nm3µm38nm,1.1s							
DSRI	**Dabo**	**5.49**	**12**	P		**Pn**	**14 19 05.4**	**-1.3**
	0.6nm110µm5µm142nm,0.7s							
KPJI	**Karang Pucung**	**5.64**	**105**	P		**Pn**	**14 19 10.7**	**+1.8**
	0.3nm0.3nm53nm,0.6s,53nm,0.6s							
PDSI	**Padang**	**5.76**	**329**	P		**Pn**	**14 19 11.2**	**+0.7**
	0.2nm752nm34nm,0.5s							
SISI	**Saibi**	**6.27**	**316**	P		**Pn**	**14 19 17.3**	**-0.2**
	0.3nm0.3nm44nm,0.7s							
BKNI	**Bangkinang**	**6.62**	**339**	P		**Pn**	**14 19 22.0**	**-0.2**
	0.6nm2µm93nm,0.5s							
BKNI	**Bangkinang**	**6.62**	**339**	Pn		**Pn**	**14 19 22.2**	**0.0**
UGM	**Wanagama**	**7.32**	**106**	P		**Pn**	**14 19 30.7**	**-1.2**
	1.1nm208nm,1.1s							
UGM	**Wanagama**	**7.32**	**106**	Pn		**Pn**	**14 19 32.1**	**+0.1**
MYKOM	**Kota Tinggi**	**7.63**	**3**	Pn		**Pn**	**14 19 39.6**	**+3.4**
PWJI	**Pagerwojo**	**8.57**	**105**	P		**Pn**	**14 19 47.6**	**-1.5**
	92nm,0.9s							
GSI	**Gunungsitoli**	**9.23**	**320**	P		**Pn**	**14 19 56.9**	**-1.3**
	37nm,0.9s							
GSI	**Gunungsitoli**	**9.23**	**320**			Pn	14 19 52.7	-5.5
RPSI	**Rantau Prapat**	**9.64**	**332**	Pn		**Pn**	**14 20 03.9**	**+0.1**
STKI	**Sintang**	**9.96**	**54**	P		Pn	14 20 21.2	+13
GMJI	**Gumukmas**	**10.21**	**104**	P		**Pn**	**14 20 15.1**	**+3.5**
	40nm,0.8s,40nm,0.8s							
IPM	**Ipoh**	**10.57**	**347**	Pn		**Pn**	**14 20 16.5**	**0.0**
JAGI	**Jajag, Banyuwa**	**10.94**	**104**	P		**Pn**	**14 20 21.5**	**-0.1**
	110nm,0.9s							
JAGI	**Jajag, Banyuwa**	**10.94**	**104**			**Pn**	**14 20 21.6**	**0.0**
KULM	**Kulim**	**11.44**	**346**	Pn		**Pn**	**14 20 29.2**	**+0.7**
SRBI	**Singaraja**	**11.89**	**101**	P		**Pn**	**14 20 35.4**	**+0.8**
	1µm74nm,0.7s							
TWSI	**Taliwang, Sumb**	**13.63**	**103**	P		**Pn**	**14 20 57.8**	**-0.6**
	27µm29nm,0.7s							
PLAI	**Plampang**	**14.52**	**102**	P		**Pn**	**14 21 08.7**	**-1.9**
	664nm78nm,0.7s							
BKSI	**Bulukumba**	**16.61**	**89**	P		P	14 21 49.2	+8.9
BNSI	**Bone**	**16.67**	**86**	P		**Pn**	**14 21 37.8**	**-0.8**
	37nm,1.2s							
MPSI	**Mapaga**	**17.55**	**70**	P		**Pn**	**14 21 50.2**	**+0.5**
	21nm,1.3s							
MRSI	**Marisa**	**19.52**	**72**	P		**Pn**	**14 22 14.0**	**+0.3**
	31nm,0.6s							
LUWI	**Luwuk**	**19.88**	**77**	P		**P**	**14 22 17.4**	**+1.1**
LUWI				lAmb		lAmb	14 22 44.9	
	comp=Z,57nm,0.9s							
SOEI	**Soe**	**20.99**	**102**	P		**P**	**14 22 30.0**	**+1.6**
	comp=Z,1µmcomp=Z,154nm,0.9s							
SOEI	**Soe**	**20.99**	**102**	P		**P**	**14 22 27.7**	**-0.7**
PSA00	**Pilbara Seismi**	**22.26**	**136**	P		**P**	**14 22 42.1**	**+0.2**
PSA00				lAmb		lAmb	14 23 00.0	
	comp=Z,36nm,1.4s							
CMAR	**Chiang Mai Arr**	**24.59**	**350**	P		**P**	**14 23 03.8**	**-1.1**
	comp=Z,4.3nm,0.5s,baz=182,slow=8.8,SNR=40							
CMAR				PcP		**PcP**	**14 26 43.9**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=206,slow=3.7,SNR=5.4							
CMAR				LR		LR	14 33 36.7	
	comp=Z,78nm,18.9s,baz=160,slow=39							
FITZ	**Fitzroy Crossi**	**24.84**	**121**	P		**P**	**14 23 06.7**	**-0.6**
	comp=Z,17nm,0.7s,baz=282,slow=6.7,SNR=39							
FITZ				S		**S**	**14 27 32.3**	**+3.3**
	comp=Z,1.6nm,0.8s,baz=226,slow=12,SNR=2.3							
FITZ	**Fitzroy Crossi**	**24.84**	**121**	P		**P**	**14 23 06.8**	**-0.4**
FITZ				lAmb		lAmb	14 23 08.9	
	comp=Z,17nm,0.8s							
CHTO	**Chiang Mai**	**24.93**	**350**	P		**P**	**14 23 06.9**	**-1.2**
QIZ	**Qiongzhong**	**25.55**	**14**	P		**P**	**14 23 15.8**	**+2.2**
QIZ				S		**S**	**14 27 42.6**	**+2.5**
QIZ				LR		LR		
	comp=Z,150nm,16.1s							
QIZ				LR		LR		
	comp=Z,230nm,18.8s							
KNRA	**Kununurra**	**26.68**	**113**	P		**P**	**14 23 22.7**	**-1.2**
KNRA				lAmb		lAmb	14 23 55.0	
	comp=Z,19nm,0.9s							
FAKI	**Fak Fak**	**28.87**	**85**	P		**P**	**14 23 42.8**	**-0.8**
NWAO	**Narrogin (SRO)**	**29.82**	**156**	P		**P**	**14 23 51.3**	**-0.5**
NWAO				lAmb		lAmb	14 24 14.6	
	comp=Z,30nm,1.3s							
H01W3	**Cape Leeuwin H**	**30.51**	**163**	T		T	14 55 59.7	
	baz=341,slow=76,SNR=6.0							
H01W2	**Cape Leeuwin H**	**30.52**	**163**	T		T	14 55 59.7	
	baz=341,slow=76,SNR=6.2							
H01W1	**Cape Leeuwin H**	**30.52**	**162**	T		T	14 56 12.9	
	baz=341,slow=76,SNR=5.1							
H08S2	**Diego Garcia H**	**30.78**	**265**	T		T	14 56 31.2	
	baz=86,slow=75							
H08S3	**Diego Garcia H**	**30.79**	**265**	T		T	14 56 44.1	
	baz=86,slow=75							
H08S1	**Diego Garcia H**	**30.80**	**265**	T		T	14 56 52.0	
	baz=86,slow=75							
KMI	**Kunming**	**30.82**	**359**	P		P	14 24 06.6	+5.6
KMI				sP		pwP	14 24 16.7	+6.4
KMI				pmax		pmax		
	comp=Z,8.0nm,1.4s							
KMI				pmax		pmax		
	comp=Z,150nm,5.2s							
KMI				LR		LR		
	comp=Z,270nm,13.0s							
KMI				LR		LR		
	comp=Z,240nm,13.7s							
KMI				LR		LR		
	comp=Z,260nm,12.3s							
WRA	**Warramunga Arr**	**33.12**	**118**	P		**P**	**14 24 19.8**	**-1.2**
	comp=Z,2.8nm,0.6s,baz=285,slow=12,SNR=21							
WRA				PcP		**PcP**	**14 27 04.3**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=308,slow=1.7,SNR=8.0							
WRA				LR		LR	14 39 52.4	
	comp=Z,40nm,18.4s,baz=255,slow=40							
WRA	**Warramunga Arr**	**33.12**	**118**	P		**P**	**14 24 20.2**	**-0.8**
WR0	**Warramunga Arr**	**33.30**	**118**	P		**P**	**14 24 20.9**	**-1.7**
WR0				lAmb		lAmb	14 24 22.7	
	comp=Z,11nm,1.2s							
ASAR	**Alice Springs**	**34.23**	**124**	P		**P**	**14 24 29.9**	**-0.8**
	comp=Z,6.0nm,0.8s,baz=299,slow=7.9,SNR=80							
ASAR				PcP		**PcP**	**14 27 07.8**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=297,slow=2.1,SNR=14							
ASAR	**Alice Springs**	**34.23**	**124**	P		**P**	**14 24 30.4**	**-0.2**
AS31	**Alice Springs**	**34.23**	**124**	P		**P**	**14 24 30.4**	**-0.3**
ODAN	**Odare**	**36.07**	**335**	*e*P		**P**	**14 24 47.1**	**+0.5**
	comp=Z,10nm,0.6s							
TAPN	**Taplejung**	**36.37**	**336**	*e*P		**P**	**14 24 49.6**	**+0.3**
	comp=Z,15nm,0.8s							

comp=Z,77nm,5.0s
LZH LR LR
comp=Z,350nm,14.1s
LZH LR LR
comp=Z,250nm,14.3s
LZH LR LR
comp=Z,400nm,15.5s
STKA Stephens Creek 44.03 131 P **P** **14 25 52.5 0.0**
comp=Z,14nm,0.6s,baz=304,slow=8.2,SNR=35
STKA PcP **PcP** **14 27 38.0 +0.2**
comp=Z,2.8nm,0.8s,baz=214,slow=3.6,SNR=2.8
STKA Stephens Creek 44.03 131 P **P** **14 25 52.7 +0.3**
GTA Gaotai 45.19 356 ⇑P **P** **14 26 01.5 -0.2**
GTA pP sP 14 26 10.4 -0.5
GTA sP pwP 14 26 14.0 +2.8
GTA PcP **PcP** **14 27 42.4 +0.7**
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,75nm,5.9s
GTA LR LR
comp=Z,200nm,15.2s
GTA LR LR
comp=Z,160nm,15.9s
GTA LR LR
comp=Z,150nm,16.8s
JNU Nakatsue 46.72 32 P **P** **14 26 12.8 -1.0**
JNU IAmb IAmb 14 26 28.2
comp=Z,14nm,0.9s
HHC Hu-ho-hao-te 47.10 8 *eP* **P** **14 26 18.6 +1.9**
HHC S **S** **14 33 09.4 +1.8**
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,44nm,5.7s
HHC LR LR
comp=Z,150nm,17.0s
HHC LR LR
comp=Z,120nm,19.6s
KSAR Wonju Array Be 48.76 26 P **P** **14 26 29.9 +0.4**
KSRS Korea Array 48.79 26 P **P** **14 26 29.1 -0.6**
comp=Z,5.9nm,0.6s,baz=223,slow=7.6,SNR=24
KS19 Wonju Array Si 48.80 26 P **P** **14 26 29.8 0.0**
KS19 IAmb IAmb 14 26 39.7
comp=Z,12nm,0.9s
EIDS Eidsvold 49.48 118 P **P** **14 26 36.3 +1.1**
WMQ Urumqi 51.48 345 P **P** **14 26 51.1 +1.0**
WMQ pP sP 14 26 59.4 +0.1
WMQ pmax pmax
comp=Z,19nm,0.9s
WMQ pmax pmax
comp=Z,140nm,6.3s
WMQ LR LR
comp=Z,360nm,25.3s
WMQ LR LR
comp=Z,2μm,29.2s
WMQ LR LR
comp=Z,190nm,23.5s
WMQ Urumqi 51.48 345 P **P** **14 26 50.6 +0.5**
KSH Kashi 51.81 333 P **P** **14 26 51.7 -1.0**
KSH pP sP 14 27 01.8 -0.1
KSH sP pwP 14 27 07.3 +5.0
KSH PP **PP** **14 28 53.8 +3.1**
KSH S **S** **14 34 06.7 -7.1**
KSH sS sS 14 34 29.3 +4.6
KSH ScS **ScS** **14 36 40.7 -1.1**
KSH SS **SS** **14 37 47.3 -3.5**
KSH pmax pmax
comp=Z,51nm,0.7s
KSH pmax pmax
comp=Z,430nm,5.2s
KSH LR LR
comp=Z,270nm,7.0s
KSH LR LR
comp=Z,350nm,5.2s
KSH LR LR
comp=Z,340nm,6.4s
PRZ Przheval'sk 53.26 337 P **P** **14 27 04.5 +1.1**
PRZ IAmb IAmb 14 27 05.6
comp=Z,19nm,1.1s
CN2 Changchun 53.30 20 *eP* **P** **14 27 04.7 +1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.5s
NRN Naryn 53.36 334 P **P** **14 27 04.0 -0.5**
SONM Songino Array 53.55 2 P **P** **14 27 05.4 0.0**
comp=Z,4.3nm,0.7s,baz=180,slow=8.3,SNR=36
SONM PcP **PcP** **14 28 12.0 +0.1**
comp=Z,5.0nm,0.7s,baz=185,slow=3.9,SNR=12
SONM Songino Array 53.55 2 P **P** **14 27 05.5 0.0**
SONM PcP **PcP** **14 28 11.9 -0.1**
ULN Ulaanbaatar 53.61 3 P **P** **14 27 05.5 -0.4**
ULN PcP **PcP** **14 28 11.8 -0.4**
ULHL Ulahol 53.93 335 P **P** **14 27 08.7 +0.3**
SNR=8.7
KZA Kyzart 54.21 334 P **P** **14 27 12.0 +1.3**
SNR=18
TKM2 Tokmak 2 54.75 335 P **P** **14 27 14.8 +0.4**
SNR=6.2
KBK Karagaybulak 54.81 334 P **P** **14 27 13.5 -1.3**
SNR=16
MK31 Makanchi Array 55.70 343 P **P** **14 27 20.9 -0.1**
MK31 IAmb IAmb 14 27 21.4
comp=Z,10nm,0.6s
MKAR Makanchi Array 55.70 343 P **P** **14 27 20.6 -0.4**
comp=Z,14nm,0.6s,baz=144,slow=7.8,SNR=168
MKAR Makanchi Array 55.70 343 P **P** **14 27 20.7 -0.3**
MAKZ Makanchi 55.81 342 P **P** **14 27 21.4 -0.3**
USA0B Ussuriysk Arra 56.10 24 P **P** **14 27 21.7 -2.1**
USRK Ussuriysk Ar. 56.10 24 P **P** **14 27 22.6 -1.2**
comp=Z,11nm,0.8s,baz=208,slow=5.0,SNR=19
USRK Ussuriysk Ar. 56.10 24 P **P** **14 27 22.1 -1.6**
KKAR Karatay Array 57.16 332 P **P** **14 27 30.4 -1.1**
KURBB Kurchatov Arra 60.25 342 P **P** **14 27 52.1 -0.6**
comp=Z,7.3nm,0.8s,baz=158,slow=6.4,SNR=6.2
KURK Kurchatov 60.30 342 P **P** **14 27 52.5 -0.5**
GEYT Alibeck 60.61 320 P **P** **14 27 55.0 -0.5**
comp=Z,2.6nm,0.5s,baz=165,slow=6.0,SNR=5.1
GEYT LR LR 14 57 15.3
comp=Z,27nm,18.5s,baz=40,slow=39
GEYT Alibeck 60.61 320 P **P** **14 27 53.8 -1.7**
ZAA0 Zalesovo Array 61.63 348 P **P** **14 28 01.6 -0.5**
ZALV Zalesovo Beam 61.63 348 P **P** **14 28 01.3 -0.7**
comp=Z,9.8nm,0.4s,baz=165,slow=4.7,SNR=66
ZALV Zalesovo Beam 61.63 348 P **P** **14 28 01.5 -0.6**
BVAR Borovoye Array 65.00 339 P **P** **14 28 23.7 -0.7**
comp=Z,10nm,0.7s,baz=148,slow=8.0,SNR=16
BRVK Borovoye 65.07 339 P **P** **14 28 24.7 -0.2**
BRVK IAmb IAmb 14 28 25.2
comp=Z,7.0nm,0.7s
ABKAR Akbulak array 66.67 331 P **P** **14 28 34.8 -0.5**
ABKAR IAmb IAmb 14 28 36.0
comp=Z,14nm,0.8s
MAW Mawson 67.44 196 P **P** **14 28 37.8 -2.0**
ARU Arti 72.12 336 P **P** **14 29 08.4 -0.4**
comp=Z,2.2nm,0.5s,baz=91,slow=7.0,SNR=4.7
ARU Arti 72.12 336 IAmb IAmb 14 29 18.5
comp=Z,12nm,1.0s
PETK Petropavlovsk- 74.39 31 P **P** **14 29 21.2 -1.1**
comp=Z,3.2nm,0.8s,baz=179,slow=2.1,SNR=3.5
MMAI Mount Meron Ar 75.08 306 P **P** **14 29 27.7 +0.8**
comp=Z,6.8nm,0.8s,baz=97,slow=14,SNR=3.7
SEY Seymchan 77.97 21 P **P** **14 29 41.5 -0.9**
comp=Z,2.8nm,0.8s,baz=260,slow=3.6,SNR=5.9
BRTR Keskin Array B 78.45 312 P **P** **14 29 45.5 -0.3**
comp=Z,6.9nm,0.8s,baz=112,slow=6.8,SNR=4.6
JURR Jurilovca 83.27 316 ⇑P **P** **14 30 11.9 +0.7**
TIRR Tirgusor 83.51 316 ⇑P **P** **14 30 12.9 +0.5**
GISR Galati 84.00 317 ⇑P P 14 30 30.0 +15
IDI Anoyia 84.08 306 P **P** **14 30 14.5 -1.2**
comp=Z,3.2nm,0.5s,baz=133,slow=18,SNR=5.8
SORM Soroca 84.50 319 ⇑P **P** **14 30 17.8 +0.4**
AKASG Malin Array Be 84.63 322 P **P** **14 30 16.5 -1.5**
comp=Z,0.3nm,0.4s,baz=79,slow=5.0,SNR=4.9
AKASG Malin Array Be 84.63 322 IAmb IAmb 14 30 21.8
comp=Z,3.3nm,1.6s
VRI Vrincioaia 85.01 317 ⇑P **P** **14 30 21.9 +1.8**
SULR 85.06 316 ⇑P **P** **14 30 22.0 +1.7**
TESR Tescani 85.22 318 ⇑P **P** **14 30 22.6 +1.5**
MLR Muntele Rosu 85.46 316 P **P** **14 30 23.2 +0.7**
comp=Z,4.0nm,0.7s,baz=169,slow=14,SNR=4.2
MLR Muntele Rosu 85.46 316 ⇓P **P** **14 30 24.2 +1.7**
MLR Muntele Rosu 85.46 316 P **P** **14 30 21.7 -0.8**
MLR IAmb IAmb 14 30 33.7
comp=Z,9.9nm,0.9s
PRAR RASCA 85.69 318 ⇑P **P** **14 30 25.3 +1.8**

PLVB Pleven 85.93 314 ⇑P **P** **14 30 26.7 +2.0**
ARR Arges 86.33 316 ⇑P **P** **14 30 28.5 +1.7**
BURAR Bucovina Array 86.42 318 ⇑P **P** **14 30 29.3 +2.1**
BURAR Bucovina Array 86.42 318 P **P** **14 30 26.3 -0.9**
BURAR PcP **PcP** **14 30 29.7 0.0**
BUR08 Bucovina Ar. S 86.44 318 P **P** **14 30 25.9 -1.4**
BUR08 PcP **PcP** **14 30 29.9 +0.2**
BUR08 IAmb IAmb 14 30 30.2
comp=Z,10.0nm,0.9s
VTS Vitosha 86.77 313 ⇑P **P** **14 30 30.3 +1.2**
LIT Litokhoron 86.86 311 P **P** **14 30 28.1 -1.4**
TRPA Tarpa 88.29 319 ⇓P **P** **14 30 37.4 +1.4**
BZS Buzias 88.46 316 ⇑P **P** **14 30 38.0 +1.1**
SIRR Siria 88.55 317 ⇓P **P** **14 30 38.4 +1.1**
KOLS Kolonicke sedl 88.61 319 *eP* **P** **14 30 39.6 +2.0**
FINES FINESS Array B 89.12 332 P **P** **14 30 40.4 +0.7**
comp=Z,2.2nm,0.6s,baz=110,slow=6.1,SNR=3.0
STHS Stebnicka Huta 89.36 320 *eP* **P** **14 30 42.2 +1.1**
SNAA Sanae 89.52 198 P **P** **14 30 43.7 +2.1**
VYHS Vyhne 90.79 319 *eP* **P** **14 30 49.4 +1.6**
GERES GERESS Array B 94.21 319 P **P** **14 31 04.3 +0.6**
comp=Z,0.9nm,0.7s,baz=84,slow=4.0,SNR=4.7
NVAR Mina Array Bea 130.24 43 PKP **PKPdf** **14 36 55.7 +0.3**
comp=Z,0.6nm,0.6s,baz=298,slow=1.9,SNR=6.5
BDFB Brasilia 144.55 233 PKP **PKPdf** **14 37 21.7 -0.5**
comp=Z,2.1nm,0.3s,baz=118,slow=7.0,SNR=3.5
WMOK Wichita Mounta 144.70 33 **PKPab** **14 37 20.5 0.0**
N51A Ashland 144.73 8 PKPdf **PKPab** **14 37 20.5 +0.1**
CCM Cathedral Cave 145.30 21 **PKPbc** **14 37 22.1 -0.4**
ACSO Alum Creek Sta 145.32 9 **PKPbc** **14 37 22.1 -0.3**
TX31 Lajitas Ar. Si 145.37 44 **PKPab** **14 37 24.1 +0.9**
TX32 Lajitas Array 145.37 44 **PKPab** **14 37 24.1 +0.8**
TXAR Lajitas Array 145.37 44 PKPbc **PKPdf** **14 37 23.6 +0.4**
comp=Z,10.0nm,0.7s,baz=274,slow=1.2,SNR=98
TXAR Lajitas Array 145.37 44 **PKPab** **14 37 23.9 +0.6**
SSPA Standing Stone 145.38 2 **PKPbc** **14 37 22.7 +0.1**
P48A Milroy 145.62 12 **PKPdf** **14 37 23.1 -0.2**
O56A Blue Knob Stat 145.72 3 PKPbc **PKPbc** **14 37 24.1 +0.3**
MGMO Mountain Grove 146.72 23 **PKPdf** **14 37 23.5 -0.1**
U40A Yellville 146.19 24 **PKPdf** **14 37 24.9 +0.6**
LPAZ La Paz 156.45 201 PKPab **PKPab** **14 38 11.0 +1.6**
comp=Z,1.3nm,0.9s,baz=129,slow=5.2,SNR=3.6

*BJI **03** 14:21:57.0±0.0,27.°90N×52.°20E,h7km,mB4.9/16, mb4.6/25,Ms4.5/8,Ms7 4.2/8*
*MOS **03** 14:21:57.2±1.0,27.°79N×52.°09E,h24km,mb4.8/36,Error ellipse: s-maj=6.8km s-min=4.2km az=106.7*
*TEH **03** 14:21:57.4,27.°83N×52.°09E,h16km,ML4.8*
*THR **03** 14:21:58.1±0.3,27.°85N×52.°05E,h17km±3km, ML4.9*
*NEIC **03** 14:21:59.5±1.7,27.°79N±0.°06×52.°08E±0.°04,h28km±4km, Error ellipse: s-maj=9.9km s-min=4.5km az=159.0*
*IDC **03** 14:21:59.1±2.6,27.°80N×52.°08E,h21km±16km,mb4.3/36, mb1 4.3/45,mb1mx4.3/59,mbtmp4.4/45,ML4.0/8,MS3.8/25, Ms1 3.8/25,ms1mx3.6/45,Error ellipse: s-maj=13.6km s-min=10.0km az=9.0*
*DSN **03** 14:22:02.6±0.8,27.°66N×52.°40E,h10km,ML4.8/9,Error ellipse: s-maj=14.8km s-min=4.0km az=8.0*
*OMAN **03** 14:22:19.6±1.9,27.°01N×53.°40E,h30km,ml4.2/12,Error ellipse: s-maj=36.1km s-min=2.7km az=307.0*

ISC 03 14:21:59.1±0.3,27.°77N±0.°04×52.°06E±0.°04,h26km,n382,
σ1§42/398,mb4.6/106,MS3.9/21,19C-12D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**1.07**	**113**	*e*Pg		**Pn**		**14 22 18.2**	**-0.2**
LMD1				*e*				14 22 40.6	
JHRM	**Jahrom**	**1.53**	**61**	*e*Pn		**Pn**		**14 22 25.4**	**+0.6**
JHRM				*e*				14 22 51.5	
ISRV	**Sarvestan**	**1.86**	**30**	*e*Pn		**Pn**		**14 22 30.6**	**+1.1**
ISRV				*e*				14 23 10.9	
SHI	**Shiraz**	**1.91**	**12**	*e*Pg		**Pn**		**14 22 30.9**	**+0.8**
SHI				*e*				14 23 05.6	
IKAZ	**Kazeroun**	**2.01**	**355**	*e*Pn		**Pn**		**14 22 32.3**	**+0.6**
IKAZ				*e*				14 23 12.5	
KLNJ	**Kolanjah**	**3.25**	**353**	*e*Pn		**Pn**		**14 22 49.0**	**+0.2**
GENO	**Geno**	**3.67**	**95**	*e*Pn		**Pn**		**14 22 54.7**	**+0.4**
UMQ	**Umm Al-Quwin**	**3.92**	**124**	*e*Pn		**Pn**		**14 23 00.2**	**+2.6**
SHME	**Shamm**	**4.03**	**114**	*i* P		**Pn**		**14 23 00.0**	**+0.9**
SHME	SNR=18				S		**Sn**	**14 23 44.8**	**-0.8**
SHME	**Shamm**	**4.03**	**114**	*e*Pn		**Pn**		**14 22 59.1**	**0.0**
IRAM	**Ramesheh**	**4.04**	**4**	*e*Pn		**Pn**		**14 22 59.4**	**0.0**
IBRJ	**Brojen**	**4.18**	**351**	*e*Pn		**Pn**		**14 23 01.8**	**+0.3**
BANOM	**Banah**	**4.21**	**115**	*i* P		**Pn**		**14 23 02.5**	**+0.9**
BANOM	SNR=77				S		**Sn**	**14 23 49.3**	**-0.8**
BANOM	**Banah**	**4.21**	**115**	P		**Pn**		**14 23 02.6**	**+0.9**
IMEH	**Mehriz**	**4.24**	**31**	*e*Pn		**Pn**		**14 23 03.3**	**+1.1**
NIAN	**Nian**	**4.24**	**92**	*e*Pn		**Pn**		**14 23 01.6**	**-0.4**
NIAN				*e*				14 24 42.3	
NAZ	**Nazwa, Dubai**	**4.26**	**130**	*i* P		**Pn**		**14 23 04.0**	**+1.8**
NAZ	SNR=44 **Nazwa, Dubai**	**4.26**	**130**	*e*Pn		**Pn**		**14 23 04.0**	**+1.8**
NAZ	**Nazwa, Dubai**	**4.26**	**130**	P		**Pn**		**14 23 04.6**	**+2.3**
ASUD	SNR=44 **Al Ashush, Dub**	**4.29**	**136**	*i* P		**Pn**		**14 23 04.5**	**+1.8**
ASUD	SNR=97 **Al Ashush, Dub**	**4.29**	**136**	*e*Pn		**Pn**		**14 23 04.8**	**+2.1**
ASUD	**Al Ashush, Dub**	**4.29**	**136**	P		**Pn**		**14 23 04.9**	**+2.1**
ISAD	SNR=97 **Sadrabad**	**4.37**	**19**	*e*Pn		**Pn**		**14 23 04.9**	**+0.9**
FAQ	**Al Faqa, Dubai**	**4.38**	**133**	*i* P		**Pn**		**14 23 05.2**	**+1.4**
FAQ	SNR=5.3 **Al Faqa, Dubai**	**4.38**	**133**	*e*Pn		**Pn**		**14 23 05.7**	**+1.8**
MSFE	**Esma-Masafi**	**4.39**	**122**	*i* P		**Pn**		**14 23 05.0**	**+0.9**
MSFE	SNR=53 **Esma-Masafi**	**4.39**	**122**	*e*Pn		**Pn**		**14 23 05.3**	**+1.2**
NGRK	**Negar Kerman**	**4.51**	**64**	*e*Pn		**Pn**		**14 23 06.1**	**0.0**
MDH	**Madha**	**4.53**	**122**	*i* P		**Pn**		**14 23 07.0**	**+1.1**
MDH	SNR=18			*i* P		Pb		14 23 07.1	-11
MDH	SNR=27 **Madha**	**4.53**	**122**	*e*Pn		**Pn**		**14 23 07.0**	**+1.1**
MDH	**Madha**	**4.53**	**122**	P		**Pn**		**14 23 06.9**	**+1.0**
JHBN	SNR=18 **Jahan bin**	**4.61**	**345**	*e*Pn		**Pn**		**14 23 07.7**	**+0.4**
ROKH	**ROKH**	**4.65**	**349**	*e*Pn		**Pn**		**14 23 07.6**	**-0.2**
KHGB	**Koh Gabri**	**4.66**	**55**	*e*Pn		**Pn**		**14 23 08.6**	**+0.6**
UOSS	**Minazif**	**4.66**	**126**	*i* P		**Pn**		**14 23 08.3**	**+0.4**
UOSS	SNR=44 **Minazif**	**4.66**	**126**	*e*Pn		**Pn**		**14 23 08.2**	**+0.4**
UOSS	**Minazif**	**4.66**	**126**			**Pn**		**14 23 08.5**	**+0.7**
UOSS	**Minazif**	**4.66**	**126**	P		**Pn**		**14 23 08.6**	**+0.7**
KRBR	**Kerman**	**4.68**	**61**	*e*Pn		**Pn**		**14 23 10.0**	**+1.7**
KRBR	**Kerman**	**4.68**	**61**	*e*Pn		**Pn**		**14 23 10.0**	**+1.7**
KRBR				*e*Sg		**Sb**		**14 24 22.0**	**+5.5**
TVBK	**TV Kerman**	**4.68**	**61**	*e*Pn		**Pn**		**14 23 09.4**	**+1.0**
HATD	**Hatta, Dubai**	**4.69**	**128**	*i* P		**Pn**		**14 23 09.5**	**+1.3**
HATD	SNR=20 **Hatta, Dubai**	**4.69**	**128**	*e*Pn		**Pn**		**14 23 09.5**	**+1.3**
HATD	**Hatta, Dubai**	**4.69**	**128**	P		**Pn**		**14 23 09.4**	**+1.3**
ASHO	SNR=20 **Ashiyiah**	**4.73**	**130**	*i* P		**Pn**		**14 23 09.7**	**+0.9**
ASHO	SNR=51 **Ashiyiah**	**4.73**	**130**	*e*Pn		**Pn**		**14 23 10.0**	**+1.2**
ASHO	**Ashiyiah**	**4.73**	**130**	P		**Pn**		**14 23 10.0**	**+1.2**
IBAF	SNR=51 **Bafgh**	**4.88**	**38**	*e*Pn		**Pn**		**14 23 11.7**	**+0.7**
ICHK	**Chekchek**	**4.90**	**24**	*e*Pn		**Pn**		**14 23 12.0**	**+0.7**
ALNE	**Al Ain**	**4.97**	**137**	*i* P		**Pn**		**14 23 13.3**	**+1.2**
ALNE	SNR=12 **Al Ain**	**4.97**	**137**	*e*Pn		**Pn**		**14 23 14.1**	**+2.0**
KHNJ	**Kahnooj**	**5.00**	**87**	*e*Pn		**Pn**		**14 23 12.3**	**-0.2**
YZKH	**Yazd**	**5.10**	**25**	*e*Pn		**Pn**		**14 23 15.4**	**+1.5**
YZKH	**Yazd**	**5.10**	**25**	*e*Pn		**Pn**		**14 23 15.4**	**+1.5**
YZKH				*e*Sg		**Sb**		**14 24 33.9**	**+5.3**
IZEF	**Zefreh**	**5.12**	**3**	*e*Pn		**Pn**		**14 23 13.7**	**-0.6**
SHGR	**Shooshtar-Gavs**	**5.17**	**328**	*e*Pn		**Pn**		**14 23 15.7**	**+1.0**
SHGR	**Shooshtar-Gavs**	**5.17**	**328**	*e*Pn		**Pn**		**14 23 15.7**	**+1.0**
CHMN	**Cheshme madani**	**5.24**	**65**	*e*Pn		**Pn**		**14 23 17.0**	**+0.9**
SOHO	**SOHO**	**5.42**	**131**	P		**Pn**		**14 23 19.0**	**+0.8**
IKLH	SNR=46 **Kolahrood**	**5.55**	**356**	*e*Pn		**Pn**		**14 23 19.3**	**-0.9**
ANAR	**Anarak**	**5.59**	**15**	*e*Pn		**Pn**		**14 23 21.2**	**+0.5**
ARQ	**Araqi**	**5.98**	**137**	P		**Pn**		**14 23 26.7**	**+0.8**
QAM	SNR=15 **Ghamsar**	**6.00**	**355**	*e*Pn		**Pn**		**14 23 26.7**	**+0.4**
KRSH	**Karshahi**	**6.18**	**1**	*e*Pn		**Pn**		**14 23 28.7**	**-0.1**
KHMZ	**Khomeyn**	**6.22**	**344**	*e*Pn		**Pn**		**14 23 30.4**	**+1.0**
KHMZ	**Khomeyn**	**6.22**	**344**	*e*Pn		**Pn**		**14 23 30.4**	**+1.0**
HOQ	**Hoqain**	**6.31**	**130**	P		**Pn**		**14 23 31.0**	**+0.5**
BMDN	SNR=47 **Meydan**	**6.51**	**335**	*e*Pn		**Pn**		**14 23 33.2**	**-0.1**
IKMR	**Kamar-syah**	**6.55**	**332**	*e*Pn		**Pn**		**14 23 33.4**	**-0.3**
TPRV	**Parvadeh(Tabas**	**6.59**	**36**	*e*Pn		**Pn**		**14 23 34.3**	**-0.1**
BDRS	**Dareh Seyedi**	**6.74**	**337**	*e*Pn		**Pn**		**14 23 37.3**	**+0.7**
IKFM	**Kafar-mosalman**	**6.79**	**329**	*e*Pn		**Pn**		**14 23 37.3**	**+0.4**
BSY	**Bisya**	**6.83**	**136**	P		**Pn**		**14 23 38.9**	**+1.2**
IDOB	SNR=54 **Doab**	**6.86**	**332**	*e*Pn		**Pn**		**14 23 37.1**	**-1.1**
BIDO	**Bidbid**	**6.92**	**126**	*e*Pn		**Pn**		**14 23 39.1**	**+0.3**
BIDO	**Bidbid**	**6.92**	**126**	P		**Pn**		**14 23 39.5**	**+0.7**
HSAM	SNR=7.5 **Samen**	**7.07**	**336**	*e*Pn		**Pn**		**14 23 41.4**	**+0.2**
IQOM	**Qom**	**7.10**	**353**	*e*Pn		**Pn**		**14 23 40.1**	**-1.4**
SMDO	**Samad**	**7.16**	**130**	P		**Pn**		**14 23 43.3**	**+1.0**
IVRN	SNR=43 **Varamin**	**7.21**	**358**	*e*Pn		**Pn**		**14 23 42.3**	**-0.6**
RAYN	**Ar Rayn**	**7.27**	**236**	P		**Pn**		**14 23 44.4**	**+0.7**
RAYN	**Ar Rayn**	**7.27**	**236**			**Pn**		**14 23 44.4**	**+0.7**
TKDS	**Koohdasht(Taba**	**7.28**	**36**	*e*Pn		**Pn**		**14 23 43.3**	**-0.5**
TNSJ	**Nastanj**	**7.31**	**31**	*e*Pn		**Pn**		**14 23 45.1**	**+0.9**
WSAR	**Wadi Sarin**	**7.46**	**126**	P		**Pn**		**14 23 46.1**	**-0.1**
WSAR	3.0nm,0.3s,baz=333,slow=9.4,SNR=46				Sn		**Sn**	**14 25 07.8**	**-2.2**
WSAR	7.8nm,0.3s,baz=306,slow=17,SNR=5.9				LR		LR	14 27 45.1	
WSAR	comp=Z,479nm,19.0s,baz=314,slow=46 **Wadi Sarin**	**7.46**	**126**	P		**Pn**		**14 23 46.8**	**+0.5**
HAGD	SNR=6.3 **Aghdareh**	**7.46**	**341**	*e*Pn		**Pn**		**14 23 46.6**	**+0.2**
IKOM	**Komasi**	**7.48**	**330**	*e*Pn		**Pn**		**14 23 47.6**	**+0.9**
IBZA	**Bozab**	**7.59**	**333**	*e*Pn		**Pn**		**14 23 47.6**	**-0.6**
IKOO	**Kooshah**	**7.60**	**51**	*e*Pn		**Pn**		**14 23 49.4**	**+1.0**
IHSB	**Hasanabad**	**7.67**	**355**	*e*Pn		**Pn**		**14 23 48.2**	**-1.1**
JMDO	**Jabal Madar**	**7.68**	**133**	P		**Pn**		**14 23 49.3**	**+0.1**
ITEG	SNR=25 **Tejag**	**7.72**	**47**	*e*Pn		**Pn**		**14 23 49.1**	**-0.8**
KCHF	**Cheshme Sefid,**	**7.78**	**328**	*e*Pn		**Pn**		**14 23 50.8**	**0.0**
IDMV	**Damavand**	**7.79**	**360**	*e*Pn		**Pn**		**14 23 50.6**	**-0.3**
IRAZ	**Razeghan**	**7.83**	**347**	*e*Pn		**Pn**		**14 23 50.7**	**-0.7**
IANJ	**Anjilo**	**7.84**	**11**	*e*Pn		**Pn**		**14 23 51.1**	**-0.5**
NHDN	**Nehbandan**	**7.84**	**61**	*e*Pn		**Pn**		**14 23 51.5**	**-0.1**
IFIR	**Firoozkooh**	**7.87**	**4**	*e*Pn		**Pn**		**14 23 51.8**	**-0.3**
IGHG	**Ghaleghazi**	**8.06**	**326**	*e*Pn		**Pn**		**14 23 54.7**	**+0.1**
IVIS	**Veis**	**8.08**	**328**	*e*Pn		**Pn**		**14 23 55.0**	**+0.2**
ISHM	**Shahmirzad**	**8.08**	**7**	*e*Pn		**Pn**		**14 23 54.1**	**-0.9**
HSRG	**Sareghieh**	**8.12**	**338**	*e*Pn		**Pn**		**14 23 55.4**	**-0.1**
QABG	**Abgarm-Qazvin**	**8.19**	**346**	*e*Pn		**Pn**		**14 23 55.6**	**-0.9**
AFRZ	**Afriz**	**8.23**	**45**	*e*Pn		**Pn**		**14 23 57.8**	**+0.9**
IALA	**Alasht**	**8.31**	**4**	*e*Pn		**Pn**		**14 23 58.6**	**+0.4**
SNGE	**Sanandaj**	**8.34**	**332**	IAML				14 25 42.9	
SNGE	comp=E,60nm,0.6s			IAML				14 25 57.9	
IDHR	comp=N,48nm,0.6s **Dehrash**	**8.44**	**326**	*e*Pn		**Pn**		**14 23 59.5**	**-0.4**
IPRN	**Peran**	**8.45**	**2**	*e*Pn		**Pn**		**14 24 00.6**	**+0.7**
QALM	**Alamut, Qazvin**	**8.72**	**352**	*e*Pn		**Pn**		**14 24 03.3**	**-0.4**
IGLO	**Ghaloghah**	**8.84**	**9**	*e*Pn		**Pn**		**14 24 07.2**	**+1.9**
SBZV	**Sabzevar**	**9.80**	**27**	*e*Pn		**Pn**		**14 24 18.2**	**-0.3**
MAHB	**Mahabad**	**10.46**	**331**	*e*Pn		**Pn**		**14 24 27.0**	**-0.4**
IPAY	**Payeh**	**10.46**	**32**	*e*Pn		**Pn**		**14 24 29.3**	**+1.7**
IKRD	**Kardeh**	**10.51**	**30**	*e*Pn		**Pn**		14 24 37.2	+8.9
HRA	**Herat**	**10.94**	**50**			**Pn**		**14 24 35.1**	**+1.0**
IHRS	**Heris**	**11.33**	**340**	*e*Pn		**Pn**		**14 24 38.5**	**-0.9**
GEYT	**Alibeck**	**11.34**	**25**	Pn		**Pn**		**14 24 40.0**	**+0.6**
GEYT	comp=N,1.6nm,0.3s,baz=205,slow=16,SNR=15			LR		LR		14 30 12.5	
GYA0B	comp=N,426nm,20.7s,baz=195,slow=44 **ALIBECK ARRAY**	**11.34**	**25**			**Pn**		**14 24 39.2**	**-0.2**
GNI	**Garni**	**13.75**	**336**	*ce*P		**Pn**		**14 25 10.2**	**-2.3**
GNI				pmax		pmax			
GNI	comp=Z,82nm,1.7s **Garni**	**13.75**	**336**	Pn		**Pn**		**14 25 13.1**	**+0.7**
GNI	comp=Z,0.5nm,0.3s,baz=175,slow=12,SNR=8.0			LR		LR		14 31 38.8	
GNI	comp=Z,188nm,21.6s,baz=150,slow=42 **Garni**	**13.75**	**336**						
ASF	**Jabal al Asfar**	**13.85**	**292**	Pn		**Pn**		**14 25 12.8**	**-1.0**
ASF	comp=Z,0.4nm,0.3s,baz=60,slow=5.5,SNR=3.6				Sn		Sn	14 27 35.4	-11
DAMY	comp=Z,0.4nm,0.3s,baz=48,slow=16,SNR=2.6 **Dhamar**	**14.94**	**210**				**Pn**	**14 25 27.5**	**-1.4**
DAMY					IAmb		IAmb	14 25 37.5	
EIL	comp=Z,23nm,0.7s **Elat**	**15.13**	**281**	Pn		**Pn**		**14 25 31.0**	**-0.1**
EIL	comp=Z,0.5nm,0.3s,baz=46,slow=6.1,SNR=9.5				Sn		**Sn**	**14 28 18.5**	**+0.6**
TBLG	comp=Z,0.2nm,0.3s,baz=3.9,slow=18,SNR=1.6 **Delisi**	**15.16**	**339**	P		**Pn**		**14 25 31.0**	**-0.4**
TBLG				pmax		pmax			
TBLG	comp=Z,50nm,1.2s **Delisi**	**15.16**	**339**						
TBLG					IAmb		IAmb	14 25 35.3	
MMAI	comp=Z,50nm,1.2s **Mount Meron Ar**	**15.29**	**294**	Pn		**Pn**		**14 25 32.0**	**-1.2**
MMAI	comp=Z,0.8nm,0.3s,baz=97,slow=14,SNR=7.0				Sn		**Sn**	**14 28 15.1**	**-6.7**
MMAI	comp=Z,0.5nm,0.3s,baz=123,slow=28,SNR=2.5				LR		LR	14 32 43.3	
MAK	comp=Z,514nm,19.1s,baz=95,slow=42 **Makhachkala**	**15.60**	**347**	*e*P		**Pn**		**14 25 33.7**	**-3.4**
MAK				*e*S		**Sn**		**14 28 26.0**	**-3.2**
MAK				pmax		pmax			
MAK	comp=Z,305nm,1.3s			MLR		MLR			
KBL	comp=Z,215nm,14.0s **Kabul**	**16.02**	**61**	P		**Pn**		**14 25 39.9**	**-3.0**
KBL				pmax		pmax			
KBL	comp=Z,23nm,1.1s **Kabul**	**16.02**	**61**			**Pn**		**14 25 39.9**	**-3.0**
GROC	**Groznyy**	**16.21**	**343**	*e*P		**Pn**		**14 25 46.6**	**+1.6**
GROC				pmax		pmax			
ZEI	comp=Z,80nm,1.4s **Tsey**	**16.38**	**338**	*e*P		**Pn**		**14 25 43.1**	**-4.3

BRTR LR LR 14 35 11.4
comp=Z,158nm,18.8s,baz=110,slow=41
BRTR Keskin Array B 19.37 313 P **P** **14 26 23.5 +0.6**
BR131 Keskin Array S 19.37 313 P **P** **14 26 23.7 +0.8**
BR131 pmax pmax
comp=Z,10.0nm,0.8s
BR131 Keskin Array S 19.37 313 P **P** **14 26 23.7 +0.8**
BTK Batken 19.77 47 P **P** **14 26 26.8 -0.5**
BTK pmax pmax
comp=Z,15nm,0.8s
BTK Batken 19.77 47 P **P** **14 26 26.8 -0.5**
ANN Anapa 20.63 329 *e*P **P** **14 26 36.8 +0.4**
ANN pmax pmax
comp=Z,58nm,1.3s
ELL Elmali 20.72 301 P **P** **14 26 37.4 -0.3**
ELL pmax pmax
comp=Z,90nm,1.0s
ELL Elmali 20.72 301 P **P** **14 26 37.4 -0.3**
KK31 Karatay Array 21.38 39 P **P** **14 26 44.3 -0.3**
KK31 pmax pmax
comp=Z,16nm,0.8s
KK31 Karatay Array 21.38 39 P **P** **14 26 44.3 -0.3**
KK31 IAmb IAmb 14 26 45.9
comp=Z,16nm,0.8s
KKAR Karatay Array 21.38 39 P **P** **14 26 44.2 -0.4**
KKAR pmax pmax
comp=Z,16nm,0.8s
KKAR Karatay Array 21.38 39 P **P** **14 26 44.1 -0.4**
KKAR Karatay Array 21.38 39 P **P** **14 26 44.2 -0.4**
KKAR IAmb IAmb 14 26 45.8
comp=Z,16nm,0.8s
AB31 Akbulak array 22.30 14 *e*P **P** **14 26 54.0 -0.4**
ABKAR Akbulak array 22.30 14 P **P** **14 26 54.7 +0.4**
ABKAR Akbulak array 22.30 14 P **P** **14 26 54.8 +0.4**
ABKAR IAmb IAmb 14 27 02.9
comp=Z,12nm,0.8s
SIM Simferopol' 22.34 325 *e*P **P** **14 26 58.6 +3.8**
SIM pmax pmax
comp=Z,30nm,0.8s
AML Almayashu 22.71 45 P **P** **14 26 58.5 -0.9**
SNR=24
EKS2 Erkin-Say 23.05 44 P **P** **14 27 06.1 +3.6**
SNR=16
AKTO Aktyubinsk 23.09 10 P **P** **14 27 02.9 +0.3**
AKTO Aktyubinsk 23.09 10 P **P** **14 27 03.3 +0.6**
comp=Z,9.3nm,0.7s,baz=180,slow=11,SNR=20
AKTO LR LR 14 37 57.0
comp=Z,195nm,20.8s,baz=188,slow=42
UCH Uchtor 23.28 46 P **P** **14 27 06.2 +1.0**
SNR=13
AAK Ala-Archa 23.48 45 *i* P **P** **14 27 07.1 +0.2**
AAK pmax pmax
comp=Z,13nm,0.8s
AAK Ala-Archa 23.48 45 P **P** **14 27 08.6 +1.8**
comp=Z,8.3nm,0.6s,baz=233,slow=10,SNR=11
AAK LR LR 14 38 10.7
comp=Z,342nm,19.2s,baz=246,slow=41
AAK Ala-Archa 23.48 45 P **P** **14 27 09.9 +3.0**
SNR=8.3
AAK Ala-Archa 23.48 45 P **P** **14 27 07.9 +1.0**
AAK IAmb IAmb 14 27 18.6
comp=Z,12nm,0.7s
USP Ospenovka 23.83 44 P **P** **14 27 10.1 0.0**
SNR=26
CHMS Chumysh 23.84 44 P **P** **14 27 11.9 +1.8**
SNR=6.9
SANT Santorini 24.06 298 P **P** **14 27 11.7 -0.5**
IDI Anoyia 24.29 295 P **P** **14 27 15.5 +1.1**
comp=Z,14nm,0.6s,baz=73,slow=7.4,SNR=21
IDI LR LR 14 39 39.5
comp=Z,108nm,20.9s,baz=81,slow=44
TKM2 Tokmak 2 24.33 45 P **P** **14 27 14.2 -0.7**
VRH Novokhopyorsk 24.68 344 *e*P **P** **14 27 18.2 +0.5**
VRH *e*S **S** **14 31 43.5 +5.9**
VRH pmax pmax
comp=Z,110nm,0.6s
VRH smax smax
comp=E,440nm,4.1s
ALN Alexandroupoli 25.05 308 P **P** **14 27 21.9 +0.8**
ALN pmax pmax
comp=Z,7.0nm,0.9s
ALN Alexandroupoli 25.05 308 P **P** **14 27 21.9 +0.8**
JURR Jurilovca 25.11 319 ⇑P **P** **14 27 22.6 +1.0**
VORD Divnogorie 25.11 341 *e*P **P** **14 27 21.5 0.0**
VORD *e*S **S** **14 31 45.4 +0.8**
VORD pmax pmax
comp=Z,30nm,0.6s
VORD smax smax
comp=N,40nm,0.9s
TIRR Tirgusor 25.21 318 P **P** **14 27 22.7 +0.2**
TIRR pmax pmax
comp=Z,17nm,0.8s
TIRR Tirgusor 25.21 318 ⇓P **P** **14 27 22.8 +0.2**
TIRR Tirgusor 25.21 318 P **P** **14 27 22.7 +0.2**
TIRR IAmb IAmb 14 27 29.3
comp=Z,17nm,0.8s
VSR Storozhevoye 25.37 341 *e*P **P** **14 27 23.8 -0.1**
VSR *e*S **S** **14 31 47.8 -0.9**
VSR pmax pmax
comp=Z,30nm,0.5s
VSR smax smax
comp=N,150nm,3.6s
TOPG Topolog 25.46 318 ⇑P **P** **14 27 25.8 +0.9**
HARR Harsova 25.62 318 ⇓P **P** **14 27 27.5 +1.2**
RAZG Razgrad 25.92 314 ⇓P **P** **14 27 30.8 +1.8**
KUBB Kubrat 26.04 315 ⇑P **P** **14 27 33.7 +3.5**
MILM Milestii Mici 26.42 323 ⇓P **P** **14 27 34.4 +0.9**
KIS Kishinev 26.47 323 *e*P **P** **14 27 35.0 +1.1**
KIS Kishinev 26.47 323 *e*P **P** **14 27 35.0 +1.1**
KIS *e* 14 27 37.0
SULR 26.63 316 ⇑P **P** **14 27 37.4 +2.0**
LPSR Galich'ya Gora 26.67 342 *e*P **P** **14 27 36.0 +0.3**
LPSR *e*S **S** **14 32 09.2 0.0**
LPSR pmax pmax
comp=Z,60nm,0.7s
LPSR smax smax
comp=E,40nm,1.5s
GHRR 26.69 320 ⇑P **P** **14 27 38.1 +2.1**
VRI Vrincioaia 26.98 319 ⇑P **P** **14 27 40.3 +1.7**
PLOR Plostina 27.01 319 ⇑P **P** **14 27 40.5 +1.5**
AGG Agios Georgios 27.12 302 P **P** **14 27 37.1 -2.9**
AGG pmax pmax
comp=Z,8.0nm,0.9s
AGG Agios Georgios 27.12 302 P **P** **14 27 37.1 -2.9**
MLR Muntele Rosu 27.24 317 P **P** **14 27 42.7 +1.6**
MLR pmax pmax
comp=Z,14nm,1.0s
MLR Muntele Rosu 27.24 317 P **P** **14 27 42.3 +1.2**
comp=Z,8.1nm,0.6s,baz=96,slow=13,SNR=19
MLR Muntele Rosu 27.24 317 ⇑P **P** **14 27 42.8 +1.7**
MLR Muntele Rosu 27.24 317 P **P** **14 27 42.7 +1.6**
MLR IAmb IAmb 14 28 00.6
comp=Z,14nm,1.0s
TESR Tescani 27.38 320 ⇓P **P** **14 27 43.4 +1.2**
SORM Soroca 27.43 324 ⇓P **P** **14 27 43.7 +1.2**
OZUR 27.65 318 ⇑P **P** **14 27 46.6 +1.9**
VTS Vitosha 27.66 310 P **P** **14 27 43.7 -1.2**
VTS pmax pmax
comp=Z,14nm,1.3s
VTS Vitosha 27.66 310 ⇑P **P** **14 27 46.6 +1.6**
VTS Vitosha 27.66 310 P **P** **14 27 43.7 -1.2**
VTS IAmb IAmb 14 27 47.7
comp=Z,14nm,1.3s
VOIR 27.75 317 ⇑P **P** **14 27 47.2 +1.5**
DOPR Dopca 27.82 318 ⇓P **P** **14 27 47.4 +1.2**
BRVK Borovoye 28.66 23 P **P** **14 27 53.3 -0.2**
BRVK Borovoye 28.66 23 P **P** **14 27 53.9 +0.5**
BVAR Borovoye Array 28.66 23 P **P** **14 27 53.9 +0.3**
comp=Z,3.0nm,0.5s,baz=218,slow=7.5,SNR=23
BVAR ScP **ScP** **14 34 43.0 -0.4**
comp=Z,0.9nm,0.9s,baz=253,slow=1.5,SNR=3.7
AKASG Malin Array Be 28.71 329 P **P** **14 27 53.7 -0.3**
comp=Z,4.4nm,0.7s,baz=132,slow=7.9,SNR=11
AKASG Malin Array Be 28.71 329 P **P** **14 27 53.4 -0.6**
AKBB Malin Array Si 28.71 329 P **P** **14 27 53.7 -0.3**
AKBB pmax pmax
comp=Z,6.0nm,0.8s
AKBB Malin Array Si 28.71 329 P **P** **14 27 53.7 -0.3**
AKBB IAmb IAmb 14 27 58.9
comp=Z,6.2nm,0.8s
BURAR Bucovina Array 28.81 321 ⇑P **P** **14 27 56.7 +1.6**
BURAR Bucovina Array 28.81 321 P **P** **14 27 54.8 -0.2**
BUR08 Bucovina Ar. S 28.84 321 P **P** **14 27 55.5 +0.2**
ARU Arti 29.02 7 *i* P **P** **14 27 57.2 +0.6**
ARU pmax pmax
comp=Z,6.0nm,1.3s
ARU Arti 29.02 7 P **P** **14 27 57.0 +0.4**
comp=Z,0.8nm,0.5s,baz=152,slow=3.8,SNR=6.9
ARU LR LR 14 42 29.2
comp=Z,71nm,18.6s,baz=186,slow=42
GZR Gura Zlata 29.14 315 ⇓P **P** **14 27 59.0 +1.1**
MDVR Moldovita 29.55 313 ⇓P **P** **14 28 02.8 +1.2**
OBN Obninsk 29.55 342⇑ *e*P **P** **14 28 06.0 -3.1**
OBN *e*SP **pP**
OBN pmax pmax
comp=Z,21nm,1.3s
OBN Obninsk 29.55 342 P **P** **14 28 01.5 +0.2**
comp=Z,1.9nm,0.4s,baz=120,slow=8.1,SNR=3.6
OBN LR LR 14 40 47.3
comp=Z,40nm,19.0s,baz=196,slow=38
OBN Obninsk 29.55 342 P **P** **14 27 59.9 -1.4**
SVE Sverdlovsk 29.68 10 *e*P **P** **14 28 02.5 0.0**
SVE pmax pmax
comp=Z,11nm,1.4s
MOS Moscow 29.82 344 *e*P **P** **14 28 00.6 -3.2**
MOS *e* 14 28 54.5
MOS *e*S **S** **14 32 59.9 +1.1**
DRGR 29.84 317 ⇑P **P** **14 28 05.7 +1.5**
MAKZ Makanchi 30.19 43 P **P** **14 28 08.5 +1.3**
MAKZ pmax pmax
comp=Z,10.0nm,0.8s
MAKZ Makanchi 30.19 43 **P** **14 28 08.5 +1.3**
MAKZ IAmb IAmb 14 28 09.5
comp=Z,9.7nm,0.8s
MK31 Makanchi Array 30.37 43 P **P** **14 28 08.3 -0.5**
MK31 pmax pmax
comp=Z,5.0nm,0.8s
MK31 Makanchi Array 30.37 43 P **P** **14 28 08.3 -0.5**
MK31 IAmb IAmb 14 28 11.0
comp=Z,5.2nm,0.8s
MKAR Makanchi Array 30.37 43 P **P** **14 28 09.1 +0.3**
comp=Z,4.1nm,0.7s,baz=229,slow=9.2,SNR=7.2
KURBB Kurchatov Arra 30.40 34 P **P** **14 28 09.9 +1.0**
comp=Z,7.3nm,0.7s,baz=232,slow=9.0,SNR=7.7
KURBB ScP **ScP** **14 34 49.0 0.0**
comp=Z,1.0nm,1.0s,baz=235,slow=4.0,SNR=3.6
KURK Kurchatov 30.50 34 P **P** **14 28 09.9 0.0**
KURK 14 34 49.0
KURK Kurchatov 30.50 34 **ScP** **14 34 49.0 -0.3**
KIRV Kirov 30.86 357 P **P** **14 28 13.8 +0.9**
comp=Z,47nm,0.6s,baz=131,slow=1.2,SNR=21
UZH Uzhgorod 31.01 320 *e*P **P** **14 28 14.4 +0.1**
UZH *e* 14 28 18.6
KOLS Kolonicke sedl 31.18 321 *e*P **P** **14 28 18.1 +2.2**
KOLS pmax pmax
comp=Z,11nm,1.1s
KOLS Kolonicke sedl 31.18 321 *e*P **P** **14 28 18.1 +2.2**
TIP Timpagrande 31.38 300 P **P** **14 28 19.1 +1.2**
TIP IAmb IAmb 14 28 21.4
comp=Z,17nm,1.4s
KECS Kecovo 31.97 319 *e*P **P** **14 28 24.3 +1.4**
KECS pmax pmax
comp=Z,5.0nm,1.1s
KECS Kecovo 31.97 319 *e*P **P** **14 28 24.3 +1.4**
CSKK Cskako 32.81 316 *e*P **P** **14 28 33.2 +3.0**
LANS Liptovska Anna 32.88 319 *e*P **P** **14 28 32.6 +1.7**
LANS pmax pmax
comp=Z,13nm,1.2s
LANS Liptovska Anna 32.88 319 *e*P **P** **14 28 32.6 +1.7**
VYHS Vyhne 32.95 318 *e*P **P** **14 28 32.3 +0.9**
VYHS Vyhne 32.95 318 *e*P **P** **14 28 32.3 +0.9**
SRO Srobarova 32.97 317 *e*P **P** **14 28 34.0 +2.5**
SRO pmax pmax
comp=Z,29nm,1.4s
SRO Srobarova 32.97 317 *e*P **P** **14 28 34.0 +2.5**
MPLH Magyarpolny 33.18 315 *e*P P 14 28 26.1 -7.3
OJC Ojcow 33.22 321 P **P** **14 28 34.3 +0.5**
OJC pmax pmax
comp=Z,15nm,0.9s
OJC Ojcow 33.22 321 P **P** **14 28 34.3 +0.5**
SMOL Smolenice 33.80 317 *e*P **P** **14 28 40.4 +1.6**
SMOL pmax pmax
comp=Z,4.0nm,1.2s
SMOL Smolenice 33.80 317 *e*P **P** **14 28 40.4 +1.6**
JAVC Velka Javorina 33.80 318 *e*P **P** **14 28 40.8 +1.9**
MODS Modra-Piesok 33.83 317 *e*P **P** **14 28 39.4 +0.3**
MODS Modra-Piesok 33.83 317 *e*P **P** **14 28 39.4 +0.3**
PRGR Permogore 34.14 355 *e*P P 14 28 35.5 -6.0
PRGR pmax pmax
comp=Z,13nm,0.8s
MORC Moravsky Berou 34.29 319 P **P** **14 28 44.1 +1.0**
MORC pmax pmax
comp=Z,13nm,1.4s
MORC Moravsky Berou 34.29 319 ⇑P **P** **14 28 43.7 +0.6**
MORC Moravsky Berou 34.29 319 *e*P **P** **14 28 43.8 +0.7**
MORC Moravsky Berou 34.29 319 P **P** **14 28 44.1 +1.0**
MORC IAmb IAmb 14 28 44.8
comp=Z,12nm,1.4s
ARSA Arzberg 34.48 314 *e*P **P** **14 28 45.5 +0.7**
comp=Z,5.0nm,1.1s
CONA Conrad Observa 34.52 316 *e*pP **P** **14 28 46.6 +1.4**
comp=Z,10nm,1.3s
SOKA Soboth 34.59 313 *e*pP **P** **14 28 46.9 +1.1**
comp=Z,7.0nm,1.1s
VRAC Vranov 34.64 318 P **P** **14 28 46.3 +0.2**
comp=Z,2.7nm,0.7s,baz=118,slow=4.6,SNR=4.1
VRAC Vranov 34.64 318 *e*P **P** **14 28 47.1 +1.0**
KRUC Moravsky 34.65 318 *e*P **P** **14 28 47.2 +1.0**
LJU Ljubljana 34.71 312 *i* P **P** **14 28 48.5 +1.7**
NRCA Norcia 34.82 306 P **P** **14 28 49.7 +1.8**
OBKA Obir 34.85 313 *e*pP **P** **14 28 50.4 +2.3**
comp=Z,14nm,1.2s
KRLC Kraliky 34.86 319 *e*P **P** **14 28 48.6 +0.5**
KRLC Kraliky 34.86 319 *e*P **P** **14 28 48.6 +0.5**
CRNS Crni Vrh 34.90 312 *i* P **P** **14 28 49.9 +1.4**
DPC Dobruska-Polom 35.25 320 *e*P **P** **14 28 52.0 +0.6**
DPC Dobruska-Polom 35.25 320 *e*P **P** **14 28 52.0 +0.6**
OSTC Ostas 35.40 320 *e*P **P** **14 28 53.4 +0.7**
MYKA Terra Mystica 35.48 312 *e*pP **P** **14 28 56.2 +2.7**
comp=Z,5.8nm,0.9s
ZAA0 Zalevo Array 35.48 33 P **P** **14 28 52.5 -0.8**
ZALV Zalesovo Beam 35.48 33 P **P** **14 28 53.2 -0.1**
comp=Z,21nm,0.6s,baz=241,slow=9.8,SNR=27
ZALV PcP **PcP** **14 31 23.8 +1.5**
comp=Z,1.1nm,0.6s,baz=255,slow=4.5,SNR=2.3
ZALV S **S** **14 34 27.5 +0.7**
comp=Z,1.5nm,0.9s,baz=225,slow=14,SNR=6.3
ZALV LR LR 14 45 31.2
comp=Z,311nm,19.0s,baz=248,slow=40
ZALV Zalesovo Beam 35.48 33 P **P** **14 28 52.0 -1.2**
MOA Molln 35.49 315 *e*P **P** **14 28 54.4 +0.9**
comp=Z,8.6nm,0.9s
CHVC Chvalec 35.51 320 *e*P **P** **14 28 54.1 +0.5**
KBA Koelnbreinsper 35.82 313 P **P** **14 28 57.4 +0.9**
comp=Z,9.3nm,0.7s,SNR=17
GERES GERESS Array B 36.20 316 P **P** **14 28 59.7 0.0**
comp=Z,1.1nm,0.6s,baz=123,slow=7.1,SNR=9.8
GERES PcP **PcP** **14 31 26.4 +1.7**
comp=Z,0.6nm,0.5s,baz=108,slow=3.2,SNR=3.7
GERES LR LR 14 49 28.8
comp=Z,189nm,20.6s,baz=106,slow=46
GERES GERESS Array B 36.20 316 P **P** **14 28 59.3 -0.3**
ABTA Abfaltersbach 36.26 312 *e*pP **P** **14 29 01.7 +1.5**
comp=Z,15nm,1.1s,SNR=6.0
KHC Kasperske Hory 36.38 316 *e*P **P** **14 29 01.6 +0.5**
KHC Kasperske Hory 36.38 316 *e*P **P** **14 29 01.6 +0.5**
BRG Berggiesshubel 36.84 319 *e*P **P** **14 29 07.5 +2.5**
comp=Z,3.5nm,0.7s
BRG Berggiesshubel 36.84 319 *e*P **P** **14 29 07.5 +2.5**
BRG pmax pmax
comp=Z,4.0nm,0.7s
KEST Kesra 36.95 293 P **P** **14 29 07.1 +0.9**
comp=Z,6.9nm,0.9s,baz=127,slow=10,SNR=4.8
WTTA Wattenberg 36.98 313 *e*P **P** **14 29 06.9 +0.4**
comp=Z,29nm,1.3s,SNR=10
WATA Walderalm 37.04 313 *e*P **P** **14 29 07.5 +0.5**
comp=Z,23nm,1.1s,SNR=5.1
SQTA Sankt Quirin 37.25 313 *e*P **P** **14 29 08.9 +0.3**
comp=Z,15nm,0.6s,SNR=6.0
MOTA Moosalm 37.35 313 P **P** **14 29 09.6 0.0**
comp=Z,19nm,1.1s,SNR=9.1
TMCR Tamitsa 37.51 350 *e*P **P** **14 29 08.9 -1.5**
TMCR pmax pmax
comp=Z,29nm,1.1s
FETA Feichten 37.51 312 *e*P **P** **14 29 11.1 +0.2**
comp=Z,16nm,0.8s,SNR=17
CLL Collm 37.56 320 *e*P **P** **14 29 11.0 -0.1**
CLL pmax pmax
comp=Z,19nm,1.5s
CLL Collm 37.56 320 *e*P **P** **14 29 11.0 -0.1**
comp=Z,19nm,1.5s
RETA Reutte 37.62 313 *i* P **P** **14 29 11.7 0.0**
comp=Z,7.3nm,0.6s
FUORN Ofenpass-Fuorn 37.71 311 P **P** **14 29 12.5 -0.2**
FUORN IAmb IAmb 14 29 24.2
comp=Z,5.4nm,0.7s
FIA1 FINESS Array S 37.89 340 P **P** **14 29 12.9 -0.8**
FIA1 IAmb IAmb 14 29 28.9
comp=Z,18nm,1.1s
FINES FINESS Array B 37.89 340 P **P** **14 29 13.7 0.0**
comp=Z,3.9nm,0.5s,baz=144,slow=9.6,SNR=21
FINES LR LR 14 47 30.8
comp=Z,157nm,19.4s,baz=174,slow=40
DAVOX Davos/Dischmat 38.01 311 P **P** **14 29 15.2 +0.1**
comp=Z,8.2nm,0.6s,baz=112,slow=8.3,SNR=19
DAVA Damuels 38.14 312 *e*P **P** **14 29 16.5 +0.3**
comp=Z,33nm,0.6s,SNR=20
SENIN Lac Senin/Sane 39.64 310 P **P** **14 29 28.7 -0.2**
GTA Gaotai 41.01 61 ⇓P **P** **14 29 41.4 +1.2**
GTA pP pP 14 29 45.4 -2.9
GTA sP sP 14 29 48.5 -2.8
GTA pmax pmax
comp=Z,12nm,1.2s
GTA pmax pmax
comp=Z,140nm,5.1s
GTA LR LR
comp=Z,120nm,18.7s
GTA LR LR
comp=Z,170nm,17.8s
GTA LR LR
comp=Z,210nm,18.4s
HFS Hagfors 41.50 332 P **P** **14 29 43.9 +0.1**
comp=Z,9.0nm,0.6s,baz=133,slow=9.1,SNR=47
HFS LR LR 14 49 31.4
comp=Z,138nm,18.8s,baz=140,slow=40
NC405 NORSAR Array S 42.85 332 P **P** **14 29 54.9 +0.1**
NB2 NORSAR Subarra 43.02 332 P **P** **14 29 55.7 -0.5**
comp=Z,5.0nm,0.7s,baz=123,slow=8.6
NOA NORSAR Array B 43.02 332 P **P** **14 29 55.8 -0.4**
comp=Z,1.2nm,0.5s,baz=127,slow=9.3,SNR=14
NOA LR LR 14 48 14.7
comp=Z,70nm,19.0s,baz=135,slow=37
MOY Mondy 43.52 43 *e*P **P** **14 30 02.1 +1.6**
MOY pmax pmax
comp=Z,22nm,1.5s
CHTO Chiang Mai 43.76 91 P **P** **14 30 03.7 +1.0**
CHTO pmax pmax
comp=Z,6.0nm,0.9s
CHTO Chiang Mai 43.76 91 P **P** **14 30 03.7 +1.0**
CMAR Chiang Mai Arr 43.89 92 P **P** **14 30 04.2 +0.4**
comp=Z,2.7nm,0.7s,baz=281,slow=9.1,SNR=24
CMAR PcP **PcP** **14 31 50.9 +1.2**
comp=Z,0.7nm,0.5s,baz=296,slow=4.8,SNR=3.4
CMAR LR LR 14 52 03.1
comp=Z,86nm,18.2s,baz=250,slow=41
CMAR Chiang Mai Arr 43.89 92 P **P** **14 30 02.2 -1.5**
ARCES ARCESS Array B 44.55 347 P **P** **14 30 08.9 +0.6**
comp=Z,2.1nm,0.7s,baz=152,slow=8.4,SNR=19
ARCES PP **PcP** **14 31 51.8 +0.8**
comp=Z,1.2nm,0.6s,baz=135,slow=10,SNR=4.6
SONM Songino Array 46.33 49 P **P** **14 30 23.4 +0.5**
SONM 14 31 59.1
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 46.33 49 P **P** **14 30 22.9 +0.1**
comp=Z,1.4nm,0.7s,baz=268,slow=9.5,SNR=7.7
SONM PcP **PcP** **14 31 59.1 +1.3**
comp=Z,0.3nm,0.4s,baz=242,slow=3.1,SNR=2.9
SONM LR LR 14 52 57.4
comp=Z,190nm,18.6s,baz=286,slow=40
SONM Songino Array 46.33 49 P **P** **14 30 23.4 +0.5**
ULN Ulaanbaatar 46.77 49*ce*P **P** **14 30 26.2 -0.2**
ULN pmax pmax
comp=Z,7.0nm,1.7s
ESDC Sonseca Array 47.40 300 P **P** **14 30 32.2 +1.0**
comp=Z,0.9nm,0.7s,baz=90,slow=7.7,SNR=6.1
ESDC Sonseca Array 47.40 300 IAmb IAmb 14 30 33.1
comp=Z,1.6nm,1.1s
EKA Eskdalemuir Ar 47.99 321 P **P** **14 30 36.2 +0.6**
comp=Z,1.8nm,0.6s,baz=104,slow=8.7,SNR=3.8
TOA0 Torodi Ar. Sit 49.05 263 P **P** **14 30 45.3 +1.0**
TOA0 IAmb IAmb 14 30 48.3
comp=Z,6.0nm,0.8s
TORD Torodi Ar. Bea 49.05 263 P **P** **14 30 45.1 +0.9**
comp=Z,5.0nm,0.7s,baz=59,slow=7.6,SNR=31
TORD Torodi Ar. Bea 49.05 263 P **P** **14 30 42.6 -1.6**
IPM Ipoh 51.98 107 P **P** **14 31 05.9 -0.6**
BOD Bodaibo 52.08 37 *e*P **P** **14 31 06.6 0.0**
BOD pmax pmax
comp=Z,9.0nm,1.4s
HIA Hailar 55.21 48 *e*P **P** **14 31 27.5 -2.2**
HIA pmax pmax
comp=Z,22nm,0.8s
SDSI Sungai Dareh 55.29 113 P **P** **14 31 28.9 -1.7**
comp=Z,3μmcomp=Z,15nm,0.7s
DBIC Dimbokro 57.73 260 P **P** **14 31 49.0 +1.0**
DBIC Dimbokro 57.73 260 P **P** **14 31 49.0 +1.0**
comp=Z,7.4nm,0.7s,baz=40,slow=7.7,SNR=12
DBIC LR LR 14 59 31.9
comp=Z,88nm,18.6s,baz=30,slow=39
KIC Kosan Boka 57.77 259 *e*P **P** **14 31 49.0 +0.6**
comp=Z,25nm,1.2s
TIC Toumodi 57.88 260 *e*P **P** **14 31 50.0 +0.9**
LIC Lamto 58.09 259 *e*P **P** **14 31 51.4 +0.8**
comp=Z,41nm,1.1s
MDSI Maura Dua 59.58 114 P **P** **14 31 59.8 -1.1**
comp=Z,1μmcomp=Z,7.7nm,1.1s
TIXI Tiksi 59.76 21 *i* P **P** **14 31 59.5 -1.8**
TIXI pmax pmax
comp=Z,2.0nm,1.7s
LWLI Liwa 59.79 115 P **P** **14 32 02.6 +0.1**
YAK Yakutsk 60.12 32 *i* P **P** **14 32 02.7 -1.2**
YAK pmax pmax
comp=Z,4.0nm,0.8s
KLSI 60.14 114 P **P** **14 32 02.9 -1.8**
comp=Z,4.2nm,1.1s
KASI Kota Agung 60.44 115 P **P** **14 32 06.2 -0.6**
comp=Z,23nm,0.9s
BOSA Boshof 61.67 207 P **P** **14 32 16.3 +1.3**
comp=Z,1.9nm,0.8s,baz=54,slow=4.7,SNR=3.3
BOSA LR LR 15 00 28.9
comp=Z,190nm,18.7s,baz=14,slow=37
DBJI Dramaga 62.85 114 P **P** **14 32 23.3 +0.2**
KLR Kul'dur 63.01 46 *i* P **P** **14 32 20.5 -3.1**
KLR pmax pmax
comp=Z,4.0nm,1.0s
KSRS Korea Array 63.07 60 P **P** **14 32 23.1 -1.1**
comp=Z,3.3nm,0.8s,baz=285,slow=7.2,SNR=8.5
KSRS LR LR 15 04 21.0
comp=Z,58nm,18.7s,baz=298,slow=40
SEY Seymchan 70.16 29 P **P** **14 33 09.8 +0.8**
comp=Z,6.4nm,0.7s,baz=271,slow=6.3,SNR=21
MPSI Mapaga 70.31 100 P **P** **14 33 11.4 +0.6**
comp=Z,26nm,1.0s
IGBI Denpasar 70.99 111 P **P** **14 33 14.4 -0.4**
comp=Z,37nm,0.7s
MJAR Matsushiro Ar 71.18 58 LR LR 15 06 32.9
comp=Z,41nm,20.6s,baz=355,slow=38
MRSI Marisa 72.03 99 P **P** **14 33 23.3 +2.1**
comp=Z,19nm,1.2s
BILL Bilibino 72.98 21⇑ *e*P **P** **14 33 25.4 -0.6**
BILL *e* 14 33 30.3
BILL *e* 14 33 37.8
BILL *e* 14 33 43.8
BILL pmax pmax
comp=Z,15nm,2.5s
BILL MLR MLR
comp=Z,131nm,19.0s
RES Resolute Bay 75.56 351 P **P** **14 33 41.5 +0.6**
comp=Z,1.1nm,0.5s,baz=309,slow=3.1,SNR=5.8
SANI Sanana 76.78 99 P **P** **14 33 48.0 -0.9**
comp=Z,12nm,1.1s
PETK Petropavlovsk- 76.95 37 LR LR 15 11 32.0
comp=Z,128nm,19.6s,baz=241,slow=39
SCHQ Schefferville 82.51 329 P **P** **14 34 19.5 +0.1**
comp=Z,2.6nm,0.8s,baz=59,slow=2.8,SNR=3.7
INK Inuvik 84.13 2 P **P** **14 34 27.5 +0.1**
comp=Z,1.9nm,0.8s,baz=32,slow=4.1,SNR=6.6
IMAR Indian Mountai 84.47 10 P **P** **14 34 29.1 -0.1**
FITZ Fitzroy Crossi 84.54 114 P **P** **14 34 31.1 +0.8**
comp=Z,5.6nm,0.7s,baz=288,slow=3.2,SNR=16
FITZ Fitzroy Crossi 84.54 114 P **P** **14 34 31.2 +1.0**
MLY Manley 85.82 9 P **P** **14 34 36.1 +0.1**
MLY IAmb IAmb 14 34 39.3
comp=Z,3.6nm,0.7s

COLA	**College**	**86.37**	**8**	*i* P		**P**	**14 34 37.7**	**-0.9**
COLA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ILAR	**Eielson Array**	**86.59**	**8**	P		**P**	**14 34 39.6**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=316,slow=3.1,SNR=11							
ILAR				LR		LR	15 20 41.9	
	comp=Z,41nm,18.5s,baz=16,slow=41							
ILAR	**Eielson Array**	**86.59**	**8**	P		**P**	**14 34 38.7**	**-1.0**
EGAK	**Eagle**	**87.18**	**6**	P		**P**	**14 34 44.3**	**+1.6**
EGAK				IAmb		IAmb	14 34 48.0	
	comp=Z,3.7nm,0.8s							
SCRK	**Sand Creek**	**87.69**	**7**	P		**P**	**14 34 46.8**	**+1.5**
SCRK				IAmb		IAmb	14 34 48.1	
	comp=Z,5.5nm,1.0s							
BCAR	**Beaver Creek A**	**88.81**	**6**	P		**P**	**14 34 47.6**	**-2.9**
YKA	**Yellowknife Ar**	**89.42**	**354**	P		**P**	**14 34 53.9**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=8.3,slow=5.1,SNR=30							
WRA	**Warramunga Arr**	**92.59**	**111**	P		**P**	**14 35 08.9**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=308,slow=4.1,SNR=7.6							
WRAB	**Tennant Creek**	**92.59**	**111**	*i* P		**P**	**14 35 04.6**	**-4.1**
WRAB				pmax		pmax		
	comp=Z,3.0nm,1.2s							
ASAR	**Alice Springs**	**94.00**	**115**	P		**P**	**14 35 15.1**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=305,slow=4.4,SNR=25							
ULM	**Lac du Bonnet**	**97.28**	**340**	LR		LR	15 20 09.1	
	comp=Z,64nm,21.1s,baz=80,slow=36							

*NEIC **03** 14:25:20.7±1.5, 63.03N±0.03×148.20W±0.07, h63km±3km, Error ellipse: s-maj=5.0km s-min=4.3km az=53.0*
*AEIC **03** 14:25:20.4±1.3, 63.03N±0.03×148.17W±0.07, h66km±4km, ML3.5/120, Error ellipse: s-maj=4.7km s-min=4.4km az=188.0*
*IDC **03** 14:25:23.9±4.5, 63.24N×148.00W, h77km±36km, mb3.0/1, mb1 3.3/3, mb1mx2.9/54, mbtmp3.4/3, Error ellipse: s-maj=38.9km s-min=20.3km az=18.0*

ISC 03 14:25:20.7±0.9, **63.06N**±0.03×**148.17W**±0.03, **h63**km±6km, **n132**, σ0**93**/154, **Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAT2	**Susitna Watana**	**0.21**	**244**		**Pn**	**14 25 30.7**	**0.0**
WAT2					**Sn**	**14 25 38.4**	**+0.4**
WAT1	**Susitna Watana**	**0.29**	**218**		**Pn**	**14 25 30.8**	**-0.2**
WAT1					**Sn**	**14 25 39.0**	**+0.4**
DHY	**Denali Highway**	**0.36**	**87**		**Pn**	**14 25 32.0**	**+0.2**
DHY					**Sn**	**14 25 41.1**	**+1.3**
RND	**Reindeer**	**0.47**	**319**		**Pn**	**14 25 32.7**	**0.0**
RND					**Sn**	**14 25 42.5**	**+1.1**
WAT6	**Susitna Watana**	**0.52**	**158**		**Pn**	**14 25 32.5**	**-0.7**
WAT6					**Sn**	**14 25 41.8**	**-0.5**
HUR	**Hurricane**	**0.68**	**264**		**Pn**	**14 25 34.2**	**-0.6**
MCK	**McKinley**	**0.76**	**333**		**Pn**	**14 25 36.3**	**+0.5**
MCK					**Sn**	**14 25 48.5**	**+1.5**
TRF	**Thorofare Moun**	**1.04**	**293**		**Pn**	**14 25 39.5**	**0.0**
TRF					**Sn**	**14 25 54.2**	**+0.8**
PS10	**TAPS Pump St10**	**1.15**	**70**		**Pn**	**14 25 41.6**	**+0.9**
PAX	**Paxson**	**1.23**	**93**		**Pn**	**14 25 42.1**	**+0.2**
PAX					**Sn**	**14 25 60.0**	**+2.1**
SML	**Sawmill**	**1.26**	**184**		**Pn**	**14 25 41.4**	**-0.8**
SML					**Sn**	**14 25 58.4**	**+0.1**
BWN	**Browne**	**1.26**	**333**		**Pn**	**14 25 42.0**	**-0.2**
BWN	**Browne**	**1.26**	**333**	Sn	**Sn**	**14 25 57.6**	**-0.7**
SCM	**Sheep Creek Mo**	**1.29**	**162**		**Pn**	**14 25 42.0**	**-0.6**
SCM					**Sn**	**14 26 00.1**	**+1.1**
GHO	**Glory Hole Cre**	**1.34**	**196**		**Pn**	**14 25 42.5**	**-0.8**
KTH	**Kantishna Hill**	**1.34**	**293**		**Pn**	**14 25 43.5**	**+0.1**
KTH					**Sn**	**14 26 01.4**	**+1.0**
WRH	**Wood River Hil**	**1.42**	**1**		**Pn**	**14 25 44.3**	**0.0**
WRH					**Sn**	**14 26 02.1**	**0.0**
HDA	**Harding Lake**	**1.46**	**21**		**Pn**	**14 25 45.3**	**+0.4**
HDA					**Sn**	**14 26 03.6**	**+0.5**
PMR	**Palmer**	**1.54**	**197**		**Pn**	**14 25 45.2**	**-0.6**
PMR					**Sn**	**14 26 05.4**	**+0.6**
NEA	**Nenana**	**1.58**	**346**		**Pn**	**14 25 46.3**	**-0.1**
NEA	**Nenana**	**1.58**	**346**	Sn	**Sn**	**14 26 05.7**	**-0.2**
PS11	**TAPS Pump St11**	**1.59**	**127**		**Pn**	**14 25 47.1**	**+0.6**
CCB	**Clear Creek Bu**	**1.60**	**6**		**Pn**	**14 25 46.6**	**-0.1**
CCB					**Sn**	**14 26 06.2**	**-0.3**
PS08	**TAPS Pump Stn8**	**1.61**	**21**		**Pn**	**14 25 47.1**	**+0.2**
PS08					**Sn**	**14 26 06.6**	**0.0**
BPAW	**Bear Paw Mtn.**	**1.64**	**311**		**Pn**	**14 25 46.8**	**-0.5**
RIDG	**Independent Ri**	**1.64**	**64**		**Pn**	**14 25 48.5**	**+1.1**
RIDG	**Independent Ri**	**1.64**	**64**	Sn	**Sn**	**14 26 11.1**	**+3.5**
KNK	**Knik Glacier**	**1.66**	**185**		**Pn**	**14 25 47.5**	**0.0**
KNK	**Knik Glacier**	**1.66**	**185**	Sn	**Sn**	**14 26 09.9**	**+2.1**
CAST	**Castle Rocks**	**1.81**	**283**		**Pn**	**14 25 49.7**	**+0.1**
IL31		**1.81**	**18**		**Pn**	**14 25 49.6**	**0.0**
IL31				Sn	**Sn**	**14 26 11.2**	**-0.3**
ILAR	**Eielson Array**	**1.81**	**18**	P	**Pn**	**14 25 49.3**	**-0.3**
	34nm,0.3s,baz=199,slow=14,SNR=1699							
ILAR				S	**Sn**	**14 26 11.0**	**-0.6**
	66nm,0.3s,baz=200,slow=23,SNR=80							
ILAR	**Eielson Array**	**1.81**	**18**		**Pn**	**14 25 49.4**	**-0.2**
IL01		**1.81**	**18**		**Pn**	**14 25 49.7**	**+0.2**
TCOL	**CIGO, UAF Yank**	**1.83**	**4**		**Pn**	**14 25 50.0**	**+0.2**
COLA	**College**	**1.83**	**4**		**Pn**	**14 25 50.1**	**+0.3**
COLA				Sn	**Sn**	**14 26 12.2**	**+0.3**
PPLA	**Purkeypile**	**1.84**	**267**		**Pn**	**14 25 50.0**	**-0.2**
SKT	**Skwentna**	**1.90**	**237**		**Pn**	**14 25 50.4**	**-0.4**
SKT	**Skwentna**	**1.90**	**237**	Sn	**Sn**	**14 26 13.9**	**+0.3**
MDM	**Murphy Dome**	**1.91**	**359**		**Pn**	**14 25 51.2**	**+0.2**
MDM	**Murphy Dome**	**1.91**	**359**	Sn	**Sn**	**14 26 13.7**	**-0.3**
DOT	**Dot Lake**	**1.94**	**70**		**Pn**	**14 25 51.8**	**+0.4**
DOT	**Dot Lake**	**1.94**	**70**	Sn	**Sn**	**14 26 16.6**	**+1.9**
SUA	**Susitna One**	**2.00**	**218**		**Pn**	**14 25 53.4**	**+1.1**
MENT	**Mentasta**	**2.03**	**91**		**Pn**	**14 25 53.0**	**+0.4**
CHUM	**Lake Minchumin**	**2.04**	**296**		**Pn**	**14 25 52.3**	**-0.3**
SCRK	**Sand Creek**	**2.09**	**62**		**Pn**	**14 25 53.8**	**+0.4**
SCRK	**Sand Creek**	**2.09**	**62**	Sn	**Sn**	**14 26 19.4**	**+0.9**
POKR	**Poker Plat Res**	**2.09**	**9**		**Pn**	**14 25 53.7**	**+0.3**
RC01	**Rabbit Creek A**	**2.11**	**201**		**Pn**	**14 25 54.5**	**+0.9**
PS12	**TAPS Pump St12**	**2.12**	**137**		**Pn**	**14 25 53.5**	**-0.4**
JPK	**Jack Peak**	**2.14**	**159**		**Pn**	**14 25 53.3**	**-0.8**
FIS	**Fire Island**	**2.15**	**208**		**Pn**	**14 25 55.8**	**+1.7**
PWL	**Port Wells**	**2.21**	**182**		**Pn**	**14 25 54.5**	**-0.4**
GLI	**Glacier Island**	**2.24**	**167**		**Pn**	**14 25 55.1**	**-0.3**
PS07	**TAPS Pump Stn7**	**2.26**	**359**		**Pn**	**14 25 56.3**	**+0.6**
MLY	**Manley**	**2.28**	**331**		**Pn**	**14 25 56.0**	**0.0**
MLY	**Manley**	**2.28**	**331**	Sn	**Sn**	**14 26 22.1**	**-0.9**
FID	**Port Fidalgo**	**2.45**	**160**		**Pn**	**14 25 57.6**	**-0.6**
CGLM	**Capps Glacier**	**2.52**	**227**		**Pn**	**14 25 59.9**	**+0.7**
SPCG	**Spurr Capps Gl**	**2.53**	**227**		**Pn**	**14 26 00.3**	**+0.8**
SPCP	**Crater Peak Br**	**2.59**	**228**		**Pn**	**14 26 00.7**	**+0.3**
GLB	**Gilahina Butte**	**2.60**	**127**		**Pn**	**14 26 00.5**	**+0.1**
SPCR	**Spurr Chakacha**	**2.66**	**227**		**Pn**	**14 26 02.7**	**+1.5**
SPBG	**Spurr Blockage**	**2.67**	**229**		**Pn**	**14 26 02.2**	**+0.9**
CKL	**Chakachamna La**	**2.71**	**228**		**Pn**	**14 26 02.1**	**+0.2**
SPNN	**North Nagishla**	**2.72**	**233**		**Pn**	**14 26 02.6**	**+0.5**
PRP	**Porcupine Dome**	**2.73**	**24**		**Pn**	**14 26 02.5**	**+0.4**
PRP	**Porcupine Dome**	**2.73**	**24**	Sn	**Sn**	**14 26 33.2**	**-0.8**
SPWE	**Spurr West**	**2.73**	**231**		**Pn**	**14 26 03.0**	**+0.9**
SLKM	**Skilak Lake**	**2.74**	**202**		**Pn**	**14 26 02.5**	**+0.3**
EYAK	**Cordova Ski Ar**	**2.77**	**154**		**Pn**	**14 26 01.8**	**-0.7**
VRDI	**Verde Repeater**	**2.87**	**128**		**Pn**	**14 26 03.9**	**-0.3**
PS06	**TAPS Pump Stn6**	**2.89**	**347**		**Pn**	**14 26 04.5**	**+0.3**
BC03		**2.91**	**87**		**Pn**	**14 26 04.2**	**-0.1**
BCAR	**Beaver Creek A**	**2.91**	**87**		**Pn**	**14 26 04.3**	**-0.2**
BCAR				Sn	**Sn**	**14 26 34.2**	**-4.0**
MCARA	**McCarthy VSAT**	**2.94**	**123**		**Pn**	**14 26 05.5**	**+0.7**
GOAT	**Goat Mountain**	**2.97**	**145**		**Pn**	**14 26 04.6**	**-0.8**
SEW	**Seward**	**3.03**	**192**		**Pn**	**14 26 06.2**	**+0.1**
RAGM	**Ragged Mountai**	**3.15**	**147**		**Pn**	**14 26 07.5**	**-0.3**
PTPK	**Patty Peak**	**3.27**	**122**		**Pn**	**14 26 09.8**	**+0.2**
DFR	**Drift River**	**3.27**	**223**		**Pn**	**14 26 10.4**	**+0.9**
HMT	**Hamilton**	**3.30**	**144**		**Pn**	**14 26 09.0**	**-0.9**
CRQM	**Cirque**	**3.31**	**132**		**Pn**	**14 26 09.5**	**-0.7**
NCT	**North Crescent**	**3.37**	**224**		**Pn**	**14 26 11.2**	**+0.3**
RSO	**Redoubt South**	**3.40**	**222**		**Pn**	**14 26 12.1**	**+0.8**
BALM	**Baldy**	**3.41**	**124**		**Pn**	**14 26 10.9**	**-0.5**
BERG	**Berg Lake**	**3.41**	**140**		**Pn**	**14 26 10.6**	**-0.8**
TGL	**Tana Glacier**	**3.42**	**130**		**Pn**	**14 26 10.6**	**-1.0**
BVCY	**Beaver Creek**	**3.42**	**98**		**Pn**	**14 26 11.7**	**+0.1**
RED	**Redoubt Volcan**	**3.44**	**222**		**Pn**	**14 26 12.2**	**+0.4**
KIAG	**Kiagna River**	**3.48**	**125**		**Pn**	**14 26 11.5**	**-0.9**
EGAK	**Eagle**	**3.54**	**58**		**Pn**	**14 26 13.7**	**+0.5**
BRSE	**Bradley Lake S**	**3.55**	**202**		**Pn**	**14 26 12.8**	**-0.4**
BRLK	**Bradley Lake**	**3.55**	**203**		**Pn**	**14 26 13.5**	**+0.2**
TT01	**Tatalina**	**3.59**	**271**		**Pn**	**14 26 13.0**	**-0.8**
YUK2	**White River**	**3.64**	**107**		**Pn**	**14 26 15.1**	**+0.6**
YUK1	**Sand Pete Hill**	**3.65**	**101**		**Pn**	**14 26 14.8**	**+0.1**
SUCK	**Suckling Hills**	**3.66**	**143**	Pn	**Pn**	**14 26 14.5**	**-0.2**
BARN	**Barnard Glacie**	**3.66**	**120**		**Pn**	**14 26 15.5**	**+0.6**
FYU	**Fort Yukon**	**3.74**	**18**		**Pn**	**14 26 16.5**	**+0.7**
HOM	**Homer**	**3.80**	**208**	Pn	**Pn**	**14 26 17.3**	**+0.7**
IM03		**3.80**	**323**		**Pn**	**14 26 16.5**	**-0.1**
IMAR	**Indian Mountai**	**3.80**	**323**		**Pn**	**14 26 16.9**	**+0.3**
YUK3	**Moose Creek**	**3.81**	**106**		**Pn**	**14 26 17.2**	**+0.2**
GRNC	**Granite Creek**	**3.83**	**125**		**Pn**	**14 26 16.6**	**-0.6**
CTGM	**Chitina Glacie**	**3.84**	**120**		**Pn**	**14 26 17.3**	**-0.1**
PS05	**TAPS Pump Stn5**	**3.92**	**345**		**Pn**	**14 26 19.1**	**+0.9**
SVW2	**Sparrevohn**	**4.00**	**244**		**Pn**	**14 26 18.7**	**-0.8**
DAWY	**Dawson**	**4.05**	**72**		**Pn**	**14 26 20.4**	**+0.2**
MESA	**MESA**	**4.14**	**131**	Pn	**Pn**	**14 26 21.9**	**+0.4**
COLD	**Coldfoot**	**4.28**	**349**		**Pn**	**14 26 24.1**	**+0.9**
BM03	**Burnt Mountain**	**4.63**	**17**		**Pn**	**14 26 28.5**	**+0.5**
BMAR	**Burnt Mountain**	**4.64**	**17**	Pn	**Pn**	**14 26 28.7**	**+0.5**
PCA	**Pinnacle**	**4.80**	**125**	Pn	**Pn**	**14 26 30.0**	**-0.5**
YUK6	**Outpost Mounta**	**5.08**	**110**		**Pn**	**14 26 34.6**	**+0.2**
YUK5	**Granite Creek**	**5.21**	**107**		**Pn**	**14 26 36.4**	**+0.3**
PNL	**Peninsula**	**5.42**	**125**		**Pn**	**14 26 38.4**	**-0.3**
HYT	**Haines Junctio**	**5.51**	**109**		**Pn**	**14 26 40.6**	**+0.5**
TOLK	**Toolik Lake Re**	**5.64**	**355**		**Pn**	**14 26 43.1**	**+1.4**
KDAK	**Kodiak Island**	**5.72**	**204**	Pn	**Pn**	**14 26 40.9**	**-2.0**
DHAK	**Deception Hill**	**6.25**	**125**	Pn	**Pn**	**14 26 49.3**	**-0.9**
OHAK	**Old Harbor**	**6.38**	**206**		**Pn**	**14 26 50.1**	**-1.9**
WHY	**Whitehorse**	**6.73**	**105**	Pn	**Pn**	**14 26 57.0**	**+0.2**
SKAG	**Skagway**	**7.16**	**114**	Pn	**Pn**	**14 27 02.7**	**+0.1**
ANM	**Nome**	**7.76**	**289**	Pn	**Pn**	**14 27 11.2**	**+0.4**
BESE	**Bessie Mountai**	**7.90**	**119**	Pn	**Pn**	**14 27 11.6**	**-1.1**
INK	**Inuvik**	**8.00**	**42**	P	**Pn**	**14 27 14.8**	**+0.8**
	0.5nm,0.3s,baz=242,slow=15,SNR=36							
INK				S	**Sn**	**14 28 40.5**	**-2.3**
	1.9nm,0.3s,baz=131,slow=20,SNR=9.8							
INK	**Inuvik**	**8.00**	**42**		**Pn**	**14 27 15.1**	**+1.1**
INK					**Sn**	**14 28 40.0**	**-2.8**
C36M	**Paulatuk**	**11.52**	**46**	Pn	**Pn**	**14 27 58.4**	**-3.6**
YKA	**Yellowknife Ar**	**15.27**	**77**	P	**Pn**	**14 28 52.2**	**+0.1**
	0.1nm,0.3s,baz=285,slow=13,SNR=9.8							
MKAR	**Makanchi Array**	**63.41**	**324**	P	**P**	**14 35 44.5**	**+1.3**
	0.1nm,0.4s,baz=27,slow=6.1,SNR=4.2							

*IDC **03** 14:44:42.2±4.0, 5.96S×103.33E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.4/32, mbtmp3.6/4, Error ellipse: s-maj=172.9km s-min=30.5km az=55.0*
*DJA **03** 14:44:45.8±3.0, 6.6S±10.4×10.4E±, h24km±40km, M3.7/6, MLv3.7/6*

ISC 03 14:44:47.7±1.3, **6.0S**±0.1×**103.52E**±0.08, **h38**km, **n14**, σ1**95**/13, **mb3.8/4**, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.06**	**67**	P	**Pn**	**14 45 04.9**	**-1.2**
KASI				S	**Sn**	**14 45 18.5**	**-1.1**
LWLI	**Liwa**	**1.07**	**30**	P	**Pn**	**14 45 05.6**	**-0.7**
LWLI				S	**Sn**	**14 45 20.4**	**+0.4**
MDSI	**Maura Dua**	**1.60**	**24**	P	**Pn**	**14 45 13.7**	**+0.3**
MNAI	**Manna**	**1.68**	**340**	P	**Pn**	**14 45 15.5**	**+1.0**
KLSI		**1.74**	**44**	P	**Pn**	**14 45 16.6**	**+1.2**
KSI	**Kapahiang**	**2.46**	**338**	P	**Pn**	**14 45 23.5**	**-1.9**
H08S2	**Diego Garcia H**	**30.85**	**265**	T	T	15 23 17.4	
	baz=88						
H08S3	**Diego Garcia H**	**30.86**	**265**	T	T	15 23 01.7	
	baz=88						
H08S1	**Diego Carcia H**	**30.87**	**265**	T	T	15 23 15.3	
	baz=88						
ASAR	**Alice Springs**	**34.12**	**124**	P	**P**	**14 51 29.9**	**+0.6**
	0.3nm,0.9s,baz=297,slow=8.7,SNR=3.4						
SONM	**Songino Array**	**53.61**	**2**	P	**P**	**14 54 05.4**	**+0.1**
	0.4nm,0.4s,baz=183,slow=8.1,SNR=6.2						
MKAR	**Makanchi Array**	**55.79**	**342**	P	**P**	**14 54 20.6**	**-0.4**
	0.5nm,0.6s,baz=141,slow=9.0,SNR=7.0						
ZALV	**Zalesovo Beam**	**61.71**	**348**	P	**P**	**14 55 01.6**	**-0.4**
	0.5nm,0.4s,baz=145,slow=7.4,SNR=2.8						
TXAR	**Lajitas Array**	**145.37**	**45**	PKPbc	**PKPab**	**15 04 23.5**	**+1.0**
	0.3nm,0.8s,baz=304,slow=1.8,SNR=3.6						

DDA 03 15:05:06.7, 37.03N×34.86E, h7km±1km, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DED	**Mersin**	**0.08**	**214**	*i* P	Pg	15 05 09.2	+0.5
DED				*i* S	Sg	15 05 11.3	+1.2
GULE	**Gulek**	**0.26**	**346**	*i* P	Pg	15 05 12.2	+0.2
GULE				*i* S	Sg	15 05 16.6	+1.2
AKO	**Adana**	**0.64**	**47**	*i* P	Pg	15 05 19.6	-0.3
AKO				*i* S	Sg	15 05 27.3	0.0

ISK 03 15:05:08.6, 36.50N×34.22E, h23km, ML2.0/6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBE	**Keben-Mersin**	**0.41**	**263**	PG	Pb	15 05 17.6	+0.3
IKL	**Isikli**	**0.50**	**239**	PG	Pn	15 05 19.7	-0.7
IKL				SG	Sb	15 05 26.9	+1.2
TEVE	**Tevekalti-Mers**	**0.63**	**265**	PG	Pn	15 05 21.7	-0.5
AKKU	**Akkuyu-Mersin**	**0.64**	**238**	PG	Pn	15 05 21.7	-0.6
AKKU				SG	Sn	15 05 31.6	-0.1
BERE	**Bereket-Mersin**	**0.82**	**260**	PG	Pn	15 05 25.1	+0.2
BERE				SG	Sn	15 05 37.2	+0.8
TEKE	**Tekeli-Mersin**	**0.96**	**249**	PG	Pn	15 05 27.4	+0.7

MAN 03 15:15:49.3, 9.89N×123.76E, h30km, mb3.9, ML2.6, MS2.2, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.47**	**25**	*i* P	Pn	15 16 00.2	+0.2
LLP				*i* S	Sb	15 16 06.5	+0.4
MSLP	**Maasin**	**1.11**	**77**	*e* P	Pn	15 16 08.7	-0.1
MSLP				*e* S	Sn	15 16 23.0	-0.1
OCLP	**Ormoc**	**1.43**	**36**	*e* P	Pb	15 16 16.1	+0.8

*IDC **03** 15:24:02.7±3.7, 14.20N×92.97W, h0km, mb3.7/2, mb1 3.9/5, mb1mx3.6/33, mbtmp3.5/5, ML3.3/3, Error ellipse: s-maj=84.0km s-min=30.9km az=17.0*
*GCG **03** 15:24:04.4±0.4, 15.93N×92.28W, h129km±44km, MD4.1*

ISC 03 15:24:07.3±1.7, **14.1N**±0.2×**93.05W**±0.08, **h35**km, **n9**, σ1**46**/14, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STG3	**Santiaguito 3,**	**1.54**	**68**	*e* P	**Pn**	**15 24 30.7**	**-1.8**
STG3				*e* S	**Sn**	**15 24 53.9**	**+2.3**
FUG	**Fuego 3**	**2.17**	**82**	*e* P	**Pn**	**15 24 39.7**	**-1.4**
FUG				*e* S	**Sn**	**15 25 07.0**	**+0.2**
IXG	**Ixpaco**	**2.54**	**89**	*e* P	**Pn**	**15 24 45.5**	**-0.7**
IXG				*e* S	**Sn**	**15 25 17.8**	**+1.9**
APG	**El Apazote**	**2.65**	**71**	Pn	**Pn**	**15 24 46.5**	**-1.3**
	7.8nm,0.3s,baz=278,slow=6.5,SNR=12						
APG				Sn	**Sn**	**15 25 19.0**	**+0.1**
	8.3nm,0.3s,baz=311,slow=18,SNR=3.6						
CMIG	**Matias Romero**	**3.42**	**329**	Pn	**Pn**	**15 24 56.8**	**-1.4**
	1.8nm,0.3s,baz=135,slow=13,SNR=18						
CMIG				Sn	**Sn**	**15 25 38.6**	**+1.0**
	4.5nm,0.3s,baz=96,slow=15,SNR=4.5						
TXAR	**Lajitas Array**	**18.03**	**329**	P	**Pn**	**15 28 15.4**	**+0.1**
	0.0nm,0.3s,baz=148,slow=10,SNR=3.0						
NVAR	**Mina Array Bea**	**32.92**	**322**	P	**P**	**15 30 40.5**	**+1.8**
	0.5nm,0.7s,baz=143,slow=9.1,SNR=6.4						
YKA	**Yellowknife Ar**	**50.66**	**347**	P	**P**	**15 33 02.1**	**-0.8**
	0.8nm,0.6s,baz=152,slow=7.3,SNR=18						
CMAR	**Chiang Mai Arr**	**145.51**	**340**	PKPbc	**PKPbc**	**15 43 42.4**	**-0.5**
	0.6nm,0.3s,baz=9.0,slow=3.4,SNR=4.9						

MAN 03 15:26:40.5, 6.04N×124.77E, h23km, mb4.4, ML3.2, MS2.9, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.18**	**76**	*i* P	Pn	15 26 47.6	-0.4
SKMP	**Bagumbayan, Su**	**0.53**	**334**	*e* P	Pb	15 26 50.0	-1.0
SKMP				*e* S	Sb	15 26 56.6	-1.6
DDMP	**Don Marcelino,**	**0.94**	**86**	*e* P	Pb	15 26 57.5	-0.5
DDMP				*e* S	Sn	15 27 10.9	0.0
KCP	**Kidapawan**	**1.01**	**18**	*i* P	Pn	15 26 59.0	-0.3
KCP				*i* S	Sn	15 27 13.2	+0.3
CTBH	**Cotabato--PC H**	**1.28**	**336**	*i* P	Pn	15 27 03.4	+0.4
CTBH				*i* S	Sn	15 27 19.2	-0.2
BUKP	**Musuan**	**1.85**	**9**	*e* P	Pn	15 27 11.4	+0.5

*IDC **03** 15:40:47.7±1.7, 43.83N×105.56W, h0km, mb4.2/1, mb1 3.7/5, mb1mx3.4/48, mbtmp3.5/5, ML3.0/3, Error ellipse: s-maj=48.5km s-min=8.6km az=149.0*
*NEIC **03** 15:40:47.9±0.9, 43.71N±0.05×105.29W±0.04, h0km±1km, ML3.3/35, Error ellipse: s-maj=9.8km s-min=4.6km az=154.0*

ISC 03 15:40:47.0±0.9, **43.71N**±0.05×**105.29W**±0.06, **h0**km, **n28**, σ1**17**/28, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.99**	**65**		**Pb**	**15 41 07.0**	**-0.3**
K22A	**Casper**	**1.39**	**221**		**Pg**	**15 41 12.4**	**-1.2**
K22A				IAML		15 41 34.8	
	comp=N,547nm,0.3s						
PHWY	**Pilot Hill**	**2.41**	**183**		**Pn**	**15 41 29.0**	**+1.1**
RWWY	**Rawlins**	**2.46**	**216**		**Pn**	**15 41 29.2**	**+0.5**
RWWY				IAML		15 42 04.0	
	comp=N,181nm,0.3s						
RWWY				IAML		15 42 04.5	
	comp=N,166nm,0.3s						
N23A	**Red Feather La**	**2.85**	**190**		**Pn**	**15 41 35.2**	**+1.2**
N23A				IAML		15 42 16.5	
	comp=N,82nm,0.3s						
LAO	**LASA Array**	**3.06**	**348**		**Pn**	**15 41 38.4**	**+1.8**
LAO				IAML		15 42 23.4	
	comp=N,96nm,0.3s						
LAO				IAML		15 42 47.3	
	comp=N,100nm,4.2s						
RLMT	**Red Lodge**	**3.18**	**298**		**Pn**	**15 41 39.0**	**+0.5**
RLMT				IAML		15 42 29.2	
	comp=N,52nm,0.3s						
RLMT				IAML		15 42 35.1	
	comp=N,88nm,0.3s						
BW06	**Boulder Array**	**3.26**	**255**		**Pn**	**15 41 40.0**	**+0.4**
BW06				IAML		15 42 28.7	
	comp=N,63nm,0.3s						
BW06				IAML		15 42 29.8	
	comp=E,51nm,0.3s						
PD31	**Pinedale Array**	**3.26**	**255**		**Pn**	**15 41 40.4**	**+0.9**
PDAR	**Pinedale Array**	**3.26**	**255**	Pn	**Pn**	**15 41 40.5**	**+0.9**
	comp=E,6.1nm,0.3s,baz=73,slow=16,SNR=64						
PDAR				Lg	Lg	15 42 24.6	
	comp=E,15nm,0.3s,baz=72,slow=29,SNR=9.2						
PDAR	**Pinedale Array**	**3.26**	**255**		**Pn**	**15 41 40.3**	**+0.7**
YNE	**Yellowstone No**	**3.63**	**293**		**Pn**	**15 41 45.4**	**+0.8**
OGNE	**Ogallala**	**3.67**	**138**		**Pn**	**15 41 46.4**	**+1.4**
ISCO	**Idaho Springs**	**3.91**	**184**		**Pn**	**15 41 49.9**	**+1.3**
ISCO				IAML		15 43 05.3	
	comp=E,31nm,4.6s						
REDW	**Red Top Meadow**	**4.06**	**267**		**Pn**	**15 41 51.2**	**+0.6**
REDW				IAML		15 42 26.0	
	comp=E,27nm,4.8s						
REDW				IAML		15 43 03.2	
	comp=E,32nm,1.8s						
FXWY	**Fox Creek**	**4.17**	**271**		**Pn**	**15 41 53.1**	**+1.1**
O20A	**White River Ci**	**4.19**	**213**		**Pn**	**15 41 53.5**	**+1.1**
O20A				IAML		15 43 38.8	
	comp=N,43nm,3.0s						
YHL	**Hebgen Lake**	**4.39**	**287**		**Pn**	**15 41 56.0**	**+0

GO04	**Tololo Observa**	**16.23**	**20**	Pn	**Pn**	**16 28 32.6**	**-0.4**
GO04				IAmb	IAmb	16 28 44.1	
	comp=Z,40nm,1.2s						
PMSA	**Palmer Station**	**20.46**	**164**	LR	LR	16 35 05.5	
	comp=Z,179nm,19.4s,baz=94,slow=30						
PMSA	**Palmer Station**	**20.46**	**164**	P	**P**	**16 29 20.3**	**-1.2**
PMSA				IAmb	IAmb	16 29 24.4	
	comp=Z,26nm,1.2s						
PB10	**IPOC Station P**	**22.73**	**16**	P	**P**	**16 29 44.5**	**-1.8**
LVC	**Limon Verde**	**23.95**	**19**	P	**P**	**16 29 58.3**	**-0.3**
	comp=Z,2.1nm,0.6s,baz=180,slow=11,SNR=3.5						
LVC				LR	LR	16 38 54.7	
	comp=Z,65nm,18.4s,baz=206,slow=36						
LVC	**Limon Verde**	**23.95**	**19**	P	**P**	**16 29 58.4**	**-0.3**
CPUP	**Villa Florida**	**24.94**	**46**	P	**P**	**16 30 08.7**	**+1.4**
	comp=Z,4.6nm,0.8s,baz=216,slow=12,SNR=7.9						
CPUP				LR	LR	16 40 37.3	
	comp=Z,201nm,18.1s,baz=218,slow=38						
CPUP	**Villa Florida**	**24.94**	**46**	P	**P**	**16 30 09.8**	**+2.5**
CPUP				IAmb	IAmb	16 30 15.9	
	comp=Z,5.4nm,0.7s						
PB11	**IPOC Station P**	**26.55**	**16**	P	**P**	**16 30 18.2**	**-4.0**
PB11				IAmb	IAmb	16 30 29.2	
	comp=Z,9.5nm,1.0s						
LPAZ	**La Paz**	**30.24**	**17**	P	**P**	**16 30 55.9**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=209,slow=10,SNR=2.3						
SIV	**San Ignacio**	**32.49**	**30**	P	**P**	**16 31 15.5**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=218,slow=11,SNR=4.7						
NNA	**Nana**	**33.57**	**0**	LR	LR	16 40 51.9	
	comp=Z,74nm,21.4s,baz=195,slow=29						
BDFB	**Brasilia**	**38.60**	**49**	LR	LR	16 49 29.2	
	comp=Z,276nm,18.6s,baz=200,slow=38						
QSPA	**South Pole Qui**	**44.58**	**180**	P	**P**	**16 32 55.7**	**0.0**
	comp=Z,1.7nm,1.0s,baz=150,slow=6.0,SNR=3.2						
ROSC	**El Rosal**	**50.34**	**4**	LR	LR	16 53 03.4	
	comp=Z,124nm,18.3s,baz=130,slow=34						
VNDA	**Vanda**	**51.89**	**194**	LR	LR	16 50 29.2	
	comp=Z,57nm,21.8s,baz=200,slow=30						
MAW	**Mawson**	**63.08**	**164**	LR	LR	17 01 25.8	
	comp=Z,93nm,18.2s,baz=232,slow=35						
SUR	**Sutherland**	**72.64**	**119**	LR	LR	17 02 44.0	
	comp=Z,43nm,21.4s,baz=184,slow=31						
LBTB	**Lobatse**	**80.79**	**116**	LR	LR	17 09 35.2	
	comp=Z,30nm,18.4s,baz=208,slow=33						
DBIC	**Dimbokro**	**82.51**	**73**	LR	LR	17 13 54.4	
	comp=Z,44nm,19.2s,baz=290,slow=36						
H11S2	**WAKE ISLAND Hyl**	**21.24**	**265**	T	T	18 56 05.5	
	baz=134						
H11S1	**WAKE ISLAND Hyl**	**21.26**	**265**	T	T	18 56 05.9	
	baz=134						
H11S3	**WAKE ISLAND Hyl**	**21.26**	**265**	T	T	18 56 06.9	
	baz=134						
CMAR	**Chiang Mai Arr**	**152.67**	**172**	PKPbc	**PKiKP**	**16 44 43.7**	**+3.0**
	comp=Z,0.2nm,0.4s,baz=242,slow=1.9,SNR=3.9						

*ISN **03** 16:27:26.8±0.7, 37.°10N×43.°30E, h12km±9km, ML2.1*
*ISK **03** 16:27:27.9, 37.°11N×43.°36E, h5km, ML2.5/4*
ISC 03 16:27:27.8±1.2, 37.°08N±0.°04×43.°28E±0.°04, h8km±11km, n8, σ0.°47/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**0.31**	**58**	PG	**Pg**	**16 27 33.7**	**-0.2**
CUKT				SG	**Sg**	**16 27 38.2**	**+0.1**
MSL	**Mosul**	**0.70**	**191**	*e*Pg	**Pg**	**16 27 41.0**	**-0.2**
MSL				AML	AML	16 27 42.7	
	comp=Z,102nm,0.2s						
MSL				*e*Sg	**Sg**	**16 27 50.5**	**+0.3**
SIRT	**Sirnak**	**0.79**	**302**	PG	**Pn**	**16 27 45.2**	**-0.1**
SIRT				SG	**Sn**	**16 27 57.6**	**+0.2**
IKRK	**Kirkuk**	**1.89**	**153**	*e*Pn	**Pn**	**16 28 00.5**	**+0.1**
IKRK				*e*Sn	**Sb**	**16 28 25.5**	**-0.8**
SVAN	**Silvan-Diyarba**	**1.96**	**303**	PN	**Pb**	**16 28 04.5**	**+0.6**
SVAN				SN	**Sg**	**16 28 30.8**	**-0.1**
MAZI	**Mazidag**	**2.29**	**280**	PN	**Pb**	**16 28 09.1**	**-0.3**
BHD	**Baghdad**	**3.91**	**166**	*e*Pn	**Pn**	**16 28 29.0**	**+0.8**
BHD				*e*Sn	**Sn**	**16 29 14.0**	**-0.3**
IBDR	**Badra**	**4.52**	**150**	*e*Pn	**Pn**	**16 28 37.0**	**+0.4**
IBDR				*e*Sn	**Sn**	**16 29 29.0**	**-0.3**

YARS 03 16:38:02.6±0.0, 56.°42N×123.°89E, h26km, ML4.0/13, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IENR	**Iengra**	**0.57**	**109**	*e*Pg	Pb	16 38 14.4	+0.3
	0.3nm,0.2s						
IENR				*e*Sg	Sb	16 38 22.0	0.0
	1.3nm,0.2s						
IENR				*e*Sg	Sb	16 38 22.0	0.0
	0.3nm,0.2s						
CLNS	**Chul'man**	**0.70**	**52**	*i* Pg	Pn	16 38 16.6	-0.3
	0.3nm,0.3s						
CLNS				*e*Sg	Sb	16 38 25.8	+0.3
	1.1nm,0.4s						
CLNS				*e*Sg	Sb	16 38 25.8	+0.3
	0.7nm,0.3s						
YKLR	**Yuktali**	**1.25**	**279**	*i* Pg	Pb	16 38 26.4	+0.8
	0.1nm,0.3s						
YKLR				*e*Sg	Sb	16 38 42.5	+1.3
	0.4nm,0.1s						
YKLR				*e*Sg	Sb	16 38 42.5	+1.3
	0.7nm,0.2s						
TNDR	**Tynda**	**1.36**	**159**	*e*Pg	Pb	16 38 27.4	+0.1
	0.2nm,0.3s						
TNDR				*e*Sg	Sb	16 38 45.7	+1.5
	0.6nm,0.6s						
TNDR				*e*Sg	Sb	16 38 45.7	+1.5
	0.3nm,0.2s						
KHN	**Khani**	**2.32**	**284**	*e*Pn	Pn	16 38 39.0	-0.2
KHN				*e*Pg	Pb	16 38 43.0	-0.7
	0.1nm,0.1s						
KHN				*e*Sn	Sn	16 39 05.4	-1.4
KHN				*e*Sg	Sb	16 39 11.4	-0.5
	1.1nm,0.2s						
ALDR	**Aldan**	**2.35**	**20**	*e*Pn	Pn	16 38 40.2	+0.7
ALDR				*e*Pg	Pb	16 38 44.6	+0.3
	0.0nm,0.4s						
ALDR				*e*Sn	Sn	16 39 07.7	+0.1
ALDR				*e*Sg	Sb	16 39 16.1	+3.3
	0.3nm,0.1s						
ALDR				*e*Sg	Sb	16 39 16.1	+3.3
	0.3nm,0.1s						
TUP	**Tupik**	**3.00**	**230**	*e*Pn	Pn	16 38 50.1	+1.6
TUP				*e*Pg	Pb	16 38 56.0	+0.6
	0.0nm,0.5s						
TUP				*e*Sn	Sn	16 39 26.0	+2.4
TUP				*e*Sg	Sb	16 39 35.3	+3.8
	0.2nm,0.5s						
BMKR	**Bomnak**	**3.29**	**119**	*e*Pg	Pb	16 39 02.8	+2.5
	0.1nm,0.2s						
BMKR				*e*Sg	Sb	16 39 45.8	+6.0
	0.3nm,0.2s						
BMKR				*e*Sg	Sb	16 39 45.8	+6.0
	0.3nm,0.2s						
CGD	**Chagda**	**4.31**	**54**	*e*Pn	Pn	16 39 08.3	+1.9
CGD				*e*Pg	Pb	16 39 19.6	+2.0
	0.0nm,0.5s						
CGD				*e*Sn	Sn	16 39 56.1	+0.3
CGD				*e*Sg	Sb	16 40 17.3	+8.2
	0.2nm,0.4s						
CGD				*e*Sg	Sb	16 40 17.3	+8.2
	0.2nm,0.3s						
BLSR	**Buluus**	**5.63**	**26**	*e*Pn	Pn	16 39 25.7	+1.2
BLSR				*e*Pg	Pb	16 39 44.4	+4.3
	0.3nm,0.9s						
BLSR				*e*Sn	Sn	16 40 29.1	+0.8
BLSR				*e*Sg	Sb	16 40 58.6	+12
	4.4nm,0.5s						
BLSR				*e*Sg	Sb	16 40 58.6	+12
	4.8nm,0.4s						
TBGR	**Tabaga**	**6.18**	**26**	*e*Pn	Pn	16 39 33.7	+1.7
TBGR				*e*Pg	Pb	16 39 55.1	+5.8
	0.0nm,0.5s						
TBGR				*e*Sn	Sn	16 40 42.8	+1.1
TBGR				*e*Sg	Sb	16 41 16.3	+14
	0.2nm,0.6s						
TBGR				*e*Sg	Sb	16 41 16.3	+14
	0.1nm,0.6s						
YAK	**Yakutsk**	**6.37**	**25**	*e*Pn	Pn	16 39 36.0	+1.3
YAK				*e*Pg	Pb	16 39 57.2	+4.7
YAK				*e*Sn	Sn	16 40 46.5	+0.1
YAK				*e*Sg	Sb	16 41 21.9	+14

*DJA **03** 16:51:27.8±0.4, 1.°N×123.°2E±1°, h12km±3km, M4.5/20, mb4.6/20, mB5.0/10, MLv4.5/16, Mw(mB)4.4/10*
*NEIC **03** 16:51:31.9±3.0, 1.°08N±0.°03×121.°8E±0.°1, h61km±10km, mb4.3/9, Error ellipse: s-maj=15.8km s-min=3.4km az=80.0*
*IDC **03** 16:51:33.0±2.5, 1.°07N×121.°95E, h70km±23km, mb3.7/9, mb1 3.9/12, mb1mx3.6/43, mbtmp4.2/12, MS3.3/7, Ms1 3.3/7, ms1mx3.1/33, Error ellipse: s-maj=23.4km s-min=11.1km az=69.0*
ISC 03 16:51:30.7±0.5, 1.°07N±0.°05×121.°84E±0.°06, h44km, n69, σ1.°67/66, mb4.4/19, MS3.1/4, 2C-1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.60**	**170**	P	**Pn**	**16 51 42.7**	**-0.2**
MRSI				S	**Sn**	**16 51 53.0**	**+1.4**
APSI	**Ampana**	**1.98**	**185**	P	**Pn**	**16 52 03.9**	**+2.2**
MPSI	**Mapaga**	**2.07**	**249**	P	**Pn**	**16 52 03.4**	**+0.4**
KMSI	**Cibinong**	**2.20**	**103**	P	**Pn**	**16 52 07.5**	**+2.8**
LUWI	**Luwuk**	**2.29**	**156**	P	**Pn**	**16 52 09.5**	**+3.4**
LUWI	**Luwuk**	**2.29**	**156**		**Pn**	**16 52 10.0**	**+4.0**
TTSI	**Tana Toraja**	**4.56**	**206**	P	**Pn**	**16 52 40.4**	**+3.2**
SANI	**Sanana**	**5.18**	**127**	P	**Pn**	**16 52 45.5**	**-0.2**
	0.2nm707nm27nm,0.7s						
SPSI	**Sidrap Palu**	**5.41**	**202**	P	**Pn**	**16 52 51.4**	**+2.5**
	0.3nm878nm87nm,0.8s						
BNSI	**Bone**	**5.70**	**198**	P	**Pn**	**16 52 56.4**	**+3.5**
	0.4nm1μm108nm,0.9s						
GSPH	**General Santos**	**5.87**	**32**	*i*P	**Pn**	**16 52 54.0**	**-1.3**
BBSI	**Bau Bau**	**6.55**	**174**	P	**Pn**	**16 53 07.7**	**+3.1**
	0.1nm14nm,0.9s						
CTBH	**Cotabato--PC H**	**6.57**	**21**	*i*P	**Pn**	**16 53 02.4**	**-2.4**
BKSI	**Bulukumba**	**6.58**	**195**	P	**Pn**	**16 53 07.6**	**+2.7**
	0.1nm457nm27nm,0.7s						
KCP	**Kidapawan**	**6.73**	**29**	*e*P	**Pn**	**16 53 05.4**	**-1.7**
KCP				*e*S	Sn	16 54 03.6	-19
NLAI	**Namlea**	**6.78**	**129**	P	**Pn**	**16 53 12.2**	**+4.5**
DAV	**Davao City (W)**	**7.03**	**32**	P	**Pn**	**16 53 11.2**	**0.0**
	42nm,0.3s,baz=208,slow=17,SNR=5.2						
DAV				S	**Sn**	**16 54 33.1**	**+3.3**
	34nm,0.3s,baz=239,slow=23,SNR=1.8						
DAV				LR	LR	16 56 04.3	
	comp=Z,276nm,20.4s,baz=192,slow=39						
KBKI	**Kotabaru**	**7.14**	**233**	P	**Pn**	**16 53 12.7**	**+0.1**
	0.2nm563nm38nm,0.6s						
KKM	**Kota Kinabalu**	**7.48**	**312**		**Pn**	**16 53 17.0**	**-0.4**
AAI	**Ambon**	**7.92**	**127**	P	**Pn**	**16 53 24.0**	**+0.7**
	43nm,0.8s						
MMRI	**Maumere**	**9.65**	**178**	Pn	**Pn**	**16 53 46.6**	**-0.4**
STKI	**Sintang**	**10.41**	**265**	P	**Pn**	**16 53 59.7**	**+2.3**
PLAI	**Piampang**	**10.63**	**202**	P	**Pn**	**16 54 00.3**	**-0.2**
	16nm,0.7s						
BATI	**Baumata**	**11.35**	**171**	LR	LR	16 58 41.0	
	comp=Z,231nm,19.7s,slow=38						
TGY	**Tagaytay City**	**12.98**	**356**	LR	LR	16 59 02.6	
	comp=Z,84nm,20.0s,baz=150,slow=35						
KPJI	**Karang Pucung**	**15.34**	**237**	P	**P**	**16 55 07.0**	**-1.4**
	37nm,0.8s						
LEM	**Lembang**	**16.21**	**241**	P	**P**	**16 55 19.4**	**+1.1**
	2.1nm,0.3s,baz=82,slow=14,SNR=6.9						
KLSI		**18.02**	**251**	P	**P**	**16 55 39.8**	**+1.7**
	8.5nm,0.9s						
MDSI	**Maura Dua**	**18.49**	**253**	P	**Pn**	**16 55 45.0**	**+1.3**
	581nm18nm,0.9s						
KASI	**Kota Agung**	**18.51**	**249**	P	**Pn**	**16 55 45.2**	**+1.2**
	30nm,0.8s						
LWLI	**Liwa**	**18.76**	**251**	P	**P**	**16 55 45.9**	**-0.5**
	85μm47nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.41**	**169**	P	**P**	**16 55 53.7**	**+0.4**
	1.5nm,0.3s,baz=359,slow=10.0,SNR=58						
FITZ	**Fitzroy Crossi**	**19.41**	**169**	P	**Pn**	**16 55 54.1**	**-0.6**
FITZ				IAmb	IAmb	16 55 54.7	
	comp=Z,16nm,1.2s						
KSI	**Kapahiang**	**19.80**	**256**	P	**Pn**	**16 55 59.6**	**+0.1**
	comp=Z,3μmcomp=Z,41nm,0.9s						
SDSI	**Sungai Dareh**	**20.50**	**265**	P	**P**	**16 56 06.2**	**+0.9**
	comp=Z,3μmcomp=Z,19nm,0.6s						
KRJI	**Kerinci**	**20.61**	**261**	P	Pn	16 56 07.8	-1.4
	comp=Z,94nm,1.1s						
PDSI	**Padang**	**21.46**	**265**	P	**P**	**16 56 16.2**	**+0.5**
	comp=Z,13nm,1.1s						
WRA	**Warramunga Arr**	**24.21**	**150**	P	**P**	**16 56 42.5**	**-1.0**
	comp=Z,3.4nm,0.8s,baz=328,slow=10,SNR=24						
WRA				LR	LR	17 07 37.9	
	comp=Z,58nm,18.8s,baz=330,slow=40						
GSI	**Gunungsitoli**	**24.26**	**271**	P	**P**	**16 56 43.2**	**-0.8**
GSI				IAmb	IAmb	16 56 44.0	
	comp=Z,18nm,0.7s						
WR0	**Warramunga Arr**	**24.33**	**150**	P	**P**	**16 56 44.9**	**+0.4**
WR0				IAmb	IAmb	16 56 59.1	
	comp=Z,11nm,0.8s						
AS31	**Alice Springs**	**27.24**	**155**	P	**P**	**16 57 09.8**	**-1.1**
ASAR	**Alice Springs**	**27.24**	**155**	P	**P**	**16 57 10.2**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=331,slow=8.8,SNR=52						
ASAR				PcP	**PcP**	**17 00 29.5**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=346,slow=2.2,SNR=9.2						
ASAR				S	**S**	**17 01 45.3**	**-1.9**
	comp=Z,0.4nm,0.9s,baz=336,slow=13,SNR=3.1						
CMAR	**Chiang Mai Arr**	**28.34**	**309**	P	**P**	**16 57 21.3**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=145,slow=8.0,SNR=7.2						
CMAR				LR	LR	17 09 35.6	
	comp=Z,54nm,19.9s,baz=110,slow=38						
KSRS	**Korea Array**	**36.64**	**8**	LR	LR	17 12 11.6	
	comp=Z,36nm,21.3s,baz=200,slow=34						
STKA	**Stephens Creek**	**37.74**	**152**	P	**P**	**16 58 41.5**	**-0.9**
	comp=Z,5.7nm,0.8s,baz=336,slow=8.2,SNR=7.4						
STKA	**Stephens Creek**	**37.74**	**152**	IAmb	IAmb	16 58 42.9	
	comp=Z,1.2nm,0.8s						
MJAR	**Matsushiro Arr**	**38.41**	**21**	LR	LR	17 16 23.4	
	comp=Z,27nm,18.5s,baz=265,slow=39						
ODAN	**Odare**	**41.85**	**311**	*e*P	**P**	**16 59 17.7**	**+0.7**
	comp=Z,10nm,0.6s						
TAPN	**Taplejung**	**41.87**	**312**	*e*P	**P**	**16 59 17.4**	**+0.2**
	comp=Z,43nm,1.7s						
CN2	**Changchun**	**42.67**	**4**	*e*P	**P**	**16 59 25.1**	**+2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JIRN	**Jiri**	**43.18**	**311**	*e*P	**P**	**16 59 28.4**	**+0.5**
	comp=Z,17nm,0.7s						
GUN	**Gumba**	**43.54**	**311**	*e*P	**P**	**16 59 31.1**	**+0.3**
	comp=Z,22nm,0.8s						
PKI	**Pulchoki**	**43.73**	**310**	*e*P	**P**	**16 59 32.2**	**-0.1**
PKIN	**Phulchoki**	**43.74**	**310**	*e*P	**P**	**16 59 31.9**	**-0.4**
KKN	**Kakani**	**43.94**	**310**	*e*P	**P**	**16 59 34.2**	**+0.4**
DMN	**Daman**	**43.98**	**310**	*e*P	**P**	**16 59 34.4**	**+0.2**
GKN	**Gorkha**	**44.53**	**310**	*e*P	**P**	**16 59 38.6**	**0.0**
	comp=Z,17nm,0.9s						
KOLN	**Koldanda**	**45.21**	**309**	*e*P	**P**	**16 59 44.3**	**+0.3**
	comp=Z,20nm,0.8s						
DANN	**Dangsing**	**45.38**	**310**	*e*P	**P**	**16 59 45.3**	**-0.1**
SONM	**Songino Array**	**48.47**	**346**	P	**P**	**17 00 09.5**	**+0.4**
	comp=Z,7nm,0.7s,baz=160,slow=8.1,SNR=5.1						
SONM	**Songino Array**	**48.47**	**346**	IAmb	IAmb	17 00 10.8	
	comp=Z,1.2nm,1.0s						
MKAR	**Makanchi Array**	**57.10**	**329**	P	**P**	**17 01 12.9**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=129,slow=8.7,SNR=17						
MKAR				PcP	**PcP**	**17 02 05.9**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=119,slow=3.1,SNR=4.1						
ZALV	**Zalesovo Beam**	**60.87**	**336**	P	**P**	**17 01 36.7**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=123,slow=5.3,SNR=4.1						
YAK	**Yakutsk**	**61.10**	**4**	P	**P**	**17 01 38.4**	**-1.6**
	comp=Z,1.5nm,0.5s,baz=183,slow=2.8,SNR=3.6						
GEYT	**Alibeck**	**68.81**	**310**	P	**P**	**17 02 30.9**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=106,slow=9.4,SNR=4.2						
GEYT	**Alibeck**	**68.81**	**310**	IAmb	IAmb	17 02 31.8	
	comp=Z,2.1nm,0.9s						
TORD	**Torodi Ar. Bea**	**119.00**	**286**	PKP	**PKPdf**	**17 10 14.8**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=64,slow=3.4,SNR=2.6						
TXAR	**Lajitas Array**	**127.07**	**51**	PKP	**PKiKP**	**17 10 31.6**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=252,slow=1.8,SNR=3.4						
LPAZ	**La Paz**	**161.97**	**148**	PKPab	**PKPab**	**17 12 12.4**	**-2.5**
	comp=Z,0.6nm,0.5s,baz=191,slow=5.2,SNR=3.0						

*NCEDC **03** 16:54:26.9±3.5, 40.°32N±0.°03×124.°57W±0.°06, h20km±3km, Md2.6/37, Error ellipse: s-maj=6.7km s-min=3.6km az=76.0*
*ANF **03** 16:54:27.9±0.9, 40.°64N×124.°32W, h0km±8km, ML2.2/1, Error ellipse: s-maj=10.1km s-min=6.3km az=176.0*
NEIC 03 16:54:24.8±1.3, 40.°31N±0.°03×124.°72W±0.°08, h27km±7km, Error ellipse: s-maj=8.4km s-min=4.2km az=88.0, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.34**	**60**		Pn	16 54 33.5	-0.5
KCTM					Sb	16 54 38.8	+1.0
KSMM	**Slide Mountain**	**0.43**	**106**		Pb	16 54 34.2	+0.2
KMPM	**Mount Pierce**	**0.47**	**76**		Pb	16 54 35.1	+0.4
KMPM					Sb	16 54 41.1	-0.2
KCRM	**Chalk Rock**	**0.70**	**80**		Pb	16 54 38.5	+0.1
JCC	**Jacoby Creek,**	**0.73**	**45**		Pb	16 54 38.6	-0.4
JCC	**Jacoby Creek,**	**0.73**	**45**		Pb	16 54 38.7	-0.3
JCC				Sg	Sb	16 54 46.8	-1.8
KMRM	**Mail Ridge**	**0.78**	**96**		Pb	16 54 39.9	+0.1
KMRM	**Mail Ridge**	**0.78**	**96**	Sg	Sn	16 54 50.9	+0.1
KHMM	**Horse Mountain**	**0.94**	**53**		Pb	16 54 42.1	-0.3
KHMM	**Horse Mountain**	**0.94**	**53**	Sg	Sb	16 54 53.5	-1.2
KBSM	**Bell Springs**	**0.94**	**114**		Pn	16 54 42.2	-0.2
KCSM	**Cold Springs**	**0.95**	**75**		Pn	16 54 42.2	-0.2
KRPM	**Rodgers**	**1.00**	**32**		Pn	16 54 43.0	-0.2
KCPM	**Cahto Peak**	**1.07**	**125**		Pn	16 54 44.0	-0.1
KIPM	**Iron Peak**	**1.07**	**117**		Pn	16 54 44.0	-0.2
KFPM	**Farley Peak**	**1.20**	**123**		Pn	16 54 45.6	-0.1
KHBM	**Hayfork Bally**	**1.20**	**72**		Pn	16 54 45.5	-0.5
KBNM	**Bluenose Ridge**	**1.24**	**109**		Pn	16 54 46.5	+0.1
GTC	**Three Chop Rid**	**1.27**	**135**		Pn	16 54 46.7	-0.1
KRMB	**Red Mountain**	**1.36**	**26**		Pn	16 54 48.1	-0.1
KRMB	**Red Mountain**	**1.36**	**26**	Sn	Sn	16 55 04.0	-1.4
KOMM	**Orleans Mounta**	**1.37**	**44**		Pn	16 54 48.1	-0.1
GNAM	**Navarro Ridge**	**1.39**	**143**		Pn	16 54 48.4	0.0
KRKM	**Rackout Spring**	**1.39**	**122**		Pn	16 54 48.5	0.0
LBPM	**Beegum Peak**	**1.40**	**89**		Pn	16 54 48.7	0.0
O02D	**Mt. Diablo Mer**	**1.48**	**94**		Pn	16 54 50.0	+0.3
GHOM	**Hamilton Openi**	**1.55**	**144**		Pn	16 54 50.8	0.0
LGPM	**Granite Peak**	**1.56**	**67**		Pn	16 54 50.8	-0.1
GHMM	**Hull Mountain**	**1.59**	**120**		Pn	16 54 51.2	-0.1
N02D	**Trinity Center**	**1.67**	**66**		Pn	16 54 52.3	0.0
N02D	**Trinity Center**	**1.67**	**66**	P	Pn	16 54 52.2	-0.1
	baz=246,SNR=9.1						
N02D				Sb	Sn	16 55 11.0	-1.9
	baz=246						
WDC	**Whiskeytown Da**	**1.68**	**80**		Pn	16 54 52.4	0.0
WDC	**Whiskeytown Da**	**1.68**	**80**	Pn	Pn	16 54 52.1	-0.3
GGUM	**Gualala**	**1.73**	**147**		Pn	16 54 53.1	0.0
LBKM	**Bonanza King**	**1.74**	**63**		Pn	16 54 53.5	+0.1
M02C	**Callahan**	**1.78**	**52**		Pn	16 54 54.1	+0.2
M02C	**Callahan**	**1.78**	**52**	P	Pn	16 54 53.7	-0.1
	baz=231,SNR=137						
HOPS	**Hopland Field**	**1.82**	**135**	Pn	Pn	16 54 54.5	+0.1
KTRM	**Thompson Ridge**	**1.90**	**32**		Pn	16 54 55.9	+0.4
L02E	**Cave Junction**	**2.03**	**24**	P	Pn	16 54 57.8	+0.5
	baz=202,SNR=74						
L02E				Sb	Sn	16 55 20.9	-0.9
	baz=202						
LAMM	**Antelope Mount**	**2.05**	**50**		Pn	16 54 58.1	+0.4
YBH	**Yreka Blue Hor**	**2.08**	**46**		Pn	16 54 58.4	+0.3
YBH	**Yreka Blue Hor**	**2.08**	**46**	Pn	Pn	16 54 58.2	+0.2
YBH					Sn	16 55 23.4	+0.2
LGBM	**Gray Butte**	**2.18**	**61**		Pn	16 55 00.5	+1.0
M03C	**McCloud**	**2.20**	**63**		Pn	16 55 00.8	+1.3
LHEM	**Herd Peak**	**2.31**	**54**		Pn	16 55 02.5	+1.3
B040	**Montague**	**2.31**	**48**		Pn	16 55 02.1	+1.0
LBFM	**Black Fox Moun**	**2.38**	**63**		Pn	16 55 03.5	+1.2
K02D	**Willamette Mer**	**2.52**	**18**	P	Pn	16 55 04.8	+0.9
	baz=196,SNR=11						
K02D				S	Sn	16 55 32.2	-1.6
	baz=196						
MCCM	**Marconi Confer**	**2.59**	**146**	Pn	Pn	16 55 05.5	+0.7
M04C	**Macdoel**	**2.63**	**55**	Pb	Pn	16 55 08.3	+2.7
	baz=235						
L04D	**Klamath Falls**	**2.64**	**43**		Pn	16 55 07.8	+2.1
L04D	**Klamath Falls**	**2.64**	**43**	Pb	Pn	16 55 07.7	+2.0
	baz=222,SNR=14						
L04D				Sb	Sn	16 55 38.6	+1.7
	baz=222						
HUMO	**Hull Mountain**	**2.65**	**29**		Pn	16 55 07.0	+1.2
HUMO	**Hull Mountain**	**2.65**	**29**	Pn	Pn	16 55 06.6	+0.8
CMCM	**Mills College**	**3.20**	**141**		Pb	16 55 18.9	-2.0
JFP	**Foothills Park**	**3.54**	**145**		Pn	16 55 18.4	+0.4
JBNB	**Ben Lomond Mou**	**3.75**	**147**		Pn	16 55 21.3	+0.3

*NEIC **03** 17:17:23.5±2.1, 34.°41S±0.°10×179.°8W±0.°2, h159km±19km, mb4.7/4, Error ellipse: s-maj=27.6km s-min=10.9km az=112.0*
*IDC **03** 17:17:30.7±8.4, 34.°54S×179.°65E, h182km±87km, mb3.1/2, mb1 3.4/3, mb1mx3.2/23, mbtmp3.8/3, Error ellipse: s-maj=102.2km s-min=46.6km az=179.0*
*WEL **03

KAHC	Kahuranaki	6.10	193	P	Pn	17 18 52.9	+1.2
KAHC	Kahuranaki	6.10	193	P	Sn	17 19 54.6	-6.9
PXZ	Pawanui	6.33	193	P	Pn	17 18 55.3	+0.5
PXZ	Pawanui	6.33	193	P	Sn	17 19 59.8	-7.4
PNHZ	Pukenui	6.36	198	P	Pn	17 18 56.9	+1.6
PNHZ	Pukenui	6.36	198	P	Sn	17 20 03.0	-5.1
DREZ	Durham Road	6.44	213	P	Pn	17 19 05.3	+9.0
WPHZ	Waipukurau	6.45	196	P	Pn	17 18 58.1	+1.6
WPHZ	Waipukurau	6.45	196	P	Sn	17 20 05.5	-4.6
TSZ	Takapari Road	6.56	199	P	Pn	17 18 59.9	+1.9
TSZ	Takapari Road	6.56	199	P	Sn	17 20 05.5	-7.4
WAZ	Wanganui	6.59	206	P	Pn	17 19 02.8	+4.4
PRHZ	Porangahau	6.60	194	P	Pn	17 18 58.6	+0.1
DVHZ	Dannevirke	6.74	197	P	Pn	17 19 01.4	+1.0
DVHZ	Dannevirke	6.74	197	P	Sn	17 20 10.2	-7.0
ANWZ	Angora Road	6.82	195	P	Pn	17 19 02.1	+0.6
ANWZ	Angora Road	6.82	195	P	Sn	17 20 10.9	-8.3
POWZ	Post Office Ro	6.93	199	P	Pn	17 19 05.0	+2.0
BFZ	Birch Farm	7.08	195	P	Pn	17 19 05.8	+0.7
BFZ	Birch Farm	7.08	195	Pn	Pn	17 19 03.9	-1.3
MRZ	Mangatainoka R	7.23	199	P	Pn	17 19 08.0	+0.8
MRZ				S	Sn	17 20 23.0	-6.3
TIWZ	Tintock	7.26	197	P	Pn	17 19 08.5	+1.0
HOWZ	Holdsworth Sta	7.47	199	P	Pn	17 19 09.7	-0.7
OGWZ	Otaki Gorge	7.49	201	P	Pn	17 19 10.8	0.0
TMWZ	Te Maipa	7.57	196	P	Pn	17 19 11.4	-0.4
KIW	Kapiti Island	7.61	202	P	Pn	17 19 13.1	+0.7
MTW	Mount Morrison	7.71	198	P	Pn	17 19 13.1	-0.8
CAW	Cannon Point	7.79	201	P	Pn	17 19 14.2	-0.6
MSWZ	Moikau Station	8.02	199	Pn	Pn	17 19 17.8	-0.3
SNZO	South Karori	8.08	202	Pn	Pn	17 19 17.6	-1.2
BHW	Baring Head	8.12	201	P	Pn	17 19 19.0	-0.4
BHW	Baring Head	8.12	201	Pn	Pn	17 19 19.1	-0.3
BHW				Sn	Sn	17 20 43.2	-8.1
PLWZ	Palliser	8.16	199	P	Pn	17 19 18.6	-1.5
PLWZ	Palliser	8.16	199	Pn	Pn	17 19 18.8	-1.2
TUWZ	Tuamarina	8.44	205	Pn	Pn	17 19 24.3	+0.5
TUWZ					Sn	17 20 55.0	-4.2
NNZ	Nelson	8.47	208	Pn	Pn	17 19 25.3	+1.1
NNZ					Sn	17 20 57.7	-2.2
QRZ	Quartz Range	8.51	214	Pn	Pn	17 19 27.2	+2.4
CMWZ	Cape Campbell	8.64	203	Pn	Pn	17 19 28.7	+2.2
CMWZ				Sn	Sn	17 20 58.7	-5.2
BSWZ	Blackbirch Sta	8.72	205	Pn	Pn	17 19 28.0	+0.4
THZ	Tophouse	9.12	209	Pn	Pn	17 19 33.8	+0.6
KHZ	Kahutara	9.46	204	Pn	Pn	17 19 36.5	-1.2
LTZ	Lake Taylor	10.24	208	Pn	Pn	17 19 47.3	-1.1
CRLZ	Canterbury Las	10.79	204	Pn	Pn	17 19 53.7	-2.3
MQZ	McQueen's Vall	10.90	204	Pn	Pn	17 19 53.8	-3.7
ODZ	Otahua Downs	12.78	207	Pn	Pn	17 20 20.5	-2.6
MSVF	Nonsavu	16.08	358	P	P	17 21 11.3	+0.1
MSVF				IAmb	IAmb	17 21 13.3	
	comp=Z,5.4nm,0.8s						
EIDS	Eidsvold	25.41	282	P	P	17 22 46.6	-2.6
EIDS				IAmb	IAmb	17 23 10.2	
	comp=Z,30nm,1.6s						
ASAR	Alice Springs	40.30	273	P	P	17 24 56.8	-2.4
	comp=Z,0.5nm,0.5s,baz=116,slow=8.2,SNR=16						
ASAR	Alice Springs	40.30	273	P	P	17 24 55.9	-3.2
WRA	Warramunga Arr	41.62	278	P	P	17 25 08.1	-1.9
	comp=Z,0.5nm,0.5s,baz=118,slow=7.5,SNR=6.0						
WRA	Warramunga Arr	41.62	278	P	P	17 25 07.5	-2.5
FINES	FINESS Array B	147.30	336	PKPbc	PKPdf	17 36 53.6	-8.4
	comp=Z,1.0nm,0.6s,baz=46,slow=4.0,SNR=8.2						

IDC 03 17:23:39.7±4.3, 4°47'S×100°16'E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.3/35, mbtmp3.3/4, MS3.1/1, Ms1 3.1/1, ms1mx2.6/18, Error ellipse: s-maj=160.9km s-min=27.8km az=60.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	22.82	357	P	P	17 28 45.8	+1.3
	0.4nm,0.6s,baz=185,slow=8.3,SNR=6.1						
H08S2	Diego Garcia H	27.68	262	T	T	17 59 37.8	
	baz=85,slow=76,SNR=80						
H08S3	Diego Garcia H	27.69	262	T	T	17 59 39.8	
	baz=85,slow=76,SNR=91						
H08S1	Diego Garcia H	27.70	262	T	T	17 59 40.6	
	baz=85,slow=76,SNR=15						
H01W3	Cape Leeuwin H	32.91	159	T	T	18 04 15.7	
	baz=334						
H01W2	Cape Leeuwin H	32.93	159	T	T	18 04 16.5	
	baz=334						
H01W1	Cape Leeuwin H	32.93	159	T	T	18 04 14.7	
	baz=334						
ASAR	Alice Springs	37.72	124	P	P	17 30 57.8	+0.3
	0.2nm,0.8s,baz=300,slow=7.7,SNR=5.4						
JNU	Nakatsue	47.38	36	LR	LR	17 53 40.3	
	comp=Z,20nm,18.4s,baz=42,slow=38						
SONM	Songino Array	52.38	5	P	P	17 32 52.6	-1.2
	0.7nm,0.8s,baz=186,slow=6.3,SNR=5.5						
MKAR	Makanchi Array	53.44	345	P	P	17 33 01.3	-0.2
	0.3nm,0.8s,baz=142,slow=7.5,SNR=3.6						

*IDC **03** 17:33:58.9±0.6, 7°47'N×35°53'W, h0km, mb4.2/19, mb1 4.3/20, mb1mx4.1/47, mbtmp4.2/20, ML4.7/1, MS3.8/18, Ms1 3.8/18, ms1mx3.7/29, Error ellipse: s-maj=20.2km s-min=14.0km az=141.0*

*NEIC **03** 17:34:00.8±2.4, 7°48'N±0°06'×35°5'W±0°1, h15km±5km, mb4.7/29, Error ellipse: s-maj=15.6km s-min=8.4km az=90.0*

ISC 03 17:33:60.0±0.5, 7°39'N±0°08'×35°46'W±0°09, h10km, n97, σ1§32/84, mb4.5/37, MS3.8/17, 13C-3D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	Riachuelo	13.14	182	Pn	Pn	17 37 06.5	-0.4
	4.0nm,0.3s,baz=356,slow=10,SNR=15						
RCBR				Sn	Sn	17 39 21.2	-12
	6.3nm,0.3s,baz=254,slow=3.5,SNR=8.8						
RCBR	Riachuelo	13.14	182		Pn	17 37 05.4	-1.5
RCBR					Sn	17 39 17.2	-16
SACV	Santiago Islan	13.85	56		Pn	17 37 12.3	-4.2
MDP	Montagnes des	17.23	263	LR	LR	17 44 18.7	
	comp=Z,108nm,18.9s,baz=343,slow=36						
H10N3	ASCENSION HYDR	25.80	125	T	T	18 06 29.3	
	baz=305,slow=75,SNR=13						
H10N2	ASCENSION HYDR	25.81	125	T	T	18 06 32.1	
	baz=305,slow=75,SNR=12						
H10N1	ASCENSION HYDR	25.82	125	T	T	18 06 31.1	
	baz=305,slow=75,SNR=14						
BDFB	Brasilia	26.05	208	P	P	17 39 35.6	+1.8
	2.6nm,0.5s,baz=48,slow=14,SNR=3.6						
BDFB				LR	LR	17 49 07.2	
	comp=Z,315nm,18.6s,baz=324,slow=35						
BDFB	Brasilia	26.05	208	P	P	17 39 35.0	+1.2
BDFB				IAmb	IAmb	17 40 00.3	
	comp=Z,13nm,1.2s						
DBIC	Dimbokro	30.38	89	P	P	17 40 12.6	0.0
	comp=Z,3.4nm,0.7s,baz=257,slow=7.7,SNR=6.4						
DBIC				LR	LR	17 49 45.6	
	comp=Z,86nm,18.0s,baz=252,slow=31						
DBIC	Dimbokro	30.38	89	P	P	17 40 12.4	-0.2
DBIC				IAmb	IAmb	17 40 19.9	
	comp=Z,11nm,1.1s						
PMOZ	Porto Moniz, M	30.46	31	eT	T	18 11 51.4	
FUL	Funchal	30.48	32	eT	T	18 11 54.8	
PMAR	Madeira	30.53	32	eT	T	18 11 52.7	
SJG	San Juan	31.72	293	LR	LR	17 52 07.0	
	comp=Z,78nm,18.2s,baz=90,slow=34						
SAML	Samuel	32.04	240	P	P	17 40 26.1	-1.0
SIV	San Ignacio	34.39	227	P	P	17 40 48.0	+0.3
	comp=Z,3.5nm,0.9s,baz=74,slow=8.5,SNR=13						
TOA0	Torodi Ar. Sit	36.98	78	P	P	17 41 09.6	-0.4
TOA0				IAmb	IAmb	17 41 11.0	
	comp=Z,13nm,0.8s						
TORD	Torodi Ar. Bea	36.98	78	P	P	17 41 10.0	0.0
	comp=Z,12nm,0.8s,baz=271,slow=8.8,SNR=52						
TORD				LR	LR	17 54 01.1	
	comp=Z,131nm,21.5s,baz=335,slow=32						
TORD	Torodi Ar. Bea	36.98	78	P	P	17 41 09.3	-0.6
ROSC	El Rosal	38.71	269	LR	LR	17 56 10.0	
	comp=Z,175nm,19.4s,baz=169,slow=34						
CPUP	Villa Florida	39.68	212	LR	LR	17 58 01.3	
	comp=Z,203nm,18.8s,baz=32,slow=36						
LPAZ	La Paz	39.99	234	P	P	17 41 35.8	-0.1
	comp=Z,5.4nm,0.8s,baz=62,slow=6.9,SNR=14						
LPAZ				LR	LR	17 58 33.1	
	comp=Z,123nm,18.3s,baz=69,slow=37						
LPAZ	La Paz	39.99	234	P	P	17 41 35.1	-0.8
ESDC	Sonseca Array	42.78	36	P	P	17 41 59.0	+1.0
	comp=Z,0.1nm,0.3s,baz=242,slow=8.1,SNR=3.4						
ESDC	Sonseca Array	42.78	36	P	P	17 41 58.3	+0.3
CART	Cartagena	43.34	41	P	P	17 42 00.2	-2.2
BATG	Bathurst New B	47.55	332	P	P	17 42 33.5	-2.1
KEST	Kesra	49.70	49	P	P	17 42 52.7	+0.2
	comp=Z,3.5nm,0.8s,baz=292,slow=17,SNR=3.6						
KEST				LR	LR	18 03 31.6	
	comp=Z,242nm,19.1s,baz=294,slow=36						
KEST	Kesra	49.70	49	P	P	17 42 52.6	+0.1
KEST				IAmb	IAmb	17 43 00.6	
	comp=Z,6.8nm,1.0s						
GO04	Tololo Observa	50.45	221	P	P	17 42 56.6	-1.8
253A	Americus	51.41	305	P	P	17 43 03.6	-1.8
TKL	Tuckaleechee C	52.31	310	P	P	17 43 15.0	+2.9
	comp=Z,5.7nm,0.9s,baz=72,slow=19,SNR=1.9						
SCHQ	Schefferville	53.55	338	P	P	17 43 22.4	+1.5
	comp=Z,2.5nm,0.9s,baz=154,slow=8.0,SNR=4.9						
SCHQ	Schefferville	53.55	338	P	P	17 43 20.0	-0.9
DAVA	Damuels	55.38	36	epP	P	17 43 37.0	+2.5
	comp=Z,15nm,1.7s						
RETA	Reutte	55.99	36	eP	P	17 43 39.7	+0.9
	comp=Z,8.0nm,1.3s						
MOTA	Moosalm	56.12	36	epP	P	17 43 42.2	+2.4
	comp=Z,8.9nm,1.5s						
SQTA	Sankt Quirin	56.12	37	eP	P	17 43 40.8	+1.0
	comp=Z,6.0nm,0.8s						
WATA	Walderalm	56.40	37	eP	P	17 43 41.2	-0.7
	comp=Z,2.1nm,0.6s						
ABTA	Abfaltersbach	56.67	38	eP	P	17 43 44.6	+0.9
	comp=Z,7.5nm,1.3s						
MYKA	Terra Mystica	57.31	38	eP	P	17 43 48.2	0.0
	comp=Z,4.8nm,0.9s						
PLCA	Paso Flores	57.75	211	LR	LR	18 09 14.8	
	comp=Z,319nm,18.6s,baz=71,slow=37						
SOKA	Soboth	58.19	39	P	P	17 43 55.4	+1.0
	comp=Z,8.1nm,1.0s						
GERES	GERESS Array B	58.37	36	P	P	17 43 55.6	-0.1
	comp=Z,0.5nm,0.8s,baz=243,slow=4.3,SNR=3.1						
GERES	GERESS Array B	58.37	36	P	P	17 43 54.6	-1.1
LIT	Litokhoron	60.94	48	P	P	17 44 14.2	+0.7
LIT				IAmb	IAmb	17 44 23.2	
	comp=Z,3.9nm,0.8s						
GZR	Gura Zlata	62.71	42	⇑P	P	17 44 26.5	+1.2
TRPA	Tarpa	63.45	39	⇑P	P	17 44 30.7	+0.6
NB2	NORSAR Subarra	63.71	23	P	P	17 44 32.3	+0.6
	comp=Z,1.1nm,0.8s,baz=261,slow=6.2						
NOA	NORSAR Array B	63.71	23	P	P	17 44 32.4	+0.8
	comp=Z,0.9nm,0.8s,baz=245,slow=5.9,SNR=3.2						
NOA				LR	LR	18 07 38.2	
	comp=Z,56nm,21.8s,baz=225,slow=32						
ALN	Alexandroupoli	63.77	48	P	P	17 44 32.9	+0.5
ALN				IAmb	IAmb	17 44 36.6	
	comp=Z,4.9nm,1.3s						
ARR	Arges	63.95	43	⇑P	P	17 44 34.8	+1.2
COPA	Copaceanca	64.00	44	⇑P	P	17 44 35.5	+1.7
VOIR		64.25	43	⇑P	P	17 44 36.9	+1.4
DOPR	Dopca	64.62	42	⇑P	P	17 44 35.6	-2.4
MLR	Muntele Rosu	64.87	43	⇑P	P	17 44 41.0	+1.3
MLR	Muntele Rosu	64.87	43	P	P	17 44 40.3	+0.6
MLR				IAmb	IAmb	17 44 50.4	
	comp=Z,13nm,0.8s						
OZUR		64.93	42	⇓P	P	17 44 41.2	+1.3
BURAR	Bucovina Array	64.99	41	⇑P	P	17 44 41.6	+1.2
BURAR	Bucovina Array	64.99	41	P	P	17 44 41.3	+0.9
ISR	Istrita	65.17	44	⇓P	P	17 44 42.7	+1.2
PLOR	Plostina	65.44	43	⇓P	P	17 44 49.2	+6.0
VRI	Vrincioaia	65.50	43	⇑P	P	17 44 44.0	+0.4
HARR	Harsova	66.02	44	⇑P	P	17 44 47.1	+0.2
TOPG	Topolog	66.37	44	⇑P	P	17 44 49.3	+0.1
JURR	Jurilovca	66.69	44	⇑P	P	17 44 52.8	+1.5
SORM	Soroca	67.16	41	⇑P	P	17 44 53.8	-0.3
AKASG	Malin Array Be	68.39	38	P	P	17 45 01.9	+0.1
	comp=Z,2.9nm,0.8s,baz=258,slow=6.0,SNR=8.7						
AKASG	Malin Array Be	68.39	38	P	P	17 45 00.5	-1.4
BOSA	Boshof	68.56	125	P	P	17 45 06.2	+2.7
	comp=Z,1.9nm,0.9s,baz=236,slow=8.0,SNR=3.7						
BOSA				LR	LR	18 08 55.0	
	comp=Z,113nm,19.9s,baz=281,slow=30						
BR131	Keskin Array S	69.25	50	P	P	17 45 07.4	-0.3
BR131				IAmb	IAmb	17 45 09.3	
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	69.25	50	P	P	17 45 08.4	+0.8
	comp=Z,2.3nm,0.8s,baz=244,slow=5.2,SNR=16						
BRTR				LR	LR	18 15 45.5	
	comp=Z,47nm,21.1s,baz=270,slow=36						
BRTR	Keskin Array B	69.25	50	P	P	17 45 07.4	-0.3
FINES	FINESS Array B	70.17	27	P	P	17 45 13.0	+0.3
	comp=Z,5.2nm,1.0s,baz=264,slow=5.7,SNR=4.6						
FINES				LR	LR	18 12 16.3	
	comp=Z,103nm,19.5s,baz=218,slow=33						
FINES	FINESS Array B	70.17	27	P	P	17 45 13.1	+0.5
FIA1	FINESS Array S	70.17	27	P	P	17 45 12.1	-0.6
121A	Cookes Peak, D	71.17	302	P	P	17 45 15.8	-3.8
121A				IAmb	IAmb	17 45 40.3	
	comp=Z,4.9nm,0.8s						
ARCES	ARCESS Array B	73.20	19	P	P	17 45 31.3	+0.4
	comp=Z,2.2nm,1.0s,baz=233,slow=12,SNR=2.7						
ARCES	ARCESS Array B	73.20	19	P	P	17 45 30.9	+0.1
ARE0	ARCESS Array S	73.20	19	P	P	17 45 31.2	+0.4
PD31	Pinedale Array	73.34	312	P	P	17 45 31.1	-1.4
PDAR	Pinedale Array	73.34	312	P	P	17 45 32.2	-0.3
	comp=Z,0.8nm,0.7s,baz=110,slow=7.4,SNR=7.4						
PDAR				LR	LR	18 13 03.8	
	comp=Z,57nm,21.9s,baz=58,slow=32						
PDAR	Pinedale Array	73.34	312	P	P	17 45 31.3	-1.2
WUAZ	Wupatki	74.28	305	P	P	17 45 38.7	+0.6
WUAZ				IAmb	IAmb	17 45 48.5	
	comp=Z,6.5nm,0.9s						
HWUT	Hardware Ranch	74.74	311	P	P	17 45 40.6	0.0
HWUT				IAmb	IAmb	17 45 50.2	
	comp=Z,7.4nm,0.8s						
NLU	North Lily Min	75.03	309	P	P	17 45 42.8	+0.4
RES	Resolute Bay	75.09	346	P	P	17 45 44.1	+2.3
	comp=Z,0.5nm,0.5s,baz=90,slow=8.1,SNR=2.1						
PSUT	Pine Spring	76.36	308	P	P	17 45 50.9	+0.9
KBZ	Khabaz	76.52	47	P	P	17 45 51.7	+1.2
	comp=Z,1.6nm,0.7s,baz=273,slow=3.3,SNR=6.7						
KBZ				LR	LR	18 22 11.9	
	comp=Z,46nm,18.2s,baz=328,slow=38						
YKA	Yellowknife Ar	78.47	332	P	P	17 46 00.2	-0.8
	comp=Z,0.7nm,0.7s,baz=98,slow=5.8,SNR=11						
YKA	Yellowknife Ar	78.47	332	P	P	17 45 59.1	-1.9
KVN	Kaiserville	79.68	308	P	P	17 46 08.1	-0.4
NVAR	Mina Array Bea	79.85	308	P	P	17 46 08.8	-0.6
	comp=Z,0.9nm,0.8s,baz=103,slow=6.2,SNR=6.2						
NVAR				LR	LR	18 20 11.5	
	comp=Z,23nm,19.3s,baz=66,slow=35						
ISA	Isabella, Lake	80.07	305	P	P	17 46 10.7	+0.2
BEKR	Beckworth	81.40	309	P	P	17 46 17.7	0.0
BEKR				IAmb	IAmb	17 46 27.2	
	comp=Z,5.5nm,1.1s						
ILAR	Eielson Array	92.28	336	LR	LR	18 26 19.0	
	comp=Z,78nm,19.0s,baz=96,slow=34						

*DSN **03** 17:35:52.0±1.8, 27°.71N×58°.15E, h10km, ML3.7/6, Error ellipse: s-maj=46.6km s-min=14.4km az=140.0*

*TEH **03** 17:35:58.7, 27°.14N×54°.53E, h9km, ML3.3*

*OMAN **03** 17:35:59.1±0.6, 27°.47N×54°.48E, h30km, ml3.5/4, Error ellipse: s-maj=14.8km s-min=6.6km az=275.0*

ISC 03 17:36:01.3±1.2, 27°.15N±0°.04×54°.50E±0°.05, h18km, n36, σ0§93/41, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	1.21	279	ePg	Pn	17 36 22.9	-0.4
LMD1				e		17 36 57.5	
GENO	Geno	1.51	80	ePg	Pn	17 36 27.4	-0.2
JHRM	Jahrom	1.58	329	ePg	Pn	17 36 28.7	+0.2
JHRM				e		17 37 06.4	
SHME	Shamm	1.83	126	P	Pn	17 36 31.5	-0.5
SHME	Shamm	1.83	126	ePn	Pn	17 36 31.4	-0.6
BANOM	Banah	2.02	127	eP	Pn	17 36 34.0	-0.6
	SNR=14						
BANOM				S	Sb	17 37 02.7	+0.2
BANOM	Banah	2.02	127	P	Pn	17 36 34.2	-0.4
	SNR=14						
BANOM				S	Sb	17 37 01.8	-0.7
NIAN	Nian	2.11	78	ePn	Pn	17 36 35.8	0.0
NIAN				e		17 37 12.5	
MSFE	Esma-Masafi	2.33	140	P	Pn	17 36 39.0	+0.2
MSFE	Esma-Masafi	2.33	140	ePn	Pn	17 36 38.9	+0.2
NAZ	Nazwa, Dubai	2.40	154	P	Pg	17 36 46.4	-0.9
NAZ	Nazwa, Dubai	2.40	154	ePn	Pn	17 36 39.6	-0.1
MDH	Madha	2.45	138	ePn	Pn	17 36 40.8	+0.3
ISRV	Sarvestan	2.54	331	ePn	Pn	17 36 42.4	+0.5
ISRV				e		17 37 47.9	
ASUD	Al Ashush, Dub	2.62	163	ePn	Pn	17 36 44.5	+1.7
ASUD	Al Ashush, Dub	2.62	163	P	Pn	17 36 44.0	+1.2
	SNR=18						
ASUD				S	Sb	17 37 19.5	-0.3
UOSS	Minazif	2.68	145	P	Pn	17 36 43.6	0.0
UOSS	Minazif	2.68	145	ePn	Pn	17 36 43.9	+0.3
HATD	Hatta, Dubai	2.74	147	P	Pn	17 36 45.6	+1.1
HATD	Hatta, Dubai	2.74	147	ePn	Pn	17 36 44.8	+0.3
ASHO	Ashiyiah	2.83	150	iP	Pn	17 36 46.1	+0.4
	SNR=13						
ASHO	Ashiyiah	2.83	150	ePn	Pn	17 36 45.8	+0.1
ASHO	Ashiyiah	2.83	150	P	Pn	17 36 46.1	+0.4
	SNR=13						
ASHO				S	Sn	17 37 22.8	+3.4
NGRK	Negar Kerman	3.16	38	ePn	Pn	17 36 50.5	-0.1
NGRK				e		17 37 46.6	
ALNE	Al Ain	3.28	160	ePn	Pn	17 36 52.1	+0.2
TVBK	TV Kerman	3.45	35	ePn	Pn	17 36 55.2	+0.7
TVBK				e		17 37 45.4	
KHGB	Koh Gabri	3.65	28	ePn	Pn	17 36 58.1	+1.0
KHGB				e		17 37 45.8	
CHMN	Cheshme madani	3.80	44	ePn	Pn	17 37 00.7	+1.4
CHMN				e		17 37 13.2	
ARQ	Araqi	4.22	154	P	Pn	17 37 05.0	+0.2
	SNR=20						
IMEH	Mehriz	4.22	1	ePn	Pn	17 37 06.4	+1.4
IBAF	Bafgh	4.52	12	ePn	Pn	17 37 09.1	+0.1
KLNJ	Kolanjah	4.61	327	ePn	Pn	17 37 09.0	-1.4
IRAM	Ramesheh	4.99	339	ePn	Pn	17 37 14.7	-0.9
WSAR	Wadi Sarin	5.40	135	P	Pn	17 37 21.3	+0.3
	SNR=9.2						
WSAR				S	Sn	17 38 21.0	-1.8
TPRV	Parvadeh(Tabas	6.15	17	ePn	Pn	17 37 30.9	-0.5
NHDN	Nehbandan	6.43	48	ePn	Pn	17 37 35.6	+0.4

*IDC **03** 17:43:44.5±1.8, 5°.40S×146°.81E, h0km, mb3.6/3, mb1 4.0/5, mb1mx3.5/35, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=54.9km s-min=27.5km az=118.0*

*NEIC **03** 17:43:53.3±2.0, 5°.7S±0°.1×147°.0E±0°.1, h79km±14km, mb4.4/8, Error ellipse: s-maj=17.2km s-min=15.1km az=92.0*

ISC 03 17:43:54.9±1.0, 5°.90S±0°.09×147°.0E±0°.1, h100km, n18, σ1§98/20, mb3.9/5, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.49	178	Pn	Pn	17 44 47.5	+0.3
	5.7nm,0.3s,baz=358,slow=8.9,SNR=36						
PMG				Sn	Sn	17 45 26.2	-1.4
	12nm,0.3s,baz=182,slow=19,SNR=11						
PMG	Port Moresby	3.49	178		Pn	17 44 47.9	+0.6
PMG					Sn	17 45 26.2	-1.4
COEN	Coen	8.86	205	Pn	Pn	17 46 01.2	+1.0
COEN				Sn	Sn	17 47 34.1	-4.2
FAKI	Fak Fak	15.03	281	Pn	Pn	17 47 18.2	-3.9
MTN	Manton Dam	17.13	245		Pn	17 47 48.7	+0.5
MTN				IAmb	IAmb	17 47 58.0	
	comp=Z,18nm,1.2s						
WRA	Warramunga Arr	18.63	220	P	Pn	17 48 06.4	+0.2
	comp=Z,0.3nm,0.3s,baz=42,slow=12,SNR=13						
WRA	Warramunga Arr	18.63	220	P	Pn	17 48 05.4	-0.9
KNRA	Kununurra	20.39	240	P	Pn	17 48 24.6	-2.3
KNRA				IAmb	IAmb	17 48 25.1	
	comp=Z,65nm,1.6s						
AS31	Alice Springs	21.72	214	P	P	17 48 40.2	+2.1
ASAR	Alice Springs	21.72	214	P	P	17 48 39.9	+1.7
	comp=Z,0.3nm,0.3s,baz=50,slow=8.8,SNR=31						
ASAR	Alice Springs	21.72	214	P	P	17 48 39.7	+1.5
FITZ	Fitzroy Crossi	24.14	238	P	P	17 49 03.9	+2.1
	comp=Z,3.0nm,0.6s,baz=48,slow=9.6,SNR=12						
FITZ	Fitzroy Crossi	24.14	238	P	P	17 49 04.2	+2.4
FITZ				IAmb	IAmb	17 49 05.9	
	comp=Z,3.4nm,0.7s						
DZM	Mont Dzumac	24.71	132	P	P	17 49 06.9	-0.2
DZM				IAmb	IAmb	17 49 16.3	
	comp=Z,11nm,1.2s						
BBOO	Buckleboo	28.66	200	P	P	17 49 44.1	+1.8
BBOO				IAmb	IAmb	17 50 06.4	
	comp=Z,45nm,1.6s						
FUNA	Funafuti	32.01	97	P	P	17 50 10.5	-1.6
ILAR	Eielson Array	85.38	23	P	P	17 56 21.4	+0.6
	comp=Z,0.4nm,0.7s,baz=232,slow=4.4,SNR=4.4						
ILAR	Eielson Array	85.38	23	P	P	17 56 20.3	-0.5

**MAN 03 17:44:29.6, 5°.93N×125°.55E, h1km, mb4.6,

CMAR	**Chiang Mai Arr**	**9.68**	**194**		**Pn**	**18 14 07.1**	**+1.1**
PBKT	**Sadao Pong**	**11.30**	**182**	Pn	**Pn**	**18 14 27.6**	**-0.6**
QIZ	**Qiongzhong**	**11.78**	**137**	P	**Pn**	**18 14 33.9**	**-0.8**
QIZ				S	**Sn**	**18 16 47.8**	**+1.5**
QIZ				LR	LR		
	comp=E,690nm,12.5s						
QIZ				LR	LR		
	comp=E,260nm,8.0s						
TAPN	**Taplejung**	**12.12**	**270**	*eP*	**Pn**	**18 14 38.9**	**-0.8**
ODAN	**Odare**	**12.46**	**268**	*eP*	**Pn**	**18 14 42.4**	**-1.9**
	comp=E,12nm,0.5s						
HKPS	**Hong Kong Po S**	**12.86**	**113**	Pn	**Pn**	**18 14 48.7**	**-0.9**
RAMN	**Ramite**	**13.15**	**269**	*eP*	**Pn**	**18 14 51.8**	**-1.9**
	comp=E,15nm,0.6s						
JIRN	**Jiri**	**13.44**	**272**	*eP*	**Pn**	**18 14 56.6**	**-1.1**
	comp=E,20nm,0.8s						
GUN	**Gumba**	**13.70**	**274**	*eP*	**Pn**	**18 15 00.0**	**-1.2**
	comp=E,17nm,0.9s						
PKI	**Pulchoki**	**14.14**	**272**	*eP*	**Pn**	**18 15 04.6**	**-2.7**
	comp=E,2.3nm,1.0s						
PKIN	**Phulchoki**	**14.15**	**272**	*eP*	**Pn**	**18 15 05.0**	**-2.3**
	comp=E,8.0nm,0.5s						
KKN	**Kakani**	**14.23**	**273**	*eP*	**Pn**	**18 15 06.5**	**-2.0**
DMN	**Daman**	**14.40**	**273**	*eP*	**Pn**	**18 15 08.0**	**-2.8**
	comp=E,15nm,0.9s						
DANN	**Dangsing**	**15.54**	**276**	*eP*	**Pn**	**18 15 22.4**	**-3.7**
BJT	**Baijiatuan**	**17.19**	**42**	P	**Pn**	**18 15 45.6**	**-1.2**
BJT				IAmb	IAmb	18 15 50.5	
	comp=Z,7.5nm,0.6s						
WMQ	**Urumqi**	**19.31**	**329**	*eP*	**P**	**18 16 10.9**	**-0.9**
WMQ				pP	Pn	18 16 13.7	+0.9
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SONM	**Songino Array**	**20.27**	**10**	P	**P**	**18 16 21.3**	**-1.0**
	comp=Z,0.5nm,0.9s,baz=187,slow=10,SNR=3.7						
SONM				LR	LR	18 25 03.8	
	comp=Z,161nm,20.3s,baz=174,slow=40						
SONM	**Songino Array**	**20.27**	**10**	P	**P**	**18 16 22.0**	**-0.3**
ULN	**Ulaanbaatar**	**20.40**	**11**	P	**P**	**18 16 23.6**	**-0.2**
MK31	**Makanchi Array**	**24.07**	**327**	P	**P**	**18 17 01.5**	**-0.6**
MK31				IAmb	IAmb	18 17 06.1	
	comp=Z,3.3nm,0.8s						
MKAR	**Makanchi Array**	**24.07**	**327**	P	**P**	**18 17 03.2**	**+1.2**
	comp=Z,3.9nm,0.8s,baz=126,slow=9.8,SNR=33						
MKAR	**Makanchi Array**	**24.07**	**327**	P	**P**	**18 17 01.4**	**-0.7**
KSRS	**Korea Array**	**24.22**	**60**	LR	LR	18 27 48.9	
	comp=Z,78nm,18.5s,baz=258,slow=40						
MAKZ	**Makanchi**	**24.23**	**326**	P	**P**	**18 17 04.1**	**+0.5**
MAKZ				IAmb	IAmb	18 17 07.6	
	comp=Z,3.9nm,0.9s						
AAK	**Ala-Archa**	**26.25**	**311**	P	**P**	**18 17 24.4**	**+2.3**
	comp=Z,0.7nm,0.6s,baz=101,slow=5.2,SNR=3.2						
AAK	**Ala-Archa**	**26.25**	**311**	P	**P**	**18 17 23.5**	**+1.3**
KURBB	**Kurchatov Arra**	**28.53**	**329**	P	**P**	**18 17 44.2**	**+2.0**
	comp=Z,0.9nm,0.7s,baz=142,slow=9.4,SNR=13						
KURK	**Kurchatov**	**28.56**	**329**	P	**P**	**18 17 44.0**	**+1.5**
KURK				IAmb	IAmb	18 17 45.2	
	comp=Z,3.0nm,1.0s						
ZALV	**Zalesovo Beam**	**28.70**	**339**	P	**P**	**18 17 46.3**	**+2.5**
	comp=Z,0.4nm,0.5s,baz=161,slow=9.2,SNR=2.7						
ZALV				LR	LR	18 30 47.3	
	comp=Z,65nm,20.9s,baz=177,slow=40						
USRK	**Ussuriysk Ar.**	**29.39**	**48**	LR	LR	18 29 22.2	
	comp=Z,64nm,18.8s,baz=162,slow=36						
MJAR	**Matsushiro Arr**	**32.17**	**65**	LR	LR	18 30 20.6	
	comp=Z,30nm,21.8s,baz=0.0,slow=35						
GEYT	**Alibeck**	**37.36**	**297**	LR	LR	18 36 48.9	
	comp=Z,74nm,20.5s,baz=205,slow=40						
ABKAR	**Akbulak array**	**38.13**	**315**	P	**P**	**18 19 07.6**	**+1.9**
ABKAR	**Akbulak array**	**38.13**	**315**	P	**P**	**18 19 06.9**	**+1.1**
ABKAR				IAmb	IAmb	18 19 11.1	
	comp=Z,3.6nm,1.2s						
TIXI	**Tiksi**	**46.34**	**12**	LR	LR	18 40 55.7	
	comp=Z,68nm,18.6s,baz=351,slow=38						
KNRA	**Kununurra**	**50.82**	**145**	P	**P**	**18 20 45.0**	**-2.4**
FITZ	**Fitzroy Crossi**	**51.43**	**150**	P	**P**	**18 20 51.6**	**-0.4**
FITZ				IAmb	IAmb	18 21 12.0	
	comp=Z,7.0nm,1.3s						
GIRL	**Giralia**	**51.78**	**165**	P	**P**	**18 20 53.5**	**-1.0**
BRTR	**Keskin Array B**	**56.28**	**301**	P	**P**	**18 21 27.6**	**0.0**
	comp=Z,0.5nm,0.8s,baz=96,slow=4.3,SNR=3.3						
BRTR	**Keskin Array B**	**56.28**	**301**	P	**P**	**18 21 27.3**	**-0.3**
WRA	**Warramunga Arr**	**57.29**	**143**	P	**P**	**18 21 33.6**	**-1.1**
	comp=Z,6.6nm,0.7s,baz=329,slow=8.0,SNR=9.5						
WRA	**Warramunga Arr**	**57.29**	**143**	P	**P**	**18 21 32.9**	**-1.8**
AKASG	**Malin Array Be**	**57.86**	**314**	P	**P**	**18 21 38.3**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=69,slow=7.6,SNR=3.0						
AKASG	**Malin Array Be**	**57.86**	**314**	P	**P**	**18 21 38.8**	**+0.4**
ASAR	**Alice Springs**	**60.13**	**145**	P	**P**	**18 21 53.4**	**-1.1**
	comp=Z,0.6nm,0.8s,baz=327,slow=6.8,SNR=6.8						
ASAR	**Alice Springs**	**60.13**	**145**	P	**P**	**18 21 53.6**	**-0.8**
NOA	**NORSAR Array B**	**66.06**	**328**	LR	LR	18 55 40.1	
	comp=Z,45nm,21.9s,baz=250,slow=40						
ILAR	**Eielson Array**	**73.72**	**24**	P	**P**	**18 23 19.9**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=292,slow=4.8,SNR=3.1						
ILAR	**Eielson Array**	**73.72**	**24**	P	**P**	**18 23 20.4**	**-0.1**
YKA	**Yellowknife Ar**	**85.41**	**16**	P	**P**	**18 24 22.7**	**-1.2**
	comp=Z,0.3nm,0.9s,baz=337,slow=6.3						
YKA	**Yellowknife Ar**	**85.41**	**16**	P	**P**	**18 24 24.6**	**+0.6**

*IDC **03** 18:22:00.7±4.2, 19.°90S×169.°45E, h255km±64km, mb3.2/2, mb1 3.5/3, mb1mx3.0/40, mbtmp3.8/3, Error ellipse: s-maj=235.5km s-min=43.2km az=155.0*
*NEIC **03** 18:22:01.9±3.0, 19.°9S±0.°1×169.°4E±0.°1, h258km±9km, mb4.6/7, Error ellipse: s-maj=18.0km s-min=13.7km az=125.0*

ISC 03 18:22:01.5±1.1, 19.°9S±0.°1×169.°5E±0.°1, h250km, n14, σ1s54/15, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.54**	**232**	P	**Pn**	**18 22 59.9**	**-0.1**
	4.1nm,0.3s,baz=66,slow=20,SNR=117						
DZM				S	**S**	**18 23 46.4**	**0.0**
	1.1nm,0.3s,baz=343,slow=19,SNR=3.3						
HNR	**Honiara**	**13.89**	**317**	Pn	**P**	**18 25 11.2**	**+2.0**
HIZ	**Hauiti**	**19.12**	**167**	P	**P**	**18 26 07.5**	**+1.5**
ARMA	**Armidale**	**19.20**	**234**	P	**P**	**18 26 08.5**	**+1.4**
ARMA				IAmb	IAmb	18 26 13.4	
	comp=Z,16nm,1.2s						
WRA	**Warramunga Arr**	**32.97**	**264**	P	**P**	**18 28 11.9**	**-1.4**
	comp=Z,0.5nm,0.3s,baz=93,slow=8.6,SNR=14						
WRA	**Warramunga Arr**	**32.97**	**264**	P	**P**	**18 28 12.1**	**-1.2**
ASAR	**Alice Springs**	**33.17**	**257**	P	**P**	**18 28 13.8**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=87,slow=9.3,SNR=19						
ASAR	**Alice Springs**	**33.17**	**257**	P	**P**	**18 28 12.6**	**-2.3**
MTN	**Manton Dam**	**37.37**	**275**	P	**P**	**18 28 50.3**	**-0.3**
MTN				IAmb	IAmb	18 29 10.7	
	comp=Z,25nm,1.2s						
KNRA	**Kununurra**	**38.91**	**270**	P	**P**	**18 29 02.6**	**-0.9**
KNRA				IAmb	IAmb	18 29 25.3	
	comp=Z,71nm,1.6s						
FITZ	**Fitzroy Crossi**	**41.38**	**265**	P	**P**	**18 29 24.0**	**+0.3**
LCMT	**Little Creek M**	**92.14**	**51**	P	**P**	**18 34 43.0**	**+0.1**
GERES	**GERESS Array B**	**145.18**	**332**	PKPbc	**PKPdf**	**18 41 06.9**	**-2.3**
	comp=Z,0.4nm,0.5s,baz=44,slow=3.1,SNR=5.1						
GERES	**GERESS Array B**	**145.18**	**332**		**PKPdf**	**18 41 07.3**	**-1.9**

JMA 03 18:27:01.8±0.2, 37.°98N×144.°01E, h46km, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.03**	**280**	P	Pn	18 27 34.5	+1.0
JIKH				S	Sn	18 27 58.3	+0.6
OFUJ	**Ofunato**	**2.14**	**302**	P	Pn	18 27 36.2	+1.2
OFUJ				S	Sn	18 28 02.0	+1.7
JIO	**Ouri**	**2.15**	**284**	P	Pn	18 27 36.3	+1.2
JIO				S	Sn	18 28 01.9	+1.3
JKMT	**Kesennumamotoy**	**2.16**	**293**	P	Pn	18 27 36.4	+1.1
JKMT				*eS*	Sn	18 28 02.0	+1.2
JMK	**Ichinoseki**	**2.40**	**295**	P	Pn	18 27 40.0	+1.5
JMK				*eS*	Sn	18 28 08.6	+2.0
JOM	**Ohasama**	**2.60**	**306**	P	Pn	18 27 43.0	+1.7
JOM				*eS*	Sn	18 28 13.7	+2.1
JFT	**Otama**	**2.95**	**262**	P	Pn	18 27 48.0	+1.9
JFT				*eS*	Sn	18 28 21.9	+1.6
JYK	**Kaneyama**	**3.02**	**289**	P	Pn	18 27 49.0	+2.0
JYK				*eS*	Sn	18 28 24.7	+2.8
JANG	**Nango**	**3.08**	**322**	P	Pn	18 27 48.9	+1.0
JANG				*eS*	Sn	18 28 23.7	+0.3
JOT	**Ohata**	**4.09**	**327**	P	Pn	18 28 04.0	+2.2
JOT				*eS*	Sn	18 28 48.3	-0.1
JKB	**Kayabe**	**4.52**	**331**	P	Pn	18 28 10.5	+2.8
JRY	**Ryogami san**	**4.53**	**246**	P	Pn	18 28 08.7	+0.8
JRY				*eS*	Sn	18 28 57.2	-2.2
JCH	**Churui**	**4.66**	**354**	P	Pn	18 28 09.9	+0.4
JCH				*eS*	Sn	18 29 00.2	-2.0
JOD2	**Odawara 2**	**4.80**	**237**	*eS*	Sn	18 29 02.8	-3.1
NEM2	**Nemuro 2**	**5.54**	**13**	P	Pn	18 28 20.2	-1.4
JTKR	**Abashiri--Toko**	**5.99**	**359**	P	Pn	18 28 27.9	+0.2
JTKR				*eS*	Sn	18 29 32.5	-2.4
JHR	**Hokuryu**	**6.01**	**344**	P	Pn	18 28 30.7	+2.6

*IDC **03** 18:34:00.5±0.5, 21.°93S×175.°52W, h0km, mb4.5/18, mb1 4.7/19, mb1mx4.5/34, mbtmp4.5/19, ML4.8/1, MS3.8/23, Ms1 3.9/23, ms1mx3.8/40, Error ellipse: s-maj=20.2km s-min=13.6km az=131.0*
*NEIC **03** 18:34:01.8±1.4, 22.°07S±0.°08×175.°60W±0.°09, h11km±2km, mb5.0/133, Error ellipse: s-maj=12.7km s-min=11.5km az=57.0*
*MOS **03** 18:34:03.2±3.4, 21.°92S×175.°37W, h10km, mb4.9/7, Error ellipse: s-maj=10.3km s-min=7.6km az=53.4*
*BGR **03** 18:34:05.5±0.0, 21.°64S×170.°25W, h33km*
*BJI **03** 18:34:08.0±0.0, 22.°30S×175.°50W, h70km, mB5.2/4, mb4.9/13, Ms4.8/1, Ms7 4.6/2*
ISC 03 18:34:01.4±0.3, 22.°10S±0.°07×175.°44W±0.°07, h10km, n453, σ1s117/434, mb5.0/94, MS3.9/25, 44C-13D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**5.97**	**61**		**Pn**	**18 35 27.2**	**-2.7**
NIUE					Sn	18 36 23.5	-15
RAO	**Raoul Island**	**7.46**	**197**	P	Pn	18 35 55.4	+5.0
MSVF	**Nonsavu**	**7.51**	**304**	*d iP*	Pn	18 36 00.4	+9.2
AFI	**Afiamalu**	**8.86**	**24**	P	**Pn**	**18 36 07.9**	**-1.7**
AFI	**Afiamalu**	**8.86**	**24**	P	**Pn**	**18 36 09.6**	**0.0**
	12nm,0.3s,baz=244,slow=6.9,SNR=7.4						
AFI					Sn	18 37 35.8	-14
	11nm,0.3s,baz=246,slow=20,SNR=3.4						
AFI	**Afiamalu**	**8.86**	**24**		**Pn**	**18 36 07.9**	**-1.7**
RAR	**Rarotonga**	**14.59**	**89**	P	**Pn**	**18 37 27.8**	**-0.2**
RAR	**Rarotonga**	**14.59**	**89**	Pn	Pn	18 37 24.4	-3.6
	2.1nm,0.3s,baz=275,slow=11,SNR=3.7						
RAR					Sn	18 39 54.5	-15
	1.6nm,0.3s,baz=348,slow=19,SNR=3.8						
RAR				LR	LR	18 41 46.9	
	comp=Z,314nm,21.7s,baz=277,slow=32						
RAR	**Rarotonga**	**14.59**	**89**	Pn	**Pn**	**18 37 27.8**	**-0.2**
OUZ	**Omahuta**	**16.21**	**214**		**P**	**18 37 53.6**	**+1.1**
DZM	**Mont Dzumac**	**16.80**	**267**	*eP*	P	18 38 05.9	+6.8
	73nm,1.1s						
DZM				*eLQ*	LQ	18 41 21.0	
	576nm,25.1s						
DZM				*eLR*	LR	18 42 03.7	
	comp=Z,905nm,24.2s						
DZM	**Mont Dzumac**	**16.80**	**267**	Pn	**P**	**18 38 03.7**	**+4.6**
	0.6nm,0.3s,baz=76,slow=19,SNR=11						
DZM				LR	LR	18 42 39.7	
	comp=Z,184nm,20.1s,baz=98,slow=31						
DZM	**Mont Dzumac**	**16.80**	**267**	P	**P**	**18 37 57.9**	**-1.3**
URZ	**Urewera**	**17.33**	**200**	P	**Pn**	**18 38 01.2**	**-2.2**
	0.3nm,0.3s,baz=310,slow=18,SNR=3.9						
URZ				S	Sn	18 41 02.8	-13
	0.8nm,0.3s,baz=72,slow=20,SNR=4.5						
URZ	**Urewera**	**17.33**	**200**		**P**	**18 38 05.3**	**+0.4**
HIZ	**Hauiti**	**18.36**	**205**		**P**	**18 38 17.9**	**+1.7**
HIZ				IAmb	IAmb	18 38 35.5	
	comp=Z,115nm,1.3s						
BHW	**Baring Head**	**20.91**	**201**	P	Pn	18 38 47.1	+0.6
PLWZ	**Palliser**	**20.93**	**200**	P	**P**	**18 38 43.0**	**-1.3**
TUWZ	**Tuamarina**	**21.25**	**202**	P	**P**	**18 38 46.3**	**-1.3**
QRZ	**Quartz Range**	**21.26**	**206**	P	**P**	**18 38 47.3**	**-0.5**
NNZ	**Nelson**	**21.27**	**204**	P	**P**	**18 38 46.1**	**-1.8**
NNZ				IAmb	IAmb	18 39 00.6	
	comp=Z,145nm,1.3s						
THZ	**Tophouse**	**21.92**	**204**	P	**P**	**18 38 53.0**	**-1.9**
THZ				IAmb	IAmb	18 39 11.8	
	comp=Z,178nm,1.8s						
KHZ	**Kahutara**	**22.26**	**202**	P	**P**	**18 38 57.3**	**-1.2**
LTZ	**Lake Taylor**	**23.03**	**204**	P	**P**	**18 39 06.8**	**0.0**
LTZ				IAmb	IAmb	18 39 29.4	
	comp=Z,114nm,1.7s						
TBI	**Tubuai**	**23.98**	**98**	*e*LR	LR	18 45 06.2	
	comp=Z,886nm,27.5s,baz=273						
TBI	**Tubuai**	**23.98**	**98**	*e*T	T	19 03 44.9	
	comp=Z,28nm,0.4s						
RPZ	**Rata Peaks**	**24.29**	**204**	P	**P**	**18 39 21.6**	**+2.6**
	comp=Z,12nm,0.7s,baz=56,slow=3.6,SNR=3.0						
RPZ				LR	LR	18 49 00.6	
	comp=Z,395nm,20.5s,baz=34,slow=37						
RPZ	**Rata Peaks**	**24.29**	**204**	P	**P**	**18 39 20.0**	**+1.0**
FOZ	**Fox Glacier**	**24.63**	**206**	P	**P**	**18 39 22.5**	**+0.5**
PAE	**Paea**	**24.70**	**84**	*e*T	T	19 04 30.7	
	comp=Z,66nm,0.3s						
PPT2	**Papeete2**	**24.72**	**84**	*e*LQ	LQ	18 44 28.2	
	comp=Z,404nm,27.1s						
PPT2				*e*LR	LR	18 45 21.8	
	comp=Z,1μm,25.8s,baz=254						
PPT2	**Papeete2**	**24.72**	**84**	*e*T	T	19 04 32.9	
	comp=Z,41nm,0.3s						
PPT	**Papeete**	**24.73**	**84**	LR	LR	18 46 14.4	
	comp=Z,298nm,21.3s,baz=192,slow=30						
TVO	**Taravao**	**24.97**	**85**	*e*T	T	19 04 48.7	
	comp=Z,10nm,0.3s						
LBZ	**Lake Benmore**	**25.19**	**205**	P	**P**	**18 39 27.4**	**+0.3**
LBZ				IAmb	IAmb	18 39 53.5	
	comp=Z,76nm,1.5s						
WKZ	**Wanaka**	**26.02**	**206**	P	**P**	**18 39 35.3**	**+0.6**
HNR	**Honiara**	**26.78**	**294**	LR	LR	18 49 35.8	
	comp=Z,110nm,18.7s,baz=156,slow=35						
MLZ	**Mavora Lakes**	**26.83**	**206**	P	**P**	**18 39 42.4**	**+0.5**
ARMA	**Armidale**	**30.59**	**247**	P	**P**	**18 40 15.4**	**-0.3**
EIDS	**Eidsvold**	**30.78**	**257**	P	**P**	**18 40 16.4**	**-0.9**
EIDS				IAmb	IAmb	18 40 26.0	
	comp=Z,40nm,1.9s						
CTA	**Charters Tower**	**35.74**	**266**	P	**P**	**18 41 01.4**	**+0.7**
	comp=Z,7.9nm,0.6s,baz=100,slow=11,SNR=10						
CTAO	**Charters Tower**	**35.74**	**266**	P	**P**	**18 41 01.2**	**+0.5**
TAOE	**Nuku Hiva Isla**	**36.36**	**74**	*e*LR	LR	18 50 39.7	
	comp=Z,694nm,28.1s						
TAOE	**Nuku Hiva Isla**	**36.36**	**74**	*e*T	T	19 19 00.5	
	comp=Z,32nm,0.2s						
TOO	**Toolangi**	**36.95**	**236**	P	**P**	**18 41 10.4**	**-0.4**
TOO				pmax	pmax		
	comp=Z,94nm,1.9s						
TOO	**Toolangi**	**36.95**	**236**	P	**P**	**18 41 10.4**	**-0.4**
TOO				IAmb	IAmb	18 41 20.3	
	comp=Z,94nm,1.9s						
PMG	**Port Moresby**	**38.03**	**283**	*i* P	**P**	**18 41 22.7**	**+2.5**
PMG				pmax	pmax		
	comp=Z,72nm,1.0s						
PMG	**Port Moresby**	**38.03**	**283**	P	**P**	**18 41 21.8**	**+1.6**
	comp=Z,16nm,0.9s,baz=91,slow=4.1,SNR=6.8						
PMG	**Port Moresby**	**38.03**	**283**	P	**P**	**18 41 21.2**	**+1.0**
PMG				IAmb	IAmb	18 41 26.4	
	comp=Z,15nm,0.8s						
STKA	**Stephens Creek**	**39.29**	**246**	P	**P**	**18 41 32.4**	**+1.8**
	comp=Z,3.5nm,0.6s,baz=101,slow=12,SNR=9.8						
STKA	**Stephens Creek**	**39.29**	**246**	P	**P**	**18 41 30.5**	**-0.1**
COEN	**Coen**	**40.08**	**274**	P	**P**	**18 41 38.8**	**+1.4**
BBOO	**Buckleboo**	**44.01**	**245**	P	**P**	**18 42 08.5**	**-0.8**
BBOO				IAmb	IAmb	18 42 28.7	
	comp=Z,53nm,1.5s						
MLH	**Mauna Loa**	**45.75**	**27**	P	**P**	**18 42 25.5**	**+2.0**
AS31	**Alice Springs**	**46.50**	**258**	P	**P**	**18 42 29.4**	**+0.1**
ASAR	**Alice Springs**	**46.50**	**258**	P	**P**	**18 42 28.9**	**-0.3**
ASAR						18 44 03.7	
ASAR	**Alice Springs**	**46.50**	**258**	P	**P**	**18 42 28.4**	**-0.8**
	comp=Z,5.9nm,0.8s,baz=92,slow=7.4,SNR=50						
ASAR				PcP	**PcP**	**18 44 03.2**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=111,slow=3.5,SNR=4.6						
ASAR				LR	LR	19 01 38.6	
	comp=Z,261nm,18.9s,baz=112,slow=36						
ASAR	**Alice Springs**	**46.50**	**258**	P	**P**	**18 42 28.9**	**-0.3**
ASAR				PcP	**PcP**	**18 44 03.7**	**-0.1**
WRAB	**Tennant Creek**	**46.76**	**263**	*e*P	**P**	**18 42 30.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WRA	**Warramunga Arr**	**46.76**	**263**	P	**P**	**18 42 30.1**	**-1.2**
WRA	**Warramunga Arr**	**46.76**	**263**	P	**P**	**18 42 29.9**	**-1.4**
	comp=Z,1.5nm,0.3s,baz=100,slow=8.3,SNR=30						
WRA				LR	LR	19 01 16.8	
	comp=Z,114nm,19.8s,baz=200,slow=35						
WRA	**Warramunga Arr**	**46.76**	**263**	P	**P**	**18 42 30.1**	**-1.2**
FORT	**Forrest**	**50.88**	**248**	P	**P**	**18 43 00.9**	**-1.8**
KNRA	**Kununurra**	**52.95**	**267**	P	**P**	**18 43 17.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**55.19**	**263**	P	**P**	**18 43 34.1**	**-0.7**
VNDA	**Vanda**	**56.55**	**186**	P	**P**	**18 43 46.3**	**+2.7**
	comp=Z,1.2nm,0.8s,baz=11,slow=7.6,SNR=4.0						
VNDA				LR	LR	19 07 47.7	
	comp=Z,35nm,18.1s,baz=355,slow=36						
VNDA	**Vanda**	**56.55**	**186**	P	**P**	**18 43 45.4**	**+1.8**
SOEI	**Soe**	**58.94**	**272**	P	**P**	**18 44 01.8**	**+0.2**
BATI	**Baumata**	**59.35**	**271**	LR	LR	19 07 55.6	
	comp=Z,241nm,21.8s,slow=34						
PSAD2	**Pilbara Seismi**	**59.52**	**257**	P	**P**	**18 44 05.2**	**-0.2**
PSAA1	**Pilbara Seismi**	**59.65**	**257**	P	**P**	**18 44 04.7**	**-1.5**
PSAA1				IAmb	IAmb	18 44 14.2	
	comp=Z,9.1nm,1.0s						
PSAB1	**Pilbara Seismi**	**59.66**	**257**	P	**P**	**18 44 06.2**	**-0.1**
PSAD1	**Pilbara Seismi**	**59.68**	**257**	P	**P**	**18 44 06.0**	**-0.4**
RPN	**Rapa Nui**	**59.70**	**109**	LR	LR	19 03 10.7	
	comp=Z,65nm,20.8s,baz=267,slow=29						
MORW	**Morawa**	**61.44**	**248**	P	**P**	**18 44 17.7**	**-0.7**
CASY	**Casey**	**63.55**	**206**	P	**P**	**18 44 32.5**	**+0.7**
CASY				IAmb	IAmb	18 44 34.2	
	comp=Z,6.9nm,0.9s						
QSPA	**South Pole Qui**	**67.97**	**180**	P	**P**	**18 45 02.1**	**+1.6**
	comp=Z,8.3nm,0.9s,baz=62,slow=1.5,SNR=18						
QSPA	**South Pole Qui**	**67.97**	**180**	P	**P**	**18 45 02.3**	**+1.7**
QSPA				IAmb	IAmb	18 45 03.8	
	comp=Z,8.2nm,0.8s						
MJAR	**Matsushiro Arr**	**72.92**	**322**	LR	LR	19 13 45.5	
	comp=Z,26nm,21.6s,baz=335,slow=33						
MAJO	**Matsushiro**	**72.92**	**322**	P	**P**	**18 45 30.9**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,53nm,1.9s						
MAJO	**Matsushiro**	**72.92**	**322**	P	**P**	**18 45 30.9**	**-0.1**
MJB9	**Matsu-Tunnel**	**72.93**	**322**	P	**P**	**18 45 30.8**	**-0.2**
UNV	**Unalaska Valle**	**76.03**	**5**	P	**P**	**18 45 49.1**	**+0.6**
PKM	**Mcpherson Peak**	**77.44**	**44**	P	**P**	**18 45 58.8**	**+1.5**
	baz=232						
SMMC	**Simmler**	**77.59**	**44**	P	**P**	**18 46 00.1**	**+2.2**
	baz=232						
PEA0B	**Petropavlovsk-**	**78.45**	**344**	P	**P**	**18 46 01.1**	**-1.1**
PEA0B				pmax	pmax		
	comp=Z,196nm,2.0s						
PEA0B	**Petropavlovsk-**	**78.45**	**344**	P	**P**	**18 46 01.1**	**-1.1**
PETK	**Petropavlovsk-**	**78.45**	**344**	P	**P**	**18 46 01.6**	**-0.6**
	comp=Z,7.9nm,0.9s,baz=126,slow=8.9,SNR=12						
PETK				LR	LR	19 14 40.6	
	comp=Z,86nm,20.7s,baz=242,slow=31						
PETK	**Petropavlovsk-**	**78.45**	**344**	P	**P**	**18 46 01.4**	**-0.8**
MONP2	**Monument Peak**	**78.49**	**47**	P	**P**	**18 46 04.4**	**+1.2**
	baz=234						
VES	**Vestal, Richgr**	**78.50**	**44**	P	**P**	**18 46 04.3**	**+1.5**
	baz=232						
KMRM	**Mail Ridge**	**78.51**	**38**	P	**P**	**18 46 05.3**	**+2.3**
KMRM				IAmb	IAmb	18 46 06.0	
	comp=Z,23nm,0.9s						
IKP	**In-Ko-Pah, Jac**	**78.57**	**48**	P	**P**	**18 46 05.0**	**+1.6**
	baz=234						
EDW2	**Edwards Air Fo**	**78.62**	**45**	P	**P**	**18 46 05.1**	**+1.5**
	baz=233						
ISA	**Isabella, Lake**	**78.78**	**44**	P	**P**	**18 46 05.6**	**+1.0**
ISA				pmax	pmax		
	comp=Z,17nm,1.2s						
ISA	**Isabella, Lake**	**78.78**	**44**	P	**P**	**18 46 05.6**	**+1.0**
ISA				IAmb	IAmb	18 46 07.2	
	comp=Z,17nm,1.1s						
ISA	**Isabella, Lake**	**78.78**	**44**	P	**P**	**18 46 06.1**	**+1.6**
	baz=232						
PFO	**Pinyon Flats O**	**78.89**	**47**	P	**P**	**18 46 05.3**	**0.0**
PFO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PFO	**Pinyon Flats O**	**78.89**	**47**	LR	LR	19 12 29.0	
	comp=Z,82nm,19.5s,baz=225,slow=29						
PFO	**Pinyon Flats O**	**78.89**	**47**	P	**P**	**18 46 05.3**	**0.0**
PFO	**Pinyon Flats O**	**78.89**	**47**	P	**P**	**18 46 06.3**	**+1.1**
	baz=234						
TPFO

214A Organ Pipe Nat 80.48 50 P P 18 46 14.7 +0.8
214A IAmb IAmb 18 46 16.4
comp=Z,28nm,1.8s
HUMO Hull Mountain 80.52 36 P P 18 46 15.2 +1.4
RYN Ryan 80.56 42 P P 18 46 15.2 +1.0
NVAR Mina Array Bea 80.58 42 P P 18 46 15.4 +1.0
comp=Z,8.2nm,1.1s,baz=223,slow=8.8,SNR=30
NVAR LR LR 19 18 08.1
comp=Z,118nm,19.1s,baz=214,slow=33
M04C Macdoel 80.60 38 P P 18 46 16.4 +2.1
baz=229
L04D Klamath Falls 80.63 37 P P 18 46 15.8 +1.3
baz=229
PAHR Pah Rah Range 80.71 40 P P 18 46 15.8 +0.7
PAHR IAmb IAmb 18 46 17.4
comp=Z,13nm,1.3s
MAW Mawson 80.86 199 P P 18 46 16.8 +1.5
comp=Z,3.3nm,0.8s,baz=132,slow=6.8,SNR=7.5
MAW LR LR 19 20 07.7
comp=Z,59nm,20.8s,baz=62,slow=34
MAW Mawson 80.86 199 P P 18 46 11.7 -3.6
TPNV Topopah Spring 80.99 44 P P 18 46 17.5 +0.9
TPNV pmax pmax
comp=Z,6.0nm,1.0s
TPNV Topopah Spring 80.99 44 P P 18 46 17.5 +0.9
TPNV Topopah Spring 80.99 44 P P 18 46 18.0 +1.4
baz=234
KVN Kaiserville 81.08 42 P P 18 46 17.8 +0.7
KVN pmax pmax
comp=Z,6.0nm,1.1s
KVN Kaiserville 81.08 42 P P 18 46 17.8 +0.7
J04D Umpqua Nationa 81.41 36 P P 18 46 20.7 +1.9
baz=229
SHPR Sheep Range 81.44 45 P P 18 46 19.9 +0.9
W13A Hualapai Mount 81.48 47 P P 18 46 20.3 +1.0
MOD Modoc Plateau 81.56 38 P P 18 46 20.5 +1.0
I04A Tendick Farm, 81.61 36 P P 18 46 20.3 +0.7
baz=228
J05D Fort Rock, OR 81.92 37 P P 18 46 22.9 +1.5
baz=230
TUC Tucson 82.11 51 P P 18 46 23.6 +1.0
TUC pmax pmax
comp=Z,22nm,1.7s
TUC Tucson 82.11 51 P P 18 46 23.6 +1.0
TUC IAmb IAmb 18 46 25.5
comp=Z,22nm,1.7s
TUC Tucson 82.11 51 P P 18 46 24.3 +1.7
baz=238
R11A Troy Canyon, C 82.24 43 P P 18 46 23.9 +0.7
R11A Troy Canyon, C 82.24 43 P P 18 46 24.5 +1.3
baz=234
H04A Detroit Lake 82.32 35 P P 18 46 24.1 +0.8
PINE Pine Mountain 82.41 36 P P 18 46 25.5 +1.5
PINE IAmb IAmb 18 46 26.8
comp=Z,24nm,1.1s
319A Douglas 82.71 52 P P 18 46 27.0 +1.2
319A IAmb IAmb 18 46 28.6
comp=Z,13nm,1.1s
NJ2 Nanjing 82.74 309 eP P 18 46 27.1 +1.4
NJ2 pmax pmax
comp=Z,9.0nm,0.8s
X16A Lo Mia Camp, P 82.78 48 P P 18 46 27.2 +1.1
X16A IAmb IAmb 18 46 29.1
comp=Z,8.6nm,1.1s
WVOR Wild Horse Val 82.85 39 P P 18 46 27.1 +0.9
WVOR pmax pmax
comp=Z,16nm,1.2s
WVOR Wild Horse Val 82.85 39 P P 18 46 27.1 +0.9
WVOR IAmb IAmb 18 46 28.6
comp=Z,16nm,1.2s
LCMT Little Creek M 82.99 46 P P 18 46 27.9 +0.7
F04A Amboy 83.03 34 P P 18 46 27.6 +0.7
CCUT Cedar City 83.21 45 P P 18 46 29.7 +1.3
KNB Kanab 83.27 46 P P 18 46 30.0 +1.4
KNB pmax pmax
comp=Z,16nm,1.1s
KNB Kanab 83.27 46 P P 18 46 30.0 +1.4
U15A North Rim 83.30 46 P P 18 46 29.8 +0.9
U15A IAmb IAmb 18 46 32.0
comp=Z,21nm,1.1s
SZCU Shurtz Canyon 83.42 45 P P 18 46 30.9 +1.5
WUAZ Wupatki 83.42 48 P P 18 46 30.4 +1.0
WUAZ IAmb IAmb 18 46 31.7
comp=Z,24nm,1.6s
WUAZ Wupatki 83.42 48 P P 18 46 31.4 +2.0
baz=237
PSUT Pine Spring 83.45 44 P P 18 46 30.8 +1.2
G06A Carlson Farm, 83.51 36 P P 18 46 30.4 +0.9
G06A IAmb IAmb 18 46 31.8
comp=Z,12nm,1.1s
PKCU Pink Cliffs 83.85 46 P P 18 46 33.1 +1.3
ELK Elko 83.86 42 P P 18 46 32.0 +0.4
ELK pmax pmax
comp=Z,7.0nm,1.0s
ELK Elko 83.86 42 P P 18 46 32.0 +0.4
ELK IAmb IAmb 18 46 33.7
comp=Z,7.2nm,1.0s
X18A Snowflake 83.88 49 P P 18 46 33.0 +1.2
LON Longmire 83.88 34 P P 18 46 32.1 +0.7
LON pmax pmax
comp=Z,16nm,1.3s
LON Longmire 83.88 34 P P 18 46 32.1 +0.7
LON IAmb IAmb 18 46 32.7
comp=Z,16nm,1.3s
GRNR Gornyy 84.03 332 eP P 18 46 31.3 -0.7
GRNR pmax pmax
comp=Z,5.0nm,1.4s
D05A Enumclaw 84.08 33 P P 18 46 33.7 +1.5
MTPU Mount Pierson 84.26 45 P P 18 46 35.7 +1.8
121A Cookes Peak, D 84.40 52 P P 18 46 35.6 +1.1
121A IAmb IAmb 18 46 37.5
comp=Z,15nm,1.2s
121A Cookes Peak, D 84.40 52 P P 18 46 36.6 +2.1
baz=240
TCRU Three Creeks R 84.41 45 P P 18 46 35.5 +1.0
G08A Pilot Rock 84.46 36 P P 18 46 34.9 +0.5
G08A IAmb IAmb 18 46 36.7
comp=Z,15nm,1.1s
MSU Marysvale 84.53 45 P P 18 46 36.6 +1.5
MSU Marysvale 84.53 45 P P 18 46 36.5 +1.5
B05A Bryant 84.74 33 P P 18 46 37.1 +1.5
baz=228
E07A Sunnyside 84.78 35 P P 18 46 36.5 +0.6
E07A IAmb IAmb 18 46 38.3
comp=Z,16nm,1.2s
LTY Liberty 84.81 34 P P 18 46 37.0 +0.9
LTY IAmb IAmb 18 46 37.9
comp=Z,10.0nm,1.1s
HAWA Hanford 84.85 35 P P 18 46 37.7 +1.5
HAWA IAmb IAmb 18 46 38.4
comp=Z,20nm,1.4s
DUG Dugway, Tooele 85.06 43 P P 18 46 38.5 +0.9
baz=236
MFID Camas Ranch 85.08 39 P P 18 46 38.1 +0.5
MFID IAmb IAmb 18 46 39.7
comp=Z,13nm,1.1s
BMO Blue Mountains 85.11 37 P P 18 46 37.9 +0.2
BMO pmax pmax
comp=Z,4.0nm,1.1s
BMO Blue Mountains 85.11 37 P P 18 46 37.9 +0.2
KLR Kul'dur 85.13 328 i P P 18 46 38.1 +0.6
KLR pmax pmax
comp=Z,2.0nm,1.1s
TMUT Trail Mountain 85.59 44 P P 18 46 40.9 +0.4
SUA Susitna One 85.61 12 P P 18 46 39.9 +0.1
SUA IAmb IAmb 18 46 42.2
comp=Z,14nm,1.2s
MNTX Cornudas Mount 85.75 53 P P 18 46 41.7 +0.6
MNTX IAmb IAmb 18 46 43.6
comp=Z,11nm,1.1s
MNTX Cornudas Mount 85.75 53 P P 18 46 42.5 +1.4
baz=241
LENM Lemitar 85.80 51 P P 18 46 42.7 +1.2
F10A Beach Ranch, E 85.84 36 P P 18 46 41.1 -0.2
F10A IAmb IAmb 18 46 46.9
comp=Z,8.4nm,1.0s
SPUT South Promonto 85.91 42 P P 18 46 42.2 +0.3
TX31 Lajitas Ar. Si 85.93 56 P P 18 46 43.3 +1.2
TX31 IAmb IAmb 18 46 44.8
comp=Z,23nm,1.5s
TX32 Lajitas Array 85.93 56 P P 18 46 42.8 +0.6
TX32 IAmb IAmb 18 46 44.8
comp=Z,23nm,1.5s
TXAR Lajitas Array 85.93 56 P P 18 46 43.1 +1.0
comp=Z,3.4nm,0.9s,baz=213,slow=6.0,SNR=23
TXAR LR LR 19 20 58.2
comp=Z,34nm,18.1s,baz=0.0,slow=33
TXAR Lajitas Array 85.93 56 P P 18 46 42.8 +0.6
SRU San Rafael Swe 85.94 45 P P 18 46 42.6 +0.6
SRU pmax pmax
comp=Z,8.0nm,1.0s
SRU San Rafael Swe 85.94 45 P P 18 46 42.6 +0.6
P17A Butcher Ranch, 85.99 45 P P 18 46 42.9 +0.6
BNM Barren Site 86.05 51 P P 18 46 43.0 +0.3
TTA Tatalina 86.13 9 P P 18 46 43.2 +0.9
TTA Tatalina 86.13 9 P P 18 46 43.2 +0.9
B08A Colville Reser 86.20 34 P P 18 46 43.6 +0.7
SNAA Sanae 86.33 178 i P P 18 46 42.3 -1.1
PLCA Paso Flores 86.44 133 LR LR 19 19 00.8
comp=Z,55nm,21.5s,baz=236,slow=31
TCUT Toone Canyon 86.46 43 P P 18 46 45.0 +0.4
ANMO Albuquerque 86.56 50 i P P 18 46 43.9 -1.4
ANMO pmax pmax
comp=Z,11nm,1.1s
ANMO Albuquerque 86.56 50 P P 18 46 46.0 +0.7
ANMO IAmb IAmb 18 46 47.7
comp=Z,16nm,1.1s
ANMO Albuquerque 86.56 50 P P 18 46 46.7 +1.5
baz=240
KTH Kantishna Hill 87.52 11 P P 18 46 49.2 +0.2
KTH IAmb IAmb 18 46 51.7
comp=Z,6.3nm,1.1s
TRF Thorofare Moun 87.53 11 P P 18 46 48.9 -0.3
TRF IAmb IAmb 18 46 53.3
comp=Z,9.3nm,0.8s
S22A 4UR Ranch, Cre 87.70 48 P P 18 46 50.9 +0.1
S22A 4UR Ranch, Cre 87.70 48 P P 18 46 52.1 +1.2
baz=240
RND Reindeer 87.75 12 P P 18 46 50.2 0.0
RND pmax pmax
comp=Z,27nm,1.3s
RND Reindeer 87.75 12 P P 18 46 50.2 0.0
BPAW Bear Paw Mtn. 88.01 10 P P 18 46 49.7 -1.6
BPAW IAmb IAmb 18 46 50.4
comp=Z,28nm,2.0s
MCK McKinley 88.04 11 P P 18 46 50.5 -1.0
MCK pmax pmax
comp=Z,23nm,1.4s
MCK McKinley 88.04 11 P P 18 46 50.5 -1.0
SEY Seymchan 88.49 346 i P P 18 46 53.0 -0.6
SEY Seymchan 88.49 346 P P 18 46 53.0 -0.6
comp=Z,6.0nm,0.9s,baz=92,slow=7.5,SNR=6.0
PDAR Pinedale Array 88.51 42 P P 18 46 54.1 -0.3
comp=Z,1.2nm,0.8s,baz=194,slow=5.4,SNR=7.0
PDAR LR LR 19 22 35.8
comp=Z,72nm,19.4s,baz=216,slow=33
PDAR Pinedale Array 88.51 42 P P 18 46 53.8 -0.7
SDCO Great Sand Dun 88.61 48 P P 18 46 55.8 +0.6
baz=241
YHL Hebgen Lake 88.65 40 P P 18 46 55.4 +0.2
WRH Wood River Hil 88.87 11 P P 18 46 54.8 -0.5
BCAR Beaver Creek A 88.94 15 P P 18 46 55.0 -0.7
HDA Harding Lake 89.03 12 P P 18 46 55.3 -0.8
HDA IAmb IAmb 18 46 58.5
comp=Z,19nm,1.6s
HDA Harding Lake 89.03 12 P P 18 46 56.4 +0.3
baz=206
CCB Clear Creek Bu 89.08 12 P P 18 46 55.4 -0.9
CCB IAmb IAmb 18 46 57.4
comp=Z,14nm,1.4s
SCRK Sand Creek 89.24 13 P P 18 46 57.5 +0.3
SCRK IAmb IAmb 18 46 58.5
comp=Z,18nm,1.6s
COLA College 89.28 11 i P P 18 46 55.9 -1.3
COLA pmax pmax
comp=Z,7.0nm,1.3s
IMAR Indian Mountai 89.35 9 P P 18 46 57.9 +0.3
IL31 89.36 12 P P 18 46 57.3 -0.3
ILAR Eielson Array 89.36 12 P P 18 46 56.6 -1.1
ILAR Eielson Array 89.36 12 P P 18 46 57.2 -0.5
comp=Z,0.8nm,0.5s,baz=208,slow=5.6,SNR=12
ILAR LR LR 19 19 44.2
comp=Z,101nm,19.5s,baz=201,slow=31
ILAR Eielson Array 89.36 12 P P 18 46 56.6 -1.1
WALA Waterton Lakes 89.48 35 P P 18 46 59.0 +0.2
WALA IAmb IAmb 18 47 02.9
comp=Z,18nm,1.6s
PRP Porcupine Dome 90.29 12 P P 18 47 02.0 -0.1
PRP IAmb IAmb 18 47 03.5
comp=Z,6.8nm,1.2s
DAWY Dawson 90.36 15 P P 18 47 02.9 +0.5
EGAK Eagle 90.55 14 P P 18 47 03.1 -0.1
EGAK IAmb IAmb 18 47 04.9
comp=Z,13nm,1.3s
BILL Bilibino 90.88 353 eP P 18 47 05.0 +0.3
BILL e 18 47 10.6
BILL pmax pmax
comp=Z,5.0nm,1.1s
WMOK Wichita Mounta 92.06 53 P P 18 47 12.4 +1.4
WMOK pmax pmax
comp=Z,8.0nm,1.1s
WMOK Wichita Mounta 92.06 53 P P 18 47 12.4 +1.4
WMOK IAmb IAmb 18 47 15.5
comp=Z,7.9nm,1.1s
WMOK Wichita Mounta 92.06 53 P P 18 47 14.9 +4.0
baz=245
BMAR Burnt Mountain 92.17 11 P P 18 47 10.9 +0.1
HHC Hu-ho-hao-te 92.18 313 eP P 18 47 11.6 +0.1
HHC S S 18 58 05.6 -8.8
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,84nm,5.6s
HHC LR LR
comp=Z,170nm,17.9s
HHC LR LR
comp=Z,100nm,18.7s
HHC LR LR
comp=Z,80nm,17.9s
RSSD Black Hills 92.67 43 P P 18 47 13.5 -0.3
RSSD pmax pmax
comp=Z,12nm,1.1s
RSSD Black Hills 92.67 43 P P 18 47 13.5 -0.3
RSSD IAmb IAmb 18 47 15.2
comp=Z,12nm,1.1s
RSSD Black Hills 92.67 43 P P 18 47 14.6 +0.8
baz=242
CMAR Chiang Mai Arr 92.90 289 P P 18 47 15.3 +0.1
CMAR Chiang Mai Arr 92.90 289 P P 18 47 16.8 +1.6
comp=Z,1.4nm,1.0s,baz=105,slow=3.0,SNR=8.7
CMAR LR LR 19 27 28.8
comp=Z,25nm,20.0s,baz=70,slow=35
CMAR Chiang Mai Arr 92.90 289 P P 18 47 15.3 +0.1
EPYK Eagle Plains 92.91 15 P P 18 47 15.0 +0.9
baz=216
CD2 Chengdu 93.66 302 P P 18 47 17.9 -0.6
CD2 pmax pmax
comp=Z,10.0nm,0.5s
YAK Yakutsk 94.50 337 i P P 18 47 20.3 -1.2
YAK pmax pmax
comp=Z,5.0nm,1.1s
LZH Lanzhou 95.64 307 eP P 18 47 27.5 -0.1
LZH pP sP 18 47 47.4 +15
LZH sP pP 18 47 58.9 +28
LZH pmax pmax
comp=Z,5.0nm,1.0s
YKA Yellowknife Ar 96.98 24 P P 18 47 32.4 -0.4
YKA Yellowknife Ar 96.98 24 P P 18 47 32.7 0.0
comp=Z,0.9nm,0.8s,baz=238,slow=4.4,SNR=17
YKA Yellowknife Ar 96.98 24 P P 18 47 32.4 -0.4
ECSD EROS Data Cent 97.32 46 P P 18 47 35.4 +0.6
ECSD EROS Data Cent 97.32 46 P P 18 47 35.4 +0.6
baz=247
LPAZ La Paz 99.25 112 LR LR 19 22 32.5
comp=Z,44nm,21.7s,baz=50,slow=29
MKAR Makanchi Array 114.03 313 PKiKP PKiKP 18 52 39.4 -1.4
comp=Z,0.5nm,0.5s,baz=104,slow=1.7,SNR=11
MKAR Makanchi Array 114.03 313 PKiKP 18 52 39.2 -1.6
KSH Kashi 117.76 304 PKP PKPdf 18 52 41.1 -7.2
KSH sPKP 18 53 22.4
KSH PP PP 18 54 06.0 +4.1
KSH AMB AMB
comp=Z,560nm,4.8s
BRVK Borovoye 121.90 320 PKIKP PKPdf 18 52 55.2 -0.5
BRVK Borovoye 121.90 320 PKPdf 18 52 55.2 -0.5
GAR Garm 122.09 303 PKPdf 18 52 56.1 -0.6
KKAR Karatay Array 122.11 308 PKIKP PKPdf 18 52 55.2 -1.3
KKAR Karatay Array 122.11 308 PKPdf 18 52 55.2 -1.3
BOSA Boshof 125.77 203 PKIKP PKPdf 18 53 02.8 -1.4
BOSA Boshof 125.77 203 PKP PKiKP 18 53 05.1 +0.5
comp=Z,1.7nm,0.9s,baz=223,slow=9.0,SNR=3.8
BOSA Boshof 125.77 203 PKPdf 18 53 02.8 -1.4
ARU Arti 127.87 325 i PKIKP PKPdf 18 53 07.2 +0.2
ARU 18 55 13.0
ARU 19 00 10.5
ARU SS SS 19 12 28.2 +6.2
ARCES ARCESS Array B 130.91 350 PKP PKPdf 18 53 12.8 +0.3
comp=Z,1.8nm,0.6s,baz=54,slow=2.1,SNR=7.0
ARCES ARCESS Array B 130.91 350 PKPdf 18 53 12.6 +0.2
FINES FINESS Array B 137.96 345 PKHKP PKPpre 18 53 14.9
FINES FINESS Array B 137.96 345 PKhKP PKPpre 18 53 15.8
comp=Z,5.0nm,1.1s,baz=60,slow=3.4,SNR=5.6
FINES FINESS Array B 137.96 345 PKPpre 18 53 14.9
OBN Obninsk 139.29 332 i PKIKP PKPdf 18 53 28.5 +0.1
OBN 19 00 34.0
OBN pmax pmax
comp=Z,10.0nm,1.2s
SUW Suwalki 145.16 341 ePKP2 PKPbc 18 53 38.4 0.0
SUW Suwalki 145.16 341 ePKP PKPbc 18 53 38.4 0.0
SUW Suwalki 145.16 341 PKPbc 18 53 38.3 -0.2
AKASG Malin Array Be 145.56 332 PKPbc PKPdf 18 53 39.0 -0.7
comp=Z,6.7nm,0.4s,baz=41,slow=4.1,SNR=67
AKASG Malin Array Be 145.56 332 PKPdf 18 53 38.9 -0.9
AKBB Malin Array Si 145.56 332 PKHKP PKPpre 18 53 38.7
AKBB Malin Array Si 145.56 332 PKPdf 18 53 38.7 -1.0
BEL Belsk 147.77 341 ePKP2 PKPbc 18 53 47.4 +1.1
BEL Belsk 147.77 341 ePKP PKPbc 18 53 47.4 +1.1
SORM Soroca 147.80 330 ⇑PKIKP PKPbc 18 53 46.3 -0.2
SORM Soroca 147.80 330 ⇑P PKPbc 18 53 46.3 -0.2
BSEG Bad Segeberg 147.92 354 ePKPbc PKPbc 18 53 47.0 +0.4
baz=2.9,slow=2.4
GAZ Gaziantep 148.08 305 PKPbc 18 53 47.9 +0.2
LVV L'vov 148.36 336 ePKIKP PKPbc 18 53 47.5 -0.4
BZK Bozkurt 148.38 316 ⇑P PKPbc 18 53 48.8 +0.6
RUE Ruedersdorf 148.85 349 ePKPbc PKPbc 18 53 49.9 +0.9
baz=2.9,slow=2.4
KWP Kalwaria Pacla 149.01 337 PKIKP PKPbc 18 53 49.5 -0.1
KWP Kalwaria Pacla 149.01 337 PKPbc 18 53 49.5 -0.1
NRDL Niedersach Rie 149.36 353 ePKPbc PKPbc 18 53 50.7 +0.4
baz=2.9,slow=2.4
OJC Ojcow 149.49 341 PKIKP PKPbc 18 53 50.1 -0.7
OJC Ojcow 149.49 341 PKPbc 18 53 50.1 -0.7
TLCR 149.59 325 ⇑PKHKP PKPpre 18 53 52.2
TLCR 149.59 325 ⇑P PKiKP 18 53 52.2 0.0
BUR08 Bucovina Ar. S 149.60 332 PKPbc 18 53 51.5 +0.3
BURAR Bucovina Array 149.61 332 ⇑PKP2 PKiKP 18 53 52.7 +0.3
BURAR Bucovina Array 149.61 332 ⇑P PKiKP 18 53 52.7 +0.3
BURAR Bucovina Array 149.61 332 PKPdf PKPdf 18 53 46.4 -0.3
BURAR sPKPdf 18 53 51.3 +0.2
ASSE Asse, Remlinge 149.66 353 ePKPbc PKPbc 18 53 51.8 +0.7
baz=2.9,slow=2.4
BR131 Keskin Array S 149.68 312 PKIKP PKPdf 18 53 47.1 -0.1
BR131 18 53 51.2
BR131 Keskin Array S 149.68 312 PKPdf PKPdf 18 53 47.1 -0.1
BR131 pPKPdf 18 53 51.2 +0.7
BRTR Keskin Array B 149.68 312 PKPbc PKPbc 18 53 51.4 -0.4
comp=Z,8.0nm,1.0s,baz=141,slow=4.8,SNR=28
GHRR 149.72 328 ⇓P PKPbc 18 53 52.2 +0.7
KOLS Kolonicke sedl 149.75 337 ePKHKP PKPpre 18 53 52.4
KOLS Kolonicke sedl 149.75 337 ePKP PKiKP 18 53 52.4 -0.1
TESR Tescani 149.77 329 ⇓P PKPbc 18 53 51.3 -0.3
JURR Jurilovca 149.84 324 ⇓P PKPbc 18 53 52.4 +0.6
KSP Ksiaz 149.88 345 ePKHKP PKPpre 18 53 52.8
KSP Ksiaz 149.88 345 ePKP PKiKP 18 53 52.8 +0.1
CLZ Clausthal 149.97 353 ePKPbc PKPbc 18 53 52.2 +0.2
baz=2.9,slow=2.4
UZH Uzhgorod 149.99 336 ePKHKP PKPpre 18 53 50.7
UZH i 18 53 52.8
UZH e 18 53 55.6
TOPG Topolog 150.03 325 ⇑P PKPbc 18 53 52.4 +0.2
CLL Collm 150.12 349 PKHKP PKPpre 18 53 52.1
CLL Collm 150.12 349 i PKPbc PKPbc 18 53 52.4 +0.1
comp=Z,29nm,1.1s
CLL ePKPab **sPKPbc 18 53 57.0 +0.3**
comp=Z,8.0nm,0.8s
CLL Collm 150.12 349 ePKPbc PKPbc 18 53 52.7 +0.4
baz=2.9,slow=2.4
CLL Collm 150.12 349 PKPbc 18 53 52.1 -0.2
OSTC Ostas 150.17 345⇑ePKP PKPbc 18 53 53.1 +0.6
CHVC Chvalec 150.18 345⇑ePKP PKPbc 18 53 53.1 +0.6
ANTO Ankara 150.19 313 PKIKP PKPbc 18 53 52.9 0.0
ANTO Ankara 150.19 313 ⇓P PKiKP 18 53 54.0 +0.2
ANTO Ankara 150.19 313 PKPbc 18 53 52.9 0.0
VRI Vrincioaia 150.20 328 ⇑PKIKP PKPbc 18 53 52.0 -0.7
VRI Vrincioaia 150.20 328 ⇑P PKPbc 18 53 52.0 -0.7
PLOR Plostina 150.25 328 ⇑PKIKP PKPbc 18 53 52.8 -0.1
PLOR Plostina 150.25 328 ⇑P PKPbc 18 53 52.8 -0.1
UPC Upice 150.26 345 ePKIKP PKiKP 18 53 53.4 -0.1
UPC Upice 150.26 345⇑ePKP PKiKP 18 53 53.4 -0.1
TIRR Tirgusor 150.29 324 PKIKP PKPbc 18 53 52.8 -0.1
TIRR Tirgusor 150.29 324 ⇓P PKPbc 18 53 53.2 +0.3
TIRR Tirgusor 150.29 324 PKPbc 18 53 52.8 -0.1
TRPA Tarpa 150.31 335 ⇑P PKPbc 18 53 53.2 +0.4
GTTG Guttingen 150.31 353 ePKPbc PKPbc 18 53 52.9 +0.2
baz=2.9,slow=2.4
DPC Dobruska-Polom 150.33 345 ePKIKP PKiKP 18 53 53.7 0.0
DPC Dobruska-Polom 150.33 345⇑ePKP PKiKP 18 53 53.7 0.0
BRG Berggiesshubel 150.36 348 i PKIKP PKPbc 18 53 53.1 +0.2
comp=Z,19nm,1.1s
BRG Berggiesshubel 150.36 348 i PKIKP PKPbc 18 53 53.1 +0.2
BRG pmax pmax
comp=Z,19nm,1.1s
BRG Berggiesshubel 150.36 348 ePKPbc PKPbc 18 53 53.3 +0.5
baz=2.9,slow=2.4
HARR Harsova 150.39 325 ⇑PKIKP PKPbc 18 53 53.5 +0.4
HARR Harsova 150.39 325 ⇑P PKPbc 18 53 53.5 +0.4
NEUB Neuenburg 150.41 351 ePKPbc PKPbc 18 53 53.5 +0.5
baz=2.9,slow=2.4
FBE Freiberg 150.43 349 ePKPbc PKPbc 18 53 53.4 +0.4
baz=2.9,slow=2.4
BISRR Bisoca 150.43 328 ⇓P PKPbc 18 53 53.6 +0.3
OZUR 150.49 329 ⇓P PKPbc 18 53 53.9 +0.5
LANS Liptovska Anna 150.53 340 ePKIKP PKiKP 18 53 55.6 +1.5
LANS e 18 54 02.0
LANS Liptovska Anna 150.53 340 ePKP PKiKP 18 53 55.6 +1.5
LANS e 18 54 02.0
MORC Moravsky Berou 150.54 343 PKIKP PKPbc 18 53 53.6 +0.2
MORC Moravsky Berou 150.54 343 ⇑P PKiKP 18 53 54.3 +0.1
MORC Moravsky Berou 150.54 343 ePKP PKPbc 18 53 54.0 +0.6
MORC Moravsky Berou 150.54 343 PKPbc 18 53 53.6 +0.2
PVCC Panska Ves 150.56 347 ePKIKP PKiKP 18 53 54.6 +0.5
PVCC Panska Ves 150.56 347⇑ePKP PKiKP 18 53 54.6 +0.5
MANR Mangalia 150.61 323 ⇑P PKiKP 18 53 55.0 +0.6
BUG Bochum--Univer 150.64 357 ePKPbc PKPbc 18 53 52.6 -0.9
baz=2.9,slow=2.4
DOPR Dopca 150.77 329 ⇑P PKiKP 18 53 54.9 +0.2
MLR Muntele Rosu 150.85 328 PKIKP PKPbc 18 53 53.8 -0.6
MLR Muntele Rosu 150.85 328 ⇓P PKPbc 18 53 54.7 +0.3
MLR Muntele Rosu 150.85 328 PKPbc 18 53 53.8 -0.6
MOX Moxa 150.98 351 ePKPbc PKPbc 18 53 54.5 +0.2
baz=2.9,slow=2.4
CJR Cluj-Napoca 151.01 332 ⇓PKIKP PKiKP 18 53 55.6 +0.4
CJR Cluj-Napoca 151.01 332 ⇓P PKiKP 18 53 55.6 +0.4
TANN Tannenbergstha 151.07 350 ePKPbc PKPbc 18 53 54.9 +0.3
baz=2.9,slow=2.4
PRU Pruhonice 151.08 347 ePKIKP PKPbc 18 53 54.5 -0.1
PRU Pruhonice 151.08 347⇑ePKP PKPbc 18 53 54.5 -0.1
GOPC GO Pecny, Ondr 151.10 346 ePKIKP PKPbc 18 53 55.2 +0.5
GOPC GO Pecny, Ondr 151.10 346⇑ePKP PKiKP 18 53 55.2 +0.5
SECR 151.12 327 ⇑P PKiKP 18 53 56.0 +0.5
GUNZ Gunzen 151.14 350 ePKPbc PKPbc 18 53 55.3 +0.5
baz=2.9,slow=2.4
WERN Wernitzgruen 151.21 350 ePKPbc PKiKP 18 53 55.6 +0.1
baz=2.9,slow=2.4
VRAC Vranov 151.22 344 ePKP PKiKP 18 53 55.9 +0.4
VYHS Vyhne 151.31 340 ePKIKP PKPbc 18 53 55.7 +0.5
VYHS e 18 54 04.0
VYHS Vyhne 151.31 340 ePKP PKPbc 18 53 55.7 +0.5
VYHS e 18 54 04.0
DRGR 151.32 334 ⇑PKIKP PKPbc 18 53 55.8 +0.4
DRGR 151.32 334 ⇑P PKPbc 18 53 55.8 +0.4
VOIR 151.32 329 ⇑PKIKP PKiKP 18 53 56.6 +0.7
VOIR 151.32 329 ⇑P PKiKP 18 53 56.6 +0.7
JAVC Velka Javorina 151.33 342 ePKP PKiKP 18 53 57.0 +1.2
KOLL Kolacno 151.37 341 ePKP PKiKP 18 53 56.1 +0.3
KRUC Moravsky 151.50 344 ePKP PKPbc 18 53 55.9 +0.3
MEM Membach 151.53 358 PKPdf PKPdf 18 53 49.5 0.0
MEM PKiKP 18 53 56.3 +0.2
MANZ Manzenberg 151.54 350 ePKPbc PKPbc 18 53 56.1 +0.4
baz=2.9,slow=2.4
ARR Arges 151.57 329 ⇑P PKiKP 18 53 56.9 +0.5
SMOL Smolenice 151.71 342 ePKIKP PKiKP 18 53 57.1 +0.6

SMOL				*e*			18 54 06.0	
SMOL	**Smolenice**	**151.71**	**342**	*e*PKP	**PKiKP**	**18 53 57.1**	**+0.6**
SMOL				*e*		18 54 06.0		
ROTZ	**Rotzenmuhle**	**151.74**	**350**	*e*PKPbc	**PKiKP**	**18 53 56.9**	**+0.4**
	baz=2.9,slow=2.4							
TNS	**Taunus Mts**	**151.77**	**355**	*e*PKPbc	**PKPbc**	**18 53 56.2**	**-0.1**
	baz=2.9,slow=2.4							
BMRD	**Maredsous**	**151.86**	**360**	PKPdf	**PKPdf**	**18 53 49.2**	**-0.8**
BMRD				PKiKP	**PKPbc**	**18 53 56.8**	**+0.4**
MODS	**Modra-Piesok**	**151.88**	**342**	*e*PKiKP	**PKPbc**	**18 53 56.4**	**-0.1**
MODS				*e*		18 54 06.6		
MODS	**Modra-Piesok**	**151.88**	**342**	*e*PKP	**PKPbc**	**18 53 56.4**	**-0.1**
MODS				*e*		18 54 06.6		
DEV	**Deva**	**151.96**	**332**	⇑PKiKP	**PKiKP**	**18 53 57.5**	**+0.4**
DEV	**Deva**	**151.96**	**332**	⇑P	**PKiKP**	**18 53 57.5**	**+0.4**
GRF	**Grafenberg Arr**	**151.97**	**351**	*e*PKPbc	**PKiKP**	**18 53 57.2**	**+0.2**
	baz=2.9,slow=2.4							
HUMR	**Humele**	**152.02**	**328**	⇑P	**PKPbc**	**18 53 56.2**	**-0.7**
KHC	**Kasperske Hory**	**152.09**	**347**	*e*PKiKP	**PKiKP**	**18 53 57.9**	**+0.5**
KHC				*e*		18 54 07.0		
KHC	**Kasperske Hory**	**152.09**	**347**	⇑*e*PKP	**PKiKP**	**18 53 57.9**	**+0.5**
KHC				*ep*PKP	**PKPab**	**18 54 07.0**	**+0.5**
SIRR	**Siria**	**152.17**	**334**	⇑P	**PKPbc**	**18 53 57.6**	**+0.4**
GERES	**GERESS Array B**	**152.34**	**347**	PKiKP	**PKPbc**	**18 53 57.4**	**-0.3**
GERES	**GERESS Array B**	**152.34**	**347**	PKPbc	**PKPbc**	**18 53 57.6**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=15,slow=1.5,SNR=9.5							
GERES	**GERESS Array B**	**152.34**	**347**		**PKPbc**	**18 53 57.4**	**-0.3**
GZR	**Gura Zlata**	**152.40**	**332**	⇑PKiKP	**PKPbc**	**18 53 57.6**	**-0.3**
GZR	**Gura Zlata**	**152.40**	**332**	⇑P	**PKPbc**	**18 53 57.6**	**-0.2**
CONA	**Conrad Observa**	**152.68**	**343**	*e*PKiKP	**PKPbc**	**18 53 58.7**	**+0.3**
	comp=Z,8.0nm,1.2s							
BZS	**Buzias**	**152.72**	**333**	⇑PKiKP	**PKiKP**	**18 53 58.9**	**+0.2**
BZS	**Buzias**	**152.72**	**333**	⇑P	**PKiKP**	**18 53 58.9**	**+0.2**
PLVB	**Pleven**	**153.02**	**327**	⇑P	**PKiKP**	**18 54 00.3**	**+0.9**
MOA	**Molln**	**153.16**	**345**	*e*PKiKP	**PKPbc**	**18 53 59.0**	**-0.4**
	comp=Z,13nm,1.5s							
MDVR	**Moldovita**	**153.34**	**332**	⇑P	**PKPbc**	**18 53 59.7**	**-0.3**
SOKA	**Soboth**	**154.06**	**343**	PKPab	**PKPab**	**18 54 14.6**	**-0.3**
	comp=Z,6.0nm,1.4s							
UBR	**Ueberruh**	**154.09**	**351**	*e*PKPbc	**PKiKP**	**18 54 02.0**	**+0.4**
	baz=2.9,slow=2.4							
WATA	**Walderalm**	**154.20**	**349**	*e*PKPab	**PKPab**	**18 54 13.6**	**-1.9**
	comp=Z,8.8nm,1.3s							
MOTA	**Moosalm**	**154.27**	**350**	*ep*PKPdf	**PKPdf**	**18 53 54.2**	**+0.5**
	comp=Z,12nm,1.6s							
VTS	**Vitosha**	**154.28**	**327**	⇑PKiKP	**PKiKP**	**18 54 02.8**	**+0.6**
VTS	**Vitosha**	**154.28**	**327**	⇑P	**PKiKP**	**18 54 02.8**	**+0.6**
OBKA	**Obir**	**154.34**	**344**	*e*PKPab	**PKPab**	**18 54 15.6**	**-0.5**
	comp=Z,8.2nm,1.2s							
ABTA	**Abfaltersbach**	**154.58**	**347**	*e*PKPdf	**PKPdf**	**18 53 54.2**	**+0.1**
	comp=Z,12nm,2.3s							
ESDC	**Sonseca Array**	**161.04**	**21**	PKPab	**PKPab**	**18 54 44.8**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=333,slow=4.5,SNR=4.4							
ESDC	**Sonseca Array**	**161.04**	**21**		**PKPab**	**18 54 45.4**	**+0.3**
DBIC	**Dimbokro**	**162.16**	**148**	PKiKP	**PKPdf**	**18 54 04.2**	**+0.1**
DBIC	**Dimbokro**	**162.16**	**148**	PKP	**PKPdf**	**18 54 04.5**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=225,slow=1.4,SNR=3.1							
DBIC	**Dimbokro**	**162.16**	**148**		**PKPdf**	**18 54 04.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**170.68**	**162**	PKP	**PKPdf**	**18 54 09.5**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=121,slow=1.2,SNR=4.1							
TORD				PKPab	**PKPab**	**18 55 29.2**	**+1.2**
	comp=Z,1.3nm,1.1s,baz=221,slow=3.1,SNR=3.9							
TORD	**Torodi Ar. Bea**	**170.68**	**162**		**PKPdf**	**18 54 09.1**	**-1.6**
TORD					**PKPab**	**18 55 28.1**	**+0.1**

NEIC ***03*** *18:48:55.7±1.8,0.°59N±0.°08×126.°72E±0.°06,h71km±7km, mb4.6/25, Error ellipse: s-maj=12.2km s-min=8.8km az=164.0*

IDC ***03*** *18:48:57.0±4.5,0.°60N×126.°89E,h78km±43km,mb3.7/8, mb1 3.8/10,mb1mx3.5/35,mbtmp3.9/10,ML3.0/2,MS3.6/2, Ms1 3.6/2,ms1mx2.8/38,Error ellipse: s-maj=42.7km s-min=14.5km az=84.0*

DJA ***03*** *18:48:56.5±0.7,1.°N×3.°×12.°7E±.°,h36km±14km,M4.0/12, mB4.7/4,mb4.4/6,mb4.0/1,MLv3.9/12,MLv4.0/7, Mw(mB)4.0/4*

ISC 03 18:48:53.0±0.5,**0.°72N**±0.°06×**126.°73E**±0.°06,**h35**km,**n59,** σ2§**17**/58,**mb4.4**/16,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.64**	**85**	P	**Pn**	**18 49 09.9**	**+4.4**
TNTI	**Ternate**	**0.64**	**85**		**Pn**	**18 49 10.1**	**+4.6**
LBMI	**Labuha**	**1.55**	**150**	P	**Pn**	**18 49 21.6**	**+3.5**
LBMI				S	**Sn**	**18 49 40.1**	**+3.1**
KMSI	**Cibinong**	**2.75**	**267**	P	**Pn**	**18 49 38.6**	**+3.9**
SANI	**Sanana**	**2.85**	**195**	P	**Pn**	**18 49 37.5**	**+1.6**
LUWI	**Luwuk**	**4.33**	**246**	P	Pn	18 50 01.9	+5.6
LUWI	**Luwuk**	**4.33**	**246**		**Pn**	**18 49 57.2**	**+0.8**
MRSI	**Marisa**	**4.80**	**267**	P	**Pn**	**18 50 05.3**	**+2.5**
SIJI	**Sorong**	**4.80**	**109**	P	**Pn**	**18 50 04.5**	**+1.7**
	0.4nm,0.3s,baz=264,slow=18,SNR=4.1							
APSI	**Ampana**	**5.33**	**252**	P	**Pn**	**18 50 14.5**	**+4.3**
	0.2nm0.2nm594nm36nm,0.6s							
FAKI	**Fak Fak**	**6.59**	**123**	P	Pn	18 50 33.0	+5.5
	0.1nm0.1nm14nm,1.4s							
FAKI	**Fak Fak**	**6.59**	**123**	Pn	**Pn**	**18 50 31.1**	**+3.6**
TTSI	**Tana Toraja**	**7.86**	**242**	P	**Pn**	**18 50 47.3**	**+2.5**
	0.1nm0.1nm584nm35nm,0.6s							
BNSI	**Bone**	**8.35**	**232**	P	**Pn**	**18 50 54.7**	**+3.2**
	20nm,0.5s							
SPSI	**Sidrap Palu**	**8.37**	**236**	P	**Pn**	**18 50 55.1**	**+3.2**
BKSI	**Bulukumba**	**8.92**	**228**	P	**Pn**	**18 51 02.7**	**+3.3**
	23nm,0.5s							
KAPI	**Kappang**	**9.00**	**231**	Pn	**Pn**	**18 51 01.9**	**+1.4**
BKB	**Balikpapan**	**10.03**	**259**		**Pn**	**18 51 16.4**	**+1.8**
MTN	**Manton Dam**	**14.16**	**152**	Pn	**Pn**	**18 52 12.0**	**+0.9**
SBUM	**Sibu**	**14.61**	**277**	Pn	**Pn**	**18 52 19.8**	**+2.5**
KNRA	**Kununurra**	**16.41**	**173**		**Pn**	**18 52 41.4**	**+0.7**
KNRA				IAmb	IAmb	18 52 42.5		
	comp=Z,70nm,1.6s							
KSM	**Kuching**	**16.44**	**273**		**P**	**18 52 43.9**	**+0.3**
KSM				IAmb	IAmb	18 52 46.3		
	comp=Z,39nm,1.7s							
FITZ	**Fitzroy Crossi**	**18.73**	**183**	P	**P**	**18 53 08.9**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=11,SNR=2.7							
FITZ	**Fitzroy Crossi**	**18.73**	**183**	P	**P**	**18 53 07.1**	**-1.6**
CISI	**Cisompet, Garu**	**20.58**	**246**	P	**P**	**18 53 28.3**	**-0.8**
CISI				IAmb	IAmb	18 53 46.0		
	comp=Z,61nm,1.3s							
WRAB	**Tennant Creek**	**21.84**	**160**	P	**P**	**18 53 41.1**	**-1.5**
WRA	**Warramunga Arr**	**21.84**	**160**	P	**P**	**18 53 41.4**	**-1.2**
	comp=Z,4.3nm,0.6s,baz=339,slow=11,SNR=60							
WRA	**Warramunga Arr**	**21.84**	**160**	P	**P**	**18 53 40.6**	**-2.0**
COEN	**Coen**	**21.86**	**132**	P	**P**	**18 53 43.7**	**+0.9**
COEN				IAmb	IAmb	18 54 37.4		
	comp=Z,22nm,1.4s							
WR0	**Warramunga Arr**	**21.93**	**160**	P	**P**	**18 53 42.6**	**-0.9**
TPUB	**Ta-pu**	**23.22**	**346**	P	**P**	**18 53 58.3**	**+1.2**
TPUB				IAmb	IAmb	18 54 43.8		
	comp=Z,71nm,1.7s							
AS31	**Alice Springs**	**25.22**	**164**	P	**P**	**18 54 12.7**	**-3.0**
ASAR	**Alice Springs**	**25.22**	**164**	P	**P**	**18 54 14.2**	**-1.6**
	comp=Z,3.3nm,0.4s,baz=345,slow=11,SNR=85							
ASAR				PcP	**PcP**	**18 57 47.3**	**-1.6**
	comp=Z,1.2nm,1.0s,baz=354,slow=2.1,SNR=4.3							
ASAR	**Alice Springs**	**25.22**	**164**	P	**P**	**18 54 13.1**	**-2.6**
ASAR					**PcP**	**18 57 47.0**	**-1.9**
BBOO	**Buckleboo**	**34.49**	**166**	P	**P**	**18 55 36.6**	**-1.2**
STKA	**Stephens Creek**	**35.34**	**158**	P	**P**	**18 55 43.4**	**-1.7**
	comp=Z,1.8nm,0.7s,baz=333,slow=11,SNR=3.2							
STKA	**Stephens Creek**	**35.34**	**158**	P	**P**	**18 55 43.6**	**-1.5**
MAJO	**Matsushiro**	**37.20**	**15**	P	**P**	**18 56 00.2**	**-0.7**
MJAR	**Matsushiro Arr**	**37.20**	**15**	P	**P**	**18 56 00.2**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=194,slow=9.5,SNR=5.7							
MJAR	**Matsushiro Arr**	**37.20**	**15**	P	**P**	**18 55 59.6**	**-1.3**
MJB9	**Matsu-Tunnel**	**37.20**	**15**	P	**P**	**18 56 00.2**	**-0.8**
KLR	**Kul'dur**	**48.52**	**4**	LR	LR	19 18 37.5		
	comp=Z,79nm,21.9s,baz=148,slow=37							
ULN	**Ulaanbaatar**	**49.97**	**343**	P	**P**	**18 57 43.6**	**-0.2**
ULN				IAmb	IAmb	18 59 12.5		
	comp=Z,7.1nm,1.6s							
SONM	**Songino Array**	**50.14**	**342**	P	**P**	**18 57 45.5**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=149,slow=6.7,SNR=3.2							
SONM	**Songino Array**	**50.14**	**342**	P	**P**	**18 57 44.2**	**-0.8**
PEA0B	**Petropavlovsk-**	**58.21**	**21**	P	**P**	**18 58 44.4**	**+0.9**
PETK	**Petropavlovsk-**	**58.21**	**21**	P	**P**	**18 58 44.1**	**+0.5**
	comp=Z,2.8nm,0.8s,baz=206,slow=6.7,SNR=9.4							
MK31	**Makanchi Array**	**60.03**	**326**	P	**P**	**18 58 56.6**	**+0.2**
MK31				IAmb	IAmb	19 00 38.7		
	comp=Z,5.1nm,1.8s							
MKAR	**Makanchi Array**	**60.03**	**326**	P	**P**	**18 58 57.1**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=118,slow=7.4,SNR=24							
MKAR	**Makanchi Array**	**60.03**	**326**	P	**P**	**18 58 55.6**	**-0.8**
KSH	**Kashi**	**60.19**	**316**	P	**P**	**18 59 01.5**	**+3.8**
KSH				pP	sP	18 59 17.8	+6.2
KSH				pmax	pmax			
	comp=Z,310nm,4.8s							
MAKZ	**Makanchi**	**60.21**	**326**	P	**P**	**18 58 57.7**	**+0.1**
MAKZ				IAmb	IAmb	18 59 54.4		
	comp=Z,12nm,1.9s							
KDJ	**Kajisay**	**60.60**	**319**	P	**P**	**18 59 00.9**	**+0.3**
KDJ				IAmb	IAmb	19 01 00.2		
	comp=Z,8.6nm,0.9s							
GAR	**Garm**	**63.97**	**314**	P	**P**	**18 59 23.1**	**0.0**
GAR				IAmb	IAmb	19 00 47.0		
	comp=Z,18nm,1.9s							
KURK	**Kurchatov**	**64.28**	**328**	P	**P**	**18 59 24.4**	**-0.3**
KURK				IAmb	IAmb	18 59 26.1		
	comp=Z,2.3nm,0.5s							
NIUE	**Niue**	**65.15**	**111**	P	**P**	**18 59 27.4**	**-3.6**
OPO	**Ambohidratompo**	**80.32**	**251**	LR	LR	19 31 31.8		
	comp=Z,34nm,19.7s,baz=338,slow=32							
VNDA	**Vanda**	**80.46**	**173**	P	**P**	**19 00 58.4**	**-2.4**
	comp=Z,0.5nm,0.8s,baz=291,slow=3.6,SNR=3.7							
VNDA	**Vanda**	**80.46**	**173**	P	**P**	**19 00 59.3**	**-1.4**
VNDA				IAmb	IAmb	19 03 05.3		
	comp=Z,12nm,1.9s							

ROM 03 18:51:54.2±0.1,**38.°545N**±0.°006×**15.°019E**±0.°007, **h10**km,**ML1.6/2,Error ellipse: s-maj=0.7km s-min=0.5km az=205.0,Sicily**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLI	**Lipari**	**0.12**	**209**	P	Pg	18 51 57.6	+0.7
LLI				S	Sg	18 51 59.7	+0.7
LLI				AML	AML		
	comp=E,1490μm,0.8s						
LLI				AML	AML		
	comp=N,1880μm,0.5s						
VPL	**Vulcano Piano**	**0.17**	**190**	P	Pg	18 51 58.5	+0.7
VPL				S	Sg	18 52 01.4	+1.0
VPL				AML	AML		
	comp=E,248μm,0.9s						
VPL				AML	AML		
	comp=N,232μm,0.6s						
VPL				AML	AML		
	comp=N,232μm,0.6s						
MILZ	**Milazzo**	**0.32**	**149**	P	Pg	18 52 01.1	+0.6
MILZ				S	Sg	18 52 05.9	+1.0
MILZ				AML	AML		
	comp=E,102μm,0.4s						
MILZ				AML	AML		
	comp=N,88μm,0.5s						
MILZ				AML	AML		
	comp=E,102μm,0.4s						
IFIL	**Filicudi I Eol**	**0.36**	**273**	P	Pg	18 52 01.5	+0.3
IFIL				S	Sg	18 52 06.9	+0.9
IFIL				AML	AML		
	comp=E,450μm,1.3s						
IFIL				AML	AML		
	comp=N,114μm,0.3s						
MSRU	**Castanea**	**0.48**	**126**	P	Pg	18 52 04.0	+0.6
MSRU				S	Sg	18 52 10.6	+0.8
MSRU				AML	AML		
	comp=E,145μm,0.4s						
MSRU				AML	AML		
	comp=N,96μm,0.9s						
MPNC	**Port Mandanici**	**0.48**	**147**	P	Pb	18 52 04.1	-0.6
MPNC				S	Sg	18 52 10.8	+1.0
MPNC				AML	AML		
	comp=E,111μm,0.6s						
MPNC				AML	AML		
	comp=N,111μm,0.3s						
MPNC				AML	AML		
	comp=E,111μm,0.6s						
MCSR	**Castroreale**	**0.51**	**159**	P	Pg	18 52 04.7	+0.5
MCSR				S	Sb	18 52 12.1	-0.8
MCSR				AML	AML		
	comp=N,138μm,0.3s						
MCSR				AML	AML		
	comp=E,120μm,0.3s						
MUCR	**Ucria**	**0.51**	**193**	P	Pb	18 52 04.8	-0.5
MUCR				S	Sb	18 52 12.6	-0.3
JOPP	**Joppolo**	**0.68**	**85**	P	Pg	18 52 07.2	-0.2
JOPP				S	Sb	18 52 17.2	-0.4

IDC ***03*** *18:56:45.2±2.0,12.°04N×87.°43W,h0km,mb3.8/5, mb1 4.1/5,mb1mx3.6/44,mbtmp3.9/5,ML2.7/1,MS3.8/3, Ms1 3.8/3,ms1mx2.8/36,Error ellipse: s-maj=58.2km s-min=27.7km az=49.0*

INET ***03*** *18:56:46.9,11.°70N×87.°69W,h6km,ML2.8*

NEIC ***03*** *18:56:48.1±1.8,11.°7N±0.°1×87.°68W±0.°07,h46km±9km, mb4.3/10,Error ellipse: s-maj=18.0km s-min=2.2km az=211.0*

ISC 03 18:56:47.3±1.0,**11.°7N**±0.°1×**87.°7W**±0.°1,**h37**km,**n29,** σ1§**10**/27,**mb4.1**/10,**MS3.7/3,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESTN	**Estel**	**1.94**	**43**		**Pn**	**18 57 18.3**	**+0.5**
TGUH	**Tegucigalpa,Un**	**2.41**	**10**		**Pn**	**18 57 25.0**	**+0.6**
ACON	**Acoyapa**	**2.51**	**83**		**Pn**	**18 57 25.3**	**-0.3**
JTS	**Las Juntas de**	**3.04**	**117**	Pn	**Pn**	**18 57 34.2**	**+1.3**
	1.1nm,0.3s,baz=163,slow=22,SNR=6.4						
JTS				Sn	**Sn**	**18 58 08.0**	**-0.2**
	7.7nm,0.3s,baz=360,slow=20,SNR=7.0						
JTS	**Las Juntas de**	**3.04**	**117**		**Pn**	**18 57 33.3**	**+0.3**
JTS					**Sn**	**18 58 08.1**	**-0.2**
ESPN	**Las Esperanzas**	**3.39**	**81**		**Pn**	**18 57 39.0**	**+1.4**
Y49A	**Blount Mountai**	**22.11**	**3**	P	**P**	**19 01 40.7**	**+1.2**
Y49A				IAmb	IAmb	19 01 44.6		
	comp=Z,20nm,1.2s						
TXAR	**Lajitas Array**	**23.01**	**322**	P	**P**	**19 01 51.9**	**+2.7**
	comp=Z,1.4nm,0.8s,baz=134,slow=10,SNR=12						
TXAR	**Lajitas Array**	**23.01**	**322**	P	**P**	**19 01 49.9**	**+0.6**
TX31	**Lajitas Ar. Si**	**23.01**	**322**	P	**P**	**19 01 51.0**	**+1.8**
TX32	**Lajitas Array**	**23.01**	**322**	P	**P**	**19 01 50.0**	**+0.8**
TX32				IAmb	IAmb	19 02 02.1		
	comp=Z,9.9nm,1.6s						
MIAR	**Mount Ida**	**23.39**	**348**	P	**P**	**19 01 52.0**	**-0.7**
MIAR				IAmb	IAmb	19 01 54.9		
	comp=Z,5.0nm,0.7s						
H06E1	**SOCORRO T-PHAS**	**23.46**	**290**	T	T	19 26 12.0		
	SNR=5.0						
TKL	**Tuckaleechee C**	**24.14**	**8**	P	**P**	**19 02 01.2**	**+1.3**
	comp=Z,4.9nm,0.9s,baz=168,slow=9.3,SNR=3.5						
TKL	**Tuckaleechee C**	**24.14**	**8**	P	**P**	**19 01 59.3**	**-0.6**
LCAR	**Lake Charles**	**24.49**	**353**	P	**P**	**19 02 01.3**	**-1.7**
LCAR				IAmb	IAmb	19 02 16.8		
	comp=Z,8.3nm,1.5s						
WMOK	**Wichita Mounta**	**25.07**	**338**	P	P	19 01 59.4	-9.0
WMOK				IAmb	IAmb	19 02 20.8		
	comp=Z,11nm,1.0s						
ULM	**Lac du Bonnet**	**39.05**	**352**	P	**P**	**19 04 09.8**	**-0.6**
	comp=Z,2.4nm,0.6s,baz=183,slow=11,SNR=6.0						
ULM	**Lac du Bonnet**	**39.05**	**352**	P	**P**	**19 04 09.9**	**-0.6**
SCHQ	**Schefferville**	**46.09**	**17**	P	**P**	**19 05 07.2**	**-0.5**
	comp=Z,2.7nm,0.8s,baz=212,slow=9.5,SNR=5.9						
SCHQ	**Schefferville**	**46.09**	**17**	P	**P**	**19 05 07.1**	**-0.5**
SCHQ				IAmb	IAmb	19 05 22.7		
	comp=Z,12nm,1.4s						
CPUP	**Villa Florida**	**47.96**	**142**	LR	LR	19 26 32.3		
	comp=Z,81nm,18.5s,baz=358,slow=37						
YKA	**Yellowknife Ar**	**54.29**	**345**	P	**P**	**19 06 09.8**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=138,slow=7.7,SNR=9.5						
YKA	**Yellowknife Ar**	**54.29**	**345**	P	**P**	**19 06 08.7**	**-0.9**
CRQM	**Cirque**	**63.38**	**333**	P	**P**	**19 07 13.6**	**+0.6**
FINES	**FINESS Array B**	**90.78**	**26**	LR	LR	19 48 28.5		
	comp=Z,86nm,20.8s,baz=314,slow=34							
OBN	**Obninsk**	**98.77**	**29**	LR	LR	19 55 44.6		
	comp=Z,20nm,18.4s,baz=38,slow=36							
CMAR	**Chiang Mai Arr**	**149.35**	**348**	PKPbc	**PKPab**	**19 16 36.0**	**-1.7**
	comp=Z,1.2nm,0.7s,baz=348,slow=3.7,SNR=15							
CMAR	**Chiang Mai Arr**	**149.35**	**348**	PKPdf	**PKPdf**	**19 16 28.1**	**-0.8**
CMAR					**PKiKP**	**19 16 34.9**	**+0.5**

MAN 03 19:00:32.0,6.°11N×126.°67E,h2km,mb4.4,ML3.3,MS3.1, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.72**	**269**	*i* P	Pn	19 00 58.6	-4.4
GSPH				*i* S	Sn	19 01 22.0	-3.6

TEH ***03*** *19:03:39.7,28.°78N×57.°45E,h10km,ML3.5*

DSN ***03*** *19:03:41.6±2.0,28.°03N×58.°52E,h10km,ML3.8/4,Error ellipse: s-maj=57.3km s-min=13.4km az=142.0*

THR ***03*** *19:03:42.1±0.5,28.°91N×57.°51E,h14km±9km,ML3.2*

OMAN ***03*** *19:03:43.3±1.9,28.°65N×57.°59E,h20km,ml3.4/6,Error ellipse: s-maj=29.8km s-min=15.9km az=127.0*

ISC 03 19:03:40.9±0.9,**28.°78N**±0.°03×**57.°50E**±0.°06,**h10**km,**n35,** σ1§**61**/40,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KHNJ	**Kahnooj**	**0.84**	**168**	*e*Pg	**Pg**	**19 03 55.4**	**-1.8**
CHMN	**Cheshme madani**	**1.08**	**2**	*e*Pg	**Pg**	**19 04 00.3**	**-1.4**
CHMN				*e*		19 04 15.4		
NGRK	**Negar Kerman**	**1.10**	**322**	*e*Pg	**Pg**	**19 03 59.2**	**-2.8**
NGRK				*e*		19 04 15.3		
NIAN	**Nian**	**1.35**	**206**	*e*		19 04 26.3		
NIAN				*e*Pg	**Pn**	**19 04 04.6**	**-1.2**
KRBR	**Kerman**	**1.36**	**332**	*e*Pg	**Pn**	**19 04 05.3**	**-1.0**
KRBR	**Kerman**	**1.36**	**332**	*e*Pg	**Pn**	**19 04 05.3**	**-1.0**
KRBR				*e*Sg	**Sb**	**19 04 22.7**	**-1.6**
KRBR				IAML		19 04 25.5		
	comp=E,459nm,0.2s							
KRBR				IAML		19 04 25.7		
	comp=N,361nm,0.3s							
TVBK	**TV Kerman**	**1.37**	**332**	*e*		19 04 24.7		
TVBK				*e*Pg	**Pn**	**19 04 04.5**	**-1.9**
GENO	**Geno**	**1.81**	**221**	*e*Pn	**Pn**	**19 04 11.9**	**-0.4**
BNDS	**Bandar-Abbas**	**1.81**	**221**	*e*Pn	**Pb**	**19 04 16.6**	**+2.4**
BNDS	**Bandar-Abbas**	**1.81**	**221**	*e*Pn	**Pb**	**19 04 16.6**	**+2.4**
BNDS				*e*Sg	**Sg**	**19 04 42.5**	**+3.4**
BNDS				IAML		19 04 43.4		
	comp=E,197nm,0.5s							
KHGB	**Koh Gabri**	**1.83**	**331**	*e*Pn	**Pn**	**19 04 12.1**	**-0.5**
KHGB				*e*		19 04 13.3		
SHME	**Shamm**	**2.98**	**204**	*e*P	**Pn**	**19 04 27.4**	**-0.8**
	SNR=11							
BANOM	**Banah**	**3.04**	**201**	*e*P	**Pn**	**19 04 28.6**	**-0.4**
	SNR=25							
BANOM				S	**Sn**	**19 05 03.6**	**-1.9**
BANOM	**Banah**	**3.04**	**201**	P	**Pn**	**19 04 28.7**	**-0.4**
	SNR=25							
BANOM				S	**Sn**	**19 05 05.8**	**+0.2**
NHDN	**Nehbandan**	**3.42**	**40**	*e*Pn	**Pn**	**19 04 35.8**	**+1.4**
IMEH	**Mehriz**	**3.61**	**317**	*e*Pn	**Pn**	**19 04 38.8**	**+1.6**
IKOO	**Kooshah**	**3.86**	**19**	*e*Pn	**Pn**	**19 04 41.2**	**+0.6**
ISRV	**Sarvestan**	**3.89**	**280**	*e*Pn	**Pn**	**19 04 41.6**	**+0.6**
UOSS	**Minazif**	**3.99**	**197**	P	**Pn**	**19 04 39.4**	**-2.7**
HATD	**Hatta, Dubai**	**4.12**	**198**	P	Pn	19 04 39.9	-4.1
ASHO	**Ashiyiah**	**4.28**	**198**	P	**Pn**	**19 04 43.9**	**-2.2**
ASHO	**Ashiyiah**	**4.28**	**198**	P	**Pn**	**19 04 46.6**	**+0.5**
TPRV	**Parvadeh(Tabas**	**4.29**	**351**	*e*Pn	**Pn**	**19 04 47.0**	**+0.6**
ISAD	**Sadrabad**	**4.54**	**314**	*e*Pn	**Pn**	**19 04 50.6**	**+0.6**
ASUD	**Al Ashush, Dub**	**4.57**	**206**	P	**Pn**	**19 04 50.5**	**+0.4**
	SNR=8.0							
IMON	**Monand**	**4.78**	**22**	*e*Pn	**Pn**	**19 04 55.2**	**+2.0**
AFRZ	**Afriz**	**4.81**	**15**	*e*Pn	**Pn**	**19 04 54.1**	**+0.5**
TABS	**Tabas**	**4.87**	**356**	*e*Pn	**Pn**	**19 04 55.2**	**+0.9**
TABS	**Tabas**	**4.87**	**356**	*e*Pn	**Pn**	**19 04 55.2**	**+0.9**
HOQ	**Hoqain**	**5.18**	**182**	P	**Pn**	**19 04 57.5**	**-1.0**
HOQ				S	**Sn**	**19 05 54.7**	**-3.6**
IRAM	**Ramesheh**	**5.36**	**306**	*e*Pn	**Pn**	**19 05 01.7**	**+0.5**
SHRT	**Shahrakht**	**5.41**	**25**	*e*Pn	**Pn**	**19 05 03.0**	**+1.3**
SHRT	**Shahrakht**	**5.41**	**25**	*e*Pn	**Pn**	**19 05 03.0**	**+1.3**
ARQ	**Araqi**	**5.49**	**189**	P	**Pn**	**19 05 03.3**	**+0.5**
	SNR=13							
ARQ				S	**Sn**	**19 06 05.8**	**-0.2**
KLNJ	**Kolanjah**	**5.59**	**295**	*e*Pn	**Pn**	**19 05 05.7**	**+1.2**

IDC ***03*** *19:17:20.1±1

UWJI	**Ujung Watu**	**2.80**	**66**	P		**Pn**	**19 23 29.6**	**+2.6**
CGJI	**Cibinong**	**2.83**	**290**	P		**Pn**	**19 23 28.9**	**+1.4**
PCJI	**Pacitan**	**2.84**	**103**	P		**Pn**	**19 23 29.2**	**+1.7**
NGJI	**Ngawi**	**3.06**	**86**	P		**Pn**	**19 23 34.4**	**+3.9**
PWJI	**Pagerwojo**	**3.42**	**98**	P		**Pn**	**19 23 37.4**	**+2.1**
TBJI	**Tambak Boyo**	**3.52**	**78**	P		**Pn**	**19 23 38.9**	**+2.2**
GRJI	**Gresik**	**4.12**	**81**	P		**Pn**	**19 23 47.5**	**+2.8**
KASI	**Kota Agung**	**4.37**	**298**	P		**Pn**	**19 23 49.4**	**+1.3**
KLSI		**4.63**	**308**	P		**Pn**	**19 23 55.2**	**+3.6**
TPI	**Tanjungpandan**	**4.85**	**351**	P		**Pn**	**19 23 57.6**	**+3.0**
	0.3nm740nm740nm82nm,0.9s,82nm,0.9s							
LWLI	**Liwa**	**4.99**	**300**	P		**Pn**	**19 24 00.6**	**+4.0**
	0.8nm10µm62nm,0.7s							
MDSI	**Maura Dua**	**5.19**	**306**	P		**Pn**	**19 24 02.6**	**+3.4**
	0.2nm509nm32nm,0.8s							
JAGI	**Jajag, Banyuwa**	**5.78**	**99**	P		**Pn**	**19 24 10.2**	**+3.0**
	0.8nm2µm63nm,0.4s							
JAGI	**Jajag, Banyuwa**	**5.78**	**99**			**Pn**	**19 24 10.2**	**+3.0**
MNAI	**Manna**	**6.27**	**300**	P		**Pn**	**19 24 16.2**	**+2.3**
	1.0nm3µm55nm,0.4s							
MNAI	**Manna**	**6.27**	**300**	Pn		**Pn**	**19 24 15.2**	**+1.3**
SRBI	**Singaraja**	**6.79**	**95**	P		**Pn**	**19 24 23.4**	**+2.5**
	0.3nm1µm36nm,0.5s							
IGBI	**Denpasar**	**6.81**	**101**	P		**Pn**	**19 24 24.3**	**+3.2**
	0.4nm2µm37nm,0.5s							
DNP	**Denpasar**	**6.85**	**100**	P		**Pn**	**19 24 22.2**	**+0.5**
	1.6nm187nm,0.4s							
KSI	**Kapahiang**	**6.96**	**304**	P		**Pn**	**19 24 26.1**	**+2.9**
	0.3nm0.3nm3µm94nm,0.6s							
TWSI	**Taliwang, Sumb**	**8.49**	**98**	P		**Pn**	**19 24 45.1**	**+1.0**
	863nm20nm,0.4s							
KRJI	**Kerinci**	**8.79**	**308**	P		Pn	19 25 04.9	+17
PLAI	**Plampang**	**9.38**	**98**	P		**Pn**	**19 24 56.7**	**+0.6**
	758nm758nm24nm,0.6s,24nm,0.6s							
PDSI	**Padang**	**10.30**	**310**	P		**Pn**	**19 25 09.3**	**+0.6**
SBUM	**Sibu**	**10.68**	**21**			Pn	19 25 18.6	+4.9
SBUM	**Sibu**	**10.68**	**21**	P		Pn	19 25 19.0	+5.3
BKNI	**Bangkinang**	**10.74**	**317**	Pn		**Pn**	**19 25 11.8**	**-2.7**
BKSI	**Bulukumba**	**11.88**	**80**	P		**Pn**	**19 25 33.4**	**+3.5**
	9.3nm,0.9s							
MMRI	**Maumere**	**13.76**	**95**	P		**Pn**	**19 25 56.2**	**+1.7**
	1µm105nm,1.0s							
MMRI	**Maumere**	**13.76**	**95**			**Pn**	**19 25 54.1**	**-0.4**
RPSI	**Rantau Prapat**	**13.90**	**317**	Pn		**Pn**	**19 25 54.1**	**-2.2**
MPSI	**Mapaga**	**13.92**	**56**	P		Pn	19 25 51.4	-5.2
GSI	**Gunungsitoli**	**13.93**	**309**	P		**Pn**	**19 25 53.5**	**-3.3**
	30nm,1.3s,30nm,1.3s							
GSI	**Gunungsitoli**	**13.93**	**309**	Pn		**Pn**	**19 25 53.4**	**-3.3**
IPM	**Ipoh**	**14.05**	**328**	Pn		**Pn**	**19 25 55.3**	**-3.0**
KULM	**Kulim**	**14.93**	**329**	Pn		**Pn**	**19 26 05.7**	**-3.8**
KKM	**Kota Kinabalu**	**15.63**	**30**			**P**	**19 26 20.0**	**-0.2**
KKM				IAmb		IAmb	19 26 26.3	
	comp=Z,23nm,1.1s							
MRSI	**Marisa**	**15.71**	**60**	P		**P**	**19 26 21.4**	**+0.3**
	comp=Z,20nm,0.7s							
LUWI	**Luwuk**	**15.74**	**66**			**Pn**	**19 26 20.2**	**+0.4**
LUWI				IAmb		IAmb	19 26 38.0	
	comp=Z,24nm,1.1s							
SOEI	**Soe**	**15.85**	**99**	P		**P**	**19 26 22.7**	**-0.1**
	comp=Z,25nm,0.6s							
SOEI	**Soe**	**15.85**	**99**	P		**Pn**	**19 26 20.2**	**-1.0**
SOEI				IAmb		IAmb	19 26 33.0	
	comp=Z,27nm,0.7s							
SOEI						**S**	**19 29 22.4**	**-1.5**
GIRL	**Giralia**	**16.00**	**160**	Pn		**Pn**	**19 26 21.4**	**-1.4**
LHMI	**Lhok Sumawe**	**17.09**	**318**	P		**Pn**	**19 26 34.9**	**-1.4**
PSA00	**Pilbara Seismi**	**17.78**	**143**	P		**P**	**19 26 42.1**	**-1.8**
PSA00	**Pilbara Seismi**	**17.78**	**143**	P		**P**	**19 26 44.0**	**+0.1**
PSA00				IAmb		IAmb	19 26 56.4	
	comp=Z,32nm,1.5s							
SANI	**Sanana**	**18.38**	**73**	P		**P**	**19 26 51.0**	**+0.5**
	comp=Z,12nm,0.7s							
NLAI	**Namlea**	**19.12**	**78**	P		**Pn**	**19 27 00.4**	**-0.2**
	comp=Z,2µmcomp=Z,30nm,0.5s							
DLV	**T Lat**	**19.40**	**0**	P		**Pn**	**19 27 04.1**	**+0.2**
DLV				IAmb		IAmb	19 27 05.6	
	comp=Z,17nm,0.7s							
FITZ	**Fitzroy Crossi**	**19.79**	**124**	P		**P**	**19 27 07.1**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=319,slow=7.7,SNR=19							
FITZ				S		**S**	**19 30 38.6**	**-4.5**
	comp=Z,0.3nm,0.3s,baz=162,slow=20,SNR=3.9							
FITZ	**Fitzroy Crossi**	**19.79**	**124**	P		**Pn**	**19 27 07.3**	**-1.1**
FITZ						**S**	**19 30 40.2**	**-2.9**
AAI	**Ambon**	**20.09**	**80**	P		Pn	19 27 11.2	-0.7
	comp=Z,842nmcomp=Z,82nm,0.7s							
TNTI	**Ternate**	**20.67**	**67**	P		**P**	**19 27 15.2**	**-0.2**
	comp=Z,1µmcomp=Z,28nm,1.3s							
TNTI	**Ternate**	**20.67**	**67**	P		**P**	**19 27 15.9**	**+0.5**
TNTI				IAmb		IAmb	19 27 20.1	
	comp=Z,20nm,0.8s							
KNRA	**Kununurra**	**21.51**	**114**	P		**P**	**19 27 25.7**	**+1.4**
MORW	**Morawa**	**22.56**	**162**	P		**P**	**19 27 37.3**	**+2.1**
MORW				IAmb		IAmb	19 27 53.5	
	comp=Z,54nm,1.6s							
MTN	**Manton Dam**	**22.99**	**105**	P		**P**	**19 27 40.2**	**+0.6**
MTN				IAmb		IAmb	19 27 57.9	
	comp=Z,35nm,1.2s							
SWI	**Sorong**	**23.76**	**75**	P		**P**	**19 27 48.9**	**+2.2**
	comp=Z,19nm,0.6s							
SIJI	**Sorong**	**23.77**	**75**	P		**P**	**19 27 46.5**	**-0.3**
	comp=Z,7.1nm,0.5s,baz=280,slow=10,SNR=10							
FAKI	**Fak Fak**	**24.21**	**80**	P		**P**	**19 27 50.0**	**-0.8**
FAKI				IAmb		IAmb	19 27 52.3	
	comp=Z,15nm,0.5s							
PBKT	**Sadao Pong**	**25.09**	**343**	P		**P**	**19 27 58.1**	**-0.6**
NWAO	**Narrogin (SRO)**	**26.52**	**163**	P		**P**	**19 28 12.2**	**+0.6**
	comp=Z,8.3nm,0.7s,baz=322,slow=12,SNR=4.7							
NWAO	**Narrogin (SRO)**	**26.52**	**163**	P		**P**	**19 28 12.1**	**+0.6**
NWAO				IAmb		IAmb	19 28 22.7	
	comp=Z,43nm,1.6s							
NWAO	**Narrogin (SRO)**	**26.52**	**163**	P		**P**	**19 28 12.3**	**+0.8**
NWAO				IAmb		IAmb	19 28 22.7	
	comp=Z,49nm,1.6s							
CM31	**Chiang Mai Arr**	**27.50**	**340**	P		**P**	**19 28 18.4**	**-1.9**
CMAR	**Chiang Mai Arr**	**27.50**	**340**	P		**P**	**19 28 19.9**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=175,slow=8.8,SNR=14							
CMAR				PcP		**PcP**	**19 31 38.1**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=200,slow=3.2,SNR=4.5							
CMAR				ScP		**ScP**	**19 35 07.3**	**0.0**
	comp=Z,1.0nm,0.6s,baz=192,slow=3.8,SNR=9.0							
CMAR	**Chiang Mai Arr**	**27.50**	**340**	P		**P**	**19 28 17.6**	**-2.7**
CMAR						**PcP**	**19 31 37.8**	**+1.5**
CMAR						**ScP**	**19 35 07.9**	**+0.6**
CHTO	**Chiang Mai**	**27.83**	**341**	P		**P**	**19 28 22.4**	**-1.0**
WRA	**Warramunga Arr**	**27.99**	**119**	P		**P**	**19 28 25.1**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=288,slow=13,SNR=8.2							
WRA				ScP		**ScP**	**19 35 08.5**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=304,slow=2.6,SNR=4.0							
WRA	**Warramunga Arr**	**27.99**	**119**	P		**P**	**19 28 25.1**	**+0.2**
WRA						**ScP**	**19 35 08.0**	**-0.9**
WR0	**Warramunga Arr**	**28.18**	**119**	P		**P**	**19 28 23.9**	**-2.6**
WR0				IAmb		IAmb	19 28 33.9	
	comp=Z,9.7nm,1.2s							
AS31	**Alice Springs**	**29.24**	**126**	P		**P**	**19 28 36.5**	**+0.6**
ASAR	**Alice Springs**	**29.24**	**126**	P		**P**	**19 28 36.6**	**+0.7**
	comp=Z,1.6nm,0.6s,baz=302,slow=8.3,SNR=30							
ASAR				PcP		**PcP**	**19 31 41.5**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=322,slow=2.3,SNR=3.6							
ASAR				ScP		**ScP**	**19 35 11.9**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=309,slow=2.8,SNR=5.2							
ASAR	**Alice Springs**	**29.24**	**126**	P		**P**	**19 28 36.8**	**+0.9**
ASAR						**PcP**	**19 31 41.2**	**+0.5**
ASAR						**ScP**	**19 35 12.3**	**-0.4**
FORT	**Forrest**	**29.53**	**144**	P		**P**	**19 28 39.1**	**+0.8**
FORT				IAmb		IAmb	19 29 07.6	
	comp=Z,15nm,0.8s							
TPUB	**Ta-pu**	**32.95**	**21**	P		**P**	**19 29 06.5**	**-1.9**
SSLB	**Suanglung**	**33.51**	**21**	P		**P**	**19 29 14.4**	**+1.0**
SSLB				IAmb		IAmb	19 29 20.0	
	comp=Z,7.8nm,0.7s							
COEN	**Coen**	**34.73**	**104**	P		**P**	**19 29 25.1**	**+1.0**
H08S2	**Diego Garcia H**	**35.56**	**267**	T		T	20 06 58.6	
	baz=92,slow=76,SNR=36							
H08S3	**Diego Garcia H**	**35.58**	**267**	T		T	20 06 58.1	
	baz=92,slow=76,SNR=37							
H08S1	**Diego Garcia H**	**35.58**	**267**	T		T	20 06 60.0	
	baz=92,slow=76,SNR=38							
BBOO	**Buckleboo**	**35.90**	**138**	P		**P**	**19 29 34.2**	**+0.4**
ENH	**Enshi**	**37.65**	**2**	P		**P**	**19 29 47.7**	**-0.9**
ENH				IAmb		IAmb	19 30 08.0	
	comp=Z,9.2nm,1.6s							
CD2	**Chengdu**	**38.53**	**354**	P		**P**	**19 29 56.1**	**+0.1**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
STKA	**Stephens Creek**	**39.24**	**133**	P		**P**	**19 30 03.4**	**+1.4**
	comp=Z,6.4nm,0.6s,baz=318,slow=8.0,SNR=31							
STKA	**Stephens Creek**	**39.24**	**133**	P		**P**	**19 30 03.4**	**+1.4**
ODAN	**Odare**	**39.83**	**330**	*eP*		**P**	**19 30 05.4**	**-1.8**
	comp=Z,2.9nm,0.3s							
TAPN	**Taplejung**	**40.08**	**331**	*eP*		**P**	**19 30 08.5**	**-0.8**
LSA	**Lhasa**	**40.60**	**337**	P		**P**	**19 30 12.9**	**-0.9**
NJ2	**Nanjing**	**40.66**	**14**	*eP*		**P**	**19 30 14.8**	**+1.2**
NJ2				pmax		pmax		
	comp=Z,7.0nm,0.7s							
PKIN	**Phulchoki**	**41.43**	**328**	*eP*		**P**	**19 30 18.7**	**-1.7**
	comp=Z,1.9nm,0.4s							
GUN	**Gumba**	**41.45**	**329**	*eP*		**P**	**19 30 18.7**	**-1.9**
	comp=Z,6.2nm,0.4s							
DANN	**Dangsing**	**42.91**	**327**	*eP*		**P**	**19 30 30.2**	**-2.2**
	comp=Z,10nm,0.5s							
LZH	**Lanzhou**	**43.64**	**355**	*eP*		**P**	**19 30 40.6**	**+2.6**
LZH				pP		pP	19 31 04.4	+1.4
LZH				sP		sP	19 31 19.1	+4.0
LZH				PP		**PP**	**19 32 22.4**	**+0.6**
LZH				pmax		pmax		
	comp=Z,17nm,1.1s							
LZH				pmax		pmax		
	comp=Z,57nm,5.4s							
TOO	**Toolangi**	**44.95**	**137**	P		**P**	**19 30 49.4**	**+1.1**
JNU	**Nakatsue**	**45.78**	**27**	P		**P**	**19 30 54.5**	**-0.4**
JNU				IAmb		IAmb	19 31 10.2	
	comp=Z,14nm,1.3s							
CAN	**Canberra**	**46.31**	**133**	P		**P**	**19 30 58.5**	**-0.6**
GTA	**Gaotai**	**47.42**	**351**	*eP*		**P**	**19 31 08.3**	**+0.6**
GTA				pP		pP	19 31 34.2	+1.2
GTA				sP		sP	19 31 47.4	+2.3
GTA				pmax		pmax		
	comp=Z,1.0nm,0.9s							
GTA				pmax		pmax		
	comp=Z,110nm,4.9s							
GTA				LR		LR		
	comp=N,130nm,17.5s							
GTA				LR		LR		
	comp=E,100nm,17.5s							
GTA				LR		LR		
	comp=Z,130nm,18.7s							
HHC	**Hu-ho-hao-te**	**48.28**	**3**	*eP*		**P**	**19 31 18.3**	**+4.0**
HHC				pmax		pmax		
	comp=Z,6.0nm,0.9s							
HHC				pmax		pmax		
	comp=Z,41nm,5.8s							
KSRS	**Korea Array**	**48.38**	**21**	P		**P**	**19 31 15.5**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=202,slow=8.8,SNR=4.1							
MAJO	**Matsushiro**	**52.05**	**31**	P		**P**	**19 31 40.6**	**-2.1**
MAJO				IAmb		IAmb	19 31 59.5	
	comp=Z,12nm,1.2s							
MJAR	**Matsushiro Arr**	**52.05**	**31**	P		**P**	**19 31 40.5**	**-2.3**
MJB9	**Matsu-Tunnel**	**52.05**	**31**	P		**P**	**19 31 40.6**	**-2.1**
MJB9				IAmb		IAmb	19 31 59.5	
	comp=Z,13nm,1.2s							
WMQ	**Urumqi**	**54.49**	**342**	*eP*		**P**	**19 32 02.0**	**+1.5**
WMQ				pmax		pmax		
	comp=Z,6.0nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,150nm,4.3s							
SONM	**Songino Array**	**55.20**	**358**	P		**P**	**19 32 05.8**	**+0.1**
	comp=Z,1.9nm,0.4s,baz=178,slow=8.9,SNR=39							
SONM				PcP		**PcP**	**19 33 05.4**	**0.0**
	comp=Z,1.1nm,0.5s,baz=173,slow=4.2,SNR=9.2							
SONM				ScP		**ScP**	**19 36 53.7**	**-0.8**
	comp=Z,0.7nm,1.0s,baz=175,slow=3.5,SNR=3.9							
SONM	**Songino Array**	**55.20**	**358**	P		**P**	**19 32 05.7**	**+0.1**
SONM				PcP		**PcP**	**19 33 05.1**	**-0.3**
ULN	**Ulaanbaatar**	**55.22**	**359**	P		**P**	**19 32 05.6**	**-0.2**
ULN						**P**	**19 32 05.9**	**+0.1**
ULN				IAmb		IAmb	19 32 06.1	
	comp=Z,2.8nm,0.6s							
KSH	**Kashi**	**55.64**	**330**	P		**P**	**19 32 09.2**	**+0.2**
KSH				pP		pP	19 32 38.2	+3.2
KSH				pmax		pmax		
	comp=Z,400nm,6.0s							
USA0B	**Ussuriysk Arra**	**55.78**	**20**	P		**P**	**19 32 08.7**	**-1.0**
USRK	**Ussuriysk Ar.**	**55.78**	**20**	P		**P**	**19 32 09.1**	**-0.6**
	comp=Z,1.6nm,0.6s,baz=179,slow=5.9,SNR=10							
CASY	**Casey**	**58.62**	**179**	P		**P**	**19 32 29.9**	**+0.6**
CASY				IAmb		IAmb	19 32 36.5	
	comp=Z,12nm,1.6s							
ERM	**Erimo**	**58.71**	**30**	P		**P**	**19 32 31.3**	**+1.0**
MK31	**Makanchi Array**	**58.90**	**339**	P		**P**	**19 32 30.3**	**-1.4**
MK31				IAmb		IAmb	19 32 52.6	
	comp=Z,6.0nm,1.6s							
MKAR	**Makanchi Array**	**58.90**	**339**	P		**P**	**19 32 30.1**	**-1.5**
	comp=Z,1.3nm,0.4s,baz=151,slow=7.5,SNR=30							
MAKZ	**Makanchi**	**59.02**	**339**	P		**P**	**19 32 30.8**	**-1.7**
UOSS	**Minazif**	**60.20**	**304**	P		**P**	**19 32 40.2**	**-0.8**
OPO	**Ambohidratompo**	**60.35**	**253**	P		**P**	**19 32 44.7**	**+2.4**
	comp=Z,7.1nm,0.9s,baz=43,slow=2.0,SNR=5.3							
HRA	**Herat**	**60.37**	**317**	P		**P**	**19 32 41.7**	**-0.5**
YSS	**Yuzh-Sakhalins**	**62.29**	**26**	P		**P**	**19 32 54.5**	**0.0**
KURK	**Kurchatov**	**63.52**	**339**	P		**P**	**19 33 01.3**	**-1.3**
ZAA0	**Zalesovo Array**	**64.44**	**345**	P		**P**	**19 33 07.5**	**-1.2**
ZALV	**Zalesovo Beam**	**64.44**	**345**	P		**P**	**19 33 06.7**	**-1.9**
	comp=Z,1.0nm,0.4s,baz=148,slow=3.4,SNR=7.9							
ZALV	**Zalesovo Beam**	**64.44**	**345**	P		**P**	**19 33 06.6**	**-2.1**
GEYT	**Alibeck**	**65.11**	**318**	P		**P**	**19 33 12.1**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=146,slow=4.9,SNR=8.4							
GEYT	**Alibeck**	**65.11**	**318**	P		**P**	**19 33 12.4**	**-1.0**
GYA0B	**ALIBECK ARRAY**	**65.11**	**318**	P		**P**	**19 33 12.7**	**-0.7**
GYA0B				IAmb		IAmb	19 33 35.8	
	comp=Z,3.0nm,0.8s							
KHZ	**Kahutara**	**66.64**	**133**	P		**P**	**19 33 24.3**	**+1.2**
MAW	**Mawson**	**67.22**	**197**	P		**P**	**19 33 27.6**	**+1.4**
	comp=Z,3.0nm,0.5s,baz=38,slow=6.4,SNR=4.4							
MAW	**Mawson**	**67.22**	**197**	P		**P**	**19 33 27.0**	**+0.8**
MAW				IAmb		IAmb	19 33 46.4	
	comp=Z,5.4nm,1.5s							
BRVK	**Borovoye**	**68.51**	**336**	P		**P**	**19 33 33.8**	**-0.8**
RAYN	**Ar Rayn**	**68.73**	**299**	P		**P**	**19 33 36.0**	**-0.6**
ABKAR	**Akbulak array**	**70.61**	**329**	P		**P**	**19 33 46.0**	**-1.6**
ABKAR	**Akbulak array**	**70.61**	**329**	P		**P**	**19 33 46.1**	**-1.4**
ABKAR				IAmb		IAmb	19 33 47.0	
	comp=Z,2.8nm,1.0s							
YAK	**Yakutsk**	**71.34**	**10**	P		**P**	**19 33 51.3**	**-0.4**
YAK				IAmb		IAmb	19 33 51.8	
	comp=Z,5.6nm,0.6s							
PEA0B	**Petropavlovsk-**	**73.44**	**28**	P		**P**	**19 34 03.7**	**-0.7**
PETK	**Petropavlovsk-**	**73.44**	**28**	P		**P**	**19 34 04.0**	**-0.4**
	comp=Z,3.0nm,0.8s,baz=192,slow=4.1,SNR=1.6							
PETK	**Petropavlovsk-**	**73.44**	**28**	P		**P**	**19 34 03.9**	**-0.4**
VNDA	**Vanda**	**75.15**	**170**	P		**P**	**19 34 15.2**	**+1.3**
	comp=Z,1.6nm,0.6s,baz=316,slow=6.1,SNR=12							
VNDA	**Vanda**	**75.15**	**170**	P		**P**	**19 34 15.2**	**+1.3**
VNDA				IAmb		IAmb	19 34 16.4	
	comp=Z,5.3nm,1.2s							
SYO	**Syowa Base**	**75.43**	**200**	*eP*		**P**	**19 34 15.6**	**-0.1**
SYO	**Syowa Base**	**75.43**	**200**	*eX*		pP	19 34 40.0	-2.6
KBZ	**Khabaz**	**78.00**	**318**	P		**P**	**19 34 29.9**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=153,slow=2.3,SNR=4.2							
EIL	**Elat**	**79.54**	**302**	P		**P**	**19 34 39.1**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=68,slow=4.3,SNR=4.6							
MMAI	**Mount Meron Ar**	**80.05**	**305**	P		**P**	**19 34 41.4**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=99,slow=9.1,SNR=4.4							
LBTB	**Lobatse**	**80.32**	**246**	P		**P**	**19 34 45.4**	**+1.6**
LBTB				IAmb		IAmb	19 34 45.4	
	comp=Z,18nm,1.5s							
BOSA	**Boshof**	**80.40**	**242**	P		**P**	**19 34 45.9**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=127,slow=5.1,SNR=2.9							
BOSA	**Boshof**	**80.40**	**242**	P		**P**	**19 34 46.0**	**+1.8**
BOSA				IAmb		IAmb	19 35 15.3	
	comp=Z,9.5nm,1.4s							
QSPA	**South Pole Qui**	**82.41**	**180**	P		**P**	**19 34 55.3**	**+1.3**
QSPA				IAmb		IAmb	19 34 56.3	
	comp=Z,9.8nm,0.9s							
BR131	**Keskin Array S**	**83.24**	**311**	P		**P**	**19 34 58.2**	**-0.7**
BRTR	**Keskin Array B**	**83.24**	**311**	P		**P**	**19 34 58.7**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=141,slow=7.1,SNR=19							
BRTR	**Keskin Array B**	**83.24**	**311**	P		**P**	**19 34 58.0**	**-0.8**
BZK	**Bozkurt**	**83.58**	**314**	P		**P**	**19 34 60.0**	**-0.3**
JURR	**Jurilovca**	**87.90**	**316**	P		**P**	**19 35 21.1**	**-0.5**
TOPG	**Topolog**	**88.27**	**316**	P		**P**	**19 35 23.0**	**-0.3**
HARR	**Harsova**	**88.54**	**315**	P		**P**	**19 35 24.1**	**-0.5**
SANT	**Santorini**	**88.78**	**307**	P		**P**	**19 35 25.7**	**-0.3**
AKASG	**Malin Array Be**	**89.00**	**321**	P		**P**	**19 35 25.4**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=86,slow=4.2,SNR=7.3							
IDI	**Anoyia**	**89.05**	**306**	P		**P**	**19 35 28.0**	**+0.7**
	comp=Z,2.8nm,0.4s,baz=90,slow=6.1,SNR=10.0							
ALN	**Alexandroupoli**	**89.15**	**311**			**P**	**19 35 27.8**	**+0.2**
ALN				IAmb		IAmb	19 35 30.3	
	comp=Z,4.0nm,1.3s							
SNAA	**Sanae**	**89.38**	**197**	P		**P**	**19 35 29.6**	**+1.4**
SNAA				IAmb		IAmb	19 35 31.2	
	comp=Z,7.3nm,1.0s							
VRI	**Vrincioaia**	**89.61**	**316**	⇑P		**P**	**19 35 30.6**	**+0.9**
INCR	**INCERC-Sediu C**	**89.73**	**315**	⇓P		P	19 35 37.2	+7.0
TESR	**Tescani**	**89.79**	**317**	⇑P		**P**	**19 35 30.8**	**+0.3**
MLR	**Muntele Rosu**	**90.08**	**316**	P		**P**	**19 35 32.4**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=143,slow=7.0,SNR=5.3							
MLR	**Muntele Rosu**	**90.08**	**316**	⇑P		**P**	**19 35 32.5**	**+0.4**
MLR	**Muntele Rosu**	**90.08**	**316**	P		**P**	**19 35 32.7**	**+0.7**
MLR				IAmb		IAmb	19 35 42.3	
	comp=Z,4.4nm,1.6s							
PRAR	**RASCA**	**90.23**	**318**	⇑P		**P**	**19 35 32.5**	**0.0**
BURAR	**Bucovina Array**	**90.95**	**318**	⇑P		**P**	**19 35 37.0**	**+1.0**
BURAR	**Bucovina Array**	**90.95**	**318**	P		**P**	**19 35 36.4**	**+0.4**
BUR08	**Bucovina Ar. S**	**90.97**	**318**	P		**P**	**19 35 36.4**	**+0.3**
BUR08				IAmb		IAmb	19 36 00.7	
	comp=Z,6.1nm,1.5s							
GZR	**Gura Zlata**	**92.26**	**315**	⇑P		**P**	**19 35 43.4**	**+1.4**
YKA	**Yellowknife Ar**	**116.92**	**21**	PKP		**PKiKP**	**19 41 15.8**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=321,slow=0.5,SNR=20							
YKA	**Yellowknife Ar**	**116.92**	**21**			**PKPdf**	**19 41 13.6**	**-2.1**
PDAR	**Pinedale Array**	**131.64**	**37**	PKP		**PKiKP**	**19 41 46.4**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=174,slow=2.8,SNR=3.6							
PDAR				SKPbc		**SKPbc**	**19 45 00.6**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=217,slow=2.1,SNR=5.0							
PDAR	**Pinedale Array**	**131.64**	**37**			**PKiKP**	**19 41 46.1**	**+0.3**
PDAR						**SKPbc**	**19 44 59.8**	**-1.0**
SCHQ	**Schefferville**	**132.72**	**356**	SKPbc		**SKPbc**	**19 45 03.9**	**0.0**
	comp=Z,4.9nm,1.0s,baz=22,slow=4.4,SNR=5.5							
SCHQ	**Schefferville**	**132.72**	**356**	PKPdf		**PKiKP**	**19 41 47.3**	**0.0**
SCHQ						**SKPbc**	**19 45 03.0**	**-0.9**
ULM	**Lac du Bonnet**	**132.90**	**21**	SKPbc		**SKPbc**	**19 45 03.9**	**-0.8**
	comp=Z,3.4nm,0.8s,baz=333,slow=5.1,SNR=3.4							
ULM	**Lac du Bonnet**	**132.90**	**21**	SKPbc		**SKPbc**	**19 45 03.7**	**-1.0**
TXAR	**Lajitas Array**	**142.90**	**50**	PKP		**PKPdf**	**19 42 03.0**	**-2.8**
	comp=Z,0.6nm,0.6s,baz=278,slow=1.8,SNR=10.0							
TXAR				SKPbc		**SKPbc**	**19 45 34.6**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=316,slow=2.5,SNR=4.0							
LPAZ	**La Paz**	**156.03**	**188**	PKPab		**PKPab**	**19 42 56.3**	**+1.5**
	comp=Z,0.8nm,0.4s,baz=180,slow=3.0,SNR=4.2							

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*IDC **03** 19:35:16.9±1.0, 34°.49N×26°.56E, h0km, mb3.8/12, mb1 3.8/18, mb1mx3.7/48, mbtmp3.7/18, ML3.5/6, MS2.6/1, Ms1 2.6/1, ms1mx2.3/58, Error ellipse: s-maj=22.3km s-min=14.4km az=11.0*

*ATH **03** 19:35:18.4, 34°.31N×26°.48E, h16km±2km, ML

KEPZ					IAML			19 37 41.0		
	comp=N,21nm,0.9s									
KEPZ					IAML			19 37 51.0		
	comp=E,31nm,2.2s									
GAZI	**Gazipasa**	**5.07**	**66**	*i* P		**Pn**		**19 36 32.4**	**-1.0**	
GAZI					IAML			19 37 40.0		
	comp=N,28nm,0.7s									
GAZI					IAML			19 37 52.0		
	comp=E,20nm,0.8s									
MMAI	**Mount Meron Ar**	**7.48**	**98**	Pn		**Pn**		**19 37 07.2**	**+0.7**	
	comp=E,1.3nm,0.3s,baz=307,slow=12,SNR=8.6									
MMAI					Sn		**Sn**	19 38 28.9	-2.7	
	comp=E,2.4nm,0.3s,baz=268,slow=26,SNR=5.7									
BRTR	**Keskin Array B**	**7.81**	**44**	Pn		**Pn**		**19 37 13.7**	**+2.6**	
	comp=E,0.1nm,0.3s,baz=218,slow=15,SNR=4.2									
EIL	**Elat**	**8.49**	**121**	Pn		**Pn**		**19 37 21.0**	**+0.7**	
	comp=E,0.4nm,0.3s,baz=333,slow=3.4,SNR=13									
EIL					Sn		Sn	19 38 51.9	-4.6	
	comp=E,0.8nm,0.3s,baz=311,slow=19,SNR=4.5									
EIL					LR		LR	19 42 03.5		
	comp=E,35nm,18.3s,baz=312,slow=47									
ASF	**Jabal al Asfar**	**8.91**	**101**	Pn		**Pn**		**19 37 26.9**	**+0.7**	
	comp=E,0.2nm,0.3s,baz=252,slow=3.2,SNR=3.1									
ASF					Sn		**Sn**	19 39 04.4	-2.5	
	comp=E,0.1nm,0.3s,baz=331,slow=19,SNR=2.1									
AKASG	**Malin Array Be**	**16.49**	**6**	Pn		**Pn**		**19 39 06.8**	**-1.8**	
	comp=E,0.4nm,0.3s,baz=194,slow=11,SNR=4.2									
GERES	**GERESS Array B**	**17.38**	**330**	P		**Pn**		**19 39 18.2**	**-1.8**	
	comp=E,0.1nm,0.3s,baz=138,slow=12,SNR=10									
ESDC	**Sonseca Array**	**24.90**	**291**	P		**P**		**19 40 41.2**	**+0.7**	
	comp=E,0.4nm,0.4s,baz=82,slow=9.0,SNR=4.4									
GEYT	**Alibeck**	**25.67**	**73**	P		**P**		**19 40 47.7**	**+0.1**	
	comp=E,0.6nm,0.4s,baz=268,slow=12,SNR=3.5									
FINES	**FINESS Array B**	**27.14**	**359**	P		**P**		**19 40 58.8**	**-1.7**	
	comp=E,1.6nm,0.5s,baz=159,slow=13,SNR=10									
HFS	**Hagfors**	**27.17**	**346**	P		**P**		**19 40 58.9**	**-1.8**	
	comp=E,3.2nm,0.9s,baz=145,slow=8.8,SNR=3.2									
EKA	**Eskdalemuir Ar**	**29.40**	**325**	P		**P**		**19 41 21.1**	**+0.5**	
	comp=E,1.9nm,0.8s,baz=112,slow=9.3,SNR=3.0									
TORD	**Torodi Ar. Bea**	**30.87**	**233**	P		**P**		**19 41 35.8**	**+1.7**	
	comp=E,0.3nm,0.4s,baz=35,slow=9.1,SNR=5.6									
ARCES	**ARCESS Array B**	**35.27**	**359**	P		**P**		**19 42 10.1**	**-1.9**	
	comp=E,2.0nm,0.6s,baz=177,slow=8.8,SNR=14									
MKAR	**Makanchi Array**	**43.27**	**56**	P		**P**		**19 43 20.6**	**+1.4**	
	comp=E,0.7nm,0.5s,baz=276,slow=7.0,SNR=13									
ZALV	**Zalesovo Beam**	**44.76**	**46**	P		**P**		**19 43 31.4**	**+0.6**	
	comp=E,0.9nm,0.4s,baz=259,slow=8.6,SNR=5.3									
SONM	**Songino Array**	**59.12**	**51**	P		**P**		**19 45 19.9**	**+1.6**	
	comp=E,0.4nm,0.5s,baz=286,slow=8.3,SNR=5.0									
USRK	**Ussuriysk Ar.**	**76.61**	**45**	P		**P**		**19 47 08.7**	**+0.5**	
	comp=E,0.7nm,0.5s,baz=285,slow=5.9,SNR=5.8									
YKA	**Yellowknife Ar**	**78.60**	**343**	P		**P**		**19 47 18.5**	**-0.5**	
	comp=E,0.2nm,0.6s,baz=32,slow=5.3									

*BJI **03** 19:42:12.0±0.0,8°.10N×137°.20E,h5km,mB5.0/10, mb4.5/16,Ms4.6/2,Ms7 4.4/2*
*DJA **03** 19:42:14.3±0.5,8°.N±4°×13°.7E±°,h10km,M4.6/14, mb4.6/14,mB5.5/2,Mw(mB)4.9/2*
*NEIC **03** 19:42:17.9±1.7,7°.77N±0°.08×137°.19E±0°.10,h55km±7km, mb4.6/37,Error ellipse: s-maj=14.4km s-min=11.2km az=94.0*
*IDC **03** 19:42:19.1±3.5,7°.81N×137°.27E,h63km±32km,mb3.9/17, mb1 4.0/19,mb1mx3.8/50,mbtmp4.2/19,ML4.2/2,MS3.4/5, Ms1 3.4/5,ms1mx3.0/44,Error ellipse: s-maj=26.5km s-min=13.2km az=83.0*

ISC 03 19:42:16.6±1.3,7°.78N±0°.06×137°.19E±0°.08,h43km±13km, n89,σ1°09/83,mb4.5/34,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**9.50**	**52**	LR	LR	19 48 02.5	
	comp=Z,150nm,19.3s,baz=246,slow=36						
GUMO	**Guam**	**9.50**	**52**	Pn	**Pn**	**19 44 30.1**	**-0.8**
SMPI	**Sarmi**	**9.82**	**171**	P	**Pn**	**19 44 37.2**	**+1.8**
	70nm,0.6s						
SIJI	**Sorong**	**10.43**	**215**	P	**Pn**	**19 44 47.0**	**+3.4**
	0.5nm,0.3s,baz=342,slow=20,SNR=6.2						
SIJI				S	Sn	19 46 27.5	-12
	0.5nm,0.3s,baz=323,slow=20,SNR=5.5						
GENI	**Genyem**	**10.73**	**164**	P	**Pn**	**19 44 48.1**	**+0.4**
JAY	**Jayapura**	**10.81**	**161**	P	**Pn**	**19 44 50.8**	**+1.9**
	6.1nm,0.3s,baz=280,slow=8.4,SNR=36						
JAY				S	**Sn**	**19 46 47.2**	**-1.5**
	2.8nm,0.3s,baz=180,slow=20,SNR=6.5						
JAY				LR	LR	19 48 29.8	
	comp=Z,217nm,18.9s,baz=288,slow=34						
DAV	**Davao City (W)**	**11.53**	**267**	Pn	**Pn**	**19 44 58.6**	**-0.1**
FAKI	**Fak Fak**	**11.71**	**205**	Pn	**Pn**	**19 45 00.7**	**-0.5**
LUWI	**Luwuk**	**16.84**	**239**	P	**Pn**	**19 46 10.0**	**+0.7**
	2µm45nm,1.1s						
MRSI	**Marisa**	**16.84**	**245**	P	**Pn**	**19 46 08.2**	**-1.1**
	17nm,1.0s						
APSI	**Ampana**	**17.74**	**242**	P	**Pn**	**19 46 19.3**	**-1.2**
	14nm,1.3s						
MPSI	**Mapaga**	**18.75**	**248**	P	**Pn**	**19 46 33.1**	**+0.2**
	6.1nm,0.9s						
KRVT	**Keravat (AS076**	**19.06**	**129**	LR	LR	19 52 33.2	
	comp=Z,109nm,19.0s,baz=283,slow=32						
PMG	**Port Moresby**	**19.75**	**150**	LR	LR	19 53 51.7	
	comp=Z,115nm,18.4s,baz=283,slow=35						
TTSI	**Tana Toraja**	**20.39**	**239**	P	**P**	**19 46 49.8**	**-0.2**
	20nm,0.8s						
KKM	**Kota Kinabalu**	**20.89**	**267**	P	**P**	**19 46 52.7**	**-2.8**
KKM				IAmb	IAmb	19 46 58.9	
	comp=Z,38nm,1.2s						
BNSI	**Bone**	**20.90**	**235**	P	Pn	**19 46 57.7**	**-0.6**
	comp=Z,33nm,1.0s						
SPSI	**Sidrap Palu**	**20.93**	**237**	P	Pn	19 46 58.4	-0.3
	comp=Z,23nm,1.5s						
MTN	**Manton Dam**	**21.35**	**196**	P	**P**	**19 46 58.3**	**-2.0**
MTN				IAmb	IAmb	19 47 18.4	
	comp=Z,45nm,1.4s						
SOEI	**Soe**	**21.66**	**217**	P	**P**	**19 47 03.9**	**+0.2**
	comp=Z,31nm,1.3s						
SOEI	**Soe**	**21.66**	**217**	P	**P**	**19 47 04.4**	**+0.7**
SOEI				IAmb	IAmb	19 47 30.9	
	comp=Z,69nm,1.6s						
YULB	**Yu-li**	**21.76**	**317**	P	**P**	**19 47 05.4**	**+0.7**
YULB				IAmb	IAmb	19 47 32.6	
	comp=Z,52nm,1.5s						
TPUB	**Ta-pu**	**22.15**	**316**	P	**P**	**19 47 09.2**	**+0.3**
TPUB				IAmb	IAmb	19 47 35.3	
	comp=Z,37nm,1.2s						
BATI	**Baumata**	**22.37**	**217**	P	**P**	**19 47 14.0**	**+2.6**
	comp=Z,12nm,0.5s,baz=90,slow=8.5,SNR=4.7						
COEN	**Coen**	**22.40**	**165**	P	**P**	**19 47 09.1**	**-2.5**
COEN				IAmb	IAmb	19 47 19.2	
	comp=Z,36nm,1.4s						
YHNB	**Yeheng**	**22.59**	**320**	P	**P**	**19 47 13.9**	**+0.2**
KNRA	**Kununurra**	**24.75**	**200**	P	**P**	**19 47 34.1**	**-0.2**
KNRA				IAmb	IAmb	19 47 42.1	
	comp=Z,25nm,1.0s						
WRA	**Warramunga Arr**	**27.69**	**186**	P	**P**	**19 48 01.4**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=5.5,slow=9.7,SNR=5.5						
WRA	**Warramunga Ar**	**27.69**	**186**	P	**P**	**19 48 00.9**	**+0.1**
FITZ	**Fitzroy Crossi**	**28.13**	**204**	P	**P**	**19 48 04.5**	**-0.2**
	comp=Z,2.0nm,0.7s,baz=22,slow=12,SNR=5.1						
FITZ	**Fitzroy Crossi**	**28.13**	**204**	P	**P**	**19 48 04.9**	**+0.2**
HNR	**Honiara**	**28.40**	**127**	LR	LR	19 59 09.8	
	comp=Z,94nm,18.4s,baz=199,slow=36						
H11S3	**WAKE ISLAND Hy**	**30.59**	**67**	T	T	20 20 22.1	
	baz=253,slow=75,SNR=174						
H11S1	**WAKE ISLAND Hy**	**30.60**	**67**	T	T	20 20 26.9	
	baz=253,slow=75,SNR=141						
H11S2	**WAKE ISLAND Hy**	**30.60**	**67**	T	T	20 20 25.4	
	baz=253,slow=75,SNR=172						
H11N1	**WAKE ISLAND Hy**	**31.13**	**65**	T	T	20 21 18.5	
	baz=252,slow=75,SNR=34						
H11N2	**WAKE ISLAND Hy**	**31.14**	**65**	T	T	20 21 09.3	
	baz=252,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**31.15**	**65**	T	T	20 21 20.0	
	baz=252,slow=75,SNR=36						
AS31	**Alice Springs**	**31.42**	**186**	P	**P**	**19 48 34.5**	**+0.6**
ASAR	**Alice Springs**	**31.42**	**186**	P	**P**	**19 48 35.3**	**+1.4**
	comp=Z,1.0nm,0.6s,baz=16,slow=11,SNR=24						
ASAR				PcP	**PcP**	**19 51 27.9**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=13,slow=1.1,SNR=5.0						
ASAR	**Alice Springs**	**31.42**	**186**	P	**P**	**19 48 34.9**	**+1.0**
ASAR					**PcP**	**19 51 27.6**	**+0.8**
PBKT	**Sadao Pong**	**36.41**	**287**	P	**P**	**19 49 18.2**	**+1.0**
USRK	**Ussuriysk Ar.**	**36.56**	**354**	P	**P**	**19 49 18.6**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=197,slow=9.9,SNR=5.5						
CM31	**Chiang Mai Arr**	**38.64**	**290**	P	**P**	**19 49 35.6**	**-0.6**
CMAR	**Chiang Mai Arr**	**38.64**	**290**	P	**P**	**19 49 36.9**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=105,slow=6.7,SNR=10.0						
CMAR	**Chiang Mai Arr**	**38.64**	**290**	P	**P**	**19 49 35.7**	**-0.5**
FORT	**Forrest**	**39.33**	**192**	P	**P**	**19 49 43.1**	**+1.4**
STKA	**Stephens Creek**	**39.66**	**174**	P	**P**	**19 49 45.5**	**+1.0**
	comp=Z,2.9nm,0.9s,baz=360,slow=8.1,SNR=3.9						
STKA	**Stephens Creek**	**39.66**	**174**	P	**P**	**19 49 44.8**	**+0.4**
GSI	**Gunungsitoli**	**39.98**	**263**	P	**P**	**19 49 47.9**	**+0.5**
BBOO	**Buckleboo**	**40.38**	**181**	P	**P**	**19 49 49.8**	**-0.6**
KLR	**Kul'dur**	**41.56**	**355**	P	**P**	**19 50 00.7**	**+0.7**
	comp=Z,4.2nm,0.7s,baz=176,slow=5.9,SNR=19						
NWAO	**Narrogin (SRO)**	**44.72**	**204**	P	**P**	**19 50 24.5**	**-1.1**
NWAO				IAmb	IAmb	19 50 38.0	
	comp=Z,24nm,1.3s						
ULN	**Ulaanbaatar**	**47.43**	**333**	P	**P**	**19 50 47.1**	**+0.1**
ULN				IAmb	IAmb	19 50 48.9	
	comp=Z,3.6nm,0.8s						
SONM	**Songino Array**	**47.71**	**332**	P	**P**	**19 50 50.5**	**+1.3**
	comp=Z,3.8nm,0.9s,baz=150,slow=8.5,SNR=25						
SONM				PcP	**PcP**	**19 52 18.2**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=130,slow=3.1,SNR=3.8						
SONM	**Songino Array**	**47.71**	**332**	P	**P**	**19 50 50.4**	**+1.2**
SONM					**PcP**	**19 52 18.4**	**+0.4**
MK31	**Makanchi Array**	**60.71**	**320**	P	**P**	**19 52 24.5**	**+0.8**
MK31				IAmb	IAmb	19 52 25.1	
	comp=Z,2.4nm,0.7s						
MKAR	**Makanchi Array**	**60.71**	**320**	P	**P**	**19 52 24.7**	**+0.9**
	comp=Z,4.0nm,0.6s,baz=102,slow=8.9,SNR=41						
MKAR	**Makanchi Array**	**60.71**	**320**	P	**P**	**19 52 24.3**	**+0.6**
MKAR				PcP	**PcP**	**19 53 09.3**	**+1.8**
MAKZ	**Makanchi**	**60.91**	**320**	P	**P**	**19 52 26.0**	**+0.9**
MAKZ				IAmb	IAmb	19 52 26.9	
	comp=Z,3.5nm,0.7s						
ZAA0	**Zalesovo Array**	**62.22**	**328**	P	**P**	**19 52 33.3**	**-0.4**
ZAA0				IAmb	IAmb	19 52 34.6	
	comp=Z,6.4nm,1.4s						
ZALV	**Zalesovo Beam**	**62.22**	**328**	P	**P**	**19 52 33.7**	**0.0**
	comp=Z,2.0nm,0.6s,baz=111,slow=6.6,SNR=10						
ZALV	**Zalesovo Beam**	**62.22**	**328**	P	**P**	**19 52 32.8**	**-0.9**
KDJ	**Kajisay**	**62.72**	**314**	P	**P**	**19 52 37.2**	**-0.4**
KDJ				IAmb	IAmb	19 52 59.3	
	comp=Z,8.4nm,0.9s						
KSH	**Kashi**	**62.98**	**310**	P	**P**	**19 52 41.6**	**+2.4**
NRN	**Naryn**	**63.40**	**313**	P	**P**	**19 52 42.7**	**+0.4**
NIL	**Nilore**	**64.06**	**304**	P	**P**	**19 52 46.2**	**-0.2**
NIL				IAmb	IAmb	19 52 53.1	
	comp=Z,11nm,1.1s						
KURK	**Kurchatov**	**64.38**	**323**	P	**P**	**19 52 48.4**	**+0.3**
KURBB	**Kurchatov Arra**	**64.40**	**323**	P	**P**	**19 52 48.8**	**+0.6**
	comp=Z,2.0nm,0.5s,baz=114,slow=5.1,SNR=29						
GAR	**Garm**	**67.19**	**309**	P	**P**	**19 53 06.4**	**-0.2**
GAR				IAmb	IAmb	19 53 24.3	
	comp=Z,6.8nm,1.1s						
ANM	**Nome**	**69.42**	**23**	P	**P**	**19 53 19.9**	**+0.1**
ANM				IAmb	IAmb	19 53 38.7	
	comp=Z,8.6nm,1.6s						
BVAR	**Borovoye Array**	**69.94**	**324**	P	**P**	**19 53 23.9**	**+0.6**
	comp=Z,3.2nm,0.6s,baz=107,slow=6.9,SNR=26						
BRVK	**Borovoye**	**70.01**	**324**	P	**P**	**19 53 24.1**	**+0.4**
BRVK				IAmb	IAmb	19 53 25.6	
	comp=Z,22nm,1.6s						
SII	**Sitkinak Islan**	**71.83**	**33**	P	**P**	**19 53 35.0**	**+0.2**
PPLA	**Purkeypile**	**74.33**	**27**	P	**P**	**19 53 50.2**	**+0.6**
IMAR	**Indian Mountai**	**74.48**	**23**	P	**P**	**19 53 49.7**	**-0.5**
MLY	**Manley**	**75.45**	**25**	P	**P**	**19 53 56.4**	**+0.5**
KNK	**Knik Glacier**	**75.73**	**29**	P	**P**	**19 53 57.3**	**-0.2**
KNK				IAmb	IAmb	19 54 17.0	
	comp=Z,18nm,1.4s						
ABKAR	**Akbulak array**	**75.82**	**319**	P	**P**	**19 53 57.1**	**-1.1**
ABKAR	**Akbulak array**	**75.82**	**319**	P	**P**	**19 53 56.9**	**-1.4**
ABKAR				IAmb	IAmb	19 54 04.9	
	comp=Z,5.9nm,1.5s						
SML	**Sawmill**	**75.86**	**28**	P	**P**	**19 53 58.7**	**+0.4**
ILAR	**Eielson Array**	**77.01**	**25**	P	**P**	**19 54 03.6**	**-1.0**
	comp=Z,0.7nm,0.9s,baz=244,slow=5.6,SNR=6.0						
ILAR	**Eielson Array**	**77.01**	**25**	P	**P**	**19 54 03.1**	**-1.6**
ARU	**Arti**	**77.27**	**326**	P	**P**	**19 54 06.0**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=112,slow=2.7,SNR=8.3						
ARU	**Arti**	**77.27**	**326**	P	**P**	**19 54 05.7**	**-0.5**
ARU				IAmb	IAmb	19 54 12.5	
	comp=Z,3.3nm,0.8s						
YKA	**Yellowknife Ar**	**91.41**	**26**	P	**P**	**19 55 18.1**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=293,slow=4.8,SNR=6.6						
YKA	**Yellowknife Ar**	**91.41**	**26**	P	**P**	**19 55 17.5**	**-0.4**
FINES	**FINESS Array B**	**93.07**	**333**	P	**P**	**19 55 24.3**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=51,slow=6.1,SNR=6.5						
FINES	**FINESS Array B**	**93.07**	**333**	P	**P**	**19 55 24.6**	**-0.9**

*ANF **03** 19:47:59.2±0.2,33°.98N×118°.45W,h12km±1km,ML3.0/35, ML2.9/35,Error ellipse: s-maj=1.2km s-min=1.1km az=124.0*
*PAS **03** 19:47:59.9±1.8,33°.982N±0°.010×118°.45W±0°.01, h11km±2km,ML3.0/220,Error ellipse: s-maj=1.7km s-min=1.2km az=48.0*
*NEIC **03** 19:47:59.4±1.5,34°.00N±0°.01×118°.46W±0°.02,h18km, Error ellipse: s-maj=2.1km s-min=1.6km az=71.0*
*SCEDC **03** 19:48:00.1,33°.99N×118°.46W,h10km*

ISC 03 19:47:59.8±0.8,33°.97N±0°.01×118°.46W±0°.01,h17km±4km, n146,σ0°.94/196,Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCGC	**La Cienega, Cu**	**0.07**	**68**		**Pg**	**19 48 02.3**	**-0.7**
LCGC					**Sg**	**19 48 04.6**	**-0.6**
BHPC	**Baldwin Hills**	**0.08**	**78**		**Pg**	**19 48 02.5**	**-0.6**
BHPC					**Sg**	**19 48 04.9**	**-0.4**
DJJ	**Donna J Jenkin**	**0.13**	**0**		**Pg**	**19 48 02.6**	**-1.0**
DJJ	**Donna J Jenkin**	**0.13**	**0**		**Pg**	**19 48 02.6**	**-1.0**
USC	**University of**	**0.15**	**72**		**Pg**	**19 48 03.6**	**-0.2**
USC					**Sg**	**19 48 06.9**	**+0.3**
WTT2	**Watts, South G**	**0.17**	**98**		**Pg**	**19 48 04.1**	**0.0**
WTT2					**Sg**	**19 48 07.7**	**+0.7**
GR2C	**Griffith Obs.**	**0.19**	**42**		**Pg**	**19 48 03.7**	**-0.8**
HLLC	**North Hollywoo**	**0.22**	**21**		**Pg**	**19 48 04.2**	**-0.7**
HLLC					**Sg**	**19 48 07.7**	**-0.6**
RPV	**Rancho Palos V**	**0.23**	**169**		**Pg**	**19 48 04.8**	**-0.3**
GVRC	**Garvey Reservo**	**0.29**	**75**		**Pg**	**19 48 06.0**	**0.0**
FMP	**Fort Macarthur**	**0.29**	**153**		**Sg**	**19 48 10.2**	**-0.2**
FMP	**Fort Macarthur**	**0.29**	**153**	P	**Pg**	**19 48 05.7**	**-0.4**
	baz=333,SNR=21						
FMP				S	**Sg**	**19 48 09.8**	**-0.6**
	baz=333						
DECC	**Green Verdugo**	**0.30**	**20**		**Sg**	**19 48 09.8**	**-0.9**
DECC	**Green Verdugo**	**0.30**	**20**	P	**Pg**	**19 48 05.5**	**-0.8**
	baz=202,SNR=39						
DECC				S	**Sg**	**19 48 09.7**	**-0.9**
	baz=202						
PASC	**Pasadena Art C**	**0.30**	**49**		**Pg**	**19 48 05.3**	**-0.9**
CACC	**Caltech Cellar**	**0.32**	**59**		**Pg**	**19 48 06.0**	**-0.6**
BLCC	**Black Canyon**	**0.32**	**326**		**Pg**	**19 48 06.4**	**-0.3**
DLAC	**Del Amo**	**0.32**	**113**		**Pb**	**19 48 07.2**	**+0.1**
DLAC					**Sb**	**19 48 13.5**	**+1.4**
OAT	**Oat Mountain**	**0.39**	**340**		**Pg**	**19 48 08.0**	**+0.1**
MWC	**Mount Wilson**	**0.41**	**53**		**Pg**	**19 48 07.5**	**-0.8**
MWC	**Mount Wilson**	**0.41**	**53**		**Sg**	**19 48 13.3**	**-0.7**
IR2C	**Iron Canyon**	**0.42**	**6**		**Pg**	**19 48 07.6**	**-0.7**
CHFC	**Chilao Flat St**	**0.51**	**45**		**Pg**	**19 48 09.0**	**-1.0**
CHFC					**Sg**	**19 48 15.8**	**-1.0**
PEM	**Pine Mountain**	**0.52**	**68**		**Pg**	**19 48 09.4**	**-0.8**
BLG	**Laguna Peak, P**	**0.52**	**285**		**Pg**	**19 48 09.4**	**-0.8**
BLG	**Laguna Peak, P**	**0.52**	**285**	P	**Pg**	**19 48 09.4**	**-0.8**
	baz=103,SNR=8.7						
BLG				S	**Sg**	**19 48 16.7**	**-0.6**
	baz=103						
BALC	**Balcom Canyon**	**0.54**	**308**		**Pg**	**19 48 10.6**	**+0.1**
PSRC	**Puddingstone R**	**0.55**	**77**		**Pg**	**19 48 10.1**	**-0.7**
CIAC	**Catalina I. Ai**	**0.57**	**176**		**Pg**	**19 48 10.8**	**-0.3**
CIS	**Catalina Islan**	**0.57**	**177**	P	**Pg**	**19 48 10.8**	**-0.3**
	baz=356,SNR=98						
CIS				S	**Sg**	**19 48 18.0**	**-0.8**
	baz=356						
XTL	**Crystal Lake,**	**0.59**	**57**		**Pg**	**19 48 10.6**	**-0.9**
PYR	**Pyramid**	**0.64**	**338**		**Pg**	**19 48 12.3**	**-0.1**
LRRC	**Littlerock Res**	**0.66**	**33**		**Pg**	**19 48 11.8**	**-0.9**
LEOC	**Leona Valley**	**0.67**	**11**		**Pg**	**19 48 11.8**	**-1.2**
LEOC					**Sg**	**19 48 21.0**	**-0.9**
SSK	**Sunset Peak**	**0.68**	**69**		**Pg**	**19 48 12.2**	**-0.9**
OSI	**Osito Audit: C**	**0.68**	**341**		**Pg**	**19 48 12.5**	**-0.6**
OSI	**Osito Audit: C**	**0.68**	**341**	P	**Pg**	**19 48 12.7**	**-0.4**
	baz=161,SNR=11						
OSI				S	**Sg**	**19 48 21.8**	**-0.3**
	baz=161						
SBI	**Santa Barbara**	**0.69**	**224**		**Pg**	**19 48 13.3**	**+0.1**
HOLC	**Holcomb Ridge**	**0.70**	**46**		**Pg**	**19 48 12.5**	**-1.0**
BFSC	**Mount Baldy Ra**	**0.71**	**68**		**Pg**	**19 48 12.5**	**-1.3**
BFSC	**Mount Baldy Ra**	**0.71**	**68**	P	**Pg**	**19 48 12.6**	**-1.3**
	baz=250,SNR=80						
BFSC				S	**Sg**	**19 48 23.2**	**-0.1**
	baz=250						
BTPC	**Burnt Peak**	**0.71**	**352**		**Pg**	**19 48 12.8**	**-1.0**
ALPC	**Antelope**	**0.72**	**10**		**Pg**	**19 48 12.8**	**-1.1**
ALPC					**Sg**	**19 48 22.5**	**-1.1**
MLSC	**Mira Loma**	**0.74**	**87**		**Pb**	**19 48 14.8**	**+0.5**
FOXC	**Fox Airport**	**0.79**	**13**		**Pg**	**19 48 14.2**	**-1.0**
SS2	**San Sevaine**	**0.83**	**73**		**Pg**	**19 48 14.9**	**-1.0**
SBB	**Saddle Back Bu**	**0.88**	**36**		**Pg**	**19 48 15.6**	**-1.4**
SBB					**Sg**	**19 48 27.0**	**-1.6**
RVR	**Riverside**	**0.90**	**88**		**Pg**	**19 48 16.0**	**-1.2**
RVR					**Sg**	**19 48 27.9**	**-1.1**
SME	**Santa Rosa Min**	**0.93**	**99**		**Pg**	**19 48 16.2**	**-1.6**
SME					**Sg**	**19 48 28.6**	**-1.4**
RSBC	**Riverside Bore**	**0.94**	**90**		**Sg**	**19 48 30.2**	**-0.1**
RSBC	**Riverside Bore**	**0.94**	**90**		**Pg**	**19 48 17.3**	**-0.7**
RSBC	**Riverside Bore**	**0.94**	**90**		**Pg**	**19 48 17.2**	**-0.7**
RSBC					**Sg**	**19 48 29.1**	**-1.3**
THC	**Tehachapi Micr**	**0.95**	**350**		**Pg**	**19 48 17.2**	**-1.1**
CSP	**Cedar Springs**	**0.97**	**70**		**Pg**	**19 48 17.3**	**-1.3**
SCZ2	**Santa Cruz Isl**	**0.98**	**272**		**Pg**	**19 48 17.9**	**-0.9**
SCZ2	**Santa Cruz Isl**	**0.98**	**272**	P	**Pg**	**19 48 18.2**	**-0.6**
	baz=90,SNR=31						
SCZ2				Sb	**Sn**	**19 48 33.2**	**+0.8**
	baz=90						
EDW2	**Edwards Air Fo**	**0.98**	**23**		**Pg**	**19 48 17.4**	**-1.5**
EDW2					**Sg**	**19 48 29.7**	**-2.1**
EDW2	**Edwards Air Fo**	**0.98**	**23**	P	**Pg**	**19 48 17.4**	**-1.5**
	baz=204,SNR=84						
EDW2				S	**Sg**	**19 48 30.0**	**-1.8**
	baz=204						
SCI2	**San Clemente I**	**0.99**	**184**	P	**Pb**	**19 48 18.1**	**-0.5**
	baz=4.0,SNR=30						
SCI2				Sb	**Sn**	**19 48 33.3**	**+0.6**
	baz=4.0						
RYS	**Reyes Peak**	**1.00**	**312**		**Pg**	**19 48 17.7**	**-1.4**
MPI	**Mount Pinos, F**	**1.01**	**326**		**Pg**	**19 48 18.2**	**-1.3**
HLNC	**Highland**	**1.04**	**81**		**Pb**	**19 48 19.0**	**-0.3**
ABL	**Mount Abel**	**1.08**	**324**		**Pb**	**19 48 19.1**	**-1.1**
PEC	**Perris**	**1.08**	**94**		**Pb**	**19 48 18.9**	**-1.2**
PEC					**Sb**	**19 48 33.6**	**-0.3**
VTV	**Victorville**	**1.10**	**58**		**Sb**	**19 48 34.6**	**0.0**
MURC	**Murrieta**	**1.11**	**109**		**Pb**	**19 48 19.4**	**-1.2**
MURC					**Sb**	**19 48 34.3**	**-0.6**
MURC	**Murrieta**	**1.11**	**109**	P	**Pb**	**19 48 19.6**	**-1.0**
	baz=290,SNR=19						
MURC				S	**Sb**	**19 48 34.8**	**-0.1**
	baz=290						
CFT	**Crafton Hills**	**1.12**	**86**		**Pb**	**19 48 20.0**	**-0.8**
SVD	**Seven Oaks Dam**	**1.14**	**83**		**Pb**	**19 48 20.2**	**-0.8**
SBC	**Santa Barbara**	**1.14**	**294**	Sb	**Sn**	**19 48 37.1**	**+0.8**
	baz=113						
SNCC	**San Nicolas Is**	**1.15**	**231**		**Pb**	**19 48 20.6**	**-0.6**
SNCC	**San Nicolas Is**	**1.15**

DAC	**Darwin (Calif)**	**2.40**	**17**			**Pn**	**19 48 39.1**	**+0.5**
SWSC	**Sam W. Stewart**	**2.45**	**114**		Pb	**Pb**	**19 48 43.3**	**-0.1**
	baz=296							
SWSC					Sb	**Sb**	**19 49 14.4**	**+1.2**
	baz=296							
GMRC	**Granite Mounta**	**2.45**	**70**	P		**Pn**	**19 48 39.4**	**+0.3**
	baz=252							
CWC	**Cottonwood Cre**	**2.48**	**7**	Sb		**Sb**	**19 49 16.8**	**+2.5**
	baz=187							
BC3	**Big Chuckawall**	**2.52**	**96**	Pb		**Pb**	**19 48 44.5**	**-0.2**
	baz=278							
TUQ	**Turquoise Moun**	**2.54**	**54**	P		**Pn**	**19 48 41.0**	**+0.5**
	baz=236,SNR=8.9							
TUQ					Sb	**Sb**	**19 49 18.4**	**+2.2**
	baz=236							
IRM	**Iron Mountain**	**2.75**	**85**	Pb		**Pb**	**19 48 48.8**	**+0.2**
	baz=267							
PMPB	**Monarch Peak**	**2.95**	**320**	Pn		**Pn**	**19 48 46.6**	**+0.6**
GLA	**Glamis**	**3.17**	**106**	Pn		**Pn**	**19 48 50.0**	**+1.1**
Y12C	**Blythe**	**3.28**	**93**			**Pn**	**19 48 52.2**	**+1.8**
TPNV	**Topopah Spring**	**3.47**	**31**			**Pn**	**19 48 55.0**	**+1.8**
TPNV	**Topopah Spring**	**3.47**	**31**	P		**Pn**	**19 48 55.0**	**+1.8**
	baz=212							
OMMB	**Old Mammoth Mi**	**3.66**	**353**			**Pn**	**19 48 57.2**	**+1.2**
MDPB	**Devils Postpil**	**3.69**	**352**			**Pn**	**19 48 57.6**	**+1.4**
SHPR	**Sheep Range**	**3.69**	**46**	Pn		**Pn**	**19 48 58.3**	**+2.0**
CMB	**Columbia Colle**	**4.34**	**339**			**Pn**	**19 49 07.3**	**+2.2**
RYN	**Ryan**	**4.64**	**359**	Pn		**Pn**	**19 49 08.6**	**-0.7**
R11A	**Troy Canyon, C**	**4.95**	**27**	Pn		**Pn**	**19 49 13.4**	**-0.1**
LCMT	**Little Creek M**	**5.22**	**53**			**Pn**	**19 49 18.0**	**+0.8**
CCUT	**Cedar City**	**5.47**	**48**	Pn		**Pn**	**19 49 21.0**	**+0.3**
KNB	**Kanab**	**5.51**	**55**	Pn		**Pn**	**19 49 21.8**	**+0.6**
PSUT	**Pine Spring**	**5.88**	**38**			**Pn**	**19 49 27.0**	**+0.7**

*DJA **03** 19:52:40.5±1.0,9˚N±7˝×12˚7E±˚, h48km±9km, M4.8/18, mb4.7/18, mB5.0/5, MLv5.0/3, Mw(mB)4.3/5*
*MAN **03** 19:52:41.4, 8.69N×126.45E, h21km, mb5.4, ML4.4, MS4.6*
*IDC **03** 19:52:43.6±1.6, 8.70N×126.34E, h75km±15km, mb4.1/29, mb1 4.2/31, mb1mx4.1/44, mbtmp4.5/31, MS3.2/10, Ms1 3.2/10, ms1mx3.0/46, Error ellipse: s-maj=16.6km s-min=8.2km az=81.0*
*BJI **03** 19:52:43.1±0.0, 8.80N×126.40E, h76km, mB5.0/27, mb4.6/33, Ms4.6/6, Ms7 4.4/6*
*NEIC **03** 19:52:44.9±2.5, 8.69N±0.06×126.39E±0.07, h85km±5km, mb4.8/130, Error ellipse: s-maj=10.0km s-min=9.1km az=92.0*
ISC 03 19:52:42.7±0.6, 8.73N±0.03×126.46E±0.05, h66km±5km, n240, σ1$54/268, mb4.7/101, 6C-6D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.55**	**190**	↑	*i*	P	**Pn**	**19 52 51.8**	**-3.9**
BIPH					*i*	S	**Sn**	**19 52 58.8**	**-6.5**
SCPH	**Surigao**	**1.42**	**317**	↑	*e*	P	**Pn**	**19 53 06.1**	**-0.4**
SCPH					*e*	S	**Sn**	**19 53 26.6**	**+2.2**
CGP	**Cagayan de Oro**	**1.77**	**261**	↑	*i*	P	**Pn**	**19 53 10.4**	**-0.8**
CGP					*i*	S	**Sn**	**19 53 32.8**	**0.0**
DAV	**Davao City (W)**	**1.87**	**208**			P	**Pn**	**19 53 13.3**	**+0.8**
	142nm,0.3s,baz=16,slow=18,SNR=15								
DAV						S	**Sn**	**19 53 36.5**	**+1.3**
	296nm,0.3s,baz=274,slow=22,SNR=9.4								
DAV	**Davao City (W)**	**1.87**	**208**	‖	*e*	P	Pn	19 53 17.9	+5.4
DAV	**Davao City (W)**	**1.87**	**208**				**Pn**	**19 53 13.3**	**+0.8**
DAV							**Sn**	**19 53 35.5**	**+0.3**
DMPH	**Davao City--Mi**	**1.89**	**210**	↑	*e*	P	**Pn**	**19 53 13.5**	**+0.6**
DMPH					*i*	S	**Sn**	**19 53 37.5**	**+1.8**
KCP	**Kidapawan**	**2.19**	**219**	↑	*i*	P	**Pn**	**19 53 16.2**	**-0.7**
KCP					*i*	S	**Sn**	**19 53 46.1**	**+3.2**
CTBH	**Cotabato--PC H**	**2.66**	**236**	‖	*i*	P	**Pn**	**19 53 22.2**	**-1.1**
SKMP	**Bagumbayan, Su**	**2.91**	**221**		*e*	P	**Pn**	**19 53 25.4**	**-1.3**
SKMP					*e*	S	**Sn**	**19 53 57.9**	**-2.5**
LLP	**Lapu-Lapu**	**2.92**	**303**	‖	*e*	P	**Pn**	**19 53 27.4**	**+0.5**
LLP					*e*	S	**Sn**	**19 54 03.4**	**+2.5**
OCLP	**Ormoc**	**2.94**	**322**		*e*	P	**Pn**	**19 53 29.1**	**+2.0**
OCLP					*e*	S	**Sn**	**19 54 05.5**	**+4.3**
GSPH	**General Santos**	**3.03**	**210**	‖	*i*	P	**Pn**	**19 53 29.4**	**+1.0**
DCPH	**Dipolog City**	**3.08**	**267**	‖	*i*	P	**Pn**	**19 53 29.2**	**+0.2**
DCPH					*i*	S	**Sn**	**19 54 04.8**	**+0.1**
RCP	**Roxas**	**4.61**	**308**	↑	*e*	P	**Pn**	**19 53 51.8**	**+1.8**
OTRP	**Odiongan**	**5.66**	**310**		*e*	P	**Pn**	**19 54 06.6**	**+2.2**
LQP	**Lukban**	**7.20**	**318**	‖	*e*	P	**Pn**	**19 54 27.4**	**+1.8**
TGY	**Tagaytay City**	**7.60**	**315**			P	Pn	19 54 35.9	+4.9
	14nm,0.3s,baz=77,slow=5.2,SNR=5.9								
TNTI	**Ternate**	**7.96**	**173**			P	**Pn**	**19 54 38.5**	**+2.7**
	544nm45nm,1.2s								
TNTI	**Ternate**	**7.96**	**173**				**Pn**	**19 54 35.9**	**+0.1**
TNTI							**Sn**	**19 56 09.6**	**+5.2**
KMSI	**Cibinong**	**8.47**	**197**	P			Pn	19 55 01.9	+19
CAUP	**Cauayan**	**9.33**	**331**		*e*	P	**Pn**	**19 54 53.3**	**-1.2**
CAUP					*e*	S	**Sn**	**19 56 33.9**	**-4.0**
MRSI	**Marisa**	**9.36**	**209**			P	**Pn**	**19 54 53.9**	**-1.0**
	32nm,0.5s								
LUWI	**Luwuk**	**10.38**	**201**			P	Pn	19 55 21.1	+12
LUWI	**Luwuk**	**10.38**	**201**				**Pn**	**19 55 09.8**	**+0.9**
KKM	**Kota Kinabalu**	**10.51**	**256**	Pn			**Pn**	**19 55 12.3**	**+1.6**
SWI	**Sorong**	**10.66**	**153**	P			**Pn**	**19 55 12.5**	**-0.2**
	26nm,0.5s								
SIJI	**Sorong**	**10.67**	**153**	P			**Pn**	**19 55 12.8**	**0.0**
	2.5nm,0.3s,baz=343,slow=13,SNR=9.8								
SIJI						S	**Sn**	**19 57 04.2**	**-6.7**
	1.4nm,0.3s,baz=204,slow=19,SNR=5.0								
SIJI						LR	LR	19 59 33.8	
	comp=Z,70nm,18.7s,baz=13,slow=38								
APSI	**Ampana**	**10.71**	**207**			P	**Pn**	**19 55 17.2**	**+3.8**
	26nm,0.7s								
SANI	**Sanana**	**10.72**	**183**			P	**Pn**	**19 55 13.1**	**-0.4**
	27nm,0.7s								
FAKI	**Fak Fak**	**12.93**	**153**	Pn			**Pn**	**19 55 43.0**	**-0.8**
TTSI	**Tana Toraja**	**13.44**	**210**	P			**Pn**	**19 55 53.4**	**+2.8**
	23nm,1.1s								
BNSI	**Bone**	**14.50**	**206**	P			**P**	**19 56 07.2**	**-2.3**
	32nm,0.9s								
YULB	**Yu-li**	**15.39**	**342**			Pn	**Pn**	**19 56 16.5**	**+0.4**
YULB						IAmb	IAmb	19 56 17.6	
	comp=Z,62nm,1.7s								
SBUM	**Sibu**	**15.48**	**247**	P			**P**	**19 56 21.1**	**+0.8**
TPUB	**Ta-pu**	**15.53**	**340**			Pn	**Pn**	**19 56 18.6**	**+0.8**
TPUB						IAmb	IAmb	19 56 30.0	
	comp=Z,62nm,1.5s								
SSLB	**Suanglung**	**15.87**	**341**	P			**P**	**19 56 24.8**	**+0.1**
SSLB						IAmb	IAmb	19 56 27.0	
	comp=Z,102nm,1.9s								
YHNB	**Yeheng**	**16.58**	**344**	P			**P**	**19 56 32.7**	**+0.1**
JOW	**Kunigami**	**18.09**	**5**	P			**Pn**	**19 56 52.3**	**+2.8**
	comp=Z,0.4nm,0.3s,baz=186,slow=14,SNR=7.7								
JOW	**Kunigami**	**18.09**	**5**	P			**Pn**	**19 56 50.1**	**+0.7**
SOEI	**Soe**	**18.50**	**187**	P			Pn	19 57 07.1	+12
SOEI	**Soe**	**18.50**	**187**	P			**Pn**	**19 56 56.2**	**+1.6**
SOEI							IAmb	IAmb	19 57 22.4
	comp=Z,65nm,1.4s								
GUMO	**Guam**	**18.69**	**73**			LR	LR	20 02 34.9	
	comp=Z,86nm,20.4s,baz=231,slow=31								
GUMO	**Guam**	**18.69**	**73**	P			**Pn**	**19 56 56.7**	**-0.1**
BATI	**Baumata**	**19.02**	**188**	P			**Pn**	**19 57 00.9**	**+0.1**
	comp=Z,5.9nm,0.3s,baz=68,slow=5.6,SNR=15								
BATI						LR	LR	20 06 20.1	
	comp=Z,90nm,18.1s,baz=344,slow=43								
QIZ	**Qiongzhong**	**19.09**	**304**	P			**P**	**19 56 59.5**	**-0.6**
PLAI	**Plampang**	**19.47**	**207**	P			**Pn**	**19 57 07.5**	**+1.4**
	comp=Z,36nm,0.8s								
SRBI	**Singaraja**	**20.12**	**214**	P			Pn	19 57 12.9	-0.8
	comp=Z,30nm,0.7s								
NJ2	**Nanjing**	**24.26**	**344**		*e*	P	**P**	**19 57 54.3**	**+0.7**
NJ2						pmax	pmax		
	comp=Z,11nm,1.1s								
LEM	**Lembang**	**24.32**	**231**	P			**P**	**19 57 57.7**	**+3.1**
	comp=Z,16nm,0.5s,baz=8.3,slow=13,SNR=5.2								
KNRA	**Kununurra**	**24.36**	**175**	P			**P**	**19 57 54.7**	**+0.1**
KNRA							IAmb	IAmb	19 57 57.6
	comp=Z,33nm,0.8s								
JNU	**Nakatsue**	**24.61**	**9**	P			**P**	**19 57 57.9**	**+0.9**
	comp=Z,23nm,0.8s,baz=170,slow=4.5,SNR=16								
JNU						LR	LR	20 07 18.1	
	comp=Z,51nm,20.0s,baz=172,slow=36								
JNU	**Nakatsue**	**24.61**	**9**	P			**P**	**19 57 56.9**	**0.0**
JNU							IAmb	IAmb	19 57 59.0
	comp=Z,28nm,0.9s								
CISI	**Cisompet, Garu**	**24.64**	**229**	P			**P**	**19 57 57.5**	**+0.1**
CISI							IAmb	IAmb	19 57 59.7
	comp=Z,102nm,1.8s								
IPM	**Ipoh**	**25.61**	**262**	P			**P**	**19 58 06.5**	**+0.3**
MDSI	**Maura Dua**	**25.81**	**240**	P			**P**	**19 58 10.4**	**+2.5**
	comp=Z,12nm,1.1s								
KULM	**Kulim**	**25.84**	**264**			P	**P**	**19 58 08.8**	**+0.6**
PBKT	**Sadao Pong**	**26.04**	**290**			P	**P**	**19 58 11.0**	**+0.9**
PBKT						IAmb	IAmb	19 58 13.4	
	comp=Z,16nm,0.9s								
BKNI	**Bangkinang**	**26.66**	**253**			P	**P**	**19 58 13.6**	**-2.0**
BKNI						IAmb	IAmb	19 58 14.2	
	comp=Z,29nm,1.1s								
FITZ	**Fitzroy Crossi**	**26.67**	**182**			P	**P**	**19 58 15.3**	**-0.3**
	comp=Z,11nm,0.7s,baz=12,slow=9.4,SNR=54								
FITZ						PcP	**PcP**	**20 01 38.1**	**0.0**
	comp=Z,2.4nm,0.8s,baz=316,slow=4.3,SNR=3.4								
FITZ						LR	LR	20 10 49.7	
	comp=Z,50nm,18.1s,baz=336,slow=41								
FITZ	**Fitzroy Crossi**	**26.67**	**182**			P	**P**	**19 58 15.4**	**-0.3**
FITZ							**PcP**	**20 01 38.4**	**+0.3**
MNAI	**Manna**	**26.80**	**242**			P	**P**	**19 58 17.7**	**+0.7**
PMG	**Port Moresby**	**27.38**	**131**			LR	LR	20 10 14.9	
	comp=Z,55nm,19.4s,baz=334,slow=38								
COEN	**Coen**	**27.99**	**143**			P	**P**	**19 58 27.0**	**-0.4**
COEN						IAmb	IAmb	19 58 42.1	
	comp=Z,39nm,1.6s								
INU	**Inuyama**	**28.20**	**18**			P	**P**	**19 58 29.6**	**+0.5**
INU						IAmb	IAmb	19 58 30.5	
	comp=Z,17nm,0.6s								
CM31	**Chiang Mai Arr**	**28.40**	**293**			P	**P**	**19 58 31.8**	**+0.6**
CMAR	**Chiang Mai Arr**	**28.40**	**293**			P	**P**	**19 58 32.0**	**+0.8**
	comp=Z,3.9nm,0.6s,baz=99,slow=7.2,SNR=38								
CMAR						LR	LR	20 09 51.5	
	comp=Z,34nm,18.3s,baz=124,slow=36								
CMAR	**Chiang Mai Arr**	**28.40**	**293**			P	**P**	**19 58 31.0**	**-0.2**
CHTO	**Chiang Mai**	**28.50**	**293**			P	**P**	**19 58 32.0**	**-0.1**
KSAR	**Wonju Array Be**	**28.61**	**2**			P	**P**	**19 58 32.2**	**-0.6**
KSRS	**Korea Array**	**28.62**	**2**			P	**P**	**19 58 33.4**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=191,slow=9.2,SNR=4.1								
KSRS						LR	LR	20 11 54.9	
	comp=Z,37nm,18.4s,baz=180,slow=40								
KS19	**Wonju Array Si**	**28.67**	**2**			P	**P**	**19 58 33.4**	**0.0**
KS19						IAmb	IAmb	19 58 34.4	
	comp=Z,20nm,1.0s								
WRA	**Warramunga Arr**	**29.53**	**165**			P	**P**	**19 58 39.6**	**-1.6**
	comp=Z,1.4nm,0.7s,baz=342,slow=9.4,SNR=11								
WRA						PcP	**PcP**	**20 01 44.9**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=343,slow=2.7,SNR=6.0								
WRA	**Warramunga Arr**	**29.53**	**165**			P	**P**	**19 58 38.8**	**-2.4**
WRA							**PcP**	**20 01 45.4**	**+0.3**
MJAR	**Matsushiro Arr**	**29.67**	**19**	P			**P**	**19 58 41.6**	**-0.6**
	comp=Z,4.0nm,0.7s,baz=168,slow=6.7,SNR=18								
MJAR						LR	LR	20 10 50.5	
	comp=Z,31nm,18.0s,baz=250,slow=36								
MJAR	**Matsushiro Arr**	**29.67**	**19**	P			**P**	**19 58 41.5**	**-0.8**
MAJO	**Matsushiro**	**29.68**	**19**	P			**P**	**19 58 40.2**	**-2.0**
MAJO						IAmb	IAmb	19 58 43.8	
	comp=Z,62nm,2.0s								
MJB9	**Matsu-Tunnel**	**29.68**	**19**	P			**P**	**19 58 40.4**	**-1.9**
MJB9						IAmb	IAmb	19 58 43.8	
	comp=Z,64nm,2.0s								
GSI	**Gunungsitoli**	**29.69**	**257**	P			**P**	**19 58 43.5**	**+0.9**
GSI						IAmb	IAmb	19 59 11.8	
	comp=Z,28nm,1.0s								
CD2	**Chengdu**	**30.58**	**319**	P			**P**	**19 58 50.3**	**-0.1**
CD2						pmax	pmax		
	comp=Z,20nm,0.5s								
PSA00	**Pilbara Seismi**	**30.81**	**192**	P			**P**	**19 58 52.3**	**-0.1**
PSA00						IAmb	IAmb	19 58 53.5	
	comp=Z,10nm,0.6s								
AS31	**Alice Springs**	**33.01**	**167**	P			**P**	**19 59 12.7**	**+0.9**
ASAR	**Alice Springs**	**33.01**	**167**	P			**P**	**19 59 10.6**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=342,slow=7.1,SNR=26								
ASAR						PcP	**PcP**	**20 01 54.6**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=344,slow=2.6,SNR=11								
ASAR						ScP	**ScP**	**20 05 32.6**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=338,slow=3.2,SNR=4.5								
ASAR	**Alice Springs**	**33.01**	**167**	P			**P**	**19 59 10.7**	**-1.1**
ASAR							**ScP**	**20 05 32.0**	**-1.0**
LZH	**Lanzhou**	**34.15**	**326**		*e*	P	**P**	**19 59 24.1**	**+2.4**
LZH						pmax	pmax		
	comp=Z,16nm,1.1s								
LZH						pmax	pmax		
	comp=Z,57nm,4.3s								
SIMRM	**Sittwe**	**34.36**	**293**			P	**P**	**19 59 24.6**	**+1.0**
SIMRM						IAmb	IAmb	19 59 27.7	
	comp=Z,17nm,0.7s								
HHC	**Hu-ho-hao-te**	**34.62**	**340**		*e*	P	**P**	**19 59 28.1**	**+2.5**
HHC						pmax	pmax		
	comp=Z,3.0nm,0.9s								
HHC						pmax	pmax		
	comp=Z,63nm,5.6s								
CTA	**Charters Tower**	**34.64**	**146**	P			**P**	**19 59 26.6**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=351,slow=9.2,SNR=3.6								
USA0B	**Ussuriysk Arra**	**35.66**	**7**	P			**P**	**19 59 35.5**	**+1.1**
USRK	**Ussuriysk Ar.**	**35.66**	**7**	P			**P**	**19 59 35.4**	**+1.0**
	comp=Z,18nm,0.7s,baz=188,slow=7.8,SNR=38								
USRK	**Ussuriysk Ar.**	**35.66**	**7**	P			**P**	**19 59 35.2**	**+0.8**
MDJ	**Mudanjiang**	**35.85**	**4**	P			**P**	**19 59 37.1**	**+1.1**
MDJ						IAmb	IAmb	19 59 38.7	
	comp=Z,14nm,1.0s								
ERM	**Erimo**	**36.27**	**21**	P			**P**	**19 59 38.9**	**-0.7**
SHL	**Shillong**	**36.88**	**301**	P			**P**	**19 59 43.4**	**-2.0**
SHL						IAmb	IAmb	19 59 48.9	
	comp=Z,14nm,0.9s								
HNR	**Honiara**	**37.91**	**118**	P			**P**	**19 59 54.5**	**+0.5**
ASAJ	**Asahikawa**	**37.95**	**19**	P			**P**	**19 59 55.8**	**+1.9**
	comp=Z,18nm,0.6s,baz=210,slow=7.7,SNR=19								
GTA	**Gaotai**	**38.75**	**326**		*e*	P	**P**	**20 00 03.1**	**+2.2**
GTA						pP	sP	20 00 21.1	-3.8
GTA						sP	pP	20 00 28.2	+11
GTA						pmax	pmax		
	comp=Z,5.0nm,1.1s								
MORW	**Morawa**	**38.90**	**195**	P			**P**	**20 00 02.7**	**+0.7**
LSA	**Lhasa**	**39.09**	**307**	P			**P**	**20 00 04.7**	**+0.5**
FORT	**Forrest**	**39.31**	**178**	P			**P**	**20 00 04.9**	**-0.5**
TAPN	**Taplejung**	**41.01**	**302**		*e*	P	**P**	**20 00 20.3**	**+0.4**
	comp=Z,14nm,0.5s								
ODAN	**Odare**	**41.12**	**301**		*e*	P	**P**	**20 00 21.0**	**+0.2**
	comp=Z,48nm,0.6s								
RAMN	**Ramite**	**41.81**	**301**		*e*	P	**P**	**20 00 27.1**	**+0.6**
	comp=Z,18nm,0.5s								
BBOO	**Buckleboo**	**42.31**	**168**			P	**P**	**20 00 30.2**	**+0.1**
BBOO						PcP	**PcP**	**20 02 22.2**	**-0.6**
ULN	**Ulaanbaatar**	**42.33**	**341**			P	**P**	**20 00 29.4**	**-0.9**
NWAO	**Narrogin (SRO)**	**42.35**	**192**			P	**P**	**20 00 31.0**	**+0.6**
	comp=Z,3.7nm,0.4s,baz=33,slow=9.3,SNR=12								
NWAO	**Narrogin (SRO)**	**42.35**	**192**			P	**P**	**20 00 30.9**	**+0.6**
NWAO						IAmb	IAmb	20 00 45.8	
	comp=Z,24nm,1.1s								
NWAO	**Narrogin (SRO)**	**42.35**	**192**			P	**P**	**20 00 31.1**	**+0.6**
NWAO						IAmb	IAmb	20 00 45.8	
	comp=Z,20nm,1.1s								
JIRN	**Jiri**	**42.38**	**302**		*e*	P	**P**	**20 00 31.2**	**-0.1**
	comp=Z,48nm,0.6s								
SONM	**Songino Array**	**42.52**	**340**	P			**P**	**20 00 30.8**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=152,slow=11,SNR=7.3								
SONM						PcP	**PcP**	**20 02 23.5**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=150,slow=3.8,SNR=5.4								
SONM	**Songino Array**	**42.52**	**340**	P			**P**	**20 00 30.5**	**-1.3**
SONM						PcP	**PcP**	**20 02 23.5**	**+0.1**
GUN	**Gumba**	**42.72**	**302**		*e*	P	**P**	**20 00 34.1**	**+0.1**
	comp=Z,49nm,0.8s								
STKA	**Stephens Creek**	**42.89**	**161**	P			**P**	**20 00 34.2**	**-0.6**
	comp=Z,5.4nm,0.7s,baz=340,slow=7.8,SNR=11								
STKA	**Stephens Creek**	**42.89**	**161**	P			**P**	**20 00 34.6**	**-0.2**
PKI	**Pulchoki**	**43.01**	**301**		*e*	P	**P**	**20 00 36.2**	**-0.1**
	comp=Z,1.8nm,0.6s								
PKIN	**Phulchoki**	**43.02**	**301**		*e*	P	**P**	**20 00 36.1**	**-0.3**
	comp=Z,12nm,0.6s								
KKN	**Kakani**	**43.19**	**302**		*e*	P	**P**	**20 00 37.6**	**0.0**
	comp=Z,21nm,0.9s								
DMN	**Daman**	**43.28**	**301**		*e*	P	**P**	**20 00 38.4**	**0.0**
	comp=Z,13nm,0.6s								
DANN	**Dangsing**	**44.64**	**302**		*e*	P	**P**	**20 00 49.1**	**-0.2**
	comp=Z,42nm,0.6s								
WMQ	**Urumqi**	**48.55**	**323**		*e*	P	**P**	**20 01 20.8**	**+1.4**
WMQ						pmax	pmax		
	comp=Z,6.0nm,0.7s								
WMQ						pmax	pmax		
	comp=Z,160nm,6.1s								
WMQ						LR	LR		
	comp=Z,190nm,29.1s								
WMQ						LR	LR		
	comp=Z,1μm,29.2s								
WMQ						LR	LR		
	comp=Z,590nm,29.0s								
TOO	**Toolangi**	**49.38**	**160**	P			**P**	**20 01 27.1**	**+1.3**
PEA0B	**Petropavlovsk-**	**50.96**	**24**	P			**P**	**20 01 39.4**	**+2.0**
PETK	**Petropavlovsk-**	**50.96**	**24**	P			**P**	**20 01 39.6**	**+2.2**
	comp=Z,12nm,0.5s,baz=209,slow=3.7,SNR=44								
PETK	**Petropavlovsk-**	**50.96**	**24**	P			**P**	**20 01 39.0**	**+1.6**
PET	**Petropavlovsk**	**51.28**	**24**	P			**P**	**20 01 41.5**	**+1.6**
YAK	**Yakutsk**	**53.25**	**2**	P			**P**	**20 01 54.0**	**-0.3**
YAK							IAmb	IAmb	20 01 55.2
	comp=Z,9.3nm,0.9s								
MK31	**Makanchi Array**	**53.36**	**323**	P			**P**	**20 01 54.8**	**-0.7**
MK31							PcP	**PcP**	**20 03 01.0**	**-1.1**
MKAR	**Makanchi Array**	**53.36**	**323**	P			**P**	**20 01 54.8**	**-0.6**
	comp=Z,3.2nm,0.6s,baz=123,slow=7.1,SNR=35								
MKAR							PcP	**PcP**	**20 03 01.6**	**-0.5**
	comp=Z,3.3nm,0.8s,baz=111,slow=5.0,SNR=6.2								
MKAR	**Makanchi Array**	**53.36**	**323**	P			**P**	**20 01 54.4**	**-1.1**
MKAR							**PcP**	**20 03 01.0**	**-1.1**
MAKZ	**Makanchi**	**53.55**	**323**	P			**P**	**20 01 56.2**	**-0.7**
MAKZ							PcP	**PcP**	**20 03 02.5**	**-0.3**
KSH	**Kashi**	**54.40**	**313**	*e*	P		**P**	**20 02 01.6**	**-1.7**
KSH					*e*	pP	sP	20 02 27.7	-0.3
KSH					*e*	PP	**PP**	**20 04 09.1**	**+3.1**
KSH					*e*	S	**S**	**20 09 29.5**	**-7.6**
KSH						sS	sS	20 10 10.7	+4.4
KSH					*e*	ScS	**ScS**	**20 11 43.4**	**-3.5**
KSH					*e*	SS	**SS**	**20 13 21.0**	**+0.8**
KSH						LR	LR		
	comp=Z,260nm,5.4s								
KSH						LR	LR		
	comp=Z,520nm,6.1s								
KSH						LR	LR		
	comp=Z,550nm,5.3s								
KDJ	**Kajisay**	**54.51**	**316**	P			**P**	**20 02 03.9**	**-0.2**
KDJ							IAmb	IAmb	20 02 04.6	
	comp=Z,5.7nm,0.8s								
NIL	**Nilore**	**54.76**	**305**	P			**P**	**20 02 06.3**	**+0.4**
NIL							IAmb	IAmb	20 02 09.7	
	comp=Z,14nm,0.7s								
NRN	**Naryn**	**55.07**	**315**	P			**P**	**20 02 07.2**	**-1.2**
ZAA0	**Zalesovo Array**	**56.06**	**332**	P			**P**	**20 02 12.5**	**-2.3**
ZALV	**Zalesovo Beam**	**56.06**	**332**	P			**P**	**20 02 13.2**	**-1.5**
	comp=Z,2.0nm,0.6s,baz=127,slow=6.2,SNR=8.9								
ZALV							**PcP**	**20 03 10.6**	**-1.7**
	comp=Z,1.4nm,0.6s,baz=142,slow=5.4,SNR=2.9								
ZALV	**Zalesovo Beam**	**56.06**	**332**	P			**P**	**20 02 12.3**	**-2.5**
ZALV							PcP	**PcP**	**20 03 09.4**	**-2.9**
DGAR	**Diego Garcia**	**56.16**	**255**	P			**P**	**20 02 14.0**	**-2.2**
KURK	**Kurchatov**	**57.44**	**326**	P			**P**	**20 02 23.9**	**-0.7**
KURK							IAmb	IAmb	20 02 27.4	
	comp=Z,5.0nm,0.8s								
KURBB	**Kurchatov Arra**	**57.44**	**326**	P			**P**	**20 02 23.7**	**-0.9**
	comp=Z,2.8nm,0.6s,baz=123,slow=6.7,SNR=20								
BTK	**Batken**	**58.34**	**312**	P			**P**	**20 02 30.3**	**-1.0**
BTK							IAmb	IAmb	20 02 39.3	
	comp=Z,3.5nm,0.6s								
KBL	**Kabul**	**58.36**	**305**	P			**P**	**20 02 31.3**	**-0.4**
KBL							IAmb	IAmb	20 02 32.8	
	comp=

GLI	**Glacier Island**	**80.70**	**30**	P	**P**	**20 04 49.5 +0.9**
HDA	**Harding Lake**	**80.71**	**26**	P	**P**	**20 04 48.6 +0.1**
HDA				IAmb	IAmb	20 04 51.3
	comp=Z,7.9nm,0.8s					
IL31		**80.73**	**26**	P	**P**	**20 04 49.0 +0.4**
ILAR	**Eielson Array**	**80.73**	**26**	P	**P**	**20 04 48.4 -0.2**
	comp=Z,2.2nm,0.6s,baz=248,slow=4.2,SNR=28					
FID	**Port Fidalgo**	**81.01**	**30**	P	**P**	**20 04 51.2 +1.1**
PRP	**Porcupine Dome**	**81.29**	**25**	P	**P**	**20 04 51.6 -0.1**
BMAR	**Burnt Mountain**	**81.60**	**23**	P	**P**	**20 04 55.3 +2.1**
RIDG	**Independent Ri**	**81.66**	**27**	P	**P**	**20 04 54.7 +1.1**
RIDG				IAmb	IAmb	20 04 56.1
	comp=Z,20nm,1.1s					
DOT	**Dot Lake**	**82.01**	**27**	P	**P**	**20 04 56.5 +1.1**
SCRK	**Sand Creek**	**82.02**	**26**	P	**P**	**20 04 57.1 +1.5**
MENT	**Mentasta**	**82.21**	**27**	P	**P**	**20 04 57.7 +1.2**
MENT				IAmb	IAmb	20 04 59.9
	comp=Z,6.0nm,0.6s					
GLB	**Gilahina Butte**	**82.27**	**29**	P	**P**	**20 04 58.1 +1.3**
GLB				IAmb	IAmb	20 05 03.2
	comp=Z,7.3nm,0.9s					
CRQM	**Cirque**	**82.65**	**30**	P	**P**	**20 04 59.3 +0.3**
CRQM				IAmb	IAmb	20 05 03.5
	comp=Z,6.9nm,0.8s					
MCARA	**McCarthy VSAT**	**82.65**	**29**	P	**P**	**20 05 01.2 +2.4**
MCARA				IAmb	IAmb	20 05 04.3
	comp=Z,9.9nm,1.0s					
TGL	**Tana Glacier**	**82.80**	**30**	P	**P**	**20 05 00.9 +1.2**
TGL				IAmb	IAmb	20 05 02.8
	comp=Z,11nm,1.0s					
BALM	**Baldy**	**83.01**	**29**	P	**P**	**20 05 01.6 +0.8**
BALM				IAmb	IAmb	20 05 03.6
	comp=Z,31nm,2.0s					
BCAR	**Beaver Creek A**	**83.08**	**27**	P	**P**	**20 05 02.8 +1.7**
BARN	**Barnard Glacie**	**83.34**	**29**	P	**P**	**20 05 04.9 +2.3**
BARN				IAmb	IAmb	20 05 06.4
	comp=Z,8.4nm,0.6s					
CTGM	**Chitina Glacie**	**83.51**	**29**	P	**P**	**20 05 05.5 +2.1**
CTGM				IAmb	IAmb	20 05 07.2
	comp=Z,12nm,0.7s					
DAWY	**Dawson**	**84.03**	**26**	P	**P**	**20 05 07.2 +1.3**
DAWY				IAmb	IAmb	20 05 08.7
	comp=Z,6.6nm,1.0s					
EPYK	**Eagle Plains**	**84.80**	**24**	P	**P**	**20 05 10.5 +0.8**
EPYK				IAmb	IAmb	20 05 12.3
	comp=Z,8.9nm,0.8s					
HYT	**Haines Junctio**	**85.38**	**29**	P	**P**	**20 05 14.7 +1.8**
ARCES	**ARCESS Array B**	**85.69**	**340**	P	**P**	**20 05 13.4 -0.7**
	comp=Z,2.9nm,0.7s,baz=79,slow=5.3,SNR=9.0					
BRTR	**Keskin Array B**	**86.65**	**310**	P	**P**	**20 05 17.7 -1.9**
	comp=Z,0.3nm,0.7s,baz=90,slow=5.8,SNR=3.7					
BRTR	**Keskin Array B**	**86.65**	**310**	P	**P**	**20 05 18.9 -0.7**
WHY	**Whitehorse**	**86.68**	**29**	P	**P**	**20 05 21.1 +1.8**
WHY				IAmb	IAmb	20 05 22.7
	comp=Z,22nm,1.6s					
FIA1	**FINESS Array S**	**87.33**	**332**	P	**P**	**20 05 21.1 -1.0**
FINES	**FINESS Array B**	**87.33**	**332**	P	**P**	**20 05 20.7 -1.4**
	comp=Z,1.9nm,0.4s,baz=82,slow=4.7,SNR=18					
FINES	**FINESS Array B**	**87.33**	**332**	P	**P**	**20 05 21.1 -1.1**
CSS	**Mathiatis**	**87.61**	**305**	P	**P**	**20 05 23.3 -0.9**
AKASG	**Malin Array Be**	**87.87**	**321**	P	**P**	**20 05 23.1 -1.9**
	comp=Z,0.5nm,0.5s,baz=61,slow=5.4,SNR=2.8					
AKASG	**Malin Array Be**	**87.87**	**321**	P	**P**	**20 05 27.0 +2.0**
VNDA	**Vanda**	**88.39**	**173**	P	**P**	**20 05 26.9 +0.1**
	comp=Z,2.6nm,0.7s,baz=322,slow=6.4,SNR=19					
VNDA	**Vanda**	**88.39**	**173**	P	**P**	**20 05 27.1 +0.3**
VNDA				IAmb	IAmb	20 05 28.3
	comp=Z,2.8nm,0.7s					
C36M	**Paulatuk**	**88.62**	**20**	P	**P**	**20 05 28.4 +0.3**
C36M				IAmb	IAmb	20 05 38.5
	comp=Z,21nm,1.9s					
YKA	**Yellowknife Ar**	**95.08**	**24**	P	**P**	**20 05 59.0 +0.8**
	comp=Z,2.2nm,0.7s,baz=300,slow=4.6,SNR=52					
YKA	**Yellowknife Ar**	**95.08**	**24**	P	**P**	**20 05 58.6 +0.4**
TXAR	**Lajitas Array**	**118.68**	**50**	PKP	**PKiKP**	**20 11 24.8 +0.6**
	comp=Z,0.4nm,0.6s,baz=288,slow=1.3,SNR=4.7					
TXAR	**Lajitas Array**	**118.68**	**50**		**PKiKP**	**20 11 25.0 +0.8**
TORD	**Torodi Ar. Bea**	**121.00**	**291**	PKP	**PKPdf**	**20 11 27.7 -1.1**
	comp=Z,0.8nm,0.7s,baz=64,slow=1.4,SNR=4.6					
TORD	**Torodi Ar. Bea**	**121.00**	**291**	PKP	**PKPdf**	**20 11 27.6 -1.2**
PLCA	**Paso Flores**	**144.72**	**157**	PKP	**PKPdf**	**20 12 12.4 -0.1**
	comp=Z,6.2nm,1.1s,baz=226,slow=6.2,SNR=4.6					
PLCA	**Paso Flores**	**144.72**	**157**		**PKPdf**	**20 12 12.6 +0.1**

*TEH **03** 19:55:11.3,27.93N×53.15E,h10km,ML3.3*
*OMAN **03** 19:55:16.1±0.4,27.90N×53.19E,h74km±24km,ml3.2/7,*
Error ellipse: s-maj=17.9km s-min=7.5km az=243.0
ISC 03 19:55:12.1±1.0,27.93N±0.04×53.10E±0.08,h14km,n28,
σ1§22/35,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.59**	**174**	*e*Pg	**Pg**	**19 55 23.3**	**-0.4**
LMD1				*e*		19 55 41.0	
JHRM	**Jahrom**	**0.71**	**36**	*e*Pg	**Pg**	**19 55 24.6**	**-1.4**
JHRM				*e*		19 55 41.5	
ISRV	**Sarvestan**	**1.45**	**1**	*e*Pg	**Pn**	**19 55 38.8**	**+0.6**
ISRV				*e*Sg	**Sg**	**19 56 01.6**	**+2.8**
ISRV				*e*		19 56 13.1	
SHI	**Shiraz**	**1.78**	**343**	*e*Pn	**Pb**	**19 55 44.0**	**-0.6**
SHI				*e*		19 56 16.8	
IKAZ	**Kazeroun**	**2.15**	**329**	*e*Pn	**Pb**	**19 55 50.3**	**-0.7**
GENO	**Geno**	**2.78**	**100**	*e*		19 57 05.7	
NIAN	**Nian**	**3.33**	**96**	*e*Pn	**Pn**	**19 56 04.9**	**+1.1**
NIAN				*e*		19 57 02.5	
KLNJ	**Kolanjah**	**3.34**	**337**	*e*Pn	**Pn**	**19 56 03.8**	**-0.4**
BANOM	**Banah**	**3.49**	**124**	P	**Pn**	**19 56 07.1**	**+1.1**
	SNR=12						
NGRK	**Negar Kerman**	**3.62**	**61**	*e*Pn	**Pn**	**19 56 08.8**	**+0.7**
NGRK				*e*		19 57 16.1	
IMEH	**Mehriz**	**3.69**	**21**	*e*Pn	**Pn**	**19 56 10.6**	**+1.6**
NAZ	**Nazwa, Dubai**	**3.72**	**141**	P	**Pn**	**19 56 11.5**	**+2.3**
NAZ				S	**Sn**	**19 56 53.5**	**+0.6**
KHGB	**Koh Gabri**	**3.83**	**50**	*e*Pn	**Pn**	**19 56 12.1**	**+1.2**
ASUD	**Al Ashush, Dub**	**3.85**	**148**	P	**Pn**	**19 56 12.1**	**+1.2**
	SNR=9.4						
IRAM	**Ramesheh**	**3.91**	**351**	*e*Pn	**Pn**	**19 56 12.4**	**+0.4**
ISAD	**Sadrabad**	**4.00**	**7**	*e*Pn	**Pn**	**19 56 14.8**	**+1.5**
ASHO	**Ashiyiah**	**4.18**	**140**	P	**Pn**	**19 56 16.5**	**+0.9**
	SNR=6.2						
ASHO				S	**Sn**	**19 57 03.5**	**-0.8**
IBAF	**Bafgh**	**4.23**	**30**	*e*Pn	**Pn**	**19 56 17.2**	**+0.9**
CHMN	**Cheshme madani**	**4.34**	**63**	*e*Pn	**Pn**	**19 56 19.5**	**+1.5**
CHMN				*e*		19 57 43.9	
ICHK	**Chekchek**	**4.45**	**14**	*e*Pn	**Pn**	**19 56 20.5**	**+1.2**
SOHO	**SOHO**	**4.88**	**140**	P	**Pn**	**19 56 25.7**	**+0.5**
SOHO				S	**Sn**	**19 57 21.4**	**-0.1**
IPIR	**Pirpir**	**5.11**	**339**	*e*Pn	**Pn**	**19 56 28.4**	**-0.1**
ANAR	**Anarak**	**5.27**	**6**	*e*Pn	**Pn**	**19 56 30.7**	**+0.1**
ARQ	**Araqi**	**5.52**	**145**	P	**Pn**	**19 56 34.5**	**+0.6**
	SNR=8.6						
ARQ				S	**Sn**	**19 57 37.7**	**+0.4**
BSY	**Bisya**	**6.36**	**143**	P	**Pn**	**19 56 46.0**	**+0.6**
BSY				S	**Sn**	**19 57 55.4**	**-2.6**
SMDO	**Samad**	**6.60**	**136**	P	**Pn**	**19 56 49.8**	**+1.0**
	SNR=12						
SMDO				S	**Sn**	**19 58 03.3**	**-0.7**
WSAR	**Wadi Sarin**	**6.84**	**132**	P	**Pn**	**19 56 52.1**	**0.0**
	SNR=6.5						
WBK	**Wadi Bani Khal**	**7.50**	**134**	P	**Pn**	**19 57 00.5**	**-0.7**
	SNR=13						
WBK				S	**Sn**	**19 58 24.0**	**-2.2**

*TRN **03** 19:57:57.2, 10.70N×62.49W, h98km, MD3.4*
*FUNV **03** 19:57:59.5, 10.74N×62.44W, h100km, MW3.3*
ISC 03 19:57:57.2±1.2,10.70N±0.04×62.50W±0.04,h113km±8km,
n40,σ1§62/65,4C-1D,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.28**	**101**	*e*P	**Pn**	**19 58 13.7**	**+0.6**
GUIV				*e*S	**Sn**	**19 58 23.3**	**-1.9**
GUIV	**Guiria**	**0.28**	**101**	*e*P	**Pn**	**19 58 13.8**	**+0.6**
GUIV				*e*S	**Sn**	**19 58 23.6**	**-1.6**
GUNV	**Guanoco**	**0.69**	**219**	*i*P	**Pn**	**19 58 17.8**	**+2.1**
GUNV				*e*S	**Sn**	**19 58 30.5**	**+0.8**
CRUV	**Carupano**	**0.73**	**268**	*e*P	**Pn**	**19 58 16.9**	**+0.9**
CRUV				*e*S	**Sn**	**19 58 29.8**	**-0.4**
TRN	**Trinidad (W)**	**1.08**	**93**	*i*P	**Pn**	**19 58 20.9**	**+1.6**
TRN				*e*S	**Sn**	**19 58 35.1**	**-1.0**
TBH	**Brigand Hill**	**1.42**	**99**	*e*P	**Pn**	**19 58 24.2**	**+1.0**
TBH				*e*S	**Sn**	**19 58 42.6**	**-0.5**
GRGR	**Grenville**	**1.65**	**30**	*e*P	**Pn**	**19 58 26.9**	**+0.9**
GRGR	**Grenville**	**1.65**	**30**	*e*P	**Pn**	**19 58 26.0**	**0.0**
GRGR				*e*S	**Sn**	**19 58 45.6**	**-2.2**
ORIV	**Oritupano**	**1.85**	**209**	*e*P	**Pn**	**19 58 30.7**	**+2.3**
ORIV				*e*S	**Sn**	**19 58 52.3**	**0.0**
ORIV	**Oritupano**	**1.85**	**209**	*e*P	**Pn**	**19 58 30.8**	**+2.3**
ORIV				*e*S	**Sn**	**19 58 53.1**	**+0.8**
TOSP	**Speyside**	**2.02**	**73**	*e*P	**Pn**	**19 58 31.1**	**+0.6**
TOSP				*e*S	**Sn**	**19 58 54.8**	**-1.2**
TOSP	**Speyside**	**2.02**	**73**	*e*P	**Pn**	**19 58 31.3**	**+0.8**
TOSP				*e*S	**Sn**	**19 58 54.8**	**-1.2**
PCRV	**Puerto La Cruz**	**2.17**	**256**	*i*eP	**Pn**	**19 58 34.3**	**+1.8**
PCRV				*e*S	**Sn**	**19 58 59.0**	**-0.4**
RIOV	**Rio Grande**	**2.70**	**165**	*e*P	**Pn**	**19 58 41.1**	**+1.7**
RIOV				*e*S	**Sn**	**19 59 11.5**	**-0.3**
SVB	**Belmont**	**2.83**	**25**	*e*P	**Pn**	**19 58 42.0**	**+0.9**
SVB				*e*S	**Sn**	**19 59 15.2**	**+0.3**
PRGV	**PARIAGUAN**	**2.86**	**228**	*e*P	**Pn**	**19 58 43.1**	**+1.6**
PRGV				*e*S	**Sn**	**19 59 16.6**	**+0.9**
SVCV	**St. Vincent, C**	**2.88**	**27**	*e*P	**Pn**	**19 58 43.4**	**+1.7**
SVCV				*e*S	**Sn**	**19 59 15.2**	**-0.8**
CUPV	**Cpira**	**3.30**	**259**	*i*eP	**Pn**	**19 58 49.2**	**+1.9**
CUPV				*e*S	**Sn**	**19 59 26.3**	**+0.3**
MCLT	**Moule a Chique**	**3.36**	**27**	*e*P	**Pn**	**19 58 49.1**	**+1.0**
MCLT				*e*S	**Sn**	**19 59 27.5**	**+0.2**
SLBI	**Saint Lucia, B**	**3.62**	**24**	*e*P	**Pn**	**19 58 52.8**	**+1.3**
SLBI				*e*S	**Sn**	**19 59 32.9**	**-0.7**
BIRV	**Birongo**	**3.71**	**267**	*e*P	**Pn**	**19 58 54.7**	**+1.9**
BIRV				*e*S	**Sn**	**19 59 36.2**	**+0.4**
MERV	**Las Mercedes**	**4.01**	**249**	*e*P	**Pn**	**19 58 58.1**	**+1.4**
MERV				*e*S	**Sn**	**19 59 42.5**	**-0.5**
BIM	**Bigot**	**4.04**	**20**	*e*P	**Pn**	**19 58 58.6**	**+1.4**
MPOM	**Morne Pois Mar**	**4.05**	**23**	*e*P	**Pn**	**19 58 59.6**	**+2.3**
TRMF	**Trois Ilets**	**4.07**	**20**	*e*P	**Pn**	**19 58 59.1**	**+1.6**
LPMF	**Morne Lapointe**	**4.13**	**21**	*e*P	**Pn**	**19 58 59.7**	**+1.3**
FDF	**Fort de France**	**4.22**	**18**	*e*P	**Pn**	**19 59 01.2**	**+1.6**
FDF	**Fort de France**	**4.22**	**18**	*e*S	**Sn**	**19 59 47.7**	**-0.3**
PML	**Morne Lenard**	**4.25**	**17**	*e*P	**Pn**	**19 59 01.4**	**+1.3**
GBMF	**Grand Be**	**4.28**	**18**	*e*P	**Pn**	**19 59 01.7**	**+1.3**
PCM	**Pelee Case Pet**	**4.28**	**17**	*e*P	**Pn**	**19 59 01.9**	**+1.6**
BAMF	**Morne Balai**	**4.30**	**18**	*e*P	**Pn**	**19 59 01.9**	**+1.3**
LUEV	**Luepa**	**4.93**	**168**	*e*P	**Pn**	**19 59 09.7**	**+0.3**
LUEV				*e*S	**Sn**	**20 00 02.6**	**-2.9**
TURV	**Turiamo**	**5.26**	**268**	*e*S	**Sn**	**20 00 09.8**	**-3.2**
BAUV	**El Baul**	**5.74**	**253**	*e*P	**Pn**	**19 59 20.5**	**+0.5**
BAUV	**El Baul**	**5.74**	**253**	*e*P	**Pn**	**19 59 20.3**	**+0.3**
BAUV				*e*S	**Sn**	**20 00 21.6**	**-3.0**
MAPV	**Macapo**	**5.93**	**262**	*i*eP	**Pn**	**19 59 23.6**	**+0.9**
MAPV				*e*S	**Sn**	**20 00 26.3**	**-3.1**
TEPV	**Terepaima**	**6.63**	**264**	*e*P	**Pn**	**19 59 32.6**	**+0.4**
PAYV	**Puerto Ayacuch**	**7.32**	**225**	*e*P	**Pn**	**19 59 41.9**	**+0.4**
PAYV				*e*S	**Sn**	**20 00 57.3**	**-5.8**
SOCV	**Socops**	**8.59**	**254**	*e*P	**Pn**	**19 59 58.3**	**-0.4**
SOCV				*e*S	Sn	20 01 26.6	-7.3

*IDC **03** 20:09:20.0±2.9,6.65N×73.04W,h169km±21km,mb3.1/3,*
mb1 3.4/4,mb1mx3.0/39,mbtmp3.6/4,Error ellipse:
s-maj=55.1km s-min=25.5km az=94.0
*RSNC **03** 20:09:20.2±0.9,6.80N×73.16W,h140km±4km,ML3.3,*
Mw3.4,Fault plane solution: NP1:φs67.00000°,
δ42.00000°,λ-167.00000°.
*FUNV **03** 20:09:21.2,6.55N×72.82W,h99km,MW3.1*
ISC 03 20:09:18.2±0.8,6.84N±0.03×73.07W±0.03,h151km±6km,
n47,σ1§90/87,7C-5D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**205**	*i*P	**Pn**	**20 09 39.5**	**+0.4**
BARC				*e*S	**Sn**	**20 09 53.4**	**-1.6**
BARC				*i*		20 09 55.7	
	comp=Z,2μm,0.3s						
PAMC	**Pamplona, Colo**	**0.62**	**36**	*i*P	**Pn**	**20 09 42.3**	**+1.4**
PAMC				*e*S	**Sn**	**20 09 58.9**	**+0.6**
PAMC				*i*		20 10 00.6	
	comp=Z,400nm,0.6s						
BRRC	**Barranca, Sant**	**0.69**	**293**	*i*P	**Pn**	**20 09 41.4**	**+0.6**
BRRC				*e*S	**Sn**	**20 09 57.2**	**-0.8**
BRRC				*i*		20 09 59.8	
	comp=Z,587nm,0.2s						
BRRC				*i*		20 09 60.0	
	comp=Z,508nm,0.2s						
RUSC	**La Rusia**	**0.94**	**181**	*i*P	**Pn**	**20 09 43.4**	**+0.2**
RUSC				*e*S	**Sn**	**20 10 01.6**	**-0.7**
RUSC				*i*		20 10 02.6	
	comp=Z,320nm,0.3s						
RUSC				*i*		20 10 03.6	
	comp=Z,339nm,0.3s						
TAMC	**Tame, Arauca**	**1.33**	**107**	*i*P	**Pn**	**20 09 47.9**	**+1.7**
TAMC				*e*S	**Sn**	**20 10 08.8**	**+1.2**
TAMC				*i*		20 10 16.0	
	comp=Z,70nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.41**	**258**	*i*P	**Pn**	**20 09 46.0**	**-0.9**
PTBC				*e*S	**Sn**	**20 10 06.9**	**-2.0**
PTBC				*i*		20 10 09.9	
	comp=Z,403nm,0.1s						
PTBC				*i*		20 10 09.9	
	comp=Z,439nm,0.2s						
OCAC	**Ocana**	**1.42**	**350**	*e*P	**Pn**	**20 09 47.9**	**+0.6**
OCAC				*e*S	**Sn**	**20 10 09.2**	**-0.3**
OCAC				*i*		20 10 10.5	
	comp=Z,314nm,0.5s						
OCAC				*i*		20 10 17.4	
	comp=Z,358nm,0.5s						
SPBC	**San Pablo de B**	**1.54**	**220**	*i*P	**Pn**	**20 09 48.4**	**0.0**
SPBC				*e*S	**Sn**	**20 10 10.2**	**-1.3**
SPBC				*i*		20 10 14.4	
	comp=Z,268nm,0.2s						
SPBC				*i*		20 10 14.8	
	comp=Z,295nm,0.4s						
NORC	**Norcasia**	**2.19**	**235**	*e*P	**Pn**	**20 09 55.4**	**-0.3**
NORC				*e*S	**Sn**	**20 10 23.0**	**-1.6**
NORC				*i*		20 10 27.1	
	comp=Z,189nm,0.2s						
NORC				*i*		20 10 27.8	
	comp=Z,157nm,0.3s						
SMLC	**San Martn de**	**2.19**	**333**	*e*P	**Pn**	**20 09 56.1**	**+0.4**
SMLC				*e*S	**Sn**	**20 10 24.5**	**-0.1**
SMLC				*i*		20 10 28.4	
	comp=Z,241nm,0.3s						
SMLC				*i*		20 10 28.4	
	comp=Z,224nm,0.1s						
CHIC	**Chingaza**	**2.29**	**197**	*e*P	**Pn**	**20 09 57.7**	**+0.5**
CHIC				*e*S	**Sn**	**20 10 26.1**	**-1.1**
CHIC				*i*		20 10 32.7	
	comp=Z,74nm,0.3s						
CHIC				*i*		20 10 32.9	
	comp=Z,78nm,0.3s						
ROSC	**El Rosal**	**2.34**	**212**	P	**Pn**	**20 09 59.3**	**+1.5**
	comp=Z,37nm,0.3s,baz=63,slow=18,SNR=34						
ROSC				S	**Sn**	**20 10 29.6**	**+1.2**
	comp=Z,47nm,0.3s,baz=182,slow=23,SNR=15						
ROSC	**El Rosal**	**2.34**	**212**	*i*P	**Pn**	**20 09 59.4**	**+1.6**
ROSC				*e*S	**Sn**	**20 10 31.2**	**+2.9**
ROSC				*i*		20 10 35.7	
	comp=Z,192nm,0.6s						
HELC	**Santa Helena**	**2.52**	**255**	*e*P	**Pn**	**20 10 00.0**	**0.0**
HELC				*e*S	**Sn**	**20 10 31.0**	**-1.2**
HELC				*i*		20 10 36.2	
	comp=Z,88nm,0.3s						
HELC				*i*		20 10 38.5	
	comp=Z,129nm,0.3s						
UREC	**San Jos de Ur**	**2.61**	**291**	*e*P	**Pn**	**20 09 59.6**	**-1.1**
UREC				*e*S	**Sn**	**20 10 30.7**	**-2.8**
UREC				*i*		20 10 35.3	
	comp=Z,161nm,0.2s						
VIGV	**El Vigia**	**2.61**	**40**	*e*P	**Pn**	**20 10 02.3**	**+1.4**
VIGV				*e*S	**Sn**	**20 10 32.4**	**-1.3**
SOCV	**Socops**	**2.63**	**57**	*i*eP	**Pn**	**20 10 02.1**	**+1.1**
SOCV				*e*S	**Sn**	**20 10 29.5**	**-4.5**
VILC	**Villavicencio,**	**2.77**	**193**	*e*P	**Pn**	**20 10 03.2**	**+0.2**
VILC				*e*S	**Sn**	**20 10 36.4**	**-1.2**
VILC				*i*		20 10 48.1	
	comp=Z,89nm,0.5s						
PTGC	**Puerto Gaitan,**	**2.78**	**160**	*e*P	**Pn**	**20 10 02.6**	**-0.3**
PTGC				*e*S	**Sn**	**20 10 35.2**	**-2.3**
PTGC				*i*		20 10 44.5	
	comp=Z,66nm,0.3s						
PTGC				*i*		20 11 00.7	
	comp=Z,54nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.79**	**235**	*e*P	**Pn**	**20 10 04.0**	**+0.6**
GUY2C				*e*S	**Sn**	**20 10 37.8**	**-0.5**
GUY2C				*i*		20 10 44.3	
	comp=Z,159nm,0.8s						
GUY2C				*i*		20 10 44.9	
	comp=Z,160nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.08**	**252**	*i*P	**Pn**	**20 10 07.6**	**+0.8**
CBOC				*e*S	**Sn**	**20 10 42.9**	**-1.4**
CBOC				*i*		20 10 48.1	
	comp=Z,57nm,0.6s						
CBOC				*i*		20 10 48.6	
	comp=Z,51nm,0.4s						
CODC	**Agustn Codazz**	**3.10**	**353**	*i*P	**Pn**	**20 10 07.8**	**+0.9**
CODC				*e*S	**Sn**	**20 10 44.3**	**-0.4**
CODC				*i*		20 10 48.4	
	comp=Z,15nm,0.3s						
CODC				*i*		20 10 56.1	
	comp=Z,16nm,0.5s						
DBBC	**Dabeiba**	**3.12**	**274**	*i*P	**Pn**	**20 10 07.7**	**+0.5**
DBBC				*e*S	**Sn**	**20 10 43.2**	**-1.9**
DBBC				*i*		20 10 48.0	
	comp=Z,238nm,0.4s						
SDV	**Santo Domingo**	**3.16**	**50**	*e*P	**Pn**	**20 10 09.1**	**+1.2**
SDV				*e*S	**Sn**	**20 10 43.3**	**-3.0**
ARGC	**Ariguani, Magd**	**3.22**	**339**	*e*P	**Pn**	**20 10 11.2**	**+2.7**
ARGC				*e*S	**Sn**	**20 10 47.1**	**-0.4**
ARGC				*i*		20 10 56.1	
	comp=Z,37nm,0.3s						
ARGC				*i*		20 10 56.3	
	comp=Z,41nm,0.3s						
ANIL	**Santa Ana**	**3.29**	**225**	*e*P	**Pn**	**20 10 10.7**	**+1.1**
ANIL				*e*S	**Sn**	**20 10 49.1**	**-0.2**
ANIL				*i*		20 11 01.4	
	comp=Z,201nm,0.3s						
ANIL				*i*		20 11 01.6	
	comp=Z,189nm,0.5s						
ELOV	**Elorza**	**3.57**	**87**	*e*P	**Pn**	**20 10 13.1**	**+0.2**
ELOV				*e*S	**Sn**	**20 10 51.9**	**-3.4**
ORTC	**Ortega, Tolima**	**3.62**	**217**	*e*P	**Pn**	**20 10 14.3**	**+0.6**
ORTC				*e*S	**Sn**	**20 10 55.8**	**-1.0**
ORTC				*i*		20 11 00.9	
	comp=Z,53nm,0.6s						
ORTC				*i*		20 11 01.4	
	comp=Z,56nm,0.6s						
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*P	**Pn**	**20 10 14.0**	**-0.5**
SJCC				*e*S	**Sn**	**20 10 55.2**	**-3.1**
SJCC				*i*		20 10 58.4	
	comp=Z,49nm,0.4s						
LCBC	**Los crdobas,**	**3.83**	**302**	*e*P	**Pn**	**20 10 17.4**	**+1.0**
LCBC				*e*S	**Sn**	**20 10 57.7**	**-3.8**
QARV	**Quebrada Arrib**	**4.19**	**37**	*e*P	**Pn**	**20 10 22.6**	**+1.5**
YOTC	**Yotoco, Valle**	**4.32**	**229**	*e*P	**Pn**	**20 10 22.2**	**-0.6**
YOTC				*e*S	**Sn**	**20 11 10.6**	**-2.5**
YOTC				*i*		20 11 19.2	
	comp=Z,12nm,1.0s						
YOTC				*i*		20 11 22.0	
	comp=Z,7.4nm,0.3s						
CURV	**Curarigua**	**4.41**	**44**	*e*P	**Pn**	**20 10 24.5**	**+0.6**
CURV				*e*S	**Sn**	**20 11 12.6**	**-2.5**
SMRC	**Santa Marta, M**	**4.45**	**345**	*e*P	**Pn**	**20 10 25.2**	**+0.7**
SMRC				*e*S	**Sn**	**20 11 13.6**	**-2.4**
SMRC				*i*		20 11 18.9	
	comp=Z,22nm,0.7s						
DABV	**Dabajuro**	**4.72**	**30**	*e*P	**Pn**	**20 10 29.5**	**+1.5**
MACC	**Macarena, Meta**	**4.72**	**189**	*e*P	**Pn**	**20 10 26.2**	**-1.9**
MACC				*e*S	**Sn**	**20 11 19.0**	**-3.5**
MACC				*i*		20 11 21.2	
	comp=Z,11nm,0.3s						
TEPV	**Terepaima**	**4.94**	**51**	*e*P	**Pn**	**20 10 31.5**	**+0.6**
TEPV				*e*S	**Sn**	**20 11 24.6**	**-3.0**
BAUV	**El Baul**	**5.41**	**67**	*e*P	**Pn**	**20 10 36.1**	**-1.0**
BAUV				*e*S	**Sn**	**20 11 31.1**	**-7.5**
MAPV	**Macapo**	**5.45**	**57**	*e*P	**Pn**	**20 10 38.0**	**+0.3**
MAPV				*e*S	**Sn**	**20 11 34.6**	**-5.1**
PCON	**Cinco Dias**	**5.57**	**217**	*e*P	**Pn**	**20 10 39.6**	**-0.2**
PCON				*e*S	**Sn**	**20 11 42.8**	**-0.6**
PCON				*i*		20 12 18.7	
	comp=Z,6.9nm,1.6s						
MONV	**Montecano**	**5.94**	**31**	*e*P	**Pn**	**20 10 44.5**	**+0.3**
MONV				*e*S	**Sn**	**20 11 49.7**	**-1.6**
BBAC	**Balboa, Cauca**	**6.34**	**221**	*e*P	**Pn**	**20 10 50.1**	**+0.4**
BBAC				*e*S	**Sn**	**20 11 57.9**	**-3.4**
BBAC				*i*		20 12 02.4	
	comp=Z,10.0nm,0.3s						
TXAR	**Lajitas Array**	**36.49**	**312**	P	**P**	**20 16 10.4**	**+1.3**
	comp=Z,0.1nm,0.5s,baz=116,slow=10,SNR=3.2						
**SCH

198nm,0.3s,baz=247,slow=7.0,SNR=4.2
HNR LR LR 20 37 26.2
comp=Z,3µm,18.4s,baz=273,slow=44
HNR Honiara 4.56 121 Pn Pn 20 35 11.1 +0.2
KRVT Keravat (AS076 4.82 305 P **Pn 20 35 16.1 +1.6**
19nm,0.3s,baz=183,slow=3.9,SNR=14
KRVT S **Sn 20 36 13.6 +4.6**
62nm,0.3s,baz=274,slow=15,SNR=3.2
PMG Port Moresby 9.01 255 P **Pn 20 36 15.2 +3.3**
PMG 20 37 49.8
PMG Port Moresby 9.01 255 P **Pn 20 36 15.8 +3.8**
7.1nm,0.3s,baz=72,slow=8.0,SNR=18
PMG S **Sn 20 37 55.1 +3.1**
baz=285,slow=16,SNR=1.5
PMG LR LR 20 39 40.5
comp=Z,2µm,21.6s,baz=48,slow=38
PMG Port Moresby 9.01 255 Pn 20 36 15.2 +3.3
PMG **Sn 20 37 49.8 -2.3**
PATS Pohnpei 14.06 10 Pn **Pn 20 37 19.5 -1.2**
COEN Coen 14.29 241 P **P 20 37 29.3 -0.2**
baz=14,SNR=31
COEN Coen 14.29 241 P **P 20 37 28.1 -1.3**
MTSU Mount Surprise 15.78 225 P **P 20 37 46.3 +0.4**
baz=16,SNR=29
JAY Jayapura 15.88 286 P **Pn 20 37 45.2 +0.8**
3.7nm,0.3s,baz=143,slow=6.2,SNR=11
JAY LR LR 20 43 03.7
comp=Z,573nm,21.8s,baz=106,slow=34
CTA Charters Tower 15.97 215 P **P 20 37 48.9 +0.8**
6.9nm,0.3s,baz=36,slow=13,SNR=129
CTA LR LR 20 43 12.4
comp=Z,2µm,21.6s,baz=26,slow=34
GENI Genyem 16.37 285 P **P 20 37 53.0 +0.5**
3µm80nm,1.1s
SMPI Sarmi 17.94 286 P **P 20 38 09.5 -0.4**
2µm131nm,0.9s
DZM Mont Dzumac 17.98 147 *e*P **Pn 20 38 11.0 +0.6**
134nm,1.2s
DZM *e*LQ LQ 20 41 37.7
2µm,32.8s
DZM *e*LR LR 20 42 22.9
comp=Z,781nm,25.6s
DZM Mont Dzumac 17.98 147 P **Pn 20 38 12.5 +2.1**
4.3nm,0.3s,baz=307,slow=8.5,SNR=49
DZM LR LR 20 44 14.3
comp=Z,367nm,18.3s,baz=353,slow=34
DZM Mont Dzumac 17.98 147 P **Pn 20 38 11.0 +0.6**
EIDS Eidsvold 18.74 194 P **Pn 20 38 20.8 +1.2**
baz=19,SNR=8.8
EIDS Eidsvold 18.74 194 P **Pn 20 38 21.1 +1.5**
TARA Tarawa 18.89 64 P **Pn 20 38 22.1 +0.6**
TARA IAmb IAmb 20 38 24.6
comp=Z,253nm,0.8s
KWAJ Kwajalein Atol 19.61 36 P **P 20 38 26.8 -1.4**
KWAJ pmax pmax
comp=Z,391nm,1.1s
KWAJ Kwajalein Atol 19.61 36 P **P 20 38 26.8 -1.4**
RMQ Roma 20.45 199 P Pn 20 38 39.5 -0.3
baz=21,SNR=70
BAKI Biak 20.66 286 P **P 20 38 39.9 +0.3**
comp=Z,222nm,0.9s
QIS Mount Isa 20.73 228 P **P 20 38 41.7 +1.3**
baz=21,SNR=93
QLP Quilpie 22.35 209 P **P 20 38 58.6 +1.0**
baz=22,SNR=50
RKPI Ransiki, Papua 22.43 283 P **P 20 39 01.0 +2.4**
comp=Z,2µmcomp=Z,144nm,0.8s
FUNA Funafuti 23.05 95 P **P 20 39 05.9 +0.9**
FUNA IAmb IAmb 20 39 07.0
comp=Z,252nm,1.1s
GUMO Guam 23.34 332 pP 20 39 20.9 -0.4
ARMA Armidale 23.54 189 P **P 20 39 11.4 +1.7**
baz=24,SNR=21
ARMA Armidale 23.54 189 P **P 20 39 11.1 +1.5**
ARMA IAmb IAmb 20 39 12.6
comp=Z,96nm,0.9s
KDU Kakadu 23.79 255 P **P 20 39 12.7 +0.7**
baz=24,SNR=121
MSVF Nonsavu 23.97 118 P **P 20 39 14.5 +0.7**
MSVF pmax pmax
comp=Z,71nm,1.1s
MSVF Nonsavu 23.97 118 P **P 20 39 14.5 +0.7**
MSVF IAmb IAmb 20 39 16.0
comp=Z,71nm,1.1s
FAKI Fak Fak 23.99 279 P **P 20 39 16.5 +2.6**
comp=Z,1µmcomp=Z,61nm,1.4s
FAKI Fak Fak 23.99 279 P **P 20 39 13.9 0.0**
FAKI IAmb IAmb 20 39 48.2
comp=Z,56nm,0.8s
WR0 Warramunga Arr 24.39 236 P **P 20 39 18.2 +0.7**
SAUI Saumlaki 24.47 266 P **P 20 39 17.7 -0.6**
comp=Z,5µmcomp=Z,427nm,1.0s
SAUI Saumlaki 24.47 266 P **P 20 39 17.7 -0.6**
WRAB Tennant Creek 24.54 237 *ce*P **P 20 39 19.1 +0.3**
WRAB pmax pmax
comp=Z,249nm,0.7s
WRAB Tennant Creek 24.54 237 P **P 20 39 19.1 +0.3**
WRA Warramunga Arr 24.55 237 P **P 20 39 19.4 +0.5**
comp=Z,229nm,0.7s,baz=61,slow=9.6,SNR=273
WRA ScP **ScP 20 46 31.4 +1.4**
comp=Z,6.4nm,0.9s,baz=61,slow=3.1,SNR=11
WRA LR LR 20 48 40.1
comp=Z,992nm,20.2s,baz=75,slow=36
WRA Warramunga Arr 24.55 237 P **P 20 39 18.5 -0.5**
WRA **ScP 20 46 29.5 -0.5**
MTN Manton Dam 25.11 255 P **P 20 39 24.0 0.0**
MTN IAmb IAmb 20 39 26.9
comp=Z,170nm,1.1s
SIJI Sorong 25.40 283 P **P 20 39 27.1 +0.3**
comp=Z,40nm,0.6s,baz=90,slow=7.9,SNR=52
SWI Sorong 25.41 283 P **P 20 39 27.7 +0.9**
comp=Z,1µmcomp=Z,99nm,0.7s
CMSA Cobar Meteorol 26.13 200 P **P 20 39 33.6 +0.5**
baz=26,SNR=99
MGCD Mangrove Creek 26.35 189 P **P 20 39 37.1 +2.0**
baz=26,SNR=11
AS31 Alice Springs 26.82 230 P **P 20 39 39.5 -0.1**
ASAR Alice Springs 26.83 230 P **P 20 39 39.2 -0.3**
ASAR Alice Springs 26.83 230 P **P 20 39 39.4 -0.2**
comp=Z,20nm,0.5s,baz=58,slow=10,SNR=467
ASAR PcP **PcP 20 43 02.5 +1.4**
comp=Z,2.5nm,0.5s,baz=62,slow=2.9,SNR=4.3
ASAR ScP **ScP 20 46 37.8 +1.2**
comp=Z,3.7nm,0.8s,baz=52,slow=3.0,SNR=12
ASAR LR LR 20 49 49.0
comp=Z,912nm,20.5s,baz=62,slow=35
ASAR Alice Springs 26.83 230 P **P 20 39 39.2 -0.3**
ASAR **ScP 20 46 37.3 +0.7**
H11S3 WAKE ISLAND Hy 27.56 22 T T 21 08 03.2
baz=202,slow=75,SNR=4678
H11S2 WAKE ISLAND Hy 27.56 22 T T 21 08 03.4
baz=202,slow=75,SNR=3072
H11S1 WAKE ISLAND Hy 27.57 22 T T 21 08 04.5
baz=202,slow=75,SNR=1379
AAI Ambon 27.86 276 P **P 20 39 48.7 -0.1**
comp=Z,31nm,0.6s
YNG Young 27.94 193 P **P 20 39 50.8 +1.5**
baz=28,SNR=6.7
KNRA Kununurra 27.97 250 P **P 20 39 51.1 +1.3**
baz=28,SNR=4.9
KNRA Kununurra 27.97 250 P **P 20 39 50.5 +0.7**
STKA Stephens Creek 28.05 207 P **P 20 39 49.8 -0.6**
comp=Z,36nm,0.8s,baz=17,slow=8.7,SNR=16
STKA ScP **ScP 20 46 40.6 +0.5**
comp=Z,12nm,0.9s,baz=46,slow=4.4,SNR=8.8
STKA LR LR 20 50 52.2
comp=Z,937nm,19.8s,baz=24,slow=36
STKA Stephens Creek 28.05 207 P **P 20 39 50.4 +0.1**
STKA **ScP 20 46 41.2 +1.2**
CNB Canberra Magne 28.71 191 P **P 20 39 58.0 +1.8**
baz=29,SNR=18
H11N1 WAKE ISLAND Hy 28.75 22 T T 21 09 36.0
baz=203,slow=76,SNR=132
H11N3 WAKE ISLAND Hy 28.76 22 T T 21 09 34.6
baz=203,slow=76,SNR=75
H11N2 WAKE ISLAND Hy 28.77 22 T T 21 09 36.8
baz=203,slow=76,SNR=55
CAN Canberra 28.79 192 P **P 20 39 57.5 +0.5**
CAN pmax pmax
comp=Z,36nm,0.9s
CAN Canberra 28.79 192 P **P 20 39 57.5 +0.5**
CAN IAmb IAmb 20 39 59.7
comp=Z,36nm,0.9s
NLAI Namlea 29.01 276 P **P 20 39 58.2 -0.8**
comp=Z,30nm,0.5s
TNTI Ternate 29.60 284 P **P 20 40 06.0 +1.7**
comp=Z,820nmcomp=Z,24nm,1.2s
TNTI Ternate 29.60 284 P **P 20 40 04.8 +0.6**
TNTI IAmb IAmb 20 40 21.2
comp=Z,49nm,1.2s
SANI Sanana 30.30 278 P **P 20 40 12.3 +1.8**
comp=Z,57nm,1.1s
HTT Hallett 30.58 209 P **P 20 40 13.1 +0.2**
baz=31,SNR=5.9
SOEI Soe 31.46 263 P **P 20 40 22.0 +1.1**
comp=Z,37nm,1.0s
SOEI Soe 31.46 263 P **P 20 40 22.4 +1.5**
SOEI IAmb IAmb 20 41 32.1
comp=Z,42nm,0.8s
FITZ Fitzroy Crossi 31.49 247 P **P 20 40 20.8 -0.2**
baz=32,SNR=51
FITZ Fitzroy Crossi 31.49 247 P **P 20 40 20.7 -0.3**
comp=Z,44nm,0.6s,baz=78,slow=8.6,SNR=107
FITZ LR LR 20 53 08.8
comp=Z,701nm,20.2s,baz=70,slow=36
FITZ Fitzroy Crossi 31.49 247 P **P 20 40 20.8 -0.2**
FITZ IAmb IAmb 20 40 22.6
comp=Z,55nm,0.7s
BBOO Buckleboo 31.56 213 P **P 20 40 21.7 +0.3**
baz=32,SNR=4.8
BBOO Buckleboo 31.56 213 P **P 20 40 20.2 -1.2**
BBOO IAmb IAmb 20 41 19.8
comp=Z,90nm,1.8s
TOO Toolangi 31.78 196 P **P 20 40 23.4 +0.1**
TOO pmax pmax
comp=Z,154nm,2.0s
TOO Toolangi 31.78 196 P **P 20 40 23.4 +0.1**
TOO IAmb IAmb 20 40 38.8
comp=Z,154nm,1.9s
WRKA Warakurna 31.89 233 P **P 20 40 24.2 -0.3**
baz=32,SNR=71
BATI Baumata 32.08 262 LR LR 20 54 53.7
comp=Z,802nm,21.6s,baz=108,slow=39
ARPS Mount Arapiles 32.21 202 P **P 20 40 27.9 +0.9**
baz=32,SNR=14
OUZ Omahuta 32.32 152 P **P 20 40 28.1 +0.1**
AFI Afiamalu 32.39 105 P **P 20 40 29.9 +0.9**
comp=Z,58nm,0.7s,baz=64,slow=9.5,SNR=5.0
AFI Afiamalu 32.39 105 P **P 20 40 28.1 -0.9**
KNTN Kanton 32.47 84 P **P 20 40 29.2 -0.4**
KMSI Cibinong 32.82 282 P **P 20 40 34.2 +1.5**
comp=Z,2µmcomp=Z,151nm,0.6s
DAV Davao City (W) 33.43 294 LR LR 20 54 03.3
comp=Z,135nm,19.4s,baz=112,slow=36
MMRI Maumere 33.45 265 P **P 20 40 39.3 +1.2**
comp=Z,1µmcomp=Z,103nm,0.7s
MMRI Maumere 33.45 265 P **P 20 40 38.5 +0.4**
LUWI Luwuk 33.65 279 P **P 20 40 39.7 -0.2**
comp=Z,2µmcomp=Z,85nm,0.8s
LUWI Luwuk 33.65 279 P **P 20 40 40.6 +0.7**
APSI Ampana 34.77 279 P **P 20 40 46.6 -3.0**
comp=Z,483nmcomp=Z,51nm,1.1s
MRSI Marisa 34.78 281 P **P 20 40 48.9 -0.8**
comp=Z,20nm,0.5s
FORT Forrest 35.17 224 P **P 20 40 53.0 +0.1**
baz=35,SNR=86
FORT Forrest 35.17 224 P **P 20 40 52.2 -0.7**
NIUE Niue 35.20 113 P **P 20 40 51.9 -1.4**
WSI Waingapu 35.37 263 P **P 20 40 54.8 0.0**
comp=Z,2µmcomp=Z,268nm,0.6s
BKSI Bulukumba 35.68 271 P **P 20 40 58.2 +0.8**
comp=Z,477nmcomp=Z,37nm,1.1s
BNSI Bone 35.78 272 P **P 20 40 59.9 +1.6**
comp=Z,804nmcomp=Z,58nm,1.2s
KAPI Kappang 36.07 271 P **P 20 41 01.4 +0.6**
KAPI pmax pmax
comp=Z,62nm,1.0s
KAPI Kappang 36.07 271 P **P 20 41 01.4 +0.6**
KAPI IAmb IAmb 20 41 18.3
comp=Z,62nm,1.0s
SPSI Sidrap Palu 36.16 273 P **P 20 41 02.4 +0.8**
comp=Z,520nmcomp=Z,30nm,1.1s
TTSI Tana Toraja 36.23 275 P **P 20 41 05.4 +3.3**
comp=Z,557nmcomp=Z,31nm,0.9s
URZ Urewera 36.43 151 P **P 20 41 06.4 +2.9**
comp=Z,8.3nm,0.5s,baz=260,slow=4.3,SNR=7.5
URZ Urewera 36.43 151 P **P 20 41 03.9 +0.4**
URZ IAmb IAmb 20 41 20.9
comp=Z,98nm,1.6s
TAU Tasmania Unive 36.46 191 P **P 20 41 03.3 -0.4**
TAU pmax pmax
comp=Z,75nm,1.1s
TAU Tasmania Unive 36.46 191 P **P 20 41 03.3 -0.4**
MXZ Matakaoa Point 36.47 149 P **P 20 41 03.8 -0.1**
QRZ Quartz Range 36.67 159 P **P 20 41 05.1 -0.5**
MPSI Mapaga 36.74 280 P **P 20 41 06.2 -0.3**
comp=Z,542nmcomp=Z,30nm,0.7s
NNZ Nelson 37.33 158 P **P 20 41 10.9 -0.2**
THZ Tophouse 37.63 159 P **P 20 41 13.2 -0.5**
THZ IAmb IAmb 20 41 37.0
comp=Z,38nm,0.8s
PSA00 Pilbara Seismi 37.71 244 P **P 20 41 13.8 -0.9**
PSA00 Pilbara Seismi 37.71 244 P **P 20 41 13.1 -1.6**
PSA00 IAmb IAmb 20 41 15.6
comp=Z,66nm,1.2s
TUWZ Tuamarina 37.72 158 P **P 20 41 14.9 +0.4**
PLAI Plampang 37.85 265 P **P 20 41 16.7 +0.7**
comp=Z,71nm,0.7s
SNZO South Karori 37.91 157 P **P 20 41 14.1 -2.0**
BSWZ Blackbirch Sta 37.94 158 P **P 20 41 14.8 -1.5**
BFZ Birch Farm 38.01 155 P **P 20 41 16.4 -0.5**
BHW Baring Head 38.06 157 P **P 20 41 15.4 -1.9**
CMWZ Cape Campbell 38.10 158 P **P 20 41 15.6 -2.0**
MSWZ Moikau Station 38.22 156 P **P 20 41 17.3 -1.3**
LTZ Lake Taylor 38.32 161 P **P 20 41 16.9 -2.6**
PLWZ Palliser 38.35 156 P **P 20 41 17.9 -1.9**
KHZ Kahutara 38.43 159 P **P 20 41 19.3 -1.1**
TWSI Taliwang, Sumb 38.74 265 P **P 20 41 23.2 -0.2**
comp=Z,33nm,1.0s
RPZ Rata Peaks 38.78 162 P **P 20 41 24.5 +1.1**
comp=Z,24nm,0.6s,baz=270,slow=1.0,SNR=7.9
RPZ Rata Peaks 38.78 162 P **P 20 41 21.6 -1.7**
RPZ IAmb IAmb 20 41 41.2
comp=Z,74nm,1.0s
CRLZ Canterbury Las 39.14 161 P **P 20 41 26.0 -0.3**
LBZ Lake Benmore 39.14 164 P **P 20 41 25.7 -0.7**
WKZ Wanaka 39.24 165 P **P 20 41 25.2 -2.0**
MQZ McQueen's Vall 39.27 161 P **P 20 41 25.8 -1.6**
BKB Balikpapan 39.38 277 P **P 20 41 27.1 -1.7**
BKB IAmb IAmb 20 41 34.4
comp=Z,40nm,0.7s
MLZ Mavora Lakes 39.53 167 P **P 20 41 27.5 -2.1**
ODZ Otahua Downs 39.88 164 P **P 20 41 31.2 -1.2**
KMBL Kambalda 39.94 228 P **P 20 41 33.4 +0.2**
baz=40,SNR=34
WHZ Wether Hill Ro 39.99 167 P **P 20 41 32.3 -1.1**
WHZ IAmb IAmb 20 42 05.0
comp=Z,137nm,1.7s
JAGI Jajag, Banyuwa 41.44 265 P **P 20 41 48.6 +2.8**
comp=Z,40nm,0.9s
JAGI Jajag, Banyuwa 41.44 265 P **P 20 41 44.6 -1.2**
JAGI IAmb IAmb 20 41 49.4
comp=Z,28nm,0.8s
KKM Kota Kinabalu 41.77 287 P **P 20 41 48.1 -0.5**
KKM IAmb IAmb 20 42 02.7
comp=Z,49nm,0.9s
GIRL Giralia 43.01 244 P **P 20 41 57.7 -0.7**
KLBR Kellerberrin 43.15 231 P **P 20 41 59.1 -0.4**
baz=43,SNR=118
MORW Morawa 43.48 235 P **P 20 42 01.7 -0.4**
baz=44,SNR=18
MORW Morawa 43.48 235 P **P 20 42 01.6 -0.6**
MORW IAmb IAmb 20 42 03.6
comp=Z,48nm,0.8s
BLDU Ballidu 43.55 232 P **P 20 42 02.7 0.0**
baz=44,SNR=10
NWAO Narrogin (SRO) 44.14 229 P **P 20 42 07.8 +0.3**
baz=44,SNR=14
NWAO Narrogin (SRO) 44.14 229 P **P 20 42 05.9 -1.6**
NWAO pmax pmax
comp=Z,41nm,1.1s
NWAO Narrogin (SRO) 44.14 229 P **P 20 42 07.4 0.0**
comp=Z,32nm,0.8s,baz=66,slow=7.0,SNR=20
NWAO Narrogin (SRO) 44.14 229 P **P 20 42 05.8 -1.7**
NWAO IAmb IAmb 20 42 09.0
comp=Z,43nm,1.0s
NWAO Narrogin (SRO) 44.14 229 P **P 20 42 05.9 -1.6**
NWAO IAmb IAmb 20 42 09.0
comp=Z,41nm,1.1s
MUN Mundaring 44.51 231 P **P 20 42 10.6 +0.2**
baz=45,SNR=13
SBUM Sibu 44.69 281 P **P 20 42 12.3 +0.3**
SBUM Sibu 44.69 281 P **P 20 42 13.0 +1.0**
RAR Rarotonga 44.97 113 P **P 20 42 14.6 +0.4**
comp=Z,19nm,0.7s,baz=264,slow=9.1,SNR=3.9
RAR Rarotonga 44.97 113 P **P 20 42 12.8 -1.4**
UGM Wanagama 45.05 266 P **P 20 42 14.4 -0.5**
RKGY Rocky Gully 45.11 227 P **P 20 42 16.3 +1.2**
baz=45,SNR=24
YULB Yu-li 45.47 313 P **P 20 42 17.5 -0.7**
YULB IAmb IAmb 20 42 36.7
comp=Z,97nm,1.9s
NACB Ninganchiao 45.74 314 P **P 20 42 18.5 -1.7**
NACB IAmb IAmb 20 42 39.7
comp=Z,32nm,1.0s
INU Inuyama 45.86 338 P **P 20 42 19.8 -1.2**
INU IAmb IAmb 20 43 42.0
comp=Z,29nm,1.3s
TPUB Ta-pu 45.91 312 P **P 20 42 20.3 -1.2**
SSLB Suanglung 45.96 313 P **P 20 42 20.5 -1.5**
SSLB IAmb IAmb 20 42 46.1
comp=Z,20nm,1.0s
YHNB Yeheng 46.20 314 P **P 20 42 22.4 -1.5**
YHNB IAmb IAmb 20 43 53.5
comp=Z,70nm,1.4s
KSM Kuching 46.36 279 P **P 20 42 24.9 -0.3**
KSM IAmb IAmb 20 42 27.0
comp=Z,34nm,0.8s
KSM Kuching 46.36 279 P **P 20 42 25.0 -0.3**
MJAR Matsushiro Arr 46.52 340 P **P 20 42 25.7 -0.4**
comp=Z,2.9nm,0.6s,baz=159,slow=6.8,SNR=23
MJAR PcP **PcP 20 43 60.0 +0.2**
comp=Z,2.5nm,0.7s,baz=167,slow=3.9,SNR=4.7
MJAR LR LR 20 59 07.2
comp=Z,55nm,21.3s,baz=185,slow=32
MJAR Matsushiro Arr 46.52 340 P **P 20 42 25.4 -0.7**
MAJO Matsushiro 46.52 340 *i* P **P 20 42 25.7 -0.4**
MAJO pmax pmax
comp=Z,6.0nm,0.5s
MAJO Matsushiro 46.52 340 P **P 20 42 24.7 -1.4**
MAJO PcP **PcP 20 43 59.8 +0.1**
MAT Matsushiro 46.52 340 P **P 20 42 25.7 -0.4**
MJB9 Matsu-Tunnel 46.52 340 P **P 20 42 24.2 -2.0**
JNU Nakatsue 46.59 331 P **P 20 42 26.9 +0.1**
comp=Z,29nm,0.7s,baz=99,slow=4.7,SNR=23
JNU Nakatsue 46.59 331 P **P 20 42 27.0 +0.3**
JNU IAmb IAmb 20 42 29.7
comp=Z,33nm,0.8s
KPJI Karang Pucung 46.65 267 P **P 20 42 28.6 +1.1**
comp=Z,51nm,1.0s
MCQ Macquarie Isla 47.31 178 P **P 20 42 31.1 -0.9**
MCQ pmax pmax
comp=Z,184nm,1.5s
MCQ Macquarie Isla 47.31 178 P **P 20 42 31.1 -0.9**
CISI Cisompet, Garu 47.75 266 P **P 20 42 35.8 -0.4**
comp=Z,108nm,0.6s
CISI Cisompet, Garu 47.75 266 P **P 20 42 35.5 -0.7**
LEM Lembang 47.98 267 P **P 20 42 38.2 +0.1**
comp=Z,17nm,0.6s,baz=137,slow=14,SNR=4.4
CNJI Cibinong 48.44 267 P **P 20 42 40.3 -1.1**
comp=Z,92nm,1.3s
CGJI Cibinong 49.90 267 P **P 20 42 49.6 -3.0**
comp=Z,790nmcomp=Z,64nm,0.6s
DLV T Lat 50.88 292 P **P 20 43 00.2 +0.1**
DLV IAmb IAmb 20 43 14.9
comp=Z,44nm,0.8s
TJN Taejon 50.92 330 *ce*P **P 20 43 00.8 +0.9**
KASI Kota Agung 51.17 269 P P 20 43 15.4 +13
KSRS Korea Array 51.50 331 P **P 20 43 04.5 +0.3**
comp=Z,12nm,0.7s,baz=148,slow=7.4,SNR=29
KSRS LR LR 21 02 29.2
comp=Z,78nm,21.7s,baz=175,slow=33
KSAR Wonju Array Be 51.51 331 P **P 20 43 04.3 0.0**
KSAR Wonju Array Be 51.51 331 P **P 20 43 04.3 0.0**
KS19 Wonju Array Si 51.57 331 P **P 20 43 05.1 +0.4**
KS19 IAmb IAmb 20 43 07.4
comp=Z,32nm,0.9s
MDSI Maura Dua 51.58 270 P **P 20 43 05.3 +0.1**
comp=Z,11nm,1.0s
INCN Inchon 52.15 330 P **P 20 43 08.6 -0.5**
INCN pmax pmax
comp=Z,26nm,0.7s
INCN Inchon 52.15 330 P **P 20 43 08.6 -0.5**
INCN IAmb IAmb 20 43 11.2
comp=Z,26nm,0.7s
QIZ Qiongzhong 52.36 301 P **P 20 43 09.6 -1.3**
QIZ S **S 20 50 35.4 +2.7**
QIZ pmax pmax
comp=Z,10.0nm,1.5s
QIZ LR LR
comp=Z,77nm,8.4s
QIZ LR LR
comp=Z,160nm,26.0s
ASAJ Asahikawa 52.41 348 P **P 20 43 13.0 +2.1**
ASAJ Asahikawa 52.41 348 P **P 20 43 12.9 +2.1**
comp=Z,13nm,0.8s,baz=177,slow=8.0,SNR=4.6
NJ2 Nanjing 52.63 320 *eP* **P 20 43 13.9 +1.2**
NJ2 pmax pmax
comp=Z,11nm,1.0s
OPA Opana 53.44 56 P **P 20 43 17.1 -1.7**
OPA pmax pmax
comp=Z,667nm,1.7s
OPA Opana 53.44 56 P **P 20 43 17.1 -1.7**
PPT Papeete 54.03 106 P **P 20 43 24.4 +1.1**
comp=Z,16nm,0.4s,baz=233,slow=18,SNR=3.9
PPT LR LR 21 02 02.8
comp=Z,91nm,21.7s,baz=300,slow=31
PPT Papeete 54.03 106 P **P 20 43 22.1 -1.2**
PPT2 Papeete2 54.03 106 *eP* **P 20 43 25.0 +1.6**
comp=Z,64nm,1.3s
PPT2 *eS* **S 20 50 58.6 +2.9**
comp=Z,80nm,29.8s
PPT2 *e*LQ LQ 20 56 45.8
comp=Z,479nm,26.0s
PPT2 *e*LR LR 20 58 57.5
comp=Z,631nm,31.2s
PAE Paea 54.03 107 *eP* **P 20 43 25.0 +1.7**
comp=Z,6.6nm,0.8s
TVO Taravao 54.36 107 *eP* **P 20 43 27.4 +1.7**
KHU Kahuku 54.41 60 P **P 20 43 25.1 -1.2**
KHU pmax pmax
comp=Z,255nm,1.3s
KHU Kahuku 54.41 60 P **P 20 43 25.1 -1.2**
JRMM Jerantut 54.50 280 P **P 20 43 29.0 +2.2**
HMH Humu'ula Sheep 54.67 60 P **P 20 43 28.2 0.0**
POHA Pohakuloa 54.69 60 **P 20 43 27.0 -1.3**
MLH Mauna Loa 54.70 60 P **P 20 43 29.1 +0.7**
SDSI Sungai Dareh 54.72 274 P **P 20 43 28.8 +0.4**
comp=Z,3µmcomp=Z,26nm,1.2s
TBI Tubuai 54.74 113 *e*LQ LQ 20 57 01.5
comp=Z,510nm,35.8s
TBI *e*LR LR 20 59 18.6
comp=Z,944nm,34.0s
UBPT Khong Chiam 54.77 294 P **P 20 43 27.6 -1.0**
UBPT IAmb IAmb 20 43 51.1
comp=Z,28nm,1.4s
YSS Yuzh-Sakhalins 55.10 349 *eP* **P 20 43 32.6 +2.2**
YSS *e* 20 43 45.6
YSS MLR MLR
comp=Z,300nm,15.0s
USRK Ussuriysk Ar. 55.48 339 P **P 20 43 34.7 +1.4**
comp=Z,8.6nm,0.8s,baz=151,slow=7.6,SNR=13
USRK pP **pP 20 43 48.1 -0.8**
comp=Z,2.0nm,0.7s,baz=145,slow=5.3,SNR=1.9
USRK LR LR 21 05 06.3
comp=Z,56nm,21.1s,baz=131,slow=34
USRK Ussuriysk Ar. 55.48 339 P **P 20 43 32.8 -0.5**
DL2 Dalian 55.78 328 P **P 20 43 37.6 +2.1**
DL2 pP **pP 20 43 50.8 -0.3**
DL2 *e*S **S 20 51 21.8 +3.5**
DL2 pmax pmax
comp=Z,39nm,0.7s
DL2 LR LR
comp=Z,490nm,13.5s
DL2 LR LR
comp=Z,270nm,12.3s
DL2 LR LR
comp=Z,220nm,13.6s
IPM Ipoh 56.03 280 P **P 20 43 36.4 -1.5**
IPM IAmb IAmb 20 43 53.5
comp=Z,40nm,1.2s
IPM Ipoh 56.03 280 P **P 20 43 38.0 +0.1**
KULM Kulim 56.57 281 P **P 20 43 40.7 -0.9**
KULM IAmb IAmb 20 43 59.5
comp=Z,22nm,0.9s
KULM Kulim 56.57 281 P **P 20 43 42.0 +0.4**
CN2 Changchun 57.72 334 *eP* **P 20 43 51.4 +2.2**

CN2 eS S 20 51 43.0 -0.7
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,200nm,6.0s
RPSI Rantau Prapat 57.76 278 P P 20 43 49.1 -0.9
RPSI IAmb IAmb 20 44 06.8
comp=Z,23nm,1.5s
PSI Prapat 57.78 278 P P 20 43 49.1 -1.2
PSI pmax pmax
comp=Z,23nm,1.5s
ENH Enshi 58.04 312 P P 20 43 51.6 -0.1
ENH IAmb IAmb 20 44 26.6
comp=Z,13nm,0.9s
GYA Guiyang 58.30 307 eP P 20 43 55.4 +1.7
GYA pmax pmax
comp=Z,10.0nm,0.6s
SLVN Son La 58.38 300 P P 20 43 52.8 -1.5
SLVN IAmb IAmb 20 44 10.7
comp=Z,17nm,1.2s
PBKT Sadao Pong 59.27 294 P P 20 43 59.7 -0.7
PBKT IAmb IAmb 20 44 16.8
comp=Z,51nm,1.6s
BJT Baijiatuau 59.56 325 P P 20 44 00.9 -1.2
BJT pmax pmax
comp=Z,11nm,0.7s
BJT Baijiatuau 59.56 325 P P 20 44 00.9 -1.2
BJT IAmb IAmb 20 44 05.0
comp=Z,11nm,0.7s
KLR Kul'dur 59.98 342 *i* P P 20 44 04.6 -0.1
KLR pmax pmax
comp=Z,3.0nm,0.6s
KLR Kul'dur 59.98 342 P P 20 44 05.3 +0.6
comp=Z,2.5nm,0.6s,baz=188,slow=3.4,SNR=11
PETK Petropavlovsk- 60.01 1 P P 20 44 05.5 +0.6
comp=Z,19nm,0.8s,baz=175,slow=7.6,SNR=17
PETK pP pP 20 44 20.0 -0.6
comp=Z,20nm,0.8s,baz=154,slow=7.1,SNR=9.3
PETK LR LR 21 06 52.2
comp=Z,197nm,21.5s,baz=227,slow=33
PETK Petropavlovsk- 60.01 1 P P 20 44 04.4 -0.5
GRNR Gornyy 60.08 346⇑ *i*P P 20 44 06.4 +1.0
GRNR pmax pmax
comp=Z,6.0nm,1.0s
XAN Xi'an 60.47 316 P P 20 44 09.1 +0.6
XAN pmax pmax
comp=Z,9.0nm,0.6s
XAN Xi'an 60.47 316 P P 20 44 07.5 -1.0
XAN pmax pmax
comp=Z,7.0nm,0.7s
XAN Xi'an 60.47 316 P P 20 44 07.5 -1.0
XAN IAmb IAmb 20 44 11.7
comp=Z,7.5nm,0.7s
KMI Kunming 60.89 304 P P 20 44 14.6 +2.9
KMI pP pP 20 44 28.6 +1.1
KMI sP sP 20 44 35.3 +1.2
KMI S S 20 52 27.9 +2.1
KMI pmax pmax
comp=Z,11nm,0.9s
KMI pmax pmax
comp=Z,68nm,4.2s
KMI LR LR
comp=Z,160nm,28.9s
KMI LR LR
comp=Z,91nm,34.8s
CM31 Chiang Mai Arr 61.71 295 P P 20 44 17.0 -0.2
CM31 IAmb IAmb 20 44 33.5
comp=Z,45nm,1.4s
CMAR Chiang Mai Arr 61.71 295 *ce*P P 20 44 18.1 +1.0
CMAR pmax pmax
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 61.71 295 P P 20 44 18.1 +1.0
comp=Z,9.8nm,0.8s,baz=120,slow=5.3,SNR=59
CMAR pP pP 20 44 31.6 -1.3
comp=Z,12nm,1.0s,baz=129,slow=4.8,SNR=7.4
CMAR LR LR 21 11 18.9
comp=Z,38nm,19.8s,baz=124,slow=36
CMAR PKP2bc 21 13 35.4
comp=Z,0.2nm,0.3s,baz=263,slow=3.6,SNR=4.2
CMAR Chiang Mai Arr 61.71 295 P P 20 44 16.2 -0.9
CHTO Chiang Mai 61.83 296 P P 20 44 17.6 -0.3
CHTO pmax pmax
comp=Z,44nm,1.4s
CHTO Chiang Mai 61.83 296 P P 20 44 17.6 -0.3
CHTO IAmb IAmb 20 44 34.0
comp=Z,44nm,1.4s
CD2 Chengdu 62.63 310 P P 20 44 24.2 +1.1
CD2 S S 20 52 45.4 -1.9
CD2 pmax pmax
comp=Z,40nm,0.5s
CD2 pmax pmax
comp=Z,50nm,3.6s
CD2 LR LR
comp=Z,260nm,20.1s
CD2 LR LR
comp=Z,210nm,16.3s
CD2 LR LR
comp=Z,320nm,17.6s
HHC Hu-ho-hao-te 62.77 323 eP P 20 44 25.4 +1.5
HHC pmax pmax
comp=Z,10.0nm,1.0s
HHC pmax pmax
comp=Z,78nm,5.1s
KIWB Kanaga Island 63.10 18 P P 20 44 25.9 +0.2
TAOE Nuku Hiva Isla 63.22 96 eLR LR 21 03 18.6
comp=Z,493nm,31.0s
LZH Lanzhou 65.08 315 eP P 20 44 40.7 +1.4
LZH pP pP 20 44 55.0 -0.2
LZH sP sP 20 45 03.3 +1.5
LZH PP PP 20 47 06.4 +3.2
LZH pmax pmax
comp=Z,16nm,1.1s
LZH pmax pmax
comp=Z,61nm,4.9s
LZH LR LR
comp=Z,330nm,16.5s
LZH LR LR
comp=Z,330nm,16.3s
LZH LR LR
comp=Z,460nm,18.0s
ZEA Zeya 65.29 342 eP P 20 44 41.6 +1.6
ZEA pmax pmax
comp=Z,23nm,1.0s
MA2 Magadan 66.61 357 P P 20 44 49.1 +0.8
comp=Z,8.3nm,0.8s,baz=153,slow=16,SNR=2.8
CASY Casey 66.78 198 P P 20 44 48.0 -1.4
KOHI KOHIMA 68.34 301 eP P 20 44 58.8 -1.5
KOHI IAmb IAmb 20 45 15.8
comp=Z,14nm,0.5s
ZIRO ZIRO 69.18 303 eP P 20 45 06.1 +0.7
ZIRO IAmb IAmb 20 45 10.7
comp=Z,6.3nm,0.7s
GTA Gaotai 69.49 317 eP P 20 45 09.0 +1.9
GTA pP pP 20 45 25.7 +2.5
GTA sP PcP 20 45 31.4 +1.4
GTA pmax pmax
comp=Z,4.0nm,0.9s
ULN Ulaanbaatar 69.63 327 *ce*P P 20 45 08.2 +0.4
ULN pmax pmax
comp=Z,42nm,1.0s
ULN Ulaanbaatar 69.63 327 P P 20 45 08.4 +0.6
ULN IAmb IAmb 20 45 10.4
comp=Z,28nm,0.7s
SEY Seymchan 69.90 358 P P 20 45 09.6 +0.7
comp=Z,7.5nm,0.9s,baz=168,slow=3.1,SNR=8.9
SEY pP pP 20 45 24.3 -0.7
comp=Z,7.4nm,0.9s,baz=161,slow=6.7,SNR=4.5
SONM Songino Array 69.97 327 P P 20 45 10.3 +0.5
comp=Z,41nm,0.8s,baz=140,slow=6.5,SNR=189
SONM PKPPKP **P'P'df** 21 13 13.8 +0.7
comp=Z,3.9nm,1.2s,baz=278,slow=1.6,SNR=11
SONM LR LR 21 14 29.9
comp=Z,90nm,21.4s,baz=162,slow=35
SONM Songino Array 69.97 327 P P 20 45 10.2 +0.3
SHL Shillong 70.19 300 P P 20 45 11.2 -0.5
SHL pmax pmax
comp=Z,107nm,1.8s
SHL Shillong 70.19 300 eP P 20 45 13.1 +1.3
SHL IAmb IAmb 20 45 16.1
comp=Z,23nm,1.2s
SHL Shillong 70.19 300 P P 20 45 11.2 -0.5
SHL IAmb IAmb 20 45 27.3
comp=Z,107nm,1.8s
VNDA Vanda 70.43 179 P P 20 45 13.0 +0.9
comp=Z,4.6nm,0.8s,baz=333,slow=7.3,SNR=12
VNDA LR LR 21 11 19.7
comp=Z,124nm,19.7s,baz=340,slow=32
VNDA Vanda 70.43 179 P P 20 45 11.3 -0.7
YAK Yakutsk 71.89 347 eP P 20 45 23.1 +2.2
YAK pmax pmax
comp=Z,8.0nm,0.8s
YAK Yakutsk 71.89 347 P P 20 45 23.6 +2.7
comp=Z,4.8nm,0.6s,baz=176,slow=7.3,SNR=6.7
YAK Yakutsk 71.89 347 P P 20 45 21.3 +0.3
LSA Lhasa 72.14 304 P P 20 45 23.4 -0.4
LSA pmax pmax
comp=Z,8.0nm,0.9s
LSA Lhasa 72.14 304 P P 20 45 23.4 -0.4
BOD Bodaibo 73.09 338 eP P 20 45 28.0 -0.2
BOD pmax pmax
comp=Z,8.0nm,1.8s
ZAK Zakamensk 73.11 328 eP P 20 45 28.6 -0.1
ZAK pmax pmax
comp=Z,16nm,0.9s
TLY Talaya 73.66 329 eP P 20 45 33.1 +1.3
TLY pmax pmax
comp=Z,36nm,1.0s
TLY Talaya 73.66 329 P P 20 45 32.5 +0.7
comp=Z,8.5nm,0.8s,baz=204,slow=3.8,SNR=9.1
TLY Talaya 73.66 329 P P 20 45 32.6 +0.8
TAPN Taplejung 74.30 301 eP P 20 45 36.2 -0.2
comp=Z,53nm,0.9s
ODAN Odare 74.43 300 eP P 20 45 36.9 -0.2
comp=Z,62nm,0.7s
BOK Bokaro 74.92 297 eP P 20 45 40.4 +0.8
BOK IAmb IAmb 20 45 43.6
comp=Z,6.4nm,0.9s
MOY Mondy 75.03 328 eP P 20 45 40.5 +0.7
RAMN Ramite 75.13 300 eP P 20 45 40.7 -0.5
comp=Z,13nm,0.5s
BILL Bilibino 75.33 4 *ce*P P 20 45 41.8 +0.7
BILL *e* 20 45 55.3
BILL *e* 20 46 02.2
BILL S S 20 55 16.0 +0.1
BILL pmax pmax
comp=Z,24nm,1.3s
BILL MLR MLR
comp=Z,114nm,17.0s
BILL Bilibino 75.33 4 P P 20 45 41.7 +0.6
BILL IAmb IAmb 20 45 44.2
comp=Z,22nm,1.1s
JIRN Jiri 75.68 301 eP P 20 45 44.3 -0.1
comp=Z,40nm,0.6s
GUN Gumba 76.01 301 eP P 20 45 46.1 -0.2
comp=Z,60nm,0.7s
PKI Pulchoki 76.32 301 eP P 20 45 47.1 -0.9
PKIN Phulchoki 76.33 301 eP P 20 45 47.6 -0.4
comp=Z,12nm,0.5s
KKN Kakani 76.49 301 eP P 20 45 48.6 -0.2
comp=Z,31nm,0.8s
DMN Daman 76.59 300 eP P 20 45 49.5 0.0
comp=Z,40nm,0.7s
ANM Nome 77.08 16 P P 20 45 52.2 +1.2
ANM pmax pmax
comp=Z,6.0nm,0.7s
ANM Nome 77.08 16 P P 20 45 52.2 +1.2
DANN Dangsing 77.93 301 eP P 20 45 56.1 -0.9
comp=Z,25nm,0.5s
TTA Tatalina 78.80 20 P P 20 46 00.6 -0.1
TTA Tatalina 78.80 20 P P 20 46 00.6 -0.1
WMQ Urumqi 79.58 317 eP P 20 46 06.8 +1.4
WMQ pP pP 20 46 21.3 -0.5
WMQ pmax pmax
comp=Z,8.0nm,1.1s
WMQ pmax pmax
comp=Z,160nm,8.7s
WMQ LR LR
comp=Z,380nm,29.2s
WMQ LR LR
comp=Z,330nm,27.1s
SUA Susitna One 79.81 23 P P 20 46 06.2 -0.2
SUA IAmb IAmb 20 46 08.3
comp=Z,13nm,0.7s
RDOG Red Dog Mine 80.39 15 P P 20 46 10.4 +1.2
NGP Nagpur 80.48 293 eP P 20 46 10.0 -0.7
NGP IAmb IAmb 20 46 12.9
comp=Z,24nm,1.4s
PMR Palmer 80.51 23 P P 20 46 09.8 -0.1
PMR pmax pmax
comp=Z,9.0nm,0.8s
PMR Palmer 80.51 23 P P 20 46 09.8 -0.1
TIXI Tiksi 80.61 352 *ce*P P 20 46 10.1 -0.2
TIXI pmax pmax
comp=Z,6.0nm,1.7s
TIXI Tiksi 80.61 352 P P 20 46 10.6 +0.3
comp=Z,2.0nm,0.6s,baz=136,slow=3.2,SNR=5.6
TIXI Tiksi 80.61 352 P P 20 46 10.0 -0.3
GHO Glory Hole Cre 80.70 23 P P 20 46 10.0 -1.1
SML Sawmill 80.95 23 P P 20 46 12.2 -0.2
SML IAmb IAmb 20 46 16.9
comp=Z,25nm,0.9s
TRF Thorofare Moun 81.15 22 P P 20 46 13.1 -0.5
TRF IAmb IAmb 20 46 16.5
comp=Z,14nm,0.8s
SCM Sheep Creek Mo 81.36 24 P P 20 46 14.4 -0.2
SCM pmax pmax
comp=Z,18nm,1.0s
SCM Sheep Creek Mo 81.36 24 P P 20 46 14.4 -0.2
SCM IAmb IAmb 20 46 19.8
comp=Z,18nm,1.0s
IMAR Indian Mountai 81.53 19 P P 20 46 15.0 -0.3
RND Reindeer 81.65 22 P P 20 46 15.9 -0.2
RND pmax pmax
comp=Z,10.0nm,0.8s
RND Reindeer 81.65 22 P P 20 46 15.9 -0.2
MCK McKinley 81.81 22 P P 20 46 16.5 -0.4
MCK pmax pmax
comp=Z,29nm,0.9s
MCK McKinley 81.81 22 P P 20 46 16.4 -0.4
MCK IAmb IAmb 20 46 20.6
comp=Z,29nm,0.9s
MLY Manley 81.93 20 P P 20 46 17.6 +0.1
DHY Denali Highway 82.02 23 P P 20 46 18.8 +0.6
WRH Wood River Hil 82.53 21 P P 20 46 20.2 -0.3
GLB Gilahina Butte 82.59 25 P P 20 46 21.8 +0.7
GLB IAmb IAmb 20 47 19.8
comp=Z,29nm,1.6s
CCB Clear Creek Bu 82.73 21 P P 20 46 21.0 -0.6
COLA College 82.84 21 P P 20 46 21.8 -0.3
COLA pmax pmax
comp=Z,16nm,0.9s
COLA College 82.84 21 P P 20 46 21.8 -0.3
COLA IAmb IAmb 20 46 26.2
comp=Z,16nm,0.8s
QSPA South Pole Qui 82.86 180 P P 20 46 21.9 -0.6
QSPA IAmb IAmb 20 46 45.8
comp=Z,46nm,1.1s
BALM Baldy 83.02 26 P P 20 46 23.7 +0.4
IL31 83.13 21 P P 20 46 22.3 -1.4
ILAR Eielson Array 83.13 21 P P 20 46 23.1 -0.7
comp=Z,2.7nm,0.6s,baz=234,slow=6.7,SNR=30
ILAR LR LR 21 19 00.6
comp=Z,255nm,21.7s,baz=250,slow=32
ILAR Eielson Array 83.13 21 P P 20 46 22.0 -1.7
BARN Barnard Glacie 83.32 26 P P 20 46 26.5 +1.5
RIDG Independent Ri 83.34 23 P P 20 46 24.8 0.0
DOT Dot Lake 83.60 23 P P 20 46 25.3 -0.9
DOT IAmb IAmb 20 46 31.6
comp=Z,12nm,0.8s
SCRK Sand Creek 83.79 23 P P 20 46 27.4 +0.1
MK31 Makanchi Array 84.14 318 P P 20 46 28.8 -0.5
MK31 pmax pmax
comp=Z,26nm,0.8s
MK31 Makanchi Array 84.14 318 P P 20 46 28.8 -0.5
MK31 IAmb IAmb 20 46 31.2
comp=Z,26nm,0.8s
MKAR Makanchi Array 84.14 318 P P 20 46 29.4 +0.1
comp=Z,34nm,0.7s,baz=102,slow=5.6,SNR=187
MKAR pP pP 20 46 44.9 -0.9
comp=Z,14nm,0.8s,baz=104,slow=5.2,SNR=4.7
MKAR LR LR 21 24 00.8
comp=Z,44nm,20.7s,baz=310,slow=36
MKAR Makanchi Array 84.14 318 P P 20 46 28.7 -0.6
SMLA Simla 84.15 302 eP P 20 46 28.9 -0.7
SMLA IAmb IAmb 20 46 33.9
comp=Z,17nm,0.6s
BCAR Beaver Creek A 84.21 24 P P 20 46 29.9 +0.6
MAKZ Makanchi 84.35 318 P P 20 46 29.9 -0.5
MAKZ Makanchi 84.35 318 P P 20 46 29.9 -0.5
MAKZ IAmb IAmb 20 46 32.2
comp=Z,41nm,0.8s
MAW Mawson 84.66 203 P P 20 46 31.9 +0.4
baz=85,SNR=5.7
MAW Mawson 84.66 203 P P 20 46 31.7 +0.2
MAW pmax pmax
comp=Z,15nm,1.6s
MAW Mawson 84.66 203 P P 20 46 31.3 -0.1
comp=Z,15nm,0.8s,baz=97,slow=6.6,SNR=11
MAW LR LR 21 21 00.2
comp=Z,28nm,18.4s,baz=54,slow=33
MAW Mawson 84.66 203 P P 20 46 31.7 +0.2
ZAA0 Zalesovo Array 84.82 326 P P 20 46 31.3 -1.2
ZAA0 IAmb IAmb 20 46 33.2
comp=Z,13nm,0.8s
ZALV Zalesovo Beam 84.82 326 P P 20 46 31.5 -1.1
comp=Z,6.7nm,0.4s,baz=112,slow=5.1,SNR=37
ZALV LR LR 21 24 55.7
comp=Z,90nm,20.3s,baz=111,slow=36
ZALV Zalesovo Beam 84.82 326 P P 20 46 30.9 -1.6
POO Poona 84.83 289 *ex* P 20 46 31.0 -2.4
HYT Haines Junctio 85.04 27 P P 20 46 34.5 +0.9
HYT IAmb IAmb 20 46 38.2
comp=Z,9.0nm,0.8s
DHRM DHARAMSHALA 85.10 303 eP P 20 46 35.0 +0.3
DHRM IAmb IAmb 20 46 39.3
comp=Z,16nm,0.9s
EGAK Eagle 85.26 22 P P 20 46 34.7 +0.2
EGAK IAmb IAmb 20 46 40.2
comp=Z,12nm,0.9s
BMAR Burnt Mountain 85.34 19 P P 20 46 36.2 +1.3
PRZ Przheval'sk 85.69 314 P P 20 46 39.3 +1.9
PRZ pmax pmax
comp=Z,40nm,1.2s
PRZ Przheval'sk 85.69 314 P P 20 46 39.3 +1.9
PRZ IAmb IAmb 20 46 40.8
comp=Z,40nm,1.1s
KDJ Kajisay 86.49 313 P P 20 46 41.3 0.0
KDJ pmax pmax
comp=Z,15nm,0.9s
KDJ Kajisay 86.49 313 P P 20 46 41.3 0.0
KDJ IAmb IAmb 20 46 43.3
comp=Z,15nm,0.8s
KSH Kashi 86.83 310 P P 20 46 45.9 +2.9
KSH pP pP 20 47 01.4 +1.9
KSH PP PP 20 50 10.4 +4.0
KSH SKS SKSac 20 57 03.1 -2.2
KSH S S 20 57 16.1 -0.6
KSH sS sS 20 57 43.2 -1.6
KSH SS SS 21 03 04.1 +4.1
KSH pmax pmax
comp=Z,40nm,1.0s
KSH pmax pmax
comp=Z,430nm,5.0s
KSH LR LR
comp=Z,280nm,6.0s
KSH LR LR
comp=Z,290nm,6.0s
KSH LR LR
comp=Z,310nm,7.9s
NRN Naryn 87.20 312 P P 20 46 45.0 0.0
NRN pmax pmax
comp=Z,6.0nm,1.0s
NRN Naryn 87.20 312 P P 20 46 45.0 0.0
KURK Kurchatov 87.53 322 *ce*P P 20 46 45.0 -0.9
KURK pmax pmax
comp=Z,6.0nm,1.0s
KURK Kurchatov 87.53 322 P P 20 46 44.3 -1.6
KURBB Kurchatov Arra 87.56 322 P P 20 46 45.2 -0.9
comp=Z,5.8nm,0.8s,baz=105,slow=3.7,SNR=46
KURBB PKKPbc **PKKPbc** 21 04 35.4 -1.4
comp=Z,0.4nm,0.8s,baz=289,slow=2.8,SNR=5.0
EPYK Eagle Plains 87.61 22 P P 20 46 46.7 +0.7
EPYK IAmb IAmb 20 47 08.5
comp=Z,19nm,0.9s
EPYK Eagle Plains 87.61 22 P P 20 46 47.1 +1.0
baz=246
TKM2 Tokmak 2 87.80 314 P P 20 46 47.4 -0.4
SNR=12
NIL Nilore 87.88 304 P P 20 46 47.0 -1.1
NIL pmax pmax
comp=Z,18nm,0.9s
NIL Nilore 87.88 304 P P 20 46 47.0 -1.1
NIL IAmb IAmb 20 46 49.1
comp=Z,18nm,0.8s
KZA Kyzart 87.88 313 P P 20 46 50.0 +1.6
SNR=5.6
KBK Karagaybulak 88.22 313 P P 20 46 49.5 -0.2
SNR=6.4
CHMS Chumysh 88.43 314 P P 20 46 50.2 -0.2
SNR=7.2
UCH Uchtor 88.45 313 P P 20 46 51.6 +0.5
SNR=7.7
AAK Ala-Archa 88.54 313 *ce*P P 20 46 50.0 -1.2
AAK pmax pmax
comp=Z,8.0nm,0.7s
AAK Ala-Archa 88.54 313 P P 20 46 51.5 +0.3
comp=Z,7.7nm,0.8s,baz=126,slow=6.0,SNR=32
AAK Ala-Archa 88.54 313 P P 20 46 49.5 -1.7
SNR=9.1
AAK Ala-Archa 88.54 313 P P 20 46 50.2 -0.9
AAK IAmb IAmb 20 46 52.8
comp=Z,8.2nm,0.8s
AML Almayashu 89.03 313 P P 20 46 54.1 +0.4
SNR=19
EKS2 Erkin-Say 89.07 313 P P 20 46 53.9 +0.4
SNR=7.7
ARSB Arslanbob 89.41 312 P P 20 46 55.7 +0.4
ARSB IAmb IAmb 20 46 59.8
comp=Z,28nm,1.4s
INK Inuvik 89.49 21 P P 20 46 55.4 +0.6
comp=Z,2.6nm,0.5s,baz=213,slow=9.1,SNR=3.7
INK Inuvik 89.49 21 P P 20 46 55.0 +0.3
INK IAmb IAmb 20 47 13.9
comp=Z,24nm,1.6s
MWC Mount Wilson 90.64 56 P P 20 46 59.9 -1.3
MWC pmax pmax
comp=Z,10.0nm,0.9s
MWC Mount Wilson 90.64 56 P P 20 46 59.9 -1.3
MWC IAmb IAmb 20 47 05.3
comp=Z,9.8nm,0.9s
EDW2 Edwards Air Fo 90.78 55 P P 20 47 03.1 +1.5
baz=262
BTK Batken 90.83 310 P P 20 47 01.2 -0.6
BTK pmax pmax
comp=Z,11nm,0.9s
BTK Batken 90.83 310 P P 20 47 01.2 -0.6
BTK IAmb IAmb 20 47 03.3
comp=Z,11nm,0.9s
NVAR Mina Array Bea 91.04 52 P P 20 47 04.2 +1.2
comp=Z,0.8nm,0.8s,baz=256,slow=7.3,SNR=5.5
NVAR PP PP 20 50 40.5 +0.3
comp=Z,0.2nm,0.3s,baz=260,slow=8.3,SNR=4.4
NVAR LR LR 21 20 28.3
comp=Z,88nm,21.4s,baz=306,slow=30
GAR Garm 91.06 309 P P 20 47 02.8 -0.2
GAR IAmb IAmb 20 47 04.9
comp=Z,14nm,1.1s
LRMC Laurel Mtn Rad 91.12 55 P P 20 47 04.4 +1.0
baz=262
MPMC Manual Prospec 91.35 54 P P 20 47 07.1 +2.7
baz=262
KBL Kabul 91.47 304 P P 20 47 03.6 -1.5
KBL pmax pmax
comp=Z,7.0nm,0.8s
KBL Kabul 91.47 304 P P 20 47 03.6 -1.5
KBL IAmb IAmb 20 47 05.2
comp=Z,6.6nm,0.8s
KK31 Karatay Array 91.51 313 P P 20 47 04.0 -0.8
KK31 pmax pmax
comp=Z,5.0nm,0.9s
KK31 Karatay Array 91.51 313 P P 20 47 04.0 -0.8
KKAR Karatay Array 91.51 313 P P 20 47 03.6 -1.2
KKAR Karatay Array 91.51 313 P P 20 47 03.5 -1.2
KKAR Karatay Array 91.51 313 P P 20 47 03.6 -1.2
KKAR IAmb IAmb 20 47 05.8
comp=Z,4.6nm,0.9s
B08A Colville Reser 91.75 42 P P 20 47 05.8 0.0
B08A IAmb IAmb 20 47 32.5
comp=Z,12nm,1.4s
GSC Goldstone, Bar 91.80 55 P P 20 47 07.0 +0.5
GSC pmax pmax
comp=Z,4.0nm,0.9s
GSC Goldstone, Bar 91.80 55 P P 20 47 07.0 +0.5
GSC Goldstone, Bar 91.80 55 P P 20 47 07.6 +1.2
baz=262
CHGR Chuyangaron 91.91 309 P P 20 47 06.8 -0.1
CHGR IAmb IAmb 20 47 41.5

comp=Z,7.6nm,0.8s
BELC Belle Mtn. Jos 92.30 56 P **P** **20 47 09.4 +0.5**
baz=263
TPNV Topopah Spring 92.46 53 P **P** **20 47 09.9 +0.4**
TPNV pmax pmax
comp=Z,3.0nm,0.7s
TPNV Topopah Spring 92.46 53 P **P** **20 47 09.9 +0.4**
TPNV Topopah Spring 92.46 53 P **P** **20 47 10.6 +1.1**
baz=263
SYO Syowa Base 92.53 199‖*e*P **P** **20 47 07.2 -1.7**
SYO Syowa Base 92.53 199‖*e*pP pP 20 47 27.5 +2.3
TUQ Turquoise Mounta 92.53 55 P **P** **20 47 11.8 +1.9**
baz=263
GMRC Granite Mounta 92.67 55 P **P** **20 47 11.9 +1.4**
baz=263
IRM Iron Mountain 93.02 56 P **P** **20 47 14.5 +2.5**
baz=263
BRVK Borovoye 93.05 323*ce*P **P** **20 47 10.3 -1.3**
BRVK pmax pmax
comp=Z,9.0nm,0.9s
BRVK Borovoye 93.05 323 P **P** **20 47 10.3 -1.3**
BRVK IAmb IAmb 20 47 12.1
comp=Z,9.2nm,0.8s
C36M Paulatuk 93.08 20 P **P** **20 47 11.4 0.0**
C36M IAmb IAmb 20 47 13.1
comp=Z,8.4nm,0.8s
R11A Troy Canyon, C 93.14 52 P **P** **20 47 13.5 +0.8**
R11A IAmb IAmb 20 47 40.8
comp=Z,15nm,1.9s
SHPR Sheep Range 93.27 54 P **P** **20 47 14.2 +0.9**
YKA Yellowknife Ar 95.99 28 P **P** **20 47 24.8 -0.1**
comp=Z,2.5nm,0.8s,baz=266,slow=4.5,SNR=24
YKA PKKPbc **PKKPbc** **21 04 11.5 -4.0**
comp=Z,0.3nm,0.4s,baz=83,slow=2.7,SNR=9.5
YKA LR LR 21 30 07.9
comp=Z,9.6nm,18.3s,baz=284,slow=35
YKA Yellowknife Ar 95.99 28 P **P** **20 47 23.5 -1.4**
HRA Herat 97.04 304 P **P** **20 47 28.3 -2.4**
PDAR Pinedale Array 98.06 48 P **P** **20 47 34.8 -0.3**
comp=Z,0.4nm,0.6s,baz=219,slow=1.9,SNR=5.0
PDAR LR LR 21 28 27.0
comp=Z,164nm,18.9s,baz=280,slow=33
PDAR Pinedale Array 98.06 48 P **P** **20 47 33.9 -1.2**
ABKAR Akbulak array 99.28 319 P **Pdif** **20 47 37.3 -2.7**
ABKAR Akbulak array 99.28 319 P **Pdif** **20 47 37.3 -2.7**
ABKAR IAmb IAmb 20 47 39.5
comp=Z,2.4nm,0.8s
ARU Arti 99.99 326 P **Pdif** **20 47 36.5 -6.5**
ARU Arti 99.99 326 P **Pdif** **20 47 42.2 -0.8**
comp=Z,1.1nm,0.8s,baz=140,slow=5.8,SNR=4.2
AKTO Aktyubinsk 100.51 320 P **Pdif** **20 47 43.3 -2.2**
comp=Z,1.3nm,0.7s,baz=77,slow=5.2,SNR=5.2
RES Resolute Bay 101.83 15 P **Pdif** **20 47 51.4 +0.5**
comp=Z,1.4nm,0.6s,baz=351,slow=3.1,SNR=4.6
TXAR Lajitas Array 102.46 62 PP PKiKP 20 52 07.4 -8.7
comp=Z,0.6nm,1.1s,baz=282,slow=5.4,SNR=2.7
ARCES ARCESS Array B 109.98 343 PKiKP **PKiKP** **20 52 29.5 +0.7**
comp=Z,6.1nm,1.1s,baz=64,slow=2.8,SNR=5.6
ARCES PKKPbc **PKKPbc** **21 03 34.2 0.0**
comp=Z,2.5nm,0.8s,baz=197,slow=2.8,SNR=4.2
FINES FINESS Array B 114.44 336 PKP **PKiKP** **20 52 36.8 -0.6**
comp=Z,2.7nm,0.7s,baz=128,slow=3.9,SNR=9.2
FINES PKKPbc **PKKPbc** **21 03 17.4 -1.6**
comp=Z,1.4nm,0.7s,baz=126,slow=2.6,SNR=3.6
FINES FINESS Array B 114.44 336 **PKiKP** **20 52 36.4 -1.1**
PLCA Paso Flores 116.03 142 PKP **PKiKP** **20 52 41.3 0.0**
comp=Z,4.7nm,1.1s,baz=341,slow=4.1,SNR=4.4
PLCA Paso Flores 116.03 142 **PKiKP** **20 52 40.9 -0.4**
AKASG Malin Array Be 118.20 325 PKP **PKPdf** **20 52 43.7 -1.3**
comp=Z,3.4nm,0.6s,baz=50,slow=2.4,SNR=16
AKASG PKKPbc **PKKPbc** **21 03 03.6 -2.0**
comp=Z,0.7nm,0.6s,baz=259,slow=3.7,SNR=4.1
AKBB Malin Array Si 118.20 325 PKiKP **PKPdf** **20 52 44.4 -0.6**
AKBB Malin Array Si 118.20 325 **PKPdf** **20 52 44.4 -0.6**
BR131 Keskin Array S 119.19 312 PKiKP **PKPdf** **20 52 45.4 -2.1**
BR131 Keskin Array S 119.19 312 **PKPdf** **20 52 45.4 -2.1**
BRTR Keskin Array B 119.19 312 PKP **PKPdf** **20 52 46.2 -1.2**
comp=Z,0.8nm,0.6s,baz=138,slow=3.7,SNR=6.4
BRTR PKKPbc **PKKPbc** **21 03 02.1 +0.3**
comp=Z,1.5nm,0.7s,baz=217,slow=4.0,SNR=11
BRTR Keskin Array B 119.19 312 **PKPdf** **20 52 45.6 -1.9**
BRTR **PKKPbc** **21 03 02.0 +0.1**
SORM Soroca 119.81 322‖P **PKKPab** **21 02 57.1 -2.6**
NB2 NORSAR Subarra120.13 341 PKPdf **PKPdf** **20 52 46.9 -1.6**
comp=Z,0.9nm,0.7s,baz=44,slow=1.9
NOA NORSAR Array B 120.13 341 PKP **PKPdf** **20 52 47.9 -0.6**
comp=Z,0.6nm,0.6s,baz=65,slow=1.4,SNR=5.0
BOSA Boshof 120.70 231 PKP **PKPdf** **20 52 49.8 -0.9**
comp=Z,3.0nm,0.7s,baz=134,slow=2.5,SNR=9.3
TLCR 120.73 319↑PKiKP **PKiKP** **20 52 50.3 +0.2**
TLCR 120.73 319↑P **PKiKP** **20 52 50.3 +0.2**
HARR Harsova 121.50 319↑PKiKP **PKPdf** **20 52 51.3 -0.2**
HARR Harsova 121.50 319↑P **PKPdf** **20 52 51.3 -0.2**
VRI Vrincioaia 121.79 320↑PKiKP **PKPdf** **20 52 51.7 -0.4**
VRI Vrincioaia 121.79 320↑P **PKPdf** **20 52 51.7 -0.4**
VRI Vrincioaia 121.79 320↑P **PKKPab** **21 02 51.0 -0.3**
PLOR Plostina 121.84 320‖P **PKKPab** **21 02 50.2 -0.9**
BISRR Bisoca 121.93 320‖P **PKiKP** **20 52 52.6 0.0**
BUR08 Bucovina Ar. S 121.93 323 **PKiKP** **20 52 53.5 +0.9**
BURAR Bucovina Array 121.94 323‖PKiKP **PKiKP** **20 52 53.5 +0.9**
BURAR Bucovina Array 121.94 323‖P **PKiKP** **20 52 53.5 +0.9**
BURAR Bucovina Array 121.94 323‖P **PKKPab** **21 02 51.6 +0.9**
BURAR Bucovina Array 121.94 323 **PKPdf** **20 52 52.4 -0.1**
LBTB Lobatse 122.11 235 PKiKP **PKPdf** **20 52 52.9 -0.6**
LBTB Lobatse 122.11 235 **PKPdf** **20 52 52.9 -0.6**
OZUR 122.28 321↑P **PKKPab** **21 02 49.5 +0.3**
MLR Muntele Rosu 122.44 320‖PKiKP **PKPdf** **20 52 53.0 -0.5**
MLR Muntele Rosu 122.44 320 PKP **PKPdf** **20 52 58.2 -0.7**
comp=Z,2.5nm,0.7s,baz=153,slow=2.3,SNR=8.3
MLR PKKPbc **PKKPbc** **21 02 49.7 -0.1**
comp=Z,3.1nm,0.7s,baz=307,slow=5.1,SNR=11
MLR Muntele Rosu 122.44 320‖P **PKPdf** **20 52 53.0 -0.5**
MLR Muntele Rosu 122.44 320↑P **PKKPab** **21 02 49.2 +0.6**
MLR Muntele Rosu 122.44 320 **PKPdf** **20 52 52.5 -1.0**
DOPR Dopca 122.58 321↑P **PKPdf** **20 52 53.2 -0.5**
DOPR Dopca 122.58 321↑P **PKKPab** **21 02 48.3 +0.4**
CFA Coronel Fontan 122.87 135 PKP **PKPdf** **20 52 54.8 0.0**
comp=Z,3.7nm,0.7s,baz=272,slow=6.2,SNR=5.7
KOLS Kolonicke sedl 123.00 325*e*PKiKP **PKiKP** **20 52 55.0 +0.4**
KOLS Kolonicke sedl 123.00 325*e*PKP **PKiKP** **20 52 55.0 +0.4**
VOIR 123.03 321‖PKiKP **PKPdf** **20 52 54.0 -0.6**
VOIR 123.03 321‖P **PKPdf** **20 52 54.0 -0.6**
VOIR 123.03 321‖P **PKKPab** **21 02 47.9 +1.8**
TRPA Tarpa 123.26 324‖P **PKPdf** **20 52 53.6 -1.2**
ARR Arges 123.33 321‖P **PKPdf** **20 52 53.9 -1.2**
ARR Arges 123.33 321‖P **PKKPab** **21 02 45.7 +0.9**
HUMR Humele 123.48 320↑P **PKPdf** **20 52 53.8 -1.6**
COPA Copaceanca 123.50 319↑P **PKPdf** **20 52 55.2 -0.2**
ELND Elena 123.57 318‖P **PKPdf** **20 52 55.0 -0.6**
DRGR 123.83 323↑PKiKP **PKPdf** **20 52 55.6 -0.5**
DRGR 123.83 323↑P **PKPdf** **20 52 55.6 -0.5**
DEV Deva 124.16 322↑PKiKP **PKPdf** **20 52 56.6 0.0**
DEV Deva 124.16 322↑P **PKPdf** **20 52 56.6 0.0**
PLVB Pleven 124.21 319‖P **PKPdf** **20 52 56.0 -0.9**
GZR Gura Zlata 124.47 321↑PKiKP **PKiKP** **20 52 57.5 -0.2**
GZR Gura Zlata 124.47 321↑P **PKiKP** **20 52 57.5 -0.2**
SIRR Siria 124.72 323‖P **PKiKP** **20 52 58.4 +0.3**
BZS Buzias 125.07 322‖PKiKP **PKPdf** **20 52 58.1 -0.3**
BZS Buzias 125.07 322‖P **PKPdf** **20 52 58.1 -0.3**
MORC Moravsky Berou 125.10 328↑PKiKP **PKPdf** **20 52 57.7 -0.7**
MORC Moravsky Berou 125.10 328↑P **PKPdf** **20 52 57.7 -0.7**
VYHS Vyhne 125.15 326*e*PKiKP **PKiKP** **20 52 59.2 +0.4**
VYHS Vyhne 125.15 326*e*PKP **PKiKP** **20 52 59.2 +0.4**
OSTC Ostas 125.31 330*e*PKPDF **PKiKP** **20 52 59.7 +0.6**
VTS Vitosha 125.46 318↑PKiKP **PKPdf** **20 52 59.2 -0.2**
VTS Vitosha 125.46 318↑P **PKPdf** **20 52 59.2 -0.2**
VTS Vitosha 125.46 318 **PKPdf** **20 52 58.6 -0.8**
MODS Modra-Piesok 126.07 327*e*PKiKP **PKPdf** **20 53 00.0 -0.3**
MODS Modra-Piesok 126.07 327*e*PKP **PKPdf** **20 53 00.0 -0.3**
PVCC Panska Ves 126.14 330*e*PKiKP **PKiKP** **20 53 01.2 +0.5**
PVCC Panska Ves 126.14 330*e*PKPDF **PKiKP** **20 53 01.2 +0.5**
BRG Berggiesshubel 126.22 331*e*PKP **PKiKP** **20 53 00.7 -0.2**
comp=Z,9.1nm,0.9s
BRG Berggiesshubel 126.22 331*e*PKIKP **PKiKP** **20 53 00.7 -0.2**
BRG pmax pmax
comp=Z,9.0nm,1.0s
CLL Collm 126.38 332 *i* PKiKP **PKiKP** **20 53 01.2 0.0**
CLL pmax pmax
comp=Z,7.0nm,0.7s
CLL Collm 126.38 332 *i* PKPdf **PKiKP** **20 53 01.2 0.0**
comp=Z,7.0nm,0.7s
CLL *i* 20 53 05.9
PRU Pruhonice 126.50 330*e*PKIKP **PKiKP** **20 53 01.4 -0.1**
PRU Pruhonice 126.50 330*e*PKPDF **PKiKP** **20 53 01.4 -0.1**
PBCC Pribram 126.97 330*e*PKPDF **PKPdf** **20 53 01.8 -0.1**
CONA Conrad Observa 127.10 327 *i* PKiKP **PKiKP** **20 53 03.3 +0.4**
comp=Z,2.4nm,0.6s,SNR=6.3
FNA Florina 127.53 317 PKIKP **PKPdf** **20 53 03.1 -0.2**
FNA Florina 127.53 317 **PKPdf** **20 53 03.1 -0.2**
KHC Kasperske Hory 127.53 330*e*PKIKP **PKPdf** **20 53 03.2 +0.1**
KHC Kasperske Hory 127.53 330*e*PKPDF **PKPdf** **20 53 03.2 +0.1**
KHC Kasperske Hory 127.53 330 **PKPdf** **20 53 02.4 -0.6**
GEC2 GERESS Array S 127.66 329 **PKPdf** **20 53 03.6 +0.2**
GERES GERESS Array B 127.66 329 PKP **PKPdf** **20 53 03.6 +0.2**
comp=Z,3.5nm,0.7s,baz=66,slow=1.7,SNR=25
GERES pPKP **pPKPdf** **20 53 18.9 -1.8**
comp=Z,1.6nm,0.6s,baz=99,slow=2.4,SNR=5.3
GERES GERESS Array B 127.66 329 **PKPdf** **20 53 02.7 -0.7**
MOA Molln 128.00 328 *i* PKiKP **PKiKP** **20 53 04.5 0.0**
comp=Z,0.8nm,0.4s
KBA Koelnbreinsper 128.97 328 *i* PKiKP **PKPdf** **20 53 06.1 +0.1**
comp=Z,1.5nm,0.6s
MYKA Terra Mystica 129.09 327 *i* PKiKP **PKPdf** **20 53 06.5 +0.3**
comp=Z,1.8nm,0.4s
ABTA Abfaltersbach 129.62 328 *i* PKiKP **PKPdf** **20 53 07.0 -0.2**
comp=Z,1.2nm,0.4s
WATA Walderalm 129.72 329 *i* PKiKP **PKiKP** **20 53 08.0 -0.2**
comp=Z,4.2nm,0.5s
WTTA Wattenberg 129.74 329 *i* PKiKP **PKiKP** **20 53 08.0 -0.2**
comp=Z,4.0nm,0.5s
STAL STALIGIAL 129.82 327 **PKPdf** **20 53 06.7 -0.8**
MOTA Moosalm 129.96 329 *i* PKiKP **PKPdf** **20 53 07.5 -0.4**
comp=Z,2.0nm,0.4s
SQTA Sankt Quirin 129.98 329 *i* PKiKP **PKPdf** **20 53 07.8 -0.1**
comp=Z,3.1nm,0.5s
RETA Reutte 130.03 330 *i* PKiKP **PKPdf** **20 53 08.3 +0.4**
comp=Z,0.6nm,0.3s
FETA Feichten 130.36 329*e*PKiKP **PKPdf** **20 53 08.6 0.0**
comp=Z,2.2nm,0.7s,SNR=4.6
LPAZ La Paz 130.55 118 PKP **PKiKP** **20 53 11.3 0.0**
comp=Z,3.3nm,0.8s,baz=294,slow=2.4,SNR=9.2
LPAZ SKPbc **SKPab** **20 56 30.1 +0.8**
comp=Z,1.8nm,0.7s,baz=218,slow=6.7,SNR=4.8
LPAZ La Paz 130.55 118 **PKPdf** **20 53 09.9 -0.5**
DAVA Damuels 130.61 330 *i* PKiKP **PKiKP** **20 53 09.6 -0.4**
comp=Z,1.6nm,0.3s
SGRT San Giovanni R 130.72 321 **PKPdf** **20 53 08.4 -1.1**
INTR Introdacqua 131.71 322 **PKPdf** **20 53 10.4 -0.9**
ZCCA Zocca 131.98 326 **PKPdf** **20 53 12.0 +0.3**
CPUP Villa Florida 133.63 137 PKP **PKiKP** **20 53 16.1 -0.5**
comp=Z,3.3nm,0.8s,baz=297,slow=2.2,SNR=6.2
CPUP Villa Florida 133.63 137 **PKPdf** **20 53 15.5 +0.3**
SIV San Ignacio 136.73 122 PKP **PKPdf** **20 53 21.8 +0.5**
comp=Z,2.3nm,0.8s,baz=227,slow=4.1,SNR=7.9
SIV SKPbc **SKPbc** **20 56 49.4 +0.1**
comp=Z,2.0nm,0.7s,baz=218,slow=3.2,SNR=6.1
KEST Kesra 138.23 318 PKP **PKPdf** **20 53 22.6 -1.1**
comp=Z,1.8nm,0.7s,baz=297,slow=8.9,SNR=2.8
KEST SKPbc **SKPbc** **20 56 52.8 -0.3**
comp=Z,2.9nm,0.9s,baz=116,slow=5.1,SNR=4.1
KEST Kesra 138.23 318 **PKPdf** **20 53 23.3 -0.3**
ESDC Sonseca Array 142.91 334 PKhKP PKPpre 20 53 29.0
comp=Z,1.1nm,0.6s,baz=37,slow=2.5,SNR=8.3
ESDC Sonseca Array 142.91 334 **PKPdf** **20 53 29.2 -2.7**
PVIS Viseu 143.57 339*e*PKP PKPbc 20 53 31.2 +0.7
PCBR Castelo Branco 144.19 338*e*PKP PKPdf **20 53 34.0 -0.1**
PMRV Mar??o 144.52 338*e*PKP PKPbc 20 53 33.7 +0.3
PTOM Tomar 144.73 339*e*PKP PKPbc 20 53 34.2 +0.2
PMTG Montargil 145.15 338*e*PKP **PKPdf** **20 53 36.8 +1.0**
PBEJ Beja 145.92 337*e*PKP **PKPab** **20 53 38.9 +0.5**
PNCL Nicolau / Gran 146.10 338*e*PKP **PKPab** **20 53 39.4 +0.4**
PCVE Castro Verde 146.33 337*e*PKP **PKPab** **20 53 40.2 +0.3**
PTEO Sao Teotonio 146.67 338*e*PKP **PKPab** **20 53 40.8 -0.4**
PFVI Vila Bisbo 147.07 337*e*PKP **PKPdf** **20 53 35.3 -3.8**
BDFB Brasilia 147.20 134 PKPbc **PKPbc** **20 53 42.5 +0.2**
comp=Z,67nm,0.6s,baz=208,slow=2.1,SNR=50
ZHG ZHG 149.25 331 P **PKiKP** **20 53 48.0 -0.4**
SNR=11
TISM Timmit 150.53 328 P **PKiKP** **20 53 51.0 +0.1**
SNR=19
TZRR Tazzarine 150.79 326 P **PKiKP** **20 53 52.0 +0.3**
SNR=14
ZGR Zagora 151.32 325 P **PKiKP** **20 53 53.0 +0.2**
SNR=20
OUZM OUZ 151.34 328 P **PKiKP** **20 53 53.0 +0.1**
SNR=13
TOA0 Torodi Ar. Sit 153.99 285 **PKPdf** **20 53 53.4 +2.9**
TORD Torodi Ar. Bea 153.99 285 PKP **PKPdf** **20 53 49.7 -0.7**
comp=Z,1.2nm,0.7s,baz=31,slow=1.5,SNR=5.3
TORD PKPbc **PKPbc** **20 53 57.8 -0.7**
comp=Z,3.6nm,0.6s,baz=46,slow=1.8,SNR=14
TORD PKPab **PKPab** **20 54 11.8 -0.3**
comp=Z,2.9nm,0.7s,baz=68,slow=2.9,SNR=5.9
TORD PP **PP** **20 57 47.6 +0.6**
comp=Z,0.8nm,0.8s,baz=90,slow=5.8,SNR=3.3
KIC Kosan Boka 160.83 269*e*PKP1 **PKPab** **20 54 41.4 -0.3**
comp=Z,20nm,0.8s
DBIC Dimbokro 160.96 270 PKP2 **PKPab** **20 54 42.0 -0.2**
DBIC Dimbokro 160.96 270 PKPab **PKPab** **20 54 42.0 -0.2**
comp=Z,4.0nm,0.7s,baz=95,slow=4.5,SNR=6.9
DBIC pPKPab **pPKPab** **20 54 57.5 -1.3**
comp=Z,5.5nm,0.9s,baz=93,slow=8.0,SNR=3.9
LIC Lamto 161.11 268*e*PKP1 **PKPab** **20 54 42.3 -0.5**
comp=Z,20nm,0.9s
TIC Toumodi 161.12 270*e*PKP1 **PKPab** **20 54 42.2 -0.7**
comp=Z,9.2nm,0.6s

*FUNV **03** 20:43:37.0, 10°.41N×61°.93W, h9km, MW3.2*
*TRN **03** 20:43:37.0, 10°.42N×61°.99W, h9km, MD3.3*
ISC 03 20:43:36.7±1.1, **10°.37N**±0°.03×**62°.00W**±0°.03, **h13**km±8km, **n18**, σ0**97/35**, **1D**, **Trinidad**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.36**	**322**	*e*P	**Pg**	**20 43 43.8**	**-0.2**
GUIV				*e*S	**Sg**	**20 43 48.8**	**-0.1**
GUIV	**Guiria**	**0.36**	**322**‖	*e*P	**Pg**	**20 43 44.1**	**+0.2**
GUIV				*e*S	**Sg**	**20 43 48.3**	**-0.5**
TRN	**Trinidad (W)**	**0.65**	**64**	*e*P	**Pg**	**20 43 48.2**	**-1.2**
TRN				*e*S	**Sg**	**20 43 58.3**	**+0.3**
TBH	**Brigand Hill**	**0.92**	**83**	*e*P	**Pb**	**20 43 54.5**	**0.0**
TBH				*e*S	**Sn**	**20 44 08.5**	**0.0**
GUNV	**Guanoco**	**0.95**	**258**	*e*P	**Pg**	**20 43 55.8**	**+0.7**
GUNV				*e*S	**Sn**	**20 44 09.6**	**+0.4**
CRUV	**Carupano**	**1.26**	**284**	*e*P	**Pn**	**20 43 59.5**	**-0.5**
CRUV				*e*S	**Sb**	**20 44 15.6**	**-0.8**
TOSP	**Speyside**	**1.71**	**57**	*e*P	**Pn**	**20 44 06.8**	**+0.7**
TOSP				*e*S	**Sn**	**20 44 28.5**	**+0.6**
GRGR	**Grenville**	**1.79**	**11**	*e*P	**Pn**	**20 44 07.3**	**+0.1**
GRGR				*e*S	**Sn**	**20 44 29.6**	**-0.3**
GRHS	**Sauteurs**	**1.88**	**11**	*e*P	**Pn**	**20 44 08.8**	**+0.2**
GRHS				*e*S	**Sn**	**20 44 31.7**	**-0.4**
ORIV	**Oritupano**	**1.90**	**227**	*e*P	**Pb**	**20 44 11.5**	**+0.4**
ORIV				*e*S	**Sb**	**20 44 35.5**	**+0.7**
RIOV	**Rio Grande**	**2.29**	**175**	*e*P	**Pn**	**20 44 13.8**	**-0.4**
RIOV				*e*S	**Sn**	**20 44 41.6**	**-0.6**
PCRV	**Puerto La Cruz**	**2.60**	**266**	*e*P	**Pn**	**20 44 18.9**	**+0.3**
SVB	**Belmont**	**2.98**	**14**	*e*P	**Pn**	**20 44 24.8**	**+1.1**
SVB				*e*S	**Sn**	**20 44 59.0**	**-0.3**
SVCV	**St. Vincent, C**	**3.01**	**16**	*e*P	**Pn**	**20 44 25.4**	**+1.4**
SVCV				*e*S	**Sn**	**20 44 59.8**	**-0.2**
PRGV	**PARIAGUAN**	**3.06**	**239**	*e*P	**Pn**	**20 44 26.4**	**+1.7**
PRGV				*e*S	**Sn**	**20 45 01.6**	**+0.3**
CUPV	**Cpira**	**3.74**	**266**	*e*P	**Pn**	**20 44 35.5**	**+1.3**
CUPV				*e*S	**Sn**	**20 45 17.6**	**-0.7**
SLBI	**Saint Lucia, B**	**3.77**	**15**	*e*P	**Pn**	**20 44 35.4**	**+0.8**
SLBI				*e*S	**Sn**	**20 45 18.4**	**-0.3**
BAUV	**El Baul**	**6.12**	**257**	*e*P	**Pn**	**20 45 06.6**	**-0.4**
BAUV				*e*S	**Sn**	**20 46 13.2**	**-3.8**

*IDC **03** 20:44:42.8±2.8, 5°.03S×145°.17E, h72km±24km, mb3.9/12, mb1 4.1/16, mb1mx3.9/35, mbtmp4.3/16, MS3.4/3, Ms1 3.4/3, ms1mx3.0/32, Error ellipse: s-maj=24.0km s-min=14.1km az=77.0*
*NEIC **03** 20:44:42.5±2.3, 5°.10S±0°.06×145°.15E±0°.07, h76km±6km, mb4.6/27, Error ellipse: s-maj=11.5km s-min=7.7km az=51.0*
ISC 03 20:44:40.6±0.5, **5°.03S**±0°.06×**145°.21E**±0°.07, **h54**km, **n69,** σ1**51/68**, **mb4.5/24**, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**3.67**	**36**		**Pn**	**20 45 37.6**	**+2.7**
PMG	**Port Moresby**	**4.75**	**156**	P	**Pn**	**20 45 51.9**	**+2.1**
	4.7nm,0.3s,baz=330,slow=12,SNR=5.9						
PMG				S	**Sn**	**20 46 46.2**	**+2.6**
	25nm,0.3s,baz=298,slow=23,SNR=19						
PMG	**Port Moresby**	**4.75**	**156**		**Pn**	**20 45 49.6**	**-0.2**
PMG					**Sn**	**20 46 45.6**	**+2.0**
JAY	**Jayapura**	**5.15**	**299**	P	**Pn**	**20 45 57.6**	**+2.4**
	4.2nm,0.3s,baz=88,slow=6.8,SNR=14						
JAY				S	**Sn**	**20 46 56.8**	**+3.4**
	3.0nm,0.3s,baz=0.0,slow=20,SNR=2.3						
KRVT	**Keravat (AS076**	**6.83**	**84**	LR	LR	20 48 49.8	
	comp=Z,181nm,20.1s,baz=202,slow=36						
COEN	**Coen**	**9.09**	**193**		**Pn**	**20 46 50.5**	**+1.3**
SIJI	**Sorong**	**14.53**	**286**	P	**Pn**	**20 48 05.5**	**+2.1**
	1.3nm,0.3s,baz=90,slow=10,SNR=5.8						
CTA	**Charters Tower**	**15.00**	**176**	P	**P**	**20 48 13.9**	**+0.2**
	baz=3.4,slow=17,SNR=1.9						
MTN	**Manton Dam**	**15.92**	**240**	Pn	**Pn**	**20 48 19.6**	**-1.7**
WR0	**Warramunga Arr**	**18.11**	**214**	P	**P**	**20 48 47.6**	**-0.7**
WRAB	**Tennant Creek**	**18.20**	**215**	P	**P**	**20 48 48.0**	**-1.2**
WRA	**Warramunga Arr**	**18.21**	**215**	P	**P**	**20 48 49.3**	**-0.1**
	1.2nm,0.3s,baz=42,slow=11,SNR=54						
WRA	**Warramunga Arr**	**18.21**	**215**	P	**P**	**20 48 46.5**	**-2.9**
KNRA	**Kununurra**	**19.31**	**236**	P	**P**	**20 48 59.5**	**-2.0**
KNRA				IAmb	IAmb	20 49 20.5	
	comp=Z,86nm,1.4s						
EIDS	**Eidsvold**	**20.99**	**165**	P	**P**	**20 49 20.6**	**+1.0**
EIDS				IAmb	IAmb	20 49 34.4	
	comp=Z,48nm,1.8s						
SOEI	**Soe**	**21.29**	**256**	P	**P**	**20 49 22.5**	**-0.5**
SOEI				IAmb	IAmb	20 49 43.2	
	comp=Z,19nm,0.9s						
AS31	**Alice Springs**	**21.49**	**209**	P	**P**	**20 49 24.3**	**-0.7**
ASAR	**Alice Springs**	**21.49**	**209**	P	**P**	**20 49 24.8**	**-0.3**
	comp=Z,4.1nm,0.8s,baz=37,slow=10,SNR=36						
ASAR	**Alice Springs**	**21.49**	**209**	P	**P**	**20 49 24.3**	**-0.7**
BATI	**Baumata**	**21.96**	**255**	P	**P**	**20 49 30.9**	**+0.7**
	comp=Z,4.9nm,0.4s,baz=149,slow=3.9,SNR=3.1						
LUWI	**Luwuk**	**22.75**	**279**	P	**P**	**20 49 35.9**	**-2.7**
FITZ	**Fitzroy Crossi**	**23.12**	**234**	P	**P**	**20 49 41.8**	**-0.4**
	comp=Z,4.8nm,0.6s,baz=61,slow=9.5,SNR=14						
FITZ	**Fitzroy Crossi**	**23.12**	**234**	P	**P**	**20 49 41.1**	**-1.1**
FITZ				IAmb	IAmb	20 49 51.7	
	comp=Z,29nm,1.8s						
ARMA	**Armidale**	**25.96**	**167**	P	**P**	**20 50 09.2**	**+0.8**
ARMA				IAmb	IAmb	20 50 15.0	
	comp=Z,42nm,1.4s						
STKA	**Stephens Creek**	**26.92**	**187**	P	**P**	**20 50 17.0**	**+0.2**
	comp=Z,4.1nm,0.7s,baz=350,slow=7.9,SNR=11						
STKA	**Stephens Creek**	**26.92**	**187**	P	**P**	**20 50 17.6**	**+0.8**
BBOO	**Buckleboo**	**28.93**	**196**	P	**P**	**20 50 33.8**	**-0.9**
BBOO				IAmb	IAmb	20 50 54.9	
	comp=Z,32nm,1.3s						
FORT	**Forrest**	**30.27**	**210**	P	**P**	**20 50 46.9**	**+0.2**
TGY	**Tagaytay City**	**30.68**	**309**	LR	LR	21 04 23.8	
	comp=Z,14nm,18.1s,baz=151,slow=38						
OUZ	**Omahuta**	**39.86**	**143**	P	**P**	**20 52 09.3**	**+0.3**
JNU	**Nakatsue**	**40.31**	**341**	LR	LR	21 05 48.5	
	comp=Z,82nm,19.3s,baz=166,slow=31						
MJAR	**Matsushiro Arr**	**41.88**	**352**	P	**P**	**20 52 24.9**	**-0.7**
MAJO	**Matsushiro**	**41.88**	**352**	P	**P**	**20 52 25.3**	**-0.4**
MAJO				IAmb	IAmb	20 52 43.8	
	comp=Z,22nm,1.4s						
NJ2	**Nanjing**	**44.61**	**328**	*e*P	**P**	**20 52 47.6**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,28nm,0.5s						
KULM	**Kulim**	**45.67**	**282**	P	**P**	**20 52 55.6**	**-0.9**
RPSI	**Rantau Prapat**	**46.88**	**278**	P	**P**	**20 53 05.0**	**-0.9**
RPSI				IAmb	IAmb	20 53 05.6	
	comp=Z,8.3nm,1.1s						
GSI	**Gunungsitoli**	**48.00**	**276**	P	**P**	**20 53 12.9**	**-1.8**
KMI	**Kunming**	**51.00**	**308**	P	**P**	**20 53 38.7**	**+1.0**
KMI				pP	pP	20 53 49.3	-2.9
KMI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CM31	**Chiang Mai Arr**	**51.23**	**298**	P	**P**	**20 53 38.8**	**-0.5**
CM31				IAmb	IAmb	20 53 39.7	
	comp=Z,4.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**51.23**	**298**	P	**P**	**20 53 39.5**	**+0.2**
	comp=Z,2.6nm,0.5s,baz=124,slow=6.2,SNR=27						
CMAR	**Chiang Mai Arr**	**51.23**	**298**	P	**P**	**20 53 38.5**	**-0.7**
CD2	**Chengdu**	**53.33**	**315**	P	**P**	**20 53 53.8**	**-0.9**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	**Hu-ho-hao-te**	**55.09**	**329**	*e*P	**P**	**20 54 09.6**	**+2.2**
LZH	**Lanzhou**	**56.33**	**320**	*e*P	**P**	**20 54 19.4**	**+3.0**
LZH				pP	pP	20 54 33.7	+2.6
LZH				sP	sP	20 54 41.6	+4.3
LZH				PP	**PP**	**20 56 22.5**	**+0.1**
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,56nm,4.9s						
PETK	**Petropavlovsk-**	**58.88**	**9**	P	**P**	**20 54 34.8**	**+1.0**
	comp=Z,2.9nm,0.9s,baz=178,slow=9.8,SNR=3.3						
PETK	**Petropavlovsk-**	**58.88**	**9**	P	**P**	**20 54 34.4**	**+0.6**
SHL	**Shillong**	**60.00**	**303**	P	**P**	**20 54 41.2**	**-1.1**
SHL				IAmb	IAmb	20 54 43.8	
	comp=Z,4.0nm,0.6s						
SONM	**Songino Array**	**62.71**	**332**	P	**P**	**20 55 00.8**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=151,slow=7.3,SNR=3.4						
SONM	**Songino Array**	**62.71**	**332**	P	**P**	**20 55 01.7**	**+1.6**

MDSI	**Maura Dua**	**1.57**	**24**	P	**Pn**	**20 59 13.1 +1.0**
MNAI	**Manna**	**1.67**	**339**	P	**Pn**	**20 59 14.3 +0.7**
MNAI	**Manna**	**1.67**	**339**		**Pn**	**20 59 15.6 +2.0**
KLSI		**1.71**	**44**	P	**Pn**	**20 59 16.0 +2.0**
CGJI	**Cibinong**	**2.23**	**108**	P	**Pn**	**20 59 22.8 +1.5**
KSI	**Kapahiang**	**2.46**	**337**	P	**Pn**	**20 59 25.5 +1.0**
SBJI	**Serang**	**2.57**	**94**	P	Pn	20 59 42.6 +17
SKJI	**Sukabumi**	**3.17**	**110**	P	**Pn**	**20 59 34.9 +0.7**
PMBI	**Palembang**	**3.23**	**22**	Pn	**Pn**	**20 59 34.0 -1.0**
DBJI	**Dramaga**	**3.24**	**101**	P	**Pn**	**20 59 36.6 +1.4**
LEM	**Lembang**	**4.14**	**103**	Pn	**Pn**	**20 59 52.4 +4.7**
	3.8nm,0.3s,baz=287,slow=19,SNR=2.5					
CISI	**Cisompet, Garu**	**4.53**	**111**	P	**Pn**	**20 59 54.6 +1.6**
CISI	**Cisompet, Garu**	**4.53**	**111**		**Pn**	**20 59 54.6 +1.6**
UGM	**Wanagama**	**7.20**	**106**	Pn	**Pn**	**21 00 32.5 +2.9**
JAGI	**Jajag, Banyuwa**	**10.82**	**104**	P	**Pn**	**21 01 21.0 +1.8**
	37nm,0.6s					
JAGI	**Jajag, Banyuwa**	**10.82**	**104**		**Pn**	**21 01 19.4 +0.2**
SRBI	**Singaraja**	**11.77**	**101**	P	**Pn**	**21 01 33.8 +1.5**
BATI	**Baumata**	**20.36**	**103**	P	Pn	21 03 23.3 +0.7
	6.3nm,0.4s,baz=322,slow=12,SNR=3.0					
BATI				S	**S**	**21 07 00.9 -5.7**
	4.0nm,0.3s,baz=221,slow=20,SNR=1.7					
SOEI	**Soe**	**20.87**	**102**	P	**P**	**21 03 26.6 +0.7**
SOEI				IAmb	IAmb	21 04 11.6
	comp=Z,27nm,0.9s					
UBPT	**Khong Chiam**	**21.16**	**5**	P	**P**	**21 03 27.0 -1.9**
UBPT				IAmb	IAmb	21 03 55.4
	comp=Z,29nm,1.9s					
CMAR	**Chiang Mai Arr**	**24.66**	**349**	P	**P**	**21 04 03.0 -1.2**
	comp=Z,0.7nm,0.6s,baz=180,slow=9.3,SNR=4.9					
CMAR	**Chiang Mai Arr**	**24.66**	**349**	P	**P**	**21 04 02.7 -1.4**
FITZ	**Fitzroy Crossi**	**24.72**	**121**	P	**P**	**21 04 06.8 +2.1**
	comp=Z,4.0nm,0.8s,baz=233,slow=5.2,SNR=6.3					
FITZ	**Fitzroy Crossi**	**24.72**	**121**	P	**P**	**21 04 05.1 +0.3**
FITZ				IAmb	IAmb	21 04 18.4
	comp=Z,20nm,1.4s					
CHTO	**Chiang Mai**	**25.01**	**350**	P	**P**	**21 04 05.5 -1.8**
KNRA	**Kununurra**	**26.56**	**113**	P	**P**	**21 04 19.3 -2.1**
H08S2	**Diego Garcia H**	**30.88**	**265**	T	T	21 37 20.5
	baz=88,slow=75,SNR=8.4					
H08S3	**Diego Garcia H**	**30.89**	**265**	T	T	21 37 17.6
	baz=88,slow=75,SNR=10					
H08S1	**Diego Garcia H**	**30.90**	**265**	T	T	21 37 08.1
	baz=88,slow=75,SNR=4.4					
WRA	**Warramunga Arr**	**32.99**	**118**	P	**P**	**21 05 19.3 +0.7**
	comp=Z,0.8nm,0.6s,baz=290,slow=9.8,SNR=3.2					
WRA	**Warramunga Arr**	**32.99**	**118**	P	**P**	**21 05 17.0 -1.5**
ASAR	**Alice Springs**	**34.11**	**124**	P	**P**	**21 05 29.3 +1.1**
	comp=Z,1.0nm,0.7s,baz=298,slow=8.0,SNR=12					
ASAR				PcP	**PcP**	**21 08 06.3 +1.1**
	comp=Z,0.5nm,0.7s,baz=295,slow=2.6,SNR=4.8					
ASAR	**Alice Springs**	**34.11**	**124**	P	**P**	**21 05 28.4 +0.2**
STKA	**Stephens Creek**	**43.91**	**131**	P	**P**	**21 06 51.3 +1.3**
	comp=Z,2.1nm,0.7s,baz=304,slow=9.3,SNR=5.8					
STKA	**Stephens Creek**	**43.91**	**131**	P	**P**	**21 06 50.9 +0.8**
KSRS	**Korea Array**	**48.79**	**26**	P	**P**	**21 07 28.1 0.0**
	comp=Z,0.7nm,0.7s,baz=224,slow=7.9,SNR=4.1					
CAN	**Canberra**	**50.97**	**131**	P	**P**	**21 07 43.4 -1.6**
SONM	**Songino Array**	**53.60**	**2**	P	**P**	**21 08 04.4 +0.2**
	comp=Z,0.6nm,0.7s,baz=175,slow=5.7,SNR=6.4					
SONM				PcP	**PcP**	**21 09 11.1 +0.6**
	comp=Z,0.7nm,0.7s,baz=175,slow=4.7,SNR=3.7					
SONM	**Songino Array**	**53.60**	**2**	P	**P**	**21 08 03.4 -0.9**
GAR	**Garm**	**54.27**	**328**	P	**P**	**21 08 07.7 -1.7**
ARSB	**Arslanbob**	**54.72**	**332**	P	**P**	**21 08 10.1 -2.5**
ARSB				IAmb	IAmb	21 08 13.6
	comp=Z,5.0nm,0.9s					
BTK	**Batken**	**54.80**	**329**	P	**P**	**21 08 12.4 -0.7**
BTK				IAmb	IAmb	21 09 22.1
	comp=Z,8.7nm,1.8s					
MK31	**Makanchi Array**	**55.78**	**342**	P	**P**	**21 08 18.6 -1.5**
MK31				IAmb	IAmb	21 08 58.6
	comp=Z,5.8nm,1.4s					
MKAR	**Makanchi Array**	**55.78**	**342**	P	**P**	**21 08 19.8 -0.3**
	comp=Z,2.0nm,0.6s,baz=145,slow=7.9,SNR=23					
MKAR	**Makanchi Array**	**55.78**	**342**	P	**P**	**21 08 19.4 -0.6**
KURBB	**Kurchatov Arra**	**60.33**	**342**	P	**P**	**21 08 51.7 0.0**
	comp=Z,1.0nm,0.7s,baz=160,slow=6.3,SNR=7.7					
KURK	**Kurchatov**	**60.38**	**342**	P	**P**	**21 08 51.8 -0.3**
CASY	**Casey**	**60.44**	**177**	P	**P**	**21 08 52.3 0.0**
CASY				IAmb	IAmb	21 10 17.2
	comp=Z,8.9nm,1.5s					
ZAA0	**Zalesovo Array**	**61.71**	**348**	P	**P**	**21 09 00.6 -0.4**
ZAA0				IAmb	IAmb	21 09 01.8
	comp=Z,16nm,1.9s					
ZALV	**Zalesovo Beam**	**61.71**	**348**	P	**P**	**21 09 00.5 -0.5**
	comp=Z,1.6nm,0.5s,baz=160,slow=5.6,SNR=11					
ZALV	**Zalesovo Beam**	**61.71**	**348**	P	**P**	**21 08 59.8 -1.1**
BVAR	**Borovoye Array**	**65.09**	**339**	P	**P**	**21 09 23.2 -0.2**
	comp=Z,1.1nm,0.6s,baz=142,slow=8.8,SNR=10					
ABKAR	**Akbulak array**	**66.78**	**331**	P	**P**	**21 09 34.0 -0.3**
ABKAR	**Akbulak array**	**66.78**	**331**	P	**P**	**21 09 33.8 -0.5**
ABKAR				IAmb	IAmb	21 09 35.0
	comp=Z,2.0nm,0.8s					
BR131	**Keskin Array S**	**78.57**	**312**	P	**P**	**21 10 44.0 -0.9**
BRTR	**Keskin Array B**	**78.57**	**312**	P	**P**	**21 10 45.3 +0.4**
	comp=Z,0.8nm,0.7s,baz=139,slow=9.1,SNR=7.2					
BRTR	**Keskin Array B**	**78.57**	**312**	P	**P**	**21 10 43.3 -1.6**
BURAR	**Bucovina Array**	**86.53**	**318**	P	**P**	**21 11 28.2 +2.1**
ILAR	**Eielson Array**	**103.62**	**25**	Pdiff	**Pdif**	**21 12 43.9 +0.1**
	comp=Z,0.5nm,0.9s,baz=289,slow=2.8,SNR=3.4					
TXAR	**Lajitas Array**	**145.33**	**45**	PKPbc	**PKPdf**	**21 18 22.3 +0.9**
	comp=Z,1.5nm,0.6s,baz=318,slow=1.1,SNR=12					
TXAR	**Lajitas Array**	**145.33**	**45**		**PKPdf**	**21 18 21.7 +0.2**

*IDC **03** 21:43:34.7±0.9, 55.°35S×26.°89W, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.8/25, mbtmp4.0/6, ML3.9/1, Error ellipse: s-maj=37.7km s-min=21.9km az=67.0*
*NEIC **03** 21:43:40.3±1.4, 55.°4S×0.°1×27.°4W±0.°2, h40km±7km, mb4.2/6, Error ellipse: s-maj=17.6km s-min=11.1km az=47.0*

ISC 03 21:43:39.8±0.8, 55.°4S±0.°1×27.°3W±0.°1, h35km, n17, σ1°00/15, mb4.1/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.43**	**278**	Pn	**Pn**	**21 44 58.1**	**0.0**
HOPE				Sn	**Sn**	**21 45 59.2**	**-0.1**
EFI	**East Falkland**	**18.58**	**269**	P	**Pn**	**21 47 52.8**	**-1.1**
SNAA	**Sanae**	**19.35**	**157**	P	**Pn**	**21 48 02.6**	**-0.6**
	0.3nm,0.3s,baz=300,slow=9.2,SNR=16						
SNAA	**Sanae**	**19.35**	**157**	P	**Pn**	**21 48 02.6**	**-0.6**
QSPA	**South Pole Qui**	**34.84**	**180**	P	**P**	**21 50 27.3**	**+0.2**
	1.1nm,0.4s,baz=236,slow=10.0,SNR=2.9						
QSPA	**South Pole Qui**	**34.84**	**180**	IAmb	IAmb	21 50 33.7	
	comp=Z,2.0nm,0.8s						
MAW	**Mawson**	**40.70**	**144**	P	**P**	**21 51 17.6**	**+1.3**
LVC	**Limon Verde**	**44.93**	**300**	P	**P**	**21 51 53.4**	**+2.0**
	comp=Z,3.2nm,0.7s,baz=153,slow=6.8,SNR=3.3						
LVC	**Limon Verde**	**44.93**	**300**	P	**P**	**21 51 52.1**	**+0.7**
LVC				IAmb	IAmb	21 51 54.0	
	comp=Z,4.1nm,0.8s						
VNDA	**Vanda**	**47.21**	**183**	P	**P**	**21 52 08.2**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=192,slow=8.2,SNR=4.3						
LPAZ	**La Paz**	**49.96**	**305**	P	**P**	**21 52 31.6**	**+0.7**
	comp=Z,1.5nm,0.6s,baz=227,slow=7.8,SNR=5.3						
LPAZ	**La Paz**	**49.96**	**305**	IAmb	IAmb	21 52 32.5	
	comp=Z,2.3nm,0.9s						
TORD	**Torodi Ar. Bea**	**72.53**	**30**	P	**P**	**21 55 02.3**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=200,slow=6.7,SNR=5.6						
TORD	**Torodi Ar. Bea**	**72.53**	**30**	IAmb	IAmb	21 55 07.2	
	comp=Z,1.0nm,0.8s						
YKA	**Yellowknife Ar**	**135.65**	**318**	PKP	**PKiKP**	**22 02 57.0**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=121,slow=2.4,SNR=4.0						
ILAR	**Eielson Array**	**149.64**	**312**	PKPbc	**PKiKP**	**22 03 24.1**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=117,slow=2.2,SNR=10						
SONM	**Songino Array**	**150.74**	**85**	PKPbc	**PKiKP**	**22 03 26.7**	**-1.3**
	comp=Z,0.6nm,0.7s,baz=248,slow=0.4,SNR=4.3						

*IDC **03** 22:02:06.1±4.5, 37.°23N×71.°93E, h93km±29km, mb3.4/4, mb1 3.5/9, mb1mx3.1/41, mbtmp3.8/9, Error ellipse: s-maj=58.2km s-min=23.9km az=149.0*
*NEIC **03** 22:02:10.0±2.9, 37.°59N±0.°03×71.°77E±0.°07, h136km±7km, mb4.3/15, Error ellipse: s-maj=8.9km s-min=3.6km az=67.0*
*NNC **03** 22:02:14.2±4.9, 37.°87N×71.°69E, h113km±96km, mb3.1, mpv3.6, Error ellipse: s-maj=41.7km s-min=27.8km az=179.0*

ISC 03 22:02:09.2±0.6, 37.°58N±0.°05×71.°81E±0.°05, h130km, n68, σ2°01/88, mb4.0/11, 6C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**1.84**	**321**		**Pn**	**22 02 42.6**	**+1.2**
GAR				Sn	**Sn**	**22 03 06.5**	**+0.5**
CHGR	**Chuyangaron**	**2.35**	**298**		**Pn**	**22 02 48.4**	**+0.8**
CHGR				Sn	**Sn**	**22 03 17.1**	**0.0**
BTK	**Batken**	**2.59**	**343**	Pn	**Pn**	**22 02 53.4**	**+2.7**
FRG	**Fergana**	**3.15**	**360**	*eP*	**Pn**	**22 02 55.9**	**-1.9**
FRG				*eS*	**Sn**	**22 03 28.1**	**-7.2**
KBL	**Kabul**	**3.77**	**217**		**Pn**	**22 03 07.9**	**+1.7**
ARSB	**Arslanbob**	**3.85**	**13**		**Pn**	**22 03 07.8**	**+0.7**
NIL	**Nilore**	**4.09**	**163**		**Pn**	**22 03 11.9**	**+1.6**
TAS	**Tashkent**	**4.21**	**333**	S	**Sn**	**22 04 02.8**	**+2.4**
CHRV	**Charvak**	**4.30**	**341**	*eP*	**Pn**	**22 03 14.7**	**+1.7**
CHRV				S	**Sn**	**22 04 03.4**	**+0.9**
AML	**Almayashu**	**4.77**	**17**	P	**Pn**	**22 03 20.9**	**+1.3**
	SNR=21						
NRN	**Naryn**	**5.03**	**39**		**Pn**	**22 03 22.8**	**-0.1**
UCH	**Uchtor**	**5.09**	**23**	P	**Pn**	**22 03 25.2**	**+1.4**
	SNR=8.0						
EKS2	**Erkin-Say**	**5.29**	**16**	P	**Pn**	**22 03 28.3**	**+2.0**
	SNR=14						
AAK	**Ala-Archa**	**5.45**	**21**	P	**Pn**	**22 03 30.3**	**+1.9**
	3.1nm,0.3s,baz=175,slow=6.0,SNR=80						
AAK				S	**Sn**	**22 04 29.5**	**-0.8**
	2.8nm,0.3s,baz=114,slow=20,SNR=14						
AAK	**Ala-Archa**	**5.45**	**21**	P	**Pn**	**22 03 30.4**	**+1.9**
	SNR=12						
AAK	**Ala-Archa**	**5.45**	**21**		**Pn**	**22 03 29.9**	**+1.4**
AAK					**Sn**	**22 04 29.8**	**-0.5**
AAK	**Ala-Archa**	**5.45**	**21**	⇑P	**Pn**	**22 03 30.1**	**+1.6**
	4.4nm,0.4s						
AAK				⇑P	**Pn**	**22 03 30.1**	**+1.6**
	4.4nm,0.4s						
AAK				⇓S	**Sn**	**22 04 29.5**	**-0.8**
	12nm,0.5s						
AAK				⇓S	**Sn**	**22 04 29.5**	**-0.8**
	12nm,0.5s						
KK31	**Karatay Array**	**5.60**	**350**		**Pn**	**22 03 31.6**	**+1.3**
KK31				Sn	**Sn**	**22 04 32.7**	**-1.0**
KK31	**Karatay Array**	**5.60**	**350**	P	**Pn**	**22 03 31.8**	**+1.5**
	2.4nm,0.4s,baz=169,slow=12,SNR=44						
KK31				P	**Pn**	**22 03 31.8**	**+1.5**
	2.4nm,0.4s,baz=169,slow=12,SNR=44						
KK31				⇓S	**Sn**	**22 04 32.1**	**-1.6**
	7.1nm,0.2s,baz=174,slow=23,SNR=17						
KK31				⇓S	**Sn**	**22 04 32.1**	**-1.6**
	7.1nm,0.2s,baz=174,slow=23,SNR=17						
KKAR	**Karatay Array**	**5.60**	**350**		**Pn**	**22 03 32.0**	**+1.6**
KKAR	**Karatay Array**	**5.60**	**350**	Pn	**Pn**	**22 03 31.5**	**+1.2**
KKAR				Sn	**Sn**	**22 04 33.4**	**-0.3**
CHMS	**Chumysh**	**5.86**	**22**	P	**Pn**	**22 03 35.5**	**+1.7**
	SNR=9.0						
TKM2	**Tokmak 2**	**6.07**	**27**	P	**Pn**	**22 03 38.6**	**+1.7**
	SNR=8.8						
TKM2	**Tokmak 2**	**6.07**	**27**	⇓P	**Pn**	**22 03 38.5**	**+1.7**
	4.2nm,0.6s						
TKM2				⇓P	**Pn**	**22 03 38.5**	**+1.7**
	4.2nm,0.6s						
TKM2				⇑S	**Sn**	**22 04 44.2**	**-1.0**
	2.7nm,0.5s						
TKM2				⇑S	**Sn**	**22 04 44.2**	**-1.0**
	2.7nm,0.5s						
TARG	**Taragay, Kyrgy**	**6.21**	**46**	Pn	**Pn**	**22 03 39.0**	**+0.1**
PRZ	**Przheval'sk**	**7.04**	**44**	Pn	**Pn**	**22 03 49.9**	**0.0**
HRA	**Herat**	**8.38**	**251**	Pn	**Pn**	**22 04 09.4**	**+1.4**
GEYT	**Alibeck**	**10.85**	**276**	P	**Pn**	**22 04 39.3**	**-1.6**
	0.3nm,0.3s,baz=103,slow=12,SNR=5.8						
GEYT				S	**Sn**	**22 06 35.4**	**-5.0**
	0.2nm,0.3s,baz=40,slow=25,SNR=2.4						
GYA0B	**ALIBECK ARRAY**	**10.85**	**276**	Pn	**Pn**	**22 04 39.7**	**-1.2**
MAKZ	**Makanchi**	**11.90**	**36**	Pn	**Pn**	**22 04 54.6**	**-0.1**
MK31	**Makanchi Array**	**12.04**	**37**	Pn	**Pn**	**22 04 57.3**	**+0.8**
MKAR	**Makanchi Array**	**12.04**	**37**	P	**Pn**	**22 04 57.0**	**+0.5**
	0.1nm,0.3s,baz=209,slow=15,SNR=5.5						
KURBB	**Kurchatov Arra**	**13.89**	**18**	P	**Pn**	**22 05 18.6**	**-1.8**
	0.0nm,0.3s,baz=209,slow=9.4,SNR=2.8						
KURK	**Kurchatov**	**14.00**	**18**		**Pn**	**22 05 20.6**	**-1.2**
AB31	**Akbulak array**	**14.49**	**327**	⇑P	**Pn**	**22 05 27.8**	**-0.1**
	0.6nm,0.5s,baz=140,slow=14,SNR=21						
AB31				⇑P	**Pn**	**22 05 27.8**	**-0.1**
	0.6nm,0.5s,baz=140,slow=14,SNR=21						
ABKAR	**Akbulak array**	**14.49**	**327**	P	**Pn**	**22 05 27.6**	**-0.3**
ABKAR	**Akbulak array**	**14.49**	**327**	Pn	**Pn**	**22 05 28.2**	**+0.3**
BVAR	**Borovoye Array**	**15.48**	**357**	P	**Pn**	**22 05 40.3**	**0.0**
	0.1nm,0.3s,baz=162,slow=12,SNR=5.0						
BRVK	**Borovoye**	**15.51**	**357**		**Pn**	**22 05 41.7**	**+0.9**
AKTO	**Aktyubinsk**	**16.20**	**327**	P	**P**	**22 05 52.4**	**+2.5**
	0.9nm,0.3s,baz=140,slow=8.7,SNR=16						
AKTO				S	**Sn**	**22 08 41.4**	**-7.7**
	0.1nm,0.3s,baz=39,slow=14,SNR=3.2						
AKTO	**Aktyubinsk**	**16.20**	**327**	⇓P	**P**	**22 05 53.6**	**+3.7**
	3.5nm,0.6s						
AKTO				⇓P	**P**	**22 05 53.6**	**+3.7**
	3.5nm,0.6s						
ZAA0	**Zalesovo Array**	**18.66**	**25**	P	**P**	**22 06 18.3**	**+1.4**
ZALV	**Zalesovo Beam**	**18.66**	**25**	P	**Pn**	**22 06 18.7**	**0.0**
	0.2nm,0.3s,baz=216,slow=11,SNR=8.1						
ZALV	**Zalesovo Beam**	**18.66**	**25**	P	**P**	**22 06 17.3**	**+0.4**
SOCY	**Socotra**	**29.90**	**217**	P	**P**	**22 08 03.4**	**-1.5**
SOCY				IAmb	IAmb	22 08 13.3	
	comp=Z,15nm,1.0s						
BJT	**Baijiatuao**	**34.39**	**72**	P	**P**	**22 08 43.9**	**+0.1**
BJT				IAmb	IAmb	22 08 44.8	
	comp=Z,3.2nm,0.4s						
BURAR	**Bucovina Array**	**35.26**	**302**	P	**P**	**22 08 52.4**	**+1.1**
ALN	**Alexandroupoli**	**35.29**	**290**	P	**P**	**22 08 50.6**	**-0.9**
ALN				IAmb	IAmb	22 08 59.8	
	comp=Z,1.2nm,1.0s						
FIA1	**FINESS Array S**	**36.96**	**325**	P	**P**	**22 09 06.7**	**+1.3**
FIA1				IAmb	IAmb	22 09 09.0	
	comp=Z,13nm,1.1s						
FINES	**FINESS Array B**	**36.96**	**325**	P	**P**	**22 09 08.9**	**+3.5**
	comp=Z,1.0nm,0.4s,baz=125,slow=12,SNR=8.2						
FINES	**FINESS Array B**	**36.96**	**325**	P	**P**	**22 09 08.3**	**+2.9**
HKPS	**Hong Kong Po S**	**39.39**	**101**	P	**P**	**22 09 25.7**	**-0.6**
ARCES	**ARCESS Array B**	**40.40**	**337**	P	**P**	**22 09 37.1**	**+3.1**
	comp=Z,1.4nm,0.8s,baz=115,slow=8.6,SNR=6.2						
ARCES	**ARCESS Array B**	**40.40**	**337**	P	**P**	**22 09 33.7**	**-0.3**
NB201	**NORSAR Array S**	**43.88**	**322**	P	**P**	**22 10 03.2**	**+0.8**
MSEY	**Mahe Island**	**44.70**	**203**	P	**P**	**22 10 09.4**	**0.0**
OSSC	**Osservatorio P**	**45.51**	**297**	P	**P**	**22 10 12.9**	**-2.7**
OSSC				IAmb	IAmb	22 10 15.8	
	comp=Z,2.2nm,0.7s						
ECH	**Echery**	**47.23**	**305**	P	**P**	**22 10 29.2**	**+0.3**
KBS	**Kingsbay**	**47.70**	**347**	P	**P**	**22 10 29.6**	**-2.5**
TORD	**Torodi Ar. Bea**	**66.39**	**269**	P	**P**	**22 12 46.2**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=49,slow=4.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	**66.39**	**269**	IAmb	IAmb	22 12 50.9	
	comp=Z,0.7nm,1.0s						
TOLK	**Toolik Lake Re**	**69.71**	**15**	P	**P**	**22 13 05.2**	**+0.7**
IMAR	**Indian Mountai**	**70.95**	**18**	P	**P**	**22 13 13.8**	**+1.9**
BARN	**Barnard Glacie**	**77.98**	**16**	P	**P**	**22 13 54.4**	**+1.5**
BARN				IAmb	IAmb	22 14 03.2	
	comp=Z,3.5nm,1.1s						
YKA	**Yellowknife Ar**	**80.14**	**3**	P	**P**	**22 14 07.3**	**+2.9**
	comp=Z,0.2nm,0.5s,baz=352,slow=5.6,SNR=6.5						
YKA	**Yellowknife Ar**	**80.14**	**3**	P	**P**	**22 14 05.8**	**+1.4**
I63A	**Otisfield**	**91.89**	**334**	P	**P**	**22 15 02.7**	**0.0**
BBOO	**Buckleboo**	**92.11**	**131**	P	**P**	**22 15 01.3**	**-2.4**
BBOO				IAmb	IAmb	22 15 03.5	
	comp=Z,5.2nm,0.9s						

*UCR **03** 22:39:56.7±5.3, 12.°28N×89.°60W, h16km±245km, ML3.4, mb4.1(NEIC)*
*GCG **03** 22:39:56.7±0.3, 13.°53N×89.°04W, h196km±10km, MD4.1*
*SNET **03** 22:39:58.6±0.7, 13.°79N×89.°12W, h183km±5km, ML3.6*
*IDC **03** 22:40:01.0±5.7, 14.°34N×88.°75W, h172km±29km, mb3.3/5, mb1 3.5/5, mb1mx3.1/39, mbtmp3.8/5, MS3.5/1, Ms1 3.5/1, ms1mx2.5/26, Error ellipse: s-maj=125.4km s-min=46.7km az=13.0*
*NEIC **03** 22:40:02.0±1.5, 14.°4N±0.°2×88.°9W±0.°1, h180km±12km, mb4.1/6, Error ellipse: s-maj=33.6km s-min=9.7km az=207.0*

ISC 03 22:39:59.6±0.8, 14.°0N±0.°1×88.°99W±0.°07, h184km±7km, n49, σ1°21/53, mb3.8/6, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LBRS	**Las Brisas**	**0.23**	**193**	*eP*	**Pn**	**22 40 23.5**	**-0.6**
LFU	**La Fuente**	**0.24**	**209**	*eP*	**Pn**	**22 40 23.6**	**-0.6**
LFU	**La Fuente**	**0.24**	**209**	*eP*	**Pn**	**22 40 23.6**	**-0.6**
PAVA	**Las Pavas**	**0.25**	**168**	*eP*	**Pn**	**22 40 23.6**	**-0.6**
PAVA	**Las Pavas**	**0.25**	**168**	*eP*	**Pn**	**22 40 23.6**	**-0.6**
VICT	**Victoria**	**0.34**	**90**	*eP*	**Pn**	**22 40 24.1**	**-0.3**
VICT	**Victoria**	**0.34**	**90**	*eP*	**Pn**	**22 40 24.1**	**-0.3**
LFRS	**El Faro**	**0.34**	**192**	*eP*	**Pn**	**22 40 23.6**	**-0.9**
LFRS				*eS*	**Sn**	**22 40 42.3**	**-1.3**
COEG	**Centro de Oper**	**0.36**	**163**	*eP*	**Pn**	**22 40 23.6**	**-0.8**
COEG				IAML		22 40 24.2	
	comp=Z,460nm,0.3s						
BOQS	**Boqueron**	**0.36**	**231**	*eP*	**Pn**	**22 40 23.7**	**-0.9**
MTO3	**Montecristo**	**0.56**	**320**	*eP*	**Pn**	**22 40 25.4**	**+0.1**
MTO3	**Montecristo**	**0.56**	**320**	*eP*	**Pn**	**22 40 25.4**	**+0.1**
SNJE	**San Jose**	**0.60**	**261**	*eP*	**Pn**	**22 40 24.5**	**-1.0**
SNJE	**San Jose**	**0.60**	**261**	*eP*	**Pn**	**22 40 24.5**	**-1.0**
SBLS	**San Blas**	**0.63**	**259**	*eP*	**Pn**	**22 40 24.5**	**-1.2**
SBLS	**San Blas**	**0.63**	**259**	*eP*	**Pn**	**22 40 24.5**	**-1.2**
CEVE	**Cerro Verde**	**0.63**	**258**	*eP*	**Pn**	**22 40 24.8**	**-0.9**
CEVE				IAML		22 40 25.3	
	comp=Z,830nm,0.3s						
CEVE	**Cerro Verde**	**0.63**	**258**	*eP*	**Pn**	**22 40 24.8**	**-0.9**
CEVE				IAML		22 40 25.3	
	comp=Z,830nm,0.3s						
COEB	**Comit de Eme**	**0.64**	**136**	*eP*	**Pn**	**22 40 25.1**	**-0.5**
TECA	**Tecapa**	**0.66**	**134**	*eP*	**Pn**	**22 40 25.5**	**-0.4**
TECA	**Tecapa**	**0.66**	**134**	*eP*	**Pn**	**22 40 25.5**	**-0.4**
PACA	**Pacayal**	**0.81**	**127**	*eP*	**Pn**	**22 40 25.9**	**-0.7**
PACA				*eS*	**Sn**	**22 40 48.1**	**+0.7**
PACA	**Pacayal**	**0.81**	**127**	*eP*	**Pn**	**22 40 25.9**	**-0.7**
PACA				*eS*	**Sn**	**22 40 48.1**	**+0.7**
FAME	**Alcalda de S**	**1.00**	**263**	*eP*	**Pn**	**22 40 26.1**	**-1.6**
LCND	**La Caada**	**1.25**	**121**	*eP*	**Pn**	**22 40 28.9**	**-0.8**
LCND	**La Caada**	**1.25**	**121**	*eP*	**Pn**	**22 40 28.9**	**-0.8**
CNCH	**Conchagua**	**1.31**	**121**	*eP*	**Pn**	**22 40 30.3**	**0.0**
CNCH	**Conchagua**	**1.31**	**121**	*eP*	**Pn**	**22 40 30.3**	**0.0**
IXG	**Ixpaco**	**1.42**	**279**	*eP*	**Pn**	**22 40 31.2**	**-0.1**
TGUH	**Tegucigalpa,Un**	**1.67**	**87**		**Pn**	**22 40 35.0**	**+1.4**
APG	**El Apazote**	**1.76**	**306**	P	**Pn**	**22 40 35.4**	**+0.7**
	comp=Z,3.9nm,0.3s,baz=77,slow=13,SNR=4.8						
APG				S	**Sn**	**22 41 02.2**	**+0.3**
	comp=Z,4.4nm,0.3s,baz=85,slow=20,SNR=12						
FUG	**Fuego 3**	**1.86**	**285**	*eP*	**Pn**	**22 40 35.9**	**+0.3**
FUG				*eS*	**Sn**	**22 41 06.5**	**+3.0**
STG3	**Santiaguito 3,**	**2.61**	**287**	*eP*	**Pn**	**22 40 44.5**	**+0.5**
STG3				*eS*	**Sn**	**22 41 20.2**	**+1.8**
OTAV	**Otavalo**	**17.17**	**142**	P	**Pn**	**22 43 54.1**	**+4.8**
OTAV				IAmb	IAmb	22 43 55.0	
	comp=Z,3.8nm,0.5s						
TXAR	**Lajitas Array**	**20.46**	**321**	P	**P**	**22 44 24.8**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=134,slow=11,SNR=14						
TXAR	**Lajitas Array**	**20.46**	**321**	P	**P**	**22 44 24.6**	**+1.4**
TX31	**Lajitas Ar. Si**	**20.46**	**321**	P	**P**	**22 44 23.2**	**0.0**
TX32	**Lajitas Array**	**20.46**	**321**	P	**P**	**22 44 24.1**	**+0.9**
WMOK	**Wichita Mounta**	**22.50**	**339**	P	**P**	**22 44 42.3**	**-1.6**

CASO	**Castillo**	**1.07**	**326**	⇑*iP*	**Pn**	**22 53 43.3**	**-0.4**
ARE1	**Arenal 1**	**1.08**	**327**	*eP*	**Pn**	**22 53 43.7**	**-0.2**
CEDE	**Laguna Cedeo**	**1.10**	**329**	*eP*	**Pn**	**22 53 44.0**	**-0.2**
CEDE				*i* S	**Sb**	**22 53 59.2**	**+0.1**
JTS	**Las Juntas de**	**1.10**	**312**	*eP*	**Pn**	**22 53 43.5**	**-0.7**
JTS	**Las Juntas de**	**1.10**	**312**	⇑*iP*	**Pn**	**22 53 43.5**	**-0.7**
JTS				*i* S	**Sn**	**22 53 57.7**	**-0.7**
CUI	**Cuipilapa**	**1.51**	**317**	*eP*	**Pn**	**22 53 50.0**	**+0.3**
CUI				*i* S	**Sb**	**22 54 10.3**	**-0.5**
COLC	**Colonia**	**1.54**	**317**	*iP*	**Pn**	**22 53 50.4**	**+0.2**
HORNC	**Hornillas**	**1.56**	**318**	*iP*	**Pn**	**22 53 50.0**	**-0.5**
GUAB	**Guayabo de Bag**	**1.59**	**317**	*iP*	**Pn**	**22 53 51.2**	**+0.3**
BRU2	**Volcan**	**1.60**	**118**	*eP*	**Pn**	**22 53 51.2**	**0.0**
BRU2	**Volcan** baz=281,slow=6.9	**1.60**	**118**	⇑*iP*	**Pn**	**22 53 51.1**	**0.0**
BRU2				*i* S	**Sn**	**22 54 12.4**	**+1.5**
CNI2	**El Empalme, Bo**	**1.64**	**94**	*eP*	**Pn**	**22 53 49.9**	**-1.6**
GPS3	**Bodega del ICE**	**1.71**	**315**	*iP*	**Pn**	**22 53 53.7**	**+1.1**
BUEV	**Buena Vista**	**1.77**	**315**	*iP*	**Pn**	**22 53 54.2**	**+0.8**
BCO2	**Palmira**	**1.78**	**117**	⇓*iP*	**Pn**	**22 53 53.6**	**0.0**
BCO2				*eS*	**Sn**	**22 54 13.0**	**-2.3**
GB1A	**Borinquen Arri**	**1.78**	**315**	*iP*	**Pn**	**22 53 54.0**	**+0.4**
DVD	**David**	**1.99**	**123**	*eP*	**Pn**	**22 53 56.8**	**+0.5**
DVD				*eS*	**Sn**	**22 54 19.5**	**-0.8**
LOMA3	**Las Lomas, Chi**	**2.04**	**123**	*eP*	**Pn**	**22 53 57.3**	**+0.2**
CHGR2	**Aguacate**	**2.05**	**107**	*eP*	**Pn**	**22 53 54.9**	**-2.3**
CHIR3	**Chiriqui UPA,**	**2.11**	**123**	*eP*	**Pn**	**22 53 58.5**	**+0.5**
CHIR3				*i* S	**Sb**	**22 54 27.8**	**-0.3**
ACON	**Acoyapa**	**2.62**	**337**	*eP*	**Pn**	**22 54 04.6**	**-0.5**
GMAL	**Guarumal, Vera**	**3.36**	**122**	*eP*	**Pn**	**22 54 15.3**	**0.0**
GMAL				*i* S	**Sn**	**22 54 55.5**	**+1.3**
CACAO	**El Cacao, Vera**	**3.90**	**124**	*eP*	**Pn**	**22 54 20.5**	**-2.1**

*THE **03** 22:59:49.6,34°.95N×26°.24E, h6km±2km, ML2.8/5, Error ellipse: s-maj=2.5km s-min=0.7km az=351.0*
*ATH **03** 22:59:49.6,34°.97N×26°.26E, h15km±1km, ML2.8/3, Error ellipse: s-maj=4.5km s-min=1.9km az=337.0*
*ISK **03** 22:59:50.9,35°.23N×26°.19E, h3km, ML2.8/8*

ISC 03 22:59:48.8±1.3, 34°.94N±0°.06×26°.24E±0°.03, h13km±7km, n41, σ1°19/54, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.17**	**353**	P	**Pb**	**22 59 53.4**	**-0.5**
ZKR				S	**Sg**	**22 59 56.2**	**+0.5**
	5μm,0.2s						
ZKR	**Zakros**	**0.17**	**353**	P	**Pb**	**22 59 53.4**	**-0.5**
ZKR				S	**Sg**	**22 59 56.2**	**+0.5**
ZKR				AML	AML	22 59 56.5	
	comp=N,8912μm,0.2s						
ZKR				AML	AML	22 59 56.7	
	comp=E,11135μm,0.2s						
ZKR	**Zakros**	**0.17**	**353**	PG	**Pb**	**22 59 53.5**	**-0.5**
ZKR				SG	**Sg**	**22 59 56.4**	**+0.7**
STIA	**Sitia Lasithi**	**0.29**	**335**	P	**Pb**	**22 59 55.5**	**-0.3**
STIA				S	**Sb**	**23 00 00.0**	**-0.6**
FRMA	**Ierapetra Chan**	**0.42**	**280**	P	**Pg**	**22 59 56.3**	**-0.9**
FRMA				S	**Sg**	**23 00 02.1**	**-0.8**
	comp=E,2μm,0.1s						
NPS	**Neapolis**	**0.61**	**302**	P	**Pb**	**23 00 01.4**	**+0.1**
NPS				S	**Sb**	**23 00 10.6**	**+0.8**
	comp=E,1μm,0.2s						
NPS	**Neapolis**	**0.61**	**302**	P	**Pb**	**23 00 01.4**	**+0.1**
NPS				S	**Sb**	**23 00 10.4**	**+0.6**
NPS				AML	AML	23 00 12.4	
	comp=N,2101μm,0.2s						
NPS				AML	AML	23 00 13.4	
	comp=E,2742μm,0.3s						
LAST	**Lasithi**	**0.66**	**290**	P	**Pb**	**23 00 02.1**	**-0.2**
LAST				S	**Sb**	**23 00 12.8**	**+1.4**
	comp=E,498nm,0.4s						
LAST	**Lasithi**	**0.66**	**290**	P	**Pb**	**23 00 02.1**	**-0.2**
LAST				S	**Sb**	**23 00 12.5**	**+1.1**
LAST				AML	AML	23 00 14.0	
	comp=N,1303μm,0.3s						
LAST				AML	AML	23 00 17.1	
	comp=E,574μm,0.4s						
KARP	**Karpathos**	**0.97**	**51**	P	**Pb**	**23 00 07.6**	**+0.2**
KARP				S	**Sn**	**23 00 22.5**	**+0.8**
KARP	**Karpathos**	**0.97**	**51**	P	**Pb**	**23 00 07.7**	**+0.2**
KARP	**Karpathos**	**0.97**	**51**	PG	**Pb**	**23 00 07.7**	**+0.2**
HRKL	**Herakleio**	**1.00**	**292**	PG	**Pn**	**23 00 09.1**	**+0.5**
KSTL	**Kastelli Herak**	**1.03**	**291**	P	**Pb**	**23 00 04.5**	**-3.9**
KSTL				S	**Sb**	**23 00 16.4**	**-5.4**
IDI	**Anoyia**	**1.16**	**288**	P	**Pb**	**23 00 10.9**	**+0.1**
IDI	**Anoyia**	**1.16**	**288**	PG	**Pg**	**23 00 11.4**	**+0.2**
IDI				SG	**Sn**	**23 00 27.3**	**+0.7**
SIVA	**Sivas**	**1.18**	**274**	P	**Pg**	**23 00 11.5**	**0.0**
SIVA				S	**Sn**	**23 00 28.5**	**+1.6**
	comp=E,378nm,0.4s						
SIVA	**Sivas**	**1.18**	**274**	P	**Pg**	**23 00 11.6**	**+0.2**
SANT	**Santorini**	**1.56**	**336**	P	**Pb**	**23 00 18.0**	**+0.3**
SANT	**Santorini**	**1.56**	**336**	PN	**Pn**	**23 00 16.5**	**+0.2**
THR6	**Thira Island,**	**1.57**	**334**	P	**Pg**	**23 00 19.3**	**+0.3**
THR3	**Thira Island,**	**1.62**	**335**	P	**Pg**	**23 00 20.0**	**+0.2**
THT2	**Imerovigli**	**1.63**	**336**	PN	**Pn**	**23 00 17.8**	**+0.5**
THR5	**Thira Island,**	**1.64**	**334**	P	**Pg**	**23 00 19.0**	**+0.1**
SAP3	**Santorini-Thir**	**1.66**	**334**	P	**Pg**	**23 00 20.5**	**-0.2**
VAM	**Vamos**	**1.74**	**286**	P	**Pg**	**23 00 21.9**	**-0.2**
GVDS	**Gavdos**	**1.77**	**267**	PN	**Pg**	**23 00 23.8**	**+1.0**
GVD	**Gavdhos**	**1.77**	**267**	PN	**Pg**	**23 00 23.3**	**+0.5**
KOSK	**Kos Island**	**1.90**	**18**	PN	**Pn**	**23 00 21.9**	**+1.0**
AMGA	**Amorgos Island**	**1.91**	**352**	P	**Pb**	**23 00 22.9**	**-0.6**
IMMV	**Iera Moni Meta**	**1.92**	**286**	P	**Pg**	**23 00 25.1**	**-0.6**
IMMV	**Iera Moni Meta**	**1.92**	**286**	PN	**Pb**	**23 00 24.4**	**+0.7**
IOSP	**Ios island**	**1.94**	**337**	P	**Pb**	**23 00 22.9**	**-1.1**
ARG	**Arkhangelos**	**2.00**	**50**	PN	**Pb**	**23 00 24.6**	**-0.3**
DAT	**Datca**	**2.09**	**31**	PN	**Pb**	**23 00 25.4**	**-1.2**
RODP	**Rodopos**	**2.12**	**288**	P	**Pn**	**23 00 23.6**	**-0.4**
RODP	**Rodopos**	**2.12**	**288**	PN	**Pb**	**23 00 27.3**	**+0.1**
APE	**Apeiranthos**	**2.20**	**345**	P	**Pb**	**23 00 26.9**	**-1.6**
APE	**Apeiranthos**	**2.20**	**345**	PN	**Pn**	**23 00 25.9**	**+0.8**
TURN	**Turunc**	**2.72**	**44**	PN	**Pn**	**23 00 30.1**	**-2.0**
KTHR	**Kythira**	**2.95**	**297**	P	**Pn**	**23 00 35.5**	**+0.2**

*IDC **03** 23:24:19.1±1.1, 26°.66S×115°.00W, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.9/34, mbtmp3.8/6, MS4.0/8, Ms1 4.0/8, ms1mx3.7/20, Error ellipse: s-maj=51.4km s-min=30.4km az=68.0*
*GCMT **03** 23:24:25.0±0.4, 26°.87S±0°.03×114°.87W±0°.02, h20km±2km, MW4.8/69, Moment Tensor Solution. s20,c21; s69,c87; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.29±. 12; Mθθ 1.53±. 11; Mϕϕ -1.24±.09; Mrθ 0.34±. 19; Mϕθ -1.48±.09; Mϕr 0.15±. 19; Best double couple: M0 2.06200×10^16 NP1: ϕs 249.00000°, δ87.00000°, λ-169.00000°. NP2: ϕs 158.00000°, δ79.00000°, λ-3.00000°. Principal axes: T 2.1970, Plg6.0000°, Azm23.0000°; N -0.2730, Plg79.0000°, Azm262.0000°; P -1.9260, Plg9.0000°, Azm114.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 03 23:24:19.6±1.4, 26°.8S±0°.3×115°.3W±0°.4, h10km, n27, σ0°.82/11, mb3.9/6, MS4.1/10, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAOE	**Nuku Hiva Isla**	**29.53**	**303**	*e*LR	LR	23 38 11.9	
	comp=Z,810nm,24.9s						
TBI	**Tubuai**	**31.07**	**269**	*e*T	T	00 03 35.4	
	17nm,0.3s						
PPT2	**Papeete2**	**32.94**	**279**	*e*LR	LR	23 39 42.9	
	comp=Z,509nm,25.0s,baz=111						
PPT	**Papeete**	**32.95**	**279**	LR	LR	23 41 00.2	
	comp=Z,137nm,18.0s,baz=106,slow=30						
PLCA	**Paso Flores**	**39.30**	**122**	P	**P**	**23 31 49.1**	**+0.3**
	5.5nm,1.0s,baz=301,slow=13,SNR=4.1						
PLCA				LR	LR	23 43 46.4	
	comp=Z,170nm,21.8s,baz=284,slow=30						
LPAZ	**La Paz**	**44.90**	**86**	LR	LR	23 46 51.8	
	comp=Z,76nm,20.5s,baz=2.0,slow=30						
H06S1	**SOCORRO T** SNR=8.7	**45.48**	**6**	T	T	00 21 11.7	
ROSC	**El Rosal**	**50.62**	**58**	LR	LR	23 50 51.2	
	comp=Z,198nm,18.4s,baz=198,slow=32						
CPUP	**Villa Florida**	**51.45**	**103**	LR	LR	23 50 43.0	
	comp=Z,172nm,21.8s,baz=256,slow=31						
TXAR	**Lajitas Array**	**56.94**	**12**	P	**P**	**23 34 05.2**	**0.0**
	0.5nm,0.9s,baz=186,slow=8.2,SNR=2.3						
TXAR				LR	LR	23 53 58.7	
	comp=Z,87nm,18.2s,baz=0.0,slow=31						
VNDA	**Vanda**	**62.47**	**194**	LR	LR	23 55 13.1	
	comp=Z,145nm,18.2s,baz=99,slow=30						
NVAR	**Mina Array Bea**	**64.97**	**357**	P	**P**	**23 35 01.6**	**+1.9**
	1.3nm,1.0s,baz=191,slow=8.3,SNR=6.1						
PDAR	**Pinedale Array**	**69.44**	**5**	P	**P**	**23 35 27.8**	**-0.3**
	0.2nm,0.6s,baz=178,slow=7.1,SNR=2.2						
ULM	**Lac du Bonnet**	**78.64**	**13**	P	**P**	**23 36 20.9**	**-0.6**
	2.5nm,0.8s,baz=198,slow=7.3,SNR=3.0						
MAW	**Mawson**	**85.86**	**179**	LR	LR	00 11 07.5	
	comp=Z,146nm,19.8s,baz=167,slow=33						
H11S2	**WAKE ISLAND Hy**	**87.99**	**292**	T	T	01 15 23.0	
	baz=118,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**88.00**	**292**	T	T	01 15 15.8	
	baz=118,slow=75,SNR=21						
H11S3	**WAKE ISLAND Hy**	**88.00**	**292**	T	T	01 15 24.6	
	baz=118,slow=75,SNR=9.6						
H11N3	**WAKE ISLAND Hy**	**88.41**	**293**	T	T	01 15 35.8	
	baz=115,slow=78,SNR=4.9						
H11N1	**WAKE ISLAND Hy**	**88.42**	**293**	T	T	01 15 39.9	
	baz=115,slow=78,SNR=7.3						
H11N2	**WAKE ISLAND Hy**	**88.43**	**293**	T	T	01 15 22.0	
	baz=115,slow=78,SNR=6.9						
YKA	**Yellowknife Ar**	**89.00**	**0**	P	**P**	**23 37 13.7**	**-0.4**
	0.2nm,0.5s,baz=172,slow=5.2,SNR=4.6						
CMAR	**Chiang Mai Arr**	**147.39**	**262**	PKPbc	**PKiKP**	**23 44 07.0**	**+0.4**
	0.4nm,0.3s,baz=125,slow=1.0,SNR=3.4						
ZALV	**Zalesovo Beam**	**149.09**	**337**	PKPbc	**PKiKP**	**23 44 08.1**	**-0.9**
	3.3nm,0.6s,baz=14,slow=3.7,SNR=6.3						
BRTR	**Keskin Array B**	**151.18**	**56**	PKPbc	**PKPbc**	**23 44 13.3**	**-0.1**
	1.8nm,1.1s,baz=238,slow=1.4,SNR=5.7						
BVAR	**Borovoye Array**	**153.48**	**352**	PKPbc	**PKiKP**	**23 44 18.0**	**-0.1**
	0.4nm,0.5s,baz=17,slow=1.5,SNR=5.4						
KURBB	**Kurchatov Arra**	**153.98**	**340**	PKPbc	**PKiKP**	**23 44 18.6**	**-0.6**
	0.7nm,0.7s,baz=24,slow=2.0,SNR=5.0						

IDC 03 23:28:54.6±3.8, 6°.49S×155°.27E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.6/38, mbtmp3.8/5, ML4.2/1, Error ellipse: s-maj=83.5km s-min=36.8km az=94.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.88**	**304**	Pn	Pn	23 29 57.1	+1.4
	15nm,0.3s,baz=59,slow=5.9,SNR=2.3						
KRVT				Sn	Sn	23 30 36.4	-5.7
	20nm,0.3s,baz=180,slow=19,SNR=2.0						
WRA	**Warramunga Arr**	**24.33**	**235**	P	P	23 34 14.2	-0.2
	1.4nm,0.7s,baz=58,slow=9.6,SNR=6.1						
ASAR	**Alice Springs**	**26.71**	**228**	P	P	23 34 36.1	+0.2
	0.5nm,0.5s,baz=57,slow=8.8,SNR=2.6						
H11S3	**WAKE ISLAND Hy**	**27.26**	**24**	T	T	00 02 58.5	
	baz=205,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.26**	**24**	T	T	00 02 48.4	
	baz=205,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.28**	**24**	T	T	00 02 59.0	
	baz=205						
CMAR	**Chiang Mai Arr**	**60.81**	**295**	P	P	23 39 09.1	0.0
	1.2nm,0.7s,baz=119,slow=5.3,SNR=8.2						
MKAR	**Makanchi Array**	**83.20**	**319**	P	P	23 41 22.5	-0.4
	0.4nm,0.8s,baz=100,slow=5.8,SNR=2.4						

*IDC **03** 23:31:41.9±2.3, 15°.75S×174°.19W, h129km±22km, mb3.9/8, mb1 4.1/9, mb1mx3.7/44, mbtmp4.3/9, MS3.0/2, Ms1 3.0/2, ms1mx2.7/35, Error ellipse: s-maj=35.9km s-min=14.5km az=143.0*
*NEIC **03** 23:31:41.7±2.4, 15°.87S±0°.07×174°.11W±0°.09, h131km±8km, mb4.4/17, Error ellipse: s-maj=12.0km s-min=10.8km az=91.0*

ISC 03 23:31:40.1±0.5, 15°.85S±0°.06×174°.12W±0°.06, h115km, n38, σ1°.46/34, mb4.2/14, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.97**	**50**	P	**Pn**	**23 32 28.2**	**+2.3**
	71nm,0.3s,baz=288,slow=3.2,SNR=36						
AFI				S	**Sn**	**23 33 01.0**	**-0.2**
	288nm,0.3s,baz=280,slow=20,SNR=14						
NIUE	**Niue**	**5.13**	**129**	Pn	**Pn**	**23 32 56.7**	**+2.0**
NIUE				Sn	**Sn**	**23 33 50.4**	**-2.5**
MSVF	**Nonsavu**	**7.73**	**255**	Pn	**Pn**	**23 33 33.6**	**+3.6**
KNTN	**Kanton**	**13.20**	**11**	Pn	**Pn**	**23 34 42.7**	**-0.5**
RAR	**Rarotonga**	**14.61**	**114**	Pn	**Pn**	**23 35 02.7**	**+1.4**
DZM	**Mont Dzumac**	**19.39**	**248**	LR	LR	23 42 17.4	
	comp=Z,34nm,21.4s,baz=52,slow=33						
DZM	**Mont Dzumac**	**19.39**	**248**	P	**P**	**23 35 58.2**	**+1.0**
DZM				IAmb	IAmb	23 36 05.8	
	comp=Z,24nm,1.0s						
URZ	**Urewera**	**23.63**	**197**	P	**P**	**23 36 42.4**	**+1.7**
	comp=Z,3.3nm,0.3s,baz=59,slow=5.9,SNR=4.7						
URZ	**Urewera**	**23.63**	**197**	P	**P**	**23 36 40.6**	**-0.1**
URZ				IAmb	IAmb	23 36 54.0	
	comp=Z,12nm,1.0s						
HIZ	**Hauiti**	**24.58**	**201**	P	**P**	**23 36 49.0**	**-0.3**
HIZ				IAmb	IAmb	23 36 51.7	
	comp=Z,27nm,0.9s						
HNR	**Honiara**	**26.08**	**281**	LR	LR	23 46 58.7	
	comp=Z,48nm,19.5s,baz=252,slow=35						
NNZ	**Nelson**	**27.50**	**201**	P	**P**	**23 37 16.4**	**+0.8**
KWAJ	**Kwajalein Atol**	**30.45**	**322**	P	**P**	**23 37 40.0**	**-2.0**
H11S2	**WAKE ISLAND Hy**	**38.99**	**330**	T	T	00 20 17.1	
	baz=146,slow=76,SNR=7.9						
H11S3	**WAKE ISLAND Hy**	**39.01**	**330**	T	T	00 20 14.9	
	baz=146,slow=76,SNR=7.4						
H11S1	**WAKE ISLAND Hy**	**39.01**	**330**	T	T	00 20 24.3	
	baz=146,slow=76,SNR=4.9						
COEN	**Coen**	**41.26**	**267**	P	**P**	**23 39 15.7**	**+1.4**
COEN				IAmb	IAmb	23 39 17.1	
	comp=Z,4.6nm,1.1s						
TOO	**Toolangi**	**41.65**	**231**	P	**P**	**23 39 15.9**	**-1.4**
TOO				IAmb	IAmb	23 39 20.2	
	comp=Z,12nm,1.0s						
STKA	**Stephens Creek**	**43.21**	**240**	P	**P**	**23 39 29.9**	**0.0**
	comp=Z,2.0nm,0.6s,baz=100,slow=13,SNR=4.7						
WRA	**Warramunga Arr**	**49.07**	**257**	P	**P**	**23 40 15.8**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=95,slow=6.8,SNR=25						
WRA	**Warramunga Arr**	**49.07**	**257**	IAmb	IAmb	23 40 23.3	
	comp=Z,0.2nm,1.1s						
AS31	**Alice Springs**	**49.31**	**252**	P	**P**	**23 40 17.9**	**+0.1**
ASAR	**Alice Springs**	**49.31**	**252**	P	**P**	**23 40 17.1**	**-0.7**
	comp=Z,6.2nm,0.5s,baz=87,slow=7.6,SNR=73						
ASAR	**Alice Springs**	**49.31**	**252**	P	**P**	**23 40 17.0**	**-0.9**
SARN	**Sarigan**	**51.09**	**308**	P	**P**	**23 40 29.8**	**-1.4**
FORT	**Forrest**	**54.60**	**243**	P	**P**	**23 40 54.3**	**-2.6**
SIJI	**Sorong**	**55.85**	**280**	P	**P**	**23 41 06.5**	**+0.4**
	comp=Z,10nm,0.8s,baz=80,slow=4.3,SNR=4.5						
PSA00	**Pilbara Seismi**	**62.41**	**254**	P	**P**	**23 41 51.1**	**-0.2**
PSA00				IAmb	IAmb	23 41 52.0	
	comp=Z,11nm,1.1s						
CASY	**Casey**	**69.72**	**205**	P	**P**	**23 42 34.0**	**-3.1**
CASY				IAmb	IAmb	23 42 34.4	
	comp=Z,5.6nm,0.7s						
QSPA	**South Pole Qui**	**74.20**	**180**	P	**P**	**23 43 04.4**	**+0.2**
WAKR	**Walker**	**74.44**	**42**	P	**P**	**23 43 06.7**	**+0.7**
WAKR				IAmb	IAmb	23 43 06.9	
	comp=Z,3.5nm,1.1s						
X16A	**Lo Mia Camp, P**	**77.73**	**49**	P	**P**	**23 43 25.6**	**+0.9**
TXAR	**Lajitas Array**	**81.44**	**56**	P	**P**	**23 43 45.0**	**+0.2**
	comp=Z,1.3nm,1.0s,baz=217,slow=8.3,SNR=7.9						
ILAR	**Eielson Array**	**83.02**	**11**	P	**P**	**23 43 51.8**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=213,slow=6.5,SNR=10.0						
PDAR	**Pinedale Array**	**83.06**	**42**	P	**P**	**23 43 52.7**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=210,slow=3.2,SNR=15						
ARCES	**ARCESS Array B**	**124.95**	**352**	PKP	**PKPdf**	**23 50 25.4**	**-0.7**
	comp=Z,4.2nm,1.1s,baz=70,slow=1.1,SNR=3.9						
BRTR	**Keskin Array B**	**146.06**	**320**	PKPbc	**PKPbc**	**23 51 06.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=57,slow=2.7,SNR=6.2						
GERES	**GERESS Array B**	**146.47**	**351**	PKPbc	**PKPbc**	**23 51 07.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=39,slow=3.7,SNR=2.7						

WEL 03 23:37:24.5±0.8, 46°.S±6°×16°.6E±°, h12km, M3.8/10, ML3.9/10, MLv3.8/10, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYZ	**Puysegur Point**	**0.46**	**82**	P	Pb	23 37 34.7	+0.2
PYZ				S	Sb	23 37 42.3	+1.0
DCZ	**Deep Cove**	**1.10**	**46**	P	Pb	23 37 43.5	-2.0
DCZ				S	Sg	23 38 00.0	-0.1
WHZ	**Wether Hill Ro**	**1.38**	**76**	P	Pn	23 37 48.9	-0.7
WHZ				S	Sn	23 38 07.2	-0.7
MLZ	**Mavora Lakes**	**1.70**	**60**	P	Pn	23 37 54.8	+0.7
MSZ	**Milford Sound**	**2.06**	**41**	P	Pn	23 37 59.0	+0.1
SYZ	**Scrubby Hill**	**2.18**	**99**	P	Pn	23 38 00.0	-0.5
EAZ	**Earnscleugh**	**2.51**	**68**	P	Pn	23 38 05.8	+0.7
TUZ	**Tuapeka**	**2.53**	**85**	P	Pn	23 38 05.4	+0.2
WKZ	**Wanaka**	**2.53**	**57**	P	Pn	23 38 07.5	+2.0
JCZ	**Jackson Bay**	**2.92**	**43**	P	Pn	23 38 12.0	+1.3
HHSZ	**Highcliff Hill**	**3.21**	**85**	P	Pn	23 38 14.6	-0.1
ODZ	**Otahua Downs**	**3.45**	**71**	P	Pn	23 38 16.8	-1.2
LBZ	**Lake Benmore**	**3.47**	**59**	P	Pn	23 38 18.3	-0.1
FOZ	**Fox Glacier**	**3.82**	**46**	P	Pn	23 38 24.5	+1.5
INZ	**Inchbonnie**	**5.23**	**50**	P	Pn	23 38 43.8	+1.4
LTZ	**Lake Taylor**	**5.65**	**55**	P	Pn	23 38 48.3	+0.1
DSZ	**Denniston Nort**	**6.13**	**45**	P	Pn	23 38 54.3	-0.5
THZ	**Tophouse**	**6.68**	**50**	P	Pn	23 39 03.6	+1.1
QRZ	**Quartz Range**	**7.18**	**43**	P	Pn	23 39 08.9	-0.4
MRZ	**Mangatainoka R**	**8.90**	**55**	P	Pn	23 39 30.8	-2.1
RUGZ	**Raukumara Rang**	**11.96**	**50**	P	Pn	23 40 19.2	+4.4

PGC 03 23:40:20.4±2.6, 50°.98N×138°.89W, h10km, MLSn3.6/3, Mw4.3/3, 544km Wsw of Sandspit, Bc West Of Vancouver Island, West of Vancouver Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DIB	**Dawson Inlet,**	**4.54**	**58**	Pn	Pn	23 41 29.0	0.0
DIB				Sn	Sn	23 42 18.8	-2.9
BNB	**Barry Inlet**	**4.71**	**67**	Pn	Pn	23 41 31.0	-0.5
BNB				Sn	Sn	23 42 23.0	-3.1
MOBC	**Moresby Island**	**4.79**	**60**	Pn	Pn	23 41 30.9	-1.6
MOBC				Sn	Sn	23 42 25.6	-2.5
HG3B	**Hotspring**	**4.89**	**68**	Sn	Sn	23 42 27.5	-2.9
BESE	**Bessie Mountai**	**7.96**	**15**	Pn	Pn	23 42 18.1	+1.9
PLBC	**Pleasant Camp**	**8.62**	**9**	Pn	Pn	23 42 26.6	+1.6
PLBC				Sn	Sn	23 44 01.1	-1.0
PNL	**Peninsula**	**8.71**	**358**	Pn	Pn	23 42 28.1	+1.7
YUK7	**Dusty Glacier**	**9.58**	**2**	Pn	Pn	23 42 40.7	+2.2
YUK7				Sn	Sn	23 44 25.8	-0.4
HYT	**Haines Junctio**	**9.90**	**4**	Pn	Pn	23 42 44.7	+2.0
WHY	**Whitehorse**	**9.96**	**11**	Pn	Pn	23 42 46.1	+2.6
WHY				Sn	Sn	23 44 33.0	-2.2
YUK6	**Outpost Mounta**	**9.99**	**1**	Pn	Pn	23 42 46.1	+2.0
CTGM	**Chitina Glacie**	**10.10**	**353**	Pn	Pn	23 42 46.1	+0.6
KIAG	**Kiagna River**	**10.15**	**350**	Pn	Pn	23 42 45.7	-0.5
KIAG				Sn	Sn	23 44 35.2	-4.9
YUK5	**Granite Creek**	**10.19**	**3**	Pn	Pn	23 42 49.2	+2.5
YUK4	**Talbot Arm**	**10.39**	**1**	Pn	Pn	23 42 53.0	+3.5
YUK4				Sn	Sn	23 44 49.0	+3.0
YUK3	**Moose Creek**	**10.86**	**356**	Pn	Pn	23 42 57.8	+1.9
YUK2	**White River**	**10.89**	**355**	Pn	Pn	23 42 58.0	+1.9
YUK1	**Sand Pete Hill**	**11.24**	**356**	Pn	Pn	23 43 03.4	+2.3
DAWY	**Dawson**	**13.12**	**359**	Pn	Pn	23 43 29.0	+2.3

IDC 03 23:57:17.4±2.1, 26°.97S×114°.74W, h0km, mb3.5/1, mb1 3.8/1, mb1mx3.3/33, mbtmp3.5/1, Error ellipse: s-maj=127.4km s-min=70.9km az=147.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H11S2	**WAKE ISLAND Hy**	**88.52**	**291**	T	T	01 47 48.1	
	baz=118						
H11S1	**WAKE ISLAND Hy**	**88.53**	**292**	T	T	01 47 52.1	
	baz=118						
H11S3	**WAKE ISLAND Hy**	**88.53**	**291**	T	T	01 47 51.3	
	baz=118						
YKA	**Yellowknife Ar**	**89.15**	**0**	P	P	00 10 14.6	+0.4
	0.1nm,0.5s,baz=176,slow=5.0,SNR=4.0						
CMAR	**Chiang Mai Arr**	**147.87**	**262**	PKPbc	PKPbc	00 17 04.8	-0.4
	0.5nm,0.3s,baz=123,slow=3.3,SNR=2.7						
ZALV	**

UKT pmax pmax
comp=Z,79nm,0.2s
UKT smax smax
comp=N,892nm,0.3s
SYVR Suvo 2.21 195 ⇓*i*Pn **Pn 00 04 32.8 +0.9**
SYVR ⇑*i*Pg **Pb 00 04 35.0 -0.2**
SYVR *e*Sg **Sg 00 05 05.8 -0.4**
SYVR Pmax
comp=N,180nm,0.5s
SYVR Smax
comp=N,786nm,0.5s
SYVR Suvo 2.21 195 *e*PN **Pn 00 04 32.6 +0.7**
SYVR *e* **Pb 00 04 35.0 -0.2**
SYVR *e* **Sg 00 05 05.8 -0.4**
SYVR pmax pmax
comp=Z,183nm,0.5s
SYVR smax smax
comp=N,804nm,0.5s
BOD Bodaibo 2.64 39 *e*Pn **Pn 00 04 37.5 -0.2**
BOD *e*Pg **Pb 00 04 40.8 -1.7**
BOD *e*Sn **Sn 00 05 08.8 -0.9**
BOD *e*Sg **Sb 00 05 15.2 +0.3**
BOD Pmax
comp=N,68nm,0.5s
BOD Smax
comp=N,374nm,0.9s
BOD Bodaibo 2.64 39 *e*PN **Pn 00 04 37.6 -0.2**
BOD *e* 00 04 40.3
BOD *e* 00 05 14.1
BOD pmax pmax
comp=Z,69nm,0.5s
BOD smax smax
comp=E,335nm,0.5s
MXMB Maximikha 2.84 208 *e*Pn **Pn 00 04 41.3 +0.8**
MXMB *e*Pg **Pb 00 04 47.1 +1.2**
MXMB *e* 00 05 07.8
MXMB *e* 00 05 14.5
MXMB *e*Sg **Sg 00 05 25.1 -1.3**
OGRR Ongureny 2.90 223 *e*Pn **Pn 00 04 43.1 +1.8**
OGRR Pg **Pb 00 04 46.9 0.0**
OGRR *e*Sg **Sg 00 05 26.1 -2.2**
OGRR *e* 00 05 27.3
OGRR Pmax
comp=E,45nm,0.2s
OGRR max
comp=E,325nm,0.2s
OGRR Ongureny 2.90 223 *e*PN **Pn 00 04 43.1 +1.8**
OGRR *e* 00 04 48.6
OGRR *e* 00 05 26.0
OGRR pmax pmax
comp=Z,45nm,0.4s
OGRR smax smax
comp=E,324nm,0.3s
KELR Kotokel 3.47 210 *e*Pg **Pb 00 04 58.2 +1.5**
KELR *e*Sg **Sg 00 05 44.2 -2.4**
KELR *e*SgSg **SbSb 00 05 46.7 +2.7**
ZRHB Zarechye 3.94 216 *e* **Pn 00 04 59.6 +4.0**
ZRHB *e*Sg **Sg 00 05 58.2 -3.3**
ZRHB Smax
comp=E,596nm,1.6s
TRG Tyrgan 4.06 223 ⇑*i*Pn **Pn 00 04 58.1 +0.8**
TRG *e* 00 04 59.5
TRG *e*Pg **Pb 00 05 09.0 +2.3**
TRG *e* 00 05 45.2
TRG *e* 00 05 57.0
TRG *e*Sg **Sg 00 06 01.5 -4.0**
TRG Pmax
comp=E,17nm,0.3s
TRG Smax
comp=E,154nm,0.3s
TRG Tyrgan 4.06 223 *e*PN **Pn 00 04 58.0 +0.8**
TRG *e* 00 05 07.9
TRG *e*S **Sn 00 05 45.3 +0.5**
TRG *e* 00 06 01.5
TRG pmax pmax
comp=Z,25nm,0.3s
TRG smax smax
comp=E,154nm,0.3s
TRTB Turuntaevo 4.07 210 *e*Pn **Pn 00 04 58.3 +0.9**
TRTB *e*Pg **Pb 00 05 07.8 +0.9**
TRTB *e*Sn **Sn 00 05 44.5 -0.5**
TRTB *e*Sg **Sg 00 06 02.3 -3.5**
TRTB *e* 00 06 05.2
CIT Chita 4.09 157 *e* **Pb 00 05 07.1 -0.1**
CIT *e*Sg **Sg 00 06 02.9 -3.5**
CIT Smax
comp=E,278nm,0.3s
CIT Chita 4.09 157 *e*PN **Pn 00 04 56.7 -1.0**
CIT *e* 00 05 07.1
CIT *e*S **Sn 00 05 43.9 -1.6**
CRS Chara 4.23 72 *e*Pn **Pn 00 04 59.8 +0.2**
CRS *e*Pg **Pb 00 05 10.7 +1.1**
CRS *e* 00 05 13.7
CRS *e* 00 05 27.3
CRS *e*Sg **Sg 00 06 06.8 -4.1**
CRS *e* 00 06 12.6
CRS Chara 4.23 72 *e*PN **Pn 00 04 59.4 -0.2**
CRS *e* 00 05 12.5
CRS *e* 00 06 04.2
CRS pmax pmax
comp=Z,55nm,0.5s
CRS smax smax
comp=E,139nm,0.5s
UUDB Ulan-Yde 4.39 208 *e*Pn **Pn 00 05 02.3 +0.5**
UUDB *e*Pg **Pb 00 05 14.7 +2.4**
UUDB *e* 00 05 45.3
UUDB *e* 00 05 53.8
UUDB *e*Sg **Sg 00 06 13.1 -2.9**
UUDB *e* 00 06 16.6
UUDB Pmax
comp=E,38nm,0.8s
UUDB max
comp=E,156nm,1.0s
FFNB Fofonovo 4.49 215 *e*Pn **Pn 00 05 03.5 +0.3**
FFNB *e*Pg **Pb 00 05 15.6 +1.5**
FFNB *e*Sg **Sg 00 06 15.4 -4.0**
STDB Stepnoy Dvoret 4.52 218 Sg **Sb 00 06 15.0 +5.9**
STDB *e* 00 06 18.7
STDB *e* 00 06 23.4
KAB Kabansk 4.53 216 *e*Sg **Sg 00 06 15.8 -4.6**
KAB Smax
comp=E,439nm,0.9s
HRMR Khuramsha 4.80 211 *e*Pn **Pn 00 05 08.3 +0.9**
HRMR *e*Pg **Pb 00 05 21.7 +2.4**
HRMR *e* 00 06 20.1
HRMR *e*Sg **Sg 00 06 24.8 -4.4**
HRMR Pmax
comp=E,49nm,0.4s
HRMR Smax
comp=E,269nm,0.4s
BGT Bolshoye Golou 4.98 223 *e*Pn **Pn 00 05 09.2 -0.7**
BGT *e*Pg **Pb 00 05 24.6 +2.3**
BGT *e*Sn **Sb 00 06 16.4 -5.8**
BGT *e*Sg **Sg 00 06 29.7 -5.2**
BGT Pmax
comp=E,14nm,0.3s
BGT Smax
comp=E,168nm,1.9s
KHNR Khani 5.16 74 Pg **Pb 00 05 26.5 +1.1**
KHNR *e*Sg **Sg 00 06 35.0 -5.6**
IRK Irkutsk 5.30 231 *e*Sg **Sb 00 06 38.3 +6.9**
IRK Smax
comp=E,209nm,0.4s
LSTR Listvyanka 5.34 225 *e*Pn **Pn 00 05 14.9 0.0**
LSTR *e* 00 05 27.0
LSTR *e*Sn **Sn 00 06 14.9 -1.4**
LSTR *e* 00 06 25.0
LSTR *e*Sg **Sg 00 06 40.1 -6.5**
LSTR max
comp=E,14nm,1.1s
LSTR Smax
comp=E,84nm,1.5s
TUP Tupik 5.36 101 ⇑*i*Pn **Pn 00 05 15.0 -0.2**
TUP *e* 00 05 19.9
TUP Pg **Pb 00 05 31.8 +3.0**
TUP *e* 00 05 56.1
TUP *e* 00 06 11.4
TUP *e*Sg **Sg 00 06 42.9 -4.2**
TUP Pmax
comp=E,12nm,0.9s
TUP Smax
comp=E,177nm,1.4s
TUP Tupik 5.36 101 *e*PN **Pn 00 05 14.9 -0.2**
TUP *e* 00 05 31.2
TUP *e* 00 06 42.6
TUP pmax pmax
comp=Z,9.0nm,0.2s
TUP smax smax
comp=N,177nm,0.9s
IVK Ivanovka 5.56 227 *e*Pn **Pn 00 05 16.9 -1.0**
IVK *e* 00 05 21.7
IVK *e*Pg **Pb 00 05 34.5 +2.2**
IVK *e*Sn **Sn 00 06 19.0 -2.8**
IVK *e*Sg **Sb 00 06 46.6 +7.7**
IVK Pmax
comp=N,4.0nm,0.2s
IVK Smax
comp=N,123nm,1.3s
TLY Talaya 5.97 229 *e*Pg **Pb 00 05 41.0 +1.7**
TLY *e*Sn **Sn 00 06 26.7 -5.2**
TLY *e*Sg **Sb 00 06 58.7 +7.9**
TLY Pmax
comp=N,13nm,0.8s
TLY Smax
comp=N,88nm,0.8s
KPC Khapcheranga 6.17 171 Pn **Pn 00 05 25.9 -0.4**
KPC *e*Pg Pg 00 05 48.0 -5.2
KPC *e*Sg **Sg 00 07 08.0 -5.0**
KPC Pmax
comp=N,8.0nm,0.6s
KPC Smax
comp=N,104nm,1.1s
KPC Khapcheranga 6.17 171 *e*PN **Pn 00 05 25.4 -0.9**
KPC *e* 00 05 45.2
KPC *e* 00 07 06.9
KPC pmax pmax
comp=Z,7.0nm,0.6s
KPC smax smax
comp=E,102nm,1.3s
ARS Arshan 6.36 236 *e*Pn **Pn 00 05 28.3 -0.6**
ARS *e* 00 05 36.9
ARS Pg **Pb 00 05 48.8 +3.0**
ARS *e*Sn **Sn 00 06 36.9 -4.5**
ARS *e*Sg **Sg 00 07 13.2 -5.9**
ARS Pmax
comp=E,14nm,0.5s
ARS Smax
comp=E,163nm,0.5s
ZAK Zakamensk 7.11 224 *e* Pg 00 06 06.7 -4.7
ZAK *e* 00 07 30.5
ZAK *e*Sg **Sg 00 07 35.0 -8.4**
ZAK max
comp=E,5.0nm,0.5s
ZAK Smax
comp=E,42nm,1.4s
MOY Mondy 7.20 239 *e*Pn **Pn 00 05 41.0 +0.5**
MOY *e*Pg **Pb 00 06 04.3 +4.1**
MOY *e*Sn **Sn 00 06 58.6 -3.6**
MOY *e*Sg **Sg 00 07 38.1 -8.0**
MOY Pmax
comp=E,14nm,0.8s
MOY Smax
comp=E,74nm,1.4s
MOY Mondy 7.20 239 *e*PN **Pn 00 05 41.8 +1.3**
MOY *e* 00 06 04.9
MOY *e*S **Sn 00 06 59.9 -2.3**
MOY *e* 00 07 40.4
MOY pmax pmax
comp=Z,5.0nm,0.2s
MOY smax smax
comp=E,73nm,1.4s
ORL Orlik 7.30 248 ⇑*i*Pn **Pn 00 05 42.4 +0.6**
ORL *e* 00 05 47.7
ORL Pg **Pb 00 06 05.8 +3.9**
ORL *e*Sn **Sn 00 07 01.7 -3.0**
ORL *e*Sg **Sg 00 07 41.5 -7.8**
ORL max
comp=E,10.0nm,0.9s
ORL Smax
comp=E,54nm,1.4s
ORL Orlik 7.30 248 *e*PN **Pn 00 05 42.4 +0.6**
ORL *e* 00 06 05.7
ORL *e*S **Sn 00 07 01.5 -3.2**
ORL *e* 00 07 41.7
ORL pmax pmax
comp=Z,11nm,0.4s
ORL smax smax
comp=N,54nm,1.4s
SONM Songino Array 8.45 201 Pn **Pn 00 05 59.2 +1.6**
comp=N,0.2nm,0.3s,baz=16,slow=14,SNR=6.8
SONM Pg Pb 00 06 28.5 +7.0
comp=N,0.4nm,0.3s,baz=12,slow=18,SNR=7.4
SONM Lg Lg 00 08 21.2
comp=N,1.4nm,0.3s,baz=12,slow=33,SNR=9.1
MKAR Makanchi Array 19.92 255 P **P 00 08 25.5 -1.2**
comp=N,0.2nm,0.3s,baz=57,slow=10,SNR=12
ARCES ARCESS Array B 37.96 325 P **P 00 11 14.8 +2.4**
comp=N,5.5nm,1.1s,baz=74,slow=9.5,SNR=3.2

SJA ***04*** *00:11:43.6±0.3,20.˚58S×71.˚30W,h30km,ML5.3,MW5.2*
IDC ***04*** *00:11:46.8±0.4,20.˚52S×70.˚51W,h0km,mb5.1/18, mb1 5.2/21,mb1mx5.1/23,mbtmp5.1/21,ML4.5/3,MS5.4/21, Ms1 5.3/21,ms1mx5.3/23,Error ellipse: s-maj=18.1km s-min=11.8km az=73.0*
NEIC ***04*** *00:11:47.6±1.5,20.˚66S±0.˚04×70.˚61W±0.˚06,h5km±2km, Error ellipse: s-maj=8.3km s-min=4.3km az=67.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.68; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-3.28; $M_{r\theta}$0.70; $M_{\theta\phi}$1.33; $M_{\phi r}$-3.87; Fault plane solution: $M_0$5.43000×10^{17} NP1: ϕ_s166.75000°,δ68.35000°,λ96.15000°. NP2: ϕ_s330.47000°,δ22.47000°,λ74.89000°. Principal axes: T 5.4072, Plg66.0000°, Azm88.0000°; N 0.0415, Plg6.0000°, Azm344.0000°; P -5.4487, Plg23.0000°, Azm252.0000°;*
GUC ***04*** *00:11:48.1±0.6,20.˚69S×70.˚80W,h26km±11km,ML5.3*
VAO ***04*** *00:11:49.7±0.3,20.˚60S×70.˚39W,h10km,mb5.4*
MOS ***04*** *00:11:49.3±1.1,20.˚46S×70.˚52W,h20km,mb5.8/55, MS5.4/14,Error ellipse: s-maj=10.3km s-min=6.1km az=109.5*
BJI ***04*** *00:11:50.7±0.0,20.˚47S×70.˚97W,h20km,mB5.7/55, Ms5.8/60,Ms7 5.7/57*
NEIC ***04*** *00:11:55,20.˚76S×71.˚18W,h18km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.48; $M_{\theta\theta}$-0.40; $M_{\phi\phi}$-3.09; $M_{r\theta}$0.89; $M_{\theta\phi}$0.60; $M_{\phi r}$-1.73; Fault plane solution: $M_0$3.88000×10^{17} NP1:ϕ_s354.00000°, δ31.00000°,λ101.00000°. NP2:ϕ_s161.00000°,δ60.00000°, λ83.00000°. Principal axes: T 4.0317, Plg74.0000°, Azm54.0000°; N -0.3167, Plg6.0000°, Azm164.0000°; P -3.7150, Plg15.0000°, Azm256.0000°;*
GCMT ***04*** *00:11:55.0±0.1,20.˚60S±0.˚01×70.˚98W±0.˚01,h20km, MW5.7/157,Moment Tensor Solution. s134,c239; s157,c321; Duration: 1s8 Moment tensor: Scale 10^{17} Nm; M_{rr}3.57±.05; $M_{\theta\theta}$0.20±.03; $M_{\phi\phi}$-3.77±.04; $M_{r\theta}$0.34±.07; $M_{\theta\phi}$0.52±.03; $M_{\phi r}$-3.29±.09; Best double couple: $M_0$4.96500×10^{17} NP1:ϕ_s352.00000°,δ24.00000°, λ88.00000°. NP2:ϕ_s174.00000°,δ66.00000°,λ91.00000°. Principal axes: T 4.8330, Plg69.0000°, Azm85.0000°; N 0.2640, Plg1.0000°, Azm353.0000°; P -5.0980, Plg21.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***04*** *00:11:55,20.˚64S×70.˚99W,h18km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}3.37; $M_{\theta\theta}$0.29; $M_{\phi\phi}$-3.66; $M_{r\theta}$0.75; $M_{\theta\phi}$0.59; $M_{\phi r}$-4.09; Fault plane solution: $M_0$5.48000×10^{17} NP1:ϕ_s354.00000°, δ20.00000°,λ94.00000°. NP2:ϕ_s170.00000°,δ70.00000°, λ89.00000°. Principal axes: T 5.2870, Plg65.0000°, Azm78.0000°; N 0.3723, Plg1.0000°, Azm170.0000°; P -5.6593, Plg25.0000°, Azm261.0000°;*
ISC 04 00:11:50.5±1.0,20.˚68S±0.˚03×70.˚64W±0.˚04,h26km±6km, n1331,σ1°48/1162,mb5.7/255,MS5.6/137,60C-10D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.45**	**76**	⇓*i*P	**Pb**	**00 11 59.2**	**-0.7**
TA01				*i* S	**Sb**	**00 12 07.0**	**+0.8**
TA01				IAML		00 12 11.9	
	comp=N,238μm,0.8s						
PSGC	**Pisagua**	**1.18**	**25**	*i* P	**Pn**	**00 12 10.1**	**-1.4**
PSGC				*i* S	**Sn**	**00 12 26.6**	**-0.2**
PSGC				IAML		00 12 29.3	
	comp=N,86μm,0.3s						
PB11	**IPOC Station P**	**1.30**	**46**	⇑*i*P	**Pn**	**00 12 12.6**	**-0.5**
PB11				*i* S	**Sb**	**00 12 31.1**	**+0.4**
PB11				IAML		00 12 34.5	
	comp=E,78μm,0.5s						
PB11	**IPOC Station P**	**1.30**	**46**		**Pn**	**00 12 13.0**	**-0.1**
PB08	**IPOC Station P**	**1.49**	**69**	⇑*i*P	**Pn**	**00 12 16.3**	**+0.3**
PB08				*i* S	**Sb**	**00 12 38.7**	**+2.2**
PB04	**IPOC Station P**	**1.71**	**165**	IAML		00 12 50.8	
	comp=E,43μm,0.3s						
PB04	**IPOC Station P**	**1.71**	**165**		**Pn**	**00 12 17.8**	**-1.1**
PB04	**IPOC Station P**	**1.71**	**165**	*i* P	**Pn**	**00 12 18.4**	**-0.5**
PB04				*e*S	**Sb**	**00 12 44.2**	**+1.5**
PB04				IAML		00 12 50.0	
	comp=Z,33μm,0.4s						
PB09	**IPOC Station P**	**1.72**	**131**	*i* P	**Pn**	**00 12 20.1**	**+1.2**
PB09				*i* S	**Sb**	**00 12 45.8**	**+3.0**
PB09				IAML		00 12 58.0	
	comp=E,34μm,0.5s						
PB09	**IPOC Station P**	**1.72**	**131**	*i* P	**Pb**	**00 12 21.6**	**0.0**
PB09				*e*S	**Sb**	**00 12 49.8**	**+7.0**
MNMC	**Minye Minye**	**1.82**	**33**	*i* P	**Pn**	**00 12 20.4**	**-0.1**
MNMC				*i* S	**Sb**	**00 12 46.4**	**+0.5**
MNMC				IAML		00 12 52.8	
	comp=N,70μm,0.7s						
MNMC	**Minye Minye**	**1.82**	**33**		**Pn**	**00 12 20.0**	**-0.5**
PB05	**IPOC Station P**	**2.21**	**169**	*i* P	**Pn**	**00 12 24.6**	**-1.0**
PB06	**IPOC Station P**	**2.25**	**154**	*i* P	**Pn**	**00 12 27.1**	**+0.8**
AP01	**Chacalluta**	**2.31**	**7**	⇑*i*P	**Pn**	**00 12 26.1**	**-0.8**
AP01				*i* S	**Sb**	**00 13 01.7**	**+2.1**
AP01				IAML		00 13 08.4	
	comp=N,92μm,0.6s						
LVC	**Limon Verde**	**2.51**	**140**	P	**Pn**	**00 12 30.0**	**0.0**
LVC						00 13 04.5	
LVC	**Limon Verde**	**2.51**	**140**	Pn	**Pn**	**00 12 31.3**	**+1.3**
	comp=N,476nm,0.3s,baz=329,slow=9.5,SNR=594						
LVC				Sn	**Sb**	**00 13 04.5**	**-1.3**
	comp=N,1μm,0.3s,baz=56,slow=22,SNR=22						
LVC	**Limon Verde**	**2.51**	**140**	*e*P	**Pn**	**00 12 31.8**	**+1.8**
LVC	**Limon Verde**	**2.51**	**140**		**Pn**	**00 12 30.0**	**0.0**
LVC	**Limon Verde**	**2.51**	**140**	*i* P	**Pn**	**00 12 32.3**	**+2.3**
LVC				*e*S	**Sb**	**00 13 08.7**	**+2.9**
LVC				IAML		00 13 15.0	
	comp=Z,7μm,0.5s						
PB16	**IPOC Station P**	**2.56**	**25**	IAML		00 13 17.0	
	comp=N,16μm,0.6s						
PB15	**IPOC Station P**	**2.75**	**157**	*i* P	**Pn**	**00 12 33.7**	**+0.5**
PB15				*e*S	**Sb**	**00 13 10.7**	**-1.7**
PB15				IAML		00 13 25.6	
	comp=Z,21μm,0.6s						
PB10	**IPOC Station P**	**2.83**	**178**		**Pn**	**00 12 32.7**	**-1.3**
PB10	**IPOC Station P**	**2.83**	**178**	*i* P	**Pn**	**00 12 32.0**	**-2.1**
PB14	**IPOC Station P**	**3.94**	**177**	*i* P	**Pn**	**00 12 48.2**	**-1.4**
I08BO	**LAS PENAS INFR**	**4.90**	**25**	Pn	**Pn**	**00 13 05.8**	**+2.7**
	baz=207,slow=32,SNR=1.2						
I08BO				*i*		00 30 50.0	
	baz=208,slow=302,SNR=7.0						
LPAZ	**La Paz**	**4.97**	**29**	P	**Pn**	**00 13 05.0**	**+0.9**
LPAZ	**La Paz**	**4.97**	**29**	Pn	**Pn**	**00 13 06.6**	**+2.5**
	comp=Z,3.1nm,0.3s,baz=178,slow=1.5,SNR=101						
LPAZ	**La Paz**	**4.97**	**29**	*e*P	**Pn**	**00 13 04.1**	**0.0**
LPAZ	**La Paz**	**4.97**	**29**		**Pn**	**00 13 05.0**	**+0.9**
YJA	**Yavi**	**5.01**	**108**	*i* P	Pn	00 13 10.0	+5.6
YJA				IAML		00 13 17.7	
	comp=Z,407nm,0.7s						
HJA	**Humahuaca**	**5.47**	**118**	*i* P	**Pn**	**00 13 15.4**	**+4.7**
SLA	**San Lorenzo**	**6.22**	**131**	*i* P	**Pn**	**00 13 23.6**	**+2.7**
AZAP	**Zapla**	**6.25**	**125**	*i* P	**Pn**	**00 13 25.3**	**+4.0**
AHML	**Horco Molle**	**7.79**	**142**	*i* P	**Pn**	**00 13 44.1**	**+1.9**
VCA	**Vinchina**	**8.33**	**165**	*i* P	**Pn**	**00 13 48.8**	**-1.0**
CYA	**Choya**	**8.90**	**151**	*i* P	**Pn**	**00 13 58.6**	**+1.1**
ACLC	**CERRO LA CRUZ**	**9.33**	**160**	*i* P	**Pn**	**00 14 03.5**	**-0.1**
GO04	**Tololo Observa**	**9.46**	**181**		**Pn**	**00 14 04.5**	**-0.9**
SIV	**San Ignacio**	**10.21**	**64**	LR	LR	00 18 60.0	
	comp=Z,31μm,18.1s,baz=262,slow=43						
APLL	**PUNTA DE LOS L**	**10.37**	**160**	*i* P	**Pn**	**00 14 17.0**	**-0.6**
NNA	**Nana**	**10.49**	**325**	Pn	**Pn**	**00 14 18.3**	**-1.0**
	comp=Z,5.8nm,0.3s,baz=74,slow=14,SNR=8.4						
NNA				Sn	Sn	00 16 06.4	-10
	comp=Z,3.7nm,0.3s,baz=232,slow=19,SNR=2.9						
NNA				LR	LR	00 18 25.3	
	comp=Z,10μm,19.4s,baz=156,slow=38						
NNA	**Nana**	**10.49**	**325**		**Pn**	**00 14 18.7**	**-0.6**
RTLL	**Cerro Villicun**	**10.79**	**170**	*i* P	**Pn**	**00 14 21.9**	**-1.5**
CFA	**Coronel Fontan**	**11.10**	**169**	Pn	**Pn**	**00 14 25.7**	**-1.9**
	comp=Z,1.7nm,0.3s,baz=7.1,slow=16,SNR=16						
CFA				Sn	**Sn**	**00 16 25.2**	**-5.8**
	comp=Z,4.9nm,0.3s,baz=86,slow=19,SNR=2.5						
CFA				LR	LR	00 19 09.6	
	comp=Z,23μm,18.1s,baz=332,slow=39						
RTLS	**Leoncito**	**11.14**	**174**	*i* P	**Pn**	**00 14 26.9**	**-1.6**
RTCV	**Cerro Valdivia**	**11.30**	**171**	*i* P	**Pn**	**00 14 28.5**	**-1.9**
TCA	**Tanti**	**11.93**	**154**	*i* P	**Pn**	**00 14 38.1**	**-0.5**
ACAN	**Cantantal**	**11.96**	**166**	*i* P	**Pn**	**00 14 37.8**	**-1.6**
ASAL	**Salagasta**	**11.98**	**173**	*i* P	**Pn**	**00 14 37.5**	**-2.2**
ARCO	**CERRO ARCO**	**12.21**	**173**	*i* P	**Pn**	**00 14 40.7**	**-2.3**
ROC1	**El Roble**	**12.26**	**181**	Pn	**Pn**	**00 14 43.2**	**-0.5**
PEL	**Peldehue**	**12.42**	**180**	P	**Pn**	**00 14 45.4**	**-0.3**
PEL	**Peldehue**	**12.42**	**180**	Pn	**Pn**	**00 14 45.4**	**-0.3**
MRA	**San Martin**	**12.50**	**160**	*i* P	**Pn**	**00 14 45.7**	**-1.1**
CPUP	**Villa Florida**	**13.45**	**117**	P	**Pn**	**00 14 59.7**	**0.0**
CPUP	**Villa Florida**	**13.45**	**117**	Pn	**Pn**	**00 15 01.7**	**+2.0**
	comp=Z,0.5nm,0.3s,baz=306,slow=13,SNR=13						
CPUP				LR	LR	00 20 55.5	
	comp=Z,16μm,19.2s,baz=296,slow=41						
CPUP	**Villa Florida**	**13.45**	**117**	*e*P	**Pn**	**00 14 59.1**	**-0.6**
CPUP	**Villa Florida**	**13.45**	**117**		**Pn**	**00 14 59.7**	**0.0**
SAML	**Samuel**	**13.70**	**33**	P	**Pn**	**00 15 00.4**	**-2.9**
SAML	**Samuel**	**13.70**	**33**	*e*P	**Pn**	**00 15 00.3**	**-3.0**
SAML	**Samuel**	**13.70**	**33**		**Pn**	**00 15 00.4**	**-2.9**
AQDB	**Aquidauana**	**14.00**	**92**	*e*P	**Pn**	**00 15 06.3**	**-1.0**
SALV	**Santo Antonio**	**14.97**	**74**	*e*P	**Pn**	**00 15 18.0**	**-2.5**
PP1B	**Ponte de Pedra**	**15.21**	**81**	*e*P	**Pn**	**00 15 20.9**	**-2.8**
ATAH	**Atahualpa**	**15.41**	**330**	Pn	**Pn**	**00 15 25.4**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=132,slow=12,SNR=4.9						
ATAH				LR	LR	00 21 54.7	
	comp=Z,9μm,18.7s,baz=174,slow=40						
ITQB	**Itaqui**	**15.52**	**128**	*e*P	**Pn**	**00 15 26.9**	**-0.8**
TRCB	**Terra Rica**	**16.87**	**100**	*e*P	**Pn**	**00 15 44.4**	**-0.6**
C2SB	**Chapadao do Su**	**16.87**	**87**	*e*P	**Pn**	**00 15 43.8**	**-1.3**
CLDB	**Colider**	**17.28**	**58**	*e*P	**Pn**	**00 15 48.2**	**-2.1**
PTGB	**Pitanga**	**17.61**	**107**	*e*P	**Pn**	**00 15 51.3**	**-3.0**
LPA	**La Plata**	**18.07**	**144**	*e*P	Pn	00 15 50.8	-9.0
LPA				S	**Sn**	**00 19 12.8**	**-7.9**
LPA				SSS	SSS	00 20 53.9	
LPA				SCS	ScS	00 27 22.1	-26
LPA				PKIKP	PKiKP	00 28 11.6	-13
LPA				SKIKS		00 35 10.9	
PCMB	**Pacaembu**	**18.11**	**96**	*e*P	**Pn**	**00 15 58.6**	**-1.8**
ITAB	**Concordia**	**18.13**	**115**	*e*P	**Pn**	**00 15 59.6**	**-0.9**
CPSB	**Cacapava Do Su**	**18.28**	**125**	*e*P	**Pn**	**00 16 00.1**	**-2.3**
ARAG	**Araguaiana, MT**	**18.56**	**78**	*e*P	**P**	**00 16 04.0**	**-1.6**
PLTB	**Pedras Altas**	**18.83**	**129**	*e*P	**P**	**00 16 06.1**	**-2.4**
ITRB	**Iturama**	**19.07**	**91**	*e*P	**P**	**00 16 09.8**	**-1.3**
OGAUY	**Aigu**	**19.58**	**137**	*e*P	**P**	**00 16 17.1**	**+0.5**
FRTB	**Fartura**	**19.72**	**102**	*e*P	**P**	**00 16 17.4**	**-0.9**
CNLB	**Canela**	**19.87**	**120**	*e*P	**P**	**00 16 19.8**	**-0.1**
PLCA	**Paso Flores**	**20.00**	**180**	P	**P**	**00 16 21.9**	**+0.7**
PLCA				pmax	pmax		
	comp=Z,295nm,1.6s						
PLCA	**Paso Flores**	**20.00**	**180**	P	**P**	**00 16 21.8**	**+0.5**
	comp=Z,56nm,1.1s,baz=26,slow=13,SNR=33						
PLCA				LR	LR	00 23 32.4	
	comp=Z,6μm,21.4s,baz=20,slow=35						
PLCA	**Paso Flores**	**20.00**	**180**	*e*P	**Pn**	**00 16 22.5**	**-0.5**
PLCA	**Paso Flores**	**20.00**	**180**	P	**P**	**00 16 21.9**	**+0.7**
BB19B	**Bebedouro**	**20.67**	**95**	*e*P	**P**	**00 16 28.1**	**-0.6**
PTLC	**Puerto Leguiza**	**21.11**	**348**	⇑*i*P	**P**	**00 16 27.2**	**-6.2**
IPMB	**Ipameri, GO**	**21.33**	**87**	*e*P	**P**	**00 16 34.2**	**-1.7**
RCLB	**Rio Claro- Sao**	**21.57**	**99**	*e*P	**P**	**00 16 36.9**	**-1.5**
SPB	**Sao Paulo**	**21.69**	**102**	*e*P	**P**	**00 16 39.1**	**-0.5**
BDFB	**Brasilia**	**22.07**	**81**	P	**P**	**00 16 43.4**	**-0.4**
BDFB				pmax	pmax		
	comp=Z,208nm,1.1s						
BDFB				MLR	MLR		
	comp=Z,44μm,18.0s						
BDFB	**Brasilia**	**22.07**	**81**	P	**P**	**00 16 42.0**	**-1.8**
	comp=Z,44nm,1.0s,baz=260,slow=12,SNR=29						
BDFB				LR	LR	00 26 48.9	
	comp=Z,42μm,18.4s,baz=261,slow=41						
BDFB	**Brasilia**	**22.07**	**81**	P	**P**	**00 16 43.4**	**-0.4**

BDFB IAmb IAmb 00 16 49.9
comp=Z,208nm,1.1s
VAO Valinhos 22.10 100 *eP* **P 00 16 42.2 -1.8**
OTAV Otavalo 22.14 339 P **P 00 16 44.3 -0.7**
OTAV pmax pmax
comp=Z,370nm,1.5s
OTAV MLR MLR
comp=Z,6µm,20.0s
OTAV Otavalo 22.14 339 ⇑*iP* **P 00 16 45.6 +0.6**
OTAV Otavalo 22.14 339 *eP* **P 00 16 46.9 +1.9**
OTAV Otavalo 22.14 339 P **P 00 16 44.3 -0.7**
OTAV IAmb IAmb 00 17 21.8
comp=Z,370nm,1.4s
FLOC Florencia 22.66 347 ⇑*iP* **P 00 16 49.8 -0.2**
GCUF Volcan Galeras 22.73 342 ⇑*iP* **P 00 16 52.6 +1.3**
MACC Macarena, Meta 22.89 352 ⇑*iP* **P 00 16 49.0 -3.4**
PMNB Patos De Minas 22.90 89 *eP* **P 00 16 50.6 -2.0**
CRUC La Cruz 22.95 344 *eP* **P 00 16 56.8 +3.3**
SOTA Rioblanco 23.41 345 ⇑*iP* **P 00 16 58.9 +0.7**
BBAC Balboa, Cauca 23.47 343 ⇑*iP* **P 00 16 59.1 +0.7**
PCON Cinco Dias 23.55 345 ⇑*iP* **P 00 17 01.2 +1.6**
BETC Betania 23.68 348 *eP* **P 00 17 02.2 +1.9**
TUMC Tumaco 23.72 340 *eP* **P 00 17 02.8 +2.1**
POPC Popayan, Colom 23.82 345 ⇑*iP* **P 00 17 02.6 +0.8**
PTGC Puerto Gaitan, 24.76 356 ⇑*iP* **P 00 17 09.2 -1.1**
VILC Villavicencio, 24.81 353 *eP* **P 00 17 11.3 +0.4**
ORTC Ortega, Tolima 24.84 349 ⇑*iP* **P 00 17 11.9 +0.8**
YOTC Yotoco, Valle 25.14 347 ⇑*iP* **P 00 17 14.6 +0.8**
SMTB Santa Maria do 25.16 66 *eP* **P 00 17 13.4 -0.5**
CVER Cruz Verde, Cu 25.26 352 *eP* **P 00 17 16.3 +1.0**
CHIC Chingaza 25.33 353 ⇑*iP* **P 00 17 15.7 -0.1**
ANIL Santa Ana 25.44 349 ⇑*iP* **P 00 17 17.0 +0.3**
TOLC Tolima 25.52 349 *eP* **P 00 17 17.9 +0.4**
ROSC El Rosal 25.61 351 P **P 00 17 19.8 +1.4**
comp=Z,41nm,0.7s,baz=185,slow=4.9,SNR=25
ROSC LR LR 00 28 45.9
comp=Z,13µm,18.6s,baz=200,slow=40
ROSC El Rosal 25.61 351 ⇑*iP* **P 00 17 19.9 +1.5**
ROSC El Rosal 25.61 351 P **P 00 17 17.8 -0.6**
JANB Januaria 25.66 82 *eP* **P 00 17 17.6 -0.9**
CTAB Cerro Tablazo, 25.76 352 *eP* **P 00 17 21.1 +1.3**
RREF El Recreo 25.83 349 ⇑*iP* **P 00 17 21.9 +1.2**
CTAU Tausa, Cundina 25.93 352 *eP* **P 00 17 24.9 +3.5**
PLMC San Jos del P 26.02 347 ⇑*iP* **P 00 17 22.1 +0.3**
GUY2C Guyana, Caldas 26.15 349 ⇑*iP* **P 00 17 24.0 +0.6**
SPBC San Pablo de B 26.38 352 ⇑*iP* **P 00 17 24.6 -0.5**
NORC Norcasia 26.40 351 ⇑*iP* **P 00 17 24.8 -0.4**
RUSC La Rusia 26.51 355 ⇑*iP* **P 00 17 26.8 +0.1**
CBOC Ciudad Bolivar 26.89 348 ⇑*iP* **P 00 17 29.6 -0.2**
TAMC Tame, Arauca 26.96 357 ⇑*iP* **P 00 17 29.8 -0.4**
HELC Santa Helena 27.13 349 ⇑*iP* **P 00 17 31.5 -0.5**
BARC Barichara 27.21 354 *eP* **P 00 17 31.6 -1.0**
PTBC PUERTO BERRIO, 27.30 352 ⇑*iP* **P 00 17 31.0 -2.2**
ELOV Elorza 27.53 2 ⇑*iP* **P 00 17 34.3 -0.9**
SOLC Bahia Solano 27.55 345 *eP* **P 00 17 36.7 +1.3**
PAYG Puerto Ayora 27.63 314 P **P 00 17 35.5 -0.8**
PAYG IAmb IAmb 00 17 47.1
comp=Z,202nm,1.8s
BRRC Barranca, Sant 27.77 353 ⇑*iP* **P 00 17 35.6 -1.8**
SJMB Sao Joao De Ma 27.79 91 *eP* **P 00 17 36.5 -1.2**
PAMC Pamplona, Colo 27.91 356 *eP* **P 00 17 37.6 -1.6**
DBBC Dabeiba 28.06 348 *eP* **P 00 17 40.8 +0.7**
BSFB Barra de Sao F 28.09 91 *eP* **P 00 17 39.7 -0.6**
ZARC Zaragoza, Cauc 28.30 351 *eP* **P 00 17 40.9 -1.2**
UREC San Jos de Ur 28.65 350 ⇑*iP* **P 00 17 44.1 -1.2**
SOCV Socops 28.78 360 ⇑*iP* **P 00 17 44.9 -1.6**
OCAC Ocana 28.85 355 *eP* P 00 17 42.0 -5.3
SDV Santo Domingo 29.38 0 P **P 00 17 51.2 -0.7**
comp=Z,23nm,0.2s,baz=184,slow=6.3,SNR=18
SDV LR LR 00 28 53.6
comp=Z,8µm,19.9s,baz=189,slow=35
SDV Santo Domingo 29.38 0 *eP* **P 00 17 51.5 -0.4**
SMLC San Martn de 29.48 353 ⇑*iP* **P 00 17 49.8 -2.9**
BAUV El Baul 29.54 5 *eP* **P 00 17 51.7 -1.5**
NBIT Itapeh - BA 30.23 84 *eP* **P 00 17 59.5 +0.1**
ORIV Oritupano 30.40 14 *eP* P 00 17 55.6 -5.2
CODC Agustn Codazz 30.54 355 ⇑*iP* **P 00 17 58.2 -3.8**
ARGC Ariguani, Magd 30.55 353 ⇑*iP* **P 00 18 00.7 -1.4**
SJCC San Jacinto, C 30.70 351 ⇑*iP* **P 00 18 02.8 -0.8**
UPA Univ. de Panam 30.74 343 *eP* **P 00 18 01.1 -2.6**
NBPN Ponto Novo - B 30.83 76 *eP* **P 00 18 04.1 -0.7**
DABV Dabajuro 31.40 0 ⇑*iP* **P 00 18 07.9 -1.7**
SMRC Santa Marta, M 31.83 353 *eP* **P 00 18 11.8 -1.6**
URIC Uribia, Colomb 32.20 358 *eP* P 00 18 10.6 -6.0
EFI East Falkland 32.47 165 *iP* **P 00 18 22.9 +4.3**
EFI pmax pmax
comp=Z,61nm,1.1s
EFI East Falkland 32.47 165 P **P 00 18 19.1 +0.5**
EFI East Falkland 32.47 165 IAMs_20 IAMs_20 00 31 41.1
comp=Z,9µm,19.0s
NBPS Pedro II - PI 32.67 64 *eP* **P 00 18 20.2 -0.8**
NBLA Lagarto - SE 32.98 78 *eP* **P 00 18 22.2 -1.4**
NBTA Tacaratu-PE 33.44 75 *eP* **P 00 18 27.4 -0.2**
NBMA Muriti-CE 33.55 71 *eP* **P 00 18 27.8 -0.8**
NBPB Pedra_Branca-C 33.68 68 *eP* **P 00 18 29.0 -0.7**
GRGR Grenville 33.78 16 *eP* P 00 18 25.3 -5.1
GRGR Grenville 33.78 16 IAMs_20 IAMs_20 00 33 31.6
comp=Z,11µm,19.0s
JTS Las Juntas de 33.84 334 P **P 00 18 30.9 -0.1**
JTS pmax pmax
comp=Z,133nm,1.7s
JTS MLR MLR
comp=Z,4µm,18.0s
JTS Las Juntas de 33.84 334 P **P 00 18 30.9 -0.1**
JTS IAmb IAmb 00 18 44.6
comp=Z,133nm,1.6s
USHA Ushuaia 34.14 178 P **P 00 18 33.9 +0.7**
comp=Z,31nm,1.2s,baz=357,slow=9.4,SNR=6.9
NBMO Morrinhos-CE 34.43 64 *eP* **P 00 18 35.5 -0.8**
NBAN Anadia - AL 34.85 77 *eP* **P 00 18 38.7 -1.1**
SVB Belmont 34.98 16 IAmb IAmb 00 18 56.6
comp=Z,142nm,1.0s
NBLI Livramento-PB 35.17 73 *eP* **P 00 18 42.3 -0.4**
BBGH Gun Hill 35.33 19 P **P 00 18 42.2 -1.7**
BBGH IAMs_20 IAMs_20 00 35 26.8
comp=Z,11µm,22.0s
PRVC Isla de Provid 35.44 342 *eP* **P 00 18 46.6 +1.8**
ACON Acoyapa 35.45 335 P **P 00 18 44.6 -0.3**
NBCL Cascavel-CE 35.45 67 *eP* **P 00 18 44.7 -0.3**
NBPA Parau_RN 35.75 70 *eP* **P 00 18 46.6 -0.9**
RPN Rapa Nui 35.85 252 IAMs_20 IAMs_20 00 29 40.9
comp=Z,11µm,19.0s
NBRF Rio Formoso - 36.28 76 *eP* **P 00 18 51.3 -0.8**
FDF Fort de France 36.40 16 P **P 00 18 51.0 -2.1**
FDF pmax pmax
comp=Z,215nm,1.1s
FDF MLR MLR
comp=Z,8µm,18.0s
FDF Fort de France 36.40 16 P **P 00 18 51.0 -2.1**
FDF IAMs_20 IAMs_20 00 35 19.1
comp=Z,8µm,18.0s
RCBR Riachuelo 36.78 71 P **P 00 18 56.2 -0.3**
RCBR pmax pmax
comp=Z,311nm,1.1s
RCBR MLR MLR
comp=Z,17µm,19.0s
RCBR Riachuelo 36.78 71 *eP* **P 00 18 57.0 +0.5**
RCBR Riachuelo 36.78 71 P **P 00 18 56.2 -0.3**
NBPV Pedro Velho 37.06 73 *eP* **P 00 18 58.3 -0.5**
TGUH Tegucigalpa,Un 38.19 333 *eP* **P 00 19 08.9 +0.5**
TGUH Tegucigalpa,Un 38.19 333 P **P 00 19 08.0 -0.4**
ICMP Isla Caja de M 38.53 6 P **P 00 19 10.6 -0.5**
SEUS St. Eustatius 38.67 12 IAMs_20 IAMs_20 00 36 15.9
comp=Z,10µm,19.0s
OBIP Obispado Ponce 38.68 6 IAmb IAmb 00 19 13.9
comp=Z,225nm,1.2s
PDPR Patillas Dam, 38.72 7 IAmb IAmb 00 19 12.0
comp=Z,208nm,0.9s
SABA Saba 38.74 11 IAmb IAmb 00 19 12.0
comp=Z,196nm,0.9s
SABA IAMs_20 IAMs_20 00 36 07.8
comp=Z,9µm,19.0s
SJG San Juan 38.80 7 P **P 00 19 11.2 -2.0**
SJG pmax pmax
comp=Z,198nm,1.0s
SJG MLR MLR
comp=Z,3µm,18.0s
SJG San Juan 38.80 7 ⇑*iP* **P 00 19 10.9 -2.4**
SJG San Juan 38.80 7 P **P 00 19 11.2 -2.0**
SJG IAmb IAmb 00 19 12.6
comp=Z,198nm,0.9s
BANI BANI 38.83 0 P **P 00 19 12.9 -0.7**
MTP Monte Pirata 38.85 8 IAmb IAmb 00 19 12.9
comp=Z,208nm,1.1s
HUMP Col San Antoni 38.86 7 P **P 00 19 12.1 -1.8**
HUMP IAmb IAmb 00 19 14.8
comp=Z,164nm,1.2s
SDD Santo Domingo 38.90 1 P **P 00 19 12.2 -1.9**
SDD IAMs_20 IAMs_20 00 36 27.4
comp=Z,12µm,20.0s
AOPR Arecibo Observ 38.97 6 IAmb IAmb 00 19 14.2
comp=Z,142nm,0.9s
CBYP Canovanas 38.99 7 IAmb IAmb 00 19 14.2
comp=Z,214nm,0.8s
GCPR Guaynabo City 39.00 7 IAmb IAmb 00 19 13.9
comp=Z,127nm,0.8s
PCDR Punta Cana, DR 39.01 3 P **P 00 19 14.5 -0.5**
AGPR Aguadilla, PR 39.05 5 P **P 00 19 14.8 -0.6**
AGPR IAmb IAmb 00 19 17.4
comp=Z,260nm,1.2s
ANWB Willy Bob 39.08 13 IAmb IAmb 00 19 13.1
comp=Z,220nm,0.9s
ANWB IAMs_20 IAMs_20 00 36 31.0
comp=Z,7µm,20.0s
EMPR Esperanza - Ma 39.12 6 IAmb IAmb 00 19 15.6
comp=Z,244nm,1.1s
SMRT St. Maarten 39.19 11 IAMs_20 IAMs_20 00 36 30.8
comp=Z,9µm,18.0s
DR12 Loma Pena Alta 39.24 2 P **P 00 19 15.3 -1.7**
SC01 Santiago de lo 39.85 360 P **P 00 19 22.1 0.0**
SC01 IAmb IAmb 00 19 22.9
comp=Z,266nm,1.4s
GTBY Guantanamo Bay 40.59 354 P **P 00 19 27.0 -1.2**
FSCY Frank Sound, G 41.06 345 P **P 00 19 32.7 +0.6**
GRTK Grand Turk 41.93 359 P **P 00 19 37.2 -2.0**
GRTK IAmb IAmb 00 19 39.7
comp=Z,293nm,1.2s
HOPE Hope Point 42.38 151 P **P 00 19 43.5 +1.0**
HOPE pmax pmax
comp=Z,181nm,1.3s
HOPE MLR MLR
comp=Z,7µm,21.0s
HOPE Hope Point 42.38 151 P **P 00 19 43.5 +1.0**
HOPE IAmb IAmb 00 19 46.1
comp=Z,181nm,1.2s
HOPE Hope Point 42.38 151 IAMs_20 IAMs_20 00 36 21.4
comp=Z,7µm,21.0s
TEIG Tepich 44.16 336 P **P 00 19 57.9 +0.6**
TEIG IAmb IAmb 00 20 08.9
comp=Z,328nm,1.6s
PMSA Palmer Station 44.30 176 P **P 00 19 58.9 +1.1**
comp=Z,16nm,0.9s,baz=342,slow=11,SNR=11
PMSA Palmer Station 44.30 176 *eP* **P 00 19 59.8 +2.0**
PMSA Palmer Station 44.30 176 P **P 00 19 60.0 +2.2**
061Z Ochoppi 47.32 347 P **P 00 20 21.6 -0.5**
553A Crawfordville 52.28 345 P **P 00 20 59.9 +0.1**
451A Vernon 53.02 344 P **P 00 21 04.9 -0.4**
TIGA Tifton 53.28 346 P **P 00 21 06.7 -0.6**
353A Camilla 53.34 346 P **P 00 21 07.6 -0.1**
baz=164
256A Glennville 53.45 348 P **P 00 21 09.0 +0.6**
baz=167
255A Hazlehurst 53.52 347 P **P 00 21 09.2 +0.3**
baz=166
352A Blakely 53.64 345 P **P 00 21 09.9 +0.1**
baz=163,SNR=6.2
254A Abbeville 53.71 347 P **P 00 21 10.3 0.0**
baz=165,SNR=5.3
BRAL Brewton 53.90 343 P **P 00 21 11.9 +0.2**
baz=161,SNR=8.9
253A Americus 54.00 346 P **P 00 21 12.3 -0.1**
253A IAMs_20 IAMs_20 00 45 31.1
comp=Z,4µm,21.0s
253A Americus 54.00 346 P **P 00 21 13.0 +0.6**
baz=164
156A Sylvania 54.03 349 P **P 00 21 12.8 +0.2**
baz=168
RGRS Roger Stewart 54.06 350 P **P 00 21 13.0 +0.2**
252A Lumpkin 54.08 345 P **P 00 21 13.6 +0.5**
baz=164,SNR=6.0
CSU Charleston Sou 54.11 350 P **P 00 21 13.8 +0.6**
155A Kite 54.19 348 P **P 00 21 14.8 +1.0**
baz=166,SNR=7.7
NHSC New Hope 54.25 350 P **P 00 21 15.2 +0.9**
baz=169
154A Montrose 54.31 347 IAmb IAmb 00 21 16.5
comp=Z,126nm,1.0s
154A Montrose 54.31 347 P **P 00 21 15.1 +0.4**
baz=166,SNR=8.1
Z58A St. Stephen 54.41 351 P **P 00 21 16.2 +0.8**
baz=170,SNR=7.4
250A Grady 54.45 344 IAmb IAmb 00 21 27.3
comp=Z,126nm,1.1s
Z57A Bowman 54.52 350 P **P 00 21 16.8 +0.6**
baz=168,SNR=6.7
Z56A Williston 54.66 349 P **P 00 21 17.4 +0.2**
Z56A IAmb IAmb 00 21 18.7
comp=Z,119nm,1.2s
Z56A Williston 54.66 349 P **P 00 21 17.1 -0.2**
baz=168
KVTX Kingsville 54.71 330 P **P 00 21 18.2 +0.5**
152A Waverly Hall 54.72 345 IAMs_20 IAMs_20 00 45 42.2
comp=Z,4µm,22.0s
152A Waverly Hall 54.72 345 P **P 00 21 17.4 -0.3**
baz=164,SNR=8.8
Y60A Bolivia 54.85 352 P **P 00 21 18.6 0.0**
baz=171,SNR=7.4
Z54A Sparta 54.86 347 P **P 00 21 18.7 0.0**
baz=166
Y59A Loris 54.92 352 P **P 00 21 18.7 -0.4**
Y59A IAmb IAmb 00 21 33.1
comp=Z,90nm,1.1s
Y59A Loris 54.92 352 P **P 00 21 19.9 +0.8**
baz=171
Y58A Scranton 54.95 351 P **P 00 21 19.3 0.0**
baz=170
Z53A Monticello 55.05 347 P **P 00 21 20.0 -0.1**
baz=165
Z52A Williamson 55.15 346 P **P 00 21 20.4 -0.5**
baz=164,SNR=7.2
GOGA Godfrey 55.16 347 IAmb IAmb 00 21 30.5
comp=Z,83nm,1.6s
GOGA Godfrey 55.16 347 P **P 00 21 20.8 0.0**
baz=165
Y57A Sumter 55.17 350 IAmb IAmb 00 21 22.5
comp=Z,96nm,1.1s
Y57A Sumter 55.17 350 P **P 00 21 21.4 +0.4**
baz=169,SNR=5.3
Y55A Saluda 55.35 349 P **P 00 21 21.9 -0.3**
baz=167,SNR=6.6
X60A Albert Glenn T 55.39 353 P **P 00 21 23.1 +0.7**
baz=172,SNR=9.2
Y54A Tignall 55.43 348 P **P 00 21 22.9 +0.1**
baz=166,SNR=8.2
Z51A Franklin 55.45 345 IAMs_20 IAMs_20 00 46 17.4
comp=Z,3µm,20.0s
X59A McDuffie Farm, 55.46 352 P **P 00 21 23.2 +0.2**
baz=171,SNR=8.0
X58A Rowland 55.54 351 P **P 00 21 23.9 +0.3**
baz=170,SNR=6.4
X57A Johnson Farm, 55.57 351 P **P 00 21 24.0 +0.2**
baz=169
Z50A Ashland 55.58 344 IAmb IAmb 00 21 24.6
comp=Z,70nm,1.2s
Z50A Ashland 55.58 344 P **P 00 21 23.1 -0.8**
baz=163,SNR=10
Y53A Monroe 55.61 347 P **P 00 21 24.9 +0.8**
baz=165,SNR=6.0
LRAL Lakeview Retre 55.65 343 IAmb IAmb 00 21 34.7
comp=Z,187nm,1.9s
LRAL Lakeview Retre 55.65 343 P **P 00 21 23.3 -1.0**
baz=162,SNR=8.3
Y52A Lilburn 55.72 346 P **P 00 21 24.4 -0.5**
baz=165
ASCN Ascension 55.74 86 P **P 00 21 25.9 +0.4**
ASCN IAMs_20 IAMs_20 00 45 29.7
comp=Z,4µm,19.0s
X56A White Oak 55.74 350 P **P 00 21 24.9 -0.1**
baz=168,SNR=6.1
BIRD Birdtown, Kers 55.80 350 IAmb IAmb 00 21 27.0
comp=Z,90nm,1.1s
W60A Pink Hill 55.83 353 P **P 00 21 26.3 +0.7**
baz=172,SNR=6.8
X55A Gracelyn & Ava 55.83 349 P **P 00 21 25.9 +0.3**
baz=168,SNR=8.3
W61A Ground Anchor 55.87 354 P **P 00 21 27.1 +1.1**
baz=173,SNR=8.4
HKT Hockley 55.87 333 P **P 00 21 26.7 +0.8**
HKT pmax pmax
comp=Z,79nm,1.4s
HKT Hockley 55.87 333 P **P 00 21 26.7 +0.8**
HKT IAmb IAmb 00 19 14.8
comp=Z,79nm,1.4s
Y51A Rockmart 55.98 346 P **P 00 21 25.9 -1.0**
baz=164,SNR=13
W58A Raeford 55.99 351 P **P 00 21 26.8 +0.1**
baz=170,SNR=12
W59A Clinton 56.03 352 P **P 00 21 27.4 +0.3**
baz=171
CNNC Cliffs of the 56.03 353 P **P 00 21 28.2 +1.1**
baz=172,SNR=6.9
X54A Belton 56.04 348 P **P 00 21 27.3 +0.2**
baz=167,SNR=6.8
833A Chaparral WMA, 56.08 329 IAmb IAmb 00 21 38.1
comp=Z,62nm,0.9s
833A Chaparral WMA, 56.08 329 P **P 00 21 28.9 +1.3**
baz=147,SNR=7.5
X53A Estanollee 56.18 347 P **P 00 21 27.9 -0.3**
baz=166
PAULI Pauline 56.20 349 IAmb IAmb 00 21 29.7
comp=Z,66nm,1.2s
PAULI IAMs_20 IAMs_20 00 50 10.3
comp=Z,3µm,18.0s
W57A Gilead 56.23 351 IAmb IAmb 00 21 30.0
comp=Z,80nm,1.2s
W57A Gilead 56.23 351 P **P 00 21 28.7 +0.3**
baz=170
W56A Indian Trail 56.30 350 P **P 00 21 29.1 +0.1**
baz=169,SNR=6.6
X52A Dahlonega 56.40 347 P **P 00 21 29.6 -0.1**
baz=165,SNR=6.5
KMSC Kings Mountain 56.43 349 IAmb IAmb 00 21 31.4
comp=Z,71nm,1.2s
KMSC IAMs_20 IAMs_20 00 46 30.3
comp=Z,4µm,20.0s
KMSC Kings Mountain 56.43 349 P **P 00 21 30.1 +0.2**
baz=168,SNR=8.7
V61A Roper 56.44 354 P **P 00 21 30.4 +0.5**
V61A Roper 56.44 354 P **P 00 21 31.7 +1.8**
baz=173
V60A Jim Taylor Roa 56.48 354 P **P 00 21 29.4 -0.9**
V60A IAmb IAmb 00 21 32.8
comp=Z,124nm,1.1s
V60A Jim Taylor Roa 56.48 354 P **P 00 21 31.2 +1.0**
baz=173,SNR=6.4
W54A Cherokee Point 56.53 349 P **P 00 21 30.7 +0.1**
baz=167,SNR=9.2
X51A Calhoun 56.57 346 P **P 00 21 30.7 -0.3**
baz=164,SNR=5.9
V59A Middlesex 56.59 353 P **P 00 21 31.4 +0.4**
baz=172,SNR=14
FPAL Fort Paine 56.73 345 P **P 00 21 31.0 -1.1**
V58A Windy Hill, Pi 56.73 352 IAmb IAmb 00 21 33.7
comp=Z,146nm,1.5s
V58A Windy Hill, Pi 56.73 352 P **P 00 21 32.1 0.0**
baz=171,SNR=5.9
W53A Cullowhee 56.80 348 P **P 00 21 32.4 -0.3**
baz=166,SNR=13
W52A Murphy 56.88 347 IAmb IAmb 00 21 34.2
comp=Z,80nm,1.3s
W52A Murphy 56.88 347 P **P 00 21 33.5 +0.3**
baz=165,SNR=7.5
V57A Coltrane Farms 56.91 351 P **P 00 21 33.2 -0.1**
baz=170
V56A Mocksville 56.95 350 P **P 00 21 33.8 +0.2**
baz=169,SNR=9.3
U61A Possum Corner 56.96 354 P **P 00 21 34.4 +0.7**
baz=174,SNR=5.9
NATX Nacogdoches 56.99 336 P **P 00 21 35.1 +1.1**
NATX IAmb IAmb 00 21 45.2
comp=Z,137nm,1.1s
NATX Nacogdoches 56.99 336 P **P 00 21 36.3 +2.3**
baz=153,SNR=5.4
X48A Hartselle 57.00 344 IAmb IAmb 00 21 35.4
comp=Z,84nm,1.2s
V55A Taylorsville 57.10 350 IAmb IAmb 00 21 36.3
comp=Z,87nm,1.1s
V55A Taylorsville 57.10 350 P **P 00 21 35.3 +0.6**
baz=168,SNR=9.0
U59A Littleton 57.12 353 IAmb IAmb 00 21 36.6
comp=Z,144nm,1.2s
U59A Littleton 57.12 353 P **P 00 21 35.2 +0.4**
baz=172,SNR=13
W51A Cleveland 57.12 346 P **P 00 21 34.0 -0.9**
baz=164,SNR=8.5
V54A Nebo 57.16 349 P **P 00 21 34.9 -0.2**
baz=167,SNR=12
U60A Pendleton 57.17 354 P **P 00 21 35.9 +0.8**
baz=173,SNR=5.9
V53A Saluda 57.21 348 P **P 00 21 35.1 -0.5**
baz=166
U58A Oxford 57.25 352 P **P 00 21 37.4 +1.7**
baz=171,SNR=9.5
W50A Signal Mountai 57.29 346 IAmb IAmb 00 21 37.6
comp=Z,71nm,1.2s
W50A Signal Mountai 57.29 346 P **P 00 21 35.4 -0.7**
baz=164,SNR=9.4
CPCT Cooper Cave 57.35 347 IAmb IAmb 00 21 38.0
comp=Z,74nm,1.2s
U57A Blanch 57.39 352 P **P 00 21 36.7 0.0**
baz=170,SNR=6.3
TKL Tuckaleechee C 57.39 347 IAmb IAmb 00 21 37.5
comp=Z,72nm,1.1s
W49A Belvidere 57.44 345 P **P 00 21 36.9 -0.2**
baz=163
SWET Sewanee 57.45 345 IAmb IAmb 00 21 37.8
comp=Z,73nm,1.2s
U56A King 57.45 351 IAmb IAmb 00 21 39.1
comp=Z,72nm,1.1s
U56A IAMs_20 IAMs_20 00 47 10.5
comp=Z,3µm,20.0s
U56A King 57.45 351 P **P 00 21 38.0 +0.7**
baz=169,SNR=8.1
V52A Sevierville 57.53 348 IAmb IAmb 00 21 38.6
comp=Z,113nm,1.1s
V52A Sevierville 57.53 348 P **P 00 21 37.0 -0.7**
baz=166,SNR=14
V51A Loudon 57.65 347 P **P 00 21 37.7 -0.9**
baz=165,SNR=5.3
Z41A Richland Creek 57.65 338 P **P 00 21 39.9 +1.2**
baz=155,SNR=9.5
V50A Pikevile 57.69 346 P **P 00 21 37.9 -1.0**
baz=164,SNR=16
T59A Double "B" Far 57.70 353 P **P 00 21 39.2 +0.3**
baz=172,SNR=17
TA2, Sparta 57.71 350 P **P 00 21 39.3 +0.2**
baz=168,SNR=5.6
OXF Oxford 57.71 342 IAmb IAmb 00 21 48.7
comp=Z,68nm,1.1s
OXF Oxford 57.71 342 P **P 00 21 38.6 -0.4**
baz=159,SNR=11
T60A Surry 57.79 354 P **P 00 21 39.7 +0.3**
T60A Surry 57.79 354 P **P 00 21 41.3 +1.8**
baz=173
T58A Grand View Acr 57.79 353 P **P 00 21 39.6 0.0**
baz=171,SNR=20
U53A Fall Branch 57.84 349 P **P 00 21 39.9 0.0**
baz=167,SNR=5.8
U54A Nelsons Funny 57.86 349 IAmb IAmb 00 21 41.3
comp=Z,91nm,1.1s
U54A Nelsons Funny 57.86 349 P **P 00 21 39.8 -0.4**
baz=168,SNR=9.2
CCAR Cane Creek 57.90 339 P **P 00 21 40.7 +0.3**
T57A Hurt 57.93 352 IAmb IAmb 00 21 42.4
comp=Z,120nm,1.2s
T57A Hurt 57.93 352 P **P 00 21 40.6 +0.1**
baz=170,SNR=10
V49A McMinnville 57.97 345 P **P 00 21 39.5 -1.3**
baz=163,SNR=14
U52A Thorn Hill 58.02 348 P **P 00 21 40.6 -0.6**
baz=166,SNR=5.2
T56A Rocky Mt 58.07 351 P **P 00 21 42.0 +0.5**
baz=170,SNR=7.1
JCT Junction City 58.08 330 P **P 00 21 44.4 +2.6**
baz=148
U51A La Follette 58.14 347 P **P 00 21 41.1 -0.9**
baz=165,SNR=6.1
V48A Smith Brothers 58.16 345 IAmb IAmb 00 21 43.6
comp=Z,96nm,1.2s
X43A Marvell 58.17 340 P **P 00 21 42.7 +0.5**
baz=158
TZTN Tazewell 58.20 348 P **P 00 21 41.8 -0.6**
baz=166
SACV Santiago Islan 58.22 56 IAMs_20 IAMs_20 00 44 23.2
comp=Z,4µm,22.0s
T55A Pulaski 58.27 350 P **P 00 21 43.3 +0.3**
baz=169,SNR=14
BLA Blacksburg 58.31 351 IAmb IAmb 00 22 15.2

comp=Z,58nm,1.1s
BLA Blacksburg 58.31 351 P P 00 21 43.2 -0.1
baz=169
WHTX Lake Whitney, 58.33 333 IAmb IAmb 00 21 53.8
comp=Z,82nm,1.2s
WHTX Lake Whitney, 58.33 333 P P 00 21 44.5 +1.1
baz=150
T54A Tazewell 58.34 350 P P 00 21 43.1 -0.4
baz=168,SNR=7.3
U50A Jamestown 58.35 347 P P 00 21 42.6 -0.8
baz=164,SNR=14
S58A Poland Farm, P 58.39 353 P P 00 21 44.0 +0.3
baz=172,SNR=8.4
T53A Wise 58.43 349 P P 00 21 43.6 -0.5
baz=167,SNR=7.1
S59A Mechanicsville 58.46 354 P P 00 21 44.7 +0.6
baz=173
T52A Hallie 58.64 348 IAMs_20 IAMs_20 00 45 33.7
comp=Z,3µm,20.0s
T52A Hallie 58.64 348 P P 00 21 44.8 -0.7
baz=166
S56A Natural Bridge 58.64 352 P P 00 21 45.9 +0.3
baz=170,SNR=6.4
S57A Dark Hollow, R 58.65 352 IAmb IAmb 00 21 48.1
comp=Z,109nm,1.2s
S57A Dark Hollow, R 58.65 352 P P 00 21 45.9 +0.4
baz=171,SNR=15
U49A Red Boiling Sp 58.65 346 P P 00 21 44.6 -1.0
baz=163,SNR=12
T51A Gray 58.69 348 P P 00 21 45.9 0.0
baz=166,SNR=9.3
R58B Mineral 58.72 353 IAmb IAmb 00 21 48.1
comp=Z,134nm,1.2s
R58B Mineral 58.72 353 P P 00 21 46.6 +0.6
baz=172,SNR=16
X40A Basin Creek Fa 58.78 339 P P 00 21 46.3 -0.2
WVT Waverly 58.79 344 P P 00 21 44.8 -1.7
WVT pmax pmax
comp=Z,74nm,1.3s
WVT Waverly 58.79 344 P P 00 21 44.8 -1.7
WVT IAmb IAmb 00 21 46.7
comp=Z,74nm,1.2s
WVT Waverly 58.79 344 P P 00 21 45.2 -1.4
baz=161
S55A Lewisburg 58.87 351 P P 00 21 47.0 -0.1
baz=169,SNR=9.9
UALR University of 58.88 339 IAmb IAmb 00 21 48.4
comp=Z,94nm,1.4s
R59A King George, V 58.88 354 P P 00 21 48.0 +1.0
baz=173,SNR=6.4
CBN Corbin Frederi 58.91 354 P P 00 21 47.7 +0.4
CBN Corbin Frederi 58.91 354 P P 00 21 48.2 +0.9
baz=173
T50A Nancy 58.93 347 P P 00 21 46.5 -1.0
baz=164,SNR=9.5
LPAR Lepanto 58.99 341 P P 00 21 47.8 -0.2
HALT Halls 59.00 342 P P 00 21 47.0 -1.0
S54A Dingess, Beckl 59.02 350 IAmb IAmb 00 21 49.4
comp=Z,108nm,1.2s
S54A Dingess, Beckl 59.02 350 P P 00 21 48.1 -0.1
baz=168,SNR=7.8
TXAR Lajitas Array 59.04 326 P P 00 21 48.4 -0.2
TXAR Lajitas Array 59.04 326 P P 00 21 48.0 -0.6
comp=Z,9.8nm,1.0s,baz=148,slow=8.7,SNR=30
TXAR LR LR 00 44 27.7
comp=Z,908nm,20.4s,baz=0.0,slow=33
TXAR Lajitas Array 59.04 326 P P 00 21 48.4 -0.2
S53A Williamson 59.04 349 P P 00 21 47.7 -0.6
baz=168
R58A Rapidan 59.07 353 P P 00 21 48.9 +0.5
baz=172,SNR=9.6
MIAR Mount Ida 59.09 338 P P 00 21 48.3 -0.4
baz=155,SNR=24
R57A Stanardsville 59.12 353 P P 00 21 49.5 +0.7
baz=171,SNR=15
T49A Edmonton 59.16 346 P P 00 21 48.3 -0.8
baz=164,SNR=23
W41B Gary Mavity, V 59.21 339 P P 00 21 49.7 +0.3
baz=156,SNR=11
LNXT Lenox 59.22 342 P P 00 21 49.6 +0.1
GNAR Gosnell 59.24 342 P P 00 21 49.5 -0.2
UTMT University of 59.27 343 P P 00 21 50.0 +0.1
S51A Beattyville 59.27 348 P P 00 21 49.2 -0.6
baz=166
R55A Marlinton 59.32 351 P P 00 21 50.7 +0.4
baz=170,SNR=5.1
GLAT Glass 59.32 343 P P 00 21 50.1 -0.1
GLAT IAmb IAmb 00 21 51.5
comp=Z,98nm,1.0s
WHAR Wooly Hollow 59.33 339 IAmb IAmb 00 22 01.2
comp=Z,97nm,1.3s
R56A Bull Pasture M 59.34 352 P P 00 21 50.8 +0.4
baz=170
R54A Victor 59.34 351 P P 00 21 50.1 -0.3
baz=169,SNR=6.6
S50A Richmond 59.47 347 P P 00 21 50.5 -0.7
baz=165,SNR=14
HICK Hickman 59.56 343 P P 00 21 51.2 -0.6
Q60A Greensboro 59.56 355 P P 00 21 51.9 +0.2
Q60A Greensboro 59.56 355 P P 00 21 53.2 +1.4
baz=174
PENMO Penman 59.58 342 P P 00 21 51.4 -0.6
R53A Hurricane 59.65 350 IAmb IAmb 00 21 53.4
comp=Z,68nm,1.1s
R53A Hurricane 59.65 350 P P 00 21 52.5 +0.1
baz=168,SNR=6.7
Q58A Fox Den Farm, 59.67 354 P P 00 21 54.3 +1.7
baz=172,SNR=8.4
LCAR Lake Charles 59.68 341 IAmb IAmb 00 22 03.2
comp=Z,138nm,1.7s
W39A Magazine 59.75 338 IAmb IAmb 00 22 03.9
comp=Z,107nm,1.1s
W39A Magazine 59.75 338 P P 00 21 54.4 +1.2
baz=155,SNR=13
S49A Springfield 59.76 347 P P 00 21 52.5 -0.7
baz=164,SNR=8.9
HENM Henderson Moun 59.79 343 P P 00 21 53.4 0.0
HENM IAmb IAmb 00 21 54.4
comp=Z,60nm,0.6s
ABTX Abilene, Hawle 59.82 332 IAmb IAmb 00 22 04.0
comp=Z,77nm,1.1s
ABTX Abilene, Hawle 59.82 332 P P 00 21 54.1 +0.3
baz=148
PARMO Parma 59.82 342 P P 00 21 53.6 0.0
PARMO IAmb IAmb 00 22 03.4
comp=Z,84nm,0.9s
FCAR Ozark Folk Cen 59.82 340 P P 00 21 53.1 -0.6
Q57A Strasburg 59.84 353 P P 00 21 54.3 +0.6
baz=172,SNR=18
R51A Hillsboro 59.91 348 P P 00 21 53.5 -0.7
baz=166,SNR=11
Q56A Snyder Ridge, 59.94 352 P P 00 21 55.1 +0.6
baz=171,SNR=15
Q55A Buckhannon 60.01 352 P P 00 21 56.0 +1.0
baz=170,SNR=9.5
R50A Paris 60.04 348 IAmb IAmb 00 21 55.9
comp=Z,80nm,1.3s
R50A Paris 60.04 348 P P 00 21 54.9 -0.2
baz=165,SNR=9.9
Q53A Leroy 60.09 350 P P 00 21 55.3 -0.2
baz=168,SNR=8.3
Q54A Coxs Mills 60.11 351 IAmb IAmb 00 22 06.6
comp=Z,144nm,1.6s
Q54A Coxs Mills 60.11 351 P P 00 21 55.1 -0.5
baz=169,SNR=5.8
PBMO Poplar Bluff 60.12 342 P P 00 21 54.9 -0.8
PBMO IAmb IAmb 00 22 05.1
comp=Z,33nm,0.8s
P58A Pank, Wackersv 60.17 354 P P 00 21 57.2 +1.2
baz=173,SNR=9.0
P59A Jarrettsville 60.21 355 P P 00 21 57.3 +1.0
baz=174,SNR=12
R49A Shelbyville 60.22 347 IAmb IAmb 00 21 56.9
comp=Z,74nm,1.4s
R49A Shelbyville 60.22 347 P P 00 21 56.0 -0.4
baz=164,SNR=6.4
P57A Homestead Farm 60.24 353 P P 00 21 57.8 +1.4
baz=172,SNR=14
Q52A Bidwell 60.31 350 P P 00 21 56.7 -0.3
baz=168
P60A Greenville 60.35 356 IAmb IAmb 00 21 59.0
comp=Z,85nm,1.3s
P60A Greenville 60.35 356 P P 00 21 57.7 +0.5
baz=175,SNR=5.2
P56A Dayton Farm, R 60.35 353 P P 00 21 58.2 +1.0
baz=171,SNR=13
WCI Wyandotte Cave 60.41 346 P P 00 21 56.5 -1.1
WCI pmax pmax
comp=Z,78nm,1.3s
WCI Wyandotte Cave 60.41 346 P P 00 21 56.5 -1.1
WCI IAmb IAmb 00 21 58.1
comp=Z,78nm,1.2s
WCI Wyandotte Cave 60.41 346 P P 00 21 56.8 -0.9
baz=163
PSUB Penn St. - Bra 60.45 356 P P 00 21 57.1 -0.8
PSUB IAmb IAmb 00 21 59.6
comp=Z,73nm,1.2s
P55A Reedsville 60.48 352 P P 00 21 58.1 -0.1
baz=170,SNR=6.6
U40A Yellville 60.49 339 IAmb IAmb 00 22 09.9
comp=Z,50nm,0.9s
U40A Yellville 60.49 339 P P 00 21 57.7 -0.5
baz=156,SNR=18
Q50A Georgetown 60.51 348 P P 00 21 58.0 -0.3
baz=166,SNR=6.9
Q51A Peebles 60.57 349 P P 00 21 58.2 -0.5
baz=166,SNR=7.4
MVL Millersville 60.59 355 IAmb IAmb 00 22 02.0
comp=Z,67nm,1.1s
MCWV Mont Chateau 60.63 352 IAmb IAmb 00 22 01.0
comp=Z,48nm,1.1s
MCWV Mont Chateau 60.63 352 P P 00 21 59.5 +0.4
baz=170,SNR=9.6
S44A Carbondale 60.64 343 IAmb IAmb 00 22 10.6
comp=Z,83nm,0.8s
SIUC Southern Illin 60.65 343 P P 00 21 58.9 -0.4
SIUC IAmb IAmb 00 22 10.7
comp=Z,83nm,0.9s
P54A Burton 60.66 351 P P 00 21 59.5 +0.1
baz=170,SNR=16
P53A Whipple 60.68 350 IAmb IAmb 00 22 00.8
comp=Z,100nm,1.2s
P53A Whipple 60.68 350 P P 00 21 59.6 +0.1
baz=159,SNR=9.9
X34A Smith Ranch, M 60.75 334 IAmb IAmb 00 22 10.5
comp=Z,98nm,1.2s
O58A Lewisberry 60.77 354 P P 00 22 01.2 +1.2
baz=173,SNR=7.3
HHAR Hobbs 60.78 339 IAmb IAmb 00 22 12.1
comp=Z,110nm,1.3s
Q49A Aurora 60.85 347 P P 00 22 00.2 -0.5
baz=165,SNR=7.9
W35A Tecumseh 60.85 335 P P 00 22 01.1 +0.3
PAGS Pennsylvania G 60.85 355 IAmb IAmb 00 22 03.6
comp=Z,115nm,1.5s
O59A Robesonia 60.89 355 P P 00 21 01.8 +0.9
baz=174,SNR=11
O57A Amberson 60.92 354 P P 00 22 02.6 +1.5
baz=172,SNR=15
P52A Corning 60.95 350 P P 00 22 00.5 -0.8
baz=168,SNR=6.1
Q48A North Vernon 60.95 347 P P 00 22 00.2 -1.1
baz=164,SNR=7.3
P51A Williamsport 60.96 349 IAmb IAmb 00 22 01.9
comp=Z,46nm,1.0s
P51A Williamsport 60.96 349 P P 00 22 00.8 -0.5
baz=167
MGMO Mountain Grove 61.03 340 IAmb IAmb 00 22 13.6
comp=Z,77nm,1.2s
O56A Blue Knob Stat 61.08 353 P P 00 22 03.0 +0.7
baz=172,SNR=16
O55A Ligonier 61.10 352 P P 00 22 02.5 +0.2
baz=171,SNR=12
TUL1 Leonard 61.11 337 IAmb IAmb 00 22 12.6
comp=Z,101nm,1.1s
TUL1 Leonard 61.11 337 P P 00 22 04.0 +1.5
baz=153,SNR=11
N61A South Mountain 61.20 357 P P 00 22 04.6 +1.6
baz=176
P50A Jamestown 61.22 348 P P 00 22 02.6 -0.5
baz=166,SNR=10
O54A Avella 61.22 352 P P 00 22 02.9 -0.3
O54A IAmb IAmb 00 23 04.5
comp=Z,68nm,1.3s
O54A Avella 61.22 352 P P 00 22 02.8 -0.3
baz=170
OKCFA Oklahoma City 61.30 335 P P 00 22 03.2 -0.7
OLIL Olney 61.32 344 IAmb IAmb 00 22 10.3
comp=Z,138nm,1.7s
BLO Bloomington 61.36 346 IAmb IAmb 00 22 04.4
comp=Z,168nm,1.7s
SSPA Standing Stone 61.37 354 P P 00 22 04.7 +0.6
SSPA Standing Stone 61.37 354 P P 00 22 04.7 +0.6
baz=172
N60A Cedar Hill Far 61.37 356 P P 00 22 05.4 +1.3
baz=175,SNR=5.3
O52A Adamsville 61.37 350 IAmb IAmb 00 22 05.1
comp=Z,89nm,1.4s
O52A Adamsville 61.37 350 P P 00 22 03.7 -0.5
baz=168
VNA3 Neumayer Olymp 61.37 161 P P 00 22 04.8 +0.9
P48A Milroy 61.40 347 IAmb IAmb 00 22 37.2
comp=Z,96nm,1.7s
P48A Milroy 61.40 347 P P 00 22 02.8 -1.6
baz=164
O53A New Philadelph 61.40 351 P P 00 22 04.4 0.0
baz=169,SNR=5.6
PAL Palisades 61.44 357 P P 00 22 04.9 +0.3
PAL pmax pmax
comp=Z,110nm,1.3s
PAL Palisades 61.44 357 P P 00 22 04.9 +0.3
PAL IAmb IAmb 00 22 06.2
comp=Z,110nm,1.2s
PAL Palisades 61.44 357 P P 00 22 05.8 +1.2
baz=176,SNR=6.1
SHEL Horse Pasture 61.44 97 P P 00 22 05.2 -0.1
SHEL pmax pmax
comp=Z,117nm,1.1s
SHEL Horse Pasture 61.44 97 P P 00 22 05.2 -0.1
SHEL Horse Pasture 61.44 97 IAMs_20 IAMs_20 00 46 09.6
comp=Z,3µm,18.0s
N57A Milvy 61.45 354 P P 00 22 05.4 +0.7
baz=173,SNR=11
N58A Sunbury 61.46 355 P P 00 22 05.2 +0.5
baz=174,SNR=8.4
N59A State Game Lan 61.46 356 P P 00 22 05.2 +0.4
N59A IAmb IAmb 00 22 06.9
comp=Z,109nm,1.4s
N59A State Game Lan 61.46 356 P P 00 22 05.7 +0.9
baz=175
CLNB Carlsbad 61.51 328 P P 00 22 05.5 +0.1
O51A Paskala 61.53 350 P P 00 22 04.4 -0.9
baz=167,SNR=7.2
CCM Cathedral Cave 61.55 342 P P 00 22 04.7 -0.7
CCM pmax pmax
comp=Z,51nm,1.1s
CCM Cathedral Cave 61.55 342 P P 00 22 04.7 -0.7
CCM IAmb IAmb 00 22 16.8
comp=Z,52nm,1.1s
CCM Cathedral Cave 61.55 342 P P 00 22 04.9 -0.5
baz=158
ODNJ Ogdensburg 61.55 357 P P 00 22 05.1 -0.2
WSPT Westport, CT 61.58 358 P P 00 22 05.7 +0.2
VNA1 Neumayer--Stat 61.60 160 P P 00 22 06.9 +1.5
N55A Marion Center 61.63 353 P P 00 22 06.2 +0.3
baz=171,SNR=31
ACSO Alum Creek Sta 61.67 349 IAmb IAmb 00 22 07.5
comp=Z,113nm,1.1s
ACSO Alum Creek Sta 61.67 349 P P 00 22 05.5 -0.7
baz=167,SNR=19
N56A West Decatur 61.69 353 P P 00 22 06.8 +0.5
baz=172,SNR=14
GDL2 Guadalupe Moun 61.70 328 P P 00 22 06.9 +0.2
O50A Cable 61.70 349 P P 00 22 05.9 -0.5
baz=166,SNR=8.9
YLE Yale 61.71 358 P P 00 22 06.6 +0.2
M60A Port Jervis 61.79 357 P P 00 22 07.6 +0.6
baz=176,SNR=5.2
MNTX Cornudas Mount 61.81 327 P P 00 22 06.9 -0.4
baz=143,SNR=29
M62A Hamden 61.83 358 P P 00 22 08.2 +1.0
baz=178
O49A Covington 61.88 348 IAmb IAmb 00 22 08.7
comp=Z,68nm,1.1s
O49A Covington 61.88 348 P P 00 22 06.8 -0.7
baz=166,SNR=10
N53A Lisbon 61.90 351 IAmb IAmb 00 22 09.1
comp=Z,88nm,1.3s
N53A Lisbon 61.90 351 P P 00 22 07.5 -0.2
baz=169,SNR=6.8
N54A Moraine State 61.93 352 P P 00 22 08.2 +0.2
baz=170,SNR=10
P46A Rosedale 61.94 346 IAmb IAmb 00 22 08.0
comp=Z,77nm,1.1s
M58A Price's Panora 61.97 355 P P 00 22 08.9 +0.7
baz=174,SNR=10
M57A Sunshine Farm, 61.99 354 P P 00 22 09.0 +0.7
baz=173,SNR=8.7
N52A McGinn's Farm, 62.03 351 P P 00 22 08.2 -0.4
baz=168
M59A Waymart 62.06 356 P P 00 22 09.4 +0.6
baz=175,SNR=11
O48A Farmland 62.11 347 P P 00 22 08.0 -1.2
baz=165,SNR=15
KSCT Kent School, K 62.14 358 P P 00 22 08.7 -0.6
KSCT IAmb IAmb 00 22 11.8
comp=Z,110nm,1.4s
L63A North Scituate 62.23 359 P P 00 22 10.3 +0.4
baz=179,SNR=9.4
N50A Nevada 62.23 349 P P 00 22 09.0 -1.0
baz=167,SNR=15
N51A Ashland 62.24 350 IAmb IAmb 00 22 10.6
comp=Z,72nm,1.3s
N51A Ashland 62.24 350 P P 00 22 09.3 -0.8
baz=168
M55A Ridgway 62.28 353 P P 00 22 10.6 +0.3
baz=171,SNR=17
MSTX Muleshoe 62.37 330 IAmb IAmb 00 22 24.7
comp=Z,87nm,1.2s
MSTX Muleshoe 62.37 330 P P 00 22 12.4 +1.2
baz=146
M54A Oil Creek Stat 62.43 352 P P 00 22 11.3 0.0
baz=170,SNR=11
L60A Shokan 62.43 357 P P 00 22 12.7 +1.4
baz=176,SNR=5.7
SRIG Santa Rosalia 62.43 318 P P 00 22 12.2 +0.6
SRIG IAmb IAmb 00 22 33.8
comp=Z,42nm,1.0s
N49A Columbus Grove 62.56 348 P P 00 22 11.3 -0.8
baz=166,SNR=25
L58A Harry Jones Me 62.59 356 P P 00 22 13.4 +1.0
baz=174,SNR=12
L61A Hillsdale 1, H 62.61 358 P P 00 22 13.5 +1.1
baz=177
M51A Elyria 62.61 350 P P 00 22 12.0 -0.5
baz=168,SNR=6.5
L57A Andrews Acres 62.62 355 P P 00 22 13.4 +0.8
baz=174,SNR=7.5
SFIN Lafayette 62.64 346 IAmb IAmb 00 22 12.5
comp=Z,101nm,1.4s
N48A Decatur 62.66 348 P P 00 22 12.0 -0.8
baz=165,SNR=12
L59A Walton 62.68 356 P P 00 22 13.7 +0.8
baz=175,SNR=11
M52A Chesterland 62.69 351 IAmb IAmb 00 22 14.1
comp=Z,143nm,1.5s
M52A Chesterland 62.69 351 P P 00 22 12.4 -0.6
baz=169,SNR=5.3
BINY Binghamton 62.75 356 P P 00 22 14.3 +0.9
baz=174,SNR=9.4
O44A Mansfield 62.75 345 IAmb IAmb 00 22 14.0
comp=Z,82nm,1.3s
U32A Winter Ranch, 62.76 334 P P 00 22 13.8 +0.2
U32A IAmb IAmb 00 22 23.8
comp=Z,67nm,1.0s
N47A Urbana 62.82 347 IAmb IAmb 00 22 14.7
comp=Z,111nm,1.2s
N47A Urbana 62.82 347 P P 00 22 13.5 -0.4
baz=164,SNR=8.7
L56A Greenwood 62.82 354 P P 00 22 13.8 -0.1
baz=173,SNR=7.3
M50A Fremont 62.82 350 IAmb IAmb 00 22 14.6
comp=Z,127nm,1.4s
M50A Fremont 62.82 350 P P 00 22 13.4 -0.5
baz=167,SNR=6.6
L61B Northampton 62.83 358 P P 00 22 15.0 +1.0
baz=178,SNR=6.4
HRV Adam Dziewonsk 62.87 359 P P 00 22 15.3 +1.1
HRV pmax pmax
comp=Z,192nm,1.2s
HRV Adam Dziewonsk 62.87 359 P P 00 22 15.3 +1.1
HRV Adam Dziewonsk 62.87 359 P P 00 22 14.7 +0.6
baz=179
HSIG 62.87 320 P P 00 22 13.7 -0.8
HSIG IAmb IAmb 00 22 27.1
comp=Z,148nm,2.0s
L55A Hinsdale 62.95 354 P P 00 22 15.1 +0.3
baz=172,SNR=14
K62A Royalston 63.04 359 P P 00 22 15.2 -0.1
K60A Five Rivers En 63.04 357 P P 00 22 17.2 +1.9
baz=177
K63A Dunstable 63.05 359 P P 00 22 16.6 +1.3
baz=179
M49A Liberty Center 63.06 349 P P 00 22 14.1 -1.4
baz=166,SNR=9.9
ERPA Erie 63.07 352 P P 00 22 15.5 0.0
baz=170,SNR=7.5
K61A Williamstown 63.07 358 P P 00 22 16.9 +1.3
baz=177,SNR=5.5
L54A Sinclairville 63.10 353 P P 00 22 15.7 -0.1
baz=171,SNR=21
TRY Troy 63.15 358 P P 00 22 16.5 +0.5
M48A Edgerton 63.20 348 IAmb IAmb 00 22 18.0
comp=Z,87nm,1.2s
M48A Edgerton 63.20 348 P P 00 22 15.6 -0.8
baz=165,SNR=8.9
K59A Cooperstown 63.25 357 P P 00 22 17.8 +1.0
baz=176,SNR=16
M47A Cromwell 63.26 347 P P 00 22 16.0 -0.8
baz=164
K58A Earlville 63.29 356 IAmb IAmb 00 22 18.9
comp=Z,109nm,1.1s
K58A Earlville 63.29 356 P P 00 22 17.4 +0.4
baz=175,SNR=11
K57A Scipio Center 63.32 355 P P 00 22 17.1 -0.1
baz=174
HDIL Hopedale 63.34 344 IAmb IAmb 00 22 18.1
comp=Z,107nm,1.2s
HDIL Hopedale 63.34 344 P P 00 22 16.3 -1.0
baz=160,SNR=7.5
K56A Middlesex 63.35 354 P P 00 22 17.4 0.0
baz=173
K54A Basiliko Farm, 63.40 353 P P 00 22 18.0 +0.3
baz=172,SNR=15
L50A Kingsville 63.41 350 P P 00 22 17.7 0.0
baz=167
K55A Perry 63.45 354 P P 00 22 18.1 +0.1
baz=172,SNR=8.7
SNAA Sanae 63.59 161 P P 00 22 19.2 +0.5
SNAA Sanae 63.59 161 *i* P P 00 22 19.4 +0.7
J62A Henniker 63.59 359 P P 00 22 20.0 +1.1
baz=179
L48A N Adams 63.60 349 P P 00 22 18.1 -0.9
baz=166,SNR=7.8
L49A Milan 63.63 349 P P 00 22 18.9 -0.4
baz=166,SNR=6.9
J60A Lant Hill Farm 63.65 358 P P 00 22 21.0 +1.7
baz=177
319A Douglas 63.66 323 IAmb IAmb 00 22 40.1
comp=Z,48nm,1.1s
121A Cookes Peak, D 63.73 325 IAmb IAmb 00 22 33.2
comp=Z,190nm,1.9s
121A Cookes Peak, D 63.73 325 P P 00 22 23.4 +3.0
baz=141,SNR=8.5
J61A Chester 63.73 358 P P 00 22 21.1 +1.3
baz=178,SNR=5.3
L47A Sherwood 63.77 348 P P 00 22 19.6 -0.6
baz=165,SNR=9.7
ACCN Adirondack Com 63.80 358 IAmb IAmb 00 22 22.7
comp=Z,134nm,1.4s
K52A Tillsonburg 63.82 352 P P 00 22 20.2 -0.2
baz=170,SNR=6.1
M44A Midewin, Midew 63.82 345 P P 00 22 18.1 -2.4
M44A IAmb IAmb 00 22 30.1
comp=Z,165nm,1.9s
J56A Wolcott 63.89 355 P P 00 22 19.9 -1.0
J56A IAmb IAmb 00 22 22.2
comp=Z,106nm,1.2s
J56A Wolcott 63.89 355 P P 00 22 20.8 0.0
baz=174
N41A Harden Midland 63.90 343 IAmb IAmb 00 22 32.0
comp=Z,80nm,1.1s
J59A Piesco 63.92 357 P P 00 22 21.7 +0.6
baz=176,SNR=15
MEDO Medina 63.93 354 P P 00 22 21.8 +0.6
MEDO IAmb IAmb 00 22 23.4
comp=Z,127nm,1.4s
J55A Hilton 63.96 354 P P 00 22 21.1 -0.3
J55A IAmb IAmb 00 22 22.9
comp=Z,102nm,1.1s
J55A Hilton 63.96 354 P P 00 22 22.3 +0.9
baz=173,SNR=5.3

L46A	Eue Claire		64.03	347	IAmb	IAmb	00 22 27.1		
	comp=Z,143nm,1.4s								
J54A	Appleton		64.05	354	P	P	00 22 22.0	+0.1	
	baz=172								
HNH	Hanover		64.08	359	P	P	00 22 22.7	+0.6	
I62A	Tamworth		64.23	359	P	P	00 22 24.3	+1.1	
	baz=179								
K49A	Clarkson		64.24	350	P	P	00 22 24.0	+0.7	
	baz=167								
J52A	Paris		64.24	352	P	P	00 22 22.8	-0.4	
	baz=170,SNR=11								
I60A	Shoreham		64.25	358	P	P	00 22 24.3	+1.1	
	baz=177,SNR=8.4								
I61A	Oroboro, Fairl		64.30	359	P	P	00 22 25.5	+1.9	
	baz=178,SNR=13								
K48A	Perry		64.37	349	P	P	00 22 22.9	-1.2	
	baz=166								
BNM	Barren Site		64.39	327	P	P	00 22 24.5	-0.2	
NCB	Newcomb		64.41	357	P	P	00 22 24.8	+0.5	
NCB					IAmb	IAmb	00 22 27.6		
	comp=Z,56nm,1.2s								
I57A	Carthage		64.46	356	P	P	00 22 25.1	+0.5	
	baz=175,SNR=5.6								
LPM	Los Pinos Moun		64.52	327	P	P	00 22 26.0	+0.5	
LENM	Lemitar		64.58	327	P	P	00 22 26.4	+0.5	
LBNH	Lisbon		64.61	359	P	P	00 22 26.2	+0.6	
LBNH					pmax	pmax			
	comp=Z,208nm,1.3s								
LBNH	Lisbon		64.61	359	P	P	00 22 26.2	+0.6	
LBNH	Lisbon		64.61	359	P	P	00 22 27.7	+2.1	
	baz=179,SNR=6.8								
J49A	Marlette		64.75	350	P	P	00 22 25.8	-0.7	
	baz=167								
J48A	Bridge Port		64.79	349	IAmb	IAmb	00 22 27.3		
	comp=Z,130nm,1.3s								
J48A	Bridge Port		64.79	349	P	P	00 22 25.8	-1.0	
	baz=166,SNR=7.1								
H58A	Gabriels		64.85	357	P	P	00 22 27.6	+0.3	
	baz=176,SNR=9.3								
I51A	Listowel		64.86	352	P	P	00 22 26.5	-0.7	
	baz=169								
I55A	Frankford		64.89	354	P	P	00 22 27.7	+0.3	
	baz=173,SNR=8.5								
H61A	Lyndonville		64.90	359	P	P	00 22 28.8	+1.3	
	baz=179,SNR=6.7								
J47A	Sunmer		64.92	349	IAmb	IAmb	00 22 28.1		
	comp=Z,88nm,1.1s								
J47A	Sunmer		64.92	349	P	P	00 22 27.4	-0.3	
	baz=165								
ANMO	Albuquerque		64.94	328	P	P	00 22 28.7	+0.5	
ANMO					pmax	pmax			
	comp=Z,125nm,2.0s								
ANMO	Albuquerque		64.94	328	P	P	00 22 28.7	+0.5	
ANMO					IAmb	IAmb	00 22 42.2		
	comp=Z,125nm,1.9s								
ANMO	Albuquerque		64.94	328	P	P	00 22 30.1	+1.9	
	baz=143								
H60A	Morristown		64.94	358	P	P	00 22 29.2	+1.4	
	baz=178								
H57A	Richville		64.96	356	P	P	00 22 27.6	-0.3	
	baz=175,SNR=9.7								
H63A	New Sharon		65.02	0	P	P	00 22 30.1	+1.8	
	baz=181,SNR=6.3								
H59A	Cadyville		65.06	358	P	P	00 22 29.8	+1.2	
	baz=177,SNR=8.4								
LONY	Lake Ozonia		65.08	357	IAmb	IAmb	00 22 30.6		
	comp=Z,137nm,1.4s								
LONY	Lake Ozonia		65.08	357	P	P	00 22 29.7	+1.0	
	baz=176,SNR=6.3								
K43A	Burlington		65.14	346	P	P	00 22 28.3	-0.8	
K43A					IAmb	IAmb	00 22 29.5		
	comp=Z,116nm,1.2s								
H56A	Elgin		65.15	356	P	P	00 22 29.6	+0.5	
	baz=174,SNR=5.6								
CBKS	Cedar Bluff		65.16	335	IAmb	IAmb	00 22 40.0		
	comp=Z,94nm,1.2s								
CBKS	Cedar Bluff		65.16	335	P	P	00 22 31.2	+1.8	
	baz=150,SNR=7.8								
H55A	Tweed		65.18	355	P	P	00 22 29.9	+0.6	
	baz=173,SNR=6.5								
DELO	Deloro Mine		65.19	355	IAmb	IAmb	00 22 30.8		
	comp=Z,130nm,1.5s								
TUC	Tucson		65.20	323	P	P	00 22 31.2	+1.3	
TUC					pmax	pmax			
	comp=Z,96nm,2.0s								
TUC	Tucson		65.20	323	P	P	00 22 31.2	+1.3	
TUC					IAmb	IAmb	00 22 37.8		
	comp=Z,96nm,2.0s								
TUC	Tucson		65.20	323	P	P	00 22 32.6	+2.8	
	baz=138								
H66A	Whiting		65.21	3	P	P	00 22 30.8	+1.3	
	baz=183								
I49A	Point Hope		65.26	350	IAmb	IAmb	00 22 30.2		
	comp=Z,95nm,1.0s								
L40A	Anamosa		65.26	343	IAmb	IAmb	00 22 31.2		
	comp=Z,90nm,1.2s								
H53A	Bobcaygeon		65.33	354	P	P	00 22 30.1	-0.2	
	baz=172,SNR=7.7								
G60A	Masonville		65.47	359	P	P	00 22 33.2	+2.0	
	baz=178,SNR=5.5								
G59A	Clarenceville		65.48	358	P	P	00 22 31.9	+0.7	
	baz=177								
G63A	Kingsbury		65.48	1	P	P	00 22 32.6	+1.4	
	baz=181								
H52A	Wyevale		65.55	353	P	P	00 22 31.2	-0.4	
	baz=170,SNR=7.5								
G62A	West of Eustis		65.57	0	P	P	00 22 32.9	+1.1	
	baz=180,SNR=13								
G58A	Ormstown		65.58	357	P	P	00 22 32.9	+1.0	
	baz=176								
G57A	Newington		65.58	357	P	P	00 22 32.1	+0.2	
	baz=176,SNR=9.0								
SADO	Sadowa		65.59	353	IAmb	IAmb	00 22 32.9		
	comp=Z,81nm,1.1s								
I47A	Gladwin		65.62	349	IAmb	IAmb	00 22 34.2		
	comp=Z,52nm,1.1s								
PKME	Peaks-Kenny Pk		65.63	1	P	P	00 22 32.9	+0.7	
PKME					IAmb	IAmb	00 23 31.7		
	comp=Z,129nm,1.4s								
G61A	St-Isidore-de-		65.64	359	P	P	00 22 33.8	+1.5	
	baz=179,SNR=6.6								
I48A	Sherman Twp		65.64	350	P	P	00 22 31.3	-1.0	
	baz=167,SNR=9.7								
PLVO	Plevna		65.66	355	IAmb	IAmb	00 23 08.1		
	comp=Z,92nm,1.4s								
SCIA	State Center		65.68	342	P	P	00 22 32.5	-0.1	
SCIA					IAmb	IAmb	00 22 35.5		
	comp=Z,83nm,1.2s								
I46A	Reed City		65.72	348	P	P	00 22 31.5	-1.3	
	baz=165,SNR=5.7								
T25A	Trinidad		65.73	331	P	P	00 22 33.6	+0.3	
T25A					IAmb	IAmb	00 22 44.6		
	comp=Z,82nm,1.4s								
T25A	Trinidad		65.73	331	P	P	00 22 35.8	+2.4	
	baz=145								
JFWS	Jewell Farm		65.80	344	P	P	00 22 32.9	-0.5	
	baz=160								
G55A	Calabogie		65.84	355	P	P	00 22 34.8	+1.2	
	baz=174,SNR=7.4								
G53A	Haliburton		65.88	354	P	P	00 22 33.7	-0.1	
	baz=172,SNR=14								
H48A	Harrisville		66.08	350	P	P	00 22 34.2	-0.9	
H48A					IAmb	IAmb	00 22 36.2		
	comp=Z,105nm,1.3s								
G54A	Lake Saint Pet		66.10	354	P	P	00 22 35.7	+0.4	
	baz=172,SNR=6.3								
214A	Organ Pipe Nat		66.10	321	IAmb	IAmb	00 22 48.7		
	comp=Z,142nm,1.9s								
214A	Organ Pipe Nat		66.10	321	P	P	00 22 37.5	+1.9	
	baz=137,SNR=20								
H46A	Fife Lake		66.25	349	P	P	00 22 35.0	-1.2	
	baz=165,SNR=8.0								
F64A	Sherman		66.25	2	IAmb	IAmb	00 22 38.4		
	comp=Z,79nm,1.2s								
F64A	Sherman		66.25	2	P	P	00 22 36.8	+0.6	
	baz=182								
GBN	Guysborough		66.29	7	P	P	00 22 36.6	+0.2	
F60A	Warwick		66.33	359	P	P	00 22 37.6	+0.9	
	baz=179								
I42A	Draeger Farm,		66.40	346	IAmb	IAmb	00 22 38.1		
	comp=Z,157nm,1.6s								
X18A	Snowflake		66.41	325	P	P	00 22 38.0	+0.3	
X18A					IAmb	IAmb	00 22 49.7		
	comp=Z,110nm,1.8s								
GLMI	Grayling		66.42	349	P	P	00 22 36.1	-1.2	
LMN	Caledonia Moun		66.42	4	P	P	00 22 36.9	-0.4	
LMN					IAmb	IAmb	00 22 39.0		
	comp=Z,109nm,1.4s								
KSCO	Kaye Shedlock'		66.50	333	P	P	00 22 38.0	-0.1	
KSCO					IAmb	IAmb	00 22 51.0		
	comp=Z,126nm,1.4s								
KSCO	Kaye Shedlock'		66.50	333	P	P	00 22 40.4	+2.3	
	baz=147								
F52A	Sundridge		66.62	353	P	P	00 22 38.3	-0.3	
	baz=171,SNR=6.3								
ALGO	Algonquin Park		66.65	354	P	P	00 22 38.3	-0.5	
	baz=172								
H43A	Windswept, Lux		66.69	347	P	P	00 22 38.4	-0.6	
H43A					IAmb	IAmb	00 23 57.8		
	comp=Z,79nm,1.0s								
SDCO	Great Sand Dun		66.72	330	IAmb	IAmb	00 22 51.2		
	comp=Z,80nm,1.3s								
SDCO	Great Sand Dun		66.72	330	P	P	00 22 40.3	+0.5	
	baz=144,SNR=19								
W18A	Petrified Fore		66.75	326	P	P	00 22 40.6	+0.7	
E58A	La Victoria		66.77	358	P	P	00 22 39.7	+0.2	
	baz=177,SNR=5.9								
E61A	Lac Etchemin		66.79	0	P	P	00 22 41.7	+2.1	
	baz=180								
E63A	Oxbow		66.81	2	P	P	00 22 39.9	+0.1	
E63A	Oxbow		66.81	2	P	P	00 22 41.0	+1.2	
	baz=182								
I40A	Norwalk		66.81	344	IAmb	IAmb	00 22 50.6		
	comp=Z,131nm,1.6s								
F51A	Arnstein		66.82	353	P	P	00 22 39.2	-0.6	
	baz=171								
BGNE	Belgrade		66.83	338	P	P	00 22 41.8	+1.7	
	baz=152,SNR=5.2								
E55A	Montcerf-Lytto		66.99	356	P	P	00 22 41.1	+0.2	
	baz=174								
E56A	St. Veronique		67.02	357	P	P	00 22 41.1	0.0	
	baz=176,SNR=9.0								
E52A	Mattawa		67.04	354	P	P	00 22 41.3	+0.1	
	baz=172								
E53A	Dumoine, Ponti		67.04	355	P	P	00 22 41.3	+0.1	
	baz=173								
E54A	Lac Daplat, Po		67.05	355	P	P	00 22 41.0	-0.3	
	baz=173								
X16A	Lo Mia Camp, P		67.14	324	P	P	00 22 42.6	+0.3	
113A	Mohawk Valley,		67.25	321	P	P	00 22 44.2	+1.3	
D60A	Saint Jean D'O		67.27	360	P	P	00 22 44.4	+1.8	
	baz=180,SNR=6.4								
S22A	4UR Ranch, Cre		67.35	330	P	P	00 22 44.5	+0.7	
	baz=143								
E51A	G1948 Merrick		67.37	353	P	P	00 22 43.0	-0.3	
	baz=171								
D59A	Saint-Raymond		67.37	359	P	P	00 22 44.9	+1.6	
	baz=179								
D63A	Stockholm		67.43	2	P	P	00 22 45.0	+1.3	
	baz=183								
D57A	Chemin Vers le		67.44	358	P	P	00 22 45.2	+1.4	
	baz=177								
D62A	Allapoint, All		67.45	1	IAmb	IAmb	00 22 46.0		
	comp=Z,115nm,1.2s								
D62A	Allapoint, All		67.45	1	P	P	00 22 44.7	+0.9	
	baz=182,SNR=6.1								
D58A	Chemin du LacG		67.48	358	P	P	00 22 45.1	+1.1	
	baz=178,SNR=15								
D55A	Sainte-Anne-du		67.52	356	P	P	00 22 44.4	+0.1	
	baz=175,SNR=11								
Q24A	Divide		67.56	331	P	P	00 22 45.0	-0.1	
Q24A					IAmb	IAmb	00 22 56.3		
	comp=Z,66nm,1.2s								
Q24A	Divide		67.56	331	P	P	00 22 47.0	+1.9	
	baz=145								
D61A	St Aubert, Com		67.56	0	P	P	00 22 46.0	+1.5	
	baz=180								
Y14A	Wickenburg		67.66	323	P	P	00 22 46.3	+0.8	
D52A	ZEK Kipawa Sen		67.70	354	P	P	00 22 45.3	-0.1	
	baz=172								
D54A	Lac Fusel, La		67.73	356	P	P	00 22 44.8	-0.8	
	baz=174								
MVCO	Mesa Verde		67.73	328	IAmb	IAmb	00 22 57.6		
	comp=Z,135nm,1.8s								
MVCO	Mesa Verde		67.73	328	P	P	00 22 47.1	+1.0	
	baz=142,SNR=14								
BATG	Bathurst New B		67.76	3	P	P	00 22 46.0	+0.3	
BATG					IAmb	IAmb	00 24 23.6		
	comp=Z,157nm,1.8s								
LATQ	La Tuque		67.77	358	P	P	00 22 46.3	+0.5	
	baz=178,SNR=5.7								
E47A	Iron Bridge		67.78	351	P	P	00 22 45.7	-0.3	
	baz=167								
TAOE	Nuku Hiva Isla		67.81	269	eS	S	00 31 38.9	-5.2	
	comp=Z,9µm,36.9s								
TAOE	Nuku Hiva Isla		67.81	269	eLR	LR	00 43 09.3		
	comp=Z,4µm,23.9s								
TAOE	Nuku Hiva Isla		67.81	269	eT	T	01 35 57.6		
	comp=Z,31nm,0.2s								
E46A	Sault Ste Mari		67.86	350	IAmb	IAmb	00 22 46.9		
	comp=Z,98nm,1.4s								
OGNE	Ogalala		67.89	335	IAmb	IAmb	00 23 08.2		
	comp=Z,56nm,1.2s								
D51A	Lot 18 Range I		67.91	354	P	P	00 22 47.0	+0.3	
	baz=171								
WUAZ	Wupatki		67.92	325	P	P	00 22 47.9	+0.6	
WUAZ	Wupatki		67.92	325	P	P	00 22 48.8	+1.5	
	baz=139,SNR=16								
D50A	G1974 Best Tow		68.03	353	P	P	00 22 47.9	+0.4	
	baz=171,SNR=13								
GLA	Glamis		68.07	321	P	P	00 22 51.7	+3.6	
	baz=135								
NVL	N'lazarevskaya		68.17	159	eP	P	00 22 48.8	+0.6	
NVL					e		00 25 17.2		
NVL					eS	S	00 31 48.8	+2.3	
NVL					eSS	SS	00 36 07.5	-1.4	
NVL					pmax	pmax			
	comp=Z,153nm,1.3s								
ECSD	EROS Data Cent		68.38	340	IAmb	IAmb	00 23 00.9		
	comp=Z,145nm,1.6s								
ECSD	EROS Data Cent		68.38	340	P	P	00 22 49.2	-0.5	
	baz=154,SNR=17								
Y12C	Blythe		68.39	322	P	P	00 22 50.8	+0.8	
Y12C					IAmb	IAmb	00 23 02.4		
	comp=Z,130nm,2.0s								
Y12C	Blythe		68.39	322	P	P	00 22 53.4	+3.4	
	baz=136								
ISCO	Idaho Springs		68.45	332	P	P	00 22 50.5	-0.2	
ISCO					pmax	pmax			
	comp=Z,51nm,1.4s								
ISCO	Idaho Springs		68.45	332	P	P	00 22 50.5	-0.2	
ISCO	Idaho Springs		68.45	332	P	P	00 22 52.5	+1.9	
	baz=145								
IKP	In-Ko-Pah, Jac		68.56	320	P	P	00 22 54.0	+2.8	
	baz=134,SNR=6.7								
SMCO	Snowmass		68.56	330	P	P	00 22 52.0	+0.5	
SMCO					IAmb	IAmb	00 23 03.2		
	comp=Z,82nm,1.4s								
SWSC	Sam W. Stewart		68.58	320	P	P	00 22 53.4	+2.1	
	baz=135								
SPMN	Marine on St.		68.62	343	IAmb	IAmb	00 23 01.9		
	comp=Z,59nm,1.2s								
SPMN	Marine on St.		68.62	343	P	P	00 22 51.5	+0.3	
	baz=158,SNR=6.5								
VLDQ	Val d'Or		68.74	355	IAmb	IAmb	00 22 54.2		
	comp=Z,56nm,1.1s								
BC3	Big Chuckawall		68.87	321	P	P	00 22 54.7	+1.5	
	baz=135,SNR=17								
MONP2	Monument Peak		68.92	320	P	P	00 22 57.0	+3.4	
	baz=134,SNR=10								
BAR	Barrett		68.92	319	P	P	00 22 54.8	+1.4	
BAR					IAmb	IAmb	00 23 03.1		
	comp=Z,141nm,2.0s								
W13A	Hualapai Mount		69.00	323		P	00 22 56.9	+2.8	
IRM	Iron Mountain		69.04	322	P	P	00 22 55.8	+1.6	
	baz=136,SNR=21								
U15A	North Rim		69.10	325	P	P	00 22 55.5	+0.7	
TPFO	Pinon Flats		69.43	320	P	P	00 22 58.7	+2.0	
	baz=134,SNR=7.9								
XPFO	Pion Flat		69.43	320	P	P	00 22 57.7	+1.0	
XPFO					IAmb	IAmb	00 23 10.1		
	comp=Z,76nm,1.7s								
BELC	Belle Mtn. Jos		69.44	321	P	P	00 22 58.8	+2.0	
	baz=135,SNR=7.9								
PFO	Pinyon Flats O		69.44	320	P	P	00 22 58.0	+1.3	
PFO					pmax	pmax			
	comp=Z,70nm,1.7s								
PFO	Pinyon Flats O		69.44	320	P	P	00 22 58.0	+1.3	
PFO					IAmb	IAmb	00 23 10.1		
	comp=Z,70nm,1.6s								
PFO	Pinyon Flats O		69.44	320	P	P	00 22 58.8	+2.1	
	baz=134,SNR=8.0								
N23A	Red Feather La		69.49	332	P	P	00 22 57.2	+0.2	
N23A	Red Feather La		69.49	332	P	P	00 22 59.4	+2.4	
	baz=145								
QSPA	South Pole Qui		69.51	180	P	P	00 22 58.1	+1.3	
QSPA					IAmb	IAmb	00 23 00.4		
	comp=Z,136nm,1.4s								
PHWY	Pilot Hill		69.61	333	P	P	00 22 58.5	+0.7	
LSQQ	Lebel-sur-Quev		69.64	356	P	P	00 22 56.8	-0.6	
	baz=174								
LIC	Lamto		69.72	75	eP	P	00 22 57.5	-1.3	
	comp=Z,151nm,1.3s								
SUSD	Miller		69.78	339	P	P	00 22 58.6	+0.2	
SUSD					IAmb	IAmb	00 23 09.4		
	comp=Z,78nm,1.2s								
GMRC	Granite Mounta		69.79	322	P	P	00 23 00.3	+1.4	
	baz=135,SNR=22								
KNB	Kanab		69.82	325	P	P	00 22 59.7	+0.6	
KNB					pmax	pmax			
	comp=Z,294nm,1.9s								
KNB	Kanab		69.82	325	P	P	00 22 59.7	+0.6	
PKCU	Pink Cliffs		69.86	326	P	P	00 23 00.1	+0.6	
MURC	Murrieta		69.87	320	P	P	00 23 03.0	+3.7	
	baz=134								
TIC	Toumodi		69.91	74	eP	P	00 22 58.8	-1.1	
	comp=Z,170nm,1.1s								
O20A	White River Ci		69.91	330	P	P	00 23 01.8	+2.2	
	baz=143,SNR=10								
KIC	Kosan Boka		70.04	75	eP	P	00 22 59.6	-1.1	
	comp=Z,250nm,1.2s								
DBIC	Dimbokro		70.06	75	P	P	00 22 59.0	-1.9	
DBIC	Dimbokro		70.06	75	P	P	00 22 59.0	-1.9	
	comp=Z,71nm,0.9s,baz=218,slow=6.0,SNR=76								
DBIC					LR	LR	00 52 25.9		
	comp=Z,6µm,19.9s,baz=222,slow=35								
HEC	Hector,Ludlow		70.21	321	P	P	00 23 04.9	+3.5	
	baz=135,SNR=6.2								
SRU	San Rafael Swe		70.21	328	P	P	00 23 01.7	+0.2	
SRU					pmax	pmax			
	comp=Z,32nm,0.9s								
SRU	San Rafael Swe		70.21	328	P	P	00 23 01.7	+0.2	
MTPU	Mount Pierson		70.25	326	P	P	00 23 01.3	-0.6	
Q16A	Castle Valley		70.39	327	P	P	00 23 04.0	+1.4	
SZCU	Shurtz Canyon		70.39	325	P	P	00 23 02.9	+0.3	
MATQ	Matagami		70.39	355	P	P	00 23 01.3	-0.8	
	baz=173,SNR=12								
TUQ	Turquoise Moun		70.40	322	P	P	00 23 05.7	+3.0	
	baz=135,SNR=14								
BFSC	Mount Baldy Ra		70.59	320	P	P	00 23 07.3	+3.5	
	baz=134,SNR=9.2								
P17A	Butcher Ranch,		70.60	328	P	P	00 23 04.0	+0.3	
RWWY	Rawlins		70.69	332	P	P	00 23 04.3	-0.1	
RWWY					IAmb	IAmb	00 23 16.3		
	comp=Z,65nm,0.9s								
TMUT	Trail Mountain		70.70	328	P	P	00 23 05.5	+0.9	
TCRU	Three Creeks R		70.81	326	P	P	00 23 06.0	+0.8	
GSC	Goldstone, Bar		70.82	321	IAmb	IAmb	00 23 18.6		
	comp=Z,119nm,1.9s								
GSC	Goldstone, Bar		70.82	321	P	P	00 23 08.7	+3.6	
	baz=134,SNR=10								
MWC	Mount Wilson		70.82	320	P	P	00 23 07.0	+1.7	
MWC					pmax	pmax			
	comp=Z,65nm,1.5s								
MWC	Mount Wilson		70.82	320	P	P	00 23 07.0	+1.7	
MWC					IAmb	IAmb	00 23 15.0		
	comp=Z,65nm,1.5s								
PASC	Pasadena Art C		70.86	320	P	P	00 23 06.2	+0.9	
PASC					IAmb	IAmb	00 23 15.0		
	comp=Z,80nm,1.5s								
SHOC	Shoshone, Teco		70.93	322	P	P	00 23 09.2	+3.5	
	baz=135								
SNCC	San Nicolas Is		71.07	318	P	P	00 23 06.6	+0.1	
SNCC					IAmb	IAmb	00 23 14.8		
	comp=Z,200nm,1.9s								
K22A	Casper		71.17	333	IAmb	IAmb	00 23 19.6		
	comp=Z,91nm,1.6s								
K22A	Casper		71.17	333	P	P	00 23 09.7	+2.5	
	baz=145								
EDW2	Edwards Air Fo		71.23	320	P	P	00 23 10.1	+2.5	
	baz=133,SNR=6.9								
BLG	Laguna Peak, P		71.36	319	P	P	00 23 10.6	+2.3	
	baz=132								
RSSD	Black Hills		71.36	335	P	P	00 23 09.2	+0.8	
RSSD					pmax	pmax			
	comp=Z,46nm,1.3s								
RSSD	Black Hills		71.36	335	P	P	00 23 09.2	+0.8	
RSSD	Black Hills		71.36	335	P	P	00 23 10.5	+2.1	
	baz=147								
MACI	Morro de la Ar		71.41	49	P	P	00 23 09.6	+0.6	
LRMC	Laurel Mtn Rad		71.46	321	P	P	00 23 12.0	+3.0	
	baz=134,SNR=10								
D32A	Dogwood Acres,		71.56	341	IAmb	IAmb	00 23 10.2		
	comp=Z,61nm,1.1s								
NLU	North Lily Min		71.63	328	P	P	00 23 11.0	+0.9	
SCZ2	Santa Cruz Isl		71.63	319	P	P	00 23 13.7	+3.7	
	baz=132								
TPNV	Topopah Spring		71.66	323	IAmb	IAmb	00 23 24.1		
	comp=Z,132nm,1.6s								
TPNV	Topopah Spring		71.66	323	P	P	00 23 13.0	+2.8	
	baz=135,SNR=16								
FURC	Furnace Creek,		71.67	322	P	P	00 23 12.3	+2.3	
	baz=135,SNR=8.7								
MPMC	Manual Prospec		71.74	322	P	P	00 23 12.1	+1.3	
	baz=134,SNR=11								
DAC	Darwin (Calif)		71.96	322	P	P	00 23 14.1	+2.0	
DAC					pmax	pmax			
	comp=Z,94nm,2.0s								
DAC	Darwin (Calif)		71.96	322	P	P	00 23 14.1	+2.0	
CTU	Camp Tracy		72.03	328		P	00 23 15.0	+2.6	
ISA	Isabella, Lake		72.05	321	P	P	00 23 14.3	+1.7	
	baz=133,SNR=14								
DUG	Dugway, Tooele		72.18	327	P	P	00 23 16.1	+2.8	
	baz=139,SNR=24								
TBI	Tubuai		72.23	251	eS	S	00 32 30.0	-5.4	
	comp=Z,2µm,27.0s								
TBI	Tubuai		72.23	251	eLR	LR	00 45 19.9		
	comp=Z,5µm,27.8s,baz=102								
AGMN	Agassiz Nation		72.28	343	P	P	00 23 12.8	-0.7	
	baz=155,SNR=8.0								
R11A	Troy Canyon, C		72.29	324	P	P	00 23 14.2	+0.2	
R11A	Troy Canyon, C		72.29	324	P	P	00 23 15.9	+1.9	
	baz=136,SNR=14								
GRAC	Grapevine Rang		72.33	322	P	P	00 23 16.9	+2.7	
	baz=134								

comp=Z,2µm,20.2s,baz=97,slow=29
FXWY Fox Creek 73.95 331 P P 00 23 23.8 0.0
ULM Lac du Bonnet 74.06 343 P P 00 23 22.9 -1.1
comp=Z,8.8nm,0.7s,baz=158,slow=7.2,SNR=14
ULM LR LR 00 58 09.7
comp=Z,2µm,21.0s,baz=141,slow=38
ULM Lac du Bonnet 74.06 343 IAmb IAmb 00 23 24.8
comp=Z,100nm,1.6s
FLWY Flagg Ranch 74.15 331 IAmb IAmb 00 23 38.9
comp=Z,70nm,1.1s
RLMT Red Lodge 74.33 333 P P 00 23 26.9 +0.9
RLMT IAmb IAmb 00 23 38.8
comp=Z,60nm,1.1s
RLMT Red Lodge 74.33 333 P P 00 23 28.8 +2.8
baz=143
H17A Grant Village 74.33 331 P P 00 23 31.2 +5.1
baz=142
YPP Pitchstone Pla 74.34 331 P P 00 23 28.0 +1.9
YMP Mirror Lake Pl 74.42 332 P P 00 23 27.4 +0.8
WAKR Walker 74.55 322 P P 00 23 28.0 +0.6
YUF Upper Falls 74.55 332 P P 00 23 28.3 +1.0
SAO San Andreas Ge 74.57 320 P P 00 23 27.3 0.0
SAO pmax pmax
comp=Z,60nm,2.0s
SAO San Andreas Ge 74.57 320 P P 00 23 27.3 0.0
YNR Norris Junctio 74.63 332 P P 00 23 28.2 +0.4
BMN Battle Mountai 74.66 325 P P 00 23 28.4 +0.5
BMN Battle Mountai 74.66 325 P P 00 23 28.4 +0.5
YMR Madison River 74.72 331 P P 00 23 28.7 +0.5
YERR Yerington 74.77 323 P P 00 23 28.7 +0.1
YERR IAmb IAmb 00 23 42.1
comp=Z,110nm,1.9s
QLMT Earthquake Lak 75.06 331 P 00 23 31.8 +1.6
DGMT Dagmar 75.09 338 P P 00 23 31.4 +1.4
DGMT IAmb IAmb 00 23 42.7
comp=Z,79nm,1.1s
DGMT Dagmar 75.09 338 P P 00 23 31.7 +1.7
baz=148,SNR=6.6
SCHQ Schefferville 75.27 2 P P 00 23 30.3 -0.6
comp=Z,28nm,1.1s,baz=181,slow=6.6,SNR=9.2
SCHQ LR LR 00 56 15.4
comp=Z,2µm,21.8s,baz=188,slow=36
SCHQ Schefferville 75.27 2 IAmb IAmb 00 23 32.7
comp=Z,95nm,1.4s
DLMT Dillon 75.99 331 P P 00 23 37.1 +1.7
MFID Camas Ranch 76.08 328 IAmb IAmb 00 23 49.3
comp=Z,127nm,1.9s
SBA Scott Base 76.34 191 P P 00 23 37.8 +0.9
SBA pmax pmax
comp=Z,58nm,1.4s
SBA Scott Base 76.34 191 P P 00 23 37.8 +0.9
WVOR Wild Horse Val 76.82 326 P P 00 23 41.2 +1.0
WVOR pmax pmax
comp=Z,12nm,1.1s
WVOR Wild Horse Val 76.82 326 P P 00 23 41.2 +1.0
EGMT Eagleton 76.84 334 P P 00 23 41.9 +1.7
baz=143,SNR=11
O03E Paynes Creek 77.11 322 P P 00 23 43.8 +2.0
baz=132
MOD Modoc Plateau 77.35 324 P P 00 23 44.1 +0.9
VNDA Vanda 77.38 190 P P 00 23 44.8 +2.0
comp=Z,7.3nm,1.0s,baz=136,slow=4.1,SNR=15
O02D Mt. Diablo Mer 77.60 322 P P 00 23 46.6 +2.0
baz=131
MSO Missoula 77.72 331 P P 00 23 48.0 +2.9
baz=139,SNR=5.8
KCPM Cahto Peak 77.75 321 P P 00 23 46.0 +0.6
KCPM IAmb IAmb 00 23 59.0
comp=Z,88nm,1.5s
SYO Syowa Base 77.84 160⇓ *i*X **P 00 23 44.4 -1.0**
SYO Syowa Base 77.84 160⇓ *e*pP P 00 23 51.0 +5.6
N02D Trinity Center 78.08 322 P P 00 23 48.2 +1.0
baz=131
M04C Macdoel 78.12 323 P P 00 23 50.2 +2.7
baz=132
KMRM Mail Ridge 78.17 321 P P 00 23 47.6 -0.1
KMRM IAmb IAmb 00 23 55.7
comp=Z,80nm,1.6s
M02C Callahan 78.43 323 P P 00 23 51.4 +2.3
baz=131
TTIG Tnine Tigouga, 78.51 51 P P 00 23 52.0 +2.1
SNR=28
TTIG P P 00 23 52.0 +2.1
SNR=28
JTMT Jette 78.56 332 P P 00 23 50.6 +0.9
YBH Yreka Blue Hor 78.58 323 P P 00 23 49.8 -0.2
YBH pmax pmax
comp=Z,58nm,2.0s
YBH Yreka Blue Hor 78.58 323 P P 00 23 49.8 -0.2
TORD Torodi Ar. Bea 78.61 71 P P 00 23 49.5 -1.1
comp=Z,148nm,1.0s,baz=254,slow=4.6,SNR=303
TORD LR LR 00 58 11.2
comp=Z,9µm,18.9s,baz=275,slow=36
TORD Torodi Ar. Bea 78.61 71 P P 00 23 49.4 -1.3
F10A Beach Ranch, E 78.62 329 P P 00 23 51.3 +1.2
L04D Klamath Falls 78.67 324 P P 00 23 52.4 +1.8
baz=132
J05D Fort Rock, OR 78.80 325 P P 00 23 54.2 +3.0
baz=133,SNR=5.1
G08A Pilot Rock 78.99 328 P P 00 23 52.8 +0.6
J04D Umpqua Nationa 79.24 324 P P 00 23 55.9 +2.2
baz=132
OUK Oukaimeden 79.28 51 P P 00 23 57.0 +2.6
SNR=17
OUK P P 00 23 57.0 +2.6
SNR=17
L02E Cave Junction 79.36 323 P P 00 23 55.7 +1.6
baz=131
E09A Wood Farm, Sta 79.45 329 P P 00 23 55.7 +1.2
K02D Willamette Mer 79.74 323 P P 00 23 59.4 +3.1
baz=131
FFC Flin Flon 79.74 342 P P 00 23 55.7 -0.2
FFC pmax pmax
comp=Z,21nm,1.2s
FFC Flin Flon 79.74 342 P P 00 23 55.7 -0.2
I04A Tendick Farm, 79.77 325 P P 00 23 59.1 +2.7
baz=132
G06A Carlson Farm, 79.81 327 P P 00 23 57.8 +1.2
F07A Phinny Hill Vi 79.90 327 P P 00 23 58.0 +1.1
G05D Wamic, OR 80.16 326 P P 00 24 01.4 +2.9
baz=133
NEW Newport 80.23 331 P P 00 24 00.9 +2.1
baz=136
KEBM Edson Butte 80.23 323 P P 00 24 00.7 +1.7
KEBM IAmb IAmb 00 24 18.8
comp=Z,98nm,1.2s
E07A Sunnyside 80.32 328 P 00 24 00.2 +0.9
ZGR Zagora 80.37 53 P P 00 24 01.0 +1.0
SNR=36
ZGR P P 00 24 01.0 +1.0
SNR=36
SUR Sutherland 80.39 121 P P 00 24 01.0 +0.7
SUR Sutherland 80.39 121 IAMs_20 IAMs_20 00 56 42.7
comp=Z,3µm,20.0s
C09A Chrisman Ranch 80.43 330 IAmb IAmb 00 24 03.4
comp=Z,88nm,1.6s
TISM Timmit 80.58 51 P P 00 24 03.1 +2.1
SNR=18
TISM P P 00 24 03.1 +2.1
SNR=18
F05D White Salmon 80.67 327 P P 00 24 03.9 +2.8
baz=133
TZRR Tazzarine 80.74 52 P P 00 24 04.0 +2.0
SNR=33
TZRR P P 00 24 04.0 +2.0
SNR=33
COR Corvallis 80.78 325 P P 00 24 03.6 +1.9
COR pmax pmax
comp=Z,109nm,1.2s
COR Corvallis 80.78 325 P P 00 24 03.6 +1.9
COR IAmb IAmb 00 24 16.1
comp=Z,109nm,1.2s
F04A Amboy 81.20 326 IAmb IAmb 00 24 17.4
comp=Z,66nm,1.1s
LTY Liberty 81.21 328 P P 00 24 05.0 +1.0
ZHG ZHG 81.33 49 P P 00 24 06.0 +1.0
SNR=7.5
LON Longmire 81.44 327 P P 00 24 05.6 +0.3
LON pmax pmax
comp=Z,11nm,0.9s
LON Longmire 81.44 327 P P 00 24 05.6 +0.3
FCC Fort Churchill 81.48 348 IAmb IAmb 00 24 06.8
comp=Z,69nm,1.3s
PFVI Vila Bisbo 81.81 45 P P 00 24 06.6 -0.8
PFVI IAmb IAmb 00 25 22.9
comp=Z,118nm,1.3s

D05A Enumclaw 81.82 327 P P 00 24 07.9 +0.7
D05A IAmb IAmb 00 24 21.5
comp=Z,47nm,0.9s
RAR Rarotonga 81.98 250 LR LR 00 51 02.8
comp=Z,340nm,20.5s,baz=102,slow=29
MORF Marmelete 82.02 45 *e*P **P 00 24 09.0 +0.5**
MORF AMb AMB 00 24 11.8
comp=Z,123nm,1.3s
MORF Marmelete 82.02 45 *e*P **P 00 24 09.8 +1.2**
comp=Z,122nm,1.8s
MORF Marmelete 82.02 45 *e*P **P 00 24 09.0 +0.5**
ARF Arif 82.07 52 P **P 00 24 11.0 +2.0**
SNR=24
ARF P P 00 24 11.0 +2.0
SNR=24
PTEO Sao Teotonio 82.11 45 *e*P **P 00 24 11.6 +2.7**
comp=Z,171nm,1.5s
PBDV Barranco-do-Ve 82.47 46 *e*P **P 00 24 12.0 +1.1**
comp=Z,100nm,1.7s
B05A Bryant 82.60 328 P P **00 24 13.2 +2.0**
baz=132
PCVE Castro Verde 82.61 45 *e*P **P 00 24 12.5 +1.0**
comp=Z,46nm,1.3s
D03D Eldon 82.61 327 P P **00 24 13.6 +2.3**
baz=132
PVAQ Vaqueiros 82.70 46 *e*P **P 00 24 13.3 +1.3**
comp=Z,50nm,1.3s
NLWA Neilton Lookou 82.92 327 P P 00 24 13.2 +0.2
NLWA IAmb IAmb 00 25 38.1
comp=Z,82nm,1.7s
NLWA IAMs_20 IAMs_20 01 00 42.4
comp=Z,2µm,19.0s
PBEJ Beja 82.94 45 *e*P **P 00 24 14.1 +0.8**
comp=Z,32nm,1.6s
PMTG Montargil 83.27 44 *e*P **P 00 24 15.2 +0.3**
comp=Z,113nm,1.6s
PTOM Tomar 83.45 43 *e*P **P 00 24 16.7 +0.8**
comp=Z,154nm,1.6s
PCAS Casmilo, Conde 83.64 43 *e*P **P 00 24 19.0 +2.2**
COI Coimbra 83.78 43 *e*P **P 00 24 18.6 +1.1**
comp=Z,185nm,1.4s
COI Coimbra 83.78 43 P P 00 24 18.6 +1.1
COI pmax pmax
comp=Z,162nm,1.3s
COI Coimbra 83.78 43 P P 00 24 18.6 +1.1
PMRV Marv??o 84.01 44 *e*P **P 00 24 19.8 +1.0**
comp=Z,51nm,1.4s
LLLB Lillooet 84.09 330 IAmb IAmb 00 24 31.8
comp=Z,56nm,1.2s
PCBR Castelo Branco 84.17 44 *e*P **P 00 24 19.9 +0.3**
comp=Z,77nm,1.5s
PVIS Viseu 84.39 43 *e*P **P 00 24 21.8 +1.1**
comp=Z,116nm,1.4s
MTE Manteigas 84.44 43 *e*P **P 00 24 21.8 +0.8**
comp=Z,107nm,1.2s
MTE Manteigas 84.44 43 IAmb IAmb 00 24 22.8
comp=Z,72nm,1.0s
HORN Hornachuelos 84.59 46 P P 00 24 22.9 +1.2
SNR=8.8
FIGM Figuig 84.61 53 P P 00 24 24.0 +1.9
SNR=29
FIGM P P 00 24 24.0 +1.9
SNR=29
PVRL Vila Real 84.80 42 *e*P **P 00 24 23.6 +0.8**
comp=Z,102nm,1.3s
TAF Taforâlt 85.05 50 P P 00 24 27.0 +2.8
SNR=6.2
MVO Moncorvo 85.18 43 *e*P **P 00 24 25.4 +0.7**
comp=Z,125nm,1.4s
BOSA Boshof 85.26 119 P P 00 24 26.6 +1.0
comp=Z,48nm,1.0s,baz=237,slow=6.0,SNR=35
BOSA LR LR 00 58 51.5
comp=Z,3µm,20.9s,baz=247,slow=33
BOSA Boshof 85.26 119 IAmb IAmb 00 24 27.9
comp=Z,86nm,1.1s
MAW Mawson 85.58 164 P P 00 24 27.1 +0.9
comp=Z,27nm,1.1s,baz=234,slow=6.2,SNR=10.0
MAW LR LR 01 02 48.0
comp=Z,2µm,18.7s,baz=238,slow=36
PBRG Braganca 85.71 42 *e*P **P 00 24 27.3 0.0**
comp=Z,108nm,1.5s
PAB San Pablo 86.07 45 P P 00 24 30.0 +0.8
PAB pmax pmax
comp=Z,76nm,1.4s
PAB San Pablo 86.07 45 P P 00 24 30.0 +0.8
PAB IAmb IAmb 00 24 31.9
comp=Z,76nm,1.4s
ESDC Sonseca Array 86.39 45 P P 00 24 31.1 +0.4
comp=Z,16nm,1.1s,baz=237,slow=5.2,SNR=33
ESDC LR LR 00 59 16.3
comp=Z,2µm,22.0s,baz=235,slow=33
ESDC Sonseca Array 86.39 45 P P 00 24 31.9 +1.1
ESBB Sonseca Array 86.39 45 IAmb IAmb 00 24 32.9
comp=Z,64nm,1.4s
LBTB Lobatse 86.83 115 P P 00 24 34.5 +1.0
LBTB pmax pmax
comp=Z,159nm,1.7s
LBTB Lobatse 86.83 115 P P 00 24 34.5 +1.0
ANGG Ammassalik, Gr 89.62 13 IAmb IAmb 00 24 47.3
comp=Z,63nm,1.1s
YKA Yellowknife Ar 89.88 341 P P 00 24 46.3 -0.4
comp=Z,13nm,0.9s,baz=136,slow=4.6,SNR=136
YKA LR LR 01 07 36.9
comp=Z,150nm,21.8s,baz=122,slow=37
ILULI Ilulissat 90.73 7 P P 00 24 50.3 -0.2
ILULI pmax pmax
comp=Z,142nm,1.5s
ILULI Ilulissat 90.73 7 P P 00 24 50.3 -0.2
LSZ Lusaka 92.68 107 P P 00 25 00.7 -0.4
LSZ pmax pmax
comp=Z,28nm,1.3s
LSZ Lusaka 92.68 107 P P 00 25 00.7 -0.4
LSZ IAmb IAmb 00 25 05.0
comp=Z,28nm,1.2s
BFZ Birch Farm 92.96 224 IAMs_20 IAMs_20 00 57 14.4
comp=Z,3µm,20.0s
MXZ Matakana Point 93.11 228 IAMs_20 IAMs_20 00 57 27.5
comp=Z,3µm,21.0s
CASY Casey 93.31 180 P P 00 25 03.6 +0.8
CASY IAmb IAmb 00 25 06.4
comp=Z,47nm,1.4s
KEST Kesra 94.11 53 P P 00 25 07.0 0.0
comp=Z,10.0nm,1.1s,baz=286,slow=3.7,SNR=7.9
KEST PP PP 00 28 53.2 -0.8
comp=Z,5.8nm,1.0s,baz=210,slow=8.1,SNR=4.2
KEST LR LR 01 07 44.9
comp=Z,3µm,19.9s,baz=213,slow=36
NNZ Nelson 94.53 223 IAMs_20 IAMs_20 00 57 43.0
comp=Z,3µm,21.0s
SSB Saint Sauveur 94.56 43 P P 00 25 08.9 0.0
SSB pmax pmax
comp=Z,68nm,1.7s
SSB Saint Sauveur 94.56 43 P P 00 25 08.9 0.0
SSB IAmb IAmb 00 25 12.6
comp=Z,68nm,1.7s
BESE Bessie Mountai 94.91 332 P P 00 25 10.1 -0.1
QRZ Qurayyat Range 95.29 223 IAMs_20 IAMs_20 00 58 26.9
comp=Z,2µm,21.0s
SUMG Summit 95.50 9 P P 00 25 13.9 +0.9
SUMG pmax pmax
comp=Z,50nm,1.3s
SUMG Summit 95.50 9 *i* P **P 00 25 13.8 +0.8**
comp=Z,191nm,1.5s
SUMG Summit 95.50 9 P P 00 25 13.9 +0.9
SUMG IAmb IAmb 00 25 15.3
comp=Z,50nm,1.3s
TULEG Thule 97.00 0 IAmb IAmb 00 25 20.9
comp=Z,26nm,1.4s
WLF Walferdange 97.34 40 P Pdif 00 25 21.5 +0.1
WLF pmax pmax
comp=Z,73nm,1.3s
WLF Walferdange 97.34 40 P Pdif 00 25 21.5 0.0
WDD Wied Dalam 98.08 55 IAMs_20 IAMs_20 01 09 22.8
comp=Z,2µm,20.0s
ZCCA Zocca 98.43 46 P Pdif 00 25 26.8 +0.3
SALO Salr 98.58 45 IAMs_20 IAMs_20 01 10 09.2
comp=Z,2µm,19.0s
DAVA Damuels 98.75 43 *e*Pdiff Pdif 00 25 29.0 +1.0
comp=Z,20nm,1.5s
FETA Feichten 99.20 43 *e*Pdiff **Pdif 00 25 31.0 +0.9**
comp=Z,11nm,1.3s
FETA *e*PP **PP 00 29 26.7 -6.4**
comp=Z,9.5nm,1.3s
TEOL Teolo 99.24 45 IAmb IAmb 00 25 31.1
comp=Z,22nm,1.0s
NRCA Norcia 99.37 48 IAMs_20 IAMs_20 01 14 12.6
comp=Z,2µm,18.0s

RETA Reutte 99.38 43 *e*Pdiff **Pdif 00 25 31.6 +0.9**
comp=Z,12nm,1.3s,SNR=4.1
AQU L'Aquila 99.42 48 IAMs_20 IAMs_20 01 11 02.8
comp=Z,2µm,18.0s
MOTA Moosalm 99.55 43 *e*Pdiff **Pdif 00 25 32.5 +1.0**
comp=Z,12nm,1.2s,SNR=4.8
MOTA PP **PP 00 29 30.2 -5.6**
comp=Z,13nm,1.4s
SQTA Sankt Quirin 99.58 43 Pdiff **Pdif 00 25 32.7 +1.1**
comp=Z,22nm,1.3s,SNR=5.2
SQTA *e*PP **PP 00 29 30.4 -5.6**
comp=Z,20nm,1.3s
INK Inuvik 99.62 340 P **Pdif 00 25 30.9 -0.2**
INK pmax pmax
comp=Z,15nm,1.4s
INK Inuvik 99.62 340 Pdif 00 25 30.9 -0.2
WATA Walderalm 99.85 43 *e*Pdiff **Pdif 00 25 33.7 +0.8**
comp=Z,18nm,1.4s
WTTA Wattenberg 99.86 43 *e*Pdiff **Pdif 00 25 34.1 +1.2**
comp=Z,20nm,1.4s
WTTA *e*PP **PP 00 29 32.5 -5.7**
comp=Z,7.5nm,1.2s
CEL Celeste 99.90 53 IAMs_20 IAMs_20 01 09 47.9
comp=Z,2µm,21.0s
ABTA Abfaltersbach 100.26 44 *e*Pdiff **Pdif 00 25 34.4 -0.3**
comp=Z,9.4nm,1.3s
ABTA PP **PP 00 29 36.6 -4.5**
comp=Z,10nm,1.5s
ACER Acerenza 100.72 50 IAMs_20 IAMs_20 01 11 25.5
comp=Z,1µm,18.0s
SGRT San Giovanni R 100.88 49 IAMs_20 IAMs_20 01 14 29.5
comp=Z,2µm,20.0s
KBA Koelnbreinsper 100.91 44 *e*Pdiff **Pdif 00 25 37.6 0.0**
comp=Z,2.5nm,0.5s
MYKA Terra Mystica 100.96 44 *e*Pdiff **Pdif 00 25 38.6 +0.9**
comp=Z,7.9nm,1.1s
MYKA *e*PP **PP 00 29 44.7 -1.6**
comp=Z,13nm,1.2s
OBKA Obir 101.51 45 *e*Pdiff **Pdif 00 25 41.3 +1.1**
comp=Z,8.3nm,1.3s
OBKA *e*PP **PP 00 29 48.9 -1.7**
comp=Z,9.4nm,1.4s
GEC2 GERESS Array S 101.69 42 IAMs_20 IAMs_20 01 08 37.2
comp=Z,3µm,22.0s
GERES GERESS Array B 101.69 42 P **Pdif 00 25 40.7 -0.3**
comp=Z,1.6nm,1.1s,baz=255,slow=6.0,SNR=4.7
GERES PP **PP 00 29 53.9 +2.0**
comp=Z,1.3nm,1.0s,baz=270,slow=5.8,SNR=3.5
KHC Kasperske Hory 101.70 42 *e*P **Pdif 00 25 41.8 +0.9**
KHC *e* 00 29 51.0
KHC Kasperske Hory 101.70 42 *e*PDIFF **Pdif 00 25 41.8 +0.9**
KHC *ex* x 00 29 02.0
KHC *e*PP **PP 00 29 51.0 -0.8**
MOA Molln 101.74 43 *e*Pdiff **Pdif 00 25 42.0 +0.9**
comp=Z,10nm,1.4s
MOA *e*PP **PP 00 29 52.4 +0.2**
comp=Z,9.6nm,1.4s
SOKA Soboth 101.88 45 *e*PP **PP 00 29 51.4 -2.0**
comp=Z,5.8nm,1.2s
CLL Collm 102.02 40 *e*P **Pdif 00 25 43.0 +0.8**
CLL *e* **PP 00 29 51.0 -3.1**
CLL pmax pmax
comp=Z,18nm,1.5s
CLL MLR MLR
comp=Z,2µm,21.1s
CLL Collm 102.02 40 *e*Pdif **Pdif 00 25 42.0 -0.2**
comp=Z,18nm,1.5s
CLL *e* 00 29 35.0
CLL *e*PP **PP 00 29 51.0 -3.1**
CLL *e*PS **PS 00 39 01.0 +1.5**
CLL *e*PPS PPS 00 39 48.0
CLL *e*SS SS 00 44 24.0 -4.1
CLL LmV 01 08 00.0
comp=Z,2µm,21.1s
ARSA Arzberg 102.37 44 PP **PP 00 29 55.2 -1.8**
comp=Z,9.4nm,1.3s
BRG Berggiesshubel 102.45 40 *e*P **Pdif 00 25 44.1 0.0**
comp=Z,8.4nm,1.2s
BRG *e*PP **PP 00 29 55.4 -2.0**
comp=Z,35nm,2.0s
comp=N,1µm,24.4s
comp=E,1µm,20.8s
comp=Z,2µm,24.6s
BRG Berggiesshubel 102.45 40 *e*P **Pdif 00 25 44.1 0.0**
BRG *e* 00 29 55.4
BRG pmax pmax
comp=Z,8.0nm,1.2s
BRG pmax pmax
comp=Z,35nm,2.0s
BRG MLR MLR
comp=N,1µm,24.4s
BRG MLR MLR
comp=E,1µm,20.8s
BRG MLR MLR
comp=Z,2µm,24.6s
PRU Pruhonice 102.55 41 AMS AMS 01 09 20.0
comp=Z,1µm,21.0s
BLY Banja Luka 102.77 47 IAMs_20 IAMs_20 01 16 29.2
comp=Z,2µm,19.0s
CONA Conrad Observa 102.79 44 *e*Pdiff **Pdif 00 25 44.5 -1.3**
comp=Z,8.2nm,2.1s
ILAR Eielson Array 102.81 335 P **Pdif 00 25 45.4 0.0**
comp=Z,0.6nm,0.9s,baz=150,slow=3.9,SNR=5.4
ILAR PP **PP 00 29 57.5 -2.2**
comp=Z,1.7nm,1.0s,baz=114,slow=6.0,SNR=6.7
MCK McKinley 103.28 333 IAMs_20 IAMs_20 01 20 13.8
comp=Z,1µm,20.0s
PDG Podgorica 103.57 50 IAMs_20 IAMs_20 01 13 13.0
comp=Z,1µm,20.0s
DPC Dobruska-Polom 103.75 41 *e*P **Pdif 00 25 51.0 +1.0**
DPC Dobruska-Polom 103.75 41 *e*PDIFF **Pdif 00 25 51.0 +1.0**
ITM Ithomi 104.17 55 IAMs_20 IAMs_20 01 16 13.1
comp=Z,2µm,20.0s
BSD Bornholm Skovb 104.22 36 *e*P **Pdif 00 25 46.0 -5.9**
BSD pmax pmax
comp=Z,33nm,1.0s
BSD Bornholm Skovb 104.22 36 *i* P **Pdif 00 25 46.0 -5.9**
comp=Z,33nm,1.0s
AGG Agios Georgios 104.95 54 IAMs_20 IAMs_20 01 19 07.7
comp=Z,2µm,20.0s
LIT Litokhoron 105.33 53 IAMs_20 IAMs_20 01 18 47.8
comp=Z,1µm,18.0s
BZS Buzias 106.02 47 ⇓P **PKiKP 00 30 13.3 +1.1**
KMBO Kilima Mbogo 106.31 98 IAMs_20 IAMs_20 01 13 10.6
comp=Z,2µm,20.0s
VTS Vitosha 106.47 50 IAMs_20 IAMs_20 01 18 43.6
comp=Z,2µm,18.0s
PUNG Punghina 106.63 48 ⇑P **PKiKP 00 30 12.9 -0.4**
SANT Santorini 106.71 57 IAMs_20 IAMs_20 01 14 25.6
comp=Z,1µm,22.0s
DRGR 107.02 46 ⇑P **PKiKP 00 30 12.1 -2.1**
KARP Karpathos 107.87 58 IAMs_20 IAMs_20 01 20 31.4
comp=Z,2µm,19.0s
ARR Arges 108.04 48 ⇑P **PKiKP 00 30 17.4 +1.3**
MTUR Matau 108.31 48 ⇓P **PP 00 30 39.0 -2.0**
VOIR 108.34 48 ⇑P PP 00 30 30.3 -11
DOPR Dopca 108.67 47 ⇑P **PKiKP 00 30 15.9 -1.3**
BURAR Bucovina Array 108.85 45 ⇑P **PP 00 30 37.3 -7.6**
MLR Muntele Rosu 108.97 48 ⇑P PP 00 30 38.0 -7.9
MLR Muntele Rosu 108.97 48 IAMs_20 IAMs_20 01 15 02.5
comp=Z,2µm,21.0s
BISRR Bisoca 109.51 48 ⇓P **PKiKP 00 30 20.1 +1.2**
PLOR Plostina 109.52 47 ⇑P **PKiKP 00 30 18.4 -0.5**
LHI Lord Howe Isla 109.55 224 IAMs_20 IAMs_20 01 06 56.5
comp=Z,2µm,22.0s
VRI Vrincioaia 109.57 47 ⇑P **PKiKP 00 30 18.6 -0.3**
RDOG Red Dog Mine 109.83 336 IAMs_20 IAMs_20 01 22 01.5
comp=Z,1µm,20.0s
DZM Mont Dzumac 109.93 236 *e*PP **PP 00 30 46.8 -5.9**
comp=Z,184nm,25.1s
DZM Mont Dzumac 109.93 236 *e*PS PS 00 40 17.6 -4.6
comp=Z,528nm,25.3s
DZM *e*SS SS 00 46 12.5 -3.7
comp=Z,736nm,23.9s
DZM Mont Dzumac 109.93 236 *e*LR LR 01 02 43.7
comp=Z,2µm,23.9s
DZM Mont Dzumac 109.93 236 IAMs_20 IAMs_20 01 11 25.4
comp=Z,2µm,19.0s
HARR Harsova 110.22 49 ⇓P **PKiKP 00 30 20.4 +0.4**
SORM Soroca 111.02 45 ⇓P **PP 00 30 56.5 -4.0**
FURI Furi 111.10 88 IAMs_20 IAMs_20 01 14 32.1
comp=Z,2µm,20.0s
MILM Milestii Mici 111.16 46 ⇑P **PKiKP 00 30 21.8 0.0**
AKASG Malin Array Be 111.90 42 PKiKP **PKiKP 00 30 22.4 -0.6**
comp=Z,2.4nm,1.0s,baz=280,slow=2.3,SNR=8.1
AKASG PP **PP 00 31 03.3 -3.3**
comp=Z,1.9nm,0.8s,baz=260,slow=6.7,SNR=5.8

AKBB Malin Array Si 111.90 42 IAMs_20 IAMs_20 01 13 20.3
comp=Z,2µm,22.0s
CSS Mathiatis 112.70 60 IAMs_20 IAMs_20 01 19 27.5
comp=Z,2µm,21.0s
CAN Canberra 112.81 214 IAMs_20 IAMs_20 01 12 26.3
comp=Z,1µm,19.0s
ANTO Ankara 113.05 54 IAMs_20 IAMs_20 01 26 04.2
comp=Z,1µm,19.0s
BRTR Keskin Array B 113.68 55 PKiKP **PKiKP 00 30 27.2 +0.2**
comp=Z,3.1nm,1.1s,baz=183,slow=4.5,SNR=12
DIKM Dikmen 115.13 53 ⇓P **PKPdf 00 30 27.7 -1.9**
ATD Arta Tunnel 115.82 87 IAMs_20 IAMs_20 01 29 29.0
comp=Z,1µm,18.0s
GAZ Gaziantep 116.14 58 IAMs_20 IAMs_20 01 25 15.1
comp=Z,1µm,19.0s
OBN Obninsk 116.52 38 *i* PKiKP **PKPdf 00 30 31.2 -0.6**
OBN *e* 00 31 37.2
OBN pmax pmax
comp=Z,27nm,1.3s
OBN MLR MLR
comp=Z,1µm,20.0s
OBN Obninsk 116.52 38 **PKiKP 00 30 32.4 +0.6**
OBN Obninsk 116.52 38 IAMs_20 IAMs_20 01 18 22.0
comp=Z,2µm,18.0s
ANN Anapa 116.96 49 *e*P **Pdif 00 26 48.5 -0.3**
ANN *i* 00 30 33.5
ANN *e* 00 31 45.0
ANN *e* 00 37 21.7
ANN *e*SSS SSS 00 52 02.6
ANN pmax pmax
comp=Z,25nm,1.1s
ANN pmax pmax
comp=Z,30nm,1.3s
MOS Moscow 117.09 37 *e*PKiKP **PKPdf 00 30 32.3 -0.6**
MOS *e* 00 31 39.9
MOS pmax pmax
comp=Z,17nm,0.9s
LPSR Galich'ya Gora 118.00 41 *e*PKiKP **PKPdf 00 30 34.3 -0.4**
LPSR pmax pmax
comp=Z,20nm,1.0s
VSR Storozhevoye 118.19 42 *i* PKiKP **PKPdf 00 30 34.5 -0.6**
VORD Divnogorie 118.28 42 *e*PKiKP **PKPdf 00 30 35.2 -0.1**
VORD pmax pmax
comp=Z,10.0nm,0.8s
SOC Sochi 118.55 51 *i* PKiKP **PKiKP 00 30 36.4 +0.3**
SOC *e* 00 31 49.9
SOC *e*PPP PPP 00 34 26.7
SOC *e*PS **PS 00 41 37.4 -3.3**
SOC *e*SS SS 00 48 04.5 -5.4
SOC *e*SSS SSS 00 52 36.6
SOC pmax pmax
comp=Z,24nm,1.4s
VRH Novokhopyorsk 119.80 42 *e*PKiKP **PKPdf 00 30 37.8 -0.4**
VRH pmax pmax
comp=Z,20nm,1.0s
PRGR Permogore 120.42 30 *e*PKiKP **PKiKP 00 30 39.2 0.0**
PRGR pmax pmax
comp=Z,24nm,1.1s
KIV Kislovodsk 120.70 50 *i* PKiKP **PKiKP 00 30 40.7 +0.3**
KIV *e* 00 32 06.2
KIV pmax pmax
comp=Z,22nm,1.3s
KIV MLR MLR
comp=Z,633nm,21.0s
KIV Kislovodsk 120.70 50 ⇑P **PKiKP 00 30 40.9 +0.4**
KIV Kislovodsk 120.70 50 **PKiKP 00 30 40.8 +0.3**
NEY Neytrino 120.73 51 *i* PKiKP **PKiKP 00 30 41.1 +0.4**
KBZ Khabaz 120.86 51 PKP **PKiKP 00 30 40.8 +0.2**
comp=Z,15nm,1.0s,baz=234,slow=1.0,SNR=23
GOF Gofitskoye 120.94 49 ⇓*i* PKiKP **PKiKP 00 30 42.1 +1.3**
GOF pmax pmax
comp=Z,31nm,1.0s
BILL Bilibino 121.16 338 *i* PKiKP **PKiKP 00 30 41.2 +0.7**
BILL *e* 00 32 08.6
BILL *e*PPP PPP 00 34 48.1
BILL pmax pmax
comp=Z,11nm,1.7s
BILL MLR MLR
comp=Z,818nm,21.0s
BILL Bilibino 121.16 338 **PKiKP 00 30 42.1 +1.6**
RAYN Ar Rayn 121.20 74 PKiKP **PKiKP 00 30 42.5 +0.5**
RAYN MLR MLR
comp=Z,2µm,19.0s
RAYN Ar Rayn 121.20 74 **PKiKP 00 30 42.5 +0.5**
RAYN IAMs_20 IAMs_20 01 23 53.5
comp=Z,2µm,19.0s
AKH Akhalkalaki 121.28 53 ⇑P **PKiKP 00 30 42.7 +0.9**
ZEI Tsey 121.59 52 *i* PKiKP **PKiKP 00 30 42.6 +0.2**
ZEI pmax pmax
comp=Z,11nm,1.1s
GNI Garni 122.22 55*c* *i*PKiKP **PKPdf 00 30 42.7 -0.8**
GNI pmax pmax
comp=Z,69nm,1.7s
GNI Garni 122.22 55 **PKiKP 00 30 44.2 +0.5**
GNI Garni 122.22 55 IAMs_20 IAMs_20 01 28 00.8
comp=Z,925nm,20.0s
MAK Makhachkala 124.24 52 *e*P **Pdif 00 27 21.4 +0.2**
MAK *i* 00 30 47.3
MAK *e* 00 32 32.1
MAK pmax pmax
comp=Z,234nm,1.2s
AKT Akhty 124.47 53 *e*PKiKP **PKiKP 00 30 49.3 +1.3**
AKT *e* 00 32 35.9
AKT pmax pmax
comp=Z,31nm,1.3s
CTA Charters Tower 125.73 224 PKP **PKiKP 00 30 51.4 +0.3**
comp=Z,4.7nm,0.9s,baz=100,slow=6.1,SNR=3.4
CTAO Charters Tower 125.73 224 IAMs_20 01 16 16.2
comp=Z,1µm,19.0s
H11S2 WAKE ISLAND Hyl 126.16 278 T T 02 50 18.0
baz=103,slow=75
H11S1 WAKE ISLAND Hyl 126.17 278 T T 02 50 18.6
baz=103
H11S3 WAKE ISLAND Hyl 126.18 278 T T 02 49 47.9
baz=103,slow=75
H11N3 WAKE ISLAND Hyl 126.23 280 T T 02 49 45.8
baz=102,slow=75,SNR=65
H11N2 WAKE ISLAND Hyl 126.24 280 T T 02 49 57.5
baz=102,slow=75,SNR=54
H11N1 WAKE ISLAND Hyl 126.25 280 T T 02 50 11.1
baz=102,slow=75,SNR=296
SOCY Socotra 126.44 90 IAMs_20 IAMs_20 01 25 05.9
comp=Z,1µm,21.0s
TIXI Tiksi 127.77 352*c* *i*PKiKP **PKPdf 00 30 52.6 -0.3**
TIXI pmax pmax
comp=Z,16nm,1.3s
ARU Arti 128.36 33 *i* PKiKP **PKiKP 00 30 55.1 0.0**
ARU 00 33 00.7
ARU SP SP 00 43 06.9 +4.2
ARU Arti 128.36 33 **PKPdf 00 30 54.8 +0.3**
SEY Seymchan 128.70 336 *i* PKiKP **PKiKP 00 30 55.9 +0.3**
SVE Sverdlovsk 129.26 32 *i* PKiKP **PKPdf 00 30 54.3 -1.9**
SVE pmax pmax
comp=Z,28nm,1.5s
ASAR Alice Springs 129.86 210 PKP **PKPdf 00 30 58.2 -0.3**
comp=Z,12nm,1.1s,baz=148,slow=2.5,SNR=28
ASAR Alice Springs 129.86 210 **PKPdf 00 30 57.5 -1.0**
AKTO Aktyubinsk 130.08 41 PKiKP **PKiKP 00 30 58.6 -0.2**
PETK Petropavlovsk- 130.94 323 PKP **PKiKP 00 31 00.5 +0.1**
comp=Z,13nm,1.0s,baz=107,slow=5.0,SNR=6.1
PETK Petropavlovsk- 130.94 323 **PKiKP 00 31 01.1 +0.7**
UOSS Minazif 131.07 74 IAMs_20 IAMs_20 01 30 44.9
comp=Z,1µm,20.0s
AB31 Akbulak array 131.63 42 *i* PKiKP **PKiKP 00 31 02.3 +0.4**
ABKAR Akbulak array 131.63 42 **PKPdf 00 31 01.3 +0.4**
COEN Coen 132.16 227 IAMs_20 IAMs_20 01 18 55.7
comp=Z,1µm,22.0s
PMG Port Moresby 132.30 235 *i* PKiKP **PKPdf 00 31 02.8 -0.5**
PMG Port Moresby 132.30 235 PKP **PKiKP 00 31 04.8 +0.4**
comp=Z,9.6nm,0.7s,baz=58,slow=3.6,SNR=4.8
PMG Port Moresby 132.30 235 **PKPdf 00 31 03.7 +0.4**
PMG Port Moresby 132.30 235 IAMs_20 IAMs_20 01 18 54.2
comp=Z,998nm,22.0s
WR0 Warramunga Arr 132.69 213 IAMs_20 IAMs_20 01 22 36.8
comp=Z,1µm,19.0s
WR8 Warramunga Arr 132.71 213 IAMs_20 IAMs_20 01 22 48.4
comp=Z,1µm,19.0s
GEYT Alibeck 132.72 57 PKP **PKiKP 00 31 04.2 -0.3**
comp=Z,6.5nm,1.1s,baz=274,slow=4.3,SNR=11
GEYT Alibeck 132.72 57 **PKiKP 00 31 05.5 +0.9**
WR7 Warramunga Arr 132.72 213 IAMs_20 IAMs_20 01 22 48.7
comp=Z,1µm,20.0s
WR2 Warramunga Arr 132.79 213 IAMs_20 IAMs_20 01 26 35.4
comp=Z,1µm,18.0s
WR1 Warramunga Arr 132.80 213 IAMs_20 IAMs_20 01 27 42.8
comp=Z,1µm,18.0s
WRA Warramunga Arr 132.80 213 PKP **PKPdf 00 31 04.0 -0.1**
comp=Z,6.3nm,0.8s,baz=153,slow=1.9,SNR=25
WRA Warramunga Arr 132.80 213 **PKPdf 00 31 04.7 +0.5**
WRAB Tennant Creek 132.81 213*c* *i*PKiKP **PKPdf 00 31 04.2 +0.1**
WRAB pmax pmax
comp=Z,55nm,2.5s
WRAB Tennant Creek 132.81 213 IAMs_20 IAMs_20 01 26 35.8
comp=Z,1µm,18.0s
WC1 Warramunga Arr 132.82 213 IAMs_20 IAMs_20 01 27 01.2
comp=Z,1µm,18.0s
WB5 Warramunga Arr 132.84 213 IAMs_20 IAMs_20 01 26 36.9
comp=Z,1µm,19.0s
WB7 Warramunga Arr 132.87 213 IAMs_20 IAMs_20 01 25 40.7
comp=Z,1µm,19.0s
BRVK Borovoye 135.94 33*c* *i*PKiKP **PKiKP 00 31 10.2 -0.3**
BRVK pmax pmax
comp=Z,25nm,2.5s
BRVK Borovoye 135.94 33 **PKiKP 00 31 10.6 0.0**
BRVK IAMs_20 IAMs_20 01 29 13.0
comp=Z,1µm,20.0s
YAK Yakutsk 136.34 346 *e*PKiKP **PKPdf 00 31 09.9 +0.5**
YAK *e* 00 33 50.3
YAK pmax pmax
comp=Z,35nm,1.5s
YAK pmax pmax
comp=N,9.0nm,1.5s
YAK pmax pmax
comp=E,7.0nm,1.8s
YAK pmax pmax
comp=Z,255nm,4.7s
YAK pmax pmax
comp=N,334nm,4.7s
YAK pmax pmax
comp=E,155nm,4.4s
YAK MLR MLR
comp=Z,326nm,19.0s
YAK MLR MLR
comp=N,395nm,23.0s
YAK MLR MLR
comp=E,120nm,20.0s
PSAA1 Pilbara Seismi 136.78 194 IAMs_20 IAMs_20 01 13 22.6
comp=Z,2µm,21.0s
PSAB1 Pilbara Seismi 136.79 194 IAMs_20 IAMs_20 01 39 37.9
comp=Z,967nm,20.0s
FITZ Fitzroy Crossi 138.29 204 PKhKP **PKPdf 00 31 11.0 -3.4**
comp=Z,2.4nm,0.7s,baz=156,slow=4.8,SNR=2.4
KNRA Kununurra 139.16 209 IAMs_20 IAMs_20 01 29 02.0
comp=Z,1µm,20.0s
KKAR Karatay Array 140.63 46 PKiKP **PKPdf 00 31 17.4 -0.5**
KKAR Karatay Array 140.63 46 **PKPdf 00 31 17.4 -0.5**
KURK Kurchatov 141.50 31 *i* PKiKP **PKPdf 00 31 20.5 +1.3**
KURK Kurchatov 141.50 31 IAMs_20 IAMs_20 01 31 35.7
comp=Z,991nm,20.0s
YUK Yuzh-Kuril'sk 141.81 316 *e*PKiKP **PKPdf 00 31 18.8 -1.1**
YUK *i* 00 31 24.3
YUK *e* 00 34 23.6
YUK *e*SS SS 00 52 53.0 -2.1
ZAA0 Zalesovo Array 141.87 23 **PKiKP 00 31 21.4 -1.2**
ZALV Zalesovo Beam 141.87 23 PKiKP **PKiKP 00 31 21.5 -1.1**
ZALV Zalesovo Beam 141.87 23 PKhKP PKPpre 00 31 14.7
comp=Z,11nm,0.9s,baz=320,slow=4.4,SNR=25
ZALV Zalesovo Beam 141.87 23 PKPpre 00 31 14.7
ZALV PKPdf **PKiKP 00 31 21.5 -1.1**
BTK Batken 141.92 51 IAMs_20 IAMs_20 01 34 55.8
comp=Z,1µm,21.0s
YSS Yuzh-Sakhalins 142.30 322 *e*PKiKP **PKiKP 00 31 27.4 +3.7**
YSS *e* 00 34 34.2
YSS *e*PPP PPP 00 37 33.3
YSS Yuzh-Sakhalins 142.30 322 IAMs_20 IAMs_20 01 45 03.2
comp=Z,839nm,20.0s
BOD Bodaibo 142.75 356 *e*PKHKP PKPpre 00 31 16.6
BOD pmax pmax
comp=Z,19nm,1.5s
ARSB Arslanbob 143.01 48 IAMs_20 IAMs_20 01 44 12.9
comp=Z,1µm,21.0s
EKS2 Erkin-Say 143.01 46 P **PKPdf 00 31 21.3 -1.0**
SNR=9.5
BHUJ Bhuj 143.16 79 *e*P PKPab 00 31 18.5 -0.1
BHUJ IAmb IAmb 00 31 24.2
comp=Z,122nm,1.4s
AML Almayashu 143.18 46 P **PKPdf 00 31 22.0 -1.0**
SNR=8.3
USP Ospenovka 143.22 44 P **PKPdf 00 31 22.0 -0.6**
SNR=11
AAK Ala-Archa 143.50 45 PKiKP **PKPdf 00 31 22.6 -0.6**
AAK Ala-Archa 143.50 45 P **PKPdf 00 31 23.3 0.0**
SNR=13
AAK Ala-Archa 143.50 45 **PKPdf 00 31 22.6 -0.6**
AAK IAMs_20 IAMs_20 01 38 21.8
comp=Z,778nm,20.0s
CHMS Chumysh 143.51 44 P **PKPdf 00 31 23.8 +0.8**
SNR=8.3
FRU1 Bishkek 143.51 45 IAMs_20 IAMs_20 01 47 51.1
comp=Z,1µm,19.0s
UCH Uchtor 143.69 46 P **PKPdf 00 31 23.5 -0.5**
SNR=31
KBK Karagaybulak 143.79 45 P **PKPdf 00 31 23.1 -0.6**
SNR=19
TKM2 Tokmak 2 144.10 44 PKiKP **PKPdf 00 31 23.6 -0.7**
TKM2 Tokmak 2 144.10 44 P **PKPdf 00 31 24.6 +0.2**
SNR=18
KZA Kyzart 144.25 46 P **PKPdf 00 31 26.0 +1.1**
SNR=16
ZEA Zeya 144.26 342 *i* PKiKP PKPbc 00 31 22.1 -0.1
ZEA *e* 00 37 50.5
ZEA pmax pmax
comp=Z,150nm,2.0s
ZEA pmax pmax
comp=Z,700nm,7.0s
SAUI Saumlaki 144.27 219 PKP **PKPdf 00 31 24.6 -0.6**
SAUI PKP **PKiKP 00 31 28.0 -0.8**
ERM Erimo 144.48 314 IAMs_20 IAMs_20 01 34 24.4
comp=Z,1µm,19.0s
ULHL Ulahol 144.83 45 P **PKPdf 00 31 26.5 +0.9**
SNR=9.4
NRN Naryn 145.03 46 IAMs_20 IAMs_20 01 39 35.3
comp=Z,970nm,20.0s
KDJ Kajisay 145.50 44 IAMs_20 IAMs_20 01 45 58.8
comp=Z,822nm,21.0s
NIL Nilore 145.55 60 PKiKP **PKPbc 00 31 27.2 +0.1**
NIL Nilore 145.55 60 **PKPbc 00 31 27.2 +0.1**
NIL Nilore 145.55 60 IAMs_20 IAMs_20 01 40 35.6
comp=Z,866nm,21.0s
MAKZ Makanchi 145.71 34 PKiKP **PKPbc 00 31 27.1 0.0**
MAKZ Makanchi 145.71 34 **PKPab 00 31 27.5 0.0**
KSH Kashi 145.82 49 *i* PKPbc **PKPab 00 31 28.1 -0.2**
KSH PP **PP 00 34 49.4 +0.4**
KSH SKKS 00 41 39.6
KSH SS **SS 00 53 42.9 +1.0**
KSH AMB AMB
comp=Z,680nm,4.6s
KSH LR LR
comp=Z,370nm,6.1s
KSH LR LR
comp=Z,630nm,8.0s
KSH LR LR
comp=Z,2µm,19.5s
GOA Goa 145.88 93 ⇑*i*P **PKPdf 00 31 27.6 -0.2**
GOA IAmb IAmb 00 31 31.9
comp=Z,230nm,1.8s
MK31 Makanchi Array 145.89 34 *i* PKP2 **PKPdf 00 31 27.3 +0.3**
MKAR Makanchi Array 145.89 34 PKPbc **PKPbc 00 31 27.5 -0.2**
comp=Z,66nm,0.8s,baz=326,slow=2.6,SNR=302
MKAR Makanchi Array 145.89 34 **PKPbc 00 31 27.6 -0.1**
comp=Z,815nm,20.0s
TARG Taragay, Kyrgy 146.10 45 IAMs_20 IAMs_20 01 44 25.6
PRZ Przheval'sk 146.12 43 pPKPdf **PKPab 00 31 30.5 +1.1**
BATI Baumata 146.24 206 PKPbc **PKPbc 00 31 29.4 -0.2**
comp=Z,35nm,0.9s,baz=90,slow=4.0,SNR=11
PDGK Podgornoye 146.36 41 PKP2 **PKPbc 00 31 29.6 +0.2**
KLR Kul'dur 146.37 333 *i* PKiKP **PKPdf 00 31 26.7 -1.0**
SOEI Soe 146.39 207 PKP **PKiKP 00 31 32.4 -0.9**
SOEI PKP **PKPab 00 31 33.4 +2.4**
TRD Trivandrum 146.47 106 ⇑*i*P **PKPbc 00 31 29.9 -0.4**
TRD IAmb IAmb 00 31 32.7
comp=Z,81nm,1.0s
TEY Ternei 146.91 324 ⇑*e*PKP2 **PKPab 00 31 31.7 -0.3**
TEY pmax pmax
comp=Z,300nm,2.4s
TEY pmax pmax
comp=Z,30nm,1.7s
RKPI Ransiki, Papua 147.18 231 PKP **PKPbc 00 31 33.2 +0.8**
RKPI PKP **PKiKP 00 31 35.9 +1.1**
FAKI Fak Fak 147.54 226 PKP **PKPbc 00 31 34.0 +0.6**
FAKI PKP **PKPab 00 31 34.6 -0.8**
FAKI Fak Fak 147.54 226 **PKPbc 00 31 34.4 +1.0**
FAKI IAMs_20 IAMs_20 01 29 46.3
comp=Z,769nm,20.0s
MMRI Maumere 148.24 205 PKP **PKPbc 00 31 34.0 -1.2**
MMRI PKP **PKiKP 00 31 37.2 +0.2**
MMRI Maumere 148.24 205 **PKiKP 00 31 36.6 -0.4**
IRK Irkutsk 148.24 6 *e*PKiKP **PKPdf 00 31 31.9 +1.1**
IRK pmax pmax
comp=Z,224nm,2.3s
DHRM DHARAMSHALA 148.36 62 *e*P **PKPbc 00 31 34.4 -1.0**
DHRM IAmb IAmb 00 31 47.0
comp=Z,746nm,1.9s
MOY Mondy 148.38 10 *e*PKiKP **PKPbc 00 31 33.0 -1.7**
MOY pmax pmax
comp=Z,194nm,2.0s
TLY Talaya 148.73 7 *e*PKiKP **PKPdf 00 31 33.0 +1.4**
TLY *e*SS SS 00 54 12.2 -0.2
TLY pmax pmax
comp=Z,193nm,2.0s
TLY Talaya 148.73 7 **PKPbc 00 31 33.9 -1.6**
URV Uravakonda 148.95 95 *e*PKPbc **PKPdf 00 31 32.8 -0.3**
KLRI Killari 149.01 89 *e*PKiKP **PKPdf 00 31 34.4 +1.3**
PALK Pallekele 149.24 112 PKiKP **PKPdf 00 31 33.8 +0.2**
PALK MLR MLR
comp=Z,1µm,18.0s
PALK Pallekele 149.24 112 **PKPdf 00 31 33.8 +0.2**
SMLA Simla 149.33 64 *e*P **PKPdf 00 31 34.8 +1.6**
SMLA IAmb IAmb 00 31 44.8
comp=Z,142nm,1.0s
JCJ Chichijima 149.37 288 PKPbc **PKPbc 00 31 38.0 +0.2**
comp=Z,76nm,0.7s,baz=139,slow=20,SNR=3.5
PLAI Plampang 149.54 197 PKP **PKPbc 00 31 37.2 -1.3**
PLAI PKP **PKiKP 00 31 39.5 -0.1**
SIJI Sorong 149.70 228 PKPbc **PKiKP 00 31 39.6 -0.4**
comp=Z,27nm,0.9s,baz=126,slow=5.5,SNR=6.0
USA0B Ussuriysk Arra 149.94 326 IAMs_20 IAMs_20 01 41 38.9
comp=Z,1µm,22.0s
USRK Ussuriysk Ar. 149.94 326 PKP **PKPdf 00 31 34.6 +0.8**
comp=Z,8.4nm,0.9s,baz=78,slow=0.7,SNR=7.9
USRK PKPbc **PKPbc 00 31 38.9 +0.3**
comp=Z,21nm,0.8s,baz=8.6,slow=1.0,SNR=14
USRK Ussuriysk Ar. 149.94 326 **PKPdf 00 31 35.0 +1.3**
USRK **PKiKP 00 31 39.7 +0.2**
DMPR Damasthipur 149.95 91 *e*PKPbc **PKPdf 00 31 35.5 +0.9**
ZAK Zakamensk 149.97 8 *e*PKHKP **PKPbc 00 31 36.0 -2.7**
ZAK pmax pmax
comp=Z,55nm,1.3s
DDI Dehra Dun 150.24 65 *e*P **PKPdf 00 31 36.9 +2.1**
DDI *i* x x 00 31 47.6
DDI IAmb IAmb 00 31 49.4
comp=Z,594nm,1.5s
JHJ2 Mitsune 150.26 301 IAMs_20 IAMs_20 01 25 44.2
comp=Z,1µm,19.0s
MJAR Matsushiro Arr 150.29 308 PKPbc **PKPbc 00 31 39.8 0.0**
comp=Z,20nm,1.0s,baz=83,slow=1.2,SNR=6.1
MJAR Matsushiro Arr 150.29 308 **PKiKP 00 31 40.2 -0.3**
MAJO Matsushiro 150.29 308 PKiKP **PKiKP 00 31 40.5 -0.1**
MAJO Matsushiro 150.29 308 **PKiKP 00 31 40.5 -0.1**
MAT Matsushiro 150.29 308 PKP **PKPbc 00 31 39.9 +0.1**
MJB9 Matsu-Tunnel 150.29 308 **PKiKP 00 31 40.5 -0.1**
BHPL Bhopal 150.30 79 *e*P **PKPdf 00 31 35.7 +0.7**
BHPL IAmb IAmb 00 31 51.7
comp=Z,18nm,0.8s
JAGI Jajag, Banyuwa 150.66 190 **PKPdf 00 31 36.7 +0.9**
WMQ Urumqi 150.70 33 PKPbc **PKPdf 00 31 36.8 +1.7**
WMQ pPKP PKPbc 00 31 40.8 +0.2
WMQ PP **PP 00 35 22.5 +5.7**
WMQ AMB AMB
WMQ comp=Z,270nm,5.1s LR LR
WMQ comp=Z,470nm,23.1s LR LR
WMQ comp=Z,500nm,19.1s LR LR
comp=Z,1µm,23.9s
HYBB Hyderabad (bro 150.72 91 *e*PKPbc **PKPdf 00 31 36.9 +1.1**
HYBB IVMs_BB IVMs_BB 01 34 47.5
comp=Z,344nm,22.2s
HYB Hyderabad 150.72 91 *i* PKP **PKPdf 00 31 37.0 +1.2**
HYB *e* 00 31 42.0
HYB Hyderabad 150.72 91 *e*P **PKiKP 00 31 41.7 -0.3**
HYB IAmb IAmb 00 31 44.2
comp=Z,157nm,1.4s
SRLM Srisailam 150.76 94 *e*PKPbc **PKPdf 00 31 37.6 +1.8**
SRSP Sriramsagar 150.79 88 *e*PKPbc **PKPdf 00 31 37.4 +1.5**
MDJ Mudanjiang 150.83 330 PKPbc **PKPdf 00 31 36.3 +1.2**
MDJ PP **PP 00 35 18.6 +1.3**
MDJ AMB AMB
comp=Z,390nm,6.8s
MDJ LR LR
comp=Z,610nm,20.8s
MDJ LR LR
comp=Z,730nm,20.8s
MDJ LR LR
comp=Z,1µm,21.2s
MDJ Mudanjiang 150.83 330 IAMs_20 IAMs_20 01 40 16.1
comp=Z,1µm,21.0s
SKHT Srikalahasti 150.88 99 *e*PKiKP **PKPdf 00 31 38.4 +2.4**
NJS Nagarjunasagar 151.25 93 *e*PKPdf **PKPdf 00 31 30.4 -6.2**
INU Inuyama 151.66 307 **PKiKP 00 31 44.1 +0.7**
INU IAMs_20 IAMs_20 01 41 03.7
comp=Z,894nm,19.0s
RPR Rampur 151.67 88 *e*PKPbc **PKPbc 00 31 41.3 -2.1**
ADKI Addanki 151.70 95 *e*PKPbc **PKPdf 00 31 39.7 +2.4**
NGP Nagpur 151.70 84 *ex* **PKPbc 00 31 43.5 0.0**
CISI Cisompet, Garu 151.91 177 **PKiKP 00 31 45.4 +0.8**
GGR Gangavaram 152.34 91 *e*PKPbc **PKPdf 00 31 41.2 +3.0**
KAPI Kappang 152.51 203 PKiKP **PKiKP 00 31 48.1 +2.3**
KAPI Kappang 152.51 203 **PKiKP 00 31 48.1 +2.3**
KAPI Kappang 152.51 203 IAMs_20 IAMs_20 01 37 57.5
comp=Z,1µm,20.0s
MYLAV Mylavaram 152.53 93 *e*PKPbc **PKPdf 00 31 40.6 +2.1**
LEM Lembang 152.62 176 PKPab **PKPab 00 31 57.4 +1.1**
comp=Z,113nm,0.6s,baz=216,slow=14,SNR=11
SONM Songino Array 152.80 4 PKP **PKPdf 00 31 38.6 +0.4**
comp=Z,12nm,1.1s,baz=285,slow=0.4,SNR=36
SONM PKPbc **PKPbc 00 31 45.4 0.0**
comp=Z,16nm,1.0s,baz=329,slow=0.9,SNR=26
SONM Songino Array 152.80 4 **PKPdf 00 31 38.9 +0.7**
ULN Ulaanbaatar 152.81 3 PKP2 **PKPab 00 31 57.6 +1.3**
ULN Ulaanbaatar 152.81 3 **PKPdf 00 31 39.6 +1.4**
ULN PKPbc **PKPbc 00 31 46.7 +1.3**
ULN PKPab **PKPab 00 31 57.6 +1.3**
ULN Ulaanbaatar 152.81 3 IAMs_20 IAMs_20 01 40 22.5
comp=Z,1µm,21.0s
TNG Tangerang 153.19 174 PKP **PKPdf 00 31 35.8 -3.8**
TNG PKP **PKPdf 00 31 36.2 -3.4**
CN2 Changchun 153.32 333 PKPbc **PKPdf 00 31 39.7 +0.8**
CN2 SS SS 00 55 07.4 +3.6
CN2 AMB AMB
CN2 comp=Z,100nm,4.0s LR LR
CN2 comp=Z,400nm,22.0s LR LR
CN2 comp=Z,300nm,22.0s LR LR
CN2 comp=Z,800nm,21.0s LR LR
PVM Polavaram 153.56 93 *e*PKPbc **PKPbc 00 31 46.5 -1.1**
KLSI 154.39 169 PKP **PKPdf 00 31 40.0 -1.3**
KLSI 154.39 169 PKP **PKPdf 00 31 40.1 -1.3**
KLSI 154.39 169 P **PKPdf 00 31 40.0 -1.3**
LUWI Luwuk 154.74 213 IAMs_20 IAMs_20 01 34 15.1
comp=Z,729nm,22.0s
DANN Dangsing 155.52 67 *e*P **PKPdf 00 31 43.0 +0.2**
SNY Shenyang 155.72 333 ⇑PKP **PKPdf 00 31 41.3 -1.0**
SNY PP **PP 00 35 49.6 +4.7**
SNY AMB AMB
comp=Z,690nm,13.2s
SNY LR LR
comp=Z,680nm,19.0s
SNY LR LR
comp=Z,750nm,19.8s
SNY LR LR
comp=Z,1µm,22.8s
CHLP Challavanipeta 156.07 91 *e*PKPdf **PKPdf 00 31 38.8 -4.6**
PMBI Palembang 156.12 169 IAMs_20 IAMs_20 01 45 39.4
comp=Z,1µm,22.0s
KSRS Korea Array 156.77 320 PKP **PKPdf 00 31 44.2 +0.4**
comp=Z,13nm,1.1s,baz=64,slow=0.5,SNR=19
KSAR Wonju Array Be 156.80 320 PKiKP **PKPdf 00 31 44.4 +0.6**
KSAR Wonju Array Be 156.80 320 **PKPdf 00 31 44.4 +0.6**
DMN Daman 156.84 68 *e*P **PKPdf 00 31 45.0 +0.5**
KKN Kakani 156.95 67 *e*P **PKPdf 00 31 45.2 +0.6**
BKB Balikpapan 156.98 200 IAMs_20 IAMs_20 01 40 17.9

comp=Z,1μm,20.0s
PKIN Phulchoki 157.10 68 *e*P **PKPdf 00 31 45.0 +0.1**
PKI Pulchoki 157.11 68 *e*P **PKPdf 00 31 45.1 +0.1**
JNU Nakatsue 157.21 307 IAMs_20 IAMs_20 01 48 02.8
comp=Z,922nm,19.0s
GUN Gumba 157.44 67 *e*P **PKPdf 00 31 45.0 -0.4**
INCN Inchon 157.51 322 IAMs_20 IAMs_20 01 55 20.2
comp=Z,745nm,20.0s
JIRN Jiri 157.77 67 *e*P **PKPdf 00 31 46.5 +0.7**
RAMN Ramite 158.28 69 *e*P **PKPdf 00 31 46.2 -0.1**
DL2 Dalian 158.98 332 PKP **PKPdf 00 31 46.7 +0.3**
DL2 SS SS 00 56 03.6 -1.1
DL2 AMB AMB
comp=Z,330nm,7.0s
DL2 LR LR
comp=Z,320nm,18.2s
DL2 LR LR
comp=Z,740nm,17.9s
DL2 LR LR
comp=Z,830nm,17.6s
ODAN Odare 158.99 69 *e*P **PKPdf 00 31 47.7 +0.5**
comp=Z,46nm,1.2s
TAPN Taplejung 159.15 67 *e*P **PKPdf 00 31 46.7 -0.7**
comp=Z,44nm,1.4s
RPSI Rantau Prapat 159.44 149 PKPdf **PKPdf 00 31 48.5 +0.7**
RPSI **PKPab 00 32 27.2 +1.8**
PSI Prapat 159.53 149 PKP2 **PKPab 00 32 27.2 +1.3**
PSI **PKPdf 00 31 48.5 +0.5**
GTA Gaotai 159.61 22 ⇑PKP **PKPdf 00 31 48.0 +0.6**
GTA PKPab **PKPab 00 32 26.2 +0.6**
GTA PP **PP 00 36 10.0 +3.7**
GTA SS SS 00 56 18.7 +7.3
GTA AMB AMB
comp=Z,390nm,13.3s
GTA LR LR
comp=Z,470nm,21.0s
GTA LR LR
comp=Z,890nm,20.3s
GTA LR LR
comp=Z,940nm,20.3s
HHC Hu-ho-hao-te 159.80 355 *e*PKP **PKPdf 00 31 49.8 +2.3**
HHC PP **PP 00 36 06.2 -0.8**
HHC SS SS 00 56 13.2 +0.3
HHC AMB AMB
comp=Z,260nm,7.2s
HHC LR LR
comp=Z,350nm,16.2s
HHC LR LR
comp=Z,200nm,12.8s
HHC LR LR
comp=Z,540nm,16.2s
BJT Baijiatuau 159.86 345 IAMs_20 IAMs_20 01 55 46.9
comp=Z,779nm,18.0s
BTO Baotou 160.12 359 *e*PKP **PKPdf 00 31 48.4 +0.5**
LSA Lhasa 161.25 58 PKP **PKPdf 00 31 51.6 +1.7**
LSA Lhasa 161.25 58 PKP2 **PKPab 00 32 34.8 +1.1**
LSA Lhasa 161.25 58 **PKPab 00 32 34.8 +1.1**
TIA Tai'an 163.09 338 PKP **PKPdf 00 31 52.8 +1.8**
LZH Lanzhou 163.90 16 ⇑PKP **PKPdf 00 31 47.8 -4.2**
LZH pPKP pPKPdf 00 31 54.9 -5.3
LZH sPKP 00 31 59.1
LZH PKPab **PKPab 00 32 45.7 +1.2**
LZH SS SS 00 56 59.0 +2.9
LZH AMB AMB
comp=Z,450nm,7.1s
LZH LR LR
comp=Z,760nm,17.4s
LZH LR LR
comp=Z,830nm,20.6s
LZH LR LR
comp=Z,1μm,20.6s
KOHI KOHIMA 165.11 67 *e*P **PKPdf 00 31 54.2 +0.9**
KOHI *i* x x 00 32 48.8
NJ2 Nanjing 165.84 325 *e*PKP **PKPdf 00 31 55.7 +2.2**
NJ2 PP **PP 00 36 44.1 +4.5**
NJ2 SS SS 00 57 20.2 +3.7
NJ2 AMB AMB
comp=Z,360nm,5.2s
NJ2 LR LR
comp=Z,670nm,18.9s
NJ2 LR LR
comp=Z,610nm,17.1s
NJ2 LR LR
comp=Z,1μm,21.8s
XAN Xi'an 166.68 2 PKP **PKPdf 00 31 55.9 +1.7**
XAN pPKP pPKPdf 00 32 02.7 +0.2
XAN SS SS 00 57 21.5 -2.3
XAN AMB AMB
comp=Z,520nm,9.4s
XAN LR LR
comp=Z,760nm,21.0s
XAN LR LR
comp=Z,290nm,21.8s
XAN LR LR
comp=Z,1μm,21.1s
CD2 Chengdu 168.63 25 PKP **PKPdf 00 31 56.8 +1.1**
CD2 pPKP pPKPdf 00 31 59.1 -4.7
CD2 SKS **SKSdf 00 38 59.3 +1.3**
CD2 SS **SS 00 57 46.6 +2.4**
CD2 AMB AMB
comp=Z,1μm,6.8s
CD2 LR LR
comp=Z,2μm,18.4s
CD2 LR LR
comp=Z,2μm,20.2s
CD2 LR LR
comp=Z,3μm,17.7s
WHN Wuhan 169.19 336 *i* PKP **PKPdf 00 31 56.7 +0.8**
WHN PKPab **PKPab 00 33 06.4 -1.3**
WHN PP **PP 00 36 55.8 -0.5**
WHN AMB AMB
comp=Z,1μm,10.0s
WHN LR LR
comp=Z,2μm,19.8s
WHN LR LR
comp=Z,1μm,15.6s
WHN LR LR
comp=Z,3μm,20.2s
CMAR Chiang Mai Arr 169.94 101 PKP **PKPdf 00 31 57.3 +0.6**
comp=Z,3.0nm,0.8s,baz=274,slow=2.0,SNR=25
CMAR PKPab **PKPab 00 33 12.1 +0.3**
comp=Z,3.2nm,0.8s,baz=260,slow=4.5,SNR=10.0
CMAR PP **PP 00 37 01.8 -0.3**
comp=Z,1.2nm,0.5s,baz=242,slow=6.2,SNR=9.3
CHTO Chiang Mai 170.02 99 PKP2 **PKPab 00 33 13.2 +1.1**
CHTO 01 31 57.8
CHTO Chiang Mai 170.02 99 **PKPdf 00 31 57.8 +1.0**
CHTO **PKPab 00 33 13.2 +1.1**
QZH Quanzhou 170.48 298 *i* PKP **PKPdf 00 31 58.2 +1.4**
QZH PP **PP 00 37 08.5 +4.2**
QZH LR LR
comp=Z,680nm,20.1s
QZH LR LR
comp=Z,750nm,19.4s
KMI Kunming 172.46 53 PKP **PKPdf 00 31 58.6 +0.5**
KMI pPKP pPKPdf 00 32 01.3 -5.0
UBPT Khong Chiam 173.48 145 **PKPdf 00 31 55.2 -3.3**
GYA Guiyang 173.74 23 *i* PKP1 **PKPdf 00 31 59.5 +1.0**
GYA PKPab **PKPab 00 33 27.7 -0.5**
GYA PP **PP 00 37 19.3 +0.3**
GYA SKKS 00 44 04.7
GYA SS **SS 00 58 32.3 -2.1**
GYA AMB AMB
comp=Z,510nm,10.7s
GYA LR LR
comp=Z,550nm,16.7s
GYA LR LR
comp=Z,490nm,17.6s
GYA LR LR
comp=Z,940nm,19.0s
GZH Guangzhou 175.59 304 PKP **PKPdf 00 32 00.6 +1.7**
GZH SS SS 00 58 43.6 -11
GZH LR LR
comp=Z,570nm,17.2s
GZH LR LR
comp=Z,750nm,20.4s
QIZ Qiongzhong 178.30 196 PKP **PKPdf 00 32 00.4 +0.8**
QIZ PP **PP 00 37 42.0 +1.6**
QIZ SS SS 00 59 20.7 +3.4
QIZ AMB AMB
comp=Z,1μm,10.4s
QIZ LR LR
comp=Z,740nm,19.2s
QIZ LR LR
comp=Z,470nm,18.8s
QIZ LR LR
comp=Z,1μm,20.4s

IDC 04 00:27:26.0±2.0, 1°.18N×125°.84E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/36, mbtmp3.4/3, Error ellipse: s-maj=200.8km s-min=25.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.59**	**159**	P	P	00 32 27.8	-0.5
	0.9nm,0.5s,baz=337,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**25.91**	**163**	P	P	00 33 00.3	+0.3
	0.4nm,0.7s,baz=344,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**59.16**	**327**	P	P	00 37 28.6	-0.1
	0.3nm,0.8s,baz=120,slow=6.2,SNR=3.4						

*DJA **04** 00:31:12.8±0.4, 6°.S±5°.×10°.5E±°, h10km, M3.6/9, MLv3.6/9*
*IDC **04** 00:31:37.9±13.0, 6°.26S×105°.10E, h283km±134km, mb3.2/8, mb1 3.3/8, mb1mx3.1/45, mbtmp3.8/8, MS3.9/1, Ms1 3.9/1, ms1mx3.1/13, Error ellipse: s-maj=75.3km s-min=15.0km az=59.0*
ISC 04 00:31:13.4±0.8, 6°.12S±0°.09×105°.27E±0°.07, h26km, n31, σ1°.33/26, mb3.9/8, 3C-5D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.97**	**308**	P	**Pn**	**00 31 31.3**	**-0.1**
KLSI		**1.52**	**339**	S	**Sb**	**00 31 59.7**	**-0.2**
DBJI	**Dramaga**	**1.53**	**106**	P	**Pn**	**00 31 38.3**	**-0.8**
SKJI	**Sukabumi**	**1.55**	**125**	P	**Pn**	**00 31 39.0**	**-0.4**
CBJI	**Citeko**	**1.60**	**101**	P	**Pb**	**00 31 42.0**	**-0.3**
LWLI	**Liwa**	**1.63**	**312**	P	**Pb**	**00 31 42.6**	**-0.3**
MDSI	**Maura Dua**	**1.96**	**326**	P	**Pn**	**00 31 46.2**	**+1.3**
LEM	**Lembang**	**2.43**	**107**	P	**Pn**	**00 31 52.7**	**+1.0**
MNAI	**Manna**	**2.90**	**307**	P	**Pb**	**00 32 04.5**	**+0.1**
CISI	**Cisompet, Garu**	**2.90**	**120**	P	**Pn**	**00 31 59.5**	**+1.5**
TPI	**Tanjungpandan**	**4.10**	**35**	P	**Pn**	**00 32 15.1**	**+0.6**
CMAR	**Chiang Mai Arr**	**25.21**	**346**	P	**P**	**00 36 39.5**	**+2.3**
	1.4nm,0.3s,baz=178,slow=8.7,SNR=4.8						
PALK	**Pallekele**	**27.89**	**298**	LR	LR	00 48 33.4	
	comp=Z,229nm,19.4s,baz=154,slow=36						
WRA	**Warramunga Arr**	**31.40**	**119**	P	**P**	**00 37 32.9**	**+0.3**
	0.9nm,0.4s,baz=300,slow=9.1,SNR=11						
H08S2	**Diego Garcia H**	**32.57**	**265**	T	T	01 11 58.3	
	baz=92						
H08S3	**Diego Garcia H**	**32.58**	**265**	T	T	01 11 58.3	
	baz=92						
H08S1	**Diego Garcia H**	**32.59**	**265**	T	T	01 11 54.1	
	baz=92						
ASAR	**Alice Springs**	**32.59**	**125**	P	**P**	**00 37 43.4**	**+0.2**
	0.6nm,0.5s,baz=301,slow=8.0,SNR=16						
STKA	**Stephens Creek**	**42.50**	**132**	P	**P**	**00 39 07.6**	**+0.8**
	2.8nm,0.5s,baz=309,slow=9.1,SNR=9.5						
SONM	**Songino Array**	**53.73**	**1**	P	**P**	**00 40 32.8**	**-0.6**
	0.4nm,0.7s,baz=176,slow=5.8,SNR=4.8						
MKAR	**Makanchi Array**	**56.49**	**341**	P	**P**	**00 40 51.3**	**-2.0**
	0.7nm,1.0s,baz=144,slow=8.5,SNR=2.7						
ZALV	**Zalesovo Beam**	**62.27**	**347**	P	**P**	**00 41 30.0**	**-3.0**
	0.9nm,0.7s,baz=147,slow=5.6,SNR=4.8						
BRTR	**Keskin Array B**	**79.97**	**312**	P	P	00 43 15.7	-5.0
	0.5nm,0.7s,baz=126,slow=5.5,SNR=3.0						
MILM	**Milestii Mici**	**85.27**	**318**	⇑P	**P**	**00 43 47.9**	**-0.1**
VRI	**Vrincioaia**	**86.43**	**317**	⇓P	**P**	**00 43 55.1**	**+1.2**
PLOR	**Plostina**	**86.48**	**317**	⇑P	**P**	**00 43 56.7**	**+2.6**
TESR	**Tescani**	**86.62**	**317**	⇓P	**P**	**00 43 55.4**	**+0.7**
MLR	**Muntele Rosu**	**86.89**	**316**	⇓P	**P**	**00 43 56.9**	**+0.7**
PRAR	**RASCA**	**87.09**	**318**	⇓P	**P**	**00 43 57.9**	**+0.9**
BURAR	**Bucovina Array**	**87.81**	**318**	⇓P	**P**	**00 44 01.7**	**+1.1**
VTS	**Vitosha**	**88.27**	**313**	⇑P	**P**	**00 44 01.2**	**-1.7**

IDC 04 00:37:45.2±4.1, 26°.28S×115°.55W, h0km, mb3.3/1, mb1 3.7/1, mb1mx3.3/25, mbtmp3.3/1, Error ellipse: s-maj=225.6km s-min=131.3km az=55.0, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S2	**WAKE ISLAND Hy**	**87.59**	**292**	T	T	02 28 12.6	
	baz=119,slow=74,SNR=7.9						
H11S1	**WAKE ISLAND Hy**	**87.61**	**292**	T	T	02 28 13.6	
	baz=119,slow=74,SNR=7.4						
H11S3	**WAKE ISLAND Hy**	**87.61**	**292**	T	T	02 28 14.0	
	baz=119,slow=74,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**88.01**	**293**	T	T	02 28 46.4	
	baz=121						
H11N1	**WAKE ISLAND Hy**	**88.02**	**293**	T	T	02 28 49.6	
	baz=121						
H11N2	**WAKE ISLAND Hy**	**88.03**	**293**	T	T	02 28 48.8	
	baz=121						
YKA	**Yellowknife Ar**	**88.46**	**0**	P	P	00 50 39.0	+0.1
	0.1nm,0.6s,baz=173,slow=4.9						
ZALV	**Zalesovo Beam**	**148.51**	**337**	PKPbc	PKPbc	00 57 32.8	-0.7
	0.4nm,0.5s,baz=20,slow=3.5,SNR=2.5						
BRTR	**Keskin Array B**	**151.04**	**55**	PKPbc	PKPbc	00 57 40.0	-0.5
	0.4nm,0.7s,baz=315,slow=1.2,SNR=2.6						

IDC 04 00:38:51.5±1.7, 4°.55S×150°.37E, h0km, mb3.1/2, mb1 3.5/2, mb1mx3.2/29, mbtmp3.2/2, MS3.8/1, Ms1 3.8/1, ms1mx3.3/5, Error ellipse: s-maj=64.6km s-min=20.1km az=159.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.67**	**82**	Pn	Pn	00 39 22.5	+0.5
	54nm,0.3s,baz=310,slow=2.5,SNR=21						
KRVT				Sn	Sn	00 39 44.1	-0.1
	51nm,0.3s,baz=162,slow=19,SNR=8.0						
WRA	**Warramunga Arr**	**21.86**	**224**	P	P	00 43 44.8	-1.3
	0.5nm,0.7s,baz=53,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**24.77**	**218**	P	P	00 44 16.6	+1.3
	0.3nm,0.8s,baz=50,slow=9.5,SNR=5.5						
ASAR				LR	LR	00 53 25.1	
	comp=Z,198nm,20.2s,baz=150,slow=35						
TORD	**Torodi Ar. Bea**	**147.92**	**289**	PKPbc	PKPbc	00 58 38.7	-1.1
	0.4nm,0.5s,baz=82,slow=3.2,SNR=4.3						

SJA 04 00:43:14.7±0.3, 20°.59S×71°.06W, h12km, ML3.4, MW3.6, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	**IPOC Station P**	**1.93**	**154**	*i* P	Pb	00 43 49.5	-0.6
PB04				*e*S	Sb	00 44 15.6	+1.4
PB04				IAML		00 44 23.9	
	comp=Z,203nm,0.3s						
PB09	**IPOC Station P**	**2.08**	**126**	*i* P	Pb	00 43 51.7	-0.7
PB09				*e*S	Sb	00 44 19.1	+0.7
PB05	**IPOC Station P**	**2.39**	**161**	*i* P	Pb	00 43 56.2	-1.6
PB05				*e*S	Sb	00 44 26.8	-0.6
PB06	**IPOC Station P**	**2.52**	**147**	*i* P	Pb	00 43 58.1	-2.0
PB06				*e*S	Sb	00 44 30.4	-0.6
PB10	**IPOC Station P**	**2.95**	**171**	*i* P	Pn	00 44 04.0	+2.6
PB15	**IPOC Station P**	**3.00**	**151**	*i* P	Pn	00 44 05.0	+2.8
PB15				*e*S	Sb	00 44 42.0	-2.8
PB15				IAML		00 44 54.1	
	comp=Z,201nm,0.4s						
LPAZ	**La Paz**	**5.10**	**33**	*i* P	Pn	00 44 35.3	+3.8

IDC 04 01:41:03.6±2.8, 15°.57N×44°.80W, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.5/33, mbtmp3.6/5, MS3.6/3, Ms1 3.6/3, ms1mx3.2/51, Error ellipse: s-maj=112.2km s-min=28.3km az=17.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDP	**Montagnes des**	**12.94**	**217**	LR	LR	01 48 46.4	
	comp=Z,56nm,18.8s,baz=1.0,slow=36						
BDFB	**Brasilia**	**31.17**	**186**	LR	LR	02 00 10.5	
	comp=Z,200nm,18.4s,baz=303,slow=37						
H10N3	**ASCENSION HYDR**	**37.98**	**126**	T	T	02 28 14.9	
	baz=306,slow=74						
H10N2	**ASCENSION HYDR**	**37.98**	**126**	T	T	02 28 12.8	
	baz=306,slow=74						
H10N1	**ASCENSION HYDR**	**37.99**	**126**	T	T	02 28 12.6	
	baz=306						
TORD	**Torodi Ar. Bea**	**45.04**	**87**	P	P	01 49 21.3	-0.2
	0.4nm,0.6s,baz=272,slow=6.9,SNR=3.8						
ULM	**Lac du Bonnet**	**53.61**	**322**	P	P	01 50 26.4	-0.2
	2.0nm,0.8s,baz=115,slow=6.4,SNR=3.0						
TXAR	**Lajitas Array**	**55.59**	**295**	P	P	01 50 41.4	-0.1
	0.2nm,0.6s,baz=105,slow=7.0,SNR=3.1						
H09W1	**TRISTAN DA CUN**	**60.66**	**151**	T	T	02 56 25.4	
	SNR=7.5						
HFS	**Hagfors**	**61.12**	**29**	LR	LR	02 15 45.7	
	comp=Z,139nm,18.3s,baz=93,slow=34						
YKA	**Yellowknife Ar**	**67.00**	**332**	P	P	01 51 57.7	-0.3
	0.3nm,0.9s,baz=104,slow=7.5,SNR=4.4						
ILAR	**Eielson Array**	**81.11**	**335**	P	P	01 53 21.1	+0.5
	0.7nm,0.7s,baz=73,slow=4.5,SNR=7.7						

IDC 04 01:43:23.6±3.1, 7°.89N×126°.24E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/32, mbtmp3.5/3, MS4.1/1, Ms1 4.1/1, ms1mx3.3/28, Error ellipse: s-maj=260.0km s-min=26.7km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**28.79**	**164**	P	P	01 49 23.7	+0.3
	0.2nm,0.3s,baz=344,slow=9.4,SNR=4.6						
ASAR	**Alice Springs**	**32.25**	**167**	P	P	01 49 53.8	-0.3
	0.3nm,0.5s,baz=343,slow=7.0,SNR=3.6						
MKAR	**Makanchi Array**	**53.91**	**324**	P	P	01 52 48.9	-0.1
	0.3nm,0.5s,baz=123,slow=6.5,SNR=6.9						
YAK	**Yakutsk**	**54.09**	**2**	LR	LR	02 15 57.3	
	comp=Z,160nm,19.9s,baz=224,slow=36						

*DJA **04** 01:55:01.9±0.3, 12°.S±3°.×11°.1E±°, h10km, M4.9/17, mb4.8/15, mB5.4/6, MLv4.9/17, Mw(mB)4.8/6, Mwp5.5/1*
*IDC **04** 01:55:03.8±0.8, 11°.58S×111°.09E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.0/47, mbtmp4.1/15, ML4.1/2, Error ellipse: s-maj=34.0km s-min=14.4km az=53.0*
*NEIC **04** 01:55:04.6±1.7, 11°.67S±0°.08×111°.02E±0°.05, h12km±5km, mb4.3/13, Error ellipse: s-maj=12.1km s-min=5.4km az=203.0*
ISC 04 01:55:04.4±0.6, 11°.70S±0°.06×110°.98E±0°.06, h10km, n80, σ1°.98/78, mb4.3/19, 1D, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**3.49**	**3**	P	**Pn**	**01 55 57.4**	**-1.3**
PCJI				S	**Sn**	**01 56 36.0**	**-4.1**
PWJI	**Pagerwojo**	**3.74**	**13**	P	**Pn**	**01 56 01.6**	**-0.6**
UGM	**Wanagama**	**3.79**	**353**	P	**Pn**	**01 56 01.8**	**-1.1**
UGM	**Wanagama**	**3.79**	**353**		**Pn**	**01 56 02.1**	**-0.8**
UGM				Sn	**Sn**	**01 56 48.3**	**+0.8**
WOJI	**Wonogiri, Jawa**	**3.84**	**359**	P	**Pn**	**01 56 02.5**	**-1.0**
YOGI	**Yogyakarta**	**3.92**	**350**	P	**Pn**	**01 56 02.9**	**-1.7**
GMJI	**Gumukmas**	**4.18**	**36**	P	**Pn**	**01 56 09.0**	**+0.7**
NGJI	**Ngawi**	**4.33**	**6**	P	**Pn**	**01 56 12.3**	**+2.0**
JAGI	**Jajag, Banyuwa**	**4.48**	**45**	P	**Pn**	**01 56 13.8**	**+1.4**
JAGI	**Jajag, Banyuwa**	**4.48**	**45**		**Pn**	**01 56 13.6**	**+1.2**
JAGI				Sn	**Sn**	**01 57 03.4**	**-1.2**
SMRI	**Semarang**	**4.65**	**353**	P	**Pn**	**01 56 15.7**	**+1.0**
SMRI	**Semarang**	**4.65**	**353**		**Pn**	**01 56 15.0**	**+0.3**
SMRI					**Sn**	**01 57 08.2**	**-0.6**
KPJI	**Karang Pucung**	**4.78**	**335**	P	**Pn**	**01 56 15.9**	**-0.6**
IGBI	**Denpasar**	**5.00**	**55**	P	**Pn**	**01 56 21.1**	**+1.6**
	69nm,0.4s						
CISI	**Cisompet, Garu**	**5.16**	**323**	P	**Pn**	**01 56 19.6**	**-2.2**
	3.1nm7μm133nm,0.6s						
CISI				S	**Sn**	**01 57 14.2**	**-7.3**
	3.1nm7μm133nm,0.6s						
CISI	**Cisompet, Garu**	**5.16**	**323**		**Pn**	**01 56 20.1**	**-1.8**
CISI				Sn	**Sn**	**01 57 16.4**	**-5.1**
SRBI	**Singaraja**	**5.50**	**50**	P	**Pn**	**01 56 27.7**	**+1.2**
	0.8nm2μm86nm,0.7s						
LEM	**Lembang**	**5.87**	**325**	Sn	**Sn**	**01 57 40.3**	**+1.3**
	8.9nm,0.3s,baz=206,slow=20,SNR=5.8						
TWSI	**Taliwang, Sumb**	**6.51**	**64**	P	**Pn**	**01 56 41.7**	**+1.4**
	0.6nm1μm79nm,0.7s						
CGJI	**Cibinong**	**7.26**	**314**	P	**Pn**	**01 56 47.8**	**-2.8**
	0.5nm13μm48nm,0.7s						
PLAI	**Plampang**	**7.27**	**68**	P	**Pn**	**01 56 52.0**	**+1.2**
	0.4nm72nm,0.6s						
KASI	**Kota Agung**	**8.87**	**313**	P	Pn	01 57 17.8	+5.1
KLSI		**9.31**	**318**	P	**Pn**	**01 57 17.7**	**-1.0**
	9.4nm,0.9s						
MDSI	**Maura Dua**	**9.83**	**316**	P	**Pn**	**01 57 24.0**	**-1.9**
	1μm6.2nm,0.5s						
MNAI	**Manna**	**10.78**	**312**	Pn	**Pn**	**01 57 38.9**	**0.0**
KAPI	**Kappang**	**10.93**	**53**	Pn	**Pn**	**01 57 41.6**	**+0.7**
BKSI	**Bulukumba**	**11.04**	**56**	P	**Pn**	**01 57 44.5**	**+2.0**
	18nm,0.6s						
GIRL	**Giralia**	**11.32**	**164**	Pn	**Pn**	**01 57 43.6**	**-2.7**
MMRI	**Maumere**	**11.49**	**76**	P	**Pn**	**01 57 49.2**	**+0.5**
	2μm46nm,0.9s						
MMRI	**Maumere**	**11.49**	**76**	Pn	**Pn**	**01 57 47.1**	**-1.6**
KSI	**Kapahiang**	**11.53**	**313**	P	Pn	01 57 55.0	+5.8
BNSI	**Bone**	**11.58**	**52**	P	Pn	01 57 55.0	+5.1
BATI	**Baumata**	**12.54**	**84**	Sn	**Sn**	**02 00 16.2**	**-6.9**
	6.8nm,0.3s,baz=360,slow=19,SNR=2.9						
PSA00	**Pilbara Seismi**	**12.98**	**140**		**Pn**	**01 58 08.0**	**-1.0**
PSA00	**Pilbara Seismi**	**12.98**	**140**		**Pn**	**01 58 09.6**	**+0.6**
SOEI	**Soe**	**13.20**	**83**	Pn	**Pn**	**01 58 10.3**	**-1.9**
FITZ	**Fitzroy Crossi**	**15.53**	**116**	Pn	**Pn**	**01 58 42.3**	**-1.2**
	0.7nm,0.3s,baz=294,slow=6.4,SNR=20						
FITZ				Sn	Sn	02 01 22.6	-13
	0.5nm,0.3s,baz=336,slow=19,SNR=3.5						
FITZ	**Fitzroy Crossi**	**15.53**	**116**	Pn	**Pn**	**01 58 43.1**	**-0.5**
FITZ				IAmb	IAmb	01 58 56.1	
	comp=Z,16nm,0.9s						
MRSI	**Marisa**	**16.28**	**43**	P	**P**	**01 58 58.6**	**+2.3**
RPSI	**Rantau Prapat**	**18.66**	**319**	P	**Pn**	**01 59 24.8**	**+1.9**
PSI	**Prapat**	**18.74**	**320**	P	**P**	**01 59 24.8**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=137,slow=17,SNR=3.6						
WRA	**Warramunga Arr**	**23.90**	**113**	P	**P**	**02 00 19.0**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=284,slow=12,SNR=21						
WRA	**Warramunga Arr**	**23.90**	**113**	P	**P**	**02 00 18.7**	**+0.1**
WRAB	**Tennant Creek**	**23.91**	**113**	P	**P**	**02 00 17.6**	**-1.0**
ASAR	**Alice Springs**	**24.83**	**122**	P	**P**	**02 00 27.9**	**+0.8**
	comp=Z,3.1nm,0.7s,baz=296,slow=8.9,SNR=30						
ASAR	**Alice Springs**	**24.83**	**122**	P	**P**	**02 00 27.6**	**+0.5**
AS31	**Alice Springs**	**24.83**	**122**	P	**P**	**02 00 27.1**	**0.0**
CMAR	**Chiang Mai Arr**	**32.23**	**338**	P	**P**	**02 01 34.0**	**+1.0**
	comp=Z,1.5nm,0.3s,baz=168,slow=8.7,SNR=8.8						
CMAR	**Chiang Mai Arr**	**32.23**	**338**	P	**P**	**02 01 31.6**	**-1.5**
STKA	**Stephens Creek**	**34.61**	**130**	P	**P**	**02 01 55.1**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=307,slow=12,SNR=3.7						
H08S2	**Diego Garcia H**	**38.13**	**272**	T	T	02 42 33.4	
	baz=99,slow=75,SNR=6.1						
H08S3	**Diego Garcia H**	**38.14**	**273**	T	T	02 42 29.5	
	baz=99,slow=75,SNR=8.2						
H08S1	**Diego Carcia H**	**38.15**	**272**	T	T	02 42 32.4	
	baz=99,slow=75,SNR=4.9						
WHN	**Wuhan**	**42.12**	**4**	⇓P	P	02 03 11.7	+15
CD2	**Chengdu**	**42.93**	**351**	*e*P	**P**	**02 03 04.1**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	**48.00**	**352**	*e*P	**P**	**02 03 47.0**	**+3.2**
LZH				pP	pwP	02 03 51.0	-0.3
LZH				sP	sP	02 03 53.5	+7.2
LZH				PP	**PP**	**02 05 33.4**	**-2.7**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,67nm,5.4s						
HHC	**Hu-ho-hao-te**	**52.28**	**1**	*e*P	**P**	**02 04 19.2**	**+3.0**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.0s						
MJAR	**Matsushiro Arr**	**54.41**	**27**	P	**P**	**02 04 31.4**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=205,slow=5.4,SNR=4.6						
MJAR	**Matsushiro Arr**	**54.41**	**27**	IAmb	IAmb	02 04 31.5	
	comp=Z,1.8nm,0.8s						
USRK	**Ussuriysk Ar.**	**58.82**	**18**	P	**P**	**02 05 02.9**	**0.0**
	comp=Z,1.8nm,0.7s,baz=200,slow=5.4,SNR=3.4						
WMQ	**Urumqi**	**59.19**	**341**	*e*P	**P**	**02 05 07.9**	**+2.3**
ULN	**Ulaanbaatar**	**59.40**	**357**	P	**P**	**02 05 06.9**	**-0.2**
ULN				IAmb	IAmb	02 05 08.6	
	comp=Z,3.5nm,0.9s						
SONM	**Songino Array**	**59.41**	**356**	P	**P**	**02 05 07.8**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=178,slow=7.4,SNR=16						
SONM	**Songino Array**	**59.41**	**356**	P	**P**	**02 05 07.3**	**+0.1**
KSH	**Kashi**	**60.47**	**329**	P	**P**	**02 05 19.1**	**+4.5**
KSH				pmax	pmax		
	comp=Z,380nm,5.1s						
MK31	**Makanchi Array**	**63.64**	**338**	P	**P**	**02 05 35.5**	**-0.2**
MKAR	**Makanchi Array**	**63.64**	**338**	P	**P**	**02

MKAR	**Makanchi Array**	**63.64**	**338**	P		**P**	**02 05 35.5**	**-0.2**
KURBB	**Kurchatov Arra**	**68.21**	**338**	P		**P**	**02 06 04.9**	**0.0**
	comp=Z,0.6nm,0.6s,baz=150,slow=5.9,SNR=6.6							
KURK	**Kurchatov**	**68.25**	**339**	P		**P**	**02 06 03.6**	**-1.6**
KURK				IAmb		IAmb	02 06 05.1	
	comp=Z,1.8nm,0.7s							
ZAA0	**Zalesovo Array**	**69.07**	**344**	P		**P**	**02 06 09.5**	**-0.8**
ZAA0				IAmb		IAmb	02 06 12.3	
	comp=Z,2.3nm,1.1s							
ZALV	**Zalesovo Beam**	**69.07**	**344**	P		**P**	**02 06 10.3**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=131,slow=4.5,SNR=6.7							
BVAR	**Borovoye Array**	**73.22**	**336**	P		**P**	**02 06 35.7**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=153,slow=9.7,SNR=5.0							
ABKAR	**Akbulak array**	**75.44**	**328**	P		**P**	**02 06 48.3**	**-0.1**
QSPA	**South Pole Qui**	**78.32**	**180**	P		**P**	**02 07 06.2**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=326,slow=3.6,SNR=2.8							
QSPA	**South Pole Qui**	**78.32**	**180**	IAmb		IAmb	02 07 12.7	
	comp=Z,3.9nm,1.1s							
BRTR	**Keskin Array B**	**87.86**	**311**	P		**P**	**02 07 55.8**	**+1.3**
	comp=Z,1.2nm,1.0s,baz=150,slow=5.1,SNR=5.4							
BRTR	**Keskin Array B**	**87.86**	**311**	P		**P**	**02 07 54.2**	**-0.3**
BR131	**Keskin Array S**	**87.86**	**311**	P		**P**	**02 07 54.8**	**+0.3**
BR131				IAmb		IAmb	02 07 57.4	
	comp=Z,1.2nm,0.9s							
TXAR	**Lajitas Array**	**143.31**	**56**	PKP		**PKiKP**	**02 14 42.4**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=265,slow=2.0,SNR=3.1							

*IDC **04** 02:04:41.6±0.5,45°.97S×13°.61W,h0km,mb4.4/11, mb1 4.4/11,mb1mx4.1/32,mbtmp4.4/11,MS4.4/18, Ms1 4.4/18,ms1mx4.3/20,Error ellipse: s-maj=24.5km s-min=16.0km az=100.0*

*NEIC **04** 02:04:43.2±0.9,46°.0S±0°.1×13°.6W±0°.2,h10km±2km, mb4.6/16,Error ellipse: s-maj=18.1km s-min=16.9km az=95.0*

*GCMT **04** 02:04:46.2±0.2,46°.19S±0°.02×13°.43W±0°.02,h12km, MW5.1/128,Moment Tensor Solution. s55,c71; s128,c196; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}=5.40±.21; $M_{\theta\theta}$2.55±.15; $M_{\phi\phi}$2.85±.14; $M_{r\theta}$2.42±.42; $M_{\theta\phi}$-2.44±.09; $M_{r\phi}$1.04±.41; Best double couple: $M_0$5.81100×10¹⁶ NP1:ϕ_s155.00000°,δ43.00000°, λ-60.00000°. NP2:ϕ_s296.00000°,δ54.00000°, λ-115.00000°. Principal axes: T 5.2310, Plg5.0000°, Azm44.0000°; N 1.1610, Plg20.0000°, Azm312.0000°; P -6.3920, Plg69.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 02:04:43.1±0.4,46°.02S±0°.08×13°.6W±0°.1,h10km,n77, σ0²61/57,mb4.5/17,MS4.4/21,1C,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H09W1	**TRISTAN DA CUN**	**8.96**	**6**	T	T	02 16 10.8	
	SNR=15						
VNA1	**Neumayer--Stat**	**24.84**	**176**	P	**P**	**02 10 05.2**	**0.0**
VNA3	**Neumayer Olymp**	**25.37**	**177**	P	**P**	**02 10 09.5**	**-0.6**
SNAA	**Sanae**	**26.24**	**172**	P	**P**	**02 10 18.0**	**0.0**
SNAA	**Sanae**	**26.24**	**172**	P	**P**	**02 10 17.8**	**-0.1**
	4.8nm,0.9s,baz=328,slow=3.2,SNR=13						
SNAA				PcP	**PcP**	**02 13 43.6**	**-0.5**
	1.6nm,0.9s,baz=303,slow=2.2,SNR=4.5						
SNAA				LR	LR	02 18 25.0	
	comp=Z,507nm,18.8s,baz=346,slow=31						
SNAA	**Sanae**	**26.24**	**172**	P	**P**	**02 10 18.0**	**0.0**
SUR	**Sutherland**	**29.69**	**75**	LR	LR	02 19 45.7	
	comp=Z,2μm,20.9s,baz=230,slow=30						
SYO	**Syowa Base**	**34.97**	**150**	*e*P	**P**	**02 11 33.2**	**-1.7**
BOSA	**Boshof**	**35.03**	**74**	LR	LR	02 22 51.0	
	comp=Z,2μm,21.0s,baz=225,slow=31						
USHA	**Ushuaia**	**35.20**	**235**	P	**P**	**02 11 37.3**	**+0.3**
	13nm,0.7s,baz=81,slow=10,SNR=7.3						
CPUP	**Villa Florida**	**39.80**	**284**	P	**P**	**02 12 16.1**	**-0.3**
	1.3nm,0.6s,baz=136,slow=5.1,SNR=3.9						
CPUP				LR	LR	02 26 04.8	
	comp=Z,218nm,20.1s,baz=132,slow=32						
CPUP	**Villa Florida**	**39.80**	**284**	IAmb	IAmb	02 13 23.6	
	comp=Z,39nm,2.0s						
PLCA	**Paso Flores**	**40.98**	**256**	LR	LR	02 29 05.0	
	comp=Z,458nm,18.3s,baz=142,slow=36						
BDFB	**Brasilia**	**41.76**	**305**	LR	LR	02 26 55.0	
	comp=Z,385nm,19.1s,baz=118,slow=32						
MAW	**Mawson**	**43.53**	**147**	P	**P**	**02 12 46.7**	**+0.3**
	comp=Z,5.5nm,0.7s,baz=250,slow=5.1,SNR=6.7						
CFA	**Coronel Fontan**	**44.10**	**269**	LR	LR	02 30 07.3	
	comp=Z,508nm,18.8s,baz=134,slow=35						
QSPA	**South Pole Qui**	**44.24**	**180**	P	**P**	**02 12 53.0**	**+0.6**
	comp=Z,11nm,0.9s,baz=214,slow=5.0,SNR=23						
QSPA				PcP	**PcP**	**02 14 36.4**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=217,slow=5.0,SNR=4.2						
QSPA	**South Pole Qui**	**44.24**	**180**	P	**P**	**02 12 53.0**	**+0.6**
LSZ	**Lusaka**	**46.42**	**63**	P	**P**	**02 13 09.5**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=193,slow=6.4,SNR=9.0						
LSZ	**Lusaka**	**46.42**	**63**	P	**P**	**02 13 09.9**	**-0.2**
SIV	**San Ignacio**	**49.51**	**291**	LR	LR	02 32 01.9	
	comp=Z,486nm,20.4s,baz=112,slow=33						
LVC	**Limon Verde**	**50.16**	**278**	LR	LR	02 33 47.7	
	comp=Z,280nm,19.4s,baz=138,slow=35						
LVC	**Limon Verde**	**50.16**	**278**	P	**P**	**02 13 39.4**	**+0.1**
LIC	**Lamto**	**52.57**	**11**	*e*P	**P**	**02 13 56.7**	**-0.1**
	comp=Z,14nm,0.6s						
KIC	**Kosan Boka**	**52.74**	**11**	*e*P	**P**	**02 13 57.9**	**-0.2**
	comp=Z,21nm,1.2s						
TIC	**Toumodi**	**52.98**	**11**	*e*P	**P**	**02 13 59.9**	**0.0**
DBIC	**Dimbokro**	**53.03**	**11**	LR	LR	02 31 09.4	
	comp=Z,319nm,19.6s,baz=139,slow=30						
LPAZ	**La Paz**	**53.97**	**285**	LR	LR	02 37 49.4	
	comp=Z,190nm,18.1s,baz=120,slow=37						
SAML	**Samuel**	**56.14**	**295**	P	**P**	**02 14 22.8**	**-0.2**
SAML				IAmb	IAmb	02 14 27.3	
	comp=Z,10nm,1.5s						
VNDA	**Vanda**	**56.71**	**179**	P	**P**	**02 14 27.0**	**+0.8**
	comp=Z,3.3nm,1.0s,baz=200,slow=8.1,SNR=6.5						
VNDA				LR	LR	02 36 29.1	
	comp=Z,348nm,21.7s,baz=182,slow=34						
VNDA	**Vanda**	**56.71**	**179**	P	**P**	**02 14 26.5**	**+0.3**
VNDA				IAmb	IAmb	02 14 27.7	
	comp=Z,7.7nm,1.2s						
MBAR	**Mbarara**	**59.61**	**54**	P	**P**	**02 14 47.3**	**-0.1**
MBAR				IAmb	IAmb	02 15 24.2	
	comp=Z,12nm,1.6s						
CASY	**Casey**	**60.15**	**157**	P	**P**	**02 14 51.0**	**+0.7**
TOA0	**Torodi Ar. Sit**	**60.48**	**17**	P	**P**	**02 14 53.0**	**-0.2**
TOA0				IAmb	IAmb	02 14 53.8	
	comp=Z,5.7nm,1.2s						
TORD	**Torodi Ar. Bea**	**60.48**	**17**	P	**P**	**02 14 52.1**	**-1.0**
	comp=Z,3.2nm,1.1s,baz=220,slow=3.3,SNR=9.7						
TORD				LR	LR	02 34 49.4	
	comp=Z,368nm,21.2s,baz=120,slow=30						
TORD	**Torodi Ar. Bea**	**60.48**	**17**	P	**P**	**02 14 53.0**	**-0.2**
NNA	**Nana**	**62.94**	**281**	LR	LR	02 39 05.3	
	comp=Z,100nm,20.6s,baz=142,slow=33						
TAM	**Tamanrasset**	**70.65**	**19**	P	**P**	**02 15 59.6**	**+0.7**
TAM				IAmb	IAmb	02 16 00.9	
	comp=Z,3.9nm,0.9s						
ROSC	**El Rosal**	**73.77**	**295**	LR	LR	02 46 13.3	
	comp=Z,216nm,21.9s,baz=162,slow=34						
H08S1	**Diego Garcia H**	**81.83**	**93**	T	T	03 47 03.8	
	baz=225,slow=76,SNR=11						
H08S2	**Diego Garcia H**	**81.84**	**93**	T	T	03 47 04.7	
	baz=225,slow=76,SNR=15						
H08S3	**Diego Garcia H**	**81.85**	**93**	T	T	03 47 05.2	
	baz=225,slow=76,SNR=14						
KEST	**Kesra**	**83.96**	**19**	P	**P**	**02 17 14.2**	**+1.1**
	comp=Z,3.9nm,1.0s,baz=240,slow=7.2,SNR=3.9						
KEST				LR	LR	02 50 34.2	
	comp=Z,258nm,18.3s,baz=197,slow=33						
KEST	**Kesra**	**83.96**	**19**	IAmb	IAmb	02 17 17.9	
	comp=Z,11nm,1.2s						
ESDC	**Sonseca Array**	**85.74**	**7**	P	**P**	**02 17 23.1**	**+1.1**
	comp=Z,3.3nm,0.9s,baz=188,slow=4.5,SNR=9.5						
ESDC	**Sonseca Array**	**85.74**	**7**	P	**P**	**02 17 22.3**	**+0.3**
VTS	**Vitosha**	**94.14**	**26**	P	**P**	**02 18 02.3**	**+0.7**
BRTR	**Keskin Array B**	**95.25**	**35**	P	**P**	**02 18 08.1**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=235,slow=4.6,SNR=2.8						
BRTR				LR	LR	03 01 31.0	
	comp=Z,93nm,19.2s,baz=218,slow=36						
GERES	**GERESS Array B**	**97.43**	**18**	LR	LR	02 58 53.0	
	comp=Z,230nm,20.2s,baz=252,slow=33						
TBI	**Tubuai**	**100.20**	**221**	*e*LR	LR	02 51 08.2	
	comp=Z,355nm,36.2s						
PPT2	**Papeete2**	**105.22**	**223**	*e*LR	LR	02 53 25.4	
	comp=Z,454nm,28.0s						
TAOE	**Nuku Hiva Isla**	**107.49**	**236**	*e*LR	LR	02 54 39.8	
	comp=Z,2μm,35.2s						
PDAR	**Pinedale Array**	**122.58**	**300**	PKP	**PKPdf**	**02 23 37.4**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=84,slow=4.0,SNR=3.2						
MKAR	**Makanchi Array**	**124.76**	**56**	PKP	**PKPdf**	**02 23 41.4**	**-1.0**
	comp=Z,0.9nm,1.0s,baz=236,slow=2.2,SNR=4.2						
YKA	**Yellowknife Ar**	**134.19**	**321**	PKP	**PKPdf**	**02 23 59.1**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=108,slow=2.4,SNR=11						
SONM	**Songino Array**	**139.88**	**65**	PKhKP	PKPpre	02 24 04.4	
	comp=Z,0.2nm,0.6s,baz=270,slow=0.7,SNR=2.6						
SONM				PKP	**PKPdf**	**02 24 10.3**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=241,slow=2.6,SNR=6.3						
EPYK	**Eagle Plains**	**144.08**	**325**		PKPbc	02 24 15.8	0.0
HYT	**Haines Junctio**	**144.66**	**315**		**PKPdf**	**02 24 19.0**	**0.0**
DAWY	**Dawson**	**145.43**	**321**		**PKPbc**	**02 24 19.8**	**-0.3**
EGAK	**Eagle**	**146.11**	**322**	PKPbc	**PKPbc**	**02 24 22.1**	**-0.1**
BCAR	**Beaver Creek A**	**146.59**	**319**	PKPbc	**PKPbc**	**02 24 23.6**	**-0.1**
BMAR	**Burnt Mountain**	**146.94**	**328**		**PKPbc**	**02 24 24.8**	**+0.3**
PRP	**Porcupine Dome**	**147.78**	**324**		**PKPbc**	**02 24 27.1**	**0.0**
RIDG	**Independent Ri**	**147.86**	**321**		**PKPbc**	**02 24 27.6**	**+0.4**
IL31		**148.52**	**323**		**PKPbc**	**02 24 28.4**	**-0.3**
ILAR	**Eielson Array**	**148.52**	**323**	PKPbc	**PKPbc**	**02 24 28.1**	**-0.7**
	comp=Z,3.1nm,0.8s,baz=1.3,slow=1.9,SNR=22						
ILAR	**Eielson Array**	**148.52**	**323**		**PKPbc**	**02 24 27.6**	**-1.2**
TIXI	**Tiksi**	**148.79**	**22**	PKPbc	**PKPbc**	**02 24 28.2**	**-1.2**
	comp=Z,2.1nm,0.5s,baz=344,slow=3.5,SNR=7.3						
CCB	**Clear Creek Bu**	**148.93**	**323**		**PKPbc**	**02 24 29.3**	**-0.6**
RND	**Reindeer**	**149.68**	**321**		**PKPbc**	**02 24 31.9**	**0.0**
JNU	**Nakatsue**	**149.99**	**103**	PKPbc	**PKPbc**	**02 24 34.1**	**+0.5**
	comp=Z,6.9nm,0.8s,baz=258,slow=2.5,SNR=3.8						
KSRS	**Korea Array**	**150.27**	**93**	PKPbc	**PKPbc**	**02 24 34.0**	**-0.1**
	comp=Z,3.3nm,0.9s,baz=247,slow=4.5,SNR=4.4						
TRF	**Thorofare Moun**	**150.30**	**322**		**PKPbc**	**02 24 33.3**	**-0.2**
BPAW	**Bear Paw Mtn.**	**150.41**	**323**		**PKPbc**	**02 24 33.2**	**-0.4**
KTH	**Kantishna Hill**	**150.54**	**322**		**PKPbc**	**02 24 34.0**	**0.0**
IMAR	**Indian Mountai**	**150.85**	**327**		**PKPbc**	**02 24 34.2**	**-0.3**
PPLA	**Purkeypile**	**151.28**	**321**		**PKPbc**	**02 24 35.6**	**-0.2**

MAN 04 02:07:25.1,10°.28N×124°.08E,h36km,mb3.9,ML2.7, MS2.2,1D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.12**	**290**	*i*P	Pn	02 07 32.5	-3.9
LLP				*i* S	Sn	02 07 36.8	-10
MSLP	**Maasin**	**0.78**	**100**	*e*P	Pn	02 07 41.1	+1.6
MSLP				*e*S	Sn	02 07 51.4	+1.3

*IDC **04** 02:26:18.5±4.6,35°.00N×140°.11E,h61km±36km, mb3.4/3, mb1 3.5/4,mb1mx3.1/37,mbtmp3.6/4,ML2.3/1,Error ellipse: s-maj=49.8km s-min=24.8km az=75.0*

*JMA **04** 02:26:21.2±0.2,35°.28N×140°.05E,h84km±2km,M2.9*

ISC 04 02:26:21.6±0.9,35°.21N±0°.06×140°.05E±0°.05,h87km±6km, n22,σ0²76/31,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKUC	**kamogawauchiur**	**0.13**	**113**	P	**Pn**	**02 26 33.7**	**-0.3**
JKUC				S	**Sn**	**02 26 42.6**	**-0.6**
TATJ	**Tateyama 2**	**0.22**	**216**	P	**Pn**	**02 26 34.5**	**+0.2**
TATJ				S	**Sn**	**02 26 44.6**	**+0.9**
KTR	**Katsuura**	**0.23**	**106**	P	**Pn**	**02 26 34.0**	**-0.3**
KTR				S	**Sn**	**02 26 43.3**	**-0.4**
JCN	**Nagara**	**0.24**	**31**	P	**Pn**	**02 26 34.4**	**0.0**
JCN				S	**Sn**	**02 26 44.2**	**+0.3**
JYO	**Yokosk**	**0.31**	**272**	P	**Pn**	**02 26 35.1**	**+0.4**
JYO				*e*S	**Sn**	**02 26 44.9**	**+0.4**
BSO3	**Boso 3**	**0.56**	**137**	P	**Pn**	**02 26 36.6**	**+0.4**
BSO3				X		02 26 49.0	
JIM2	**Oshima 3**	**0.71**	**226**	P	**Pn**	**02 26 37.7**	**-0.3**
JIM2				S	**Sn**	**02 26 49.9**	**-0.2**
JOD2	**Odawara 2**	**0.79**	**274**	P	**Pn**	**02 26 38.1**	**-0.7**
JOD2				S	**Sn**	**02 26 50.8**	**-0.8**
BSO1	**Boso 1**	**0.94**	**126**	P	**Pn**	**02 26 40.2**	**+0.3**
JIZS	**Izushimoda**	**1.08**	**243**	P	**Pn**	**02 26 42.3**	**+0.3**
JIZS				S	**Sn**	**02 26 57.5**	**+0.1**
JFNN	**Fujinakano**	**1.12**	**269**	P	**Pn**	**02 26 42.9**	**+0.4**
JFNN				S	**Sn**	**02 26 58.4**	**+0.3**
JRY	**Ryogami san**	**1.23**	**311**	P	**Pn**	**02 26 43.6**	**-0.3**
JYN	**Shimob**	**1.26**	**283**	P	**Pn**	**02 26 44.2**	**-0.1**
JYN				S	**Sn**	**02 27 00.6**	**-0.8**
JAG	**Ashikaga**	**1.30**	**338**	P	**Pn**	**02 26 43.9**	**-0.9**
MJAR	**Matsushiro Arr**	**2.00**	**312**	P	**Pn**	**02 26 53.8**	**+0.1**
	0.9nm,0.3s,baz=137,slow=15,SNR=71						
MJAR				S	**Sn**	**02 27 17.7**	**-0.5**
	2.4nm,0.3s,baz=130,slow=22,SNR=18						
MAT	**Matsushiro**	**2.00**	**312**	P	**Pn**	**02 26 54.2**	**+0.5**
MAT				S	**Sn**	**02 27 18.3**	**+0.1**
H11N2	**WAKE ISLAND Hy**	**28.25**	**116**	T	T	03 01 35.3	
	baz=308						
H11N1	**WAKE ISLAND Hy**	**28.26**	**116**	T	T	03 01 51.9	
	baz=308,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.27**	**116**	T	T	03 01 51.2	
	baz=308,slow=74						
MKAR	**Makanchi Array**	**44.17**	**303**	P	**P**	**02 34 23.3**	**+1.6**
	0.3nm,0.7s,baz=91,slow=9.1,SNR=4.3						
WRA	**Warramunga Arr**	**55.12**	**187**	P	**P**	**02 35 42.4**	**-2.5**
	0.3nm,0.4s,baz=2.3,slow=7.6,SNR=4.5						
FINES	**FINESS Array B**	**69.91**	**332**	P	**P**	**02 37 24.0**	**+1.1**
	2.8nm,1.1s,baz=67,slow=7.7,SNR=2.8						

*IDC **04** 02:26:39.9±6.6,6°.49S×101°.79E,h0km,mb3.4/2, mb1 3.5/2,mb1mx3.2/33,mbtmp3.4/2,Error ellipse: s-maj=301.1km s-min=34.2km az=48.0*

*DJA **04** 02:26:41.2±0.8,6°.5S±7°×107°.4E±°,h10km,M3.6/7,MLv3.6/7*

ISC 04 02:26:40.8±1.7,6°.3S±0°.1×103°.55E±0°.09,h10km,n9, σ0²93/9,Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.20**	**51**	P	**Pn**	**02 27 04.4**	**+0.7**
KASI				S	**Sb**	**02 27 19.2**	**-0.1**
LWLI	**Liwa**	**1.35**	**22**	P	**Pn**	**02 27 05.2**	**-0.7**
MDSI	**Maura Dua**	**1.89**	**19**	P	**Pn**	**02 27 13.7**	**+0.5**
KLSI		**1.97**	**37**	P	**Pb**	**02 27 16.4**	**-0.4**
MNAI	**Manna**	**2.00**	**343**	P	**Pn**	**02 27 14.6**	**-0.1**
CGJI	**Cibinong**	**2.15**	**99**	P	**Pn**	**02 27 16.3**	**-0.5**
WRA	**Warramunga Arr**	**32.83**	**117**	P	P	02 33 29.1	+14
	0.3nm,0.8s,baz=286,slow=12,SNR=2.8						
MKAR	**Makanchi Array**	**56.12**	**343**	P	**P**	**02 36 19.8**	**-0.6**
	0.3nm,0.5s,baz=153,slow=8.2,SNR=4.6						
TXAR	**Lajitas Array**	**145.57**	**45**	PKPbc	**PKPab**	**02 46 22.4**	**+1.8**
	0.2nm,0.6s,baz=283,slow=2.2,SNR=4.6						

*NORS **04** 02:31:42.5±0.0,43°.48N×46°.06E,h9km,MPVA3.6*

*DRS **04** 02:31:47.2±0.0,43°.32N×45°.68E,h14km*

ISC 04 02:31:49.5±2.5,43°.3N±0°.1×45°.83E±0°.04,h18km±5km,n13, σ0²87/24,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLMR	**Dylym**	**0.64**	**113**	*e*Pg	**Pb**	**02 32 01.5**	**-0.5**
DLMR				*e*Sg	**Sb**	**02 32 11.0**	**+0.5**
	82nm,0.5s						
BTLR	**Botlikh**	**0.72**	**156**	*e*Pg	**Pb**	**02 32 02.1**	**-1.3**
	13nm,0.2s						
BTLR				*e*Sg	**Sg**	**02 32 14.1**	**+0.9**
	44nm,0.5s						
KRNR	**Karanay**	**0.93**	**122**	*e*Pg	**Pb**	**02 32 06.0**	**-1.1**
KRNR				*e*Sg	**Sb**	**02 32 19.0**	**-0.2**
	26nm,0.2s						
UNCR	**Uncukul**	**0.93**	**130**	*e*Pg	**Pb**	**02 32 06.5**	**-0.6**
UNCR				*e*Sg	**Sg**	**02 32 20.0**	**0.0**
	46nm,0.2s						
XNZR	**Khunzakh**	**1.01**	**140**	*e*Pg	**Pb**	**02 32 07.5**	**-1.0**
XNZR				*e*Sg	**Sn**	**02 32 23.1**	**+0.4**
BUJR	**Buynaksk**	**1.06**	**117**	*e*Pg	**Pb**	**02 32 08.4**	**-0.8**
BUJR				*e*Sg	**Sg**	**02 32 24.8**	**+0.8**
GNBR	**Gunib**	**1.25**	**138**	*e*Pg	**Pn**	**02 32 12.3**	**+0.2**
	9.0nm,0.4s						
GNBR				*e*Sg	**Sg**	**02 32 30.9**	**+0.9**
	62nm,0.6s						
GUDG	**Gudauri**	**1.31**	**230**	P	**Pn**	**02 32 11.1**	**-1.9**
GUDG				S	**Sn**	**02 32 30.4**	**+0.2**
KMKR	**Kumukh**	**1.51**	**141**	*e*Pg	**Pn**	**02 32 16.0**	**+0.2**
	23nm,0.2s						
KMKR				*e*Sg	**Sg**	**02 32 37.5**	**-0.9**
	58nm,0.4s						
LGD	**Lagodekhi**	**1.52**	**168**	P	**Pb**	**02 32 17.2**	**+0.1**
URKR	**Urkarakh**	**1.76**	**130**	*e*Pg	**Pb**	**02 32 21.6**	**+0.3**
URKR				*e*Sg	**Sg**	**02 32 46.3**	**0.0**
ONI	**Oni**	**1.89**	**248**	P	**Pn**	**02 32 21.5**	**+0.6**
ONI				S	**Sb**	**02 32 48.1**	**+1.3**
DGRG	**David-gareji**	**1.90**	**190**	P	**Pb**	**02 32 23.1**	**-0.5**

*IDC **04** 02:50:47.6±2.8,10°.24S×161°.17E,h57km±23km,mb3.3/5, mb1 3.6/6,mb1mx3.3/38,mbtmp3.6/6,ML3.6/1,Error ellipse: s-maj=26.9km s-min=19.4km az=62.0*

ISC 04 02:50:48.5±1.0,10°.2S±0°.1×161°.1E±0°.1,h67km,n7, σ0²92/8,mb3.4/5,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.38**	**305**	P	**Pn**	**02 51 10.4**	**-1.4**
	134nm,0.3s,baz=186,slow=7.0,SNR=19						
HNR				S	**Sn**	**02 51 29.6**	**+0.4**
	345nm,0.3s,baz=202,slow=19,SNR=17						
HNR				LR	LR	02 52 03.9	
	comp=Z,138nm,21.2s,baz=3.0,slow=53						
DZM	**Mont Dzumac**	**12.84**	**157**	P	**Pn**	**02 53 47.9**	**-0.4**
	0.4nm,0.3s,baz=17,slow=9.4,SNR=23						
WRA	**Warramunga Arr**	**27.53**	**246**	P	**P**	**02 56 29.6**	**+0.4**
	0.6nm,0.8s,baz=73,slow=9.7,SNR=3.6						
ASAR	**Alice Springs**	**29.16**	**239**	P	**P**	**02 56 44.2**	**+0.5**
	0.2nm,0.4s,baz=68,slow=10,SNR=3.7						
SONM	**Songino Array**	**75.35**	**325**	P	**P**	**03 02 26.2**	**+1.2**
	0.4nm,0.6s,baz=136,slow=6.8,SNR=4.0						
ILAR	**Eielson Array**	**84.25**	**20**	P	**P**	**03 03 12.3**	**-0.2**
	0.3nm,0.9s,baz=231,slow=5.7,SNR=3.7						
YKA	**Yellowknife Ar**	**96.37**	**28**	P	**P**	**03 04 09.7**	**0.0**
	0.1nm,0.6s,baz=253,slow=4.8,SNR=4.9						

*IDC **04** 02:54:46.1±0.8,55°.34S×27°.03W,h0km,mb4.2/6, mb1 4.2/7,mb1mx4.0/29,mbtmp4.1/7,ML3.8/1,MS3.7/2, Ms1 3.7/2,ms1mx3.3/17,Error ellipse: s-maj=29.6km s-min=19.8km az=76.0*

*NEIC **04** 02:54:52.5±1.0,55°.3S±0°.1×27°.3W±0°.2,h42km±3km, mb4.4/6,Error ellipse: s-maj=22.2km s-min=17.1km az=209.0*

ISC 04 02:54:50.1±0.8,55°.3S±0°.1×27°.1W±0°.1,h25km,n25, σ0²64/24,mb4.3/5,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.54**	**277**	Pn	**Pn**	**02 56 10.6**	**-0.2**
VNA1	**Neumayer--Stat**	**17.44**	**159**	P	**P**	**02 58 53.1**	**+0.7**
VNA3	**Neumayer Olymp**	**17.65**	**161**	P	**Pn**	**02 58 52.9**	**-1.0**
SNAA	**Sanae**	**19.38**	**157**	P	**P**	**02 59 14.6**	**+0.9**
SNAA	**Sanae**	**19.38**	**157**	P	**P**	**02 59 13.0**	**-0.7**
	0.3nm,0.3s,baz=302,slow=9.2,SNR=24						
SNAA	**Sanae**	**19.38**	**157**	P	**P**	**02 59 13.8**	**+0.1**
PMSA	**Palmer Station**	**20.42**	**228**	P	**P**	**02 59 25.8**	**+0.9**
	4.6nm,0.7s,baz=67,slow=11,SNR=4.8						
PMSA				LR	LR	03 06 09.8	
	comp=Z,180nm,18.3s,baz=18,slow=33						
PMSA	**Palmer Station**	**20.42**	**228**	P	**P**	**02 59 25.8**	**+0.9**
QSPA	**South Pole Qui**	**34.92**	**180**	P	**P**	**03 01 39.1**	**-0.3**
	3.5nm,0.8s,baz=191,slow=3.8,SNR=13						
QSPA	**South Pole Qui**	**34.92**	**180**	P	**P**	**03 01 40.2**	**+0.7**
CFA	**Coronel Fontan**	**37.33**	**292**	P	**P**	**03 01 59.2**	**-1.0**
	2.8nm,0.6s,baz=158,slow=3.7,SNR=4.8						
BDFB	**Brasilia**	**42.77**	**330**	LR	LR	03 18 47.5	
	comp=Z,112nm,19.0s,baz=87,slow=34						
VNDA	**Vanda**	**47.29**	**183**	P	**P**	**03 03 20.0**	**-0.7**
	2.7nm,0.8s,baz=184,slow=4.7,SNR=8.2						
VNDA	**Vanda**	**47.29**	**183**	P	**P**	**03 03 21.0**	**+0.2**
VNDA				IAmb	IAmb	03 03 24.8	
	comp=Z,4.1nm,1.0s						
LPAZ	**La Paz**	**50.01**	**305**	P	**P**	**03 03 43.3**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=165,slow=5.7,SNR=8.3						
LPAZ	**La Paz**	**50.01**	**305**	P	**P**	**03 03 43.8**	**+0.8**
LPAZ				IAmb	IAmb	03 03 47.1	
	comp=Z,3.1nm,0.8s

n264,σ1ş58/301, mb4.0/17, 18C-8D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMT	**Artemida-Makis**	**0.20**	**3**	P	**Pg**	**02 57 50.6**	**-0.5**
AMT				S	**Sg**	**02 57 53.9**	**-0.5**
	81μm,0.2s						
AMT	**Artemida-Makis**	**0.20**	**3**	P	**Pg**	**02 57 50.6**	**-0.5**
AMT				S	**Sg**	**02 57 54.3**	**-0.1**
AMT				AML	AML	02 57 55.4	
AMT				AML	AML	02 57 55.7	
ITM	**Ithomi**	**0.24**	**128**	P	**Pg**	**02 57 51.2**	**-0.4**
ITM				S	**Sg**	**02 57 55.1**	**-0.1**
	17μm,0.3s						
ITM	**Ithomi**	**0.24**	**128**	P	**Pg**	**02 57 51.2**	**-0.4**
ITM				S	**Sg**	**02 57 55.2**	**0.0**
ITM				AML	AML	02 57 55.5	
	comp=N,34237μm,0.3s						
ITM				AML	AML	02 57 58.4	
	comp=E,31522μm,0.3s						
KLMT	**Kalamata**	**0.39**	**132**	P	**Pg**	**02 57 54.2**	**-0.1**
KLMT				S	**Sb**	**02 58 00.8**	**+0.1**
	comp=E,22μm,0.4s						
PYL	**PYLOS**	**0.43**	**175**	P	**Pg**	**02 57 54.4**	**-0.6**
PYL				S	**Sg**	**02 58 00.5**	**-0.4**
PYL	**PYLOS**	**0.43**	**175**	P	**Pg**	**02 57 54.4**	**-0.6**
VLX	**Vlachokerasia**	**0.55**	**85**	P	**Pg**	**02 57 56.6**	**-0.6**
VLX				S	**Sg**	**02 58 04.7**	**+0.2**
	comp=E,8μm,0.8s						
VLX	**Vlachokerasia**	**0.55**	**85**	P	**Pg**	**02 57 56.6**	**-0.6**
VLX				S	**Sg**	**02 58 04.9**	**+0.4**
VLX				AML	AML	02 58 06.8	
	comp=E,14675μm,0.7s						
VLX				AML	AML	02 58 09.7	
	comp=N,12947μm,0.5s						
DRO	**Drossia**	**0.62**	**1**	P	**Pg**	**02 57 58.1**	**-0.5**
DRO				S	**Sb**	**02 58 07.3**	**-0.1**
	comp=N,14μm,0.4s						
DRO	**Drossia**	**0.62**	**1**	P	**Pg**	**02 57 58.2**	**-0.5**
DRO				S	**Sg**	**02 58 07.0**	**+0.1**
DRO				AML	AML	02 58 08.9	
	comp=E,28214μm,0.4s						
DRO				AML	AML	02 58 11.4	
	comp=N,26699μm,0.3s						
RLS	**Riolos of Patr**	**0.75**	**346**	P	**Pg**	**02 58 00.4**	**-0.6**
RLS				S	**Sb**	**02 58 11.5**	**+0.5**
	comp=N,4μm,0.2s						
RLS	**Riolos of Patr**	**0.75**	**346**	P	**Pg**	**02 58 00.2**	**-0.8**
RLS				S	**Sb**	**02 58 11.1**	**+0.1**
RLS				AML	AML	02 58 14.8	
	comp=N,7208μm,0.2s						
RLS				AML	AML	02 58 16.1	
	comp=E,6782μm,0.2s						
DYR	**Agios Nikonas**	**0.76**	**138**	P	**Pg**	**02 58 00.8**	**-0.3**
DYR				S	**Sb**	**02 58 12.3**	**+1.0**
DYR	**Agios Nikonas**	**0.76**	**138**	P	**Pg**	**02 58 00.6**	**-0.6**
DYR				AML	AML	02 58 14.2	
	comp=E,1534μm,0.4s						
DYR				AML	AML	02 58 14.8	
	comp=N,1355μm,0.3s						
KLV	**Kalavryta, Ach**	**0.80**	**27**	P	**Pb**	**02 58 01.0**	**-0.9**
KLV				S	**Sb**	**02 58 13.3**	**+0.8**
KLV	**Kalavryta, Ach**	**0.80**	**27**	P	**Pb**	**02 58 00.9**	**-0.9**
KLV				S	**Sb**	**02 58 12.9**	**+0.3**
KLV				AML	AML	02 58 14.7	
	comp=N,4926μm,0.4s						
KLV				AML	AML	02 58 15.5	
	comp=E,5182μm,0.3s						
LAKA	**Lakka**	**0.94**	**14**	P	**Pb**	**02 58 03.5**	**-0.8**
LAKA				S	**Sg**	**02 58 17.3**	**+0.4**
	comp=E,4μm,0.8s						
LAKA	**Lakka**	**0.94**	**14**	P	**Pb**	**02 58 03.5**	**-0.8**
LAKA				S	**Sb**	**02 58 16.6**	**+0.2**
LAKA				AML	AML	02 58 19.2	
	comp=E,6814μm,0.5s						
LAKA				AML	AML	02 58 21.1	
	comp=N,5818μm,0.5s						
UPR	**University Cam**	**0.96**	**4**	P	**Pb**	**02 58 04.3**	**-0.2**
UPR	**University Cam**	**0.96**	**4**	P	**Pb**	**02 58 04.3**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.99**	**304**	P	**Pb**	**02 58 04.3**	**-0.7**
VLMS				AML	AML	02 58 24.5	
	comp=N,7933μm,0.2s						
VLMS				AML	AML	02 58 25.2	
	comp=E,11600μm,0.2s						
ALIK	**Aliki, Aigiali**	**0.99**	**19**	P	**Pb**	**02 58 04.5**	**-0.5**
ALIK				S	**Sn**	**02 58 20.0**	**+0.8**
THAL	**Thalero**	**1.04**	**47**	P	**Pb**	**02 58 05.5**	**-0.5**
THAL	**Thalero**	**1.04**	**47**	P	**Pb**	**02 58 05.5**	**-0.5**
THAL				S	**Sn**	**02 58 20.6**	**+0.1**
THAL				AML	AML	02 58 27.1	
	comp=N,15451μm,0.4s						
THAL				AML	AML	02 58 27.3	
	comp=E,24537μm,0.6s						
KFL	**Anninata**	**1.06**	**318**	P	**Pb**	**02 58 06.0**	**-0.3**
KFL				S	**Sn**	**02 58 21.9**	**+0.9**
	comp=E,3μm,0.4s						
KFL	**Anninata**	**1.06**	**318**	P	**Pb**	**02 58 06.1**	**-0.3**
KFL				AML	AML	02 58 26.8	
	comp=N,6843μm,0.4s						
KFL				AML	AML	02 58 27.2	
	comp=E,4606μm,0.3s						
TRIZ	**Trizonia**	**1.08**	**16**	P	**Pb**	**02 58 05.8**	**-0.8**
TRIZ				S	**Sn**	**02 58 22.2**	**+0.8**
	comp=E,4μm,0.3s						
TRIZ	**Trizonia**	**1.08**	**16**	P	**Pb**	**02 58 05.7**	**-0.8**
TRIZ				S	**Sg**	**02 58 21.2**	**-0.1**
EFP	**Efpalio**	**1.11**	**9**	P	**Pb**	**02 58 06.7**	**-0.4**
EFP				S	**Sg**	**02 58 23.8**	**+1.5**
	comp=E,3μm,0.4s						
EFP	**Efpalio**	**1.11**	**9**	P	**Pb**	**02 58 06.7**	**-0.4**
EFP				S	**Sn**	**02 58 22.1**	**-0.1**
EFP				AML	AML	02 58 26.4	
	comp=E,5949μm,0.5s						
EFP				AML	AML	02 58 28.4	
	comp=N,6233μm,0.3s						
KALE	**Kalithea**	**1.12**	**18**	P	**Pb**	**02 58 06.5**	**-0.8**
KALE				S	**Sg**	**02 58 23.7**	**+1.1**
	comp=N,4μm,0.4s						
KALE	**Kalithea**	**1.12**	**18**	P	**Pb**	**02 58 06.7**	**-0.6**
KALE				AML	AML	02 58 25.8	
	comp=E,6753μm,0.5s						
KALE				AML	AML	02 58 28.0	
	comp=N,7404μm,0.3s						
SERG	**Sergoula**	**1.12**	**15**	P	**Pb**	**02 58 06.6**	**-0.8**
SERG				S	**Sg**	**02 58 24.2**	**+1.5**
	comp=N,4μm,0.3s						
SERG	**Sergoula**	**1.12**	**15**	P	**Pb**	**02 58 06.6**	**-0.8**
SERG				S	**Sb**	**02 58 22.0**	**+0.2**
SERG				AML	AML	02 58 26.1	
	comp=E,7243μm,0.3s						
SERG				AML	AML	02 58 26.3	
	comp=N,7016μm,0.3s						
KRND	**KRANIDI**	**1.16**	**87**	P	**Pb**	**02 58 08.2**	**+0.2**
KRND				S	**Sg**	**02 58 25.2**	**+1.3**
	comp=N,2μm,0.4s						
KRND	**KRANIDI**	**1.16**	**87**	P	**Pb**	**02 58 08.2**	**+0.2**
VLI	**Veliai**	**1.17**	**121**	P	**Pb**	**02 58 08.2**	**+0.1**
VLI	**Veliai**	**1.17**	**121**	P	**Pb**	**02 58 08.3**	**+0.3**
VLI				AML	AML	02 58 28.4	
	comp=E,4302μm,0.5s						
VLI				AML	AML	02 58 37.6	
	comp=N,2906μm,0.8s						
LOUT	**Loutraki**	**1.21**	**57**	P	**Pn**	**02 58 08.2**	**-0.4**
LOUT	**Loutraki**	**1.21**	**57**	P	**Pn**	**02 58 08.5**	**-0.1**
LOUT				AML	AML	02 58 31.2	
	comp=E,598μm,0.6s						
LOUT				AML	AML	02 58 33.0	
	comp=N,534μm,0.7s						
VLS	**Valsamata**	**1.22**	**314**	P	**Pn**	**02 58 08.5**	**-0.2**
VLS				S	**Sg**	**02 58 27.7**	**+1.9**
	comp=N,2μm,0.3s						
VLS	**Valsamata**	**1.22**	**314**	P	**Pn**	**02 58 08.5**	**-0.2**
VLS				AML	AML	02 58 28.9	
	comp=E,3731μm,0.3s						
VLS				AML	AML	02 58 29.1	
	comp=N,3994μm,0.3s						
LTK	**Loutraki**	**1.23**	**55**	P	**Pn**	**02 58 08.5**	**-0.3**
LTK	**Loutraki**	**1.23**	**55**	P	**Pn**	**02 58 08.5**	**-0.3**
DID	**Didima**	**1.24**	**81**	P	**Pb**	**02 58 09.2**	**-0.2**
DID				S	**Sg**	**02 58 27.5**	**+1.1**
	comp=N,3μm,0.6s						
DID	**Didima**	**1.24**	**81**	P	**Pb**	**02 58 09.1**	**-0.2**
DID				AML	AML	02 58 30.9	
	comp=N,5823μm,0.4s						
DID				AML	AML	02 58 32.5	
	comp=E,5604μm,0.5s						
MNVA	**Monemvasia**	**1.25**	**120**	P	**Pg**	**02 58 10.1**	**-0.3**
PVO	**Paravola**	**1.29**	**354**	P	**Pn**	**02 58 09.9**	**+0.1**
PVO	**Paravola**	**1.29**	**354**	P	**Pn**	**02 58 09.8**	**+0.1**
DLFA	**Delphi**	**1.31**	**29**	P	**Pn**	**02 58 10.2**	**+0.2**
PROD	**Prodromos**	**1.33**	**45**	P	**Pn**	**02 58 10.3**	**+0.1**
PROD				AML	AML	02 58 35.3	
	comp=N,4044μm,0.3s						
PROD				AML	AML	02 58 36.9	
	comp=E,5358μm,0.6s						
YDRA	**Hydra**	**1.41**	**89**	P	**Pg**	**02 58 13.5**	**0.0**
KTHR	**Kythira**	**1.50**	**135**	P	**Pg**	**02 58 14.4**	**-0.7**
VIL2	**Platees**	**1.53**	**54**	P	**Pb**	**02 58 14.7**	**+0.4**
VIL2				AML	AML	02 58 44.5	
	comp=N,4481μm,0.9s						
VIL2				AML	AML	02 58 45.5	
	comp=E,3989μm,0.5s						
VILL	**Villia**	**1.53**	**56**	P	**Pb**	**02 58 14.6**	**+0.3**
EVGI	**Lefkada island**	**1.53**	**328**	P	**Pb**	**02 58 14.0**	**-0.3**
EVGI	**Lefkada island**	**1.53**	**328**	P	**Pb**	**02 58 14.2**	**-0.1**
KTHA	**Kythira Island**	**1.53**	**134**	P	**Pb**	**02 58 14.8**	**+0.5**
KTHA	**Kythira Island**	**1.53**	**134**	P	**Pg**	**02 58 15.1**	**-0.7**
KTHA				AML	AML	02 58 47.0	
	comp=N,1560μm,0.9s						
KTHA				AML	AML	02 58 51.8	
	comp=E,2462μm,0.5s						
EVR	**Evrytania**	**1.59**	**3**	P	**Pb**	**02 58 15.3**	**-0.1**
EVR	**Evrytania**	**1.59**	**3**	P	**Pb**	**02 58 15.6**	**+0.3**
EVR				AML	AML	02 58 44.7	
	comp=E,1982μm,0.7s						
EVR				AML	AML	02 58 48.0	
	comp=N,2168μm,1.2s						
AXAR	**Agios Charalam**	**1.63**	**28**	P	**Pb**	**02 58 15.5**	**-0.4**
LKD2	**Lefkada island**	**1.67**	**331**	P	**Pb**	**02 58 16.5**	**-0.3**
LKD2	**Lefkada island**	**1.67**	**331**	P	**Pb**	**02 58 16.4**	**-0.3**
LKR	**Lokris**	**1.68**	**38**	P	**Pb**	**02 58 16.1**	**-0.7**
LKR	**Lokris**	**1.68**	**38**	P	**Pb**	**02 58 15.9**	**-0.9**
LKR				AML	AML	02 58 44.3	
	comp=N,2508μm,0.3s						
LKR				AML	AML	02 58 46.7	
	comp=E,2271μm,0.4s						
TSLK	**Tsoukalades, L**	**1.71**	**332**	P	**Pb**	**02 58 17.5**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.72**	**11**	P	**Pb**	**02 58 17.5**	**0.0**
MAKR	**Makrakomi, Fth**	**1.72**	**11**	P	**Pb**	**02 58 18.0**	**+0.4**
ATH	**Athens Observa**	**1.73**	**68**	P	**Pb**	**02 58 17.1**	**-0.6**
ATH				S	**Sg**	**02 58 40.9**	**-1.1**
	comp=E,988nm,0.6s						
ATH	**Athens Observa**	**1.73**	**68**	P	**Pb**	**02 58 17.8**	**+0.1**
VLY	**Voula,Athens**	**1.75**	**72**	P	**Pb**	**02 58 17.7**	**-0.3**
VLY				S	**Sg**	**02 58 42.1**	**-0.5**
	comp=E,1μm,0.5s						
VLY	**Voula,Athens**	**1.75**	**72**	P	**Pb**	**02 58 17.6**	**-0.3**
VLY				AML	AML	02 58 47.2	
	comp=N,2216μm,0.5s						
VLY				AML	AML	02 58 48.9	
	comp=E,1828μm,0.5s						
AGG	**Agios Georgios**	**1.77**	**16**	P	**Pb**	**02 58 18.1**	**-0.2**
AGG	**Agios Georgios**	**1.77**	**16**	P	**Pb**	**02 58 17.8**	**-0.5**
AGG	**Agios Georgios**	**1.77**	**16**		**Pb**	**02 58 19.0**	**+0.7**
ATHU	**Athens Univers**	**1.78**	**68**	P	**Pb**	**02 58 18.1**	**-0.4**
ATHU	**Athens Univers**	**1.78**	**68**	P	**Pb**	**02 58 18.0**	**-0.4**
ATHU				AML	AML	02 58 46.8	
	comp=E,320μm,0.5s						
ATHU				AML	AML	02 58 51.0	
	comp=N,723μm,0.7s						
PTL	**Penteli**	**1.87**	**67**	P	**Pb**	**02 58 19.4**	**-0.6**
PTL				S	**Sb**	**02 58 44.3**	**+1.2**
	comp=N,522nm,0.8s						
PTL	**Penteli**	**1.87**	**67**	P	**Pb**	**02 58 19.4**	**-0.6**
PTL				AML	AML	02 58 50.8	
	comp=E,1045μm,0.7s						
PTL				AML	AML	02 58 50.9	
	comp=N,1097μm,0.7s						
ANKY	**Antikythira Is**	**1.95**	**138**	P	**Pb**	**02 58 22.0**	**+0.6**
MRKA	**Markates**	**2.03**	**47**	P	**Pn**	**02 58 21.1**	**+1.2**
MRKA	**Markates**	**2.03**	**47**	P	**Pb**	**02 58 21.5**	**-1.3**
EREA	**Eretria**	**2.08**	**58**	P	**Pb**	**02 58 22.7**	**-0.9**
EREA	**Eretria**	**2.08**	**58**	P	**Pb**	**02 58 22.8**	**-0.9**
SERI	**Serifos**	**2.23**	**93**	P	**Pb**	**02 58 24.7**	**-1.6**
THL	**Klokotos Trika**	**2.25**	**6**	P	**Pb**	**02 58 25.5**	**-1.0**
THL	**Klokotos Trika**	**2.25**	**6**	P	**Pb**	**02 58 26.0**	**-0.6**
MHLA	**Plaka, Milos I**	**2.26**	**104**	P	**Pb**	**02 58 26.4**	**-0.2**
MHLO	**Agia Marina, M**	**2.26**	**106**	P	**Pb**	**02 58 25.7**	**-1.0**
KARY	**Karystos**	**2.29**	**71**	P	**Pb**	**02 58 25.6**	**-1.6**
KARY	**Karystos**	**2.29**	**71**	P	**Pb**	**02 58 25.6**	**-1.6**
SKIA	**Skiathos**	**2.31**	**37**	P	**Pn**	**02 58 25.3**	**+1.6**
SKIA	**Skiathos**	**2.31**	**37**	P	**Pn**	**02 58 25.5**	**+1.8**
NEO	**Neokhori**	**2.31**	**31**	P	**Pn**	**02 58 25.1**	**+1.3**
NEO	**Neokhori**	**2.31**	**31**	P	**Pn**	**02 58 25.0**	**+1.3**
XOR	**Xorichti**	**2.35**	**30**	P	**Pn**	**02 58 25.7**	**+1.4**
XOR	**Xorichti**	**2.35**	**30**	P	**Pn**	**02 58 25.8**	**+1.5**
JAN	**Janina**	**2.42**	**344**	P	**Pb**	**02 58 28.5**	**-0.9**
IGT	**Igoumenitsa**	**2.45**	**334**	P	**Pn**	**02 58 27.7**	**+2.1**
ALNA	**Alonissos**	**2.50**	**43**	P	**Pn**	**02 58 28.1**	**+1.9**
AOS	**Alonnisos**	**2.52**	**42**	P	**Pn**	**02 58 27.8**	**+1.2**
AOS	**Alonnisos**	**2.52**	**42**	P	**Pn**	**02 58 27.8**	**+1.2**
IMMV	**Iera Moni Meta**	**2.62**	**135**	P	**Pb**	**02 58 30.6**	**-2.3**
IMMV	**Iera Moni Meta**	**2.62**	**135**	P	**Pb**	**02 58 31.1**	**-1.8**
SKY	**Skiros Island**	**2.73**	**55**	P	**Pn**	**02 58 31.3**	**+1.8**
VAM	**Vamos**	**2.79**	**133**	P	**Pn**	**02 58 32.7**	**+2.5**
VAM	**Vamos**	**2.79**	**133**	P	**Pn**	**02 58 32.8**	**+2.6**
KEK	**Kerkira**	**2.81**	**329**	P	**Pn**	**02 58 32.6**	**+2.0**
KEK	**Kerkira**	**2.81**	**329**	P	**Pn**	**02 58 32.3**	**+1.7**
LIT	**Litokhoron**	**2.84**	**12**		**Pn**	**02 58 33.6**	**+2.6**
PAIG	**Paliouri**	**3.03**	**30**	P	**Pn**	**02 58 34.5**	**+1.0**
PAIG	**Paliouri**	**3.03**	**30**	P	**Pn**	**02 58 34.6**	**+1.1**
APE	**Apeiranthos**	**3.07**	**94**	P	**Pn**	**02 58 36.2**	**+1.9**
APE	**Apeiranthos**	**3.07**	**94**	⇑P	**Pn**	**02 58 36.0**	**+1.8**
APE	**Apeiranthos**	**3.07**	**94**	⇑S	**Sn**	**02 59 14.1**	**+3.4**
SANT	**Santorini**	**3.17**	**106**	⇑P	**Pn**	**02 58 38.4**	**+2.9**
IDI	**Anoyia**	**3.29**	**127**	P	**Pn**	**02 58 38.9**	**+1.7**
	comp=N,2.7nm,0.3s,baz=301,slow=16,SNR=25						
IDI				S	**Sn**	**02 59 18.9**	**+2.9**
	comp=N,5.7nm,0.3s,baz=274,slow=19,SNR=4.0						
IDI	**Anoyia**	**3.29**	**127**	P	**Pn**	**02 58 39.1**	**+1.9**
PLG	**Polygyros**	**3.33**	**24**	P	**Pn**	**02 58 38.5**	**+0.7**
PLG	**Polygyros**	**3.33**	**24**	P	**Pn**	**02 58 39.2**	**+1.4**
AMGA	**Amorgos Island**	**3.39**	**97**	P	**Pn**	**02 58 41.7**	**+3.1**
FNA	**Florina**	**3.46**	**356**	P	**Pn**	**02 58 41.9**	**+2.3**
FNA	**Florina**	**3.46**	**356**		**Pn**	**02 58 41.8**	**+2.2**
OUR	**Ouranopolis**	**3.49**	**30**	P	**Pn**	**02 58 41.2**	**+1.3**
OUR	**Ouranopolis**	**3.49**	**30**	P	**Pn**	**02 58 41.5**	**+1.6**
CHOS	**Chios island**	**3.61**	**72**	P	**Pn**	**02 58 43.7**	**+2.1**
CHOS	**Chios island**	**3.61**	**72**	P	**Pn**	**02 58 43.9**	**+2.3**
SOH	**Sokhos**	**3.72**	**20**	P	**Pn**	**02 58 45.9**	**+2.8**
SOH	**Sokhos**	**3.72**	**20**	P	**Pn**	**02 58 45.5**	**+2.3**
SCTE	**Santa Cesarea**	**3.73**	**318**		**Pn**	**02 58 45.2**	**+2.0**
LAST	**Lasithi**	**3.75**	**124**	P	**Pn**	**02 58 45.6**	**+2.1**
NPS	**Neapolis**	**3.78**	**122**	P	**Pn**	**02 58 45.9**	**+2.0**
ZEY	**zmir**	**3.92**	**75**	*i* P	**Pn**	**02 58 49.1**	**+3.3**
KNT	**Kendrikon**	**3.94**	**13**	P	**Pn**	**02 58 48.8**	**+2.7**
URLA	**Izmir**	**4.01**	**74**	*i* P	**Pn**	**02 58 50.1**	**+3.0**
URLA				*i* S	Sn	02 59 12.6	-21
VAY	**Valandovo**	**4.05**	**9**	*i* Pn	**Pn**	**02 58 51.1**	**+3.6**
PRK	**Paraskevi**	**4.08**	**61**	P	**Pn**	**02 58 50.8**	**+2.8**
SMG	**Samos**	**4.11**	**83**	P	**Pn**	**02 58 50.5**	**+2.1**
SMG	**Samos**	**4.11**	**83**	P	**Pn**	**02 58 50.6**	**+2.2**
DGB	**zmir**	**4.18**	**78**	*i* P	**Pn**	**02 58 52.0**	**+2.7**
BOZC	**Bozcaada**	**4.24**	**52**	*i* P	**Pn**	**02 58 50.7**	**+0.5**
TIR	**Tirane**	**4.26**	**341**	⇑P	**Pn**	**02 58 51.9**	**+1.4**
TIR	**Tirane**	**4.26**	**341**		**Pn**	**02 58 53.7**	**+3.2**
TIP	**Timpagrande**	**4.30**	**297**	⇑P	**Pn**	**02 58 51.5**	**+0.3**
TIP	**Timpagrande**	**4.30**	**297**		**Pn**	**02 58 52.7**	**+1.5**
SMTH	**Samothraki Isl**	**4.34**	**42**	P	**Pn**	**02 58 52.4**	**+0.8**
NVR	**Nevrokopi**	**4.35**	**22**	P	**Pn**	**02 58 54.4**	**+2.6**
NVR	**Nevrokopi**	**4.35**	**22**	P	**Pn**	**02 58 54.6**	**+2.8**
STIP	**Stip**	**4.38**	**5**	*i* Pn	**Pn**	**02 58 56.0**	**+3.8**
GCAM	**G?zelcaml?**	**4.42**	**83**	*i* P	**Pn**	**02 58 55.3**	**+2.6**
BAYC	**CANAKKALE_Bayr**	**4.50**	**56**	*i* P	**Pn**	**02 58 55.3**	**+1.5**
MMB	**Musomiste**	**4.54**	**20**	*i* P	**Pn**	**02 58 56.5**	**+2.1**
ZEDA	**zmir-Bergama**	**4.55**	**67**	*i* P	**Pn**	**02 58 55.5**	**+1.1**
DAT	**Datca**	**4.75**	**95**	*i* P	**Pn**	**02 59 00.5**	**+3.2**
KARP	**Karpathos**	**4.75**	**110**		**Pn**	**02 59 00.2**	**+2.9**
MASS	**Massafra**	**4.84**	**314**	⇑*i* Pn	**Pn**	**02 58 59.4**	**+0.9**
ALN	**Alexandroupoli**	**4.91**	**42**		**Pn**	**02 59 02.4**	**+3.0**
AYDN	**Tasoluk**	**4.93**	**84**	*i* P	**Pn**	**02 59 02.7**	**+3.0**
RZN	**Rozhen**	**4.94**	**27**	*i* P	**Pn**	**02 59 03.3**	**+3.3**
MATE	**Matera**	**5.11**	**312**	⇑P	**Pn**	**02 59 02.7**	**+0.6**
STEP	**BALIKESIR_Sava**	**5.16**	**65**	*i* P	**Pn**	**02 59 05.6**	**+2.7**
KDZ	**Kurdzhali**	**5.19**	**33**	*i* P	**Pn**	**02 59 08.0**	**+4.7**
DRME	**Dracevica, Mon**	**5.22**	**339**	*e*Pn	**Pn**	**02 59 04.6**	**+0.8**
BALY	**Balya**	**5.23**	**61**	*i* P	**Pn**	**02 59 07.6**	**+3.7**
SG1	**Sgolgore (BA)**	**5.25**	**313**	⇑*i* Pn	**Pn**	**02 59 04.8**	**+0.7**
SG1				Sn	**Sn**	**03 00 04.7**	**+0.4**
BAI	**Bari**	**5.31**	**317**	⇑*i* Pn	**Pn**	**02 59 05.7**	**+0.8**
BAI				Sn	**Sn**	**03 00 05.8**	**0.0**
VTS	**Vitosha**	**5.42**	**12**	⇑P	**Pn**	**02 59 08.3**	**+1.8**
VTS	**Vitosha**	**5.42**	**12**	⇓S	**Sn**	**03 00 10.6**	**+2.0**
VTS	**Vitosha**	**5.42**	**12**	*i* P	**Pn**	**02 59 10.3**	**+3.8**
VTS	**Vitosha**	**5.42**	**12**		**Pn**	**02 59 09.7**	**+3.2**
KNL	**Balıkesir**	**5.42**	**55**	*i* P	**Pn**	**02 59 07.9**	**+1.5**
PDG	**Podgorica**	**5.43**	**341**	⇓P	**Pn**	**02 59 07.5**	**+1.0**
PDG	**Podgorica**	**5.43**	**341**	⇓S	**Sn**	**03 00 09.7**	**+1.0**
PDG	**Podgorica**	**5.43**	**341**		**Pn**	**02 59 07.6**	**+1.0**
PDG	**Podgorica**	**5.43**	**341**	*e*Pn	**Pn**	**02 59 07.5**	**+1.0**
MANT	**Manisa**	**5.55**	**76**	*i* P	**Pn**	**02 59 11.6**	**+3.2**
ACER	**Acerenza**	**5.65**	**309**		**Pn**	**02 59 08.0**	**-1.7**
HCY	**Herceg Novi**	**5.67**	**335**	*e*Pn	**Pn**	**02 59 10.1**	**+0.2**
DURS	**Dursunbey**	**5.78**	**65**	*i* P	**Pn**	**02 59 13.0**	**+1.5**
DEMI	**Demirci**	**5.79**	**71**	*i* P	**Pn**	**02 59 14.1**	**+2.5**
VAE	**Valguarnera**	**5.80**	**274**	P	**Pn**	**02 59 15.3**	**+3.6**
	comp=N,1.4nm,0.3s,baz=129,slow=10,SNR=3.2						
VAE				S	**Sn**	**03 00 20.7**	**+2.7**
	comp=N,0.8nm,0.3s,baz=343,slow=19,SNR=1.7						
USAK	**Uak-Merkez**	**5.95**	**74**	*i* P	**Pn**	**02 59 16.7**	**+3.0**
FETY	**Fethiye**	**5.96**	**94**	*i* P	Pn	02 59 21.4	+7.6
TREB	**Trebinje**	**5.96**	**336**	*e*Pn	**Pn**	**02 59 12.8**	**-1.1**
DBRK	**Dubrovnik**	**5.99**	**334**	*i* Pn	**Pn**	**02 59 14.8**	**+0.5**
DBRK				Sn	**Sn**	**03 00 21.9**	**-0.6**
BRY	**Bratogost**	**6.07**	**338**	*e*Pn	**Pn**	**02 59 15.7**	**+0.2**
UPM	**Unac-Piva**	**6.25**	**341**	*e*Pn	**Pn**	**02 59 18.6**	**+0.7**
GOLH	**Golhisar**	**6.27**	**88**	*i* P	**Pn**	**02 59 21.7**	**+3.4**
STON	**Ston**	**6.33**	**332**	*e*Pn	**Pn**	**02 59 19.6**	**+0.8**
STON	**Ston**	**6.33**	**332**	*e*Pn	**Pn**	**02 59 19.3**	**+0.4**
ELND	**Elena**	**6.45**	**28**	⇓P	**Pn**	**02 59 22.3**	**+1.8**
RUDO	**Rudo**	**6.53**	**345**	*e*Pn	**Pn**	**02 59 20.9**	**-0.8**
CORL	**Corleone**	**6.69**	**277**		**Pn**	**02 59 25.2**	**+1.3**
CLTB	**Caltabellotta**	**6.75**	**275**		**Pn**	**02 59 24.5**	**-0.3**
BBLS	**Lazići**	**6.76**	**346**	*e*Pn	**Pn**	**02 59 25.4**	**+0.5**
DIVS	**Divibare**	**6.89**	**350**	*e*Pn	**Pn**	**02 59 26.8**	**+0.1**
MAKA	**Makarska**	**6.94**	**330**	*e*Pn	**Pn**	**02 59 27.8**	**+0.5**
MAKA				Sn	**Sn**	**03 00 45.0**	**-0.9**
HAPS	**Han Pijesak,BI**	**7.07**	**344**	*e*Pn	**Pn**	**02 59 28.1**	**-1.0**
HVAR	**Hvar**	**7.09**	**327**	*e*Pn	**Pn**	**02 59 29.5**	**+0.2**
HVAR				Sn	**Sn**	**03 00 47.6**	**-1.9**
MDVR	**Moldovita**	**7.45**	**0**	⇑P	**Pn**	**02 59 35.9**	**+1.6**
INTR	**Introdacqua**	**7.61**	**310**	Pn	**Pn**	**02 59 38.3**	**+1.7**
KUV	**Kijevo**	**7.79**	**331**	*i* Pn	**Pn**	**02 59 39.9**	**+0.9**
ZIRJ	**Zirje**	**7.82**	**326**	*i* Pn	**Pn**	**02 59 39.0**	**-0.3**
MGRS	**Mrkonjic Grad**	**7.90**	**335**	*e*Pn	**Pn**	**02 59 38.7**	**-1.7**
FRGS	**Fruska Gora**	**7.95**	**350**	*e*Pn	**Pn**	**02 59 40.9**	**-0.3**
MORI	**Morici**	**7.96**	**327**	*e*Pn	**Pn**	**02 59 41.2**	**-0.1**
GZR	**Gura Zlata**	**8.10**	**5**	⇓P	**Pn**	**02 59 44.5**	**+1.2**
BLY	**Banja Luka**	**8.16**	**337**	⇑P	**Pn**	**02 59 44.2**	**+0.2**
BLY	**Banja Luka**	**8.16**	**337**	Pn	**Pn**	**02 59 45.0**	**+1.0**
BLY	**Banja Luka**	**8.16**	**337**	*e*Pn	**Pn**	**02 59 43.5**	**-0.5**
BZS	**Buzias**	**8.28**	**360**	⇓P	**Pn**	**02 59 46.4**	**+0.7**
**

ϕ_b=356.49000°,δ72.00000°,λ-142.75000°. Principal axes: T 1.2219, Plg11.0000°, Azm121.0000°; N 0.0647, Plg49.0000°, Azm19.0000°; P -1.2867, Plg39.0000°, Azm220.0000°;

MOS **04** 02:58:47.6±1.6,10°.96S×163°.61E,h30km,mb5.1/17 Error ellipse: s-maj=11.1km s-min=9.6km az=132.3

NEIC **04** 02:58:49, 10°.85S×163°.75E, h22km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=0.11; $M_{\theta\theta}$=0.66; $M_{\phi\phi}$=0.77; $M_{r\theta}$=0.31; $M_{\theta\phi}$=1.14; $M_{\phi r}$=0.75; Fault plane solution: M_o=1.58000×10^{17} NP1:ϕ_b=253.00000°, δ59.00000°,λ-5.00000°. NP2:ϕ_b=345.00000°, δ86.00000°, λ-149.00000°. Principal axes: T 1.5710, Plg18.0000°, Azm115.0000°; N 0.0128, Plg59.0000°, Azm352.0000°; P -1.5838, Plg25.0000°, Azm213.0000°;

GCMT **04** 02:58:49.5±0.1,10°.85S±0°.01×163°.73E±0°.01,h20km, MW5.4/148,Moment Tensor Solution. s112,c184; s148,c268; Duration: 1$\uparrow$2 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.17±.02; $M_{\theta\theta}$=0.59±.02; $M_{\phi\phi}$=0.76±.02; $M_{r\theta}$=0.34±.04; $M_{\theta\phi}$=1.02±.02; $M_{\phi r}$=0.75±.05; Best double couple: M_o=1.48100×10^{17} NP1:ϕ_b=251.00000°, δ56.00000°, λ-7.00000°. NP2:ϕ_b=345.00000°, δ84.00000°, λ-146.00000°. Principal axes: T 1.4770, Plg19.0000°, Azm113.0000°; N 0.0090, Plg55.0000°, Azm354.0000°; P -1.4860, Plg28.0000°, Azm214.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 04 02:58:48.9±0.3,**11°.11S**±0°.05×**163.75E**±0°.05,**h31**km,**n256,** σ1$\uparrow$**66**/204,**mb4.9**/74,**MS4.9**/85,**5C-1D,**

Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.09**	**294**	Pn	**Pn**	**02 59 48.7**	**-0.7**
	351nm,0.3s,baz=152,slow=4.2,SNR=43						
HNR				Sn	**Sn**	**03 00 38.0**	**+1.7**
	351nm,0.3s,baz=164,slow=19,SNR=3.7						
HNR				LR	LR	03 01 34.3	
	comp=Z,33μm,18.1s,baz=129,slow=42						
HNR	**Honiara**	**4.09**	**294**	*i* P	**Pn**	**02 59 48.5**	**-0.9**
HNR				*i* S	**Sn**	**03 00 35.0**	**-1.3**
HNR	**Honiara**	**4.09**	**294**		**Pn**	**02 59 48.7**	**-0.7**
HNR				Sn	**Sn**	**03 00 34.8**	**-1.5**
DZM	**Mont Dzumac**	**11.21**	**167**	*e*Pn	**Pn**	**03 01 29.1**	**+2.0**
	140nm,1.2s						
DZM				*e*Sn	**Sn**	**03 03 24.8**	**-6.6**
	14nm,0.3s						
DZM				*e*LR	LR	03 04 01.8	
	comp=Z,4μm,22.4s						
DZM	**Mont Dzumac**	**11.21**	**167**	Pn	**Pn**	**03 01 28.4**	**+1.3**
	4.6nm,0.3s,baz=18,slow=9.6,SNR=35						
DZM				Sn	**Sn**	**03 03 32.1**	**+0.6**
	2.3nm,0.3s,baz=72,slow=20,SNR=3.9						
DZM				LR	LR	03 05 13.5	
	comp=Z,4μm,19.3s,baz=15,slow=34						
DZM	**Mont Dzumac**	**11.21**	**167**		**Pn**	**03 01 29.2**	**+2.0**
KRVT	**Keravat (AS076**	**13.43**	**299**	LR	LR	03 07 36.6	
	comp=Z,4μm,19.9s,baz=121,slow=40						
MSVF	**Nonsavu**	**15.33**	**117**	P	**Pn**	**03 02 23.8**	**+0.5**
MSVF				pmax	pmax		
	comp=Z,104nm,1.7s						
MSVF	**Nonsavu**	**15.33**	**117**		**Pn**	**03 02 23.8**	**+0.5**
MSVF				IAmb	IAmb	03 02 49.2	
	comp=Z,104nm,1.7s						
TARA	**Tarawa**	**15.38**	**37**		**Pn**	**03 02 20.1**	**-3.8**
PMG	**Port Moresby**	**16.41**	**274**	*i* P	**Pn**	**03 02 35.0**	**-2.1**
PMG				pmax	pmax		
	comp=Z,159nm,1.2s						
PMG	**Port Moresby**	**16.41**	**274**	Pn	**Pn**	**03 02 38.3**	**+1.1**
	comp=Z,0.8nm,0.3s,baz=116,slow=14,SNR=3.6						
PMG				LR	LR	03 08 30.2	
	comp=Z,7μm,21.3s,baz=124,slow=36						
PMG	**Port Moresby**	**16.41**	**274**	Pn	**Pn**	**03 02 34.8**	**-2.3**
PMG				IAmb	IAmb	03 02 54.5	
	comp=Z,124nm,1.2s						
EIDS	**Eidsvold**	**18.58**	**219**	P	**Pn**	**03 03 06.7**	**+2.8**
EIDS				IAmb	IAmb	03 03 08.4	
	comp=Z,154nm,1.3s						
MANU	**Manus Island**	**18.58**	**298**	P	**P**	**03 03 02.1**	**-1.6**
MANU				IAmb	IAmb	03 03 06.6	
	comp=Z,94nm,0.9s						
CTA	**Charters Tower**	**19.05**	**240**	P	**Pn**	**03 03 11.4**	**+1.6**
	comp=Z,2.4nm,0.3s,baz=67,slow=11,SNR=30						
CTA				LR	LR	03 10 06.8	
	comp=Z,2μm,19.4s,baz=54,slow=36						
COEN	**Coen**	**20.28**	**260**	P	**P**	**03 03 22.8**	**+0.5**
COEN				IAmb	IAmb	03 03 26.5	
	comp=Z,95nm,1.1s						
ARMA	**Armidale**	**22.27**	**209**	P	**P**	**03 03 45.0**	**+1.3**
ARMA				IAMs_20	IAMs_20	03 11 37.7	
	comp=Z,6μm,18.0s						
AFI	**Afiamalu**	**24.05**	**99**	LR	LR	03 11 37.4	
	comp=Z,4μm,19.3s,baz=282,slow=32						
AFI	**Afiamalu**	**24.05**	**99**	IAMs_20	IAMs_20	03 11 25.9	
	comp=Z,4μm,20.0s						
JAY	**Jayapura**	**24.40**	**289**	LR	LR	03 15 04.0	
	comp=Z,2μm,18.0s,baz=126,slow=40						
RAO	**Raoul Island**	**24.88**	**139**	LR	LR	03 12 00.1	
	comp=Z,1μm,21.1s,baz=298,slow=32						
STKA	**Stephens Creek**	**29.08**	**221**	P	**P**	**03 04 48.3**	**+1.5**
	comp=Z,13nm,0.8s,baz=40,slow=12,SNR=18						
STKA				LR	LR	03 15 45.4	
	comp=Z,4μm,18.3s,baz=36,slow=35						
STKA	**Stephens Creek**	**29.08**	**221**	P	**P**	**03 04 48.3**	**+1.5**
WR0	**Warramunga Arr**	**29.45**	**249**	P	**P**	**03 04 49.2**	**-0.9**
WR0				IAMs_20	IAMs_20	03 16 15.8	
	comp=Z,3μm,20.0s						
WR9	**Warramunga Arr**	**29.47**	**249**	IAMs_20	IAMs_20	03 16 16.0	
	comp=Z,3μm,20.0s						
WR7	**Warramunga Arr**	**29.50**	**249**	IAMs_20	IAMs_20	03 16 17.3	
	comp=Z,3μm,20.0s						
WR6	**Warramunga Arr**	**29.52**	**249**	IAMs_20	IAMs_20	03 16 17.9	
	comp=Z,3μm,19.0s						
WR5	**Warramunga Arr**	**29.54**	**249**	IAMs_20	IAMs_20	03 16 27.4	
	comp=Z,3μm,20.0s						
WB9	**Warramunga Arr**	**29.55**	**249**	IAMs_20	IAMs_20	03 16 07.6	
	comp=Z,4μm,20.0s						
WB8	**Warramunga Arr**	**29.56**	**249**	IAMs_20	IAMs_20	03 16 07.8	
	comp=Z,4μm,20.0s						
WR4	**Warramunga Arr**	**29.57**	**249**	IAMs_20	IAMs_20	03 16 29.0	
	comp=Z,3μm,20.0s						
WB7	**Warramunga Arr**	**29.57**	**249**	IAMs_20	IAMs_20	03 16 07.3	
	comp=Z,3μm,20.0s						
URZ	**Urewera**	**29.57**	**158**	LR	LR	03 15 50.5	
	comp=Z,2μm,18.5s,baz=343,slow=35						
URZ	**Urewera**	**29.57**	**158**	IAMs_20	IAMs_20	03 15 39.5	
	comp=Z,2μm,19.0s						
WR3	**Warramunga Arr**	**29.58**	**249**	IAMs_20	IAMs_20	03 16 19.4	
	comp=Z,3μm,20.0s						
WB5	**Warramunga Arr**	**29.59**	**249**	IAMs_20	IAMs_20	03 17 07.5	
	comp=Z,3μm,18.0s						
WB4	**Warramunga Arr**	**29.60**	**249**	IAMs_20	IAMs_20	03 15 58.9	
	comp=Z,4μm,21.0s						
WC3	**Warramunga Arr**	**29.60**	**249**	IAMs_20	IAMs_20	03 16 19.9	
	comp=Z,3μm,20.0s						
WR2	**Warramunga Arr**	**29.61**	**249**	IAMs_20	IAMs_20	03 16 20.0	
	comp=Z,3μm,20.0s						
WB3	**Warramunga Arr**	**29.61**	**249**	IAMs_20	IAMs_20	03 16 20.1	
	comp=Z,3μm,20.0s						
WRAB	**Tennant Creek**	**29.61**	**249**	⇓*i*P	**P**	**03 04 51.1**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,39nm,1.1s						
WRAB	**Tennant Creek**	**29.61**	**249**	P	**P**	**03 04 50.9**	**-0.8**
WRAB	**Tennant Creek**	**29.61**	**249**	IAMs_20	IAMs_20	03 16 30.0	
	comp=Z,3μm,20.0s						
WC1	**Warramunga Arr**	**29.62**	**249**	IAMs_20	IAMs_20	03 16 20.5	
	comp=Z,3μm,20.0s						
WR1	**Warramunga Arr**	**29.62**	**249**	IAMs_20	IAMs_20	03 16 20.6	
	comp=Z,3μm,20.0s						
WRA	**Warramunga Arr**	**29.63**	**249**	*e*P	**P**	**03 04 50.5**	**-1.3**
WRA	**Warramunga Arr**	**29.63**	**249**	P	**P**	**03 04 51.0**	**-0.8**
	comp=Z,18nm,0.5s,baz=80,slow=9.2,SNR=125						
WRA				S	**S**	**03 09 43.7**	**-1.8**
	comp=Z,13nm,1.1s,baz=80,slow=14,SNR=8.7						
WRA				LR	LR	03 17 20.1	
	comp=Z,3μm,18.1s,baz=70,slow=38						
WRA	**Warramunga Arr**	**29.63**	**249**	P	**P**	**03 04 50.5**	**-1.3**
WC4	**Warramunga Arr**	**29.63**	**249**	IAMs_20	IAMs_20	03 16 32.7	
	comp=Z,3μm,20.0s						
GUMO	**Guam**	**30.87**	**322**	LR	LR	03 17 21.7	
	comp=Z,1μm,18.2s,baz=140,slow=36						
AS31	**Alice Springs**	**31.02**	**242**	P	**P**	**03 05 03.5**	**-0.6**
ASAR	**Alice Springs**	**31.02**	**242**	P	**P**	**03 05 02.2**	**-1.9**
ASAR				S	**S**	**03 10 04.8**	**-2.6**
ASAR	**Alice Springs**	**31.02**	**242**	P	**P**	**03 05 03.0**	**-1.1**
	comp=Z,9.3nm,0.6s,baz=62,slow=9.9,SNR=120						
ASAR				S	**S**	**03 10 04.8**	**-2.6**
	comp=Z,1.2nm,0.9s,baz=66,slow=16,SNR=3.0						
ASAR				LR	LR	03 17 22.2	
	comp=Z,1μm,18.1s,baz=70,slow=36						
ASAR	**Alice Springs**	**31.02**	**242**	P	**P**	**03 05 02.2**	**-1.9**
BFZ	**Birch Farm**	**31.46**	**162**	IAMs_20	IAMs_20	03 17 15.5	
	comp=Z,3μm,18.0s						
SAUI	**Saumlaki**	**32.14**	**273**	IAMs_20	IAMs_20	03 17 51.2	
	comp=Z,2μm,18.0s						
FAKI	**Fak Fak**	**32.27**	**282**	IAMs_20	IAMs_20	03 18 33.9	
	comp=Z,2μm,21.0s						
RPZ	**Rata Peaks**	**33.10**	**170**	LR	LR	03 18 15.6	
	comp=Z,2μm,18.3s,baz=346,slow=35						
BBOO	**Buckleboo**	**33.37**	**225**	P	**P**	**03 05 25.1**	**+0.5**
BBOO				IAMs_20	IAMs_20	03 18 09.6	
	comp=Z,3μm,19.0s						
SIJI	**Sorong**	**33.82**	**285**	LR	LR	03 21 16.6	
	comp=Z,3μm,18.2s,baz=107,slow=40						
KNRA	**Kununurra**	**34.31**	**258**	P	**P**	**03 05 31.4**	**-1.5**
KNRA				IAMs_20	IAMs_20	03 18 01.9	
	comp=Z,2μm,22.0s						
RAR	**Rarotonga**	**36.37**	**111**	LR	LR	03 17 41.5	
	comp=Z,952nm,21.2s,baz=274,slow=31						
NLAI	**Namlea**	**37.16**	**279**	P	**P**	**03 05 58.5**	**+1.1**
	comp=Z,17nm,1.8s						
FITZ	**Fitzroy Crossi**	**37.47**	**255**	P	**P**	**03 05 58.7**	**-1.3**
	comp=Z,22nm,0.6s,baz=82,slow=7.4,SNR=62						
FITZ				LR	LR	03 21 25.8	
	comp=Z,2μm,19.1s,baz=84,slow=36						
FITZ	**Fitzroy Crossi**	**37.47**	**255**	P	**P**	**03 05 58.8**	**-1.2**
FITZ				IAmb	IAmb	03 06 00.2	
	comp=Z,23nm,0.6s						
FITZ				IAMs_20	IAMs_20	03 21 06.0	
	comp=Z,2μm,20.0s						
FORT	**Forrest**	**38.41**	**234**	P	**P**	**03 06 08.2**	**+0.4**
FORT				IAMs_20	IAMs_20	03 21 47.5	
	comp=Z,2μm,19.0s						
SANI	**Sanana**	**38.53**	**281**	P	**P**	**03 06 08.0**	**-1.0**
	comp=Z,23nm,1.1s						
BATI	**Baumata**	**39.38**	**267**	P	**P**	**03 06 16.4**	**+0.2**
	comp=Z,30nm,0.5s,baz=148,slow=3.5,SNR=4.9						
BATI				LR	LR	03 23 56.9	
	comp=Z,737nm,18.6s,baz=130,slow=38						
MMRI	**Maumere**	**40.95**	**270**	P	**P**	**03 06 26.2**	**-2.9**
MMRI				IAmb	IAmb	03 07 13.8	
	comp=Z,39nm,0.8s						
LUWI	**Luwuk**	**41.90**	**281**	P	**P**	**03 06 36.9**	**0.0**
	comp=Z,3μmcomp=Z,42nm,1.4s						
LUWI	**Luwuk**	**41.90**	**281**	P	**P**	**03 06 35.3**	**-1.6**
DAV	**Davao City (W)**	**42.06**	**294**	LR	LR	03 25 06.6	
	comp=Z,548nm,18.3s,baz=118,slow=38						
PSA00	**Pilbara Seismi**	**43.26**	**250**	P	**P**	**03 06 47.1**	**-0.8**
PSA00				IAmb	IAmb	03 07 03.6	
	comp=Z,39nm,1.0s						
PSAC3	**Pilbara Seismi**	**43.28**	**250**	IAMs_20	IAMs_20	03 25 37.4	
	comp=Z,3μm,21.0s						
BNSI	**Bone**	**43.71**	**275**	P	**P**	**03 06 51.2**	**-0.5**
	comp=Z,30nm,1.3s						
MPSI	**Mapaga**	**45.03**	**282**	P	**P**	**03 07 01.1**	**-1.1**
	comp=Z,10nm,0.8s						
PLAI	**Plampang**	**45.30**	**269**	P	**P**	**03 07 00.7**	**-3.7**
PPT	**Papeete**	**45.59**	**104**	LR	LR	03 22 45.2	
	comp=Z,1μm,18.2s,baz=272,slow=32						
PPT2	**Papeete2**	**45.59**	**104**	*e*S	**S**	**03 13 48.8**	**+1.4**
	comp=Z,444nm,27.0s						
PPT2				*e*LQ	LQ	03 18 03.8	
	comp=Z,2μm,27.5s						
PPT2				*e*LR	LR	03 19 59.7	
	comp=Z,1μm,22.0s,baz=277						
TBI	**Tubuai**	**46.13**	**112**	*e*S	**S**	**03 13 55.0**	**0.0**
	comp=Z,554nm,29.5s						
TBI				*e*LQ	LQ	03 18 17.4	
	comp=Z,2μm,30.5s						
NWAO	**Narrogin (SRO)**	**47.81**	**235**	IAMs_20	IAMs_20	03 26 54.2	
	comp=Z,2μm,20.0s						
MORW	**Morawa**	**47.88**	**241**	IAMs_20	IAMs_20	03 27 16.7	
	comp=Z,2μm,21.0s						
SRBI	**Singaraja**	**47.91**	**269**	P	P	03 07 32.6	+7.8
JAGI	**Jajag, Banyuwa**	**48.90**	**268**	P	**P**	**03 07 31.2**	**-1.3**
	comp=Z,45nm,1.1s						
JAGI	**Jajag, Banyuwa**	**48.90**	**268**	P	**P**	**03 07 29.8**	**-2.7**
TGY	**Tagaytay City**	**49.29**	**300**	LR	LR	03 27 16.3	
	comp=Z,373nm,19.5s,baz=150,slow=35						
JHJ2	**Mitsune**	**49.54**	**333**	IAMs_20	IAMs_20	03 32 01.0	
	comp=Z,1μm,22.0s						
SBUM	**Sibu**	**52.99**	**282**	P	**P**	**03 08 01.9**	**-1.3**
MJAR	**Matsushiro Arr**	**53.15**	**334**	P	**P**	**03 08 02.3**	**-1.7**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MJAR	**Matsushiro Arr**	**53.15**	**334**	P	**P**	**03 08 03.2**	**-0.8**
	comp=Z,1.3nm,0.6s,baz=150,slow=6.2,SNR=4.2						
MJAR				LR	LR	03 30 02.4	
	comp=Z,244nm,21.0s,baz=190,slow=35						
MJAR	**Matsushiro Arr**	**53.15**	**334**	P	**P**	**03 08 02.3**	**-1.7**
JNU	**Nakatsue**	**54.00**	**326**	P	**P**	**03 08 09.9**	**-0.4**
	comp=Z,8.9nm,0.8s,baz=122,slow=7.8,SNR=4.1						
JNU	**Nakatsue**	**54.00**	**326**	P	**P**	**03 08 08.9**	**-1.4**
TPUB	**Ta-pu**	**54.31**	**309**	P	**P**	**03 08 12.0**	**-0.8**
KSM	**Kuching**	**54.58**	**280**	P	**P**	**03 08 13.3**	**-1.6**
KSM				IAmb	IAmb	03 09 20.0	
	comp=Z,16nm,1.2s						
TAOE	**Nuku Hiva Isla**	**55.23**	**93**	*e*S	**S**	**03 16 00.4**	**-1.4**
	comp=Z,314nm,27.0s						
TAOE				*e*LR	LR	03 24 25.9	
	comp=Z,706nm,23.6s						
QZH	**Quanzhou**	**56.77**	**310**	P	**P**	**03 08 31.8**	**+1.5**
QZH				S	**S**	**03 16 22.8**	**+1.3**
QZH				pmax	pmax		
	comp=Z,260nm,4.4s						
QZH				LR	LR		
	comp=Z,470nm,18.6s						
JKA	**Kamikawa-asahi**	**58.23**	**342**	P	**P**	**03 08 40.5**	**+0.3**
ASAJ	**Asahikawa**	**58.23**	**342**	P	**P**	**03 08 40.5**	**+0.3**
	comp=Z,8.4nm,0.8s,baz=228,slow=14,SNR=5.0						
SSE	**Sheshan**	**58.55**	**317**	IAMs_20	IAMs_20	03 35 10.2	
	comp=Z,701nm,21.0s						
KSRS	**Korea Array**	**58.84**	**327**	P	**P**	**03 08 44.5**	**-0.2**
	comp=Z,3.0nm,1.1s,baz=135,slow=7.2,SNR=3.2						
KSRS				LR	LR	03 31 21.8	
	comp=Z,373nm,19.8s,baz=131,slow=33						
HKPS	**Hong Kong Po S**	**58.87**	**304**	IAMs_20	IAMs_20	03 30 37.8	
	comp=Z,855nm,21.0s						
PMBI	**Palembang**	**59.01**	**273**	IAMs_20	IAMs_20	03 35 48.2	
	comp=Z,1μm,22.0s						
NJ2	**Nanjing**	**60.70**	**317**	*e*P	**P**	**03 08 59.5**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
QIZ	**Qiongzhong**	**60.99**	**299**	IAMs_20	IAMs_20	03 31 35.4	
	comp=Z,700nm,21.0s						
USRK	**Ussuriysk Ar.**	**62.14**	**335**	P	**P**	**03 09 06.4**	**-0.7**
USRK	**Ussuriysk Ar.**	**62.14**	**335**	P	**P**	**03 09 06.7**	**-0.4**
	comp=Z,8.8nm,1.1s,baz=160,slow=6.1,SNR=8.0						
USRK	**Ussuriysk Ar.**	**62.14**	**335**	P	**P**	**03 09 06.4**	**-0.7**
USA0B	**Ussuriysk Arra**	**62.14**	**335**	P	**P**	**03 09 05.5**	**-1.6**
USA0B				pmax	pmax		
	comp=Z,46nm,1.4s						
USA0B	**Ussuriysk Arra**	**62.14**	**335**	P	**P**	**03 09 05.5**	**-1.6**
WHN	**Wuhan**	**62.98**	**313**	⇑P	**P**	**03 09 13.0**	**0.0**
WHN				S	**S**	**03 17 40.6**	**-0.8**
WHN				pmax	pmax		
	comp=Z,480nm,8.3s						
WHN				pmax	pmax		
	comp=Z,530nm,15.2s						
WHN				LR	LR		
	comp=Z,1μm,19.2s						
WHN				LR	LR		
	comp=Z,390nm,7.1s						
WHN				LR	LR		
	comp=Z,930nm,15.8s						
PET	**Petropavlovsk**	**64.02**	**357**	*e*P	**P**	**03 09 22.6**	**+3.3**
PET				*e*S	**S**	**03 17 58.9**	**+5.4**
PETK	**Petropavlovsk-**	**64.17**	**356**	P	**P**	**03 09 18.4**	**-1.9**
	comp=Z,2.4nm,0.8s,baz=165,slow=6.9,SNR=2.4						
CN2	**Changchun**	**64.80**	**330**	*e*P	**P**	**03 09 26.7**	**+2.0**
CN2				*e*S	**S**	**03 18 07.8**	**+4.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
CN2				pmax	pmax		
	comp=Z,200nm,5.5s						
CN2				LR	LR		
	comp=Z,500nm,19.0s						
CN2				LR	LR		
	comp=Z,500nm,19.0s						
CN2				LR	LR		
	comp=Z,400nm,19.0s						
GRNR	**Gornyy**	**66.06**	**341**	*e*P	**P**	**03 09 28.8**	**-3.9**
KLR	**Kul'dur**	**66.35**	**338**	*i* P	**P**	**03 09 36.4**	**+1.8**
KLR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KLR	**Kul'dur**	**66.35**	**338**	P	**P**	**03 09 34.5**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=168,slow=3.5,SNR=8.8						
VNDA	**Vanda**	**66.41**	**180**	P	**P**	**03 09 38.5**	**+3.9**
VNDA				pmax	pmax		
	comp=Z,13nm,1.3s						
VNDA	**Vanda**	**66.41**	**180**	P	**P**	**03 09 35.6**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=331,slow=8.9,SNR=4.3						
VNDA				LR	LR	03 36 29.4	
	comp=Z,282nm,18.1s,baz=4.5,slow=34						
VNDA	**Vanda**	**66.41**	**180**	P	**P**	**03 09 38.5**	**+3.9**
VNDA				IAmb	IAmb	03 09 49.9	
	comp=Z,13nm,1.3s						
BJT	**Baijiatuao**	**67.30**	**322**	IAMs_20	IAMs_20	03 37 13.7	
	comp=Z,694nm,21.0s						
XAN	**Xi'an**	**68.72**	**313**	P	**P**	**03 09 48.7**	**-1.3**
XAN				pP	pP	03 09 57.6	0.0
XAN				pmax	pmax		
	comp=Z,8.0nm,1.6s						
XAN	**Xi'an**	**68.72**	**313**	IAMs_20	IAMs_20	03 38 19.9	
	comp=Z,531nm,21.0s						
KMI	**Kunming**	**69.49**	**302**	P	**P**	**03 09 56.4**	**+1.3**
KMI				pP	pP	03 09 58.7	-4.2
KMI				S	**S**	**03 19 03.0**	**+1.8**
KMI				pmax	pmax		
	comp=Z,28nm,1.5s						
KMI				pmax	pmax		
	comp=Z,210nm,5.6s						
KMI				LR	LR		
	comp=Z,240nm,20.8s						
KMI				LR	LR		
	comp=Z,340nm,21.7s						
KMI				LR	LR		
	comp=Z,620nm,23.5s						
KMI	**Kunming**	**69.49**	**302**	IAMs_20	IAMs_20	03 37 45.3	
	comp=Z,598nm,20.0s						
CMAR	**Chiang Mai Arr**	**70.34**	**294**	P	**P**	**03 09 59.2**	**-1.0**
	comp=Z,4.8nm,0.8s,baz=122,slow=4.6,SNR=18						
CMAR				LR	LR	03 40 42.4	
	comp=Z,122nm,19.9s,baz=106,slow=36						
CHTO	**Chiang Mai**	**70.46**	**295**	P	**P**	**03 10 00.4**	**-0.6**
CHTO				pmax	pmax		
	comp=Z,13nm,1.4s						
CHTO	**Chiang Mai**	**70.46**	**295**	P	**P**	**03 10 00.4**	**-0.6**
HHC	**Hu-ho-hao-te**	**70.62**	**321**	*e*P	**P**	**03 10 01.4**	**-0.2**
CD2	**Chengdu**	**71.09**	**308**	P	**P**	**03 10 03.4**	**-1.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
ZEA	**Zeya**	**71.65**	**338**	*e*P	**P**	**03 10 07.3**	**-0.1**
ZEA				pmax	pmax		
	comp=Z,72nm,1.8s						
LZH	**Lanzhou**	**73.36**	**313**	⇑P	**P**	**03 10 19.1**	**+0.9**
LZH				pP	pP	03 10 22.2	-3.7
LZH				PP	**PP**	**03 13 04.5**	**+2.4**
LZH				S	**SKiKP**	**03 19 46.7**	**-0.8**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,200nm,4.9s						
LZH				LR	LR		
	comp=Z,310nm,14.6s						
LZH				LR	LR		
	comp=Z,460nm,17.0s						
LZH				LR	LR		
	comp=Z,450nm,17.9s						
ULN	**Ulaanbaatar**	**77.21**	**325**	P	**P**	**03 10 38.8**	**-1.3**
ULN				pmax	pmax		
	comp=Z,42nm,1.7s						
ULN	**Ulaanbaatar**	**77.21**	**325**	P	**P**	**03 10 38.8**	**-1.3**
SONM	**Songino Array**	**77.57**	**324**	P	**P**	**03 10 40.8**	**-1.3**
SONM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SONM	**Songino Array**	**77.57**	**324**	P	**P**	**03 10 41.4**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=144,slow=4.2,SNR=13						
SONM				LR	LR	03 43 57.4	
	comp=Z,300nm,20.1s,baz=116,slow=35						
SONM	**Songino Array**	**77.57**	**324**	P	**P**	**03 10 40.8**	**-1.3**
YAK	**Yakutsk**	**77.61**	**344**‖	*e*P	**P**	**03 10 43.1**	**+1.3**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA	**Gaotai**	**77.69**	**315**	*e*P	**P**	**03 10 43.3**	**+0.3**
GTA				pP	sP	03 10 53.7	+0.1
GTA				sP	pwP	03 10 57.4	-1.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,120nm,4.6s						
GTA				LR	LR		
	comp=Z,340nm,20.6s						
GTA				LR	LR		
	comp=Z,380nm,19.7s						
GTA				LR	LR		
	comp=Z,420nm,20.3s						
SHL	**Shillong**	**78.83**	**299**	P	**P**	**03 10 48.4**	**-1.2**
SHL				pmax	pmax		
	comp=Z,19nm,1.1s						
SHL	**Shillong**	**78.83**	**299**	P	**P**	**03 10 48.4**	**-1.2**
SHL				IAmb	IAmb	03 10 50.2	
	comp=Z,19nm,1.1s						
QSPA	**South Pole Qui**	**78.90**	**180**	P	**P**	**03 10 51.0**	**+1.9**
BILL	**Bilibino**	**78.96**	**1**	*e*P	**P**	**03 10 48.6**	**-0.6**
BILL				*e*		03 10 56.9	
BILL				*e*		03 11 04.7	
BILL				*e*		03 13 47.0	
BILL				*e*PPP	PPP	03 15 33.9	
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
**

PKM Mcpherson Peak 85.40 53 P **P** 03 11 24.8 +0.9
baz=253
HUMO Hull Mountain 85.46 45 IAmb IAmb 03 11 40.3
comp=Z,11nm,1.1s
ORV Oroville 85.52 48 IAmb IAmb 03 11 38.0
comp=Z,15nm,1.4s
O03E Paynes Creek 85.53 48 P **P** 03 11 23.9 -0.4
baz=252
AFDM Forest Hills D 85.72 49 IAmb IAmb 03 11 26.3
comp=Z,8.4nm,1.0s
BBB Bella Bella 85.74 35 LR LR 03 40 37.8
comp=Z,271nm,21.7s,baz=236,slow=29
TIXI Tiksi 85.78 350 P **P** 03 11 24.8 +0.1
TIXI pmax pmax
comp=Z,13nm,0.9s
TIXI Tiksi 85.78 350 LR LR 03 51 53.5
comp=Z,184nm,18.1s,baz=104,slow=37
TIXI Tiksi 85.78 350 P **P** 03 11 24.8 +0.1
TIXI IAmb IAmb 03 13 33.9
comp=Z,12nm,0.9s
J04D Umpqua Nationa 86.25 45 P **P** 03 11 27.4 -0.5
baz=251
MWC Mount Wilson 86.60 54 IAmb IAmb 03 11 31.2
comp=Z,18nm,1.3s
BMAR Burnt Mountain 86.65 18 P **P** 03 11 28.6 -0.6
ISA Isabella, Lake 86.67 53 P **P** 03 11 29.8 -0.3
baz=254
PNTR Pine Nut 86.78 49 P **P** 03 11 30.3 -0.4
OMMB Old Mammoth Mi 86.81 51 IAmb IAmb 03 11 45.7
comp=Z,18nm,1.7s
EDW2 Edwards Air Fo 86.83 54 P **P** 03 11 30.3 -0.5
baz=254
J05D Fort Rock, OR 86.87 45 P **P** 03 11 30.5 -0.4
baz=252
BFSC Mount Baldy Ra 86.93 54 P **P** 03 11 30.5 -0.8
baz=255
D03D Eldon 87.03 40 P **P** 03 11 30.6 -0.8
baz=250
MOD Modoc Plateau 87.10 46 IAmb IAmb 03 11 35.3
comp=Z,7.8nm,1.1s
PAHR Pah Rah Range 87.12 49 IAmb IAmb 03 11 33.0
comp=Z,12nm,1.3s
CWC Cottonwood Cre 87.19 52 P **P** 03 11 31.3 -1.3
baz=254
LRMC Laurel Mtn Rad 87.24 53 P **P** 03 11 32.4 -0.5
baz=254
RYN Ryan 87.45 50 IAmb IAmb 03 11 34.6
comp=Z,7.2nm,1.1s
NVAR Mina Array Bea 87.56 50 P **P** 03 11 33.8 -0.7
comp=Z,3.2nm,0.8s,baz=234,slow=7.4,SNR=8.7
MONP2 Monument Peak 87.57 56 P **P** 03 11 34.2 -0.4
baz=255
PFO Pinyon Flats O 87.72 55 P **P** 03 11 34.9 -0.3
PFO pmax pmax
comp=Z,4.0nm,0.9s
PFO Pinyon Flats O 87.72 55 LR LR 03 50 15.0
comp=Z,278nm,18.0s,baz=263,slow=35
PFO Pinyon Flats O 87.72 55 P **P** 03 11 34.9 -0.3
PFO Pinyon Flats O 87.72 55 P **P** 03 11 34.8 -0.5
baz=255
TPFO Pinon Flats 87.73 55 P **P** 03 11 35.3 0.0
baz=255
XPFO Pion Flat 87.73 55 P **P** 03 11 35.2 -0.1
WMQ Urumqi 87.75 315 *eP* **P** 03 11 35.0 -0.1
WMQ pP pP 03 11 41.7 -1.3
WMQ pmax pmax
comp=Z,11nm,1.3s
WMQ pmax pmax
comp=Z,220nm,6.9s
WMQ LR LR
comp=Z,600nm,28.9s
WMQ LR LR
comp=Z,530nm,29.1s
WMQ LR LR
comp=Z,400nm,25.3s
IKP In-Ko-Pah, Jac 87.77 56 P **P** 03 11 35.8 +0.4
baz=256
KVN Kaiserville 87.89 50 IAmb IAmb 03 11 40.7
comp=Z,12nm,1.5s
GRAC Grapevine Rang 87.89 52 P **P** 03 11 35.8 -0.1
baz=255
FURC Furnace Creek, 88.14 52 P **P** 03 11 37.0 0.0
baz=255
BELC Belle Mtn. Jos 88.19 55 P **P** 03 11 37.4 -0.1
baz=256
BC3 Big Chuckawall 88.55 55 P **P** 03 11 39.2 0.0
baz=256
TUQ Turquoise Moun 88.61 54 P **P** 03 11 39.1 -0.4
baz=256
GMRC Granite Mounta 88.66 54 P **P** 03 11 39.3 -0.4
baz=256
TPNV Topopah Spring 88.74 52 P **P** 03 11 39.2 -0.9
baz=255
IRM Iron Mountain 88.92 55 P **P** 03 11 41.1 +0.3
baz=256
Y12C Blythe 89.32 56 P **P** 03 11 42.9 +0.2
Y12C IAmb IAmb 03 11 43.9
comp=Z,6.8nm,0.9s
Y12C Blythe 89.32 56 P **P** 03 11 42.5 -0.1
baz=256
R11A Troy Canyon, C 89.60 51 P **P** 03 11 43.5 -0.6
baz=256
214A Organ Pipe Nat 90.31 58 IAmb IAmb 03 11 49.1
comp=Z,11nm,1.3s
F10A Beach Ranch, E 90.39 43 IAmb IAmb 03 11 48.0
comp=Z,9.9nm,1.1s
ELK Elko 90.45 49 P **P** 03 11 46.8 -1.2
comp=Z,2.5nm,0.9s,baz=265,slow=6.6,SNR=8.7
ELK LR LR 03 49 29.0
comp=Z,108nm,18.2s,baz=248,slow=34
NEW Newport 91.07 41 P **P** 03 11 49.0 -1.5
comp=Z,1.0nm,0.4s,baz=246,slow=5.8,SNR=4.0
NEW LR LR 03 44 32.1
comp=Z,190nm,21.7s,baz=259,slow=30
CCUT Cedar City 91.12 52 P **P** 03 11 51.0 -0.2
SYO Syowa Base 91.15 197 ⇑*es*P **P** 03 11 54.0 +3.6
SYO Syowa Base 91.15 197 ⇑*e*PP PP 03 15 29.7 +2.8
U15A North Rim 91.71 53 IAmb IAmb 03 12 09.6
comp=Z,15nm,1.4s
DUG Dugway, Tooele 92.13 50 P **P** 03 11 55.6 -0.1
baz=258
MTPU Mount Pierson 92.14 52 P **P** 03 11 55.6 -0.5
MK31 Makanchi Array 92.23 317 P **P** 03 11 54.9 -1.0
MK31 pmax pmax
comp=Z,10.0nm,1.3s
MK31 Makanchi Array 92.23 317 P **P** 03 11 54.9 -1.0
MK31 IAmb IAmb 03 12 06.4
comp=Z,10nm,1.3s
MKAR Makanchi Array 92.23 317 P **P** 03 11 54.5 -1.4
comp=Z,1.7nm,0.8s,baz=91,slow=5.9,SNR=9.0
MKAR LR LR 03 52 53.8
comp=Z,178nm,21.8s,baz=93,slow=35
WUAZ Wupatki 92.25 54 P **P** 03 11 58.2 +1.8
baz=258
MAKZ Makanchi 92.44 317 P **P** 03 11 55.5 -1.4
MAKZ pmax pmax
comp=Z,10.0nm,1.2s
MAKZ Makanchi 92.44 317 P **P** 03 11 55.5 -1.4
MAKZ IAmb IAmb 03 12 11.6
comp=Z,10nm,1.2s
ZAA0 Zalesovo Array 92.46 325 P **P** 03 11 55.3 -1.4
ZAA0 IAmb IAmb 03 12 17.4
comp=Z,10nm,1.5s
ZALV Zalesovo Beam 92.46 325 P **P** 03 11 57.7 +1.0
ZALV Zalesovo Beam 92.46 325 P **P** 03 11 54.5 -2.2
comp=Z,0.4nm,0.4s,baz=126,slow=2.0,SNR=4.9
ZALV LR LR 03 55 11.6
comp=Z,121nm,18.6s,baz=98,slow=37
ZALV Zalesovo Beam 92.46 325 P **P** 03 11 57.7 +1.0
PDAR Pinedale Array 95.04 48 P **P** 03 12 08.0 -1.2
comp=Z,1.0nm,0.9s,baz=259,slow=1.5,SNR=5.7
PDAR LR LR 03 49 11.8
comp=Z,265nm,19.6s,baz=274,slow=32
PDAR Pinedale Array 95.04 48 P **P** 03 12 08.5 -0.7
KSH Kashi 95.27 309 P **P** 03 12 12.2 +2.0
KSH pP pP 03 12 15.1 -3.0
KSH PP **PP** 03 16 01.5 +0.8
KSH S **S** 03 23 23.6 -0.4
KSH sS pS 03 23 31.7 -2.4
KSH SS **SS** 03 29 53.9 +2.4
KSH LR LR
comp=Z,210nm,5.2s
KSH LR LR
comp=Z,210nm,4.3s
KSH LR LR
comp=Z,340nm,6.1s
EGMT Eagleton 95.83 42 P **P** 03 12 11.4 -1.1
baz=260
YKA Yellowknife Ar 95.93 28 P **P** 03 12 10.4 -2.0
YKA Yellowknife Ar 95.93 28 P **P** 03 12 10.1 -2.3
comp=Z,1.1nm,0.8s,baz=254,slow=4.6,SNR=13
YKA LR LR 03 48 21.6
comp=Z,54nm,21.0s,baz=258,slow=31
YKA Yellowknife Ar 95.93 28 P **P** 03 12 10.4 -2.0
ANMO Albuquerque 96.10 56 LR LR 03 51 03.6
comp=Z,243nm,18.3s,baz=264,slow=33
SNAA Sanae 96.92 184 P **P** 03 12 17.3 +0.3
TXAR Lajitas Array 97.58 62 P **P** 03 12 19.7 -1.2
comp=Z,0.3nm,0.9s,baz=270,slow=2.7,SNR=3.0
TXAR LR LR 03 47 15.6
comp=Z,221nm,21.8s,baz=0.0,slow=30
VNA3 Neumayer Olymp 97.72 182 P Pdif 03 12 22.5 +1.9
ACON Acoyapa 112.63 82 IAMs_20 IAMs_20 04 15 34.1
comp=Z,437nm,21.0s
ARCES ARCESS Array B 115.89 345 PKP **PKiKP** 03 17 27.0 -1.0
comp=Z,3.8nm,1.1s,baz=48,slow=1.8,SNR=5.5
OBN Obninsk 119.83 328 *e*PKIKP **PKiKP** 03 17 36.5 +0.5
OBN *e* 03 19 00.6
OBN *e*PPP PPP 03 21 33.0
OBN pmax pmax
comp=Z,3.0nm,1.0s
KIV Kislovodsk 119.88 314 *e*PKIKP **PKiKP** 03 17 36.6 0.0
KIV *e* 03 18 57.1
KIV *e*PPP PPP 03 21 31.4
KIV pmax pmax
comp=Z,1.0nm,0.9s
NOA NORSAR Array B 126.23 344 PKP **PKiKP** 03 17 48.6 0.0
comp=Z,0.3nm,0.6s,baz=47,slow=2.1,SNR=2.6
MBAR Mbarara 131.87 259 IAMs_20 IAMs_20 04 19 08.4
comp=Z,325nm,18.0s
VYHS Vyhne 132.62 329 *e*PKIKP **PKiKP** 03 18 03.9 +2.1
VYHS Vyhne 132.62 329 *e*PKP **PKiKP** 03 18 03.9 +2.1
GERES GERESS Array B 134.87 332 PKP **PKiKP** 03 18 06.2 -0.3
comp=Z,0.4nm,0.8s,baz=10,slow=2.2,SNR=2.6
KEST Kesra 146.25 321 PKPbc **PKPab** 03 18 27.8 +0.1
comp=Z,2.1nm,0.7s,baz=73,slow=4.4,SNR=4.4
ESDC Sonseca Array 149.53 341 PKPbc **PKiKP** 03 18 36.5 -0.2
comp=Z,0.3nm,0.5s,baz=9.8,slow=4.2,SNR=2.9
ESDC Sonseca Array 149.53 341 PKPdf **PKPdf** 03 18 29.8 -1.3
TORD Torodi Ar. Bea 162.34 278 PKP **PKPdf** 03 18 47.3 -1.3
comp=Z,0.5nm,1.0s,baz=39,slow=1.3,SNR=2.4

*KRNET **04** 03:09:56.2±0.1, 39.39N×72.02E, mb3.0*
*NNC **04** 03:10:01.0±0.9, 39.74N×72.27E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=9.0km s-min=5.9km az=174.0*
ISC 04 03:09:56.6±2.4, 39.3N±0.2×72.02E±0.06, h10km, n22, σ1§01/32, 23C-6D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**1.17**	**308**	⇑*i*P	**Pb**	**03 10 17.3**	**-1.8**
	baz=6.0						
BTK				⇑*i*S	**Sb**	**03 10 32.6**	**-1.8**
	baz=6.0						
FRG	**Fergana**	**1.41**	**353**	*e*P	Pn	03 10 15.8	-6.6
FRG				*e*S	Sn	03 10 29.6	-11
ARSB	**Arslanbob**	**2.12**	**20**	⇑*e*P	**Pn**	**03 10 32.1**	**-0.1**
	baz=20						
ARSB				⇑*i*S	**Sn**	**03 10 59.1**	**+0.4**
	baz=20						
ARK	**Arkit**	**2.46**	**359**	⇑*e*P	**Pn**	**03 10 37.1**	**+0.2**
	baz=59						
ARK				⇑*i*S	**Sn**	**03 11 06.6**	**-0.5**
	baz=59						
AML	**Almayashu**	**3.07**	**24**	⇑*i*P	**Pn**	**03 10 46.1**	**+0.6**
	baz=24						
AML				⇑*i*S	**Sn**	**03 11 21.9**	**-0.6**
	baz=24						
AML	**Almayashu**	**3.07**	**24**	P	**Pn**	**03 10 46.8**	**+1.3**
	SNR=24						
ARLS	**Aral**	**3.07**	**34**	⇑*i*P	**Pn**	**03 10 45.7**	**+0.3**
	baz=35						
ARLS				⇑*i*S	**Sn**	**03 11 22.3**	**0.0**
	baz=35						
UCH	**Uchtor**	**3.45**	**32**	⇓*i*P	**Pn**	**03 10 51.2**	**+0.3**
	baz=33						
UCH				⇓*i*S	**Sn**	**03 11 32.1**	**0.0**
	baz=33						
UCH	**Uchtor**	**3.45**	**32**	P	**Pn**	**03 10 51.6**	**+0.7**
	SNR=8.4						
EKS2	**Erkin-Say**	**3.58**	**21**	⇑*i*P	**Pn**	**03 10 52.6**	**+0.3**
	baz=22						
EKS2				⇑*i*S	**Sn**	**03 11 34.2**	**-0.5**
	baz=22						
EKS2	**Erkin-Say**	**3.58**	**21**	P	**Pn**	**03 10 54.2**	**+1.9**
	SNR=6.2						
KZA	**Kyzart**	**3.68**	**41**	⇑*e*P	**Pn**	**03 10 54.3**	**+0.4**
	baz=41						
KZA				⇑*i*S	**Sn**	**03 11 37.3**	**-0.2**
	baz=41						
NRN	**Naryn**	**3.69**	**54**	⇑*e*P	**Pn**	**03 10 54.1**	**+0.1**
	baz=55						
NRN				⇑*i*S	**Sn**	**03 11 36.9**	**-0.9**
	baz=55						
AAK	**Ala-Archa**	**3.79**	**29**	⇑*i*P	**Pn**	**03 10 55.7**	**+0.4**
	baz=29						
AAK				⇑*i*S	**Sn**	**03 11 39.4**	**-0.6**
	baz=29						
AAK	**Ala-Archa**	**3.79**	**29**	P	**Pn**	**03 10 57.0**	**+1.7**
	SNR=5.5						
AAK	**Ala-Archa**	**3.79**	**29**	⇓Pn	**Pn**	**03 10 54.6**	**-0.7**
	4.5nm,0.5s						
AAK				⇓Lg	Lg	03 11 47.1	
	13nm,0.7s						
KK31	**Karatay Array**	**3.93**	**344**	⇑Pn	**Pn**	**03 10 58.5**	**+1.5**
	3.9nm,0.5s,baz=159,slow=12,SNR=20						
KK31				⇓Lg	Lg	03 11 55.2	
	5.0nm,0.4s,baz=155,slow=30,SNR=5.9						
KBK	**Karagaybulak**	**3.99**	**33**	⇑*i*P	**Pn**	**03 10 58.6**	**+0.6**
	baz=33						
KBK				⇑*i*S	**Sn**	**03 11 44.2**	**-0.7**
	baz=33						
CHMS	**Chumysh**	**4.20**	**29**	P	**Pn**	**03 11 01.9**	**+1.2**
	SNR=14						
USP	**Ospenovka**	**4.35**	**25**	P	**Pn**	**03 11 03.8**	**+1.0**
	SNR=13						
TKM2	**Tokmak 2**	**4.49**	**36**	⇑Pn	**Pn**	**03 11 04.2**	**-0.7**
	3.5nm,0.8s						
TKM2				⇓Lg	Lg	03 12 10.4	
	3.3nm,0.5s						
AB31	**Akbulak array**	**13.14**	**323**	⇑Pn	**Pn**	**03 13 05.5**	**+2.3**
	0.2nm,0.4s,baz=130,slow=14,SNR=16						

*IDC **04** 03:10:20.8±4.2, 23.7S×179.29W, h452km±43km, mb3.6/10, mb1 3.7/11, mb1mx3.4/37, mbtmp4.4/11, Error ellipse: s-maj=25.1km s-min=23.6km az=27.0*
*NEIC **04** 03:10:22.7±1.6, 23.4S±0.1×179.4W±0.2, h472km±7km, mb4.2/9, Error ellipse: s-maj=22.7km s-min=17.8km az=121.0*
ISC 04 03:10:26.4±0.8, 23.7S±0.1×179.5W±0.1, h500km, n46, σ1§67/42, mb3.9/10, 8C-7D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.35**	**338**	P	P	03 11 58.4	-8.0
NIUE	**Niue**	**10.01**	**65**	P	P	03 12 39.0	-5.0
URZ	**Urewera**	**14.82**	**191**	P	**P**	**03 13 34.4**	**-0.1**
	0.7nm,0.3s,baz=346,slow=4.2,SNR=3.3						
URZ				S	**S**	**03 16 09.2**	**-0.4**
	0.5nm,0.3s,baz=30,slow=20,SNR=2.4						
PMG	**Port Moresby**	**34.87**	**288**	P	**P**	**03 16 34.2**	**-1.2**
	18nm,0.8s,baz=144,slow=2.0,SNR=4.6						
PMG	**Port Moresby**	**34.87**	**288**	IAmb	IAmb	03 16 35.3	
	comp=Z,18nm,0.9s						
STKA	**Stephens Creek**	**35.24**	**248**	P	**P**	**03 16 38.8**	**+0.4**
	comp=Z,3.0nm,0.9s,baz=88,slow=12,SNR=5.8						
STKA	**Stephens Creek**	**35.24**	**248**	IAmb	IAmb	03 17 53.5	
	comp=Z,12nm,2.0s						
BBOO	**Buckleboo**	**39.96**	**247**	P	**P**	**03 17 16.0**	**-1.0**
AS31	**Alice Springs**	**42.53**	**260**	P	**P**	**03 17 37.5**	**-0.2**
ASAR	**Alice Springs**	**42.54**	**260**	P	**P**	**03 17 37.3**	**-0.4**
	comp=Z,3.9nm,0.8s,baz=102,slow=6.9,SNR=35						
ASAR				PcP	**pwP**	**03 19 17.5**	**+3.6**
	comp=Z,0.8nm,0.9s,baz=101,slow=3.9,SNR=4.4						
ASAR	**Alice Springs**	**42.54**	**260**	P	**P**	**03 17 36.7**	**-1.0**
WRA	**Warramunga Arr**	**42.89**	**266**	P	**P**	**03 17 39.4**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=91,slow=8.3,SNR=28						
WRA				PcP	**PcP**	**03 19 20.7**	**+0.4**
	comp=Z,4.0nm,1.3s,baz=93,slow=3.1,SNR=4.2						
WRA	**Warramunga Arr**	**42.89**	**266**	P	**P**	**03 17 39.1**	**-1.4**
FORT	**Forrest**	**46.83**	**249**	P	**P**	**03 18 10.1**	**-0.6**
FITZ	**Fitzroy Crossi**	**51.32**	**265**	P	**P**	**03 18 43.9**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=119,slow=11,SNR=7.9						
SIJI	**Sorong**	**52.82**	**288**	P	**P**	**03 18 52.9**	**-2.1**
	comp=Z,11nm,0.6s,baz=91,slow=17,SNR=7.1						
NWAO	**Narrogin (SRO)**	**55.75**	**245**	P	**P**	**03 19 15.4**	**-0.1**
	comp=Z,2.1nm,0.4s,baz=93,slow=5.5,SNR=6.4						
NWAO	**Narrogin (SRO)**	**55.75**	**245**	IAmb	IAmb	03 19 46.5	
	comp=Z,28nm,1.3s						
PETK	**Petropavlovsk-**	**79.00**	**346**	P	P	03 21 33.3	-4.3
	comp=Z,1.2nm,0.5s,baz=145,slow=6.0,SNR=3.2						
CMAR	**Chiang Mai Arr**	**89.89**	**290**	P	**P**	**03 22 33.1**	**+1.0**
	comp=Z,0.5nm,0.3s,baz=93,slow=3.6,SNR=7.5						
TXAR	**Lajitas Array**	**89.92**	**58**	P	**P**	**03 22 30.4**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=210,slow=7.0,SNR=7.5						
MKAR	**Makanchi Array**	**112.36**	**313**	PKiKP	**PKiKP**	**03 28 03.9**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=103,slow=1.0,SNR=4.1						
ARCES	**ARCESS Array B**	**131.77**	**349**	PKP	**PKPdf**	**03 28 39.7**	**-1.8**
	comp=Z,4.4nm,1.0s,baz=51,slow=2.3,SNR=4.0						
FINES	**FINESS Array B**	**138.39**	**342**	PKhKP	PKPpre	03 28 45.8	
	comp=Z,4.6nm,1.0s,baz=111,slow=3.1,SNR=3.7						
AKASG	**Malin Array Be**	**145.04**	**328**	PKP	**PKPdf**	**03 29 05.2**	**-1.0**
	comp=Z,1.3nm,0.3s,baz=44,slow=4.2,SNR=16						
AKASG	**Malin Array Be**	**145.04**	**328**		**PKPdf**	**03 29 05.5**	**-0.6**
AKBB	**Malin Array Si**	**145.04**	**328**		**PKPdf**	**03 29 04.8**	**-1.4**
SORM	**Soroca**	**147.10**	**325**	⇓P	**PKPdf**	**03 29 11.5**	**+1.8**
BR131	**Keskin Array S**	**147.82**	**308**		**PKPdf**	**03 29 14.7**	**+3.4**
BRTR	**Keskin Array B**	**147.82**	**308**	PKPbc	**PKPdf**	**03 29 14.3**	**+2.9**
	comp=Z,0.8nm,0.6s,baz=146,slow=4.6,SNR=6.8						
TOPG	**Topolog**	**149.00**	**320**	⇑P	**PKPbc**	**03 29 17.7**	**+0.1**
BIZ	**Bicaz**	**149.04**	**325**	⇑P	**PKPbc**	**03 29 18.3**	**+0.6**
BURAR	**Bucovina Array**	**149.05**	**327**	⇓P	**PKPbc**	**03 29 19.0**	**+1.2**
HARR	**Harsova**	**149.36**	**320**	⇑P	**PKPbc**	**03 29 18.4**	**0.0**
VRI	**Vrincioaia**	**149.37**	**323**	⇓P	**PKPdf**	**03 29 15.6**	**+2.2**
PLOR	**Plostina**	**149.42**	**323**	⇑P	**PKiKP**	**03 29 24.2**	**+4.8**
TRPA	**Tarpa**	**149.99**	**330**	⇑P	**PKPbc**	**03 29 19.7**	**-0.1**
MLR	**Muntele Rosu**	**150.03**	**323**	⇓P	**PKPdf**	**03 29 18.9**	**+4.2**
DOPR	**Dopca**	**150.04**	**324**	⇓P	**PKPbc**	**03 29 20.2**	**+0.1**
CJR	**Cluj-Napoca**	**150.48**	**327**	⇓P	**PKPbc**	**03 29 21.1**	**0.0**
VOIR		**150.56**	**324**	⇑P	**PKPbc**	**03 29 21.6**	**+0.2**
CLL	**Collm**	**150.78**	**344**	*e*PKPbc	**PKPbc**	**03 29 21.0**	**-0.6**
ARR	**Arges**	**150.83**	**324**	⇓P	**PKPbc**	**03 29 22.2**	**+0.2**
GZR	**Gura Zlata**	**151.79**	**326**	⇑P	**PKPbc**	**03 29 23.1**	**-1.0**
BZS	**Buzias**	**152.23**	**327**	⇑P	**PKPbc**	**03 29 24.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**169.46**	**186**	PKPab	**PKPab**	**03 30 52.2**	**-0.8**
	comp=Z,0.8nm,1.1s,baz=186,slow=2.9,SNR=2.5						

*SJA **04** 03:14:53.7±0.5, 21.17S×68.99W, h187km±5km, ML3.3, MW3.2*
*GUC **04** 03:14:56.3±0.7, 21.08S×68.77W, h122km±5km, ML3.6*
ISC 04 03:14:56.5±1.4, 21.09S±0.03×68.91W±0.06, h126km±13km, n19, σ1§30/31, 2C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.77**	**204**	⇑*i*P	**Pn**	**03 15 17.0**	**-0.2**
PB09				*i* S	**Sn**	**03 15 33.1**	**+0.2**
PB09				IAML		03 15 33.8	
	comp=N,1μm,0.2s						
PB08	**IPOC Station P**	**0.97**	**347**	⇓*i*P	**Pn**	**03 15 18.9**	**-0.3**
PB08				*i* S	**Sn**	**03 15 35.8**	**-0.6**
PB08				IAML		03 15 36.5	
	comp=E,838nm,0.3s						
PB03	**IPOC Station P**	**1.23**	**219**	*i* P	**Pn**	**03 15 21.8**	**+0.2**
PB03				*i* S	**Sn**	**03 15 40.6**	**-0.1**
PB03				IAML		03 15 41.1	
	comp=E,956nm,0.2s						
TA01	**Diego Aracena**	**1.30**	**294**	⇓*i*P	**Pn**	**03 15 22.4**	**+0.3**
TA01				*i* S	**Sn**	**03 15 42.3**	**+0.8**
TA01				IAML		03 15 43.9	
	comp=E,2μm,0.2s						
PB11	**IPOC Station P**	**1.50**	**332**	*i* P	**Pn**	**03 15 24.2**	**-0.2**
PB11				*i* S	**Sn**	**03 15 45.5**	**-0.3**
PB11				IAML		03 15 47.1	
	comp=N,2μm,0.2s						
PB04	**IPOC Station P**	**1.69**	**223**	*i* P	**Pn**	**03 15 28.0**	**+1.3**
PB04				*e*S	**Sn**	**03 15 52.7**	**+3.0**
PB06	**IPOC Station P**	**1.72**	**201**	⇑*i*P	**Pn**	**03 15 27.2**	**+0.2**
PB06				*i* S	**Sn**	**03 15 50.7**	**+0.2**
MNMC	**Minye Minye**	**2.05**	**342**	*i* P	**Pn**	**03 15 31.7**	**+0.5**
MNMC				*i* S	**Sn**	**03 15 58.8**	**+1.0**
MNMC				IAML		03 16 03.2	
	comp=N,651nm,0.3s						
PB05	**IPOC Station P**	**2.12**	**214**	*i* P	**Pn**	**03 15 32.1**	**+0.2**
PB05				*e*S	**Sn**	**03 16 00.6**	**+1.5**
PB15	**IPOC Station P**	**2.17**	**194**	*i* P	**Pn**	**03 15 32.9**	**+0.3**
PB15				*e*S	**Sn**	**03 16 02.1**	**+1.8**
PB15				IAML		03 16 06.9	
	comp=Z,1μm,0.2s						
PB16	**IPOC Station P**	**2.80**	**348**	⇓*i*P	**Pn**	**03 15 41.4**	**+0.4**
PB16				*i* S	**Sn**	**03 16 16.4**	**+1.3**
PB10	**IPOC Station P**	**2.85**	**212**	*i* P	**Pn**	**03 15 40.3**	**-0.8**
YJA	**Yavi**	**3.34**	**109**	*i* P	**Pn**	**03 15 47.5**	**-0.4**
YJA				IAML		03 15 51.3	
	comp=Z,10nm,0.8s						
YJA				*e*S	**Sn**	**03 16 30.2**	**+2.7**
PB14	**IPOC Station P**	**3.78**	**201**	*i* P	**Pn**	**03 15 52.0**	**-1.5**
HJA	**Humahuaca**	**3.87**	**124**	*i* P	**Pn**	**03 15 55.2**	**+0.4**
HJA				IAML		03 15 55.9	
	comp=Z,12nm,0.4s						
AZAP	**Zapla**	**4.73**	**132**	*i* P	**Pn**	**03 16 05.1**	**-1.0**
SLA	**San Lorenzo**	**4.79**	**140**	*i* P	**Pn**	**03 16 06.4**	**-0.5**
LPAZ	**La Paz**	**4.83**	**9**	*i* P	**Pn**	**03 16 08.3**	**+0.4**
TCA	**Tanti**	**10.91**	**160**	*i* P	**Pn**	**03 17 25.6**	**-3.6**

MAN 04 03:31:02.4, 6.71N×125.33E, h0km, mb4.0, ML2.8, MS2.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.71**	**148**	*e*P	Pg	03 31 16.5	+0.5
DDMP				*e*S	Sn	03 31 30.6	-0.8
GSPH	**General Santos**	**0.72**	**211**	⇑*i*P	Pg	03 31 14.8	-1.5
GSPH				*i* S	Sb	03 31 28.1	-0.4
SKMP	**Bagumbayan, Su**	**0.80**	**256**	*e*P	Pg	03 31 17.7	-0.1
SKMP				*e*S	Sb	03 31 30.4	-0.3
BUKP	**Musuan**	**1.19**	**347**	*e*P	Pg	03 31 25.5	+0.2
PAGZ	**Pagadian**	**2.24**	**300**	*e*P	Sn	03 32 06.9	-2.2

IDC 04 03:31:31.2±3.5, 22.60N×144.38E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.4/58, mbtmp3.8/4, Error ellipse: s-maj=163.7km s-min=26.1km az=81.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**43.41**	**194**	P	P	03 39 35.8	0.0
	0.1nm,0.3s,baz=15,slow=9.3,SNR=9.0						
ASAR	**Alice Springs**	**47.11**	**193**	P	P	03 40 05.1	-0.1
	0.3nm,0.8s,baz=22,slow=10,SNR=3.1						
KURBB	**Kurchatov Arra**	**57.63**	**317**	P	P	03 41 23.1	+0.1
	0.6nm,0.5s,baz=92,slow=7.4,SNR=7.5						
FINES	**FINESS Array B**	**82.84**	**335**	P	P	03 43 57.0	-0.3
	3.4nm,1.0s,baz=69,slow=4.6,SNR=4.2						

*IDC **04** 03:51:04.1±5.9, 26.39S×178.65W, h354km±56km, mb3.2/5, mb1 3.6/7, mb1mx3.4/24, mbtmp4.1/7, Error ellipse: s-maj=31.1km s-min=28.4km az=48.0*
ISC 04 03:51:04.3±0.7, 26.55S±0.06×178.8W±0.1, h350km, n38, σ2§23/51, mb3.5/5, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.82**	**164**	P	**Pn**	**03 52 06.6**	**+4.6**
GLKZ				S	**S**	**03 52 50.1**	**+1.7**
WMGZ	**Waiomatatini S**	**11.48**	**191**	P	**P**	**03 53 41.8**	**+1.7**
WMGZ				S	**S**	**03 55 41.8**	**-6.1**
HAZ	**Te Kaha**	**11.54**	**194**	P	**Pn**	**03 53 40.4**	**0.0**
HAZ				S	**S**	**03 55 47.0**	**-2.2**
PKGZ	**Pakihiroa**	**11.61**	**192**	P	**P**	**03 53 42.0**	**+0.4**
PKGZ				S	**S**	**03 55 47.2**	**-3.6**
PUZ	**Puketiti**	**11.75**	**191**	P	**Pn**	**03 53 42.2**	**-0.9**

URZ				S	S	03 56 01.0	-1.9	
	8.5nm,0.3s,baz=270,slow=20,SNR=18							
URZ	**Urewera**	**12.17**	**195**	P	**P**	**03 53 47.9**	**+0.2**	
URZ				S	**S**	**03 56 01.4**	**-1.4**	
RIGZ	**Rimuhau**	**12.46**	**193**	P	**Pn**	**03 53 51.6**	**+0.2**	
RIGZ				S	**S**	**03 56 05.6**	**-3.3**	
MUGZ	**Murupara**	**12.46**	**196**	P	**Pn**	**03 53 52.7**	**+1.3**	
KNZ	**Kokohu**	**12.78**	**192**	P	**P**	**03 53 53.0**	**-1.5**	
KNZ				S	**S**	**03 56 09.6**	**-5.8**	
HIZ	**Hauiti**	**13.07**	**202**	P	**Pn**	**03 54 02.2**	**+3.7**	
WTVZ	**West Tongariro**	**13.38**	**199**	P	**Pn**	**03 54 02.7**	**+0.3**	
TWVZ	**Taurewa**	**13.39**	**200**	P	**Pn**	**03 54 02.9**	**+0.5**	
MCHZ	**McNeill Hill**	**13.40**	**195**	P	**P**	**03 54 00.9**	**-0.4**	
MCHZ				S	**S**	**03 56 29.6**	**+1.8**	
CKHZ	**Cape Kidnapper**	**13.52**	**194**	P	**P**	**03 54 02.6**	**0.0**	
CKHZ				S	**S**	**03 56 25.7**	**-4.6**	
KAHZ	**Kahuranaki**	**13.69**	**194**	P	**P**	**03 54 04.4**	**-0.1**	
PXZ	**Pawanui**	**13.92**	**194**	P	**Pn**	**03 54 08.1**	**-0.4**	
PNHZ	**Pukenui**	**13.96**	**196**	P	**P**	**03 54 07.7**	**+0.2**	
DZM	**Mont Dzumac**	**14.16**	**285**	P	**Pn**	**03 54 12.5**	**+0.9**	
	0.3nm,0.3s,baz=101,slow=15,SNR=6.7							
PRHZ	**Porangahau**	**14.20**	**194**	P	**Pn**	**03 54 11.5**	**-0.3**	
BFZ	**Birch Farm**	**14.68**	**195**	P	**P**	**03 54 16.3**	**+1.0**	
ASAR	**Alice Springs**	**42.73**	**263**	P	**P**	**03 58 29.1**	**+0.6**	
	1.5nm,0.5s,baz=97,slow=7.2,SNR=33							
WRA	**Warramunga Arr**	**43.36**	**269**	P	**P**	**03 58 34.0**	**+0.5**	
	2.1nm,0.8s,baz=104,slow=7.8,SNR=14							
MJAR	**Matsushiro Arr**	**74.68**	**325**	P	**P**	**04 02 05.0**	**-1.2**	
	0.6nm,0.5s,baz=136,slow=5.8,SNR=3.7							
SNAA	**Sanae**	**82.01**	**179**	P	**P**	**04 02 46.9**	**+1.3**	
VNA3	**Neumayer Olymp**	**82.18**	**176**	P	**P**	**04 02 47.8**	**+1.4**	
VNA1	**Neumayer--Stat**	**82.84**	**177**	P	**P**	**04 02 50.5**	**+0.7**	
NVAR	**Mina Array Bea**	**85.92**	**43**	P	**P**	**04 03 05.2**	**-0.6**	
	0.5nm,0.7s,baz=219,slow=5.6,SNR=3.7							
ILAR	**Eielson Array**	**94.35**	**13**	P	**P**	**04 03 41.5**	**-2.7**	
	0.2nm,0.8s,baz=212,slow=5.4,SNR=3.6							
ARCES	**ARCESS Array B**	**134.69**	**348**	PKP	**PKPdf**	**04 09 40.5**	**-0.3**	
	1.2nm,0.6s,baz=8.1,slow=2.5,SNR=5.6							
NB2	**NORSAR Subarra**	**144.85**	**352**	PKP	**PKPdf**	**04 09 58.0**	**-1.4**	
	comp=Z,3.2nm,0.6s,baz=9.8,slow=3.7							
NOA	**NORSAR Array B**	**144.85**	**352**	PKP	**PKPdf**	**04 09 57.9**	**-1.6**	
	comp=Z,1.7nm,0.7s,baz=16,slow=2.7,SNR=6.6							
AKASG	**Malin Array Be**	**147.76**	**326**	PKPbc	**PKPdf**	**04 10 06.4**	**+1.8**	
	comp=Z,0.5nm,0.4s,baz=46,slow=4.2,SNR=3.0							
BRTR	**Keskin Array B**	**149.99**	**304**	PKPbc	**PKPbc**	**04 10 12.7**	**-1.4**	
	comp=Z,0.5nm,0.8s,baz=63,slow=0.6,SNR=3.4							
BRTR				PKPab	**PKPab**	**04 10 20.4**	**-0.8**	
	comp=Z,0.5nm,0.6s,baz=74,slow=2.9,SNR=3.9							
TORD	**Torodi Ar. Bea**	**166.66**	**182**	PKPab	**PKPab**	**04 11 33.7**	**+0.3**	
	comp=Z,0.4nm,0.6s,baz=190,slow=2.6,SNR=4.0							

*IDC **04** 03:59:38.0±1.4, 28.°04N×53.°45E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/27, mbtmp3.5/5, MS4.2/1, Ms1 4.2/1, ms1mx3.0/29, Error ellipse: s-maj=43.7km s-min=26.8km az=164.0*

*TEH **04** 03:59:39.7, 28.°11N×53.°51E, h5km, ML3.2*

ISC 04 03:59:40.6±0.9, 28.°12N±0.°06×53.°49E±0.°07, h10km, n15, σ2s12/14, mb3.7/4, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHRM	**Jahrom**	**0.39**	**11**	*e*Pg		**Pg**	**03 59 47.3**	**-1.0**
JHRM				*e*			03 59 58.3	
LMD1	**Lamerd**	**0.83**	**201**	*e*Pg		**Pg**	**03 59 56.5**	**-0.2**
LMD1				*e*			04 00 18.5	
IKAZ	**Kazeroun**	**2.19**	**319**	*e*Pn		**Pn**	**04 00 19.8**	**+2.4**
IKAZ				*e*			04 01 05.8	
KLNJ	**Kolanjah**	**3.32**	**331**	*e*Pn		**Pn**	**04 00 35.9**	**+3.0**
KLNJ				*e*			04 02 06.4	
KHGB	**Koh Gabri**	**3.44**	**49**	*e*Pn		**Pn**	**04 00 36.4**	**+1.9**
KHGB				*e*			04 01 34.7	
IBAF	**Bafgh**	**3.90**	**27**	*e*Pn		**Pn**	**04 00 42.8**	**+2.1**
CHMN	**Cheshme madani**	**3.94**	**63**	*e*Pn		**Pn**	**04 00 44.7**	**+3.2**
CHMN				*e*			04 01 45.7	
ICHK	**Chekchek**	**4.18**	**11**	*e*Pn		**Pn**	**04 00 46.3**	**+1.6**
JHBN	**Jahan bin**	**4.77**	**330**	*e*Pn		**Pn**	**04 00 55.6**	**+2.8**
BRTR	**Keskin Array B**	**20.09**	**310**	P		**P**	**04 04 13.0**	**-1.4**
	0.5nm,0.6s,baz=131,slow=11,SNR=2.3							
MKAR	**Makanchi Array**	**29.25**	**43**	P		**P**	**04 05 42.9**	**+0.2**
	0.2nm,0.5s,baz=231,slow=7.1,SNR=5.8							
ZALV	**Zalesovo Beam**	**34.49**	**33**	P		**P**	**04 06 28.0**	**-0.6**
	0.6nm,0.5s,baz=248,slow=7.6,SNR=3.6							
DAVOX	**Davos/Dischmat**	**38.73**	**311**	LR		LR	04 24 34.0	
	comp=Z,314nm,20.0s,baz=28,slow=39							
TORD	**Torodi Ar. Bea**	**50.35**	**264**	P		**P**	**04 08 37.0**	**-1.1**
	0.5nm,0.7s,baz=67,slow=7.6,SNR=3.5							
ASAR	**Alice Springs**	**93.00**	**115**	P		**P**	**04 12 53.4**	**-1.3**
	0.2nm,0.6s,baz=289,slow=4.6,SNR=2.9							

IDC 04 04:29:20.6±6.5, 30.°18S×177.°81W, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.5/25, mbtmp3.3/2, Error ellipse: s-maj=268.1km s-min=56.7km az=154.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ASAR	**Alice Springs**	**43.29**	**267**	P		P	04 37 23.6	-0.7
	0.2nm,0.5s,baz=103,slow=6.7,SNR=4.2							
WRA	**Warramunga Arr**	**44.26**	**272**	P		P	04 37 31.9	-0.2
	0.4nm,0.4s,baz=108,slow=7.8,SNR=6.1							
FINES	**FINESS Array B**	**145.00**	**340**	PKPbc		PKPdf	04 48 58.9	-0.1
	2.1nm,0.8s,baz=47,slow=4.2,SNR=7.5							

*IDC **04** 04:57:46.9±2.1, 7.°10S×129.°49E, h132km±22km, mb3.7/3, mb1 3.8/8, mb1mx3.5/38, mbtmp4.2/8, Error ellipse: s-maj=31.5km s-min=17.2km az=82.0*

*NEIC **04** 04:57:47.7±0.9, 7.°04S±0.°09×129.°49E±0.°05, h138km±12km, mb4.0/3, Error ellipse: s-maj=13.1km s-min=6.5km az=173.0*

ISC 04 04:57:46.9±0.8, 7.°01S±0.°07×129.°49E±0.°06, h139km, n16, σ1s75/19, mb4.0/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SAUI	**Saumlaki**	**2.04**	**118**	Pn		**Pn**	**04 58 24.2**	**+2.2**
SAUI						**Sn**	**04 58 48.4**	**-0.4**
FAKI	**Fak Fak**	**4.91**	**34**			**Pn**	**04 58 59.6**	**+0.6**
SOEI	**Soe**	**5.84**	**242**			**Pn**	**04 59 13.8**	**+2.2**
SOEI						**Sn**	**05 00 17.8**	**+0.2**
MTN	**Manton Dam**	**6.02**	**164**			**Pn**	**04 59 13.6**	**-0.2**
SIJI	**Sorong**	**6.36**	**16**	P		**Pn**	**04 59 19.5**	**+1.1**
	2.2nm,0.3s,baz=67,slow=20,SNR=13							
SIJI				S		**Sn**	**05 00 27.4**	**-2.4**
	2.1nm,0.3s,baz=162,slow=19,SNR=3.1							
BATI	**Baumata**	**6.57**	**241**	P		**Pn**	**04 59 22.0**	**+0.7**
	6.5nm,0.3s,baz=229,slow=20,SNR=3.0							
BATI				S		**Sn**	**05 00 33.5**	**-1.6**
	19nm,0.3s,baz=96,slow=19,SNR=7.1							
FITZ	**Fitzroy Crossi**	**11.64**	**198**	P		**Pn**	**05 00 26.1**	**-2.8**
	0.8nm,0.3s,baz=18,slow=9.2,SNR=26							
FITZ				S		Sn	05 02 26.2	-11
	2.4nm,0.3s,baz=63,slow=23,SNR=8.6							
WRAB	**Tennant Creek**	**13.69**	**160**			**Pn**	**05 00 52.4**	**-3.0**
WRA	**Warramunga Arr**	**13.69**	**160**	P		**Pn**	**05 00 52.6**	**-2.8**
	1.8nm,0.3s,baz=338,slow=13,SNR=29							
WRA				S		Sn	05 03 15.8	-11
	3.0nm,0.3s,baz=331,slow=23,SNR=11							
AS31	**Alice Springs**	**17.09**	**166**	P		**Pn**	**05 01 37.7**	**+0.1**
ASAR	**Alice Springs**	**17.10**	**166**	P		**Pn**	**05 01 38.1**	**+0.4**
	0.8nm,0.3s,baz=348,slow=11,SNR=37							
ASAR				S		S	05 04 34.9	-14
	0.5nm,0.3s,baz=348,slow=26,SNR=6.4							
STKA	**Stephens Creek**	**27.20**	**157**	P		**P**	**05 03 18.2**	**+0.5**
	2.0nm,0.7s,baz=322,slow=10,SNR=3.6							
STKA	**Stephens Creek**	**27.20**	**157**	IAmb		IAmb	05 03 55.2	
	comp=Z,6.6nm,1.8s							
MK31	**Makanchi Array**	**67.96**	**327**	P		**P**	**05 08 31.7**	**+0.8**
MK31				IAmb		IAmb	05 09 11.8	
	comp=Z,5.1nm,1.6s							
MKAR	**Makanchi Array**	**67.96**	**327**	P		**P**	**05 08 32.1**	**+1.2**
	comp=Z,1.3nm,0.4s,baz=120,slow=7.7,SNR=38							
ZALV	**Zalesovo Beam**	**71.37**	**334**	P		**P**	**05 08 52.6**	**+1.0**
	comp=Z,0.5nm,0.6s,baz=134,slow=8.3,SNR=2.6							

WEL 04 05:06:39.7, 38.°5±8.°×17.°6E±2.°0, h245km±12km, M3.3/13, MLv3.3/13, Error ellipse: s-maj=0.0km s-min=0.0km az=74.4, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OPRZ	**Ohinepanea**	**0.10**	**116**	P		Pn	05 07 11.0	-0.2
TGRZ	**Tauranga**	**0.16**	**296**	P		Pn	05 07 10.6	-0.6
KMRZ	**Kaimai**	**0.40**	**264**	P		Pn	05 07 11.2	-0.5
RRRZ	**Republican Roa**	**0.54**	**174**	P		Pn	05 07 12.5	+0.4
URZ	**Urewera**	**0.70**	**131**	P		Pn	05 07 12.7	+0.1
URZ				S		S	05 07 35.1	-3.4
MUGZ	**Murupara**	**0.72**	**159**	P		Pn	05 07 13.1	+0.3
MUGZ				S		S	05 07 35.5	-3.3
RTZ	**Ruatahuna**	**0.92**	**153**	P		Pn	05 07 14.5	+0.7
RTZ				S		S	05 07 39.6	-1.0
RTZ	**Ruatahuna**	**0.92**	**153**	P		Pn	05 07 14.3	+0.5
RTZ				S		S	05 07 38.6	-2.0
RUGZ	**Raukumara Rang**	**0.99**	**100**	P		Pn	05 07 13.7	-0.5
RUGZ				S		S	05 07 37.1	-4.2
MWZ	**Matawai**	**1.01**	**122**	P		Pn	05 07 14.7	+0.5
MWZ				S		S	05 07 39.8	-1.5
MRHZ	**Matea Rd**	**1.03**	**181**	P		Pn	05 07 15.0	+0.6
MRHZ				S		S	05 07 40.1	-1.6
RAGZ	**Rawiri**	**1.03**	**132**	P		Pn	05 07 15.7	+1.3
RAGZ				S		S	05 07 38.6	-3.1
HAZ	**Te Kaha**	**1.06**	**88**	P		Pn	05 07 14.3	-0.1
HAZ				S		S	05 07 39.0	-2.8
HAZ	**Te Kaha**	**1.06**	**88**	P		Pn	05 07 14.3	-0.2
HAZ				S		S	05 07 39.0	-2.7
MTHZ	**Maungataniwha**	**1.09**	**164**	P		Pn	05 07 15.9	+1.1
MTHZ				S		S	05 07 40.5	-1.8
SNGZ	**Shannon Statio**	**1.21**	**145**	P		Pn	05 07 17.0	+1.6
RAHZ	**Arahi**	**1.22**	**156**	P		Pn	05 07 17.2	+1.7
MKAZ	**Moumakai**	**1.24**	**304**	P		Pn	05 07 14.0	-1.6
PKGZ	**Pakihiroa**	**1.29**	**94**	P		Pn	05 07 17.0	+1.4
RIGZ	**Rimuhau**	**1.38**	**131**	P		Pn	05 07 18.5	+1.9
WHHZ	**Waihua**	**1.42**	**154**	P		Pn	05 07 18.7	+1.9
HIZ	**Hauiti**	**1.44**	**240**	P		Pn	05 07 17.2	+0.2
PUZ	**Puketiti**	**1.46**	**101**	P		Pn	05 07 18.2	+1.0
MXZ	**Matakaoa Point**	**1.50**	**81**	P		Pn	05 07 18.3	+0.8
ARHZ	**Aropaoanui**	**1.52**	**164**	P		Pn	05 07 19.6	+2.0
CNGZ	**Carnagh Statio**	**1.55**	**117**	P		Pn	05 07 20.2	+2.4
KNZ	**Kokohu**	**1.56**	**142**	P		Pn	05 07 19.7	+1.9
WMGZ	**Waiomatatini S**	**1.56**	**91**	P		Pn	05 07 19.2	+1.2
PRGZ	**Paritu Road**	**1.59**	**135**	P		Pn	05 07 20.4	+2.2
KWHZ	**Kaweka Forest**	**1.62**	**181**	P		Pn	05 07 20.1	+1.6
MCHZ	**McNeill Hill**	**1.65**	**173**	P		Pn	05 07 20.7	+2.0
MOVZ	**Moawhango**	**1.69**	**198**	P		Pn	05 07 19.5	+0.5
BHHZ	**Black Hill Sta**	**1.71**	**190**	P		Pn	05 07 20.0	+0.8
MHGZ	**Mahia Peninsul**	**1.77**	**140**	P		Pn	05 07 21.8	+2.2
KRHZ	**Kereru**	**1.84**	**182**	P		Pn	05 07 21.6	+1.4
CKHZ	**Cape Kidnapper**	**1.92**	**165**	P		Pn	05 07 23.0	+2.1
KAHZ	**Kahuranaki**	**2.02**	**171**	P		Pn	05 07 23.8	+2.0
PNHZ	**Pukenui**	**2.12**	**185**	P		Pn	05 07 24.0	+1.2
PXZ	**Pawanui**	**2.25**	**172**	P		Pn	05 07 25.9	+2.0
WPHZ	**Waipukurau**	**2.26**	**180**	P		Pn	05 07 25.7	+1.5
WPHZ				S		S	05 07 55.8	-3.4
TSZ	**Takapari Road**	**2.29**	**189**	P		Pn	05 07 25.5	+1.1
TSZ	**Takapari Road**	**2.29**	**189**	P		Pn	05 07 25.2	+0.9
TSZ				S		S	05 07 57.5	-2.2
WCZ	**Waipu Caves**	**2.51**	**317**	P		Pn	05 07 25.5	-1.2
POWZ	**Post Office Ro**	**2.64**	**191**	P		Pn	05 07 28.7	+0.7
POWZ	**Post Office Ro**	**2.64**	**191**	P		Pn	05 07 28.2	+0.3
POWZ				S		S	05 08 02.5	-3.5
ANWZ	**Angora Road**	**2.66**	**179**	P		Pn	05 07 30.0	+1.9
ANWZ				S		S	05 08 05.1	-1.2
PRWZ	**Pori Road**	**2.77**	**187**	P		Pn	05 07 30.7	+1.3
PRWZ	**Pori Road**	**2.77**	**187**	P		Pn	05 07 30.2	+0.8
PRWZ				S		S	05 08 07.8	-0.8
BFZ	**Birch Farm**	**2.88**	**183**	P		Pn	05 07 31.7	+1.2
BFZ	**Birch Farm**	**2.88**	**183**	P		Pn	05 07 31.2	+0.7
BFZ				S		S	05 08 08.1	-2.6
MRZ	**Mangatainoka R**	**2.93**	**193**	P		Pn	05 07 31.6	+0.6
MRZ	**Mangatainoka R**	**2.93**	**193**	P		Pn	05 07 31.9	+0.8
MRZ				S		S	05 08 10.4	-1.3
TIWZ	**Tintock**	**3.00**	**188**	S		S	05 08 11.4	-1.7
CPWZ	**Castlepoint**	**3.11**	**183**	P		Pn	05 07 33.0	+0.1
OGWZ	**Otaki Gorge**	**3.17**	**198**	P		Pn	05 07 34.2	+0.6
HOWZ	**Holdsworth Sta**	**3.17**	**193**	P		Pn	05 07 34.1	+0.4
HOWZ	**Holdsworth Sta**	**3.17**	**193**	P		Pn	05 07 33.8	+0.1
KIW	**Kapiti Island**	**3.28**	**201**	P		Pn	05 07 35.0	+0.1
TMWZ	**Te Maipa**	**3.33**	**187**	P		Pn	05 07 36.5	+1.0
TMWZ	**Te Maipa**	**3.33**	**187**	P		Pn	05 07 36.7	+1.3
MTW	**Mount Morrison**	**3.43**	**192**	P		Pn	05 07 36.8	+0.2
MTW	**Mount Morrison**	**3.43**	**192**	P		Pn	05 07 35.8	-0.8
CAW	**Cannon Point**	**3.47**	**197**	P		Pn	05 07 37.4	+0.4
PAWZ	**Paruwai Farm**	**3.66**	**192**	P		Pn	05 07 38.7	-0.6
MSWZ	**Moikau Station**	**3.73**	**194**	P		Pn	05 07 40.1	+0.1
TCW	**Tory Channel**	**3.79**	**206**	P		Pn	05 07 40.6	-0.1
PLWZ	**Palliser**	**3.87**	**193**	P		Pn	05 07 41.7	-0.1
TUWZ	**Tuamarina**	**4.11**	**207**	P		Pn	05 07 44.2	-0.2
KHZ	**Kahutara**	**5.12**	**205**	P		Pn	05 07 56.7	+0.1

*BGR **04** 05:22:58.0±0.0, 36.°90N×143.°22E, h33km, mb5.5, Ms5.2*

*BJI **04** 05:22:57.7±0.0, 37.°15N×143.°07E, h5km, mB5.5/71, mb5.5/90, Ms5.6/98, Ms7 5.5/89*

*IDC **04** 05:22:57.4±0.3, 36.°96N×143.°37E, h0km, mb5.3/45, mb1 5.4/51, mb1mx5.3/55, mbtmp5.3/51, ML3.7/6, MS5.0/33, Ms1 5.0/33, ms1mx4.8/42, Error ellipse: s-maj=10.5km s-min=8.6km az=114.0*

*JMA **04** 05:22:58.9±0.2, 37.°02N×143.°34E, h50km, M5.6*

JMA Felt I J1.

*NEIC **04** 05:23:00.3±1.4, 36.°97N±0.°04×143.°38E±0.°08, h22km±1km, mb5.4/443, Ms_20 5.2/154, Mwb5.5/17, Error ellipse: s-maj=11.8km s-min=5.6km az=73.0, Moment Tensor Solution. Moment tensor: Scale 10^17^Nm; Mrr-1.45; Mθθ-0.19; Mϕϕ 1.64; Mrθ 0.25; Mθϕ 0.63; Mϕr 0.84; Fault plane solution: M0 1.89000×10^17^ NP1:ϕs17.93000°, δ30.92000°, λ-89.03000°. NP2:ϕs196.80000°, δ59.08000°, λ-90.58000°. Principal axes: T 2.0578, Plg14.0000°, Azm287.0000°; N -0.3897, Plg0.0000°, Azm197.0000°; P -1.6681, Plg76.0000°, Azm105.0000°;*

*MOS **04** 05:23:01.4±1.0, 37.°13N×143.°21E, h33km, mb5.8/79, MS5.4/34 Error ellipse: s-maj=6.0km s-min=3.6km az=117.3*

*GCMT **04** 05:23:02.3±0.1, 37.°01N±0.°01×143.°38E±0.°01, h12km, MW5.4/168, Moment Tensor Solution. s107,c182; s168,c336; Duration: 1s2 Moment tensor: Scale 10^17^ Nm; Mrr-1.54±.01; Mθθ0.25±.01; Mϕϕ 1.29±.01; Mrθ0.12±.04; Mθϕ0.51±.01; Mϕr0.12±.04; Best double couple: M0 1.52700×10^17^ NP1:ϕs20.00000°, δ42.00000°, λ-93.00000°. NP2:ϕs204.00000°, δ48.00000°, λ-87.00000°. Principal axes: T 1.5020, Plg3.0000°, Azm292.0000°; N 0.0460, Plg2.0000°, Azm22.0000°; P -1.5510, Plg86.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 05:23:00.2±0.4, 37.°01N±0.°03×143.°33E±0.°03, h20km±1km, h20km:pP-P, n1251, σ1s57/1128, mb5.5/405, MS5.2/160, 52C-87D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakikobu**	**1.97**	**312**	⇓P		**Pn**	**05 23 30.5**	**-2.0**
JIKH				*e*S		**Sn**	**05 23 53.7**	**-2.9**
JFK	**Kawauchi**	**2.00**	**281**	⇓P		**Pn**	**05 23 30.9**	**-2.0**
JFK				*e*S		**Sn**	**05 23 54.5**	**-2.8**
ONAJ	**Iwakimizuishiy**	**2.03**	**273**	P		**Pn**	**05 23 32.0**	**-1.4**
ONAJ				*e*S		**Sn**	**05 23 56.0**	**-2.2**
JMST	**Minamisoumatoc**	**2.08**	**291**	⇓P		**Pn**	**05 23 32.0**	**-1.9**
JMST				*e*S		**Sn**	**05 23 56.8**	**-2.4**
JIO	**Ouri**	**2.13**	**313**	⇓P		**Pn**	**05 23 33.1**	**-1.6**
JIO				S		**Sn**	**05 23 58.6**	**-2.0**
JMM	**Marumori**	**2.19**	**294**	⇓P		**Pn**	**05 23 33.9**	**-1.7**
JMM				*e*S		**Sn**	**05 23 59.2**	**-3.0**
JHYU	**Hitachinakayam**	**2.31**	**254**	⇓P		**Pn**	**05 23 35.4**	**-1.7**
JHYU				S		**Sn**	**05 24 02.1**	**-2.9**
JKMT	**Kesennumamotoy**	**2.32**	**321**	⇓P		**Pn**	**05 23 35.5**	**-1.8**
JFT	**Otama**	**2.44**	**283**	⇓P		**Pn**	**05 23 38.1**	**-0.9**
JFT				*e*S		**Sn**	**05 24 07.0**	**-1.4**
OFUJ	**Ofunato**	**2.45**	**328**	⇓P		**Pn**	**05 23 37.0**	**-2.1**
JMK	**Ichinoseki**	**2.56**	**320**	⇓P		**Pn**	**05 23 39.0**	**-1.6**
JMK				*e*S		**Sn**	**05 24 08.5**	**-2.6**
MIYJ	**Miyakonagasawa**	**2.82**	**336**	P		**Pn**	**05 23 42.4**	**-1.9**
JOM	**Ohasama**	**2.94**	**327**	P		**Pn**	**05 23 44.2**	**-1.6**
JOM				*e*S		**Sn**	**05 24 18.6**	**-1.9**
JYK	**Kaneyama**	**3.02**	**310**	P		**Pn**	**05 23 46.0**	**-1.0**
JYK				*e*S		**Sn**	**05 24 21.0**	**-1.7**
BSO1	**Boso 1**	**3.03**	**220**	P		**Pn**	**05 23 45.1**	**-1.5**
JAG	**Ashikaga**	**3.17**	**261**	⇓P		**Pn**	**05 23 47.6**	**-1.5**
BSO3	**Boso 3**	**3.18**	**227**	P		**Pn**	**05 23 47.5**	**-1.4**
JNS	**Sasagawa**	**3.30**	**285**	P		**Pn**	**05 23 51.3**	**+0.5**
JNS				*e*S		**Sn**	**05 24 29.0**	**-0.4**
JHK	**Hiroka**	**3.46**	**275**	P		**Pn**	**05 23 52.3**	**-0.7**
JAW	**Awa shima**	**3.54**	**295**	P		**Pn**	**05 23 54.7**	**+0.6**
JSGW	**Sagamiharawaka**	**3.62**	**248**	P		**Pn**	**05 23 54.4**	**-0.8**
JANG	**Nango**	**3.65**	**338**	P		**Pn**	**05 23 53.8**	**-1.7**
JANG				*e*S		**Sn**	**05 24 35.0**	**-3.0**
JRY	**Ryogami san**	**3.71**	**256**	P		**Pn**	**05 23 55.0**	**-1.4**
JRY				*e*S		**Sn**	**05 24 36.4**	**-3.1**
JOD2	**Odawara 2**	**3.85**	**244**	P		**Pn**	**05 23 56.7**	**-1.8**
JOD2				*e*S		**Sn**	**05 24 40.3**	**-2.9**
JIM2	**Oshima 3**	**3.91**	**235**	P		**Pn**	**05 23 56.4**	**-2.8**
JHTM	**Izuhatsuma**	**4.06**	**241**	P		**Pn**	**05 24 00.0**	**-1.3**
MJAR	**Matsushiro Arr**	**4.14**	**265**	P		**Pn**	**05 24 01.5**	**-0.9**
MJAR	**Matsushiro Arr**	**4.14**	**265**	Pn		**Pn**	**05 24 02.3**	**-0.1**
	9.4nm,0.3s,baz=140,slow=10,SNR=261							
MJAR					Sn	**Sn**	**05 24 49.7**	**-0.5**
	8.4nm,0.3s,baz=81,slow=17,SNR=8.5							
MJAR				LR	LR		05 26 03.2	
	comp=Z,35μm,18.6s,baz=85,slow=45							
MJAR	**Matsushiro Arr**	**4.14**	**265**	Pn		**Pn**	**05 24 01.5**	**-0.9**
MAJO	**Matsushiro**	**4.14**	**265**	*c* iP		**Pn**	**05 24 02.8**	**+0.4**
MAJO	**Matsushiro**	**4.14**	**265**	Pn		**Pn**	**05 24 02.9**	**+0.4**
MAT	**Matsushiro**	**4.14**	**265**	P		**Pn**	**05 24 02.9**	**+0.5**
MAT				S		**Sn**	**05 24 49.2**	**-1.1**
MJB9	**Matsu-Tunnel**	**4.14**	**265**	Pn		**Pn**	**05 24 02.8**	**+0.3**
JOT	**Ohata**	**4.71**	**339**	P		**Pn**	**05 24 09.4**	**-0.8**
JHJ2	**Mitsune**	**4.84**	**218**	P		**Pn**	**05 24 09.1**	**-2.9**
JHJ2				*e*S		**Sn**	**05 25 03.5**	**-4.0**
JHJ2	**Mitsune**	**4.84**	**218**			**Pn**	**05 24 09.5**	**-2.5**
ERM	**Erimo**	**5.00**	**358**	*c*eP		**Pn**	**05 24 12.3**	**-1.8**
ERM				pmax	pmax			
	comp=Z,343nm,0.8s							
ERM	**Erimo**	**5.00**	**358**			**Pn**	**05 24 11.7**	**-2.4**
JKB	**Kayabe**	**5.18**	**341**	P		**Pn**	**05 24 15.3**	**-1.4**
JKB				*e*S		**Sn**	**05 25 12.7**	**-3.2**
INU	**Inuyama**	**5.37**	**254**	Pn		**Pn**	**05 24 19.3**	**0.0**
JFM	**Mihama**	**6.12**	**258**	⇑P		**Pn**	**05 24 31.0**	**+1.4**
NMR	**Nemuro--Hokkai**	**6.61**	**15**	*e*P		**Pn**	**05 24 32.5**	**-3.7**
NMR				*e*S		**Sn**	**05 25 43.5**	**-7.4**
GLVR	**Golovnino**	**6.92**	**13**	*e*P		**Pn**	**05 24 38.5**	**-2.0**
GLVR				*e*S		**Sn**	**05 25 51.0**	**-7.7**
GLVR				pmax	pmax			
	comp=Z,528nm,0.5s							
ASAJ	**Asahikawa**	**7.12**	**356**	Pn		**Pn**	**05 24 42.0**	**-1.2**
	comp=Z,79nm,0.3s,baz=206,slow=8.7,SNR=153							
ASAJ					Sn	**Sn**	**05 26 00.3**	**-3.2**
	comp=Z,22nm,0.3s,baz=35,slow=33,SNR=3.6							
JKA	**Kamikawa-asahi**	**7.12**	**356**			**Pn**	**05 24 42.0**	**-1.2**
JKA						**Sn**	**05 26 00.3

TYV pmax pmax
comp=Z,300nm,3.1s
TYV pmax pmax
comp=Z,46nm,1.1s
TYV smax smax
comp=E,11nm,1.1s
TYV smax smax
comp=E,1μm,3.0s
TYV MLR MLR
comp=E,14μm,15.0s
TYV MLR MLR
comp=Z,14μm,15.0s
GRNR Gornyy 14.62 342 ⇓*i* P **Pn 05 26 23.6 -2.2**
GRNR *e*S **Sn 05 29 04.2 -3.0**
GRNR pmax pmax
comp=Z,60nm,0.9s
GRNR smax smax
comp=N,10.0nm,0.9s
GRNR MLR MLR
comp=Z,7μm,16.0s
KLR Kul'dur 14.83 329 ⇑*i* P **Pn 05 26 26.1 -2.6**
KLR MLR MLR
comp=Z,10μm,15.0s
KLR Kul'dur 14.83 329 Pn **Pn 05 26 26.3 -2.5**
comp=Z,3.4nm,0.3s,baz=131,slow=12,SNR=90
KLR LR LR 05 32 20.0
comp=Z,6μm,18.6s,baz=143,slow=38
CN2 Changchun 15.21 302 *e*P **Pn 05 26 31.9 -1.9**
CN2 *e*S **Sn 05 29 22.6 +1.1**
CN2 pmax pmax
comp=Z,20nm,1.4s
CN2 pmax pmax
comp=Z,1μm,11.7s
CN2 LR LR
comp=Z,9μm,12.2s
CN2 LR LR
comp=Z,8μm,12.2s
CN2 LR LR
comp=Z,10μm,12.2s
SNY Shenyang 16.00 294 ⇑P **Pn 05 26 41.8 -2.2**
SNY S **Sn 05 29 39.7 -1.1**
SNY pmax pmax
comp=Z,44nm,1.6s
SNY pmax pmax
comp=Z,1μm,8.6s
SNY LR LR
comp=Z,8μm,13.0s
SNY LR LR
comp=Z,13μm,16.6s
SNY LR LR
comp=Z,25μm,12.9s
JOW Kunigami 16.30 236 Pn **Pn 05 26 48.9 +0.9**
comp=Z,0.1nm,0.3s,baz=106,slow=16,SNR=4.7
JOW Kunigami 16.30 236 P **P 05 26 52.4 +1.5**
SKR Severo-Kuril's 16.45 30 *e*P **Pn 05 26 43.0 -6.7**
SKR pmax pmax
comp=Z,700nm,4.4s
SKR pmax pmax
comp=Z,2μm,4.3s
SKR MLR MLR
comp=Z,3μm,14.0s
SKR MLR MLR
comp=Z,4μm,13.0s
OKH Okha 16.54 359 *de*P Pn 05 26 38.3 -13
OKH MLR MLR
comp=Z,9μm,15.0s
DL2 Dalian 17.22 283 P **Pn 05 26 59.0 -0.5**
DL2 S **Sn 05 30 10.1 -0.4**
DL2 pmax pmax
comp=Z,200nm,1.1s
DL2 pmax pmax
comp=Z,2μm,6.1s
DL2 LR LR
comp=Z,4μm,13.3s
DL2 LR LR
comp=Z,10μm,12.5s
DL2 LR LR
comp=Z,14μm,13.3s
PEA0B Petropavlovsk- 18.97 27 P **Pn 05 27 20.6 -0.3**
PEA0B pmax pmax
comp=Z,32nm,0.9s
PEA0B Petropavlovsk- 18.97 27 P **Pn 05 27 20.6 -0.3**
PETK Petropavlovsk- 18.97 27 P **Pn 05 27 21.0 +0.1**
PETK Petropavlovsk- 18.97 27 P **Pn 05 27 20.9 +0.1**
comp=Z,1.1nm,0.3s,baz=223,slow=10,SNR=14
PETK LR LR 05 37 33.8
comp=Z,4μm,18.3s,baz=210,slow=46
PETK Petropavlovsk- 18.97 27 P **P 05 27 19.7 -0.5**
SSE Sheshan 19.26 259 P **Pn 05 27 25.3 +0.8**
SSE pmax pmax
comp=Z,39nm,0.8s
SSE LR LR
comp=Z,4μm,19.0s
SSE LR LR
comp=Z,2μm,17.3s
SSE Sheshan 19.26 259 P **Pn 05 27 24.6 +0.1**
PET Petropavlovsk 19.26 29 *e*P **Pn 05 27 25.4 +1.0**
PET *e*S **Sn 05 30 55.6 -4.0**
PET pmax pmax
comp=Z,600nm,10.0s
PET MLR MLR
comp=Z,3μm,19.0s
PET MLR MLR
comp=Z,3μm,16.0s
ZEA Zeya 20.10 331 *e*P **P 05 27 31.8 -0.7**
ZEA *e*S Sn 05 31 20.5 +0.6
ZEA pmax pmax
comp=N,1μm,2.0s
ZEA pmax pmax
comp=E,700nm,2.0s
ZEA pmax pmax
comp=Z,2μm,2.0s
ZEA pmax pmax
comp=E,240nm,1.0s
ZEA pmax pmax
comp=N,300nm,0.8s
ZEA pmax pmax
comp=Z,440nm,0.8s
ZEA pmax pmax
comp=Z,2μm,5.0s
ZEA pmax pmax
comp=N,2μm,6.0s
ZEA smax smax
comp=E,3μm,11.0s
ZEA smax smax
comp=N,2μm,8.0s
ZEA MLR MLR
comp=E,8μm,13.0s
ZEA MLR MLR
comp=Z,15μm,13.0s
ZEA MLR MLR
comp=N,7μm,14.0s
JISG Ishigakijimahi 20.46 238 P **P 05 27 34.0 -2.6**
JIJ Ishigaki jima 20.72 238 P **P 05 27 36.5 -3.0**
NJ2 Nanjing 20.74 263 *e*P **P 05 27 40.4 +0.7**
NJ2 sP **sP 05 27 45.2 +0.3**
NJ2 pmax pmax
comp=N,45nm,0.7s
NJ2 pmax pmax
comp=N,800nm,5.2s
NJ2 LR LR
comp=N,10μm,12.3s
NJ2 LR LR
comp=N,9μm,16.1s
NJ2 LR LR
comp=N,10μm,16.6s
IRIF Iriomote-Funau 21.02 239 P **P 05 27 44.7 +2.0**
HIA Hailar 21.03 313 P **P 05 27 41.1 -1.5**
HIA pmax pmax
comp=Z,60nm,0.6s
HIA MLR MLR
comp=Z,10μm,19.0s
HIA Hailar 21.03 313 P **P 05 27 41.1 -1.5**
HIA Hailar 21.03 313 IAMs_20 IAMs_20 05 35 50.1
comp=Z,10μm,19.0s
TIA Tai'an 21.04 276 P **P 05 27 40.8 -2.0**
TIA pmax pmax
comp=Z,96nm,1.3s
TIA pmax pmax
comp=Z,600nm,3.3s
TIA LR LR
comp=Z,6μm,12.8s
TIA LR LR
comp=Z,9μm,12.4s
TIA LR LR
comp=Z,11μm,13.1s
BJI Beijing 21.43 286 P **P 05 27 44.5 -2.5**
BJI pmax pmax
comp=Z,86nm,1.7s
BJI pmax pmax
comp=Z,1.0nm,2.8s
BJI LR LR
comp=Z,3μm,14.2s
BJI LR LR
comp=Z,3μm,13.7s
BJT Baijiatuau 21.44 286 P **P 05 27 45.6 -1.5**
BJT pmax pmax
comp=Z,88nm,1.0s
BJT MLR MLR
comp=Z,3μm,20.0s
BJT Baijiatuau 21.44 286 P **P 05 27 45.6 -1.5**
TATO Taipei 22.18 243 IAMs_20 IAMs_20 05 38 03.0
comp=Z,7μm,18.0s
YHNB Yeheng 22.45 243 P **P 05 27 58.0 -0.2**
YHNB IAMs_20 IAMs_20 05 38 12.7
comp=Z,5μm,18.0s
NACB Ninganchiao 22.61 242 P **P 05 27 57.3 -2.4**
MA2 Magadan 23.09 10 P **P 05 28 04.3 -0.1**
MA2 pmax pmax
comp=Z,115nm,1.0s
MA2 MLR MLR
comp=Z,3μm,20.0s
MA2 Magadan 23.09 10 P **P 05 28 04.2 -0.3**
comp=Z,83nm,0.9s,baz=195,slow=8.7,SNR=22
MA2 LR LR 05 39 06.5
comp=Z,3μm,18.1s,baz=206,slow=42
MA2 Magadan 23.09 10 P **P 05 28 04.3 -0.1**
MA2 IAmb IAmb 05 28 06.7
comp=Z,115nm,1.0s
SSLB Suanglung 23.30 242 IAmb IAmb 05 28 11.9
comp=Z,167nm,1.1s
SSLB IAMs_20 IAMs_20 05 38 43.9
comp=Z,6μm,18.0s
YULB Yu-li 23.32 241 IAmb IAmb 05 28 14.0
comp=Z,95nm,0.9s
GUMO Guam 23.37 176 P **P 05 28 04.3 -3.3**
GUMO pmax pmax
comp=Z,321nm,1.1s
GUMO Guam 23.37 176 P **P 05 28 06.9 -0.7**
comp=Z,96nm,0.9s,baz=169,slow=16,SNR=2.8
GUMO LR LR 05 35 20.1
comp=Z,1μm,19.6s,baz=354,slow=32
GUMO Guam 23.37 176 P **P 05 28 04.3 -3.3**
TPUB Ta-pu 23.84 241 IAMs_20 IAMs_20 05 39 10.1
comp=Z,7μm,18.0s
TWG Pinlang 23.85 240 P **P 05 28 11.8 -0.4**
QZH Quanzhou 24.31 247 ⇑*i* P **P 05 28 15.1 -1.4**
QZH S **S 05 32 35.3 +0.7**
QZH pmax pmax
comp=Z,66nm,1.0s
QZH pmax pmax
comp=Z,640nm,4.7s
QZH LR LR
comp=Z,3μm,15.9s
QZH LR LR
comp=Z,6μm,14.3s
QZH LR LR
comp=Z,7μm,15.4s
TIY Taiyuan 24.52 281 *e*P **P 05 28 19.8 +1.3**
TIY S **S 05 32 38.8 +0.8**
TIY pmax pmax
comp=Z,350nm,1.1s
TIY pmax pmax
comp=Z,1μm,3.3s
TIY LR LR
comp=Z,2μm,12.5s
TIY LR LR
comp=Z,9μm,12.7s
TIY LR LR
comp=Z,14μm,11.5s
KNMB Chin-men Tao 24.74 247 IAmb IAmb 05 28 23.0
comp=Z,143nm,1.1s
WHN Wuhan 24.88 264 ⇓P **P 05 28 21.8 +0.1**
WHN sP **pwP 05 28 34.4 +0.3**
WHN S **S 05 32 45.6 +1.8**
WHN pmax pmax
comp=Z,690nm,1.2s
WHN pmax pmax
comp=Z,4μm,3.4s
WHN LR LR
comp=Z,14μm,13.5s
WHN LR LR
comp=Z,15μm,12.2s
WHN LR LR
comp=Z,23μm,12.6s
HHC Hu-ho-hao-te 24.93 289 *e*P **P 05 28 21.1 -1.1**
HHC sP sP 05 28 27.9 +0.2
HHC S **S 05 32 39.3 -5.5**
HHC SS 05 33 36.7
HHC pmax pmax
comp=Z,42nm,1.0s
HHC pmax pmax
comp=Z,530nm,3.8s
HHC LR LR
comp=Z,2μm,11.1s
HHC LR LR
comp=Z,5μm,12.0s
HHC LR LR
comp=Z,7μm,12.4s
CIT Chita 25.77 315 *e*P **P 05 28 30.9 +1.3**
CIT *e* 05 28 43.8
CIT *e* 05 29 11.1
CIT *e* 05 29 20.6
CIT pmax pmax
comp=Z,1μm,1.8s
BTO Baotou 26.12 288 *e*P **P 05 28 33.3 +0.4**
YAK Yakutsk 26.45 346 *d*/P **P 05 28 35.5 0.0**
YAK *e**PP **sP 05 28 42.4 +1.6**
YAK *e*PPP PPP 05 29 22.3
YAK *e*S **S 05 33 08.0 0.0**
YAK pmax pmax
comp=Z,232nm,0.9s
YAK pmax pmax
comp=N,101nm,1.0s
YAK pmax pmax
comp=E,49nm,1.2s
YAK pmax pmax
comp=Z,486nm,2.2s
YAK pmax pmax
comp=N,499nm,2.3s
YAK pmax pmax
comp=E,224nm,2.3s
YAK smax smax
comp=N,2μm,2.7s
YAK smax smax
comp=E,1μm,3.5s
YAK MLR MLR
comp=Z,4μm,20.0s
YAK MLR MLR
comp=N,3μm,18.0s
YAK MLR MLR
comp=E,2μm,16.0s
YAK Yakutsk 26.45 346 P **P 05 28 35.6 0.0**
comp=E,123nm,0.7s,baz=357,slow=1.0,SNR=89
YAK LR LR 05 39 30.0
comp=E,4μm,18.9s,baz=154,slow=37
YAK Yakutsk 26.45 346 *P* **P 05 28 34.9 -0.7**
YAK IAMs_20 IAMs_20 05 39 17.7
comp=Z,4μm,19.0s
SEY Seymchan 26.54 9 ⇓*i* P **P 05 28 37.5 +1.1**
SEY Seymchan 26.54 9 P **P 05 28 37.9 +1.6**
comp=Z,67nm,0.8s,baz=191,slow=8.4,SNR=85
SEY LR LR 05 40 13.0
comp=Z,3μm,20.0s,baz=191,slow=39
H11N2 WAKE ISLAND Hy 26.83 123 T T 05 56 44.0
baz=315,slow=75,SNR=92
H11N1 WAKE ISLAND Hy 26.84 124 T T 05 56 49.1
baz=315,slow=75,SNR=57
H11N3 WAKE ISLAND Hy 26.85 123 T T 05 56 50.4
baz=315,slow=75,SNR=59
WAKE Wake Island 26.99 125 IAMs_20 IAMs_20 05 37 12.1
comp=Z,6μm,20.0s
H11S1 WAKE ISLAND Hy 27.58 126 T T 05 57 45.0
baz=317,slow=76,SNR=10
H11S3 WAKE ISLAND Hy 27.58 126 T T 05 57 42.9
baz=317,slow=76,SNR=38
H11S2 WAKE ISLAND Hy 27.59 126 T T 05 57 40.6
baz=317,slow=76,SNR=25
XAN Xi'an 28.07 274 P **P 05 28 50.4 -0.1**
XAN sP sP 05 28 56.5 +0.5
XAN PP **PnPn 05 29 40.1 +2.0**
XAN S **S 05 33 39.7 +5.3**
XAN pmax pmax
comp=Z,210nm,1.2s
XAN pmax pmax
comp=Z,1μm,3.9s
XAN LR LR
comp=Z,5μm,14.2s
XAN LR LR
comp=Z,6μm,14.7s
XAN LR LR
comp=Z,6μm,13.7s
BOD Bodaibo 28.38 327 *e*P **P 05 28 52.8 -0.1**
BOD pmax pmax
comp=Z,165nm,1.2s
ULN Ulaanbaatar 28.64 304 *d*/P **P 05 28 56.9 +1.3**
ULN pmax pmax
comp=Z,301nm,2.5s
ULN Ulaanbaatar 28.64 304 P **P 05 28 56.6 +1.1**
ULN IAmb IAmb 05 29 04.8
comp=Z,50nm,1.0s
ULN Ulaanbaatar 28.64 304 IAMs_20 IAMs_20 05 40 50.5
comp=Z,4μm,18.0s
ENH Enshi 28.86 267 IAMs_20 IAMs_20 05 41 08.0
comp=Z,5μm,18.0s
SONM Songino Array 29.07 304 P **P 05 29 00.8 +1.4**
comp=Z,41nm,0.8s,baz=103,slow=7.9,SNR=85
SONM PcP **PcP 05 32 07.7 +0.6**
comp=Z,6.0nm,0.6s,baz=106,slow=2.1,SNR=5.1
SONM LR LR 05 40 58.0
comp=Z,3μm,18.2s,baz=106,slow=37
SONM Songino Array 29.07 304 P **P 05 29 00.1 +0.7**
SONM **PcP 05 32 06.3 -0.8**
HKPS Hong Kong Po S 29.17 248 IAmb IAmb 05 29 02.7
comp=Z,100nm,1.0s
GZH Guangzhou 29.30 250 P **P 05 28 57.3 -4.1**
GZH PP **PnPn 05 29 54.1 -0.7**
GZH S **S 05 33 51.6 -2.0**
GZH LR LR
comp=Z,4μm,15.7s
GZH LR LR
comp=Z,7μm,15.4s
TGY Tagaytay City 30.33 227 P **P 05 29 11.1 +0.4**
comp=Z,306nm,0.3s,baz=179,slow=4.4,SNR=9.9
IRK Irkutsk 31.26 312 *e*P **P 05 29 19.1 +0.6**
IRK pmax pmax
comp=Z,225nm,2.9s
ZAK Zakamensk 31.49 308 *e*P **P 05 29 21.4 +0.7**
ZAK pmax pmax
comp=Z,79nm,1.4s
TLY Talaya 31.51 310 *d*/P **P 05 29 21.5 +0.7**
TLY *e* 05 30 30.1
TLY *e*PPP PPP 05 30 36.3
TLY pmax pmax
comp=Z,161nm,1.5s
TLY MLR MLR
comp=Z,15μm,12.0s
TLY Talaya 31.51 310 P **P 05 29 22.0 +1.3**
comp=Z,16nm,0.8s,baz=116,slow=6.2,SNR=8.2
TLY PcP **PcP 05 32 14.2 +0.9**
comp=Z,21nm,1.0s,baz=163,slow=5.9,SNR=3.7
TLY Talaya 31.51 310 P **P 05 29 21.4 +0.7**
TLY IAmb IAmb 05 29 26.1
comp=Z,40nm,1.0s
TLY **PcP 05 32 13.1 -0.1**
TLY IAMs_20 IAMs_20 05 42 26.3
comp=Z,7μm,18.0s
LZH Lanzhou 31.58 280 ⇓P **P 05 29 22.6 +0.9**
LZH S **S 05 34 30.4 +0.7**
LZH pmax pmax
comp=Z,73nm,1.1s
LZH pmax pmax
comp=Z,1μm,4.3s
LZH LR LR
comp=Z,5μm,13.6s
LZH LR LR
comp=Z,7μm,14.6s
LZH LR LR
comp=Z,8μm,15.2s
GYA Guiyang 32.74 262 ⇑*i* P **P 05 29 31.2 -0.7**
GYA PP **PP 05 30 38.2 -7.7**
GYA PcP **PcP 05 32 18.9 +1.8**
GYA S **S 05 34 46.6 -1.1**
GYA SS **SnSn 05 36 42.5 -1.1**
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,170nm,4.5s
GYA LR LR
comp=Z,3μm,10.7s
GYA LR LR
comp=Z,4μm,12.0s
GYA LR LR
comp=Z,5μm,11.4s
MOY Mondy 33.13 310 *e*P **P 05 29 35.6 +0.5**
MOY pmax pmax
comp=Z,153nm,2.7s
CD2 Chengdu 33.21 271 ⇓*i* P **P 05 29 35.7 -0.2**
CD2 sP pP 05 29 39.4 -0.6
CD2 S **S 05 34 55.3 +0.5**
CD2 sS sS 05 35 00.9 -0.1
CD2 pmax pmax
comp=Z,100nm,0.9s
CD2 pmax pmax
comp=Z,940nm,4.7s
CD2 LR LR
comp=Z,16μm,14.6s
CD2 LR LR
comp=Z,13μm,13.7s
CD2 LR LR
comp=Z,14μm,14.7s
BUKP Musuan 33.42 214 *e*P **P 05 29 36.9 -0.9**
BILL Bilibino 33.63 15 *e*P **P 05 29 39.5 +0.5**
BILL *e* 05 30 48.4
BILL *e* 05 32 19.3
BILL *e*S **S 05 35 04.5 +4.1**
BILL *e*SS **SS 05 37 26.1 +0.5**
BILL pmax pmax
comp=Z,106nm,2.5s
BILL Bilibino 33.63 15 P **P 05 29 39.0 0.0**
GTA Gaotai 34.04 288 P **P 05 29 43.5 +0.4**
GTA pP sP 05 29 51.8 +3.2
GTA sP pwP 05 29 56.0 +0.3
GTA PcP **PcP 05 32 21.8 +1.2**
GTA S **S 05 35 08.7 +1.0**
GTA sS sS 05 35 20.4 +6.5
GTA pmax pmax
comp=Z,79nm,0.8s
GTA pmax pmax
comp=Z,650nm,4.4s
GTA LR LR
comp=Z,3μm,16.5s
GTA LR LR
comp=Z,3μm,17.1s
GTA LR LR
comp=Z,4μm,17.8s
KCP Kidapawan 34.18 214 ⇓*i* P **P 05 29 45.6 +1.2**
QIZ Qiongzhong 34.33 248 P **P 05 29 47.3 +1.6**
QIZ pmax pmax
comp=Z,59nm,1.1s
QIZ pmax pmax
comp=Z,390nm,5.1s
QIZ LR LR
comp=Z,2μm,16.1s
QIZ LR LR
comp=Z,3μm,13.3s
QIZ LR LR
comp=Z,4μm,16.5s
QIZ Qiongzhong 34.33 248 IAmb IAmb 05 29 48.6
comp=Z,84nm,1.1s
SKMP Bagumbayan, Su 34.86 214 *e*P **P 05 29 50.2 0.0**
TIXI Tiksi 35.51 352 ⇓*i* P **P 05 29 54.3 -0.9**
TIXI pmax pmax
comp=Z,66nm,2.5s
TIXI MLR MLR
comp=Z,3μm,18.0s
TIXI Tiksi 35.51 352 P **P 05 29 55.2 -0.1**
comp=Z,15nm,0.9s,baz=180,slow=24,SNR=16
TIXI Tiksi 35.51 352 P **P 05 29 54.6 -0.6**
TIXI IAMs_20 IAMs_20 05 45 36.5
comp=Z,3μm,19.0s
KWAJ Kwajalein Atol 35.68 136 IAMs_20 IAMs_20 05 43 37.5
comp=Z,3μm,20.0s
KMI Kunming 36.48 263 P **P 05 30 04.6 +0.2**
KMI pP pP 05 30 08.6 +0.1
KMI S **S 05 35 46.2 +0.6**
KMI sS sS 05 35 51.8 -0.1
KMI pmax pmax
comp=Z,65nm,0.8s

KMI pmax pmax
comp=Z,340nm,5.3s
KMI LR LR
comp=Z,2μm,18.3s
KMI LR LR
comp=Z,2μm,18.3s
KMI LR LR
comp=Z,4μm,26.7s
KMI Kunming 36.48 263 IAmb IAmb 05 30 19.6
comp=Z,89nm,1.0s
KMI Kunming 36.48 263 IAMs_20 IAMs_20 05 45 49.7
comp=Z,3μm,20.0s
SLVN Son La 37.51 257 IAMs_20 IAMs_20 05 47 47.2
comp=Z,2μm,19.0s
TNTI Ternate 38.97 206 P **P** **05 30 24.6 -0.6**
comp=Z,73nm,1.4s
TNTI Ternate 38.97 206 P **P** **05 30 24.5 -0.7**
TNTI IAmb IAmb 05 30 28.3
comp=Z,75nm,1.1s
SMPI Sarmi 39.04 187 P **P** **05 30 26.6 +0.8**
comp=Z,2μmcomp=Z,104nm,1.3s
SWI Sorong 39.31 199 P **P** **05 30 28.2 +0.1**
comp=Z,63nm,1.1s
SIJI Sorong 39.32 199 P **P** **05 30 27.4 -0.7**
comp=Z,28nm,0.9s,baz=0.1,slow=14,SNR=14
JAY Jayapura 39.40 184 P **P** **05 30 29.5 +0.6**
comp=Z,26nm,0.9s,baz=286,slow=8.0,SNR=3.7
KKM Kota Kinabalu 39.54 225 P **P** **05 30 33.1 +3.0**
KKM IAmb IAmb 05 30 52.3
comp=Z,58nm,1.1s
UBPT Khong Chiam 39.93 247 IAmb IAmb 05 30 35.6
comp=Z,142nm,1.1s
DLV T Lat 39.99 240 P **P** **05 30 34.2 +0.2**
KMSI Cibinong 40.44 211 P **P** **05 30 39.3 +1.9**
comp=Z,275nm,1.0s
SPMM Sapulut 40.49 224 P **P** **05 30 39.0 +1.1**
ANM Nome 40.82 31 IAmb IAmb 05 30 43.3
comp=Z,80nm,1.2s
FAKI Fak Fak 41.05 197 P **P** **05 30 41.4 -1.0**
comp=Z,1μmcomp=Z,3μmcomp=Z,38nm,1.0s
MRSI Marisa 41.39 213 P **P** **05 30 45.4 +0.1**
comp=Z,2μmcomp=Z,199nm,1.3s
SANI Sanana 42.08 206 P **P** **05 30 49.6 -1.3**
WMQ Urumqi 42.22 297 P **P** **05 30 53.6 +1.7**
WMQ sP pwP 05 31 04.7 +0.2
WMQ PcP **PcP** **05 32 46.8 +1.0**
WMQ S **S** **05 37 12.6 +1.4**
WMQ pmax pmax
comp=Z,38nm,0.9s
WMQ pmax pmax
comp=Z,660nm,4.1s
WMQ LR LR
comp=Z,4μm,15.3s
WMQ LR LR
comp=Z,2μm,14.1s
WMQ LR LR
comp=Z,3μm,28.1s
WMQ Urumqi 42.22 297 IAmb IAmb 05 31 10.5
comp=Z,86nm,1.1s
WMQ Urumqi 42.22 297 IAMs_20 IAMs_20 05 48 19.7
comp=Z,2μm,20.0s
MSAI Masohi 42.34 202 P **P** **05 30 54.5 +1.5**
comp=Z,1μmcomp=Z,38nm,1.0s
LUWI Luwuk 42.40 211 P **P** **05 30 53.5 0.0**
comp=Z,3μmcomp=Z,81nm,0.9s
LUWI Luwuk 42.40 211 IAmb IAmb 05 31 12.7
comp=Z,87nm,1.0s
MPSI Mapaga 42.45 216 P **P** **05 30 53.2 -0.7**
comp=Z,687nmcomp=Z,30nm,1.0s
APSI Ampana 42.76 213 P **P** **05 30 56.4 0.0**
comp=Z,2μmcomp=Z,194nm,1.2s
CHTO Chiang Mai 42.78 257 P **P** **05 30 56.3 -0.4**
CHTO pmax pmax
comp=Z,41nm,1.1s
CHTO MLR MLR
comp=Z,3μm,18.0s
CHTO Chiang Mai 42.78 257 P **P** **05 30 56.3 -0.4**
CHTO Chiang Mai 42.78 257 IAMs_20 IAMs_20 05 51 27.7
comp=Z,3μm,18.0s
NLAI Namlea 42.80 204 P **P** **05 30 58.2 +1.4**
comp=Z,74nm,1.0s
AAI Ambon 42.88 203 P **P** **05 30 57.9 +0.5**
comp=Z,2μmcomp=Z,194nm,1.0s
CM31 Chiang Mai Arr 42.98 257 P **P** **05 30 59.6 +1.3**
SNR=14
CMAR Chiang Mai Arr 42.98 257 P **P** **05 30 58.5 +0.2**
CMAR Chiang Mai Arr 42.98 257 P **P** **05 30 59.2 +0.9**
comp=Z,10.0nm,0.8s,baz=45,slow=5.6,SNR=60
CMAR PcP **PcP** **05 32 50.0 +1.4**
comp=Z,7.8nm,1.0s,baz=15,slow=4.8,SNR=3.3
CMAR LR LR 05 51 35.7
comp=Z,2μm,19.1s,baz=55,slow=40
CMAR Chiang Mai Arr 42.98 257 P **P** **05 30 58.5 +0.2**
CMAR **PcP** **05 32 49.4 +0.8**
ZAA0 Zalesovo Array 43.06 312 IAmb IAmb 05 31 00.3
comp=Z,92nm,1.1s
ZALV Zalesovo Beam 43.06 312 P **P** **05 30 59.1 +0.5**
comp=Z,64nm,0.9s,baz=89,slow=6.7,SNR=171
ZALV PcP **PcP** **05 32 48.2 0.0**
comp=Z,34nm,0.7s,baz=92,slow=3.2,SNR=8.1
ZALV LR LR 05 49 34.9
comp=Z,4μm,18.7s,baz=85,slow=37
ZALV Zalesovo Beam 43.06 312 P **P** **05 30 58.5 0.0**
ZALV **PcP** **05 32 47.9 -0.4**
KOHI KOHIMA 43.09 269 *eP* **P** **05 30 59.2 -0.1**
KOHI IAMs_20 IAMs_20 05 50 03.7
comp=Z,3μm,20.1s
ZSN Zaisan 43.59 303 *d* iP **P** **05 31 03.5 +0.6**
ZSN *e*S **S** **05 37 28.1 -3.0**
ZSN pmax pmax
comp=Z,141nm,1.8s
ZSN Zaisan 43.59 303 ⇓ *i*P **P** **05 31 03.6 +0.6**
comp=Z,141nm,1.8s
ZSN *e*S **S** **05 37 28.1 -3.0**
ZSN *e*LR LR 05 50 59.0
LSA Lhasa 43.74 276 P **P** **05 31 06.2 +1.3**
LSA pmax pmax
comp=Z,180nm,1.0s
LSA Lhasa 43.74 276 *i* P **P** **05 31 06.2 +1.3**
SNR=8.3
LSA Lhasa 43.74 276 IAmb IAmb 05 31 23.5
comp=Z,86nm,1.1s
LSA IAMs_20 IAMs_20 05 50 55.6
comp=Z,2μm,18.0s
SVW2 Sparrevohn 44.61 37 IAmb IAmb 05 31 14.2
comp=Z,60nm,1.1s
SBUM Sibu 44.76 227 P **P** **05 31 12.2 -0.4**
SBUM Sibu 44.76 227 P **P** **05 31 13.0 +0.5**
TARA Tarawa 44.77 135 IAMs_20 IAMs_20 05 48 19.4
comp=Z,3μm,20.0s
SHL Shillong 44.94 270 *eP* **P** **05 31 13.5 -0.7**
SHL IAmb IAmb 05 31 22.1
comp=Z,31nm,0.9s
SHL Shillong 44.94 270 IAmb IAmb 05 31 33.4
comp=Z,58nm,1.0s
SHL IAMs_20 IAMs_20 05 51 58.3
comp=Z,3μm,18.0s
SHL Shillong 44.94 270 P **P** **05 31 14.3 +0.1**
SNR=15
KDI Kendari 45.10 210 P P 05 31 07.0 -8.3
AZL Aizawl 45.16 268 *eP* **P** **05 31 15.5 -0.3**
AZL IAmb IAmb 05 31 19.7
comp=Z,16nm,0.9s
MK31 Makanchi Array 45.43 302 *i* P **P** **05 31 17.2 -0.4**
MK31 Makanchi Array 45.43 302 IAmb IAmb 05 31 35.3
comp=Z,36nm,0.8s
MKAR Makanchi Array 45.43 302 P **P** **05 31 17.8 +0.2**
comp=Z,26nm,0.9s,baz=86,slow=7.5,SNR=124
MKAR PcP **PcP** **05 32 57.2 +0.6**
comp=Z,18nm,0.9s,baz=67,slow=4.8,SNR=2.3
MKAR LR LR 05 51 47.8
comp=Z,2μm,19.4s,baz=80,slow=38
MKAR Makanchi Array 45.43 302 P **P** **05 31 17.4 -0.3**
MKAR **PcP** **05 32 56.3 -0.3**
SAIH SAIHA 45.54 266 *eP* **P** **05 31 18.5 -0.5**
SAIH IAmb IAmb 05 31 27.3
comp=Z,86nm,0.8s
SAIH IAMs_20 IAMs_20 05 52 33.9
comp=Z,5μm,24.0s
MAKZ Makanchi 45.64 303 P **P** **05 31 19.5 +0.2**
MAKZ pmax pmax
comp=Z,38nm,0.8s
MAKZ MLR MLR
comp=Z,3μm,18.0s
MAKZ Makanchi 45.64 303 P **P** **05 31 19.5 +0.2**
MAKZ IAmb IAmb 05 31 36.6
comp=Z,38nm,0.8s
MAKZ IAMs_20 IAMs_20 05 51 34.2
comp=Z,3μm,18.0s
IMAR Indian Mountai 45.89 30 P **P** **05 31 21.2 +0.2**
KDAK Kodiak Island 46.09 42 P **P** **05 31 22.9 +0.3**
KDAK pmax pmax
comp=Z,51nm,0.8s
KDAK Kodiak Island 46.09 42 P **P** **05 31 22.9 +0.3**
KDAK IAmb IAmb 05 31 24.2
comp=Z,51nm,0.8s
AGT Agartala 46.24 269 *eP* **P** **05 31 26.1 +1.9**
AGT *i* x x 05 51 51.7
AGT IAMs_20 IAMs_20 05 54 53.5
comp=Z,8μm,16.5s
PPLA Purkeypile 46.31 35 IAmb IAmb 05 31 27.2
comp=Z,31nm,0.9s
SPSI Sidrap Palu 46.31 213 P **P** **05 31 22.9 -1.9**
PMG Port Moresby 46.31 175 P **P** **05 31 24.5 -0.3**
PMG pmax pmax
comp=Z,31nm,1.2s
PMG Port Moresby 46.31 175 P **P** **05 31 24.5 -0.3**
BNSI Bone 46.55 213 P **P** **05 31 28.0 +1.3**
comp=Z,1μmcomp=Z,123nm,1.2s
KSM Kuching 46.67 229 IAmb IAmb 05 31 30.8
comp=Z,83nm,1.1s
KSM Kuching 46.67 229 P **P** **05 31 29.0 +1.3**
SUA Susitna One 46.95 37 IAmb IAmb 05 31 32.6
comp=Z,27nm,0.8s
MLY Manley 47.05 32 IAmb IAmb 05 31 32.6
comp=Z,44nm,0.8s
STKI Sintang 47.11 226 P **P** **05 31 32.3 +1.2**
comp=Z,89nm,1.5s
KURK Kurchatov 47.15 308 ⇑ *i*P **P** **05 31 31.1 0.0**
KURK pmax pmax
comp=Z,184nm,1.0s
KURK Kurchatov 47.15 308 P **P** **05 31 30.7 -0.4**
TRF Thorofare Moun 47.19 34 IAmb IAmb 05 31 49.9
comp=Z,26nm,1.0s
KAPI Kappang 47.25 213 P **P** **05 31 32.1 -0.1**
KAPI pmax pmax
comp=Z,130nm,1.2s
KAPI Kappang 47.25 213 P **P** **05 31 32.1 -0.1**
BKSI Bulukumba 47.37 212 P **P** **05 31 33.6 +0.5**
comp=Z,972nmcomp=Z,48nm,1.2s
KBKI Kotabaru 47.41 218 P **P** **05 31 34.8 +1.4**
comp=Z,12nm,0.8s
RC01 Rabbit Creek A 47.44 37 IAmb IAmb 05 31 35.2
comp=Z,54nm,1.1s
TAPN Taplejung 47.48 275 *eP* **P** **05 31 34.6 +0.3**
comp=Z,124nm,1.1s
PMR Palmer 47.72 37 IAmb IAmb 05 31 37.6
comp=Z,38nm,0.9s
TOLK Toolik Lake Re 47.79 27 IAmb IAmb 05 31 38.5
comp=Z,51nm,0.9s
TOLK Toolik Lake Re 47.79 27 P **P** **05 31 37.1 +1.2**
baz=264,SNR=30
MCK McKinley 47.80 34 IAmb IAmb 05 31 38.0
comp=Z,56nm,1.1s
RND Reindeer 47.83 34 IAmb IAmb 05 31 37.6
comp=Z,32nm,0.8s
ODAN Odare 47.95 275 *eP* **P** **05 31 38.5 +0.6**
comp=Z,331nm,1.1s
KNK Knik Glacier 48.05 37 IAmb IAmb 05 31 40.0
comp=Z,35nm,0.8s
PDGK Podgornoye 48.14 298 P **P** **05 31 38.2 -0.8**
WRH Wood River Hil 48.17 33 IAmb IAmb 05 31 40.8
comp=Z,23nm,0.8s
TCOL CIGO, UAF Yank 48.27 32 P **P** **05 31 40.9 +1.4**
baz=270,SNR=13
COLA College 48.28 32 P **P** **05 31 40.6 +1.0**
COLA pmax pmax
comp=Z,31nm,0.8s
COLA College 48.28 32 P **P** **05 31 40.6 +1.0**
COLA IAmb IAmb 05 31 42.0
comp=Z,31nm,0.8s
POKR Poker Plat Res 48.46 32 P **P** **05 31 42.6 +1.6**
baz=270,SNR=48
TDK Taldyqorghan 48.47 301 *eP* **P** **05 31 40.9 -0.5**
TDK Taldyqorghan 48.47 301 *eP* **P** **05 31 40.9 -0.5**
DHY Denali Highway 48.51 35 IAmb IAmb 05 31 56.3
comp=Z,29nm,1.0s
UZB Uzunbulak 48.52 298 *eP* **P** **05 31 40.0 -1.9**
UZB pmax pmax
comp=Z,93nm,2.4s
UZB Uzunbulak 48.52 298 *eP* **P** **05 31 40.1 -1.9**
comp=Z,93nm,2.4s
UZB *e*LR LR 05 56 20.4
RAMN Ramite 48.54 275 *eP* **P** **05 31 42.7 +0.3**
comp=Z,402nm,1.1s
JIRN Jiri 48.55 276 *eP* **P** **05 31 43.5 +0.8**
comp=Z,539nm,1.2s
HDA Harding Lake 48.67 33 IAmb IAmb 05 31 44.2
comp=Z,44nm,0.8s
HDA Harding Lake 48.67 33 P **P** **05 31 43.2 +0.6**
baz=271,SNR=32
KPKS Kokpek 48.67 299 *de*P **P** **05 31 43.4 +0.4**
KPKS pmax pmax
comp=Z,85nm,2.6s
KPKS Kokpek 48.67 299 ⇓ *e*P **P** **05 31 43.5 +0.4**
comp=Z,85nm,2.6s
KPKS *e*LR LR 05 55 44.4
GUN Gumba 48.69 277 *eP* **P** **05 31 44.6 +0.9**
comp=Z,496nm,1.0s
IL31 48.69 32 IAmb IAmb 05 31 44.5
comp=Z,47nm,0.8s
ILAR Eielson Array 48.69 32 P **P** **05 31 43.3 +0.5**
comp=Z,34nm,0.7s,baz=261,slow=6.4,SNR=351
ILAR Eielson Array 48.69 32 P **P** **05 31 42.7 -0.1**
HNR Honiara 48.76 158 IAMs_20 IAMs_20 05 54 51.4
comp=Z,2μm,18.0s
SATY Saty 48.98 298 *d* iP **P** **05 31 45.1 -0.3**
SATY pmax pmax
comp=Z,140nm,2.5s
SATY Saty 48.98 298 ⇓ *i*P **P** **05 31 45.1 -0.3**
comp=Z,140nm,2.5s
SATY *e*LR LR 05 56 08.6
PRZ Przheval'sk 49.14 298 IAmb IAmb 05 31 54.2
comp=Z,73nm,1.1s
PRZ IAMs_20 IAMs_20 05 53 03.2
comp=Z,3μm,20.0s
PKI Pulchoki 49.21 277 *eP* **P** **05 31 47.8 +0.1**
comp=Z,25nm,1.1s
KKN Kakani 49.22 277 *eP* **P** **05 31 48.1 +0.5**
comp=Z,423nm,1.1s
PKIN Phulchoki 49.22 277 *eP* **P** **05 31 47.7 0.0**
comp=Z,141nm,1.1s
PRP Porcupine Dome 49.25 31 IAmb IAmb 05 31 49.8
comp=Z,31nm,1.0s
FYU Fort Yukon 49.36 30 IAmb IAmb 05 31 50.8
comp=Z,53nm,0.8s
EYAK Cordova Ski Ar 49.43 38 IAmb IAmb 05 32 03.1
comp=Z,40nm,0.8s
DMN Daman 49.43 277 *eP* **P** **05 31 49.7 +0.4**
comp=Z,144nm,1.2s
BMAR Burnt Mountain 49.61 29 P **P** **05 31 51.5 +1.6**
RIDG Independent Ri 49.61 34 IAmb IAmb 05 31 51.6
comp=Z,26nm,1.0s
GKN Gorkha 49.63 277 *eP* **P** **05 31 51.2 +0.5**
comp=Z,846nm,1.0s
TARG Taragay, Kyrgy 49.78 297 IAMs_20 IAMs_20 05 56 11.5
comp=Z,2μm,18.0s
SOEI Soe 49.85 205 P **P** **05 31 51.2 -1.1**
comp=Z,2μmcomp=Z,168nm,1.2s
JRMM Jerantut 49.88 239 P **P** **05 31 52.0 -0.5**
MDOK Medeo 49.90 299 *de*P **P** **05 31 51.6 -0.9**
MDOK *e*S **S** **05 39 09.3 +7.6**
MDOK MLR MLR
comp=Z,2μm,15.0s
MDOK Medeo 49.90 299 ⇓ *e*P **P** **05 31 51.6 -0.9**
MDOK *e*S **S** **05 39 09.3 +7.6**
MDOK *e*LR LR 05 53 15.2
comp=Z,2μm,14.8s
DOT Dot Lake 49.97 34 IAMs_20 IAMs_20 05 56 41.8
comp=Z,1μm,18.0s
RAGM Ragged Mountai 49.97 38 IAmb IAmb 05 31 59.0
comp=Z,56nm,0.9s
AAA Alma-Ata 49.98 299 *eP* **P** **05 31 55.3 +2.2**
AAA *e*S **S** **05 39 04.8 +2.1**
AAA pmax pmax
comp=Z,400nm,4.0s
AAA smax smax
comp=N,400nm,6.5s
AAA MLR MLR
comp=Z,2μm,19.0s
AAA Alma-Ata 49.98 299 *eP* **P** **05 31 52.2 -0.9**
SCRK Sand Creek 49.98 33 IAmb IAmb 05 31 54.7
comp=Z,46nm,0.9s
TNSS Tian-Shan 50.01 299 *eP* **P** **05 31 54.5 +0.8**
TNSS pmax pmax
comp=Z,45nm,0.7s
TNSS Tian-Shan 50.01 299 *eP* **P** **05 31 54.5 +0.8**
comp=Z,45nm,0.7s
KULM Kulim 50.15 242 IAmb IAmb 05 31 56.2
comp=Z,64nm,1.1s
KULM IAMs_20 IAMs_20 05 55 27.2
comp=Z,2μm,18.0s
KULM Kulim 50.15 242 P **P** **05 31 54.0 -0.5**
DANN Dangsing 50.18 278 *eP* **P** **05 31 55.1 +0.1**
comp=Z,945nm,1.0s
MENT Mentasta 50.18 35 IAmb IAmb 05 31 56.7
comp=Z,22nm,0.8s
HMT Hamilton 50.18 38 IAmb IAmb 05 32 11.4
comp=Z,56nm,1.2s
KUU Kurty 50.19 300 *d* iP **P** **05 31 54.5 0.0**
KUU *i* S **S** **05 39 10.2 +4.8**
KUU pmax pmax
KUU comp=Z,232nm,3.2s smax smax
KUU comp=N,169nm,5.3s MLR MLR
KUU Kurty 50.19 300 ⇓ *i*P **P** **05 31 54.5 0.0**
comp=Z,232nm,3.2s
KUU ⇓ *i*S **S** **05 39 10.2 +4.8**
KUU comp=Z,169nm,5.3s *e*LR LR 05 56 48.6
comp=Z,2μm,13.1s
GLB Gilahina Butte 50.28 37 IAmb IAmb 05 31 57.9
comp=Z,40nm,1.2s
MTBS Maitube 50.34 299 *eP* **P** **05 31 55.7 -0.1**
MTBS Maitube 50.34 299 *eP* **P** **05 31 55.8 -0.1**
IPM Ipoh 50.46 240 P **P** **05 31 56.8 -0.1**
IPM Ipoh 50.46 240 P **P** **05 31 57.0 +0.1**
BATI Baumata 50.47 205 P **P** **05 31 56.5 -0.4**
comp=Z,78nm,1.1s
MYKOM Kota Tinggi 50.50 235 IAmb IAmb 05 31 58.9
comp=Z,41nm,1.0s
MYKOM Kota Tinggi 50.50 235 P **P** **05 31 58.0 +0.8**
KOLN Koldanda 50.56 278 *eP* **P** **05 31 58.3 +0.5**
comp=Z,382nm,1.3s
BOK Bokaro 50.58 272 *eP* **P** **05 31 58.3 +0.5**
BOK IAmb IAmb 05 31 59.8
comp=Z,47nm,0.9s
BOK IAMs_20 IAMs_20 05 56 29.3
comp=Z,2μm,16.4s
MCARA McCarthy VSAT 50.66 37 IAmb IAmb 05 32 00.8
comp=Z,78nm,1.0s
TPRI Tanjung Pinang 50.71 234 P **P** **05 32 00.1 +1.3**
comp=Z,39μmcomp=Z,92nm,1.3s
TGL Tana Glacier 50.83 37 IAmb IAmb 05 32 02.0
comp=Z,55nm,1.0s
BOOM Boomskoye usch 50.88 298 IAmb IAmb 05 32 03.0
comp=Z,48nm,1.1s
TKM2 Tokmak 2 50.99 299 P **P** **05 32 02.0 +1.2**
SNR=30
BRZS Berezniki 51.03 308 *eP* **P** **05 31 59.9 -0.9**
BRZS pmax pmax
comp=Z,136nm,2.8s
BRZS Berezniki 51.03 308 *eP* **P** **05 31 59.9 -0.9**
comp=Z,136nm,2.8s
BALM Baldy 51.03 37 IAmb IAmb 05 32 03.2
comp=Z,55nm,1.2s
BCAR Beaver Creek A 51.04 34 P **P** **05 32 01.4 +0.6**
NRN Naryn 51.16 297 IAMs_20 IAMs_20 05 54 00.1
comp=Z,3μm,22.0s
BTLS Baital 51.43 302 *c* iP **P** **05 32 04.0 +0.1**
BTLS pmax pmax
comp=Z,56nm,3.9s
BTLS Baital 51.43 302 ⇑ *i*P **P** **05 32 04.0 +0.1**
comp=Z,56nm,3.9s
BTLS *e*LR LR 05 56 55.4
KZA Kyzart 51.49 298 P **P** **05 32 06.7 +1.9**
SNR=19
SGDS Sogindy 51.50 300 ⇓ *e*P **P** **05 32 04.5 -0.1**
comp=Z,102nm,2.9s
SGDS ⇓ *i*S S 05 39 33.7 +10
comp=Z,55nm,4.6s
PLAI Plampang 51.52 213 P **P** **05 32 03.4 -1.3**
KBK Karagaybulak 51.52 299 P **P** **05 32 05.6 +0.8**
SNR=22
CHMS Chumysh 51.56 299 P **P** **05 32 07.2 +2.3**
SNR=6.6
TPI Tanjungpandan 51.62 228 P **P** **05 32 06.7 +1.1**
comp=Z,1μmcomp=Z,111nm,1.1s
USP Ospenovka 51.65 300 P **P** **05 32 06.1 +0.5**
SNR=19
FRU1 Bishkek 51.70 299 IAMs_20 IAMs_20 05 55 35.1
comp=Z,3μm,18.0s
BRVK Borovoye 51.77 313 *d* iP **P** **05 32 06.8 +0.5**
BRVK pmax pmax
comp=Z,60nm,0.9s
BRVK Borovoye 51.77 313 P **P** **05 32 06.3 0.0**
BRVK IAmb IAmb 05 32 08.2
comp=Z,54nm,0.9s
KSH Kashi 51.81 295 P **P** **05 32 11.6 +4.6**
KSH pP sP 05 32 15.2 +2.7
KSH PcP **PcP** **05 33 20.7 +0.8**
KSH S **S** **05 39 34.0 +5.7**
KSH sS sS 05 39 41.5 +6.8
KSH ScS **ScS** **05 41 54.7 -1.6**
KSH SS **SS** **05 43 05.3 +0.6**
KSH pmax pmax
comp=Z,84nm,0.8s
KSH pmax pmax
comp=Z,1μm,4.2s
KSH LR LR
comp=Z,2μm,8.5s
KSH LR LR
comp=Z,2μm,10.3s
KSH LR LR
comp=Z,3μm,11.8s
TWSI Taliwang, Sumb 51.83 214 P **P** **05 32 06.1 -1.0**
AAK Ala-Archa 51.85 299 P **P** **05 32 07.6 +0.4**
AAK pmax pmax
comp=Z,24nm,1.1s
AAK MLR MLR
comp=Z,4μm,20.0s
AAK Ala-Archa 51.85 299 P **P** **05 32 07.9 +0.7**
comp=Z,7.0nm,0.7s,baz=131,slow=5.1,SNR=23
AAK Ala-Archa 51.85 299 *i* P **P** **05 32 07.9 +0.7**
SNR=12
AAK Ala-Archa 51.85 299 P **P** **05 32 07.6 +0.4**
AAK Ala-Archa 51.85 299 IAMs_20 IAMs_20 05 55 09.6
comp=Z,4μm,20.0s
UCH Uchtor 51.96 298 P **P** **05 32 11.3 +2.8**
SNR=8.4
DAWY Dawson 51.98 33 IAMs_20 IAMs_20 05 58 04.2
comp=Z,1μm,19.0s
SRBI Singaraja 52.03 216 P **P** **05 32 09.2 +0.7**
comp=Z,2μmcomp=Z,140nm,0.9s
PPBI Pangkal Pinang 52.07 230 P **P** **05 32 10.2 +1.3**
comp=Z,5μmcomp=Z,20μmcomp=Z,52nm,1.7s
EKS2 Erkin-Say 52.34 299 P **P** **05 32 11.6 +0.8**
SNR=11
BWNR Bhubaneshwar 52.41 268 *eP* **P** **05 32 12.2 +0.8**
BWNR IAmb IAmb 05 32 29.2
comp=Z,253nm,2.1s
AML Almayashu 52.57 299 P **P** **05 32 14.1 +1.2**
SNR=26
EPYK Eagle Plains 52.78 30 P **P** **05 32 15.3 +1.6**
baz=278,SNR=66
LHMI Lhok Sumawe 52.83 245 P **P** **05 32 15.7 +1.1**
comp=Z,3μmcomp=Z,193nm,1.1s
JAGI Jajag, Banyuwa 52.87 217 P **P** **05 32 15.6 +0.8**
comp=Z,46nm,1.1s
JAGI Jajag, Banyuwa 52.87 217 IAmb IAmb 05 32 23.4
comp=Z,43nm,1.1s
PSI Prapat 53.12 241 P **P** **05 32 17.3 +0.4**
comp=Z,63nm,0.9s,baz=48,slow=2.9,SNR=26
RPSI Rantau Prapat 53.19 241 IAMs_20 IAMs_20 05 57 32.9
comp=Z,1μm,18.0s
ARSB Arslanbob 53.34 298 IAmb IAmb 05 32 21.1
comp=Z,87nm,1.1s
ARSB IAMs_20 IAMs_20 05 56 13.4
comp=Z,3μm,18.0s
BKNI Bangkinang 53.45 237 P **P** **05 32 20.2 +1.0**
INK Inuvik 53.70 27 P **P** **05 32 21.4 +1.1**
comp=Z,38nm,0.7s,baz=295,slow=6.2,SNR=207
INK Inuvik 53.70 27 IAmb IAmb 05 32 22.2
comp=Z,41nm,0.8s
DZA Taraz 53.97 300 *eP* **P** **05 32 22.4 -0.3**
DZA Taraz 53.97 300 *eP* **P** **05 32 22.5 -0.3**
TPTI 54.02 243 P **P** **05 32 21.4 -2.0**
SMLA Simla 54.15 285 *eP* **P** **05 32 24.1 0.0**

DHRM DHARAMSHALA 54.34 286 *e*P P 05 32 25.8 -0.1
KK31 Karatay Array 54.46 301 *i* P P 05 32 25.9 -0.4
KK31 Karatay Array 54.46 301 IAmb IAmb 05 32 27.6
comp=Z,53nm,1.1s
KKAR Karatay Array 54.46 301 P P 05 32 26.2 -0.1
KKAR Karatay Array 54.46 301 P P 05 32 26.2 -0.1
KKAR Karatay Array 54.46 301 IAmb IAmb 05 32 27.6
comp=Z,53nm,1.1s
JBG Jabagly 54.67 300 *d i*P P 05 32 29.9 +1.9
JBG *e*S S 05 40 19.3 +12
JBG pmax pmax
comp=Z,130nm,3.0s
CHLP Challavanipeta 54.75 267 *e*P P 05 32 29.3 +0.7
CHLP IAmb IAmb 05 32 31.0
comp=Z,29nm,1.1s
LEM Lembang 54.93 225 P P 05 32 30.1 0.0
comp=Z,186nm,1.0s,baz=62,slow=5.6,SNR=22
BRLS Borolday 54.95 301 *i* LR LR 05 56 23.6
GSI Gunungsitoli 55.12 241 IAMs_20 IAMs_20 05 58 13.0
comp=Z,2μm,18.0s
IUG Iuzhnay 55.13 300 *d i*P P 05 32 32.4 +1.2
IUG *e*S S 05 40 18.4 +5.3
IUG pmax pmax
comp=Z,12nm,1.2s
IUG Iuzhnay 55.13 300⇓ *i*P P 05 32 32.4 +1.2
comp=Z,12nm,1.2s
IUG *e*S S 05 40 18.4 +5.3
BTK Batken 55.33 297 IAmb IAmb 05 32 49.7
comp=Z,29nm,1.0s
CHM Chimkent 55.36 300 *i* P P 05 32 33.4 +0.6
CHM Chimkent 55.36 300 *i* P P 05 32 33.5 +0.6
NIL Nilore 56.08 289 P P 05 32 38.8 +0.7
NIL pmax pmax
comp=Z,152nm,1.0s
NIL MLR MLR
comp=Z,1μm,19.0s
NIL Nilore 56.08 289 P P 05 32 38.8 +0.7
SVE Sverdlovsk 56.18 319 *c i*P P 05 32 39.5 +1.1
SVE pmax pmax
comp=Z,134nm,1.0s
SVE MLR MLR
comp=Z,7μm,16.0s
C36M Paulatuk 56.80 25 P P 05 32 43.4 +0.8
baz=287,SNR=63
WRAK Wrangell Islan 57.16 41 P P 05 32 47.1 +1.8
WRAB Tennant Creek 57.27 190 *ce*P P 05 32 45.6 -0.9
WRAB pmax pmax
comp=Z,198nm,1.3s
WRAB Tennant Creek 57.27 190 P P 05 32 44.9 -1.6
WRA Warramunga Arr 57.28 190 P P 05 32 44.5 -2.1
WRA pmax pmax
comp=Z,10.0nm,1.0s
WRA Warramunga Arr 57.28 190 P P 05 32 45.3 -1.2
comp=Z,86nm,0.9s,baz=8.8,slow=7.3,SNR=331
WRA LR LR 06 02 37.5
comp=Z,195nm,18.5s,baz=20,slow=42
WRA PKPPKP 06 02 39.8
comp=Z,1.5nm,1.1s,baz=190,slow=2.4,SNR=3.3
WRA Warramunga Arr 57.28 190 P P 05 32 44.5 -2.1
FITZ Fitzroy Crossi 57.30 200 P P 05 32 45.9 -0.8
FITZ IAmb IAmb 05 33 00.1
comp=Z,45nm,1.1s
NGP Nagpur 57.37 273 *e*P P 05 32 47.1 -0.3
NGP IAmb IAmb 05 32 50.1
comp=Z,58nm,0.9s
PVM Polavaram 57.37 268 *e*P P 05 32 47.5 +0.1
PVM IAmb IAmb 05 32 49.4
comp=Z,32nm,1.1s
ARU Arti 57.39 319 *c i*P P 05 32 47.3 +0.3
ARU 05 33 37.1
ARU 05 34 51.9
ARU S S 05 40 44.1 +1.6
ARU SS SS 05 44 27.2 -4.3
ARU pmax pmax
comp=Z,163nm,1.2s
ARU MLR MLR
comp=Z,7μm,17.0s
ARU Arti 57.39 319 P P 05 32 47.1 +0.1
BHPL Bhopal 57.61 276 *e*P P 05 32 48.4 -0.7
BHPL IAmb IAmb 05 33 02.3
comp=Z,56nm,1.3s
DLBC Dease Lake 57.69 38 P P 05 32 50.8 +1.6
comp=Z,19nm,0.9s,baz=253,slow=3.9,SNR=8.0
DLBC Dease Lake 57.69 38 IAmb IAmb 05 33 04.6
comp=Z,42nm,1.1s
DIB Dawson Inlet, 58.16 45 P P 05 32 53.3 +0.9
DIB IAmb IAmb 05 32 55.5
comp=Z,33nm,1.2s
GGR Gangavaram 58.20 269 *e*P P 05 32 52.9 -0.4
GGR IAmb IAmb 05 32 55.0
comp=Z,49nm,1.2s
RPR Rampur 58.37 271 *e*P P 05 32 54.6 +0.1
RPR IAmb IAmb 05 32 56.1
comp=Z,85nm,1.1s
MYLAV Mylavaram 58.44 268 *e*P P 05 32 55.8 +0.9
MYLAV IAmb IAmb 05 32 57.2
comp=Z,55nm,1.2s
KBL Kabul 58.85 292 P P 05 32 57.7 -0.2
KBL pmax pmax
comp=Z,37nm,1.0s
KBL MLR MLR
comp=Z,2μm,21.0s
KBL Kabul 58.85 292 P P 05 32 57.7 -0.2
KBL IAmb IAmb 05 32 59.1
comp=Z,37nm,1.0s
KBL IAMs_20 IAMs_20 06 00 13.1
comp=Z,2μm,21.0s
SRSP Sriramsagar 59.10 271 *e*P P 05 32 58.8 -0.7
SRSP IAmb IAmb 05 33 01.0
comp=Z,180nm,1.1s
AB31 Akbulak array 59.12 311 *i* P P 05 32 58.4 -0.8
ABKAR Akbulak array 59.12 311 P P 05 32 58.7 -0.5
ABKAR Akbulak array 59.12 311 IAmb IAmb 05 33 00.7
comp=Z,76nm,1.1s
ADKI Addanki 59.47 267 *e*P P 05 33 02.5 +0.4
ADKI IAmb IAmb 05 33 03.6
comp=Z,18nm,1.1s
NJS Nagarjunasagar 59.61 268 *e*P P 05 33 03.1 +0.1
NJS IAmb IAmb 05 33 04.5
comp=Z,29nm,1.1s
HYBB Hyderabad (bro 59.74 270 *e*P P 05 33 03.8 -0.2
HYBB IAmb IAmb 05 33 05.4
comp=Z,86nm,1.1s
HYB Hyderabad 59.74 270 *i* P P 05 33 04.0 0.0
comp=Z,140nm,1.0s
HYB *es*P **pwP** 05 33 14.0 -3.3
HYB *e*S S 05 41 18.0 +3.8
HYB Hyderabad 59.74 270 *e*P P 05 33 04.3 +0.3
HYB IAmb IAmb 05 33 06.8
comp=Z,62nm,0.9s
HYB IAMs_20 IAMs_20 05 59 04.7
comp=Z,1μm,20.2s
AKTO Aktyubinsk 59.83 313 P P 05 33 03.4 -0.7
SRLM Srisailam 60.19 268 *e*P P 05 33 07.0 -0.1
SRLM IAmb IAmb 05 33 08.4
comp=Z,28nm,1.0s
DMPR Damasthipur 60.37 270 *e*P P 05 33 07.8 -0.5
DMPR IAmb IAmb 05 33 09.5
comp=Z,83nm,1.2s
HOPEN Hopen 60.43 346 *e*P P 05 33 08.9 +1.1
SPA0 Spitsbergen Ar 60.84 349 *e*P P 05 33 11.6 +1.0
SPA0 Spitsbergen Ar 60.84 349 IAmb IAmb 05 33 12.5
comp=Z,52nm,1.1s
SKHT Srikalahasti 60.85 265 *e*P P 05 33 12.2 +0.6
SKHT IAmb IAmb 05 33 13.7
comp=Z,45nm,1.2s
KBS Kingsbay 60.94 350 *ce*P P 05 33 13.2 +2.0
KBS pmax pmax
comp=Z,315nm,1.7s
KBS Kingsbay 60.94 350 *e*P P 05 33 12.4 +1.2
KBS Kingsbay 60.94 350 IAMs_20 IAMs_20 06 00 47.1
comp=Z,1μm,20.0s
KLRI Killari 60.95 271 *e*P P 05 33 11.5 -0.8
KLRI IAmb IAmb 05 33 13.3
comp=Z,172nm,1.2s
ASAR Alice Springs 61.01 190 P P 05 33 11.1 -1.2
ASAR Alice Springs 61.01 190 P P 05 33 11.7 -0.6
comp=Z,44nm,0.9s,baz=12,slow=5.6,SNR=41
ASAR LR LR 06 01 18.4
comp=Z,139nm,20.0s,baz=5.5,slow=38
ASAR PKP2bc 06 02 36.4
comp=Z,3.6nm,1.0s,baz=172,slow=2.1,SNR=14
ASAR Alice Springs 61.01 190 P P 05 33 11.1 -1.2
NOR Nord 61.17 357 *i* P P 05 33 13.1 +0.3
comp=Z,31nm,1.1s

KIRV Kirov 61.19 323 P P 05 33 13.6 +0.4
comp=Z,149nm,0.9s,baz=67,slow=1.6,SNR=55
PRGR Permogore 61.62 327 ⇓ *i*P P 05 33 16.6 +0.6
PRGR pmax pmax
comp=Z,105nm,1.0s
HSPB Hornsund (broa 61.78 348 *e*P P 05 33 17.3 +0.3
URV Uravakonda 62.13 268 *e*P P 05 33 20.0 -0.3
URV IAmb IAmb 05 33 21.6
comp=Z,68nm,1.2s
PSA00 Pilbara Seismi 62.34 205 P P 05 33 20.2 -1.1
EIDS Eidsvold 62.48 172 IAmb IAmb 05 33 23.9
comp=Z,26nm,0.8s
DZM Mont Dzumac 62.68 156 *e*P P 05 33 25.2 +1.5
comp=Z,182nm,1.4s
DZM *e*S S 05 41 48.3 -3.0
comp=Z,2μm,28.1s
DZM Mont Dzumac 62.68 156 *e*LR LR 05 52 03.0
comp=Z,2μm,26.4s
DZM Mont Dzumac 62.68 156 P P 05 33 24.8 +1.1
DZM IAmb IAmb 05 33 27.9
comp=Z,55nm,1.1s
DZM IAMs_20 IAMs_20 06 02 12.1
comp=Z,2μm,20.0s
LVZ Lovozero 62.76 336 *ce*P P 05 33 23.9 +0.2
LVZ pmax pmax
comp=Z,117nm,2.5s
LVZ Lovozero 62.76 336 P P 05 33 23.4 -0.3
LVZ IAmb IAmb 05 33 25.1
comp=Z,30nm,0.8s
POO Poona 62.90 273 *e*P P 05 33 26.0 +0.6
POO IAmb IAmb 05 33 27.3
comp=Z,75nm,0.9s
YKW3 Yellowknife Ar 63.01 31 IAmb IAmb 05 33 26.6
comp=Z,23nm,0.9s
YKA Yellowknife Ar 63.05 31 P P 05 33 25.8 +0.2
comp=Z,16nm,0.8s,baz=302,slow=6.7,SNR=194
YKA PKPPKP P'P'df 06 02 16.5 -16
comp=Z,0.9nm,1.1s,baz=118,slow=1.6,SNR=4.7
YKA LR LR 06 05 27.9
comp=Z,49nm,18.4s,baz=292,slow=40
YKA Yellowknife Ar 63.05 31 P P 05 33 24.6 -1.0
TMCR Tamitsa 63.50 332 *e*P P 05 33 27.6 -0.9
TMCR pmax pmax
comp=Z,95nm,1.0s
PALK Pallekele 63.87 259 P P 05 33 32.0 +0.2
PALK Pallekele 63.87 259 P P 05 33 32.0 +0.2
comp=Z,26nm,1.0s,baz=56,slow=5.2,SNR=6.1
PALK Pallekele 63.87 259 P P 05 33 32.1 +0.3
PALK Pallekele 63.87 259 P P 05 33 32.2 +0.3
PALK IAmb IAmb 05 33 33.8
comp=Z,51nm,1.1s
HRA Herat 63.93 295 IAmb IAmb 05 33 33.7
comp=Z,20nm,0.8s
HRA IAMs_20 IAMs_20 06 03 00.6
comp=Z,2μm,21.0s
HAMF Hammerfest 64.34 341 *e*P P 05 33 33.6 -0.4
ARCES ARCESS Array B 64.55 340 P P 05 33 36.0 +0.6
comp=Z,22nm,0.8s,baz=46,slow=8.7,SNR=25
ARCES LR LR 06 04 49.5
comp=Z,965nm,20.0s,baz=51,slow=39
ARCES ARCESS Array B 64.55 340 P P 05 33 35.4 -0.1
ARE0 ARCESS Array S 64.55 340 *e*P P 05 33 35.8 +0.4
GOA Goa 64.58 271 *e*P P 05 33 36.1 -0.3
TULEG Thule 64.92 8 IAmb IAmb 05 33 38.3
comp=Z,38nm,0.7s
ASHT Ashkhabad 64.99 300 IAMs_20 IAMs_20 06 05 37.5
comp=Z,2μm,21.0s
GEYT Alibeck 65.19 300 P P 05 33 40.9 +0.8
comp=Z,52nm,0.9s,baz=41,slow=2.7,SNR=67
GEYT LR LR 06 06 07.4
comp=Z,1μm,18.5s,baz=85,slow=40
GEYT Alibeck 65.19 300 P P 05 33 40.3 +0.1
GYA0B ALIBECK ARRAY 65.19 300 IAMs_20 IAMs_20 06 05 45.6
comp=Z,1μm,20.0s
KTK1 Kautokeino 65.51 340 *e*P P 05 33 42.3 +0.6
NLWA Neilton Lookou 65.59 48 IAmb IAmb 05 33 45.5
comp=Z,35nm,0.9s
DAG Danmarks Havn 65.92 356 *i* P P 05 33 44.0 -0.2
DAG pmax pmax
comp=Z,29nm,0.9s
DAG Danmarks Havn 65.92 356 *i* P P 05 33 44.0 -0.2
comp=Z,29nm,0.9s
D03D Eldon 65.98 48 P P 05 33 47.3 +2.2
baz=299,SNR=11
B05A Bryant 66.21 47 P P 05 33 48.2 +1.7
baz=299,SNR=5.4
TRO Tromso 66.23 342 *e*P P 05 33 46.4 +0.1
D04E Lakebay 66.35 48 P P 05 33 50.6 +3.3
baz=299
E04D Cinebar 66.78 49 P P 05 33 52.2 +2.0
baz=300,SNR=11
D05A Emumuw 66.81 48 IAmb IAmb 05 33 53.2
comp=Z,31nm,0.9s
F04A Amboy 67.17 49 IAmb IAmb 05 33 56.1
comp=Z,42nm,1.0s
H04D Lebanon 67.69 50 P P 05 33 57.9 +1.9
baz=300
I03D Drain, OR 67.72 51 P P 05 33 58.2 +1.9
baz=300
F05D White Salmon 67.78 49 P P 05 33 58.3 +1.7
baz=301
KULLO Kullorsuaq 67.85 6 *i* P P 05 33 56.6 +0.1
KULLO pmax pmax
comp=Z,86nm,1.2s
KULLO Kullorsuaq 67.85 6 *i* P P 05 33 56.6 +0.1
comp=Z,86nm,1.2s
H04A Detroit Lake 67.95 50 IAmb IAmb 05 34 01.0
comp=Z,29nm,0.8s
K02D Willamette Mer 68.03 53 P P 05 33 59.9 +1.6
baz=300
MOS Moscow 68.17 324 *e*P P 05 33 58.8 0.0
MOS *e* 05 34 11.4
MOS *e* 05 34 24.1
MOS *e* 05 36 31.8
MOS *e*S S 05 43 03.5 +5.8
MOS pmax pmax
comp=Z,120nm,1.3s
MOS MLR MLR
comp=Z,2μm,14.0s
G05D Wamic, OR 68.19 49 P P 05 34 01.0 +1.8
baz=301,SNR=7.4
I04A Tendick Farm, 68.26 51 P P 05 34 01.2 +1.5
baz=301,SNR=1
L02E Cave Junction 68.34 53 P P 05 34 02.8 +2.6
baz=301
E07A Sunnyside 68.39 47 IAmb IAmb 05 34 03.1
comp=Z,44nm,1.2s
STEI Steigen 68.39 341 *e*P P 05 34 00.6 +0.7
STKA Stephens Creek 68.55 182 P P 05 34 01.3 0.0
comp=Z,26nm,1.0s,baz=345,slow=9.0,SNR=22
STKA LR LR 06 05 34.5
comp=Z,357nm,19.8s,baz=4.7,slow=37
G06A Carlson Farm, 68.61 49 IAmb IAmb 05 34 04.0
comp=Z,26nm,1.1s
VRH Novokhopyorsk 68.62 319 *e*P P 05 34 01.3 -0.4
VRH pmax pmax
comp=Z,150nm,1.4s
VRH MLR MLR
comp=Z,6μm,15.0s
I05D Terrebonne, OR 68.64 50 P P 05 34 03.7 +1.6
baz=301,SNR=6.1
C09A Chrisman Ranch 68.66 46 IAmb IAmb 05 34 03.8
comp=Z,20nm,0.7s
HAWA Hanford 68.66 48 IAmb IAmb 05 34 04.1
comp=Z,22nm,1.1s
LOF Lofoten 68.66 342 *e*P P 05 34 02.4 +0.7
F07A Phinny Hill Vi 68.69 48 IAmb IAmb 05 34 05.0
comp=Z,51nm,1.1s
J04D Umpqua Nationa 68.73 51 P P 05 34 04.7 +1.9
baz=301,SNR=8.5
E08A Dider Farm, El 68.89 47 P P 05 34 03.9 +0.4
E08A IAmb IAmb 05 34 05.4
comp=Z,16nm,0.8s
E08A PcP 05 34 28.6 +0.7
KHMM Horse Mountain 68.92 54 IAmb IAmb 05 34 08.8
comp=Z,41nm,1.2s
FORT Forrest 68.94 194 P P 05 34 03.0 -0.7
PUL Pulkovo 68.98 330 *ce*P P 05 34 04.9 +1.1
PUL pmax pmax
comp=Z,43nm,0.5s
OBN Obninsk 69.03 324 *e*P P 05 34 04.6 +0.5
OBN *e* 05 34 18.5
OBN *e* 05 34 28.4
OBN *e* 05 36 34.2
OBN *e*PPP PPP 05 38 15.3
OBN *e*S S 05 43 12.4 +4.6

OBN *e*SS SS 05 47 29.8 -3.0
OBN pmax pmax
comp=Z,124nm,1.3s
OBN MLR MLR
comp=Z,2μm,14.0s
OBN Obninsk 69.03 324 IAMs_20 IAMs_20 06 02 36.4
comp=Z,1μm,18.0s
NEW Newport 69.07 45 P P 05 34 05.7 +1.1
baz=302,SNR=19
YBH Yreka Blue Hor 69.13 53 LR LR 06 00 22.4
comp=Z,274nm,18.6s,baz=300,slow=32
L04D Klamath Falls 69.14 52 P P 05 34 07.1 +1.8
baz=301,SNR=9.9
PINE Pine Mountain 69.17 50 IAmb IAmb 05 34 08.3
comp=Z,40nm,0.8s
M02C Callahan 69.22 53 P P 05 34 07.8 +2.1
baz=301,SNR=7.3
J05D Fort Rock, OR 69.26 51 P P 05 34 07.9 +1.9
baz=302,SNR=18
K04D Chiloquin, OR 69.28 52 P P 05 34 08.3 +2.2
baz=302
LPSR Galich'ya Gora 69.30 321 *e*P P 05 34 05.8 -0.1
LPSR pmax pmax
comp=Z,100nm,1.0s
LPSR MLR MLR
comp=Z,6μm,15.0s
N02D Trinity Center 69.53 54 P P 05 34 10.0 +2.3
baz=302,SNR=8.3
FINES FINESS Array B 69.54 333 P P 05 34 07.5 +0.2
comp=Z,56nm,0.7s,baz=46,slow=7.3,SNR=122
FINES LR LR 06 06 40.8
comp=Z,2μm,18.1s,baz=42,slow=38
FINES FINESS Array B 69.54 333 P P 05 34 07.2 0.0
KCPM Cahto Peak 69.63 55 IAmb IAmb 05 34 12.9
comp=Z,46nm,1.1s
M04C Macdoel 69.66 53 P P 05 34 10.6 +2.1
baz=302,SNR=9.7
MAK Makhachkala 69.67 309 *e*P P 05 34 05.0 -3.4
MAK *e*S S 05 43 09.8 -6.1
MAK pmax pmax
comp=Z,437nm,1.5s
MAK MLR MLR
comp=Z,1μm,13.0s
LHI Lord Howe Isla 69.75 166 IAMs_20 IAMs_20 05 59 13.2
comp=Z,2μm,18.0s
BBOO Buckleboo 69.80 187 P P 05 34 08.6 -0.5
O02D Mt. Diablo Mer 69.90 54 P P 05 34 12.1 +2.1
baz=302,SNR=8.0
MOR8 Moi Rana 69.91 340 *e*P P 05 34 08.7 -0.8
VSR Storozhevoye 69.95 320 *e*P P 05 34 09.4 -0.6
VSR pmax pmax
comp=Z,120nm,1.3s
VSR MLR MLR
comp=Z,8μm,16.0s
VORD Divnogorie 70.03 319 *e*P P 05 34 10.1 -0.3
VORD pmax pmax
comp=Z,50nm,0.8s
VORD MLR MLR
comp=Z,11μm,19.0s
HOPS Hopland Field 70.33 56 IAMs_20 IAMs_20 06 02 14.4
comp=Z,1μm,20.0s
WALA Waterton Lakes 70.41 43 IAmb IAmb 05 34 14.7
comp=Z,19nm,0.8s
O03E Paynes Creek 70.47 54 P P 05 34 14.9 +1.4
baz=302,SNR=20
MORW Morawa 70.55 205 P P 05 34 13.4 -0.4
MORW IAmb IAmb 05 34 15.4
comp=Z,53nm,1.0s
GROC Groznyy 70.60 310 *e*P P 05 34 14.3 +0.2
GROC *e* 05 34 33.2
GROC pmax pmax
comp=Z,41nm,1.2s
SUMG Summit 70.70 1 *i* P P 05 34 15.8 +1.1
SUMG pmax pmax
comp=Z,110nm,0.7s
SUMG Summit 70.70 1 *i* P P 05 34 15.8 +1.1
comp=Z,111nm,0.7s
SUMG Summit 70.70 1 IAmb IAmb 05 34 16.5
comp=Z,40nm,0.7s
BMO Blue Mountains 70.81 48 IAmb IAmb 05 34 17.4
comp=Z,16nm,0.8s
MCCM Marconi Confer 70.91 56 IAMs_20 IAMs_20 06 04 01.7
comp=Z,1μm,20.0s
JTMT Jette 70.94 44 IAmb IAmb 05 34 18.2
comp=Z,21nm,0.8s
VSU Vasula 71.24 330 *ce*P P 05 34 18.2 +0.5
VSU pmax pmax
comp=Z,204nm,1.3s
VSU Vasula 71.24 330 *e*P P 05 34 18.0 +0.4
VSU IAmb IAmb 05 34 19.9
comp=Z,88nm,0.8s
GOF Gofitskoye 71.25 313 ⇑ *i*P P 05 34 18.5 +0.5
GOF pmax pmax
comp=Z,140nm,1.0s
MSO Missoula 71.66 45 P P 05 34 21.5 +0.9
baz=305,SNR=13
NSS Namsos 71.84 340 *e*P P 05 34 21.9 +0.8
ZEI Tsey 71.99 310 *e*P P 05 34 19.8 -3.0
ZEI pmax pmax
comp=Z,21nm,0.9s
TBLG Delisi 72.06 309 IAmb IAmb 05 34 36.5
comp=Z,43nm,1.1s
KVAR Kislovodsk Arr 72.07 312 P P 05 34 25.1 +2.0
comp=Z,42nm,1.0s,baz=261,slow=19,SNR=34
KIV Kislovodsk 72.07 312 ⇑ P P 05 34 24.7 +1.6
KIV Kislovodsk 72.07 312 *i* P P 05 34 24.6 +1.5
SNR=23
KIV Kislovodsk 72.07 312 P P 05 34 24.1 +1.0
KIV IAMs_20 IAMs_20 06 10 39.7
comp=Z,1μm,18.0s
KBZ Khabaz 72.08 311 *d i*P P 05 34 24.1 +1.2
KBZ Khabaz 72.08 311 P P 05 34 24.2 +1.3
comp=Z,50nm,0.9s,baz=63,slow=4.2,SNR=95
KBZ LR LR 06 08 19.5
comp=Z,915nm,18.0s,baz=44,slow=38
CAN Canberra 72.16 175 IAmb IAmb 05 34 26.1
comp=Z,42nm,1.1s
SHA1 Shidzhatmaz 72.21 312 *d i*P P 05 34 25.2 +1.1
RUBR Rubicon Trail 72.22 54 IAmb IAmb 05 34 26.7
comp=Z,26nm,1.0s
SCO Scoresbysund 72.28 355 *i* P P 05 34 24.9 +1.2
SCO pmax pmax
comp=Z,35nm,1.1s
SCO Scoresbysund 72.28 355 *i* P P 05 34 24.9 +1.2
comp=Z,35nm,1.1s
WBK Wadi Bani Khal 72.44 285 P P 05 34 26.7 +1.2
SNR=6.9
NEY Neytrino 72.45 311 *i* P P 05 34 26.4 +0.9
NEY pmax pmax
comp=Z,8.0nm,1.2s
BIDO Bidbid 72.59 287 P P 05 34 27.9 +1.5
SNR=5.0
BANOM Banah 72.67 290 *i* P P 05 34 27.7 +0.9
SNR=9.3
SHME Shamm 72.72 290 *i* P P 05 34 27.7 +0.5
SNR=12
YERR Yerington 72.84 54 IAmb IAmb 05 34 30.0
comp=Z,22nm,0.9s
FFC Flin Flon 72.88 33 P P 05 34 27.8 +0.2
FFC pmax pmax
comp=Z,63nm,1.0s
FFC Flin Flon 72.88 33 P P 05 34 27.8 +0.2
FFC IAmb IAmb 05 34 29.4
comp=Z,63nm,0.9s
SMDO Samad 72.90 286 P P 05 34 29.7 +1.4
SNR=6.2
SMDO P P 05 34 29.7 +1.4
SNR=6.2
GNI Garni 72.94 308 *ce*P P 05 34 30.0 +1.5
GNI pmax pmax
comp=Z,241nm,1.7s
GNI Garni 72.94 308 P P 05 34 29.9 +1.4
comp=Z,41nm,1.2s,baz=156,slow=5.1,SNR=16
GNI Garni 72.94 308 *i* P P 05 34 29.5 +1.0
SNR=8.9
GNI Garni 72.94 308 P P 05 34 29.8 +1.4
GNI IAmb IAmb 05 34 37.3
comp=Z,39nm,1.1s
GNI Garni 72.94 308 IAMs_20 IAMs_20 06 08 50.5
comp=Z,1μm,20.0s
WAKR Walker 72.98 54 IAMs_20 IAMs_20 06 10 09.3
comp=Z,902nm,20.0s
AKH Akhalkalaki 73.02 309 ⇓ P P 05 34 30.0 +1.1
AKH Akhalkalaki 73.02 309 IAMs_20 IAMs_20 06 10 05.4
comp=Z,1μm,20.0s
MSFE Esma-Masafi 73.08 289 *i* P P 05 34 30.0 +0.6
SNR=7.4

JMDO	**Jabal Madar**	**73.24**	**286**		P		**P**	**05 34 30.9**	**+0.6**
	SNR=6.7								
JMDO					P		**P**	**05 34 30.9**	**+0.6**
	SNR=6.7								
IZAR	**Zarasai**	**73.24**	**328**	*e*	P		**P**	**05 34 30.8**	**+1.1**
EGMT	**Eagleton**	**73.26**	**42**		IAmb		IAmb	05 34 32.1	
	comp=Z,46nm,1.1s								
EGMT	**Eagleton**	**73.26**	**42**		P		**P**	**05 34 30.9**	**+0.8**
	baz=307,SNR=14								
DLMT	**Dillon**	**73.27**	**46**		IAmb		IAmb	05 34 32.6	
	comp=Z,39nm,0.8s								
UOSS	**Minazif**	**73.27**	**289**	*i*	P		**P**	**05 34 30.5**	**+0.1**
	SNR=13								
UOSS	**Minazif**	**73.27**	**289**		P		**P**	**05 34 30.5**	**+0.1**
TBLU	**Trondheim**	**73.31**	**340**	*e*	P		**P**	**05 34 29.8**	**-0.2**
FCC	**Fort Churchill**	**73.32**	**27**		IAmb		IAmb	05 34 31.6	
	comp=Z,74nm,1.1s								
PMPB	**Monarch Peak**	**73.35**	**57**		IAmb		IAmb	05 34 33.5	
	comp=Z,31nm,1.2s								
MICGM	**Minsk**	**73.36**	**327**	*e*	P		**P**	**05 34 31.0**	**+0.6**
MICGM				*e*	PcP		**pwP**	**05 34 43.0**	**-0.7**
MICGM				*e*	PP		**PP**	**05 37 14.0**	**+0.6**
MICGM				*e*	S		**S**	**05 43 56.0**	**-2.1**
MICGM				*e*	LR		LR	06 08 48.0	
MICGM					LRM		MLR	06 10 50.0	
	comp=Z,7.4nm,14.0s								
MNK	**Minsk**	**73.36**	**327**	⇓*e*	P		**P**	**05 34 31.0**	**+0.6**
MNK				*e*				05 34 43.0	
MNK				*e*				05 37 14.0	
MNK				*e*	S		**S**	**05 43 56.0**	**-2.1**
MNK					MLR		MLR		
	comp=Z,7μm,14.0s								
HATD	**Hatta, Dubai**	**73.39**	**289**	*i*	P		**P**	**05 34 31.8**	**+0.7**
	SNR=21								
HATD	**Hatta, Dubai**	**73.39**	**289**		P		**P**	**05 34 31.8**	**+0.7**
	SNR=9.1								
HATD					P		**P**	**05 34 31.8**	**+0.7**
	SNR=9.1								
ISAL	**Salakas**	**73.41**	**328**	*e*	P		**P**	**05 34 32.1**	**+1.4**
ISAL					IAmb		IAmb	05 34 34.1	
	comp=Z,23nm,0.8s								
SOHO	**SOHO**	**73.47**	**288**		P		**P**	**05 34 32.0**	**+0.4**
	SNR=13								
SOHO					P		**P**	**05 34 32.0**	**+0.4**
	SNR=13								
RYN	**Ryan**	**73.51**	**54**		IAMs_20		IAMs_20	06 11 58.4	
	comp=Z,781nm,18.0s								
ASHO	**Ashiyiah**	**73.53**	**289**	*i*	P		**P**	**05 34 32.5**	**+0.5**
	SNR=16								
ASHO	**Ashiyiah**	**73.53**	**289**		P		**P**	**05 34 34.0**	**+2.0**
	SNR=8.8								
ASHO					P		**P**	**05 34 34.0**	**+2.0**
	SNR=8.8								
KVN	**Kaiserville**	**73.54**	**53**		IAmb		IAmb	05 34 34.7	
	comp=Z,54nm,1.2s								
NACGM	**Naroch**	**73.58**	**327**	*e*	P		**P**	**05 34 32.0**	**+0.3**
NACGM				*e*	PP		**PP**	**05 37 22.0**	**+6.8**
NACGM				*e*	PPP		PPP	05 39 14.0	
NACGM				*e*	S		**SKiKP**	**05 44 06.0**	**+5.4**
NACGM				*e*	PS			05 45 44.0	
NACGM				*e*	SS		SS	05 49 12.0	+29
NACGM				*e*	SSS		SSS	05 52 34.0	
NACGM				*e*	LQ		LQ	06 02 20.0	
NACGM				*e*	LR		LR	06 08 48.0	
NACGM					LRM		MLR	06 11 14.0	
	comp=Z,5.0nm,14.0s								
NWAO	**Narrogin (SRO)**	**73.72**	**203**		P		**P**	**05 34 32.3**	**-0.4**
NWAO					pmax		pmax		
	comp=Z,48nm,0.9s								
NWAO	**Narrogin (SRO)**	**73.72**	**203**		P		**P**	**05 34 32.2**	**-0.4**
NWAO					IAmb		IAmb	05 34 33.7	
	comp=Z,48nm,0.9s								
NWAO	**Narrogin (SRO)**	**73.72**	**203**		IAmb		IAmb	05 34 33.7	
	comp=Z,38nm,0.9s								
BSY	**Bisya**	**73.73**	**286**		P		**P**	**05 34 35.0**	**+1.8**
	SNR=5.9								
BSY					P		**P**	**05 34 35.0**	**+1.8**
	SNR=5.9								
NVAR	**Mina Array Bea**	**73.76**	**54**		P		**P**	**05 34 34.9**	**+1.5**
	comp=Z,18nm,0.8s,baz=289,slow=6.0,SNR=96								
NVAR					LR		LR	06 03 58.3	
	comp=Z,418nm,18.2s,baz=299,slow=33								
NVAR	**Mina Array Bea**	**73.76**	**54**		P		**P**	**05 34 34.3**	**+0.9**
OMMB	**Old Mammoth Mi**	**73.77**	**55**		IAMs_20		IAMs_20	06 03 28.3	
	comp=Z,1μm,20.0s								
MLAC	**Mammoth, Mammo**	**73.87**	**55**		P		**P**	**05 34 36.3**	**+2.2**
	baz=304,SNR=11								
ARQ	**Araqi**	**73.92**	**287**		P		**P**	**05 34 36.0**	**+1.7**
	SNR=12								
ARQ					P		**P**	**05 34 36.0**	**+1.7**
	SNR=12								
PAGB	**Antelope Grade**	**74.00**	**57**		IAmb		IAmb	05 34 36.9	
	comp=Z,42nm,1.1s								
SOC	**Sochi**	**74.05**	**313**	*e*	P		**P**	**05 34 33.7**	**-1.0**
SOC				*e*	*SP		**pwP**	**05 34 47.2**	**-0.7**
SOC				*e*	PPP		PPP	05 39 00.2	
SOC				*e*	S		**S**	**05 44 04.3**	**-1.9**
SOC				*e*	SSS		SSS	05 51 59.2	
SOC					pmax		pmax		
	comp=Z,63nm,1.0s								
SOC					MLR		MLR		
	comp=Z,2μm,15.0s								
ASUD	**Al Ashush, Dub**	**74.11**	**289**	*i*	P		**P**	**05 34 36.1**	**+0.7**
	SNR=10								
PABE	**Paberze**	**74.36**	**329**	*e*	P		**P**	**05 34 37.1**	**+0.9**
PABE					IAmb		IAmb	05 34 39.3	
	comp=Z,111nm,1.1s								
ELK	**Elko**	**74.38**	**51**		LR		LR	06 03 32.1	
	comp=Z,241nm,21.5s,baz=294,slow=33								
SMMC	**Simmler**	**74.40**	**57**		P		**P**	**05 34 39.0**	**+2.0**
	baz=304,SNR=7.3								
TIN	**Tinemaha, Big**	**74.59**	**55**		P		**P**	**05 34 40.4**	**+2.3**
	baz=305								
NC303	**NORSAR Array S**	**74.60**	**338**		IAmb		IAmb	05 34 41.9	
	comp=Z,23nm,0.8s								
DOMB	**Dombas**	**74.61**	**340**	*e*	P		**P**	**05 34 38.4**	**+0.8**
ANN	**Anapa**	**74.64**	**315**	*e*	P		**P**	**05 34 37.6**	**-0.5**
ANN				*e*	*PP		**sP**	**05 34 46.4**	**+2.7**
ANN				*e*				05 37 23.2	
ANN				*e*	PPP		PPP	05 39 14.0	
ANN				*e*	S		**S**	**05 44 11.7**	**-1.1**
ANN				*e*	SS		**SS**	**05 48 52.0**	**-7.3**
ANN					pmax		pmax		
	comp=Z,95nm,1.4s								
VES	**Vestal, Richgr**	**74.72**	**57**		P		**P**	**05 34 39.4**	**+0.7**
	baz=305,SNR=23								
PKM	**Mcpherson Peak**	**74.76**	**58**		P		**P**	**05 34 40.9**	**+1.7**
	baz=305,SNR=18								
NB2	**NORSAR Subarra**	**74.79**	**338**		P		**P**	**05 34 38.7**	**0.0**
	comp=Z,126nm,1.2s,baz=38,slow=6.2								
NB2	**NORSAR Subarra**	**74.79**	**338**		P		**P**	**05 34 38.7**	**0.0**
	baz=38,slow=6.2								
NOA	**NORSAR Array B**	**74.79**	**338**		P		**P**	**05 34 39.1**	**+0.3**
	comp=Z,35nm,0.9s,baz=38,slow=5.8,SNR=61								
NOA					LR		LR	06 13 18.3	
	comp=Z,2μm,18.0s,baz=30,slow=40								
NBO00	**NORSAR Array S**	**74.93**	**338**	*e*	P		**P**	**05 34 39.9**	**+0.4**
NBO00	**NORSAR Array S**	**74.93**	**338**		P		**P**	**05 34 39.3**	**-0.1**
NBO00							**pwP**	**05 34 51.3**	**-1.4**
NC602	**NORSAR Array S**	**74.93**	**338**		IAmb		IAmb	05 34 57.6	
	comp=Z,52nm,1.1s								
LKWY	**Lake**	**74.99**	**45**		IAmb		IAmb	05 34 44.7	
	comp=Z,50nm,1.1s								
H17A	**Grant Village**	**75.00**	**45**		P		**P**	**05 34 43.4**	**+2.9**
	baz=307,SNR=65								
DQM	**DQM**	**75.03**	**284**		P		**P**	**05 34 42.0**	**+1.2**
	SNR=5.5								
DQM					P		**P**	**05 34 42.0**	**+1.2**
	SNR=5.5								
CWC	**Cottonwood Cre**	**75.04**	**56**		P		**P**	**05 34 41.8**	**+1.0**
	baz=305								
AKN	**Aaknes**	**75.07**	**340**	*e*	P		**P**	**05 34 41.7**	**+1.5**
SBC	**Santa Barbara**	**75.08**	**58**		P		**P**	**05 34 42.8**	**+2.0**
	baz=305								
FLWY	**Flagg Ranch**	**75.11**	**46**		IAmb		IAmb	05 34 44.8	
	comp=Z,60nm,1.1s								
GRAC	**Grapevine Rang**	**75.19**	**55**		P		**P**	**05 34 43.1**	**+1.6**
	baz=305,SNR=23								
ISA	**Isabella, Lake**	**75.22**	**56**		P		**P**	**05 34 42.0**	**+0.3**
	baz=305,SNR=13								
AKASG	**Malin Array Be**	**75.25**	**323**		P		**P**	**05 34 41.3**	**-0.2**
	comp=Z,24nm,0.7s,baz=46,slow=6.1,SNR=116								
AKASG					LR		LR	06 10 40.4	
	comp=Z,2μm,18.1s,baz=55,slow=38								
AKASG	**Malin Array Be**	**75.25**	**323**		P		**P**	**05 34 41.3**	**-0.2**
AKBB	**Malin Array Si**	**75.25**	**323**		IAmb		IAmb	05 34 42.9	
	comp=Z,68nm,1.1s								
MOOW	**Moose Ponds**	**75.29**	**46**		IAmb		IAmb	05 34 57.2	
	comp=Z,30nm,1.1s								
ARVC	**Arvin**	**75.29**	**57**		P		**P**	**05 34 43.3**	**+1.3**
	baz=305,SNR=10.0								
RLMT	**Red Lodge**	**75.29**	**44**		IAmb		IAmb	05 34 57.5	
	comp=Z,29nm,1.0s								
RLMT	**Red Lodge**	**75.29**	**44**		P		**P**	**05 34 43.6**	**+1.5**
	baz=308,SNR=20								
SCZ2	**Santa Cruz Isl**	**75.39**	**58**		P		**P**	**05 34 43.6**	**+1.0**
	baz=305,SNR=5.9								
SNOW	**Snow King Moun**	**75.46**	**46**		P		**P**	**05 34 44.6**	**+1.4**
SNOW					IAmb		IAmb	05 34 46.2	
	comp=Z,38nm,1.1s								
REDW	**Red Top Meadow**	**75.46**	**46**		IAmb		IAmb	05 34 46.2	
	comp=Z,45nm,1.1s								
R11A	**Troy Canyon, C**	**75.56**	**53**		P		**P**	**05 34 45.1**	**+1.3**
	baz=306,SNR=38								
MPMC	**Manual Prospec**	**75.65**	**56**		P		**P**	**05 34 45.5**	**+1.1**
	baz=305,SNR=26								
OSI	**Osito Audit: C**	**75.66**	**57**		IAmb		IAmb	05 34 46.8	
	comp=Z,34nm,0.9s								
OSI					IAMs_20		IAMs_20	06 04 11.4	
	comp=Z,2μm,18.0s								
BLG	**Laguna Peak, P**	**75.72**	**58**		P		**P**	**05 34 45.8**	**+1.3**
	baz=305,SNR=10								
SUW	**Suwalki**	**75.72**	**328**	*e*	P		**P**	**05 34 44.7**	**+0.6**
SUW	**Suwalki**	**75.72**	**328**	*e*	P		**P**	**05 34 44.7**	**+0.6**
SUW	**Suwalki**	**75.72**	**328**		IAmb		IAmb	05 34 46.3	
	comp=Z,69nm,1.0s								
SFJD	**Kangerlussuaq**	**75.77**	**6**		P		**P**	**05 34 44.3**	**+0.2**
SFJD					pmax		pmax		
	comp=Z,37nm,0.9s								
SFJD	**Kangerlussuaq**	**75.77**	**6**	*i*	P		**P**	**05 34 43.8**	**-0.3**
SFJD	**Kangerlussuaq**	**75.77**	**6**		P		**P**	**05 34 44.3**	**+0.2**
SFJD					IAmb		IAmb	05 34 45.6	
	comp=Z,37nm,0.9s								
OSL	**Oslo**	**75.81**	**338**	*e*	P		**P**	**05 34 45.7**	**+1.2**
FURC	**Furnace Creek,**	**75.83**	**55**		P		**P**	**05 34 46.4**	**+1.4**
	baz=306,SNR=26								
LRMC	**Laurel Mtn Rad**	**75.86**	**56**		P		**P**	**05 34 46.4**	**+0.9**
	baz=305,SNR=20								
DGMT	**Dagmar**	**75.89**	**39**		IAmb		IAmb	05 34 47.7	
	comp=Z,51nm,1.0s								
DGMT	**Dagmar**	**75.89**	**39**		P		**P**	**05 34 45.9**	**+0.6**
	baz=310,SNR=11								
SNCC	**San Nicolas Is**	**75.89**	**59**		IAmb		IAmb	05 34 47.5	
	comp=Z,39nm,0.8s								
SNCC	**San Nicolas Is**	**75.89**	**59**		P		**P**	**05 34 46.8**	**+1.2**
	baz=305								
SKAR	**Skarslia**	**75.93**	**339**	*e*	P		**P**	**05 34 46.3**	**+1.0**
TPNV	**Topopah Spring**	**75.95**	**54**		IAmb		IAmb	05 34 47.8	
	comp=Z,24nm,0.8s								
TPNV	**Topopah Spring**	**75.95**	**54**		P		**P**	**05 34 47.2**	**+1.3**
	baz=306,SNR=41								
LAO	**LASA Array**	**75.98**	**42**		P		**P**	**05 34 47.2**	**+1.4**
LAO					IAmb		IAmb	05 35 00.3	
	comp=Z,55nm,0.9s								
LAO	**LASA Array**	**75.98**	**42**		P		**P**	**05 34 47.5**	**+1.7**
	baz=309								
EDW2	**Edwards Air Fo**	**75.99**	**57**		P		**P**	**05 34 47.5**	**+1.3**
	baz=305,SNR=29								
HYA	**Hoyanger**	**76.12**	**340**	*e*	P		**P**	**05 34 47.1**	**+0.9**
DECC	**Green Verdugo**	**76.13**	**58**		P		**P**	**05 34 48.3**	**+1.4**
	baz=305,SNR=5.3								
DUG	**Dugway, Tooele**	**76.20**	**50**		IAmb		IAmb	05 34 49.5	
	comp=Z,25nm,0.8s								
DUG	**Dugway, Tooele**	**76.20**	**50**		P		**P**	**05 34 48.7**	**+1.4**
	baz=307,SNR=42								
PASC	**Pasadena Art C**	**76.28**	**58**		IAmb		IAmb	05 34 49.9	
	comp=Z,33nm,1.1s								
PASC	**Pasadena Art C**	**76.28**	**58**		IAMs_20		IAMs_20	06 05 15.8	
	comp=Z,2μm,18.0s								
MWC	**Mount Wilson**	**76.33**	**57**		IAmb		IAmb	05 34 50.5	
	comp=Z,40nm,1.1s								
MWC					IAMs_20		IAMs_20	06 05 20.3	
	comp=Z,2μm,18.0s								
KONO	**Kongsberg**	**76.39**	**338**	*ce*	P		**P**	**05 34 49.5**	**+1.7**
KONO					pmax		pmax		
	comp=Z,61nm,1.7s								
KONO	**Kongsberg**	**76.39**	**338**	*e*	P		**P**	**05 34 48.4**	**+0.6**
SIM	**Simferopol'**	**76.41**	**316**	*de*	P		**P**	**05 34 48.8**	**+0.6**
SIM				*e*				05 35 02.0	
SIM					pmax		pmax		
	comp=Z,58μm,0.9s								
GSC	**Goldstone, Bar**	**76.54**	**56**		P		**P**	**05 34 50.3**	**+1.0**
	baz=306,SNR=19								
SHOC	**Shoshee, Teco**	**76.54**	**55**		P		**P**	**05 34 50.3**	**+1.1**
	baz=306,SNR=7.6								
CIS	**Catalina Islan**	**76.56**	**58**		P		**P**	**05 34 50.6**	**+1.2**
	baz=306,SNR=9.2								
BW06	**Boulder Array**	**76.58**	**46**		P		**P**	**05 34 50.3**	**+0.8**
	baz=308,SNR=16								
PDAR	**Pinedale Array**	**76.58**	**46**		P		**P**	**05 34 50.0**	**+0.4**
	comp=Z,9.1nm,0.8s,baz=273,slow=2.4,SNR=70								
PDAR	**Pinedale Array**	**76.58**	**46**		P		**P**	**05 34 49.6**	**0.0**
BFSC	**Mount Baldy Ra**	**76.59**	**57**		P		**P**	**05 34 51.1**	**+1.5**
	baz=306,SNR=20								
SCI2	**San Clemente I**	**76.72**	**59**		P		**P**	**05 34 51.6**	**+1.4**
	baz=306,SNR=5.4								
SEVA	**Sevastopol**	**76.92**	**316**	⇑*e*	P		**P**	**05 34 51.6**	**+0.6**
BER	**Bergen**	**77.01**	**340**	*e*	P		**P**	**05 34 52.8**	**+1.5**
ODD1	**Odda**	**77.04**	**339**	*e*	P		**P**	**05 34 52.5**	**+1.0**
TUQ	**Turquoise Moun**	**77.05**	**55**		P		**P**	**05 34 53.4**	**+1.2**
	baz=306,SNR=26								
HEC	**Hector,Ludlow**	**77.13**	**56**		P		**P**	**05 34 53.9**	**+1.3**
	baz=306,SNR=6.9								
OUZ	**Omaluta**	**77.18**	**155**		P		**P**	**05 34 54.3**	**+1.9**
MURC	**Murrieta**	**77.28**	**58**		P		**P**	**05 34 54.2**	**+0.8**
	baz=306,SNR=9.1								
SORM	**Soroca**	**77.37**	**322**	⇑*e*	P		**P**	**05 34 53.6**	**0.0**
BLS5	**Blasjo**	**77.50**	**339**	*e*	P		**P**	**05 34 54.7**	**+0.6**
SHAO	**Shalim**	**77.60**	**283**		P		**P**	**05 34 55.6**	**+0.2**
GMRC	**Granite Mounta**	**77.61**	**56**		P		**P**	**05 34 56.0**	**+0.6**
	baz=306,SNR=19								
PURM	**Purcari**	**77.67**	**320**	⇓*e*	P		**P**	**05 34 55.9**	**+0.6**
ANGG	**Ammassalik, Gr**	**77.70**	**0**		IAmb		IAmb	05 34 57.5	
	comp=Z,34nm,1.0s								
109C	**Camp Elliot, M**	**77.75**	**58**		P		**P**	**05 34 57.0**	**+1.0**
	baz=306,SNR=7.2								
PFO	**Pinyon Flats O**	**77.77**	**57**		P		**P**	**05 34 56.6**	**+0.4**
PFO					pmax		pmax		
	comp=Z,17nm,1.1s								
PFO	**Pinyon Flats O**	**77.77**	**57**		P		**P**	**05 34 56.6**	**+0.4**
PFO	**Pinyon Flats O**	**77.77**	**57**		IAMs_20		IAMs_20	06 05 27.3	
	comp=Z,2μm,20.0s								
PFO	**Pinyon Flats O**	**77.77**	**57**		P		**P**	**05 34 57.1**	**+0.9**
	baz=306,SNR=24								
XPFO	**Pion Flat**	**77.77**	**57**		P		**P**	**05 34 55.9**	**-0.3**
XPFO	**Pion Flat**	**77.77**	**57**		IAMs_20		IAMs_20	06 05 54.3	
	comp=Z,2μm,19.0s								
DIKM	**Dikmen**	**77.83**	**313**	⇓*e*	P		**P**	**05 34 57.8**	**+1.5**
BELC	**Belle Mtn. Jos**	**77.84**	**57**		P		**P**	**05 34 57.1**	**+0.4**
	baz=306,SNR=16								
KIS	**Kishinev**	**77.90**	**320**	*e*	P		**P**	**05 34 56.0**	**-0.5**
KIS				*e*	S		**SKiKP**	**05 44 13.0**	**+5.5**
KIS				*e*	L		L	05 54 40.0	
KIS					LRM		MLR	06 12 24.0	
	comp=Z,4μm,16.0s								
KIS	**Kishinev**	**77.90**	**320**	*e*	P		**P**	**05 34 56.0**	**-0.5**
KIS				*e*				05 35 12.0	
KIS				*e*	S		**S**	**05 44 43.0**	**-5.5**
KIS				*e*				05 45 04.0	
KIS				*e*				05 45 42.0	
KIS					MLR		MLR		
	comp=Z,4μm,16.0s								
KIS					MLR		MLR		
	comp=N,4μm,17.0s								
MILM	**Milestii Mici**	**77.95**	**320**	⇑*e*	P		**P**	**05 34 56.0**	**-0.8**
BSD	**Bornholm Skovb**	**78.18**	**333**	*i*	P		**P**	**05 34 58.4**	**+0.5**
BSD					pmax		pmax		
	comp=Z,83nm,1.1s								
BSD					MLR		MLR		
	comp=Z,4μm,17.0s								
BSD	**Bornholm Skovb**	**78.18**	**333**	*i*	P		**P**	**05 34 58.4**	**+0.5**
	comp=Z,83nm,1.1s								
	comp=Z,4μm,17.0s								
MONP2	**Monument Peak**	**78.22**	**58**		P		**P**	**05 34 59.7**	**+0.9**
	baz=306,SNR=21								
LVV	**L'vov**	**78.29**	**325**	*e*	P		**P**	**05 34 59.3**	**+0.6**
LVV				*e*				05 37 56.2	
LVV				*e*	S		**S**	**05 44 48.4**	**-4.3**
LVV				*e*	PS		**PnS**	**05 45 48.9**	**+14**
LVV					MLR		MLR		
	comp=E,2μm,16.0s								
LVV					MLR		MLR		
	comp=Z,2μm,15.0s								
BEL	**Belsk**	**78.29**	**328**	*e*	P		**P**	**05 35 00.0**	**+1.3**
BEL	**Belsk**	**78.29**	**328**	*e*	P		**P**	**05 34 60.0**	**+1.3**
IRM	**Iron Mountain**	**78.32**	**56**		P		**P**	**05 35 00.4**	**+1.2**
	baz=307,SNR=23								
BZK	**Bozkurt**	**78.37**	**314**	⇓	P		**P**	**05 35 00.0**	**+0.8**
K22A	**Casper**	**78.39**	**45**		IAmb		IAmb	05 35 01.0	
	comp=Z,25nm,0.9s								
K22A	**Casper**	**78.39**	**45**		P		**P**	**05 35 00.3**	**+0.7**
	baz=310,SNR=14								
IAS	**Iasi**	**78.40**	**321**	⇑	P		**P**	**05 34 59.8**	**+0.5**
BC3	**Big Chuckawall**	**78.42**	**57**		P		**P**	**05 35 00.7**	**+0.9**
	baz=307,SNR=24								
LEOM	**Leova**	**78.54**	**320**	⇓	P		**P**	**05 35 00.9**	**+0.8**
IKP	**In-Ko-Pah, Jac**	**78.57**	**58**		P		**P**	**05 35 01.8**	**+1.1**
	baz=307,SNR=22								
MDND	**Maddock**	**78.59**	**38**		IAmb		IAmb	05 35 17.6	
	comp=Z,64nm,1.1s								
MDND	**Maddock**	**78.59**	**38**		P		**P**	**05 35 01.3**	**+0.9**
	baz=313,SNR=6.7								
SWSC	**Sam W. Stewart**	**78.61**	**57**		P		**P**	**05 35 01.8**	**+1.1**
	baz=307,SNR=14								
GOET	**G??ttrup**	**78.62**	**336**	*i*	P		**P**	**05 35 02.0**	**+1.7**
	comp=Z,260nm,0.9s								
COP	**Copenhagen**	**78.63**	**334**	*i*	P		**P**	**05 35 01.7**	**+1.3**
COP					pmax		pmax		
	comp=Z,87nm,0.9s								
COP	**Copenhagen**	**78.63**	**334**	*i*	P		**P**	**05 35 01.7**	**+1.3**
	comp=Z,87nm,0.9s								
VASR	**Vaslui**	**78.66**	**321**	⇑	P		**P**	**05 35 01.7**	**+0.9**
ULM	**Lac du Bonnet**	**78.67**	**34**		P		**P**	**05 35 00.6**	**-0.2**
	comp=Z,14nm,0.8s,baz=307,slow=6.5,SNR=19								
ULM					LR		LR	06 13 21.4	
	comp=Z,245nm,19.4s,baz=289,slow=38								
ULM	**Lac du Bonnet**	**78.67**	**34**		IAmb		IAmb	05 35 01.4	
	comp=Z,33nm,1.1s								
U15A	**North Rim**	**78.81**	**53**		IAmb		IAmb	05 35 04.4	
	comp=Z,24nm,0.8s								
U15A					IAMs_20		IAMs_20	06 09 17.5	
	comp=Z,1μm,19.0s								
RSSD	**Black Hills**	**78.81**	**43**		P		**P**	**05 35 02.2**	**+0.2**
RSSD					pmax		pmax		
	comp=Z,30nm,1.0s								
RSSD	**Black Hills**	**78.81**	**43**		P		**P**	**05 35 02.1**	**+0.2**
RSSD					IAmb		IAmb	05 35 03.6	
	comp=Z,30nm,0.9s								
RSSD	**Black Hills**	**78.81**	**43**		P		**P**	**05 35 02.4**	**+0.5**
	baz=311								
PRAR	**RASCA**	**78.95**	**322**	⇓	P		**P**	**05 35 02.8**	**+0.4**
Y12C	**Blythe**	**78.98**	**56**		P		**P**	**05 35 04.0**	**+1.2**
	baz=307,SNR=13								
O20A	**White River Ci**	**78.99**	**48**		P		**P**	**05 35 03.9**	**+0.8**
	baz=309,SNR=16								
BIR	**Birlad**	**79.00**	**320**	⇑	P		**P**	**05 35 04.3**	**+1.7**
KWP	**Kalwaria Pacla**	**79.03**	**325**	*e*	P		**P**	**05 35 04.2**	**+1.4**
KWP	**Kalwaria Pacla**	**79.03**	**325**	*e*	P		**P**	**05 35 04.2**	**+1.4**
MUD	**Monsted U'grnd**	**79.11**	**336**	*i*	P		**P**	**05 35 03.7**	**+0.7**
MUD					pmax		pmax		
	comp=Z,67nm,1.2s								
MUD	**Monsted U'grnd**	**79.11**	**336**	*i*	P		**P**	**05 35 03.7**	**+0.7**
	comp=Z,67nm,1.2s								
GLA	**Glamis**	**79.20**	**57**		IAmb		IAmb	05 35 18.5	
	comp=Z,32nm,0.9s								
GLA	**Glamis**	**79.20**	**57**		P		**P**	**05 35 05.4**	**+1.3**
	baz=307,SNR=7.7								
GHRR		**79.25**	**320**	⇓	P		**P**	**05 35 05.7**	**+1.7**
BURAR	**Bucovina Array**	**79.27**	**323**	⇓	P		**P**	**05 35 05.2**	**+0.9**
BURAR	**Bucovina Array**	**79.27**	**323**		P		**P**	**05 35 04.5**	**+0.2**
BIZ	**Bicaz**	**79.30**	**322**	⇓	P		**P**	**05 35 05.4**	**+1.0**
TESR	**Tescani**	**79.33**	**321**	⇑	P		**P**	**05 35 04.7**	**+0.2**
JURR	**Jurilovca**	**79.36**	**319**	⇓	P		**P**	**05 35 05.3**	**+0.7**
DGAR	**Diego Garcia**	**79.44**	**252**		P		**P**	**05 35 06.0**	**+0.5**
DGAR					pmax		pmax		
	comp=Z,113nm,1.1s								
DGAR	**Diego Garcia**	**79.44**	**252**		P		**P**	**05 35 06.0**	**+0.5**
GAZ	**Gaziantep**	**79.45**	**309**		IAmb		IAmb	05 35 24.5	
	comp=Z,42nm,1.1s								
GAZ					IAMs_20		IAMs_20	06 16 00.2	

KECS Kecovo 80.87 326 *e*P **P 05 35 13.7 +0.9**
KECS pmax pmax
comp=Z,8.0nm,1.1s
KECS Kecovo 80.87 326 *e*P **P 05 35 13.7 +0.9**
VOIR 80.87 321 ⇓P **P 05 35 13.9 +1.0**
OKC Ostrava-Krasne 80.90 328 *e*P **P 05 35 13.7 +0.8**
OKC *e* 05 35 26.9
OKC MLR MLR
comp=Z,2µm,13.3s
OKC Ostrava-Krasne 80.90 328 *e*P **P 05 35 13.7 +0.8**
OKC *ex* x 05 35 26.9
OKC AMS AMS 06 13 50.0
comp=Z,2µm,13.3s
KSP Ksiaz 80.92 329 *e*P **P 05 35 14.2 +1.2**
KSP Ksiaz 80.92 329 *e*P **P 05 35 14.2 +1.2**
BIGH Upper Bighouse 80.99 343 *e*P **P 05 35 13.9 +0.7**
BIGH IAmb IAmb 05 35 16.1
comp=Z,309nm,1.4s
MTUR Matau 81.02 321 ⇓P **P 05 35 14.5 +0.8**
ARR Arges 81.13 321 ⇓P **P 05 35 15.7 +1.4**
OSTC Ostas 81.17 329 *e*P **P 05 35 15.2 +0.9**
OSTC AMS AMS 06 15 10.0
comp=Z,3µm,16.8s
MORC Moravsky Berou 81.20 328 ⇑P **P 05 35 15.2 +0.6**
MORC Moravsky Berou 81.20 328 *e*P **P 05 35 15.5 +0.9**
MORC *e* 05 35 27.7
MORC Moravsky Berou 81.20 328 IAmb IAmb 05 35 16.9
comp=Z,53nm,1.1s
PRD Provadia 81.21 318 *e*P **P 05 35 16.0 +1.4**
214A Organ Pipe Nat 81.21 57 IAMs_20 IAMs_20 06 08 38.4
comp=Z,1µm,20.0s
214A Organ Pipe Nat 81.21 57 P **P 05 35 16.1 +1.2**
baz=308,SNR=17
CHVC Chvalec 81.21 329 *e*P **P 05 35 15.5 +0.9**
CHVC AMS AMS 06 15 20.0
comp=Z,3µm,17.9s
W18A Petrified Fore 81.25 53 P **P 05 35 16.6 +1.4**
baz=309,SNR=11
SUSD Miller 81.28 40 P **P 05 35 15.5 +0.5**
baz=314
DPC Dobruska-Polom 81.28 329 *e*P **P 05 35 15.9 +0.9**
DPC AMS AMS 06 17 20.0
comp=Z,3µm,13.2s
UPC Upice 81.29 329 *e*P **P 05 35 15.8 +0.9**
UPC MLR MLR
comp=Z,3µm,14.8s
UPC Upice 81.29 329 *e*P **P 05 35 15.8 +0.9**
UPC AMS AMS 06 15 10.0
comp=Z,3µm,14.8s
KRLC Kraliky 81.30 328 *e*P **P 05 35 16.0 +0.9**
KRLC MLR MLR
comp=Z,3µm,12.1s
KRLC Kraliky 81.30 328 *e*P **P 05 35 16.0 +0.9**
KRLC AMS AMS 06 16 10.0
comp=Z,3µm,12.1s
ORH Orhaniye 81.32 315 P P 05 35 23.4 +8.1
S22A 4UR Ranch, Cre 81.37 49 IAmb IAmb 05 35 18.4
comp=Z,26nm,1.0s
S22A 4UR Ranch, Cre 81.37 49 P **P 05 35 17.3 +1.3**
baz=310,SNR=34
RAZG Razgrad 81.43 319 ⇑P **P 05 35 16.4 +0.6**
HUMR Humele 81.55 320 ⇓P **P 05 35 17.5 +1.1**
PSZ Piszkesteto 81.56 325 ⇓P **P 05 35 17.8 +1.3**
PSZ Piszkesteto 81.56 325 IAmb IAmb 05 35 19.0
comp=Z,68nm,1.1s
Q24A Divide 81.57 47 P **P 05 35 18.4 +1.3**
baz=311,SNR=9.0
VYHS Vyhne 81.61 326 *e*P **P 05 35 17.6 +0.9**
VYHS pmax pmax
comp=Z,34nm,1.1s
VYHS Vyhne 81.61 326 *e*P **P 05 35 17.6 +0.9**
DEV Deva 81.62 322 ⇓P **P 05 35 17.9 +1.1**
IVI Ivigtut 81.68 6 IAmb IAmb 05 35 19.8
comp=Z,25nm,0.9s
COPA Copaceanca 81.70 320 ⇓P **P 05 35 17.6 +0.4**
KOLL Kolacno 81.73 327 *e*P **P 05 35 18.7 +1.4**
BRG Berggiesshubel 81.84 330 *i* P **P 05 35 18.4 +0.6**
comp=Z,35nm,0.9s
BRG *i* 05 35 30.7
comp=Z,14nm,1.1s
BRG *e*PP **PP 05 38 21.7 -2.7**
comp=Z,18nm,1.3s
BRG *e*PKPPKP **P'P'df 06 01 56.3 -2.8**
comp=Z,23nm,2.0s
comp=N,1µm,19.7s
comp=E,2µm,10.5s
comp=Z,3µm,14.8s
BRG Berggiesshubel 81.84 330 *i* P **P 05 35 18.4 +0.6**
BRG *i* 05 35 30.7
BRG *e* 05 38 21.7
BRG pmax pmax
comp=Z,35nm,0.9s
BRG pmax pmax
comp=Z,14nm,1.1s
BRG pmax pmax
comp=Z,18nm,1.3s
BRG Berggiesshubel 81.84 330 *e*P **P 05 35 18.4 +0.6**
comp=Z,42nm,1.1s,baz=37,slow=5.1
BSZH Besenyszg 81.84 325 *e*P **P 05 35 21.5 +3.6**
JAVC Velka Javorina 81.84 327 *e*P **P 05 35 19.7 +1.7**
PVCC Panska Ves 81.86 330 *e*P **P 05 35 19.0 +1.1**
PVCC *e* 05 35 35.1
PVCC MLR MLR
comp=Z,4µm,21.3s
PVCC Panska Ves 81.86 330 *e*P **P 05 35 19.0 +1.1**
PVCC *ex* x 05 35 35.1
PVCC AMS AMS 06 14 40.0
comp=Z,4µm,21.3s
CLL Collm 81.87 331 *i* P **P 05 35 18.2 +0.2**
CLL *i* 05 35 30.7
CLL pmax pmax
comp=Z,96nm,1.2s
CLL Collm 81.87 331 *i* P **P 05 35 18.2 +0.2**
comp=Z,96nm,1.2s
CLL *i* (sP) **pwP 05 35 30.7 -0.5**
CLL *i* 05 35 43.5
CLL *e*PP **PP 05 38 26.0 +1.4**
CLL *e*SS SS 05 50 54.0 +6.6
CLL *e*SSS SSS 05 54 42.0
CLL LmH 06 11 00.0
comp=N,1µm,18.9s
CLL LmH 06 11 00.0
comp=E,3µm,18.6s
CLL Collm 81.87 331 *e*P **P 05 35 18.4 +0.4**
comp=E,66nm,1.0s,baz=37,slow=5.1
SIRR Siria 81.94 323 ⇑P **P 05 35 19.8 +1.3**
QRZ Quartz Range 81.96 158 IAMs_20 IAMs_20 06 03 43.9
comp=Z,1µm,19.0s
VRAC Vranov 81.96 328 ⇓P **P 05 35 19.4 +0.9**
VRAC Vranov 81.96 328 *e*P **P 05 35 19.4 +0.9**
VRAC *e* 05 35 31.9
NRDL Niedersach Rie 82.00 333 *e*P **P 05 35 19.7 +1.1**
comp=Z,23nm,1.0s,baz=37,slow=5.1
GZR Gura Zlata 82.03 322 ⇓P **P 05 35 19.1 +0.1**
OGNE Ogallala 82.03 44 IAmb IAmb 05 35 33.8
comp=Z,48nm,1.1s
OGNE Ogallala 82.03 44 P **P 05 35 20.8 +1.6**
baz=313
FBE Freiberg 82.04 331 *e*P **P 05 35 19.7 +0.9**
comp=Z,36nm,0.8s,baz=37,slow=5.1
RAYN Ar Rayn 82.08 293 P **P 05 35 19.7 0.0**
RAYN pmax pmax
comp=Z,94nm,1.2s
RAYN MLR MLR
comp=Z,2µm,20.0s
RAYN Ar Rayn 82.08 293 *i* P **P 05 35 19.8 +0.2**
SNR=48
RAYN Ar Rayn 82.08 293 P **P 05 35 19.6 0.0**
RAYN IAMs_20 IAMs_20 06 15 38.4
comp=Z,2µm,20.0s
ASSE Asse, Remlinge 82.09 333 *e*P **P 05 35 20.0 +1.0**
comp=Z,28nm,1.0s,baz=37,slow=5.1
SDCO Great Sand Dun 82.17 48 P **P 05 35 21.5 +1.3**
baz=311,SNR=22
ELND Elena 82.20 319 ⇓P **P 05 35 20.3 +0.4**
KAC Achnashellach 82.21 344 *e*P **P 05 35 20.7 +1.0**
SMOL Smolenice 82.21 327 *e*P **P 05 35 21.1 +1.3**
SMOL pmax pmax
comp=Z,26nm,1.2s
SMOL Smolenice 82.21 327 *e*P **P 05 35 21.1 +1.3**
KRUC Moravsky 82.24 328 *e*P **P 05 35 20.3 +0.3**
KRUC *e* 05 35 32.9
GOPC GO Pecny, Ondr 82.25 329 *e*P **P 05 35 20.6 +0.6**
GOPC *e* 05 35 33.2
GOPC MLR MLR
comp=Z,3µm,15.5s
GOPC GO Pecny, Ondr 82.25 329 *e*P **P 05 35 20.6 +0.6**
GOPC *es*P **pwP 05 35 33.2 -0.1**
GOPC AMS AMS 06 17 20.0
comp=Z,3µm,15.5s
SOCY Socotra 82.26 279 P **P 05 35 19.0 -1.7**
SOCY Socotra 82.26 279 P **P 05 35 19.9 -0.9**
SNR=6.8
PRA Prague 82.27 330 *e*P **P 05 35 21.1 +1.0**
PRA MLR MLR
comp=Z,3µm,20.0s
PRA Prague 82.27 330 *e*P **P 05 35 21.1 +1.0**
PRA AMS AMS 06 15 10.0
comp=Z,3µm,20.0s
BUD Budapest 82.27 326 ⇓*e*P **P 05 35 21.5 +1.3**
PRU Pruhonice 82.29 329 *e*P **P 05 35 20.8 +0.6**
PRU *e* 05 35 33.7
PRU MLR MLR
comp=Z,3µm,14.7s
PRU Pruhonice 82.29 329 *e*P **P 05 35 20.8 +0.6**
PRU *ex* x 05 35 33.7
PRU AMS AMS 06 15 00.0
comp=Z,3µm,14.7s
EYMN Ely 82.31 34 P **P 05 35 20.3 -0.1**
baz=319
TUC Tucson 82.34 55 P **P 05 35 21.7 +0.8**
TUC pmax pmax
comp=Z,10.0nm,0.9s
TUC Tucson 82.34 55 P **P 05 35 21.7 +0.8**
TUC Tucson 82.34 55 IAMs_20 IAMs_20 06 09 42.1
comp=Z,1µm,18.0s
TUC Tucson 82.34 55 P **P 05 35 21.9 +1.0**
baz=309
SRO Srobarova 82.35 326 *e*P **P 05 35 21.8 +1.3**
SRO pmax pmax
comp=Z,46nm,1.0s
SRO Srobarova 82.35 326 *e*P **P 05 35 21.8 +1.3**
MODS Modra-Piesok 82.38 327 *e*P **P 05 35 21.0 +0.2**
MODS pmax pmax
comp=Z,47nm,1.1s
MODS Modra-Piesok 82.38 327 *e*P **P 05 35 21.0 +0.2**
NEUB Neuenburg 82.42 332 *e*P **P 05 35 21.6 +0.8**
comp=Z,69nm,0.9s,baz=37,slow=5.1
CLZ Clausthal 82.43 333 *e*P **P 05 35 22.2 +1.2**
comp=Z,55nm,1.0s,baz=37,slow=5.1
KPL Plockton 82.44 344 *e*P **P 05 35 21.5 +0.7**
KPL IAmb IAmb 05 35 23.9
comp=Z,350nm,1.5s
BZS Buzias 82.44 323 ⇑P **P 05 35 20.8 -0.3**
TREC Trest 82.44 329 *e*P **P 05 35 21.8 +0.8**
TREC *e* 05 35 34.2
TREC MLR MLR
comp=Z,4µm,12.1s
TREC Trest 82.44 329 *e*P **P 05 35 21.8 +0.8**
TREC *ex* x 05 35 34.2
TREC AMS AMS 06 18 50.0
comp=Z,4µm,12.1s
EDRB Edirne 82.49 318 P P 05 35 33.1 +12
PLVB Pleven 82.53 320 ⇓P **P 05 35 22.3 +0.7**
CSKK Cskako 82.71 326 *e*P **P 05 35 22.5 +0.1**
PBCC Pribram 82.75 330 *e*P **P 05 35 23.1 +0.5**
PBCC *ex* x 05 35 35.2
TANN Tannenbergstha 82.78 331 *e*P **P 05 35 23.2 +0.3**
baz=37,slow=5.1
ASF Jabal al Asfar 82.79 305 P **P 05 35 24.2 +1.0**
comp=Z,15nm,1.0s,baz=312,slow=2.1,SNR=16
GTTG Guttingen 82.82 333 *e*P **P 05 35 23.8 +0.8**
comp=Z,63nm,0.9s,baz=37,slow=5.1
GUNZ Gunzen 82.88 331 *e*P **P 05 35 24.1 +0.7**
comp=Z,17nm,0.8s,baz=37,slow=5.1
INVG Invergeldie, C 82.89 342 *e*P **P 05 35 23.2 +0.1**
WERN Wernitzgruen 82.92 331 *e*P **P 05 35 24.3 +0.8**
comp=Z,19nm,0.8s,baz=37,slow=5.1
MOX Moxa 82.93 331 *e*P **P 05 35 24.2 +0.6**
comp=Z,14nm,0.8s,baz=37,slow=5.1
MOX *e*L L 06 18 06.9
comp=Z,1µm,18.3s
NKC Novy Kostel 82.94 331 *e*P **P 05 35 24.0 +0.4**
NKC Novy Kostel 82.94 331 *e*P **P 05 35 24.0 +0.4**
ECSD EROS Data Cent 82.97 39 IAmb IAmb 05 35 25.3
comp=Z,50nm,1.1s
ECSD EROS Data Cent 82.97 39 P **P 05 35 24.1 +0.2**
baz=316,SNR=15
IBBN Ibbenburen 82.99 334 *e*P **P 05 35 24.5 +0.8**
comp=Z,53nm,0.8s,baz=37,slow=5.1
MDVR Moldovita 83.00 322 ⇑P **P 05 35 24.3 +0.2**
KSCO Kaye Shedlock' 83.01 46 P **P 05 35 25.4 +1.1**
comp=Z,32nm,1.1s
KSCO Kaye Shedlock' 83.01 46 P **P 05 35 25.4 +1.1**
baz=313,SNR=6.1
MPLH Magyarpolny 83.18 326 ⇓*e*P P 05 35 17.5 -7.4
T25A Trinidad 83.22 48 IAmb IAmb 05 35 27.5
comp=Z,31nm,0.9s
T25A Trinidad 83.22 48 P **P 05 35 26.9 +1.3**
baz=312,SNR=25
SOP Sopron 83.22 327 ⇓*e*P **P 05 35 26.4 +1.3**
TIH Tihany 83.22 326 *e*P **P 05 35 25.6 +0.5**
MMAI Mount Meron Ar 83.22 306 P **P 05 35 26.8 +1.3**
comp=Z,70nm,0.9s,baz=41,slow=6.6,SNR=64
PPT Papeete 83.26 118 LR LR 06 03 57.2
comp=Z,754nm,20.4s,baz=294,slow=30
MANZ Manzenberg 83.26 331 *e*P **P 05 35 26.0 +0.6**
comp=Z,14nm,0.8s,baz=37,slow=5.1
PPT2 Papeete2 83.27 118 *e*S **S 05 45 46.6 +1.1**
comp=Z,1µm,30.8s
PPT2 Papeete2 83.27 118 *e*LR LR 06 01 18.3
comp=Z,2µm,25.0s,baz=314
CSS Mathiatis 83.28 309 P **P 05 35 26.8 +1.1**
CONA Conrad Observa 83.33 327 *i* PcP **P 05 35 26.8 +1.0**
comp=Z,39nm,0.9s,SNR=15
KHC Kasperske Hory 83.35 329 *e*P **P 05 35 26.3 +0.5**
KHC *e* 05 35 39.0
KHC MLR MLR
comp=Z,3µm,12.6s
KHC Kasperske Hory 83.35 329 *e*P **P 05 35 26.3 +0.5**
KHC *ex* x 05 35 39.0
KHC *ex* x 05 38 20.0
KHC AMS AMS 06 15 30.0
comp=Z,3µm,12.6s
KHC Kasperske Hory 83.35 329 IAmb IAmb 05 35 28.0
comp=Z,20nm,1.0s
MORH Mrgy, Hungar 83.40 325 ⇓*i*P **P 05 35 25.8 -0.2**
MORH Mrgy, Hungar 83.40 325 ⇓*i*P **P 05 35 25.8 -0.2**
PLD Plovdiv 83.40 319 *e*P **P 05 35 25.0 -1.1**
UBBA Unterbreizbach 83.40 332 *e*P **P 05 35 26.5 +0.7**
baz=37,slow=5.1
ROTZ Rotzenmuhle 83.40 331 *e*P **P 05 35 26.6 +0.6**
baz=37,slow=5.1
ANMO Albuquerque 83.42 51 P **P 05 35 27.3 +0.7**
ANMO pmax pmax
comp=Z,50nm,1.2s
ANMO Albuquerque 83.42 51 P **P 05 35 27.3 +0.7**
ANMO IAmb IAmb 05 35 30.0
comp=Z,50nm,1.1s
ANMO Albuquerque 83.42 51 P **P 05 35 28.3 +1.7**
baz=311
ALN Alexandroupoli 83.53 317 P **P 05 35 27.5 +0.7**
ALN Alexandroupoli 83.53 317 IAmb IAmb 05 35 28.2
comp=Z,17nm,1.0s
GEC2 GERESS Array S 83.53 329 *e*P **P 05 35 27.5 +0.7**
comp=Z,14nm,0.8s,baz=37,slow=5.1
GEC2 GERESS Array S 83.53 329 IAmb IAmb 05 35 27.9
comp=Z,20nm,0.8s
GERES GERESS Array B 83.53 329 P **P 05 35 27.2 +0.4**
comp=Z,19nm,0.9s,baz=36,slow=5.3,SNR=88
GERES PKKPbc **PKKPbc 05 53 43.3 -1.0**
comp=Z,0.7nm,0.7s,baz=286,slow=3.7,SNR=5.4
GERES LR LR 06 16 18.2
comp=Z,2µm,18.4s,baz=30,slow=38
GERES GERESS Array B 83.53 329 P **P 05 35 26.6 -0.2**
PGBU Glenifferbraes 83.55 342 *e*P **P 05 35 27.7 +1.1**
PGBU IAmb IAmb 05 35 30.3
comp=Z,232nm,1.3s
RDO Rodhopi 83.63 318 P **P 05 35 29.1 +1.8**
WET Wettzell 83.63 330 *e*P **P 05 35 27.8 +0.6**
comp=Z,16nm,0.9s,baz=37,slow=5.1
FRGS Fruska Gora 83.64 324 *e*P **P 05 35 27.2 -0.1**
RZN Rozhen 83.68 319 *i* P **P 05 35 27.9 +0.1**
SPMN Marine on St. 83.75 36 IAmb IAmb 05 35 31.2
comp=Z,19nm,0.9s
SPMN Marine on St. 83.75 36 P **P 05 35 28.1 +0.2**
baz=318,SNR=6.4
VTS Vitosha 83.80 320 P **P 05 35 30.2 +1.8**
VTS Vitosha 83.80 320 ⇓P **P 05 35 29.0 +0.7**
VTS Vitosha 83.80 320 *i* P **P 05 35 29.9 +1.5**
VTS Vitosha 83.80 320 IAmb IAmb 05 35 30.4
comp=Z,30nm,0.9s
BGNE Belgrade 83.83 42 P **P 05 35 28.4 0.0**
baz=315,SNR=6.7
GRF Grafenberg Arr 83.84 331 *e*P **P 05 35 29.2 +0.9**
comp=Z,107nm,1.2s,baz=37,slow=5.1
GRF *e*L L 06 15 53.0
comp=Z,778nm,20.6s
BUG Bochum--Univer 83.87 334 *e*P **P 05 35 29.0 +0.7**
comp=Z,19nm,0.8s,baz=37,slow=5.1
ARSA Arzberg 84.00 327 *i* PcP **P 05 35 29.8 +0.6**
comp=Z,18nm,1.1s,SNR=6.3
MOA Molln 84.07 328 *i* PcP **P 05 35 30.7 +1.2**
comp=Z,28nm,1.3s,SNR=6.8
EZN Ezine 84.12 316 P **P 05 35 30.1 +0.3**
121A Cookes Peak, D 84.14 53 P **P 05 35 31.6 +1.3**
baz=310,SNR=30
HSIG 84.30 58 IAmb IAmb 05 35 32.4
comp=Z,16nm,0.9s
HSIG IAMs_20 IAMs_20 06 09 24.2
comp=Z,1µm,20.0s
DIVS Divibare 84.34 323 *e*P **P 05 35 31.1 +0.1**
NVR Nevrokopi 84.38 319 P **P 05 35 32.1 +0.9**
THAS Thassos island 84.45 318 P **P 05 35 31.2 -0.3**
KALN Kalnik 84.45 326 *i* P **P 05 35 31.2 -0.2**
TNS Taunus Mts 84.46 333 *e*P **P 05 35 32.0 +0.5**
comp=Z,14nm,0.8s,baz=37,slow=5.1
GAL1 Galloway 84.46 342 *e*P **P 05 35 31.6 +0.4**
GAL1 IAmb IAmb 05 35 33.8
comp=Z,98nm,1.0s
HPK Haverah Park 84.48 340 *e*P **P 05 35 32.5 +1.1**
SRIG Santa Rosalia 84.48 60 IAmb IAmb 05 35 45.9
comp=Z,29nm,1.1s
SRIG IAMs_20 IAMs_20 06 09 52.1
comp=Z,1µm,18.0s
LBZ Lake Benmore 84.59 161 IAmb IAmb 05 35 38.2
comp=Z,44nm,1.1s
MQZ McQueen's Vall 84.64 159 IAMs_20 IAMs_20 06 05 22.5
comp=Z,1µm,21.0s
PERS Pernice 84.65 327 *e*P **P 05 35 32.7 +0.1**
SOKA Soboth 84.66 327 *i* PcP **P 05 35 32.9 +0.3**
comp=Z,47nm,1.1s,SNR=18
AHRW Bad Neuenahr-A 84.69 334 *e*P **P 05 35 33.6 +1.1**
comp=Z,39nm,1.0s,baz=37,slow=5.1
FETY Fethiye 84.74 313 P **P 05 35 33.4 +0.3**
RJOB Jochberg 84.77 329 *e*P **P 05 35 34.0 +0.9**
comp=Z,32nm,0.9s,baz=37,slow=5.1
CBKS Cedar Bluff 84.78 44 IAmb IAmb 05 35 35.8
comp=Z,47nm,1.1s
CBKS Cedar Bluff 84.78 44 P **P 05 35 33.2 -0.1**
baz=314,SNR=10
BBLS Lazići 84.79 323 *e*P **P 05 35 34.2 +0.9**
HAPS Han Pijesak,Bl 84.84 323 *e*P **P 05 35 33.3 -0.3**
YER Yerkesik 84.87 313 P **P 05 35 33.5 -0.3**
SCHQ Schefferville 84.92 17 P **P 05 35 34.2 +0.5**
comp=Z,14nm,0.8s,baz=346,slow=5.9,SNR=19
SCHQ LR LR 06 16 59.1
comp=Z,712nm,19.9s,baz=353,slow=38
SCHQ Schefferville 84.92 17 IAmb IAmb 05 35 34.8
comp=Z,16nm,0.8s
RUDO Rudo 84.99 323 *e*P **P 05 35 34.1 -0.1**
LBWR Ladybower, Pea 85.00 340 *e*P **P 05 35 34.7 +0.7**
LBWR IAmb IAmb 05 35 36.1
comp=Z,318nm,1.3s
OBKA Obir 85.00 327 *i* PcP **P 05 35 34.9 +0.6**
comp=Z,9.1nm,1.0s
STIP Stip 85.00 320 *i* P **P 05 35 34.1 -0.2**
KNT Kendrikon 85.02 319 P **P 05 35 35.1 +0.7**
FUR Furstenfeldbru 85.05 330 *e*P **P 05 35 35.2 +0.7**
comp=Z,59nm,0.8s,baz=37,slow=5.1
KBA Koelnbreinsper 85.07 328 *e*PcP **P 05 35 35.5 +0.8**
comp=Z,19nm,0.9s,SNR=7.6
VAY Valandovo 85.07 319 *i* P **P 05 35 35.4 +0.8**
CRES Cresnjev 85.13 326 *e*P **P 05 35 34.9 0.0**
BLY Banja Luka 85.18 325 ⇑P **P 05 35 35.6 +0.5**
BLY Banja Luka 85.18 325 IAmb IAmb 05 35 36.2
comp=Z,20nm,1.0s
BLY Banja Luka 85.18 325 ⇓*i*P **P 05 35 35.4 +0.3**
SKO Skopje 85.18 321 *i* P **P 05 35 36.6 +1.4**
MYKA Terra Mystica 85.29 328 *e*PcP **P 05 35 35.9 +0.2**
comp=Z,20nm,1.3s,SNR=6.5
PLG Polygyros 85.29 318 P **P 05 35 35.8 0.0**
STU Stuttgart 85.37 332 *e*P **P 05 35 36.5 +0.6**
comp=Z,60nm,0.8s,baz=37,slow=5.1
LJU Ljubljana 85.37 327 *e*P **P 05 35 36.2 +0.1**
GRG Griva 85.42 319 P **P 05 35 36.8 +0.3**
CWF Charnwood Fore 85.47 339 *e*P **P 05 35 37.4 +1.0**
CWF IAmb IAmb 05 35 38.3
comp=Z,63nm,1.0s
MGRS Mrkonjic Grad 85.47 325 *e*P **P 05 35 37.4 +0.8**
PAIG Paliouri 85.49 318 P **P 05 35 36.9 +0.2**
UPM Unac-Piva 85.53 323 *e*P **P 05 35 36.9 -0.2**
WATA Walderalm 85.59 329 P **P 05 35 36.6 -0.7**
comp=Z,17nm,1.1s
WTTA Wattenberg 85.63 329 *e*PcP **P 05 35 37.5 0.0**
comp=Z,17nm,1.2s
CEY Cerknica 85.65 327 *e*P **P 05 35 37.2 -0.3**
EIL Elat 85.67 304 P **P 05 35 38.3 +0.5**
comp=Z,20nm,1.1s,baz=328,slow=2.5,SNR=13
ABTA Abfaltersbach 85.68 329 *i* P **P 05 35 36.9 -0.8**
comp=Z,21nm,1.3s,SNR=5.3
WLF Walferdange 85.75 334 *e*P **P 05 35 38.7 +0.9**
baz=37,slow=5.1
WLF Walferdange 85.75 334 IAmb IAmb 05 35 41.0
comp=Z,42nm,1.1s
MOTA Moosalm 85.78 330 *e*PcP **P 05 35 38.4 +0.1**
comp=Z,36nm,1.2s,SNR=8.5
I40A Norwalk 85.78 36 IAmb IAmb 05 35 38.9
comp=Z,34nm,0.9s
RETA Reutte 85.80 330 *i* PcP **P 05 35 38.6 +0.3**
comp=Z,60nm,1.1s,SNR=16
SQTA Sankt Quirin 85.84 330 *i* PcP **P 05 35 38.6 +0.1**
comp=Z,21nm,1.1s,SNR=6.0
FOEL Foel Wylfa 85.86 340 *e*P **P 05 35 39.2 +0.9**
FOEL IAmb IAmb 05 35 40.6
comp=Z,131nm,1.0s
PHP Peshkopia 85.90 321 P **P 05 35 39.1 +0.3**
UBR Ueberruh 85.91 330 *e*P **P 05 35 39.2 +0.5**
comp=Z,14nm,1.0s,baz=37,slow=5.1
BRY Bratogost 85.93 323 ⇓*i*P **P 05 35 38.7 -0.4**
PDG Podgorica 85.94 322 ⇑P **P 05 35 39.0 +0.1**
PDG Podgorica 85.94 322 ⇓*i*P **P 05 35 39.1 +0.2**
STAL STALIGIAL 85.98 328 IAmb IAmb 05 35 39.4
comp=Z,37nm,1.2s
STAL IAMs_20 IAMs_20 06 15 39.6
comp=Z,2µm,18.0s
BFO Black Forest 86.06 332 P **P 05 35 39.6 +0.1**
BFO pmax pmax
comp=Z,95nm,1.1s
BFO Black Forest 86.06 332 *e*P **P 05 35 40.0 +0.6**
comp=Z,56nm,0.9s,baz=37,slow=5.1
BFO Black Forest 86.06 332 P **P 05 35 39.6 +0.1**
FNA Florina 86.08 320 IAmb IAmb 05 35 41.0
comp=Z,31nm,1.0s
KIJV Kijevo 86.11 325 *i* P **P 05 35 39.3 -0.4**
OHR Ohrid 86.14 320 *i* P **P 05 35 40.3 +0.2**
DRME Dracevica, Mon 86.15 322 ⇓*i*P **P 05 35 40.5 +0.5**
FETA Feichten 86.19 330 *i* PcP **P 05 35 40.5 +0.2**
comp=Z,28nm,1.1s,SNR=7.1
MNTX Cornudas Mount 86.23 53 P **P 05 35 41.3 +0.7**
baz=312,SNR=14
DBRK Dubrovnik 86.30 323 *i* P **P 05 35 40.4 -0.3**
KSU1 Kansas State U 86.30 42 P **P 05 35 40.9 +0.1**
baz=316,SNR=14
D46A Sault St. Mari 86.31 30 P **P 05 35 40.5 -0.2**
baz=324
MATQ Matagami 86.31 25 P **P 05 35 40.6 -0.1**
baz=328,SNR=5.1
DAVA Damuels 86.31 330 *i* PcP **P 05 35 40.9 0.0**
comp=Z,56nm,1.0s,SNR=10
MSTX Muleshoe 86.33 50 P **P 05 35 41.9 +0.7**
baz=313
STON Ston 86.36 323 *i* P **P 05 35 40.2 -0.8**
STON Ston 86.36 323 *e*P **P 05 35 40.2 -0.8**
MAKA Makarska 86.37 324 *i* P **P 05 35 40.1 -0.9**
AMTX Amarillo 86.37 48 IAmb IAmb 05 35 43.1
comp=Z,25nm,0.8s
AMTX Amarillo 86.37 48 P **P 05 35 42.0 +0.7**
baz=313
TIR Tirane 86.44 321 ⇑P **P 05 35 41.6 +0.2**
NEST Nestorio 86.52 320 P **P 05 35 42.5 +0.5**
MORI Morici 86.53 325 *i* P **P 05 35 40.6 -1.2**
STRD Stroud 86.57 339 *e*P **P 05 35 43.0 +1.2**
STRD IAmb IAmb 05 35 43.8
comp=Z,164nm,1.0s
MCH1 Michaelchurch 86.60 340 *e*P **P 05 35 43.0 +1.0**

MCH1 IAmb IAmb 05 35 44.4
comp=Z,52nm,0.9s
AGG Agios Georgios 86.86 318 P **P** **05 35 42.0 -1.6**
U32A Winter Ranch, 86.90 46 IAmb IAmb 05 35 57.9
comp=Z,27nm,1.0s
SANT Santorini 87.03 314 IAMs_20 IAMs_20 06 16 31.3
comp=Z,774nm,22.0s
LSQQ Lebel-sur-Quev 87.14 25 P **P** **05 35 44.8 +0.1**
baz=329
TEOL Teolo 87.14 328 IAmb IAmb 05 35 47.6
comp=Z,17nm,1.0s
TBI Tubuai 87.20 122 *e*S **S** **05 46 21.1 -2.9**
comp=Z,669nm,31.2s
TBI Tubuai 87.20 122 *e*LR LR 06 02 58.0
comp=Z,2µm,32.0s,baz=314
TBI Tubuai 87.20 122 *e*T T 07 11 12.0
comp=Z,10nm,0.3s
KEK Kerkira 87.69 320 P **P** **05 35 46.6 -0.9**
D51A Lot 18 Range I 87.95 28 P **P** **05 35 48.0 -0.6**
baz=327
WMOK Wichita Mounta 88.18 47 IAmb IAmb 05 35 52.7
comp=Z,27nm,1.1s
WMOK Wichita Mounta 88.18 47 P **P** **05 35 50.9 +0.9**
baz=315,SNR=14
DAMY Dhamar 88.31 287 IAmb IAmb 05 35 53.2
comp=Z,26nm,0.9s
DAMY IAMs_20 IAMs_20 06 20 53.0
comp=Z,893nm,20.0s
ITM Ithomi 88.42 317 IAmb IAmb 05 35 51.5
comp=Z,32nm,0.9s
ITM IAMs_20 IAMs_20 06 22 28.1
comp=Z,815nm,18.0s
I47A Gladwin 88.42 32 P **P** **05 35 52.2 +1.3**
baz=324
OKCFA Oklahoma City 88.47 45 IAmb IAmb 05 36 07.5
comp=Z,29nm,1.0s
CLF Chambon-Foret 88.49 335 IAmb IAmb 05 35 58.1
comp=Z,10nm,0.8s
NRCA Norcia 88.52 326 IAmb IAmb 05 35 52.7
comp=Z,30nm,0.8s
NRCA IAMs_20 IAMs_20 06 22 05.9
comp=Z,2µm,19.0s
MATE Matera 88.53 322 ⇓P **P** **05 35 51.6 +0.1**
ANKY Antikythira Is 88.61 315 P **P** **05 35 51.0 -1.0**
I48A Sherman Twp 88.63 32 P **P** **05 35 52.9 +1.0**
baz=324
AQU L'Aquila 88.77 325 IAmb IAmb 05 35 54.4
comp=Z,34nm,0.9s
AQU L'Aquila 88.77 325 ⇓*i*P **P** **05 35 52.8 +0.1**
X34A Smith Ranch, M 88.83 46 IAmb IAmb 05 36 09.0
comp=Z,17nm,1.0s
D54A Lac Fusel, La 88.88 26 P **P** **05 35 52.8 -0.2**
baz=329
TX31 Lajitas Ar. Si 88.91 54 IAmb IAmb 05 35 55.0
comp=Z,14nm,0.8s
TX32 Lajitas Array 88.91 54 IAmb IAmb 05 35 55.0
comp=Z,14nm,0.8s
TXAR Lajitas Array 88.91 54 P **P** **05 35 53.6 0.0**
TXAR Lajitas Array 88.91 54 P **P** **05 35 54.0 +0.4**
comp=Z,12nm,0.7s,baz=300,slow=3.6,SNR=118
TXAR LR LR 06 13 36.2
comp=Z,603nm,18.9s,baz=0.0,slow=34
TXAR Lajitas Array 88.91 54 P **P** **05 35 53.5 0.0**
J47A Sunmer 88.92 33 P **P** **05 35 54.4 +1.1**
baz=323
HDIL Hopedale 88.97 37 P **P** **05 35 53.6 0.0**
baz=320,SNR=5.6
TUL1 Leonard 89.05 44 IAmb IAmb 05 35 55.3
comp=Z,18nm,0.8s
TUL1 Leonard 89.05 44 P **P** **05 35 54.9 +0.8**
baz=317,SNR=5.5
ABTX Abilene, Hawle 89.16 49 IAmb IAmb 05 35 56.0
comp=Z,17nm,1.0s
E53A Dumoine, Ponti 89.18 27 P **P** **05 35 54.4 0.0**
baz=328
LATE Laterza 89.28 326 IAmb IAmb 05 35 55.5
comp=Z,38nm,1.1s
E54A Lac Daplat, Po 89.31 27 P **P** **05 35 55.5 +0.5**
baz=329
ALGO Algonquin Park 89.40 27 P **P** **05 35 55.4 -0.1**
baz=328
D55A Sainte-Anne-du 89.41 25 P **P** **05 35 55.8 +0.3**
baz=330
P43A Skaggs, Pawnee 89.56 38 IAmb IAmb 05 35 57.5
comp=Z,28nm,0.8s
TIP Timpagrande 89.63 321 P **P** **05 35 56.1 -0.7**
TIP Timpagrande 89.63 321 ⇑P **P** **05 35 56.9 +0.1**
TIP Timpagrande 89.63 321 IAmb IAmb 05 35 57.7
comp=Z,14nm,0.8s
O44A Mansfield 89.68 37 IAmb IAmb 05 35 58.4
comp=Z,30nm,1.0s
E55A Montcerf-Lytto 89.69 26 P **P** **05 35 57.2 +0.4**
baz=330
L47A Sherwood 89.76 34 P **P** **05 35 57.9 +0.6**
baz=323
HHAR Hobbs 89.80 43 IAmb IAmb 05 35 58.2
comp=Z,17nm,0.8s
H52A Wyevale 89.81 29 P **P** **05 35 58.1 +0.7**
baz=327,SNR=5.1
G53A Haliburton 89.89 28 P **P** **05 35 58.9 +1.1**
baz=328
CCM Cathedral Cave 89.90 40 P **P** **05 35 58.1 +0.1**
CCM pmax pmax
comp=Z,80nm,1.2s
CCM Cathedral Cave 89.90 40 P **P** **05 35 58.1 +0.1**
CCM Cathedral Cave 89.90 40 P **P** **05 35 58.5 +0.5**
baz=319
D57A Chemin Vers le 89.94 24 P **P** **05 35 58.7 +0.6**
baz=331
E56A St. Veronique 89.97 25 P **P** **05 35 58.3 +0.1**
baz=330
MGMO Mountain Grove 90.05 41 IAmb IAmb 05 35 59.4
comp=Z,26nm,0.9s
L48A N Adams 90.13 34 P **P** **05 35 59.6 +0.6**
baz=324
SFIN Lafayette 90.16 36 P **P** **05 35 59.3 +0.1**
baz=322
L49A Milan 90.29 33 P **P** **05 36 00.7 +1.0**
baz=324
U40A Yellville 90.33 42 P **P** **05 36 00.3 +0.3**
baz=318,SNR=34
H53A Bobcaygeon 90.37 29 P **P** **05 36 00.4 +0.3**
baz=328,SNR=6.9
N47A Urbana 90.41 35 IAmb IAmb 05 36 02.9
comp=Z,41nm,1.1s
N47A Urbana 90.41 35 P **P** **05 36 00.6 +0.3**
baz=323,SNR=5.6
G55A Calabogie 90.49 27 P **P** **05 36 00.9 +0.4**
baz=329,SNR=5.6
JCT Junction City 90.56 50 P **P** **05 36 01.6 +0.3**
baz=314,SNR=5.2
W39A Magazine 90.69 43 P **P** **05 36 02.3 +0.6**
baz=318,SNR=5.7
P46A Rosedale 90.70 37 IAmb IAmb 05 36 03.0
comp=Z,26nm,0.9s
M49A Liberty Center 90.71 34 P **P** **05 36 02.0 +0.3**
baz=324
E58A La Victoria 90.71 24 P **P** **05 36 01.9 +0.3**
baz=332
N48A Decatur 90.73 35 P **P** **05 36 02.5 +0.7**
baz=323,SNR=5.5
WHTX Lake Whitney, 90.91 48 IAMs_20 IAMs_20 06 16 22.6
comp=Z,945nm,20.0s
WHTX Lake Whitney, 90.91 48 P **P** **05 36 03.7 +0.9**
baz=316,SNR=6.4
H55A Tweed 90.92 28 P **P** **05 36 03.3 +0.7**
baz=329
D61A St Aubert, Com 90.95 22 P **P** **05 36 03.6 +1.0**
baz=334
D60A Saint Jean D'O 90.98 23 P **P** **05 36 03.1 +0.3**
baz=333,SNR=7.2
K52A Tillsonburg 91.03 31 P **P** **05 36 04.8 +1.7**
baz=326
N49A Columbus Grove 91.06 34 IAmb IAmb 05 36 05.0
comp=Z,24nm,0.9s
N49A Columbus Grove 91.06 34 P **P** **05 36 03.8 +0.5**
baz=324
O48A Farmland 91.16 35 P **P** **05 36 04.2 +0.4**
baz=323
S44A Carbondale 91.19 39 IAmb IAmb 05 36 05.1
comp=Z,25nm,0.9s
G57A Newington 91.23 26 P **P** **05 36 04.9 +0.9**
baz=330
M1AR Mount Ida 91.28 44 P **P** **05 36 05.3 +0.8**
baz=318,SNR=18
ATD Arta Tunnel 91.36 285 P **P** **05 36 06.5 +1.3**
comp=Z,16nm,0.9s,baz=32,slow=5.0,SNR=5.2
ATD Arta Tunnel 91.36 285 IAmb IAmb 05 36 20.2
comp=Z,15nm,1.0s
D62A Allapoint, All 91.39 21 P **P** **05 36 05.4 +0.7**
baz=335
LCAR Lake Charles 91.45 41 IAmb IAmb 05 36 18.6
comp=Z,21nm,1.1s
W41B Gary Mavity, V 91.54 43 P **P** **05 36 06.2 +0.5**
baz=319,SNR=8.9
O49A Covington 91.58 35 IAmb IAmb 05 36 07.3
comp=Z,32nm,1.1s
O49A Covington 91.58 35 P **P** **05 36 06.4 +0.7**
baz=324
H57A Richville 91.65 27 P **P** **05 36 06.3 +0.3**
baz=330
435B Jarrell 91.69 49 IAmb IAmb 05 36 08.9
comp=Z,17nm,1.1s
X40A Basin Creek Fa 91.73 43 IAmb IAmb 05 36 20.3
comp=Z,15nm,1.1s
X40A Basin Creek Fa 91.73 43 P **P** **05 36 07.7 +1.2**
baz=318,SNR=10
UALR University of 91.79 43 IAmb IAmb 05 36 07.9
comp=Z,19nm,1.1s
F61A St Evariste 91.80 23 P **P** **05 36 08.2 +1.5**
baz=333
O50A Cable 91.94 34 P **P** **05 36 07.9 +0.5**
baz=324
Q48A North Vernon 91.94 36 P **P** **05 36 08.2 +0.7**
baz=323
ACSO Alum Creek Sta 92.16 34 P **P** **05 36 08.9 +0.5**
baz=325
E63A Oxbow 92.18 21 P **P** **05 36 08.5 +0.2**
baz=335
WCI Wyandotte Cave 92.23 37 P **P** **05 36 09.0 +0.2**
WCI pmax pmax
comp=Z,19nm,1.1s
WCI Wyandotte Cave 92.23 37 P **P** **05 36 09.0 +0.2**
WCI IAmb IAmb 05 36 10.0
comp=Z,19nm,1.1s
WCI Wyandotte Cave 92.23 37 P **P** **05 36 09.7 +0.9**
baz=322
Q49A Aurora 92.28 36 P **P** **05 36 10.0 +1.0**
baz=323
T47A Sharon Grove 92.81 38 IAmb IAmb 05 36 12.7
comp=Z,20nm,0.8s
Q51A Peebles 92.97 35 IAmb IAmb 05 36 13.3
comp=Z,23nm,0.9s
Q51A Peebles 92.97 35 P **P** **05 36 12.4 +0.2**
baz=324
S49A Springfield 93.07 37 P **P** **05 36 13.2 +0.5**
baz=323
R50A Paris 93.12 36 IAmb IAmb 05 36 14.6
comp=Z,12nm,0.9s
R50A Paris 93.12 36 P **P** **05 36 13.3 +0.4**
baz=324
WVT Waverly 93.12 39 P **P** **05 36 13.4 +0.4**
WVT pmax pmax
comp=Z,14nm,1.0s
WVT Waverly 93.12 39 P **P** **05 36 13.3 +0.4**
WVT IAmb IAmb 05 36 13.9
comp=Z,14nm,0.9s
WVT Waverly 93.12 39 P **P** **05 36 13.4 +0.4**
baz=321
WDD Wied Dalam 93.34 321 IAMs_20 IAMs_20 06 23 53.6
comp=Z,2µm,19.0s
HKT Hockley 93.34 48 P **P** **05 36 15.3 +1.3**
HKT pmax pmax
comp=Z,4.0nm,1.1s
HKT Hockley 93.34 48 P **P** **05 36 15.3 +1.3**
T49A Edmonton 93.49 37 IAmb IAmb 05 36 16.3
comp=Z,19nm,1.1s
T49A Edmonton 93.49 37 P **P** **05 36 15.5 +0.8**
baz=323,SNR=5.1
Q52A Bidwell 93.51 34 P **P** **05 36 14.2 -0.5**
baz=325
OXF Oxford 93.56 41 P **P** **05 36 15.9 +1.0**
baz=320
S50A Richmond 93.57 36 P **P** **05 36 15.5 +0.5**
baz=324
U49A Red Boiling Sp 93.84 38 P **P** **05 36 16.9 +0.6**
baz=323,SNR=6.0
T50A Nancy 93.89 37 P **P** **05 36 16.8 +0.3**
baz=323,SNR=6.5
CLTN Cedars of Leba 93.90 38 IAmb IAmb 05 36 18.1
ZAIG Zaatecas 94.07 58 IAmb IAmb 05 36 35.9
comp=Z,11nm,1.1s
ZAIG IAMs_20 IAMs_20 06 16 07.1
comp=Z,1µm,19.0s
V49A McMinnville 94.37 38 P **P** **05 36 18.8 0.0**
baz=323
U50A Jamestown 94.37 37 P **P** **05 36 19.3 +0.6**
baz=323
W49A Belvidere 94.70 39 P **P** **05 36 20.4 +0.2**
baz=322
SWET Sewanee 94.79 39 IAmb IAmb 05 36 21.0
comp=Z,14nm,0.9s
KEST Kesra 95.96 324 P **P** **05 36 26.1 0.0**
comp=Z,9.2nm,1.1s,baz=3.7,slow=7.2,SNR=5.6
KEST LR LR 06 24 39.4
comp=Z,1µm,18.3s,baz=342,slow=39
KEST Kesra 95.96 324 IAmb IAmb 05 36 26.8
comp=Z,13nm,1.1s
FURI Furi 96.20 286 IAMs_20 IAMs_20 06 27 57.1
comp=Z,733nm,18.0s
Z50A Ashland 96.35 40 P **P** **05 36 27.8 0.0**
baz=322
ESDC Sonseca Array 97.97 335 P **P** **05 36 34.8 -0.3**
comp=Z,1.5nm,0.8s,baz=24,slow=4.0,SNR=5.7
ESDC LR LR 06 25 54.0
comp=Z,1µm,19.3s,baz=40,slow=38
ESDC Sonseca Array 97.97 335 P **P** **05 36 34.7 -0.4**
MBAR Mbarara 108.29 284 IAMs_20 IAMs_20 06 30 44.6
comp=Z,778nm,22.0s
TORD Torodi Ar. Bea 118.42 317 PKP **PKPdf** **05 41 45.8 -1.1**
comp=Z,1.9nm,0.6s,baz=29,slow=1.5,SNR=16
TORD PP PP 05 42 48.2 -14
comp=Z,2.0nm,0.9s,baz=44,slow=4.5,SNR=4.4
TORD PKKPbc **PKKPbc** **05 52 03.0 -0.2**
comp=Z,1.6nm,0.7s,baz=225,slow=3.1,SNR=7.6
TORD PKKP **PKKPdf** **05 52 30.1 -1.6**
comp=Z,1.1nm,0.7s,baz=216,slow=3.8,SNR=3.8
TORD Torodi Ar. Bea 118.42 317 **PKPdf** **05 41 45.9 -1.0**
LSZ Lusaka 119.03 272 PKIKP **PKPdf** **05 41 47.7 -0.5**
LSZ Lusaka 119.03 272 **PKPdf** **05 41 47.7 -0.5**
SABA Saba 120.16 30 IAMs_20 IAMs_20 06 35 15.8
comp=Z,727nm,20.0s
MAW Mawson 120.19 206 PKIKP **PKPdf** **05 41 47.9 -0.7**
MAW Mawson 120.19 206 PKP **PKPdf** **05 41 48.7 0.0**
comp=Z,7.5nm,1.0s,baz=126,slow=7.7,SNR=6.8
MAW Mawson 120.19 206 **PKPdf** **05 41 47.9 -0.7**
PTBC PUERTO BERRIO 124.10 47 *e*P **PKPdf** **05 41 56.1 -1.8**
SDV Santo Domingo 124.33 42 *e*P **PKPdf** **05 41 57.5 -1.1**
SDV Santo Domingo 124.33 42 **PKPdf** **05 41 58.2 -0.4**
SDV IAMs_20 IAMs_20 06 40 16.1
comp=Z,429nm,20.0s
GUY2C Guyana, Caldas 124.61 49 *e*P **PKPdf** **05 41 57.9 -1.6**
SOCV Socops 124.72 43 *e*P **PKPdf** **05 41 58.3 -0.8**
YOTC Yotoco, Valle 124.97 51 *e*P **PKPdf** **05 41 57.9 -1.9**
SPBC San Pablo de B 125.04 48 *e*P **PKPdf** **05 41 58.8 -1.1**
RUSC La Rusia 125.42 46 *e*P **PKPdf** **05 41 59.7 -1.4**
ROSC El Rosal 125.54 48 PKP **PKPdf** **05 42 01.4 +0.2**
comp=Z,4.8nm,0.5s,baz=91,slow=13,SNR=4.1
ORTC Ortega, Tolima 125.71 50 *e*P **PKPdf** **05 41 58.8 -2.3**
CHIC Chingaza 126.06 48 *e*P **PKPdf** **05 42 01.5 -0.7**
LBTB Lobatse 126.16 264 PKIKP **PKPdf** **05 42 01.6 0.0**
LBTB Lobatse 126.16 264 **PKPdf** **05 42 01.6 0.0**
SOTA Rioblanco 126.23 53 *e*P **PKiKP** **05 42 04.2 +1.1**
OTAV Otavalo 126.47 56 PKIKP **PKiKP** **05 42 03.4 -0.1**
OTAV Otavalo 126.47 56 **PKiKP** **05 42 03.4 -0.1**
OTAV Otavalo 126.47 56 IAMs_20 IAMs_20 06 46 01.5
comp=Z,496nm,18.0s
VILC Villavicencio, 126.49 48 *e*P **PKPdf** **05 41 59.7 -3.0**
VILC *e*P **PKPdf** **05 41 59.7 -3.0**
ELOV Elorza 126.52 42 *e*P **PKPdf** **05 42 02.4 -0.1**
QSPA South Pole Qui 126.75 180 **PKPdf** **05 42 00.6 -0.8**
DBIC Dimbokro 127.34 319 PKIKP **PKPdf** **05 42 03.3 -0.8**
DBIC Dimbokro 127.34 319 PKP **PKPdf** **05 42 03.2 -0.9**
comp=Z,7.1nm,0.9s,baz=42,slow=4.1,SNR=8.3
DBIC PP PP 05 43 48.8 -14
comp=Z,2.7nm,0.8s,baz=343,slow=14,SNR=2.5
DBIC Dimbokro 127.34 319 **PKPdf** **05 42 03.3 -0.8**
TIC Toumodi 127.44 319 *e*PKP1 **PKPdf** **05 42 03.5 -0.8**
KIC Kosan Boka 127.54 318 *e*PKP1 **PKPdf** **05 42 03.4 -1.1**
comp=Z,36nm,1.2s
LIC Lamto 127.80 319 *e*PKP1 **PKPdf** **05 42 04.5 -0.5**
comp=Z,5.9nm,0.4s
BOSA Boshof 128.08 260 PKP **PKiKP** **05 42 05.6 -0.2**
comp=Z,3.8nm,0.9s,baz=281,slow=1.6,SNR=5.4
SYO Syowa Base 128.88 207 ⇓*i*PKPdf **PKPdf** **05 42 04.0 -1.2**
SYO Syowa Base 128.88 207 ⇓*e*PKiKP **PKiKP** **05 42 07.0 +1.1**
PTLC Puerto Leguiza 128.89 52 *e*P **PKPdf** **05 42 06.9 -0.2**
NVL N'lazarevskaya 137.84 202 *e*PKIKP **PKPdf** **05 42 22.1 0.0**
NVL pmax pmax
comp=Z,29nm,1.3s
SNAA Sanae 141.17 196 PKPdf **PKPdf** **05 42 22.0 -6.2**
SNAA Sanae 141.17 196 PP PP 05 45 29.2 -1.3
SNAA Sanae 141.17 196 PKHKP PKPdf 05 42 20.3 -7.9
SNAA 05 42 27.5
SNAA Sanae 141.17 196 PKPdf 05 42 20.3 -7.9
SNAA **PKiKP** **05 42 27.5 -3.5**
VNA3 Neumayer Olymp 142.93 194 PKPdf **PKPdf** **05 42 26.8 -4.5**
VNA3 Neumayer Olymp 142.93 194 PP PP 05 45 40.0 -1.1
VNA1 Neumayer--Stat 143.11 195 PKPdf PKPab 05 42 27.8 +0.7
VNA1 Neumayer--Stat 143.11 195 PP PP 05 45 42.9 +0.8
H10N2 ASCENSION HYDR 144.64 320 PKP **PKPdf** **05 42 35.9 +0.3**
baz=37,slow=5.0,SNR=4.4
H10N1 ASCENSION HYDR 144.65 320 PKP **PKPdf** **05 42 36.2 +0.5**
baz=37,slow=5.0,SNR=4.7
H10N3 ASCENSION HYDR 144.66 320 PKP **PKPdf** **05 42 36.2 +0.5**
baz=37,slow=5.0,SNR=4.7
ASCN Ascension 144.66 319 PKPbc 05 42 35.4 +0.5
LPAZ La Paz 145.36 62 PKPbc **PKPbc** **05 42 37.7 -0.1**
comp=Z,22nm,0.8s,baz=344,slow=3.2,SNR=44
SHEL Horse Pasture 145.52 299 PKIKP **PKPab** **05 42 38.3 +0.5**
SHEL Horse Pasture 145.52 299 **PKPab** **05 42 38.3 +0.5**
MNMC Minye Minye 146.15 67 **PKPab** **05 42 40.6 +0.2**
PMSA Palmer Station 147.80 158 **PKPbc** **05 42 42.2 -0.4**
LVC Limon Verde 148.73 72 PKIKP **PKPdf** **05 42 44.9 +1.8**
LVC Limon Verde 148.73 72 **PKPdf** **05 42 44.9 +1.8**
RCBR Riachuelo 148.95 359 PKP2 **PKPbc** **05 42 47.6 +0.3**
RCBR Riachuelo 148.95 359 **PKPbc** **05 42 47.6 +0.3**
ROC1 El Roble 151.67 92 **PKPbc** **05 42 53.5 -0.1**
CFA Coronel Fontan 153.44 88 PKPbc **PKiKP** **05 42 58.0 +0.6**
comp=Z,5.1nm,0.5s,baz=241,slow=2.2,SNR=11
CFA PKPab **PKPab** **05 43 10.8 +1.1**
comp=Z,12nm,0.9s,baz=3.3,slow=2.8,SNR=7.8
PLCA Paso Flores 153.46 109 PKPbc **PKiKP** **05 42 57.7 +0.5**
comp=Z,9.3nm,1.0s,baz=237,slow=2.0,SNR=12
PLCA PKPab **PKPab** **05 43 10.8 +1.3**
comp=Z,12nm,0.9s,baz=292,slow=3.4,SNR=18
PLCA Paso Flores 153.46 109 **PKPdf** **05 42 49.8 +0.4**
PLCA **PKiKP** **05 42 57.8 +0.5**
PLCA **PKPab** **05 43 10.0 +0.5**
BDFB Brasilia 156.45 28 PKP2 **PKPab** **05 43 19.7 -3.0**
BDFB Brasilia 156.45 28 PKPab **PKPab** **05 43 22.1 -0.6**
comp=Z,6.7nm,0.9s,baz=249,slow=6.8,SNR=7.2
BDFB Brasilia 156.45 28 **PKPab** **05 43 19.7 -3.0**
CPUP Villa Florida 159.48 65 PKPab **PKPab** **05 43 35.3 -0.3**
comp=Z,5.1nm,1.0s,baz=303,slow=3.5,SNR=8.6

MAN 04 05:28:55.5, 7.93N×127.68E, h15km, mb4.6, ML3.4, MS3.3,
Philippine Islands region

KRSC 04 05:42:17.6±1.0, 55.48N×165.99E, h33km±10km, ML3.7,
Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.28**	**182**	*e*P			Pn	05 42 25.5	+0.1
BKI				*e*S			Sn	05 42 31.0	+0.6
KBTR	**Krutoberegovo**	**1.93**	**293**	*e*P			Pn	05 42 49.4	+1.3
KBTR				*e*S			Sn	05 43 13.2	+1.9
MKZ	**Mys Kozlova**	**2.62**	**251**	*e*P			Pb	05 43 00.8	-3.1
MKZ				*e*S			Sb	05 43 32.3	-3.3
ZLN	**Zelenaya**	**2.98**	**282**	*e*P			Pn	05 43 05.8	+3.1
TUMD	**Tumrok D**	**3.21**	**267**	*e*P			Pb	05 43 09.9	-3.9
TUMD				*e*S			Sb	05 43 48.6	-3.8
KMNR	**Kamenistaya**	**3.27**	**277**	*e*P			Pn	05 43 10.8	+4.1
KZV	**Kizimen**	**3.28**	**266**	*e*P			Pn	05 43 10.3	+3.5
KZV				*e*S			Sn	05 43 49.1	+4.4
KPT	**Kopyto**	**3.30**	**281**	*e*P			Pn	05 43 10.6	+3.6
TUMR	**Tumrok**	**3.34**	**269**	*e*P			Pn	05 43 11.3	+3.7
KOZ	**Kozyrevsk**	**3.50**	**282**	*e*P			Pn	05 43 14.3	+4.5
SPN	**Mys Shipunski**	**4.24**	**238**	*e*P			Pn	05 43 23.1	+3.3
SPN				*e*S			Sn	05 44 12.1	+4.1
SDLR	**Sedlovina**	**4.71**	**245**	*e*P			Pn	05 43 31.0	+4.6
SMAR	**Somma**	**4.76**	**245**	*e*P			Pn	05 43 31.9	+4.8
KRER	**Koryakskii**	**4.76**	**246**	*e*P			Pn	05 43 32.3	+5.1
UGLR	**Uglovaya**	**4.77**	**244**	*e*P			Pn	05 43 31.7	+4.4
KRX	**Arik**	**4.79**	**247**	*e*P			Pn	05 43 31.7	+4.2
AVH	**Avacha**	**4.79**	**245**	*e*P			Pn	05 43 32.7	+5.2
KOK	**Koryaka**	**4.83**	**246**	*e*P			Pn	05 43 33.0	+5.0
GNL	**Ganaly**	**5.01**	**252**	*e*P			Pn	05 43 35.6	+5.0
KRMR	**Karymshinskiy**	**5.33**	**243**	*e*S			Sn	05 44 40.0	+5.0
RUS	**Russkaya**	**5.37**	**238**	*e*P			Pn	05 43 40.4	+5.1

*SJA **04** 06:05:51.4±0.7, 33.59S×72.74W, h20km, ML3.9, MW4.1*
*IDC **04** 06:05:54.5±1.1, 33.67S×72.05W, h0km, mb4.0/7,*
mb1 4.1/10, mb1mx3.9/34, mbtmp4.0/10, ML4.0/3, MS3.9/3,
Ms1 3.9/3, ms1mx3.4/24, Error ellipse: s-maj=34.4km
s-min=21.8km az=98.0
*GUC **04** 06:05:55.6±0.7, 33.76S×72.26W, h36km±8km, ML4.0*
*NEIC **04** 06:05:58.1±2.9, 33.73S±0.05×72.3W±0.1, h32km±3km,*
mb4.2/6, ML4.0(GUC), Error ellipse: s-maj=17.9km
s-min=6.7km az=104.0

ISC 04 06:05:56.9±2.3, 33.69S±0.05×72.46W±0.07, h25km±16km,
n58, σ1.87/65, mb4.1/7, 1C-3D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.95**	**46**	*i* P			**Pn**	**06 06 12.9**	**-1.8**
VA01				*i* S			**Sn**	**06 06 25.2**	**-2.2**
GO05	**Huala**	**1.39**	**162**	⇑*i*P			**Pn**	**06 06 19.1**	**-1.6**
GO05				*i* S			**Sn**	**06 06 35.9**	**-2.5**
GO05				IAML				06 06 41.9	
comp=N,3µm,0.3s									
GO05	**Huala**	**1.39**	**162**				**Pn**	**06 06 19.3**	**-1.5**
ROC1	**El Roble**	**1.40**	**60**				**Pn**	**06 06 19.5**	**-1.7**
ROC1	**El Roble**	**1.40**	**60**	*i* P			**Pn**	**06 06 20.0**	**-1.2**
ROC1				*e*S			**Sb**	**06 06 41.8**	**+1.7**
ROCH	**El Roble**	**1.41**	**60**	*i* P			**Pn**	**06 06 19.6**	**-1.6**
ROCH				*i* S			**Sn**	**06 06 37.5**	**-1.6**
ROCH				IAML				06 06 39.5	
comp=N,3µm,0.3s									
PEL	**Peldehue**	**1.58**	**70**	⇓*i*P			**Pn**	**06 06 21.9**	**-1.5**
PEL				*i* S			**Sn**	**06 06 41.1**	**-2.1**
PEL				IAML				06 06 49.1	
comp=E,6µm,0.4s									
PEL	**Peldehue**	**1.58**	**70**				**Pn**	**06 06 21.8**	**-1.6**
PEL	**Peldehue**	**1.58**	**70**	*i* P			**Pn**	**06 06 22.1**	**-1.4**
PEL				*e*S			**Sb**	**06 06 47.4**	**+2.3**
CLCH	**Cerro Calan**	**1.63**	**80**	⇓*i*P			**Pn**	**06 06 22.0**	**-2.1**
CLCH				*i* S			**Sn**	**06 06 42.5**	**-1.9**
LMEL	**Las Melosas**	**1.89**	**95**	⇓*i*P			**Pn**	**06 06 25.6**	**-2.2**
LMEL				*i* S			**Sn**	**06 06 49.0**	**-1.9**
LMEL				IAML				06 06 54.9	
comp=N,4µm,0.2s									
COIS	**El Sosneado**	**2.76**	**122**	*i* P			**Pn**	**06 06 40.7**	**+1.0**
COIS				*e*S			**Sb**	**06 07 17.7**	**-1.3**
CCHI	**Chillan**	**2.92**	**174**	*i* P			**Pn**	**06 06 41.6**	**-0.3**
ARCO	**CERRO ARCO**	**3.08**	**75**	*i* P			**Pn**	**06 06 45.4**	**+1.3**
ARCO				*e*S			**Sn**	**06 07 24.1**	**+4.0**
ARCO				IAML				06 07 31.0	
comp=Z,469nm,0.6s									
AAGR	**Agrelo**	**3.10**	**80**	*i* P			**Pn**	**06 06 45.5**	**+1.1**
AAGR				IAML				06 07 42.1	
comp=Z,256nm,1.4s									
ASAL	**Salagasta**	**3.23**	**71**	*i* P			**Pn**	**06 06 47.1**	**+1.0**
ASAL				IAML				06 07 42.4	
comp=Z,348nm,0.8s									
EDS3	**Malargue**	**3.27**	**130**	*i* P			**Pn**	**06 06 48.3**	**+1.6**
GO04	**Tololo Observa**	**3.78**	**22**				**Pn**	**06 06 53.2**	**-0.6**
ZON	**Zonda**	**3.84**	**57**	*i* P			**Pn**	**06 06 54.8**	**+0.2**
ZON				IAML				06 08 02.8	
comp=Z,177nm,1.4s									
RTLL	**Cerro Villicun**	**4.11**	**56**	*i* P			**Pn**	**06 06 58.8**	**+0.6**
RTLL				IAML				06 08 08.5	
comp=Z,136nm,0.6s									
CFA	**Coronel Fontan**	**4.12**	**61**	Pn			**Pn**	**06 06 58.6**	**+0.2**
comp=Z,8.0nm,0.3s,baz=226,slow=7.5,SNR=152									
CFA				Lg			Lg	06 07 56.7	
comp=Z,26nm,0.3s,baz=77,slow=13,SNR=5.6									
CFA				LR			LR	06 08 51.6	
comp=Z,308nm,18.1s,baz=226,slow=46									
CFA	**Coronel Fontan**	**4.12**	**61**	*i* P			**Pn**	**06 06 58.9**	**+0.5**
AMOG	**MOGNA**	**4.34**	**52**	*i* P			**Pn**	**06 07 01.7**	**+0.3**

AMOG IAML 06 08 16.2
comp=Z,152nm,0.5s

CANA Caviahue 4.34 165 *i* P **Pn 06 07 02.1 +0.6**
CANA IAML 06 08 21.3
comp=Z,76nm,1.0s

ACAN Cantantal 4.65 74 *i* P **Pn 06 07 06.2 +0.6**
ACAN IAML 06 08 29.6
comp=Z,47nm,0.6s

AGUA GUANDACOL 5.39 40 *i* P **Pn 06 07 16.2 +0.4**
AGUA IAML 06 09 01.0
comp=Z,18nm,0.7s

MRA San Martin 5.80 79 *i* P **Pn 06 07 22.4 +0.9**
MRA IAML 06 09 02.9
comp=Z,24nm,0.6s

VCA Vinchina 6.14 38 *i* P **Pn 06 07 25.6 -0.6**
VCA IAML 06 09 13.9
comp=Z,149nm,0.8s

PLCA Paso Flores 7.19 168 Pn **Pn 06 07 40.6 0.0**
comp=Z,0.8nm,0.3s,baz=354,slow=11,SNR=39

PLCA Paso Flores 7.19 168 *i* P **Pn 06 07 40.9 +0.3**
CYA Choya 7.74 49 *i* P **Pn 06 07 44.8 -3.3**
AHML Horco Molle 9.23 44 *i* P **Pn 06 08 04.2 -4.4**
LVC Limon Verde 11.47 17 Pn **Pn 06 08 35.2 -4.3**
comp=Z,0.4nm,0.3s,baz=135,slow=10.0,SNR=4.4
LVC Limon Verde 11.47 17 Pn **Pn 06 08 35.1 -4.4**
LVC Limon Verde 11.47 17 *i* P Pn 06 08 34.4 -5.1
PB11 IPOC Station P 14.10 11 P **Pn 06 09 18.7 +3.5**
MNMC Minye Minye 14.72 11 P **Pn 06 09 25.0 +1.1**
CPUP Villa Florida 15.01 65 Pn **Pn 06 09 24.1 -3.3**
comp=Z,0.1nm,0.3s,baz=242,slow=12,SNR=2.5
CPUP Villa Florida 15.01 65 **Pn 06 09 27.8 +0.3**
LPAZ La Paz 17.76 14 P **P 06 10 03.2 -0.6**
comp=Z,0.2nm,0.3s,baz=191,slow=6.6,SNR=11
LPAZ La Paz 17.76 14 P **P 06 10 04.0 +0.2**
SIV San Ignacio 20.40 33 P **P 06 10 30.9 -1.2**
comp=Z,3.4nm,0.6s,baz=231,slow=9.3,SNR=21
SAML Samuel 26.06 21 P **P 06 11 28.8 +0.3**
BDFB Brasilia 28.45 57 P **P 06 11 48.2 -1.9**
comp=Z,2.4nm,0.5s,baz=244,slow=7.7,SNR=6.2
BDFB Brasilia 28.45 57 P **P 06 11 48.3 -1.8**
BDFB IAmb IAmb 06 11 56.7
comp=Z,6.7nm,1.2s
SNAA Sanae 52.01 158 P **P 06 15 03.6 -0.2**
SNAA IAmb IAmb 06 15 04.6
comp=Z,2.4nm,0.9s
QSPA South Pole Qui 56.55 180 P **P 06 15 38.3 +1.2**
comp=Z,1.4nm,0.9s,baz=155,slow=3.8,SNR=4.2
QSPA South Pole Qui 56.55 180 P **P 06 15 38.8 +1.7**
QSPA IAmb IAmb 06 15 54.9
comp=Z,3.7nm,1.2s
TXAR Lajitas Array 69.29 331 P **P 06 17 04.5 +2.4**
comp=Z,0.3nm,0.6s,baz=152,slow=8.6,SNR=6.8
TXAR Lajitas Array 69.29 331 P **P 06 17 04.7 +2.5**
ANMO Albuquerque 75.34 332 LR LR 06 47 00.3
comp=Z,191nm,18.2s,baz=58,slow=33
DBIC Dimbokro 75.41 72 P **P 06 17 38.5 -0.5**
comp=Z,1.5nm,0.8s,baz=127,slow=5.0,SNR=3.1
DBIC Dimbokro 75.41 72 P **P 06 17 38.7 -0.3**
BOSA Boshof 80.53 118 P **P 06 18 08.2 +0.8**
comp=Z,1.1nm,0.7s,baz=192,slow=2.2,SNR=3.6
BOSA Boshof 80.53 118 P **P 06 18 08.7 +1.3**
BOSA IAmb IAmb 06 18 17.1
comp=Z,3.5nm,1.1s
TORD Torodi Ar. Bea 84.44 70 P **P 06 18 27.4 -0.4**
comp=Z,1.8nm,0.8s,baz=268,slow=4.5,SNR=7.5
NEW Newport 90.83 332 LR LR 06 54 02.2
comp=Z,119nm,20.1s,baz=39,slow=32
BVAR Borovoye Array 147.29 42 PKPbc **PKPbc 06 25 38.2 +0.5**
comp=Z,0.5nm,0.4s,baz=273,slow=2.0,SNR=3.8

IDC 04 06:13:56.0±44.0, 15°.82S×176°.32W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/35, mbtmp4.1/3, Error ellipse: s-maj=834.6km s-min=166.0km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.40**	**240**	P	P	06 21 44.9	+0.6
	1.8nm,0.6s,baz=77,slow=8.5,SNR=5.3						
WRA	**Warramunga Arr**	**47.01**	**257**	P	P	06 22 28.2	-1.2
	0.4nm,0.2s,baz=96,slow=7.7,SNR=7.4						
ASAR	**Alice Springs**	**47.31**	**252**	P	P	06 22 31.9	+0.2
	5.0nm,0.6s,baz=88,slow=8.1,SNR=98						

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*IDC **04** 06:19:06.5±3.0, 53°.54N×90°.64E, h0km, mb1 3.3/4, mb1mx3.1/47, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=26.5km s-min=21.1km az=64.0*
*NNC **04** 06:19:10.2±1.8, 53°.38N×90°.48E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=15.8km s-min=10.5km az=86.0*
ASRS 04 06:19:02.5, 53°.72N×91°.05E, M2.5, 4C-5D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.70**	**276**	⇑Pn	Pb	06 20 05.2	-3.4
	3.3nm,0.8s						
ZAA0				⇑Lg	Lg	06 20 56.7	
	22nm,1.2s						
ZALV	**Zalesovo Beam**	**3.70**	**276**	Pn	Pn	06 20 01.0	+0.2
	0.3nm,0.3s,baz=95,slow=12,SNR=3.8						
ZALV				Lg	Lg	06 20 56.3	
	5.4nm,0.3s,baz=99,slow=25,SNR=12						
KURBB	**Kurchatov Arra**	**8.30**	**253**	Pn	Pn	06 21 03.2	-0.7
	0.2nm,0.3s,baz=64,slow=14,SNR=6.1						
KURBB				Sn	Sn	06 22 34.0	-4.3
	0.1nm,0.3s,baz=68,slow=21,SNR=4.4						
KURBB				Lg	Lg	06 23 22.5	
	0.1nm,0.3s,baz=65,slow=36,SNR=6.1						
KURBB	**Kurchatov Arra**	**8.30**	**253**	⇑Pn	Pn	06 21 05.2	+1.2
	2.3nm,0.4s						
KURBB				⇓Sn	Sn	06 22 38.0	-0.3
	56nm,0.8s						
KURBB				⇓Lg	Lg	06 23 20.0	
	84nm,0.9s						
MK31	**Makanchi Array**	**8.91**	**222**	Pn	Pn	06 21 13.4	+1.0
	2.7nm,0.9s,baz=37,slow=12,SNR=14						
MK31				Sn	Sn	06 22 51.3	-2.2
	3.1nm,0.7s,baz=37,slow=24,SNR=5.0						
MK31				⇓Lg	Lg	06 23 42.9	
	22nm,1.0s,baz=36,slow=26,SNR=4.8						
MKAR	**Makanchi Array**	**8.91**	**222**	Pn	Pn	06 21 13.3	+0.9
	0.2nm,0.3s,baz=35,slow=13,SNR=15						
MKAR				Sn	Sn	06 22 50.1	-3.4
	0.1nm,0.3s,baz=31,slow=20,SNR=3.0						
MKAR				Lg	Lg	06 23 38.3	
	0.0nm,0.3s,baz=37,slow=24,SNR=6.5						
MAKZ	**Makanchi**	**9.03**	**224**	⇓Pn	Pn	06 21 14.5	+0.5
	0.4nm,0.4s						
MAKZ				⇓Sn	Sn	06 22 52.5	-3.8
	5.6nm,0.8s						
MAKZ				⇑Lg	Lg	06 23 42.2	
	23nm,1.1s						
SONM	**Songino Array**	**11.35**	**115**	Lg	Lg	06 24 60.0	
	0.1nm,0.3s,baz=300,slow=24,SNR=10						
I34MN	**SONGINO INFRAS**	**11.38**	**115**	*i*		07 24 10.0	
	baz=310,slow=338,SNR=1.1						
BVAR	**Borovoye Array**	**12.36**	**275**	Pn	Pn	06 21 59.5	0.0
	0.1nm,0.3s,baz=70,slow=13,SNR=2.1						

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*KRSC **04** 06:39:36.2±1.9, 48°.79N×156°.57E, h30km±23km, ML4.4*
*IDC **04** 06:39:39.0±3.2, 48°.91N×154°.82E, h78km±31km, mb3.1/5, mb1 3.6/9, mb1mx3.3/42, mbtmp3.7/9, Error ellipse: s-maj=40.6km s-min=18.4km az=130.0*
ISC 04 06:39:34.9±1.0, 48°.57N±0°.09×155°.8E±0°.1, h35km, n37, σ2s03/40, mb3.6/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.12**	**6**	*e*P	**Pn**	**06 40 07.5**	**-0.4**
SKR				*e*S	**Sn**	**06 40 30.8**	**-2.2**
PAU	**Pauzhetka**	**2.98**	**13**	*e*P	**Pn**	**06 40 20.2**	**+0.6**
PAU				*e*S	**Sn**	**06 40 52.9**	**-1.1**
KDTR	**Khodutka, Kamc**	**3.56**	**24**	*e*P	**Pn**	**06 40 27.7**	**0.0**
KDTR				*e*S	**Sn**	**06 41 06.1**	**-2.4**
ASAK	**Asacha**	**4.05**	**19**	*e*P	**Pn**	**06 40 36.0**	**+1.5**
ASAK				*e*S	**Sn**	**06 41 20.4**	**-0.3**
MTVR	**Mutnovka**	**4.21**	**21**	*e*P	**Pn**	**06 40 37.8**	**+1.1**
RUS	**Russkaya**	**4.25**	**23**	*e*P	**Pn**	**06 40 37.7**	**+0.7**
RUS				*e*S	**Sn**	**06 41 23.5**	**-1.8**
GRL	**Gorelyy**	**4.25**	**19**	*e*P	**Pn**	**06 40 38.9**	**+1.7**
APC	**Apacha**	**4.45**	**11**	*e*P	**Pn**	**06 40 42.6**	**+2.8**
KRMR	**Karymshinskiy**	**4.52**	**19**	*e*P	**Pn**	**06 40 42.4**	**+1.6**
KRMR				*e*S	**Sn**	**06 41 31.0**	**-1.1**
PETK	**Petropavlovsk-**	**4.70**	**14**	P	**Pn**	**06 40 45.2**	**+1.9**
	3.6nm,0.3s,baz=181,slow=13,SNR=67						
PETK				S	**Sn**	**06 41 41.8**	**+5.1**
	1.0nm,0.3s,baz=236,slow=21,SNR=2.5						
UGLR	**Uglovaya**	**5.03**	**22**	*e*P	**Pn**	**06 40 49.9**	**+2.0**
AVH	**Avacha**	**5.06**	**21**	*e*P	**Pn**	**06 40 50.5**	**+2.2**
AVH				*e*S	**Sn**	**06 41 43.1**	**-2.4**
KOK	**Koryaka**	**5.06**	**20**	*e*P	**Pn**	**06 40 49.9**	**+1.6**
SMAR	**Somma**	**5.07**	**21**	*e*P	**Pn**	**06 40 49.9**	**+1.3**
KRER	**Koryakskii**	**5.10**	**21**	*e*P	**Pn**	**06 40 51.7**	**+2.7**
SDLR	**Sedlovina**	**5.11**	**22**	*e*P	**Pn**	**06 40 49.7**	**+0.7**
NLC	**Nalytchevo**	**5.13**	**25**	*e*P	**Pn**	**06 40 49.1**	**-0.1**
NLC				*e*S	**Sn**	**06 41 43.4**	**-3.7**
SPN	**Mys Shipunski**	**5.27**	**29**	*e*P	**Pn**	**06 40 51.0**	**-0.1**
SPN				*e*S	**Sn**	**06 41 48.4**	**-2.2**
GNL	**Ganaly**	**5.31**	**14**	*e*P	**Pn**	**06 40 52.9**	**+1.1**
MKZ	**Mys Kozlova**	**7.05**	**30**	*e*P	**Pn**	**06 41 15.0**	**-0.5**
KZV	**Kizimen**	**7.12**	**21**	*e*P	**Pn**	**06 41 19.9**	**+3.2**
TUMD	**Tumrok D**	**7.23**	**22**	*e*P	**Pn**	**06 41 19.3**	**+1.3**
TUMR	**Tumrok**	**7.25**	**20**	*e*P	**Pn**	**06 41 20.0**	**+1.7**
ASAJ	**Asahikawa**	**10.13**	**249**	P	**Pn**	**06 41 56.9**	**-0.9**
	1.5nm,0.3s,baz=82,slow=18,SNR=9.6						
MA2	**Magadan**	**11.40**	**347**	P	**Pn**	**06 42 11.4**	**-3.6**
	0.7nm,0.3s,baz=14,slow=19,SNR=2.6						
SEY	**Seymchan**	**14.52**	**354**	P	**Pn**	**06 42 54.9**	**-2.7**
	0.4nm,0.3s,baz=152,slow=21,SNR=4.5						
H11N2	**WAKE ISLAND Hy**	**30.15**	**159**	T	T	07 17 39.6	
	baz=344,slow=78,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	**30.16**	**159**	T	T	07 17 57.2	
	baz=344,slow=78,SNR=4.6						
H11N3	**WAKE ISLAND Hy**	**30.16**	**159**	T	T	07 17 55.7	
	baz=344,slow=78,SNR=4.3						
H11S1	**WAKE ISLAND Hy**	**31.28**	**160**	T	T	07 19 08.4	
	baz=345,slow=76,SNR=90						
H11S3	**WAKE ISLAND Hy**	**31.29**	**160**	T	T	07 19 05.7	
	baz=345,slow=76,SNR=148						
H11S2	**WAKE ISLAND Hy**	**31.30**	**160**	T	T	07 19 17.2	
	baz=345,slow=76,SNR=81						
MKAR	**Makanchi Array**	**47.70**	**297**	P	P	06 48 02.0	-5.9
	0.1nm,0.4s,baz=61,slow=7.2,SNR=2.8						
YKA	**Yellowknife Ar**	**48.39**	**38**	P	**P**	**06 48 13.7**	**+0.8**
	0.2nm,0.8s,baz=300,slow=7.2						
WRA	**Warramunga Arr**	**70.84**	**201**	P	**P**	**06 50 46.8**	**-1.2**
	0.3nm,0.5s,baz=13,slow=5.4,SNR=12						
ASAR	**Alice Springs**	**74.53**	**201**	P	**P**	**06 51 09.8**	**0.0**
	0.4nm,0.6s,baz=304,slow=4.9,SNR=8.5						
TXAR	**Lajitas Array**	**75.05**	**63**	P	**P**	**06 51 15.0**	**+1.9**
	0.4nm,0.6s,baz=304,slow=4.9,SNR=8.5						

MAN 04 07:07:54.0, 13°.97N×120°.68E, h31km, mb4.0, ML2.8, MS2.4, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.48**	**241**	*e*P	Pn	07 08 05.1	+0.3
LUBP				*e*S	Sn	07 08 12.4	+0.2
LQP	**Lukban**	**0.85**	**80**	⇓*i*P	Pb	07 08 16.6	+6.2
POLP	**Polillo Island**	**1.44**	**58**	*e*P	Pn	07 08 17.9	-0.1
SJMP	**San Jose**	**1.56**	**164**	*e*P	Pn	07 08 20.1	+0.5
SJMP				*e*S	Sn	07 08 38.5	-0.2
SCZP	**Santa Cruz**	**1.95**	**338**	*e*P	Pn	07 08 22.4	-2.6
SCZP				*e*S	Sb	07 09 08.0	+15

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*BJI **04** 07:35:21.0±0.0, 38°.82N×75°.23E, h10km, ML3.6/5*
*IDC **04** 07:35:23.8±1.8, 38°.62N×75°.49E, h0km, mb3.7/7, mb1 3.7/11, mb1mx3.5/59, mbtmp3.5/11, ML2.7/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/47, Error ellipse: s-maj=36.0km s-min=19.4km az=128.0*
*SOME **04** 07:35:33.3, 39°.23N×75°.22E, h0km*
*NNC **04** 07:35:34.8±1.7, 39°.21N×75°.33E, h18km±8km, mb4.0, mpv3.6, Error ellipse: s-maj=11.3km s-min=9.1km az=17.0*
ISC 04 07:35:26.2±1.0, 38°.57N±0°.07×75°.17E±0°.06, h10km, n42, σ1s30/55, mb3.7/7, 8C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**4.09**	**353**	Pn	**Pn**	**07 36 30.2**	**+1.2**
	1.3nm,0.3s,baz=148,slow=11,SNR=17						
AAK				Sn	**Sn**	**07 37 20.8**	**+3.7**
	1.5nm,0.3s,baz=342,slow=16,SNR=4.4						
AAK	**Ala-Archa**	**4.09**	**353**	⇓Pn	**Pn**	**07 36 29.6**	**+0.6**
	10.0nm,0.6s						
AAK				⇑Lg	Lg	07 37 23.4	
	33nm,0.9s						
TKM2	**Tokmak 2**	**4.36**	**4**	⇑Pn	**Pn**	**07 36 31.6**	**-1.1**
	6.1nm,0.5s						
TKM2				⇓Lg	Lg	07 37 32.6	
	50nm,0.7s						
MRKS	**Merke**	**4.42**	**341**	*e*P	**Pb**	**07 36 45.0**	**+0.9**
	5.9nm,0.5s						
MRKS				*e*S	**Sb**	**07 37 36.9**	**-0.6**
	5.6nm,0.8s						
MRKS	**Merke**	**4.42**	**341**	Pg	**Pb**	**07 36 45.0**	**+0.9**
MRKS				Lg	Lg	07 37 37.2	
KST	**Kastek**	**4.51**	**7**	*e*P	**Pb**	**07 36 46.0**	**+0.5**
	12nm,0.6s						
KST				*e*S	**Sb**	**07 37 38.4**	**-1.5**
	50nm,0.9s						
KST	**Kastek**	**4.51**	**7**	Pg	**Pb**	**07 36 46.0**	**+0.5**
	12nm,0.6s						
KST				Lg	Lg	07 37 38.5	
	50nm,0.9s						
MTBS	**Maitube**	**4.65**	**11**	*e*P	**Pb**	**07 36 49.5**	**+1.5**
	8.4nm,0.5s						
MTBS				*e*S	**Sb**	**07 37 44.3**	**+0.2**
	19nm,0.9s						
TNSS	**Tian-Shan**	**4.66**	**16**	Pg	**Pb**	**07 36 48.9**	**+0.6**
	11nm,0.5s						
TNSS				Lg	Lg	07 37 44.1	
	31nm,0.8s						
DGS	**Degeres**	**4.69**	**5**	*e*P	**Pb**	**07 36 49.4**	**+0.8**
	16nm,0.7s						
DGS				*e*S	**Sb**	**07 37 44.4**	**-0.7**
	35nm,0.6s						
DGS	**Degeres**	**4.69**	**5**	Pg	**Pb**	**07 36 49.4**	**+0.8**
	16nm,0.7s						
DGS				Lg	Lg	07 37 44.7	
	35nm,0.6s						
MDOK	**Medeo**	**4.80**	**17**	*e*P	**Pb**	**07 36 51.0**	**+0.5**
	6.3nm,0.5s						
MDOK				*e*S	**Sb**	**07 37 47.1**	**-1.3**
	32nm,0.9s						
MDOK	**Medeo**	**4.80**	**17**	⇓Pg	**Pb**	**07 36 50.2**	**-0.4**
	4.3nm,0.5s						
MDOK				⇑Lg	Lg	07 37 46.4	
	51nm,0.9s						
KNDC	**Almaty**	**4.84**	**16**	⇑Lg	Lg	07 37 46.9	
KOTS	**Kotyrbulak**	**4.88**	**17**	*e*P	**Pb**	**07 36 52.9**	**+0.9**
	19nm,0.4s						
KOTS				*e*S	**Sb**	**07 37 50.1**	**-0.7**
	132nm,1.0s						
KOTS	**Kotyrbulak**	**4.88**	**17**	Pg	**Pb**	**07 36 52.9**	**+0.9**
	19nm,0.4s						
KOTS				Lg	Lg	07 37 50.6	
	132nm,1.0s						
SATY	**Saty**	**5.11**	**28**	*e*P	**Pb**	**07 36 57.1**	**+1.4**
	20nm,0.8s						
SATY				*e*S	**Sb**	**07 37 57.6**	**+0.3**
	40nm,1.0s						
SATY	**Saty**	**5.11**	**28**	Pg	**Pb**	**07 36 55.6**	**-0.2**
	21nm,0.8s						
SATY				Lg	Lg	07 37 55.5	
	40nm,0.8s						
KTBS	**Karatobe**	**5.26**	**12**	*e*P	**Pb**	**07 36 59.4**	**+1.1**
	7.3nm,0.7s						
KTBS				*e*S	**Sb**	**07 38 01.3**	**-0.2**
	31nm,0.6s						
KTBS	**Karatobe**	**5.26**	**12**	Pg	**Pb**	**07 36 59.4**	**+1.1**
	7.3nm,0.7s						
KTBS				Lg	Lg	07 38 02.1	
	31nm,0.6s						
KUU	**Kurty**	**5.39**	**9**	*e*P	**Pb**	**07 37 01.7**	**+1.2**
	5.1nm,1.0s						
KUU				*e*S	**Sb**	**07 38 05.2**	**0.0**
	46nm,0.7s						
KURS	**Kuram**	**5.41**	**24**	*e*P	**Pb**	**07 37 02.1**	**+1.3**
	4.7nm,1.4s						
KURS				*e*S	**Sb**	**07 38 05.9**	**+0.1**
	20nm,0.8s						
UZB	**Uzynbulak**	**5.42**	**31**	*e*P	**Pb**	**07 37 02.9**	**+1.7**
	6.8nm,1.8s						
UZB				*e*S	**Sb**	**07 38 07.3**	**+1.1**
	18nm,0.8s						
CHKK	**Chushkaly**	**5.45**	**14**	*e*P	**Pb**	**07 37 02.9**	**+1.4**
	4.0nm,0.8s						
CHKK				*e*S	**Sb**	**07 38 07.2**	**+0.2**
	22nm,0.7s						
KK31	**Karatay Array**	**5.74**	**324**	⇑Pn	**Pn**	**07 36 53.0**	**+1.5**
	0.7nm,0.3s,baz=122,slow=11,SNR=4.4						
KK31				⇑Sn	**Sn**	**07 37 55.4**	**-2.0**
	3.5nm,0.5s,baz=133,slow=23						
PDGK	**Podgornoye**	**5.77**	**33**	⇓Pn	**Pn**	**07 36 50.5**	**-1.5**
	1.9nm,0.7s						
PDGK				⇑Pg	**Pb**	**07 37 08.8**	**+1.8**
	4.2nm,0.7s						
PDGK				⇑Lg	Lg	07 38 19.6	
	28nm,0.8s						
ARXS	**Arharly**	**5.98**	**19**	Pg	**Pb**	**07 37 11.6**	**+1.1**
	3.7nm,0.8s						
ARXS				Lg	Lg	07 38 23.6	
	20nm,0.7s						
MKAR	**Makanchi Array**	**9.74**	**30**	Pn	**Pn**	**07 37 45.0**	**-1.4**
	0.1nm,0.3s,baz=206,slow=13,SNR=5.4						
MKAR				Lg	Lg	07 40 27.2	
	0.1nm,0.3s,baz=219,slow=29,SNR=3.2						
WMQ	**Urumqi**	**10.79**	**57**	*e*P	**Pn**	**07 38 00.2**	**-0.6**
KURBB	**Kurchatov Arra**	**12.28**	**10**	Pn	**Pn**	**07 38 17.6**	**-3.5**
	0.0nm,0.3s,baz=194,slow=12,SNR=2.6						
KURBB				Lg	Lg	07 41 45.7	
	0.0nm,0.3s,baz=175,slow=30,SNR=6.3						
BVAR	**Borovoye Array**	**14.83**	**349**	Pn	**Pn**	**07 38 55.8**	**0.0**
	0.1nm,0.3s,baz=168,slow=15,SNR=2.2						
AB31	**Akbulak array**	**15.28**	**319**	Pn	**Pn**	**07 39 00.0**	**-1.9**
	1.6nm,0.8s,baz=125,slow=9.4,SNR=15						
ZALV	**Zalesovo Beam**	**16.74**	**20**	Pn	**Pn**	**07 39 19.8**	**-0.8**
	0.1nm,0.3s,baz=185,slow=8.0,SNR=3.6						
GTA	**Gaotai**	**19.16**	**80**	*e*P	**Pn**	**07 39 51.4**	**+0.6**
GTA				pP	sP	07 39 56.2	+0.4
GTA				sP	pP	07 39 58.7	+4.7
SONM	**Songino Array**	**24.43**	**58**	LR	LR	07 50 36.4	
	comp=Z,82nm,18.3s,baz=289,slow=38						
BRTR	**Keskin Array B**	**32.02**	**285**	P	**P**	**07 41 55.6**	**+2.6**
	0.4nm,0.7s,baz=86,slow=7.8,SNR=3.9						
FINES	**FINESS Array B**	**37.70**	**324**	P	**P**	**07 42 41.5**	**0.0**
	5.6nm,1.2s,baz=120,slow=8.2,SNR=4.5						
ARCES	**ARCESS Array B**	**40.56**	**336**	P	**P**	**07 43 04.0**	**-1.3**
	3.2nm,0.9s,baz=104,slow=8.9,SNR=4.3						
NOA	**NORSAR Array B**	**44.77**	**322**	P	**P**	**07 43 40.3**	**+0.7**
	0.9nm,0.8s,baz=90,slow=7.9,SNR=2.8						
TORD	**Torodi Ar. Bea**	**69.05**	**270**	P	**P**	**07 46 32.4**	**-0.1**
	0.4nm,0.4s,baz=54,slow=5.4,SNR=4.9						
ILAR	**Eielson Array**	**71.84**	**18**	P	**P**	**07 46 47.3**	**-1.5**
	0.3nm,0.8s,baz=331,slow=5.4,SNR=3.3						
YKA	**Yellowknife Ar**	**78.97**	**5**	P	**P**	**07 47 28.9**	**-0.8**
	0.1nm,0.5s,baz=346,slow=5.8,SNR=4.3						

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*ASRS **04** 07:41:28.8±0.4, 52°.N±3°×9°.8E±°, h5km, MLv4.7/19, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*BJI **04** 07:41:30.9±0.0, 51°.83N×98°.19E, h20km, mb3.8/4, ML4.0/1*
*IDC **04** 07:41:34.0±1.0, 51°.54N×98°.26E, h0km, mb1 3.0/5, mb1mx2.9/64, mbtmp3.0/5, ML2.8/4, Error ellipse: s-maj=34.4km s-min=9.1km az=179.0*
*MOS **04** 07:41:35.1±3.5, 51°.62N×98°.28E, h2km, mb3.9/2, Error ellipse: s-maj=10.3km s-min=8.3km az=2.5*
*NNC **04** 07:41:49.1±11.0, 49°.64N×97°.78E, h0km, mb3.7, Error ellipse: s-maj=98.5km s-min=75.3km az=85.0*
ISC 04 07:41:34.3±0.6, 51°.69N±0°.04×98°.23E±0°.03, h10km, n58, σ3s12/84, 8C-3D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ORL	**Orlik**	**1.29**	**48**	⇓*i*PG	**Pg**	**07 41 58.8**	**-0.3**
ORL				*e*		07 42 17.0	
ORL				pmax	pmax		
	comp=Z,289nm,0.3s						
ORL				smax	smax		
	comp=E,1μm,0.5s						
TDJR	**Todzha**	**1.50**	**299**	PN	**Pn**	**07 42 01.2**	**0.0**
TDJR						07 42 21.5	
TDJR	**Todzha**	**1.50**	**299**	Pg	**Pn**	**07 42 01.3**	**0.0**
TDJR				Sg	**Sb**	**07 42 21.9**	**+0.7**
MOY	**Mondy**	**1.72**	**90**	⇑*i*PN	**Pb**	**07 42 05.6**	**-0.4**
MOY				*e*		07 42 29.1	
MOY				pmax	pmax		
	comp=Z,224nm,0.3s						
MOY				smax	smax		
	comp=N,2μm,0.5s						
KZLR	**Kyzyl**	**2.35**	**272**	PN	**Pb**	**07 42 15.2**	**-1.5**
KZLR						07 42 45.3	
KZLR	**Kyzyl**	**2.35**	**272**	Pg	**Pb**	**07 42 15.5**	**-1.2**
KZLR				Sg	**Sb**	**07 42 45.3**	**-0.5**
ARS	**Arshan**	**2.61**	**83**	*e*PN	**Pn**	**07 42 17.6**	**+1.0**
ARS				*e*		07 42 57.1	
ARS				pmax	pmax		
	comp=Z,185nm,0.3s						
ARS				smax	smax		
	comp=E,4μm,0.6s						
TLY	**Talaya**	**3.37**	**88**	*e*PN	**Pb**	**07 42 34.8**	**+0.7**
TLY				*e*		07 43 19.0	
TLY				pmax	pmax		
	comp=Z,107nm,0.4s						
TLY				smax	smax		
	comp=N,987nm,0.6s						
TLY	**Talaya**	**3.37**	**88**	Pg	**Pb**	**07 42 34.1**	**0.0**
	comp=N,0.1nm,0.3s,baz=275,slow=14,SNR=19						
TLY				Lg	Lg	07 43 19.1	
	comp=N,1.0nm,0.3s,baz=75,slow=7.9,SNR=30						
TLY	**Talaya**	**3.37**	**88**	Sg	**Sg**	**07 43 19.0**	**-3.4**
ZAK	**Zakamensk**	**3.45**	**110**	*e*PN	**Pb**	**07 42 35.3**	**-0.2**
ZAK				*e*		07 43 21.4	
ZAK				pmax	pmax		
	comp=Z,206nm,0.8s						
ZAK				smax	smax		
	comp=N,658nm,0.7s						
IRK	**Irkutsk**	**3.78**	**79**	*e*PN	**Pb**	**07 42 42.7**	**+1.7**
IRK				*e*		07 43 30.3	
IRK				pmax	pmax		
	comp=Z,174nm,0.4s						
IRK				smax	smax		
	comp=N,1μm,0.5s						
ORY	**Orie**	**3.81**	**332**	*i* PN	**Pb**	**07 42 41.3**	**-0.2**
ORY	**Orie**

VEH				Pg		**Pb**	07 43 04.6	+1.3
VEH				Sg		**Sb**	07 44 09.7	+5.2
GZL	**Zheleznogorsk**	**5.35**	**331**	Sg		**Sg**	07 44 19.5	-6.4
GZLN	**Zheleznogorsk**	**5.38**	**333**	Pg		**Pb**	07 43 10.2	+1.8
GZLN				Sg		**Sg**	07 44 23.6	-3.3
SHTK	**Zheleznogorsk-**	**5.39**	**331**	Sg		**Sb**	07 44 09.7	-3.4
LUZB	**Luzhba, Kemero**	**6.01**	**293**	Pn		**Pn**	07 43 04.8	+1.6
LUZB				Pg		**Pb**	07 43 19.0	0.0
LUZB				Sg		**Sb**	07 44 37.5	+6.5
OGRR	**Ongureny**	**6.02**	**67**	*e*PN		**Pn**	07 43 07.3	+3.9
OGRR				*e*			07 43 25.1	
OGRR				*e*			07 44 40.5	
OGRR				pmax	pmax			
	comp=Z,27nm,0.6s							
OGRR				smax	smax			
	comp=N,318nm,1.4s							
TASR	**Tashtagol**	**6.45**	**284**	Pg		**Pb**	07 43 28.3	+1.8
TASR				Sg		**Sb**	07 44 52.3	+8.6
SONM	**Songino Array**	**6.55**	**123**	Pn		**Pn**	07 43 10.1	-0.6
	comp=N,0.2nm,0.3s,baz=311,slow=15,SNR=4.3							
SONM				Pg		**Pb**	07 43 30.7	+2.4
	comp=N,5.0nm,0.3s,baz=301,slow=18,SNR=54							
SONM				Lg	Lg		07 44 59.5	
	comp=N,11nm,0.3s,baz=309,slow=30,SNR=4.1							
ULGR	**Ulagan, Altay**	**6.55**	**265**	Pn		**Pn**	07 43 11.7	+1.0
ULGR				Pg		**Pb**	07 43 32.5	+4.2
ULGR				Sg		**Sb**	07 44 55.3	+8.7
ARTR	**Artybash**	**6.80**	**275**	Pn		**Pn**	07 43 16.1	+2.1
ARTR				Pg		**Pb**	07 43 34.8	+2.3
ARTR				Sg		**Sb**	07 45 02.2	+8.4
AKAR	**Aktash**	**6.84**	**263**	Pn		Pn	07 43 21.5	+6.8
AKAR				Pg		Pb	07 43 38.7	+5.5
AKAR				Sg		Sg	07 45 04.9	-8.7
ULN	**Ulaanbaatar**	**6.88**	**120**⇑	*e*PN		**Pn**	07 43 13.9	-1.4
ULN				pmax	pmax			
	comp=Z,1.0nm,1.2s							
ULN	**Ulaanbaatar**	**6.88**	**120**	Pg		**Pb**	07 43 37.1	+3.2
ULN				Sg		**Sg**	07 45 11.1	-3.8
CHBI	**Chibit, Altay**	**6.91**	**263**	Pn		**Pn**	07 43 15.0	-0.7
CHBI				Pg		**Pg**	07 43 42.9	-3.6
CHBI				Sg		**Sg**	07 45 07.8	-8.2
BRCR	**Berchikul'**	**7.09**	**308**	Pg		**Pb**	07 43 38.4	+1.0
BRCR				Sg		**Sg**	07 45 17.7	-4.0
DGZ	**Jazzator, Alta**	**7.14**	**258**	Pn		**Pn**	07 43 18.2	-0.8
DGZ				Pg		**Pb**	07 43 42.9	+4.5
DGZ				Sg		Sb	07 45 13.8	+10
ELT	**Eltsovka**	**7.49**	**287**	Pg		**Pb**	07 43 46.2	+2.0
ELT				Sg		Sb	07 45 22.8	+9.2
ELDR	**Elanda**	**7.60**	**271**	Pn		**Pn**	07 43 27.9	+2.9
ELDR				Pg		Pb	07 43 52.0	+5.8
ELDR				Sg		Sg	07 45 28.7	-9.5
NIZ	**Nizh Angarsk**	**7.85**	**54**	*e*P		**Pn**	07 43 30.3	+1.8
ZALV	**Zalesovo Beam**	**8.43**	**291**	P		**Pn**	07 43 38.0	+1.6
ZALV	**Zalesovo Beam**	**8.43**	**291**	Pn		**Pn**	07 43 38.0	+1.6
	comp=Z,0.1nm,0.3s,baz=112,slow=11,SNR=3.1							
ZALV				Pg		**Pb**	07 44 04.5	+4.2
	comp=Z,0.5nm,0.3s,baz=106,slow=14,SNR=4.8							
ZALV				Lg	Lg		07 45 54.7	
	comp=Z,1.9nm,0.3s,baz=110,slow=24,SNR=10							
MK31	**Makanchi Array**	**11.51**	**251**⇑	*e*P		**Pn**	07 44 19.3	+0.7
MK31	**Makanchi Array**	**11.51**	**251**	⇑Pn		Pn	07 44 24.1	+5.5
	comp=Z,0.6nm,0.5s,baz=75,slow=16,SNR=5.4							
MK31				⇓Pg			07 45 02.8	
	comp=Z,1.6nm,0.7s,baz=68,slow=14							
MK31				⇑Lg		Lg	07 47 30.8	
	comp=Z,20nm,1.1s,baz=68,slow=34,SNR=4.6							
MKAR	**Makanchi Array**	**11.51**	**251**	Pn		**Pn**	07 44 19.3	+0.7
	comp=Z,0.1nm,0.3s,baz=79,slow=14,SNR=4.7							
MKAR				Lg		Lg	07 47 31.8	
	comp=Z,0.1nm,0.3s,baz=45,slow=33,SNR=2.9							
MAKZ	**Makanchi**	**11.69**	**252**	⇑Lg		Lg	07 47 36.4	
	comp=Z,19nm,1.2s							
KURK	**Kurchatov**	**12.34**	**273**	P		**Pn**	07 44 31.2	+1.3
KURBB	**Kurchatov Arra**	**12.41**	**273**	Pn		**Pn**	07 44 31.2	+0.3
	baz=77,slow=16,SNR=2.8							
KURBB				Lg		Lg	07 47 58.8	
	comp=Z,0.0nm,0.3s,baz=77,slow=36,SNR=5.9							
PDGK	**Podgornoye**	**15.14**	**244**	Lg		Lg	07 49 16.4	
BVAR	**Borovoye Array**	**17.02**	**285**	P		**P**	07 45 35.2	+1.2
	comp=Z,0.1nm,0.3s,baz=111,slow=7.9,SNR=2.9							
BRVK	**Borovoye**	**17.08**	**286**⇑	*e*P		**Pn**	07 45 30.1	-2.8
YAK	**Yakutsk**	**19.85**	**46**⇓	*e*P		**P**	07 46 04.4	-0.7
YAK				pmax	pmax			
	comp=Z,5.0nm,0.7s							
TIXI	**Tiksi**	**24.22**	**23**⇑	*e*P		**P**	07 46 49.1	-1.6
TIXI				pmax	pmax			
	comp=Z,9.0nm,3.1s							
AKASG	**Malin Array Be**	**41.77**	**297**	*i* P		**P**	07 49 19.7	-3.7

*IDC **04** 07:47:59.1±0.7,46°.13N×36°.53E, h0km, mb3.6/6, mb1 3.6/13,mb1mx3.5/43, mbtmp3.6/13,ML3.1/7, Error ellipse: s-maj=11.4km s-min=8.4km az=29.0*

*SIGU **04** 07:48:00.3±0.5,46°.14N×36°.57E, h6km±3km, Mw2.9/6*

ISC 04 07:47:58.5±1.4, 46°.17N±0°.04×36°.56E±0°.03, h6km±10km, n63, σ1§84/85, mb3.6/5, 7C-14D, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FEO	**Feodosiya**	**1.41**	**216**	*e*Pg		**Pg**	**07 48 26.0**	**+0.4**
	baz=217							
FEO				*e*Sg		**Sg**	**07 48 44.6**	**+0.8**
	baz=217							
FEO				Sgm			07 48 44.8	
	baz=217							
FEO				Sgm			07 48 48.6	
	baz=217							
FEO	**Feodosiya**	**1.41**	**216**	*e*Pg		**Pg**	**07 48 26.0**	**+0.4**
FEO				*e*Sg		**Sg**	**07 48 44.6**	**+0.8**
ANN	**Anapa**	**1.50**	**155**	⇓*i*Pg		**Pb**	**07 48 25.7**	**-1.1**
	baz=157							
ANN				Pgm			07 48 26.2	
	baz=157							
ANN				*i*			07 48 39.8	
	baz=157							
ANN				*e*			07 48 42.9	
	baz=157							
ANN				Sgm			07 48 51.1	
	baz=157							
ANN	**Anapa**	**1.50**	**155**	*i* Pg		**Pb**	**07 48 25.8**	**-0.9**
ANN				*e*Sg		**Sn**	**07 48 43.8**	**-2.0**
SUDU	**Sudak**	**1.68**	**221**⇓	*e*Pn		**Pb**	**07 48 29.9**	**0.0**
	baz=222							
SUDU				Pnm			07 48 31.9	
	baz=222							
SUDU				*e*Sn		**Sg**	**07 48 53.0**	**+0.5**
	baz=222							
SUDU				Snm			07 48 56.5	
	baz=222							
SUDU				Snm			07 48 56.5	
	baz=222							
SUDU	**Sudak**	**1.68**	**221**	*e*Pg		**Pb**	**07 48 29.9**	**0.0**
SUDU				*e*Sg		**Sg**	**07 48 53.0**	**+0.5**
GL1R	**Gelendzhik**	**1.94**	**146**⇓	*e*Pn		**Pb**	**07 48 33.7**	**-0.5**
	baz=146							
GL1R				*e*Sn		**Sb**	**07 48 57.7**	**-0.9**
	baz=146							
GL1R	**Gelendzhik**	**1.94**	**146**	*i* Pg		**Pb**	**07 48 33.9**	**-0.3**
GL1R				*i* Sg		**Sb**	**07 48 57.5**	**-1.1**
KGUR	**Krasnodar**	**2.08**	**123**	*e*Pg		**Pb**	**07 48 35.6**	**-1.0**
KGUR				*e*Sg		**Sb**	**07 49 03.1**	**+0.4**
SIM	**Simferopol'**	**2.10**	**235**	*e*Sn		**Sb**	**07 49 01.9**	**-1.6**
	baz=236							
SIM				Snm			07 49 05.8	
	baz=236							
SIM				Snm			07 49 05.8	
	baz=236							
SIM	**Simferopol'**	**2.10**	**235**	*e*Pg		**Pb**	**07 48 37.5**	**+0.4**
SIM				*e*Sg		**Sb**	**07 49 01.9**	**-1.6**
ALU	**Alushta**	**2.12**	**226**	*e*Pn		**Pb**	**07 48 36.4**	**-1.0**
	baz=227							
ALU				Pnm			07 48 37.5	
	baz=227							
ALU				*e*Sn		**Sb**	**07 49 03.5**	**-0.5**
	baz=227							
ALU				Snm			07 49 08.0	
	baz=227							
ALU				Snm			07 49 08.0	
	baz=227							
ALU	**Alushta**	**2.12**	**226**	*e*Pg		**Pb**	**07 48 36.4**	**-1.0**
ALU				*e*Sg		**Sb**	**07 49 03.5**	**-0.5**
YAL	**Yalta**	**2.39**	**226**	*e*Sn		**Sb**	**07 49 09.7**	**-1.8**
	baz=227							
SEV	**Sevastopol'**	**2.60**	**233**	*e*Pn		**Pb**	**07 48 43.9**	**-1.7**
	baz=233							
SEV				Pnm			07 48 44.0	
	baz=233							
SEV				*e*Sn		**Sb**	**07 49 16.3**	**-1.5**
	baz=233							
SEV				Snm			07 49 17.5	
	baz=233							
SEV				Snm			07 49 18.0	
	baz=233							
SEV	**Sevastopol'**	**2.60**	**233**	*e*Pn		**Pb**	**07 48 43.9**	**-1.7**
SEV				*e*Sn		**Sb**	**07 49 16.3**	**-1.5**
AGYR	**Agha**	**2.67**	**138**	*e*Pn		**Pb**	**07 48 44.3**	**-2.5**
AGYR				*i* Sn		**Sn**	**07 49 15.6**	**+0.8**
TPSR	**Tuapse**	**2.75**	**138**	*e*Pn		**Pb**	**07 48 45.9**	**-2.3**
TPSR				*i* Sn		**Sn**	**07 49 17.8**	**+0.9**
TARU	**Tarkhankut**	**2.93**	**256**	*e*Pn		**Pn**	**07 48 47.5**	**+1.9**
	baz=255							
TARU	**Tarkhankut**	**2.93**	**256**	*e*Pn		**Pn**	**07 48 47.5**	**+1.9**
LZRR	**Lazarevskoye**	**3.00**	**137**	*e*Pn		**Pn**	**07 48 44.4**	**-2.2**
	baz=137							
LZRR	**Lazarevskoye**	**3.00**	**137**	*e*Pn		**Pn**	**07 48 47.1**	**+0.5**
LZRR				*e*Sn		**Sn**	**07 49 22.4**	**-0.4**
RPOR	**Krasnaya Polya**	**3.61**	**132**	*i* Pn		**Pn**	**07 48 57.0**	**+2.0**
RPOR				*i* Sn		**Sn**	**07 49 37.5**	**-0.4**
NVNR	**Nevinnomyssk**	**4.11**	**110**	*e*Pn		**Pn**	**07 49 03.4**	**+1.5**
NVNR				*e*Sn		**Sn**	**07 49 48.5**	**-1.9**
ARXR	**Arkhyz**	**4.25**	**126**	*e*Pn		**Pn**	**07 49 06.6**	**+2.7**
ARXR				*e*Sn		**Sn**	**07 49 54.0**	**+0.2**
BZK	**Bozkurt**	**4.59**	**205**	⇓P		**Pn**	**07 49 09.9**	**+1.5**
BZK	**Bozkurt**	**4.59**	**205**	⇓S		**Sn**	**07 50 00.6**	**-1.5**
DIKM	**Dikmen**	**4.61**	**192**	⇓P		**Pn**	**07 49 09.5**	**+0.7**
DIKM	**Dikmen**	**4.61**	**192**	⇑S		**Sn**	**07 49 57.8**	**-4.9**
GOF	**Gofitskoye**	**4.68**	**101**	*e*Pn		**Pn**	**07 49 12.1**	**+2.3**
GOF				*e*Sn		**Sn**	**07 50 04.4**	**0.0**
KIV	**Kislovodsk**	**4.87**	**115**	*e*Pn		Pn	07 49 16.6	+4.1
KVAR	**Kislovodsk Arr**	**4.88**	**115**	Pn		Pn	07 49 16.8	+4.2
	baz=252,slow=20,SNR=6.6							
KVAR				Sn		**Sn**	**07 50 07.7**	**-1.7**
	baz=352,slow=19,SNR=7.0							
KVAR				Lg		Lg	07 50 39.3	
	baz=288,slow=20,SNR=3.6							
SHA1	**Shidzhatmaz**	**4.96**	**117**	*e*Pn		**Pn**	**07 49 15.4**	**+1.6**
SHA1				*e*Sn		**Sn**	**07 50 12.0**	**+0.4**
PYA1	**Pyatigorsk**	**5.08**	**112**	*e*Pn		**Pn**	**07 49 18.1**	**+2.8**
PYA1				*e*Sn		**Sn**	**07 50 13.8**	**-0.5**
KBZ	**Khabaz**	**5.12**	**116**	Pn		**Pn**	**07 49 17.2**	**+1.5**
	0.4nm,0.3s,baz=285,slow=12,SNR=8.7							
KBZ				Sn		**Sn**	**07 50 11.2**	**-3.9**
	1.9nm,0.3s,baz=282,slow=4.7,SNR=4.3							
KBZ				Lg		Lg	07 50 44.2	
	2.0nm,0.3s,baz=50,slow=13,SNR=6.4							
KBZ	**Khabaz**	**5.12**	**116**	*e*Pn		**Pn**	**07 49 16.9**	**+1.2**
KBZ				*e*Sn		**Sn**	**07 50 13.4**	**-1.6**
MILM	**Milestii Mici**	**5.40**	**281**	⇑P		**Pb**	**07 49 33.5**	**+0.3**
MILM	**Milestii Mici**	**5.40**	**281**	⇓S		**Sg**	**07 50 51.1**	**-0.7**
SORM	**Soroca**	**5.93**	**292**	⇓P		**Sn**	**07 50 34.0**	**-1.2**
TIRR	**Tirgusor**	**5.99**	**256**	⇓P		Pn	07 49 32.7	+5.0
TIRR	**Tirgusor**	**5.99**	**256**	⇑S		**Sn**	**07 50 37.9**	**+1.2**
AKASG	**Malin Array Be**	**6.66**	**316**	Pn		**Pn**	**07 49 38.4**	**+1.5**
	1.6nm,0.3s,baz=120,slow=14,SNR=4.4							
AKASG				Sn		**Sn**	**07 50 49.6**	**-3.4**
	3.3nm,0.3s,baz=126,slow=24,SNR=8.8							
AKASG				Lg		Lg	07 51 25.8	
	4.3nm,0.3s,baz=129,slow=30,SNR=8.4							
BRTR	**Keskin Array B**	**6.78**	**199**	Pn		**Pn**	**07 49 39.4**	**+0.6**
	0.5nm,0.3s,baz=29,slow=12,SNR=16							
BRTR				Sn		**Sn**	**07 50 52.0**	**-4.4**
	0.3nm,0.3s,baz=25,slow=15,SNR=3.6							
VRI	**Vrincioaia**	**6.85**	**271**	⇓P		Pb	07 49 50.6	-7.4
VRI	**Vrincioaia**	**6.85**	**271**	⇓S		**Sg**	**07 51 36.5**	**-1.9**
TESR	**Tescani**	**6.87**	**276**	⇑S		**Sg**	**07 51 35.7**	**-3.2**
MLR	**Muntele Rosu**	**7.45**	**269**	Pn		**Pn**	**07 49 50.4**	**+2.6**
	0.3nm,0.3s,baz=242,slow=3.8,SNR=6.1							
MLR				Sn		**Sn**	**07 51 13.2**	**+0.5**
	0.6nm,0.3s,baz=75,slow=20,SNR=4.1							
MLR	**Muntele Rosu**	**7.45**	**269**	⇑P		**Pn**	**07 49 49.7**	**+1.9**
MLR	**Muntele Rosu**	**7.45**	**269**	⇓S		**Sn**	**07 51 12.6**	**0.0**
BURAR	**Bucovina Array**	**7.90**	**285**	⇑P		**Pn**	**07 49 56.1**	**+2.0**
BURAR	**Bucovina Array**	**7.90**	**285**	⇑S		**Sn**	**07 51 24.2**	**+0.4**
VOIR		**8.08**	**269**	⇓P		Pn	07 50 01.0	+4.6
VOIR		**8.08**	**269**	⇓S		**Sn**	**07 51 33.2**	**+5.2**
FINES	**FINESS Array B**	**16.47**	**342**	Pn		**Pn**	**07 51 45.3**	**-4.7**
	0.2nm,0.3s,baz=152,slow=13,SNR=5.4							
FINES				Sn		Sn	07 54 39.3	-14
	0.3nm,0.3s,baz=149,slow=24,SNR=4.8							
ARU	**Arti**	**17.09**	**45**	P		**P**	**07 51 58.0**	**-1.7**
	0.0nm,0.3s,baz=259,slow=6.6,SNR=7.3							
HFS	**Hagfors**	**19.44**	**324**	P		**Pn**	**07 52 26.1**	**-0.5**
	0.2nm,0.3s,baz=119,slow=12,SNR=6.5							
NB2	**NORSAR Subarra**	**20.96**	**324**	P		Pn	07 52 42.8	-1.8
	comp=Z,1.5nm,0.8s,baz=129,slow=10							
NOA	**NORSAR Array B**	**20.96**	**324**	P		**P**	**07 52 42.4**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=127,slow=10,SNR=4.4							
ARCES	**ARCESS Array B**	**24.08**	**350**	P		**P**	**07 53 15.6**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=165,slow=10,SNR=8.5							
MKAR	**Makanchi Array**	**31.16**	**72**	P		**P**	**07 54 19.4**	**+1.4**
	comp=Z,1.0nm,0.5s,baz=286,slow=8.1,SNR=16							
ZALV	**Zalesovo Beam**	**31.41**	**58**	P		**P**	**07 54 20.9**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=277,slow=10,SNR=3.9							
SONM	**Songino Array**	**46.15**	**61**	P		**P**	**07 56 25.9**	**+2.1**
	comp=Z,0.4nm,0.6s,baz=297,slow=4,SNR=2.8							
YKA	**Yellowknife Ar**	**69.26**	**346**	P		**P**	**07 59 06.9**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=19,slow=6.4,SNR=5.7							

*NCEDC **04** 07:58:29.7±2.2, 40°.96N±0°.03×123°.44W±0°.02, h25km±7km, Md2.1/25, Error ellipse: s-maj=3.8km s-min=1.7km az=168.0*

NEIC 04 07:58:28.9±1.2, 40°.97N±0°.02×123°.45W±0°.03, h31km±8km, Error ellipse: s-maj=3.8km s-min=2.1km az=125.0, Northern California

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KHMM	**Horse Mountain**	**0.23**	**247**			Pb	07 58 35.9	+0.1
KHMM						Sn	07 58 41.2	+0.1
KOMM	**Orleans Mounta**	**0.31**	**360**			Pb	07 58 37.0	+0.2
KHBM	**Hayfork Bally**	**0.35**	**150**			Pb	07 58 37.4	0.0
KHBM						Sb	07 58 43.6	+0.5
KCSM	**Cold Springs**	**0.43**	**186**			Pb	07 58 38.7	+0.3
JCC	**Jacoby Creek,**	**0.46**	**251**			Pb	07 58 39.0	+0.2
KRPM	**Rodgers**	**0.47**	**294**			Pb	07 58 39.1	+0.2
LGPM	**Granite Peak**	**0.47**	**96**			Pb	07 58 38.9	-0.2
LGPM						Sb	07 58 46.2	+0.2
N02D	**Trinity Center**	**0.57**	**89**			Pb	07 58 40.2	-0.3
N02D						Sn	07 58 49.2	0.0
LBKM	**Bonanza King**	**0.61**	**79**			Pb	07 58 40.9	-0.3
KCRM	**Chalk Rock**	**0.61**	**207**			Pn	07 58 41.7	+0.3
M02C	**Callahan**	**0.62**	**47**			Pb	07 58 41.4	0.0
M02C						Sn	07 58 50.4	-0.2
KRMB	**Red Mountain**	**0.65**	**328**			Pb	07 58 41.2	-0.8
LBPM	**Beegum Peak**	**0.78**	**146**			Pn	07 58 43.8	0.0
WDC	**Whiskeytown Da**	**0.79**	**119**			Pn	07 58 43.9	0.0
WDC	**Whiskeytown Da**	**0.79**	**119**			Pn	07 58 43.6	-0.4
WDC	**Whiskeytown Da**	**0.79**	**119**	Sg		Sn	07 58 55.1	+0.4
LAMM	**Antelope Mount**	**0.90**	**44**			Pn	07 58 45.7	+0.1
KSXB	**Camp Six Broad**	**0.92**	**340**			Pb	07 58 46.2	-0.2
O02D	**Mt. Diablo Mer**	**0.94**	**147**			Pb	07 58 46.4	-0.2
KTRM	**Thompson Ridge**	**0.94**	**3**			Pn	07 58 46.4	+0.2
YBH	**Yreka Blue Hor**	**0.95**	**36**			Pb	07 58 46.5	-0.3
YBH	**Yreka Blue Hor**	**0.95**	**36**			Pn	07 58 46.1	0.0
KSMM	**Slide Mountain**	**0.95**	**215**			Pn	07 58 45.7	-0.6
LGBM	**Gray Butte**	**1.02**	**68**			Pb	07 58 48.1	-0.1
LSHM	**Sage Hen Hill**	**1.08**	**99**			Pb	07 58 48.7	-0.4
B040	**Montague**	**1.16**	**42**			Pb	07 58 49.8	-0.6
LBFM	**Black Fox Moun**	**1.24**	**72**			Pb	07 58 51.9	+0.1
KBO	**Bosley Butte**	**1.37**	**335**	Pn		Pb	07 58 54.1	+0.1
LGMM	**Garner Mountai**	**1.37**	**62**			Pb	07 58 54.3	+0.2
HUMO	**Hull Mountain**	**1.68**	**13**	Pn		Pb	07 58 58.2	-1.0
JTGM	**Trout Gulch Ro**	**4.12**	**162**			Pn	07 59 31.1	+1.5

*IDC **04** 08:09:58.2±0.8,9°.78N×124°.10E, h0km, mb3.8/8, mb1 3.9/8,mb1mx3.7/43,mbtmp3.8/8,MS3.2/3,Ms1 3.2/3, ms1mx2.7/34, Error ellipse: s-maj=36.4km s-min=17.2km az=73.0*

*MAN **04** 08:10:00.8,9°.89N×124°.02E,h10km, mb4.8, ML3.7, MS3.7*
MAN Intensity III - Tagbilaran City Maribojoc and Loboc Bohol.
*NEIC **04** 08:10:02.4±2.3, 10°.3N±0°.1×124°.2E±0°.2, h10km±1km, mb4.3/6, Error ellipse: s-maj=39.5km s-min=8.0km az=53.0*

ISC 04 08:10:01.5±1.1, 9°.86N±0°.03×124°.06E±0°.04, h17km±8km, n36, σ1§69/45, mb3.9/11, 3C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LLP	**Lapu-Lapu**	**0.47**	**348**⇓	*i*P		**Pg**	**08 10 09.5**	**-1.4**
LLP				*i* S		**Sg**	**08 10 16.0**	**-1.3**
MSLP	**Maasin**	**0.83**	**71**	*e*P		**Pg**	**08 10 17.8**	**+0.1**
MSLP				*e*S		**Sn**	**08 10 30.8**	**+0.4**
OCLP	**Ormoc**	**1.30**	**24**	*e*P		**Pn**	**08 10 24.9**	**-0.1**
SCPH	**Surigao**	**1.41**	**93**⇓	*e*P		**Pb**	**08 10 27.1**	**-0.3**
SCPH				*e*S		**Sg**	**08 10 46.7**	**-0.3**
DCPH	**Dipolog City**	**1.45**	**209**⇓	*i*P		**Pn**	**08 10 26.5**	**-0.5**
DCPH				*i* S		**Sb**	**08 10 46.7**	**+0.5**
CGP	**Cagayan de Oro**	**1.53**	**156**⇓	*e*P		**Pn**	**08 10 27.1**	**-1.0**
CGP				*e*S		**Sn**	**08 10 47.2**	**-0.4**
GUIM	**Jordan**	**1.64**	**298**	*e*P		**Pn**	**08 10 29.0**	**-0.6**
GUIM				*e*S		**Sn**	**08 10 50.9**	**+0.5**
BUTP	**Butuan**	**1.77**	**120**	*e*S		**Sb**	**08 10 56.4**	**+0.9**
PAGZ	**Pagadian**	**2.11**	**199**	*e*P		**Pn**	**08 10 36.1**	**0.0**
PAGZ				*e*S		**Sb**	**08 11 05.6**	**+0.4**
RCP	**Roxas**	**2.13**	**323**⇑	*e*P		**Pn**	**08 10 36.4**	**0.0**
RCP				*e*S		**Sn**	**08 11 01.1**	**-1.4**
BUKP	**Musuan**	**2.20**	**153**	*e*P		**Pn**	**08 10 38.1**	**+0.7**
BUKP				*e*S		**Sg**	**08 11 15.4**	**+3.1**
CTBH	**Cotabato--PC H**	**2.62**	**176**⇑	*i*P		**Pn**	**08 10 44.1**	**+0.9**
KCP	**Kidapawan**	**3.01**	**160**⇑	*i*P		**Pn**	**08 10 49.6**	**+1.1**
KCP				*i* S		**Sn**	**08 11 16.1**	**-8.1**
DAV	**Davao City (W)**	**3.15**	**151**	LR		LR	08 12 14.9	
	comp=Z,220nm,19.9s,baz=190,slow=45							
DAV	**Davao City (W)**	**3.15**	**151**	Pn		**Pb**	**08 10 58.1**	**+1.0**
LQP	**Lukban**	**4.90**	**330**⇓	*e*P		**Pn**	**08 11 16.5**	**+1.8**
UBPT	**Khong Chiam**	**18.93**	**288**	P		**Pn**	**08 14 24.7**	**+2.2**
UBPT				IAmb		IAmb	08 14 31.5	
	comp=Z,24nm,1.1s							
PBKT	**Sadao Pong**	**23.44**	**289**			**P**	**08 15 11.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**25.79**	**292**	P		**P**	**08 15 32.3**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=102,slow=8.4,SNR=5.7							
CMAR				LR		LR	08 26 10.1	
	comp=Z,22nm,18.3s,baz=155,slow=38							
CMAR	**Chiang Mai Arr**	**25.79**	**292**	P		**P**	**08 15 34.7**	**+2.8**
KSRS	**Korea Array**	**27.70**	**7**	P		**P**	**08 15 48.6**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=186,slow=10,SNR=3.2							
WRA	**Warramunga Arr**	**31.29**	**161**	P		**P**	**08 16 18.8**	**-2.2**
	comp=Z,0.3nm,0.6s,baz=348,slow=9.1,SNR=3.3							
SHL	**Shillong**	**34.28**	**301**	P		**P**	**08 16 47.8**	**+0.5**
ASAR	**Alice Springs**	**34.68**	**164**	P		**P**	**08 16 49.9**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=339,slow=6.8,SNR=18							
ASAR				PcP		**PcP**	**08 19 22.9**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=344,slow=3.1,SNR=7.7							
ASAR	**Alice Springs**	**34.68**	**164**	P		**P**	**08 16 51.5**	**+0.9**
USRK	**Ussuriysk Ar.**	**34.90**	**10**	P		**P**	**08 16 52.5**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=194,slow=12,SNR=3.4							
MK31	**Makanchi Array**	**51.06**	**324**	P		**P**	**08 19 03.5**	**+0.4**
MK31				IAmb		IAmb	08 19 13.3	
	comp=Z,3.4nm,1.1s							
MKAR	**Makanchi Array**	**51.06**	**324**	P		**P**	**08 19 02.9**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=129,slow=8.3,SNR=14							
MKAR	**Makanchi Array**	**51.06**	**324**	P		**P**	**08 19 03.1**	**+0.1**
MAKZ	**Makanchi**	**51.25**

HYT	**Haines Junctio**	**8.64**	**155**	Pn		**Pn**	**08 15 36.2**	**-0.1**
PCA	**Pinnacle**	**9.00**	**165**	Pn		**Pn**	**08 15 44.9**	**+3.6**
WHY	**Whitehorse**	**9.25**	**148**	Pn		**Pn**	**08 15 43.3**	**-1.4**
YKA	**Yellowknife Ar**	**13.90**	**102**	Pn		**Pn**	**08 16 44.4**	**-3.6**
	0.2nm,0.3s,baz=303,slow=13,SNR=16							
YKA				Sn		Sn	08 19 10.1	-12
	0.1nm,0.3s,baz=304,slow=23,SNR=4.5							
YKA				Lg		Lg	08 20 48.1	
	baz=321,slow=29							
YKA	**Yellowknife Ar**	**13.90**	**102**			**Pn**	**08 16 43.5**	**-4.5**
SEY	**Seymchan**	**25.20**	**287**	P		**P**	**08 18 58.4**	**+1.8**
	5.2nm,0.9s,baz=81,slow=12,SNR=6.7							
PDAR	**Pinedale Array**	**31.97**	**126**	P		**P**	**08 19 59.4**	**+2.0**
	0.9nm,0.8s,baz=30,slow=4.2,SNR=8.0							
PDAR	**Pinedale Array**	**31.97**	**126**	P		**P**	**08 19 58.2**	**+0.8**
NVAR	**Mina Array Bea**	**33.73**	**141**	P		**P**	**08 20 16.1**	**+3.3**
	0.5nm,0.7s,baz=319,slow=7.0,SNR=5.8							
ARCES	**ARCESS Array B**	**41.73**	**5**	P		**P**	**08 21 20.3**	**+0.5**
	4.3nm,1.0s,baz=345,slow=10,SNR=2.6							
TXAR	**Lajitas Array**	**46.18**	**127**	P		**P**	**08 21 58.0**	**+2.0**
	0.1nm,0.6s,baz=353,slow=6.5,SNR=3.2							
AKASG	**Malin Array Be**	**60.70**	**4**	P		**P**	**08 23 42.1**	**-0.1**
	0.3nm,0.4s,baz=359,slow=6.6,SNR=3.2							

*SJA **04** 08:25:28.6±0.4,20°.45S×71°.25W,h21km±20km, ML4.2, MW3.9*
*NEIC **04** 08:25:35.8±2.5,20°.78S±0°.05×70°.8W±0°.1,h13km±4km, Error ellipse: s-maj=14.9km s-min=6.9km az=96.0*
*GUC **04** 08:25:36.4±0.7,20°.66S×70°.76W,h38km±2km, ML4.2*
*IDC **04** 08:25:40.8±2.5,20°.83S×70°.64W,h53km±25km,mb3.4/5, mb1 3.8/11,mb1mx3.7/29,mbtmp3.8/11,ML3.9/6,MS3.2/6, Ms1 3.2/6,ms1mx3.1/18,Error ellipse: s-maj=30.6km s-min=20.7km az=83.0*

ISC 04 08:25:35.7±1.3,20°.66S±0°.03×70°.80W±0°.06,h14km±8km, n58,σ1º25/62,mb3.7/5,8C-2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.59**	**81**	*i*P		**Pb**	**08 25 47.0**	**-0.9**
TA01				*e*S		**Sb**	**08 25 55.6**	**-0.5**
PSGC	**Pisagua**	**1.23**	**31**	⇓*e*P		**Pn**	**08 25 57.9**	**-0.9**
PSGC				*e*S		**Sb**	**08 26 14.3**	**-0.4**
PB11	**IPOC Station P**	**1.40**	**51**	⇑*i*P		**Pn**	**08 26 00.6**	**-0.4**
PB11				*e*S		**Sn**	**08 26 18.5**	**-0.9**
PB11				IAML			08 26 20.1	
	comp=N,7μm,0.6s							
PB11	**IPOC Station P**	**1.40**	**51**			**Pn**	**08 26 00.6**	**-0.4**
PB08	**IPOC Station P**	**1.63**	**72**	⇑*i*P		**Pn**	**08 26 04.2**	**-0.2**
PB08				*e*S		**Sn**	**08 26 25.4**	**-0.1**
PB08				IAML			08 26 28.8	
	comp=N,3μm,0.3s							
PB03	**IPOC Station P**	**1.70**	**145**	⇑*i*P		**Pn**	**08 26 04.9**	**-0.2**
PB03				*e*S		**Sn**	**08 26 27.4**	**+0.6**
PB03				IAML			08 26 38.1	
	comp=N,3μm,0.4s							
PB04	**IPOC Station P**	**1.78**	**160**	⇓*e*P		**Pn**	**08 26 05.2**	**-1.0**
PB04				*e*S		**Sn**	**08 26 29.0**	**+0.2**
PB04				IAML			08 26 35.6	
	comp=E,6μm,0.5s							
PB04	**IPOC Station P**	**1.78**	**160**			**Pn**	**08 26 05.0**	**-1.3**
PB09	**IPOC Station P**	**1.85**	**128**	⇑*i*P		**Pn**	**08 26 07.7**	**+0.5**
PB09				*e*S		**Sn**	**08 26 30.6**	**+0.1**
PB09				IAML			08 26 33.7	
	comp=E,5μm,0.5s							
MNMC	**Minye Minye**	**1.90**	**37**	⇑*i*P		**Pn**	**08 26 08.2**	**+0.2**
MNMC				*e*S		**Sn**	**08 26 32.4**	**+0.5**
MNMC				IAML			08 26 37.4	
	comp=E,5μm,0.7s							
MNMC	**Minye Minye**	**1.90**	**37**			**Pn**	**08 26 08.1**	**+0.1**
PB05	**IPOC Station P**	**2.26**	**166**	*i*P		**Pn**	**08 26 11.9**	**-0.9**
PB05				*e*S		**Sb**	**08 26 44.2**	**-0.1**
AP01	**Chacalluta**	**2.31**	**11**	⇑*i*P		**Pn**	**08 26 13.2**	**-0.3**
AP01				*e*S		**Sn**	**08 26 41.9**	**+0.1**
AP01				IAML			08 26 59.0	
	comp=E,2μm,0.5s							
PB06	**IPOC Station P**	**2.34**	**151**	⇑*i*P		**Pn**	**08 26 13.2**	**-0.8**
PB06				*e*S		**Sn**	**08 26 43.1**	**+0.4**
PB06				IAML			08 26 53.1	
	comp=N,2μm,0.4s							
PB06	**IPOC Station P**	**2.34**	**151**	*i*P		**Pn**	**08 26 14.2**	**+0.2**
PB06				*e*S		**Sb**	**08 26 47.9**	**+1.2**
PB16	**IPOC Station P**	**2.61**	**28**	*e*S		**Sn**	**08 26 51.8**	**+1.8**
PB16				IAML			08 27 03.5	
	comp=N,2μm,0.9s							
LVC	**Limon Verde**	**2.62**	**138**	P		**Pn**	**08 26 19.1**	**+1.1**
	comp=N,36nm,0.3s,baz=333,slow=9.7,SNR=171							
LVC				S		**Sn**	**08 26 50.5**	**+0.5**
	comp=N,111nm,0.3s,baz=357,slow=14,SNR=6.4							
LVC				LR		LR	08 27 10.9	
	comp=N,136nm,19.1s,baz=303,slow=38							
LVC	**Limon Verde**	**2.62**	**138**			**Pn**	**08 26 19.3**	**+1.2**
LVC	**Limon Verde**	**2.62**	**138**	*i*P		**Pn**	**08 26 18.9**	**+0.9**
LVC				*e*S		**Sb**	**08 26 56.2**	**+1.2**
LVC				IAML			08 27 02.1	
	comp=Z,550nm,0.4s							
PB15	**IPOC Station P**	**2.82**	**154**	*i*P		**Pn**	**08 26 21.2**	**+0.4**
PB15				IAML			08 27 05.8	
	comp=Z,3μm,0.4s							
PB10	**IPOC Station P**	**2.85**	**175**			**Pn**	**08 26 18.9**	**-2.1**
PB10	**IPOC Station P**	**2.85**	**175**	*i*P		**Pn**	**08 26 19.2**	**-1.7**
LPAZ	**La Paz**	**5.03**	**31**	P		Pn	08 26 56.9	+5.5
	comp=Z,1.1nm,0.3s,baz=195,slow=6.2,SNR=17							
LPAZ	**La Paz**	**5.03**	**31**			Pb	08 26 58.4	-5.6
YJA	**Yavi**	**5.15**	**108**	*i*P		**Pn**	**08 26 55.5**	**+2.6**
YJA				IAML			08 27 03.8	
	comp=Z,29nm,0.6s							
HJA	**Humahuaca**	**5.61**	**118**	*i*P		**Pn**	**08 27 02.0**	**+2.8**
AZAP	**Zapla**	**6.38**	**125**	*i*P		**Pn**	**08 27 07.2**	**-2.5**
GO04	**Tololo Observa**	**9.48**	**180**	Pn		**Pn**	**08 27 51.3**	**-0.8**
SIV	**San Ignacio**	**10.34**	**65**	P		**Pn**	**08 28 04.0**	**+0.2**
	comp=Z,3.6nm,0.3s,baz=271,slow=9.1,SNR=46							
SIV				LR		LR	08 33 00.6	
	comp=Z,101nm,19.4s,baz=280,slow=43							
NNA	**Nana**	**10.39**	**325**	LR		LR	08 31 49.9	
	comp=Z,86nm,20.5s,baz=130,slow=35							
CFA	**Coronel Fontan**	**11.14**	**169**	P		**Pn**	**08 28 13.7**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=356,slow=13,SNR=4.6							
CFA	**Coronel Fontan**	**11.14**	**169**	*i*P		**Pn**	**08 28 13.1**	**-1.6**
CPUP	**Villa Florida**	**13.59**	**117**	P		**Pn**	**08 28 46.2**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=281,slow=16,SNR=3.0							
CPUP				LR		LR	08 33 44.0	
	comp=Z,86nm,18.8s,baz=301,slow=36							
CPUP	**Villa Florida**	**13.59**	**117**			**Pn**	**08 28 45.8**	**-2.4**
PLCA	**Paso Flores**	**20.01**	**179**	P		**P**	**08 30 07.5**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=22,slow=12,SNR=6.4							
PLCA	**Paso Flores**	**20.01**	**179**	P		**P**	**08 30 07.9**	**-0.3**
PLCA				IAmb		IAmb	08 30 10.1	
	comp=Z,16nm,1.2s							
BDFB	**Brasilia**	**22.21**	**81**	LR		LR	08 40 54.9	
	comp=Z,174nm,18.9s,baz=295,slow=41							
BBAC	**Balboa, Cauca**	**23.41**	**344**	*e*P		**P**	**08 30 46.2**	**+1.5**
ORTC	**Ortega, Tolima**	**24.80**	**349**	*e*P		**P**	**08 30 59.5**	**+1.9**
CHIC	**Chingaza**	**25.29**	**353**	*e*P		**P**	**08 31 00.6**	**-1.9**
GUY2C	**Guyana, Caldas**	**26.11**	**350**	*e*P		**P**	**08 31 10.4**	**+0.5**
GUY2C				*e*P		**pP**	**08 31 14.0**	**+0.6**
SPBC	**San Pablo de B**	**26.34**	**353**	*e*P		**P**	**08 31 12.3**	**+0.7**
RUSC	**La Rusia**	**26.48**	**355**	*e*P		**P**	**08 31 14.0**	**+0.7**
SMLC	**San Martn de**	**29.45**	**353**	*e*P		**P**	**08 31 36.5**	**-2.9**
TEIG	**Tepich**	**44.08**	**336**	LR		LR	08 52 40.0	
	comp=Z,70nm,18.0s,slow=36							
TXAR	**Lajitas Array**	**58.94**	**326**	P		**P**	**08 35 35.5**	**+0.6**
	comp=Z,0.6nm,1.0s,baz=159,slow=7.7,SNR=3.4							
PDAR	**Pinedale Array**	**72.51**	**331**	P		**P**	**08 37 03.9**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=119,slow=7.5,SNR=2.9							
PDAR	**Pinedale Array**	**72.51**	**331**	P		**P**	**08 37 04.1**	**+1.7**
NVAR	**Mina Array Bea**	**73.75**	**323**	P		**P**	**08 37 11.5**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=158,slow=7.5,SNR=3.5							
TORD	**Torodi Ar. Bea**	**78.75**	**71**	P		**P**	**08 37 37.6**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=251,slow=6.2,SNR=7.1							
YKA	**Yellowknife Ar**	**89.82**	**341**	P		**P**	**08 38 33.4**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=138,slow=4.8,SNR=9.7							
H11S2	**WAKE ISLAND Hyl**	**26.01**	**278**	T		T	11 04 08.0	
	baz=106,SNR=54							
H11S1	**WAKE ISLAND Hyl**	**26.02**	**278**	T		T	11 03 23.9	
	baz=106,slow=74,SNR=39							
H11S3	**WAKE ISLAND Hyl**	**26.03**	**278**	T		T	11 03 32.0	
	baz=106,slow=74,SNR=43							
H11N3	**WAKE ISLAND Hyl**	**26.08**	**280**	T		T	11 04 04.8	
	baz=102,slow=75,SNR=19							
H11N2	**WAKE ISLAND Hyl**	**26.09**	**280**	T		T	11 04 05.9	
	baz=102,slow=75,SNR=17							
H11N1	**WAKE ISLAND Hyl**	**26.09**	**280**	T		T	11 03 36.2	
	baz=102,slow=75,SNR=17							
MKAR	**Makanchi Array**	**145.95**	**34**	PKPbc		**PKPbc**	**08 45 14.8**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=322,slow=2.3,SNR=13							

*NCEDC **04** 08:40:50.7±1.1,38°.10N±0°.02×122°.25W±0°.02,h7km±6km, Md2.0/62, Error ellipse: s-maj=3.2km s-min=2.0km az=181.0*

NEIC 04 08:40:51.2±0.9,38°.10N±0°.01×122°.29W±0°.02,h12km±2km, Error ellipse: s-maj=2.1km s-min=1.3km az=57.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
CPIM	**Pinole Ridge**	**0.12**	**151**			Pg	08 40 53.7	-0.6
CSPM	**San Pablo Ridg**	**0.14**	**187**			Pg	08 40 54.7	+0.2
CPMM	**Point Molate**	**0.17**	**213**			Pg	08 40 55.2	+0.2
RFSB	**Richmond Field**	**0.18**	**192**			Pg	08 40 55.1	-0.1
BRIB	**Briones**	**0.21**	**148**			Pg	08 40 55.2	-0.4
CVPM	**Vollmer Peak**	**0.22**	**166**			Pg	08 40 55.7	-0.2
BL88	**Building 88, L**	**0.22**	**173**			Pg	08 40 55.7	-0.2
VAK	**Adit at Lawren**	**0.22**	**172**			Pg	08 40 55.7	-0.1
VAK						Sg	08 40 59.4	+0.4
BL67	**Building 67, L**	**0.22**	**173**			Pg	08 40 55.8	-0.2
BL67						Sg	08 40 59.5	+0.3
BKS	**Berkeley--Byer**	**0.22**	**169**			Pg	08 40 55.7	-0.2
BKS						Sg	08 40 59.4	+0.3
BRK	**Berkeley--Havi**	**0.22**	**174**			Pg	08 40 55.7	-0.2
BRK						Sg	08 40 59.3	+0.3
CVS	**Carmenet Viney**	**0.28**	**332**			Pg	08 40 56.7	-0.3
CVS						Sg	08 41 01.4	+0.6
CYBM	**Yerba Buena Is**	**0.29**	**191**			Pg	08 40 57.1	0.0
CMCM	**Mills College**	**0.33**	**164**			Pg	08 40 57.5	-0.3
BGC	**Bolinger Road**	**0.33**	**147**			Pg	08 40 57.7	-0.2
CRHM	**Round Hill Res**	**0.33**	**135**			Pg	08 40 57.7	-0.2
JPRM	**Presidio of Sa**	**0.33**	**206**			Pg	08 40 58.1	+0.3
NAPC	**Atlas Peak**	**0.34**	**5**			Pg	08 40 57.9	-0.3
BDM	**Black Diamond**	**0.36**	**113**			Pg	08 40 57.8	-0.6
HMR	**Hamilton Ranch**	**0.39**	**81**			Pg	08 40 59.4	+0.5
CLCB	**Lake Chabot**	**0.40**	**154**			Pg	08 40 58.7	-0.4
NOLM	**Olema**	**0.40**	**262**			Pg	08 40 59.6	+0.5
NTYM	**Taylor**	**0.41**	**315**			Pg	08 40 59.6	+0.2
NADM	**Allendale**	**0.44**	**35**			Pb	08 41 00.9	0.0
MCCM	**Marconi Confer**	**0.47**	**276**			Sg	08 41 00.6	-6.0
MCCM	**Marconi Confer**	**0.47**	**276**		Pg	Pg	08 41 00.3	0.0
CMOB	**Morgan Territo**	**0.48**	**126**			Pg	08 41 00.1	-0.4
JCPM	**Coyote Point**	**0.51**	**183**			Pg	08 41 01.0	-0.1
SAC	**San Andreas**	**0.52**	**191**			Pg	08 41 01.4	+0.1
MAC	**Mark West Spri**	**0.57**	**323**			Pg	08 41 02.4	+0.1
NBPM	**Berryessa Peak**	**0.58**	**8**			Pb	08 41 03.2	0.0
WENL	**Wente Vineyard**	**0.63**	**138**			Pg	08 41 03.8	+0.3
JHPM	**Huddart Park**	**0.65**	**181**			Pg	08 41 03.9	+0.1
CMJM	**Mission San Jo**	**0.66**	**150**			Pg	08 41 03.7	-0.3
FARB	**Farallon Islan**	**0.69**	**235**			Pg	08 41 04.6	+0.1
JRSC	**Jasper Ridge**	**0.69**	**177**			Pg	08 41 04.2	-0.4
NMCNC	**Mill Creek, So**	**0.70**	**315**			Pg	08 41 04.5	-0.2
NMTM	**Middletown**	**0.72**	**350**			Pg	08 41 05.3	+0.2
NDHM	**Dunnigan Hills**	**0.73**	**24**			Pb	08 41 05.9	+0.1
JFP	**Foothills Park**	**0.74**	**174**			Pg	08 41 05.3	-0.2
BGH	**Bear Gulch**	**0.75**	**183**			Pg	08 41 05.9	+0.2
JJRM	**Joaquin Road**	**0.75**	**175**			Pg	08 41 05.7	0.0
GDXM	**Geysers**	**0.81**	**331**		Pg	Pg	08 41 06.0	-0.9
JPC	**Peters Creek,**	**0.83**	**176**			Pg	08 41 06.9	-0.2
JSGM	**Saratoga Golf**	**0.83**	**167**			Pg	08 41 07.1	-0.2
JSGM						Sb	08 41 19.5	+0.8
JSTM	**Santa Teresa H**	**0.97**	**156**			Pg	08 41 08.9	-0.9
JUMM	**Mount Umunhum**	**0.98**	**161**			Pg	08 41 08.8	-1.3
AMC	**Almaden**	**1.00**	**159**			Pg	08 41 09.2	-1.3
JHLM	**Holstrom Ranch**	**1.05**	**160**			Pb	08 41 09.8	-1.6
AFDM	**Forest Hills D**	**1.34**	**50**			Pn	08 41 13.1	-2.7
AFDM					Sg	Sb	08 41 30.2	-3.2
SAO	**San Andreas Ge**	**1.49**	**153**		Pn	Pn	08 41 16.8	-1.0
CMB	**Columbia Colle**	**1.50**	**92**			Pn	08 41 16.4	-1.6
RUBR	**Rubicon Trail**	**1.93**	**60**	Pn		Pn	08 41 24.1	+0.1
WAKR	**Walker**	**2.28**	**79**	Pn		Pn	08 41 28.1	-0.7
PNTR	**Pine Nut**	**2.33**	**64**	Pn		Pn	08 41 30.2	+0.7
MDPB	**Devils Postpil**	**2.58**	**99**	Pn		Pn	08 41 33.8	+0.7
OMMB	**Old Mammoth Mi**	**2.65**	**99**	Pn		Pn	08 41 35.4	+1.4

*NEIC **04** 08:43:55.6±1.8,6°.1S±0°.1×125°.5E±0°.1,h546km±9km, mb4.5/17, Error ellipse: s-maj=16.8km s-min=14.1km az=56.0*
*IDC **04** 08:43:56.5±0.9,6°.16S×125°.42E,h559km±13km,mb3.3/7, mb1 3.6/12,mb1mx3.3/36,mbtmp4.4/12, Error ellipse: s-maj=23.3km s-min=11.0km az=57.0*

ISC 04 08:43:55.9±0.5,6°.11S±0°.07×125°.53E±0°.07,h550km,n41, σ1º07/46,mb4.4/14,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.83**	**199**	P		**P**	**08 45 17.4**	**+0.7**
SOEI				S		**S**	**08 46 20.7**	**-1.8**
BATI	**Baumata**	**4.47**	**204**	P		**P**	**08 45 22.5**	**+1.0**
	13nm,0.3s,baz=68,slow=4.2,SNR=6.8							
BATI				S		**S**	**08 46 31.4**	**+0.1**
	14nm,0.3s,baz=338,slow=22,SNR=12							
LUWI	**Luwuk**	**5.74**	**331**	P		**P**	**08 45 33.4**	**+1.2**
KAPI	**Kappang**	**5.86**	**280**	P		**P**	**08 45 35.5**	**+2.3**
FAKI	**Fak Fak**	**7.41**	**65**	P		**P**	**08 45 47.2**	**-0.7**
FAKI				S		**S**	**08 47 17.7**	**-1.8**
SIJI	**Sorong**	**7.73**	**48**	P		**P**	**08 45 53.8**	**+2.7**
	6.9nm,0.3s,baz=323,slow=14,SNR=8.7							
MTN	**Manton Dam**	**8.68**	**141**	P		**P**	**08 46 00.8**	**+0.4**
KNRA	**Kununurra**	**10.02**	**162**	P		**P**	**08 46 14.8**	**+0.8**
JAGI	**Jajag, Banyuwa**	**11.53**	**258**	P		**P**	**08 46 28.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**11.92**	**180**	P		**P**	**08 46 33.6**	**+0.1**
	1.8nm,0.3s,baz=14,slow=8.9,SNR=37							
WRAB	**Tennant Creek**	**16.20**	**149**	P		**P**	**08 47 16.8**	**-0.5**
WRA	**Warramunga Arr**	**16.20**	**149**	P		**P**	**08 47 16.7**	**-0.6**
	6.0nm,0.3s,baz=327,slow=10,SNR=213							
WRA				S		**S**	**08 49 59.8**	**-2.0**
	baz=329,slow=16,SNR=4.8							
PSA00	**Pilbara Seismi**	**16.33**	**199**	P		**P**	**08 47 18.4**	**-0.1**
PSA00				IAmb		IAmb	08 47 19.1	
	comp=Z,16nm,1.2s							
CISI	**Cisompet, Garu**	**17.65**	**264**	P		**P**	**08 47 30.5**	**-0.3**
COEN	**Coen**	**19.03**	**116**	P		**P**	**08 47 43.2**	**-0.1**
ASAR	**Alice Springs**	**19.23**	**156**	P		**P**	**08 47 45.4**	**+0.3**
	comp=Z,4.2nm,0.3s,baz=345,slow=15,SNR=251							
ASAR				ScP		**ScP**	**08 54 23.6**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=347,slow=1.8,SNR=7.5							
CTA	**Charters Tower**	**24.46**	**127**	P		**P**	**08 48 31.9**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=281,slow=8.4,SNR=3.7							
FORT	**Forrest**	**24.66**	**175**	P		**P**	**08 48 33.7**	**+0.2**
KULM	**Kulim**	**27.30**	**294**	P		**P**	**08 48 57.4**	**+0.3**
KULM				IAmb		IAmb	08 49 09.6	
	comp=Z,8.0nm,1.0s							
NWAO	**Narrogin (SRO)**	**27.78**	**195**	P		**P**	**08 49 01.3**	**+0.3**
NWAO				IAmb		IAmb	08 49 13.5	
	comp=Z,22nm,1.2s							
RPSI	**Rantau Prapat**	**27.97**	**287**	P		**P**	**08 49 02.5**	**-0.4**
PSI	**Prapat**	**28.01**	**288**	P		**P**	**08 49 02.5**	**-0.8**
	comp=Z,8.4nm,0.6s,baz=51,slow=1.4,SNR=3.8							
BBOO	**Buckleboo**	**28.32**	**161**	P		**P**	**08 49 05.9**	**+0.1**
BBOO				IAmb		IAmb	08 49 07.8	
	comp=Z,21nm,1.2s							
STKA	**Stephens Creek**	**29.71**	**152**	P		**P**	**08 49 18.4**	**+0.5**
	comp=Z,5.0nm,0.4s,baz=332,slow=8.7,SNR=23							
STKA	**Stephens Creek**	**29.71**	**152**	P		**P**	**08 49 18.3**	**+0.5**
ARMA	**Armidale**	**34.45**	**138**	P		**P**	**08 49 60.0**	**+1.7**
ARMA				IAmb		IAmb	08 50 12.2	
	comp=Z,16nm,1.4s							
CMAR	**Chiang Mai Arr**	**35.83**	**313**	P		**P**	**08 50 10.1**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=154,slow=7.1,SNR=5.4							
CMAR	**Chiang Mai Arr**	**35.83**	**313**	P		**P**	**08 50 08.6**	**-1.1**
TOO	**Toolangi**	**36.21**	**153**	P		**P**	**08 50 14.5**	**+1.8**
CAN	**Canberra**	**36.22**	**147**	P		**P**	**08 50 14.6**	**+1.8**
CAN				IAmb		IAmb	08 50 15.0	
	comp=Z,9.6nm,0.6s							
RPZ	**Rata Peaks**	**54.69**	**141**	P		**P**	**08 52 34.2**	**+0.7**
RPZ				IAmb		IAmb	08 52 53.4	
	comp=Z,18nm,1.0s							
KHZ	**Kahutara**	**55.69**	**138**	P		**P**	**08 52 40.5**	**0.0**
KHZ				IAmb		IAmb	08 52 51.0	
	comp=Z,27nm,1.4s							
SONM	**Songino Array**	**56.30**	**345**	P		**P**	**08 52 44.6**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=149,slow=8.6,SNR=4.3							
SONM	**Songino Array**	**56.30**	**345**	P		**P**	**08 52 44.7**	**-0.1**
MK31	**Makanchi Array**	**65.11**	**329**	P		**P**	**08 53 42.5**	**-0.1**
MKAR	**Makanchi Array**	**65.11**	**329**	P		**P**	**08 53 42.3**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=117,slow=8.5,SNR=15							
ZALV	**Zalesovo Beam**	**68.88**	**336**	P		**P**	**08 54 04.6**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=155,slow=5.1,SNR=6.1							
ZALV	**Zalesovo Beam**	**68.88**	**336**	P		**P**	**08 54 04.1**	**-1.4**
BRVK	**Borovoye**	**75.06**	**329**	P		**P**	**08 54 41.2**	**-0.2**
ABKAR	**Akbulak array**	**79.08**	**323**	P		**P**	**08 55 02.8**	**-0.7**
FNO	**Franklin**	**131.04**	**48**	PKPdf		**PKiKP**	**09 02 07.2**	**+0.4**

*INET **04** 08:45:41.4, 12°.39N×88°.00W, h23km, MD3.3, ML3.4*
*NEIC **04** 08:45:41.1±2.3, 12°.42N±0°.07×87°.90W±0°.06, h37km±5km, mb4.2/59, Md4.6(SNET), Error ellipse: s-maj=11.1km s-min=7.0km az=210.0*
*UCR **04** 08:45:42.2±1.1, 12°.49N×88°.07W, h29km±4km, ML4.5, mb4.2(NEIC)*
*SNET **04** 08:45:42.1±1.2, 12°.49N×88°.11W, h25km±4km, ML4.6*
*IDC **04** 08:45:44.5±1.9, 12°.57N×87°.77W, h77km±20km, mb3.5/6, mb1 3.9/10,mb1mx3.6/33,mbtmp3.9/10,MS3.4/3, Ms1 3.4/3,ms1mx2.8/26, Error ellipse: s-maj=46.9km s-min=13.1km az=44.0*
*GCG **04** 08:45:46.6±0.7, 12°.07N×89°.12W, h0km±146km, MD4.4*

ISC 04 08:45:37.8±1.5, 12°.42N±0°.05×88°.00W±0°.03, h14km±9km, n143, σ1º46/170, mb4.2/30, 4D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
JUCU	**Jucuarɲn**	**0.86**	**344**	⇓*e*P		**Pn**	**08 45 57.1**	**+1.4**
JUCU				*e*S		**Sn**	**08 46 08.5**	**+0.3**
JUCU				IAML			08 46 12.2	
	comp=Z,21μm,0.3s							
CNCH	**Conchagua**	**0.86**	**11**	*e*P		**Pn**	**08 45 57.6**	**+1.8**
CNCH	**Conchagua**	**0.86**	**11**	*e*P		**Pn**	**08 45 57.6**	**+1.8**
LCND	**La Caada**	**0.89**	**7**	⇓*e*P		**Pn**	**08 45 57.7**	**+1.7**
LCND				*e*S		**Sn**	**08 46 10.2**	**+1.5**
LCND				IAML			08 46 12.9	
	comp=Z,15μm,0.4s							
LCND	**La Caada**	**0.89**	**7**	⇓*e*P		**Pn**	**08 45 57.7**	**+1.7**
LCND				*e*S		**Sn**	**08 46 10.2**	**+1.5**
LCND				IAML			08 46 12.9	
	comp=Z,15μm,0.4s							
LCY	**Lacayo**	**1.04**	**344**	*e*P		**Pn**	**08 45 59.8**	**+1.6**
LCY	**Lacayo**	**1.04**	**344**	*e*P		**Pn**	**08 45 59.8**	**+1.6**
PACA	**Pacayal**	**1.09**	**343**	*e*P		**Pn**	**08 46 00.6**	**+1.7**
PACA				*e*S		**Sn**	**08 46 14.8**	**+1.0**
PACA	**Pacayal**	**1.09**	**343**	*e*P		**Pn**	**08 46 00.6**	**+1.7**
PACA				*e*S		**Sn**	**08 46 14.8**	**+1.0**
TECA	**Tecapa**	**1.17**	**335**	*e*P		**Pn**	**08 46 01.6**	**+1.5**
TECA	**Tecapa**	**1.17**	**335**	*e*P		**Pn**	**08 46 01.6**	**+1.5**
COEB	**Comit de Eme**	**1.19**	**334**	*e*P		**Pn**	**08 46 01.7**	**+1.5**
COEB				*e*S		**Sn**	**08 46 17.1**	**+0.8**
FAGO	**Alcalda de S**	**1.27**	**355**	⇓*e*P		**Pn**	**08 46 03.2**	**+1.9**
FAGO				*e*S		**Sn**	**08 46 19.4**	**+1.3**
UESV	**Universidad de**	**1.43**	**328**	*e*P		**P

Y49A	Blount Mountai	21.39	4	P		P		08 50 26.8	+1.6
Y52A	Lilburn	21.64	9	P		P		08 50 30.8	+2.9
Y52A				IAmb		IAmb		08 50 45.0	
	comp=Z,25nm,1.4s								
ATAH	Atahualpa	21.65	153	LR		LR		08 57 27.5	
	comp=Z,88nm,19.7s,baz=58,slow=32								
TXAR	Lajitas Array	22.26	321	P		P		08 50 35.3	+0.6
	comp=Z,9.2nm,0.6s,baz=138,slow=10,SNR=117								
TXAR	Lajitas Array	22.26	321	P		P		08 50 35.4	+0.7
TX31	Lajitas Ar. Si	22.26	321	P		P		08 50 35.4	+0.6
TX31				IAmb		IAmb		08 50 38.5	
	comp=Z,12nm,0.8s								
TX32	Lajitas Array	22.26	321	P		P		08 50 35.3	+0.6
TX32				IAmb		IAmb		08 50 38.5	
	comp=Z,13nm,0.8s								
MIAR	Mount Ida	22.60	348	P		P		08 50 38.5	+0.4
W50A	Signal Mountai	22.81	6	P		P		08 50 40.5	+0.1
W50A				IAmb		IAmb		08 50 51.0	
	comp=Z,7.6nm,0.9s								
BG3	Lake Jocassee	22.94	11	P		P		08 50 42.6	+0.9
WHAR	Wooly Hollow	23.10	351	P		P		08 50 44.1	+0.8
CPCT	Cooper Cave	23.14	7	P		P		08 50 44.4	+0.6
W39A	Magazine	23.27	348	P		P		08 50 47.0	+1.9
W39A				IAmb		IAmb		08 50 52.0	
	comp=Z,9.4nm,1.3s								
TKL	Tuckaleechee C	23.45	9	P		P		08 50 45.6	-1.3
	comp=Z,3.8nm,0.7s,baz=163,slow=11,SNR=4.8								
TKL	Tuckaleechee C	23.45	9	P		P		08 50 47.6	+0.7
TKL				IAmb		IAmb		08 50 50.0	
	comp=Z,12nm,1.1s								
CLTN	Cedars of Leba	23.61	3	P		P		08 50 48.1	-0.4
FCAR	Ozark Folk Cen	23.66	352	P		P		08 50 48.6	-0.3
LCAR	Lake Charles	23.72	354	P		P		08 50 49.0	-0.5
LCAR				IAmb		IAmb		08 51 00.1	
	comp=Z,6.9nm,1.3s								
X34A	Smith Ranch, M	23.82	340	P		P		08 50 50.7	+0.1
U40A	Yellville	24.23	350	P		P		08 50 54.5	+0.1
FNO	Franklin	24.28	341	P		P		08 50 55.6	+0.8
TZTN	Tazewell	24.35	9	P		P		08 50 55.5	0.0
HHAR	Hobbs	24.35	348	P		P		08 50 55.7	+0.2
HHAR				IAmb		IAmb		08 50 56.9	
	comp=Z,7.6nm,1.1s								
TUL1	Leonard	24.42	345	P		P		08 50 57.3	+1.2
TUL1				IAmb		IAmb		08 50 58.2	
	comp=Z,6.9nm,0.7s								
V58A	Windy Hill, Pi	24.61	18	P		P		08 50 58.6	+0.8
V58A				IAmb		IAmb		08 51 14.7	
	comp=Z,15nm,1.2s								
GDL2	Guadalupe Moun	24.77	325	P		P		08 51 00.5	+1.0
MNTX	Cornudas Mount	24.98	323	P		P		08 51 01.1	-0.2
MNTX				IAmb		IAmb		08 51 03.0	
	comp=Z,4.9nm,0.8s								
T52A	Hallie	24.99	10	P		P		08 51 03.4	+2.2
MSTX	Muleshoe	25.33	330	P		P		08 51 03.9	-0.5
AMTX	Amarillo	25.58	333	P		P		08 51 09.4	+2.7
CCM	Cathedral Cave	25.69	354	P		P		08 51 06.7	-0.8
CCM				IAmb		IAmb		08 51 08.9	
	comp=Z,7.0nm,1.0s								
121A	Cookes Peak, D	27.02	321	P		P		08 51 21.5	+1.7
121A				IAmb		IAmb		08 51 25.8	
	comp=Z,4.6nm,0.8s								
BNM	Barren Site	27.49	325	P		P		08 51 25.9	+1.8
LENM	Lemitar	27.69	325	P		P		08 51 28.8	+2.8
SDCO	Great Sand Dun	29.68	331	P		P		08 51 43.8	+0.2
SDCO				IAmb		IAmb		08 51 45.6	
	comp=Z,4.9nm,1.1s								
S22A	4UR Ranch, Cre	30.32	330	P		P		08 51 49.8	+0.5
S22A				IAmb		IAmb		08 51 51.5	
	comp=Z,3.4nm,0.8s								
X16A	Lo Mia Camp, P	30.55	320	P		P		08 51 52.7	+1.4
X16A				IAmb		IAmb		08 51 54.0	
	comp=Z,2.5nm,0.8s								
I42A	Draeger Farm,	31.37	359	P		P		08 51 56.5	-1.7
O20A	White River Ci	32.87	331	P		P		08 52 13.1	+1.4
SADO	Sadowa	33.12	12	P		P		08 52 13.9	+0.4
SRU	San Rafael Swe	33.25	327	P		P		08 52 15.4	+0.5
P17A	Butcher Ranch,	33.63	327	P		P		08 52 19.7	+1.4
BW06	Boulder Array	35.55	332	P		P		08 52 34.8	-0.1
PD31	Pinedale Array	35.55	332	P		P		08 52 36.0	+1.1
PDAR	Pinedale Array	35.55	332	P		P		08 52 34.4	-0.5
	comp=Z,1.5nm,0.7s,baz=128,slow=9.4,SNR=13								
PDAR	Pinedale Array	35.55	332	P		P		08 52 35.0	+0.1
BGU	Big Grassy Mou	35.89	327	P		P		08 52 38.1	+0.3
SNOW	Snow King Moun	35.64	332	P		P		08 52 44.4	+0.2
MOOW	Moose Ponds	36.85	332	P		P		08 52 46.1	0.0
FXWY	Fox Creek	36.90	332	P		P		08 52 46.4	-0.1
FXWY				IAmb		IAmb		08 52 47.8	
	comp=Z,2.2nm,0.8s								
FLWY	Flagg Ranch	37.09	333	P		P		08 52 48.1	0.0
RLMT	Red Lodge	37.30	335	P		P		08 52 49.5	-0.3
NVAR	Mina Array Bea	37.37	319	P		P		08 52 51.6	+1.1
	comp=Z,1.2nm,0.7s,baz=126,slow=7.4,SNR=9.5								
NVAR	Mina Array Bea	37.37	319	P		P		08 52 52.8	+2.2
YNE	Yellowstone No	37.52	334	P		P		08 52 51.8	+0.1
KVN	Kaiserville	37.61	320	P		P		08 52 53.6	+1.1
YMR	Madison River	37.67	333	P		P		08 52 53.0	0.0
YHB	Horse Butte	37.84	333	P		P		08 52 55.3	+0.9
YHL	Hebgen Lake	37.91	333	P		P		08 52 55.0	0.0
GCMT	Greycliff	38.01	335	P		P		08 52 55.5	-0.3
DGMT	Dagmar	38.39	343	P		P		08 52 58.7	0.0
DGMT				IAmb		IAmb		08 53 04.4	
	comp=Z,2.4nm,0.6s								
DLMT	Dillon	38.94	332	P		P		08 53 03.9	+0.3
DLMT				IAmb		IAmb		08 53 05.5	
	comp=Z,3.3nm,0.8s								
WVOR	Wild Horse Val	40.01	324	P		P		08 53 13.7	+1.1
F10A	Beach Ranch, E	41.61	329	P		P		08 53 24.7	-0.9
F10A				IAmb		IAmb		08 53 26.7	
	comp=Z,4.6nm,1.0s								
PINE	Pine Mountain	42.18	324	P		P		08 53 30.2	-0.2
C09A	Chrisman Ranch	43.40	330	P		P		08 53 39.8	-0.2
C09A				IAmb		IAmb		08 53 41.3	
	comp=Z,3.4nm,0.7s								
LTY	Liberty	44.23	328	P		P		08 53 47.4	+0.6
LTY				IAmb		IAmb		08 53 47.9	
	comp=Z,2.3nm,0.7s								
FCC	Fort Churchill	46.48	356	P		P		08 54 01.6	-2.7
YKA	Yellowknife Ar	53.50	345	P		P		08 54 54.8	-2.8
	comp=Z,0.2nm,0.5s,baz=149,slow=7.2,SNR=8.4								
YKA				PcP		PcP		08 56 03.1	-1.3
	baz=149,slow=5.0								
YKA	Yellowknife Ar	53.50	345	P		P		08 54 57.0	-0.6
ILAR	Eielson Array	65.83	336	P		P		08 56 20.7	-1.9
	comp=Z,0.3nm,0.7s,baz=166,slow=5.1,SNR=4.1								
RND	Reindeer	66.11	335	P		P		08 56 22.1	-2.4
RND				IAmb		IAmb		08 56 32.2	
	comp=Z,2.9nm,1.3s								
BMAR	Burnt Mountain	66.12	339	P		P		08 56 22.5	-2.0
PMSA	Palmer Station	79.08	170	LR		LR		09 25 28.8	
	comp=Z,69nm,19.3s,baz=121,slow=30								
LZH	Lanzhou	130.47	347	*e*PKP		PKiKP		09 04 51.6	+1.8
LZH				pPKP		sPKPdf		09 05 01.6	+6.3
LZH				sPKP				09 05 07.3	

IDC ***04*** *09:19:16.1±0.8,36°.13S×100°.90W,h0km,mb4.1/10, mb1 4.3/10,mb1mx4.1/29,mbtmp4.1/10,MS3.7/9, Ms1 3.7/9,ms1mx3.5/20,Error ellipse: s-maj=24.6km s-min=22.3km az=81.0*
NEIC ***04*** *09:19:18.4±1.4,36°.23S±0°.05×100°.6W±0°.2,h10km±1km, mb4.5/21,Error ellipse: s-maj=30.1km s-min=8.7km az=269.0*

ISC 04 09:19:18.2±0.6,36°.2S±0°.1×100°.8W±0°.1,h14km,n53, σ1§10/43,mb4.3/17,MS3.8/8,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	11.56	319	LR	LR	09 25 11.6	
	comp=Z,687nm,19.8s,baz=132,slow=31						
GO05	Huala	23.49	96	P	P	09 24 28.1	+0.5
GO05				IAmb	IAmb	09 24 45.5	
	comp=Z,13nm,0.9s						
PLCA	Paso Flores	24.08	110	P	P	09 24 34.5	+1.2
	comp=Z,3.8nm,1.0s,baz=311,slow=11,SNR=4.6						
PLCA				LR	LR	09 30 27.0	
	comp=Z,54nm,18.6s,baz=298,slow=28						
PLCA	Paso Flores	24.08	110	P	P	09 24 33.1	-0.2
PLCA				IAmb	IAmb	09 24 36.5	
	comp=Z,18nm,1.4s						
CFA	Coronel Fontan	27.36	90	LR	LR	09 33 16.8	
	comp=Z,70nm,18.1s,baz=315,slow=31						
USHA	Ushuaia	29.00	140	LR	LR	09 34 10.7	
	comp=Z,347nm,20.4s,baz=272,slow=31						

LVC	Limon Verde	30.76	73	P		P		09 25 32.0	-1.7
LVC				IAmb		IAmb		09 25 39.3	
	comp=Z,9.9nm,1.3s								
MNMC	Minye Minye	32.26	67	P		P		09 25 46.8	0.0
NNA	Nana	32.37	48	P		P		09 25 48.0	+0.6
LPAZ	La Paz	35.14	64	P		P		09 26 13.2	+0.9
	comp=Z,5.4nm,1.1s,baz=234,slow=7.9,SNR=6.8								
LPAZ				LR		LR		09 37 29.6	
	comp=Z,58nm,19.8s,baz=228,slow=31								
LPAZ	La Paz	35.14	64	P		P		09 26 11.2	-1.0
LPAZ				IAmb		IAmb		09 26 15.0	
	comp=Z,6.7nm,1.1s								
ATAH	Atahualpa	35.44	41	P		P		09 26 15.8	+1.2
	comp=Z,7.8nm,1.0s,baz=236,slow=9.4,SNR=4.6								
PMSA	Palmer Station	36.03	154	P		P		09 26 18.9	+0.3
SIV	San Ignacio	40.60	71	P		P		09 26 56.7	-1.1
	comp=Z,3.5nm,1.2s,baz=266,slow=9.2,SNR=4.9								
OTAV	Otavalo	41.77	35	P		P		09 27 08.0	+0.2
SAML	Samuel	43.63	61	P		P		09 27 21.9	-0.5
SAML				IAmb		IAmb		09 27 23.1	
	comp=Z,8.1nm,1.1s								
ROSC	El Rosal	47.75	37	LR		LR		09 45 41.0	
	comp=Z,143nm,19.8s,baz=48,slow=33								
BDFB	Brasilia	51.05	81	LR		LR		09 49 51.8	
	comp=Z,90nm,18.1s,baz=280,slow=36								
SDV	Santo Domingo	53.06	38	P		P		09 28 33.8	-1.5
SDV				IAmb		IAmb		09 28 36.2	
	comp=Z,3.9nm,0.9s								
QSPA	South Pole Qui	54.04	180	P		P		09 28 42.9	+1.0
	comp=Z,1.4nm,0.7s,baz=151,slow=3.4,SNR=9.2								
QSPA	South Pole Qui	54.04	180	P		P		09 28 42.5	+0.5
H06E1	SOCORRO T-PHAS	55.48	348	T		T		10 28 50.3	
	SNR=6.2								
ZAIG	Zacatecas	58.64	358	P		P		09 29 14.8	-0.5
TXAR	Lajitas Array	65.21	357	P		P		09 29 59.4	+0.3
	comp=Z,0.6nm,0.9s,baz=178,slow=7.9,SNR=5.8								
TXAR	Lajitas Array	65.21	357	P		P		09 29 59.6	+0.4
HSIG		65.54	350	P		P		09 30 02.6	+1.4
HSIG				IAmb		IAmb		09 30 07.6	
	comp=Z,1.8nm,0.6s								
TPNV	Topopah Spring	74.15	347	P		P		09 30 54.8	+0.7
CCUT	Cedar City	74.27	350	P		P		09 30 56.4	+1.5
T49A	Edmonton	74.28	13	P		P		09 30 56.1	+1.3
R11A	Troy Canyon, C	75.40	348	P		P		09 31 04.2	+2.8
NV11	Mina Array Sit	75.94	346	P		P		09 31 06.5	+2.0
NV11				IAmb		IAmb		09 31 15.6	
	comp=Z,6.3nm,1.2s								
NVAR	Mina Array Bea	75.97	346	P		P		09 31 05.4	+0.7
	comp=Z,1.9nm,0.9s,baz=174,slow=8.2,SNR=8.8								
NVAR	Mina Array Bea	75.97	346	P		P		09 31 06.1	+1.3
YERR	Yerington	76.69	345	P		P		09 31 10.7	+1.9
YERR				IAmb		IAmb		09 31 19.7	
	comp=Z,4.9nm,1.1s								
PD31	Pinedale Array	78.97	353	P		P		09 31 22.4	+0.9
PD31				IAmb		IAmb		09 31 31.2	
	comp=Z,3.9nm,1.1s								
PDAR	Pinedale Array	78.97	353	P		P		09 31 21.3	-0.2
	comp=Z,1.2nm,0.9s,baz=155,slow=6.6,SNR=7.1								
PDAR	Pinedale Array	78.97	353	P		P		09 31 22.5	+1.1
PINE	Pine Mountain	81.66	345	P		P		09 31 37.2	+1.3
ULM	Lac du Bonnet	86.16	3	P		P		09 31 57.2	-1.2
	comp=Z,1.3nm,0.6s,baz=202,slow=11,SNR=3.1								
STKA	Stephens Creek	90.57	229	LR		LR		10 05 39.0	
	comp=Z,31nm,21.8s,baz=200,slow=31								
SCHQ	Scheiferville	95.23	19	LR		LR		10 13 13.2	
	comp=Z,93nm,18.9s,baz=99,slow=34								
YKA	Yellowknife Ar	98.95	354	P		P		09 32 57.1	-0.4
	comp=Z,0.2nm,0.8s,baz=155,slow=3.8,SNR=4.2								
YKA	Yellowknife Ar	98.95	354	P		Pdif		09 32 57.8	+0.3
H01W1	Cape Leeuwin H	102.14	209	T		T		11 28 09.9	
	baz=153,slow=74,SNR=2.5								
H01W2	Cape Leeuwin H	102.15	209	T		T		11 28 14.2	
	baz=153								
H01W3	Cape Leeuwin H	102.16	209	T		T		11 28 11.1	
	baz=153,slow=74,SNR=2.3								
BRTR	Keskin Array B	144.21	70	PKP		PKPab		09 38 51.5	0.0
	comp=Z,1.5nm,1.0s,baz=204,slow=2.7,SNR=4.3								
ASF	Jabal al Asfar	144.99	84	PKPbc		PKPab		09 38 53.4	-1.1
	comp=Z,4.4nm,0.9s,baz=172,slow=6.6,SNR=4.1								
KBZ	Khabaz	151.36	63	PKPbc		PKiKP		09 39 11.3	-0.3
	comp=Z,3.2nm,0.8s,baz=350,slow=4.0,SNR=8.7								
CMAR	Chiang Mai Arr	155.19	230	PKPab		PKPab		09 39 35.6	-0.5
	comp=Z,1.1nm,0.4s,baz=145,slow=3.3,SNR=3.6								
CMAR	Chiang Mai Arr	155.19	230	PKPdf		PKPdf		09 39 10.6	-0.8
CMAR						PKPab		09 39 35.5	-0.7
SONM	Songino Array	156.78	309	PKPab		PKPab		09 39 41.9	-0.5
	comp=Z,0.3nm,0.5s,baz=29,slow=3.3,SNR=2.9								
SONM	Songino Array	156.78	309	PKPdf		PKPdf		09 39 12.3	-0.6
SONM						pPKPab		09 39 44.4	-1.6

IDC ***04*** *09:26:29.6±2.0,12°.56N×57°.65E,h0km,mb3.5/7, mb1 3.6/7,mb1mx3.5/51,mbtmp3.5/7,MS3.3/2,Ms1 3.3/2, ms1mx2.8/28,Error ellipse: s-maj=58.0km s-min=26.3km az=65.0*

ISC 04 09:26:31.1±2.1,12°.6N±0°.3×57°.6E±0°.4,h10km,n8,σ1§19/7, mb3.6/7,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEYT	Alibeck	25.27	1	P	P	09 31 59.4	+1.8
	1.3nm,0.6s,baz=188,slow=10.0,SNR=3.6						
EIL	Elat	27.06	313	LR	LR	09 42 51.3	
	comp=Z,55nm,18.0s,baz=322,slow=36						
MKAR	Makanchi Array	39.95	27	P	P	09 34 05.6	-0.1
	0.2nm,0.7s,baz=212,slow=9.6,SNR=2.5						
AKASG	Malin Array Be	44.53	334	P	P	09 34 42.4	-0.4
	0.3nm,0.4s,baz=140,slow=8.8,SNR=3.0						
AKASG				LR	LR	09 57 33.2	
	comp=Z,33nm,18.1s,baz=295,slow=42						
ZALV	Zalesovo Beam	46.56	22	P	P	09 34 57.5	-1.4
	0.5nm,0.4s,baz=221,slow=7.7,SNR=3.2						
SONM	Songino Array	53.62	39	P	P	09 35 52.7	-0.1
	0.2nm,0.5s,baz=216,slow=7.1,SNR=2.9						
WRA	Warramunga Arr	82.08	112	P	P	09 38 52.3	-0.1
	0.4nm,0.8s,baz=295,slow=5.1,SNR=2.7						
ASAR	Alice Springs	82.76	116	P	P	09 38 56.4	+0.5
	0.6nm,0.8s,baz=281,slow=4.7,SNR=7.3						

IDC ***04*** *09:35:13.8±2.1,1°.13N×96°.95E,h0km,mb3.4/4,mb1 3.3/5, mb1mx3.2/39,mbtmp3.3/5,ML2.5/1,MS2.3/1,Ms1 2.3/1, ms1mx2.2/18,Error ellipse: s-maj=53.4km s-min=29.5km az=56.0*
DJA ***04*** *09:35:19.5±0.6,2°.N±5°.×97°.7E±°.,h10km,M3.1/6,MLv3.1/6*

ISC 04 09:35:19.0±1.1,1°.3N±0°.1×97°.08E±0°.09,h28km,n14, σ0§57/12,mb3.3/4,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	Gunungsitoli	0.50	92	P	Pn	09 35 30.1	-0.2
GSI				S	Sn	09 35 37.8	-0.2
SNSI	Sinabang, Aceh	1.32	325	P	Pn	09 35 41.4	-0.2
PBSI	Pulau Batu	1.82	139	P	Pb	09 35 52.6	+0.9
TPTI		1.93	3	P	Pn	09 35 50.1	0.0
KCSI	Kotacane, Aceh	2.30	18	P	Pn	09 35 54.9	-0.2
PSI	Prapat	2.36	51	Pn	Pn	09 35 56.3	+0.2
	0.9nm,0.3s,baz=301,slow=14,SNR=3.9						
PSI				LR	LR	09 37 07.6	
	comp=Z,60nm,21.3s,baz=130,slow=45						
MLSI	Meulaboh, Aceh	3.01	347	P	Pn	09 36 04.9	0.0
H08S2	Diego Garcia H	26.09	250	T	T	10 07 48.3	
	baz=71,slow=75,SNR=474						
H08S3	Diego Garcia H	26.09	250	T	T	10 07 44.9	
	baz=71,slow=75,SNR=452						
H08S1	Diego Carcia H	26.10	250	T	T	10 07 46.2	
	baz=71,slow=75,SNR=325						
ASAR	Alice Springs	43.56	127	P	P	09 43 19.7	-1.2
	0.3nm,0.8s,baz=295,slow=7.2,SNR=4.3						
SONM	Songino Array	47.03	9	P	P	09 43 48.3	+0.1
	0.4nm,0.8s,baz=157,slow=4.4,SNR=2.3						
MKAR	Makanchi Array	47.10	346	P	P	09 43 49.1	+0.6
	0.1nm,0.4s,baz=170,slow=8.8,SNR=3.6						
ZALV	Zalesovo Beam	53.42	351	P	P	09 44 36.3	0.0
	0.6nm,0.4s,baz=186,slow=12,SNR=4.1						

OMAN ***04*** *09:58:47.3±0.6,27°.61N×57°.10E,h52km±33km,ml3.2/5, Error ellipse: s-maj=14.5km s-min=8.2km az=238.0*
TEH ***04*** *09:58:49.0,27°.69N×56°.75E,h10km,ML2.6*

ISC 04 09:58:46.4±1.3,27°.64N±0°.06×56°.99E±0°.09,h25km±8km, n9,σ1§29/12,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIAN	Nian	0.16	239	*e*Pg	Pb	09 58 51.7	+0.1
NIAN				*e*Sg	Sn	09 58 55.4	+0.2
NIAN				*e*		09 58 56.3	
GENO	Geno	0.76	252	*e*Pg	Pb	09 59 00.6	-0.6
GENO				*e*Sg	Sb	09 59 10.2	-1.0
GENO				*e*		09 59 13.0	
BANOM	Banah	1.82	200	P	Pn	09 59 16.1	0.0
	SNR=20						
BANOM				S	Sn	09 59 40.3	+1.8
NGRK	Negar Kerman	2.01	354	*e*Pn	Pb	09 59 23.1	+0.7
NGRK				*e*		09 59 56.0	
CHMN	Cheshme madani	2.26	12	*e*		09 57 00.3	
MDH	Madha	2.42	195	P	Pn	09 59 25.2	+1.0
KHGB	Koh Gabri	2.76	351	*e*Pn	Pb	09 59 34.2	-1.0
KHGB				*e*		09 59 51.6	
ASUD	Al Ashush, Dub	3.35	207	P	Pn	09 59 38.0	+0.8
	SNR=5.7						
WSAR	Wadi Sarin	4.63	161	P	Pn	09 59 55.5	+0.7
	SNR=19						
WSAR				S	Sn	10 00 45.5	-2.2

IDC ***04*** *10:12:38.3±0.9,36°.91N×23°.23E,h0km,mb3.7/7, mb1 3.8/12,mb1mx3.5/58,mbtmp3.6/12,ML3.0/4,MS3.6/1, Ms1 3.6/1,ms1mx2.4/45,Error ellipse: s-maj=21.0km s-min=17.4km az=11.0*
ATH ***04*** *10:12:39.3,36°.89N×23°.03E,h22km±1km,ML3.3/14,Error ellipse: s-maj=1.5km s-min=0.6km az=241.0*
THE ***04*** *10:12:40.3,36°.89N×23°.06E,h4km±1km,ML3.4/8,Error ellipse: s-maj=1.1km s-min=0.4km az=113.0*

ISC 04 10:12:39.8±0.9,36°.91N±0°.02×23°.08E±0°.02,h10km±6km, n74,σ1§07/101,mb3.6/7,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLI	Veliai	0.22	211	P	Pg	10 12 44.2	0.0
VLI				S	Sg	10 12 47.8	+0.6
	24μm,0.9s						
VLI	Veliai	0.22	211	P	Pg	10 12 44.0	-0.3
VLI				S	Sg	10 12 47.6	+0.3
VLI				AML	AML	10 12 48.4	
	comp=N,50689μm,0.5s						
VLI				AML	AML	10 12 48.5	
	comp=E,51275μm,0.4s						
MNVA	Monemvasia	0.22	188	P	Pg	10 12 44.2	-0.1
MNVA				S	Sg	10 12 48.2	+0.9
MNVA				AML	AML	10 12 49.1	
	comp=N,33805μm,0.5s						
MNVA				AML	AML	10 12 49.5	
	comp=E,48648μm,0.6s						
KRND	KRANIDI	0.48	7	P	Pg	10 12 49.4	+0.3
KRND				S	Sb	10 12 57.6	+0.1
KRND	KRANIDI	0.48	7	P	Pg	10 12 49.4	+0.3
KRND				S	Sb	10 12 57.0	-0.5
KRND				AML	AML	10 13 00.8	
	comp=E,6664μm,0.5s						
KRND				AML	AML	10 13 04.2	
	comp=N,3908μm,0.4s						
YDRA	Hydra	0.54	35	P	Pg	10 12 50.7	+0.4
YDRA				S	Sb	10 12 59.6	+0.4
YDRA				AML	AML	10 13 04.7	
	comp=E,7418μm,0.6s						
YDRA				AML	AML	10 13 05.1	
	comp=N,6866μm,0.6s						
DYR	Agios Nikonas	0.61	257	P	Pg	10 12 51.1	-0.5
DYR	Agios Nikonas	0.61	257	P	Pg	10 12 51.0	-0.5
DYR				S	Sg	10 12 59.3	-0.4
DYR				AML	AML	10 13 01.6	
	comp=N,998μm,0.9s						
DYR				AML	AML	10 13 02.1	
	comp=E,1711μm,0.9s						
DID	Didima	0.61	12	P	Pg	10 12 51.6	-0.1
DID	Didima	0.61	12	P	Pg	10 12 51.6	-0.1
DID				S	Sb	10 13 01.1	-0.3
DID				AML	AML	10 13 04.3	
	comp=E,4261μm,0.6s						
DID				AML	AML	10 13 05.2	
	comp=N,3309μm,0.5s						
KTHR	Kythira	0.65	185	P	Pb	10 12 52.8	-0.3
KTHR				S	Sb	10 13 02.1	-0.1
	comp=N,8μm,0.5s						
KTHA	Kythira Island	0.65	181	P	Pg	10 12 52.3	0.0
KTHA				S	Sb	10 13 02.0	-0.2
	comp=N,6μm,0.4s						
KTHA	Kythira Island	0.65	181	P	Pg	10 12 52.3	0.0
KTHA				S	Sg	10 13 01.1	+0.4
KTHA				AML	AML	10 13 02.2	
	comp=N,11199μm,0.5s						
KTHA				AML	AML	10 13 03.0	
	comp=E,15151μm,0.4s						
VLX	Vlachokerasia	0.72	310	P	Pg	10 12 53.4	-0.4
VLX	Vlachokerasia	0.72	310	P	Pg	10 12 53.4	-0.4
VLX				S	Sg	10 13 02.8	-0.5
VLX				AML	AML	10 13 05.0	
	comp=E,7945μm,0.6s						
VLX				AML	AML	10 13 06.4	
	comp=N,7310μm,0.7s						
ITM	Ithomi	0.96	287	P	Pg	10 12 57.4	-0.8
ITM				S	Sg	10 13 09.6	-1.1

KLV	Kalavryta, Ach	1.35 327	P	Pn	10 13 04.1	-0.7
RODP	Rodopos	1.45 157	P	Pb	10 13 06.5	-0.4
KARY	Karystos	1.56 43	P	Pn	10 13 07.7	+0.1
LAKA	Lakka	1.59 327	P	Pn	10 13 08.2	+0.1
LAKA			S	Sb	10 13 30.3	+0.8
LAKA	Lakka	1.59 327	P	Pn	10 13 08.2	+0.1
IMMV	Iera Moni Meta	1.62 153	P	Pn	10 13 08.1	-0.2
IMMV	Iera Moni Meta	1.62 153	P	Pn	10 13 08.2	-0.2
EREA	Eretria	1.66 24	P	Pn	10 13 09.1	+0.1
KALE	Kalithea	1.66 334	P	Pn	10 13 09.2	+0.2
KALE	comp=N,490nm,0.6s		S	Sb	10 13 32.1	+0.6
TRIZ	Trizonia	1.66 332	P	Pn	10 13 09.2	+0.2
SERG	Sergoula	1.71 332	P	Pn	10 13 10.2	+0.5
VAM	Vamos	1.75 148	P	Pn	10 13 10.1	0.0
VAM	Vamos	1.75 148	P	Pn	10 13 10.2	0.0
EFP	Efpalio	1.78 329	P	Pn	10 13 11.1	+0.5
IDI	Anoyia	2.18 137	Pn	Pn	10 13 15.8	-0.4
IDI	comp=N,5.5nm,0.3s,baz=317,slow=16,SNR=37		Sn	Sb	10 13 46.3	-0.2
IDI	Anoyia	2.18 137	P	Pn	10 13 16.9	+0.7
LAST	Lasithi	2.61 131	P	Pn	10 13 23.2	+1.1
VAY	Valandovo	4.43 355	*i* P	Pn	10 13 49.5	+2.5
OHR	Ohrid	4.56 338	*i* P	Pb	10 13 57.8	-2.1
STIP	Stip	4.83 352	*i* P	Pn	10 13 55.0	+2.5
VAE	Valguarnera	6.94 277	Pn	Pn	10 14 24.9	+3.3
VAE	baz=137,slow=12,SNR=4.3		Sn	Sn	10 15 46.4	+5.8
BRTR	comp=N,0.4nm,0.3s,baz=112,slow=19,SNR=2.1 Keskin Array B	8.77 68	Pn	Pn	10 14 48.5	+1.8
MLR	comp=N,0.1nm,0.3s,baz=256,slow=12,SNR=3.0 Muntele Rosu	8.85 13	Pn	Pn	10 14 49.3	+1.5
MMAI	comp=N,0.0nm,0.3s,baz=212,slow=9.5,SNR=2.9 Mount Meron Ar	10.83 107	Pn	Pn	10 15 14.2	-0.8
GERES	comp=N,0.9nm,0.3s,baz=315,slow=12,SNR=4.8 GERESS Array B	13.76 333	Pn	P	10 16 01.1	-2.4
EKA	comp=N,0.1nm,0.3s,baz=139,slow=9.1,SNR=2.8 Eskdalemuir Ar	25.64 324	P	P	10 18 11.7	+2.3
TORD	comp=N,0.7nm,0.6s,baz=123,slow=9.1,SNR=3.9 Torodi Ar. Bea	30.43 225	P	P	10 18 53.4	+0.8
DBIC	comp=N,0.8nm,0.8s,baz=32,slow=9.8,SNR=4.7 Dimbokro	39.43 227	LR	LR	10 37 58.7	
MKAR	comp=N,76nm,18.6s,baz=329,slow=38 Makanchi Array	44.25 58	P	P	10 20 47.8	-1.5
ZALV	comp=N,0.6nm,0.3s,baz=266,slow=7.7,SNR=18 Zalesovo Beam	45.04 47	P	P	10 20 54.1	-1.3
CMAR	comp=N,0.8nm,0.3s,baz=271,slow=7.9,SNR=4.2 Chiang Mai Arr	68.04 83	P	P	10 23 38.8	-0.9
YKA	comp=N,0.8nm,0.3s,baz=289,slow=5.6,SNR=4.1 Yellowknife Ar	75.26 341	P	P	10 24 21.3	-1.2
ILAR	comp=N,0.1nm,0.4s,baz=34,slow=5.3 Eielson Array	78.35 356	P	P	10 24 40.2	+0.3
	comp=N,0.4nm,0.9s,baz=7.0,slow=8.2,SNR=4.5					

MAN 04 10:21:33.1, 9°.91N×124°.04E, h10km, mb3.9, ML2.7, MS2.3, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.41 350		↓*i* P	Pg	10 21 41.9	+0.6
LLP				*e*S	Sb	10 21 48.9	-0.1
MSLP	Maasin	0.84 74		*e*P	Pg	10 21 48.9	-0.5
MSLP				*e*S	Sb	10 22 00.9	-0.2
PAGZ	Pagadian	2.15 198		*e*P	Pn	10 22 09.3	+0.3
PAGZ				*e*S	Pg	10 22 15.2	+0.8

*PRU **04** 10:30:08.5±0.0, 50°.44N×16°.35E, h2km, Klodzko*
*IPEC **04** 10:30:08.1±0.1, 50°.45N×16°.40E, h4km, ML2.1/9, Error ellipse: s-maj=0.6km s-min=0.3km az=56.0*
*VIE **04** 10:30:09.1±0.5, 50°.31N×16°.38E, h6km±5km, mb1.8/2, ml2.6/3, Error ellipse: s-maj=9.1km s-min=2.7km az=12.0*
96 km SSW of Wroclaw
ISC 04 10:30:08.4±0.9, 50°.45N±0°.03×16°.38E±0°.02, h9km±6km, n34, σ0°.93/58, 14C, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DPC	Dobruska-Polom	0.11 201		↑*i* PG	Pg	10 30 11.1	+0.1
DPC	comp=Z,288nm,0.2s			*e*SG	Sg	10 30 12.6	-0.2
OSTC	Ostas	0.15 315		↑*i* PG	Pg	10 30 11.7	+0.1
OSTC	comp=Z,175nm,0.2s			*e*SG	Sg	10 30 14.1	+0.2
UPC	Upice	0.24 284		↑*e* PG	Pg	10 30 13.1	-0.2
UPC	comp=Z,36nm,0.2s			*e*SG	Sg	10 30 16.4	-0.2
CHVC	Chvalec	0.25 304		↑*i* PG	Pg	10 30 13.4	0.0
CHVC	comp=Z,58nm,0.4s			*e*SG	Sg	10 30 16.1	-0.7
KSP	Ksiaz	0.40 352		*i* Pg	Pg	10 30 15.6	-0.6
KSP				*e*Sg	Sg	10 30 21.0	-0.4
KRLC	Kraliky	0.46 145		↑*e* PG	Pg	10 30 16.9	-0.3
KRLC	comp=Z,39nm,0.2s			*e*SG	Sg	10 30 22.9	-0.3
ANAC	Anensky vrch	0.74 120		*e*Pg	Pg	10 30 22.3	-0.4
ANAC	baz=301 26nm,0.2s,baz=301			*e*Sg	Sg	10 30 31.5	-0.9
LIPC	Lipinka	0.74 144		*e*Pg	Pg	10 30 22.4	-0.3
LIPC	baz=326 75nm,0.2s,baz=326			*e*Sg	Sg	10 30 31.6	-0.8
MUVC	Mutkov	0.87 138		*e*Pg	Pg	10 30 24.6	-0.5
MORC	baz=320 Moravsky Berou	1.01 132		*e*PG	Pg	10 30 27.0	-0.8
MORC				*e*SG	Sg	10 30 39.6	-1.2
MORC	Moravsky Berou baz=313	1.01 132		*e*Pg	Pg	10 30 26.9	-0.8
MORC	21nm,0.2s,baz=313			*e*Sg	Sg	10 30 39.5	-1.2
VRAC	Vranov	1.15 173		*e*PG	Pg	10 30 30.4	-0.1
VRAC				*e*SG	Sg	10 30 44.0	-1.4
VRAC	Vranov baz=354	1.15 173		*e*Pg	Pg	10 30 30.3	-0.2
VRAC	20nm,0.1s,baz=354			*e*Sg	Sg	10 30 44.0	-1.4
GOPC	GO Pecny, Ondr comp=Z,32nm,0.2s	1.16 243		↑*e* SG	Sg	10 30 45.1	-0.5
PVCC	Panska Ves comp=Z,51nm,0.4s	1.16 275		↑*e* PG	Pg	10 30 30.0	-0.6
PVCC				*e*SG	Sg	10 30 45.8	+0.1
PRU	Pruhonice comp=Z,19nm,0.2s	1.27 249		↑*e* SG	Sg	10 30 47.5	-1.7
OKC	Ostrava-Krasne comp=Z,18nm,0.3s	1.29 118		↑*e* SG	Sg	10 30 49.1	-0.8
TREC	Trest	1.29 207		↑*e* SG	Sg	10 30 49.3	-0.7
PRA	Prague	1.31 254		↑*e* SG	Sg	10 30 49.9	-0.5
KRUC	Moravsky	1.39 180		*e*PG	Pn	10 30 33.7	-0.3
KRUC				*e*SG	Sb	10 30 51.8	-0.6
KRUC	Moravsky baz=0.2	1.39 180		*e*Pg	Pn	10 30 33.7	-0.3
KRUC	14nm,0.2s,baz=0.2			*e*Sg	Sb	10 30 51.8	-0.6
BRG	Berggiesshubel	1.61 286		PG	Pb	10 30 38.4	+0.1
BRG	11nm,0.3s			SG	Sn	10 30 58.8	+0.9
PBCC	Pribram	1.72 244		↑*e* SG	Sn	10 31 01.6	+1.0
JAVC	Velka Javorina	1.80 152		*e*PG	Pb	10 30 42.0	+0.4
SMOL	Smolenice	2.06 160		*e*PG	Pg	10 30 49.7	+1.9
SMOL				*e*SG	Sg	10 31 15.9	+1.5
MODS	Modra-Piesok	2.16 164		*e*PG	Pg	10 30 49.0	-0.8
MODS				*e*SG	Sg	10 31 20.0	+2.3
KHC	Kasperske Hory	2.25 235		↑*e* PN	Pn	10 30 44.5	-1.3
KHC				*e*PG	Pb	10 30 49.5	+0.3
KHC				*e*SN	Sn	10 31 12.0	-1.7
KHC				*e*SG	Sb	10 31 17.3	+0.2
KOLL	Kolacno	2.29 144		*e*SG	Sb	10 31 20.1	+1.8
CLL	Collm	2.31 293		*e*Pg	Pg	10 30 52.0	-0.6
CLL	comp=Z,7.0nm,0.5s			*e*Sg	Sb	10 31 20.0	+1.2
LANS	Liptovska Anna	2.39 122		*e*SG	Sg	10 31 25.2	+0.2
VYHS	Vyhne	2.53 140		*e*PG	Pb	10 30 54.5	+0.5
VYHS				*e*SG	Sg	10 31 29.3	-0.3
NKC	Novy Kostel	2.53 267		↑*e* SG	Sb	10 31 27.2	+2.0
CONA	Conrad Observa comp=Z,0.4nm,0.2s	2.55 188		*e*Pn	Pn	10 30 50.1	+0.1
CONA	comp=Z,1.3nm,0.2s			Sn	Sn	10 31 21.7	+0.5
ARSA	Arzberg comp=Z,4.0nm,0.6s	3.25 190		Sg	Sg	10 31 51.7	-1.1

*ISK **04** 10:30:50.8, 35°.88N×33°.61E, h5km, ML2.6/16*
*NIC **04** 10:30:52.2±0.0, 35°.46N×33°.75E, h74km±2km, Ml2.1/2*
ISC 04 10:30:49.5±1.3, 35°.77N±0°.05×33°.70E±0°.06, h13km±11km, n19, σ0°.39/30, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKK2	Akkuyu-Mersin	0.38 342		PG	Pg	10 30 57.0	-0.2
TISA	Tisan-Mersin	0.39 358		PG	Pg	10 30 57.7	+0.4
AKK1	Akkuyu-Mersin	0.39 341		PG	Pg	10 30 57.6	+0.2
AKKU	Akkuyu-Mersin	0.40 343		PG	Pg	10 30 57.9	+0.3
YESI	Yesilovacik-Me	0.42 354		PG	Pg	10 30 57.8	-0.2
YESI				SG	Sg	10 31 03.6	-0.1
KARG	Kargicak-Mersi	0.43 1		PG	Pg	10 30 58.5	+0.4
KARG				SG	Sg	10 31 03.9	0.0
YORU	Yoruktepe-Mers	0.45 328		PG	Pg	10 30 58.4	0.0
YORU				SG	Sg	10 31 03.9	-0.5
IKL	Isikli	0.47 359		PG	Pg	10 30 58.8	+0.1
IKL				SG	Sg	10 31 05.2	+0.2
OREN	Orenkoy-Mersin	0.48 336		PG	Pg	10 30 58.8	-0.1
TEKE	Tekeli-Mersin	0.60 308		PG	Pg	10 31 01.4	+0.2
TEKE				SG	Sg	10 31 08.8	-0.4
SILI	Silifke-Mersin	0.62 17		PG	Pb	10 31 02.6	+0.4
KEBE	Keben-Mersin	0.67 1		PG	Pb	10 31 03.2	0.0
ATHAL	Athalassa	0.68 201		P	Pn	10 31 05.0	+0.2
ATHAL				S	Sn	10 31 14.9	-0.2
ATHAL	0.7nm,0.2s			AML	AML	10 31 15.5	
ATHAL	0.7nm,0.2s			AML	AML	10 31 15.5	
ATHAL	0.5nm,0.3s			AML	AML	10 31 18.8	
ATHAL	0.5nm,0.3s			AML	AML	10 31 18.8	
BERE	Bereket-Mersin	0.69 326		PG	Pg	10 31 02.7	-0.3
BERE				SG	Sg	10 31 11.7	-0.4
TEVE	Tevekalti-Mers	0.69 343		PG	Pg	10 31 02.9	-0.1
MVOU	Mavrovouni	0.76 184		P	Pn	10 31 05.3	-0.6
MVOU				S	Sb	10 31 15.2	+0.5
MVOU	0.2nm,0.1s			AML	AML	10 31 15.3	
MVOU	0.2nm,0.1s			AML	AML	10 31 15.3	
MVOU	0.2nm,0.1s			AML	AML	10 31 17.1	
MVOU	0.2nm,0.1s			AML	AML	10 31 17.1	
KIZK	Mersin	0.79 27		PG	Pn	10 31 06.2	-0.2
KIZK				SG	Sn	10 31 17.7	-0.4
CSS	Mathiatis	0.86 200		P	Pn	10 31 06.5	-0.8
CSS				S	Sb	10 31 17.9	+0.2
GAZI	Gazipasa	1.21 293		PN	Pg	10 31 13.4	+0.6
GAZI				SN	Sn	10 31 29.1	+0.6

*NNC **04** 10:36:32.4±3.3, 40°.80N×70°.16E, h4km±15km, mb3.1, mpv2.8, Error ellipse: s-maj=25.9km s-min=16.9km az=13.0*
*SOME **04** 10:36:32.4, 40°.80N×70°.37E, h5km*
*KRNET **04** 10:36:34.9±0.1, 41°.02N×70°.22E, h11km, mb2.5*
ISC 04 10:36:34.1±1.5, 41°.00N±0°.04×70°.23E±0°.04, h3km±12km, n16, σ1°.77/29, 12C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAS	Tashkent	0.78 295		↓*i* P	Pg	10 36 49.4	+0.4
TAS	baz=94			↓*i* S	Sb	10 37 00.6	-0.6
BTK	Batken	1.04 154		↓*e* P	Pb	10 36 55.1	+0.3
BTK	baz=54			↓*e* S	Sn	10 37 10.6	-0.1
IUG	luzhnay	1.16 353		*e*P	Pn	10 36 58.4	+1.0
IUG	2.1nm,0.2s			*e*S	Sn	10 37 17.0	+3.2
IUG	39nm,0.4s luzhnay	1.16 353		P	Pn	10 36 58.4	+1.0
IUG	2.1nm,0.2s			S	Sn	10 37 17.0	+3.2
ARK	39nm,0.4s Arkit	1.53 58		↑*e* P	Pg	10 37 03.8	+0.3
ARK	baz=60			↑*i* S	Sg	10 37 25.1	+1.7
BRLS	baz=60 Borolday	2.06 352		P	Pn	10 37 07.3	-2.3
BRLS	5.2nm,0.4s			S	Sn	10 37 32.9	-2.9
ARSB	5.9nm,0.4s Arslanbob	2.11 80		↑*i* P	Pb	10 37 13.6	+0.6
ARSB	baz=81			↑*i* S	Sg	10 37 41.9	+0.1
KK31	baz=81 Karatay Array	2.12 6		P	Pb	10 37 12.1	-1.0
KK31	1.4nm,0.5s,baz=190,slow=15,SNR=22			↑S	Sg	10 37 41.1	-1.0
AML	0.7nm,0.2s,baz=191,slow=28,SNR=6.0 Almayashu	2.84 65		↑*i* P	Pb	10 37 24.8	-0.9
AML	baz=66			↑*i* S	Sb	10 38 02.7	+1.7
MRKS	baz=66 Merke	2.84 51		*e*P	Pb	10 37 26.1	+0.6
MRKS	2.6nm,0.6s			*e*S	Sg	10 38 04.8	-0.6
MRKS	3.9nm,0.5s Merke	2.84 51		Pg	Pb	10 37 26.1	+0.6
MRKS	2.6nm,0.6s			Lg	Lg	10 38 04.8	
EKS2	3.9nm,0.5s Erkin-Say	3.13 57		↑*e* P	Pb	10 37 28.7	-1.8
EKS2	baz=57			↑*i* S	Sb	10 38 08.9	-0.3
ARLS	baz=57 Aral	3.20 73		↓*e* P	Pb	10 37 29.0	-2.7
ARLS	baz=73			↓*i* S	Sb	10 38 08.8	-2.3
UCH	baz=73 Uchtor	3.44 68		↓*e* P	Pb	10 37 33.0	-3.0
UCH	baz=68			↓*e* S	Sb	10 38 17.6	-0.8
AAK	baz=68 Ala-Archa	3.59 61		↑Pg	Pb	10 37 40.5	+2.3
AAK	0.7nm,0.5s			↑Lg	Lg	10 38 29.5	
TKM2	2.9nm,0.7s Tokmak 2	4.44 63		↑Pg	Pb	10 37 53.9	+1.0
TKM2	2.7nm,1.1s			↓Lg	Lg	10 38 56.5	
	1.8nm,0.7s						

*NIED **04** 10:39:00, 36°.90N×142°.40E, h8km, Mw3.6 Best double couple: M0 2.61000×10^14 NP1:φs 193.00000°, δ51.00000°, λ-114.00000°. NP2:φs 49.00000°, δ45.00000°, λ-63.00000°.*
*IDC **04** 10:39:25.4±1.0, 36°.80N×142°.54E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/36, mbtmp3.5/6, ML2.6/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/31, Error ellipse: s-maj=26.5km s-min=22.4km az=117.0*
*JMA **04** 10:39:26.2±0.3, 36°.93N×142°.36E, h33km, M3.6*
ISC 04 10:39:26.5±2.3, 37°.00N±0°.06×142°.17E±0°.07, h6km±13km, n26, σ1°.27/28, mb3.5/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	Kawauchi	1.10 290		P	Pg	10 39 47.9	+0.3
JFK				*e*S	Sn	10 40 04.0	-0.1
JMST	Minamisoumatoc	1.25 306		P	Pn	10 39 50.1	-0.5
JFFD	Fukushimafurud	1.29 275		P	Pn	10 39 50.5	-0.6
JFFD				*e*S	Sn	10 40 08.6	-0.2
JHO	Hitachi	1.34 254		P	Pn	10 39 51.1	-0.7
JMM	Marumori	1.40 309		P	Pn	10 39 52.2	-0.4
JFT	Otama	1.55 290		P	Pb	10 39 55.4	-0.3
JFT				*e*S	Sg	10 40 16.7	+0.3
JIO	Ouri	1.59 336		P	Pn	10 39 54.9	-0.4
JOU	Okura	1.81 319		P	Pb	10 39 59.0	-1.2
JOU				*e*S	Sb	10 40 23.0	-0.2
JFY	Yanaizu	2.01 282		P	Pb	10 40 02.6	-0.9
JFY				*e*S	Sb	10 40 28.0	-0.8
JMK	Ichinoseki	2.09 339		P	Pn	10 40 02.7	+0.6
JAG	Ashikaga	2.26 256		P	Pn	10 40 05.0	+0.6
JYK	Kaneyama	2.39 324		P	Pn	10 40 07.2	+0.9
JYK				*e*S	Sb	10 40 38.6	-1.2
JOM	Ohasama	2.57 345		P	Pn	10 40 09.0	+0.3
MJAR	Matsushiro Arr	3.21 263		Pn	Pn	10 40 19.5	+1.9
MJAR	0.6nm,0.3s,baz=88,slow=14,SNR=43			Sn	Sb	10 41 03.2	-0.2
MJAR	0.4nm,0.3s,baz=172,slow=16,SNR=5.2			LR	LR	10 41 45.1	
MAT	comp=Z,46nm,18.1s,baz=25,slow=40 Matsushiro	3.21 263		P	Pn	10 40 20.0	+2.4
MAT				S	Sb	10 41 00.9	-2.5
SEY	Seymchan	26.71 10		P	P	10 45 06.9	+0.5
H11N2	3.9nm,0.9s,baz=219,slow=14,SNR=5.5 WAKE ISLAND Hy 27.61 122			T	T	11 13 56.5	
H11N1	baz=314,slow=75,SNR=8.7 WAKE ISLAND Hy 27.62 122			T	T	11 14 05.5	
H11N3	baz=314,slow=75,SNR=12 WAKE ISLAND Hy 27.63 122			T	T	11 14 13.1	
H11S1	baz=314,slow=75,SNR=10 WAKE ISLAND Hy 28.33 124			T	T	11 15 07.7	
H11S3	baz=316,slow=75,SNR=6.3 WAKE ISLAND Hy 28.34 124			T	T	11 15 02.1	
H11S2	baz=316,slow=75,SNR=5.7 WAKE ISLAND Hy 28.35 124			T	T	11 15 05.8	
MKAR	baz=316,slow=75,SNR=5.7 Makanchi Array	44.65 302		P	P	10 47 43.2	+3.3
WRA	0.3nm,0.8s,baz=108,slow=4.7,SNR=2.1 Warramunga Arr	57.11 189		P	P	10 49 12.4	-1.5
ASAR	0.4nm,0.6s,baz=6.7,slow=6.7,SNR=2.7 Alice Springs	60.84 189		P	P	10 49 38.8	-1.0
NVAR	0.3nm,0.8s,baz=8.9,slow=6.6,SNR=2.6 Mina Array Bea	74.53 53		P	P	10 51 05.6	-0.8
	0.4nm,0.8s,baz=289,slow=8.2,SNR=3.1						

*NNC **04** 10:46:06.0±2.8, 39°.14N×70°.41E, h4km±15km, mb3.5, mpv3.2, Error ellipse: s-maj=18.8km s-min=14.3km az=24.0*
ISC 04 10:45:34.9±3.7, 37°.8N±0°.2×71°.5E±0°.1, h10km, n5, σ1°35/8, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAK	Shakhimardan	2.13 5		*i* P	Pg	10 46 16.8	+1.1
SHAK				*i* S	Sn	10 46 35.0	-2.3
AAK	Ala-Archa 1.6nm,0.5s	5.32 24		⇑Pn	Pg	10 47 17.7	+1.1
AAK	3.1nm,0.7s			⇑Lg	Lg	10 48 32.9	
KK31	Karatay Array 1.2nm,0.3s,baz=180,slow=11,SNR=59	5.32 352		Pn	Pb	10 47 07.6	-0.4
KK31	0.8nm,0.3s			⇓Sn	Sn	10 47 55.6	-0.2
KK31	3.5nm,0.5s,baz=184,slow=31,SNR=7.5			⇓Lg	Lg	10 48 11.9	
TKM2	Tokmak 2 3.6nm,0.6s	5.96 30		⇓Pn	Pg	10 47 28.5	-0.5
TKM2	3.0nm,1.1s			⇑Sn	Sb	10 48 31.5	+1.0
AB31	Akbulak array 0.2nm,0.5s,baz=153,slow=9.8,SNR=5.4	14.15 327		P	P	10 49 03.0	+0.1

*IDC **04** 10:46:17.6±0.7, 24°.47S×176°.14W, h0km, mb4.3/13, mb1 4.5/14, mb1mx4.3/33, mbtmp4.3/14, ML3.8/1, MS3.7/17, Ms1 3.7/17, ms1mx3.5/32, Error ellipse: s-maj=26.2km s-min=20.1km az=146.0*
*NEIC **04** 10:46:21.8±1.8, 24°.66S±0°.09×176°.1W±0°.1, h33km±4km, mb4.5/42, Error ellipse: s-maj=17.5km s-min=12.6km az=92.0*
ISC 04 10:46:18.7±0.5, 24°.63S±0°.08×175°.90W±0°.10, h10km, n93, σ1°34/81, mb4.5/29, MS3.7/16, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	7.83 46			Pn	10 48 04.7	-8.0
NIUE					Sn	10 49 22.5	-19
MSVF	Nonsavu	8.88 319			Pn	10 48 31.6	+4.3
URZ	Urewera 0.4nm,0.3s,baz=279,slow=2.0,SNR=3.2	14.84 202		Pn	Pn	10 49 49.5	+1.0
URZ	0.1nm,0.3s,baz=217,slow=20,SNR=2.5			Sn	Sn	10 52 20.7	-12
URZ	Urewera	14.84 202			Pn	10 49 48.2	-0.4
RAR	Rarotonga 5.1nm,0.3s,baz=253,slow=7.6,SNR=17	15.24 80		Pn	Pn	10 49 45.8	-8.3
RAR	1.2nm,0.3s,baz=6.7,slow=17,SNR=2.5			Sn	Sn	10 52 16.5	-26
RAR	comp=Z,152nm,20.3s,baz=278,slow=33			LR	LR	10 54 48.9	
DZM	Mont Dzumac 53nm,1.5s	16.42 275		eP	P	10 50 16.7	+4.5
DZM	comp=Z,429nm,23.8s			eLR	LR	10 54 11.5	
DZM	Mont Dzumac 0.2nm,0.3s,baz=100,slow=15,SNR=6.1	16.42 275		Pn	P	10 50 16.3	+4.1
DZM	comp=Z,87nm,21.8s,baz=90,slow=29			LR	LR	10 54 11.8	
DZM	Mont Dzumac	16.42 275			Pn	10 50 05.5	-3.9
FUNA	Funafuti	16.68 343		Pn	Pn	10 50 12.3	-0.5
TBI	Tubuai 365nm,26.0s	24.18 92		eLQ	LQ	10 56 04.7	
TBI	comp=Z,204nm,33.0s			eLR	LR	10 56 58.4	
PPT2	Papeete2 496nm,25.2s	25.51 79		eLQ	LQ	10 56 46.0	
PPT2	comp=Z,221nm,25.8s			eLR	LR	10 58 07.2	
PPT	Papeete	25.51 79		LR	LR	10 59 44.2	
HNR	comp=Z,108nm,19.0s,baz=232,slow=31 Honiara	27.53 299		LR	LR	11 01 24.0	
PMG	comp=Z,216nm,19.8s,baz=162,slow=33 Port Moresby	38.28 287		P	P	10 53 36.8	-2.7
PMG	5.3nm,0.7s,baz=126,slow=12,SNR=3.9 Port Moresby	38.28 287		P	P	10 53 36.9	-2.7
PMG	comp=Z,15nm,1.1s			IAmb	IAmb	10 53 49.9	
COEN	Coen	39.92 278		P	P	10 53 53.2	-0.1
COEN	comp=Z,9.2nm,1.2s			IAmb	IAmb	10 54 08.6	
BBOO	Buckleboo	42.62 248		P	P	10 54 14.4	-1.0
BBOO	comp=Z,14nm,1.2s			IAmb	IAmb	10 54 17.5	
AS31	Alice Springs	45.61 260		P	P	10 54 39.4	-0.1
ASAR	Alice Springs comp=Z,1.7nm,0.8s,baz=93,slow=6.3,SNR=21	45.61 260		P	P	10 54 38.2	-1.3
ASAR	comp=Z,232nm,18.0s,baz=112,slow=36			LR	LR	11 13 22.0	
ASAR	Alice Springs	45.61 260		P	P	10 54 39.1	-0.4
WR0	Warramunga Arr	45.90 266		P	P	10 54 42.0	+0.1
WR0	comp=Z,7.5nm,1.3s			IAmb	IAmb	10 54 57.9	
WRAB	Tennant Creek	46.08 265		P	P	10 54 42.3	-0.9
WRAB	comp=Z,6.3nm,1.2s			IAmb	IAmb	10 55 01.4	
WRA	Warramunga Arr comp=Z,3.1nm,0.8s,baz=103,slow=8.3,SNR=16	46.09 265		P	P	10 54 41.6	-1.8
WRA	Warramunga Arr	46.09 265		P	P	10 54 41.5	-1.8
JAY	Jayapura comp=Z,49nm,20.9s,baz=251,slow=35	47.26 291		LR	LR	11 13 31.6	
GUMO	Guam comp=Z,46nm,18.1s,baz=150,slow=34	53.94 310		LR	LR	11 16 40.5	
VNDA	Vanda comp=Z,1.4nm,0.8s,baz=38,slow=12,SNR=5.3	54.01 186		P	P	10 55 44.9	+2.3
VNDA	comp=Z,45nm,19.5s,baz=16,slow=34			LR	LR	11 17 02.8	
NWAO	Narrogin (SRO) comp=Z,71nm,19.0s,baz=163,slow=35	58.34 245		LR	LR	11 20 24.2	
QSPA	South Pole Qui	65.46 180		P	P	10 57 02.9	+1.1
MJAR	Matsushiro Arr comp=Z,43nm,21.6s,baz=300,slow=32	74.67 323		LR	LR	11 25 46.1	
KSM	Kuching	75.92 278		P	P	10 58 03.7	-2.5
KSM	comp=Z,9.4nm,1.0s			IAmb	IAmb	10 58 06.4	
ASAJ	Asahikawa comp=Z,56nm,21.9s,baz=232,slow=32	78.26 331		LR	LR	11 28 22.1	
MAW	Mawson comp=Z,104nm,20.0s,baz=65,slow=34	78.35 200		LR	LR	11 30 37.3	
PETK	Petropavlovsk- comp=Z,3.8nm,0.8s,baz=143,slow=10,SNR=3.7	80.74 344		P	P	10 58 31.5	-0.4
PETK	comp=Z,71nm,19.8s,baz=60,slow=34			LR	LR	11 32 28.7	
PETK	Petropavlovsk-	80.74 344		P	P	10 58 31.2	-0.7
ISA	Isabella, Lake	80.88 44		P	P	10 58 33.6	+0.4
ISA	comp=Z,4.5nm,0.9s			IAmb	IAmb	10 58 35.0	
CMB	Columbia Colle	81.22 41		P	P	10 58 34.4	-0.5
KSAR	Wonju Array Be	81.26 318		P	P	10 58 34

GLA	**Glamis**	**81.67**	**48**	P	**P**	**10 58 38.7**	**+1.2**
GLA				IAmb	IAmb	10 58 55.4	
	comp=Z,3.9nm,0.7s						
GSC	**Goldstone, Bar**	**81.72**	**45**	P	**P**	**10 58 37.4**	**-0.3**
MDPB	**Devils Postpil**	**81.75**	**42**	P	**P**	**10 58 37.8**	**-0.2**
MDPB				IAmb	IAmb	10 58 40.2	
	comp=Z,5.1nm,1.1s						
WAKR	**Walker**	**82.09**	**41**	P	**P**	**10 58 39.9**	**+0.1**
WAKR				IAmb	IAmb	10 58 44.0	
	comp=Z,5.4nm,1.1s						
PNTR	**Pine Nut**	**82.37**	**41**	P	**P**	**10 58 41.6**	**+0.4**
PNTR				IAmb	IAmb	10 58 43.0	
	comp=Z,5.2nm,0.9s						
BEKR	**Beckworth**	**82.43**	**40**	P	**P**	**10 58 41.6**	**+0.2**
NVAR	**Mina Array Bea**	**82.73**	**42**	P	**P**	**10 58 43.9**	**+0.8**
	comp=Z,2.4nm,0.8s,baz=224,slow=9.7,SNR=16						
NVAR	**Mina Array Bea**	**82.73**	**42**	P	**P**	**10 58 42.9**	**-0.2**
NV11	**Mina Array Sit**	**82.82**	**42**	P	**P**	**10 58 43.1**	**-0.4**
TPNV	**Topopah Spring**	**83.08**	**44**	P	**P**	**10 58 45.9**	**+1.0**
TPNV				IAmb	IAmb	10 58 46.8	
	comp=Z,3.9nm,1.0s						
KVN	**Kaiserville**	**83.24**	**42**	P	**P**	**10 58 45.1**	**-0.6**
KVN				IAmb	IAmb	10 58 47.2	
	comp=Z,7.1nm,1.3s						
USRK	**Ussuriysk Ar.**	**83.45**	**325**	P	**P**	**10 58 47.0**	**+0.6**
	comp=Z,5.7nm,0.9s,baz=142,slow=4.9,SNR=8.4						
W13A	**Hualapai Mount**	**83.51**	**47**	P	**P**	**10 58 47.3**	**+0.1**
W13A				IAmb	IAmb	10 58 48.6	
	comp=Z,5.6nm,1.3s						
SHPR	**Sheep Range**	**83.51**	**45**	P	**P**	**10 58 47.3**	**+0.1**
SHPR				IAmb	IAmb	10 58 59.0	
	comp=Z,4.4nm,1.3s						
MOD	**Modoc Plateau**	**83.79**	**38**	P	**P**	**10 58 48.5**	**+0.1**
MOD				IAmb	IAmb	10 58 52.1	
	comp=Z,3.7nm,1.1s						
SNAA	**Sanae**	**83.84**	**178**	P	**P**	**10 58 48.6**	**+0.4**
SNAA	**Sanae**	**83.84**	**178**	P	**P**	**10 58 48.0**	**-0.3**
VNA3	**Neumayer Olymp**	**83.91**	**176**	P	**P**	**10 58 49.5**	**+1.0**
VNA1	**Neumayer--Stat**	**84.58**	**176**	P	**P**	**10 58 52.5**	**+0.6**
X16A	**Lo Mia Camp, P**	**84.76**	**49**	P	**P**	**10 58 54.2**	**+0.6**
X16A				IAmb	IAmb	10 58 55.2	
	comp=Z,6.4nm,1.3s						
PLCA	**Paso Flores**	**85.05**	**133**	LR	LR	11 34 13.0	
	comp=Z,56nm,18.1s,baz=110,slow=34						
LCMT	**Little Creek M**	**85.05**	**46**	P	**P**	**10 58 55.5**	**+0.6**
WVOR	**Wild Horse Val**	**85.08**	**39**	P	**P**	**10 58 54.6**	**-0.3**
CCUT	**Cedar City**	**85.29**	**45**	P	**P**	**10 58 56.5**	**+0.4**
KNB	**Kanab**	**85.33**	**46**	P	**P**	**10 58 56.5**	**+0.1**
SZCU	**Shurtz Canyon**	**85.49**	**45**	P	**P**	**10 58 57.3**	**+0.1**
MSU	**Marysvale**	**86.61**	**45**	P	**P**	**10 59 02.5**	**-0.2**
KLR	**Kul'dur**	**87.05**	**329**	P	**P**	**10 59 04.6**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=109,slow=5.5,SNR=4.6						
MNTX	**Cornudas Mount**	**87.59**	**54**	P	**P**	**10 59 07.8**	**+0.5**
MNTX				IAmb	IAmb	10 59 09.2	
	comp=Z,5.1nm,1.2s						
TX32	**Lajitas Array**	**87.67**	**56**	P	**P**	**10 59 06.8**	**-1.1**
TXAR	**Lajitas Array**	**87.68**	**56**	P	**P**	**10 59 08.4**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=216,slow=7.7,SNR=10						
TXAR	**Lajitas Array**	**87.68**	**56**	P	**P**	**10 59 06.9**	**-1.1**
LENM	**Lemitar**	**87.72**	**51**	P	**P**	**10 59 08.8**	**+0.7**
BNM	**Barren Site**	**87.96**	**51**	P	**P**	**10 59 10.2**	**+0.9**
SRU	**San Rafael Swe**	**88.01**	**45**	P	**P**	**10 59 10.1**	**+0.7**
ANMO	**Albuquerque**	**88.50**	**50**	P	**P**	**10 59 11.3**	**-0.5**
TCUT	**Toone Canyon**	**88.59**	**43**	P	**P**	**10 59 12.2**	**0.0**
MCARA	**McCarthy VSAT**	**89.73**	**15**	P	**P**	**10 59 17.1**	**+0.4**
ENH	**Enshi**	**89.94**	**303**	P	**P**	**10 59 18.7**	**+0.2**
RND	**Reindeer**	**90.30**	**12**	P	**P**	**10 59 17.3**	**-2.1**
PDAR	**Pinedale Array**	**90.65**	**42**	P	**P**	**10 59 22.1**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=225,slow=4.0,SNR=4.2						
PDAR	**Pinedale Array**	**90.65**	**42**	P	**P**	**10 59 21.3**	**-0.5**
ILAR	**Eielson Array**	**91.91**	**12**	P	**P**	**10 59 27.0**	**+0.2**
	comp=Z,1.4nm,1.1s,baz=225,slow=3.8,SNR=5.1						
ILAR	**Eielson Array**	**91.91**	**12**	P	**P**	**10 59 25.3**	**-1.5**
CMAR	**Chiang Mai Arr**	**93.30**	**289**	P	**P**	**10 59 35.1**	**+0.8**
	comp=Z,2.4nm,0.9s,baz=129,slow=3.1,SNR=14						
CMAR				LR	LR	11 43 03.7	
	comp=Z,11nm,18.0s,baz=60,slow=37						
CMAR	**Chiang Mai Arr**	**93.30**	**289**	P	**P**	**10 59 33.2**	**-1.1**
YKA	**Yellowknife Ar**	**99.44**	**24**	P	**Pdif**	**11 00 01.5**	**+0.4**
	comp=Z,0.3nm,0.9s,baz=240,slow=4.9						
SONM	**Songino Array**	**100.12**	**318**	LR	LR	11 43 36.5	
	comp=Z,37nm,19.2s,baz=110,slow=34						
AKASG	**Malin Array Be**	**147.54**	**330**	PKPbc	**PKPdf**	**11 06 01.4**	**+1.0**
	comp=Z,1.1nm,0.5s,baz=39,slow=4.6,SNR=5.9						
AKASG	**Malin Array Be**	**147.54**	**330**		**PKPdf**	**11 06 01.0**	**+0.7**
BRTR	**Keskin Array B**	**150.98**	**308**	PKPbc	**PKPbc**	**11 06 10.6**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=127,slow=3.8,SNR=2.9						
BRTR	**Keskin Array B**	**150.98**	**308**		**PKPdf**	**11 06 07.1**	**+0.7**
TORD	**Torodi Ar. Bea**	**168.36**	**168**	PKP	**PKPdf**	**11 06 25.2**	**-1.3**
	comp=Z,2.1nm,1.2s,baz=228,slow=3.5,SNR=4.6						
TORD				PKPab	**pPKPab**	**11 07 36.4**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=191,slow=6.8,SNR=2.9						
TORD	**Torodi Ar. Bea**	**168.36**	**168**		**PKPdf**	**11 06 25.2**	**-1.3**
TORD					**PKPab**	**11 07 35.0**	**0.0**

MAN 04 10:47:05.9, 16°05N×119°63E, h32km, mb3.6, ML2.3, MS1.7, Luzon

*IDC **04** 11:02:41.9±1.9, 6°.63S×129°.67E, h153km±21km, mb3.8/5, mb1 4.1/11, mb1mx3.8/30, mbtmp4.5/11, MS3.4/1, Ms1 3.4/1, ms1mx2.5/30, Error ellipse: s-maj=23.7km s-min=14.4km az=74.0*
*DJA **04** 11:02:42.7±0.2, 7°.5±2°×13°.0E±°, h169km±5km, M4.5/12, mb4.6/12, mB5.0/8, MLv4.7/12, Mw(mB)4.4/8*
*NEIC **04** 11:02:42.1±2.1, 6°.58S±0°.06×129°.60E±0°.06, h159km±9km, mb4.4/22, Error ellipse: s-maj=8.7km s-min=8.2km az=97.0*

ISC 04 11:02:42.1±0.4, 6°.66S±0°.04×129°.64E±0°.05, h165km, n78, σ2s 15/88, mb4.3/19, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.11**	**129**	P	**Pn**	**11 03 21.8**	**+2.4**
SAUI				S	**Sn**	**11 03 49.5**	**+1.2**
SAUI	**Saumlaki**	**2.11**	**129**		**Pn**	**11 03 22.1**	**+2.7**
SAUI				Sn	**Sn**	**11 03 50.8**	**+2.5**
BNDI	**Bandanaira**	**2.14**	**7**	P	**Pn**	**11 03 20.4**	**+0.7**
AAI	**Ambon**	**3.28**	**334**	P	**Pn**	**11 03 35.0**	**+1.4**
MSAI	**Masohi**	**3.36**	**348**	P	**Pn**	**11 03 36.5**	**+1.9**
NLAI	**Namlea**	**4.22**	**323**	P	**Pn**	**11 03 47.6**	**+1.8**
FAKI	**Fak Fak**	**4.53**	**35**	P	**Pn**	**11 03 48.0**	**-1.7**
FAKI	**Fak Fak**	**4.53**	**35**		**Pn**	**11 03 48.3**	**-1.4**
FAKI				Sn	**Sn**	**11 04 37.7**	**-4.8**
SANI	**Sanana**	**5.84**	**321**	P	**Pn**	**11 04 08.3**	**+1.4**
	0.3nm846nm85nm,0.8s						
SIJI	**Sorong**	**5.97**	**16**	P	**Pn**	**11 04 08.0**	**-0.6**
	8.5nm,0.3s,baz=222,slow=23,SNR=17						
SIJI				S	**Sn**	**11 05 10.4**	**-6.2**
	34nm,0.3s,baz=62,slow=23,SNR=14						
SWI	**Sorong**	**5.98**	**16**	P	**Pn**	**11 04 08.8**	**+0.1**
	1.1nm2µm46nm,0.8s						
SOEI	**Soe**	**6.14**	**240**	P	**Pn**	**11 04 12.9**	**+1.9**
	1.0nm2µm118nm,1.1s						
SOEI	**Soe**	**6.14**	**240**		**Pn**	**11 04 12.6**	**+1.6**
SOEI				Sn	**Sn**	**11 05 20.3**	**-0.4**
MTN	**Manton Dam**	**6.32**	**167**		**Pn**	**11 04 14.1**	**+0.8**
MTN				Sn	**Sn**	**11 05 22.3**	**-2.5**
LBMI	**Labuha**	**6.35**	**340**	P	Pn	11 04 04.0	-10
RKPI	**Ransiki, Papua**	**6.83**	**42**	P	**Pn**	**11 04 19.6**	**-0.3**
BATI	**Baumata**	**6.88**	**239**	P	**Pn**	**11 04 21.8**	**+1.1**
	54nm,0.3s,baz=103,slow=2.8,SNR=43						
BATI				S	**Sn**	**11 05 36.2**	**-2.0**
	31nm,0.3s,baz=45,slow=5.4,SNR=13						
BATI	**Baumata**	**6.88**	**239**	P	**Pn**	**11 04 21.7**	**+1.1**
	0.5nm2µm112nm,0.5s						
BBSI	**Bau Bau**	**7.12**	**279**	P	**Pn**	**11 04 27.4**	**+3.6**
TNTI	**Ternate**	**7.72**	**343**	P	**Pn**	**11 04 32.4**	**+0.6**
	0.3nm2µm52nm,0.6s						
TNTI	**Ternate**	**7.72**	**343**	Pn	**Pn**	**11 04 30.4**	**-1.3**
KNRA	**Kununurra**	**9.01**	**185**		**Pn**	**11 04 48.7**	**-0.1**
SMPI	**Sarmi**	**10.16**	**63**	P	**Pn**	**11 05 03.4**	**-0.7**
	33nm,1.0s						
MRSI	**Marisa**	**10.45**	**312**	P	**Pn**	**11 05 10.2**	**+2.4**
	75nm,0.8s						
GENI	**Genyem**	**11.24**	**69**	P	**Pn**	**11 05 17.5**	**-0.7**
	44nm,1.0s						
PLAI	**Plampang**	**11.95**	**259**	P	**Pn**	**11 05 27.5**	**+0.1**
	16nm,0.6s						
FITZ	**Fitzroy Crossi**	**12.02**	**199**	P	**Pn**	**11 05 27.6**	**-0.7**
	1.6nm,0.3s,baz=14,slow=9.3,SNR=30						
FITZ				S	**Sn**	**11 07 33.0**	**-8.5**
	7.2nm,0.3s,baz=273,slow=22,SNR=9.4						
WRAB	**Tennant Creek**	**13.97**	**161**		**Pn**	**11 05 51.5**	**-1.6**
WRA	**Warramunga Arr**	**13.97**	**161**	P	**Pn**	**11 05 51.8**	**-1.3**
	4.7nm,0.3s,baz=346,slow=13,SNR=80						
WRA				S	**Sn**	**11 08 20.9**	**-7.6**
	4.1nm,0.3s,baz=332,slow=22,SNR=7.4						
WRA	**Warramunga Arr**	**13.97**	**161**		**Pn**	**11 05 51.0**	**-2.1**
WR0	**Warramunga Arr**	**14.06**	**161**		**Pn**	**11 05 52.9**	**-1.2**
KCP	**Kidapawan**	**14.31**	**341**	*eP*	**Pn**	**11 05 56.2**	**-1.2**
BUKP	**Musuan**	**15.14**	**342**	*eP*	**Pn**	**11 06 06.9**	**-0.8**
COEN	**Coen**	**15.16**	**120**		**Pn**	**11 06 07.5**	**-0.4**
COEN				IAmb	IAmb	11 06 25.4	
	comp=Z,7.0nm,0.8s						
JAGI	**Jajag, Banyuwa**	**15.46**	**262**	Pn	**Pn**	**11 06 10.1**	**-1.5**
AS31	**Alice Springs**	**17.40**	**167**	P	**Pn**	**11 06 36.3**	**+1.2**
AS31				IAmb	IAmb	11 06 38.4	
	comp=Z,8.0nm,0.6s						
ASAR	**Alice Springs**	**17.40**	**167**	P	**Pn**	**11 06 36.7**	**+1.6**
	comp=Z,3.4nm,0.3s,baz=345,slow=9.8,SNR=306						
ASAR				S	**S**	**11 09 40.4**	**-6.3**
	comp=Z,0.5nm,0.3s,baz=331,slow=18,SNR=4.2						
ASAR	**Alice Springs**	**17.40**	**167**	P	**Pn**	**11 06 36.2**	**+1.1**
ASAR					**S**	**11 09 45.7**	**-1.0**
PMG	**Port Moresby**	**17.56**	**100**	P	**P**	**11 06 36.0**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=293,slow=13,SNR=2.7						
PMG	**Port Moresby**	**17.56**	**100**	P	**Pn**	**11 06 36.6**	**-0.4**
PMG				IAmb	IAmb	11 06 41.3	
	comp=Z,24nm,0.9s						
PSA00	**Pilbara Seismi**	**17.59**	**212**		**Pn**	**11 06 36.8**	**-0.5**
PSA00				IAmb	IAmb	11 06 38.8	
	comp=Z,14nm,0.8s						
MANU	**Manus Island**	**18.26**	**76**	P	**Pn**	**11 06 45.5**	**+0.3**
KKM	**Kota Kinabalu**	**18.40**	**313**	Pn	**Pn**	**11 06 46.6**	**-0.4**
KKM				IAmb	IAmb	11 06 55.5	
	comp=Z,34nm,1.0s						
SBUM	**Sibu**	**19.60**	**297**	P	**P**	**11 06 57.6**	**-0.2**
TGY	**Tagaytay City**	**22.36**	**337**	P	**P**	**11 07 27.4**	**+0.7**
	comp=Z,206nm,0.5s,baz=225,slow=5.7,SNR=5.1						
FORT	**Forrest**	**24.04**	**183**	P	**P**	**11 07 43.6**	**+1.6**
FORT				IAmb	IAmb	11 07 50.4	
	comp=Z,17nm,1.0s						
BBOO	**Buckleboo**	**26.70**	**168**	P	**P**	**11 08 07.1**	**+1.1**
BBOO				IAmb	IAmb	11 08 24.6	
	comp=Z,20nm,1.3s						
STKA	**Stephens Creek**	**27.47**	**158**	P	**P**	**11 08 14.0**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=334,slow=6.9,SNR=4.8						
STKA	**Stephens Creek**	**27.47**	**158**	P	**P**	**11 08 14.7**	**+1.9**
NWAO	**Narrogin (SRO)**	**28.57**	**202**	P	**P**	**11 08 24.1**	**+1.5**
TPUB	**Ta-pu**	**31.05**	**344**	P	**P**	**11 08 43.7**	**-0.9**
GSI	**Gunungsitoli**	**32.96**	**283**	P	**P**	**11 09 01.2**	**-0.2**
DZM	**Mont Dzumac**	**38.67**	**117**	P	**P**	**11 09 51.8**	**+1.7**
DZM				IAmb	IAmb	11 09 55.6	
	comp=Z,5.0nm,1.1s						
CM31	**Chiang Mai Arr**	**39.23**	**310**	P	**P**	**11 09 55.0**	**+0.3**
CM31				IAmb	IAmb	11 09 56.3	
	comp=Z,4.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**39.23**	**310**	P	**P**	**11 09 55.8**	**+1.1**
	comp=Z,3.7nm,0.7s,baz=136,slow=7.1,SNR=27						
CMAR	**Chiang Mai Arr**	**39.23**	**310**	P	**P**	**11 09 54.9**	**+0.2**
CHTO	**Chiang Mai**	**39.45**	**310**	P	**P**	**11 09 56.8**	**+0.3**
CHTO				IAmb	IAmb	11 09 58.1	
	comp=Z,5.5nm,0.8s						
LZH	**Lanzhou**	**48.93**	**332**	*eP*	**P**	**11 11 12.3**	**+0.5**
LZH				pP	pP	11 11 49.9	+2.4
LZH				sP	sP	11 12 10.1	+4.8
LZH				PP	**PP**	**11 13 06.8**	**-0.1**
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,350nm,5.4s						
HHC	**Hu-ho-hao-te**	**50.11**	**342**	*eP*	**P**	**11 11 25.1**	**+4.6**
USRK	**Ussuriysk Ar.**	**50.66**	**2**	LR	LR	11 36 00.8	
	comp=Z,33nm,18.3s,baz=7.4,slow=40						
ODAN	**Odare**	**52.76**	**311**	*eP*	**P**	**11 11 41.2**	**+0.6**
	comp=Z,12nm,0.5s						
RAMN	**Ramite**	**53.40**	**311**	*eP*	**P**	**11 11 45.9**	**+0.5**
	comp=Z,14nm,0.4s						
GTA	**Gaotai**	**53.50**	**331**	*eP*	**P**	**11 11 46.9**	**+1.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GUN	**Gumba**	**54.46**	**311**	*eP*	**P**	**11 11 53.4**	**+0.3**
	comp=Z,16nm,0.4s						
PKIN	**Phulchoki**	**54.64**	**311**	*eP*	**P**	**11 11 53.9**	**-0.5**
	comp=Z,3.1nm,0.4s						
GKN	**Gorkha**	**55.44**	**311**	*eP*	**P**	**11 11 59.9**	**0.0**
	comp=Z,23nm,0.3s						
ULN	**Ulaanbaatar**	**57.83**	**342**	P	**P**	**11 12 17.5**	**+1.1**
ULN				IAmb	IAmb	11 12 18.7	
	comp=Z,3.9nm,0.6s						
SONM	**Songino Array**	**58.00**	**342**	P	**P**	**11 12 19.0**	**+1.4**
	comp=Z,1.4nm,0.5s,baz=162,slow=6.2,SNR=15						
SONM	**Songino Array**	**58.00**	**342**	P	**P**	**11 12 19.0**	**+1.4**
WMQ	**Urumqi**	**62.91**	**327**	*eP*	**P**	**11 12 54.1**	**+3.2**
MK31	**Makanchi Array**	**67.74**	**327**	P	**P**	**11 13 22.7**	**+0.9**
MKAR	**Makanchi Array**	**67.74**	**327**	P	**P**	**11 13 23.0**	**+1.1**
	comp=Z,1.6nm,0.4s,baz=116,slow=7.8,SNR=26						
MKAR	**Makanchi Array**	**67.74**	**327**	P	**P**	**11 13 22.6**	**+0.8**
ZALV	**Zalesovo Beam**	**71.12**	**334**	P	**P**	**11 13 42.7**	**+0.4**
	comp=Z,2.0nm,0.6s,baz=125,slow=5.6,SNR=8.5						
ZALV	**Zalesovo Beam**	**71.12**	**334**	P	**P**	**11 13 42.5**	**+0.2**
KURK	**Kurchatov**	**72.04**	**329**	P	**P**	**11 13 48.7**	**+0.8**
ABKAR	**Akbulak array**	**82.02**	**322**	P	**P**	**11 14 44.3**	**+0.6**
ABKAR	**Akbulak array**	**82.02**	**322**	P	**P**	**11 14 44.0**	**+0.3**
ABKAR				IAmb	IAmb	11 14 47.4	
	comp=Z,1.6nm,0.8s						

*SOME **04** 11:09:54.6, 39°.75N×73°.82E, h5km*
*KRNET **04** 11:09:57.3±0.1, 39°.66N×74°.39E, mb3.8*
*NNC **04** 11:09:59.8±1.2, 39°.81N×74°.18E, h0km, mb4.3, mpv3.9, Error ellipse: s-maj=9.2km s-min=5.6km az=171.0*

ISC 04 11:09:58.9±1.7, 39°.79N±0°.06×74°.22E±0°.03, h2km±11km, n56, σ2s 16/84, 22C-19D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANR	**Andizhan**	**1.72**	**305**	P	**Pg**	**11 10 32.3**	**+0.5**
ANR				S	**Sg**	**11 10 58.5**	**+4.4**
ARSB	**Arslanbob**	**1.80**	**329**	⇑*i*P	**Pg**	**11 10 33.8**	**+0.4**
	baz=28						
ARSB				⇑*i*S	**Sg**	**11 11 00.0**	**+3.2**
	baz=28						
SHAK	**Shakhimardan**	**1.92**	**276**	*i* P	Pn	11 10 22.1	-11
SHAK				*i* S	**Sn**	**11 10 50.0**	**-7.4**
AML	**Almayashu**	**2.38**	**351**	⇑*i*P	**Pb**	**11 10 41.8**	**-0.8**
	baz=48						
AML				⇑*i*S	**Sg**	**11 11 14.0**	**-1.2**
	baz=48						
AML	**Almayashu**	**2.38**	**351**	P	**Pb**	**11 10 42.0**	**-0.6**
	SNR=60						
KZA	**Kyzart**	**2.42**	**19**	⇓*i*P	**Pb**	**11 10 42.0**	**-1.4**
	baz=15						
KZA				⇓*i*S	**Sb**	**11 11 14.8**	**+1.0**
	baz=15						
KZA	**Kyzart**	**2.42**	**19**	P	**Pb**	**11 10 42.2**	**-1.1**
	SNR=30						
UCH	**Uchtor**	**2.45**	**5**	⇑*i*P	**Pb**	**11 10 43.0**	**-0.9**
	baz=2.0						
UCH				⇑*i*S	**Sb**	**11 11 15.8**	**+1.1**
	baz=2.0						
UCH	**Uchtor**	**2.45**	**5**	P	**Pb**	**11 10 43.1**	**-0.8**
	SNR=79						
BTK	**Batken**	**2.63**	**277**	⇓*i*P	**Pb**	**11 10 44.8**	**-1.9**
	baz=79						
BTK				⇓*i*S	**Sb**	**11 11 18.7**	**-0.8**
	baz=79						
AAK	**Ala-Archa**	**2.85**	**4**	⇑*i*P	**Pb**	**11 10 48.6**	**-2.1**
	baz=2.0						
AAK				⇑*i*S	**Sb**	**11 11 24.3**	**-1.8**
	baz=2.0						
AAK	**Ala-Archa**	**2.85**	**4**	P	**Pb**	**11 10 48.8**	**-1.8**
	SNR=56						
AAK	**Ala-Archa**	**2.85**	**4**	⇓Pn	**Pn**	**11 10 47.2**	**+1.6**
	25nm,0.4s						
AAK				⇑Lg	Lg	11 11 29.6	
	31nm,0.5s						
EKS2	**Erkin-Say**	**2.89**	**354**	⇑*i*P	**Pb**	**11 10 49.0**	**-2.2**
	baz=51						
EKS2				⇑*i*S	**Sb**	**11 11 26.0**	**-1.1**
	baz=51						
EKS2	**Erkin-Say**	**2.89**	**354**	P	**Pb**	**11 10 49.8**	**-1.5**
	SNR=11						
ULHL	**Ulahol**	**2.89**	**31**	⇓*i*P	**Pn**	**11 10 48.5**	**+2.3**
	baz=28						
ULHL				⇓*i*S	**Sb**	**11 11 25.2**	**-2.1**
	baz=28						
ULHL	**Ulahol**	**2.89**	**31**	P	**Pn**	**11 10 48.8**	**+2.6**
	SNR=20						
KBK	**Karagaybulak**	**2.92**	**11**	⇓*i*P	**Pb**	**11 10 49.3**	**-2.4**
	baz=8.0						
KBK				⇓*i*S	**Sb**	**11 11 26.3**	**-1.6**
	baz=8.0						
KBK	**Karagaybulak**	**2.92**	**11**	P	**Pb**	**11 10 50.1**	**-1.7**
	SNR=34						
FRU1	**Bishkek**	**3.04**	**6**	⇑*i*P	**Pb**	**11 10 50.9**	**-2.8**
	baz=3.0						
FRU1				⇑*i*S	**Sb**	**11 11 29.5**	**-1.7**
	baz=3.0						
MRKS	**Merke**	**3.05**	**346**	*eP*	**Pb**	**11 10 51.4**	**-2.5**
	28nm,0.2s						
MRKS				*eS*	**Sb**	**11 11 31.2**	**-0.3**
	37nm,0.6s						
MRKS	**Merke**	**3.05**	**346**	Pg	**Pb**	**11 10 55.0**	**+1.1**
	28nm,0.2s						
MRKS				Lg	Lg	11 11 37.7	
	37nm,0.6s						
CHMS	**Chumysh**	**3.23**	**7**	P	**Pb**	**11 10 54.1**	**-2.9**
	SNR=7.5						
KDJ	**Kajisay**	**3.24**	**43**	⇑*i*P	**Pn**	**11 10 53.1**	**+2.2**
	baz=40						
KDJ				⇑*i*S	**Sn**	**11 11 33.4**	**+3.2**
	baz=40						
TKM2	**Tokmak 2**	**3.30**	**18**	⇓*i*P	**Pn**	**11 10 54.4**	**+2.7**
	baz=15						
TKM2				⇓*i*S	**Sb**	**11 11 35.5**	**-3.4**
	baz=15						
TKM2	**Tokmak 2**	**3.30**	**18**	P	**Pn**	**11 10 54.6**	**+2.9**
	SNR=34						
TKM2	**Tokmak 2**	**3.30**	**18**	⇓Pn	**Pn**	**11 10 54.0**	**+2.3**
	7.2nm,0.3s						
TKM2				⇓Lg	Lg	11 11 44.2	
	34nm,0.5s						
USP	**Ospenovka**	**3.48**	**3**	⇓*i*P	**Pn**	**11 10 56.8**	**+2.7**
	baz=1.0						
USP				⇓*i*S	**Sb**	**11 11 39.8**	**-4.2**
	baz=1.0						
USP	**Ospenovka**	**3.48**	**3**	P	**Pb**	**11 10 59.3**	**-2.0**
	SNR=9.1						
KST	**Kastek**	**3.51**	**21**	*eP*	**Pb**	**11 11 03.0**	**+1.3**
	33nm,0.4s						
KST				*eS*	**Sg**	**11 11 51.0**	**-0.6**
	51nm,0.3s						
KST	**Kastek**	**3.51**	**21**	Pg	**Pb**	**11 11 03.1**	**+1.3**
	33nm,0.4s						
KST				Lg	Lg	11 11 51.9	
	51nm,0.3s						
DGS	**Degeres**	**3.64**	**18**	*eP*	**Pb**	**11 11 05.9**	**+1.8**
	21nm,0.3s						
DGS				*eS*	**Sg**	**11 11 56.4**	**+0.4**
	36nm,0.6s						
DGS	**Degeres**	**3.64**	**18**	Pg	**Pb**	**11 11 05.9**	**+1.8**
	21nm,0.3s						
DGS				Lg	Lg	11 11 55.3	
	36nm,0.6s						
MTBS	**Maitube**	**3.73**	**26**	*eP*	**Pb**	**11 11 06.9**	**+1.4**
	23nm,0.4s						
MTBS				*eS*	**Sg**	**11 11 57.9**	**-0.8**
	21nm,0.2s						
MTBS	**Maitube**	**3.73**	**26**	Pg	**Pb**	**11 11 06.9**	**+1.4**
	23nm,0.4s						
MTBS				Lg	Lg	11 11 57.9	
	21nm,0.2s						
TNSS	**Tian-Shan**	**3.84**	**31**	*eP*	**Pb**	**11 11 09.3**	**+1.7**
	45nm,0.3s						
TNSS				*eS*	**Sg**	**11 12 01.8**	**-0.5**
	29nm,0.4s						
TNSS	**Tian-Shan**	**3.84**	**31**	Pg	**Pb**	**11 11 09.3**	**+1.7**
	45nm,0.3s						
TNSS				Lg	Lg	11 12 02.5	
	29nm,0.4s						
IUG	**Iuzhnay**	**3.95**	**308**	*eP*	**Pn**	**11 11 02.7**	**+2.1**
	3.1nm,0.3s						
IUG				*eS*	**Sn**	**11 11 50.6**	**+3.1**
	47nm,0.3s						
IUG	**Iuzhnay**	**3.95**	**308**	Pg	**Pn**	**11 11 02.7**	**+2.1**
	3.1nm,0.3s						
IUG				Lg	Lg	11 11 51.3	
	47nm,0.3s						
MDOK	**Medeo**	**3.99**	**31**	⇓*i*P	**Pb**	**11 11 11.8**	**+1.9**
	27nm,0.4s						
MDOK				*eS*	**Sg**	**11 12 06.5**	**-0.4**
	16nm,0.4s						
MDOK

SONM				Sn		**Sn**	**11 18 48.5**	**0.0**
	0.2nm,0.3s,baz=194,slow=21,SNR=2.9							
SONM				Lg		Lg	11 19 38.3	
	0.3nm,0.3s,baz=179,slow=23,SNR=3.7							
MKAR	**Makanchi Array**	**18.99**	**302**	P		**P**	**11 19 25.5**	**-0.6**
	0.0nm,0.3s,baz=101,slow=13,SNR=3.0							
ZALV	**Zalesovo Beam**	**20.72**	**323**	P		**P**	**11 19 44.4**	**-0.4**
	0.6nm,0.3s,baz=126,slow=10,SNR=4.1							
KURBB	**Kurchatov Arra**	**22.53**	**310**	P		**P**	**11 20 04.3**	**0.0**
	1.3nm,0.7s,baz=108,slow=13,SNR=5.0							
BVAR	**Borovoye Array**	**28.07**	**311**	P		**P**	**11 20 56.3**	**+0.6**
	0.9nm,0.5s,baz=118,slow=11,SNR=3.8							
ASAR	**Alice Springs**	**67.66**	**152**	P		**P**	**11 26 01.1**	**-0.1**
	0.5nm,0.5s,baz=337,slow=6.6,SNR=15							

*EAF **04** 11:41:47.2±1.4,24°.28S×29°.60E,h10km,MD3.5*
ISC 04 11:41:43.3±1.8,24°.37S±0°.07×29°.7E±0°.1,h10km,n6,
σ2s49/10,South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSNA	**Messina**	**2.04**	**8**	*i* P	**Pb**	**11 42 20.8**	**+0.3**
MSNA				*i* S	**Sb**	**11 42 44.9**	**-1.0**
LBTB	**Lobatse**	**3.80**	**259**	*i* P	**Pg**	**11 42 56.2**	**+0.1**
LBTB	**Lobatse**	**3.80**	**259**	*i* P	**Pn**	**11 42 45.3**	**+3.3**
LBTB				*i* S	**Sn**	**11 43 26.7**	**-0.1**
MATP	**Matopo**	**4.08**	**344**	*i* P	**Pn**	**11 42 47.3**	**+1.3**
MATP				*i* S	**Sn**	**11 43 31.1**	**-2.8**
BOSA	**Boshof**	**5.81**	**222**	*i* P	**Pb**	**11 43 22.3**	**-2.6**
BOSA	**Boshof**	**5.81**	**222**	*i* P	**Pn**	**11 43 12.8**	**+3.1**
BOSA				*i* S	**Sn**	**11 44 14.2**	**-2.3**

*ANF **04** 12:12:42.3±0.2,32°.89N×115°.49W,h15km,ML2.7/17,*
Error ellipse: s-maj=2.4km s-min=1.5km az=166.0
*NEIC **04** 12:12:42.5±1.9,32°.82N±0°.02×115°.56W±0°.03,h21km±6km,*
Error ellipse: s-maj=3.8km s-min=2.4km az=123.0
*SCEDC **04** 12:12:43.1,32°.86N×115°.48W,h15km*
*PAS **04** 12:12:43.2±2.9,32°.87N±0°.02×115°.49W±0°.03,h10km±3km,*
ML2.7/10, Error ellipse: s-maj=3.4km s-min=1.8km
az=116.0
ISC 04 12:12:42.8±0.8,32°.87N±0°.02×115°.53W±0°.02,h17km±5km,
n66,σ0s92/85,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNR	**Schaffner Ranc**	**0.08**	**94**		**Pg**	**12 12 45.5**	**-0.7**
DREC	**Desert Rsrch C**	**0.09**	**131**		**Pg**	**12 12 46.2**	**-0.1**
DREC					**Sg**	**12 12 49.6**	**+1.0**
COK2	**Cook Ranch 2**	**0.17**	**264**		**Pb**	**12 12 47.8**	**+0.3**
SWSC	**Sam W. Stewart**	**0.24**	**289**		**Pg**	**12 12 48.6**	**+0.3**
SWSC	**Sam W. Stewart**	**0.24**	**289**	P	**Pg**	**12 12 48.6**	**+0.3**
	baz=107,SNR=168						
UABX	**UABC, Campus M**	**0.25**	**162**		**Pb**	**12 12 49.6**	**+0.7**
SUP	**Superstition M**	**0.26**	**290**		**Pb**	**12 12 49.1**	**0.0**
CLIC	**Calipatria**	**0.27**	**1**		**Pg**	**12 12 49.1**	**+0.3**
ERRC	**Elmore Ranch**	**0.35**	**316**		**Pb**	**12 12 51.1**	**+0.5**
ERRC					**Sb**	**12 12 57.2**	**+1.4**
CRR	**Carrizo Plain**	**0.37**	**273**		**Pb**	**12 12 51.0**	**+0.1**
IKP	**In-Ko-Pah, Jac**	**0.53**	**246**		**Pb**	**12 12 53.9**	**+0.1**
IKP					**Sg**	**12 12 58.9**	**-1.8**
IKP	**In-Ko-Pah, Jac**	**0.53**	**246**	P	**Pb**	**12 12 53.9**	**+0.1**
	baz=68,SNR=76						
IKP				S	**Sb**	**12 13 02.7**	**+1.5**
	baz=68						
FRK	**Frink**	**0.54**	**350**		**Pg**	**12 12 53.1**	**-0.5**
CBKC	**Canebrake**	**0.61**	**273**		**Pb**	**12 12 55.2**	**+0.2**
GLA	**Glamis**	**0.62**	**73**	Pg	**Pg**	**12 12 54.3**	**-0.8**
GLA	**Glamis**	**0.62**	**73**	P	**Pg**	**12 12 54.4**	**-0.8**
	baz=251,SNR=72						
GLA				S	**Sg**	**12 13 02.5**	**-0.9**
	baz=251						
BATC	**Bat Cave Butte**	**0.65**	**336**		**Pg**	**12 12 55.5**	**-0.1**
MONP2	**Monument Peak**	**0.75**	**272**		**Pg**	**12 12 57.6**	**0.0**
MONP2					**Sb**	**12 13 08.1**	**+0.5**
MONP2	**Monument Peak**	**0.75**	**272**	P	**Pg**	**12 12 57.5**	**0.0**
	baz=92,SNR=100						
MONP2				S	**Sb**	**12 13 08.3**	**+0.7**
	baz=92						
BC3	**Big Chuckawall**	**0.79**	**5**		**Pb**	**12 12 57.6**	**-0.6**
BC3					**Sb**	**12 13 08.1**	**-0.6**
BC3	**Big Chuckawall**	**0.79**	**5**	P	**Pb**	**12 12 57.6**	**-0.6**
	baz=182,SNR=66						
BC3				S	**Sb**	**12 13 08.3**	**-0.3**
	baz=182						
BORC	**Borrego Spring**	**0.84**	**299**		**Pb**	**12 12 58.3**	**-0.8**
BORC					**Sb**	**12 13 10.2**	**+0.1**
HAY	**Hayfield**	**0.85**	**351**		**Pb**	**12 12 59.5**	**-0.6**
CTCC	**Cactus City**	**0.88**	**334**		**Pb**	**12 12 59.1**	**-0.5**
CTCC					**Sg**	**12 13 12.1**	**+0.6**
ESJX	**Sierra Juarez**	**0.93**	**202**		**Pb**	**12 13 00.5**	**-0.1**
BAR	**Barrett**	**0.98**	**259**	Pg	**Pb**	**12 13 00.9**	**-0.4**
XPFO	**Pion Flat**	**1.07**	**314**		**Pb**	**12 13 01.8**	**-1.2**
PFO	**Pinyon Flats O**	**1.07**	**314**		**Pb**	**12 13 01.8**	**-1.3**
PFO	**Pinyon Flats O**	**1.07**	**314**	P	**Pb**	**12 13 01.8**	**-1.3**
	baz=132,SNR=21						
PFO				S	**Sb**	**12 13 17.6**	**+0.7**
	baz=132						
FRD	**Ford Ranch, An**	**1.09**	**305**		**Pb**	**12 13 02.2**	**-1.2**
EML	**El Monte Cty P**	**1.11**	**272**		**Pb**	**12 13 02.6**	**-0.9**
SNDA	**J Saunders Pla**	**1.14**	**307**		**Pn**	**12 13 02.9**	**-1.2**
BZNA	**Buzz No.'s Pla**	**1.14**	**303**		**Pn**	**12 13 03.0**	**-1.1**
DPP	**Dos Picos Cty**	**1.19**	**277**		**Pn**	**12 13 04.1**	**-0.6**
SDRC	**San Diego Road**	**1.20**	**264**		**Pn**	**12 13 04.3**	**-0.5**
SDRC					**Sb**	**12 13 19.9**	**-0.3**
BELC	**Belle Mtn. Jos**	**1.20**	**341**	P	**Pn**	**12 13 03.8**	**-1.2**
	baz=159,SNR=12						
OLP	**Otay Lakes Par**	**1.21**	**258**		**Pn**	**12 13 04.7**	**-0.2**
OLP					**Sb**	**12 13 20.5**	**0.0**
Y12C	**Blythe**	**1.22**	**43**	Pn	**Pb**	**12 13 05.7**	**+0.3**
Y12C	**Blythe**	**1.22**	**43**	Pg	**Pb**	**12 13 05.7**	**+0.3**
	baz=222,SNR=19						
Y12C				S	**Sn**	**12 13 21.3**	**+0.1**
	baz=222						
109C	**Camp Elliot, M**	**1.32**	**271**	Pn	**Pn**	**12 13 06.8**	**+0.2**
109C	**Camp Elliot, M**	**1.32**	**271**	P	**Pn**	**12 13 06.3**	**-0.3**
	baz=91,SNR=27						
109C				S	**Sb**	**12 13 24.7**	**+0.8**
	baz=91						
IRM	**Iron Mountain**	**1.33**	**14**	P	**Pn**	**12 13 05.7**	**-1.0**
	baz=192,SNR=47						
POB	**Polly Butte**	**1.42**	**305**		**Pn**	**12 13 07.0**	**-1.0**
POB					**Pg**	**12 13 10.3**	**0.0**
GORC	**Green Oak Ranc**	**1.46**	**282**		**Sn**	**12 13 26.5**	**-0.5**
DGR	**Domenigoni Val**	**1.46**	**303**		**Pg**	**12 13 10.8**	**-0.3**
113A	**Mohawk Valley,**	**1.49**	**93**	Pn	**Pn**	**12 13 07.7**	**-1.1**
MURC	**Murrieta**	**1.57**	**298**	Pg	**Pg**	**12 13 12.7**	**-0.4**
	baz=117						
MURC				Sb	**Sg**	**12 13 33.0**	**-0.7**
	baz=117						
BBRC	**Big Bear Solar**	**1.81**	**321**	Pg	**Pg**	**12 13 17.8**	**+0.1**
	baz=139						
GMRC	**Granite Mounta**	**1.92**	**357**	Pg	**Pg**	**12 13 18.7**	**-1.0**
	baz=176,SNR=18						
NEE2	**Needles Airpor**	**2.04**	**22**	Pg	**Pb**	**12 13 20.5**	**+1.0**
	baz=201						
BFSC	**Mount Baldy Ra**	**2.24**	**308**	Pg	**Pg**	**12 13 25.6**	**-0.3**
	baz=126						
Y14A	**Wickenburg**	**2.37**	**62**		**Pb**	**12 13 25.8**	**+0.7**
214A	**Organ Pipe Nat**	**2.47**	**111**	Pn	**Pn**	**12 13 21.1**	**-1.3**
214A	**Organ Pipe Nat**	**2.47**	**111**	Pn	**Pn**	**12 13 21.1**	**-1.3**
	baz=293						
214A				Pb	**Pb**	**12 13 25.8**	**-1.1**
	baz=293						
CIS	**Catalina Islan**	**2.48**	**283**	Sb	**Sb**	**12 13 59.9**	**+2.7**
	baz=102						
W13A	**Hualapai Mount**	**2.61**	**31**		**Pn**	**12 13 25.7**	**+1.2**
GSC	**Goldstone, Bar**	**2.65**	**337**		**Pn**	**12 13 27.1**	**+2.3**
ISA	**Isabella, Lake**	**3.70**	**320**		**Pn**	**12 13 40.9**	**+1.6**
X16A	**Lo Mia Camp, P**	**3.75**	**64**	Pn	**Pn**	**12 13 42.3**	**+2.3**
TUC	**Tucson**	**4.04**	**97**		**Pn**	**12 13 45.3**	**+1.3**
U15A	**North Rim**	**4.44**	**36**		**Pn**	**12 13 50.1**	**+0.4**
LCMT	**Little Creek M**	**4.54**	**24**	Pn	**Pn**	**12 13 50.4**	**-0.5**
KNB	**Kanab**	**4.70**	**28**	Pn	**Pn**	**12 13 53.4**	**+0.3**
X18A	**Snowflake**	**4.94**	**69**	Pn	**Pn**	**12 13 57.5**	**+1.0**
CCUT	**Cedar City**	**5.00**	**20**	Pn	**Pn**	**12 13 58.5**	**+1.2**
SZCU	**Shurtz Canyon**	**5.12**	**22**	Pn	**Pn**	**12 14 00.5**	**+1.5**

MAN 04 12:25:52.0,11°.15N×124°.68E,h7km,mb4.4,ML3.3,MS3.1,
1C,Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.12**	**213**	*eP*	Pg	12 25 55.5	+0.9
OCLP				*eS*	Sg	12 25 59.4	+2.9
MSLP	**Maasin**	**1.03**	**170**	*eP*	Pb	12 26 12.2	0.0
MSLP				*eS*	Sg	12 26 23.6	-1.6
LLP	**Lapu-Lapu**	**1.09**	**220**	*eP*	Pg	12 26 11.8	-1.1
LLP				*eS*	Sg	12 26 25.4	-1.6
RCP	**Roxas**	**1.94**	**282**	*eP*	Pn	12 26 25.3	-0.1
RCP				*eS*	Sn	12 26 50.7	+0.7
GUIM	**Jordan**	**2.12**	**256**	*eP*	Pn	12 26 27.6	-0.3
GUIM				*eS*	Sb	12 26 55.9	-1.4

*IDC **04** 12:31:06.7±61.0,19°.94S×178°.90E,h0km,mb4.4/3,*
mb1 4.6/3,mb1mx3.8/34,mbtmp4.4/3,Error ellipse:
s-maj=1085.0km s-min=148.9km az=81.0
*NEIC **04** 12:31:29.4±0.8,20°.1S±0°.1×177°.6W±0°.1,h523km±19km,*
mb4.1/15, Error ellipse: s-maj=21.4km s-min=20.0km
az=210.0
ISC 04 12:31:28.8±0.7,20°.1S±0°.1×177°.69W±0°.08,h500km,n22,
σ1s39/24,mb4.2/10,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.68**	**300**	P	**P**	**12 32 56.6**	**+3.5**
NIUE	**Niue**	**7.38**	**83**	P	**P**	**12 33 19.2**	**+0.3**
NIUE				S	**S**	**12 34 52.0**	**+2.8**
AFI	**Afiamalu**	**8.36**	**43**	P	**P**	**12 33 29.5**	**+0.3**
AFI				S	**S**	**12 35 04.2**	**-3.6**
DZM	**Mont Dzumac**	**14.94**	**260**	P	**P**	**12 34 39.2**	**+0.6**
DZM				IAmb	IAmb	12 34 45.1	
	comp=Z,5.4nm,0.9s						
RPZ	**Rata Peaks**	**25.35**	**199**	P	**P**	**12 36 15.2**	**-0.1**
EIDS	**Eidsvold**	**29.24**	**254**	P	**P**	**12 36 49.5**	**-0.1**
ARMA	**Armidale**	**29.50**	**244**	P	**P**	**12 36 52.0**	**-0.1**
ARMA				IAmb	IAmb	12 36 52.6	
	comp=Z,19nm,1.4s						
COEN	**Coen**	**37.85**	**273**	P	**P**	**12 38 02.4**	**-0.2**
COEN				IAmb	IAmb	12 38 10.3	
	comp=Z,6.5nm,1.1s						
STKA	**Stephens Creek**	**38.22**	**244**	P	**P**	**12 38 05.0**	**-0.5**
	comp=Z,1.6nm,0.7s,baz=92,slow=12,SNR=4.0						
STKA	**Stephens Creek**	**38.22**	**244**	P	**P**	**12 38 04.7**	**-0.7**
BBOO	**Buckleboo**	**42.99**	**243**	P	**P**	**12 38 42.2**	**-1.3**
WR0	**Warramunga Arr**	**44.76**	**262**	P	**P**	**12 38 56.8**	**-0.7**
WR0				IAmb	IAmb	12 39 03.5	
	comp=Z,4.0nm,1.1s						
AS31	**Alice Springs**	**44.90**	**256**	P	**P**	**12 38 58.3**	**-0.3**
ASAR	**Alice Springs**	**44.90**	**256**	P	**P**	**12 38 58.2**	**-0.3**
	comp=Z,6.5nm,0.5s,baz=95,slow=7.7,SNR=116						
ASAR	**Alice Springs**	**44.90**	**256**	P	**P**	**12 38 57.8**	**-0.8**
WRAB	**Tennant Creek**	**44.94**	**262**	P	**P**	**12 38 58.3**	**-0.6**
WRAB				IAmb	IAmb	12 38 58.6	
	comp=Z,4.9nm,0.8s						
WRA	**Warramunga Arr**	**44.95**	**262**	P	**P**	**12 38 58.2**	**-0.8**
	comp=Z,3.0nm,0.3s,baz=97,slow=7.8,SNR=80						
WRA	**Warramunga Arr**	**44.95**	**262**	P	**P**	**12 38 58.3**	**-0.7**
MTN	**Manton Dam**	**49.46**	**270**	P	**P**	**12 39 32.8**	**-0.2**
MTN				IAmb	IAmb	12 39 35.2	
	comp=Z,17nm,1.4s						
KNRA	**Kununurra**	**50.98**	**266**	P	**P**	**12 39 43.7**	**-0.5**
KNRA				IAmb	IAmb	12 39 52.8	
	comp=Z,20nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.37**	**262**	P	**P**	**12 40 01.1**	**-0.3**
FITZ				IAmb	IAmb	12 40 07.6	
	comp=Z,4.8nm,1.2s						
QSPA	**South Pole Qui**	**69.96**	**180**	P	**P**	**12 41 48.1**	**-1.1**

*IDC **04** 12:37:58.3±1.2,1°.66N×102°.33W,h0km,mb4.1/10,*
mb1 4.4/10,mb1mx4.1/37,mbtmp4.1/10,MS3.9/23,
Ms1 3.9/23,ms1mx3.8/34,Error ellipse: s-maj=60.7km
s-min=16.3km az=52.0
*NEIC **04** 12:37:59.9±0.8,1°.8N±0°.1×101°.9W±0°.1,h10km±1km,*
mb4.6/62,Error ellipse: s-maj=25.0km s-min=18.4km
az=224.0
*GCMT **04** 12:38:00.9±0.4,1°.77N±0°.02×102°.14W±0°.02,h24km±2km,*
MW4.9/77,Moment Tensor Solution. s14,c15; s77,c93;
Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.48±.18;
Mθθ-2.06±.12; Mφφ2.54±.15; Mrθ-0.67±.18; Mθφ-0.42±.10;
Mφr0.30±.17; Best double couple: M0.47200×10^16
NP1:φs39.00000°,δ72.00000°,λ-9.00000°. NP2:
φs131.00000°,δ81.00000°,λ-161.00000°. Principal axes:
T 2.6210, Plg7.0000°, Azm264.0000°; N -0.2960,
Plg69.0000°, Azm155.0000°; P -2.3230, Plg19.0000°,
Azm356.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function
ISC 04 12:37:59.4±0.6,1°.69N±0°.10×102°.11W±0°.10,h10km,n138,
σ1s43/102,mb4.5/36,MS3.9/24,Galapagos Triple
Junction region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**16.87**	**24**	LR	LR	12 45 51.8	
	comp=Z,223nm,19.4s,baz=204,slow=28						
APG	**El Apazote**	**17.52**	**40**	LR	LR	12 47 11.3	
	comp=Z,353nm,20.0s,baz=117,slow=31						
MOIG	**Morelia**	**17.90**	**3**		**P**	**12 42 09.9**	**+0.4**
H06E1	**SOCORRO T-PHAS**	**19.06**	**334**	T	T	13 01 46.1	
	SNR=9.6						
JTS	**Las Juntas de**	**19.07**	**63**	LR	LR	12 47 35.9	
	comp=Z,952nm,19.9s,baz=312,slow=30						
JTS	**Las Juntas de**	**19.07**	**63**	P	**P**	**12 42 18.4**	**-3.8**
ZAIG	**Zacatecas**	**20.96**	**359**	P	Pn	12 42 44.2	-1.3
ZAIG				IAmb	IAmb	12 42 48.4	
	comp=Z,28nm,1.4s						
TEIG	**Tepich**	**22.85**	**35**	LR	LR	12 50 30.9	
	comp=Z,218nm,19.3s,slow=33						
LPIG	**La Paz**	**23.65**	**341**	LR	LR	12 50 06.7	
	comp=Z,436nm,21.0s,baz=167,slow=31						
OTAV	**Otavalo**	**23.70**	**93**	P	**P**	**12 43 11.4**	**-0.8**
OTAV				IAmb	IAmb	12 43 17.6	
	comp=Z,30nm,1.6s						
ATAH	**Atahualpa**	**25.23**	**111**	P	**P**	**12 43 29.5**	**+3.2**
	comp=Z,4.1nm,0.6s,baz=283,slow=12,SNR=5.7						
ATAH				LR	LR	12 50 54.8	
	comp=Z,562nm,21.1s,baz=293,slow=30						
TXAR	**Lajitas Array**	**27.53**	**357**	P	**P**	**12 43 47.5**	**+1.0**
	comp=Z,1.9nm,1.1s,baz=172,slow=10,SNR=9.3						
TXAR				PcP	**PcP**	**12 47 05.1**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=169,slow=5.2,SNR=3.5						
TXAR				LR	LR	12 53 48.6	
	comp=Z,281nm,18.4s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**27.53**	**357**	P	**P**	**12 43 46.4**	**-0.1**
TX31	**Lajitas Ar. Si**	**27.53**	**357**	P	**P**	**12 43 46.3**	**-0.2**
TX31				IAmb	IAmb	12 43 48.5	
	comp=Z,12nm,1.6s						
ROSC	**El Rosal**	**27.91**	**83**	LR	LR	12 53 04.7	
	comp=Z,427nm,21.5s,baz=230,slow=32						
ROSC	**El Rosal**	**27.91**	**83**	P	**P**	**12 43 49.4**	**-1.1**
NNA	**Nana**	**28.54**	**119**	LR	LR	12 52 55.2	
	comp=Z,190nm,18.0s,baz=293,slow=31						
JCT	**Junction City**	**28.71**	**4**	P	**P**	**12 43 56.8**	**-0.2**
JCT				IAmb	IAmb	12 43 59.7	
	comp=Z,21nm,1.4s						
JCT	**Junction City**	**28.71**	**4**	P	**P**	**12 43 59.2**	**+2.2**
	baz=184						
RPN	**Rapa Nui**	**29.48**	**193**	LR	LR	12 52 53.1	
	comp=Z,336nm,19.7s,baz=28,slow=30						
MNTX	**Cornudas Mount**	**30.01**	**354**	P	**P**	**12 44 08.2**	**-0.2**
MNTX	**Cornudas Mount**	**30.01**	**354**	P	**P**	**12 44 09.2**	**+0.8**
	baz=173						
NATX	**Nacogdoches**	**30.72**	**12**	P	**P**	**12 44 13.7**	**-1.0**
NATX				IAmb	IAmb	12 44 17.9	
	comp=Z,11nm,0.8s						
ABTX	**Abilene, Hawle**	**30.86**	**4**	P	**P**	**12 44 15.6**	**-0.4**
ABTX				IAmb	IAmb	12 44 17.5	
	comp=Z,14nm,1.1s						
ABTX	**Abilene, Hawle**	**30.86**	**4**	P	**P**	**12 44 17.3**	**+1.4**
	baz=184						
121A	**Cookes Peak, D**	**31.14**	**351**	P	**P**	**12 44 18.4**	**-0.3**
121A				IAmb	IAmb	12 44 21.6	
	comp=Z,12nm,1.4s						
TUC	**Tucson**	**31.53**	**346**	P	**P**	**12 44 22.9**	**+0.9**
	baz=163						
214A	**Organ Pipe Nat**	**31.75**	**343**	P	**P**	**12 44 23.8**	**-0.1**
214A				IAmb	IAmb	12 44 26.4	
	comp=Z,9.1nm,1.4s						
214A	**Organ Pipe Nat**	**31.75**	**343**	P	**P**	**12 44 25.6**	**+1.8**
	baz=159						
113A	**Mohawk Valley,**	**32.80**	**342**	P	**P**	**12 44 32.8**	**-0.2**
113A				IAmb	IAmb	12 44 35.8	
	comp=Z,19nm,1.6s						
WMOK	**Wichita Mounta**	**33.02**	**5**	P	**P**	**12 44 34.3**	**-0.7**
AMTX	**Amarillo**	**33.03**	**1**	P	**P**	**12 44 35.0**	**-0.1**
AMTX				IAmb	IAmb	12 44 48.9	
	comp=Z,12nm,1.5s						
GLA	**Glamis**	**33.41**	**340**	P	**P**	**12 44 40.3**	**+1.9**
	baz=156						
IKP	**In-Ko-Pah, Jac**	**33.49**	**338**	P	**P**	**12 44 40.4**	**+1.2**
	baz=154						
MIAR	**Mount Ida**	**33.64**	**13**	P	**P**	**12 44 39.9**	**-0.5**
MIAR	**Mount Ida**	**33.64**	**13**	P	**P**	**12 44 41.8**	**+1.5**
	baz=195						
SWSC	**Sam W. Stewart**	**33.65**	**339**	P	**P**	**12 44 41.7**	**+1.4**
	baz=154						
W35A	**Tecumseh**	**33.65**	**8**	P	**P**	**12 44 39.2**	**-1.2**
Y14A	**Wickenburg**	**33.66**	**344**	P	**P**	**12 44 40.2**	**-0.4**
BAR	**Barrett**	**33.73**	**338**	P	**P**	**12 44 41.4**	**+0.2**
BAR				IAmb	IAmb	12 44 43.9	
	comp=Z,17nm,1.3s						
MONP2	**Monument Peak**	**33.83**	**338**	P	**P**	**12 44 43.8**	**+1.6**
	baz=153						
109C	**Camp Elliot, M**	**34.08**	**337**	P	**P**	**12 44 44.1**	**-0.1**
BC3	**Big Chuckawall**	**34.17**	**340**	P	**P**	**12 44 46.8**	**+1.7**
	baz=156						
TPFO	**Pinon Flats**	**34.48**	**339**	P	**P**	**12 44 49.6**	**+1.8**
	baz=154,SNR=6.9						
XPFO	**Pion Flat**	**34.48**	**339**	P	**P**	**12 44 47.9**	**+0.1**
XPFO				IAmb	IAmb	12 44 50.8	
	comp=Z,19nm,1.4s						
PFO	**Pinyon Flats O**	**34.48**	**339**	P	**P**	**12 44 48.4**	**+0.6**
	comp=Z,5.3nm,1.0s,baz=168,slow=7.0,SNR=8.2						
PFO	**Pinyon Flats O**	**34.48**	**339**	P	**P**	**12 44 48.0**	**+0.1**
PFO				IAmb	IAmb	12 44 50.8	
	comp=Z,17nm,1.3s						
PFO	**Pinyon Flats O**	**34.48**	**339**	P	**P**	**12 44 49.7**	**+1.9**
	baz=154						
IRM	**Iron Mountain**	**34.52**	**341**	P	**P**	**12 44 49.7**	**+1.7**
	baz=156,SNR=5.7						
BELC	**Belle Mtn. Jos**	**34.67**	**339**	P	**P**	**12 44 51.7**	**+2.3**
	baz=155						
GMRC	**Granite Mounta**	**35.27**	**340**	P	**P**	**12 44 56.6**	**+2.0**
	baz=156						
BFSC	**Mount Baldy Ra**	**35.49**	**338**	P	**P**	**12 44 58.2**	**+1.7**
	baz=152						
HEC	**Hector,Ludlow**	**35.54**	**340**	P	**P**	**12 44 58.9**	**+2.1**
	baz=155,SNR=5.1						
MWC	**Mount Wilson**	**35.63**	**337**	P	**P**	**12 44 57.5**	**-0.3**
MWC				IAmb	IAmb	12 45 00.6	
	comp=Z,14nm,1.2s						
TUQ	**Turquoise Moun**	**35.95**	**341**	P	**P**	**12 45 02.5**	**+2.1**
	baz=156						
GSC	**Goldstone, Bar**	**36.13**	**339**	P	**P**	**12 45 02.2**	**+0.3**
GSC				IAmb	IAmb	12 45 05.1	
	comp=Z,13nm,1.2s						
GSC	**Goldstone, Bar**	**36.13**	**339**	P	**P**	**12 45 03.3**	**+1.4**
	baz=154,SNR=9.2						
S22A	**4UR Ranch, Cre**	**36.14**	**354**	P	**P**	**12 45 03.1**	**+0.8**
	baz=172						
EDW2	**Edwards Air Fo**	**36.19**	**338**	P	**P**	**12 45 03.2**	**+0.8**
	baz=152,SNR=6.0						
SHOC	**Shoshone, Teco**	**36.49**	**340**	P	**P**	**12 45 07.2**	**+2.3**
	baz=156,SNR=5.9						
KNB	**Kanab**	**36.52**	**346**	P	**P**	**12 45 05.3**	**0.0**
LRMC	**Laurel Mtn Rad**	**36.60**	**338**	P	**P**	**12 45 07.7**	**+1.7**
	baz=153						
SHPR	**Sheep Range**	**36.69**	**342**	P	**P**	**12 45 06.4**	**-0.3**
SHPR				IAmb	IAmb	12 45 09.1	
	comp=Z,8.2nm,1.5s						
V48A	**Smith Brothers**	**36.73**	**21**	P	**P**	**12 45 06.4**	**-0.5**
V48A				IAmb	IAmb	12 45 15.5	
	comp=Z,19nm,1.6s						
MPMC	**Manual Prospec**	**37.05**	**339**	P	**P**	**12 45 11.3**	**+1.4**
	baz=154,SNR=15						
ISA	**Isabella, Lake**	**37.06**	**338**	P	**P**	**12 45 10.3**	**+0.5**
ISA	**Isabella, Lake**	**37.06**	**338**	P	**P**	**12 45 11.7**	**+1.9**
	baz=152,SNR=7.3						
MTPU	**Mount Pierson**	**37.34**	**347**	P	**P**	**12 45 11.4**	**-1.1**
SMMC	**Simmler**	**37.36**	**336**	P	**P**	**12 45 14.4**	**+2.0**
	baz=149						
TPNV	**Topopah Spring**	**37.44**	**341**	P	**P**	**12 45 13.2**	**+0.1**
TPNV	**Topopah Spring**	**37.44**	**341**	P	**P**	**12 45 13.8**	**+0.7**
	baz=156						
VES	**Vestal, Richgr**	**37.45**	**337**	P	**P**	**12 45 15.5**	**+2.5**
	baz=151						
CWC	**Cottonwood Cre**	**37.60**	**339**	P	**P**	**12 45 16.5**	**+2.0**
	baz=153						
LPAZ	**La Paz**	**38.01**	**119**	P	**P**	**12 45 20.4**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=298,slow=8.9,SNR=3.8						
LPAZ				LR	LR	12 58 55.1	
	comp=Z,134nm,18.1s,baz=325,slow=33						
LPAZ	**La Paz**	**38.01**	**119**	P	**P**	**12 45 18.1**	**-0.7**
R11A	**Troy Canyon, C**	**38.52**	**343**	P	**P**	**12 45 22.1**

CPUP	**Villa Florida**	**51.40**	**126**	P	**P**	**12 47 04.9**	**+0.1**
TBI	**Tubuai**	**52.35**	**239**	*e*LR	LR	13 02 19.8	
	comp=Z,330nm,26.0s,baz=58						
BBB	**Bella Bella**	**54.82**	**341**	LR	LR	13 08 29.8	
	comp=Z,57nm,18.4s,baz=161,slow=33						
XMAS	**Kiritimati**	**55.31**	**271**	P	**P**	**12 47 35.7**	**+1.9**
BDFB	**Brasilia**	**56.16**	**110**	LR	LR	13 10 10.4	
	comp=Z,342nm,20.0s,baz=298,slow=34						
YKA	**Yellowknife Ar**	**61.38**	**353**	P	**P**	**12 48 14.6**	**-0.6**
	comp=Z,0.8nm,1.1s,baz=164,slow=6.6,SNR=7.9						
YKA				LR	LR	13 14 39.9	
	comp=Z,32nm,19.3s,baz=152,slow=36						
RND	**Reindeer**	**70.46**	**340**	P	**P**	**12 49 14.1**	**+0.2**
IL31		**70.70**	**341**	P	**P**	**12 49 14.7**	**-0.5**
ILAR	**Eielson Array**	**70.70**	**341**	P	**P**	**12 49 14.5**	**-0.7**
	comp=Z,3.9nm,1.1s,baz=163,slow=3.8,SNR=14						
PRP	**Porcupine Dome**	**70.78**	**342**	P	**P**	**12 49 16.1**	**+0.2**
H11N3	**WAKE ISLAND Hy**	**90.36**	**290**	T	T	14 30 52.9	
	baz=88,slow=75,SNR=7.1						
H11N2	**WAKE ISLAND Hy**	**90.37**	**290**	T	T	14 30 52.4	
	baz=88,slow=75,SNR=6.7						
H11N1	**WAKE ISLAND Hy**	**90.38**	**290**	T	T	14 30 52.5	
	baz=88,slow=75,SNR=8.0						
H11S2	**WAKE ISLAND Hy**	**90.60**	**288**	T	T	14 31 06.6	
	baz=86,slow=74,SNR=8.0						
H11S1	**WAKE ISLAND Hy**	**90.60**	**288**	T	T	14 31 05.8	
	baz=86,slow=74,SNR=8.6						
H11S3	**WAKE ISLAND Hy**	**90.61**	**288**	T	T	14 31 16.5	
	baz=86,slow=74,SNR=6.6						
DZM	**Mont Dzumac**	**91.97**	**248**	*e*LR	LR	13 20 37.9	
	comp=Z,141nm,25.2s						
VNDA	**Vanda**	**92.95**	**193**	LR	LR	13 25 49.0	
	comp=Z,39nm,18.9s,baz=208,slow=31						
DBIC	**Dimbokro**	**97.00**	**83**	LR	LR	13 29 56.7	
	comp=Z,54nm,20.4s,baz=307,slow=32						
NOA	**NORSAR Array B**	**99.61**	**27**	LR	LR	13 35 41.8	
	comp=Z,29nm,18.4s,baz=280,slow=35						
VYHS	**Vyhne**	**128.66**	**37**	*e*PIFF	**Pdif**	**12 52 27.4**	**+3.9**
SONM	**Songino Array**	**124.76**	**337**	PKP	**PKiKP**	**12 57 01.0**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=96,slow=1.4,SNR=2.5						
MKAR	**Makanchi Array**	**131.56**	**356**	PKP	**PKiKP**	**12 57 13.6**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=33,slow=3.4,SNR=2.7						
MKAR	**Makanchi Array**	**131.56**	**356**		**PKPdf**	**12 57 13.0**	**+0.3**
CMAR	**Chiang Mai Arr**	**151.19**	**315**	PKPbc	**PKPbc**	**12 57 54.0**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=4.6,slow=2.0,SNR=6.9						
CMAR	**Chiang Mai Arr**	**151.19**	**315**		**PKPdf**	**12 57 48.6**	**+0.4**

WEL 04 12:38:36.9,42°S±1°×174°0E±1°.0, h11km±1km, M3.5/16, ML3.8/16, MLv3.5/16, Error ellipse: s-maj=0.0km s-min=0.0km az=155.6, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSWZ	**Blackbirch Sta**	**0.12**	**305**	P	Pg	12 38 40.3	+0.4
BSWZ				S	Sg	12 38 42.9	+0.8
CMWZ	**Cape Campbell**	**0.16**	**77**	P	Pb	12 38 41.2	-0.7
CMWZ				S	Sg	12 38 44.6	+1.6
TUWZ	**Tuamarina**	**0.36**	**352**	P	Pb	12 38 45.1	-0.1
TUWZ				S	Sb	12 38 50.9	+0.2
TCW	**Tory Channel**	**0.61**	**20**	P	Pb	12 38 49.2	-0.2
KHZ	**Kahutara**	**0.72**	**209**	P	Pb	12 38 51.3	-0.1
NNZ	**Nelson**	**0.74**	**320**	P	Pb	12 38 51.8	+0.1
NNZ				S	Sb	12 39 02.2	+0.5
BHW	**Baring Head**	**0.75**	**60**	P	Pb	12 38 52.4	+0.6
THZ	**Tophouse**	**0.82**	**271**	P	Pb	12 38 53.4	+0.2
PLWZ	**Palliser**	**0.96**	**77**	P	Pn	12 38 56.1	-0.2
DUWZ	**D'Urville Isla**	**0.98**	**356**	P	Pb	12 38 56.0	+0.1
MSWZ	**Moikau Station**	**1.00**	**69**	P	Pn	12 38 57.1	+0.3
CAW	**Cannon Point**	**1.04**	**50**	P	Pn	12 38 57.5	+0.1
PAWZ	**Paruwai Farm**	**1.14**	**70**	P	Pg	12 38 58.8	0.0
KIW	**Kapiti Island**	**1.15**	**37**	P	Pg	12 38 58.9	0.0
MTW	**Mount Morrison**	**1.28**	**61**	P	Pn	12 39 00.8	+0.1
OGWZ	**Otaki Gorge**	**1.30**	**43**	P	Pg	12 39 01.8	-0.1
TRWZ	**Traveller**	**1.32**	**74**	P	Pn	12 39 00.9	-0.3
GVZ	**Greta Valley S**	**1.39**	**211**	P	Pn	12 39 02.3	+0.2
HOWZ	**Holdsworth Sta**	**1.44**	**53**	P	Pb	12 39 03.4	-0.3
QRZ	**Quartz Range**	**1.47**	**310**	P	Pb	12 39 04.6	+0.4
TMWZ	**Te Maipa**	**1.57**	**95**	P	Pn	12 39 04.4	-0.3
LTZ	**Lake Taylor**	**1.63**	**232**	P	Pb	12 39 06.3	-0.6
MRZ	**Mangatainoka R**	**1.63**	**47**	P	Pn	12 39 05.9	+0.5
DSZ	**Denniston Nort**	**1.65**	**271**	P	Pg	12 39 08.0	-0.5
WVZ	**Waitaha Valley**	**2.74**	**241**	P	Pn	12 39 23.1	+2.3
KRHZ	**Kereru**	**2.79**	**41**	P	Pn	12 39 21.6	+0.1
KAHZ	**Kahuranaki**	**2.95**	**49**	P	Pn	12 39 23.5	-0.1
HIZ	**Hauiti**	**3.33**	**12**	P	Pb	12 39 32.5	-3.4
ODZ	**Otahua Downs**	**4.08**	**216**	P	Pn	12 39 37.7	-1.4
URZ	**Urewera**	**4.25**	**35**	P	Pn	12 39 42.4	+0.9
MWZ	**Matawai**	**4.38**	**39**	P	Pn	12 39 42.0	-1.3
MKAZ	**Moumakai**	**4.76**	**11**	P	Pn	12 39 51.5	+3.1
ETAZ	**East Tamaki Re**	**4.88**	**9**	P	Pn	12 39 54.2	+4.2
MBAZ	**Motutapu North**	**5.06**	**8**	P	Pn	12 39 56.1	+3.6
TUZ	**Tuapeka**	**5.23**	**216**	P	Pn	12 39 53.6	-1.4
SYZ	**Scrubby Hill**	**5.90**	**215**	P	Pn	12 40 03.7	-0.4
OUZ	**Omahuta**	**6.56**	**357**	P	Pn	12 40 18.6	+5.4

*NEIC **04** 13:14:55.4±1.9,23°.9S±0°.1×179°.4E±0°.3,h545km±20km, mb4.5/15, Error ellipse: s-maj=35.9km s-min=21.1km az=84.0*
*IDC **04** 13:14:56.2±6.9,23°.93S×179°.44E,h552km±71km,mb3.5/5, mb1 3.6/6,mb1mx3.1/32,mbtmp4.5/6, Error ellipse: s-maj=65.8km s-min=36.9km az=49.0*

ISC 04 13:14:55.4±1.5, 23°.80S±0°.09×179°.4E±0°.2, h550km, n34, σ2s09/37, mb4.5/11, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.17**	**348**	P	**P**	**13 16 34.9**	**-0.9**
ETAZ	**East Tamaki Re**	**13.66**	**195**	P	**P**	**13 17 54.2**	**+3.3**
MKAZ	**Moumakai**	**13.75**	**194**	P	**P**	**13 17 54.7**	**+2.9**
HAZ	**Te Kaha**	**13.98**	**185**	P	**P**	**13 17 56.7**	**+2.5**
HAZ				S	**S**	**13 20 21.7**	**+0.3**
WMGZ	**Waiomatatini S**	**14.00**	**183**	P	**P**	**13 17 57.4**	**+3.0**
WMGZ				S	**S**	**13 20 23.2**	**+1.5**
PKGZ	**Pakihiroa**	**14.09**	**184**	P	**P**	**13 17 58.1**	**+2.7**
PUZ	**Puketiti**	**14.26**	**184**	P	**P**	**13 17 58.6**	**+1.5**
PUZ				S	**S**	**13 20 21.4**	**-5.4**
URZ	**Urewera**	**14.54**	**187**	P	**P**	**13 17 59.5**	**-0.5**
	1.4nm,0.3s,baz=274,slow=3.2,SNR=15						
URZ				S	**S**	**13 20 30.3**	**-1.8**
	0.8nm,0.3s,baz=207,slow=20,SNR=8.0						
URZ	**Urewera**	**14.54**	**187**	P	**P**	**13 17 60.0**	**0.0**
URZ	**Urewera**	**14.54**	**187**	P	**P**	**13 17 57.6**	**-2.4**
MWZ	**Matawai**	**14.57**	**186**	P	**P**	**13 18 01.3**	**+1.0**
CNGZ	**Carnagh Statio**	**14.67**	**184**	P	**P**	**13 18 03.6**	**+2.3**
MUGZ	**Murupara**	**14.80**	**188**	P	**P**	**13 18 03.7**	**+1.0**
BFZ	**Birch Farm**	**17.04**	**188**	P	**P**	**13 18 20.9**	**-3.4**
ARMA	**Armidale**	**25.53**	**249**	P	**P**	**13 19 40.2**	**-0.8**
ARMA				IAmb	IAmb	13 19 47.5	
	comp=Z,18nm,1.2s						
EIDS	**Eidsvold**	**25.77**	**261**	P	**P**	**13 19 40.8**	**-2.2**
EIDS				IAmb	IAmb	13 19 50.0	
	comp=Z,23nm,1.5s						
CAN	**Canberra**	**28.70**	**239**	P	**P**	**13 20 07.5**	**-1.2**
CTA	**Charters Tower**	**30.91**	**270**	P	**P**	**13 20 29.8**	**+1.9**
	comp=Z,13nm,0.3s,baz=96,slow=11,SNR=54						
CTAO	**Charters Tower**	**30.91**	**270**	P	**P**	**13 20 26.2**	**-1.7**
CTAO				IAmb	IAmb	13 20 31.9	
	comp=Z,19nm,1.0s						
TOO	**Toolangi**	**32.03**	**237**	P	**P**	**13 20 35.4**	**-1.8**
TOO				IAmb	IAmb	13 20 46.5	
	comp=Z,20nm,1.4s						
PMG	**Port Moresby**	**33.93**	**289**	P	**P**	**13 20 54.3**	**+0.8**
	comp=Z,8.2nm,0.7s,baz=115,slow=10,SNR=3.4						
PMG	**Port Moresby**	**33.93**	**289**	IAmb	IAmb	13 20 55.1	
	comp=Z,9.5nm,0.8s						
STKA	**Stephens Creek**	**34.23**	**248**	P	**P**	**13 20 56.2**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=112,slow=11,SNR=3.4						
COEN	**Coen**	**35.54**	**279**	P	**P**	**13 21 07.9**	**+0.9**
BBOO	**Buckleboo**	**38.96**	**247**	P	**P**	**13 21 35.6**	**+0.9**
AS31	**Alice Springs**	**41.49**	**261**	P	**P**	**13 21 56.5**	**+1.3**
ASAR	**Alice Springs**	**41.49**	**261**	P	**P**	**13 21 56.1**	**+1.0**
	comp=Z,1.7nm,0.5s,baz=95,slow=7.2,SNR=68						
WR0	**Warramunga Arr**	**41.66**	**266**	P	**P**	**13 21 57.2**	**+0.8**
WRAB	**Tennant Creek**	**41.84**	**266**	P	**P**	**13 21 53.3**	**-4.5**
WRAB				IAmb	IAmb	13 21 56.9	
	comp=Z,12nm,1.5s						
WRA	**Warramunga Arr**	**41.85**	**266**	P	**P**	**13 21 58.1**	**+0.2**
	comp=Z,2.4nm,0.4s,baz=104,slow=8.4,SNR=68						
WRA	**Warramunga Arr**	**41.85**	**266**	P	**P**	**13 21 58.3**	**+0.4**
FORT	**Forrest**	**45.81**	**250**	P	**P**	**13 22 29.4**	**+0.9**
FORT				IAmb	IAmb	13 22 29.9	
	comp=Z,13nm,0.6s						
KNRA	**Kununurra**	**48.12**	**270**	P	**P**	**13 22 46.9**	**+0.9**
KNRA				IAmb	IAmb	13 22 58.4	
	comp=Z,14nm,1.2s						
BRTR	**Keskin Array B**	**147.07**	**307**	PKPbc	**PKPbc**	**13 33 37.6**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=98,slow=4.5,SNR=2.8						

*CNRM **04** 13:20:40.1±3.0,35°.23N×9°.10W,h92km±146km, Error ellipse: s-maj=22.4km s-min=9.6km az=102.0*
*MDD **04** 13:20:41.9±1.4,35°.44N×9°.21W,h26km, mbLg2.7/25, Error ellipse: s-maj=12.6km s-min=9.6km az=41.0, PRXIMO*
*IGIL **04** 13:20:42.5,35°.42N×9°.24W,h32km, ML2.7*
*INMG **04** 13:20:43.0±0.9,35°.43N×9°.24W,h31km, ML2.6, Error ellipse: s-maj=4.4km s-min=3.6km az=90.0*

ISC 04 13:20:38.7±1.5, 35°.33N±0°.05×9°.23W±0°.06, h35km, n63, σ1s82/108, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**1.83**	**10**	*e*Pn	**Pn**	**13 21 09.2**	**+1.6**
PFVI				*e*Sn	**Sn**	**13 21 29.3**	**-0.2**
PFVI				A	A	13 21 34.5	
	28nm,0.4s						
PFVI	**Vila Bisbo**	**1.83**	**10**	P	**Pn**	**13 21 09.0**	**+1.4**
	3.3nm,0.0s,SNR=7.9						
PFVI				S	**Sn**	**13 21 29.0**	**-0.5**
	26nm,0.1s,SNR=7.9						
MORF	**Marmelete**	**2.03**	**13**	*e*P	**Pn**	**13 21 12.0**	**+1.6**
MORF				*e*S	**Sn**	**13 21 33.9**	**-0.6**
MORF				AML	AML	13 21 34.7	
	comp=N,49nm,0.3s						
MORF	**Marmelete**	**2.03**	**13**	*e*Pn	**Pn**	**13 21 12.0**	**+1.6**
MORF				*e*Sn	**Sn**	**13 21 34.0**	**-0.5**
MORF				A	A	13 21 39.6	
	comp=N,29nm,0.2s						
MORF	**Marmelete**	**2.03**	**13**	P	**Pn**	**13 21 12.0**	**+1.6**
MORF				S	**Sn**	**13 21 34.0**	**-0.5**
	comp=N,29nm,0.2s						
PBDV	**Barranco-do-Ve**	**2.18**	**28**	*e*Pn	**Pn**	**13 21 14.8**	**+2.4**
PBDV				*e*Sn	**Sn**	**13 21 38.3**	**+0.1**
PBDV				A	A	13 21 39.9	
	comp=N,18nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.18**	**28**	P	**Pn**	**13 21 14.8**	**+2.4**
PBDV				S	**Sn**	**13 21 38.3**	**+0.1**
	comp=N,18nm,0.1s						
PTEO	**Sao Teotonio**	**2.25**	**10**	*e*Pn	**Pn**	**13 21 15.1**	**+1.8**
PTEO				*e*Sn	**Sn**	**13 21 39.4**	**-0.5**
PTEO				A	A	13 21 43.4	
	comp=N,32nm,0.8s						
PTEO	**Sao Teotonio**	**2.25**	**10**	P	**Pn**	**13 21 15.1**	**+1.8**
PTEO				S	**Sn**	**13 21 39.4**	**-0.5**
	comp=N,16nm,0.8s						
PVAQ	**Vaqueiros**	**2.40**	**30**	*e*Pn	**Pn**	**13 21 17.6**	**+2.1**
PVAQ				*e*Sn	**Sn**	**13 21 43.5**	**-0.1**
PVAQ				A	A	13 21 47.9	
	comp=N,27nm,0.1s						
PVAQ	**Vaqueiros**	**2.40**	**30**	P	**Pn**	**13 21 17.6**	**+2.1**
PVAQ				S	**Sn**	**13 21 43.5**	**-0.1**
	comp=N,27nm,0.1s						
PVAQ	**Vaqueiros**	**2.40**	**30**	P	**Pn**	**13 21 17.8**	**+2.4**
PCVE	**Castro Verde**	**2.49**	**22**	*e*Pn	**Pn**	**13 21 18.8**	**+2.1**
PCVE				*e*Sn	**Sn**	**13 21 45.5**	**-0.3**
PCVE				A	A	13 21 52.7	
	comp=N,12nm,0.3s						
PCVE	**Castro Verde**	**2.49**	**22**	P	**Pn**	**13 21 18.8**	**+2.1**
PCVE				S	**Sn**	**13 21 45.5**	**-0.3**
	comp=N,12nm,0.3s						
EGRO	**El Granado**	**2.61**	**32**	P	**Pn**	**13 21 20.5**	**+2.1**
	comp=N,5.0nm,0.3s,SNR=4.5						
EGRO				S	**Sn**	**13 21 48.5**	**-0.3**
	comp=N,27nm,0.1s,SNR=16						
PNCL	**Nicolau / Gran**	**2.83**	**11**	*e*Pn	**Pn**	**13 21 23.4**	**+2.0**
PNCL				*e*Sn	**Sn**	**13 21 53.1**	**-1.2**
PNCL				A	A	13 21 55.1	
	comp=N,7.9nm,0.3s						
PNCL	**Nicolau / Gran**	**2.83**	**11**	P	**Pn**	**13 21 23.4**	**+2.0**
PNCL				S	**Sn**	**13 21 53.1**	**-1.2**
	comp=N,7.9nm,0.3s						
ZHG	**ZHG**	**2.85**	**131**	P	**Pn**	**13 21 24.2**	**+2.6**
PBEJ	**Beja**	**2.90**	**22**	*e*Pn	**Pn**	**13 21 24.7**	**+2.3**
PBEJ				*e*Sn	**Sn**	**13 21 55.0**	**-1.1**
PBEJ				A	A	13 21 58.9	
	comp=N,9.7nm,0.1s						
PBEJ	**Beja**	**2.90**	**22**	P	**Pn**	**13 21 24.7**	**+2.3**
PBEJ				S	**Sn**	**13 21 55.0**	**-1.1**
	comp=N,4.8nm,0.1s						
SRHM	**Skhour des Reh**	**3.06**	**158**	P	**Pn**	**13 21 26.4**	**+1.8**
SMIR	**Smir Dam**	**3.16**	**83**	P	**Pn**	**13 21 28.5**	**+2.6**
EMIN	**Mina Concepcio**	**3.19**	**39**	P	**Pn**	**13 21 28.2**	**+1.9**
	comp=N,0.5nm,0.1s,SNR=9.6						
EMIN				S	**Sn**	**13 22 01.7**	**-1.3**
	comp=N,5.9nm,0.1s,SNR=17						
ECEU	**Ceuta**	**3.19**	**79**	S	**Sn**	**13 22 04.5**	**+1.4**
	comp=N,4.5nm,0.0s,SNR=7.9						
PBAR	**Barrancos**	**3.34**	**31**	*e*Sn	**Sn**	**13 22 05.8**	**-1.0**
PBAR	**Barrancos**	**3.34**	**31**	S	**Sn**	**13 22 05.8**	**-1.0**
PMAFR	**Mafra**	**3.62**	**359**	*e*Pn	**Pn**	**13 21 33.5**	**+1.3**
PMAFR				*e*Sn	**Sn**	**13 22 12.4**	**-1.3**
PMAFR	**Mafra**	**3.62**	**359**	P	**Pn**	**13 21 33.4**	**+1.2**
	comp=N,14nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**13 22 12.8**	**-0.9**
	comp=N,17nm,0.2s,SNR=7.9						
PESTR	**Estremoz**	**3.77**	**20**	*e*Pn	**Pn**	**13 21 35.3**	**+1.1**
PESTR				*e*Sn	**Sn**	**13 22 16.1**	**-1.2**
PESTR				A	A	13 22 18.6	
	comp=N,5.4nm,0.5s						
PMTG	**Montargil**	**3.82**	**12**	*e*Pn	**Pn**	**13 21 36.4**	**+1.5**
PMTG				*e*Sn	**Sn**	**13 22 16.6**	**-2.0**
PMTG				A	A	13 22 18.5	
	comp=N,8.5nm,0.4s						
PMTG	**Montargil**	**3.82**	**12**	P	**Pn**	**13 21 36.4**	**+1.5**
PMTG				S	**Sn**	**13 22 16.6**	**-2.0**
	comp=N,8.5nm,0.4s						
EMIJ	**Mijas**	**3.82**	**70**	P	**Pn**	**13 21 36.6**	**+1.7**
	comp=N,0.7nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**13 22 18.9**	**+0.3**
	comp=N,2.2nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**3.85**	**27**	P	**Pn**	**13 21 36.6**	**+1.2**
	comp=N,1.4nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**13 22 17.7**	**-1.7**
	comp=N,5.9nm,0.1s,SNR=7.4						
HORN	**Hornachuelos**	**4.06**	**51**	P	**Pn**	**13 21 39.9**	**+1.6**
HORN				S	**Sn**	**13 22 22.7**	**-1.9**
ECAB	**El Cabril**	**4.11**	**47**	P	**Pn**	**13 21 41.2**	**+2.2**
	comp=N,1.0nm,0.2s,SNR=8.7						
ECAB				S	**Sn**	**13 22 24.2**	**-1.5**
	comp=N,2.3nm,0.2s,SNR=7.9						
OUK	**Oukaimeden**	**4.27**	**164**	P	**Pn**	**13 21 43.1**	**+1.6**
OUK				S	**Sn**	**13 22 28.7**	**-1.5**
TISM	**Timmit**	**4.29**	**146**	P	**Pn**	**13 21 40.4**	**-0.9**
PALE	**Palemas**	**4.33**	**90**	P	**Pn**	**13 21 44.3**	**+2.3**
PTOM	**Tomar**	**4.33**	**8**	*e*Pn	**Pn**	**13 21 43.7**	**+1.7**
PTOM	**Tomar**	**4.33**	**8**	P	**Pn**	**13 21 43.7**	**+1.7**
PMRV	**Marv??o**	**4.34**	**19**	*e*Pn	**Pn**	**13 21 43.7**	**+1.5**
PMRV				*e*Sn	**Sn**	**13 22 29.4**	**-2.2**
PMRV				A	A	13 22 31.2	
	comp=N,5.1nm,0.4s						
PMRV	**Marv??o**	**4.34**	**19**	P	**Pn**	**13 21 43.7**	**+1.5**
PMRV				S	**Sn**	**13 22 29.4**	**-2.2**
	comp=N,5.1nm,0.4s						
MD31	**MD31**	**4.45**	**122**	P	**Pn**	**13 21 45.9**	**+2.2**
MD31				S	**Sn**	**13 22 32.6**	**-1.7**
AKLM	**AKL**	**4.48**	**99**	P	**Pn**	**13 21 42.1**	**-2.0**
EADA	**Adamuz**	**4.69**	**51**	P	**Pn**	**13 21 49.1**	**+2.2**
	comp=N,2.2nm,0.2s,SNR=11						
EADA				S	**Sn**	**13 22 38.4**	**-1.7**
	comp=N,14nm,0.1s,SNR=12						
PCBR	**Castelo Branco**	**4.71**	**17**	*e*Pn	**Pn**	**13 21 49.2**	**+2.0**
PCBR				*e*Sn	**Sn**	**13 22 37.8**	**-2.8**
PCBR				A	A	13 22 41.6	
	comp=N,6.7nm,0.2s						
PCBR	**Castelo Branco**	**4.71**	**17**	P	**Pn**	**13 21 49.2**	**+2.0**
PCBR				S	**Sn**	**13 22 37.8**	**-2.8**
	comp=N,3.3nm,0.2s						
PCAS	**Casmilo, Conde**	**4.75**	**7**	*e*Pn	**Pn**	**13 21 49.8**	**+2.0**
PCAS				*e*Sn	**Sn**	**13 22 40.2**	**-1.4**
PCAS	**Casmilo, Conde**	**4.75**	**7**	P	**Pn**	**13 21 49.8**	**+2.0**
PCAS				S	**Sn**	**13 22 40.2**	**-1.4**
ELGU	**Los Guajares,**	**4.79**	**70**	P	**Pn**	**13 21 50.9**	**+2.5**
	comp=N,1.4nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**13 22 41.6**	**-1.0**
	comp=N,4.8nm,0.3s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**4.82**	**172**	P	**Pn**	**13 21 46.8**	**-2.0**
OUZM	**OUZ**	**4.87**	**154**	P	**Pn**	**13 21 51.0**	**+1.5**
OUZM				S	**Sn**	**13 22 42.8**	**-2.0**
MTE	**Manteigas**	**5.23**	**14**	*e*Pn	**Pn**	**13 21 56.1**	**+1.7**
MTE	**Manteigas**	**5.23**	**14**	P	**Pn**	**13 21 56.1**	**+1.7**
EPLA	**Plasencia**	**5.34**	**27**	S	**Sn**	**13 22 53.0**	**-3.3**
	comp=N,1.0nm,0.2s,SNR=7.9						
PVIS	**Viseu**	**5.48**	**11**	*e*Pn	**Pn**	**13 21 59.5**	**+1.7**
PVIS				*e*Sn	**Sn**	**13 22 57.6**	**-2.0**
PVIS	**Viseu**	**5.48**	**11**	P	**Pn**	**13 21 59.5**	**+1.7**
PVIS				S	**Sn**	**13 22 57.6**	**-2.0**
EQES	**Quesada**	**5.53**	**62**	P	**Pn**	**13 22 00.4**	**+1.8**
	comp=N,1.3nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**13 22 59.4**	**-1.6**
	comp=N,1.5nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**5.72**	**41**	P	**Pn**	**13 22 02.0**	**+0.8**
	comp=N,0.2nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**13 23 02.2**	**-3.5**
	comp=N,1.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**6.03**	**42**	S	**Sn**	**13 23 09.4**	**-3.6**
	SNR=7.9						
ELOB	**Lobios**	**6.59**	**8**	P	**Pn**	**13 22 14.8**	**+1.7**
	comp=N,3.5nm,0.2s,SNR=5.9						
ELOB				S	**Sn**	**13 23 23.6**	**-3.5**
	comp=N,1.2nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**6.98**	**59**	P	**Pn**	**13 22 19.6**	**+1.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**13 23 33.0**	**-3.6**
	comp=N,3.0nm,0.1s,SNR=9.7						
EAGO	**Agolada(Pontev**	**7.51**	**6**	P	**Pn**	**13 22 26.6**	**+0.9**
	comp=N,4.3nm,2.1s,SNR=7.9						

MAN 04 13:23:22.9,10°.09N×124°.33E,h31km, mb4.4, ML3.2, MS3.0, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.42**	**302**	⇓*i*P	Pn	13 23 33.4	+0.5
LLP				*e*S	Sn	13 23 39.2	-0.4
MSLP	**Maasin**	**0.52**	**85**	*e*P	Pn	13 23 34.6	+0.4
MSLP				*e*S	Sn	13 23 50.9	+8.8

IDC 04 14:05:42.0±1.3, 26°.76S×114°.97W, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.7/22, mbtmp3.6/3, Error ellipse: s-maj=68.1km s-min=33.9km az=54.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**39.07**	**122**	P	P	14 13 11.6	+0.6
	1.4nm,0.8s,baz=276,slow=10,SNR=4.3						
NVAR	**Mina Array Bea**	**64.92**	**357**	P	P	14 16 24.8	+1.3
	0.5nm,0.8s,baz=179,slow=4.4,SNR=2.9						
H11S2	**WAKE ISLAND Hy**	**88.25**	**292**	T	T	15 56 46.4	
	baz=119,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**88.26**	**292**	T	T	15 56 41.3	
	baz=119,slow=75,SNR=17						
H11S3	**WAKE ISLAND Hy**	**88.26**	**292**	T	T	15 56 42.2	
	baz=119,slow=75,SNR=9.8						
H11N3	**WAKE ISLAND Hy**	**88.67**	**293**	T	T	15 56 50.6	
	baz=120						
H11N1	**WAKE ISLAND Hy**	**88.68**	**293**	T	T	15 56 49.2	
	baz=120						
H11N2	**WAKE ISLAND Hy**	**88.68**	**293**	T	T	15 56 50.1	
	baz=120						
YKA	**Yellowknife Ar**	**88.94**	**0**	P	P	14 18 36.7	-1.1
	0.2nm,0.6s,baz=172,slow=5.1,SNR=5.8						
CMAR	**Chiang Mai Arr**	**147.69**	**262**	PKPbc	PKPbc	14 25 29.2	0.0
	1.3nm,1.0s,baz=157,slow=0.3,SNR=6.1						
ZALV	**Zalesovo Beam**	**149.15**	**337**	PKPbc	PKPbc	14 25 30.8	-1.2
	1.2nm,0.6s,baz=24,slow=3.0,SNR=6.5						
BRTR	**Keskin Array B**	**150.89**	**56**	PKPbc	PKPbc	14 25 35.2	-1.7
	0.6nm,0.6s,baz=279,slow=3.6,SNR=4.5						

*IDC **04** 14:27:13.9±2.3,36°.47N×

AAK				⇓S		Sn	14 29 58.8	-3.7
	comp=N,41nm,0.9s							
KBK	**Karagaybulak**	**6.65**	**25**	P		**Pn**	**14 28 52.9**	**+2.4**
	SNR=6.6							
FRU1	**Bishkek**	**6.69**	**23**	PN		**Pn**	**14 28 52.9**	**+2.1**
FRU1	**Bishkek**	**6.69**	**23**	Pn		**Pn**	**14 28 52.9**	**+2.1**
ULHL	**Ulahol**	**6.82**	**34**	P		**Pn**	**14 28 54.7**	**+2.0**
	SNR=13							
BHK	**Bhakra**	**6.85**	**139**	*e*S		**Sn**	**14 30 10.0**	**-0.9**
CHMS	**Chumysh**	**6.90**	**23**	P		**Pn**	**14 28 55.9**	**+2.4**
	SNR=5.5							
USP	**Ospenovka**	**7.07**	**20**	P		**Pn**	**14 28 57.9**	**+2.2**
	SNR=19							
TKM2	**Tokmak 2**	**7.12**	**28**	PN		**Pn**	**14 28 58.4**	**+1.9**
TKM2	**Tokmak 2**	**7.12**	**28**	P		**Pn**	**14 28 58.6**	**+2.1**
	SNR=16							
TKM2	**Tokmak 2**	**7.12**	**28**	⇓P		**Pn**	**14 28 58.5**	**+1.9**
	comp=N,10nm,0.6s							
TKM2				⇓S		**Sn**	**14 30 15.0**	**-2.4**
	comp=N,8.5nm,0.5s							
KDJ	**Kajisay**	**7.18**	**39**	PN		**Pn**	**14 29 00.0**	**+2.7**
KDJ	**Kajisay**	**7.18**	**39**	Pn		**Pn**	**14 29 00.0**	**+2.7**
SMLA	**Simla**	**7.48**	**136**	*e*P		**Pn**	**14 29 02.8**	**+1.6**
SMLA				*e*S		**Sn**	**14 30 23.8**	**-1.9**
SMLA				IAML			14 30 25.8	
	comp=N,286nm,0.5s							
SMLA				IAML			14 30 26.7	
	comp=E,293nm,0.3s							
HRA	**Herat**	**7.59**	**255**			**Pn**	**14 29 03.6**	**+0.8**
DDI	**Dehra Dun**	**8.59**	**136**	*e*S		**Sn**	**14 30 48.5**	**-3.6**
DDI				IAML			14 30 54.4	
	comp=N,220nm,0.6s							
DDI				IAML			14 30 55.3	
	comp=E,212nm,0.2s							
JOSI	**Joshimath**	**9.31**	**129**	*e*P		**Pn**	**14 29 27.1**	**+1.8**
JOSI				*e*S		**Sn**	**14 31 06.7**	**-3.0**
JOSI				IAML			14 31 09.5	
	comp=N,90nm,0.6s							
JOSI				IAML			14 31 09.8	
	comp=E,121nm,0.3s							
NDI	**New Delhi**	**9.48**	**146**	*e*P		**Pn**	**14 29 29.0**	**+1.7**
NDI				*ex*		x	14 30 57.0	
AYAN	**Aya Nagar**	**9.62**	**147**	*e*P		**Pn**	**14 29 29.5**	**+0.5**
AYAN				*e*S		**Sn**	**14 31 09.8**	**-6.8**
KUDL	**Kundal**	**9.64**	**150**	*e*P		**Pn**	**14 29 24.8**	**-4.5**
KUDL				*e*S		Sn	14 31 05.7	-12
GEYT	**Alibeck**	**10.44**	**281**	P		**Pn**	**14 29 38.8**	**-0.7**
	comp=E,1.0nm,0.3s,baz=120,slow=11,SNR=16							
GEYT				S		**Sn**	**14 31 30.7**	**-5.3**
	baz=106,slow=24,SNR=2.7							
GEYT	**Alibeck**	**10.44**	**281**			**Pn**	**14 29 39.1**	**-0.5**
GYA0	**ALIBECK ARRAY**	**10.44**	**281**	P		**Pn**	**14 29 40.3**	**+0.8**
GYA0B	**ALIBECK ARRAY**	**10.44**	**281**			**Pn**	**14 29 38.3**	**-1.2**
MAKZ	**Makanchi**	**12.95**	**35**	P		**Pn**	**14 30 12.4**	**+1.0**
MAKZ	**Makanchi**	**12.95**	**35**			**Pn**	**14 30 12.4**	**+1.0**
MK31	**Makanchi Array**	**13.08**	**36**	P		**Pn**	**14 30 14.8**	**-1.4**
MK31	**Makanchi Array**	**13.08**	**36**			**P**	**14 30 14.8**	**-1.4**
MK31	**Makanchi Array**	**13.08**	**36**	P		**Pn**	**14 30 14.3**	**+1.2**
	comp=E,0.4nm,0.3s,baz=210,slow=12,SNR=38							
MKAR	**Makanchi Array**	**13.08**	**36**	P		**Pn**	**14 30 14.5**	**+1.4**
	comp=E,0.3nm,0.3s,baz=206,slow=12,SNR=19							
MKAR	**Makanchi Array**	**13.08**	**36**	P		**P**	**14 30 14.6**	**-1.6**
DANN	**Dangsing**	**13.51**	**124**	*e*P		**Pn**	**14 30 18.8**	**0.0**
	comp=E,19nm,0.3s							
KOLN	**Koldanda**	**13.79**	**127**	*e*P		**Pn**	**14 30 22.5**	**+0.2**
	comp=E,9.8nm,0.3s							
GKN	**Gorkha**	**14.32**	**123**	*e*P		**Pn**	**14 30 29.3**	**+0.6**
	comp=E,45nm,0.2s							
DMN	**Daman**	**14.89**	**123**	*e*P		**Pn**	**14 30 36.1**	**+0.2**
	comp=E,44nm,0.3s							
KKN	**Kakani**	**14.89**	**123**	*e*P		**Pn**	**14 30 36.1**	**+0.3**
	comp=E,33nm,0.6s							
KURBB	**Kurchatov Arra**	**14.92**	**19**	P		**P**	**14 30 37.5**	**+1.2**
	comp=E,0.1nm,0.3s,baz=208,slow=11,SNR=4.4							
AB31	**Akbulak array**	**14.97**	**331**	*e*P		**Pn**	**14 30 36.5**	**+0.2**
AB31	**Akbulak array**	**14.97**	**331**	⇑P		**Pn**	**14 30 36.5**	**+0.2**
	comp=E,4.8nm,0.6s,baz=148,slow=10,SNR=167							
AB31				⇓S		**S**	**14 33 18.9**	**-3.5**
	comp=E,4.6nm,0.8s,baz=147,slow=23,SNR=5.5							
ABKAR	**Akbulak array**	**14.97**	**331**	P		**P**	**14 30 37.0**	**-0.1**
ABKAR	**Akbulak array**	**14.97**	**331**	P		**P**	**14 30 36.8**	**-0.3**
KURK	**Kurchatov**	**15.03**	**19**	P		**P**	**14 30 37.6**	**0.0**
PKIN	**Phulchoki**	**15.11**	**123**	*e*P		**Pn**	**14 30 38.7**	**+0.2**
	comp=E,57nm,0.4s							
PKI	**Pulchoki**	**15.12**	**123**	*e*P		**P**	**14 30 40.0**	**+0.7**
	comp=E,5.8nm,0.3s							
GUN	**Gumba**	**15.22**	**121**	*e*P		**P**	**14 30 40.4**	**0.0**
	comp=E,7.2nm,0.3s							
JIRN	**Jiri**	**15.60**	**121**	*e*P		**P**	**14 30 45.3**	**+0.7**
	comp=E,64nm,0.4s							
RAMN	**Ramite**	**16.33**	**122**	*e*P		**Pn**	**14 30 53.7**	**+0.5**
	comp=E,21nm,0.3s							
BRVK	**Borovoye**	**16.38**	**358**	⇓*e*P		**Pn**	**14 30 53.6**	**+0.2**
BRVK	**Borovoye**	**16.38**	**358**	Pn		**Pn**	**14 30 54.8**	**+1.4**
BRVK				IAmb		IAmb	14 30 55.8	
	comp=Z,9.7nm,1.5s							
BRVK	**Borovoye**	**16.38**	**358**	P		**Pn**	**14 30 54.3**	**+0.9**
AKTO	**Aktyubinsk**	**16.67**	**330**	P		**Pn**	**14 30 57.4**	**+0.6**
AKTO	**Aktyubinsk**	**16.67**	**330**	P		**Pn**	**14 30 57.2**	**+0.4**
	comp=Z,1.2nm,0.3s,baz=141,slow=8.5,SNR=22							
AKTO				S		**S**	**14 33 57.4**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=356,slow=19,SNR=4.1							
AKTO	**Aktyubinsk**	**16.67**	**330**	⇑P		**Pn**	**14 30 57.5**	**+0.6**
	comp=Z,3.7nm,0.6s							
AKTO				⇑S		**S**	**14 33 56.2**	**-3.4**
	comp=Z,8.4nm,1.3s							
TAPN	**Taplejung**	**16.85**	**119**	*e*P		**Pn**	**14 31 01.1**	**+1.6**
	comp=Z,19nm,0.4s							
ODAN	**Odare**	**16.93**	**121**	*e*P		**Pn**	**14 31 01.9**	**+1.5**
	comp=Z,49nm,0.7s							
ZAA0	**Zalesovo Array**	**19.71**	**25**	P		**P**	**14 31 29.4**	**+0.7**
ZAA0				IAmb		IAmb	14 31 30.3	
	comp=Z,4.0nm,0.7s							
ZALV	**Zalesovo Beam**	**19.71**	**25**	P		**P**	**14 31 29.6**	**+1.0**
	comp=Z,1.3nm,0.3s,baz=218,slow=12,SNR=14							
ZALV	**Zalesovo Beam**	**19.71**	**25**	P		**P**	**14 31 29.8**	**+1.2**
ARU	**Arti**	**21.49**	**341**	*d* P		**P**	**14 31 48.4**	**+0.9**
ARU				S		**S**	**14 35 34.5**	**+2.1**
ARU				pmax		pmax		
	comp=Z,8.0nm,1.1s							
ARU	**Arti**	**21.49**	**341**	P		**P**	**14 31 47.0**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=168,slow=9.3,SNR=3.5							
ARU	**Arti**	**21.49**	**341**	P		**P**	**14 31 49.0**	**+1.5**
ARU				IAmb		IAmb	14 31 51.3	
	comp=Z,6.6nm,1.0s							
KBZ	**Khabaz**	**22.61**	**297**	⇑*e*P		**P**	**14 31 59.2**	**+0.9**
KBZ	**Khabaz**	**22.61**	**297**	P		**P**	**14 31 58.4**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=111,slow=7.0,SNR=5.5							
GOF	**Gofitskoye**	**22.74**	**300**	⇑*e*P		**P**	**14 32 02.4**	**+2.9**
KIV	**Kislovodsk**	**22.79**	**297**	*e*P		**P**	**14 31 59.9**	**-0.2**
KIV				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ANN	**Anapa**	**26.63**	**298**	*e*P		**P**	**14 32 32.6**	**-2.0**
ANN				*e**PP		**pP**	**14 33 16.5**	**+1.5**
ANN				*e*S		**S**	**14 36 50.5**	**-4.0**
ANN				*e**SS		**sS**	**14 38 11.7**	**+3.4**
ANN				pmax		pmax		
	comp=Z,19nm,1.2s							
SONM	**Songino Array**	**28.15**	**56**	P		**P**	**14 32 49.4**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=246,slow=11,SNR=3.4							
BRTR	**Keskin Array B**	**29.47**	**287**	*e*P		**P**	**14 33 02.3**	**+2.2**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
BRTR	**Keskin Array B**	**29.47**	**287**	P		**P**	**14 33 01.5**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=105,slow=8.5,SNR=4.1							
BRTR	**Keskin Array B**	**29.47**	**287**	P		**P**	**14 33 01.2**	**+1.1**
OBN	**Obninsk**	**29.86**	**319**	*e*P		**P**	**14 33 03.6**	**+0.5**
OBN				pmax		pmax		
	comp=Z,16nm,0.9s							
CMAR	**Chiang Mai Arr**	**30.46**	**119**	*e*P		**P**	**14 33 10.5**	**+1.7**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**30.46**	**119**	P		**P**	**14 33 09.3**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=308,slow=7.1,SNR=6.0							
XAN	**Xi'an**	**30.81**	**84**	P		P	14 33 18.8	+7.0
XAN				pP		pP	14 33 56.4	+2.5
XAN				pmax		pmax		
	comp=Z,5.0nm,1.0s							
XAN				pmax		pmax		
	comp=Z,83nm,4.2s							
AKASG	**Malin Array Be**	**32.91**	**309**	*e*P		**P**	**14 33 30.7**	**+0.9**
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.4s							
AKASG	**Malin Array Be**	**32.91**	**309**	P		**P**	**14 33 30.7**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=81,slow=7.1,SNR=14							
WHN	**Wuhan**	**36.28**	**87**	P		P	14 34 12.7	+14
FINES	**FINESS Array B**	**37.39**	**326**	P		**P**	**14 34 09.0**	**+1.1**
	comp=Z,1.8nm,0.4s,baz=122,slow=9.6,SNR=33							
FINES	**FINESS Array B**	**37.39**	**326**	P		**P**	**14 34 09.1**	**+1.2**
VYHS	**Vyhne**	**39.53**	**304**	*e*P		**P**	**14 34 28.2**	**+2.2**
VYHS	**Vyhne**	**39.53**	**304**	*e*P		**P**	**14 34 28.2**	**+2.2**
ARCES	**ARCESS Array B**	**41.01**	**337**	P		**P**	**14 34 39.1**	**+1.4**
	comp=Z,2.0nm,0.4s,baz=118,slow=8.8,SNR=24							
ARCES	**ARCESS Array B**	**41.01**	**337**	P		**P**	**14 34 39.4**	**+1.6**
	comp=Z,2.2nm,0.4s,baz=98,slow=8.6							
CLL	**Collm**	**43.15**	**309**	*e*P		**P**	**14 34 58.0**	**+2.7**
CLL	**Collm**	**43.15**	**309**	*e*(P)		**P**	**14 34 58.0**	**+2.7**
YAK	**Yakutsk**	**43.76**	**36**	⇑*e*P		**P**	**14 34 59.9**	**0.0**
YAK				pmax		pmax		
	comp=Z,20nm,2.9s							
NB2	**NORSAR Subarra**	**44.29**	**323**	P		**P**	**14 35 04.8**	**+0.5**
	comp=Z,2.2nm,0.4s,baz=98,slow=8.6							
NOA	**NORSAR Array B**	**44.29**	**323**	P		**P**	**14 35 04.8**	**+0.5**
	comp=Z,3.8nm,0.5s,baz=106,slow=7.1,SNR=33							
TIXI	**Tiksi**	**45.57**	**22**	⇓*e*P		**P**	**14 35 15.0**	**+0.9**
TIXI				pmax		pmax		
	comp=Z,4.0nm,0.8s							
BILL	**Bilibino**	**58.40**	**26**	*e*P		**P**	**14 36 49.2**	**+0.5**
BILL				pmax		pmax		
	comp=Z,2.0nm,1.0s							
TORD	**Torodi Ar. Bea**	**65.82**	**269**	P		**P**	**14 37 37.3**	**-1.5**
	comp=Z,2.9nm,0.7s,baz=41,slow=5.8,SNR=17							
TORD	**Torodi Ar. Bea**	**65.82**	**269**	P		**P**	**14 37 36.4**	**-2.4**
SIJI	**Sorong**	**66.97**	**110**	LR		LR	15 12 19.5	
	comp=Z,16nm,18.0s,baz=28,slow=40							
COLA	**College**	**74.27**	**16**	⇓*e*P		**P**	**14 38 29.5**	**+0.1**
COLA				pmax		pmax		
	comp=Z,20nm,2.1s							
ILAR	**Eielson Array**	**74.58**	**16**	P		**P**	**14 38 31.1**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=321,slow=4.8,SNR=11							
ILAR	**Eielson Array**	**74.58**	**16**	P		**P**	**14 38 29.9**	**-1.3**
BOSA	**Boshof**	**77.95**	**220**	P		**P**	**14 38 49.1**	**-1.6**
	comp=Z,2.3nm,0.9s,baz=88,slow=9.7,SNR=3.2							
YKA	**Yellowknife Ar**	**81.06**	**3**	P		**P**	**14 39 07.3**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=350,slow=5.4,SNR=44							
YKA	**Yellowknife Ar**	**81.06**	**3**	P		**P**	**14 39 06.5**	**-0.4**
WRA	**Warramunga Arr**	**82.00**	**122**	*e*P		**P**	**14 39 11.5**	**-1.0**
WRA	**Warramunga Arr**	**82.00**	**122**	P		**P**	**14 39 10.9**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=324,slow=4.8,SNR=4.8							
WRA	**Warramunga Arr**	**82.00**	**122**	P		**P**	**14 39 10.3**	**-2.2**
ASAR	**Alice Springs**	**84.28**	**125**	P		**P**	**14 39 23.1**	**-1.0**
ASAR	**Alice Springs**	**84.28**	**125**	P		**P**	**14 39 22.3**	**-1.8**
	comp=Z,0.7nm,0.8s,baz=314,slow=4.9,SNR=9.7							
ASAR	**Alice Springs**	**84.28**	**125**	P		**P**	**14 39 23.1**	**-1.0**

*SSNC **04** 14:28:10.7±0.4, 19°.80N×77°.14W, h14km±2km, MD2.3, ML2.1, MW2.8*
*JSN **04** 14:28:11.8±0.4, 19°.69N×77°.07W, h30km±752km, MD3.4*
ISC 04 14:28:08.5±1.2, 19°.82N±0°.05×77°.19W±0°.08, h32km±10km, n7, σ1s01/12, 1C-3D, Cuba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMGC	**Las Mercedes**	**0.29**	**36**	*e*P	**Pb**	**14 28 16.3**	**+0.2**
LMGC				*e*S	**Sb**	**14 28 20.6**	**-0.7**
LMGC				IAML		14 28 20.8	
	comp=N,2μm,0.1s						
LMGC				IAML		14 28 20.9	
	comp=E,1μm,0.1s						
RCC	**Rio Carpintero**	**1.42**	**83**	*e*P	**Pn**	**14 28 32.7**	**+0.7**
RCC				*e*S	**Sn**	**14 28 49.2**	**-0.4**
RCC				IAML		14 28 51.4	
	comp=E,17nm,0.2s						
RCC				IAML		14 28 51.5	
	comp=N,17nm,0.1s						
BBJ	**Bamboo Saint A**	**1.44**	**183**	⇓*i*P	**Pn**	**14 28 33.1**	**+0.7**
BBJ				*i* S	**Sn**	**14 28 49.3**	**-0.9**
CCCC	**Cccc**	**1.47**	**339**	*e*P	**Pn**	**14 28 33.5**	**+0.7**
CCCC				*e*S	**Sn**	**14 28 50.1**	**-1.0**
CCCC				IAML		14 28 52.9	
	comp=N,12nm,0.2s						
CCCC				IAML		14 28 52.9	
	comp=E,10nm,0.1s						
BNJ	**Bonny Gate**	**1.51**	**171**	⇓*i*P	**Pn**	**14 28 34.1**	**+0.7**
STH	**Stony Hill**	**1.77**	**168**	⇑*i*P	**Pn**	**14 28 37.5**	**+0.5**
STH				*i* S	**Sn**	**14 28 57.0**	**-1.5**
PCJ	**Portland Cotta**	**2.07**	**179**	⇓*i*P	**Pn**	**14 28 42.3**	**+1.2**

IDC 04 14:31:33.9±11.0, 7°.21S×129°.35E, h222km±126km, mb2.6/1, mb1 2.7/4, mb1mx2.6/32, mbtmp3.2/4, Error ellipse: s-maj=73.0km s-min=53.9km az=22.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.41**	**198**	P	Pn	14 34 11.9	+1.2
	0.0nm,0.3s,baz=13,slow=8.6,SNR=6.8						
FITZ				S	S	14 36 16.3	-0.6
	0.1nm,0.3s,baz=162,slow=20,SNR=4.1						
WRA	**Warramunga Arr**	**13.55**	**160**	P	Pn	14 34 36.4	-1.2
	0.1nm,0.3s,baz=338,slow=12,SNR=7.4						
WRA				S	S	14 36 56.3	-11
	0.1nm,0.3s,baz=336,slow=23,SNR=3.7						
ASAR	**Alice Springs**	**16.94**	**166**	P	P	14 35 17.5	+0.7
	0.1nm,0.3s,baz=348,slow=10,SNR=10.0						
MKAR	**Makanchi Array**	**68.05**	**327**	P	P	14 42 09.3	-0.2
	0.1nm,0.5s,baz=111,slow=6.5,SNR=2.3						

*SJA **04** 15:02:31.8±0.8, 31°.58S×68°.85W, h10km±2km, ML3.3, MW3.2*
*NEIC **04** 15:02:35.2±0.3, 31°.53S±0°.09×68°.6W±0°.1, h67km±20km, mb4.0/3, Md4.0(SJA), Error ellipse: s-maj=18.6km s-min=12.5km az=108.0*
ISC 04 15:02:31.7±1.0, 31°.54S±0°.04×68°.82W±0°.03, h18km±3km, n21, σ1s09/25, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**0.12**	**92**	*i* P	**Pg**	**15 02 35.9**	**+0.2**
ZON				*e*S	**Sg**	**15 02 38.7**	**+0.2**
ZON				IAML		15 02 39.0	
	comp=Z,14μm,0.2s						
RTLL	**Cerro Villicun**	**0.36**	**55**	*i* P	**Pb**	**15 02 40.5**	**+0.8**
RTLL				IAML		15 02 46.4	
	comp=Z,5μm,0.6s						
RTLL				*e*S	**Sb**	**15 02 46.6**	**+1.4**
RTLS	**Leoncito**	**0.48**	**237**	*i* P	**Pg**	**15 02 41.2**	**-0.3**
RTLS				*e*S	**Sg**	**15 02 48.3**	**+0.1**
RTLS				IAML		15 02 48.5	
	comp=Z,770nm,0.2s						
CFA	**Coronel Fontan**	**0.50**	**97**	*i* P	**Pg**	**15 02 42.3**	**+0.4**
CFA				*e*S	**Sb**	**15 02 50.1**	**+1.0**
ASAL	**Salagasta**	**1.05**	**181**	*i* P	**Pb**	**15 02 51.4**	**+0.1**
ASAL				IAML		15 03 07.5	
	comp=Z,853nm,0.9s						
ARCO	**CERRO ARCO**	**1.30**	**184**	*i* P	**Pb**	**15 02 56.0**	**+0.2**
ARCO				IAML		15 03 15.9	
	comp=Z,712nm,0.6s						
AAGR	**Agrelo**	**1.54**	**180**	*i* P	**Pb**	**15 03 00.4**	**+0.6**
AAGR				IAML		15 03 26.6	
	comp=Z,483nm,0.3s						
ACAN	**Cantantal**	**1.57**	**118**	*i* P	**Pb**	**15 03 01.6**	**+1.4**
ACAN				IAML		15 03 25.7	
	comp=Z,768nm,0.4s						
AVIZ	**Vizcacheras**	**1.94**	**172**	*i* P	**Pb**	**15 03 07.2**	**+0.5**
AGUA	**GUANDACOL**	**2.07**	**8**	*i* P	**Pb**	**15 03 09.9**	**+1.2**
AGUA				IAML		15 03 38.6	
	comp=Z,92nm,0.6s						
GO04	**Tololo Observa**	**2.18**	**308**		**Pb**	**15 03 11.3**	**+0.5**
PEL	**Peldehue**	**2.25**	**224**		**Pb**	**15 03 12.0**	**+0.3**
ROC1	**El Roble**	**2.34**	**232**		**Pb**	**15 03 13.9**	**+0.3**
ROC1	**El Roble**	**2.34**	**232**	*i* P	**Pb**	**15 03 13.7**	**+0.1**
MRA	**San Martin**	**2.78**	**109**	*i* P	**Pb**	**15 03 19.0**	**-1.9**
MRA				IAML		15 04 02.3	
	comp=Z,150nm,0.3s						
GO05	**Huala**	**4.33**	**216**		**Pn**	**15 03 39.5**	**+2.9**
LVC	**Limon Verde**	**8.90**	**359**	Pn	**Pn**	**15 04 40.2**	**+0.5**
CPUP	**Villa Florida**	**11.32**	**66**	Pn	**Pn**	**15 05 11.7**	**-0.9**
LPAZ	**La Paz**	**15.20**	**3**	P	**P**	**15 06 10.3**	**-0.7**
LPAZ				IAmb	IAmb	15 06 25.4	
	comp=Z,1.7nm,1.0s						
OTAV	**Otavalo**	**32.90**	**342**	P	**P**	**15 09 03.9**	**-1.5**
OTAV				IAmb	IAmb	15 09 20.4	
	comp=Z,2.2nm,0.9s						
PAYG	**Puerto Ayora**	**36.81**	**322**	P	**P**	**15 09 37.9**	**-0.8**
PAYG				IAmb	IAmb	15 09 43.1	
	comp=Z,19nm,1.0s						

*EAF **04** 15:10:18.7±1.9, 25°.75S×28°.81E, h10km, MD3.5*
ISC 04 15:10:17.0±1.5, 25°.71S±0°.08×28°.74E±0°.09, h10km, n8, σ2s57/12, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBTB	**Lobatse**	**2.93**	**283**	*i* P	**Pb**	**15 11 09.2**	**-0.2**
LBTB	**Lobatse**	**2.93**	**283**	*i* P	**Pb**	**15 11 06.5**	**-2.9**
LBTB				*i* S	**Sn**	**15 11 41.5**	**+2.5**
MSNA	**Messina**	**3.55**	**20**	*i* P	**Pb**	**15 11 18.5**	**-1.4**
MSNA	**Messina**	**3.55**	**20**	*i* P	**Pn**	**15 11 15.0**	**+2.8**
MSNA				*i* S	**Sn**	**15 11 53.9**	**-0.4**
BOSA	**Boshof**	**4.25**	**226**	*i* P	**Pn**	**15 11 23.3**	**+1.4**
BOSA	**Boshof**	**4.25**	**226**	*i* P	**Pn**	**15 11 24.1**	**+2.2**
BOSA				*i* S	**Sn**	**15 12 09.1**	**-2.5**
MATP	**Matopo**	**5.26**	**358**	*i* P	**Pn**	**15 11 38.3**	**+2.4**
MATP	**Matopo**	**5.26**	**358**	*i* P	**Pn**	**15 11 37.4**	**+1.5**
MATP				*i* S	**Sn**	**15 12 33.0**	**-3.7**

*IDC **04** 15:12:27.4±0.8, 37°.10N×69°.40E, h0km, mb3.7/11, mb1 3.9/18, mb1mx3.7/48, mbtmp3.8/18, ML3.4/7, MS2.7/3, Ms1 2.7/3, ms1mx2.5/38, Error ellipse: s-maj=15.2km s-min=12.2km az=136.0*
*NEIC **04** 15:12:32.4±2.8, 37°.31N±0°.06×69°.15E±0°.10, h24km±6km, mb4.6/5, Error ellipse: s-maj=12.4km s-min=7.7km az=120.0*
*NNC **04** 15:12:34.9±1.6, 37°.40N×69°.14E, h123km±38km, mb3.6, mpv4.1, Error ellipse: s-maj=19.1km s-min=7.0km az=159.0*
ISC 04 15:12:32.0±0.5, 37°.28N±0°.04×69°.24E±0°.04, h29km, n83, σ1s82/93, mb3.6/10, 7C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHGR	**Chuyangaron**	**1.38**	**358**		**Pb**	**15 12 56.6**	**-0.5**
GAR	**Garm**	**1.92**	**26**		**Pb**	**15 13 04.7**	**-1.6**
KBL	**Kabul**	**2.74**	**183**		**Pn**	**15 13 17.3**	**+3.1**
BTK	**Batken**	**3.04**	**24**		**Pn**	**15 13 21.1**	**+3.0**
TAS	**Tashkent**	**4.04**	**1**	*e*P	**Pb**	**15 13 41.7**	**-0.7**
TAS				*e*S	Sb	15 14 43.1	+12
CEP	**Cherat**	**4.08**	**147**	P	Pb	15 13 38.4	-4.8
CEP				S	**Sb**	**15 14 35.0**	**+2.9**
CHCP	**Chirah Chowk**	**4.89**	**137**	P	**Pn**	**15 13 47.4**	**+3.9**
THW	**Thamme Wali**	**4.93**	**155**	P	**Pn**	**15 13 44.9**	**+0.8**
KK31	**Karatay Array**	**5.90**	**9**		**Pn**	**15 13 58.3**	**+0.9**
KK31	**Karatay Array**	**5.90**	**9**	P	**Pn**	**15 13 59.4**	**+2.0**
	1.6nm,0.3s,baz=196,slow=15,SNR=28						
KK31				⇑S	**Sn**	**15 15 04.3**	**+0.3**
	4.7nm,0.5s,baz=190,slow=30,SNR=3.9						
KKAR	**Karatay Array**	**5.90**	**9**		**Pn**	**15 13 59.1**	**+1.7**
KKAR	**Karatay Array**	**5.90**	**9**		**Pn**	**15 13 59.7**	**+2.4**
AML	**Almayashu**	**5.94**	**34**	P	**Pn**	**15 13 59.6**	**+1.3**
	SNR=24						
UCH	**Uchtor**	**6.40**	**38**	P	**Pn**	**15 14 06.2**	**+1.5**
	SNR=10						
EKS2	**Erkin-Say**	**6.41**	**32**	P	**Pn**	**15 14 07.4**	**+2.9**
	SNR=6.5						
KZA	**Kyzart**	**6.67**	**42**	P	**Pn**	**15 14 09.4**	**+1.1**
	SNR=11						
NRN	**Naryn**	**6.68**	**50**		**Pn**	**15 14 09.5**	**+1.0**
AAK	**Ala-Archa**	**6.70**	**35**	Pn	**Pn**	**15 14 10.6**	**+2.1**
	4.6nm,0.3s,baz=194,slow=7.4,SNR=116						
AAK				Sn	**Sn**	**15 15 26.2**	**+2.1**
	1.9nm,0.3s,baz=305,slow=14,SNR=3.8						
AAK				Lg	Lg	15 16 00.9	
	1.3nm,0.3s,baz=315,slow=20,SNR=3.6						
AAK				LR	LR	15 17 23.2	
	comp=Z,24nm,20.7s,baz=176,slow=44						
AAK	**Ala-Archa**	**6.70**	**35**	P	**Pn**	**15 14 10.8**	**+2.2**
	SNR=31						
AAK	**Ala-Archa**	**6.70**	**35**		**Pn**	**15 14 10.5**	**+1.9**
AAK					**Sn**	**15 15 29.4**	**+5.4**
AAK	**Ala-Archa**	**6.70**	**35**	⇑P	**Pn**	**15 14 10.

	comp=N,6.1nm,0.5s							
KKN	**Kakani**	**16.49**	**120**	*e*P		**P**	**15 16 24.1**	**+0.2**
	comp=N,20nm,0.5s							
PKIN	**Phulchoki**	**16.71**	**121**	*e*P		**P**	**15 16 25.7**	**-0.6**
	comp=N,4.3nm,0.4s							
PKI	**Pulchoki**	**16.72**	**121**	*e*P		**Pn**	**15 16 25.5**	**+1.1**
	comp=N,1.4nm,0.5s							
GUN	**Gumba**	**16.83**	**119**	*e*P		**P**	**15 16 28.1**	**+0.3**
	comp=N,9.9nm,0.5s							
RAMN	**Ramite**	**17.93**	**120**	*e*P		**Pn**	**15 16 35.6**	**-3.8**
	comp=N,4.5nm,0.5s							
TAPN	**Taplejung**	**18.46**	**117**	*e*P		**P**	**15 16 45.7**	**-0.1**
	comp=N,16nm,0.6s							
ODAN	**Odare**	**18.54**	**119**	*e*P		**P**	**15 16 43.5**	**-3.0**
	comp=N,8.4nm,0.6s							
ZALV	**Zalesovo Beam**	**19.84**	**28**	P		**P**	**15 16 59.5**	**-0.7**
	comp=N,0.5nm,0.3s,baz=228,slow=11,SNR=6.7							
ZALV	**Zalesovo Beam**	**19.84**	**28**	P		**P**	**15 16 59.9**	**-0.4**
ARU	**Arti**	**20.45**	**343**	P		Pn	15 17 08.1	-1.1
	comp=N,1.5nm,0.5s,baz=162,slow=7.4,SNR=9.8							
ARU	**Arti**	**20.45**	**343**	IAmb		IAmb	15 17 25.6	
	comp=Z,8.8nm,1.2s							
KBZ	**Khabaz**	**20.99**	**296**	P		**P**	**15 17 12.5**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=111,slow=11,SNR=7.0							
KBZ				LR		LR	15 27 34.8	
	comp=Z,70nm,18.8s,baz=323,slow=43							
BRTR	**Keskin Array B**	**27.85**	**286**	P		**P**	**15 18 21.9**	**+2.8**
	comp=Z,0.9nm,0.6s,baz=107,slow=8.0,SNR=7.5							
BRTR	**Keskin Array B**	**27.85**	**286**	P		**P**	**15 18 19.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**32.07**	**118**	P		**P**	**15 18 55.9**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=298,slow=8.5,SNR=4.8							
KWP	**Kalwaria Pacla**	**35.41**	**305**	P		**P**	**15 19 25.3**	**+0.2**
UBPT	**Khong Chiam**	**38.84**	**115**			**PcP**	**15 22 06.7**	**+1.2**
ARCES	**ARCESS Array B**	**39.88**	**338**	P		**P**	**15 20 04.1**	**+1.4**
NOA	**NORSAR Array B**	**42.90**	**323**	P		**P**	**15 20 29.1**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=97,slow=7.9,SNR=2.5							
TORD	**Torodi Ar. Bea**	**64.33**	**267**	P		**P**	**15 23 05.8**	**+0.6**
	comp=Z,1.1nm,0.5s,baz=50,slow=5.6,SNR=9.3							
TORD	**Torodi Ar. Bea**	**64.33**	**267**	P		**P**	**15 23 03.7**	**-1.5**
DBIC	**Dimbokro**	**73.33**	**266**	P		**P**	**15 24 01.3**	**0.0**
	comp=Z,2.2nm,0.9s,baz=54,slow=1.2,SNR=3.5							
ILAR	**Eielson Array**	**74.41**	**15**	P		**P**	**15 24 07.4**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=310,slow=7.0,SNR=3.6							
ILAR	**Eielson Array**	**74.41**	**15**	P		**P**	**15 24 06.7**	**-0.1**
PPLA	**Purkeypile**	**74.80**	**18**			**P**	**15 24 10.3**	**+1.1**
PPLA				IAmb		IAmb	15 25 16.2	
	comp=Z,36nm,1.7s							
YKA	**Yellowknife Ar**	**80.52**	**2**	P		**P**	**15 24 42.2**	**+1.3**
	comp=Z,0.6nm,0.4s,baz=352,slow=5.6,SNR=17							
WRA	**Warramunga Arr**	**83.61**	**121**	P		**P**	**15 24 55.8**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=333,slow=4.8,SNR=4.6							
ASAR	**Alice Springs**	**85.86**	**124**	P		**P**	**15 25 07.5**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=314,slow=4.4,SNR=6.1							

BJI ***04*** *15:23:10.2±0.0, 47.98N×147.49E, h412km, mB4.5/4, mb4.2/8*

SKHL ***04*** *15:23:11.9±0.3, 47.70N×147.60E, h449km±27km, mb4.8/13, mbv4.9/3, ms4.5/1, msh4.9/4, msha5.2/7*

MOS ***04*** *15:23:12.0±0.8, 47.80N×147.50E, h439km, mb3.7/9, Error ellipse: s-maj=10.4km s-min=7.3km az=84.3*

IDC ***04*** *15:23:14.4±1.3, 47.98N×147.31E, h435km±15km, mb3.2/17, mb1 3.4/25, mb1mx3.3/41, mbtmp4.1/25, Error ellipse: s-maj=13.2km s-min=9.5km az=132.0*

NEIC ***04*** *15:23:14.0±1.3, 47.9N±0.1×147.5E±0.2, h439km±7km, mb4.0/7, Error ellipse: s-maj=18.1km s-min=14.9km az=148.0*

ISC 04 15:23:12.4±0.5, 47.77N±0.05×147.42E±0.05, h418km, n131, σ1s97/161, mb3.6/29, 17C-15D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.56**	**173**	*c* iPN		**P**	**15 24 16.4**	**+2.7**
KUR				*e*S		**S**	**15 25 06.8**	**+3.5**
KUR				pmax	pmax			
	comp=Z,249nm,0.5s							
KUR				pmax	pmax			
	comp=E,33nm,0.3s							
KUR				pmax	pmax			
	comp=N,81nm,0.2s							
KUR				smax	smax			
	comp=N,66nm,0.5s							
KUR				smax	smax			
	comp=E,42nm,0.4s							
KUR	**Kuril'sk**	**2.56**	**173**	⇓*i* P		**P**	**15 24 15.8**	**+2.1**
KUR				AMB	AMB		15 24 16.9	
	comp=E,70nm,0.5s							
KUR				AMB	AMB		15 24 16.9	
	comp=E,30nm,0.5s							
KUR				AMB	AMB		15 24 16.9	
	comp=E,250nm,0.5s							
KUR				AMB	AMB		15 24 17.9	
	comp=E,1μm,4.0s							
KUR				*e*S		**S**	**15 25 06.0**	**+2.7**
KUR				A	A		15 25 08.0	
	comp=E,170nm,0.5s							
KUR				A	A		15 25 08.0	
	comp=E,100nm,0.5s							
KUR				A	A		15 25 10.5	
	comp=E,2μm,3.0s							
KUR				A	A		15 25 10.5	
	comp=E,1μm,3.0s							
YSS	**Yuzh-Sakhalins**	**3.27**	**257**	⇓*i* PN		**P**	**15 24 22.7**	**+3.6**
YSS				*i* S		**S**	**15 25 17.8**	**+4.4**
YSS				pmax	pmax			
	comp=Z,80nm,0.9s							
YSS				smax	smax			
	comp=N,40nm,1.3s							
YSS	**Yuzh-Sakhalins**	**3.27**	**257**	⇓*i* P		**P**	**15 24 22.7**	**+3.6**
YSS				AMB	AMB		15 24 23.0	
	comp=N,80nm,0.8s							
YSS				AMB	AMB		15 24 27.9	
	comp=N,400nm,3.0s							
YSS				⇓*i* S		**S**	**15 25 17.8**	**+4.4**
YSS				A	A		15 25 21.0	
	comp=N,40nm,0.8s							
YSS				A	A		15 25 21.0	
	comp=N,60nm,0.8s							
YSS				A	A		15 25 22.0	
	comp=N,600nm,4.0s							
YSS				A	A		15 25 22.0	
	comp=N,500nm,4.0s							
YSS	**Yuzh-Sakhalins**	**3.27**	**257**	P		**P**	**15 24 22.0**	**+2.9**
YUK	**Yuzh-Kuril'sk**	**3.89**	**197**	*e*PN		**P**	**15 24 26.1**	**+1.6**
YUK				*e*S		**S**	**15 25 23.9**	**+0.7**
YUK				pmax	pmax			
	comp=Z,49nm,0.2s							
YUK				pmax	pmax			
	comp=E,29nm,0.3s							
YUK				smax	smax			
	comp=N,209nm,0.5s							
YUK				smax	smax			
	comp=E,435nm,0.5s							
YUK				smax	smax			
	comp=N,1μm,1.5s							
YUK				smax	smax			
	comp=E,347nm,0.9s							
YUK	**Yuzh-Kuril'sk**	**3.89**	**197**	⇓*e* P		**P**	**15 24 26.5**	**+2.0**
YUK				AMB	AMB		15 24 31.0	
	comp=E,30nm,0.2s							
YUK				AMB	AMB		15 24 31.0	
	comp=E,50nm,0.2s							
YUK				⇓*i* S		**S**	**15 25 24.5**	**+1.3**
YUK				A	A		15 25 25.8	
	comp=E,2μm,2.0s							
YUK				A	A		15 25 25.8	
	comp=E,400nm,2.0s							
YUK				A	A		15 25 31.3	
	comp=E,210nm,0.6s							
YUK				A	A		15 25 31.3	
	comp=E,340nm,0.6s							
SHO	**Shikotan**	**3.92**	**186**	*e*PN		**P**	**15 24 24.2**	**-0.6**
SHO				*i* S		**S**	**15 25 21.0**	**-2.8**
SHO				pmax	pmax			
	comp=N,54nm,0.3s							
SHO				pmax	pmax			
	comp=Z,158nm,0.3s							
SHO				pmax	pmax			
	comp=E,34nm,0.2s							
SHO				smax	smax			
	comp=E,360nm,0.5s							
SHO				smax	smax			
	comp=N,228nm,1.2s							
SHO				smax	smax			
	comp=E,241nm,0.4s							
SHO				smax	smax			
	comp=N,274nm,0.3s							
SHO	**Shikotan**	**3.92**	**186**	⇑*i* P		**P**	**15 24 24.7**	**-0.1**
SHO				AMB	AMB		15 24 27.0	
	comp=N,50nm,0.3s							
SHO				AMB	AMB		15 24 27.0	
	comp=N,30nm,0.3s							
SHO				AMB	AMB		15 24 27.0	
	comp=N,160nm,0.3s							
SHO				⇓*i* S		**S**	**15 25 21.5**	**-2.3**
SHO				A	A		15 25 23.9	
	comp=N,600nm,2.0s							
SHO				A	A		15 25 23.9	
	comp=N,500nm,2.0s							
SHO				A	A		15 25 26.0	
	comp=N,270nm,0.5s							
SHO				A	A		15 25 26.0	
	comp=N,240nm,0.5s							
GLVR	**Golovnino**	**4.25**	**199**	*e*PN		**P**	**15 24 29.0**	**+1.2**
GLVR				*e*S		**S**	**15 25 31.4**	**+2.2**
GLVR				smax	smax			
	comp=N,1μm,0.5s							
GLVR				smax	smax			
	comp=E,316nm,0.5s							
GLVR	**Golovnino**	**4.25**	**199**	*e*P		**P**	**15 24 29.0**	**+1.2**
GLVR				*e*S		**S**	**15 25 31.1**	**+1.9**
GLVR				A	A		15 25 40.5	
	comp=E,1μm,0.6s							
GLVR				A	A		15 25 40.5	
	comp=E,320nm,0.6s							
JSE	**Soyaes**	**4.37**	**232**	P		**P**	**15 24 32.5**	**+3.5**
TYV	**Tymovskoe**	**4.39**	**317**	*e*PN		**P**	**15 24 31.2**	**+2.2**
TYV				*e*S		**S**	**15 25 32.8**	**+1.2**
TYV				pmax	pmax			
	comp=Z,400nm,3.4s							
TYV				pmax	pmax			
	comp=E,71nm,0.6s							
TYV				smax	smax			
	comp=N,35nm,1.1s							
TYV				smax	smax			
	comp=E,40nm,1.1s							
TYV	**Tymovskoe**	**4.39**	**317**	⇓*i* P		**P**	**15 24 31.6**	**+2.6**
TYV				AMB	AMB		15 24 31.7	
	comp=E,70nm,0.5s							
TYV				AMB	AMB		15 24 31.8	
	comp=E,700nm,3.0s							
TYV				*e*S		**S**	**15 25 35.8**	**+4.2**
TYV				A	A		15 25 59.4	
	comp=E,50nm,0.7s							
TYV				A	A		15 25 59.4	
	comp=E,50nm,0.7s							
JTKR	**Abashiri--Toko**	**4.52**	**214**	P		**P**	**15 24 32.8**	**+2.4**
JTKR				*e*S		**S**	**15 25 35.8**	**+1.7**
JWK2	**Keihoku**	**4.53**	**239**	P		**P**	**15 24 34.5**	**+4.0**
NMR	**Nemuro--Hokkai**	**4.56**	**196**	⇓*i* PN		**P**	**15 24 30.5**	**-0.3**
NMR				*i* S		**S**	**15 25 32.1**	**-2.6**
NMR	**Nemuro--Hokkai**	**4.56**	**196**	⇓*i* P		**P**	**15 24 30.5**	**-0.3**
NEM2	**Nemuro 2**	**4.56**	**196**	P		**P**	**15 24 30.3**	**-0.5**
NEM2				*e*S		**S**	**15 25 32.2**	**-2.5**
JKA	**Kamikawa-asahi**	**4.96**	**224**	*e*P		**P**	**15 24 37.8**	**+3.0**
JKA	**Kamikawa-asahi**	**4.96**	**224**	P		**P**	**15 24 37.8**	**+3.0**
ASAJ	**Asahikawa**	**4.97**	**224**	P		**P**	**15 24 37.8**	**+3.0**
	comp=E,4.3nm,0.3s,baz=48,slow=5.9,SNR=43							
JKK2	**Kamakawa 2**	**5.08**	**222**	P		**P**	**15 24 38.6**	**+2.6**
JAK	**Akkeshi**	**5.14**	**203**	P		**P**	**15 24 36.5**	**-0.1**
JAK				*e*S		**S**	**15 25 42.7**	**-2.7**
JAR	**Ashorobuto**	**5.16**	**211**	P		**P**	**15 24 38.6**	**+1.9**
JAR				*e*S		**S**	**15 25 45.6**	**0.0**
JHR	**Hokuryu**	**5.66**	**227**	P		**P**	**15 24 44.9**	**+2.9**
JFR	**Furan**	**5.72**	**218**	P		**P**	**15 24 44.8**	**+2.2**
JFR				*e*S		**S**	**15 25 57.2**	**+0.8**
JCH	**Churui**	**5.90**	**211**	P		**P**	**15 24 44.8**	**+0.4**
JCH				*e*S		**S**	**15 25 56.1**	**-3.6**
SKR	**Severo-Kuril's**	**6.40**	**60**	*e*PN		**P**	**15 24 50.8**	**+1.3**
SKR				*e*S		**S**	**15 26 10.9**	**+1.6**
SKR				pmax	pmax			
	comp=Z,174nm,0.9s							
SKR				smax	smax			
	comp=N,57nm,0.9s							
SKR				smax	smax			
	comp=E,51nm,0.8s							
SKR				MLR	MLR			
	comp=Z,700nm,18.0s							
SKR				MLR	MLR			
	comp=N,2μm,14.0s							
SKR	**Severo-Kuril's**	**6.40**	**60**	*e*P		**P**	**15 24 50.8**	**+1.3**
SKR				AMB	AMB		15 24 51.6	
	comp=N,170nm,0.9s							
SKR				*e*S		**S**	**15 26 08.1**	**-1.2**
SKR				A	A		15 26 19.6	
	comp=N,60nm,0.8s							
SKR				A	A		15 26 19.6	
	comp=N,50nm,0.8s							
SKR				AMS	AMS		15 27 12.0	
	comp=N,2μm,15.0s							
SKR				AMS	AMS		15 27 12.0	
	comp=N,2μm,15.0s							
SKR				AMS	AMS		15 27 12.0	
	comp=N,700nm,18.0s							
JNBK	**Urakawa-nobuka**	**6.41**	**213**	P		**P**	**15 24 49.4**	**-0.4**
OKH	**Okha**	**6.45**	**335**	⇑*e*P		**P**	**15 24 53.6**	**+3.6**
OKH				AMB	AMB		15 24 54.8	
	comp=N,110nm,0.7s							
JEW	**Eniwo**	**6.48**	**223**	P		**P**	**15 24 52.8**	**+2.2**
ERM	**Erimo**	**6.50**	**209**	⇓*i* PN		**P**	**15 24 52.2**	**+0.8**
ERM	**Erimo**	**6.50**	**209**	P		**P**	**15 24 52.2**	**+0.8**
PAU	**Pauzhetka**	**7.13**	**55**	*i* P		**P**	**15 24 58.9**	**+0.9**
JKB	**Kayabe**	**7.43**	**220**	P		**P**	**15 25 01.3**	**-0.2**
JKB				*e*S		**S**	**15 26 25.2**	**-5.0**
GRNR	**Gornyy**	**7.79**	**297**	⇑*i* PN		**P**	**15 25 07.0**	**+1.6**
GRNR				*e*S		**S**	**15 26 33.8**	**-3.8**
GRNR				pmax	pmax			
	comp=Z,30nm,0.9s							
GRNR				smax	smax			
	comp=N,10.0nm,1.0s							
GRNR				MLR	MLR			
	comp=Z,150nm,11.0s							
GRNR	**Gornyy**	**7.79**	**297**	⇓*i* P		**P**	**15 25 07.0**	**+1.6**
GRNR				AMB	AMB		15 25 07.4	
	comp=Z,10.0nm,0.7s							
GRNR				AMB	AMB		15 25 07.4	
	comp=Z,20nm,0.7s							
GRNR				AMB	AMB		15 25 07.4	
	comp=Z,30nm,0.7s							
JOT	**Ohata**	**7.84**	**218**	P		**P**	**15 25 05.4**	**-0.6**
TEY	**Ternei**	**7.96**	**254**	⇑*i* PN		**P**	**15 25 10.3**	**+3.1**
TEY				pmax	pmax			
	comp=Z,70nm,0.7s							
TEY				pmax	pmax			
	comp=E,60nm,0.7s							
TEY				pmax	pmax			
	comp=N,20nm,1.2s							
TEY	**Ternei**	**7.96**	**254**	⇑*e*P		**P**	**15 25 09.1**	**+1.9**
TEY				AMB	AMB		15 25 10.9	
	comp=N,20nm,0.7s							
TEY				AMB	AMB		15 25 10.9	
	comp=N,60nm,0.7s							
TEY				AMB	AMB		15 25 10.9	
	comp=N,70nm,0.7s							
JOSM	**Okushiri--Mats**	**8.00**	**228**	P		**P**	**15 25 08.2**	**+0.5**
PEA0B	**Petropavlovsk-**	**8.46**	**47**	⇑*i* PN		**P**	**15 25 13.1**	**+0.6**
PETK	**Petropavlovsk-**	**8.46**	**47**	P		**P**	**15 25 13.1**	**+0.7**
	comp=N,2.7nm,0.3s,baz=226,slow=9.4,SNR=93							
PETK	**Petropavlovsk-**	**8.46**	**47**	P		**P**	**15 25 13.4**	**+0.9**
PET	**Petropavlovsk**	**8.89**	**50**	⇑*e*PN		**P**	**15 25 18.1**	**+0.9**
PET	**Petropavlovsk**	**8.89**	**50**	*e*P		**P**	**15 25 17.2**	**0.0**
PET				AMB	AMB		15 25 18.1	
	comp=N,140nm,0.9s							
JMK	**Ichinoseki**	**9.90**	**209**	P		**P**	**15 25 30.5**	**+1.9**
KLR	**Kul'dur**	**10.51**	**284**	P		**P**	**15 25 37.5**	**+2.4**
	comp=N,0.3nm,0.3s,baz=91,slow=13,SNR=8.4							
KLR				S		**S**	**15 27 34.4**	**+1.4**
	comp=N,0.0nm,0.3s,baz=342,slow=20,SNR=4.1							
EKMR	**Ekimchan**	**10.64**	**305**	⇑*i* P		**P**	**15 25 38.8**	**+2.2**
EKMR				AMB	AMB		15 25 39.0	
	comp=N,20nm,0.5s							
USA0B	**Ussuriysk Arra**	**11.31**	**257**	PN		**P**	**15 25 45.4**	**+1.3**
USA0B	**Ussuriysk Arra**	**11.31**	**257**	P		**P**	**15 25 45.4**	**+1.3**
USRK	**Ussuriysk Ar.**	**11.31**	**257**	PN		**P**	**15 25 45.4**	**+1.3**
USRK	**Ussuriysk Ar.**	**11.31**	**257**	P		**P**	**15 25 45.2**	**+1.1**
	baz=62,slow=12,SNR=24							
USRK	**Ussuriysk Ar.**	**11.31**	**257**	P		**P**	**15 25 45.4**	**+1.3**
MDJ	**Mudanjiang**	**12.75**	**262**	P		**P**	**15 26 01.1**	**+1.3**
MJB9	**Matsu-Tunnel**	**13.12**	**215**	P		**P**	**15 26 06.9**	**+2.9**
MAJO	**Matsushiro**	**13.12**	**215**	*d* iPN		**P**	**15 26 06.6**	**+2.5**
MAJO				pmax	pmax			
	comp=Z,10.0nm,0.5s							
MAJO	**Matsushiro**	**13.12**	**215**	P		**P**	**15 26 06.7**	**+2.7**
MAT	**Matsushiro**	**13.12**	**215**	P		**P**	**15 26 06.6**	**+2.5**
MJAR	**Matsushiro Arr**	**13.12**	**215**	PN		**P**	**15 26 06.8**	**+2.7**
MJAR	**Matsushiro Arr**	**13.12**	**215**	P		**P**	**15 26 06.7**	**+2.6**
	comp=Z,0.7nm,0.3s,baz=14,slow=32,SNR=64							
MJAR	**Matsushiro Arr**	**13.12**	**215**	P		**P**	**15 26 06.8**	**+2.7**
BMKR	**Bomnak**	**13.53**	**308**	⇑*e*P		**P**	**15 26 09.0**	**+0.8**
BMKR				AMB	AMB		15 26 10.5	
	comp=Z,30nm,0.3s							
ZEA	**Zeya**	**14.07**	**303**	*e*P		**P**	**15 26 14.1**	**0.0**
ZEA	**Zeya**	**14.07**	**303**	*e*P		**P**	**15 26 14.9**	**+0.8**
KROS	**Kirovskiy**	**14.45**	**305**	⇑*i* P		**P**	**15 26 19.0**	**+0.9**
KROS				AMB	AMB		15 26 20.0	
	comp=Z,10.0nm,0.4s							
KROS				AMB	AMB		15 26 20.0	
	comp=Z,20nm,0.4s							
KROS				AMB	AMB		15 26 20.0	
	comp=Z,30nm,0.4s							
INU	**Inuyama**	**14.63**	**216**	P		**P**	**15 26 22.9**	**+2.5**
SEY	**Seymchan**	**15.45**	**9**	P		**P**	**15 26 29.3**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=208,slow=11,SNR=14							
YAK	**Yakutsk**	**17.46**	**331**	*e*P		**P**	**15 26 48.1**	**-2.1**
YAK				pmax	pmax			
	comp=Z,59nm,0.8s							
YAK				pmax	pmax			
	comp=N,19nm,1.1s							
YAK				pmax	pmax			
	comp=E,10.0nm,1.0s							
YAK				pmax	pmax			
	comp=N,19nm,1.0s							
YAK				pmax	pmax			
	comp=E,25nm,1.0s							
YAK	**Yakutsk**	**17.46**	**331**	*e*P		**P**	**15 26 48.1**	**-2.1**
KSRS	**Korea Array**	**17.62**	**241**	P		**P**	**15 26 54.3**	**+2.0**
	comp=E,0.7nm,0.3s,baz=46,slow=10,SNR=23							
JNU	**Nakatsue**	**19.24**	**226**	P		**P**	**15 27 10.6**	**+1.8**
	comp=E,1.1nm,0.3s,baz=270,slow=2.7,SNR=12							
BILL	**Bilibino**	**22.46**	**19**	*e*P		**P**	**15 27 36.9**	**-0.7**
BILL				*e**SP		**sP**	**15 29 39.8**	**+4.7**
BILL				pmax	pmax			
	comp=Z,1.0nm,1.1s							
BILL	**Bilibino**	**22.46**	**19**	*e*P		**P**	**15 27 36.9**	**-0.7**
SONM	**Songino Array**	**27.33**	**286**	P		**P**	**15 28 21.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=86,slow=8.1,SNR=3.6							
WHN	**Wuhan**	**30.57**	**248**	P		**P**	**15 28 47.4**	**-2.4**
IL31		**38.19**	**39**	P		**P**	**15 29 52.7**	**-1.0**
ILAR	**Eielson Array**	**38.19**	**39**	P		**P**	**15 29 53.6**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=270,slow=8.1,SNR=28							
ILAR	**Eielson Array**	**38.19**	**39**	P		**P**	**15 29 52.7**	**-1.1**
WMQ	**Urumqi**	**40.93**	**287**	*e*P		**P**	15 30 22.0	+5.6
WMQ				pmax	pmax			
	comp=Z,5.0nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,73nm,5.5s							
MK31	**Makanchi Array**	**43.01**	**294**	P		**P**	**15 30 32.3**	**-0.5**
MK31				pmax	pmax			
	comp=Z,2.0nm,1.0s							
MK31	**Makanchi Array**	**43.01**	**294**	P		**P**	**15 30 32.3**	**-0.5**
MKAR	**Makanchi Array**	**43.01**	**294**	P		**P**	**15 30 32.4**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=59,slow=9.4,SNR=25							
MKAR	**Makanchi Array**	**43.01**	**294**	P		**P**	**15 30 32.6**	**-0.3**
KURK	**Kurchatov**	**43.54**	**301**	⇑*e*P		**P**	**15 30 36.0**	**-0.9**
KURK				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KURK	**Kurchatov**	**43.54**	**301**	⇑*e*P		**P**	**15 30 36.0**	**-0.9**
C36M	**Paulatuk**	**45.86**	**30**	P		**P**	**15 30 54.1**	**-0.5**
C36M				IAmb	IAmb		15 31 05.0	
	comp=Z,4.9nm,0.6s							
BRVK	**Borovoye**	**47.22**	**307**	⇓*i* P		**P**	**15 31 04.4**	**-0.9**
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.7s							
BRVK	**Borovoye**	**47.22**	**307**	⇓*i* P		**P**	**15 31 04.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**48.95**	**250**	P		**P**	**15 31 19.9**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=35,slow=6.9,SNR=3.1							
AAK	**Ala-Archa**	**49.88**	**293**	⇑*e*P		**P**	**15 31 25.3**	**-0.4**
AAK				pmax	pmax			
	comp=Z,1.0nm,0.6s							
AAK	**Ala-Archa**	**49.88**	**293**	⇑*e*P		**P**	**15 31 25.3**	**-0.4**
ARU	**Arti**	**51.59**	**315**	*c* iP		**P**	**15 31 36.6**	**-1.2**
ARU							15 33 35.9	
ARU				S		**S**	**15 38 25.1**	**-0.6**
ARU				SS		**SKiKP**	**15 42 12.6**	**-3.5**
ARU				pmax	pmax			
	comp=Z,5.0nm,0.6s							
ARU	**Arti**	**51.59**	**315**	⇑*i* P		**P**	**15 31 36.6**	**-1.2**
KKAR	**Karatay Array**	**52.08**	**295**	P		**P**	**15 31 41.3**	**-0.3**
KKAR	**Karatay Array**	**52.08**	**295**	P		**P**	**15 31 41.3**	**-0.3**
YKA	**Yellowknife Ar**	**52.38**	**35**	P		**P**	**15 31 43.2**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=303,slow=7.1,SNR=14							
YKA	**Yellowknife Ar**	**52.38**	**35**	P		**P**	**15 31 42.9**	**-0.5**
ABKAR	**Akbulak array**	**54.75**	**307**	P		**P**	**15 31 60.0**	**-0.5**
ABKAR	**Akbulak array**	**54.75**	**307**	P		**P**	**15 32 00.0**	**-0.5**
ABKAR				IAmb	IAmb		15 32 00.4	
	comp=Z,3.4nm,0.6s							
ARCES	**ARCESS Array B**	**55.56**	**339**	P		**P**	**15 32 04.3**	**-1.6**
	comp=Z,6.2nm,1.1s,baz=48,slow=7.9,SNR=5.5							
FINES	**FINESS Array B**	**61.39**	**322**	P		**P**	**15 32 44.3**	**-1.4**
	comp=Z,5.4nm,0.5s,baz=28,slow=8.5,SNR=60							
OBN	**Obninsk**	**62.21**	**323**	*e*P		**P**	**15 32 48.9**	**-2.2**
OBN				*e**PP		**pP**	**15 34 19.1**	**+0.2**
OBN				*e**SP		**sP**	**15 35 05.4**	**+1.3**
OBN				*e*			15 35 10.4	
OBN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
OBN	**Obninsk**	**62.21**	**323**	*e*P		**P**	**15 32 48.9**	**-2.2**
GEYT	**Alibeck**	**62.72**	**297**	P		**P**	**15 32 54.9**	**0.0**
	comp=Z,2.6nm,0.5s,baz=46,slow=4.3,SNR=6.1							
GEYT	**Alibeck**	**62.72**	**297**	P		**P**	**15 32 53.2**	**-1.7**
NB2	**NORSAR Subarra**	**65.93**	**338**	P		**P**	**15 33 13.7**	**-1.3**
	comp=Z,1.8nm,0.5s,

0.1nm,0.1s
IENR *e*Sg Sg 15 26 45.2 -0.2
0.1nm,0.2s
IENR *e*Sg Sg 15 26 45.2 -0.2
0.2nm,0.2s
ALDR Aldan 1.52 345 *e*Pg Pg 15 26 37.0 +0.3
0.0nm,0.1s
ALDR *e*Sg Sg 15 26 56.2 -0.2
0.5nm,0.2s
ALDR *e*Sg Sg 15 26 56.2 -0.2
0.7nm,0.2s
TNDR Tynda 2.16 202 *e*Pn Pb 15 26 44.5 -1.7
TNDR *e*Pg Pg 15 26 47.2 -1.7
0.0nm,0.2s
TNDR *e*Sn Sn 15 27 09.8 +0.5
TNDR *e*Sg Sg 15 27 15.3 -1.6
0.1nm,0.2s
TNDR *e*Sg Sg 15 27 15.3 -1.6
0.1nm,0.2s
YKLR Yuktali 2.54 259 *e*Pg Pb 15 26 52.8 +0.3
0.0nm,0.5s
YKLR *e*Sn Sn 15 27 20.1 +1.6
YKLR *e*Sg Sg 15 27 26.9 -2.0
0.1nm,0.2s
YKLR *e*Sg Sg 15 27 26.9 -2.0
0.0nm,0.2s
KROS Kirovskiy 2.76 170 *e*Sg Sg 15 27 33.1 -3.0
0.1nm,0.3s
CGD Chagda 2.87 54 *e*Pg Pb 15 26 59.5 +1.2
0.0nm,0.2s
CGD *e*Sn Sn 15 27 27.1 +0.5
CGD *e*Sg Sg 15 27 36.5 -3.0
0.3nm,0.3s
CGD *e*Sg Sg 15 27 36.5 -3.0
0.1nm,0.3s
BMKR Bomnak 2.87 147 *e*Pg Pb 15 27 00.2 +1.9
0.0nm,0.2s
BMKR *e*Sg Sg 15 27 37.2 -2.5
0.4nm,0.2s
BMKR *e*Sg Sg 15 27 37.2 -2.5
0.3nm,0.2s
KHN Khani 3.49 269 *e*Pn Pn 15 27 00.9 -0.1
KHN *e*Pg Pb 15 27 09.3 +0.5
0.1nm,0.5s
KHN *e*Sn Sn 15 27 41.2 -0.8
KHN *e*Sg Sb 15 27 53.5 +2.6
0.1nm,0.2s
CRS Chara 4.32 270 *e*Pg Pb 15 27 23.8 +0.8
0.0nm,0.6s
OLMR Olekminsk 4.39 320 *e*Pn Pn 15 27 13.7 +0.4
OLMR *e*Pg Pb 15 27 26.3 +2.2
0.0nm,0.5s
OLMR *e*Sn Sn 15 28 04.3 +0.3
OLMR *e*Sg Sg 15 28 24.1 -4.1
0.1nm,0.8s
TUP Tupik 4.44 235 *e*Pn Pn 15 27 15.3 +1.2
TUP *e*Pg Pb 15 27 27.0 +2.0
0.0nm,0.4s
TUP *e*Sn Sn 15 28 04.6 -0.9
BLSR Buluus 4.47 18 *e*Pn Pn 15 27 14.7 +0.2
BLSR *e*Pg Pb 15 27 27.5 +1.9
0.6nm,0.3s
BLSR *e*Sn Sn 15 28 07.0 +0.9
BLSR *e*Sg Sg 15 28 27.1 -3.8
1.5nm,0.8s
TBGR Tabaga 5.01 19 *e*Pn Pn 15 27 23.5 +1.6
TBGR *e*Pg Pb 15 27 37.4 +2.7
0.0nm,0.6s
TBGR *e*Sn Sn 15 28 20.3 +0.9
TBGR *e*Sg Sg 15 28 43.8 -4.3
0.2nm,0.7s
TBGR *e*Sg Sg 15 28 43.8 -4.3
0.2nm,0.8s
YAK Yakutsk 5.21 19 *e*Pn Pn 15 27 26.0 +1.3
YAK *e*Pg Pb 15 27 41.8 +3.7
YAK *e*Sn Sn 15 28 25.1 +0.7
YAK *e*Sg Sg 15 28 51.1 -3.5

MAN 04 15:28:56.0,10°.22N×124°.17E,h1km,mb4.3,ML3.1,MS2.9, 1D,Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.23**	**296**	⇓*i*P	Pg	15 29 00.6	+0.2
LLP				*i* S	Sg	15 29 04.2	+0.8
MSLP	**Maasin**	**0.68**	**97**	*e*P	Pg	15 29 09.6	+0.5
MSLP				*e*S	Sb	15 29 20.5	-0.1
GUIM	**Jordan**	**1.61**	**285**	*e*P	Pn	15 29 24.9	-0.7
GUIM				*e*S	Sg	15 29 47.8	-0.1
PAGZ	**Pagadian**	**2.48**	**198**	*e*P	Pn	15 29 38.0	+0.4
PAGZ				*e*S	Sg	15 30 18.4	+2.7

*GUC **04** 15:37:12.9±0.7,21°.41S×69°.41W,h82km±4km,ML3.9*
*IDC **04** 15:37:13.0±0.9,21°.32S×69°.17W,h87km±7km,mb3.8/3, mb1 3.8/4,mb1mx3.5/25,mbtmp4.0/4,MS2.5/1,Ms1 2.6/1, ms1mx2.4/24,Error ellipse: s-maj=32.7km s-min=8.9km az=87.0*

ISC 04 15:37:12.0±0.7,21°.44S±0°.04×69°.39W±0°.07,h88km±6km, n21,σ1§52/36,mb3.9/3,6C-2D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.38**	**158**	⇓*i*P	**Pn**	**15 37 25.9**	**0.0**
PB09				*i* S	**Sn**	**15 37 36.0**	**-0.2**
PB09				IAML		15 37 36.6	
	comp=E,6µm,0.3s						
PB03	**IPOC Station P**	**0.69**	**209**	⇓*i*P	**Pn**	**15 37 28.5**	**+0.1**
PB03				*i* S	**Sn**	**15 37 40.6**	**-0.1**
PB03				IAML		15 37 41.6	
	comp=E,4µm,0.2s						
PB04	**IPOC Station P**	**1.13**	**218**	*e*P	**Pn**	**15 37 33.8**	**+0.5**
PB04				*i* S	**Sn**	**15 37 50.1**	**+0.8**
PB04				IAML		15 37 53.0	
	comp=N,3µm,0.2s						
TA01	**Diego Aracena**	**1.14**	**320**	⇑*i*P	**Pn**	**15 37 33.3**	**+0.1**
TA01				*e*S	**Sn**	**15 37 49.6**	**+0.5**
LVC	**Limon Verde**	**1.25**	**159**	⇑*i*P	**Pn**	**15 37 36.4**	**+1.4**
LVC				*e*S	**Sn**	**15 37 54.1**	**+2.1**
LVC	**Limon Verde**	**1.25**	**159**	P	**Pn**	**15 37 36.7**	**+1.8**
	comp=N,251nm,0.3s,baz=324,slow=11,SNR=1502						
LVC				S	**Sn**	**15 37 54.2**	**+2.1**
	comp=N,1µm,0.3s,baz=194,slow=19,SNR=152						
LVC				LR	LR	15 37 56.7	
	comp=N,23nm,18.6s,baz=135,slow=33						
PB06	**IPOC Station P**	**1.27**	**187**	⇑*i*P	**Pn**	**15 37 35.7**	**+0.7**
PB06				*i* S	**Sn**	**15 37 53.3**	**+1.0**
PB06				IAML		15 37 53.7	
	comp=E,4µm,0.3s						
PB08	**IPOC Station P**	**1.31**	**10**	*e*P	**Pn**	**15 37 36.0**	**+0.3**
PB08				*e*S	**Sn**	**15 37 54.2**	**+0.7**
PB08				IAML		15 37 55.5	
	comp=E,2µm,0.2s						
PB05	**IPOC Station P**	**1.59**	**208**	⇑*i*P	**Pn**	**15 37 39.5**	**+0.5**
PB05				*i* S	**Sn**	**15 38 00.3**	**+0.9**
PB11	**IPOC Station P**	**1.69**	**352**	⇑*i*P	**Pn**	**15 37 40.4**	**+0.1**
PB11				*i* S	**Sn**	**15 38 02.2**	**+0.6**
PB11				IAML		15 38 03.5	
	comp=E,4µm,0.4s						
PB15	**IPOC Station P**	**1.76**	**182**	*e*P	**Pn**	**15 37 42.6**	**+1.4**
PB15				*e*S	**Sn**	**15 38 05.9**	**+2.5**
PSGC	**Pisagua**	**1.96**	**339**	⇑*i*P	**Pn**	**15 37 43.0**	**-0.7**
PSGC				*i* S	**Sn**	**15 38 07.5**	**-0.3**
PSGC				IAML		15 38 11.8	
	comp=N,1µm,0.3s						
LPAZ	**La Paz**	**5.26**	**13**	P	**Pn**	**15 38 31.7**	**+2.9**
	comp=N,1.8nm,0.3s,baz=196,slow=7.8,SNR=24						
LPAZ				LR	LR	15 40 59.6	
	comp=N,47nm,20.3s,baz=204,slow=44						
SIV	**San Ignacio**	**9.56**	**57**	P	**Pn**	**15 39 25.3**	**-1.7**
	comp=N,0.6nm,0.3s,baz=252,slow=12,SNR=9.6						
CFA	**Coronel Fontan**	**10.18**	**174**	P	**Pn**	**15 39 34.2**	**-1.0**
	comp=N,1.7nm,0.3s,baz=319,slow=12,SNR=14						
CFA				S	**Sn**	**15 41 22.2**	**-5.3**
	comp=N,0.3nm,0.3s,baz=176,slow=19,SNR=2.7						
DBIC	**Dimbokro**	**69.15**	**74**	P	**P**	**15 48 08.2**	**-1.3**
	comp=N,3.0nm,0.7s,baz=218,slow=4.8,SNR=4.6						
TORD	**Torodi Ar. Bea**	**77.76**	**71**	P	**P**	**15 48 59.7**	**-0.4**
	comp=N,0.5nm,0.4s,baz=247,slow=5.5,SNR=5.5						
TORD				pP	**pP**	**15 49 22.7**	**-1.2**
	comp=N,0.7nm,0.5s,baz=257,slow=5.4,SNR=3.7						
YKA	**Yellowknife Ar**	**90.98**	**341**	P	**P**	**15 50 06.8**	**+1.1**
	comp=N,0.5nm,0.7s,baz=133,slow=4.5,SNR=12						
YKA				pP	**pP**	**15 50 28.6**	**-1.0**
	comp=N,0.3nm,0.8s,baz=137,slow=4.3,SNR=6.2						
ASAR	**Alice Springs**	**129.75**	**208**	PKP	**PKPdf**	**15 56 12.5**	**+0.6**
	comp=N,0.5nm,0.9s,baz=129,slow=1.5,SNR=3.9						
ZALV	**Zalesovo Beam**	**142.09**	**25**	PKP	**PKPdf**	**15 56 34.0**	**+0.4**
	comp=N,0.3nm,0.3s,baz=298,slow=3.1,SNR=2.7						
MKAR	**Makanchi Array**	**145.85**	**35**	PKPbc	**PKPab**	**15 56 41.9**	**+0.2**
	comp=N,0.4nm,0.6s,baz=329,slow=2.9,SNR=6.6						
MKAR				pPKPbc	pPKPab	15 57 05.6	-0.5
	comp=N,0.6nm,0.7s,baz=0.0,slow=4.9,SNR=4.4						

MAN 04 15:53:43.7,10°.95N×123°.02E,h36km,mb3.8,ML2.5, MS2.1,1D,Cebu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**0.54**	**233**	*e*P	Pn	15 53 56.0	+1.1
RCP	**Roxas**	**0.67**	**336**	⇓*e*P	Pn	15 53 57.6	+0.8
RCP				*e*S	Sn	15 54 02.3	-3.6
MSLP	**Maasin**	**1.98**	**114**	*e*P	Pn	15 54 15.7	+1.0

*IDC **04** 16:00:10.1±4.6,12°.86N×91°.61W,h0km,mb3.3/2, mb1 3.5/5,mb1mx3.4/40,mbtmp3.2/5,ML3.3/3,MS1.9/1, Ms1 1.9/1,ms1mx1.8/22,Error ellipse: s-maj=78.2km s-min=37.9km az=149.0*
*GCG **04** 16:00:16.5±0.6,13°.25N×91°.78W,h36km±999km,MD3.9*

ISC 04 16:00:17.8±2.0,13°.2N±0°.2×91°.81W±0°.07,h35km,n8, σ1§39/13,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STG3	**Santiaguito 3,**	**1.50**	**9**	*e*P	**Pn**	**16 00 41.1**	**-1.4**
STG3				*e*S	**Sn**	**16 01 00.4**	**-0.5**
FUG	**Fuego 3**	**1.54**	**38**	*e*P	**Pn**	**16 00 41.9**	**-1.1**
FUG				*e*S	**Sn**	**16 01 02.4**	**+0.5**
IXG	**Ixpaco**	**1.64**	**54**	*e*P	**Pn**	**16 00 42.6**	**-1.6**
IXG				*e*S	**Sn**	**16 01 03.4**	**-0.8**
APG	**El Apazote**	**2.21**	**36**	Pn	**Pn**	**16 00 52.1**	**0.0**
	4.7nm,0.3s,baz=197,slow=15,SNR=14						
APG				Sn	**Sn**	**16 01 20.4**	**+2.0**
	2.5nm,0.3s,baz=274,slow=19,SNR=2.8						
APG				LR	LR	16 01 41.2	
	comp=Z,21nm,18.6s,baz=124,slow=38						
CMIG	**Matias Romero**	**4.86**	**323**	Pn	**Pn**	**16 01 28.5**	**+0.1**
	0.6nm,0.3s,baz=168,slow=12,SNR=5.4						
CMIG				Sn	**Sn**	**16 02 21.4**	**-2.1**
	0.7nm,0.3s,baz=83,slow=18,SNR=3.3						
TXAR	**Lajitas Array**	**19.45**	**327**	P	**Pn**	**16 04 44.9**	**+2.0**
	0.1nm,0.3s,baz=144,slow=11,SNR=2.7						
YKA	**Yellowknife Ar**	**51.82**	**347**	P	**P**	**16 09 22.2**	**+0.1**
	0.2nm,0.6s,baz=148,slow=7.6,SNR=4.2						
ILAR	**Eielson Array**	**63.62**	**337**	P	**P**	**16 10 45.0**	**0.0**
	0.3nm,0.9s,baz=120,slow=5.3,SNR=3.2						

*NIED **04** 16:10:00,47°.20N×153°.70E,h35km,Mw4.5 Best double couple: M0 7.28000×10^15 NP1:φs126.00000°,δ69.00000°, λ-31.00000°. NP2:φs229.00000°,δ61.00000°, λ-155.00000°.*
*BJI **04** 16:10:15.0±0.0,47°.48N×153°.36E,h53km,mB5.0/44, mb4.6/55,Ms4.5/23,Ms7 4.2/22*
*JMA **04** 16:10:15.2±0.9,47°.22N×153°.70E,h30km,M4.9*
*SKHL **04** 16:10:17.9±0.2,47°.10N×153°.70E,h79km±5km,mb5.2/14*
*MOS **04** 16:10:18.4±1.0,47°.26N×153°.26E,h73km,mb4.9/30, MS3.5/6,Error ellipse: s-maj=6.9km s-min=4.8km az=82.3*
*NEIC **04** 16:10:19.6±1.7,47°.29N±0°.08×153°.1E±0°.1,h67km±3km, mb4.9/79,Error ellipse: s-maj=14.4km s-min=9.0km az=124.0*
*IDC **04** 16:10:22.3±2.0,47°.42N×153°.08E,h88km±17km,mb4.2/26, mb1 4.3/31,mb1mx4.2/40,mbtmp4.5/31,MS3.8/29, Ms1 3.8/29,ms1mx3.7/39,Error ellipse: s-maj=13.7km s-min=8.7km az=143.0*
*GCMT **04** 16:10:22.6±0.5,47°.13N±0°.04×153°.27E±0°.05,h56km±2km, MW4.8/53,Moment Tensor Solution. s31,c40; s53,c74; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 1.61±.15; Mθθ -0.59±.12; Mφφ -1.02±.11; Mrθ 0.38±.09; Mθφ -0.93±.07; Mφr 0.58±.07; Best double couple: M0 1.82100×10^16 NP1:φs221.00000°,δ34.00000°,λ94.00000°. NP2: φs36.00000°,δ56.00000°,λ87.00000°. Principal axes: T 1.7480, Plg79.0000°, Azm297.0000°; N 0.1460, Plg2.0000°, Azm38.0000°; P -1.8940, Plg11.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 16:10:20.0±0.5,47°.23N±0°.04×153°.26E±0°.04,h72km±3km, h72km:pP-P,n576,σ1§49/597,mb4.8/142,55C-42D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.93**	**28**	*e*PN	**Pn**	**16 11 16.1**	**-1.7**
SKR				*e*S	**Sn**	**16 11 58.7**	**-3.9**
SKR				pmax	pmax		
	comp=Z,289nm,0.6s						
SKR				smax	smax		
	comp=E,1µm,0.5s						
SKR				smax	smax		
	comp=N,888nm,0.7s						
SKR				MLR	MLR		
	comp=Z,300nm,17.0s						
SKR	**Severo-Kuril's**	**3.93**	**28**	*e*P	**Pn**	**16 11 15.7**	**-2.1**
SKR				AMB	AMB	16 11 20.0	
	comp=Z,290nm,0.6s						
SKR				*e*S	**Sn**	**16 11 58.9**	**-3.7**
SKR				A	A	16 12 10.0	
	comp=Z,890nm,0.7s						
SKR				A	A	16 12 10.0	
	comp=Z,1µm,0.7s						
KUR	**Kuril'sk**	**4.24**	**244**	*d*iPN	**Pn**	**16 11 23.6**	**+1.5**
KUR				*i* S	**Sn**	**16 12 12.7**	**+2.4**
KUR				pmax	pmax		
	comp=Z,665nm,0.7s						
KUR				pmax	pmax		
	comp=E,163nm,0.5s						
KUR				pmax	pmax		
	comp=N,46nm,0.1s						
KUR				smax	smax		
	comp=E,2µm,1.3s						
KUR				smax	smax		
	comp=N,3µm,1.2s						
KUR				smax	smax		
	comp=E,799nm,0.7s						
KUR				smax	smax		
	comp=N,601nm,0.8s						
KUR	**Kuril'sk**	**4.24**	**244**	⇑*i*P	**Pn**	**16 11 23.7**	**+1.6**
KUR				AMB	AMB	16 11 25.0	
	comp=N,150nm,0.8s						
KUR				AMB	AMB	16 11 25.0	
	comp=N,510nm,0.8s						
KUR				*i* S	**Sn**	**16 12 13.2**	**+2.9**
KUR				A	A	16 12 21.0	
	comp=N,3µm,1.5s						
KUR				A	A	16 12 21.0	
	comp=N,2µm,1.5s						
KUR				A	A	16 12 27.0	
	comp=N,600nm,0.8s						
KUR				A	A	16 12 27.0	
	comp=N,800nm,0.8s						
PAU	**Pauzhetka**	**4.83**	**27**	*e*P	**Pn**	**16 11 28.8**	**-1.2**
PAU				*e*S	**Sn**	**16 12 20.8**	**-3.8**
SHO	**Shikotan**	**5.63**	**236**	*d*iPN	**Pn**	**16 11 39.7**	**-1.2**
SHO				*e*S	**Sn**	**16 12 44.6**	**+0.4**
SHO				pmax	pmax		
	comp=Z,105nm,0.3s						
SHO				pmax	pmax		
	comp=N,29nm,0.2s						
SHO				pmax	pmax		
	comp=E,56nm,0.2s						
SHO				smax	smax		
	comp=N,402nm,0.3s						
SHO				smax	smax		
	comp=E,386nm,0.5s						
SHO				smax	smax		
	comp=E,486nm,1.9s						
SHO				smax	smax		
	comp=N,695nm,1.1s						
SHO	**Shikotan**	**5.63**	**236**	⇓*i*P	**Pn**	**16 11 39.8**	**-1.2**
SHO				AMB	AMB	16 11 42.5	
	comp=N,600nm,3.0s						
SHO				AMB	AMB	16 11 51.0	
	comp=N,30nm,0.3s						
SHO				AMB	AMB	16 11 51.0	
	comp=N,110nm,0.3s						
SHO				⇓*i*S	**Sn**	**16 12 43.0**	**-1.2**
SHO				A	A	16 12 48.0	
	comp=N,800nm,3.0s						
SHO				A	A	16 12 48.0	
	comp=N,800nm,3.0s						
SHO				A	A	16 13 04.0	
	comp=N,400nm,0.5s						
SHO				A	A	16 13 04.0	
	comp=N,390nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**6.09**	**241**	*c i*PN	**Pn**	**16 11 48.3**	**+1.0**
YUK				*e*S	**Sn**	**16 12 57.3**	**+1.7**
YUK				pmax	pmax		
	comp=Z,333nm,0.5s						
YUK				pmax	pmax		
	comp=N,158nm,0.2s						
YUK				pmax	pmax		
	comp=E,190nm,0.4s						
YUK				pmax	pmax		
	comp=Z,885nm,1.2s						
YUK				smax	smax		
	comp=E,627nm,0.6s						
YUK				smax	smax		
	comp=N,342nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**6.09**	**241**	⇑*i*P	**Pn**	**16 11 48.4**	**+1.1**
YUK				AMB	AMB	16 11 52.0	
	comp=N,900nm,1.5s						
YUK				AMB	AMB	16 11 59.0	
	comp=N,160nm,0.6s						
YUK				AMB	AMB	16 11 59.0	
	comp=N,190nm,0.6s						
YUK				AMB	AMB	16 11 59.0	
	comp=N,330nm,0.6s						
YUK				*e*S	**Sn**	**16 12 57.3**	**+1.7**
YUK				A	A	16 13 17.0	
	comp=N,340nm,0.6s						
YUK				A	A	16 13 17.0	
	comp=N,630nm,0.6s						
GLVR	**Golovnino**	**6.47**	**240**	*e*PN	**Pn**	**16 11 52.7**	**+0.3**
GLVR				*e*S	**Sn**	**16 13 07.8**	**+3.1**
GLVR				pmax	pmax		
	comp=Z,288nm,0.5s						
GLVR				pmax	pmax		
	comp=N,203nm,0.4s						
GLVR				pmax	pmax		
	comp=E,110nm,0.3s						
GLVR	**Golovnino**	**6.47**	**240**	*e*P	**Pn**	**16 11 52.0**	**-0.4**
GLVR				AMB	AMB	16 11 58.0	
	comp=E,290nm,0.6s						
GLVR				AMB	AMB	16 11 58.0	
	comp=E,200nm,0.4s						
GLVR				AMB	AMB	16 11 58.0	
	comp=E,110nm,0.4s						
PEA0B	**Petropavlovsk-**	**6.53**	**24**	⇓*i*PN	**Pn**	**16 11 52.4**	**-0.9**
PEA0B	**Petropavlovsk-**	**6.53**	**24**	P	**Pn**	**16 11 53.0**	**-0.3**
PETK	**Petropavlovsk-**	**6.53**	**24**	P	**Pn**	**16 11 52.3**	**-1.0**
	comp=E,4.4nm,0.3s,baz=177,slow=12,SNR=92						
PETK				S	**Sn**	**16 13 06.8**	**+0.4**
	baz=141,slow=18,SNR=1.7						
PETK				LR	LR	16 14 09.3	
	comp=E,525nm,20.8s,baz=211,slow=35						
PETK	**Petropavlovsk-**	**6.53**	**24**		**Pn**	**16 11 52.5**	**-0.8**
NEM2	**Nemuro 2**	**6.56**	**237**	P	**Pn**	**16 11 52.2**	**-1.5**
NEM2				*e*S	**Sn**	**16 13 03.4**	**-3.6**
NMR	**Nemuro--Hokkai**	**6.57**	**237**	⇑*i*PN	**Pn**	**16 11 52.2**	**-1.6**
NMR	**Nemuro--Hokkai**	**6.57**	**237**	⇑*i*P	**Pn**	**16 11 52.0**	**-1.8**
JRA	**Rausu**	**6.59**	**243**	P	**Pn**	**16 11 55.5**	**+1.4**
PET	**Petropavlovsk**	**6.75**	**29**	*e*PN	**Pn**	**16 11 57.8**	**+1.5**
PET				pmax	pmax		
	comp=Z,62nm,0.6s						
PET				MLR	MLR		
	comp=Z,500nm,20.0s						
PET	**Petropavlovsk**	**6.75**	**29**	⇑*i*P	**Pn**	**16 11 55.3**	**-1.0**
PET				AMB	AMB	16 12 00.4	
	comp=Z,50nm,0.6s						
PET				⇓*i*S	**Sn**	**16 13 06.5**	**-5.1**
PET				A	A	16 13 13.7	
	comp=Z,250nm,0.5s						
PET				A	A	16 13 13.7	
	comp=Z,200nm,0.5s						
JNK	**Nakash**	**7.03**	**242**	P	**Pn**	**16 11 59.8**	**-0.3**
JNK				*e*S	**Sn**	**16 13 19.7**	**+1.1**
YSS	**Yuzh-Sakhalins**	**7.18**	**272**	⇑*i*PN	**Pn**	**16 12 05.3**	**+3.2**
YSS				*e*S	**Sn**	**16 13 25.4**	**+3.3**
YSS				pmax	pmax		
	comp=Z,340nm,0.8s						
YSS				smax	smax		
	comp=N,60nm,0.9s						
YSS				smax	smax		
	comp=E,60nm,1.2s						
YSS				MLR	MLR		
	comp=N,700nm,17.0s						
YSS				MLR	MLR		
	comp=Z,1µm,17.0s						
YSS				MLR	MLR		
	comp=E,500nm,12.0s						
YSS	**Yuzh-Sakhalins**	**7.18**	**272**	⇓*i*P	**Pn**	**16 12 05.1**	**+3.0**
YSS				AMB	AMB	16 12 05.7	
	comp=E,340nm,0.8s						
YSS				*e*S	**Sn**	**16 13 24.7**	**+2.6**
YSS				A	A	16 13 28.0	
	comp=E,60nm,0.9s						
YSS				A	A	16 13 28.0	
	comp=E,60nm,0.9s						
YSS	**Yuzh-Sakhalins**	**7.18**	**272**		**Pn**	**16 12 05.1**	**+3.0**
JTKR	**Abashiri--Toko**	**7.33**	**247**	P	**Pn**	**16 12 05.8**	**+1.7**
JAK	**Akkeshi**	**7.39**	**238**	P	**Pn**	**16 12 03.5**	**-1.5**
JAK				*e*S	**Sn**	**16 13 22.9**	**-4.4**
JMP	**Maruseppu**	**7.65**	**249**	P	**Pn**	**16 12 10.8**	**+2.1**
UGL	**Uglegorsk**	**7.71**	**288**	*e*PN	**Pn**	**16 12 10.8**	**+1.4**
UGL				pmax	pmax		
	comp=Z,317nm,0.8s						
UGL	**Uglegorsk**	**7.71**	**288**	⇓*e*P	**Pn**	**16 12 12.8**	**+3.4**
UGL				AMB	AMB	16 12 13.4	
	comp=Z,250nm,1.0s						
UGL				*e*S	**Sn**	**16 13 39.5**	**+4.4**
UGL				A	A	16 13 54.7	
	comp=Z,200nm,1.0s						
JAR	**Ashorobuto**	**7.76**	**243**	P	**Pn**	**16 12 10.9**	**+0.7**
JAR				*e*S	**Sn**	**16 13 36.6**	**+0.1**
TYV	**Tymovskoe**	**7.86**	**301**	*e*PN	**Pn**	**16 12 13.4**	**+2.0**
TYV				*e*S	**Sn**	**16 13 39.4**	**+0.8**
TYV				pmax	pmax		
	comp=Z,800nm,3.9s						
TYV				pmax	pmax		
	comp=Z,129nm,0.9s						
TYV				smax	smax		
	comp=N,24nm,0.8s						
TYV				smax	smax		
	comp=E,700nm,4.3s						
TYV	**Tymovskoe**	**7.86**	**301**	⇓*e*P	**Pn**	**16 12 13.4**	**+2.0**
TYV				AMB	AMB	16 12 16.0	
	comp=E,800nm,4.0s						
TYV				AMB	AMB	16 12 16.1	
	comp=E,130nm,0.8s						
TYV				*e*S	**Sn**	**16 13 43.0**	**+4.4**
TYV				A	A	16 13 48.7	
	comp=E,30nm,0.7s						
TYV				A	A	16 13 48.7	
	comp=E,60nm,0.7s						
TYV				A	A	16 13 51.9	
	comp=E,200nm,9.0s						
JOB	**Onbets**	**7.95**	**240**	P	**Pn**	**16 12 12.0**	**-0.7**
JOB				*e*S	**Sn**	**16 13 38.3**	**-2.8**
JKA	**Kamikawa-asahi**	**8.09**	**251**	*e*P	**Pn**	**16 12 17.3**	**+2.7**
JKA	**Kamikawa-asahi**	**8.09**	**251**		**Pn**	**16 12 17.3**	**+2.7**
ASAJ	**Asahikawa**	**8.09**	**251**	P	**Pn**	**16 12 17.7**	**+3.1**
ASAJ	**Asahikawa**	**8.09**	**251**	P	**Pn**	**16 12 17.3**	**+2.7**
	comp=E,2.7nm,0.3s,baz=62,slow=15,SNR=19						
ASAJ				LR	LR	16 15 10.7	
	comp=E,676nm,20.4s,baz=45,slow=36						
JWK2	**Keihoku**	**8.10**	**260**	P	**Pn**	**16 12 19.2**	**+4.4**
JKK2	**Kamakawa 2**	**8.11**	**249**	P	**Pn**	**16 12 17.1**	**+2.3**
JCH	**Churui**	**8.40**	**240**	P	**Pn**	**16 12 17.7**	**-1.2**
JCH				*e*S	**Sn**	**16 13 49.4**	**-2.7**
JFR	**Furan**	**8.56**	**245**	P	**Pn**	**16 12 22.8**	**+1.8**
JAB	**Ashibetsu**	**8.62**	**248**	P	**Pn**	**16 12 24.5**	**+2.7**
JRBN	**Rebuntou**	**8.63**	**262**	P	**Pn**	**16 12 26.0**	**+4.0**
ERM	**Erimo**	**8.89**	**238**	⇓*e*PN	**Pn**	**16 12 25.4**	**-0.2**
JBT2	**Biratori 2**	**8.91**	**244**	P	**Pn**	**16 12 24.7**	**-1.1**
JNBK	**Urakawa-nobuka**	**8.96**	**240**	P	**Pn**	**16 12 24.5**	**-2.0**
OKH	**Okha**	**9.13**	**318**	*de*PN	**Pn**	**16 12 28.8**	**+0.1**

OKH eS Sn 16 14 11.3 +1.6
OKH pmax pmax
comp=Z,200nm,15.7s
OKH MLR MLR
comp=Z,600nm,16.0s
OKH Okha 9.13 318 *e*P **Pn** **16 12 31.9 +3.2**
OKH AMB AMB 16 12 33.0
comp=Z,700nm,4.0s
OKH eS **Sn** **16 14 14.2 +4.5**
JNB Noboribetsu 9.90 246 P **Pn** **16 12 38.7 -0.6**
JNB eS **Sn** **16 14 27.7 -0.9**
JKB Kayabe 10.23 243 P **Pn** **16 12 41.8 -2.0**
JKB eS **Sn** **16 14 31.2 -5.5**
JSH Shimam 10.43 249 P **Pn** **16 12 46.8 +0.3**
JYM2 Yakumo 2 10.51 246 P **Pn** **16 12 46.5 -1.1**
JANG Nango 10.90 235 P **Pn** **16 12 48.8 -4.2**
GRNR Gornyy 11.61 294⇑ *i*PN **Pn** **16 13 05.3 +2.7**
GRNR eS **Sn** **16 15 17.6 +7.3**
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR smax smax
comp=N,3.0nm,0.9s
GRNR MLR MLR
comp=Z,420nm,13.0s
GRNR Gornyy 11.61 294⇓ *i*P **Pn** **16 13 05.3 +2.7**
GRNR AMB AMB 16 13 06.6
comp=Z,30nm,1.0s
OFUJ Ofunato 11.74 230 P **Pn** **16 12 59.8 -4.6**
OFUJ eS Sn 16 15 02.1 -11
TEY Ternei 11.77 265⇑ *i*P **Pn** **16 13 04.8 +0.1**
TEY AMB AMB 16 13 10.8
comp=Z,20nm,0.6s
JRG Rokugo 12.07 234 P **Pn** **16 13 05.7 -3.2**
MA2 Magadan 12.45 354 *d i*PN **Pn** **16 13 13.3 -0.7**
MA2 pmax pmax
comp=Z,51nm,1.7s
MA2 Magadan 12.45 354 P **Pn** **16 13 13.5 -0.5**
comp=Z,9.1nm,0.3s,baz=162,slow=14,SNR=43
MA2 Magadan 12.45 354⇓ *i*P **Pn** **16 13 13.3 -0.7**
EKMR Ekimchan 14.25 302 *e*P **Pn** **16 13 39.2 +1.3**
EKMR AMB AMB 16 13 45.3
comp=Z,10.0nm,0.7s
KLR Kul'dur 14.47 286⇓ *e*P **P** **16 13 43.8 -1.8**
KLR pmax pmax
comp=Z,21nm,0.9s
KLR Kul'dur 14.47 286 P **Pn** **16 13 43.2 +2.4**
comp=Z,0.6nm,0.3s,baz=94,slow=11,SNR=19
KLR Kul'dur 14.47 286⇓ *e*P **P** **16 13 43.8 -1.8**
USA0B Ussuriysk Arra 15.16 266 P **Pn** **16 13 45.1 -4.7**
USA0B pmax pmax
comp=Z,24nm,0.9s
USA0B Ussuriysk Arra 15.16 266 **Pn** **16 13 45.1 -4.7**
USRK Ussuriysk Ar. 15.16 266 P **Pn** **16 13 50.0 +0.2**
USRK Ussuriysk Ar. 15.16 266 P **Pn** **16 13 50.0 +0.2**
baz=66,slow=11,SNR=27
USRK LR LR 16 19 21.2
comp=Z,281nm,19.4s,baz=57,slow=36
USRK Ussuriysk Ar. 15.16 266 **Pn** **16 13 49.5 -0.2**
MJAR Matsushiro Arr 15.46 232 P **Pn** **16 13 53.9 +0.3**
MJAR pmax pmax
comp=Z,18nm,0.9s
MJAR Matsushiro Arr 15.46 232 P **Pn** **16 13 51.6 -2.0**
comp=Z,0.1nm,0.3s,baz=33,slow=16,SNR=18
MJAR LR LR 16 20 31.3
comp=Z,66nm,19.7s,baz=80,slow=39
MJAR Matsushiro Arr 15.46 232 P **Pn** **16 13 53.9 +0.3**
MJB9 Matsu-Tunnel 15.46 232 **Pn** **16 13 51.4 -2.3**
MJB9 IAmb IAmb 16 13 59.8
comp=Z,69nm,1.1s
MAJO Matsushiro 15.46 232⇓ *e*P **Pn** **16 13 51.9 -1.7**
MAJO pmax pmax
comp=Z,50nm,2.7s
MAJO Matsushiro 15.46 232 **Pn** **16 13 50.6 -3.0**
MAJO IAmb IAmb 16 13 59.8
comp=Z,68nm,1.1s
MAT Matsushiro 15.46 232 P **Pn** **16 13 51.0 -2.6**
MAT eS **Sn** **16 16 37.2 -6.7**
VLA Vladivostok 15.61 263⇑ *e*P **Pn** **16 13 56.9 +1.4**
VLA pmax pmax
comp=Z,38nm,0.8s
VLA Vladivostok 15.61 263⇑ *e*P **Pn** **16 13 56.9 +1.4**
SEY Seymchan 15.74 359⇑ *e*P **Pn** **16 13 58.2 +1.2**
SEY Seymchan 15.74 359 P **Pn** **16 13 56.4 -0.6**
comp=Z,2.0nm,0.3s,baz=186,slow=14,SNR=32
SEY Seymchan 15.74 359⇑ *e*P **Pn** **16 13 58.2 +1.2**
MDJ Mudanjiang 16.66 270 P **Pn** **16 14 05.7 -3.0**
MDJ pP P 16 14 15.9 +6.0
MDJ sP pP 16 14 23.0 -1.4
MDJ pmax pmax
comp=Z,12nm,0.9s
MDJ pmax pmax
comp=Z,160nm,5.1s
MDJ Mudanjiang 16.66 270 P **Pn** **16 14 08.5 -0.2**
INU Inuyama 16.99 231 **Pn** **16 14 08.5 -4.3**
BMKR Bomnak 17.04 305 *e*P **P** **16 14 14.0 0.0**
BMKR AMB AMB 16 14 17.2
comp=Z,20nm,0.5s
ZEA Zeya 17.72 301 *e*P **Pn** **16 14 22.9 +1.3**
ZEA pmax pmax
comp=Z,20nm,1.0s
ZEA MLR MLR
comp=Z,600nm,18.0s
ZEA MLR MLR
comp=E,400nm,17.0s
ZEA Zeya 17.72 301 *e*P **Pn** **16 14 22.2 +0.6**
ZEA AMB AMB 16 14 24.0
comp=E,20nm,1.0s
KROS Kirovskiy 18.02 303⇑ *e*P **Pn** **16 14 25.9 +0.6**
KROS AMB AMB 16 14 28.8
comp=E,10.0nm,0.5s
CN2 Changchun 19.74 270 *e*P **P** **16 14 42.4 -1.3**
CN2 eS **S** **16 18 14.7 -7.6**
CN2 pmax pmax
comp=E,10.0nm,0.9s
CN2 pmax pmax
comp=E,100nm,6.0s
CN2 LR LR
comp=E,200nm,17.0s
CN2 LR LR
comp=E,300nm,17.0s
CN2 LR LR
comp=E,400nm,17.0s
YAK Yakutsk 19.97 326 *e*P **P** **16 14 45.9 -0.1**
YAK eS **S** **16 18 25.1 -1.3**
YAK pmax pmax
comp=Z,22nm,1.1s
YAK pmax pmax
comp=N,9.0nm,1.1s
YAK pmax pmax
comp=E,14nm,1.3s
YAK smax smax
comp=E,57nm,3.3s
YAK smax smax
comp=N,117nm,3.2s
YAK Yakutsk 19.97 326 P **P** **16 14 45.4 -0.6**
comp=N,0.1nm,0.3s,baz=189,slow=0.3,SNR=12
YAK Yakutsk 19.97 326 P **P** **16 14 46.9 +0.9**
KSRS Korea Array 21.04 252 P **P** **16 14 58.8 +1.1**
comp=N,17nm,0.9s,baz=54,slow=10,SNR=23
KSRS LR LR 16 21 57.9
comp=N,156nm,20.4s,baz=44,slow=33
KS19 Wonju Array Si 21.05 252 P **P** **16 14 54.2 -3.7**
KSAR Wonju Array Be 21.07 252 P **P** **16 14 55.7 -2.4**
KSAR Wonju Array Be 21.07 252 P **P** **16 14 55.7 -2.4**
BILL Bilibino 21.90 13 *e*P **P** **16 15 05.3 -1.4**
BILL *e**SP **sP** **16 15 28.0 -1.9**
BILL *e* 16 19 01.2
BILL pmax pmax
comp=Z,7.0nm,0.9s
BILL MLR MLR
comp=Z,280nm,18.0s
BILL Bilibino 21.90 13 *e*P **P** **16 15 05.3 -1.4**
BILL Bilibino 21.90 13 P **P** **16 15 04.6 -2.0**
JNU Nakatsue 22.06 238 P **P** **16 15 09.5 +0.8**
comp=Z,21nm,1.0s,baz=7.6,slow=4.2,SNR=5.2
JNU Nakatsue 22.06 238 IAmb IAmb 16 15 12.1
comp=Z,28nm,1.0s
BOD Bodaibo 25.76 309 *e*P **P** **16 15 40.7 -2.8**
BOD pmax pmax
comp=Z,8.0nm,1.7s
TIXI Tiksi 27.03 343⇓ *e*P **P** **16 15 54.5 -0.3**
TIXI pmax pmax
comp=Z,7.0nm,1.4s
TIXI Tiksi 27.03 343 LR LR 16 27 44.6
comp=Z,197nm,19.1s,baz=156,slow=39

TIXI Tiksi 27.03 343⇓ *e*P **P** **16 15 54.5 -0.3**
ANM Nome 28.24 37 P **P** **16 16 05.9 +0.2**
ANM pmax pmax
comp=Z,7.0nm,0.7s
ANM Nome 28.24 37 P **P** **16 16 05.9 +0.2**
H11N2 WAKE ISLAND Hy 29.61 153 T T 16 48 10.0
baz=341,slow=76
H11N1 WAKE ISLAND Hy 29.62 153 T T 16 48 13.5
baz=341,slow=76
H11N3 WAKE ISLAND Hy 29.62 153 T T 16 48 20.9
baz=341,slow=76
NJ2 Nanjing 30.24 252 *e*P **P** **16 16 21.5 -2.2**
NJ2 pmax pmax
comp=Z,11nm,0.5s
RDOG Red Dog Mine 30.35 31 P **P** **16 16 24.6 +0.2**
RDOG IAmb IAmb 16 16 39.9
comp=Z,13nm,0.7s
HHC Hu-ho-hao-te 30.36 273 *e*P **P** **16 16 23.4 -1.5**
HHC pP pP 16 16 38.1 -3.8
HHC S **S** **16 21 18.0 -2.1**
HHC pmax pmax
comp=Z,5.0nm,0.9s
HHC pmax pmax
comp=Z,150nm,5.0s
HHC LR LR
comp=Z,140nm,7.7s
HHC LR LR
comp=Z,120nm,7.2s
HHC LR LR
comp=Z,140nm,9.4s
H11S1 WAKE ISLAND Hy 30.70 154 T T 16 49 11.9
baz=342,slow=76
H11S3 WAKE ISLAND Hy 30.71 154 T T 16 49 16.2
baz=342,slow=76
H11S2 WAKE ISLAND Hy 30.72 154 T T 16 49 31.8
baz=342,slow=76
ULN Ulaanbaatar 30.84 289⇑ *e*P **P** **16 16 29.5 +0.4**
ULN pmax pmax
comp=Z,9.0nm,2.5s
ULN Ulaanbaatar 30.84 289⇑ *e*P **P** **16 16 29.5 +0.4**
SONM Songino Array 31.27 289 P **P** **16 16 32.5 -0.3**
comp=Z,1.3nm,0.9s,baz=64,slow=7.9,SNR=7.6
SONM PcP **PcP** **16 19 25.8 +0.4**
comp=Z,1.4nm,0.8s,baz=95,slow=1.4,SNR=6.1
SONM LR LR 16 30 00.8
comp=Z,259nm,18.4s,baz=36,slow=38
SONM Songino Array 31.27 289 IAmb IAmb 16 16 33.9
comp=Z,1.1nm,0.8s
TLY Talaya 32.05 297 LR LR 16 30 39.2
comp=Z,253nm,18.6s,baz=52,slow=38
IMAR Indian Mountai 33.32 37 P **P** **16 16 50.8 +0.4**
IMAR PcP **PcP** **16 19 31.8 +1.2**
WHN Wuhan 34.15 255⇑ P **P** **16 16 59.4 +1.4**
WHN pmax pmax
comp=Z,30nm,0.5s
KTH Kantishna Hill 34.33 41 P **P** **16 17 00.2 +0.9**
KTH IAmb IAmb 16 17 02.0
comp=Z,16nm,1.0s
COLD Coldfoot 34.88 35 P **P** **16 17 03.2 -0.7**
MCK McKinley 35.22 41 P **P** **16 17 06.3 -0.6**
MCK pmax pmax
comp=Z,21nm,1.2s
MCK McKinley 35.22 41 P **P** **16 17 06.3 -0.6**
MCK IAmb IAmb 16 17 10.3
comp=Z,21nm,1.2s
RND Reindeer 35.26 41 P **P** **16 17 06.7 -0.6**
RND pmax pmax
comp=Z,8.0nm,0.9s
RND Reindeer 35.26 41 P **P** **16 17 06.7 -0.6**
RND IAmb IAmb 16 17 09.4
comp=Z,7.7nm,0.9s
TOLK Toolik Lake Re 35.28 32 P **P** **16 17 08.0 +0.6**
TOLK Toolik Lake Re 35.28 32 P **P** **16 17 08.1 +0.6**
baz=263,SNR=9.7
KNK Knik Glacier 35.52 45 P **P** **16 17 09.8 +0.3**
KNK IAmb IAmb 16 17 21.8
comp=Z,23nm,1.0s
XAN Xi'an 35.66 265 P **P** **16 17 11.4 +0.4**
XAN pP pP 16 17 20.3 -7.8
XAN pmax pmax
comp=Z,12nm,1.0s
TCOL CIGO, UAF Yank 35.69 39 P **P** **16 17 12.0 +1.1**
baz=270,SNR=6.8
COLA College 35.70 39⇑ *i*P **P** **16 17 11.6 +0.7**
COLA pmax pmax
comp=Z,12nm,0.9s
COLA College 35.70 39 P **P** **16 17 11.9 +1.1**
COLA IAmb IAmb 16 17 13.7
comp=Z,12nm,0.6s
CCB Clear Creek Bu 35.71 39 P **P** **16 17 12.0 +0.9**
CCB IAmb IAmb 16 17 27.7
comp=Z,13nm,1.4s
POKR Poker Plat Res 35.88 38 P **P** **16 17 13.8 +1.3**
baz=270,SNR=9.9
DHY Denali Highway 35.93 42 P **P** **16 17 13.5 +0.3**
DHY IAmb IAmb 16 17 18.6
comp=Z,14nm,1.2s
HDA Harding Lake 36.09 40 P **P** **16 17 14.8 +0.6**
HDA IAmb IAmb 16 17 30.4
comp=Z,33nm,1.4s
HDA Harding Lake 36.09 40 P **P** **16 17 14.7 +0.4**
baz=271,SNR=5.1
IL31 36.11 39 P **P** **16 17 14.9 +0.5**
ILAR Eielson Array 36.11 39 P **P** **16 17 14.8 +0.4**
ILAR Eielson Array 36.11 39 P **P** **16 17 14.3 -0.1**
comp=Z,3.0nm,0.9s,baz=259,slow=9.3,SNR=46
ILAR LR LR 16 35 32.2
comp=Z,74nm,18.1s,baz=304,slow=42
ILAR Eielson Array 36.11 39 P **P** **16 17 14.8 +0.4**
FYU Fort Yukon 36.80 36 P **P** **16 17 21.9 +1.7**
BMAR Burnt Mountain 37.06 34 P **P** **16 17 24.1 +1.5**
DOT Dot Lake 37.39 41 P **P** **16 17 25.3 -0.1**
DOT IAmb IAmb 16 17 40.9
comp=Z,4.8nm,0.6s
LZH Lanzhou 37.98 271 *e*P **P** **16 17 30.9 +0.1**
LZH pP pP 16 17 41.9 -6.0
LZH sP sP 16 17 48.5 -7.6
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,62nm,4.3s
LZH LR LR
comp=Z,350nm,14.1s
LZH LR LR
comp=Z,250nm,14.3s
LZH LR LR
comp=Z,400nm,15.5s
CRQM Cirque 38.16 45 P **P** **16 17 32.2 +0.2**
BCAR Beaver Creek A 38.47 42 P **P** **16 17 35.9 +1.4**
EGAK Eagle 38.56 39 P **P** **16 17 35.3 +0.1**
EGAK IAmb IAmb 16 17 50.9
comp=Z,9.2nm,0.7s
GTA Gaotai 38.99 279 *e*P **P** **16 17 40.1 +0.8**
GTA pP pP 16 17 56.5 -0.1
GTA PcP **PcP** **16 19 49.6 +1.4**
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,170nm,4.8s
GTA LR LR
comp=Z,170nm,15.2s
GTA LR LR
comp=Z,150nm,16.5s
GTA LR LR
comp=Z,240nm,16.2s
EPYK Eagle Plains 40.22 36 IAmb IAmb 16 18 05.8
comp=Z,13nm,0.7s
EPYK Eagle Plains 40.22 36 P **P** **16 17 50.4 +1.4**
baz=279
HYT Haines Junctio 40.86 44 P **P** **16 17 55.1 +0.6**
CD2 Chengdu 41.02 265 P **P** **16 17 52.9 -3.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
INK Inuvik 41.19 33 P **P** **16 17 57.5 +0.7**
comp=Z,13nm,0.7s,baz=289,slow=7.7,SNR=22
INK Inuvik 41.19 33 P **P** **16 17 58.2 +1.4**
INK IAmb IAmb 16 17 59.0
comp=Z,14nm,0.8s
GYA Guiyang 41.92 257⇑ *i*P **P** **16 18 04.0 +0.5**
GYA pmax pmax
comp=Z,10.0nm,0.9s
ZALV Zalesovo Beam 42.41 305 P **P** **16 18 04.9 -2.1**
comp=Z,1.3nm,0.5s,baz=63,slow=7.4,SNR=7.1
ZALV PcP **PcP** **16 19 59.0 +0.2**
comp=Z,1.6nm,0.3s,baz=79,slow=2.3,SNR=10.0
ZALV LR LR 16 37 03.0
comp=Z,208nm,18.9s,baz=43,slow=38
C36M Paulatuk 44.35 30 P **P** **16 18 23.4 +1.0**
C36M IAmb IAmb 16 18 24.3
comp=Z,34nm,1.1s
C36M Paulatuk 44.35 30 P **P** **16 18 23.4 +1.0**
baz=285,SNR=19
WMQ Urumqi 44.84 291 *e*P **P** **16 18 27.1 +0.3**
WMQ pP pP 16 18 41.9 -2.6
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ pmax pmax
comp=Z,110nm,6.5s
WMQ LR LR
comp=Z,720nm,29.0s
WMQ LR LR
comp=Z,750nm,28.9s
WMQ LR LR
comp=Z,180nm,22.9s
DLBC Dease Lake 45.19 46 P **P** **16 18 29.4 +0.1**
comp=Z,2.4nm,0.4s,baz=270,slow=4.0,SNR=4.7
DLBC Dease Lake 45.19 46 IAmb IAmb 16 18 44.4
comp=Z,16nm,1.1s
KMI Kunming 45.43 259 P **P** **16 18 32.2 +0.4**
KMI pmax pmax
comp=Z,17nm,1.0s
MK31 Makanchi Array 46.81 297 P **P** **16 18 41.0 -1.2**
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MK31 Makanchi Array 46.81 297 P **P** **16 18 41.0 -1.2**
MKAR Makanchi Array 46.81 297 P **P** **16 18 41.1 -1.0**
comp=Z,2.0nm,0.7s,baz=68,slow=9.1,SNR=16
MKAR PcP **PcP** **16 20 13.2 -0.9**
comp=Z,2.6nm,0.7s,baz=68,slow=4.3,SNR=6.3
MKAR LR LR 16 39 31.5
comp=Z,130nm,19.8s,baz=51,slow=38
MKAR Makanchi Array 46.81 297 P **P** **16 18 40.9 -1.3**
KURK Kurchatov 47.18 303 *de*P **P** **16 18 43.6 -1.3**
KURK pmax pmax
comp=Z,6.0nm,0.8s
KURK Kurchatov 47.18 303⇓ *e*P **P** **16 18 43.6 -1.3**
KURK Kurchatov 47.18 303 P **P** **16 18 43.2 -1.7**
KURK Kurchatov 47.18 303 **PcP** **16 20 15.1 -0.2**
KURBB Kurchatov Arra 47.27 303 PcP **PcP** **16 20 15.1 -0.6**
comp=Z,2.5nm,0.8s,baz=64,slow=3.7,SNR=5.7
RES Resolute Bay 50.34 19 P **P** **16 19 09.4 +0.6**
RES pmax pmax
comp=Z,4.0nm,0.9s
RES Resolute Bay 50.34 19 P **P** **16 19 08.9 +0.1**
comp=Z,2.8nm,0.5s,baz=136,slow=3.4,SNR=6.4
RES Resolute Bay 50.34 19 P **P** **16 19 09.4 +0.6**
LSA Lhasa 50.35 273 P **P** **16 19 08.9 -1.2**
LSA pmax pmax
comp=Z,7.0nm,0.7s
LSA Lhasa 50.35 273 P **P** **16 19 08.9 -1.2**
LSA IAmb IAmb 16 19 13.1
comp=Z,7.1nm,0.7s
YKW3 Yellowknife Ar 50.44 37 P **P** **16 19 11.1 +1.3**
YKW3 IAmb IAmb 16 19 12.2
comp=Z,19nm,0.9s
YKA Yellowknife Ar 50.48 37 P **P** **16 19 10.5 +0.5**
comp=Z,16nm,0.8s,baz=298,slow=7.2,SNR=132
YKA PcP **PcP** **16 20 27.4 +0.3**
comp=Z,2.3nm,0.8s,baz=301,slow=3.6,SNR=5.5
YKA LR LR 16 44 35.6
comp=Z,7.6nm,18.2s,baz=272,slow=41
YKA Yellowknife Ar 50.48 37 P **P** **16 19 10.7 +0.7**
SMPI Sarmi 50.66 199 P **P** **16 19 13.9 +2.0**
comp=Z,24nm,1.2s
BRVK Borovoye 50.67 309⇑ *e*P **P** **16 19 09.7 -1.9**
BRVK pmax pmax
comp=Z,5.0nm,1.2s
GENI Genyem 50.94 197 P **P** **16 19 16.0 +2.0**
comp=Z,38nm,0.8s
TNTI Ternate 51.48 214 P **P** **16 19 20.3 +2.2**
comp=Z,26nm,1.3s
SWI Sorong 51.62 209 P **P** **16 19 21.1 +2.0**
comp=Z,16nm,1.4s
CHTO Chiang Mai 52.33 256 P **P** **16 19 24.5 +0.1**
CHTO pmax pmax
comp=Z,21nm,0.9s
CHTO Chiang Mai 52.33 256 P **P** **16 19 24.5 +0.1**
CM31 Chiang Mai Arr 52.58 256 P **P** **16 19 27.8 +1.5**
CM31 IAmb IAmb 16 19 29.0
comp=Z,14nm,0.8s
CMAR Chiang Mai Arr 52.58 256 P **P** **16 19 28.0 +1.7**
CMAR Chiang Mai Arr 52.58 256 P **P** **16 19 27.9 +1.7**
comp=Z,10nm,0.8s,baz=34,slow=7.4,SNR=84
CMAR LR LR 16 43 42.8
comp=Z,64nm,18.4s,baz=7.5,slow=38
CMAR Chiang Mai Arr 52.58 256 P **P** **16 19 26.8 +0.5**
PBKT Sadao Pong 52.62 253 P **P** **16 19 27.9 +1.4**
PBKT IAmb IAmb 16 19 28.9
comp=Z,7.9nm,0.7s
SVE Sverdlovsk 53.54 317 *e*P **P** **16 19 32.3 -0.6**
SVE Sverdlovsk 53.54 317 *e*P **P** **16 19 32.3 -0.6**
AAK Ala-Archa 53.71 296⇑ *e*P **P** **16 19 34.0 -0.5**
AAK pmax pmax
comp=Z,8.0nm,2.2s
AAK Ala-Archa 53.71 296⇑ *e*P **P** **16 19 34.0 -0.5**
TAPN Taplejung 54.17 273 *e*P **P** **16 19 38.1 -0.1**
KSH Kashi 54.56 292 P P 16 19 45.9 +5.2
KSH pP pP 16 19 55.5 -3.3
KSH PP **PP** **16 21 46.1 +2.7**
KSH S **S** **16 27 18.0 +3.4**
KSH ScS **ScS** **16 29 23.7 +0.5**
KSH SS **SS** **16 31 00.6 +3.0**
KSH pmax pmax
comp=Z,270nm,5.0s
KSH LR LR
comp=Z,230nm,5.3s
KSH LR LR
comp=Z,140nm,3.5s
KSH LR LR
comp=Z,430nm,6.1s
ARU Arti 54.72 317 *d i*P **P** **16 19 40.1 -1.3**
ARU 16 20 42.2
ARU S **S** **16 27 15.4 -0.7**
ARU SS **SS** **16 30 52.7 -6.5**
ARU pmax pmax
comp=Z,9.0nm,1.0s
ARU Arti 54.72 317⇓ *i*P **P** **16 19 40.1 -1.3**
JIRN Jiri 55.01 274 *e*P **P** **16 19 44.6 +0.2**
GUN Gumba 55.06 275 *e*P **P** **16 19 45.2 +0.5**
comp=Z,4.7nm,0.3s
RAMN Ramite 55.19 273 *e*P **P** **16 19 45.5 0.0**
LTY Liberty 55.41 56 P **P** **16 19 47.2 +0.6**
KKN Kakani 55.54 275 *e*P **P** **16 19 48.3 +0.3**
PKIN Phulchoki 55.60 275 *e*P **P** **16 19 48.3 -0.2**
comp=Z,4.3nm,0.5s
DMN Daman 55.78 275 *e*P **P** **16 19 50.3 +0.5**
GKN Gorkha 55.84 276 *e*P **P** **16 19 50.4 +0.3**
comp=Z,7.5nm,0.2s
DANN Dangsing 56.22 277 *e*P **P** **16 19 53.7 +0.8**
comp=Z,34nm,0.6s
KOLN Koldanda 56.70 276 *e*P **P** **16 19 56.5 +0.3**
comp=Z,18nm,0.8s
NEW Newport 56.80 53 P **P** **16 19 57.4 +0.9**
baz=306
PINE Pine Mountain 57.26 59 P **P** **16 20 02.1 +2.2**
J05D Fort Rock, OR 57.39 60 P **P** **16 20 03.0 +2.2**
baz=306
ARCES ARCESS Array B 57.43 341 P **P** **16 19 58.8 -1.8**
comp=Z,1.5nm,0.7s,baz=23,slow=7.6,SNR=13
ARCES LR LR 16 47 33.0
comp=Z,129nm,20.2s,baz=194,slow=39
WALA Waterton Lakes 58.05 51 P **P** **16 20 06.1 +0.7**
ABKAR Akbulak array 58.19 310 P **P** **16 20 05.3 -0.9**
ABKAR Akbulak array 58.19 310 P **P** **16 20 04.6 -1.6**
GAR Garm 58.40 295 P **P** **16 20 07.1 -0.9**
GAR IAmb IAmb 16 20 11.2
comp=Z,7.3nm,0.8s
BMO Blue Mountains 58.72 56 P **P** **16 20 11.1 +1.0**
BMO pmax pmax
comp=Z,9.0nm,0.9s
BMO Blue Mountains 58.72 56 P **P** **16 20 11.1 +1.0**
BMO IAmb IAmb 16 20 28.4
comp=Z,8.8nm,0.9s
MSO Missoula 59.39 53 P **P** **16 20 16.0 +1.3**
baz=308,SNR=11
KBKI Kotabaru 59.94 224 P **P** **16 20 20.4 +1.8**
comp=Z,4.9nm,0.8s
BKSI Bulukumba 59.95 219 P **P** **16 20 19.9 +1.2**
comp=Z,9.9nm,1.1s
SUMG Summit 60.21 4 *i*P **P** **16 20 20.0 -0.2**
SUMG Summit 60.21 4 *i*P **P** **16 20 20.0 -0.2**

SUMG **Summit** 60.21 4 P P 16 20 20.4 +0.2
FFC **Flin Flon** 60.30 40 P P 16 20 21.9 +1.3
FFC pmax pmax
comp=Z,12nm,0.7s
FFC **Flin Flon** 60.30 40 P P 16 20 21.9 +1.3
FCC **Fort Churchill** 60.80 33 P P 16 20 24.5 +0.5
FCC pmax pmax
comp=Z,18nm,0.9s
FCC **Fort Churchill** 60.80 33 P P 16 20 24.4 +0.5
EGMT **Eagleton** 60.87 50 P P 16 20 25.1 +0.3
EGMT **Eagleton** 60.87 50 P P 16 20 25.7 +1.0
baz=310,SNR=8.5
NVAR **Mina Array Bea** 62.12 63 P P 16 20 34.6 +1.1
comp=Z,1.8nm,0.8s,baz=299,slow=6.6,SNR=9.8
H17A **Grant Village** 62.76 53 P P 16 20 41.0 +3.3
baz=311,SNR=7.8
RLMT **Red Lodge** 62.99 52 P P 16 20 40.3 +1.1
baz=311,SNR=6.8
DGMT **Dagmar** 63.40 47 P P 16 20 42.7 +1.1
baz=312
CWC **Cottonwood Cre** 63.53 64 P P 16 20 43.9 +1.1
baz=311
LAO **LASA Array** 63.56 49 P P 16 20 44.3 +1.5
baz=312
GRAC **Grapevine Rang** 63.61 63 P P 16 20 44.8 +1.6
baz=311
FINES **FINESS Array B** 63.64 335 P P 16 20 41.1 -1.8
comp=Z,6.2nm,0.5s,baz=34,slow=7.3,SNR=79
FINES LR LR 16 52 42.9
comp=Z,159nm,18.8s,baz=36,slow=40
R11A **Troy Canyon, C** 63.81 61 P P 16 20 44.8 +0.1
R11A IAmb IAmb 16 21 02.8
comp=Z,8.5nm,0.9s
R11A **Troy Canyon, C** 63.81 61 P P 16 20 45.7 +1.1
baz=311,SNR=6.7
MPMC **Manual Prospec** 64.14 64 P P 16 20 48.4 +1.5
baz=311
DUG **Dugway, Tooele** 64.23 58 P P 16 20 49.0 +1.7
baz=311,SNR=6.3
TPNV **Topopah Spring** 64.32 63 P P 16 20 49.6 +1.6
baz=311
BW06 **Boulder Array** 64.38 54 P P 16 20 49.2 +0.8
BW06 IAmb IAmb 16 21 06.6
comp=Z,16nm,0.9s
BW06 **Boulder Array** 64.38 54 P P 16 20 49.6 +1.2
baz=312,SNR=10
PD31 **Pinedale Array** 64.38 54 P P 16 20 49.5 +1.2
PD31 IAmb IAmb 16 21 06.6
comp=Z,13nm,0.9s
PDAR **Pinedale Array** 64.38 54 P P 16 20 49.3 +0.9
comp=Z,5.6nm,0.9s,baz=300,slow=1.6,SNR=39
PDAR LR LR 16 51 19.8
comp=Z,34nm,18.0s,baz=18,slow=38
PDAR **Pinedale Array** 64.38 54 P P 16 20 49.0 +0.6
TWSI **Taliwang, Sumb** 64.41 221 P P 16 20 50.2 +1.7
comp=Z,12nm,1.0s
CTU **Camp Tracy** 64.52 57 pP 16 21 07.0 -0.3
SRBI **Singaraja** 64.59 223 P P 16 20 52.5 +2.9
comp=Z,26nm,1.1s
EDW2 **Edwards Air Fo** 64.60 65 P P 16 20 51.4 +1.6
baz=311,SNR=5.3
MLSI **Meulaboh, Aceh** 64.81 247 P P 16 20 52.2 +1.0
comp=Z,49nm,1.7s
OBN **Obninsk** 64.97 325 *e*P P 16 20 50.4 -1.2
OBN *e**PP **pwP** 16 21 12.1 -0.4
OBN *e**SP **sP** 16 21 20.3 +2.7
OBN *e* 16 21 22.9
OBN *e* 16 23 13.5
OBN pmax pmax
comp=Z,44nm,2.5s
OBN **Obninsk** 64.97 325 *e*P P 16 20 50.4 -1.2
GSC **Goldstone, Bar** 65.06 64 P P 16 20 53.9 +1.2
baz=312,SNR=5.0
DNP **Denpasar** 65.11 222 P P 16 20 55.2 +2.2
comp=Z,128nm,1.7s
TUQ **Turquoise Moun** 65.51 64 P P 16 20 57.0 +1.3
baz=312,SNR=5.3
HEC **Hector,Ludlow** 65.66 65 P P 16 20 57.9 +1.3
baz=312,SNR=5.7
SMRI **Semarang** 65.99 228 P P 16 21 00.8 +2.0
comp=Z,167nm,1.6s
MDND **Maddock** 66.07 45 P P 16 21 00.4 +1.5
baz=315
ULM **Lac du Bonnet** 66.09 41 P P 16 20 58.8 -0.2
comp=Z,5.0nm,0.5s,baz=313,slow=7.0,SNR=12
GMRC **Granite Mounta** 66.11 64 P P 16 21 00.7 +1.1
baz=312
K22A **Casper** 66.12 53 P P 16 21 01.7 +2.1
baz=313
PWJI **Pagerwojo** 66.15 226 P P 16 21 00.7 +1.0
comp=Z,42nm,1.1s
SNSI **Sinabang, Aceh** 66.29 246 P P 16 21 02.5 +1.8
comp=Z,53nm,0.9s
RWWY **Rawlins** 66.40 54 pP 16 21 17.8 -1.8
BELC **Belle Mtn. Jos** 66.42 65 P P 16 21 03.4 +1.9
baz=312
WOJI **Wonogiri, Jawa** 66.42 227 P P 16 21 03.6 +2.1
comp=Z,38nm,2.2s
RSSD **Black Hills** 66.43 50 P P 16 21 02.4 +0.8
RSSD pmax pmax
comp=Z,24nm,0.8s
RSSD **Black Hills** 66.43 50 P P 16 21 02.4 +0.8
RSSD **Black Hills** 66.43 50 P P 16 21 02.6 +1.0
baz=314
GEYT **Alibeck** 66.44 301 P P 16 21 00.5 -1.0
comp=Z,1.6nm,0.7s,baz=76,slow=7.8,SNR=4.3
GEYT LR LR 16 51 48.6
comp=Z,125nm,18.6s,baz=10.0,slow=38
GEYT **Alibeck** 66.44 301 IAmb IAmb 16 21 03.5
comp=Z,2.0nm,1.0s
IRM **Iron Mountain** 66.84 64 P P 16 21 05.4 +1.3
baz=312,SNR=6.0
O20A **White River Ci** 66.88 56 P P 16 21 05.7 +1.2
baz=313
BC3 **Big Chuckawall** 66.99 65 P P 16 21 06.4 +1.2
baz=312
AGMN **Agassiz Nation** 67.50 42 P P 16 21 08.5 +0.4
baz=317
N23A **Red Feather La** 67.64 54 P P 16 21 10.7 +1.4
baz=314
NB2 **NORSAR Subarra** 67.80 341 P P 16 21 09.4 -0.3
comp=Z,7.8nm,0.6s,baz=29,slow=6.5
NOA **NORSAR Array B** 67.80 341 P P 16 21 09.4 -0.3
comp=Z,5.3nm,0.7s,baz=28,slow=6.0,SNR=37
NOA LR LR 16 56 20.8
comp=Z,63nm,18.2s,baz=15,slow=41
WUAZ **Wupatki** 68.21 61 P P 16 21 14.9 +2.0
baz=313
SMCO **Snowmass** 68.25 56 pP 16 21 30.6 -0.9
SMCO IAmb IAmb 16 21 31.5
comp=Z,12nm,0.7s
Y14A **Wickenburg** 68.30 63 pP 16 21 30.8 -0.8
ISCO **Idaho Springs** 68.58 54 P P 16 21 16.8 +1.6
baz=314,SNR=8.3
MVCO **Mesa Verde** 68.73 58 P P 16 21 18.0 +1.8
baz=314,SNR=5.1
WRAB **Tennant Creek** 68.99 199⇑ *e*P P 16 21 17.5 0.0
WRAB pmax pmax
comp=Z,34nm,2.9s
WRA **Warramunga Arr** 69.00 199 P P 16 21 18.1 +0.6
comp=Z,2.9nm,0.7s,baz=18,slow=6.6,SNR=23
S22A **4UR Ranch, Cre** 69.32 57 P P 16 21 21.6 +1.7
baz=314,SNR=6.3
OGNE **Ogallala** 69.71 51 P P 16 21 23.2 +1.2
baz=316,SNR=5.3
SDCO **Great Sand Dun** 70.07 56 P P 16 21 25.8 +1.2
baz=315
ECSD **EROS Data Cent** 70.48 46 P P 16 21 27.1 +0.6
baz=318,SNR=17
KIV **Kislovodsk** 70.53 314 *de*P P 16 21 27.4 +0.4
KIV *e**PP **PcP** 16 21 48.2 +0.4
KIV *e**SP **sP** 16 21 56.3 +2.9
KIV *e*PPP PPP 16 25 45.4
KIV pmax pmax
comp=Z,6.0nm,0.6s
KIV **Kislovodsk** 70.53 314⇓ *e*P P 16 21 27.4 +0.4
KBZ **Khabaz** 70.60 314 P P 16 21 26.6 -0.5
comp=Z,8.8nm,1.1s,baz=32,slow=0.5,SNR=9.9
KBZ LR LR 16 56 11.4
comp=Z,96nm,19.9s,baz=12,slow=39
NEY **Neytrino** 71.04 314⇑ *e*P P 16 21 30.9 +0.7
NEY pmax pmax
comp=Z,1.0nm,0.9s
T25A **Trinidad** 71.11 56 P P 16 21 32.0 +1.2
baz=316
AKASG **Malin Array Be** 71.20 326 P P 16 21 29.9 -0.8
comp=Z,2.5nm,0.3s,baz=35,slow=6.2,SNR=19
AKASG LR LR 16 54 46.7
comp=Z,99nm,18.1s,baz=315,slow=38
AKBB **Malin Array Si** 71.20 326 P P 16 21 28.1 -2.7
AKBB pmax pmax
comp=Z,14nm,1.4s
AKBB **Malin Array Si** 71.20 326 P P 16 21 28.1 -2.7
AKBB IAmb IAmb 16 21 31.9
comp=Z,14nm,1.4s
ANMO **Albuquerque** 71.50 58 P P 16 21 34.6 +1.5
baz=315
121A **Cookes Peak, D** 72.42 61 P P 16 21 40.7 +2.0
baz=315
AS31 **Alice Springs** 72.70 199 P P 16 21 41.8 +1.8
ASAR **Alice Springs** 72.70 199 P P 16 21 42.1 +2.1
ASAR **Alice Springs** 72.70 199 P P 16 21 41.9 +1.9
comp=Z,7.1nm,0.7s,baz=11,slow=5.0,SNR=112
ASAR LR LR 16 52 29.5
comp=Z,18nm,20.9s,baz=10.0,slow=35
ASAR **Alice Springs** 72.70 199 P P 16 21 42.0 +2.1
SCHQ **Schefferville** 72.82 23 P P 16 21 40.5 +0.1
comp=Z,12nm,0.8s,baz=359,slow=6.2,SNR=15
SCHQ LR LR 16 56 53.6
comp=Z,63nm,18.4s,baz=102,slow=38
SCHQ **Schefferville** 72.82 23 IAmb IAmb 16 21 57.9
comp=Z,15nm,0.8s
D46A **Sault St. Mari** 73.73 37 P P 16 21 45.6 -0.3
baz=324
MATQ **Matagami** 73.84 32 P P 16 21 46.2 -0.3
baz=327
KSU1 **Kansas State U** 73.91 49 P P 16 21 46.8 -0.3
baz=318
AMTX **Amarillo** 74.27 56 P P 16 21 50.9 +1.6
baz=317
MSTX **Muleshoe** 74.32 57 P P 16 21 51.1 +1.4
baz=317
LSQQ **Lebel-sur-Quev** 74.66 32 P P 16 21 51.2 0.0
baz=327
RUE **Ruedersdorf** 74.80 336 *e*P P 16 21 51.6 -0.3
baz=326,slow=5.9
KOLS **Kolonicke sedl** 75.20 329 *e*P P 16 21 54.3 -0.1
KOLS pmax pmax
comp=Z,5.0nm,1.0s
KOLS **Kolonicke sedl** 75.20 329 *e*P P 16 21 54.3 -0.1
BUR08 **Bucovina Ar. S** 75.22 327 IAmb IAmb 16 21 55.2
comp=Z,6.3nm,0.7s
BURAR **Bucovina Array** 75.24 327⇑ P P 16 21 54.8 +0.1
BURAR **Bucovina Array** 75.24 327⇑ P P 16 21 54.8 +0.1
BURAR **Bucovina Array** 75.24 327 P P 16 21 54.6 -0.2
VLDQ **Val d'Or** 75.28 32 P P 16 21 53.9 -0.9
VLDQ IAmb IAmb 16 22 10.8
comp=Z,21nm,1.0s
BIZ **Bicaz** 75.46 326 ⇓P P 16 21 56.2 +0.3
TESR **Tescani** 75.61 325 ⇓P P 16 21 56.7 0.0
NRDL **Niedersach Rie** 75.78 338 *e*P P 16 21 57.2 -0.2
comp=Z,6.1nm,0.9s,baz=26,slow=5.9
TRPA **Tarpa** 75.79 328 ⇑P P 16 21 58.3 +0.6
CHVC **Chvalec** 75.81 333 *e*P P 16 21 57.7 -0.2
TLCR 75.83 323 ⇑P P 16 21 58.4 +0.4
TLCR 75.83 323 ⇑P P 16 21 58.4 +0.4
DIKM **Dikmen** 75.83 317 ⇑P P 16 21 59.3 +1.2
DPC **Dobruska-Polom** 75.94 333 *e*P P 16 21 58.6 0.0
DPC **Dobruska-Polom** 75.94 333 *e*P P 16 21 58.6 0.0
ASSE **Asse, Remlinge** 75.96 337 *e*P P 16 21 58.4 -0.2
comp=Z,5.9nm,0.8s,baz=26,slow=5.9
LANS **Liptovska Anna** 75.97 331 *e*P P 16 21 59.9 +1.0
LANS pmax pmax
comp=Z,6.0nm,1.0s
LANS **Liptovska Anna** 75.97 331 *e*P P 16 21 59.9 +1.0
WMOK **Wichita Mounta** 75.99 54 P P 16 21 59.8 +0.7
baz=318,SNR=6.1
ARCR **ARCALIA** 76.00 327 ⇑P P 16 21 59.6 +0.6
MORC **Moravsky Berou** 76.06 332 ⇑P P 16 21 59.3 0.0
MORC **Moravsky Berou** 76.06 332 ⇑P P 16 21 59.3 0.0
MORC **Moravsky Berou** 76.06 332 *e*P P 16 21 59.0 -0.3
CLL **Collm** 76.06 336 ⇑/*e*P P 16 21 58.7 -0.5
CLL *e**PP **pwP** 16 22 21.0 +0.3
CLL pmax pmax
comp=Z,21nm,1.2s
CLL **Collm** 76.06 336 ⇑ */e*P P 16 21 58.7 -0.5
comp=Z,21nm,1.2s
CLL *e*(pP) **pwP** 16 22 21.0 +0.3
CLL **Collm** 76.06 336 *e*P P 16 21 58.8 -0.5
comp=Z,8.0nm,0.7s,baz=26,slow=5.9
VRI **Vrincioaia** 76.11 325 ⇓P P 16 21 59.8 +0.2
VRI **Vrincioaia** 76.11 325 ⇓P P 16 21 59.8 +0.2
JURR **Jurilovca** 76.14 323 ⇑P P 16 22 00.5 +0.7
BRG **Berggiesshubel** 76.18 335 *e*P P 16 21 59.2 -0.7
comp=Z,6.8nm,1.2s
BRG **Berggiesshubel** 76.18 335 *e*P P 16 21 59.2 -0.7
BRG pmax pmax
comp=Z,7.0nm,1.2s
BRG **Berggiesshubel** 76.18 335 *e*P P 16 21 59.6 -0.3
comp=Z,3.1nm,0.9s,baz=26,slow=5.9
TOPG **Topolog** 76.26 323 ⇓P P 16 22 01.0 +0.5
OZUR 76.28 325 ⇓P P 16 22 01.2 +0.5
CLZ **Clausthal** 76.30 337 *e*P P 16 22 00.6 0.0
comp=Z,15nm,1.1s,baz=26,slow=5.9
FBE **Freiberg** 76.31 335 *e*P P 16 22 00.2 -0.5
baz=26,slow=5.9
WSAR **Wadi Sarin** 76.32 289 LR LR 16 59 46.4
comp=Z,61nm,20.1s,baz=81,slow=39
D54A **Lac Fusel, La** 76.38 32 P P 16 22 00.6 -0.5
baz=328
IBBN **Ibbenburen** 76.54 339 *e*P P 16 22 01.9 0.0
baz=26,slow=5.9
DOPR **Dopca** 76.55 326 ⇑P P 16 22 02.6 +0.5
TIRR **Tirgusor** 76.58 323 ⇓P P 16 22 02.3 0.0
TIRR **Tirgusor** 76.58 323 ⇓P P 16 22 02.3 0.0
HARR **Harsova** 76.59 323 ⇓P P 16 22 02.5 +0.2
HARR **Harsova** 76.59 323 ⇓P P 16 22 02.5 +0.2
CJR **Cluj-Napoca** 76.60 327 ⇓P P 16 22 03.0 +0.5
CJR **Cluj-Napoca** 76.60 327 ⇓P P 16 22 03.0 +0.5
MLR **Muntele Rosu** 76.73 325 ⇑P P 16 22 03.2 -0.1
MLR **Muntele Rosu** 76.73 325 ⇑P P 16 22 03.2 -0.1
TUL1 **Leonard** 76.73 51 P P 16 22 03.9 +0.6
baz=319
VYHS **Vyhne** 76.75 331 *e*P P 16 22 03.3 0.0
VYHS pmax pmax
comp=Z,10.0nm,1.3s
VYHS **Vyhne** 76.75 331 *e*P P 16 22 03.2 0.0
VRAC **Vranov** 76.77 333 ⇑P P 16 22 03.3 0.0
VRAC **Vranov** 76.77 333 ⇑P P 16 22 03.3 0.0
VRAC **Vranov** 76.77 333 *e*P P 16 22 03.3 0.0
GOPC **GO Pecny, Ondr** 76.79 334 *e*P P 16 22 03.4 0.0
GOPC **GO Pecny, Ondr** 76.79 334 *e*P P 16 22 03.4 0.0
PRU **Pruhonice** 76.80 334 *e*P P 16 22 02.7 -0.7
PRU **Pruhonice** 76.80 334 *e*P P 16 22 02.7 -0.7
ISR **Istrita** 76.80 324 ⇑P P 16 22 04.6 +1.0
ISR **Istrita** 76.80 324 ⇑P P 16 22 04.6 +1.0
JAVC **Velka Javorina** 76.82 332 *e*P P 16 22 04.6 +1.0
DRGR 76.86 328 ⇑P P 16 22 03.8 -0.1
DRGR 76.86 328 ⇑P P 16 22 03.8 -0.1
TANN **Tannenbergstha** 77.02 335 *e*P P 16 22 04.5 -0.3
comp=Z,4.7nm,0.9s,baz=26,slow=5.9
KRUC **Moravsky** 77.05 333 *e*P P 16 22 04.8 0.0
MOX **Moxa** 77.05 336 *e*P P 16 22 04.5 -0.3
comp=Z,3.5nm,0.8s,baz=26,slow=5.9
GUNZ **Gunzen** 77.10 336 *e*P P 16 22 05.1 -0.1
comp=Z,5.3nm,1.0s,baz=26,slow=5.9
VOIR 77.12 325 ⇑P P 16 22 05.8 +0.4
VOIR 77.12 325 ⇑P P 16 22 05.8 +0.4
WERN **Wernitzgruen** 77.16 335 *e*P P 16 22 05.6 +0.1
comp=Z,12nm,1.1s,baz=26,slow=5.9
TX31 **Lajitas Ar. Si** 77.17 61 P P 16 22 07.1 +1.1
TX32 **Lajitas Array** 77.17 61 P P 16 22 07.0 +1.0
TXAR **Lajitas Array** 77.17 61 P P 16 22 06.9 +0.9
comp=Z,3.4nm,0.6s,baz=297,slow=4.5,SNR=35
TXAR **Lajitas Array** 77.17 61 P P 16 22 07.3 +1.3
SMOL **Smolenice** 77.20 332 *e*P P 16 22 06.4 +0.7
SMOL pmax pmax
comp=Z,11nm,1.6s
SMOL **Smolenice** 77.20 332 *e*P P 16 22 06.4 +0.7
PBCC **Pribram** 77.23 334 *e*P P 16 22 05.8 -0.1
UBBA **Unterbreizbach** 77.33 337 *e*P P 16 22 06.1 -0.1
baz=26,slow=5.9
ARR **Arges** 77.34 326 ⇑P P 16 22 08.2 +1.6
MODS **Modra-Piesok** 77.37 332 *e*P P 16 22 06.1 -0.6
MODS pmax pmax
comp=Z,12nm,1.1s
MODS **Modra-Piesok** 77.37 332 *e*P P 16 22 06.1 -0.6
CCM **Cathedral Cave** 77.43 47 P P 16 22 07.4 +0.2
baz=321
D57A **Chemin Vers le** 77.49 31 P P 16 22 07.8 +0.4
baz=330
MANZ **Manzenberg** 77.50 335 *e*P P 16 22 07.1 -0.3
comp=Z,5.7nm,1.0s,baz=26,slow=5.9
SRO **Srobarova** 77.52 331 *e*P P 16 22 07.5 0.0
SRO pmax pmax
comp=Z,17nm,0.6s
SRO **Srobarova** 77.52 331 *e*P P 16 22 07.5 0.0
ROTZ **Rotzenmuhle** 77.67 335 *e*P P 16 22 08.5 +0.1
baz=26,slow=5.9
KHC **Kasperske Hory** 77.84 334 P P 16 22 09.4 +0.1
KHC pmax pmax
comp=Z,6.0nm,1.1s
KHC **Kasperske Hory** 77.84 334 *e*P P 16 22 09.3 -0.1
KHC *e*pP **pP** 16 22 27.4 -0.6
KHC **Kasperske Hory** 77.84 334 P P 16 22 09.4 +0.1
U40A **Yellville** 77.92 49 P P 16 22 10.2 +0.2
baz=321,SNR=16
GRA1 **Grafenberg Arr** 78.02 336 P P 16 22 10.8 +0.5
GRF **Grafenberg Arr** 78.02 336 P P 16 22 10.8 +0.5
GRF pmax pmax
comp=Z,17nm,0.7s
GRF **Grafenberg Arr** 78.02 336 *e*P P 16 22 10.5 +0.2
comp=Z,13nm,0.7s,baz=26,slow=5.9
GZR **Gura Zlata** 78.02 327 ⇑P P 16 22 10.2 -0.2
GZR **Gura Zlata** 78.02 327 ⇑P P 16 22 10.2 -0.2
WET **Wettzell** 78.04 335 *e*P P 16 22 10.6 +0.1
comp=Z,8.2nm,1.0s,baz=26,slow=5.9
GEC2 **GERESS Array S** 78.06 334 *e*P P 16 22 10.3 -0.4
comp=Z,2.3nm,0.7s,baz=26,slow=5.9
GERES **GERESS Array B** 78.06 334 P P 16 22 10.3 -0.4
GERES **GERESS Array B** 78.06 334 P P 16 22 10.2 -0.5
comp=Z,2.0nm,0.5s,baz=39,slow=5.7,SNR=14
GERES LR LR 16 59 52.3
comp=Z,82nm,18.4s,baz=290,slow=38
GERES **GERESS Array B** 78.06 334 P P 16 22 10.3 -0.4
BRTR **Keskin Array B** 78.11 317 *i* P P 16 22 11.6 +0.5
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR **Keskin Array B** 78.11 317 P P 16 22 11.1 0.0
comp=Z,2.5nm,0.9s,baz=63,slow=4.0,SNR=15
BRTR LR LR 17 02 07.3
comp=Z,27nm,18.2s,baz=282,slow=40
BRTR **Keskin Array B** 78.11 317 P P 16 22 10.7 -0.4
COPA **Copaceanca** 78.14 325 ⇓P P 16 22 10.5 -0.5
N48A **Decatur** 78.16 41 P P 16 22 11.3 +0.1
baz=324
CONA **Conrad Observa** 78.21 332 *e*P P 16 22 11.7 +0.3
comp=Z,8.8nm,0.8s,baz=8.6
BZS **Buzias** 78.26 328 ⇑P P 16 22 11.0 -0.7
E58A **La Victoria** 78.26 31 P P 16 22 11.6 0.0
baz=330
W39A **Magazine** 78.33 50 P P 16 22 12.5 +0.3
baz=320
N49A **Columbus Grove** 78.48 41 P P 16 22 13.1 +0.1
baz=324
MEM **Membach** 78.53 339 ⇑P P 16 22 12.8 -0.2
comp=Z,19nm,1.2s
MEM **Membach** 78.53 339 PcP **PcP** 16 22 21.1 -0.8
MEM **Membach** 78.53 339 pP pP 16 22 26.3 -5.4
VLAD **Vladila** 78.58 325 ⇓P P 16 22 13.3 -0.1
JCT **Junction City** 78.58 57 P P 16 22 14.3 +0.6
baz=319
BSTI **Sart Tilman** 78.66 340 P P 16 22 13.5 -0.2
BSTI PcP **PcP** 16 22 21.5 -1.0
WHTX **Lake Whitney,** 78.78 55 P P 16 22 15.6 +0.8
baz=319
MOA **Molln** 78.78 333 *e*P P 16 22 14.8 +0.3
comp=Z,7.1nm,1.1s
ELND **Elena** 78.89 324 ⇑P P 16 22 15.0 -0.2
ARSA **Arzberg** 78.92 332 *e*P P 16 22 16.1 +0.8
comp=Z,4.5nm,0.8s
MIAR **Mount Ida** 78.94 51 P P 16 22 16.2 +0.6
baz=321
PLVB **Pleven** 79.00 325 ⇓P P 16 22 15.7 0.0
N50A **Nevada** 79.06 40 P P 16 22 15.8 -0.4
baz=325
BMRD **Maredsous** 79.11 340 ⇑P P 16 22 14.9 -1.3
comp=Z,11nm,1.1s
W41B **Gary Mavity, V** 79.15 49 P P 16 22 17.0 +0.3
baz=321,SNR=5.1
N51A **Ashland** 79.28 40 P P 16 22 17.5 +0.1
baz=325
L53A **Girard** 79.33 38 P P 16 22 18.2 +0.6
baz=326
RJOB **Jochberg** 79.33 334 *e*P P 16 22 18.1 +0.6
comp=Z,3.9nm,0.8s,baz=26,slow=5.9
O50A **Cable** 79.36 41 P P 16 22 18.2 +0.4
baz=325
WLF **Walferdange** 79.37 339 *e*P P 16 22 19.1 +1.5
baz=26,slow=5.9
FUR **Furstenfeldbru** 79.38 335 *e*P P 16 22 18.2 +0.4
comp=Z,11nm,0.9s,baz=26,slow=5.9
Q48A **North Vernon** 79.39 43 P P 16 22 18.1 +0.2
baz=324
STU **Stuttgart** 79.41 337 *e*P P 16 22 18.6 +0.7
comp=Z,9.4nm,0.9s,baz=26,slow=5.9
STKA **Stephens Creek** 79.44 190 LR LR 17 01 39.4
comp=Z,21nm,18.1s,baz=24,slow=39
ACSO **Alum Creek Sta** 79.58 40 P P 16 22 19.4 +0.4
baz=325
M53A **WI Miller and** 79.58 38 P P 16 22 19.3 +0.4
baz=326
SOKA **Soboth** 79.58 332 *e*P P 16 22 19.0 0.0
comp=Z,15nm,1.3s,SNR=5.6
WCI **Wyandotte Cave** 79.69 44 P P 16 22 20.0 +0.4
WCI pmax pmax
comp=Z,17nm,0.8s
WCI **Wyandotte Cave** 79.69 44 P P 16 22 20.0 +0.4
WCI IAmb IAmb 16 22 20.8
comp=Z,17nm,0.8s
WCI **Wyandotte Cave** 79.69 44 P P 16 22 20.0 +0.4
baz=324
Q49A **Aurora** 79.71 42 P P 16 22 20.4 +0.7
baz=324
P50A **Jamestown** 79.72 41 P P 16 22 20.0 +0.2
baz=325
KBA **Koelnbreinsper** 79.75 333 *i* P P 16 22 20.6 +0.5
comp=Z,12nm,0.6s
O51A **Pataskala** 79.81 40 P P 16 22 20.4 +0.2
baz=325
OBKA **Obir** 79.89 332 *i* P P 16 22 20.1 -0.5
comp=Z,7.5nm,0.8s
N53A **Lisbon** 80.03 39 P P 16 22 21.7 +0.2
baz=326
BFO **Black Forest** 80.05 337 *e*P P 16 22 21.8 +0.4
comp=Z,8.0nm,0.9s,baz=26,slow=5.9
WATA **Walderalm** 80.05 335 *e*P P 16 22 21.8 +0.2
comp=Z,11nm,0.9s,SNR=5.1
WTTA **Wattenberg** 80.09 335 *e*P P 16 22 22.3 +0.4
comp=Z,12nm,0.6s,SNR=9.1
RETA **Reutte** 80.14 335 *e*P P 16 22 22.3 +0.3
comp=Z,16nm,1.5s,SNR=6.7
P51A **Williamsport** 80.15 41 P P 16 22 22.1 0.0
baz=325
UBR **Ueberruh** 80.15 336 *e*P P 16 22 22.5 +0.4
baz=26,slow=5.9
O52A **Adamsville** 80.17 40 P P 16 22 22.3 +0.1
baz=326
MOTA **Moosalm** 80.18 335 *e*P P 16 22 22.5 +0.2
comp=Z,27nm,1.2s
VTS **Vitosha** 80.20 325 ⇓P P 16 22 22.9 +0.4
VTS **Vitosha** 80.20 325 ⇓P P 16 22 22.9 +0.4
VTS **Vitosha** 80.20 325 *i* Pg P 16 22 21.9 -0.6
VTS **Vitosha** 80.20 325 IAmb IAmb 16 22 23.4
comp=Z,16nm,0.7s
SQTA **Sankt Quirin** 80.26 335 *i* P P 16 22 23.0 +0.3
comp=Z,16nm,1.1s
Q50A **Georgetown** 80.26 42 P P 16 22 23.2 +0.5
baz=325
N54A **Moraine State** 80.26 38 P P 16 22 23.1 +0.4
baz=327
J59A **Piesco** 80.32 33 P P 16 22 22.6 -0.3
baz=330
O53A **New Philadelph** 80.33 39 P P 16 22 23.2 +0.1
baz=326
M55A **Ridgway** 80.35 37 P P 16 22 23.4 +0.2
baz=327
Q51A **Peebles** 80.40 41 P P 16 22 24.0 +0.6
baz=325,SNR=5.8
P52A **Corning** 80.44 40 P P 16 22 23.6 0.0
baz=326
S49A **Springfield** 80.52 43 P P 16 22 24.4 +0.3
baz=324
DAVA **Damuels** 80.58 336 *i* P P 16 22 24.4 0.0
comp=Z,12nm,0.9s
FETA **Feichten** 80.58 335 *e*P P 16 22 24.6 +0.2
comp=Z,9.7nm,1.3s,SNR=4.9
WVT **Waverly** 80.62 46 P P 16 22 25.1 +0.5

WVT				pmax		pmax	
	comp=Z,10.0nm,0.8s						
WVT	**Waverly**	**80.62**	**46**	P		**P**	**16 22 25.1 +0.5**
WVT				IAmb		IAmb	16 22 26.0
	comp=Z,9.8nm,0.8s						
WVT	**Waverly**	**80.62**	**46**	P		**P**	**16 22 25.2 +0.5**
	baz=323						
O54A	**Avella**	**80.75**	**39**	P		**P**	**16 22 25.8 +0.6**
	baz=326						
K59A	**Cooperstown**	**80.78**	**34**	P		**P**	**16 22 25.4 -0.1**
	baz=329						
N55A	**Marion Center**	**80.83**	**37**	P		**P**	**16 22 26.1 +0.3**
	baz=327						
R51A	**Hillsboro**	**80.88**	**42**	P		**P**	**16 22 26.6 +0.6**
	baz=325						
P53A	**Whipple**	**80.89**	**40**	P		**P**	**16 22 26.1 +0.1**
	baz=326						
Q52A	**Bidwell**	**80.93**	**41**	P		**P**	**16 22 26.4 +0.1**
	baz=326						
T49A	**Edmonton**	**80.95**	**44**	P		**P**	**16 22 26.9 +0.5**
	baz=324						
N56A	**West Decatur**	**81.00**	**37**	P		**P**	**16 22 26.7 +0.1**
	baz=328						
OXF	**Oxford**	**81.12**	**48**	P		**P**	**16 22 27.6 +0.2**
	baz=322						
M57A	**Sunshine Farm,**	**81.12**	**36**	P		**P**	**16 22 27.5 +0.3**
	baz=328						
O55A	**Ligonier**	**81.18**	**38**	P		**P**	**16 22 27.8 +0.2**
	baz=327						
P54A	**Burton**	**81.18**	**39**	P		**P**	**16 22 28.2 +0.5**
	baz=326						
R52A	**Catlettsburg**	**81.28**	**41**	P		**P**	**16 22 28.4 +0.3**
	baz=325						
U49A	**Red Boiling Sp**	**81.31**	**44**	P		**P**	**16 22 28.9 +0.6**
	baz=324,SNR=5.1						
T50A	**Nancy**	**81.34**	**43**	P		**P**	**16 22 29.1 +0.6**
	baz=324,SNR=6.7						
Q53A	**Leroy**	**81.34**	**40**	P		**P**	**16 22 29.1 +0.6**
	baz=326,SNR=7.4						
STIP	**Stip**	**81.39**	**325**	*i* P		**P**	**16 22 27.4 -1.3**
MCWV	**Mont Chateau**	**81.41**	**39**	P		**P**	**16 22 29.6 +0.8**
	baz=327						
S51A	**Beattyville**	**81.42**	**42**	P		**P**	**16 22 29.0 +0.1**
	baz=325						
O56A	**Blue Knob Stat**	**81.44**	**37**	P		**P**	**16 22 29.4 +0.4**
	baz=327						
N57A	**Milroy**	**81.44**	**37**	P		**P**	**16 22 29.3 +0.3**
	baz=328						
P55A	**Reedsville**	**81.54**	**39**	P		**P**	**16 22 30.1 +0.5**
	baz=327,SNR=6.6						
Q54A	**Coxs Mills**	**81.54**	**40**	P		**P**	**16 22 30.1 +0.5**
	baz=326						
VAY	**Valandovo**	**81.56**	**325**	*i* P		**P**	**16 22 29.6 0.0**
U50A	**Jamestown**	**81.83**	**44**	P		**P**	**16 22 31.5 +0.4**
	baz=324						
V49A	**McMinnville**	**81.85**	**45**	P		**P**	**16 22 31.4 +0.2**
	baz=324						
Q55A	**Buckhannon**	**81.86**	**39**	P		**P**	**16 22 31.7 +0.4**
	baz=327						
PDG	**Podgorica**	**81.87**	**327**	⇑P		**P**	**16 22 30.4 -0.7**
P56A	**Dayton Farm, R**	**81.96**	**38**	P		**P**	**16 22 32.2 +0.5**
	baz=327						
W49A	**Belvidere**	**82.19**	**45**	P		**P**	**16 22 33.3 +0.3**
	baz=324						
O58A	**Lewisberry**	**82.23**	**36**	P		**P**	**16 22 33.3 +0.2**
	baz=328						
V50A	**Pikevile**	**82.31**	**44**	P		**P**	**16 22 33.8 +0.2**
	baz=324						
PPT	**Papeete**	**82.36**	**126**	LR		LR	16 53 12.9
	comp=Z,60nm,20.4s,baz=300,slow=31						
PPT2	**Papeete2**	**82.38**	**126**	*e*LR		LR	16 48 32.9
	comp=Z,108nm,22.2s,baz=318						
PPT2	**Papeete2**	**82.38**	**126**	*e*T		T	17 53 00.4
	comp=Z,3.1nm,0.2s						
T53A	**Wise**	**82.44**	**42**	P		**P**	**16 22 34.8 +0.5**
	baz=326						
U52A	**Thorn Hill**	**82.54**	**43**	P		**P**	**16 22 35.3 +0.5**
	baz=325						
V51A	**Loudon**	**82.56**	**44**	P		**P**	**16 22 35.3 +0.4**
	baz=325						
MMAI	**Mount Meron Ar**	**82.57**	**311**	LR		LR	17 03 56.4
	comp=Z,90nm,18.5s,baz=60,slow=39						
W50A	**Signal Mountai**	**82.59**	**45**	P		**P**	**16 22 35.2 +0.1**
	baz=324						
P58A	**Pank, Wackersv**	**82.61**	**37**	P		**P**	**16 22 35.3 +0.2**
	baz=328						
T54A	**Tazewell**	**82.81**	**41**	P		**P**	**16 22 36.8 +0.5**
	baz=326						
V52A	**Sevierville**	**82.88**	**43**	P		**P**	**16 22 37.0 +0.4**
	baz=325						
W51A	**Cleveland**	**82.89**	**44**	P		**P**	**16 22 36.8 +0.2**
	baz=325						
U53A	**Fall Branch**	**82.93**	**42**	P		**P**	**16 22 37.2 +0.4**
	baz=326						
T55A	**Pulaski**	**83.11**	**41**	P		**P**	**16 22 38.2 +0.4**
	baz=326						
V53A	**Saluda**	**83.39**	**43**	P		**P**	**16 22 39.7 +0.5**
	baz=326						
LRAL	**Lakeview Retre**	**83.51**	**47**	P		**P**	**16 22 39.9 +0.1**
	baz=324						
U55A	**TA2, Sparta**	**83.51**	**41**	P		**P**	**16 22 40.3 +0.4**
	baz=326						
NRCA	**Norcia**	**83.63**	**332**	IAmb		IAmb	16 22 41.5
	comp=Z,25nm,1.1s						
Y51A	**Rockmart**	**83.76**	**45**	P		**P**	**16 22 41.4 +0.2**
	baz=325						
Z50A	**Ashland**	**83.86**	**46**	P		**P**	**16 22 41.8 +0.1**
	baz=324						
BG3	**Lake Jocassee**	**83.89**	**43**	IAmb		IAmb	16 22 43.1
	comp=Z,9.5nm,0.8s						
X53A	**Estanollee**	**84.11**	**44**	P		**P**	**16 22 43.6 +0.7**
	baz=325						
W54A	**Cherokee Point**	**84.16**	**43**	P		**P**	**16 22 43.6 +0.4**
	baz=326						
T58A	**Grand View Acr**	**84.24**	**39**	P		**P**	**16 22 43.7 +0.2**
	baz=328						
Y52A	**Lilburn**	**84.27**	**45**	P		**P**	**16 22 44.5 +0.8**
	baz=325						
RAYN	**Ar Rayn**	**84.28**	**299**	P		**P**	**16 22 44.3 +0.3**
RAYN				pmax		pmax	
	comp=Z,10.0nm,0.8s						
RAYN	**Ar Rayn**	**84.28**	**299**	P		**P**	**16 22 44.3 +0.3**
RAYN				IAmb		IAmb	16 22 45.3
	comp=Z,10nm,0.8s						
KMSC	**Kings Mountain**	**84.50**	**42**	P		**P**	**16 22 45.1 +0.3**
	baz=326						
Y53A	**Monroe**	**84.51**	**44**	P		**P**	**16 22 45.6 +0.7**
	baz=325						
X54A	**Belton**	**84.51**	**43**	P		**P**	**16 22 45.6 +0.7**
	baz=326						
Z52A	**Williamson**	**84.65**	**45**	P		**P**	**16 22 46.2 +0.5**
	baz=325						
U58A	**Oxford**	**84.70**	**40**	P		**P**	**16 22 46.2 +0.4**
	baz=328						
Y54A	**Tignall**	**84.93**	**44**	P		**P**	**16 22 48.1 +1.1**
	baz=326						
Z53A	**Monticello**	**84.99**	**45**	P		**P**	**16 22 47.9 +0.6**
	baz=325						
X56A	**White Oak**	**85.18**	**42**	P		**P**	**16 22 48.8 +0.5**
	baz=326						
EIL	**Elat**	**85.46**	**310**	LR		LR	17 03 59.2
	comp=Z,46nm,20.7s,baz=65,slow=38						
TBI	**Tubuai**	**87.13**	**129**	*e*T		T	17 58 55.2
	comp=Z,25nm,0.2s						
KEST	**Kesra**	**91.29**	**331**	LR		LR	17 09 15.6
	comp=Z,98nm,18.0s,baz=224,slow=39						
TORD	**Torodi Ar. Bea**	**114.73**	**329**	PKiKP		**PKiKP**	**16 28 51.1 -1.3**
	comp=Z,0.4nm,0.8s,baz=276,slow=1.3,SNR=2.5						
BDFB	**Brasilia**	**143.89**	**36**	PKP		PKPbc	16 29 44.9 -0.2
	comp=Z,6.1nm,0.7s,baz=298,slow=6.0,SNR=6.5						
CPUP	**Villa Florida**	**148.14**	**60**	PKPbc		**PKPbc**	**16 29 57.0 -0.3**
	comp=Z,4.9nm,0.7s,baz=320,slow=2.6,SNR=14						
PLCA	**Paso Flores**	**148.15**	**95**	PKPbc		**PKPbc**	**16 29 57.5 +0.5**
	comp=Z,3.2nm,0.9s,baz=306,slow=5.7,SNR=5.4						
SNAA	**Sanae**	**153.05**	**196**	PKPdf		**PKPbc**	**16 30 07.8 0.0**
SNAA	**Sanae**	**153.05**	**196**	PKPbc		**PKPbc**	**16 30 07.2 -0.5**
	comp=Z,3.2nm,0.7s,baz=186,slow=3.2,SNR=25						
SNAA				PKPab		**PKPab**	**16 30 19.8 +0.3**
	comp=Z,4.3nm,0.8s,baz=222,slow=3.4,SNR=11						
VNA3	**Neumayer Olymp**	**154.59**	**193**	PKPab		**PKPab**	**16 30 26.8 +0.8**
VNA1	**Neumayer--Stat**	**154.88**	**194**	PKPab		**PKPab**	**16 30 27.1 -0.1**

*SJA **04** 16:16:56.8±0.5,24°.23S×67°.19W,h194^{km}±4^{km},ML3.2, MW3.4*
*IDC **04** 16:16:57.6±1.2,24°.21S×67°.10W,h173^{km}±12^{km},mb3.4/4, mb1 3.5/10,mb1mx3.3/27,mbtmp3.8/10,Error ellipse:*
s-maj=19.2km s-min=14.5km az=82.0
*GUC **04** 16:16:59.0±0.5,24°.20S×67°.51W,h214^{km}±8^{km},ML3.8*

ISC 04 16:16:57.9±0.7,24°.20S±0'.06×67°.22W±0'.04,h185^{km}±7^{km}, n42,σ0°95/56,mb3.4/4,2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.65**	**109**	*i* P		**Pn**	**16 17 32.0**	**+0.1**
SLA				*e*S		**Sn**	**16 17 57.8**	**-0.5**
SLA				IAML			16 17 58.6	
	comp=Z,99nm,1.0s							
HJA	**Humahuaca**	**1.94**	**60**	*i* P		**Pn**	**16 17 35.4**	**+0.3**
HJA				IAML			16 18 06.8	
	comp=Z,19nm,1.2s							
AZAP	**Zapla**	**1.97**	**91**	⇓*i* P		**Pn**	**16 17 35.0**	**-0.3**
AZAP				*e*S		**Sn**	**16 18 03.8**	**-0.4**
AZAP				IAML			16 18 06.3	
	comp=Z,43nm,1.3s							
LVC	**Limon Verde**	**2.22**	**315**	*e*P		**Pn**	**16 17 38.9**	**+0.8**
LVC				*i* S		**Sn**	**16 18 09.5**	**+0.1**
LVC	**Limon Verde**	**2.22**	**315**	P		**Pn**	**16 17 38.7**	**+0.6**
	comp=Z,46nm,0.3s,baz=144,slow=7.3,SNR=446							
LVC				S		**Sn**	**16 18 09.3**	**0.0**
	comp=Z,19nm,0.3s,baz=310,slow=20,SNR=15							
LVC	**Limon Verde**	**2.22**	**315**	*i* P		**Pn**	**16 17 38.8**	**+0.6**
LVC				IAML			16 18 16.1	
	comp=Z,43nm,0.3s							
PB15	**IPOC Station P**	**2.29**	**295**	*e*P		**Pn**	**16 17 39.6**	**+0.9**
PB15				*i* S		**Sn**	**16 18 10.2**	**-0.2**
PB15	**IPOC Station P**	**2.29**	**295**	*i* P		**Pn**	**16 17 39.4**	**+0.7**
PB15				*e*S		**Sn**	**16 18 10.6**	**+0.2**
PB15				IAML			16 18 12.8	
	comp=Z,1μm,0.1s							
ASTB	**Santa Barbara**	**2.54**	**85**	⇓*i* P		**Pn**	**16 17 41.2**	**-0.4**
ASTB				IAML			16 18 17.1	
	comp=Z,11nm,0.7s							
YJA	**Yavi**	**2.56**	**38**	*i* P		**Pn**	**16 17 42.6**	**+0.6**
YJA				*e*S		**Sn**	**16 18 16.9**	**+0.6**
YJA				IAML			16 18 17.8	
	comp=Z,13nm,1.2s							
PB06	**IPOC Station P**	**2.62**	**304**	*e*P		**Pn**	**16 17 43.2**	**+0.6**
PB06				*i* S		**Sn**	**16 18 16.5**	**-0.7**
PB06				IAML			16 18 19.6	
	comp=N,275nm,0.4s							
PB06	**IPOC Station P**	**2.62**	**304**	*i* P		**Pn**	**16 17 42.9**	**+0.3**
PB06				*e*S		**Sn**	**16 18 16.9**	**-0.3**
PB06				IAML			16 18 21.9	
	comp=Z,177nm,0.3s							
PB14	**IPOC Station P**	**2.93**	**261**	*e*P		**Pn**	**16 17 46.3**	**0.0**
PB14				*i* S		**Sn**	**16 18 22.1**	**-1.9**
PB14				IAML			16 18 23.1	
	comp=E,110nm,0.5s							
PB14	**IPOC Station P**	**2.93**	**261**	*i* P		**Pn**	**16 17 46.6**	**+0.3**
PB14				IAML			16 18 27.5	
	comp=Z,86nm,0.1s							
PB09	**IPOC Station P**	**3.03**	**322**	*e*P		**Pn**	**16 17 48.4**	**+0.9**
PB09				*i* S		**Sn**	**16 18 26.0**	**0.0**
PB09				IAML			16 18 33.7	
	comp=N,131nm,0.3s							
PB09	**IPOC Station P**	**3.03**	**322**	*i* P		**Pn**	**16 17 48.2**	**+0.9**
PB09				IAML			16 18 33.1	
	comp=Z,112nm,0.4s							
PB05	**IPOC Station P**	**3.05**	**296**	*e*P		**Pn**	**16 17 47.5**	**0.0**
PB05				*i* S		**Sn**	**16 18 24.0**	**-2.2**
PB05	**IPOC Station P**	**3.05**	**296**	*i* P		**Pn**	**16 17 47.9**	**+0.4**
PB05				IAML			16 18 35.4	
	comp=Z,61nm,0.6s							
AHML	**Horco Molle**	**3.09**	**147**	*i* P		**Pn**	**16 17 47.8**	**-0.1**
AHML				IAML			16 18 28.0	
	comp=Z,29nm,1.9s							
PB10	**IPOC Station P**	**3.13**	**282**	IAML			16 18 29.9	
	comp=E,132nm,0.4s							
PB10	**IPOC Station P**	**3.13**	**282**	*i* P		**Pn**	**16 17 48.9**	**+0.5**
PB10				IAML			16 18 29.5	
	comp=Z,73nm,0.3s							
PB03	**IPOC Station P**	**3.17**	**312**	*e*P		**Pn**	**16 17 49.2**	**+0.2**
PB03				*i* S		**Sn**	**16 18 27.8**	**-1.0**
PB03				IAML			16 18 31.4	
	comp=E,167nm,0.4s							
PB04	**IPOC Station P**	**3.27**	**304**	*e*P		**Pn**	**16 17 50.6**	**+0.3**
PB04				*i* S		**Sn**	**16 18 29.6**	**-1.6**
PB04	**IPOC Station P**	**3.27**	**304**	*i* P		**Pn**	**16 17 50.9**	**+0.5**
CYA	**Choya**	**4.41**	**163**	*i* P		**Pn**	**16 18 03.8**	**-0.6**
CYA				IAML			16 19 33.7	
	comp=Z,5.8nm,3.6s							
AMOG	**MOGNA**	**6.80**	**189**	*i* P		**Pn**	**16 18 34.9**	**-0.6**
AMOG				IAML			16 20 06.3	
	comp=Z,15nm,0.4s							
RTLL	**Cerro Villicun**	**7.18**	**189**	*i* P		**Pn**	**16 18 39.9**	**-0.6**
RTLL				IAML			16 20 03.4	
	comp=Z,12nm,0.4s							
CFA	**Coronel Fontan**	**7.43**	**187**	P		**Pn**	**16 18 42.7**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=41,slow=21,SNR=12							
TCA	**Tanti**	**7.48**	**162**	*i* P		**Pn**	**16 18 43.0**	**-1.4**
TCA				IAML			16 20 49.4	
	comp=Z,11nm,2.8s							
LPAZ	**La Paz**	**7.92**	**354**	P		**Pn**	**16 18 51.0**	**+0.1**
	comp=Z,2.6nm,0.3s,baz=157,slow=7.1,SNR=38							
LPAZ				S		**Sn**	**16 20 16.2**	**-4.0**
	baz=204,slow=20,SNR=1.6							
ACAN	**Cantantal**	**8.04**	**180**	*i* P		**Pn**	**16 18 50.5**	**-1.2**
ASAL	**Salagasta**	**8.48**	**189**	*i* P		**Pn**	**16 18 56.7**	**-0.7**
SIV	**San Ignacio**	**10.00**	**36**	P		**Pn**	**16 19 17.1**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=242,slow=6.1,SNR=7.6							
PLCA	**Paso Flores**	**16.72**	**189**	P		**Pn**	**16 20 41.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=18,slow=13,SNR=3.0							
BDFB	**Brasilia**	**19.95**	**68**	P		**P**	**16 21 15.5**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=248,slow=11,SNR=6.0							
PMSA	**Palmer Station**	**40.62**	**178**	P		**P**	**16 24 20.2**	**+0.9**
	comp=Z,5.3nm,0.4s,baz=30,slow=8.1,SNR=6.4							
TXAR	**Lajitas Array**	**63.72**	**325**	P		**P**	**16 27 11.3**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=129,slow=7.1,SNR=2.3							
TORD	**Torodi Ar. Bea**	**76.83**	**69**	P		**P**	**16 28 29.6**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=250,slow=7.7,SNR=2.8							
YKA	**Yellowknife Ar**	**94.25**	**340**	P		**P**	**16 29 56.5**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=134,slow=5.3							
ASAR	**Alice Springs**	**128.19**	**205**	PKP		**PKiKP**	**16 35 43.4**	**0.0**
	comp=Z,0.3nm,0.7s,baz=126,slow=6.2,SNR=6.2							
WRA	**Warramunga Arr**	**131.35**	**207**	PKP		**PKiKP**	**16 35 49.9**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=160,slow=1.7,SNR=4.0							
MKAR	**Makanchi Array**	**146.81**	**40**	PKPbc		**PKiKP**	**16 36 19.3**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=323,slow=2.6,SNR=4.8							

*ISK **04** 16:19:52.9,39°.11N×25°.96E,h10^{km},ML2.3/15*
*ATH **04** 16:19:52.9,39°.13N×25°.90E,h18^{km}±1^{km},ML2.2/3,Error ellipse: s-maj=1.9km s-min=1.1km az=272.0*
*DDA **04** 16:19:53.6,39°.13N×25°.96E,h7^{km}±2^{km},ML1.9*
*THE **04** 16:19:53.9,39°.09N×25°.94E,h5^{km}±2^{km},ML2.0/3,Error ellipse: s-maj=2.9km s-min=0.6km az=322.0*

ISC 04 16:19:53.6±0.9,39°.13N±0'.02×25°.96E±0'.04,h12^{km}±7^{km}, n32,σ0°44/47,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SIGR	**SIGRI**	**0.11**	**316**	P		**Pg**	**16 19 56.6**	**0.0**
SIGR				S		**Sg**	**16 19 58.9**	**+0.1**
	1μm,0.2s							
SIGR	**SIGRI**	**0.11**	**316**	P		**Pg**	**16 19 56.6**	**0.0**
SIGR				S		**Sg**	**16 19 58.7**	**0.0**
SIGR				AML		AML	16 19 59.1	
	comp=E,3567μm,0.2s							
SIGR				AML		AML	16 19 59.2	
	comp=N,6305μm,0.2s							
SIGR	**SIGRI**	**0.11**	**316**	PG		**Pg**	**16 19 56.6**	**0.0**
SIGR				SG		**Sg**	**16 19 58.8**	**0.0**
PRK	**Paraskevi**	**0.27**	**65**	P		**Pb**	**16 19 59.9**	**-0.6**
PRK				S		**Sb**	**16 20 04.2**	**-0.8**
	comp=N,510nm,0.4s							
PRK	**Paraskevi**	**0.27**	**65**	P		**Pb**	**16 19 59.8**	**-0.6**
PRK				S		**Sb**	**16 20 04.2**	**-0.8**
PRK				AML		AML	16 20 06.3	
	comp=N,1320μm,0.3s							
PRK				AML		AML	16 20 06.8	
	comp=E,664μm,0.4s							
GPNR	**Gulpinar-Canak**	**0.35**	**23**	PG		**Pg**	**16 20 00.9**	**+0.2**
GPNR				SG		**Sg**	**16 20 06.6**	**-0.8**
AYVA	**Ayvalik**	**0.60**	**73**	*i* P		**Pg**	**16 20 05.4**	**+0.1**
AYVA				*i* S		**Sb**	**16 20 14.0**	**-0.4**
AYVA				IAML			16 20 17.0	
	comp=N,94nm,0.7s							
AYVA				IAML			16 20 20.0	
	comp=E,35nm,0.2s							
BOZC	**Bozcaada**	**0.71**	**6**	PG		**Pg**	**16 20 07.4**	**-0.1**
BOZC				SG		**Sb**	**16 20 18.2**	**+0.4**
BOZC	**Bozcaada**	**0.71**	**6**	*i* P		**Pg**	**16 20 07.4**	**-0.1**
BOZC				*i* S		**Sb**	**16 20 17.5**	**-0.3**
BOZC				IAML			16 20 18.0	
	comp=E,88nm,0.2s							
BOZC				IAML			16 20 20.0	
	comp=N,66nm,0.3s							
DKL	**Dikili**	**0.74**	**94**	PG		**Pg**	**16 20 07.7**	**-0.3**
CHOS	**Chios island**	**0.75**	**174**	P		**Pg**	**16 20 08.0**	**-0.1**
CHOS				S		**Sg**	**16 20 17.6**	**-0.3**
	comp=N,148nm,0.3s							
CHOS	**Chios island**	**0.75**	**174**	P		**Pg**	**16 20 07.6**	**-0.5**
CHOS				S		**Sg**	**16 20 17.9**	**0.0**
CHOS				AML		AML	16 20 19.9	
	comp=N,194μm,0.2s							
CHOS				AML		AML	16 20 20.7	
	comp=E,408μm,0.3s							
CHOS	**Chios island**	**0.75**	**174**	PG		**Pg**	**16 20 07.4**	**-0.7**
EZN	**Ezine**	**0.75**	**22**	PG		**Pg**	**16 20 07.9**	**-0.3**
BAYC	**CANAKKALE_Bayr**	**0.76**	**37**	*i* P		**Pg**	**16 20 07.9**	**-0.5**
BAYC				*i* S		**Sb**	**16 20 19.0**	**-0.1**
BAYC				IAML			16 20 22.0	
	comp=E,58nm,0.6s							
BAYC				IAML			16 20 22.0	
	comp=N,47nm,0.2s							
ZEDA	**zmir-Bergama**	**0.89**	**100**	*i* P		**Pb**	**16 20 11.0**	**+0.1**
ZEDA				*i* S		**Sb**	**16 20 23.0**	**+0.2**
ZEDA				IAML			16 20 25.0	
	comp=N,26nm,0.5s							
ZEDA				IAML			16 20 25.0	
	comp=E,26nm,0.2s							
URLA	**Izmir**	**0.92**	**147**	PG		**Pg**	**16 20 10.9**	**-0.4**
URLA	**Izmir**	**0.92**	**147**	*i* P		**Pb**	**16 20 11.9**	**+0.4**
URLA				*i* S		**Sb**	**16 20 24.0**	**+0.4**
URLA				IAML			16 20 25.0	
	comp=N,38nm,1.5s							
URLA				IAML			16 20 28.0	
	comp=E,24nm,0.4s							
GADA	**Gvkgeada**	**1.06**	**358**	PN		**Pg**	**16 20 13.5**	**-0.5**
SKY	**Skiros Island**	**1.12**	**257**	P		**Pn**	**16 20 15.9**	**+0.8**
GELI	**Tayfur-Gelibol**	**1.33**	**17**	PN		**Pn**	**16 20 18.3**	**+0.3**
SMTH	**Samothraki Isl**	**1.38**	**346**	P		**Pn**	**16 20 18.8**	**+0.2**
LPK	**Lapseki**	**1.39**	**26**	PN		**Pn**	**16 20 18.9**	**+0.1**
BALY	**Balya**	**1.43**	**64**	*i* P		**Pg**	**16 20 21.7**	**+0.7**
BALY				*i* S		**Sg**	**16 20 40.5**	**+1.0**
BALY				IAML			16 20 42.0	
	comp=N,19nm,0.2s							
BALY				IAML			16 20 42.0	
	comp=E,24nm,0.8s							
SMG	**Samos**	**1.58**	**154**	P		**Pb**	**16 20 22.5**	**-0.2**
ERIK	**Erikli-Kesan**	**1.60**	**15**	PN		**Pn**	**16 20 22.2**	**+0.6**
KRBG	**Karabiga-Canak**	**1.63**	**39**	PN		**Pn**	**16 20 22.2**	**+0.1**
ALN	**Alexandroupoli**	**1.77**	**2**	P		**Pn**	**16 20 24.4**	**+0.4**
ALN	**Alexandroupoli**	**1.77**	**2**	P		**Pn**	**16 20 24.3**	**+0.4**
ALN	**Alexandroupoli**	**1.77**	**2**	PN		**Pn**	**16 20 24.1**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.82**	**31**	PN		**Pn**	**16 20 25.2**	**+0.4**
MRMT	**Marmara Adasi**	**1.94**	**40**	PN		**Pn**	**16 20 26.8**	**+0.4**

*IDC **04** 16:49:09.9±1.0,15°.09S×66°.98E,h0^{km},mb3.8/10, mb1 3.9/10,mb1mx3.7/53,mbtmp3.8/10,MS3.5/6, Ms1 3.5/6,ms1mx3.2/32,Error ellipse: s-maj=32.2km s-min=22.3km az=23.0*

ISC 04 16:49:12.4±1.1,15°.1S±0'.2×67°.0E±0'.2,h16^{km},n26, σ0°77/12,mb4.0/10,MS3.5/6,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**9.16**	**37**	T		T	17 00 47.2	
	baz=216,slow=76							
H08S2	**Diego Carcia H**	**9.17**	**37**	T		T	17 00 47.9	
	baz=216,slow=76							
H08S3	**Diego Carcia H**	**9.18**	**37**	T		T	17 00 48.3	
	baz=216,slow=76							
H08N3	**Diego Carcia H**	**9.55**	**25**	T		T	17 01 16.4	
	baz=204,slow=77							
H08N1	**Diego Carcia H**	**9.57**	**25**	T		T	17 01 18.9	
	baz=204,slow=77							
H08N2	**Diego Carcia H**	**9.58**	**25**	T		T	17 01 17.8	
	baz=204,slow=77							
PALK	**Pallekele**	**26.06**	**32**	LR		LR	17 02 39.2	
	comp=Z,60nm,21.7s,baz=219,slow=31							
LSZ	**Lusaka**	**37.41**	**265**	P		**P**	**16 56 25.9**	**+0.6**
	2.4nm,0.8s,baz=97,slow=9.8,SNR=4.4							
WSAR	**Wadi Sarin**	**38.98**	**348**	LR		LR	17 08 38.6	
	comp=Z,47nm,20.4s,baz=230,slow=30							
BOSA	**Boshof**	**40.79**	**244**	LR		LR	17 10 27.1	
	comp=Z,99nm,20.6s,baz=92,slow=31							
CMAR	**Chiang Mai Arr**	**45.86**	**44**	P		**P**	**16 57 35.3**	**+1.0**
	0.9nm,1.0s,baz=228,slow=9.1,SNR=7.7							
CMAR				LR		LR	17 14 33.8	
	comp=Z,64nm,19.1s,baz=186,slow=33							
H01W3	**Cape Leeuwin H**	**46.57**	**124**	T		T	17 47 31.5	
	baz=280							
H01W2	**Cape Leeuwin H**	**46.57**	**124**	T		T	17 47 31.6	
	baz=280							
H01W1	**Cape Leeuwin H**	**46.58**	**124**	T		T	17 47 32.8	
	baz=280							
BRTR	**Keskin Array B**	**62.78**	**332**	P		**P**	**16 59 37.1**	**-0.2**
	0.3nm,0.7s,baz=134,slow=6.

AKDM	**Akdamar-Van**	**1.64**	**7**	PN	**Pb**	**17 00 53.4**	**-0.3**
MARD	**Mardin**	**1.67**	**292**	*i* P	**Pn**	**17 00 52.4**	**-0.4**
MARD				*i* S	**Sb**	**17 01 15.3**	**0.0**
BLIS	**Bitlis-Merkez**	**1.78**	**344**	*i* P	**Pb**	**17 00 55.3**	**-0.8**
BLIS				IAML		17 01 23.0	
	comp=E,23nm,0.9s						
BLIS				IAML		17 01 23.0	
	comp=N,21nm,0.4s						
IKRK	**Kirkuk**	**1.85**	**134**	*e*Pn	**Pb**	**17 00 56.0**	**-1.2**
IKRK				AML	AML	17 01 07.7	
	comp=Z,36nm,0.4s						
IKRK				*e*Sn	**Sb**	**17 01 20.0**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.89**	**320**	PN	**Pn**	**17 00 55.8**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.89**	**320**	*i* P	**Pb**	**17 00 57.2**	**-0.7**
SVAN				*i* S	**Sb**	**17 01 21.7**	**+0.2**
SVAN				IAML		17 01 24.0	
	comp=E,42nm,0.4s						
SVAN				IAML		17 01 25.0	
	comp=N,32nm,0.3s						
GURO	**Guroymak-BITLI**	**1.93**	**344**	PN	**Pn**	**17 00 57.1**	**+0.8**
MAZI	**Mazidag**	**1.97**	**293**	PN	**Pn**	**17 00 56.9**	**0.0**
MUSM	**Mu-Merkez**	**2.23**	**335**	*i* P	**Pn**	**17 00 59.8**	**-0.8**
DYBB	**Diyarbakir**	**2.41**	**302**	PN	**Pn**	**17 01 03.3**	**+0.5**
HANI	**Diyarbakir_Han**	**2.52**	**314**	*i* P	**Pb**	**17 01 09.2**	**+0.6**
HANI				*i* S	**Sb**	**17 01 40.7**	**+1.0**
HANI				IAML		17 01 55.0	
	comp=E,55nm,0.9s						
BNGL	**BINGOL**	**2.57**	**331**	*i* P	**Pb**	**17 01 08.9**	**-0.7**
BNGB	**Bingl**	**2.80**	**325**	PN	**Pn**	**17 01 09.2**	**+0.9**
AGRB	**Hanur-Agry**	**2.88**	**4**	PN	**Pn**	**17 01 10.1**	**+0.7**
URFA	**Urfa**	**3.21**	**284**	PN	**Pn**	**17 01 14.9**	**+1.1**
BHD	**Baghdad**	**3.69**	**158**	*e*Pn	**Pn**	**17 01 22.0**	**+1.7**
BHD				*e*Sn	**Sn**	**17 02 04.0**	**+0.2**
MALT	**Malatya**	**3.77**	**297**	PN	**Pn**	**17 01 22.9**	**+1.2**
IBDR	**Badra**	**4.45**	**143**	*e*Pn	**Pn**	**17 01 32.5**	**+1.7**
IBDR				AML	AML	17 01 38.9	
	comp=Z,62nm,0.7s						
IBDR				*e*Sn	**Sn**	**17 02 22.0**	**-0.6**
NSR	**Nassriya**	**6.35**	**152**	*e*Pn	**Pn**	**17 01 59.5**	**+2.6**
NSR				*e*Sn	**Sn**	**17 03 07.0**	**-2.5**

*UCR **04** 17:12:29.1±2.0,8.˚40N×82.˚79W, h26km±5km, MW3.5*
*UPA **04** 17:12:29.2±1.1,8.˚39N×82.˚78W, h22km±3km, MW3.7*
ISC 04 17:12:28.4±1.2,8.˚36N±0.˚06×82.˚80W±0.˚04, h31km±6km, n26,σ0°86/39, 2C-7D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LESP3	**La Esperanza,**	**0.04**	**17**	*e*P		**Pb**	**17 12 32.9**	**-0.8**
LESP3				*i* S		**Sb**	**17 12 36.6**	**-0.6**
BAGA3	**Bagala, Chiriq**	**0.29**	**69**	⇓*i*P		**Pb**	**17 12 36.3**	**+0.4**
BAGA3				*i* S		**Sb**	**17 12 41.2**	**+0.2**
DVD	**David**	**0.36**	**78**	⇑*i*P		**Pb**	**17 12 36.8**	**0.0**
DVD				*i* S		**Sb**	**17 12 42.4**	**0.0**
PEDE3	**Pedregal, Chir**	**0.38**	**87**	⇓*i*P		**Pb**	**17 12 37.0**	**0.0**
PEDE3				*i* S		**Sb**	**17 12 42.8**	**-0.1**
LOCO3	**Loma Colorada,**	**0.38**	**83**	⇓*i*P		**Pb**	**17 12 37.2**	**+0.1**
LOMA3	**Las Lomas, Chi**	**0.41**	**81**	⇓*e*P		**Pb**	**17 12 37.5**	**0.0**
BRU2	**Volcan**	**0.44**	**15**	*e*S		**Sn**	**17 12 45.5**	**-0.4**
BRU2	**Volcan**	**0.44**	**15**	⇑*i*P		**Pb**	**17 12 38.0**	**-0.2**
	baz=181,slow=2.8							
BRU2				*i* S		**Sb**	**17 12 44.8**	**0.0**
BCO2	**Palmira**	**0.45**	**38**	⇓*i*P		**Pb**	**17 12 38.2**	**0.0**
BCO2				*i* S		**Sb**	**17 12 45.0**	**+0.1**
PTAR3	**Potrerillos Ar**	**0.45**	**43**	⇓*i*P		**Pb**	**17 12 38.2**	**0.0**
PTAR3				*i* S		**Sb**	**17 12 44.4**	**-0.5**
CHIR3	**Chiriqui UPA,**	**0.47**	**86**	⇓*i*P		**Pb**	**17 12 38.2**	**-0.2**
CHIR3				*i* S		**Sb**	**17 12 45.5**	**+0.3**
EDSV	**San Vito**	**0.48**	**340**	*e*P		**Pb**	**17 12 38.7**	**0.0**
EDSV				*e*S		**Sn**	**17 12 47.5**	**+0.6**
CHGR2	**Aguacate**	**0.87**	**49**	*i* P		**Pn**	**17 12 43.9**	**-0.6**
CHGR2				*i* S		**Sb**	**17 12 55.2**	**-1.1**
EDPN	**Palmar Norte**	**0.88**	**313**	*e*P		**Pn**	**17 12 43.8**	**-0.9**
EDPN				*e*S		**Sb**	**17 12 56.2**	**-0.5**
CNI2	**El Empalme, Bo**	**1.10**	**17**	*e*P		**Pn**	**17 12 47.8**	**-0.1**
EDLM	**Las Mercedes**	**1.20**	**320**	*e*P		**Pn**	**17 12 49.5**	**+0.4**
EDLM				*e*S		**Sb**	**17 13 06.2**	**+0.5**
EDDO	**Dominical**	**1.37**	**310**	*e*P		**Pn**	**17 12 52.0**	**+0.5**
GMAL	**Guarumal, Vera**	**1.67**	**111**	*i* P		**Pn**	**17 12 55.2**	**-0.4**
GMAL				*i* S		**Sb**	**17 13 18.2**	**-0.9**
LCR2	**La Lucha 2**	**1.81**	**319**	*e*P		**Pn**	**17 12 58.9**	**+1.1**
STIA3	**Santiago, Vera**	**1.83**	**98**	*e*P		**Pn**	**17 12 58.8**	**+1.0**
HDC	**Heredia**	**2.08**	**322**	*e*P		**Pn**	**17 13 03.2**	**+1.8**
ARE1	**Arenal 1**	**2.81**	**318**	*e*P		**Pb**	**17 13 15.8**	**-2.2**
JTS	**Las Juntas de**	**2.86**	**312**	*e*P		**Pn**	**17 13 13.9**	**+2.0**
JTS	**Las Juntas de**	**2.86**	**312**	*e*P		**Pn**	**17 13 14.1**	**+2.2**
BCIP	**Isla Barro Col**	**3.04**	**75**	*e*P		**Pn**	**17 13 15.1**	**+0.7**
UPA	**Univ. de Panam**	**3.29**	**79**	*e*P		**Pn**	**17 13 18.2**	**+0.3**

*IDC **04** 17:34:25.7±1.3,35.˚14N×141.˚67E, h0km, mb3.7/6, mb1 3.9/9, mb1mx3.5/58, mbtmp3.8/9, ML3.8/2, Error ellipse: s-maj=45.7km s-min=16.9km az=76.0*
*JMA **04** 17:34:29.1±0.1,35.˚13N×141.˚34E, h26km±2km, M3.1*
*NEIC **04** 17:34:29.3±0.8,35.˚15N±0.˚05×141.˚73E±0.˚09, h37km±10km, mb4.4/8, Error ellipse: s-maj=12.2km s-min=2.8km az=120.0*
ISC 04 17:34:29.4±0.8,35.˚14N±0.˚05×141.˚38E±0.˚07, h27km, n44, σ1°45/44, mb4.1/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BSO1	**Boso 1**	**0.59**	**214**	P		**Pb**	**17 34 40.0**	**-0.8**
BSO1				*e*X			17 34 47.1	
CHOJ	**Chosi**	**0.70**	**323**	P		**Pb**	**17 34 42.3**	**-0.8**
CHOJ				*e*S		**Sb**	**17 34 51.4**	**-1.1**
BSO3	**Boso 3**	**0.79**	**245**	P		**Pb**	**17 34 43.4**	**-1.0**
BSO3				*e*X			17 34 53.5	
BSO4	**Boso 4**	**0.87**	**260**	P		**Pn**	**17 34 45.0**	**-0.8**
BSO4				*e*X			17 34 55.5	
KTR	**Katsuura**	**0.87**	**271**	P		**Pn**	**17 34 44.9**	**-1.0**
KTR				*e*S		**Sb**	**17 34 56.4**	**-0.9**
JSMT	**Sammumatsuo**	**0.91**	**304**	P		**Pn**	**17 34 45.9**	**-0.6**
JKUC	**kamogawauchiur**	**0.97**	**272**	P		**Pn**	**17 34 46.2**	**-1.0**
JKUC				*e*S		**Sb**	**17 34 58.9**	**-1.1**
JCN	**Nagara**	**1.00**	**286**	*e*S		**Sb**	**17 35 00.3**	**-0.7**
JYT	**Yasato**	**1.45**	**319**	P		**Pn**	**17 34 54.5**	**+0.6**
JHO	**Hitachi**	**1.61**	**336**	P		**Pn**	**17 34 57.0**	**+0.9**
JHJ2	**Mitsune**	**2.40**	**213**	Pn		**Pn**	**17 35 08.5**	**+1.5**
MJAR	**Matsushiro Arr**	**2.93**	**299**	Pn		**Pn**	**17 35 16.3**	**+2.0**
	0.5nm,0.3s,baz=111,slow=13,SNR=42							
MJAR	**Matsushiro Arr**	**2.93**	**299**			**Pn**	**17 35 15.8**	**+1.6**
MAJO	**Matsushiro**	**2.93**	**299**			**Pn**	**17 35 16.6**	**+2.3**
MAT	**Matsushiro**	**2.93**	**299**	P		**Pn**	**17 35 16.0**	**+1.7**
MAT				*e*S		**Sn**	**17 35 46.8**	**-1.9**
MJB9	**Matsu-Tunnel**	**2.94**	**299**			**Pn**	**17 35 16.8**	**+2.4**
INU	**Inuyama**	**3.58**	**275**			**Pn**	**17 35 26.2**	**+3.1**
ERM	**Erimo**	**7.00**	**11**	Pn		**Pn**	**17 36 07.6**	**-2.6**
JCJ	**Chichijima**	**8.05**	**175**	Pn		**Pn**	**17 36 23.5**	**-1.1**
	3.7nm,0.3s,baz=0.0,slow=20,SNR=3.5							
ASAJ	**Asahikawa**	**9.01**	**6**	Pn		**Pn**	**17 36 36.7**	**-1.0**
	0.7nm,0.3s,baz=202,slow=12,SNR=11							
ASAJ				Sn		**Sn**	**17 38 20.1**	**+1.8**
	0.1nm,0.3s,baz=233,slow=20,SNR=1.6							
JKA	**Kamikawa-asahi**	**9.01**	**6**			**Pn**	**17 36 36.7**	**-1.0**
JKA						**Sn**	**17 38 20.1**	**+1.8**
ENH	**Enshi**	**27.21**	**269**	P		**P**	**17 40 13.1**	**+2.1**
ENH				IAmb		IAmb	17 40 57.8	
	comp=Z,14nm,1.6s							
H11N2	**WAKE ISLAND Hy**	**27.25**	**118**	T		T	18 08 42.2	
	baz=310,slow=75,SNR=29							
H11N1	**WAKE ISLAND Hy**	**27.25**	**118**	T		T	18 08 48.2	
	baz=310,slow=75,SNR=18							
H11N3	**WAKE ISLAND Hy**	**27.27**	**118**	T		T	18 08 43.6	
	baz=310,slow=75,SNR=11							
H11S1	**WAKE ISLAND Hy**	**27.90**	**120**	T		T	18 10 00.5	
	baz=312,slow=75,SNR=89							
H11S3	**WAKE ISLAND Hy**	**27.90**	**120**	T		T	18 09 58.2	
	baz=312,slow=75,SNR=58							
YAK	**Yakutsk**	**27.91**	**348**	P		**P**	**17 40 16.0**	**-0.9**
YAK				IAmb		IAmb	17 40 23.3	
	comp=Z,16nm,1.6s							
H11S2	**WAKE ISLAND Hy**	**27.91**	**120**	T		T	18 10 06.1	
	baz=312,slow=75,SNR=40							
SONM	**Songino Array**	**28.86**	**307**	P		**P**	**17 40 24.7**	**-1.0**
ZALV	**Zalesovo Beam**	**43.19**	**314**	P		**P**	**17 42 29.3**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=98,slow=9.1,SNR=5.2							
ZALV	**Zalesovo Beam**	**43.19**	**314**	P		**P**	**17 42 28.4**	**+0.6**
MK31	**Makanchi Array**	**45.12**	**304**	P		**P**	**17 42 43.7**	**+0.3**
MKAR	**Makanchi Array**	**45.12**	**304**	P		**P**	**17 42 44.6**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=87,slow=9.1,SNR=5.8							
MKAR	**Makanchi Array**	**45.12**	**304**	P		**P**	**17 42 44.1**	**+0.7**
MAKZ	**Makanchi**	**45.34**	**304**	P		**P**	**17 42 45.8**	**+0.7**
MAKZ				IAmb		IAmb	17 44 26.4	
	comp=Z,3.8nm,1.4s							
KURK	**Kurchatov**	**47.10**	**309**	P		**P**	**17 42 59.8**	**+0.9**
KURK				IAmb		IAmb	17 43 03.9	
	comp=Z,2.7nm,0.6s							
KURBB	**Kurchatov Arra**	**47.16**	**309**	P		**P**	**17 43 01.6**	**+2.2**
	comp=Z,0.9nm,0.5s,baz=86,slow=8.4,SNR=5.7							
MTN	**Manton Dam**		**48.70 193**	P		**P**	**17 43 10.3**	**-1.2**
WRA	**Warramunga Arr**	**55.19**	**188**	P		**P**	**17 44 00.3**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=5.0,slow=7.5,SNR=30							
WRA	**Warramunga Arr**	**55.19**	**188**	P		**P**	**17 43 59.7**	**-0.1**
ASAR	**Alice Springs**	**58.91**	**188**	P		**P**	**17 44 26.8**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=1.3,slow=6.0,SNR=12							
ASAR	**Alice Springs**	**58.91**	**188**	P		**P**	**17 44 24.9**	**-1.3**
NOA	**NORSAR Array B**	**75.92**	**337**	P		**P**	**17 46 14.7**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=38,slow=5.8,SNR=2.9							

*BJI **04** 17:46:06.4±0.0,38.˚31N×75.˚52E, h138km, mb4.5/1*
*IDC **04** 17:46:08.3±6.8,38.˚25N×75.˚86E, h126km±42km, mb3.2/3, mb1 3.1/6, mb1mx2.8/51, mbtmp3.4/6, Error ellipse: s-maj=78.1km s-min=42.0km az=147.0*
*NEIC **04** 17:46:08.7±1.3,38.˚34N±0.˚07×75.˚4E±0.˚1, h127km±14km, mb4.6/3, Error ellipse: s-maj=14.7km s-min=8.1km az=121.0*
*NNC **04** 17:46:11.3±2.2,38.˚45N×75.˚27E, h95km±64km, mb2.9, mpv3.4, Error ellipse: s-maj=21.1km s-min=17.2km az=36.0*
ISC 04 17:46:07.2±0.6,38.˚19N±0.˚05×75.˚49E±0.˚07, h135km, n53, σ2°12/62, 2C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KSH	**Kashi**	**1.38**	**16**	P		Pn	17 46 29.3	-5.1
KSH				S		Sn	17 46 44.7	-11
KSH				*s*max		*s*max		
	comp=N,660nm,0.3s							
KSH				*s*max		*s*max		
	comp=E,2μm,0.2s							
NRN	**Naryn**	**3.26**	**7**			**Pn**	**17 46 57.2**	**-0.4**
ARSB	**Arslanbob**	**3.68**	**329**			**Pn**	**17 47 02.0**	**-0.9**
KZA	**Kyzart**	**3.89**	**357**	P		**Pn**	**17 47 05.6**	**-0.3**
	SNR=7.8							
TARG	**Taragay, Kyrgy**	**3.96**	**26**			**Pn**	**17 47 06.8**	**0.0**
BTK	**Batken**	**4.08**	**299**			**Pn**	**17 47 07.8**	**-0.4**
ULHL	**Ulahol**	**4.09**	**8**	P		**Pn**	**17 47 08.3**	**-0.1**
	SNR=15							
UCH	**Uchtor**	**4.10**	**350**	P		**Pn**	**17 47 08.6**	**-0.2**
	SNR=37							
GAR	**Garm**	**4.13**	**283**			**Pn**	**17 47 08.6**	**-0.3**
KDJ	**Kajisay**	**4.14**	**18**	Pn		**Pn**	**17 47 09.7**	**+0.6**
AML	**Almayashu**	**4.17**	**341**	P		**Pn**	**17 47 09.4**	**-0.2**
	SNR=11							
BOOM	**Boomskoye usch**	**4.31**	**4**	Pn		**Pn**	**17 47 10.4**	**-0.8**
KBK	**Karagaybulak**	**4.48**	**355**	P		**Pn**	**17 47 14.9**	**+1.4**
	SNR=5.8							
AAK	**Ala-Archa**	**4.50**	**351**	P		**Pn**	**17 47 14.0**	**+0.2**
	1.1nm,0.3s,baz=193,slow=11,SNR=20							
AAK				S		**Sn**	**17 48 03.6**	**-2.1**
	0.8nm,0.3s,baz=330,slow=20,SNR=5.0							
AAK	**Ala-Archa**	**4.50**	**351**	P		**Pn**	**17 47 14.1**	**+0.2**
	SNR=5.5							
AAK	**Ala-Archa**	**4.50**	**351**			**Pn**	**17 47 14.0**	**+0.2**
AAK	**Ala-Archa**	**4.50**	**351**	⇓P		**Pn**	**17 47 13.8**	**-0.1**
	7.6nm,1.1s							
AAK				⇓S		**Sn**	**17 48 02.9**	**-2.8**
	3.9nm,0.6s							
EKS2	**Erkin-Say**	**4.65**	**344**	P		**Pn**	**17 47 16.8**	**+1.0**
	SNR=7.8							
TKM2	**Tokmak 2**	**4.72**	**1**	P		**Pn**	**17 47 17.1**	**+0.3**
	SNR=13							
TKM2	**Tokmak 2**	**4.72**	**1**	⇓P		**Pn**	**17 47 17.0**	**+0.1**
	4.9nm,0.3s							
TKM2				⇑S		**Sn**	**17 48 07.4**	**-3.7**
	5.8nm,0.8s							
PRZ	**Przheval'sk**	**4.83**	**26**	Pn		**Pn**	**17 47 18.8**	**+0.6**
CHCP	**Chirah Chowk**	**4.87**	**202**	P		**Pn**	**17 47 21.7**	**+3.0**
NIL	**Nilore**	**4.88**	**203**			**Pn**	**17 47 21.7**	**+2.8**
CHGR	**Chuyangaron**	**4.99**	**277**			**Pn**	**17 47 19.3**	**-1.0**
CEP	**Cherat**	**5.24**	**215**	P		**Pn**	**17 47 25.6**	**+1.9**
THN	**Thein Dam**	**5.75**	**178**	*e*P		**Pn**	**17 47 32.0**	**+1.6**
THN				*e*S		**Sn**	**17 48 33.0**	**-2.3**
DHRM	**DHARAMSHALA**	**5.96**	**173**	*e*P		**Pn**	**17 47 34.8**	**+1.3**
DHRM				*e*S		**Sn**	**17 48 38.9**	**-2.0**
DHRM				IAML			17 48 44.0	
	comp=E,140nm,0.5s							
DHRM				IAML			17 48 44.6	
	comp=N,70nm,0.4s							
THW	**Thamme Wali**	**6.19**	**211**	P		**Pn**	**17 47 37.4**	**+1.0**
KK31	**Karatay Array**	**6.20**	**324**	Pn		**Pn**	**17 47 35.9**	**-0.5**
KK31						**Sn**	**17 48 41.1**	**-4.9**
KK31	**Karatay Array**	**6.20**	**324**	⇓P		**Pn**	**17 47 35.2**	**-1.1**
	comp=N,0.6nm,0.3s,baz=139,slow=29,SNR=28							
KK31				⇑S		**Sn**	**17 48 42.3**	**-3.6**
	comp=N,0.7nm,0.3s,baz=135,slow=24,SNR=8.3							
KKAR	**Karatay Array**	**6.20**	**324**	Pn		**Pn**	**17 47 35.3**	**-1.0**
KKAR						**Sn**	**17 48 41.8**	**-4.2**
KKAR	**Karatay Array**	**6.20**	**324**	Pn		**Pn**	**17 47 35.8**	**-0.6**
KKAR						**Sn**	**17 48 41.0**	**-5.0**
KBL	**Kabul**	**6.35**	**237**	Pn		**Pn**	**17 47 38.8**	**+0.2**
SARP	**Sargodha**	**6.67**	**201**	P		**Pn**	**17 47 43.6**	**+0.9**
SMLA	**Simla**	**7.18**	**168**	*e*P		**Pn**	**17 47 50.5**	**+0.9**
SMLA				*e*S		**Sn**	**17 49 04.9**	**-4.9**
SMLA				IAML			17 49 06.7	
	comp=E,29nm,0.3s							
SMLA				IAML			17 49 12.1	
	comp=N,42nm,0.1s							
JOSI	**Joshimath**	**8.32**	**155**	*e*P		**Pn**	**17 48 07.0**	**+1.8**
JOSI				*e*S		**Sn**	**17 49 33.0**	**-4.7**
MAKZ	**Makanchi**	**9.85**	**27**	Pn		Pn	17 48 22.6	-2.7
MK31	**Makanchi Array**	**9.95**	**28**	Pn		**Pn**	**17 48 25.1**	**-1.6**
MKAR	**Makanchi Array**	**9.95**	**28**	P		**Pn**	**17 48 26.0**	**-0.7**
	comp=N,0.1nm,0.3s,baz=206,slow=16,SNR=5.3							
MKAR	**Makanchi Array**	**9.95**	**28**	Pn		**Pn**	**17 48 24.6**	**-2.1**
KUDL	**Kundal**	**10.05**	**175**	*e*P		**Pn**	**17 48 25.0**	**-3.2**
KUDL				*e*S		Sn	17 50 09.3	-10
WMQ	**Urumqi**	**10.80**	**55**	*e*P		**Pn**	**17 48 37.4**	**-0.7**
WMQ				*p*max		*p*max		
	comp=N,8.0nm,0.7s							
HRA	**Herat**	**11.34**	**254**	Pn		**Pn**	**17 48 44.3**	**-1.2**
BVAR	**Borovoye Array**	**15.25**	**348**	P		**P**	**17 49 38.7**	**+1.7**
	comp=N,0.1nm,0.3s,baz=157,slow=14,SNR=4.0							
AB31	**Akbulak array**	**15.73**	**320**	P		**P**	**17 49 43.9**	**+1.6**
	comp=N,1.1nm,0.9s,baz=129,slow=11,SNR=5.8							
ABKAR	**Akbulak array**	**15.73**	**320**	Pn		**Pn**	**17 49 40.7**	**-0.5**
UOSS	**Minazif**	**21.03**	**237**	P		**P**	**17 50 43.1**	**+2.8**
UOSS				IAmb		IAmb	17 50 59.3	
	comp=Z,11nm,1.2s							
CSS	**Mathiatis**	**33.80**	**278**	P		**P**	**17 52 37.7**	**+1.4**
CSS				IAmb		IAmb	17 53 03.6	
	comp=Z,14nm,1.0s							
ARCES	**ARCESS Array B**	**41.01**	**336**	P		**P**	**17 53 38.8**	**+2.3**
	comp=Z,0.8nm,0.6s,baz=106,slow=8.9,SNR=5.7							
ARCES	**ARCESS Array B**	**41.01**	**336**	P		**P**	**17 53 38.6**	**+2.1**
NC303	**NORSAR Array S**	**45.15**	**322**	P		**P**	**17 54 09.7**	**-0.2**
NC303				IAmb		IAmb	17 54 34.1	
	comp=Z,36nm,1.3s							
TORD	**Torodi Ar. Bea**	**69.31**	**271**	P		**P**	**17 57 04.3**	**+4.1**
	comp=Z,0.4nm,0.5s,baz=47,slow=5.5,SNR=3.4							
YKA	**Yellowknife Ar**	**79.33**	**5**	P		**P**	**17 57 58.9**	**+1.5**
	comp=Z,0.1nm,0.5s,baz=346,slow=5.6,SNR=4.8							

*BJI **04** 17:56:59.0±0.0, 13.˚10S×167.˚10E, h215km, mB5.0/16, mb4.5/29*
*NEIC **04** 17:56:59.2±1.4, 13.˚11S±0.˚07×167.˚06E±0.˚09, h209km±5km, mb4.8/102, Error ellipse: s-maj=13.6km s-min=9.6km az=66.0*
*IDC **04** 17:57:00.8±1.5, 13.˚20S×167.˚11E, h223km±12km, mb4.2/23, mb1 4.2/26, mb1mx4.0/44, mbtmp4.7/26, Error ellipse: s-maj=13.9km s-min=9.0km az=115.0*
ISC 04 17:56:59.3±0.7, 13.˚15S±0.˚05×167.˚11E±0.˚06, h212km±5km, n199, σ1°09/227, mb4.7/75, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	**Honiara**	**7.94**	**297**	P		**Pn**	**17 58 54.6**	**+2.8**
	1.6nm,0.3s,baz=162,slow=16,SNR=3.4							
HNR	**Honiara**	**7.94**	**297**	Pn		**Pn**	**17 58 49.7**	**-2.0**
DZM	**Mont Dzumac**	**8.90**	**184**	P		**Pn**	**17 59 07.9**	**+3.7**
	5.0nm,0.3s,baz=322,slow=9.6,SNR=62							
DZM				S		**S**	**18 00 45.5**	**+1.1**
	baz=323,slow=20,SNR=1.8							
DZM	**Mont Dzumac**	**8.90**	**184**			**Pn**	**17 59 03.5**	**-0.7**
DZM						**S**	**18 00 43.1**	**-1.3**
MSVF	**Nonsavu**	**11.49**	**115**	P		**P**	**17 59 41.5**	**-1.1**
KRVT	**Keravat (AS076**	**17.29**	**299**	P		**Pn**	**18 00 48.2**	**-0.3**
	4.1nm,0.3s,baz=350,slow=15,SNR=3.6							
EIDS	**Eidsvold**	**19.38**	**229**	P		**P**	**18 01 11.0**	**+1.7**
EIDS				IAmb		IAmb	18 01 11.6	
	comp=Z,17nm,0.6s							
PMG	**Port Moresby**	**19.91**	**279**	P		**P**	**18 01 16.0**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=268,slow=9.3,SNR=5.4							
PMG	**Port Moresby**	**19.91**	**279**	P		**P**	**18 01 15.6**	**+0.5**
CTA	**Charters Tower**	**21.13**	**248**	P		**P**	**18 01 28.2**	**+0.3**
	comp=Z,26nm,0.9s,baz=76,slow=12,SNR=17							
ARMA	**Armidale**	**22.36**	**217**	P		**P**	**18 01 41.4**	**+1.5**
NIUE	**Niue**	**22.82**	**108**	P		**P**	**18 01 43.5**	**-0.6**
COEN	**Coen**	**23.28**	**265**	P		**P**	**18 01 49.9**	**+1.7**
COEN				IAmb		IAmb	18 02 05.3	
	comp=Z,66nm,1.8s							
URZ	**Urewera**	**26.54**	**162**	P		**P**	**18 02 19.8**	**+2.4**
CAN	**Canberra**	**27.47**	**213**	P		**P**	**18 02 26.1**	**+0.3**
SNZO	**South Karori**	**28.83**	**168**	P		**P**	**18 02 36.4**	**-1.3**
THZ	**Tophouse**	**28.95**	**171**	P		**P**	**18 02 40.8**	**+2.0**
BHW	**Baring Head**	**28.96**	**168**	P		**P**	**18 02 39.1**	**+0.3**
MSWZ	**Moikau Station**	**29.05**	**167**	P		**P**	**18 02 40.0**	**+0.4**
KHZ	**Kahutara**	**29.69**	**170**	P		**P**	**18 02 45.6**	**+0.4**
KHZ				IAmb		IAmb	18 02 47.6	
	comp=Z,44nm,1.3s							
LTZ	**Lake Taylor**	**29.86**	**172**	P		**P**	**18 02 47.8**	**+1.0**
STKA	**Stephens Creek**	**29.92**	**227**	P		**P**	**18 02 48.5**	**+1.0**
	comp=Z,9.2nm,0.5s,baz=46,slow=9.8,SNR=30							
STKA				PcP		**PcP**	**18 05 45.0**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=85,slow=3.5,SNR=4.6							
STKA	**Stephens Creek**	**29.92**	**227**	P		**P**	**18 02 48.7**	**+1.2**
STKA						**PcP**	**18 05 45.2**	**+0.4**
TOO	**Toolangi**	**31.04**	**215**	P		**P**	**18 02 58.0**	**+0.6**
TOO				IAmb		IAmb	18 03 01.4	
	comp=Z,32nm,1.5s							
ODZ	**Otahua Downs**	**31.93**	**175**	P		**P**	**18 03 05.2**	**+0.3**
ODZ				IAmb		IAmb	18 03 26.4	
	comp=Z,53nm,1.5s							
WRA	**Warramunga Arr**	**32.09**	**253**	P		**P**	**18 03 06.2**	**-0.5**
	comp=Z,3.8nm,0.5s,baz=85,slow=9.2,SNR=36							
WRA				PcP		**PcP**	**18 05 51.0**	**0.0**
	comp=Z,0.5nm,0.6s,baz=81,slow=3.7,SNR=3.1							
WRA	**Warramunga Arr**	**32.09**	**253**	P		**P**	**18 03 05.3**	**-1.4**
AS31	**Alice Springs**	**33.12**	**247**	P		**P**	**18 03 15.2**	**-0.5**
ASAR	**Alice Springs**	**33.12**	**247**	P		**P**	**18 03 15.1**	**-0.5**
	comp=Z,10.0nm,0.5s,baz=75,slow=9.7,SNR=348							
ASAR				PcP		**PcP**	**18 05 53.6**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=95,slow=2.5,SNR=5.6							
ASAR				S		**S**	**18 08 17.6**	**-1.6**
	comp=Z,1.2nm,1.0s,ba

OHAK	**Old Harbor**	**77.37**	**21**			**P**	**18 08 31.3**	**+1.0**
GAMB	**Gambell**	**78.40**	**9**	P		**P**	**18 08 36.6**	**+0.8**
GAMB				IAmb		IAmb	18 08 55.9	
	comp=Z,34nm,1.5s							
SVW2	**Sparrevohn**	**79.70**	**17**	P		**P**	**18 08 44.6**	**+1.6**
SVW2				IAmb		IAmb	18 08 45.6	
	comp=Z,60nm,1.8s							
BRLK	**Bradley Lake**	**80.13**	**20**	P		**P**	**18 08 46.0**	**+0.6**
ANM	**Nome**	**80.26**	**12**	P		**P**	**18 08 46.9**	**+1.0**
YAK	**Yakutsk**	**80.48**	**343**	P		**P**	**18 08 47.5**	**+0.3**
	comp=Z,4.6nm,0.3s,baz=54,slow=2.0,SNR=13							
YAK	**Yakutsk**	**80.48**	**343**	P		**P**	**18 08 47.0**	**-0.1**
YAK				IAmb		IAmb	18 08 48.4	
	comp=Z,23nm,0.9s							
ULN	**Ulaanbaatar**	**80.78**	**324**	P		**P**	**18 08 49.9**	**+0.6**
SEW	**Seward**	**80.87**	**20**	P		**P**	**18 08 49.7**	**+0.5**
BILL	**Bilibino**	**80.97**	**360**	P		**P**	**18 08 49.9**	**+0.3**
BILL				IAmb		IAmb	18 08 51.0	
	comp=Z,38nm,1.5s							
SONM	**Songino Array**	**81.14**	**324**	P		**P**	**18 08 51.7**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=130,slow=4.8,SNR=11							
SONM	**Songino Array**	**81.14**	**324**	P		**P**	**18 08 51.4**	**+0.2**
SUA	**Susitna One**	**81.46**	**19**	P		**P**	**18 08 52.5**	**0.0**
SUA				IAmb		IAmb	18 09 17.6	
	comp=Z,38nm,1.7s							
GTA	**Gaotai**	**81.47**	**314**	P		**P**	**18 08 54.3**	**+1.2**
GTA				pmax		pmax		
	comp=Z,4.0nm,1.0s							
MID	**Middleton Isla**	**81.48**	**22**	P		**P**	**18 08 55.6**	**+3.1**
RC01	**Rabbit Creek A**	**81.50**	**20**	P		**P**	**18 08 53.2**	**+0.6**
RC01				IAmb		IAmb	18 09 12.0	
	comp=Z,41nm,1.4s							
PMR	**Palmer**	**82.07**	**20**	P		**P**	**18 08 55.9**	**+0.4**
PMR				IAmb		IAmb	18 09 14.5	
	comp=Z,15nm,1.2s							
PPLA	**Purkeypile**	**82.11**	**18**	P		**P**	**18 08 55.5**	**-0.4**
KNK	**Knik Glacier**	**82.16**	**20**	P		**P**	**18 08 56.1**	**+0.1**
KNK				IAmb		IAmb	18 08 57.0	
	comp=Z,12nm,0.6s							
GLI	**Glacier Island**	**82.24**	**21**	P		**P**	**18 08 56.3**	**-0.1**
GHO	**Glory Hole Cre**	**82.27**	**19**			**P**	**18 08 56.7**	**+0.1**
GHO				IAmb		IAmb	18 09 07.1	
	comp=Z,26nm,1.4s							
FID	**Port Fidalgo**	**82.36**	**21**	P		**P**	**18 08 57.0**	**-0.1**
FID				IAmb		IAmb	18 08 57.6	
	comp=Z,29nm,1.0s							
EYAK	**Cordova Ski Ar**	**82.47**	**21**	P		**P**	**18 08 58.2**	**+0.6**
EYAK				IAmb		IAmb	18 09 13.4	
	comp=Z,16nm,1.1s							
SML	**Sawmill**	**82.49**	**20**	P		**P**	**18 08 58.0**	**+0.3**
SML				IAmb		IAmb	18 08 59.3	
	comp=Z,48nm,1.7s							
SCM	**Sheep Creek Mo**	**82.84**	**20**	P		**P**	**18 09 00.1**	**+0.5**
SCM				IAmb		IAmb	18 09 00.9	
	comp=Z,24nm,0.8s							
KTH	**Kantishna Hill**	**82.98**	**18**	P		**P**	**18 08 59.7**	**-0.6**
KTH				IAmb		IAmb	18 09 01.1	
	comp=Z,17nm,1.3s							
TRF	**Thorofare Moun**	**83.09**	**18**	P		**P**	**18 09 00.6**	**-0.4**
RND	**Reindeer**	**83.49**	**18**	P		**P**	**18 09 03.2**	**+0.3**
RND				IAmb		IAmb	18 09 03.7	
	comp=Z,43nm,1.3s							
KRMB	**Red Mountain**	**83.51**	**45**	P		**P**	**18 09 04.9**	**+1.4**
CRQM	**Cirque**	**83.56**	**22**	P		**P**	**18 09 03.7**	**+0.2**
CRQM				IAmb		IAmb	18 09 12.8	
	comp=Z,46nm,1.6s							
TGL	**Tana Glacier**	**83.67**	**22**	P		**P**	**18 09 04.2**	**+0.3**
TGL				IAmb		IAmb	18 09 05.0	
	comp=Z,20nm,1.0s							
MCK	**McKinley**	**83.71**	**18**	P		**P**	**18 09 03.8**	**-0.1**
MCK				IAmb		IAmb	18 09 05.3	
	comp=Z,45nm,1.6s							
DHY	**Denali Highway**	**83.71**	**19**	P		**P**	**18 09 04.7**	**+0.5**
DIB	**Dawson Inlet,**	**83.76**	**32**	P		**P**	**18 09 05.0**	**+0.7**
DIB				IAmb		IAmb	18 09 09.7	
	comp=Z,19nm,1.3s							
GLB	**Gilahina Butte**	**83.78**	**21**	P		**P**	**18 09 04.7**	**+0.3**
BWN	**Browne**	**83.87**	**18**	P		**P**	**18 09 04.6**	**-0.1**
MOBC	**Moresby Island**	**83.99**	**32**	P		**P**	**18 09 05.7**	**+0.1**
MOBC				IAmb		IAmb	18 09 28.0	
	comp=Z,43nm,1.6s							
MCARA	**McCarthy VSAT**	**84.02**	**22**	P		**P**	**18 09 06.2**	**+0.7**
MCARA				IAmb		IAmb	18 09 07.3	
	comp=Z,31nm,1.5s							
BALM	**Baldy**	**84.04**	**22**	P		**P**	**18 09 06.1**	**+0.4**
BALM				IAmb		IAmb	18 09 06.7	
	comp=Z,9.6nm,0.6s							
IMAR	**Indian Mountai**	**84.09**	**15**	P		**P**	**18 09 06.5**	**+0.7**
MLY	**Manley**	**84.15**	**17**	P		**P**	**18 09 06.2**	**+0.1**
MLY				IAmb		IAmb	18 09 07.6	
	comp=Z,20nm,1.6s							
BARN	**Barnard Glacie**	**84.31**	**22**	P		**P**	**18 09 07.8**	**+0.6**
BARN				IAmb		IAmb	18 09 08.1	
	comp=Z,10nm,0.7s							
CTGM	**Chitina Glacie**	**84.37**	**23**	P		**P**	**18 09 07.5**	**+0.1**
CTGM				IAmb		IAmb	18 09 08.7	
	comp=Z,15nm,0.8s							
DHAK	**Deception Hill**	**84.42**	**25**	P		**P**	**18 09 07.1**	**-0.5**
WRH	**Wood River Hil**	**84.50**	**18**	P		**P**	**18 09 07.7**	**-0.2**
WRH				IAmb		IAmb	18 09 08.4	
	comp=Z,22nm,1.1s							
HUMO	**Hull Mountain**	**84.59**	**44**	P		**P**	**18 09 09.8**	**+1.0**
HUMO				IAmb		IAmb	18 09 35.2	
	comp=Z,26nm,1.8s							
LSA	**Lhasa**	**84.59**	**302**	P		**P**	**18 09 10.9**	**+1.2**
CCB	**Clear Creek Bu**	**84.72**	**18**	P		**P**	**18 09 08.2**	**-0.7**
CCB				IAmb		IAmb	18 09 09.2	
	comp=Z,11nm,0.6s							
HDA	**Harding Lake**	**84.80**	**18**	P		**P**	**18 09 09.5**	**+0.1**
HDA				IAmb		IAmb	18 09 10.3	
	comp=Z,18nm,0.6s							
MDM	**Murphy Dome**	**84.82**	**17**	P		**P**	**18 09 09.2**	**-0.2**
MDM				IAmb		IAmb	18 09 09.9	
	comp=Z,14nm,0.9s							
COLA	**College**	**84.86**	**18**	P		**P**	**18 09 09.2**	**-0.4**
COLA				IAmb		IAmb	18 09 10.6	
	comp=Z,14nm,0.8s							
RIDG	**Independent Ri**	**84.99**	**19**	P		**P**	**18 09 11.2**	**+0.8**
RIDG				IAmb		IAmb	18 09 30.6	
	comp=Z,17nm,1.2s							
IL31		**85.08**	**18**	P		**P**	**18 09 10.2**	**-0.5**
IL31				IAmb		IAmb	18 09 11.2	
	comp=Z,14nm,0.9s							
ILAR	**Eielson Array**	**85.08**	**18**	P		**P**	**18 09 10.3**	**-0.4**
	comp=Z,8.0nm,0.5s,baz=233,slow=5.2,SNR=190							
ILAR	**Eielson Array**	**85.08**	**18**	P		**P**	**18 09 10.2**	**-0.5**
DOT	**Dot Lake**	**85.19**	**20**	P		**P**	**18 09 11.8**	**+0.4**
DOT				IAmb		IAmb	18 09 14.6	
	comp=Z,35nm,1.8s							
DOT				pP		**pP**	**18 10 01.2**	**-1.3**
SCRK	**Sand Creek**	**85.43**	**19**	P		**P**	**18 09 13.1**	**+0.4**
SCRK				IAmb		IAmb	18 09 14.0	
	comp=Z,12nm,0.9s							
BCAR	**Beaver Creek A**	**85.57**	**21**	P		**P**	**18 09 13.3**	**+0.1**
HYT	**Haines Junctio**	**85.75**	**24**	P		**P**	**18 09 14.4**	**+0.1**
WHY	**Whitehorse**	**86.71**	**25**	P		**P**	**18 09 18.5**	**-0.4**
EGAK	**Eagle**	**86.89**	**20**	P		**P**	**18 09 20.4**	**+0.9**
DAWY	**Dawson**	**87.03**	**21**	P		**P**	**18 09 20.7**	**+0.4**
TOLK	**Toolik Lake Re**	**87.17**	**15**	P		**P**	**18 09 21.6**	**+0.7**
BMAR	**Burnt Mountain**	**87.62**	**17**	P		**P**	**18 09 23.8**	**+0.8**
TIXI	**Tiksi**	**88.40**	**349**	P		**P**	**18 09 26.3**	**-0.3**
SYO	**Syowa Base**	**90.17**	**197**	eP		**P**	**18 09 33.0**	**-2.0**
WMQ	**Urumqi**	**91.52**	**315**	eP		**P**	**18 09 41.9**	**+0.1**
WMQ				pmax		pmax		
	comp=Z,6.0nm,1.7s							
WMQ				pmax		pmax		
	comp=Z,150nm,5.9s							
MK31	**Makanchi Array**	**95.96**	**317**	P		**P**	**18 10 02.5**	**+0.4**
MKAR	**Makanchi Array**	**95.96**	**317**	P		**P**	**18 10 02.4**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=89,slow=6.1,SNR=19							
MKAR				PKiKP		**PKiKP**	**18 14 39.4**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=210,slow=0.9,SNR=4.8							
MKAR				PKKPbc		**PKKPbc**	**18 26 49.1**	**-2.3**
	comp=Z,0.4nm,0.6s,baz=300,slow=2.4,SNR=4.0							
MKAR	**Makanchi Array**	**95.96**	**317**	P		**P**	**18 10 02.4**	**+0.3**
MKAR						**PKiKP**	**18 14 39.3**	**-0.5**
MKAR						**PKKPbc**	**18 26 48.5**	**-2.8**
ZALV	**Zalesovo Beam**	**96.03**	**324**	P		**P**	**18 10 01.7**	**-0.5**
	comp=Z,1.7nm,0.7s,baz=118,slow=4.3,SNR=7.5							
YKA	**Yellowknife Ar**	**96.22**	**27**	P		**P**	**18 10 01.9**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=254,slow=4.7,SNR=24							
YKA				PKiKP		**PKiKP**	**18 14 39.5**	**-0.3**
	baz=248,slow=1.6							
YKA	**Yellowknife Ar**	**96.22**	**27**	P		**P**	**18 10 01.7**	**-1.1**
KSH	**Kashi**	**99.10**	**308**	P		**Pdif**	**18 10 17.2**	**+0.7**
HAMF	**Hammerfest**	**118.29**	**347**	*e*PKPdf		**PKPdf**	**18 15 20.3**	**-0.3**
ARCES	**ARCESS Array B**	**118.69**	**346**	PKP		**PKPdf**	**18 15 21.4**	**0.0**
	comp=Z,6.3nm,0.3s,baz=71,slow=2.0,SNR=169							
ARCES				PKKPbc		**PKKPab**	**18 25 36.8**	**-3.7**
	comp=Z,0.9nm,0.8s,baz=264,slow=2.2,SNR=5.4							
ARCES	**ARCESS Array B**	**118.69**	**346**			**PKPdf**	**18 15 20.9**	**-0.5**
ARCES				PKKPbc		**PKKPab**	**18 25 36.9**	**-3.7**
ARE0	**ARCESS Array S**	**118.69**	**346**	*e*PKPdf		**PKPdf**	**18 15 21.2**	**-0.3**
KTK1	**Kautokeino**	**119.62**	**346**	*e*PKPdf		**PKPdf**	**18 15 22.7**	**-0.6**
TRO	**Tromso**	**120.10**	**348**	*e*PKPdf		**PKPdf**	**18 15 23.6**	**-0.5**
CPUP	**Villa Florida**	**121.63**	**132**	PKP		**PKPdf**	**18 15 27.3**	**-1.1**
	comp=Z,0.7nm,0.3s,baz=247,slow=3.3,SNR=3.2							
CPUP	**Villa Florida**	**121.63**	**132**			**PKPdf**	**18 15 27.6**	**-0.8**
STEI	**Steigen**	**122.27**	**348**	*e*PKPdf		**PKPdf**	**18 15 27.9**	**-0.4**
LOF	**Lofoten**	**122.44**	**349**	*e*PKPdf		**PKPdf**	**18 15 27.8**	**-0.8**
KONS	**Konsvik**	**123.93**	**348**	*e*PKPdf		**PKPdf**	**18 15 31.4**	**-0.1**
FINES	**FINESS Array B**	**124.20**	**339**	PKP		**PKPdf**	**18 15 32.3**	**+0.1**
	comp=Z,3.4nm,0.5s,baz=81,slow=2.3,SNR=35							
FINES	**FINESS Array B**	**124.20**	**339**			**PKPdf**	**18 15 31.9**	**-0.3**
NSS	**Namsos**	**125.87**	**347**	*e*PKPdf		**PKPdf**	**18 15 34.9**	**-0.4**
TBLU	**Trondheim**	**127.36**	**347**	*e*PKPdf		**PKPdf**	**18 15 37.4**	**-0.8**
NB2	**NORSAR Subarra**	**129.07**	**345**	PKPdf		**PKPdf**	**18 15 41.8**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=31,slow=1.9							
NB2	**NORSAR Subarra**	**129.07**	**345**	PKPdf		**PKPdf**	**18 15 41.8**	**+0.2**
	baz=31,slow=1.9							
NOA	**NORSAR Array B**	**129.07**	**345**	PKP		**PKPdf**	**18 15 41.9**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=31,slow=2.0,SNR=11							
NC602	**NORSAR Array S**	**129.25**	**345**	*e*PKPdf		**PKPdf**	**18 15 41.7**	**-0.2**
HYA	**Hoyanger**	**130.09**	**348**	*e*PKPdf		**PKPdf**	**18 15 42.4**	**-1.0**
BRTR	**Keskin Array B**	**131.36**	**312**	PKP		**PKPdf**	**18 15 45.7**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=143,slow=4.6,SNR=5.7							
BRTR				SKPbc		**SKPbc**	**18 18 52.1**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=91,slow=3.6,SNR=4.2							
BRTR	**Keskin Array B**	**131.36**	**312**			**PKPdf**	**18 15 45.1**	**-1.6**
BLS5	**Blasjo**	**131.62**	**347**	*e*PKPdf		**PKPdf**	**18 15 45.5**	**-1.0**
BUR08	**Bucovina Ar. S**	**133.23**	**325**			**PKPdf**	**18 15 50.6**	**+0.6**
BURAR	**Bucovina Array**	**133.24**	**325**			**PKiKP**	**18 15 50.9**	**-0.3**
OSTC	**Ostas**	**135.81**	**334**	*e*PKPDF		**PKiKP**	**18 15 57.2**	**+1.0**
GOPC	**GO Pecny, Ondr**	**136.90**	**334**	*e*PKPDF		**PKiKP**	**18 15 58.3**	**-0.2**
CONA	**Conrad Observa**	**137.87**	**331**	*e*PKiKP		**PKiKP**	**18 16 01.2**	**+0.5**
	comp=Z,2.7nm,0.7s							
KHC	**Kasperske Hory**	**138.00**	**334**	*e*PKPDF		**PKPdf**	**18 15 59.2**	**+0.5**
GERES	**GERESS Array B**	**138.17**	**334**	PKhKP		PKPpre	18 15 49.6	
	comp=Z,0.8nm,0.7s,baz=320,slow=6.1,SNR=4.1							
GERES				PKP		**PKPdf**	**18 15 59.3**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=64,slow=3.1,SNR=6.0							
GERES				SKPbc		**SKPbc**	**18 19 11.1**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=329,slow=3.7,SNR=2.7							
GERES	**GERESS Array B**	**138.17**	**334**			**PKPdf**	**18 15 59.0**	**-0.2**
ARSA	**Arzberg**	**138.52**	**331**	*e*PKiKP		**PKiKP**	**18 16 01.8**	**-0.1**
	comp=Z,4.5nm,1.1s							
MOA	**Molln**	**138.66**	**332**	*i* PKiKP		**PKiKP**	**18 16 02.2**	**0.0**
	comp=Z,0.8nm,0.4s							
FNA	**Florina**	**139.32**	**319**			**PKPdf**	**18 16 00.0**	**-1.4**
WATA	**Walderalm**	**140.24**	**334**	*i* PKiKP		**PKiKP**	**18 16 05.5**	**0.0**
	comp=Z,2.9nm,0.4s							
WTTA	**Wattenberg**	**140.27**	**334**	*i* PKiKP		**PKiKP**	**18 16 05.9**	**+0.2**
	comp=Z,2.3nm,0.3s							
ABTA	**Abfaltersbach**	**140.28**	**333**	*e*PKiKP		**PKiKP**	**18 16 05.2**	**-0.4**
	comp=Z,1.8nm,0.4s							
MOTA	**Moosalm**	**140.44**	**334**	*i* PKiKP		**PKiKP**	**18 16 06.0**	**+0.1**
	comp=Z,1.1nm,0.3s							
KEST	**Kesra**	**149.89**	**322**	PKPbc		**PKiKP**	**18 16 25.6**	**-0.1**
	comp=Z,8.5nm,0.6s,baz=30,slow=0.7,SNR=15							
KEST	**Kesra**	**149.89**	**322**			**PKiKP**	**18 16 25.4**	**-0.2**
ESDC	**Sonseca Array**	**152.43**	**345**	PKPbc		**PKiKP**	**18 16 31.1**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=13,slow=3.3,SNR=15							
ESDC				PKPab		**PKPab**	**18 16 41.3**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=17,slow=4.3,SNR=6.1							
ESDC	**Sonseca Array**	**152.43**	**345**			**PKPbc**	**18 16 30.7**	**+0.2**
ESDC						**PKPab**	**18 16 41.5**	**+0.1**
TORD	**Torodi Ar. Bea**	**165.79**	**272**	PKP		**PKPdf**	**18 16 38.8**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=86,slow=0.5,SNR=6.6							

*JMA **04** 18:01:17.4±0.1,38.77N×142.08E,h37km±1km,M3.8*
JMA Felt II J1.
*IDC **04** 18:01:20.3±2.6,38.71N×142.06E,h59km±24km,mb3.4/7, mb1 3.6/11,mb1mx3.4/37,mbtmp3.6/11,ML3.0/4,MS2.6/1, Ms1 2.6/1,ms1mx2.2/26,Error ellipse: s-maj=27.1km s-min=14.5km az=112.0*

ISC 04 18:01:16.8±1.8,38.72N±0.05×142.03E±0.07,h27km±13km, n28,σ1s25/30,mb3.7/7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKMT	**Kesennumamotoy**	**0.44**	**282**	P	**Pn**	**18 01 27.6**	**+0.2**
JKMT				S	**Sn**	**18 01 34.4**	**-0.2**
OFUJ	**Ofunato**	**0.45**	**322**	P	**Pn**	**18 01 27.3**	**-0.3**
OFUJ				S	**Sn**	**18 01 34.0**	**-0.9**
JIO	**Ouri**	**0.60**	**243**	P	**Pn**	**18 01 29.9**	**+0.3**
JIO				S	**Sn**	**18 01 38.2**	**-0.2**
JIKH	**Ishinomakikobu**	**0.60**	**227**	P	**Pn**	**18 01 30.0**	**+0.3**
JIKH				S	**Sn**	**18 01 38.6**	**0.0**
JMK	**Ichinoseki**	**0.67**	**290**	P	**Pn**	**18 01 30.8**	**+0.2**
JMK				S	**Sn**	**18 01 40.1**	**-0.1**
JOM	**Ohasama**	**0.94**	**323**	P	**Pn**	**18 01 34.3**	**-0.1**
JOM				S	**Sb**	**18 01 46.3**	**-0.4**
JOU	**Okura**	**1.13**	**252**	P	**Pb**	**18 01 38.2**	**+0.5**
JOU				*e*S	**Sn**	**18 01 52.8**	**+1.2**
JTH	**Tanohata**	**1.22**	**354**	P	**Pn**	**18 01 37.3**	**-0.9**
JTH				S	**Sn**	**18 01 51.9**	**-1.9**
JRG	**Rokugo**	**1.28**	**302**	P	**Pb**	**18 01 39.6**	**-0.6**
JMM	**Marumori**	**1.30**	**229**	P	**Pb**	**18 01 39.9**	**-0.6**
JYK	**Kaneyama**	**1.32**	**279**	P	**Pb**	**18 01 40.5**	**-0.4**
MJAR	**Matsushiro Arr**	**3.73**	**235**	P	**Pn**	**18 02 15.6**	**+2.8**
	0.2nm,0.3s,baz=45,slow=12,SNR=8.0						
MJAR				LR	LR	18 03 53.7	
	comp=Z,70nm,18.9s,baz=70,slow=41						
ASAJ	**Asahikawa**	**5.41**	**4**	P	**Pn**	**18 02 37.1**	**+1.5**
	2.3nm,0.3s,baz=223,slow=8.0,SNR=15						
ASAJ				S	**Sn**	**18 03 40.1**	**+3.1**
	0.6nm,0.3s,baz=54,slow=19,SNR=2.4						
USRK	**Ussuriysk Ar.**	**9.31**	**309**	P	**Pn**	**18 03 32.6**	**+3.3**
	baz=120,slow=14,SNR=4.9						
KSRS	**Korea Array**	**11.19**	**268**	P	Pn	18 03 59.8	+4.8
	0.1nm,0.3s,baz=74,slow=14,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**28.64**	**124**	T	T	18 37 35.1	
	baz=318,slow=76,SNR=170						
H11N1	**WAKE ISLAND Hy**	**28.65**	**124**	T	T	18 37 36.1	
	baz=318,slow=76,SNR=210						
H11N3	**WAKE ISLAND Hy**	**28.66**	**124**	T	T	18 37 35.4	
	baz=318,slow=76,SNR=133						
H11S1	**WAKE ISLAND Hy**	**29.42**	**126**	T	T	18 38 31.8	
	baz=319,slow=76,SNR=57						
H11S3	**WAKE ISLAND Hy**	**29.42**	**126**	T	T	18 38 32.6	
	baz=319,slow=76,SNR=61						
H11S2	**WAKE ISLAND Hy**	**29.43**	**126**	T	T	18 38 33.8	
	baz=319,slow=76,SNR=39						
ZALV	**Zalesovo Beam**	**41.16**	**311**	P	**P**	**18 08 58.3**	**-0.3**
	1.1nm,0.4s,baz=88,slow=8.8,SNR=5.6						
MKAR	**Makanchi Array**	**43.66**	**301**	P	**P**	**18 09 18.9**	**-0.2**
	0.7nm,0.5s,baz=90,slow=8.6,SNR=13						
ILAR	**Eielson Array**	**47.81**	**33**	P	**P**	**18 09 51.6**	**0.0**
	0.9nm,0.6s,baz=262,slow=6.3,SNR=2.3						
WRA	**Warramunga Arr**	**58.80**	**188**	P	**P**	**18 11 12.1**	**-0.8**
	0.7nm,0.5s,baz=6.1,slow=7.0,SNR=7.2						
YKA	**Yellowknife Ar**	**62.11**	**31**	P	**P**	**18 11 34.5**	**-0.4**
	0.2nm,0.7s,baz=306,slow=6.5,SNR=4.3						
ASAR	**Alice Springs**	**62.53**	**188**	P	**P**	**18 11 37.7**	**-0.5**
	0.4nm,0.6s,baz=9.1,slow=5.1,SNR=8.5						
TXAR	**Lajitas Array**	**88.71**	**53**	P	**P**	**18 14 08.2**	**0.0**
	0.2nm,0.6s,baz=284,slow=3.6,SNR=3.2						

*NIED **04** 18:12:00,33.80N×141.20E,h35km,Mw4.4 Best double couple: M0 4.08000×10^15 NP1:φs323.00000°,δ77.00000°, λ43.00000°. NP2:φs221.00000°,δ48.00000°,λ162.00000°.*
*BJI **04** 18:12:15.6±0.0,33.67N×141.66E,h33km,mB4.9/28, mb4.4/33,Ms4.7/6,Ms7 4.5/4*
*MOS **04** 18:12:18.2±1.2,33.73N×141.48E,h34km,mb4.6/11,Error ellipse: s-maj=11.0km s-min=6.0km az=106.3*
*NEIC **04** 18:12:20.4±1.7,33.73N±0.05×141.32E±0.07,h34km±4km, mb4.7/39,Error ellipse: s-maj=9.0km s-min=7.0km az=110.0*
*JMA **04** 18:12:21.9±0.2,33.80N×141.15E,h55km±5km,M4.4*
*IDC **04** 18:12:25.3±2.3,33.66N×140.99E,h65km±19km,mb3.8/21, mb1 3.9/24,mb1mx3.8/42,mbtmp4.1/24,MS3.2/15, Ms1 3.3/15,ms1mx3.2/35,Error ellipse: s-maj=18.0km s-min=10.3km az=84.0*

ISC 04 18:12:18.9±0.7,33.70N±0.04×141.32E±0.05,h20km±6km, n174,σ1s61/188,mb4.5/57,MS3.3/11,3C-8D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.99**	**344**	P	**Pb**	**18 12 38.1**	**+1.0**
BSO3	**Boso 3**	**1.29**	**329**	P	**Pn**	**18 12 42.2**	**+0.7**
JHJ2	**Mitsune**	**1.39**	**245**	P	**Pn**	**18 12 44.4**	**+1.4**
JHJ2				*e*S	**Sn**	**18 13 00.8**	**+0.1**
JHJ2	**Mitsune**	**1.39**	**245**		**Pn**	**18 12 44.1**	**+1.1**
JHJ2				Sn	**Sn**	**18 13 00.1**	**-0.6**
JHCJ	**Hachijojimakas**	**1.42**	**244**	P	**Pn**	**18 12 44.7**	**+1.2**
JHCJ				S	**Sn**	**18 13 01.1**	**-0.4**
JMKN	**Mikurajimanish**	**1.45**	**278**	P	**Pn**	**18 12 44.6**	**+0.7**
JMKN				*e*S	**Sn**	**18 13 01.0**	**-1.4**
BSO4	**Boso 4**	**1.52**	**328**	P	**Pn**	**18 12 45.8**	**+1.0**
KTR	**Katsuura**	**1.67**	**330**	P	**Pn**	**18 12 47.6**	**+0.7**
JAOM	**Aogashimamukai**	**1.79**	**227**	P	**Pn**	**18 12 50.5**	**+1.8**
JIM2	**Oshima 3**	**1.86**	**304**	P	**Pn**	**18 12 49.5**	**-0.2**
JIM2				*e*S	**Sn**	**18 13 09.7**	**-2.9**
JTHY	**Toshimahigashi**	**1.87**	**297**	P	**Pn**	**18 12 50.2**	**+0.4**
JTHY				S	**Sn**	**18 13 10.9**	**-1.9**
JKO	**Kozu shima**	**1.88**	**286**	P	**Pn**	**18 12 50.3**	**+0.5**
JKO				S	**Sn**	**18 13 11.3**	**-1.6**
JIZS	**Izushimoda**	**2.26**	**297**	P	**Pn**	**18 12 55.6**	**+0.5**
JIZS				S	**Sn**	**18 13 20.4**	**-2.0**
JOD2	**Odawara 2**	**2.41**	**311**	P	**Pn**	**18 12 57.3**	**+0.1**
JOD2				*e*S	**Sn**	**18 13 23.7**	**-2.5**
JFNN	**Fujinakano**	**2.64**	**305**	P	**Pn**	**18 13 01.0**	**+0.7**
JFNN				*e*S	**Sn**	**18 13 29.9**	**-1.8**
JYN	**Shimob**	**2.91**	**309**	P	**Pn**	**18 13 04.7**	**+0.6**
SHZ3	**Shizuoka 3**	**2.91**	**299**	P	**Pn**	**18 13 05.6**	**+1.5**
TK04	**Tokai 4**	**2.94**	**284**	P	**Pn**	**18 13 06.0**	**+1.7**
MJAR	**Matsushiro Arr**	**3.81**	**319**	P	**Pn**	**18 13 18.2**	**+1.7**
	5.6nm,0.3s,baz=164,slow=14,SNR=371						
MJAR				S	**Sn**	**18 14 01.1**	**+0.4**
	6.8nm,0.3s,baz=143,slow=19,SNR=11						
MJAR				LR	LR	18 14 34.7	
	comp=Z,105nm,18.3s,baz=155,slow=36						
MJAR	**Matsushiro Arr**	**3.81**	**319**		**Pn**	**18 13 17.1**	**+0.6**
MJAR				Sn	**Sn**	**18 13 58.9**	**-1.8**
MAJO	**Matsushiro**	**3.81**	**319**	P	**Pn**	**18 13 17.9**	**+1.4**
MAJO						18 13 59.3	
MAJO	**Matsushiro**	**3.81**	**319**		**Pn**	**18 13 17.9**	**+1.4**
MAJO				Sn	**Sn**	**18 13 59.2**	**-1.5**
MAT	**Matsushiro**	**3.81**	**319**	P	**Pn**	**18 13 18.1**	**+1.6**
MAT				S	**Sn**	**18 13 59.9**	**-0.8**
MJB9	**Matsu-Tunnel**	**3.82**	**319**		**Pn**	**18 13 18.2**	**+1.6**
MJB9				Sn	**Sn**	**18 13 59.5**	**-1.3**
INU	**Inuyama**	**3.91**	**296**		**Pn**	**18 13 19.4**	**+1.6**
JCJ	**Chichijima**	**6.62**	**173**	P	**Pn**	**18 13 56.8**	**+1.7**
	43nm,0.3s,baz=280,sl

LZH				sP	sP	18 18 50.2	+10
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
CD2	**Chengdu**	**31.76**	**275**	P	**P**	**18 18 39.8**	**-1.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TLY	**Talaya**	**32.54**	**315**⇓	*e*P	**P**	**18 18 50.5**	**+2.1**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GTA	**Gaotai**	**33.60**	**292**	*e*P	P	18 19 11.7	+14
GTA				pP	pwP	18 19 16.6	+8.5
GTA				sP	sP	18 19 18.8	+14
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA	**Gaotai**	**33.60**	**292**	*e*P	**P**	**18 19 01.6**	**+3.7**
GTA				pP	pwP	18 19 12.0	+3.9
GTA				sP	sP	18 19 16.2	+11
SIJI	**Sorong**	**35.66**	**197**	P	**P**	**18 19 15.3**	**-0.4**
	comp=Z,5.0nm,0.6s,baz=55,slow=11,SNR=3.6						
SIJI				LR	LR	18 30 13.8	
	comp=Z,71nm,21.3s,baz=126,slow=30						
BILL	**Bilibino**	**37.25**	**15**	*e*P	**P**	**18 19 28.4**	**-0.3**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FAKI	**Fak Fak**	**37.41**	**195**	P	**P**	**18 19 30.1**	**-0.5**
FAKI				IAmb	IAmb	18 19 33.1	
	comp=Z,18nm,0.9s						
TIXI	**Tiksi**	**38.59**	**354**⇓	*e*P	**P**	**18 19 36.8**	**-3.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LUWI	**Luwuk**	**38.71**	**211**	P	**P**	**18 19 39.4**	**-2.2**
LUWI				IAmb	IAmb	18 20 02.1	
	comp=Z,16nm,0.7s						
PBKT	**Sadao Pong**	**40.02**	**255**	P	**P**	**18 19 50.5**	**-2.0**
NIKH	**Nikolski High**	**40.09**	**46**	P	**P**	**18 19 50.1**	**-2.6**
CHTO	**Chiang Mai**	**40.50**	**259**	P	**P**	**18 19 54.7**	**-1.9**
CHTO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
CHTO	**Chiang Mai**	**40.50**	**259**	P	**P**	**18 19 54.7**	**-1.9**
CMAR	**Chiang Mai Arr**	**40.68**	**259**	P	**P**	**18 19 56.9**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=50,slow=7.4,SNR=11						
CMAR				LR	LR	18 36 39.1	
	comp=Z,42nm,18.4s,baz=68,slow=36						
CMAR	**Chiang Mai Arr**	**40.68**	**259**	P	**P**	**18 19 56.2**	**-1.9**
WMQ	**Urumqi**	**42.36**	**300**	*e*P	**P**	**18 20 12.0**	**+0.4**
WMQ				pP	sP	18 20 22.3	+3.5
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,210nm,6.1s						
WMQ				LR	LR		
	comp=Z,210nm,29.0s						
WMQ				LR	LR		
	comp=Z,1μm,29.2s						
KSM	**Kuching**	**43.25**	**229**	P	**P**	**18 20 18.5**	**-0.5**
KSM				IAmb	IAmb	18 20 21.2	
	comp=Z,16nm,1.2s						
ZAA0	**Zalesovo Array**	**44.16**	**315**	P	**P**	**18 20 26.4**	**+0.5**
ZAA0				PcP	**PP**	**18 22 09.6**	**+0.8**
ZALV	**Zalesovo Beam**	**44.16**	**315**	P	**P**	**18 20 25.6**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=90,slow=6.1,SNR=9.8						
ZALV				PcP	**PcP**	**18 22 09.9**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=114,slow=2.7,SNR=7.7						
ZALV	**Zalesovo Beam**	**44.16**	**315**	P	**P**	**18 20 26.9**	**+1.0**
ZALV				PcP	**PP**	**18 22 09.3**	**+0.6**
ANM	**Nome**	**44.50**	**30**	P	**P**	**18 20 30.7**	**+2.2**
ANM				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ANM	**Nome**	**44.50**	**30**	P	**P**	**18 20 30.7**	**+2.2**
MK31	**Makanchi Array**	**45.89**	**305**	P	**P**	**18 20 39.7**	**-0.2**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**45.89**	**305**	P	**P**	**18 20 39.7**	**-0.2**
MKAR	**Makanchi Array**	**45.89**	**305***ce*	P	**P**	**18 20 39.7**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**45.89**	**305**	P	**P**	**18 20 39.5**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=89,slow=10,SNR=24						
MKAR				LR	LR	18 39 45.7	
	comp=Z,66nm,19.4s,baz=354,slow=36						
MAKZ	**Makanchi**	**46.10**	**305**	P	**P**	**18 20 41.1**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAKZ	**Makanchi**	**46.10**	**305**	P	**P**	**18 20 41.1**	**-0.5**
SOEI	**Soe**	**46.16**	**204**	P	**P**	**18 20 41.2**	**-1.1**
SOEI				IAmb	IAmb	18 21 00.1	
	comp=Z,24nm,1.1s						
BATI	**Baumata**	**46.78**	**204**	P	**P**	**18 20 48.0**	**+1.0**
	comp=Z,22nm,0.6s,baz=293,slow=0.7,SNR=12						
MTN	**Manton Dam**	**47.29**	**194**	P	**P**	**18 20 50.9**	**-0.1**
COEN	**Coen**	**47.42**	**178**	P	**P**	**18 20 52.0**	**0.0**
COEN				IAmb	IAmb	18 21 15.4	
	comp=Z,28nm,1.4s						
KURK	**Kurchatov**	**47.98**	**311**⇑	*e*P	**P**	**18 20 55.6**	**-0.5**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURK	**Kurchatov**	**47.98**	**311**	P	**P**	**18 20 55.2**	**-0.8**
KURK				IAmb	IAmb	18 20 59.5	
	comp=Z,5.3nm,0.9s						
KNRA	**Kununurra**	**50.54**	**196**	P	**P**	**18 21 16.0**	**+0.1**
UGM	**Wanagama**	**50.66**	**221**	P	**P**	**18 21 14.9**	**-2.1**
KSH	**Kashi**	**51.76**	**296**	P	**P**	**18 21 29.4**	**+4.3**
KSH				pP	pwP	18 21 39.7	+4.4
KSH				PP	**PP**	**18 23 28.1**	**+5.4**
KSH				S	**S**	**18 28 48.3**	**+2.2**
KSH				sS	sS	18 29 03.9	+8.5
KSH				ScS	**ScS**	**18 31 11.6**	**-2.8**
KSH				SS	**SS**	**18 32 27.0**	**+4.6**
KSH				pmax	pmax		
	comp=Z,350nm,7.4s						
KSH				LR	LR		
	comp=Z,210nm,5.2s						
KSH				LR	LR		
	comp=Z,170nm,4.3s						
KSH				LR	LR		
	comp=Z,430nm,6.4s						
AAK	**Ala-Archa**	**52.06**	**301**⇓	*e*P	**P**	**18 21 28.0**	**+0.6**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AAK	**Ala-Archa**	**52.06**	**301**	P	**P**	**18 21 27.4**	**0.0**
	comp=Z,2.0nm,0.7s,baz=87,slow=9.3,SNR=4.2						
AAK	**Ala-Archa**	**52.06**	**301**	P	**P**	**18 21 26.9**	**-0.5**
GSI	**Gunungsitoli**	**52.08**	**241**	P	**P**	**18 21 26.2**	**-1.4**
GSI				IAmb	IAmb	18 21 26.9	
	comp=Z,24nm,1.2s						
ILAR	**Eielson Array**	**52.37**	**31**	P	**P**	**18 21 33.0**	**+3.9**
	comp=Z,1.3nm,1.1s,baz=246,slow=7.2,SNR=4.8						
ILAR	**Eielson Array**	**52.37**	**31**	P	**P**	**18 21 32.3**	**+3.2**
BRVK	**Borovoye**	**52.85**	**314**⇓	*e*P	**P**	**18 21 35.1**	**+2.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
FITZ	**Fitzroy Crossi**	**53.63**	**199**	P	**P**	**18 21 39.2**	**+0.3**
WRAB	**Tennant Creek**	**53.74**	**188**⇑	*e*P	**P**	**18 21 39.5**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,17nm,0.7s						
WRAB	**Tennant Creek**	**53.74**	**188**	P	**P**	**18 21 40.0**	**+0.3**
WRAB				IAmb	IAmb	18 21 41.0	
	comp=Z,19nm,0.8s						
WR0	**Warramunga Arr**	**53.75**	**188**	P	**P**	**18 21 39.4**	**-0.4**
WRA	**Warramunga Arr**	**53.76**	**188**	*e*P	**P**	**18 21 38.7**	**-1.1**
WRA	**Warramunga Arr**	**53.76**	**188**	P	**P**	**18 21 39.7**	**-0.1**
	comp=Z,21nm,0.6s,baz=3.6,slow=7.5,SNR=218						
WRA	**Warramunga Arr**	**53.76**	**188**	P	**P**	**18 21 38.7**	**-1.1**
KK31	**Karatay Array**	**54.78**	**302**	P	**P**	**18 21 46.5**	**-0.7**
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KK31	**Karatay Array**	**54.78**	**302**	P	**P**	**18 21 46.5**	**-0.7**
KK31				IAmb	IAmb	18 22 03.5	
	comp=Z,3.9nm,0.9s						
KKAR	**Karatay Array**	**54.78**	**302**	P	**P**	**18 21 46.4**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	**Karatay Array**	**54.78**	**302**	P	**P**	**18 21 46.4**	**-0.8**
KKAR	**Karatay Array**	**54.78**	**302**	P	**P**	**18 21 46.6**	**-0.6**
KKAR				IAmb	IAmb	18 22 03.5	
	comp=Z,3.9nm,0.9s						
NIL	**Nilore**	**55.64**	**290**	P	**P**	**18 21 53.5**	**-0.1**
NIL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NIL	**Nilore**	**55.64**	**290**	P	**P**	**18 21 53.5**	**-0.1**
NIL				IAmb	IAmb	18 21 57.0	
	comp=Z,4.5nm,0.7s						
CHGR	**Chuyangaron**	**57.08**	**297**	P	**P**	**18 22 02.9**	**-0.9**
CHGR				IAmb	IAmb	18 22 21.1	
	comp=Z,11nm,0.7s						

AS31	**Alice Springs**	**57.48**	**188**	P	**P**	**18 22 06.6**	**0.0**
AS31				IAmb	IAmb	18 22 09.8	
	comp=Z,5.0nm,0.5s						
ASAR	**Alice Springs**	**57.48**	**188**	P	**P**	**18 22 06.2**	**-0.4**
ASAR						18 23 00.7	
ASAR	**Alice Springs**	**57.48**	**188**	P	**P**	**18 22 06.8**	**+0.2**
	comp=Z,4.1nm,0.4s,baz=5.4,slow=6.8,SNR=148						
ASAR				LR	LR	18 44 34.6	
	comp=Z,21nm,21.6s,baz=14,slow=34						
ASAR	**Alice Springs**	**57.48**	**188**	P	**P**	**18 22 06.2**	**-0.4**
ASAR				PcP	**PcP**	**18 23 00.7**	**+0.6**
ARU	**Arti**	**58.83**	**320***d*	*i*P	**P**	**18 22 15.3**	**-0.4**
ARU						18 23 00.1	
ARU						18 24 25.4	
ARU				S	**S**	**18 30 18.6**	**-1.3**
ARU				SS	**SS**	**18 34 14.4**	**+1.6**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ARU	**Arti**	**58.83**	**320**	P	**P**	**18 22 15.3**	**-0.4**
ARU				IAmb	IAmb	18 22 19.3	
	comp=Z,8.1nm,1.1s						
ABKAR	**Akbulak array**	**60.06**	**312**	P	**P**	**18 22 23.1**	**-1.1**
ABKAR	**Akbulak array**	**60.06**	**312**	P	**P**	**18 22 23.3**	**-1.0**
ABKAR				IAmb	IAmb	18 22 40.4	
	comp=Z,3.5nm,0.8s						
HRA	**Herat**	**63.82**	**295**	P	**P**	**18 22 49.5**	**-0.6**
HRA				IAmb	IAmb	18 22 58.8	
	comp=Z,2.8nm,0.8s						
STKA	**Stephens Creek**	**65.23**	**180**	P	**P**	**18 22 59.6**	**+0.8**
	comp=Z,2.9nm,0.5s,baz=352,slow=6.9,SNR=7.1						
STKA	**Stephens Creek**	**65.23**	**180**	P	**P**	**18 22 58.6**	**-0.2**
FORT	**Forrest**	**65.34**	**193**	P	**P**	**18 23 00.1**	**+0.6**
YKA	**Yellowknife Ar**	**66.74**	**29**	P	**P**	**18 23 08.2**	**0.0**
YKA	**Yellowknife Ar**	**66.74**	**29**	P	**P**	**18 23 09.1**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=302,slow=6.7						
YKA	**Yellowknife Ar**	**66.74**	**29**	P	**P**	**18 23 08.2**	**0.0**
ARCES	**ARCESS Array B**	**67.09**	**340**	P	**P**	**18 23 09.9**	**-0.5**
ARCES	**ARCESS Array B**	**67.09**	**340**	P	**P**	**18 23 11.3**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=60,slow=7.4,SNR=2.8						
ARCES	**ARCESS Array B**	**67.09**	**340**	P	**P**	**18 23 09.9**	**-0.5**
OBN	**Obninsk**	**70.73**	**324**	*e*P	**P**	**18 23 29.7**	**-3.5**
OBN				*e*		18 26 10.4	
OBN				*e*PPP	PPP	18 27 51.8	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FINES	**FINESS Array B**	**71.73**	**333**	P	**P**	**18 23 38.6**	**-0.6**
FINES	**FINESS Array B**	**71.73**	**333**	P	**P**	**18 23 39.7**	**+0.5**
	comp=Z,4.6nm,1.1s,baz=57,slow=5.1,SNR=4.6						
FINES	**FINESS Array B**	**71.73**	**333**	P	**P**	**18 23 38.6**	**-0.6**
KBZ	**Khabaz**	**73.03**	**311**	P	**P**	**18 23 47.6**	**+0.3**
	comp=Z,5.7nm,1.0s,baz=52,slow=3.0,SNR=8.9						
KIV	**Kislovodsk**	**73.05**	**312**⇓	*e*P	**P**	**18 23 48.0**	**+0.5**
KIV				*e*		18 24 03.4	
KIV				pmax	pmax		
	comp=Z,9.0nm,1.3s						
AKASG	**Malin Array Be**	**76.89**	**323**	P	**P**	**18 24 08.5**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKASG	**Malin Array Be**	**76.89**	**323**	P	**P**	**18 24 08.9**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=48,slow=5.9,SNR=6.6						
AKASG	**Malin Array Be**	**76.89**	**323**	P	**P**	**18 24 08.5**	**-0.9**
NVAR	**Mina Array Bea**	**77.06**	**52**	P	**P**	**18 24 13.7**	**+2.7**
	comp=Z,0.4nm,0.6s,baz=282,slow=4.5,SNR=2.9						
NVAR				LR	LR	18 51 30.0	
	comp=Z,28nm,20.6s,baz=281,slow=30						
NVAR	**Mina Array Bea**	**77.06**	**52**	P	**P**	**18 24 10.0**	**-0.9**
NOA	**NORSAR Array B**	**77.23**	**338**	P	**P**	**18 24 12.1**	**+0.9**
	comp=Z,1.3nm,0.9s,baz=79,slow=4.1,SNR=3.7						
NOA				LR	LR	19 00 53.7	
	comp=Z,37nm,19.4s,baz=255,slow=38						
PDAR	**Pinedale Array**	**80.07**	**45**	P	**P**	**18 24 29.6**	**+2.1**
	comp=Z,0.6nm,0.8s,baz=291,slow=4.1,SNR=6.5						
PDAR	**Pinedale Array**	**80.07**	**45**	P	**P**	**18 24 28.0**	**+0.6**
BR131	**Keskin Array S**	**81.01**	**312**	P	**P**	**18 24 32.1**	**-0.3**
BR131				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BR131	**Keskin Array S**	**81.01**	**312**	P	**P**	**18 24 32.1**	**-0.3**
BRTR	**Keskin Array B**	**81.01**	**312**	*i*P	**P**	**18 24 32.2**	**-0.2**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**81.01**	**312**	P	**P**	**18 24 32.6**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=132,slow=2.8,SNR=10						
BRTR	**Keskin Array B**	**81.01**	**312**	P	**P**	**18 24 32.4**	**-0.1**
VYHS	**Vyhne**	**83.42**	**326**	*e*P	**P**	**18 24 47.0**	**+2.2**
VYHS	**Vyhne**	**83.42**	**326**	*e*P	**P**	**18 24 47.0**	**+2.2**
CLL	**Collm**	**83.95**	**330**	*e*P	**P**	**18 24 50.0**	**+2.7**
CLL	**Collm**	**83.95**	**330**	*e*(P)	**P**	**18 24 50.0**	**+2.7**
GERES	**GERESS Array B**	**85.50**	**328**	P	**P**	**18 24 54.5**	**-0.9**
GERES	**GERESS Array B**	**85.50**	**328**	P	**P**	**18 24 55.1**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=27,slow=4.6,SNR=2.5						
GERES	**GERESS Array B**	**85.50**	**328**	P	**P**	**18 24 54.5**	**-0.9**
TXAR	**Lajitas Array**	**92.22**	**52**	P	**P**	**18 25 29.6**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=311,slow=7.1,SNR=2.5						
TORD	**Torodi Ar. Bea**	**119.59**	**313**	PKP	**PKPdf**	**18 31 07.1**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=6.8,slow=3.6,SNR=2.5						
LPAZ	**La Paz**	**148.33**	**64**	PKP2	**PKiKP**	**18 32 06.0**	**-0.7**
LPAZ	**La Paz**	**148.33**	**64**	PKPbc	**PKiKP**	**18 32 06.0**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=42,slow=4.3,SNR=3.6						

*IDC **04** 18:16:50.9±1.1, 28.67N×139.50E, h437km±30km, mb2.7/5, mb1 2.9/6, mb1mx2.6/43, mbtmp3.6/6, Error ellipse: s-maj=78.4km s-min=18.1km az=71.0*

ISC 04 18:16:51.2±0.9, 28.7N±0.2×139.7E±0.2, h448km, n6, σ0s44/7, mb3.0/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.76**	**125**	P		P	**P**	**18 17 56.8**	**+0.4**
	15nm,0.3s,baz=288,slow=20,SNR=4.7								
JCJ				S		S	**S**	**18 18 48.5**	**-0.7**
	9.9nm,0.3s,baz=240,slow=20,SNR=6.0								
SONM	**Songino Array**	**32.00**	**316**	P		P	**P**	**18 22 38.7**	**-0.3**
	0.3nm,0.4s,baz=118,slow=9.6,SNR=6.6								
MKAR	**Makanchi Array**	**47.72**	**309**	P		P	**P**	**18 24 45.9**	**0.0**
	0.2nm,0.4s,baz=91,slow=8.6,SNR=4.0								
WRA	**Warramunga Arr**	**48.64**	**187**	P		P	**P**	**18 24 53.0**	**0.0**
	0.2nm,0.3s,baz=1.0,slow=7.8,SNR=6.5								
ASAR	**Alice Springs**	**52.37**	**187**	P		P	**P**	**18 25 20.4**	**0.0**
	0.2nm,0.5s,baz=4.7,slow=5.7,SNR=3.4								
FINES	**FINESS Array B**	**75.50**	**333**	P		P	**P**	**18 27 48.3**	**+0.2**
	2.3nm,0.9s,baz=76,slow=5.9,SNR=4.3								

JMA 04 18:24:21.8±0.1, 38.01N×141.90E, h48km±1km, M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.46**	**311**	P		Pn		18 24 32.4	0.0
JIKH				S		Sn		18 24 39.7	-0.2
JIO	**Ouri**	**0.62**	**316**	P		Pn		18 24 34.5	+0.1
JIO				S		Sn		18 24 43.3	-0.2
JMST	**Minamisoumatoc**	**0.85**	**251**	P		Pn		18 24 37.5	+0.1
JMST				S		Sn		18 24 48.8	-0.1
JKMT	**Kesennumamotoy**	**0.87**	**337**	P		Pn		18 24 37.6	-0.1
JKMT				S		Sn		18 24 48.9	-0.4
JMM	**Marumori**	**0.89**	**261**	P		Pn		18 24 38.0	+0.1
JMM				*e*S		Sn		18 24 49.6	-0.1
JFK	**Kawauchi**	**1.04**	**232**	P		Pn		18 24 39.9	-0.1
JFK				*e*S		Sn		18 24 52.9	-0.5
JOU	**Okura**	**1.04**	**290**	P		Pn		18 24 40.4	+0.4
JOU				*e*S		Sn		18 24 53.9	+0.5
JMK	**Ichinoseki**	**1.08**	**331**	P		Pn		18 24 40.8	+0.2
JMK				S		Sn		18 24 54.4	0.0
JFT	**Otama**	**1.33**	**249**	P		Pn		18 24 44.9	+0.9
JFT				*e*S		Sn		18 25 01.6	+1.0
JYS	**Shirataka**	**1.46**	**279**	P		Pn		18 24 46.6	+0.8
JYS				S		Sn		18 25 05.5	+1.7
JYK	**Kaneyama**	**1.51**	**307**	P		Pn		18 24 47.0	+0.6
JYK				S		Sn		18 25 06.1	+1.1
JOM	**Ohasama**	**1.54**	**342**	P		Pn		18 24 47.3	+0.5
JOM				*e*S		Sn		18 25 06.3	+0.7
JRG	**Rokugo**	**1.70**	**325**	P		Pn		18 24 50.1	+1.1
JRG				*e*S		Sn		18 25 11.9	+2.3
JYA	**Atsumi**	**1.82**	**289**	P		Pn		18 24 51.4	+0.8
JFY	**Yanaizu**	**1.84**	**252**	P		Pn		18 24 52.1	+1.1
JFY				S		Sn		18 25 14.3	+1.2
MAT	**Matsushiro**	**3.29**	**245**	P		Pn		18 25 14.0	+3.2
MAT				S		Sn		18 25 55.8	+7.1

*RSPR **04** 18:49:50.8, 18.82N×67.15W, h9km±1km, MD3.2/13*

*NEIC **04** 18:49:50.3±1.2, 18.79N±0.01×67.15W±0.03, h35km±2km, Error ellipse: s-maj=4.7km s-min=3.0km az=240.0*

ISC 04 18:49:49.4±1.1, 18.85N±0.05×67.13W±0.03, h29km, n61, σ0s84/67, 12C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.38**	**177**⇑	*e*P		**P**	**Pb**	**18 49 58.0**	**+0.2**
AGPR				*e*S			**Sb**	**18 50 03.5**	**-0.1**
AGPR	**Aguadilla, PR**	**0.38**	**177**			**P**	**Pb**	**18 49 58.0**	**+0.2**
AGPR	**Aguadilla, PR**	**0.38**	**177**			**P**	**Pb**	**18 49 57.5**	**-0.4**
AGPR							**Sb**	**18 50 02.6**	**-1.0**
AGPR	**Aguadilla, PR**	**0.38**	**177**			**P**	**Sb**	**18 50 03.5**	**-0.1**
IDE	**Isla Desecheo**	**0.56**	**215**⇓	*e*P		**P**	**Pb**	**18 50 00.8**	**0.0**
IDE	**Isla Desecheo**	**0.56**	**215**	*e*S		**P**	**Sb**	**18 50 08.8**	**+0.3**
IDE	**Isla Desecheo**	**0.56**	**215**			**P**	**Pb**	**18 50 00.8**	**0.0**
IDE							**Sb**	**18 50 08.8**	**+0.3**
AOPR	**Arecibo Observ**	**0.61**	**144**⇓	*e*P		**P**	**Pb**	**18 50 01.6**	**0.0**
AOPR	**Arecibo Observ**	**0.61**	**144**⇓	*e*P		**P**	**Pb**	**18 50 01.6**	**0.0**
AOPR	**Arecibo Observ**	**0.61**	**144**	*e*S		**P**	**Sn**	**18 50 11.0**	**0.0**
AOPR	**Arecibo Observ**	**0.61**	**144**			**P**	**Sn**	**18 50 11.0**	**0.0**
AOPR	**Arecibo Observ**	**0.61**	**144**			**P**	**Pb**	**18 50 01.5**	**-0.2**
MPR	**Mayaguez**	**0.63**	**181**			**P**	**Pb**	**18 50 01.7**	**-0.2**
LSP	**Las Mesas**	**0.67**	**176**	*e*S		**P**	**Sb**	**18 50 12.0**	**+0.5**
LSP	**Las Mesas**	**0.67**	**176**⇑	*e*P		**P**	**Pb**	**18 50 02.7**	**+0.1**
LSP	**Las Mesas**	**0.67**	**176**			**P**	**Pb**	**18 50 02.7**	**+0.1**
LSP							**Sb**	**18 50 12.0**	**+0.5**
EMPR	**Esperanza - Ma**	**0.68**	**123**	*e*S		**P**	**Sn**	**18 50 13.3**	**+0.7**
EMPR	**Esperanza - Ma**	**0.68**	**123**⇑	*e*P		**P**	**Pb**	**18 50 03.0**	**+0.2**
EMPR	**Esperanza - Ma**	**0.68**	**123**			**P**	**Pb**	**18 50 03.0**	**+0.2**
EMPR	**Esperanza - Ma**	**0.68**	**123**				Pn	18 50 13.3	+10
UUPR	**Utuado, UPR, P**	**0.71**	**146**			**P**	**Pb**	**18 50 03.0**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.84**	**179**	*e*S		**P**	**Sb**	**18 50 16.3**	**0.0**
CRPR	**Cabo Rojo, PR**	**0.84**	**179**⇑	*e*P		**P**	**Pn**	**18 50 05.0**	**-0.2**
CRPR	**Cabo Rojo, PR**	**0.84**	**179**			**P**	**Pn**	**18 50 04.8**	**-0.4**
CRPR	**Cabo Rojo, PR**	**0.84**	**179**			**P**	**Sb**	**18 50 16.3**	**0.0**
MLPR	**Magueyes Islan**	**0.88**	**175**	*e*S		**P**	**Sb**	**18 50 16.1**	**-1.3**
MLPR	**Magueyes Islan**	**0.88**	**175**⇑	*e*P		**P**	**Pn**	**18 50 04.7**	**-1.1**
MLPR	**Magueyes Islan**	**0.88**	**175**			**P**	**Pn**	**18 50 04.6**	**-1.1**
MLPR	**Magueyes Islan**	**0.88**	**175**			**P**	**Sb**	**18 50 16.1**	**-1.3**
GBPR	**Guanica, Bosqu**	**0.90**	**164**	*e*S		**P**	**Sn**	**18 50 18.2**	**+0.1**
GBPR	**Guanica, Bosqu**	**0.90**	**164**⇓	*e*P		**P**	**Pn**	**18 50 06.1**	**0.0**
GBPR	**Guanica, Bosqu**	**0.90**	**164**			**P**	**Pn**	**18 50 06.1**	**0.0**
GBPR							**Sn**	**18 50 18.2**	**+0.1**
CELP	**Cerrillos**	**0.93**	**146**⇑	*e*P		**P**	**Pn**	**18 50 06.6**	**+0.1**
CELP				*e*S			**Sb**	**18 50 18.3**	**-0.7**
CELP	**Cerrillos**	**0.93**	**146**			**P**	**Pn**	**18 50 06.6**	**+0.1**
CELP							**Sb**	**18 50 18.3**	**-0.7**
OBIP	**Obispado Ponce**	**0.94**	**148**	*e*S		**P**	**Sn**	**18 50 19.4**	**+0.2**
OBIP	**Obispado Ponce**	**0.94**	**148**⇑	*e*P		**P**	**Pn**	**18 50 06.7**	**+0.1**
OBIP	**Obispado Ponce**	**0.94**	**148**			**P**	**Pn**	**18 50 06.8**	**+0.1**
OBIP	**Obispado Ponce**	**0.94**	**148**			**P**	**Sn**	**18 50 19.4**	**+0.2**
ICMP	**Isla Caja de M**	**1.11**	**149**	*e*S		**P**	**Sb**	**18 50 25.0**	**+0.8**
ICMP	**Isla Caja de M**	**1.11**	**149**⇑	*e*P		**P**	**Pn**	**18 50 09.7**	**+0.7**
ICMP	**Isla Caja de M**	**1.11**	**149**			**P**	**Pn**	**18 50 09.5**	**+0.5**
ICMP	**Isla Caja de M**	**1.11**	**149**			**P**	**Sb**	**18 50 25.0**	**+0.8**
GCPR	**Guaynabo City**	**1.13**	**118**			**P**	**Pn**	**18 50 09.2**	**-0.1**
SJG	**San Juan**	**1.18**	**128**			**P**	**Pn**	**18 50 10.0**	**0.0**
PCDR	**Punta Cana, DR**	**1.23**	**255**⇑	*e*P		**P**	**Pn**	**18 50 10.8**	**+0.2**
PCDR	**Punta Cana, DR**	**1.23**	**255**⇑	*e*P		**P**	**Pn**	**18 50 10.8**	**+0.2**
PCDR	**Punta Cana, DR**	**1.23**	**255**	*e*S		**P**	**Sn**	**18 50 27.3**	**+1.1**
PCDR	**Punta Cana, DR**	**1.23

TPUB					IAmb	IAmb	19 20 11.8		
	comp=Z,28nm,1.2s								
KLR	**Kul'dur**	**22.42**	**342**	P	**P**		**19 20 22.1**	**+1.2**	
	comp=Z,2.6nm,0.6s,baz=162,slow=7.0,SNR=11								
H11N2	**WAKE ISLAND Hy**	**24.21**	**105**	T	T		19 45 31.3		
	baz=296,slow=74,SNR=24								
H11N1	**WAKE ISLAND Hy**	**24.21**	**105**	T	T		19 45 44.3		
	baz=296,slow=74,SNR=23								
H11N3	**WAKE ISLAND Hy**	**24.23**	**105**	T	T		19 45 44.5		
	baz=296,slow=74,SNR=36								
H11S3	**WAKE ISLAND Hy**	**24.58**	**108**	T	T		19 46 16.8		
	baz=298,slow=74								
H11S1	**WAKE ISLAND Hy**	**24.59**	**108**	T	T		19 46 10.6		
	baz=298,slow=74,SNR=3.7								
H11S2	**WAKE ISLAND Hy**	**24.60**	**108**	T	T		19 46 24.6		
	baz=298								
TNTI	**Ternate**	**30.69**	**210**	P	**P**		**19 21 36.7**	**-0.1**	
TNTI					IAmb	IAmb	19 21 50.0		
	comp=Z,16nm,1.1s								
SONM	**Songino Array**	**33.81**	**315**	P	**P**		**19 22 05.0**	**+0.9**	
	comp=Z,0.4nm,0.6s,baz=91,slow=7.4,SNR=2.8								
LUWI	**Luwuk**	**34.46**	**216**	P	**P**		**19 22 09.3**	**-0.5**	
WRA	**Warramunga Arr**	**48.45**	**190**	P	**P**		**19 24 04.6**	**+0.3**	
	comp=Z,1.3nm,0.7s,baz=8.8,slow=8.0,SNR=9.9								
WRA	**Warramunga Arr**	**48.45**	**190**	P	**P**		**19 24 04.0**	**-0.3**	
ZALV	**Zalesovo Beam**	**48.55**	**318**	P	**P**		**19 24 05.2**	**+0.4**	
	comp=Z,0.6nm,0.4s,baz=111,slow=8.1,SNR=4.3								
ZALV	**Zalesovo Beam**	**48.55**	**318**	P	**P**		**19 24 04.1**	**-0.7**	
FITZ	**Fitzroy Crossi**	**48.70**	**201**	P	**P**		**19 24 07.1**	**+0.8**	
	comp=Z,0.7nm,0.5s,baz=12,slow=9.3,SNR=5.1								
FITZ	**Fitzroy Crossi**	**48.70**	**201**	P	**P**		**19 24 06.6**	**+0.4**	
FITZ					IAmb	IAmb	19 24 07.7		
	comp=Z,4.7nm,1.2s								
ANM	**Nome**	**49.03**	**27**	P	**P**		**19 24 09.0**	**+0.6**	
ANM					IAmb	IAmb	19 24 16.3		
	comp=Z,5.3nm,1.4s								
MKAR	**Makanchi Array**	**49.66**	**309**	P	**P**		**19 24 12.8**	**-0.7**	
	comp=Z,0.1nm,0.3s,baz=82,slow=9.4,SNR=4.5								
MKAR	**Makanchi Array**	**49.66**	**309**	P	**P**		**19 24 13.0**	**-0.5**	
KURK	**Kurchatov**	**52.10**	**314**	P	**P**		**19 24 31.4**	**-0.3**	
AS31	**Alice Springs**	**52.17**	**189**	P	**P**		**19 24 32.8**	**+0.3**	
ASAR	**Alice Springs**	**52.17**	**189**	P	**P**		**19 24 32.7**	**+0.2**	
	comp=Z,0.3nm,0.8s,baz=8.3,slow=6.0,SNR=7.9								
IMAR	**Indian Mountai**	**54.11**	**27**	P	**P**		**19 24 46.1**	**-0.2**	
PPLA	**Purkeypile**	**54.28**	**31**	P	**P**		**19 24 47.5**	**-0.2**	
RND	**Reindeer**	**55.84**	**31**	P	**P**		**19 24 57.8**	**-1.1**	
ILAR	**Eielson Array**	**56.80**	**29**	P	**P**		**19 25 04.9**	**-0.8**	
	comp=Z,0.5nm,0.9s,baz=257,slow=6.2,SNR=5.0								
ILAR	**Eielson Array**	**56.80**	**29**	P	**P**		**19 25 04.7**	**-1.0**	
RIDG	**Independent Ri**	**57.64**	**30**	P	**P**		**19 25 11.8**	**+0.1**	
KKAR	**Karatay Array**	**58.32**	**305**	P	**P**		**19 25 15.8**	**-0.9**	
KKAR	**Karatay Array**	**58.32**	**305**	P	**P**		**19 25 15.7**	**-1.0**	
KKAR					IAmb	IAmb	19 25 31.9		
	comp=Z,2.5nm,1.2s								
GAR	**Garm**	**59.30**	**301**	P	**P**		**19 25 23.1**	**-0.6**	
GAR					IAmb	IAmb	19 25 28.5		
	comp=Z,6.5nm,1.4s								
CHGR	**Chuyangaron**	**60.25**	**300**	P	**P**		**19 25 29.9**	**-0.3**	
CHGR					IAmb	IAmb	19 25 41.5		
	comp=Z,3.9nm,0.8s								
ARU	**Arti**	**63.45**	**322**	P	**P**		**19 25 51.0**	**-0.3**	
ARU					IAmb	IAmb	19 25 52.1		
	comp=Z,4.9nm,0.7s								
ABKAR	**Akbulak array**	**64.22**	**314**	P	**P**		**19 25 56.2**	**-0.2**	
ABKAR	**Akbulak array**	**64.22**	**314**	P	**P**		**19 25 56.2**	**-0.2**	
ABKAR					IAmb	IAmb	19 25 57.0		
	comp=Z,2.0nm,0.6s								
YKA	**Yellowknife Ar**	**71.23**	**28**	P	**P**		**19 26 39.8**	**-0.5**	
	comp=Z,0.2nm,0.5s,baz=296,slow=6.3,SNR=4.6								
ARCES	**ARCESS Array B**	**72.44**	**341**	P	**P**		**19 26 49.0**	**+1.4**	
	comp=Z,2.0nm,0.9s,baz=55,slow=9.1,SNR=4.0								
FINES	**FINESS Array B**	**76.88**	**334**	P	**P**		**19 27 13.3**	**-0.1**	
	comp=Z,1.8nm,0.7s,baz=64,slow=4.4,SNR=11								
FINES	**FINESS Array B**	**76.88**	**334**	P	**P**		**19 27 12.9**	**-0.4**	
KBZ	**Khabaz**	**77.14**	**313**	P	**P**		**19 27 16.0**	**+0.8**	
	comp=Z,2.7nm,0.9s,baz=90,slow=5.3,SNR=5.1								
AKASG	**Malin Array Be**	**81.63**	**324**	P	**P**		**19 27 39.1**	**-0.4**	
	comp=Z,0.7nm,0.5s,baz=49,slow=5.3,SNR=4.5								
NOA	**NORSAR Array B**	**82.52**	**338**	P	**P**		**19 27 43.6**	**-0.5**	
	comp=Z,1.3nm,0.8s,baz=41,slow=5.3,SNR=3.4								
BRTR	**Keskin Array B**	**85.14**	**313**	P	**P**		**19 27 58.3**	**+0.3**	
	comp=Z,0.6nm,0.5s,baz=90,slow=4.3,SNR=5.3								
BRTR	**Keskin Array B**	**85.14**	**313**	P	**P**		**19 27 57.9**	**-0.1**	
BURAR	**Bucovina Array**	**85.58**	**323**	P	**P**		**19 28 00.3**	**+0.3**	

NEIC ***04*** *19:26:17.9±1.9,23°.50S±0°.05×68°.74W±0°.08,h101km±2km, Error ellipse: s-maj=10.2km s-min=7.0km az=102.0*
GUC ***04*** *19:26:18.8±0.7,23°.46S×68°.83W,h106km±6km,ML4.1*
SJA ***04*** *19:26:18.2±0.6,23°.47S×68°.79W,h105km±5km,ML4.3, MW4.1*
IDC ***04*** *19:26:19.1±0.7,23°.36S×68°.67W,h103km±5km,mb4.2/8, mb1 4.0/11,mb1mx3.9/26,mbtmp4.3/11,MS2.8/3, Ms1 2.8/3,ms1mx2.7/19,Error ellipse: s-maj=21.3km s-min=13.8km az=64.0*

ISC 04 19:26:18.3±0.6,23°.50S±0°.04×68°.73W±0°.05,h102km±5km, n66,σ1§16/87,mb4.3/12,3C-5D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**0.74**	**293**	Op *i* P		**Pn**	**19 26 37.0**	**+0.5**
PB15				*i* S		**Sn**	**19 26 50.9**	**+0.6**
PB15	**IPOC Station P**	**0.74**	**293**	*i* P		**Pn**	**19 26 36.7**	**+0.2**
PB15				*e*S		**Sn**	**19 26 50.8**	**+0.6**
PB15				IAML			19 26 51.9	
	comp=Z,31µm,0.4s							
LVC	**Limon Verde**	**0.91**	**349**	P		**Pn**	**19 26 38.5**	**+0.1**
	comp=Z,470nm,0.3s,baz=171,slow=8.0,SNR=2933							
LVC				S		**Sn**	**19 26 52.8**	**-0.5**
	comp=Z,2µm,0.3s,baz=46,slow=20,SNR=117							
LVC				LR		LR	19 27 08.9	
	comp=Z,462nm,18.2s,baz=150,slow=64							
LVC	**Limon Verde**	**0.91**	**349**			**Pn**	**19 26 38.4**	**+0.1**
LVC				Sn		**Sn**	**19 26 52.5**	**-0.8**
LVC	**Limon Verde**	**0.91**	**349**	*i* P		**Pn**	**19 26 38.4**	**+0.1**
PB06	**IPOC Station P**	**1.11**	**315**	*i* P		**Pn**	**19 26 40.6**	**+0.4**
PB06				*i* S		**Sn**	**19 26 57.1**	**+0.3**
PB06				IAML			19 26 57.9	
	comp=E,11µm,0.2s							
PB06	**IPOC Station P**	**1.11**	**315**	*i* P		**Pn**	**19 26 40.4**	**+0.1**
PB06				*e*S		**Sn**	**19 26 57.2**	**+0.4**
PB05	**IPOC Station P**	**1.50**	**295**	*i* P		**Pn**	**19 26 45.0**	**+0.2**
PB05				*i* S		**Sn**	**19 27 04.8**	**-0.1**
PB05				IAML			19 27 10.8	
	comp=E,2µm,0.4s							
PB05	**IPOC Station P**	**1.50**	**295**	*i* P		**Pn**	**19 26 45.0**	**+0.2**
PB10	**IPOC Station P**	**1.68**	**269**	*i* P		**Pn**	**19 26 47.4**	**+0.6**
PB10				*i* S		**Sn**	**19 27 08.7**	**+0.1**
PB10				IAML			19 27 15.7	
	comp=E,3µm,0.5s							
PB10	**IPOC Station P**	**1.68**	**269**			**Pn**	**19 26 47.2**	**+0.4**
PB10				Sn		**Sn**	**19 27 07.2**	**-1.3**
PB10	**IPOC Station P**	**1.68**	**269**	*i* P		**Pn**	**19 26 47.2**	**+0.4**
PB03	**IPOC Station P**	**1.73**	**327**	*i* P		**Pn**	**19 26 47.8**	**+0.2**
PB03				*i* S		**Sn**	**19 27 09.8**	**-0.2**
PB03				IAML			19 27 11.1	
	comp=E,3µm,0.5s							
PB04	**IPOC Station P**	**1.75**	**311**	*i* P		**Pn**	**19 26 48.0**	**+0.1**
PB04				*i* S		**Sn**	**19 27 10.5**	**0.0**
PB04				IAML			19 27 12.1	
	comp=E,4µm,0.8s							
PB04	**IPOC Station P**	**1.75**	**311**			**Pn**	**19 26 48.0**	**+0.1**
PB04				Sn		**Sn**	**19 27 09.2**	**-1.3**
PB04	**IPOC Station P**	**1.75**	**311**	*i* P		**Pn**	**19 26 48.2**	**+0.2**
PB04				*e*S		**Sn**	**19 27 10.6**	**0.0**
PB09	**IPOC Station P**	**1.76**	**344**	*i* P		**Pn**	**19 26 49.2**	**+1.1**
PB09				*i* S		**Sn**	**19 27 11.4**	**+0.6**
PB09				IAML			19 27 13.2	
	comp=E,2µm,0.5s							
PB09	**IPOC Station P**	**1.76**	**344**	*i* P		**Pn**	**19 26 49.1**	**+1.0**
PB09				*e*S		**Sn**	**19 27 11.1**	**+0.3**
PB14	**IPOC Station P**	**1.90**	**234**	*i* P		**Pn**	**19 26 50.7**	**+0.8**
PB14				*i* S		**Sn**	**19 27 15.3**	**+1.3**
PB14	**IPOC Station P**	**1.90**	**234**	*i* P		**Pn**	**19 26 50.7**	**+0.8**
HJA	**Humahuaca**	**3.06**	**85**	*i* P		**Pn**	**19 27 08.2**	**+2.9**
AZAP	**Zapla**	**3.43**	**103**	*i* P		**Pn**	**19 27 12.7**	**+2.7**
AZAP				IAML			19 27 15.0	
	comp=Z,104nm,0.5s							
PB11	**IPOC Station P**	**3.82**	**347**			**Pn**	**19 27 14.6**	**-0.7**
ASTB	**Santa Barbara**	**3.94**	**97**	*i* P		**Pn**	**19 27 18.9**	**+2.0**
MNMC	**Minye Minye**	**4.43**	**349**			**Pn**	**19 27 22.3**	**-1.2**
GO04	**Tololo Observa**	**6.89**	**195**	Pn		**Pn**	**19 27 54.0**	**-2.9**
GO04				Sn		**Sn**	**19 29 12.4**	**-1.6**

LPAZ	**La Paz**	**7.20**	**5**	P		**Pn**	**19 28 01.6**	**+0.1**	
	comp=Z,1.1nm,0.3s,baz=199,slow=2.4,SNR=24								
LPAZ				LR		LR	19 31 08.8		
	comp=Z,66nm,21.0s,baz=230,slow=41								
LPAZ	**La Paz**	**7.20**	**5**			**Pn**	**19 28 01.2**	**-0.3**	
ZON	**Zonda**	**8.01**	**180**	*i* P		**Pn**	**19 28 13.4**	**+1.4**	
CFA	**Coronel Fontan**	**8.08**	**177**	P		**Pn**	**19 28 12.0**	**-0.9**	
	comp=Z,3.9nm,0.3s,baz=357,slow=8.8,SNR=14								
CFA				S		**Sn**	**19 29 37.6**	**-5.0**	
	comp=Z,1.7nm,0.3s,baz=229,slow=18,SNR=3.1								
CFA				LR		LR	19 31 54.7		
	comp=Z,65nm,20.2s,baz=89,slow=41								
ASAL	**Salagasta**	**9.05**	**181**	*i* P		**Pn**	**19 28 25.1**	**-1.0**	
SIV	**San Ignacio**	**10.38**	**45**	P		**Pn**	**19 28 40.4**	**-3.8**	
	comp=Z,5.7nm,0.3s,baz=248,slow=7.9,SNR=43								
SIV				S		Sn	19 30 27.8	-11	
	comp=Z,1.2nm,0.3s,baz=156,slow=20,SNR=4.1								
CPUP	**Villa Florida**	**10.72**	**108**	P		**Pn**	**19 28 49.9**	**+1.1**	
	comp=Z,0.3nm,0.3s,baz=277,slow=11,SNR=7.1								
CPUP				LR		LR	19 33 04.1		
	comp=Z,45nm,19.9s,baz=28,slow=38								
CPUP	**Villa Florida**	**10.72**	**108**			**Pn**	**19 28 48.8**	**+0.1**	
SAML	**Samuel**	**15.42**	**21**	Pn		**Pn**	**19 29 47.9**	**-2.4**	
PLCA	**Paso Flores**	**17.25**	**185**	P		**Pn**	**19 30 14.9**	**+2.2**	
	comp=Z,0.1nm,0.3s,baz=27,slow=11,SNR=4.8								
PLCA	**Paso Flores**	**17.25**	**185**	P		**P**	**19 30 12.4**	**-0.3**	
BDFB	**Brasilia**	**21.01**	**72**	P		**P**	**19 30 53.4**	**-0.6**	
BDFB				IAmb		IAmb	19 30 54.2		
	comp=Z,5.3nm,1.0s								
SNAA	**Sanae**	**60.34**	**161**	P		**P**	**19 36 17.3**	**+1.2**	
	comp=Z,2.9nm,0.6s,baz=282,slow=9.1,SNR=16								
SNAA	**Sanae**	**60.34**	**161**	P		**P**	**19 36 16.9**	**+0.8**	
SNAA				IAmb		IAmb	19 36 17.7		
	comp=Z,3.6nm,0.7s								
TXAR	**Lajitas Array**	**62.37**	**326**	P		**P**	**19 36 30.4**	**+0.1**	
	comp=Z,0.2nm,0.8s,baz=170,slow=5.5,SNR=3.1								
TXAR				pP		**pP**	**19 36 56.5**	**0.0**	
	comp=Z,0.4nm,0.7s,baz=162,slow=8.8,SNR=4.5								
TXAR	**Lajitas Array**	**62.37**	**326**	P		**P**	**19 36 28.8**	**-1.5**	
LIC	**Lamto**	**68.80**	**73**	*e*P		**P**	**19 37 11.7**	**-0.3**	
	comp=Z,5.5nm,0.3s								
TIC	**Toumodi**	**69.00**	**73**	*e*P		**P**	**19 37 13.3**	**+0.1**	
KIC	**Kosan Boka**	**69.11**	**73**	*e*P		**P**	**19 37 13.9**	**0.0**	
	comp=Z,14nm,0.9s								
DBIC	**Dimbokro**	**69.16**	**73**	P		**P**	**19 37 14.3**	**+0.1**	
	comp=Z,3.8nm,0.7s,baz=200,slow=11,SNR=7.4								
DBIC	**Dimbokro**	**69.16**	**73**	P		**P**	**19 37 13.6**	**-0.5**	
DBIC				IAmb		IAmb	19 37 15.0		
	comp=Z,5.4nm,0.8s								
I42A	**Draeger Farm,**	**69.58**	**345**	P		**P**	**19 37 15.7**	**-0.3**	
ULM	**Lac du Bonnet**	**77.27**	**343**	P		**P**	**19 38 01.2**	**+0.1**	
	comp=Z,1.7nm,0.5s,baz=159,slow=5.6,SNR=5.9								
ULM	**Lac du Bonnet**	**77.27**	**343**	P		**P**	**19 38 00.9**	**-0.1**	
SUR	**Sutherland**	**77.43**	**120**	P		**P**	**19 38 03.1**	**+0.3**	
SUR				IAmb		IAmb	19 38 05.4		
	comp=Z,7.6nm,0.9s								
TOA0	**Torodi Ar. Sit**	**77.88**	**70**	P		**P**	**19 38 05.3**	**+0.1**	
TORD	**Torodi Ar. Bea**	**77.88**	**70**	P		**P**	**19 38 05.5**	**+0.2**	
	comp=Z,13nm,0.6s,baz=258,slow=5.2,SNR=98								
TORD				pP		**pP**	**19 38 32.3**	**0.0**	
	comp=Z,2.1nm,0.7s,baz=243,slow=5.1,SNR=2.4								
TORD	**Torodi Ar. Bea**	**77.88**	**70**	P		**P**	**19 38 04.5**	**-0.8**	
BOSA	**Boshof**	**82.36**	**118**	P		**P**	**19 38 30.2**	**+0.8**	
	comp=Z,2.1nm,0.5s,baz=247,slow=5.7,SNR=7.0								
BOSA	**Boshof**	**82.36**	**118**	P		**P**	**19 38 29.5**	**0.0**	
BOSA				IAmb		IAmb	19 38 30.2		
	comp=Z,3.5nm,0.9s								
MAW	**Mawson**	**82.37**	**163**	P		**P**	**19 38 30.3**	**+1.8**	
	comp=Z,4.4nm,0.6s,baz=216,slow=6.1,SNR=7.6								
MAW	**Mawson**	**82.37**	**163**	P		**P**	**19 38 29.7**	**+1.2**	
MAW				IAmb		IAmb	19 38 31.0		
	comp=Z,1.1nm,0.8s								
YKA	**Yellowknife Ar**	**93.12**	**341**	P		**P**	**19 39 20.7**	**+0.5**	
	comp=Z,0.9nm,0.7s,baz=136,slow=4.5,SNR=20								
YKA	**Yellowknife Ar**	**93.12**	**341**	P		**P**	**19 39 20.1**	**-0.1**	
ASAR	**Alice Springs**	**128.22**	**207**	PKP		**PKiKP**	**19 45 14.1**	**0.0**	
	comp=Z,0.9nm,0.7s,baz=138,slow=1.9,SNR=12								
ASAR				pPKP		**pPKPdf**	**19 45 42.6**	**+0.4**	
	comp=Z,0.4nm,0.8s,baz=147,slow=1.9,SNR=3.0								
ASAR	**Alice Springs**	**128.22**	**207**			**PKiKP**	**19 45 14.3**	**+0.3**	
WRA	**Warramunga Arr**	**131.31**	**209**	PKP		**PKiKP**	**19 45 20.2**	**-0.1**	
	comp=Z,0.5nm,0.6s,baz=154,slow=1.5,SNR=3.7								
WRA	**Warramunga Arr**	**131.31**	**209**			**PKiKP**	**19 45 20.4**	**+0.1**	
MKAR	**Makanchi Array**	**147.13**	**38**	PKPbc		**PKPbc**	**19 45 49.9**	**+0.5**	
	comp=Z,6.3nm,0.9s,baz=322,slow=2.2,SNR=2.7								

NEIC ***04*** *19:34:25.6±1.2,56°.75N±0°.05×129°.5E±0°.1,h1km±3km, mb5.3/373,Error ellipse: s-maj=10.3km s-min=7.7km az=97.0*
IDC ***04*** *19:34:25.7±0.4,56°.69N×129°.66E,h0km,mb4.8/34, mb1 5.0/43,mb1mx4.9/46,mbtmp4.9/43,ML5.1/7,MS4.5/29, Ms1 4.5/29,ms1mx4.5/38,Error ellipse: s-maj=9.0km s-min=8.4km az=115.0*
MOS ***04*** *19:34:25.5±0.8,56°.74N×129°.59E,h12km,mb5.5/39, MS4.9/26,Error ellipse: s-maj=7.1km s-min=3.7km az=100.8*
MOS Felt (III) at Verkhnezeysk, (II) at Zea.
BJI ***04*** *19:34:26.0±0.0,56°.58N×129°.48E,h10km,mB5.2/59, mb5.0/73,Ms5.6/77,Ms7 5.3/71*
YARS ***04*** *19:34:26.8±0.0,56°.96N×129°.32E,h10km,mb0.2/99, ML5.4/12,Ms0.3/101*
BGR ***04*** *19:34:27.3±0.0,57°.18N×129°.96E,h14km,mb5.1,Ms4.7*
GCMT ***04*** *19:34:27.6±0.1,56°.84N±0°.01×129°.57E±0°.01,h21km, MW5.4/137,Moment Tensor Solution. s111,c181; s137,c262; Duration: 1§2 Moment tensor: Scale 10^17 Nm; Mrr-0.37±.02; Mθθ 0.88±.02; Mϕϕ -0.50±.02; Mrθ-0.07±.04; Mθϕ 1.17±.02; Mϕr-0.23±.04; Best double couple: Mo1.38500×10^17 NP1:ϕs285.00000°,δ79.00000°, λ-4.00000°. NP2:ϕs16.00000°,δ86.00000°,λ-168.00000°. Principal axes: T 1.5640, Plg5.0000°, Azm150.0000°; N -0.3570, Plg78.0000°, Azm36.0000°; P -1.2060, Plg11.0000°, Azm241.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 04 19:34:27.4±0.4,56°.80N±0°.02×129°.51E±0°.02,h10km±2km, h10km:pP-P,n1060,σ1§33/1054,mb5.3/348,MS5.0/58, 69C-5-1D,Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CGD	**Chagda**	**2.05**	**16**	Op *e*Pg		**Pn**	**19 35 02.8**	**+0.9**
	11µm,0.5s							
CGD				*e*Sg		**Sb**	**19 35 29.8**	**-0.3**
	9µm,0.3s							
CGD				*e*Sg		**Sb**	**19 35 29.8**	**-0.3**
	11µm,0.4s							
CLNS	**Chul'man**	**2.54**	**273**	*i* E		**Pn**	**19 35 10.1**	**+1.4**
CLNS				*e*Pg		**Pb**	**19 35 11.4**	**-1.6**
	11µm,0.4s							
CLNS				*e*Lg		Lg	19 35 44.2	
CLNS				*e*Lg		Lg	19 35 44.2	
CLNS				*e*Sg		**Sg**	**19 35 47.2**	**-1.6**
	104µm,0.5s							
CLNS				*e*Sg		**Sg**	**19 35 47.2**	**-1.6**
	236µm,0.6s							
IENR	**Iengra**	**2.64**	**259**	*e*Pn		**Pn**	**19 35 10.7**	**+0.6**
	710nm,0.5s							
IENR				*e*Pg		**Pb**	**19 35 13.7**	**-1.1**
	13µm,0.7s							
IENR				*e*Lg		Lg	19 35 47.8	
	33µm,0.6s							
IENR				*e*Lg		Lg	19 35 47.8	
	31µm,0.8s							
ALDR	**Aldan**	**2.86**	**311**	*e*Pg		**Pn**	**19 35 14.1**	**+1.1**
	10µm,0.7s							
ALDR				*e*Sn		**Sn**	**19 35 44.9**	**-2.6**
ALDR				*e*Sn		**Sn**	**19 35 44.9**	**-2.6**
ALDR				*e*Sg		**Sb**	**19 35 53.9**	**+0.5**
	11µm,0.1s							
ALDR				*e*Sg		**Sb**	**19 35 53.9**	**+0.5**
	11µm,0.1s							
TNDR	**Tynda**	**3.16**	**240**	*e*Pn		**Pn**	**19 35 16.6**	**-0.6**
TNDR				*e*Pg		**Pb**	**19 35 23.5**	**-0.1**
	7µm,0.4s							
TNDR				*e*Sn		**Sn**	**19 35 55.0**	**+0.2**
TNDR				*e*Sn		**Sn**	**19 35 55.0**	**+0.2**
TNDR				*e*Lg		Lg	19 36 06.2	
TNDR				*e*Lg		Lg	19 36 06.2	
TNDR				*e*Sg		**Sg**	**19 36 10.4**	**+1.7**

	22µm,0.7s								
TNDR				*e*Sg		**Sg**	**19 36 10.4**	**+1.7**	
	46µm,1.3s								
ZEA	**Zeya**	**3.33**	**204**	*e*P		**Pn**	**19 35 17.2**	**-2.2**	
ZEA				*i*			19 35 53.2		
ZEA				pmax		pmax			
	comp=N,470nm,0.9s								
ZEA				pmax		pmax			
	comp=Z,500nm,0.7s								
ZEA				pmax		pmax			
	comp=Z,600nm,1.0s								
ZEA				pmax		pmax			
	comp=N,500nm,0.5s								
ZEA				smax		smax			
	comp=N,5µm,0.3s								
ZEA				smax		smax			
	comp=E,28µm,1.0s								
YKLR	**Yuktali**	**4.34**	**271**	*e*Pn		**Pn**	**19 35 33.5**	**+0.2**	
YKLR				*e*Pg		**Pb**	**19 35 43.5**	**-0.1**	
	comp=E,3µm,0.5s								
YKLR				*e*Lg		Lg	19 36 40.5		
	comp=E,9µm,0.4s								
YKLR				*e*Lg		Lg	19 36 40.5		
	comp=E,11µm,0.7s								
TBGR	**Tabaga**	**5.04**	**1**	*e*Pn		**Pn**	**19 35 43.6**	**+0.7**	
TBGR				*e*Pg		**Pb**	**19 35 55.4**	**-0.2**	
	comp=E,31µm,0.6s								
TBGR				*e*Sn		**Sn**	**19 36 37.9**	**-3.3**	
TBGR				*e*Sn		**Sn**	**19 36 37.9**	**-3.3**	
TBGR				*e*Lg		Lg	19 37 00.7		
TBGR				*e*Lg		Lg	19 37 00.7		
TBGR				*e*Sg		**Sg**	**19 37 08.2**	**-0.9**	
	comp=E,152µm,0.9s								
TBGR				*e*Sg		**Sg**	**19 37 08.2**	**-0.9**	
	comp=E,125µm,0.8s								
YAK	**Yakutsk**	**5.25**	**1**	*e*P		**Pn**	**19 35 46.6**	**+0.8**	
YAK				*e*			19 36 48.3		
YAK				pmax		pmax			
	comp=Z,662nm,1.0s								
YAK				smax		smax			
	comp=N,1µm,0.8s								
YAK				smax		smax			
	comp=E,4µm,1.0s								
YAK	**Yakutsk**	**5.25**	**1**	Pn		**Pn**	**19 35 46.9**	**+1.1**	
	comp=E,5.5nm,0.3s,baz=178,slow=2.5,SNR=222								
YAK				Pg		**Pb**	**19 35 59.4**	**+0.2**	
	comp=E,100nm,0.3s,baz=166,slow=4.2,SNR=144								
YAK				Lg		Lg	19 37 06.8		
	comp=E,117nm,0.3s,baz=342,slow=20,SNR=28								
YAK	**Yakutsk**	**5.25**	**1**	*e*Pn		**Pn**	**19 35 45.8**	**-0.1**	
YAK				*e*Pg		**Pb**	**19 35 59.2**	**+0.1**	
YAK				*e*Sn		**Sn**	**19 36 43.4**	**-3.0**	
YAK				*e*Sn		**Sn**	**19 36 43.4**	**-3.0**	
YAK				*e*Lg		Lg	19 37 07.0		
YAK				*e*Lg		Lg	19 37 07.0		
YAK	**Yakutsk**	**5.25**	**1**			**Pn**	**19 35 46.7**	**+0.8**	
YAK				Sn		**Sn**	**19 36 47.9**	**+1.5**	
KHN	**Khani**	**5.34**	**275**	*e*Pn		**Pn**	**19 35 45.8**	**-1.3**	
KHN				*e*Pg		**Pb**	**19 36 00.5**	**-0.2**	
	comp=E,7µm,0.4s								
KHN				*e*Lg		Lg	19 37 08.8		
KHN				*e*Lg		Lg	19 37 08.8		
KHN				*e*Sg		**Sg**	**19 37 15.7**	**-2.9**	
	comp=E,75µm,1.0s								
TUP	**Tupik**	**5.91**	**250**	*i* Pn		**Pn**	**19 35 54.0**	**-1.0**	
TUP				*i* Pg		**Pb**	**19 36 14.0**	**+3.5**	
	comp=E,3µm,0.9s								
TUP				*i* Sn		**Sn**	**19 37 02.4**	**-0.4**	
TUP				*i* Sn		**Sn**	**19 37 02.4**	**-0.4**	
TUP				*i* Sn		**Sn**	**19 37 02.4**	**-0.4**	
TUP				*i* Lg		Lg	19 37 33.4		
	comp=E,24µm,1.3s								
OLMR	**Olekminsk**	**5.94**	**311**	*e*Pn		**Pn**	**19

ATKR *i* Sn **Sn** **19 38 58.9 -0.4**
comp=Z,2μm,1.3s
ATKR *i* Lg Lg 19 40 03.8
comp=Z,10μm,1.2s
ATKR *i* Lg Lg 19 40 03.8
comp=Z,36μm,1.2s
ATKR *i* LR LR 19 40 53.5
comp=Z,446nm,3.2s
UGL Uglegorsk 10.81 130 *e*P **Pn** **19 37 01.5 -0.5**
UGL S **Sn** **19 38 59.9 -3.0**
UGL pmax pmax
comp=Z,283nm,1.4s
UGL MLR MLR
comp=Z,17μm,8.0s
UGL MLR MLR
comp=N,22μm,6.0s
UGL MLR MLR
comp=E,14μm,7.0s
BTGS Batagay 11.15 10 *e*Pn **Pn** **19 37 04.8 -1.8**
comp=E,1μm,0.9s
BTGS *e*Sn **Sn** **19 39 09.5 -1.7**
comp=E,959nm,1.2s
BTGS *e*Sn **Sn** **19 39 09.5 -1.7**
comp=E,752nm,1.2s
BTGS *e*Lg Lg 19 40 15.5
comp=E,6μm,1.3s
BTGS *e*Lg Lg 19 40 15.5
comp=E,5μm,1.5s
BTGS *i* LR LR 19 41 05.3
comp=E,6μm,10.9s
MA2 Magadan 11.55 67 *d i*P **Pn** **19 37 11.1 -1.0**
MA2 pmax pmax
comp=Z,97nm,1.3s
MA2 Magadan 11.55 67 Pn **Pn** **19 37 12.8 +0.8**
comp=Z,3.5nm,0.3s,baz=263,slow=14,SNR=16
MA2 Lg Lg 19 40 18.9
comp=Z,1.1nm,0.3s,baz=327,slow=17,SNR=3.3
MA2 Magadan 11.55 67 *e*Pn **Pn** **19 37 11.1 -1.0**
MA2 Magadan 11.55 67 **Pn** **19 37 10.9 -1.1**
MOMR Moma 11.65 28 *e*Pn **Pn** **19 37 12.3 -1.2**
comp=Z,263nm,0.9s
MOMR *e*Sn **Sn** **19 39 22.8 -0.7**
comp=Z,1μm,2.0s
MOMR *e*Sn **Sn** **19 39 22.8 -0.7**
comp=Z,619nm,1.0s
MOMR *e*Lg Lg 19 40 34.2
comp=Z,9μm,1.6s
MOMR *e*Lg Lg 19 40 34.2
comp=Z,12μm,1.8s
MOMR *i* LR LR 19 41 27.1
comp=Z,6μm,7.2s
MDJ Mudanjiang 12.19 180 P **Pn** **19 37 19.4 -1.6**
MDJ pP 19 37 22.2
MDJ sP 19 37 24.2
MDJ S **Sn** **19 39 35.6 -1.3**
MDJ sS 19 39 41.3
MDJ SS **SnSn** **19 39 49.7 +1.1**
MDJ pmax pmax
comp=Z,46nm,0.6s
MDJ pmax pmax
comp=Z,550nm,4.3s
MDJ LR LR
comp=Z,15μm,8.5s
MDJ Mudanjiang 12.19 180 **Pn** **19 37 19.4 -1.6**
TEY Ternei 12.59 156⇑ *e*P Pn 19 37 37.5 +11
TEY pmax pmax
comp=Z,30nm,1.4s
TEY MLR MLR
comp=E,900nm,10.0s
TEY MLR MLR
comp=N,1μm,8.0s
TEY MLR MLR
comp=Z,2μm,9.0s
USA0B Ussuriysk Arra 12.71 172 P **Pn** **19 37 27.3 -0.7**
USA0B Ussuriysk Arra 12.71 172 **Pn** **19 37 27.3 -0.7**
USRK Ussuriysk Ar. 12.71 172 Pn **Pn** **19 37 27.2 -0.8**
baz=349,slow=14,SNR=337
USRK Sn **Sn** **19 39 48.5 -0.9**
baz=348,slow=26,SNR=2.0
USRK Lg Lg 19 40 59.5
baz=341,slow=22,SNR=4.1
USRK LR LR 19 41 47.0
comp=Z,1μm,21.7s,baz=343,slow=35
USRK Ussuriysk Ar. 12.71 172 **Pn** **19 37 27.3 -0.7**
YSS Yuzh-Sakhalins 12.78 135 *e*P **Pn** **19 37 29.6 +0.6**
YSS *e*S **Sn** **19 39 53.1 +1.9**
YSS pmax pmax
comp=Z,50nm,1.2s
YSS MLR MLR
comp=Z,6μm,11.0s
YSS MLR MLR
comp=N,5μm,12.0s
YSS MLR MLR
comp=E,7μm,14.0s
YSS Yuzh-Sakhalins 12.78 135 Pn **Pn** **19 37 29.2 +0.2**
SEY Seymchan 12.98 52⇓ *i*P **Pn** **19 37 32.6 +1.0**
SEY Seymchan 12.98 52 Pn **Pn** **19 37 32.3 +0.7**
comp=E,18nm,0.3s,baz=263,slow=11,SNR=270
SEY Lg Lg 19 41 06.3
comp=E,4.5nm,0.3s,baz=277,slow=14,SNR=3.8
CN2 Changchun 13.26 193 *e*P **Pn** **19 37 33.4 -2.2**
CN2 *e*S **Sn** **19 40 02.4 -0.6**
CN2 pmax pmax
comp=E,100nm,4.0s
CN2 LR LR
comp=E,16μm,11.0s
CN2 LR LR
comp=E,51μm,11.0s
CN2 LR LR
comp=E,9μm,5.0s
DEPR Deputatskiy 13.46 16 *e*Pn **Pn** **19 37 36.4 -1.7**
comp=E,82nm,0.8s
DEPR *e*Sn **Sn** **19 40 05.8 -1.7**
comp=E,362nm,0.9s
DEPR *e*Sn **Sn** **19 40 05.8 -1.7**
comp=E,442nm,1.0s
DEPR *e*Lg Lg 19 41 30.3
comp=E,3μm,1.4s
DEPR *e*Lg Lg 19 41 30.3
comp=E,3μm,1.6s
DEPR *i* LR LR 19 42 29.0
comp=E,4μm,6.9s
VLA Vladivostok 13.77 173⇑ *e*P **Pn** **19 37 42.7 +0.2**
VLA Vladivostok 13.77 173 *e*Pn **Pn** **19 37 42.7 +0.2**
YBGR Belaya Gora 13.97 26 *e*Pn Pn 19 37 40.0 -5.1
comp=E,89nm,0.8s
YBGR *e*Lg Lg 19 41 47.5
comp=E,2μm,1.3s
MSHR Mys Shultsa 14.27 175 *d i*P **Pn** **19 37 50.9 +1.6**
TIXI Tiksi 14.92 359 *c i*P **Pn** **19 37 55.1 -2.9**
TIXI pmax pmax
comp=Z,239nm,1.0s
TIXI MLR MLR
comp=Z,5μm,13.0s
TIXI Tiksi 14.92 359 Pn **Pn** **19 37 56.6 -1.4**
comp=Z,11nm,0.3s,baz=180,slow=24,SNR=268
TIXI Sn **Sn** **19 40 34.6 -8.5**
comp=Z,6.3nm,0.3s,baz=162,slow=15,SNR=3.4
TIXI Lg Lg 19 42 09.1
comp=Z,5.9nm,0.3s,baz=33,slow=7.6,SNR=4.9
TIXI LR LR 19 42 44.1
comp=Z,1μm,21.6s,baz=184,slow=33
TIXI Tiksi 14.92 359 *e*Pn **Pn** **19 37 56.1 -1.9**
comp=Z,338nm,1.3s
TIXI *e*Sn **Sn** **19 40 39.9 -3.1**
comp=Z,262nm,1.3s
TIXI *e*Lg Lg 19 42 14.6
comp=Z,3μm,1.9s
TIXI *i* LR LR 19 43 25.7
comp=Z,6μm,10.3s
TIXI Tiksi 14.92 359 **Pn** **19 37 56.4 -1.5**
ASAJ Asahikawa 15.14 141 Pn **Pn** **19 37 57.3 -3.9**
comp=Z,0.3nm,0.3s,baz=344,slow=16,SNR=4.0
ASAJ Lg Lg 19 42 06.1
comp=Z,0.4nm,0.3s,baz=347,slow=14,SNR=2.7
ASAJ LR LR 19 43 35.2
comp=Z,4μm,20.7s,baz=347,slow=37
JKA Kamikawa-asahi 15.15 141 **Pn** **19 37 57.3 -3.9**
IRK Irkutsk 15.30 263 *e*P **Pn** **19 38 03.6 +0.3**
SNY Shenyang 15.46 197⇓ P **Pn** **19 38 04.4 -1.0**
SNY S **Sn** **19 41 01.0 +4.5**
SNY pmax pmax
comp=Z,300nm,4.7s
SNY LR LR
comp=Z,23μm,13.2s
SNY LR LR
comp=Z,12μm,9.8s

TLY Talaya 15.91 262 *d i*P **Pn** **19 38 11.0 -0.2**
TLY pmax pmax
comp=Z,116nm,1.5s
TLY MLR MLR
comp=Z,4μm,16.0s
TLY Talaya 15.91 262 Pn **Pn** **19 38 10.8 -0.4**
comp=Z,0.0nm,0.3s,baz=46,slow=12,SNR=20
TLY Sn **Sn** **19 41 04.0 -3.5**
comp=Z,0.0nm,0.3s,baz=305,slow=12,SNR=2.9
TLY Lg Lg 19 42 42.2
comp=Z,0.0nm,0.3s,baz=282,slow=22,SNR=7.5
TLY LR LR 19 43 40.6
comp=Z,4μm,18.0s,baz=52,slow=35
TLY Talaya 15.91 262 **Pn** **19 38 11.8 +0.6**
KUR Kuril'sk 16.29 127 *d i*P **Pn** **19 38 16.6 +0.6**
KUR *e*S **Sn** **19 41 20.7 +4.2**
KUR pmax pmax
comp=Z,104nm,1.0s
KUR MLR MLR
comp=N,5μm,10.0s
KUR MLR MLR
comp=Z,4μm,10.0s
KUR MLR MLR
comp=E,3μm,13.0s
ULN Ulaanbaatar 16.31 246 *ce*P **Pn** **19 38 15.3 -1.2**
ULN pmax pmax
comp=Z,54nm,0.8s
ULN Ulaanbaatar 16.31 246 **Pn** **19 38 15.3 -1.2**
YUK Yuzh-Kuril'sk 16.42 134 *e*P Pn 19 38 10.3 -7.4
YUK *e*S **Sn** **19 41 18.5 -1.4**
YUK pmax pmax
comp=Z,529nm,1.2s
YUK pmax pmax
comp=N,577nm,1.4s
YUK pmax pmax
comp=E,154nm,0.9s
YUK pmax pmax
comp=Z,893nm,1.8s
YUK MLR MLR
comp=Z,2μm,12.0s
PEA0B Petropavlovsk- 16.55 91⇓ *e*P **P** **19 38 21.8 -0.1**
PEA0B Petropavlovsk- 16.55 91 **Pn** **19 38 19.2 -0.1**
PEA0B IAmb IAmb 19 38 24.6
comp=Z,198nm,1.2s
PETK Petropavlovsk- 16.55 91 P **Pn** **19 38 19.3 0.0**
PETK Petropavlovsk- 16.55 91 Pn **Pn** **19 38 18.6 -0.7**
comp=Z,0.7nm,0.3s,baz=292,slow=7.6,SNR=14
PETK LR LR 19 44 04.0
comp=Z,643nm,18.9s,baz=307,slow=35
PETK Petropavlovsk- 16.55 91 **Pn** **19 38 19.3 0.0**
SONM Songino Array 16.67 247 Pn **Pn** **19 38 20.7 -0.2**
comp=Z,2.0nm,0.3s,baz=43,slow=13,SNR=62
SONM Sn **Sn** **19 41 28.8 +2.9**
comp=Z,0.6nm,0.3s,baz=53,slow=24,SNR=3.1
SONM Lg Lg 19 43 13.2
comp=Z,12nm,0.3s,baz=47,slow=31,SNR=12
SONM LR LR 19 44 50.7
comp=Z,3μm,20.5s,baz=48,slow=37
SONM Songino Array 16.67 247 Pn **Pn** **19 38 19.6 -1.4**
ZAK Zakamensk 16.77 259 *e*P **Pn** **19 38 21.7 -0.6**
ZAK pmax pmax
comp=Z,49nm,1.3s
PET Petropavlovsk 17.11 90 *e*P **P** **19 38 29.8 +1.8**
PET *e*S **Sn** **19 41 36.8 +0.4**
PET pmax pmax
comp=Z,209nm,1.2s
PET MLR MLR
comp=Z,2μm,11.0s
PET MLR MLR
comp=Z,3μm,16.0s
PET Petropavlovsk 17.11 90 P **Pn** **19 38 26.2 -0.1**
PET IAmb IAmb 19 38 34.8
comp=Z,257nm,1.2s
ERM Erimo 17.20 144 *ce*P **Pn** **19 38 27.0 -0.6**
ERM pmax pmax
comp=Z,204nm,1.2s
ERM Erimo 17.20 144 **Pn** **19 38 26.1 -1.5**
ERM IAmb IAmb 19 38 50.6
comp=Z,292nm,1.2s
MOY Mondy 17.37 265 *e*P **P** **19 38 32.4 +1.3**
MOY pmax pmax
comp=Z,226nm,1.7s
DL2 Dalian 18.64 200 P **P** **19 38 44.4 -0.6**
DL2 S **Sn** **19 42 08.6 -5.0**
DL2 pmax pmax
comp=Z,68nm,0.8s
DL2 pmax pmax
comp=Z,330nm,5.0s
DL2 LR LR
comp=Z,9μm,18.8s
DL2 LR LR
comp=Z,22μm,19.4s
DL2 LR LR
comp=Z,8μm,10.2s
BJI Beijing 18.90 213 P **Pn** **19 38 48.3 -0.1**
BJI S **Sn** **19 42 14.8 -5.0**
BJI pmax pmax
comp=Z,26nm,1.3s
BJI pmax pmax
comp=Z,600nm,4.8s
BJI LR LR
comp=Z,17μm,16.3s
BJT Baijiatuau 18.92 213 P **P** **19 38 47.3 -0.8**
BJT pmax pmax
comp=Z,45nm,1.1s
BJT Baijiatuau 18.92 213 P **P** **19 38 47.2 -0.8**
KS19 Wonju Array Si 19.33 184 P **P** **19 38 50.4 -2.2**
KS19 IAmb IAmb 19 38 59.4
comp=Z,144nm,1.1s
KSRS Korea Array 19.38 184 P **P** **19 38 53.5 +0.4**
comp=Z,0.6nm,0.3s,baz=6.0,slow=9.9,SNR=45
KSRS Lg Lg 19 44 38.1
comp=Z,0.5nm,0.3s,baz=4.8,slow=32,SNR=7.5
KSRS LR LR 19 46 52.7
comp=Z,1μm,21.4s,baz=11,slow=39
KSAR Wonju Array Be 19.39 184 P **P** **19 38 52.7 -0.6**
KSAR Wonju Array Be 19.39 184 P **P** **19 38 52.6 -0.6**
INCN Inchon 19.42 187 P **P** **19 38 53.6 +0.1**
INCN pmax pmax
comp=Z,214nm,1.1s
INCN Inchon 19.42 187 P **P** **19 38 53.6 +0.1**
INCN IAmb IAmb 19 39 00.6
comp=Z,214nm,1.1s
HHC Hu-ho-hao-te 19.75 224 *e*P **P** **19 38 57.7 +0.3**
HHC pP sP 19 39 02.0 0.0
HHC sP pP 19 39 05.2 +4.7
HHC S **S** **19 42 33.1 -6.8**
HHC sS Sn 19 42 40.2 -0.4
HHC pmax pmax
comp=Z,46nm,1.3s
HHC pmax pmax
comp=Z,530nm,6.2s
HHC LR LR
comp=Z,5μm,6.6s
HHC LR LR
comp=Z,4μm,5.6s
HHC LR LR
comp=Z,5μm,9.1s
BILL Bilibino 20.03 41 *c i*P Pn 19 39 01.3 -0.5
BILL *e**PP sP 19 39 04.9 +0.4
BILL *e*PPP PPP 19 39 24.5
BILL *i* S Sn 19 42 46.5 -0.3
BILL *e* 19 43 14.2
BILL pmax pmax
comp=Z,190nm,1.3s
BILL MLR MLR
comp=Z,2μm,16.0s
BILL Bilibino 20.03 41 *e*Pn Pn 19 39 01.1 -0.7
BILL *i* Sn Sn 19 42 48.5 +1.8
BILL *i* Sn Sn 19 42 48.5 +1.8
BILL *i* Lg Lg 19 45 04.0
BILL *i* Lg Lg 19 45 04.0
BILL Bilibino 20.03 41 P **P** **19 39 00.7 +0.6**
BILL IAmb IAmb 19 39 09.0
comp=Z,311nm,1.5s
TJN Taejon 20.48 185⇓ *e*P **P** **19 39 05.0 -0.1**
BTO Baotou 20.56 226 *e*P **P** **19 39 05.8 -0.4**
MJB9 Matsu-Tunnel 21.08 160 P **P** **19 39 10.4 -1.3**
MAJO Matsushiro 21.09 160⇓ *i*P **P** **19 39 13.5 +1.8**
MAJO pmax pmax
comp=Z,69nm,1.8s
MAJO Matsushiro 21.09 160 P **P** **19 39 10.4 -1.3**
MAT Matsushiro 21.09 160 P **P** **19 39 08.9 -2.8**
MAT S **S** **19 43 04.0 -2.2**
MJAR Matsushiro Arr 21.09 160 P **P** **19 39 11.0 -0.8**
MJAR pmax pmax
comp=Z,22nm,1.2s
MJAR Matsushiro Arr 21.09 160 P **P** **19 39 10.5 -1.3**
comp=Z,11nm,0.7s,baz=22,slow=6.4,SNR=31
MJAR LR LR 19 46 40.2
comp=Z,1μm,19.6s,baz=345,slow=35
MJAR Matsushiro Arr 21.09 160 P **P** **19 39 11.0 -0.8**
INU Inuyama 22.05 163 P **P** **19 39 19.4 -2.6**
INU IAmb IAmb 19 39 27.1
comp=Z,114nm,1.2s
TIA Tai'an 22.22 207 P **P** **19 39 29.8 +6.0**
TIA S **S** **19 43 27.6 -0.7**
TIA pmax pmax
comp=Z,15nm,0.9s
TIA pmax pmax
comp=Z,170nm,2.9s
TIA LR LR
comp=N,5μm,12.1s
TIA LR LR
comp=E,6μm,9.5s
TIA LR LR
comp=Z,7μm,12.0s
TIY Taiyuan 22.22 218 *e*P **P** **19 39 26.0 +2.1**
TIY S **S** **19 43 26.9 -1.5**
TIY pmax pmax
comp=Z,29nm,0.6s
TIY pmax pmax
comp=Z,320nm,6.3s
TIY LR LR
comp=Z,18μm,8.0s
TIY LR LR
comp=Z,6μm,9.9s
JNU Nakatsue 23.69 177 P **P** **19 39 38.9 -0.3**
comp=Z,78nm,1.2s,baz=350,slow=6.8,SNR=9.9
JNU Nakatsue 23.69 177 P **P** **19 39 38.4 -0.7**
JNU IAmb IAmb 19 39 42.9
comp=Z,88nm,1.2s
ZAA0 Zalesovo Array 25.21 283 P **P** **19 39 52.6 -0.3**
ZALV Zalesovo Beam 25.21 283 P **P** **19 39 53.4 +0.5**
comp=Z,8.9nm,0.7s,baz=62,slow=6.9,SNR=23
ZALV LR LR 19 50 00.5
comp=Z,2μm,18.1s,baz=58,slow=37
ZALV Zalesovo Beam 25.21 283 P **P** **19 39 52.9 0.0**
NJ2 Nanjing 25.82 201 *e*P **P** **19 39 58.2 -0.4**
NJ2 sP **sP** **19 40 05.7 +2.4**
NJ2 S **S** **19 44 25.8 -2.1**
NJ2 sS **sS** **19 44 34.3 +0.8**
NJ2 pmax pmax
comp=Z,24nm,0.7s
NJ2 pmax pmax
comp=Z,320nm,3.9s
NJ2 LR LR
comp=Z,6μm,11.8s
NJ2 LR LR
comp=Z,11μm,15.6s
NJ2 LR LR
comp=Z,5μm,12.8s
GTA Gaotai 26.07 241⇓ P **P** **19 40 01.0 0.0**
GTA pP sP 19 40 08.4 +2.7
GTA sP pP 19 40 12.2 +7.9
GTA S **S** **19 44 31.8 -0.2**
GTA sS sS 19 44 40.4 +2.8
GTA pmax pmax
comp=Z,50nm,1.1s
GTA pmax pmax
comp=Z,340nm,5.4s
GTA LR LR
comp=Z,3μm,13.3s
GTA LR LR
comp=Z,4μm,11.7s
GTA LR LR
comp=Z,6μm,14.6s
SSE Sheshan 26.34 196 P **P** **19 40 02.6 -0.7**
SSE S **S** **19 44 36.5 +0.4**
SSE pmax pmax
comp=Z,48nm,1.0s
SSE pmax pmax
comp=Z,150nm,4.1s
SSE LR LR
comp=Z,5μm,15.1s
SSE LR LR
comp=Z,5μm,16.0s
SSE Sheshan 26.34 196 P **P** **19 40 02.4 -0.9**
XAN Xi'an 26.75 220 P **P** **19 40 06.7 -0.4**
XAN sP sP 19 40 13.6 +1.8
XAN PP **PnPn** **19 40 45.7 -2.4**
XAN PcP **PcP** **19 43 30.2 +0.2**
XAN S **S** **19 44 41.6 -1.1**
XAN SS 19 45 46.3
XAN pmax pmax
comp=Z,14nm,1.4s
XAN pmax pmax
comp=Z,190nm,5.6s
XAN LR LR
comp=Z,7μm,16.7s
XAN LR LR
comp=Z,11μm,20.6s
XAN LR LR
comp=Z,7μm,11.6s
XAN Xi'an 26.75 220 P **P** **19 40 06.0 -1.1**
XAN pmax pmax
comp=Z,22nm,0.9s
XAN Xi'an 26.75 220 P **P** **19 40 06.0 -1.1**
LZH Lanzhou 26.95 231⇑ P **P** **19 40 10.2 +1.2**
LZH pP sP 19 40 14.2 +0.4
LZH S **S** **19 44 48.5 +2.4**
LZH sS sS 19 44 51.8 +0.1
LZH pmax pmax
comp=Z,30nm,1.5s
LZH pmax pmax
comp=Z,400nm,5.4s
LZH LR LR
comp=Z,5μm,10.8s
LZH LR LR
comp=Z,4μm,10.3s
LZH LR LR
comp=Z,4μm,10.8s
WHN Wuhan 28.31 208⇑ *i*P **P** **19 40 20.6 -0.3**
WHN S **S** **19 45 02.6 -4.5**
WHN pmax pmax
comp=Z,42nm,0.6s
WHN pmax pmax
comp=Z,470nm,10.0s
WHN LR LR
comp=Z,10μm,13.4s
WHN LR LR
comp=Z,7μm,12.2s
GAMB Gambell 28.98 52 P **P** **19 40 26.9 +0.2**
GAMB IAmb IAmb 19 40 31.9
comp=Z,76nm,1.5s
WMQ Urumqi 29.19 262 P **P** **19 40 30.0 +1.2**
WMQ pP sP 19 40 35.2 +1.5
WMQ PcP **PcP** **19 43 40.9 +5.1**
WMQ S **S** **19 45 23.4 +2.3**
WMQ SS ScP 19 46 52.5 -25
WMQ pmax pmax
comp=Z,10.0nm,1.3s
WMQ pmax pmax
comp=Z,300nm,5.9s
WMQ LR LR
comp=Z,10μm,23.7s
WMQ LR LR
comp=Z,6μm,26.1s
WMQ LR LR
comp=Z,3μm,22.3s
WMQ Urumqi 29.19 262 P **P** **19 40 29.3 +0.4**
WMQ pmax pmax
comp=Z,45nm,1.2s
WMQ Urumqi 29.19 262 P **P** **19 40 29.2 +0.4**
WMQ IAmb IAmb 19 40 36.1
comp=Z,45nm,1.2s
ENH Enshi 30.00 216 P **P** **19 40 34.7 -1.3**
KURK Kurchatov 30.09 280 *de*P **P** **19 40 37.1 +0.5**
KURK pmax pmax
comp=Z,23nm,0.8s
KURK Kurchatov 30.09 280 P **P** **19 40 36.4 -0.3**
KURK IAmb IAmb 19 40 45.4
comp=Z,39nm,0.9s
KURBB Kurchatov Arra 30.19 280 P **P** **19 40 38.0 +0.5**
comp=Z,22nm,0.8s,baz=64,slow=9.2,SNR=57
MK31 Makanchi Array 30.29 271 *i* P **P** **19 40 38.0 -0.5**
MK31 Makanchi Array 30.29 271 P **P** **19 40 37.8 -0.7**
MKAR Makanchi Array 30.29 271 *i* P **P** **19 40 38.4 -0.1**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 30.29 271 P **P** **19 40 38.6 +0.2**

comp=Z,3.5nm,0.7s,baz=58,slow=9.2,SNR=38
MKAR LR LR 19 54 09.2
comp=Z,721nm,18.7s,baz=40,slow=39
MKAR Makanchi Array 30.29 271 P P 19 40 38.1 -0.4
MAKZ Makanchi 30.45 271 P P 19 40 39.6 -0.3
MAKZ pmax pmax
comp=Z,10.0nm,1.1s
MAKZ Makanchi 30.45 271 P P 19 40 39.6 -0.3
ANM Nome 31.45 49 IAmb IAmb 19 40 54.5
comp=Z,30nm,0.8s
CD2 Chengdu 31.49 226 P P 19 40 49.2 0.0
CD2 sP sP 19 40 53.8 -0.2
CD2 S **S 19 46 00.3 +3.2**
CD2 sS sS 19 46 05.1 +2.2
CD2 ScS **ScS 19 51 21.7 -1.0**
CD2 pmax pmax
comp=Z,60nm,0.5s
CD2 pmax pmax
comp=Z,330nm,4.8s
CD2 LR LR
comp=Z,7μm,9.9s
CD2 LR LR
comp=Z,6μm,11.8s
CD2 LR LR
comp=Z,8μm,8.7s
ATKA Atka Island 32.21 74 P P 19 40 54.5 -0.8
YHNB Yeheng 32.63 194 P P 19 40 59.2 -0.1
QZH Quanzhou 32.79 199 P P 19 41 02.1 +1.5
QZH *e*S **S 19 46 16.9 -0.5**
QZH LR LR
comp=Z,6μm,13.4s
QZH LR LR
comp=Z,4μm,11.5s
BVAR Borovoye Array 33.28 289 P P 19 41 05.5 +0.9
comp=Z,15nm,0.6s,baz=70,slow=9.5,SNR=128
BRVK Borovoye 33.31 289*c i*P **P 19 41 05.8 +0.9**
BRVK pmax pmax
comp=Z,18nm,0.8s
BRVK Borovoye 33.31 289 P P 19 41 05.5 +0.5
BRVK IAmb IAmb 19 41 12.0
comp=Z,23nm,0.8s
SSLB Suanglung 33.56 194 P P 19 41 07.3 0.0
SSLB IAmb IAmb 19 41 11.5
comp=Z,34nm,1.1s
GYA Guiyang 34.45 218‖*i*P **P 19 41 14.5 -0.7**
GYA PP **PP 19 42 31.7 -1.5**
GYA S **S 19 46 42.4 -1.0**
GYA SS **SnSn 19 48 53.7 0.0**
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,110nm,5.0s
GYA LR LR
comp=Z,5μm,13.4s
GYA LR LR
comp=Z,6μm,11.4s
GYA LR LR
comp=Z,2μm,9.9s
UNV Unalaska Valle 35.35 67 P P 19 41 22.1 -0.4
IMAR Indian Mountai 35.56 43 P P 19 41 23.7 -0.5
AKUT Akutan 35.57 66 P P 19 41 22.6 -1.7
TOLK Toolik Lake Re 36.02 38 P P 19 41 28.6 +0.4
TOLK IAmb IAmb 19 41 30.0
comp=Z,26nm,0.8s
TOLK Toolik Lake Re 36.02 38 P P 19 41 28.5 +0.4
baz=292,SNR=19
SVE Sverdlovsk 36.24 300‖*e*P **P 19 41 31.9 +1.8**
SVE *e*S **S 19 47 12.2 +2.1**
SVE pmax pmax
comp=Z,88nm,1.0s
SVE MLR MLR
comp=Z,2μm,11.0s
TKM2 Tokmak 2 36.42 271 P P 19 41 32.8 +0.7
SNR=7.5
USP Ospenovka 36.80 272 P P 19 41 36.5 +1.3
SNR=12
CHMS Chumysh 36.84 272 P P 19 41 36.4 +0.9
SNR=10
KBK Karagaybulak 36.96 271 P P 19 41 38.0 +1.4
SNR=8.2
FRU1 Bishkek 37.03 272 P P 19 41 37.6 +0.5
FRU1 pmax pmax
comp=Z,23nm,1.0s
FRU1 Bishkek 37.03 272 P P 19 41 37.6 +0.5
KMI Kunming 37.07 223 P P 19 41 37.0 -0.8
KMI pP pP 19 41 40.1 -1.1
KMI sP sP 19 41 42.9 +0.3
KMI PP **PP 19 43 00.4 -1.8**
KMI S **S 19 47 20.3 -3.5**
KMI sS pS 19 47 26.5 -1.5
KMI pmax pmax
comp=Z,30nm,0.9s
KMI pmax pmax
comp=Z,180nm,5.0s
KMI LR LR
comp=Z,2μm,17.1s
KMI LR LR
comp=Z,2μm,13.7s
KMI LR LR
comp=Z,2μm,13.6s
KMI Kunming 37.07 223 P P 19 41 36.7 -1.1
KMI pmax pmax
comp=Z,24nm,0.9s
KMI Kunming 37.07 223 P P 19 41 36.7 -1.1
MLY Manley 37.10 44 IAmb IAmb 19 41 42.1
comp=Z,45nm,1.0s
KZA Kyzart 37.18 270 P P 19 41 40.0 +1.3
SNR=6.7
AAK Ala-Archa 37.22 272*d i*P **P 19 41 39.6 +0.8**
AAK pmax pmax
comp=Z,13nm,0.8s
AAK Ala-Archa 37.22 272 P P 19 41 39.7 +0.8
comp=Z,11nm,0.7s,baz=87,slow=5.8,SNR=38
AAK Ala-Archa 37.22 272 P P 19 41 39.7 +0.9
SNR=8.2
AAK Ala-Archa 37.22 272 *i* P **P 19 41 39.5 +0.8**
SNR=9.1
AAK Ala-Archa 37.22 272 P P 19 41 39.3 +0.5
ARU Arti 37.43 300*c i*P **P 19 41 41.1 +0.9**
ARU S **S 19 47 31.8 +3.6**
ARU SS **SnSn 19 50 02.9 -1.8**
ARU SSS SSS 19 50 27.9
ARU pmax pmax
comp=Z,65nm,1.0s
ARU MLR MLR
comp=Z,2μm,14.0s
ARU Arti 37.43 300 P P 19 41 41.2 +0.9
comp=Z,17nm,0.9s,baz=74,slow=4.6,SNR=52
ARU Arti 37.43 300 P P 19 41 41.1 +0.9
ARU IAmb IAmb 19 41 46.5
comp=Z,53nm,0.9s
EKS2 Erkin-Say 37.60 272 P P 19 41 43.1 +1.1
SNR=6.4
TRF Thorofare Moun 38.00 46 IAmb IAmb 19 41 46.9
comp=Z,51nm,0.9s
MDM Murphy Dome 38.08 43 IAmb IAmb 19 41 51.6
comp=Z,34nm,0.9s
LSA Lhasa 38.09 241 P P 19 41 47.0 +0.2
LSA pmax pmax
comp=Z,48nm,1.1s
LSA Lhasa 38.09 241 P P 19 41 46.9 +0.2
LSA pmax pmax
comp=Z,15nm,1.1s
LSA Lhasa 38.09 241 *i* P **P 19 41 47.9 +1.2**
SNR=10
LSA Lhasa 38.09 241 P P 19 41 46.9 +0.2
BMAR Burnt Mountain 38.24 38 P P 19 41 47.7 +0.7
TCOL CIGO, UAF Yank 38.26 43 P P 19 41 47.9 +0.8
baz=298,SNR=12
COLA College 38.26 43*c i*P **P 19 41 47.5 +0.3**
COLA pmax pmax
comp=Z,39nm,0.7s
COLA College 38.26 43 P P 19 41 47.3 +0.2
COLA IAmb IAmb 19 41 49.5
comp=Z,53nm,0.7s
POKR Poker Plat Res 38.30 43 P P 19 41 48.1 +0.6
baz=298,SNR=14
WRH Wood River Hil 38.36 44 IAmb IAmb 19 41 49.6
comp=Z,60nm,0.8s
FYU Fort Yukon 38.42 40 P P 19 41 49.1 +0.7
FYU IAmb IAmb 19 41 51.0
comp=Z,74nm,1.0s
KSH Kashi 38.54 267 P P 19 41 55.4 +5.4
KSH sP sP 19 42 01.2 +6.3
KSH PP **PnPn 19 43 27.3 +7.4**
KSH S S 19 47 55.4 +10
KSH sS sS 19 48 00.1 +8.7
KSH SS **SS 19 50 36.8 +1.8**
KSH ScS **ScS 19 52 01.1 +0.5**
KSH pmax pmax
comp=Z,640nm,4.0s
KSH LR LR
comp=Z,1μm,6.4s
KSH LR LR
comp=Z,2μm,6.7s
KSH LR LR
comp=Z,3μm,8.8s
IL31 38.67 43 P **P 19 41 50.5 -0.1**
IL31 IAmb IAmb 19 41 52.3
comp=Z,49nm,0.9s
ILAR Eielson Array 38.67 43 P **P 19 41 50.8 +0.1**
comp=Z,34nm,0.8s,baz=296,slow=8.0,SNR=300
ILAR LR LR 20 00 26.7
comp=Z,1μm,18.3s,baz=322,slow=40
ILAR Eielson Array 38.67 43 P P 19 41 50.6 0.0
HDA Harding Lake 38.83 43 IAmb IAmb 19 42 00.6
comp=Z,65nm,1.2s
HDA Harding Lake 38.83 43 P P 19 41 52.1 +0.2
baz=299,SNR=15
ARSB Arslanbob 38.94 271 P P 19 41 54.3 +1.0
KK31 Karatay Array 39.09 275 *i* P **P 19 41 54.4 -0.1**
KKAR Karatay Array 39.09 275 P P 19 41 54.7 +0.2
KKAR pmax pmax
comp=Z,11nm,1.0s
KKAR Karatay Array 39.09 275 P P 19 41 54.7 +0.2
KKAR Karatay Array 39.09 275 P P 19 41 54.5 0.0
GHO Glory Hole Cre 39.38 48 IAmb IAmb 19 42 47.9
comp=Z,106nm,1.6s
SPA0 Spitsbergen Ar 39.42 343*eP* **P 19 41 58.0 +1.2**
SPA0 Spitsbergen Ar 39.42 343 P P 19 41 57.6 +0.8
SPA0 IAmb IAmb 19 43 25.1
comp=Z,133nm,1.5s
SPITS Spitsbergen Ar 39.42 343 P P 19 41 57.5 +0.7
comp=Z,14nm,0.9s,baz=77,slow=8.1,SNR=11
SML Sawmill 39.60 48 IAmb IAmb 19 42 02.3
comp=Z,60nm,0.9s
KBS Kingsbay 39.64 344*eP* **P 19 42 00.1 +1.5**
KDAK Kodiak Island 39.93 55 P P 19 42 00.2 -1.0
KDAK pmax pmax
comp=Z,136nm,1.4s
KDAK Kodiak Island 39.93 55 P P 19 42 00.2 -1.0
KDAK IAmb IAmb 19 42 22.4
comp=Z,136nm,1.4s
SCM Sheep Creek Mo 39.99 47 IAmb IAmb 19 42 03.0
comp=Z,51nm,1.0s
SLVN Son La 40.13 219 P P 19 42 01.9 -1.4
PAX Paxson 40.13 45 P P 19 42 02.4 -0.5
PAX pmax pmax
comp=Z,51nm,1.6s
PAX Paxson 40.13 45 P P 19 42 02.4 -0.5
HSPB Hornsund (broa 40.29 341*eP* **P 19 42 04.5 +0.5**
DOT Dot Lake 40.31 44 IAmb IAmb 19 42 12.1
comp=Z,121nm,1.7s
PRGR Permogore 40.39 313⇑*i*P **P 19 42 05.6 +0.7**
PRGR *e**PP **sP 19 42 10.6 +0.8**
PRGR pmax pmax
comp=Z,89nm,0.9s
KIRV Kirov 40.46 307 P **P 19 42 06.4 +0.9**
comp=Z,66nm,0.7s,baz=61,slow=4.2,SNR=23
QIZ Qiongzhong 40.47 209 P **P 19 42 04.8 -1.2**
QIZ S **S 19 48 15.8 +1.2**
QIZ LR LR
comp=Z,2μm,12.7s
QIZ LR LR
comp=Z,5μm,17.8s
QIZ LR LR
comp=Z,2μm,13.4s
QIZ Qiongzhong 40.47 209 P P 19 42 05.2 -0.9
NOR Nord 40.65 353 *i* P **P 19 42 06.9 0.0**
comp=Z,18nm,1.1s
EGAK Eagle 40.78 41 P P 19 42 08.1 0.0
ABKAR Akbulak array 40.83 290 P P 19 42 09.4 +0.6
ABKAR IAmb IAmb 19 42 15.5
comp=Z,46nm,0.8s
ABKAR Akbulak array 40.83 290 P P 19 42 09.2 +0.5
LVZ Lovozero 40.95 325 P P 19 42 09.8 +0.2
LVZ pmax pmax
comp=Z,90nm,1.5s
LVZ Lovozero 40.95 325 P P 19 42 09.8 +0.2
LVZ IAmb IAmb 19 42 48.2
comp=Z,90nm,1.5s
BTK Batken 41.00 272 P P 19 42 10.8 +0.4
BTK pmax pmax
comp=Z,23nm,0.8s
BTK Batken 41.00 272 P P 19 42 10.8 +0.4
AKTO Aktyubinsk 41.09 293 P P 19 42 11.8 +0.9
comp=Z,15nm,0.6s,baz=67,slow=7.8,SNR=26
SHL Shillong 41.24 237 P P 19 42 11.9 -0.7
SHL pmax pmax
comp=Z,42nm,1.2s
SHL Shillong 41.24 237 P P 19 42 11.9 -0.7
INK Inuvik 41.38 34 P P 19 42 13.4 +0.4
INK pmax pmax
comp=Z,22nm,1.0s
INK Inuvik 41.38 34 P P 19 42 13.3 +0.4
EPYK Eagle Plains 41.45 37 P P 19 42 13.7 +0.1
baz=304
BCAR Beaver Creek A 41.49 43 P P 19 42 13.8 -0.3
TAPN Taplejung 41.72 243*eP* **P 19 42 16.1 -0.5**
comp=Z,14nm,0.6s
DAWY Dawson 41.81 41 P P 19 42 16.0 -0.7
TMCR Tamitsa 41.89 319*eP* **P 19 42 17.1 -0.2**
TMCR pmax pmax
comp=Z,76nm,1.2s
GAR Garm 42.02 271 P P 19 42 19.1 +0.3
GAR IAmb IAmb 19 42 27.6
comp=Z,42nm,0.8s
GUN Gumba 42.16 245*eP* **P 19 42 20.1 -0.2**
comp=Z,28nm,0.7s
JIRN Jiri 42.21 245*eP* **P 19 42 20.5 -0.3**
comp=Z,35nm,0.6s
CRQM Cirque 42.28 47 IAmb IAmb 19 42 44.6
comp=Z,58nm,1.0s
ODAN Odare 42.28 243*eP* **P 19 42 20.8 -0.4**
comp=Z,74nm,0.8s
TGL Tana Glacier 42.40 47 IAmb IAmb 19 42 49.7
comp=Z,41nm,0.9s
HAMF Hammerfest 42.51 332*eP* **P 19 42 22.1 -0.1**
KKN Kakani 42.56 246*eP* **P 19 42 23.1 -0.3**
comp=Z,24nm,0.5s
RAMN Ramite 42.60 244*eP* **P 19 42 23.0 -0.8**
comp=Z,93nm,0.9s
PKI Pulchoki 42.68 246*eP* **P 19 42 24.1 -0.4**
PKIN Phulchoki 42.68 246*eP* **P 19 42 24.0 -0.4**
ARCES ARCESS Array B 42.71 330 P P 19 42 24.3 +0.4
comp=Z,17nm,0.9s,baz=52,slow=7.9,SNR=17
ARCES LR LR 20 03 10.2
comp=Z,554nm,19.2s,baz=38,slow=40
ARCES ARCESS Array B 42.71 330 P P 19 42 23.8 -0.1
ARE0 ARCESS Array S 42.71 330*eP* **P 19 42 24.2 +0.3**
ARE0 ARCESS Array S 42.71 330 P P 19 42 24.0 +0.1
GKN Gorkha 42.71 247*eP* **P 19 42 24.8 +0.2**
DMN Daman 42.80 246*eP* **P 19 42 25.4 0.0**
comp=Z,46nm,0.9s
DANN Dangsing 42.87 248*eP* **P 19 42 26.6 +0.5**
comp=Z,29nm,0.5s
CHGR Chuyangaron 42.90 272 P P 19 42 25.9 0.0
KOLN Koldanda 43.43 248*eP* **P 19 42 30.7 +0.3**
C36M Paulatuk 43.49 30 P P 19 42 30.4 +0.2
C36M IAmb IAmb 19 42 31.5
comp=Z,49nm,0.8s
C36M Paulatuk 43.49 30 P P 19 42 30.5 +0.4
baz=310,SNR=40
KTK1 Kautokeino 43.66 330*eP* **P 19 42 32.3 +0.7**
CHTO Chiang Mai 44.24 224 P P 19 42 36.1 -0.7
CHTO pmax pmax
comp=Z,20nm,1.1s
CHTO Chiang Mai 44.24 224 P P 19 42 36.1 -0.7
NIL Nilore 44.32 263 P P 19 42 37.0 -0.3
NIL pmax pmax
comp=Z,26nm,1.1s
NIL Nilore 44.32 263 P P 19 42 37.0 -0.3
TRO Tromso 44.40 332*eP* **P 19 42 37.7 +0.2**
HYT Haines Junctio 44.45 44 P P 19 42 38.4 +0.3
CM31 Chiang Mai Arr 44.56 223 P P 19 42 38.8 -0.6
CMAR Chiang Mai Arr 44.56 223 P P 19 42 38.8 -0.6
comp=Z,4.6nm,0.9s,baz=12,slow=7.5,SNR=42
CMAR LR LR 20 01 35.5
comp=Z,1μm,20.2s,baz=35,slow=37
DAG Danmarks Havn 45.18 350⇑*i*P **P 19 42 43.3 -0.3**
DAG pmax pmax
comp=Z,40nm,1.1s
DAG Danmarks Havn 45.18 350⇑*i*P **P 19 42 43.3 -0.3**
comp=Z,40nm,1.1s
UBPT Khong Chiam 45.28 214 P P 19 42 44.2 -0.8
UBPT IAmb IAmb 19 42 51.5
comp=Z,32nm,1.3s
RES Resolute Bay 45.53 15 P P 19 42 46.5 +0.1
RES pmax pmax
comp=Z,31nm,0.9s
RES Resolute Bay 45.53 15 P P 19 42 46.5 +0.1
RES IAmb IAmb 19 42 47.6
comp=Z,31nm,0.9s
PBKT Sadao Pong 45.56 220 P P 19 42 46.6 -0.6
KBL Kabul 45.96 268 P P 19 42 49.8 -0.8
KBL pmax pmax
comp=Z,18nm,1.0s
KBL Kabul 45.96 268 P P 19 42 49.8 -0.8
KBL IAmb IAmb 19 42 57.0
comp=Z,18nm,0.9s
STEI Steigen 46.56 332*eP* **P 19 42 54.7 +0.2**
LOF Lofoten 46.85 333*eP* **P 19 42 56.0 -0.8**
MOS Moscow 47.28 310*eP* **P 19 42 59.9 -0.5**
MOS *e* 19 43 09.6
MOS *e* 19 44 51.4
MOS *e*PPP PPP 19 45 35.7
MOS *e*S **S 19 49 54.2 +0.9**
MOS *e*SS **SS 19 53 16.1 -3.9**
MOS pmax pmax
comp=Z,75nm,1.0s
MOS MLR MLR
comp=Z,600nm,12.0s
PUL Pulkovo 47.48 317*d i*P **P 19 43 02.9 +1.0**
PUL pmax pmax
comp=Z,111nm,0.9s
FIA1 FINESS Array S 47.86 321 P P 19 43 04.7 -0.1
FINES FINESS Array B 47.86 321 *i* P **P 19 43 05.0 +0.2**
FINES pmax pmax
comp=Z,75nm,0.8s
FINES FINESS Array B 47.86 321 P P 19 43 05.2 +0.3
comp=Z,75nm,0.8s,baz=44,slow=8.9,SNR=136
FINES LR LR 20 04 44.7
comp=Z,1μm,20.6s,baz=53,slow=38
FINES FINESS Array B 47.86 321 P P 19 43 04.7 -0.1
MOR8 Moi Rana 48.06 330*eP* **P 19 43 05.2 -1.2**
OBN Obninsk 48.15 310*c i*P **P 19 43 07.1 0.0**
OBN *i* *PP **pP 19 43 10.9 +0.3**
OBN *e* 19 44 33.9
OBN *e* 19 44 59.4
OBN *e*S **S 19 50 06.9 +1.4**
OBN *e*SS **SS 19 53 37.6 +3.6**
OBN pmax pmax
comp=Z,51nm,1.0s
OBN MLR MLR
comp=Z,871nm,13.0s
OBN Obninsk 48.15 310 P P 19 43 07.5 +0.4
comp=Z,6.3nm,0.7s,baz=17,slow=2.2,SNR=10
OBN Obninsk 48.15 310 P P 19 43 07.1 0.0
VRH Novokhopyorsk 48.52 303*eP* **P 19 43 10.1 +0.1**
VRH pmax pmax
comp=Z,110nm,0.8s
VRH MLR MLR
comp=Z,1μm,9.0s
KULLO Kullorsuaq 48.82 2 *i* P **P 19 43 11.6 -0.5**
KULLO pmax pmax
comp=Z,15nm,0.8s
KULLO Kullorsuaq 48.82 2 *i* P **P 19 43 11.6 -0.5**
comp=Z,15nm,0.8s
LPSR Galich'ya Gora 48.83 306*eP* **P 19 43 12.4 0.0**
LPSR pmax pmax
comp=Z,70nm,0.9s
LPSR MLR MLR
comp=Z,1μm,10.0s
GEYT Alibeck 49.46 280 P P 19 43 18.7 +1.1
comp=Z,7.4nm,0.8s,baz=35,slow=3.6,SNR=20
GEYT LR LR 20 04 59.5
comp=Z,971nm,19.7s,baz=35,slow=37
GEYT Alibeck 49.46 280 P P 19 43 17.8 +0.3
GYA0B ALIBECK ARRAY 49.46 280 P P 19 43 17.3 -0.2
GYA0B IAmb IAmb 19 43 29.6
comp=Z,18nm,0.8s
VSR Storozhevoye 49.68 304*eP* **P 19 43 18.9 0.0**
VSR pmax pmax
comp=Z,80nm,0.9s
VSR MLR MLR
comp=Z,1μm,11.0s
VSU Vasula 49.73 318*d i*P **P 19 43 19.0 -0.2**
VSU Vasula 49.73 318*eP* **P 19 43 19.9 +0.7**
VSU IAmb IAmb 19 43 20.6
comp=Z,269nm,0.7s
KCP Kidapawan 49.78 186‖*eP* **P 19 43 19.7 -0.4**
VORD Divnogorie 49.79 304*eP* **P 19 43 19.8 0.0**
VORD pmax pmax
comp=Z,40nm,0.8s
HRA Herat 49.81 273 P P 19 43 20.4 0.0
NSS Namsos 49.99 330*eP* **P 19 43 21.1 0.0**
SUMG Summit 50.65 355 *i* P **P 19 43 26.9 +0.4**
SUMG pmax pmax
comp=Z,100nm,0.8s
SUMG Summit 50.65 355 *i* P **P 19 43 26.9 +0.4**
comp=Z,102nm,0.8s
SUMG Summit 50.65 355 P P 19 43 26.8 +0.4
SUMG IAmb IAmb 19 43 28.0
comp=Z,44nm,0.9s
CHLP Challavanipeta 50.97 241*eP* **P 19 43 28.5 -0.6**
YKW3 Yellowknife Ar 51.04 32 P P 19 43 28.9 -0.1
YKW3 IAmb IAmb 19 43 30.8
comp=Z,24nm,0.9s
YKA Yellowknife Ar 51.09 32 P P 19 43 29.7 +0.2
comp=Z,13nm,0.8s,baz=319,slow=7.3,SNR=174
YKA LR LR 20 06 52.3
comp=Z,70nm,21.6s,baz=307,slow=38
SCO Scoresbysund 51.39 348 *i* P **P 19 43 32.4 +0.8**
SCO pmax pmax
comp=Z,42nm,0.9s
SCO Scoresbysund 51.39 348 *i* P **P 19 43 32.4 +0.8**
comp=Z,42nm,0.9s
MAK Makhachkala 51.45 292*eP* P 19 43 27.5 -4.9
MAK *e* 19 45 25.2
MAK *e*S **S 19 50 44.2 -7.8**
MAK *e*SS **SS 19 54 22.4 -4.9**
MAK pmax pmax
comp=Z,383nm,1.5s
MAK MLR MLR
comp=Z,838nm,14.0s
TBLU Trondheim 51.46 330*eP* **P 19 43 31.3 -0.9**
DIB Dawson Inlet, 51.62 49 IAmb IAmb 19 43 38.2
comp=Z,34nm,1.2s
KKM Kota Kinabalu 51.69 197 P P 19 43 34.2 -0.4
IZAR Zarasai 51.88 316*eP* **P 19 43 36.5 +1.1**
IZAR IAmb IAmb 19 43 37.2
comp=Z,32nm,0.7s
ISAL Salakas 52.05 316*eP* **P 19 43 37.5 +0.8**
ISAL IAmb IAmb 19 43 38.6
comp=Z,45nm,0.7s
MICGM Minsk 52.15 314*eP* **P 19 43 38.0 +0.5**
MNK Minsk 52.15 314‖*eP* **P 19 43 38.0 +0.5**
GOF Gofitskoye 52.19 296⇑*eP* **P 19 43 40.7 +2.8**
GOF pmax pmax
comp=Z,29nm,0.9s
NACGM Naroch 52.29 315*eP* **P 19 43 37.0 -1.5**
NACGM PM 19 43 38.0
comp=Z,0.7nm,1.0s
NACGM eLQ LQ 20 01 43.0
NACGM eLR LR 20 06 38.0
AKT Akhty 52.40 290*eP* **P 19 43 40.6 +0.9**
AKT *e* 19 44 50.0
AKT pmax pmax
comp=Z,25nm,0.7s
NC405 NORSAR Array S 52.74 327 P P 19 43 42.2 +0.4
DOMB Dombas 52.77 329*eP* **P 19 43 42.1 +0.1**
PABE Paberze 52.93 317*eP* **P 19 43 43.8 +0.6**
NB2 NORSAR Subarra 52.95 328 P P 19 43 43.3 -0.1
comp=Z,69nm,0.7s,baz=36,slow=6.9
NB2 NORSAR Subarra 52.95 328 P P 19 43 43.3 -0.1
baz=36,slow=6.9
NOA NORSAR Array B 52.95 328 P P 19 43 43.9 +0.5
comp=Z,53nm,0.7s,baz=38,slow=7.4,SNR=198
NOA LR LR 20 09 32.1
comp=Z,504nm,18.5s,baz=35,slow=40
RPR Rampur 53.01 246*eP* **P 19 43 43.1 -1.2**
KIV Kislovodsk 53.16 296*d i*P **P 19 43 47.0 +1.8**
KIV *e**PP **sP 19 43 50.6 +0.4**
KIV *e* 19 44 54.4
KIV *e* 19 45 43.6

KIV eS S 19 51 16.6 +0.9
KIV eSS SS 19 54 57.5 +3.0
KIV pmax pmax
comp=Z,9.0nm,0.6s
KIV MLR MLR
comp=Z,1µm,17.0s
KIV Kislovodsk 53.16 296 ⇓P P 19 43 47.4 +2.2
KIV Kislovodsk 53.16 296 *i* P P 19 43 47.3 +2.0
SNR=28
KIV Kislovodsk 53.16 296 P P 19 43 46.0 +0.8
KBZ Khabaz 53.22 295 P P 19 43 47.5 +2.0
comp=Z,7.0nm,0.9s,baz=288,slow=0.8,SNR=8.5
KBZ LR LR 20 07 28.5
comp=Z,2µm,18.2s,baz=44,slow=37
PVM Polavaram 53.22 242 *e*P P 19 43 45.1 -0.7
AKN Aaknes 53.23 330 *e*P P 19 43 46.2 +0.8
PBUR Paburg 53.30 318 *e*P P 19 43 46.1 +0.2
ZEI Tsey 53.40 294 *e*P P 19 43 46.2 -1.0
ZEI pmax pmax
comp=Z,7.0nm,0.9s
SRSP Sriramsagar 53.43 247 *e*P P 19 43 46.1 -1.2
GGR Gangavaram 53.43 244 *e*P P 19 43 46.7 -0.7
TBLG Delisi 53.75 292 P P 19 43 49.6 0.0
TBLG pmax pmax
comp=Z,16nm,0.8s
TBLG Delisi 53.75 292 P P 19 43 49.6 0.0
OSL Oslo 53.98 327 *e*P P 19 43 50.9 +0.1
SKAR Skarslia 54.09 329 *e*P P 19 43 52.7 +0.9
MYLAV Mylavaram 54.14 243 *e*P P 19 43 51.8 -0.7
FOO Floro 54.23 331 *e*P P 19 43 53.1 +0.5
HYA Hoyanger 54.28 330 *e*P P 19 43 53.5 +0.5
SUW Suwalki 54.35 316 *e*P P 19 43 53.5 -0.2
SUW Suwalki 54.35 316 *e*P P 19 43 53.5 -0.2
AKASG Malin Array Be 54.41 310 P P 19 43 54.4 +0.2
comp=Z,20nm,0.6s,baz=39,slow=8.4,SNR=82
AKASG LR LR 20 07 57.5
comp=Z,558nm,18.9s,baz=45,slow=37
AKASG Malin Array Be 54.41 310 P P 19 43 54.2 +0.1
AKBB Malin Array Si 54.41 310 P P 19 43 54.1 -0.1
AKBB pmax pmax
comp=Z,29nm,0.9s
AKBB Malin Array Si 54.41 310 P P 19 43 54.0 -0.1
AKBB IAmb IAmb 19 44 00.9
comp=Z,29nm,0.9s
KONO Kongsberg 54.55 327 P P 19 43 55.4 +0.4
KONO pmax pmax
comp=Z,52nm,0.9s
KONO Kongsberg 54.55 327 *e*P P 19 43 55.5 +0.5
KONO Kongsberg 54.55 327 P P 19 43 55.4 +0.4
HYBB Hyderabad (bro 54.60 245 *e*P P 19 43 55.0 -0.9
HYB Hyderabad 54.60 245 *i* P P 19 43 55.0 -0.9
AKH Akhalkalaki 54.62 293 P P 19 43 56.8 +0.7
AKH pmax pmax
comp=Z,14nm,1.0s
AKH Akhalkalaki 54.62 293 ⇓P P 19 43 58.1 +2.0
AKH Akhalkalaki 54.62 293 P P 19 43 56.8 +0.7
SOC Sochi 54.90 297 *e*P P 19 43 57.8 0.0
SOC *e* 19 46 00.6
SOC *e*PPP PPP 19 47 09.2
SOC *e*S S 19 51 39.9 +1.0
SOC *e*SS SS 19 55 23.6 +2.0
SOC *e*SSS SSS 19 57 19.6
SOC pmax pmax
comp=Z,23nm,0.9s
SOC MLR MLR
comp=Z,942nm,15.0s
GNI Garni 54.92 291⇑ *e*P P 19 44 00.3 +2.1
GNI pmax pmax
comp=Z,10.0nm,0.6s
GNI Garni 54.92 291 P P 19 43 59.6 +1.4
GNI Garni 54.92 291 P P 19 43 59.0 +0.8
GNI IAmb IAmb 19 44 50.3
comp=Z,20nm,0.9s
DMPR Damasthipur 54.95 246 *e*P P 19 43 57.2 -1.3
KLNR Kaliningrad 55.02 318*ce*P P 19 43 58.6 +0.2
KLNR pmax pmax
comp=Z,188nm,0.8s
KLRI Killari 55.04 248 *e*P P 19 43 58.0 -1.1
ANN Anapa 55.10 300 *e*P P 19 43 57.3 -1.9
ANN *e**PP pP 19 43 59.7 -3.1
ANN *e*PPP PPP 19 47 19.8
ANN *e*S S 19 51 43.0 +1.5
ANN *e*SSS SSS 19 57 28.3
ANN pmax pmax
comp=Z,36nm,1.3s
ANN MLR MLR
comp=E,585nm,15.0s
ANN MLR MLR
comp=Z,2µm,15.0s
ANN MLR MLR
comp=N,1µm,15.0s
ASK Askoy 55.12 330 *e*P P 19 43 59.5 +0.4
BER Bergen 55.16 330 *e*P P 19 43 59.8 +0.3
ODD1 Odda 55.20 329 *e*P P 19 44 00.5 +0.7
ADKI Addanki 55.23 243 *e*P P 19 44 00.2 -0.2
SRLM Srisailam 55.55 244 *e*P P 19 44 01.7 -1.1
BLSS Blasjo 55.65 329 *e*P P 19 44 03.9 +0.9
SBUM Sibu 55.92 201 P P 19 44 04.8 -0.6
SBUM Sibu 55.92 201 P P 19 44 06.0 +0.6
KMY Karmoy 56.17 329 *e*P P 19 44 07.8 +1.1
KULM Kulim 56.20 215 P P 19 44 06.8 -0.6
KULM IAmb IAmb 19 44 15.0
comp=Z,19nm,1.0s
KULM Kulim 56.20 215 P P 19 44 07.0 -0.4
KMSI Cibinong 56.22 187 P P 19 44 09.3 +1.8
comp=Z,707nmcomp=Z,62nm,1.1s
MRSI Marisa 56.47 189 P P 19 44 10.7 +1.4
comp=Z,1µmcomp=Z,102nm,1.1s
BSD Bornholm Skovb 56.50 321⇑ *i*P P 19 44 08.9 -0.2
BSD pmax pmax
comp=Z,99nm,0.9s
BSD Bornholm Skovb 56.50 321⇑ *i*P P 19 44 08.9 -0.2
comp=Z,99nm,0.9s
SIM Simferopol' 56.55 302 *e*P P 19 44 11.4 +1.8
SIM pmax pmax
comp=Z,10.0nm,0.8s
SIM MLR MLR
comp=Z,540nm,14.0s
SORM Soroca 56.73 308 ⇓P P 19 44 11.4 +0.6
MPSI Mapaga 56.81 192 P P 19 44 13.0 +1.3
comp=Z,25nm,0.9s
BEL Belsk 56.96 315 *e*P P 19 44 13.3 +0.9
BEL Belsk 56.96 315 *e*P P 19 44 13.3 +0.9
JRMM Jerantut 56.96 213 P P 19 44 12.0 -0.8
SEVA Sevastopol 57.07 302⇑ *i*P P 19 44 13.7 +0.4
LRW Lerwick 57.08 333⇑ *e*P P 19 44 14.2 +1.1
LRW IAmb IAmb 19 44 15.4
comp=Z,90nm,1.0s
GKP Gorka Klasztor 57.16 319 *e*P P 19 44 14.4 +0.6
GKP Gorka Klasztor 57.16 319 *e*P P 19 44 14.4 +0.6
LVV L'vov 57.24 312 *e*P P 19 44 14.8 +0.3
LVV *i* 19 44 21.1
LVV *e*S S 19 52 08.1 -1.9
LVV *e*PS PnS 19 52 27.4 +7.2
LVV MLR MLR
comp=E,2µm,12.0s
LVV MLR MLR
comp=N,1µm,14.0s
LVV MLR MLR
comp=Z,2µm,13.0s
KSM Kuching 57.26 203 P P 19 44 14.1 -0.9
KSM IAmb IAmb 19 44 20.5
comp=Z,25nm,0.8s
KSM Kuching 57.26 203 P P 19 44 15.0 0.0
MUD Monsted U'grnd 57.30 325⇑ *i*P P 19 44 15.5 +0.8
MUD pmax pmax
comp=Z,66nm,0.8s
MUD Monsted U'grnd 57.30 325⇑ *i*P P 19 44 15.5 +0.8
comp=Z,66nm,0.8s
URV Uravakonda 57.34 245 *e*P P 19 44 14.4 -1.1
KIS Kishinev 57.39 307 *e*P P 19 44 16.0 +0.5
KIS Kishinev 57.39 307 *e*PP PP 19 46 20.0 -2.5
KIS *e*LQ LQ 20 02 24.0
comp=Z,2µm,16.0s
KIS *e*L L 20 04 32.0
KIS LRM MLR 20 10 04.0
comp=Z,2µm,15.0s
KIS Kishinev 57.39 307 *e*P P 19 44 16.0 +0.5
KIS *e* 19 44 20.0
KIS *e* 19 46 20.0
KIS *e* 19 52 20.0
KIS MLR MLR
comp=Z,2µm,15.0s
KIS MLR MLR
comp=N,2µm,13.0s
MILM Milestii Mici 57.45 307⇑P P 19 44 17.4 +1.4
SWI Sorong 57.49 178 P P 19 44 18.9 +2.4
comp=N,16nm,1.0s
APSI Ampana 57.87 189 P P 19 44 20.7 +1.5
comp=N,952nmcomp=N,724nmcomp=N,68nm,1.2s
LLLB Lillooet 57.88 45 IAmb IAmb 19 44 26.5
comp=Z,33nm,0.9s
LUWI Luwuk 57.91 188 P P 19 44 21.0 +1.5
comp=Z,49nm,1.2s
LUWI Luwuk 57.91 188 P P 19 44 19.5 0.0
SMKI Samarinda 57.92 195 P P 19 44 20.6 +1.0
KWP Kalwaria Pacla 57.93 313 *e*P P 19 44 20.2 +0.9
KWP Kalwaria Pacla 57.93 313 *e*P P 19 44 20.2 +0.9
KWP Kalwaria Pacla 57.93 313 P P 19 44 20.1 +0.7
VASR Vaslui 58.12 307⇓P P 19 44 21.0 +0.3
PRAR RASCA 58.23 309⇑P P 19 44 22.3 +0.8
RKPI Ransiki, Papua 58.24 175 P P 19 44 24.4 +2.6
comp=Z,2µmcomp=Z,29nm,0.9s
BUR08 Bucovina Ar. S 58.45 310 P P 19 44 23.5 +0.3
BURAR Bucovina Array 58.47 310⇑P P 19 44 23.7 +0.5
BURAR Bucovina Array 58.47 310 P P 19 44 23.3 +0.1
BIR Birlad 58.48 307⇓P P 19 44 25.2 +2.0
DIKM Dikmen 58.52 299⇑P P 19 44 24.9 +1.4
BIZ Bicaz 58.62 309⇓P P 19 44 25.0 +0.8
OJC Ojcow 58.62 315 *e*P P 19 44 24.5 +0.4
OJC Ojcow 58.62 315 *e*P P 19 44 24.5 +0.4
OJC Ojcow 58.62 315 P P 19 44 24.4 +0.2
OJC IAmb IAmb 19 44 31.5
comp=Z,28nm,0.8s
KOLS Kolonicke sedl 58.65 312 *e*P P 19 44 25.0 +0.6
KOLS pmax pmax
comp=Z,31nm,0.9s
KOLS Kolonicke sedl 58.65 312 *e*P P 19 44 25.0 +0.6
TESR Tescani 58.71 308⇑P P 19 44 25.2 +0.4
SANI Sanana 58.72 184 P P 19 44 27.0 +1.8
comp=Z,24nm,1.0s
GHRR 58.73 307⇓P P 19 44 26.7 +1.7
TLCR 58.79 306⇓P P 19 44 27.0 +1.7
UZH Uzhgorod 58.88 312 *e*P P 19 44 30.6 +4.6
UZH *e* 19 44 36.0
UZH *e*S S 19 52 34.0 +2.6
BSEG Bad Segeberg 59.02 323 *e*P P 19 44 27.5 +0.7
baz=33,slow=6.8
RUE Ruedersdorf 59.03 320 *e*P P 19 44 27.9 +1.0
comp=Z,47nm,0.9s,baz=33,slow=6.8
A04D Lummi Island 59.04 47 P P 19 44 27.8 +0.7
baz=322
NIE Niedzica 59.06 314 *e*P P 19 44 28.6 +1.4
NIE Niedzica 59.06 314 *e*P P 19 44 28.6 +1.4
PETR Petresti 59.08 307⇑P P 19 44 28.9 +1.6
JURR Jurilovca 59.09 305⇓P P 19 44 27.8 +0.4
PSI Prapat 59.09 216 P P 19 44 27.0 -0.9
PSI pmax pmax
comp=Z,14nm,1.0s
BMR Baia Mare 59.14 311⇑P P 19 44 29.1 +1.3
TRPA Tarpa 59.18 312⇑P P 19 44 29.2 +1.2
VRI Vrincioaia 59.18 307⇑P P 19 44 29.2 +1.0
RPSI Rantau Prapat 59.19 216 P P 19 44 27.0 -1.4
TOPG Topolog 59.23 306⇓P P 19 44 29.2 +0.8
PLOR Plostina 59.23 308⇑P P 19 44 29.2 +0.8
MLA1 Lanthon 59.23 333 *e*P P 19 44 29.5 +1.3
ARCR ARCALIA 59.25 310⇑P P 19 44 30.2 +1.7
OZUR 59.41 308⇑P P 19 44 31.2 +1.5
BISRR Bisoca 59.44 307⇑P P 19 44 31.9 +1.9
KSP Ksiaz 59.45 317 *e*P P 19 44 30.6 +0.7
KSP Ksiaz 59.45 317 *e*P P 19 44 30.6 +0.7
TIRR Tirgusor 59.54 305 P P 19 44 30.9 +0.3
TIRR pmax pmax
comp=Z,37nm,1.0s
TIRR Tirgusor 59.54 305 P P 19 44 30.9 +0.3
FAKI Fak Fak 59.56 177 P P 19 44 30.0 -1.0
FAKI IAmb IAmb 19 44 41.4
comp=Z,28nm,1.0s
OKC Ostrava-Krasne 59.56 316 *e*P P 19 44 31.4 +0.7
OKC Ostrava-Krasne 59.56 316 *e*P P 19 44 31.4 +0.7
HARR Harsova 59.57 306⇓P P 19 44 31.0 +0.2
SHME Shamm 59.58 272 *i*P P 19 44 30.4 -0.7
BANOM Banah 59.59 271 P P 19 44 31.1 -0.2
LANS Liptovska Anna 59.60 314 *e*P P 19 44 32.6 +1.5
LANS pmax pmax
comp=Z,20nm,1.0s
LANS Liptovska Anna 59.60 314 *e*P P 19 44 32.5 +1.5
NLWA Neilton Lookou 59.62 49 IAmb IAmb 19 44 36.2
comp=Z,19nm,0.9s
B05A Bryant 59.65 47 P P 19 44 31.9 +0.6
baz=323,SNR=11
FCC Fort Churchill 59.67 25 P P 19 44 30.4 -0.8
FCC pmax pmax
comp=Z,37nm,1.5s
FCC Fort Churchill 59.67 25 P P 19 44 30.4 -0.8
FCC IAmb IAmb 19 44 31.4
comp=Z,37nm,1.4s
DOPR Dopca 59.69 308⇓P P 19 44 33.3 +1.7
B06A Marblemount 59.70 47 IAmb IAmb 19 44 35.6
comp=Z,14nm,0.8s
OSTC Ostas 59.72 317 *e*P P 19 44 32.4 +0.7
OSTC *ex* x 19 44 36.0
CHVC Chvalec 59.75 317 *e*P P 19 44 32.7 +0.7
CHVC *ex* x 19 44 36.5
MFTR Murfatlar 59.75 305⇓P P 19 44 33.0 +1.0
MLR Muntele Rosu 59.82 308⇑P P 19 44 33.3 +0.7
PGOR Pogoanele 59.82 307⇓P P 19 44 33.3 +0.8
GENI Genyem 59.82 168 P P 19 44 36.0 +3.2
comp=Z,50nm,1.7s
D03D Eldon 59.83 48 P P 19 44 33.4 +0.9
baz=323,SNR=7.3
UPC Upice 59.83 317 *e*P P 19 44 33.4 +0.9
UPC Upice 59.83 317 *e*P P 19 44 33.4 +0.9
DPC Dobruska-Polom 59.84 317 *e*P P 19 44 33.6 +0.9
DPC *e* 19 44 37.5
DPC Dobruska-Polom 59.84 317 *e*P P 19 44 33.6 +0.9
DPC *ex* x 19 44 37.5
MORC Moravsky Berou 59.84 316 P P 19 44 32.8 +0.1
MORC pmax pmax
comp=Z,40nm,0.9s
MORC Moravsky Berou 59.84 316⇓P P 19 44 33.5 +0.8
MORC Moravsky Berou 59.84 316 *e*P P 19 44 33.2 +0.5
MORC Moravsky Berou 59.84 316 P P 19 44 32.8 +0.1
MCD Coleburn Disti 59.85 333⇑ *e*P P 19 44 33.3 +0.8
ISR Istrita 59.85 307⇓P P 19 44 34.3 +1.5
MSAI Masohi 59.94 181 P P 19 44 35.7 +2.1
comp=Z,312nmcomp=Z,17nm,1.2s
LTVH Ltavrtes, Hu 60.03 312 *e*P P 19 44 36.5 +2.6
DRGR 60.17 311⇑P P 19 44 36.0 +1.0
LEHL Lehliu 60.23 306⇓P P 19 44 36.5 +1.2
DRUM Mains of Drumt 60.25 332⇑ *e*P P 19 44 36.2 +0.9
DRUM IAmb IAmb 19 44 36.9
comp=Z,104nm,0.8s
PSN Preselentsi 60.25 305 *i* P P 19 44 35.6 +0.2
VOIR 60.25 308⇓P P 19 44 36.9 +1.4
CLL Collm 60.27 320⇑ *i*P P 19 44 35.6 +0.1
CLL *e* 19 44 39.0
CLL *e*S S 19 52 54.0 +4.8
CLL pmax pmax
comp=Z,70nm,1.3s
CLL Collm 60.27 320⇑ *i*P P 19 44 35.6 +0.1
comp=Z,70nm,1.3s
CLL *ep*P pP 19 44 39.0 -0.1
CLL *i* sP sP 19 44 41.4 +0.9
comp=Z,75nm,1.0s
CLL *e*S S 19 52 54.0 +4.8
CLL *e*SS SS 19 56 54.0 +8.4
CLL Collm 60.27 320 *e*P P 19 44 35.9 +0.4
baz=33,slow=6.8
NRDL Niedersach Rie 60.29 322 *e*P P 19 44 36.2 +0.6
comp=Z,25nm,1.0s,baz=33,slow=6.8
NRDL *ep*P sP 19 44 40.2 -0.3
RASA Rasa 60.29 306⇓P P 19 44 38.0 +2.2
BRG Berggiesshubel 60.29 319 *i* P P 19 44 35.9 +0.3
comp=Z,88nm,1.9s
BRG *i* 19 44 42.1
comp=N,1µm,12.8s
comp=E,1µm,10.4s
comp=Z,1µm,10.8s
BRG Berggiesshubel 60.29 319 *i* P P 19 44 35.9 +0.3
BRG *i* 19 44 42.1
BRG pmax pmax
comp=Z,88nm,1.9s
BRG MLR MLR
comp=N,1µm,12.8s
BRG MLR MLR
comp=E,1µm,10.4s
BRG MLR MLR
comp=Z,1µm,10.8s
BRG Berggiesshubel 60.29 319 *i* P P 19 44 36.4 +0.8
baz=33,slow=6.8
SULR 60.32 307⇓P P 19 44 37.2 +1.2
SNSI Sinabang, Aceh 60.33 219 P P 19 44 36.3 0.0
comp=Z,108nm,1.0s
PVCC Panska Ves 60.35 318 *e*P P 19 44 36.9 +0.9
PVCC *e* 19 44 40.8
PVCC Panska Ves 60.35 318 *e*P P 19 44 36.9 +0.9
PVCC *ex* x 19 44 40.8
VYHS Vyhne 60.38 314 *e*P P 19 44 37.3 +1.0
VYHS pmax pmax
comp=Z,31nm,1.1s
VYHS Vyhne 60.38 314 *e*P P 19 44 37.3 +1.0
ASSE Asse, Remlinge 60.40 322 *e*P P 19 44 36.8 +0.5
comp=Z,16nm,0.9s,baz=33,slow=6.8
ASSE *ep*P sP 19 44 41.0 -0.3
MTUR Matau 60.41 308⇓P P 19 44 37.9 +1.2
UOSS Minazif 60.41 271 P P 19 44 36.4 -0.5
UOSS Minazif 60.41 271 P P 19 44 35.9 -1.0
UOSS IAmb IAmb 19 44 47.7
comp=Z,12nm,0.8s
PSZ Piszkesteto 60.42 313⇓P P 19 44 38.0 +1.4
PSZ Piszkesteto 60.42 313 IAmb IAmb 19 44 44.8
comp=Z,31nm,1.0s
KAC Achnashellach 60.43 334⇑ *e*P P 19 44 37.5 +1.0
FBE Freiberg 60.47 319 *e*P P 19 44 37.6 +0.8
comp=Z,14nm,0.9s,baz=33,slow=6.8
FBE *ep*P sP 19 44 41.6 -0.2
ARR Arges 60.48 308⇑P P 19 44 39.0 +1.8
JAVC Velka Javorina 60.54 315 *e*P P 19 44 39.3 +1.8
HATD Hatta, Dubai 60.55 271 P P 19 44 37.5 -0.3
VRAC Vranov 60.59 316⇓P P 19 44 39.1 +1.4
VRAC Vranov 60.59 316 *e*P P 19 44 38.2 +0.5
KPL Plockton 60.66 334⇑ *e*P P 19 44 38.7 +0.7
KPL IAmb IAmb 19 44 40.1
comp=Z,41nm,1.0s
CLZ Clausthal 60.75 322 *e*P P 19 44 39.3 +0.5
comp=Z,20nm,0.7s,baz=33,slow=6.8
BKNI Bangkinang 60.77 213 P P 19 44 39.5 +0.3
comp=Z,1µmcomp=Z,121nm,1.2s
BKNI Bangkinang 60.77 213 P P 19 44 38.6 -0.7
GOPC GO Pecny, Ondr 60.77 318 *e*P P 19 44 39.2 +0.2
GOPC *e* 19 44 44.8
GOPC MLR MLR
comp=Z,1µm,15.5s
GOPC GO Pecny, Ondr 60.77 318 *e*P P 19 44 39.2 +0.2
GOPC *ex* x 19 44 44.8
GOPC AMS AMS 20 12 00.0
comp=Z,1µm,15.5s
PRA Prague 60.77 318 AMS AMS 20 12 00.0
comp=Z,2µm,13.8s
BR131 Keskin Array S 60.78 298 P P 19 44 39.8 +0.4
BR131 pmax pmax
comp=Z,10.0nm,1.0s
BR131 Keskin Array S 60.78 298 P P 19 44 39.8 +0.4
BRTR Keskin Array B 60.78 298 P P 19 44 40.3 +0.9
comp=Z,5.9nm,0.8s,baz=64,slow=4.2,SNR=24
BRTR Keskin Array B 60.78 298 P P 19 44 39.8 +0.4
NEUB Neuenburg 60.79 320 *e*P P 19 44 39.7 +0.7
comp=Z,21nm,0.7s,baz=33,slow=6.8
LOT Lotru 60.79 309⇑P P 19 44 46.0 +6.7
PRU Pruhonice 60.80 318 *e*P P 19 44 39.8 +0.7
PRU *e* 19 44 43.6
PRU MLR MLR
comp=Z,2µm,18.8s
PRU Pruhonice 60.80 318 *e*P P 19 44 39.8 +0.7
PRU *ex* x 19 44 43.6
PRU AMS AMS 20 12 00.0
comp=Z,2µm,18.8s
DEV Deva 60.81 310⇓P P 19 44 47.3 +8.0
E04D Cinebar 60.82 49 P P 19 44 40.2 +0.9
baz=323
KRUC Moravsky 60.86 316 *e*P P 19 44 40.1 +0.5
KBKI Kotabaru 60.87 195 P P 19 44 41.1 +1.2
comp=Z,22nm,1.0s
SMOL Smolenice 60.91 315 *e*P P 19 44 41.1 +1.2
SMOL pmax pmax
comp=Z,20nm,1.0s
SMOL Smolenice 60.91 315 *e*P P 19 44 41.1 +1.2
GSI Gunungsitoli 60.94 217 P P 19 44 40.5 0.0
comp=Z,42nm,1.1s
GSI Gunungsitoli 60.94 217 P P 19 44 39.3 -1.1
PRD Provadia 60.98 305 *i* P P 19 44 42.4 +2.0
LTY Liberty 61.03 47 IAmb IAmb 19 44 46.1
comp=Z,46nm,1.8s
ANTO Ankara 61.08 299⇓P P 19 44 46.7 +5.4
MODS Modra-Piesok 61.09 315 *e*P P 19 44 41.3 +0.2
MODS pmax pmax
comp=Z,22nm,1.2s
MODS Modra-Piesok 61.09 315 *e*P P 19 44 41.3 +0.2
RAZG Razgrad 61.09 306⇓P P 19 44 41.8 +0.6
GTTG Gyttingen 61.13 322 *e*P P 19 44 42.3 +0.9
comp=Z,42nm,1.1s,baz=33,slow=6.8
SRO Srobarova 61.13 314 *e*P P 19 44 42.5 +1.1
SRO pmax pmax
comp=Z,45nm,0.8s
SRO Srobarova 61.13 314 *e*P P 19 44 42.5 +1.1
ASUD Al Ashush, Dub 61.15 271 P P 19 44 41.5 -0.3
ESY Stoneypath 61.16 332 *e*P P 19 44 42.1 +0.6
TANN Tannenbergstha 61.20 319 *e*P P 19 44 42.4 +0.5
baz=33,slow=6.8
COPA Copaceanca 61.21 307⇑P P 19 44 42.6 +0.6
FFC Flin Flon 61.22 31 P P 19 44 40.9 -1.0
FFC pmax pmax
comp=Z,23nm,1.2s
FFC Flin Flon 61.22 31 P P 19 44 40.9 -1.0
FFC IAmb IAmb 19 44 42.5
comp=Z,23nm,1.1s
IBBN Ibbenburen 61.23 323 *e*P P 19 44 42.4 +0.4
comp=Z,20nm,0.9s,baz=33,slow=6.8
PBCC Pribram 61.25 318 *e*P P 19 44 42.4 +0.2
PBCC *ex* x 19 44 46.7
GZR Gura Zlata 61.26 310⇓P P 19 44 43.5 +1.1
GUNZ Gunzen 61.29 319 *e*P P 19 44 43.3 +0.8
baz=33,slow=6.8
MOX Moxa 61.31 320 *e*P P 19 44 43.5 +0.9
comp=Z,15nm,0.8s,baz=33,slow=6.8
MOX *e*L L 20 13 26.4
comp=Z,641nm,18.7s
WERN Wernitzgruen 61.34 319 *e*P P 19 44 43.6 +0.8
baz=33,slow=6.8
NKC Novy Kostel 61.36 319 *e*P P 19 44 43.7 +0.7
NKC Novy Kostel 61.36 319 *e*P P 19 44 43.7 +0.7
EBL Broad Law 61.40 332 *e*P P 19 44 43.7 +0.6
EAU Auchinoon 61.44 332 *e*P P 19 44 44.1 +0.7
LAWE Loch Awe, Argy 61.56 333⇑ *e*P P 19 44 44.6 +0.5
BZS Buzias 61.57 311⇑P P 19 44 45.1 +0.7
SZH Strazhica 61.58 306 *i* P P 19 44 44.6 +0.1
ORH Orhaniye 61.59 302 P P 19 44 49.0 +4.3
NEW Newport 61.61 44 P P 19 44 44.6 -0.2
baz=325
SRE Strehaia 61.66 309⇑P P 19 44 46.4 +1.3
MANZ Manzenberg 61.69 319 *e*P P 19 44 45.9 +0.7
comp=Z,5.9nm,1.0s,baz=33,slow=6.8
UBBA Unterbreizbach 61.73 321 *e*P P 19 44 45.8 +0.5
baz=33,slow=6.8
PGBU Glenifferbraes 61.74 333⇑ *e*P P 19 44 46.4 +1.0
PGBU IAmb IAmb 19 44 47.8
comp=Z,174nm,1.0s
ROTZ Rotzenmuhle 61.83 319 *e*P P 19 44 46.9 +0.8
baz=33,slow=6.8
ESK Eskdalemuir 61.85 332⇑ *e*P P 19 44 45.8 -0.3
ESK Eskdalemuir 61.85 332 P P 19 44 45.8 -0.3
ESK pmax pmax
comp=Z,91nm,1.6s
ESK Eskdalemuir 61.85 332 P P 19 44 45.8 -0.3
KHC Kasperske Hory 61.86 318*ce*P P 19 44 47.1 +0.7
KHC pmax pmax
comp=Z,92nm,1.6s
KHC Kasperske Hory 61.86 318 *e*P P 19 44 47.2 +0.8
KHC *ex* x 19 44 51.1
KHC AMS AMS 20 12 40.0
comp=Z,2µm,17.6s
KHC Kasperske Hory 61.86 318 P P 19 44 46.7 +0.3
KHC IAmb IAmb 19 44 54.4
comp=Z,14nm,0.9s
ELND Elena 61.88 306⇓P P 19 44 47.3 +0.8
E07A Sunnyside 61.93 47 IAmb IAmb 19 44 51.2
comp=Z,11nm,0.8s
EDMD Edmundbyers 61.95 331⇑ *e*P P 19 44 47.2 +0.4
EDMD IAmb IAmb 19 44 48.0
comp=Z,34nm,0.7s

CONA Conrad Observa 62.00 316 esP P 19 44 48.5 +1.2
comp=Z,13nm,0.9s,SNR=6.4
GDLE Glaisdale, N Y 62.00 330 eP P 19 44 47.9 +0.8
GEC2 GERESS Array S 62.05 318 eP P 19 44 48.2 +0.5
baz=33,slow=6.8
GEC2 GERESS Array S 62.05 318 P P 19 44 47.8 +0.1
GEC2 IAmb IAmb 19 44 55.3
comp=Z,19nm,0.9s
GERES GERESS Array B 62.05 318 P P 19 44 48.3 +0.5
comp=Z,6.6nm,0.9s,baz=46,slow=5.8,SNR=15
GERES LR LR 20 15 04.9
comp=Z,853nm,18.1s,baz=20,slow=39
GERES GERESS Array B 62.05 318 P P 19 44 47.8 +0.1
PLVB Pleven 62.06 307 ⇓P P 19 44 52.8 +5.1
PUNG Punghina 62.08 309 ⇑P P 19 44 55.4 +7.5
COR Corvallis 62.10 51 P P 19 44 48.4 +0.4
COR pmax pmax
comp=Z,53nm,1.0s
COR Corvallis 62.10 51 P P 19 44 48.4 +0.4
WET Wettzell 62.11 318 eP P 19 44 48.8 +0.7
baz=33,slow=6.8
BUG Bochum--Univer 62.13 323 eP P 19 44 48.7 +0.6
comp=Z,16nm,0.7s,baz=33,slow=6.8
WALA Waterton Lakes 62.16 42 IAmb IAmb 19 44 58.4
comp=Z,23nm,1.1s
GRA1 Grafenberg Arr 62.25 320 P P 19 44 49.0 +0.1
GRF Grafenberg Arr 62.25 320 P P 19 44 49.0 +0.1
GRF pmax pmax
comp=Z,37nm,1.1s
GRF Grafenberg Arr 62.25 320 eP P 19 44 49.6 +0.6
comp=Z,41nm,1.2s,baz=33,slow=6.8
GRF eL L 20 15 29.4
comp=Z,375nm,20.4s
BKSI Bulukumba 62.38 191 P P 19 44 51.6 +1.5
comp=Z,449nmcomp=Z,20nm,0.8s
H04D Lebanon 62.39 50 P P 19 44 51.2 +1.3
baz=324
G05D Wamic, OR 62.40 49 P P 19 44 50.9 +0.9
baz=324
H04A Detroit Lake 62.49 50 IAmb IAmb 19 45 02.2
comp=Z,15nm,1.0s
HPK Haverah Park 62.63 330 eP P 19 44 52.3 +0.9
HPK IAmb IAmb 19 44 54.7
comp=Z,154nm,1.6s
MOA Molln 62.67 317 esP P 19 44 52.5 +0.7
comp=Z,16nm,1.3s,SNR=6.2
ARSA Arzberg 62.68 316 esP P 19 44 53.1 +1.2
comp=Z,18nm,1.0s
TNS Taunus Mts 62.77 322 eP P 19 44 53.2 +0.7
comp=Z,14nm,0.7s,baz=33,slow=6.8
I03D Drain, OR 62.79 51 P P 19 44 54.2 +1.5
baz=324,SNR=9.3
CLGH Cloghs, Cushen 62.80 333⇑eP P 19 44 53.3 +0.8
PMBI Palembang 62.82 208 P P 19 44 52.2 -0.9
PGB Panagyurishte 62.93 307 iP P 19 44 58.7 +5.0
AHRW Bad Neuenahr-A 62.96 323 eP P 19 44 54.5 +0.8
comp=Z,21nm,0.9s,baz=33,slow=6.8
J01E Myrtle Point 62.97 52 P P 19 44 55.6 +1.7
baz=324,SNR=11
KEBM Edson Butte 63.03 52 P P 19 44 54.3 0.0
PLD Plovdiv 63.05 306 iP P 19 44 58.6 +4.2
I04A Tendick Farm, 63.11 51 P P 19 44 55.6 +0.7
baz=324
JTMT Jette 63.12 43 IAmb IAmb 19 44 56.8
comp=Z,15nm,1.1s
LBWR Ladybower, Pea 63.15 330⇑eP P 19 44 55.6 +0.7
LBWR IAmb IAmb 19 44 56.5
comp=Z,133nm,0.8s
BEBN Eben Emael 63.20 324 P P 19 44 55.7 +0.5
MEM Membach 63.25 323 P P 19 44 56.1 +0.5
comp=Z,47nm,0.9s
VTS Vitosha 63.29 308 ⇑P P 19 44 56.9 +0.7
VTS Vitosha 63.29 308 iPg P 19 44 56.6 +0.5
RJOB Jochberg 63.31 318 eP P 19 44 57.0 +0.9
baz=33,slow=6.8
SOKA Soboth 63.35 315 esP P 19 44 58.0 +1.6
comp=Z,18nm,1.2s
RZN Rozhen 63.38 306 iP P 19 44 57.1 +0.3
BSTI Sart Tilman 63.42 324 ⇑P P 19 44 57.4 +0.7
comp=Z,11nm,0.8s
BSTI sP sP 19 45 01.9 +0.3
F10A Beach Ranch, E 63.45 46 IAmb IAmb 19 45 01.6
comp=Z,14nm,0.8s
K02D Willamette Mer 63.46 52 P P 19 44 58.5 +1.2
baz=324
BHOU Houvegnez 63.47 323 P P 19 44 56.8 -0.2
comp=Z,19nm,0.8s
BHOU pP pP 19 45 00.7 0.0
FUR Furstenfeldbru 63.51 319 eP P 19 44 58.5 +1.1
comp=Z,20nm,0.9s,baz=33,slow=6.8
CWF Charnwood Fore 63.62 329⇑eP P 19 44 58.5 +0.5
CWF IAmb IAmb 19 44 59.4
comp=Z,50nm,0.9s
BCLA Clavier 63.64 324 ⇑P P 19 44 58.2 0.0
comp=Z,12nm,0.7s
KBA Koelnbreinsper 63.66 317 esP P 19 45 00.0 +1.5
comp=Z,38nm,1.4s,SNR=7.5
OBKA Obir 63.67 316 esP P 19 44 59.8 +1.3
comp=Z,39nm,0.9s
J04D Umpqua Nationa 63.69 51 P P 19 45 00.2 +1.4
baz=324,SNR=13
STU Stuttgart 63.74 320 P P 19 44 59.3 +0.4
STU pmax pmax
comp=Z,26nm,1.2s
STU Stuttgart 63.74 320 eP P 19 44 59.7 +0.9
comp=Z,8.0nm,0.9s,baz=33,slow=6.8
STU Stuttgart 63.74 320 P P 19 44 59.2 +0.4
STU IAmb IAmb 19 45 06.5
comp=Z,26nm,1.2s
MMB Musomiste 63.90 307 iP P 19 45 00.6 +0.5
BMRD Maredsous 63.92 324 ⇑P P 19 45 00.4 +0.4
comp=Z,33nm,0.7s
MYKA Terra Mystica 63.92 316 esP P 19 45 01.8 +1.7
comp=Z,28nm,1.3s
PPSI Pulau Pagai 64.00 213 P P 19 45 01.3 +0.4
comp=Z,29µmcomp=Z,124nm,1.6s
MSO Missoula 64.01 43 IAmb IAmb 19 45 02.8
comp=Z,20nm,1.1s
MSO Missoula 64.01 43 P P 19 45 02.4 +1.6
baz=327,SNR=9.4
WLF Walferdange 64.02 323 P P 19 45 00.7 0.0
WLF pmax pmax
comp=Z,141nm,2.0s
WLF Walferdange 64.02 323 eP P 19 45 01.1 +0.5
comp=Z,11nm,0.7s,baz=33,slow=6.8
WLF Walferdange 64.02 323 P P 19 45 01.1 +0.5
WLF Walferdange 64.02 323 P P 19 45 00.7 0.0
J05D Fort Rock, OR 64.03 50 P P 19 45 02.1 +1.0
baz=325,SNR=35
YLL Llanberis 64.05 331⇑eP P 19 45 01.4 +0.6
WATA Walderalm 64.10 318 esP P 19 45 02.5 +1.1
comp=Z,12nm,0.7s,SNR=6.1
WTTA Wattenberg 64.14 318 iP P 19 45 02.7 +1.0
comp=Z,17nm,0.8s
DOU Dourbes 64.15 324 ⇑P P 19 45 01.7 +0.2
comp=Z,20nm,0.7s
DOU x x 19 45 03.3
DOU sP sP 19 45 06.2 -0.4
ABTA Abfaltersbach 64.25 317 iP P 19 45 03.7 +1.4
comp=Z,23nm,1.2s
HLM1 Long Mynd 64.26 330⇑eP P 19 45 02.9 +0.7
HLM1 IAmb IAmb 19 45 04.4
comp=Z,46nm,1.0s
MOTA Moosalm 64.27 318 esP P 19 45 03.3 +0.7
comp=Z,31nm,1.0s,SNR=6.8
RETA Reutte 64.27 319 iP P 19 45 03.2 +0.8
comp=Z,10nm,0.8s
SQTA Sankt Quirin 64.33 318 esP P 19 45 03.6 +0.7
comp=Z,36nm,1.6s,SNR=5.5
UBR Ueberruh 64.34 319 eP P 19 45 03.3 +0.3
comp=Z,9.8nm,0.9s,baz=33,slow=6.8
K04D Chiloquin, OR 64.34 51 P P 19 45 04.1 +1.1
baz=325
BMO Blue Mountains 64.35 46 IAmb IAmb 19 45 10.2
comp=Z,14nm,1.1s
BFO Black Forest 64.42 321 P P 19 45 03.4 0.0
BFO pmax pmax
comp=Z,34nm,1.1s
BFO Black Forest 64.42 321 eP P 19 45 03.7 +0.3
comp=Z,16nm,0.8s,baz=33,slow=6.8
BFO Black Forest 64.42 321 P P 19 45 03.4 0.0
L04D Klamath Falls 64.44 51 P P 19 45 04.3 +0.6
baz=325,SNR=15
MDSI Maura Dua 64.47 208 P P 19 45 04.5 +0.5
comp=Z,27nm,1.3s
STIP Stip 64.49 308 iP P 19 45 03.5 -0.4

EGMT Eagleton 64.52 40 IAmb IAmb 19 45 09.9
comp=Z,20nm,1.1s
EGMT Eagleton 64.52 40 P P 19 45 04.4 +0.3
baz=328,SNR=6.9
KLSI 64.53 208 P P 19 45 04.9 +0.6
SAUI Saumlaki 64.56 178 P P 19 45 07.0 +2.5
comp=Z,4µmcomp=Z,109nm,1.2s
SKO Skopje 64.59 308 iP P 19 45 08.2 +3.6
VAY Valandovo 64.63 307 iP P 19 45 05.8 +1.1
YBH Yreka Blue Hor 64.66 52 IAmb IAmb 19 45 10.4
comp=Z,11nm,0.8s
FETA Feichten 64.67 318 esP P 19 45 06.4 +1.2
comp=Z,24nm,1.3s
CSS Mathiatis 64.68 295 P P 19 45 05.3 +0.1
STRD Stroud 64.72 329 eP P 19 45 06.5 +1.3
STRD IAmb IAmb 19 45 09.5
comp=Z,65nm,0.9s
MCH1 Michaelchurch 64.76 330 eP P 19 45 05.4 0.0
HMNX Herstmonceux 64.80 327 eP P 19 45 06.7 +1.0
HMNX IAmb IAmb 19 45 07.7
comp=Z,390nm,1.5s
UWJI Ujung Watu 64.81 200 P P 19 45 07.1 +1.0
comp=Z,123nm,0.8s
SWN1 Swindon 64.85 329⇑eP P 19 45 06.9 +0.8
SWN1 IAmb IAmb 19 45 08.2
comp=Z,89nm,0.7s
WOL Wolverton 64.87 328⇑eP P 19 45 06.5 +0.3
WOL IAmb IAmb 19 45 07.3
comp=Z,90nm,0.8s
M02C Callahan 64.87 52 P P 19 45 08.1 +1.6
baz=325
KMMI Kalianget 64.89 197 P P 19 45 07.8 +1.1
comp=Z,50nm,1.2s
ECH Echery 64.92 321 P P 19 45 06.7 0.0
ECH pmax pmax
comp=Z,22nm,1.1s
ECH Echery 64.92 321 P P 19 45 06.7 0.0
ECH IAmb IAmb 19 45 13.9
comp=Z,22nm,1.1s
ELL Elmali 64.93 299 P P 19 45 07.2 +0.2
ELL pmax pmax
comp=Z,35nm,0.8s
ELL Elmali 64.93 299 P P 19 45 07.2 +0.2
M04C Macdoel 65.00 51 P P 19 45 08.4 +1.1
baz=325,SNR=23
GRJI Gresik 65.01 199 P P 19 45 08.5 +1.1
comp=Z,37nm,0.9s
LWLI Liwa 65.01 208 P P 19 45 08.1 +0.5
comp=Z,27nm,1.0s
TBJI Tambak Boyo 65.03 199 P P 19 45 08.6 +1.0
comp=Z,95nm,1.8s
PDG Pogorica 65.15 310 ⇓P P 19 45 08.2 +0.1
PDG Podgorica 65.15 310 P P 19 45 08.1 0.0
PDG IAmb IAmb 19 45 14.6
comp=Z,16nm,0.7s
FUORN Ofenpass-Fuorn 65.19 319 P P 19 45 09.3 +0.7
N02D Trinity Center 65.28 53 P P 19 45 10.8 +1.7
baz=325
KASI Kota Agung 65.39 208 P P 19 45 10.5 +0.6
comp=Z,44nm,2.0s
MMRI Maumere 65.47 188 P P 19 45 10.6 +0.1
TNG Tangerang 65.49 205 P P 19 45 11.3 +0.8
comp=Z,150nm,0.8s
SMRI Semarang 65.52 201 P P 19 45 11.7 +0.9
comp=Z,98nm,1.9s
FNA Florina 65.59 308 IAmb IAmb 19 45 21.5
comp=Z,13nm,0.8s
NGJI Ngawi 65.64 200 P P 19 45 12.5 +1.0
comp=Z,73nm,1.2s
LIT Litokhoron 65.66 306 IAmb IAmb 19 45 16.1
comp=Z,44nm,2.0s
WDC Whiskeytown Da 65.67 53 IAmb IAmb 19 45 17.9
comp=Z,40nm,1.4s
SRBI Singaraja 65.72 196 P P 19 45 13.2 +1.2
comp=Z,52nm,1.0s
DLMT Dillon 65.75 43 IAmb IAmb 19 45 17.3
comp=Z,25nm,0.9s
TIR Tirane 65.78 309 P P 19 45 22.1 +10
WVOR Wild Horse Val 65.81 49 IAmb IAmb 19 45 17.7
comp=Z,16nm,0.8s
O02D Mt. Diablo Mer 65.89 53 P P 19 45 13.3 +0.1
baz=325
DGMT Dagmar 66.01 36 P P 19 45 13.6 -0.1
DGMT Dagmar 66.01 36 P P 19 45 13.7 0.0
baz=331
MFID Camas Ranch 66.14 46 IAmb IAmb 19 45 16.5
comp=Z,21nm,1.2s
O03E Paynes Creek 66.23 52 P P 19 45 16.2 +0.9
baz=325
SOEI Soe 66.45 186 P P 19 45 16.4 -0.5
AGG Agios Georgios 66.61 306 IAmb IAmb 19 45 30.2
comp=Z,12nm,0.8s
ULM Lac du Bonnet 66.91 30 P P 19 45 17.8 -1.5
comp=Z,9.2nm,0.8s,baz=337,slow=7.0,SNR=12
ULM Lac du Bonnet 66.91 30 IAmb IAmb 19 45 25.1
comp=Z,12nm,0.8s
ORV Oroville 66.97 53 IAmb IAmb 19 45 26.0
comp=Z,12nm,0.8s
RLMT Red Lodge 67.18 41 IAmb IAmb 19 45 26.4
comp=Z,26nm,0.8s
RLMT Red Lodge 67.18 41 P P 19 45 21.9 +0.5
baz=329,SNR=15
LKWY Lake 67.25 42 IAmb IAmb 19 46 02.3
comp=Z,17nm,0.9s
NRCA Norcia 67.31 314 IAmb IAmb 19 45 27.8
comp=Z,24nm,0.9s
H17A Grant Village 67.33 42 IAmb IAmb 19 45 34.2
comp=Z,19nm,1.2s
H17A Grant Village 67.33 42 P P 19 45 24.5 +2.1
baz=329
RAYN Ar Rayn 67.41 279 P P 19 45 22.6 -0.4
RAYN pmax pmax
comp=Z,39nm,1.5s
RAYN Ar Rayn 67.41 279 P P 19 45 22.5 -0.4
RAYN Ar Rayn 67.41 279 P P 19 45 22.6 -0.4
RAYN IAmb IAmb 19 45 29.7
comp=Z,39nm,1.5s
FLWY Flagg Ranch 67.55 43 IAmb IAmb 19 45 29.3
comp=Z,16nm,0.8s
AFDM Forest Hills D 67.70 53 IAmb IAmb 19 45 30.4
comp=Z,34nm,1.5s
PAHR Pah Rah Range 67.76 51 IAmb IAmb 19 45 29.8
comp=Z,19nm,0.8s
MOOW Moose Ponds 67.82 43 IAmb IAmb 19 45 30.7
comp=Z,12nm,0.9s
SCHQ Schefferville 67.94 10 P P 19 45 25.6 -0.2
comp=Z,28nm,1.0s,baz=3.9,slow=7.0,SNR=18
SCHQ Schefferville 67.94 10 P P 19 45 25.7 -0.1
SNOW Snow King Moun 68.06 43 IAmb IAmb 19 45 34.1
comp=Z,21nm,1.0s
REDW Red Top Meadow 68.11 43 IAmb IAmb 19 45 37.6
comp=Z,20nm,1.1s
PNTR Pine Nut 68.18 52 IAmb IAmb 19 45 39.1
comp=Z,25nm,0.9s
ITM Ithomi 68.30 305 IAmb IAmb 19 45 37.6
comp=Z,18nm,0.7s
ELK Elko 68.62 48 IAmb IAmb 19 45 35.7
comp=Z,9.4nm,0.7s
AGMN Agassiz Nation 68.69 31 IAmb IAmb 19 45 33.5
comp=Z,16nm,0.8s
AGMN Agassiz Nation 68.69 31 P P 19 45 29.1 -1.5
baz=335
KVN Kaiserville 68.85 51 IAmb IAmb 19 45 37.1
comp=Z,23nm,0.8s
TIP Timpagrande 68.90 310 ⇓P P 19 45 32.4 +0.3
TIP Timpagrande 68.90 310 IAmb IAmb 19 45 45.2
comp=Z,13nm,0.7s
RYN Ryan 69.03 51 IAmb IAmb 19 45 39.6
comp=Z,44nm,1.6s
BW06 Boulder Array 69.10 43 IAmb IAmb 19 45 44.6
comp=Z,38nm,1.9s
BW06 Boulder Array 69.10 43 P P 19 45 33.1 -0.4
baz=330
PD31 Pinedale Array 69.10 43 IAmb IAmb 19 45 44.6
comp=Z,34nm,1.9s
PDAR Pinedale Array 69.10 43 P P 19 45 33.3 -0.3
comp=Z,4.0nm,0.6s,baz=15,slow=2.5,SNR=30
PDAR LR LR 20 15 25.9
comp=Z,654nm,18.5s,baz=346,slow=36
PDAR Pinedale Array 69.10 43 P P 19 45 32.9 -0.7
NVAR Mina Array Bea 69.29 51 P P 19 45 35.1 +0.4
comp=Z,16nm,0.9s,baz=306,slow=6.1,SNR=18
NVAR Mina Array Bea 69.29 51 P P 19 45 34.4 -0.4
NV11 Mina Array Sit 69.35 51 P P 19 45 34.9 -0.2
NV11 IAmb IAmb 19 45 41.7
comp=Z,40nm,1.7s
MTN Manton Dam 69.39 178 P P 19 45 34.3 -0.9

OMMB Old Mammoth Mi 69.67 52 IAmb IAmb 19 45 45.0
comp=Z,47nm,1.9s
RSSD Black Hills 69.89 38 P P 19 45 37.9 -0.5
RSSD pmax pmax
comp=Z,22nm,1.4s
RSSD Black Hills 69.89 38 P P 19 45 37.9 -0.5
RSSD IAmb IAmb 19 46 06.6
comp=Z,22nm,1.4s
RSSD Black Hills 69.89 38 P P 19 45 38.0 -0.4
baz=332
DUG Dugway, Tooele 70.06 46 P P 19 45 40.0 +0.6
baz=329,SNR=8.4
EYMN Ely 70.19 28 P P 19 45 38.3 -1.5
baz=338,SNR=9.2
R11A Troy Canyon, C 70.50 49 P P 19 45 42.5 +0.3
baz=328,SNR=27
PAGB Antelope Grade 70.69 54 IAmb IAmb 19 45 49.5
comp=Z,55nm,1.7s
GRAC Grapevine Rang 70.89 51 P P 19 45 45.4 +1.0
baz=328,SNR=13
CWC Cottonwood Cre 71.05 52 P P 19 45 46.2 +0.7
baz=328
VES Vestal, Richgr 71.12 53 P P 19 45 45.8 +0.1
baz=327
SUSD Miller 71.25 34 P P 19 45 46.4 0.0
baz=334
TPNV Topopah Spring 71.41 50 IAmb IAmb 19 45 57.9
comp=Z,25nm,0.8s
TPNV Topopah Spring 71.41 50 P P 19 45 48.1 +0.4
baz=328,SNR=24
MATQ Matagami 71.45 18 P P 19 45 46.8 -0.7
baz=345
ISA Isabella, Lake 71.54 53 P P 19 45 48.4 0.0
baz=328
FURC Furnace Creek, 71.56 51 P P 19 45 49.6 +1.2
baz=328,SNR=10
PKM Mcpherson Peak 71.59 54 P P 19 45 49.7 +0.8
baz=327
MPMC Manual Prospec 71.63 52 P P 19 45 49.5 +0.4
baz=328,SNR=24
O20A White River Ci 71.88 43 IAmb IAmb 19 45 54.9
comp=Z,20nm,0.8s
O20A White River Ci 71.88 43 P P 19 45 50.2 -0.3
baz=331,SNR=11
LRMC Laurel Mtn Rad 72.04 52 P P 19 45 51.7 +0.2
baz=328,SNR=16
N23A Red Feather La 72.06 41 P P 19 45 51.5 -0.1
baz=332,SNR=9.3
KNRA Kununurra 72.20 181 P P 19 45 51.2 -1.0
LSQQ Lebel-sur-Quev 72.24 18 P P 19 45 52.1 -0.2
baz=345
SHPR Sheep Range 72.25 50 IAmb IAmb 19 45 59.4
comp=Z,28nm,1.2s
SPMN Marine on St. 72.35 30 P P 19 45 52.7 -0.3
baz=337
EDW2 Edwards Air Fo 72.41 53 P P 19 45 53.9 +0.3
baz=328,SNR=28
GSC Goldstone, Bar 72.57 52 IAmb IAmb 19 46 00.9
comp=Z,48nm,1.6s
GSC Goldstone, Bar 72.57 52 P P 19 45 55.0 +0.5
baz=328,SNR=12
ECSD EROS Data Cent 72.61 33 IAmb IAmb 19 46 00.8
comp=Z,26nm,1.1s
ECSD EROS Data Cent 72.61 33 P P 19 45 53.7 -0.9
baz=336,SNR=15
TUQ Turquoise Moun 72.83 51 P P 19 45 57.1 +0.9
baz=328
MWC Mount Wilson 72.93 53 P P 19 45 57.3 +0.4
MWC pmax pmax
comp=Z,34nm,1.4s
MWC Mount Wilson 72.93 53 P P 19 45 57.3 +0.4
MWC IAmb IAmb 19 46 03.0
comp=Z,34nm,1.4s
G40A Rib Lake 73.00 28 IAmb IAmb 19 46 03.4
comp=Z,34nm,0.9s
VLDQ Val d'Or 73.08 19 P P 19 45 56.2 -1.0
BFSC Mount Baldy Ra 73.09 53 P P 19 45 58.2 +0.5
baz=328,SNR=15
ISCO Idaho Springs 73.14 41 P P 19 45 58.5 +0.4
baz=332,SNR=14
HEC Hector,Ludlow 73.17 52 P P 19 45 59.0 +0.8
baz=328,SNR=17
SMCO Snowmass 73.19 43 IAmb IAmb 19 46 03.1
comp=Z,20nm,0.8s
GMRC Granite Mounta 73.50 51 P P 19 46 00.6 +0.4
baz=329,SNR=25
U15A North Rim 73.50 48 IAmb IAmb 19 46 06.6
comp=Z,19nm,1.1s
D50A G1974 Best Tow 73.55 20 P P 19 45 59.6 -0.5
baz=344
D51A Lot 18 Range I 73.71 20 P P 19 46 00.8 -0.2
baz=344
BELC Belle Mtn. Jos 74.02 52 P P 19 46 03.3 0.0
baz=329,SNR=13
D54A Lac Fusel, La 74.14 18 P P 19 46 03.2 -0.3
baz=345
PFO Pinyon Flats O 74.15 52 P P 19 46 03.6 -0.4
PFO pmax pmax
comp=Z,36nm,1.5s
PFO Pinyon Flats O 74.15 52 P P 19 46 03.6 -0.4
PFO IAmb IAmb 19 46 09.9
comp=Z,36nm,1.4s
PFO Pinyon Flats O 74.15 52 P P 19 46 04.6 +0.6
baz=329,SNR=6.5
XPFO Pion Flat 74.15 52 P P 19 46 03.3 -0.7
XPFO IAmb IAmb 19 46 10.0
comp=Z,36nm,1.4s
TPFO Pinon Flats 74.16 52 P P 19 46 05.4 +1.3
baz=329
I40A Norwalk 74.17 29 IAmb IAmb 19 46 13.5
comp=Z,28nm,0.7s
E51A G1948 Merrick 74.22 20 P P 19 46 03.8 -0.2
baz=344
IRM Iron Mountain 74.25 51 P P 19 46 05.2 +0.7
baz=329,SNR=42
D55A Sainte-Anne-du 74.47 17 P P 19 46 05.5 0.0
baz=346
S22A 4UR Ranch, Cre 74.50 43 P P 19 46 06.2 +0.1
baz=332
BC3 Big Chuckawall 74.55 52 P P 19 46 06.6 +0.3
baz=329,SNR=12
E52A Mattawa 74.62 20 P P 19 46 05.6 -0.7
baz=344
FITZ Fitzroy Crossi 74.67 184 P P 19 46 05.6 -1.2
FITZ IAmb IAmb 19 46 11.3
comp=Z,22nm,0.8s
E53A Dumoine, Ponti 74.71 19 P P 19 46 06.4 -0.4
baz=345
D57A Chemin Vers le 74.73 16 P P 19 46 06.7 -0.3
baz=347
E54A Lac Daplat, Po 74.74 19 P P 19 46 06.3 -0.7
baz=345
MONP2 Monument Peak 74.78 53 P P 19 46 08.0 +0.3
baz=329
Y12C Blythe 74.87 51 IAmb IAmb 19 46 14.5
comp=Z,47nm,1.1s
Y12C Blythe 74.87 51 P P 19 46 09.0 +1.0
baz=329
KEST Kesra 74.90 313 P P 19 46 09.0 +0.8
comp=Z,2.9nm,0.7s,baz=107,slow=3.6,SNR=5.5
KSCO Kaye Shedlock' 74.91 40 IAmb IAmb 19 46 13.9
comp=Z,38nm,1.1s
SDCO Great Sand Dun 74.99 42 P P 19 46 08.7 -0.3
baz=332,SNR=14
E56A St. Veronique 75.00 17 P P 19 46 08.5 0.0
baz=346
ALGO Algonquin Park 75.05 20 P P 19 46 08.5 -0.3
baz=345
D61A St Aubert, Com 75.07 14 P P 19 46 09.7 +0.8
baz=349
PBRG Braganca 75.08 328 eP P 19 46 14.0 +4.8
comp=Z,72nm,2.1s
IKP In-Ko-Pah, Jac 75.12 53 P P 19 46 09.9 +0.3
baz=329,SNR=13
GLA Glamis 75.34 51 IAmb IAmb 19 46 17.3
comp=Z,25nm,1.0s
D62A Allapoint, All 75.34 13 P P 19 46 10.4 0.0
D62A IAmb IAmb 19 46 42.7
comp=Z,58nm,1.6s
Y14A Wickenburg 75.35 50 IAmb IAmb 19 46 17.3
comp=Z,36nm,1.4s
TRQ Mont Tremblant 75.39 17 P P 19 46 10.7 -0.2
E58A La Victoria 75.45 16 P P 19 46 10.8 -0.3
baz=347
G54A Lake Saint Pet 75.58 20 P P 19 46 11.6 -0.4
baz=345
X16A Lo Mia Camp, P 75.58 48 IAmb IAmb 19 46 19.1
comp=Z,22nm,1.2s

L40A	**Anamosa**	75.71	30	IAmb	IAmb	19 46 17.1			
	comp=Z,31nm,0.9s								
G53A	**Haliburton**	75.75	20	P	**P**	**19 46 12.7**	**-0.2**		
	baz=344								
POLO	**Lamas de Olo**	75.79	328	*eP*	**P**	**19 46 13.2**	**-0.1**		
	comp=Z,43nm,1.8s								
PVRL	**Vila Real**	75.86	328	*eP*	**P**	**19 46 14.5**	**+0.9**		
T25A	**Trinidad**	75.93	42	IAmb	IAmb	19 46 20.4			
	comp=Z,43nm,1.5s								
T25A	**Trinidad**	75.93	42	P	**P**	**19 46 14.3**	**0.0**		
	baz=333								
G55A	**Calabogie**	75.97	19	P	**P**	**19 46 13.3**	**-0.8**		
	baz=346								
113A	**Mohawk Valley,**	76.03	51	IAmb	IAmb	19 46 20.9			
	comp=Z,25nm,1.2s								
CBKS	**Cedar Bluff**	76.08	38	IAmb	IAmb	19 46 19.9			
	comp=Z,32nm,1.1s								
E64A	**Bridgewater**	76.14	12	P	**P**	**19 46 15.6**	**+0.5**		
	baz=350								
F61A	**St Evariste**	76.17	15	P	**P**	**19 46 15.6**	**+0.3**		
	baz=349								
ESBB	**Sonseca Array**	76.18	325	P	**P**	**19 46 15.6**	**+0.1**		
ESBB				IAmb	IAmb	19 46 22.4			
	comp=Z,18nm,0.8s								
ESDC	**Sonseca Array**	76.18	325	P	**P**	**19 46 16.2**	**+0.6**		
	comp=Z,8.4nm,0.7s,baz=14,slow=5.5,SNR=34								
ESDC	**Sonseca Array**	76.18	325	P	**P**	**19 46 15.6**	**+0.1**		
G57A	**Newington**	76.41	18	P	**P**	**19 46 16.5**	**-0.1**		
	baz=346								
PAB	**San Pablo**	76.42	325	P	**P**	**19 46 16.2**	**-0.7**		
PAB				pmax	pmax				
	comp=Z,86nm,1.8s								
PAB	**San Pablo**	76.42	325	P	**P**	**19 46 16.2**	**-0.7**		
G58A	**Ormstown**	76.52	17	P	**P**	**19 46 17.3**	**+0.1**		
	baz=347								
WRAB	**Tennant Creek**	76.54	175	P	**P**	**19 46 16.3**	**-1.1**		
WRAB				pmax	pmax				
	comp=Z,84nm,1.6s								
WRAB	**Tennant Creek**	76.54	175	P	**P**	**19 46 16.3**	**-1.1**		
WRA	**Warramunga Arr**	76.55	175	P	**P**	**19 46 16.3**	**-1.2**		
	comp=Z,21nm,0.9s,baz=354,slow=6.7,SNR=29								
WRA				LR	LR	20 20 00.9			
	comp=Z,103nm,21.1s,baz=260,slow=36								
WRA	**Warramunga Arr**	76.55	175	P	**P**	**19 46 16.2**	**-1.3**		
WR0	**Warramunga Arr**	76.57	175	P	**P**	**19 46 16.6**	**-1.1**		
MTE	**Manteigas**	76.61	328	*eP*	**P**	**19 46 18.9**	**+1.0**		
	comp=Z,108nm,1.6s								
F64A	**Sherman**	76.62	13	P	**P**	**19 46 18.1**	**+0.3**		
	baz=350								
KSU1	**Kansas State U**	76.83	35	P	**P**	**19 46 18.2**	**-1.0**		
	baz=336								
LONY	**Lake Ozonia**	76.95	17	IAmb	IAmb	19 48 20.9			
	comp=Z,44nm,1.3s								
ANMO	**Albuquerque**	77.10	44	P	**P**	**19 46 20.6**	**-0.4**		
ANMO				pmax	pmax				
	comp=Z,9.0nm,1.2s								
ANMO	**Albuquerque**	77.10	44	P	**P**	**19 46 20.6**	**-0.4**		
ANMO	**Albuquerque**	77.10	44	P	**P**	**19 46 22.2**	**+1.2**		
	baz=332								
214A	**Organ Pipe Nat**	77.14	51	IAmb	IAmb	19 46 27.4			
	comp=Z,24nm,1.1s								
214A	**Organ Pipe Nat**	77.14	51	P	**P**	**19 46 21.7**	**+0.7**		
	baz=330,SNR=19								
H58A	**Gabriels**	77.21	17	P	**P**	**19 46 21.0**	**-0.2**		
	baz=347								
PCAS	**Casmilo, Conde**	77.21	328	*eP*	**P**	**19 46 20.0**	**-1.2**		
	comp=Z,116nm,1.4s								
L47A	**Sherwood**	77.34	26	P	**P**	**19 46 21.1**	**-0.8**		
	baz=341								
PMRV	**Marv??o**	77.47	327	*eP*	**P**	**19 46 23.1**	**+0.4**		
L49A	**Milan**	77.55	25	P	**P**	**19 46 23.0**	**-0.1**		
	baz=342								
L48A	**N Adams**	77.55	25	P	**P**	**19 46 22.5**	**-0.7**		
	baz=342								
TUC	**Tucson**	77.68	49	P	**P**	**19 46 23.8**	**-0.3**		
TUC				pmax	pmax				
	comp=Z,16nm,1.3s								
TUC	**Tucson**	77.68	49	P	**P**	**19 46 23.8**	**-0.3**		
TUC	**Tucson**	77.68	49	P	**P**	**19 46 24.2**	**+0.1**		
	baz=331								
L50A	**Kingsville**	77.83	24	P	**P**	**19 46 24.2**	**-0.5**		
	baz=342								
PMTG	**Montargil**	78.04	328	*eP*	**P**	**19 46 25.9**	**0.0**		
J59A	**Piesco**	78.09	18	P	**P**	**19 46 26.1**	**0.0**		
	baz=347								
M49A	**Liberty Center**	78.11	25	P	**P**	**19 46 25.7**	**-0.5**		
	baz=342								
M50A	**Fremont**	78.39	24	P	**P**	**19 46 27.3**	**-0.5**		
	baz=342								
P43A	**Skaggs, Pawnee**	78.43	30	IAmb	IAmb	19 46 32.5			
	comp=Z,29nm,0.8s								
J60A	**Lant Hill Farm**	78.48	17	P	**P**	**19 46 28.3**	**+0.1**		
	baz=347								
PSA00	**Pilbara Seismi**	78.48	189	P	**P**	**19 46 27.7**	**-0.6**		
PSA00				IAmb	IAmb	19 46 32.9			
	comp=Z,21nm,1.0s								
K58A	**Earlville**	78.57	19	P	**P**	**19 46 28.6**	**-0.2**		
	baz=346								
N49A	**Columbus Grove**	78.58	25	IAmb	IAmb	19 46 33.5			
	comp=Z,19nm,0.8s								
N49A	**Columbus Grove**	78.58	25	P	**P**	**19 46 28.2**	**-0.6**		
	baz=342								
M52A	**Chesterland**	78.63	23	IAmb	IAmb	19 46 29.5			
	comp=Z,29nm,0.8s								
M52A	**Chesterland**	78.63	23	P	**P**	**19 46 28.8**	**-0.4**		
	baz=343								
K59A	**Cooperstown**	78.70	18	P	**P**	**19 46 29.5**	**+0.1**		
	baz=347								
121A	**Cookes Peak, D**	78.71	46	IAmb	IAmb	19 46 36.3			
	comp=Z,21nm,1.1s								
121A	**Cookes Peak, D**	78.71	46	P	**P**	**19 46 30.6**	**+0.7**		
	baz=332								
M53A	**WI Miller and**	78.87	23	P	**P**	**19 46 29.9**	**-0.5**		
	baz=344								
AMTX	**Amarillo**	78.94	41	P	**P**	**19 46 31.6**	**+0.6**		
	baz=334								
N50A	**Nevada**	78.97	25	P	**P**	**19 46 30.6**	**-0.4**		
	baz=342								
O48A	**Farmland**	78.98	26	P	**P**	**19 46 30.1**	**-0.9**		
	baz=342								
N51A	**Ashland**	79.00	24	IAmb	IAmb	19 46 35.7			
	comp=Z,27nm,0.8s								
N51A	**Ashland**	79.00	24	P	**P**	**19 46 30.5**	**-0.7**		
	baz=343								
P46A	**Rosedale**	79.07	28	IAmb	IAmb	19 46 36.1			
	comp=Z,19nm,0.8s								
319A	**Douglas**	79.12	48	IAmb	IAmb	19 46 38.4			
	comp=Z,29nm,1.1s								
L59A	**Walton**	79.23	18	IAmb	IAmb	19 46 41.8			
	comp=Z,33nm,0.9s								
L59A	**Walton**	79.23	18	P	**P**	**19 46 32.0**	**-0.5**		
	baz=347								
O49A	**Covington**	79.24	26	IAmb	IAmb	19 46 36.6			
	comp=Z,22nm,0.9s								
O49A	**Covington**	79.24	26	P	**P**	**19 46 31.9**	**-0.6**		
	baz=342								
MSTX	**Muleshoe**	79.36	42	P	**P**	**19 46 32.8**	**-0.5**		
	baz=334								
CCM	**Cathedral Cave**	79.42	32	P	**P**	**19 46 32.8**	**-0.7**		
CCM				pmax	pmax				
	comp=Z,79nm,2.0s								
CCM	**Cathedral Cave**	79.42	32	P	**P**	**19 46 32.8**	**-0.7**		
CCM				IAmb	IAmb	19 48 33.9			
	comp=Z,79nm,1.9s								
CCM	**Cathedral Cave**	79.42	32	P	**P**	**19 46 32.2**	**-1.3**		
	baz=339								
N53A	**Lisbon**	79.45	23	IAmb	IAmb	19 46 37.9			
	comp=Z,21nm,0.8s								
N53A	**Lisbon**	79.45	23	P	**P**	**19 46 32.7**	**-0.9**		
	baz=344								
ACSO	**Alum Creek Sta**	79.52	25	IAmb	IAmb	19 46 39.0			
	comp=Z,53nm,1.6s								
L60A	**Shokan**	79.57	18	P	**P**	**19 46 33.9**	**-0.4**		
	baz=347								
P48A	**Milroy**	79.67	27	P	**P**	**19 46 33.4**	**-1.4**		
P48A				IAmb	IAmb	19 46 38.7			
	comp=Z,19nm,0.8s								
M57A	**Sunshine Farm,**	79.68	20	IAmb	IAmb	19 46 43.5			
	comp=Z,32nm,1.1s								
M57A	**Sunshine Farm,**	79.68	20	P	**P**	**19 46 34.2**	**-0.7**		
	baz=346								
M58A	**Price's Panora**	79.78	20	P	**P**	**19 46 34.8**	**-0.6**		
	baz=346								
N55A	**Marion Center**	79.86	22	P	**P**	**19 46 35.3**	**-0.5**		
	baz=345								
N56A	**West Decatur**	79.86	21	P	**P**	**19 46 34.6**	**-1.3**		
	baz=345								
O52A	**Adamsville**	79.89	24	IAmb	IAmb	19 46 35.9			
	comp=Z,15nm,0.7s								
O52A	**Adamsville**	79.89	24	P	**P**	**19 46 35.0**	**-1.0**		
	baz=343								
O53A	**New Philadelph**	79.90	23	P	**P**	**19 46 35.1**	**-1.0**		
	baz=344								
TUL1	**Leonard**	80.01	36	P	**P**	**19 46 36.2**	**-0.5**		
TUL1				IAmb	IAmb	19 46 42.1			
	comp=Z,39nm,1.3s								
WMOK	**Wichita Mounta**	80.09	39	IAmb	IAmb	19 46 43.1			
	comp=Z,42nm,1.1s								
WMOK	**Wichita Mounta**	80.09	39	P	**P**	**19 46 36.4**	**-0.8**		
	baz=335,SNR=30								
O54A	**Avella**	80.14	23	P	**P**	**19 46 36.9**	**-0.5**		
	baz=344								
N57A	**Milroy**	80.17	21	P	**P**	**19 46 36.2**	**-1.3**		
	baz=345								
SSPA	**Standing Stone**	80.22	21	P	**P**	**19 46 36.7**	**-1.0**		
SSPA				IAmb	IAmb	19 46 39.6			
	comp=Z,91nm,1.9s								
SSPA	**Standing Stone**	80.22	21	P	**P**	**19 46 36.8**	**-1.0**		
	baz=345								
AS31	**Alice Springs**	80.23	176	P	**P**	**19 46 36.8**	**-1.0**		
ASAR	**Alice Springs**	80.23	176	P	**P**	**19 46 36.9**	**-0.9**		
	comp=Z,12nm,0.9s,baz=359,slow=5.5,SNR=32								
ASAR				LR	LR	20 22 19.1			
	comp=Z,131nm,21.1s,baz=341,slow=36								
ASAR	**Alice Springs**	80.23	176	P	**P**	**19 46 36.7**	**-1.2**		
N58A	**Sunbury**	80.24	20	IAmb	IAmb	19 46 38.2			
	comp=Z,104nm,1.9s								
N58A	**Sunbury**	80.24	20	P	**P**	**19 46 37.2**	**-0.6**		
	baz=346								
N59A	**State Game Lan**	80.34	19	IAmb	IAmb	19 47 04.0			
	comp=Z,44nm,1.4s								
N59A	**State Game Lan**	80.34	19	P	**P**	**19 46 38.3**	**-0.2**		
	baz=346								
O55A	**Ligonier**	80.34	22	P	**P**	**19 46 37.3**	**-1.2**		
	baz=344								
O56A	**Blue Knob Stat**	80.44	21	P	**P**	**19 46 38.4**	**-0.6**		
	baz=345								
HSIG		80.48	51	IAmb	IAmb	19 46 45.6			
	comp=Z,33nm,1.2s								
USIN	**University of**	80.50	29	P	**P**	**19 46 38.4**	**-0.9**		
U40A	**Yellville**	80.52	33	IAmb	IAmb	19 46 44.2			
	comp=Z,25nm,1.0s								
U40A	**Yellville**	80.52	33	P	**P**	**19 46 38.5**	**-1.0**		
	baz=338,SNR=5.4								
X34A	**Smith Ranch, M**	80.53	38	P	**P**	**19 46 39.0**	**-0.6**		
X34A				IAmb	IAmb	19 46 46.3			
	comp=Z,79nm,1.7s								
P53A	**Whipple**	80.59	24	IAmb	IAmb	19 46 39.9			
	comp=Z,28nm,0.8s								
P53A	**Whipple**	80.59	24	P	**P**	**19 46 39.2**	**-0.6**		
	baz=343								
WCI	**Wyandotte Cave**	80.61	28	P	**P**	**19 46 38.7**	**-1.2**		
WCI				pmax	pmax				
	comp=Z,41nm,0.9s								
WCI	**Wyandotte Cave**	80.61	28	P	**P**	**19 46 38.7**	**-1.2**		
WCI				IAmb	IAmb	19 48 40.6			
	comp=Z,41nm,0.8s								
WCI	**Wyandotte Cave**	80.61	28	P	**P**	**19 46 39.6**	**-0.3**		
	baz=341								
O57A	**Amberson**	80.68	21	P	**P**	**19 46 39.5**	**-0.7**		
	baz=345								
P54A	**Burton**	80.68	23	P	**P**	**19 46 39.7**	**-0.6**		
	baz=344								
R49A	**Shelbyville**	80.84	27	P	**P**	**19 46 40.5**	**-0.7**		
	baz=342								
O59A	**Robesonia**	80.85	20	P	**P**	**19 46 40.7**	**-0.5**		
	baz=346								
P55A	**Reedsville**	80.91	23	P	**P**	**19 46 41.1**	**-0.5**		
	baz=344								
R50A	**Paris**	81.05	26	P	**P**	**19 46 41.4**	**-0.9**		
	baz=342								
Q53A	**Leroy**	81.16	24	P	**P**	**19 46 42.2**	**-0.6**		
	baz=343								
Q54A	**Coxs Mills**	81.19	23	P	**P**	**19 46 42.4**	**-0.6**		
	baz=344								
S49A	**Springfield**	81.29	27	P	**P**	**19 46 43.1**	**-0.5**		
	baz=342								
LCAR	**Lake Charles**	81.30	32	IAmb	IAmb	19 46 48.6			
	comp=Z,25nm,1.1s								
W39A	**Magazine**	81.31	35	P	**P**	**19 46 43.1**	**-0.6**		
	baz=338								
Q55A	**Buckhannon**	81.35	23	P	**P**	**19 46 43.3**	**-0.5**		
	baz=344								
PSUB	**Penn St. - Bra**	81.36	19	IAmb	IAmb	19 46 43.4			
	comp=Z,64nm,1.7s								
P58A	**Pank, Wackersv**	81.44	21	P	**P**	**19 46 43.7**	**-0.6**		
	baz=346								
R53A	**Hurricane**	81.57	25	IAmb	IAmb	19 46 45.4			
	comp=Z,22nm,0.8s								
S50A	**Richmond**	81.61	27	P	**P**	**19 46 44.6**	**-0.6**		
	baz=342								
WHAR	**Woolly Hollow**	81.68	33	IAmb	IAmb	19 46 50.8			
	comp=Z,39nm,1.0s								
ABTX	**Abilene, Hawle**	81.70	40	P	**P**	**19 46 44.9**	**-1.0**		
	baz=335,SNR=6.0								
W41B	**Gary Mavity, V**	81.80	33	P	**P**	**19 46 45.4**	**-0.9**		
	baz=338								
T49A	**Edmonton**	81.87	28	P	**P**	**19 46 46.0**	**-0.6**		
	baz=341,SNR=7.0								
Q58A	**Fox Den Farm,**	81.89	21	P	**P**	**19 46 45.8**	**-0.9**		
	baz=345								
MIAR	**Mount Ida**	81.97	35	IAmb	IAmb	19 46 52.6			
	comp=Z,73nm,2.0s								
R56A	**Bull Pasture M**	82.06	23	P	**P**	**19 46 46.6**	**-1.0**		
	baz=344								
T50A	**Nancy**	82.12	27	P	**P**	**19 46 47.5**	**-0.4**		
	baz=342								
S53A	**Williamson**	82.15	25	P	**P**	**19 46 47.3**	**-0.9**		
	baz=343								
WVT	**Waverly**	82.18	30	P	**P**	**19 46 47.7**	**-0.6**		
WVT				pmax	pmax				
	comp=Z,37nm,1.2s								
WVT	**Waverly**	82.18	30	P	**P**	**19 46 47.7**	**-0.6**		
WVT				IAmb	IAmb	19 48 49.9			
	comp=Z,37nm,1.1s								
WVT	**Waverly**	82.18	30	P	**P**	**19 46 47.7**	**-0.6**		
	baz=340								
S54A	**Dingess, Beckl**	82.22	24	P	**P**	**19 46 47.4**	**-1.1**		
	baz=344								
X40A	**Basin Creek Fa**	82.26	34	P	**P**	**19 46 48.3**	**-0.3**		
	baz=338								
R57A	**Stanardsville**	82.34	22	P	**P**	**19 46 48.3**	**-0.8**		
	baz=345								
U49A	**Red Boiling Sp**	82.36	28	P	**P**	**19 46 48.4**	**-0.9**		
	baz=341								
T51A	**Gray**	82.40	26	P	**P**	**19 46 48.9**	**-0.5**		
	baz=342								
T52A	**Hallie**	82.49	26	IAmb	IAmb	19 47 58.0			
	comp=Z,43nm,1.4s								
T52A	**Hallie**	82.49	26	P	**P**	**19 46 49.5**	**-0.5**		
	baz=343								
CLTN	**Cedars of Leba**	82.62	29	IAmb	IAmb	19 48 47.2			
	comp=Z,24nm,1.0s								
U50A	**Jamestown**	82.70	27	P	**P**	**19 46 50.4**	**-0.6**		
	baz=342,SNR=8.7								
T53A	**Wise**	82.72	25	P	**P**	**19 46 50.5**	**-0.6**		
	baz=343								
S57A	**Dark Hollow, R**	82.77	22	IAmb	IAmb	19 46 52.0			
	comp=Z,15nm,0.8s								
S57A	**Dark Hollow, R**	82.77	22	P	**P**	**19 46 51.4**	**+0.1**		
	baz=345								
R58B	**Mineral**	82.80	22	P	**P**	**19 46 50.8**	**-0.6**		
	baz=345								
V48A	**Smith Brothers**	82.82	29	IAmb	IAmb	19 48 56.0			
	comp=Z,30nm,1.1s								
TZTN	**Tazewell**	82.89	26	P	**P**	**19 46 51.7**	**-0.3**		
	baz=342								
V49A	**McMinnville**	83.04	28	P	**P**	**19 46 52.2**	**-0.6**		
	baz=341								
S59A	**Mechanicsville**	83.11	21	P	**P**	**19 46 52.8**	**-0.2**		
	baz=346								
TX32	**Lajitas Array**	83.16	45	P	**P**	**19 46 53.4**	**-0.2**		
TXAR	**Lajitas Array**	83.16	45	P	**P**	**19 46 53.2**	**-0.4**		
	comp=Z,2.6nm,0.8s,baz=302,slow=2.4,SNR=16								
TXAR				LR	LR	20 27 01.1			
	comp=Z,395nm,18.2s,baz=0.0,slow=38								
TXAR	**Lajitas Array**	83.16	45	P	**P**	**19 46 52.9**	**-0.7**		
V50A	**Pikeville**	83.34	28	P	**P**	**19 46 53.4**	**-0.9**		
	baz=342								
U55A	**TA2, Sparta**	83.52	24	P	**P**	**19 46 54.9**	**-0.5**		
	baz=344								
SWET	**Sewanee**	83.55	29	IAmb	IAmb	19 49 17.2			
	comp=Z,34nm,1.2s								
V52A	**Sevierville**	83.55	27	P	**P**	**19 46 54.8**	**-0.6**		
	baz=342								
W49A	**Belvidere**	83.55	29	P	**P**	**19 46 54.2**	**-1.2**		
	baz=341								
JCT	**Junction City**	83.58	41	IAmb	IAmb	19 47 01.2			
	comp=Z,24nm,1.0s								
JCT	**Junction City**	83.58	41	P	**P**	**19 46 55.4**	**-0.3**		
	baz=335								
T58A	**Grand View Acr**	83.64	22	P	**P**	**19 46 55.0**	**-0.8**		
	baz=345								
CPCT	**Cooper Cave**	83.69	27	IAmb	IAmb	19 46 56.4			
	comp=Z,15nm,0.9s								
EIDS	**Eidsvold**	83.85	160	P	**P**	**19 46 56.6**	**-0.1**		
V53A	**Saluda**	83.91	26	P	**P**	**19 46 56.3**	**-1.0**		
	baz=343								
W51A	**Cleveland**	83.91	28	P	**P**	**19 46 56.2**	**-1.0**		
	baz=342								
V54A	**Nebo**	84.01	25	P	**P**	**19 46 57.3**	**-0.5**		
	baz=343								
435B	**Jarrell**	84.10	39	P	**P**	**19 46 58.0**	**-0.3**		
435B				IAmb	IAmb	19 47 03.9			
	comp=Z,24nm,1.0s								
U58A	**Oxford**	84.17	22	P	**P**	**19 46 57.8**	**-0.7**		
	baz=345								
V56A	**Mocksville**	84.31	24	P	**P**	**19 46 58.7**	**-0.5**		
	baz=344								
V57A	**Coltrane Farms**	84.40	24	P	**P**	**19 46 59.2**	**-0.5**		
	baz=344								
DZM	**Mont Dzumac**	84.49	146	*eP*	**P**	**19 47 01.4**	**+1.2**		
	comp=Z,22nm,1.1s								
DZM	**Mont Dzumac**	84.49	146	*e*LR	LR	20 13 35.9			
	comp=Z,405nm,22.1s								
DZM	**Mont Dzumac**	84.49	146	P	**P**	**19 47 00.1**	**-0.1**		
W54A	**Cherokee Point**	84.61	26	P	**P**	**19 47 00.1**	**-0.7**		
	baz=343								
X52A	**Dahlonega**	84.66	27	P	**P**	**19 47 00.6**	**-0.5**		
	baz=342								
KMSC	**Kings Mountain**	84.76	25	IAmb	IAmb	19 49 13.9			
	comp=Z,41nm,1.6s								
KMSC	**Kings Mountain**	84.76	25	P	**P**	**19 47 00.6**	**-1.0**		
	baz=344								
V59A	**Middlesex**	84.84	22	P	**P**	**19 47 01.5**	**-0.4**		
	baz=345								
X54A	**Belton**	85.08	26	P	**P**	**19 47 02.7**	**-0.4**		
	baz=343								
MSEY	**Mahe Island**	85.22	254	P	**P**	**19 47 04.5**	**+0.4**		
Z50A	**Ashland**	85.41	29	IAmb	IAmb	19 47 10.6			
	comp=Z,19nm,1.1s								
Z50A	**Ashland**	85.41	29	P	**P**	**19 47 03.8**	**-1.1**		
	baz=341								
Y53A	**Monroe**	85.44	27	P	**P**	**19 47 04.6**	**-0.4**		
	baz=342								
Y54A	**Tignall**	85.66	26	P	**P**	**19 47 05.6**	**-0.5**		
	baz=343								
Y55A	**Saluda**	85.79	26	P	**P**	**19 47 06.3**	**-0.4**		
	baz=343								
Z52A	**Williamson**	85.86	28	P	**P**	**19 47 06.8**	**-0.3**		
	baz=342								
GOGA	**Godfrey**	85.90	27	P	**P**	**19 47 06.8**	**-0.4**		
	baz=343								
Z53A	**Monticello**	85.99	27	P	**P**	**19 47 07.4**	**-0.4**		
	baz=342								
Z54A	**Sparta**	86.22	27	P	**P**	**19 47 08.2**	**-0.6**		
	baz=343								
FORT	**Forrest**	87.24	181	P	**P**	**19 47 12.4**	**-1.0**		
TAM	**Tamanrasset**	87.83	310	P	**P**	**19 47 16.6**	**-0.4**		
TAM				pmax	pmax				
	comp=Z,4.0nm,1.1s								
TAM	**Tamanrasset**	87.83	310	P	**P**	**19 47 16.6**	**-0.4**		
ARMA	**Armidale**	88.87	161	P	**P**	**19 47 20.7**	**-0.8**		
STKA	**Stephens Creek**	88.92	170	P	**P**	**19 47 21.5**	**0.0**		
STKA				pmax	pmax				
	comp=Z,5.0nm,1.4s								
STKA	**Stephens Creek**	88.92	170	P	**P**	**19 47 21.3**	**-0.1**		
	comp=Z,6.2nm,1.1s,baz=351,slow=8.6,SNR=6.5								
STKA				LR	LR	20 25 35.0			
	comp=Z,141nm,21.8s,baz=350,slow=35								
STKA	**Stephens Creek**	88.92	170	P	**P**	**19 47 21.5**	**0.0**		
ZAIG	**Zacatecas**	89.47	47	IAmb	IAmb	19 47 31.6			
	comp=Z,14nm,1.1s								
KMBO	**Kilima Mbogo**	92.18	271	LR	LR	20 32 02.7			
	comp=Z,521nm,18.5s,baz=12,slow=38								
RAR	**Rarotonga**	97.52	117	LR	LR	20 24 56.4			
	comp=Z,71nm,19.9s,baz=294,slow=31								
TAOE	**Nuku Hiva Isla**	97.52	95	*e*LR	LR	20 19 41.9			
	comp=Z,280nm,23.9s								
TORD	**Torodi Ar. Bea**	98.04	309	P	**P**	**19 48 03.8**	**-0.3**		
	comp=Z,1.4nm,1.0s,baz=6.3,slow=4.1,SNR=4.8								
TORD				PP	**PP**	**19 51 59.6**	**-2.7**		
	comp=Z,3.6nm,0.9s,baz=20,slow=9.1,SNR=6.9								
TORD				LR	LR	20 36 09.1			
	comp=Z,221nm,21.2s,baz=340,slow=38								
TORD	**Torodi Ar. Bea**	98.04	309	P	**P**	**19 48 02.9**	**-1.1**		
PPT	**Papeete**	99.65	107	LR	LR	20 23 59.0			
	comp=Z,119nm,21.7s,baz=348,slow=30								
PPT2	**Papeete2**	99.67	107	*e*LR	LR	20 20 44.9			
	comp=Z,413nm,24.0s,baz=322								
TBI	**Tubuai**	104.49	110	*e*LR	LR	20 22 58.0			
	comp=Z,388nm,25.5s,baz=326								
DBIC	**Dimbokro**	106.61	312	PP	**PP**	**19 53 04.4**	**-2.3**		
	comp=Z,3.6nm,0.8s,baz=31,slow=5.9,SNR=4.1								
BOSA	**Boshof**	121.13	265	PKP	**PKiKP**	**19 53 21.2**	**+1.0**		
	comp=Z,3.3nm,0.7s,baz=330,slow=3.1,SNR=7.4								
BOSA	**Boshof**	121.13	265		**PKPdf**	**19 53 19.2**	**-0.8**		
QSPA	**South Pole Qui**	146.55	180		**PKPdf**	**19 54 05.8**	**-0.1**		
CPUP	**Villa Flor

GEVA					IAML			19 54 51.2	
	comp=Z,460nm,0.4s								
GEVA	**Gevas**	**0.34**	**178**	*i* P		**Pg**		**19 54 40.2**	**0.0**
GEVA					IAML			19 54 52.0	
	comp=E,497nm,0.5s								
VMUR	**Van-Muradiye**	**0.53**	**51**	*i* P		**Pb**		**19 54 43.9**	**-1.0**
VMUR				*i* S		**Sb**		**19 54 51.8**	**-0.9**
VMUR					IAML			19 54 53.0	
	comp=E,439nm,0.3s								
VMUR					IAML			19 54 54.0	
	comp=N,512nm,0.3s								
TUTA	**Tutak**	**0.77**	**346**	*e*P		**Pb**		**19 54 48.1**	**-0.9**
TUTA				*e*S		**Sb**		**19 54 59.0**	**-0.6**
TUTA					IAML			19 55 01.7	
	comp=Z,181nm,0.3s								
TUTA	**Tutak**	**0.77**	**346**	*i* P		**Pb**		**19 54 48.1**	**-0.9**
TUTA					IAML			19 55 01.0	
	comp=N,360nm,0.3s								
BLIS	**Bitlis-Merkez**	**0.77**	**252**	*e*P		**Pb**		**19 54 48.2**	**-0.8**
BLIS				*e*S		**Sb**		**19 54 58.3**	**-1.3**
BLIS					IAML			19 54 59.6	
	comp=Z,365nm,0.3s								
BLIS	**Bitlis-Merkez**	**0.77**	**252**	*i* P		**Pb**		**19 54 48.2**	**-0.8**
BLIS				*i* S		**Sg**		**19 54 57.7**	**-0.6**
GURO	**Guroymak-BITLI**	**0.80**	**263**	PG		**Pb**		**19 54 48.6**	**-0.9**
GURO				SG		**Sb**		**19 54 59.4**	**-1.1**
CLDR	**Caldiran**	**0.83**	**54**	PG		**Pg**		**19 54 48.8**	**-0.7**
CLDR	**Caldiran**	**0.83**	**54**	*i* P		**Pg**		**19 54 49.0**	**-0.5**
CLDR					IAML			19 55 02.0	
	comp=N,149nm,0.4s								
CLDR				*i* S		**Sb**		**19 55 02.1**	**+0.5**
CLDR					IAML			19 55 03.0	
	comp=E,128nm,0.4s								
AGRB	**Hanur-Agry**	**0.92**	**357**	PG		**Pg**		**19 54 50.2**	**-0.9**
BASK	**Baskale_VAN**	**0.97**	**128**	*i* P		**Pg**		**19 54 51.4**	**-0.6**
BASK					IAML			19 55 10.0	
	comp=E,146nm,0.4s								
BASK					IAML			19 55 11.0	
	comp=N,140nm,0.8s								
EKAR	**Karacoban**	**0.97**	**308**	*i* P		**Pb**		**19 54 52.4**	**0.0**
DYDN	**Diyadin**	**1.02**	**29**	*e*P		**Pb**		**19 54 52.8**	**-0.4**
DYDN				*e*S		**Sn**		**19 55 09.3**	**+0.9**
DYDN					IAML			19 55 12.7	
	comp=Z,57nm,1.1s								
DYDN	**Diyadin**	**1.02**	**29**	*i* P		**Pg**		**19 54 51.9**	**-1.1**
DYDN					IAML			19 55 12.0	
	comp=E,92nm,0.7s								
SRTM	**Siirt_Merkez**	**1.11**	**233**	*i* P		**Pn**		**19 54 55.2**	**+0.1**
SRTM					IAML			19 55 14.0	
	comp=N,147nm,0.8s								
SRTM					IAML			19 55 18.0	
	comp=E,115nm,0.7s								
MUSM	**Mu-Merkez**	**1.20**	**274**	*e*P		**Pg**		**19 54 55.5**	**-0.9**
MUSM				*e*S		**Sb**		**19 55 11.7**	**-0.3**
MUSM					IAML			19 55 17.2	
	comp=Z,51nm,0.4s								
MUSM	**Mu-Merkez**	**1.20**	**274**	*i* P		**Pb**		**19 54 55.8**	**-0.6**
MUSM				*i* S		**Sb**		**19 55 11.7**	**-0.3**
MUSM					IAML			19 55 15.0	
	comp=E,41nm,0.2s								
MUSM					IAML			19 55 16.0	
	comp=N,63nm,0.4s								
SIRT	**Sirnak**	**1.25**	**203**	PN		**Pn**		**19 54 56.9**	**-0.1**
SIRN	**Sırnak**	**1.26**	**204**	*i* P		**Pn**		**19 54 57.9**	**+0.7**
SIRN					IAML			19 55 23.0	
	comp=E,84nm,0.5s								
EATA	**Eleskirt**	**1.28**	**340**	*e*P		**Pb**		**19 54 57.3**	**-0.4**
EATA				*e*S		**Sn**		**19 55 16.0**	**+0.9**
EATA					IAML			19 55 18.1	
	comp=Z,15nm,0.7s								
EATA	**Eleskirt**	**1.28**	**340**	*i* P		**Pg**		**19 54 57.2**	**-0.8**
EATA				*i* S		**Sn**		**19 55 14.9**	**-0.1**
EATA					IAML			19 55 19.0	
	comp=E,81nm,0.6s								
EATA					IAML			19 55 19.0	
	comp=N,69nm,0.5s								
VRTB	**Varto-Mus**	**1.34**	**293**	PN		**Pb**		**19 54 58.3**	**-0.4**
VRTB	**Varto-Mus**	**1.34**	**293**	*i* P		**Pb**		**19 54 58.8**	**+0.1**
VRTB				*i* S		**Sn**		**19 55 18.9**	**+2.6**
VRTB					IAML			19 55 20.0	
	comp=E,103nm,0.8s								
VRTB					IAML			19 55 24.0	
	comp=N,79nm,0.8s								
IGDI	**IGDIR**	**1.45**	**33**	*e*P		**Pg**		**19 55 00.5**	**-0.8**
IGDI				*e*S		**Sg**		**19 55 21.7**	**+1.7**
IGDI					IAML			19 55 26.7	
	comp=Z,5.5nm,0.8s								
IGDI	**IGDIR**	**1.45**	**33**	*i* P		**Pg**		**19 55 00.4**	**-0.8**
IGDI					IAML			19 55 26.0	
	comp=E,45nm,0.7s								
IGDI					IAML			19 55 27.0	
	comp=N,32nm,1.1s								
CUKT	**Cukurca**	**1.48**	**162**	PN		**Pb**		**19 55 00.4**	**-0.6**
CUKT	**Cukurca**	**1.48**	**162**	*i* P		**Pb**		**19 55 00.4**	**-0.6**
CUKT					IAML			19 55 27.0	
	comp=E,89nm,0.4s								
CUKT					IAML			19 55 30.0	
	comp=N,80nm,0.8s								
BNGL	**BINGOL**	**1.51**	**282**	*e*P		**Pg**		**19 55 02.4**	**+0.1**
BNGL				*e*S		**Sg**		**19 55 23.6**	**+1.6**
BNGL					IAML			19 55 37.0	
	comp=Z,140nm,0.9s								
BNGL	**BINGOL**	**1.51**	**282**	*i* P		**Pg**		**19 55 02.1**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.54**	**251**	PN		**Pb**		**19 55 01.4**	**-0.6**
SVAN	**Silvan-Diyarba**	**1.54**	**251**	*i* P		**Pg**		**19 55 02.7**	**-0.1**
SVAN				*i* S		**Sg**		**19 55 23.0**	**+0.2**
SVAN					IAML			19 55 28.0	
	comp=E,28nm,0.5s								
SVAN					IAML			19 55 28.0	
	comp=N,29nm,0.6s								
TASB	**TASBURUN-IGDIR**	**1.62**	**35**	PN		**Pn**		**19 55 02.5**	**+0.4**
KOPR	**Koprukoy-ERZUR**	**1.62**	**326**	PN		**Pn**		**19 55 02.3**	**+0.1**
HOMI	**Horasan**	**1.64**	**328**	*e*P		**Pg**		**19 55 04.3**	**-0.6**
HOMI	**Horasan**	**1.64**	**328**	*i* P		**Pg**		**19 55 04.2**	**-0.7**
HOMI					IAML			19 55 33.0	
	comp=E,98nm,0.6s								
HOMI					IAML			19 55 39.0	
	comp=N,47nm,0.5s								
KARO	**Karlıova-Bingo**	**1.69**	**293**	PN		**Pn**		**19 55 02.9**	**-0.2**
DIGO	**Kars**	**1.77**	**8**	*e*P		**Pg**		**19 55 07.2**	**-0.2**
DIGO	**Kars**	**1.77**	**8**	*i* P		**Pb**		**19 55 06.2**	**0.0**
DIGO					IAML			19 55 37.0	
	comp=E,40nm,0.8s								
DIGO					IAML			19 55 38.0	
	comp=N,34nm,0.8s								
ECAT	**Cat-ERZURUM**	**1.87**	**301**	*i* P		**Pg**		**19 55 08.4**	**-0.8**
BNGB	**Bingl**	**1.88**	**281**	PN		**Pn**		**19 55 06.0**	**+0.3**
SENK	**Senkaya-Erzuru**	**1.98**	**344**	PN		**Pn**		**19 55 07.5**	**+0.4**
GNI	**Garni**	**1.99**	**41**	PN		**Pn**		**19 55 07.4**	**+0.2**
EAK	**Akyaka**	**2.07**	**12**	*i* P		**Pg**		**19 55 13.2**	**+0.1**
EAK					IAML			19 55 48.0	
	comp=N,24nm,0.7s								
HANI	**Diyarbakir_Han**	**2.09**	**264**	*i* P		**Pg**		**19 55 12.3**	**-1.2**
HANI					IAML			19 55 45.0	
	comp=E,30nm,0.3s								
HANI					IAML			19 55 51.0	
	comp=N,20nm,0.3s								
MARD	**Mardin**	**2.24**	**234**	*i* P		**Pb**		**19 55 14.0**	**0.0**
MARD					IAML			19 55 50.0	
	comp=N,82nm,0.7s								
MARD					IAML			19 55 53.0	
	comp=E,47nm,0.5s								
KRIK	**Erzurum-spir**	**2.35**	**316**	*i* P		**Pg**		**19 55 19.6**	**+1.3**
MAZI	**Mazidag**	**2.38**	**241**	PN		**Pn**		**19 55 13.1**	**+0.6**
DYBB	**Diyarbakir**	**2.39**	**254**	PN		**Pn**		**19 55 13.5**	**+0.8**
KOPT	**Kop Dagi**	**2.40**	**305**	*i* P		**Pg**		**19 55 19.1**	**-0.2**
DDEM	**Demirkent**	**2.44**	**336**	*i* P		**Pg**		**19 55 19.2**	**-1.0**
DAGI	**Agillar**	**2.57**	**341**	*i* P		**Pg**		**19 55 20.8**	**-1.8**
DBAD	**Bademkaya**	**2.58**	**337**	*i* P		**Pg**		**19 55 21.4**	**-1.3**

JMA 04 19:55:43.8±0.5, 31.73N×142.79E, h0km, M4.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.87**	**300**	S	Sn	19 57 08.0	+2.0
BSO1	**Boso 1**	**3.29**	**333**	*e*S	Sn	19 57 18.8	+3.2
JOD2	**Odawara 2**	**4.69**	**320**	P	Pn	19 56 57.1	+1.3
JHU	**Hanno**	**5.04**	**326**	P	Pn	19 57 03.2	+2.5
JHO	**Hitachi**	**5.21**	**340**	P	Pn	19 57 04.4	+1.5
JHO				S	Sn	19 58 03.9	+0.2
JRY	**Ryogami san**	**5.36**	**324**	P	Pn	19 57 07.9	+2.8

*TEH **04** 19:56:34.4, 34.42N×45.47E, h8km, ML2.6*
*ISN **04** 19:56:35.2±0.8, 34.42N×45.44E, h18km±3km, ML2.6*
ISC 04 19:56:34.8±1.3, 34.42N±0.04×45.46E±0.03, h4km±12km, n14, σ0.82/21, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.81**	**70**	*e*Pg	**Pg**	**19 56 49.8**	**-0.5**
IDHR				*e*Sg	**Sb**	**19 57 02.2**	**-0.7**
IDHR				*e*		19 57 03.6	
IGHG	**Ghaleghazi**	**0.92**	**95**	*e*Pg	**Pg**	**19 56 52.4**	**0.0**
IGHG				*e*		19 57 07.6	
	comp=N,2μm,0.4s						
IVIS	**Veis**	**1.15**	**84**	*e*Pg	**Pb**	**19 56 56.2**	**-1.1**
IVIS				*e*		19 57 15.3	
KCHF	**Cheshme Sefid,**	**1.31**	**96**	*e*Pg	**Pg**	**19 56 59.9**	**0.0**
KCHF				*e*Sg	**Sg**	**19 57 18.5**	**+1.5**
KCHF				*e*		19 57 20.0	
IKRK	**Kirkuk**	**1.34**	**317**	*e*Pg	**Pb**	**19 57 00.0**	**-0.5**
IKRK				*e*Sg	**Sg**	**19 57 18.0**	**0.0**
IKRK				AML	AML	19 57 29.3	
	comp=Z,144nm,0.3s						
IBDR	**Badra**	**1.36**	**163**	*e*Pg	**Pb**	**19 57 00.0**	**-0.8**
IBDR				*e*Sg	**Sg**	**19 57 19.0**	**+0.4**
KER	**Kermanshah**	**1.38**	**91**	*e*Pn	**Pb**	**19 57 00.8**	**-0.4**
KER				*e*		19 57 24.0	
BHD	**Baghdad**	**1.46**	**218**	*e*Pn	**Pb**	**19 57 02.0**	**-0.4**
BHD				*e*Sn	**Sg**	**19 57 22.0**	**+0.4**
IKOM	**Komasi**	**1.71**	**98**	*e*		19 57 43.1	
IKOM				*e*Pn	**Pb**	**19 57 06.2**	**-0.7**
IBZA	**Bozab**	**1.98**	**88**	*e*Pn	**Pb**	**19 57 11.3**	**-0.2**
IBZA				*e*		19 57 40.6	
IDOB	**Doab**	**2.34**	**105**	*e*Pn	**Pb**	**19 57 16.0**	**-1.6**
IDOB				*e*		19 57 59.6	
HSRG	**Sareghieh**	**2.46**	**70**	*e*Pn	**Pn**	**19 57 17.0**	**+1.1**
HSRG				*e*		19 57 58.3	
MSL	**Mosul**	**2.76**	**316**	*e*Pn	**Pn**	**19 57 20.0**	**+0.3**
MSL				*e*Sn	**Sn**	**19 57 54.0**	**+0.6**
NSR	**Nassriya**	**3.45**	**170**	*e*Pn	**Pn**	**19 57 30.0**	**+0.8**
NSR				*e*Sn	**Sn**	**19 58 10.0**	**-0.5**

TIR 04 20:10:28.7, 41.88N×20.16E, h7km, Md2.0/2, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUK	**Puka**	**0.26**	**309**	*i* PG	Pg	20 10 34.3	+0.4
PUK				*i* SG	Sg	20 10 38.5	+1.2
PHP	**Peshkopia**	**0.29**	**133**	*i* PG	Pg	20 10 34.9	+0.5
PHP				*i* SG	Sg	20 10 39.4	+1.2

*DDA **04** 20:12:13.2, 40.73N×29.19E, h7km±3km, ML1.4*
ISK 04 20:12:13.3, 40.75N×29.16E, h10km, ML1.5/11, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUZL	**Tuzla-Istanbul**	**0.10**	**53**	PG	Pg	20 12 16.2	+0.3
BUY	**Buyukada**	**0.10**	**342**	*i* P	Pg	20 12 16.7	+0.7
BUY				IAML		20 12 18.0	
	comp=E,154nm,0.3s						
BUY				*i* S	Sg	20 12 18.4	+0.5
BUY				IAML		20 12 19.0	
	comp=N,124nm,1.0s						
YLVH	**Yalova**	**0.17**	**110**	PG	Pg	20 12 17.4	+0.4
YLV	**Yalova**	**0.25**	**139**	PG	Pg	20 12 18.9	+0.5
YLV				SG	Sg	20 12 22.7	+0.9
KAVV	**Kandilli-Istan**	**0.32**	**346**	PG	Pg	20 12 20.3	+0.6
KAVV				SG	Sb	20 12 25.2	-1.1
ISK	**Istanbul-Kandi**	**0.32**	**346**	PG	Pg	20 12 20.1	+0.3
ISK				SG	Sg	20 12 24.9	+0.8
HRT	**Hereke**	**0.39**	**80**	PG	Pg	20 12 21.6	+0.5
MDNY	**Mudanya-Bursa**	**0.44**	**209**	PG	Pb	20 12 22.8	-0.3
IGD	**Bursa**	**0.49**	**176**	*i* P	Pb	20 12 23.6	-0.4
IGD				IAML		20 12 29.0	
	comp=N,12nm,0.4s						
IGD				*i* S	Sg	20 12 29.1	-0.2
KLYT	**Kilyos**	**0.51**	**350**	PG	Pg	20 12 23.4	+0.2
KLYT				SG	Sb	20 12 31.2	-0.5
ULDT	**Uludag**	**0.61**	**182**	*i* P	Pg	20 12 24.8	-0.4
CTKS	**Kestanelik-??a**	**0.69**	**314**	PG	Pg	20 12 26.9	+0.2
KAND	**Kocaeli-Kandir**	**0.85**	**66**	*i* P	Pg	20 12 29.7	0.0
KAND				*i* S	Sg	20 12 39.6	-1.3
KAND				IAML		20 12 40.0	
	comp=E,16nm,1.3s						
KAND				IAML		20 12 41.0	
	comp=N,17nm,0.4s						
SLVT	**Silivri**	**0.86**	**304**	PG	Pb	20 12 30.3	0.0
MRMT	**Marmara Adasi**	**1.20**	**263**	PN	Pg	20 12 36.7	+0.4
DURS	**Dursunbey**	**1.27**	**205**	*i* P	Pg	20 12 38.0	+0.4
DURS				IAML		20 12 55.0	
	comp=N,8.9nm,0.8s						
DURS				*i* S	Sn	20 12 55.0	+0.9
DURS				IAML		20 12 59.0	
	comp=E,4.4nm,0.2s						
BORA	**Eskisehir**	**1.32**	**131**	*i* P	Pg	20 12 39.1	+0.5
BORA				IAML		20 12 57.0	
	comp=N,12nm,1.2s						
BORA				*i* S	Sg	20 12 57.9	+2.2
BORA				IAML		20 12 58.0	
	comp=E,10nm,0.4s						

MAN 04 20:22:58.6, 9.72N×123.64E, h1km, mb4.2, ML3.0, MS2.7, 2C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.68**	**28**	*e*P	Pg	20 23 11.7	+0.1
LLP				*i* S	Sg	20 23 20.4	0.0
DCPH	**Dipolog City**	**1.16**	**194**	*e*P	Pg	20 23 20.6	-0.3
DCPH				*e*S	Sn	20 23 39.2	+0.6
MSLP	**Maasin**	**1.27**	**71**	*e*P	Pg	20 23 23.0	0.0
MSLP				*e*S	Sb	20 23 40.4	+0.2
GUIM	**Jordan**	**1.37**	**311**	*e*P	Pn	20 23 24.4	-0.6
GUIM				*e*S	Sn	20 23 44.0	+0.2
OCLP	**Ormoc**	**1.63**	**36**	*e*P	Pn	20 23 27.8	-0.7
OCLP				*e*S	Sg	20 23 52.3	+1.2
PAGZ	**Pagadian**	**1.88**	**188**	*e*P	Pb	20 23 33.0	-0.8
PAGZ				*e*S	Sg	20 23 59.5	+0.6

*IDC **04** 20:30:32.4±1.3, 39.44N×74.19E, h0km, mb3.7/3, mb1 3.6/5, mb1mx3.3/38, mbtmp3.4/5, ML2.3/2, MS3.8/1, Ms1 3.8/1, ms1mx2.9/41, Error ellipse: s-maj=32.8km s-min=21.0km az=134.0*
*KRNET **04** 20:30:33.0±0.1, 39.52N×74.19E, mb3.6*
*SOME **04** 20:30:36.3, 39.92N×73.80E, h20km*
*NNC **04** 20:30:37.8±1.4, 39.81N×74.26E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=11.1km s-min=6.8km az=168.0*
ISC 04 20:30:37.5±2.4, 39.80N±0.07×74.24E±0.03, h7km±14km, n65, σ2.02/97, mb3.7/3, 26C-21D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANR	**Andizhan**	**1.72**	**304**	P	**Pn**	**20 31 09.6**	**+1.7**
ANR				S	**Sg**	**20 31 36.4**	**+3.5**
ARSB	**Arslanbob**	**1.80**	**328**	⇓*i*P	**Pn**	**20 31 10.5**	**+1.5**
ARSB				⇓*i*S	**Sg**	**20 31 37.3**	**+2.1**
	baz=33						
ARLS	**Aral**	**2.06**	**2**	⇑*e*P	**Pb**	**20 31 14.8**	**-0.5**
ARLS	baz=2.0			⇑*i*S	**Sg**	**20 31 44.8**	**+1.1**
	baz=2.0						
NRN	**Naryn**	**2.11**	**39**	⇑*i*P	**Pn**	**20 31 14.4**	**+0.9**
NRN	baz=35			⇑*i*S	**Sg**	**20 31 44.9**	**-0.5**
	baz=35						
AML	**Almayashu**	**2.36**	**350**	⇑*i*P	**Pn**	**20 31 18.8**	**+1.8**
AML	baz=52			⇑*i*S	**Sg**	**20 31 52.6**	**-0.9**
	baz=52						
AML	**Almayashu**	**2.36**	**350**	P	**Pb**	**20 31 19.6**	**-1.0**
	SNR=58						
KZA	**Kyzart**	**2.40**	**18**	⇓*i*P	**Pn**	**20 31 19.5**	**+2.0**
KZA	baz=17			⇓*i*S	**Sg**	**20 31 53.6**	**-1.1**
	baz=17						
KZA	**Kyzart**	**2.40**	**18**	P	**Pn**	**20 31 19.5**	**+2.0**
	SNR=21						
UCH	**Uchtor**	**2.43**	**5**	⇓*i*P	**Pn**	**20 31 20.4**	**+2.4**
	baz=5.0						
UCH				⇓*i*S	**Sg**	**20 31 54.5**	**-1.2**
	baz=5.0						
UCH	**Uchtor**	**2.43**	**5**	P	**Pn**	**20 31 20.4**	**+2.4**
	SNR=79						
ARK	**Arkit**	**2.64**	**320**	⇑*i*P	**Pn**	**20 31 21.3**	**+0.8**
	baz=24						
ARK				⇑*i*S	**Sb**	**20 31 56.4**	**-1.3**
	baz=24						
BTK	**Batken**	**2.64**	**277**	⇑*i*P	**Pn**	**20 31 18.9**	**-1.6**
	baz=83						
BTK				⇑*i*S	**Sn**	**20 31 52.8**	**0.0**
	baz=83						
AAK	**Ala-Archa**	**2.84**	**4**	⇓*i*P	**Pn**	**20 31 25.8**	**+2.4**
	baz=4.0						
AAK				⇓*i*S	**Sb**	**20 32 04.3**	**+0.7**
	baz=4.0						
AAK	**Ala-Archa**	**2.84**	**4**	P	**Pn**	**20 31 26.5**	**+3.1**
	SNR=20						
AAK	**Ala-Archa**	**2.84**	**4**	⇓Pn	**Pn**	**20 31 26.3**	**+2.9**
	17nm,0.5s						
AAK				⇓Lg	Lg	20 32 08.4	
	32nm,0.5s						
ULHL	**Ulahol**	**2.88**	**31**	⇑*i*P	**Pn**	**20 31 25.8**	**+1.9**
	baz=29						
ULHL				⇑*i*S	**Sb**	**20 32 04.5**	**-0.2**
	baz=29						
ULHL	**Ulahol**	**2.88**	**31**	P	**Pn**	**20 31 26.0**	**+2.1**
	SNR=20						
EKS2	**Erkin-Say**	**2.88**	**353**	⇑*i*P	**Pn**	**20 31 25.9**	**+2.0**
	baz=54						
EKS2				⇑*i*S	**Sb**	**20 32 04.8**	**+0.1**
	baz=54						
EKS2	**Erkin-Say**	**2.88**	**353**	P	**Pb**	**20 31 28.9**	**-0.4**
	SNR=9.0						
KBK	**Karagaybulak**	**2.90**	**10**	⇑*i*P	**Pn**	**20 31 26.7**	**+2.5**
	baz=10.0						
KBK				⇑*i*S	**Sb**	**20 32 05.8**	**+0.4**
	baz=10.0						
KBK	**Karagaybulak**	**2.90**	**10**	P	**Pn**	**20 31 27.2**	**+2.9**
	SNR=26						
BOOM	**Boomskoye usch**	**2.98**	**25**	⇓*i*P	**Pn**	**20 31 27.1**	**+1.8**
	baz=23						
BOOM				⇓*i*S	**Sb**	**20 32 06.6**	**-1.0**
	baz=23						
FRU1	**Bishkek**	**3.02**	**6**	⇑*i*P	**Pn**	**20 31 27.9**	**+2.1**
	baz=6.0						
FRU1				⇑*i*S	**Sb**	**20 32 08.1**	**-0.6**
	baz=6.0						
MRKS	**Merke**	**3.04**	**346**	*e*P	**Pb**	**20 31 29.8**	**-2.1**
	7.2nm,0.4s						
MRKS				*e*S	**Sb**	**20 32 08.4**	**-0.9**
	30nm,0.5s						
MRKS	**Merke**	**3.04**	**346**	Pg	**Pb**	**20 31 34.1**	**+2.2**
	17nm,0.4s						
MRKS				Lg	Lg	20 32 16.2	
	30nm,0.5s						
CHMS	**Chumysh**	**3.22**	**7**	P	**Pn**	**20 31 31.4**	**+3.0**
	SNR=8.7						
TKM2	**Tokmak 2**	**3.28**	**18**	⇓*i*P	**Pn**	**20 31 31.7**	**+2.2**
	baz=17						
TKM2				⇓*i*S	**Sb**	**20 32 14.6**	**-1.7**
	baz=17						
TKM2	**Tokmak 2**	**3.28**	**18**	P	**Pn**	**20 31 32.0**	**+2.6**
	SNR=15						
TKM2	**Tokmak 2**	**3.28**	**18**	⇓Pn	**Pn**	**20 31 31.9**	**+2.4**
	4.9nm,0.3s						
TKM2				⇑Lg	Lg	20 32 22.0	
	39nm,0.5s						
USP	**Ospenovka**	**3.47**	**3**	⇑*i*P	**Pn**	**20 31 34.3**	**+2.4**
	baz=3.0						
USP				⇑*i*S	**Sb**	**20 32 18.6**	**-3.0**
	baz=3.0						
USP	**Ospenovka**	**3.47**	**3**	P	**Pb**	**20 31 40.9**	**+1.7**
	SNR=8.0						
KST	**Kastek**	**3.49**	**21**	*e*P	**Pb**	**20 31 39.3**	**-0.4**
	9.0nm,0.4s						
KST				*e*S	**Sb**	**20 32 24.3**	**+2.0**
	54nm,0.9s						
KST	**Kastek**	**3.49**	**21**	Pg	**Pb**	**20 31 41.1**	**+1.4**
	22nm,0.4s						
KST				Lg	Lg	20 32 28.8	
	52nm,0.5s						
DGS	**Degeres**	**3.63**	**18**	*e*P	**Pb**	**20 31 43.6**	**+1.6**
	15nm,0.6s						
DGS				*e*S	**Sg**	**20 32 31.9**	**-2.0**
	31nm,0.5s						
DGS	**Degeres**	**3.63**	**18**	Pg	**Pb**	**20 31 43.5**	**+1.6**
	15nm,0.6s						
DGS				Lg	Lg	20 32 32.5	
	31nm,0.5s						
IZV	**Izvestkoviy**	**3.69**	**28**	*e*P	**Pb**	**20 31 44.8**	**+1.7**
	24nm,0.6s						
IZV				*e*S	**Sg**	**20 32 34.1**	**-2.0**
	32nm,0.6s						
MTBS	**Maitube**	**3.71**	**26**	*e*P	**Pb**	**20 31 45.4**	**+2.0**
	18nm,0.5s						
MTBS				*e*S	**Sg**	**20 32 35.4**	**-1.3**
	19nm,0.5s						
MTBS	**Maitube**	**3.71**	**26**	Pg	**Pb**	**20 31 45.2**	**+1.8**
	18nm,0.5s						
MTBS				Lg	Lg	20 32 35.3	
	19nm,0.5s						
TNSS	**Tian-Shan**	**3.82**	**31**	*e*P	**Pb**	**20 31 47.6**	**+2.1**
	40nm,0.5s						
TNSS				*e*S	**Sg**	**20 32 39.1**	**-1.2**
	29nm,0.6s						
TNSS	**Tian-Shan**	**3.82**	**31**	Pg	**Pb**	**20 31 46.6**	**+1.2**
	40nm,0.5s						
TNSS				Lg	Lg	20 32 38.4	
	29nm,0.6s						
IUG	**Iuzhnay**	**3.95**	**308**	*e*P	**Pn**	**20 31 41.5**	**+2.9**
	3.2nm,0.2s						
IUG				*e*S	**Sn**	**20 32 28.7**	**+3.5**
	52nm,0.3s						
IUG	**Iuzhnay**	**3.95**	**308**	Pg	**Pn**	**20 31 40.2**	**+1.6**
	3.2nm,0.2s						
IUG				Lg	Lg	20 32 27.8	
	52nm,0.3s						
MDOK	**Medeo**	**3.97**	**31**	*e*P	**Pb**	**20 31 50.1**	**+2.4**
	24nm,0.4s						
MDOK				*e*S	**Sg**	**20 32 43.6**	**-1.3**
	24nm,0.5s						
MDOK	**Medeo**	**3.97**	**31**	⇓Pg	**Pb**	**20 31 48.8**	**+1.0**
	29nm,0.9s						
MDOK				⇓Lg	Lg	20 32 42.5	
	22nm,0.6s						
MDOK	**Medeo**	**3.

CHKK	**Chushkaly**	**4.54**	**26**	*e*P		**Pb**	**20 32 00.6**	**+3.1**
	3.6nm,0.4s								
CHKK				*e*S		**Sg**	**20 33 01.1**	**-2.2**
	15nm,0.5s								
KURS	**Kuram**	**4.72**	**37**	*e*P		**Pb**	**20 32 03.6**	**+3.1**
	11nm,0.8s								
KURS				*e*S		**Sg**	**20 33 06.3**	**-2.6**
	5.9nm,0.9s								
UZB	**Uzynbulak**	**4.91**	**46**	*e*P		**Pb**	**20 32 07.8**	**+3.9**
	5.1nm,0.8s								
UZB				*e*S		**Sg**	**20 33 13.6**	**-1.5**
	6.0nm,0.9s								
PDGK	**Podgornoye**	**5.29**	**46**	⇓Pn		**Pn**	**20 31 57.3**	**+0.3**
	3.6nm,1.0s								
PDGK				⇓Pg		**Pb**	**20 32 13.0**	**+2.7**
	5.9nm,0.6s								
PDGK				⇑Lg		Lg	20 33 24.7		
	18nm,1.1s								
MKAR	**Makanchi Array**	**9.12**	**37**	Pn		**Pn**	**20 32 51.0**	**+1.5**
	0.0nm,0.3s,baz=220,slow=14,SNR=2.2								
MKAR				Lg		Lg	20 35 30.6		
	0.1nm,0.3s,baz=213,slow=26,SNR=3.3								
AB31	**Akbulak array**	**13.88**	**318**	⇓Pn		**Pn**	**20 33 52.1**	**-2.3**
	0.7nm,0.8s,baz=125,slow=13,SNR=13								
ZALV	**Zalesovo Beam**	**15.87**	**23**	Pn		**Pn**	**20 34 20.2**	**-0.9**
	0.1nm,0.3s,baz=218,slow=14,SNR=2.3								
FINES	**FINESS Array B**	**36.28**	**323**	P		**P**	**20 37 39.1**	**-2.0**
	3.4nm,1.1s,baz=108,slow=10,SNR=5.0								
KEST	**Kesra**	**50.45**	**287**	LR		LR	21 04 36.9		
	comp=Z,87nm,18.7s,baz=290,slow=40								
TORD	**Torodi Ar. Bea**	**68.33**	**269**	P		P	20 41 35.7	-3.9	
	0.2nm,0.5s,baz=39,slow=5.4,SNR=3.9								
WRA	**Warramunga Arr**	**81.66**	**124**	P		P	20 42 51.4	-5.0	
	0.8nm,1.0s,baz=325,slow=4.4,SNR=2.5								

YARS 04 20:32:30.6±0.0, 56°91N×129°38E, h10km, ML3.6/13, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGD	**Chagda**	**1.96**	**19**	*e*Pg	Pb	20 33 06.6	+0.3
	0.0nm,0.1s						
CGD				*e*Sg	Sg	20 33 32.6	-0.8
	0.2nm,0.1s						
CGD				*e*Sg	Sg	20 33 32.6	-0.8
	0.4nm,0.2s						
CLNS	**Chul'man**	**2.46**	**270**	*e*Pg	Pb	20 33 15.7	+0.8
	0.0nm,0.2s						
CLNS				*e*Sg	Sg	20 33 47.8	-1.8
	0.3nm,0.4s						
CLNS				*e*Sg	Sg	20 33 47.8	-1.8
	0.5nm,0.5s						
IENR	**Iengra**	**2.59**	**256**	*e*Sg	Sb	20 33 51.3	+2.2
ALDR	**Aldan**	**2.72**	**310**	*e*Pn	Pn	20 33 15.1	+0.7
ALDR				*e*Pg	Pb	20 33 19.9	+0.5
	0.0nm,0.2s						
ALDR				*e*Sn	Sn	20 33 48.1	+0.8
ALDR				*e*Sg	Sg	20 33 56.1	-1.9
	0.1nm,0.1s						
ALDR				*e*Sg	Sg	20 33 56.1	-1.9
	0.1nm,0.2s						
TNDR	**Tynda**	**3.15**	**238**	*e*Pg	Pb	20 33 27.2	+0.6
	0.0nm,0.2s						
TNDR				*e*Sg	Sg	20 34 08.5	-3.3
	0.1nm,0.3s						
TNDR				*e*Sg	Sg	20 34 08.5	-3.3
	0.0nm,0.1s						
YKLR	**Yuktali**	**4.26**	**269**	*e*Sg	Sg	20 34 44.5	-2.9
	0.0nm,0.4s						
BLSR	**Buluus**	**4.47**	**358**	*e*Pg	Pb	20 33 51.2	+2.2
	0.6nm,0.4s						
BLSR				*e*Sg	Sg	20 34 50.5	-3.3
TBGR	**Tabaga**	**4.93**	**1**	*e*Pn	Pn	20 33 45.7	+1.2
TBGR				*e*Pg	Pb	20 33 58.9	+2.1
	0.0nm,0.3s						
TBGR				*e*Sg	Sg	20 35 04.8	-3.8
	0.2nm,0.6s						
TBGR				*e*Sg	Sg	20 35 04.8	-3.8
	0.4nm,0.8s						
YAK	**Yakutsk**	**5.14**	**2**	*e*Pg	Pb	20 34 02.5	+2.1
YAK				*e*Sg	Sg	20 35 10.1	-5.3
OLMR	**Olekminsk**	**5.81**	**310**	*e*Pn	Pn	20 33 58.1	+1.5
OLMR				*e*Pg	Pb	20 34 14.7	+3.0
	0.0nm,0.2s						
OLMR				*e*Sg	Sg	20 35 32.1	-4.7
	0.1nm,1.1s						

*IDC **04** 20:35:31.0±1.0, 36°95N×98°47W, h0km, mb1 3.8/5, mb1mx3.5/43, mbtmp3.5/5, ML3.7/3, Error ellipse: s-maj=13.6km s-min=11.9km az=146.0*
*TUL **04** 20:35:30.1±1.4, 36°84N±0°03×98°36W±0°06, h3km±7km, mb_Lg3.5/63(NEIC), Error ellipse: s-maj=6.9km s-min=4.8km az=81.0*
*NEIC **04** 20:35:31.6±1.2, 36°79N±0°04×98°34W±0°06, h6km±6km, Error ellipse: s-maj=6.8km s-min=5.1km az=80.0*
*ANF **04** 20:35:31.3±0.3, 36°82N×98°38W, h0km, ML4.3/13, Error ellipse: s-maj=4.7km s-min=3.5km az=101.0*

ISC 04 20:35:30.0±1.3, 36°84N±0°03×98°27W±0°03, h6km±12km, n75, σ1°50/78, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
U32A	**Winter Ranch,**	**0.75**	**232**		**Pg**	**20 35 43.8**	**-0.6**
U32A				Sg	**Sg**	**20 35 53.1**	**-0.9**
ADOK	**Arcadia Dam**	**1.39**	**148**	Pn	**Pg**	**20 35 56.9**	**+0.3**
ADOK				Sn	**Sg**	**20 36 15.9**	**+1.3**
OKCFA	**Oklahoma City**	**1.57**	**155**		**Pb**	**20 35 59.2**	**-0.2**
OKCFA				Sn	**Sg**	**20 36 20.8**	**+0.4**
OKCSW	**OKLAHOMA CITY**	**1.58**	**155**		**Pb**	**20 35 59.7**	**0.0**
OKCSW				Sn	**Sg**	**20 36 21.2**	**+0.3**
FNO	**Franklin**	**1.73**	**156**		**Pg**	**20 36 02.8**	**-0.3**
FNO				Sn	**Sg**	**20 36 26.2**	**+0.6**
W35A	**Tecumseh**	**2.03**	**146**		**Pb**	**20 36 06.5**	**-0.8**
W35A				Sn	**Sb**	**20 36 32.5**	**-0.3**
WMOK	**Wichita Mounta**	**2.14**	**191**		**Pn**	**20 36 07.1**	**+0.8**
WMOK				Sn	**Sb**	**20 36 34.5**	**-1.4**
WMOK	**Wichita Mounta**	**2.14**	**191**	P	**Pn**	**20 36 07.0**	**+0.7**
	baz=9.2						
WMOK				S	**Sb**	**20 36 35.1**	**-0.9**
	baz=9.2						
TUL1	**Leonard**	**2.20**	**114**		**Pb**	**20 36 10.0**	**-0.3**
TUL1				lAmb_Lg		20 36 46.0	
	comp=Z,257nm,0.9s						
TUL1	**Leonard**	**2.20**	**114**	P	**Pb**	**20 36 10.6**	**+0.4**
	baz=295						
TUL1				S	**Sg**	**20 36 40.8**	**-0.1**
	baz=295						
X34A	**Smith Ranch, M**	**2.26**	**171**		**Pb**	**20 36 09.6**	**-1.6**
CBKS	**Cedar Bluff**	**2.29**	**330**		**Pn**	**20 36 10.0**	**+1.6**
CBKS				lAmb_Lg		20 36 44.4	
	comp=Z,160nm,0.8s						
CBKS	**Cedar Bluff**	**2.29**	**330**	P	**Pn**	**20 36 10.2**	**+1.8**
	baz=151						
CBKS				S	**Sb**	**20 36 40.6**	**+0.2**
	baz=151						
KSU1	**Kansas State U**	**2.61**	**30**	P	**Pb**	**20 36 15.6**	**-1.7**
	baz=212						
KSU1				Sb	**Sg**	**20 36 54.8**	**+0.8**
	baz=212						
X37A	**Clayton**	**3.26**	**133**		**Pn**	**20 36 23.7**	**+2.1**
X37A				lAmb_Lg		20 37 21.6	
	comp=Z,155nm,0.7s						
AMTX	**Amarillo**	**3.39**	**236**		**Pn**	**20 36 24.6**	**+1.1**
AMTX	**Amarillo**	**3.39**	**236**	P	**Pn**	**20 36 25.0**	**+1.5**
	baz=53						
HHAR	**Hobbs**	**3.53**	**98**		**Pn**	**20 36 27.7**	**+2.3**
HHAR				lAmb_Lg		20 37 27.0	
	comp=Z,138nm,1.0s						
W39A	**Magazine**	**3.99**	**113**		**Pn**	**20 36 34.3**	**+2.7**
W39A				lAmb_Lg		20 37 44.1	
	comp=Z,156nm,1.0s						
W39A	**Magazine**	**3.99**	**113**	P	**Pn**	**20 36 34.4**	**+2.7**
	baz=295						
KSCO	**Kaye Shedlock'**	**4.07**	**304**		**Pn**	**20 36 34.2**	**+1.2**
KSCO				lAmb_Lg		20 37 42.4	
	comp=Z,102nm,0.8s						
ABTX	**Abilene, Hawle**	**4.35**	**195**		**Pn**	**20 36 37.2**	**+0.4**
ABTX	**Abilene, Hawle**	**4.35**	**195**	Pb	**Pb**	**20 36 46.7**	**-0.2**
	baz=14						
U40A	**Yellville**	**4.38**	**95**		**Pn**	**20 36 39.2**	**+2.1**
U40A				lAmb_Lg		20 38 00.4	
	comp=Z,60nm,0.8s						
U40A	**Yellville**	**4.38**	**95**	P	**Pn**	**20 36 39.3**	**+2.1**
	baz=278						
MIAR	**Mount Ida**	**4.45**	**120**		**Pn**	**20 36 40.2**	**+2.2**
MIAR				lAmb_Lg		20 37 56.0	
	comp=Z,61nm,0.8s						
MIAR	**Mount Ida**	**4.45**	**120**	P	**Pn**	**20 36 40.4**	**+2.3**
	baz=302						
BGNE	**Belgrade**	**4.56**	**1**		**Pn**	**20 36 41.3**	**+1.6**
BGNE				lAmb_Lg		20 38 07.8	
	comp=Z,104nm,0.8s						
BGNE	**Belgrade**	**4.56**	**1**	P	**Pn**	**20 36 41.6**	**+2.0**
	baz=182						
MSTX	**Muleshoe**	**4.66**	**233**		**Pn**	**20 36 41.7**	**+0.6**
MGMO	**Mountain Grove**	**4.81**	**84**		**Pn**	**20 36 45.5**	**+2.4**
MGMO				lAmb_Lg		20 38 16.2	
	comp=Z,71nm,0.7s						
WHTX	**Lake Whitney,**	**4.88**	**172**		**Pn**	**20 36 44.1**	**+0.2**
WHTX	**Lake Whitney,**	**4.88**	**172**	P	**Pn**	**20 36 45.2**	**+1.2**
	baz=352						
T25A	**Trinidad**	**4.92**	**275**		**Pn**	**20 36 45.6**	**+0.8**
T25A	**Trinidad**	**4.92**	**275**	P	**Pn**	**20 36 45.5**	**+0.7**
	baz=92						
X40A	**Basin Creek Fa**	**5.01**	**116**		**Pn**	**20 36 48.1**	**+2.4**
X40A	**Basin Creek Fa**	**5.01**	**116**	P	**Pn**	**20 36 48.3**	**+2.5**
	baz=299						
OGNE	**Ogallala**	**5.04**	**326**		**Pn**	**20 36 48.7**	**+2.4**
FCAR	**Ozark Folk Cen**	**5.05**	**99**		**Pn**	**20 36 48.7**	**+2.4**
WHAR	**Wooly Hollow**	**5.09**	**106**		**Pn**	**20 36 48.9**	**+2.1**
WHAR				lAmb_Lg		20 38 15.2	
	comp=Z,58nm,0.7s						
UALR	**University of**	**5.24**	**111**		**Pn**	**20 36 50.5**	**+1.6**
UALR				lAmb_Lg		20 38 23.0	
	comp=Z,58nm,0.8s						
WLAR	**White Oak Lake**	**5.26**	**125**	lAmb_Lg		20 38 34.4	
	comp=Z,52nm,0.9s						
CCM	**Cathedral Cave**	**5.72**	**76**		**Pn**	**20 36 58.4**	**+2.9**
CCM				lAmb_Lg		20 38 37.7	
	comp=Z,82nm,0.7s						
LCAR	**Lake Charles**	**5.79**	**96**		**Pn**	**20 36 58.1**	**+1.7**
SDCO	**Great Sand Dun**	**5.84**	**281**		**Pn**	**20 36 58.2**	**+0.9**
Q24A	**Divide**	**5.84**	**293**		**Pn**	**20 36 57.8**	**+0.4**
Q24A				lAmb_Lg		20 38 41.3	
	comp=Z,46nm,0.7s						
CPRX	**Cap Rock**	**5.96**	**232**		**Pn**	**20 36 59.6**	**+0.7**
435B	**Jarrell**	**6.07**	**174**	Pn	**Pn**	**20 37 01.4**	**+1.1**
435B				lAmb_Lg		20 38 59.2	
	comp=Z,70nm,0.9s						
HBAR	**Harrisburg**	**6.29**	**99**	lAmb_Lg		20 38 51.7	
	comp=Z,74nm,0.7s						
SCIA	**State Center**	**6.40**	**36**	lAmb_Lg		20 39 01.3	
	comp=Z,74nm,0.8s						
JCT	**Junction City**	**6.47**	**192**	lAmb_Lg		20 38 56.0	
	comp=Z,82nm,1.1s						
ISCO	**Idaho Springs**	**6.49**	**299**		**Pn**	**20 37 07.2**	**+0.9**
CLNB	**Carlsbad**	**6.50**	**227**		**Pn**	**20 37 06.2**	**-0.1**
GDL2	**Guadalupe Moun**	**6.83**	**229**		**Pn**	**20 37 11.2**	**+0.3**
S22A	**4UR Ranch, Cre**	**6.88**	**280**		**Pn**	**20 37 13.4**	**+1.6**
ANMO	**Albuquerque**	**6.91**	**257**	Pn	**Pn**	**20 37 12.6**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=70,slow=15,SNR=3.6						
ANMO				Pg	**Pb**	**20 37 33.0**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=69,slow=18,SNR=6.6						
ANMO				Lg	Lg	20 39 05.6	
	comp=Z,5.2nm,0.3s,baz=71,slow=4.2,SNR=8.8						
ANMO	**Albuquerque**	**6.91**	**257**		**Pn**	**20 37 12.5**	**+0.5**
ANMO				lAmb_Lg		20 39 10.7	
	comp=Z,40nm,1.2s						
N41A	**Harden Midland**	**6.96**	**54**		**Pn**	**20 37 12.9**	**+0.4**
ECSD	**EROS Data Cent**	**7.00**	**10**		**Pn**	**20 37 13.4**	**+0.3**
PHWY	**Pilot Hill**	**7.15**	**311**	Pn	**Pn**	**20 37 13.6**	**-1.8**
PHWY				lAmb_Lg		20 39 17.9	
	comp=Z,45nm,0.8s						
N23A	**Red Feather La**	**7.23**	**306**		**Pn**	**20 37 17.5**	**+1.1**
N23A				lAmb_Lg		20 39 37.2	
	comp=Z,70nm,0.8s						
S44A	**Carbondale**	**7.24**	**81**	lAmb_Lg		20 39 22.2	
	comp=Z,71nm,0.7s						
SIUC	**Southern Illin**	**7.27**	**80**		**Pn**	**20 37 18.6**	**+1.8**
SIUC				lAmb_Lg		20 39 29.7	
	comp=Z,78nm,0.9s						
P43A	**Skaggs, Pawnee**	**7.43**	**65**		**Pn**	**20 37 18.8**	**-0.2**
OXF	**Oxford**	**7.58**	**105**		**Pn**	**20 37 21.9**	**+1.0**
Y22D	**IRIS PASSCAL I**	**7.58**	**251**	lAmb_Lg		20 39 48.1	
	comp=Z,56nm,0.8s						
LENM	**Lemitar**	**7.58**	**252**		**Pn**	**20 37 19.4**	**-1.9**
MNTX	**Cornudas Mount**	**7.80**	**231**		**Pn**	**20 37 24.1**	**-0.1**
MNTX				lAmb_Lg		20 39 45.8	
	comp=Z,49nm,1.1s						
OLIL	**Olney**	**8.27**	**74**	lAmb_Lg		20 39 57.8	
	comp=Z,59nm,1.0s						
USIN	**University of**	**8.51**	**79**	lAmb_Lg		20 40 03.8	
	comp=Z,41nm,0.8s						
JFWS	**Jewell Farm**	**8.65**	**43**	lAmb_Lg		20 40 09.0	
	comp=Z,52nm,0.8s						
TXAR	**Lajitas Array**	**8.74**	**213**	Pn	**Pn**	**20 37 37.5**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=38,slow=11,SNR=62						
TXAR				Lg	Lg	20 40 02.5	
	comp=Z,1.7nm,0.3s,baz=31,slow=26,SNR=7.8						
PDAR	**Pinedale Array**	**10.51**	**308**	Pn	**Pn**	**20 38 01.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=116,slow=14,SNR=4.6						
PDAR				Lg	Lg	20 40 51.4	
	comp=Z,0.4nm,0.3s,baz=107,slow=35,SNR=4.2						
TKL	**Tuckaleechee C**	**11.77**	**91**	Pn	**Pn**	**20 38 20.7**	**+2.3**
	comp=Z,0.9nm,0.3s,baz=274,slow=16,SNR=5.5						
TKL				Lg	Lg	20 41 38.4	
	comp=Z,0.5nm,0.3s,baz=159,slow=17,SNR=3.7						
ULM	**Lac du Bonnet**	**13.52**	**7**	Pn	**Pn**	**20 38 39.1**	**-3.1**
	comp=Z,0.2nm,0.3s,baz=195,slow=12,SNR=2.3						
ULM				Lg	Lg	20 42 23.8	
	comp=Z,0.1nm,0.3s,baz=94,slow=19,SNR=1.7						

*IDC **04** 20:47:50.6±1.6, 13°68S×111°44W, h0km, mb3.6/6, mb1 4.0/6, mb1mx3.9/21, mbtmp3.6/6, MS4.0/7, Ms1 4.0/7, ms1mx3.7/23, Error ellipse: s-maj=50.9km s-min=36.2km az=52.0*
*NEIC **04** 20:47:52.6±1.1, 13°5S±0°1×111°3W±0°1, h10km±1km, mb4.7/8, Error ellipse: s-maj=24.9km s-min=17.4km az=248.0*

ISC 04 20:47:52.8±0.6, 13°5S±0°1×111°3W±0°2, h11km, n44, σ0°69/31, MS3.9/6, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.70**	**173**	LR	LR	20 54 54.3	
	comp=Z,747nm,20.4s,baz=344,slow=31						
RPN	**Rapa Nui**	**13.70**	**173**	Pn	**Pn**	**20 51 07.0**	**-0.2**
PTCN	**Pitcairn Islan**	**21.14**	**234**	P	**P**	**20 52 37.6**	**-0.4**
TAOE	**Nuku Hiva Isla**	**28.67**	**276**	*e*LR	LR	21 01 07.9	
	comp=Z,339nm,38.7s						
PPT2	**Papeete2**	**37.07**	**259**	*e*LQ	LQ	21 03 37.0	
	433nm,31.5s						
PPT2				*e*LR	LR	21 05 13.6	
	comp=Z,213nm,26.2s						
TBI	**Tubuai**	**37.43**	**249**	*e*LQ	LQ	21 03 41.6	
	212nm,28.2s						
TBI				*e*LR	LR	21 05 11.2	
	comp=Z,240nm,29.0s						
TBI	**Tubuai**	**37.43**	**249**	*e*T	T	21 35 58.0	
	11nm,0.3s						
TBI				*e*T	T	21 36 00.0	
LPAZ	**La Paz**	**41.75**	**99**	P	**P**	**20 55 43.5**	**+0.3**
	2.1nm,0.8s,baz=267,slow=4.8,SNR=3.4						
LPAZ				LR	LR	21 08 57.1	
	comp=Z,117nm,20.8s,baz=44,slow=30						
LPAZ	**La Paz**	**41.75**	**99**	P	**P**	**20 55 42.4**	**-0.8**
TX31	**Lajitas Ar. Si**	**43.19**	**10**	P	**P**	**20 55 53.4**	**-0.7**
TXAR	**Lajitas Array**	**43.19**	**10**	P	**P**	**20 55 55.1**	**+1.1**
	0.7nm,1.1s,baz=186,slow=8.2,SNR=3.4						
TXAR	**Lajitas Array**	**43.19**	**10**	P	**P**	**20 55 53.5**	**-0.5**
PLCA	**Paso Flores**	**44.71**	**135**	LR	LR	21 10 23.5	
	comp=Z,246nm,18.8s,baz=22,slow=30						
PFO	**Pinyon Flats O**	**47.08**	**354**	LR	LR	21 11 05.6	
	comp=Z,232nm,21.9s,baz=160,slow=30						
SAML	**Samuel**	**47.34**	**90**	P	**P**	**20 56 26.9**	**-0.3**
SAML				lAmb	lAmb	20 56 31.9	
	comp=Z,5.5nm,0.9s						
LENM	**Lemitar**	**47.55**	**5**	P	**P**	**20 56 28.6**	**-0.1**
SDCO	**Great Sand Dun**	**51.24**	**6**	P	**P**	**20 56 57.0**	**+0.1**
NVAR	**Mina Array Bea**	**52.05**	**353**	P	**P**	**20 57 04.0**	**+1.1**
	comp=Z,1.5nm,0.7s,baz=177,slow=10,SNR=7.6						
NVAR				LR	LR	21 14 19.6	
	comp=Z,116nm,19.1s,baz=100,slow=30						
NVAR	**Mina Array Bea**	**52.05**	**353**	P	**P**	**20 57 02.8**	**-0.1**
ISCO	**Idaho Springs**	**53.26**	**5**	P	**P**	**20 57 12.1**	**+0.2**
N23A	**Red Feather La**	**54.32**	**5**	P	**P**	**20 57 18.8**	**-0.9**
N23A				lAmb	lAmb	20 57 21.4	
	comp=Z,6.3nm,0.8s						
PDAR	**Pinedale Array**	**55.99**	**2**	P	**P**	**20 57 33.0**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=178,slow=9.0,SNR=3.1						
PDAR				LR	LR	21 17 36.4	
	comp=Z,104nm,18.6s,baz=98,slow=32						
PDAR	**Pinedale Array**	**55.99**	**2**	P	**P**	**20 57 31.6**	**-0.1**
BBB	**Bella Bella**	**66.99**	**349**	LR	LR	21 22 32.6	
	comp=Z,70nm,19.1s,baz=86,slow=31						
YKA	**Yellowknife Ar**	**75.77**	**358**	P	**P**	**20 59 38.7**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=168,slow=5.4						
QSPA	**South Pole Qui**	**76.63**	**180**	P	**P**	**20 59 44.8**	**+1.3**
QSPA				lAmb	lAmb	20 59 57.2	
	comp=Z,5.8nm,1.1s						
ILAR	**Eielson Array**	**82.54**	**345**	P	**P**	**21 00 15.2**	**-0.1**
	comp=Z,0.4nm,1.0s,baz=157,slow=4.9,SNR=2.8						
ILAR	**Eielson Array**	**82.54**	**345**	P	**P**	**21 00 15.0**	**-0.3**
WRH	**Wood River Hil**	**82.60**	**345**	P	**P**	**21 00 15.5**	**-0.2**
WRH				lAmb	lAmb	21 00 18.3	
	comp=Z,12nm,1.2s						
KTH	**Kantishna Hill**	**82.62**	**343**	P	**P**	**21 00 15.5**	**-0.4**
BMAR	**Burnt Mountain**	**84.25**	**348**	P	**P**	**21 00 24.3**	**+0.2**
H11S2	**WAKE ISLAND Hy**	**86.83**	**290**	T	T	22 36 23.8	
	baz=106,slow=74,SNR=39						
H11S1	**WAKE ISLAND Hy**	**86.83**	**290**	T	T	22 36 24.6	
	baz=106,slow=74,SNR=19						
H11S3	**WAKE ISLAND Hy**	**86.84**	**290**	T	T	22 36 26.3	
	baz=106,slow=74,SNR=18						
H11N3	**WAKE ISLAND Hy**	**86.96**	**291**	T	T	22 36 34.3	
	baz=108,slow=75,SNR=8.1						
H11N1	**WAKE ISLAND Hy**	**86.98**	**291**	T	T	22 36 33.3	
	baz=108,slow=75,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**86.98**	**291**	T	T	22 36 32.8	
	baz=108,slow=75,SNR=9.3						
MK31	**Makanchi Array**	**144.88**	**344**		**PKPab**	**21 07 28.8**	**-0.5**
MKAR	**Makanchi Array**	**144.88**	**344**	PKPbc	**PKPab**	**21 07 28.7**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=13,slow=2.3,SNR=7.5						
MKAR	**Makanchi Array**	**144.88**	**344**		**PKPab**	**21 07 28.2**	**-1.1**
MAKZ	**Makanchi**	**144.95**	**344**		**PKPab**	**21 07 28.3**	**-1.2**
CM31	**Chiang Mai Arr**	**150.54**	**284**	PKPbc	**PKiKP**	**21 07 46.3**	**-0.2**
CM31					**PKPab**	**21 07 52.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**150.54**	**284**	PKPbc	**PKPbc**	**21 07 44.9**	**-0.8**
	comp=Z,1.4nm,0.8s,baz=60,slow=0.8,SNR=14						
CMAR	**Chiang Mai Arr**	**150.54**	**284**		**PKPbc**	**21 07 45.5**	**-0.2**

IDC 04 21:09:40.4±3.8, 15°13N×44°95W, h0km, mb4.0/7, mb1 4.2/7, mb1mx3.7/52, mbtmp4.0/7, Error ellipse: s-maj=150.7km s-min=31.8km az=21.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR**	**37.84**	**125**	T	T	21 56 51.0	
	baz=307,slow=75,SNR=12						
H10N2	**ASCENSION HYDR**	**37.84**	**125**	T	T	21 56 51.3	
	baz=307,slow=75,SNR=14						
H10N1	**ASCENSION HYDR**	**37.86**	**125**	T	T	21 56 52.5	
	baz=307,slow=75,SNR=13						
SADO	**Sadowa**	**41.32**	**323**	P	P	21 17 28.2	+0.4
	19nm,1.2s,baz=103,slow=12,SNR=2.9						
TORD	**Torodi Ar. Bea**	**45.21**	**86**	P	P	21 17 59.6	-0.1
	1.2nm,1.1s,baz=274,slow=6.9,SNR=2.9						
ULM	**Lac du Bonnet**	**53.87**	**322**	P	P	21 19 04.6	-0.7
	1.3nm,0.7s,baz=124,slow=5.8,SNR=5.2						
PDAR	**Pinedale Array**	**61.29**	**311**	P	P	21 19 57.6	-0.5
	0.2nm,0.5s,baz=96,slow=9.2,SNR=3.6						
ELK	**Elko**	**65.41**	**308**	P	P	21 20 25.9	+0.5
	1.0nm,0.7s,baz=90,slow=7.3,SNR=3.7						
YKA	**Yellowknife Ar**	**67.32**	**332**	P	P	21 20 36.4	-0.5
	0.3nm,0.7s,baz=100,slow=6.4,SNR=5.8						
ILAR	**Eielson Array**	**81.45**	**335**	P	P	21 21 59.5	+0.4
	1.3nm,0.8s,baz=67,slow=4.0,SNR=10.0						

*IDC **04** 21:20:37.5±0.7, 27°11N×54°40E, h0km, mb4.0/21, mb1 4.1/26, mb1mx4.0/44, mbtmp4.0/26, ML3.4/4, MS2.8/2, Ms1 2.8/2, ms1mx2.5/48, Error ellipse: s-maj=16.7km s-min=13.4km az=177.0*
*NEIC **04** 21:20:39.3±1.7, 27°16N±0°07×54°35E±0°07, h10km±1km, mb4.1/45, Error ellipse: s-maj=11.6km s-min=10.0km az=204.0*
*DSN **04** 21:20:39.2±2.2, 27°31N×54°49E, h10km, ML4.0/8, Error ellipse: s-maj=33.4km s-min=7.8km az=16.0*
*TEH **04** 21:20:39.2, 27°14N×54°44E, h10km, ML4.0*
*MOS **04** 21:20:40.8±1.0, 27°13N×54°36E, h36km, mb4.4/10, Error ellipse: s-maj=7.5km s-min=5.7km az=97.7*
*THR **04** 21:20:41.8±1.4, 27°52N×54°25E, h15km±100km, ML3.8*
*OMAN **04** 21:20:46.9±0.5, 26°73N×54°26E, h36km±22km, mb4.1/1, ml3.6/13, Error ellipse: s-maj=10.2km s-min=6.4km az=340.0*

ISC 04 21:20:40.2±0.4, 27°15N±0°04×54°29E±0°03, h18km, n224, σ1°45/230, mb4.1/49, 6C-6D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**1.49**	**335**	*e*		21 21 39.0	
JHRM				*e*Pn	**Pg**	**21 21 08.7**	**-0.2**
BNDS	**Bandar-Abbas**	**1.70**	**81**	*e*Pn	**Pg**	**21 21 13.1**	**+0.3**
BNDS	**Bandar-Abbas**	**1.70**	**81**	*e*Pg

TVBK TV Kerman 3.57 37 *e*Pn **Pn** 21 21 36.4 +1.4
TVBK *e* 21 22 23.2
KHGB Koh Gabri 3.75 30 *e*Pn **Pn** 21 21 39.0 +1.7
KHGB *e* 21 22 57.4
CHMN Cheshme madani 3.94 46 *e*Pn **Pn** 21 21 42.0 +1.9
IMEH Mehriz 4.23 4 *e*Pn **Pn** 21 21 46.5 +2.4
ARQ Araqi 4.30 151 P **Pn** 21 21 46.0 +1.2
SNR=34
ARQ S **Sn** 21 22 36.2 +1.6
HOQ Hoqain 4.48 142 P **Pn** 21 21 49.0 +1.7
SNR=13
HOQ S **Sn** 21 22 40.1 +1.0
KLNJ Kolanjah 4.51 329 *e*Pn **Pn** 21 21 49.6 +1.7
IBAF Bafgh 4.56 14 *e*Pn **Pn** 21 21 50.1 +1.6
ISAD Sadrabad 4.78 354 *e*Pn **Pn** 21 21 53.8 +2.3
IRAM Rameshеh 4.93 341 *e*Pn **Pn** 21 21 55.6 +2.0
ICHK Chekchek 5.08 1 *e*Pn **Pn** 21 21 57.9 +2.3
BSY Bisya 5.12 148 P **Pn** 21 21 57.0 +0.9
SNR=6.7
BSY S **Sn** 21 22 55.0 +0.2
SMDO Samad 5.31 139 P **Pn** 21 21 60.0 +1.2
SNR=14
SMDO S **Sn** 21 23 00.5 +0.9
SNR=6.1
SMDO S Sb 21 23 02.8 -13
WSAR Wadi Sarin 5.54 134 Pn **Pn** 21 22 01.8 0.0
comp=E,1.5nm,0.3s,baz=317,slow=13,SNR=32
WSAR Sn **Sn** 21 23 02.8 -2.2
comp=E,3.7nm,0.3s,baz=127,slow=22,SNR=6.3
WSAR LR LR 21 24 47.2
comp=E,70nm,18.8s,baz=328,slow=46
WSAR Wadi Sarin 5.54 134 P **Pn** 21 22 01.8 0.0
SNR=38
JHBN Jahan bin 5.96 329 *e*Pn **Pn** 21 22 08.9 +1.0
IZEF Zefreh 5.97 344 *e*Pn **Pn** 21 22 08.8 +0.8
ANAR Anarak 6.04 356 *e*Pn **Pn** 21 22 09.8 +1.0
WBK Wadi Bani Khal 6.21 136 P **Pn** 21 22 11.0 0.0
SNR=21
TPRV Parvadeh(Tabas 6.22 19 *e*Pn **Pn** 21 22 12.8 +1.6
BSRN Basiran 6.39 40 *e*Pn **Pn** 21 22 14.0 +0.5
BSRN Basiran 6.39 40 *e*Pn **Pn** 21 22 14.0 +0.5
NHDN Nehbandan 6.57 49 *e*Pn **Pn** 21 22 16.8 +0.7
IKLH Kolahrood 6.58 340 *e*Pn **Pn** 21 22 17.6 +1.3
IKOO Kooshah 6.67 37 *e*Pn **Pn** 21 22 18.0 +0.5
TKDS Koohdasht(Taba 6.89 20 *e*Pn **Pn** 21 22 20.9 +0.4
ITEG Tejag 6.91 33 *e*Pn **Pn** 21 22 21.6 +0.8
TABS Tabas 6.92 20 *e*Pn **Pn** 21 22 20.5 -0.4
TABS Tabas 6.92 20 *e*Pn **Pn** 21 22 20.3 -0.6
KRSH Karshahi 7.04 345 *e*Pn **Pn** 21 22 24.2 +1.6
TNSJ Nastanj 7.08 16 *e*Pn **Pn** 21 22 23.7 +0.7
AFRZ Afriz 7.47 32 *e*Pn **Pn** 21 22 30.1 +1.7
IMON Monand 7.61 36 *e*Pn **Pn** 21 22 32.9 +2.4
DQM DQM 7.78 157 P **Pn** 21 22 31.8 -0.8
SNR=6.7
DQM S **Sn** 21 23 55.0 -5.3
BDRS Dareh Seyedi 8.23 327 *e*Pn **Pn** 21 22 37.8 -1.1
SHRT Shahrakht 8.29 37 *e*Pn **Pn** 21 22 40.4 +0.8
SHRT Shahrakht 8.29 37 *e*Pn **Pn** 21 22 38.2 -1.4
IANJ Anjilo 8.30 358 *e*Pn **Pn** 21 22 40.8 +0.9
IDOB Doab 8.46 323 *e*Pn **Pn** 21 22 44.6 +2.6
HSAM Samen 8.57 327 *e*Pn **Pn** 21 22 44.1 +0.5
RAYN Ar Rayn 8.73 247 P **Pn** 21 22 47.4 +1.8
RAYN Ar Rayn 8.73 247 *i* P **Pn** 21 22 46.8 +1.2
SNR=19
RAYN Ar Rayn 8.73 247 **Pn** 21 22 47.4 +1.8
HAGD Aghdareh 8.83 331 *e*Pn **Pn** 21 22 48.8 +1.6
IKOM Komasi 9.11 322 *e*Pn **Pn** 21 22 51.5 +0.5
SHAO Shalim 9.17 172 P **Pn** 21 22 51.2 -0.4
SNR=51
WHFO Wadi Hawf 9.20 183 P **Pn** 21 22 52.0 -0.1
SNR=215
WHFO S **Sn** 21 24 28.9 -6.4
DMTO DMTO 9.41 176 P **Pn** 21 22 55.0 +0.1
SNR=27
HSRG Sareghieh 9.56 329 *e*Pn **Pn** 21 22 57.8 +0.5
RBK Rabkut 9.60 180 P **Pn** 21 22 58.2 +0.6
SNR=16
ABTO Aybut 9.79 186 P **Pn** 21 23 00.0 -0.3
SNR=170
HRA Herat 9.94 42 **Pn** 21 23 03.0 +0.6
IDHR Dehrash 10.13 320 *e*Pn **Pn** 21 23 06.4 +1.5
GEYT Alibeck 11.22 16 Pn **Pn** 21 23 22.7 +2.9
comp=E,0.1nm,0.3s,baz=201,slow=7.6,SNR=4.5
GEYT LR LR 21 28 44.6
comp=E,59nm,19.2s,baz=25,slow=43
GEYT Alibeck 11.22 16 **Pn** 21 23 21.1 +1.4
SOCY Socotra 14.89 181 Pn Pn 21 24 06.3 -3.7
GNI Garni 15.19 331 P **Pn** 21 24 14.9 +0.9
GNI pmax pmax
comp=Z,15nm,1.1s
GNI Garni 15.19 331 Pn **P** 21 24 17.9 -1.1
comp=Z,0.3nm,0.3s,baz=33,slow=14,SNR=3.7
GNI Garni 15.19 331 **Pn** 21 24 14.9 +0.9
GNI IAmb IAmb 21 24 23.3
comp=Z,15nm,1.1s
ASF Jabal al Asfar 15.92 292 Pn **Pn** 21 24 24.9 +1.4
comp=Z,0.1nm,0.3s,baz=24,slow=12,SNR=2.9
ASF Sn **Sn** 21 27 12.0 -7.5
comp=Z,0.1nm,0.3s,baz=36,slow=17,SNR=2.5
MMAI Mount Meron Ar 17.35 294 Pn **Pn** 21 24 42.2 +0.7
comp=Z,0.3nm,0.3s,baz=100,slow=16,SNR=3.8
NIL Nilore 17.59 64 P **Pn** 21 24 43.7 -0.7
NIL pmax pmax
comp=Z,14nm,1.2s
NIL Nilore 17.59 64 P **Pn** 21 24 43.6 -0.7
NIL IAmb IAmb 21 24 46.2
comp=Z,14nm,1.1s
ZEI Tsey 17.75 334 *e*P **P** 21 24 49.2 +1.9
ZEI pmax pmax
comp=Z,14nm,0.9s
NEY Neytrino 18.60 333⇑ *e*P **P** 21 24 56.8 +0.1
NEY pmax pmax
comp=Z,2.0nm,1.1s
BTK Batken 18.81 43 P **P** 21 24 57.7 -1.2
BTK pmax pmax
comp=Z,6.0nm,1.0s
BTK Batken 18.81 43 P **P** 21 24 57.7 -1.2
KBZ Khabaz 18.93 334⇑ *e*P **Pn** 21 25 02.4 +1.6
KBZ Khabaz 18.93 334 P **Pn** 21 25 01.4 +0.6
comp=Z,0.1nm,0.3s,baz=132,slow=7.6,SNR=3.9
KIV Kislovodsk 19.21 334 *e*P **Pn** 21 25 04.9 +0.7
KIV pmax pmax
comp=Z,10.0nm,1.3s
KIV Kislovodsk 19.21 334 P **Pn** 21 25 07.5 +3.3
KIV IAmb IAmb 21 25 22.3
comp=Z,6.6nm,0.9s
CSS Mathiatis 19.55 299 P **P** 21 25 07.8 +0.9
CSS IAmb IAmb 21 25 12.4
comp=Z,14nm,0.9s
SOC Sochi 20.20 328 *e*P Pn 21 25 16.6 +0.7
SOC *e*PPP PPP 21 25 41.8
SOC *e*SS Sn 21 29 17.8 +15
SOC *e*SSS SSS 21 29 35.5
SOC pmax pmax
comp=Z,17nm,0.9s
KK31 Karatay Array 20.66 35 P **P** 21 25 18.6 -0.4
KK31 pmax pmax
comp=Z,4.0nm,0.9s
KK31 Karatay Array 20.66 35 P **P** 21 25 18.6 -0.4
KKAR Karatay Array 20.66 35 P **P** 21 25 18.9 -0.1
KKAR Karatay Array 20.66 35 P **P** 21 25 18.6 -0.5
KKAR Karatay Array 20.66 35 P **P** 21 25 18.9 -0.1
ARSB Arslanbob 20.89 43 P **P** 21 25 20.9 -0.7
ARSB IAmb IAmb 21 25 21.9
comp=Z,18nm,0.9s
BRTR Keskin Array B 21.25 311 P **P** 21 25 27.7 +2.2
comp=Z,4.1nm,0.7s,baz=130,slow=13,SNR=38
BRTR Keskin Array B 21.25 311 P **P** 21 25 27.4 +1.9
BR131 Keskin Array S 21.25 311 *e*P **P** 21 25 27.6 +2.1
BR131 Keskin Array S 21.25 311 P **P** 21 25 27.8 +2.3
BR131 IAmb IAmb 21 25 28.5
comp=Z,4.2nm,0.7s
BR131 Keskin Array S 21.25 311 P **P** 21 25 27.8 +2.3
SNR=9.1
ANN Anapa 22.20 327 *e*P **P** 21 25 30.5 -5.0
ANN *e*S **S** 21 29 33.9 -5.2
ANN pmax pmax
comp=Z,30nm,1.3s
ABKAR Akbulak array 22.50 10 P **P** 21 25 39.2 +0.6
ABKAR Akbulak array 22.50 10 P **P** 21 25 38.9 +0.3
ABKAR IAmb IAmb 21 25 41.3
comp=Z,6.6nm,0.9s
AAK Ala-Archa 22.57 42 *de*P **P** 21 25 39.7 0.0
AAK pmax pmax
comp=Z,18nm,2.5s
AAK Ala-Archa 22.57 42 P **P** 21 25 40.1 +0.4
comp=Z,2.8nm,0.7s,baz=224,slow=10,SNR=8.2
AAK Ala-Archa 22.57 42 P **P** 21 25 39.4 -0.3
AAK IAmb IAmb 21 25 46.7
comp=Z,6.1nm,0.9s
ELL Elmali 22.74 301 P **P** 21 25 40.9 -0.6
ELL pmax pmax
comp=Z,26nm,1.0s
ELL Elmali 22.74 301 P **P** 21 25 40.9 -0.6
NRN Naryn 22.82 46 P **P** 21 25 41.6 -1.0
NRN pmax pmax
comp=Z,6.0nm,1.2s
NRN Naryn 22.82 46 P **P** 21 25 41.5 -1.0
NRN IAmb IAmb 21 25 49.9
comp=Z,5.9nm,1.1s
AKTO Aktyubinsk 23.43 6 P **P** 21 25 48.8 +0.6
comp=Z,3.9nm,0.6s,baz=185,slow=10,SNR=18
KARP Karpathos 24.57 297 P **P** 21 25 59.0 -0.2
IDI Anoyia 26.34 295 P **P** 21 26 17.0 +1.7
comp=Z,6.0nm,0.8s,baz=104,slow=12,SNR=3.8
ALN Alexandroupoli 26.99 308 P **P** 21 26 21.9 +0.9
ALN pmax pmax
comp=Z,1.0nm,0.9s
ALN Alexandroupoli 26.99 308 P **P** 21 26 21.9 +0.9
BRVK Borovoye 28.49 20 ⇓ *i* P **P** 21 26 34.2 0.0
BRVK pmax pmax
comp=Z,3.0nm,1.3s
BRVK Borovoye 28.49 20 P **P** 21 26 34.5 +0.3
BRVK IAmb IAmb 21 26 34.8
comp=Z,3.7nm,0.5s
BVAR Borovoye Array 28.50 21 P **P** 21 26 34.4 +0.1
comp=Z,3.3nm,0.6s,baz=204,slow=7.4,SNR=34
BVAR PcP **PcP** 21 29 46.1 +0.3
comp=Z,0.6nm,0.6s,baz=225,slow=1.3,SNR=4.6
ITM Ithomi 29.04 298 P **P** 21 26 39.1 -0.3
ITM IAmb IAmb 21 26 56.6
comp=Z,10nm,1.2s
MLR Muntele Rosu 29.04 317 P **P** 21 26 40.2 +0.8
comp=Z,0.6nm,0.6s,baz=132,slow=12,SNR=3.0
MLR Muntele Rosu 29.04 317 P **P** 21 26 39.6 +0.2
AGG Agios Georgios 29.13 302 P **P** 21 26 40.9 +0.8
AGG pmax pmax
comp=Z,1.0nm,0.8s
AGG Agios Georgios 29.13 302 P **P** 21 26 40.9 +0.8
MAKZ Makanchi 29.33 41 P **P** 21 26 40.8 -1.0
MAKZ pmax pmax
comp=Z,2.0nm,0.8s
MAKZ Makanchi 29.33 41 P **P** 21 26 40.8 -1.0
MAKZ IAmb IAmb 21 26 42.2
comp=Z,1.8nm,0.8s
MK31 Makanchi Array 29.50 41 P **P** 21 26 43.5 +0.1
MK31 pmax pmax
comp=Z,1.0nm,0.7s
MK31 Makanchi Array 29.50 41 P **P** 21 26 43.5 +0.1
MKAR Makanchi Array 29.50 41 *ce*P **P** 21 26 43.4 0.0
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 29.50 41 P **P** 21 26 43.0 -0.4
comp=Z,1.0nm,0.7s,baz=228,slow=8.0,SNR=9.8
MKAR Makanchi Array 29.50 41 P **P** 21 26 42.5 -0.8
KURBB Kurchatov Arra 29.84 32 P **P** 21 26 46.2 0.0
comp=Z,1.3nm,0.7s,baz=231,slow=8.8,SNR=7.4
KURBB PcP **PcP** 21 29 49.4 +0.2
comp=Z,0.5nm,0.7s,baz=221,slow=3.3,SNR=3.3
KURK Kurchatov 29.94 32 ⇓ *e*P **P** 21 26 47.3 +0.1
KURK pmax pmax
comp=Z,9.0nm,3.4s
KURK Kurchatov 29.94 32 **PcP** 21 29 49.4 0.0
AKASG Malin Array Be 30.28 328 P **P** 21 26 50.2 +0.1
comp=Z,0.1nm,0.3s,baz=135,slow=9.0,SNR=2.4
AKASG Malin Array Be 30.28 328 IAmb IAmb 21 26 50.5
comp=Z,0.8nm,1.1s
AKBB Malin Array Si 30.28 328 P **P** 21 26 48.8 -1.3
AKBB pmax pmax
comp=Z,3.0nm,1.0s
AKBB Malin Array Si 30.28 328 P **P** 21 26 48.8 -1.3
AKBB IAmb IAmb 21 26 54.6
comp=Z,2.5nm,1.0s
FNA Florina 30.30 305 P **P** 21 26 50.1 -0.5
FNA pmax pmax
comp=Z,3.0nm,1.0s
FNA Florina 30.30 305 P **P** 21 26 50.1 -0.5
FNA IAmb IAmb 21 27 03.1
comp=Z,3.3nm,1.0s
BURAR Bucovina Array 30.55 320 P **P** 21 26 53.3 +0.6
OBN Obninsk 30.78 340 *e*P **P** 21 26 54.2 -0.2
OBN *e* 21 27 55.0
OBN pmax pmax
comp=Z,3.0nm,0.9s
KOLS Kolonicke sedl 32.92 320 *e*P P 21 27 18.9 +5.5
KOLS Kolonicke sedl 32.92 320 *e*P P 21 27 18.9 +5.5
VYHS Vyhne 34.74 317 *e*P P 21 27 38.9 +10
VYHS Vyhne 34.74 317 *e*P P 21 27 38.9 +10
ZALV Zalesovo Beam 34.94 32 P **P** 21 27 30.6 -0.2
comp=Z,6.0nm,0.5s,baz=240,slow=9.5,SNR=36
NRCA Norcia 36.79 306 P **P** 21 27 47.8 +0.8
NRCA IAmb IAmb 21 28 02.5
comp=Z,5.9nm,1.1s
GERES GERESS Array B 38.02 316 P **P** 21 27 56.3 -1.1
GERES GERESS Array B 38.02 316 P **P** 21 27 56.3 -1.1
KHC Kasperske Hory 38.19 316 ⇓ *e*P **P** 21 27 59.2 +0.4
KHC Kasperske Hory 38.19 316 P **P** 21 27 59.5 +0.7
FINES FINESS Array B 39.16 339 P **P** 21 28 06.8 +0.2
comp=Z,1.6nm,0.5s,baz=143,slow=9.3,SNR=15
CLL Collm 39.32 319 *e*P **P** 21 28 08.0 -0.1
CLL *e* 21 28 28.0
CLL Collm 39.32 319 *e*P **P** 21 28 08.0 -0.1
CLL *e* 21 28 28.0
CLL *e*PP **PP** 21 29 39.0 +0.7
GTA Gaotai 39.59 60 ⇑ P **P** 21 28 11.3 +0.6
GTA pP pP 21 28 15.9 -0.6
GTA sP sP 21 28 18.3 -0.4
GTA pmax pmax
comp=Z,8.0nm,0.9s
GTA pmax pmax
comp=Z,170nm,6.2s
GTA LR LR
comp=N,190nm,15.9s
GTA LR LR
comp=E,200nm,17.1s
GTA LR LR
comp=Z,250nm,17.8s
FUORN Ofenpass-Fuorn 39.60 311 P **P** 21 28 11.8 +0.9
FUORN IAmb IAmb 21 28 12.0
comp=Z,3.1nm,1.1s
SENIN Lac Senin/Sane 41.55 310 P **P** 21 28 27.3 +0.4
BNI Bardonecchia 41.76 308 P **P** 21 28 28.0 -0.5
BNI pmax pmax
comp=Z,9.0nm,1.1s
BNI Bardonecchia 41.76 308 P **P** 21 28 28.0 -0.5
BNI IAmb IAmb 21 28 36.0
comp=Z,9.5nm,1.1s
CHTO Chiang Mai 41.77 92 P **P** 21 28 28.4 -0.4
CHTO pmax pmax
comp=Z,2.0nm,1.1s
CHTO Chiang Mai 41.77 92 P **P** 21 28 28.4 -0.4
CMAR Chiang Mai Arr 41.89 92 *ce*P **P** 21 28 30.0 +0.3
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR Chiang Mai Arr 41.89 92 P **P** 21 28 28.9 -0.8
comp=Z,0.6nm,0.7s,baz=284,slow=9.3,SNR=6.6
NC602 NORSAR Array S 44.20 331 P **P** 21 28 48.6 +0.7
NC405 NORSAR Array S 44.32 332 P **P** 21 28 48.6 -0.3
PBKT Sadao Pong 44.37 94 P **P** 21 28 50.4 +0.6
NB201 NORSAR Array S 44.47 332 P **P** 21 28 49.2 -0.9
NB201 IAmb IAmb 21 28 51.6
comp=Z,2.4nm,0.8s
NOA NORSAR Array B 44.49 332 P **P** 21 28 50.2 -0.2
comp=Z,0.6nm,0.6s,baz=123,slow=7.7,SNR=3.3
SONM Songino Array 45.24 48 P **P** 21 28 56.5 -0.1
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 45.24 48 P **P** 21 28 56.4 -0.2
comp=Z,1.9nm,0.9s,baz=271,slow=8.5,SNR=12
SONM Songino Array 45.24 48 P **P** 21 28 56.5 -0.1
ARCES ARCESS Array B 45.61 346 P **P** 21 28 59.7 +0.7
comp=Z,2.6nm,1.1s,baz=146,slow=8.8,SNR=9.9
ARCES ARCESS Array B 45.61 346 P **P** 21 28 59.4 +0.4
ULN Ulaanbaatar 45.68 49 ⇑ *e*P **P** 21 29 00.1 0.0
ULN pmax pmax
comp=Z,10.0nm,2.5s
ESDC Sonseca Array 49.42 300 P **P** 21 29 30.2 +1.0
comp=Z,0.4nm,0.4s,baz=65,slow=7.8,SNR=5.0
PAB San Pablo 49.73 300 P **P** 21 29 32.2 +0.7
PAB pmax pmax
comp=Z,7.0nm,1.1s
PAB San Pablo 49.73 300 P **P** 21 29 32.2 +0.7
TOA0 Torodi Ar. Sit 50.96 265 P **P** 21 29 41.8 +0.7
TOA0 IAmb IAmb 21 29 42.5
comp=Z,2.0nm,1.1s
TORD Torodi Ar. Bea 50.96 265 P **P** 21 29 42.1 +1.1
comp=Z,0.6nm,0.4s,baz=66,slow=7.8,SNR=10
BOD Bodaibo 51.40 36 *e*P **P** 21 29 42.1 -1.6
BOD pmax pmax
comp=Z,8.0nm,1.4s
LBTB Lobatse 58.78 211 P **P** 21 30 39.0 +1.5
LBTB pmax pmax
comp=Z,5.0nm,1.2s
LBTB Lobatse 58.78 211 P **P** 21 30 39.0 +1.5
DBIC Dimbokro 59.58 261 P **P** 21 30 44.4 +1.1
comp=Z,1.4nm,0.5s,baz=59,slow=6.6,SNR=4.4
DBIC Dimbokro 59.58 261 IAmb IAmb 21 30 48.9
comp=Z,4.0nm,1.1s
SSLB Suanglung 59.65 77 P **P** 21 30 42.3 -1.3
BOSA Boshof 62.05 209 P **P** 21 30 59.2 -0.6
comp=Z,1.4nm,0.7s,baz=27,slow=4.5,SNR=3.9
BOSA Boshof 62.05 209 IAmb IAmb 21 31 05.0
comp=Z,3.9nm,1.1s
USRK Ussuriysk Ar. 63.14 52 P **P** 21 31 06.0 -0.9
USRK Ussuriysk Ar. 63.14 52 P **P** 21 31 06.0 -0.9
ILULI Ilulissat 70.15 339 P **P** 21 31 52.2 +1.0
ILULI pmax pmax
comp=Z,40nm,1.0s
ILULI Ilulissat 70.15 339 P **P** 21 31 52.2 +1.0
BILL Bilibino 72.84 21 ⇓ *e*P **P** 21 32 08.1 +0.6
BILL *e* 21 32 25.1
BILL pmax pmax
comp=Z,4.0nm,1.2s
TOLK Toolik Lake Re 82.89 9 P **P** 21 33 04.0 +0.5
TOLK IAmb IAmb 21 33 21.0
comp=Z,1.2nm,0.9s
ANM Nome 83.50 16 P **P** 21 33 07.1 +0.5
ANM pmax pmax
comp=Z,3.0nm,1.0s
ANM Nome 83.50 16 P **P** 21 33 07.1 +0.5
ANM IAmb IAmb 21 33 12.3
comp=Z,2.8nm,1.0s
BMAR Burnt Mountain 84.65 7 P **P** 21 33 13.4 +0.9
IMAR Indian Mountai 84.71 11 P **P** 21 33 13.0 +0.3
ILAR Eielson Array 86.90 9 P **P** 21 33 23.4 -0.3
comp=Z,0.4nm,0.6s,baz=322,slow=4.3,SNR=6.6
YKA Yellowknife Ar 90.23 355 P **P** 21 33 39.8 +0.5
comp=Z,0.4nm,0.7s,baz=5.5,slow=5.2,SNR=8.7
HMT Hamilton 91.52 9 P **P** 21 33 42.6 -2.9
NIKH Nikolski High 91.82 24 P **P** 21 33 44.3 -2.7

TUL ***04*** *21:26:17.7±1.1, 35°.82N±0°.01×96°.94W±0°.02, h5km±1km, mb_Lg3.2/40(NEIC), Error ellipse: s-maj=3.4km s-min=2.6km az=162.0*
NEIC ***04*** *21:26:17.7±1.4, 35°.83N±0°.02×96°.93W±0°.02, h5km±1km, Error ellipse: s-maj=3.6km s-min=2.6km az=157.0*
ANF ***04*** *21:26:17.3±0.3, 35°.80N×96°.93W, h0km, ML3.7/8, Error ellipse: s-maj=3.2km s-min=2.4km az=162.0*
ISC 04 21:26:17.9±0.8, 35°.86N±0°.04×96°.96W±0°.03, h10km, n43, σ1§11/38, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	0.39	239		**Pg**	21 26 24.9	-0.7
OK001	**Jones High Sch**	0.40	223		**Pg**	21 26 25.0	-0.7
OKCFA	**Oklahoma City**	0.60	223		**Pg**	21 26 28.4	-1.0
OKCSW	**OKLAHOMA CITY**	0.60	221		**Pg**	21 26 28.6	-0.8
OKCSW				Sg	**Sg**	21 26 36.5	-0.8
FNO	**Franklin**	0.70	211		**Pg**	21 26 30.9	-0.5
FNO				Sg	**Sg**	21 26 40.6	+0.1
W35A	**Tecumseh**	0.70	175		**Pg**	21 26 30.0	-1.5
TUL1	**Leonard**	0.95	86		**Pg**	21 26 34.8	-1.3
TUL1				Sg	**Sg**	21 26 47.8	-0.6
TUL1	**Leonard**	0.95	86	P	**Pg**	21 26 34.8	-1.3
	baz=265						
TUL1				S	**Sg**	21 26 47.4	-0.9
	baz=265						
X34A	**Smith Ranch, M**	1.44	210		**Pn**	21 26 43.6	-0.4
X34A				IAmb_Lg		21 27 04.0	
	comp=Z,70nm,0.9s						
U32A	**Winter Ranch,**	1.74	288		**Pb**	21 26 49.1	-0.7
U32A				Sg	**Sg**	21 27 13.3	-0.4
X37A	**Clayton**	1.81	134		**Pn**	21 26 49.5	+0.4
WMOK	**Wichita Mounta**	1.86	234		**Pn**	21 26 50.3	+0.5
WMOK				Sg	**Sg**	21 27 17.1	-0.7
WMOK	**Wichita Mounta**	1.86	234	P	**Pn**	21 26 50.1	+0.2
	baz=54						
WMOK				S	**Sb**	21 27 15.3	-0.1
	baz=54						
HHAR	**Hobbs**	2.48	79		**Pn**	21 26 59.5	+1.2
W39A	**Magazine**	2.67	103	IAmb_Lg		21 27 48.0	
	comp=Z,113nm,1.0s						
W39A	**Magazine**	2.67	103	P	**Pn**	21 27 01.5	+0.6
	baz=284						
W39A				S	**Sn**	21 27 34.5	+1.2
	baz=284						
MIAR	**Mount Ida**	3.06	114		**Pn**	21 27 06.9	+0.6
MIAR	**Mount Ida**	3.06	114	P	**Pn**	21 27 07.1	+0.9
	baz=296						
MIAR				S	**Sn**	21 27 44.4	+1.5
	baz=296						
KSU1	**Kansas State U**	3.25	5	P	**Pn**	21 27 10.0	+1.1
	baz=185						
KSU1				Sb	**Sg**	21 28 00.7	-1.6
	baz=185						
U40A	**Yellville**	3.36	80		**Pn**	21 27 11.1	+0.6
X40A	**Basin Creek Fa**	3.64	111		**Pn**	21 27 15.2	+1.0
X40A				IAmb_Lg		21 28 16.6	
	comp=Z,84nm,0.8s						
X40A	**Basin Creek Fa**	3.64	111	P	**Pn**	21 27 15.0	+0.7
	baz=293						
WLAR	**White Oak Lake**	3.83	123	IAmb_Lg		21 28 25.3	
	comp=Z,38nm,0.8s						
WHAR	**Wooly Hollow**	3.84	97		**Pn**	21 27 17.5	+0.4
WHAR				IAmb_Lg		21 28 24.4	
	comp=Z,38nm,0.8s						
WHTX	**Lake Whitney,**	3.88	186	Sb	**Sb**	21 28 14.6	+1.3
	baz=6.2						
W41B	**Gary Mavity, V**	3.90	99	P	**Pn**	21 27 18.1	+0.3
	baz=281						
W41B				S	**Sn**	21 28 04.4	+0.7
	baz=281						
UALR	**University of**	3.92	105	Pn	**Pn**	21 27 18.8	+0.7
UALR				IAmb_Lg		21 28 26.5	
	comp=Z,63nm,1.0s						
FCAR	**Ozark Folk Cen**	3.92	88		**Pn**	21 27 18.3	+0.2
AMTX	**Amarillo**	3.98	257	IAmb_Lg		21 28 33.6	
	comp=Z,47nm,0.8s						
MGMO	**Mountain Grove**	3.99	70	IAmb_Lg		21 28 26.7	
	comp=Z,32nm,0.7s						
435B	**Jarrell**	5.09	186	IAmb_Lg		21 29 03.9	
	comp=Z,35nm,1.1s						
PBMO	**Poplar Bluff**	5.35	78	IAmb_Lg		21 29 09.4	
	comp=Z,43nm,0.8s						
KSCO	**Kaye Shedlock'**	5.50	307		**Pn**	21 27 44.0	+3.9
KSCO				IAmb_Lg		21 29 25.6	
	comp=Z,29nm,0.8s						
SLM	**Saint Louis**	6.04	61	IAmb_Lg		21 29 27.3	
	comp=Z,44nm,0.9s						
T25A	**Trinidad**	6.14	284	IAmb_Lg		21 29 39.0	
	comp=Z,44nm,1.0s						
OXF	**Oxford**	6.32	100	IAmb_Lg		21 29 52.8	
	comp=Z,18nm,0.8s						
S44A	**Carbondale**	6.45	71	IAmb_Lg		21 29 46.9	
	comp=Z,35nm,0.8s						
SDCO	**Great Sand Dun**	7.11	288	IAmb_Lg		21 30 14.6	
	comp=Z,13nm,1.3s						
USIN	**University of**	7.73	71	IAmb_Lg		21 30 24.9	
	comp=Z,29nm,0.8s						
O44A	**Mansfield**	7.96	55	IAmb_Lg		21 30 37.3	
	comp=Z,32nm,0.8s						
P46A	**Rosedale**	8.59	61	IAmb_Lg		21 30 54.0	
	comp=Z,27nm,0.7s						
N23A	**Red Feather La**	8.67	308	IAmb_Lg		21 31 07.5	
	comp=Z,22nm,1.0s						
MVCO	**Mesa Verde**	9.39	282	IAmb_Lg		21 31 40.1	
	comp=Z,11nm,1.2s						

TEH ***04*** *21:27:31.9, 34°.53N×45°.63E, h10km, ML2.7*
ISN ***04*** *21:27:32.0±0.7, 34°.52N×45°.65E, h14km±4km, ML2.7*
ISC 04 21:27:32.0±1.3, 34°.52N±0°.04×45°.64E±0°.04, h4km±12km,

n9, σ0^{s}**81**/15**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.64**	**73**	*e*Pg	**Pg**	**21 27 44.8**	**+0.5**
IDHR				*e*		21 27 58.6	
IGHG	**Ghaleghazi**	**0.79**	**104**	*e*Pg	**Pb**	**21 27 47.7**	**-0.7**
IGHG				*e*		21 28 03.9	
	comp=N,7μm,0.3s						
IVIS	**Veis**	**1.00**	**89**	*e*Pn	**Pb**	**21 27 51.3**	**-0.6**
IVIS				*e*Sg	**Sn**	**21 28 06.3**	**-1.2**
IVIS				*e*		21 28 11.0	
IKRK	**Kirkuk**	**1.39**	**310**	*e*Pg	**Pb**	**21 27 58.0**	**-0.5**
IKRK				*e*Sg	**Sg**	**21 28 16.0**	**-0.5**
IBDR	**Badra**	**1.43**	**170**	*e*Pn	**Pg**	**21 27 59.0**	**-0.3**
IBDR				*e*Sn	**Sg**	**21 28 19.0**	**+1.2**
IKOM	**Komasi**	**1.58**	**102**	*e*Pn	**Pb**	**21 28 01.5**	**-0.5**
IKOM				*e*		21 28 29.4	
BHD	**Baghdad**	**1.63**	**220**	*e*Pn	**Pb**	**21 28 02.0**	**-0.7**
BHD				*e*Sn	**Sg**	**21 28 24.0**	**-0.4**
MSL	**Mosul**	**2.79**	**313**	*e*Pn	**Pn**	**21 28 18.0**	**+0.5**
MSL				*e*Sn	**Sn**	**21 28 52.5**	**+0.8**
NSR	**Nassriya**	**3.52**	**173**	*e*Pn	**Pn**	**21 28 28.5**	**+0.9**
NSR				*e*Sn	**Sn**	**21 29 09.5**	**-0.2**

*IDC **04** 21:29:15.8±4.7, 17°.76S×178°.30W, h633*km*±61*km*, mb3.2/9, mb1 3.5/10, mb1mx3.2/32, mbtmp4.2/10, Error ellipse: s-maj=72.4km s-min=21.3km az=151.0*

*NEIC **04** 21:29:15.7±2.1, 18°.1S±0°.1×178°.1W±0°.1, h647*km*±9*km*, mb4.2/33, Error ellipse: s-maj=21.6km s-min=15.4km az=131.0*

ISC 04 21:29:12.0±0.6**, 18°.1S**±0°.1×**178°.0W**±0°.1**, h600**km**, n52,** σ1^{s}**35**/49**, mb4.1**/23**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.80**	**275**	P	P	21 30 42.0	+5.8
DZM	**Mont Dzumac**	**15.16**	**252**	P	**P**	**21 32 23.6**	**+1.8**
	0.4nm,0.3s,baz=85,slow=18,SNR=6.4						
DZM	**Mont Dzumac**	**15.16**	**252**	P	**P**	**21 32 23.2**	**+1.4**
KNTN	**Kanton**	**16.41**	**23**	P	**P**	**21 32 34.1**	**+0.8**
OUZ	**Omahuta**	**18.63**	**202**	P	**P**	**21 32 55.2**	**+1.9**
OUZ				IAmb	IAmb	21 32 56.5	
	comp=Z,18nm,1.1s						
HIZ	**Hauiti**	**21.29**	**196**		**S**	**21 36 31.3**	**-3.4**
SNZO	**South Karori**	**23.98**	**194**	P	**P**	**21 33 44.9**	**+3.9**
QRZ	**Quartz Range**	**24.08**	**198**	P	**P**	**21 33 42.6**	**+0.6**
LTZ	**Lake Taylor**	**25.97**	**197**	P	**P**	**21 33 59.9**	**+0.3**
MLZ	**Mavora Lakes**	**29.56**	**200**	P	**P**	**21 34 30.1**	**+0.3**
MLZ				IAmb	IAmb	21 34 34.8	
	comp=Z,4.5nm,0.8s						
EIDS	**Eidsvold**	**29.59**	**250**	P	**P**	**21 34 30.7**	**+0.4**
EIDS				IAmb	IAmb	21 34 43.8	
	comp=Z,7.6nm,1.0s						
ARMA	**Armidale**	**30.20**	**240**	P	**P**	**21 34 36.8**	**+1.1**
ARMA				IAmb	IAmb	21 34 41.6	
	comp=Z,7.0nm,1.1s						
CAN	**Canberra**	**33.92**	**233**	P	**P**	**21 35 07.7**	**+0.7**
CAN				IAmb	IAmb	21 35 11.9	
	comp=Z,10nm,1.1s						
TOO	**Toolangi**	**37.37**	**231**	P	**P**	**21 35 36.2**	**+0.8**
TOO				IAmb	IAmb	21 35 43.7	
	comp=Z,9.4nm,1.1s						
COEN	**Coen**	**37.51**	**271**	P	**P**	**21 35 38.2**	**+1.4**
STKA	**Stephens Creek**	**38.90**	**241**	P	**P**	**21 35 48.5**	**+0.8**
	comp=Z,2.4nm,0.5s,baz=92,slow=12,SNR=8.7						
STKA	**Stephens Creek**	**38.90**	**241**	IAmb	IAmb	21 35 49.0	
	comp=Z,0.8nm,0.7s						
WRA	**Warramunga Arr**	**45.00**	**260**	P	**P**	**21 36 35.5**	**-0.3**
	comp=Z,4.3nm,0.4s,baz=97,slow=6.8,SNR=113						
WRA	**Warramunga Arr**	**45.00**	**260**	P	**P**	**21 36 35.4**	**-0.3**
AS31	**Alice Springs**	**45.13**	**254**	P	**P**	**21 36 36.9**	**+0.2**
ASAR	**Alice Springs**	**45.13**	**254**	P	**P**	**21 36 36.8**	**+0.1**
	comp=Z,12nm,0.7s,baz=91,slow=7.9,SNR=196						
ASAR				PcP	**PcP**	**21 38 03.7**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=117,slow=3.7,SNR=3.8						
ASAR	**Alice Springs**	**45.13**	**254**	P	**P**	**21 36 36.3**	**-0.4**
FORT	**Forrest**	**50.30**	**245**	P	**P**	**21 37 14.3**	**-0.7**
KNRA	**Kununurra**	**50.88**	**264**	P	**P**	**21 37 19.1**	**-0.3**
KNRA				IAmb	IAmb	21 37 19.9	
	comp=Z,12nm,0.9s						
FAKI	**Fak Fak**	**51.01**	**281**	P	**P**	**21 37 20.9**	**+0.5**
FITZ	**Fitzroy Crossi**	**53.40**	**261**	P	**P**	**21 37 37.6**	**+0.2**
SOEI	**Soe**	**56.48**	**270**		pP	21 39 52.2	-0.5
PSA00	**Pilbara Seismi**	**58.26**	**255**	P	**P**	**21 38 10.1**	**-0.7**
PSA00				IAmb	IAmb	21 38 11.7	
	comp=Z,10nm,1.1s						
MMRI	**Maumere**	**58.71**	**271**	P	**P**	**21 38 12.0**	**-1.9**
MMRI				IAmb	IAmb	21 38 18.8	
	comp=Z,17nm,0.7s						
NWAO	**Narrogin (SRO)**	**59.48**	**242**	P	**P**	**21 38 17.5**	**-1.3**
NWAO				IAmb	IAmb	21 38 24.1	
	comp=Z,14nm,1.1s						
NWAO	**Narrogin (SRO)**	**59.48**	**242**	P	**P**	**21 38 17.9**	**-0.9**
NWAO				IAmb	IAmb	21 38 24.1	
	comp=Z,18nm,1.1s						
VNDA	**Vanda**	**60.30**	**185**	P	**P**	**21 38 23.2**	**-0.2**
MORW	**Morawa**	**60.78**	**246**	P	**P**	**21 38 26.7**	**-0.7**
MORW				IAmb	IAmb	21 38 32.9	
	comp=Z,12nm,1.1s						
JAGI	**Jajag, Banyuwa**	**66.44**	**268**	P	**P**	**21 39 01.9**	**-1.8**
JAGI				IAmb	IAmb	21 39 03.0	
	comp=Z,13nm,0.9s						
QSPA	**South Pole Qui**	**71.96**	**180**	P	**P**	**21 39 35.7**	**-0.1**
YBH	**Yreka Blue Hor**	**78.41**	**39**	P	**P**	**21 40 12.8**	**+0.9**
	comp=Z,0.8nm,0.5s,baz=281,slow=5.2,SNR=4.1						
YBH	**Yreka Blue Hor**	**78.41**	**39**	P	**P**	**21 40 13.1**	**+1.1**
VCNR	**Virginia City**	**78.88**	**42**		pP	21 42 27.4	+8.1
NVAR	**Mina Array Bea**	**79.27**	**44**	P	**P**	**21 40 17.8**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=229,slow=9.7,SNR=5.1						
DHAK	**Deception Hill**	**83.51**	**19**	P	**P**	**21 40 35.1**	**-2.5**
GLB	**Gilahina Butte**	**83.83**	**16**	P	**P**	**21 40 39.3**	**+0.1**
GLB				IAmb	IAmb	21 40 40.0	
	comp=Z,4.7nm,0.8s						
BALM	**Baldy**	**83.88**	**17**	P	**P**	**21 40 36.0**	**-3.4**
BALM				PcP	**PcP**	**21 40 39.8**	**-2.2**
BALM				IAmb	IAmb	21 40 43.8	
	comp=Z,5.2nm,1.1s						
TRF	**Thorofare Moun**	**84.10**	**12**	P	**P**	**21 40 40.4**	**-0.2**
RND	**Reindeer**	**84.36**	**13**		**P**	**21 40 42.2**	**+0.4**
RND				IAmb	IAmb	21 40 42.4	
	comp=Z,4.7nm,0.9s						
DHY	**Denali Highway**	**84.38**	**13**		**P**	**21 40 41.6**	**-0.3**
GSI	**Gunungsitoli**	**85.12**	**273**		pP	21 43 02.7	+8.6
TXAR	**Lajitas Array**	**85.75**	**57**	P	**P**	**21 40 50.7**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=215,slow=6.1,SNR=13						
IL31		**85.97**	**13**		**P**	**21 40 48.8**	**-0.5**
ILAR	**Eielson Array**	**85.97**	**13**	P	**P**	**21 40 48.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=220,slow=4.8,SNR=13						
PDAR	**Pinedale Array**	**87.20**	**43**	P	**P**	**21 40 56.3**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=196,slow=4.4,SNR=6.5						
YKA	**Yellowknife Ar**	**94.33**	**25**	P	**P**	**21 41 27.7**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=245,slow=4.6						
GERES	**GERESS Array B**	**147.89**	**345**	PKPbc	**PKPbc**	**21 47 50.2**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=28,slow=4.4,SNR=3.0						

*IDC **04** 21:43:33.1±1.3, 13°.65S×111°.44W, h0*km*, mb3.9/7, mb1 4.3/7, mb1mx4.1/22, mbtmp3.9/7, MS4.4/16, Ms1 4.3/16, ms1mx4.3/19, Error ellipse: s-maj=53.5km s-min=21.7km az=57.0*

*GCMT **04** 21:43:39.0±0.2, 13°.49S±0°.01×111°.35W±0°.01, h18*km*, MW5.2/132, Moment Tensor Solution. s77,c96; s132,c201; Duration: 1^{s}0 Moment tensor: Scale 10^{16} Nm; M$_{rr}$-1.26±.15; M$_{\theta\theta}$2.89±.15; M$_{\phi\phi}$-1.63±.15; M$_{r\theta}$-0.59±.32; M$_{r\phi}$6.99±.13; M$_{\theta\phi}$-1.27±.34; Best double couple: M$_{0}$7.46900×10^{16} NP1:ϕ_{s}279.00000°,δ80.00000°, λ.0.00000°. NP2:ϕ_{s}189.00000°,δ90.00000°,λ170.00000°. Principal axes: T 8.1360, Plg7.0000°, Azm144.0000°; N -1.3350, Plg80.0000°, Azm8.0000°; P -6.8010, Plg7.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 04 21:43:34.8±0.8**, 13°.6S**±0°.1×**111°.4W**±0°.1**, h11**km**, n28,** σ0^{s}**94**/**11, mb4.0**/7**, MS4.5**/19**, Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.58**	**172**	LR	LR	21 50 44.4	
	comp=Z,3μm,18.1s,baz=12,slow=32						
TAOE	**Nuku Hiva Isla**	**28.58**	**276**	*e*LR	LR	21 56 15.7	
	comp=Z,610nm,23.2s						
PPT	**Papeete**	**36.94**	**259**	LR	LR	21 59 48.0	
	comp=Z,141nm,21.9s,baz=80,slow=26						
PPT2	**Papeete2**	**36.94**	**259**	*e*S	**S**	**21 56 29.6**	**-0.1**
	346nm,25.2s						
PPT2				*e*LQ	LQ	21 59 27.4	
	2μm,30.8s						
PPT2				*e*LR	LR	22 00 38.0	
	comp=Z,1μm,27.8s,baz=90						
TBI	**Tubuai**	**37.28**	**249**	*e*S	**S**	**21 56 35.0**	**+0.5**
	184nm,27.7s						
TBI				*e*LQ	LQ	21 59 22.6	
	997nm,32.2s						
TBI				*e*LR	LR	22 00 55.7	
	comp=Z,2μm,27.5s,baz=80						
TBI	**Tubuai**	**37.28**	**249**	*e*T	T	22 30 08.0	
	4.4nm,0.3s						
ROSC	**El Rosal**	**41.12**	**66**	LR	LR	22 04 28.0	
	comp=Z,441nm,22.0s,baz=244,slow=30						
LPAZ	**La Paz**	**41.83**	**99**	P	**P**	**21 51 26.1**	**+0.3**
	3.8nm,0.7s,baz=281,slow=6.7,SNR=3.6						
LPAZ				LR	LR	22 04 36.6	
	comp=Z,309nm,21.4s,baz=260,slow=30						
TXAR	**Lajitas Array**	**43.35**	**10**	P	**P**	**21 51 37.5**	**+0.2**
	1.6nm,1.1s,baz=200,slow=11,SNR=3.5						
TXAR				LR	LR	22 06 21.2	
	comp=Z,278nm,18.6s,baz=0.0,slow=32						
CFA	**Coronel Fontan**	**43.35**	**122**	P	**P**	**21 51 37.0**	**-0.4**
	1.4nm,0.4s,baz=246,slow=10.0,SNR=4.6						
PLCA	**Paso Flores**	**44.69**	**135**	P	**P**	**21 51 48.4**	**+0.4**
	2.2nm,0.9s,baz=318,slow=7.8,SNR=3.8						
CPUP	**Villa Florida**	**52.03**	**113**	LR	LR	22 10 26.9	
	comp=Z,576nm,21.9s,baz=277,slow=31						
NVAR	**Mina Array Bea**	**52.17**	**353**	P	**P**	**21 52 46.5**	**+0.7**
	0.6nm,0.5s,baz=182,slow=10,SNR=4.9						
NVAR				LR	LR	22 09 42.9	
	comp=Z,599nm,21.8s,baz=158,slow=30						
PDAR	**Pinedale Array**	**56.13**	**2**	P	**P**	**21 53 14.5**	**-0.1**
	1.5nm,0.8s,baz=168,slow=9.1,SNR=3.6						
PDAR				LR	LR	22 13 09.6	
	comp=Z,405nm,19.9s,baz=188,slow=32						
BDFB	**Brasilia**	**61.16**	**100**	LR	LR	22 17 38.3	
	comp=Z,142nm,20.0s,baz=300,slow=33						
ULM	**Lac du Bonnet**	**65.04**	**11**	LR	LR	22 19 41.3	
	comp=Z,225nm,18.0s,baz=194,slow=33						
YKA	**Yellowknife Ar**	**75.91**	**358**	P	**P**	**21 55 21.6**	**+0.5**
	1.1nm,0.9s,baz=173,slow=5.4,SNR=9.9						
YKA				LR	LR	22 25 49.8	
	comp=Z,61nm,18.2s,baz=178,slow=33						
DZM	**Mont Dzumac**	**77.85**	**250**	*e*LR	LR	22 19 41.9	
	comp=Z,573nm,29.3s						
SCHQ	**Schefferville**	**77.88**	**25**	LR	LR	22 28 17.9	
	comp=Z,362nm,20.6s,baz=142,slow=34						
ILAR	**Eielson Array**	**82.65**	**345**	LR	LR	22 25 20.2	
	comp=Z,153nm,19.2s,baz=138,slow=30						
INK	**Inuvik**	**83.24**	**352**	LR	LR	22 28 25.6	
	comp=Z,336nm,18.9s,baz=128,slow=32						
H11S2	**WAKE ISLAND Hy**	**86.77**	**290**	T	T	23 32 16.7	
	baz=106,slow=75						
H11S1	**WAKE ISLAND Hy**	**86.78**	**290**	T	T	23 32 18.1	
	baz=106,slow=75						
H11S3	**WAKE ISLAND Hy**	**86.79**	**290**	T	T	23 32 17.8	
	baz=106,slow=75						
STKA	**Stephens Creek**	**96.83**	**235**	LR	LR	22 32 39.9	
	comp=Z,215nm,21.6s,baz=49,slow=30						
MAW	**Mawson**	**98.89**	**178**	LR	LR	22 37 46.9	
	comp=Z,232nm,19.1s,baz=122,slow=33						
MKAR	**Makanchi Array**	**144.99**	**344**	PKPbc	**PKPab**	**22 03 09.3**	**-2.4**
	0.4nm,0.6s,baz=324,slow=2.0,SNR=4.3						
CMAR	**Chiang Mai Arr**	**150.47**	**283**	PKPbc	**PKPbc**	**22 03 27.7**	**+0.1**
	0.6nm,0.3s,baz=101,slow=2.9,SNR=6.3						

*IDC **04** 22:02:58.7±0.8, 1°.10N×125°.73E, h0*km*, mb3.8/8, mb1 4.0/9, mb1mx3.7/40, mbtmp3.8/9, ML3.8/1, MS3.4/4, Ms1 3.4/4, ms1mx2.8/36, Error ellipse: s-maj=64.0km s-min=14.8km az=75.0*

*DJA **04** 22:03:03.0±0.2, 1°.N±2°×12°.6E±°, h10*km*, M4.0/11, mB4.7/2, mb4.3/2, MLv3.9/11, Mw(mB)4.0/2*

*NEIC **04** 22:03:06.5±1.4, 1°.14N±0°.08×126°.32E±0°.07, h62*km*±6*km*, mb4.4/16, Error ellipse: s-maj=12.1km s-min=9.7km az=173.0*

ISC 04 22:03:06.0±0.5**, 1°.28N**±0°.06×**126°.24E**±0°.05**, h54**km**, n46,** σ1^{s}**27**/46**, mb4.2**/17**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.24**	**114**	P	**Pn**	**22 03 25.6**	**-1.4**
TNTI				S	**Sn**	**22 03 44.2**	**+1.5**
TNTI	**Ternate**	**1.24**	**114**	Pn	**Pn**	**22 03 25.6**	**-1.4**
LBMI	**Labuha**	**2.29**	**146**	P	**Pn**	**22 03 41.5**	**+0.2**
LBMI				S	**Sn**	**22 04 11.0**	**+2.7**
KMSI	**Cibinong**	**2.36**	**253**	P	**Pn**	**22 03 41.3**	**-1.0**
SANI	**Sanana**	**3.31**	**184**	P	**Pn**	**22 03 56.4**	**+1.0**
SANI				S	**Sn**	**22 04 35.9**	**+2.3**
LUWI	**Luwuk**	**4.16**	**236**	P	**Pn**	**22 03 57.6**	**+0.6**
LUWI				S	**Sn**	**22 04 57.0**	**+2.7**
LUWI	**Luwuk**	**4.16**	**236**	Pn	**Pn**	**22 04 07.3**	**+0.3**
MRSI	**Marisa**	**4.37**	**260**	P	**Pn**	**22 04 09.4**	**-0.4**
APSI	**Ampana**	**5.08**	**245**	P	**Pn**	**22 04 18.5**	**-1.0**
	0.2nm586nm50nm,0.5s						
SWI	**Sorong**	**5.46**	**113**	P	**Pn**	**22 04 24.8**	**0.0**
FAKI	**Fak Fak**	**7.32**	**125**	Pn	**Pn**	**22 04 50.5**	**+0.3**
KAPI	**Kappang**	**9.00**	**226**	Pn	**Pn**	**22 05 13.4**	**+0.1**
KNRA	**Kununurra**	**17.03**	**172**		**Pn**	**22 06 59.4**	**-1.1**
FITZ	**Fitzroy Crossi**	**19.26**	**182**	P	**P**	**22 07 24.7**	**-1.5**
	0.2nm,0.3s,baz=13,slow=13,SNR=4.3						
FITZ	**Fitzroy Crossi**	**19.26**	**182**	P	**P**	**22 07 25.0**	**-1.2**
WRA	**Warramunga Arr**	**22.54**	**162**	P	**P**	**22 07 60.0**	**-1.6**
	1.8nm,0.3s,baz=340,slow=11,SNR=32						
WRA	**Warramunga Arr**	**22.54**	**160**	P	**P**	**22 08 00.5**	**-1.1**
PSAB3	**Pilbara Seismi**	**23.57**	**195**	P	**P**	**22 08 10.3**	**-1.5**
PSAB3				IAmb	IAmb	22 08 11.9	
	comp=Z,6.1nm,0.9s						
PSAC3	**Pilbara Seismi**	**23.61**	**195**	P	**P**	**22 08 11.1**	**-1.1**
PSAC3				IAmb	IAmb	22 08 22.3	
	comp=Z,10nm,1.1s						
IPM	**Ipoh**	**25.37**	**278**	P	**P**	**22 08 28.8**	**+0.4**
IPM				IAmb	IAmb	22 08 42.3	
	comp=Z,8.4nm,1.1s						
AS31	**Alice Springs**	**25.89**	**164**	P	**P**	**22 08 33.0**	**0.0**
ASAR	**Alice Springs**	**25.89**	**164**	P	**P**	**22 08 32.3**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=344,slow=10,SNR=20						
ASAR				PcP	**PcP**	**22 12 01.5**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=351,slow=2.8,SNR=6.9						
ASAR	**Alice Springs**	**25.89**	**164**	P	**P**	**22 08 34.2**	**+1.2**
KRVT	**Keravat (AS076**	**26.36**	**102**	LR	LR	22 19 14.4	
	comp=Z,53nm,18.2s,baz=102,slow=36						
JCJ	**Chichijima**	**29.89**	**29**	LR	LR	22 22 54.4	
	comp=Z,12nm,18.1s,baz=329,slow=40						
FORT	**Forrest**	**31.93**	**177**	P	**P**	**22 09 25.0**	**-1.5**
FORT				IAmb	IAmb	22 09 39.4	
	comp=Z,24nm,0.9s						
BBOO	**Buckleboo**	**35.15**	**166**	P	P	22 09 49.5	-5.2
BBOO				IAmb	IAmb	22 10 04.3	
	comp=Z,14nm,1.1s						
KSRS	**Korea Array**	**36.03**	**2**	P	**P**	**22 10 03.8**	**+1.8**
	comp=Z,0.8nm,0.7s,baz=186,slow=11,SNR=3.3						
STKA	**Stephens Creek**	**36.05**	**157**	P	**P**	**22 10 02.4**	**0.0**
	comp=Z,2.4nm,0.7s,baz=354,slow=9.2,SNR=3.7						
USA0B	**Ussuriysk Arra**	**43.04**	**6**	P	**P**	**22 11 02.3**	**+2.0**
USA0B				IAmb	IAmb	22 11 14.8	
	comp=Z,4.9nm,1.1s						
USRK	**Ussuriysk Ar.**	**43.04**	**6**	P	**P**	**22 11 02.0**	**+1.7**
	comp=Z,1.2nm,0.5s,baz=173,slow=5.3,SNR=5.1						
USRK	**Ussuriysk Ar.**	**43.04**	**6**	P	**P**	**22 11 02.3**	**+2.0**
SONM	**Songino Array**	**49.46**	**342**	P	**P**	**22 11 50.4**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=149,slow=6.7,SNR=3.4						
PETK	**Petropavlovsk-**	**57.87**	**22**	LR	LR	22 34 17.1	
	comp=Z,134nm,21.7s,baz=61,slow=32						
MKAR	**Makanchi Array**	**59.29**	**326**	P	**P**	**22 13 01.2**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=120,slow=7.4,SNR=14						
THZ	**Tophouse**	**60.10**	**141**	P	**P**	**22 13 06.5**	**-1.4**
ZALV	**Zalesovo Beam**	**62.55**	**334**	P	**P**	**22 13 23.7**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=117,slow=6.2,SNR=3.3						
GAR	**Garm**	**63.23**	**314**	P	**P**	**22 13 28.9**	**-0.2**
GAR				IAmb	IAmb	22 13 42.5	
	comp=Z,1.7nm,0.8s						
KURK	**Kurchatov**	**63.54**	**328**	P	**P**	**22 13 31.7**	**+0.9**
KURK				IAmb	IAmb	22 13 32.1	
	comp=Z,3.1nm,1.0s						
ABKAR	**Akbulak array**	**73.73**	**321**	P	**P**	**22 14 34.8**	**+0.5**
ABKAR	**Akbulak array**	**73.73**	**321**	P	**P**	**22 14 35.0**	**+0.7**
RSO	**Redoubt South**	**84.45**	**29**	P	**P**	**22 15 31.6**	**-1.4**
TGL	**Tana Glacier**	**89.35**	**29**	P	**P**	**22 15 57.8**	**+1.2**
BALM	**Baldy**	**89.58**	**29**	P	**P**	**22 15 58.1**	**+0.5**
BALM				IAmb	IAmb	22 16 03.7	
	comp=Z,10nm,1.1s						
BRTR	**Keskin Array B**	**91.19**	**310**	LR	LR	23 02 46.8	
	comp=Z,38nm,19.1s,baz=296,slow=40						
BESE	**Bessie Mountai**	**93.57**	**31**	P	**P**	**22 16 16.0**	**-0.1**

*IDC **04** 22:13:04.4±1.0, 37°.47N×141°.50E, h0*km*, mb3.5/9, mb1 3.6/10, mb1mx3.5/37, mbtmp3.4/10, ML2.3/1, MS3.9/1, Ms1 3.9/1, ms1mx2.4/39, Error ellipse: s-maj=23.7km s-min=22.6km az=127.0*

*JMA **04** 22:13:05.2±0.2, 36°.78N×141°.67E, h51*km*±3*km*, M3.4*

ISC 04 22:13:04.8±2.6**, 36°.79N**±0°.07×**141°.71E**±0°.10**, h24**km**±16**km**, n29,** σ1^{s}**10**/25**, mb3.5**/9**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.79**	**293**	P	**Pb**	**22 13 19.9**	**0.0**
JFK	**Kawauchi**	**0.88**	**311**	P	**Pn**	**22 13 21.1**	**-0.6**
JHO	**Hitachi**	**0.93**	**259**	P	**Pn**	**22 13 21.5**	**-0.9**
JFFD	**Fukushimafurud**	**0.97**	**288**	P	**Pn**	**22 13 22.3**	**-0.6**
JHYU	**Hitachinakayam**	**1.01**	**244**	P	**Pn**	**22 13 22.8**	**-0.6**
JHYU				*e*S	**Sn**	**22 13 35.6**	**-1.2**
JMM	**Marumori**	**1.29**	**326**	P	**Pn**	**22 13 27.2**	**-0.2**
JMM				*e*S	**Sn**	**22 13 43.4**	**-0.5**
JFT	**Otama**	**1.31**	**304**	P	**Pn**	**22 13 28.4**	**+0.8**
JIO	**Ouri**	**1.68**	**350**	P	**Pn**	**22 13 32.6**	**-0.1**
JIO				S	**Sn**	**22 13 52.5**	**-0.9**
JOU	**Okura**	**1.77**	**332**	P	**Pn**	**22 13 35.2**	**+1.2**
JAG	**Ashikaga**	**1.85**	**259**	P	**Pn**	**22 13 35.1**	**+0.1**
JMK	**Ichinoseki**	**2.19**	**350**	P	**Pn**	**22 13 40.5**	**+0.9**
MJAR	**Matsushiro Arr**	**2.83**	**266**	Pn	**Pn**	**22 13 49.6**	**+1.2**
	0.5nm,0.3s,baz=84,slow=16,SNR=34						
MJAR				Sn	**Sn**	**22 14 24.1**	**+2.4**
	0.5nm,0.3s,baz=106,slow=15,SNR=12						
MAT	**Matsushiro**	**2.83**	**266**	P	**Pn**	**22 13 49.8**	**+1.4**
MAT				S	**Sn**	**22 14 23.6**	**+1.9**
H11N2	**WAKE ISLAND Hy**	**27.82**	**121**	T	T	22 48 05.5	
	baz=313,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**27.83**	**121**	T	T	22 48 17.4	
	baz=313,slow=75,SNR=8.6						
H11N3	**WAKE ISLAND Hy**	**27.84**	**121**	T	T	22 48 10.8	
	baz=313,slow=75,SNR=8.7						
SONM	**Songino Array**	**28.11**	**304**	P	**P**	**22 18 53.7**	**-1.1**
	0.6nm,0.6s,baz=95,slow=8.5,SNR=4.3						
H11S1	**WAKE ISLAND Hy**	**28.53**	**123**	T	T	22 49 03.1	
	baz=315,slow=76,SNR=5.7						
H11S3	**WAKE ISLAND Hy**	**28.53**	**123**	T	T	22 48 58.8	
	baz=315,slow=76,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**28.55**	**123**	T	T	22 49 04.6	
	baz=315,slow=76,SNR=5.3						
ZALV	**Zalesovo Beam**	**42.25**	**313**	P	**P**	**22 20 54.7**	**-1.2**
	0.3nm,0.3s,baz=120,slow=8.5,SNR=2.8						
MKAR	**Makanchi Array**	**44.45**	**302**	P	**P**	**22 21 13.9**	**+0.1**
	0.4nm,0.8s,baz=88,slow=8.6,SNR=4.9						
FITZ	**Fitzroy Crossi**	**56.66**	**198**	LR	LR	22 47 23.8	
	comp=Z,90nm,18.3s,baz=128,slow=36						
WRA	**Warramunga Arr**	**56.86**	**188**	P	P	22 22 55.0	+7.5
	0.8nm,1.0s,baz=2.3,slow=7.5,SNR=4.4						
ASAR	**Alice Springs**	**60.58**	**188**	P	P	22 23 22.0	+8.6
	0.2nm,0.8s,baz=7.4,slow=8.6,SNR=4.2						
YKA	**Yellowknife Ar**	**63.90**	**30**	P	**P**	**22 23 35.5**	**+0.4**
	0.3nm,0.9s,baz=301,slow=7.0,SNR=3.7						
AKASG	**Malin Array Be**	**74.63**	**322**	P	**P**	**22 24 41.6**	**-0.2**
	0.2nm,0.3s,baz=45,slow=6.3,SNR=4.1						
NVAR	**Mina Array Bea**	**74.94**	**53**	P	**P**	**22 24 45.8**	**+1.6**
	0.4nm,0.6s,baz=302,slow=5.2,SNR=3.3						
BRTR	**Keskin Array B**	**79.19**	**312**	P	**P**	**22 25 07.2**	**-0.7**
	0.2nm,0.7s,baz=37,slow=6.0,SNR=2.7						

*NIED **04** 22:59:00,

KLR **Kul'dur** 17.76 340 P **P** 23 03 49.0 -2.1
comp=Z,0.5nm,0.3s,baz=167,slow=7.0,SNR=15
GRNR **Gornyy** 18.26 351 *eP* **Pn** 23 03 57.8 +0.5
GRNR pmax pmax
comp=Z,8.0nm,0.9s
WHN **Wuhan** 22.52 271 P **P** 23 04 41.2 -1.7
ZEA **Zeya** 23.06 339 *eP* **P** 23 04 48.2 -0.1
ZEA pmax pmax
comp=N,59nm,1.0s
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,70nm,1.0s
H11N2 **WAKE ISLAND Hy** 26.77 113 T T 23 34 27.9
baz=305,slow=75,SNR=88
H11N1 **WAKE ISLAND Hy** 26.77 113 T T 23 34 25.9
baz=305,slow=75,SNR=65
H11N3 **WAKE ISLAND Hy** 26.78 113 T T 23 34 29.1
baz=305,slow=75,SNR=11
H11S3 **WAKE ISLAND Hy** 27.32 115 T T 23 34 43.3
baz=305,slow=75,SNR=3.2
H11S1 **WAKE ISLAND Hy** 27.32 115 T T 23 34 55.4
baz=305,slow=75,SNR=9.0
H11S2 **WAKE ISLAND Hy** 27.33 115 T T 23 34 45.8
baz=305,slow=75,SNR=3.3
ULN **Ulaanbaatar** 29.48 311 ⇑ *i*P **P** 23 05 46.9 +0.5
ULN pmax pmax
comp=Z,9.0nm,2.5s
ULN **Ulaanbaatar** 29.48 311 P **P** 23 05 45.0 -1.4
SONM **Songino Array** 29.89 310 *eP* **P** 23 05 50.6 +0.6
SONM pmax pmax
comp=Z,2.0nm,0.6s
SONM **Songino Array** 29.89 310 P **P** 23 05 50.4 +0.4
comp=Z,1.5nm,0.6s,baz=110,slow=8.1,SNR=15
SONM **Songino Array** 29.89 310 P **P** 23 05 50.4 +0.4
YAK **Yakutsk** 30.13 350 *eP* **P** 23 05 51.5 -0.2
YAK pmax pmax
comp=Z,6.0nm,0.6s
BILL **Bilibino** 38.29 15 *eP* **P** 23 07 05.2 +3.0
BILL pmax pmax
comp=Z,9.0nm,1.7s
TIXI **Tiksi** 39.46 354 ⇓ *i*P **P** 23 07 12.3 +0.4
TIXI pmax pmax
comp=Z,9.0nm,2.5s
CMAR **Chiang Mai Arr** 39.99 260 *eP* **P** 23 07 16.2 -0.8
CMAR pmax pmax
comp=Z,1.0nm,0.6s
CMAR **Chiang Mai Arr** 39.99 260 P **P** 23 07 15.8 -1.2
comp=Z,0.8nm,0.6s,baz=44,slow=8.0,SNR=7.9
ZAA0 **Zalesovo Array** 44.45 316 P **P** 23 07 52.1 -0.7
ZALV **Zalesovo Beam** 44.45 316 P **P** 23 07 52.8 -0.1
comp=Z,0.8nm,0.3s,baz=102,slow=6.8,SNR=7.9
ZALV **Zalesovo Beam** 44.45 316 P **P** 23 07 52.4 -0.4
ANM **Nome** 45.57 29 P **P** 23 08 02.8 +1.2
ANM pmax pmax
comp=Z,3.0nm,1.0s
ANM **Nome** 45.57 29 P **P** 23 08 02.8 +1.2
MK31 **Makanchi Array** 46.00 306 P **P** 23 08 05.2 -0.1
MK31 pmax pmax
comp=Z,7.0nm,0.9s
MK31 **Makanchi Array** 46.00 306 P **P** 23 08 05.2 -0.1
MK31 IAmb IAmb 23 08 06.2
comp=Z,6.6nm,0.8s
MKAR **Makanchi Array** 46.00 306 P **P** 23 08 05.0 -0.2
comp=Z,6.9nm,0.7s,baz=91,slow=9.6,SNR=71
MKAR **Makanchi Array** 46.00 306 P **P** 23 08 04.8 -0.4
MAKZ **Makanchi** 46.21 306 P **P** 23 08 06.7 -0.2
MAKZ pmax pmax
comp=Z,6.0nm,0.7s
MAKZ **Makanchi** 46.21 306 P **P** 23 08 06.7 -0.2
KURK **Kurchatov** 48.19 311 *ceP* **P** 23 08 21.7 -0.5
KURK pmax pmax
comp=Z,5.0nm,1.3s
KURK **Kurchatov** 48.19 311 P **P** 23 08 21.7 -0.5
KURK IAmb IAmb 23 08 22.8
comp=Z,4.8nm,0.9s
KTH **Kantishna Hill** 51.64 32 P **P** 23 08 49.4 +1.1
KTH IAmb IAmb 23 09 03.5
comp=Z,3.6nm,1.2s
SUA **Susitna One** 51.66 35 P **P** 23 08 49.1 +0.6
SUA IAmb IAmb 23 08 49.7
comp=Z,3.1nm,0.8s
KSH **Kashi** 51.71 297 P P 23 08 55.1 +5.9
KSH pmax pmax
comp=Z,320nm,4.5s
MLY **Manley** 51.80 30 P **P** 23 08 50.0 +0.6
TRF **Thorofare Moun** 51.92 32 P **P** 23 08 52.3 +1.8
TRF IAmb IAmb 23 09 06.9
comp=Z,4.2nm,1.0s
RC01 **Rabbit Creek A** 52.15 35 P **P** 23 08 52.9 +1.0
TOLK **Toolik Lake Re** 52.55 26 P **P** 23 08 55.9 +1.0
TOLK IAmb IAmb 23 08 58.1
comp=Z,5.2nm,0.9s
RND **Reindeer** 52.57 32 P **P** 23 08 55.3 +0.2
RND pmax pmax
comp=Z,2.0nm,1.0s
RND **Reindeer** 52.57 32 P **P** 23 08 55.3 +0.2
KNK **Knik Glacier** 52.76 35 P **P** 23 08 57.7 +1.2
WRA **Warramunga Arr** 52.76 188 *eP* **P** 23 08 58.7 +1.8
WRA **Warramunga Arr** 52.76 188 P **P** 23 08 55.9 -1.0
comp=Z,0.4nm,0.4s,baz=4.1,slow=7.4,SNR=6.2
SCM **Sheep Creek Mo** 53.29 34 P **P** 23 09 01.4 +0.9
SCM **Sheep Creek Mo** 53.29 34 P **P** 23 09 01.4 +0.9
HDA **Harding Lake** 53.41 31 P **P** 23 09 01.4 +0.1
HDA IAmb IAmb 23 09 02.5
comp=Z,3.0nm,0.7s
IL31 53.44 31 P **P** 23 09 02.1 +0.7
IL31 IAmb IAmb 23 09 06.0
comp=Z,3.7nm,1.1s
ILAR **Eielson Array** 53.44 31 P **P** 23 09 02.0 +0.6
comp=Z,2.0nm,0.9s,baz=269,slow=6.9,SNR=17
KKAR **Karatay Array** 54.83 303 P **P** 23 09 11.7 -0.2
KKAR **Karatay Array** 54.83 303 P **P** 23 09 11.7 -0.2
KKAR **Karatay Array** 54.83 303 IAmb IAmb 23 09 12.4
comp=Z,6.2nm,0.8s
NIL **Nilore** 55.48 291 P **P** 23 09 16.2 -0.6
NIL pmax pmax
comp=Z,4.0nm,0.7s
NIL **Nilore** 55.48 291 P **P** 23 09 16.2 -0.6
NIL IAmb IAmb 23 09 17.3
comp=Z,4.0nm,0.7s
BCAR **Beaver Creek A** 55.78 33 P **P** 23 09 19.4 +0.9
GAR **Garm** 56.08 298 P **P** 23 09 20.2 -0.8
ASAR **Alice Springs** 56.49 187 P **P** 23 09 23.8 -0.1
comp=Z,0.4nm,0.5s,baz=12,slow=10,SNR=7.7
ASAR **Alice Springs** 56.49 187 P **P** 23 09 23.4 -0.5
INK **Inuvik** 58.46 26 P **P** 23 09 38.5 +1.2
comp=Z,2.6nm,0.7s,baz=283,slow=6.8,SNR=4.9
INK **Inuvik** 58.46 26 IAmb IAmb 23 09 42.6
comp=Z,3.5nm,1.1s
KBL **Kabul** 58.47 293 P **P** 23 09 37.2 -0.9
KBL pmax pmax
comp=Z,2.0nm,0.8s
KBL **Kabul** 58.47 293 P **P** 23 09 37.2 -0.9
KBL IAmb IAmb 23 09 37.8
comp=Z,2.1nm,0.8s
ARU **Arti** 59.21 320 *d i*P **P** 23 09 41.5 -1.1
ARU S **S** 23 17 44.8 -0.3
ARU SS **SS** 23 21 36.8 -3.0
ARU pmax pmax
comp=Z,4.0nm,0.8s
ABKAR **Akbulak array** 60.29 312 P **P** 23 09 49.4 -0.7
ABKAR **Akbulak array** 60.29 312 IAmb IAmb 23 09 50.2
comp=Z,1.2nm,0.6s
GEYT **Alibeck** 65.43 300 P **P** 23 10 25.1 +0.5
comp=Z,1.2nm,0.7s,baz=76,slow=7.8,SNR=5.4
GEYT **Alibeck** 65.43 300 IAmb IAmb 23 10 25.9
comp=Z,1.7nm,0.8s
ARCES **ARCESS Array B** 67.78 340 *eP* **P** 23 10 40.5 +1.6
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES **ARCESS Array B** 67.78 340 P **P** 23 10 38.5 -0.4
comp=Z,2.1nm,0.8s,baz=42,slow=7.3,SNR=3.5
YKA **Yellowknife Ar** 67.81 29 P **P** 23 10 39.7 +0.5
comp=Z,0.5nm,0.8s,baz=292,slow=6.2,SNR=7.3
OBN **Obninsk** 71.17 324 *eP* **P** 23 10 58.1 -1.9
OBN *e* 23 11 22.0
OBN pmax pmax
comp=Z,2.0nm,0.9s
FINES **FINESS Array B** 72.32 333 P **P** 23 11 06.3 -0.5
comp=Z,1.4nm,0.7s,baz=38,slow=7.0,SNR=4.7
KBZ **Khabaz** 73.25 311 *eP* **P** 23 11 13.6 +1.0
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KBZ **Khabaz** 73.25 311 P **P** 23 11 12.9 +0.3
comp=Z,3.2nm,0.8s,baz=148,slow=3.3,SNR=6.0
KIV **Kislovodsk** 73.27 312 *eP* **P** 23 11 11.1 -1.8
KIV pmax pmax
comp=Z,4.0nm,0.8s
AKASG **Malin Array Be** 77.31 323 P **P** 23 11 35.8 -0.1
comp=Z,0.6nm,0.6s,baz=47,slow=6.1,SNR=4.0
AKASG LR LR 23 47 58.0
comp=Z,42nm,18.4s,baz=270,slow=37
NVAR **Mina Array Bea** 78.05 52 P **P** 23 11 41.8 +1.3
comp=Z,2.0nm,0.3s,baz=289,slow=6.6,SNR=2.6
BR131 **Keskin Array S** 81.24 312 P **P** 23 11 58.4 +0.7
BR131 pmax pmax
comp=Z,3.0nm,1.2s
BR131 **Keskin Array S** 81.24 312 P **P** 23 11 58.4 +0.7
BRTR **Keskin Array B** 81.24 312 P **P** 23 11 57.8 +0.1
comp=Z,2.0nm,0.9s,baz=97,slow=3.7,SNR=11
RAYN **Ar Rayn** 81.73 293 P **P** 23 12 00.7 +0.3
RAYN pmax pmax
comp=Z,3.0nm,0.7s
RAYN **Ar Rayn** 81.73 293 P **P** 23 12 00.7 +0.3
RAYN IAmb IAmb 23 12 01.8
comp=Z,3.4nm,0.7s
VYHS **Vyhne** 83.89 325 *eP* **P** 23 12 11.8 +0.7
VYHS **Vyhne** 83.89 325 *eP* **P** 23 12 11.8 +0.7
BRG **Berggiesshubel** 84.41 329 *e*(P) **P** 23 12 13.7 +0.1
comp=Z,2.4nm,0.9s
BRG **Berggiesshubel** 84.41 329 *eP* **P** 23 12 13.7 0.0
BRG pmax pmax
comp=Z,2.0nm,1.0s
CLL **Collm** 84.49 330 *i* P **P** 23 12 13.8 -0.3
CLL pmax pmax
comp=Z,3.0nm,0.8s
CLL **Collm** 84.49 330 *i* P **P** 23 12 13.8 -0.3
GERES **GERESS Array B** 86.02 328 P **P** 23 12 21.2 -0.6
comp=Z,0.5nm,0.7s,baz=57,slow=4.9,SNR=3.7
TXAR **Lajitas Array** 93.20 52 P **P** 23 12 57.4 +1.4
comp=Z,1.0nm,0.7s,baz=296,slow=3.1,SNR=13

*LDG **04** 23:10:10.8±0.0, 44°.97N×5°.70E, h2km, Md2.2/4, Ml2.4/20, Error ellipse: s-maj=0.6km s-min=0.5km az=29.0*
*STR **04** 23:10:10.9±0.3, 45°.N±°×±°, h10km±3km, MLv2.0/7*
ISC 04 23:10:10.5±0.8, **44°.97N**±0°.02×**5°.70E**±0°.02, **h13**km±6km,
n55, σ1°**46**/102, **France**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ORIF	**Oris-en-Rattie**	**0.14**	**114**	*e*Pg		**Pg**	**23 10 13.6**	**-0.5**
ORIF				*e*Sg		**Sg**	**23 10 15.6**	**-1.0**
	90nm,0.2s							
ORIF	**Oris-en-Rattie**	**0.14**	**114**	Pg		**Pg**	**23 10 13.6**	**-0.5**
GDM	**Grand'Maison**	**0.37**	**52**	Pg		**Pg**	**23 10 18.2**	**+0.1**
GDM				Sg		**Sg**	**23 10 23.2**	**0.0**
VIVF	**Saint-Julien-l**	**0.74**	**261**	*e*Pg		**Pg**	**23 10 24.7**	**-0.2**
VIVF				*e*Sg		**Sg**	**23 10 34.2**	**-0.4**
	43nm,0.3s							
RRL	**Rocca Remolon**	**0.78**	**94**	P		**Pg**	**23 10 25.7**	**0.0**
RRL				S		**Sg**	**23 10 36.5**	**+0.7**
OGAG	**Argentiere**	**0.79**	**131**	Pg		**Pg**	**23 10 22.6**	**-3.3**
OGAG				Sg		**Sg**	**23 10 30.9**	**-5.5**
MBDF	**Montbardon**	**0.80**	**108**	*e*Pg		**Pg**	**23 10 25.8**	**-0.3**
MBDF	**Montbardon**	**0.80**	**108**	*e*Pn		**Pb**	**23 10 27.6**	**+1.2**
MBDF				*e*Sg		**Sg**	**23 10 36.2**	**-0.4**
	18nm,0.2s							
MBDF				*e*Sn		**Sb**	**23 10 39.6**	**+2.4**
	25nm,0.3s							
SSB	**Saint Sauveur**	**0.88**	**291**	Pg		**Pg**	**23 10 27.3**	**-0.2**
LPG	**La Plagne**	**0.91**	**54**	*e*Pg		**Pg**	**23 10 28.2**	**+0.1**
LPG	**La Plagne**	**0.91**	**54**	*e*Pn		**Pb**	**23 10 29.4**	**+1.0**
LPG				*e*Sg		**Sg**	**23 10 40.2**	**+0.1**
LPG				*e*Sn		**Sb**	**23 10 42.3**	**+1.8**
	14nm,0.4s							
LPL	**La Plagne**	**0.91**	**53**	*e*Pg		**Pg**	**23 10 28.2**	**+0.1**
LPL	**La Plagne**	**0.91**	**53**	*e*Pn		**Pb**	**23 10 29.2**	**+0.9**
LPL				*e*Sg		**Sg**	**23 10 40.1**	**+0.1**
LPL				*e*Sn		**Sb**	**23 10 42.1**	**+1.7**
	12nm,0.3s							
SURF	**Saint Ours**	**0.93**	**121**	Pg		**Pg**	**23 10 28.2**	**-0.4**
SURF				Sg		**Sg**	**23 10 41.2**	**+0.4**
OGDI	**Digne**	**0.96**	**153**	Pg		**Pb**	**23 10 30.0**	**+0.8**
OGDI				Sg		**Sg**	**23 10 42.5**	**+0.7**
RSL	**Roselend**	**0.97**	**42**	Pg		**Pg**	**23 10 29.2**	**0.0**
SMRF	**Simiane la Rot**	**1.00**	**185**	*e*Pg		**Pg**	**23 10 29.5**	**-0.4**
SMRF	**Simiane la Rot**	**1.00**	**185**	*e*Pn		**Pg**	**23 10 30.2**	**+0.3**
SMRF				*e*Sn		**Sb**	**23 10 44.0**	**+1.1**
	14nm,0.4s							
RUSF	**Rustrel**	**1.04**	**189**	Pg		**Pg**	**23 10 31.0**	**+0.4**
BLAF	**les Blancs**	**1.05**	**166**	Pn		**Pb**	**23 10 31.4**	**+0.8**
BLAF				Pg		**Pn**	**23 10 31.9**	**+0.9**
BLAF				Sg		**Sb**	**23 10 46.2**	**+1.8**
OG35	**Corcelles**	**1.07**	**355**	Pn		**Pb**	**23 10 31.8**	**+0.8**
OG35				Sn		**Sb**	**23 10 46.4**	**+1.4**
BSTF	**la Bastide-des**	**1.09**	**182**	Pg		**Pn**	**23 10 33.6**	**+2.0**
PZZ	**Stroppo**	**1.11**	**114**	P		**Pg**	**23 10 31.7**	**-0.2**
PZZ				S		**Sg**	**23 10 45.4**	**-1.1**
BHB	**Bricherasio**	**1.12**	**96**	P		**Pg**	**23 10 31.9**	**-0.2**
BHB				S		**Sg**	**23 10 45.6**	**-1.0**
RSP	**Reno Superiore**	**1.12**	**81**	P		**Pg**	**23 10 32.1**	**0.0**
RSP				S		**Sg**	**23 10 46.8**	**0.0**
LSD	**Lago del Serru**	**1.12**	**64**	P		**Pg**	**23 10 32.0**	**-0.3**
LSD				S		**Sg**	**23 10 46.9**	**+0.1**
OG02	**Monnetier-Morn**	**1.23**	**17**	Pn		**Pg**	**23 10 34.4**	**+0.1**
FRF	**La Foret Royal**	**1.57**	**154**	*e*Pn		**Pn**	**23 10 38.2**	**+0.1**
FRF	**La Foret Royal**	**1.57**	**154**	*e*Pg		**Pb**	**23 10 39.9**	**+0.5**
FRF				*e*Sn		**Sn**	**23 10 57.3**	**-1.0**
FRF				*e*Sg		**Sb**	**23 11 00.3**	**+1.1**
	12nm,0.2s							
TURF	**col de Turini**	**1.57**	**129**	Pg		**Pb**	**23 10 40.4**	**+0.8**
LASF	**Ste Croix**	**1.59**	**236**	*e*Pn		**Pn**	**23 10 38.3**	**-0.2**
LASF	**Ste Croix**	**1.59**	**236**	*e*P		**Pn**	**23 10 40.1**	**+1.6**
LASF				*e*Sn		**Sn**	**23 10 58.0**	**-1.0**
LASF				*e*Sg		**Sb**	**23 11 01.0**	**+1.0**
	7.0nm,0.3s							
CABF	**La Chapelle**	**1.66**	**9**	*e*P		**Pb**	**23 10 41.2**	**+0.2**
CABF	**La Chapelle**	**1.66**	**9**	*e*Pg		**Pg**	**23 10 42.3**	**-0.1**
CABF				*e*Sg		**Sg**	**23 11 03.6**	**-0.3**
	9.0nm,0.3s							
SMF	**Signal de Mont**	**2.12**	**323**	*e*Pn		**Pn**	**23 10 45.4**	**-0.3**
SMF	**Signal de Mont**	**2.12**	**323**	*e*Pg		**Pb**	**23 10 50.1**	**+1.3**
SMF				*e*Sn		**Sn**	**23 11 10.3**	**-1.6**
SMF				*e*Sg		**Sb**	**23 11 17.4**	**+2.4**
	3.7nm,0.2s							
AVF	**Avril sur Loir**	**2.45**	**319**	*e*Pn		**Pn**	**23 10 50.1**	**-0.1**
AVF	**Avril sur Loir**	**2.45**	**319**	*e*Pg		**Pb**	**23 10 56.3**	**+1.9**
AVF				*e*Sn		**Sn**	**23 11 18.4**	**-1.6**
AVF				*e*Sg		**Sb**	**23 11 27.3**	**+2.8**
	4.6nm,0.4s							
BGF	**Bois d'Agland**	**2.55**	**309**	*e*Pn		**Pn**	**23 10 51.3**	**-0.3**
BGF	**Bois d'Agland**	**2.55**	**309**	*e*Pg		**Pb**	**23 10 58.2**	**+2.1**
BGF				*e*Sg		**Sg**	**23 11 31.1**	**-1.3**
	8.0nm,0.3s							
CAF	**Calviac**	**2.58**	**270**	*e*Sg		**Sg**	**23 11 31.9**	**-1.6**
	3.4nm,0.3s							
SSF	**Saint Saulge**	**2.59**	**325**	*e*Pn		**Pn**	**23 10 52.2**	**+0.1**
SSF	**Saint Saulge**	**2.59**	**325**	*e*Pg		**Pb**	**23 10 58.9**	**+2.1**
SSF				*e*Sn		**Sn**	**23 11 22.1**	**-1.4**
SSF				*e*Sg		**Sg**	**23 11 32.4**	**-1.2**
	3.2nm,0.3s							
LOR	**Lormes**	**2.63**	**331**	*e*Pn		**Pn**	**23 10 52.7**	**0.0**
LOR	**Lormes**	**2.63**	**331**	*e*Pg		**Pg**	**23 10 59.8**	**-1.1**
LOR				*e*Sn		**Sn**	**23 11 22.6**	**-1.9**
LOR				*e*Sg		**Sg**	**23 11 33.2**	**-1.7**
	4.3nm,0.3s							
TCF	**Toulx Ste Croi**	**2.78**	**299**	*e*Pn		**Pn**	**23 10 54.8**	**0.0**
TCF				*e*Sg		**Sg**	**23 11 37.7**	**-2.1**
	0.7nm,0.2s							
HINF	**Hinteralfeld**	**2.95**	**15**	*e*Pn		**Pn**	**23 10 56.8**	**-0.4**
HINF	**Hinteralfeld**	**2.95**	**15**	*e*Pg		**Pb**	**23 11 05.3**	**+2.2**
HINF				*e*Sn		**Sn**	**23 11 30.8**	**-1.7**
HINF				*e*Sg		**Sg**	**23 11 43.5**	**-1.9**
	3.3nm,0.4s							
RJF	**Les Rejaudoux**	**2.98**	**278**	*e*Pg		**Pb**	**23 11 05.8**	**+2.3**
RJF				*e*Sn		**Sn**	**23 11 31.2**	**-1.9**
RJF				*e*Sg		**Sg**	**23 11 44.2**	**-2.0**
	1.9nm,0.2s							
MTLF	**Montolieu**	**2.99**	**238**	*e*Pn		**Pn**	**23 10 57.3**	**-0.4**
MTLF	**Montolieu**	**2.99**	**238**	*e*Pg		**Pb**	**23 11 06.1**	**+2.4**
MTLF				*e*Sn		**Sn**	**23 11 31.1**	**-2.3**
	3.2nm,0.4s							
MTLF				*e*Sg		**Sg**	**23 11 44.4**	**-2.2**
	0.9nm,0.2s							
HAU	**Haudompre**	**3.06**	**8**	*e*Pn		**Pn**	**23 10 58.4**	**-0.3**
HAU	**Haudompre**	**3.06**	**8**	*e*Pg		**Pb**	**23 11 07.5**	**+2.5**
HAU				*e*Sn		**Sn**	**23 11 33.4**	**-1.9**
HAU				*e*Sg		**Sg**	**23 11 47.4**	**-1.6**
	4.5nm,0.3s							
PGF	**Pioggiola**	**3.41**	**134**	*e*Pn		**Pn**	**23 11 03.2**	**-0.3**
PGF				*e*Sn		**Sn**	**23 11 42.0**	**-1.8**
	0.4nm,0.2s							
CDF	**Champ du Feu**	**3.61**	**17**	*e*Pn		**Pn**	**23 11 04.3**	**-1.9**
CDF				*e*Sn		**Sn**	**23 11 46.1**	**-2.6**
CDF				*e*Sg		**Sg**	**23 12 04.1**	**-2.2**
	0.5nm,0.2s							

*IDC **04** 23:32:27.4±0.6, 44°.18N×142°.01E, h220km±5km, mb2.9/5, mb1 3.1/6, mb1mx2.8/38, mbtmp3.4/6, Error ellipse: s-maj=22.1km s-min=20.1km az=34.0*
*JMA **04** 23:32:27.0±0.2, 44°.25N×142°.03E, h229km±2km, M3.2*
ISC 04 23:32:27.5±0.8, **44°.20N**±0°.06×**142°.04E**±0°.06, **h225**km±6km,
n25, σ0°**88**/36, **mb3.2**/5, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JSS	**Shosan**	**0.24**	**327**	P		**Pn**	**23 32 57.0**	**+0.3**
ASAJ	**Asahikawa**	**0.41**	**101**	P		**Pn**	**23 32 57.3**	**+0.1**
ASAJ				*e*S		**S**	**23 33 20.1**	**-0.2**
ASAJ	**Asahikawa**	**0.41**	**101**	P		**Pn**	**23 32 57.2**	**+0.1**
	17nm,0.3s,baz=261,slow=5.3,SNR=60							
ASAJ				S		**S**	**23 33 20.0**	**-0.2**
	2.2nm,0.3s,baz=18,slow=20,SNR=4.3							
JYG	**Yagishiri**	**0.49**	**298**	P		**Pn**	**23 32 57.3**	**0.0**
JHR	**Hokuryu**	**0.51**	**207**	P		**Pn**	**23 32 58.0**	**+0.5**
JKK2	**Kamakawa 2**	**0.61**	**122**	P		**Pn**	**23 32 58.2**	**+0.4**
JKK2				*e*S		**S**	**23 33 21.9**	**+0.4**
JAB	**Ashibetsu**	**0.70**	**169**	P		**Pn**	**23 32 58.7**	**+0.4**
JAB				*e*S		**S**	**23 33 23.1**	**+0.9**
JSE	**Soyaes**	**0.86**	**27**	P		**Pn**	**23 32 58.8**	**-0.1**
JSE				*e*S		**S**	**23 33 22.9**	**-0.6**
JWK2	**Keihoku**	**1.12**	**355**	P		**Pn**	**23 33 00.2**	**-0.3**
JWK2				*e*S		**S**	**23 33 25.6**	**-0.8**
JTKR	**Abashiri--Toko**	**1.37**	**99**	P		**Pn**	**23 33 03.2**	**+0.9**
JRBN	**Rebuntou**	**1.41**	**331**	P		**Pn**	**23 33 02.0**	**-0.5**
JSK	**Shakotan**	**1.41**	**234**	P		**Pn**	**23 33 02.9**	**+0.2**
JEW	**Eniwo**	**1.42**	**198**	P		**Pn**	**23 33 03.6**	**+0.8**
JAR	**Ashorobuto**	**1.54**	**125**	P		**Pn**	**23 33 04.6**	**+0.8**
JAR				*e*S		**S**	**23 33 33.8**	**+1.9**
JCH	**Churui**	**1.85**	**148**	P		**Pn**	**23 33 05.8**	**-0.7**
JCH				*e*S		**S**	**23 33 34.6**	**-2.2**
JNBK	**Urakawa-nobuka**	**1.99**	**164**	*e*S		**S**	**23 33 39.1**	**0.0**
JAK	**Akkeshi**	**2.27**	**121**	P		**Pn**	**23 33 09.8**	**-0.8**
JAK				*e*S		**S**	**23 33 43.2**	**-0.9**
JKB	**Kayabe**	**2.42**	**198**	P		**Pn**	**23 33 11.9**	**-0.2**
JKB				*e*S		**S**	**23 33 45.1**	**-1.8**
NEM2	**Nemuro 2**	**2.81**	**106**	P		**Pn**	**23 33 15.6**	**-0.7**
NEM2				*e*S		**S**	**23 33 52.4**	**-1.9**
USRK	**Ussuriysk Ar.**	**7.22**	**274**	P		**Pn**	**23 34 10.2**	**-0.5**
	baz=88,slow=15,SNR=12							
SONM	**Songino Array**	**24.88**	**291**	P		**P**	**23 37 29.6**	**-0.1**
	0.4nm,0.5s,baz=75,slow=8.2,SNR=5.5							
MKAR	**Makanchi Array**	**41.08**	**295**	P		**P**	**23 39 49.2**	**+0.1**
	0.3nm,0.7s,baz=76,slow=9.1,SNR=3.6							
YKA	**Yellowknife Ar**	**57.44**	**32**	P		**P**	**23 41 52.7**	**+0.3**
	0.3nm,0.6s,baz=306,slow=6.6,SNR=6.4							
WRA	**Warramunga Arr**	**64.21**	**188**	P		**P**	**23 42 37.9**	**-0.5**
	0.6nm,1.0s,baz=7.8,slow=6.7,SNR=3.3							
ASAR	**Alice Springs**	**67.94**	**188**	P		**P**	**23 43 03.1**	**+1.1**
	0.3nm,0.8s,baz=352,slow=4.7,SNR=4.0							

*ANF **04** 23:33:31.8±0.3, 36°.12N×97°.30W, h0km, ML4.3/9, Error ellipse: s-maj=4.2km s-min=2.7km az=3.0*
*TUL **04** 23:33:32.1±1.3, 36°.13N±0°.01×97°.32W±0°.06, h5km±2km, mb_Lg3.7/83(NEIC), Error ellipse: s-maj=8.1km s-min=3.0km az=99.0*
*NEIC **04** 23:33:32.7±0.9, 36°.11N±0°.03×97°.30W±0°.05, h5km±2km, Error ellipse: s-maj=6.7km s-min=4.3km az=98.0*
ISC 04 23:33:32.2±1.4, **36°.08N**±0°.04×**97°.32W**±0°.04, **h0**km±12km,
n75, σ1°**09**/63, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.43**	**186**			**Pg**	**23 33 41.4**	**+0.9**
ADOK				Sg		**Sg**	**23 33 47.9**	**+1.8**
OK005	**Luther M Schoo**	**0.44**	**166**			**Pg**	**23 33 41.5**	**+0.9**
OK001	**Jones High Sch**	**0.52**	**177**	Pg		**Pg**	**23 33 43.3**	**+1.1**
OKCFA	**Oklahoma City**	**0.68**	**189**			**Pg**	**23 33 45.8**	**+0.6**
OKCSW	**OKLAHOMA CITY**	**0.68**	**188**			**Pg**	**23 33 45.9**	**+0.6**
FNO	**Franklin**	**0.83**	**185**			**Pb**	**23 33 49.2**	**-0.2**
W35A	**Tecumseh**	**1.00**	**159**			**Pg**	**23 33 50.9**	**-0.4**
TUL1	**Leonard**	**1.25**	**98**			**Pn**	**23 33 54.6**	**-2.3**
TUL1				IAmb_Lg			23 34 14.2	
	comp=Z,346nm,0.8s							
TUL1	**Leonard**	**1.25**	**98**	P		**Pn**	**23 33 54.9**	**-2.1**
	baz=280							
TUL1				S		**Sb**	**23 34 12.3**	**-1.0**
	baz=280							
U32A	**Winter Ranch,**	**1.39**	**283**			**Pn**	**23 33 57.5**	**-1.4**
X34A	**Smith Ranch, M**	**1.54**	**196**			**Pb**	**23 34 01.1**	**-0.5**
X34A						**Sg**	**23 34 21.9**	**+0.3**
WMOK	**Wichita Mounta**	**1.80**	**222**			**Pn**	**23 34 04.6**	**+0.1**
WMOK				Sn		**Sb**	**23 34 28.6**	**-0.4**
WMOK				IAmb_Lg			23 34 31.3	
	comp=Z,453nm,0.8s							
WMOK	**Wichita Mounta**	**1.80**	**222**	P		**Pn**	**23 34 04.4**	**-0.1**
	baz=40							
WMOK				S		**Sb**	**23 34 28.9**	**-0.2**
	baz=40							
HHAR	**Hobbs**	**2.74**	**85**			**Pn**	**23 34 17.0**	**-0.4**
W39A	**Magazine**	**3.01**	**106**			**Pn**	**23 34 21.1**	**0.0**
W39A				IAmb_Lg			23 35 15.0	
	comp=Z,269nm,0.8s							
W39A	**Magazine**	**3.01**	**106**	P		**Pn**	**23 34 21.5**	**+0.3**
	baz=289							
KSU1	**Kansas State U**	**3.06**	**10**	Sb		**Sb**	**23 35 06.4**	**+0.9**
	baz=191							
CBKS	**Cedar Bluff**	**3.34**	**325**			**Pn**	**23 34 25.1**	**-0.5**
CBKS	**Cedar Bluff**	**3.34**	**325**	P		**Pn**	**23 34 25.0**	**-0.6**
	baz=144							
MIAR	**Mount Ida**	**3.42**	**116**			**Pn**	**23 34 26.9**	**+0.1**
MIAR				IAmb_Lg			23 35 27.1	
	comp=Z,188nm,0.7s							
MIAR	**Mount Ida**	**3.42**	**116**	P		**Pn**	**23 34 26.9**	**+0.1**
	baz=298							
MIAR				S		**Sn**	**23 35 09.3**	**+1.2**
	baz=298							
U40A	**Yellville**	**3.62**	**84**	IAmb_Lg			23 35 25.2	
	comp=Z,129nm,0.8s							
AMTX	**Amarillo**	**3.76**	**253**			**Pn**	**23 34 31.6**	**+0.1**
AMTX				IAmb_L

comp=Z,102nm,0.8s
KSCO Kaye Shedlock' **5.13 306** Pn **Pn** **23 34 50.4 0.0**
KSCO lAmb_Lg 23 36 22.7
comp=Z,93nm,0.8s
CCM Cathedral Cave **5.24 66** Pn **Pn** **23 34 51.8 +0.1**
CCM **Pb** **23 35 06.1 +1.4**
CCM lAmb_Lg 23 36 30.4
comp=Z,76nm,0.8s
435B Jarrell **5.29 182** Pn **Pn** **23 34 52.8 +0.3**
435B **Pg** **23 35 10.6 -3.0**
435B lAmb_Lg 23 36 32.5
comp=Z,101nm,0.8s
BGNE Belgrade **5.36 353** **Pn** **23 34 53.1 -0.3**
BGNE lAmb_Lg 23 36 33.3
comp=Z,147nm,0.8s
GNAR Gosnell **5.92 89** Pn **Pn** **23 35 01.6 +0.5**
JCT Junction City **5.96 201** **Pn** **23 35 02.2 +0.4**
JCT lAmb_Lg 23 36 46.8
comp=Z,105nm,0.8s
OGNE Ogallala **6.10 324** **Pn** **23 35 03.5 -0.2**
SLM Saint Louis **6.19 64** lAmb_Lg 23 36 48.3
comp=Z,86nm,0.8s
SCIA State Center **6.63 28** **Pg** **23 35 36.4 -2.9**
SCIA lAmb_Lg 23 37 15.1
comp=Z,116nm,0.8s
S44A Carbondale **6.66 74** lAmb_Lg 23 37 11.6
comp=Z,116nm,0.7s
SDCO Great Sand Dun **6.76 287** **Pn** **23 35 13.6 +0.7**
P43A Skaggs, Pawnee **7.12 58** Pg 23 35 42.9 -5.7
P43A lAmb_Lg 23 37 24.1
comp=Z,94nm,0.9s
ISCO Idaho Springs **7.53 302** **Pn** **23 35 23.8 +0.3**
ANMO Albuquerque **7.54 264** lAmb_Lg 23 37 46.2
comp=Z,18nm,0.9s
ANMO lAmb_Lg 23 37 46.2
comp=Z,18nm,0.9s
L40A Anamosa **7.62 37** **Pn** **23 35 23.1 -1.3**
L40A lAmb_Lg 23 37 34.7
comp=Z,58nm,0.7s
ECSD EROS Data Cent **7.66 4** **Pn** **23 35 23.3 -1.7**
WVT Waverly **7.68 87** lAmb_Lg 23 37 36.0
comp=Z,44nm,0.7s
HDIL Hopedale **7.73 52** **Pn** **23 35 25.1 -0.7**
HDIL lAmb_Lg 23 37 58.4
comp=Z,86nm,0.7s
S22A 4UR Ranch, Cre **7.80 285** **Pg** **23 35 58.0 -3.6**
OLIL Olney **7.80 67** lAmb_Lg 23 37 37.6
comp=Z,93nm,1.1s
USIN University of **7.95 73** lAmb_Lg 23 37 43.3
comp=Z,74nm,0.9s
MNTX Cornudas Mount **8.00 239** **Pn** **23 35 28.9 -0.8**
O44A Mansfield **8.07 57** lAmb_Lg 23 37 57.3
comp=Z,81nm,0.7s
Y22D IRIS PASSCAL I **8.12 258** lAmb_Lg 23 38 11.1
comp=Z,82nm,1.0s
N23A Red Feather La **8.29 308** lAmb_Lg 23 38 00.9
comp=Z,77nm,0.9s
L42A Oliver, Polo **8.39 43** lAmb_Lg 23 38 02.4
comp=Z,58nm,0.9s
SUSD Miller **8.44 352** lAmb_Lg 23 38 02.5
comp=Z,60nm,0.8s
V48A Smith Brothers **8.52 89** lAmb_Lg 23 38 06.3
comp=Z,43nm,0.8s
TX31 Lajitas Ar. Si **8.60 220** **Pn** **23 35 38.9 +1.0**
JFWS Jewell Farm **8.74 37** lAmb_Lg 23 38 18.4
comp=Z,62nm,0.8s
SWET Sewanee **9.31 92** lAmb_Lg 23 38 24.4
comp=Z,37nm,0.9s
I40A Norwalk **9.34 31** lAmb_Lg 23 38 35.0
comp=Z,46nm,0.9s
L44A Lake County Fo **9.51 47** lAmb_Lg 23 38 39.7
comp=Z,54nm,0.8s
RSSD Black Hills **9.53 329** **Pn** **23 35 49.6 -1.2**
W50A Signal Mountai **9.81 92** lAmb_Lg 23 38 45.7
comp=Z,70nm,0.8s
P48A Milroy **10.00 67** lAmb_Lg 23 38 57.6
comp=Z,43nm,0.7s
N58A Sunbury **16.81 67** **PcP** **23 42 18.0 +0.9**

*IDC **05** 00:15:55.6±1.7, 10°.15S×118°.53E, h0km, mb3.6/2, mb1 3.7/6, mb1mx3.5/32, mbtmp3.6/6, ML3.5/4, MS3.3/1, Ms1 3.2/1, ms1mx2.5/29, Error ellipse: s-maj=73.3km s-min=21.6km az=45.0*
*DJA **05** 00:16:03.1±0.9, 10°.S±5°×11°.9E±°, h24km±9km, M4.0/12, mb4.1/3, MLv3.9/12*
ISC 05 00:16:01.5±0.9,**10°.22S**±0°.08×**118°.76E**±0°.04,**h37**km,**n22,**
σ1§**83**/26,**South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**1.61**	**70**	P	**Pn**	**00 16 29.1**	**+1.7**
WSI				S	**Sn**	**00 16 49.2**	**+2.3**
PLAI	**Plampang**	**1.69**	**325**	P	**Pn**	**00 16 28.3**	**-0.3**
PLAI				S	**Sn**	**00 16 48.0**	**-1.0**
TWSI	**Taliwang, Sumb**	**2.37**	**308**	P	**Pn**	**00 16 38.5**	**+0.6**
TWSI				S	**Sn**	**00 17 06.2**	**+0.5**
MMRI	**Maumere**	**3.77**	**66**	P	**Pn**	**00 16 58.2**	**+1.0**
MMRI				S	**Sn**	**00 17 40.5**	**+0.1**
DNP	**Denpasar**	**3.83**	**293**	P	**Pn**	**00 16 59.8**	**+1.9**
IGBI	**Denpasar**	**3.83**	**291**	P	**Pn**	**00 16 59.7**	**+1.7**
IGBI				S	**Sn**	**00 17 44.4**	**+2.6**
SRBI	**Singaraja**	**4.10**	**301**	P	**Pn**	**00 17 03.2**	**+1.5**
SRBI				S	**Sn**	**00 17 49.5**	**+1.1**
BATI	**Baumata**	**4.82**	**90**	Pn	**Pn**	**00 17 13.8**	**+2.1**
	12nm,0.3s,baz=221,slow=20,SNR=10						
BATI				Sn	**Sn**	**00 18 05.8**	**-0.5**
	baz=197,slow=13,SNR=1.0						
BATI	**Baumata**	**4.82**	**90**	P	**Pn**	**00 17 13.9**	**+2.2**
JAGI	**Jajag, Banyuwa**	**4.87**	**291**	P	**Pn**	**00 17 14.0**	**+1.7**
BKSI	**Bulukumba**	**5.05**	**16**	P	**Pn**	**00 17 14.1**	**-0.7**
SOEI	**Soe**	**5.44**	**86**	P	**Pn**	**00 17 22.3**	**+2.0**
	0.1nm31nm,0.8s						
KMMI	**Kalianget**	**5.69**	**303**	P	**Pn**	**00 17 24.9**	**+1.3**
FITZ	**Fitzroy Crossi**	**10.28**	**140**	Pn	**Pn**	**00 18 27.0**	**+0.4**
	0.2nm,0.3s,baz=325,slow=12,SNR=2.4						
FITZ				Sn	**Sn**	**00 20 15.6**	**-5.0**
	0.1nm,0.3s,baz=186,slow=24,SNR=2.3						
WRA	**Warramunga Arr**	**17.86**	**125**	P	**Pn**	**00 20 06.7**	**-0.6**
	0.1nm,0.3s,baz=296,slow=14,SNR=5.8						
ASAR	**Alice Springs**	**19.68**	**135**	P	**Pn**	**00 20 29.9**	**+0.6**
	0.1nm,0.3s,baz=317,slow=11,SNR=11						
STKA	**Stephens Creek**	**30.18**	**139**	LR	LR	00 34 55.5	
	comp=Z,55nm,20.7s,baz=49,slow=38						
H08S2	**Diego Garcia H**	**45.75**	**269**	T	T	01 13 36.0	
	baz=96,slow=74						
H08S3	**Diego Garcia H**	**45.76**	**269**	T	T	01 13 30.4	
	baz=96,slow=74						
H08S1	**Diego Carcia H**	**45.77**	**269**	T	T	01 13 44.6	
	baz=96						
MKAR	**Makanchi Array**	**65.43**	**333**	P	**P**	**00 26 39.3**	**-1.3**
	0.4nm,0.6s,baz=147,slow=6.9,SNR=7.8						
ZALV	**Zalesovo Beam**	**70.09**	**339**	P	**P**	**00 27 08.2**	**-1.6**
	0.3nm,0.4s,baz=145,slow=5.3,SNR=2.6						

*MAN **05** 00:16:16.0, 13°.34N×120°.09E, h18km, mb4.3, ML3.1, MS2.8*
ISC 05 00:16:16.3±1.3,**13°.35N**±0°.04×**120°.17E**±0°.07,**h16**km±10km,
n9, σ1§**50**/18,**1C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.39**	**11**	*e*P	**Pg**	**00 16 23.8**	**-0.5**
LUBP				eS	**Sg**	**00 16 28.3**	**-1.5**
TGY	**Tagaytay City**	**1.06**	**45**	*e*P	**Pg**	**00 16 37.8**	**+1.0**
TGY				*i* S	**Sg**	**00 16 52.1**	**+1.5**
SJMP	**San Jose**	**1.28**	**133**	*e*P	**Pb**	**00 16 40.7**	**+0.7**
SJMP				*e*S	**Sb**	**00 16 57.3**	**+1.1**
BOAC	**Boac**	**1.63**	**86**	*e*P	**Pn**	**00 16 43.7**	**-0.7**
BOAC				*e*S	**Sb**	**00 17 07.3**	**+0.8**
OTRP	**Odiongan**	**2.06**	**118**	*e*P	**Pb**	**00 16 52.9**	**-0.3**
OTRP				*e*S	**Sb**	**00 17 18.4**	**-0.2**
POLP	**Polilio Island**	**2.20**	**51**	*e*P	**Pn**	**00 16 49.6**	**-2.6**
POLP				*e*S	**Sn**	**00 17 18.3**	**-0.8**
ENPP	**El Nido**	**2.25**	**199**	*e*P	**Pn**	**00 16 52.8**	**0.0**
ENPP				*e*S	**Sn**	**00 17 19.3**	**-1.0**
BALP	**Baler**	**2.74**	**30**	*e*P	**Pn**	**00 17 01.6**	**+1.9**
BALP				*e*S	**Sn**	**00 17 29.8**	**-2.7**
SMPP	**San Manuel, Pa**	**2.83**	**10**	*e*P	**Pn**	**00 17 01.2**	**+0.3**
SMPP				*e*S	**Sn**	**00 17 36.5**	**+1.8**

IDC 05 00:28:44.7±2.5,**19°.80S**×**172°.22E**,**h0**km,**mb3.6**/3,
mb1 3.9/4,**mb1mx3.7**/24,**mbtmp3.6**/4,**ML3.0**/1,**MS3.4**/2,
Ms1 3.4/2,**ms1mx2.8**/25,**Error ellipse: s-maj=143.2km s-min=32.0km az=152.0,Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.86**	**246**	Pn	Pn	00 30 13.7	+0.8
	0.4nm,0.3s,baz=74,slow=19,SNR=2.3						
URZ	**Urewera**	**18.88**	**168**	LR	LR	00 38 05.5	
	comp=Z,100nm,20.3s,baz=356,slow=30						
ASAR	**Alice Springs**	**35.73**	**257**	P	P	00 35 44.5	-1.0
	0.2nm,0.7s,baz=84,slow=8.6,SNR=1.3						
PPT	**Papeete**	**36.21**	**93**	LR	LR	00 47 44.7	
	comp=Z,62nm,19.9s,baz=95,slow=32						
ILAR	**Eielson Array**	**89.95**	**16**	P	P	00 41 45.0	-0.4
	0.5nm,0.8s,baz=232,slow=5.6,SNR=3.0						
TXAR	**Lajitas Array**	**94.57**	**61**	P	P	00 42 07.3	-0.5
	0.4nm,0.8s,baz=258,slow=1.7,SNR=3.5						
GERES	**GERESS Array B**	**146.26**	**334**	PKPbc	PKPbc	00 48 27.4	+0.1
	1.2nm,0.7s,baz=29,slow=3.0,SNR=7.0						

*IDC **05** 00:30:05.0±2.0, 20°.12S×172°.40E, h0km, mb3.9/7, mb1 4.2/8, mb1mx4.0/23, mbtmp3.9/8, ML3.4/1, MS3.2/7, Ms1 3.2/7, ms1mx3.0/29, Error ellipse: s-maj=98.7km s-min=23.6km az=156.0*
*NEIC **05** 00:30:08.6±2.3, 20°.3S±0°.1×172°.39E±0°.08, h28km±3km, mb4.6/13, Error ellipse: s-maj=16.5km s-min=10.5km az=164.0*
ISC 05 00:30:09.2±0.5,**20°.3S**±0°.1×**172°.42E**±0°.08,**h35**km,**n78,**
σ1§**92**/72,**mb4.0**/12,**MS3.3**/6,**5C-2D,Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.87**	**251**	*e*Pn	**Pn**	**00 31 34.6**	**+0.8**
	3.5nm,0.3s						
DZM				*e*LR	LR	00 32 56.2	
	comp=Z,490nm,26.1s						
DZM	**Mont Dzumac**	**5.87**	**251**	Pn	**Pn**	**00 31 34.3**	**+0.5**
	1.1nm,0.3s,baz=142,slow=20,SNR=4.1						
DZM				LR	LR	00 33 26.2	
	comp=Z,240nm,19.7s,baz=39,slow=34						
DZM	**Mont Dzumac**	**5.87**	**251**		**Pn**	**00 31 35.2**	**+1.4**
MSVF	**Nonsavu**	**5.88**	**66**	Pn	**Pn**	**00 31 35.1**	**+1.0**
FUNA	**Funafuti**	**13.37**	**30**	Pn	**Pn**	**00 33 14.2**	**-2.4**
HNR	**Honiara**	**16.14**	**310**	LR	LR	00 39 51.4	
	comp=Z,25nm,18.1s,baz=150,slow=37						
NIUE	**Niue**	**16.67**	**89**	Pn	**Pn**	**00 33 59.5**	**-0.8**
MXZ	**Matakaoa Point**	**18.00**	**165**		**P**	**00 34 17.4**	**+0.5**
MXZ				lAmb	lAmb	00 34 24.9	
	comp=Z,64nm,1.1s						
EIDS	**Eidsvold**	**20.31**	**251**		**P**	**00 34 42.1**	**-0.2**
SNZO	**South Karori**	**21.09**	**175**	P	**P**	**00 34 50.8**	**+0.3**
ARMA	**Armidale**	**21.31**	**238**	P	**P**	**00 34 53.9**	**+0.7**
WKZ	**Wanaka**	**24.67**	**186**	P	**P**	**00 35 25.5**	**-1.3**
WKZ				lAmb	lAmb	00 35 35.0	
	comp=Z,28nm,1.1s						
ODZ	**Otahua Downs**	**24.77**	**183**	P	**P**	**00 35 25.7**	**-1.9**
ODZ				lAmb	lAmb	00 35 40.9	
	comp=Z,10nm,1.2s						
PMG	**Port Moresby**	**26.65**	**290**	LR	LR	00 44 52.5	
	comp=Z,78nm,18.1s,baz=105,slow=33						
STKA	**Stephens Creek**	**29.91**	**241**	LR	LR	00 46 21.8	
	comp=Z,46nm,21.5s,baz=49,slow=33						
WRA	**Warramunga Arr**	**35.71**	**264**	P	**P**	**00 37 05.0**	**+0.2**
	comp=Z,1.1nm,1.0s,baz=89,slow=8.0,SNR=3.8						
ASAR	**Alice Springs**	**35.81**	**257**	P	**P**	**00 37 05.9**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=85,slow=8.6,SNR=9.2						
ASAR				LR	LR	00 50 44.6	
	comp=Z,54nm,21.0s,baz=102,slow=35						
PPT2	**Papeete2**	**36.00**	**92**	*e*LR	LR	00 46 36.7	
	comp=Z,146nm,30.2s						
FITZ	**Fitzroy Crossi**	**44.13**	**265**	P	**P**	**00 38 14.5**	**-0.2**
SOEI	**Soe**	**47.52**	**275**	P	**P**	**00 38 38.3**	**-3.3**
NWAO	**Narrogin (SRO)**	**50.43**	**244**	P	**P**	**00 39 01.4**	**-2.2**
NWAO				lAmb	lAmb	00 39 04.6	
	comp=Z,5.6nm,0.8s						
MJAR	**Matsushiro Arr**	**65.08**	**330**	LR	LR	01 03 58.4	
	comp=Z,18nm,19.9s,baz=340,slow=31						
KSRS	**Korea Array**	**71.06**	**324**	LR	LR	01 10 22.1	
	comp=Z,17nm,19.5s,baz=5.0,slow=34						
USA0B	**Ussuriysk Arra**	**74.04**	**331**	P	**P**	**00 41 42.3**	**+0.9**
USA0B				lAmb	lAmb	00 41 43.8	
	comp=Z,6.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**81.65**	**293**	P	**P**	**00 42 25.9**	**+1.6**
	comp=Z,0.7nm,0.4s,baz=137,slow=4.2,SNR=6.7						
NVAR	**Mina Array Bea**	**87.25**	**47**	P	**P**	**00 42 53.7**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=222,slow=8.1,SNR=3.8						
BBB	**Bella Bella**	**88.71**	**32**	P	**P**	**00 42 58.2**	**-0.6**
BBB				lAmb	lAmb	00 43 01.0	
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**89.84**	**322**	P	**P**	**00 43 05.3**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=110,slow=5.0,SNR=2.5						
LCMT	**Little Creek M**	**90.19**	**50**	P	**P**	**00 43 06.0**	**-0.4**
IL31		**90.33**	**16**	P	**P**	**00 43 06.3**	**+0.2**
ILAR	**Eielson Array**	**90.33**	**16**	P	**P**	**00 43 05.8**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=231,slow=4.4,SNR=7.0						
TXAR	**Lajitas Array**	**94.63**	**61**	P	**P**	**00 43 28.3**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=205,slow=5.5,SNR=4.9						
TULEG	**Thule**	**116.12**	**13**		**PKiKP**	**00 48 50.3**	**+2.5**
ARR	**Arges**	**143.52**	**321**	⇓P	**PKPdf**	**00 49 39.9**	**-0.5**
DRGR		**143.81**	**324**	⇑P	**PKPdf**	**00 49 39.9**	**-1.0**
OSTC	**Ostas**	**144.39**	**334**	*e*PKP	**PKiKP**	**00 49 44.0**	**-1.3**
DPC	**Dobruska-Polom**	**144.50**	**333**	*e*PKP	**PKPdf**	**00 49 41.8**	**-0.1**
UPC	**Upice**	**144.51**	**334**	*e*PKP	**PKPdf**	**00 49 42.0**	**+0.2**
PLVB	**Pleven**	**144.56**	**318**	⇑P	**PKPdf**	**00 49 42.5**	**+0.4**
GZR	**Gura Zlata**	**144.59**	**322**	⇑P	**PKPab**	**00 49 40.0**	**-0.8**
VYHS	**Vyhne**	**144.71**	**329**	*e*PKP	**PKPdf**	**00 49 42.9**	**+0.6**
JAVC	**Velka Javorina**	**145.00**	**331**	*e*PKP	**PKiKP**	**00 49 44.9**	**-1.7**
CLL	**Collm**	**145.04**	**337**	⇓*i*PKPdf	**PKPdf**	**00 49 43.2**	**+0.5**
CLL				*i*		00 49 45.9	
	comp=Z,17nm,0.9s						
CLL	**Collm**	**145.04**	**337**	*e*PKPbc	**PKPdf**	**00 49 43.5**	**+0.8**
	comp=Z,11nm,1.0s						
BRG	**Berggiesshubel**	**145.04**	**336**	*i* PKP	**PKPdf**	**00 49 43.7**	**+1.0**
	baz=28,slow=2.7						
BRG	**Berggiesshubel**	**145.04**	**336**	*e*PKPbc	**PKPdf**	**00 49 43.7**	**+1.0**
	comp=Z,17nm,1.0s						
PVCC	**Panska Ves**	**145.08**	**335**	*e*PKP	**PKPdf**	**00 49 43.8**	**+1.0**
	baz=28,slow=2.7						
PVCC				*ex*	x	00 49 59.8	
BZS	**Buzias**	**145.12**	**323**	⇑P	**PKPdf**	**00 49 43.7**	**+0.7**
ASSE	**Asse, Remlinge**	**145.14**	**340**	*e*PKPbc	**PKPdf**	**00 49 43.2**	**+0.4**
	baz=28,slow=2.7						
VRAC	**Vranov**	**145.16**	**332**	⇑P	**PKPdf**	**00 49 44.3**	**+1.3**
VRAC	**Vranov**	**145.16**	**332**	*e*PKP	**PKPdf**	**00 49 44.1**	**+1.1**
FBE	**Freiberg**	**145.23**	**337**	*e*PKPbc	**PKPdf**	**00 49 44.3**	**+1.3**
	baz=28,slow=2.7						
SMOL	**Smolenice**	**145.36**	**330**	*e*PKP	**PKPab**	**00 49 45.2**	**+1.8**
KRUC	**Moravsky**	**145.43**	**332**	*e*PKP	**PKPab**	**00 49 44.9**	**+1.2**
GOPC	**GO Pecny, Ondr**	**145.47**	**334**	*e*PKP	**PKPab**	**00 49 44.1**	**+0.3**
CLZ	**Clausthal**	**145.49**	**340**	*e*PKPbc	**PKPab**	**00 49 44.0**	**+0.2**
	baz=28,slow=2.7						
PRU	**Pruhonice**	**145.51**	**335**	*e*PKP	**PKPab**	**00 49 44.7**	**+0.8**
MODS	**Modra-Piesok**	**145.53**	**330**	*e*PKP	**PKPab**	**00 49 44.9**	**+0.8**
GTTG	**Gvttingen**	**145.87**	**340**	*e*PKPbc	**PKPab**	**00 49 45.4**	**+0.2**
	baz=28,slow=2.7						
PBCC	**Pribram**	**145.97**	**335**	*e*PKP	**PKPdf**	**00 49 43.7**	**-0.7**
TANN	**Tannenbergstha**	**145.97**	**337**	*e*PKPbc	**PKPab**	**00 49 46.2**	**+0.5**
	baz=28,slow=2.7						
GUNZ	**Gunzen**	**146.06**	**337**	*e*PKPbc	**PKPab**	**00 49 46.4**	**+0.4**
	baz=28,slow=2.7						
MOX	**Moxa**	**146.09**	**338**	*e*PKPbc	**PKPab**	**00 49 46.3**	**+0.2**
	baz=28,slow=2.7						
WERN	**Wernitzgruen**	**146.11**	**337**	*e*PKPbc	**PKPab**	**00 49 46.8**	**+0.6**
	baz=28,slow=2.7						
CONA	**Conrad Observa**	**146.51**	**331**	*e*PKiKP	**PKPab**	**00 49 48.6**	**+0.7**
	comp=Z,5.1nm,0.9s						
KHC	**Kasperske Hory**	**146.57**	**335**	*e*PKP	**PKPab**	**00 49 47.8**	**-0.2**
KHC				*ex*	x	00 49 54.8	
KHC				*ex*	x	00 50 01.1	
GEC2	**GERESS Array S**	**146.75**	**334**	*e*PKPbc	**PKPab**	**00 49 48.6**	**-0.2**
	baz=28,slow=2.7						
GERES	**GERESS Array B**	**146.75**	**334**	PKPbc	**PKPab**	**00 49 48.3**	**-0.5**
	comp=Z,2.9nm,0.7s,baz=33,slow=3.2,SNR=24						
WET	**Wettzell**	**146.84**	**335**	*e*PKPbc	**PKPab**	**00 49 48.7**	**-0.3**
	baz=28,slow=2.7						
GRF	**Grafenberg Arr**	**147.02**	**337**	*e*PKPbc	**PKPab**	**00 49 49.2**	**-0.5**
	baz=28,slow=2.7						
MYKA	**Terra Mystica**	**148.48**	**331**	*e*PKPbc	**PKPbc**	**00 49 52.2**	**-0.1**
	comp=Z,6.4nm,0.9s						
STU	**Stuttgart**	**148.51**	**339**	*e*PKPbc	**PKPbc**	**00 49 52.8**	**+0.6**
	baz=28,slow=2.7						
WATA	**Walderalm**	**148.81**	**334**	*e*PKiKP	**PKPbc**	**00 49 53.6**	**+0.3**
	comp=Z,5.0nm,0.9s						
WTTA	**Wattenberg**	**148.85**	**334**	*i* PKiKP	**PKPbc**	**00 49 53.9**	**+0.5**
	comp=Z,5.2nm,0.9s						
ABTA	**Abfaltersbach**	**148.89**	**333**	*i* PKiKP	**PKPbc**	**00 49 53.3**	**-0.1**
	comp=Z,6.7nm,0.8s						
MOTA	**Moosalm**	**149.00**	**335**	*i* PKiKP	**PKPbc**	**00 49 54.1**	**+0.4**
	comp=Z,4.7nm,0.8s						
SQTA	**Sankt Quirin**	**149.05**	**335**	*i* PKiKP	**PKPbc**	**00 49 54.4**	**+0.6**
	comp=Z,3.4nm,0.6s						
FETA	**Feichten**	**149.41**	**335**	*e*PKiKP	**PKiKP**	**00 49 55.5**	**-0.4**
	comp=Z,7.3nm,1.0s						

*IDC **05** 00:36:46.7±3.9, 12°.13N×143°.72E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.5/31, mbtmp3.9/3, Error ellipse: s-maj=171.0km s-min=35.9km az=139.0*
*NEIC **05** 00:36:48.3±1.5, 12°.2N±0°.1×143°.6E±0°.1, h10km±1km, mb4.6/5, Error ellipse: s-maj=25.7km s-min=7.0km az=129.0*
ISC 05 00:36:50.4±0.7,**12°.2N**±0°.1×**143°.7E**±0°.1,**h25**km,**n12,**
σ1§**18**/13,**mb4.5/6,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.80**	**39**	Pn	**Pn**	**00 37 20.3**	**+0.4**
	23nm,0.3s,baz=144,slow=14,SNR=13						
GUMO				Sn	**Sn**	**00 37 43.1**	**+1.1**
	29nm,0.3s,baz=194,slow=24,SNR=9.0						
SARN	**Sarigan**	**4.92**	**24**	Pn	**Pn**	**00 38 01.5**	**-1.4**
PMG	**Port Moresby**	**21.71**	**171**	P	**P**	**00 41 39.1**	**-0.8**
PMG				lAmb	lAmb	00 41 47.9	
	comp=Z,12nm,1.1s						
WAKE	**Wake Island**	**23.17**	**69**		**P**	**00 41 52.9**	**-2.5**
JNU	**Nakatsue**	**23.93**	**333**	P	**P**	**00 42 01.9**	**-0.7**
FITZ	**Fitzroy Crossi**	**34.97**	**211**	P	**P**	**00 43 40.7**	**-0.1**
EIDS	**Eidsvold**	**38.00**	**169**	P	**P**	**00 44 07.6**	**+1.0**
CISI	**Cisompet, Garu**	**40.72**	**243**	P	**P**	**00 44 29.5**	**-0.1**
CISI				lAmb	lAmb	00 44 48.2	
	comp=Z,22nm,0.9s						
PEA0B	**Petropavlovsk-**	**42.33**	**12**	P	**P**	**00 44 43.0**	**+0.8**
PEA0B				lAmb	lAmb	00 44 53.7	
	comp=Z,21nm,1.1s						
ILAR	**Eielson Array**	**70.32**	**25**	P	**P**	**00 48 01.3**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=254,slow=5.5,SNR=5.4						
YKA	**Yellowknife Ar**	**84.62**	**27**	P	**P**	**00 49 22.9**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=285,slow=5.0,SNR=6.3						
FINES	**FINESS Array B**	**91.95**	**335**	P	**P**	**00 49 57.1**	**+0.4**
	comp=Z,4.9nm,1.0s,baz=54,slow=3.6,SNR=4.4						

*IDC **05** 00:53:12.1±0.8, 45°.89N×150°.71E, h0km, mb3.6/8, mb1 3.9/11, mb1mx3.7/30, mbtmp3.6/11, ML2.8/3, MS2.8/2, Ms1 2.8/2, ms1mx2.5/32, Error ellipse: s-maj=33.3km s-min=16.4km az=140.0*
*SKHL **05** 00:53:17.7±0.4, 46°.20N×150°.90E, h36km±5km, mb4.8/4, msh4.8/3*
*NEIC **05** 00:53:17.0±2.9, 45°.98N±0°.10×150°.7E±0°.1, h35km±1km, mb4.5/10, Error ellipse: s-maj=16.9km s-min=8.7km az=142.0*
*MOS **05** 00:53:20.2±1.5, 46°.13N×150°.46E, h74km, mb4.0/6, Error ellipse: s-maj=16.2km s-min=8.3km az=57.6*
ISC 05 00:53:25.0±0.5,**46°.05N**±0°.07×**150°.38E**±0°.07,**h104**km,**n84,**
σ1§**83**/78,**mb3.6**/18,**5C-6D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.94**	**246**	*d* iPN	**Pn**	**00 53 53.5**	**-3.4**
KUR				pmax	pmax		
	comp=E,226nm,0.2s						
KUR				pmax	pmax		
	comp=Z,340nm,0.2s						
KUR				pmax	pmax		
	comp=N,201nm,0.3s						
KUR	**Kuril'sk**	**1.94**	**246**	⇓*i* P	**Pn**	**00 53 53.5**	**-3.4**
KUR				AMB	AMB	00 53 57.1	
	comp=N,200nm,0.4s						
KUR				AMB	AMB	00 53 57.1	
	comp=N,230nm,0.4s						
KUR				AMB	AMB	00 53 57.1	
	comp=N,310nm,0.4s						
KUR				*e*S	**Sn**	**00 54 20.7**	**-0.6**
KUR				A	A	00 54 24.0	
	comp=N,2μm,4.0s						
KUR				A	A	00 54 24.0	
	comp=N,1μm,4.0s						
KUR				A	A	00 54 25.8	
	comp=N,1μm,0.5s						
KUR				A	A	00 54 25.8	
	comp=N,710nm,0.5s						
SHO	**Shikotan**	**3.33**	**230**	*c* iPN	**Pn**	**00 54 12.9**	**-2.2**
SHO				*e*S	**Sn**	**00 54 55.8**	**+1.8**
SHO	**Shikotan**	**3.33**	**230**	⇓*i* P	**Pn**	**00 54 13.0**	**-2.2**
SHO				AMB	AMB	00 54 13.8	
	comp=N,50nm,0.3s						
SHO				*e*S	**Sn**	**00 54 54.2**	**+0.2**
SHO				A	A	00 54 56.2	
	comp=N,200nm,2.0s						
SHO				A	A	00 54 56.2	
	comp=N,800nm,2.0s						
SHO				A	A	00 54 57.0	
	comp=N,90nm,0.3s						
SHO				A	A	00 54 57.0	
	comp=N,90nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**3.78**	**239**	*e*PN	**Pn**	**00 54 21.3**	**+0.1**
YUK				pmax	pmax		
	comp=Z,571nm,0.3s						
YUK				pmax	pmax		
	comp=N,78nm,0.2s						
YUK				MLR	MLR		
	comp=Z,

JSH	**Shimam**	**8.15**	**249**	P		**Pn**	**00 55 22.8**	**+2.4**
JYM2	**Yakumo 2**	**8.21**	**245**	P		**Pn**	**00 55 21.7**	**+0.5**
PEA0B	**Petropavlovsk-**	**8.51**	**31⇓**	*e*PN		Pn	00 55 19.3	-6.0
PEA0B	**Petropavlovsk-**	**8.51**	**31**	Pn		Pn	00 55 15.3	-10
PETK	**Petropavlovsk-**	**8.51**	**31**	Pn		Pn	00 55 15.6	-10
	comp=Z,0.2nm,0.3s,baz=201,slow=12,SNR=4.9							
PETK				LR		LR	00 58 43.8	
	comp=Z,57nm,20.1s,baz=246,slow=39							
JTM	**Tenmabayashi**	**8.58**	**235**	P		**Pn**	**00 55 25.2**	**-1.0**
JANG	**Nango**	**8.60**	**232**	P		**Pn**	**00 55 23.8**	**-2.8**
JOSM	**Okushiri--Mats**	**8.79**	**247**	P		**Pn**	**00 55 30.1**	**+1.0**
JRG	**Rokugo**	**9.77**	**231**	P		**Pn**	**00 55 41.1**	**-1.4**
JIO	**Ouri**	**10.11**	**225**	P		**Pn**	**00 55 43.5**	**-3.6**
MJAR	**Matsushiro Arr**	**13.17**	**228**	Pn		Pn	00 56 21.9	-6.0
	comp=Z,0.0nm,0.3s,baz=28,slow=11,SNR=2.8							
ZEA	**Zeya**	**16.72**	**306**	*e*P		P	00 57 21.2	+8.0
ZEA				pmax		pmax		
	comp=Z,15nm,0.3s							
SEY	**Seymchan**	**16.96**	**3**	*i* P		**Pn**	**00 57 12.0**	**-3.5**
INCN	**Inchon**	**19.62**	**253**	P		**P**	**00 57 43.7**	**-1.4**
INCN				pmax		pmax		
	comp=Z,14nm,0.5s							
INCN	**Inchon**	**19.62**	**253**	P		**P**	**00 57 43.7**	**-1.4**
INCN				IAmb		IAmb	00 57 51.3	
	comp=Z,14nm,0.5s							
JNU	**Nakatsue**	**19.75**	**236**	P		**P**	**00 57 45.4**	**-1.2**
BILL	**Bilibino**	**23.53**	**15⇑**	*e*P		**P**	**00 58 25.7**	**+0.4**
BILL				*e*S		S	01 02 20.0	-11
BILL				pmax		pmax		
	comp=Z,2.0nm,1.0s							
BILL				MLR		MLR		
	comp=Z,55nm,10.0s							
BILL	**Bilibino**	**23.53**	**15⇑**	*e*P		**P**	**00 58 25.7**	**+0.4**
TIXI	**Tiksi**	**27.64**	**345**	*i* P		**P**	**00 59 03.5**	**+1.2**
TIXI				pmax		pmax		
	comp=Z,1.0nm,1.2s							
TIXI	**Tiksi**	**27.64**	**345**	*i* P		**P**	**00 59 03.5**	**+1.2**
H11N2	**WAKE ISLAND Hy**	**29.56**	**147**	T		T	01 30 29.0	
	baz=338,slow=76,SNR=3231							
H11N1	**WAKE ISLAND Hy**	**29.57**	**147**	T		T	01 30 30.1	
	baz=338,slow=76,SNR=5003							
H11N3	**WAKE ISLAND Hy**	**29.58**	**147**	T		T	01 30 30.3	
	baz=338,slow=76,SNR=6418							
H11S1	**WAKE ISLAND Hy**	**30.61**	**148**	T		T	01 31 48.2	
	baz=338,slow=76,SNR=5291							
H11S3	**WAKE ISLAND Hy**	**30.61**	**148**	T		T	01 31 49.4	
	baz=338,slow=76,SNR=3501							
H11S2	**WAKE ISLAND Hy**	**30.62**	**148**	T		T	01 31 49.6	
	baz=338,slow=76,SNR=2729							
OHAK	**Old Harbor**	**35.69**	**51**			**S**	**01 05 46.9**	**+5.3**
COLA	**College**	**37.85**	**38⇑**	*e*P		**P**	**01 00 30.7**	**-0.4**
COLA				pmax		pmax		
	comp=Z,3.0nm,1.0s							
ILAR	**Eielson Array**	**38.27**	**38**	*e*P		**P**	**01 00 34.2**	**-0.5**
ILAR	**Eielson Array**	**38.27**	**38**	P		**P**	**01 00 34.7**	**0.0**
	comp=Z,0.4nm,0.6s,baz=266,slow=6.7,SNR=8.8							
CRQM	**Cirque**	**40.39**	**44**	P		**P**	**01 00 50.8**	**-1.8**
CRQM				IAmb		IAmb	01 01 00.9	
	comp=Z,10nm,0.9s							
BARN	**Barnard Glacie**	**41.05**	**43**	P		**P**	**01 00 56.8**	**-1.1**
BARN				IAmb		IAmb	01 01 03.0	
	comp=Z,9.5nm,1.2s							
CTGM	**Chitina Glacie**	**41.23**	**43**	P		**P**	**01 00 58.1**	**-1.3**
CTGM				IAmb		IAmb	01 01 00.1	
	comp=Z,10nm,1.2s							
ZALV	**Zalesovo Beam**	**41.49**	**306**	PcP		**PcP**	**01 02 58.1**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=64,slow=3.4,SNR=2.4							
INK	**Inuvik**	**43.25**	**32**			**PcP**	**01 03 05.0**	**+2.4**
SKAG	**Skagway**	**44.50**	**45**	P		**P**	**01 01 22.2**	**-3.3**
SKAG				IAmb		IAmb	01 01 30.9	
	comp=Z,7.6nm,1.0s							
MKAR	**Makanchi Array**	**45.58**	**297**	P		**P**	**01 01 34.0**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=70,slow=6.8,SNR=2.7							
MKAR				PcP		**PcP**	**01 03 13.4**	**+2.4**
	comp=Z,0.2nm,0.7s,baz=83,slow=4.8,SNR=2.5							
BRVK	**Borovoye**	**49.88**	**309⇑**	*e*P		**P**	**01 02 07.5**	**+0.1**
BRVK				pmax		pmax		
	comp=Z,4.0nm,1.6s							
YKA	**Yellowknife Ar**	**52.61**	**36**	P		**P**	**01 02 28.1**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=299,slow=7.1,SNR=6.0							
ARU	**Arti**	**54.24**	**317**	*i* P		**P**	**01 02 42.0**	**+2.4**
ARU				pmax		pmax		
	comp=Z,2.0nm,1.1s							
ARU	**Arti**	**54.24**	**317**	*i* P		**P**	**01 02 42.0**	**+2.4**
NVAR	**Mina Array Bea**	**64.43**	**61**	P		**P**	**01 03 47.6**	**-2.7**
	comp=Z,0.3nm,0.6s,baz=111,slow=6.2,SNR=2.6							
MDPB	**Devils Postpil**	**64.46**	**62**	IAmb		IAmb	01 03 50.7	
	comp=Z,7.8nm,1.2s							
PDAR	**Pinedale Array**	**66.68**	**52**	P		**P**	**01 04 03.7**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=243,slow=0.2,SNR=4.0							
WRA	**Warramunga Arr**	**67.27**	**196**	P		**P**	**01 04 07.7**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=14,slow=6.9,SNR=3.7							
ASAR	**Alice Springs**	**70.98**	**196**	P		**P**	**01 04 30.7**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=26,slow=10,SNR=6.1							
ARMA	**Armidale**	**76.11**	**179**	P		**P**	**01 05 01.1**	**0.0**
E46A	**Sault Ste Mari**	**76.18**	**36**	P		**P**	**01 05 01.4**	**-0.1**
KSU1	**Kansas State U**	**76.18**	**48**	P		**P**	**01 05 00.7**	**-0.9**
I42A	**Draeger Farm,**	**76.19**	**40**	P		**P**	**01 05 02.0**	**+0.4**
TXAR	**Lajitas Array**	**79.48**	**59**	P		**P**	**01 05 20.9**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=296,slow=4.3,SNR=10							
PLCA	**Paso Flores**	**150.03**	**95**	PKPbc		**PKiKP**	**01 13 04.1**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=256,slow=4.2,SNR=2.7							

YARS 05 00:56:16.0±0.0, 56.84N×129.45E, h13km, ML3.6/16, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CGD	**Chagda**	**2.02**	**17**	*e*Pg			Pb	00 56 53.3	+0.9
	0.0nm,0.1s								
CGD				*e*Sg			Sg	00 57 19.6	-1.1
	0.4nm,0.3s								
CGD				*e*Sg			Sg	00 57 19.6	-1.1
	0.2nm,0.1s								
BMKR	**Bomnak**	**2.16**	**189**	*e*Pg			Pb	00 56 54.8	-0.1
	0.0nm,0.2s								
BMKR				*e*Sg			Sb	00 57 22.8	+1.3
	0.9nm,0.2s								
BMKR				*e*Sg			Sb	00 57 22.8	+1.3
	0.7nm,0.2s								
CLNS	**Chul'man**	**2.51**	**272**	*e*Pg			Pb	00 57 02.1	+1.3
	0.1nm,0.3s								
CLNS				*e*Sg			Sg	00 57 34.7	-1.7
	0.4nm,0.5s								
CLNS				*e*Sg			Sg	00 57 34.7	-1.7
	0.4nm,0.5s								
ALDR	**Aldan**	**2.80**	**311**	*e*Pg			Pb	00 57 07.2	+1.3
	0.0nm,0.2s								
ALDR				*e*Sg			Sg	00 57 43.4	-2.6
	0.1nm,0.2s								
ALDR				*e*Sg			Sg	00 57 43.4	-2.6
	0.1nm,0.1s								
TNDR	**Tynda**	**3.15**	**239**	*e*Pg			Pb	00 57 12.7	+0.9
	0.0nm,0.1s								
TNDR				*e*Sg			Sg	00 57 54.5	-2.7
	0.0nm,0.2s								
TNDR				*e*Sg			Sg	00 57 54.5	-2.7
	0.1nm,0.3s								
YKLR	**Yuktali**	**4.31**	**270**	*e*Pg			Pb	00 57 34.7	+3.3
	0.0nm,0.3s								
YKLR				*e*Sg			Sg	00 58 30.9	-3.2
	0.0nm,0.6s								
YKLR				*e*Sg			Sg	00 58 30.9	-3.2
	0.0nm,0.5s								
BLSR	**Buluus**	**4.54**	**357**	*e*Pg			Pb	00 57 38.5	+3.1
BLSR				*e*Sg			Sg	00 58 37.0	-4.6
TBGR	**Tabaga**	**5.00**	**1**	*e*Pg			Pb	00 57 45.7	+2.5
	0.0nm,0.4s								
TBGR				*e*Sg			Sg	00 58 51.6	-4.6
	0.5nm,0.8s								
TBGR				*e*Sg			Sg	00 58 51.6	-4.6
	0.4nm,0.8s								
YAK	**Yakutsk**	**5.21**	**1**	*e*Pg			Pb	00 57 50.7	+3.9
YAK				*e*Sg			Sg	00 58 58.1	-5.0
KHN	**Khani**	**5.30**	**275**	*e*Pg			Pb	00 57 50.1	+1.7
	0.0nm,0.5s								
KHN				*e*Sg			Sb	00 58 58.0	+6.1
	0.1nm,0.8s								
OLMR	**Olekminsk**	**5.89**	**311**	*e*Sg			Sg	00 59 19.6	-5.0
	0.0nm,0.6s								
TUP	**Tupik**	**5.90**	**250**	*e*Pn			Pn	00 57 43.8	+0.8
TUP				*e*Pg			Pb	00 58 01.7	+3.1
	0.0nm,0.4s								
TUP				*e*Sn			Sn	00 58 50.5	0.0
TUP				*e*Sg			Sg	00 59 21.5	-3.6
	0.0nm,1.1s								

NIED ***05*** *01:00:00.37˝.00N×143˝.30E, h8km, Mw3.8 Best double couple: M₀5.61000×10¹⁴ NP1:φ₀193.00000°, δ64.00000°, λ-89.00000°. NP2:φ₀10.00000°, δ26.00000°, λ-92.00000°.*
IDC ***05*** *01:00:25.7±0.8, 36˝.89N×143˝.58E, h0km, mb3.8/9, mb1 4.0/12, mb1mx3.8/33, mbtmp3.8/12, ML2.7/3, Error ellipse: s-maj=20.1km s-min=19.3km az=148.0*
JMA ***05*** *01:00:27.6±0.2, 37˝.03N×143˝.35E, h44km, M3.7*
NEIC ***05*** *01:00:29.0±3.0, 37˝.06N±0˝.07×143˝.41E±0˝.08, h27km±6km, mb4.3/3, Error ellipse: s-maj=10.5km s-min=8.5km az=167.0*

ISC 05 01:00:30.5±0.8, 37˝.13N±0˝.05×143˝.28E±0˝.07, h35km, n46, σ1°76/54, mb3.9/12, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.86**	**310**	P			**Pn**	**01 00 59.3**	**-0.5**
JIKH				S			**Sn**	**01 01 22.2**	**+0.2**
JFK	**Kawauchi**	**1.93**	**278**	P			**Pn**	**01 01 00.0**	**-0.9**
JFK				S			**Sn**	**01 01 23.7**	**-0.2**
ONAJ	**Iwakimizuishiy**	**1.98**	**270**	P			**Pn**	**01 01 00.6**	**-1.0**
ONAJ				S			**Sn**	**01 01 25.0**	**-0.2**
JMST	**Minamisoumatoc**	**1.99**	**288**	P			**Pn**	**01 01 00.9**	**-0.7**
JMST				S			**Sn**	**01 01 25.2**	**-0.1**
JIO	**Ouri**	**2.02**	**311**	P			**Pn**	**01 01 01.8**	**-0.2**
JIO				S			**Sn**	**01 01 26.1**	**+0.1**
JMM	**Marumori**	**2.11**	**291**	P			**Pn**	**01 01 02.8**	**-0.4**
JFFD	**Fukushimafurud**	**2.17**	**270**	P			**Pn**	**01 01 03.3**	**-0.8**
JFFD				S			**Sn**	**01 01 29.6**	**-0.2**
JFT	**Otama**	**2.38**	**280**	P			**Pn**	**01 01 06.9**	**0.0**
JMK	**Ichinoseki**	**2.44**	**319**	P			**Pn**	**01 01 07.8**	**0.0**
JMK				S			**Sn**	**01 01 37.3**	**+1.0**
JOM	**Ohasama**	**2.81**	**327**	P			**Pn**	**01 01 12.9**	**0.0**
JOM				S			**Sn**	**01 01 46.6**	**+1.0**
JYK	**Kaneyama**	**2.91**	**309**	P			**Pn**	**01 01 14.8**	**+0.5**
BSO1	**Boso 1**	**3.10**	**218**	P			**Pn**	**01 01 14.2**	**-2.2**
JAG	**Ashikaga**	**3.15**	**258**	P			**Pn**	**01 01 16.7**	**-0.9**
JAG				S			**Sn**	**01 01 53.4**	**-0.5**
JANG	**Nango**	**3.52**	**337**	P			**Pn**	**01 01 23.2**	**+0.6**
JRY	**Ryogami san**	**3.69**	**254**	P			**Pn**	**01 01 23.9**	**-1.2**
JRY				S			**Sn**	**01 02 05.9**	**-1.5**
JOD2	**Odawara 2**	**3.87**	**242**	P			**Pn**	**01 01 25.9**	**-1.6**
JOD2				S			**Sn**	**01 02 08.7**	**-3.0**
MJAR	**Matsushiro Arr**	**4.11**	**263**	Pn			**Pn**	**01 01 31.1**	**+0.3**
	0.5nm,0.3s,baz=79,slow=10,SNR=62								
MJAR				Sn			**Sn**	**01 02 18.6**	**+1.0**
	0.1nm,0.3s,baz=84,slow=30,SNR=2.6								
MAJO	**Matsushiro**	**4.11**	**263**	Pn			**Pn**	**01 01 31.4**	**+0.6**
MAT	**Matsushiro**	**4.11**	**263**	P			**Pn**	**01 01 31.6**	**+0.8**
MAT	**Matsushiro**	**4.11**	**263**	P			**Pn**	**01 01 31.5**	**+0.8**
MAT	**Matsushiro**	**4.11**	**263**	S			**Sn**	**01 02 18.2**	**+0.6**
MJB9	**Matsu-Tunnel**	**4.11**	**263**	Pn			**Pn**	**01 01 31.6**	**+0.8**
JYN	**Shimob**	**4.16**	**248**	P			**Pn**	**01 01 31.0**	**-0.5**
ERM	**Erimo**	**4.88**	**359**	Pn			**Pn**	**01 01 40.5**	**-0.8**
JHJ2	**Mitsune**	**4.91**	**216**	Pn			**Pn**	**01 01 40.9**	**-0.9**
INU	**Inuyama**	**5.36**	**252**	Pn			**Pn**	**01 01 48.3**	**+0.3**
JKA	**Kamikawa-asahi**	**7.00**	**356**				**Pn**	**01 02 09.8**	**-0.6**
JKA							**Sn**	**01 03 21.2**	**-7.4**
ASAJ	**Asahikawa**	**7.00**	**356**	Pn			**Pn**	**01 02 09.8**	**-0.6**
	1.5nm,0.3s,baz=213,slow=16,SNR=4.4								
ASAJ				Sn			**Sn**	**01 03 21.2**	**-7.5**
	baz=152,slow=34,SNR=1.1								
USRK	**Ussuriysk Ar.**	**11.10**	**313**	Pn			Pn	01 03 09.7	+3.1
	baz=133,slow=14,SNR=3.1								
KSRS	**Korea Array**	**12.23**	**276**	Pn			P	01 03 25.2	-8.8
	0.1nm,0.3s,baz=91,slow=14,SNR=12								
KLR	**Kul'dur**	**14.71**	**329**	Pn			**Pn**	**01 03 54.2**	**-1.6**
	0.1nm,0.3s,baz=134,slow=15,SNR=4.9								
H11N2	**WAKE ISLAND Hy**	**26.94**	**124**	T			T	01 34 15.1	
	baz=318								
H11N1	**WAKE ISLAND Hy**	**26.95**	**124**	T			T	01 34 18.7	
	baz=318								
H11N3	**WAKE ISLAND Hy**	**26.96**	**124**	T			T	01 34 15.1	
	baz=318								
SONM	**Songino Array**	**28.97**	**303**	P			P	01 06 29.7	+3.0
	1.5nm,0.7s,baz=96,slow=8.3,SNR=8.7								
ZALV	**Zalesovo Beam**	**42.95**	**312**	P			**P**	**01 08 27.4**	**+1.7**
	0.4nm,0.3s,baz=93,slow=8.9,SNR=5.1								
ZALV				PcP			**PcP**	**01 10 17.6**	**+1.7**
	0.4nm,0.6s,baz=96,slow=4.5,SNR=2.8								
LSA	**Lhasa**	**43.68**	**276**	P			**P**	**01 08 32.4**	**-0.2**
LSA				IAmb			IAmb	01 08 38.2	
	comp=Z,7.7nm,1.4s								
MK31	**Makanchi Array**	**45.33**	**302**	P			**P**	**01 08 45.7**	**+0.7**
MK31				IAmb			IAmb	01 09 23.2	
	comp=Z,1.7nm,1.1s								
MKAR	**Makanchi Array**	**45.33**	**302**	P			P	01 08 49.6	+4.7
	comp=Z,1.0nm,0.7s,baz=88,slow=9.6,SNR=11								
KURK	**Kurchatov**	**47.04**	**308**	P			**P**	**01 08 59.4**	**+1.1**
KURK				IAmb			IAmb	01 09 05.8	
	comp=Z,5.2nm,0.7s								
ILAR	**Eielson Array**	**48.61**	**32**	P			**P**	**01 09 11.2**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=264,slow=6.5,SNR=12								
WRA	**Warramunga Arr**	**57.39**	**190**	P			**P**	**01 10 14.5**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=10.0,slow=7.3,SNR=11								
ASAR	**Alice Springs**	**61.11**	**190**	P			**P**	**01 10 40.3**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=17,slow=9.5,SNR=12								
YKA	**Yellowknife Ar**	**62.97**	**31**	P			**P**	**01 10 54.2**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=302,slow=6.9,SNR=5.8								
NVAR	**Mina Array Bea**	**73.73**	**54**	P			**P**	**01 12 01.9**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=289,slow=5.7,SNR=3.8								
TXAR	**Lajitas Array**	**88.87**	**53**	P			**P**	**01 13 21.6**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=298,slow=3.4,SNR=7.5								

IDC 05 01:25:46.5±2.0, 7˝.63S×126˝.63E, h0km, mb3.2/1, mb1 3.8/3, mb1mx3.4/33, mbtmp3.5/3, ML3.6/2, Error ellipse: s-maj=180.4km s-min=31.7km az=62.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.34**	**149**	Pn			Pn	01 29 10.9	-0.1
	0.2nm,0.3s,baz=324,slow=14,SNR=7.0								
WRA				Sn			Sn	01 31 37.1	-14
	1.1nm,0.3s,baz=326,slow=24,SNR=15								
ASAR	**Alice Springs**	**17.41**	**157**	P			Pn	01 29 50.9	-0.1
	0.3nm,0.3s,baz=333,slow=12,SNR=24								
ASAR				S			Sn	01 32 52.2	-13
	0.3nm,0.3s,baz=339,slow=25,SNR=5.3								
MKAR	**Makanchi Array**	**66.97**	**329**	P			P	01 36 41.1	0.0
	0.1nm,0.4s,baz=133,slow=8.0,SNR=5.4								

SOME ***05*** *01:49:31.5, 42˝.52N×79˝.65E, h10km*
NNC ***05*** *01:49:32.1±0.8, 42˝.60N×79˝.60E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=5.0km s-min=2.6km az=133.0*
KRNET ***05*** *01:49:32.0±0.1, 42˝.53N×79˝.83E, h35km, mb2.7*

ISC 05 01:49:31.1±1.7, 42˝.56N±0˝.05×79˝.65E±0˝.06, h8km±10km, n31, σ0°88/51, 16C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**0.62**	**347**	*e*P			**Pb**	**01 49 43.9**	**-0.3**
	16nm,0.1s								
SHLS				*e*S			**Sb**	**01 49 53.0**	**-0.1**
	33nm,0.1s								
SHLS	**Shalkode**	**0.62**	**347**	P			**Pb**	**01 49 43.9**	**-0.3**
	12nm,0.1s								
SHLS				S			**Sb**	**01 49 52.8**	**-0.3**
	33nm,0.3s								
UZB	**Uzynbulak**	**0.75**	**322**	*e*P			**Pg**	**01 49 45.8**	**+0.3**
	7.8nm,0.1s								
UZB				*e*S			**Sg**	**01 49 56.1**	**+0.7**
	6.5nm,0.1s								
UZB	**Uzynbulak**	**0.75**	**322**	P			**Pg**	**01 49 45.8**	**+0.3**
	7.8nm,0.1s								
UZB				S			**Sg**	**01 49 56.1**	**+0.7**
	16nm,0.2s								
PDGK	**Podgornoye**	**0.78**	**351**	P			**Pb**	**01 49 46.2**	**-0.9**
	3.9nm,0.2s								
PDGK				S			**Sg**	**01 49 56.7**	**+0.4**
	2.6nm,0.2s								
PDGK	**Podgornoye**	**0.78**	**351**	⇑P			**Pb**	**01 49 46.1**	**-0.9**
	2.3nm,0.3s								
PDGK				⇑S			**Sg**	**01 49 56.6**	**+0.3**
	1.6nm,0.4s								
PRZ	**Przheval'sk**	**0.93**	**266**	⇓*i*P			**Pn**	**01 49 51.7**	**+1.1**
	baz=68								
PRZ				⇓*i*S			**Sn**	**01 50 05.8**	**+1.6**
	baz=68								
SATY	**Saty**	**1.04**	**299**	*e*P			**Pn**	**01 49 51.4**	**-0.8**
	1.2nm,0.1s								
SATY				*e*S			**Sn**	**01 50 05.7**	**-1.3**
	29nm,0.1s								
SATY	**Saty**	**1.04**	**299**	P			**Pn**	**01 49 51.4**	**-0.8**
	3.0nm,0.1s								
SATY				S			**Sg**	**01 50 05.4**	**+0.7**
	26nm,0.2s								
KPKS	**Kokpek**	**1.15**	**322**	*e*P			**Pb**	**01 49 52.9**	**-0.5**
	9.7nm,0.2s								
KPKS				*e*S			**Sb**	**01 50 08.0**	**-0.6**
	8.7nm,0.4s								
ANVS	**Anan'yevo**	**1.48**	**280⇑**	*i*P			**Pg**	**01 49 59.5**	**0.0**
	baz=80								
ANVS				⇑*i*S			**Sg**	**01 50 19.6**	**+0.9**
	baz=80								
TARG	**Taragay, Kyrgy**	**1.60**	**240⇑**	*i*P			**Pb**	**01 50 00.6**	**-0.6**
	baz=43								
TARG				⇑*i*S			**Sg**	**01 50 21.8**	**-0.8**
	baz=43								
DJR	**Jarkent**	**1.78**	**3**	*e*P			**Pg**	**01 50 04.6**	**-0.6**
	1.3nm,0.1s								
DJR				*e*S			**Sg**	**01 50 28.3**	**0.0**
	12nm,0.2s								
DJR	**Jarkent**	**1.78**	**3**	P			**Pb**	**01 50 04.3**	**+0.3**
	1.1nm,0.2s								
DJR				S			**Sg**	**01 50 27.7**	**-0.6**
	10.0nm,0.3s								
KDJ	**Kajisay**	**1.88**	**258⇑**	*i*P			**Pb**	**01 50 05.3**	**-0.5**
	baz=59								
KDJ				⇑*i*S			**Sb**	**01 50 29.3**	**-0.2**
	baz=59								
KOTS	**Kotyrbulak**	**1.98**	**291**	*e*P			**Pg**	**01 50 08.6**	**-0.5**
	5.2nm,0.2s								
KOTS				*e*S			**Sg**	**01 50 35.2**	**+0.4**
	14nm,0.4s								
KOTS	**Kotyrbulak**	**1.98**	**291**	Pg			**Pg**	**01 50 08.8**	**-0.3**
	3.5nm,0.2s								
KOTS				Lg			Lg	01 50 35.4	
	14nm,0.4s								
MDOK	**Medeo**	**2.01**	**288**	Pg			**Pg**	**01 50 09.0**	**-0.6**
	2.6nm,0.3s								
MDOK				Lg			Lg	01 50 35.6	
	4.2nm,0.5s								
TNSS	**Tian-Shan**	**2.05**	**285**	Pg			**Pg**	**01 50 09.7**	**-0.7**
	2.3nm,0.4s								
TNSS				Lg			Lg	01 50 36.7	
	3.9nm,0.2s								
ARXS	**Arharly**	**2.12**	**322**	Pg			**Pb**	**01 50 09.4**	**-0.5**
	1.8nm,0.2s								
ARXS				Lg			Lg	01 50 36.7	
	3.3nm,0.4s								
CHKK	**Chushkaly**	**2.34**	**305**	Pg			**Pb**	**01 50 13.1**	**-0.4**
	0.9nm,0.1s								
CHKK				Lg			Lg	01 50 43.3	
	6.5nm,0.3s								
KTBS	**Karatobe**	**2.46**	**299**	Pg			**Pb**	**01 50 16.0**	**+0.4**
	1.3nm,0.3s								
KTBS				Lg			Lg	01 50 47.6	
	11nm,0.3s								
ULHL	**Ulahol**	**2.54**	**264⇓**	*i*P			**Pb**	**01 50 15.9**	**-1.2**
	baz=65								
ULHL				⇓*i*S			**Sb**	**01 50 48.1**	**-0.5**
	baz=65								
KAPS	**Kapalarasan**	**2.74**	**356**	Pg			**Pb**	**01 50 21.1**	**+0.8**
	0.7nm,0.3s								
KAPS				Lg			Lg	01 50 56.7	
	3.0nm,0.3s								
BOOM	**Boomskoye usch**	**2.74**	**270⇑**	*e*P			**Pn**	**01 50 17.2**	**+1.6**
	baz=71								
BOOM				⇑*i*S			**Sn**	**01 50 49.8**	**+0.8**
	baz=71								
KST	**Kastek**	**2.76**	**281**	Pg			**Pb**	**01 50 21.8**	**+1.1**
	2.1nm,0.3s								
KST				Lg			Lg	01 50 57.5	
	1.8nm,0.2s								
KUU	**Kurty**	**2.76**	**300**	Pg			**Pb**	**01 50 21.0**	**+0.2**
	0.4nm,0.5s								
KUU				Lg			Lg	01 50 56.2	
	2.8nm,0.3s								
DGS	**Degeres**	**2.93**	**285**	Pg			**Pb**	**01 50 24.6**	**+1.0**
	1.8nm,0.6s								
DGS				Lg			Lg	01 51 02.6	
	5.5nm,0.5s								
NRN	**Naryn**	**2.94**	**249⇑**	*i*P			**Pn**	**01 50 19.7**	**+1.3**
	baz=50								
NRN			

CHVC	**Chvalec**	**144.34**	**334**	*e*PKP	PKPbc	02 10 58.8	+0.3
CHVC				*ex*	x	02 11 02.6	
DPC	**Dobruska-Polom**	**144.41**	**333**	*e*PKP	PKPbc	02 10 59.0	+0.3
DPC				*ex*	x	02 11 06.2	
UPC	**Upice**	**144.42**	**334**	*e*PKP	PKPbc	02 10 59.0	+0.3
PLVB	**Pleven**	**144.45**	**318**	⇑P	**PKPdf**	**02 10 59.8**	**-0.6**
GZR	**Gura Zlata**	**144.48**	**322**	⇑P	**PKPab**	**02 10 58.8**	**-0.2**
VYHS	**Vyhne**	**144.61**	**329**	*e*	PKPbc	02 11 00.1	+0.7
KOLL	**Kolacno**	**144.76**	**330**	*e*	**PKPdf**	**02 11 01.1**	**+0.2**
JAVC	**Velka Javorina**	**144.91**	**330**	*e*PKP	**PKPdf**	**02 11 01.9**	**+0.7**
CLL	**Collm**	**144.96**	**337**	⇓*i*PKPdf	**PKPbc**	**02 11 00.4**	**0.0**
	comp=Z,16nm,1.0s						
BRG	**Berggiesshubel**	**144.96**	**336**	*e*PKP	**PKPab**	**02 11 00.7**	**+0.3**
	comp=Z,12nm,0.9s						
PVCC	**Panska Ves**	**144.99**	**335**	*e*PKP	**PKPdf**	**02 11 01.1**	**-0.1**
BZS	**Buzias**	**145.01**	**323**	⇑P	**PKPbc**	**02 11 00.3**	**-0.5**
VRAC	**Vranov**	**145.07**	**332**	⇑P	**PKPdf**	**02 11 01.6**	**+0.2**
VRAC	**Vranov**	**145.07**	**332**	*e*PKP	**PKPdf**	**02 11 01.4**	**0.0**
KRUC	**Moravsky**	**145.34**	**332**	*e*PKP	**PKPab**	**02 11 02.2**	**+0.3**
PRU	**Pruhonice**	**145.42**	**334**	*e*PKP	**PKPdf**	**02 11 02.0**	**0.0**
MODS	**Modra-Piesok**	**145.44**	**330**	*e*	**PKPdf**	**02 11 01.7**	**-0.4**
PBCC	**Pribram**	**145.88**	**335**	*e*PKP	**PKPbc**	**02 11 03.4**	**0.0**
KHC	**Kasperske Hory**	**146.48**	**334**	*e*PKP	**PKPbc**	**02 11 04.7**	**-0.6**
KHC				*ex*	x	02 11 16.3	
GERES	**GERESS Array B**	**146.66**	**334**	PKPbc	**PKPbc**	**02 11 05.6**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=35,slow=3.3,SNR=26						

*NEIC **05** 01:52:32.6±2.0, 14°.02N±0°.07×91°.62W±0°.05, h56km±1km, mb4.1/16, Md4.3/20(MEX), Error ellipse: s-maj=10.3km s-min=6.7km az=201.0*
*MEX **05** 01:52:33.2±0.6, 13°.99N×91°.57W, h36km±28km, MD4.3*
*INET **05** 01:52:34.1, 14°.02N×91°.64W, h28km, ML4.4*
*SNET **05** 01:52:34.9±1.9, 14°.09N×91°.43W, h15km, ML4.1*
*GCG **05** 01:52:34.2±0.6, 13°.91N×91°.50W, h23km±5km, MD4.4*
*UCR **05** 01:52:34.7±2.0, 14°.07N×91°.51W, h25km, ML3.9, mb4.1(NEIC)*
*IDC **05** 01:52:38.6±2.0, 14°.32N×91°.12W, h102km±13km, mb3.5/11, mb1 3.7/13, mb1mx3.5/42, mbtmp3.8/13, MS3.3/6, Ms1 3.3/6, ms1mx3.0/24, Error ellipse: s-maj=34.8km s-min=16.4km az=44.0*

ISC 05 01:52:33.6±1.0, 14°.07N±0°.07×91°.65W±0°.04, h63km±8km, n90, σ1°.926/95, mb4.0/17, 1C-3D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
ERG	**Entre ros, C**	**0.38**	**12**	⇓*i*P		**Pn**		**01 52 44.5**	**-0.2**
STG3	**Santiaguito 3,**	**0.65**	**7**	⇓*i*P		**Pn**		**01 52 46.9**	**-0.7**
FUG	**Fuego 3**	**0.87**	**64**	⇓*i*P		**Pn**		**01 52 49.9**	**-0.4**
THIG		**1.03**	**325**	*e*P		**Pn**		**01 52 51.0**	**-1.1**
THIG				*e*S		**Sn**		**01 53 05.1**	**-0.7**
THIG		**1.03**	**325**			**Pn**		**01 52 51.0**	**-1.1**
THIG						**Sn**		**01 53 05.1**	**-0.7**
PCG	**Pacaya**	**1.06**	**72**	*e*P		**Pn**		**01 52 52.8**	**0.0**
IXG	**Ixpaco**	**1.18**	**85**	⇑*i*P		**Pn**		**01 52 53.6**	**-0.6**
NBG	**Las Nubes**	**1.36**	**68**	*e*P		**Pn**		**01 52 58.1**	**+1.3**
APG	**El Apazote**	**1.48**	**51**	P		**Pn**		**01 52 58.6**	**+0.3**
	119nm,0.3s,baz=203,slow=11,SNR=726								
APG				S		**Sn**		**01 53 18.4**	**+1.5**
	311nm,0.3s,baz=103,slow=13,SNR=7.6								
APG				LR		LR		01 53 38.0	
	comp=Z,589nm,21.9s,baz=218,slow=64								
FAME	**Alcalda de S**	**1.60**	**98**	*e*P		**Pn**		**01 52 58.1**	**-1.6**
FAME				*e*S		**Sn**		**01 53 16.8**	**-2.7**
FAME				IAML				01 53 21.1	
	comp=Z,1μm,0.3s								
RTR	**El Retiro**	**1.95**	**95**	*e*P		**Pn**		**01 53 04.8**	**+0.1**
RTR	**El Retiro**	**1.95**	**95**	*e*P		**Pn**		**01 53 04.8**	**+0.1**
SBLS	**San Blas**	**1.98**	**96**	*e*P		**Pn**		**01 53 04.9**	**-0.2**
SBLS	**San Blas**	**1.98**	**96**	*e*P		**Pn**		**01 53 04.9**	**-0.2**
CEVE	**Cerro Verde**	**1.98**	**97**	*e*P		**Pn**		**01 53 04.8**	**-0.3**
CEVE				*e*S		**Sn**		**01 53 31.0**	**+2.0**
CEVE				IAML				01 53 38.0	
	comp=Z,6μm,0.3s								
CEVE	**Cerro Verde**	**1.98**	**97**	*e*P		**Pn**		**01 53 04.8**	**-0.3**
CEVE				*e*S		**Sn**		**01 53 31.0**	**+2.0**
CEVE				IAML				01 53 38.0	
	comp=Z,6μm,0.3s								
SNJE	**San Jose**	**1.99**	**95**	*e*P		**Pn**		**01 53 05.2**	**0.0**
SNJE	**San Jose**	**1.99**	**95**	*e*P		**Pn**		**01 53 05.2**	**0.0**
MRL	**Marmol**	**2.15**	**62**	*e*P		**Pn**		**01 53 08.5**	**+1.1**
PCIG		**2.23**	**317**	*e*P		**Pn**		**01 53 07.5**	**-0.6**
PCIG				*i* S		**Sn**		**01 53 34.6**	**+0.1**
PCIG		**2.23**	**317**			**Pn**		**01 53 07.5**	**-0.6**
PCIG						**Sn**		**01 53 34.6**	**+0.1**
MTO3	**Montecristo**	**2.24**	**81**	*e*P		**Pn**		**01 53 08.2**	**-0.4**
MTO3	**Montecristo**	**2.24**	**81**	*e*P		**Pn**		**01 53 08.2**	**-0.4**
BOQS	**Boqueron**	**2.32**	**98**	*e*P		**Pn**		**01 53 09.9**	**+0.1**
SNET	**Serv Nac Est T**	**2.38**	**99**	*e*P		**Pn**		**01 53 10.4**	**+0.1**
SNET				*e*S		**Sn**		**01 53 38.1**	**-0.3**
SNET				IAML				01 53 45.7	
	comp=Z,2μm,0.2s								
SNET	**Serv Nac Est T**	**2.38**	**99**	*e*P		**Pn**		**01 53 10.4**	**+0.1**
SNET				*e*S		**Sn**		**01 53 38.1**	**-0.3**
SNET				IAML				01 53 45.7	
	comp=Z,2μm,0.2s								
SNET	**Serv Nac Est T**	**2.38**	**99**			**Pn**		**01 53 08.9**	**-1.4**
LFU	**La Fuente**	**2.48**	**97**	*e*P		**Pn**		**01 53 12.2**	**+0.4**
LFU	**La Fuente**	**2.48**	**97**	*e*P		**Pn**		**01 53 12.2**	**+0.4**
LBRS	**Las Brisas**	**2.55**	**97**	*e*P		**Pn**		**01 53 12.8**	**+0.2**
LFRS	**El Faro**	**2.55**	**100**	*e*P		**Pn**		**01 53 13.1**	**+0.3**
COEG	**Centro de Oper**	**2.73**	**99**	*e*P		Pn		01 53 16.2	+1.2
COEG				*e*S		**Sn**		**01 53 48.8**	**+1.8**
COEG				IAML				01 53 58.3	
	comp=Z,1μm,0.5s								
COEB	**Comit de Eme**	**3.08**	**100**	*e*P		**Pn**		**01 53 20.3**	**+0.4**
COEB				*e*S		**Sn**		**01 53 55.6**	**-0.1**
COEB				IAML				01 54 04.8	
	comp=Z,723nm,0.3s								
TECA	**Tecapa**	**3.11**	**100**	*e*P		Pn		01 53 20.9	+0.5
TECA	**Tecapa**	**3.11**	**100**	*e*P		Pn		01 53 23.9	+0.5
PACA	**Pacayal**	**3.29**	**100**	*e*P		Pn		01 53 24.0	+1.3
PACA	**Pacayal**	**3.29**	**100**	*e*P		Pn		01 53 24.0	+1.3
LCY	**Lacayo**	**3.32**	**101**	*e*P		Pn		01 53 24.5	+1.3
LCY	**Lacayo**	**3.32**	**101**	*e*P		Pn		01 53 24.5	+1.3
JUCU	**Jucuarįn**	**3.40**	**103**	*e*P		Pn		01 53 25.3	+1.0
JUCU				IAML				01 54 21.7	
	comp=Z,601nm,0.5s								
LCND	**La Caada**	**3.73**	**101**	*e*P		Pn		01 53 29.4	+0.7
LCND				*e*S		**Sn**		**01 54 12.4**	**+0.9**
LCND				IAML				01 54 25.2	
	comp=Z,559nm,0.3s								
LCND	**La Caada**	**3.73**	**101**	*e*P		Pn		01 53 29.4	+0.7
LCND				*e*S		**Sn**		**01 54 12.4**	**+0.9**
LCND				IAML				01 54 25.2	
	comp=Z,559nm,0.3s								
TGUH	**Tegucigalpa,Un**	**4.25**	**90**	Pn		**Pn**		**01 53 34.4**	**-1.5**
HUIG	**Huatulco**	**4.63**	**292**	*i* P		**Pn**		**01 53 40.4**	**-0.7**
HUIG				*i* S		**Sn**		**01 54 34.2**	**+0.7**
HUIG	**Huatulco**	**4.63**	**292**			**Pn**		**01 53 40.4**	**-0.7**
HUIG						**Sn**		**01 54 34.2**	**+0.7**
ESTN	**Estel**	**5.22**	**100**			**Pn**		**01 53 47.7**	**-1.6**
ACON	**Acoyapa**	**6.65**	**108**			**Pn**		**01 54 07.4**	**-1.3**
PNIG	**Pinotepa**	**6.67**	**291**	*e*P		**Pn**		**01 54 09.4**	**+0.5**
PNIG				*i* S		**Sn**		**01 55 24.9**	**+1.3**
PNIG	**Pinotepa**	**6.67**	**291**			**Pn**		**01 54 09.4**	**+0.5**
PNIG						**Sn**		**01 55 24.9**	**+1.3**
TEIG	**Tepich**	**6.92**	**27**	P		**Pn**		**01 54 12.3**	**-0.1**
TEIG				S		**Sn**		**01 55 29.0**	**-0.7**
TEIG	**Tepich**	**6.92**	**27**			**Pn**		**01 54 11.6**	**-0.9**
ESPN	**Las Esperanzas**	**7.40**	**104**	Pn		**Pn**		**01 54 16.0**	**-3.0**
JTS	**Las Juntas de**	**7.55**	**119**	P		Pn		01 54 21.4	+0.4
	comp=Z,1.6nm,0.3s,baz=174,slow=22,SNR=9.2								
JTS				S		**Sn**		**01 55 47.2**	**+2.0**
	comp=Z,0.4nm,0.3s,baz=354,slow=21,SNR=0.6								
NATX	**Nacogdoches**	**17.83**	**352**	Pn		**Pn**		**01 56 39.7**	**+2.4**
TXAR	**Lajitas Array**	**18.83**	**326**	P		**Pn**		**01 56 51.4**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=22								
TXAR				PcP		**PcP**		**02 01 13.4**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=151,slow=4.0,SNR=4.0								
TX31	**Lajitas Ar. Si**	**18.83**	**326**	P		**Pn**		**01 56 50.8**	**+1.2**
TX32	**Lajitas Array**	**18.83**	**326**	P		**Pn**		**01 56 51.1**	**+1.5**
SDV	**Santo Domingo**	**21.22**	**102**	P		**P**		**01 57 12.5**	**-2.1**
	comp=Z,2.8nm,0.6s,baz=317,slow=7.8,SNR=4.7								
SDV				LR		LR		02 04 59.7	
	comp=Z,48nm,20.4s,baz=236,slow=36								
SDV	**Santo Domingo**	**21.22**	**102**	P		**P**		**01 57 13.6**	**-1.0**
SDV				IAmb		IAmb		01 57 19.7	
	comp=Z,8.1nm,0.8s								
MNTX	**Cornudas Mount**	**21.60**	**327**	P		**P**		**01 57 20.0**	**+1.7**
MNTX				IAmb		IAmb		01 57 23.0	
	comp=Z,5.0nm,0.8s								
LCAR	**Lake Charles**	**21.91**	**1**	P		**P**		**01 57 21.3**	**-0.3**
LCAR				IAmb		IAmb		01 57 22.7	
	comp=Z,6.1nm,0.6s								
TKL	**Tuckaleechee C**	**22.64**	**17**	P		**P**		**01 57 28.7**	**-0.7**
	comp=Z,4.6nm,0.9s,baz=158,slow=11,SNR=4.3								
TKL				LR		LR		02 07 04.6	
	comp=Z,90nm,18.7s,baz=173,slow=39								
TKL	**Tuckaleechee C**	**22.64**	**17**	IAmb		IAmb		01 57 30.1	
	comp=Z,4.9nm,0.8s								
PBMO	**Poplar Bluff**	**22.64**	**3**	P		**P**		**01 57 28.9**	**-0.6**
PBMO				IAmb		IAmb		01 57 30.3	
	comp=Z,6.9nm,0.7s								
CCM	**Cathedral Cave**	**23.90**	**1**	P		**P**		**01 57 41.1**	**-0.4**
CCM				IAmb		IAmb		01 57 42.5	
	comp=Z,4.7nm,0.8s								
BNM	**Barren Site**	**24.16**	**328**	P		**P**		**01 57 46.0**	**+1.7**
ANMO	**Albuquerque**	**24.71**	**330**	P		**P**		**01 57 49.9**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=344,slow=5.3,SNR=4.8								
ANMO	**Albquerque**	**24.71**	**330**	IAmb		IAmb		01 57 58.4	
	comp=Z,0.7nm,0.8s								
SJG	**San Juan**	**24.82**	**77**	LR		LR		02 06 42.6	
	comp=Z,67nm,18.5s,baz=153,slow=35								
PCRV	**Puerto La Cruz**	**26.68**	**95**	LR		LR		02 10 52.3	
	comp=Z,179nm,19.4s,slow=42								
NNA	**Nana**	**29.76**	**150**	LR		LR		02 09 44.5	
	comp=Z,25nm,19.2s,baz=309,slow=34								
MTPU	**Mount Pierson**	**30.04**	**326**	P		**P**		**01 58 39.3**	**+2.2**
PDAR	**Pinedale Array**	**32.50**	**335**	P		**P**		**01 59 01.7**	**+3.1**
	comp=Z,0.2nm,0.5s,baz=142,slow=9.0,SNR=2.6								
PDAR				PcP		**PcP**		**02 01 43.6**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=128,slow=4.9,SNR=3.8								
NV11	**Mina Array Sit**	**33.74**	**321**	P		**P**		**01 59 11.7**	**+2.4**
NV11				IAmb		IAmb		01 59 31.4	
	comp=Z,2.3nm,0.8s								
NVAR	**Mina Array Bea**	**33.83**	**321**	P		**P**		**01 59 13.3**	**+3.1**
	comp=Z,1.0nm,0.6s,baz=131,slow=9.0,SNR=10								
NVAR				PcP		**PcP**		**02 01 48.8**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=125,slow=4.5,SNR=5.6								
F10A	**Beach Ranch, E**	**38.42**	**331**	P		**P**		**01 59 50.1**	**+1.1**
C09A	**Chrisman Ranch**	**40.25**	**332**	P		**P**		**02 00 05.7**	**+1.4**
LON	**Longmire**	**41.21**	**328**	P		**P**		**02 00 14.2**	**+1.9**
LON				IAmb		IAmb		02 00 17.1	
	comp=Z,2.7nm,0.8s								
SCHQ	**Schefferville**	**45.04**	**20**	P		**P**		**02 00 40.2**	**-2.7**
	comp=Z,3.1nm,0.9s,baz=235,slow=8.9,SNR=4.3								
YKA	**Yellowknife Ar**	**51.04**	**347**	P		**P**		**02 01 28.1**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=148,slow=7.5,SNR=10								
YKA				PcP		**PcP**		**02 02 44.0**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=154,slow=3.7,SNR=14								
INK	**Inuvik**	**60.47**	**343**	P		**P**		**02 02 36.5**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=111,slow=8.6,SNR=4.4								
INK	**Inuvik**	**60.47**	**343**	IAmb		IAmb		02 02 36.8	
	comp=Z,2.1nm,1.0s								
ILAR	**Eielson Array**	**62.91**	**337**	P		**P**		**02 02 52.9**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=117,slow=6.4,SNR=9.5								
MLY	**Manley**	**64.52**	**336**	P		**P**		**02 03 04.4**	**+0.8**
ARCES	**ARCESS Array B**	**85.97**	**18**	P		P		02 05 03.5	-3.1
	comp=Z,1.0nm,0.9s,baz=287,slow=4.6,SNR=4.2								
TORD	**Torodi Ar. Bea**	**90.03**	**77**	P		**P**		**02 05 24.7**	**-2.4**
	comp=Z,0.1nm,0.4s,baz=315,slow=3.6,SNR=4.2								
TORD				LR		LR		02 42 00.0	
	comp=Z,32nm,20.5s,baz=335,slow=33								
TORD	**Torodi Ar. Bea**	**90.03**	**77**	IAmb		IAmb		02 05 32.9	
	comp=Z,0.6nm,1.1s								
MKAR	**Makanchi Array**	**119.18**	**5**	PKP		**PKPdf**		**02 11 14.8**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=328,slow=2.6,SNR=5.3								
BOSA	**Boshof**	**120.08**	**115**	PKP		**PKPdf**		**02 11 17.5**	**-0.5**
	comp=Z,2.8nm,0.9s,baz=194,slow=4.2,SNR=3.2								
CMAR	**Chiang Mai Arr**	**146.04**	**342**	PKPbc		**PKPbc**		**02 12 07.8**	**+0.6**
	comp=Z,6.2nm,0.7s,baz=344,slow=4.1,SNR=9.9								

*IDC **05** 01:55:28.4±1.2, 10°.31N×126°.29E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/45, mbtmp3.7/6, Error ellipse: s-maj=64.9km s-min=27.4km az=71.0*
*MAN **05** 01:55:30.9, 10°.52N×126°.52E, h14km, mb4.5, ML3.3, MS3.1*

ISC 05 01:55:30.3±2.3, 10°.56N±0°.04×126°.35E±0°.09, h9km±13km, n20, σ1°.936/20, mb3.6/6, 3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SCPH	**Surigao**	**1.15**	**228**	⇓*e*P		**Pn**		**01 55 53.5**	**+0.9**
BESP	**Borongan**	**1.37**	**319**	*e*P		**Pn**		**01 55 55.6**	**-0.1**
BESP				*e*S		Sg		01 56 26.9	+12
MSLP	**Maasin**	**1.53**	**254**	*e*P		**Pg**		**01 55 59.9**	**+0.3**
MSLP				*e*S		**Sn**		**01 56 16.2**	**-1.7**
BUTP	**Butuan**	**1.73**	**205**	*e*P		**Pn**		**01 56 00.1**	**-0.6**
BUTP				*e*S		**Sg**		**01 56 26.8**	**+0.7**
LLP	**Lapu-Lapu**	**2.36**	**264**	⇓*e*P		**Pb**		**01 56 13.6**	**+0.5**
LLP				*e*S		**Sg**		**01 56 46.5**	**+0.3**
CNP	**Catarman**	**2.55**	**320**	*e*P		**Pb**		**01 56 14.9**	**-1.5**
CNP				*e*S		**Sb**		**01 56 48.1**	**+0.3**
CGP	**Cagayan de Oro**	**2.65**	**218**	⇓*e*P		**Pb**		**01 56 17.0**	**-1.0**
CGP				*e*S		**Sb**		**01 56 48.6**	**-2.1**
BUKP	**Musuan**	**2.95**	**206**	*e*P		**Pn**		**01 56 19.1**	**+1.6**
BUKP				*e*S		**Sn**		**01 56 55.1**	**+2.1**
ASAR	**Alice Springs**	**34.80**	**168**	P		**P**		**02 02 19.0**	**-2.6**
	0.2nm,0.3s,baz=350,slow=7.1,SNR=6.0								
H11S3	**WAKE ISLAND Hy**	**39.76**	**74**	T		T		02 46 03.1	
	baz=261								
H11S1	**WAKE ISLAND Hy**	**39.78**	**74**	T		T		02 46 10.7	
	baz=261								
H11S2	**WAKE ISLAND Hy**	**39.78**	**74**	T		T		02 46 03.7	
	baz=261								
H11N1	**WAKE ISLAND Hy**	**40.09**	**72**	T		T		02 46 30.5	
	baz=264								
H11N2	**WAKE ISLAND Hy**	**40.10**	**72**	T		T		02 46 32.3	
	baz=264								
H11N3	**WAKE ISLAND Hy**	**40.11**	**72**	T		T		02 46 34.2	
	baz=264								
MKAR	**Makanchi Array**	**51.85**	**323**	P		**P**		**02 04 39.4**	**+0.3**
	0.2nm,0.5s,baz=123,slow=6.1,SNR=5.9								
ZALV	**Zalesovo Beam**	**54.42**	**331**	P		**P**		**02 04 58.2**	**+0.4**
	0.4nm,0.4s,baz=114,slow=7.8,SNR=2.8								
ILAR	**Eielson Array**	**79.15**	**26**	P		**P**		**02 07 36.1**	**+0.8**
	0.3nm,0.8s,baz=262,slow=6.3,SNR=2.9								
ARCES	**ARCESS Array B**	**83.95**	**340**	P		**P**		**02 08 01.9**	**+1.2**
	1.7nm,0.8s,baz=74,slow=7.6,SNR=4.2								
FINES	**FINESS Array B**	**85.68**	**332**	P		**P**		**02 08 10.3**	**+0.9**
	1.8nm,0.9s,baz=66,slow=4.8,SNR=4.8								

*JMA **05** 01:59:04.5±0.2, 28°.03N×130°.23E, h41km±2km, M3.2*
*IDC **05** 01:59:07.7±2.7, 28°.11N×129°.91E, h40km±22km, mb3.3/3, mb1 3.5/4, mb1mx3.1/44, mbtmp3.5/4, ML3.0/1, MS2.9/5, Ms1 3.0/5, ms1mx2.7/21, Error ellipse: s-maj=37.9km s-min=10.1km az=117.0*

ISC 05 01:59:05.8±1.3, 28°.03N×130°.11E±0°.05, h31km±10km, n29, σ0°.966/33, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
JZK	**Kikaishima**	**0.32**	**337**	P		**Pb**		**01 59 13.4**	**-0.2**
JZK				S		**Sn**		**01 59 20.1**	**+0.2**
JAM	**Amami Oshima**	**0.59**	**311**	P		**Pb**		**01 59 17.6**	**-0.2**
JAM				S		**Sn**		**01 59 26.2**	**-0.5**
JAMN	**Amaminishikomi**	**0.86**	**285**	P		**Pn**		**01 59 21.7**	**-0.1**
JTK	**Tokunoshima**	**1.06**	**257**	P		**Pb**		**01 59 25.0**	**-0.6**
JTK				*e*S		**Sb**		**01 59 39.4**	**+0.3**
JTAJ	**Takarajima**	**1.38**	**325**	P		**Pn**		**01 59 28.1**	**-0.9**
JTAJ				*e*S		**Sn**		**01 59 46.4**	**+0.2**
JOKE	**Okinoerabujima**	**1.52**	**245**	P		**Pn**		**01 59 31.3**	**+0.4**
JYRO	**Yoronjima**	**1.78**	**236**	P		**Pn**		**01 59 34.9**	**+0.4**
JYRO				*e*S		**Sn**		**01 59 57.3**	**+1.2**
JNN	**Nakanoshima**	**1.82**	**353**	*e*S		**Sn**		**01 59 57.2**	**0.0**
JOW	**Kunigami**	**2.02**	**234**	P		**Pn**		**01 59 38.1**	**+0.3**
JOW	**Kunigami**	**2.02**	**234**	P		**Pn**		**01 59 38.2**	**+0.3**
	1.7nm,0.3s,baz=90,slow=16,SNR=17								
JOW				S		**Sn**		**02 00 01.4**	**-0.7**
	4.1nm,0.3s,baz=89,slow=19,SNR=5.7								
JIH	**Iheya**	**2.15**	**243**	P		**Pn**		**01 59 39.8**	**+0.3**
JYAK	**Yakushimahirau**	**2.23**	**9**	P		**Pn**		**01 59 41.7**	**+1.0**
JYAK				*e*S		**Sn**		**02 00 07.2**	**-0.1**
JKDJ	**Kitadaitoujima**	**2.32**	**153**	*e*S		**Sn**		**02 00 09.0**	**-0.4**
JNTH	**Nagotoyohara**	**2.39**	**232**	P		**Pn**		**01 59 43.2**	**+0.3**
JNTH				*e*S		**Sn**		**02 00 11.4**	**+0.2**
JMZ	**Minamidaito 2**	**2.41**	**156**	*e*S		**Sn**		**02 00 10.3**	**-1.3**
JKC	**Kuchinoerabu**	**2.43**	**2**	*e*S		**Sn**		**02 00 12.3**	**+0.2**
JTN	**Tanegashima 3**	**2.73**	**16**	P		**Pn**		**01 59 48.1**	**+0.5**
JTN				*e*S		**Sn**		**02 00 19.4**	**-0.1**
JKE	**Kume jima 2**	**3.41**	**241**	P		**Pn**		**01 59 57.4**	**+0.4**
JKE				*e*S		**Sn**		**02 00 37.6**	**+1.2**
JNU	**Nakatsue**	**5.12**	**7**	P		**Pn**		**02 00 21.4**	**+0.9**
	0.6nm,0.3s,baz=192,slow=9.3,SNR=1.2								
JNU				S		**Sn**		**02 01 18.6**	**0.0**
	1.5nm,0.3s,baz=106,slow=22,SNR=7.2								
JNU				LR		LR		02 02 30.0	
	comp=Z,53nm,18.9s,baz=159,slow=40								
KSRS	**Korea Array**	**9.58**	**349**	LR		LR		02 05 26.6	
	comp=Z,36nm,20.0s,baz=296,slow=40								
JCJ	**Chichijima**	**10.75**	**92**	LR		LR		02 05 18.9	
	comp=Z,31nm,18.5s,baz=324,slow=34								
CMAR	**Chiang Mai Arr**	**30.11**	**258**	LR		LR		02 19 13.3	
	comp=Z,31nm,20.6s,baz=185,slow=40								
H11N2	**WAKE ISLAND Hy**	**34.53**	**96**	T		T		02 42 22.5	
	baz=290								
H11N1	**WAKE ISLAND Hy**	**34.53**	**96**	T		T		02 42 21.0	
	baz=290								
H11N3	**WAKE ISLAND Hy**	**34.55**	**96**	T		T		02 42 22.8	
	baz=290								
MKAR	**Makanchi Array**	**41.63**	**310**	P		**P**		**02 06 50.0**	**-1.2**
	0.2nm,0.5s,baz=100,slow=7.3,SNR=1.6								
WRA	**Warramunga Arr**	**47.86**	**175**	P		**P**		**02 07 42.1**	**+1.1**
	0.2nm,0.4s,baz=353,slow=8.3,SNR=2.2								
FINES	**FINESS Array B**	**72.13**	**331**	P		**P**		**02 10 26.9**	**-0.2**
	0.6nm,0.4s,baz=62,slow=6.4,SNR=13								
AKASG	**Malin Array Be**	**75.25**	**320**	LR		LR		02 45 44.3	
	comp=Z,73nm,18.1s,baz=355,slow=37								

MAN 05 02:12:42.9, 10°.17N×124°.17E, h33km, mb3.5, ML2.1, MS1.5, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
LLP	**Lapu-Lapu**	**0.25**	**307**	⇓*e*P		**Pg**		**02 12 51.6**	**+1.5**
LLP				*i* S		Sb		02 12 57.5	+2.5
MSLP	**Maasin**	**0.68**	**93**	*e*P		Pb		02 12 56.6	+0.1
MSLP				*e*S		Sn		02 13 07.0	+1.3

MAN 05 02:15:55.2, 9°.91N×124°.14E, h6km, mb4.5, ML3.3, MS3.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
LLP	**Lapu-Lapu**	**0.44**	**337**	⇓*e*P		Pg		02 16 04.2	+0.5
LLP				*i* S		Sb		02 16 11.0	-1.2
MSLP	**Maasin**	**0.74**	**73**	*e*P		Pg		02 16 09.5	0.0
MSLP				*e*S		Sg		02 16 19

	comp=Z,51nm,21.6s,baz=124,slow=28					
PLCA	**Paso Flores**	**39.30 125**	LR	LR	03 14 20.8	
	comp=Z,79nm,18.2s,baz=262,slow=30					
CFA	**Coronel Fontan**	**40.41 111**	LR	LR	03 15 26.1	
	comp=Z,112nm,19.7s,baz=302,slow=31					
CPUP	**Villa Florida**	**50.49 105**	LR	LR	03 21 36.7	
	comp=Z,39nm,19.3s,baz=214,slow=32					
TXAR	**Lajitas Array**	**54.27 11**	P	P	03 04 01.9	+0.5
	0.4nm,0.9s,baz=190,slow=8.2,SNR=3.2					
NVAR	**Mina Array Bea**	**62.67 356**	P	P	03 05 00.1	+0.1
	0.6nm,0.7s,baz=182,slow=8.1,SNR=5.2					
PDAR	**Pinedale Array**	**66.94 3**	P	P	03 05 26.8	-1.0
	0.3nm,0.6s,baz=150,slow=7.3,SNR=3.3					
YKA	**Yellowknife Ar**	**86.61 360**	P	P	03 07 18.5	+0.5
	0.1nm,0.5s,baz=175,slow=4.8,SNR=3.9					
H11S2	**WAKE ISLAND Hy**	**88.60 291**	T	T	04 43 39.8	
	baz=116,slow=75,SNR=28					
H11S1	**WAKE ISLAND Hy**	**88.61 291**	T	T	04 43 39.8	
	baz=116,slow=75,SNR=14					
H11S3	**WAKE ISLAND Hy**	**88.62 291**	T	T	04 43 39.1	
	baz=116,slow=75,SNR=14					
H11N3	**WAKE ISLAND Hy**	**88.97 292**	T	T	04 44 02.3	
	baz=112,slow=74					
H11N1	**WAKE ISLAND Hy**	**88.98 292**	T	T	04 44 07.3	
	baz=112					
H11N2	**WAKE ISLAND Hy**	**88.98 292**	T	T	04 44 03.5	
	baz=112,slow=74					
BRTR	**Keskin Array B**	**148.49 53**	PKPbc	PKPbc	03 14 21.7	-0.7
	0.4nm,1.0s,baz=266,slow=5.8,SNR=2.4					

*CRAAG **05** 03:00:36.1,36°.43N×1°.95E,Ml2.7*
*MDD **05** 03:00:36.6±1.9,36°.59N×1°.88E,h0km,mb3.6/3,Error ellipse: s-maj=18.1km s-min=8.2km az=94.0,PRXIMO*
ISC 05 03:00:36.3±2.4,36°.53N±0°.08×1°.9E±0°.1,h20km,n13, σ0s75/20,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.40**	**233**	P	**Pb**	**03 00 44.3**	**-0.4**
ECHA	**Ech Chlef**	**0.59**	**230**	P	**Pb**	**03 00 47.3**	**-0.7**
ECHF	**Ech Chlef**	**0.60**	**232**	P	**Pb**	**03 00 47.3**	**-0.9**
EANR	**'Ain N'Sour**	**0.89**	**229**	P	**Pb**	**03 00 53.6**	**+0.5**
EANR	**'Ain N'Sour**	**0.89**	**229**	P	**Pb**	**03 00 53.6**	**+0.5**
OKGL	**Djebel Kef Gue**	**1.15**	**245**	P	**Pn**	**03 00 57.3**	**0.0**
	28nm,0.2s,SNR=7.9						
OKGL				S	**Sb**	**03 01 12.7**	**+0.6**
	74nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**2.85**	**298**	P	**Pn**	**03 01 21.3**	**+0.6**
	0.3nm,0.2s,SNR=7.9						
EMUR				S	**Sn**	**03 01 54.3**	**-0.1**
	1.1nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	**3.35**	**279**	P	**Pn**	**03 01 28.1**	**+0.6**
	9.2nm,0.7s,SNR=7.9						
ENIJ				S	**Sn**	**03 02 06.4**	**-0.3**
	1.5nm,0.6s,SNR=7.9						
ETOB	**Tobarra**	**3.47**	**308**	P	**Pn**	**03 01 30.3**	**+1.0**
	0.6nm,0.2s,SNR=4.9						
ETOB				S	**Sn**	**03 02 09.6**	**-0.2**
	12nm,0.7s,SNR=7.9						
EBER	**Berja**	**3.89**	**277**	P	**Pn**	**03 01 35.4**	**+0.3**
	0.5nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**03 02 19.3**	**-1.0**
	50nm,1.0s,SNR=7.9						
SESP	**Santiago Espad**	**3.90**	**295**	S	**Sn**	**03 02 19.9**	**-0.7**
	12nm,0.6s,SNR=4.0						
EQES	**Quesada**	**4.19**	**289**	P	**Pn**	**03 01 40.0**	**+0.8**
	0.2nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**03 02 26.8**	**-0.8**
	2.6nm,0.5s,SNR=7.9						
EMOS	**Mosqueruela**	**4.26**	**335**	P	**Pn**	**03 01 40.7**	**+0.5**
	1.7nm,0.2s,SNR=7.9						
EMOS				S	**Sn**	**03 02 28.0**	**-1.5**
	13nm,0.6s,SNR=7.9						

*IDC **05** 03:18:28.3±1.8,61°.02S×36°.92W,h0km,mb4.0/2, mb1 4.1/2,mb1mx3.7/18,mbtmp4.0/2,Error ellipse: s-maj=77.3km s-min=45.4km az=34.0*
ISC 05 03:18:27.2±1.1,61°.4S±0°.3×37°.7W±0°.4,h10km,n14, σ0s89/10,Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA3	**Neumayer Olymp**	**14.75**	**143**	P	**Pn**	**03 21 56.2**	**+0.5**
VNA1	**Neumayer--Stat**	**14.91**	**140**	P	**Pn**	**03 21 56.7**	**-1.1**
SNAA	**Sanae**	**16.93**	**142**	P	**Pn**	**03 22 24.8**	**+0.9**
CPUP	**Villa Florida**	**37.52**	**330**	P	**P**	**03 25 41.5**	**+0.4**
	1.1nm,0.8s,baz=183,slow=18,SNR=1.5						
H10N3	**ASCENSION HYDR**	**56.19**	**28**	T	T	04 28 25.2	
	baz=192,slow=75,SNR=10						
H10N1	**ASCENSION HYDR**	**56.19**	**28**	T	T	04 28 25.2	
	baz=192,slow=75,SNR=7.3						
H10N2	**ASCENSION HYDR**	**56.21**	**28**	T	T	04 28 24.1	
	baz=192,slow=75,SNR=9.0						
TORD	**Torodi Ar. Bea**	**80.59**	**39**	P	**P**	**03 30 40.1**	**+0.5**
	1.5nm,0.8s,baz=200,slow=6.2,SNR=7.0						
FINES	**FINESS Array B**	**131.85**	**35**	PKP	**PKiKP**	**03 37 38.7**	**-1.3**
	1.8nm,0.9s,baz=278,slow=3.9,SNR=3.4						
YKA	**Yellowknife Ar**	**136.56**	**319**	PKP	**PKPdf**	**03 37 48.5**	**+0.8**
	0.2nm,0.6s,baz=143,slow=2.1,SNR=5.0						
MKAR	**Makanchi Array**	**143.35**	**85**	PKhKP	PKPpre	03 37 58.7	
	0.2nm,0.6s,baz=243,slow=3.0,SNR=2.7						
KURBB	**Kurchatov Arra**	**144.23**	**78**	PKP	**PKPdf**	**03 38 01.5**	**-0.5**
	0.3nm,0.6s,baz=258,slow=3.1,SNR=4.9						
ILAR	**Eielson Array**	**149.32**	**308**	PKPbc	**PKPab**	**03 38 18.8**	**-0.5**
	1.3nm,0.9s,baz=145,slow=2.2,SNR=7.3						
ZALV	**Zalesovo Beam**	**149.33**	**78**	PKPbc	**PKiKP**	**03 38 15.6**	**-0.4**
	0.5nm,0.5s,baz=224,slow=4.0,SNR=2.6						

*BJI **05** 03:36:36.0±0.0,4°.60N×76°.70W,h20km,mB5.8/19, Ms5.7/20,Ms7 5.4/16*
*MOS **05** 03:36:38.3±0.9,4°.60N×76°.66W,h44km,mb5.6/42,Error ellipse: s-maj=7.8km s-min=5.3km az=95.8*
*VAO **05** 03:36:39.8±0.9,4°.09N×76°.13W,h10km,mb5.6*
*RSNC **05** 03:36:39.1±2.7,4°.64N×76°.77W,h19km±6km,ML5.2, Mw5.3,Fault plane solution: NP1:φs61.00000°, δ52.00000°,λ-162.00000°.*
*NEIC **05** 03:36:40.6±1.3,4°.56N±0°.06×76°.64W±0°.06,h54km±3km, mb5.4/457,Mwb5.5/28,Mwc5.6(GCMT),Error ellipse: s-maj=8.4km s-min=8.0km az=175.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.36; Mθθ=0.08; Mφφ=0.28; Mrθ=-0.64; Mθφ=-0.23; Mφr=-1.74; Fault plane solution: M₀1.89000×10¹⁷ NP1:φs18.32000°, δ86.28000°,λ-82.53000°. NP2:φs134.65000°,δ8.34000°, λ-153.42000°. Principal axes: T 1.7611, Plg41.0000°, Azm101.0000°; N 0.2430, Plg7.0000°, Azm198.0000°; P -2.0041, Plg48.0000°, Azm296.0000°;*
*GCMT **05** 03:36:41.6±0.1,4°.66N±0°.01×76°.72W±0°.01,h26km, MW5.5/151,Moment Tensor Solution. s114,c196; s151,c294; Duration: 1s6 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.47±.03; Mθθ1.06±.02; Mφφ-0.59±.02; Mrθ-0.80±.07; Mθφ0.58±.02; Mφr-1.84±.14; Best double couple: M₀2.27400×10¹⁷ NP1:φs288.00000°,δ27.00000°, λ-13.00000°. NP2:φs30.00000°,δ84.00000°, λ-117.00000°. Principal axes: T 2.1710, Plg34.0000°; Azm143.0000°; N 0.2060, Plg27.0000°, Azm33.0000°; P -2.3770, Plg45.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **05** 03:36:42.7±1.2,4°.59N×76°.65W,h73km±10km,mb4.9/20, mb1 5.0/28,mb1mx5.0/32,mbtmp5.2/28,MS4.8/34, Ms1 4.8/34,ms1mx4.8/36 Error ellipse: s-maj=11.6km s-min=8.5km az=30.0*
*UPA **05** 03:36:43.3±2.4,5°.04N×76°.84W,h8km±16km,MS5.3, MW5.4*
*NEIC **05** 03:36:43,4°.68N×76°.72W,h24km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-0.39; Mθθ1.04; Mφφ-0.65; Mrθ-1.08; Mθφ0.55; Mφr-2.66; Fault plane solution: M₀3.06000×10¹⁷ NP1:φs288.00000°, δ20.00000°,λ-8.00000°. NP2:φs26.00000°,δ87.00000°, λ-109.00000°. Principal axes: T 2.8853, Plg39.0000°; Azm134.0000°; N 0.3282, Plg19.0000°, Azm27.0000°; P -3.2135, Plg44.0000°, Azm277.0000°;*
*BGR **05** 03:36:52.9±0.0,5°.64N×75°.12W,h45km±1km,mb5.1*
ISC 05 03:36:38.0±0.5,4°.61N±0°.02×76°.69W±0°.02,h33km±2km, h33km:pP-P,n1197,σ1s90/1128,mb5.3/287,MS4.8/37, 57C-40D,Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLMC	**San Jos del P**	**0.50**	**54**	*i*Pg	**Pn**	**03 36 49.0**	**+0.1**
PLMC				*e*S	**Sn**	**03 36 57.0**	**+0.6**
YOTC	**Yotoco, Valle**	**0.71**	**151**	*e*P	**Pn**	**03 36 52.1**	**+0.2**
YOTC				*e*S	**Sb**	**03 37 02.2**	**+0.6**
YOTC	**Yotoco, Valle**	**0.71**	**151**	*i*P	**Pn**	**03 36 52.1**	**+0.2**
YOTC				*e*S	**Sn**	**03 37 01.8**	**0.0**
YOTC				*i*		03 37 04.7	
	comp=Z,106μm,0.4s						
MALC	**Bahia Malaga**	**0.88**	**228**	*e*P	**Pb**	**03 36 54.9**	**+0.1**
MALC				*e*S	**Sb**	**03 37 06.9**	**+0.6**
MALC				*i*		03 37 15.2	
	comp=Z,61μm,1.0s						
MALC	**Bahia Malaga**	**0.88**	**228**	*i*P	**Pb**	**03 36 54.8**	**0.0**
	comp=Z,58μm,0.5s						
MALC				*e*S	**Sb**	**03 37 07.8**	**+1.6**
MALC				*i*		03 37 16.7	
	comp=Z,58μm,0.5s						
CMAN1	**Manizales, Cal**	**1.25**	**68**	*e*P	**Pb**	**03 37 01.5**	**+0.3**
CMAN1				*e*S	**Sb**	**03 37 18.0**	**+1.0**
ANIL	**Santa Ana**	**1.28**	**95**	*i*P	**Pb**	**03 37 01.8**	**0.0**
ANIL				*e*S	**Sb**	**03 37 18.1**	**-0.1**
ANIL				*i*		03 37 22.5	
	comp=Z,137μm,0.4s						
TOLC	**Tolima**	**1.36**	**91**	*i*P	**Pn**	**03 37 03.1**	**0.0**
CBOC	**Ciudad Bolivar**	**1.42**	**28**	*i*P	**Pn**	**03 37 01.7**	**+0.1**
CBOC				*e*S	**Sn**	**03 37 19.4**	**+0.1**
CBOC				*i*		03 37 27.4	
	comp=Z,19μm,0.4s						
GUY2C	**Guyana, Caldas**	**1.45**	**65**	*i*P	**Pb**	**03 37 04.1**	**-0.7**
GUY2C				*e*S	**Sb**	**03 37 23.2**	**+0.2**
GUY2C				*i*		03 37 25.9	
	comp=Z,48μm,0.7s						
ORTC	**Ortega, Tolima**	**1.60**	**116**	*i*P	**Pb**	**03 37 06.8**	**-0.1**
ORTC				*e*S	**Sb**	**03 37 27.9**	**+1.1**
ORTC				*i*		03 37 34.1	
	comp=Z,38μm,0.6s						
SOLC	**Bahia Solano**	**1.76**	**336**	*e*P	**Pn**	**03 37 07.4**	**+1.1**
SOLC				*i*		03 37 51.4	
	comp=Z,13μm,1.4s						
SOLC	**Bahia Solano**	**1.76**	**336**	*e*P	**Pn**	**03 37 06.6**	**+0.3**
SOLC				*i*		03 37 32.4	
	comp=Z,5μm,0.2s						
HELC	**Santa Helena**	**1.95**	**36**	*i*P	**Pn**	**03 37 11.1**	**+2.0**
HELC				*e*S	**Sn**	**03 37 35.0**	**+2.3**
HELC				*i*		03 37 37.1	
	comp=Z,12μm,0.9s						
HELC	**Santa Helena**	**1.95**	**36**	*i*P	**Pn**	**03 37 11.2**	**+2.0**
HELC				*i* S	**Sb**	**03 37 35.1**	**-2.1**
NORC	**Norcasia**	**2.04**	**62**	*i*P	**Pb**	**03 37 14.0**	**-0.6**
NORC				*e*S	**Sb**	**03 37 39.3**	**-0.3**
NORC				*i*		03 37 44.3	
	comp=Z,15μm,1.8s						
GR1C	**Gorgona, Isla**	**2.17**	**223**	*i*P	**Pn**	**03 37 11.4**	**-0.5**
BETC	**Betania**	**2.28**	**147**	*i*P	**Pb**	**03 37 16.7**	**-1.9**
BETC				*e*S	**Sn**	**03 37 42.5**	**+2.0**
PCON	**Cinco Dias**	**2.28**	**173**	*i*P	**Pn**	**03 37 16.5**	**+2.5**
PCON				*i*		03 38 06.5	
	comp=Z,27μm,0.7s						
ROSC	**El Rosal**	**2.37**	**84**	P	**Pb**	**03 37 20.3**	**0.0**
	comp=Z,3μm,0.3s,baz=226,slow=3.6,SNR=1083						
ROSC				S	**Sb**	**03 37 48.7**	**-0.6**
	comp=Z,693nm,0.3s,baz=241,slow=21,SNR=4.5						
ROSC				LR	LR	03 38 38.8	
	comp=Z,59nm,19.0s,baz=206,slow=50						
ROSC	**El Rosal**	**2.37**	**84**	*i*P	**Pb**	**03 37 20.7**	**+0.4**
ROSC				*e*S	**Sb**	**03 37 52.8**	**+3.5**
ROSC	**El Rosal**	**2.37**	**84**	Pn	**Pb**	**03 37 19.9**	**-0.4**
DBBC	**Dabeiba**	**2.44**	**11**	*i*P	**Pn**	**03 37 16.5**	**+0.8**
DBBC				*e*S	**Sn**	**03 37 45.5**	**+1.0**
DBBC				*i*		03 37 59.5	
	comp=Z,13μm,0.7s						
SOTA	**Rioblanco**	**2.46**	**178**	*i*P	**Pn**	**03 37 18.7**	**+2.4**
SOTA				*i*		03 38 06.7	
	comp=Z,32μm,0.8s						
BBAC	**Balboa, Cauca**	**2.63**	**192**	*i*P	**Pn**	**03 37 19.2**	**+0.7**
BBAC				*e*S	**Sn**	**03 37 51.3**	**+2.0**
BBAC				*i*		03 38 08.1	
	comp=Z,12μm,1.1s						
PTAC	**Punta Ardita,**	**2.76**	**336**	*e*P	**Pn**	**03 37 20.0**	**0.0**
PTAC				*e*S	**Sn**	**03 37 49.6**	**-2.5**
PTAC				*i*		03 38 00.5	
	comp=Z,6μm,0.3s						
SPBC	**San Pablo de B**	**2.80**	**68**	*i*P	**Pb**	**03 37 24.7**	**-2.8**
SPBC				*i*		03 37 43.8	
	comp=Z,3μm,0.5s						
SPBC				*e*S	**Sb**	**03 37 58.4**	**-3.1**
PTBC	**PUERTO BERRIO,**	**2.93**	**49**	*i*P	**Pn**	**03 37 25.7**	**+3.3**
PTBC				*e*S	**Sn**	**03 38 00.7**	**+4.1**
PTBC				*i*		03 38 03.6	
	comp=Z,7μm,0.6s						
CHIC	**Chingaza**	**2.94**	**89**	*i*P	**Pb**	**03 37 28.2**	**-1.9**
CHIC				*e*S	**Sb**	**03 38 03.8**	**-2.1**
CHIC				*i*		03 38 12.6	
	comp=Z,7μm,0.6s						
VILC	**Villavicencio,**	**3.02**	**99**	*e*P	**Pb**	**03 37 28.4**	**-2.9**
VILC				*e*S	**Sb**	**03 38 07.5**	**-0.4**
VILC				*i*		03 38 19.9	
	comp=Z,16μm,0.6s						
CRUC	**La Cruz**	**3.03**	**185**	*i*P	**Pn**	**03 37 26.6**	**+2.5**
CRUC				*i*		03 38 25.8	
	comp=Z,7μm,0.7s						
CFLOR	**Florencia**	**3.17**	**161**	*i*P	**Pn**	**03 37 29.1**	**+3.4**
CFLOR				*e*S	**Sn**	**03 38 07.1**	**+4.6**
CFLOR				*i*		03 38 25.3	
	comp=Z,12μm,0.9s						
FLOC	**Florencia**	**3.18**	**161**	*i*P	**Pn**	**03 37 29.1**	**+3.3**
FLOC				*e*S	**Sn**	**03 38 07.2**	**+4.5**
FLOC				*i*		03 38 25.3	
	comp=Z,11μm,0.9s						
UREC	**San Jos de Ur**	**3.33**	**20**	*i*P	**Pn**	**03 37 30.1**	**+2.3**
UREC				*e*S	**Sn**	**03 38 08.6**	**+2.3**
UREC				*i*		03 38 17.5	
	comp=Z,3μm,0.5s						
ZARC	**Zaragoza, Cauc**	**3.39**	**32**	*e*P	**Pn**	**03 37 32.0**	**+3.3**
ZARC				*e*S	**Sn**	**03 38 11.0**	**+3.1**
GCUF	**Volcan Galeras**	**3.42**	**191**	*i*P	**Pn**	**03 37 31.6**	**+2.0**
GCUF				*e*S	**Sn**	**03 38 11.5**	**+2.2**
GCUF				*i*		03 38 37.5	
	comp=Z,4μm,0.8s						
CTUM2	**Tumaco**	**3.44**	**216**	*e*P	**Pn**	**03 37 29.6**	**+0.3**
CTUM2				*e*S	**Sn**	**03 38 11.7**	**+2.8**
CTUM2				*i*		03 38 43.3	
	comp=Z,4μm,0.8s						
TUMC	**Tumaco**	**3.44**	**216**	*e*P	**Pn**	**03 37 29.6**	**+0.3**
TUMC				*i*		03 38 43.3	
	comp=Z,5μm,0.8s						
CPAS1	**Pasto**	**3.46**	**191**	*e*P	**Pn**	**03 37 32.0**	**+2.0**
CPAS1				*e*S	**Sn**	**03 38 12.2**	**+2.2**
CPAS1				*i*		03 38 31.3	
	comp=Z,3μm,1.6s						
MACC	**Macarena, Meta**	**3.75**	**131**	*i*P	**Pn**	**03 37 36.5**	**+2.9**
MACC				*e*S	**Sn**	**03 38 20.0**	**+3.4**
MACC	**Macarena, Meta**	**3.75**	**131**	*i*P	**Pn**	**03 37 36.7**	**+3.1**
MACC				*e*S	**Sb**	**03 38 23.5**	**-5.0**
RUSC	**La Rusia**	**3.81**	**70**	*i*P	**Pn**	**03 37 38.6**	**+3.7**
RUSC				*e*S	**Sb**	**03 38 25.9**	**-4.8**
CMBC	**Cumbal**	**3.82**	**197**	*e*P	**Pn**	**03 37 38.7**	**+3.7**
BRRC	**Barranca, Sant**	**3.86**	**50**	*i*P	**Pn**	**03 37 38.2**	**+3.1**
BRRC				*e*S	**Sn**	**03 38 23.1**	**+3.6**
BRRC				*i*		03 38 46.8	
	comp=Z,2μm,1.1s						
BARC	**Barichara**	**4.01**	**60**	*i*P	**Pn**	**03 37 41.1**	**+3.8**
BARC				*e*S	**Sn**	**03 38 24.6**	**+1.3**
BARC				*e*S	**Sn**	**03 38 24.6**	**+1.3**
BARC				*i*		03 38 45.6	
	comp=Z,7μm,0.7s						
BARC				*i*		03 38 45.6	
	comp=Z,7μm,0.7s						
UPD2	**Meteti**	**4.13**	**341**	*e*P	**Pn**	**03 37 39.4**	**+0.6**
UPD2				*e*P	**Pn**	**03 37 39.4**	**+0.6**
UPD2				*e*S	**Sn**	**03 38 25.4**	**-0.6**
UPD2				*e*S	**Sn**	**03 38 25.4**	**-0.6**
UPD2	**Meteti**	**4.13**	**341**	*i*P	**Pn**	**03 37 39.3**	**+0.5**
UPD2				IVMs_BB	IVMs_BB	03 40 22.6	
	comp=Z,68μm,3.2s						
LCBC	**Los crdobas,**	**4.23**	**4**	*e*P	**Pn**	**03 37 43.0**	**+2.7**
LCBC				*e*S	**Sn**	**03 38 33.6**	**+5.0**
LCBC				*e*S	**Sn**	**03 38 33.6**	**+5.0**
ACHO3	**Achotines, Los**	**4.45**	**309**	*e*P	**Pn**	**03 37 42.4**	**-0.9**
ACHO3				*e*S	**Sn**	**03 38 31.0**	**-2.9**
GUVC	**San Jose del G**	**4.54**	**117**	*i*P	**Pn**	**03 37 47.8**	**+3.3**
GUVC				*e*S	**Sn**	**03 38 38.6**	**+2.4**
GUVC				*e*S	**Sn**	**03 38 38.6**	**+2.4**
PTGC	**Puerto Gaitan,**	**4.56**	**95**	*i*P	**Pn**	**03 37 48.4**	**+3.6**
PTGC				*e*S	**Sn**	**03 38 38.9**	**+2.2**
PTGC				*e*S	**Sn**	**03 38 38.9**	**+2.2**
PTGC				*i*		03 38 49.8	
	comp=Z,2μm,0.7s						
PTGC				*i*		03 38 49.8	
	comp=Z,2μm,0.7s						
OTAV	**Otavalo**	**4.69**	**202**	P	**Pn**	**03 37 48.9**	**+2.0**
OTAV	**Otavalo**	**4.69**	**202**	*i*P	**Pn**	**03 37 47.3**	**+0.4**
OTAV				*e*P	**Pn**	**03 37 47.3**	**+0.4**
OTAV				*e*S	**Sn**	**03 38 37.6**	**-2.8**
OTAV				*e*S	**Sn**	**03 38 37.6**	**-2.8**
OTAV	**Otavalo**	**4.69**	**202**	*e*P	**Pn**	**03 37 47.6**	**+0.7**
OTAV	**Otavalo**	**4.69**	**202**		**Pn**	**03 37 48.9**	**+2.0**
AZU	**Azuero**	**4.77**	**312**	*e*P	**Pn**	**03 37 46.6**	**-1.0**
AZU				*e*P	**Pn**	**03 37 46.6**	**-1.0**
AZU				*e*S	**Sn**	**03 38 38.1**	**-3.6**
AZU				*e*S	**Sn**	**03 38 38.1**	**-3.6**
AZU				*i*		03 38 45.8	
	comp=Z,2μm,0.8s						
AZU				*i*		03 38 45.8	
	comp=Z,2μm,0.8s						
AZU	**Azuero**	**4.77**	**312**	*i*P	**Pn**	**03 37 46.5**	**-1.0**
AZU				*i* S	**Sn**	**03 38 38.6**	**-3.1**
PTLC	**Puerto Leguiza**	**4.80**	**157**	*i*P	Pb	03 37 55.2	-6.2
PTLC				*i*P	Pb	03 37 55.2	-6.2
PTLC				*e*S	**Sb**	**03 39 02.3**	**+3.6**
PTLC				*e*S	**Sb**	**03 39 02.3**	**+3.6**
PTLC				*i*		03 39 28.8	
	comp=Z,20μm,1.0s						
PTLC				*i*		03 39 28.8	
	comp=Z,20μm,1.0s						
PAMC	**Pamplona, Colo**	**4.80**	**55**	*e*P	**Pn**	**03 37 51.8**	**+3.2**
PAMC				*e*S	**Sn**	**03 38 47.7**	**+4.3**
PAMC				*e*S	**Sn**	**03 38 47.7**	**+4.3**
PAMC				*i*		03 39 00.6	
	comp=Z,1μm,0.7s						
PAMC				*i*		03 39 00.6	
	comp=Z,1μm,0.7s						
SMLC	**San Martn de**	**4.91**	**32**	*e*P	**Pn**	**03 37 51.9**	**+2.4**
SMLC				*e*S	**Sn**	**03 38 46.6**	**+1.4**
SMLC				*i*		03 39 21.0	
	comp=Z,1μm,0.7s						
SMLC				*i*		03 39 21.0	
	comp=Z,1μm,0.7s						
OCAC	**Ocana**	**4.92**	**43**	*e*P	**Pn**	**03 37 53.4**	**+3.5**
OCAC				*e*P	**Pn**	**03 37 53.4**	**+3.5**
OCAC				*e*S	**Sn**	**03 38 50.8**	**+5.1**
OCAC				*e*S	**Sn**	**03 38 50.8**	**+5.1**
OCAC				*i*		03 39 07.9	
	comp=Z,2μm,0.1s						
OCAC				*i*		03 39 07.9	
	comp=Z,2μm,0.1s						
CACAO	**El Cacao, Vera**	**4.96**	**303**	*e*P	**Pn**	**03 37 49.0**	**-1.3**
CACAO				*e*S	**Sn**	**03 38 43.8**	**-2.8**
CHIT3	**Chitre**	**4.98**	**312**	*e*P	**Pn**	**03 37 50.3**	**-0.2**
TABO3	**Taboga, Panama**	**5.04**	**326**	*i*P	**Pn**	**03 37 51.8**	**+0.5**
PESE3	**Pese, Herrera**	**5.10**	**310**	*e*P	**Pn**	**03 37 52.3**	**+0.1**
FLAM	**Flamenco Islan**	**5.13**	**327**	*e*P	**Pn**	**03 37 53.5**	**+0.9**
CHPO	**Chepo, Panama**	**5.13**	**332**	*i*P	**Pn**	**03 37 53.8**	**+1.2**
UPA	**Univ. de Panam**	**5.18**	**327**	*e*P	**Pn**	**03 37 52.7**	**-0.6**
UPA				*e*P	**Pn**	**03 37 52.7**	**-0.6**
UPA				*e*S	**Sn**	**03 38 50.9**	**-1.1**
UPA				*e*S	**Sn**	**03 38 50.9**	**-1.1**
UPA				*i*		03 38 59.8	
	comp=Z,193nm,0.6s						
UPA				*i*		03 38 59.8	
	comp=Z,193nm,0.6s						
UPA	**Univ. de Panam**	**5.18**	**327**	*i*P	**Pn**	**03 37 53.1**	**-0.2**
TAMC	**Tame, Arauca**	**5.20**	**69**	*i*P	**Pn**	**03 37 57.7**	**+4.1**
TAMC				*i*P	**Pn**	**03 37 57.7**	**+4.1**
TAMC				*e*S	**Sn**	**03 38 59.1**	**+6.6**
TAMC				*e*S	**Sn**	**03 38 59.1**	**+6.6**
TAMC				*i*		03 39 28.5	
	comp=Z,88μm,1.5s						
TAMC				*i*		03 39 28.5	
	comp=Z,88μm,1.5s						
VTON	**El Valle, Cocl**	**5.23**	**320**	*e*P	**Pn**	**03 37 54.0**	**-0.1**
VTON				*i* S	**Sn**	**03 38 54.3**	**+0.9**
CHOR3	**La Chorrera**	**5.24**	**325**	*i*P	**Pn**	**03 37 54.3**	**+0.1**
OCU3	**Ocu, Herrera**	**5.24**	**309**	*i*P	**Pn**	**03 37 54.5**	**+0.3**
OCU3				*e*S	**Sn**	**03 38 50.4**	**-3.2**
PNME	**Penonome**	**5.28**	**317**	*e*P	Pn	03 37 49.9	-4.8
ZANG	**Zanguenga, Cho**	**5.35**	**324**	*e*P	**Pn**	**03 37 56.4**	**+0.8**
PONU3	**Ponuga, Veragu**	**5.37**	**308**	*e*P	**Pn**	**03 37 57.4**	**+1.6**
SJCC	**San Jacinto, C**	**5.46**	**16**	*e*P	**Pn**	**03 37 59.9**	**+2.7**
SJCC				*e*P	**Pn**	**03 37 59.9**	**+2.7**
SJCC				*e*S	**Sn**	**03 39 03.1**	**+4.1**
SJCC				*e*S	**Sn**	**03 39 03.1**	**+4.1**
SJCC				*i*		03 39 44.6	
	comp=Z,468nm,0.8s						
SJCC				*i*		03 39 44.6	
	comp=Z,468nm,0.8s						
SJCC	**San Jacinto, C**	**5.46**	**16**	*e*P	**Pn**	**03 38 00.3**	**+3.0**
FRIJ	**El Hiral**	**5.49**	**327**	*e*P	**Pn**	**03 37 57.1**	**-0.4**
STIA3	**Santiago, Vera**	**5.49**	**309**	*e*P	**Pn**	**03 37 59.2**	**+1.6**
GMAL	**Guarumal, Vera**	**5.50**	**305**	*i*P	**Pn**	**03 37 57.9**	**+0.2**
GMAL

ESTN Estel 12.75 312 Pn 03 39 40.3 +3.0
PCRV Puerto La Cruz 13.16 64 P **Pn 03 39 43.9 +1.1**
comp=Z,11nm,0.3s,baz=215,slow=8.0,SNR=37
PCRV S **Sn 03 42 05.4 -2.9**
comp=Z,3.6nm,0.3s,baz=107,slow=20,SNR=1.2
PCRV LR LR 03 45 24.0
comp=Z,5μm,21.6s,slow=40
PLCV Puerto La Cruz 13.20 65 Pn 03 39 43.9 +0.6
ORIV Oritupano 13.91 71 *eP* **P 03 39 57.8 -2.9**
ORIV Oritupano 13.91 71 P **P 03 39 57.8 -2.9**
LGNH Logne 14.38 16 Pn 03 40 02.5 +3.1
PAYG Puerto Ayora 14.56 249 Pn **P 03 40 05.2 -2.9**
BANI BANI 15.03 24 Pn **Pn 03 40 10.6 +2.3**
SDDR Presa de Saban 15.23 20 Pn 03 40 12.8 +2.0
SDDR IAmb IAmb 03 40 31.6
comp=Z,225nm,0.8s
SDD Santo Domingo 15.27 25 Pn **Pn 03 40 12.7 +1.3**
GTBY Guantanamo Bay 15.30 6 Pn **Pn 03 40 13.7 +1.9**
SNET Serv Nac Est T 15.31 307 Pn **Pn 03 40 13.3 +1.4**
DR12 Loma Pena Alta 15.80 26 Pn 03 40 20.0 +1.8
SC01 Santiago de lo 15.83 21 P 03 40 23.6 +1.5
SC01 IAmb IAmb 03 40 48.8
comp=Z,313nm,0.8s
CRPR Cabo Rojo, PR 16.28 34 P 03 40 29.3 +2.2
MLPR Magueyes Islan 16.29 35 P 03 40 28.2 +1.1
MPR Mayaguez 16.43 34 Pn **Pn 03 40 27.1 +0.9**
NNA Nana 16.49 181 ⇧*iP* **P 03 40 29.7 +0.3**
NNA pmax pmax
comp=Z,409nm,1.4s
NNA Nana 16.49 181 P **P 03 40 29.4 0.0**
comp=Z,4.2nm,0.3s,baz=348,slow=12,SNR=16
NNA LR LR 03 48 07.2
comp=Z,7μm,21.3s,baz=346,slow=42
NNA Nana 16.49 181 P 03 40 29.1 -0.3
NNA IAmb IAmb 03 40 35.6
comp=Z,312nm,1.4s
ICMP Isla Caja de M 16.52 36 P 03 40 30.8 +1.1
ICMP IAmb IAmb 03 40 49.8
comp=Z,350nm,1.1s
OBIP Obispado Ponce 16.60 36 Pn **P 03 40 29.6 -1.0**
GRGR Grenville 16.64 62 *eP* **Pn 03 40 29.1 +0.2**
GRGR Grenville 16.64 62 Pn **Pn 03 40 29.1 +0.2**
AOPR Arecibo Observ 16.75 35 P 03 40 32.0 -0.4
AOPR IAmb IAmb 03 40 44.1
comp=Z,159nm,0.6s
IGPR InterUniversit 16.83 37 Pn **Pn 03 40 31.6 +0.2**
SJG San Juan 16.92 37 P **P 03 40 33.4 -0.8**
comp=Z,3.4nm,0.3s,baz=230,slow=17,SNR=10
SJG LR LR 03 47 53.4
comp=Z,3μm,21.7s,baz=220,slow=40
SJG San Juan 16.92 37 Pn **P 03 40 33.3 -0.8**
SJG P **P 03 40 34.8 +0.6**
EMPR Esperanza - Ma 16.99 35 IAmb IAmb 03 40 60.0
comp=Z,333nm,0.9s
APG El Apazote 17.05 308 P **P 03 40 36.0 +0.2**
comp=Z,0.5nm,0.3s,baz=98,slow=7.6,SNR=12
APG LR LR 03 48 33.0
comp=Z,3μm,19.5s,baz=118,slow=42
GCPR Guaynabo City 17.11 36 IAmb IAmb 03 40 54.0
comp=Z,147nm,0.7s
HUMP Col San Antoni 17.12 37 P **P 03 40 37.7 +1.3**
CBYP Canovanas 17.22 37 IAmb IAmb 03 40 48.6
comp=Z,152nm,0.7s
TOSP Speyside 17.31 66 P 03 40 38.4 -0.1
SVB Belmont 17.50 60 IAmb IAmb 03 41 10.7
comp=Z,226nm,1.0s
SLBI Saint Lucia, B 18.09 58 *eP* Pn 03 40 37.5 -9.5
FDF Fort de France 18.31 56 P **P 03 40 49.5 -0.1**
FDF pmax pmax
comp=Z,207nm,0.8s
FDF Fort de France 18.31 56 *eP* P 03 40 38.3 -11
FDF Fort de France 18.31 56 P **P 03 40 49.5 -0.1**
FDF IAmb IAmb 03 41 31.4
comp=Z,207nm,0.8s
MLYT Lee's Yard 18.63 49 *eP* Pn 03 41 18.1 +25
BBGH Gun Hill 18.91 62 *eP* **P 03 40 50.2 -6.0**
SAML Samuel 19.04 135 P **P 03 40 57.4 -0.2**
SAML pmax pmax
comp=Z,164nm,0.8s
SAML Samuel 19.04 135 P P 03 40 57.4 -0.2
SAML IAmb IAmb 03 41 15.1
comp=Z,164nm,0.8s
TEIG Tepich 19.19 325 P **Pn 03 41 00.6 +0.3**
TEIG Tepich 19.19 325 P **Pn 03 40 59.8 -0.4**
TEIG IAmb IAmb 03 41 04.5
comp=Z,379nm,1.9s
CMIG Matias Romero 21.73 306 P **P 03 41 25.3 -1.4**
comp=Z,12nm,0.7s,baz=92,slow=9.3,SNR=22
CMIG PcP **PcP 03 45 27.8 +0.9**
comp=Z,3.1nm,0.6s,baz=73,slow=3.6,SNR=2.4
CMIG LR LR 03 50 15.7
comp=Z,3μm,21.4s,baz=126,slow=37
HUIG Huatulco 22.07 302 P P 03 41 32.4 +2.0
LPAZ La Paz 22.42 158 P **P 03 41 32.7 -2.1**
LPAZ pmax pmax
comp=Z,57nm,0.8s
LPAZ La Paz 22.42 158 P P 03 41 33.2 -1.6
comp=Z,28nm,0.6s,baz=333,slow=10,SNR=92
LPAZ LR LR 03 50 59.9
comp=Z,8μm,20.3s,baz=314,slow=38
LPAZ La Paz 22.42 158 *eP* **P 03 41 32.8 -2.1**
LPAZ La Paz 22.42 158 P **P 03 41 32.7 -2.1**
MDP Montagnes des 23.96 88 P P 03 41 49.6 -0.1
comp=Z,78nm,0.7s,baz=180,slow=3.9
MDP S **S 03 46 06.0 +1.4**
baz=180,slow=19
MDP LR LR 03 51 54.6
comp=Z,7μm,18.9s,baz=182,slow=38
PNIG Pinotepa 24.08 301 P P 03 41 49.9 -0.9
MNMC Minye Minye 24.60 164 P P 03 41 54.9 -0.8
PB11 IPOC Station P 25.18 164 P P 03 42 00.5 -0.4
656A Williston 25.24 348 IAmb IAmb 03 42 35.0
comp=Z,118nm,1.1s
SIV San Ignacio 25.65 143 P P 03 42 04.7 -0.3
comp=Z,50nm,0.8s,baz=336,slow=11,SNR=182
SIV LR LR 03 52 29.1
comp=Z,15μm,18.7s,baz=326,slow=37
CLDB Colider 25.86 127 *eP* **P 03 42 04.4 -2.6**
CAIG El Cayaco 26.21 300 P P 03 42 11.8 +1.7
UNM Universidad Na 26.37 306 P P 03 42 13.7 +1.9
UNM pmax pmax
comp=Z,263nm,1.4s
UNM Universidad Na 26.37 306 P P 03 42 13.7 +1.9
TIGA Tifton 27.47 347 P P 03 42 22.3 +1.1
353A Camilla 27.52 346 P P 03 42 24.5 +2.8
baz=164
PB04 IPOC Station P 27.53 167 P P 03 42 22.3 +0.2
352A Blakely 27.83 345 P P 03 42 27.4 +2.9
baz=162,SNR=6.2
254A Abbeville 27.89 348 P P 03 42 28.2 +3.2
baz=166
LVC Limon Verde 28.10 165 P P 03 42 28.9 +1.5
comp=Z,40nm,0.6s,baz=342,slow=7.2,SNR=29
LVC LR LR 03 56 22.4
comp=Z,2μm,19.4s,baz=320,slow=42
LVC Limon Verde 28.10 165 P P 03 42 27.6 +0.2
LVC IAmb IAmb 03 42 47.6
comp=Z,78nm,0.8s
BRAL Brewton 28.16 341 P P 03 42 30.1 +2.7
baz=158
MOIG Morelia 28.18 304 P P 03 42 29.9 +1.9
253A Americus 28.19 347 P P 03 42 30.5 +2.9
baz=164
252A Lumpkin 28.27 345 P P 03 42 31.0 +2.6
baz=163,SNR=6.7
154A Montrose 28.50 349 P P 03 42 33.2 +2.8
baz=166
PB10 IPOC Station P 28.59 168 P P 03 42 31.9 +0.6
PB10 IAmb IAmb 03 42 35.2
comp=Z,107nm,0.8s
250A Grady 28.67 343 IAmb IAmb 03 42 35.3
comp=Z,118nm,0.9s
153A Fort Valley 28.69 347 P P 03 42 34.5 +2.4
baz=165
Z57A Bowman 28.79 353 P P 03 42 35.6 +2.7
baz=172
152A Waverly Hall 28.91 346 P P 03 42 36.8 +2.8
baz=163,SNR=8.5
Z54A Sparta 29.05 349 P P 03 42 37.8 +2.4
baz=167
SALV Santo Antonio 29.10 135 *eP* **P 03 42 35.0 -0.9**
Z53A Monticello 29.24 348 P **P 03 42 39.7 +2.7**
baz=166
Z52A Williamson 29.34 347 P P 03 42 40.6 +2.8
baz=164,SNR=7.8

GOGA Godfrey 29.34 348 P P 03 42 40.5 +2.5
baz=166
Y57A Sumter 29.46 354 P P 03 42 40.6 +1.7
Y57A Sumter 29.46 354 P P 03 42 41.9 +3.0
baz=172
Y55A Saluda 29.57 351 P P 03 42 42.5 +2.6
baz=170
Y54A Tignall 29.64 350 P P 03 42 43.0 +2.5
baz=168,SNR=5.3
Z50A Ashland 29.77 344 IAmb IAmb 03 42 45.1
comp=Z,72nm,0.9s
Z50A Ashland 29.77 344 P P 03 42 44.0 +2.2
baz=161,SNR=27
Y53A Monroe 29.80 348 P P 03 42 44.5 +2.6
baz=166,SNR=6.3
X59A McDuffie Farm, 29.87 357 P P 03 42 44.9 +2.3
baz=176
LRAL Lakeview Retre 29.88 342 IAmb IAmb 03 42 45.7
comp=Z,101nm,1.1s
LRAL Lakeview Retre 29.88 342 P P 03 42 44.3 +1.7
baz=159,SNR=38
X58A Rowland 29.90 356 IAmb IAmb 03 42 45.9
comp=Z,41nm,0.7s
X58A Rowland 29.90 356 P P 03 42 45.3 +2.5
baz=175
Y52A Lilburn 29.91 348 P P 03 42 45.7 +2.8
baz=165
X56A White Oak 30.01 353 P P 03 42 46.1 +2.4
baz=171
X55A Gracelyn & Ava 30.07 352 P P 03 42 46.8 +2.5
baz=170
BIRD Birdtown, Kers 30.09 354 P P 03 42 45.5 +0.9
Y51A Rockmart 30.17 346 P P 03 42 47.7 +2.5
baz=163,SNR=5.9
X54A Belton 30.25 351 P P 03 42 48.7 +2.7
baz=169
W58A Raeford 30.35 356 P P 03 42 49.3 +2.5
baz=175
VBMS Vicksburg 30.37 336 IAmb IAmb 03 42 49.7
comp=Z,56nm,0.8s
VBMS Vicksburg 30.37 336 P P 03 42 49.2 +2.2
baz=152,SNR=5.3
X53A Estanollee 30.37 349 P P 03 42 49.5 +2.4
baz=167
Y49A Blount Mountai 30.48 344 IAmb IAmb 03 42 50.8
comp=Z,51nm,0.7s
W57A Gilead 30.55 355 P P 03 42 50.7 +2.2
baz=174
X52A Dahlonega 30.59 348 P P 03 42 51.2 +2.3
baz=166
W56A Indian Trail 30.59 354 P P 03 42 51.2 +2.3
baz=172
KMSC Kings Mountain 30.69 353 P P 03 42 52.4 +2.6
baz=171
W54A Cherokee Point 30.75 351 P P 03 42 53.2 +2.9
baz=169
X51A Calhoun 30.76 347 P P 03 42 52.9 +2.5
baz=164
PP1B Ponte de Pedra 30.83 136 *eP* **P 03 42 50.8 -0.4**
ZAIG Zacatecas 30.85 308 IAmb IAmb 03 42 56.0
comp=Z,69nm,1.3s
W53A Cullowhee 31.00 350 P P 03 42 55.5 +2.9
baz=167,SNR=7.7
HKT Hockley 31.03 326 P P 03 42 53.4 +0.6
HKT pmax pmax
comp=Z,56nm,1.4s
HKT Hockley 31.03 326 P P 03 42 53.4 +0.6
V59A Middlesex 31.04 358 P P 03 42 55.2 +2.4
baz=177,SNR=6.0
W52A Murphy 31.07 348 P P 03 42 55.9 +2.7
baz=166,SNR=5.8
V58A Windy Hill, Pi 31.11 356 P P 03 42 55.8 +2.2
baz=175
X48A Hartselle 31.21 343 IAmb IAmb 03 42 57.1
comp=Z,54nm,0.7s
V56A Mocksville 31.25 354 P P 03 42 57.4 +2.6
baz=173,SNR=5.1
V57A Coltrane Farms 31.26 355 P P 03 42 57.2 +2.4
baz=174,SNR=6.3
W51A Cleveland 31.31 347 P P 03 42 58.3 +3.0
baz=164,SNR=9.2
V55A Taylorsville 31.37 353 P P 03 42 58.4 +2.6
baz=171
V54A Neb 31.39 352 P P 03 42 58.9 +2.8
baz=170,SNR=5.3
V53A Saluda 31.42 350 P P 03 42 59.1 +2.7
baz=168
W50A Signal Mountai 31.47 346 P P 03 42 59.5 +2.7
baz=163,SNR=14
U59A Littleton 31.61 358 P P 03 43 00.1 +2.2
baz=178
W49A Belvidere 31.63 345 P P 03 42 59.7 +1.6
baz=167,SNR=15
SWET Sewanee 31.64 345 IAmb IAmb 03 43 01.0
comp=Z,42nm,1.0s
U58A Oxford 31.68 357 P P 03 43 00.8 +2.3
baz=176,SNR=5.9
V52A Sevierville 31.73 349 IAmb IAmb 03 43 16.0
comp=Z,31nm,0.8s
V52A Sevierville 31.73 349 P P 03 43 01.8 +2.8
baz=167,SNR=5.9
U57A Blanch 31.76 356 P P 03 43 01.5 +2.2
baz=175,SNR=8.7
U56A King 31.77 354 IAmb IAmb 03 43 03.0
comp=Z,52nm,1.0s
U56A King 31.77 354 P P 03 43 02.4 +3.1
baz=173,SNR=8.8
V51A Loudon 31.84 348 IAmb IAmb 03 43 17.4
comp=Z,35nm,0.8s
V51A Loudon 31.84 348 P P 03 43 02.6 +2.7
baz=165,SNR=6.3
ARAG Aragualaina, MT 31.84 130 *eP* **P 03 42 58.8 -1.4**
NATX Nacogdoches 31.84 330 P P 03 43 01.2 +1.2
NATX Nacogdoches 31.84 330 P P 03 43 02.1 +2.0
baz=144,SNR=9.7
V50A Pikevile 31.87 347 P P 03 43 02.8 +2.6
baz=164,SNR=11
833A Chaparral WMA, 31.97 320 P P 03 43 02.2 +1.0
baz=134,SNR=8.5
U55A TA2, Sparta 31.99 353 P P 03 43 04.0 +2.6
baz=172
OXF Oxford 32.01 340 P P 03 43 02.9 +1.5
baz=156
PLAL Pickwick Lake 32.01 342 IAmb IAmb 03 43 03.7
comp=Z,109nm,1.4s
U53A Fall Branch 32.06 351 P P 03 43 04.4 +2.5
baz=169,SNR=7.0
U54A Nelsons Funny 32.11 352 IAmb IAmb 03 43 16.5
comp=Z,63nm,0.8s
U54A Nelsons Funny 32.11 352 P P 03 43 05.2 +2.8
baz=170,SNR=8.7
V49A McMinnville 32.15 346 P P 03 43 04.4 +1.7
baz=163,SNR=20
T59A Double "B" Far 32.22 359 P P 03 43 05.5 +2.3
baz=178,SNR=7.8
U52A Thorn Hill 32.22 350 P P 03 43 05.6 +2.2
baz=167
Z41A Richland Creek 32.22 334 P P 03 43 04.6 +1.2
baz=149,SNR=6.3
T58A Grand View Acr 32.23 357 P P 03 43 05.6 +2.2
baz=176,SNR=5.5
T57A Hurt 32.32 356 P P 03 43 06.5 +2.4
baz=175,SNR=7.3
U51A La Follette 32.33 349 P P 03 43 06.6 +2.4
baz=166
CCAR Cane Creek 32.36 336 P P 03 43 05.8 +1.2
T60A Surry 32.38 360 IAmb IAmb 03 43 23.4
comp=Z,54nm,0.8s
TZTN Tazewell 32.40 350 P P 03 43 07.4 +2.5
baz=167
T56A Rocky Mt 32.41 355 P P 03 43 07.7 +2.8
baz=174,SNR=6.8
U50A Jamestown 32.53 348 P P 03 43 08.6 +2.6
baz=165,SNR=15
T55A Pulaski 32.57 354 P P 03 43 09.5 +3.1
baz=172,SNR=5.6
T54A Tazewell 32.61 353 P P 03 43 09.4 +2.6
baz=171,SNR=7.7
BLA Blacksburg 32.63 354 IAmb IAmb 03 43 37.2
comp=Z,44nm,0.9s
BLA Blacksburg 32.63 354 P P 03 43 10.2 +3.3
baz=173,SNR=6.7
435B Jarrell 32.64 325 IAmb IAmb 03 43 08.6
comp=Z,177nm,2.0s
435B Jarrell 32.64 325 P P 03 43 08.3 +1.3
baz=139,SNR=6.2
T53A Wise 32.66 351 P P 03 43 09.8 +2.5
baz=169

U49A Red Boiling Sp 32.83 346 P P 03 43 10.9 +2.3
baz=163,SNR=8.9
T52A Hallie 32.86 351 IAmb IAmb 03 43 12.1
comp=Z,62nm,1.2s
T52A Hallie 32.86 351 P P 03 43 11.4 +2.5
baz=168,SNR=6.7
S58A Poland Farm, P 32.87 358 P P 03 43 11.4 +2.5
baz=177
T51A Gray 32.88 349 P P 03 43 11.7 +2.6
baz=167,SNR=7.5
S60A Water View 32.94 0 P P 03 43 12.6 +3.0
baz=180
S59A Mechanicsville 33.00 359 P P 03 43 12.9 +2.8
baz=179
WVT Waverly 33.01 343 P P 03 43 10.6 +0.4
WVT pmax pmax
comp=Z,44nm,0.7s
WVT Waverly 33.01 343 P P 03 43 10.6 +0.4
WVT IAmb IAmb 03 43 12.0
comp=Z,44nm,0.7s
WVT Waverly 33.01 343 P P 03 43 10.8 +0.7
baz=159
S56A Natural Bridge 33.02 356 P P 03 43 12.6 +2.3
baz=175,SNR=7.0
S57A Dark Hollow, R 33.06 357 P P 03 43 13.0 +2.4
baz=176
T50A Nancy 33.11 348 P P 03 43 13.1 +2.0
baz=165,SNR=9.7
S55A Lewisburg 33.19 354 P P 03 43 14.8 +3.0
baz=173,SNR=6.7
R58B Mineral 33.22 358 P P 03 43 12.7 +0.7
baz=178
S53A Williamson 33.29 352 P P 03 43 14.8 +2.1
baz=170
X40A Basin Creek Fa 33.29 335 P P 03 43 13.3 +0.7
baz=150,SNR=21
S54A Dingess, Beckl 33.30 353 IAmb IAmb 03 43 34.0
comp=Z,36nm,1.0s
S54A Dingess, Beckl 33.30 353 P P 03 43 15.4 +2.5
baz=172,SNR=5.2
UALR University of 33.34 336 IAmb IAmb 03 43 16.1
comp=Z,33nm,0.8s
T49A Edmonton 33.34 347 IAmb IAmb 03 43 15.9
comp=Z,96nm,1.4s
T49A Edmonton 33.34 347 P P 03 43 15.2 +2.1
baz=164,SNR=12
HBAR Harrisburg 33.39 339 P P 03 43 14.4 +0.9
S52A Salyersville 33.43 351 P P 03 43 16.1 +2.3
baz=168
R59A King George, V 33.44 359 P P 03 43 16.9 +3.1
baz=179
S51A Beattyville 33.48 350 IAmb IAmb 03 43 36.6
comp=Z,30nm,0.8s
S51A Beattyville 33.48 350 P P 03 43 16.9 +2.6
baz=168
WHTX Lake Whitney, 33.48 327 IAmb IAmb 03 43 16.1
comp=Z,46nm,0.8s
WHTX Lake Whitney, 33.48 327 P P 03 43 14.8 +0.4
baz=140,SNR=11
R58A Rapidan 33.55 358 P P 03 43 17.8 +2.9
baz=178,SNR=6.8
R57A Stanardsville 33.57 357 P P 03 43 17.5 +2.4
baz=177
R54A Victor 33.65 354 P P 03 43 18.6 +2.8
baz=172
W41B Gary Mavity, V 33.65 337 P P 03 43 16.8 +1.1
baz=151,SNR=8.5
MIAR Mount Ida 33.66 334 P P 03 43 15.9 +0.1
baz=149,SNR=6.6
S50A Richmond 33.66 349 P P 03 43 18.3 +2.5
baz=166,SNR=11
R55A Marlinton 33.66 355 IAmb IAmb 03 43 36.3
comp=Z,25nm,0.8s
R55A Marlinton 33.66 355 P P 03 43 19.1 +3.2
baz=174,SNR=5.5
JCT Junction City 33.72 322 IAmb IAmb 03 43 18.0
comp=Z,113nm,2.0s
JCT Junction City 33.72 322 P P 03 43 17.3 +0.7
baz=135,SNR=8.1
R56A Bull Pasture M 33.73 356 P P 03 43 19.3 +2.7
baz=175
WHAR Wooly Hollow 33.77 337 IAmb IAmb 03 43 43.1
comp=Z,34nm,0.9s
HICK Hickman 33.80 342 P P 03 43 18.0 +0.9
S49A Springfield 33.94 348 P P 03 43 20.6 +2.3
baz=164,SNR=24
R51A Hillsboro 34.12 350 P P 03 43 22.4 +2.6
baz=168,SNR=12
Q58A Fox Den Farm, 34.19 359 P P 03 43 23.3 +2.9
baz=178,SNR=6.9
R50A Paris 34.23 349 IAmb IAmb 03 43 37.0
comp=Z,33nm,0.8s
R50A Paris 34.23 349 P P 03 43 23.5 +2.7
baz=166,SNR=6.1
W39A Magazine 34.30 335 IAmb IAmb 03 43 23.3
comp=Z,41nm,0.8s
W39A Magazine 34.30 335 P P 03 43 22.1 +0.7
baz=149,SNR=12
Q57A Strasburg 34.30 358 P P 03 43 24.5 +3.1
baz=177,SNR=7.1
Q56A Snyder Ridge, 34.35 357 IAmb IAmb 03 43 42.3
comp=Z,30nm,0.8s
Q56A Snyder Ridge, 34.35 357 P P 03 43 25.1 +3.2
baz=176
Q55A Buckhannon 34.37 355 P P 03 43 25.6 +3.5
baz=174,SNR=7.4
Q53A Leroy 34.38 353 P P 03 43 24.8 +2.8
baz=171,SNR=6.9
R49A Shelbyville 34.41 348 IAmb IAmb 03 43 25.0
comp=Z,94nm,1.4s
R49A Shelbyville 34.41 348 P P 03 43 24.4 +2.1
baz=165,SNR=8.7
Q54A Coxs Mills 34.42 354 P P 03 43 25.0 +2.5
baz=173
Q52A Bidwell 34.57 352 P P 03 43 26.4 +2.6
baz=170,SNR=5.4
WCI Wyandotte Cave 34.59 347 P P 03 43 25.2 +1.3
WCI pmax pmax
comp=Z,79nm,0.9s
WCI Wyandotte Cave 34.59 347 P P 03 43 25.2 +1.3
WCI Wyandotte Cave 34.59 347 P P 03 43 25.8 +1.9
baz=163
Q50A Georgetown 34.72 350 P P 03 43 27.2 +2.2
baz=167
P58A Pank, Wackersv 34.73 359 P P 03 43 28.0 +2.9
baz=179
P57A Homestead Farm 34.74 358 IAmb IAmb 03 43 43.7
comp=Z,38nm,0.9s
P57A Homestead Farm 34.74 358 P P 03 43 29.0 +3.9
baz=178,SNR=5.6
Q51A Peebles 34.79 351 IAmb IAmb 03 43 38.7
comp=Z,41nm,0.7s
Q51A Peebles 34.79 351 P P 03 43 28.0 +2.4
baz=168,SNR=5.4
P56A Dayton Farm, R 34.79 357 P P 03 43 29.3 +3.7
baz=176,SNR=6.5
BDFB Brasilia 34.79 126 P P 03 43 25.5 -0.6
comp=Z,23nm,0.7s,baz=289,slow=11,SNR=34
BDFB LR LR 03 58 20.2
comp=Z,14μm,19.8s,baz=300,slow=37
BDFB Brasilia 34.79 126 P P 03 43 25.4 -0.6
BDFB IAmb IAmb 03 43 53.0
comp=Z,34nm,0.7s
P59A Jarrettsville 34.84 0 P P 03 43 29.1 +3.0
baz=180
P55A Reedsville 34.86 356 P P 03 43 29.4 +3.1
baz=174
U40A Yellville 34.92 337 P P 03 43 27.3 +0.5
baz=151,SNR=46
P61A Hammonton 34.95 3 P P 03 43 29.5 +2.5
P61A Hammonton 34.95 3 P P 03 43 29.5 +2.5
baz=183
P53A Whipple 34.98 354 IAmb IAmb 03 43 44.9
comp=Z,58nm,0.9s
P53A Whipple 34.98 354 P P 03 43 30.1 +2.9
baz=172,SNR=8.1
P54A Burton 35.00 355 P P 03 43 30.3 +2.8
baz=173
MCWV Mont Chateau 35.01 356 P P 03 43 30.4 +2.9
baz=174
GO04 Tololo Observa 35.04 171 P P 03 43 28.3 +0.1
Q49A Aurora 35.04 349 P P 03 43 29.6 +1.9
baz=166,SNR=6.6
Q48A North Vernon 35.14 348 P P 03 43 30.5 +1.9
baz=164,SNR=13
ABTX Abilene, Hawle 35.18 325 P P 03 43 29.6 +0.5
baz=138,SNR=33
P51A Williamsport 35.19 351 P P 03 43 31.5 +2.4

baz=169
P52A Corning 35.21 353 P **P** 03 43 31.7 +2.4
baz=171,SNR=8.0
MVL Millersville 35.23 0 P **P** 03 43 30.8 +1.4
MVL IAmb IAmb 03 43 51.6
comp=Z,28nm,0.9s
HHAR Hobbs 35.29 335 IAmb IAmb 03 43 31.2
comp=Z,56nm,1.0s
O58A Lewisberry 35.36 360 P **P** 03 43 33.8 +3.3
baz=180
P50A Jamestown 35.43 351 P **P** 03 43 33.1 +1.9
baz=168
O57A Amberson 35.45 359 P **P** 03 43 34.5 +3.2
baz=178
TXAR Lajitas Array 35.45 317 P **P** 03 43 32.4 +0.8
comp=Z,6.6nm,0.7s,baz=126,slow=6.5,SNR=71
TXAR PcP **PcP** 03 46 01.4 +0.4
comp=Z,3.8nm,0.6s,baz=146,slow=5.9,SNR=6.9
TXAR LR LR 03 59 48.8
comp=Z,323nm,21.6s,baz=0.0,slow=39
TX31 Lajitas Ar. Si 35.46 317 IAmb IAmb 03 43 33.2
comp=Z,63nm,1.9s
TX32 Lajitas Array 35.46 317 IAmb IAmb 03 43 33.2
comp=Z,69nm,1.9s
O55A Ligonier 35.52 357 P **P** 03 43 35.0 +3.1
baz=176
O56A Blue Knob Stat 35.54 358 IAmb IAmb 03 43 50.3
comp=Z,38nm,0.9s
O56A Blue Knob Stat 35.54 358 P **P** 03 43 35.4 +3.3
baz=177,SNR=6.8
BLO Bloomington 35.54 347 P **P** 03 43 33.0 +0.9
BLO pmax pmax
comp=Z,91nm,0.8s
BLO Bloomington 35.54 347 P **P** 03 43 33.0 +0.9
O59A Robesonia 35.55 1 P **P** 03 43 35.0 +2.9
baz=181
O60A Telford 35.57 2 P **P** 03 43 33.9 +1.6
baz=182
O54A Avella 35.57 355 IAmb IAmb 03 43 49.9
comp=Z,27nm,0.9s
O54A Avella 35.57 355 P **P** 03 43 35.1 +2.8
baz=174
P48A Milroy 35.59 348 IAmb IAmb 03 43 34.4
comp=Z,82nm,1.2s
P48A Milroy 35.59 348 P **P** 03 43 33.8 +1.3
baz=165,SNR=12
O52A Adamsville 35.65 353 IAmb IAmb 03 43 50.5
comp=Z,55nm,1.0s
O52A Adamsville 35.65 353 P **P** 03 43 35.6 +2.6
baz=171,SNR=5.5
X34A Smith Ranch, M 35.71 329 IAmb IAmb 03 43 35.5
comp=Z,67nm,1.3s
O53A New Philadelph 35.72 354 P **P** 03 43 36.1 +2.5
baz=172,SNR=6.3
O51A Pataskala 35.78 352 P **P** 03 43 36.5 +2.4
baz=170,SNR=10
TUL1 Leonard 35.78 333 P **P** 03 43 34.4 +0.2
baz=146,SNR=21
CCM Cathedral Cave 35.84 340 P **P** 03 43 34.4 -0.3
CCM pmax pmax
comp=Z,75nm,0.7s
CCM Cathedral Cave 35.84 340 P **P** 03 43 34.4 -0.3
CCM Cathedral Cave 35.84 340 P **P** 03 43 34.8 +0.1
baz=155
SSPA Standing Stone 35.88 358 P **P** 03 43 37.0 +2.0
SSPA Standing Stone 35.88 358 P **P** 03 43 37.8 +2.8
baz=176
ACSO Alum Creek Sta 35.92 352 IAmb IAmb 03 44 08.3
comp=Z,124nm,1.9s
ACSO Alum Creek Sta 35.92 352 P **P** 03 43 37.7 +2.4
baz=169
O50A Cable 35.93 351 P **P** 03 43 37.6 +2.1
baz=168,SNR=6.5
IPMB Ipameri, GO 35.96 129 eP **P** 03 43 34.5 -1.5
BRNJ Basking Ridge 35.97 3 P **P** 03 43 37.5 +1.8
TRCB Terra Rica 35.98 140 eP **P** 03 43 33.7 -2.4
N57A Milroy 35.99 359 P **P** 03 43 38.7 +2.7
baz=178
CPUP Villa Florida 36.02 150 P **P** 03 43 33.6 -2.8
CPUP 03 46 02.7
CPUP pmax pmax
comp=Z,20nm,0.9s
CPUP Villa Florida 36.02 150 P **P** 03 43 33.8 -2.5
comp=Z,13nm,0.7s,baz=330,slow=8.5,SNR=43
CPUP PcP **PcP** 03 46 02.7 +0.2
comp=Z,5.4nm,0.7s,baz=276,slow=4.7,SNR=3.0
CPUP LR LR 03 59 14.4
comp=Z,2µm,21.5s,baz=320,slow=38
CPUP Villa Florida 36.02 150 P **P** 03 43 33.5 -2.8
N61A South Mountain 36.05 3 P **P** 03 43 39.2 +2.8
baz=184
N58A Sunbury 36.07 360 P **P** 03 43 38.5 +1.9
N58A IAmb IAmb 03 43 60.0
comp=Z,63nm,1.5s
N58A Sunbury 36.07 360 P **P** 03 43 39.4 +2.8
baz=180
N55A Marion Center 36.07 357 P **P** 03 43 39.7 +3.0
baz=176,SNR=8.0
O49A Covington 36.09 350 P **P** 03 43 38.6 +1.9
baz=167
N60A Cedar Hill Far 36.13 2 P **P** 03 43 39.4 +2.3
baz=183
OKCSW OKLAHOMA CITY 36.15 331 P **P** 03 43 37.8 +0.4
N59A State Game Lan 36.16 1 P **P** 03 43 40.3 +2.9
baz=182
N56A West Decatur 36.18 358 P **P** 03 43 40.4 +2.8
baz=177,SNR=6.4
N53A Lisbon 36.23 355 IAmb IAmb 03 43 54.8
comp=Z,38nm,1.1s
N53A Lisbon 36.23 355 P **P** 03 43 40.4 +2.4
baz=173
WMOK Wichita Mounta 36.30 328 IAmb IAmb 03 43 39.9
comp=Z,59nm,1.1s
WMOK Wichita Mounta 36.30 328 P **P** 03 43 39.3 +0.6
baz=141,SNR=14
O48A Farmland 36.30 349 P **P** 03 43 40.2 +1.6
baz=166,SNR=11
N54A Moraine State 36.31 356 IAmb IAmb 03 43 42.3
comp=Z,50nm,1.0s
N54A Moraine State 36.31 356 P **P** 03 43 41.6 +2.9
baz=174,SNR=6.3
N52A McGinn's Farm, 36.32 354 P **P** 03 43 41.1 +2.3
baz=172,SNR=6.4
PAL Palisades 36.32 4 P **P** 03 43 40.3 +1.6
PAL pmax pmax
comp=Z,41nm,1.1s
PAL Palisades 36.32 4 P **P** 03 43 40.3 +1.6
PAL IAmb IAmb 03 43 42.4
comp=Z,41nm,1.1s
PAL Palisades 36.32 4 P **P** 03 43 40.9 +2.2
baz=185
N50A Nevada 36.47 352 P **P** 03 43 41.9 +1.9
baz=169
N51A Ashland 36.51 353 IAmb IAmb 03 43 43.0
comp=Z,48nm,0.8s
N51A Ashland 36.51 353 P **P** 03 43 42.4 +2.0
baz=170,SNR=6.4
M57A Sunshine Farm, 36.57 359 P **P** 03 43 43.9 +3.1
baz=179,SNR=6.1
M58A Price's Panora 36.60 0 P **P** 03 43 44.3 +3.1
baz=180
M60A Port Jervis 36.60 3 P **P** 03 43 42.7 +1.5
baz=183
M61A Granite Spring 36.63 4 P **P** 03 43 43.7 +2.3
baz=185
M56A Emporium 36.74 358 IAmb IAmb 03 44 00.1
comp=Z,46nm,0.8s
M56A Emporium 36.74 358 P **P** 03 43 45.2 +2.8
baz=178,SNR=9.0
M55A Ridgway 36.75 357 IAmb IAmb 03 44 00.3
comp=Z,33nm,1.0s
M55A Ridgway 36.75 357 P **P** 03 43 45.1 +2.6
baz=176
N49A Columbus Grove 36.78 350 P **P** 03 43 43.9 +1.2
N49A IAmb IAmb 03 43 44.9
comp=Z,42nm,1.0s
N49A Columbus Grove 36.78 350 P **P** 03 43 44.5 +1.9
baz=168,SNR=7.4
M59A Waymart 36.79 2 P **P** 03 43 45.6 +2.8
baz=182
SFIN Lafayette 36.83 347 IAmb IAmb 03 43 44.4
comp=Z,32nm,0.5s
SFIN Lafayette 36.83 347 P **P** 03 43 43.9 +0.8
baz=162,SNR=6.8
M62A Hamden 36.83 5 P **P** 03 43 46.1 +3.0
baz=186
M54A Oil Creek Stat 36.84 356 IAmb IAmb 03 44 01.0
comp=Z,56nm,0.9s
M54A Oil Creek Stat 36.84 356 P **P** 03 43 45.9 +2.8
baz=175,SNR=5.9
M53A WI Miller and 36.84 355 P **P** 03 43 45.7 +2.4
baz=173
N48A Decatur 36.86 349 P **P** 03 43 44.9 +1.5
baz=166
M63A Gales Ferry 36.87 6 P **P** 03 43 46.4 +3.0
baz=186
M51A Elyria 36.89 353 P **P** 03 43 45.9 +2.3
baz=171
CFA Coronel Fontan 36.90 168 LR LR 03 59 43.7
comp=Z,3µm,21.9s,baz=3.5,slow=37
M52A Chesterland 37.01 354 P **P** 03 43 47.1 +2.5
baz=172
N47A Urbana 37.01 349 IAmb IAmb 03 43 46.4
comp=Z,84nm,1.3s
N47A Urbana 37.01 349 P **P** 03 43 45.9 +1.3
baz=165,SNR=5.8
M50A Fremont 37.08 352 P **P** 03 43 47.2 +2.0
baz=169
L57A Andrews Acres 37.23 360 P **P** 03 43 49.4 +2.9
baz=180
M49A Liberty Center 37.28 351 P **P** 03 43 48.7 +1.8
baz=168,SNR=5.1
L58A Harry Jones Me 37.28 1 P **P** 03 43 49.9 +2.9
baz=181
L60A Shokan 37.28 3 P **P** 03 43 49.7 +2.7
baz=184
L53A Girard 37.32 356 P **P** 03 43 49.7 +2.4
baz=174,SNR=6.0
L56A Greenwood 37.38 359 P **P** 03 43 50.6 +2.8
baz=178
BINY Binghamton 37.44 1 IAmb IAmb 03 44 10.6
comp=Z,32nm,0.8s
BINY Binghamton 37.44 1 P **P** 03 43 51.2 +3.0
baz=181,SNR=5.6
L62A Suffield 37.44 5 P **P** 03 43 51.2 +3.0
baz=186
L55A Hinsdale 37.45 358 P **P** 03 43 51.1 +2.7
baz=177
L59A Walton 37.45 2 IAmb IAmb 03 44 09.3
comp=Z,79nm,1.6s
L59A Walton 37.45 2 P **P** 03 43 51.1 +2.7
baz=183
M47A Cromwell 37.46 349 P **P** 03 43 49.8 +1.4
baz=165,SNR=7.7
ERPA Erie 37.46 356 P **P** 03 43 50.9 +2.4
baz=175
L61A Hillsdale 1, H 37.53 4 P **P** 03 43 51.9 +2.9
baz=185
L54A Sinclairville 37.54 357 P **P** 03 43 51.8 +2.7
baz=176,SNR=7.4
HDIL Hopedale 37.55 344 P **P** 03 43 48.8 -0.4
HDIL Hopedale 37.55 344 P **P** 03 43 49.0 -0.2
baz=159,SNR=12
BB19B Bebedouro 37.60 134 eP **P** 03 43 48.1 -1.9
L50A Kingsville 37.67 353 P **P** 03 43 51.8 +1.6
baz=170
L61B Northampton 37.85 5 P **P** 03 43 52.7 +1.0
baz=186
L49A Milan 37.87 351 P **P** 03 43 53.8 +1.9
baz=168,SNR=8.9
BCX Boston College 37.89 7 IAmb IAmb 03 43 56.1
comp=Z,59nm,0.9s
WES Weston 37.92 6 P **P** 03 43 54.7 +2.4
WES pmax pmax
comp=Z,189nm,1.9s
WES Weston 37.92 6 P **P** 03 43 54.7 +2.4
MSTX Muleshoe 37.96 324 P **P** 03 43 53.2 +0.2
baz=135,SNR=14
K57A Scipio Center 37.96 0 P **P** 03 43 55.5 +2.8
baz=180
PEL Peldehue 37.98 172 P **P** 03 43 53.6 +0.6
PEL pmax pmax
comp=Z,86nm,0.9s
PEL Peldehue 37.98 172 P **P** 03 43 53.6 +0.6
L47A Sherwood 37.98 350 P **P** 03 43 54.0 +1.2
baz=166
K55A Perry 37.98 358 P **P** 03 43 55.3 +2.4
baz=178
AMTX Amarillo 37.98 326 IAmb IAmb 03 43 54.7
comp=Z,55nm,1.1s
AMTX Amarillo 37.98 326 P **P** 03 43 54.1 +1.0
baz=137
K58A Earlville 38.00 1 IAmb IAmb 03 43 56.5
comp=Z,74nm,1.4s
K58A Earlville 38.00 1 P **P** 03 43 55.6 +2.6
baz=182
HRV Adam Dziewonsk 38.01 6 P **P** 03 43 56.1 +3.0
baz=188
TRY Troy 38.06 4 IAmb IAmb 03 43 58.2
comp=Z,43nm,1.2s
MNTX Cornudas Mount 38.09 318 P **P** 03 43 54.4 +0.5
MNTX IAmb IAmb 03 44 15.0
comp=Z,32nm,0.9s
MNTX Cornudas Mount 38.09 318 P **P** 03 43 54.8 +0.8
baz=129,SNR=30
K62A Royalston 38.10 5 IAmb IAmb 03 43 57.3
comp=Z,47nm,0.8s
K62A Royalston 38.10 5 P **P** 03 43 56.6 +2.8
baz=187,SNR=5.4
K51A Iona Station 38.19 354 P **P** 03 43 56.8 +2.2
baz=172
K63A Dunstable 38.20 6 P **P** 03 43 57.9 +3.3
baz=188
L46A Eue Claire 38.22 348 P **P** 03 43 55.7 +0.9
baz=164
K50A Casco 38.37 353 P **P** 03 43 57.9 +1.8
baz=170
FRTB Fartura 38.37 138 eP **P** 03 43 54.4 -2.0
MEDO Medina 38.43 358 IAmb IAmb 03 44 31.6
comp=Z,54nm,0.8s
J56A Wolcott 38.51 360 IAmb IAmb 03 44 12.4
comp=Z,42nm,0.8s
J56A Wolcott 38.51 360 P **P** 03 43 59.7 +2.5
baz=180
J55A Hilton 38.51 359 P **P** 03 43 60.0 +2.7
baz=178
J60A Lant Hill Farm 38.58 4 P **P** 03 44 00.7 +2.9
baz=185,SNR=5.7
K48A Perry 38.60 351 P **P** 03 43 59.8 +1.8
baz=168
J58A Remsen 38.61 2 IAmb IAmb 03 44 41.2
comp=Z,38nm,1.0s
J58A Remsen 38.61 2 P **P** 03 44 00.6 +2.5
baz=182
K47A Vermontville 38.62 350 P **P** 03 43 59.6 +1.4
baz=167,SNR=5.7
J59A Piesco 38.74 3 P **P** 03 44 01.1 +1.8
J59A IAmb IAmb 03 44 03.4
comp=Z,50nm,1.1s
J59A Piesco 38.74 3 P **P** 03 44 02.2 +3.0
baz=183,SNR=7.3
KSU1 Kansas State U 38.80 335 P **P** 03 43 59.4 -0.4
baz=147,SNR=28
J48A Bridge Port 39.04 352 P **P** 03 44 03.5 +1.8
baz=169
J47A Sunmer 39.14 351 IAmb IAmb 03 44 04.6
comp=Z,84nm,1.2s
J47A Sunmer 39.14 351 P **P** 03 44 04.0 +1.5
baz=167
RCLB Rio Claro- Sao 39.17 134 eP **P** 03 44 01.7 -1.5
I60A Shoreham 39.19 4 P **P** 03 44 05.4 +2.5
baz=185
I51A Listowel 39.22 355 P **P** 03 44 05.3 +2.0
baz=173,SNR=7.9
I61A Oroboro, Fairl 39.36 5 P **P** 03 44 07.0 +2.6
baz=187
J46A Howard City 39.39 350 P **P** 03 44 05.4 +0.8
baz=166
L40A Arnosa 39.48 343 IAmb IAmb 03 44 20.6
comp=Z,65nm,0.8s
ITAB Concordia 39.56 144 eP **P** 03 44 03.9 -2.4
I63A Otisfield 39.65 7 IAmb IAmb 03 44 10.5
comp=Z,59nm,0.9s
I63A Otisfield 39.65 7 P **P** 03 44 09.5 +2.7
baz=190,SNR=5.1
GO05 Huala 39.66 174 P **P** 03 44 07.3 +0.3
LBNH Lisbon 39.69 5 IAmb IAmb 03 44 10.8
comp=Z,44nm,0.8s
LBNH Lisbon 39.69 5 P **P** 03 44 10.1 +2.9
baz=187,SNR=6.2
H57A Richville 39.71 1 P **P** 03 44 09.8 +2.6
baz=182
H58A Gabriels 39.71 3 P **P** 03 44 09.7 +2.4
baz=184,SNR=7.7
H55A Tweed 39.78 359 P **P** 03 44 10.2 +2.3
baz=179
H56A Elgin 39.82 0 P **P** 03 44 10.8 +2.6
baz=181
H53A Bobcaygeon 39.84 358 P **P** 03 44 10.1 +1.7
baz=177
I47A Gladwin 39.85 351 P **P** 03 44 10.1 +1.6
baz=168
LONY Lake Ozonia 39.89 2 P **P** 03 44 10.3 +1.5
LONY IAmb IAmb 03 44 12.1
comp=Z,46nm,1.1s
LONY Lake Ozonia 39.89 2 P **P** 03 44 11.3 +2.5
baz=183,SNR=6.8
I46A Reed City 39.93 350 P **P** 03 44 10.4 +1.3
baz=166
H60A Morristown 39.94 4 P **P** 03 44 11.9 +2.6
baz=186
VAO Valinhos 39.95 135 eP **P** 03 44 07.9 -1.7
H59A Cadyville 39.96 3 P **P** 03 44 11.9 +2.5
baz=185,SNR=6.1
SCIA State Center 39.96 341 P **P** 03 44 09.7 +0.2
baz=154
CBKS Cedar Bluff 39.97 332 P **P** 03 44 10.0 +0.4
baz=143,SNR=23
H52A Wyevale 39.97 356 P **P** 03 44 11.5 +2.0
baz=175
H61A Lyndonville 39.98 5 P **P** 03 44 11.8 +2.2
baz=187
SPB Sao Paulo 40.00 136 IAmb IAmb 03 44 26.7
comp=Z,51nm,0.8s
JFWS Jewell Farm 40.00 344 P **P** 03 44 09.8 0.0
baz=159,SNR=17
121A Cookes Peak, D 40.21 317 P **P** 03 44 14.2 +2.3
baz=127,SNR=69
PLVO Plevna 40.27 360 IAmb IAmb 03 44 32.4
comp=Z,38nm,0.9s
G57A Newington 40.36 2 P **P** 03 44 14.9 +2.3
baz=183,SNR=5.5
H47A Mio 40.37 352 P **P** 03 44 14.5 +1.7
baz=168
G53A Haliburton 40.39 358 P **P** 03 44 15.3 +2.4
baz=177
G58A Ormstown 40.44 3 P **P** 03 44 15.9 +2.6
baz=184,SNR=7.0
H46A Fife Lake 40.47 351 P **P** 03 44 15.9 +2.4
baz=167
G55A Calabogie 40.48 360 P **P** 03 44 15.9 +2.3
baz=180,SNR=5.2
G60A Masonville 40.51 5 P **P** 03 44 16.7 +2.8
baz=187
LPM Los Pinos Moun 40.56 321 P **P** 03 44 15.7 +1.0
319A Douglas 40.56 315 IAmb IAmb 03 44 37.0
comp=Z,74nm,0.8s
I42A Draeger Farm, 40.58 346 IAmb IAmb 03 44 15.8
comp=Z,36nm,0.8s
Y22D IRIS PASSCAL I 40.59 320 IAmb IAmb 03 44 18.2
comp=Z,38nm,0.6s
Y22D IRIS PASSCAL I 40.59 320 P **P** 03 44 17.4 +2.4
baz=130
G54A Lake Saint Pet 40.65 358 P **P** 03 44 16.9 +1.8
baz=178
SRIG Santa Rosalia 40.72 308 IAmb IAmb 03 44 18.2
comp=Z,144nm,1.9s
G61A St-Isidore-de- 40.76 6 P **P** 03 44 19.0 +3.0
baz=188,SNR=5.4
G62A West of Eustis 40.80 7 IAmb IAmb 03 44 20.6
comp=Z,47nm,0.9s
G62A West of Eustis 40.80 7 P **P** 03 44 19.4 +3.0
baz=189,SNR=7.6
ANMO Albuquerque 40.86 321 *d iP* **P** 03 44 18.5 +1.3
ANMO pmax pmax
comp=Z,73nm,1.4s
ANMO Albuquerque 40.86 321 P **P** 03 44 18.6 +1.3
ANMO Albuquerque 40.86 321 P **P** 03 44 18.9 +1.7
baz=131
F55A Otter Lake 41.06 0 P **P** 03 44 21.0 +2.6
baz=180
F52A Sundridge 41.09 357 P **P** 03 44 20.6 +1.9
baz=176
T25A Trinidad 41.14 326 P **P** 03 44 21.5 +2.0
baz=135,SNR=48
ALGO Algonquin Park 41.20 359 P **P** 03 44 21.7 +2.2
baz=178,SNR=7.7
F59A Saint Guilaume 41.22 4 P **P** 03 44 22.6 +2.9
baz=186
BGNE Belgade 41.37 335 P **P** 03 44 22.0 +0.9
baz=147,SNR=7.6
F60A Warwick 41.40 5 P **P** 03 44 24.1 +2.8
baz=187,SNR=5.3
TRQ Mont Tremblant 41.49 2 P **P** 03 44 23.2 +1.2
F61A St Evariste 41.50 6 P **P** 03 44 24.3 +2.3
baz=188
KSCO Kaye Shedlock' 41.55 329 P **P** 03 44 24.8 +2.0
baz=139,SNR=9.4
E52A Mattawa 41.55 358 P **P** 03 44 24.5 +2.0
baz=177
E53A Dumoine, Ponti 41.62 359 P **P** 03 44 24.7 +1.7
baz=178
E55A Montcerf-Lytto 41.69 1 P **P** 03 44 26.0 +2.4
baz=181,SNR=5.6
E58A La Victoria 41.71 4 P **P** 03 44 26.2 +2.5
baz=185,SNR=8.7
F64A Sherman 41.73 9 P **P** 03 44 26.3 +2.4
baz=192
E56A St. Veronique 41.80 2 P **P** 03 44 26.7 +2.2
baz=182
E51A G1948 Merrick 41.83 357 P **P** 03 44 27.0 +2.3
baz=176,SNR=12
E60A Ste Agathe de 41.85 5 P **P** 03 44 25.9 +1.0
baz=188
SJMB Sao Joao De Ma 41.95 125 eP **P** 03 44 24.7 -1.4
E48A Lockeyer 41.98 354 P **P** 03 44 27.5 +1.6
baz=172
E61A Lac Etchemin 42.01 6 P **P** 03 44 29.4 +3.2
baz=189
RCBR Riachuelo 42.02 104 P **P** 03 44 26.0 -0.9
RCBR pmax pmax
comp=Z,29nm,0.8s
RCBR Riachuelo 42.02 104 eP **P** 03 44 26.2 -0.7
RCBR Riachuelo 42.02 104 P **P** 03 44 26.0 -0.9
E47A Iron Bridge 42.08 353 P **P** 03 44 28.0 +1.3
baz=170
E46A Sault Ste Mari 42.12 352 IAmb IAmb 03 44 53.0
comp=Z,38nm,0.8s
TUC Tucson 42.15 315 P **P** 03 44 28.3 +0.6
TUC pmax pmax
comp=Z,63nm,1.1s
TUC Tucson 42.15 315 P **P** 03 44 28.2 +0.6
TUC IAmb IAmb 03 44 30.8
comp=Z,63nm,1.1s
TUC Tucson 42.15 315 P **P** 03 44 29.3 +1.6
baz=124
SDCO Great Sand Dun 42.18 325 IAmb IAmb 03 44 31.4
comp=Z,68nm,0.7s
SDCO Great Sand Dun 42.18 325 P **P** 03 44 29.8 +1.7
baz=134,SNR=141
F42A Maple Grove Fa 42.19 348 IAmb IAmb 03 44 42.6
comp=Z,32nm,0.7s
D52A ZEK Kipawa Sen 42.23 358 P **P** 03 44 30.3 +2.3
baz=177
D55A Sainte-Anne-du 42.26 1 P **P** 03 44 30.5 +2.2
baz=182
E63A Oxbow 42.27 9 P **P** 03 44 30.5 +2.2
baz=192,SNR=6.3
BSFB Barra de Sao F 42.29 124 eP **P** 03 44 27.6 -1.3
D57A Chemin Vers le 42.32 3 P **P** 03 44 31.1 +2.3
baz=184
E64A Bridgewater 42.35 9 P **P** 03 44 31.5 +2.5
baz=193,SNR=9.0
D54A Lac Fusel, La 42.38 0 P **P** 03 44 31.3 +2.1
baz=180,SNR=13
D51A Lot 18 Range I 42.38 357 P **P** 03 44 31.8 +2.5
baz=176
D60A Saint Jean D'O 42.44 6 P **P** 03 44 32.3 +2.7
baz=188,SNR=11
D59A Saint-Raymond 42.45 5 P **P** 03 44 32.2 +2.5
baz=187
D58A Chemin du LacG 42.45 4 P **P** 03 44 32.4 +2.6
baz=186,SNR=16
D50A G1974 Best Tow 42.48 357 P **P** 03 44 31.7 +1.6
baz=175
PQI Presque Isle 42.57 9 P **P** 03 44 32.4 +1.7
D46A Sault St. Mari 42.60 353 P **P** 03 44 31.7 +0.7
baz=169
OGNE Ogallala 42.73 331 P **P** 03 44 33.0 +0.7
OGNE Ogallala 42.73 331 P **P** 03 44 33.8 +1.5
baz=141,SNR=5.2
LATQ La Tuque 42.75 4 IAmb IAmb 03 44 35.6
comp=Z,36nm,0.8s
LATQ La Tuque 42.75 4 P **P** 03 44 34.9 +2.7

baz=186,SNR=22
ECSD EROS Data Cent 42.75 339 P P 03 44 31.5 -0.8
baz=150,SNR=37
D61A St Aubert, Com 42.80 7 P P 03 44 35.8 +3.2
baz=190,SNR=16
D62A Allapoint, All 42.82 8 IAmb IAmb 03 44 36.4
comp=Z,64nm,0.9s
D62A Allapoint, All 42.82 8 P P 03 44 35.5 +2.7
baz=191,SNR=15
SPMN Marine on St. 42.84 343 P P 03 44 33.1 +0.1
baz=156,SNR=14
Q24A Divide 42.85 327 P P 03 44 35.6 +2.1
baz=136,SNR=5.8
X18A Snowflake 42.85 318 IAmb IAmb 03 44 37.0
comp=Z,67nm,0.8s
D63A Stockholm 42.91 9 P P 03 44 35.8 +2.3
baz=192
S22A 4UR Ranch, Cre 42.95 324 IAmb IAmb 03 44 37.5
comp=Z,72nm,1.2s
S22A 4UR Ranch, Cre 42.95 324 P P 03 44 36.0 +1.6
baz=133,SNR=50
W18A Petrified Fore 43.06 319 P P 03 44 37.2 +2.0
baz=127,SNR=37
VLDQ Val d'Or 43.35 359 IAmb IAmb 03 44 42.0
comp=Z,139nm,1.9s
214A Organ Pipe Nat 43.41 313 IAmb IAmb 03 44 41.1
comp=Z,41nm,0.8s
214A Organ Pipe Nat 43.41 313 P P 03 44 39.6 +1.8
baz=121,SNR=34
BATG Bathurst New B 43.48 11 P P 03 44 39.8 +1.6
BATG IAmb IAmb 03 44 41.3
comp=Z,43nm,0.8s
MVCO Mesa Verde 43.59 322 IAmb IAmb 03 44 41.6
comp=Z,158nm,1.7s
MVCO Mesa Verde 43.59 322 P P 03 44 40.7 +1.2
baz=130,SNR=33
ISCO Idaho Springs 43.70 327 IAmb IAmb 03 44 43.2
comp=Z,162nm,1.9s
ISCO Idaho Springs 43.70 327 P P 03 44 41.7 +1.3
baz=136,SNR=28
E38A The Farm, Brul 43.77 345 IAmb IAmb 03 44 41.5
comp=Z,50nm,0.9s
SUSD Miller 44.24 337 P P 03 44 43.6 -0.7
baz=147,SNR=8.1
LSQQ Lebel-sur-Quev 44.29 360 P P 03 44 46.4 +1.8
baz=180
WUAZ Wupatki 44.37 318 IAmb IAmb 03 44 49.1
comp=Z,63nm,0.8s
WUAZ Wupatki 44.37 318 P P 03 44 47.6 +1.9
baz=126,SNR=52
113A Mohawk Valley, 44.52 314 IAmb IAmb 03 44 49.8
comp=Z,65nm,1.5s
RPN Rapa Nui 44.62 223 LR LR 03 58 59.2
comp=Z,1µm,20.0s,baz=49,slow=30
N23A Red Feather La 44.66 328 IAmb IAmb 03 44 51.0
comp=Z,97nm,1.6s
N23A Red Feather La 44.66 328 P P 03 44 50.2 +2.1
baz=136,SNR=12
MATQ Matagami 45.00 359 P P 03 44 52.0 +1.7
baz=179,SNR=18
EYMN Ely 45.01 346 P P 03 44 50.6 +0.2
baz=159,SNR=11
O20A White River Ci 45.38 326 P P 03 44 55.0 +1.3
O20A IAmb IAmb 03 44 57.7
comp=Z,46nm,0.8s
O20A White River Ci 45.38 326 P P 03 44 55.2 +1.5
baz=133,SNR=46
GLA Glamis 45.43 313 IAmb IAmb 03 44 57.2
comp=Z,74nm,1.3s
GLA Glamis 45.43 313 P P 03 44 55.9 +1.9
baz=120
PLCA Paso Flores 45.47 173 P P 03 44 54.9 +0.7
PLCA pmax pmax
comp=Z,97nm,0.9s
PLCA Paso Flores 45.47 173 P P 03 44 54.8 +0.6
comp=Z,81nm,0.8s,baz=13,slow=8.8,SNR=199
PLCA Paso Flores 45.47 173 *e*P P 03 44 55.1 +0.9
PLCA Paso Flores 45.47 173 P P 03 44 54.9 +0.7
U15A North Rim 45.51 319 IAmb IAmb 03 44 58.3
comp=Z,34nm,0.8s
Y12C Blythe 45.57 314 IAmb IAmb 03 44 58.2
comp=Z,54nm,1.1s
Y12C Blythe 45.57 314 P P 03 44 56.9 +1.8
baz=121,SNR=30
W13A Hualapai Mount 45.83 316 IAmb IAmb 03 45 00.9
comp=Z,57nm,1.4s
RWWY Rawlins 45.89 328 IAmb IAmb 03 44 59.5
comp=Z,42nm,1.0s
SWSC Sam W. Stewart 46.09 313 P P 03 45 01.5 +2.4
baz=119,SNR=9.6
RSSD Black Hills 46.13 333 P P 03 45 00.5 +0.9
RSSD pmax pmax
comp=Z,54nm,0.8s
RSSD Black Hills 46.13 333 P P 03 45 00.5 +0.9
RSSD IAmb IAmb 03 45 02.5
comp=Z,54nm,0.8s
RSSD Black Hills 46.13 333 P P 03 45 00.8 +1.3
baz=141
IKP In-Ko-Pah, Jac 46.17 312 P P 03 45 01.4 +1.5
baz=119,SNR=13
BC3 Big Chuckawall 46.19 314 P P 03 45 01.5 +1.4
baz=120,SNR=20
IRM Iron Mountain 46.22 314 P P 03 45 01.9 +1.6
baz=121,SNR=47
K22A Casper 46.23 329 IAmb IAmb 03 45 02.6
comp=Z,59nm,1.4s
K22A Casper 46.23 329 P P 03 45 01.4 +1.1
baz=137,SNR=12
MONP2 Monument Peak 46.52 312 P P 03 45 04.4 +1.6
baz=119,SNR=13
TMUT Trail Mountain 46.56 323 P P 03 45 04.6 +1.5
BELC Belle Mtn. Jos 46.75 314 P P 03 45 06.4 +1.8
baz=120,SNR=19
XPFO Pion Flat 46.89 313 P P 03 45 07.1 +1.4
XPFO IAmb IAmb 03 45 08.7
comp=Z,89nm,1.8s
PFO Pinyon Flats O 46.90 313 P P 03 45 07.1 +1.4
PFO pmax pmax
comp=Z,89nm,1.8s
PFO Pinyon Flats O 46.90 313 P P 03 45 07.1 +1.4
PFO IAmb IAmb 03 45 08.7
comp=Z,89nm,1.8s
PFO Pinyon Flats O 46.90 313 P P 03 45 07.1 +1.4
baz=119,SNR=14
GMRC Granite Mounta 46.91 315 P P 03 45 07.2 +1.5
baz=121,SNR=23
MDND Maddock 47.36 339 P P 03 45 09.5 +0.6
baz=148
DRLN Deer Lake 47.38 17 P P 03 45 10.2 +1.2
DRLN IAmb IAmb 03 45 11.2
comp=Z,52nm,0.9s
HEC Hector Ludlow 47.41 315 P P 03 45 11.7 +2.1
baz=120,SNR=34
TUQ Turquoise Moun 47.43 315 P P 03 45 11.6 +1.8
baz=121,SNR=7.7
MURC Murrieta 47.43 313 P P 03 45 11.5 +1.8
baz=119,SNR=12
SHPR Sheep Range 47.46 317 IAmb IAmb 03 45 13.2
comp=Z,90nm,1.9s
BBRC Big Bear Solar 47.55 314 P P 03 45 13.2 +2.4
baz=119,SNR=6.5
BW06 Boulder Array 47.89 327 IAmb IAmb 03 45 15.4
comp=Z,89nm,1.6s
BW06 Boulder Array 47.89 327 P P 03 45 14.7 +1.3
baz=133,SNR=24
PD31 Pinedale Array 47.89 327 P P 03 45 13.7 +0.3
PD31 IAmb IAmb 03 45 15.4
comp=Z,87nm,1.7s
PDAR Pinedale Array 47.89 327 P P 03 45 14.2 +0.8
comp=Z,7.8nm,0.6s,baz=131,slow=9.6,SNR=73
PDAR LR LR 04 07 56.1
comp=Z,443nm,21.8s,baz=128,slow=39
SHOC Shoshone, Teco 47.91 316 P P 03 45 15.6 +2.2
baz=121
GSC Goldstone, Bar 47.98 315 IAmb IAmb 03 45 17.1
comp=Z,34nm,0.8s
GSC Goldstone, Bar 47.98 315 P P 03 45 15.9 +1.9
baz=120,SNR=37
BFSC Mount Baldy Ra 48.07 313 P P 03 45 16.1 +1.3
baz=119,SNR=8.6
DUG Dugway, Tooele 48.08 323 P P 03 45 16.4 +1.6
baz=128,SNR=40
CIS Catalina Islan 48.24 312 P P 03 45 17.6 +1.7
baz=117,SNR=12
ULM Lac du Bonnet 48.27 344⇓ *e*P P 03 45 15.0 -0.9
ULM Lac du Bonnet 48.27 344 P P 03 45 15.3 -0.6
comp=Z,40nm,0.7s,baz=151,slow=8.5,SNR=85
ULM LR LR 04 07 44.7
comp=Z,1µm,19.8s,baz=154,slow=39
MWC Mount Wilson 48.35 313 IAmb IAmb 03 45 20.1
comp=Z,42nm,1.3s
TPNV Topopah Spring 48.44 317 P P 03 45 19.6 +1.9
baz=122,SNR=10
DECC Green Verdugo 48.57 313 P P 03 45 20.9 +2.4
baz=118,SNR=5.9
FURC Furnace Creek, 48.61 316 P P 03 45 20.5 +1.8
baz=121,SNR=8.3
EDW2 Edwards Air Fo 48.62 314 P P 03 45 20.4 +1.4
baz=119,SNR=26
BGU Big Grassy Mou 48.66 323 P P 03 45 20.2 +0.9
LRMC Laurel Mtn Rad 48.69 315 P P 03 45 21.1 +1.6
baz=120,SNR=14
AHID Auburn Hatcher 48.73 326 IAmb IAmb 03 45 21.8
comp=Z,27nm,0.8s
R11A Troy Canyon, C 48.75 319 IAmb IAmb 03 45 22.2
comp=Z,72nm,1.8s
R11A Troy Canyon, C 48.75 319 P P 03 45 21.5 +1.5
baz=124,SNR=29
MPMC Manual Prospec 48.84 315 P P 03 45 21.9 +1.2
baz=120,SNR=28
SNOW Snow King Moun 49.01 327 IAmb IAmb 03 45 24.3
comp=Z,34nm,0.8s
OSI Osito Audit: C 49.02 313 IAmb IAmb 03 45 39.1
comp=Z,22nm,0.9s
HVU Hansel Valley 49.05 324 P P 03 45 23.0 +0.8
HVU pmax pmax
comp=Z,25nm,0.9s
HVU Hansel Valley 49.05 324 P P 03 45 23.0 +0.8
LAO LASA Array 49.09 333 IAmb IAmb 03 45 26.1
comp=Z,27nm,0.8s
LAO LASA Array 49.09 333 P P 03 45 22.6 +0.3
baz=140,SNR=13
GRAC Grapevine Rang 49.23 316 P P 03 45 26.6 +3.0
baz=121,SNR=5.3
ISA Isabella, Lake 49.34 314 P P 03 45 26.1 +1.6
baz=119,SNR=16
ARVC Arvin 49.34 314 P P 03 45 27.1 +2.8
baz=118,SNR=12
RLMT Red Lodge 49.38 330 IAmb IAmb 03 45 26.7
comp=Z,26nm,0.8s
RLMT Red Lodge 49.38 330 P P 03 45 25.5 +0.7
baz=135,SNR=20
FLWY Flagg Ranch 49.40 328 IAmb IAmb 03 45 27.5
comp=Z,53nm,1.4s
SCZ2 Santa Cruz Isl 49.41 312 P P 03 45 26.8 +1.8
baz=117,SNR=6.5
CWC Cottonwood Cre 49.44 315 P P 03 45 26.9 +1.6
baz=120
H17A Grant Village 49.55 328 IAmb IAmb 03 45 42.3
comp=Z,56nm,1.9s
H17A Grant Village 49.55 328 P P 03 45 28.3 +2.2
baz=133
YMP Mirror Lake Pl 49.56 329 P P 03 45 27.5 +1.2
DGMT Dagmar 49.61 336 P P 03 45 27.0 +0.7
baz=143,SNR=13
VES Vestal, Richgr 49.86 314 P P 03 45 30.1 +1.8
baz=119,SNR=29
PKM Mcpherson Peak 49.95 313 P P 03 45 31.7 +2.4
baz=117,SNR=12
GCMT Greycliff 50.05 330 P P 03 45 30.5 +0.7
SMMC Simmler 50.27 313 P P 03 45 33.3 +1.8
baz=117
NV11 Mina Array Sit 50.50 318 IAmb IAmb 03 45 36.4
comp=Z,47nm,1.1s
MLAC Mammoth, Mammo 50.56 316 P P 03 45 36.6 +2.7
baz=120
NVAR Mina Array Bea 50.60 318 P P 03 45 35.5 +1.3
comp=Z,25nm,0.7s,baz=129,slow=6.5,SNR=156
NVAR PcP PcP 03 46 52.7 +1.1
comp=Z,5.6nm,0.7s,baz=139,slow=4.3,SNR=2.5
NVAR LR LR 04 09 44.2
comp=Z,612nm,19.4s,baz=127,slow=39
PAGB Antelope Grade 50.65 314 IAmb IAmb 03 45 37.1
comp=Z,40nm,0.8s
OMMB Old Mammoth Mi 50.66 316 IAmb IAmb 03 45 37.7
comp=Z,26nm,1.1s
SCHQ Schefferville 50.70 7 P P 03 45 35.9 +1.4
comp=Z,79nm,0.8s,baz=198,slow=5.1,SNR=90
SCHQ LR LR 04 07 05.5
comp=Z,763nm,21.0s,baz=186,slow=36
SCHQ Schefferville 50.70 7 P P 03 45 35.8 +1.4
MDPB De Postil 50.73 316 IAmb IAmb 03 45 38.1
comp=Z,26nm,1.0s
KVN Kaiserville 50.79 318 IAmb IAmb 03 45 38.2
comp=Z,32nm,1.2s
RYN Ryan 50.85 318 IAmb IAmb 03 45 38.8
comp=Z,30nm,0.9s
DLMT Dillon 51.26 328 IAmb IAmb 03 45 41.6
comp=Z,38nm,1.3s
PMPB Monarch Peak 51.27 314 IAmb IAmb 03 45 41.4
comp=Z,45nm,1.0s
WAKR Walker 51.41 317 IAmb IAmb 03 45 43.4
comp=Z,37nm,1.0s
YERR Yerington 51.52 318 IAmb IAmb 03 45 43.8
comp=Z,37nm,0.8s
EGMT Eagleton 51.69 332 P P 03 45 42.8 +0.8
EGMT IAmb IAmb 03 46 02.4
comp=Z,33nm,0.9s
EGMT Eagleton 51.69 332 P P 03 45 43.6 +1.6
baz=136,SNR=6.7
PNTR Pinto Nut 51.81 318 IAmb IAmb 03 45 46.2
comp=Z,26nm,0.8s
MFID Camas Ranch 51.83 324 IAmb IAmb 03 45 45.7
comp=Z,33nm,0.8s
SAO San Andreas Ge 51.98 314 IAmb IAmb 03 45 45.9
comp=Z,54nm,1.6s
PAHR Pah Rah Range 51.98 318 IAmb IAmb 03 45 46.2
comp=Z,91nm,1.8s
MSO Missoula 52.93 329 P P 03 45 52.1 +0.8
MSO Missoula 52.93 329 P P 03 45 52.0 +0.7
baz=131,SNR=13
ORV Oroville 53.32 317 IAmb IAmb 03 45 57.1
comp=Z,63nm,1.2s
JTMT Jette 53.71 329 IAmb IAmb 03 45 59.5
comp=Z,42nm,1.1s
MOD Modoc Plateau 53.71 320 IAmb IAmb 03 45 59.1
comp=Z,46nm,1.6s
O03E Paynes Creek 53.88 318 P P 03 45 58.8 +0.5
baz=119,SNR=6.0
FFC Flin Flon 54.00 342 P P 03 45 58.5 -0.3
FFC pmax pmax
comp=Z,48nm,1.2s
FFC Flin Flon 54.00 342 P P 03 45 58.5 -0.3
FFC IAmb IAmb 03 45 60.0
comp=Z,48nm,1.2s
F10A Beach Ranch, E 54.16 326 IAmb IAmb 03 46 21.1
comp=Z,26nm,0.8s
O02D Mt. Diablo Mer 54.49 317 P P 03 46 03.3 +0.5
baz=118,SNR=5.3
M04C Macdel 54.64 319 P P 03 46 04.9 +1.0
baz=120,SNR=19
G08A Pilot Rock 54.75 324 IAmb IAmb 03 46 06.9
comp=Z,51nm,1.0s
N02D Trinity Center 54.81 318 P P 03 46 05.2 +0.1
baz=119
K04D Chiloquin, OR 55.01 320 P P 03 46 08.0 +1.5
baz=121
J05D Fort Rock, OR 55.02 321 P P 03 46 07.9 +1.2
baz=122,SNR=17
PINE Pine Mountain 55.10 322 IAmb IAmb 03 46 10.1
comp=Z,39nm,0.8s
M02C Callahan 55.11 319 P P 03 46 07.5 +0.2
baz=119
L04D Klamath Falls 55.16 320 P P 03 46 08.2 +0.6
baz=120,SNR=12
YBH Yreka Blue Hor 55.18 319 P P 03 46 07.5 -0.3
YBH pmax pmax
comp=Z,13nm,0.8s
YBH Yreka Blue Hor 55.18 319 P P 03 46 07.5 -0.3
NEW Newport 55.51 328 IAmb IAmb 03 46 11.6
comp=Z,26nm,0.9s
NEW Newport 55.51 328 P P 03 46 10.4 +0.5
baz=128,SNR=22
J04D Umpqua Nationa 55.55 321 P P 03 46 11.7 +1.2
baz=121,SNR=8.1
I05D Terrebonne, OR 55.64 322 P P 03 46 12.6 +1.7
baz=122,SNR=10.0
F07A Phinny Hill Vi 55.65 325 IAmb IAmb 03 46 14.1
comp=Z,31nm,0.6s
FCC Fort Churchill 55.68 349 IAmb IAmb 03 46 26.3
comp=Z,32nm,1.1s
C09A Chrisman Ranch 55.83 327 IAmb IAmb 03 46 28.7
comp=Z,34nm,0.8s
KRMB Red Mountain 55.87 318 IAmb IAmb 03 46 25.9
comp=Z,23nm,0.8s
E07A Sunnyside 55.98 325 P P 03 46 14.6 +1.2
E07A IAmb IAmb 03 46 30.6
comp=Z,25nm,0.8s
I04A Tendick Farm, 56.02 321 P P 03 46 14.0 +0.3
baz=121,SNR=8.2
G05D Wamic, OR 56.10 323 P P 03 46 16.5 +2.2
baz=123,SNR=29
K02D Willamette Mer 56.27 320 P P 03 46 16.9 +1.3
baz=119,SNR=6.3
F05D White Salmon 56.54 324 P P 03 46 19.0 +1.7
baz=123,SNR=6.9
I03D Drain, OR 56.55 321 P P 03 46 18.7 +1.2
baz=120
H04D Lebanon 56.59 322 P P 03 46 18.7 +1.0
baz=121
J01E Myrtle Point 56.66 320 P P 03 46 19.8 +1.6
baz=119
B08A Colville Reser 56.74 327 IAmb IAmb 03 46 20.8
comp=Z,48nm,0.9s
LTY Liberty 56.84 326 IAmb IAmb 03 46 21.9
comp=Z,30nm,0.9s
I02D Swisshome 57.07 321 P P 03 46 22.9 +1.9
baz=120
F04A Amboy 57.13 323 IAmb IAmb 03 46 42.4
comp=Z,27nm,0.8s
LON Longmire 57.21 325 IAmb IAmb 03 46 35.9
comp=Z,34nm,0.8s
G03D McMinnville, O 57.26 322 P P 03 46 24.3 +1.8
baz=121
C06D Leavenworth 57.34 326 P P 03 46 25.1 +2.1
baz=124,SNR=8.0
E04D Cinebar 57.55 324 P P 03 46 25.0 +0.6
baz=122
D05A Enumclaw 57.55 325 IAmb IAmb 03 46 26.7
comp=Z,43nm,0.9s
B06A Marblemount 58.00 326 IAmb IAmb 03 46 29.4
comp=Z,26nm,0.8s
B05A Bryant 58.20 326 P P 03 46 29.1 +0.2
baz=123,SNR=17
EFI East Falkland 58.28 166 *ce*P P 03 46 29.5 +0.1
EFI pmax pmax
comp=Z,336nm,2.4s
EFI East Falkland 58.28 166 P P 03 46 29.7 +0.3
D03D Eldon 58.37 325 P P 03 46 31.1 +0.9
baz=122,SNR=16
A04D Lummi Island 58.79 326 P P 03 46 34.7 +1.7
baz=123,SNR=10
NRS Narsarsuaq 61.12 17 *i* P P 03 46 50.0 +1.2
NRS pmax pmax
comp=Z,68nm,0.9s
NRS Narsarsuaq 61.12 17 *i* P P 03 46 50.0 +1.2
comp=Z,68nm,0.9s
NRS Narsarsuaq 61.12 17 P P 03 46 49.9 +1.1
MACI Morro de la Ar 61.65 60 P P 03 46 54.0 +0.7
ASCN Ascension 63.41 101 P P 03 47 04.7 -0.4
BBB Bella Bella 63.54 327 IAmb IAmb 03 47 08.1
comp=Z,36nm,0.8s
YKA Yellowknife Ar 64.16 342 P P 03 47 09.0 0.0
comp=Z,21nm,0.5s,baz=134,slow=6.1,SNR=430
YKA LR LR 04 17 04.1
comp=Z,80nm,20.0s,baz=142,slow=38
TAOE Nuku Hiva Isla 64.66 258 *e*LR LR 04 06 43.0
comp=Z,6µm,25.6s,baz=78
SFJD Kangerlussuaq 64.83 11 *i* P P 03 47 13.4 +0.1
SFJD Kangerlussuaq 64.83 11 *i* P P 03 47 13.4 +0.1
ILULI Ilulissat 66.70 10 P P 03 47 25.7 +0.3
ILULI pmax pmax
comp=Z,60nm,0.8s
ILULI Ilulissat 66.70 10 *i* P P 03 47 25.6 +0.2
comp=Z,58nm,0.8s
ILULI Ilulissat 66.70 10 P P 03 47 25.7 +0.3
HOPE Hope Point 67.56 156 P P 03 47 30.9 -0.1
HOPE pmax pmax
comp=Z,113nm,0.8s
HOPE Hope Point 67.56 156 P P 03 47 30.9 -0.1
DLBC Dease Lake 67.61 333 P P 03 47 32.4 +0.9
DLBC IAmb IAmb 03 47 34.2
comp=Z,35nm,1.0s
OUK Oukaimeden 69.53 59 P P 03 47 47.0 +2.6
SNR=8.8
MORF Marmelete 69.79 52 *e*P P 03 47 45.3 -0.2
MORF AMb AMB 03 48 09.0
comp=Z,124nm,2.3s
MORF Marmelete 69.79 52 *e*P P 03 47 46.5 +1.0
comp=Z,133nm,2.4s
MORF Marmelete 69.79 52 *e*P P 03 47 45.2 -0.2
BESE Bessie Mountai 69.92 332 P P 03 47 47.0 +1.2
BESE IAmb IAmb 03 47 48.5
comp=Z,34nm,1.1s
PNCL Nicolau / Gran 70.03 51 *e*P P 03 47 48.0 +1.2
comp=Z,100nm,1.6s
PCVE Castro Verde 70.33 52 *e*P P 03 47 49.8 +1.1
comp=Z,67nm,2.1s
PBDV Barranco-do-Ve 70.35 52 *e*P P 03 47 50.5 +1.6
PCAS Casmilo, Conde 70.40 49 *e*P P 03 47 49.1 0.0
comp=Z,132nm,1.8s
PMTG Montargil 70.43 50 *e*P P 03 47 49.6 +0.3
COI Coimbra 70.49 49 *e*P P 03 47 50.7 +1.1
comp=Z,176nm,1.7s
COI Coimbra 70.49 49 P P 03 47 50.6 +0.9
COI pmax pmax
comp=Z,66nm,0.9s
COI Coimbra 70.49 49 P P 03 47 50.5 +0.9
PBEJ Beja 70.53 51 *e*P P 03 47 50.4 +0.5
comp=Z,54nm,1.8s
PESTR Estremoz 70.88 51 P P 03 47 52.1 +0.1
PESTR IAmb IAmb 03 48 13.7
comp=Z,32nm,0.8s
PVIS Viseu 70.98 49 *e*P P 03 47 52.6 -0.1
PMRV Marv??o 71.13 50 *e*P P 03 47 53.8 +0.2
PCBR Castelo Branco 71.13 50 *e*P P 03 47 54.2 +0.6
comp=Z,67nm,1.8s
MTE Manteigas 71.18 49 *e*P P 03 47 54.2 +0.3
TIC Toumodi 71.30 85⇑ *i*P P 03 47 54.1 -1.0
comp=Z,206nm,1.0s
LIC Lamto 71.31 85⇑ *i*P P 03 47 54.2 -0.9
comp=Z,326nm,0.9s
TZRR Tazzarine 71.44 59 P P 03 47 57.4 +1.6
SNR=17
DBIC Dimbokro 71.46 85 P P 03 47 55.5 -0.5
comp=Z,114nm,0.7s,baz=249,slow=6.7,SNR=155
DBIC LR LR 04 17 20.6
comp=Z,648nm,19.8s,baz=246,slow=34
DBIC Dimbokro 71.46 85 P P 03 47 55.3 -0.7
KIC Kosan Boka 71.59 85⇑ *i*P P 03 47 56.0 -0.8
comp=Z,260nm,0.9s
C36M Paulatuk 71.69 344 P P 03 47 55.4 -0.9
baz=129
MVO Moncorvo 71.70 48 *e*P P 03 47 58.0 +0.9
SUMG Summit 71.82 11⇓ *i*P P 03 47 58.4 +0.8
SUMG pmax pmax
comp=Z,310nm,0.8s
SUMG Summit 71.82 11⇓ *i*P P 03 47 58.4 +0.8
comp=Z,313nm,0.8s
SUMG Summit 71.82 11 P P 03 47 57.7 +0.2
TULEG Thule 72.00 2 IAmb IAmb 03 48 00.2
comp=Z,32nm,0.9s
PBRG Braganca 72.03 48 *e*P P 03 47 59.1 +0.1
comp=Z,67nm,1.8s
GOLM Goulmima 72.06 58 P P 03 48 02.0 +2.5
SNR=14
ARF Arif 72.66 59 P P 03 48 05.0 +2.0
SNR=66
SHEL Horse Pasture 73.06 108 P P 03 48 05.1 -0.5
SHEL pmax pmax
comp=Z,63nm,0.8s
SHEL Horse Pasture 73.06 108 P P 03 48 05.1 -0.5
PAB San Pablo 73.47 50 P P 03 48 08.0 +0.3
PAB pmax pmax
comp=Z,22nm,0.8s
PAB San Pablo 73.47 50 P P 03 48 08.0 +0.3
ESDC Sonseca Array 73.79 50 P P 03 48 09.9 +0.4
comp=Z,14nm,0.8s,baz=259,slow=5.8,SNR=45
ESDC LR LR 04 17 07.5
comp=Z,514nm,21.7s,baz=250,slow=33
ESDC Sonseca Array 73.79 50 IAmb IAmb 03 48 12.0
comp=Z,11nm,0.9s
INK Inuvik 73.93 341 IAmb IAmb 03 48 25.5
comp=Z,25nm,0.8s
BARN Barnard Glacie 74.05 333 IAmb IAmb 03 48 27.8
comp=Z,39nm,0.8s
EPYK Eagle Plains 74.11 339 IAmb IAmb 03 48 12.8
comp=Z,47nm,1.2s
EPYK Eagle Plains 74.11 339 P P 03 48 12.0 +1.2
baz=116,SNR=9.6
BALM Baldy 74.35 333 P P 03 48 13.3 +0.9
BALM IAmb IAmb 03 48 29.7
comp=Z,34nm,0.9s

SCO Scoresbysund 74.42 17 *i* P **P 03 48 13.0 +0.6**
SCO Scoresbysund 74.42 17 *i* P **P 03 48 13.0 +0.6**
MCARA McCarthy VSAT 74.78 333 IAmb IAmb 03 48 33.8
comp=Z,68nm,1.0s
VRDI Verde Repeater 74.92 333 IAmb IAmb 03 48 33.3
comp=Z,35nm,0.8s
GLB Gilahina Butte 75.16 333 IAmb IAmb 03 48 33.3
comp=Z,41nm,1.1s
PPT Papeete 75.18 251 LR LR 04 14 32.1
comp=Z,412nm,19.7s,baz=78,slow=30
PPT2 Papeete2 75.18 251 *e*S **S 03 57 50.5 -4.6**
comp=Z,336nm,35.8s
PPT2 Papeete2 75.18 251 *e*LQ LQ 04 08 23.8
comp=Z,2µm,31.8s
PPT2 *e*LR LR 04 11 33.9
comp=Z,601nm,23.2s,baz=83
FIGM Figuig 75.22 58 P **P 03 48 20.0 +1.9**
SNR=22
MENT Mentasta 75.59 334 IAmb IAmb 03 48 39.1
comp=Z,26nm,0.8s
DOT Dot Lake 75.96 335 IAmb IAmb 03 48 23.9
comp=Z,41nm,0.8s
TBI Tubuai 76.12 245 *e*S **S 03 58 04.1 -1.0**
comp=Z,400nm,30.2s
TBI Tubuai 76.12 245 *e*LQ LQ 04 08 47.8
comp=Z,710nm,35.0s
TBI *e*LR LR 04 12 00.2
comp=Z,1µm,26.0s,baz=69
RIDG Independent Ri 76.32 335 P **P 03 48 24.1 +0.5**
PAX Paxson 76.36 334 IAmb IAmb 03 48 25.8
comp=Z,33nm,1.1s
HDA Harding Lake 77.40 335 P **P 03 48 30.5 +0.9**
baz=106,SNR=17
ILAR Eielson Array 77.48 336 P **P 03 48 30.6 +0.5**
comp=Z,12nm,0.7s,baz=115,slow=4.3,SNR=102
ILAR PP **PP 03 51 25.6 +0.8**
comp=Z,2.2nm,0.8s,baz=110,slow=6.0,SNR=6.1
ILAR LR LR 04 27 14.2
comp=Z,340nm,18.6s,baz=118,slow=39
TOA0 Torodi Ar. Sit 77.67 78 P **P 03 48 31.5 -0.6**
TORD Torodi Ar. Bea 77.67 78 P **P 03 48 31.4 -0.6**
comp=Z,43nm,0.7s,baz=284,slow=6.4,SNR=481
TORD S **S 03 58 18.4 -4.0**
comp=Z,1.7nm,1.2s,baz=218,slow=9.3,SNR=3.7
TORD PKKPbc **PKKPbc 04 07 35.1 +0.4**
comp=Z,0.6nm,0.6s,baz=99,slow=2.6,SNR=6.1
TORD LR LR 04 20 45.8
comp=Z,1µm,21.9s,baz=285,slow=34
TORD Torodi Ar. Bea 77.67 78 IAmb IAmb 03 48 34.6
comp=Z,30nm,0.8s
PUH Pauahi 77.67 289 P **P 03 48 32.9 +0.8**
POKR Poker Plat Res 77.80 336 P **P 03 48 32.6 +0.8**
baz=106,SNR=7.4
CCB Clear Creek Bu 77.82 335 IAmb IAmb 03 48 32.5
comp=Z,49nm,1.8s
COLA College 77.90 336⇓ *e*P **P 03 48 31.7 -0.6**
COLA pmax pmax
comp=Z,22nm,1.1s
COLA College 77.90 336 P **P 03 48 32.8 +0.5**
COLA IAmb IAmb 03 48 55.9
comp=Z,25nm,0.9s
TCOL CIGO, UAF Yank 77.91 336 P **P 03 48 33.6 +1.2**
baz=105
RND Reindeer 77.95 334 IAmb IAmb 03 48 35.0
comp=Z,60nm,1.1s
MCK McKinley 78.07 334 IAmb IAmb 03 48 35.2
comp=Z,33nm,1.0s
MDM Murphy Dome 78.08 336 IAmb IAmb 03 48 35.0
comp=Z,46nm,1.2s
SUA Susitna One 78.38 332 IAmb IAmb 03 48 52.1
comp=Z,34nm,0.8s
DAG Danmarks Havn 78.51 12 *i* P **P 03 48 35.0 -0.5**
DAG pmax pmax
comp=Z,13nm,0.8s
DAG Danmarks Havn 78.51 12 *i* P **P 03 48 35.0 -0.5**
comp=Z,13nm,0.8s
TRF Thorofare Moun 78.59 334 P **P 03 48 36.7 +0.3**
TRF IAmb IAmb 03 48 48.3
comp=Z,21nm,0.7s
BPAW Bear Paw Mtn. 79.04 334 IAmb IAmb 03 48 40.2
comp=Z,62nm,1.0s
MLY Manley 79.13 335 IAmb IAmb 03 48 40.8
comp=Z,48nm,1.1s
CLF Chambon-Foret 79.20 42 IAmb IAmb 03 48 58.8
comp=Z,55nm,1.0s
PPLA Purkeypile 79.32 333 IAmb IAmb 03 48 41.8
comp=Z,35nm,0.8s
TOLK Toolik Lake Re 79.53 339 P **P 03 48 41.4 +0.1**
TOLK Toolik Lake Re 79.53 339 P **P 03 48 42.5 +1.2**
baz=104
KIP Kipapa 80.27 291⇓ *e*P **P 03 48 46.2 0.0**
SVW2 Sparrevohn 80.62 331 IAmb IAmb 03 48 48.1
comp=Z,28nm,0.8s
DOU Dourbes 80.89 40⇓ P **P 03 48 48.9 0.0**
BMRD Maredsous 81.01 40 P **P 03 48 50.0 +0.5**
TTA Tatalina 81.06 333 IAmb IAmb 03 49 52.7
comp=Z,68nm,1.9s
TAM Tamanrasset 81.06 68 P **P 03 48 51.6 +1.0**
TAM pmax pmax
comp=Z,53nm,0.8s
TAM Tamanrasset 81.06 68 P **P 03 48 51.6 +1.0**
TAM IAmb IAmb 03 48 54.6
comp=Z,53nm,0.8s
NOR Nord 81.24 7 *i* P **P 03 48 50.0 -0.3**
comp=Z,12nm,0.8s
BSTI Sart Tilman 81.54 40⇓ P **P 03 48 53.1 +0.8**
BHOU Houvegnez 81.81 40 P **P 03 48 54.7 +0.9**
MEM Membach 81.82 40 P **P 03 48 54.9 +1.1**
comp=Z,17nm,1.0s
WLF Walferdange 81.87 41 P **P 03 48 54.3 +0.1**
WLF pmax pmax
comp=Z,38nm,0.8s
WLF Walferdange 81.87 41 *e*P **P 03 48 54.7 +0.6**
comp=Z,34nm,0.8s,baz=270,slow=5.1
WLF Walferdange 81.87 41 P **P 03 48 54.6 +0.4**
comp=Z,30nm,0.8s
WLF Walferdange 81.87 41 P **P 03 48 54.3 +0.1**
WLF IAmb IAmb 03 48 56.2
comp=Z,38nm,0.8s
ASK Askoy 82.01 30 *e*P **P 03 48 54.2 -0.4**
ECH Echery 82.48 42 P **P 03 48 57.1 -0.4**
ECH pmax pmax
comp=Z,20nm,0.9s
ECH Echery 82.48 42 P **P 03 48 57.1 -0.4**
AHRW Bad Neuenahr-A 82.50 40 *e*P **P 03 48 58.0 +0.6**
comp=Z,12nm,0.7s,baz=270,slow=5.1
SENIN Lac Senin/Sane 82.54 44 P **P 03 48 58.1 +0.1**
HYA Hoyanger 82.54 29 *e*P **P 03 48 56.9 -0.5**
BLS5 Blasjo 82.56 31 *e*P **P 03 48 56.9 -0.7**
BUG Bochum--Univer 82.65 39 *e*P **P 03 48 59.1 +1.0**
baz=270,slow=5.1
IBBN Ibbenburen 82.98 38 *e*P **P 03 49 00.9 +1.1**
baz=270,slow=5.1
AKN Aaknes 83.00 28 *e*P **P 03 48 59.6 -0.2**
BFO Black Forest 83.27 42 P **P 03 49 01.2 -0.3**
BFO pmax pmax
comp=Z,31nm,1.6s
BFO Black Forest 83.27 42 *e*P **P 03 49 01.4 -0.1**
comp=Z,4.8nm,0.8s,baz=270,slow=5.1
BFO Black Forest 83.27 42 P **P 03 49 01.2 -0.3**
TNS Taunus Mts 83.37 40 *e*P **P 03 49 03.1 +1.0**
baz=270,slow=5.1
SKAR Skarslia 83.55 30 *e*P **P 03 49 02.4 -0.4**
STU Stuttgart 83.84 42 P **P 03 49 04.8 +0.4**
STU pmax pmax
comp=Z,17nm,0.9s
STU Stuttgart 83.84 42 *e*P **P 03 49 04.8 +0.4**
comp=Z,12nm,0.8s,baz=270,slow=5.1
STU Stuttgart 83.84 42 P **P 03 49 04.8 +0.4**
MUD Monsted U'grnd 83.89 34 *i* P **P 03 49 05.4 +0.9**
MUD pmax pmax
comp=Z,12nm,0.8s
MUD Monsted U'grnd 83.89 34 *i* P **P 03 49 05.4 +0.9**
comp=Z,12nm,0.8s
TUE Stuetta 83.95 44 IAmb IAmb 03 49 09.9
comp=Z,22nm,0.6s
DOMB Dombas 83.96 28 *e*P **P 03 49 04.7 -0.1**
KEST Kesra 84.12 55 P **P 03 49 06.7 +0.5**
comp=Z,18nm,0.9s,baz=167,slow=2.5,SNR=11
KEST LR LR 04 24 31.7
comp=Z,322nm,18.8s,baz=267,slow=34
KEST Kesra 84.12 55 P **P 03 49 06.6 +0.3**
KEST IAmb IAmb 03 49 29.8
comp=Z,34nm,0.9s
DAVA Damuels 84.31 43 *e*PcP **P 03 49 07.8 +0.8**
comp=Z,17nm,0.8s,SNR=13

GTTG Gvttingen 84.33 39 *e*P **P 03 49 07.8 +0.9**
baz=270,slow=5.1
UBBA Unterbreizbach 84.36 40 *e*P **P 03 49 08.3 +1.4**
baz=270,slow=5.1
NRDL Niedersach Rie 84.42 38 *e*P **P 03 49 08.4 +1.3**
comp=Z,8.8nm,0.8s,baz=270,slow=5.1
UBR Ueberruh 84.46 43 *e*P **P 03 49 08.6 +0.9**
baz=270,slow=5.1
BSEG Bad Segeberg 84.54 36 *e*P **P 03 49 08.9 +1.1**
comp=Z,9.3nm,0.7s,baz=270,slow=5.1
FUORN Ofenpass-Fuorn 84.58 44 P **P 03 49 08.5 -0.1**
CLZ Clausthal 84.59 38 *e*P **P 03 49 09.2 +1.0**
comp=Z,7.2nm,0.7s,baz=270,slow=5.1
ASSE Asse, Remlinge 84.77 38 *e*P **P 03 49 10.4 +1.5**
baz=270,slow=5.1
ASSE *e*pP **sP 03 49 23.3 +0.1**
NAO01 NORSAR Array S 84.82 29 P **P 03 49 09.7 +0.6**
FETA Feichten 84.90 43 *e*P **P 03 49 09.9 -0.1**
comp=Z,14nm,1.0s
RETA Reutte 84.91 43 *i* P **P 03 49 10.2 +0.3**
comp=Z,5.6nm,0.9s
NB2 NORSAR Subarra 84.98 29 P **P 03 49 10.6 +0.6**
comp=Z,4.7nm,0.8s,baz=272,slow=5.3
NB2 NORSAR Subarra 84.98 29 P **P 03 49 10.6 +0.6**
baz=272,slow=5.3
NOA NORSAR Array B 84.98 29 P **P 03 49 10.2 +0.3**
comp=Z,2.4nm,0.8s,baz=275,slow=4.9,SNR=8.8
NOA LR LR 04 26 23.6
comp=Z,141nm,19.1s,baz=270,slow=35
NC602 NORSAR Array S 85.14 30 *e*P **P 03 49 11.1 +0.3**
MOTA Moosalm 85.14 43 *e*P **P 03 49 11.4 +0.2**
comp=Z,12nm,0.9s,SNR=9.3
GRF Grafenberg Arr 85.16 41 *e*P **P 03 49 12.1 +1.0**
comp=Z,6.2nm,0.8s,baz=270,slow=5.1
SQTA Sankt Quirin 85.22 43 *e*P **P 03 49 12.0 +0.4**
comp=Z,8.1nm,0.6s,SNR=9.9
FUR Furstenfeldbru 85.24 42 *e*P **P 03 49 12.4 +0.9**
comp=Z,5.5nm,0.7s,baz=270,slow=5.1
KBS Kingsbay 85.24 11 *e*P **P 03 49 10.4 -0.5**
NSS Namsos 85.29 26 *e*P **P 03 49 11.5 +0.1**
MOX Moxa 85.39 40 *e*P **P 03 49 13.3 +1.1**
baz=270,slow=5.1
WATA Walderalm 85.47 43 *e*P **P 03 49 12.7 -0.1**
comp=Z,6.6nm,1.0s
NEUB Neuenburg 85.48 39 *e*P **P 03 49 13.5 +0.9**
comp=Z,9.6nm,0.7s,baz=270,slow=5.1
NEUB *e*pP **sP 03 49 26.1 -0.7**
WTTA Wattenberg 85.51 43 *e*P **P 03 49 12.6 -0.5**
comp=Z,12nm,0.7s
TEOL Teolo 85.60 45 P **P 03 49 13.4 +0.1**
MANZ Manzenberg 85.73 40 *e*P **P 03 49 15.2 +1.2**
comp=Z,10nm,0.8s,baz=270,slow=5.1
ROTZ Rotzenmuhle 85.80 41 *e*P **P 03 49 15.3 +1.0**
comp=Z,3.5nm,0.8s,baz=270,slow=5.1
GUNZ Gunzen 85.86 40 *e*P **P 03 49 15.7 +1.1**
comp=Z,4.7nm,0.9s,baz=270,slow=5.1
WERN Wernitzgruen 85.89 40 *e*P **P 03 49 15.9 +1.1**
comp=Z,6.9nm,0.8s,baz=270,slow=5.1
NKC Novy Kostel 85.94 40 *e*P **P 03 49 15.8 +0.8**
NKC *e* 03 49 28.5
NKC Novy Kostel 85.94 40 *e*P **P 03 49 15.8 +0.8**
NKC *e*pP **sP 03 49 28.5 -0.7**
TANN Tannenbergstha 85.94 40 *e*P **P 03 49 15.9 +0.9**
comp=Z,19nm,0.8s,baz=270,slow=5.1
HSPB Hornsund (broa 86.04 13 *e*P **P 03 49 15.5 +0.6**
ABTA Abfaltersbach 86.13 44 *e*PcP **P 03 49 16.6 +0.5**
comp=Z,17nm,0.8s
SPA0 Spitsbergen Ar 86.15 12 *e*P **P 03 49 16.6 +1.2**
CLL Collm 86.24 39 *i* P **P 03 49 17.3 +0.9**
comp=Z,19nm,0.9s
CLL *i* 03 49 23.0
CLL *i* (pP) **sP 03 49 29.5 -1.1**
CLL *i* 03 49 34.3
CLL *e*PP **PP 03 52 37.0 -0.3**
CLL *e*S **S 03 59 46.0 -3.3**
CLL *e*PPS PPS 04 01 24.0
CLL *e*SS **SS 04 05 30.0 +1.4**
CLL *e*SSS SSS 04 08 48.0
CLL *e* 04 11 18.0
CLL Collm 86.24 39 *e*P **P 03 49 17.3 +0.9**
comp=Z,13nm,0.8s,baz=270,slow=5.1
CLL *e*pP **sP 03 49 30.5 -0.1**
CLL Collm 86.24 39 P **P 03 49 17.3 +0.9**
CLL IAmb IAmb 03 49 31.0
comp=Z,16nm,0.8s
WET Wettzell 86.26 41 *e*P **P 03 49 17.6 +1.0**
comp=Z,14nm,0.8s,baz=270,slow=5.1
MOR8 Moi Rana 86.28 24 *e*P **P 03 49 17.4 +1.1**
RJOB Jochberg 86.28 43 *e*P **P 03 49 17.6 +0.8**
comp=Z,8.3nm,0.7s,baz=270,slow=5.1
RGN Rugen 86.28 36 *e*P **P 03 49 17.7 +1.2**
comp=Z,67nm,0.8s,baz=270,slow=5.1
RGN *e*pP **sP 03 49 31.2 +0.5**
STAL STALIGIAL 86.29 44 IAmb IAmb 03 49 24.1
comp=Z,36nm,1.1s
FBE Freiberg 86.48 39 *e*P **P 03 49 18.7 +1.1**
comp=Z,16nm,0.8s,baz=270,slow=5.1
STEI Steigen 86.49 22 *e*P **P 03 49 17.7 +0.5**
RUE Ruedersdorf 86.66 38 *e*P **P 03 49 19.7 +1.3**
baz=270,slow=5.1
KBA Koelnbreinsper 86.68 43 *e*PcP **P 03 49 19.1 +0.2**
comp=Z,19nm,0.7s,SNR=6.3
KHC Kasperske Hory 86.72 41 *e*P **P 03 49 19.4 +0.5**
KHC *e* 03 49 30.5
KHC Kasperske Hory 86.72 41 *e*P **P 03 49 19.4 +0.5**
KHC *ex* x 03 49 24.7
KHC *e*pP **pP 03 49 30.5 +1.1**
GEC2 GERESS Array S 86.82 41 *e*P **P 03 49 20.3 +0.8**
comp=Z,11nm,0.8s,baz=270,slow=5.1
GEC2 GERESS Array S 86.82 41 P **P 03 49 19.6 +0.1**
GEC2 IAmb IAmb 03 49 26.8
comp=Z,17nm,0.9s
GERES GERESS Array B 86.82 41 P **P 03 49 20.0 +0.6**
comp=Z,10nm,0.8s,baz=262,slow=3.9,SNR=77
GERES LR LR 04 28 25.4
comp=Z,108nm,18.4s,baz=264,slow=36
ROBS Robic 86.84 44 *i* P **P 03 49 19.8 +0.4**
BRG Berggiesshubel 86.86 39 *e*P **P 03 49 20.2 +0.8**
comp=Z,19nm,0.9s
BRG Berggiesshubel 86.86 39 *e*P **P 03 49 20.2 +0.8**
BRG pmax pmax
comp=Z,19nm,0.9s
BRG Berggiesshubel 86.86 39 *e*P **P 03 49 20.4 +1.0**
comp=Z,14nm,0.8s,baz=270,slow=5.1
MYKA Terra Mystica 86.91 44 *e*PcP **P 03 49 20.1 +0.2**
comp=Z,15nm,0.5s,SNR=10
PBCC Pribram 86.96 41 *e*P **P 03 49 20.7 +0.7**
PBCC *ex* x 03 49 26.8
PBCC *ex* x 03 49 33.7
VNA3 Neumayer Olymp 87.11 163 P **P 03 49 20.2 0.0**
PRA Prague 87.22 40 *e*P **P 03 49 22.2 +1.0**
PRA Prague 87.22 40 *e*P **P 03 49 22.2 +1.0**
JAVS Javornik 87.25 44 *i* P **P 03 49 21.9 +0.4**
MOA Molln 87.26 42 *e*PcP **P 03 49 21.9 +0.4**
comp=Z,9.5nm,0.8s,SNR=13
PVCC Panska Ves 87.28 40 *e*P **P 03 49 22.1 +0.6**
PVCC *e* 03 49 35.3
PVCC Panska Ves 87.28 40 *e*P **P 03 49 22.1 +0.6**
PVCC *ex* x 03 49 28.2
PVCC *e*pP **sP 03 49 35.3 -0.4**
PRU Pruhonice 87.30 40 *e*P **P 03 49 22.3 +0.7**
PRU *e* 03 49 35.2
PRU Pruhonice 87.30 40 *e*P **P 03 49 22.3 +0.7**
PRU *e*pP **sP 03 49 35.2 -0.6**
VNA1 Neumayer--Stat 87.31 162 P **P 03 49 21.6 +0.5**
GOPC GO Pecny, Ondr 87.46 40 *e*P **P 03 49 25.1 +2.7**
GOPC GO Pecny, Ondr 87.46 40 *e*P **P 03 49 25.1 +2.7**
OBKA Obir 87.54 44 *e*PcP **P 03 49 23.5 +0.5**
comp=Z,10nm,0.6s,SNR=4.7
TRO Tromso 87.67 20 *e*P **P 03 49 23.3 +0.4**
TREC Trest 87.96 41 *e*P **P 03 49 25.4 +0.6**
TREC *e* 03 49 39.2
TREC Trest 87.96 41 *e*P **P 03 49 25.4 +0.6**
TREC *e*pP **sP 03 49 39.2 +0.1**
ARSA Arzberg 88.15 43 *e*PcP **P 03 49 26.0 +0.2**
comp=Z,8.0nm,0.8s,SNR=8.8
UPC Upice 88.20 40 *e*P **P 03 49 26.4 +0.5**
UPC *e* 03 49 39.9
UPC Upice 88.20 40 *e*P **P 03 49 26.4 +0.5**

UPC *e*pP **sP 03 49 39.9 -0.3**
CHVC Chvalec 88.22 40 *e*P **P 03 49 27.0 +1.0**
CHVC *ex* x 03 49 35.2
CHVC *ex* x 03 49 40.6
OSTC Ostas 88.32 40 *e*P **P 03 49 27.5 +1.0**
OSTC *ex* x 03 49 34.9
OSTC *ex* x 03 49 40.2
CONA Conrad Observa 88.32 42 *e*PcP **P 03 49 27.2 +0.6**
comp=Z,7.8nm,0.8s,SNR=11
DPC Dobruska-Polom 88.41 40 *e*P **P 03 49 27.7 +0.8**
DPC *e* 03 49 40.6
DPC Dobruska-Polom 88.41 40 *e*P **P 03 49 27.7 +0.8**
DPC *e*pP **sP 03 49 40.6 -0.6**
KRUC Moravsky 88.58 41 *e*P **P 03 49 28.6 +0.9**
VRAC Vranov 88.68 41⇓ P **P 03 49 29.3 +1.1**
VRAC Vranov 88.68 41 *e*P **P 03 49 29.2 +1.0**
KRLC Kraliky 88.73 40 *e*P **P 03 49 29.4 +0.9**
KRLC *e* 03 49 40.8
KRLC Kraliky 88.73 40 *e*P **P 03 49 29.4 +0.9**
KRLC *ex* x 03 49 40.8
SOP Sopron 88.81 42 *e*P **P 03 49 32.3 +3.5**
HAMF Hammerfest 89.12 19 *e*P **P 03 49 29.4 -0.4**
MODS Modra-Piesok 89.22 42 *e*P **P 03 49 31.1 +0.3**
MODS Modra-Piesok 89.22 42 *e*P **P 03 49 31.1 +0.3**
MORC Moravsky Berou 89.25 40 P **P 03 49 31.8 +0.9**
MORC pmax pmax
comp=Z,7.0nm,0.9s
MORC Moravsky Berou 89.25 40⇑ P **P 03 49 32.7 +1.8**
MORC Moravsky Berou 89.25 40 *e*P **P 03 49 32.1 +1.2**
MORC Moravsky Berou 89.25 40 P **P 03 49 31.8 +0.9**
KTK1 Kautokeino 89.28 21 *e*P **P 03 49 31.2 +0.6**
SMOL Smolenice 89.31 42 *e*P **P 03 49 32.2 +1.0**
SMOL Smolenice 89.31 42 *e*P **P 03 49 32.2 +1.0**
SNAA Sanae 89.31 162 P **P 03 49 30.8 0.0**
SNAA Sanae 89.31 162⇑ *e*P **P 03 49 30.8 0.0**
SNAA Sanae 89.31 162 P **P 03 49 30.7 0.0**
SNAA IAmb IAmb 03 49 53.6
comp=Z,20nm,0.8s
MPLH Magyarpolny 89.53 43 *e*P pP 03 49 42.2 -0.6
OKC Ostrava-Krasne 89.63 40 *e*P **P 03 49 34.0 +1.4**
OKC *e* 03 49 42.6
OKC Ostrava-Krasne 89.63 40 *e*P **P 03 49 34.0 +1.4**
OKC *ex* x 03 49 42.6
TIH Tihany 89.80 43 *e*P **P 03 49 34.3 +0.8**
ARCES ARCESS Array B 89.96 20 P **P 03 49 33.4 -0.4**
comp=Z,2.7nm,0.6s,baz=266,slow=3.6,SNR=13
ARCES LR LR 04 27 21.0
comp=Z,122nm,21.7s,baz=301,slow=34
ARE0 ARCESS Array S 89.96 20 *e*P **P 03 49 33.6 -0.1**
CSKK Cskako 89.99 43 *e*P **P 03 49 35.4 +1.0**
VYHS Vyhne 90.24 41 *e*P **P 03 49 36.4 +0.9**
VYHS pmax pmax
comp=Z,59nm,2.3s
VYHS Vyhne 90.24 41 *e*P **P 03 49 36.4 +0.9**
MORH Mrgy, Hungar 90.39 44 *e*P **P 03 49 37.1 +0.9**
BUD Budapest 90.49 42 *e*P **P 03 49 37.6 +0.9**
OJC Ojcow 90.64 40 P **P 03 49 37.5 +0.2**
OJC pmax pmax
comp=Z,12nm,1.1s
OJC Ojcow 90.64 40 P **P 03 49 37.5 +0.2**
OJC IAmb IAmb 03 49 55.9
comp=Z,12nm,1.1s
FINES FINESS Array B 92.05 28 P **P 03 49 42.5 -1.1**
comp=Z,3.9nm,0.8s,baz=354,slow=3.8,SNR=9.3
FINES LR LR 04 26 25.2
comp=Z,302nm,20.1s,baz=291,slow=32
KOLS Kolonicke sedl 92.43 41 *e*P pP 03 49 55.1 -1.2
KOLS Kolonicke sedl 92.43 41 *e* pP 03 49 55.1 -1.2
UZH Uzhgorod 92.49 41 *e*P **P 03 49 47.3 +1.4**
UZH *i* 03 49 57.4
UZH *e* 03 50 04.3
BZS Buzias 92.53 44⇑ P **P 03 49 47.5 +1.2**
TRPA Tarpa 92.74 41 *e*P **P 03 49 47.2 +0.1**
VSU Vasula 93.08 31⇓ *e*P **P 03 49 48.8 +0.4**
VSU pmax pmax
comp=Z,27nm,0.8s
DRGR 93.09 43⇑ P **P 03 49 49.8 +1.0**
FNA Florina 93.11 49 P **P 03 49 49.4 +0.3**
FNA pmax pmax
comp=Z,16nm,0.9s
FNA Florina 93.11 49 P **P 03 49 49.4 +0.3**
FNA IAmb IAmb 03 50 12.3
comp=Z,16nm,0.9s
GZR Gura Zlata 93.37 44⇓ P **P 03 49 51.2 +1.0**
DEV Deva 93.38 44⇓ P **P 03 49 51.2 +1.1**
CJR Cluj-Napoca 93.70 43⇓ P **P 03 49 53.0 +1.4**
NVL N'lazarevskaya 93.83 161 *e*P **P 03 49 50.2 -1.4**
NVL pmax pmax
comp=Z,18nm,1.0s
ARCR ARCALIA 94.14 42⇑ P **P 03 49 55.0 +1.5**
VTS Vitosha 94.18 47⇓ P **P 03 49 54.9 +0.8**
BURAR Bucovina Array 94.61 42⇑ P **P 03 49 57.3 +1.5**
QSPA South Pole Qui 94.63 180 P **P 03 49 56.4 +0.9**
ARR Arges 94.66 44⇓ P **P 03 49 57.1 +0.9**
VOIR 94.94 44⇑ P **P 03 49 57.8 +0.4**
MTUR Matau 94.99 44⇑ P **P 03 49 58.6 +0.9**
DOPR Dopca 95.06 43⇑ P **P 03 49 59.0 +1.1**
BIZ Bicaz 95.34 42⇓ P **P 03 50 00.5 +1.4**
BILL Bilibino 95.54 340⇑ *e*P **P 03 50 00.0 +0.5**
BILL *e* 03 53 46.5
BILL *e*PPP PPP 03 55 52.3
BILL *e*S S 04 01 01.5 -12
BILL pmax pmax
comp=Z,12nm,2.2s
MLR Muntele Rosu 95.54 44 P **P 03 50 00.5 +0.3**
MLR pmax pmax
comp=Z,59nm,2.0s
MLR Muntele Rosu 95.54 44⇑ P **P 03 50 01.5 +1.3**
MLR Muntele Rosu 95.54 44 P **P 03 50 00.5 +0.3**
PLOR Plostina 95.95 43⇓ P **P 03 50 03.4 +1.4**
VRI Vrincioaia 96.00 43⇑ P **P 03 50 09.6 +7.5**
GHRR 96.42 43⇓ P **P 03 50 04.1 +0.1**
AKASG Malin Array Be 96.44 38 *i* P **P 03 50 05.5 +1.5**
AKASG Malin Array Be 96.44 38 P **P 03 50 01.3 -2.7**
comp=Z,0.4nm,0.4s,baz=290,slow=3.8,SNR=4.4
AKASG LR LR 04 34 16.6
comp=Z,330nm,18.9s,baz=300,slow=36
SORM Soroca 96.55 41⇓ P **P 03 50 04.6 +0.1**
MILM Milestii Mici 97.15 42⇑ P Pdif 03 50 07.6 +0.3
OBN Obninsk 99.25 32⇑ *e*P **Pdif 03 50 15.5 -1.0**
OBN *e* 03 54 19.7
OBN *e*SS SS 04 08 42.7 +8.2
OBN pmax pmax
comp=Z,10.0nm,1.2s
OBN MLR MLR
comp=Z,357nm,21.0s
TIXI Tiksi 102.07 352⇑ *e*P **Pdif 03 50 29.3 +0.6**
TIXI pmax pmax
comp=Z,6.0nm,2.2s
BRTR Keskin Array B 102.49 48 P **Pdif 03 50 31.3 -0.2**
comp=Z,0.1nm,0.3s,baz=297,slow=2.7,SNR=2.4
BRTR PKKPbc **PKKPbc 04 06 32.0 -1.3**
comp=Z,0.5nm,0.6s,baz=129,slow=5.2,SNR=4.1
BOSA Boshof 102.67 118 P **Pdif 03 50 31.6 -0.9**
comp=Z,3.0nm,0.9s,baz=225,slow=5.7,SNR=3.1
SYO Syowa Base 103.50 161⇑ *e*pPdiff pPdif 03 50 46.0 +0.4
DZM Mont Dzumac 116.60 248 *e*LR LR 04 30 50.0
comp=Z,496nm,27.5s
ZAA0 Zalesovo Array 119.63 12 **PKPdf 03 55 24.3 -0.3**
ZALV Zalesovo Beam 119.63 12 PKP **PKPdf 03 55 24.3 -0.3**
comp=Z,6.1nm,0.8s,baz=266,slow=2.7,SNR=20
GEYT Alibeck 120.44 41 PKP **PKPdf 03 55 26.2 -0.5**
comp=Z,3.0nm,0.8s,baz=245,slow=3.1,SNR=5.1
KURK Kurchatov 120.94 18*d* /PKIKP **PKPdf 03 55 26.9 -0.3**
KURK Kurchatov 120.94 18 **PKPdf 03 55 26.6 -0.6**
KLR Kul'dur 120.95 339⇓ *i*PKIKP **PKPdf 03 55 26.8 -0.5**
TLY Talaya 123.93 360⇓ *i*PKIKP **PKPdf 03 55 32.7 -0.3**
HIA Hailar 124.47 347⇓ *e*PKIKP **PKPdf 03 55 32.3 -1.8**
USRK Ussuriysk Ar. 125.00 335 PKP **PKPdf 03 55 35.0 -0.1**
comp=Z,3.8nm,0.7s,baz=31,slow=2.0,SNR=9.9
HRA Herat 125.21 42 **PKPdf 03 55 35.8 -0.4**
MAKZ Makanchi 125.43 18 PKIKP **PKPdf 03 55 35.2 -0.8**
MAKZ Makanchi 125.43 18 **PKPdf 03 55 35.2 -0.8**
MK31 Makanchi Array 125.54 18 *e*PKIKP **PKPdf 03 55 35.5 -0.7**
MKAR Makanchi Array 125.54 18 PKP **PKPdf 03 55 35.4 -0.8**
comp=Z,5.7nm,0.8s,baz=352,slow=2.1,SNR=52
AAK Ala-Archa 126.20 26*d* /PKIKP **PKiKP 03 55 38.2 0.0**
AAK Ala-Archa 126.20 26 **PKPdf 03 55 38.0 +0.2**
GAR Garm 126.97 32 **PKPdf 03 55 39.6 +0.3**
ULN Ulaanbaatar 127.64 357⇓ *i*PKIKP **PKPdf 03 55 40.5 +0.2**
ULN Ulaanbaatar 127.64 357 **PKPdf 03 55 40.6 +0.2**
MJAR Matsushiro Arr 127.67 324 PKP **PKPdf 03 55 40.2 -0.4**

comp=Z,2.7nm,0.8s,baz=108,slow=0.7,SNR=9.4
MAJO Matsushiro 127.67 324 *d* PKIKP **PKiKP 03 55 41.0 -0.1**
MAT Matsushiro 127.67 324 PKP **PKPdf 03 55 40.6 0.0**
SONM Songino Array 127.71 357 PKP **PKPdf 03 55 40.2 -0.2**
comp=Z,3.2nm,0.8s,baz=339,slow=1.9,SNR=22
SONM PP **PP 03 57 40.2 -0.5**
comp=Z,1.8nm,0.9s,baz=354,slow=6.2,SNR=3.4
NRN Naryn 127.83 26 PKIKP **PKiKP 03 55 41.7 0.0**
NRN Naryn 127.83 26 **PKiKP 03 55 41.6 0.0**
CAN Canberra 127.98 228 PKIKP **PKPdf 03 55 41.4 +0.2**
CAN Canberra 127.98 228 **PKPdf 03 55 41.4 +0.2**
KSH Kashi 129.37 27 PKP **PKiKP 03 55 44.8 +0.2**
KSH PP **PP 03 57 55.6 +3.4**
KSH PKS 03 59 20.7
KSH SKS **SKSdf 04 02 49.4 -4.1**
KSH SKKS **SKKSac 04 04 49.9 +1.8**
KSH SS **SS 04 15 14.0 +2.9**
KSH AMB AMB
comp=Z,810nm,8.3s
KSH LR LR
comp=Z,370nm,5.8s
KSH LR LR
comp=Z,260nm,5.1s
KSH LR LR
comp=Z,640nm,8.5s
WMQ Urumqi 129.78 15 *e* PKP **PKPdf 03 55 44.6 +0.2**
WMQ LR LR
comp=Z,610nm,29.3s
WMQ LR LR
comp=Z,380nm,29.3s
KS19 Wonju Array Si 132.28 333 **PKiKP 03 55 50.3 -0.1**
KSRS Korea Array 132.29 333 PKP **PKPdf 03 55 49.5 +0.3**
comp=Z,5.7nm,0.6s,baz=16,slow=2.0,SNR=23
DL2 Dalian 133.50 340 PKP **PKPdf 03 55 51.0 -0.5**
DL2 PP **PP 03 58 23.3 +4.9**
DL2 SS SS 04 16 07.9 +7.1
DL2 AMB AMB
comp=Z,540nm,6.8s
DL2 LR LR
comp=Z,800nm,22.8s
DL2 LR LR
comp=Z,560nm,17.7s
DL2 LR LR
comp=Z,700nm,20.9s
HHC Hu-ho-hao-te 134.13 351 *e* PKP **PKPdf 03 55 52.2 -0.6**
STKA Stephens Creek 135.04 228 PKhKP PKPpre 03 55 42.2
comp=Z,1.4nm,0.7s,baz=126,slow=8.7,SNR=1.9
STKA PKP **PKPdf 03 55 54.6 0.0**
comp=Z,9.8nm,0.7s,baz=48,slow=0.7,SNR=17
CTA Charters Tower 135.49 246 PKP **PKPdf 03 55 55.7 0.0**
comp=Z,6.5nm,1.0s,baz=96,slow=4.5,SNR=6.9
GTA Gaotai 136.08 4 PKP **PKPdf 03 55 57.0 +0.5**
GTA PP **PP 03 58 36.7 +2.0**
GTA AMB AMB
comp=Z,260nm,9.5s
GTA LR LR
comp=Z,280nm,23.5s
GTA LR LR
comp=Z,180nm,21.3s
LZH Lanzhou 139.51 359 *e* PKP **PKiKP 03 56 06.0 +0.7**
LZH LR LR
comp=Z,170nm,14.3s
LZH LR LR
comp=Z,210nm,15.0s
NJ2 Nanjing 140.66 339 *e* PKP **PKPdf 03 56 02.6 -2.3**
XAN Xi'an 141.20 353 PKP **PKiKP 03 56 08.5 -0.2**
DANN Dangsing 142.21 29 *e* P **PKPdf 03 56 02.3 -5.9**
GKN Gorkha 142.91 28 *e* P **PKPdf 03 56 05.3 -4.0**
KKN Kakani 143.39 27 *e* P PKPab 03 56 06.3 0.0
DMN Daman 143.46 28 *e* P PKPab 03 56 06.7 +0.1
GUN Gumba 143.56 27 *e* P PKPab 03 56 07.3 +0.2
comp=Z,77nm,0.8s
PKIN Phulchoki 143.63 27 *e* P PKPab 03 56 06.7 -0.6
comp=Z,29nm,0.7s
PKI Pulchoki 143.64 27 *e* P PKPab 03 56 06.7 -0.7
comp=Z,5.8nm,0.8s
JIRN Jiri 143.91 26 *e* P PKPab 03 56 08.1 -0.4
comp=Z,41nm,0.8s
LSA Lhasa 143.95 18 PKIKP PKPbc 03 56 09.7 +0.5
LSA Lhasa 143.95 18 PKPbc 03 56 09.7 +0.4
CD2 Chengdu 144.68 359 PKP **PKPab 03 56 09.8 -1.0**
RAMN Ramite 144.71 26 *e* P **PKPab 03 56 10.3 -1.0**
comp=Z,31nm,0.6s
ENH Enshi 144.82 351 **PKPab 03 56 11.2 -0.1**
TAPN Taplejung 144.83 25 *e* P **PKPab 03 56 11.2 -0.6**
comp=Z,75nm,0.5s
AS31 Alice Springs 144.95 234 **PKPab 03 56 11.2 -0.8**
ASAR Alice Springs 144.95 234 PKP **PKPab 03 56 11.2 -0.8**
comp=Z,46nm,0.7s,baz=119,slow=3.7,SNR=600
FORT Forrest 145.06 219 **PKPbc 03 56 12.1 -0.1**
ODAN Odare 145.13 25 *e* P **PKPbc 03 56 11.7 -1.1**
KLRI Killari 145.33 49 *e* PKPab **PKPbc 03 56 12.4 -1.0**
SRSP Sriramsagar 146.06 46 *e* PKPab **PKPdf 03 56 14.2 -0.6**
WRAB Tennant Creek 146.16 241 PKP2 **PKPdf 03 56 14.7 -0.2**
WRAB Tennant Creek 146.16 241 **PKPdf 03 56 14.7 -0.2**
WRA Warramunga Arr 146.17 241 PKPbc **PKPdf 03 56 14.7 -0.3**
comp=Z,35nm,0.8s,baz=109,slow=2.2,SNR=101
NACB Ninganchiao 146.30 329 **PKPab 03 56 17.2 +0.2**
DMPR Damasthipur 146.51 48 *e* PKPab **PKPdf 03 56 16.2 +0.6**
RPR Rampur 146.78 45 *e* PKPab **PKPbc 03 56 16.9 -0.8**
SSLB Suanglang 146.95 329 **PKPbc 03 56 18.4 +0.3**
HYBB Hyderabad (bro 147.19 48 *e* PKPbc **PKPdf 03 56 17.8 +1.1**
HYB Hyderabad 147.19 48 *i* PKP **PKPdf 03 56 16.0 -0.8**
TPUB Ta-pu 147.51 329 **PKPbc 03 56 20.0 +0.2**
GGR Gangavaram 148.11 45 *e* PKPbc **PKPdf 03 56 18.2 -0.1**
SRLM Srisailam 148.26 49 *e* PKPbc **PKPdf 03 56 19.9 +1.3**
NJS Nagarjunasagar 148.29 48 *e* PKPdf **PKPdf 03 56 16.9 -1.6**
GYA Guiyang 148.95 354⇑ *i* PKPbc **PKPdf 03 56 20.4 +0.8**
GYA PP **PP 03 59 52.1 -0.4**
GYA SKKS 04 06 41.0
GYA SS **SS 04 19 08.8 +8.2**
GYA AMB AMB
comp=Z,100nm,5.8s
GYA LR LR
comp=Z,440nm,21.8s
GYA LR LR
comp=Z,240nm,19.5s
GYA LR LR
comp=Z,450nm,21.3s
NWAO Narrogin (SRO) 148.97 203 PKP2 **PKPbc 03 56 23.0 -0.2**
NWAO Narrogin (SRO) 148.97 203 **PKPbc 03 56 22.5 -0.8**
NWAO Narrogin (SRO) 148.97 203 **PKPbc 03 56 23.0 -0.2**
MYLAV Mylavaram 149.13 46 *e* PKPbc **PKPdf 03 56 21.1 +1.2**
ADKI Addanki 149.23 48 *e* PKiKP **PKPbc 03 56 23.9 -0.4**
PVM Polavaram 149.49 44 *e* PKPab **PKPbc 03 56 29.2 -0.6**
CHLP Challavanipeta 150.20 39 *e* PKiKP **PKPbc 03 56 26.2 -0.5**
SKHT Srikalahasti 150.31 52 *e* PKiKP **PKPbc 03 56 26.0 -1.0**
KMI Kunming 150.44 1 P **PKPbc 03 56 27.2 -0.2**
KMI pP PKiKP 03 56 29.9 +1.7
KMI pmax pmax
comp=Z,29nm,1.1s
KMI LR LR
comp=N,210nm,15.9s
KMI LR LR
comp=E,250nm,20.3s
KMI LR LR
comp=Z,330nm,26.1s
KMI Kunming 150.44 1 PKIKP **PKPbc 03 56 27.8 +0.4**
KMI Kunming 150.44 1 **PKPbc 03 56 27.8 +0.4**
FAKI Fak Fak 151.08 272 **PKPbc 03 56 28.6 -0.3**
MTN Manton Dam 151.34 252 **PKPbc 03 56 29.2 -0.2**
KNRA Kununurra 152.68 244 **PKPbc 03 56 32.4 0.0**
MORW Morawa 152.84 205 **PKPbc 03 56 31.7 -0.8**
SLVN Son La 154.21 359 **PKiKP 03 56 36.1 +0.3**
FITZ Fitzroy Crossi 154.38 237 PKP **PKPdf 03 56 27.4 -0.3**
comp=Z,2.4nm,0.8s,baz=198,slow=5.4,SNR=6.7
FITZ PKPbc **PKPbc 03 56 35.7 -0.4**
comp=Z,9.6nm,0.6s,baz=168,slow=2.9,SNR=31
CHTO Chiang Mai 156.33 10 PKP2 **PKPab 03 56 57.5 -0.9**
CHTO 04 56 30.1
CHTO Chiang Mai 156.33 10 PKPdf **PKPdf 03 56 30.1 -0.3**
CHTO **PKPab 03 56 57.5 -0.9**
CMAR Chiang Mai Arr 156.68 11 PKP **PKPdf 03 56 31.2 +0.3**
comp=Z,3.2nm,0.6s,baz=312,slow=2.2,SNR=15
CMAR PKPab **PKPab 03 56 59.6 -0.3**
comp=Z,12nm,0.8s,baz=330,slow=5.2,SNR=7.4
PSA00 Pilbara Seismi 156.73 222 **PKPab 03 56 59.4 -0.8**
KSM Kuching 170.76 311 **PKPab 03 58 02.1 +0.2**
PSI Prapat 171.43 31 PKIKP **PKPdf 03 56 43.4 -1.1**
PSI 03 58 03.9
RPSI Rantau Prapat 171.52 31 **PKPdf 03 56 43.4 -1.0**
RPSI PKPab **PKPab 03 58 03.9 -1.2**

*GUC **05** 03:39:37.3±0.8, 31°.22S×69°.31W, h133km±27km, ML2.7*
*SJA **05** 03:39:37.9±0.7, 31°.28S×69°.16W, h106km±3km, ML2.9, MW3.1*
ISC 05 03:39:39.0±1.5, **31°.25S**±0'.04×**69°.17W**±0'.04, **h103**km±10km, **n20**, σ0**s.78**/30, **2C, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**0.51**	**125**	*i* P	**Pn**	**03 39 55.1**	**-0.2**
ZON				*e*S	**Sn**	**03 40 07.6**	**+0.1**
ZON				IAML		03 40 09.3	
	comp=Z,211nm,0.5s						
RTLS	**Leoncito**	**0.56**	**191**	*i* P	**Pn**	**03 39 56.0**	**0.0**
RTLS				*e*S	**Sn**	**03 40 09.2**	**+0.6**
RTLS				IAML		03 40 09.4	
	comp=Z,265nm,0.4s						
RTLL	**Cerro Villicun**	**0.60**	**98**	*i* P	**Pn**	**03 39 55.4**	**-0.5**
RTLL				*e*S	**Sn**	**03 40 08.9**	**+0.2**
RTLL				IAML		03 40 09.9	
	comp=Z,420nm,0.3s						
AMOG	**MOGNA**	**0.66**	**62**	*i* P	**Pn**	**03 39 56.1**	**-0.3**
AMOG				*e*S	**Sn**	**03 40 09.9**	**+0.4**
RTCV	**Cerro Valdivia**	**0.81**	**139**	*i* P	**Pn**	**03 39 57.6**	**-0.2**
RTCV				*e*S	**Sn**	**03 40 11.6**	**-0.3**
CFA	**Coronel Fontan**	**0.87**	**114**	*i* P	**Pn**	**03 39 57.9**	**-0.4**
CFA				*e*S	**Sn**	**03 40 13.0**	**0.0**
ASAL	**Salagasta**	**1.37**	**168**	*i* P	**Pn**	**03 40 04.0**	**+0.1**
CO02	**Combarbal**	**1.57**	**271**⇑	*i* P	**Pn**	**03 40 06.2**	**-0.2**
CO02				*i* S	**Sn**	**03 40 27.8**	**+0.6**
ARCO	**CERRO ARCO**	**1.60**	**173**	*i* P	**Pn**	**03 40 07.0**	**+0.2**
GO04	**Tololo Observa**	**1.77**	**307**⇑	*i* P	**Pn**	**03 40 08.6**	**-0.4**
GO04				*i* S	**Sn**	**03 40 32.0**	**+0.2**
AAGR	**Agrelo**	**1.85**	**171**	*i* P	**Pn**	**03 40 09.5**	**-0.4**
AGUA	**GUANDACOL**	**1.85**	**19**	*i* P	**Pn**	**03 40 10.6**	**+0.6**
ACAN	**Cantantal**	**1.97**	**122**	*i* P	**Pn**	**03 40 10.9**	**-0.4**
LSCH	**La Serena**	**2.24**	**306**	*e*P	**Pn**	**03 40 13.7**	**-1.0**
LSCH				*i* S	**Sn**	**03 40 40.5**	**-1.6**
FCH	**Farellones**	**2.28**	**204**	*e*P	**Pn**	**03 40 16.2**	**+0.6**
FCH				*i* S	**Sn**	**03 40 45.3**	**+1.7**
FCH				IAML		03 40 50.2	
	comp=E,39nm,0.1s						
ROCH	**El Roble**	**2.32**	**222**	*e*P	**Pn**	**03 40 15.3**	**-0.8**
ROCH				IAML		03 40 49.0	
	comp=N,45nm,0.3s						
ROC1	**El Roble**	**2.33**	**222**	*i* P	**Pn**	**03 40 15.8**	**-0.3**
VCA	**Vinchina**	**2.64**	**19**	*i* P	**Pn**	**03 40 22.2**	**+1.9**
VCA				IAML		03 40 55.8	
	comp=Z,33nm,0.2s						
TCA	**Tanti**	**3.92**	**92**	*i* P	**Pn**	**03 40 35.8**	**-1.4**
AHML	**Horco Molle**	**5.57**	**38**	*i* P	**Pn**	**03 40 59.6**	**0.0**

*IDC **05** 03:42:09.9±1.7, 0°.65S×131°.57E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.3/36, mbtmp3.4/3, ML3.2/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/21, Error ellipse: s-maj=29.8km s-min=10.8km az=146.0*
*DJA **05** 03:42:13.0±0.6, 1°.5±7°.×13°.1E±°, h10km, M3.4/4, MLv3.4/4*
ISC 05 03:42:12.0±1.5, **0°.8S**±0'.2×**130°.99E**±0'.09, **h10**km, **n8**, σ0**s93**/8, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**0.27**	**97**	P	**Pg**	**03 42 18.0**	**+0.5**
SWI				S	**Sg**	**03 42 21.2**	**+0.1**
SIJI	**Sorong**	**0.28**	**98**	Pg	**Pg**	**03 42 18.0**	**+0.4**
	329nm,0.3s,baz=105,slow=13,SNR=3407						
SIJI				Lg	Lg	03 42 21.3	
	676nm,0.3s,baz=132,slow=24,SNR=29						
FAKI	**Fak Fak**	**2.42**	**149**	P	**Pn**	**03 42 52.2**	**+0.4**
RKPI	**Ransiki, Papua**	**3.25**	**102**	P	**Pg**	**03 43 13.5**	**-0.9**
WRA	**Warramunga Arr**	**19.27**	**170**	P	**P**	**03 46 35.7**	**-1.4**
	0.1nm,0.3s,baz=354,slow=12,SNR=3.3						
ASAR	**Alice Springs**	**22.88**	**173**	P	**P**	**03 47 16.9**	**+0.9**
	0.5nm,0.5s,baz=355,slow=10,SNR=8.7						
HNR	**Honiara**	**30.05**	**107**	LR	LR	04 02 03.5	
	comp=Z,60nm,18.0s,baz=330,slow=40						
MKAR	**Makanchi Array**	**63.71**	**325**	P	**P**	**03 52 43.8**	**-0.1**
	0.2nm,0.6s,baz=110,slow=7.2,SNR=3.4						

*IDC **05** 03:45:05.5±2.6, 19°.89S×177°.73W, h592km±30km, mb3.4/6, mb1 3.5/8, mb1mx3.2/37, mbtmp4.4/8, Error ellipse: s-maj=29.9km s-min=20.9km az=149.0*
ISC 05 03:45:04.9±1.5, **19°.9S**±0'.2×**177°.6W**±0'.2, **h600**km, **n10**, σ0**s75**/12, **mb3.9/6, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**15.09**	**259**	P	**P**	**03 48 15.3**	**+1.2**
	0.4nm,0.3s,baz=111,slow=22,SNR=5.6						
URZ	**Urewera**	**18.90**	**193**	P	**P**	**03 48 48.3**	**-0.2**
	1.3nm,0.3s,baz=292,slow=2.6,SNR=7.2						
CTA	**Charters Tower**	**33.95**	**263**	P	**P**	**03 50 59.9**	**-0.5**
	5.3nm,0.5s,baz=93,slow=9.6,SNR=15						
JAY	**Jayapura**	**44.23**	**288**	P	**P**	**03 52 23.0**	**+0.2**
	20nm,1.1s,baz=97,slow=23,SNR=5.1						
ASAR	**Alice Springs**	**45.06**	**256**	P	**P**	**03 52 29.3**	**+0.3**
	4.5nm,0.8s,baz=90,slow=7.8,SNR=42						
ASAR				PcP	**PcP**	**03 53 58.0**	**+1.3**
	0.3nm,0.6s,baz=102,slow=3.9,SNR=3.2						
ASAR				S	**S**	**03 58 25.0**	**-0.5**
	2.8nm,0.8s,baz=95,slow=18,SNR=3.2						
WRA	**Warramunga Arr**	**45.09**	**261**	P	**P**	**03 52 28.6**	**-0.6**
	1.1nm,0.3s,baz=98,slow=7.9,SNR=22						
FITZ	**Fitzroy Crossi**	**53.51**	**262**	P	**P**	**03 53 30.9**	**-0.1**
	2.0nm,0.7s,baz=97,slow=6.7,SNR=8.5						
MJAR	**Matsushiro Arr**	**69.94**	**323**	P	**P**	**03 55 17.0**	**-0.2**
	1.2nm,0.5s,baz=133,slow=6.2,SNR=5.6						
BRTR	**Keskin Array B**	**146.70**	**313**	PKPbc	**PKiKP**	**04 03 42.0**	**-0.9**
	0.7nm,0.6s,baz=92,slow=4.8,SNR=6.4						
GERES	**GERESS Array B**	**149.69**	**345**	PKPbc	**PKiKP**	**04 03 48.8**	**+0.2**
	0.2nm,0.5s,baz=24,slow=1.6,SNR=7.3						

RSNC 05 04:07:40.9±0.4, **4°.56N×76°.61W, h16**km±1km, **ML1.3, Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLMC	**San Jos del P**	**0.47**	**44**	*e*P	Pg	04 07 49.6	-0.8
PLMC				*e*S	Sg	04 07 56.8	0.0
PLMC	**San Jos del P**	**0.47**	**44**	*e*P	Pg	04 07 49.6	-0.8
PLMC				*e*S	Sg	04 07 56.8	0.0
YOTC	**Yotoco, Valle**	**0.63**	**155**	*e*P	Pg	04 07 52.7	-0.7
YOTC				*i*		04 07 53.0	
	comp=Z,9.9nm,0.2s						
YOTC				*e*S	Sg	04 08 01.4	-0.4
YOTC	**Yotoco, Valle**	**0.63**	**155**	*e*P	Pg	04 07 52.7	-0.7
YOTC				*i*		04 07 53.0	
	comp=Z,9.9nm,0.2s						
YOTC				*e*S	Sg	04 08 01.4	-0.4
ANIL	**Santa Ana**	**1.21**	**93**	*e*P	Pn	04 08 02.3	-1.2
ANIL				*i*		04 08 02.4	
	comp=Z,13nm,0.2s						
ANIL	**Santa Ana**	**1.21**	**93**	*e*P	Pn	04 08 02.2	-1.3
ANIL				*i*		04 08 02.4	
	comp=Z,13nm,0.2s						
TOLC	**Tolima**	**1.29**	**89**	*e*P	Pn	04 08 03.4	-1.2
TOLC	**Tolima**	**1.29**	**89**	*e*P	Pn	04 08 03.6	-1.0
RREF	**El Recreo**	**1.30**	**75**	*e*P	Pn	04 08 04.1	-1.0
GUY2C	**Guyana, Caldas**	**1.41**	**62**	*e*P	Pn	04 08 05.5	-0.9
GUY2C				*e*S	Sn	04 08 24.4	-0.4
GUY2C				*i*		04 08 26.2	
	comp=Z,2.4nm,0.6s						
GUY2C	**Guyana, Caldas**	**1.41**	**62**	*e*P	Pn	04 08 05.3	-1.0
GUY2C				*e*S	Sn	04 08 24.2	-0.7
GUY2C				*i*		04 08 26.2	
	comp=Z,2.4nm,0.6s						

*IDC **05** 04:34:26.5±2.4, 8°.82N×40°.54W, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/34, mbtmp3.7/7, MS3.7/12, Ms1 3.7/12, ms1mx3.5/32, Error ellipse: s-maj=89.2km s-min=22.8km az=12.0*
*NEIC **05** 04:34:27.4±1.0, 8°.7N±0'.2×40°.6W±0'.1, h10km±3km, mb4.3/3, Error ellipse: s-maj=34.5km s-min=17.0km az=185.0*
ISC 05 04:34:26.7±0.9, **8°.5N**±0'.2×**40°.6W**±0'.1, **h10**km, **n21**, σ0**s64**/9, **mb3.9**/9, **MS3.8**/11, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**12.40**	**255**	LR	LR	04 41 29.5	
	comp=Z,396nm,21.0s,baz=5.0,slow=34						
BDFB	**Brasilia**	**25.05**	**197**	LR	LR	04 49 38.9	
	comp=Z,133nm,19.7s,baz=31,slow=36						
SJG	**San Juan**	**26.60**	**294**	LR	LR	04 48 24.4	
	comp=Z,213nm,21.4s,baz=76,slow=32						
H10N3	**ASCENSION HYDR**	**30.66**	**121**	T	T	05 13 19.7	
	baz=302,slow=75,SNR=7.3						
H10N2	**ASCENSION HYDR**	**30.66**	**121**	T	T	05 13 19.1	
	baz=302,slow=75,SNR=7.6						
H10N1	**ASCENSION HYDR**	**30.68**	**121**	T	T	05 13 19.7	
	baz=302,slow=75,SNR=8.2						
ROSC	**El Rosal**	**33.66**	**266**	LR	LR	04 55 17.3	
	comp=Z,373nm,18.1s,baz=104,slow=37						
DBIC	**Dimbokro**	**35.48**	**90**	P	**P**	**04 41 24.1**	**+0.2**
	2.2nm,0.8s,baz=283,slow=8.8,SNR=2.8						
DBIC				LR	LR	04 54 30.5	
	comp=Z,68nm,18.1s,baz=277,slow=34						
LPAZ	**La Paz**	**36.70**	**228**	LR	LR	04 56 41.1	
	comp=Z,100nm,18.5s,baz=55,slow=36						
LPAZ	**La Paz**	**36.70**	**228**	P	**P**	**04 41 34.6**	**-0.3**
LPAZ				IAmb	IAmb	04 41 56.4	
	comp=Z,5.9nm,1.4s						
CPUP	**Villa Florida**	**38.21**	**205**	LR	LR	04 58 06.1	
	comp=Z,145nm,18.3s,baz=27,slow=37						
TOA0	**Torodi Ar. Sit**	**41.78**	**80**	P	**P**	**04 42 17.0**	**+0.2**
TOA0				IAmb	IAmb	04 42 25.4	
	comp=Z,18nm,1.7s						
TORD	**Torodi Ar. Bea**	**41.78**	**80**	P	**P**	**04 42 17.1**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=279,slow=7.3,SNR=8.2						
TORD				LR	LR	04 57 59.7	
	comp=Z,124nm,18.9s,baz=315,slow=34						
TXAR	**Lajitas Array**	**62.44**	**299**	P	**P**	**04 44 51.6**	**+1.0**
	comp=Z,0.1nm,0.5s,baz=108,slow=5.9,SNR=2.8						
TXAR				LR	LR	05 13 04.3	
	comp=Z,26nm,20.0s,baz=0.0,slow=37						
PDAR	**Pinedale Array**	**68.86**	**313**	LR	LR	05 13 03.0	
	comp=Z,67nm,18.8s,baz=86,slow=34						
AKASG	**Malin Array Be**	**70.75**	**39**	P	**P**	**04 45 43.0**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=256,slow=5.9,SNR=4.1						
BRTR	**Keskin Array B**	**72.53**	**51**	P	**P**	**04 45 54.1**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=264,slow=6.4,SNR=2.8						
PFO	**Pinyon Flats O**	**73.59**	**302**	LR	LR	05 16 49.5	
	comp=Z,65nm,18.6s,baz=76,slow=35						
YKA	**Yellowknife Ar**	**75.16**	**333**	P	**P**	**04 46 08.1**	**-1.0**
	comp=Z,0.8nm,1.0s,baz=96,slow=6.2,SNR=5.8						
YBH	**Yreka Blue Hor**	**78.53**	**311**	LR	LR	05 18 04.4	
	comp=Z,39nm,18.8s,baz=46,slow=33						
ILAR	**Eielson Array**	**89.24**	**336**	P	**P**	**04 47 23.2**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=47,slow=6.6,SNR=5.2						

*UCR **05** 04:50:18.3±1.7, 9°.31N×84°.19W, h21km±4km, MD3.9, MW3.5*
*UPA **05** 04:50:18.0±1.7, 9°.43N×84°.00W, h0km±71km, MW4.3*
ISC 05 04:50:18.5±1.3, **9°.32N**±0'.06×**84°.17W**±0'.06, **h22**km±11km, **n31**, σ0**s81**/45, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDDO	**Dominical**	**0.31**	**102**	*e*P	**Pb**	**04 50 25.2**	**-0.3**
EDDO				*i* S	**Sb**	**04 50 31.0**	**+0.7**
LCR2	**La Lucha 2**	**0.45**	**22**	*e*P	**Pb**	**04 50 27.4**	**-0.6**
LCR2				*e*S	**Sb**	**04 50 34.8**	**+0.4**
EDLM	**Las Mercedes**	**0.58**	**94**	*e*P	**Pb**	**04 50 29.2**	**-0.8**
SJS	**Escuela Geolog**	**0.63**	**11**	*e*P	**Pb**	**04 50 30.2**	**-0.7**
SJS				*e*S	**Sb**	**04 50 39.8**	**+0.4**
HDC	**Heredia**	**0.68**	**5**	*e*P	**Pb**	**04 50 31.1**	**-0.7**
HDC				*e*S	**Sb**	**04 50 41.3**	**+0.4**
EDPN	**Palmar Norte**	**0.79**	**117**	*e*P	**Pb**	**04 50 32.4**	**-1.1**
EDPN				*e*S	**Sn**	**04 50 45.1**	**-0.3**
SRA1	**San Ramn**	**0.82**	**338**	*e*P	**Pb**	**04 50 33.2**	**-0.9**
SRA1				*e*S	**Sb**	**04 50 45.1**	**+0.2**
JTS	**Las Juntas de**	**1.23**	**322**	*e*P	**Pn**	**04 50 39.1**	**-1.3**
JTS				*e*S	**Sb**	**04 50 56.3**	**-0.4**
CASO	**Castillo**	**1.24**	**333**	*i* P	**Pn**	**04 50 40.3**	**-0.2**
FORC	**Fortuna**	**1.24**	**337**	*i* P	**Pn**	**04 50 40.3**	**-0.2**
FORC				*i* S	**Sb**	**04 50 57.5**	**+0.6**
ARE1	**Arenal 1**	**1.26**	**335**	*e*P	**Pn**	**04 50 40.6**	**-0.1**
CEDE	**Laguna Cedeo**	**1.27**	**336**	*i* P	**Pn**	**04 50 41.0**	**0.0**
EDSV	**San Vito**	**1.28**	**113**	*e*P	**Pn**	**04 50 40.7**	**-0.5**
BRU2	**Volcan**	**1.55**	**109**	*e*P	**Pn**	**04 50 44.4**	**-0.6**
BRU2	**Volcan**	**1.55**	**109**	*e*P	**Pn**	**04 50 44.0**	**-0.9**
	baz=300,slow=7.9						
SBAR3	**San Bartolo, C**	**1.62**	**128**	*e*P	**Pb**	**04 50 46.9**	**-0.8**
CUI	**Cuipilapa**	**1.65**	**324**	*e*P	**Pn**	**04 50 45.7**	**-0.5**
CUI				*i* S	**Sn**	**04 51 06.9**	**+0.1**
COLC	**Colonia**	**1.68**	**323**	*i* P	**Pn**	**04 50 47.1**	**+0.5**
HORNC	**Hornillas**	**1.70**	**325**	*i* P	**Pn**	**04 50 47.5**	**+0.5**
HORNC				*i* S	**Sn**	**04 51 08.5**	**+0.4**
BCO2	**Palmira**	**1.73**	**110**	*i* P	**Pn**	**04 50 46.4**	**-1.0**
BCO2				*i* S	**Sn**	**04 51 09.7**	**+0.9**
GUAB	**Guayabo de Bag**	**1.73**	**323**	*i* P	**Pn**	**04 50 47.9**	**-0.7**
PTAR3	**Potrerillos Ar**	**1.77**	**110**	*e*P	**Pn**	**04 50 47.7**	**-0.1**
GPS3	**Bodega del ICE**	**1.85**	**321**	*i* P	**Pn**	**04 50 49.7**	**+0.8**
BUEV	**Buena Vista**	**1.91**	**321**	*i* P	**Pn**	**04 50 50.4**	**+0.7**
DVD	**David**	**1.91**	**117**	*e*P	**Pn**	**04 50 51.1**	**+1.4**
DVD				*i* S	**Sb**	**04 51 15.2**	**-0.9**
GB1A	**Borinquen Arri**	**1.92**	**321**	*i* P	**Pn**	**04 50 50.6**	**+0.7**
PEDE3	**Pedregal, Chir**	**1.96**	**118**	*e*P	**Pn**	**04 50 49.7**	**-0.7**
CHGR2	**Aguacate**	**2.04**	**101**	*i* P	**Pn**	**04 50 51.2**	**-0.2**
CHGR2				*i* S	**Sn**	**04 51 16.3**	**+0.1**
CHIR3	**Chiriqui UPA,**	**2.04**	**117**	*e*P	**Pn**	**04 50 51.5**	**0.0**
GMAL	**Guarumal, Vera**	**3.29**	**118**	*e*P	**Pn**	**04 51 09.2**	**+0.5**
GMAL				*i* S	**Sn**	**04 51 48.0**	**+0.8**
CACAO	**El Cacao, Vera**	**3.82**	**121**	*e*P	**Pn**	**04 51 18.9**	**+3.0**

MAN 05 05:18:30.6, 11°.82N×124°.24E, h15km, **mb4.6, ML3.5, MS3.3, 1C-2D, Leyte**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.80**	**31**	*e*P	Pb	05 18 46.7	+0.5
CNP				*e*S	Sn	05 18 59.8	+0.9
MMPH	**Masbate**	**0.80**	**312**	*e*P	Pg	05 18 45.0	-1.2
MMPH				*e*S	Sg	05 18 55.9	-0.8
OCLP	**Ormoc**	**0.85**	**155**	*e*P	Pb	05 18 46.4	-0.7
OCLP				*e*S	Sn	05 18 59.8	-0.5
BESP	**Borongan**	**1.20**	**101**	*e*P	Pn	05 18 51.5	-1.2
BESP				*e*S	Sn	05 19 08.9	+0.2
RCP	**Roxas**	**1.48**	**260**⇓	*e*P	Pn	05 18 56.3	-

baz=324,slow=75,SNR=12
H11N1 WAKE ISLAND Hy 30.17 131 T T 06 27 18.3
baz=324,slow=75,SNR=11
H11N3 WAKE ISLAND Hy 30.18 131 T T 06 27 14.5
baz=324,slow=75,SNR=10
H11S1 WAKE ISLAND Hy 31.04 133 T T 06 28 23.6
baz=326,slow=76,SNR=11
H11S3 WAKE ISLAND Hy 31.04 133 T T 06 28 19.6
baz=326,slow=76,SNR=9.9
H11S2 WAKE ISLAND Hy 31.06 133 T T 06 28 19.2
baz=326,slow=76,SNR=7.3
MKAR Makanchi Array 42.65 298 P **P 05 57 27.7 +0.9**
0.2nm,0.5s,baz=86,slow=9.4,SNR=4.8
FINES FINESS Array B 64.79 332 P **P 06 00 07.8 -0.4**
1.2nm,0.9s,baz=54,slow=9.7,SNR=5.3

MAN 05 05:54:10.2, 12°.65N×124°.52E, h9km, mb4.5, ML3.4, MS3.2, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**1.59**	**177**	*e*P	Pn	05 54 38.2	-0.3
OCLP	**Ormoc**	**1.59**	**177**	*e*S	Pg	05 54 41.4	+0.8
LLP	**Lapu-Lapu**	**2.38**	**193**↓	*e*P	Pn	05 54 50.4	+1.1
MSLP	**Maasin**	**2.52**	**172**	*e*P	Pn	05 54 52.1	+0.8
GUIM	**Jordan**	**2.76**	**223**	*e*P	Pn	05 54 55.2	+0.6
GUIM				*e*S	Sn	05 55 29.4	+1.3

*ATH **05** 06:00:29.4, 37°.53N×21°.98E, h20km±1km, ML3.4/12, Error ellipse: s-maj=1.2km s-min=0.7km az=273.0*
*THE **05** 06:00:30.2, 37°.51N×21°.96E, h7km±1km, ML3.4/6, Error ellipse: s-maj=1.9km s-min=0.6km az=267.0*
*IDC **05** 06:00:34.5±2.8, 37°.42N×21°.92E, h54km±30km, mb3.5/7, mb1 3.6/10, mb1mx3.4/37, mbtmp3.7/10, ML3.5/3, MS3.4/2, Ms1 3.4/2, ms1mx2.6/35, Error ellipse: s-maj=39.4km s-min=17.0km az=50.0*
ISC 05 06:00:30.0±1.0, 37.52N±0.02×21.99E±0.02, h9km±8km, n76, σ1s07/98, mb3.8/7, 11C-1D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**0.34**	**188**	P	**Pg**	**06 00 36.2**	**-0.6**
ITM				S	**Sg**	**06 00 41.8**	**+0.5**
	5μm,0.6s						
ITM	**Ithomi**	**0.34**	**188**	P	**Pg**	**06 00 36.4**	**-0.4**
ITM				S	**Sg**	**06 00 42.2**	**+0.9**
ITM				AML	AML	06 00 43.0	
	comp=N,11042μm,0.5s						
ITM				AML	AML	06 00 43.2	
	comp=E,8810μm,0.2s						
KLMT	**Kalamata**	**0.46**	**173**	P	**Pg**	**06 00 38.8**	**-0.2**
KLV	**Kalavryta, Ach**	**0.54**	**14**	P	**Pg**	**06 00 40.0**	**-0.5**
KLV				S	**Sg**	**06 00 49.4**	**+1.7**
	comp=E,3μm,0.3s						
KLV	**Kalavryta, Ach**	**0.54**	**14**	P	**Pg**	**06 00 39.8**	**-0.7**
KLV				S	**Sg**	**06 00 48.0**	**+0.3**
KLV				AML	AML	06 00 49.7	
	comp=E,6796μm,0.5s						
KLV				AML	AML	06 00 50.1	
	comp=N,5472μm,0.2s						
RLS	**Riolos of Patr**	**0.68**	**323**	P	**Pg**	**06 00 42.5**	**-0.6**
RLS				S	**Sb**	**06 00 53.5**	**0.0**
	comp=N,3μm,0.2s						
RLS	**Riolos of Patr**	**0.68**	**323**	P	**Pg**	**06 00 42.3**	**-0.9**
RLS				S	**Sg**	**06 00 52.5**	**+0.5**
RLS				AML	AML	06 00 56.9	
	comp=N,6446μm,0.2s						
RLS				AML	AML	06 00 57.5	
	comp=E,4943μm,0.3s						
LAKA	**Lakka**	**0.72**	**360**	P	**Pg**	**06 00 43.3**	**-0.7**
LAKA				S	**Sb**	**06 00 55.3**	**+0.5**
	comp=E,3μm,0.3s						
LAKA	**Lakka**	**0.72**	**360**	P	**Pg**	**06 00 43.2**	**-0.8**
LAKA				S	**Sg**	**06 00 53.3**	**-0.1**
LAKA				AML	AML	06 00 55.6	
	comp=E,5087μm,0.2s						
LAKA				AML	AML	06 00 55.6	
	comp=N,9906μm,0.5s						
THAL	**Thalero**	**0.75**	**46**	P	**Pg**	**06 00 43.9**	**-0.5**
THAL	**Thalero**	**0.75**	**46**	P	**Pg**	**06 00 43.7**	**-0.7**
THAL				S	**Sg**	**06 00 54.6**	**+0.5**
ALIK	**Aliki, Aigiali**	**0.75**	**8**	P	**Pg**	**06 00 44.1**	**-0.4**
TRIZ	**Trizonia**	**0.85**	**5**	P	**Pb**	**06 00 45.5**	**-1.4**
TRIZ				S	**Sg**	**06 00 59.2**	**+1.8**
	comp=N,5μm,0.5s						
TRIZ	**Trizonia**	**0.85**	**5**	P	**Pb**	**06 00 45.5**	**-1.4**
TRIZ				S	**Sb**	**06 00 58.0**	**-0.4**
KALE	**Kalithea**	**0.88**	**8**	P	**Pb**	**06 00 45.9**	**-1.6**
KALE				S	**Sg**	**06 01 00.3**	**+1.8**
	comp=N,5μm,0.4s						
KALE	**Kalithea**	**0.88**	**8**	P	**Pb**	**06 00 46.0**	**-1.5**
KALE				S	**Sb**	**06 00 58.9**	**-0.5**
KALE				AML	AML	06 01 01.3	
	comp=E,9371μm,0.5s						
KALE				AML	AML	06 01 01.5	
	comp=N,10008μm,0.4s						
LOUT	**Loutraki**	**0.91**	**59**	P	**Pb**	**06 00 46.7**	**-1.3**
KRND	**KRANIDI**	**0.94**	**98**	P	**Pb**	**06 00 47.6**	**-0.8**
PROD	**Prodromos**	**1.03**	**44**	P	**Pb**	**06 00 49.1**	**-1.0**
PROD				S	**Sb**	**06 01 02.6**	**-1.2**
PROD				AML	AML	06 01 08.1	
	comp=E,7482μm,0.4s						
PROD				AML	AML	06 01 09.6	
	comp=N,4814μm,0.4s						
DLFA	**Delphi**	**1.04**	**23**	P	**Pb**	**06 00 48.0**	**-2.2**
VLI	**Veliai**	**1.10**	**136**	P	**Pb**	**06 00 50.9**	**-0.4**
VLI				S	**Sb**	**06 01 06.1**	**+0.4**
VLI				AML	AML	06 01 12.3	
	comp=E,1569μm,0.5s						
VLI				AML	AML	06 01 13.5	
	comp=N,1877μm,0.6s						
VLMS	**Volimes, Zakyn**	**1.11**	**289**	P	**Pb**	**06 00 49.9**	**-1.5**
VLMS				S	**Sn**	**06 01 06.9**	**-0.3**
VLMS				AML	AML	06 01 15.1	
	comp=E,4230μm,0.5s						
VLMS				AML	AML	06 01 20.8	
	comp=N,2568μm,0.6s						
MNVA	**Monemvasia**	**1.18**	**134**	P	**Pn**	**06 00 52.4**	**-0.3**
YDRA	**Hydra**	**1.19**	**98**	P	**Pn**	**06 00 52.5**	**-0.3**
YDRA				S	**Sg**	**06 01 09.7**	**+1.4**
VIL2	**Platees**	**1.23**	**55**	P	**Pn**	**06 00 52.5**	**-0.9**
VLS	**Valsamata**	**1.29**	**301**	P	**Pn**	**06 00 53.7**	**-0.4**
AXAR	**Agios Charalam**	**1.35**	**23**	P	**Pn**	**06 00 54.7**	**-0.5**
AXAR				S	**Sb**	**06 01 13.7**	**+0.7**
AXAR				AML	AML	06 01 20.7	
	comp=E,7500μm,0.4s						
AXAR				AML	AML	06 01 23.6	
	comp=N,5644μm,0.5s						
EVR	**Evrytania**	**1.40**	**354**	P	**Pn**	**06 00 55.5**	**-0.4**
EVR				S	**Sg**	**06 01 15.8**	**+0.6**
EVR				AML	AML	06 01 21.6	
	comp=N,1919μm,0.4s						
EVR				AML	AML	06 01 23.3	
	comp=E,1896μm,0.4s						
ATH	**Athens Observa**	**1.45**	**71**	P	**Pn**	**06 00 56.6**	**+0.3**
VLY	**Voula,Athens**	**1.47**	**76**	P	**Pn**	**06 00 56.5**	**-0.2**
ATHU	**Athens Univers**	**1.50**	**72**	P	**Pn**	**06 00 57.2**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.50**	**4**	P	**Pb**	**06 00 57.9**	**-0.1**
MAKR				S	**Sg**	**06 01 19.0**	**+0.8**
MAKR				AML	AML	06 01 25.4	
	comp=E,2942μm,0.3s						
MAKR				AML	AML	06 01 26.9	
	comp=N,2194μm,0.7s						
EVGI	**Lefkada island**	**1.52**	**317**	P	**Pb**	**06 00 57.5**	**-0.9**
EVGI				S	**Sb**	**06 01 17.6**	**-0.2**
AGG	**Agios Georgios**	**1.53**	**10**	P	**Pn**	**06 00 57.3**	**-0.2**
AGG				S	**Sb**	**06 01 18.5**	**+0.5**
AGG				AML	AML	06 01 23.2	
	comp=E,1124μm,0.4s						
AGG				AML	AML	06 01 24.0	
	comp=N,1012μm,0.5s						
KTHA	**Kythira Island**	**1.53**	**145**	P	**Pb**	**06 00 58.1**	**-0.4**
PTL	**Penteli**	**1.58**	**70**	P	**Pn**	**06 00 58.2**	**-0.1**
TSLK	**Tsoukalades, L**	**1.67**	**322**	P	**Pb**	**06 01 00.3**	**-0.7**
MRKA	**Markates**	**1.73**	**46**	P	**Pn**	**06 01 00.2**	**-0.1**
EREA	**Eretria**	**1.78**	**59**	P	**Pn**	**06 01 01.4**	**+0.4**
ANKY	**Antikythira Is**	**1.96**	**147**	P	**Pb**	**06 01 04.9**	**-0.9**
KARY	**Karystos**	**2.01**	**74**	P	**Pn**	**06 01 04.7**	**+0.6**
SKIA	**Skiathos**	**2.02**	**35**	P	**Pn**	**06 01 04.4**	**+0.2**
SERI	**Serifos**	**2.02**	**99**	P	**Pn**	**06 01 04.8**	**+0.5**
NEO	**Neokhori**	**2.03**	**28**	P	**Pn**	**06 01 04.3**	**-0.2**
XOR	**Xorichti**	**2.07**	**27**	P	**Pn**	**06 01 04.8**	**-0.3**
AOS	**Alonnisos**	**2.22**	**42**	P	**Pn**	**06 01 06.7**	**-0.3**
IMMV	**Iera Moni Meta**	**2.61**	**141**	P	**Pb**	**06 01 14.8**	**-2.1**
IOSP	**Ios island**	**2.76**	**106**	P	**Pn**	**06 01 14.2**	**-0.2**
VAM	**Vamos**	**2.76**	**139**	P	**Pn**	**06 01 16.5**	**+2.0**
APE	**Apeiranthos**	**2.86**	**98**	P	**Pn**	**06 01 15.8**	**-0.1**
APE	**Apeiranthos**	**2.86**	**98**	⇓P	**Pn**	**06 01 15.5**	**-0.3**
APE	**Apeiranthos**	**2.86**	**98**	⇑S	**Sn**	**06 01 50.6**	**+0.1**
AMGA	**Amorgos Island**	**3.20**	**101**	P	**Pn**	**06 01 20.8**	**+0.4**
IDI	**Anoyia**	**3.23**	**133**	P	**Pn**	**06 01 22.1**	**+1.1**
	comp=N,3.5nm,0.3s,baz=331,slow=13,SNR=26						
IDI				S	**Sn**	**06 01 59.9**	**+0.3**
	comp=N,3.1nm,0.3s,baz=104,slow=23,SNR=5.7						
OHR	**Ohrid**	**3.70**	**346**	*i* Pn	**Pn**	**06 01 26.4**	**-1.0**
VAY	**Valandovo**	**3.82**	**7**	*i* Pn	**Pn**	**06 01 31.0**	**+1.9**
TIR	**Tirane**	**4.16**	**337**	⇑P	**Pg**	**06 01 49.6**	**-0.1**
STIP	**Stip**	**4.17**	**2**	*i* Pn	**Pn**	**06 01 35.7**	**+1.9**
TIP	**Timpagrande**	**4.43**	**294**	⇑P	**Pn**	**06 01 38.5**	**+1.1**
MATE	**Matera**	**5.16**	**309**	⇑P	Pn	06 01 40.8	-6.6
VTS	**Vitosha**	**5.18**	**10**	⇑P	**Pn**	**06 01 49.6**	**+1.8**
GZR	**Gura Zlata**	**7.89**	**4**	⇑P	**Pn**	**06 02 26.4**	**+1.4**
BZS	**Buzias**	**8.10**	**358**	⇑P	**Pn**	**06 02 28.7**	**+1.0**
VOIR		**8.24**	**15**	⇑P	**Pn**	**06 02 31.2**	**+1.5**
MLR	**Muntele Rosu**	**8.50**	**19**	P	**Pn**	**06 02 36.3**	**+2.9**
	comp=N,0.3nm,0.3s,baz=197,slow=14,SNR=3.8						
MLR				LR	LR	06 06 47.6	
	comp=N,126nm,20.0s,baz=298,slow=43						
MLR	**Muntele Rosu**	**8.50**	**19**	⇑P	**Pn**	**06 02 34.9**	**+1.6**
DOPR	**Dopca**	**8.82**	**16**	⇑P	**Pn**	**06 02 39.0**	**+1.4**
PLOR	**Plostina**	**9.03**	**21**	⇑P	**Pn**	**06 02 43.1**	**+2.6**
BRTR	**Keskin Array B**	**9.38**	**73**	P	**Pn**	**06 02 49.0**	**+3.5**
	comp=N,0.2nm,0.3s,baz=255,slow=13,SNR=9.8						
HFS	**Hagfors**	**23.25**	**349**	P	**P**	**06 05 37.9**	**+0.5**
	comp=N,1.5nm,0.5s,baz=171,slow=10,SNR=7.7						
HFS				LR	LR	06 16 32.8	
	comp=N,201nm,20.2s,baz=218,slow=41						
FINES	**FINESS Array B**	**24.09**	**5**	P	**P**	**06 05 44.9**	**-0.6**
	comp=N,3.8nm,1.0s,baz=177,slow=12,SNR=5.0						
NOA	**NORSAR Array B**	**24.50**	**347**	P	**P**	**06 05 49.4**	**0.0**
	comp=N,0.4nm,0.5s,baz=150,slow=11,SNR=6.3						
EKA	**Eskdalemuir Ar**	**24.64**	**324**	P	**P**	**06 05 50.4**	**-0.2**
	comp=N,1.3nm,0.7s,baz=124,slow=9.8,SNR=2.7						
ARCES	**ARCESS Array B**	**32.13**	**2**	P	**P**	**06 06 57.3**	**0.0**
	comp=N,1.0nm,0.6s,baz=190,slow=10.0,SNR=13						
MKAR	**Makanchi Array**	**44.66**	**58**	P	**P**	**06 08 42.5**	**-0.5**
	comp=N,0.6nm,0.5s,baz=277,slow=6.8,SNR=12						
ZALV	**Zalesovo Beam**	**45.27**	**48**	P	**P**	**06 08 47.2**	**-0.5**
	comp=N,1.1nm,0.4s,baz=279,slow=8.4,SNR=5.9						

IDC 05 06:24:37.6±4.6, 28°.08S×176°.66W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.6/24, mbtmp3.6/2, Error ellipse: s-maj=98.7km s-min=35.0km az=115.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.61**	**223**	Pn	Pb	06 25 08.0	-0.3
	108nm,0.3s,baz=38,slow=19,SNR=3.8						
RAO				Sn	Sn	06 25 28.3	-0.6
	375nm,0.3s,baz=350,slow=23,SNR=7.1						
ASAR	**Alice Springs**	**44.46**	**264**	P	P	06 32 50.4	-0.5
	0.4nm,0.5s,baz=104,slow=7.6,SNR=7.8						
WRA	**Warramunga Arr**	**45.24**	**269**	P	P	06 32 57.4	+0.4
	0.4nm,0.3s,baz=109,slow=7.9,SNR=8.9						
FINES	**FINESS Array B**	**143.34**	**342**	PKP	PKPbc	06 44 11.6	+1.2
	1.1nm,0.7s,baz=64,slow=3.2,SNR=5.0						

*NEIC **05** 06:32:39.8±1.5, 25°.77S×179°.08E±0°.2, h494km±11km, mb4.3/14, Error ellipse: s-maj=23.2km s-min=6.9km az=58.0*
*IDC **05** 06:32:41.3±2.1, 25°.90S×179°.77E, h517km±24km, mb3.5/6, mb1 3.7/8, mb1mx3.4/22, mbtmp4.4/8, Error ellipse: s-maj=27.4km s-min=16.4km az=165.0*
ISC 05 06:32:38.2±0.8, 25.75S±0.10×179.8E±0.1, h475km, n31, σ1s10/31, mb4.3/14, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**12.68**	**190**	P	**P**	**06 35 24.0**	**0.0**
	0.9nm,0.3s,baz=38,slow=2.8,SNR=4.7						
URZ				S	**S**	**06 37 39.8**	**-1.0**
	0.2nm,0.3s,baz=24,slow=20,SNR=3.0						
URZ	**Urewera**	**12.68**	**190**	P	**P**	**06 35 25.1**	**+1.1**
DZM	**Mont Dzumac**	**12.78**	**284**	P	**P**	**06 35 26.3**	**+0.9**
	0.4nm,0.3s,baz=101,slow=14,SNR=7.7						
DZM	**Mont Dzumac**	**12.78**	**284**	P	**P**	**06 35 26.9**	**+1.5**
HNR	**Honiara**	**24.89**	**307**	P	**P**	**06 37 23.4**	**+1.0**
	95nm,0.3s,baz=187,slow=15,SNR=6.3						
ARMA	**Armidale**	**25.28**	**253**	P	**P**	**06 37 27.8**	**+2.0**
ARMA				IAmb	IAmb	06 37 41.8	
	comp=Z,28nm,1.5s						
EIDS	**Eidsvold**	**25.92**	**265**	P	**P**	**06 37 32.2**	**+0.8**
CTA	**Charters Tower**	**31.38**	**273**	P	**P**	**06 38 19.6**	**+0.5**
	comp=Z,9.0nm,0.4s,baz=98,slow=10,SNR=28						
STKA	**Stephens Creek**	**33.93**	**251**	P	**P**	**06 38 41.2**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=96,slow=12,SNR=8.2						
STKA	**Stephens Creek**	**33.93**	**251**	P	**P**	**06 38 41.5**	**+0.7**
COEN	**Coen**	**36.30**	**282**	P	**P**	**06 39 01.4**	**+0.6**
BBOO	**Buckleboo**	**38.61**	**249**	P	**P**	**06 39 19.0**	**-0.6**
AS31	**Alice Springs**	**41.61**	**263**	P	**P**	**06 39 43.9**	**-0.1**
AS31				IAmb	IAmb	06 39 44.9	
	comp=Z,2.2nm,0.5s						
ASAR	**Alice Springs**	**41.61**	**263**	P	**P**	**06 39 43.6**	**-0.4**
	comp=Z,3.5nm,0.4s,baz=92,slow=7.6,SNR=94						
ASAR				S	**S**	**06 45 21.4**	**-4.0**
	comp=Z,0.3nm,0.7s,baz=103,slow=16,SNR=4.9						
ASAR	**Alice Springs**	**41.61**	**263**	P	**P**	**06 39 43.4**	**-0.5**
WR0	**Warramunga Arr**	**41.97**	**268**	P	**P**	**06 39 46.4**	**-0.5**
WR0				IAmb	IAmb	06 39 46.7	
	comp=Z,4.5nm,0.7s						
WRAB	**Tennant Creek**	**42.15**	**268**	P	**P**	**06 39 47.6**	**-0.7**
WRAB				IAmb	IAmb	06 39 48.1	
	comp=Z,7.2nm,0.4s						
WRA	**Warramunga Arr**	**42.16**	**268**	P	**P**	**06 39 47.5**	**-0.8**
	comp=Z,4.0nm,0.4s,baz=99,slow=7.0,SNR=52						
WRA	**Warramunga Arr**	**42.16**	**268**	P	**P**	**06 39 47.7**	**-0.6**
FORT	**Forrest**	**45.55**	**251**	P	**P**	**06 40 14.4**	**-0.2**
KNRA	**Kununurra**	**48.55**	**271**	P	**P**	**06 40 37.3**	**-0.1**
KNRA				IAmb	IAmb	06 40 38.4	
	comp=Z,26nm,1.1s						
FITZ	**Fitzroy Crossi**	**50.56**	**267**	P	**P**	**06 40 52.8**	**+0.5**
FITZ				IAmb	IAmb	06 41 02.1	
	comp=Z,8.5nm,1.3s						
QSPA	**South Pole Qui**	**64.34**	**180**	P	**P**	**06 42 27.0**	**+0.9**
NVAR	**Mina Array Bea**	**86.19**	**44**	P	**P**	**06 44 27.7**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=228,slow=8.0,SNR=4.9						
NVAR	**Mina Array Bea**	**86.19**	**44**	P	**P**	**06 44 28.6**	**-0.2**
XAN	**Xi'an**	**89.76**	**308**	P	**P**	**06 44 44.4**	**-0.9**
XAN				IAmb	IAmb	06 44 48.2	
	comp=Z,7.2nm,1.3s						
TXAR	**Lajitas Array**	**91.54**	**58**	P	**P**	**06 44 53.7**	**0.0**
	comp=Z,0.3nm,0.7s,baz=224,slow=5.2,SNR=4.9						
TXAR	**Lajitas Array**	**91.54**	**58**	P	**P**	**06 44 53.2**	**-0.5**
NB2	**NORSAR Subarra1**	**143.88**	**351**	PKP	PKPbc	06 51 15.6	-1.6
	comp=Z,0.4nm,0.5s,baz=18,slow=3.2						
NOA	**NORSAR Array B**	**143.88**	**351**	PKP	PKPbc	06 51 15.6	-1.6
	comp=Z,1.2nm,0.7s,baz=17,slow=4.8,SNR=4.9						
BRTR	**Keskin Array B**	**148.53**	**305**	PKPbc	**PKPbc**	**06 51 30.5**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=90,slow=0.7,SNR=3.2						

MAN 05 06:33:13.7, 9°.62N×123°.93E, h34km, mb4.2, ML3.0, MS2.6, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.69**	**3**	*e*P	Pb	06 33 28.3	+0.8
LLP				*e*S	Sb	06 33 37.7	+0.8
MSLP	**Maasin**	**1.04**	**61**	*e*P	Pn	06 33 31.6	-0.3
MSLP				*e*S	Sb	06 33 57.2	+10

*IDC **05** 06:40:23.6±1.1, 35°.18N×23°.07E, h0km, mb3.8/9, mb1 3.8/12, mb1mx3.6/36, mbtmp3.6/12, ML3.3/3, Error ellipse: s-maj=22.4km s-min=17.4km az=15.0*
*THE **05** 06:40:24.2, 35°.05N×23°.00E, h0km±3km, ML3.3/2, Error ellipse: s-maj=4.8km s-min=1.1km az=231.0*
*ATH **05** 06:40:27.2, 35°.20N×23°.24E, h9km±2km, ML3.4/4, Error ellipse: s-maj=4.2km s-min=1.4km az=44.0*
ISC 05 06:40:24.1±1.6, 35°.17N±0°.05×23°.08E±0°.05, h1km±10km, n41, σ1s12/50, mb3.7/9, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RODP	**Rodopos**	**0.68**	**55**	P	**Pb**	**06 40 39.5**	**+0.8**
RODP				S	**Sn**	**06 40 51.6**	**-0.4**
ANKY	**Antikythira Is**	**0.72**	**15**	P	**Pb**	**06 40 40.3**	**+0.9**
ANKY				S	**Sb**	**06 40 50.0**	**+0.3**
IMMV	**Iera Moni Meta**	**0.79**	**68**	P	**Pb**	**06 40 40.8**	**+0.2**
IMMV	**Iera Moni Meta**	**0.79**	**68**	P	**Pb**	**06 40 40.6**	**0.0**
IMMV				S	**Sg**	**06 40 48.3**	**-1.2**
IMMV				AML	AML	06 41 02.5	
	comp=N,10878μm,0.8s						
IMMV				AML	AML	06 41 04.7	
	comp=E,7064μm,0.8s						
CHAN	**Chania**	**0.86**	**66**	P	**Pb**	**06 40 42.3**	**+0.5**
GVD	**Gavdhos**	**0.89**	**112**	P	**Pg**	**06 40 41.7**	**+0.5**
GVD				S	**Sb**	**06 40 55.9**	**+1.2**
	comp=E,2μm,0.4s						
GVD	**Gavdhos**	**0.89**	**112**	P	**Pg**	**06 40 41.7**	**+0.5**
GVDS	**Gavdos**	**0.89**	**111**	P	**Pg**	**06 40 41.2**	**0.0**
VAM	**Vamos**	**0.94**	**75**	P	**Pb**	**06 40 43.1**	**-0.2**
VAM	**Vamos**	**0.94**	**75**	P	**Pb**	**06 40 43.1**	**-0.2**
VAM				S	**Sg**	**06 40 52.7**	**-1.7**
VAM				AML	AML	06 41 06.1	
	comp=N,6671μm,0.7s						
VAM				AML	AML	06 41 10.2	
	comp=E,5972μm,0.7s						
KTHA	**Kythira Island**	**1.08**	**359**	P	**Pn**	**06 40 47.4**	**+1.0**
KTHA				S	**Sn**	**06 41 04.8**	**+2.7**
	comp=E,1μm,1.1s						
KTHA	**Kythira Island**	**1.08**	**359**	P	**Pn**	**06 40 46.8**	**+0.4**
KTHA				S	**Sn**	**06 41 01.5**	**-0.6**
KTHA				AML	AML	06 41 07.2	
	comp=N,1260μm,0.7s						
KTHA				AML	AML	06 41 07.4	
	comp=E,3446μm,0.6s						
KTHR	**Kythira**	**1.09**	**357**	P	**Pn**	**06 40 46.7**	**+0.2**
SIVA	**Sivas**	**1.43**	**96**	P	**Pb**	**06 40 51.8**	**+0.3**
SIVA				S	**Sb**	**06 41 10.7**	**+0.6**
SIVA				AML	AML	06 41 24.5	
	comp=N,2863μm,0.6s						
SIVA				AML	AML	06 41 25.8	
	comp=E,4106μm,0.7s						
IDI	**Anoyia**	**1.49**	**85**	Pn	**Pn**	**06 40 51.9**	**-0.1**
	comp=E,3.9nm,0.3s,baz=260,slow=14,SNR=30						
IDI				Sn	**Sn**	**06 41 13.1**	**+1.0**
	comp=E,19nm,0.3s,baz=351,slow=24,SNR=7.7						
IDI				LR	LR	06 41 18.4	
	comp=E,109nm,21.8s,baz=264,slow=37						
IDI	**Anoyia**	**1.49**	**85**	P	**Pn**	**06 40 52.2**	**+0.2**
VLI	**Veliai**	**1.55**	**356**	P	**Pg**	**06 40 55.9**	**+2.2**
LAST	**Lasithi**	**1.96**	**90**	P	**Pb**	**06 41 01.0**	**+0.3**
NPS	**Neapolis**	**2.08**	**87**	P	**Pb**	**06 41 03.4**	**+0.9**
KRND	**KRANIDI**	**2.21**	**1**	P	**Pg**	**06 41 06.5**	**+0.2**
ITM	**Ithomi**	**2.21**	**335**	P	**Pg**	**06 41 06.9**	**+0.4**
SANT	**Santorini**	**2.27**	**58**	P	**Pb**	**06 41 05.1**	**-0.9**
IOSP	**Ios island**	**2.37**	**49**	P	**Pb**	**06 41 06.2**	**-1.3**
ZKR	**Zakros**	**2.57**	**90**	P	**Pn**	**06 41 09.0**	**+2.1**
KLV	**Kalavryta, Ach**	**2.96**	**346**	P	**Pb**	**06 41 17.1**	**-0.5**
KARP	**Karpathos**	**3.36**	**82**	P	**Pn**	**06 41 20.0**	**+2.3**
BRTR	**Keskin Array B**	**9.54**	**58**	Pn	**Pn**	**06 42 44.6**	**+1.8**
	comp=E,0.1nm,0.3s,baz=236,slow=14,SNR=7.0						
VYHS	**Vyhne**	**13.68**	**348**	*e*PN	**Pn**	**06 43 36.6**	**-2.5**
GERES	**GERESS Array B**	**15.32**	**336**	Pn	**Pn**	**06 44 00.6**	**-0.9**
	comp=E,0.1nm,0.3s,baz=146,slow=13,SNR=2.3						
KHC	**Kasperske Hory**	**15.61**	**336**	*e*PN	**P**	**06 44 11.5**	**+1.9**
AKASG	**Malin Array Be**	**16.15**	**14**	Pn	**Pn**	**06 44 11.7**	**-0.4**
	comp=E,0.2nm,0.3s,baz=210,slow=10.0,SNR=4.0						
HFS	**Hagfors**	**25.71**	**349**	P	**P**	**06 45 54.7**	**-0.9**
	comp=E,1.8nm,0.6s,baz=146,slow=11,SNR=8.4						
FINES	**FINESS Array B**	**26.36**	**3**	P	**P**	**06 46 01.2**	**-0.2**
	comp=E,2.5nm,0.9s,baz=193,slow=15,SNR=3.2						
NOA	**NORSAR Array B**	**26.98**	**347**	P	**P**	**06 46 06.9**	**-0.3**
	comp=E,1.2nm,1.0s,baz=154,slow=10,SNR=3.4						
TORD	**Torodi Ar. Bea**	**29.23**	**227**	P	**P**	**06 46 27.4**	**-0.1**
	comp=E,0.3nm,0.4s,baz=38,slow=9.3,SNR=4.1						
ARCES	**ARCESS Array B**	**34.44**	**2**	P	**P**	**06 47 11.9**	**-0.9**
	comp=E,0.7nm,0.6s,baz=191,slow=8.3,SNR=4.1						
MKAR	**Makanchi Array**	**45.19**	**56**	P	**P**	**06 48 41.7**	**-0.8**
	comp=E,0.2nm,0.3s,baz=272,slow=7.5,SNR=6.6						
ZALV	**Zalesovo Beam**	**46.22**	**46**	P	**P**	**06 48 49.6**	**-1.0**
	comp=E,0.4nm,0.3s,baz=260,slow=8.6,SNR=2.6						
CMAR	**Chiang Mai Arr**	**68.26**	**82**	P	**P**	**06 51 27.1**	**+0.1**
	comp=E,0.6nm,0.4s,baz=306,slow=5.4,SNR=4.5						
YKA	**Yellowknife Ar**	**76.90**	**341**	P	**P**	**06 52 18.1**	**+0.5**
	comp=E,0.4nm,0.6s,baz=35,slow=5.6,SNR=9.4						
ASAR	**Alice Springs**

*IDC **05** 07:24:48.0±2.1,6°99S×120°55E,h538km±20km,mb2.7/4, mb1 2.8/5,mb1mx2.6/41,mbtmp3.6/5,Error ellipse: s-maj=114.3km s-min=16.5km az=61.0*
ISC 05 07:24:48.8±1.7,**7°00S**±0°5×**120°7E**±0°8,**h550**km,**n6,** σ0s**75**/**7**,**mb3.0**/3,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.35**	**138**	P	**P**	**07 26 13.2**	**-0.1**
	19nm,0.3s,baz=65,slow=1.7,SNR=11						
BATI				S	**S**	**07 27 21.5**	**-0.8**
	5.5nm,0.3s,baz=288,slow=20,SNR=2.4						
WRA	**Warramunga Arr**	**18.47**	**136**	P	**P**	**07 28 32.2**	**+1.1**
	0.2nm,0.3s,baz=314,slow=11,SNR=9.3						
ASAR	**Alice Springs**	**20.89**	**144**	P	**P**	**07 28 53.5**	**+0.5**
	0.5nm,0.4s,baz=320,slow=8.3,SNR=14						
STKA	**Stephens Creek**	**31.53**	**145**	P	**P**	**07 30 26.2**	**-0.2**
	3.0nm,0.8s,baz=337,slow=13,SNR=3.2						
SONM	**Songino Array**	**56.00**	**348**	P	**P**	**07 33 35.4**	**-0.1**
	0.2nm,0.5s,baz=166,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	**63.45**	**331**	P	**P**	**07 34 25.0**	**0.0**
	0.3nm,0.5s,baz=141,slow=7.4,SNR=7.4						

IDC 05 07:50:57.2±2.2,**1°89N**×**126°93E**,**h0**km,**mb3.1**/3, **mb1 3.3**/3,**mb1mx3.2**/34,**mbtmp3.1**/3,**MS2.5**/1,**Ms1 2.5**/1, **ms1mx2.2**/13,**Error ellipse: s-maj=190.4km s-min=25.0km az=66.0**,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.89**	**162**	P	P	07 56 02.8	+0.1
	0.3nm,0.5s,baz=341,slow=12,SNR=7.8						
ASAR	**Alice Springs**	**26.30**	**165**	P	P	07 56 34.8	+0.1
	0.2nm,0.6s,baz=348,slow=7.6,SNR=6.0						
KSRS	**Korea Array**	**35.40**	**1**	LR	LR	08 17 50.5	
	comp=Z,6.0nm,18.1s,baz=335,slow=6						
MKAR	**Makanchi Array**	**59.17**	**326**	P	P	08 00 59.8	-0.2
	0.2nm,0.7s,baz=124,slow=7.2,SNR=3.0						

*SJA **05** 07:53:55.2±0.6,31°43S×69°29W,h115km±3km,ML3.2, MW3.5*
*GUC **05** 07:53:55.2±0.6,31°42S×69°60W,h151km±8km,ML3.4*
ISC 05 07:53:55.0±1.4,**31°39S**±0°04×**69°29W**±0°04,**h122**km±9km, **n25,**σ1s**03**/**40**,**5C-1D**,**San Juan Province**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTLS	**Leoncito**	**0.41**	**181**	*i* P	**Pn**	**07 54 13.2**	**0.0**
RTLS				*e*S	**Sn**	**07 54 26.7**	**-0.1**
RTLS				IAML		07 54 26.8	
	comp=Z,518nm,0.2s						
ZON	**Zonda**	**0.54**	**107**	*i* P	**Pn**	**07 54 13.4**	**-0.2**
ZON				*e*S	**Sn**	**07 54 26.9**	**-0.7**
ZON				IAML		07 54 28.2	
	comp=Z,295nm,0.2s						
RTLL	**Cerro Villicun**	**0.70**	**85**	*i* P	**Pn**	**07 54 14.7**	**+0.1**
RTLL				IAML		07 54 29.1	
	comp=Z,416nm,0.3s						
RTLL				*e*S	**Sn**	**07 54 29.1**	**-0.4**
RTCV	**Cerro Valdivia**	**0.79**	**127**	*i* P	**Pn**	**07 54 15.6**	**+0.2**
RTCV				*e*S	**Sn**	**07 54 30.1**	**-0.7**
AMOG	**MOGNA**	**0.82**	**57**	*i* P	**Pn**	**07 54 16.3**	**+0.7**
AMOG				*e*S	**Sn**	**07 54 31.5**	**+0.2**
CO02	**Combarbal**	**1.48**	**277**	*e*P	**Pn**	**07 54 22.9**	**+0.4**
CO02				*e*S	**Sn**	**07 54 43.5**	**+0.1**
ARCO	**CERRO ARCO**	**1.48**	**168**	*i* P	**Pn**	**07 54 22.8**	**+0.3**
ARCO				IAML		07 54 45.6	
	comp=Z,276nm,0.7s						
AAGR	**Agrelo**	**1.73**	**167**	*i* P	**Pn**	**07 54 26.2**	**+0.7**
GO04	**Tololo Observa**	**1.78**	**313**↑	*e*P	**Pn**	**07 54 26.9**	**+0.7**
GO04				*i* S	**Sn**	**07 54 50.4**	**+0.6**
ACAN	**Cantantal**	**1.99**	**117**	*i* P	**Pn**	**07 54 29.2**	**+0.6**
FCH	**Farellones**	**2.11**	**203**↓	*e*P	**Pn**	**07 54 31.4**	**+1.1**
FCH				*i* S	**Sn**	**07 54 58.6**	**+1.4**
FCH				IAML		07 55 00.3	
	comp=E,227nm,0.3s						
PEL	**Peldehue**	**2.11**	**214**↑	*e*P	**Pn**	**07 54 30.4**	**+0.3**
PEL				*i* S	**Sn**	**07 54 56.7**	**-0.2**
PEL				IAML		07 54 58.3	
	comp=E,389nm,0.9s						
PEL	**Peldehue**	**2.11**	**214**	*i* P	**Pn**	**07 54 30.3**	**+0.3**
ROCH	**El Roble**	**2.15**	**222**↑	*e*P	**Pn**	**07 54 30.7**	**0.0**
ROCH				*i* S	**Sn**	**07 54 58.5**	**+0.5**
ROCH				IAML		07 55 00.1	
	comp=E,239nm,0.2s						
ROC1	**El Roble**	**2.16**	**222**	*i* P	**Pn**	**07 54 31.1**	**+0.3**
LSCH	**La Serena**	**2.24**	**311**	*e*P	**Pn**	**07 54 31.1**	**-0.5**
LSCH				*i* S	**Sn**	**07 54 58.7**	**-1.0**
LSCH				IAML		07 55 00.5	
	comp=E,163nm,0.5s						
CLCH	**Cerro Calan**	**2.26**	**208**	*e*P	**Pn**	**07 54 32.5**	**+0.6**
CLCH				*i* S	**Sn**	**07 55 00.5**	**+0.2**
CLCH				IAML		07 55 02.7	
	comp=E,463nm,0.7s						
ANTU	**Antumapu**	**2.45**	**207**	*e*P	**Pn**	**07 54 34.8**	**+0.4**
ANTU				*i* S	**Sn**	**07 55 05.8**	**+1.2**
ANTU				IAML		07 55 07.6	
	comp=E,265nm,0.3s						
LMEL	**Las Melosas**	**2.57**	**197**↑	*e*P	**Pn**	**07 54 37.1**	**+1.1**
LMEL				*i* S	**Sn**	**07 55 08.4**	**+1.0**
LMEL				IAML		07 55 17.7	
	comp=N,150nm,0.2s						
VCA	**Vinchina**	**2.81**	**20**	*i* P	**Pn**	**07 54 40.7**	**+1.7**
VCA				IAML		07 55 21.5	
	comp=Z,144nm,0.5s						
COIS	**El Sosneado**	**3.72**	**184**	*i* P	**Pn**	**07 54 49.6**	**-1.3**
TCA	**Tanti**	**4.01**	**90**	*i* P	**Pn**	**07 54 54.9**	**0.0**
CYA	**Choya**	**4.22**	**47**	*i* P	**Pn**	**07 54 57.3**	**-0.3**
GO05	**Huala**	**4.24**	**211**↑	*i* P	**Pn**	**07 54 54.9**	**-2.9**
GO05				*i* S	**Sn**	**07 55 43.0**	**-3.4**
AHML	**Horco Molle**	**5.75**	**38**	*i* P	**Pn**	**07 55 17.3**	**-0.8**

*UCR **05** 08:15:05.7±1.9,8°81N×84°13W,h3km,MD4.2,MW3.7*
*UPA **05** 08:15:07.0±1.2,8°86N×84°08W,h8km±7km,MW4.3*
ISC 05 08:15:06.5±1.6,**8°89N**±0°07×**84°09W**±0°05,**h13**km±12km, **n34,**σ0s**94**/**45**,**2C-1D**,**Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EDDO	**Dominical**	**0.43**	**31**	*e*P	**Pb**	**08 15 15.4**	**-0.5**
EDPN	**Palmar Norte**	**0.63**	**83**	*e*P	**Pb**	**08 15 18.9**	**-0.5**
EDPN				*e*S	**Sn**	**08 15 29.7**	**-1.4**
ELM	**Las Mercedes**	**0.63**	**52**	*e*P	**Pb**	**08 15 19.2**	**-0.3**
EDBA	**Buenos Aires**	**0.85**	**71**	*e*S	**Sn**	**08 15 36.6**	**-0.1**
LCR2	**La Lucha 2**	**0.85**	**6**	*e*P	**Pb**	**08 15 22.9**	**-0.5**
LCR2				*e*S	**Sn**	**08 15 37.2**	**+0.1**
SJS	**Escuela Geolog**	**1.05**	**2**	*e*P	**Pb**	**08 15 26.3**	**-0.3**
EDSV	**San Vito**	**1.10**	**93**	*e*P	**Pg**	**08 15 27.2**	**-0.6**
EDSV				*e*S	**Sn**	**08 15 44.4**	**+1.4**
HDC	**Heredia**	**1.11**	**359**	*e*P	**Pn**	**08 15 27.4**	**-0.6**
HDC	**Heredia**	**1.11**	**359**↑	*i*P	**Pn**	**08 15 27.4**	**-0.6**
HDC				*i* S	**Sn**	**08 15 44.8**	**+1.6**
SRA1	**San Ramn**	**1.25**	**342**	*e*P	**Pb**	**08 15 29.3**	**-0.8**
SBAR3	**San Bartolo, C**	**1.32**	**115**	*e*P	**Pn**	**08 15 30.2**	**-0.5**
LESP3	**La Esperanza,**	**1.37**	**110**	*e*P	**Pn**	**08 15 31.8**	**+0.4**
BRU2	**Volcan**	**1.38**	**94**	*e*P	**Pn**	**08 15 31.4**	**-0.4**
BRU2	**Volcan**	**1.38**	**94**↑	*i*P	**Pn**	**08 15 31.4**	**-0.4**
	baz=295,slow=3.5						
BRU2				*i* S	**Sb**	**08 15 49.8**	**-0.2**
BCO2	**Palmira**	**1.55**	**96**	*i* P	**Pn**	**08 15 34.0**	**0.0**
BCO2				*i* S	**Sb**	**08 15 55.0**	**+0.1**
PTAR3	**Potrerillos Ar**	**1.58**	**97**	*e*P	**Pn**	**08 15 34.5**	**+0.1**
JTS	**Las Juntas de**	**1.64**	**329**	*e*P	**Pn**	**08 15 33.8**	**-1.3**
JTS	**Las Juntas de**	**1.64**	**329**	*e*P	**Pn**	**08 15 35.6**	**+0.5**
CASO	**Castillo**	**1.67**	**338**	*i* P	**Pn**	**08 15 35.9**	**+0.3**
FORC	**Fortuna**	**1.67**	**340**	*i* P	**Pb**	**08 15 36.9**	**-0.3**
DVD	**David**	**1.68**	**105**	*e*P	**Pn**	**08 15 36.0**	**+0.3**
CNI2	**El Empalme, Bo**	**1.68**	**71**↓	*i*P	**Pn**	**08 15 36.1**	**+0.3**
CNI2				*e*S	**Sn**	**08 15 56.4**	**-0.8**
ARE1	**Arenal 1**	**1.68**	**338**	*e*P	**Pn**	**08 15 36.1**	**+0.3**
CEDE	**Laguna Cedeo**	**1.70**	**339**	*i* P	**Pb**	**08 15 36.9**	**-0.9**
PEDE3	**Pedregal, Chir**	**1.72**	**107**	*e*P	**Pn**	**08 15 35.7**	**-0.6**
LOMA3	**Las Lomas, Chi**	**1.74**	**105**	*e*P	**Pn**	**08 15 36.3**	**-0.1**
CHIR3	**Chiriqui UPA,**	**1.81**	**106**	*i* P	**Pn**	**08 15 37.7**	**+0.3**
CHIR3				*i* S	**Sn**	**08 15 59.9**	**-0.3**
CHGR2	**Aguacate**	**1.92**	**88**	*i* P	**Pn**	**08 15 39.0**	**0.0**
CHGR2				*i* S	**Sn**	**08 16 03.9**	**+0.8**
CUI	**Cuipilapa**	**2.06**	**329**	*i* P	**Pb**	**08 15 42.3**	**-1.5**
CUI				*i* S	**Sg**	**08 16 14.9**	**+2.2**
HORNC	**Hornillas**	**2.11**	**329**	*i* P	**Pb**	**08 15 43.5**	**-1.3**
GUAB	**Guayabo de Bag**	**2.13**	**328**	*i* P	**Pn**	**08 15 43.3**	**+1.3**
BUEV	**Buena Vista**	**2.30**	**326**	*e*P	**Pb**	**08 15 46.6**	**-1.5**
GMAL	**Guarumal, Vera**	**3.04**	**111**	*e*P	**Pn**	**08 15 54.7**	**+0.4**
GMAL				*e*S	**Sn**	**08 16 30.4**	**-0.2**
CACAO	**El Cacao, Vera**	**3.54**	**115**	*e*P	**Pn**	**08 16 04.2**	**+2.9**

RSNC 05 08:19:15.4±0.5,**4°58N**×**76°64W**,**h18**km±2km,**ML1.5, 2C-1D**,**Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLMC	**San Jos del P**	**0.48**	**48**	*e*P	Pg	08 19 24.1	-1.1
PLMC				*e*S	Sg	08 19 31.7	0.0
PLMC				*i*		08 19 32.2	
	comp=Z,291nm,0.1s						
PLMC	**San Jos del P**	**0.48**	**48**	*e*P	Pg	08 19 24.2	-1.0
PLMC				*e*S	Sg	08 19 31.8	+0.1
PLMC				*i*		08 19 32.2	
	comp=Z,291nm,0.1s						
YOTC	**Yotoco, Valle**	**0.67**	**153**↑	*i*P	Pb	08 19 27.4	-1.1
YOTC				*e*S	Sb	08 19 37.2	-0.3
YOTC				*i*		08 19 39.0	
	comp=Z,7.8nm,0.2s						
YOTC	**Yotoco, Valle**	**0.67**	**153**↓	*i*P	Pb	08 19 27.5	-1.1
YOTC				↑*i*P	Pb	08 19 27.5	-1.1
YOTC				*e*S	Sb	08 19 37.2	-0.3
YOTC				*i*		08 19 37.6	
	comp=N,20nm,0.1s						
YOTC				*i*		08 19 39.0	
	comp=Z,7.8nm,0.2s						
MALC	**Bahia Malaga**	**0.89**	**231**	*e*P	Pb	08 19 31.2	-1.2
MALC				*e*S	Sb	08 19 42.7	-1.2
MALC				*i*		08 20 08.5	
	comp=Z,26nm,0.6s						
MALC	**Bahia Malaga**	**0.89**	**231**	*e*P	Pb	08 19 31.4	-1.0
MALC				*e*S	Sb	08 19 43.6	-0.4
MALC				*i*		08 19 58.5	
	comp=Z,29nm,0.7s						
CBOC	**Ciudad Bolivar**	**1.42**	**26**	*e*P	Pn	08 19 37.3	-3.2
CBOC				*e*S	Sn	08 19 56.5	-2.3
CBOC				*i*		08 19 58.6	
	comp=Z,2.4nm,0.2s						
CBOC	**Ciudad Bolivar**	**1.42**	**26**	*e*P	Pn	08 19 37.3	-3.2
CBOC				*e*S	Sn	08 19 57.8	-1.0
CBOC				*i*		08 19 58.7	
	comp=Z,2.4nm,0.2s						
GUY2C	**Guyana, Caldas**	**1.42**	**63**	*e*P	Pn	08 19 39.9	-0.9
GUY2C				*e*S	Sn	08 19 58.5	-0.9
GUY2C				*i*		08 20 04.2	
	comp=Z,2.1nm,0.7s						
GUY2C	**Guyana, Caldas**	**1.42**	**63**	*e*P	Pn	08 19 39.9	-0.9
GUY2C				*e*S	Sn	08 19 59.1	-0.2
GUY2C				*i*		08 20 04.3	
	comp=Z,2.1nm,0.7s						
ORTC	**Ortega, Tolima**	**1.55**	**116**	*e*P	Pn	08 19 41.1	-1.0
ORTC				*e*S	Sn	08 20 01.5	-0.3
ORTC				*i*		08 20 04.0	
	comp=Z,2.7nm,0.2s						

*MEX **05** 08:37:32.9±0.7,16°60N×99°72W,h2km±4km,MD4.2*
*NEIC **05** 08:37:33.1±2.8,16°66N±0°06×99°70W±0°04,h21km±8km, Error ellipse: s-maj=9.5km s-min=4.4km az=201.0*
*IDC **05** 08:37:45.1±6.3,17°44N×99°07W,h77km±48km,mb3.2/4, mb1 3.6/8,mb1mx3.4/46,mbtmp3.6/8,ML3.3/3,MS3.4/2, Ms1 3.4/2,ms1mx2.8/13,Error ellipse: s-maj=96.7km s-min=33.1km az=38.0*
ISC 05 08:37:32.8±1.4,**16°70N**±0°05×**99°67W**±0°04,**h12**km±8km, **n43,**σ1s**57**/**54**,**mb3.7**/**7**,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.67**	**301**	*e*P	**Pg**	**08 37 45.7**	**-0.1**
CAIG				*e*S	**Sg**	**08 37 54.7**	**+0.1**
CAIG	**El Cayaco**	**0.67**	**301**		**Pg**	**08 37 45.7**	**-0.1**
CAIG					**Sg**	**08 37 54.7**	**+0.1**
MEIG	**Mezcala**	**1.22**	**2**	*e*P	**Pg**	**08 37 55.0**	**-1.3**
MEIG				*i* S	**Sg**	**08 38 11.8**	**-0.4**
MEIG	**Mezcala**	**1.22**	**2**		**Pg**	**08 37 55.0**	**-1.3**
MEIG					**Sg**	**08 38 10.8**	**-1.4**
PNIG	**Pinotepa**	**1.51**	**102**	*e*P	**Pn**	**08 37 57.2**	**-2.6**
PNIG				*i* S	**Sn**	**08 38 16.9**	**-2.6**
PNIG	**Pinotepa**	**1.51**	**102**		**Pn**	**08 37 57.2**	**-2.6**
PNIG					**Sn**	**08 38 16.9**	**-2.6**
PLIG	**Platanillo**	**1.69**	**5**	*e*P	**Pn**	**08 38 02.1**	**-0.2**
PLIG				*i* S	**Sn**	**08 38 22.8**	**-1.2**
PLIG	**Platanillo**	**1.69**	**5**		**Pn**	**08 38 02.1**	**-0.2**
PLIG					**Sn**	**08 38 22.8**	**-1.2**
ARIG	**Puente Sto Nin**	**1.70**	**338**	*e*P	**Pn**	**08 38 00.6**	**-1.8**
ARIG				*i* S	**Sn**	**08 38 22.4**	**-1.7**
ARIG	**Puente Sto Nin**	**1.70**	**338**		**Pn**	**08 38 00.6**	**-1.8**
ARIG					**Sn**	**08 38 22.4**	**-1.7**
ZIIG	**Zihuatanejo**	**1.94**	**298**	*e*P	**Pn**	**08 38 04.4**	**-1.3**
ZIIG				*i* S	**Sn**	**08 38 27.6**	**-2.3**
ZIIG	**Zihuatanejo**	**1.94**	**298**		**Pn**	**08 38 04.4**	**-1.3**
ZIIG					**Sn**	**08 38 27.6**	**-2.3**
YAIG	**Yautepec**	**2.23**	**15**	*e*P	**Pn**	**08 38 08.8**	**-0.9**
YAIG				*i* S	**Sn**	**08 38 37.6**	**+0.3**
YAIG	**Yautepec**	**2.23**	**15**		**Pn**	**08 38 08.8**	**-0.9**
YAIG					**Sn**	**08 38 37.6**	**+0.3**
UNM	**Universidad Na**	**2.66**	**10**	Pn	**Pn**	**08 38 16.1**	**+0.4**
VHO	**Vista Hermosa**	**2.84**	**82**	*i* P	**Pn**	**08 38 17.5**	**-0.8**
VHO				*i* S	**Sn**	**08 38 51.9**	**-0.6**
MOIG	**Morelia**	**3.29**	**334**		**Pn**	**08 38 26.4**	**+1.9**
APG	**El Apazote**	**9.02**	**100**	P	**Pn**	**08 39 47.0**	**+3.8**
	0.4nm,0.3s,baz=305,slow=12,SNR=3.7						
H06E1	**SOCORRO T-PHAS**	**10.92**	**283**	T	T	08 51 12.2	
	SNR=38						
H06S1	**SOCORRO T**	**10.94**	**282**	T	T	08 51 12.3	
	SNR=14						
TEIG	**Tepich**	**11.37**	**70**	P	**Pn**	**08 40 14.1**	**-1.0**
TEIG				S	Sn	08 42 14.3	-7.9
TEIG	**Tepich**	**11.37**	**70**	Pn	Pn	08 40 22.2	+7.0
TXAR	**Lajitas Array**	**13.10**	**344**	P	**Pn**	**08 40 41.5**	**+2.6**
	0.0nm,0.3s,baz=161,slow=12,SNR=3.3						
TXAR	**Lajitas Array**	**13.10**	**344**	Pn	**Pn**	**08 40 40.7**	**+1.7**
W39A	**Magazine**	**19.16**	**15**	P	**P**	**08 41 56.3**	**+0.1**
ANMO	**Albuquerque**	**19.16**	**343**	P	**P**	**08 41 56.5**	**+0.1**
	0.1nm,0.3s,baz=151,slow=12,SNR=4.1						
ANMO	**Albuquerque**	**19.16**	**343**	P	**P**	**08 41 57.8**	**+1.4**
U40A	**Yellville**	**20.49**	**16**	P	**P**	**08 42 10.3**	**-0.5**
U40A				IAmb	IAmb	08 42 22.0	
	comp=Z,5.2nm,0.9s						
XPFO	**Pion Flat**	**22.62**	**321**	P	**P**	**08 42 35.5**	**+1.6**
XPFO				IAmb	IAmb	08 42 53.2	
	comp=Z,6.6nm,1.4s						
PFO	**Pinyon Flats O**	**22.63**	**321**	P	**P**	**08 42 35.5**	**+1.6**
PFO				IAmb	IAmb	08 42 53.2	
	comp=Z,6.6nm,1.4s						
CPCT	**Cooper Cave**	**23.05**	**33**	P	**P**	**08 42 39.2**	**+1.0**
CPCT				IAmb	IAmb	08 42 51.2	
	comp=Z,8.7nm,1.3s						
PKCU	**Pink Cliffs**	**23.48**	**334**		**S**	**08 46 54.8**	**-1.9**
P46A	**Rosedale**	**25.29**	**23**	P	**P**	**08 43 01.5**	**+2.4**
NLU	**North Lily Min**	**25.56**	**337**		**PcP**	**08 46 31.9**	**-1.3**
NVAR	**Mina Array Bea**	**27.12**	**327**	P	**P**	**08 43 18.3**	**+2.1**
	comp=Z,0.8nm,0.8s,baz=150,slow=9.3,SNR=7.0						
NVAR	**Mina Array Bea**	**27.12**	**327**	P	**P**	**08 43 16.9**	**+0.8**
PD31	**Pinedale Array**	**27.32**	**344**	P	**P**	**08 43 19.0**	**+1.2**
PD31				IAmb	IAmb	08 43 23.2	
	comp=Z,2.6nm,1.3s						
PDAR	**Pinedale Array**	**27.32**	**344**	P	**P**	**08 43 17.7**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=152,slow=8.1,SNR=7.8						
PDAR				LR	LR	08 55 42.8	
	comp=Z,86nm,18.7s,baz=136,slow=40						
PDAR	**Pinedale Array**	**27.32**	**344**	P	**P**	**08 43 18.9**	**+1.1**
ELK	**Elko**	**27.49**	**334**	LR	LR	08 54 36.3	
	comp=Z,84nm,19.9s,baz=20,slow=37						
JTMT	**Jette**	**33.22**	**342**	P	**P**	**08 44 08.6**	**-1.3**
YKA	**Yellowknife Ar**	**46.93**	**351**	P	**P**	**08 46 02.7**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=157,slow=7.2,SNR=7.5						
ILAR	**Eielson Array**	**57.52**	**338**	P	**P**	**08 47 23.2**	**+1.3**
	comp=Z,0.2nm,0.7s,baz=120,slow=8.4,SNR=3.2						

*ISK **05** 08:48:42.0,34°54N×32°94E,h11km,ML3.1/16*
*DDA **05** 08:48:43.4,34°77N×32°80E,h8km±3km,ML2.5*
*NIC **05** 08:48:43.1±0.0,34°56N×33°01E,h20km±2km,Md3.5/2, Ml3.5/4*
ISC 05 08:48:43.1±1.3,**34°54N**±0°05×**32°92E**±0°03,**h16**km±7km, **n44,**σ1s**60**/**64**,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SZAC	**Souni**	**0.22**	**353**	P	**Pb**	**08 48 48.9**	**+0.1**
SZAC				AML	AML	08 48 52.4	
	41nm,0.3s						
SZAC				AML	AML	08 48 52.4	
	41nm,0.3s						
SZAC				S	**Sg**	**08 48 52.9**	**+1.3**
SZAC				AML	AML	08 48 54.2	
	29nm,0.5s						
SZAC				AML	AML	08 48 54.2	
	29nm,0.5s						
SZAC				AMd		08 50 52.9	
SZAC				AMd		08 50 52.9	
ASGA	**Asgata**	**0.37**	**48**	P	**Pg**	**08 48 50.3**	**-0.4**
ASGA				S	**Sg**	**08 48 55.1**	**-0.8**
ASGA				AML	AML	08 48 55.8	
	20nm,0.6s						
ASGA				AML	AML	08 48 55.8	
	20nm,0.6s						
ASGA				AMd		08 50 45.0	
ASGA				AMd		08 50 45.0	
NATA	**Nata**	**0.37**	**310**	P	**Pb**	**08 48 52.2**	**+0.9**
CSS	**Mathiatis**	**0.55**	**39**	PG	**Pg**	**08 48 52.8**	**-1.1**
CSS	**Mathiatis**	**0.55**	**39**	P	**Pg**	**08 48 52.6**	**-1.4**
LEF	**Lefka**	**0.58**	**358**	PG	**Pg**	**08 48 53.9**	**-0.7**
LEF				SG	**Sg**	**08 49 02.2**	**-0.2**
LEF	**Lefka**	**0.58**	**358**	*i* P	**Pg**	**08 48 53.3**	**-1.3**
LEF				*i* S	**Sg**	**08 49 02.0**	**-0.3**
AKIN	**Akıncılar- Kıb**	**0.66**	**43**	PG	**Pg**	**08 48 54.9**	**-1.2**
AKIN				SG	**Sg**	**08 49 04.3**	**-0.5**
ALFC	**Alefka**	**0.67**	**337**	P	**Pg**	**08 48 55.9**	**-0.4**
ALFC				AML	AML	08 49 06.9	
	9.5nm,0.2s						
ALFC				AML	AML	08 49 06.9	
	9.5nm,0.2s						
ALFC				S	**Sb**	**08 49 07.0**	**+1.5**
ALFC				AML	AML	08 49 07.1	
	8.4nm,0.8s						
ALFC				AML	AML	08 49 07.1	
	8.4nm,0.8s						
AKMS	**Akamas**	**0.68**	**315**	P	**Pb**	**08 48 57.1**	**+0.6**
AKMS				S	**Sb**	**08 49 07.6**	**+1.9**
AKMS				AML	AML	08 49 11.0	
	4.0nm,0.5s						
AKMS				AML	AML	08 49 11.0	
	4.0nm,0.5s						
AKMS				AML	AML	08 49 12.0	
	4.4nm,0.6s						
AKMS				AML	AML	08 49 12.0	
	4.4nm,0.6s						
EREN	**Erenkoy**	**1.43**	**46**	PN	**Pn**	**08 49 08.4**	**0.0**
EREN				SN	**Sb**	**08 49 27.6**	**+0.3**
EREN	**Erenkoy**	**1.43**	**46**	*i* P	**Pb**	**08 49 09.2**	**-0.2**
EREN				*i* S	**Sg**	**08 49 29.1**	**-0.1**
EREN				IAML		08 49 37.0	
	comp=N,94nm,0.9s						
EREN				IAML		08 49 39.0	
	comp=E,90nm,0.5s						
TEKE	**Tekeli-Mersin**	**1.61**	**6**	PN	**Pn**	**08 49 10.8**	**-0.1**
YORU	**Yoruktepe-Mers**	**1.66**	**14**	PN	**Pn**	**08 49 11.9**	**+0.3**
GULN	**MERSIN_Gulnar**	**1.72**	**17**	*i* P	**Pn**	**08 49 11.6**	**-0.8**
GULN				*i* S	**Sn**	**08 49 32.6**	**-1.4**
GULN				IAML		08 49 36.0	
	comp=N,47nm,0.3s						
GULN				IAML		08 49 36.0	
	comp=E,47nm,0.3s						
TISA	**Tisan-Mersin**	**1.74**	**21**	PN	**Pn**	**08 49 12.9**	**+0.3**
YESI	**Yesilovacik-Me**	**1.76**	**20**	PN	**Pn**	**08 49 12.3**	**-0.6**
GAZI	**Gazipasa**	**1.76**	**344**	PN	**Pn**	**08 49 13.2**	**+0.2**
GAZI	**Gazipasa**	**1.76**	**344**	*i* P	**Pn**	**08 49 12.8**	**-0.2**
GAZI				*i* S	**Sn**	**08 49 33.5**	**-1.6**
GAZI				IAML		08 49 41.0	
	comp=N,66nm,0.3s						
GAZI				IAML		08 49 49.0	
	comp=E,48nm,0.5s						
IKL	**Isikli**	**1.81**	**20**	PN	**Pn**	**08 49 13.6**	**0.0**
BERE	**Bereket-Mersin**	**1.82**	**8**	PN	**Pn**	**08 49 13.7**	**-0.2**
TEVE	**Tevekalti-Mers**	**1.94**	**13**	PN	**Pn**	**08 49 15.8**	**+0.3**
SILI	**Silifke-Mersin**	**2.00**	**24**	PN	**Pn**	**08 49 16.8**	**+0.5**
KEBE	**Keben-Mersin**	**2.01**	**19**	PN	**Pn**	**08 49 17.5**	**+1.0**
ERMK	**Ermenek**	**2.10**	**360**	*i* P	**Pn**	**08 49 18.9**	**+1.1**
ERMK				*i* S	**Sn**	**08 49 45.0**	**+1.3**
ERMK				IAML		08 49 52.0	
	comp=E,69nm,0.8s						
ERMK				IAML		08 49 53.0	
	comp=N,70nm,0.4s						
KIZK	**Mersin**	**2.18**	**27**	PN	**Pn**	**08 49 19.3**	**+0.6**
KIZK	**Mersin**	**2.18**	**27**	*i* P	**P

LSCH				*i* S		Sn	09 06 22.2 -1.6
RTLL	**Cerro Villicun**	**2.56**	**169**	⇑*i* P		Pn	**09 06 01.1 +0.7**
RTLL				*i* S		Sn	**09 06 30.4 -1.7**
RTLL				IAML			09 06 32.6
	comp=E,1μm,0.4s						
RTLL	**Cerro Villicun**	**2.56**	**169**	*i* P		Pn	**09 06 00.9 +0.5**
RTLL				*eS*		Sn	**09 06 31.2 -0.9**
RTLL				IAML			09 06 32.9
	comp=Z,247nm,0.4s						
ZON	**Zonda**	**2.75**	**173**	*i* P		Pn	**09 06 03.3 +0.6**
ZON				*eS*		Sn	**09 06 35.1 -1.2**
ZON				IAML			09 06 39.0
	comp=Z,51nm,0.3s						
CFA	**Coronel Fontan**	**2.88**	**166**	*i* P		Pn	**09 06 05.0 +0.6**
CFA				*eS*		Sn	**09 06 38.5 -0.7**
CYA	**Choya**	**2.88**	**84**	*i* P		Pn	**09 06 05.6 +1.2**
CYA				IAML			09 06 57.6
	comp=Z,44nm,0.4s						
CO02	**Combarbal**	**2.92**	**215**	⇓*i* P		Pn	**09 06 05.5 +0.4**
CO02				*i* S		Sn	**09 06 39.7 -0.6**
CO02				IAML			09 06 44.5
	comp=E,302nm,0.4s						
RTLS	**Leoncito**	**2.99**	**184**	⇓*i* P		Pn	**09 06 07.3 +1.3**
RTLS				IAML			09 06 46.7
	comp=Z,25nm,0.2s						
RTCV	**Cerro Valdivia**	**3.08**	**172**	*i* P		Pn	**09 06 07.7 +0.8**
RTCV				*eS*		Sn	**09 06 43.0 -0.8**
RTCV				IAML			09 06 46.4
	comp=Z,37nm,0.3s						
ASAL	**Salagasta**	**3.78**	**177**	*i* P		Pn	**09 06 17.8 +1.6**
ASAL				IAML			09 07 06.4
	comp=Z,33nm,1.0s						
ACAN	**Cantantal**	**3.81**	**155**	*i* P		Pn	**09 06 17.7 +1.1**
ACAN				IAML			09 07 03.8
	comp=Z,15nm,0.3s						
AHML	**Horco Molle**	**3.86**	**59**	*i* P		Pn	**09 06 15.3 -2.0**
AHML				IAML			09 07 27.0
	comp=Z,23nm,0.8s						
ARCO	**CERRO ARCO**	**4.02**	**179**	*i* P		Pn	**09 06 21.0 +1.5**
ARCO				IAML			09 07 14.3
	comp=Z,30nm,0.4s						
AAGR	**Agrelo**	**4.27**	**177**	*i* P		Pn	**09 06 24.3 +1.6**
ROC1	**El Roble**	**4.49**	**202**	*i* P		Pn	**09 06 24.6 -1.1**
PEL	**Peldehue**	**4.54**	**198**	*eP*		Pn	**09 06 26.3 0.0**
PEL	**Peldehue**	**4.54**	**198**	*i* P		Pn	**09 06 27.0 +0.7**
TCA	**Tanti**	**4.62**	**124**	*i* P		Pn	**09 06 27.6 +0.3**
TCA				IAML			09 07 28.3
	comp=Z,9.5nm,1.9s						
FCH	**Farellones**	**4.63**	**193**	*eP*		Pn	**09 06 28.9 +1.2**
FCH				*i* S		Sn	**09 07 19.6 -1.3**
SLA	**San Lorenzo**	**5.16**	**39**	⇓*i* P		Pn	**09 06 38.1 +3.4**
SLA				IAML			09 08 06.5
	comp=Z,13nm,3.6s						
PB10	**IPOC Station P**	**5.44**	**345**	*i* P		Pn	**09 06 39.6 +1.3**
PB10				IAML			09 08 06.6
	comp=Z,21nm,3.0s						
PB15	**IPOC Station P**	**5.59**	**356**	*i* P		Pn	**09 06 42.3 +1.8**
PB15				IAML			09 07 52.5
	comp=Z,48nm,0.2s						
PB05	**IPOC Station P**	**6.02**	**350**	*i* P		Pn	**09 06 46.5 +0.4**
PB05				IAML			09 08 10.5
	comp=Z,14nm,0.9s						
LVC	**Limon Verde**	**6.17**	**1**	*i* P		Pn	**09 06 50.4 +1.9**
LVC				IAML			09 08 41.7
	comp=Z,8.2nm,4.0s						
PB04	**IPOC Station P**	**6.52**	**351**	*i* P		Pn	**09 06 53.9 +0.9**

UPA 05 09:09:45.4±2.4,7°43N×80°91W,h20km±6km,ML3.0, MW3.7,Panama

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CACAO	**El Cacao, Vera**	**0.10**	**147**	*i* P	Pb	09 09 49.7	+0.4
CACAO				AMP		09 09 49.9	
	comp=Z,17μm,0.1s						
CACAO				*i* S	Sb	09 09 52.0	0.0
MARI3	**Mariato, Verag**	**0.23**	**341**	*i* P	Pb	09 09 51.4	+0.3
MARI3				*i* S	Sb	09 09 57.5	+2.6
GMAL	**Guarumal, Vera**	**0.46**	**317**	*i* P	Pn	09 09 56.1	-0.8
GMAL				AMP		09 09 56.3	
	comp=Z,189nm,0.1s						
GMAL				*eS*	Sb	09 10 02.0	+0.7
OCU3	**Ocu, Herrera**	**0.53**	**15**	*eP*	Pb	09 09 55.2	-0.9
OCU3				*eS*	Sb	09 10 02.8	-0.6
RSUS3	**Rio de Jesus,**	**0.61**	**336**	*eP*	Pb	09 09 55.2	-2.1
AZU	**Azuero**	**0.73**	**60**	*eP*	Pn	09 10 00.1	-0.5
MESA3	**La Mesa, Verag**	**0.77**	**339**	*eP*	Pb	09 09 59.5	-0.5
SFRA3	**San Francisco,**	**0.82**	**356**	*eP*	Pb	09 09 59.8	-1.2
CNAZ3	**Canazas, Verag**	**0.96**	**342**	*eP*	Pb	09 10 02.8	-0.6

*JMA **05** 09:13:52.7±0.1,24°46N×122°80E,h90km±1km,M2.9*
*TAP **05** 09:13:52.5,24°43N×122°81E,h88km,ML3.9,B*
ISC 05 09:13:52.9±1.2,24°46N±0°03×122°81E±0°02,h90km±6km, n112,σ0°86/197,3C-1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.12**	**93**	P	Pn	**09 14 05.7**	**+0.1**
JYNG				S	Sn	**09 14 15.0**	**-0.1**
YOJ	**Yonaguni jima**	**0.18**	**89**	P	Pn	**09 14 05.3**	**-0.5**
	baz=77						
YOJ				S	Sn	09 14 15.3	-0.1
	baz=77						
YOJ	**Yonaguni jima**	**0.18**	**89**	P	Pn	**09 14 05.9**	**+0.1**
YOJ				S	Sn	**09 14 15.3**	**-0.1**
EOS1	**EOS1**	**0.63**	**278**	P	Pn	**09 14 08.8**	**+0.1**
	baz=280						
EOS1				*eS*	Sn	**09 14 20.8**	**+0.4**
	baz=280						
IRIF	**Iriomote-Funau**	**0.85**	**98**	P	Pn	**09 14 11.1**	**+0.2**
IRIF				S	Sn	**09 14 24.3**	**-0.1**
EGS		**0.89**	**296**	P	Pn	**09 14 11.2**	**-0.1**
	baz=297						
EGS				*eS*	Sn	**09 14 25.2**	**+0.1**
	baz=297						
TWC	**Suao**	**0.89**	**280**	P	Pn	**09 14 11.2**	**-0.1**
	baz=281						
TWC				*eS*	Sn	**09 14 24.4**	**-0.7**
	baz=281						
TWB1	**Santiao Chiao**	**0.93**	**306**	P	Pn	**09 14 11.4**	**-0.4**
	baz=307						
TWB1				*eS*	Sn	**09 14 26.7**	**+0.8**
	baz=307						
NANB	**Nanao**	**0.97**	**268**	P	Pn	**09 14 12.4**	**+0.2**
	baz=269						
NANB				*eS*	Sn	**09 14 27.7**	**+1.0**
	baz=269						
ENA	**Nanau**	**0.97**	**268**	P	Pn	**09 14 12.6**	**+0.3**
	baz=269						
ENA				S	Sn	**09 14 27.2**	**+0.4**
	baz=269						
NTC	**Toucheng**	**0.97**	**294**	*i* P	Pn	**09 14 12.3**	**0.0**
	baz=295						
NTC				*eS*	Sn	**09 14 25.6**	**-1.2**
	baz=295						
HATJ	**Hateruma jima**	**0.99**	**114**	P	Pn	**09 14 13.2**	**+0.7**
HATJ				*eS*	Sn	**09 14 28.1**	**+0.9**
ILA	**Ilan**	**1.01**	**288**	*eS*	Sn	**09 14 27.9**	**+0.3**
	baz=289						
TIPB	**Shuangxi**	**1.03**	**300**	⇓*i* P	Pn	**09 14 12.8**	**-0.2**
	baz=301						
TIPB				*eS*	Sn	**09 14 27.1**	**-1.0**
	baz=301						
TWE	**Neicheng**	**1.07**	**284**	P	Pn	**09 14 13.7**	**+0.2**
	baz=285						
TWE				*eS*	Sn	**09 14 28.5**	**-0.4**
	baz=285						
SLBB	**Yuanshan**	**1.11**	**286**	*eP*	Pn	**09 14 13.0**	**-0.9**
	baz=286						
JKRS	**Kuro-shima**	**1.11**	**101**	P	Pn	**09 14 14.5**	**+0.6**
JKRS				S	Sn	**09 14 30.6**	**+0.9**
NWF	**Wu-fen Shan**	**1.12**	**303**	*eP*	Pn	**09 14 14.5**	**+0.5**
	baz=304						
NWF				*eS*	Sn	**09 14 29.6**	**-0.3**
	baz=304						
WFSB	**Wu-fen Shan**	**1.12**	**303**	P	Pn	**09 14 14.3**	**+0.3**
	baz=304						
WFSB				*eS*	Sn	**09 14 29.6**	**-0.2**
	baz=304						
NACB	**Ninganchiao**	**1.15**	**256**	P	Pn	**09 14 14.1**	**-0.2**
	baz=256						
NACB				S	Sn	**09 14 29.6**	**-0.8**
	baz=256						
ENTT	**Nioudou**	**1.15**	**279**	P	Pn	**09 14 14.8**	**+0.5**
	baz=280						
ENTT				S	Sn	**09 14 31.0**	**+0.5**
	baz=280						
TWD	**Chiawan**	**1.17**	**251**	P	Pn	**09 14 14.4**	**-0.1**
	baz=252						
TWD				S	Sn	**09 14 29.9**	**-1.0**
	baz=252						
NDT	**Datong Townshi**	**1.19**	**277**	P	Pn	**09 14 15.5**	**+0.7**
	baz=278						
NDT				S	Sn	**09 14 31.5**	**+0.1**
	baz=278						
HWA	**Hwalien**	**1.20**	**247**	*eS*	Sn	**09 14 32.0**	**+0.5**
	baz=247						
JIJ	**Ishigaki jima**	**1.22**	**94**	P	Pn	**09 14 15.2**	**+0.1**
JIJ				S	Sn	**09 14 31.2**	**-0.7**
TWA	**Mucha**	**1.23**	**295**	*eP*	Pn	**09 14 15.8**	**+0.4**
	baz=296						
TWA				S	Sn	**09 14 31.8**	**-0.4**
	baz=296						
NWLT	**Wulai**	**1.23**	**285**	P	Pn	**09 14 15.7**	**+0.3**
	baz=286						
NWLT				S	Sn	**09 14 31.9**	**-0.4**
	baz=286						
ENLB	**Shoufeng**	**1.23**	**244**	P	Pn	**09 14 14.8**	**-0.5**
	baz=244						
ENLB				*i* S	Sn	**09 14 31.7**	**-0.5**
	baz=244						
ETLH	**Xiulin Townshi**	**1.24**	**259**	P	Pn	**09 14 15.5**	**0.0**
	baz=259						
ETLH				S	Sn	**09 14 31.8**	**-0.7**
	baz=259						
NNSH	**Datong**	**1.30**	**269**	P	Pn	**09 14 16.5**	**+0.2**
	baz=269						
NNSH				*eS*	Sn	**09 14 33.7**	**-0.2**
	baz=269						
TATO	**Taipei**	**1.31**	**293**	P	Pn	**09 14 16.5**	**+0.2**
	baz=294						
TATO				*eS*	Sn	**09 14 33.2**	**-0.6**
	baz=294						
NNS	**Nan Shan**	**1.31**	**269**	P	Pn	**09 14 16.3**	**-0.1**
	baz=270						
NNS				*eS*	Sn	**09 14 33.6**	**-0.5**
	baz=270						
YM01	**YM01**	**1.32**	**302**	⇑*i* P	Pn	**09 14 16.8**	**+0.3**
	baz=302						
YM01				*eS*	Sn	**09 14 34.2**	**0.0**
	baz=302						
YHNB	**Yeheng**	**1.32**	**279**	P	Pn	**09 14 16.9**	**+0.4**
	baz=280						
YHNB				S	Sn	**09 14 34.6**	**+0.3**
	baz=280						
YM08	**YM08**	**1.33**	**303**	P	Pn	**09 14 16.8**	**+0.3**
	baz=304						
YM08				*eS*	Sn	**09 14 34.0**	**-0.3**
	baz=304						
YM11	**YM11**	**1.33**	**302**	P	Pn	**09 14 17.0**	**+0.4**
	baz=303						
YM11				*eS*	Sn	**09 14 34.4**	**0.0**
	baz=303						
YM10	**YM10**	**1.33**	**302**	P	Pn	**09 14 16.8**	**+0.2**
	baz=302						
YM10				*eS*	Sn	**09 14 34.6**	**+0.1**
	baz=302						
YM05	**YM05**	**1.33**	**302**	⇑*i* P	Pn	**09 14 17.1**	**+0.4**
	baz=302						
YM05				*eS*	Sn	**09 14 34.3**	**-0.2**
	baz=302						
NSK	**Sanguang**	**1.34**	**280**	P	Pn	**09 14 17.3**	**+0.6**
	baz=280						
NSK				*i* S	Sn	**09 14 34.9**	**+0.2**
	baz=280						
YM04	**YM04**	**1.35**	**301**	P	Pn	**09 14 16.8**	**0.0**
	baz=301						
YM04				S	Sn	**09 14 34.4**	**-0.5**
	baz=301						
TWY	**Chenhua**	**1.37**	**307**	*eP*	Pn	**09 14 17.3**	**+0.4**
	baz=307						
TWY				*eS*	Sn	**09 14 35.9**	**+0.8**
	baz=307						
JISG	**Ishigakijimahi**	**1.37**	**84**	P	Pn	**09 14 16.9**	**-0.1**
JISG				S	Sn	**09 14 34.4**	**-0.9**
ESL	**Shilin**	**1.41**	**243**	*eP*	Pn	**09 14 17.3**	**-0.3**
	baz=243						
ESL				*eS*	Sn	**09 14 35.7**	**-0.5**
	baz=243						
TWS1	**Kuangyinshan**	**1.42**	**297**	P	Pn	**09 14 17.9**	**+0.3**
	baz=297						
TWS1				S	Sn	**09 14 36.5**	**+0.2**
	baz=297						
NTST	**Danshui**	**1.42**	**300**	*eP*	Pn	**09 14 18.1**	**+0.4**
	baz=300						
WLTB	**Daxi**	**1.47**	**286**	*eP*	Pn	**09 14 17.9**	**-0.3**
	baz=286						
WLTB				S	Sn	**09 14 38.2**	**+0.7**
	baz=286						
EGFH	**Guangfu**	**1.49**	**238**	P	Pn	**09 14 18.4**	**-0.1**
	baz=239						
EGFH				*eS*	Sn	**09 14 37.3**	**-0.6**
	baz=239						
TWT	**Tachien**	**1.50**	**263**	*eP*	Pn	**09 14 19.9**	**+1.1**
	baz=263						
TWT				S	Sn	**09 14 38.8**	**+0.2**
	baz=263						
TDCB	**Techi**	**1.52**	**263**	P	Pn	**09 14 19.6**	**+0.6**
	baz=263						
TDCB				S	Sn	**09 14 38.5**	**-0.3**
	baz=263						
NCU	**National Centr**	**1.56**	**289**	*eS*	Sn	**09 14 40.1**	**+0.6**
	baz=289						
NCUH	**Zhongli**	**1.56**	**289**	S	Sn	**09 14 39.8**	**+0.2**
	baz=289						
OWD	**Renai**	**1.57**	**252**	*eP*	Pn	**09 14 19.7**	**0.0**
	baz=252						
OWD				S	Sn	**09 14 39.1**	**-1.0**
	baz=252						
HGSD	**Ruisui**	**1.59**	**233**	*eP*	Pn	**09 14 20.1**	**+0.3**
	baz=233						
HGSD				*eS*	Sn	**09 14 39.6**	**-0.6**
	baz=233						
LIOB	**Emei**	**1.65**	**277**	P	Pn	**09 14 21.2**	**+0.7**
	baz=277						
LIOB				*eS*	Sn	**09 14 41.8**	**+0.3**
	baz=277						
NSTT	**Nanjuang**	**1.66**	**276**	*eP*	Pn	**09 14 21.2**	**+0.6**
	baz=276						
NSTT				*eS*	Sn	**09 14 41.8**	**+0.1**
	baz=276						
EHY	**Hungye**	**1.66**	**235**	*eP*	Pn	**09 14 20.6**	**-0.1**
	baz=235						
EHY				*eS*	Sn	**09 14 40.5**	**-1.3**
	baz=235						
NHW	**Xinwu Township**	**1.69**	**289**	*eS*	Sn	**09 14 42.6**	**0.0**
	baz=289						
SBCB	**Hsinchu**	**1.69**	**282**	*eS*	Sn	**09 14 42.9**	**+0.4**
	baz=282						
WHP	**Taichung City**	**1.71**	**264**	*eP*	Pn	**09 14 22.8**	**+1.4**
	baz=264						
WHP				*eS*	Sn	**09 14 43.3**	**+0.2**
	baz=264						
JTJ	**Tarama**	**1.73**	**84**	P	Pn	**09 14 21.9**	**+0.3**
JTJ				S	Sn	**09 14 42.6**	**-0.8**
YULB	**Yu-li**	**1.75**	**233**	P	Pn	**09 14 21.4**	**-0.4**
	baz=233						
YULB				*eS*	Sn	**09 14 43.1**	**-0.7**
	baz=233						
TWF1	**Yuli**	**1.77**	**232**	P	Pn	**09 14 22.1**	**0.0**
	baz=231						
TWF1				*eS*	Sn	**09 14 43.8**	**-0.6**
	baz=231						
DPDB	**Guoxing**	**1.77**	**257**	*eP*	Pn	**09 14 22.8**	**+0.7**
	baz=257						
DPDB				*eS*	Sn	**09 14 45.2**	**+0.8**
	baz=257						
SSLB	**Suanglung**	**1.82**	**249**	*eP*	Pn	**09 14 23.6**	**+0.8**
	baz=249						
SSLB				*eS*	Sn	**09 14 45.8**	**+0.2**
	baz=249						
SMLT	**Sun Moon Lake**	**1.84**	**252**	*eP*	Pn	**09 14 25.0**	**+1.9**
	baz=252						
SMLT				*eS*	Sn	**09 14 47.7**	**+1.7**
	baz=252						
TYC	**Yuchr**	**1.87**	**253**	*eP*	Pn	**09 14 24.6**	**+1.2**
	baz=253						
TYC				*eS*	Sn	**09 14 47.8**	**+1.2**
	baz=253						
NSY	**Sanyi**	**1.87**	**269**	*eP*	Pn	**09 14 24.2**	**+0.8**
	baz=269						
NSY				S	Sn	**09 14 47.1**	**+0.4**
	baz=269						
FULB	**Fuli**	**1.87**	**228**	P	Pn	**09 14 23.4**	**0.0**
	baz=228						
FULB				S	Sn	**09 14 46.4**	**-0.3**
	baz=228						
CHKT	**Chengkung**	**1.89**	**225**	*eP*	Pn	**09 14 23.2**	**-0.5**
	baz=224						
CHKT				S	Sn	**09 14 46.0**	**-1.1**
	baz=224						
PTSB	**Yuanli**	**1.92**	**270**	*eS*	Sn	**09 14 48.4**	**+0.6**
	baz=270						
WHYT	**Xinyi Township**	**1.94**	**247**	*eP*	Pn	**09 14 25.3**	**+0.9**
	baz=247						
WHYT				*eS*	Sn	**09 14 49.8**	**+1.4**
	baz=247						
YUS	**Yu-Shan**	**1.96**	**241**	P	Pn	**09 14 25.5**	**+0.5**
	baz=240						
YUS				*eS*	Sn	**09 14 48.7**	**-0.7**
	baz=240						
TCU	**Taichung**	**1.97**	**261**	*eS*	Sn	**09 14 50.1**	**+1.1**
	baz=261						
WDJ	**Dajia District**	**1.98**	**267**	*eS*	Sn	**09 14 49.7**	**+0.4**
	baz=267						
WJS	**Zhushan**	**2.00**	**252**	*eP*	Pn	**09 14 26.6**	**+1.4**
	baz=252						
WJS				*eS*	Sn	**09 14 51.9**	**+2.1**
	baz=252						
WNT	**Mingjian**	**2.03**	**254**	*eS*	Sn	**09 14 52.8**	**+2.5**
	baz=254						
ALS	**Alishan**	**2.06**	**243**	*eP*	Pn	**09 14 27.5**	**+1.3**
	baz=243						
ALS				*eS*	Sn	**09 14 52.3**	**+0.7**
	baz=243						
ELDTW	**Lidau**	**2.07**	**233**	P	Pn	**09 14 26.4**	**+0.2**
	baz=232						
ELDTW				*eS*	Sn	**09 14 50.5**	**-1.1**
	baz=232						
WCHH	**Zhanghua**	**2.09**	**260**	*eS*	Sn	**09 14 52.2**	**+0.5**
	baz=260						
TWH	**Lutao**	**2.13**	**215**	⇑*i* P	Pn	**09 14 26.8**	**0.0**
	baz=214						
TWH				S	Sn	**09 14 51.6**	**-1.1**
	baz=214						
CHN5	**Tsauling**	**2.13**	**247**	*eP*	Pn	**09 14 28.1**	**+1.2**
	baz=246						
CHN5				*eS*	Sn	**09 14 54.7**	**+1.9**
	baz=246						
JIRB	**Irabujima**	**2.18**	**80**	P	Pn	**09 14 27.9**	**+0.4**
JIRB				*eS*	Sn	**09 14 53.0**	**-0.9**
TWGBT	**Beinan**	**2.28**	**225**	P	Pn	**09 14 28.7**	**0.0**
	baz=224						
TWGBT				*eS*	Sn	**09 14 54.8**	**-1.4**
	baz=224						
STYT	**Tauyuan**	**2.28**	**236**	*eP*	Pn	**09 14 30.1**	**+1.2**
	baz=235						
STYT				*eS*	Sn	**09 14 57.5**	**+1.1**
	baz=235						
TWG	**Pinlang**	**2.28**	**225**	P	Pn	**09 14 28.8**	**-0.1**
	baz=224						
TWG				*eS*	Sn	**09 14 55.1**	**-1.2**
	baz=224						
JMJ	**Miyako jima 2**	**2.29**	**81**	*eP*	Pn	**09 14 29.3**	**+0.4**
	baz=80						
JMJ				*eS*	Sn	**09 14 56.4**	**-0.1**
	baz=80						
TPUB	**Ta-pu**	**2.31**	**240**	*eP*	Pn	**09 14 30.8**	**+1.6**
	baz=240						
TPUB				*eS*	Sn	**09 14 58.5**	**+1.6**
	baz=240						
CHN4	**Tsaushan**	**2.31**	**242**	*eP*	Pn	**09 14 29.7**	**+0.5**
	baz=242						
JMJ2	**Miyako jima3**	**2.31**	**82**	P	Pn	**09 14 29.5**	**+0.3**
JMJ2				*eS*	Sn	**09 14 57.1**	**+0.2**
RLNB	**Erlin**	**2.31**	**256**	*eS*	Sn	**09 14 57.1**	**+0.2**
	baz=256						
WTP	**Ta-pu**	**2.34**	**239**	*eP*	Pn	**09 14 30.8**	**+1.1**
	baz=239						
WTP				*eS*	Sn	**09 14 59.5**	**+1.6**
	baz=239						
JOGS	**Gusukube**	**2.38**	**82**	*eS*	Sn	**09 14 59.8**	**+1.1**
CHY	**Chiayi**	**2.38**	**247**	*eS*	Sn	**09 14 58.5**	**-0.2**
	baz=246						
TWK	**Hsinying**	**2.44**	**241**	*eP*	Pn	**09 14 31.2**	**+0.3**
	baz=241						
CHN1	**Nanshi**	**2.44**	**239**	*eP*	Pn	**09 14 31.4**	**+0.4**
	baz=239						
SGST	**Jiashian**	**2.46**	**237**	*eP*	Pn	**09 14 31.1**	**-0.1**
	baz=236						
SGST				*eS*	Sn	**09 15 01.4**	**+0.8**
	baz=236						
SLGT	**Liugui**	**2.46**	**234**	*eP*	Pn	**09 14 32.8**	**+1.5**
	baz=234						
WSF	**Szhu**	**2.50**	**251**	*eS*	Sn	**09 15 01.8**	**+0.2**
	baz=251						
ECL	**Taimali**	**2.52**	**223**	*eP*	Pn	**09 14 31.8**	**-0.2**
	baz=222						
ECL				*eS*	Sn	**09 15 00.3**	**-1.6**
	baz=222						
SSD	**Sandimen**	**2.63**	**230**	*eP*	Pn	**09 14 34.8**	**+1.4**
	baz=229						
LAY	**Lan-yu**	**2.67**	**206**	*eP*	Pn	**09 14 33.4**	**-0.7**
	baz=205						
LAY				*eS*	Sn	**09 15 03.4**	**-2.3**
	baz=205						
MASBT	**Mashibuluo**	**2.71**	**228**	*eP*	Pn	**09 14 35.3**	**+0.7**
	baz=227						
MASBT				*eS*	Sn	**09 15 06.9**	**+0.2**
	baz=227						
EAST	**Anshuo**	**2.74**	**221**	*eP*	Pn	**09 14 35.0**	**0.0**
	baz=221						
EAST				*eS*	Sn	**09 15 05.9**	**-1.5**
	baz=221						
SCZT	**Fangliau**	**2.89**	**225**	*eP*	Pn	**09 14 38.2**	**+1.2**
	baz=224						
MATB	**Ma-tsu**	**3.09**	**304**	*eP*	Pn	**09 14 39.1**	**-0.6**
	baz=303						
MATB				*eS*	Sn	**09 15 13.5**	**-2.2**
	baz=303						
PHUB	**P'eng-hu**	**3.11**	**253**	*eS*	Sn	**09 15 14.8**	**-1.3**
	baz=252						
TWKBT	**Hengchun**	**3.11**	**217**	*eP*	Pn	**09 14 41.5**	**+1.6**
	baz=216						
TWKBT				*eS*	Sn	**09 15 16.4**	**+0.3**
	baz=216						
TWK1	**Hengchun**	**3.11**	**217**	*eP*	Pn	**09 14 40.6**	**+0.7**
	baz=216						
PTMZ	**Houxiangcun**	**3.41**	**281**	*eP*	Pn	**09 14 43.0**	**-0.9**
	baz=280						
PTMZ				*eS*	Sn	**09 15 19.4**	**-3.8**
	baz=280						
KNM	**Kinmen**	**3.99**	**270**	*eP*	Pn	**09 14 53.4**	**+1.6**
	baz=269						
KNM				*eS*	Sn	**09 15 37.0**	**-0.4**
	baz=269						
KNMB	**Chin-men Tao**	**4.03**	**271**	*eS*	Sn	**09 15 35.5**	**-2.9**
	baz=270						
AXDP	**Jialang**	**4.42**	**277**	*eP*	Pn	**09 14 57.9**	**+0.2**
	baz=276						

WEL 05 09:28:36.1,45°S±9°×16°7E±°,h12km,ML3.6/9,MLv3.5/8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.4,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLZ	**Mavora Lakes**	**0.79**	**90**	P	Pb	09 28 52.0	+0.2
MLZ				S	Sb	09 29 03.1	+0.7
PYZ	**Puysegur Point**	**0.82**	**196**	P	Pg	09 28 52.0	+0.1
PYZ				S	Sb	09 29 03.5	+0.3
WHZ	**Wether Hill Ro**	**0.84**	**128**	P	Pb	09 28 53.1	+0.5
WHZ				S	Sn	09 29 05.4	-0.7
MSZ	**Milford Sound**	**0.96**	**43**	P	Pg	09 28 52.3	-2.4
MSZ				S	Sn	09 29 08.4	-0.6
WKZ	**Wanaka**	**1.53**	**70**	P	Pn	09 29 03.6	+0.3
WKZ				S	Sb	09 29 24.0	+0.2
APZ	**The Paps**	**1.61**	**155**	P	Pg	09 29 06.7	-0.3
EAZ	**Earnscleugh**	**1.64**	**86**	P	Pb	09 29 05.5	-0.7
JCZ	**Jackson Bay**	**1.82**	**45**	P	Pn	09 29 06.5	-0.9
SYZ	**Scrubby Hill**	**1.89**	**129**	P	Pn	09 29 08.6	+0.5
TUZ	**Tuapeka**	**1.93**	**108**	P	Pn	09 29 10.0	+1.2
LBZ	**Lake Benmore**	**2.47**	**67**	P	Pn	09 29 15.6	-0.6
HHSZ	**Highcliff Hill**	**2.58**	**103**	P	Pn	09 29 18.3	+0.7
ODZ	**Otahua Downs**	**2.60**	**84**	P	Pn	09 29 17.5	-0.4
FOZ	**Fox Glacier**	**2.73**	**49**	P	Pn	09 29 18.8	-0.9
RPZ	**Rata Peaks**	**3.34**	**62**	P	Pn	09

INZ	**Inchbonnie**	**4.16**	**52**	P	Pn	09 29 38.6	-0.8
MQZ	**McQueen's Vall**	**4.38**	**70**	P	Pn	09 29 42.0	-0.3
AKCZ	**Akaroa Harbour**	**4.48**	**72**	P	Pn	09 29 42.6	-1.2
OKCZ	**Okains Bay**	**4.64**	**71**	P	Pn	09 29 45.9	-0.1
DSZ	**Denniston Nort**	**5.04**	**46**	P	Pn	09 29 49.6	-1.8
THZ	**Tophouse**	**5.61**	**52**	P	Pn	09 29 59.9	+0.5
QRZ	**Quartz Range**	**6.09**	**44**	P	Pn	09 30 04.3	-1.6

*NEIC **05** 09:37:24.2±2.3, 15°.42N±0°.08×94°.78W±0°.02, h35km±84km, Error ellipse: s-maj=11.5km s-min=2.2km az=190.0*
*MEX **05** 09:37:25.5±0.7, 15°.38N×94°.79W, h16km±8km, MD4.0*
ISC 05 09:37:21.2±1.5, 15°.44N±0°.09×94°.81W±0°.06, h10km, n10, σ1°.77/17, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.29**	**285**	*e*S	**Sb**	**09 38 01.0**	**-1.2**
HUIG				*e*S	**Sb**	**09 38 01.7**	**-0.5**
HUIG	**Huatulco**	**1.29**	**285**		**Sb**	**09 38 01.7**	**-0.5**
PCIG		**1.56**	**80**	*e*P	**Pn**	**09 37 48.5**	**-0.4**
PCIG				*e*S	**Sn**	**09 38 06.3**	**-2.9**
PCIG		**1.56**	**80**		**Pn**	**09 37 48.5**	**-0.4**
PCIG					**Sn**	**09 38 06.3**	**-2.9**
CMIG	**Matias Romero**	**1.65**	**358**	*e*P	**Pn**	**09 37 50.9**	**+0.7**
CMIG				*i* S	**Sn**	**09 38 10.6**	**-0.9**
CMIG	**Matias Romero**	**1.65**	**358**		**Pn**	**09 37 50.9**	**+0.7**
CMIG					**Sn**	**09 38 10.6**	**-0.9**
TGIG		**2.10**	**50**	*e*P	**Pn**	**09 37 57.6**	**+1.0**
TGIG				*i* S	**Sn**	**09 38 22.2**	**-0.6**
TGIG		**2.10**	**50**		**Pn**	**09 37 57.6**	**+1.0**
TGIG					**Sn**	**09 38 22.2**	**-0.6**
TGUH	**Tegucigalpa,Un**	**7.42**	**100**	Pn	**Pn**	**09 39 13.0**	**+3.3**
TEIG	**Tepich**	**7.84**	**52**	Pn	**Pn**	**09 39 18.2**	**+2.9**

IDC 05 10:02:11.4±2.2, 4°.25N×123°.30E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/46, mbtmp3.6/3, Error ellipse: s-maj=298.6km s-min=24.7km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.38**	**156**	P	P	10 07 49.8	+0.1
	0.5nm,0.3s,baz=334,slow=9.7,SNR=12						
ASAR	**Alice Springs**	**29.61**	**160**	P	P	10 08 18.6	-0.1
	0.2nm,0.3s,baz=337,slow=7.7,SNR=13						
MKAR	**Makanchi Array**	**55.21**	**327**	P	P	10 11 46.1	-0.1
	0.2nm,0.3s,baz=118,slow=7.6,SNR=8.4						

UPA 05 10:04:17.4±3.5, 8°.67N×83°.09W, h61km±24km, MW3.9, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LESP3	**La Esperanza,**	**0.39**	**132**	*e*P	Pn	10 04 26.8	-1.6
LESP3				*e*S	Sn	10 04 40.2	+3.9
BRU2	**Volcan**	**0.41**	**72**	*i* P	Pn	10 04 28.3	-0.5
BRU2				*i* S	Sn	10 04 37.4	+0.4
BCO2	**Palmira**	**0.55**	**85**	*i* P	Pn	10 04 30.1	-0.1
BCO2				*i* S	Sn	10 04 39.1	-0.4
PTAR3	**Potrerillos Ar**	**0.58**	**88**	*e*P	Pn	10 04 30.5	0.0
PTAR3				*e*S	Sn	10 04 35.8	-4.2
DVD	**David**	**0.67**	**110**	*i* P	Pn	10 04 31.8	+0.4
PEDE3	**Pedregal, Chir**	**0.71**	**113**	*e*P	Pn	10 04 27.5	-4.4
CHGR2	**Aguacate**	**0.97**	**74**	*e*P	Pn	10 04 36.8	+1.7
CHGR2				*e*S	Sn	10 04 48.5	+0.3
GMAL	**Guarumal, Vera**	**2.04**	**116**	*e*P	Pn	10 04 48.1	-1.4

*NNC **05** 10:08:17.6±1.9, 42°.04N×70°.53E, h21km±17km, mb3.4, mpv2.7, Error ellipse: s-maj=20.6km s-min=9.4km az=10.0*
*KRNET **05** 10:08:17.4±0.1, 42°.16N×70°.56E, mb2.5*
*SOME **05** 10:08:18.9, 42°.10N×70°.58E, h15km*
ISC 05 10:08:17.8±1.3, 42°.13N±0°.04×70°.60E±0°.03, h18km±6km, n14, σ1°.07/25, 12C-2D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	**luzhnay**	**0.42**	**273**	*e*P	**Pb**	**10 08 27.1**	**+0.4**
	9.4nm,0.1s						
IUG				*e*S	**Sb**	**10 08 33.2**	**+0.4**
	152nm,0.1s						
IUG	**luzhnay**	**0.42**	**273**	P	**Pb**	**10 08 27.1**	**+0.4**
	9.4nm,0.1s						
IUG				S	**Sb**	**10 08 33.1**	**+0.3**
	156nm,0.2s						
KK31	**Karatay Array**	**0.98**	**356**	⇑P	**Pg**	**10 08 37.7**	**+0.9**
	0.7nm,0.3s,baz=180,slow=17,SNR=18						
KK31				⇓S	**Sn**	**10 08 51.1**	**+1.0**
	2.0nm,0.3s,baz=183,slow=29,SNR=15						
BRLS	**Borolday**	**1.06**	**328**	*e*P	**Pb**	**10 08 37.2**	**-0.5**
	baz=29						
BRLS				*e*S	**Sb**	**10 08 50.5**	**-0.8**
	baz=29						
BRLS	**Borolday**	**1.06**	**328**	*e*P	**Pb**	**10 08 37.2**	**-0.5**
	0.5nm,0.1s						
BRLS				*e*S	**Sb**	**10 08 50.5**	**-0.8**
	9.3nm,0.1s						
BRLS	**Borolday**	**1.06**	**328**	P	**Pn**	**10 08 38.0**	**+0.2**
	0.4nm,0.2s						
BRLS				S	**Sb**	**10 08 50.9**	**-0.4**
	1.4nm,0.2s						
ARK	**Arkit**	**1.07**	**107**	⇑*e*P	**Pg**	**10 08 38.6**	**0.0**
	baz=9.0						
ARK				⇑*i*S	**Sg**	**10 08 53.1**	**+0.4**
	baz=9.0						
ARSB	**Arslanbob**	**1.96**	**113**	⇑*i*P	**Pb**	**10 08 53.9**	**+0.9**
	baz=14						
ARSB				⇑*i*S	**Sb**	**10 09 19.2**	**+2.1**
	baz=14						
MRKS	**Merke**	**2.04**	**72**	*e*P	**Pg**	**10 08 56.9**	**-0.1**
	2.7nm,0.1s						
MRKS				*e*S	**Sg**	**10 09 24.2**	**+0.6**
	16nm,0.3s						
MRKS	**Merke**	**2.04**	**72**	Pg	**Pg**	**10 08 58.9**	**+1.9**
	4.8nm,0.2s						
MRKS				Lg	Lg	10 09 24.9	
	16nm,0.3s						
BTK	**Batken**	**2.07**	**175**	⇑*i*P	**Pb**	**10 08 55.5**	**+0.6**
	baz=75						
BTK				⇑*i*S	**Sg**	**10 09 22.4**	**-2.1**
	baz=75						
ARLS	**Aral**	**2.79**	**94**	⇑*i*P	**Pb**	**10 09 06.1**	**-1.1**
	baz=95						
ARLS				⇑*i*S	**Sb**	**10 09 40.7**	**-0.4**
	baz=95						
AAK	**Ala-Archa**	**2.93**	**79**	⇑Pn	**Pn**	**10 09 02.1**	**-1.5**
	3.5nm,1.2s						
AAK				⇑Lg	Lg	10 09 50.8	
	3.4nm,0.9s						
TKM2	**Tokmak 2**	**3.78**	**76**	⇑Pn	**Pn**	**10 09 13.9**	**-1.5**
	3.4nm,1.4s						
TKM2				⇓Lg	Lg	10 10 16.3	
	7.4nm,1.3s						

IDC 05 10:15:11.4±1.3, 53°.82N×35°.72W, h0km, mb3.3/5, mb1 3.6/5, mb1mx3.3/60, mbtmp3.3/5, MS3.7/17, Ms1 3.7/17, ms1mx3.5/30, Error ellipse: s-maj=69.6km s-min=22.5km az=26.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**18.10**	**286**	LR	LR	10 25 00.2	
	comp=Z,332nm,19.1s,baz=54,slow=32						
FRB	**Frobisher Bay**	**19.46**	**314**	LR	LR	10 25 17.1	
	comp=Z,153nm,19.5s,baz=40,slow=31						
JMIC	**Jan Mayen**	**20.99**	**25**	LR	LR	10 25 56.8	
	comp=Z,117nm,18.7s,baz=264,slow=31						
ESDC	**Sonseca Array**	**25.69**	**110**	P	P	10 20 42.6	-0.4
	0.4nm,0.6s,baz=316,slow=9.0,SNR=2.5						
NOA	**NORSAR Array B**	**25.77**	**55**	LR	LR	10 29 00.3	
	comp=Z,109nm,18.4s,baz=290,slow=32						
HFS	**Hagfors**	**27.10**	**57**	LR	LR	10 29 06.3	
	comp=Z,166nm,20.8s,baz=273,slow=31						
SADO	**Sadowa**	**29.32**	**270**	LR	LR	10 32 09.1	
	comp=Z,262nm,18.7s,baz=96,slow=35						
DAVOX	**Davos/Dischmat**	**29.53**	**85**	LR	LR	10 30 58.2	
	comp=Z,191nm,20.0s,slow=32						
GERES	**GERESS Array B**	**30.76**	**79**	LR	LR	10 33 27.1	
	comp=Z,105nm,20.7s,baz=278,slow=36						
FINES	**FINESS Array B**	**32.77**	**51**	LR	LR	10 32 45.4	
	comp=Z,160nm,18.8s,baz=333,slow=32						
ULM	**Lac du Bonnet**	**36.21**	**290**	LR	LR	10 35 46.5	
	comp=Z,133nm,18.1s,baz=28,slow=34						
YKA	**Yellowknife Ar**	**39.98**	**315**	P	P	10 22 45.2	-1.9
	0.1nm,0.3s,baz=61,slow=5.0						
BRTR	**Keskin Array B**	**47.64**	**78**	P	P	10 23 49.8	+0.6
	0.5nm,0.7s,baz=305,slow=6.4,SNR=3.8						
BRTR				LR	LR	10 44 46.3	
	comp=Z,28nm,18.1s,baz=291,slow=37						
PDAR	**Pinedale Array**	**48.21**	**288**	P	P	10 23 55.4	+1.6
	0.3nm,0.7s,baz=56,slow=8.0,SNR=3.3						
PDAR				LR	LR	10 42 51.8	
	comp=Z,87nm,18.9s,baz=54,slow=34						
TORD	**Torodi Ar. Bea**	**50.16**	**130**	P	P	10 24 07.5	-1.1
	0.7nm,0.9s,baz=339,slow=7.7,SNR=2.3						
TORD				LR	LR	10 43 19.5	
	comp=Z,76nm,18.4s,baz=350,slow=34						
KBZ	**Khabaz**	**50.24**	**68**	LR	LR	10 46 14.1	
	comp=Z,58nm,18.6s,baz=356,slow=37						
DBIC	**Dimbokro**	**53.24**	**141**	LR	LR	10 43 57.3	
	comp=Z,93nm,19.6s,baz=331,slow=32						
TXAR	**Lajitas Array**	**54.06**	**272**	LR	LR	10 46 13.1	
	comp=Z,72nm,18.1s,baz=0.0,slow=34						
NVAR	**Mina Array Bea**	**56.04**	**290**	LR	LR	10 46 52.9	
	comp=Z,87nm,18.3s,baz=42,slow=34						
ASAR	**Alice Springs**	**148.89**	**19**	PKPbc	PKiKP	10 35 01.7	-0.6
	0.4nm,0.8s,baz=357,slow=2.6,SNR=3.1						

*DDA **05** 10:18:11.0, 38°.65N×43°.16E, h6km±11km, MW3.5*
*ISK **05** 10:18:11.7, 38°.65N×43°.17E, h5km, ML3.3/17*
ISC 05 10:18:13.2±1.0, 38°.66N±0°.02×43°.14E±0°.02, h4km±10km, n50, σ0°.91/72, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.21**	**109**	PG	**Pg**	**10 18 17.4**	**+0.1**
VANB				SG	**Sg**	**10 18 21.6**	**+1.5**
ADCV	**BITLIS_Adilcev**	**0.35**	**294**	*i* P	**Pg**	**10 18 20.6**	**+0.5**
ADCV				*i* S	**Sb**	**10 18 26.9**	**-1.2**
ADCV				IAML		10 18 28.0	
	comp=N,2μm,0.3s						
ADCV				IAML		10 18 29.0	
	comp=E,4μm,0.5s						
AKDM	**Akdamar-Van**	**0.36**	**200**	PG	**Pg**	**10 18 19.5**	**-0.6**
AKDM				SG	**Sg**	**10 18 25.9**	**+1.1**
GEVA	**Gevas**	**0.36**	**190**	*i* P	**Pg**	**10 18 19.4**	**-0.6**
GEVA				IAML		10 18 20.0	
	comp=Z,1μm,0.5s						
GEVA				*i* S	**Sg**	**10 18 24.9**	**+0.1**
GEVA				IAML		10 18 30.0	
	comp=N,3μm,0.6s						
GEVA				IAML		10 18 32.0	
	comp=E,3μm,0.4s						
VMUR	**Van-Muradiye**	**0.47**	**46**	*i* P	**Pg**	**10 18 22.0**	**-0.3**
VMUR				*i* S	**Sg**	**10 18 29.7**	**+1.2**
VMUR				IAML		10 18 30.0	
	comp=E,3μm,0.5s						
VMUR				IAML		10 18 32.0	
	comp=N,1μm,0.5s						
MLAZ	**Malazgirt-MUS**	**0.66**	**316**	PG	**Pg**	**10 18 25.9**	**0.0**
CLDR	**Caldiran**	**0.78**	**52**	PG	**Pg**	**10 18 27.1**	**-1.0**
CLDR				SG	**Sb**	**10 18 39.3**	**-1.0**
CLDR	**Caldiran**	**0.78**	**52**	*i* P	**Pg**	**10 18 26.9**	**-1.1**
CLDR				*i* S	**Sg**	**10 18 38.5**	**+0.4**
CLDR				IAML		10 18 42.0	
	comp=N,424nm,0.4s						
CLDR				IAML		10 18 42.0	
	comp=E,419nm,0.4s						
TUTA	**Tutak**	**0.78**	**341**	*i* P	**Pg**	**10 18 27.6**	**-0.6**
TUTA				*i* S	**Sg**	**10 18 37.9**	**-0.3**
TUTA				IAML		10 18 46.0	
	comp=N,1μm,0.4s						
BLIS	**Bitlis-Merkez**	**0.84**	**253**	*i* P	**Pg**	**10 18 28.5**	**-0.8**
BLIS				*i* S	**Sg**	**10 18 39.6**	**-0.5**
BLIS				IAML		10 18 42.0	
	comp=E,783nm,0.7s						
BLIS				IAML		10 18 44.0	
	comp=N,1μm,0.6s						
GURO	**Guroymak-BITLI**	**0.87**	**263**	PG	**Pg**	**10 18 29.0**	**-0.9**
AGRB	**Hanur-Agry**	**0.92**	**353**	PG	**Pg**	**10 18 29.8**	**-1.0**
DYDN	**Diyadin**	**0.98**	**26**	*i* P	**Pg**	**10 18 30.4**	**-1.6**
DYDN				*i* S	**Sg**	**10 18 44.7**	**+0.1**
DYDN				IAML		10 18 51.0	
	comp=N,241nm,0.7s						
DYDN				IAML		10 18 51.0	
	comp=E,287nm,0.5s						
EKAR	**Karacoban**	**1.02**	**306**	*i* P	**Pb**	**10 18 33.3**	**-0.3**
EKAR				*i* S	**Sn**	**10 18 49.9**	**+0.5**
EKAR				IAML		10 18 55.0	
	comp=E,747nm,0.6s						
EKAR				IAML		10 19 00.0	
	comp=N,739nm,0.5s						
SRTM	**Siirt_Merkez**	**1.17**	**235**	*i* P	**Pn**	**10 18 36.3**	**0.0**
SRTM				*i* S	**Sb**	**10 18 51.3**	**-0.1**
SRTM				IAML		10 18 57.0	
	comp=E,401nm,0.4s						
SRTM				IAML		10 18 59.0	
	comp=N,483nm,0.6s						
MUSM	**Mu-Merkez**	**1.27**	**273**	*i* P	**Pg**	**10 18 36.1**	**-1.4**
MUSM				*i* S	**Sg**	**10 18 53.0**	**-1.1**
MUSM				IAML		10 18 55.0	
	comp=N,169nm,0.5s						
MUSM				IAML		10 18 55.0	
	comp=E,174nm,0.4s						
SIRT	**Sirnak**	**1.28**	**206**	PN	**Pg**	**10 18 37.4**	**-0.4**
EATA	**Eleskirt**	**1.30**	**338**	*i* P	**Pg**	**10 18 37.0**	**-1.0**
EATA				*i* S	**Sb**	**10 18 55.5**	**+0.1**
EATA				IAML		10 19 01.0	
	comp=N,304nm,0.8s						
EATA				IAML		10 19 01.0	
	comp=E,523nm,0.6s						
SIRN	**Sirnak**	**1.30**	**206**	*i* P	**Pb**	**10 18 38.6**	**+0.5**
SIRN				*i* S	**Sn**	**10 18 57.3**	**+1.4**
SIRN				IAML		10 19 02.0	
	comp=E,405nm,0.6s						
SIRN				IAML		10 19 04.0	
	comp=N,235nm,0.6s						
VRTB	**Varto-Mus**	**1.40**	**291**	PN	**Pg**	**10 18 39.8**	**-0.2**
VRTB	**Varto-Mus**	**1.40**	**291**	*i* P	**Pg**	**10 18 39.7**	**-0.3**
VRTB				*i* S	**Sb**	**10 18 57.8**	**-0.4**
VRTB				IAML		10 19 17.0	
	comp=E,237nm,0.6s						
VRTB				IAML		10 19 19.0	
	comp=N,313nm,0.7s						
IGDI	**IGDIR**	**1.41**	**31**	*i* P	**Pn**	**10 18 38.9**	**-0.8**
IGDI				*i* S	**Sn**	**10 18 59.4**	**+0.7**
CUKT	**Cukurca**	**1.46**	**165**	PN	**Pn**	**10 18 40.0**	**-0.4**
CUKT	**Cukurca**	**1.46**	**165**	*e*P	**Pn**	**10 18 39.3**	**-1.1**
CUKT				*i* S	**Sg**	**10 19 01.3**	**+1.2**
CUKT				IAML		10 19 07.0	
	comp=N,472nm,1.0s						
CUKT				IAML		10 19 11.0	
	comp=E,405nm,0.8s						
TASB	**TASBURUN-IGDIR**	**1.57**	**33**	PN	**Pn**	**10 18 41.9**	**0.0**
BNGL	**BINGOL**	**1.58**	**281**	*i* P	**Pb**	**10 18 42.7**	**-0.3**
BNGL				*i* S	**Sg**	**10 19 05.5**	**+1.6**
KOPR	**Koprukoy-ERZUR**	**1.66**	**324**	PN	**Pn**	**10 18 43.4**	**+0.3**
HOMI	**Horasan**	**1.68**	**326**	*i* P	**Pb**	**10 18 44.1**	**-0.6**
HOMI				IAML		10 19 13.0	
	comp=E,230nm,0.7s						
HOMI				IAML		10 19 22.0	
	comp=N,150nm,0.7s						
KARO	**Karlieva-Bingo**	**1.75**	**292**	PN	**Pb**	**10 18 44.9**	**-1.0**
DIGO	**Kars**	**1.76**	**6**	*i* P	**Pb**	**10 18 45.4**	**-0.7**
DIGO				*i* S	**Sg**	**10 19 12.0**	**+2.3**
DIGO				IAML		10 19 19.0	
	comp=N,88nm,0.5s						
DIGO				IAML		10 19 23.0	
	comp=E,106nm,0.7s						
ECAT	**Cat-ERZURUM**	**1.93**	**300**	*i* P	**Pb**	**10 18 48.3**	**-0.7**
GNI	**Garni**	**1.94**	**39**	PN	**Pn**	**10 18 47.1**	**+0.1**
BNGB	**Bingl**	**1.95**	**280**	PN	**Pb**	**10 18 47.9**	**-1.3**
AKDA	**Akdag**	**1.99**	**317**	*i* P	**Sn**	**10 19 14.3**	**+1.2**
SENK	**Senkaya-Erzuru**	**1.99**	**343**	PN	**Pn**	**10 18 48.5**	**+0.7**
EAK	**Akyaka**	**2.05**	**10**	*i* P	**Pg**	**10 18 52.0**	**-0.6**
EAK				IAML		10 19 41.0	
	comp=N,83nm,1.1s						
EAK				IAML		10 19 42.0	
	comp=E,60nm,0.9s						
HANI	**Diyarbakir_Han**	**2.16**	**264**	*i* P	**Pg**	**10 18 53.7**	**-0.8**
HANI				*i* S	**Sg**	**10 19 22.3**	**-0.2**
HANI				IAML		10 19 29.0	
	comp=N,89nm,0.9s						
HANI				IAML		10 19 35.0	
	comp=E,82nm,0.8s						
YEDI	**Yedisu-Bingol**	**2.16**	**292**	PN	**Pn**	**10 18 50.9**	**+0.9**
MARD	**Mardin**	**2.30**	**235**	*i* P	**Pn**	**10 18 51.7**	**-0.2**
MARD				*i* S	**Sb**	**10 19 22.7**	**-1.3**
KRIK	**Erzurum-spir**	**2.39**	**315**	*i* P	**Pg**	**10 19 00.3**	**+1.3**
MAZI	**Mazidag**	**2.44**	**241**	PN	**Pn**	**10 18 54.6**	**+0.8**
KOPT	**Kop Dagi**	**2.45**	**304**	*i* P	**Pb**	**10 18 58.6**	**+0.7**
DYBB	**Diyarbakir**	**2.46**	**254**	PN	**Pn**	**10 18 54.9**	**+0.8**
DDEM	**Demirkent**	**2.47**	**335**	*i* P	**Pb**	**10 18 58.8**	**+0.7**
DDEM				IAML		10 19 33.0	
	comp=N,46nm,0.5s						
DAGI	**Agilar**	**2.59**	**339**	*i* P	**Pb**	**10 19 00.1**	**-0.1**
BAYB	**BAYBURT**	**2.74**	**306**	*i* P	**Pb**	**10 19 01.3**	**-1.5**
TNCL	**Tunceli-Merkez**	**2.84**	**280**	*i* P	**Pb**	**10 19 05.4**	**+1.0**
BAYT	**Aydıntepe-Bayb**	**2.89**	**308**	PN	**Pn**	**10 19 01.1**	**+1.0**
DBOC	**Borcka**	**2.91**	**338**	*i* P	**Pb**	**10 19 04.8**	**-0.7**
KELT	**Kelkit**	**3.35**	**297**	*i* P	**Pg**	**10 19 15.7**	**-1.6**

*RSNC **05** 10:19:28.2±1.0, 4°.63N×76°.69W, h18km±4km, ML3.1, Mw3.4, Fault plane solution: NP1:ϕs46.00000°, δ52.00000°, λ-162.00000°.*
*IDC **05** 10:19:30.4±4.7, 4°.87N×76°.86W, h58km±39km, mb3.2/3, mb1 3.5/5, mb1mx3.2/35, mbtmp3.6/5, ML2.5/2, Error ellipse: s-maj=38.0km s-min=28.0km az=39.0*
ISC 05 10:19:24.2±1.2, 4°.74N±0°.03×76°.73W±0°.03, h13km±8km, n40, σ1°.74/58, mb3.6/3, 6C-3D, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLMC	**San Jos del P**	**0.48**	**70**	⇓*i*P	**Pn**	**10 19 37.6**	**+0.8**
PLMC				*e*S	**Sn**	**10 19 45.0**	**0.0**
PLMC				*i*		10 19 45.6	
	comp=Z,24μm,0.1s						
YOTC	**Yotoco, Valle**	**0.84**	**153**	⇑*i*P	**Pg**	**10 19 40.6**	**0.0**
YOTC				*i*		10 19 51.4	
	comp=Z,617nm,0.4s						
MALC	**Bahia Malaga**	**0.94**	**220**	*e*P	**Pn**	**10 19 43.6**	**+0.5**
MALC				*i*		10 20 01.6	
	comp=Z,447nm,0.4s						
MALC				*i*		10 20 02.1	
	comp=Z,482nm,0.2s						
CBOC	**Ciudad Bolivar**	**1.33**	**33**	⇑*e*P	**Pg**	**10 19 50.2**	**+0.4**
CBOC				*e*S	**Sg**	**10 20 06.8**	**-0.3**
CBOC				*i*		10 20 11.7	
	comp=Z,228nm,0.2s						
ANIL	**Santa Ana**	**1.34**	**100**	⇓*i*P	**Pg**	**10 19 50.3**	**+0.1**
ANIL				*e*S	**Sb**	**10 20 07.1**	**+0.4**
ANIL				*i*		10 20 11.4	
	comp=Z,1μm,0.3s						
RREF	**El Recreo**	**1.39**	**83**	*e*P	**Pg**	**10 19 51.8**	**+0.8**
RREF				*e*S	**Sg**	**10 20 10.3**	**+1.2**
RREF				*i*		10 20 12.2	
	comp=Z,456nm,0.3s						
GUY2C	**Guyana, Caldas**	**1.44**	**70**	⇑*e*P	**Pn**	**10 19 49.5**	**-1.0**
GUY2C				*i*		10 20 14.5	
	comp=Z,208nm,0.6s						
SOLC	**Bahia Solano**	**1.62**	**335**	*e*P	**Pg**	**10 19 55.2**	**-0.2**
SOLC				*e*S	**Sg**	**10 20 18.6**	**+1.9**
SOLC				*i*		10 20 25.7	
	comp=Z,67nm,0.4s						
SOLC				*i*		10 20 25.7	
	comp=Z,67nm,0.4s						
SOLC				*i*		10 20 31.6	
	comp=Z,59nm,0.3s						
ORTC	**Ortega, Tolima**	**1.69**	**119**	⇑*e*P	**Pb**	**10 19 55.3**	**0.0**
ORTC				*i*		10 20 22.3	
	comp=Z,246nm,0.7s						
HELC	**Santa Helena**	**1.87**	**40**	⇑*e*P	**Pg**	**10 19 59.7**	**-0.6**
HELC				*i*		10 20 25.3	
	comp=Z,91nm,0.7s						
NORC	**Norcasia**	**2.03**	**66**	*e*P	**Pg**	**10 20 02.4**	**-0.7**
NORC				*i*		10 20 30.4	
	comp=Z,128nm,0.7s						
DBBC	**Dabeiba**	**2.32**	**13**	*e*P	**Pb**	**10 20 05.5**	**-0.6**
DBBC				*i*		10 20 37.0	
	comp=Z,162nm,0.7s						
ROSC	**El Rosal**	**2.40**	**87**	P	**Pb**	**10 20 09.0**	**+1.4**
	comp=Z,19nm,0.3s,baz=245,slow=12,SNR=26						
ROSC				S	**Sg**	**10 20 40.4**	**-1.3**
	comp=Z,15nm,0.3s,baz=260,slow=23,SNR=9.6						
ROSC	**El Rosal**	**2.40**	**87**	*e*P	**Pb**	**10 20 09.1**	**+1.4**
ROSC				*e*S	**Sg**	**10 20 42.7**	**+1.1**
ROSC				*i*		10 20 51.8	
	comp=Z,54nm,0.5s						
BETC	**Betania**	**2.41**	**148**	*e*P	**Pn**	**10 20 05.7**	**+2.2**
BETC				*e*S	**Sn**	**10 20 34.4**	**+1.4**
BETC				*i*		10 20 44.4	
	comp=Z,19nm,0.8s						
PCON	**Cinco Dias**	**2.42**	**172**	*e*P	**Pn**	**10 20 05.8**	**+1.8**
PCON				*i*		10 20 54.9	
	comp=Z,100nm,0.6s						
SOTA	**Rioblanco**	**2.59**	**177**	⇑*e*P	**Pn**	**10 20 07.5**	**+1.2**
SOTA				*i*		10 20 54.1	
	comp=Z,157nm,0.7s						
PTAC	**Punta Ardita,**	**2.62**	**336**	*e*P	**Pb**	**10 20 09.7**	**-1.5**
PTAC				*e*S	**Sn**	**10 20 39.1**	**+1.1**
PTAC				*i*		10 20 44.9	
	comp=Z,114nm,0.3s						
BBAC	**Balboa, Cauca**	**2.75**	**191**	*e*P	**Pn**	**10 20 09.0**	**+0.8**
BBAC				*i*		10 20 55.6	
	comp=Z,70nm,0.9s						
SPBC	**San Pablo de B**	**2.80**	**71**	*e*P	**Pb**	**10 20 11.8**	**-2.3**
SPBC				*e*S	Sn	10 20 27.1	-15
SPBC				*i*		10 20 31.0	
	comp=Z,28nm,0.6s						
PTBC	**PUERTO BERRIO,**	**2.88**	**52**	⇓*e*P	**Pb**	**10 20 15.2**	**-0.4**
PTBC				*i*		10 21 07.9	
	comp=Z,29nm,0.5s						
CHIC	**Chingaza**	**2.99**	**92**	*e*P	**Pb**	**10 20 16.7**	**-1.0**
CHIC				*e*S	**Sn**	**10 20 48.9**	**+1.2**
CHIC				*i*		10 21 04.0	
	comp=Z,29nm,0.5s						
CRUC	**La Cruz**	**3.16**	**184**	*e*P	**Pn**	**10 20 15.5**	**+1.6**
CRUC				*i*		10 21 17.5	
	comp=Z,34nm,0.7s						
UREC	**San Jos de Ur**	**

YKA	**Yellowknife Ar**	**64.03**	**342**	P		**P**	**10 29 57.1**	**-0.2**		
	comp=Z,0.2nm,0.4s,baz=132,slow=6.5,SNR=7.0									
ILAR	**Eielson Array**	**77.34**	**336**	P		**P**	**10 31 18.2**	**-0.3**		
	comp=Z,0.3nm,0.8s,baz=101,slow=4.9,SNR=3.6									
TORD	**Torodi Ar. Bea**	**77.68**	**78**	P		**P**	**10 31 22.2**	**+0.8**		
	comp=Z,0.4nm,0.8s,baz=282,slow=7.2,SNR=2.2									
ASAR	**Alice Springs**	**144.99**	**235**	PKP		**PKPab**	**10 38 59.9**	**-1.6**		
	comp=Z,0.3nm,0.4s,baz=122,slow=3.9,SNR=15									
WRA	**Warramunga Arr**	**146.19**	**241**	PKPbc		**PKPdf**	**10 39 04.1**	**-0.2**		
	comp=Z,0.7nm,0.9s,baz=111,slow=2.6,SNR=3.2									

NNC 05 10:39:20.9±6.4, 36.89N×70.34E, h0km, mb4.3, mpv4.0, 3C-3D, Error ellipse: s-maj=49.8km s-min=43.0km az=168.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**5.84**	**25**	P		Pn	10 40 50.2	+1.0
	SNR=96							
KK31	**Karatay Array**	**6.21**	**1**	⇓P		Pn	10 40 54.8	+0.9
	2.5nm,0.3s,baz=178,slow=13,SNR=128							
KK31				⇑S		Sn	10 42 07.2	+1.7
	1.5nm,0.3s,baz=185,slow=26							
UCH	**Uchtor**	**6.23**	**30**	P		Pn	10 40 55.2	+0.7
	SNR=16							
EKS2	**Erkin-Say**	**6.35**	**24**	P		Pn	10 40 56.8	+1.0
	SNR=28							
KZA	**Kyzart**	**6.43**	**35**	P		Pn	10 40 57.3	+0.2
	SNR=9.6							
AAK	**Ala-Archa**	**6.57**	**28**	P		Pn	10 40 59.8	+0.9
	SNR=8.2							
AAK	**Ala-Archa**	**6.57**	**28**	⇓P		Pn	10 40 59.1	+0.2
	6.3nm,0.7s							
AAK				⇓S		Sn	10 42 15.8	+1.1
	11nm,0.7s							
ULHL	**Ulahol**	**7.03**	**39**	P		Pn	10 41 05.3	+0.1
	SNR=7.2							
USP	**Ospenovka**	**7.12**	**25**	P		Pn	10 41 06.5	+0.1
	SNR=9.2							
TKM2	**Tokmak 2**	**7.25**	**32**	P		Pn	10 41 08.2	-0.1
	SNR=16							
TKM2	**Tokmak 2**	**7.25**	**32**	⇑P		Pn	10 41 07.4	-0.9
	10nm,0.7s							
TKM2				⇑S		Sn	10 42 31.6	+0.1
	4.6nm,1.0s							

*VAO **05** 10:51:53.1±0.5, 23.43N×69.16W, h119km±4km, mb4.2*
*NEIC **05** 10:51:55.8±3.0, 23.07S±0.06×68.53W±0.08, h88km±6km, Error ellipse: s-maj=10.3km s-min=9.3km az=83.0*
*IDC **05** 10:51:57.1±0.7, 22.87S×68.63W, h98km±6km, mb3.9/3, mb1 3.9/7, mb1mx3.6/41, mbtmp4.2/7, Error ellipse: s-maj=23.1km s-min=17.0km az=18.0*
*GUC **05** 10:51:57.5±0.9, 23.05S×68.78W, h101km±5km, ML4.1*
*SJA **05** 10:51:57.0±0.7, 23.07S×68.74W, h100km±3km, ML3.9, MW3.9*

ISC 05 10:51:56.4±0.5, 23.10S±0.04×68.71W±0.05, h102km±5km, n82, σ1s56/100, mb4.5/4, 7C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**0.52**	**339**	⇑*i*P		**Pn**	**10 52 13.5**	**+0.4**
LVC				*i* S		**Sn**	**10 52 25.7**	**+0.3**
LVC	**Limon Verde**	**0.52**	**339**	P		**Pn**	**10 52 13.5**	**+0.4**
	349nm,0.3s,baz=154,slow=5.1,SNR=3312							
LVC				S		**Sn**	**10 52 25.1**	**-0.3**
	1μm,0.3s,baz=36,slow=19,SNR=133							
LVC	**Limon Verde**	**0.52**	**339**	*e*P		**Pn**	**10 52 13.8**	**+0.8**
LVC	**Limon Verde**	**0.52**	**339**	*i*P		**Pn**	**10 52 13.7**	**+0.6**
LVC				*e*S		**Sn**	**10 52 25.9**	**+0.4**
LVC				IAML			10 52 26.0	
	comp=Z,2μm,0.5s							
PB15	**IPOC Station P**	**0.71**	**261**	⇑*i*P		**Pn**	**10 52 15.5**	**+1.1**
PB15				*i* S		**Sn**	**10 52 29.3**	**+1.4**
PB15	**IPOC Station P**	**0.71**	**261**	*i*P		**Pn**	**10 52 15.5**	**+1.1**
PB15				*e*S		**Sn**	**10 52 29.0**	**+1.1**
PB15				IAML			10 52 31.2	
	comp=Z,20μm,0.4s							
PB06	**IPOC Station P**	**0.89**	**296**	⇑*i*P		**Pn**	**10 52 16.9**	**+0.8**
PB06				*i* S		**Sn**	**10 52 31.5**	**+0.7**
PB06				IAML			10 52 32.7	
	comp=N,13μm,0.7s							
PB06	**IPOC Station P**	**0.89**	**296**	*i*P		**Pn**	**10 52 16.8**	**+0.8**
PB06				*e*S		**Sn**	**10 52 31.4**	**+0.7**
PB09	**IPOC Station P**	**1.39**	**339**	⇓*i*P		**Pn**	**10 52 22.9**	**+1.3**
PB09				*e*S		**Sn**	**10 52 41.6**	**+0.9**
PB09				IAML			10 52 43.3	
	comp=E,2μm,0.4s							
PB09	**IPOC Station P**	**1.39**	**339**	*i*P		**Pn**	**10 52 22.7**	**+1.0**
PB09				*e*S		**Sn**	**10 52 41.9**	**+1.2**
PB05	**IPOC Station P**	**1.40**	**280**	⇑*i*P		**Pn**	**10 52 22.2**	**+0.5**
PB05				*i* S		**Sn**	**10 52 41.3**	**+0.4**
PB05	**IPOC Station P**	**1.40**	**280**	*i*P		**Pn**	**10 52 22.2**	**+0.5**
PB03	**IPOC Station P**	**1.43**	**317**	⇑*i*P		**Pn**	**10 52 22.7**	**+0.7**
PB03				*i* S		**Sn**	**10 52 41.9**	**+0.4**
PB03				IAML			10 52 43.3	
	comp=E,4μm,0.3s							
PB03	**IPOC Station P**	**1.43**	**317**	*i*P		**Pn**	**10 52 23.2**	**+1.1**
PB03				*e*S		**Sn**	**10 52 41.7**	**+0.2**
PB04	**IPOC Station P**	**1.54**	**300**	⇑*i*P		**Pn**	**10 52 23.9**	**+0.5**
PB04				*i* S		**Sn**	**10 52 43.9**	**0.0**
PB04				IAML			10 52 49.3	
	comp=N,3μm,0.5s							
PB04	**IPOC Station P**	**1.54**	**300**			**Pn**	**10 52 23.3**	**-0.2**
PB04	**IPOC Station P**	**1.54**	**300**	*i*P		**Pn**	**10 52 24.6**	**+1.2**
PB10	**IPOC Station P**	**1.75**	**256**	⇑*i*P		**Pn**	**10 52 26.5**	**+0.6**
PB10				*i* S		**Sn**	**10 52 47.6**	**-0.7**
PB10	**IPOC Station P**	**1.75**	**256**			**Pn**	**10 52 26.8**	**+0.9**
PB14	**IPOC Station P**	**2.17**	**225**	*i*P		**Pn**	**10 52 33.5**	**+1.9**
PB08	**IPOC Station P**	**2.98**	**352**	*i*P		**Pn**	**10 52 43.7**	**+1.4**
HJA	**Humahuaca**	**3.04**	**93**	*i*P		**Pn**	**10 52 46.1**	**+3.0**
HJA				IAML			10 52 47.1	
	comp=Z,340nm,0.6s							
YJA	**Yavi**	**3.09**	**73**	*i*P		**Pn**	**10 52 46.8**	**+2.9**
YJA				IAML			10 52 47.9	
	comp=Z,101nm,0.5s							
SLA	**San Lorenzo**	**3.34**	**119**	*i*P		**Pn**	**10 52 49.9**	**+2.9**
PB11	**IPOC Station P**	**3.44**	**345**			**Pn**	**10 52 48.6**	**+0.3**
PB11	**IPOC Station P**	**3.44**	**345**	*i*P		**Pn**	**10 52 49.5**	**+1.3**
AZAP	**Zapla**	**3.52**	**109**	*i*P		**Pn**	**10 52 52.3**	**+2.9**
AZAP				IAML			10 52 54.1	
	comp=Z,209nm,0.5s							
MNMC	**Minye Minye**	**4.04**	**348**			**Pn**	**10 52 58.4**	**+1.9**
VCA	**Vinchina**	**5.63**	**176**	*i*P		**Pn**	**10 53 19.8**	**+1.9**
LPAZ	**La Paz**	**6.80**	**5**	P		**Pn**	**10 53 32.5**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=192,slow=5.4,SNR=6.3							
LPAZ	**La Paz**	**6.80**	**5**	*e*P		**Pn**	**10 53 36.5**	**+2.2**
LPAZ	**La Paz**	**6.80**	**5**			**Pn**	**10 53 34.5**	**+0.3**
GO04	**Tololo Observa**	**7.29**	**194**			**Pn**	**10 53 37.5**	**-3.0**
CFA	**Coronel Fontan**	**8.48**	**177**	P		**Pn**	**10 53 55.3**	**-1.2**
	comp=Z,3.3nm,0.3s,baz=358,slow=17,SNR=31							
CFA				S		**Sn**	**10 55 25.3**	**-5.2**
	comp=Z,0.8nm,0.3s,baz=163,slow=19,SNR=2.9							
SIV	**San Ignacio**	**10.09**	**47**	P		**Pn**	**10 54 14.4**	**-4.0**
	comp=Z,7.7nm,0.3s,baz=251,slow=10,SNR=131							
SIV				S		Sn	10 56 00.4	-9.3
	comp=Z,0.3nm,0.3s,baz=323,slow=20,SNR=2.2							
CPUP	**Villa Florida**	**10.83**	**110**	P		**Pn**	**10 54 27.4**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=293,slow=12,SNR=18							
CPUP	**Villa Florida**	**10.83**	**110**	*e*P		**Pn**	**10 54 28.4**	**0.0**
CPUP	**Villa Florida**	**10.83**	**110**			**Pn**	**10 54 28.5**	**+0.1**
AQDB	**Aquidauana**	**12.36**	**80**	*e*P		**Pn**	**10 54 50.5**	**+1.6**
ITQB	**Itaqui**	**12.65**	**124**	*e*P		**Pn**	**10 54 50.0**	**-2.5**
PP1B	**Ponte de Pedra**	**14.07**	**70**	*e*P		**Pn**	**10 55 13.8**	**+2.5**
SALV	**Santo Antonio**	**14.20**	**62**	*e*P		**Pn**	**10 55 13.8**	**+0.8**
SAML	**Samuel**	**15.04**	**21**	*e*P		**P**	**10 55 25.6**	**-0.9**
SAML	**Samuel**	**15.04**	**21**	P		**Pn**	**10 55 24.9**	**+1.3**
PTGB	**Pitanga**	**15.30**	**99**	*e*P		**P**	**10 55 30.9**	**+1.3**
C2SB	**Chapadao do Su**	**15.44**	**77**	*e*P		**Pn**	**10 55 30.4**	**+1.7**
ITAB	**Concordia**	**15.56**	**109**	*e*P		**Pn**	**10 55 31.1**	**+1.0**
PLTB	**Pedras Altas**	**15.93**	**126**	*e*P		**Pn**	**10 55 31.9**	**-2.8**
PCMB	**Pacaembu**	**16.21**	**88**	*e*P		**Pn**	**10 55 39.0**	**+0.8**
OGAUY	**Aigu**	**16.59**	**136**	*e*P		**Pn**	**10 55 38.7**	**-4.2**
CNLB	**Canela**	**17.17**	**115**	*e*P		**Pn**	**10 55 48.7**	**-1.3**
CLDB	**Colider**	**17.31**	**48**	*e*P		**P**	**10 55 51.2**	**-0.5**
ITRB	**Iturama**	**17.41**	**82**	*e*P		**P**	**10 55 53.3**	**+0.5**
ARAG	**Araguaiana, MT**	**17.54**	**68**	*e*P		**P**	**10 55 55.3**	**+1.0**
FRTB	**Fartura**	**17.60**	**95**	*e*P		**P**	**10 55 54.9**	**0.0**
PLCA	**Paso Flores**	**17.65**	**185**	P		**Pn**	**10 55 56.9**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=9.9,slow=10,SNR=14							
PLCA	**Paso Flores**	**17.65**	**185**	P		P	10 55 46.4	-8.9
PLCA	**Paso Flores**	**17.65**	**185**	P		**Pn**	**10 55 56.7**	**+0.9**
PLCA				IAmb		IAmb	10 55 59.3	
	comp=Z,4.3nm,0.8s							
BB19B	**Bebedouro**	**18.81**	**88**	*e*P		**P**	**10 56 08.2**	**0.0**
RCLB	**Rio Claro- Sao**	**19.54**	**92**	*e*P		**P**	**10 56 16.1**	**0.0**
SPB	**Sao Paulo**	**19.54**	**96**	*e*P		**P**	**10 56 15.7**	**-0.3**
SPB	**Sao Paulo**	**19.54**	**96**	P		**P**	**10 56 15.2**	**-0.8**
SPB				IAmb		IAmb	10 56 16.6	
	comp=Z,21nm,1.1s							
IPMB	**Ipameri, GO**	**19.85**	**79**	*e*P		**P**	**10 56 19.6**	**0.0**
VAO	**Valinhos**	**20.01**	**94**	*e*P		**P**	**10 56 20.9**	**-0.3**
BDFB	**Brasilia**	**20.87**	**73**	P		**P**	**10 56 28.7**	**-1.8**
	comp=Z,6.0nm,0.7s,baz=241,slow=12,SNR=10							
BDFB	**Brasilia**	**20.87**	**73**	P		**P**	**10 56 28.8**	**-1.8**
BDFB				IAmb		IAmb	10 56 31.8	
	comp=Z,9.4nm,0.8s							
PMNB	**Patos De Minas**	**21.30**	**82**	*e*P		**P**	**10 56 34.2**	**-0.9**
JANB	**Januaria**	**24.38**	**75**	*e*P		**P**	**10 57 05.5**	**+0.1**
SMTB	**Santa Maria do**	**24.70**	**58**	*e*P		**P**	**10 57 08.8**	**+0.5**
OTAV	**Otavalo**	**25.06**	**336**	*e*P		**P**	**10 57 08.2**	**-3.8**
SJMB	**Sao Joao De Ma**	**26.06**	**86**	*e*P		**P**	**10 57 18.8**	**-1.7**
NBIT	**Itapeh - BA**	**28.80**	**79**	*e*P		**P**	**10 57 44.1**	**-1.0**
SDV	**Santo Domingo**	**31.85**	**356**	*e*P		**P**	**10 58 09.7**	**-2.3**
RCBR	**Riachuelo**	**35.97**	**67**	*e*P		**P**	**10 58 47.1**	**-0.5**
SNAA	**Sanae**	**60.71**	**161**	P		**P**	**11 01 58.6**	**+1.8**
SNAA				IAmb		IAmb	11 01 59.3	
	comp=Z,5.9nm,1.3s							
QSPA	**South Pole Qui**	**67.10**	**180**	P		**P**	**11 02 41.1**	**+2.3**
QSPA				IAmb		IAmb	11 02 41.9	
	comp=Z,3.8nm,0.6s							
TOA0	**Torodi Ar. Sit**	**77.72**	**70**	P		**P**	**11 03 42.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**77.72**	**70**	P		**P**	**11 03 43.0**	**+0.5**
	comp=Z,4.6nm,0.5s,baz=253,slow=5.2,SNR=41							
TORD				pP		**pP**	**11 04 09.3**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=247,slow=5.1,SNR=2.9							
YKA	**Yellowknife Ar**	**92.75**	**340**	P		**P**	**11 04 57.6**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=137,slow=4.9,SNR=4.1							
YKA				pP		**pP**	**11 05 23.9**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=134,slow=4.3,SNR=7.2							
ASAR	**Alice Springs**	**128.58**	**207**	PKP		**PKPdf**	**11 10 53.2**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=128,slow=2.0,SNR=5.8							
ASAR				pPKP		**pPKPdf**	**11 11 21.8**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=181,slow=2.4,SNR=2.1							
WRA	**Warramunga Arr**	**131.67**	**210**	PKP		**PKiKP**	**11 10 59.9**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=152,slow=1.7,SNR=5.7							
MKAR	**Makanchi Array**	**146.80**	**37**	PKPbc		**PKPdf**	**11 11 26.4**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=294,slow=2.4,SNR=3.2							
MKAR				pPKPbc		**pPKPdf**	**11 11 53.8**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=322,slow=3.2,SNR=6.6							

*IDC **05** 10:55:55.5±0.9, 53.78N×35.32W, h0km, mb3.5/9, mb1 3.8/10, mb1mx3.5/59, mbtmp3.6/10, ML2.5/1, Error ellipse: s-maj=32.4km s-min=18.3km az=11.0*
*NEIC **05** 10:55:57.2±1.3, 53.7N±0.1×35.3W±0.2, h12km±3km, mb4.3/9, Error ellipse: s-maj=18.3km s-min=12.5km az=155.0*

ISC 05 10:55:57.8±0.6, 53.7N±0.1×35.34W±0.08, h16km, n36, σ1s03/36, mb3.8/14, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SCHQ	**Schefferville**	**18.35**	**286**	P		**Pn**	**11 00 09.0**	**-2.5**
	0.2nm,0.3s,baz=47,slow=4.9,SNR=3.6							
SCHQ	**Schefferville**	**18.35**	**286**	P		**Pn**	**11 00 08.9**	**-2.5**
D62A	**Allapoint, All**	**22.33**	**267**	P		**P**	**11 00 55.5**	**+0.9**
D62A				IAmb		IAmb	11 01 00.7	
	comp=Z,26nm,1.7s							
ESBB	**Sonseca Array**	**25.44**	**111**	P		**P**	**11 01 24.2**	**-0.5**
ESDC	**Sonseca Array**	**25.44**	**111**	P		**P**	**11 01 25.9**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=319,slow=9.3,SNR=4.6							
ESDC	**Sonseca Array**	**25.44**	**111**	P		**P**	**11 01 25.9**	**+1.2**
NC303	**NORSAR Array S**	**25.72**	**54**	P		**P**	**11 01 28.3**	**+1.3**
ECSD	**EROS Data Cent**	**40.45**	**282**	P		**P**	**11 03 36.0**	**+0.8**
ECSD				IAmb		IAmb	11 03 44.9	
	comp=Z,5.8nm,1.4s							
AGG	**Agios Georgios**	**41.25**	**87**	P		**P**	**11 03 41.4**	**-0.5**
AGG				IAmb		IAmb	11 03 44.3	
	comp=Z,12nm,1.3s							
BRTR	**Keskin Array B**	**47.45**	**78**	P		**P**	**11 04 31.8**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=294,slow=4.6,SNR=4.1							
BRTR	**Keskin Array B**	**47.45**	**78**	P		**P**	**11 04 31.8**	**+0.1**
BW06	**Boulder Array**	**48.47**	**289**	P		**P**	**11 04 40.0**	**+0.4**
PD31	**Pinedale Array**	**48.47**	**289**	P		**P**	**11 04 40.0**	**+0.4**
PDAR	**Pinedale Array**	**48.47**	**289**	P		**P**	**11 04 39.5**	**0.0**
	comp=Z,0.4nm,0.6s,baz=55,slow=8.3,SNR=4.4							
PDAR	**Pinedale Array**	**48.47**	**289**	P		**P**	**11 04 39.5**	**0.0**
TOLK	**Toolik Lake Re**	**48.80**	**334**	P		**P**	**11 04 42.6**	**+1.1**
TOA0	**Torodi Ar. Sit**	**49.90**	**130**	P		**P**	**11 04 50.1**	**-0.4**
TORD	**Torodi Ar. Bea**	**49.90**	**130**	P		**P**	**11 04 50.2**	**-0.3**
	comp=Z,1.7nm,0.8s,baz=324,slow=6.9,SNR=4.4							
TORD	**Torodi Ar. Bea**	**49.90**	**130**	P		**P**	**11 04 50.2**	**-0.3**
ILAR	**Eielson Array**	**50.74**	**329**	P		**P**	**11 04 56.8**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=47,slow=5.2,SNR=3.4							
ILAR	**Eielson Array**	**50.74**	**329**	P		**P**	**11 04 56.8**	**+0.5**
DUG	**Dugway, Tooele**	**52.00**	**288**	P		**P**	**11 05 08.3**	**+2.0**
TXAR	**Lajitas Array**	**54.29**	**272**	P		**P**	**11 05 24.0**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=82,slow=8.3,SNR=3.2							
TXAR	**Lajitas Array**	**54.29**	**272**	P		**P**	**11 05 24.1**	**+0.8**
BVAR	**Borovoye Array**	**57.09**	**44**	P		**P**	**11 05 42.8**	**0.0**
	comp=Z,0.3nm,0.7s,baz=339,slow=7.7,SNR=1.9							
BVAR	**Borovoye Array**	**57.09**	**44**	P		**P**	**11 05 42.8**	**0.0**
MK31	**Makanchi Array**	**66.75**	**41**	P		**P**	**11 06 47.9**	**-0.1**
MK31				IAmb		IAmb	11 06 52.3	
	comp=Z,5.3nm,1.8s							
MKAR	**Makanchi Array**	**66.75**	**41**	P		**P**	**11 06 47.8**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=336,slow=6.2,SNR=3.4							
MKAR	**Makanchi Array**	**66.75**	**41**	P		**P**	**11 06 47.8**	**-0.1**
SONM	**Songino Array**	**73.77**	**26**	P		**P**	**11 07 29.8**	**-1.2**
	comp=Z,1.2nm,1.0s,baz=351,slow=7.4,SNR=6.0							
SONM	**Songino Array**	**73.77**	**26**	P		**P**	**11 07 29.8**	**-1.2**
LPAZ	**La Paz**	**75.17**	**213**	P		**P**	**11 07 39.4**	**-0.5**
LPAZ				IAmb		IAmb	11 07 44.4	
	comp=Z,3.5nm,1.4s							
WRA	**Warramunga Arr**	**145.38**	**17**	PKPbc		**PKPbc**	**11 15 34.4**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=329,slow=2.6,SNR=3.1							
WRA	**Warramunga Arr**	**145.38**	**17**			**PKPbc**	**11 15 34.4**	**-0.2**
ASAR	**Alice Springs**	**148.93**	**19**	PKPbc		**PKPbc**	**11 15 43.0**	**-1.6**
	comp=Z,0.3nm,0.6s,baz=353,slow=3.0,SNR=5.0							
ASAR	**Alice Springs**	**148.93**	**19**			**PKPbc**	**11 15 43.0**	**-1.6**

*BJI **05** 10:56:10.7±0.0, 53.85N×35.40W, h9km, mB5.3/22, mb4.8/38, Ms5.1/7, Ms7 5.0/8*
*IDC **05** 10:56:11.2±0.5, 53.69N×35.28W, h0km, mb4.3/29, mb1 4.4/32, mb1mx4.3/61, mbtmp4.3/32, ML3.5/3, MS4.2/5, Ms1 4.1/5, ms1mx3.7/16, Error ellipse: s-maj=15.7km s-min=10.1km az=5.0*
*MOS **05** 10:56:11.3±0.9, 53.77N×35.31W, h9km, mb4.8/38, Error ellipse: s-maj=9.3km s-min=6.5km az=68.8*
*GCMT **05** 10:56:11.6±0.2, 53.89N±0.03×35.22W±0.02, h14km, MW4.9/112, Moment Tensor Solution. s25,c26; s112,c153; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.88±.16; Mθθ0.33±.09; Mφφ2.54±.11; Mrθ0.95±.30; Mθφ-0.06±.07; Mφr-0.07±.22; Best double couple: M=2.84100×10^16 NP1:φs193.00000°, δ46.00000°, λ-69.00000°. NP2:φs344.00000°, δ48.00000°, λ-111.00000°. Principal axes: T 2.5430, Plg1.0000°, Azm88.0000°; N 0.5870, Plg15.0000°, Azm358.0000°; P -3.1380, Plg75.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **05** 10:56:13.6±1.7, 53.72N±0.10×35.2W±0.1, h13km±4km, mb4.7/103 Error ellipse: s-maj=14.9km s-min=11.9km az=208.0*

ISC 05 10:56:12.8±2.2, 53.69N±0.07×35.26W±0.05, h9km±13km, n225, σ1s02/208, mb4.6/100, MS4.3/12, 27C-2D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NRS	**Narsarsuaq**	**9.27**	**328**	P		**Pn**	**10 59 26.4**	**-0.1**
NRS	**Narsarsuaq**	**9.27**	**328**	Pn		**Pn**	**10 58 26.4**	**-0.1**
SFJD	**Kangerlussuaq**	**15.29**	**337**	P		**P**	**10 59 53.3**	**-0.1**
SFJD				pmax		pmax		
	comp=Z,36nm,1.3s							
SFJD	**Kangerlussuaq**	**15.29**	**337**	P		**P**	**10 59 53.3**	**-0.1**
SFJD				IAmb		IAmb	11 00 04.5	
	comp=Z,36nm,1.3s							
ILULI	**Ilulissat**	**17.22**	**341**	P		**Pn**	**11 00 11.5**	**-1.7**
ILULI				pmax		pmax		
	comp=Z,107nm,1.3s							
ILULI	**Ilulissat**	**17.22**	**341**	Pn		**Pn**	**11 00 11.4**	**-1.7**
ILULI				IAmb		IAmb	11 00 17.1	
	comp=Z,107nm,1.3s							
SCHQ	**Schefferville**	**18.40**	**286**	P		**Pn**	**11 00 26.5**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=80,slow=8.2,SNR=10							
SCHQ				LR		LR	11 06 44.0	
	comp=Z,485nm,21.1s,baz=120,slow=34							
SCHQ	**Schefferville**	**18.40**	**286**	P		**Pn**	**11 00 27.2**	**-0.8**
EKA	**Eskdalemuir Ar**	**18.63**	**72**	P		**P**	**11 00 29.4**	**-1.0**
	baz=285,slow=9.4,SNR=9.4							
SUMG	**Summit**	**19.01**	**357**	P		**Pn**	**11 00 36.2**	**+0.6**
SUMG				pmax		pmax		
	comp=Z,33nm,1.4s							
SUMG	**Summit**	**19.01**	**357**	*i*P		**P**	**11 00 35.0**	**0.0**
SUMG	**Summit**	**19.01**	**357**	P		**Pn**	**11 00 36.2**	**+0.6**
FRB	**Frobisher Bay**	**19.76**	**314**	P		**P**	**11 00 40.7**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=106,slow=10,SNR=3.4							
BATG	**Bathurst New B**	**20.51**	**264**	P		Pn	11 00 52.7	-0.5
BATG				IAmb		IAmb	11 00 58.0	
	comp=Z,36nm,1.4s							
PQI	**Presque Isle**	**21.97**	**265**	P		**P**	**11 01 08.5**	**+1.7**
E63A	**Oxbow**	**22.34**	**265**	P		**P**	**11 01 12.3**	**+1.6**
D62A	**Allapoint, All**	**22.38**	**267**	P		**P**	**11 01 11.7**	**+0.6**
D62A				IAmb		IAmb	11 01 16.5	
	comp=Z,56nm,1.5s							
DAG	**Danmarks Havn**	**24.00**	**9**	*i*P		**P**	**11 01 26.8**	**-0.5**
DAG				pmax		pmax		
	comp=Z,11nm,0.9s							
DAG	**Danmarks Havn**	**24.00**	**9**	*i*P		**P**	**11 01 26.8**	**-0.5**
	comp=Z,11nm,0.9s							
ESBB	**Sonseca Array**	**25.39**	**111**	P		**P**	**11 01 40.8**	**+0.5**
ESBB				IAmb		IAmb	11 01 43.0	
	comp=Z,23nm,1.1s							
ESDC	**Sonseca Array**	**25.39**	**111**	P		**P**	**11 01 40.4**	**0.0**
	comp=Z,12nm,0.9s,baz=314,slow=9.0,SNR=20							
NB2	**NORSAR Subarra**	**25.63**	**55**	P		**P**	**11 01 42.5**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=275,slow=9.3							
NOA	**NORSAR Array B**	**25.63**	**55**	P		**P**	**11 01 42.0**	**-0.4**
	comp=Z,4.3nm,0.8s,baz=277,slow=9.7,SNR=4.4							
NB201	**NORSAR Array S**	**25.67**	**55**	P		**P**	**11 01 43.2**	**+0.5**
NC303	**NORSAR Array S**	**25.69**	**54**	P		**P**	**11 01 43.7**	**+0.8**
NC303				IAmb		IAmb	11 01 53.4	
	comp=Z,22nm,1.0s							
TULEG	**Thule**	**26.15**	**343**	P		**P**	**11 01 47.9**	**+1.0**
VLDQ	**Val d'Or**	**26.88**	**275**	P		**P**	**11 01 55.1**	**+1.4**
VLDQ				IAmb		IAmb	11 01 59.7	
	comp=Z,14nm,1.1s							
HFS	**Hagfors**	**26.95**	**56**	P		**P**	**11 01 53.9**	**-0.4**
	comp=Z,5.9nm,1.0s,baz=240,slow=7.8,SNR=6.0							
NOR	**Nord**	**28.59**	**6**	*i*P		**P**	**11 02 07.7**	**-1.0**
	comp=Z,5.6nm,0.9s							
CLL	**Collm**	**29.04**	**75**	*i*P		**P**	**11 02 12.8**	**-0.1**
CLL				pmax		pmax		
	comp=Z,8.0nm,0.9s							
CLL	**Collm**	**29.04**	**75**	*i*P		**P**	**11 02 12.8**	**-0.1**
	comp=Z,8.0nm,0.9s							
SADO	**Sadowa**	**29.59**	**271**	LR

OBN					pmax	pmax			
	comp=Z,16nm,1.2s								
OBN					MLR	MLR			
	comp=Z,296nm,17.0s								
YKA	**Yellowknife Ar**	**40.27**	**315**		P	**P**	**11 03 48.9**	**-0.7**	
	comp=Z,0.8nm,0.8s,baz=62,slow=9.1,SNR=8.3								
YKA					PcP	**PcP**	**11 05 52.1**	**-1.0**	
	comp=Z,1.6nm,0.7s,baz=61,slow=3.7,SNR=17								
ECSD	**EROS Data Cent**	**40.49**	**282**		P	**P**	**11 03 52.9**	**+1.2**	
AGG	**Agios Georgios**	**41.20**	**87**		P	**P**	**11 03 59.1**	**+1.4**	
AGG					pmax	pmax			
	comp=Z,21nm,1.2s								
AGG	**Agios Georgios**	**41.20**	**87**		P	**P**	**11 03 59.1**	**+1.4**	
AGG					IAmb	IAmb	11 04 09.6		
	comp=Z,21nm,1.2s								
PRGR	**Permogore**	**41.30**	**46**	*e*	P	P	11 03 51.5	-6.6	
PRGR					pmax	pmax			
	comp=Z,5.0nm,0.6s								
VSR	**Storozhevoye**	**43.50**	**62**	*e*	P	**P**	**11 04 15.5**	**-0.7**	
VSR					pmax	pmax			
	comp=Z,10.0nm,1.1s								
TAM	**Tamanrasset**	**43.51**	**119**		P	**P**	**11 04 17.2**	**+0.5**	
TAM					pmax	pmax			
	comp=Z,19nm,1.4s								
TAM	**Tamanrasset**	**43.51**	**119**		P	**P**	**11 04 17.2**	**+0.5**	
TAM					IAmb	IAmb	11 04 19.8		
	comp=Z,19nm,1.4s								
VORD	**Divnogorie**	**43.70**	**62**	*e*	P	**P**	**11 04 16.7**	**-1.1**	
VORD					pmax	pmax			
	comp=Z,10.0nm,0.9s								
INK	**Inuvik**	**44.40**	**328**		P	**P**	**11 04 23.2**	**0.0**	
INK					pmax	pmax			
	comp=Z,22nm,1.6s								
INK	**Inuvik**	**44.40**	**328**		P	**P**	**11 04 22.7**	**-0.4**	
	comp=Z,4.6nm,1.1s,baz=350,slow=11,SNR=4.8								
INK	**Inuvik**	**44.40**	**328**		P	**P**	**11 04 23.2**	**0.0**	
INK					IAmb	IAmb	11 04 32.4		
	comp=Z,22nm,1.6s								
MIAR	**Mount Ida**	**44.63**	**269**		P	**P**	**11 04 25.8**	**+0.4**	
MIAR					pmax	pmax			
	comp=Z,19nm,1.4s								
MIAR	**Mount Ida**	**44.63**	**269**		P	**P**	**11 04 25.8**	**+0.4**	
ANN	**Anapa**	**46.33**	**70**	*e*	P	**P**	**11 04 36.4**	**-2.4**	
ANN					pmax	pmax			
	comp=Z,56nm,0.9s								
PHWY	**Pilot Hill**	**47.12**	**285**		IAmb	IAmb	11 04 47.8		
	comp=Z,9.1nm,1.2s								
YNE	**Yellowstone No**	**47.34**	**291**		P	**P**	**11 04 48.1**	**+1.1**	
BR131	**Keskin Array S**	**47.40**	**78**	*d i*	P	**P**	**11 04 48.0**	**+0.6**	
BR131	**Keskin Array S**	**47.40**	**78**		P	**P**	**11 04 48.7**	**+1.2**	
BR131					IAmb	IAmb	11 04 49.3		
	comp=Z,5.2nm,0.9s								
BRTR	**Keskin Array B**	**47.40**	**78**	*ce*	P	**P**	**11 04 48.9**	**+1.5**	
BRTR					pmax	pmax			
	comp=Z,4.0nm,0.8s								
BRTR	**Keskin Array B**	**47.40**	**78**		P	**P**	**11 04 48.5**	**+1.1**	
	comp=Z,3.8nm,0.8s,baz=309,slow=5.7,SNR=20								
BRTR					PcP	**PcP**	**11 06 16.3**	**-1.6**	
	comp=Z,0.9nm,1.0s,baz=256,slow=3.0,SNR=3.7								
YMP	**Mirror Lake Pl**	**47.59**	**291**		P	**P**	**11 04 50.4**	**+1.4**	
H17A	**Grant Village**	**48.04**	**291**		P	**P**	**11 04 54.2**	**+1.8**	
ISCO	**Idaho Springs**	**48.19**	**283**		IAmb	IAmb	11 04 59.5		
	comp=Z,8.5nm,1.0s								
SOC	**Sochi**	**48.38**	**70**	*e*	P	**P**	**11 04 55.5**	**+0.8**	
SOC				*e*			11 06 44.9		
SOC				*e*	PPP	PPP	11 07 33.1		
SOC				*e*	S	**S**	**11 11 56.0**	**+1.0**	
SOC				*e*	SSS	SSS	11 16 39.4		
SOC					MLR	MLR			
	comp=Z,740nm,21.0s								
BW06	**Boulder Array**	**48.51**	**289**		P	**P**	**11 04 55.7**	**-0.4**	
BW06					IAmb	IAmb	11 05 05.2		
	comp=Z,6.6nm,1.2s								
PD31	**Pinedale Array**	**48.51**	**289**		P	**P**	**11 04 55.7**	**-0.4**	
PDAR	**Pinedale Array**	**48.51**	**289**		P	**P**	**11 04 56.0**	**-0.1**	
	comp=Z,1.8nm,0.6s,baz=67,slow=7.5,SNR=15								
PDAR					PcP	**PcP**	**11 06 20.5**	**-1.4**	
	comp=Z,0.4nm,0.7s,baz=38,slow=4.6,SNR=2.2								
TOLK	**Toolik Lake Re**	**48.83**	**334**		P	**P**	**11 04 58.2**	**+0.3**	
TOLK					IAmb	IAmb	11 05 02.7		
	comp=Z,12nm,1.2s								
GOF	**Gofitskoye**	**49.27**	**66⇑**	*e*	P	**P**	**11 05 03.1**	**+1.5**	
T25A	**Trinidad**	**49.27**	**280**		IAmb	IAmb	11 05 07.6		
	comp=Z,14nm,1.4s								
ARU	**Arti**	**49.73**	**47**	*c i*	P	**P**	**11 05 04.9**	**0.0**	
ARU							11 06 57.4		
ARU					S	**S**	**11 12 16.6**	**+2.9**	
ARU					SS	**SS**	**11 15 48.5**	**+3.1**	
ARU					pmax	pmax			
	comp=Z,22nm,1.7s								
ARU	**Arti**	**49.73**	**47**		P	**P**	**11 05 04.3**	**-0.7**	
ARU					IAmb	IAmb	11 05 05.7		
	comp=Z,7.5nm,0.9s								
KIV	**Kislovodsk**	**49.78**	**68⇑**	*i*	P	**P**	**11 05 07.0**	**+1.4**	
KIV				*e*			11 06 56.7		
KIV				*e*	PPP	PPP	11 07 50.9		
KIV				*e*	S	**S**	**11 12 12.1**	**-2.8**	
KIV					pmax	pmax			
	comp=Z,7.0nm,0.9s								
KIV					MLR	MLR			
	comp=Z,185nm,19.0s								
TOA0	**Torodi Ar. Sit**	**49.86**	**130**		P	**P**	**11 05 05.9**	**-0.5**	
TORD	**Torodi Ar. Bea**	**49.86**	**130**		P	**P**	**11 05 06.0**	**-0.4**	
	comp=Z,8.6nm,0.9s,baz=332,slow=8.1,SNR=17								
TORD					PcP	**PcP**	**11 06 26.4**	**-0.5**	
	comp=Z,1.0nm,0.9s,baz=313,slow=3.1,SNR=2.1								
SHA1	**Shidzhatmaz**	**49.91**	**68**	*i*	P	**P**	**11 05 07.2**	**+0.5**	
RDMU	**Red Mountain**	**49.96**	**287**		P	**P**	**11 05 08.5**	**+1.3**	
KBZ	**Khabaz**	**50.05**	**68**	*i*	P	**P**	**11 05 08.2**	**+0.7**	
KBZ	**Khabaz**	**50.05**	**68**		P	**P**	**11 05 07.8**	**+0.3**	
	comp=Z,4.4nm,0.9s,baz=92,slow=16,SNR=5.8								
LLLB	**Lillooet**	**50.06**	**304**		IAmb	IAmb	11 05 17.2		
	comp=Z,13nm,1.2s								
B08A	**Colville Reser**	**50.21**	**300**		IAmb	IAmb	11 05 18.2		
	comp=Z,15nm,1.2s								
SVE	**Sverdlovsk**	**50.37**	**45**	*e*	P	**P**	**11 05 09.9**	**+0.2**	
MSTX	**Muleshoe**	**50.49**	**276**		IAmb	IAmb	11 05 21.6		
	comp=Z,7.6nm,1.0s								
F10A	**Beach Ranch, E**	**50.65**	**297**		IAmb	IAmb	11 05 23.1		
	comp=Z,12nm,1.4s								
ILAR	**Eielson Array**	**50.77**	**329**		P	**P**	**11 05 12.8**	**+0.1**	
	comp=Z,0.9nm,0.6s,baz=45,slow=6.1,SNR=15								
ILAR					PcP	**PcP**	**11 06 28.9**	**-0.7**	
	comp=Z,1.6nm,0.8s,baz=15,slow=2.9,SNR=10								
JCT	**Junction City**	**51.21**	**270**		IAmb	IAmb	11 05 25.5		
	comp=Z,10nm,1.1s								
SRU	**San Rafael Swe**	**51.48**	**286**		P	**P**	**11 05 18.7**	**+0.1**	
SRU					pmax	pmax			
	comp=Z,8.0nm,1.2s								
SRU	**San Rafael Swe**	**51.48**	**286**		P	**P**	**11 05 18.7**	**+0.1**	
LTY	**Liberty**	**51.61**	**300**		IAmb	IAmb	11 05 28.0		
	comp=Z,17nm,1.3s								
ANMO	**Albuquerque**	**51.98**	**279**	*ce*	P	**P**	**11 05 22.1**	**-0.3**	
ANMO					pmax	pmax			
	comp=Z,8.0nm,2.5s								
ANMO	**Albuquerque**	**51.98**	**279**		P	**P**	**11 05 23.5**	**+1.1**	
G08A	**Pilot Rock**	**52.01**	**297**		IAmb	IAmb	11 05 31.2		
	comp=Z,9.6nm,1.3s								
DBIC	**Dimbokro**	**52.96**	**141**		P	**P**	**11 05 28.9**	**-0.7**	
DBIC					pmax	pmax			
	comp=Z,11nm,1.0s								
DBIC	**Dimbokro**	**52.96**	**141**		P	**P**	**11 05 29.1**	**-0.5**	
	comp=Z,8.0nm,0.9s,baz=331,slow=4.8,SNR=5.6								
DBIC	**Dimbokro**	**52.96**	**141**		P	**P**	**11 05 28.9**	**-0.7**	
DBIC					IAmb	IAmb	11 05 35.8		
	comp=Z,11nm,1.0s								
GNI	**Garni**	**53.46**	**70**	*ce*	P	**P**	**11 05 32.7**	**-0.5**	
GNI					pmax	pmax			
	comp=Z,83nm,1.7s								
WVOR	**Wild Horse Val**	**53.76**	**294**		IAmb	IAmb	11 05 44.0		
	comp=Z,15nm,1.6s								
TXAR	**Lajitas Array**	**54.34**	**272**		P	**P**	**11 05 39.5**	**-0.2**	
	comp=Z,1.3nm,0.9s,baz=64,slow=5.8,SNR=3.6								
TXAR					PcP	**PcP**	**11 06 44.0**	**+0.4**	
	comp=Z,1.4nm,0.7s,baz=62,slow=4.4,SNR=8.4								
TIXI	**Tiksi**	**54.46**	**6**	*ce*	P	**P**	**11 05 40.2**	**+0.4**	
TIXI					pmax	pmax			
	comp=Z,9.0nm,1.3s								
TIXI	**Tiksi**	**54.46**	**6**		P	**P**	**11 05 39.7**	**-0.2**	
	comp=Z,3.9nm,0.8s,baz=26,slow=4.5,SNR=7.7								
TIXI	**Tiksi**	**54.46**	**6**		P	**P**	**11 05 40.3**	**+0.4**	
TIXI					IAmb	IAmb	11 05 48.3		
	comp=Z,8.9nm,1.1s								
121A	**Cookes Peak, D**	**54.47**	**278**		P	**P**	**11 05 41.4**	**+0.7**	
MOD	**Modoc Plateau**	**55.02**	**295**		IAmb	IAmb	11 05 54.6		
	comp=Z,7.3nm,1.1s								
ABKAR	**Akbulak array**	**55.12**	**53**		P	**P**	**11 05 45.1**	**+0.1**	
X16A	**Lo Mia Camp, P**	**55.27**	**282**		IAmb	IAmb	11 05 50.0		
	comp=Z,4.4nm,0.8s								
W13A	**Hualapai Mount**	**56.20**	**285**		IAmb	IAmb	11 05 56.2		
	comp=Z,5.5nm,0.8s								
TPNV	**Topopah Spring**	**56.23**	**288**		IAmb	IAmb	11 06 05.8		
	comp=Z,5.8nm,1.0s								
RYN	**Ryan**	**56.33**	**291**		IAmb	IAmb	11 05 56.4		
	comp=Z,5.3nm,0.9s								
NVAR	**Mina Array Bea**	**56.34**	**291**		P	**P**	**11 05 53.3**	**-0.9**	
	comp=Z,0.6nm,0.9s,baz=77,slow=9.3,SNR=4.1								
NVAR					PcP	**PcP**	**11 06 51.6**	**+0.2**	
	comp=Z,0.4nm,0.7s,baz=39,slow=5.9,SNR=2.6								
BEKR	**Beckworth**	**56.47**	**293**		IAmb	IAmb	11 06 05.2		
	comp=Z,8.6nm,1.2s								
PNTR	**Pine Nut**	**56.60**	**292**		IAmb	IAmb	11 06 07.7		
	comp=Z,9.7nm,0.9s								
BVAR	**Borovoye Array**	**57.06**	**44**		P	**P**	**11 05 58.8**	**-0.1**	
	comp=Z,2.2nm,0.8s,baz=310,slow=7.4,SNR=12								
BVAR					PcP	**PcP**	**11 06 54.0**	**+0.3**	
	comp=Z,1.0nm,0.7s,baz=343,slow=4.5,SNR=3.2								
AFDM	**Forest Hills D**	**57.45**	**293**		IAmb	IAmb	11 06 07.3		
	comp=Z,7.4nm,1.3s								
Y12C	**Blythe**	**57.53**	**284**		IAmb	IAmb	11 06 13.1		
	comp=Z,11nm,1.1s								
BILL	**Bilibino**	**57.54**	**351⇑**	*e*	P	**P**	**11 06 03.9**	**+1.9**	
BILL				*e*			11 08 12.1		
BILL				*e*	S	S	11 14 23.8	+25	
BILL					pmax	pmax			
	comp=Z,2.0nm,1.1s								
113A	**Mohawk Valley,**	**57.80**	**283**		IAmb	IAmb	11 06 07.6		
	comp=Z,6.8nm,1.1s								
ISA	**Isabella, Lake**	**58.41**	**288**		IAmb	IAmb	11 06 18.6		
	comp=Z,10nm,1.4s								
XPFO	**Pion Flat**	**58.74**	**285**		P	**P**	**11 06 12.4**	**+1.4**	
XPFO					IAmb	IAmb	11 06 14.7		
	comp=Z,12nm,1.4s								
PFO	**Pinyon Flats O**	**58.74**	**285**		P	**P**	**11 06 12.4**	**+1.4**	
PFO					pmax	pmax			
	comp=Z,12nm,1.4s								
PFO	**Pinyon Flats O**	**58.74**	**285**		P	**P**	**11 06 12.4**	**+1.4**	
PFO					IAmb	IAmb	11 06 14.7		
	comp=Z,12nm,1.4s								
BAR	**Barrett**	**59.54**	**285**		IAmb	IAmb	11 06 27.3		
	comp=Z,5.7nm,1.0s								
ZALV	**Zalesovo Beam**	**61.83**	**35**		P	**P**	**11 06 31.1**	**-0.5**	
	comp=Z,1.1nm,0.7s,baz=335,slow=6.7,SNR=5.7								
ZALV					PcP	**PcP**	**11 07 12.2**	**-0.4**	
	comp=Z,1.4nm,0.7s,baz=339,slow=7.7,SNR=4.7								
KURK	**Kurchatov**	**62.13**	**41**	*ce*	P	**P**	**11 06 33.9**	**+0.1**	
KURK					pmax	pmax			
	comp=Z,8.0nm,1.3s								
KURK	**Kurchatov**	**62.13**	**41**		P	**P**	**11 06 33.5**	**-0.3**	
KURK					IAmb	IAmb	11 06 35.0		
	comp=Z,7.7nm,1.1s								
KURBB	**Kurchatov Arra**	**62.17**	**41**		P	**P**	**11 06 33.8**	**-0.2**	
	comp=Z,1.5nm,0.4s,baz=320,slow=7.4,SNR=12								
GYA0B	**ALIBECK ARRAY**	**62.33**	**63**			**P**	**11 06 36.6**	**+1.2**	
GYA0B					IAmb	IAmb	11 06 36.9		
	comp=Z,4.2nm,0.8s								
SEY	**Seymchan**	**63.57**	**356**	*i*	P	**P**	**11 06 43.7**	**+0.6**	
YAK	**Yakutsk**	**64.02**	**8**	*i*	P	**P**	**11 06 44.6**	**-1.5**	
YAK					pmax	pmax			
	comp=Z,4.0nm,1.0s								
MAKZ	**Makanchi**	**66.60**	**42**		P	**P**	**11 07 03.1**	**0.0**	
MAKZ					pmax	pmax			
	comp=Z,7.0nm,1.2s								
MAKZ	**Makanchi**	**66.60**	**42**		P	**P**	**11 07 03.1**	**0.0**	
MAKZ					IAmb	IAmb	11 07 04.5		
	comp=Z,7.2nm,1.1s								
MK31	**Makanchi Array**	**66.73**	**42**		P	**P**	**11 07 03.7**	**-0.3**	
MK31					pmax	pmax			
	comp=Z,3.0nm,0.9s								
MK31	**Makanchi Array**	**66.73**	**42**		P	**P**	**11 07 03.7**	**-0.3**	
MKAR	**Makanchi Array**	**66.73**	**42**	*ce*	P	**P**	**11 07 04.1**	**+0.1**	
MKAR					pmax	pmax			
	comp=Z,2.0nm,0.7s								
MKAR	**Makanchi Array**	**66.73**	**42**		P	**P**	**11 07 03.9**	**-0.1**	
	comp=Z,2.3nm,0.7s,baz=330,slow=4.8,SNR=24								
AAK	**Ala-Archa**	**66.79**	**49**	*ce*	P	**P**	**11 07 05.6**	**+1.0**	
AAK					pmax	pmax			
	comp=Z,12nm,1.7s								
AAK	**Ala-Archa**	**66.79**	**49**		P	**P**	**11 07 04.5**	**-0.1**	
	comp=Z,0.9nm,0.4s,baz=126,slow=5.1,SNR=3.6								
AAK	**Ala-Archa**	**66.79**	**49**		P	**P**	**11 07 06.0**	**+1.4**	
KSH	**Kashi**	**69.95**	**50**		P	**P**	**11 07 23.9**	**-0.5**	
KSH					pP	pwP	11 07 31.1	+1.8	
KSH					PP	**PP**	**11 10 00.6**	**+2.0**	
KSH					S	**S**	**11 16 31.3**	**-3.3**	
KSH					sS	sS	11 16 41.0	+3.0	
KSH					SS	**SS**	**11 21 04.6**	**+1.9**	
KSH					LR	LR			
	comp=Z,280nm,4.6s								
KSH					LR	LR			
	comp=Z,610nm,7.6s								
WMQ	**Urumqi**	**71.31**	**40**	*e*	P	**P**	**11 07 34.7**	**+2.1**	
WMQ					sP	PcP	11 07 47.3	-5.0	
WMQ					pmax	pmax			
	comp=Z,5.0nm,1.3s								
WMQ					pmax	pmax			
	comp=Z,120nm,6.3s								
WMQ					LR	LR			
	comp=Z,730nm,28.9s								
WMQ					LR	LR			
	comp=Z,1μm,28.9s								
WMQ					LR	LR			
	comp=Z,1μm,28.8s								
SONM	**Songino Array**	**73.76**	**26**		P	**P**	**11 07 47.1**	**-0.1**	
	comp=Z,7.3nm,1.0s,baz=328,slow=6.6,SNR=24								
ULN	**Ulaanbaatar**	**73.90**	**25**	*ce*	P	**P**	**11 07 48.7**	**+0.7**	
ULN					pmax	pmax			
	comp=Z,16nm,1.0s								
ULN	**Ulaanbaatar**	**73.90**	**25**		P	**P**	**11 07 47.9**	**-0.1**	
LPAZ	**La Paz**	**75.18**	**213**		P	**P**	**11 07 56.1**	**-0.2**	
LPAZ					pmax	pmax			
	comp=Z,6.0nm,1.2s								
LPAZ	**La Paz**	**75.18**	**213**		P	**P**	**11 07 56.0**	**-0.2**	
	comp=Z,1.5nm,0.8s,baz=0.7,slow=4.6,SNR=5.8								
LPAZ	**La Paz**	**75.18**	**213**		P	**P**	**11 07 56.1**	**-0.2**	
GRNR	**Gornyy**	**75.68**	**5**	*e*	P	**P**	**11 07 55.5**	**-2.6**	
GRNR					pmax	pmax			
	comp=Z,4.0nm,1.0s								
KLR	**Kul'dur**	**76.87**	**9**	*i*	P	**P**	**11 08 05.1**	**+0.2**	
KLR					pmax	pmax			
	comp=Z,2.0nm,1.3s								
GTA	**Gaotai**	**79.51**	**34**	⇓	P	**P**	**11 08 19.5**	**-0.3**	
GTA					pP	pwP	11 08 24.1	-0.6	
GTA					sP	PcP	11 08 26.6	-1.2	
GTA					pmax	pmax			
	comp=Z,7.0nm,1.3s								
GTA					pmax	pmax			
	comp=Z,120nm,5.1s								
GTA					LR	LR			
	comp=Z,100nm,17.5s								
GTA					LR	LR			
	comp=Z,110nm,18.1s								
GTA					LR	LR			
	comp=Z,120nm,19.0s								
HHC	**Hu-ho-hao-te**	**81.60**	**25**	*e*	P	**P**	**11 08 29.2**	**-1.8**	
HHC					pmax	pmax			
	comp=Z,11nm,1.1s								
HHC					pmax	pmax			
	comp=Z,47nm,7.3s								
USRK	**Ussuriysk Ar.**	**81.88**	**9**		P	**P**	**11 08 32.1**	**-0.2**	
	comp=Z,3.0nm,0.8s,baz=289,slow=4.4,SNR=5.2								
XAN	**Xi'an**	**87.28**	**29**		P	**P**	**11 08 59.4**	**-0.4**	
XAN					pP	pwP	11 09 04.6	-0.1	
XAN					pmax	pmax			
	comp=Z,8.0nm,1.4s								
XAN					pmax	pmax			
	comp=Z,170nm,4.4s								
CD2	**Chengdu**	**88.57**	**34**		P	**P**	**11 09 04.2**	**-1.8**	
CD2					pmax	pmax			
	comp=Z,10.0nm,0.5s								
CFA	**Coronel Fontan**	**89.62**	**208**		LR	LR	11 46 38.2		
	comp=Z,73nm,19.0s,baz=68,slow=34								
NJ2	**Nanjing**	**91.71**	**22**	*e*	P	**P**	**11 09 18.9**	**-1.6**	
NJ2					pmax	pmax			
	comp=Z,18nm,0.5s								
BOSA	**Boshof**	**97.22**	**130**		LR	LR	11 51 42.2		
	comp=Z,108nm,19.7s,baz=9.5,slow=34								
CMAR	**Chiang Mai Arr**	**98.09**	**43**	*ce*	P	Pdif	11 09 50.0	0.0	
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**98.09**	**43**		P	**P**	**11 09 49.5**	**-0.4**	
	comp=Z,0.5nm,0.4s,baz=328,slow=6.6,SNR=8.0								
PLCA	**Paso Flores**	**98.83**	**206**		LR	LR	11 51 45.7		
	comp=Z,46nm,18.5s,baz=54,slow=34								
PPT2	**Papeete2**	**118.36**	**279**	*e*	LR	LR	11 51 14.6		
	comp=Z,84nm,23.0s								
TBI	**Tubuai**	**122.74**	**275**	*e*	LR	LR	11 53 08.2		
	comp=Z,100nm,22.2s								
VNA3	**Neumayer Olymp**	**125.95**	**170**		PKPdf	**PKPdf**	**11 15 13.3**	**-0.2**	
SNAA	**Sanae**	**127.14**	**168**		PKPdf	**PKPdf**	**11 15 15.9**	**0.0**	
QSPA	**South Pole Qui**	**143.57**	**180**		PKPpre	PKPab	11 15 43.5	+0.4	
DZM	**Mont Dzumac**	**144.38**	**324**	*e*	LR	LR	12 03 03.2		
	comp=Z,283nm,23.9s								
WRAB	**Tennant Creek**	**145.37**	**17**		PKIKP	**PKPbc**	**11 15 50.7**	**-0.2**	
WRAB	**Tennant Creek**	**145.37**	**17**			**PKPbc**	**11 15 50.7**	**-0.2**	
WRA	**Warramunga Arr**	**145.38**	**17**		PKPbc	**PKPbc**	**11 15 50.1**	**-0.8**	
	comp=Z,2.3nm,0.7s,baz=342,slow=3.5,SNR=12								
MORW	**Morawa**	**147.71**	**52**		PKPbc	**PKiKP**	**11 15 59.4**	**-0.1**	
AS31	**Alice Springs**	**148.93**	**20**			**PKPbc**	**11 16 00.6**	**-0.3**	
ASAR	**Alice Springs**	**148.93**	**20**		PKPbc	**PKPbc**	**11 15 59.7**	**-1.2**	
	comp=Z,2.3nm,0.6s,baz=352,slow=2.3,SNR=31								

IDC ***05*** *11:06:13.9±5.5, 13°.47N×120°.16E, h180km±54km, mb2.8/3, mb1 3.0/3, mb1mx2.7/54, mbtmp3.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/10, Error ellipse: s-maj=208.8km s-min=22.3km az=71.0*

MAN ***05*** *11:06:26.7, 13°.34N×120°.81E, h38km, mb4.2, ML3.0, MS2.7*

ISC 05 11:06:14.7±1.1, 13°.6N±0°.2×120°.6E±0°.2, h200km, n9, σ1°59/9, mb3.1/3, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.34**	**293**	*e*	P	**Pn**	**11 06 40.7**	**-0.6**
LUBP				*e*	S	**Sn**	**11 06 59.2**	**-2.6**
TGY	**Tagaytay City**	**0.61**	**36**	P		**Pn**	**11 06 41.4**	**-1.0**
	37nm,0.3s,baz=165,slow=19,SNR=2.6							
TGY				S		**Sn**	**11 07 03.2**	**-0.7**
	53nm,0.3s,baz=242,slow=18,SNR=6.3							
LQP	**Lukban**	**1.07**	**62⇑**	*e*	P	**Pn**	**11 06 45.3**	**0.0**
BOAC	**Boac**	**1.25**	**97**	*e*	P	**Pn**	**11 06 44.9**	**-1.4**
BOAC				*e*	S	Sn	11 07 05.8	-5.0
PVCP	**Virac**	**3.49**	**90**	*e*	P	Pn	11 07 05.3	-4.9
JNU	**Nakatsue**	**21.59**	**24**	LR		LR	11 19 51.6	
	comp=Z,41nm,18.6s,baz=296,slow=37							
WRA	**Warramunga Arr**	**35.99**	**158**	P		**P**	**11 12 57.1**	**+0.3**
	0.5nm,0.8s,baz=334,slow=9.7,SNR=2.9							
SONM	**Songino Array**	**36.11**	**344**	P		**P**	**11 12 58.8**	**+1.1**
	0.3nm,0.7s,baz=159,slow=8.6,SNR=3.9							
ASAR	**Alice Springs**	**39.27**	**160**	P		**P**	**11 13 26.0**	**+1.7**
	0.1nm,0.3s,baz=337,slow=6.9,SNR=6.2							

IDC ***05*** *11:08:19.3±1.0, 53°.77N×35°.05W, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/43, mbtmp3.6/7, MS3.4/1, Ms1 3.4/1, ms1mx2.8/44, Error ellipse: s-maj=40.8km s-min=22.7km az=15.0*

NEIC ***05*** *11:08:21.4±1.0, 53°.8N±0°.1×35°.0W±0°.2, h11km±5km, mb4.5/6, Error ellipse: s-maj=23.2km s-min=15.7km az=212.0*

ISC 05 11:08:21.6±0.8, 53°.8N±0°.2×35°.0W±0°.1, h14km, n15, σ0°75/14, mb3.8/11, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**15.26**	**336**	LR		LR	11 16 39.8	
	comp=Z,145nm,18.2s,baz=158,slow=33							
COI	**Coimbra**	**22.49**	**116**	P		**P**	**11 13 20.6**	**+0.2**
ESDC	**Sonseca Array**	**25.28**	**111**	P		**P**	**11 13 47.9**	**+0.5**
	1.2nm,0.7s,baz=314,slow=9.6,SNR=6.0							
FCC	**Fort Churchill**	**32.24**	**303**	P		**P**	**11 14 49.6**	**+0.6**
FCC				IAmb		IAmb	11 14 57.7	
	comp=Z,10nm,1.5s							
ULM	**Lac du Bonnet**	**36.62**	**290**	P		**P**	**11 15 27.5**	**+0.4**
BRTR	**Keskin Array B**	**47.23**	**78**	P		**P**	**11 16 54.0**	**0.0**
	comp=Z,6.0nm,0.8s,baz=298,slow=7.1,SNR=2.6							
PDAR	**Pinedale Array**	**48.63**	**289**	P		**P**	**11 17 03.8**	**-1.1**
	comp=Z,3.0nm,0.6s,baz=64,slow=6.2,SNR=3.8							
TOA0	**Torodi Ar. Sit**	**49.80**	**130**	P		**P**	**11 17 14.1**	**+0.3**
TOA0				IAmb		IAmb	11 17 19.0	
	comp=Z,25nm,1.9s							
TORD	**

comp=Z,0.5nm,0.7s,baz=58,slow=3.6,SNR=7.7
HENM Henderson Moun 40.78 268 P **P** **11 25 19.9 +0.5**
BR131 Keskin Array S 47.30 78 P **P** **11 26 12.7 +0.8**
BRTR Keskin Array B 47.30 78 P **P** **11 26 12.8 +0.8**
comp=Z,1.3nm,0.7s,baz=323,slow=5.2,SNR=8.4
BRTR LR LR 11 47 42.3
comp=Z,40nm,18.9s,baz=282,slow=38
YNE Yellowstone No 47.34 291 P **P** **11 26 12.7 +0.4**
N23A Red Feather La 47.69 285 P **P** **11 26 16.4 +1.3**
PDAR Pinedale Array 48.52 289 P **P** **11 26 21.1 -0.4**
comp=Z,0.5nm,0.6s,baz=63,slow=7.1,SNR=6.2
PDAR LR LR 11 45 54.1
comp=Z,115nm,18.4s,baz=71,slow=35
TOLK Toolik Lake Re 48.71 334 P **P** **11 26 23.3 +1.0**
TOLK IAmb IAmb 11 26 23.4
comp=Z,5.2nm,1.2s
TOA0 Torodi Ar. Sit 49.92 130 P **P** **11 26 31.7 -0.4**
TOA0 IAmb IAmb 11 26 32.3
comp=Z,7.3nm,1.1s
TORD Torodi Ar. Bea 49.92 130 P **P** **11 26 31.4 -0.7**
comp=Z,4.6nm,1.0s,baz=330,slow=7.7,SNR=14
MDP Montagnes des 50.66 203 LR LR 11 45 27.4
comp=Z,41nm,18.4s,baz=88,slow=33
DBIC Dimbokro 53.06 141 LR LR 11 47 00.1
comp=Z,110nm,18.1s,baz=336,slow=33
TXAR Lajitas Array 54.40 272 P **P** **11 27 06.5 +1.1**
comp=Z,0.7nm,0.9s,baz=56,slow=8.8,SNR=5.5
TXAR LR LR 11 49 36.2
comp=Z,64nm,18.7s,baz=0.0,slow=35
APG El Apazote 57.79 250 LR LR 11 53 05.6
comp=Z,43nm,18.3s,baz=48,slow=37
CMIG Matias Romero 58.61 255 LR LR 11 53 33.4
comp=Z,50nm,18.1s,baz=56,slow=37
JTS Las Juntas de 58.72 242 LR LR 11 51 26.4
comp=Z,57nm,19.5s,baz=82,slow=35
XPFO Pion Flat 58.76 285 P **P** **11 27 37.5 +1.1**
XPFO IAmb IAmb 11 27 46.7
comp=Z,7.8nm,1.5s
PFO Pinyon Flats O 58.76 285 P **P** **11 27 37.6 +1.2**
PFO IAmb IAmb 11 27 46.7
comp=Z,7.8nm,1.5s
MK31 Makanchi Array 66.56 42 P **P** **11 28 29.1 +0.9**
MKAR Makanchi Array 66.56 42 P **P** **11 28 28.2 0.0**
comp=Z,0.6nm,0.7s,baz=342,slow=6.2,SNR=6.5
SONM Songino Array 73.57 26 P **P** **11 29 12.1 +0.8**
comp=Z,1.7nm,0.9s,baz=338,slow=8.2,SNR=6.5
WRA Warramunga Arr 145.20 17 PKPbc **PKPbc** **11 37 14.9 -0.6**
comp=Z,0.8nm,0.9s,baz=345,slow=3.9,SNR=3.8
ASAR Alice Springs 148.74 20 PKPbc **PKPbc** **11 37 24.7 -0.9**
comp=Z,0.9nm,1.0s,baz=342,slow=2.1,SNR=6.7

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*IDC **05** 11:32:03.5±0.4,5.°91S×105.°29E,h0km,mb4.7/24, mb1 4.8/27,mb1mx4.8/32,mbtmp4.7/27,ML4.2/3,MS4.0/2, Ms1 4.1/2,ms1mx3.3/37,Error ellipse: s-maj=14.3km s-min=9.0km az=38.0*

*MOS **05** 11:32:10.5±1.4,5.°70S×105.°51E,h58km,mb5.2/37,Error ellipse: s-maj=10.6km s-min=5.2km az=122.1*

*DJA **05** 11:32:10.7±0.2,6.°S±2.°×10.°5E±.°,h41km±2km,M5.0/66, mb5.0/66,mB5.5/30,MLv5.1/29,Mw(mB)5.0/30,Mwp5.8/3*

*NEIC **05** 11:32:11.1±2.3,5.°93S±0.°07×105.°35E±0.°04,h57km±4km, mb5.1/75,Error ellipse: s-maj=12.3km s-min=7.7km az=216.0*

*BJI **05** 11:32:12.0±0.0,6.°00S×105.°30E,h58km,mB5.1/39, mb4.7/48,Ms5.1/32,Ms7 4.8/31*

*KLM **05** 11:32:13.0,6.°07S×105.°22E,h37km,mb4.9*

ISC 05 11:32:11.1±0.7,6.°06S±0.°04×105.°27E±0.°04,h55km±6km, n561,σ1§43/568,mb5.0/104,MS4.7/19,65C-6D,Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBJI	**Serang**	**0.86**	**94**	P	Pn	11 32 20.2	-6.9
SBJI				S	**Sn**	**11 32 34.0**	**-4.8**
KASI	**Kota Agung**	**0.94**	**305**	P	**Pn**	**11 32 24.9**	**-3.2**
KASI				S	**Sn**	**11 32 40.6**	**0.0**
TNG	**Tangerang**	**1.37**	**95**	P	**Pn**	**11 32 29.9**	**-4.0**
KLSI		**1.47**	**338**	P	**Pn**	**11 32 33.7**	**-1.5**
DBJI	**Dramaga**	**1.55**	**108**	P	**Pn**	**11 32 32.4**	**-4.0**
DBJI				S	**Sn**	**11 32 52.9**	**-2.5**
SKJI	**Sukabumi**	**1.58**	**126**	P	**Pn**	**11 32 33.0**	**-3.8**
SKJI				S	**Sn**	**11 32 54.0**	**-2.2**
LWLI	**Liwa**	**1.59**	**311**	P	**Pn**	**11 32 37.0**	**0.0**
CBJI	**Citeko**	**1.61**	**103**	P	**Pn**	**11 32 36.3**	**-0.9**
MDSI	**Maura Dua**	**1.91**	**325**	P	**Pn**	**11 32 41.0**	**-0.2**
CNJI	**Cibinong**	**2.22**	**124**	P	**Pn**	**11 32 42.4**	**-3.1**
CNJI				S	**Sn**	**11 33 10.2**	**-1.7**
LEM	**Lembang**	**2.45**	**108**	Pn	**Pn**	**11 32 46.9**	**-2.0**
	32nm,0.3s,baz=338,slow=16,SNR=33						
LEM				Sn	**Sn**	**11 33 15.9**	**-1.9**
	89nm,0.3s,baz=342,slow=20,SNR=6.2						
LEM	**Lembang**	**2.45**	**108**	P	**Pn**	**11 32 46.5**	**-2.3**
MNAI	**Manna**	**2.86**	**306**	P	**Pn**	**11 32 54.5**	**+0.3**
MNAI	**Manna**	**2.86**	**306**		**Pn**	**11 32 55.2**	**+1.0**
CISI	**Cisompet, Garu**	**2.93**	**121**	P	**Pn**	**11 32 52.6**	**-2.7**
CISI	**Cisompet, Garu**	**2.93**	**121**		**Pn**	**11 32 52.2**	**-3.0**
PMBI	**Palembang**	**3.15**	**351**	P	**Pn**	**11 32 59.0**	**+0.7**
PMBI	**Palembang**	**3.15**	**351**		**Pn**	**11 32 59.0**	**+0.7**
KSI	**Kapahiang**	**3.58**	**312**	P	**Pn**	**11 33 05.7**	**+1.4**
CMJI	**Cimerak**	**3.59**	**119**	P	**Pn**	**11 33 01.9**	**-2.4**
KPJI	**Karang Pucung**	**3.85**	**109**	P	**Pn**	**11 33 07.2**	**-0.6**
TPI	**Tanjungpandan**	**4.05**	**36**	P	**Pn**	**11 33 07.5**	**-3.1**
MASI	**Maura Aman, Be**	**4.19**	**314**	P	**Pn**	**11 33 15.0**	**+2.5**
SMRI	**Semarang**	**5.23**	**101**	P	**Pn**	**11 33 26.9**	**+0.1**
	5.6nm15μm1μm,0.9s						
SMRI	**Semarang**	**5.23**	**101**		**Pn**	**11 33 30.4**	**+3.6**
YOGI	**Yogyakarta**	**5.29**	**110**	P	**Pn**	**11 33 28.1**	**+0.6**
	1.7nm5μm262nm,1.1s						
KRJI	**Kerinci**	**5.48**	**316**	P	**Pn**	**11 33 30.2**	**0.0**
	7.2nm4μm19μm1μm,1.0s						
UGM	**Wanagama**	**5.53**	**110**	P	**Pn**	**11 33 31.0**	**+0.1**
	2.3nm436nm,1.1s						
UGM	**Wanagama**	**5.53**	**110**		**Pn**	**11 33 31.7**	**+0.8**
WOJI	**Wonogiri, Jawa**	**5.88**	**108**	P	**Pn**	**11 33 35.7**	**0.0**
	0.7nm155nm,1.0s						
PPSI	**Pulau Pagai**	**6.18**	**302**	P	**Pn**	**11 33 39.9**	**0.0**
	1.4nm5μm400nm,1.1s						
PCJI	**Pacitan**	**6.23**	**110**	P	**Pn**	**11 33 41.0**	**+0.5**
NGJI	**Ngawi**	**6.29**	**102**	P	**Pn**	**11 33 41.5**	**+0.3**
	2.6nm193nm,1.1s						
SDSI	**Sungai Dareh**	**6.38**	**323**	P	**Pn**	**11 33 44.6**	**+2.1**
	0.6nm4μm42nm,0.8s						
PWJI	**Pagerwojo**	**6.77**	**107**	P	**Pn**	**11 33 49.1**	**+1.2**
	0.9nm231nm,1.2s						
TPRI	**Tanjung Pinang**	**6.97**	**354**	P	**Pn**	**11 33 52.8**	**+2.1**
	2.0nm17μm88nm,0.7s						
PDSI	**Padang**	**7.01**	**317**	P	**Pn**	**11 33 53.7**	**+2.4**
	0.2nm669nm45nm,1.0s						
GRJI	**Gresik**	**7.21**	**97**	P	**Pn**	**11 33 55.1**	**+1.1**
	0.6nm2μm135nm,0.9s						
BKNI	**Bangkinang**	**7.62**	**326**	Pn	**Pn**	**11 34 01.7**	**+2.1**
SISI	**Saibi**	**7.75**	**307**	P	**Pn**	**11 34 00.8**	**-0.6**
	0.2nm50nm,1.0s						
MYKOM	**Kota Tinggi**	**7.93**	**350**		**Pn**	**11 34 05.2**	**+1.5**
GMJI	**Gumukmas**	**8.40**	**106**	P	**Pn**	**11 34 10.3**	**0.0**
	86nm,1.0s						
STKI	**Sintang**	**8.69**	**46**	P	**Pn**	**11 34 15.0**	**+0.8**
	15μm57nm,1.0s						
KMMI	**Kalianget**	**8.70**	**97**	P	**Pn**	**11 34 15.0**	**+0.7**
	145nm,1.1s						
JAGI	**Jajag, Banyuwa**	**9.13**	**106**	P	**Pn**	**11 34 20.4**	**+0.1**
	4μm218nm,1.2s						
JAGI	**Jajag, Banyuwa**	**9.13**	**106**		**Pn**	**11 34 20.6**	**+0.3**
SRBI	**Singaraja**	**10.07**	**102**	P	**Pn**	**11 34 33.9**	**+0.8**
	3μm81nm,0.9s						
IGBI	**Denpasar**	**10.17**	**106**	P	**Pn**	**11 34 33.9**	**-0.5**
	87nm,1.0s						
JRMM	**Jerantut**	**10.27**	**344**	P	**Pn**	**11 34 40.0**	**+4.2**
GSI	**Gunungsitoli**	**10.61**	**313**	P	**Pn**	**11 34 39.7**	**-0.8**
	36nm,0.9s						
GSI	**Gunungsitoli**	**10.61**	**313**		**Pn**	**11 34 40.1**	**-0.4**
RPSI	**Rantau Prapat**	**10.76**	**324**		**Pn**	**11 34 46.3**	**+3.7**
RPSI	**Rantau Prapat**	**10.76**	**324**		**Pn**	**11 34 38.9**	**-3.6**
PSI	**Prapat**	**10.85**	**324**	P	**Pn**	**11 34 46.3**	**+2.4**
PSI	**Prapat**	**10.85**	**324**	Pn	Pn	11 34 38.9	-4.9
	0.4nm,0.3s,baz=153,slow=16,SNR=2.6						
SBUM	**Sibu**	**10.94**	**40**		**Pn**	**11 34 46.2**	**+1.2**
SBUM	**Sibu**	**10.94**	**40**	P	**Pn**	**11 34 49.0**	**+4.0**
IPM	**Ipoh**	**11.30**	**338**		**Pn**	**11 34 52.3**	**+2.4**
IPM	**Ipoh**	**11.30**	**338**	P	**Pn**	**11 34 54.0**	**+4.1**
TWSI	**Taliwang, Sumb**	**11.82**	**104**	P	**Pn**	**11 34 56.9**	**-0.1**
	1μm51nm,1.0s						
KULM	**Kulim**	**12.18**	**338**		**Pn**	**11 35 03.7**	**+1.7**
PLAI	**Plampang**	**12.70**	**103**	P	**Pn**	**11 35 07.5**	**-1.6**
	63nm,0.9s						
MLSI	**Meulaboh, Aceh**	**13.55**	**319**	P	**Pn**	**11 35 23.8**	**+3.1**
	4μm74nm,0.9s						
BKSI	**Bulukumba**	**14.80**	**88**	P	**Pn**	**11 35 37.0**	**-0.3**
	2μm52nm,2.2s						
TTSI	**Tana Toraja**	**14.81**	**79**	P	**Pn**	**11 35 38.9**	**+1.5**
	1μm48nm,1.9s						
BNSI	**Bone**	**14.87**	**84**	P	**Pn**	**11 35 38.9**	**+0.7**
	4μm77nm,1.5s						
MPSI	**Mapaga**	**15.93**	**67**	P	**P**	**11 35 53.9**	**-0.6**
	1μm50nm,1.4s						
MMRI	**Maumere**	**17.02**	**100**	P	**Pn**	**11 36 04.3**	**-1.2**
MMRI				IAmb	IAmb	11 36 13.3	
	comp=Z,99nm,0.9s						
APSI	**Ampana**	**17.13**	**73**	P	**P**	**11 36 08.7**	**+0.9**
	comp=Z,3μmcomp=Z,112nm,1.0s						
MRSI	**Marisa**	**17.87**	**69**	P	**P**	**11 36 17.5**	**+1.5**
	comp=Z,2μmcomp=Z,98nm,1.0s						
LUWI	**Luwuk**	**18.16**	**75**	P	**Pn**	**11 36 21.7**	**+2.2**
	comp=Z,3μmcomp=Z,146nm,1.2s						
LUWI	**Luwuk**	**18.16**	**75**	P	**Pn**	**11 36 21.7**	**+2.2**
LUWI				IAmb	IAmb	11 36 25.5	
	comp=Z,161nm,1.1s						
BATI	**Baumata**	**18.67**	**104**	P	**P**	**11 36 24.0**	**-0.9**
	comp=Z,4.7nm,0.3s,baz=318,slow=4.7,SNR=13						
BATI				S	**S**	**11 39 55.3**	**+0.5**
	comp=Z,1.6nm,0.3s,baz=53,slow=20,SNR=1.9						
BATI	**Baumata**	**18.67**	**104**	P	**P**	**11 36 23.9**	**-0.9**
	comp=Z,2μmcomp=Z,132nm,1.0s						
SOEI	**Soe**	**19.17**	**102**	P	**P**	**11 36 29.9**	**-0.6**
	comp=Z,2μmcomp=Z,185nm,0.9s						
SOEI	**Soe**	**19.17**	**102**	P	**P**	**11 36 29.5**	**-1.0**
SOEI				IAmb	IAmb	11 36 35.5	
	comp=Z,127nm,1.1s						
PSA00	**Pilbara Seismi**	**20.90**	**139**	P	**P**	**11 36 49.2**	**+0.1**
PSA00				IAmb	IAmb	11 36 55.4	
	comp=Z,114nm,1.2s						
SANI	**Sanana**	**21.04**	**80**	P	**P**	**11 36 51.6**	**+0.9**
	comp=Z,877nmcomp=Z,64nm,1.2s						
UBPT	**Khong Chiam**	**21.21**	**1**	P	**P**	**11 36 54.5**	**+2.1**
UBPT				IAmb	IAmb	11 37 00.4	
	comp=Z,139nm,1.3s						
PAGZ	**Pagadian**	**22.75**	**53**	*e*P	**P**	**11 37 09.7**	**+0.8**
PBKT	**Sadao Pong**	**22.89**	**349**	P	**P**	**11 37 09.7**	**-0.6**
SKMP	**Bagumbayan, Su**	**22.94**	**57**	*e*P	**P**	**11 37 11.1**	**+0.2**
CTBH	**Cotabato--PC H**	**23.08**	**55**	*i*P	**P**	**11 37 13.6**	**+1.3**
TNTI	**Ternate**	**23.08**	**74**	P	**P**	**11 37 11.5**	**-0.9**
	comp=Z,2μmcomp=Z,86nm,1.5s						
TNTI	**Ternate**	**23.08**	**74**	P	**P**	**11 37 12.8**	**+0.4**
TNTI				IAmb	IAmb	11 37 29.1	
	comp=Z,146nm,1.3s						
FITZ	**Fitzroy Crossi**	**23.20**	**123**	P	**P**	**11 37 12.3**	**-1.2**
	comp=Z,19nm,1.0s,baz=305,slow=8.6,SNR=17						
FITZ	**Fitzroy Crossi**	**23.20**	**123**	P	**P**	**11 37 11.9**	**-1.6**
FITZ				IAmb	IAmb	11 37 18.7	
	comp=Z,55nm,1.1s						
KCP	**Kidapawan**	**23.66**	**57**	*i*P	**P**	**11 37 20.1**	**+2.2**
DDMP	**Don Marcelino,**	**23.71**	**60**	*e*P	P	11 37 11.1	-7.2
DAV	**Davao City (W)**	**24.10**	**58**	P	**P**	**11 37 20.7**	**-1.2**
	comp=Z,86nm,0.4s,baz=210,slow=20,SNR=1.8						
DAV	**Davao City (W)**	**24.10**	**58**	*e*P	**P**	**11 37 25.8**	**+3.9**
DAV	**Davao City (W)**	**24.10**	**58**	P	**P**	**11 37 21.2**	**-0.7**
BUKP	**Musuan**	**24.12**	**55**	*e*P	**P**	**11 37 23.9**	**+1.9**
KNRA	**Kununurra**	**24.94**	**114**	P	**P**	**11 37 28.5**	**-1.1**
MORW	**Morawa**	**25.05**	**157**	P	**P**	**11 37 31.6**	**+1.3**
CM31	**Chiang Mai Arr**	**25.15**	**346**	P	**P**	**11 37 30.2**	**-1.1**
CMAR	**Chiang Mai Arr**	**25.15**	**346**	P	**P**	**11 37 29.9**	**-1.5**
	comp=Z,8.0nm,1.2s,baz=182,slow=8.7,SNR=15						
CMAR				PcP	**PcP**	**11 41 05.2**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=207,slow=2.9,SNR=5.4						
CMAR				LR	LR	11 49 22.6	
	comp=Z,253nm,19.3s,baz=192,slow=42						
QIZ	**Qiongzhong**	**25.34**	**10**	P	P	11 37 46.6	+14
QIZ				sP	sP	11 38 25.0	+32
QIZ				S	S	11 42 11.6	+16
QIZ				LR	LR		
	comp=N,1μm,9.6s						
QIZ				LR	LR		
	comp=E,1μm,13.7s						
QIZ				LR	LR		
	comp=Z,1μm,12.6s						
TGY	**Tagaytay City**	**25.36**	**38**	P	**P**	**11 37 35.5**	**+2.2**
	comp=Z,225nm,0.4s,baz=183,slow=4.7,SNR=6.8						
CHTO	**Chiang Mai**	**25.49**	**346**	P	**P**	**11 37 33.1**	**-1.4**
CHTO				pmax	pmax		
	comp=Z,11nm,1.0s						
CHTO	**Chiang Mai**	**25.49**	**346**	P	**P**	**11 37 33.0**	**-1.4**
MTN	**Manton Dam**	**26.37**	**107**	IAmb	IAmb	11 37 46.3	
	comp=Z,80nm,1.2s						
SIJI	**Sorong**	**26.45**	**80**	P	**P**	**11 37 41.5**	**-1.8**
	comp=Z,13nm,1.0s,baz=270,slow=17,SNR=2.8						
NWAO	**Narrogin (SRO)**	**28.96**	**159**	LR	LR	11 49 37.0	
	comp=Z,317nm,18.6s,baz=314,slow=36						
KMI	**Kunming**	**31.10**	**356**	P	**P**	**11 38 25.6**	**+1.0**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI				LR	LR		
	comp=Z,3μm,11.3s						
KMI				LR	LR		
	comp=Z,1μm,11.6s						
KMI				LR	LR		
	comp=Z,3μm,11.6s						
WRA	**Warramunga Arr**	**31.43**	**119**	P	**P**	**11 38 25.8**	**-1.7**
	comp=Z,14nm,0.7s,baz=293,slow=10.0,SNR=58						
WRA				PcP	**PcP**	**11 41 20.0**	**0.0**
	comp=Z,1.3nm,0.7s,baz=291,slow=2.0,SNR=4.1						
WRAB	**Tennant Creek**	**31.43**	**119**	*ce*P	**P**	**11 38 26.6**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s						
WRAB	**Tennant Creek**	**31.43**	**119**	P	**P**	**11 38 25.9**	**-1.6**
WRAB				IAmb	IAmb	11 38 34.1	
	comp=Z,22nm,0.7s						
WR0	**Warramunga Arr**	**31.61**	**119**	P	**P**	**11 38 28.1**	**-1.0**
WR0				IAmb	IAmb	11 38 33.9	
	comp=Z,19nm,0.8s						
GYA	**Guiyang**	**32.36**	**2**	*i*P	**P**	**11 38 36.6**	**+1.0**
GYA				PP	**PnPn**	**11 39 46.4**	**+2.4**
GYA				S	**S**	**11 43 47.2**	**+1.1**
GYA				sS	sS	11 44 14.8	+5.4
GYA				SS	**SnSn**	**11 45 47.3**	**+4.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,110nm,7.0s						
GYA				LR	LR		
	comp=Z,1μm,17.2s						
GYA				LR	LR		
	comp=Z,710nm,17.5s						
GYA				LR	LR		
	comp=Z,1μm,16.9s						
H08S2	**Diego Garcia H**	**32.58**	**265**	T	T	12 12 52.7	
	baz=90,slow=75,SNR=77						
H08S3	**Diego Garcia H**	**32.58**	**265**	T	T	12 12 52.7	
	baz=90,slow=75,SNR=64						
H08S1	**Diego Carcia H**	**32.59**	**265**	T	T	12 12 52.7	
	baz=90,slow=75,SNR=54						
DGAR	**Diego Garcia**	**32.61**	**266**	*i* P	**P**	**11 38 39.2**	**+1.3**
DGAR				pmax	pmax		
	comp=Z,37nm,1.0s						
AS31	**Alice Springs**	**32.63**	**125**	P	**P**	**11 38 37.8**	**-0.2**
ASAR	**Alice Springs**	**32.63**	**125**	P	**P**	**11 38 37.4**	**-0.7**
	comp=Z,11nm,0.6s,baz=301,slow=7.7,SNR=86						
ASAR				PcP	**PcP**	**11 41 24.2**	**+1.0**
	comp=Z,4.7nm,1.0s,baz=311,slow=2.3,SNR=7.6						
ASAR				S	**S**	**11 43 51.8**	**+1.4**
	comp=Z,2.6nm,1.0s,baz=295,slow=16,SNR=5.9						
YULB	**Yu-li**	**33.20**	**28**	P	**P**	**11 38 44.1**	**+1.2**
YULB				IAmb	IAmb	11 38 55.5	
	comp=Z,24nm,1.0s						
SSLB	**Suanglung**	**33.39**	**27**	P	**P**	**11 38 44.8**	**+0.2**
SSLB				IAmb	IAmb	11 38 51.0	
	comp=Z,28nm,1.0s						
SHL	**Shillong**	**34.03**	**338**	P	**P**	**11 38 46.6**	**-3.6**
SHL				pmax	pmax		
	comp=Z,18nm,1.2s						
SHL	**Shillong**	**34.03**	**338**	P	**P**	**11 38 46.6**	**-3.6**
SHL				IAmb	IAmb	11 38 55.9	
	comp=Z,18nm,1.2s						
ENH	**Enshi**	**36.35**	**6**	P	**P**	**11 39 09.1**	**-0.9**
ENH				IAmb	IAmb	11 39 20.5	
	comp=Z,15nm,1.0s						
CD2	**Chengdu**	**36.79**	**358**	P	**P**	**11 39 12.7**	**-1.1**
CD2				S	**S**	**11 44 53.1**	**-1.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,7.3s						
CD2				LR	LR		
	comp=Z,2μm,12.0s						
CD2				LR	LR		
	comp=Z,2μm,10.4s						
CD2				LR	LR		
	comp=Z,2μm,10.6s						
WHN	**Wuhan**	**37.42**	**13**	||P	P	11 39 25.9 +6.8
WHN				S	**S**	**11 45 10.5**	**+6.8**
WHN				LR	LR		
	comp=Z,2μm,11.0s						
WHN				LR	LR		
	comp=Z,2μm,17.8s						
WHN				LR	LR		
	comp=Z,2μm,11.0s						
LSA	**Lhasa**	**38.06**	**340**	IAmb	IAmb	11 39 32.1	
	comp=Z,15nm,1.1s						
COEN	**Coen**	**38.10**	**105**	P	**P**	**11 39 23.3**	**-1.7**
POO	**Poona**	**39.46**	**309**	*ex*	**P**	**11 39 36.0**	**-0.4**
XAN	**Xi'an**	**40.03**	**5**	P	**P**	**11 39 41.0**	**0.0**
XAN				S	**S**	**11 45 36.6**	**-6.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				LR	LR		
	comp=Z,370nm,8.3s						
XAN				LR	LR		
	comp=Z,990nm,17.2s						
XAN				LR	LR		
	comp=Z,1μm,10.8s						
XAN	**Xi'an**	**40.03**	**5**	P	**P**	**11 39 40.3**	**-0.7**
XAN	**Xi'an**	**40.03**	**5**	P	**P**	**11 39 40.3**	**-0.7**
NJ2	**Nanjing**	**40.05**	**18**	*e*P	**P**	**11 39 42.2**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=Z,590nm,14.7s						
NJ2				LR	LR		
	comp=Z,840nm,13.7s						
NJ2				LR	LR		
	comp=Z,1μm,14.2s						
PMG	**Port Moresby**	**41.62**	**97**	*ce*P	**P**	**11 39 53.7**	**-0.6**
PMG				pmax	pmax		
	comp=Z,209nm,1.7s						
PMG	**Port Moresby**	**41.62**	**97**	P	**P**	**11 39 52.4**	**-1.9**
PMG				IAmb	IAmb	11 39 54.5	
	comp=Z,21nm,0.8s						
LZH	**Lanzhou**	**41.95**	**358**	*e*P	**P**	**11 39 57.2**	**+0.4**
LZH				pP	pP	11 40 12.0	+1.0
LZH				sP	sP	11 40 20.0	+2.6
LZH				PP	**PnPn**	**11 41 42.3**	**+2.0**
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,57nm,4.9s						
LZH				LR	LR		
	comp=Z,890nm,12.5s						
LZH				LR	LR		
	comp=Z,1μm,12.5s						
LZH				LR	LR		
	comp=Z,1μm,13.6s						
STKA	**Stephens Creek**	**42.54**	**132**	P	**P**	**11 40 01.0**	**-0.6**
STKA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STKA	**Stephens Creek**	**42.54**	**132**	P	**P**	**11 40 01.8**	**+0.2**
	comp=Z,25nm,0.5s,baz=305,slow=8.3,SNR=20						
STKA	**Stephens Creek**	**42.54**	**132**	P	**P**	**11 40 00.9**	**-0.6**
GTA	**Gaotai**	**45.53**	**354**	||P	**P**	**11 40 25.2**	**-0.3**
GTA				PcP	**PcP**	**11 42 04.2**	**+0.7**
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,93nm,6.0s						
GTA				LR	LR		
	comp=Z,350nm,18.1s						
GTA				LR	LR		
	comp=Z,550nm,17.1s						
GTA				LR	LR		
	comp=Z,410nm,17.8s						
BJI	**Beijing**	**46.96**	**11**	*e*P	**P**	**11 40 38.0**	**+1.4**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJI				LR	LR		
	comp=Z,240nm,6.9s						
BJI				LR	LR		
	comp=Z,470nm,10.4s						
BJI				LR	LR		
	comp=Z,330nm,37.9s						
HHC	**Hu-ho-hao-te**	**47.04**	**7**	*e*P	**P**	**11 40 38.4**	**+1.1**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,70nm,5.9s						
HHC				LR	LR		
	comp=Z,470nm,10.4s						
HHC				LR	LR		
	comp=Z,260nm,12.3s						
HHC				LR	LR		
	comp=Z,530nm,12.8s						
EIDS	**Eidsvold**	**47.79**	**119**	P	**P**	**11 40 42.5**	**-0.9**
EIDS				IAmb	IAmb	11 40 48.5	
	comp=Z,45nm,1.3s						
KSRS	**Korea Array**	**48.18**	**24**	P	**P**	**11 40 44.8**	**-1.2**
	comp=Z,6.8nm,1.1s,baz=200,slow=6.5,SNR=9.4						
NIL	**Nilore**	**49.80**	**325**	P	**P**	**11 40 56.4**	**-2.2**
NIL				pmax	pmax		
	comp=Z,27nm,1.1s						
NIL	**Nilore**	**49.80**	**325**	P	**P**	**11 40 56.4**	**-2.2**
NIL				IAmb	IAmb	11 41 06.6	
	comp=Z,27nm,1.1s						
WMQ	**Urumqi**	**52.13**	**344**	*e*P	**P**	**11 41 15.9**	**-0.1**
WMQ				pP	pP	11 41 29.6	-1.0
WMQ				sP	sP	11 41 38.4	+1.5
WMQ				pmax	pmax		
	comp=Z,18nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,6.5s						
WMQ				LR	LR		
	comp=Z,630nm,22.5s						
WMQ				LR	LR		
	comp=Z,620nm,28.8s						
WMQ				LR	LR		
	comp=Z,260nm,26.3s						
WMQ	**Urumqi**	**52.13**	**344**	IAmb	IAmb	11 41 23.6	
	comp=Z,32nm,1.2s						
MJAR	**Matsushiro Arr**	**52.41**	**34**	P	**P**	**11 41 17.0**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=268,slow=7.1,SNR=9.1						
KSH	**Kashi**	**52.82**	**332

MDJ pmax pmax
comp=Z,10.0nm,1.1s
MDJ pmax pmax
comp=Z,310nm,5.1s
MDJ LR LR
comp=Z,540nm,8.4s
MDJ LR LR
comp=Z,280nm,10.7s
MDJ LR LR
comp=Z,630nm,12.1s
GAR Garm 55.29 327 P **P** **11 41 36.9 -2.4**
GAR IAmb IAmb 11 41 40.2
comp=Z,27nm,1.2s
USA0B Ussuriysk Arra 55.53 23 P **P** **11 41 39.7 -1.0**
USA0B pmax pmax
comp=Z,26nm,1.1s
USA0B Ussuriysk Arra 55.53 23 P **P** **11 41 39.7 -1.0**
USA0B IAmb IAmb 11 41 46.9
comp=Z,26nm,1.1s
USRK Ussuriysk Ar. 55.53 23 P **P** **11 41 39.8 -0.9**
comp=Z,6.2nm,0.7s,baz=208,slow=5.1,SNR=14
ARSB Arslanbob 55.65 331 P **P** **11 41 40.0 -1.8**
ARSB IAmb IAmb 11 41 48.5
comp=Z,23nm,1.1s
CHGR Chuyangaron 55.68 326 P **P** **11 41 39.5 -2.6**
BTK Batken 55.80 328 P **P** **11 41 41.1 -1.7**
BTK pmax pmax
comp=Z,7.0nm,1.0s
BTK Batken 55.80 328 P **P** **11 41 41.1 -1.7**
AAK Ala-Archa 55.97 333 *i* P **P** **11 41 42.7 -1.4**
AAK pmax pmax
comp=Z,4.0nm,1.2s
ZAK Zakamensk 56.24 358 *e*P **P** **11 41 43.5 -2.3**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
MKAR Makanchi Array 56.44 341 *ce*P **P** **11 41 45.7 -1.5**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 56.44 341 P **P** **11 41 45.4 -1.8**
comp=Z,3.0nm,0.7s,baz=153,slow=8.2,SNR=12
MKAR PcP **PcP** **11 42 44.0 +0.4**
comp=Z,1.9nm,0.8s,baz=134,slow=6.2,SNR=1.9
MAKZ Makanchi 56.55 341 P **P** **11 41 45.9 -2.1**
MAKZ pmax pmax
comp=Z,9.0nm,1.2s
MAKZ Makanchi 56.55 341 P **P** **11 41 45.9 -2.1**
UOSS Minazif 56.80 305 P **P** **11 41 49.7 -0.5**
UOSS IAmb IAmb 11 42 02.0
comp=Z,32nm,1.2s
TLY Talaya 57.53 359 *e*P **P** **11 41 52.0 -2.8**
TLY pmax pmax
comp=Z,21nm,1.3s
TLY MLR MLR
comp=Z,822nm,10.0s
KKAR Karatay Array 58.20 331 P **P** **11 41 57.8 -1.9**
KKAR pmax pmax
comp=Z,4.0nm,1.2s
KKAR Karatay Array 58.20 331 P **P** **11 41 57.8 -1.9**
KLR Kul'dur 59.72 20 *i* P **P** **11 42 08.3 -1.7**
KLR pmax pmax
comp=Z,4.0nm,0.9s
KURK Kurchatov 61.05 341 *ce*P **P** **11 42 17.6 -1.5**
KURK pmax pmax
comp=Z,8.0nm,1.0s
KURK Kurchatov 61.05 341 P **P** **11 42 17.5 -1.6**
KURK IAmb IAmb 11 42 24.2
comp=Z,11nm,1.1s
GEYT Alibeck 61.93 319 P **P** **11 42 24.7 -0.7**
comp=Z,14nm,0.9s,baz=156,slow=7.8,SNR=28
GYA0B ALIBECK ARRAY 61.93 319 P **P** **11 42 25.2 -0.2**
ZAA0 Zalesovo Array 62.22 346 IAmb IAmb 11 42 32.7
comp=Z,16nm,1.0s
ZALV Zalesovo Beam 62.22 346 P **P** **11 42 24.7 -2.2**
comp=Z,9.0nm,0.9s,baz=153,slow=4.3,SNR=26
ZEA Zeya 62.39 15 *e*P **P** **11 42 27.2 -0.9**
ZEA pmax pmax
comp=Z,12nm,1.0s
BOD Bodaibo 64.06 5 *e*P **P** **11 42 35.1 -3.9**
BOD pmax pmax
comp=Z,7.0nm,1.0s
RAYN Ar Rayn 65.29 299 P **P** **11 42 48.1 +0.2**
RAYN pmax pmax
comp=Z,24nm,1.3s
RAYN Ar Rayn 65.29 299 P **P** **11 42 48.1 +0.2**
RAYN IAmb IAmb 11 42 57.5
comp=Z,24nm,1.3s
ABKAR Akbulak array 67.74 330 P **P** **11 43 00.6 -2.2**
ABKAR IAmb IAmb 11 43 09.7
comp=Z,23nm,1.2s
MAW Mawson 67.77 196 P **P** **11 43 05.3 +2.5**
comp=Z,11nm,0.7s,baz=50,slow=9.6,SNR=15
YAK Yakutsk 70.46 12 *e*P **P** **11 43 16.6 -2.9**
YAK pmax pmax
comp=Z,17nm,1.0s
YAK pmax pmax
comp=N,8.0nm,1.2s
YAK pmax pmax
comp=E,3.0nm,1.4s
YAK Yakutsk 70.46 12 P **P** **11 43 17.1 -2.4**
YAK IAmb IAmb 11 43 19.3
comp=Z,15nm,0.7s
AKT Akhty 70.62 318 *e*P **P** **11 43 21.3 +0.2**
AKT *e* 11 43 41.1
AKT pmax pmax
comp=Z,53nm,1.0s
GNI Garni 72.08 315 *ce*P **P** **11 43 28.8 -1.2**
GNI pmax pmax
comp=Z,36nm,1.0s
SVE Sverdlovsk 72.46 336 ⇑*e*P **P** **11 43 30.9 -0.7**
SVE pmax pmax
comp=Z,22nm,1.4s
GROC Groznyy 72.67 319 *e*P **P** **11 43 32.0 -1.2**
GROC *e* 11 43 48.9
GROC pmax pmax
comp=Z,53nm,1.0s
TBLG Delisi 72.75 317 IAmb IAmb 11 43 35.3
comp=Z,37nm,1.1s
ARU Arti 73.05 335 *c i* P **P** **11 43 33.0 -2.1**
ARU S **S** **11 52 56.9 -1.2**
ARU pmax pmax
comp=Z,9.0nm,1.0s
ARU Arti 73.05 335 P **P** **11 43 34.1 -1.1**
AKH Akhalkalaki 73.46 316 P **P** **11 43 38.2 0.0**
AKH pmax pmax
comp=Z,17nm,1.2s
AKH Akhalkalaki 73.46 316 ⇑P **P** **11 43 39.5 +1.4**
AKH Akhalkalaki 73.46 316 P **P** **11 43 38.2 0.0**
AKH IAmb IAmb 11 43 48.1
comp=Z,17nm,1.2s
PETK Petropavlovsk- 73.63 30 P **P** **11 43 37.2 -1.5**
comp=Z,7.0nm,0.9s,baz=184,slow=8.3,SNR=8.7
ZEI Tsey 73.75 318 *e*P **P** **11 43 38.9 -1.0**
ZEI pmax pmax
comp=Z,18nm,0.9s
MBAR Mbarara 74.55 271 P **P** **11 43 47.2 +2.1**
MBAR pmax pmax
comp=Z,24nm,1.2s
MBAR Mbarara 74.55 271 P **P** **11 43 47.2 +2.1**
MBAR IAmb IAmb 11 43 56.4
comp=Z,24nm,1.2s
NEY Neytrino 74.73 318 *i* P **P** **11 43 45.2 -0.3**
NEY pmax pmax
comp=Z,3.0nm,1.0s
KBZ Khabaz 74.81 318 *i* P **P** **11 43 45.3 -0.4**
KBZ Khabaz 74.81 318 P **P** **11 43 45.5 -0.2**
comp=Z,17nm,1.0s,baz=157,slow=5.1,SNR=19
SHA1 Shidzhatmaz 74.97 318 *i* P **P** **11 43 46.4 -0.6**
KIV Kislovodsk 75.04 318 ⇓*e*P **P** **11 43 46.8 -0.4**
KIV *e* 11 44 03.8
KIV *e* 11 46 36.3
KIV pmax pmax
comp=Z,20nm,1.2s
KIV MLR MLR
comp=Z,73nm,23.0s
KIV Kislovodsk 75.04 318 ⇑P **P** **11 43 47.8 +0.6**
KIV Kislovodsk 75.04 318 P **P** **11 43 45.6 -1.5**
KIV IAmb IAmb 11 43 56.3
comp=Z,20nm,1.0s
GOF Gofitskoye 75.26 320 ⇓*e*P **P** **11 43 49.2 +0.9**
GOF pmax pmax
comp=Z,24nm,0.9s
SYO Syowa Base 75.79 200 ⇓*e*P **P** **11 43 51.4 +0.5**
SYO Syowa Base 75.79 200 ⇓*e*PcP **PcP** **11 44 04.2 +0.9**
LSZ Lusaka 75.99 256 P **P** **11 43 53.9 +0.6**
LSZ pmax pmax
comp=Z,9.0nm,0.9s
LSZ Lusaka 75.99 256 P **P** **11 43 53.9 +0.6**
GAZ Gaziantep 76.48 310 P **P** **11 43 56.2 +0.7**
GAZ IAmb IAmb 11 44 05.6
comp=Z,43nm,1.2s
SOC Sochi 76.88 317 *e*P **P** **11 43 54.7 -2.8**
SOC *e* 11 46 52.1
SOC *e*PPP PPP 11 48 35.0
SOC *e*S **S** **11 53 40.8 -0.5**
SOC *e*SS **SS** **11 58 30.7 -8.2**
SOC *e*SSS SSS 12 02 01.4
SOC pmax pmax
comp=Z,25nm,0.7s
VNDA Vanda 77.20 169 P **P** **11 44 00.4 +1.7**
VNDA Vanda 77.20 169 P **P** **11 43 59.5 +0.8**
comp=Z,7.9nm,0.9s,baz=312,slow=6.3,SNR=19
VNDA Vanda 77.20 169 P **P** **11 44 00.4 +1.7**
SEY Seymchan 77.51 20 *i* P **P** **11 43 59.6 -1.0**
LBTB Lobatse 78.12 246 P **P** **11 44 07.6 +2.5**
LBTB pmax pmax
comp=Z,14nm,0.9s
LBTB Lobatse 78.12 246 P **P** **11 44 07.6 +2.5**
LBTB IAmb IAmb 11 44 09.1
comp=Z,14nm,0.9s
SBA Scott Base 78.28 169 P **P** **11 44 07.0 +2.2**
SBA pmax pmax
comp=Z,20nm,1.1s
SBA Scott Base 78.28 169 P **P** **11 44 07.0 +2.2**
SBA IAmb IAmb 11 44 11.9
comp=Z,20nm,1.1s
BOSA Boshof 78.37 242 P **P** **11 44 07.5 +1.1**
comp=Z,5.9nm,0.8s,baz=113,slow=6.1,SNR=8.1
VRH Novokhopyorsk 78.63 325 *e*P **P** **11 44 05.0 -2.1**
VRH pmax pmax
comp=Z,30nm,0.7s
CSS Mathiatis 78.85 307 P **P** **11 44 09.2 +0.5**
TIXI Tiksi 79.10 7 *ce*P **P** **11 44 07.7 -1.5**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
TIXI Tiksi 79.10 7 P **P** **11 44 06.7 -2.5**
BR131 Keskin Array S 79.93 312 *i* P **P** **11 44 13.8 -0.9**
BR131 Keskin Array S 79.93 312 P **P** **11 44 14.0 -0.6**
BRTR Keskin Array B 79.93 312 P **P** **11 44 13.7 -0.9**
comp=Z,5.5nm,0.7s,baz=139,slow=6.2,SNR=29
VORD Divnogorie 79.94 324 *e*P **P** **11 44 12.4 -1.8**
VORD pmax pmax
comp=Z,20nm,1.0s
VSR Storozhevoye 80.11 324 *e*P **P** **11 44 13.4 -1.7**
VSR pmax pmax
comp=Z,20nm,0.9s
BZK Bozkurt 80.31 314 ⇑P **P** **11 44 17.7 +1.3**
ANTO Ankara 80.59 312 P **P** **11 44 16.5 -1.6**
ANTO pmax pmax
comp=Z,24nm,1.2s
ANTO Ankara 80.59 312 P **P** **11 44 16.5 -1.6**
ANTO IAmb IAmb 11 44 27.0
comp=Z,24nm,1.1s
LPSR Galich'ya Gora 80.78 326 *e*P **P** **11 44 17.6 -1.1**
LPSR pmax pmax
comp=Z,30nm,1.1s
SIM Simferopol' 81.13 317 *e*P **P** **11 44 20.8 0.0**
SIM pmax pmax
comp=Z,33nm,1.0s
SEVA Sevastopol 81.30 317 ⇑P **P** **11 44 22.9 +1.3**
PRGR Permogore 81.50 335 *e*P P 11 44 14.3 -8.0
PRGR pmax pmax
comp=Z,7.0nm,0.6s
MOS Moscow 82.68 328 *e*P **P** **11 44 27.3 -1.3**
MOS pmax pmax
comp=Z,33nm,0.8s
OBN Obninsk 83.01 327 *ce*P **P** **11 44 30.5 +0.1**
OBN *e* 11 47 36.3
OBN pmax pmax
comp=Z,65nm,1.7s
OBN MLR MLR
comp=Z,67nm,11.0s
MANT Manisa 83.43 310 P **P** **11 44 33.4 +0.2**
KARP Karpathos 83.89 307 P **P** **11 44 35.4 -0.1**
QSPA South Pole Qui 83.92 180 P **P** **11 44 36.8 +1.7**
BILL Bilibino 85.17 19 *ce*P **P** **11 44 41.2 +0.1**
BILL pmax pmax
comp=Z,2.0nm,1.1s
BILL MLR MLR
comp=Z,487nm,23.0s
MILM Milestii Mici 85.22 318 ⇑P **P** **11 44 42.0 +0.2**
KIS Kishinev 85.24 318 *e*P **P** **11 44 43.0 +1.1**
KIS Kishinev 85.24 318 *e*P **P** **11 44 43.0 +1.1**
HARR Harsova 85.30 316 ⇓P **P** **11 44 43.8 +1.5**
HARR Harsova 85.30 316 ⇓P **P** **11 44 43.8 +1.5**
LEOM Leova 85.50 318 ⇑P **P** **11 44 44.8 +1.6**
LEOM Leova 85.50 318 ⇑P **P** **11 44 44.8 +1.6**
SORM Soroca 85.82 319 ⇑P **P** **11 44 45.0 +0.2**
SORM Soroca 85.82 319 ⇑P **P** **11 44 45.0 +0.2**
VASR Vaslui 85.84 318 ⇑P **P** **11 44 46.5 +1.6**
AKASG Malin Array Be 85.90 322 P **P** **11 44 43.9 -1.2**
comp=Z,9.9nm,1.0s,baz=84,slow=4.7,SNR=31
AKBB Malin Array Si 85.90 322 *i* P **P** **11 44 44.6 -0.5**
AKBB Malin Array Si 85.90 322 IAmb IAmb 11 44 45.9
comp=Z,14nm,1.1s
ELND Elena 86.38 314 ⇑P **P** **11 44 49.3 +1.6**
VRI Vrincioaia 86.39 317 ⇑P **P** **11 44 48.9 +1.2**
VRI Vrincioaia 86.39 317 ⇑P **P** **11 44 48.9 +1.2**
PLOR Plostina 86.44 317 ⇑P **P** **11 44 48.9 +0.9**
PLOR Plostina 86.44 317 ⇑P **P** **11 44 48.9 +0.9**
TESR Tescani 86.58 317 ⇑P **P** **11 44 48.8 +0.2**
MLR Muntele Rosu 86.85 316 ⇑P **P** **11 44 51.0 +0.9**
MLR Muntele Rosu 86.85 316 ⇑P **P** **11 44 51.0 +0.9**
BIZ Bicaz 87.04 318 ⇑P **P** **11 44 52.6 +1.8**
PRAR RASCA 87.04 318 ⇑P **P** **11 44 51.9 +1.1**
DOPR Dopca 87.32 317 ⇑P **P** **11 44 52.8 +0.6**
HUMR Humele 87.33 315 ⇑P **P** **11 44 53.7 +1.5**
PLVB Pleven 87.36 314 ⇑P **P** **11 44 54.3 +1.9**
VOIR 87.45 316 ⇑P **P** **11 44 54.0 +1.1**
VOIR 87.45 316 ⇑P **P** **11 44 54.0 +1.1**
PGB Panagyurishte 87.54 313 P **P** **11 44 54.0 +0.6**
ARR Arges 87.73 316 ⇑P **P** **11 44 55.4 +1.2**
BURAR Bucovina Array 87.77 318 ⇑P **P** **11 44 55.7 +1.3**
BURAR Bucovina Array 87.77 318 ⇑P **P** **11 44 55.7 +1.3**
KKB Krupnik 88.21 312 P **P** **11 44 56.3 -0.2**
VTS Vitosha 88.23 313 ⇑P **P** **11 44 57.3 +0.5**
VTS Vitosha 88.23 313 ⇑P **P** **11 44 57.3 +0.5**
VTS Vitosha 88.23 313 P **P** **11 44 51.7 -5.1**
ARCR ARCALIA 88.24 318 ⇑P **P** **11 44 58.8 +2.3**
NACGM Naroch 88.34 326 *e* **P** **11 44 56.0 -0.8**
LOT Lotru 88.34 316 ⇑P **P** **11 44 58.1 +0.9**
VAY Valandovo 88.50 312 *i* P **P** **11 45 02.9 +5.0**
CJR Cluj-Napoca 88.68 317 ⇑P **P** **11 45 01.2 +2.5**
CJR Cluj-Napoca 88.68 317 ⇑P **P** **11 45 01.2 +2.5**
STIP Stip 88.84 312 *i* P **P** **11 45 00.2 +0.7**
LVV L'vov 88.96 320 *e*P **P** **11 45 00.0 +0.1**
DEV Deva 89.01 316 ⇑P **P** **11 45 02.3 +2.1**
DEV Deva 89.01 316 ⇑P **P** **11 45 02.3 +2.1**
GZR Gura Zlata 89.02 316 ⇑P **P** **11 45 02.1 +1.8**
GZR Gura Zlata 89.02 316 ⇑P **P** **11 45 02.1 +1.8**
VSU Vasula 89.16 329 *ce*P **P** **11 45 00.3 -0.3**
VSU pmax pmax
comp=Z,60nm,1.0s
DRGR 89.30 317 ⇑P **P** **11 45 02.8 +1.2**
DRGR 89.30 317 ⇑P **P** **11 45 02.8 +1.2**
TRPA Tarpa 89.63 318 ⇑P **P** **11 45 04.6 +1.6**
BZS Buzias 89.86 316 ⇑P **P** **11 45 04.8 +0.6**
BZS Buzias 89.86 316 ⇑P **P** **11 45 04.8 +0.6**
UZH Uzhgorod 89.88 319 *e*P **P** **11 45 07.2 +3.0**
UZH *e* 11 45 31.2
SNAA Sanae 89.90 198 P **P** **11 45 07.9 +4.0**
SNAA Sanae 89.90 198 *i* P **P** **11 45 05.6 +1.6**
SNAA Sanae 89.90 198 P **P** **11 45 06.0 +2.0**
KOLS Kolonicke sedl 89.94 319 *e*P **P** **11 45 06.0 +1.5**
KOLS pmax pmax
comp=Z,39nm,1.1s
KOLS Kolonicke sedl 89.94 319 *e*P **P** **11 45 06.0 +1.5**
FINES FINESS Array B 90.14 332 P **P** **11 45 04.1 -1.0**
comp=Z,8.0nm,0.9s,baz=116,slow=7.0,SNR=14
BSZH Besenyszg 91.03 317 *e*P P 11 45 15.1 +5.6
KECS Kecovo 91.04 318 *e*P **P** **11 45 09.8 +0.2**
KECS pmax pmax
comp=Z,5.0nm,1.1s
KECS Kecovo 91.04 318 *e*P **P** **11 45 09.8 +0.2**
PSZ Piszkesteto 91.36 318 ⇑P **P** **11 45 12.3 +1.1**
PSZ Piszkesteto 91.36 318 ⇑P **P** **11 45 12.3 +1.1**
LANS Liptovska Anna 91.80 319 *e*P **P** **11 45 13.9 +0.7**
LANS Liptovska Anna 91.80 319 *e*P **P** **11 45 13.9 +0.7**
VNA1 Neumayer--Stat 91.92 198 P **P** **11 45 17.4 +4.2**
ARCES ARCESS Array B 92.07 340 P **P** **11 45 13.3 -0.6**
comp=Z,4.2nm,1.1s,baz=94,slow=9.1,SNR=3.9
VNA3 Neumayer Olymp 92.08 197 P **P** **11 45 17.5 +3.5**
VYHS Vyhne 92.13 318 *e*P **P** **11 45 14.6 -0.1**
VYHS Vyhne 92.13 318 *e*P **P** **11 45 14.6 -0.1**
SRO Srobarova 92.40 318 *e*P **P** **11 45 17.1 +1.2**
SRO Srobarova 92.40 318 *e*P **P** **11 45 17.1 +1.2**
MORC Moravsky Berou 93.11 320 ⇑P **P** **11 45 19.9 +0.6**
MORC Moravsky Berou 93.11 320 ⇑P **P** **11 45 19.9 +0.6**
MORC Moravsky Berou 93.11 320 IAmb IAmb 11 45 27.7
comp=Z,4.7nm,1.0s
MODS Modra-Piesok 93.15 318 *e*P **P** **11 45 19.8 +0.4**
MODS Modra-Piesok 93.15 318 *e*P **P** **11 45 19.8 +0.4**
KRLC Kraliky 93.63 320 *e*P **P** **11 45 21.8 +0.2**
KRLC Kraliky 93.63 320 *e*P **P** **11 45 21.8 +0.2**
KRLC *ex* x 11 45 28.2
OSTC Ostas 94.03 320 *e*P **P** **11 45 24.1 +0.7**
CHVC Chvalec 94.14 320 *e*P P 11 45 29.8 +5.9
PRU Pruhonice 95.06 320 *e*P **P** **11 45 29.3 +1.2**
PRU Pruhonice 95.06 320 *e*P **P** **11 45 29.3 +1.2**
PRU *ex* x 11 45 35.2
GERES GERESS Array B 95.55 318 P **P** **11 45 30.5 0.0**
comp=Z,0.5nm,0.6s,baz=77,slow=4.4,SNR=4.9
CLL Collm 96.11 321 *e*P **P** **11 45 32.0 -0.8**
CLL Collm 96.11 321 *e*P **P** **11 45 32.0 -0.8**
YKA Yellowknife Ar 116.57 19 PKP **PKPdf** **11 50 48.2 -0.4**
comp=Z,0.7nm,0.7s,baz=343,slow=1.8,SNR=10
YKA PKKPab **PKKPab** **12 01 22.3 +1.3**
comp=Z,0.7nm,0.6s,baz=122,slow=4.1,SNR=13
B05A Bryant 121.88 35 P **PKiKP** **11 51 01.2 +1.7**
baz=301
J05D Fort Rock, OR 124.86 40 P **PKiKP** **11 51 07.2 +1.5**
baz=299
FFC Flin Flon 126.75 19 PKIKP **PKPdf** **11 51 07.7 -0.8**
FFC Flin Flon 126.75 19 **PKPdf** **11 51 07.7 -0.8**
MSO Missoula 127.25 33 P **PKiKP** **11 51 10.9 +0.5**
baz=308
PAHR Pah Rah Range 127.77 43 **PKPdf** **11 51 11.0 -0.1**
NVAR Mina Array Bea 129.11 44 PKP **PKiKP** **11 51 14.4 -0.1**
comp=Z,0.5nm,0.6s,baz=318,slow=2.0,SNR=5.8
ELK Elko 129.99 40 PKIKP **PKiKP** **11 51 16.0 -0.2**
ELK Elko 129.99 40 **PKiKP** **11 51 16.0 -0.2**
MPMC Manual Prospec 130.78 47 P **PKiKP** **11 51 19.1 +1.2**
baz=297
SCHQ Schefferville 130.96 354 PKP **PKiKP** **11 51 17.2 -0.2**
comp=Z,1.8nm,0.5s,baz=15,slow=3.6,SNR=6.7
SCHQ Schefferville 130.96 354 **PKPdf** **11 51 17.0 +0.4**
R11A Troy Canyon, C 131.01 43 P **PKiKP** **11 51 19.9 +1.6**
baz=301
DUG Dugway, Tooele 131.84 39 P **PKiKP** **11 51 21.0 +1.1**
baz=305
PDAR Pinedale Array 132.23 35 PKP **PKiKP** **11 51 20.6 0.0**
comp=Z,0.7nm,0.6s,baz=318,slow=1.2,SNR=6.8
ULM Lac du Bonnet 132.52 18 PKP **PKPdf** **11 51 19.8 +0.2**
comp=Z,2.8nm,0.7s,baz=19,slow=3.6,SNR=6.9
GMRC Granite Mounta 132.69 47 P **PKiKP** **11 51 24.2 +2.5**
baz=298
RSSD Black Hills 134.22 29 PKIKP **PKPdf** **11 51 23.2 -0.1**
RSSD Black Hills 134.22 29 **PKPdf** **11 51 23.2 -0.1**
RSSD Black Hills 134.22 29 P **PKiKP** **11 51 24.8 +0.2**
baz=317
O20A White River Ci 134.67 37 P **PKiKP** **11 51 26.5 +0.8**
baz=310
MATQ Matagami 136.38 3 P **PKiKP** **11 51 29.5 +1.0**
baz=356
S22A 4UR Ranch, Cre 137.04 38 P **PKiKP** **11 51 32.4 +1.8**
baz=309
LSQQ Lebel-sur-Quev 137.11 2 P **PKiKP** **11 51 30.4 +0.4**
baz=357
ECSD EROS Data Cent 137.84 24 **PKiKP** **11 51 31.7 0.0**
ECSD EROS Data Cent 137.84 24 P **PKiKP** **11 51 32.7 +0.9**
baz=326
SDCO Great Sand Dun 137.84 37 P **PKiKP** **11 51 33.9 +1.6**
baz=311
ANMO Albuquerque 139.00 41 *c i* PKIKP **PKPdf** **11 51 32.9 +0.5**
ANMO pmax pmax
comp=Z,8.0nm,1.7s
ANMO Albuquerque 139.00 41 **PKPdf** **11 51 32.2 -0.2**
ANMO Albuquerque 139.00 41 P **PKiKP** **11 51 34.3 -0.3**
baz=307
MNTX Cornudas Mount 141.64 44 P **PKiKP** **11 51 40.6 +0.7**
baz=305
L48A N Adams 143.24 12 P **PKiKP** **11 51 43.1 +0.2**
baz=344
CPUP Villa Florida 143.64 207 PKP **PKPdf** **11 51 40.8 +0.1**
comp=Z,1.7nm,0.7s,baz=173,slow=7.3,SNR=4.8
L58A Harry Jones Me 144.16 1 P PKPbc 11 51 39.9 +0.6
baz=358
TX31 Lajitas Ar. Si 144.20 46 PKPbc 11 51 40.7 +0.8
TX32 Lajitas Array 144.20 46 **PKPdf** **11 51 41.1 -0.6**
TXAR Lajitas Array 144.20 46 PKP PKPbc 11 51 40.7 +0.7
comp=Z,2.3nm,0.6s,baz=256,slow=1.1,SNR=27
KSCT Kent School, K 144.47 358 **PKPab** **11 51 39.9 -0.1**
M56A Emporium 144.60 4 P PKPbc 11 51 41.3 +0.6
baz=354
N51A Ashland 144.63 10 P PKPbc 11 51 41.3 +0.5
baz=347
N50A Nevada 144.63 11 P **PKPdf** **11 51 41.9 -0.1**
baz=345
CCM Cathedral Cave 144.79 23 PKIKP **PKPab** **11 51 40.5 -0.8**
CCM Cathedral Cave 144.79 23 **PKPab** **11 51 40.5 -0.8**
CCM Cathedral Cave 144.79 23 P **PKPab** **11 51 40.8 -0.5**
baz=331
M58A Price's Panora 144.81 2 P **PKPab** **11 51 40.4 -0.9**
baz=357
M57A Sunshine Farm, 144.81 3 P PKPbc 11 51 41.4 +0.1
baz=356
M60A Port Jervis 144.89 360 P **PKPab** **11 51 41.4 -0.1**
baz=0.0
O49A Covington 144.94 13 P **PKPdf** **11 51 42.5 0.0**
baz=343
N53A Lisbon 144.98 8 P PKPbc 11 51 42.0 +0.1
baz=349,SNR=5.4
ODNJ Ogdensburg 145.13 360 **PKPbc** **11 51 41.1 -1.3**
O50A Cable 145.14 12 P **PKPbc** **11 51 42.4 -0.1**
baz=344
N56A West Decatur 145.15 5 P **PKPbc** **11 51 42.3 -0.2**
baz=354
ACSO Alum Creek Sta 145.18 11 P **PKPab** **11 51 42.6 -0.1**
baz=346
PAL Palisades 145.20 359 PKIKP **PKPbc** **11 51 42.1 -0.5**
PAL Palisades 145.20 359 **PKPbc** **11 51 42.1 -0.5**
PAL Palisades 145.20 359 P **PKPbc** **11 51 42.5 -0.1**
baz=1.3
N55A Marion Center 145.22 6 P **PKPbc** **11 51 42.5 -0.3**
baz=352
N59A State Game Lan 145.28 1 P **PKPbc** **11 51 42.9 0.0**
baz=358,SNR=12
N58A Sunbury 145.33 3 P **PKPbc** **11 51 43.0 0.0**
baz=356,SNR=6.4
O51A Pataskala 145.33 11 P **PKPbc** **11 51 42.8 -0.3**
baz=346,SNR=8.3
N57A Milroy 145.37 4 P **PKPbc** **11 51 43.0 -0.1**
baz=355,SNR=6.2
P48A Milroy 145.38 15 P **PKPbc** **11 51 43.2 -0.1**
baz=341
N61A South Mountain 145.46 359 P **PKPab** **11 51 43.8 +0.1**
baz=0.6
SSPA Standing Stone 145.46 4 **PKPdf** **11 51 42.4 -1.1**
SSPA Standing Stone 145.46 4 P **PKPdf** **11 51 42.9 -0.6**
baz=354
O53A New Philadelph 145.47 9 P **PKPdf** **11 51 43.2 -0.3**
baz=348
O52A Adamsville 145.50 10 P **PKPdf** **11 51 43.3 -0.2**
baz=347
U40A Yellville 145.58 26 P **PKPdf** **11 51 43.3 -0.5**
baz=327
P50A Jamestown 145.62 12 P **PKPdf** **11 51 43.5 -0.2**
baz=344,SNR=7.6
O54A Avella 145.65 8 P **PKPbc** **11 51 44.2 +0.1**
baz=350,SNR=5.9
O56A Blue Knob Stat 145.77 5 P **PKPbc** **11 51 44.4 -0.1**
baz=353,SNR=7.1
Q48A North Vernon 145.80 15 P **PKPbc** **11 51 44.4 -0.2**
baz=340
BDFB Brasilia 145.87 231 PKP2 **PKPab** **11 51 47.5 +1.4**
BDFB Brasilia 145.87 231 PKPbc **PKPab** **11 51 46.3 +0.2**
comp=Z,6.9nm,0.7s,baz=123,slow=4.4,SNR=12
BDFB Brasilia 145.87 231 **PKPab** **11 51 47.5 +1.4**
O59A Robesonia 145.88 2 P **PKPbc** **11 51 44.6 -0.2**
baz=357,SNR=7.9
O60A Telford 145.89 1 P **PKPbc** **11 51 44.7 0.0**
baz=359
P51A Williamsport 145.89 12 P **PKPdf** **11 51 44.1 -0.1**
baz=345,SNR=5.2

O57A	Amberson	145.90	4	P	PKPab	11 51 45.3	0.0
	baz=355						
P52A	Corning	145.92	10	P	PKPdf	11 51 44.2	0.0
	baz=347,SNR=6.2						
Q49A	Aurora	145.94	14	P	PKPbc	11 51 44.8	-0.2
	baz=342						
O58A	Lewisberry	146.03	3	P	PKPbc	11 51 45.3	+0.1
	baz=356,SNR=6.7						
W39A	Magazine	146.11	29	P	PKPbc	11 51 45.3	-0.3
	baz=324						
JCT	Junction City	146.16	41	PKP2	PKPdf	11 51 45.5	+0.5
JCT	Junction City	146.16	41		PKPdf	11 51 45.5	+0.5
JCT	Junction City	146.16	41	P	PKPab	11 51 46.4	-0.4
	baz=311,SNR=23						
P53A	Whipple	146.19	9	P	PKPdf	11 51 44.9	+0.2
	baz=348,SNR=6.0						
P54A	Burton	146.21	8	P	PKPab	11 51 46.2	-0.4
	baz=350						
MCWV	Mont Chateau	146.24	7	P	PKPab	11 51 46.3	-0.3
	baz=351						
Q51A	Peebles	146.27	12	P	PKPbc	11 51 46.0	-0.1
	baz=344,SNR=7.6						
WCI	Wyandotte Cave	146.30	17	PKP2	PKPdf	11 51 45.1	+0.1
WCI	Wyandotte Cave	146.30	17		PKPdf	11 51 45.1	+0.1
WCI	Wyandotte Cave	146.30	17	P	PKPbc	11 51 46.2	0.0
	baz=339						
Q50A	Georgetown	146.31	13	P	PKPbc	11 51 45.9	-0.2
	baz=343						
P60A	Greenville	146.39	1	P	PKPbc	11 51 46.5	+0.1
	baz=358,SNR=5.9						
P56A	Dayton Farm, R	146.50	6	P	PKPbc	11 51 47.0	+0.3
	baz=352,SNR=8.0						
Q52A	Bidwell	146.55	11	P	PKPbc	11 51 46.8	-0.1
	baz=346,SNR=7.2						
R49A	Shelbyville	146.55	15	P	PKPbc	11 51 47.0	+0.1
	baz=341						
P59A	Jarrettsville	146.57	2	P	PKPbc	11 51 47.1	+0.3
	baz=357						
P57A	Homestead Farm	146.60	5	P	PKPbc	11 51 47.0	0.0
	baz=354						
P58A	Pank, Wackersv	146.64	4	P	PKPbc	11 51 47.3	+0.2
	baz=355,SNR=8.6						
MIAR	Mount Ida	146.73	29	P	PKPbc	11 51 47.4	-0.1
	baz=324						
Q54A	Coxs Mills	146.76	9	P	PKPbc	11 51 47.0	-0.5
	baz=349						
R50A	Paris	146.76	14	P	PKPbc	11 51 47.3	-0.2
	baz=342						
Q53A	Leroy	146.78	10	P	PKPdf	11 51 46.6	+0.9
	baz=348						
W41B	Gary Mavity, V	146.84	27	P	PKPbc	11 51 47.4	-0.4
	baz=327						
Q55A	Buckhannon	146.86	8	P	PKPbc	11 51 48.0	+0.2
	baz=350,SNR=7.1						
R51A	Hillsboro	146.92	13	P	PKPbc	11 51 47.0	-0.9
	baz=344						
Q56A	Snyder Ridge,	146.92	6	P	PKPbc	11 51 47.9	0.0
	baz=352						
S49A	Springfield	146.99	15	P	PKPbc	11 51 47.8	-0.4
	baz=340						
Q57A	Strasburg	147.01	5	P	PKPbc	11 51 48.3	+0.1
	baz=353						
R52A	Catlettsburg	147.08	11	P	PKPbc	11 51 48.3	-0.1
	baz=345						
X40A	Basin Creek Fa	147.13	28	P	PKPbc	11 51 48.1	-0.6
	baz=325						
Q58A	Fox Den Farm,	147.16	4	P	PKPbc	11 51 48.1	-0.5
	baz=354,SNR=6.8						
R53A	Hurricane	147.22	11	P	PKPbc	11 51 48.5	-0.3
	baz=347,SNR=7.5						
S50A	Richmond	147.32	14	P	PKPbc	11 51 48.6	-0.4
	baz=342						
435B	Jarrell	147.36	38	P	PKPab	11 51 50.5	-0.9
	baz=314						
R56A	Bull Pasture M	147.53	7	P	PKPbc	11 51 50.5	+0.8
	baz=351						
R54A	Victor	147.53	9	P	PKPbc	11 51 50.0	+0.3
	baz=348						
S51A	Beattyville	147.55	13	P	PKPbc	11 51 49.5	-0.2
	baz=343,SNR=6.4						
T49A	Edmonton	147.56	16	P	PKPbc	11 51 49.6	-0.2
	baz=340						
S52A	Salyersville	147.62	12	P	PKPbc	11 51 49.9	0.0
	baz=344,SNR=13						
R57A	Stanardsville	147.73	6	P	PKPbc	11 51 51.1	+1.0
	baz=353,SNR=6.7						
WVT	Waverly	147.75	20	PKP2	PKPbc	11 51 49.0	-1.3
WVT	Waverly	147.75	20		PKPbc	11 51 49.0	-1.3
WVT	Waverly	147.75	20	P	PKPbc	11 51 50.1	-0.2
	baz=335						
R58A	Rapidan	147.77	5	P	PKPbc	11 51 51.2	+0.9
	baz=354,SNR=8.0						
833A	Chaparral WMA,	147.81	44	P	PKPbc	11 51 51.6	+0.9
	baz=309,SNR=18						
S53A	Williamson	147.81	11	P	PKPbc	11 51 51.2	+0.8
	baz=346						
T50A	Nancy	147.83	15	P	PKPbc	11 51 51.0	+0.5
	baz=341						
S54A	Dingess, Beckl	147.85	10	P	PKPbc	11 51 51.3	+0.7
	baz=348						
U49A	Red Boiling Sp	148.05	17	P	PKPbc	11 51 51.0	-0.1
	baz=339,SNR=7.7						
T51A	Gray	148.11	14	P	PKPbc	11 51 51.7	+0.5
	baz=342,SNR=8.8						
Z41A	Richland Creek	148.15	30	P	PKPbc	11 51 52.2	+0.8
	baz=324,SNR=6.5						
T52A	Hallie	148.19	13	P	PKiKP	11 51 52.5	-0.7
	baz=344						
S57A	Dark Hollow, R	148.22	6	P	PKiKP	11 51 52.4	-0.8
	baz=352,SNR=6.7						
S56A	Natural Bridge	148.22	7	P	PKPbc	11 51 52.3	+0.7
	baz=351						
NATX	Nacoggdoches	148.36	34	P	PKiKP	11 51 53.4	-0.3
	baz=320,SNR=6.0						
S59A	Mechanicsville	148.36	4	P	PKiKP	11 51 53.1	-0.4
	baz=355,SNR=5.9						
U50A	Jamestown	148.40	16	P	PKPbc	11 51 52.3	+0.3
	baz=340,SNR=20						
T53A	Wise	148.41	12	P	PKiKP	11 51 53.0	-0.7
	baz=345						
S58A	Poland Farm, P	148.45	5	P	PKPbc	11 51 51.9	-0.2
	baz=354,SNR=6.0						
S60A	Water View	148.46	3	P	PKiKP	11 51 53.4	-0.3
	baz=356						
T54A	Tazewell	148.52	11	P	PKPbc	11 51 51.6	-0.8
	baz=347,SNR=13						
T55A	Pulaski	148.60	9	P	PKPbc	11 51 53.2	+0.7
	baz=348,SNR=6.5						
OXF	Oxford	148.60	24	P	PKPbc	11 51 53.0	+0.4
	baz=331,SNR=19						
TZTN	Tazewell	148.61	14	P	PKPbc	11 51 52.9	+0.3
	baz=343,SNR=12						
V49A	McMinnville	148.71	18	P	PKPbc	11 51 52.7	-0.1
	baz=338,SNR=8.3						
U52A	Thorn Hill	148.79	14	P	PKiKP	11 51 53.9	-0.6
	baz=343						
T56A	Rocky Mt	148.80	8	P	PKPbc	11 51 53.0	0.0
	baz=350,SNR=6.5						
T57A	Hurt	148.93	7	P	PKPbc	11 51 53.6	+0.2
	baz=351,SNR=5.9						
U53A	Fall Branch	149.00	12	P	PKPbc	11 51 53.5	-0.1
	baz=345						
U54A	Nelsons Funny	149.00	11	P	PKPbc	11 51 53.8	+0.2
	baz=346						
T60A	Surry	149.01	3	P	PKiKP	11 51 54.8	0.0
	baz=356						
HKT	Hockley	149.02	37	PKP2	PKPbc	11 51 54.1	+0.4
HKT	Hockley	149.02	37		PKPbc	11 51 54.1	+0.4
V50A	Pikeville	149.03	17	P	PKPbc	11 51 54.1	+0.5
	baz=340,SNR=8.3						
T58A	Grand View Acr	149.07	6	P	PKiKP	11 51 54.8	-0.2
	baz=352,SNR=8.3						
V51A	Loudon	149.11	15	P	PKiKP	11 51 54.7	-0.4
	baz=341,SNR=8.2						
T59A	Double "B" Far	149.13	4	P	PKiKP	11 51 55.0	-0.1
	baz=354,SNR=9.8						
U55A	TA2, Sparta	149.16	10	P	PKiKP	11 51 54.7	-0.6
	baz=348,SNR=8.5						
W49A	Belvidere	149.19	19	P	PKPbc	11 51 54.1	0.0
	baz=337,SNR=16						
V52A	Sevierville	149.26	14	P	PKPbc	11 51 54.1	-0.1
	baz=342,SNR=19						
W50A	Signal Mountai	149.41	17	P	PKiKP	11 51 55.3	-0.5
	baz=339						
U56A	King	149.42	9	P	PKPbc	11 51 54.7	+0.1
	baz=349						
U57A	Blanch	149.48	7	P	PKPbc	11 51 55.0	+0.3
	baz=351						
W51A	Cleveland	149.60	16	P	PKPbc	11 51 55.4	+0.3
	baz=340,SNR=7.5						
U58A	Oxford	149.61	6	P	PKPbc	11 51 55.2	+0.2
	baz=352						
V53A	Saluda	149.61	13	P	PKPbc	11 51 55.1	-0.1
	baz=344,SNR=18						
U60A	Pendleton	149.65	4	P	PKPbc	11 51 55.5	+0.4
	baz=355						
V54A	Nebo	149.69	12	P	PKiKP	11 51 56.3	-0.1
	baz=346,SNR=8.0						
U59A	Littleton	149.72	5	P	PKiKP	11 51 56.5	+0.2
	baz=354,SNR=6.5						
V55A	Taylorsville	149.76	10	P	PKPbc	11 51 55.7	+0.3
	baz=347,SNR=8.1						
U61A	Possum Corner	149.83	3	P	PKiKP	11 51 56.4	-0.1
	baz=356						
W52A	Murphy	149.89	15	P	PKiKP	11 51 56.4	-0.4
	baz=342,SNR=9.9						
V56A	Mocksville	149.93	9	P	PKPbc	11 51 56.1	+0.2
	baz=348						
V57A	Coltrane Farms	149.96	8	P	PKPbc	11 51 56.1	+0.2
	baz=350,SNR=8.1						
W53A	Cullowhee	150.01	14	P	PKPbc	11 51 56.4	+0.1
	baz=343,SNR=19						
VBMS	Vicksburg	150.09	28	P	PKPbc	11 51 56.6	+0.2
	baz=327,SNR=9.5						
X51A	Calhoun	150.13	17	P	PKPbc	11 51 56.7	+0.3
	baz=339						
V58A	Windy Hill, Pi	150.14	7	P	PKPbc	11 51 56.6	+0.3
	baz=351						
V59A	Middlesex	150.26	6	P	PKiKP	11 51 57.3	-0.1
	baz=353,SNR=6.8						
W54A	Cherokee Point	150.31	12	P	PKiKP	11 51 57.7	+0.1
	baz=345,SNR=5.8						
V60A	Jim Taylor Roa	150.35	4	P	PKiKP	11 51 58.0	+0.4
	baz=355						
X52A	Dahlonega	150.36	15	P	PKiKP	11 51 58.1	+0.3
	baz=341,SNR=6.5						
V61A	Roper	150.37	3	P	PKiKP	11 51 57.4	-0.2
	baz=356						
KMSC	Kings Mountain	150.43	11	P	PKPbc	11 51 56.8	-0.3
	baz=346,SNR=11						
W56A	Indian Trail	150.57	10	P	PKiKP	11 51 58.2	0.0
	baz=348						
X53A	Estanollee	150.61	15	P	PKiKP	11 51 58.6	+0.3
	baz=342,SNR=16						
Y51A	Rockmart	150.69	18	P	PKPbc	11 51 57.9	+0.1
	baz=339						
X54A	Belton	150.79	13	P	PKiKP	11 51 58.3	-0.3
	baz=344,SNR=17						
CNNC	Cliffs of the	150.82	5	P	PKiKP	11 51 59.6	+1.0
	baz=353						
LRAL	Lakeview Retre	150.84	21	P	PKPbc	11 51 57.9	-0.2
	baz=334,SNR=10						
W58A	Raeford	150.88	8	P	PKiKP	11 51 59.2	+0.5
	baz=351						
LVC	Limon Verde	150.94	191	PKPbc	PKPbc	11 51 57.5	-1.6
	comp=Z,5.1nm,0.9s,baz=274,slow=23,SNR=6.7						
LVC	Limon Verde	150.94	191		PKPbc	11 51 57.1	-2.0
W61A	Ground Anchor	150.95	4	P	PKiKP	11 51 59.8	+1.0
	baz=355						
Z50A	Ashland	151.01	20	P	PKPbc	11 51 58.5	-0.1
	baz=337,SNR=8.4						
Y52A	Lilburn	151.01	16	P	PKiKP	11 51 59.2	+0.2
	baz=341,SNR=9.3						
X55A	Gracelyn & Ava	151.02	12	P	PKPbc	11 51 58.6	+0.1
	baz=346,SNR=6.4						
X56A	White Oak	151.12	11	P	PKiKP	11 51 59.1	-0.2
	baz=347						
Y53A	Monroe	151.15	15	P	PKPbc	11 51 58.7	-0.1
	baz=342,SNR=14						
JSC	Jenkinsville	151.28	11		PKPbc	11 51 58.7	-0.4
X57A	Johnson Farm,	151.31	9	P	PKPbc	11 51 59.2	+0.1
	baz=349						
X58A	Rowland	151.33	8	P	PKiKP	11 52 00.5	+0.8
	baz=350						
Y54A	Tignall	151.37	14	P	PKiKP	11 52 00.0	+0.2
	baz=343,SNR=7.7						
X60A	Albert Glenn T	151.47	6	P	PKPbc	11 51 59.7	+0.2
	baz=353						
Y55A	Saluda	151.49	12	P	PKPbc	11 51 59.3	-0.2
	baz=345,SNR=6.2						
Z52A	Williamson	151.54	17	P	PKiKP	11 52 00.2	-0.1
	baz=339,SNR=7.2						
GOGA	Godfrey	151.60	15	P	PKiKP	11 52 01.1	+0.8
	baz=342,SNR=8.5						
Y57A	Sumter	151.69	10		PKPbc	11 52 00.1	+0.1
Y57A	Sumter	151.69	10	P	PKiKP	11 52 00.4	0.0
	baz=348						
Z53A	Monticello	151.70	16	P	PKPbc	11 52 00.3	+0.2
	baz=341,SNR=10						
Y58A	Scranton	151.92	9	P	PKiKP	11 52 01.3	+0.4
	baz=349						
Z54A	Sparta	151.93	15	P	PKiKP	11 52 01.4	+0.4
	baz=343,SNR=8.0						
152A	Waverly Hall	151.94	18	P	PKiKP	11 52 00.9	-0.2
	baz=338,SNR=12						
Z55A	Blythe	152.11	13	P	PKiKP	11 52 02.0	+0.7
	baz=344						
153A	Fort Valley	152.22	17	P	PKiKP	11 52 02.1	+0.5
	baz=340						
Z57A	Bowman	152.34	11	P	PKiKP	11 52 02.2	+0.4
	baz=347						
Z58A	St. Stephen	152.46	9	P	PKiKP	11 52 02.3	+0.3
	baz=349						
BRAL	Brewton	152.48	23	P	PKiKP	11 52 03.4	+1.2
	baz=333,SNR=11						
252A	Lumpkin	152.56	19	P	PKiKP	11 52 03.5	+1.2
	baz=338,SNR=7.1						
253A	Americus	152.68	18	P	PKiKP	11 52 03.3	+0.7
	baz=339						
352A	Blakely	152.97	19	P	PKiKP	11 52 04.0	+0.9
	baz=337						
TIGA	Tifton	153.43	17		PKPbc	11 52 02.8	-1.2
SIV	San Ignacio	154.25	212	PKPbc	PKPbc	11 52 06.3	0.0
	comp=Z,1.4nm,1.0s,baz=207,slow=6.1,SNR=5.0						

*ISK **05** 11:33:08.4,38°.61N×26°.13E,h16km,ML2.5/16*
*DDA **05** 11:33:08.2,38°.60N×26°.09E,h9km±4km,ML2.0*
*ATH **05** 11:33:08.3,38°.58N×26°.09E,h29km±1km,ML2.7/3, Error ellipse: s-maj=3.4km s-min=1.5km az=279.0*
*THE **05** 11:33:09.1,38°.59N×25°.98E,h16km±1km,ML2.6/4, Error ellipse: s-maj=2.6km s-min=0.5km az=262.0*

ISC 05 11:33:08.7±1.0,**38°60N**±0°.02×**26°11E**±0°.03,**h18**km±7km,
n39,σ0**°43**/61,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	**0.22**	**191**	P	**Pb**	**11 33 14.2**	**+0.1**
CHOS				S	**Sb**	**11 33 17.6**	**-0.2**
	2µm,0.6s						
CHOS	**Chios island**	**0.22**	**191**	P	**Pb**	**11 33 14.1**	**0.0**
CHOS				S	**Sb**	**11 33 18.1**	**+0.3**
CHOS				AML	AML	11 33 18.6	
	comp=N,2126µm,0.1s						
CHOS				AML	AML	11 33 18.8	
	comp=E,3449µm,0.2s						
CHOS	**Chios island**	**0.22**	**191**	PG	**Pb**	**11 33 14.2**	**+0.1**
CHOS				SG	**Sb**	**11 33 17.6**	**-0.2**
CESE	**eme**	**0.31**	**151**	PG	**Pg**	**11 33 15.3**	**0.0**
KRBN	**Karaburun**	**0.35**	**91**	PG	**Pg**	**11 33 15.8**	**-0.2**
PSRA	**Psara**	**0.43**	**262**	P	**Pb**	**11 33 18.4**	**+0.6**
PSRA				S	**Sb**	**11 33 24.4**	**+0.5**
URLA	**Izmir**	**0.45**	**122**	*i* PG	**Pg**	**11 33 17.8**	**0.0**
URLA				SG	**Sb**	**11 33 24.4**	**-0.2**
URLA	**Izmir**	**0.45**	**122**	*i* P	**Pg**	**11 33 17.9**	**+0.1**
URLA				*i* S	**Sg**	**11 33 24.0**	**0.0**
FOCM	**Foa**	**0.50**	**77**	PG	**Pg**	**11 33 18.6**	**-0.1**
FOCM				SG	**Sg**	**11 33 25.2**	**-0.2**
SIGR	**SIGRI**	**0.64**	**342**	P	**Pb**	**11 33 21.2**	**-0.1**
SIGR				S	**Sb**	**11 33 30.2**	**+0.3**
	comp=E,892nm,0.4s						
SIGR	**SIGRI**	**0.64**	**342**	P	**Pb**	**11 33 21.2**	**-0.1**
SIGR				S	**Sn**	**11 33 31.2**	**-1.4**
SIGR				AML	AML	11 33 32.9	
	comp=N,1970µm,0.3s						
SIGR				AML	AML	11 33 33.0	
	comp=E,1622µm,0.4s						
SIGR	**SIGRI**	**0.64**	**342**	PG	**Pb**	**11 33 21.5**	**+0.2**
PRK	**Paraskevi**	**0.66**	**11**	P	**Pb**	**11 33 22.2**	**+0.6**
PRK				S	**Sn**	**11 33 32.7**	**-0.3**
	comp=E,420nm,0.4s						
PRK	**Paraskevi**	**0.66**	**11**	P	**Pb**	**11 33 22.0**	**+0.4**
BLCB	**Balcova**	**0.76**	**106**	PG	**Pg**	**11 33 23.7**	**+0.1**
DKL	**Dikili**	**0.78**	**53**	PG	**Pg**	**11 33 23.9**	**0.0**
DGB	**zmir**	**0.82**	**132**	*i* P	**Pb**	**11 33 24.3**	**-0.1**
DGB				*i* S	**Sb**	**11 33 35.3**	**+0.2**
DGB				IAML		11 33 36.0	
	comp=E,62nm,0.4s						
AYVA	**Ayvalik**	**0.84**	**33**	*i* P	**Pb**	**11 33 24.4**	**-0.3**
AYVA				*i* S	**Sg**	**11 33 36.1**	**0.0**
AYVA				IAML		11 33 38.0	
	comp=E,56nm,0.3s						
AYVA				IAML		11 33 39.0	
	comp=N,126nm,0.6s						
ZEDA	**zmir-Bergama**	**0.84**	**64**	*i* P	**Pn**	**11 33 25.7**	**0.0**
ZEDA				*i* S	**Sn**	**11 33 37.3**	**-0.3**
ZEDA				IAML		11 33 38.0	
	comp=N,85nm,0.4s						
ZEDA				IAML		11 33 39.0	
	comp=E,57nm,0.5s						
GPNR	**Gulpinar-Canak**	**0.85**	**1**	PG	**Pg**	**11 33 25.4**	**+0.1**
SMG	**Samos**	**1.06**	**147**	P	**Pg**	**11 33 29.4**	**+0.1**
SMG				S	**Sn**	**11 33 44.0**	**+1.0**
	comp=E,310nm,0.4s						
SMG	**Samos**	**1.06**	**147**	P	**Pg**	**11 33 29.3**	**+0.1**
SMG				S	**Sn**	**11 33 43.2**	**+0.2**
SMG				AML	AML	11 33 45.0	
	comp=E,730µm,0.4s						
SMG				AML	AML	11 33 45.0	
	comp=N,512µm,0.4s						
BAYC	**CANAKKALE_Bayr**	**1.19**	**17**	*i* P	**Pn**	**11 33 29.9**	**-0.6**
BAYC				*i* S	**Sb**	**11 33 45.2**	**-0.6**
BAYC				IAML		11 33 51.0	
	comp=E,23nm,0.2s						
BAYC				IAML		11 33 52.0	
	comp=N,25nm,0.3s						
EZN	**Ezine**	**1.23**	**8**	PN	**Pn**	**11 33 30.7**	**-0.3**
BOZC	**Bozcaada**	**1.24**	**358**	PN	**Pn**	**11 33 30.8**	**-0.3**
BOZC	**Bozcaada**	**1.24**	**358**	*i* P	**Pn**	**11 33 31.0**	**-0.1**
BOZC				*i* S	**Sb**	**11 33 46.9**	**-0.3**
BOZC				IAML		11 33 51.0	
	comp=N,26nm,0.5s						
BOZC				IAML		11 33 53.0	
	comp=E,23nm,0.2s						
GCAM	**G?zelcaml?**	**1.26**	**135**	PN	**Pb**	**11 33 31.8**	**-0.1**
GCAM	**G?zelcaml?**	**1.26**	**135**	*i* P	**Pg**	**11 33 33.0**	**0.0**
GCAM				*i* S	**Sg**	**11 33 49.9**	**+0.3**
GCAM				IAML		11 33 52.0	
	comp=N,27nm,0.3s						
GCAM				IAML		11 33 54.0	
	comp=E,23nm,0.3s						
AKHS	**Akhisar**	**1.36**	**78**	*i* P	**Pg**	**11 33 34.9**	**0.0**
AKHS				*i* S	**Sg**	**11 33 52.6**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.47**	**58**	*i* P	**Pb**	**11 33 35.4**	**-0.2**
STEP				*i* S	**Sg**	**11 33 56.3**	**+0.1**
STEP				IAML		11 33 59.0	
	comp=N,89nm,0.4s						
STEP				IAML		11 34 00.0	
	comp=E,36nm,0.4s						
APE	**Apeiranthos**	**1.60**	**197**	P	**Pn**	**11 33 35.9**	**-0.2**
APE	**Apeiranthos**	**1.60**	**197**	PN	**Pb**	**11 33 36.8**	**-0.9**
BALY	**Balya**	**1.63**	**45**	*i* P	**Pb**	**11 33 37.9**	**-0.4**
BALY				*i* S	**Sg**	**11 34 02.2**	**+0.8**
BALY				IAML		11 34 04.0	
	comp=N,38nm,0.4s						
BALY				IAML		11 34 05.0	
	comp=E,32nm,0.5s						
AYDN	**Tasoluk**	**1.68**	**123**	*i* P	**Pg**	**11 33 40.9**	**-0.1**
AYDN				*i* S	**Sb**	**11 34 01.0**	**+1.0**
AYDN				IAML		11 34 06.0	
	comp=E,11nm,0.3s						
BALB	**Balikesir**	**1.72**	**52**	PN	**Pn**	**11 33 38.2**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.82**	**9**	PN	**Pn**	**11 33 39.7**	**+0.7**
LPK	**Lapseki**	**1.84**	**16**	PN	**Pn**	**11 33 39.9**	**+0.5**
IOSP	**Ios island**	**1.98**	**199**	P	**Pn**	**11 33 40.9**	**-0.5**
ALN	**Alexandroupoli**	**2.29**	**359**	PN	**Pn**	**11 33 46.5**	**+0.9**

MAN 05 11:36:46.5,6°.64N×123°.25E,h1km,mb3.6,ML2.3,MS1.8, Mindanao

NNC 05 11:36:54.3±10.0,**38°.28N×83°.28E,h5km±54km,mb3.6, mpv3.3,7C-2D,Error ellipse: s-maj=79.8km s-min=67.7km az=48.0,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**5.81**	**332**	⇑Pn	Pn	11 38 21.6	+0.4
	4.0nm,0.8s						
PDGK				⇑Sn	Sn	11 39 31.9	+3.6
	4.2nm,0.4s						
PDGK				⇑Lg	Lg	11 39 59.4	
	14nm,0.7s						
MK31	**Makanchi Array**	**8.54**	**355**	⇑Pn	Pn	11 38 57.6	-1.0
	0.2nm,0.3s,baz=182,slow=13,SNR=47						
MK31				⇑Sn	Sn	11 40 33.9	-1.5
	0.6nm,0.6s,baz=180,slow=27,SNR=4.3						
MK31				⇓Lg	Lg	11 41 29.4	
	8.4nm,0.9s,baz=157,slow=6.3,SNR=19						
MAKZ	**Makanchi**	**8.58**	**354**	⇑Pn	Pn	11 38 58.8	-0.3
	1.1nm,0.6s						
MAKZ				⇑Sn	Sn	11 40 35.2	-1.0
	1.0nm,0.7s						
MAKZ				⇓Lg	Lg	11 41 25.7	
	5.9nm,1.4s						

*BJI **05** 11:44:05.6±0.0,2°.65N×128°.72E,h60km,mB5.3/44, mb5.0/65,Ms4.9/35,Ms7 4.6/36*
*MOS **05** 11:44:08.4±1.2,3°.26N×128°.29E,h39km,mb5.2/46, MS4.4/5,Error ellipse: s-maj=9.0km s-min=5.4km az=108.4*
*IDC **05** 11:44:10.5±1.2,3°.19N×128°.30E,h46km±11km,mb4.5/36, mb1 4.6/39,mb1mx4.5/43,mbtmp4.8/39,ML4.7/4,MS4.1/23, Ms1 4.1/23,ms1mx3.9/40,Error ellipse: s-maj=12.6km s-min=6.8km az=66.0*
*NEIC **05** 11:44:11.5±2.4,3°.20N±0°.06×128°.36E±0°.07,h55km±4km, mb5.1/88,Error ellipse: s-maj=10.6km s-min=7.8km az=54.0*
*KLM **05** 11:44:11.0,3°.23N×128°.59E,h54km,mb5.2*
*GCMT **05** 11:44:11.5±0.3,3°.35N±0°.02×128°.27E±0°.03,h24km±2km, MW4.9/85,Moment Tensor Solution. s24,c28; s85,c105; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr 1.03±.18; Mθθ -1.18±.12; Mφφ 0.14±.12; Mrθ 0.14±.20; Mrφ 2.12±.09; Mθφ -1.97±.31; Best double couple: Mo3.10100×10^16^ NP1:φs267.00000°,δ46.00000°,λ19.00000°. NP2: φs164.00000°,δ76.00000°,λ135.00000°. Principal axes: T 3.0290, Plg41.0000°, Azm115.0000°; N 0.1410, Plg43.0000°, Azm331.0000°; P -3.1730, Plg19.0000°, Azm222.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **05** 11:44:12.8±0.3,3°.N±2°×12°.8E±°,h59km±2km,M5.3/78, mB6.0/1,mb6.1/1,mB5.6/30,mb5.3/78,MLv5.7/1, MLv5.4/18,Mw(mB)5.6/1,Mw(mB)5.1/30,Mwp4.4/1, Mwp5.5/4*

ISC 05 11:44:09.6±0.2,**3°.22N**±0°.04×**128°.35E**±0°.05,**h35**km,**n353,**
σ1**°79**/341,**mb5.0**/133,**MS4.2**/32,**19C-6D,North of Halmahera**

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

SIJI S **Sn** **11 46 18.9 +0.1**
30nm,0.3s,baz=350,slow=24,SNR=10
SIJI LR LR 11 46 55.6
comp=Z,1μm,22.0s,baz=281,slow=33
SKMP Bagumbayan, Su 5.01 311 *eP* **Pn** **11 45 24.2 +1.8**
SKMP *eS* **Sn** **11 46 19.7 +0.7**
KMSI Cibinong 5.09 239 P **Pn** **11 45 25.4 +2.0**
11nm415nm415nm16μm16μm2μm,0.7s,2μm,0.7s
BUKP Musuan 5.67 325 *eP* **Pn** **11 45 35.5 +4.1**
BUKP *eS* **Sn** **11 46 30.7 -4.6**
CTBH Cotabato--PC H 5.70 314⇑*iP* **Pn** **11 45 34.5 +2.7**
SANI Sanana 5.74 204 P **Pn** **11 45 33.0 +0.7**
1.6nm5μm364nm,0.7s
BUTP Butuan 6.32 335 *eP* **Pn** **11 45 44.5 +4.1**
BUTP *eS* Sn 11 47 04.1 +13
CGP Cagayan de Oro 6.34 325⇓*eP* Pn 11 45 46.8 +6.1
NLAI Namlea 6.53 191 P **Pn** **11 45 47.0 +3.8**
0.9nm2μm254nm,0.8s
MSAI Masohi 6.55 175 P Pn 11 45 48.2 +4.8
0.3nm4μm778nm112nm,1.0s
PAGZ Pagadian 6.75 313 *eP* **Pn** **11 45 46.6 +0.4**
AAI Ambon 6.86 181 P Pn 11 45 52.9 +5.2
1.4nm4μm484nm,0.9s
MRSI Marisa 6.96 247 P **Pn** **11 45 51.1 +2.1**
4.6nm12μm2μm,0.7s
LUWI Luwuk 7.00 233 P **Pn** **11 45 53.1 +3.5**
4.7nm6μm446nm,0.6s
LUWI Luwuk 7.00 233 Pn **11 45 53.4 +3.8**
FAKI Fak Fak 7.24 147 P **Pn** **11 45 54.8 +1.9**
0.7nm2μm205nm,0.9s
FAKI Fak Fak 7.24 147 Pn **11 45 54.9 +2.0**
RKPI Ransiki, Papua 7.49 129 P **Pn** **11 46 00.7 +4.4**
1.3nm3μm384nm,0.7s
MSLP Maasin 7.69 333 *eP* Pn 11 46 07.3 +8.2
MSLP *eS* Sn 11 47 37.6 +12
BNDI Bandanaira 7.84 169 P **Pn** **11 46 05.5 +4.2**
1.5nm1.5nm5μm334nm,0.7s
APSI Ampana 7.85 239 P **Pn** **11 46 04.0 +2.7**
1.8nm5μm431nm,0.6s
OCLP Ormoc 8.62 335 *eP* Pn 11 46 19.3 +7.4
BAKI Biak 8.91 119 P Pn 11 46 21.4 +5.5
3μm307nm,1.0s
MPSI Mapaga 8.91 251 P **Pn** **11 46 18.3 +2.4**
192nm,0.8s
BBSI Bau Bau 10.39 214 P **Pn** **11 46 38.9 +2.6**
59nm,0.7s
TTSI Tana Toraja 10.55 234 P **Pn** **11 46 38.0 -0.4**
3μm152nm,0.8s
PVCP Virac 11.11 338 *eP* **Pn** **11 46 44.8 -1.2**
SPSI Sidrap Palu 11.15 230 P **Pn** **11 46 47.7 +1.1**
2μm183nm,0.7s
BNSI Bone 11.18 227 P **Pn** **11 46 47.7 +0.7**
16μm124nm,0.6s
SAUI Saumlaki 11.51 165 P Pn 11 47 00.4 +8.9
SAUI Saumlaki 11.51 165 Pn **11 46 51.8 +0.3**
SMPI Sarmi 11.58 116 P **Pn** **11 46 55.5 +3.0**
115nm,0.8s
BKSI Bulukumba 11.81 224 P **Pn** **11 46 56.9 +1.3**
82nm,0.7s
KAPI Kappang 11.86 226 P **Pn** **11 46 56.0 -0.3**
KAPI Kappang 11.86 226 Pn **11 46 56.0 -0.3**
BKB Balikpapan 12.28 249 Pn **Pn** **11 47 00.7 -1.3**
TGY Tagaytay City 13.06 326 LR LR 11 52 59.1
comp=Z,1μm,20.9s,baz=136,slow=40
GENI Genyem 13.15 116 P **P** **11 47 19.7 -3.9**
6μm812nm,0.9s
LUBP Lubang 13.16 323 *eP* Pn 11 47 07.3 -6.8
MMRI Maumere 13.26 207 P **Pn** **11 47 18.6 +3.2**
185nm,0.9s
SOEI Soe 13.51 197 P **Pn** **11 47 22.7 +3.7**
3μm330nm,0.8s
SOEI Soe 13.51 197 P **11 47 24.0 -3.7**
JAY Jayapura 13.60 115 P **Pn** **11 47 23.1 +2.9**
0.5nm,0.3s,baz=302,slow=3.4,SNR=7.0
JAY LR LR 11 51 49.7
comp=Z,1μm,20.2s,baz=300,slow=34
KBKI Kotabaru 13.79 242 P **Pn** **11 47 21.3 -1.4**
938nm44nm,1.0s
BATI Baumata 14.13 199 P **Pn** **11 47 29.1 +1.8**
14nm,0.3s,baz=57,slow=0.5,SNR=38
BATI LR LR 11 54 03.1
comp=Z,360nm,19.1s,baz=28,slow=42
BATI Baumata 14.13 199 P **P** **11 47 31.1 -3.4**
1μm153nm,0.9s
PLAI Plampang 15.94 221 P **P** **11 47 53.1 -1.5**
5μm420nm,1.1s
SBUM Sibu 16.12 268 P **P** **11 47 56.9 +0.2**
SBUM Sibu 16.12 268 P **P** **11 47 59.0 +2.4**
MTN Manton Dam 16.20 170 Pn **11 47 54.8 +0.2**
MTN IAmb IAmb 11 48 08.2
comp=Z,155nm,0.9s
TWSI Taliwang, Sumb 16.48 224 P **P** **11 47 59.8 -0.8**
comp=Z,2μmcomp=Z,201nm,0.7s
STKI Sintang 17.15 260 P **P** **11 48 08.0 0.0**
comp=Z,81nm,0.9s
SRBI Singaraja 17.25 229 P **P** **11 48 09.6 +0.5**
comp=Z,2μmcomp=Z,190nm,1.2s
KMMI Kalianget 17.61 235 P **P** **11 48 17.8 +4.7**
DNP Denpasar 17.64 228 P **P** **11 48 19.0 +5.6**
IGBI Denpasar 17.78 228 P **P** **11 48 17.9 +2.9**
comp=Z,3μmcomp=Z,206nm,0.9s
KSM Kuching 18.11 265 P **P** **11 48 19.2 +0.6**
KSM IAmb IAmb 11 48 33.5
comp=Z,109nm,1.0s
KSM Kuching 18.11 265 P **P** **11 48 21.0 +2.4**
JAGI Jajag, Banyuwa 18.31 231 P **Pn** **11 48 21.1 +0.2**
comp=Z,3μmcomp=Z,210nm,0.9s
JAGI Jajag, Banyuwa 18.31 231 P **P** **11 48 20.4 -0.4**
GMJI Gumukmas 18.74 232 P **Pn** **11 48 29.1 +2.9**
comp=Z,192nm,1.0s
KNRA Kununurra 18.78 179 P **P** **11 48 26.2 +0.2**
GUMO Guam 19.30 57 LR LR 11 54 43.8
comp=Z,1μm,20.5s,baz=236,slow=33
NGJI Ngawi 19.86 238 P **Pn** **11 48 39.8 +0.2**
comp=Z,161nm,1.1s
PWJI Pagerwojo 19.92 236 P **P** **11 48 38.0 -0.5**
comp=Z,250nm,1.0s
WOJI Wonogiri, Jawa 20.56 238 P **P** **11 48 45.5 +0.1**
comp=Z,71nm,0.9s
TWG Pinlang 20.72 341 P **P** **11 48 46.2 -0.9**
YULB Yu-li 21.18 342 P **P** **11 48 50.3 -1.8**
TPUB Ta-pu 21.32 340 P **P** **11 48 52.2 -1.3**
TPUB IAmb IAmb 11 49 11.3
comp=Z,72nm,0.9s
FITZ Fitzroy Crossi 21.35 187 P **P** **11 48 52.6 -1.2**
comp=Z,14nm,0.6s,baz=27,slow=8.8,SNR=19
FITZ LR LR 11 57 20.4
comp=Z,315nm,20.6s,baz=17,slow=37
FITZ Fitzroy Crossi 21.35 187 P **P** **11 48 52.0 -1.9**
TPI Tanjungpandan 21.52 254 P **P** **11 48 54.5 -1.3**
comp=Z,52nm,0.9s
KPJI Karang Pucung 22.03 242 P **P** **11 48 59.8 -1.4**
comp=Z,130nm,0.8s
COEN Coen 22.53 140 P **P** **11 49 08.6 +2.0**
PMG Port Moresby 22.55 124 P **P** **11 49 08.1 +1.2**
PMG pmax pmax
comp=Z,83nm,1.1s
PMG Port Moresby 22.55 124 P **P** **11 49 07.0 +0.1**
comp=Z,17nm,0.8s,baz=342,slow=7.8,SNR=7.5
PMG LR LR 11 58 52.5
comp=Z,589nm,18.3s,baz=322,slow=39
PMG Port Moresby 22.55 124 P **P** **11 49 08.1 +1.2**
PMG IAmb IAmb 11 49 17.8
comp=Z,83nm,1.1s
LEM Lembang 22.97 244 P **P** **11 49 12.8 +1.3**
comp=Z,40nm,0.7s,baz=353,slow=15,SNR=6.4
LEM LR LR 11 58 25.4
comp=Z,273nm,19.0s,baz=65,slow=37
CISI Cisompet, Garu 23.11 242 IAmb IAmb 11 49 19.8
comp=Z,81nm,0.8s
CBJI Citeko 23.50 246 P **P** **11 49 19.4 +2.9**
comp=Z,13μmcomp=Z,1μm,0.6s
QZH Quanzhou 23.55 337 P **P** **11 49 18.4 +1.5**
TNG Tangerang 23.59 247 P **P** **11 49 15.8 -1.6**
comp=Z,496nm,0.6s
CNJI Cibinong 23.61 244 P **P** **11 49 18.6 +1.0**
comp=Z,4μmcomp=Z,522nm,0.9s
DBJI Dramaga 23.64 246 P **P** **11 49 17.8 -0.1**
comp=Z,15μmcomp=Z,423nm,1.1s
WRAB Tennant Creek 23.75 166*ceP* **P** **11 49 18.5 -0.3**
WRAB pmax pmax
comp=Z,138nm,1.3s
WRAB Tennant Creek 23.75 166 P **P** **11 49 18.2 -0.6**
WRA Warramunga Arr 23.76 166 P **P** **11 49 18.6 -0.3**
comp=Z,188nm,1.0s,baz=346,slow=10.0,SNR=210
WRA LR LR 12 00 57.3
comp=Z,397nm,18.4s,baz=335,slow=42
SKJI Sukabumi 24.00 245 P **P** **11 49 18.6 -2.7**
comp=Z,19μmcomp=Z,2μm,0.9s
MYKOM Kota Tinggi 24.51 267 P **P** **11 49 27.2 +1.2**
MYKOM IAmb IAmb 11 49 41.3
comp=Z,62nm,1.0s
MYKOM Kota Tinggi 24.51 267 P **P** **11 49 30.0 +4.0**
KRVT Keravat (AS076 24.81 107 P **P** **11 49 28.8 +0.1**
comp=Z,147nm,1.0s,baz=215,slow=1.3,SNR=4.3
KRVT LR LR 11 57 18.4
comp=Z,1μm,20.6s,baz=260,slow=32
UBPT Khong Chiam 25.52 299 P **P** **11 49 36.0 +0.9**
UBPT IAmb IAmb 11 49 37.9
comp=Z,64nm,1.0s
JRMM Jerantut 25.83 272 P **P** **11 49 39.0 +1.1**
PSA00 Pilbara Seismi 26.00 198 IAmb IAmb 11 49 41.5
comp=Z,67nm,0.8s
KSI Kapahiang 26.63 255 P sP 11 50 01.8 +3.6
ASAR Alice Springs 27.27 169 P **P** **11 49 50.1 -0.7**
comp=Z,11nm,0.8s,baz=349,slow=7.3,SNR=182
ASAR PcP **PcP** **11 53 08.3 -1.9**
comp=Z,4.1nm,0.5s,baz=356,slow=2.0,SNR=5.6
ASAR ScP **ScP** **11 56 44.9 -3.3**
comp=Z,1.9nm,0.9s,baz=339,slow=0.3,SNR=4.5
ASAR LR LR 12 03 14.8
comp=Z,436nm,18.5s,baz=352,slow=42
IPM Ipoh 27.29 274 P **P** **11 49 51.0 -0.1**
IPM Ipoh 27.29 274 P **P** **11 49 53.0 +1.9**
KULM Kulim 27.69 275 P **P** **11 49 57.0 +2.3**
CTA Charters Tower 29.08 144 P **P** **11 50 06.8 -0.2**
comp=Z,3.3nm,0.8s,baz=305,slow=10,SNR=3.9
GIRL Giralia 29.16 208 P **P** **11 50 09.9 +2.2**
PSI Prapat 29.38 270 P **P** **11 50 09.7 -0.3**
comp=Z,20nm,1.0s,baz=111,slow=2.1,SNR=8.5
PSI LR LR 12 03 50.6
comp=Z,223nm,20.5s,baz=128,slow=40
JNU Nakatsue 29.84 4 P **P** **11 50 13.2 -0.5**
comp=Z,8.9nm,0.8s,baz=139,slow=9.3,SNR=3.0
JNU Nakatsue 29.84 4 P **P** **11 50 13.3 -0.3**
PBKT Sadao Pong 30.00 298 P **P** **11 50 16.0 +0.9**
NJ2 Nanjing 30.04 344 *eP* **P** **11 50 16.4 +1.1**
NJ2 pmax pmax
comp=Z,16nm,0.6s
WHN Wuhan 30.23 336⇑P **P** **11 50 19.8 +2.8**
GSI Gunungsitoli 30.80 267 P **P** **11 50 24.3 +1.9**
comp=Z,42nm,0.7s
GSI Gunungsitoli 30.80 267 P **P** **11 50 22.1 -0.3**
GSI IAmb IAmb 11 50 37.2
comp=Z,26nm,0.7s
ENH Enshi 32.29 328 IAmb IAmb 11 50 37.4
comp=Z,29nm,1.1s
CMAR Chiang Mai Arr 32.52 300 P **P** **11 50 38.6 +1.2**
comp=Z,6.0nm,0.9s,baz=121,slow=7.8,SNR=42
CMAR PcP **PcP** **11 53 24.4 +0.5**
comp=Z,1.3nm,0.5s,baz=172,slow=1.7,SNR=4.9
CMAR ScP **ScP** **11 57 03.6 -1.6**
comp=Z,1.1nm,0.7s,baz=153,slow=2.8,SNR=4.7
CMAR LR LR 12 05 16.2
comp=Z,244nm,19.1s,baz=147,slow=39
CMAR P3KPbc 12 21 57.6
comp=Z,0.7nm,0.3s,baz=313,slow=8.5,SNR=4.7
CHTO Chiang Mai 32.67 301 P **P** **11 50 39.7 +1.0**
CHTO pmax pmax
comp=Z,22nm,0.9s
CHTO Chiang Mai 32.67 301 P **P** **11 50 39.7 +1.0**
CHTO IAmb IAmb 11 50 52.4
comp=Z,22nm,0.9s
KMI Kunming 32.89 314 P **P** **11 50 44.8 +4.0**
KMI pmax pmax
comp=Z,46nm,0.9s
KMI Kunming 32.89 314 IAmb IAmb 11 50 45.9
comp=Z,39nm,0.9s
INU Inuyama 32.97 13 P **P** **11 50 40.6 -0.5**
INU IAmb IAmb 11 50 43.3
comp=Z,40nm,1.0s
TJN Taejon 33.01 359*ceP* **P** **11 50 43.1 +1.7**
FORT Forrest 33.81 180 P **P** **11 50 46.8 -1.6**
KSRS Korea Array 34.07 359 P **P** **11 50 50.4 -0.3**
comp=Z,12nm,0.9s,baz=178,slow=10,SNR=32
KSRS LR LR 12 04 07.6
comp=Z,256nm,21.3s,baz=183,slow=35
KS19 Wonju Array Si 34.12 359 IAmb IAmb 11 50 52.2
comp=Z,25nm,1.1s
MJAR Matsushiro Arr 34.39 14 P **P** **11 50 52.0 -1.5**
MJAR Matsushiro Arr 34.39 14 P **P** **11 50 52.0 -1.5**
comp=Z,7.9nm,0.7s,baz=182,slow=9.1,SNR=32
MAJO Matsushiro 34.39 14 *i* P **P** **11 50 52.4 -1.0**
MAJO pmax pmax
comp=Z,17nm,0.9s
MAJO Matsushiro 34.39 14 P **P** **11 50 52.1 -1.4**
MAJO IAmb IAmb 11 50 55.5
comp=Z,27nm,1.1s
MAT Matsushiro 34.39 14 P **P** **11 50 52.5 -0.9**
MAT S S 11 56 29.4 +10
MJB9 Matsu-Tunnel 34.39 14 P **P** **11 50 52.6 -0.8**
MJB9 IAmb IAmb 11 50 55.5
comp=Z,29nm,1.1s
XAN Xi'an 35.61 332 P **P** **11 51 04.3 +0.2**
XAN pP sP 11 51 25.2 +7.9
XAN PP **PP** **11 52 27.6 +2.2**
XAN pmax pmax
comp=Z,37nm,1.1s
XAN pmax pmax
comp=Z,200nm,6.5s
XAN LR LR
comp=Z,360nm,11.0s
XAN LR LR
comp=Z,530nm,11.6s
XAN LR LR
comp=Z,590nm,13.3s
EIDS Eidsvold 35.97 143 P **P** **11 51 07.4 +0.2**
EIDS IAmb IAmb 11 51 13.5
comp=Z,29nm,1.2s
CD2 Chengdu 36.02 323 P **P** **11 51 07.9 +0.3**
CD2 pmax pmax
comp=Z,30nm,0.7s
STKA Stephens Creek 37.10 161 P **P** **11 51 15.6 -1.2**
comp=Z,14nm,0.3s,baz=342,slow=8.5,SNR=32
STKA LR LR 12 08 28.5
comp=Z,400nm,21.6s,baz=339,slow=39
STKA Stephens Creek 37.10 161 IAmb IAmb 11 51 22.1
comp=Z,24nm,0.7s
NWAO Narrogin (SRO) 37.46 195 P **P** **11 51 18.6 -1.1**
comp=Z,16nm,1.0s,baz=24,slow=9.1,SNR=7.8
NWAO Narrogin (SRO) 37.46 195 IAmb IAmb 11 51 28.8
comp=Z,17nm,0.9s
BJT Baijiatuan 38.26 345 IAmb IAmb 11 51 45.1
comp=Z,28nm,1.1s
BJI Beijing 38.28 345 *eP* **P** **11 51 27.2 +0.6**
BJI pmax pmax
comp=Z,13nm,0.9s
BJI LR LR
comp=Z,780nm,12.7s
BJI LR LR
comp=Z,540nm,10.0s
BJI LR LR
comp=Z,910nm,12.7s
LZH Lanzhou 39.77 328 *eP* **P** **11 51 40.8 +1.4**
LZH pP sP 11 51 53.4 +0.7
LZH sP pwP 11 52 01.3 +9.1
LZH PP **PnPn** **11 53 18.2 +3.7**
LZH pmax pmax
comp=Z,29nm,1.2s
LZH pmax pmax
comp=Z,89nm,4.3s
LZH LR LR
comp=Z,550nm,14.8s
LZH LR LR
comp=Z,400nm,13.6s
LZH LR LR
comp=Z,560nm,14.6s
ARMA Armidale 40.17 148 P **P** **11 51 42.0 -0.7**
ARMA IAmb IAmb 11 51 49.1
comp=Z,36nm,1.2s
HHC Hu-ho-hao-te 40.40 340 *eP* **P** **11 51 46.6 +2.1**
HHC pP sP 11 52 01.4 +3.6
HHC sP pwP 11 52 06.6 +9.1
HHC S **S** **11 57 47.4 -3.2**
HHC pmax pmax
comp=Z,8.0nm,1.1s
HHC pmax pmax
comp=Z,120nm,5.2s
HHC LR LR
comp=Z,470nm,11.2s
HHC LR LR
comp=Z,260nm,12.7s
HHC LR LR
comp=Z,530nm,11.6s
H11S3 WAKE ISLAND Hy 40.47 65 T T 12 34 57.1
baz=253,slow=74
H11S2 WAKE ISLAND Hy 40.48 65 T T 12 34 54.7
baz=253,slow=74
H11S1 WAKE ISLAND Hy 40.49 65 T T 12 34 55.7
baz=253,slow=74
USA0B Ussuriysk Arra 40.94 4 P **P** **11 51 49.2 +0.5**
USA0B pmax pmax
comp=Z,39nm,1.0s
USA0B Ussuriysk Arra 40.94 4 P **P** **11 51 49.2 +0.5**
USA0B IAmb IAmb 11 51 50.6
comp=Z,39nm,0.9s
USRK Ussuriysk Ar. 40.94 4 P **P** **11 51 49.5 +0.8**
comp=Z,25nm,0.8s,baz=187,slow=7.5,SNR=46
USRK LR LR 12 07 04.7
comp=Z,180nm,20.0s,baz=179,slow=34
H11N1 WAKE ISLAND Hy 41.03 63 T T 12 35 48.9
baz=250,slow=75
H11N2 WAKE ISLAND Hy 41.04 63 T T 12 35 49.1
baz=250,slow=75
H11N3 WAKE ISLAND Hy 41.05 63 T T 12 35 49.3
baz=250,slow=75
MDJ Mudanjiang 41.24 1 P **P** **11 51 52.1 +0.9**
MDJ pP sP 11 52 05.7 +1.1
MDJ sP pwP 11 52 12.2 +8.3
MDJ PP **PP** **11 53 29.3 +2.4**
MDJ PcP **PcP** **11 53 47.8 -1.8**
MDJ ScP **ScP** **11 57 33.2 -3.9**
MDJ PcS **PcS** **11 57 39.3 -1.4**
MDJ S **S** **11 58 04.7 +2.0**
MDJ sS sS 11 58 28.6 +10
MDJ ScS **ScS** **12 01 50.1 -2.6**
MDJ pmax pmax
comp=Z,56nm,1.0s
MDJ pmax pmax
comp=Z,350nm,7.7s
MDJ LR LR
comp=Z,330nm,10.7s
MDJ LR LR
comp=Z,460nm,5.6s
MDJ LR LR
comp=Z,500nm,8.6s
MDJ Mudanjiang 41.24 1 P **P** **11 51 52.0 +0.9**
MDJ IAmb IAmb 11 51 53.3
comp=Z,57nm,1.1s
SHL Shillong 41.48 306 P **P** **11 51 54.6 +0.9**
SHL pmax pmax
comp=Z,56nm,0.7s
SHL Shillong 41.48 306 P **P** **11 51 54.6 +0.9**
TEY Ternei 42.28 9⇑*iP* **P** **11 51 59.8 +0.2**
TEY pmax pmax
comp=N,20nm,0.9s
TEY pmax pmax
comp=Z,40nm,1.0s
TEY pmax pmax
comp=E,20nm,1.0s
TOO Toolangi 43.60 160 P **P** **11 52 10.8 +0.3**
TOO pmax pmax
comp=Z,38nm,1.3s
TOO Toolangi 43.60 160 P **P** **11 52 10.8 +0.3**
TOO IAmb IAmb 11 52 15.4
comp=Z,38nm,1.2s
LSA Lhasa 43.99 311 P **P** **11 52 16.2 +1.9**
LSA pmax pmax
comp=Z,160nm,1.4s
LSA Lhasa 43.99 311 P **P** **11 52 15.9 +1.6**
LSA pmax pmax
comp=Z,33nm,0.9s
LSA Lhasa 43.99 311 P **P** **11 52 15.9 +1.6**
LSA IAmb IAmb 11 52 19.1
comp=Z,34nm,0.9s
GTA Gaotai 44.37 328⇑P **P** **11 52 17.4 +0.6**
GTA pP sP 11 52 33.2 +2.9
GTA sP pwP 11 52 39.5 +10
GTA pmax pmax
comp=Z,18nm,1.0s
GTA pmax pmax
comp=Z,100nm,7.3s
GTA LR LR
comp=Z,250nm,19.7s
GTA LR LR
comp=Z,350nm,20.3s
GTA LR LR
comp=Z,450nm,18.4s
DZM Mont Dzumac 44.93 126 *e*LR LR 12 05 03.2
comp=Z,283nm,23.9s
YSS Yuzh-Sakhalins 45.33 14 *eP* **P** **11 52 24.7 +0.6**
YSS *e* 11 52 33.8
YSS pmax pmax
comp=Z,30nm,0.9s
TAPN Taplejung 45.62 306 *eP* **P** **11 52 28.2 +1.0**
comp=Z,58nm,0.9s
ODAN Odare 45.68 305 *eP* **P** **11 52 28.1 +0.5**
comp=Z,57nm,1.0s
CHLP Challavanipeta 45.91 293 *eP* **P** **11 52 29.2 +0.1**
CHLP IAmb IAmb 11 52 31.0
comp=Z,9.6nm,1.5s
KLR Kul'dur 45.94 3 P **P** **11 52 29.5 +0.6**
comp=Z,18nm,0.9s,baz=203,slow=5.1,SNR=50
RAMN Ramite 46.36 305 *eP* **P** **11 52 33.4 +0.4**
comp=Z,66nm,1.0s
JIRN Jiri 46.98 305 *eP* **P** **11 52 38.7 +0.8**
comp=Z,112nm,1.1s
GUN Gumba 47.33 306 *eP* **P** **11 52 41.2 +0.6**
PKI Pulchoki 47.58 305 *eP* **P** **11 52 42.3 -0.3**
KKN Kakani 47.77 305 *eP* **P** **11 52 44.4 +0.5**
DMN Daman 47.84 305 *eP* **P** **11 52 45.0 +0.5**
comp=Z,58nm,1.0s
GRNR Gornyy 47.87 7⇑*iP* **P** **11 52 44.9 +0.9**
GRNR *eS* **S** **11 59 41.0 +2.2**
GRNR pmax pmax
comp=Z,30nm,0.9s
GRNR smax smax
comp=N,2.0nm,0.8s
GRNR MLR MLR
comp=Z,310nm,11.0s
PVM Polavaram 47.89 290 *eP* **P** **11 52 45.0 +0.3**
PVM IAmb IAmb 11 52 51.9
comp=Z,3.7nm,0.6s
ULN Ulaanbaatar 48.12 341*ceP* **P** **11 52 46.8 +0.6**
ULN pmax pmax
comp=Z,14nm,1.3s
ULN Ulaanbaatar 48.12 341 P **P** **11 52 46.6 +0.4**
SONM Songino Array 48.31 340 P **P** **11 52 47.2 -0.4**
comp=Z,3.1nm,0.9s,baz=154,slow=7.9,SNR=12
GKN Gorkha 48.38 305 *eP* **P** **11 52 49.0 +0.5**
MYLAV Mylavaram 48.73 289 *eP* **P** **11 52 50.7 -0.5**
MYLAV IAmb IAmb 11 52 55.5
comp=Z,6.7nm,0.9s
TYV Tymovskoe 48.99 12 *eP* **P** **11 52 53.9 +1.3**
TYV *eS* **S** **11 59 56.9 +2.4**
TYV pmax pmax
comp=Z,14nm,1.1s
TYV pmax pmax
comp=Z,600nm,6.3s
TYV smax smax
comp=N,13nm,1.6s
TYV smax smax
comp=N,1μm,8.4s
SKHT Srikalahasti 49.13 285 *eP* **P** **11 52 54.7 +0.4**
SKHT IAmb IAmb 11 52 57.7
comp=Z,7.6nm,0.8s
KOLN Koldanda 49.14 304 *eP* **P** **11 52 55.0 +0.5**
comp=Z,120nm,0.9s
ADKI Addanki 49.20 288 *eP* **P** **11 52 55.3 +0.5**
ADKI IAmb IAmb 11 52 58.5
comp=Z,5.8nm,0.9s
DANN Dangsing 49.23 305 *eP* **P** **11 52 55.3 +0.1**
comp=Z,90nm,0.8s
GGR Gangavaram 49.34 291 *eP* **P** **11 52 56.1 +0.2**
GGR IAmb IAmb 11 52 59.7
comp=Z,5.6nm,1.0s
NJS Nagarjunasagar 49.95 289 *eP* **P** **11 53 00.4 -0.1**
NJS IAmb IAmb 11 53 03.6
comp=Z,6.0nm,0.8s
SRLM Srisailam 50.26 288 *eP* **P** **11 53 03.1 +0.2**
SRLM IAmb IAmb 11 53 06.0
comp=Z,8.1nm,0.8s
ZEA Zeya 50.37 359 *eP* **P** **11 53 02.2 -0.8**
ZEA pmax pmax
comp=Z,12nm,1.0s
RPR Rampur 50.39 292 *eP* **P** **11 53 04.8 +1.0**
RPR IAmb IAmb 11 53 07.7
comp=Z,4.6nm,0.8s

HYB	Hyderabad	50.81	290	*i* P		P		11 53 07.0	0.0
HYBB	Hyderabad (bro	50.81	290	*e*P		P		11 53 06.4	-0.6
HYBB					IAmb	IAmb		11 53 11.1	
	comp=Z,8.8nm,1.0s								
SRSP	Sriramsagar	51.28	292	*e*P		P		11 53 10.8	+0.2
SRSP					IAmb	IAmb		11 53 12.8	
	comp=Z,8.3nm,1.0s								
ZAK	Zakamensk	51.55	340	*e*P		P		11 53 10.8	-1.4
ZAK					pmax	pmax			
	comp=Z,7.0nm,1.1s								
DMPR	Damasthipur	51.61	290	*e*P		P		11 53 12.3	-0.8
DMPR					IAmb	IAmb		11 53 14.1	
	comp=Z,14nm,1.3s								
URV	Uravakonda	51.65	286	*e*P		P		11 53 13.1	-0.3
URV					IAmb	IAmb		11 53 15.2	
	comp=Z,13nm,0.8s								
TLY	Talaya	52.53	341	*i* P		P		11 53 20.4	+1.1
TLY					pmax	pmax			
	comp=Z,4.0nm,1.1s								
KLRI	Killari	52.75	290	*e*P		P		11 53 21.4	-0.2
KLRI					IAmb	IAmb		11 53 22.4	
	comp=Z,42nm,1.4s								
MSVF	Nonsavu	53.23	115	P		P		11 53 25.6	+0.4
MSVF					pmax	pmax			
	comp=Z,18nm,1.0s								
MSVF	Nonsavu	53.23	115	P		P		11 53 25.6	+0.4
MSVF					IAmb	IAmb		11 53 28.1	
	comp=Z,18nm,0.9s								
MOY	Mondy	53.42	339	*e*P		P		11 53 26.6	+0.6
MOY					pmax	pmax			
	comp=Z,26nm,2.1s								
WMQ	Urumqi	54.07	324	P		P		11 53 32.0	+1.1
WMQ				pP		pwP		11 53 45.9	+1.1
WMQ				sP		sP		11 53 53.8	+10
WMQ				pmax	pmax				
	comp=Z,21nm,1.1s								
WMQ				pmax	pmax				
	comp=Z,160nm,7.3s								
WMQ				LR	LR				
	comp=Z,560nm,22.9s								
WMQ				LR	LR				
	comp=Z,540nm,28.9s								
WMQ				LR	LR				
	comp=Z,220nm,20.1s								
PETK	Petropavlovsk-	55.31	21	P		P		11 53 40.4	+0.8
	comp=Z,26nm,0.9s,baz=206,slow=3.6,SNR=18								
POO	Poona	55.41	290	*ex*		P		11 53 42.0	+1.1
BOD	Bodaibo	55.61	351	*e*P		P		11 53 46.1	+4.4
BOD				pmax	pmax				
	comp=Z,9.0nm,1.1s								
H08S2	Diego Garcia H	56.76	259	P		P		11 53 51.5	+1.2
	baz=44,slow=11,SNR=7.7								
H08S3	Diego Garcia H	56.77	259	P		P		11 53 51.5	+1.1
	baz=44,slow=11,SNR=9.2								
H08S1	Diego Carcia H	56.78	259	P		P		11 53 51.8	+1.4
	baz=44,slow=11,SNR=14								
YAK	Yakutsk	58.68	1	*e*P		P		11 54 02.1	-1.2
YAK				*e**PP		pwP		11 54 22.0	+5.6
YAK				*e*				11 54 49.5	
YAK				*e*S		S		12 01 59.8	-5.5
YAK				*e*				12 03 40.2	
YAK				pmax	pmax				
	comp=Z,40nm,1.4s								
YAK				pmax	pmax				
	comp=N,21nm,1.4s								
YAK				pmax	pmax				
	comp=E,4.0nm,1.4s								
YAK				pmax	pmax				
	comp=Z,239nm,5.4s								
YAK				pmax	pmax				
	comp=N,105nm,5.1s								
YAK				pmax	pmax				
	comp=E,152nm,5.3s								
YAK				smax	smax				
	comp=E,193nm,5.3s								
YAK				smax	smax				
	comp=N,163nm,4.1s								
YAK	Yakutsk	58.68	1	P		P		11 54 03.4	+0.2
	comp=N,4.7nm,0.4s,baz=225,slow=1.3,SNR=10								
YAK	Yakutsk	58.68	1	P		P		11 54 03.5	+0.2
MA2	Magadan	58.82	13	*ce*P		P		11 54 03.5	-0.8
MA2				pmax	pmax				
	comp=Z,30nm,1.3s								
MA2	Magadan	58.82	13	P		P		11 54 04.2	-0.1
	comp=Z,15nm,0.7s,baz=188,slow=11,SNR=8.5								
MA2	Magadan	58.82	13	IAmb		IAmb		11 54 17.3	
	comp=Z,17nm,1.1s								
MK31	Makanchi Array	58.90	325	P		P		11 54 05.0	-0.1
MK31				pmax	pmax				
	comp=Z,11nm,0.9s								
MK31	Makanchi Array	58.90	325	P		P		11 54 05.0	-0.1
MK31				IAmb		IAmb		11 54 10.1	
	comp=Z,11nm,0.8s								
MKAR	Makanchi Array	58.90	325	*i* P		P		11 54 05.3	+0.2
MKAR				pmax	pmax				
	comp=Z,13nm,0.8s								
MKAR	Makanchi Array	58.90	325	P		P		11 54 05.0	-0.1
	comp=Z,13nm,0.8s,baz=120,slow=8.4,SNR=68								
MKAR				LR		LR		12 20 44.2	
	comp=Z,199nm,19.8s,baz=120,slow=37								
MKAR				PKPPKP				12 23 37.0	
	comp=Z,0.6nm,1.0s,baz=250,slow=7.2,SNR=3.6								
MKAR				PKP2bc				12 23 49.0	
	comp=Z,0.6nm,0.9s,baz=17,slow=1.3,SNR=3.8								
MAKZ	Makanchi	59.09	325	P		P		11 54 06.3	-0.1
MAKZ				pmax	pmax				
	comp=Z,17nm,0.8s								
MAKZ	Makanchi	59.09	325	P		P		11 54 06.3	-0.1
NIL	Nilore	59.51	307	P		P		11 54 09.7	0.0
NIL				pmax	pmax				
	comp=Z,46nm,1.0s								
NIL	Nilore	59.51	307	P		P		11 54 09.7	0.0
KSH	Kashi	59.55	315	P		P		11 54 12.2	+2.3
KSH				pP		pwP		11 54 26.4	+2.7
KSH				PP		PP		11 56 25.6	+4.0
KSH				S		S		12 02 16.5	-1.1
KSH				sS		sS		12 02 43.9	+10
KSH				SS		SS		12 06 14.4	+1.0
KSH				pmax	pmax				
	comp=Z,43nm,1.0s								
KSH				pmax	pmax				
	comp=Z,710nm,7.0s								
KSH				LR	LR				
	comp=Z,220nm,5.6s								
KSH				LR	LR				
	comp=Z,300nm,6.1s								
KSH				LR	LR				
	comp=Z,920nm,6.7s								
TKM2	Tokmak 2	61.20	318	P		P		11 54 21.1	-0.1
ZALV	Zalesovo Beam	61.78	332	P		P		11 54 23.0	-1.6
ZALV	Zalesovo Beam	61.78	332	P		P		11 54 23.0	-1.6
	comp=Z,5.5nm,1.0s,baz=116,slow=6.8,SNR=15								
ZALV				LR		LR		12 22 41.7	
	comp=Z,156nm,18.4s,baz=134,slow=37								
ZALV				PKP2bc				12 23 41.3	
	comp=Z,1.0nm,0.8s,baz=291,slow=4.1,SNR=4.6								
AAK	Ala-Archa	61.82	317	*ce*P		P		11 54 24.6	-0.8
AAK				pmax	pmax				
	comp=Z,15nm,1.7s								
AAK	Ala-Archa	61.82	317	P		P		11 54 25.3	-0.1
	comp=Z,3.8nm,0.9s,baz=172,slow=5.4,SNR=5.8								
SEY	Seymchan	62.18	12	*i* P		P		11 54 26.7	-0.4
ARSB	Arslanbob	62.35	316	IAmb		IAmb		11 54 32.9	
	comp=Z,13nm,0.9s								
KURBB	Kurchatov Arra	63.04	327	P		P		11 54 32.3	-0.8
	comp=Z,8.3nm,0.7s,baz=124,slow=5.9,SNR=44								
KURBB				PKP2bc				12 23 40.7	
	comp=Z,0.6nm,0.9s,baz=298,slow=3.1,SNR=4.5								
KURK	Kurchatov	63.04	327	*ce*P		P		11 54 33.0	-0.2
KURK				pmax	pmax				
	comp=Z,26nm,1.3s								
KURK	Kurchatov	63.04	327	P		P		11 54 32.9	-0.2
KBL	Kabul	63.11	307	P		P		11 54 33.8	-0.4
KBL				pmax	pmax				
	comp=Z,20nm,1.0s								
KBL	Kabul	63.11	307	P		P		11 54 33.8	-0.4
KBL				IAmb		IAmb		11 54 38.5	
	comp=Z,20nm,1.0s								
KK31	Karatay Array	64.71	317	IAmb		IAmb		11 54 59.1	
	comp=Z,15nm,0.9s								
KKAR	Karatay Array	64.71	317	IAmb		IAmb		11 54 59.1	
	comp=Z,15nm,0.9s								
TIXI	Tiksi	68.34	0	*i* P		P		11 55 06.3	-0.6
TIXI				pmax	pmax				
	comp=Z,17nm,1.6s								
TIXI	Tiksi	68.34	0	P		P		11 55 05.4	-1.5
	comp=Z,24nm,1.5s								
BVAR	Borovoye Array	68.63	327	P		P		11 55 08.6	-0.6
	comp=Z,4.5nm,0.6s,baz=122,slow=7.2,SNR=30								
BILL	Bilibino	69.64	14⇓	*e*P		P		11 55 15.0	-0.1
BILL				*e*				11 55 42.1	
BILL				*e*				11 57 52.3	
BILL				*e*S		S		12 04 24.8	+4.0
BILL				pmax	pmax				
	comp=Z,2.0nm,1.0s								
BILL				MLR		MLR			
	comp=Z,264nm,18.0s								
GEYT	Alibeck	72.47	309	P		P		11 55 32.8	-0.1
	comp=Z,7.8nm,0.8s,baz=71,slow=5.0,SNR=11								
ABKAR	Akbulak array	73.57	321	P		P		11 55 37.9	-1.2
SVE	Sverdlovsk	75.24	328	*e*P		P		11 55 48.2	-0.5
SVE				pmax	pmax				
	comp=Z,16nm,1.2s								
ARU	Arti	76.23	328	*d i*P		P		11 55 53.2	-1.1
ARU				*PP		pwP		11 56 08.4	-0.2
ARU								11 58 41.8	
ARU				S		S		12 05 34.2	-2.0
ARU				SS		SS		12 10 23.6	-6.6
ARU				pmax	pmax				
	comp=Z,4.0nm,0.7s								
ARU	Arti	76.23	328	P		P		11 55 51.8	-2.6
ANM	Nome	77.07	24	P		P		11 56 00.6	+1.7
ANM				pmax	pmax				
	comp=Z,22nm,1.3s								
ANM	Nome	77.07	24	P		P		11 56 00.6	+1.7
ANM				IAmb		IAmb		11 56 01.2	
	comp=Z,22nm,1.3s								
RDOG	Red Dog Mine	79.18	21	IAmb		IAmb		11 56 12.8	
	comp=Z,35nm,1.3s								
AKT	Akhty	80.84	311	*e*P		P		11 56 19.8	-0.5
AKT				pmax	pmax				
	comp=Z,13nm,1.0s								
RAYN	Ar Rayn	82.17	293	P		P		11 56 26.7	-0.8
RAYN				pmax	pmax				
	comp=Z,13nm,1.1s								
RAYN	Ar Rayn	82.17	293	P		P		11 56 26.7	-0.8
ABPO	Ambohimpanom	82.66	250	P		P		11 56 30.3	0.0
ABPO				pmax	pmax				
	comp=Z,16nm,1.0s								
ABPO	Ambohimpanom	82.66	250	P		P		11 56 30.3	0.0
ABPO				IAmb		IAmb		11 56 33.5	
	comp=Z,16nm,0.9s								
VNDA	Vanda	82.72	173	P		P		11 56 28.9	-0.3
	comp=Z,22nm,0.8s,baz=314,slow=5.9,SNR=67								
VNDA				LR		LR		12 34 20.2	
	comp=Z,116nm,18.1s,baz=326,slow=36								
VNDA	Vanda	82.72	173	P		P		11 56 28.8	-0.5
SUA	Susitna One	82.84	29	IAmb		IAmb		11 56 35.3	
	comp=Z,28nm,1.3s								
GNI	Garni	83.05	310	*i* P		P		11 56 32.7	+0.8
GNI				pmax	pmax				
	comp=Z,19nm,1.1s								
MLY	Manley	83.26	25	IAmb		IAmb		11 56 34.4	
	comp=Z,21nm,1.0s								
TRF	Thorofare Moun	83.27	27	IAmb		IAmb		11 56 34.2	
	comp=Z,20nm,1.0s								
PPT	Papeete	83.42	108	P		P		11 56 35.5	+1.4
	comp=Z,19nm,0.9s,baz=0.0,slow=13,SNR=3.0								
PPT				LR		LR		12 28 15.7	
	comp=Z,68nm,20.4s,baz=279,slow=32								
PPT2	Papeete2	83.42	108	*e*LR		LR		12 22 55.3	
	comp=Z,214nm,26.8s								
SBA	Scott Base	83.61	172	P		P		11 56 34.7	+0.9
SBA				pmax	pmax				
	comp=Z,20nm,0.9s								
SBA	Scott Base	83.61	172	P		P		11 56 34.7	+0.9
SBA				IAmb		IAmb		11 56 49.5	
	comp=Z,20nm,0.9s								
PRGR	Permogore	83.72	332	*e*P		P		11 56 31.5	-3.2
PRGR				*e**PP		pP		11 56 45.7	+1.1
PRGR				pmax	pmax				
	comp=Z,16nm,1.1s								
COLD	Coldfoot	83.73	23	IAmb		IAmb		11 56 37.8	
	comp=Z,17nm,1.0s								
ZEI	Tsey	83.75	313	*e*P		P		11 56 31.6	-4.0
ZEI				pmax	pmax				
	comp=Z,6.0nm,0.6s								
MAW	Mawson	83.84	201	P		P		11 56 35.4	+0.3
MAW				pmax	pmax				
	comp=Z,6.0nm,1.2s								
MAW	Mawson	83.84	201	P		P		11 56 34.4	-0.7
	comp=Z,17nm,0.9s,baz=46,slow=5.7,SNR=13								
MAW	Mawson	83.84	201	P		P		11 56 35.4	+0.3
RND	Reindeer	83.91	27	IAmb		IAmb		11 56 36.6	
	comp=Z,24nm,0.9s								
AKH	Akhalkalaki	84.02	311	P		P		11 56 37.3	+0.3
AKH				pmax	pmax				
	comp=Z,8.0nm,0.8s								
AKH	Akhalkalaki	84.02	311	P		P		11 56 37.3	+0.3
TBI	Tubuai	84.11	114	*e*LR		LR		12 23 13.1	
	comp=Z,278nm,24.0s								
TOLK	Toolik Lake Re	84.13	21	IAmb		IAmb		11 56 39.3	
	comp=Z,25nm,0.9s								
KBZ	Khabaz	84.50	313	P		P		11 56 38.4	-0.6
	comp=Z,2.1nm,1.1s,baz=107,slow=11,SNR=3.1								
KIV	Kislovodsk	84.66	314⇑	*e*P		P		11 56 40.6	+0.6
KIV				*e*				11 59 58.8	
KIV				pmax	pmax				
	comp=Z,3.0nm,0.9s								
KIV				MLR		MLR			
	comp=Z,71nm,16.0s								
ILAR	Eielson Array	84.87	25	P		P		11 56 39.8	-0.8
	comp=Z,3.6nm,1.0s,baz=252,slow=6.2,SNR=18								
VRH	Novokhopyorsk	85.39	321	*e*P		P		11 56 44.6	+1.2
VRH				pmax	pmax				
	comp=Z,20nm,0.9s								
PAX	Paxson	85.41	27	P		P		11 56 44.3	+0.9
PAX				pmax	pmax				
	comp=Z,12nm,1.2s								
PAX	Paxson	85.41	27	P		P		11 56 44.3	+0.9
VORD	Divnogorie	86.93	321	*e*P		P		11 56 49.0	-1.9
VORD				pmax	pmax				
	comp=Z,9.0nm,0.8s								
VSR	Storozhevoye	87.00	321	*e*P		P		11 56 49.3	-2.0
VSR				pmax	pmax				
	comp=Z,9.0nm,0.6s								
MOS	Moscow	87.77	326	*e*P		sP		11 57 07.9	-0.7
OBN	Obninsk	88.41	325⇑	*e*P		P		11 56 55.5	-2.4
OBN				*e*				12 00 21.4	
OBN				*e*S		SKSac		12 07 19.8	-4.4
OBN				pmax	pmax				
	comp=Z,6.0nm,0.4s								
OBN				MLR		MLR			
	comp=Z,134nm,16.0s								
LVZ	Lovozero	88.44	338	*ce*P		P		11 56 58.2	+0.3
LVZ				pmax	pmax				
	comp=Z,32nm,1.4s								
INK	Inuvik	90.04	22	P		P		11 57 04.7	-0.6
INK				pmax	pmax				
	comp=Z,7.0nm,1.1s								
INK	Inuvik	90.04	22	P		P		11 57 04.7	-0.6
KMBO	Kilima Mbogo	91.15	269	*ce*P		P		11 57 12.8	+0.8
KMBO				pmax	pmax				
	comp=Z,5.0nm,0.9s								
KMBO	Kilima Mbogo	91.15	269	P		P		11 57 12.1	+0.1
	comp=Z,4.7nm,0.9s,baz=62,slow=4.8,SNR=6.4								
KMBO	Kilima Mbogo	91.15	269	P		P		11 57 10.1	-2.0
KMBO				IAmb		IAmb		11 57 27.1	
	comp=Z,6.8nm,1.1s								
ARCES	ARCESS Array B	91.48	340	P		P		11 57 10.2	-1.9
	comp=Z,1.0nm,0.5s,baz=96,slow=7.4,SNR=9.1								
BR131	Keskin Array S	91.59	310	*i* P		P		11 57 12.2	-1.2
BRTR	Keskin Array B	91.59	310	*ce*P		P		11 57 16.1	+2.7
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.7s								
BRTR	Keskin Array B	91.59	310	P		P		11 57 11.0	-2.4
	comp=Z,0.6nm,0.8s,baz=116,slow=5.6,SNR=4.0								
BRTR				PP		PP		12 00 48.4	-3.4
	comp=Z,0.9nm,0.9s,baz=110,slow=6.7,SNR=3.8								
BRTR				LR		LR		12 45 28.9	
	comp=Z,37nm,18.4s,baz=31,slow=40								
SYO	Syowa Base	92.53	201	⇑*i*P		P		11 57 16.0	-0.8
SYO	Syowa Base	92.53	201	⇓*e*PcP		PcP		11 57 18.0	+0.5
FINES	FINESS Array B	93.04	332	P		P		11 57 17.0	-2.4
	comp=Z,1.2nm,0.8s,baz=51,slow=7.3,SNR=4.6								
FINES				LR		LR		12 42 49.5	
	comp=Z,195nm,19.0s,baz=68,slow=38								
QSPA	South Pole Qui	93.13	180	P		P		11 57 19.3	-0.6
C36M	Paulatuk	93.15	20	P		P		11 57 19.0	-0.7
AKASG	Malin Array Be	93.30	321	*ce*P		P		11 57 21.1	+0.3
AKASG				pmax	pmax				
	comp=Z,3.0nm,0.7s								
AKASG	Malin Array Be	93.30	321	P		P		11 57 19.2	-1.6
	comp=Z,1.2nm,0.7s,baz=68,slow=5.0,SNR=6.5								
UZH	Uzhgorod	98.13	320	*e*P		Pdif		11 57 46.0	+3.1
UZH				*i*				11 58 01.1	
YKA	Yellowknife Ar	99.29	25	P		Pdif		11 57 47.5	-0.2
	comp=Z,1.9nm,0.9s,baz=299,slow=4.7,SNR=26								
YKA				PKKPbc		PKKPbc		12 14 10.9	-3.4
	baz=120,slow=2.6								
NOA	NORSAR Array B	99.96	334	LR		LR		12 48 46.4	
	comp=Z,66nm,18.3s,baz=75,slow=39								
VYHS	Vyhne	100.38	320	*e*P		Pdif		11 57 55.7	+2.7
VYHS	Vyhne	100.38	320	*e*PDIFF		Pdif		11 57 55.7	+2.7
NVAR	Mina Array Bea	106.04	49	Pdiff		Pdif		11 58 15.2	-3.4
	comp=Z,0.2nm,0.8s,baz=284,slow=3.6,SNR=2.2								
PDAR	Pinedale Array	110.67	42	PKKPab		PKKPab		12 13 47.4	-2.1
	comp=Z,1.2nm,0.9s,baz=117,slow=5.6,SNR=5.5								
ECSD	EROS Data Cent	118.28	36	PKPdf		PKPdf		12 02 53.4	-0.1
MNTX	Cornudas Mount	118.32	51			PKiKP		12 02 55.3	+1.3
ESDC	Sonseca Array	118.90	319	PKP		PKPdf		12 02 54.1	-0.8
	comp=Z,0.1nm,0.3s,baz=26,slow=2.7,SNR=3.0								
TXAR	Lajitas Array	120.62	53	PKP		PKPdf		12 02 58.6	+0.1
	comp=Z,0.4nm,0.5s,baz=256,slow=2.7,SNR=7.6								
TXAR				PKKPab		PKKPbc		12 13 04.0	-0.2
	comp=Z,0.4nm,0.8s,baz=104,slow=9.1,SNR=5.4								
E46A	Sault Ste Mari	122.81	26	PKPdf		PKPdf		12 03 02.0	-0.1
TOA0	Torodi Ar. Sit	124.61	288			PKPdf		12 03 05.3	-1.2
TORD	Torodi Ar. Bea	124.61	288	PKP		PKPdf		12 03 05.5	-1.0
	comp=Z,5.6nm,0.7s,baz=59,slow=2.1,SNR=15								
TKL	Tuckaleechee C	131.02	35	PKIKP		PKiKP		12 03 19.6	+0.5
TKL	Tuckaleechee C	131.02	35	PKPdf		PKiKP		12 03 19.6	+0.5
KIC	Kosan Boka	132.20	282	*e*P		PKPdf		12 03 18.8	-2.2
	comp=Z,9.7nm,0.8s								
DBIC	Dimbokro	132.26	282	PKP		PKPdf		12 03 21.2	+0.2
	comp=Z,4.2nm,0.7s,baz=34,slow=3.7,SNR=6.7								
TIC	Toumodi	132.43	282	*e*P		PKPdf		12 03 20.0	-1.4
LIC	Lamto	132.51	281	*e*P		PKPdf		12 03 21.4	-0.1
	comp=Z,12nm,0.6s								
PLCA	Paso Flores	138.95	158	PKP		PKPdf		12 03 32.8	-0.1
	comp=Z,2.2nm,0.7s,baz=308,slow=2.5,SNR=6.7								
PLCA	Paso Flores	138.95	158			PKPdf		12 03 31.8	-1.1
ACON	Acoyapa	143.42	65			PKPab		12 03 38.3	+0.6
ESPN	Las Esperanzas	144.12	64			PKPbc		12 03 41.2	+0.4
JTS	Las Juntas de	144.23	68	PKIKP		PKPab		12 03 40.9	+0.1
JTS	Las Juntas de	144.23	68			PKPab		12 03 40.9	+0.1
ROC1	El Roble	145.28	151			PKPbc		12 03 44.2	-0.1
PEL	Peldehue	145.31	151	PKIKP		PKPdf		12 03 45.1	+0.7
PEL	Peldehue	145.31	151			PKPdf		12 03 45.1	+0.7
GO04	Tololo Observa	147.64	148			PKPdf		12 03 49.2	+0.5
CFA	Coronel Fontan	147.73	153	PKPbc		PKPbc		12 03 50.9	-0.5
	comp=Z,15nm,0.6s,baz=223,slow=2.9,SNR=32								
ATAH	Atahualpa	153.09	99	PKPbc		PKPbc		12 04 04.5	-0.7
	comp=Z,7.5nm,0.7s,baz=187,slow=4.7,SNR=4.8								
ROSC	El Rosal	155.98	71	PKPab		PKPab		12 04 30.6	+1.6
	comp=Z,7.7nm,0.7s,baz=8.5,slow=23,SNR=4.7								
CPUP	Villa Florida	156.38	167	PKP2		PKPab		12 04 30.6	+1.0
CPUP	Villa Florida	156.38	167	PKPab		PKPab		12 04 29.5	-0.1
	comp=Z,7.2nm,0.8s,baz=185,slow=5.5,SNR=11								
CPUP	Villa Florida	156.38	167			PKPab		12 04 30.6	+1.0
LPAZ	La Paz	159.24	130	PKP		PKPdf		12 04 05.9	-0.1
	comp=Z,1.8nm,0.9s,baz=349,slow=3.5,SNR=5.2								
LPAZ				PKPab		PKPab		12 04 42.0	-1.1
	comp=Z,6.4nm,0.8s,baz=332,slow=3.7,SNR=4.5								
LPAZ	La Paz	159.24	130			PKPab		12 04 44.7	+1.6
RCBR	Riachuelo	164.09	260	PKP2		PKPab		12 05 03.2	-0.7
RCBR								13 04 07.6	
RCBR	Riachuelo	164.09	260	PKPab		PKPab		12 05 01.9	-2.0
	comp=Z,123nm,0.6s,baz=131,slow=0.2,SNR=5.9								
RCBR	Riachuelo	164.09	260	PKPdf		PKPdf		12 04 07.6	-2.9
RCBR						PKPab		12 05 03.2	-0.7
SIV	San Ignacio	164.28	144	PKP		PKPdf		12 04 10.3	-0.2
	comp=Z,1.7nm,0.8s,baz=304,slow=2.0,SNR=9.0								
SIV				PKPab		PKPab		12 05 04.3	-0.1
	comp=Z,2.8nm,0.8s,baz=205,slow=5.5,SNR=3.8								

TEH ***05*** *11:52:21.9,27.˚40N×54.˚55E,h6km,ML3.0*
OMAN ***05*** *11:52:25.3±4.0,26.˚72N×54.˚14E,h15km,ml3.2/2,Error ellipse: s-maj=42.1km s-min=19.0km az=15.0*
ISC 05 11:52:20.7±1.1**,27.˚07N**±0.˚06×**54.˚39E**±0.˚07,**h18**km,n17,**
σ2$19/21,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
JHRM	Jahrom	1.60	333	*e*Pn		Pn		11 52 48.8	+0.6
JHRM				*e*				11 53 18.7	
GENO	Geno	1.62	78	*e*Pn		Pb		11 52 48.8	-1.3
NIAN	Nian	2.23	77	*e*Pn		Pb		11 52 58.2	-2.2
NIAN				*e*				11 53 38.1	
ISRV	Sarvestan	2.56	334	*e*Pn		Pn		11 53 02.8	+1.2
NGRK	Negar Kerman	3.29	38	*e*Pn		Pn		11 53 11.4	-0.3
NGRK				*e*				11 53 53.2	
JSK1	Jask	3.35	115	*e*Pn		Pb		11 53 18.4	-1.2
IKAZ	Kazeroun	3.51	321	*e*Pn		Pn		11 53 17.8	+3.1
TVBK	TV Kerman	3.57	35	*e*Pn		Pn		11 53 16.5	+0.9
TVBK				*e*				11 54 03.7	
KHGB	Koh Gabri	3.76	29	*e*Pn		Pn		11 53 18.9	+0.8
KHGB				*e*				11 54 06.6	
CHMN	Cheshme madani	3.92	44	*e*Pn		Pn	

KURS	**Kuram**	**0.99**	**348**	*e*P	**Pb**	**11 52 50.1**	**-0.4**
	baz=48						
KURS				*e*S	**Sb**	**11 53 03.1**	**-0.8**
	baz=48						
KURS	**Kuram**	**0.99**	**348**	*e*P	**Pb**	**11 52 50.3**	**-0.3**
	3.2nm,0.4s						
KURS				*e*S	**Sn**	**11 53 04.4**	**-1.5**
	5.1nm,0.3s						
KURS	**Kuram**	**0.99**	**348**	P	**Pb**	**11 52 50.1**	**-0.4**
	2.0nm,0.3s						
KURS				S	**Sb**	**11 53 03.1**	**-0.8**
	5.6nm,0.3s						
KDJ	**Kajisay**	**1.02**	**248**	⇑*i*P	**Pg**	**11 52 48.8**	**-1.7**
	baz=52						
KDJ				⇑*i*S	**Sg**	**11 53 02.6**	**-1.2**
	baz=52						
PDGK	**Podgornoye**	**1.11**	**43**	P	**Pg**	**11 52 50.6**	**-1.5**
	0.9nm,0.2s						
PDGK				S	**Sg**	**11 53 04.5**	**-2.1**
	4.2nm,0.2s						
PDGK	**Podgornoye**	**1.11**	**43**	⇑P	**Pn**	**11 52 53.5**	**+0.2**
	0.9nm,0.4s						
PDGK				⇑S	**Sg**	**11 53 05.1**	**-1.4**
	5.2nm,0.5s						
KOTS	**Kotyrbulak**	**1.22**	**306**	*e*P	**Pg**	**11 52 53.8**	**-0.4**
	5.2nm,0.1s						
KOTS				*e*S	**Sb**	**11 53 10.6**	**-0.1**
	19nm,0.3s						
KOTS	**Kotyrbulak**	**1.22**	**306**	P	**Pg**	**11 52 53.8**	**-0.4**
	8.8nm,0.2s						
KOTS				S	**Sg**	**11 53 09.8**	**-0.2**
	19nm,0.3s						
MDOK	**Medeo**	**1.22**	**302**	*e*P	**Pg**	**11 52 54.1**	**-0.1**
	baz=4.0						
MDOK				*e*S	**Sg**	**11 53 10.1**	**+0.1**
	baz=4.0						
MDOK	**Medeo**	**1.22**	**302**	*e*P	**Pg**	**11 52 53.6**	**-0.6**
	4.7nm,0.1s						
MDOK				*e*S	**Sg**	**11 53 10.2**	**+0.2**
	11nm,0.3s						
MDOK	**Medeo**	**1.22**	**302**	Pg	**Pg**	**11 52 53.8**	**-0.4**
	4.3nm,0.2s						
MDOK				Lg	Lg	11 53 10.1	
	12nm,0.4s						
TNSS	**Tian-Shan**	**1.22**	**295**	*e*P	**Pb**	**11 52 54.5**	**-0.3**
	baz=98						
TNSS				*e*S	**Sb**	**11 53 10.8**	**-0.2**
	baz=98						
TNSS	**Tian-Shan**	**1.22**	**295**	*e*P	**Pg**	**11 52 54.0**	**-0.3**
	2.5nm,0.1s						
TNSS				*e*S	**Sb**	**11 53 11.1**	**0.0**
	7.4nm,0.2s						
TNSS	**Tian-Shan**	**1.22**	**295**	P	**Pg**	**11 52 54.2**	**-0.1**
	2.5nm,0.2s						
TNSS				S	**Sb**	**11 53 10.8**	**-0.2**
	7.7nm,0.2s						
IZV	**Izvestkoviy**	**1.45**	**291**	*e*P	**Pb**	**11 52 58.2**	**-0.3**
	1.5nm,0.1s						
IZV				*e*S	**Sg**	**11 53 18.0**	**+0.5**
	12nm,0.1s						
MNBS	**Baschi**	**1.56**	**359**	*e*P	**Pb**	**11 52 59.6**	**-0.7**
	4.4nm,0.1s						
MNBS				*e*S	**Sg**	**11 53 20.7**	**-0.2**
	34nm,0.1s						
MTBS	**Maitube**	**1.61**	**293**	*e*P	**Pg**	**11 53 01.4**	**-0.3**
	1.2nm,0.0s						
MTBS				*e*S	**Sg**	**11 53 23.5**	**+0.9**
	11nm,0.2s						
MTBS	**Maitube**	**1.61**	**293**	P	**Pg**	**11 53 02.0**	**+0.3**
	5.0nm,0.2s						
MTBS				S	**Sg**	**11 53 23.5**	**+0.9**
	11nm,0.2s						
ULHL	**Ulahol**	**1.66**	**261**	⇑*i*P	**Pn**	**11 53 00.3**	**-0.6**
	baz=64						
ULHL				⇑*i*S	**Sn**	**11 53 22.8**	**0.0**
	baz=64						
CHKK	**Chushkaly**	**1.71**	**322**	*e*P	**Pb**	**11 53 02.7**	**-0.2**
	3.0nm,0.2s						
CHKK				*e*S	**Sg**	**11 53 25.8**	**0.0**
	20nm,0.2s						
CHKK	**Chushkaly**	**1.71**	**322**	P	**Pg**	**11 53 03.5**	**-0.1**
	3.0nm,0.2s						
CHKK				S	**Sg**	**11 53 26.4**	**+0.6**
	20nm,0.2s						
ARXS	**Arharly**	**1.75**	**345**	*e*P	**Pb**	**11 53 03.3**	**-0.3**
	3.3nm,0.2s						
ARXS				*e*S	**Sg**	**11 53 26.9**	**-0.2**
	20nm,0.3s						
ARXS	**Arharly**	**1.75**	**345**	P	**Pg**	**11 53 03.7**	**-0.8**
	3.3nm,0.2s						
ARXS				S	**Sg**	**11 53 26.7**	**-0.5**
	20nm,0.3s						
KTBS	**Karatobe**	**1.76**	**313**	*e*P	**Pb**	**11 53 03.4**	**-0.3**
	2.7nm,0.2s						
KTBS				*e*S	**Sg**	**11 53 27.0**	**-0.4**
	16nm,0.3s						
KTBS	**Karatobe**	**1.76**	**313**	P	**Pg**	**11 53 04.5**	**-0.1**
	2.7nm,0.2s						
KTBS				S	**Sg**	**11 53 27.8**	**+0.4**
	16nm,0.3s						
BOOM	**Boomskoye usch**	**1.86**	**270**	⇑*e*P	**Pn**	**11 53 03.6**	**0.0**
	baz=72						
BOOM				⇑*i*S	**Sn**	**11 53 28.3**	**+0.7**
	baz=72						
KST	**Kastek**	**1.91**	**287**	*e*P	**Pb**	**11 53 06.5**	**+0.3**
	1.7nm,0.1s						
KST				*e*S	**Sg**	**11 53 32.3**	**+0.1**
	6.1nm,0.1s						
KST	**Kastek**	**1.91**	**287**	P	**Pg**	**11 53 07.0**	**-0.4**
	5.3nm,0.3s						
KST				S	**Sg**	**11 53 32.2**	**+0.1**
	6.8nm,0.4s						
DJR	**Jarkent**	**2.05**	**28**	*e*P	**Pb**	**11 53 08.2**	**-0.5**
	0.7nm,0.1s						
DJR				*e*S	**Sg**	**11 53 35.3**	**-1.6**
	29nm,0.2s						
DJR	**Jarkent**	**2.05**	**28**	Pg	**Pb**	**11 53 08.5**	**-0.2**
	1.3nm,0.2s						
DJR				Lg	Lg	11 53 35.0	
	29nm,0.2s						
KUU	**Kurty**	**2.07**	**312**	*e*P	**Pb**	**11 53 08.9**	**0.0**
	1.1nm,0.1s						
KUU				*e*S	**Sg**	**11 53 36.4**	**-0.9**
	14nm,0.2s						
KUU	**Kurty**	**2.07**	**312**	Pg	**Pb**	**11 53 09.4**	**+0.5**
	2.3nm,0.4s						
KUU				Lg	Lg	11 53 36.3	
	14nm,0.2s						
DGS	**Degeres**	**2.10**	**291**	*e*P	**Pb**	**11 53 09.8**	**+0.3**
	2.6nm,0.3s						
DGS				*e*S	**Sg**	**11 53 38.0**	**-0.3**
	10nm,0.4s						
DGS	**Degeres**	**2.10**	**291**	Pg	**Pb**	**11 53 10.0**	**+0.4**
	4.0nm,0.4s						
DGS				Lg	Lg	11 53 37.7	
	10nm,0.4s						
NRN	**Naryn**	**2.13**	**240**	⇓*e*P	**Pn**	**11 53 07.1**	**-0.3**
	baz=42						
NRN				⇓*i*S	**Sn**	**11 53 34.4**	**0.0**
	baz=42						
TKM2	**Tokmak 2**	**2.14**	**282**	⇑*i*P	**Pn**	**11 53 07.8**	**+0.3**
	baz=83						
TKM2				⇑*i*S	**Sn**	**11 53 35.8**	**+1.2**
	baz=83						
TKM2	**Tokmak 2**	**2.14**	**282**	⇑Pn	**Pb**	**11 53 09.6**	**-0.7**
	1.9nm,0.5s						
TKM2				⇓Sn	**Sg**	**11 53 39.1**	**-0.6**
	4.1nm,0.5s						
KAPS	**Kapalarasan**	**2.84**	**13**	*e*P	**Pb**	**11 53 22.0**	**-0.1**
	0.9nm,0.3s						
KAPS				*e*S	**Sg**	**11 53 58.9**	**-3.1**
	4.4nm,0.1s						
KAPS	**Kapalarasan**	**2.84**	**13**	Pg	**Pg**	**11 53 23.3**	**-1.9**
	0.7nm,0.3s						
KAPS				Lg	Lg	11 53 59.7	
	3.5nm,0.3s						
AAK	**Ala-Archa**	**2.93**	**274**	⇓Pg	**Pg**	**11 53 25.8**	**-1.1**
	1.9nm,0.8s						
AAK				⇓Lg	Lg	11 54 00.8	
	3.6nm,0.8s						

*IDC **05** 11:58:20.8±1.8, 1°.07N×97°.12E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/38, mbtmp3.5/8, ML2.8/1, Error ellipse: s-maj=48.4km s-min=21.0km az=63.0*
*DJA **05** 11:58:24.3±0.8, 1°N±3°×9°7E±°, h24km±6km, M3.6/9, mb3.4/3, MLv3.7/9*

ISC 05 11:58:24.4±1.0, 1°.11N±0°.08×97°.18E±0°.10, h25km, n15, σ0s81/15, mb3.6/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.44**	**64**	P	**Pn**	**11 58 35.5**	**+0.3**
SNSI	**Sinabang, Aceh**	**1.55**	**327**	P	**Pn**	**11 58 50.9**	**+0.4**
SNSI				S	**Sn**	**11 59 09.5**	**-0.3**
PBSI	**Pulau Batu**	**1.59**	**136**	P	**Pb**	**11 58 52.4**	**-0.8**
PBSI				S	**Sn**	**11 59 11.5**	**+0.7**
TPTI		**2.14**	**360**	P	**Pn**	**11 58 57.7**	**-0.9**
TPTI				S	**Sn**	**11 59 25.7**	**+1.4**
PSI	**Prapat**	**2.42**	**46**	Pn	**Pn**	**11 59 02.3**	**-0.3**
	2.2nm,0.3s,baz=202,slow=8.1,SNR=7.0						
CMAR	**Chiang Mai Arr**	**17.33**	**6**	P	**Pn**	**12 02 23.1**	**-1.6**
	baz=200,slow=10,SNR=3.3						
H08S2	**Diego Garcia H**	**26.11**	**250**	T	T	12 30 55.3	
	baz=71,slow=76						
H08S3	**Diego Garcia H**	**26.12**	**250**	T	T	12 30 55.6	
	baz=71,slow=76						
H08S1	**Diego Carcia H**	**26.13**	**250**	T	T	12 30 56.7	
	baz=71,slow=76						
WRA	**Warramunga Arr**	**42.00**	**122**	P	**P**	**12 06 14.1**	**0.0**
	0.2nm,0.3s,baz=306,slow=9.0,SNR=8.5						
ASAR	**Alice Springs**	**43.35**	**127**	P	**P**	**12 06 25.3**	**+0.3**
	0.3nm,0.9s,baz=297,slow=8.2,SNR=3.3						
KSRS	**Korea Array**	**45.94**	**34**	P	**P**	**12 06 45.9**	**+0.5**
	1.3nm,0.8s,baz=223,slow=8.3,SNR=5.0						
SONM	**Songino Array**	**47.23**	**8**	P	**P**	**12 06 55.5**	**0.0**
	0.4nm,0.9s,baz=188,slow=8.7,SNR=4.1						
MKAR	**Makanchi Array**	**47.33**	**346**	P	**P**	**12 06 56.7**	**+0.6**
	0.7nm,0.7s,baz=165,slow=7.9,SNR=7.8						
ZALV	**Zalesovo Beam**	**53.65**	**351**	P	**P**	**12 07 44.3**	**+0.6**
	0.7nm,0.4s,baz=179,slow=5.8,SNR=6.1						

*IDC **05** 12:08:04.2±1.5, 2°.92N×127°.71E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.5/37, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=89.8km s-min=22.1km az=63.0*
*NEIC **05** 12:08:11.8±2.3, 3°.2N±0°.1×128°.4E±0°.1, h64km±7km, mb4.2/7, Error ellipse: s-maj=20.5km s-min=14.0km az=49.0*

ISC 05 12:08:16.1±1.2, 2°.9N±0°.1×128°.3E±0°.1, h100km, n15, σ2s93/15, mb3.7/7, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.29**	**205**	Pn	**Pn**	**12 08 51.8**	**-0.7**
SIJI	**Sorong**	**4.73**	**142**	Pn	**Pn**	**12 09 22.9**	**-2.4**
	1.1nm,0.3s,baz=167,slow=22,SNR=8.8						
SIJI				Sn	**Sn**	**12 10 16.3**	**-2.7**
	0.7nm,0.3s,baz=112,slow=19,SNR=1.9						
FAKI	**Fak Fak**	**6.96**	**146**	Pn	**Pn**	**12 09 56.7**	**+1.2**
KNRA	**Kununurra**	**18.43**	**179**	P	**Pn**	**12 12 26.4**	**+1.4**
KNRA				IAmb	IAmb	12 12 28.0	
	comp=Z,43nm,1.5s						
WRAB	**Tennant Creek**	**23.42**	**166**	P	**P**	**12 13 10.4**	**-6.0**
WRAB				IAmb	IAmb	12 13 14.0	
	comp=Z,5.9nm,0.9s						
WRA	**Warramunga Arr**	**23.42**	**166**	P	**P**	**12 13 17.7**	**+1.2**
	comp=Z,2.4nm,0.9s,baz=344,slow=10,SNR=14						
WR0	**Warramunga Arr**	**23.49**	**165**	P	**P**	**12 13 12.6**	**-4.5**
WR0				IAmb	IAmb	12 13 16.9	
	comp=Z,2.9nm,0.9s						
AS31	**Alice Springs**	**26.92**	**169**		**P**	**12 13 51.0**	**+2.8**
ASAR	**Alice Springs**	**26.93**	**169**	P	**P**	**12 13 49.1**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=346,slow=7.0,SNR=14						
BBOO	**Buckleboo**	**36.23**	**169**	P	**P**	**12 15 11.2**	**+1.7**
BBOO				IAmb	IAmb	12 15 21.7	
	comp=Z,30nm,1.4s						
STKA	**Stephens Creek**	**36.78**	**161**	P	**P**	**12 15 15.0**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=341,slow=10,SNR=4.6						
STKA	**Stephens Creek**	**36.78**	**161**	P	**P**	**12 15 16.1**	**+1.9**
STKA				IAmb	IAmb	12 15 20.3	
	comp=Z,1.6nm,1.1s						
MKAR	**Makanchi Array**	**59.17**	**325**	P	**P**	**12 18 04.4**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=115,slow=7.6,SNR=2.9						
AFI	**Afiamalu**	**61.67**	**107**	P	**P**	**12 18 26.9**	**+2.8**
SYO	**Syowa Base**	**92.20**	**201**	⇑*e*P	P	12 21 21.2	+7.0

IDC 05 12:08:24.0±1.6, 10°.78N×127°.01E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/37, mbtmp3.6/5, MS3.6/1, Ms1 3.5/1, ms1mx2.6/39, 1C, Error ellipse: s-maj=154.8km s-min=21.1km az=70.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.79**	**237**	⇑*e*P	Pn	12 08 49.1	-7.1
WRA	**Warramunga Arr**	**31.37**	**167**	P	P	12 14 44.8	-1.8
	0.6nm,0.9s,baz=349,slow=9.9,SNR=2.6						
ASAR	**Alice Springs**	**34.89**	**169**	P	P	12 15 19.0	+1.6
	0.1nm,0.4s,baz=343,slow=6.8,SNR=3.6						
STKA	**Stephens Creek**	**44.65**	**162**	LR	LR	12 39 11.1	
	comp=Z,64nm,18.8s,baz=351,slow=41						
MKAR	**Makanchi Array**	**52.07**	**322**	P	P	12 17 35.1	-0.7
	0.7nm,0.8s,baz=123,slow=6.5,SNR=6.9						
ZALV	**Zalesovo Beam**	**54.54**	**331**	P	P	12 17 53.8	+0.1
	1.1nm,0.6s,baz=122,slow=7.7,SNR=4.4						
ARCES	**ARCESS Array B**	**83.97**	**340**	P	P	12 20 56.4	+0.5
	1.3nm,0.9s,baz=81,slow=8.0,SNR=5.7						

*IDC **05** 12:20:48.0±0.7, 10°.81S×44°.51E, h0km, mb3.9/10, mb1 4.2/13, mb1mx3.8/48, mbtmp4.1/13, ML4.9/3, MS3.7/10, Ms1 3.8/10, ms1mx3.4/42, Error ellipse: s-maj=22.7km s-min=19.3km az=109.0*
*NEIC **05** 12:20:50.3±3.0, 10°.81S±0°.08×44°.63E±0°.07, h15km±4km, mb4.4/13, Error ellipse: s-maj=12.8km s-min=8.4km az=137.0*

ISC 05 12:20:49.4±0.5, 10°.86S±0°.09×44°.5E±0°.1, h10km, n40, σ1s18/32, mb4.3/13, MS3.8/7, Northwest of Madagascar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OPO	**Ambohidratompo**	**8.10**	**162**	Pn	**Pn**	**12 22 45.7**	**-1.7**
	23nm,0.3s,baz=334,slow=13,SNR=50						
OPO				Sn	Sn	12 24 07.3	-12
	33nm,0.3s,baz=242,slow=17,SNR=9.0						
ABPO	**Ambohimpanom**	**8.54**	**162**		**Pn**	**12 22 51.4**	**-1.9**
ABPO				Sn	Sn	12 24 21.0	-8.8
KMBO	**Kilima Mbogo**	**12.05**	**323**	LR	LR	12 27 38.6	
	comp=Z,216nm,21.2s,baz=102,slow=34						
MSEY	**Mahe Island**	**12.50**	**61**		Pn	12 23 41.2	-6.3
LSZ	**Lusaka**	**16.47**	**253**	Pn	**Pn**	**12 24 39.2**	**-1.7**
	1.7nm,0.3s,baz=74,slow=11,SNR=7.1						
LSZ				Sn	Sn	12 27 34.3	-10
	0.8nm,0.3s,baz=344,slow=20,SNR=2.7						
LSZ				LR	LR	12 30 52.3	
	comp=Z,557nm,19.0s,baz=119,slow=37						
LSZ	**Lusaka**	**16.47**	**253**	P	**Pn**	**12 24 40.8**	**-0.2**
LSZ				IAmb	IAmb	12 24 59.0	
	comp=Z,17nm,0.9s						
LSZ	**Lusaka**	**16.47**	**253**		**Pn**	**12 24 40.5**	**-0.4**
LSZ				IAmb	IAmb	12 24 59.1	
	comp=Z,17nm,0.9s						
MBAR	**Mbarara**	**17.04**	**306**	P	**Pn**	**12 24 46.0**	**-2.2**
	comp=Z,1.5nm,0.3s,baz=300,slow=20,SNR=2.4						
MBAR				LR	LR	12 31 28.5	
	comp=Z,171nm,18.8s,baz=292,slow=38						
MBAR	**Mbarara**	**17.04**	**306**	P	**P**	**12 24 50.1**	**+0.1**
LBTB	**Lobatse**	**22.79**	**229**	P	**P**	**12 25 53.3**	**+0.8**
	comp=Z,15nm,1.4s,baz=54,slow=14,SNR=3.1						
LBTB	**Lobatse**	**22.79**	**229**	P	**P**	**12 25 54.6**	**+2.1**
LBTB				IAmb	IAmb	12 26 04.1	
	comp=Z,14nm,1.1s						
BOSA	**Boshof**	**25.23**	**223**	P	**P**	**12 26 16.8**	**+1.0**
	comp=Z,4.0nm,0.8s,baz=37,slow=10,SNR=8.5						
BOSA	**Boshof**	**25.23**	**223**	P	**P**	**12 26 17.0**	**+1.3**
BOSA				IAmb	IAmb	12 26 31.0	
	comp=Z,9.1nm,1.1s						
GEYT	**Alibeck**	**50.18**	**14**	LR	LR	12 50 12.9	
	comp=Z,54nm,21.3s,baz=10.0,slow=35						
BR131	**Keskin Array S**	**51.32**	**349**	P	**P**	**12 29 55.9**	**+1.8**
BRTR	**Keskin Array B**	**51.32**	**349**	P	**P**	**12 29 55.2**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=184,slow=3.8,SNR=4.5						
CHGR	**Chuyangaron**	**54.37**	**24**	P	**P**	**12 30 17.2**	**+0.6**
KK31	**Karatay Array**	**58.73**	**22**	P	**P**	**12 30 47.4**	**0.0**
KKAR	**Karatay Array**	**58.73**	**22**	P	**P**	**12 30 47.2**	**-0.2**
KKAR				IAmb	IAmb	12 30 56.3	
	comp=Z,6.6nm,1.1s						
CMAR	**Chiang Mai Arr**	**61.11**	**62**	P	**P**	**12 31 04.7**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=242,slow=7.8,SNR=4.4						
CMAR				LR	LR	12 53 28.1	
	comp=Z,54nm,20.7s,baz=194,slow=32						

ABKAR	**Akbulak array**	**61.38**	**11**	P	**P**	**12 31 05.1**	**-0.4**
ABKAR				IAmb	IAmb	12 31 14.0	
	comp=Z,3.9nm,0.8s						
GERES	**GERESS Array B**	**65.35**	**338**	P	**P**	**12 31 31.3**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=122,slow=4.8,SNR=3.7						
MK31	**Makanchi Array**	**66.59**	**27**	P	**P**	**12 31 38.5**	**-1.4**
MKAR	**Makanchi Array**	**66.59**	**27**	P	**P**	**12 31 38.4**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=212,slow=6.3,SNR=5.1						
PAB	**San Pablo**	**67.59**	**321**	P	**P**	**12 31 47.0**	**+0.6**
NWAO	**Narrogin (SRO)**	**69.74**	**121**	LR	LR	12 54 39.1	
	comp=Z,63nm,21.4s,baz=80,slow=29						
FINES	**FINESS Array B**	**73.52**	**351**	P	**P**	**12 32 21.6**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=143,slow=12,SNR=4.2						
QSPA	**South Pole Qui**	**79.23**	**180**	P	**P**	**12 32 56.7**	**+2.0**
QSPA				IAmb	IAmb	12 33 12.1	
	comp=Z,2.9nm,1.4s						
ARCES	**ARCESS Array B**	**81.28**	**353**	P	**P**	**12 33 05.4**	**0.0**
	comp=Z,1.2nm,0.8s,baz=160,slow=5.6,SNR=4.8						
VNDA	**Vanda**	**85.16**	**169**	LR	LR	13 08 35.0	
	comp=Z,55nm,18.8s,baz=270,slow=34						
ASAR	**Alice Springs**	**85.19**	**113**	P	**P**	**12 33 26.6**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=266,slow=4.5,SNR=11						
WRA	**Warramunga Arr**	**86.22**	**109**	P	**P**	**12 33 32.9**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=266,slow=3.5,SNR=7.6						
KSRS	**Korea Array**	**91.37**	**52**	LR	LR	13 14 36.1	
	comp=Z,36nm,20.9s,baz=50,slow=35						
CPUP	**Villa Florida**	**95.62**	**242**	LR	LR	13 16 29.1	
	comp=Z,78nm,18.0s,baz=162,slow=35						
TIXI	**Tiksi**	**98.45**	**19**	LR	LR	13 22 53.5	
	comp=Z,29nm,18.1s,baz=328,slow=38						
TXAR	**Lajitas Array**	**145.07**	**306**	PKPbc	**PKPab**	**12 40 27.7**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=104,slow=2.5,SNR=3.9						
MNTX	**Cornudas Mount**	**145.29**	**311**	PKPbc	**PKPdf**	**12 40 28.5**	**+0.4**
HUMO	**Hull Mountain**	**146.52**	**343**		**PKPdf**	**12 40 30.0**	**+0.1**
KRMB	**Red Mountain**	**147.79**	**344**	PKPbc	**PKPbc**	**12 40 33.8**	**-1.3**
NVAR	**Mina Array Bea**	**148.52**	**334**	PKPbc	**PKPbc**	**12 40 37.6**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=88,slow=2.2,SNR=2.9						

MAN 05 12:21:09.0, 9°.91N×123°.93E, h33km, mb3.6, ML2.3, MS1.7, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.41**	**5**	⇓*i*P	Pn	12 21 19.6	+0.9
LLP				*i* S	Sn	12 21 26.0	+0.9
MSLP	**Maasin**	**0.94**	**76**	*e*P	Pn	12 21 26.0	+0.1
MSLP				*e*S	Sn	12 21 38.0	-0.3

*MOS **05** 12:21:44.9±1.3, 30°.24N×103°.04E, h20km, mb4.5/13, Error ellipse: s-maj=9.1km s-min=6.2km az=85.6*
*NEIC **05** 12:21:45.5±2.4, 30°.29N±0°.07×102°.96E±0°.09, h12km±3km, mb4.6/24, Error ellipse: s-maj=11.7km s-min=10.3km az=106.0*
*BJI **05** 12:21:46.3±0.0, 30°.20N×102°.90E, h18km, mB4.6/8, mb4.4/30, ML4.1/18, Ms3.9/24, Ms7 3.9/25*
*IDC **05** 12:21:47.5±3.9, 30°.22N×102°.93E, h28km±26km, mb3.8/15, mb1 3.9/17, mb1mx3.7/53, mbtmp4.0/17, ML3.6/2, Error ellipse: s-maj=19.6km s-min=13.2km az=55.0*

ISC 05 12:21:45.9±0.3, 30°.25N±0°.04×102°.95E±0°.04, h10km, n105, σ2s40/121, mb4.3/39, 5C-2D, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**0.96**	**46**	⇑*i*Pg	**Pg**	**12 22 05.2**	**+0.8**
CD2				Sg	**Sg**	**12 22 19.3**	**+2.4**
CD2				smax	smax		
	comp=N,5μm,0.5s						
CD2				smax	smax		
	comp=E,4μm,0.8s						
GYA	**Guiyang**	**5.00**	**138**	Pn	**Pn**	**12 23 00.8**	**-0.3**
GYA				Pg	**Pb**	**12 23 17.8**	**+4.2**
GYA				Sn	**Sn**	**12 23 58.6**	**-0.4**
GYA				Sg	**Sb**	**12 24 16.3**	**+2.6**
GYA				smax	smax		
	comp=N,360nm,0.6s						
GYA				smax	smax		
	comp=E,390nm,0.7s						
GYA				LR	LR		
	comp=N,530nm,6.8s						
GYA				LR	LR		
	comp=E,440nm,5.6s						
GYA				LR	LR		
	comp=Z,880nm,7.2s						
KMI	**Kunming**	**5.11**	**182**	Pn	**Pn**	**12 23 04.2**	**+1.4**
KMI				Sn	**Sn**	**12 24 03.7**	**+1.7**
KMI				smax	smax		
	comp=N,130nm,0.8s						
KMI				smax	smax		
	comp=E,140nm,1.0s						
KMI				LR	LR		
	comp=N,870nm,10.1s						
KMI				LR	LR		
	comp=E,710nm,6.2s						
KMI				LR	LR		
	comp=Z,800nm,9.7s						
KMI	**Kunming**	**5.11**	**182**	P	**Pn**	**12 23 04.0**	**+1.2**
KMI	**Kunming**	**5.11**	**182**		**Pn**	**12 23 04.0**	**+1.2**
ENH	**Enshi**	**5.65**	**88**		**Pn**	**12 23 10.5**	**+0.4**
LZH	**Lanzhou**	**5.87**	**7**	*e*Pg	**Pb**	**12 23 27.0**	**-1.5**
LZH				smax	smax		
	comp=N,150nm,1.1s						
LZH				smax	smax		
	comp=E,150nm,1.0s						
LZH				LR	LR		
	comp=E,770nm,5.1s						
LZH				LR	LR		
	comp=Z,1μm,6.1s						
XAN	**Xi'an**	**6.32**	**52**	Pn	**Pn**	**12 23 17.9**	**-1.3**
XAN				Sn	**Sn**	**12 24 28.7**	**-2.7**
XAN				Sg	**Sg**	**12 25 10.5**	**+1.8**
XAN				smax	smax		
	comp=N,250nm,0.9s						
XAN				smax	smax		
	comp=E,300nm,1.0s						
XAN	**Xi'an**	**6.32**	**52**	P	**Pn**	**12 23 17.8**	**-1.4**
XAN	**Xi'an**	**6.32**	**52**		**Pn**	**12 23 17.8**	**-1.4**
SLVN	**Son La**	**8.92**	**174**		**Pn**	**12 23 53.8**	**-1.2**
GTA	**Gaotai**	**9.50**	**345**	*e*P	Pn	12 24 14.4	+12
GTA				pP		12 24 18.9	
GTA				sP		12 24 21.6	
GTA				p

ODAN	**Odare**	**14.09**	**260**	*e*P		**Pn**	**12 25 04.9**	**-0.9**
BJI	**Beijing**	**14.56**	**44**	*e*P		Pn	12 25 10.1	-1.9
BJI				pmax	pmax			
	comp=Z,4.0nm,0.6s							
RAMN	**Ramite**	**14.74**	**261**	*e*P		**Pn**	**12 25 12.8**	**-1.9**
JIRN	**Jiri**	**14.90**	**264**	*e*P		**Pn**	**12 25 16.0**	**-1.1**
UBPT	**Khong Chiam**	**15.08**	**171**	P		**P**	**12 25 24.9**	**+0.5**
UBPT				IAmb	IAmb		12 25 34.5	
	comp=Z,16nm,0.7s							
PKI	**Pulchoki**	**15.60**	**264**	*e*P		**Pn**	**12 25 24.9**	**-1.3**
	comp=Z,3.1nm,0.7s							
PKIN	**Phulchoki**	**15.60**	**265**	*e*P		**Pn**	**12 25 24.8**	**-1.5**
	comp=Z,23nm,0.9s							
KKN	**Kakani**	**15.65**	**265**	*e*P		**Pn**	**12 25 25.2**	**-1.7**
	comp=Z,28nm,0.7s							
DMN	**Daman**	**15.85**	**265**	*e*P		**Pn**	**12 25 27.9**	**-1.5**
	comp=Z,13nm,0.7s							
DANN	**Dangsing**	**16.85**	**268**	*e*P		**Pn**	**12 25 40.6**	**-1.7**
	comp=Z,42nm,0.9s							
KOLN	**Koldanda**	**17.11**	**266**	*e*P		**Pn**	**12 25 42.3**	**-3.2**
SONM	**Songino Array**	**17.76**	**8**	P		**Pn**	**12 25 54.0**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=190,slow=12,SNR=4.7							
ULN	**Ulaanbaatar**	**17.87**	**9**	*i* P		**Pn**	**12 25 55.5**	**+0.7**
ULN				pmax	pmax			
	comp=Z,3.0nm,0.9s							
WMQ	**Urumqi**	**18.18**	**322**	*e*P		**Pn**	**12 26 00.0**	**+1.6**
WMQ				pP	pP		12 26 04.0	+2.1
WMQ				pmax	pmax			
	comp=Z,7.0nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,98nm,5.5s							
WMQ				LR	LR			
	comp=Z,440nm,29.1s							
ZAK	**Zakamensk**	**20.11**	**1**	*e*P		**P**	**12 26 21.7**	**+1.8**
ZAK				pmax	pmax			
	comp=Z,11nm,0.9s							
TJN	**Taejon**	**21.27**	**67**	*i* P		**P**	**12 26 32.3**	**-0.1**
TLY	**Talaya**	**21.42**	**1**	*i* P		**P**	**12 26 32.6**	**-1.3**
TLY				pmax	pmax			
	comp=Z,5.0nm,0.9s							
KS19	**Wonju Array Si**	**21.88**	**64**	P		**P**	**12 26 39.5**	**+0.6**
KS19				IAmb	IAmb		12 26 49.8	
	comp=Z,19nm,1.0s							
KSRS	**Korea Array**	**21.91**	**64**	P		**P**	**12 26 39.0**	**-0.2**
	comp=Z,4.0nm,0.5s,baz=247,slow=9.8,SNR=18							
CN2	**Changchun**	**22.39**	**47**	*e*P		**P**	**12 26 44.0**	**-0.4**
CN2				pmax	pmax			
	comp=Z,10.0nm,1.0s							
JOW	**Kunigami**	**22.49**	**92**			**P**	**12 26 45.9**	**+0.3**
JOW				IAmb	IAmb		12 26 55.4	
	comp=Z,30nm,1.0s							
HIA	**Hailar**	**22.87**	**29**	*i* P		**P**	**12 26 48.7**	**-0.8**
HIA				pmax	pmax			
	comp=Z,33nm,1.0s							
MK31	**Makanchi Array**	**23.00**	**322**	P		**P**	**12 26 52.0**	**+1.1**
MK31				pmax	pmax			
	comp=Z,4.0nm,0.9s							
MK31	**Makanchi Array**	**23.00**	**322**	P		**P**	**12 26 52.0**	**+1.1**
MKAR	**Makanchi Array**	**23.00**	**322**	P		**P**	**12 26 51.2**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=122,slow=10,SNR=23							
MKAR				PcP		**PcP**	**12 30 38.9**	**-1.6**
	comp=Z,0.6nm,0.9s,baz=125,slow=8.4,SNR=3.6							
MKAR				ScP		**ScP**	**12 34 15.2**	**-3.2**
	comp=Z,0.5nm,0.7s,baz=123,slow=4.3,SNR=4.2							
MAKZ	**Makanchi**	**23.18**	**321**	P		**P**	**12 26 53.1**	**+0.4**
MAKZ				pmax	pmax			
	comp=Z,5.0nm,0.8s							
MAKZ	**Makanchi**	**23.18**	**321**	P		**P**	**12 26 53.1**	**+0.4**
JNU	**Nakatsue**	**23.91**	**76**	P		**P**	**12 26 59.1**	**-0.9**
	comp=Z,9.0nm,0.9s,baz=304,slow=9.9,SNR=3.9							
JNU	**Nakatsue**	**23.91**	**76**	IAmb	IAmb		12 27 01.1	
	comp=Z,25nm,1.1s							
KSH	**Kashi**	**23.91**	**300**	P		**P**	**12 27 01.8**	**+1.7**
KSH				sP	sP		12 27 07.8	+2.7
KSH				PP		**PnPn**	**12 27 37.5**	**+9.3**
KSH				S		**S**	**12 31 17.0**	**+0.4**
KSH				sS	sS		12 31 25.1	+2.7
KSH				SS		**SnSn**	**12 32 09.3**	**+13**
NIL	**Nilore**	**25.39**	**285**	P		**P**	**12 27 15.5**	**+2.0**
NIL				pmax	pmax			
	comp=Z,25nm,0.7s							
NIL	**Nilore**	**25.39**	**285**	P		**P**	**12 27 15.5**	**+2.0**
NIL				IAmb	IAmb		12 27 19.8	
	comp=Z,25nm,0.7s							
MDJ	**Mudanjiang**	**25.41**	**48**	P		**P**	**12 27 12.7**	**-0.9**
MDJ				pP	sP		12 27 26.0	+7.5
MDJ				PP		**PnPn**	**12 27 52.3**	**+3.7**
MDJ				S		**S**	**12 31 39.5**	**-0.8**
MDJ				SS		**SnSn**	**12 32 43.6**	**+11**
MDJ				pmax	pmax			
	comp=Z,11nm,0.8s							
MDJ				LR	LR			
	comp=Z,330nm,5.0s							
MDJ				LR	LR			
	comp=Z,210nm,4.3s							
MDJ				LR	LR			
	comp=Z,340nm,5.7s							
AAK	**Ala-Archa**	**25.89**	**306**	*i* P		**P**	**12 27 17.2**	**-0.9**
AAK				pmax	pmax			
	comp=Z,9.0nm,1.8s							
USRK	**Ussuriysk Ar.**	**26.82**	**51**	P		**P**	**12 27 24.9**	**-1.5**
	comp=Z,1.5nm,0.6s,baz=251,slow=7.5,SNR=5.5							
ZALV	**Zalesovo Beam**	**27.08**	**336**	P		**P**	**12 27 27.2**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=134,slow=8.3,SNR=2.4							
KURBB	**Kurchatov Arra**	**27.35**	**325**	P		**P**	**12 27 30.4**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=49,slow=13,SNR=9.2							
KURBB				PcP		**PcP**	**12 30 48.4**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=95,slow=2.3,SNR=3.8							
KURK	**Kurchatov**	**27.36**	**325**	P		**P**	**12 27 30.4**	**-0.7**
KURK							12 30 48.4	
KURK	**Kurchatov**	**27.36**	**325**	P		**P**	**12 27 28.5**	**-2.6**
KLR	**Kul'dur**	**28.88**	**41**	*i* P		**P**	**12 27 44.4**	**-0.3**
KLR				pmax	pmax			
	comp=Z,12nm,2.8s							
KLR	**Kul'dur**	**28.88**	**41**	P		**P**	**12 27 44.1**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=238,slow=11,SNR=5.0							
SBUM	**Sibu**	**29.01**	**161**	P		**P**	**12 27 45.7**	**-0.4**
SBUM				IAmb	IAmb		12 27 52.9	
	comp=Z,5.5nm,1.1s							
ERM	**Erimo**	**34.23**	**59**	P		**P**	**12 28 31.4**	**-0.5**
ERM				pmax	pmax			
	comp=Z,40nm,1.0s							
ERM	**Erimo**	**34.23**	**59**	P		**P**	**12 28 31.4**	**-0.5**
YAK	**Yakutsk**	**36.26**	**21**	*i* P		**P**	**12 28 48.2**	**-0.8**
YAK				pmax	pmax			
	comp=Z,6.0nm,0.8s							
ABKAR	**Akbulak array**	**37.51**	**313**	P		**P**	**12 29 00.2**	**+0.4**
ARU	**Arti**	**40.51**	**323**	*d* P		**P**	**12 29 27.4**	**+2.5**
ARU							12 30 57.5	
ARU				S		**S**	**12 35 37.1**	**+3.4**
ARU				SS		**SS**	**12 38 32.7**	**-0.3**
ARU				pmax	pmax			
	comp=Z,5.0nm,1.0s							
TIXI	**Tiksi**	**43.78**	**12**	*i* P		**P**	**12 29 50.5**	**-0.8**
TIXI				pmax	pmax			
	comp=Z,2.0nm,0.9s							
TIXI	**Tiksi**	**43.78**	**12**	P		**P**	**12 29 49.9**	**-1.4**
TIXI				IAmb	IAmb		12 29 59.7	
	comp=Z,8.0nm,1.4s							
KIV	**Kislovodsk**	**48.96**	**304**	⇑*e*P		**P**	**12 30 34.7**	**+2.2**
KIV				*e*			12 31 52.4	
KIV				*e*			12 32 26.7	
KIV				*e*S		**S**	**12 37 34.2**	**-2.5**
KIV				pmax	pmax			
	comp=Z,9.0nm,1.1s							
KIV				MLR	MLR			
	comp=Z,61nm,16.0s							
SOC	**Sochi**	**51.13**	**304**	*e*P		**P**	**12 30 47.0**	**-2.0**
SOC				*e*			12 32 46.3	
SOC				*e*PPP	PPP		12 33 43.1	
SOC				*e*S		**S**	**12 38 04.0**	**-2.9**
SOC				*e*SS		**SS**	**12 41 39.1**	**-2.8**
SOC				*e*SSS	SSS		12 43 18.8	
SOC				pmax	pmax			
	comp=Z,14nm,0.4s							
KNRA	**Kununurra**	**51.99**	**148**	P		**P**	**12 30 53.9**	**-1.7**
KNRA				IAmb	IAmb		12 31 02.6	
	comp=Z,23nm,1.4s							
BILL	**Bilibino**	**52.37**	**25**	*α* *i*P		**P**	**12 30 57.5**	**-0.3**
BILL				*e*			12 32 57.5	
BILL				pmax	pmax			
	comp=Z,4.0nm,1.1s							
BILL				MLR	MLR			
	comp=Z,182nm,21.0s							
BRTR	**Keskin Array B**	**56.30**	**300**	P		**P**	**12 31 25.6**	**-1.5**
	comp=Z,0.4nm,0.7s,baz=79,slow=6.2,SNR=2.7							
AKASG	**Malin Array Be**	**57.25**	**313**	P		**P**	**12 31 31.5**	**-1.9**
	comp=Z,0.3nm,0.4s,baz=69,slow=7.3,SNR=3.6							
ARCES	**ARCESS Array B**	**57.63**	**336**	P		**P**	**12 31 34.8**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=82,slow=6.5,SNR=5.2							
FINES	**FINESS Array B**	**57.73**	**326**	*i* P		**P**	**12 31 35.0**	**-1.6**
FINES				pmax	pmax			
	comp=Z,1.0nm,0.6s							
FINES	**FINESS Array B**	**57.73**	**326**	P		**P**	**12 31 34.8**	**-1.8**
	comp=Z,1.0nm,0.6s,baz=101,slow=7.2,SNR=6.0							
WRAB	**Tennant Creek**	**58.33**	**145**	*ce*P		**P**	**12 31 40.4**	**-0.9**
WRAB				pmax	pmax			
	comp=Z,26nm,1.7s							
WRAB	**Tennant Creek**	**58.33**	**145**	P		P	12 31 39.3	-2.0
WRA	**Warramunga Arr**	**58.33**	**145**	P		**P**	**12 31 40.0**	**-1.4**
WRA	**Warramunga Arr**	**58.33**	**145**	P		**P**	**12 31 40.0**	**-1.4**
	comp=Z,10nm,0.7s,baz=335,slow=7.6,SNR=97							
WR0	**Warramunga Arr**	**58.45**	**145**	P		**P**	**12 31 40.5**	**-1.7**
WR0				IAmb	IAmb		12 31 41.3	
	comp=Z,7.7nm,0.8s							
COEN	**Coen**	**58.58**	**133**	P		**P**	**12 31 42.3**	**-0.9**
COEN				IAmb	IAmb		12 31 43.0	
	comp=Z,3.9nm,0.8s							
AS31	**Alice Springs**	**61.29**	**147**	P		**P**	**12 32 00.6**	**-1.1**
ASAR	**Alice Springs**	**61.29**	**147**	P		**P**	**12 32 00.5**	**-1.2**
	comp=Z,2.5nm,0.5s,baz=334,slow=6.8,SNR=92							
NWAO	**Narrogin (SRO)**	**64.27**	**167**	P		**P**	**12 32 20.2**	**-1.1**
NWAO				pmax	pmax			
	comp=Z,39nm,1.5s							
NWAO	**Narrogin (SRO)**	**64.27**	**167**	P		**P**	**12 32 20.2**	**-1.1**
VYHS	**Vyhne**	**64.33**	**313**	*e*P		**P**	**12 32 20.1**	**-1.6**
VYHS	**Vyhne**	**64.33**	**313**	*e*P		**P**	**12 32 20.1**	**-1.6**
TOLK	**Toolik Lake Re**	**68.21**	**22**	P		**P**	**12 32 46.0**	**-0.3**
TOLK				IAmb	IAmb		12 32 53.5	
	comp=Z,8.4nm,1.2s							
ILAR	**Eielson Array**	**71.03**	**25**	P		**P**	**12 33 02.3**	**-1.4**
	comp=Z,0.5nm,0.9s,baz=296,slow=4.2,SNR=4.2							
STKA	**Stephens Creek**	**71.84**	**146**	P		**P**	**12 33 07.7**	**-1.3**
STKA				pmax	pmax			
	comp=Z,3.0nm,1.4s							
STKA	**Stephens Creek**	**71.84**	**146**	P		**P**	**12 33 07.5**	**-1.5**
	comp=Z,2.5nm,0.5s,baz=337,slow=4.8,SNR=11							
STKA	**Stephens Creek**	**71.84**	**146**	P		**P**	**12 33 07.7**	**-1.3**
EIDS	**Eidsvold**	**72.00**	**135**	P		**P**	**12 33 09.5**	**-0.5**
INK	**Inuvik**	**73.28**	**19**	P		**P**	**12 33 16.5**	**-0.6**
INK				pmax	pmax			
	comp=Z,4.0nm,1.0s							
INK	**Inuvik**	**73.28**	**19**	P		**P**	**12 33 16.5**	**-0.6**
INK				IAmb	IAmb		12 33 16.8	
	comp=Z,4.1nm,0.9s							
ARMA	**Armidale**	**76.05**	**138**	P		**P**	**12 33 34.2**	**+0.5**
SKAG	**Skagway**	**78.54**	**26**	P		**P**	**12 33 47.0**	**-0.3**
YKA	**Yellowknife Ar**	**82.79**	**17**	P		**P**	**12 34 09.3**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=329,slow=5.2,SNR=16							

IDC 05 12:29:06.9±1.9, 2°.15N×127°.11E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/32, mbtmp3.4/4, Error ellipse: s-maj=179.2km s-min=21.9km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.08**	**162**	P		P	12 34 14.5	+0.2
	0.5nm,0.3s,baz=341,slow=11,SNR=6.8							
ASAR	**Alice Springs**	**26.50**	**166**	P		P	12 34 46.2	0.0
	0.3nm,0.3s,baz=346,slow=12,SNR=4.7							
MKAR	**Makanchi Array**	**59.06**	**326**	P		P	12 39 08.7	-0.2
	0.2nm,0.4s,baz=117,slow=7.4,SNR=7.6							
KURBB	**Kurchatov Arra**	**63.27**	**328**	P		P	12 39 37.4	+0.1
	0.5nm,0.6s,baz=128,slow=6.1,SNR=6.5							

*IDC **05** 12:34:32.2±1.1, 53°.78N×35°.34W, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.5/52, mbtmp3.6/9, ML2.7/1, MS3.7/1, Ms1 3.7/1, ms1mx2.9/39, Error ellipse: s-maj=37.5km s-min=19.3km az=20.0*

ISC 05 12:34:34.7±1.0, 53°.8N±0°.2×35°.4W±0°.1, h16km, n11, σ1s05/10, mb3.5/8, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.33**	**286**	P		**P**	**12 38 48.6**	**+0.6**
	0.2nm,0.3s,baz=77,slow=5.5,SNR=6.2							
ESDC	**Sonseca Array**	**25.46**	**111**	P		**P**	**12 40 01.8**	**+0.1**
	1.8nm,0.7s,baz=314,slow=9.8,SNR=9.2							
NOA	**NORSAR Array B**	**25.64**	**55**	P		**P**	**12 40 03.9**	**+0.7**
	0.9nm,0.8s,baz=274,slow=9.1,SNR=3.0							
FINES	**FINESS Array B**	**32.64**	**51**	LR		LR	12 52 42.3	
	comp=Z,127nm,18.4s,baz=345,slow=33							
YKA	**Yellowknife Ar**	**40.18**	**315**	P		**P**	**12 42 10.4**	**+0.8**
	0.2nm,0.6s,baz=64,slow=8.9,SNR=4.1							
BRTR	**Keskin Array B**	**47.44**	**78**	P		**P**	**12 43 10.1**	**+1.6**
	0.7nm,0.7s,baz=323,slow=5.6,SNR=4.4							
PDAR	**Pinedale Array**	**48.44**	**289**	P		**P**	**12 43 15.9**	**-0.3**
	0.3nm,0.5s,baz=66,slow=4.2,SNR=4.5							
TORD	**Torodi Ar. Bea**	**49.94**	**130**	P		**P**	**12 43 27.4**	**-0.3**
	1.1nm,0.7s,baz=333,slow=7.9,SNR=5.8							
MKAR	**Makanchi Array**	**66.72**	**41**	P		**P**	**12 45 23.3**	**-1.3**
	0.2nm,0.6s,baz=333,slow=5.2,SNR=4.0							
SONM	**Songino Array**	**73.72**	**26**	P		**P**	**12 46 06.8**	**-0.8**
	0.3nm,0.6s,baz=326,slow=7.0,SNR=4.3							
ASAR	**Alice Springs**	**148.88**	**19**	PKPbc		**PKPbc**	**12 54 20.3**	**-1.1**
	0.6nm,1.1s,baz=351,slow=4.7,SNR=3.4							

MAN 05 12:43:14.7, 9°.70N×124°.09E, h7km, mb4.5, ML3.3, MS3.1, Mindanao

*IDC **05** 12:43:59.9±2.8, 22°.24N×143°.77E, h118km±24km, mb3.2/9, mb1 3.4/11, mb1mx3.2/41, mbtmp3.6/11, Error ellipse: s-maj=28.3km s-min=15.8km az=90.0*

ISC 05 12:43:58.2±0.8, 22°.2N±0°.1×143°.9E±0°.2, h105km, n12, σ0s98/14, mb3.5/9, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.14**	**343**	P		**Pn**	**12 45 14.7**	**+1.8**
	9.2nm,0.3s,baz=281,slow=23,SNR=20							
JCJ				S		**Sn**	**12 46 10.0**	**-1.1**
	24nm,0.3s,baz=305,slow=21,SNR=9.0							
MJAR	**Matsushiro Arr**	**15.15**	**342**	P		**Pn**	**12 47 27.0**	**+0.4**
	0.0nm,0.3s,baz=139,slow=9.8,SNR=4.2							
KLR	**Kul'dur**	**28.67**	**343**	P		**P**	**12 49 45.7**	**+0.6**
	0.7nm,0.4s,baz=167,slow=7.7,SNR=4.1							
WRA	**Warramunga Arr**	**42.87**	**193**	P		**P**	**12 51 46.4**	**+0.1**
	0.2nm,0.3s,baz=15,slow=8.7,SNR=10							
ASAR	**Alice Springs**	**46.57**	**193**	P		**P**	**12 52 16.2**	**+0.5**
	0.2nm,0.4s,baz=13,slow=6.8,SNR=4.6							
ZALV	**Zalesovo Beam**	**54.24**	**321**	P		**P**	**12 53 11.7**	**-1.4**
	0.5nm,0.5s,baz=145,slow=8.1,SNR=3.1							
MKAR	**Makanchi Array**	**54.85**	**312**	P		**P**	**12 53 18.1**	**+0.4**
	0.2nm,0.6s,baz=98,slow=8.7,SNR=4.1							
MKAR				PcP		**PcP**	**12 54 18.1**	**-0.5**
	0.2nm,0.4s,baz=89,slow=1.9,SNR=5.5							
ILAR	**Eielson Array**	**61.34**	**27**	P		**P**	**12 54 01.9**	**-0.7**
	0.2nm,0.5s,baz=250,slow=5.1,SNR=5.1							
YKA	**Yellowknife Ar**	**75.76**	**28**	P		**P**	**12 55 32.4**	**+0.2**
	0.2nm,0.4s,baz=293,slow=5.7,SNR=4.7							
NVAR	**Mina Array Bea**	**82.37**	**52**	P		**P**	**12 56 09.4**	**+0.4**
	0.6nm,0.6s,baz=292,slow=4.7,SNR=6.6							
FINES	**FINESS Array B**	**83.03**	**335**	P		**P**	**12 56 10.2**	**-1.5**
	0.4nm,0.3s,baz=60,slow=4.3,SNR=8.8							
PLCA	**Paso Flores**	**145.59**	**131**	PKPbc		**PKPbc**	**13 03 24.9**	**+0.1**
	0.7nm,0.4s,baz=283,slow=3.7,SNR=7.7							

*IDC **05** 13:19:10.0±3.6, 51°.91N×176°.50E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.4/47, mbtmp3.6/6, ML2.3/1, Error ellipse: s-maj=86.8km s-min=29.2km az=3.0*
*AEIC **05** 13:19:13.9±0.6, 51°.6N±0°.2×176°.26E±0°.09, h25km±10km, Error ellipse: s-maj=30.6km s-min=6.5km az=188.0*
*NEIC **05** 13:19:14.4±0.6, 51°.5N±0°.1×176°.11E±0°.04, h47km±49km, ML3.6/19(AEIC), Error ellipse: s-maj=17.8km s-min=3.2km az=173.0*

ISC 05 13:19:11.6±2.0, 51°.3N±0°.3×176°.03E±0°.09, h35km, n30, σ1s83/25, mb3.4/5, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.84**	**320**			**Pn**	**13 19 42.0**	**+1.3**
SMY	**Shemya**	**1.84**	**320**			**Sn**	**13 20 04.7**	**+2.0**
TASE	**Tanaga Southea**	**3.74**	**80**			**Pn**	**13 20 07.8**	**+1.0**
TAFP	**Tanaga Falls P**	**3.78**	**79**			**Pn**	**13 20 08.6**	**+1.3**
TAFP						**Sn**	**13 20 51.4**	**+0.9**
TAPA	**Tanaga Point A**	**3.87**	**80**			**Pn**	**13 20 10.3**	**+1.6**
KIMD	**Kanaga Island**	**4.23**	**81**			**Pn**	**13 20 15.3**	**+1.9**
KICM	**Kanaga Island**	**4.26**	**79**			**Pn**	**13 20 15.5**	**+1.6**
KIKV	**Kanaga Island**	**4.28**	**80**			**Pn**	**13 20 16.1**	**+2.0**
KIWB	**Kanaga Island**	**4.29**	**80**			**Pn**	**13 20 16.6**	**+2.3**
KINC	**Kanaga Island**	**4.31**	**79**			**Pn**	**13 20 16.5**	**+2.0**
KIRH	**Kanaga Island**	**4.33**	**80**			**Pn**	**13 20 16.8**	**+2.0**
ADK	**Adak**	**4.58**	**80**			**Pn**	**13 20 20.0**	**+1.8**
ADAG	**Mount Adagdak**	**4.63**	**79**			**Pn**	**13 20 20.7**	**+1.6**
GSMY	**Great Sitkin M**	**4.98**	**79**			**Pn**	**13 20 25.2**	**+1.4**
GSTR	**Great Sitkin T**	**4.98**	**78**	Pn		**Pn**	**13 20 25.3**	**+1.5**
KOWE	**Korovin West**	**6.11**	**76**			**Pn**	**13 20 40.8**	**+1.4**
ATKA	**Atka Island**	**6.13**	**78**			**Pn**	**13 20 41.8**	**+2.2**
KOKL	**Mount Kliuchef**	**6.14**	**77**			**Pn**	**13 20 41.2**	**+1.4**
PETK	**Petropavlovsk-**	**11.38**	**286**	Pn		Pn	13 21 56.6	+5.0
	0.1nm,0.3s,baz=95,slow=17,SNR=6.1							
PETK					Sn	**Sn**	**13 23 57.5**	**+0.1**
	0.1nm,0.3s,baz=240,slow=23,SNR=3.7							
ILAR	**Eielson Array**	**23.36**	**41**	P		**P**	**13 24 12.2**	**-4.3**
	0.2nm,0.6s,baz=249,slow=8.6,SNR=4.7							
H11N2	**WAKE ISLAND Hy**	**32.34**	**196**	T		T	14 00 40.7	
	baz=11,slow=76,SNR=110							
H11N3	**WAKE ISLAND Hy**	**32.35**	**196**	T		T	14 00 41.9	
	baz=11,slow=76,SNR=80							
H11N1	**WAKE ISLAND Hy**	**32.36**	**196**	T		T	14 00 41.8	
	baz=11,slow=76,SNR=90							
H11S1	**WAKE ISLAND Hy**	**33.57**	**196**	T		T	14 02 27.4	
	baz=11,slow=76,SNR=34							
H11S3	**WAKE ISLAND Hy**	**33.59**	**196**	T		T	14 02 28.7	
	baz=11,slow=76,SNR=30							
H11S2	**WAKE ISLAND Hy**	**33.59**	**196**	T		T	14 02 26.7	
	baz=11,slow=76,SNR=13							
YKA	**Yellowknife Ar**	**37.60**	**45**	P		**P**	**13 26 22.2**	**-0.1**
	0.2nm,0.5s,baz=282,slow=9.6,SNR=7.0							
PDAR	**Pinedale Array**	**49.39**	**69**	P		**P**	**13 27 57.0**	**-0.8**
	0.2nm,0.5s,baz=330,slow=5.2,SNR=3.0							
ARCES	**ARCESS Array B**	**57.53**	**348**	P		**P**	**13 28 56.7**	**-0.2**
	6.3nm,1.2s,baz=23,slow=7.2,SNR=3.6							
FINES	**FINESS Array B**	**65.04**	**345**	P		**P**	**13 29 47.6**	**-0.1**
	0.7nm,0.7s,baz=29,slow=6.3,SNR=3.4							

*IDC **05** 13:30:41.9±0.9, 33°.22N×75°.92E, h0km, mb3.7/13, mb1 3.9/16, mb1mx3.7/42, mbtmp3.7/16, ML3.7/3, Error ellipse: s-maj=25.3km s-min=16.2km az=53.0*
*NDI **05** 13:30:46.7±2.8, 33°.07N×75°.41E, h5km±9km, ML3.8*
*NNC **05** 13:30:53.7±4.6, 33°.70N×75°.94E, h78km±46km, mb3.6, mpv4.0, Error ellipse: s-maj=42.9km s-min=32.5km az=60.0*

ISC 05 13:30:47.0±0.6, 33°.34N±0°.05×75°.85E±0°.08, h35km, n42, σ2s39/49, mb3.6/12, 8C-5D, Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**0.91**	**187**	*e*P		**Pn**	**13 31 00.0**	**-3.2**
THN				*e*S		**Sn**	**13 31 08.5**	**-6.6**
DHRM	**DHARAMSHALA**	**1.15**	**161**	*e*P		**Pn**	**13 31 06.5**	**-0.3**
DHRM				*e*S		**Sn**	**13 31 25.6**	**+4.2**
DHRM				IAML			13 31 27.0	
	comp=N,2μm,0.2s							
DHRM				IAML			13 31 27.1	
	comp=E,2μm,0.3s							
BHK	**Bhakra**	**1.97**	**166**	*e*P		**Pn**	**13 31 21.0**	**+3.0**
BHK				*ex*		x	13 31 46.8	
SMLA	**Simla**	**2.47**	**153**	*e*P		Pn	13 31 27.9	+3.2
SMLA				*e*S		**Sn**	**13 31 57.2**	**+3.6**
SMLA				IAML			13 32 02.4	
	comp=N,958nm,0.2s							
SMLA				IAML			13 32 02.9	
	comp=E,859nm,0.3s							
DDI	**Dehra Dun**	**3.54**	**147**	*e*P		**Pn**	**13 31 42.5**	**+3.0**
DDI				*e*S		**Sn**	**13 32 22.1**	**+1.9**
DDI				IAML			13 32 25.1	
	comp=E,252nm,0.3s							
DDI				IAML			13 32 25.7	
	comp=N,268nm,0.1s							
NDI	**New Delhi**	**4.78**	**165**	*e*PB		Pn	13 32 08.0	+11
NDI				*e*S		**Sn**	**13 32 50.0**	**-0.8**
DANN	**Dangsing**	**8.42**	**124**	*e*P		**Pn**	**13 32 47.4**	**+0.6**
	comp=N,6.9nm,0.2s							
KOLN	**Koldanda**	**8.68**	**128**	*e*P		**Pn**	**13 32 46.2**	**-4.1**
GKN	**Gorkha**	**9.24**	**123**	*e*P		**Pn**	**13 32 55.7**	**-2.3**
AAK	**Ala-Archa**	**9.35**	**354**	Pn		**Pn**	**13 33 01.0**	**+1.7**
	comp=N,1.0nm,0.3s,baz=160,slow=8.1,SNR=15							

WMGZ	**Waiomatatini S**	**2.85**	**184**	P	Pn	13 33 58.8	-0.7
WMGZ				S	S	13 34 41.6	-0.5
HAZ	**Te Kaha**	**2.87**	**194**	P	Pn	13 33 58.9	-0.7
HAZ				S	S	13 34 45.4	+3.0
PKGZ	**Pakihiroa**	**2.95**	**189**	P	Pn	13 34 00.7	+0.1
RUGZ	**Raukumara Rang**	**3.09**	**194**	P	Pn	13 34 01.8	-0.3
PUZ	**Puketiti**	**3.12**	**186**	P	Pn	13 34 01.0	-1.2
PUZ				S	S	13 34 48.8	+1.9
TWGZ	**Tauwhareparae**	**3.25**	**189**	P	Pn	13 34 04.2	+0.6
MWZ	**Matawai**	**3.48**	**195**	P	Pn	13 34 04.6	-1.4
MWZ				S	S	13 34 58.3	+4.4
URZ	**Urewera**	**3.51**	**200**	P	Pn	13 34 06.6	+0.3
TKGZ	**Te Karaka**	**3.52**	**190**	P	Pn	13 34 06.1	-0.3
CNGZ	**Carnagh Statio**	**3.53**	**185**	P	Pn	13 34 07.1	+0.7
RIGZ	**Rimuhau**	**3.80**	**190**	P	Pn	13 34 07.3	-2.2
MUGZ	**Murupara**	**3.81**	**203**	P	Pn	13 34 09.9	+0.3
RTZ	**Ruatahuna**	**3.88**	**200**	P	Pn	13 34 10.3	-0.1
SNGZ	**Shannon Statio**	**3.95**	**195**	P	Pn	13 34 11.6	+0.5
PRGZ	**Paritu Road**	**4.00**	**188**	P	Pn	13 34 12.8	+1.1
KNZ	**Kokohu**	**4.12**	**191**	P	Pn	13 34 13.4	+0.4
RAHZ	**Arahi**	**4.13**	**197**	P	Pn	13 34 13.8	+0.6
MTHZ	**Maungataniwha**	**4.14**	**200**	P	Pn	13 34 14.8	+1.5
MRHZ	**Matea Rd**	**4.25**	**204**	P	Pn	13 34 15.8	+1.3
ARHZ	**Aropaoanui**	**4.49**	**197**	P	Pn	13 34 17.7	+0.6
HIZ	**Hauiti**	**4.66**	**220**	P	Pn	13 34 23.9	+4.7
MCHZ	**McNeill Hill**	**4.73**	**199**	P	Pn	13 34 20.8	+0.8
MOVZ	**Moawhango**	**5.00**	**207**	P	Pn	13 34 23.9	+0.7
KRHZ	**Kereru**	**5.01**	**200**	P	Pn	13 34 23.8	+0.6
PNHZ	**Pukenui**	**5.31**	**201**	P	Pn	13 34 27.0	+0.2
TSZ	**Takapari Road**	**5.51**	**202**	P	Pn	13 34 29.3	+0.1
MRZ	**Mangatainoka R**	**6.18**	**202**	P	Pn	13 34 37.2	0.0
TIWZ	**Tintock**	**6.20**	**200**	P	Pn	13 34 38.2	+0.8
OGWZ	**Otaki Gorge**	**6.45**	**204**	P	Pn	13 34 39.9	-0.6
TMWZ	**Te Maipa**	**6.50**	**199**	P	Pn	13 34 41.4	+0.2
MTW	**Mount Morrison**	**6.66**	**201**	P	Pn	13 34 42.6	-0.4
CAW	**Cannon Point**	**6.75**	**204**	P	Pn	13 34 43.6	-0.5
MSWZ	**Moikau Station**	**6.97**	**201**	P	Pn	13 34 46.5	-0.4
BHW	**Baring Head**	**7.08**	**204**	P	Pn	13 34 47.7	-0.5
PLWZ	**Palliser**	**7.11**	**201**	P	Pn	13 34 48.3	-0.3
TCW	**Tory Channel**	**7.12**	**208**	P	Pn	13 34 48.5	-0.1
THZ	**Tophouse**	**8.14**	**212**	P	Pn	13 35 02.2	+0.8

*IDC **05** 14:09:28.9±0.6,53.67N×35.32W,h0km,mb3.8/18, mb1 4.0/21,mb1mx3.9/42,mbtmp3.9/21,ML3.3/3,MS3.8/17, Ms1 3.8/17,ms1mx3.5/45,Error ellipse: s-maj=21.2km s-min=12.1km az=8.0*

*NEIC **05** 14:09:31.5±1.5,53.68N±0.08×35.2W±0.2,h11km±4km, mb4.5/29,Error ellipse: s-maj=14.6km s-min=9.4km az=120.0*

ISC 05 14:09:31.0±0.5,53.7N±0.1×35.25W±0.07,h10km,n61, σ1s13/57,mb4.2/29,MS3.7/15,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFJD	**Kangerlussuaq**	**15.26**	**337**	Pn	**Pn**	**14 13 04.4**	**-1.8**
	0.2nm,0.3s,baz=155,slow=15,SNR=2.1						
CMLA	**Cha da Macela**	**17.31**	**153**	P	**P**	**14 13 34.3**	**+0.2**
SCHQ	**Schefferville**	**18.40**	**286**	P	**P**	**14 13 43.1**	**-2.8**
	0.2nm,0.3s,baz=85,slow=6.1,SNR=5.5						
SCHQ				LR	LR	14 19 01.0	
	comp=Z,357nm,19.1s,baz=30,slow=31						
SCHQ	**Schefferville**	**18.40**	**286**	P	**P**	**14 13 45.1**	**-0.9**
EKA	**Eskdalemuir Ar**	**18.61**	**72**	P	**P**	**14 13 47.9**	**-0.2**
	baz=279,slow=10.0,SNR=3.9						
FRB	**Frobisher Bay**	**19.74**	**314**	LR	LR	14 19 57.5	
	comp=Z,230nm,18.9s,baz=90,slow=32						
ESDC	**Sonseca Array**	**25.39**	**111**	P	**P**	**14 14 57.9**	**-0.4**
	3.6nm,0.9s,baz=315,slow=8.8,SNR=13						
ESDC	**Sonseca Array**	**25.39**	**111**	P	**P**	**14 14 57.3**	**-1.0**
NOA	**NORSAR Array B**	**25.60**	**55**	P	**P**	**14 14 59.6**	**-0.4**
	1.3nm,0.9s,baz=278,slow=9.9,SNR=3.5						
NOA				LR	LR	14 22 41.9	
	comp=Z,148nm,21.2s,baz=265,slow=31						
HFS	**Hagfors**	**26.92**	**56**	LR	LR	14 24 35.1	
	comp=Z,269nm,18.3s,baz=292,slow=34						
SADO	**Sadowa**	**29.60**	**270**	LR	LR	14 26 25.7	
	comp=Z,298nm,19.8s,baz=94,slow=34						
GERES	**GERESS Array B**	**30.50**	**79**	P	**P**	**14 15 44.3**	**+0.2**
	0.5nm,0.8s,baz=298,slow=5.1,SNR=3.5						
GERES				LR	LR	14 28 02.8	
	comp=Z,158nm,18.1s,baz=288,slow=36						
ARCES	**ARCESS Array B**	**31.24**	**36**	LR	LR	14 25 54.2	
	comp=Z,159nm,18.3s,baz=259,slow=32						
FCC	**Fort Churchill**	**32.15**	**303**	P	**P**	**14 15 59.0**	**+0.7**
FCC				IAmb	IAmb	14 16 12.6	
	comp=Z,11nm,1.4s						
FINES	**FINESS Array B**	**32.61**	**51**	P	**P**	**14 16 01.5**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=266,slow=9.0,SNR=4.6						
FINES				LR	LR	14 27 36.8	
	comp=Z,269nm,18.1s,baz=266,slow=33						
EYMN	**Ely**	**35.18**	**284**	P	**P**	**14 16 25.4**	**+0.6**
ULM	**Lac du Bonnet**	**36.51**	**290**	P	**P**	**14 16 35.7**	**-0.4**
	comp=Z,4.0nm,0.9s,baz=80,slow=9.8,SNR=7.2						
ULM				LR	LR	14 30 11.5	
	comp=Z,111nm,18.9s,baz=38,slow=34						
ULM	**Lac du Bonnet**	**36.51**	**290**	IAmb	IAmb	14 17 00.9	
	comp=Z,13nm,1.5s						
BURAR	**Bucovina Array**	**37.77**	**74**	P	**P**	**14 16 48.1**	**+1.1**
AKASG	**Malin Array Be**	**38.41**	**67**	P	**P**	**14 16 51.5**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=297,slow=8.5,SNR=4.1						
AKASG				PcP	**PcP**	**14 19 04.2**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=333,slow=0.6,SNR=4.2						
AKASG				LR	LR	14 32 11.9	
	comp=Z,72nm,18.1s,baz=320,slow=35						
YKA	**Yellowknife Ar**	**40.25**	**315**	P	**P**	**14 17 07.6**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=64,slow=9.0,SNR=5.8						
YKA				PcP	**PcP**	**14 19 09.7**	**-1.3**
	comp=Z,0.6nm,0.8s,baz=61,slow=3.7,SNR=7.0						
CCM	**Cathedral Cave**	**40.88**	**271**	P	**P**	**14 17 13.9**	**+1.0**
HHAR	**Hobbs**	**43.67**	**271**	P	**P**	**14 17 36.4**	**+0.6**
HHAR				IAmb	IAmb	14 17 39.0	
	comp=Z,9.7nm,1.1s						
W39A	**Magazine**	**44.32**	**270**	P	**P**	**14 17 41.7**	**+0.8**
W39A				IAmb	IAmb	14 17 44.4	
	comp=Z,9.0nm,1.0s						
BR131	**Keskin Array S**	**47.38**	**78**	P	**P**	**14 18 05.4**	**+0.2**
BRTR	**Keskin Array B**	**47.38**	**78**	P	**P**	**14 18 06.7**	**+1.4**
	comp=Z,1.8nm,0.9s,baz=322,slow=4.5,SNR=10						
BRTR				LR	LR	14 38 31.6	
	comp=Z,34nm,18.2s,baz=275,slow=37						
BRTR	**Keskin Array B**	**47.38**	**78**	P	**P**	**14 18 06.1**	**+0.8**
ISCO	**Idaho Springs**	**48.20**	**283**	P	**P**	**14 18 11.8**	**+0.1**
ISCO				IAmb	IAmb	14 18 19.8	
	comp=Z,4.1nm,0.9s						
BMAR	**Burnt Mountain**	**48.24**	**331**	P	**P**	**14 18 12.5**	**+1.0**
PD31	**Pinedale Array**	**48.51**	**289**	P	**P**	**14 18 13.5**	**-0.6**
PD31				IAmb	IAmb	14 18 31.0	
	comp=Z,6.7nm,1.4s						
PDAR	**Pinedale Array**	**48.51**	**289**	P	**P**	**14 18 12.9**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=66,slow=7.4,SNR=7.8						
PDAR				LR	LR	14 37 38.3	
	comp=Z,138nm,18.5s,baz=40,slow=35						
AMTX	**Amarillo**	**49.22**	**276**	P	**P**	**14 18 20.4**	**+1.1**
TOA0	**Torodi Ar. Sit**	**49.87**	**130**	P	**P**	**14 18 24.3**	**-0.1**
TOA0				IAmb	IAmb	14 18 35.6	
	comp=Z,5.0nm,1.1s						
TORD	**Torodi Ar. Bea**	**49.87**	**130**	P	**P**	**14 18 22.9**	**-1.5**
	comp=Z,2.7nm,0.9s,baz=333,slow=7.0,SNR=10						
TORD	**Torodi Ar. Bea**	**49.87**	**130**	P	**P**	**14 18 24.1**	**-0.3**
KBZ	**Khabaz**	**50.02**	**68**	P	**P**	**14 18 26.5**	**+1.3**
	comp=Z,1.7nm,0.8s,baz=291,slow=7.0,SNR=3.8						
KBZ				LR	LR	14 40 08.8	
	comp=Z,52nm,18.4s,baz=337,slow=37						
ILAR	**Eielson Array**	**50.75**	**329**	P	**P**	**14 18 31.2**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=33,slow=3.9,SNR=4.3						
ILAR				PcP	**PcP**	**14 19 44.9**	**-2.5**
	comp=Z,0.5nm,0.9s,baz=1.9,slow=2.7,SNR=3.4						
IMAR	**Indian Mountai**	**51.85**	**333**	P	**P**	**14 18 40.4**	**+1.7**
DBIC	**Dimbokro**	**52.98**	**141**	P	**P**	**14 18 47.3**	**-0.4**
	comp=Z,2.7nm,1.0s,baz=336,slow=9.2,SNR=3.6						
DBIC				LR	LR	14 38 02.8	
	comp=Z,125nm,20.7s,baz=326,slow=32						
MNTX	**Cornudas Mount**	**53.65**	**276**	P	**P**	**14 18 52.7**	**+0.1**
WVOR	**Wild Horse Val**	**53.75**	**294**	P	**P**	**14 18 54.9**	**+1.6**
WVOR				IAmb	IAmb	14 19 01.9	
	comp=Z,4.7nm,1.1s						
PINE	**Pine Mountain**	**54.06**	**297**	P	**P**	**14 18 56.1**	**+0.5**
TXAR	**Lajitas Array**	**54.35**	**272**	P	**P**	**14 18 56.7**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=73,slow=7.7,SNR=2.8						
TXAR				LR	LR	14 41 28.8	
	comp=Z,73nm,19.2s,baz=0.0,slow=35						
KVN	**Kaiserville**	**55.79**	**291**	P	**P**	**14 19 09.1**	**+0.9**
PAHR	**Pah Rah Range**	**56.04**	**292**	P	**P**	**14 19 11.6**	**+1.7**
PAHR				IAmb	IAmb	14 19 19.1	
	comp=Z,5.8nm,1.2s						
NV11	**Mina Array Sit**	**56.26**	**290**	P	**P**	**14 19 12.7**	**+1.2**
RYN	**Ryan**	**56.33**	**291**	P	**P**	**14 19 12.7**	**+0.7**
RYN				IAmb	IAmb	14 19 15.3	
	comp=Z,3.9nm,1.0s						
NVAR	**Mina Array Bea**	**56.34**	**291**	P	**P**	**14 19 12.5**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=73,slow=7.6,SNR=3.0						
NVAR				LR	LR	14 42 09.2	
	comp=Z,82nm,19.6s,baz=9.0,slow=35						
NVAR	**Mina Array Bea**	**56.34**	**291**	P	**P**	**14 19 12.8**	**+0.6**
PNTR	**Pine Nut**	**56.60**	**292**	P	**P**	**14 19 15.6**	**+1.6**
PNTR				IAmb	IAmb	14 19 23.9	
	comp=Z,5.6nm,1.0s						
Y12C	**Blythe**	**57.53**	**284**	P	**P**	**14 19 20.9**	**+0.6**
Y12C				IAmb	IAmb	14 19 24.4	
	comp=Z,5.1nm,0.9s						
XPFO	**Pion Flat**	**58.74**	**285**	P	**P**	**14 19 30.7**	**+1.7**
XPFO				IAmb	IAmb	14 19 37.6	
	comp=Z,2.8nm,0.8s						
PFO	**Pinyon Flats O**	**58.74**	**285**	P	**P**	**14 19 30.6**	**+1.6**
GEYT	**Alibeck**	**62.31**	**63**	LR	LR	14 49 42.5	
	comp=Z,45nm,18.4s,baz=340,slow=39						
MKAR	**Makanchi Array**	**66.70**	**42**	P	**P**	**14 20 22.0**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=343,slow=6.3,SNR=5.3						
SONM	**Songino Array**	**73.72**	**26**	P	**P**	**14 21 05.8**	**+0.9**
	comp=Z,1.1nm,0.9s,baz=316,slow=11,SNR=4.6						
SONM	**Songino Array**	**73.72**	**26**	P	**P**	**14 21 05.3**	**+0.4**
LPAZ	**La Paz**	**75.22**	**213**	P	**P**	**14 21 15.0**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=18,slow=6.4,SNR=3.8						
LPAZ	**La Paz**	**75.22**	**213**	IAmb	IAmb	14 22 13.6	
	comp=Z,10nm,1.7s						
WRA	**Warramunga Arr**	**145.34**	**17**	PKPbc	**PKPbc**	**14 29 07.1**	**-1.7**
	comp=Z,0.6nm,0.7s,baz=354,slow=3.2,SNR=3.1						
ASAR	**Alice Springs**	**148.89**	**20**	PKPbc	**PKPdf**	**14 29 17.1**	**+2.2**
	comp=Z,0.5nm,0.7s,baz=348,slow=2.1,SNR=7.1						

WEL 05 14:18:12.8±1.0,36.5S±11×18.0W±1.4,h33km,M3.7/11, ML4.0/11,MLv3.7/11,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.58**	**223**	P	Pn	14 18 52.2	0.0
MXZ				S	Sn	14 19 23.5	+1.2
WMGZ	**Waiomatatini S**	**2.71**	**217**	P	Pn	14 18 55.0	+1.0
PKGZ	**Pakihiroa**	**2.94**	**221**	P	Pn	14 18 57.7	+0.4
PUZ	**Puketiti**	**2.99**	**216**	P	Pn	14 18 58.0	+0.2
PUZ				S	Sn	14 19 33.9	+1.4
HAZ	**Te Kaha**	**3.01**	**226**	P	Pn	14 18 59.5	+1.3
HAZ				S	Sn	14 19 58.9	+2.8
RUGZ	**Raukumara Rang**	**3.21**	**224**	P	Pn	14 19 01.7	+0.6
CNGZ	**Carnagh Statio**	**3.34**	**213**	P	Pn	14 19 03.2	+0.4
TKGZ	**Te Karaka**	**3.47**	**217**	P	Pn	14 19 05.0	+0.5
MWZ	**Matawai**	**3.56**	**221**	P	Pn	14 19 05.4	-0.4
MWZ				S	Sn	14 19 46.3	-0.4
RIGZ	**Rimuhau**	**3.73**	**215**	P	Pn	14 19 08.0	-0.1
RAGZ	**Rawiri**	**3.74**	**220**	P	Pn	14 19 08.1	-0.2
URZ	**Urewera**	**3.74**	**225**	P	Pn	14 19 07.9	-0.3
OPRZ	**Ohinepanea**	**3.83**	**235**	P	Pn	14 19 09.4	-0.1
SNGZ	**Shannon Statio**	**3.99**	**218**	P	Pn	14 19 11.7	0.0
KNZ	**Kokohu**	**4.02**	**213**	P	Pn	14 19 10.7	-1.3
RTZ	**Ruatahuna**	**4.06**	**223**	P	Pn	14 19 12.9	+0.2
MUGZ	**Murupara**	**4.08**	**226**	P	Pn	14 19 12.0	-0.9
RAHZ	**Arahi**	**4.22**	**219**	P	Pn	14 19 15.7	+0.9
MTHZ	**Maungataniwha**	**4.30**	**222**	P	Pn	14 19 16.2	+0.2
TOZ	**Tahuroa Road**	**4.50**	**242**	P	Pn	14 19 19.0	+0.3
MRHZ	**Matea Rd**	**4.53**	**225**	P	Pn	14 19 18.9	-0.2
BHHZ	**Black Hill Sta**	**5.18**	**221**	P	Pn	14 19 27.4	-0.7

*NIED **05** 14:28:00,33.50N×139.50E,h11km,Mw4.3 Best double couple: M0 3.38000×10^15 NP1:φs300.00000°,δ86.00000°, λ169.00000°. NP2:φs31.00000°,δ79.00000°,λ4.00000°.*

*IDC **05** 14:28:03.4±0.5,33.42N×139.53E,h0km,mb4.1/24, mb1 4.2/31,mb1mx4.2/41,mbtmp4.1/31,ML3.7/6,MS3.3/10, Ms1 3.3/10,ms1mx3.2/47,Error ellipse: s-maj=15.9km s-min=11.9km az=87.0*

*JMA **05** 14:28:06.8,33.53N×139.51E,h28km±1km,M4.6*

JMA Felt II J1.

*NEIC **05** 14:28:08.3±1.6,33.42N±0.05×139.52E±0.07,h30km±5km, mb4.6/67,Error ellipse: s-maj=8.9km s-min=7.5km az=77.0*

*BJI **05** 14:28:09.0±0.0,33.50N×139.50E,h20km,mB4.9/20, mb4.4/29,Ms4.3/10,Ms7 4.1/8*

ISC 05 14:28:07.2±0.3,33.47N±0.03×139.47E±0.05,h22km,n138, σ1s11/133,mb4.5/51,MS3.5/6,1C-6D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMKN	**Mikurajimanish**	**0.43**	**14**	↓P	**Pb**	**14 28 14.9**	**-1.2**
JMKN				S	**Sb**	**14 28 20.4**	**-1.7**
JHJ2	**Mitsune**	**0.46**	**141**	↓P	**Pb**	**14 28 16.7**	**+0.1**
JHJ2				S	**Sb**	**14 28 23.7**	**+0.6**
JHJ2	**Mitsune**	**0.46**	**141**		**Pb**	**14 28 16.7**	**+0.1**
JHCJ	**Hachijojimakas**	**0.49**	**145**	↓P	**Pb**	**14 28 16.9**	**-0.1**
JHCJ				S	**Sb**	**14 28 24.1**	**+0.4**
JKO	**Kozu shima**	**0.76**	**339**	↓P	**Pb**	**14 28 20.5**	**-1.3**
JSKK	**Shikinejimakit**	**0.89**	**346**	↓P	**Pb**	**14 28 22.2**	**-1.7**
JNIO	**Niijimaoohara**	**0.90**	**350**	P	**Pb**	**14 28 22.6**	**-1.4**
JAOM	**Aogashimamukai**	**1.04**	**166**	↓P	**Pn**	**14 28 26.3**	**-0.1**
JTHY	**Toshimahigashi**	**1.06**	**352**	P	**Pn**	**14 28 25.3**	**-1.4**
TK03	**Tokai 3**	**1.43**	**299**	P	**Pn**	**14 28 31.7**	**0.0**
KTJ3	**Kamata3**	**1.49**	**347**	P	**Pn**	**14 28 31.3**	**-1.4**
INU	**Inuyama**	**2.76**	**313**	P	**Pn**	**14 28 50.2**	**+0.1**
MJAR	**Matsushiro Arr**	**3.23**	**342**	Pn	**Pn**	**14 28 57.5**	**+0.9**
	1.1nm,0.3s,baz=65,slow=13,SNR=93						
MJAR				Sn	**Sn**	**14 29 37.8**	**+3.4**
	0.3nm,0.3s,baz=188,slow=16,SNR=3.1						
MAJO	**Matsushiro**	**3.23**	**342**		**Pn**	**14 28 57.7**	**+1.1**
MAT	**Matsushiro**	**3.23**	**342**	P	**Pn**	**14 28 57.8**	**+1.2**
MAT				S	**Sn**	**14 29 37.5**	**+3.0**
MJB9	**Matsu-Tunnel**	**3.24**	**342**		**Pn**	**14 28 57.9**	**+1.3**
JCJ	**Chichijima**	**6.78**	**159**	Pn	**Pn**	**14 29 43.4**	**-1.9**
	8.3nm,0.3s,baz=302,slow=20,SNR=5.9						
JCJ				Sn	**Sn**	**14 30 57.5**	**-4.3**
	12nm,0.3s,baz=288,slow=19,SNR=2.6						
JCJ				LR	LR	14 31 52.5	
	comp=Z,98nm,21.2s,baz=330,slow=34						
JNU	**Nakatsue**	**7.20**	**270**	Pn	**Pn**	**14 29 52.0**	**+0.8**
	2.8nm,0.3s,baz=54,slow=3.3,SNR=27						
JNU				Sn	**Sn**	**14 31 10.2**	**-2.1**
	baz=149,slow=15,SNR=1.8						
JNU				LR	LR	14 31 44.8	
	comp=Z,83nm,20.3s,baz=94,slow=30						
JNU	**Nakatsue**	**7.20**	**270**		**Pn**	**14 29 52.0**	**+0.8**
ERM	**Erimo**	**9.01**	**18**	Pn	**Pn**	**14 30 15.6**	**-0.4**
KSRS	**Korea Array**	**10.22**	**296**	Pn	**Pn**	**14 30 34.0**	**+1.5**
	0.1nm,0.3s,baz=119,slow=7.5,SNR=3.7						
KSRS				LR	LR	14 34 18.2	
	comp=Z,238nm,21.1s,baz=102,slow=36						
ASAJ	**Asahikawa**	**10.90**	**12**	Pn	**Pn**	**14 30 40.5**	**-1.3**
	1.3nm,0.3s,baz=225,slow=12,SNR=14						
ASAJ				Sn	Sn	14 32 33.1	-10
	baz=76,slow=19,SNR=1.7						
ASAJ				LR	LR	14 35 11.4	
	comp=Z,264nm,19.5s,baz=206,slow=39						
JKA	**Kamikawa-asahi**	**10.90**	**12**		**Pn**	**14 30 40.5**	**-1.4**
JKA					Sn	14 32 33.1	-10
USRK	**Ussuriysk Ar.**	**12.19**	**334**	Pn	**Pn**	**14 30 59.6**	**+0.2**
	baz=153,slow=13,SNR=3.6						
USRK				LR	LR	14 35 14.1	
	comp=Z,130nm,20.0s,baz=145,slow=35						
MDJ	**Mudanjiang**	**13.50**	**328**	P	**P**	**14 31 26.8**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,12nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,220nm,3.9s						
YSS	**Yuzh-Sakhalins**	**13.70**	**10**	Pn	**Pn**	**14 31 20.4**	**+0.4**
SSE	**Sheshan**	**15.64**	**266**	Pn	**Pn**	**14 31 47.7**	**+1.4**
SSE				IAmb	IAmb	14 31 50.0	
	comp=Z,25nm,0.6s						
KLR	**Kul'dur**	**16.76**	**342**	Pn	**Pn**	**14 31 58.6**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=147,slow=11,SNR=3.2						
KLR				LR	LR	14 38 29.2	
	comp=Z,89nm,19.9s,baz=155,slow=37						
YOJ	**Yonaguni jima**	**16.95**	**242**	Pn	**Pn**	**14 32 02.2**	**-0.8**
YOJ				IAmb	IAmb	14 32 10.3	
	comp=Z,73nm,1.0s						
NJ2	**Nanjing**	**17.40**	**271**	*eP*	**Pn**	**14 32 08.4**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
GUMO	**Guam**	**20.40**	**165**	LR	LR	14 39 30.9	
	comp=Z,145nm,19.8s,baz=344,slow=34						
WHN	**Wuhan**	**21.49**	**269**	⇑P	P	14 33 02.3	+8.0
HHC	**Hu-ho-hao-te**	**23.36**	**296**	*eP*	**P**	**14 33 15.0**	**+0.8**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,31nm,4.1s						
PETK	**Petropavlovsk-**	**23.57**	**28**	P	**P**	**14 33 19.6**	**+3.6**
	comp=Z,5.1nm,0.9s,baz=231,slow=9.1,SNR=6.4						
PETK				LR	LR	14 43 41.4	
	comp=Z,60nm,18.3s,baz=236,slow=40						
PETK	**Petropavlovsk-**	**23.57**	**28**	P	**P**	**14 33 17.1**	**+1.1**
ENH	**Enshi**	**25.62**	**271**	P	**P**	**14 33 36.5**	**+1.4**
ENH				IAmb	IAmb	14 34 00.1	
	comp=Z,15nm,1.1s						
MA2	**Magadan**	**27.16**	**13**	P	**P**	**14 33 49.5**	**+0.8**
	comp=Z,8.1nm,0.8s,baz=184,slow=14,SNR=2.8						
MA2	**Magadan**	**27.16**	**13**	P	**P**	**14 33 49.0**	**+0.3**
H11N2	**WAKE ISLAND Hy**	**27.98**	**112**	T	T	15 03 00.7	
	baz=305,slow=75,SNR=301						
H11N1	**WAKE ISLAND Hy**	**27.99**	**112**	T	T	15 03 01.0	
	baz=305,slow=75,SNR=321						
H11N3	**WAKE ISLAND Hy**	**28.00**	**112**	T	T	15 03 01.9	
	baz=305,slow=75,SNR=288						
H11S3	**WAKE ISLAND Hy**	**28.54**	**115**	T	T	15 03 43.4	
	baz=307,slow=75,SNR=92						
H11S1	**WAKE ISLAND Hy**	**28.54**	**115**	T	T	15 03 42.0	
	baz=307,slow=75,SNR=108						
H11S2	**WAKE ISLAND Hy**	**28.56**	**115**	T	T	15 03 44.7	
	baz=307,slow=75,SNR=66						
SONM	**Songino Array**	**28.65**	**310**	P	**P**	**14 34 03.7**	**+1.4**
	comp=Z,1.0nm,1.0s,baz=100,slow=6.3,SNR=3.7						
SONM				LR	LR	14 46 07.3	
	comp=Z,40nm,21.2s,baz=28,slow=38						
SONM	**Songino Array**	**28.65**	**310**	IAmb	IAmb	14 34 12.7	
	comp=Z,7.1nm,1.7s						
YAK	**Yakutsk**	**29.25**	**351**	P	**P**	**14 34 06.5**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=187,slow=19,SNR=2.4						
YAK	**Yakutsk**	**29.25**	**351**	IAmb	IAmb	14 34 37.5	
	comp=Z,8.8nm,0.6s						
CD2	**Chengdu**	**30.24**	**275**	P	**P**	**14 34 16.2**	**-0.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
SEY	**Seymchan**	**30.59**	**12**	P	**P**	**14 34 19.0**	**0.0**
	comp=Z,1.7nm,0.8s,baz=180,slow=16,SNR=2.5						
GTA	**Gaotai**	**32.26**	**292**	*eP*	P	14 34 40.4	+6.2
GTA				pP	sP	14 34 45.9	+3.0
GTA				sP	pwP	14 34 50.0	+7.3
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GSTR	**Great Sitkin T**	**36.87**	**46**	P	**P**	**14 35 13.9**	**+0.1**
TIXI	**Tiksi**	**38.65**	**355**	P	**P**	**14 35 28.6**	**0.0**
	comp=Z,1.7nm,0.3s,baz=0.0,slow=24,SNR=6.9						
TIXI	**Tiksi**	**38.65**	**355**	P	**P**	**14 35 28.6**	**0.0**
CMAR	**Chiang Mai Arr**	**39.12**	**258**	P	**P**	**14 35 33.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=41,slow=8.4,SNR=2.5						
LSA	**Lhasa**	**41.04**	**278**	P	**P**	**14 35 48.5**	**-1.1**
WMQ	**Urumqi**	**41.14**	**300**	*eP*	**P**	**14 35 51.9**	**+2.2**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.9s						
WMQ				LR	LR		
	comp=Z,130nm,25.7s						
WMQ				LR	LR		
	comp=Z,1μm,28.9s						
WMQ				LR	LR	

H17A **Grant Village** **79.73 43** P **P** **14 40 15.3 +1.6**
H17A IAmb IAmb 14 40 17.3
comp=Z,8.7nm,0.9s
BRTR **Keskin Array B** **80.00 311** P **P** **14 40 15.4 +0.3**
comp=Z,0.4nm,0.8s,baz=104,slow=4.8,SNR=2.9
R11A **Troy Canyon, C** **80.23 50** P **P** **14 40 15.9 -0.5**
TPNV **Topopah Spring** **80.60 52** P **P** **14 40 18.4 0.0**
TPNV IAmb IAmb 14 40 19.9
comp=Z,4.9nm,0.8s
DUG **Dugway, Tooele** **80.91 48** P **P** **14 40 20.6 +0.6**
GSC **Goldstone, Bar** **81.16 54** P **P** **14 40 21.8 +0.5**
GSC IAmb IAmb 14 40 32.4
comp=Z,9.8nm,1.4s
PSUT **Pine Spring** **81.23 49** P **P** **14 40 20.8 -1.0**
PD31 **Pinedale Array** **81.31 44** P **P** **14 40 21.2 -1.0**
PD31 IAmb IAmb 14 41 11.9
comp=Z,9.8nm,1.9s
PDAR **Pinedale Array** **81.31 44** P **P** **14 40 22.4 +0.3**
comp=Z,1.1nm,0.6s,baz=275,slow=1.5,SNR=12
NLU **North Lily Min** **81.50 47** P **P** **14 40 22.3 -0.9**
SHPR **Sheep Range** **81.57 52** P **P** **14 40 22.9 -0.6**
MSU **Marysvale** **82.30 49** P **P** **14 40 28.2 +0.7**
PFO **Pinyon Flats O** **82.36 55** P **P** **14 40 27.3 -0.4**
PFO IAmb IAmb 14 40 29.4
comp=Z,11nm,1.6s
XPFO **Pion Flat** **82.37 55** P **P** **14 40 27.3 -0.5**
XPFO IAmb IAmb 14 40 29.4
comp=Z,12nm,1.6s
LCMT **Little Creek M** **82.52 50** P **P** **14 40 28.6 +0.1**
P17A **Butcher Ranch,** **82.61 47** P **P** **14 40 29.0 0.0**
VYHS **Vyhne** **82.73 325** *eP* **P** **14 40 29.4 +0.2**
KNB **Kanab** **82.79 50** P **P** **14 40 30.2 +0.2**
SRU **San Rafael Swe** **82.97 47** P **P** **14 40 31.0 +0.2**
ULM **Lac du Bonnet** **83.35 32** P **P** **14 40 31.6 -0.8**
comp=Z,2.3nm,0.9s,baz=329,slow=5.9,SNR=4.1
U15A **North Rim** **83.48 50** P **P** **14 40 33.5 -0.1**
Y14A **Wickenburg** **84.50 53** P **P** **14 40 38.4 -0.3**
Y14A IAmb IAmb 14 40 39.9
comp=Z,3.7nm,0.8s
N23A **Red Feather La** **84.58 44** P **P** **14 40 39.3 +0.1**
KHC **Kasperske Hory** **84.72 328** *eP* **P** **14 40 41.5 +2.1**
KHC *ep*P **pP** **14 40 46.5 +0.4**
GERES **GERESS Array B** **84.87 327** P **P** **14 40 40.0 -0.2**
comp=Z,1.0nm,0.7s,baz=34,slow=5.0,SNR=7.8
X16A **Lo Mia Camp, P** **85.25 52** P **P** **14 40 42.5 -0.1**
X16A IAmb IAmb 14 40 45.2
comp=Z,4.3nm,1.1s
ISCO **Idaho Springs** **85.49 44** P **P** **14 40 43.9 +0.1**
ISCO IAmb IAmb 14 40 45.5
comp=Z,2.6nm,0.7s
AMTX **Amarillo** **91.09 46** P **P** **14 41 10.4 0.0**
TX31 **Lajitas Ar. Si** **93.57 51** P **P** **14 41 22.0 +0.1**
TX32 **Lajitas Array** **93.57 51** P **P** **14 41 22.5 +0.6**
TXAR **Lajitas Array** **93.57 51** P **P** **14 41 22.6 +0.7**
comp=Z,3.1nm,0.8s,baz=294,slow=3.4,SNR=14
LPAZ **La Paz** **149.81 62** PKPbc **PKPbc** **14 47 57.5 +0.7**
comp=Z,1.9nm,0.7s,baz=9.5,slow=4.9,SNR=7.1

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*MAN **05** 14:41:24.0,2˚.81N×128˚.23E, h8km, mb5.6, ML4.6, MS5.0*
*MOS **05** 14:41:27.8±0.9, 3˚.24N×128˚.22E, h42km, mb5.1/46, Error ellipse: s-maj=8.9km s-min=5.4km az=103.6*
*KLM **05** 14:41:29.0, 3˚.17N×128˚.66E, h44km, mb5.0*
*IDC **05** 14:41:29.5±1.6, 3˚.17N×128˚.25E, h43km±15km, mb4.6/33, mb1 4.6/35, mb1mx4.5/42, mbtmp4.8/35, ML4.4/2, MS3.8/22, Ms1 3.8/22, ms1mx3.7/45, Error ellipse: s-maj=14.2km s-min=8.8km az=76.0*
*NEIC **05** 14:41:30.6±1.4, 3˚.18N±0˚.05×128˚.35E±0˚.04, h55km±5km, mb5.1/90, Error ellipse: s-maj=8.0km s-min=5.7km az=169.0*
*DJA **05** 14:41:30.9±0.4, 3˚N±3˚×12˚8E±˚, h43km±3km, M4.9/52, mB5.2/22, mb5.1/52, MLv5.4/4, MLv5.1/19, Mw(mB)4.7/22, Mwp5.0/1*
ISC 05 14:41:30.5±0.5, **3˚16N**±0˚03×**128˚39E**±0˚05, **h53**km±4km, **n340**, σ1**s31**/337, **mb5.0**/111, **MS3.9**/23, **17C-4D, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
TNTI	**Ternate**	**2.58**	**203**	P	**Pn**	**14 42 10.1**	**+0.3**
TNTI	**Ternate**	**2.58**	**203**		**Pn**	**14 42 09.8**	**0.0**
LBMI	**Labuha**	**3.87**	**193**	P	**Pn**	**14 42 30.2**	**+2.6**
DDMP	**Don Marcelino,**	**3.96**	**318**	*eP*	**Pn**	**14 42 27.8**	**-1.0**
DDMP				*eS*	**Sn**	**14 43 17.9**	**+4.0**
MATI	**Mati**	**4.32**	**331**	*eP*	**Pn**	**14 42 34.0**	**+0.3**
MATI				*eS*	Sn	14 43 37.8	+15
GSPH	**General Santos**	**4.50**	**310**	⇑*ip*	**Pn**	**14 42 37.6**	**+1.4**
DAV	**Davao City (W)**	**4.79**	**324**	P	**Pn**	**14 42 39.5**	**-0.6**
	18nm,0.3s,baz=70,slow=0.9,SNR=4.3						
DAV				S	**Sn**	**14 43 37.4**	**+3.1**
	37nm,0.3s,baz=272,slow=18,SNR=3.6						
DAV				LR	LR	14 44 47.9	
	comp=Z,2µm,21.4s,baz=154,slow=42						
DAV	**Davao City (W)**	**4.79**	**324**	P	**Pn**	**14 42 43.1**	**+3.0**
DAV	**Davao City (W)**	**4.79**	**324**		**Pn**	**14 42 39.3**	**-0.8**
DMPH	**Davao City--Mi**	**4.84**	**324**	⇑*eP*	**Pn**	**14 42 45.2**	**+4.3**
SWI	**Sorong**	**4.92**	**144**	P	**Pn**	**14 42 43.2**	**+1.3**
	0.7nm2µm182nm,0.9s						
SIJI	**Sorong**	**4.93**	**144**	P	**Pn**	**14 42 43.2**	**+1.2**
	11nm,0.3s,baz=147,slow=21,SNR=35						
SIJI				S	**Sn**	**14 43 37.6**	**-0.2**
	7.3nm,0.3s,baz=99,slow=18,SNR=11						
SIJI				LR	LR	14 44 47.5	
	comp=Z,1µm,20.1s,baz=336,slow=40						
KCP	**Kidapawan**	**5.04**	**319**	⇓*iP*	**Pn**	**14 42 45.1**	**+1.5**
KCP				*i* S	**Sn**	**14 43 46.7**	**+6.0**
SKMP	**Bagumbayan, Su**	**5.08**	**311**	*eP*	**Pn**	**14 42 43.7**	**-0.5**
SKMP				*eS*	**Sn**	**14 43 44.4**	**+2.8**
KMSI	**Cibinong**	**5.10**	**240**	P	**Pn**	**14 42 44.9**	**+0.6**
	5.1nm8µm692nm,0.7s						
SANI	**Sanana**	**5.70**	**205**	P	**Pn**	**14 42 53.4**	**+0.7**
	0.7nm3µm210nm,1.1s						
BUKP	**Musuan**	**5.74**	**325**	*eP*	**Pn**	**14 42 54.8**	**+1.5**
BUKP				*eS*	**Sn**	**14 44 02.5**	**+4.7**
CTBH	**Cotabato--PC H**	**5.77**	**315**	⇑*eP*	**Pn**	**14 42 53.6**	**+0.1**
CGP	**Cagayan de Oro**	**6.42**	**325**	*eP*	**Pn**	**14 43 05.8**	**+3.4**
MSAI	**Masohi**	**6.48**	**175**	P	Pn	14 43 09.1	+5.7
	0.2nm627nm73nm,0.9s						
NLAI	**Namlea**	**6.48**	**191**	P	**Pn**	**14 43 06.0**	**+2.6**
	0.4nm2µm131nm,0.8s						
AAI	**Ambon**	**6.80**	**182**	P	**Pn**	**14 43 12.3**	**+4.5**
	0.6nm3µm2µm219nm,1.0s						
MRSI	**Marisa**	**6.97**	**248**	P	**Pn**	**14 43 10.3**	**+0.2**
	1.9nm1.9nm5µm606nm,0.7s						
LUWI	**Luwuk**	**6.99**	**233**	P	**Pn**	**14 43 12.1**	**+1.7**
	2.1nm2.1nm3µm309nm,0.7s						
LUWI	**Luwuk**	**6.99**	**233**		**Pn**	**14 43 11.8**	**+1.4**
FAKI	**Fak Fak**	**7.17**	**147**	P	**Pn**	**14 43 14.7**	**+2.0**
	0.3nm0.3nm900nm115nm,1.0s						
FAKI	**Fak Fak**	**7.17**	**147**		**Pn**	**14 43 14.0**	**+1.3**
RKPI	**Ransiki, Papua**	**7.42**	**129**	P	**Pn**	**14 43 18.8**	**+2.6**
	0.7nm2µm201nm,0.8s						
MSLP	**Maasin**	**7.76**	**333**	*eP*	**Pn**	**14 43 22.4**	**+1.5**
MSLP				*eS*	**Sn**	**14 44 48.1**	**+0.6**
BNDI	**Bandanaira**	**7.78**	**169**	P	**Pn**	**14 43 23.9**	**+2.8**
	0.9nm3µm241nm,1.2s						
APSI	**Ampana**	**7.86**	**239**	P	**Pn**	**14 43 22.5**	**+0.3**
	0.8nm0.8nm2µm126nm,0.9s						
MPSI	**Mapaga**	**8.94**	**252**	P	**Pn**	**14 43 37.4**	**+0.4**
	872nm85nm,0.9s						
KDI	**Kendari**	**9.12**	**219**	P	Pn	14 43 51.3	+12
BBSI	**Bau Bau**	**10.37**	**214**	P	**Pn**	**14 43 57.0**	**+0.4**
	316nm28nm,0.8s						
TTSI	**Tana Toraja**	**10.55**	**234**	P	**Pn**	**14 43 58.9**	**-0.2**
	887nm120nm,0.8s						
SPSI	**Sidrap Palu**	**11.15**	**231**	P	**Pn**	**14 44 07.1**	**-0.1**
	1µm94nm,1.0s						
BNSI	**Bone**	**11.17**	**228**	P	**Pn**	**14 44 07.6**	**0.0**
	68nm,0.8s						
SAUI	**Saumlaki**	**11.44**	**165**	P	Pn	14 44 20.4	+9.1
SAUI	**Saumlaki**	**11.44**	**165**		**Pn**	**14 44 11.8**	**+0.6**
BKSI	**Bulukumba**	**11.79**	**224**	P	**Pn**	**14 44 14.7**	**-1.4**
	562nm53nm,0.7s						
KAPI	**Kappang**	**11.85**	**227**	P	**Pn**	**14 44 15.3**	**-1.5**
KAPI	**Kappang**	**11.85**	**227**		**Pn**	**14 44 15.3**	**-1.5**
KKM	**Kota Kinabalu**	**12.47**	**284**	Pn	**Pn**	**14 44 26.1**	**+0.7**
GENI	**Genyem**	**13.09**	**116**	P	P	14 44 48.1	+5.6
MMRI	**Maumere**	**13.22**	**208**	P	**Pn**	**14 44 37.0**	**+1.4**
	97nm,0.9s						
MMRI	**Maumere**	**13.22**	**208**	Pn	**Pn**	**14 44 37.7**	**+2.0**
SOEI	**Soe**	**13.47**	**198**	P	**Pn**	**14 44 42.4**	**+3.3**
	1µm176nm,1.0s						
SOEI	**Soe**	**13.47**	**198**		**Pn**	**14 44 40.9**	**+1.8**
JAY	**Jayapura**	**13.54**	**114**	LR	LR	14 49 07.9	
	comp=Z,463nm,20.8s,baz=288,slow=34						
PLAI	**Plampang**	**15.93**	**222**	P	**P**	**14 45 12.7**	**-1.3**
	3µm292nm,1.0s						
MTN	**Manton Dam**	**16.13**	**170**	Pn	**Pn**	**14 45 13.2**	**-0.6**
MTN				IAmb	IAmb	14 45 23.0	
	comp=Z,79nm,0.7s						
SBUM	**Sibu**	**16.16**	**268**	P	**P**	**14 45 16.0**	**-0.6**
SBUM	**Sibu**	**16.16**	**268**	P	**P**	**14 45 17.0**	**+0.3**
KDU	**Kaladu**	**16.26**	**166**	P	**Pn**	**14 45 14.6**	**-0.8**
	baz=16,SNR=37						
TWSI	**Taliwang, Sumb**	**16.47**	**224**	P	**Pn**	**14 45 17.9**	**-0.2**
	comp=Z,1µmcomp=Z,117nm,0.9s						
STKI	**Sintang**	**17.18**	**260**	P	**P**	**14 45 29.2**	**+1.3**
	comp=Z,81nm,0.8s						
SRBI	**Singaraja**	**17.25**	**230**	P	**P**	**14 45 29.2**	**+0.6**
	comp=Z,130nm,1.1s						
KMMI	**Kalianget**	**17.61**	**235**	P	sP	14 45 50.6	+0.8
DNP	**Denpasar**	**17.63**	**228**	P	sP	14 45 50.9	+0.9
KSM	**Kuching**	**18.14**	**265**	P	**Pn**	**14 45 38.9**	**+0.1**
KSM	**Kuching**	**18.14**	**265**	P	**Pn**	**14 45 40.0**	**+1.2**
JAGI	**Jajag, Banyuwa**	**18.30**	**231**	P	**Pn**	**14 45 41.3**	**+0.6**
	comp=Z,126nm,1.0s						
JAGI	**Jajag, Banyuwa**	**18.30**	**231**	P	**P**	**14 45 40.4**	**0.0**
JAGI				IAmb	IAmb	14 46 06.6	
	comp=Z,144nm,1.1s						
KNRA	**Kununurra**	**18.72**	**179**	P	**Pn**	**14 45 45.8**	**+0.1**
	baz=19,SNR=61						
KNRA	**Kununurra**	**18.72**	**179**	P	**Pn**	**14 45 45.7**	**0.0**
GUMO	**Guam**	**19.30**	**57**	P	**P**	**14 45 51.3**	**+0.1**
GUMO				pmax	pmax		
	comp=Z,154nm,1.3s						
GUMO	**Guam**	**19.30**	**57**	P	**P**	**14 45 51.3**	**+0.1**
GUMO				IAmb	IAmb	14 46 23.8	
	comp=Z,154nm,1.3s						
NGJI	**Ngawi**	**19.86**	**238**	P	**Pn**	**14 45 59.4**	**0.0**
	comp=Z,100nm,1.0s						
PWJI	**Pagerwojo**	**19.93**	**236**	P	**P**	**14 45 58.1**	**+0.1**
	comp=Z,134nm,1.1s						
WOJI	**Wonogiri, Jawa**	**20.56**	**238**	P	sP	14 46 22.3	+0.1
YULB	**Yu-li**	**21.25**	**342**	P	**P**	**14 46 09.8**	**-2.6**
FITZ	**Fitzroy Crossi**	**21.30**	**187**	P	**P**	**14 46 11.7**	**-1.1**
	baz=21,SNR=27						
FITZ	**Fitzroy Crossi**	**21.30**	**187**	P	**P**	**14 46 11.7**	**-1.1**
	comp=Z,8.7nm,0.7s,baz=25,slow=11,SNR=20						
FITZ	**Fitzroy Crossi**	**21.30**	**187**	P	**P**	**14 46 11.4**	**-1.4**
TPUB	**Ta-pu**	**21.39**	**340**	P	**P**	**14 46 11.2**	**-2.6**
SSLB	**Suanglung**	**21.73**	**341**	P	**P**	**14 46 15.6**	**-1.9**
SARN	**Sarigan**	**21.75**	**51**	P	**P**	**14 46 14.8**	**-3.0**
NACB	**Ninganchiao**	**21.90**	**343**	P	**P**	**14 46 19.1**	**-0.1**
KPJI	**Karang Pucung**	**22.04**	**242**	P	**P**	**14 46 19.7**	**-1.1**
	comp=Z,91nm,0.9s						
YHNB	**Yeheng**	**22.43**	**343**	P	**P**	**14 46 24.7**	**-0.3**
YHNB				IAmb	IAmb	14 46 26.6	
	comp=Z,48nm,1.1s						
COEN	**Coen**	**22.46**	**140**	P	**P**	**14 46 26.9**	**+1.5**
	baz=22,SNR=7.6						
COEN	**Coen**	**22.46**	**140**	P	**P**	**14 46 26.3**	**+1.0**
PMG	**Port Moresby**	**22.49**	**124**	P	**P**	**14 46 27.3**	**+1.6**
PMG				pmax	pmax		
	comp=Z,26nm,0.9s						
PMG	**Port Moresby**	**22.49**	**124**	P	**P**	**14 46 27.4**	**+1.8**
	comp=Z,11nm,0.9s,baz=2.8,slow=9.6,SNR=4.0						
PMG	**Port Moresby**	**22.49**	**124**	P	**P**	**14 46 27.3**	**+1.6**
LEM	**Lembang**	**22.98**	**244**	P	**P**	**14 46 28.9**	**-2.1**
	comp=Z,7.0nm,0.5s,baz=48,slow=16,SNR=2.3						
CISI	**Cisompet, Garu**	**23.12**	**243**	P	**P**	**14 46 32.2**	**-0.1**
CISI				IAmb	IAmb	14 46 34.3	
	comp=Z,76nm,1.0s						
KNMB	**Chin-men Tao**	**23.27**	**336**	P	**P**	**14 46 32.2**	**-1.4**
KNMB				IAmb	IAmb	14 46 33.4	
	comp=Z,62nm,0.9s						
CNJI	**Cibinong**	**23.62**	**244**	P	**P**	**14 46 37.2**	**+0.2**
	comp=Z,117nm,1.0s						
WRAB	**Tennant Creek**	**23.68**	**166**	*ce*P	**P**	**14 46 38.3**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,152nm,0.9s						
WRA	**Warramunga Arr**	**23.69**	**166**	*i* P	**P**	**14 46 37.7**	**+0.1**
WRA				pmax	pmax		
	comp=Z,95nm,1.0s						
WRA	**Warramunga Arr**	**23.69**	**166**	P	**P**	**14 46 37.7**	**+0.1**
	comp=Z,85nm,1.0s,baz=347,slow=9.8,SNR=190						
WRA				S	**S**	**14 50 47.0**	**-1.8**
	comp=Z,6.2nm,1.2s,baz=348,slow=16,SNR=4.7						
WRA	**Warramunga Arr**	**23.69**	**166**	IAmb	IAmb	14 46 43.7	
	comp=Z,6.8nm,0.8s						
WR0	**Warramunga Arr**	**23.76**	**166**	P	**P**	**14 46 37.4**	**-0.8**
QIZ	**Qiongzhong**	**24.04**	**312**	P	**P**	**14 46 40.2**	**-0.5**
QIZ				S	**S**	**14 50 53.8**	**-0.7**
QIZ				pmax	pmax		
	comp=Z,26nm,1.5s						
MYKOM	**Kota Tinggi**	**24.55**	**267**	P	**P**	**14 46 47.0**	**+1.5**
KRVT	**Keravat (AS076**	**24.76**	**107**	P	**P**	**14 46 48.1**	**+0.7**
	comp=Z,82nm,0.8s,baz=350,slow=7.4,SNR=5.1						
MDSI	**Maura Dua**	**25.35**	**253**	P	**P**	**14 46 52.9**	**+0.1**
	comp=Z,50nm,1.0s						
KASI	**Kota Agung**	**25.37**	**250**	P	**P**	**14 46 55.3**	**+2.3**
	comp=Z,73nm,1.3s						
UBPT	**Khong Chiam**	**25.59**	**300**	P	**P**	**14 46 54.2**	**-0.7**
UBPT				IAmb	IAmb	14 46 57.5	
	comp=Z,82nm,1.2s						
PSA00	**Pilbara Seismi**	**25.96**	**198**	P	**P**	**14 46 57.9**	**-0.3**
PSA00				IAmb	IAmb	14 47 01.6	
	comp=Z,35nm,0.9s						
QIS	**Mount Isa**	**26.01**	**155**	P	**P**	**14 46 59.1**	**+0.4**
	baz=26,SNR=30						
MTSU	**Mount Surprise**	**26.35**	**144**	P	**P**	**14 47 02.6**	**+0.8**
	baz=26,SNR=11						
AS31	**Alice Springs**	**27.20**	**169**	P	**P**	**14 47 09.4**	**0.0**
ASAR	**Alice Springs**	**27.20**	**169**	P	**P**	**14 47 09.2**	**-0.2**
	comp=Z,2.7nm,0.3s,baz=349,slow=7.2,SNR=129						
ASAR				PcP	**PcP**	**14 50 29.3**	**+0.6**
	comp=Z,4.1nm,0.5s,baz=357,slow=2.3,SNR=9.9						
ASAR				S	**S**	**14 51 44.2**	**-0.5**
	comp=Z,2.5nm,1.0s,baz=356,slow=22,SNR=4.7						
ASAR				ScP	**ScP**	**14 54 04.8**	**0.0**
	comp=Z,1.3nm,0.9s,baz=343,slow=2.9,SNR=5.0						
JCJ	**Chichijima**	**27.22**	**28**	P	**P**	**14 47 08.8**	**-0.7**
	comp=Z,77nm,0.8s,baz=259,slow=14,SNR=4.6						
JCJ				LR	LR	14 55 35.1	
	comp=Z,301nm,21.4s,baz=81,slow=31						
CTA	**Charters Tower**	**29.01**	**144**	P	**P**	**14 47 26.3**	**+0.8**
	comp=Z,4.1nm,1.0s,baz=335,slow=11,SNR=2.6						
PSI	**Prapat**	**29.43**	**270**	P	**P**	**14 47 28.9**	**-0.6**
PSI				pmax	pmax		
	comp=Z,14nm,1.0s						
PSI	**Prapat**	**29.43**	**270**	P	**P**	**14 47 28.9**	**-0.6**
	comp=Z,4.0nm,0.3s,baz=105,slow=3.4,SNR=6.8						
PSI				LR	LR	15 01 42.1	
	comp=Z,111nm,18.0s,baz=119,slow=41						
RPSI	**Rantau Prapat**	**29.43**	**270**	P	**P**	**14 47 29.1**	**-0.2**
RPSI	**Rantau Prapat**	**29.43**	**270**	P	**P**	**14 47 28.9**	**-0.5**
JNU	**Nakatsue**	**29.90**	**4**	P	**P**	**14 47 33.4**	**+0.1**
	comp=Z,12nm,0.8s,baz=58,slow=2.8,SNR=5.2						
JNU				LR	LR	14 58 47.2	
	comp=Z,294nm,20.8s,baz=180,slow=35						
JNU	**Nakatsue**	**29.90**	**4**	P	**P**	**14 47 32.9**	**-0.4**
NJ2	**Nanjing**	**30.11**	**344**	*eP*	**P**	**14 47 37.0**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
GSI	**Gunungsitoli**	**30.84**	**267**	P	**P**	**14 47 40.7**	**-1.1**
ENH	**Enshi**	**32.36**	**328**	P	**P**	**14 47 54.0**	**-1.1**
ENH				IAmb	IAmb	14 47 56.5	
	comp=Z,20nm,0.9s						
CM31	**Chiang Mai Arr**	**32.59**	**300**	P	**P**	**14 47 56.9**	**-0.3**
CM31				IAmb	IAmb	14 47 58.9	
	comp=Z,14nm,0.9s						
CMAR	**Chiang Mai Arr**	**32.59**	**300**	*i* P	**P**	**14 47 58.0**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**32.59**	**300**	P	**P**	**14 47 57.5**	**+0.4**
	comp=Z,8.3nm,0.8s,baz=118,slow=7.4,SNR=63						
CMAR				PcP	**PcP**	**14 50 43.7**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=130,slow=1.4,SNR=4.1						
CMAR				ScP	**ScP**	**14 54 24.0**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=132,slow=1.3,SNR=4.8						
CHTO	**Chiang Mai**	**32.73**	**301**	P	**P**	**14 47 58.1**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,15nm,0.9s						
CHTO	**Chiang Mai**	**32.73**	**301**	P	**P**	**14 47 58.1**	**-0.3**
CHTO				IAmb	IAmb	14 47 59.8	
	comp=Z,15nm,0.8s						
KMI	**Kunming**	**32.96**	**314**	P	**P**	**14 48 04.4**	**+3.8**
KMI				pmax	pmax		
	comp=Z,28nm,1.0s						
KMI				LR	LR		
	comp=Z,140nm,6.0s						
KMI				LR	LR		
	comp=Z,130nm,4.4s						
INU	**Inuyama**	**33.02**	**13**	P	**P**	**14 48 00.7**	**0.0**
TJN	**Taejon**	**33.07**	**358**	*ce*P	**P**	**14 48 00.7**	**-0.4**
FORT	**Forrest**	**33.75**	**181**	P	**P**	**14 48 07.0**	**0.0**
KSRS	**Korea Array**	**34.13**	**359**	P	**P**	**14 48 10.7**	**+0.3**
	comp=Z,10.0nm,0.8s,baz=175,slow=9.9,SNR=40						
KSRS				PcP	**PcP**	**14 50 47.8**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=173,slow=1.8,SNR=4.5						
MORW	**Morawa**	**34.16**	**199**	P	**P**	**14 48 09.8**	**-0.9**
MORW				IAmb	IAmb	14 49 06.0	
	comp=Z,41nm,1.5s						
KS19	**Wonju Array Si**	**34.18**	**359**	P	**P**	**14 48 10.1**	**-0.7**
KS19				IAmb	IAmb	14 48 10.9	
	comp=Z,46nm,1.4s						
MAJO	**Matsushiro**	**34.43**	**14**	*i* P	**P**	**14 48 12.2**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,24nm,0.7s						
MAJO	**Matsushiro**	**34.43**	**14**	P	**P**	**14 48 11.8**	**-1.2**
MJAR	**Matsushiro Arr**	**34.43**	**14**	P	**P**	**14 48 11.3**	**-1.7**
	comp=Z,14nm,0.7s,baz=182,slow=9.2,SNR=50						
MJAR				PcP	**PcP**	**14 50 48.6**	**+1.0**
	comp=Z,1.3nm,0.8s,baz=201,slow=3.8,SNR=5.9						
MJAR	**Matsushiro Arr**	**34.43**	**14**	IAmb	IAmb	14 48 12.9	
	comp=Z,6.7nm,0.7s						
MJB9	**Matsu-Tunnel**	**34.44**	**14**	P	**P**	**14 48 11.7**	**-1.3**
XAN	**Xi'an**	**35.68**	**332**	P	**P**	**14 48 23.4**	**-0.5**
XAN				pmax	pmax		
	comp=Z,36nm,1.1s						
XAN				pmax	pmax		
	comp=Z,170nm,5.9s						
XAN	**Xi'an**	**35.68**	**332**	P	**P**	**14 48 22.8**	**-1.1**
XAN				pmax	pmax		
	comp=Z,34nm,1.0s						
XAN	**Xi'an**	**35.68**	**332**	P	**P**	**14 48 22.8**	**-1.1**
XAN				IAmb	IAmb	14 48 24.9	
	comp=Z,34nm,1.0s						
CD2	**Chengdu**	**36.09**	**323**	P	**P**	**14 48 26.7**	**-0.7**
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
BBOO	**Buckleboo**	**36.50**	**169**	P	**P**	**14 48 31.0**	**+0.2**
STKA	**Stephens Creek**	**37.04**	**161**	P	**P**	**14 48 35.5**	**+0.1**
	comp=Z,11nm,0.3s,baz=348,slow=7.9,SNR=71						
STKA				PcP	**PcP**	**14 50 55.9**	**+0.5**
	comp=Z,6.2nm,0.9s,baz=49,slow=2.3,SNR=3.0						
STKA	**Stephens Creek**	**37.04**	**161**	P	**P**	**14 48 35.2**	**-0.2**
STKA				IAmb	IAmb	14 48 41.6	
	comp=Z,13nm,0.8s						
NWAO	**Narrogin (SRO)**	**37.41**	**196**	P	**P**	**14 48 38.5**	**0.0**
NWAO				pmax	pmax		
	comp=Z,42nm,1.5s						
NWAO	**Narrogin (SRO)**	**37.41**	**196**	P	**P**	**14 48 38.5**	**0.0**
NWAO				IAmb	IAmb	14 49 28.6	
	comp=Z,52nm,1.5s						
NWAO	**Narrogin (SRO)**	**37.41**	**196**	P	**P**	**14 48 38.5**	**0.0**
NWAO				IAmb	IAmb	14 49 28.6	
	comp=Z,42nm,1.5s						
BJT	**Baijiatuau**	**38.33**	**345**	P	**P**	**14 48 46.0**	**-0.1**
BJT				pmax	pmax		
	comp=Z,25nm,1.1s						
BJT	**Baijiatuau**	**38.33**	**345**	P	**P**	**14 48 46.0**	**-0.1**
BJT				IAmb	IAmb	14 48 48.2	
	comp=Z,25nm,1.1s						
BJI	**Beijing**	**38.34**	**345**	⇑*iP*	**P**	**14 48 45.7**	**-0.6**
BJI				pmax	pmax		
	comp=Z,20nm,0.9s						
MSHR	**Mys Shultsa**	**39.33**	**3**	*i* P	**P**	**14 48 55.1**	**+0.6**
LZH	**Lanzhou**	**39.84**	**328**	*eP*	**P**	**14 49 00.0**	**+0.9**
LZH				pP	sP	14 49 20.5	+2.6
LZH				sS	sS	14 55 24.8	+2.8
LZH				pmax	pmax		
	comp=Z,87nm,1.1s						
LZH				pmax	pmax		
	comp=Z,220nm,4.1s						
LZH				LR	LR		
	comp=Z,220nm,13.8s						
LZH				LR	LR		
	comp=Z,310nm,14.6s						
LZH				LR	LR		
	comp=Z,330nm,14.0s						
VLA	**Vladivostok**	**39.91**	**4**	*i* P	**P**	**14 48 59.9**	**+0.6**
VLA				pmax	pmax		
	comp=Z,34nm,1.0s						
ARMA	**Armidale**	**40.10**	**148**	P	**P**	**14 49 01.5**	**+0.3**
ARMA				IAmb	IAmb	14 49 42.6	
	comp=Z,25nm,1.2s						
H11S3	**WAKE ISLAND Hy**	**40.46**	**65**	T	T	15 32 15.4	
	baz=253,slow=75,SNR=43						
H11S2	**WAKE ISLAND Hy**	**40.47**	**65**	T	T	15 32 16.6	
	baz=253,slow=75,SNR=51						
H11S1	**WAKE ISLAND Hy**	**40.47**	**65**	T	T	15 32 21.2	
	baz=253,slow=75,SNR=27						
HHC

comp=Z,340nm,16.5s
YSS Yuzh-Sakhalins 45.37 14 *e*P **P 14 49 44.2 +0.7**
YSS pmax pmax
comp=Z,20nm,1.0s
YSS Yuzh-Sakhalins 45.37 14 P **P 14 49 43.6 +0.1**
TAPN Taplejung 45.69 306 *e*P **P 14 49 46.8 0.0**
ODAN Odare 45.75 305 *e*P **P 14 49 47.2 0.0**
comp=Z,31nm,0.7s
KLR Kul'dur 45.99 3*c i*P **P 14 49 48.4 0.0**
KLR pmax pmax
comp=Z,31nm,0.9s
KLR Kul'dur 45.99 3 LR LR 15 07 00.6
comp=Z,133nm,21.5s,baz=180,slow=33
RAMN Ramite 46.43 305 *e*P **P 14 49 52.8 +0.2**
comp=Z,25nm,0.6s
HIA Hailar 46.53 352 P **P 14 49 52.1 -0.6**
HIA pmax pmax
comp=Z,8.0nm,1.1s
HIA Hailar 46.53 352 P **P 14 49 52.1 -0.6**
JIRN Jiri 47.05 306 *e*P **P 14 49 57.5 0.0**
comp=Z,43nm,0.9s
GUN Gumba 47.40 306 *e*P **P 14 50 00.2 0.0**
comp=Z,49nm,0.8s
PKI Pulchoki 47.65 305 *e*P **P 14 50 01.8 -0.3**
PKIN Phulchoki 47.66 305 *e*P **P 14 50 01.8 -0.4**
comp=Z,8.1nm,0.6s
KKN Kakani 47.84 305 *e*P **P 14 50 03.3 -0.2**
DMN Daman 47.91 305 *e*P **P 14 50 04.0 -0.1**
comp=Z,29nm,0.9s
GRNR Gornyy 47.92 7Û *i*P **P 14 50 04.1 +0.6**
GRNR *e*S **S 14 56 59.5 +2.4**
GRNR pmax pmax
comp=Z,40nm,0.9s
GRNR smax smax
comp=N,2.0nm,1.0s
GRNR MLR MLR
comp=Z,140nm,15.0s
ULN Ulaanbaatar 48.19 341*ce*P **P 14 50 05.6 -0.1**
ULN pmax pmax
comp=Z,8.0nm,0.8s
ULN Ulaanbaatar 48.19 341 P **P 14 50 05.3 -0.4**
SONM Songino Array 48.38 340 P **P 14 50 07.1 -0.1**
comp=Z,3.4nm,0.8s,baz=152,slow=7.9,SNR=27
SONM PcP **PcP 14 51 33.2 +0.1**
comp=Z,2.8nm,0.8s,baz=175,slow=3.5,SNR=6.1
SONM Songino Array 48.38 340 IAmb IAmb 14 50 08.2
comp=Z,2.7nm,0.8s
GKN Gorkha 48.45 305 *e*P **P 14 50 08.0 -0.1**
MYLAV Mylavaram 48.79 289 *e*P **P 14 50 10.2 -0.4**
TYV Tymovskoe 49.04 12 *e*P **P 14 50 12.8 +0.8**
TYV *e*S **S 14 57 14.9 +2.2**
TYV pmax pmax
comp=Z,17nm,0.8s
TYV pmax pmax
comp=Z,400nm,4.2s
TYV smax smax
comp=N,600nm,5.5s
KOLN Koldanda 49.21 304 *e*P **P 14 50 14.3 +0.3**
comp=N,63nm,0.6s
DANN Dangsing 49.29 305 *e*P **P 14 50 14.7 -0.1**
comp=N,60nm,0.6s
GGR Gangavaram 49.40 291 *e*P **P 14 50 14.6 -0.8**
NJS Nagarjunasagar 50.00 289 *e*P **P 14 50 19.8 -0.1**
SRLM Srisailam 50.32 288 *e*P **P 14 50 22.4 0.0**
ZEA Zeya 50.43 359 *e*P **P 14 50 21.2 -1.3**
ZEA pmax pmax
comp=Z,18nm,1.2s
HYB Hyderabad 50.87 290 *i* P **P 14 50 27.0 +0.5**
HYBB Hyderabad (bro 50.87 290 *e*P **P 14 50 25.8 -0.7**
SRSP Sriramsagar 51.34 292 *e*P **P 14 50 29.8 -0.2**
ZAK Zakamensk 51.62 340 *e*P **P 14 50 29.9 -1.8**
ZAK pmax pmax
comp=Z,4.0nm,1.0s
DMPR Damasthipur 51.67 290 *e*P **P 14 50 32.4 -0.2**
URV Uravakonda 51.70 286 *e*P **P 14 50 32.6 -0.2**
TLY Talaya 52.60 341 *e*P P 14 50 30.6 -8.2
TLY pmax pmax
comp=Z,12nm,0.9s
TLY MLR MLR
comp=Z,271nm,6.0s
TLY Talaya 52.60 341 LR LR 15 16 24.3
comp=Z,65nm,18.1s,baz=134,slow=40
KLRI Killari 52.81 290 *e*P **P 14 50 40.5 -0.6**
MOY Mondy 53.49 339 *e*P P 14 50 56.5 +11
WMQ Urumqi 54.14 324 P **P 14 50 51.2 +0.8**
WMQ pP pwP 14 51 07.8 +0.3
WMQ sP sP 14 51 15.5 +5.8
WMQ pmax pmax
comp=Z,19nm,0.7s
WMQ pmax pmax
comp=Z,250nm,6.5s
WMQ LR LR
comp=Z,270nm,8.7s
WMQ Urumqi 54.14 324 P **P 14 50 50.5 +0.1**
WMQ pmax pmax
comp=Z,18nm,0.7s
WMQ Urumqi 54.14 324 P **P 14 50 50.5 +0.1**
WMQ IAmb IAmb 14 50 51.8
comp=Z,18nm,0.7s
PEA0B Petropavlovsk- 55.35 21 P **P 14 50 59.0 +0.1**
PEA0B pmax pmax
comp=Z,56nm,1.2s
PEA0B Petropavlovsk- 55.35 21 P **P 14 50 59.0 +0.1**
PETK Petropavlovsk- 55.35 21 P **P 14 50 59.8 +1.0**
comp=Z,20nm,0.8s,baz=180,slow=5.6,SNR=17
PETK PcP **PcP 14 51 59.0 +0.2**
comp=Z,6.5nm,0.9s,baz=169,slow=4.0,SNR=3.3
PETK LR LR 15 13 37.0
comp=Z,50nm,20.2s,baz=240,slow=35
YAK Yakutsk 58.74 1 *e*P **P 14 51 22.0 -0.6**
YAK *e**PP **pP 14 51 33.3 -3.1**
YAK *e* 14 52 11.3
YAK *e*S **S 14 59 21.9 -1.6**
YAK *e**SS **sS 14 59 43.2 -3.0**
YAK *e* 15 01 10.9
YAK *e*SS **SS 15 03 14.2 -3.2**
YAK pmax pmax
comp=Z,31nm,0.9s
YAK pmax pmax
comp=N,18nm,1.4s
YAK pmax pmax
comp=E,5.0nm,1.4s
YAK pmax pmax
comp=Z,213nm,6.7s
YAK pmax pmax
comp=E,203nm,5.5s
YAK pmax pmax
comp=N,198nm,6.6s
YAK smax smax
comp=E,185nm,4.4s
YAK smax smax
comp=N,141nm,4.3s
YAK Yakutsk 58.74 1 P **P 14 51 22.7 0.0**
comp=N,11nm,0.6s,baz=198,slow=1.5,SNR=22
YAK Yakutsk 58.74 1 P **P 14 51 22.6 0.0**
MA2 Magadan 58.87 13 *i* P **P 14 51 24.4 +0.8**
MA2 pmax pmax
comp=Z,21nm,0.9s
MA2 Magadan 58.87 13 P **P 14 51 24.2 +0.6**
PDGK Podgornoye 58.91 320 P **P 14 51 23.8 -0.6**
MK31 Makanchi Array 58.97 325 *e*P **P 14 51 24.3 -0.3**
MK31 Makanchi Array 58.97 325 P **P 14 51 24.2 -0.3**
MK31 IAmb IAmb 14 51 25.4
comp=Z,8.3nm,0.8s
MKAR Makanchi Array 58.97 325 P **P 14 51 24.4 -0.1**
comp=Z,10nm,0.6s,baz=118,slow=8.4,SNR=141
MKAR LR LR 15 19 28.6
comp=Z,86nm,18.5s,baz=100,slow=39
MAKZ Makanchi 59.16 325 P **P 14 51 25.5 -0.4**
MAKZ pmax pmax
comp=Z,14nm,0.8s
MAKZ Makanchi 59.16 325 P **P 14 51 25.4 -0.4**
MAKZ IAmb IAmb 14 51 26.6
comp=Z,14nm,0.8s
PRZ Przheval'sk 59.22 319 P **P 14 51 26.6 0.0**
PRZ pmax pmax
comp=Z,1μm,1.9s
PRZ Przheval'sk 59.22 319 P **P 14 51 26.6 0.0**
NIL Nilore 59.58 307 P **P 14 51 28.8 -0.3**
NIL pmax pmax
comp=Z,25nm,1.0s
NIL Nilore 59.58 307 P **P 14 51 28.8 -0.3**
KSH Kashi 59.62 315 P **P 14 51 30.8 +1.5**
KSH pP pwP 14 51 46.7 -0.8
KSH PP **PP 14 53 47.1 +5.7**
KSH S **S 14 59 34.8 -1.1**
KSH sS sS 15 00 03.9 +4.2
KSH SS **SS 15 03 36.2 +3.9**
KSH pmax pmax
comp=Z,16nm,0.5s
KSH pmax pmax
comp=Z,600nm,6.7s
KSH LR LR
comp=Z,430nm,5.6s
KSH LR LR
comp=Z,310nm,4.9s
KSH LR LR
comp=Z,650nm,6.2s
KDJ Kajisay 59.87 318 P **P 14 51 31.6 +0.5**
KDJ pmax pmax
comp=Z,380nm,2.0s
KDJ Kajisay 59.87 318 P **P 14 51 31.6 +0.5**
TKM2 Tokmak 2 61.27 318 P **P 14 51 40.4 -0.3**
TKM2 Tokmak 2 61.27 318 P **P 14 51 40.7 +0.1**
SNR=6.7
UCH Uchtor 61.71 317 P **P 14 51 45.0 +1.0**
SNR=6.3
ZAA0 Zalesovo Array 61.85 332 P **P 14 51 42.0 -2.1**
ZALV Zalesovo Beam 61.85 332 P **P 14 51 42.4 -1.6**
comp=Z,2.9nm,0.7s,baz=104,slow=6.3,SNR=16
ZALV LR LR 15 19 40.8
comp=Z,98nm,20.7s,baz=129,slow=37
AAK Ala-Archa 61.89 317 *i* P **P 14 51 43.4 -1.4**
AAK pmax pmax
comp=Z,19nm,2.5s
AAK Ala-Archa 61.89 317 LR LR 15 20 49.8
comp=Z,134nm,21.8s,baz=78,slow=38
USP Ospenovka 62.14 318 P **P 14 51 46.2 -0.1**
SNR=8.0
SEY Seymchan 62.23 12 *i* P **P 14 51 47.0 +0.6**
SEY Seymchan 62.23 12 P **P 14 51 47.6 +1.2**
comp=Z,15nm,0.9s,baz=228,slow=5.6,SNR=20
AML Almayashu 62.23 317 P **P 14 51 48.2 +0.8**
SNR=9.3
EKS2 Erkin-Say 62.39 317 P **P 14 51 48.4 +0.4**
SNR=5.7
ARSB Arslanbob 62.42 316 P **P 14 51 47.8 -0.6**
KURK Kurchatov 63.11 327*ce*P **P 14 51 51.9 -0.6**
KURK pmax pmax
comp=Z,14nm,0.8s
KURK Kurchatov 63.11 327 P **P 14 51 51.5 -1.0**
KURK IAmb IAmb 14 51 52.9
comp=Z,14nm,0.6s
KBL Kabul 63.18 307 P **P 14 51 52.5 -1.1**
KBL pmax pmax
comp=Z,8.0nm,0.9s
KBL Kabul 63.18 307 P **P 14 51 52.5 -1.1**
KBL IAmb IAmb 14 51 58.1
comp=Z,8.5nm,0.8s
BTK Batken 63.51 314 P **P 14 51 54.3 -1.2**
BTK pmax pmax
comp=Z,9.0nm,0.9s
BTK Batken 63.51 314 P **P 14 51 54.3 -1.2**
BTK IAmb IAmb 14 52 10.6
comp=Z,9.5nm,0.8s
GAR Garm 63.53 312 P **P 14 51 55.1 -0.6**
CHGR Chuyangaron 64.28 312 P **P 14 51 59.9 -0.7**
CHGR IAmb IAmb 14 52 04.2
comp=Z,15nm,0.7s
KK31 Karatay Array 64.78 317 *i* P **P 14 52 03.1 -0.6**
KK31 Karatay Array 64.78 317 P **P 14 52 02.9 -0.8**
KKAR Karatay Array 64.78 317 P **P 14 52 02.9 -0.8**
KKAR pmax pmax
comp=Z,9.0nm,0.9s
KKAR Karatay Array 64.78 317 P **P 14 52 02.9 -0.8**
TIXI Tiksi 68.40 0*ce*P **P 14 52 26.5 +0.3**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
TIXI Tiksi 68.40 0 P **P 14 52 25.7 -0.4**
TIXI IAmb IAmb 14 52 27.0
comp=Z,7.1nm,0.6s
BILL Bilibino 69.69 14 *i* P **P 14 52 36.4 +2.1**
BILL *e* 14 55 08.5
BILL pmax pmax
comp=Z,3.0nm,1.2s
WSAR Wadi Sarin 70.17 293 LR LR 15 22 53.9
comp=Z,18nm,21.3s,baz=72,slow=36
GEYT Alibeck 72.54 309 P **P 14 52 52.1 -0.1**
comp=Z,5.3nm,0.7s,baz=144,slow=5.3,SNR=13
GEYT Alibeck 72.54 309 IAmb IAmb 14 52 53.4
comp=Z,5.3nm,0.8s
AB31 Akbulak array 73.64 321 *i* P **P 14 52 57.3 -1.1**
ABKAR Akbulak array 73.64 321 P **P 14 52 57.2 -1.1**
AKTO Aktyubinsk 75.13 321 LR LR 15 28 33.6
comp=Z,78nm,18.9s,baz=91,slow=38
SVE Sverdlovsk 75.31 328Û *e*P **P 14 53 07.2 -0.7**
SVE pmax pmax
comp=Z,10.0nm,1.0s
ARU Arti 76.30 328*d i*P **P 14 53 12.2 -1.4**
ARU *PP **pP 14 53 27.6 0.0**
ARU S **S 15 02 55.0 +0.8**
ARU SS **SS 15 07 45.8 -3.2**
ARU pmax pmax
comp=Z,5.0nm,0.7s
RDOG Red Dog Mine 79.22 21 P **P 14 53 30.4 +0.7**
RDOG IAmb IAmb 14 53 31.9
comp=Z,34nm,1.4s
TTA Tatalina 80.66 27 P **P 14 53 38.3 +0.7**
TTA pmax pmax
comp=Z,49nm,2.0s
TTA Tatalina 80.66 27 P **P 14 53 38.2 +0.7**
TTA IAmb IAmb 14 56 39.0
comp=Z,48nm,2.0s
KIRV Kirov 81.57 329 LR LR 15 31 50.3
comp=Z,114nm,20.8s,baz=85,slow=37
RAYN Ar Rayn 82.23 293 P **P 14 53 45.9 -0.8**
RAYN pmax pmax
comp=Z,12nm,1.0s
RAYN Ar Rayn 82.23 293 P **P 14 53 45.9 -0.8**
RAYN IAmb IAmb 14 53 46.5
comp=Z,12nm,1.0s
VNDA Vanda 82.66 173 P **P 14 53 47.6 -0.1**
VNDA Vanda 82.66 173 P **P 14 53 48.0 +0.3**
comp=Z,9.6nm,0.9s,baz=312,slow=5.9,SNR=30
VNDA LR LR 15 31 37.3
comp=Z,49nm,18.3s,baz=310,slow=36
VNDA Vanda 82.66 173 P **P 14 53 47.6 -0.1**
SUA Susitna One 82.87 29 P **P 14 53 49.7 +0.4**
MLY Manley 83.29 25 P **P 14 53 52.0 +0.7**
MLY IAmb IAmb 14 53 53.4
comp=Z,17nm,0.8s
TRF Thorofare Moun 83.31 27 P **P 14 53 51.8 +0.2**
TRF IAmb IAmb 14 53 53.0
comp=Z,23nm,1.0s
COLD Coldfoot 83.77 23 P **P 14 53 53.7 0.0**
COLD IAmb IAmb 14 53 56.9
comp=Z,18nm,1.0s
PRGR Permogore 83.79 332 *e*P P 14 53 48.2 -5.6
PRGR pmax pmax
comp=Z,16nm,1.1s
MAW Mawson 83.80 201 P **P 14 53 53.8 +0.1**
MAW pmax pmax
comp=Z,7.0nm,1.5s
MAW Mawson 83.80 201 P **P 14 53 53.8 +0.1**
MCK McKinley 83.94 26 P **P 14 53 54.4 -0.2**
MCK pmax pmax
comp=Z,26nm,0.9s
MCK McKinley 83.94 26 P **P 14 53 54.4 -0.2**
MCK IAmb IAmb 14 53 55.9
comp=Z,26nm,0.9s
RND Reindeer 83.94 27 P **P 14 53 54.6 -0.2**
RND pmax pmax
comp=Z,23nm,0.8s
RND Reindeer 83.94 27 P **P 14 53 54.6 -0.2**
RND IAmb IAmb 14 53 55.7
comp=Z,23nm,0.8s
NEA Nenana 83.95 25 P **P 14 53 54.9 +0.2**
TOLK Toolik Lake Re 84.17 21 P **P 14 53 56.9 +1.1**
TOLK IAmb IAmb 14 53 58.4
comp=Z,20nm,0.9s
KBZ Khabaz 84.57 313 *i* P **P 14 53 58.0 -0.2**
KBZ Khabaz 84.57 313 P **P 14 53 57.7 -0.5**
comp=Z,1.9nm,0.9s,baz=217,slow=18,SNR=3.1
KIV Kislovodsk 84.73 314Û *e*P **P 14 54 00.6 +1.4**
KIV *e* 14 57 13.9
KIV pmax pmax
comp=Z,3.0nm,0.8s
KIV MLR MLR
comp=Z,40nm,14.0s
IL31 84.91 25 P **P 14 53 58.9 -0.6**
IL31 IAmb IAmb 14 54 27.8
comp=Z,21nm,1.6s
ILAR Eielson Array 84.91 25 P **P 14 53 59.2 -0.3**
comp=Z,2.6nm,0.9s,baz=248,slow=6.6,SNR=18
VRH Novokhopyorsk 85.47 321 *e*P **P 14 54 01.1 -1.4**
VRH pmax pmax
comp=Z,10.0nm,0.8s
VORD Divnogorie 87.00 321 *e*P **P 14 54 06.6 -3.5**
VORD pmax pmax
comp=Z,7.0nm,0.7s
VSR Storozhevoye 87.07 321 *e*P **P 14 54 08.0 -2.4**
VSR pmax pmax
comp=Z,7.0nm,0.7s
OBN Obninsk 88.48 325Û *e*P **P 14 54 15.8 -1.2**
OBN *e* 14 57 49.4
OBN pmax pmax
comp=Z,6.0nm,0.9s
OBN Obninsk 88.48 325 LR LR 15 35 45.5
comp=Z,24nm,19.6s,baz=354,slow=37
INK Inuvik 90.08 22 P **P 14 54 23.5 -0.8**
INK pmax pmax
comp=Z,5.0nm,1.1s
INK Inuvik 90.08 22 P **P 14 54 23.8 -0.5**
comp=Z,2.1nm,0.9s,baz=271,slow=6.3,SNR=5.9
INK Inuvik 90.08 22 P **P 14 54 23.4 -0.8**
ARCES ARCESS Array B 91.55 340 P **P 14 54 29.5 -1.7**
comp=Z,2.6nm,0.8s,baz=80,slow=6.8,SNR=16
BRTR Keskin Array B 91.66 310 *i* P **P 14 54 32.2 -0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR Keskin Array B 91.66 310 P **P 14 54 31.1 -1.4**
comp=Z,1.1nm,0.9s,baz=103,slow=3.9,SNR=5.7
BRTR LR LR 15 42 06.5
comp=Z,28nm,19.2s,baz=339,slow=40
SYO Syowa Base 92.49 201Û *i*P **P 14 54 35.0 -0.4**
SYO Syowa Base 92.49 201Ù *e*PcP **PcP 14 54 37.4 +1.3**
SYO Syowa Base 92.49 201Ù *e*pP pP 14 54 53.0 +3.0
QSPA South Pole Qui 93.07 180 P **P 14 54 38.7 +0.3**
FINES FINESS Array B 93.11 332 *i* P **P 14 54 36.7 -1.8**
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 93.11 332 P **P 14 54 36.4 -2.1**
comp=Z,1.9nm,0.9s,baz=65,slow=3.7,SNR=10
FINES LR LR 15 40 08.4
comp=Z,141nm,18.5s,baz=26,slow=38
AKASG Malin Array Be 93.38 321 P **P 14 54 37.9 -2.1**
AKASG pmax pmax
comp=Z,1.0nm,1.1s
AKASG Malin Array Be 93.38 321 P **P 14 54 37.9 -2.1**
comp=Z,1.5nm,0.8s,baz=64,slow=4.9,SNR=5.9
AKASG Malin Array Be 93.38 321 IAmb IAmb 14 54 38.8
comp=Z,1.4nm,1.1s
BBB Bella Bella 95.76 37 LR LR 15 33 02.8
comp=Z,37nm,19.8s,baz=259,slow=32
RES Resolute Bay 98.07 11 P **P 14 55 00.7 -0.1**
RES pmax pmax
comp=Z,6.0nm,1.0s
RES Resolute Bay 98.07 11 P **P 14 55 00.7 -0.1**
comp=Z,3.8nm,0.9s,baz=294,slow=3.7,SNR=10
RES Resolute Bay 98.07 11 P **P 14 55 00.7 -0.1**
RES IAmb IAmb 14 55 02.2
comp=Z,5.7nm,1.0s
YKA Yellowknife Ar 99.33 25 P **Pdif 14 55 06.7 0.0**
comp=Z,2.3nm,0.8s,baz=299,slow=4.6,SNR=28
NOA NORSAR Array B 100.03 334 LR LR 15 44 35.7
comp=Z,41nm,18.9s,baz=75,slow=38
NVAR Mina Array Bea 106.05 49 Pdiff **Pdif 14 55 39.1 +1.7**
comp=Z,0.5nm,0.7s,baz=263,slow=5.4,SNR=4.0
TXAR Lajitas Array 120.63 53 PKP **PKiKP 15 00 18.1 +0.8**
comp=Z,0.5nm,0.5s,baz=268,slow=5.1,SNR=3.2
JCT Junction City 123.17 50 PKIKP **PKPdf 15 00 21.0 -1.0**
JCT Junction City 123.17 50 **PKPdf 15 00 21.0 -1.0**
TORD Torodi Ar. Bea 124.67 288 PKP **PKPdf 15 00 24.9 -0.3**
comp=Z,2.0nm,0.8s,baz=48,slow=2.2,SNR=7.9
PLCA Paso Flores 138.88 158 PKhKP PKPpre 15 00 46.5
comp=Z,1.6nm,0.8s,baz=326,slow=4.0,SNR=3.3
PLCA PKP **PKPdf 15 00 52.5 +1.1**
comp=Z,1.3nm,0.7s,baz=348,slow=4.3,SNR=7.5
JTS Las Juntas de 144.22 68 PKIKP PKPbc 15 01 00.7 +0.8
JTS Las Juntas de 144.22 68 PKPbc 15 01 00.7 +0.8
ROC1 El Roble 145.21 151 **PKPbc 15 01 02.6 -0.2**
PEL Peldehue 145.24 151 PKIKP **PKPdf 15 01 03.7 +0.8**
PEL Peldehue 145.24 151 PKPbc **PKPdf 15 01 03.7 +0.8**
CPUP Villa Florida 156.31 167 PKPbc PKPbc 15 01 30.7
comp=Z,1.0nm,0.7s,baz=97,slow=2.5,SNR=3.8
LPAZ La Paz 159.16 130 PKPab **PKPab 15 02 03.5 +1.9**
comp=Z,3.4nm,0.8s,baz=209,slow=5.8,SNR=10

IDC 05 14:58:35.9±1.6, 2.78N×127.48E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/50, mbtmp3.4/4, ML3.4/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/26, Error ellipse: s-maj=87.6km s-min=23.3km az=62.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.24**	**134**	Pn	Pn	14 59 54.7	-0.9
	1.2nm,0.3s,baz=296,slow=23,SNR=7.1						
SIJI				Sn	Sn	15 00 48.6	-8.2
	0.3nm,0.3s,baz=163,slow=19,SNR=3.8						
WRA	**Warramunga Arr**	**23.57**	**164**	P	P	15 03 48.7	+0.3
	1.4nm,0.9s,baz=342,slow=10,SNR=8.0						
ASAR	**Alice Springs**	**27.02**	**167**	P	P	15 04 19.8	-0.2
	0.3nm,0.6s,baz=349,slow=8.0,SNR=5.5						
KLR	**Kul'dur**	**46.42**	**4**	LR	LR	15 31 18.1	
	comp=Z,31nm,18.0s,baz=4.5,slow=42						
MKAR	**Makanchi Array**	**58.76**	**325**	P	P	15 08 36.0	+0.1
	0.1nm,0.3s,baz=122,slow=7.0,SNR=3.1						

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*MOS **05** 14:59:02.7±0.8, 50.45N×156.95E, h66km, mb3.9/3, Error ellipse: s-maj=15.7km s-min=4.1km az=75.5*
*KRSC **05** 14:59:02.1±2.0, 50.47N×157.27E, h44km±23km, ML4.3*
*IDC **05** 14:59:06.7±2.3, 50.67N×156.78E, h82km±22km, mb3.3/9, mb1 3.5/12, mb1mx3.3/59, mbtmp3.6/12, Error ellipse: s-maj=27.7km s-min=13.0km az=135.0*
ISC 05 14:59:02.9±1.2, 50.39N±0.08×157.16E±0.06, h48km±12km, n78, σ1.9 60/101, mb3.5/11, 2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.72**	**294**	Ù *i*PN	**Pn**	**14 59 17.2**	**+0.4**
SKR				*e*S	**Sn**	**14 59 26.5**	**-0.4**
SKR				pmax	pmax		
	comp=Z,400nm,0.7s						
SKR				pmax	pmax		
	comp=Z,437nm,0.4s						
SKR				smax	smax		
	comp=N,6μm,0.3s						
SKR				smax	smax		
	comp=E,5μm,0.3s						
SKR	**Severo-Kuril's**	**0.72**	**294**	*e*P	**Pn**	**14 59 17.2**	**+0.4**
SKR				*e*S	**Sn**	**14 59 26.7**	**-0.2**
PAU	**Pauzhetka**	**1.10**	**349**	PN	**Pn**	**14 59 21.9**	**0.0**
PAU				S	**Sn**	**14 59 34.9**	**-1.0**
PAU	**Pauzhetka**	**1.10**	**349**	*e*P	**Pn**	**14 59 21.9**	**0.0**
PAU				*e*S	**Sn**	**14 59 34.9**	**-1.0**
KDTR	**Khodutka, Kamc**	**1.53**	**22**	PN	**Pn**	**14 59 27.8**	**0.0**
KDTR				S	**Sn**	**14 59 44.9**	**-1.6**
KDTR	**Khodutka, Kamc**	**1.53**	**22**	*e*P	**Pn**	**14 59 27.8**	**0.0**
KDTR				*e*S	**Sn**	**14 59 44.9**	**-1.6**
ASAK	**Asacha**	**2.05**	**13**	PN	**Pn**	**14 59 35.6**	**+0.7**
ASAK	**Asacha**	**2.05**	**13**	*e*P	**Pn**	**14 59 35.6**	**+0.7**
MTVR	**Mutnovka**	**2.19**	**17**	PN	**Pn**	**14 59 37.6**	**+0.7**
MTVR	**Mutnovka**	**2.19**	**17**	*e*P	**Pn**	**14 59 37.6**	**+0.7**
RUS	**Russkaya**	**2.21**	**22**	PN	**Pn**	**14 59 36.9**	**-0.2**
RUS				S	**Sn**	**15 00 01.1**	**-2.1**
RUS	**Russkaya**	**2.21**	**22**	*e*P	**Pn**	**14 59 36.9**	**-0.2**
RUS				*e*S	**Sn**	**15 00 01.1**	**-2.1**
GRL	**Gorelyy**	**2.24**	**14**	PN	**Pn**	**14 59 38.4**	**+0.8**
GRL				S	**Sn**	**15 00 03.8**	**-0.2**
GRL	**Gorelyy**	**2.24**	**14**	*e*P	**Pn**	**14 59 38.4**	**+0.8**
GRL				*e*S	**Sn**	**15 00 03.8**	**-0.2**
KRMR	**Karymshinskiy**	**2.52**	**14**	PN	**Pn**	**14 59 42.6**	**+1.4**
KRMR				S	**Sn**	**15 00 11.6**	**+0.9**
KRMR	**Karymshinskiy**	**2.52**	**14**	*e*P	**Pn**	**14 59 42.6**	**+1.4**
KRMR				*e*S	**Sn**	**15 00 11.6**	**+0.9**
APC	**Apacha**	**2.54**	**0**	PN	**Pn**	**14 59 42.2**	**+0.7**
APC	**Apacha**	**2.54**	**0**	*e*P	**Pn**	**14 59 42.2**	**+0.7**
PEA0B	**Petropavlovsk-**	**2.74**	**7**	*i* PN	**Pn**	**14 59 44.9**	**+0.5**
PETK	**Petropavlovsk-**	**2.74**	**7**	P	**Pn**	**14 59 45.3**	**+0.9**
	comp=E,2.5nm,0.3s,baz=188,slow=12,SNR=62						
PETK				S	**Sn**	**15 00 16.2**	**0.0**
	comp=E,2.6nm,0.3s,baz=207,slow=14,SNR=5.8						

PET	**Petropavlovsk**	**2.80**	**19**	PN	**Pn**	**14 59 46.0**	**+0.9**
PET				S	**Sn**	**15 00 17.4**	**-0.1**
PET	**Petropavlovsk**	**2.80**	**19**	*e*P	**Pn**	**14 59 46.0**	**+0.9**
PET				*e*S	**Sn**	**15 00 17.4**	**-0.1**
UGLR	**Uglovaya**	**3.01**	**19**	PN	**Pn**	**14 59 49.4**	**+1.3**
UGLR				S	**Sn**	**15 00 25.2**	**+2.3**
UGLR	**Uglovaya**	**3.01**	**19**	*e*P	**Pn**	**14 59 49.4**	**+1.3**
UGLR				*e*S	**Sn**	**15 00 25.2**	**+2.3**
AVH	**Avacha**	**3.04**	**18**	PN	**Pn**	**14 59 50.7**	**+2.2**
AVH				S	**Sn**	**15 00 26.2**	**+2.5**
AVH	**Avacha**	**3.04**	**18**	*e*P	**Pn**	**14 59 50.7**	**+2.2**
AVH				*e*S	**Sn**	**15 00 26.2**	**+2.5**
KOK	**Koryaka**	**3.05**	**17**	PN	**Pn**	**14 59 50.8**	**+2.2**
KOK				S	**Sn**	**15 00 25.8**	**+1.9**
KOK	**Koryaka**	**3.05**	**17**	*e*P	**Pn**	**14 59 50.8**	**+2.2**
KOK				*e*S	**Sn**	**15 00 25.8**	**+1.9**
SMAR	**Somma**	**3.05**	**19**	PN	**Pn**	**14 59 50.9**	**+2.1**
SMAR	**Somma**	**3.05**	**19**	*e*P	**Pn**	**14 59 50.9**	**+2.1**
KRER	**Koryakskii**	**3.08**	**18**	PN	**Pn**	**14 59 51.2**	**+2.0**
KRER				S	**Sn**	**15 00 26.2**	**+1.4**
KRER	**Koryakskii**	**3.08**	**18**	*e*P	**Pn**	**14 59 51.2**	**+2.0**
KRER				*e*S	**Sn**	**15 00 26.2**	**+1.4**
SDLR	**Sedlovina**	**3.08**	**20**	PN	**Pn**	**14 59 50.0**	**+0.9**
SDLR	**Sedlovina**	**3.08**	**20**	*e*P	**Pn**	**14 59 50.0**	**+0.9**
NLC	**Nalytchevo**	**3.10**	**25**	PN	**Pn**	**14 59 48.9**	**-0.3**
NLC				S	**Sn**	**15 00 21.5**	**-3.4**
NLC	**Nalytchevo**	**3.10**	**25**	*e*P	**Pn**	**14 59 48.9**	**-0.3**
NLC				*e*S	**Sn**	**15 00 21.5**	**-3.4**
KRX	**Arik**	**3.11**	**17**	PN	**Pn**	**14 59 51.5**	**+1.9**
KRX				S	**Sn**	**15 00 27.6**	**+2.0**
KRX	**Arik**	**3.11**	**17**	*e*P	**Pn**	**14 59 51.5**	**+1.9**
KRX				*e*S	**Sn**	**15 00 27.6**	**+2.0**
SPN	**Mys Shipunski**	**3.24**	**32**	PN	**Pn**	**14 59 52.3**	**+1.1**
SPN				S	**Sn**	**15 00 27.2**	**-1.3**
SPN	**Mys Shipunski**	**3.24**	**32**	*e*P	**Pn**	**14 59 52.3**	**+1.1**
SPN				*e*S	**Sn**	**15 00 27.2**	**-1.3**
GNL	**Ganaly**	**3.34**	**8**	PN	**Pn**	**14 59 54.3**	**+1.6**
GNL	**Ganaly**	**3.34**	**8**	*e*P	**Pn**	**14 59 54.3**	**+1.6**
MKZ	**Mys Kozlova**	**5.02**	**32**	PN	**Pn**	**15 00 16.1**	**+0.6**
MKZ	**Mys Kozlova**	**5.02**	**32**	*e*P	**Pn**	**15 00 16.1**	**+0.6**
KZV	**Kizimen**	**5.10**	**21**	PN	**Pn**	**15 00 20.2**	**+3.4**
KZV	**Kizimen**	**5.10**	**21**	*e*P	**Pn**	**15 00 20.2**	**+3.4**
TUMD	**Tumrok D**	**5.21**	**21**	*e*P	**Pn**	**15 00 20.5**	**+2.4**
TUMR	**Tumrok**	**5.22**	**19**	PN	**Pn**	**15 00 21.2**	**+2.7**
TUMR	**Tumrok**	**5.22**	**19**	*e*P	**Pn**	**15 00 21.2**	**+2.7**
KBTR	**Krutoberegovo**	**6.74**	**28**	PN	**Pn**	**15 00 40.0**	**+0.9**
KBTR	**Krutoberegovo**	**6.74**	**28**	*e*P	**Pn**	**15 00 40.0**	**+0.9**
SHO	**Shikotan**	**9.59**	**231**	*e*PN	**Pn**	**15 01 18.8**	**+0.6**
SHO				pmax	pmax		
	comp=Z,25nm,0.7s						
SHO				pmax	pmax		
	comp=E,8.0nm,0.3s						
SHO				pmax	pmax		
	comp=N,15nm,0.6s						
YSS	**Yuzh-Sakhalins**	**10.13**	**256**	*e*PN	**Pn**	**15 01 26.1**	**+0.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,600nm,20.0s						
NMR	**Nemuro--Hokkai**	**10.50**	**232**	*e*PN	**Pn**	**15 01 30.8**	**+0.1**
ASAJ	**Asahikawa**	**11.71**	**243**	P	**Pn**	**15 01 47.8**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=59,slow=17,SNR=5.9						
ERM	**Erimo**	**12.80**	**234**	*i* PN	**Pn**	**15 02 01.9**	**-0.1**
BILL	**Bilibino**	**18.27**	**11***d*	*i* P	**P**	**15 03 12.6**	**+0.5**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,334nm,21.0s						
YAK	**Yakutsk**	**19.04**	**318**	*i* P	**P**	**15 03 19.6**	**-1.0**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MJAR	**Matsushiro Arr**	**19.43**	**232**	P	**P**	**15 03 26.1**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=27,slow=12,SNR=4.0						
KSRS	**Korea Array**	**24.53**	**249**	P	**P**	**15 04 19.3**	**+1.6**
	comp=Z,0.4nm,0.5s,baz=50,slow=8.7,SNR=3.0						
TIXI	**Tiksi**	**24.87**	**339**	*i* P	**P**	**15 04 18.5**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**31.56**	**162**	T	T	15 39 00.5	
	baz=348,slow=76,SNR=29						
H11N1	**WAKE ISLAND Hy**	**31.57**	**162**	T	T	15 39 01.2	
	baz=348,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**31.57**	**162**	T	T	15 39 01.8	
	baz=348,slow=76,SNR=59						
ILAR	**Eielson Array**	**32.03**	**42**	P	**P**	**15 05 23.3**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=257,slow=8.2,SNR=4.3						
H11S1	**WAKE ISLAND Hy**	**32.71**	**163**	T	T	15 40 27.6	
	baz=348,slow=76,SNR=113						
H11S3	**WAKE ISLAND Hy**	**32.72**	**163**	T	T	15 40 27.1	
	baz=348,slow=76,SNR=56						
H11S2	**WAKE ISLAND Hy**	**32.73**	**163**	T	T	15 40 29.1	
	baz=348,slow=76,SNR=82						
TLY	**Talaya**	**33.05**	**293**	*i* P	**P**	**15 05 34.9**	**+1.4**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	**Yellowknife Ar**	**46.40**	**40**	P	**P**	**15 07 23.6**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=298,slow=7.6,SNR=7.1						
KURK	**Kurchatov**	**47.63**	**303**	P	**P**	**15 07 31.1**	**-2.7**
MKAR	**Makanchi Array**	**47.70**	**296**	P	**P**	**15 07 31.3**	**-3.1**
	comp=Z,0.2nm,0.4s,baz=59,slow=6.4,SNR=7.7						
KURBB	**Kurchatov Arra**	**47.73**	**302**	P	**P**	**15 07 31.1**	**-3.4**
	comp=Z,0.3nm,0.6s,baz=63,slow=8.0,SNR=3.7						
CMAR	**Chiang Mai Arr**	**55.82**	**257**	P	**P**	**15 08 35.5**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=31,slow=6.8,SNR=6.9						
PDAR	**Pinedale Array**	**60.48**	**58**	P	**P**	**15 09 09.4**	**+1.6**
	comp=Z,0.9nm,0.9s,baz=323,slow=3.7,SNR=5.6						
WRA	**Warramunga Arr**	**72.87**	**202**	*i* P	**P**	**15 10 27.5**	**+0.9**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**72.87**	**202**	P	**P**	**15 10 26.8**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=14,slow=6.1,SNR=5.8						
ASAR	**Alice Springs**	**76.55**	**202**	P	**P**	**15 10 49.1**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=14,slow=5.3,SNR=17						

*IDC **05** 15:09:02.3±7.6,36°.04N×71°.02E,h0km,mb3.5/1, mb1 3.5/7,mb1mx3.2/48,mbtmp3.5/7,ML3.3/6,Error ellipse: s-maj=109.1km s-min=33.3km az=160.0*
*NNC **05** 15:09:16.4±8.0,37°.03N×70°.26E,h24km±81km,mb4.0, mpv3.8,Error ellipse: s-maj=70.4km s-min=22.3km az=159.0*

ISC 05 15:09:14.7±1.9,36°.9N±0°.1×70°.45E±0°.08,h35km,n13, σ1s67/20,7C-4D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.25**	**0**	⇓P	**Pn**	**15 10 46.1**	**+1.7**
	2.3nm,0.4s,baz=181,slow=13,SNR=37						
KK31				⇑S	**Sn**	**15 11 55.0**	**+0.5**
	3.2nm,0.5s,baz=191,slow=23						
AAK	**Ala-Archa**	**6.56**	**27**	Pn	**Pn**	**15 10 50.5**	**+1.6**
	1.6nm,0.3s,baz=196,slow=5.6,SNR=24						
AAK				Sn	**Sn**	**15 12 03.2**	**+0.6**
	baz=180,slow=20,SNR=2.3						
AAK	**Ala-Archa**	**6.56**	**27**	P	**Pn**	**15 10 50.1**	**+1.2**
	2.4nm,0.5s						
AAK				⇓S	**Sn**	**15 12 02.6**	**0.0**
	5.8nm,0.8s						
TKM2	**Tokmak 2**	**7.24**	**32**	⇑P	**Pn**	**15 10 58.6**	**+0.4**
	9.0nm,0.6s						
TKM2				⇑S	**Sn**	**15 12 21.7**	**+2.5**
	6.1nm,1.1s						
GEYT	**Alibeck**	**9.88**	**280**	Pn	**Pn**	**15 11 34.5**	**+0.3**
	0.7nm,0.3s,baz=98,slow=10,SNR=7.1						
GEYT				Sn	**Sn**	**15 13 24.6**	**+0.8**
	0.7nm,0.3s,baz=237,slow=18,SNR=5.1						
GYA0B	**ALIBECK ARRAY**	**9.88**	**280**	⇓P	**Pn**	**15 11 33.4**	**-0.8**
GYA0B				⇑S	**Sn**	**15 13 24.5**	**+0.6**
MKAR	**Makanchi Array**	**13.28**	**38**	Pn	**Pn**	**15 12 20.0**	**-0.6**
	0.0nm,0.3s,baz=220,slow=11,SNR=5.0						
AB31	**Akbulak array**	**14.57**	**332**	⇓P	**Pn**	**15 12 36.4**	**-1.7**
	1.2nm,0.7s,baz=159,slow=12,SNR=4.9						
AB31				⇑S	**Sn**	**15 15 15.6**	**-2.7**
	0.4nm,0.5s						
KURBB	**Kurchatov Arra**	**14.94**	**20**	Pn	Pn	15 12 39.6	-3.5
	0.0nm,0.3s,baz=213,slow=12,SNR=6.1						
BVAR	**Borovoye Array**	**16.18**	**360**	Pn	**Pn**	**15 12 57.9**	**-1.3**
	0.1nm,0.3s,baz=170,slow=11,SNR=4.0						
AKTO	**Aktyubinsk**	**16.26**	**331**	P	**Pn**	**15 13 02.6**	**+2.4**
	0.2nm,0.3s,baz=138,slow=11,SNR=3.9						
AKTO	**Aktyubinsk**	**16.26**	**331**	⇑P	**Pn**	**15 13 03.3**	**+3.0**
	3.6nm,0.8s						
AKTO				⇑S	**Sn**	**15 15 59.8**	**+0.3**
	2.6nm,1.3s						
ZALV	**Zalesovo Beam**	**19.79**	**26**	P	**P**	**15 13 39.5**	**-2.2**
	1.2nm,0.5s,baz=216,slow=10,SNR=7.9						

*SJA **05** 15:09:25.1±0.8,32°.71S×71°.63W,h19km±5km,ML3.9, MW4.0*
*IDC **05** 15:09:27.3±3.0,32°.54S×71°.75W,h42km±24km,mb3.9/4, mb1 3.9/8,mb1mx3.6/32,mbtmp4.0/8,ML3.8/5,MS3.2/2, Ms1 3.2/2,ms1mx2.9/17,Error ellipse: s-maj=27.8km s-min=16.6km az=117.0*
*NEIC **05** 15:09:27.9±2.0,32°.71S±0°.06×71°.40W±0°.07,h52km±6km, mb4.5/10,ML4.3(GUC),Error ellipse: s-maj=10.7km s-min=6.3km az=49.0*
*GUC **05** 15:09:29.1±0.6,32°.83S×71°.33W,h45km±24km,ML4.3*

ISC 05 15:09:25.6±0.8,32°.55S±0°.04×71°.49W±0°.05,h30km±5km, n61,σ1s27/66,mb4.3/6,5C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA01	**Torpederas**	**0.49**	**196**	*i* P	**Pn**	**15 09 38.5**	**+2.0**
VA01				*i* S	**Sn**	**15 09 45.6**	**+1.6**
VA01				IAML		15 09 47.1	
	comp=E,59μm,0.4s						
ROCH	**El Roble**	**0.58**	**136**	⇑*i* P	**Pn**	**15 09 39.1**	**+1.1**
ROCH				*i* S	**Sn**	**15 09 46.5**	**-0.2**
ROCH				IAML		15 09 47.3	
	comp=N,36μm,0.1s						
ROC1	**El Roble**	**0.58**	**137**	Pn	**Pn**	**15 09 38.9**	**+0.9**
ROC1				Sn	**Sb**	**15 09 46.4**	**+0.7**
ROC1	**El Roble**	**0.58**	**137**	*i* P	**Pn**	**15 09 39.0**	**+1.0**
ROC1				*e*S	**Sb**	**15 09 46.0**	**+0.3**
PEL	**Peldehue**	**0.90**	**131**	*e*P	**Pb**	**15 09 42.1**	**-0.6**
PEL				*e*S	**Sb**	**15 09 53.2**	**-1.2**
PEL				IAML		15 09 53.9	
	comp=N,26μm,0.2s						
PEL	**Peldehue**	**0.90**	**131**		**Pb**	**15 09 42.4**	**-0.3**
PEL	**Peldehue**	**0.90**	**131**	*i* P	**Pn**	**15 09 43.0**	**+0.7**
PEL				*e*S	**Sb**	**15 09 53.9**	**-0.4**
CLCH	**Cerro Calan**	**1.16**	**137**	⇑*i*P	**Pn**	**15 09 46.5**	**+0.6**
CLCH				*i* S	**Sn**	**15 09 59.4**	**-1.3**
ANTU	**Antumapu**	**1.24**	**145**	⇑*i*P	**Pb**	**15 09 48.4**	**-0.1**
ANTU				*e*S	**Sn**	**15 10 02.1**	**-0.7**
FCH	**Farellones**	**1.27**	**128**	⇑*i*P	**Pn**	**15 09 48.3**	**+0.7**
FCH				*i* S	**Sn**	**15 10 02.8**	**-1.1**
LMEL	**Las Melosas**	**1.68**	**141**	⇑*i*P	**Pn**	**15 09 54.0**	**+0.8**
LMEL				*i* S	**Sn**	**15 10 12.9**	**-0.8**
LMEL				IAML		15 10 15.6	
	comp=N,11μm,0.2s						
ARCO	**CERRO ARCO**	**2.18**	**98**	*i* P	**Pb**	**15 10 04.8**	**+0.4**
ARCO				IAML		15 10 38.2	
	comp=Z,764nm,0.6s						
ASAL	**Salagasta**	**2.24**	**92**	*i* P	**Pb**	**15 10 06.0**	**+0.6**
ASAL				*e*S	**Sb**	**15 10 35.4**	**+2.6**
ASAL				IAML		15 10 39.2	
	comp=Z,906nm,0.7s						
AAGR	**Agrelo**	**2.30**	**104**	*i* P	**Pb**	**15 10 05.8**	**-0.7**
AAGR				IAML		15 10 42.1	
	comp=Z,565nm,0.5s						
GO04	**Tololo Observa**	**2.44**	**14**	Pn	**Pb**	**15 10 09.7**	**+0.7**
GO05	**Huala**	**2.48**	**188**	Pn	**Pn**	**15 10 03.3**	**-0.6**
ZON	**Zonda**	**2.59**	**68**	*i* P	**Pb**	**15 10 10.9**	**-0.4**
ZON				IAML		15 11 02.7	
	comp=Z,340nm,1.0s						
RTCV	**Cerro Valdivia**	**2.59**	**75**	⇓*i*P	**Pb**	**15 10 11.1**	**-0.3**
RTCV				IAML		15 10 52.7	
	comp=Z,358nm,1.6s						
CFA	**Coronel Fontan**	**2.92**	**72**	P	**Pb**	**15 10 15.1**	**-1.8**
	comp=Z,44nm,0.3s,baz=226,slow=8.5,SNR=178						
CFA				S	**Sb**	**15 10 50.9**	**-1.3**
	comp=Z,67nm,0.3s,baz=251,slow=14,SNR=5.5						
CFA	**Coronel Fontan**	**2.92**	**72**	*i* P	**Pb**	**15 10 15.1**	**-1.8**
COIS	**El Sosneado**	**3.00**	**149**	*i* P	**Pn**	**15 10 13.2**	**+2.1**
AMOG	**MOGNA**	**3.02**	**59**	*i* P	**Pb**	**15 10 17.6**	**-1.0**
AMOG				IAML		15 11 08.3	
	comp=Z,379nm,0.4s						
APLL	**PUNTA DE LOS L**	**4.75**	**64**	*i* P	**Pn**	**15 10 39.7**	**+4.5**
APLL				IAML		15 12 03.7	
	comp=Z,23nm,0.6s						
MRA	**San Martin**	**4.88**	**90**	*i* P	**Pn**	**15 10 39.5**	**+2.5**
MRA				IAML		15 12 11.8	
	comp=Z,32nm,0.7s						
ACLC	**CERRO LA CRUZ**	**4.99**	**53**	*i* P	Pn	15 10 43.5	+4.9
ACLC				IAML		15 12 15.4	
	comp=Z,225nm,0.5s						
PLCA	**Paso Flores**	**8.20**	**175**	P	**Pn**	**15 11 23.6**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=351,slow=13,SNR=6.5						
LVC	**Limon Verde**	**10.16**	**14**	P	**Pn**	**15 11 50.3**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=183,slow=12,SNR=4.6						
PB04	**IPOC Station P**	**10.25**	**7**	Pn	**Pn**	**15 11 50.4**	**-0.3**
MNMC	**Minye Minye**	**13.47**	**8**	Pn	**Pn**	**15 12 36.1**	**+1.2**
CPUP	**Villa Florida**	**13.80**	**67**	P	**Pn**	**15 12 39.0**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=238,slow=11,SNR=5.7						
CPUP				LR	LR	15 18 20.1	
	comp=Z,83nm,20.0s,baz=295,slow=38						
CPUP	**Villa Florida**	**13.80**	**67**		**Pn**	**15 12 40.9**	**+1.7**
LPAZ	**La Paz**	**16.48**	**11**	P	**P**	**15 13 17.9**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=179,slow=7.0,SNR=15						
LPAZ	**La Paz**	**16.48**	**11**	P	**P**	**15 13 18.5**	**+0.9**
SIV	**San Ignacio**	**19.00**	**32**	P	**P**	**15 13 45.8**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=233,slow=12,SNR=21						
SAML	**Samuel**	**24.71**	**20**	P	**P**	**15 14 46.1**	**+1.9**
SAML				IAmb	IAmb	15 14 48.6	
	comp=Z,6.9nm,0.7s						
BDFB	**Brasilia**	**27.15**	**57**	P	**P**	**15 15 06.6**	**+0.1**
	comp=Z,3.0nm,0.4s,baz=232,slow=8.2,SNR=8.4						
BDFB				LR	LR	15 26 57.3	
	comp=Z,63nm,20.1s,baz=86,slow=38						
BDFB	**Brasilia**	**27.15**	**57**	P	**P**	**15 15 06.5**	**+0.1**
BDFB				IAmb	IAmb	15 15 07.8	
	comp=Z,5.3nm,0.7s						
CBCY	**The Bluff, Cay**	**52.59**	**350**	P	**P**	**15 18 36.0**	**-0.5**
SNAA	**Sanae**	**52.75**	**158**	P	**P**	**15 18 38.0**	**+0.7**
	comp=Z,2.0nm,1.1s,baz=312,slow=12,SNR=2.3						
SNAA	**Sanae**	**52.75**	**158**	IAmb	IAmb	15 18 58.5	
	comp=Z,4.5nm,1.1s						
QSPA	**South Pole Qui**	**57.68**	**180**	P	**P**	**15 19 13.2**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=162,slow=2.8,SNR=12						
QSPA	**South Pole Qui**	**57.68**	**180**	P	**P**	**15 19 13.1**	**0.0**
QSPA				IAmb	IAmb	15 21 18.1	
	comp=Z,28nm,2.0s						
PPT2	**Papeete2**	**70.91**	**261**	*e*LR	LR	15 19 35.0	
	comp=Z,96nm,27.2s						
WMOK	**Wichita Mounta**	**71.68**	**337**	P	**P**	**15 20 42.8**	**-1.6**
WMOK				IAmb	IAmb	15 23 18.2	
	comp=Z,12nm,0.9s						
TORD	**Torodi Ar. Bea**	**83.28**	**70**	P	**P**	**15 21 49.9**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=268,slow=5.7,SNR=6.0						
TORD				pP	**sP**	**15 22 03.6**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=296,slow=7.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**83.28**	**70**	P	**P**	**15 21 49.4**	**-0.3**
YNE	**Yellowstone No**	**84.76**	**334**	P	**P**	**15 21 55.5**	**-1.4**
GDXM	**Geysers**	**85.51**	**322**	P	**P**	**15 21 59.0**	**-1.5**
WRA	**Warramunga Arr**	**122.25**	**209**	PKP	**PKPdf**	**15 28 16.9**	**-1.2**
	comp=Z,0.2nm,0.9s,baz=166,slow=1.7,SNR=3.2						
H11S2	**WAKE ISLAND Hy**	**126.24**	**270**	T	T	17 47 33.4	
	baz=118,slow=75,SNR=103						
H11S1	**WAKE ISLAND Hy**	**126.25**	**270**	T	T	17 47 31.2	
	baz=118,slow=75,SNR=137						
H11S3	**WAKE ISLAND Hy**	**126.26**	**270**	T	T	17 47 26.0	
	baz=118,slow=75,SNR=102						
H11N3	**WAKE ISLAND Hy**	**126.62**	**271**	T	T	17 47 59.9	
	baz=118,slow=26						
H11N1	**WAKE ISLAND Hy**	**126.63**	**271**	T	T	17 48 00.1	
	baz=118,slow=26						
H11N2	**WAKE ISLAND Hy**	**126.64**	**271**	T	T	17 48 01.3	
	baz=118,slow=26						
BVAR	**Borovoye Array**	**145.90**	**42**	PKPbc	**PKPab**	**15 29 03.1**	**+1.1**
	comp=Z,0.3nm,0.5s,baz=270,slow=2.9,SNR=3.4						
AAK	**Ala-Archa**	**151.40**	**60**	PKPbc	**PKPbc**	**15 29 17.4**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=111,slow=4.2,SNR=4.7						
AAK	**Ala-Archa**	**151.40**	**60**		**PKPbc**	**15 29 15.9**	**-0.5**
KURBB	**Kurchatov Arra**	**151.49**	**42**	PKPbc	**PKPbc**	**15 29 17.0**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=302,slow=3.1,SNR=5.9						
KURBB				pPKPbc	**pPKPab**	**15 29 31.4**	**-3.0**
	comp=Z,0.5nm,0.5s,baz=302,slow=2.7,SNR=4.6						
KURK	**Kurchatov**	**151.50**	**42**		**PKPbc**	**15 29 15.9**	**-0.2**
ZALV	**Zalesovo Beam**	**152.75**	**31**	PKPbc	**PKPbc**	**15 29 19.2**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=322,slow=5.5,SNR=3.7						

*NNC **05** 15:18:11.8±0.3,43°.22N×78°.21E,h1km±2km,mb2.8, mpv2.8,Error ellipse: s-maj=3.2km s-min=1.7km az=3.0*

*KRNET **05** 15:18:12.1±0.1,43°.19N×78°.20E,h10km,mb3.0*
*SOME **05** 15:18:12.5,43°.20N×78°.18E,h10km*

ISC 05 15:18:12.7±0.8,43°.20N±0°.02×78°.18E±0°.02,h10km,n47, σ1s20/91,22C-2D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZHN	**Zhinishke**	**0.19**	**100**	*e*P	**Pg**	**15 18 15.8**	**-1.1**
	baz=96						
ZHN				*e*S	**Sg**	**15 18 18.4**	**-1.3**
	baz=96						
ZHN	**Zhinishke**	**0.19**	**100**	*e*P	**Pg**	**15 18 15.8**	**-1.1**
	61nm,0.1s						
ZHN				*e*S	**Sg**	**15 18 18.4**	**-1.3**
	90nm,0.1s						
ZHN	**Zhinishke**	**0.19**	**100**	P	**Pg**	**15 18 15.8**	**-1.1**
	61nm,0.1s						
ZHN				S	**Sg**	**15 18 18.3**	**-1.3**
	90nm,0.2s						
SATY	**Saty**	**0.22**	**130**	*e*P	**Pg**	**15 18 16.6**	**-0.8**
	32nm,0.1s						
SATY				*e*S	**Sg**	**15 18 19.7**	**-0.8**
	362nm,0.1s						
SATY	**Saty**	**0.22**	**130**	P	**Pg**	**15 18 16.5**	**-0.8**
	32nm,0.1s						
SATY				S	**Sg**	**15 18 19.7**	**-0.8**
	362nm,0.1s						
KURS	**Kuram**	**0.29**	**359**	*e*P	**Pg**	**15 18 17.9**	**-0.6**
	baz=56						
KURS				*e*S	**Sg**	**15 18 21.9**	**-0.6**
	baz=56						
KURS	**Kuram**	**0.29**	**359**	*e*P	**Pg**	**15 18 17.9**	**-0.6**
	32nm,0.1s						
KURS				*e*S	**Sg**	**15 18 21.9**	**-0.6**
	12nm,0.1s						
KURS	**Kuram**	**0.29**	**359**	P	**Pg**	**15 18 17.9**	**-0.6**
	37nm,0.1s						
KURS				S	**Sg**	**15 18 21.9**	**-0.6**
	17nm,0.3s						
KPKS	**Kokpek**	**0.46**	**54**	*e*P	**Pg**	**15 18 20.9**	**-0.8**
	baz=53						
KPKS				*e*S	**Sg**	**15 18 26.9**	**-0.8**
	baz=53						
KPKS	**Kokpek**	**0.46**	**54**	*e*P	**Pg**	**15 18 20.9**	**-0.8**
	7.7nm,0.1s						
KPKS				*e*S	**Sg**	**15 18 26.9**	**-0.8**
	47nm,0.1s						
UZB	**Uzynbulak**	**0.62**	**95**	*e*P	**Pg**	**15 18 23.6**	**-1.2**
	baz=93						
UZB				*e*S	**Sg**	**15 18 31.6**	**-1.4**
	baz=93						
UZB	**Uzynbulak**	**0.62**	**95**	*e*P	**Pg**	**15 18 23.6**	**-1.2**
	5.8nm,0.0s						
UZB				*e*S	**Sg**	**15 18 31.6**	**-1.4**
	10nm,0.1s						
UZB	**Uzynbulak**	**0.62**	**95**	P	**Pg**	**15 18 23.6**	**-1.2**
	4.5nm,0.1s						
UZB				S	**Sg**	**15 18 31.5**	**-1.5**
	13nm,0.1s						
PRZ	**Przheval'sk**	**0.74**	**167**	⇑*i*P	**Pg**	**15 18 26.1**	**-0.9**
	baz=67						
PRZ				⇑*i*S	**Sg**	**15 18 35.4**	**-1.2**
	baz=67						
KOTS	**Kotyrbulak**	**0.78**	**273**	P	**Pg**	**15 18 27.4**	**-0.4**
	16nm,0.2s						
KOTS				S	**Sg**	**15 18 38.8**	**-0.3**
	14nm,0.2s						
MDOK	**Medeo**	**0.83**	**268**	*e*P	**Pg**	**15 18 28.1**	**-0.6**
	baz=69						
MDOK				*e*S	**Sb**	**15 18 39.5**	**-1.0**
	baz=69						
MDOK	**Medeo**	**0.83**	**268**	*e*P	**Pg**	**15 18 28.1**	**-0.6**
	2.3nm,0.1s						
MDOK				*e*S	**Sb**	**15 18 39.5**	**-1.0**
	9.6nm,0.3s						
MDOK	**Medeo**	**0.83**	**268**	Pg	**Pg**	**15 18 28.1**	**-0.6**
	2.4nm,0.2s						
MDOK				Lg	Lg	15 18 39.2	
	4.5nm,0.3s						
MNBS	**Baschi**	**0.89**	**10**	*e*P	**Pg**	**15 18 28.9**	**-1.1**
	3.4nm,0.1s						
MNBS				*e*S	**Sg**	**15 18 40.6**	**-1.0**
	12nm,0.1s						
TNSS	**Tian-Shan**	**0.92**	**260**	*e*P	**Pg**	**15 18 30.0**	**-0.4**
	baz=61						
TNSS				*e*S	**Sb

TKM2				⇑*i*S		**Sg**	**15 19 14.4**	**+0.2**
	baz=63							
TKM2	**Tokmak 2**	**1.91**	**262**	⇓Pn		**Pb**	**15 18 46.8**	**-1.0**
	1.0nm,0.3s							
TKM2				⇑Sn		**Sg**	**15 19 13.8**	**-0.3**
	1.1nm,0.4s							
KAPS	**Kapalarasan**	**2.25**	**22**	Pg		**Pb**	**15 18 53.5**	**0.0**
	0.9nm,0.2s							
KAPS				Lg		Lg	15 19 22.5	
	2.5nm,0.2s							
NRN	**Naryn**	**2.39**	**223**	⇑*i*P		**Pb**	**15 18 54.9**	**-1.2**
	baz=24							
NRN				⇑*i*S		**Sb**	**15 19 26.0**	**+0.2**
	baz=24							
KBK	**Karagaybulak**	**2.43**	**258**	⇑*i*P		**Pb**	**15 18 56.1**	**-0.6**
	baz=59							
KBK				⇑*i*S		**Sb**	**15 19 27.2**	**+0.4**
	baz=59							
USP	**Ospenovka**	**2.69**	**273**	⇑*i*P		**Pb**	**15 18 59.7**	**-1.2**
	baz=73							
USP				⇑*i*S		**Sb**	**15 19 33.5**	**-0.5**
	baz=73							
AAK	**Ala-Archa**	**2.76**	**259**	⇑Pg		**Pb**	**15 19 00.4**	**-1.9**
	3.6nm,1.2s							
AAK				⇑Lg		Lg	15 19 38.0	
	2.8nm,1.2s							

*IDC **05** 15:22:38.9±1.8,35°.77N×65°.41E,h0km,mb3.6/4, mb1 3.8/8,mb1mx3.4/48,mbtmp3.7/8,ML3.6/4,Error ellipse: s-maj=30.4km s-min=17.0km az=2.0*
*NNC **05** 15:22:42.1±6.7,36°.15N×65°.59E,h0km,mb4.2,mpv3.5, Error ellipse: s-maj=69.9km s-min=52.0km az=131.0*
ISC 05 15:22:41.0±1.3,36°.0N±0°.1×65°.42E±0°.06,h10km,n19, σ1°27/24,mb3.5/4,3C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GEYT	**Alibeck**	**6.16**	**290**	Pn		**Pn**	**15 24 11.2**	**-0.9**
	0.7nm,0.3s,baz=107,slow=12,SNR=9.3							
GEYT				Pg		**Pg**	**15 24 38.5**	**-0.4**
	0.5nm,0.3s,baz=109,slow=13,SNR=6.3							
GEYT				Sn		**Sn**	**15 25 23.4**	**+0.9**
	0.5nm,0.3s,baz=100,slow=16,SNR=3.3							
GEYT				Lg		Lg	15 25 57.0	
	0.2nm,0.3s,baz=56,slow=26,SNR=2.3							
KK31	**Karatay Array**	**8.11**	**27**	⇑P		**Pn**	**15 24 39.5**	**+0.7**
	0.8nm,0.3s,baz=205,slow=11,SNR=25							
KK31				⇓S		**Sn**	**15 26 08.2**	**-2.3**
	0.7nm,0.3s,baz=210,slow=21							
AML	**Almayashu**	**8.88**	**44**	P		**Pn**	**15 24 49.7**	**0.0**
	SNR=7.1							
UCH	**Uchtor**	**9.41**	**46**	P		**Pn**	**15 24 59.5**	**+2.5**
	SNR=6.2							
AAK	**Ala-Archa**	**9.66**	**44**	Pn		**Pn**	**15 24 59.8**	**-0.3**
	1.5nm,0.3s,baz=202,slow=8.2,SNR=40							
AAK				Sn		**Sn**	**15 26 48.1**	**-0.6**
	0.1nm,0.3s,baz=323,slow=20,SNR=3.5							
AAK	**Ala-Archa**	**9.66**	**44**	P		**Pn**	**15 25 00.6**	**+0.4**
	SNR=5.5							
AAK	**Ala-Archa**	**9.66**	**44**	⇓P		**Pn**	**15 24 59.7**	**-0.4**
	5.2nm,0.5s							
AAK				⇑S		**Sn**	**15 26 48.9**	**+0.1**
	11nm,1.4s							
KZA	**Kyzart**	**9.76**	**49**	P		**Pn**	**15 25 03.8**	**+2.0**
	SNR=6.0							
KBK	**Karagaybulak**	**9.93**	**45**	P		**Pn**	**15 25 04.5**	**+0.7**
	SNR=6.6							
TKM2	**Tokmak 2**	**10.47**	**46**	P		**Pn**	**15 25 11.2**	**-0.1**
	SNR=5.8							
TKM2	**Tokmak 2**	**10.47**	**46**	⇓P		Pn	15 25 09.2	-2.1
	12nm,1.4s							
TKM2				⇑S		**Sn**	**15 27 09.8**	**+1.1**
	6.4nm,1.4s							
AKTO	**Aktyubinsk**	**15.39**	**342**	Pn		**Pn**	**15 26 18.9**	**+0.7**
	0.2nm,0.3s,baz=155,slow=13,SNR=3.4							
MKAR	**Makanchi Array**	**16.59**	**44**	Pn		**Pn**	**15 26 32.1**	**-1.5**
	0.1nm,0.3s,baz=234,slow=13,SNR=12							
BVAR	**Borovoye Array**	**17.38**	**10**	P		**Pn**	**15 26 42.1**	**-1.4**
	0.4nm,0.3s,baz=182,slow=13,SNR=6.9							
KURBB	**Kurchatov Arra**	**17.41**	**29**	P		**Pn**	**15 26 41.6**	**-2.3**
	0.0nm,0.3s,baz=220,slow=12,SNR=12							
ZALV	**Zalesovo Beam**	**22.46**	**31**	P		**P**	**15 27 41.0**	**+0.9**
	3.3nm,0.8s,baz=218,slow=9.1,SNR=10							
CMAR	**Chiang Mai Arr**	**34.33**	**112**	P		**P**	**15 29 26.8**	**-1.1**
	0.4nm,0.6s,baz=303,slow=8.2,SNR=3.3							
NOA	**NORSAR Array B**	**42.10**	**324**	P		**P**	**15 30 33.4**	**+0.4**
	0.7nm,0.8s,baz=107,slow=8.1,SNR=3.3							
YKA	**Yellowknife Ar**	**81.85**	**0**	P		**P**	**15 35 01.2**	**+1.2**
	0.3nm,0.7s,baz=354,slow=5.5,SNR=5.8							

ROM 05 15:39:34.8±0.1,43°.043N±0°.004×12°.872E±0°.004, h9km,Md1.2/7,Error ellipse: s-maj=0.5km s-min=0.2km az=192.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CESI	**CESI - Serrava**	**0.04**	**147**	P		Pg	15 39 36.8	+0.2
CESI				S		Sg	15 39 38.0	+0.1
CESI				AML		AML		
	comp=E,167μm,0.3s							
CESI				AML		AML		
	comp=N,482μm,0.2s							
CESI				AML		AML		
	comp=E,7740μm,1.0s							
CESI				AML		AML		
	comp=N,23600μm,0.4s							
CESI				END				
ASSB	**Assisi San Ben**	**0.16**	**270**	P		Pg	15 39 38.8	+0.6
ASSB				S		Sg	15 39 41.4	+1.0
ASSB				AML		AML		
	comp=E,352μm,0.7s							
ASSB				AML		AML		
	comp=N,418μm,0.8s							
ASSB				AML		AML		
	comp=E,12355μm,0.7s							
ASSB				AML		AML		
	comp=N,15000μm,0.8s							
ASSB				END				
FDMO	**Fiordimonte**	**0.16**	**92**	P		Pg	15 39 38.8	+0.6
FDMO				S		Sg	15 39 41.6	+1.2
FDMO				AML		AML		
	comp=E,224μm,0.2s							
FDMO				AML		AML		
	comp=N,296μm,0.2s							
FDMO				AML		AML		
	comp=N,13550μm,0.2s							
FDMO				AML		AML		
	comp=E,13200μm,0.2s							
FDMO				AML		AML		
	comp=N,13550μm,0.2s							
FDMO				END				
ATCC	**AVT- Casa Cast**	**0.22**	**310**	P		Pg	15 39 39.9	+0.6
ATCC				S		Sg	15 39 43.8	+1.5
ATCC				AML		AML		
	comp=E,211μm,0.6s							
ATCC				AML		AML		
	comp=N,250μm,0.3s							
ATCC				AML		AML		
	comp=N,6915μm,0.9s							
ATCC				AML		AML		
	comp=E,7955μm,0.9s							
ATCC				END				
CSP1	**Cessapalombo**	**0.25**	**78**	P		Pg	15 39 40.4	+0.6
CSP1				S		Sg	15 39 44.9	+1.7
CSP1				END				
NRCA	**Norcia**	**0.27**	**139**	P		Pg	15 39 41.0	+0.7
NRCA				S		Sb	15 39 45.8	-0.9
NRCA				AML		AML		
	comp=E,682μm,0.1s							
NRCA				AML		AML		
	comp=N,522μm,0.2s							
NRCA				AML		AML		
	comp=E,3865μm,0.6s							
NRCA				AML		AML		
	comp=N,7485μm,0.3s							
NRCA				AML		AML		
	comp=N,7710μm,0.3s							
NRCA				AML		AML		
	comp=E,4135μm,0.6s							
NRCA				END				
MURB	**Monte Urbino**	**0.34**	**311**	P		Pg	15 39 42.1	+0.6
MURB				S		Sb	15 39 48.1	-0.4
MURB				AML		AML		
	comp=E,936μm,0.2s							
MURB				AML		AML		
	comp=N,648μm,0.4s							
MURB				AML		AML		
	comp=E,939μm,0.2s							
MURB				AML		AML		
	comp=N,772μm,0.4s							
MURB				AML		AML		
	comp=E,10645μm,0.3s							
MURB				AML		AML		
	comp=N,6820μm,0.3s							
MURB				AML		AML		
	comp=E,11650μm,0.3s							
MURB				AML		AML		
	comp=N,7255μm,0.3s							
MURB				END				
CING	**Cingoli**	**0.41**	**35**	P		Pg	15 39 43.2	+0.4
CING				S		Sb	15 39 49.9	-0.7
CING				AML		AML		
	comp=N,3855μm,0.3s							
CING				AML		AML		
	comp=E,2395μm,0.7s							

*LDG **05** 15:40:03.1±0.1,43°.05N×12°.86E,h10km,Ml2.6/5,Error ellipse: s-maj=2.1km s-min=1.8km az=42.0*
ROM 05 15:40:02.9±0.1,43°.048N±0°.003×12°.870E±0°.004, h8km,ML2.9/37,Error ellipse: s-maj=0.3km s-min=0.2km az=213.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CESI	**CESI - Serrava**	**0.05**	**149**	P		Pg	15 40 05.0	+0.3
CESI				S		Sg	15 40 06.3	+0.4
CESI				AML		AML		
	comp=E,7740μm,1.0s							
CESI				AML		AML		
	comp=N,23600μm,0.4s							
FIU1	**Fiuminata**	**0.15**	**18**	P		Pg	15 40 06.5	+0.4
FIU1				S		Sg	15 40 08.9	+0.7
FIU1				AML		AML		
	comp=E,6025μm,0.8s							
FIU1				AML		AML		
	comp=N,6275μm,1.4s							
ASSB	**Assisi San Ben**	**0.15**	**268**	P		Pg	15 40 06.9	+0.7
ASSB				S		Sg	15 40 09.5	+1.1
ASSB				AML		AML		
	comp=E,12355μm,0.7s							
ASSB				AML		AML		
	comp=N,15000μm,0.8s							
FEMA	**Monte Fema**	**0.16**	**123**	P		Pg	15 40 07.2	+0.9
FEMA				S		Sg	15 40 09.8	+1.3
FEMA				AML		AML		
	comp=E,8055μm,1.3s							
FEMA				AML		AML		
	comp=N,10440μm,0.7s							
FEMA				AML		AML		
	comp=N,10450μm,0.7s							
FEMA				AML		AML		
	comp=N,10410μm,0.7s							
FEMA				AML		AML		
	comp=E,8050μm,1.3s							
FDMO	**Fiordimonte**	**0.16**	**94**	P		Pg	15 40 06.9	+0.6
FDMO				S		Sg	15 40 09.8	+1.3
FDMO				AML		AML		
	comp=N,13550μm,0.2s							
FDMO				AML		AML		
	comp=E,13200μm,0.2s							
FDMO				AML		AML		
	comp=N,13550μm,0.2s							
SNTG	**Esanatoglia**	**0.21**	**14**	P		Pg	15 40 07.7	+0.4
SNTG				S		Sg	15 40 11.3	+1.1
SNTG				AML		AML		
	comp=E,459μm,1.2s							
SNTG				AML		AML		
	comp=N,492μm,0.6s							
SNTG				AML		AML		
	comp=E,459μm,1.2s							
SNTG				AML		AML		
	comp=N,3590μm,0.6s							
SNTG				AML		AML		
	comp=E,3510μm,0.5s							
ATCC	**AVT- Casa Cast**	**0.22**	**309**	P		Pg	15 40 08.0	+0.7
ATCC				S		Sg	15 40 12.0	+1.7
ATCC				AML		AML		
	comp=N,6910μm,0.9s							
ATCC				AML		AML		
	comp=E,7955μm,0.9s							
ATCC				AML		AML		
	comp=N,6915μm,0.9s							
MTL1	**Matelica**	**0.23**	**26**	P		Pg	15 40 08.3	+0.7
MTL1				S		Sg	15 40 12.3	+1.6
MTL1				AML		AML		
	comp=E,11800μm,0.4s							
MTL1				AML		AML		
	comp=N,12800μm,0.4s							
MTL1				AML		AML		
	comp=E,11750μm,0.4s							
MTL1				AML		AML		
	comp=N,12850μm,0.4s							
GAG1	**Gagliole**	**0.24**	**37**	P		Pg	15 40 08.5	+0.8
GAG1				S		Sg	15 40 12.7	+1.7
GAG1				AML		AML		
	comp=E,12835μm,0.5s							
GAG1				AML		AML		
	comp=N,17900μm,0.3s							
GAG1				AML		AML		
	comp=E,12845μm,0.6s							
GAG1				AML		AML		
	comp=N,17950μm,0.3s							
GAG1				AML		AML		
	comp=N,17900μm,0.3s							
GAG1				AML		AML		
	comp=E,12840μm,0.5s							
CSP1	**Cessapalombo**	**0.25**	**80**	P		Pg	15 40 08.6	+0.7
CSP1				S		Sg	15 40 13.2	+1.9
CSP1				AML		AML		
	comp=N,7880μm,1.4s							
CSP1				AML		AML		
	comp=E,5940μm,0.4s							
FOSV	**Fossato di Vic**	**0.26**	**342**	P		Pg	15 40 08.6	+0.5
FOSV				S		Sg	15 40 13.0	+1.4
FOSV				AML		AML		
	comp=N,4750μm,0.4s							
FOSV				AML		AML		
	comp=N,4745μm,0.4s							
FOSV				AML		AML		
	comp=E,4425μm,1.1s							
NRCA	**Norcia**	**0.28**	**140**	P		Pg	15 40 09.2	+0.7
NRCA				S		Sb	15 40 13.9	-1.3
NRCA				AML		AML		
	comp=N,7485μm,0.3s							
NRCA				AML		AML		
	comp=N,7710μm,0.3s							
NRCA				AML		AML		
	comp=E,3865μm,0.6s							
NRCA				AML		AML		
	comp=E,4135μm,0.6s							
SSM1	**San Severino M**	**0.29**	**51**	P		Pg	15 40 09.3	+0.7
SSM1				S		Sb	15 40 14.2	-1.2
MOMA	**Monte Martano**	**0.33**	**222**	P		Pg	15 40 10.2	+0.8
MOMA				S		Sb	15 40 16.3	-0.3
MOMA				AML		AML		
	comp=E,2525μm,0.2s							
MOMA				AML		AML		
	comp=N,3335μm,0.4s							
MOMA				AML		AML		
	comp=N,3495μm,0.4s							
MOMA				AML		AML		
	comp=N,3335μm,0.4s							
MOMA				AML		AML		
	comp=E,2415μm,0.2s							
MURB	**Monte Urbino**	**0.33**	**311**	P		Pg	15 40 10.1	+0.6
MURB				S		Sb	15 40 16.4	-0.4
MURB				AML		AML		
	comp=E,11650μm,0.3s							
MURB				AML		AML		
	comp=E,10645μm,0.3s							
MURB				AML		AML		
	comp=N,6820μm,0.3s							
MURB				AML		AML		
	comp=N,7255μm,0.3s							
ATFO	**Monte Foce - G**	**0.39**	**326**	P		Pg	15 40 11.0	+0.5
ATFO				S		Sb	15 40 17.8	-0.5
ATFO				AML		AML		
	comp=E,4230μm,1.4s							
ATFO				AML		AML		
	comp=E,4225μm,1.4s							
ATFO				AML		AML		
	comp=E,3380μm,0.2s							
SSFR	**Montelago di S**	**0.39**	**351**	P		Pg	15 40 11.1	+0.5
SSFR				S		Sb	15 40 18.2	-0.3
SSFR				AML		AML		
	comp=E,13950μm,0.3s							
SSFR				AML		AML		
	comp=N,9170μm,0.3s							
SSFR				AML		AML		
	comp=E,15300μm,0.3s							
SSFR				AML		AML		
	comp=N,8890μm,0.2s							
CING	**Cingoli**	**0.41**	**36**	AML		AML		
	comp=N,3855μm,0.3s							
CING				AML		AML		
	comp=E,2395μm,0.7s							
ATTE	**AVT- Monte Tez**	**0.41**	**292**	P		Pg	15 40 11.6	+0.7
ATTE				S		Sb	15 40 18.2	-0.7
ATTE				AML		AML		
	comp=N,654μm,1.5s							
ATTE				AML		AML		
	comp=E,1170μm,0.6s							
ATTE				AML		AML		
	comp=E,1170μm,0.6s							
MNTP	**Montappone**	**0.45**	**78**	P		Pb	15 40 12.9	-0.2
MNTP				AML		AML		
	comp=E,2820μm,1.4s							
MNTP				AML		AML		
	comp=N,2105μm,1.2s							
MNTP				AML		AML		
	comp=E,2825μm,1.3s							
ARVD	**Arcevia**	**0.45**	**7**	P		Pg	15 40 11.9	+0.1
ARVD				S		Sb	15 40 19.1	-1.1
ARVD				AML		AML		
	comp=N,1138μm,0.3s							
ARVD				AML		AML		
	comp=E,1615μm,0.7s							
LNSS	**Leonessa**	**0.46**	**164**	P		Pg	15 40 12.4	+0.5
LNSS				AML		AML		
	comp=E,2595μm,0.2s							
LNSS				AML		AML		
	comp=N,2990μm,0.2s							
ATVO	**AVT- Monte Val**	**0.48**	**315**	P		Pg	15 40 12.5	+0.3
ATVO				S		Sb	15 40 20.6	-0.3
ATVO				AML		AML		
	comp=N,1960μm,0.3s							
ATVO				AML		AML		
	comp=E,2300μm,0.3s							
CESX	**Cesi**	**0.49**	**206**	P		Pg	15 40 12.7	+0.3
CESX				AML		AML		
	comp=E,1755μm,0.3s							
CESX				AML		AML		
	comp=N,1985μm,0.3s							
ATMI	**Monte Miggiano**	**0.53**	**303**	P		Pg	15 40 13.7	+0.6
ATMI				S		Sb	15 40 22.6	+0.4
ATMI				AML		AML		
	comp=N,1490μm,0.4s							
ATMI				AML		AML		
	comp=E,1460μm,1.1s							
ATPI	**Pietralunga -**	**0.53**	**320**	P		Pg	15 40 13.6	+0.4
ATPI				S		Sb	15 40 22.5	+0.1
ATPI				AML		AML		
	comp=E,1485μm,0.4s							
ATPI				AML		AML		
	comp=N,1190μm,0.4s							
ATPI				AML		AML		
	comp=E,1490μm,0.4s							
ATPI				AML		AML		
	comp=N,1188μm,0.4s							
SMA1	**SAN MARTINO**	**0.54**	**140**	P		Pg	15 40 13.8	+0.4
SMA1				AML		AML		
	comp=N,1360μm,0.3s							
SMA1				AML		AML		
	comp=E,1430μm,0.9s							
PIEI	**Pieia**	**0.55**	**334**	P		Pg	15 40 13.9	+0.4
PIEI				S		Sb	15 40 22.4	-0.6
PIEI				AML		AML		
	comp=N,967μm,0.3s							
PIEI				AML		AML		
	comp=E,1800μm,1.2s							
MGAB	**Montegabbione**	**0.57**	**257**	P		Pg	15 40 14.4	+0.4
MGAB				AML		AML		
	comp=N,1845μm,0.3s							
MGAB				AML		AML		
	comp=E,1570μm,0.4s							
MGAB				AML		AML		
	comp=N,1900μm,0.3s							
MGAB				AML		AML		
	comp=E,1565μm,0.4s							
MGAB				AML		AML		
	comp=E,1505μm,0.3s							
MPAG	**Monte Paganucc**	**0.59**	**352**	P		Pg	15 40 14.5	+0.2
MPAG				S		Sb	15 40 23.9	-0.2
MPAG				AML		AML		
	comp=E,1098μm,0.7s							
MPAG				AML		AML		
	comp=E,1096μm,0.7s							
MPAG				AML		AML		
	comp=N,753μm,1.4s							
NARO	**Abbazia di Nar**	**0.60**	**340**	P		Pg	15 40 14.7	+0.2
NARO				S		Sb	15 40 24.4	-0.1
NARO				AML		AML		
	comp=E,637μm,0.2s							
NARO				AML		AML		
	comp=E,636μm,0.2s							
NARO				AML		AML		
	comp=N,558μm,0.2s							
OFFI	**Offida**	**0.61**	**100**	P		Pb	15 40 16.4	+0.5
OFFI				AML		AML		
	comp=E,1285μm,1.5s							
OFFI				AML		AML		
	comp=N,1405μm,0.8s							
CAMP	**Campotosto**	**0.65**	**142**	AML		AML		
	comp=N,386μm,1.1s							
CAMP				AML		AML		
	comp=E,496μm,0.6s							
FSSB	**Fossombrone**	**0.65**	**354**	P		Pg	15 40 15.6	+0.1
FSSB				S		Sb	15 40 26.2	+0.4
FSSB				AML		AML		
	comp=E,2530μm,0.3s							
FSSB				AML		AML		
	comp=N,3840μm,0.4s							
FSSB				AML		AML		
	comp=N,3835μm,0.4s							
BADI	**Badiali**	**0.65**	**316**	P		Pg	15 40 15.9	+0.4
BADI				AML		AML		
	comp=E,1018μm,0.9s							
BADI				AML		AML		
	comp=N,1405μm,0.4s							
BADI				AML		AML		
	comp=E,1016μm,0.9s							
BADI				AML		AML		
	comp=N,1400μm,0.4s							
TERO	**Teramo**	**0.69**	**128**	P		Pg	15 40 16.2	+0.1
TERO				AML		AML		
	comp=N,204μm,0.5s							
TERO				AML		AML		
	comp=E,214μm,0.5s							
PE3	**Peglio**	**0.70**	**337**	P		Pb	15 40 17.2	-0.3
PE3				AML		AML		
	comp=E,1770μm,0.4s							
PE3				AML		AML		
	comp=N,2635μm,1.5s							
CAFI	**Castiglion Fio**	**0.72**	**293**	P		Pg	15 40 17.1	+0.3
CAFI				AML		AML		
	comp=E,549μm,1.6s							
CAFI				AML		AML		
	comp=N,386μm,0.6s							
SACS	**San Casciano d**	**0.73**	**255**	AML		AML		
	comp=E,688μm,0.4s							
SACS				AML		AML		
	comp=N,712μm,0.5s							
SACS				AML		AML		
	comp=E,656μm,0.4s							
SACS				AML		AML		
	comp=N,725μm,0.5s							
SSP9	**Sansepolcro**	**0.75**	**315**	P		Pb	15 40 17.9	-0.4
SSP9				AML		AML		
	comp=E,439μm,1.4s							
SSP9				AML		AML		
	comp=N,425μm,1.6s							
PARC	**Parchiule**	**0.76**	**323**	P		Pg	15 40 17.9	+0.3
PARC				AML		AML		
	comp=E,696μm,0.3s							
PARC				AML		AML		
	comp=N,626μm,0.8s							
T0104	**Madonna delle**	**0.77**	**153**	P		Pg	15 40 17.9	+0.2

T0104					AML	AML			
	comp=E,847µm,1.0s								
T0104					AML	AML			
	comp=N,664µm,0.8s								
T0104					AML	AML			
	comp=E,902µm,1.0s								
T0104					AML	AML			
	comp=E,848µm,1.0s								
T0104					AML	AML			
	comp=N,664µm,0.8s								
T0104					AML	AML			
	comp=N,664µm,0.9s								
T0104					AML	AML			
	comp=E,903µm,1.0s								
GUMA	**Gualdo di Mace**	**0.78**	**89**		P	Pg	15 40 10.6	-7.4	
GUMA					AML	AML			
	comp=N,8315µm,0.3s								
GUMA					AML	AML			
	comp=E,10290µm,0.4s								
GUMA					AML	AML			
	comp=E,7770µm,0.5s								
GUMA					AML	AML			
	comp=N,7515µm,0.3s								
ASQU	**Asqua**	**1.09**	**314**		AML	AML			
	comp=N,220µm,0.5s								
ASQU					AML	AML			
	comp=E,188µm,0.5s								
BRJN	**Brijuni**	**1.96**	**19**	*i* Pn	Pn	Pn	15 40 36.9	+0.3	
BRJN					Sn	Sb	15 41 03.1	-0.5	
NVLJ	**Novalja**	**2.10**	**43**	*i* Pn	Pb	Pb	15 40 39.8	-1.4	
NVLJ					Sn	Sn	15 41 05.2	+0.5	
MORI	**Morici**	**2.22**	**67**	*e*Pn	Pn	Pn	15 40 40.7	+0.6	
MORI					Sn	Sb	15 41 09.7	-1.3	
KIJV	**Kijevo**	**2.74**	**68**	*i* Pn	Pn	Pn	15 40 49.3	+2.0	
KIJV					Sn	Sn	15 41 22.9	+2.2	
PGF	**Pioggiola**	**2.89**	**261**	*e*Pn	Pn	Pn	15 40 47.6	-1.8	
PGF				*e*Sn	Sn	Sn	15 41 20.5	-4.0	
	comp=E,2.7nm,0.2s								
MYKA	**Terra Mystica**	**3.62**	**8**	*i* Pn	Pn	Pn	15 41 01.5	+2.1	
	comp=E,1.8nm,0.4s								
MYKA				*i* Sn	Sn	Sn	15 41 42.9	+0.4	
	comp=E,2.1nm,0.3s								
OBKA	**Obir**	**3.66**	**18**	*i* Pn	Pn	Pn	15 40 59.7	-0.3	
	comp=E,6.6nm,0.6s								
OBKA				*i* Sn	Sn	Sn	15 41 43.5	0.0	
	comp=E,6.9nm,0.6s								
ABTA	**Abfaltersbach**	**3.71**	**356**	*i* Pn	Pn	Pn	15 41 02.2	+1.6	
	comp=E,3.7nm,0.4s								
ABTA				*i* Sn	Sn	Sn	15 41 44.5	-0.1	
	comp=E,0.3nm,0.2s								
SOKA	**Soboth**	**3.94**	**22**	*i* Pn	Pn	Pn	15 41 03.0	-0.8	
	comp=E,0.3nm,0.2s								
SOKA				*i* Sn	Sn	Sn	15 41 50.9	+0.5	
	comp=E,1.3nm,0.4s								
KBA	**Koelnbreinsper**	**4.04**	**5**	*i* Pn	Pn	Pn	15 41 02.0	-3.3	
	comp=E,1.8nm,0.3s								
KBA				*i* Sn	Sn	Sn	15 41 53.6	+0.5	
	comp=E,3.5nm,0.4s								
FETA	**Feichten**	**4.25**	**340**	*i* Pn	Pn	Pn	15 41 08.8	+0.5	
	comp=E,3.9nm,0.8s								
FETA				*i* Sn	Sn	Sn	15 41 57.3	-0.9	
	comp=E,0.1nm,0.2s								
WTTA	**Wattenberg**	**4.31**	**349**	*i* Pn	Pn	Pn	15 41 08.1	-0.8	
	comp=E,0.1nm,0.2s								
WTTA				*i* Sn	Sn	Sn	15 41 59.4	-0.1	
	comp=E,3.7nm,0.5s								
SQTA	**Sankt Quirin**	**4.33**	**345**	*i* Pn	Pn	Pn	15 41 08.6	-0.7	
	comp=E,0.9nm,0.2s								
SQTA				*i* Sn	Sn	Sn	15 42 00.6	+0.5	
	comp=E,1.5nm,0.4s								
WATA	**Walderalm**	**4.38**	**348**	*i* Pn	Pn	Pn	15 41 08.4	-1.6	
	comp=E,1.3nm,0.2s								
WATA				*i* Sn	Sn	Sn	15 42 01.4	+0.1	
	comp=E,2.6nm,0.3s								
MOTA	**Moosalm**	**4.47**	**344**	*i* Pn	Pn	Pn	15 41 11.5	+0.3	
	comp=E,0.4nm,0.2s								
ARSA	**Arzberg**	**4.60**	**23**	*i* Pn	Pn	Pn	15 41 12.1	-0.8	
	comp=E,1.2nm,0.5s								
ARSA				*i* Sn	Sn	Sn	15 42 05.2	-1.4	
	comp=E,3.4nm,0.5s								
LMR	**La Mourre**	**4.66**	**276**	*e*P	Pn	Pn	15 41 14.2	+0.6	
RETA	**Reutte**	**4.68**	**342**	*i* Pn	Pn	Pn	15 41 13.4	-0.6	
	comp=E,1.3nm,0.4s								
RETA				*i* Sn	Sn	Sn	15 42 08.7	+0.1	
	comp=E,0.5nm,0.3s								
MBDF	**Montbardon**	**4.72**	**293**	*e*Pn	Pn	Pn	15 41 12.0	-2.6	
MBDF				*e*Sn	Sn	Sn	15 42 03.8	-5.8	
	comp=E,0.7nm,0.4s								
DAVA	**Damuels**	**4.74**	**335**	*i* Pn	Pn	Pn	15 41 14.5	-0.3	
	comp=E,1.3nm,0.3s								
MOA	**Molln**	**4.90**	**11**	*i* Pn	Pn	Pn	15 41 17.4	+0.4	
	comp=E,7.3nm,1.4s								
MOA				*i* Sn	Sn	Sn	15 42 14.7	+0.8	
	comp=E,4.4nm,0.6s								
LPL	**La Plagne**	**5.05**	**301**	*e*P	Pn	Pn	15 41 20.6	+1.4	
LPL				*e*Sn	Sn	Sn	15 42 11.5	-6.4	
	comp=E,1.3nm,0.3s								
CONA	**Conrad Observa**	**5.31**	**22**	*i* Pn	Pn	Pn	15 41 21.7	-1.0	
	comp=E,7.5nm,1.5s								
CONA				*i* Sn	Sn	Sn	15 42 23.9	-0.3	
	comp=E,2.5nm,0.6s								
SMRF	**Simiane la Rot**	**5.39**	**282**	*e*P	Pn	Pn	15 41 25.7	+2.0	
VIVF	**Saint-Julien-l**	**6.19**	**290**	*e*Pn	Pn	Pn	15 41 31.8	-2.9	
HINF	**Hinteralfeld**	**6.38**	**320**	*e*P	Pn	Pn	15 41 39.3	+2.1	
HINF				*e*Sn	Sn	Sn	15 42 43.3	-6.9	
	comp=E,2.2nm,0.4s								
LASF	**Ste Croix**	**6.63**	**282**	*e*P	Pn	Pn	15 41 43.5	+2.8	
CDF	**Champ du Feu**	**6.64**	**326**	*e*P	Pn	Pn	15 41 42.8	+1.9	
HAU	**Haudompre**	**6.75**	**320**	*e*P	Pn	Pn	15 41 43.8	+1.5	
HAU				*e*Sn	Sn	Sn	15 42 52.0	-7.4	
	comp=E,4.2nm,0.5s								
SFTF	**Sexfontaines**	**7.53**	**316**	*e*Pn	Pn	Pn	15 41 50.3	-2.7	
LOR	**Lormes**	**7.64**	**307**	*e*P	Pn	Pn	15 41 57.2	+2.7	
BGF	**Bois d'Agland**	**7.94**	**300**	*e*Pn	Pn	Pn	15 41 56.4	-2.3	

NSSP ***05*** *16:00:40.1,38°.67N×43°.15E,h6km,Ms3.1*
DDA ***05*** *16:00:40.4,38°.61N×43°.16E,h22km±1km,MW3.6*
ISK ***05*** *16:00:40.6,38°.66N×43°.18E,h5km,ML3.4/20*
ISC 05 16:00:41.6±1.0,38°.66N±0°.02×43°.15E±0°.02,h6km±9km, n57,σ1§22/88,6C,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.20**	**108**	PG	**Pg**	**16 00 46.1**	**+0.5**
VANB				SG	**Sg**	**16 00 50.6**	**+2.3**
TVAN	**Van**	**0.24**	**122**	*i* P	**Pg**	**16 00 46.0**	**-0.4**
TVAN				*i* S	**Sg**	**16 00 50.0**	**+0.3**
TVAN				IAML		16 00 51.0	
	comp=N,9µm,0.6s						
TVAN				IAML		16 00 52.0	
	comp=Z,4µm,0.3s						
TVAN				IAML		16 00 52.0	
	comp=E,8µm,0.3s						
AKDM	**Akdamar-Van**	**0.35**	**202**	PG	**Pg**	**16 00 48.4**	**-0.1**
AKDM				SG	**Sb**	**16 00 55.3**	**-0.9**
ADCV	**BITLIS_Adilcev**	**0.36**	**295**	*i* P	**Pg**	**16 00 49.2**	**+0.5**
ADCV				*i* S	**Sb**	**16 00 55.9**	**-0.7**
ADCV				IAML		16 00 58.0	
	comp=N,3µm,0.3s						
ADCV				IAML		16 00 58.0	
	comp=E,3µm,0.3s						
ADCV				IAML		16 01 01.0	
	comp=Z,2µm,0.4s						
VMUR	**Van-Muradiye**	**0.47**	**45**	*i* P	**Pg**	**16 00 50.6**	**-0.1**
VMUR				*i* S	**Sb**	**16 00 58.4**	**-1.3**
VMUR				IAML		16 01 00.0	
	comp=Z,2µm,0.4s						
VMUR				IAML		16 01 00.0	
	comp=N,3µm,0.2s						
VMUR				IAML		16 01 00.0	
	comp=E,4µm,0.2s						
MLAZ	**Malazgirt-MUS**	**0.67**	**316**	PG	**Pb**	**16 00 54.9**	**-0.9**
CLDR	**Caldiran**	**0.77**	**51**	PG	**Pg**	**16 00 56.1**	**-0.4**
CLDR				SG	**Sb**	**16 01 07.8**	**-0.7**
CLDR	**Caldiran**	**0.77**	**51**	*i* P	**Pg**	**16 00 55.7**	**-0.8**
CLDR				*i* S	**Sb**	**16 01 07.2**	**-1.3**
CLDR				IAML		16 01 08.0	
	comp=N,701nm,0.3s						
CLDR				IAML		16 01 12.0	
	comp=E,711nm,0.3s						
TUTA	**Tutak**	**0.79**	**341**	*i* P	**Pg**	**16 00 56.2**	**-0.6**
TUTA				*i* S	**Sb**	**16 01 08.8**	**-0.1**
TUTA				IAML		16 01 11.0	
	comp=Z,1µm,0.3s						
TUTA				IAML		16 01 15.0	
	comp=N,2µm,0.3s						
BLIS	**Bitlis-Merkez**	**0.84**	**254**	*i* P	**Pg**	**16 00 57.3**	**-0.5**
BLIS				*i* S	**Sg**	**16 01 09.0**	**+0.2**
BLIS				IAML		16 01 10.0	
	comp=Z,973nm,1.0s						
BLIS				IAML		16 01 12.0	
	comp=E,954nm,0.6s						
BLIS				IAML		16 01 14.0	
	comp=N,1µm,0.5s						
GURO	**Guroymak-BITLI**	**0.88**	**263**	PG	**Pg**	**16 00 57.9**	**-0.6**
BASK	**Baskale_VAN**	**0.91**	**132**	*i* P	**Pg**	**16 00 58.0**	**-1.0**
BASK				*i* S	**Sg**	**16 01 09.9**	**-0.9**
BASK				IAML		16 01 13.0	
	comp=N,674nm,0.7s						
BASK				IAML		16 01 13.0	
	comp=E,748nm,0.8s						
BASK				IAML		16 01 18.0	
	comp=Z,380nm,0.7s						
AGRB	**Hanur-Agry**	**0.93**	**353**	PG	**Pg**	**16 00 58.5**	**-0.9**
DYDN	**Diyadin**	**0.98**	**25**	*i* P	**Pg**	**16 00 59.4**	**-1.1**
DYDN				*i* S	**Sn**	**16 01 17.1**	**+0.6**
DYDN				IAML		16 01 20.0	
	comp=E,346nm,0.6s						
DYDN				IAML		16 01 23.0	
	comp=N,266nm,0.7s						
EKAR	**Karacoban**	**1.03**	**306**	*e*P	**Pg**	**16 01 01.3**	**-0.2**
EKAR				*i* S	**Sn**	**16 01 21.6**	**+3.9**
EKAR				IAML		16 01 27.0	
	comp=N,764nm,0.8s						
EKAR				IAML		16 01 28.0	
	comp=E,1µm,0.9s						
SRTM	**Siirt_Merkez**	**1.17**	**236**	*i* P	**Pg**	**16 01 05.5**	**+1.4**
SRTM				*i* S	**Sn**	**16 01 21.9**	**+1.1**
SRTM				IAML		16 01 27.0	
	comp=E,598nm,0.7s						
SRTM				IAML		16 01 27.0	
	comp=Z,266nm,0.9s						
SRTM				IAML		16 01 28.0	
	comp=N,618nm,0.5s						
MUSM	**Mu-Merkez**	**1.28**	**274**	*i* P	**Pn**	**16 01 05.3**	**-0.9**
MUSM				*i* S	**Sb**	**16 01 22.1**	**-0.8**
MUSM				IAML		16 01 25.0	
	comp=E,167nm,0.5s						
MUSM				IAML		16 01 27.0	
	comp=N,190nm,0.8s						
SIRT	**Sirnak**	**1.28**	**206**	PN	**Pg**	**16 01 06.5**	**+0.3**
SIRN	**Sırnak**	**1.29**	**207**	*i* P	**Pg**	**16 01 07.5**	**+1.1**
SIRN				*i* S	**Sg**	**16 01 24.6**	**+1.4**
SIRN				IAML		16 01 29.0	
	comp=N,508nm,1.6s						
SIRN				IAML		16 01 37.0	
	comp=E,317nm,0.8s						
EATA	**Eleskirt**	**1.31**	**337**	*i* P	**Pn**	**16 01 05.6**	**-1.1**
EATA				*i* S	**Sg**	**16 01 23.5**	**-0.1**
EATA				IAML		16 01 27.0	
	comp=N,437nm,0.5s						
EATA				IAML		16 01 30.0	
	comp=E,445nm,0.6s						
EATA				IAML		16 01 31.0	
	comp=Z,155nm,0.4s						
IGDI	**IGDIR**	**1.41**	**31**	*i* P	**Pb**	**16 01 07.5**	**-0.9**
IGDI				*i* S	**Sg**	**16 01 28.1**	**+1.2**
IGDI				IAML		16 01 33.0	
	comp=E,143nm,1.1s						
VRTB	**Varto-Mus**	**1.41**	**291**	PN	**Pg**	**16 01 08.5**	**-0.1**
VRTB	**Varto-Mus**	**1.41**	**291**	*i* P	**Pg**	**16 01 08.2**	**-0.5**
VRTB				*i* S	**Sg**	**16 01 27.2**	**+0.3**
VRTB				IAML		16 01 48.0	
	comp=N,479nm,1.1s						
VRTB				IAML		16 01 52.0	
	comp=Z,449nm,1.0s						
VRTB				IAML		16 02 06.0	
	comp=E,367nm,1.2s						
CUKT	**Cukurca**	**1.45**	**165**	PN	**Pg**	**16 01 09.2**	**-0.3**
CUKT	**Cukurca**	**1.45**	**165**	*i* P	**Pb**	**16 01 08.5**	**-0.6**
CUKT				*i* S	**Sg**	**16 01 29.2**	**+0.8**
CUKT				IAML		16 01 36.0	
	comp=N,654nm,0.8s						
CUKT				IAML		16 01 39.0	
	comp=E,543nm,0.8s						
CUKT				IAML		16 01 46.0	
	comp=Z,156nm,1.1s						
VNNZ	**Vanand**	**1.54**	**20**	⇑*i* P	**Pg**	**16 01 10.4**	**-0.7**
VNNZ				⇑*i* S	**Sg**	**16 01 32.2**	**+1.2**
TASB	**TASBURUN-IGDIR**	**1.57**	**32**	PN	**Pb**	**16 01 10.5**	**-0.6**
BNGL	**BINGOL**	**1.59**	**281**	*i* P	**Pg**	**16 01 12.1**	**+0.1**
BNGL				*i* S	**Sg**	**16 01 33.7**	**+1.1**
SVAN	**Silvan-Diyarba**	**1.61**	**252**	PN	**Pg**	**16 01 11.7**	**-0.8**
SVAN	**Silvan-Diyarba**	**1.61**	**252**	*i* P	**Pg**	**16 01 11.8**	**-0.6**
SVAN				*i* S	**Sg**	**16 01 33.3**	**-0.1**
SVAN				IAML		16 01 36.0	
	comp=E,156nm,0.6s						
SVAN				IAML		16 01 37.0	
	comp=N,139nm,0.7s						
SVAN				IAML		16 01 40.0	
	comp=E,120nm,0.8s						
METS	**Metsamor**	**1.66**	**26**	*i* P	**Pg**	**16 01 14.1**	**+0.7**
METS				*i* S	**Sg**	**16 01 38.4**	**+3.5**
KOPR	**Koprukoy-ERZUR**	**1.67**	**323**	PN	**Pb**	**16 01 12.2**	**-0.5**
HOMI	**Horasan**	**1.69**	**326**	*i* P	**Pb**	**16 01 12.6**	**-0.6**
HOMI				*i* S	**Sg**	**16 01 35.4**	**-0.4**
HOMI				IAML		16 01 54.0	
	comp=Z,206nm,1.5s						
HOMI				IAML		16 01 54.0	
	comp=E,339nm,1.5s						
HOMI				IAML		16 01 59.0	
	comp=N,297nm,1.1s						
KARO	**Karliova-Bingo**	**1.76**	**292**	PN	**Pb**	**16 01 13.7**	**-0.7**
DIGO	**Kars**	**1.76**	**6**	*i* P	**Pb**	**16 01 13.9**	**-0.6**
DIGO				*i* S	**Sg**	**16 01 41.8**	**+3.5**
DIGO				IAML		16 01 50.0	
	comp=E,125nm,1.0s						
DIGO				IAML		16 01 51.0	
	comp=N,103nm,0.8s						
NRKZ	**NAREK**	**1.78**	**41**	⇑*i* P	**Pb**	**16 01 14.2**	**-0.5**
NRKZ				⇑*i* S	**Sg**	**16 01 39.0**	**0.0**
ECAT	**Cat-ERZURUM**	**1.94**	**300**	*i* P	**Pb**	**16 01 17.2**	**-0.2**
ECAT				*i* S	**Sg**	**16 01 43.1**	**-0.7**
GNI	**Garni**	**1.94**	**39**	⇑*i* P	**Pb**	**16 01 16.7**	**-0.7**
GNI				⇑S	**Sg**	**16 01 43.2**	**-0.6**
BNGB	**Bingl**	**1.96**	**281**	PN	**Pb**	**16 01 16.5**	**-1.2**
AKDA	**Akdag**	**2.00**	**317**	*i* P	**Sb**	**16 01 43.4**	**-0.3**
SENK	**Senkaya-Erzuru**	**2.00**	**342**	PN	**Pb**	**16 01 16.8**	**-1.7**
EAK	**Akyaka**	**2.06**	**10**	*i* P	**Pg**	**16 01 21.1**	**+0.1**
EAK				*i* S	**Sb**	**16 01 44.5**	**-0.8**
EAK				IAML		16 02 10.0	
	comp=N,134nm,1.1s						
EAK				IAML		16 02 11.0	
	comp=E,93nm,1.0s						
EAK				IAML		16 02 24.0	
	comp=Z,168nm,1.6s						
HANI	**Diyarbakir_Han**	**2.17**	**264**	*i* P	**Pb**	**16 01 20.3**	**-0.9**
HANI				*i* S	**Sb**	**16 01 49.1**	**+0.8**
HANI				IAML		16 01 58.0	
	comp=E,98nm,0.5s						
HANI				IAML		16 02 00.0	
	comp=Z,107nm,0.7s						
HANI				IAML		16 02 10.0	
	comp=N,118nm,1.1s						
YEDI	**Yedisu-Bingol**	**2.17**	**292**	PN	**Pb**	**16 01 19.6**	**-1.8**
GMRZ	**Gyumri**	**2.21**	**14**	*e*P	Pg	16 01 35.0	+11
KRIK	**Erzurum-spir**	**2.40**	**315**	*i* P	**Pg**	**16 01 28.0**	**+0.4**
KRIK				*i* S	**Sg**	**16 01 56.9**	**-1.8**
MAZI	**Mazidag**	**2.44**	**242**	PN	**Pb**	**16 01 23.5**	**-2.5**
KOPT	**Kop Dagi**	**2.46**	**304**	*i* P	**Pg**	**16 01 27.8**	**-1.0**
KOPT				IAML		16 02 12.0	
	comp=E,62nm,1.0s						
KOPT				IAML		16 02 15.0	
	comp=N,59nm,1.0s						
DYBB	**Diyarbakir**	**2.47**	**254**	PN	**Pb**	**16 01 24.0**	**-2.4**
DDEM	**Demirkent**	**2.48**	**335**	*i* P	**Pg**	**16 01 27.5**	**-1.6**
DDEM				IAML		16 02 10.0	
	comp=N,75nm,0.5s						
DDEM				IAML		16 02 18.0	
	comp=E,51nm,1.0s						
STE	**Stepanavan**	**2.52**	**22**	*e*P	**Pb**	**16 01 25.6**	**-1.8**
DAGI	**Agilar**	**2.60**	**339**	*i* P	**Pb**	**16 01 29.0**	**+0.4**
DBAD	**Bademkaya**	**2.61**	**335**	*i* P	**Pb**	**16 01 29.3**	**+0.5**
BAYB	**BAYBURT**	**2.75**	**306**	*i* P	**Pg**	**16 01 32.8**	**-1.5**
BAYB				*i* S	**Sg**	**16 02 12.6**	**+2.7**
ERZN	**Erzincan**	**2.82**	**290**	PN	**Pn**	**16 01 28.9**	**+1.6**
BAYT	**Aydıntepe-Bayb**	**2.90**	**308**	PN	**Pn**	**16 01 29.8**	**+1.4**
KELT	**Kelkit**	**3.36**	**298**	*i* P	**Pg**	**16 01 45.0**	**-1.0**

IDC ***05*** *16:02:57.6±2.0,1°.17N×125°.53E,h0km,mb3.1/3, mb1 3.4/3,mb1mx3.2/27,mbtmp3.2/3,Error ellipse: s-maj=189.8km s-min=26.5km az=64.0*
DJA ***05*** *16:03:00.9±1.7,1°.15×125°.62E±°,h26km±16km,M3.3/6, MLv3.3/6*
ISC 05 16:03:01.8±1.3,1°.14N±0°.1×126°.26E±0°.08,h35km,n6, σ1§10/7,mb3.0/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.25**	**118**	P	**Pn**	**16 03 22.4**	**-0.4**
TNTI				S	**Sn**	**16 03 38.6**	**+0.2**
KMSI	**Cibinong**	**2.41**	**251**	P	**Pn**	**16 03 38.8**	**0.0**
SANI	**Sanana**	**3.39**	**185**	P	**Pn**	**16 03 51.3**	**-1.0**
WRA	**Warramunga Arr**	**22.60**	**160**	P	**P**	**16 08 00.2**	**+0.6**
	0.2nm,0.3s,baz=336,slow=11,SNR=6.8						
ASAR	**Alice Springs**	**25.96**	**164**	P	**P**	**16 08 33.0**	**+1.7**
	0.2nm,0.5s,baz=343,slow=11,SNR=6.4						
MKAR	**Makanchi Array**	**59.24**	**326**	P	**P**	**16 12 59.2**	**-0.6**
	0.1nm,0.3s,baz=118,slow=7.4,SNR=4.8						

NEIC ***05*** *16:15:18.6±1.6,4°.37S±0°.08×147°.5E±0°.1,h121km±8km, mb4.8/27,Error ellipse: s-maj=18.4km s-min=11.3km az=79.0*
IDC ***05*** *16:15:33.4±1.5,5°.54S×147°.17E,h196km±14km,mb3.7/4, mb1 4.0/9,mb1mx3.5/42,mbtmp4.5/9,Error ellipse: s-maj=20.5km s-min=11.0km az=114.0*
DJA ***05*** *16:15:33.0±0.4,6°.5S±3°×14°.7E±°,h170km±7km,M4.2/10, mb4.3/10,mB4.9/1,MLv4.2/3,Mw(mB)4.2/1*
ISC 05 16:15:32.6±0.7,5°.51S±0°.07×147°.18E±0°.07,h195km,n64, σ1§57/68,mb4.7/17,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.87**	**180**	P	**Pn**	**16 16 31.4**	**-1.3**
	14nm,0.3s,baz=12,slow=8.0,SNR=136						
PMG				S	**Sn**	**16 17 13.3**	**-6.6**
	25nm,0.3s,baz=77,slow=8.0,SNR=4.5						
PMG	**Port Moresby**	**3.87**	**180**	Pn	**Pn**	**16 16 31.2**	**-1.5**
JAY	**Jayapura**	**7.11**	**294**	P	**Pn**	**16 17 14.3**	**-0.1**
	3.1nm,0.3s,baz=149,slow=8.4,SNR=24						
JAY				S	**Sn**	**16 18 30.7**	**-4.4**
	0.8nm,0.3s,baz=4.8,slow=16,SNR=2.2						
JAY	**Jayapura**	**7.11**	**294**	P	**Pn**	**16 17 13.9**	**-0.5**
	0.1nm9.9nm,0.9s						
SMPI	**Sarmi**	**9.15**	**292**	P	**Pn**	**16 17 39.8**	**-1.1**
	23nm,1.2s						
COEN	**Coen**	**9.28**	**205**	P	**Pn**	**16 17 43.4**	**+0.7**
	baz=9.3,SNR=18						
COEN	**Coen**	**9.28**	**205**	Pn	**Pn**	**16 17 44.1**	**+1.4**
MTSU	**Mount Surprise**	**12.86**	**192**	P	**Pn**	**16 18 29.6**	**+1.0**
	baz=13,SNR=19						
HNR	**Honiara**	**13.24**	**108**	P	**Pn**	**16 18 33.7**	**+0.3**
	3.5nm,0.3s,baz=238,slow=4.4,SNR=6.2						
HNR	**Honiara**	**13.24**	**108**		**Pn**	**16 18 29.9**	**-3.5**
CTA	**Charters Tower**	**14.52**	**183**	P	**Pn**	**16 18 50.8**	**+1.5**
	1.3nm,0.3s,baz=358,slow=14,SNR=26						
KDU	**Kakadu**	**16.18**	**243**	P	**Pn**	**16 19 09.5**	**+0.1**
	baz=16,SNR=54						
QIS	**Mount Isa**	**16.67**	**206**	P	**Pn**	**16 19 16.5**	**+1.1**
	baz=17,SNR=13						
MTN	**Manton Dam**	**17.43**	**244**	Pn	**P**	**16 19 23.7**	**+0.9**
WR0	**Warramunga Arr**	**18.91**	**219**	P	**P**	**16 19 40.0**	**+1.2**
WR0				IAmb	IAmb	16 19 41.0	
	comp=Z,60nm,1.0s						
WRAB	**Tennant Creek**	**19.01**	**220**	P	**P**	**16 19 41.1**	**+1.2**
WRAB				IAmb	IAmb	16 19 42.1	
	comp=Z,52nm,1.0s						
WRA	**Warramunga Arr**	**19.03**	**220**	P	**P**	**16 19 41.7**	**+1.6**
	comp=Z,7.9nm,0.3s,baz=52,slow=12,SNR=238						
WRA				S	**S**	**16 23 05.1**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=41,slow=21,SNR=5.2						
WRA	**Warramunga Arr**	**19.03**	**220**	P	**P**	**16 19 40.1**	**+0.1**
EIDS	**Eidsvold**	**20.10**	**170**	P	**P**	**16 19 53.3**	**+1.8**
	baz=20,SNR=4.3						
KNRA	**Kununurra**	**20.71**	**239**	P	**P**	**16 19 58.6**	**+0.5**
	baz=21,SNR=9.0						
KNRA	**Kununurra**	**20.71**	**239**	P	**P**	**16 19 58.8**	**+0.7**
RMQ	**Roma**	**20.92**	**176**	P	**P**	**16 20 02.3**	**+2.1**
	baz=21,SNR=13						
QLP	**Quilpie**	**21.15**	**187**	P	**P**	**16 20 03.9**	**+1.3**
	baz=21,SNR=8.4						
AS31	**Alice Springs**	**22.12**	**214**	P	**P**	**16 20 14.1**	**+1.5**
AS31				IAmb	IAmb	16 20 15.2	
	comp=Z,17nm,0.3s						
ASAR	**Alice Springs**	**22.13**	**214**	P	**P**	**16 20 14.2**	**+1.5**
	comp=Z,24nm,0.5s,baz=48,slow=8.6,SNR=890						
ASAR				S	**S**	**16 24 02.3**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=35,slow=20,SNR=2.9						
ASAR	**Alice Springs**	**22.13**	**214**	P	**P**	**16 20 13.7**	**+1.1**
SOEI	**Soe**	**23.10**	**258**	P	**P**	**16 20 19.1**	**-2.5**
FITZ	**Fitzroy Crossi**	**24.48**	**237**	P	**P**	**16 20 35.3**	**+1.2**
	baz=24,SNR=81						
FITZ	**Fitzroy Crossi**	**24.48**	**237**	P	**P**	**16 20 35.3**	**+1.2**
	comp=Z,28nm,0.5s,baz=50,slow=11,SNR=97						
FITZ	**Fitzroy Crossi**	**24.48**	**237**	P	**P**	**16 20 35.2**	**+1.2**
FITZ				IAmb	IAmb	16 20 38.1	
	comp=Z,25nm,0.7s						
ARMA	**Armidale**	**25.13**	**171**	P	**P**	**16 20 41.8**	**+1.9**
	baz=25,SNR=7.9						
ARMA	**Armidale**	**25.13**	**171**	P	**P**	**16 20 41.7**	**+1.7**
WRKA	**Warakurna**	**26.56**	**221**	P	**P**	**16 20 53.9**	**+1.1**
	baz=27,SNR=69						
STKA	**Stephens Creek**	**26.75**	**191**	P	**P**	**16 20 55.1**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=28,slow=5.0,SNR=5.1						
**

GERES	**GERESS Array B**	121.61	326	PKP		**PKiKP**	16 34 03.7	+0.2
	comp=Z,0.2nm,0.4s,baz=35,slow=2.4,SNR=2.9							
TORD	**Torodi Ar. Bea**	145.14	285	PKPbc		**PKPab**	16 34 47.9	-0.2
	comp=Z,0.5nm,0.4s,baz=70,slow=3.5,SNR=7.1							

*NIED **05** 16:24:00,39.°60N×141.°90E,h95km,Mw3.9 Best double couple: M0 7.47000×10^14 NP1:φs170.00000°,δ63.00000°, λ-91.00000°. NP2:φs352.00000°,δ27.00000°, λ-88.00000°.*

*JMA **05** 16:24:33.5±0.1,39.°55N×141.°93E,h96km±1km,M3.9 Broadband fault plane solution: P waves. NP1: φs4.00000°,δ25.00000°,λ-68.00000°. NP2:φs160.00000°, δ67.00000°,λ-100.00000°. Principal axes: T Plg21.0000°, Azm258.0000°; N Plg9.0000°, Azm164.0000°; P Plg67.0000°, Azm52.0000°;*

JMA Felt II J1.

*IDC **05** 16:24:35.6±2.5,39.°44N×141.°79E,h120km±23km, mb3.4/18,mb1 3.6/21,mb1mx3.5/43,mbtmp3.7/21,MS2.6/2, Ms1 2.6/2,ms1mx2.2/27 Error ellipse: s-maj=17.4km s-min=14.3km az=115.0*

ISC 05 16:24:33.2±0.7,39.°54N±0.°04×142.°00E±0.°06,h96km±5km, n45,σ1§16/54,mb3.6/18,1C-12D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**0.14**	**285**	⇓P	**Pn**	**16 24 47.2**	**+0.5**
MIYJ				S	**Sn**	**16 24 57.1**	**+0.3**
JTH	**Tanohata**	**0.41**	**345**	⇓P	**Pn**	**16 24 48.1**	**+0.1**
JTH				S	**Sn**	**16 24 58.5**	**-0.5**
OFUJ	**Ofunato**	**0.53**	**209**	⇓P	**Pn**	**16 24 49.1**	**+0.3**
OFUJ				S	**Sn**	**16 25 00.4**	**0.0**
JOM	**Ohasama**	**0.55**	**263**	⇓P	**Pn**	**16 24 48.9**	**0.0**
JOM				S	**Sn**	**16 25 00.5**	**-0.2**
JMK	**Ichinoseki**	**0.84**	**226**	⇓P	**Pn**	**16 24 51.5**	**-0.1**
JMK				S	**Sn**	**16 25 05.5**	**+0.1**
JANG	**Nango**	**0.91**	**336**	⇓P	**Pn**	**16 24 52.1**	**-0.3**
JANG				S	**Sn**	**16 25 05.8**	**-0.9**
JRG	**Rokugo**	**1.07**	**263**	⇓P	**Pn**	**16 24 54.0**	**0.0**
JRG				S	**Sn**	**16 25 09.8**	**+0.1**
JIO	**Ouri**	**1.20**	**205**	⇓P	**Pn**	**16 24 55.4**	**-0.2**
JIO				S	**Sn**	**16 25 11.4**	**-1.0**
JAH	**Hinai**	**1.23**	**302**	⇓P	**Pn**	**16 24 55.9**	**-0.1**
JAH				S	**Sn**	**16 25 13.1**	**-0.1**
JYK	**Kaneyama**	**1.42**	**245**	⇓P	**Pn**	**16 24 58.3**	**+0.1**
JYK				S	**Sn**	**16 25 17.2**	**+0.1**
JTM	**Tenmabayashi**	**1.44**	**331**	⇓P	**Pn**	**16 24 58.2**	**-0.2**
JTM				S	**Sn**	**16 25 16.9**	**-0.6**
JOU	**Okura**	**1.57**	**222**	⇓P	**Pn**	**16 25 00.1**	**0.0**
JOU				S	**Sn**	**16 25 20.3**	**-0.2**
JIW	**Iwasaki**	**1.85**	**305**	⇑P	**Pn**	**16 25 04.1**	**+0.4**
JIW				eS	**Sn**	**16 25 26.8**	**-0.2**
MAT	**Matsushiro**	**4.23**	**226**	P	**Pn**	**16 25 35.9**	**+0.4**
MAT				S	**Sn**	**16 26 24.0**	**+0.2**
MJAR	**Matsushiro Arr**	**4.23**	**226**	P	**Pn**	**16 25 36.2**	**+0.8**
	0.9nm,0.3s,baz=30,slow=15,SNR=122						
ASAJ	**Asahikawa**	**4.59**	**5**	P	**Pn**	**16 25 40.5**	**+0.2**
	1.3nm,0.3s,baz=205,slow=16,SNR=22						
ASAJ				S	**Sn**	**16 26 33.2**	**+0.7**
	2.6nm,0.3s,baz=300,slow=20,SNR=3.5						
USRK	**Ussuriysk Ar.**	**8.80**	**305**	P	**Pn**	**16 26 38.3**	**+0.8**
	baz=113,slow=14,SNR=12						
KSRS	**Korea Array**	**11.23**	**264**	P	**Pn**	**16 27 10.8**	**+0.3**
	0.2nm,0.3s,baz=78,slow=14,SNR=6.9						
KSRS				S	**Sn**	**16 29 20.1**	**+6.2**
	0.2nm,0.3s,baz=75,slow=23,SNR=4.3						
KSRS				LR	LR	16 31 18.7	
	comp=Z,18nm,21.6s,baz=5.0,slow=36						
KLR	**Kul'dur**	**12.14**	**326**	P	**Pn**	**16 27 20.9**	**-1.7**
	0.1nm,0.3s,baz=136,slow=14,SNR=3.7						
SEY	**Seymchan**	**24.25**	**12**	P	**P**	**16 29 41.7**	**+0.9**
	2.4nm,0.7s,baz=216,slow=22,SNR=5.8						
GUMO	**Guam**	**25.97**	**174**	LR	LR	16 42 50.5	
	comp=Z,25nm,19.9s,baz=18,slow=42						
SONM	**Songino Array**	**26.86**	**300**	P	**P**	**16 30 05.2**	**+0.4**
	0.4nm,0.3s,baz=108,slow=8.3,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**29.13**	**125**	T	T	17 01 04.6	
	baz=318,slow=75,SNR=242						
H11N1	**WAKE ISLAND Hy**	**29.14**	**125**	T	T	17 01 12.2	
	baz=318,slow=75,SNR=221						
H11N3	**WAKE ISLAND Hy**	**29.15**	**125**	T	T	17 01 11.3	
	baz=318,slow=75,SNR=166						
H11S1	**WAKE ISLAND Hy**	**29.92**	**127**	T	T	17 02 12.0	
	baz=320,slow=76,SNR=42						
H11S3	**WAKE ISLAND Hy**	**29.93**	**127**	T	T	17 02 13.2	
	baz=320,slow=76,SNR=39						
H11S2	**WAKE ISLAND Hy**	**29.94**	**127**	T	T	17 02 18.1	
	baz=320,slow=76,SNR=32						
ZALV	**Zalesovo Beam**	**40.61**	**310**	P	**P**	**16 32 02.5**	**-0.8**
	1.4nm,0.5s,baz=83,slow=8.8,SNR=7.7						
CMAR	**Chiang Mai Arr**	**42.62**	**253**	P	**P**	**16 32 17.4**	**-2.8**
	0.4nm,0.8s,baz=51,slow=7.1,SNR=3.3						
MKAR	**Makanchi Array**	**43.22**	**300**	P	**P**	**16 32 24.1**	**-0.6**
	0.5nm,0.5s,baz=84,slow=11,SNR=8.0						
ILAR	**Eielson Array**	**47.14**	**34**	P	**P**	**16 32 56.1**	**+0.7**
	0.7nm,0.6s,baz=268,slow=6.0,SNR=8.8						
INK	**Inuvik**	**51.95**	**28**	P	**P**	**16 33 32.5**	**+0.7**
	1.1nm,0.6s,baz=298,slow=6.3,SNR=7.9						
WRA	**Warramunga Arr**	**59.60**	**188**	P	**P**	**16 34 26.4**	**-0.7**
	0.8nm,0.7s,baz=1.9,slow=6.9,SNR=5.3						
YKA	**Yellowknife Ar**	**61.42**	**31**	P	**P**	**16 34 39.4**	**+0.5**
	0.2nm,0.6s,baz=301,slow=6.8,SNR=4.4						
ASAR	**Alice Springs**	**63.33**	**188**	P	**P**	**16 34 50.3**	**-1.8**
	1.2nm,0.8s,baz=346,slow=2.5,SNR=8.6						
FINES	**FINESS Array B**	**66.82**	**332**	P	**P**	**16 35 13.5**	**-0.7**
	0.9nm,0.6s,baz=27,slow=13,SNR=5.8						
NOA	**NORSAR Array B**	**72.06**	**337**	P	**P**	**16 35 46.3**	**-0.2**
	0.4nm,0.8s,baz=57,slow=7.4,SNR=3.0						
AKASG	**Malin Array Be**	**72.60**	**322**	P	**P**	**16 35 49.7**	**-0.2**
	0.3nm,0.4s,baz=46,slow=6.4,SNR=4.0						
NVAR	**Mina Array Bea**	**73.13**	**54**	P	**P**	**16 35 55.2**	**+1.7**
	0.8nm,0.8s,baz=289,slow=5.4,SNR=6.5						
PDAR	**Pinedale Array**	**75.59**	**46**	P	**P**	**16 36 08.6**	**+0.8**
	0.6nm,0.5s,baz=278,slow=0.4,SNR=6.7						
ULM	**Lac du Bonnet**	**77.16**	**94**	P	**P**	**16 36 16.2**	**0.0**
	0.4nm,0.4s,baz=350,slow=6.1,SNR=3.4						
GERES	**GERESS Array B**	**80.83**	**328**	P	**P**	**16 36 36.0**	**-0.3**
	0.3nm,0.6s,baz=26,slow=6.9,SNR=2.4						
TXAR	**Lajitas Array**	**88.23**	**53**	P	**P**	**16 37 15.2**	**+1.2**
	0.3nm,0.5s,baz=322,slow=5.7,SNR=2.1						
LPAZ	**La Paz**	**144.99**	**57**	PKPbc	**PKPbc**	**16 43 59.6**	**-0.2**
	0.7nm,0.5s,baz=314,slow=1.5,SNR=3.6						

*MAN **05** 16:25:20.2,8.°53N×122.°58E,h15km,mb5.0,ML3.9,MS3.9 BJI **05** 16:25:22.0±0.0,8.°59N×122.°48E,h41km,mB4.9/2, mb4.5/7,Ms4.8/1,Ms7 4.6/1*

*DJA **05** 16:25:25.0±0.9,8.°N±8.°×12.°2E±.°,h44km±14km,M4.7/14, mb4.6/14,mB5.1/6,MLv4.8/7,Mw(mB)4.5/6*

*NEIC **05** 16:25:29.2±1.8,8.°32N±0.°06×122.°36E±0.°10,h101km±6km, mb4.6/17,Error ellipse: s-maj=15.3km s-min=5.0km az=63.0*

*IDC **05** 16:25:30.2±2.7,8.°36N×122.°44E,h114km±26km,mb3.6/12, mb1 3.8/13,mb1mx3.5/44,mbtmp4.0/13,MS3.2/5, Ms1 3.2/5,ms1mx2.9/33,Error ellipse: s-maj=29.6km s-min=13.7km az=62.0*

ISC 05 16:25:18.4±1.6,8.°56N±0.°03×122.°62E±0.°04,h11km±11km, n80,σ1§44/93,mb4.4/29,MS3.0/3,4C-5D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCPH	**Dipolog City**	**0.72**	**88**	⇓*i*P	**Pn**	**16 25 35.4**	**+0.8**
DCPH				*i* S	**Sn**	**16 25 47.2**	**+1.5**
PAGZ	**Pagadian**	**1.03**	**133**	*e*P	**Pb**	**16 25 37.6**	**-0.7**
PAGZ				*e*S	**Sb**	**16 25 50.9**	**-1.0**
ZCP	**Zamboanga City**	**1.70**	**199**	⇓*i*P	**Pn**	**16 25 48.6**	**+0.5**
ZCP				*i* S	**Sb**	**16 26 11.0**	**-0.1**
CGP	**Cagayan de Oro**	**2.05**	**93**	⇑*e*P	**Pn**	**16 25 54.6**	**+1.7**
CGP				*i* S	**Sb**	**16 26 21.9**	**+0.6**
GUIM	**Jordan**	**2.06**	**359**	*e*P	**Pb**	**16 25 55.6**	**-0.2**
GUIM				*e*S	**Sb**	**16 26 21.5**	**0.0**
CTBH	**Cotabato--PC H**	**2.09**	**129**	⇓*i*P	**Pn**	**16 25 54.2**	**+0.8**
LLP	**Lapu-Lapu**	**2.20**	**37**	⇑*i*P	**Pn**	**16 25 56.4**	**+1.4**
LLP				*i* S	**Sb**	**16 26 25.4**	**-0.1**
BUKP	**Musuan**	**2.51**	**105**	*e*P	**Pn**	**16 26 02.1**	**+2.8**
BUKP				*e*S	**Sn**	**16 26 30.5**	**+0.6**
MSLP	**Maasin**	**2.71**	**54**	*e*P	**Pn**	**16 26 04.3**	**+2.4**
MSLP				*e*S	**Sb**	**16 26 38.9**	**-1.4**
SKMP	**Bagumbayan, Su**	**2.78**	**137**	*e*P	**Pn**	**16 26 02.4**	**-0.5**
SKMP				*e*S	**Sn**	**16 26 37.4**	**+0.9**
KCP	**Kidapawan**	**2.89**	**122**	⇓*i*P	**Pb**	**16 26 08.8**	**-1.3**
KCP				*i* S	**Sb**	**16 26 45.3**	**-0.2**
RCP	**Roxas**	**2.99**	**2**	⇓*e*P	**Pb**	**16 26 10.3**	**-1.5**
RCP				*e*S	**Sb**	**16 26 47.1**	**-1.2**
BUTP	**Butuan**	**3.00**	**82**	*e*P	**Pn**	**16 26 08.7**	**+2.8**
BUTP				*e*S	**Sb**	**16 26 46.4**	**-2.1**
KALP	**Kalibo**	**3.12**	**355**	⇑*e*P	**Sb**	**16 26 47.1**	**-4.8**
OCLP	**Ormoc**	**3.16**	**38**	*e*P	**Pn**	**16 26 09.7**	**+1.5**
OCLP				*e*S	**Sn**	**16 26 49.0**	**+3.0**
DAV	**Davao City (W)**	**3.28**	**117**	P	**Pg**	**16 26 22.0**	**+0.7**
	28nm,0.3s,baz=293,slow=19,SNR=8.2						
DAV				LR	LR	16 27 21.6	
	comp=Z,250nm,19.7s,baz=336,slow=33						
DAV	**Davao City (W)**	**3.28**	**117**		**Pg**	**16 26 21.5**	**+0.1**
GSPH	**General Santos**	**3.37**	**137**	⇑*i*p	**Pg**	**16 26 21.6**	**-1.4**
MATI	**Mati**	**3.94**	**114**	*e*P	**Pb**	**16 26 25.5**	**-2.5**
MATI				*e*S	**Sb**	**16 27 15.8**	**+0.1**
TGY	**Tagaytay City**	**5.75**	**343**	LR	LR	16 29 26.8	
	comp=Z,170nm,19.9s,baz=131,slow=40						
KKM	**Kota Kinabalu**	**6.83**	**249**	Pn	**Pn**	**16 26 59.3**	**+0.6**
KMSI	**Cibinong**	**8.04**	**170**	P	**Pn**	**16 27 17.7**	**+2.4**
	0.5nm81nm,0.6s						
MRSI	**Marisa**	**8.05**	**185**	P	**Pn**	**16 27 18.8**	**+3.4**
	0.2nm1µm22nm,0.5s						
APSI	**Ampana**	**9.45**	**186**	P	**Pn**	**16 27 37.7**	**+3.0**
	408nm26nm,0.8s						
LUWI	**Luwuk**	**9.53**	**179**	P	**Pn**	**16 27 38.7**	**+2.9**
	1µm131nm,0.8s						
LUWI	**Luwuk**	**9.53**	**179**		Pn	16 27 42.2	+6.4
SANI	**Sanana**	**11.06**	**162**	P	**Pn**	**16 27 57.2**	**+0.6**
	524nm12nm,1.1s						
SBUM	**Sibu**	**11.99**	**240**	Pn	**Pn**	**16 28 10.2**	**+0.7**
TPUB	**Ta-pu**	**14.79**	**353**	P	**P**	**16 28 57.1**	**+3.5**
UBPT	**Khong Chiam**	**18.05**	**293**	P	**P**	**16 29 32.9**	**+3.0**
PSI	**Prapat**	**24.25**	**258**	P	**P**	**16 30 35.6**	**-0.3**
	3.3nm,0.5s,baz=342,slow=16,SNR=3.4						
RPSI	**Rantau Prapat**	**24.28**	**258**	P	**P**	**16 30 35.6**	**-0.4**
RPSI	**Rantau Prapat**	**24.28**	**258**	P	**P**	**16 30 35.3**	**-0.7**
RPSI				IAmb	IAmb	16 30 46.5	
	comp=Z,12nm,1.0s						
CM31	**Chiang Mai Arr**	**25.01**	**296**	P	**P**	**16 30 43.2**	**+0.6**
CMAR	**Chiang Mai Arr**	**25.01**	**296**	P	**P**	**16 30 43.4**	**+0.8**
	comp=Z,2.6nm,0.7s,baz=111,slow=7.8,SNR=28						
CMAR				LR	LR	16 40 43.4	
	comp=Z,85nm,18.2s,baz=162,slow=37						
CMAR	**Chiang Mai Arr**	**25.01**	**296**	P	**P**	**16 30 42.4**	**-0.2**
CHTO	**Chiang Mai**	**25.13**	**296**	P	**P**	**16 30 44.0**	**+0.3**
JCJ	**Chichijima**	**26.14**	**43**	LR	LR	16 39 28.4	
	comp=Z,45nm,21.0s,baz=322,slow=32						
FITZ	**Fitzroy Crossi**	**26.65**	**174**	P	**P**	**16 30 55.7**	**-1.7**
	comp=Z,3.4nm,0.8s,baz=352,slow=14,SNR=5.0						
FITZ	**Fitzroy Crossi**	**26.65**	**174**	P	**P**	**16 30 56.1**	**-1.3**
FITZ				IAmb	IAmb	16 31 20.1	
	comp=Z,44nm,1.9s						
KSRS	**Korea Array**	**29.17**	**9**	LR	LR	16 45 52.9	
	comp=Z,33nm,18.2s,baz=266,slow=42						
WRA	**Warramunga Arr**	**30.58**	**158**	P	**P**	**16 31 33.0**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=331,slow=10,SNR=2.3						
SHL	**Shillong**	**33.77**	**304**	P	**P**	**16 32 01.0**	**+0.2**
ASAR	**Alice Springs**	**33.87**	**161**	P	**P**	**16 32 00.2**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=340,slow=7.2,SNR=12						
ASAR				PcP	**PcP**	**16 34 38.2**	**-2.0**
	comp=Z,0.4nm,0.6s,baz=343,slow=2.7,SNR=6.2						
ASAR	**Alice Springs**	**33.87**	**161**	P	**P**	**16 31 59.7**	**-1.6**
LSA	**Lhasa**	**36.22**	**310**	P	**P**	**16 32 20.9**	**-1.2**
LSA				IAmb	IAmb	16 32 25.6	
	comp=Z,4.4nm,0.7s						
GTA	**Gaotai**	**36.89**	**330**	*e*P	**P**	**16 32 28.8**	**+1.4**
GTA				pP	pwP	16 32 41.0	+6.0
GTA				sP	sP	16 32 44.1	+14
TAPN	**Taplejung**	**37.91**	**304**	*e*P	**P**	**16 32 36.9**	**+0.5**
	comp=Z,31nm,0.7s						
ODAN	**Odare**	**37.99**	**303**	*e*P	**P**	**16 32 37.6**	**+0.6**
	comp=Z,29nm,0.9s						
RAMN	**Ramite**	**38.68**	**303**	*e*P	**P**	**16 32 43.9**	**+1.1**
	comp=Z,38nm,0.7s						
JIRN	**Jiri**	**39.28**	**304**	*e*P	**P**	**16 32 48.4**	**+0.4**
	comp=Z,64nm,0.6s						
GUN	**Gumba**	**39.63**	**304**	*e*P	**P**	**16 32 51.8**	**+0.9**
	comp=Z,70nm,0.7s						
PKI	**Pulchoki**	**39.89**	**303**	*e*P	**P**	**16 32 53.1**	**+0.1**
	comp=Z,2.7nm,0.7s						
PKIN	**Phulchoki**	**39.90**	**303**	*e*P	**P**	**16 32 53.3**	**+0.2**
	comp=Z,15nm,0.6s						
KKN	**Kakani**	**40.08**	**303**	*e*P	**P**	**16 32 54.9**	**+0.5**
DMN	**Daman**	**40.16**	**303**	*e*P	**P**	**16 32 55.8**	**+0.7**
GKN	**Gorkha**	**40.68**	**303**	*e*P	**P**	**16 32 59.8**	**+0.4**
KOLN	**Koldanda**	**41.46**	**303**	*e*P	**P**	**16 33 06.5**	**+0.6**
	comp=Z,46nm,0.8s						
SONM	**Songino Array**	**41.49**	**343**	P	**P**	**16 33 06.0**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=158,slow=7.8,SNR=3.6						
SONM				PcP	**PcP**	**16 35 02.6**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=166,slow=3.0,SNR=3.8						
DANN	**Dangsing**	**41.53**	**303**	*e*P	**P**	**16 33 06.7**	**+0.2**
	comp=Z,43nm,0.6s						
MK31	**Makanchi Array**	**51.29**	**325**	P	**P**	**16 34 23.4**	**+0.7**
MK31				IAmb	IAmb	16 34 24.4	
	comp=Z,2.9nm,0.9s						
MKAR	**Makanchi Array**	**51.29**	**325**	P	**P**	**16 34 23.8**	**+1.1**
	comp=Z,2.1nm,0.7s,baz=126,slow=8.4,SNR=14						
MKAR				PcP	**PcP**	**16 35 36.8**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=129,slow=4.3,SNR=6.5						
MKAR	**Makanchi Array**	**51.29**	**325**	P	**P**	**16 34 23.1**	**+0.5**
MAKZ	**Makanchi**	**51.47**	**325**	P	**P**	**16 34 24.6**	**+0.6**
MAKZ				IAmb	IAmb	16 34 25.9	
	comp=Z,9.9nm,1.5s						
NIL	**Nilore**	**51.78**	**306**	P	**P**	**16 34 27.0**	**+0.5**
NIL				IAmb	IAmb	16 34 28.2	
	comp=Z,10nm,0.8s						
ZALV	**Zalesovo Beam**	**54.47**	**334**	P	**P**	**16 34 45.9**	**0.0**
	comp=Z,1.3nm,0.5s,baz=126,slow=7.9,SNR=5.7						
ZALV	**Zalesovo Beam**	**54.47**	**334**	P	**P**	**16 34 45.3**	**-0.6**
KURK	**Kurchatov**	**55.50**	**328**	P	**P**	**16 34 53.9**	**+0.4**
KURK				IAmb	IAmb	16 35 08.6	
	comp=Z,6.2nm,0.8s						
BTK	**Batken**	**55.66**	**313**	P	**P**	**16 34 55.9**	**+1.0**
BTK				IAmb	IAmb	16 34 56.4	
	comp=Z,4.1nm,0.8s						
GAR	**Garm**	**55.68**	**312**	P	**P**	**16 34 55.9**	**+0.7**
CHGR	**Chuyangaron**	**56.43**	**311**	P	**P**	**16 35 00.8**	**+0.4**
KK31	**Karatay Array**	**56.94**	**316**	P	**P**	**16 35 04.3**	**+0.4**
KK31				IAmb	IAmb	16 36 42.7	
	comp=Z,14nm,1.7s						
KKAR	**Karatay Array**	**56.94**	**316**	P	**P**	**16 35 04.5**	**+0.5**
BRTR	**Keskin Array B**	**83.82**	**309**	P	**P**	**16 37 47.9**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=104,slow=7.8,SNR=4.0						
BRTR	**Keskin Array B**	**83.82**	**309**	P	**P**	**16 37 47.3**	**-1.2**
ARCES	**ARCESS Array B**	**84.53**	**339**	P	**P**	**16 37 50.4**	**-0.9**
	comp=Z,2.5nm,1.0s,baz=95,slow=6.1,SNR=5.3						
ARCES	**ARCESS Array B**	**84.53**	**339**	P	**P**	**16 37 50.8**	**-0.6**
AKASG	**Malin Array Be**	**85.59**	**320**	P	**P**	**16 37 55.1**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=65,slow=3.6,SNR=4.3						
FINES	**FINESS Array B**	**85.67**	**331**	P	**P**	**16 37 55.8**	**-1.3**
	comp=Z,1.6nm,0.9s,baz=52,slow=7.2,SNR=3.6						
PLCA	**Paso Flores**	**145.88**	**162**	PKPbc	**PKPdf**	**16 44 57.0**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=243,slow=9.0,SNR=5.6						

IDC 05 16:51:40.7±25.0,21.°86S×172.°67W,h0km,mb4.1/4, mb1 4.2/4,mb1mx3.7/39,mbtmp4.1/4,Error ellipse: s-maj=466.2km s-min=152.6km az=76.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.31**	**265**	P	P	16 59 04.0	+0.6
	3.3nm,0.3s,baz=95,slow=11,SNR=16						
STKA	**Stephens Creek**	**41.74**	**246**	P	P	16 59 29.9	-1.8
	1.9nm,0.7s,baz=84,slow=10,SNR=3.8						
ASAR	**Alice Springs**	**49.06**	**257**	P	P	17 00 29.8	-0.2
	0.4nm,0.5s,baz=94,slow=6.8,SNR=32						
WRA	**Warramunga Arr**	**49.34**	**262**	P	P	17 00 32.6	+0.4
	1.1nm,0.3s,baz=98,slow=8.3,SNR=28						

*MAN **05** 16:58:15.6,13.°31N×120.°12E,h11km,mb4.9,ML3.9, MS3.9*

*IDC **05** 16:58:21.7±1.5,13.°45N×120.°51E,h67km±15km,mb3.7/13, mb1 3.9/14,mb1mx3.7/37,mbtmp4.0/14,MS3.5/3, Ms1 3.5/3,ms1mx2.9/41,Error ellipse: s-maj=31.1km s-min=12.4km az=66.0*

*NEIC **05** 16:58:21.8±1.5,13.°44N±0.°07×120.°5E±0.°1,h70km±2km, mb4.7/22,Error ellipse: s-maj=14.5km s-min=10.4km az=81.0*

ISC 05 16:58:16.3±1.0,13.°33N±0.°02×120.°17E±0.°04,h19km±3km, n68,σ1§39/80,mb4.4/23,2C-3D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.41**	**10**	*e*P	**Pg**	**16 58 23.6**	**-1.2**
LUBP				*e*S	**Sg**	**16 58 28.6**	**-1.9**
TGY	**Tagaytay City**	**1.07**	**44**	P	**Pn**	**16 58 36.4**	**+0.1**
	2µm,0.3s,baz=202,slow=1.2,SNR=166						
TGY				S	**Sb**	**16 58 50.1**	**+0.4**
	2µm,0.3s,baz=190,slow=19,SNR=19						
TGY	**Tagaytay City**	**1.07**	**44**	⇑*e*P	**Pg**	**16 58 37.5**	**+0.4**
TGY				*e*S	**Sg**	**16 58 53.2**	**+2.0**
SJMP	**San Jose**	**1.27**	**133**	*e*P	**Pg**	**16 58 40.3**	**-0.5**
SJMP				*e*S	**Sg**	**16 58 57.5**	**+0.1**
LQP	**Lukban**	**1.54**	**60**	⇓*e*P	**Pn**	**16 58 43.0**	**+0.1**
LQP				*e*S	**Sn**	**16 59 02.7**	**+0.3**
BOAC	**Boac**	**1.63**	**85**	*e*P	**Pn**	**16 58 44.2**	**+0.3**
BOAC				*e*S	**Sn**	**16 59 04.2**	**-0.2**
OTRP	**Odiongan**	**2.05**	**118**	*e*P	**Pn**	**16 58 49.2**	**-0.5**
OTRP				*e*S	**Sg**	**16 59 21.8**	**-0.4**
POLP	**Polilio Island**	**2.21**	**51**	*e*P	**Pn**	**16 58 52.0**	**+0.2**
POLP				*e*S	**Sg**	**16 59 30.0**	**+2.6**
ENPP	**El Nido**	**2.23**	**199**	*e*P	**Pn**	**16 58 53.3**	**+1.1**
ENPP				*e*S	**Sn**	**16 59 19.3**	**0.0**
GQP	**Guinayangan**	**2.28**	**75**	⇓*e*P	**Pn**	**16 58 54.3**	**+1.4**
GQP				*e*S	**Sb**	**16 59 23.4**	**-1.3**
PCPH	**Palayan**	**2.39**	**22**	⇑*e*P	**Pn**	**16 58 55.3**	**+0.9**
PCPH				*e*S	**Sn**	**16 59 24.5**	**+1.3**
SCZP	**Santa Cruz**	**2.44**	**354**	*e*P	**Pn**	**16 58 56.3**	**+1.2**
SCZP				*e*S	**Sg**	**16 59 32.8**	**-2.1**
CUYO	**Cuyo Island**	**2.60**	**161**	*e*P	**Pn**	**16 58 58.0**	**+0.7**
CUYO				*e*S	**Sn**	**16 59 27.2**	**-1.2**
KALP	**Kalibo**	**2.68**	**128**	*e*P	Sn	16 59 42.6	+12
BALP	**Baler**	**2.75**	**29**	*e*P	**Pn**	**16 59 01.1**	**+1.7**
BALP				*e*S	**Sn**	**16 59 33.8**	**+1.7**
SMPP	**San Manuel, Pa**	**2.84**	**10**	*e*P	**Pn**	**16 59 00.4**	**-0.2**
SMPP				*e*S	**Sn**	**16 59 32.8**	**-1.6**
RCP	**Roxas**	**3.07**	**125**	⇓*e*P	**Pb**	**16 59 10.7**	**+0.4**
GUIM	**Jordan**	**3.58**	**138**	*e*P	**Pn**	**16 59 11.1**	**+0.3**
GUIM				*e*S	**Sn**	**16 59 54.0**	**+1.4**
CAUP	**Cauayan**	**3.93**	**24**	*e*P	**Pn**	**16 59 17.6**	**+2.1**
CAUP				*e*S	**Sg**	**17 00 25.5**	**+3.0**
APYP	**Conner**	**4.62**	**13**	*e*P	**Pn**	**16 59 27.4**	**+2.3**
APYP				*e*S	**Sn**	**17 00 13.9**	**-4.4**
DAV	**Davao City (W)**	**8.19**	**139**	LR	LR	17 04 02.7	
	comp=Z,274nm,18.3s,baz=316,slow=42						
NACB	**Ninganchiao**	**10.87**	**7**	Pn	**Pn**	**17 00 51.4**	**+0.6**
SBUM	**Sibu**	**13.37**	**217**	P	P	17 01 39.8	+5.3
SIJI	**Sorong**	**17.89**	**141**	P	**Pn**	**17 02 23.9**	**-0.3**
	0.3nm,0.3s,baz=336,slow=20,SNR=2.8						
FAKI	**Fak Fak**	**20.11**	**143**	Pn	Pn	17 02 51.5	+0.5
CMAR	**Chiang Mai Arr**	**21.04**	**287**	P	**P**	**17 03 03.4**	**+4.2**
	0.9nm,0.7s,baz=94,slow=9.0,SNR=11						
SOEI	**Soe**	**23.30**	**170**	P	**P**	**17 03 23.2**	**0.0**
SOEI				IAmb	IAmb	17 03 35.1	
	comp=Z,24nm,0.9s						
KSRS	**Korea Array**	**25.00**	**15**	LR	LR	17 14 24.4	
	comp=Z,47nm,19.9s,baz=238,slow=39						
GSI	**Gunungsitoli**	**25.36**	**244**	P	**P**	**17 03 45.2**	**+2.8**
FITZ	**Fitzroy Crossi**	**31.69**	**170**	P	**P**	**17 04 40.0

RUSC				*i*			17 07 56.5	
	comp=Z,830nm,0.2s							
RUSC				*i*			17 07 56.7	
	comp=Z,771nm,0.3s							
RUSC	**La Rusia**	**0.94**	**181**⇑	*eP*		**Pn**	**17 07 36.6**	**+0.7**
RUSC				*eS*		**Sn**	**17 07 55.3**	**0.0**
TAMC	**Tame, Arauca**	**1.33**	**107**⇓	*iP*		**Pn**	**17 07 41.2**	**+2.3**
TAMC				*eS*		**Sn**	**17 08 02.4**	**+1.9**
TAMC				*i*			17 08 12.3	
	comp=Z,141nm,0.9s							
TAMC				*i*			17 08 12.5	
	comp=Z,119nm,0.5s							
PTBC	**PUERTO BERRIO,**	**1.41**	**258**⇑	*iP*		**Pn**	**17 07 39.1**	**-0.6**
PTBC				*eS*		**Sn**	**17 08 00.1**	**-1.7**
PTBC				*i*			17 08 07.3	
	comp=Z,604nm,0.3s							
PTBC				*i*			17 08 07.5	
	comp=Z,592nm,0.3s							
OCAC	**Ocana**	**1.41**	**350**⇑	*iP*		**Pn**	**17 07 40.8**	**+0.9**
OCAC				*eS*		**Sn**	**17 08 02.1**	**-0.1**
OCAC				*i*			17 08 07.2	
	comp=Z,372nm,0.2s							
OCAC				*i*			17 08 07.6	
	comp=Z,367nm,0.5s							
SPBC	**San Pablo de B**	**1.54**	**220**⇑	*iP*		**Pn**	**17 07 41.5**	**+0.3**
SPBC				*eS*		**Sn**	**17 08 03.1**	**-1.4**
SPBC				*i*			17 08 09.6	
	comp=Z,745nm,0.5s							
SPBC				*i*			17 08 10.8	
	comp=Z,867nm,0.3s							
ZARC	**Zaragoza, Cauc**	**1.89**	**290**	*eP*		**Pn**	**17 07 44.9**	**+0.1**
ZARC				*eS*		**Sn**	**17 08 10.2**	**-0.8**
ZARC				*i*			17 08 12.3	
	comp=Z,274nm,0.5s							
ZARC				*i*			17 08 21.3	
	comp=Z,343nm,0.2s							
SMLC	**San Martn de**	**2.19**	**333**	*eP*		**Pn**	**17 07 48.8**	**+0.5**
SMLC				*eS*		**Sn**	**17 08 17.4**	**+0.1**
SMLC				*i*			17 08 21.8	
	comp=Z,261nm,0.1s							
SMLC				*i*			17 08 22.1	
	comp=Z,285nm,0.5s							
NORC	**Norcasia**	**2.19**	**235**⇑	*iP*		**Pn**	**17 07 48.2**	**-0.2**
NORC				*eS*		**Sn**	**17 08 15.9**	**-1.5**
NORC				*i*			17 08 21.2	
	comp=Z,402nm,0.5s							
NORC				*i*			17 08 24.6	
	comp=Z,424nm,0.2s							
CHIC	**Chingaza**	**2.29**	**197**⇑	*iP*		**Pn**	**17 07 50.6**	**+0.6**
CHIC				*eS*		**Sn**	**17 08 19.5**	**-0.6**
CHIC				*i*			17 08 23.3	
	comp=Z,350nm,0.4s							
CHIC				*i*			17 08 23.6	
	comp=Z,303nm,0.4s							
ROSC	**El Rosal**	**2.34**	**212**	P		**Pn**	**17 07 52.6**	**+2.0**
	comp=Z,172nm,0.3s,baz=98,slow=18,SNR=142							
ROSC				S		**Sn**	**17 08 24.1**	**+2.9**
	comp=Z,110nm,0.3s,baz=179,slow=24,SNR=14							
ROSC	**El Rosal**	**2.34**	**212**⇑	*iP*		**Pn**	**17 07 52.4**	**+1.8**
ROSC				*eS*		**Sn**	**17 08 23.3**	**+2.1**
ROSC				*i*			17 08 31.0	
	comp=Z,486nm,0.3s							
CVER	**Cruz Verde, Cu**	**2.51**	**204**⇑	*iP*		**Pn**	**17 07 55.1**	**+2.4**
CVER				*eS*		**Sn**	**17 08 24.5**	**-0.5**
CVER				*i*			17 08 32.5	
	comp=Z,2µm,0.3s							
HELC	**Santa Helena**	**2.53**	**255**	*eP*		**Pn**	**17 07 53.2**	**+0.5**
HELC				*eS*		**Sn**	**17 08 23.6**	**-1.5**
HELC				*i*			17 08 32.2	
	comp=Z,281nm,0.2s							
HELC				*i*			17 08 32.9	
	comp=Z,281nm,0.3s							
HELC	**Santa Helena**	**2.53**	**255**	*eP*		**Pn**	**17 07 53.3**	**+0.5**
HELC				*eS*		**Sn**	**17 08 24.1**	**-1.0**
UREC	**San Jos de Ur**	**2.61**	**291**	*eP*		**Pn**	**17 07 52.4**	**-1.0**
UREC				*eS*		**Sn**	**17 08 23.8**	**-2.5**
UREC				*i*			17 08 35.4	
	comp=Z,247nm,0.3s							
UREC				*i*			17 08 35.4	
	comp=Z,233nm,0.2s							
VIGV	**El Vigia**	**2.61**	**40**	*eP*		**Pn**	**17 07 55.0**	**+1.6**
SOCV	**Socops**	**2.62**	**57**	*eP*		**Pn**	**17 07 55.1**	**+1.5**
SOCV				*eS*		**Sn**	**17 08 25.8**	**-0.8**
VILC	**Villavicencio,**	**2.78**	**193**	*eP*		**Pn**	**17 07 56.0**	**+0.3**
VILC				*eS*		**Sn**	**17 08 29.9**	**-0.4**
VILC				*i*			17 08 33.0	
	comp=Z,348nm,0.5s							
PTGC	**Puerto Gaitan,**	**2.78**	**160**	*eP*		**Pn**	**17 07 56.0**	**+0.4**
PTGC				*eS*		**Sn**	**17 08 28.8**	**-1.5**
PTGC				*i*			17 08 34.0	
	comp=Z,334nm,0.3s							
PTGC				*i*			17 08 34.2	
	comp=Z,328nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.79**	**235**	*eP*		**Pn**	**17 07 56.6**	**+0.5**
GUY2C				*eS*		**Sn**	**17 08 30.3**	**-0.8**
CBOC	**Ciudad Bolivar**	**3.08**	**252**	*eP*		**Pn**	**17 08 00.2**	**+0.8**
CBOC				*eS*		**Sn**	**17 08 35.1**	**-2.0**
CBOC				*i*			17 08 50.3	
	comp=Z,77nm,0.4s							
CBOC				*i*			17 08 51.3	
	comp=Z,115nm,0.6s							
CODC	**Agustn Codazz**	**3.10**	**353**⇑	*iP*		**Pn**	**17 08 00.0**	**+0.5**
CODC				*eS*		**Sn**	**17 08 36.9**	**-0.5**
CODC				*i*			17 08 42.9	
	comp=Z,78nm,0.4s							
CODC				*i*			17 08 46.4	
	comp=Z,98nm,0.6s							
DBBC	**Dabeiba**	**3.12**	**273**	*eP*		**Pn**	**17 07 60.0**	**+0.1**
DBBC				*eS*		**Sn**	**17 08 35.1**	**-2.8**
DBBC				*i*			17 08 38.4	
	comp=Z,267nm,0.4s							
SDV	**Santo Domingo**	**3.16**	**50**	P		**Pn**	**17 08 02.4**	**+2.0**
	comp=Z,10nm,0.3s,baz=213,slow=8.0,SNR=91							
SDV				S		**Sn**	**17 08 39.7**	**+0.8**
	comp=Z,54nm,0.3s,baz=46,slow=20,SNR=53							
SDV	**Santo Domingo**	**3.16**	**50**	*eP*		**Pn**	**17 08 01.9**	**+1.5**
SDV				*eS*		**Sn**	**17 08 37.3**	**-1.6**
SDV				*i*			17 08 43.0	
	comp=Z,131nm,0.5s							
SDV	**Santo Domingo**	**3.16**	**50**	*eP*		**Pn**	**17 08 02.2**	**+1.8**
SDV				*eS*		**Sn**	**17 08 38.5**	**-0.4**
TOLC	**Tolima**	**3.17**	**225**	*eP*		**Pn**	**17 08 01.4**	**+0.7**
TOLC				*eS*		**Sn**	**17 08 40.7**	**+1.3**
TOLC				*i*			17 08 45.2	
	comp=Z,108nm,0.5s							
ARGC	**Ariguani, Magd**	**3.22**	**339**	*eP*		**Pn**	**17 08 02.7**	**+1.7**
ARGC				*eS*		**Sn**	**17 08 41.4**	**+1.4**
ARGC				*i*			17 08 48.1	
	comp=Z,90nm,0.2s							
ARGC				*i*			17 08 53.0	
	comp=Z,153nm,0.3s							
ANIL	**Santa Ana**	**3.29**	**225**	*eP*		**Pn**	**17 08 03.4**	**+1.1**
ANIL				*eS*		**Sn**	**17 08 42.8**	**+0.7**
ANIL				*i*			17 08 49.6	
	comp=Z,655nm,0.3s							
ANIL				*i*			17 08 49.7	
	comp=Z,698nm,0.3s							
ELOV	**Elorza**	**3.56**	**87**	*eP*		**Pn**	**17 08 07.0**	**+1.6**
ELOV				*eS*		**Sn**	**17 08 48.5**	**+0.6**
ORTC	**Ortega, Tolima**	**3.63**	**217**	*eP*		**Pn**	**17 08 06.7**	**+0.3**
ORTC				*eS*		**Sn**	**17 08 49.9**	**+0.4**
ORTC				*i*			17 08 55.6	
	comp=Z,143nm,0.4s							
ORTC				*i*			17 08 56.7	
	comp=Z,142nm,0.4s							
SJCC	**San Jacinto, C**	**3.69**	**326**⇓	*iP*		**Pn**	**17 08 06.3**	**-0.8**
SJCC				*eS*		**Sn**	**17 08 47.3**	**-3.6**
SJCC				*i*			17 08 51.4	
	comp=Z,76nm,1.0s							
SJCC				*i*			17 08 55.6	
	comp=Z,67nm,0.3s							
PLMC	**San Jos del P**	**3.73**	**239**	*eP*		**Pn**	**17 08 08.3**	**+0.7**
PLMC				*eS*		**Sn**	**17 08 51.7**	**-0.2**
PLMC				*i*			17 08 55.1	
	comp=Z,174nm,0.2s							
PLMC				*i*			17 08 59.0	
	comp=Z,160nm,0.2s							
LCBC	**Los crdobas,**	**3.83**	**302**	*eP*		**Pn**	**17 08 09.2**	**+0.2**
LCBC				*eS*		**Sn**	**17 08 55.3**	**+1.1**
QARV	**Quebrada Arrib**	**4.19**	**37**	*eP*		**Pn**	**17 08 15.4**	**+1.8**
GUVC	**San Jose del G**	**4.29**	**174**	*eP*		**Pn**	**17 08 14.3**	**-0.6**
GUVC				*eP*		**Pn**	**17 08 14.3**	**-0.6**
GUVC				*eS*		**Sn**	**17 09 02.8**	**-2.1**
GUVC				*eS*		**Sn**	**17 09 02.8**	**-2.1**
GUVC				*i*			17 09 07.0	
	comp=Z,206nm,0.5s							
GUVC				*i*			17 09 07.0	
	comp=Z,206nm,0.5s							
YOTC	**Yotoco, Valle**	**4.32**	**229**⇓	*iP*		**Pn**	**17 08 15.2**	**-0.2**
YOTC				*eS*		**Sn**	**17 09 05.0**	**-0.7**
YOTC				*i*			17 09 16.5	
	comp=Z,25nm,0.5s							
YOTC				*i*			17 09 17.6	
	comp=Z,18nm,0.6s							
CURV	**Curarigua**	**4.41**	**44**	*eP*		**Pn**	**17 08 17.5**	**+1.0**
CURV				*eS*		**Sn**	**17 09 05.4**	**-2.3**
SMRC	**Santa Marta, M**	**4.45**	**345**	*eP*		**Pn**	**17 08 17.7**	**+0.8**
SMRC				*eP*		**Pn**	**17 08 17.7**	**+0.8**
SMRC				*eS*		**Sn**	**17 09 04.9**	**-3.7**
SMRC				*eS*		**Sn**	**17 09 04.9**	**-3.7**
SMRC				*i*			17 09 08.9	
	comp=Z,70nm,0.4s							
SMRC				*i*			17 09 08.9	
	comp=Z,70nm,0.4s							
MACC	**Macarena, Meta**	**4.73**	**189**	*eP*		**Pn**	**17 08 19.3**	**-1.3**
MACC				*eP*		**Pn**	**17 08 19.3**	**-1.3**
MACC				*eS*		**Sn**	**17 09 08.6**	**-6.6**
MACC				*eS*		**Sn**	**17 09 08.6**	**-6.6**
MACC				*i*			17 09 17.2	
	comp=Z,79nm,0.8s							
MACC				*i*			17 09 17.2	
	comp=Z,79nm,0.8s							
MACC				*i*			17 09 18.4	
	comp=Z,50nm,0.6s							
MACC				*i*			17 09 18.4	
	comp=Z,50nm,0.6s							
BETC	**Betania**	**4.76**	**210**	*eP*		**Pn**	**17 08 19.8**	**-1.4**
BETC				*eP*		**Pn**	**17 08 19.8**	**-1.4**
BETC				*eS*		**Sn**	**17 09 08.3**	**-7.7**
BETC				*eS*		**Sn**	**17 09 08.3**	**-7.7**
BETC				*i*			17 09 34.2	
	comp=Z,6.6nm,0.4s							
BETC				*i*			17 09 34.2	
	comp=Z,6.6nm,0.4s							
TEPV	**Terepaima**	**4.94**	**51**	*eS*		**Sn**	**17 09 17.2**	**-2.9**
URIC	**Uribia, Colomb**	**4.95**	**12**	*eP*		**Pn**	**17 08 22.8**	**-0.7**
URIC				*eP*		**Pn**	**17 08 22.8**	**-0.7**
URIC				*eS*		**Sn**	**17 09 21.8**	**+1.4**
URIC				*eS*		**Sn**	**17 09 21.8**	**+1.4**
URIC				*i*			17 09 32.1	
	comp=Z,22nm,0.3s							
URIC				*i*			17 09 32.1	
	comp=Z,22nm,0.3s							
SIQV	**Siquisique**	**4.97**	**40**	*eP*		**Pn**	**17 08 23.9**	**0.0**
MALC	**Bahia Malaga**	**5.09**	**237**	*eP*		**Pn**	**17 08 27.4**	**+1.9**
MALC				*eP*		**Pn**	**17 08 27.4**	**+1.9**
MALC				*eS*		**Sn**	**17 09 22.7**	**-1.1**
MALC				*eS*		**Sn**	**17 09 22.7**	**-1.1**
MALC				*i*			17 09 28.9	
	comp=Z,69nm,1.4s							
MALC				*i*			17 09 28.9	
	comp=Z,69nm,1.4s							
BAUV	**El Baul**	**5.40**	**67**	*eP*		**Pn**	**17 08 28.9**	**-0.6**
BAUV				*eS*		**Sn**	**17 09 29.1**	**-2.0**
MAPV	**Macapo**	**5.45**	**57**	*eP*		**Pn**	**17 08 31.0**	**+0.8**
MAPV				*eS*		**Sn**	**17 09 28.7**	**-3.5**
PCON	**Cinco Dias**	**5.57**	**217**	*eP*		**Pn**	**17 08 31.9**	**-0.4**
PCON				*eP*		**Pn**	**17 08 31.9**	**-0.4**
PCON				*eS*		**Sn**	**17 09 31.5**	**-4.6**
PCON				*eS*		**Sn**	**17 09 31.5**	**-4.6**
PCON				*i*			17 09 38.4	
	comp=Z,17nm,0.6s							
PCON				*i*			17 09 38.4	
	comp=Z,17nm,0.6s							
FLOC	**Florencia**	**5.82**	**206**	*eP*		**Pn**	**17 08 34.3**	**-0.8**
FLOC				*eP*		**Pn**	**17 08 34.3**	**-0.8**
FLOC				*eS*		**Sn**	**17 09 39.0**	**-2.2**
FLOC				*eS*		**Sn**	**17 09 39.0**	**-2.2**
FLOC				*i*			17 10 17.5	
	comp=Z,16nm,0.8s							
FLOC				*i*			17 10 17.5	
	comp=Z,16nm,0.8s							
SOTA	**Rioblanco**	**5.85**	**217**	*eP*		**Pn**	**17 08 37.4**	**+1.3**
SOTA				*eP*		**Pn**	**17 08 37.4**	**+1.3**
SOTA				*eS*		**Sn**	**17 09 42.4**	**-0.3**
SOTA				*eS*		**Sn**	**17 09 42.4**	**-0.3**
SOTA				*i*			17 09 53.0	
	comp=Z,14nm,0.5s							
SOTA				*i*			17 09 53.0	
	comp=Z,14nm,0.5s							
SOTA				*i*			17 09 59.4	
	comp=Z,15nm,0.8s							
SOTA				*i*			17 09 59.4	
	comp=Z,15nm,0.8s							
MONV	**Montecano**	**5.93**	**31**	*eP*		**Pn**	**17 08 36.8**	**+0.2**
MONV				*eS*		**Sn**	**17 09 39.1**	**-4.7**
MERV	**Las Mercedes**	**7.12**	**70**	*eP*		**Pn**	**17 08 52.0**	**-0.1**
MERV				*eS*		**Sn**	**17 10 07.7**	**-4.6**
CUPV	**Cpira**	**7.88**	**66**	*eS*		**Sn**	**17 10 24.4**	**-6.2**
PCRV	**Puerto La Cruz**	**8.97**	**68**	P		**Pn**	**17 09 19.0**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=221,slow=11,SNR=2.9							
JTS	**Las Juntas de**	**12.24**	**287**	P		**P**	**17 10 08.5**	**+2.3**
	comp=Z,0.8nm,0.3s,baz=127,slow=7.4,SNR=4.8							
APG	**El Apazote**	**18.90**	**297**	LR		LR	17 21 16.6	
	comp=Z,39nm,18.3s,baz=220,slow=44							
TXAR	**Lajitas Array**	**36.49**	**312**	P		**P**	**17 14 02.5**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=131,slow=12,SNR=2.4							
YKA	**Yellowknife Ar**	**62.27**	**340**	P		**P**	**17 17 23.5**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=131,slow=6.9							
ESDC	**Sonseca Array**	**69.60**	**50**	P		**P**	**17 18 02.3**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=287,slow=7.7,SNR=2.4							
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc		**PKiKP**	**17 26 41.5**	**-1.6**
	comp=Z,0.2nm,0.5s,baz=116,slow=3.8,SNR=6.8							
WRA	**Warramunga Arr**	**150.39**	**241**	PKPbc		**PKiKP**	**17 26 44.7**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=105,slow=2.8,SNR=5.4							
CMAR	**Chiang Mai Arr**	**153.66**	**17**	PKPbc		**PKiKP**	**17 26 51.9**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=321,slow=2.4,SNR=2.7							

PDG ***05*** *17:15:37.9±0.3,43.˚18N×18.˚73E,h12km,MD3.1/7, ML3.1/14, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
BEO ***05*** *17:15:38.4±0.2,43.˚19N×18.˚73E,h0km,ML2.8/12*
LDG ***05*** *17:15:38.4±0.1,43.˚15N×18.˚74E,h5km,Ml3.6/3, Error ellipse: s-maj=3.9km s-min=3.0km az=153.0*
RHSSO ***05*** *17:15:38.6±0.2,43.˚18N×18.˚76E,h5km,2km,ML3.1/13*
PRU ***05*** *17:15:40.7±0.0,43.˚28N×18.˚85E,h10km*

ISC 05 17:15:38.5±0.8,43.˚18N±0.˚01×18.˚75E±0.˚02,h10km±6km, n106,σ1§82/181,18C-7D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
UPM	**Unac-Piva**	**0.12**	**76**	⇓*iPg*		**Pg**	**17 15 41.3**	**-0.2**
UPM				*eSg*		**Sg**	**17 15 43.5**	**-0.2**
UPM	**Unac-Piva**	**0.12**	**76**	*ePg*		**Pg**	**17 15 41.3**	**-0.2**
UPM				*eSg*		**Sg**	**17 15 43.7**	**0.0**
BRY	**Bratogost**	**0.31**	**210**	⇓*iPg*		**Pg**	**17 15 44.3**	**-0.6**
BRY				*eSg*		**Sg**	**17 15 49.4**	**+0.4**
BRY	**Bratogost**	**0.31**	**210**	*ePg*		**Pg**	**17 15 44.2**	**-0.6**
BRY				*eSg*		**Sg**	**17 15 49.0**	**0.0**
NKY	**Niksic**	**0.40**	**154**	*ePg*		**Pg**	**17 15 46.1**	**-0.3**
NKY				*eSg*		**Sg**	**17 15 52.6**	**+0.8**
NKME	**Niksic**	**0.43**	**160**	*ePg*		**Pg**	**17 15 46.4**	**-0.6**
NKME				*eSg*		**Sg**	**17 15 53.3**	**+0.6**
PLE	**Pljevlja**	**0.49**	**71**	*ePg*		**Pg**	**17 15 47.5**	**-0.6**
PLE				*eSg*		**Sg**	**17 15 55.4**	**+0.8**
TREB	**Trebinje**	**0.54**	**213**	*ePg*		**Pg**	**17 15 48.7**	**-0.3**
TREB				*eSg*		**Sg**	**17 15 55.9**	**-0.3**
TREB	**Trebinje**	**0.54**	**213**	*ePg*		**Pg**	**17 15 48.1**	**-0.9**
TREB				*eSg*		**Sb**	**17 15 57.5**	**-0.4**
RUDO	**Rudo**	**0.63**	**45**	⇑*iPg*		**Pg**	**17 15 49.5**	**-1.2**
RUDO				*eSg*		**Sg**	**17 15 58.4**	**-0.7**
CEME	**Cevo**	**0.64**	**169**	*ePg*		**Pg**	**17 15 49.8**	**-1.1**
CEME				*eSg*		**Sg**	**17 15 59.9**	**+0.6**
KOME	**Kolasin**	**0.65**	**120**	*ePg*		**Pg**	**17 15 50.3**	**-0.7**
KOME				*eSg*		**Sb**	**17 16 00.8**	**-0.2**
DBRK	**Dubrovnik**	**0.67**	**221**	*ePg*		**Pg**	**17 15 50.5**	**-1.0**
DBRK				*Sg*		**Sb**	**17 16 02.0**	**+0.5**
HCY	**Herceg Novi**	**0.75**	**195**	*ePg*		**Pg**	**17 15 52.1**	**-0.8**
HCY				*eSg*		**Sb**	**17 16 03.6**	**-0.3**
HCY	**Herceg Novi**	**0.75**	**195**	*ePg*		**Pg**	**17 15 51.9**	**-1.0**
HCY				*eSg*		**Sb**	**17 16 03.9**	**0.0**
STON	**Ston**	**0.83**	**249**	*ePg*		**Pg**	**17 15 52.7**	**-1.7**
STON				*Sg*		**Sb**	**17 16 06.3**	**+0.3**
STON	**Ston**	**0.83**	**249**	*ePg*		**Pg**	**17 15 52.5**	**-1.9**
STON				*eSg*		**Sg**	**17 16 04.8**	**-0.4**
STON	**Ston**	**0.83**	**249**	*ePg*		**Pg**	**17 15 53.0**	**-1.4**
STON				*eSg*		**Sg**	**17 16 05.6**	**+0.4**
PDG	**Podgorica**	**0.83**	**153**	*ePg*		**Pg**	**17 15 52.8**	**-1.7**
PDG				*eSg*		**Sg**	**17 16 05.5**	**+0.1**
PDG	**Podgorica**	**0.83**	**153**	⇑*iP*		**Pg**	**17 15 53.0**	**-1.5**
PDG				⇑*S*		**Sg**	**17 16 04.9**	**-0.4**
PDG	**Podgorica**	**0.83**	**153**	⇑*iPg*		**Pg**	**17 15 53.0**	**-1.5**
PDG				*eSg*		**Sg**	**17 16 05.4**	**+0.1**
TTG	**Podgorica**	**0.83**	**153**	*ePg*		**Pg**	**17 15 52.9**	**-1.6**
TTG				*eSg*		**Sb**	**17 16 05.9**	**-0.3**
BBLS	**Lazići**	**0.84**	**34**	*ePg*		**Pg**	**17 15 54.4**	**-0.3**
BBLS				*eSg*		**Sg**	**17 16 04.4**	**-1.2**
BBLS	**Lazići**	**0.84**	**34**⇑*iPg*			**Pg**	**17 15 53.5**	**-1.2**
BBLS				*eSg*		**Sg**	**17 16 05.0**	**-0.6**
BUM	**Brajici-Budva**	**0.88**	**173**	*ePg*		**Pg**	**17 15 54.6**	**-0.8**
BUM				*eSg*		**Sb**	**17 16 08.3**	**+0.7**
IVA	**Berane**	**0.89**	**109**	*ePg*		**Pg**	**17 15 54.9**	**-0.7**
IVA				*eSg*		**Sb**	**17 16 09.0**	**+1.0**
SJES	**Sjenica**	**0.90**	**84**	*ePg*		**Pg**	**17 15 55.9**	**+0.1**
SJES				*eSg*		**Sb**	**17 16 08.1**	**-0.2**
HAPS	**Han Pijesak,Bl**	**0.92**	**9**	*ePg*		**Pg**	**17 15 55.0**	**-1.3**
HAPS				*eSg*		**Sg**	**17 16 06.4**	**-1.9**
HAPS	**Han Pijesak,Bl**	**0.92**	**9**⇓	*iPg*		**Pg**	**17 15 54.3**	**-2.0**
HAPS				*eSg*		**Sg**	**17 16 07.9**	**-0.4**
DRME	**Dracevica, Mon**	**1.04**	**162**⇓	*iPg*		**Pg**	**17 15 57.0**	**-1.4**
DRME				*eSg*		**Sg**	**17 16 12.0**	**+0.1**
DRME	**Dracevica, Mon**	**1.04**	**162**	*ePg*		**Pg**	**17 15 57.6**	**-0.8**
DRME				*eSg*		**Sn**	**17 16 14.0**	**+0.4**
PVY	**Plav**	**1.06**	**123**	*ePg*		**Pg**	**17 15 58.1**	**-0.8**
PVY				*eSg*		**Sn**	**17 16 15.2**	**+0.9**
IVAS	**Ivanjica**	**1.10**	**68**	*ePn*		**Pn**	**17 16 00.8**	**+0.9**
IVAS				*eSn*		**Sg**	**17 16 13.7**	**-0.2**
ULC	**Ulcinj**	**1.26**	**163**	*ePg*		**Pn**	**17 16 01.8**	**-0.4**
ULC				*eSg*		**Sn**	**17 16 21.7**	**+2.5**
MAKA	**Makarska**	**1.27**	**276**	*ePg*		**Pn**	**17 16 01.6**	**-0.6**
MAKA				*Sg*		**Sn**	**17 16 21.0**	**+1.8**
DIVS	**Divibare**	**1.29**	**44**	*ePn*		**Pn**	**17 16 02.6**	**0.0**
DIVS	**Divibare**	**1.29**	**44**	*ePg*		**Pn**	**17 16 01.7**	**-0.9**
DIVS				*eSg*		**Sg**	**17 16 19.9**	**-0.1**
TEKS	**Tekeris**	**1.48**	**22**	*ePn*		**Pg**	**17 16 07.2**	**+0.2**
TEKS				*eSg*		**Sb**	**17 16 25.1**	**0.0**
TEKS	**Tekeris**	**1.48**	**22**	*ePg*		**Pn**	**17 16 05.2**	**0.0**
TEKS				*eSg*		**Sg**	**17 16 26.1**	**-0.1**
TRUS	**Trudelj**	**1.59**	**48**	*ePn*		**Pb**	**17 16 08.4**	**+0.4**
TRUS				*eSn*		**Sg**	**17 16 30.5**	**+0.8**
GRUS	**Gruza**	**1.60**	**63**	*ePn*		**Pn**	**17 16 07.4**	**+0.7**
GRUS				*eSn*		**Sg**	**17 16 29.2**	**-0.6**
DOB	**Doboj**	**1.63**	**343**	*ePn*		**Pb**	**17 16 08.3**	**-0.2**
HVAR	**Hvar**	**1.68**	**271**	*ePn*		**Pb**	**17 16 09.5**	**0.0**
HVAR				*Sn*		**Sg**	**17 16 34.1**	**+1.6**
MGRS	**Mrkonjic Grad**	**1.73**	**316**	*ePn*		**Pn**	**17 16 09.3**	**+0.7**
MGRS				*eSn*		**Sb**	**17 16 32.0**	**-0.1**
SELS	**Selova**	**1.73**	**88**	*ePn*		**Pn**	**17 16 09.2**	**+0.6**
SELS				*eSn*		**Sg**	**17 16 33.8**	**-0.4**
KIJV	**Kijevo**	**1.90**	**297**	*ePn*		**Pb**	**17 16 14.0**	**+0.9**
KIJV				*Sg*		**Sg**	**17 16 42.5**	**+3.2**
BLY	**Banja Luka**	**1.94**	**325**	*ePn*		**Pn**	**17 16 12.5**	**+1.0**
BLY				*eSn*		**Sn**	**17 16 36.9**	**+1.1**
BLY	**Banja Luka**	**1.94**	**325**	⇓*P*		**Pn**	**17 16 11.8**	**+0.4**
BLY	**Banja Luka**	**1.94**	**325**	⇑*S*		**Sn**	**17 16 35.4**	**-0.4**
BLY	**Banja Luka**	**1.94**	**325**	⇑*iPn*		**Pn**	**17 16 12.4**	**+1.0**
BLY				*eSn*		**Sn**	**17 16 36.3**	**+0.5**
TIR	**Tirane**	**2.00**	**155**	⇑*P*		**Pg**	**17 16 16.4**	**-0.5**
TIR	**Tirane**	**2.00**	**155**	⇑*S*		**Sb**	**17 16 39.6**	**-0.3**
FRGS	**Fruska Gora**	**2.12**	**21**	*ePn*		**Pn**	**17 16 14.7**	**+0.7**
FRGS	**Fruska Gora**	**2.12**	**21**	*eSn*		**Sn**	**17 16 41.3**	**+0.9**
BOVS	**Bovan**	**2.20**	**77**	*ePn*		**Pn**	**17 16 15.7**	**+0.7**
BARS	**Barje**	**2.28**	**98**	*ePn*		**Pn**	**17 16 17.2**	**+1.1**
BARS				*eSn*		**Sn**	**17 16 45.1**	**+0.9**
ZIRJ	**Zirje**	**2.31**	**283**	*ePn*		**Pb**	**17 16 19.6**	**-0.6**
ZIRJ				*Sn*		**Sb**	**17 16 50.7**	**+1.8**
MORI	**Morici**	**2.32**	**288**	*ePn*		**Pb**	**17 16 19.7**	**-0.6**
MORI				*Sn*		**Sb**	**17 16

0.5nm,0.2s
DAVA *i* Sn **Sn** 17 18 56.4 +3.6
1.0nm,0.2s
MBDF **Montbardon** 8.78 284 *e*P **Pn** 17 17 48.9 +3.4
MBDF *e*Sn **Sn** 17 19 17.1 -7.5
FRF **La Foret Royal** 8.83 277 *e*P **Pn** 17 17 48.6 +2.6
FRF *e*Sn **Sn** 17 19 18.1 -7.4
LPG **La Plagne** 8.91 289 *e*P **Pn** 17 17 49.7 +2.3
LPG *e*Sn **Sn** 17 19 20.4 -7.5
2.8nm,0.4s
LPL **La Plagne** 8.93 289 *e*Sn **Sn** 17 19 20.8 -7.4
3.0nm,0.4s
LMR **La Mourre** 8.94 275 *e*P **Pn** 17 17 51.1 +3.6
ORIF **Oris-en-Rattie** 9.43 285 *e*P **Pn** 17 17 58.1 +3.7
ORIF *e*Sn **Sn** 17 19 32.7 -7.8
16nm,0.9s

MAN 05 17:20:21.2, 8°48N×122°53E, h22km, mb4.5, ML3.4, MS3.2, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	**1.05**	**127**	*e*P	Pn	17 20 38.9	-1.7
PAGZ				*e*S	Sb	17 20 52.2	-1.9
CTBH	**Cotabato--PC H**	**2.11**	**126**	⇑*i*P	Pb	17 20 57.2	-1.6
GUIM	**Jordan**	**2.13**	**2**	*e*P	Pn	17 20 56.1	+0.6
GUIM				*e*S	Sn	17 21 22.1	+0.8
LLP	**Lapu-Lapu**	**2.31**	**38**	⇑*e*P	Pn	17 20 58.7	+0.8
LLP				*e*S	Sn	17 21 26.7	+1.1
BUKP	**Musuan**	**2.58**	**103**	*e*P	Pb	17 21 05.7	-1.0
BUKP				*e*S	Sn	17 21 29.2	-3.1
CUYO	**Cuyo Island**	**2.79**	**328**	*e*S	Sn	17 21 37.1	-0.4
SKMP	**Bagumbayan, Su**	**2.79**	**134**	*e*P	Pn	17 21 04.4	-0.1
SKMP				*e*S	Sn	17 21 30.6	-6.9
MSLP	**Maasin**	**2.82**	**54**	*e*P	Pn	17 21 06.5	+1.5
MSLP				*e*S	Sn	17 21 39.4	+1.0
ENPP	**El Nido**	**4.09**	**312**	*e*P	Pn	17 21 22.0	-0.4
ENPP	**El Nido**	**4.09**	**312**	*e*S	Pn	17 21 23.8	+1.4

NIED ***05*** *17:21:00, 36°70N×140°50E, h77km, Mw3.8 Best double couple: M0≤5.12000×10^14 NP1:φs187.00000°, δ76.00000°, λ138.00000°. NP2:φs289.00000°, δ49.00000°, λ18.00000°.*
NEIC ***05*** *17:21:13.9±2.2, 36°75N±0°.06×140°.7E±0°.1, h85km±9km, mb4.1/8, Error ellipse: s-maj=13.0km s-min=7.6km az=121.0*
IDC ***05*** *17:21:14.7±2.6, 36°.78N×140°.59E, h82km±20km, mb3.4/7, mb1 3.5/10, mb1mx3.3/51, mbtmp3.8/10, MS2.4/1, Ms1 2.4/1, ms1mx2.1/26, Error ellipse: s-maj=23.1km s-min=17.5km az=91.0*
JMA ***05*** *17:21:15.5, 36°.70N×140°.45E, h76km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs284.00000°, δ44.00000°, λ16.00000°. NP2: φs182.00000°, δ79.00000°, λ133.00000°. Principal axes: T Plg40.0000°, Azm131.0000°; N Plg42.0000°, Azm352.0000°; P Plg22.0000°, Azm241.0000°;*
JMA Felt II J1.

ISC 05 17:21:13.8±0.7, 36°.71N±0°.04×140°.59E±0°.05, h89km±6km, n48, σ1s70/55, mb3.8/10, 6C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.10**	**190**	⇓P	**Pn**	**17 21 26.5**	**+0.1**
JHO				S	**Sn**	**17 21 34.4**	**-1.2**
JHYU	**Hitachinakayam**	**0.37**	**180**	⇓P	**Pn**	**17 21 27.9**	**+0.5**
JHYU				S	**Sn**	**17 21 37.2**	**-0.3**
JFK	**Kawauchi**	**0.69**	**19**	⇓P	**Pn**	**17 21 31.2**	**+1.0**
JFK				S	**Sn**	**17 21 42.8**	**+0.4**
JFT	**Otama**	**0.83**	**346**	⇑P	**Pn**	**17 21 32.3**	**+0.7**
JFT				S	**Sn**	**17 21 44.9**	**+0.1**
JAG	**Ashikaga**	**0.96**	**253**	⇑P	**Pn**	**17 21 32.7**	**-0.2**
JAG				S	**Sn**	**17 21 45.0**	**-2.2**
JFY	**Yanaizu**	**0.99**	**315**	⇑P	**Pn**	**17 21 33.5**	**+0.2**
JKT	**Katashina**	**1.08**	**273**	⇑P	**Pn**	**17 21 34.4**	**0.0**
JKT				*e*S	**Sn**	**17 21 48.2**	**-1.7**
JMM	**Marumori**	**1.17**	**8**	⇓P	**Pn**	**17 21 36.5**	**+1.2**
JMM				S	**Sn**	**17 21 51.8**	**+0.3**
JHK	**Hiroka**	**1.37**	**294**	⇑P	**Pn**	**17 21 37.9**	**+0.1**
JHK				*e*S	**Sn**	**17 21 54.8**	**-1.2**
JNS	**Sasagawa**	**1.50**	**318**	⇑P	**Pn**	**17 21 39.8**	**+0.3**
JNS				*e*S	**Sn**	**17 21 58.1**	**-0.8**
JRY	**Ryogami san**	**1.53**	**244**	⇓P	**Pn**	**17 21 39.9**	**0.0**
JRY				S	**Sn**	**17 21 57.7**	**-1.9**
JYS	**Shirataka**	**1.56**	**345**	P	**Pn**	**17 21 41.7**	**+1.4**
JYS				*e*S	**Sn**	**17 22 00.7**	**+0.3**
MJAR	**Matsushiro Arr**	**1.92**	**266**	P	**Pn**	**17 21 45.4**	**+0.5**
	6.3nm,0.3s,baz=90,slow=24,SNR=582						
MJAR				S	**Sn**	**17 22 08.8**	**+0.2**
	8.9nm,0.3s,baz=92,slow=28,SNR=18						
MJAR	**Matsushiro Arr**	**1.92**	**266**		**Pn**	**17 21 44.7**	**-0.3**
MJAR					**Sn**	**17 22 02.7**	**-6.0**
MAJO	**Matsushiro**	**1.92**	**266**		**Pn**	**17 21 45.8**	**+0.9**
MAT	**Matsushiro**	**1.92**	**266**	P	**Pn**	**17 21 45.6**	**+0.6**
MAT				S	**Sn**	**17 22 07.3**	**-1.4**
MJB9	**Matsu-Tunnel**	**1.93**	**266**		**Pn**	**17 21 45.7**	**+0.7**
INU	**Inuyama**	**3.20**	**246**		**Pn**	**17 22 03.4**	**+1.4**
JHJ2	**Mitsune**	**3.65**	**190**	Pn	**Pn**	**17 22 08.9**	**+0.9**
ERM	**Erimo**	**5.66**	**20**	Pn	**Pn**	**17 22 35.0**	**-0.3**
ASAJ	**Asahikawa**	**7.55**	**11**	P	**Pn**	**17 23 00.7**	**-0.5**
	0.9nm,0.3s,baz=209,slow=15,SNR=10						
ASAJ				S	**Sn**	**17 24 20.5**	**-4.6**
	0.4nm,0.3s,baz=311,slow=11,SNR=2.2						
JKA	**Kamikawa-asahi**	**7.55**	**11**		**Pn**	**17 23 00.7**	**-0.5**
JKA					**Sn**	**17 24 20.5**	**-4.6**
JNU	**Nakatsue**	**8.74**	**249**	P	**Pn**	**17 23 19.7**	**+2.3**
	0.4nm,0.3s,baz=100,slow=1.5,SNR=4.6						
JNU	**Nakatsue**	**8.74**	**249**		**Pn**	**17 23 19.9**	**+2.5**
JCJ	**Chichijima**	**9.68**	**172**	P	**Pn**	**17 23 27.6**	**-2.6**
	8.4nm,0.3s,baz=286,slow=22,SNR=8.2						
JCJ				S	Sn	17 25 07.4	-10
	5.4nm,0.3s,baz=253,slow=20,SNR=4.0						
KSRS	**Korea Array**	**10.15**	**278**	P	**Pn**	**17 23 38.3**	**+1.7**
	0.1nm,0.3s,baz=91,slow=15,SNR=4.2						
KSRS				LR	LR	17 27 14.2	
	comp=Z,20nm,21.4s,baz=300,slow=35						
TPUB	**Ta-pu**	**21.79**	**238**	P	**P**	**17 25 57.0**	**-1.6**
TPUB				IAmb	IAmb	17 26 04.8	
	comp=Z,14nm,1.1s						
SONM	**Songino Array**	**27.42**	**305**	P	**P**	**17 26 51.6**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=102,slow=10,SNR=5.0						
SONM	**Songino Array**	**27.42**	**305**	IAmb	IAmb	17 26 55.2	
	comp=Z,2.1nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**28.56**	**119**	T	T	17 57 10.6	
	baz=313,slow=75,SNR=28						
H11N1	**WAKE ISLAND Hy**	**28.57**	**119**	T	T	17 57 11.1	
	baz=313,slow=75,SNR=30						
H11N3	**WAKE ISLAND Hy**	**28.58**	**119**	T	T	17 57 11.9	
	baz=313,slow=75,SNR=28						
H11S1	**WAKE ISLAND Hy**	**29.25**	**121**	T	T	17 58 05.2	
	baz=314,slow=75,SNR=69						
H11S3	**WAKE ISLAND Hy**	**29.25**	**121**	T	T	17 58 03.2	
	baz=314,slow=75,SNR=42						
H11S2	**WAKE ISLAND Hy**	**29.26**	**121**	T	T	17 58 05.5	
	baz=314,slow=75,SNR=36						
CMAR	**Chiang Mai Arr**	**40.78**	**255**	P	**P**	**17 28 48.0**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=68,slow=5.9,SNR=4.4						
ZAA0	**Zalesovo Array**	**41.65**	**313**	P	**P**	**17 28 52.1**	**-1.1**
ZAA0				IAmb	IAmb	17 28 54.9	
	comp=Z,3.8nm,1.2s						
ZALV	**Zalesovo Beam**	**41.65**	**313**	P	**P**	**17 28 54.6**	**+1.5**
	comp=Z,1.6nm,0.4s,baz=99,slow=7.0,SNR=10						
ZALV	**Zalesovo Beam**	**41.65**	**313**	P	**P**	**17 28 53.5**	**+0.3**
MKAR	**Makanchi Array**	**43.73**	**302**	P	**P**	**17 29 11.1**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=87,slow=10,SNR=6.8						
MAKZ	**Makanchi**	**43.94**	**302**	P	**P**	**17 29 12.8**	**+0.9**
KURK	**Kurchatov**	**45.61**	**308**	P	**P**	**17 29 24.6**	**-0.4**
KURK				IAmb	IAmb	17 29 27.0	
	comp=Z,2.0nm,0.8s						
SVW2	**Sparrevohn**	**46.18**	**37**	P	**P**	**17 29 28.4**	**-0.9**
WRA	**Warramunga Arr**	**56.65**	**187**	P	**P**	**17 30 49.5**	**+1.7**
	comp=Z,1.1nm,0.5s,baz=1.7,slow=7.5,SNR=18						
WRA	**Warramunga Arr**	**56.65**	**187**	IAmb	IAmb	17 30 50.6	
	comp=Z,0.1nm,0.8s						
ASAR	**Alice Springs**	**60.38**	**187**	P	**P**	**17 31 15.9**	**+2.2**
	comp=Z,0.4nm,0.7s,baz=4.7,slow=3.4,SNR=8.0						
AKASG	**Malin Array Be**	**74.15**	**322**	P	**P**	**17 32 41.7**	**+1.3**
	comp=Z,0.4nm,0.5s,baz=46,slow=6.1,SNR=4.2						
AKASG	**Malin Array Be**	**74.15**	**322**	IAmb	IAmb	17 32 41.8	
	comp=Z,1.7nm,1.4s						

IDC 05 17:22:20.3±1.6, 2°.61S×134°.36E, h0km, mb3.3/2, mb1 3.6/6, mb1mx3.4/39, mbtmp3.5/6, ML3.2/4, Error ellipse: s-maj=35.0km s-min=23.2km az=55.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**3.54**	**299**	Pn	Pn	17 23 17.4	+0.8
	7.0nm,0.3s,baz=166,slow=20,SNR=24						
SIJI				Sn	Sn	17 23 59.4	+0.1
	1.8nm,0.3s,baz=96,slow=14,SNR=4.1						
JAY	**Jayapura**	**6.34**	**89**	Pn	Pn	17 23 55.2	+0.1
	0.4nm,0.3s,baz=232,slow=12,SNR=1.5						
WRA	**Warramunga Arr**	**17.23**	**180**	P	Pn	17 26 23.2	+0.7
	0.1nm,0.3s,baz=0.7,slow=12,SNR=6.7						
FITZ	**Fitzroy Crossi**	**17.61**	**208**	P	Pn	17 26 25.3	-1.9
	0.1nm,0.3s,baz=28,slow=17,SNR=0.8						
ASAR	**Alice Springs**	**20.93**	**181**	P	P	17 27 05.2	+0.4
	0.9nm,0.6s,baz=6.6,slow=12,SNR=19						
MKAR	**Makanchi Array**	**67.11**	**324**	P	P	17 33 15.6	-0.1
	0.2nm,0.6s,baz=111,slow=10,SNR=2.8						

NNC ***05*** *17:45:06.2±6.7, 39°.32N×72°.11E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=51.4km s-min=25.1km az=172.0*

KRNET 05 17:45:14.8±0.1, 39°.53N×73°.30E, mb2.1, 9C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.80**	**352**	⇑*i*P	Pn	17 45 47.9	+0.6
	baz=52						
ARSB				⇑*i*S	Sb	17 46 12.0	-0.1
	baz=52						
BTK	**Batken**	**1.98**	**286**	⇓*i*P	Pn	17 45 50.6	+0.9
	baz=86						
BTK				⇓*i*S	Sb	17 46 16.5	-0.5
	baz=86						
ARLS	**Aral**	**2.45**	**18**	⇑*i*P	Pn	17 45 57.0	+0.7
	baz=18						
ARLS				⇑*i*S	Sn	17 46 28.1	+1.1
	baz=18						
ARK	**Arkit**	**2.48**	**336**	⇓*i*P	Pn	17 45 57.4	+0.8
	baz=36						
ARK				⇓*i*S	Sn	17 46 28.5	+0.9
	baz=36						
NRN	**Naryn**	**2.80**	**47**	⇑*i*P	Pn	17 46 01.1	-0.1
	baz=46						
NRN				⇑*e*S	Sn	17 46 36.7	+0.8
	baz=46						
AAK	**Ala-Archa**	**3.23**	**16**	⇑Pg	Pb	17 46 14.6	+1.5
	2.6nm,0.9s						
AAK				⇓Lg	Lg	17 47 04.8	
	2.2nm,0.8s						
TKM2	**Tokmak 2**	**3.80**	**26**	⇑Pg	Pg	17 46 27.2	-0.5
	3.9nm,1.2s						
TKM2				⇓Lg	Lg	17 47 26.3	
	4.7nm,1.2s						
KK31	**Karatay Array**	**4.14**	**330**	⇑Pg	Pn	17 46 20.0	+0.7
	0.3nm,0.5s,baz=161,slow=15						
KK31				⇓Lg	Lg	17 47 11.6	
	0.3nm,0.5s,baz=165,slow=26						

NNC 05 17:56:48.2±2.3, 37°.25N×71°.35E, h196km±26km, mb2.8, mpv3.7, 6C-4D, Error ellipse: s-maj=20.7km s-min=14.7km az=28.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.88**	**354**	⇑P	Pn	17 58 14.1	+0.4
	3.6nm,0.3s,baz=174,slow=12,SNR=280						
KK31				⇓S	Sn	17 59 21.8	+0.4
	3.3nm,0.4s,baz=178,slow=20,SNR=7.0						
AAK	**Ala-Archa**	**5.90**	**23**	⇑P	Pn	17 58 14.3	+0.1
	3.0nm,0.5s						
AAK				⇑S	Sn	17 59 23.4	+1.3
	9.6nm,0.6s						
TKM2	**Tokmak 2**	**6.53**	**29**	⇓P	Pn	17 58 21.9	-0.6
	2.9nm,0.7s						
TKM2				⇑S	Sn	17 59 36.8	-0.3
	4.8nm,0.9s						
AB31	**Akbulak array**	**14.57**	**329**	⇓P	Pn	18 00 04.4	-0.8
	1.0nm,0.5s,baz=142,slow=13,SNR=47						
AB31				⇑S	S	18 02 46.1	-1.3
	0.3nm,0.5s,baz=160,slow=23,SNR=5.5						
AKTO	**Aktyubinsk**	**16.28**	**328**	⇓P	Pn	18 00 26.4	+0.6
	3.2nm,0.9s						
AKTO				⇑S	S	18 03 26.8	+1.3
	3.1nm,1.1s						

AUST ***05*** *18:00:59.8±0.3, 31°.90S×138°.76E, h12km, Error ellipse: s-maj=4.5km s-min=2.9km az=84.0*
IDC ***05*** *18:01:02.5±3.8, 31°.27S×139°.01E, h0km, mb1 3.6/4, mb1mx3.4/24, mbtmp3.4/4, ML3.3/4, Error ellipse: s-maj=88.5km s-min=20.7km az=35.0*

ISC 05 18:00:58.3±0.8, 31°.90S±0°.05×138°.76E±0°.04, h10km, n13, σ2s07/23, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCRK	**Leigh Creek**	**1.52**	**342**	P	**Pg**	**18 01 28.5**	**+1.0**
	baz=1.5,SNR=49						
LCRK				S	**Sg**	**18 01 48.2**	**+1.0**
	baz=1.5						
HTT	**Hallett**	**1.53**	**175**	P	**Pn**	**18 01 27.9**	**+2.2**
	baz=1.5,SNR=45						
HTT				S	**Sn**	**18 01 47.6**	**+1.8**
	baz=1.5						
STKA	**Stephens Creek**	**2.41**	**90**	Pn	**Pb**	**18 01 41.5**	**-0.4**
	2.8nm,0.3s,baz=283,slow=14,SNR=32						
STKA				Sn	**Sb**	**18 02 11.4**	**-0.3**
	6.6nm,0.3s,baz=278,slow=11,SNR=4.6						
BBOO	**Buckleboo**	**2.46**	**248**	P	**Pn**	**18 01 38.9**	**+0.4**
	baz=2.5,SNR=16						
BBOO				S	**Sn**	**18 02 10.0**	**+1.4**
	baz=2.5						
MULG	**Mulgathing**	**4.34**	**291**	P	**Pn**	**18 02 05.1**	**+0.8**
	baz=4.3,SNR=4.8						
MULG				S	**Sn**	**18 02 54.1**	**-1.0**
	baz=4.3						
INKA	**Innaminka**	**4.49**	**23**	P	**Pn**	**18 02 09.6**	**+3.2**
	baz=4.5,SNR=4.7						
INKA				S	**Sn**	**18 02 60.0**	**+1.3**
	baz=4.5						
OOD	**Oodnadatta**	**4.88**	**326**	P	**Pn**	**18 02 14.2**	**+2.4**
	baz=4.9,SNR=7.8						
OOD				S	**Sn**	**18 03 09.6**	**+1.2**
	baz=4.9						
ARPS	**Mount Arapiles**	**5.48**	**153**	P	**Pn**	**18 02 21.7**	**+1.6**
	baz=5.5,SNR=12						
ARPS				S	**Sn**	**18 03 20.2**	**-3.0**
	baz=5.5						
CMSA	**Cobar Meteorol**	**5.92**	**88**	P	**Pn**	**18 02 27.7**	**+1.7**
	baz=5.9						
CMSA				S	**Sn**	**18 03 31.4**	**-2.6**
	baz=5.9						
TOO	**Toolangi**	**7.92**	**137**	P	**Pn**	**18 02 53.7**	**+0.2**
	baz=7.9						
ASAR	**Alice Springs**	**9.26**	**331**	Pn	**Pn**	**18 03 12.2**	**+0.3**
	0.3nm,0.3s,baz=155,slow=12,SNR=34						
ASAR				Sn	**Sn**	**18 04 51.5**	**-4.7**
	0.4nm,0.3s,baz=152,slow=22,SNR=6.6						
WRA	**Warramunga Arr**	**12.55**	**341**	Pn	**Pn**	**18 03 54.7**	**-2.4**
	0.3nm,0.3s,baz=156,slow=15,SNR=8.7						
WRA				Sn	Sn	18 06 05.7	-11
	baz=334,slow=19,SNR=2.8						
FITZ	**Fitzroy Crossi**	**18.15**	**316**	P	**P**	**18 05 12.9**	**+2.1**
	0.1nm,0.3s,baz=151,slow=10,SNR=2.1						
FITZ				S	Sn	18 08 22.9	-10
	0.1nm,0.3s,baz=158,slow=18,SNR=1.7						

IDC ***05*** *18:26:30.5±8.8, 37°.86N×75°.06E, h81km±74km, mb3.3/5, mb1 3.4/7, mb1mx3.1/31, mbtmp3.5/7, ML3.0/2, Error ellipse: s-maj=64.9km s-min=23.5km az=38.0*
NNC ***05*** *18:26:48.3±5.7, 39°.36N×75°.15E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=49.4km s-min=41.4km az=8.0*

ISC 05 18:26:25.1±1.1, 37°.5N±0°.1×75°.0E±0°.2, h35km, n23, σ2s54/22, mb3.5/5, 2C-3D, Tajikistan-Xinjiang border region

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

KZA	**Kyzart**	**4.56**	**2**	P	**Pn**	**18 27 34.9**	**+3.0**
	SNR=12						
AML	**Almayashu**	**4.71**	**348**	P	**Pn**	**18 27 38.0**	**+4.0**
	SNR=17						
UCH	**Uchtor**	**4.72**	**356**	P	**Pn**	**18 27 37.9**	**+3.7**
	SNR=18						
AAK	**Ala-Archa**	**5.12**	**356**	⇑Pn	**Pn**	**18 27 41.9**	**+2.4**
	3.4nm,0.9s						
AAK				⇓Lg	Lg	18 28 32.9	
	11nm,0.8s						
KBK	**Karagaybulak**	**5.13**	**360**	P	Pn	18 27 44.2	+4.6
	SNR=15						
TKM2	**Tokmak 2**	**5.41**	**5**	P	**Pn**	**18 27 47.1**	**+3.6**
	SNR=7.5						
TKM2	**Tokmak 2**	**5.41**	**5**	⇓Pn	**Pn**	**18 27 46.1**	**+2.6**
	5.1nm,0.6s						
TKM2				⇓Lg	Lg	18 28 38.7	
	9.0nm,0.8s						
KK31	**Karatay Array**	**6.54**	**330**	Pn	**Pn**	**18 28 03.2**	**+4.3**
	0.9nm,0.3s,baz=132,slow=11,SNR=37						
KK31				⇑Sn	**Sn**	**18 29 08.5**	**-3.7**
	1.8nm,0.3s,baz=138,slow=23,SNR=11						
MKAR	**Makanchi Array**	**10.73**	**28**	P	**Pn**	**18 28 57.1**	**+0.9**
	0.2nm,0.3s,baz=200,slow=14,SNR=12						
DANN	**Dangsing**	**11.73**	**139**	*e*P	Pn	18 29 19.3	+9.0
	10nm,0.4s						
GKN	**Gorkha**	**12.48**	**137**	*e*P	**P**	**18 29 29.4**	**-2.3**
	6.4nm,0.3s						
KKN	**Kakani**	**13.00**	**135**	*e*P	**P**	**18 29 35.9**	**-1.6**
PKIN	**Phulchoki**	**13.23**	**136**	*e*P	**P**	**18 29 40.6**	**+0.5**
	2.5nm,0.4s						
PKI	**Pulchoki**	**13.24**	**136**	*e*P	**P**	**18 29 40.6**	**+0.3**
GUN	**Gumba**	**13.25**	**133**	*e*P	**P**	**18 29 39.9**	**-0.5**
	3.5nm,0.4s						
JIRN	**Jiri**	**13.62**	**133**	*e*P	**P**	**18 29 43.8**	**-0.7**
	22nm,0.7s						
TAPN	**Taplejung**	**14.75**	**130**	*e*P	**P**	**18 29 58.1**	**+1.0**
	17nm,1.4s						
ZALV	**Zalesovo Beam**	**17.77**	**19**	P	**Pn**	**18 30 26.6**	**-2.9**
	0.2nm,0.3s,baz=212,slow=15,SNR=4.0						
SONM	**Songino Array**	**25.12**	**56**	P	**P**	**18 31 46.2**	**-0.5**
	0.4nm,0.6s,baz=248,slow=7.6,SNR=4.0						
FINES	**FINESS Array B**	**38.47**	**324**	P	**P**	**18 33 42.3**	**-1.0**
	2.1nm,1.0s,baz=106,slow=10,SNR=5.4						
ARCES	**ARCESS Array B**	**41.46**	**336**	P	**P**	**18 34 06.3**	**-1.8**
	2.4nm,1.0s,baz=130,slow=8.4,SNR=3.4						
WRA	**Warramunga Arr**	**79.88**	**125**	P	**P**	**18 38 31.1**	**+0.8**
	0.6nm,1.0s,baz=307,slow=4.0,SNR=2.6						
ASAR	**Alice Springs**	**82.28**	**128**	P	**P**	**18 38 44.1**	**+1.1**
	0.3nm,0.9s,baz=323,slow=5.9,SNR=3.4						

IDC ***05*** *18:36:56.8±0.8, 26°.56S×115°.05W, h0km, mb4.1/7, mb1 4.3/7, mb1mx4.0/35, mbtmp4.1/7, MS3.7/9, Ms1 3.7/9, ms1mx3.5/26, Error ellipse: s-maj=36.7km s-min=23.2km az=60.0*
NEIC ***05*** *18:36:57.5±2.9, 26°.8S±0°.1×115°.1W±0°.1, h10km±1km, mb4.4/3, Error ellipse: s-maj=24.3km s-min=15.4km az=30.0*

ISC 05 18:36:57.5±0.7, 26°.7S±0°.2×115°.19W±0°.10, h10km, n37, σ1s78/18, mb4.1/9, MS3.6/9, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**5.25**	**96**	Pn	**Pn**	**18 38 13.3**	**-2.7**
PTCN	**Pitcairn Islan**	**13.52**	**273**	Pn	**Pn**	**18 40 07.6**	**-1.8**
PPT	**Papeete**	**33.03**	**279**	P	**P**	**18 43 32.1**	**-1.1**
PLCA	**Paso Flores**	**39.28**	**123**	P	**P**	**18 44 27.5**	**+0.9**
	6.3nm,0.8s,baz=307,slow=8.7,SNR=15						
PLCA				LR	LR	18 56 23.6	
	comp=Z,80nm,20.4s,baz=338,slow=30						
PLCA	**Paso Flores**	**39.28**	**123**	IAmb	IAmb	18 44 33.0	
	comp=Z,9.2nm,0.9s						
CFA	**Coronel Fontan**	**41.06**	**108**	LR	LR	18 57 24.8	
	comp=Z,93nm,21.5s,baz=97,slow=30						
LVC	**Limon Verde**	**42.08**	**95**	LR	LR	18 57 36.0	
	comp=Z,67nm,18.8s,baz=272,slow=30						
H06S1	**SOCORRO T**	**45.31**	**6**	T	T	19 33 48.1	
	SNR=16						
SIV	**San Ignacio**	**51.19**	**90**	P	**P**	**18 46 00.7**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=239,slow=8.7,SNR=8.1						
CPUP	**Villa Florida**	**51.38**	**103**	LR	LR	19 03 20.4	
	comp=Z,60nm,20.2s,baz=226,slow=31						
SDV	**Santo Domingo**	**55.83**	**57**	LR	LR	19 05 32.5	
	comp=Z,48nm,20.4s,baz=288,slow=31						
TXAR	**Lajitas Array**	**56.76**	**12**	P	**P**	**18 46 46.1**	**+4.3**
	comp=Z,0.5nm,0.8s,baz=169,slow=5.1,SNR=4.0						
X16A	**Lo Mia Camp, P**	**60.85**	**4**	P	**P**	**18 47 07.9**	**-2.3**
X16A				IAmb	IAmb	18 47 16.4	
	comp=Z,3.7nm,0.7s						
VNDA	**Vanda**	**62.65**	**194**	LR	LR	19 08 47.9	
	comp=Z,95nm,18.6s,baz=288,slow=30						
QSPA	**South Pole Qui**	**63.51**	**180**	P	**P**	**18 47 29.9**	**+2.1**
	comp=Z,4.0nm,0.8s,baz=87,slow=8.8,SNR=2.5						
NVAR	**Mina Array Bea**	**64.81**	**357**	P	**P**	**18 47 38.4**	**+1.8**
	comp=Z,0.6nm,0.8s,baz=195,slow=8.7,SNR=4.4						
SJG	**San Juan**	**65.16**	**52**	LR	LR	19 11 27.9	
	comp=Z,52nm,21.2s,baz=142,slow=32						
TKL	**Tuckaleechee C**	**68.72**	**27**	LR	LR	19 13 20.1	
	comp=Z,93nm,21.9s,baz=122,slow=32						
PDAR	**Pinedale Array**	**69.27**	**4**	P	**P**	**18 48 05.5**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=166,slow=4.2,SNR=3.5						
ULM	**Lac du Bonnet**	**78.46**	**13**	P	**P**	**18 48 58.9**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=178,slow=6.6,SNR=6.2						
ULM	**Lac du Bonnet**	**78.46**	**13**	IAmb	IAmb	18 49 07.3	
	comp=Z,2.4nm,1.1s						
MAW	**Mawson**	**86.02**	**179**	LR	LR	19 23 44.6	
	comp=Z,87nm,18.7s,baz=110,slow=33						
H11S2	**WAKE ISLAND Hy**	**88.03**	**292**	T	T	20 27 53.3	
	baz=119,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**88.05**	**292**	T	T	20 27 50.9

MSL				*e*Sg		**Sn**	**18 42 20.0**	**-1.0**
IHRS	**Heris**	**2.12**	**45**	*e*Pn		**Pg**	**18 42 10.0**	**+0.2**
IHRS				*e*			18 42 43.7	
TVAN	**Van**	**2.17**	**321**	*i* P		**Pb**	**18 42 09.4**	**+0.4**
TVAN				*i* S		**Sn**	**18 42 33.8**	**+0.3**
TVAN				IAML			18 42 45.0	
	comp=N,77nm,0.8s							
ORD	**Ordubad**	**2.19**	**18**	*e*Pn		**Pg**	**18 42 12.5**	**+1.3**
GEVA	**Gevas**	**2.21**	**312**	*i* P		**Pb**	**18 42 09.3**	**-0.3**
VANB	**Van**	**2.23**	**322**	*e*Pn		**Pg**	**18 42 11.8**	**-0.1**
VANB	**Van**	**2.23**	**322**	PN		**Pg**	**18 42 11.5**	**-0.4**
IHSH	**Hashtrud**	**2.24**	**49**	*e*			18 42 09.2	
IHSH				*e*Pn		**Pn**	**18 42 04.1**	**-3.0**
ISRB	**Sarab**	**2.25**	**63**	*e*Pn		**Pg**	**18 42 12.3**	**0.0**
ISRB				*e*			18 42 54.8	
SIRT	**Sirnak**	**2.25**	**288**	*e*Pn		**Pb**	**18 42 11.2**	**+0.9**
SIRT	**Sirnak**	**2.25**	**288**	PN		**Pn**	**18 42 07.1**	**+0.1**
SIRT				SN		**Sn**	**18 42 33.8**	**-1.3**
AKDM	**Akdamar-Van**	**2.27**	**312**	*e*Pn		**Pg**	**18 42 12.0**	**-0.6**
AKDM	**Akdamar-Van**	**2.27**	**312**	PN		**Pb**	**18 42 11.7**	**+1.1**
SIRN	**Sırnak**	**2.27**	**288**	*i* P		**Pn**	**18 42 07.1**	**-0.2**
SIRN				*i* S		**Sn**	**18 42 35.0**	**-0.6**
NAX	**Nakhchivan**	**2.35**	**7**	*e*Pn		**Pg**	**18 42 14.2**	**0.0**
IDHR	**Dehrash**	**2.37**	**154**	*e*Pn		**Pb**	**18 42 11.5**	**-0.8**
IDHR				*e*			18 42 48.8	
VMUR	**Van-Muradiye**	**2.48**	**331**	*i* P		**Pb**	**18 42 14.8**	**+0.6**
CLDR	**Caldiran**	**2.49**	**338**	*e*Pn		**Pg**	**18 42 18.3**	**+1.4**
CLDR	**Caldiran**	**2.49**	**338**	PN		**Pg**	**18 42 18.4**	**+1.5**
CLDR	**Caldiran**	**2.49**	**338**	*i* P		**Pb**	**18 42 14.7**	**+0.2**
MAKU	**Maku**	**2.54**	**352**	*e*Pn		**Pb**	**18 42 15.3**	**+0.1**
SBZ	**Shahbuz**	**2.58**	**7**	*e*Pn		**Pg**	**18 42 17.8**	**-0.7**
IVIS	**Veis**	**2.70**	**148**	*e*Pn		**Pb**	**18 42 16.5**	**-1.4**
IVIS				*e*			18 43 08.9	
IGHG	**Ghaleghazi**	**2.77**	**154**	*e*Pn		**Pb**	**18 42 17.5**	**-1.6**
IGHG				*e*			18 43 08.7	
SRTM	**Siirt_Merkez**	**2.80**	**295**	*i* P		**Pb**	**18 42 20.9**	**+1.2**
GRMI	**Germi**	**2.94**	**47**	*e*Pn		**Pb**	**18 42 22.1**	**0.0**
GURO	**Guroymak-BITLI**	**2.99**	**306**	*e*Pn		**Pb**	**18 42 22.0**	**-1.0**
GURO	**Guroymak-BITLI**	**2.99**	**306**	PN		**Pb**	**18 42 20.9**	**-2.1**
HSRG	**Sareghieh**	**3.01**	**121**	*e*Pn		**Pb**	**18 42 22.1**	**-1.2**
MLAZ	**Malazgirt-MUS**	**3.07**	**319**	*e*Pn		**Pb**	**18 42 24.6**	**+0.3**
MLAZ	**Malazgirt-MUS**	**3.07**	**319**	PN		**Pb**	**18 42 24.1**	**-0.2**
AGRB	**Hanur-Agry**	**3.21**	**329**	*e*Pn		**Pb**	**18 42 28.0**	**+1.3**
AGRB	**Hanur-Agry**	**3.21**	**329**	PN		**Pb**	**18 42 27.6**	**+0.9**
IKOM	**Komasi**	**3.29**	**143**	*e*Pn		**Pb**	**18 42 25.3**	**-2.8**
IKOM				*e*			18 43 27.7	
GNI	**Garni**	**3.32**	**355**	PN		**Pg**	**18 42 33.1**	**+0.3**
SVAN	**Silvan-Diyarba**	**3.39**	**294**	*e*Pn		**Pb**	**18 42 27.2**	**-2.5**
SVAN	**Silvan-Diyarba**	**3.39**	**294**	PN		**Pn**	**18 42 24.0**	**+1.3**
SVAN	**Silvan-Diyarba**	**3.39**	**294**	*i* P		**Pb**	**18 42 29.4**	**-0.3**
SVAN				*i* S		**Sb**	**18 43 12.1**	**+0.9**
MUSM	**Mu-Merkez**	**3.43**	**304**	*i* P		**Pb**	**18 42 30.4**	**0.0**
BHD	**Baghdad**	**3.61**	**190**	*e*Pn		**Pn**	**18 42 27.0**	**+1.3**
BHD				*e*Sn		**Sn**	**18 43 10.0**	**+1.4**
IBDR	**Badra**	**3.78**	**170**	*e*Pn		**Pn**	**18 42 30.0**	**+2.1**
IBDR				AML		AML	18 42 33.6	
	comp=Z,154nm,0.3s							
IBDR				*e*Sn		**Sn**	**18 43 15.0**	**+2.3**

IDC 05 18:42:46.9±3.4, 26°20S×114°60W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/37, mbtmp3.6/2, Error ellipse: s-maj=221.5km s-min=41.6km az=48.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
PLCA	**Paso Flores**	**39.09**	**123**	P		P	18 50 15.8	-0.2
	1.1nm,0.8s,baz=340,slow=14,SNR=3.6							
H11S2	**WAKE ISLAND Hy**	**88.35**	**291**	T		T	20 33 43.4	
	baz=119,slow=75,SNR=5.4							
H11S1	**WAKE ISLAND Hy**	**88.39**	**291**	T		T	20 33 43.3	
	baz=119,slow=75,SNR=7.3							
H11S3	**WAKE ISLAND Hy**	**88.37**	**291**	T		T	20 33 44.5	
	baz=119,slow=75,SNR=3.7							
YKA	**Yellowknife Ar**	**88.38**	**360**	P		P	18 55 40.1	0.0
	0.2nm,0.7s,baz=171,slow=4.9,SNR=5.2							
IDI	**Anoyia**	**144.23**	**65**	PKP		PKPdf	19 02 25.2	0.0
	4.7nm,0.8s,baz=302,slow=6.8							
ZALV	**Zalesovo Beam**	**148.76**	**338**	PKPbc		PKPbc	19 02 35.1	-0.8
	0.9nm,0.6s,baz=34,slow=2.3,SNR=4.9							

*IDC **05** 18:50:41.8±1.2, 32°.80S×178°.19W, h0km, mb4.4/4, mb1 4.6/6, mb1mx4.1/38, mbtmp4.5/6, ML4.6/2, MS3.8/1, Ms1 3.8/1, ms1mx2.8/26, Error ellipse: s-maj=41.7km s-min=26.6km az=145.0*

*NEIC **05** 18:50:42.1±2.6, 32°.71S±0°.06×178°.31W±0°.07, h10km±2km, mb4.6/12, Error ellipse: s-maj=9.9km s-min=7.5km az=47.0*

*WEL **05** 18:50:43.6±0.6, 33°.5S±3°×17°.8W±1°.1, h33km, M4.6/22, mB4.9/6, ML4.9/18, MLv4.8/22, Mw(mB)4.2/6*

ISC 05 18:50:44.5±0.8, 32°.84S±0°.06×178°.0W±0°.1, h34km, n61, σ1s97°/72, mb4.5/10, 2C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**3.57**	**1**	P		**Pn**	**18 51 35.6**	**-1.9**
GLKZ				S		**Sn**	**18 52 13.7**	**-4.8**
RAO	**Raoul Island**	**3.58**	**1**	Pn		**Pn**	**18 51 35.8**	**-1.9**
	103nm,0.3s,baz=255,slow=20,SNR=2.7							
RAO				Sn		**Sn**	**18 52 17.3**	**-1.4**
	169nm,0.3s,baz=89,slow=21,SNR=3.9							
RIZ	**Raoul Island**	**3.59**	**1**	P		**Pn**	**18 51 34.7**	**-3.0**
RIZ				S		**Sn**	**18 52 19.8**	**+0.9**
MXZ	**Matakaoa Point**	**5.59**	**212**	P		**Pn**	**18 52 05.6**	**+0.4**
MXZ				S		**Sn**	**18 53 10.7**	**+2.4**
WMGZ	**Waiomatatini S**	**5.76**	**209**	P		**Pn**	**18 52 08.3**	**+0.7**
WMGZ				S		**Sn**	**18 53 15.9**	**+3.5**
PKGZ	**Pakihiroa**	**5.96**	**211**	P		**Pn**	**18 52 10.0**	**-0.4**
PKGZ				S		**Sn**	**18 53 18.5**	**+1.0**
HAZ	**Te Kaha**	**5.99**	**214**	P		**Pn**	**18 52 11.0**	**+0.3**
HAZ				S		**Sn**	**18 53 20.3**	**+2.3**
PUZ	**Puketiti**	**6.04**	**209**	P		**Pn**	**18 52 10.8**	**-0.6**
PUZ				S		**Sn**	**18 53 17.6**	**-1.8**
RUGZ	**Raukumara Rang**	**6.20**	**213**	P		**Pn**	**18 52 14.5**	**+0.7**
CNGZ	**Carnagh Statio**	**6.41**	**208**	P		**Pn**	**18 52 16.2**	**-0.3**
TKGZ	**Te Karaka**	**6.52**	**210**	P		**Pn**	**18 52 19.9**	**+1.8**
TKGZ				S		**Sn**	**18 53 29.2**	**-2.0**
MWZ	**Matawai**	**6.57**	**212**	P		**Pn**	**18 52 19.3**	**+0.5**
MWZ				S		**Sn**	**18 53 29.5**	**-3.0**
URZ	**Urewera**	**6.71**	**215**	Pn		**Pn**	**18 52 20.2**	**-0.4**
	6.5nm,0.3s,baz=57,slow=5.5,SNR=28							
URZ				Sn		**Sn**	**18 53 35.2**	**-0.6**
	9.9nm,0.3s,baz=118,slow=23,SNR=8.1							
URZ	**Urewera**	**6.71**	**215**	P		**Pn**	**18 52 20.4**	**-0.1**
URZ				S		**Sn**	**18 53 36.7**	**+1.0**
URZ	**Urewera**	**6.71**	**215**			**Pn**	**18 52 20.8**	**+0.3**
RIGZ	**Rimuhau**	**6.78**	**209**	P		**Pn**	**18 52 23.3**	**+1.6**
SNGZ	**Shannon Statio**	**7.02**	**211**	P		**Pn**	**18 52 26.6**	**+1.6**
RTZ	**Ruatahuna**	**7.05**	**214**	P		**Pn**	**18 52 26.5**	**+1.1**
RAHZ	**Arahi**	**7.25**	**212**	P		**Pn**	**18 52 29.8**	**+1.7**
MTHZ	**Maungataniwha**	**7.31**	**213**	P		**Pn**	**18 52 31.0**	**+2.2**
WHHZ	**Waihua**	**7.32**	**210**	P		**Pn**	**18 52 31.7**	**+2.8**
OUZ	**Omahuta**	**7.36**	**249**	P		Pn	18 52 34.4	+4.9
OUZ	**Omahuta**	**7.36**	**249**			**Pn**	**18 52 33.4**	**+3.9**
ARHZ	**Aropaoanui**	**7.57**	**211**	P		**Pn**	**18 52 33.0**	**+0.5**
CKHZ	**Cape Kidnapper**	**7.87**	**209**	P		**Pn**	**18 52 36.6**	**+0.1**
KRHZ	**Kereru**	**8.16**	**212**	P		**Pn**	**18 52 40.7**	**+0.1**
BHHZ	**Black Hill Sta**	**8.18**	**214**	P		**Pn**	**18 52 42.9**	**+2.0**
MOVZ	**Moawhango**	**8.26**	**216**	P		**Pn**	**18 52 42.9**	**+0.9**
PNHZ	**Pukenui**	**8.46**	**212**	P		**Pn**	**18 52 45.1**	**+0.5**
MRZ	**Mangatainoka R**	**9.34**	**212**	P		**Pn**	**18 52 56.0**	**-0.8**
MRZ				S		**Sn**	**18 54 33.9**	**-6.6**
RPZ	**Rata Peaks**	**13.82**	**215**	Pn		**Pn**	**18 53 54.4**	**-3.6**
	0.4nm,0.3s,baz=347,slow=18,SNR=2.0							
RPZ				Sn		Sn	18 56 16.5	-14
	0.5nm,0.3s,baz=49,slow=11,SNR=3.1							
DZM	**Mont Dzumac**	**17.45**	**304**	LR		LR	19 00 09.3	
	comp=Z,326nm,18.9s,baz=197,slow=33							
RAR	**Rarotonga**	**19.92**	**59**	P		**Pn**	**18 55 15.8**	**+0.6**
ARMA	**Armidale**	**25.92**	**267**	P		**P**	**18 56 12.7**	**-1.0**
ARMA				IAmb		IAmb	18 56 25.5	
	comp=Z,7.5nm,1.4s							
CAN	**Canberra**	**27.36**	**256**	P		**P**	**18 56 24.4**	**-2.2**
CAN				IAmb		IAmb	18 56 43.5	
	comp=Z,11nm,1.3s							
STKA	**Stephens Creek**	**33.99**	**260**	P		**P**	**18 57 22.3**	**-2.8**
CTA	**Charters Tower**	**34.25**	**283**	P		**P**	**18 57 29.4**	**+2.0**
	comp=Z,4.9nm,0.6s,baz=119,slow=10.0,SNR=11							
BBOO	**Buckleboo**	**38.35**	**257**	P		**P**	**18 58 00.5**	**-1.9**
BBOO				IAmb		IAmb	18 58 11.4	
	comp=Z,28nm,1.3s							
BBOO				PcP		**PcP**	**19 00 14.8**	**-0.8**
COEN	**Coen**	**39.98**	**289**	P		**P**	**18 58 14.0**	**-2.2**
COEN				IAmb		IAmb	18 58 17.6	
	comp=Z,16nm,1.4s							
AS31	**Alice Springs**	**43.02**	**270**	P		**P**	**18 58 40.2**	**-0.8**
ASAR	**Alice Springs**	**43.02**	**270**	P		**P**	**18 58 41.9**	**+0.9**
	comp=Z,2.9nm,0.6s,baz=107,slow=7.3,SNR=87							
ASAR				PcP		**PcP**	**19 00 30.6**	**-0.3**
	comp=Z,1.0nm,1.1s,baz=116,slow=5.3,SNR=2.5							
ASAR	**Alice Springs**	**43.02**	**270**	P		**P**	**18 58 41.0**	**0.0**
WR0	**Warramunga Arr**	**44.05**	**275**	P		**P**	**18 58 48.3**	**-1.1**
WR0				IAmb		IAmb	18 58 51.6	
	comp=Z,5.4nm,0.8s							
WRAB	**Tennant Creek**	**44.22**	**275**	P		**P**	**18 58 50.2**	**-0.5**
WRA	**Warramunga Arr**	**44.23**	**275**	P		**P**	**18 58 51.4**	**+0.6**
	comp=Z,3.9nm,0.5s,baz=114,slow=7.6,SNR=49							
WRA	**Warramunga Arr**	**44.23**	**275**	P		**P**	**18 58 51.0**	**+0.2**
FORT	**Forrest**	**45.46**	**257**	P		**P**	**18 58 59.8**	**-0.6**
FORT				IAmb		IAmb	18 59 01.1	
	comp=Z,14nm,0.8s							
FITZ	**Fitzroy Crossi**	**52.38**	**272**	P		**P**	**18 59 54.4**	**+0.8**
	comp=Z,3.3nm,0.9s,baz=121,slow=9.3,SNR=5.2							
FITZ	**Fitzroy Crossi**	**52.38**	**272**	P			**18 59 51.4**	**-2.2**
FITZ				IAmb		IAmb	19 00 09.2	
	comp=Z,20nm,1.4s							
SYO	**Syowa Base**	**74.74**	**193**	*e*P		P	19 02 28.2	+7.7
SYO	**Syowa Base**	**74.74**	**193**	*e*PcP		**PcP**	**19 02 34.8**	**+0.3**
MKAR	**Makanchi Array**	**119.31**	**309**	PKP		**PKiKP**	**19 09 32.1**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=206,slow=1.9,SNR=5.2							
KURBB	**Kurchatov Arra**	**122.74**	**313**	PKP		**PKiKP**	**19 09 38.7**	**+2.2**
	comp=Z,0.6nm,0.4s,baz=116,slow=2.0,SNR=12							
ARCES	**ARCESS Array B**	**140.97**	**347**	PKhKP		PKPpre	19 10 08.5	
	comp=Z,2.4nm,0.9s,baz=20,slow=4.0,SNR=3.7							
FINES	**FINESS Array B**	**147.42**	**339**	PKPbc		**PKiKP**	**19 10 26.7**	**+0.5**
	comp=Z,6.7nm,0.7s,baz=47,slow=4.0,SNR=68							
NB2	**NORSAR Subarra**	**151.16**	**351**	PKP		**PKiKP**	**19 10 36.3**	**+2.3**
	comp=Z,1.0nm,0.6s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**151.16**	**351**	PKPbc		**PKiKP**	**19 10 36.0**	**+2.0**
	comp=Z,1.1nm,0.6s,baz=13,slow=4.1,SNR=5.8							
EIL	**Elat**	**151.71**	**272**	PKPbc		**PKiKP**	**19 10 37.8**	**+1.7**
	comp=Z,3.7nm,0.8s,baz=266,slow=15,SNR=4.0							
MMAI	**Mount Meron Ar**	**152.01**	**280**	PKPbc		**PKiKP**	**19 10 39.8**	**+3.1**
	comp=Z,2.9nm,0.6s,baz=92,slow=5.2,SNR=4.3							
AKASG	**Malin Array Be**	**153.19**	**320**	PKPbc		**PKiKP**	**19 10 40.7**	**+2.3**
	comp=Z,0.6nm,0.4s,baz=44,slow=2.9,SNR=7.5							
BRTR	**Keskin Array B**	**153.67**	**294**	PKPbc		**PKiKP**	**19 10 42.5**	**+2.4**
	comp=Z,1.2nm,0.6s,baz=151,slow=4.5,SNR=9.7							

*NEIC **05** 19:01:06.8±2.8, 7°.71S±0°.05×127°.53E±0°.07, h181km±7km, mb4.1/7, Error ellipse: s-maj=10.2km s-min=6.4km az=120.0*

*IDC **05** 19:01:07.9±1.4, 7°.58S×127°.32E, h184km±14km, mb3.6/6, mb1 3.8/11, mb1mx3.5/49, mbtmp4.3/11, Error ellipse: s-maj=16.7km s-min=14.5km az=149.0*

ISC 05 19:01:07.1±0.5, 7°.85S±0°.05×127°.56E±0°.06, h200km, n45, σ2s25°/50, mb3.9/11, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**3.70**	**92**	Pn		**Pn**	**19 02 06.0**	**+0.8**
SOEI	**Soe**	**3.77**	**240**			**Pn**	**19 02 05.9**	**-0.2**
BATI	**Baumata**	**4.51**	**238**	P		**Pn**	**19 02 15.9**	**+0.6**
	63nm,0.3s,baz=115,slow=1.7,SNR=66							
BATI				S		**Sn**	**19 03 07.5**	**-1.4**
	45nm,0.3s,baz=118,slow=4.4,SNR=11							
MMRI	**Maumere**	**5.33**	**261**			**Pn**	**19 02 25.5**	**-0.2**
MTN	**Manton Dam**	**6.08**	**145**			**Pn**	**19 02 36.7**	**+1.3**
FAKI	**Fak Fak**	**6.76**	**44**	Pn		**Pn**	**19 02 41.0**	**-3.4**
SIJI	**Sorong**	**7.86**	**28**	P		**Pn**	**19 02 56.1**	**-2.5**
	3.2nm,0.3s,baz=68,slow=3.7,SNR=30							
SIJI				S		**Sn**	**19 04 21.6**	**-5.6**
	1.3nm,0.3s,baz=278,slow=23,SNR=5.6							
KNRA	**Kununurra**	**7.87**	**172**			**Pn**	**19 02 59.5**	**+0.9**
FITZ	**Fitzroy Crossi**	**10.36**	**190**	P		**Pn**	**19 03 30.7**	**-0.2**
	2.6nm,0.3s,baz=14,slow=11,SNR=59							
FITZ				S		**Sn**	**19 05 21.2**	**-5.5**
	4.1nm,0.3s,baz=140,slow=20,SNR=7.0							
FITZ	**Fitzroy Crossi**	**10.36**	**190**			**Pn**	**19 03 30.6**	**-0.3**
FITZ						**Sn**	**19 05 23.5**	**-3.2**
WRAB	**Tennant Creek**	**13.69**	**152**	Pn		**Pn**	**19 04 11.1**	**-2.2**
WRA	**Warramunga Arr**	**13.70**	**152**	P		**Pn**	**19 04 13.4**	**+0.1**
	1.0nm,0.3s,baz=325,slow=12,SNR=32							
WRA				S		**S**	**19 06 40.6**	**-5.4**
	3.2nm,0.3s,baz=319,slow=27,SNR=9.9							
WRA	**Warramunga Arr**	**13.70**	**152**			**P**	**19 04 14.4**	**-1.2**
JAY	**Jayapura**	**14.12**	**69**	P		**P**	**19 04 23.1**	**+2.8**
	0.5nm,0.3s,baz=234,slow=8.7,SNR=3.7							
PSA00	**Pilbara Seismi**	**15.54**	**208**	P		**Pn**	**19 04 39.2**	**+3.3**
COEN	**Coen**	**16.48**	**113**	Pn		**Pn**	**19 04 50.0**	**+2.6**
COEN				IAmb		IAmb	19 05 00.4	
	comp=Z,20nm,1.4s							
AS31	**Alice Springs**	**16.86**	**160**	Pn		**Pn**	**19 04 55.1**	**+3.3**
AS31				IAmb		IAmb	19 04 58.0	
	comp=Z,3.4nm,0.7s							
ASAR	**Alice Springs**	**16.86**	**160**	P		**Pn**	**19 04 54.9**	**+3.0**
	comp=Z,1.2nm,0.3s,baz=339,slow=12,SNR=95							
ASAR				S		**S**	**19 07 57.9**	**+1.5**
	comp=Z,1.0nm,0.3s,baz=316,slow=17,SNR=7.9							
ASAR	**Alice Springs**	**16.86**	**160**			**Pn**	**19 04 55.0**	**+3.2**
PMG	**Port Moresby**	**19.44**	**96**	P		**Pn**	**19 05 25.1**	**+2.9**
	comp=Z,1.0nm,0.3s,baz=157,slow=4.4,SNR=5.6							
PMG	**Port Moresby**	**19.44**	**96**	IAmb		IAmb	19 06 09.8	
	comp=Z,9.8nm,1.0s							
CMAR	**Chiang Mai Arr**	**38.48**	**313**	P		**P**	**19 08 10.6**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=151,slow=7.2,SNR=4.0							
CMAR				PcP		**PcP**	**19 10 21.4**	**+2.4**
	comp=Z,0.3nm,0.6s,baz=160,slow=2.6,SNR=4.4							
ODAN	**Odare**	**52.03**	**313**	*e*P		**P**	**19 09 57.0**	**+0.3**
	comp=Z,5.2nm,0.5s							
TAPN	**Taplejung**	**52.08**	**314**	*e*P		**P**	**19 09 57.7**	**+0.5**
	comp=Z,3.6nm,0.5s							
RAMN	**Ramite**	**52.65**	**313**	*e*P		**P**	**19 10 01.8**	**+0.5**
JIRN	**Jiri**	**53.36**	**313**	*e*P		**P**	**19 10 06.7**	**+0.1**
GUN	**Gumba**	**53.73**	**313**	*e*P		**P**	**19 10 09.3**	**0.0**
PKIN	**Phulchoki**	**53.89**	**312**	*e*P		**P**	**19 10 10.4**	**+0.1**
	comp=Z,3.0nm,0.4s							
GKN	**Gorkha**	**54.68**	**312**	*e*P		**P**	**19 10 16.3**	**+0.4**
	comp=Z,7.9nm,0.3s							
KOLN	**Koldanda**	**55.32**	**312**	*e*P		**P**	**19 10 19.9**	**-0.6**
SONM	**Songino Array**	**58.52**	**343**	P		**P**	**19 10 43.3**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=159,slow=6.6,SNR=4.7							
PETK	**Petropavlovsk-**	**65.90**	**19**	P		**P**	**19 11 32.4**	**+1.1**
	comp=Z,5.5nm,0.9s,baz=180,slow=6.6,SNR=3.6							
MK31	**Makanchi Array**	**67.64**	**328**	P		**P**	**19 11 41.9**	**-0.5**
MKAR	**Makanchi Array**	**67.64**	**328**	P		**P**	**19 11 43.0**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=114,slow=8.7,SNR=19							
MKAR	**Makanchi Array**	**67.64**	**328**	P		**P**	**19 11 42.7**	**+0.2**
ZALV	**Zalesovo Beam**	**71.39**	**335**	P		**P**	**19 12 04.4**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=135,slow=4.6,SNR=6.5							
KURBB	**Kurchatov Arra**	**71.99**	**330**	P		**P**	**19 12 09.2**	**+0.4**
	comp=Z,1.7nm,0.5s,baz=134,slow=5.1,SNR=26							
KURK	**Kurchatov**	**72.00**	**330**	P		**P**	**19 12 09.2**	**+0.3**
KURK	**Kurchatov**	**72.00**	**330**	IAmb		IAmb	19 12 10.2	
	comp=Z,3.1nm,0.8s							
YKA	**Yellowknife Ar**	**109.57**	**26**	PKiKP		**PKiKP**	**19 19 13.8**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=294,slow=1.5,SNR=5.9							
GERES	**GERESS Array B**	**111.51**	**320**	PKiKP		**PKiKP**	**19 19 19.2**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=85,slow=2.1,SNR=2.5							
PDAR	**Pinedale Array**	**119.20**	**45**	PKP		**PKiKP**	**19 19 34.2**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=248,slow=4.6,SNR=2.5							
TORD	**Torodi Ar. Bea**	**126.59**	**281**	PKP		**PKiKP**	**19 19 48.2**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=51,slow=1.8,SNR=4.0							
CPUP	**Villa Florida**	**145.69**	**172**	PKPbc		**PKiKP**	**19 20 26.4**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=203,slow=3.1,SNR=4.8							
LPAZ	**La Paz**	**151.43**	**147**	PKPbc		**PKPab**	**19 20 42.5**	**-5.3**
	comp=Z,1.0nm,0.5s,baz=153,slow=2.3,SNR=5.3							

IDC 05 19:03:37.1±1.8, 24°.52N×93°.96E, h0km, mb3.4/2, mb1 3.5/3, mb1mx3.1/54, mbtmp3.2/3, ML3.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/32, Error ellipse: s-maj=97.7km s-min=27.0km az=55.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.61**	**141**	Pn		Pn	19 05 29.6	+0.2
	0.1nm,0.3s,baz=310,slow=13,SNR=2.8							
CMAR				Sn		Sn	19 06 56.8	+0.4
	0.0nm,0.3s,baz=322,slow=16,SNR=1.1							
CMAR				Lg		Lg	19 07 31.1	
	0.2nm,0.3s,baz=330,slow=19,SNR=1.9							
MKAR	**Makanchi Array**	**24.11**	**340**	P		P	19 08 54.2	-0.3
	0.4nm,0.5s,baz=150,slow=9.5,SNR=11							
AAK	**Ala-Archa**	**24.18**	**323**	LR		LR	19 21 01.5	
	comp=Z,33nm,21.2s,baz=325,slow=43							
ARCES	**ARCESS Array B**	**59.74**	**338**	LR		LR	19 41 21.8	
	comp=Z,130nm,20.3s,baz=252,slow=38							
GERES	**GERESS Array B**	**65.69**	**314**	P		P	19 14 23.8	+0.3
	0.2nm,0.4s,baz=78,slow=8.3,SNR=3.9							

*INET **05** 19:05:59.1, 7°.88N×83°.42W, h15km, ML3.6*

*IDC **05** 19:06:00.5±1.0, 8°.74N×82°.95W, h0km, mb3.9/9, mb1 4.2/13, mb1mx3.9/35, mbtmp3.9/13, ML3.9/3, MS4.3/1, Ms1 4.3/1, ms1mx3.0/29, Error ellipse: s-maj=35.9km s-min=17.0km az=38.0*

*UCR **05** 19:06:02.7±2.3, 8°.62N×83°.17W, h2km±9km, MD4.2, mb4.4(NEIC)*

*UPA **05** 19:06:02.1±1.5, 8°.63N×83°.11W, h2km±4km, MW4.3*

*NEIC **05** 19:06:05.0±2.1, 8°.71N±0°.07×83°.08W±0°.07, h31km±5km, mb4.4/7, Error ellipse: s-maj=13.3km s-min=6.6km az=224.0*

ISC 05 19:06:03.3±1.0, 8°.62N±0°.04×83°.13W±0°.03, h24km±7km, n85, σ1s54°/111, mb3.9/9, 1C-6D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
EDSV	**San Vito**	**0.26**	**39**	*e*P		**Pb**	**19 06 09.6**	**-0.1**
EDSV				*e*S		**Sn**	**19 06 16.0**	**-1.0**
LESP3	**La Esperanza,**	**0.40**	**122**	⇑*i*P		**Pb**	**19 06 10.6**	**-1.2**
LESP3				*e*S		**Sb**	**19 06 17.9**	**+0.4**
EDPN	**Palmar Norte**	**0.47**	**317**	*e*P		**Pb**	**19 06 11.3**	**-1.6**
EDPN				*e*S		**Sb**	**19 06 18.7**	**-0.8**
BRU2	**Volcan**	**0.47**	**68**	*e*P		**Pb**	**19 06 12.7**	**-0.3**
BRU2				*e*S		**Sb**	**19 06 21.0**	**+1.3**
BRU2	**Volcan**	**0.47**	**68**	⇓*i*P		**Pb**	**19 06 12.9**	**-0.1**
BRU2				*e*S		**Sb**	**19 06 21.0**	**+1.3**
EDBA	**Buenos Aires**	**0.56**	**345**	*e*P		**Pb**	**19 06 13.7**	**-0.8**
EDBA				*e*S		**Sn**	**19 06 23.4**	**-0.9**
BCO2	**Palmira**	**0.61**	**81**	⇓*i*P		**Pb**	**19 06 15.1**	**-0.3**
BCO2				*e*S		**Sb**	**19 06 24.7**

comp=Z,0.2nm,0.8s,baz=310,slow=2.1,SNR=3.3
ASAR Alice Springs 141.55 243 PKhKP PKPpre 19 25 27.1
comp=Z,0.1nm,0.6s,baz=94,slow=3.7,SNR=2.9
WRA Warramunga Arr 142.07 249 PKhKP PKPpre 19 25 30.1
comp=Z,0.7nm,0.9s,baz=92,slow=1.7,SNR=3.5
CMAR Chiang Mai Arr 153.02 356 PKPbc **PKPbc 19 25 59.2 -0.5**
comp=Z,0.3nm,0.4s,baz=335,slow=6.3,SNR=6.5

IDC 05 19:13:46.4±5.4, 54°57S×152°28W, h0km, mb3.4/1, mb1 3.6/1, mb1mx3.4/20, mbtmp3.4/1, Error ellipse: s-maj=595.0km s-min=91.1km az=169.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**61.75**	**268**	P	P	19 24 06.6	0.0
	0.4nm,0.8s,baz=140,slow=6.2,SNR=4.4						
MKAR	**Makanchi Array**	**145.35**	**280**	PKPbc	PKPbc	19 33 24.5	-0.6
	0.3nm,0.7s,baz=113,slow=4.7,SNR=5.0						
ZALV	**Zalesovo Beam**	**147.43**	**293**	PKPbc	PKPbc	19 33 30.2	-0.7
	0.3nm,0.4s,baz=64,slow=3.4,SNR=2.1						
KURBB	**Kurchatov Arra**	**149.44**	**284**	PKP	PKPdf	19 33 31.6	-0.3
	0.5nm,0.7s,baz=131,slow=2.0,SNR=1.6						
KURBB				PKPbc	PKPbc	19 33 35.2	-1.0
	0.4nm,0.6s,baz=103,slow=2.6,SNR=2.2						

*IDC **05** 19:20:37.8±1.1, 26°51S×115°04W, h0km, mb3.6/4, mb1 1.0/4, mb1mx3.7/27, mbtmp3.6/4, MS3.8/7, Ms1 3.8/7, ms1mx3.5/19, Error ellipse: s-maj=60.9km s-min=32.7km az=55.0*
*NEIC **05** 19:20:38.0±1.8, 26°7S±0°3×114°9W±0°1, h10km±2km, mb4.5/2, Error ellipse: s-maj=40.6km s-min=10.5km az=194.0*
ISC 05 19:20:38.5±0.8, 26°6S±0°2×114°9W±0°1, h10km, n30, σ1§07/15, mb3.6/5, MS3.9/7, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**4.95**	**97**	LR	LR	19 22 40.2	
	comp=Z,48nm,19.6s,baz=286,slow=24						
RPN	**Rapa Nui**	**4.95**	**97**	Pn	**Pn**	**19 21 53.2**	**+0.3**
PTCN	**Pitcairn Islan**	**13.82**	**273**	Pn	**Pn**	**19 23 54.4**	**-0.1**
PLCA	**Paso Flores**	**39.05**	**123**	P	**P**	**19 28 07.5**	**+1.9**
	2.2nm,0.9s,baz=324,slow=11,SNR=4.8						
PLCA				LR	LR	19 39 42.9	
	comp=Z,96nm,19.8s,baz=314,slow=29						
PLCA	**Paso Flores**	**39.05**	**123**	P	**P**	**19 28 04.5**	**-1.1**
PLCA				IAmb	IAmb	19 28 14.2	
	comp=Z,10nm,1.4s						
PB10	**IPOC Station P**	**40.09**	**96**	P	**P**	**19 28 13.2**	**-1.3**
PB10				IAmb	IAmb	19 28 24.2	
	comp=Z,16nm,1.0s						
H06S1	**SOCORRO T**	**45.25**	**5**	T	T	20 17 35.2	
	SNR=29						
CPUP	**Villa Florida**	**51.09**	**103**	LR	LR	19 47 23.4	
	comp=Z,111nm,18.8s,baz=272,slow=31						
TXAR	**Lajitas Array**	**56.66**	**12**	LR	LR	19 49 34.2	
	comp=Z,47nm,18.7s,baz=0.0,slow=31						
URZ	**Urewera**	**57.43**	**240**	LR	LR	19 50 19.7	
	comp=Z,101nm,18.6s,baz=114,slow=31						
RPZ	**Rata Peaks**	**61.00**	**233**	LR	LR	19 52 36.4	
	comp=Z,77nm,18.4s,baz=150,slow=32						
VNDA	**Vanda**	**62.76**	**197**	LR	LR	19 52 37.8	
	comp=Z,69nm,19.9s,baz=152,slow=31						
NVAR	**Mina Array Bea**	**64.79**	**357**	P	**P**	**19 31 18.1**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=180,slow=9.0,SNR=2.6						
PDAR	**Pinedale Array**	**69.22**	**4**	P	**P**	**19 31 45.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=162,slow=6.6,SNR=2.9						
MAW	**Mawson**	**86.05**	**179**	LR	LR	20 06 40.9	
	comp=Z,68nm,19.6s,baz=57,slow=32						
H11S2	**WAKE ISLAND Hy**	**88.30**	**292**	T	T	21 11 05.9	
	baz=119,slow=76,SNR=41						
H11S1	**WAKE ISLAND Hy**	**88.32**	**292**	T	T	21 11 05.7	
	baz=119,slow=76,SNR=34						
H11S3	**WAKE ISLAND Hy**	**88.32**	**292**	T	T	21 11 06.4	
	baz=119,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**88.72**	**293**	T	T	21 11 51.1	
	baz=114						
H11N1	**WAKE ISLAND Hy**	**88.73**	**293**	T	T	21 11 47.4	
	baz=114						
H11N2	**WAKE ISLAND Hy**	**88.74**	**293**	T	T	21 11 47.4	
	baz=114						
YKA	**Yellowknife Ar**	**88.81**	**0**	P	**P**	**19 33 32.1**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=173,slow=5.1,SNR=5.2						
SONM	**Songino Array**	**141.53**	**314**	PKP	**PKPdf**	**19 40 08.6**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=149,slow=3.0,SNR=2.0						
IDI	**Anoyia**	**144.60**	**66**	PKP	PKPbc	19 40 15.3	+0.9
	comp=Z,2.8nm,0.5s,baz=290,slow=6.4,SNR=11						
CMAR	**Chiang Mai Arr**	**147.83**	**262**	PKPbc	**PKPbc**	**19 40 24.9**	**+0.4**
	comp=Z,1.0nm,1.0s,baz=134,slow=0.9,SNR=7.9						
ZALV	**Zalesovo Beam**	**147.97**	**337**	PKPbc	**PKPbc**	**19 40 26.1**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=13,slow=3.9,SNR=6.0						
BRTR	**Keskin Array B**	**150.72**	**56**	PKP	**PKPdf**	**19 40 27.7**	**+1.9**
	comp=Z,0.3nm,0.7s,baz=247,slow=7.5,SNR=2.6						
BRTR				PKPbc	**pPKPbc**	**19 40 33.8**	**+0.2**
	comp=Z,1.3nm,0.9s,baz=202,slow=1.3,SNR=5.8						
BVAR	**Borovoye Array**	**153.34**	**353**	PKPbc	**PKPbc**	**19 40 36.9**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=285,slow=2.9,SNR=3.8						
KURBB	**Kurchatov Arra**	**153.94**	**340**	PKPbc	**PKPbc**	**19 40 37.1**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=19,slow=1.9,SNR=5.4						
MKAR	**Makanchi Array**	**155.73**	**330**	PKPbc	PKPdf	19 40 41.3	+8.7
	comp=Z,0.2nm,0.7s,baz=39,slow=5.9,SNR=3.9						

*NIED **05** 19:21:00, 37°40N×142°10E, h26km, Mw3.4 Best double couple: Ms1.35000×10^14 NP1:φs215.00000°, δ59.00000°, λ-119.00000°. NP2:φs82.00000°, δ41.00000°, λ-51.00000°*
JMA 05 19:21:03.2±0.2, 37°36N×142°06E, h34km±4km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.94**	**271**	P	Pn	19 21 20.4	+0.3
JFK				S	Sn	19 21 32.3	-0.1
JMST	**Minamisoumatoc**	**1.00**	**292**	P	Pn	19 21 21.0	+0.2
JMST				S	Sn	19 21 33.6	-0.1
ONAJ	**Iwakimizuishiy**	**1.04**	**256**	P	Pn	19 21 21.5	+0.1
JIKH	**Ishinomakibobu**	**1.06**	**334**	P	Pn	19 21 21.7	+0.1
JIKH				*eS*	Sn	19 21 34.6	-0.6
JMM	**Marumori**	**1.13**	**297**	P	Pn	19 21 23.0	+0.5
JMM				S	Sn	19 21 37.2	+0.4
JIO	**Ouri**	**1.23**	**333**	P	Pn	19 21 24.4	+0.4
JIO				S	Sn	19 21 39.4	0.0
JFT	**Otama**	**1.38**	**277**	P	Pb	19 21 27.7	-0.8
JFT				S	Sb	19 21 44.7	-1.1
JOU	**Okura**	**1.49**	**313**	P	Pn	19 21 29.0	+1.4
JOU				S	Sb	19 21 48.1	-0.9
JMK	**Ichinoseki**	**1.72**	**338**	P	Pn	19 21 32.1	+1.4
JMK				*eS*	Sn	19 21 53.1	+1.6
JYS	**Shirataka**	**1.80**	**299**	S	Sb	19 21 57.2	-0.5
JFY	**Yanaizu**	**1.88**	**272**	P	Pb	19 21 35.0	-1.9
JFY				S	Sb	19 21 58.3	-1.7
JYK	**Kaneyama**	**2.05**	**320**	P	Pn	19 21 36.9	+1.6
JYK				*eS*	Sb	19 22 02.5	-2.5
JOM	**Ohasama**	**2.19**	**344**	P	Pn	19 21 38.7	+1.4
JOM				S	Sn	19 22 04.0	+0.8
MAT	**Matsushiro**	**3.19**	**256**	P	Pb	19 21 56.2	-3.0
MAT				*eS*	Sn	19 22 27.9	0.0

WEL 05 19:39:09.5, 40°S±2°×17°4E±°, h200km±5km, MLv3.8/85, Error ellipse: s-maj=0.0km s-min=0.0km az=64.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.62**	**150**	P	Pn	19 39 37.3	+0.2
DUWZ				S	S	19 39 56.7	-2.1
NMEZ	**Namu Road**	**0.90**	**18**	P	Pn	19 39 38.8	+0.1
NMEZ				S	S	19 40 00.8	-0.2
QRZ	**Quartz Range**	**0.94**	**233**	P	Pn	19 39 38.9	+0.1
NNZ	**Nelson**	**0.95**	**186**	P	Pn	19 39 39.1	+0.1
NNZ				S	S	19 40 02.0	+0.1
PREZ	**Palmer Road**	**1.05**	**29**	P	Pn	19 39 39.8	+0.1
LREZ	**Lake Rotokare**	**1.06**	**41**	P	Pn	19 39 40.1	+0.4
TCW	**Tory Channel**	**1.11**	**149**	P	Pn	19 39 40.7	+0.7
TCW				S	S	19 40 03.2	-0.4
PKE	**Pukeiti**	**1.13**	**19**	P	Pn	19 39 40.4	+0.1
DREZ	**Durham Road**	**1.20**	**26**	P	Pn	19 39 40.9	+0.1
TUWZ	**Tuamarina**	**1.21**	**164**	P	Pn	19 39 41.1	+0.3
KIW	**Kapiti Island**	**1.22**	**120**	P	Pn	19 39 41.1	+0.2
KIW				S	S	19 40 01.3	-3.6
WAZ	**Wanganui**	**1.24**	**66**	P	Pn	19 39 41.8	+0.7
WAZ				S	S	19 40 05.2	0.0
MHEZ	**Mangahewa**	**1.34**	**28**	P	Pn	19 39 42.6	+0.7
OGWZ	**Otaki Gorge**	**1.38**	**114**	P	Pn	19 39 42.6	+0.5
OHWZ	**Ohakea**	**1.38**	**88**	P	Pn	19 39 43.0	+0.9
CAW	**Cannon Point**	**1.45**	**126**	P	Pn	19 39 43.2	+0.4
BSWZ	**Blackbirch Sta**	**1.47**	**169**	P	Pn	19 39 43.6	+0.6
VRZ	**Vera Road**	**1.49**	**40**	P	Pn	19 39 43.0	-0.2
BHW	**Baring Head**	**1.54**	**138**	P	Pn	19 39 43.7	+0.2
THZ	**Tophouse**	**1.56**	**197**	P	Pn	19 39 44.1	+0.3
CMWZ	**Cape Campbell**	**1.57**	**161**	P	Pn	19 39 44.8	+1.0
MRZ	**Mangatainoka R**	**1.62**	**105**	P	Pn	19 39 44.6	+0.3
HOWZ	**Holdsworth Sta**	**1.65**	**113**	P	Pn	19 39 44.9	+0.3
PKVZ	**Pokaka**	**1.72**	**56**	P	Pn	19 39 45.3	-0.1
POWZ	**Post Office Ro**	**1.73**	**95**	P	Pn	19 39 45.6	+0.3
MTVZ	**Mangateitei**	**1.75**	**60**	P	Pn	19 39 45.6	-0.1
MSWZ	**Moikau Station**	**1.75**	**132**	P	Pn	19 39 45.7	+0.2
MTW	**Mount Morrison**	**1.75**	**121**	P	Pn	19 39 45.8	+0.2
PAWZ	**Paruwai Farm**	**1.83**	**128**	P	Pn	19 39 46.5	+0.1
TRVZ	**Turoa**	**1.84**	**59**	P	Pn	19 39 46.5	-0.2
PLWZ	**Palliser**	**1.85**	**135**	P	Pn	19 39 46.6	0.0
DRZ	**Dome Shelter**	**1.86**	**59**	P	Pn	19 39 46.9	-0.1
FWVZ	**Far West T-bar**	**1.87**	**58**	P	Pn	19 39 46.8	-0.2
TIWZ	**Tintock**	**1.88**	**106**	P	Pn	19 39 47.2	+0.4
TSZ	**Takapari Road**	**1.89**	**84**	P	Pn	19 39 47.0	+0.1
PRWZ	**Pori Road**	**1.90**	**100**	P	Pn	19 39 47.7	+0.7
TWVZ	**Taurewa**	**1.91**	**52**	P	Pn	19 39 46.8	-0.4
MOVZ	**Moawhango**	**1.93**	**64**	P	Pn	19 39 46.9	-0.4
TUVZ	**Tukino**	**1.93**	**60**	P	Pn	19 39 47.6	+0.1
NGZ	**Ngauruhoe**	**1.94**	**57**	P	Pn	19 39 47.4	-0.2
DSZ	**Dennistoun Nort**	**1.96**	**221**	P	Pn	19 39 48.0	+0.3
WTVZ	**West Tongariro**	**1.97**	**55**	P	Pn	19 39 47.7	-0.2
TMWZ	**Te Maipa**	**1.99**	**116**	P	Pn	19 39 48.3	+0.3
TRWZ	**Traveller**	**2.00**	**125**	P	Pn	19 39 48.3	+0.3
KRVZ	**Karewarewa**	**2.02**	**55**	P	Pn	19 39 48.1	-0.3
DVHZ	**Dannevirke**	**2.03**	**92**	P	Pn	19 39 48.5	+0.1
HIZ	**Hauiti**	**2.04**	**31**	P	Pn	19 39 48.2	-0.3
PNHZ	**Pukenui**	**2.09**	**81**	P	Pn	19 39 49.1	+0.1
BHHZ	**Black Hill Sta**	**2.11**	**69**	P	Pn	19 39 48.8	-0.5
KATZ	**Kakaramea**	**2.12**	**53**	P	Pn	19 39 49.8	+0.3
BFZ	**Birch Farm**	**2.12**	**102**	P	Pn	19 39 49.7	+0.4
CPWZ	**Castlepoint**	**2.15**	**108**	P	Pn	19 39 50.4	+0.9
KHZ	**Kahutara**	**2.15**	**180**	P	Pn	19 39 49.7	+0.3
RATZ	**Rangitukua**	**2.24**	**52**	P	Pn	19 39 51.0	+0.3
WPHZ	**Waipukurau**	**2.25**	**86**	P	Pn	19 39 51.0	+0.3
ANWZ	**Angora Road**	**2.27**	**96**	P	Pn	19 39 51.4	+0.6
KRHZ	**Kereru**	**2.28**	**75**	P	Pn	19 39 51.0	-0.1
WATZ	**Wairara**	**2.32**	**49**	P	Pn	19 39 51.7	+0.3
PRHZ	**Porangahau**	**2.39**	**91**	P	Pn	19 39 52.7	+0.6
TLZ	**Tolley Road**	**2.49**	**40**	P	Pn	19 39 52.9	-0.5
KUTZ	**Kaahu Road**	**2.52**	**46**	P	Pn	19 39 54.2	+0.5
PXZ	**Pawanui**	**2.58**	**86**	P	Pn	19 39 54.5	+0.3
MCHZ	**McNeill Hill**	**2.58**	**72**	P	Pn	19 39 54.8	+0.4
KAHZ	**Kahuranaki**	**2.62**	**81**	P	Pn	19 39 55.1	+0.3
MRHZ	**Matea Rd**	**2.66**	**58**	P	Pn	19 39 54.6	-0.7
LTZ	**Lake Taylor**	**2.68**	**200**	P	Pn	19 39 55.6	+0.2
GVZ	**Greta Valley S**	**2.72**	**187**	P	Pn	19 39 55.8	-0.1
CKHZ	**Cape Kidnapper**	**2.81**	**79**	P	Pn	19 39 57.3	+0.5
ARHZ	**Aropaoanui**	**2.87**	**71**	P	Pn	19 39 57.9	+0.3
INZ	**Inchbonnie**	**2.91**	**212**	P	Pn	19 39 57.9	0.0
MTHZ	**Maungataniwha**	**2.93**	**62**	P	Pn	19 39 57.9	-0.6
AMCZ	**Amberley**	**2.98**	**192**	P	Pn	19 39 58.8	0.0
RAHZ	**Arahi**	**3.07**	**65**	P	Pn	19 40 00.0	0.0
MUGZ	**Murupara**	**3.09**	**56**	P	Pn	19 39 59.5	-0.8
WHHZ	**Waihua**	**3.11**	**69**	P	Pn	19 40 00.7	+0.3
SNGZ	**Shannon Statio**	**3.31**	**65**	P	Pn	19 40 02.8	-0.1
CRLZ	**Canterbury Las**	**3.37**	**191**	P	Pn	19 40 02.6	-0.9
MKAZ	**Moumakai**	**3.41**	**23**	P	Pn	19 40 04.8	+0.7
URZ	**Urewera**	**3.44**	**55**	P	Pn	19 40 03.3	-1.1
KNZ	**Kokohu**	**3.44**	**70**	P	Pn	19 40 04.2	-0.3
OKCZ	**Okains Bay**	**3.47**	**185**	P	Pn	19 40 04.0	-0.8
WVZ	**Waitaha Valley**	**3.49**	**216**	P	Pn	19 40 04.7	-0.3
MQZ	**McQueen's Vall**	**3.50**	**190**	P	Pn	19 40 03.7	-1.3
RAGZ	**Rawiri**	**3.50**	**61**	P	Pn	19 40 05.6	+0.4
MHGZ	**Mahia Peninsul**	**3.57**	**73**	P	Pn	19 40 06.3	+0.3
AKCZ	**Akaroa Harbour**	**3.63**	**187**	P	Pn	19 40 05.7	-1.0
PRGZ	**Paritu Road**	**3.63**	**70**	P	Pn	19 40 06.7	-0.1
RIGZ	**Rimuhau**	**3.64**	**66**	P	Pn	19 40 06.6	-0.3
MWZ	**Matawai**	**3.66**	**59**	P	Pn	19 40 06.4	-0.8
WIAZ	**Waiheke Island**	**3.69**	**21**	P	Pn	19 40 08.6	+1.1
TKGZ	**Te Karaka**	**3.82**	**63**	P	Pn	19 40 08.6	-0.5
RPZ	**Rata Peaks**	**3.90**	**207**	P	Pn	19 40 09.4	-0.6
RUGZ	**Raukumara Rang**	**3.97**	**56**	P	Pn	19 40 09.5	-1.5
CNGZ	**Carnagh Statio**	**4.05**	**65**	P	Pn	19 40 11.0	0.0
HAZ	**Te Kaha**	**4.16**	**54**	P	Pn	19 40 11.8	-1.5
PKGZ	**Pakihiroa**	**4.27**	**58**	P	Pn	19 40 12.2	-2.6
FOZ	**Fox Glacier**	**4.27**	**219**	P	Pn	19 40 13.8	-0.8
PUZ	**Puketiti**	**4.29**	**61**	P	Pn	19 40 13.7	-1.2
WMGZ	**Waiomatatini S**	**4.53**	**59**	P	Pn	19 40 16.7	-1.2
MXZ	**Matakaoa Point**	**4.61**	**56**	P	Pn	19 40 18.0	-1.0
LBZ	**Lake Benmore**	**4.80**	**210**	P	Pn	19 40 20.7	-0.6
JCZ	**Jackson Bay**	**5.18**	**221**	P	Pn	19 40 25.6	-0.6
ODZ	**Otahua Downs**	**5.22**	**203**	P	Pn	19 40 26.5	-0.1
WKZ	**Wanaka**	**5.64**	**215**	P	Pn	19 40 30.5	-1.5
HHSZ	**Highcliff Hill**	**6.01**	**200**	P	Pn	19 40 37.8	+1.0
TUZ	**Tuapeka**	**6.35**	**205**	P	Pn	19 40 38.6	-2.6
SYZ	**Scrubby Hill**	**7.03**	**205**	P	Pn	19 40 49.5	-0.5

*TRN **05** 19:50:18.8, 10°87N×62°27W, h58km, MD2.5*
*FUNV **05** 19:50:19.5, 10°81N×62°23W, h58km, MW2.3*
ISC 05 19:50:17.6±1.4, 10°82N±0°06×62°29W±0°05, h69km±9km, n8, σ1§28/16, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.18**	**158**	*eP*	**Pn**	**19 50 28.2**	**+0.2**
GUIV				*eS*	**Sn**	**19 50 35.4**	**-0.2**
GUIV	**Guiria**	**0.18**	**158**	*eP*	**Pn**	**19 50 28.1**	**+0.1**
GUIV				*eS*	**Sn**	**19 50 35.5**	**-0.1**
TRN	**Trinidad (W)**	**0.89**	**101**	*eP*	**Pn**	**19 50 35.2**	**+0.6**
TRN				*eS*	**Sn**	**19 50 46.9**	**-0.5**
CRUV	**Carupano**	**0.94**	**261**	*eP*	**Pn**	**19 50 35.4**	**+0.1**
CRUV				*eS*	**Sn**	**19 50 46.7**	**-0.3**
GRGR	**Grenville**	**1.45**	**26**	*eP*	**Pn**	**19 50 41.6**	**-0.2**
GRGR				*eS*	**Sn**	**19 51 00.1**	**0.0**
RIOV	**Rio Grande**	**2.77**	**170**	*eP*	**Pn**	**19 51 00.8**	**+1.1**
RIOV				*eS*	**Sn**	**19 51 30.8**	**-1.4**
CUPV	**Cpira**	**3.52**	**258**	*eP*	**Pn**	**19 51 11.7**	**+1.7**
CUPV				*eS*	**Sn**	**19 51 50.9**	**+0.5**
BAUV	**El Baul**	**5.96**	**252**	*eP*	**Pn**	**19 51 43.8**	**+0.5**
BAUV				*eS*	**Sn**	**19 52 46.7**	**-3.5**

*IDC **05** 20:00:54.1±1.9, 16°53S×71°97W, h132km±18km, mb3.4/5, mb1 3.5/9, mb1mx3.3/30, mbtmp3.8/9, Error ellipse: s-maj=25.3km s-min=16.0km az=71.0*
ISC 05 20:00:54.9±0.9, 16°48S±0°08×71°77W±0°09, h150km, n10, σ2§34/12, mb3.7/5, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.50**	**87**	P	**Pn**	**20 01 51.2**	**+1.9**
	9.2nm,0.3s,baz=272,slow=12,SNR=170						
LPAZ				S	**Sn**	**20 02 27.3**	**-4.1**
	1.8nm,0.3s,baz=260,slow=4.8,SNR=4.8						
NNA	**Nana**	**6.64**	**312**	P	**Pn**	**20 02 27.3**	**-2.9**
	1.3nm,0.3s,baz=129,slow=14,SNR=2.9						
NNA				S	Sn	20 03 27.7	-17
	5.8nm,0.3s,baz=240,slow=21,SNR=9.6						
LVC	**Limon Verde**	**6.67**	**157**	P	**Pn**	**20 02 31.0**	**+0.2**
	4.9nm,0.3s,baz=342,slow=12,SNR=46						
LVC				S	**Sn**	**20 03 46.0**	**0.0**
	11nm,0.3s,baz=204,slow=20,SNR=5.7						
SIV	**San Ignacio**	**10.29**	**89**	P	**Pn**	**20 03 17.0**	**-1.8**
	1.0nm,0.3s,baz=273,slow=13,SNR=13						
CFA	**Coronel Fontan**	**15.39**	**169**	P	**Pn**	**20 04 22.2**	**-2.0**
	0.1nm,0.3s,baz=336,slow=12,SNR=2.5						
BDFB	**Brasilia**	**22.85**	**91**	P	**P**	**20 05 47.3**	**+1.7**
	3.5nm,0.7s,baz=243,slow=9.0,SNR=5.3						
PLCA	**Paso Flores**	**24.19**	**178**	P	**P**	**20 05 58.2**	**+0.8**
	1.4nm,1.1s,baz=12,slow=13,SNR=2.4						
SDV	**Santo Domingo**	**25.23**	**3**	P	**P**	**20 06 08.2**	**+0.9**
	1.8nm,0.7s,baz=280,slow=7.3,SNR=2.8						
TORD	**Torodi Ar. Bea**	**78.33**	**72**	P	**P**	**20 12 41.6**	**+2.5**
	0.8nm,0.5s,baz=256,slow=4.6,SNR=13						
YKA	**Yellowknife Ar**	**85.59**	**342**	P	**P**	**20 13 17.4**	**+1.6**
	0.2nm,0.6s,baz=135,slow=5.1,SNR=5.3						

*IDC **05** 20:16:19.8±1.3, 0°59N×126°47E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/29, mbtmp3.8/4, Error ellipse: s-maj=140.7km s-min=20.2km az=69.0*
*DJA **05** 20:16:25.6±0.3, 1°N±4°×12°7E±°, h10km, M3.4/6, MLv3.4/6*
ISC 05 20:16:25.8±1.0, 0°9N±0°1×126°83E±0°07, h35km, n8, σ2§18/9, mb3.9/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.55**	**102**	P	**Pn**	**20 16 37.7**	**+0.6**
TNTI				S	**Sn**	**20 16 46.6**	**+1.5**
LBMI	**Labuha**	**1.65**	**156**	P	**Pn**	**20 16 54.9**	**+2.5**
KMSI	**Cibinong**	**2.87**	**264**	P	**Pn**	**20 17 10.7**	**+1.6**
SANI	**Sanana**	**3.03**	**196**	P	**Pn**	**20 17 12.0**	**+0.6**
WRA	**Warramunga Arr**	**21.97**	**161**	P	**P**	**20 21 13.6**	**-3.2**
	1.7nm,0.6s,baz=338,slow=11,SNR=14						
ASAR	**Alice Springs**	**25.35**	**165**	P	**P**	**20 21 47.4**	**-2.4**
	1.9nm,0.3s,baz=344,slow=11,SNR=52						
SONM	**Songino Array**	**50.02**	**342**	P	**P**	**20 25 17.4**	**+0.5**
	0.4nm,0.7s,baz=154,slow=7.5,SNR=3.5						
MKAR	**Makanchi Array**	**59.95**	**326**	P	**P**	**20 26 28.1**	**-0.5**
	0.5nm,0.3s,baz=119,slow=7.3,SNR=19						

*NEIC **05** 20:32:01.6±2.7, 56°2S±0°1×27°6W±0°2, h118km±7km, mb4.3/15, Error ellipse: s-maj=18.6km s-min=14.6km az=217.0*
*IDC **05** 20:32:04.0±12.0, 56°21S×27°62W, h125km±118km, mb3.7/4, mb1 3.9/4, mb1mx3.6/17, mbtmp4.1/4, Error ellipse: s-maj=41.5km s-min=25.7km az=72.0*
ISC 05 20:32:01.0±0.6, 56°2S±0°1×27°6W±0°1, h112km, n25, σ1§29/25, mb4.2/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.43**	**287**	Pn	**Pn**	**20 33 20.9**	**+1.2**
VNA3	**Neumayer Olymp**	**16.92**	**160**	P	**Pn**	**20 35 51.1**	**+0.5**
SNAA	**Sanae**	**18.70**	**156**	P	**P**	**20 36 10.8**	**+0.5**
SNAA	**Sanae**	**18.70**	**156**	P	**P**	**20 36 10.8**	**+0.5**
GO09	**Cerro Castillo**	**26.54**	**262**	P	**P**	**20 37 25.1**	**-2.9**
QSPA	**South Pole Qui**	**34.05**	**180**	P	**P**	**20 38 34.3**	**+0.1**
QSPA				IAmb	IAmb	20 38 38.2	
	comp=Z,5.3nm,1.2s						
CPUP	**Villa Florida**	**36.74**	**312**	P	**P**	**20 38 58.4**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=155,slow=7.8,SNR=3.0						
CPUP	**Villa Florida**	**36.74**	**312**	P	**P**	**20 38 55.7**	**-1.6**
ROC1	**El Roble**	**37.77**	**289**	P	**P**	**20 39 05.6**	**-0.7**
MAW	**Mawson**	**40.16**	**144**	P	**P**	**20 39 24.1**	**-1.4**
LVC	**Limon Verde**	**45.18**	**301**	P	**P**	**20 40 06.7**	**-0.2**
LVC				IAmb	IAmb	20 40 11.6	
	comp=Z,2.9nm,0.8s						
PB10	**IPOC Station P**	**45.22**	**298**	P	**P**	**20 40 05.6**	**-1.2**
PB04	**IPOC Station P**	**46.01**	**300**	P	**P**	**20 40 12.2**	**-1.1**
BOSA	**Boshof**	**46.23**	**76**	P	**P**	**20 40 14.9**	**+0.1**
BOSA				IAmb	IAmb	20 40 24.6	
	comp=Z,3.5nm,1.0s						
VNDA	**Vanda**	**46.41**	**183**	P	**P**	**20 40 17.0**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=181,slow=5.1,SNR=5.9						
VNDA	**Vanda**	**46.41**	**183**	P	**P**	**20 40 16.7**	**+1.2**
VNDA				IAmb	IAmb	20 40 23.4	
	comp=Z,5.1nm,1.4s						
PB11	**IPOC Station P**	**47.97**	**302**	P	**P**	**20 40 28.5**	**0.0**
PB11				IAmb	IAmb	20 40 30.4	
	comp=Z,7.4nm,1.0s						
MNMC	**Minye Minye**	**48.48**	**302**	P	**P**	**20 40 33.2**	**+0.6**
MNMC				IAmb	IAmb	20 40 34.8	

KONT	Konya--Tatoy	2.14	22		PN		Pn	20 56 40.7	-0.1
KONT	Konya--Tatoy	2.14	22	*i*	P		Pn	20 56 40.2	-0.5
DOGA	KONYA_Doganhis	2.16	7	*i*	P		Pn	20 56 40.9	-0.2
KIZK	Mersin	2.32	76		PN		Pn	20 56 43.8	+0.6
KIZK	Mersin	2.32	76	*i*	P		Pn	20 56 45.7	+2.5
EREN	Erenkoy	2.34	100		PN		Pn	20 56 44.3	+0.9
LADK	Ladik-KONYA	2.38	20		PN		Pn	20 56 44.7	+0.6
KERG	Konya-Eregli	2.66	56	*i*	P		Pn	20 56 48.8	+0.7
KERG				*i*	S		Sn	20 57 21.5	+2.3
KERG					IAML			20 57 24.0	
	comp=N,17nm,0.5s								
KHAL	Karahalli	2.83	329	*i*	P		Pn	20 56 51.0	+0.8
CMRD	Camardi-Nigde	3.38	59		PN		Pn	20 56 58.8	+0.9

IDC ***05*** *21:01:44.4±2.4, 43°.55N×105°.38W, h0km, mb1 3.8/3, mb1mx3.3/52, mbtmp3.5/3, ML3.7/3, Error ellipse: s-maj=54.9km s-min=8.7km az=152.0*
NEIC ***05*** *21:01:46.0±1.4, 43°.68N±0°.04×105°.25W±0°.03, h0km±2km, ML3.3/59, Error ellipse: s-maj=7.7km s-min=3.0km az=334.0*
ISC 05 21:01:45.4±0.8**, 43°.71N**±0°.05×**105°.23W**±0°.05**, h0**km**, n38, σ0s79/44, Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.96**	**64**	Op		**Pb**	**21 02 05.1**	**+0.1**
RSSD				Sg		**Sb**	**21 02 17.7**	**-0.5**
K22A	**Casper**	**1.42**	**222**			**Pn**	**21 02 10.6**	**-2.0**
K22A				Sn		**Sg**	**21 02 31.8**	**+0.9**
K22A				IAML			21 02 35.4	
	comp=E,634nm,0.3s							
K22A				IAML			21 02 35.5	
	comp=N,527nm,0.3s							
PHWY	**Pilot Hill**	**2.41**	**184**			**Pn**	**21 02 26.2**	**-0.1**
PHWY				Sn		**Sn**	**21 02 55.6**	**-1.0**
RWWY	**Rawlins**	**2.49**	**217**			**Pn**	**21 02 27.5**	**+0.1**
RWWY				Sn		**Sn**	**21 02 57.7**	**-0.9**
RWWY				IAML			21 03 02.0	
	comp=N,156nm,0.4s							
N23A	**Red Feather La**	**2.86**	**191**			**Pn**	**21 02 32.3**	**-0.2**
N23A				Sn		**Sn**	**21 03 07.5**	**-0.2**
N23A				IAML			21 03 16.0	
	comp=E,101nm,0.4s							
LAO	**LASA Array**	**3.06**	**347**			**Pn**	**21 02 35.7**	**+0.6**
LAO				IAML			21 03 30.6	
	comp=E,89nm,0.7s							
RLMT	**Red Lodge**	**3.22**	**297**			**Pn**	**21 02 37.6**	**+0.2**
RLMT				Sn		**Sn**	**21 03 16.3**	**-0.3**
RLMT				IAML			21 03 27.2	
	comp=E,79nm,0.3s							
RLMT				IAML			21 03 33.1	
	comp=E,72nm,0.3s							
BW06	**Boulder Array**	**3.30**	**255**			**Pn**	**21 02 38.4**	**-0.1**
BW06				IAML			21 03 25.9	
	comp=N,82nm,0.4s							
BW06				IAML			21 03 29.3	
	comp=E,59nm,0.3s							
PD31	**Pinedale Array**	**3.30**	**255**			**Pn**	**21 02 39.3**	**+0.8**
PDAR	**Pinedale Array**	**3.30**	**255**	Pn		**Pn**	**21 02 39.1**	**+0.6**
	comp=E,8.4nm,0.3s,baz=82,slow=19,SNR=87							
PDAR				Lg		Lg	21 03 21.9	
	comp=E,35nm,0.3s,baz=67,slow=32,SNR=15							
YNE	**Yellowstone No**	**3.67**	**292**			**Pn**	**21 02 43.7**	**+0.1**
YMP	**Mirror Lake Pl**	**3.69**	**288**			**Pn**	**21 02 44.5**	**+0.6**
LKWY	**Lake**	**3.82**	**285**			**Pn**	**21 02 43.8**	**-1.9**
LKWY				IAML			21 03 54.4	
	comp=E,41nm,2.1s							
ISCO	**Idaho Springs**	**3.91**	**184**			**Pn**	**21 02 47.3**	**+0.3**
H17A	**Grant Village**	**3.92**	**282**			**Pn**	**21 02 48.2**	**+1.2**
H17A				IAML			21 03 51.8	
	comp=E,36nm,0.3s							
FLWY	**Flagg Ranch**	**3.97**	**277**			**Pn**	**21 02 48.3**	**+0.6**
FLWY				IAML			21 04 05.5	
	comp=E,40nm,3.5s							
FLWY				IAML			21 04 44.1	
	comp=E,35nm,2.0s							
MOOW	**Moose Ponds**	**4.00**	**273**			**Pn**	**21 02 47.6**	**-0.5**
SNOW	**Snow King Moun**	**4.02**	**268**			**Pn**	**21 02 49.1**	**+0.7**
SNOW				IAML			21 04 01.1	
	comp=E,44nm,1.3s							
SNOW				IAML			21 04 06.0	
	comp=E,44nm,1.0s							
YNR	**Norris Junctio**	**4.05**	**286**			**Pn**	**21 02 49.6**	**+0.8**
YPP	**Pitchstone Pla**	**4.07**	**280**			**Pn**	**21 02 49.8**	**+0.7**
REDW	**Red Top Meadow**	**4.10**	**267**	Pn		**Pn**	**21 02 49.9**	**+0.3**
REDW				IAML			21 04 01.2	
	comp=E,53nm,1.4s							
REDW				IAML			21 04 03.6	
	comp=E,35nm,2.1s							
TPAW	**Teton Pass**	**4.16**	**269**			**Pn**	**21 02 51.6**	**+1.2**
TPAW				IAML			21 04 02.5	
	comp=E,28nm,5.0s							
TPAW				IAML			21 04 19.0	
	comp=E,36nm,1.0s							
O20A	**White River Ci**	**4.22**	**213**			**Pn**	**21 02 51.8**	**+0.8**
YMR	**Madison River**	**4.24**	**285**	Pn		**Pn**	**21 02 50.4**	**-0.9**
AHID	**Auburn Hatcher**	**4.39**	**260**			**Pn**	**21 02 54.2**	**+0.7**
AHID				IAML			21 04 08.4	
	comp=N,44nm,0.9s							
AHID				IAML			21 04 11.6	
	comp=E,41nm,1.8s							
YHB	**Horse Butte**	**4.42**	**286**			**Pn**	**21 02 53.1**	**-0.7**
YHL	**Hebgen Lake**	**4.43**	**287**			**Pn**	**21 02 53.9**	**-0.1**
QLMT	**Earthquake Lak**	**4.59**	**286**			**Pn**	**21 02 55.7**	**-0.6**
Q24A	**Divide**	**4.74**	**179**	Pn		**Pn**	**21 02 58.5**	**+0.1**
KSCO	**Kaye Shedlock'**	**5.08**	**156**	Pn		**Pn**	**21 03 02.8**	**-0.1**
EGMT	**Eagleton**	**5.35**	**325**			**Pn**	**21 03 07.3**	**+0.8**
P17A	**Butcher Ranch,**	**5.91**	**226**			**Pn**	**21 03 15.4**	**+1.0**
ECSD	**EROS Data Cent**	**6.24**	**87**			**Pn**	**21 03 19.9**	**+1.2**
CBKS	**Cedar Bluff**	**6.40**	**138**	Pn		**Pn**	**21 03 20.9**	**-0.1**
ULM	**Lac du Bonnet**	**9.14**	**41**	Pn		**Pn**	**21 03 57.6**	**-0.9**
	comp=E,3.8nm,0.3s,baz=227,slow=13,SNR=33							
ULM				Lg		Lg	21 06 31.2	
	comp=E,0.1nm,0.3s,baz=285,slow=18,SNR=1.8							
ULM	**Lac du Bonnet**	**9.14**	**41**			**Pn**	**21 03 57.7**	**-0.7**
WUAZ	**Wupatki**	**9.45**	**212**			**Pn**	**21 04 02.1**	**-0.7**
YKA	**Yellowknife Ar**	**19.61**	**347**	P		**Pn**	**21 06 16.5**	**+0.3**
	comp=E,0.1nm,0.3s,baz=156,slow=11,SNR=5.5							

JMA 05 21:12:27.5±0.1**, 24°.92N**×**140°.75E, h117**km±2km**, M4.1, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**2.14**	**37**	P		Pn	21 13 02.9	+0.4
JHH2				*eS*		Sn	21 13 29.8	+0.5
CBIJ	**Chichi jima**	**2.52**	**30**	P		Pn	21 13 08.0	+0.6
CBIJ				*eS*		Sn	21 13 38.7	+0.5
BSO3	**Boso 3**	**9.85**	**359**	P		Pn	21 14 46.1	+0.4
BSO4	**Boso 4**	**10.04**	**358**	P		Pn	21 14 49.6	+1.2
JHU	**Hanno**	**10.97**	**354**	P		Pn	21 15 01.5	+0.5
JAG	**Ashikaga**	**11.52**	**355**	P		Pn	21 15 07.3	-1.1
JHO	**Hitachi**	**11.65**	**359**	P		Pn	21 15 09.7	-0.4

NNC ***05*** *21:14:54.6±6.4, 36°.51N×70°.53E, h150km±131km, mb3.1, mpv3.8, Error ellipse: s-maj=54.0km s-min=36.8km az=21.0*
ISC 05 21:14:58.2±3.3**, 36°.7N**±0°.2×**70°.6E**±0°.1**, h204**km**, n10, σ1s66/14, 2C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.91**	**23**	P		**Pn**	**21 16 23.0**	**-1.7**
	SNR=7.1							
UCH	**Uchtor**	**6.27**	**27**	P		**Pn**	**21 16 27.8**	**-1.5**
	SNR=7.8							
KK31	**Karatay Array**	**6.39**	**359**	⇓P		**Pn**	**21 16 29.7**	**-0.7**
	1.9nm,0.3s,baz=180,slow=12,SNR=33							
KK31				⇑S		**S**	**21 17 43.9**	**+0.5**
	1.6nm,0.3s,baz=178,slow=22,SNR=6.4							
EKS2	**Erkin-Say**	**6.42**	**21**	P		**Pn**	**21 16 30.5**	**-0.4**
	SNR=9.8							
AAK	**Ala-Archa**	**6.62**	**25**	P		**Pn**	**21 16 32.8**	**-0.9**
	SNR=10.0							
AAK	**Ala-Archa**	**6.62**	**25**	⇑P		**Pn**	**21 16 32.2**	**-1.5**
	3.2nm,0.3s							
AAK				⇓S		**S**	**21 17 48.7**	**-0.5**
	8.9nm,0.9s							
CHMS	**Chumysh**	**7.03**	**25**	P		**Pn**	**21 16 38.0**	**-0.8**
	SNR=8.0							
USP	**Ospenovka**	**7.19**	**23**	P		**Pn**	**21 16 39.6**	**-1.2**
	SNR=8.8							
TKM2	**Tokmak 2**	**7.28**	**30**	⇓P		**Pn**	**21 16 40.4**	**-1.8**
	4.0nm,0.6s							
TKM2				⇓S		**S**	**21 18 08.0**	**+3.2**
	5.8nm,1.2s							
AB31	**Akbulak array**	**14.76**	**331**	⇓P		**P**	**21 18 19.7**	**+1.7**
	1.1nm,0.7s,baz=160,slow=12,SNR=31							
AB31				⇓S		**S**	**21 20 59.1**	**-1.6**
	0.4nm,0.5s,baz=157,slow=23,SNR=6.2							

MOS ***05*** *21:29:31.2±1.0, 6°.98S×128°.37E, h26km, mb5.5/37, MS4.4/6, Error ellipse: s-maj=9.3km s-min=5.5km az=113.1*
IDC ***05*** *21:29:32.2±5.3, 6°.98S×128°.42E, h19km±33km, mb4.9/29, mb1 5.0/35, mb1mx4.9/38, mbtmp5.1/35, ML5.2/5, MS4.3/24, Ms1 4.3/24, ms1mx4.1/38, Error ellipse: s-maj=13.0km s-min=9.0km az=77.0*
NEIC ***05*** *21:29:33.4±1.7, 6°.99S±0°.05×128°.43E±0°.05, h39km±4km, mb5.3/108, Error ellipse: s-maj=8.1km s-min=7.5km az=205.0*
GCMT ***05*** *21:29:33.4±0.1, 6°.90S±0°.01×128°.38E±0°.01, h20km, MW5.3/124, Moment Tensor Solution. s85,c134; s124,c218; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.76±.02; Mθθ-0.91±.01; Mϕϕ0.15±.02; Mrθ-0.29±.03; Mθϕ0.38±.01; Mϕr-0.13±.04; Best double couple: M=0.96300×10^17 NP1:ϕs127.00000°, δ41.00000°, λ120.00000°. NP2:ϕs270.00000°, δ55.00000°, λ67.00000°. Principal axes: T 0.8630, Plg69.0000°, Azm127.0000°; N 0.2000, Plg19.0000°, Azm284.0000°; P -1.0620, Plg8.0000°, Azm16.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BJI ***05*** *21:29:34.2±0.0, 6°.90S×128°.60E, h35km, mB5.3/53, mb4.9/67, Ms4.8/37, Ms7 4.5/32*
DJA ***05*** *21:29:34.5±0.3, 7°.5±1°×12°.9E±°, h36km±3km, M5.1/85, mB5.6/56, mb5.4/85, MLv5.4/16, Mw(mB)5.1/56, Mwp5.2/13*
KLM ***05*** *21:29:40.0, 7°.00S×128°.69E, h93km, mb5.4*
ISC 05 21:29:35.2±0.3**, 7°.02S**±0°.03×**128°.48E**±0°.04**, h38**km±1**km, n514, σ2s11/526, mb5.2/137, MS4.4/38, 26C-5D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**2.86**	**30**	P		Pn	21 30 13.7	-4.6
SAUI	**Saumlaki**	**2.96**	**109**	P		**Pn**	**21 30 20.7**	**+1.0**
SAUI	**Saumlaki**	**2.96**	**109**			**Pn**	**21 30 18.2**	**-1.5**
SAUI				Sn		**Sn**	**21 30 53.6**	**-0.4**
AAI	**Ambon**	**3.32**	**355**	P		Pn	21 30 19.9	-4.8
AAI				S		**Sn**	**21 30 54.7**	**-8.3**
MSAI	**Masohi**	**3.68**	**7**	P		**Pn**	**21 30 25.4**	**-4.2**
NLAI	**Namlea**	**4.00**	**340**	P		**Pn**	**21 30 31.7**	**-2.3**
SOEI	**Soe**	**4.97**	**237**	P		**Pn**	**21 30 48.5**	**+1.0**
	8.3nm10μm15μm2μm,1.3s							
SOEI	**Soe**	**4.97**	**237**			**Pn**	**21 30 43.3**	**-4.2**
SOEI				Sn		**Sn**	**21 31 40.9**	**-2.9**
SANI	**Sanana**	**5.53**	**333**	P		**Pn**	**21 30 53.4**	**-1.6**
	0.8nm7μm3μm172nm,0.7s							
FAKI	**Fak Fak**	**5.54**	**43**	P		**Pn**	**21 30 53.2**	**-2.0**
	1.6nm18μm5μm462nm,0.7s							
FAKI	**Fak Fak**	**5.54**	**43**			**Pn**	**21 30 53.3**	**-2.0**
BATI	**Baumata**	**5.71**	**236**	Pn		**Pn**	**21 30 57.7**	**0.0**
	142nm,0.3s,baz=118,slow=1.1,SNR=220							
BATI					Sn	**Sn**	**21 32 00.1**	**-2.0**
	10nm,0.3s,baz=350,slow=18,SNR=1.9							
BATI					LR	LR	21 33 13.0	
	comp=Z,5μm,19.6s,baz=108,slow=39							
BBSI	**Bau Bau**	**6.06**	**284**	P		**Pn**	**21 31 04.2**	**+1.8**
	0.3nm808nm69nm,1.1s							
KMPI	**Kaimana, Papua**	**6.18**	**58**	P		**Pn**	**21 31 04.0**	**0.0**
	3.7nm10μm1μm,0.8s							
MTN	**Manton Dam**	**6.35**	**156**			**Pn**	**21 31 06.3**	**0.0**
MMRI	**Maumere**	**6.38**	**255**	P		**Pn**	**21 31 07.4**	**+0.6**
	4.4nm13μm1μm,1.0s							
MMRI	**Maumere**	**6.38**	**255**			**Pn**	**21 31 05.2**	**-1.7**
LBMI	**Labuha**	**6.41**	**351**	P		**Pn**	**21 31 05.9**	**-1.3**
	2.6nm10μm794nm,1.0s							
SIJI	**Sorong**	**6.71**	**25**	Pn		**Pn**	**21 31 09.3**	**-2.1**
	53nm,0.3s,baz=200,slow=7.1,SNR=142							
SIJI					Sn	**Sn**	**21 32 21.1**	**-5.5**
	13nm,0.3s,baz=320,slow=23,SNR=6.2							
SWI	**Sorong**	**6.72**	**25**	P		**Pn**	**21 31 08.4**	**-3.0**
	2.6nm9μm8μm807nm,0.8s							
KDU	**Kakadu**	**6.87**	**145**	P		**Pn**	**21 31 12.2**	**-1.3**
	baz=6.9,SNR=192							
TNTI	**Ternate**	**7.82**	**352**	P		**Pn**	**21 31 24.6**	**-1.9**
	0.7nm3μm3μm255nm,1.0s							
TNTI	**Ternate**	**7.82**	**352**			**Pn**	**21 31 23.7**	**-2.8**
RKPI	**Ransiki, Papua**	**7.89**	**46**	P		**Pn**	**21 31 24.6**	**-2.9**
	2.2nm5μm719nm,0.8s							
LUWI	**Luwuk**	**8.22**	**316**	P		**Pn**	**21 31 31.2**	**-0.9**
	4μm428nm,0.9s							
LUWI	**Luwuk**	**8.22**	**316**			**Pn**	**21 31 29.6**	**-2.5**
BKSI	**Bulukumba**	**8.47**	**281**	P		**Pn**	**21 31 35.4**	**-0.1**
	3μm2μm121nm,0.8s							
WSI	**Waingapu**	**8.51**	**251**	P		**Pn**	**21 31 36.5**	**+0.5**
	5μm392nm,1.0s							
KNRA	**Kununurra**	**8.61**	**178**	P		**Pn**	**21 31 36.2**	**-1.1**
	baz=8.7,SNR=250							
KNRA	**Kununurra**	**8.61**	**178**			**Pn**	**21 31 34.3**	**-3.1**
KNRA					Sn	**Sn**	**21 33 12.2**	**-1.0**
BNSI	**Bone**	**8.72**	**287**	P		**Pn**	**21 31 38.9**	**0.0**
	2μm262nm,1.1s							
KMSI	**Cibinong**	**8.78**	**329**	P		**Pn**	**21 31 38.8**	**-0.9**
	258nm,0.8s							
KAPI	**Kappang**	**8.90**	**282**	P		**Pn**	**21 31 39.2**	**-2.2**
KAPI	**Kappang**	**8.90**	**282**			**Pn**	**21 31 39.2**	**-2.2**
APSI	**Ampana**	**9.12**	**311**	P		**Pn**	**21 31 44.7**	**+0.3**
	944nm67nm,0.8s							
SPSI	**Sidrap Palu**	**9.18**	**289**	P		**Pn**	**21 31 44.7**	**-0.5**
	2μm199nm,1.5s							
TTSI	**Tana Toraja**	**9.48**	**294**	P		**Pn**	**21 31 51.0**	**+1.7**
	1μm107nm,0.9s							
BAKI	**Biak**	**9.56**	**53**	P		**Pn**	**21 31 49.9**	**-0.5**
	4μm504nm,0.8s							
MRSI	**Marisa**	**9.90**	**319**	P		**Pn**	**21 31 56.2**	**+1.2**
	2μm1μm83nm,0.9s							
PLAI	**Plampang**	**10.75**	**260**	P		**Pn**	**21 32 05.6**	**-1.1**
	2μm150nm,0.7s							
MPSI	**Maga**	**11.25**	**310**	P		**Pn**	**21 32 13.0**	**-0.6**
	715nm33nm,1.2s							
FITZ	**Fitzroy Crossi**	**11.35**	**194**	P		**Pn**	**21 32 11.9**	**-3.0**
	baz=12,SNR=117							
FITZ	**Fitzroy Crossi**	**11.35**	**194**	Pn		**Pn**	**21 32 12.2**	**-2.8**
	5.1nm,0.3s,baz=26,slow=11,SNR=60							
FITZ					Sn	**Sn**	**21 34 13.0**	**-7.5**
	8.7nm,0.3s,baz=119,slow=22,SNR=4.6							
FITZ					LR	LR	21 37 04.5	
	comp=Z,4μm,21.0s,baz=22,slow=40							
FITZ	**Fitzroy Crossi**	**11.35**	**194**			**Pn**	**21 32 12.8**	**-2.1**
FITZ						**Sn**	**21 34 17.0**	**-3.5**
SMPI	**Sarmi**	**11.36**	**64**	P		**Pn**	**21 32 12.3**	**-2.7**
	2μm101nm,1.0s							
TWSI	**Taliwang, Sumb**	**11.61**	**261**	P		**Pn**	**21 32 22.1**	**+3.6**
	1μm92nm,1.0s							
MMPI	**Merauke**	**11.89**	**98**	P		**Pn**	**21 32 18.3**	**-4.0**
	464nm,0.6s							
GENI	**Genyem**	**12.45**	**70**	P		**Pn**	**21 32 27.7**	**-2.3**
	2μm125nm,0.7s							
KBKI	**Kotabaru**	**12.80**	**286**	P		**Pn**	**21 32 36.0**	**+1.2**
	19nm,1.0s							
BKB	**Balikpapan**	**12.88**	**296**	P		Pn	21 32 40.4	+4.5
	2μm80nm,1.1s							
JAY	**Jayapura**	**12.98**	**70**	Pn		**Pn**	**21 32 34.4**	**-2.9**
	2.7nm,0.3s,baz=243,slow=10,SNR=6.9							
JAY					LR	LR	21 38 59.8	
	comp=Z,800nm,18.5s,baz=274,slow=44							
JAY	**Jayapura**	**12.98**	**70**	P		**Pn**	**21 32 34.4**	**-2.9**
	624nm36nm,1.4s							
SRBI	**Singaraja**	**13.19**	**265**	P		**Pn**	**21 32 39.8**	**-0.3**
	101nm,1.2s							
WRAB	**Tennant Creek**	**14.04**	**157**	*ce*P		Pn	21 32 46.2	-5.6
WRAB					pmax	pmax		
	comp=Z,255nm,1.3s							
WRAB	**Tennant Creek**	**14.04**	**157**			**Pn**	**21 32 47.8**	**-4.0**
MATI	**Mati**	**14.05**	**351**	*e*P		**Pn**	**21 32 47.6**	**-4.3**
WRA	**Warramunga Arr**	**14.05**	**157**	Pn		Pn	21 32 47.3	-4.5
	comp=Z,9.9nm,0.3s,baz=339,slow=12,SNR=146							
WRA					Sn	**Sn**	**21 35 18.7**	**-7.9**
	comp=Z,10nm,0.3s,baz=329,slow=22,SNR=13							
WRA					LR	LR	21 38 29.2	
	comp=Z,3μm,20.8s,baz=305,slow=38							
WR0	**Warramunga Arr**	**14.14**	**156**			Pn	21 32 48.0	-5.1
JAGI	**Jajag, Banyuwa**	**14.27**	**263**	P		**Pn**	**21 32 56.8**	**+2.0**
	comp=Z,56nm,1.2s							
JAGI	**Jajag, Banyuwa**	**14.27**	**263**			**Pn**	**21 32 52.5**	**-2.3**
DAV	**Davao City (W)**	**14.29**	**348**	Pn		**Pn**	**21 32 52.7**	**-2.4**
	comp=Z,44nm,0.3s,baz=107,slow=5.1,SNR=5.5							
DAV					LR	LR	21 39 22.1	
	comp=Z,1μm,18.4s,baz=154,slow=41							
DAV	**Davao City (W)**	**14.29**	**348**			**Pn**	**21 32 51.0**	**-4.1**
KCP	**Kidapawan**	**14.34**	**346**	⇑*i*P		**Pn**	**21 32 53.2**	**-2.7**
KMMI	**Kalianget**	**14.40**	**269**	P		**Pn**	**21 32 59.4**	**+2.8**
	comp=Z,74nm,1.0s							
CTBH	**Cotabato--PC H**	**14.76**	**343**	⇑*i*P		**Pn**	**21 32 59.0**	**-2.4**
BUKP	**Musuan**	**15.19**	**347**	*e*P		**Pn**	**21 33 02.9**	**-4.2**
PAGZ	**Pagadian**	**15.62**	**341**	*e*P		**Pn**	**21 33 08.9**	**-3.8**
CGP	**Cagayan de Oro**	**15.83**	**346**	*e*P		**Pn**	**21 33 12.6**	**-2.8**
GRJI	**Gresik**	**15.88**	**269**	P		P	21 33 28.3	+8.9
COEN	**Coen**	**16.01**	**117**	P		**Pn**	**21 33 14.2**	**-3.5**
	baz=16,SNR=64							
COEN	**Coen**	**16.01**	**117**			**Pn**	**21 33 14.4**	**-3.3**
COEN					IAmb	IAmb	21 33 22.0	
	comp=Z,179nm,0.9s							
PSA00	**Pilbara Seismi**	**16.70**	**209**			**Pn**	**21 33 23.9**	**-2.5**
PSA00					IAmb	IAmb	21 33 36.0	
	comp=Z,243nm,0.9s							
SPMM	**Sapulut**	**16.72**	**314**	P		**P**	**21 33 33.0**	**+4.3**
NGJI	**Ngawi**	**16.88**	**268**	P		P	21 33 38.7	+8.2
AS31	**Alice Springs**	**17.35**	**163**			**Pn**	**21 33 31.7**	**-2.9**
ASAR	**Alice Springs**	**17.35**	**163**	P		**Pn**	**21 33 31.7**	**-3.0**
	comp=Z,3.1nm,0.3s,baz=334,slow=9.9,SNR=76							
ASAR				S		**Sn**	**21 36 37.1**	**-10**
	comp=Z,1.1nm,0.3s,baz=350,slow=26,SNR=4.7							
ASAR					LR	LR	21 40 39.1	
	comp=Z,2μm,18.6s,baz=340,slow=38							
MSLP	**Maasin**	**17.42**	**348**	*e*P		**Pn**	**21 33 30.6**	**-4.8**
WOJI	**Wonogiri, Jawa**	**17.42**	**266**	P		**P**	**21 33 38.8**	**+2.3**
	comp=Z,112nm,1.1s							
LLP	**Lapu-Lapu**	**17.80**	**345**	*e*P		**Pn**	**21 33 38.6**	**-1.6**
OCLP	**Ormoc**	**18.36**	**348**	*e*S		**Pn**	**21 33 47.7**	**+0.7**
PMG	**Port Moresby**	**18.64**	**99**	*ce*P		**Pn**	**21 33 50.2**	**-0.3**
PMG					pmax	pmax		
	comp=Z,764nm,0.9s							
PMG	**Port Moresby**	**18.64**	**99**	P		**Pn**	**21 33 50.4**	**0.0**
	comp=Z,5.1nm,0.3s,baz=282,slow=6.5,SNR=48							
PMG					LR	LR	21 41 39.4	
	comp=Z,1μm,20.1s,baz=265,slow=39							
PMG	**Port Moresby**	**18.64**	**99**	P		**P**	**21 33 47.6**	**-2.3**
PMG					IAmb	IAmb	21 33 52.4	
	comp=Z,170nm,0.9s							
SBUM	**Sibu**	**18.75**	**300**	P		**P**	**21 33 47.3**	**-3.8**
SBUM	**Sibu**	**18.75**	**300**	P		**Pn**	**21 33 54.0**	**+2.2**
MTSU	**Mount Surprise**	**18.98**	**127**	P		**P**	**21 33 53.1**	**-0.5**
	baz=19,SNR=124							
KPJI	**Karang Pucung**	**19.39**	**268**	P		**Pn**	**21 34 01.2**	**+1.7**
	comp=Z,87nm,0.9s							
KSM	**Kuching**	**20.00**	**294**	P		**P**	**21 34 02.7**	**-2.0**
KSM					IAmb	IAmb	21 34 16.1	
	comp=Z,84nm,0.9s							
KSM	**Kuching**	**20.00**	**294**	P		**Pn**	**21 34 06.0**	**-0.7**
CISI	**Cisompet, Garu**	**20.50**	**267**	P		**P**	**21 34 07.6**	**-2.7**
LEM	**Lembang**	**20.71**	**269**	P		**P**	**21 34 10.1**	**-2.5**
	comp=Z,7.0nm,0.4s,baz=5.3,slow=19,SNR=2.6							
GIRL	**Giralia**	**20.72**	**220**	P		**P**	**21 34 13.6**	**+1.0**
	baz=21,SNR=10.0							
GIRL	**Giralia**	**20.72**	**220**	P		**P**	**21 34 10.7**	**-1.9**
TPI	**Tapunggendan**	**21.17**	**281**	P		P	21 34 25.3	+7.8
CNJI	**Cibinong**	**21.18**	**268**	P		**P**	**21 34 19.6**	**+2.0**
	comp=Z,2μmcomp=Z,152nm,1.0s							
DBJI	**Dramaga**	**21.58**	**270**	P		P	21 34 29.8	+7.9
CTA	**Charters Tower**	**21.59**	**129**	P		**P**	**21 34 22.6**	**+0.7**
	comp=Z,80nm,0.9s,baz=304,slow=13,SNR=32							
CTA					LR	LR	21 43 42.1	
	comp=Z,2μm,18.6s,baz=307,slow=39							
TGY	**Tagaytay City**	**22.28**	**340**	P		**P**	**21 34 26.8**	**-2.6**
	comp=Z,131nm,0.3s,baz=112,slow=13,SNR=2.6							
KRVT	**Keravat (AS076**	**23.59**	**85**	P		**P**	**21 34 42.3**	**-0.5**
	comp=Z,49nm,0.8s,baz=6.5,slow=20,SNR=2.9							
KRVT					LR	LR	21 45 54.7	
	comp=Z,530nm,18.6s,baz=256,slow=42							
FORT	**Forrest**	**23.64**	**181**	P		**P**	**21 34 43.4**	**+0.3**
	baz=24,SNR=40							
FORT	**Forrest**	**23.64**	**181**	P		**P**	**21 34 41.1**	**-1.9**
KLSI		**23.73**	**274**	P		**P**	**21 34 47.7**	**+3.5**
	comp=Z,20nm,1.0s							
KASI	**Kota Agung**	**23.88**	**272**	P		P	21 34 53.3	+7.8
PMBI	**Palembang**	**23.96**	**279**	P		**P**	**21 34 47.5**	**+1.2**
	comp=Z,3μmcomp=Z,308nm,1.2s							
MDSI	**Maura Dua**	**24.30**	**275**	P		**P**	**21 34 49.7**	**+0.3**
	comp=Z,668nmcomp=Z,30nm,1.7s							
QLP	**Quilpie**	**24.56**	**144**	P		**P**	**21 34 51.8**	**+0.2**
	baz=25,S

baz=32,SNR=11
ARMA Armidale 31.84 140 P **P** **21 35 56.0 -0.8**
GSI Gunungsitoli 31.92 284 P **P** **21 35 54.4 -3.2**
comp=Z,95nm,1.2s
GSI Gunungsitoli 31.92 284 P **P** **21 35 55.7 -1.9**
GSI IAmb IAmb 21 36 07.4
comp=Z,70nm,0.9s
ARPS Mount Arapiles 32.02 160 P **P** **21 35 58.9 +0.8**
baz=32,SNR=47
YNG Young 32.79 149 P **P** **21 36 05.1 +0.1**
baz=33,SNR=7.9
LHMI Lhok Sumawe 33.73 290 P **P** **21 36 12.4 -1.0**
comp=Z,118nm,0.9s
LHMI Lhok Sumawe 33.73 290 P **P** **21 36 12.1 -1.3**
CAN Canberra 33.89 149 P **P** **21 36 13.4 -1.2**
CAN pmax pmax
comp=Z,39nm,0.8s
CAN Canberra 33.89 149 P **P** **21 36 13.4 -1.2**
CAN IAmb IAmb 21 36 16.7
comp=Z,39nm,0.8s
MLSI Meulaboh, Aceh 33.92 288 P **P** **21 36 11.4 -3.6**
comp=Z,155nm,0.7s
TOO Toolangi 34.12 156 P **P** **21 36 16.2 -0.3**
baz=34,SNR=12
TOO Toolangi 34.12 156 P **P** **21 36 14.3 -2.2**
TOO pmax pmax
comp=Z,47nm,0.9s
TOO Toolangi 34.12 156 P **P** **21 36 14.2 -2.2**
TOO IAmb IAmb 21 36 18.8
comp=Z,47nm,0.9s
JCJ Chichijima 36.42 21 P **P** **21 36 36.2 -0.2**
comp=Z,123nm,0.9s,baz=278,slow=20,SNR=3.6
CMAR Chiang Mai Arr 38.60 311 P **P** **21 36 54.9 -0.1**
comp=Z,3.7nm,0.9s,baz=141,slow=7.0,SNR=29
CMAR PcP **PcP** **21 39 07.5 +0.5**
comp=Z,3.9nm,0.8s,baz=153,slow=2.8,SNR=13
CMAR LR LR 21 53 44.5
comp=Z,376nm,20.7s,baz=138,slow=38
CHTO Chiang Mai 38.82 312 P **P** **21 36 54.4 -2.4**
CHTO pmax pmax
comp=Z,23nm,1.0s
CHTO Chiang Mai 38.82 312 P **P** **21 36 54.4 -2.4**
GYA Guiyang 39.44 328⇑*iP* **P** **21 37 02.7 +0.7**
GYA pP pP 21 37 12.1 +0.3
GYA PP **PnPn** **21 38 37.9 +1.8**
GYA S **S** **21 43 01.2 -0.4**
GYA sS sS 21 43 16.7 -2.3
GYA SS **SS** **21 45 45.5 -11**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,150nm,6.6s
GYA LR LR
comp=Z,360nm,13.8s
GYA LR LR
comp=Z,210nm,11.0s
GYA LR LR
comp=Z,320nm,13.9s
DZM Mont Dzumac 39.54 116 *e*LR LR 21 47 55.5
comp=Z,788nm,26.0s
DZM Mont Dzumac 39.54 116 P **P** **21 37 02.1 -0.8**
WHN Wuhan 39.73 341⇑P **P** **21 37 06.3 +2.1**
WHN S **S** **21 43 07.0 +1.5**
WHN LR LR
comp=Z,580nm,6.9s
WHN LR LR
comp=Z,650nm,5.6s
WHN LR LR
comp=Z,1μm,23.3s
NJ2 Nanjing 39.92 347 *e*P **P** **21 37 06.3 +0.5**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
JNU Nakatsue 39.98 3 P **P** **21 37 05.5 -0.9**
comp=Z,10nm,0.7s,baz=249,slow=0.8,SNR=7.2
JNU Nakatsue 39.98 3 P **P** **21 37 02.9 -3.5**
JNU IAmb IAmb 21 37 15.5
comp=Z,35nm,1.0s
KMI Kunming 40.60 323 P **P** **21 37 13.6 +1.8**
KMI pP pP 21 37 21.6 -0.1
KMI S **S** **21 43 20.5 +1.3**
KMI SS **SS** **21 46 19.6 -0.7**
KMI pmax pmax
comp=Z,21nm,1.7s
KMI pmax pmax
comp=Z,360nm,6.0s
KMI LR LR
comp=Z,190nm,6.8s
KMI LR LR
comp=Z,290nm,11.2s
KMI LR LR
comp=Z,190nm,9.0s
ENH Enshi 41.32 335 P **P** **21 37 16.2 -1.2**
INU Inuyama 42.90 10 P **P** **21 37 28.4 -1.8**
TJN Taejon 43.18 359*ce*P **P** **21 37 32.0 -0.4**
KSRS Korea Array 44.24 359 P **P** **21 37 40.8 -0.2**
comp=Z,9.6nm,0.7s,baz=178,slow=9.4,SNR=24
KSRS PcP **PcP** **21 39 25.3 +0.3**
comp=Z,1.8nm,0.7s,baz=175,slow=2.5,SNR=2.9
KSRS LR LR 21 53 47.1
comp=Z,270nm,20.4s,baz=172,slow=33
MJAR Matsushiro Arr 44.28 11 P **P** **21 37 39.8 -1.6**
comp=Z,8.6nm,0.8s,baz=186,slow=9.2,SNR=22
MJAR LR LR 21 54 03.4
comp=Z,234nm,21.0s,baz=185,slow=33
MAJO Matsushiro 44.28 11 P **P** **21 37 39.4 -1.9**
MAJO pmax pmax
comp=Z,36nm,0.9s
MAJO Matsushiro 44.28 11 P **P** **21 37 39.4 -1.9**
MAJO IAmb IAmb 21 37 48.5
comp=Z,36nm,0.9s
MAT Matsushiro 44.28 11 P **P** **21 37 39.2 -2.1**
MAT S **S** **21 44 12.2 -0.5**
MJB9 Matsu-Tunnel 44.29 11 IAmb IAmb 21 37 48.5
comp=Z,36nm,0.9s
INCN Inchon 44.30 358 P **P** **21 37 39.7 -1.8**
INCN pmax pmax
comp=Z,32nm,1.0s
INCN Inchon 44.30 358 P **P** **21 37 39.6 -1.8**
INCN IAmb IAmb 21 37 50.7
comp=Z,32nm,0.9s
CD2 Chengdu 44.53 329⇑*iP* **P** **21 37 41.4 -2.0**
CD2 S **S** **21 44 14.1 -2.4**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,250nm,6.1s
CD2 LR LR
comp=Z,940nm,10.6s
CD2 LR LR
comp=Z,720nm,11.0s
CD2 LR LR
comp=Z,480nm,8.4s
XAN Xi'an 44.84 337 P **P** **21 37 44.9 -1.0**
XAN PcP **PcP** **21 39 25.1 -2.2**
XAN S **S** **21 44 13.8 -7.2**
XAN SS **ScS** **21 47 38.7 -1.9**
XAN pmax pmax
comp=Z,7.0nm,0.9s
XAN pmax pmax
comp=Z,220nm,5.9s
XAN Xi'an 44.84 337 P P 21 37 40.1 -5.8
XAN pmax pmax
comp=Z,14nm,1.0s
XAN Xi'an 44.84 337 P P 21 37 40.1 -5.8
DL2 Dalian 46.13 353 *e*P **P** **21 37 54.6 -1.3**
DL2 S **S** **21 44 38.0 -1.3**
DL2 pmax pmax
comp=Z,29nm,1.2s
DL2 pmax pmax
comp=Z,250nm,11.2s
DL2 LR LR
comp=Z,190nm,23.4s
DL2 LR LR
comp=Z,220nm,14.2s
SHL Shillong 48.11 314 P **P** **21 38 09.9 -1.9**
SHL pmax pmax
comp=Z,27nm,0.8s
SHL Shillong 48.11 314 P **P** **21 38 09.9 -1.9**
SHL IAmb IAmb 21 38 25.7
comp=Z,27nm,0.8s
BJI Beijing 48.18 347 *e*P **P** **21 38 12.2 +0.3**
BJI sP **sP** **21 38 24.7 -0.6**
BJI S **S** **21 45 12.1 +3.6**
BJI sS **sS** **21 45 28.0 +1.5**
BJI pmax pmax
comp=Z,7.0nm,0.8s
BJI pmax pmax
comp=Z,160nm,4.1s
BJI LR LR
comp=Z,220nm,6.1s
BJI LR LR
comp=Z,250nm,5.5s
BJI LR LR
comp=Z,210nm,12.7s
LZH Lanzhou 48.73 333 *e*P **P** **21 38 16.5 +0.1**
LZH pP pP 21 38 26.0 -0.5
LZH sP pwP 21 38 30.5 -0.2
LZH S **S** **21 45 13.8 -2.9**
LZH sS sS 21 45 30.1 -4.1
LZH SS **SS** **21 48 43.9 -3.7**
LZH pmax pmax
comp=Z,19nm,1.3s
LZH pmax pmax
comp=Z,220nm,5.8s
LZH LR LR
comp=Z,540nm,15.2s
LZH LR LR
comp=Z,320nm,14.9s
LZH LR LR
comp=Z,520nm,15.3s
SNY Shenyang 48.82 355⇓P **P** **21 38 15.0 -1.7**
SNY S **S** **21 45 12.0 -5.3**
SNY pmax pmax
comp=Z,16nm,1.4s
SNY LR LR
comp=Z,460nm,21.4s
SNY LR LR
comp=Z,500nm,23.5s
MSHR Mys Shultsa 49.42 3 *i*P **P** **21 38 21.4 +0.1**
MSVF Nonsavu 49.44 107 *i*P **P** **21 38 22.1 0.0**
MSVF pmax pmax
comp=Z,23nm,0.9s
MSVF Nonsavu 49.44 107 P **P** **21 38 20.5 -1.6**
MSVF IAmb IAmb 21 38 23.5
comp=Z,35nm,0.9s
PALK Pallekele 49.72 286 P **P** **21 38 22.8 -1.4**
comp=Z,5.8nm,0.9s,baz=77,slow=9.5,SNR=3.4
PALK Pallekele 49.72 286 P **P** **21 38 22.1 -2.1**
PALK IAmb IAmb 21 38 32.5
comp=Z,24nm,1.0s
OUZ Omahuta 49.97 131 P **P** **21 38 24.4 -1.3**
OUZ IAmb IAmb 21 38 28.1
comp=Z,40nm,1.0s
VLA Vladivostok 50.00 3 *i*P **P** **21 38 25.7 0.0**
VLA pmax pmax
comp=Z,33nm,1.0s
HHC Hu-ho-hao-te 50.11 343 *e*P **P** **21 38 28.0 +1.2**
HHC pmax pmax
comp=Z,6.0nm,1.0s
HHC pmax pmax
comp=Z,44nm,5.7s
CHLP Challavanipeta 50.62 301 *e*P **P** **21 38 29.6 -1.3**
CN2 Changchun 50.66 357 *e*P **P** **21 38 29.4 -1.3**
CN2 *es*P pwP 21 38 47.2 +2.1
CN2 *e*S **S** **21 45 40.6 -2.4**
CN2 *e*SS **SS** **21 49 13.0 -5.0**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,280nm,17.0s
CN2 LR LR
comp=Z,210nm,17.0s
USA0B Ussuriysk Arra 51.08 3 *i*P **P** **21 38 33.9 0.0**
USA0B Ussuriysk Arra 51.08 3 P **P** **21 38 32.9 -1.0**
USA0B IAmb IAmb 21 38 35.7
comp=Z,31nm,1.1s
USRK Ussuriysk Ar. 51.08 3 P **P** **21 38 33.6 -0.3**
comp=Z,14nm,0.6s,baz=183,slow=6.9,SNR=61
USRK LR LR 22 00 34.1
comp=Z,177nm,19.8s,baz=160,slow=36
LSA Lhasa 51.18 317 P **P** **21 38 35.0 -0.5**
LSA Lhasa 51.18 317 P **P** **21 38 32.6 -2.9**
LSA pmax pmax
comp=Z,28nm,0.8s
LSA Lhasa 51.18 317 P **P** **21 38 32.6 -2.9**
LSA IAmb IAmb 21 38 47.1
comp=Z,28nm,0.8s
MDJ Mudanjiang 51.41 1 P **P** **21 38 35.6 -0.7**
MDJ pmax pmax
comp=Z,35nm,1.6s
MDJ Mudanjiang 51.41 1 IAmb IAmb 21 38 48.7
comp=Z,26nm,0.9s
LBZ Lake Benmore 51.98 143 P **P** **21 38 40.0 -0.7**
LBZ IAmb IAmb 21 38 41.7
comp=Z,34nm,0.9s
ODAN Odare 52.14 312 *e*P **P** **21 38 41.3 -1.1**
comp=Z,107nm,0.8s
RPZ Rata Peaks 52.15 142 P **P** **21 38 42.9 +0.9**
comp=Z,137nm,0.8s,baz=305,slow=2.4,SNR=33
RPZ LR LR 22 00 04.1
comp=Z,798nm,20.5s,baz=300,slow=35
TAPN Taplejung 52.18 313 *e*P **P** **21 38 41.7 -1.1**
comp=Z,147nm,0.9s
PVM Polavaram 52.20 298 *e*P **P** **21 38 41.0 -1.7**
TEY Ternei 52.33 7‖*e*P **P** **21 38 42.4 -0.8**
TEY pmax pmax
comp=N,30nm,1.0s
TEY pmax pmax
comp=Z,50nm,1.0s
THZ Tophouse 52.35 139 IAmb IAmb 21 38 46.3
comp=Z,45nm,0.9s
NNZ Nelson 52.40 138 P **P** **21 38 44.1 +0.2**
DUWZ D'Urville Isla 52.58 137 P **P** **21 38 46.6 +1.4**
SKHT Srikalahasti 52.62 293 *e*P **P** **21 38 43.9 -2.0**
RAMN Ramite 52.77 312 *e*P **P** **21 38 46.4 -0.7**
comp=Z,192nm,0.7s
TWVZ Taurewa 52.88 134 P P 21 38 57.8 +10
MYLAV Mylavaram 52.88 297 *e*P **P** **21 38 45.9 -1.8**
TUWZ Tuamarina 52.88 138 P **P** **21 38 47.8 +0.4**
TCW Tory Channel 53.00 137 P **P** **21 38 48.6 +0.3**
KHZ Kahutara 53.08 139 P **P** **21 38 48.1 -0.7**
ADKI Addanki 53.13 296 *e*P **P** **21 38 47.2 -2.5**
MQZ McQueen's Vall 53.14 141 IAmb IAmb 21 38 52.1
comp=Z,38nm,1.0s
KIW Kapiti Island 53.27 137 P **P** **21 38 50.9 +0.6**
GTA Gaotai 53.27 332⇑P **P** **21 38 49.8 -0.7**
GTA pP pP 21 38 59.5 -1.1
GTA sP sP 21 39 03.4 -0.6
GTA pmax pmax
comp=Z,9.0nm,1.5s
GTA pmax pmax
comp=Z,68nm,4.8s
GTA LR LR
comp=Z,190nm,17.1s
GTA LR LR
comp=Z,200nm,19.4s
OGWZ Otaki Gorge 53.43 137 P **P** **21 38 51.9 +0.3**
JIRN Jiri 53.47 312 *e*P **P** **21 38 51.3 -1.1**
comp=Z,209nm,0.8s
BHW Baring Head 53.49 137 P **P** **21 38 51.6 -0.3**
MRZ Mangatainoka R 53.64 136 P **P** **21 38 53.1 0.0**
GGR Gangavaram 53.67 298 *e*P **P** **21 38 51.8 -1.9**
HOWZ Holdsworth Sta 53.70 137 P **P** **21 38 53.4 -0.1**
MSWZ Moikau Station 53.75 137 P **P** **21 38 53.9 0.0**
URZ Urewera 53.75 133 P **P** **21 38 53.5 -0.4**
comp=Z,23nm,1.0s,baz=255,slow=7.6,SNR=7.7
URZ Urewera 53.75 133 IAmb IAmb 21 38 54.5
comp=Z,39nm,1.2s
PLWZ Palliser 53.82 137 P **P** **21 38 54.7 +0.3**
GUN Gumba 53.84 312 *e*P **P** **21 38 54.1 -1.0**
comp=Z,192nm,0.8s
NJS Nagarjunasagar 53.98 296 *e*P **P** **21 38 53.5 -2.4**
PKI Pulchoki 54.00 311 *e*P **P** **21 38 54.8 -1.4**
comp=Z,12nm,0.9s
PKIN Phulchoki 54.01 311 *e*P **P** **21 38 54.9 -1.4**
comp=Z,49nm,0.8s
TRWZ Traveller 54.04 137 P **P** **21 38 56.1 +0.2**
TMWZ Te Maipa 54.05 137 P **P** **21 38 56.5 +0.4**
BFZ Birch Farm 54.11 136 P **P** **21 38 57.1 +0.6**
KKN Kakani 54.21 312 *e*P **P** **21 38 56.5 -1.2**
comp=Z,90nm,0.9s
DMN Daman 54.24 311 *e*P **P** **21 38 56.9 -1.1**
comp=Z,124nm,0.9s
RPR Rampur 54.87 299 *e*P **P** **21 39 00.6 -1.7**
HYB Hyderabad 54.97 297 *i*P **P** **21 39 02.0 -1.1**
YSS Yuzh-Sakhalins 55.22 12 *e*P **P** **21 39 03.9 -0.4**
YSS *e* 21 39 08.6
YSS *e*S **S** **21 46 45.6 +0.6**
YSS *e*PS PKiKP 21 46 51.5 +14
YSS *e*SS **SS** **21 50 30.1 +0.2**
YSS pmax pmax
comp=Z,30nm,0.9s
YSS MLR MLR
comp=Z,400nm,17.0s
URV Uravakonda 55.26 294 *e*P **P** **21 39 02.8 -2.4**
DANN Dangsing 55.64 311 *e*P **P** **21 39 07.0 -1.1**
comp=Z,182nm,0.8s
DMPR Damasthipur 55.75 297 *e*P **P** **21 39 05.6 -3.2**
KLR Kul'dur 56.09 3 *i*P **P** **21 39 10.5 0.0**
KLR pmax pmax
comp=Z,38nm,1.3s
KLR MLR MLR
comp=Z,137nm,16.0s
KLRI Killari 56.94 297 *e*P **P** **21 39 13.8 -3.5**
ULN Ulaanbaatar 57.83 343*ce*P **P** **21 39 23.0 -0.1**
ULN pmax pmax
comp=Z,29nm,2.5s
ULN Ulaanbaatar 57.83 343 P **P** **21 39 21.5 -1.6**
GRNR Gornyy 57.96 6⇑*iP* **P** **21 39 23.8 0.0**
GRNR pmax pmax
comp=Z,10.0nm,1.2s
SONM Songino Array 57.99 343 P **P** **21 39 24.1 -0.1**
comp=Z,6.6nm,0.8s,baz=160,slow=7.3,SNR=39
SONM PKP2bc 22 09 18.9
comp=Z,1.6nm,1.0s,baz=345,slow=2.5,SNR=6.2
TYV Tymovskoe 58.94 10 *e*P **P** **21 39 31.0 +0.5**
TYV pmax pmax
comp=Z,16nm,0.9s
TYV pmax pmax
comp=Z,300nm,3.5s
ZEA Zeya 60.54 359 *e*P **P** **21 39 41.0 -0.5**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,41nm,1.0s
ZAK Zakamensk 61.20 342 *e*P **P** **21 39 43.3 -2.9**
ZAK pmax pmax
comp=Z,11nm,1.4s
TLY Talaya 62.23 343 *i*P **P** **21 39 53.1 0.0**
TLY pmax pmax
comp=Z,14nm,1.5s
WMQ Urumqi 62.60 328 P **P** **21 39 55.7 0.0**
WMQ pP pP 21 40 05.4 -0.5
WMQ sP pwP 21 40 12.0 +1.2
WMQ pmax pmax
comp=Z,25nm,0.7s
WMQ pmax pmax
comp=Z,340nm,4.9s
WMQ LR LR
comp=Z,700nm,29.0s
WMQ LR LR
comp=Z,1μm,29.1s
WMQ LR LR
comp=Z,350nm,28.9s
WMQ Urumqi 62.60 328 IAmb IAmb 21 40 06.6
comp=Z,33nm,0.9s
MOY Mondy 63.04 341 *e*P **P** **21 39 58.5 0.0**
MOY pmax pmax
comp=Z,49nm,1.5s
PETK Petropavlovsk- 64.83 19 P **P** **21 40 09.3 -0.8**
comp=Z,13nm,0.8s,baz=177,slow=2.0,SNR=12
PETK PcP **PcP** **21 40 42.3 -0.9**
comp=Z,9.9nm,0.7s,baz=203,slow=3.2,SNR=8.8
PET Petropavlovsk 65.07 20 *e*P **P** **21 40 15.4 +3.8**
PET *e*S **S** **21 48 53.9 +2.7**
PET MLR MLR
comp=Z,400nm,14.0s
BOD Bodaibo 65.68 352 *e*P **P** **21 40 14.8 -0.8**
BOD pmax pmax
comp=Z,29nm,1.7s
NIL Nilore 66.09 311 P **P** **21 40 17.1 -1.6**
NIL pmax pmax
comp=Z,55nm,0.7s
NIL Nilore 66.09 311 P **P** **21 40 17.1 -1.6**
PDGK Podgornoye 66.90 323 *i*P **P** **21 40 23.1 -0.8**
PDGK pmax pmax
comp=Z,31nm,1.1s
KSH Kashi 67.02 318⇑*iP* **P** **21 40 24.8 +0.1**
KSH pP pwP 21 40 40.3 +1.7
KSH PP **PP** **21 42 59.0 +6.2**
KSH S **S** **21 49 11.3 -4.6**
KSH sS sS 21 49 38.3 +5.7
KSH ScS **ScS** **21 50 20.8 +1.2**
KSH SS **SS** **21 53 37.2 +1.8**
KSH pmax pmax
comp=Z,68nm,0.8s
KSH pmax pmax
comp=Z,560nm,4.6s
KSH LR LR
comp=Z,350nm,4.6s
KSH LR LR
comp=Z,210nm,3.9s
KSH LR LR
comp=Z,540nm,6.6s
MK31 Makanchi Array 67.42 328⇑*eP* **P** **21 40 26.1 -0.9**
MK31 pmax pmax
comp=Z,23nm,0.8s
MK31 Makanchi Array 67.42 328 IAmb IAmb 21 40 28.6
comp=Z,17nm,0.8s
MKAR Makanchi Array 67.42 328*ce*P **P** **21 40 26.3 -0.7**
MKAR pmax pmax
comp=Z,20nm,0.7s
MKAR Makanchi Array 67.42 328 P **P** **21 40 26.7 -0.3**
comp=Z,20nm,0.7s,baz=130,slow=7.5,SNR=189
MKAR PKP2bc 22 08 53.2
comp=Z,0.9nm,1.1s,baz=270,slow=1.2,SNR=3.8
MAKZ Makanchi 67.60 327 P **P** **21 40 26.2 -1.9**
MAKZ pmax pmax
comp=Z,23nm,1.2s
MAKZ Makanchi 67.60 327 P **P** **21 40 26.2 -1.9**
MAKZ IAmb IAmb 21 40 29.6
comp=Z,23nm,1.1s
NRN Naryn 68.00 320 IAmb IAmb 21 40 34.2
comp=Z,18nm,1.1s
MA2 Magadan 68.72 12*ce*P **P** **21 40 35.4 +0.6**
MA2 pmax pmax
comp=Z,63nm,2.1s
KZA Kyzart 68.82 320 P **P** **21 40 36.8 +0.5**
SNR=10
YAK Yakutsk 68.85 1*c i*P **P** **21 40 34.6 -0.9**
YAK *e**PP **pP** **21 40 43.2 -2.7**
YAK *e* 21 40 57.6
YAK *e* 21 43 05.8
YAK *e*PPP PPP 21 44 48.3
YAK *e*S **S** **21 49 37.6 +1.0**
YAK *e**SS **sS** **21 49 57.0 +4.0**
YAK *e*SS **SS** **21 53 57.3 -5.2**
YAK pmax pmax
comp=Z,44nm,0.9s
YAK pmax pmax
comp=N,19nm,1.3s
YAK pmax pmax
comp=Z,270nm,6.1s
YAK pmax pmax
comp=N,140nm,5.6s
YAK pmax pmax
comp=E,129nm,5.2s
YAK smax smax
comp=E,172nm,5.2s
YAK smax smax
comp=N,145nm,6.2s
YAK Yakutsk 68.85 1 P **P** **21 40 34.5 -1.1**
YAK IAmb IAmb 21 40 44.9
comp=Z,46nm,0.8s
TKM2 Tokmak 2 69.04 321 *i*P **P** **21 40 36.8 -0.7**
TKM2 pmax pmax
comp=Z,29nm,0.7s
TKM2 Tokmak 2 69.04 321 P **P** **21 40 37.3 -0.1**
SNR=14
KBK Karagaybulak 69.31 321 P **P** **21 40 39.2 +0.1**
SNR=9.2
UCH Uchtor 69.36 320 P **P** **21 40 40.2 +0.4**
SNR=19
AAK Ala-Archa 69.59 320*ce*P **P** **21 40 41.2 +0.4**
AAK pmax pmax
comp=Z,40nm,1.3s
AAK Ala-Archa 69.59 320 P **P** **21 40 41.1 +0.3**
SNR=12
AAK Ala-Archa 69.59 320 P **P** **21 40 38.3 -2.4**
AAK IAmb IAmb 21 40 51.6
comp=Z,23nm,0.8s
FRU1 Bishkek 69.59 321 IAmb IAmb 21 40 51.5
comp=Z,14nm,0.8s
CHMS Chumysh 69.61 321 P **P** **21 40 40.4 -0.4**
SNR=7.7

KBL Kabul 69.62 311 P P 21 40 39.8 -1.4
KBL pmax pmax
comp=Z,28nm,0.8s
KBL Kabul 69.62 311 P P 21 40 39.8 -1.4
KBL IAmb IAmb 21 40 51.6
comp=Z,28nm,0.8s
AML Almayashu 69.84 320 P P 21 40 42.9 +0.2
SNR=36
ARSB Arslanbob 69.90 319 P P 21 40 40.6 -2.1
USP Ospenovka 69.91 321 P P 21 40 42.5 0.0
SNR=18
EKS2 Erkin-Say 70.05 320 P P 21 40 44.0 +0.4
SNR=12
BTK Batken 70.75 317 IAmb IAmb 21 41 04.2
comp=Z,19nm,0.8s
ZAA0 Zalesovo Array 70.94 334 P P 21 40 46.9 -1.7
ZAA0 IAmb IAmb 21 40 50.1
comp=Z,32nm,1.1s
ZALV Zalesovo Beam 70.94 334 P P 21 40 47.4 -1.2
comp=Z,16nm,0.7s,baz=122,slow=4.7,SNR=75
ZALV PKP2bc **P'P'bc 22 08 40.3 -0.8**
comp=Z,0.4nm,0.6s,baz=318,slow=1.9,SNR=3.9
KURK Kurchatov 71.75 329*ce*P **P 21 40 53.2 -0.3**
KURK pmax pmax
comp=Z,94nm,1.3s
KURK Kurchatov 71.75 329 P P 21 40 52.0 -1.6
SEY Seymchan 72.11 11 *i* P **P 21 40 55.9 +0.5**
KK31 Karatay Array 72.36 319 P P 21 40 55.3 -2.1
KK31 pmax pmax
comp=Z,10.0nm,0.9s
KK31 Karatay Array 72.36 319 P P 21 40 55.3 -2.1
KKAR Karatay Array 72.36 319 P P 21 40 55.3 -2.1
KKAR pmax pmax
comp=Z,10.0nm,0.9s
KKAR Karatay Array 72.36 319 P P 21 40 55.2 -2.1
VNDA Vanda 72.61 173 P P 21 40 57.4 -0.9
comp=Z,8.3nm,0.7s,baz=320,slow=6.9,SNR=46
VNDA LR LR 22 13 10.1
comp=Z,483nm,18.2s,baz=337,slow=36
VNDA Vanda 72.61 173 P P 21 40 57.2 -1.1
MAW Mawson 74.38 201 P P 21 41 09.3 +0.6
comp=Z,7.0nm,0.3s,baz=114,slow=7.1,SNR=21
MAW LR LR 22 12 23.4
comp=Z,250nm,19.5s,baz=58,slow=35
TIXI Tiksi 78.51 0*ce*P **P 21 41 31.6 -0.4**
TIXI pmax pmax
comp=Z,29nm,2.5s
TIXI MLR MLR
comp=Z,234nm,19.0s
TIXI Tiksi 78.51 0 P P 21 41 29.8 -2.3
GEYT Alibeck 79.08 311 P P 21 41 35.7 -0.3
comp=Z,4.9nm,0.9s,baz=157,slow=4.8,SNR=16
BILL Bilibino 79.48 14*ce*P **P 21 41 38.2 +0.7**
BILL *e* 21 44 35.2
BILL pmax pmax
comp=Z,12nm,1.3s
BILL MLR MLR
comp=Z,129nm,18.0s
BILL Bilibino 79.48 14 P P 21 41 36.1 -1.4
TBI Tubuai 79.99 112 *e*LR LR 22 06 45.0
comp=Z,282nm,29.8s
PPT2 Papeete2 80.27 107 *e*P **P 21 41 41.0 -1.9**
comp=Z,60nm,1.3s
PPT2 Papeete2 80.27 107 *e*LR LR 22 06 48.2
comp=Z,230nm,25.0s
PPT Papeete 80.27 107 P P 21 41 44.1 +1.3
comp=Z,53nm,0.9s,baz=289,slow=9.3,SNR=6.5
PPT LR LR 22 15 30.4
comp=Z,50nm,18.9s,baz=220,slow=34
PPTF Pamatai, Papee 80.28 107 P P 21 41 40.9 -2.1
TVO Taravao 80.56 107 *e*P **P 21 41 43.8 -0.6**
comp=Z,21nm,1.2s
AB31 Akbulak array 81.59 322⇓*e*P **P 21 41 47.7 -1.4**
AB31 pmax pmax
comp=Z,14nm,0.8s
QSPA South Pole Qui 82.96 180 P P 21 41 55.8 -0.4
comp=Z,30nm,0.8s,baz=315,slow=1.9,SNR=75
QSPA South Pole Qui 82.96 180 P P 21 41 54.0 -2.2
QSPA IAmb IAmb 21 41 56.8
comp=Z,28nm,0.7s
SYO Syowa Base 83.09 201⇓*e*P **P 21 41 55.3 -1.4**
SYO Syowa Base 83.09 201⇓*e*PcP **PcP 21 42 02.2 +1.0**
SYO Syowa Base 83.09 201⇑pP pP 21 42 06.0 -2.2
AKTO Aktyubinsk 83.17 323 *i* P **P 21 41 56.2 -1.2**
AKTO pmax pmax
comp=Z,53nm,1.1s
GAMB Gambell 83.52 23 pP 21 42 08.0 -1.9
SVE Sverdlovsk 84.01 329*d i* P **P 21 42 01.0 -0.5**
SVE pmax pmax
comp=Z,76nm,1.4s
ARU Arti 84.93 328*c i* P **P 21 42 05.1 -1.1**
ARU PPP PPP 21 47 13.5
ARU S **S 21 52 25.3 -6.8**
ARU pmax pmax
comp=Z,55nm,1.4s
ARU Arti 84.93 328 P P 21 42 03.8 -2.4
ARU IAmb IAmb 21 42 09.7
comp=Z,22nm,0.9s
ANM Nome 86.34 23 IAmb IAmb 21 42 14.4
comp=Z,17nm,0.9s
RAYN Ar Rayn 86.37 294 P P 21 42 10.7 -3.5
RAYN pmax pmax
comp=Z,8.0nm,0.9s
RAYN Ar Rayn 86.37 294 P P 21 42 10.7 -3.5
RDOG Red Dog Mine 88.65 20 IAmb IAmb 21 42 23.9
comp=Z,18nm,0.8s
SVW2 Sparrevohn 89.37 28 IAmb IAmb 21 42 44.2
comp=Z,20nm,0.9s
GROC Groznyy 89.45 314 *e*P **P 21 42 27.2 -1.2**
GROC pmax pmax
comp=Z,25nm,1.3s
TTA Tatalina 89.68 26 IAmb IAmb 21 42 29.6
comp=Z,34nm,1.1s
TBLG Delisi 89.97 312 P P 21 42 28.2 -2.7
TBLG pmax pmax
comp=Z,10.0nm,0.9s
TBLG Delisi 89.97 312 P P 21 42 28.1 -2.7
TBLG IAmb IAmb 21 42 44.8
comp=Z,10.0nm,0.9s
ZEI Tsey 90.75 313 *e*P **P 21 42 34.4 -0.4**
ZEI pmax pmax
comp=Z,33nm,2.3s
AKH Akhalkalaki 90.84 311 IAmb IAmb 21 42 49.3
comp=Z,7.8nm,0.9s
PPLA Purkeypile 91.36 27 IAmb IAmb 21 42 53.9
comp=Z,15nm,0.9s
KBZ Khabaz 91.61 314 P P 21 42 38.3 -0.1
KBZ Khabaz 91.61 314 P P 21 42 38.0 -0.4
comp=Z,2.2nm,0.8s,baz=107,slow=1.9,SNR=5.1
KBZ LR LR 22 31 28.5
comp=Z,67nm,19.1s,baz=76,slow=41
KIV Kislovodsk 91.80 314⇑*e*P **P 21 42 37.9 -1.5**
KIV *e* 21 46 22.3
KIV pmax pmax
comp=Z,9.0nm,1.7s
KIV MLR MLR
comp=Z,62nm,16.0s
NVL N'lazarevskaya 91.89 197 *e*P **P 21 42 37.7 -1.5**
NVL pmax pmax
comp=Z,9.0nm,0.9s
MLY Manley 92.43 25 IAmb IAmb 21 42 42.6
comp=Z,19nm,0.8s
GHO Glory Hole Cre 92.64 28 IAmb IAmb 21 42 53.3
comp=Z,17nm,0.8s
PRGR Permogore 92.73 332 *e*P **P 21 42 38.7 -4.5**
PRGR pmax pmax
comp=Z,7.0nm,0.8s
COLD Coldfoot 93.07 23 IAmb IAmb 21 42 45.1
comp=Z,7.0nm,0.7s
VRH Novokhopyorsk 93.38 321 *e*P P 21 42 52.6 +6.2
VRH pmax pmax
comp=Z,10.0nm,0.7s
TOLK Toolik Lake Re 93.56 21 IAmb IAmb 21 42 47.5
comp=Z,17nm,0.9s
TOLK Toolik Lake Re 93.56 21 P P 21 42 46.5 -0.5
baz=260
COLA College 93.62 25 *i* P **P 21 42 45.7 -1.5**
COLA pmax pmax
comp=Z,11nm,0.9s
HDA Harding Lake 93.94 26 P P 21 42 46.8 -1.9
baz=262
IL31 94.01 25 IAmb IAmb 21 42 47.4
comp=Z,14nm,0.9s
ILAR Eielson Array 94.01 25 P P 21 42 46.7 -2.3
comp=Z,9.5nm,0.8s,baz=267,slow=4.5,SNR=70
ILAR PKKPbc **PKKPdf 21 59 50.9 -2.3**
comp=Z,1.0nm,0.8s,baz=37,slow=2.1,SNR=9.9
ILAR LR LR 22 23 04.2
comp=Z,76nm,19.9s,baz=283,slow=34
VORD Divnogorie 94.88 321 *e*P **P 21 42 51.2 -2.1**
VORD pmax pmax
comp=Z,7.0nm,0.6s
VSR Storozhevoye 94.98 321 *e*P **P 21 42 51.4 -2.4**
VSR pmax pmax
comp=Z,10.0nm,0.6s
SCRK Sand Creek 95.17 26 IAmb IAmb 21 42 54.4
comp=Z,14nm,1.0s
LPSR Galich'ya Gora 95.25 322 *e*P **P 21 42 54.7 -0.2**
LPSR pmax pmax
comp=Z,10.0nm,1.6s
SNAA Sanae 95.29 194 P P 21 42 55.3 +0.3
SNAA Sanae 95.29 194 *i* P **P 21 42 55.4 +0.5**
SNAA Sanae 95.29 194 P P 21 42 53.2 -1.7
SNAA IAmb IAmb 21 42 56.4
comp=Z,14nm,1.0s
MOS Moscow 96.23 325 *e*P P 21 43 08.5 +9.2
MMAI Mount Meron Ar 96.35 302 LR LR 22 31 25.8
comp=Z,75nm,20.8s,baz=85,slow=39
TMCR Tamitsa 96.46 334 *e*P **P 21 42 57.2 -3.0**
TMCR pmax pmax
comp=Z,17nm,0.9s
OBN Obninsk 96.80 325⇓*e*P **P 21 43 00.1 -1.8**
OBN *e* 21 46 55.8
OBN pmax pmax
comp=Z,8.0nm,1.0s
BOSA Boshof 98.15 240 P P 21 43 07.8 -1.1
comp=Z,3.4nm,0.8s,baz=99,slow=2.5,SNR=4.1
BOSA LR LR 22 24 23.9
comp=Z,95nm,18.6s,baz=45,slow=34
BOSA Boshof 98.15 240 P P 21 43 05.2 -3.7
BRTR Keskin Array B 98.15 309 *i* P Pdif 21 43 08.8 +0.1
BRTR pmax pmax
comp=Z,1.0nm,1.0s
BRTR Keskin Array B 98.15 309 P P 21 43 07.8 -0.9
comp=Z,0.4nm,0.7s,baz=133,slow=5.4,SNR=4.0
BRTR PP **PP 21 47 12.1 +3.7**
comp=Z,1.0nm,0.9s,baz=106,slow=4.1,SNR=4.1
BRTR LR LR 22 35 34.6
comp=Z,33nm,18.5s,baz=40,slow=40
EPYK Eagle Plains 98.32 24 IAmb IAmb 21 43 09.3
comp=Z,16nm,1.0s
EPYK Eagle Plains 98.32 24 P P 21 43 07.6 -1.0
baz=272
INK Inuvik 99.44 22 IAmb IAmb 21 43 13.7
comp=Z,8.9nm,1.1s
ARCES ARCESS Array B 101.07 340 P Pdif 21 43 19.2 -1.6
comp=Z,4.7nm,0.7s,baz=72,slow=4.0,SNR=14
ARCES PKKPbc **PKKPbc 21 59 29.4 -5.3**
comp=Z,3.5nm,1.0s,baz=272,slow=2.7,SNR=13
AKASG Malin Array Be 101.25 320 P Pdif 21 43 20.5 -1.5
comp=Z,0.2nm,0.4s,baz=65,slow=4.7,SNR=4.1
AKASG PP **PP 21 47 37.8 +6.4**
comp=Z,0.3nm,0.5s,baz=78,slow=6.8,SNR=3.5
FINES FINESS Array B 102.06 331 P Pdif 21 43 23.2 -2.1
comp=Z,1.3nm,0.9s,baz=64,slow=9.8,SNR=3.2
C36M Paulatuk 102.66 20 P Pdif 21 43 26.5 -1.3
baz=284
MLR Muntele Rosu 103.76 315 PP PKiKP 21 47 52.9 +1.5
comp=Z,5.2nm,1.0s,baz=99,slow=5.3,SNR=5.6
IDI Anoyia 105.10 305 PKKPbc PKKPbc 21 59 22.7 +1.0
comp=Z,2.8nm,0.6s,baz=305,slow=8.3,SNR=7.9
YKA Yellowknife Ar 108.43 26 Pdiff **Pdif 21 43 52.1 -1.5**
comp=Z,0.7nm,0.7s,baz=292,slow=4.9,SNR=10.0
YKA PKiKP **PKiKP 21 47 58.5 -0.9**
comp=Z,0.7nm,0.7s,baz=300,slow=1.6,SNR=10.0
YKA PKKPbc **PKKPbc 21 59 08.8 -3.3**
comp=Z,0.8nm,0.6s,baz=110,slow=3.0,SNR=16
J05D Fort Rock, OR 109.53 47 P PKiKP 21 48 02.6 +0.3
baz=279
CONA Conrad Observa 110.28 319 *i* PKiKP **PKiKP 21 47 59.1 -4.3**
comp=Z,7.6nm,1.6s
GERES GERESS Array B 111.46 320 PKiKP **PKiKP 21 48 04.5 -1.2**
comp=Z,0.7nm,0.7s,baz=90,slow=1.7,SNR=5.9
GERES PP **PP 21 48 51.6 +5.0**
comp=Z,0.4nm,0.6s,baz=74,slow=4.2,SNR=2.3
GERES PKKPab **PKKPab 21 59 10.2 +0.2**
comp=Z,0.8nm,0.9s,baz=241,slow=2.7,SNR=5.5
NVAR Mina Array Bea 112.49 51 Pdiff **Pdif 21 44 11.9 -0.7**
comp=Z,0.1nm,0.3s,baz=252,slow=4.3,SNR=2.7
NVAR PKKP **PKKPdf 21 59 13.7 -5.0**
comp=Z,0.4nm,0.7s,baz=107,slow=4.8,SNR=4.1
WTTA Wattenberg 113.21 319 *i* PKiKP **PKiKP 21 48 08.1 -1.0**
comp=Z,4.9nm,0.7s
WATA Walderalm 113.23 319 *e*PKiKP **PKiKP 21 48 07.8 -1.4**
comp=Z,6.1nm,1.2s
WATA *i* PKKPab **PKKPab 21 59 03.0 +0.7**
comp=Z,15nm,2.3s
EDW2 Edwards Air Fo 113.26 55 P PKiKP 21 48 09.9 +0.4
baz=278
LRMC Laurel Mtn Rad 113.43 54 P PKiKP 21 48 10.6 +0.7
baz=278
MPMC Manual Prospec 113.50 54 P PKiKP 21 48 10.8 +0.7
baz=279
SQTA Sankt Quirin 113.50 319 *i* PKiKP **PKiKP 21 48 05.5 -4.1**
comp=Z,9.1nm,1.3s
MOTA Moosalm 113.54 319 *i* PKiKP **PKiKP 21 48 08.3 -1.4**
comp=Z,11nm,1.7s
DAVOX Davos/Dischmat 114.50 318 PKP PKPdf 21 48 10.3 -1.3
comp=Z,1.6nm,0.6s
DAVOX PKKPab **PKKPab 21 58 57.7 +1.0**
PFO Pinyon Flats O 114.70 56 P PKiKP 21 48 12.5 +0.2
baz=278
MONP2 Monument Peak 114.83 57 P PKiKP 21 48 13.3 +0.5
baz=278
BELC Belle Mtn. Jos 115.02 56 P PKiKP 21 48 13.5 +0.5
baz=279
SWSC Sam W. Stewart 115.34 57 P PKiKP 21 48 14.1 +0.7
baz=278
IRM Iron Mountain 115.69 56 P PKiKP 21 48 14.7 +0.6
baz=279
DUG Dugway, Tooele 116.31 49 P PKPdf 21 48 15.3 0.0
baz=284
KEST Kesra 117.63 307 PKP **PKPdf 21 48 16.9 -0.9**
comp=Z,5.9nm,1.0s,baz=90,slow=2.0,SNR=3.3
KEST Kesra 117.63 307 PKPdf 21 48 14.3 -3.6
PDAR Pinedale Array 117.98 45 PKP **PKPdf 21 48 17.9 -0.6**
comp=Z,1.6nm,0.7s,baz=282,slow=0.4,SNR=16
PDAR PKKPbc **PKKPbc 21 58 37.9 -1.9**
comp=Z,1.4nm,0.8s,baz=110,slow=3.5,SNR=9.5
WUAZ Wupatki 118.49 53 P PKiKP 21 48 19.9 +0.2
baz=283
TUC Tucson 119.62 57 PKIKP **PKPdf 21 48 18.6 -3.2**
TUC Tucson 119.62 57 PKPdf 21 48 18.6 -3.2
TUC Tucson 119.62 57 P PKPdf 21 48 21.8 0.0
baz=281
O20A White River Ci 119.71 48 P PKPdf 21 48 21.9 0.0
baz=287
W18A Petrified Fore 119.88 53 P PKPdf 21 48 21.8 -0.6
baz=284
K22A Casper 120.13 44 P PKPdf 21 48 21.6 -1.0
baz=290
MVCO Mesa Verde 120.33 51 P PKiKP 21 48 23.8 +0.5
baz=286
N23A Red Feather La 121.13 46 P PKPdf 21 48 24.1 -0.6
baz=290
RSSD Black Hills 121.29 42 PKIKP **PKPdf 21 48 21.4 -3.5**
RSSD Black Hills 121.29 42 PKPdf 21 48 21.4 -3.5
RSSD Black Hills 121.29 42 P PKPdf 21 48 23.4 -1.4
baz=293
ISCO Idaho Springs 121.73 47 P PKPdf 21 48 25.7 -0.2
baz=289
121A Cookes Peak, D 122.05 56 P PKPdf 21 48 26.5 -0.1
baz=283
SDCO Great Sand Dun 122.47 49 P PKiKP 21 48 27.7 +0.2
baz=288
ANMO Albuquerque 122.53 53*c i* PKIKP **PKPdf 21 48 24.9 -2.6**
ANMO pmax pmax
comp=Z,19nm,2.5s
ANMO Albuquerque 122.53 53 PKPdf 21 48 25.3 -2.2
ANMO Albuquerque 122.53 53 P PKiKP 21 48 27.7 0.0
baz=286
ULM Lac du Bonnet 123.28 32 PKP **PKPdf 21 48 26.7 -1.5**
comp=Z,1.2nm,0.5s,baz=318,slow=2.9,SNR=7.3
T25A Trinidad 123.48 50 P PKiKP 21 48 29.4 -0.1
baz=289
MNTX Cornudas Mount 124.23 56 P PKiKP 21 48 31.0 +0.1
baz=284
MSTX Muleshoe 125.72 53 P PKPdf 21 48 33.2 -0.4
baz=288
TXAR Lajitas Array 126.23 59 PKP **PKiKP 21 48 34.9 -0.1**
comp=Z,2.1nm,0.8s,baz=227,slow=1.7,SNR=18
ECSD EROS Data Cent 126.27 40 PKPdf 21 48 31.8 -2.3
ECSD EROS Data Cent 126.27 40 P PKPdf 21 48 33.8 -0.4
baz=300
AMTX Amarillo 126.30 52 P PKiKP 21 48 35.0 0.0
baz=289
CBKS Cedar Bluff 126.34 46 P PKPdf 21 48 34.2 -0.2
baz=293
ESDC Sonseca Array 126.45 315 PKP **PKPdf 21 48 34.0 -0.6**
comp=Z,1.0nm,0.8s,baz=52,slow=4.3,SNR=5.2
TOA0 Torodi Ar. Sit 127.33 281 PKPdf 21 48 33.8 -3.1
TORD Torodi Ar. Bea 127.33 281 PKP **PKPdf 21 48 35.8 -1.1**
comp=Z,2.1nm,0.7s,baz=56,slow=2.0,SNR=11
WMOK Wichita Mounta 128.59 51 P PKPdf 21 48 38.3 -0.5
baz=291
ABTX Abilene, Hawle 128.63 54 P PKPdf 21 48 39.2 +0.2
baz=289
JCT Junction City 129.17 56 P PKPdf 21 48 39.9 -0.2
baz=287
PLCA Paso Flores 129.36 161 PKP **PKPdf 21 48 40.5 +0.2**
comp=Z,5.3nm,0.7s,baz=269,slow=1.4,SNR=22
PLCA Paso Flores 129.36 161 *e*P **PKiKP 21 48 41.1 +0.1**
PLCA Paso Flores 129.36 161 PKPdf 21 48 38.8 -1.5
W39A Magazine 132.17 48 P PKiKP 21 48 46.1 -0.5
baz=296
MIAR Mount Ida 132.60 49 P PKiKP 21 48 47.6 +0.1
baz=296
CCM Cathedral Cave 132.63 43 P PKPdf 21 48 45.6 -0.8
baz=301
DBIC Dimbokro 133.68 273 PKP **PKPdf 21 48 48.4 -0.6**
comp=Z,2.0nm,0.8s,baz=78,slow=1.2,SNR=2.9
DBIC Dimbokro 133.68 273 PKPdf 21 48 46.2 -2.8
L48A N Adams 134.63 35 P PKPdf 21 48 49.5 -0.6
baz=311
WCI Wyandotte Cave 135.81 40 PKIKP **PKPdf 21 48 50.4 -1.9**
WCI Wyandotte Cave 135.81 40 PKPdf 21 48 50.4 -1.9
WCI Wyandotte Cave 135.81 40 P PKPdf 21 48 52.5 +0.2
baz=306
WVT Waverly 135.96 44 PKIKP **PKPdf 21 48 51.6 -1.1**
WVT Waverly 135.96 44 PKPdf 21 48 51.6 -1.1
T50A Nancy 137.45 41 P PKPdf 21 48 56.2 +0.8
baz=306
U50A Jamestown 137.80 41 P PKPdf 21 48 55.6 -0.5
baz=306
LRAL Lakeview Retre 138.15 47 P PKPdf 21 48 56.4 -0.4
baz=300
OGAUY Aigu 138.76 176 *e*P **PKPdf 21 48 58.9 +1.0**
PB10 IPOC Station P 144.41 149 PKPab 21 49 06.0 -0.4
ITAB Concordia 145.94 179 *e*P **PKPbc 21 49 11.4 -0.1**
LVC Limon Verde 145.99 150 *e*P **PKPbc 21 49 12.0 -0.2**
CPUP Villa Florida 146.37 171 PKPbc **PKPdf 21 49 10.9 -0.7**
comp=Z,25nm,0.8s,baz=193,slow=1.8,SNR=40
CPUP Villa Florida 146.37 171 *e*P **PKPdf 21 49 12.0 +0.4**
CPUP Villa Florida 146.37 171 PKPdf 21 49 10.4 -1.2
ACON Acoyapa 146.47 79 PKPbc **PKPdf 21 49 11.0 -1.0**
JTS Las Juntas de 146.80 82 PKIKP **PKPdf 21 49 11.4 -1.3**
JTS Las Juntas de 146.80 82 PKPbc **PKPdf 21 49 11.4 -1.3**
PTGB Pitanga 148.45 179 *e*P **PKPdf 21 49 15.4 +0.2**
NNA Nana 148.53 127 PKPdf 21 49 11.7 -3.8
SPB Sao Paulo 149.31 187 *e*P **PKPdf 21 49 17.5 +1.0**
ESAR Angra dos Reis 149.35 193 *e*P **PKPdf 21 49 17.8 +1.2**
FRTB Fartura 149.76 184 *e*P **PKPdf 21 49 19.0 +1.7**
VAO Valinhos 149.83 188 *e*P **PKPdf 21 49 18.3 +0.8**
TRCB Terra Rica 150.35 178 *e*P **PKPdf 21 49 17.8 -0.5**
PCMB Pacaembu 151.55 181 *e*P **PKPdf 21 49 20.2 +0.1**
LPAZ La Paz 151.60 145 PKIKP **PKPdf 21 49 17.3 -3.8**
LPAZ 21 49 22.0
LPAZ La Paz 151.60 145 PKP **PKPdf 21 49 21.1 0.0**
comp=Z,11nm,1.1s,baz=199,slow=1.3,SNR=22
LPAZ PKPbc **PKiKP 21 49 27.9 +0.2**
comp=Z,6.9nm,0.4s,baz=234,slow=1.2,SNR=36
LPAZ PKPab **PKPab 21 49 36.2 +0.4**
comp=Z,33nm,0.7s,baz=173,slow=2.6,SNR=31
LPAZ La Paz 151.60 145 *e*P **PKPdf 21 49 21.1 0.0**
LPAZ La Paz 151.60 145 PKPdf 21 49 17.2 -3.8
LPAZ PKPbc **PKPbc 21 49 21.9 -5.3**
BB19B Bebedouro 151.93 186 *e*P **PKPdf 21 49 21.1 +0.3**
BSFB Barra de Sao F 152.24 202 *e*P **PKPdf 21 49 21.2 +0.1**
OTAV Otavalo 152.31 103 *e*P **PKPdf 21 49 22.1 +0.1**
AQDB Aquidauana 152.37 172 *e*P **PKPdf 21 49 21.5 +0.2**
SJMB Sao Joao De Ma 152.48 202 *e*P **PKPdf 21 49 21.4 -0.2**
ITRB Iturama 153.42 182 *e*P **PKPdf 21 49 23.0 +0.1**
PMNB Patos De Minas 154.11 191 *e*P **PKPdf 21 49 23.9 -0.1**
C2SB Chapadao do Su 154.34 177 *e*P **PKPdf 21 49 24.6 +0.4**
IPMB Ipameri, GO 154.94 187 *e*P **PKPdf 21 49 24.6 -0.5**
NBIT Itapeh - BA 155.11 209 *e*P **PKPdf 21 49 26.1 +0.8**
PP1B Ponte de Pedra 155.31 172 *e*P **PKPdf 21 49 25.4 -0.2**
SALV Santo Antonio 156.85 170 *e*P **PKPdf 21 49 27.3 -0.3**
JANB Januaria 156.93 198 *e*P **PKPdf 21 49 26.9 -0.9**
BDFB Brasilia 157.22 189 PKIKP **PKPdf 21 49 27.0 -1.3**
BDFB Brasilia 157.22 189 PKP **PKPdf 21 49 27.0 -1.3**
comp=Z,5.4nm,0.9s,baz=159,slow=2.3,SNR=7.6
BDFB PKPab **PKPab 21 49 58.3 -0.6**
comp=Z,5.0nm,0.9s,baz=135,slow=7.0,SNR=4.0
ROSC El Rosal 157.22 94 PKP **PKPdf 21 49 28.4 -0.3**
comp=Z,5.0nm,0.4s,baz=253,slow=4.2,SNR=5.8
NBRF Rio Formoso - 157.41 227 *e*P **PKPdf 21 49 29.0 +0.6**
ARAG Araguaiana, MT 157.42 179 *e*P **PKPdf 21 49 28.4 0.0**
NBLA Lagarto - SE 157.48 217 *e*P **PKPdf 21 49 27.9 -0.6**
NBAN Anadia - AL 157.51 223 *e*P **PKPdf 21 49 28.1 -0.5**
NBPN Ponto Novo - B 158.97 213 *e*P **PKPdf 21 49 29.3 -1.1**
NBPV Pedro Velho 159.01 231 *e*P **PKPdf 21 49 31.9 +1.5**
NBTA Tacaratu-PE 159.09 220 *e*P **PKPdf 21 49 30.3 -0.2**
NBLI Livramento-PB 159.62 226 *e*P **PKPdf 21 49 32.2 +1.1**
RCBR Riachuelo 159.85 231 *e*P **PKPdf 21 49 32.2 +0.8**
SAML Samuel 160.34 144 PKIKP **PKPdf 21 49 28.5 -3.4**
SAML Samuel 160.34 144 *e*P **PKPdf 21 49 31.6 -0.2**
SAML Samuel 160.34 144 PKPdf 21 49 28.5 -3.4
NBPA Parau_RN 160.82 229 *e*P **PKPdf 21 49 32.2 -0.2**
NBMA Muriti-CE 160.86 222 *e*P **PKPdf 21 49 33.0 +0.4**
SDV Santo Domingo 160.99 83 *e*P **PKPdf 21 49 31.6 -1.2**
SDV Santo Domingo 160.99 83 PKPdf 21 49 29.2 -3.6
CLDB Colider 161.72 167 *e*P **PKPdf 21 49 31.9 -1.4**
GCPR Guaynabo City 161.92 50 PKPab 21 50 17.2 -2.1
PDPR Patillas Dam, 162.13 51 PKPab 21 50 18.3 -2.0
NBCL Cascavel-CE 162.70 230 *e*P **PKPdf 21 49 35.2 +0.8**
SMTB Santa Maria do 163.74 194 *e*P **PKPdf 21 49 35.0 -0.3**

MAN 05 21:32:00.9, 3.93N×126.28E, h103km, mb4.3, ML3.1, MS2.8, Talaud Islands

IDC 05 22:08:22.4±2.5, 20.85N×146.42E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/34, mbtmpg3.7/5, Error ellipse: s-maj=117.2km s-min=24.9km az=81.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.23**	**197**	P		P	22 16 17.4	-0.1
	0.5nm,0.7s,baz=16,slow=8.3,SNR=4.7							
ASAR	**Alice Springs**	**45.90**	**196**	P		P	22 16 45.9	-1.0
	0.2nm,0.7s,baz=17,slow=6.8,SNR=3.7							
ASAR				PcP		PcP	22 18 24.8	+0.6
	0.2nm,0.6s,baz=24,slow=5.1,SNR=3.2							
ZALV	**Zalesovo Beam**	**56.75**	**322**	P		P	22 18 08.1	+0.1
	0.7nm,0.4s,baz=109,slow=6.4,SNR=4.6							
MKAR	**Makanchi Array**	**57.49**	**313**	P		P	22 18 13.9	+0.5
	0.2nm,0.7s,baz=90,slow=7.6,SNR=4.1							
FINES	**FINESS Array B**	**85.23**	**335**	P		P	22 20 60.0	-0.7
	1.6nm,0.8s,baz=64,slow=3.2,SNR=12							

*ATA **05** 22:19:06.9±2.4, 38.66N×43.18E, h23km±18km, ML1.8, MW4.3*
*ISK **05** 22:19:07.5, 38.68N×43.16E, h5km, ML2.2/15*
*DDA **05** 22:19:08.7, 38.68N×43.19E, h7km±3km, ML2.1*
ISC 05 22:19:08.5±0.9, 38.68N±0.02×43.16E±0.02, h14km±8km, n37, σ0.93/52, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VANB	**Van**		**0.20**	**115**	PG	**Pg**	**22 19 13.6**	**+0.4**
VANB					SG	**Sg**	**22 19 18.3**	**+2.0**
TVAN	**Van**		**0.25**	**128**	*e*P	**Pg**	**22 19 13.5**	**-0.6**
TVAN					*e*S	**Sg**	**22 19 17.6**	**-0.1**
TVAN					IAML		22 19 19.0	
	comp=Z,223nm,0.3s							
TVAN	**Van**		**0.25**	**128**	*i* P	**Pg**	**22 19 13.4**	**-0.6**
TVAN					*i* S	**Sg**	**22 19 17.6**	**-0.1**
TVAN					IAML		22 19 18.0	
	comp=E,760nm,0.5s							
ADCV	**BITLIS_Adilcev**		**0.36**	**291**	*i* P	**Pb**	**22 19 16.7**	**-0.2**
ADCV					IAML		22 19 22.0	
	comp=N,243nm,0.9s							

ADCV				*i* S		**Sb**	**22 19 23.0**	**+0.4**
GEVA	**Gevas**	**0.38**	**192**	*e* P		**Pg**	**22 19 15.5**	**-0.7**
GEVA				*e* S		**Sb**	**22 19 22.6**	**-0.3**
GEVA				IAML			22 19 25.4	
	comp=Z,166nm,0.8s							
GEVA	**Gevas**	**0.38**	**192**	*i* P		**Pb**	**22 19 16.0**	**-1.1**
GEVA				*i* S		**Sb**	**22 19 22.7**	**-0.2**
GEVA				IAML			22 19 25.0	
	comp=N,234nm,0.4s							
AKDM	**Akdamar-Van**	**0.38**	**202**	PG		**Pg**	**22 19 15.7**	**-0.5**
AKDM				SG		**Sb**	**22 19 22.6**	**-0.3**
VMUR	**Van-Muradiye**	**0.45**	**46**	*i* P		**Pb**	**22 19 17.9**	**-0.4**
VMUR				*i* S		**Sb**	**22 19 23.3**	**-1.7**
VMUR				IAML			22 19 27.0	
	comp=N,134nm,0.5s							
MLAZ	**Malazgirt-MUS**	**0.66**	**314**	PG		**Pb**	**22 19 21.8**	**-0.2**
CLDR	**Caldiran**	**0.75**	**52**	PG		**Pb**	**22 19 22.7**	**-0.9**
CLDR	**Caldiran**	**0.75**	**52**	*i* P		**Pb**	**22 19 22.9**	**-0.6**
TUTA	**Tutak**	**0.77**	**340**	*e* P		**Pb**	**22 19 23.2**	**-0.6**
TUTA				IAML			22 19 38.8	
	comp=Z,48nm,0.1s							
TUTA	**Tutak**	**0.77**	**340**	*i* P		**Pb**	**22 19 23.6**	**-0.3**
BLIS	**Bitlis-Merkez**	**0.86**	**252**	*e* P		**Pg**	**22 19 24.6**	**-0.7**
BLIS				*e* S		**Sg**	**22 19 35.8**	**-0.7**
BLIS				IAML			22 19 38.3	
	comp=Z,53nm,0.5s							
BLIS	**Bitlis-Merkez**	**0.86**	**252**	*i* P		**Pb**	**22 19 24.8**	**-0.6**
BLIS				*i* S		**Sg**	**22 19 36.0**	**-0.6**
BLIS				IAML			22 19 41.0	
	comp=E,53nm,0.3s							
GURO	**Guroymak-BITLI**	**0.89**	**262**	PG		**Pg**	**22 19 25.2**	**-0.6**
AGRB	**Hanur-Agry**	**0.90**	**352**	PG		**Pb**	**22 19 25.8**	**-0.3**
DYDN	**Diyadin**	**0.96**	**25**	*e* P		**Pg**	**22 19 26.1**	**-0.9**
SRTM	**Siirt_Merkez**	**1.19**	**235**	*i* P		**Pn**	**22 19 32.6**	**+1.7**
EATA	**Eleskirt**	**1.29**	**337**	*e* P		**Pb**	**22 19 32.9**	**+0.1**
EATA				*e* S		**Sn**	**22 19 52.3**	**+2.6**
EATA				IAML			22 19 54.0	
	comp=Z,4.6nm,0.6s							
EATA	**Eleskirt**	**1.29**	**337**	*i* P		**Pb**	**22 19 32.8**	**0.0**
EATA				*i* S		**Sn**	**22 19 50.4**	**+0.7**
MUSM	**Mu-Merkez**	**1.29**	**272**	*i* P		**Pn**	**22 19 32.3**	**+0.1**
MUSM				*i* S		**Sb**	**22 19 46.2**	**-3.0**
SIRT	**Sirnak**	**1.31**	**206**	PN		**Pg**	**22 19 34.1**	**+0.4**
SIRN	**Sirnak**	**1.32**	**207**	*i* P		**Pg**	**22 19 34.8**	**+0.8**
IGDI	**IGDIR**	**1.38**	**31**	*e* P		**Pg**	**22 19 34.2**	**-1.0**
IGDI				*e* S		**Sb**	**22 19 51.5**	**-0.4**
IGDI				IAML			22 19 57.8	
	comp=Z,0.9nm,0.6s							
IGDI	**IGDIR**	**1.38**	**31**	*i* P		**Pg**	**22 19 34.8**	**-0.4**
VRTB	**Varto-Mus**	**1.41**	**290**	PN		**Pg**	**22 19 35.9**	**+0.2**
VRTB	**Varto-Mus**	**1.41**	**290**	*i* P		**Pg**	**22 19 36.6**	**+0.9**
CUKT	**Cukurca**	**1.47**	**166**	PN		**Pg**	**22 19 36.2**	**-0.7**
TASB	**TASBURUN-IGDIR**	**1.55**	**32**	PN		**Pg**	**22 19 37.9**	**-0.4**
BNGL	**BINGOL**	**1.59**	**280**	*i* P		**Pg**	**22 19 38.8**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.63**	**252**	PN		**Pg**	**22 19 38.6**	**-1.2**
SVAN	**Silvan-Diyarba**	**1.63**	**252**	*i* P		**Pg**	**22 19 39.7**	**-0.1**
SVAN				*i* S		**Sg**	**22 20 01.4**	**+0.5**
KARO	**Karliova-Bingo**	**1.76**	**292**	PN		**Pb**	**22 19 40.7**	**0.0**
BNGB	**Bingl**	**1.96**	**280**	PN		**Pb**	**22 19 43.5**	**-0.6**
SENK	**Senkaya-Erzuru**	**1.98**	**342**	PN		**Pb**	**22 19 43.8**	**-0.7**
YEDI	**Yedisu-Bingol**	**2.17**	**291**	PN		**Pb**	**22 19 46.5**	**-1.2**

MAN 05 22:41:02.7, 9°81N×123°71E, h18km, mb3.6, ML2.3, MS1.8, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.56**	**26**	⇓*e*P	Pg	22 41 13.8	-0.2
LLP				*e*S	Sg	22 41 21.2	-0.4
MSLP	**Maasin**	**1.18**	**74**	*e*P	Pn	22 41 23.8	-0.5
MSLP				*e*S	Sn	22 41 39.9	+0.1
GUIM	**Jordan**	**1.37**	**306**	*e*P	Pn	22 41 27.1	+0.1
GUIM				*e*S	Sb	22 41 44.9	-0.2
PAGZ	**Pagadian**	**1.98**	**190**	*e*P	Pn	22 41 35.3	-0.1
PAGZ				*e*S	Sb	22 42 03.4	+0.9

*SJA **05** 22:47:03.4±0.6, 20°.47S×71°.20W, h10km, ML4.3, MW4.0*
*NEIC **05** 22:47:11.8±1.1, 20°.70S±0°.04×70°.51W±0°.09, h28km±5km, Error ellipse: s-maj=13.0km s-min=4.1km az=107.0*
*GUC **05** 22:47:13.6±0.7, 20°.62S×70°.57W, h20km±4km, ML4.1*
*IDC **05** 22:47:14.8±2.7, 20°.57S×70°.57W, h49km±24km, mb3.5/5, mb1 3.8/9, mb1mx3.5/40, mbtmp3.8/9, ML4.2/3, MS3.1/1, Ms1 3.1/1, ms1mx2.8/30, Error ellipse: s-maj=30.6km s-min=14.8km az=89.0*

ISC 05 22:47:10.3±1.3, 20°.67S±0°.02×70°.50W±0°.05, h17km±8km, n53, σ1°62/66, mb4.0/6, 5C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.32**	**70**	⇓*i*P	**Pn**	**22 47 20.5**	**+0.4**
TA01				*i* S	**Sn**	**22 47 25.5**	**-0.8**
TA01				IAML		22 47 27.0	
	comp=N,13μm,0.3s						
PSGC	**Pisagua**	**1.13**	**18**	⇓*i*P	**Pb**	**22 47 31.5**	**+0.1**
PSGC				*i* S	**Sb**	**22 47 46.3**	**+0.5**
PSGC				IAML		22 47 49.3	
	comp=E,6μm,0.3s						
PB11	**IPOC Station P**	**1.21**	**41**	⇓*i*P	**Pg**	**22 47 33.8**	**+0.1**
PB11				*i* S	**Sn**	**22 47 49.9**	**+1.4**
PB11				IAML		22 47 53.5	
	comp=N,13μm,0.3s						
PB11	**IPOC Station P**	**1.21**	**41**		**Pg**	**22 47 33.6**	**+0.1**
PB11				Sn	**Sg**	**22 47 48.7**	**-0.7**
PB08	**IPOC Station P**	**1.37**	**67**	⇓*i*P	**Pg**	**22 47 37.3**	**+0.5**
PB08				*i* S	**Sg**	**22 47 56.1**	**+1.4**
PB08				IAML		22 47 59.0	
	comp=N,4μm,0.2s						
PB03	**IPOC Station P**	**1.54**	**153**	IAML		22 48 08.9	
	comp=E,2μm,0.2s						
PB09	**IPOC Station P**	**1.62**	**134**	⇑*i*P	**Pg**	**22 47 42.4**	**+0.9**
PB09				*i* S	**Sg**	**22 48 04.1**	**+1.5**
PB09				IAML		22 48 09.9	
	comp=N,3μm,0.4s						
PB04	**IPOC Station P**	**1.68**	**169**	⇑*i*P	**Pb**	**22 47 40.6**	**-0.3**
PB04				*i* S	**Sb**	**22 48 02.7**	**+0.8**
PB04				IAML		22 48 16.6	
	comp=N,3μm,0.4s						
PB04	**IPOC Station P**	**1.68**	**169**		**Pn**	**22 47 39.4**	**+0.3**
PB04				Sn	**Sn**	**22 47 59.9**	**-0.5**
MNMC	**Minye Minye**	**1.75**	**29**	⇑*i*P	**Pb**	**22 47 41.7**	**-0.5**
MNMC				*i* S	**Sb**	**22 48 04.6**	**+0.6**
MNMC				IAML		22 48 10.6	
	comp=E,7μm,0.7s						
MNMC	**Minye Minye**	**1.75**	**29**		**Pn**	**22 47 41.1**	**+1.0**
MNMC				Sn	**Sn**	**22 48 00.8**	**-1.5**
PB05	**IPOC Station P**	**2.19**	**173**	⇑*i*P	**Pn**	**22 47 47.0**	**+1.0**
PB05				*i* S	**Sn**	**22 48 14.8**	**+2.1**
PB05	**IPOC Station P**	**2.19**	**173**	*i* P	**Pn**	**22 47 47.6**	**+1.6**
PB05				*e*S	**Sg**	**22 48 20.1**	**-0.6**
PB06	**IPOC Station P**	**2.20**	**157**	⇑*i*P	**Pn**	**22 47 48.2**	**+2.0**
PB06				*i* S	**Sb**	**22 48 16.6**	**-0.1**
PB06	**IPOC Station P**	**2.20**	**157**	*i* P	**Pb**	**22 47 49.4**	**-0.3**
PB06				*e*S	**Sg**	**22 48 23.5**	**+2.4**
AP01	**Chacalluta**	**2.30**	**4**	*e*P	**Pn**	**22 47 49.3**	**+1.9**
AP01				IAML		22 48 31.8	
	comp=E,3μm,0.6s						
LVC	**Limon Verde**	**2.43**	**143**	*e*P	**Pb**	**22 47 53.8**	**+0.1**
LVC				*e*S	**Sg**	**22 48 26.0**	**-2.5**
LVC	**Limon Verde**	**2.43**	**143**	P	**Pb**	**22 47 53.8**	**+0.1**
	comp=E,86nm,0.3s,baz=315,slow=9.8,SNR=77						
LVC				S	**Sb**	**22 48 24.6**	**+1.1**
	comp=E,100nm,0.3s,baz=69,slow=21,SNR=10						
LVC				LR	LR	22 49 06.0	
	comp=E,346nm,19.8s,baz=24,slow=44						
LVC	**Limon Verde**	**2.43**	**143**		**Pn**	**22 47 49.9**	**+0.3**
LVC				Sn	**Sn**	**22 48 18.3**	**-0.7**
LVC	**Limon Verde**	**2.43**	**143**	⇑*i*P	**Pb**	**22 47 53.9**	**+0.1**
LVC				*e*S	**Sg**	**22 48 31.9**	**+3.4**
LVC				IAML		22 48 33.7	
	comp=Z,401nm,0.5s						
PB15	**IPOC Station P**	**2.70**	**159**	*i* P	**Pb**	**22 47 56.2**	**-2.0**
PB15				*e*S	**Sg**	**22 48 35.1**	**-2.0**
PB15				IAML		22 48 42.0	
	comp=Z,2μm,0.2s						
PB10	**IPOC Station P**	**2.83**	**181**	Pn	**Pn**	**22 47 55.1**	**+0.4**
PB10				Sn	**Sn**	**22 48 28.3**	**0.0**
PB10	**IPOC Station P**	**2.83**	**181**	*i* P	**Pn**	**22 47 55.1**	**+0.4**
PB14	**IPOC Station P**	**3.94**	**179**	*i* P	**Pn**	**22 48 10.7**	**+0.5**
YJA	**Yavi**	**4.88**	**109**	*i* P	**Pb**	**22 48 31.4**	**-4.2**
LPAZ	**La Paz**	**4.91**	**28**	P	**Pn**	**22 48 25.1**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=214,slow=10,SNR=5.9						
LPAZ	**La Paz**	**4.91**	**28**		**Pn**	**22 48 23.3**	**-0.5**
LPAZ	**La Paz**	**4.91**	**28**	*i* P	Pn	22 48 29.9	+6.1
AZAP	**Zapla**	**6.14**	**126**	*i* P	Pn	22 48 47.0	+6.5
GO04	**Tololo Observa**	**9.46**	**182**	Pn	**Pn**	**22 49 25.8**	**-0.3**
SIV	**San Ignacio**	**10.09**	**64**	P	**Pn**	**22 49 36.5**	**+2.0**
	comp=Z,3.9nm,0.3s,baz=269,slow=10,SNR=37						
SIV				S	**Sn**	**22 51 31.4**	**+4.1**
	comp=Z,0.1nm,0.3s,baz=172,slow=23,SNR=2.6						
CFA	**Coronel Fontan**	**11.07**	**170**	P	**Pn**	**22 49 48.1**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=337,slow=14,SNR=5.2						
CFA				S	**Sn**	**22 51 57.0**	**+5.6**
	comp=Z,0.2nm,0.3s,baz=156,slow=24,SNR=2.1						
ROC1	**El Roble**	**12.26**	**182**	Pn	**Pn**	**22 50 04.6**	**+0.2**
CPUP	**Villa Florida**	**13.33**	**117**	P	**P**	**22 50 24.1**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=307,slow=14,SNR=3.2						
PLCA	**Paso Flores**	**20.00**	**180**	P	**Pn**	**22 51 43.6**	**-0.2**
	comp=Z,1.9nm,0.9s,baz=34,slow=12,SNR=3.6						
PLCA	**Paso Flores**	**20.00**	**180**	P	**P**	**22 51 43.0**	**+1.0**
GO09	**Cerro Castillo**	**30.57**	**182**	P	**P**	**22 53 20.7**	**-2.2**
GO09				IAmb	IAmb	22 53 35.4	
	comp=Z,6.6nm,0.9s						
TXAR	**Lajitas Array**	**59.11**	**326**	P	**P**	**22 57 10.2**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=143,slow=12,SNR=2.3						
TX32	**Lajitas Array**	**59.11**	**326**	P	**P**	**22 57 10.8**	**+0.8**
TX32				IAmb	IAmb	22 57 19.5	
	comp=Z,0.9nm,0.9s						
QSPA	**South Pole Qui**	**69.51**	**180**	P	**P**	**22 58 18.9**	**+1.1**
	comp=Z,0.8nm,0.5s,baz=245,slow=1.4,SNR=6.5						
QSPA	**South Pole Qui**	**69.51**	**180**	P	**P**	**22 58 16.9**	**-1.0**
QSPA				IAmb	IAmb	22 58 21.2	
	comp=Z,1.4nm,0.9s						
TOA0	**Torodi Ar. Sit**	**78.49**	**71**	P	**P**	**22 59 11.0**	**0.0**
TORD	**Torodi Ar. Bea**	**78.49**	**71**	P	**P**	**22 59 10.9**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=251,slow=5.4,SNR=44						
YKA	**Yellowknife Ar**	**89.92**	**341**	P	**P**	**23 00 07.4**	**-0.6**
	comp=Z,0.7nm,1.0s,baz=135,slow=4.3,SNR=6.6						
H11S2	**WAKE ISLAND Hyd**	**26.30**	**278**	T	T	01 25 22.5	
	baz=103,slow=74,SNR=294						
H11S1	**WAKE ISLAND Hyd**	**26.30**	**278**	T	T	01 25 23.7	
	baz=103,slow=74,SNR=174						
H11S3	**WAKE ISLAND Hyd**	**26.31**	**278**	T	T	01 25 19.5	
	baz=103,slow=74,SNR=180						
H11N3	**WAKE ISLAND Hyd**	**26.36**	**280**	T	T	01 25 19.0	
	baz=102,slow=75,SNR=49						
H11N2	**WAKE ISLAND Hyd**	**26.38**	**280**	T	T	01 25 18.9	
	baz=102,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hyd**	**26.38**	**280**	T	T	01 25 16.2	
	baz=102,slow=75,SNR=47						
ZALV	**Zalesovo Beam**	**141.82**	**24**	PKP	**PKPdf**	**23 06 39.6**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=337,slow=3.3,SNR=3.8						
MKAR	**Makanchi Array**	**145.81**	**34**	PKPbc	**PKPdf**	**23 06 48.2**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=301,slow=2.6,SNR=12						
SONM	**Songino Array**	**152.79**	**5**	PKPbc	**PKPbc**	**23 07 06.2**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=277,slow=1.4,SNR=2.4						

*IDC **05** 22:58:59.5±3.5, 59°.80N×153°.36W, h114km±31km, mb3.5/6, mb1 3.6/10, mb1mx3.2/66, mbtmp3.9/10, Error ellipse: s-maj=29.1km s-min=18.4km az=11.0*
*AEIC **05** 22:58:59.5±1.6, 59°.47N±0°.04×153°.16W±0°.08, h106km±3km, ML3.6/113, Error ellipse: s-maj=6.2km s-min=5.1km az=137.0*

ISC 05 22:58:58.1±0.7, 59°.48N±0°.04×153°.15W±0°.04, h115km±6km, n118, σ1°00/130, mb3.9/6, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AU22	**Augustine Moun**	**0.15**	**225**		**Pn**	**22 59 13.3**	**-0.6**
AU22					**Sn**	**22 59 24.7**	**-1.1**
AU2	**Augustine Isla**	**0.16**	**227**		**Pn**	**22 59 13.4**	**-0.5**
AUL	**Augustine Lava**	**0.18**	**237**		**Pn**	**22 59 13.6**	**-0.4**
AUP	**Augustine Pinn**	**0.18**	**230**		**Pn**	**22 59 13.7**	**-0.5**
AUQ	**Augustine Qik'**	**0.19**	**228**		**Pn**	**22 59 13.6**	**-0.5**
AUQ					**Sn**	**22 59 25.0**	**-1.1**
AUW	**Augustine West**	**0.20**	**237**		**Pn**	**22 59 13.7**	**-0.4**
ILS	**Iliamna Low So**	**0.48**	**5**		**Pn**	**22 59 15.0**	**-0.5**
IVE	**Iliamna Volcan**	**0.54**	**7**		**Pn**	**22 59 15.4**	**-0.4**
FOSS	**Fourpeaked Sta**	**0.74**	**203**		**Pn**	**22 59 16.7**	**-0.6**
HOM	**Homer**	**0.79**	**76**		**Pn**	**22 59 17.7**	**+0.1**
HOM					**Sn**	**22 59 33.1**	**+0.8**
RED	**Redoubt Volcan**	**0.96**	**11**		**Pn**	**22 59 19.2**	**-0.1**
RED					**Sn**	**22 59 35.5**	**0.0**
RSO	**Redoubt South**	**1.00**	**11**		**Pn**	**22 59 19.9**	**0.0**
RSO				Sn	**Sn**	**22 59 36.5**	**+0.1**
NCT	**North Crescent**	**1.09**	**6**		**Pn**	**22 59 20.8**	**+0.1**
NCT					**Sn**	**22 59 37.6**	**-0.2**
DFR	**Drift River**	**1.14**	**11**		**Pn**	**22 59 21.4**	**+0.2**
DFR					**Sn**	**22 59 39.1**	**+0.5**
BRLK	**Bradley Lake**	**1.18**	**75**		**Pn**	**22 59 21.1**	**-0.4**
BRSE	**Bradley Lake S**	**1.25**	**77**		**Pn**	**22 59 22.1**	**-0.2**
BRSE					**Sn**	**22 59 39.8**	**-0.9**
KAHC	**Katmai Hardscr**	**1.27**	**230**		**Pn**	**22 59 23.8**	**+1.1**
KARR	**Katmai Rainbow**	**1.27**	**220**		**Pn**	**22 59 23.9**	**+1.3**
KCG	**Knife Ck. Glac**	**1.56**	**222**		**Pn**	**22 59 27.0**	**+1.1**
KCG					**Sn**	**22 59 47.2**	**+0.2**
CAPN	**Captain Cook N**	**1.63**	**37**		**Pn**	**22 59 28.5**	**+1.9**
KABU	**Katmai Buttres**	**1.65**	**223**		**Pn**	**22 59 26.1**	**-0.8**
KABU					**Sn**	**22 59 47.5**	**-1.4**
KELA	**Mount Kelaz**	**1.70**	**233**		**Pn**	**22 59 28.8**	**+1.2**
ACHA	**Angle Creek He**	**1.71**	**223**		**Pn**	**22 59 28.7**	**+1.1**
KDAK	**Kodiak Island**	**1.73**	**170**		**Pn**	**22 59 26.0**	**-1.9**
CKL	**Chakachamna La**	**1.77**	**13**		**Pn**	**22 59 29.0**	**+0.5**
ANCK	**Angle Creek**	**1.77**	**225**		**Pn**	**22 59 29.7**	**+1.2**
SPCR	**Spurr Chakacha**	**1.79**	**15**		**Pn**	**22 59 29.0**	**+0.3**
SLKM	**Skilak Lake**	**1.79**	**54**		**Pn**	**22 59 28.5**	**-0.2**
SLKM					**Sn**	**22 59 51.5**	**-0.6**
SPBG	**Spurr Blockage**	**1.83**	**12**		**Pn**	**22 59 29.7**	**+0.6**
SPCP	**Crater Peak Br**	**1.86**	**15**		**Pn**	**22 59 30.1**	**+0.5**
SPNN	**North Nagishla**	**1.91**	**6**		**Pn**	**22 59 30.6**	**+0.4**
SEW	**Seward**	**1.97**	**70**		**Pn**	**22 59 30.6**	**-0.1**
SVW2	**Sparrevohn**	**2.03**	**324**		**Pn**	**22 59 31.4**	**-0.2**
FIS	**Fire Island**	**2.21**	**40**		**Pn**	**22 59 35.1**	**+1.3**
OHAK	**Old Harbor**	**2.27**	**182**		**Pn**	**22 59 32.4**	**-2.2**
SUA	**Susitna One**	**2.32**	**30**		**Pn**	**22 59 36.0**	**+0.7**
RC01	**Rabbit Creek A**	**2.34**	**45**		**Pn**	**22 59 35.9**	**+0.4**
PLK3	**Peulik 3**	**2.43**	**224**		**Pn**	**22 59 38.1**	**+1.4**
SKT	**Skwentna**	**2.63**	**17**		**Pn**	**22 59 39.6**	**+0.3**
PWL	**Port Wells**	**2.77**	**58**		**Pn**	**22 59 40.8**	**-0.4**
PMR	**Palmer**	**2.90**	**41**		**Pn**	**22 59 42.3**	**-0.5**
SII	**Sitkinak Islan**	**2.98**	**191**		**Pn**	**22 59 41.7**	**-2.2**
KNK	**Knik Glacier**	**3.02**	**48**		**Pn**	**22 59 44.0**	**-0.4**
GHO	**Glory Hole Cre**	**3.10**	**40**		**Pn**	**22 59 45.1**	**-0.4**
SML	**Sawmill**	**3.33**	**43**		**Pn**	**22 59 48.2**	**-0.2**
PPLA	**Purkeypile**	**3.46**	**7**		**Pn**	**22 59 51.5**	**+1.2**
JPK	**Jack Peak**	**3.62**	**61**		**Pn**	**22 59 51.8**	**-0.6**
TT01	**Tatalina**	**3.71**	**339**		**Pn**	**22 59 53.5**	**0.0**
SCM	**Sheep Creek Mo**	**3.71**	**48**		**Pn**	**22 59 53.5**	**-0.1**
TTA	**Tatalina**	**3.73**	**339**		**Pn**	**22 59 53.6**	**-0.2**
EYAK	**Cordova Ski Ar**	**3.86**	**71**		**Pn**	**22 59 54.9**	**-0.6**
HUR	**Hurricane**	**3.90**	**24**		**Pn**	**22 59 56.8**	**+0.8**
CHIR	**Chirikof Islan**	**3.90**	**201**		**Pn**	**22 59 53.8**	**-2.3**
WAT1	**Susitna Watana**	**4.03**	**32**		**Pn**	**22 59 57.7**	**-0.1**
WAT6	**Susitna Watana**	**4.07**	**38**		**Pn**	**22 59 58.1**	**-0.4**
WAT2	**Susitna Watana**	**4.13**	**30**		**Pn**	**22 59 58.9**	**-0.4**
TRF	**Thorofare Moun**	**4.21**	**18**		**Pn**	**23 00 00.5**	**+0.1**
KTH	**Kantishna Hill**	**4.22**	**14**		**Pn**	**23 00 00.5**	**0.0**
GOAT	**Goat Mountain**	**4.37**	**72**		**Pn**	**23 00 02.5**	**+0.1**
PS12	**TAPS Pump St12**	**4.43**	**60**		**Pn**	**23 00 03.1**	**-0.2**
CHUM	**Lake Minchumin**	**4.44**	**5**		**Pn**	**23 00 03.5**	**+0.3**
RND	**Reindeer**	**4.45**	**26**		**Pn**	**23 00 03.5**	**+0.1**
HMT	**Hamilton**	**4.55**	**75**	Pn	**Pn**	**23 00 04.8**	**-0.1**
DHY	**Denali Highway**	**4.55**	**35**		**Pn**	**23 00 04.7**	**-0.3**
MCK	**McKinley**	**4.72**	**23**		**Pn**	**23 00 07.3**	**+0.3**
BPAW	**Bear Paw Mtn.**	**4.75**	**12**		**Pn**	**23 00 06.7**	**-0.8**
BWN	**Browne**	**5.02**	**19**		**Pn**	**23 00 11.5**	**+0.4**
GLB	**Gilahina Butte**	**5.02**	**63**		**Pn**	**23 00 10.8**	**-0.3**
PAX	**Paxson**	**5.10**	**43**		**Pn**	**23 00 12.5**	**+0.3**
CRQM	**Cirque**	**5.17**	**71**	Pn	**Pn**	**23 00 12.8**	**-0.5**
PS10	**TAPS Pump St10**	**5.30**	**39**		**Pn**	**23 00 15.9**	**+0.9**
TGL	**Tana Glacier**	**5.32**	**72**	Pn	**Pn**	**23 00 15.2**	**0.0**
MCARA	**McCarthy VSAT**	**5.36**	**65**	Pn	**Pn**	**23 00 16.8**	**+1.1**
NEA	**Nenana**	**5.46**	**19**		**Pn**	**23 00 16.7**	**-0.3**
WRH	**Wood River Hil**	**5.54**	**23**		**Pn**	**23 00 17.5**	**-0.6**
KIAG	**Kiagna River**	**5.57**	**70**		**Pn**	**23 00 18.6**	**-0.1**
BALM	**Baldy**	**5.60**	**69**		**Pn**	**23 00 19.0**	**0.0**
MLY	**Manley**	**5.68**	**10**		**Pn**	**23 00 20.4**	**+0.4**
MENT	**Mentasta**	**5.72**	**49**		**Pn**	**23 00 21.5**	**+0.9**
SDPT	**Sand Point**	**5.73**	**227**		**Pn**	**23 00 19.7**	**-1.0**
HDA	**Harding Lake**	**5.74**	**28**		**Pn**	**23 00 20.6**	**-0.2**
CCB	**Clear Creek Bu**	**5.76**	**24**		**Pn**	**23 00 20.5**	**-0.5**
RIDG	**Independent Ri**	**5.82**	**39**		**Pn**	**23 00 22.3**	**+0.3**
PS08	**TAPS Pump Stn8**	**5.89**	**28**		**Pn**	**23 00 22.5**	**-0.2**
BARN	**Barnard Glacie**	**5.93**	**70**		**Pn**	**23 00 23.9**	**+0.3**
TCOL	**CIGO, UAF Yank**	**5.95**	**22**		**Pn**	**23 00 23.4**	**-0.2**
COLA	**College**	**5.95**	**22**		**Pn**	**23 00 23.1**	**-0.5**
MDM	**Murphy Dome**	**5.96**	**21**		**Pn**	**23 00 23.5**	**-0.2**
DOT	**Dot Lake**	**6.02**	**42**		**Pn**	**23 00 25.9**	**+1.2**
ILAR	**Eielson Array**	**6.06**	**26**	P	**Pn**	**23 00 24.5**	**-0.6**
	7.1nm,0.3s,baz=218,slow=14,SNR=52						
ILAR				S	**Sn**	**23 01 27.6**	**-5.5**
	4.3nm,0.3s,baz=221,slow=22,SNR=8.1						
IL01		**6.07**	**26**		**Pn**	**23 00 24.4**	**-0.7**
CTGM	**Chitina Glacie**	**6.07**	**71**		**Pn**	**23 00 25.6**	**+0.2**
POKR	**Poker Plat Res**	**6.25**	**23**		**Pn**	**23 00 27.1**	**-0.6**
SCRK	**Sand Creek**	**6.26**	**40**		**Pn**	**23 00 27.1**	**-0.8**
YUK2	**White River**	**6.48**	**64**		**Pn**	**23 00 31.3**	**+0.4**
IM03		**6.53**	**358**		**Pn**	**23 00 31.8**	**+0.4**
BC03		**6.55**	**52**		**Pn**	**23 00 31.4**	**-0.3**
YUK3	**Moose Creek**	**6.65**	**64**		**Pn**	**23 00 33.1**	**-0.2**
BVCY	**Beaver Creek**	**6.67**	**59**		**Pn**	**23 00 33.7**	**+0.4**
PNL	**Peninsula**	**6.99**	**83**		**Pn**	**23 00 37.4**	**-0.3**
PRP	**Porcupine Dome**	**7.01**	**27**		**Pn**	**23 00 37.8**	**-0.2**
EGAK	**Eagle**	**7.72**	**41**		**Pn**	**23 00 46.0**	**-1.5**
COLD	**Coldfoot**	**7.89**	**8**		**Pn**	**23 00 49.1**	**-0.6**
PLBC	**Pleasant Camp**	**8.54**	**83**		**Pn**	**23 01 00.6**	**+1.9**
BM03	**Burnt Mountain**	**8.83**	**22**		**Pn**	**23 01 02.0**	**-0.5**
TOLK	**Toolik Lake Re**	**9.33**	**8**		**Pn**	**23 01 09.6**	**+0.3**
EPYK	**Eagle Plains**	**10.16**	**40**		**Pn**	**23 01 22.2**	**+1.7**
DLBC	**Dease Lake**	**11.96**	**85**	P	**Pn**	**23 01 48.3**	**+3.6**
	1.9nm,0.3s,baz=236,slow=8.6,SNR=6.6						
INK	**Inuvik**	**12.30**	**36**	P	**Pn**	**23 01 48.7**	**-0.2**
	0.3nm,0.3s,baz=224,slow=15,SNR=18						
C36M	**Paulatuk**	**15.79**	**39**	P	**Pn**	**23 02 31.9**	**-1.6**
YKA	**Yellowknife Ar**	**18.74**	**64**	P	**Pn**	**23 03 08.8**	**-0.4**
	0.1nm,0.3s,baz=276,slow=10,SNR=7.2						
PETK	**Petropavlovsk-**	**27.46**	**278**	P	**P**	**23 04 31.8**	**-1.1**
	2.0nm,0.6s,baz=65,slow=13,SNR=5.4						
NVAR	**Mina Array Bea**	**30.54**	**118**	P	**P**	**23 05 03.6**	**+3.1**
	0.4nm,0.7s,baz=323,slow=12,SNR=3.1						
**KLR

comp=Z,0.2nm,0.5s,baz=309,slow=3.2,SNR=3.5

*KRNET **05** 23:01:14.7±0.1, 42.6′61N×79.6′69E, h25km, mb3.4*
*SOME **05** 23:01:14.5, 42.6′70N×79.6′58E, h15km*
*NNC **05** 23:01:17.1±1.2, 42.6′83N×79.6′53E, h0km, mb2.7, mpv2.4, Error ellipse: s-maj=8.4km s-min=4.6km az=132.0*

ISC 05 23:01:14.8±1.7, **42.6′75N**±0.0′05×**79.6′58E**±0.0′05, **h1**km±11km, **n30**, σ1§**15**/54, **16C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.41**	**348**	*eP*	**Pb**	**23 01 25.6**	**+0.5**
	baz=14						
SHLS				*eS*	**Sb**	**23 01 33.7**	**+1.7**
	baz=14						
SHLS	**Shalkode**	**0.41**	**348**	*eP*	**Pb**	**23 01 25.6**	**+0.5**
	18nm,0.1s						
SHLS				*eS*	**Sb**	**23 01 33.6**	**+1.7**
	27nm,0.3s						
SHLS	**Shalkode**	**0.41**	**348**	P	**Pb**	**23 01 25.5**	**+0.3**
	18nm,0.2s						
SHLS				S	**Sb**	**23 01 32.2**	**+0.2**
	28nm,0.5s						
UZB	**Uzynbulak**	**0.57**	**314**	*eP*	**Pg**	**23 01 25.7**	**-0.1**
	1.8nm,0.1s						
UZB				*eS*	**Sg**	**23 01 33.7**	**+0.5**
	7.9nm,0.1s						
UZB	**Uzynbulak**	**0.57**	**314**	P	**Pg**	**23 01 25.7**	**-0.1**
	2.7nm,0.4s						
UZB				S	**Sg**	**23 01 32.6**	**-0.6**
	10nm,0.3s						
PDGK	**Podgornoye**	**0.58**	**353**	P	**Pb**	**23 01 26.6**	**-1.4**
PDGK				S	**Sb**	**23 01 34.3**	**-2.5**
	4.2nm,0.3s						
PDGK	**Podgornoye**	**0.58**	**353**	⇓P	**Pb**	**23 01 26.5**	**-1.4**
	3.7nm,0.5s						
PDGK				⇑S	**Sb**	**23 01 34.7**	**-2.1**
	2.8nm,0.5s						
PRZ	**Przheval'sk**	**0.91**	**253**	⇓*eP*	**Pg**	**23 01 32.8**	**+0.5**
	baz=63						
PRZ				⇓*iS*	**Sg**	**23 01 45.7**	**+1.5**
	baz=63						
KPKS	**Kokpek**	**0.97**	**318**	*eP*	**Pg**	**23 01 33.0**	**-0.5**
	3.3nm,0.1s						
KPKS				*eS*	**Sg**	**23 01 46.3**	**+0.2**
	19nm,0.1s						
ANVS	**Anan'yevo**	**1.41**	**272**	⇓*iP*	**Pg**	**23 01 42.2**	**+0.3**
	baz=78						
ANVS				⇓*iS*	**Sb**	**23 02 01.6**	**+0.9**
	baz=78						
DJR	**Jarkent**	**1.59**	**5**	*eP*	**Pg**	**23 01 45.1**	**-0.2**
	0.3nm,0.1s						
DJR				*eS*	**Sg**	**23 02 07.0**	**+1.1**
	2.8nm,0.2s						
DJR	**Jarkent**	**1.59**	**5**	P	**Pb**	**23 01 44.0**	**-1.0**
	0.5nm,0.3s						
DJR				S	**Sb**	**23 02 04.4**	**-1.3**
	4.4nm,0.4s						
TARG	**Taragay, Kyrgy**	**1.67**	**233**	⇑*iP*	**Pn**	**23 01 44.5**	**-1.2**
	baz=39						
TARG				⇑*iS*	**Sn**	**23 02 06.1**	**-1.8**
	baz=39						
KOTS	**Kotyrbulak**	**1.88**	**286**	P	**Pg**	**23 01 50.7**	**-0.1**
	3.1nm,0.3s						
KOTS				S	**Sg**	**23 02 15.5**	**+0.4**
	5.7nm,0.6s						
KDJ	**Kajisay**	**1.88**	**252**	⇑*iP*	**Pn**	**23 01 48.4**	**0.0**
	baz=56						
KDJ				⇑*iS*	**Sn**	**23 02 13.0**	**+0.1**
	baz=56						
MDOK	**Medeo**	**1.91**	**283**	⇓Pn	**Pn**	**23 01 49.7**	**+1.0**
	1.9nm,0.7s						
MDOK				⇑Sn	**Sg**	**23 02 16.8**	**+0.8**
	3.7nm,0.6s						
ARXS	**Arharly**	**1.94**	**319**	*eP*	**Pb**	**23 01 50.7**	**-0.4**
	1.2nm,0.1s						
ARXS				*eS*	**Sg**	**23 02 16.5**	**-0.7**
	4.7nm,0.3s						
ARXS	**Arharly**	**1.94**	**319**	P	**Pn**	**23 01 49.1**	**0.0**
	0.9nm,0.4s						
ARXS				S	**Sn**	**23 02 12.9**	**-1.3**
	3.6nm,0.5s						
IZV	**Izvestkoviy**	**2.20**	**278**	*eP*	**Pb**	**23 01 55.0**	**-0.6**
	2.3nm,0.1s						
IZV				*eS*	**Sb**	**23 02 23.7**	**+0.3**
	4.1nm,0.2s						
KTBS	**Karatobe**	**2.33**	**295**	*eP*	**Pb**	**23 01 56.9**	**-0.8**
	0.5nm,0.1s						
KTBS				*eS*	**Sb**	**23 02 27.1**	**+0.1**
	8.9nm,0.2s						
KTBS	**Karatobe**	**2.33**	**295**	Pg	**Pb**	**23 01 56.6**	**-1.0**
	0.6nm,0.4s						
KTBS				Lg	Lg	23 02 25.6	
	5.6nm,0.8s						
KAPS	**Kapalarasan**	**2.54**	**356**	*eP*	**Pg**	**23 02 02.5**	**-1.0**
	2.0nm,0.1s						
KAPS				*eS*	**Sg**	**23 02 36.6**	**+0.2**
	1.9nm,0.1s						
KAPS	**Kapalarasan**	**2.54**	**356**	Pg	**Pg**	**23 02 02.3**	**-1.2**
	2.7nm,0.6s						
KAPS				Lg	Lg	23 02 35.4	
	1.6nm,0.5s						
BOOM	**Boomskoye usch**	**2.70**	**266**	⇓*iP*	**Pn**	**23 02 00.5**	**+0.9**
	baz=69						
BOOM				⇓*iS*	**Sn**	**23 02 33.1**	**0.0**
	baz=69						
TKM2	**Tokmak 2**	**2.94**	**275**	⇑*eP*	**Pn**	**23 02 04.5**	**+1.6**
	baz=77						
TKM2				⇑*iS*	**Sn**	**23 02 40.3**	**+1.4**
	baz=77						
TKM2	**Tokmak 2**	**2.94**	**275**	⇑Pn	**Pb**	**23 02 08.3**	**+0.2**
	2.4nm,1.0s						
TKM2				⇑Lg	Lg	23 02 48.3	
	2.6nm,0.7s						
NRN	**Naryn**	**2.97**	**245**	⇑*iP*	**Pn**	**23 02 03.7**	**+0.2**
	baz=48						
NRN				⇑*iS*	**Sn**	**23 02 39.1**	**-0.9**
	baz=48						
AAK	**Ala-Archa**	**3.75**	**270**	⇓Pg	**Pg**	**23 02 25.3**	**-1.4**
	2.3nm,1.2s						
AAK				⇑Lg	Lg	23 03 15.1	
	4.9nm,1.2s						
MAKZ	**Makanchi**	**4.40**	**22**	⇓Pn	**Pn**	**23 02 25.8**	**+2.9**
	0.5nm,0.8s						
MAKZ				⇑Lg	Lg	23 03 35.6	
	1.5nm,1.4s						
MK31	**Makanchi Array**	**4.48**	**25**	⇑Pn	**Pn**	**23 02 26.6**	**+2.7**
	0.2nm,0.5s,baz=209,slow=13,SNR=9.7						
MK31				⇑Lg	Lg	23 03 38.5	
	1.0nm,0.8s,baz=208,slow=30						

*ANF **05** 23:11:38.2±0.1, 33.4′49N×116.4′48W, h8km±1km, ML2.4/18, Error ellipse: s-maj=1.3km s-min=1.1km az=88.0*
*NEIC **05** 23:11:38.8±2.1, 33.4′49N±0.0′02×116.4′45W±0.0′02, h15km, Error ellipse: s-maj=2.4km s-min=1.6km az=153.0*
*PAS **05** 23:11:39.1±2.0, 33.5′02N±0.0′010×116.4′47W±0.0′02, h10km±2km, ML2.5/94, Error ellipse: s-maj=2.1km s-min=1.2km az=64.0*
*SCEDC **05** 23:11:39.1, 33.5′0N×116.4′7W, h8km*

ISC 05 23:11:38.9±0.8, **33.5′0N**±0.0′01×**116.4′7W**±0.0′02, **h18**km±3km, **n83**, σ1§**04**/114, **Southern California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRD	**Ford Ranch, An**	**0.11**	**269**		**Pg**	**23 11 43.6**	**+0.9**
FRD	**Ford Ranch, An**	**0.11**	**269**		**Pg**	**23 11 43.3**	**+0.5**
PFO	**Pinyon Flats O**	**0.11**	**4**		**Pg**	**23 11 43.4**	**+0.5**
PFO	**Pinyon Flats O**	**0.11**	**4**	Pg	**Pg**	**23 11 41.5**	**-1.3**
PFO				Sg	**Sg**	**23 11 43.0**	**-2.5**
PFO	**Pinyon Flats O**	**0.11**	**4**	P	**Pg**	**23 11 41.2**	**-1.7**
	baz=186,SNR=458						
PFO				S	**Pg**	**23 11 43.3**	**+0.5**
	baz=186						
XPFO	**Pion Flat**	**0.11**	**6**	Pg	**Pg**	**23 11 41.5**	**-1.3**
XPFO				Sg	**Sg**	**23 11 43.0**	**-2.5**
SNDA	**J Saunders Pla**	**0.13**	**294**		**Pg**	**23 11 44.3**	**+1.3**
DNR	**Dunn Ranch,Anz**	**0.15**	**297**		**Pg**	**23 11 45.0**	**+1.8**
BZNA	**Buzz No.'s Pla**	**0.17**	**268**		**Pg**	**23 11 45.3**	**+1.8**
BORC	**Borrego Spring**	**0.23**	**169**		**Pg**	**23 11 47.0**	**+2.8**
CRY	**Cary Ranch**	**0.23**	**287**		**Sg**	**23 11 47.0**	**-1.2**
PLM	**Palomar**	**0.36**	**246**		**Sg**	**23 11 51.0**	**-0.7**
EW2	**E Wide Canyon**	**0.45**	**7**		**Sg**	**23 11 47.5**	**-0.5**
EW2					**Sg**	**23 11 53.7**	**-0.4**
DEVC	**Devers**	**0.45**	**348**		**Pg**	**23 11 47.5**	**-0.5**
DEVC					**Sg**	**23 11 53.5**	**-0.6**
SALN	**Salton City**	**0.46**	**118**		**Pb**	**23 11 48.2**	**-0.2**
SALN					**Sb**	**23 11 54.5**	**-0.3**
DGR	**Domenigoni Val**	**0.48**	**289**		**Pg**	**23 11 47.8**	**-0.7**
DGR					**Sg**	**23 11 54.0**	**-1.0**
BACC	**Bachelor Mtn.**	**0.49**	**284**		**Pg**	**23 11 48.0**	**-0.8**
BATC	**Bat Cave Butte**	**0.53**	**94**		**Pb**	**23 11 49.5**	**0.0**
BLAC	**Blackrock camp**	**0.57**	**7**		**Sg**	**23 11 57.7**	**-0.4**
MONP2	**Monument Peak**	**0.60**	**176**		**Sg**	**23 11 58.5**	**-0.6**
MONP2	**Monument Peak**	**0.60**	**176**	P	**Pb**	**23 11 50.5**	**-0.5**
	baz=356,SNR=20						
MONP2				S	**Sg**	**23 11 58.6**	**-0.6**
	baz=356						
MURC	**Murrieta**	**0.61**	**280**		**Sg**	**23 11 58.6**	**-0.8**
MURC	**Murrieta**	**0.61**	**280**	P	**Pb**	**23 11 50.5**	**-0.5**
	baz=99,SNR=12						
MURC				S	**Sg**	**23 11 58.6**	**-0.8**
	baz=99						
HWB	**Hans Werner Br**	**0.62**	**221**		**Sg**	**23 11 58.7**	**-0.9**
DPP	**Dos Picos Cty**	**0.64**	**219**		**Pg**	**23 11 50.8**	**-0.7**
DPP					**Sg**	**23 11 59.1**	**-0.9**
BELC	**Belle Mtn. Jos**	**0.64**	**38**		**Pg**	**23 11 50.9**	**-0.6**
BELC					**Sg**	**23 11 59.1**	**-1.0**
BELC	**Belle Mtn. Jos**	**0.64**	**38**	P	**Pg**	**23 11 50.9**	**-0.6**
	baz=218,SNR=30						
ERRC	**Elmore Ranch**	**0.66**	**125**		**Pb**	**23 11 52.7**	**+0.9**
EML	**El Monte Cty P**	**0.68**	**208**		**Pg**	**23 11 51.4**	**-0.9**
EML					**Sg**	**23 12 00.3**	**-1.1**
PEC	**Perris**	**0.70**	**304**		**Pg**	**23 11 51.8**	**-0.9**
PEC					**Sg**	**23 12 00.9**	**-1.0**
FRK	**Frink**	**0.70**	**98**		**Pg**	**23 11 52.0**	**-0.6**
RMR	**Rimrock**	**0.72**	**353**		**Pg**	**23 11 52.4**	**-0.7**
GORC	**Green Oak Ranc**	**0.72**	**242**		**Pg**	**23 11 52.0**	**-1.0**
GORC					**Sg**	**23 12 02.0**	**-0.6**
CRR	**Carrizo Plain**	**0.74**	**145**		**Pb**	**23 11 53.0**	**-0.2**
CFT	**Crafton Hills**	**0.76**	**315**		**Pg**	**23 11 52.7**	**-1.0**
SWSC	**Sam W. Stewart**	**0.79**	**134**		**Pg**	**23 11 53.5**	**-0.7**
SWSC	**Sam W. Stewart**	**0.79**	**134**	P	**Pg**	**23 11 53.5**	**-0.7**
	baz=315,SNR=29						
SVD	**Seven Oaks Dam**	**0.80**	**319**		**Pg**	**23 11 53.8**	**-0.8**
109C	**Camp Elliot, M**	**0.81**	**221**		**Pg**	**23 11 53.7**	**-1.0**
109C				Sg	**Sg**	**23 12 04.3**	**-1.1**
109C	**Camp Elliot, M**	**0.81**	**221**	P	**Pg**	**23 11 53.7**	**-1.0**
	baz=41,SNR=26						
109C				S	**Sg**	**23 12 04.2**	**-1.1**
	baz=41						
BAR	**Barrett**	**0.83**	**192**		**Pg**	**23 11 54.2**	**-0.9**
BAR	**Barrett**	**0.83**	**192**		**Sg**	**23 12 04.9**	**-1.2**
BAR	**Barrett**	**0.83**	**192**		**Pg**	**23 11 54.4**	**-0.7**
BAR				Sg	**Sg**	**23 12 04.8**	**-1.3**
BBRC	**Big Bear Solar**	**0.85**	**334**	P	**Pg**	**23 11 54.7**	**-0.8**
	baz=154,SNR=6.3						
BBRC				S	**Sg**	**23 12 06.3**	**-0.5**
	baz=154						
BC3	**Big Chuckawall**	**0.86**	**79**	P	**Pb**	**23 11 55.3**	**-0.1**
	baz=260,SNR=30						
BC3				S	**Sb**	**23 12 07.3**	**+0.7**
	baz=260						
BTL	**Butler Peak**	**0.88**	**330**		**Pg**	**23 11 55.3**	**-0.8**
IKP	**In-Ko-Pah, Jac**	**0.90**	**160**	P	**Pb**	**23 11 55.8**	**-0.1**
	baz=340,SNR=37						
IKP				S	**Sg**	**23 12 07.5**	**-0.7**
	baz=340						
SIL	**Silver Peak**	**0.90**	**341**		**Pg**	**23 11 55.4**	**-1.0**
RVR	**Riverside**	**0.90**	**303**		**Sg**	**23 12 07.2**	**-1.1**
RMX	**La Rumorosa**	**0.95**	**160**		**Pn**	**23 11 58.1**	**+0.6**
OLP	**Otay Lakes Par**	**0.97**	**204**		**Pg**	**23 11 56.4**	**-1.3**
SGL	**Mount Signal**	**1.05**	**143**		**Pg**	**23 11 57.7**	**-1.6**
CSP	**Cedar Springs**	**1.09**	**317**		**Pg**	**23 11 58.8**	**-1.2**
SS2	**San Sevaine**	**1.11**	**310**		**Pg**	**23 11 59.1**	**-1.3**
CBX	**Cerro Bola**	**1.19**	**188**		**Pg**	**23 12 00.7**	**-1.2**
IRM	**Iron Mountain**	**1.28**	**59**	P	**Pn**	**23 12 02.6**	**+0.7**
	baz=240,SNR=28						
IRM				S	**Sn**	**23 12 20.1**	**+1.3**
	baz=240						
HEC	**Hector,Ludlow**	**1.33**	**5**	P	**Pg**	**23 12 03.9**	**-0.7**
	baz=185,SNR=6.0						
HEC				S	**Sn**	**23 12 21.3**	**+1.2**
	baz=185						
RRX	**Edison Barstow**	**1.44**	**342**	P	**Pb**	**23 12 05.4**	**+0.2**
	baz=162						
GLA	**Glamis**	**1.45**	**107**		**Pn**	**23 12 04.0**	**-0.2**
GLA				Sn	**Sn**	**23 12 22.1**	**-0.6**
GMRC	**Granite Mounta**	**1.45**	**27**	P	**Pb**	**23 12 05.8**	**+0.4**
	baz=208						
GMRC				S	**Sb**	**23 12 24.4**	**+0.8**
	baz=208						
MWC	**Mount Wilson**	**1.51**	**299**		**Pn**	**23 12 05.7**	**+0.5**
MWC				Sn	**Sb**	**23 12 26.0**	**+0.6**
PASC	**Pasadena Art C**	**1.58**	**296**		**Pb**	**23 12 07.5**	**0.0**
PASC					**Sb**	**23 12 27.4**	**+0.2**
PASC	**Pasadena Art C**	**1.58**	**296**	Pn	**Pn**	**23 12 06.5**	**+0.6**
Y12C	**Blythe**	**1.64**	**81**		**Pb**	**23 12 08.6**	**0.0**
DECC	**Green Verdugo**	**1.73**	**296**	S	**Sb**	**23 12 32.2**	**+0.8**
	baz=116						
SCI2	**San Clemente I**	**1.82**	**254**	P	**Pn**	**23 12 09.7**	**+0.4**
	baz=73						
GSC	**Goldstone, Bar**	**1.82**	**351**		**Pn**	**23 12 09.8**	**+0.4**
GSC	**Goldstone, Bar**	**1.82**	**351**	Pb	**Pg**	**23 12 12.6**	**-1.3**
	baz=171,SNR=11						
GSC				Sb	**Sg**	**23 12 36.1**	**-1.5**
	baz=171						
EDW2	**Edwards Air Fo**	**1.87**	**318**	Pb	**Pb**	**23 12 12.7**	**+0.1**
	baz=137,SNR=14						
EDW2				Sb	**Sg**	**23 12 37.6**	**-1.5**
	baz=137						
TUQ	**Turquoise Moun**	**1.98**	**13**	Sb	**Sg**	**23 12 41.8**	**-1.1**
	baz=193						
113A	**Mohawk Valley,**	**2.38**	**107**	Pn	**Pn**	**23 12 18.6**	**+1.6**
113A				Pg	**Pg**	**23 12 24.7**	**+0.1**
W13A	**Hualapai Mount**	**2.67**	**53**	Pn	**Pn**	**23 12 22.0**	**+0.8**
ISA	**Isabella, Lake**	**2.72**	**323**	Pn	**Pn**	**23 12 22.9**	**+1.1**
ISA					**Pb**	**23 12 28.4**	**+1.3**
Y14A	**Wickenburg**	**2.92**	**80**	Pn	**Pn**	**23 12 26.0**	**+1.6**
DAC	**Darwin (Calif)**	**2.92**	**342**	Pn	**Pn**	**23 12 25.8**	**+1.2**
DAC				Pg	**Pg**	**23 12 35.1**	**+0.2**
SHPR	**Sheep Range**	**3.19**	**19**	Pn	**Pn**	**23 12 30.3**	**+2.1**
214A	**Organ Pipe Nat**	**3.44**	**116**	Pn	**Pn**	**23 12 33.4**	**+1.7**
TPNV	**Topopah Spring**	**3.45**	**3**	Pn	**Pn**	**23 12 33.7**	**+1.9**
PAGB	**Antelope Grade**	**3.83**	**307**	Pn	**Pn**	**23 12 37.5**	**+0.5**
X16A	**Lo Mia Camp, P**	**4.28**	**76**	Pn	**Pn**	**23 12 43.9**	**+0.6**
LCMT	**Little Creek M**	**4.39**	**36**	Pn	**Pn**	**23 12 45.5**	**+0.7**
PMPB	**Monarch Peak**	**4.48**	**308**	Pn	**Pn**	**23 12 47.1**	**+1.2**
U15A	**North Rim**	**4.51**	**48**	Pn	**Pn**	**23 12 46.7**	**+0.2**

*SOME **05** 23:17:59.7, 42.2′20N×79.5′55E, h15km*
*KRNET **05** 23:18:00.2±0.1, 42.2′14N×79.5′51E, h14km, mb2.9*
*NNC **05** 23:18:01.0±2.0, 42.3′1N×79.5′2E, h0km, mb2.7, mpv2.7, Error ellipse: s-maj=13.1km s-min=7.4km az=139.0*

ISC 05 23:17:59.6±1.7, **42.2′2N**±0.0′05×**79.4′7E**±0.0′05, **h7**km±10km, **n28**, σ1§**10**/50, **19C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.84**	**289**	⇑*iP*	**Pb**	**23 18 16.8**	**+0.3**
	baz=93						
PRZ				⇑*iS*	**Sb**	**23 18 29.0**	**+0.9**
	baz=93						
SHLS	**Shalkode**	**0.94**	**360**	*eP*	**Pb**	**23 18 18.1**	**-0.1**
	16nm,0.1s						
SHLS				*eS*	**Sn**	**23 18 31.9**	**-1.2**
	17nm,0.2s						
SHLS	**Shalkode**	**0.94**	**360**	P	**Pb**	**23 18 18.2**	**-0.1**
	14nm,0.1s						
SHLS				S	**Sn**	**23 18 31.8**	**-1.2**
	13nm,0.2s						
UZB	**Uzynbulak**	**0.98**	**341**	*eP*	**Pg**	**23 18 18.3**	**-0.2**
	0.7nm,0.1s						
UZB				*eS*	**Sb**	**23 18 32.0**	**-0.3**
	5.8nm,0.1s						
UZB	**Uzynbulak**	**0.98**	**341**	P	**Pg**	**23 18 18.1**	**-0.4**
UZB				S	**Sg**	**23 18 31.7**	**+0.4**
	0.9nm,0.4s						
PDGK	**Podgornoye**	**1.11**	**1**	P	**Pb**	**23 18 20.1**	**-1.1**
	1.8nm,0.4s						
PDGK				S	**Sg**	**23 18 34.9**	**-0.4**
	3.5nm,0.2s						
PDGK	**Podgornoye**	**1.11**	**1**	⇓P	**Pb**	**23 18 19.9**	**-1.3**
	1.7nm,0.5s						
PDGK				⇓S	**Sg**	**23 18 34.7**	**-0.6**
	6.7nm,0.6s						
SATY	**Saty**	**1.15**	**317**	*eP*	**Pb**	**23 18 21.9**	**0.0**
	3.0nm,0.1s						
SATY				*eS*	**Sn**	**23 18 38.1**	**-0.2**
	14nm,0.1s						
SATY	**Saty**	**1.15**	**317**	P	**Pb**	**23 18 20.6**	**-1.2**
	1.7nm,0.2s						
SATY				S	**Sb**	**23 18 36.4**	**-0.7**
	4.5nm,0.2s						
ZHN	**Zhinishke**	**1.22**	**322**	*eP*	**Pn**	**23 18 22.9**	**-0.2**
	2.2nm,0.1s						
ZHN				*eS*	**Sn**	**23 18 39.8**	**-0.2**
	4.8nm,0.1s						
TARG	**Taragay, Kyrgy**	**1.33**	**249**	⇑*iP*	**Pb**	**23 18 25.4**	**+0.2**
	baz=53						
TARG				⇑*iS*	**Sg**	**23 18 43.5**	**+1.0**
	baz=53						
KPKS	**Kokpek**	**1.37**	**335**	*eP*	**Pn**	**23 18 25.4**	**+0.2**
	3.2nm,0.1s						
KPKS				*eS*	**Sg**	**23 18 44.2**	**+0.4**
	25nm,0.1s						
ANVS	**Anan'yevo**	**1.45**	**294**	⇑*iP*	**Pg**	**23 18 28.2**	**+0.9**
	baz=96						
ANVS				⇑*iS*	**Sg**	**23 18 48.8**	**+2.7**
	baz=96						
KURS	**Kuram**	**1.59**	**323**	*eP*	**Pb**	**23 18 29.8**	**+0.5**
	1.8nm,0.2s						
KURS				*eS*	**Sg**	**23 18 51.6**	**+1.0**
	9.0nm,0.3s						
KDJ	**Kajisay**	**1.70**	**268**	⇓*iP*	**Pg**	**23 18 32.1**	**-0.2**
	baz=70						
KDJ				⇓*iS*	**Sg**	**23 18 55.4**	**+1.0**
	baz=70						
MDOK	**Medeo**	**2.02**	**299**	⇑Pn	**Pb**	**23 18 36.7**	**0.0**
	6.7nm,0.8s						
MDOK				Sn	**Sg**	**23 19 06.2**	**+1.7**
	20nm,1.1s						
TNSS	**Tian-Shan**	**2.03**	**295**	Pg	**Pb**	**23 18 37.7**	**+0.6**
	3.6nm,0.4s						
TNSS				Lg	Lg	23 19 05.5	
	3.7nm,0.2s						
DJR	**Jarkent**	**2.12**	**6**	*eP*	**Pb**	**23 18 38.7**	**+0.3**
	1.0nm,0.1s						
DJR				*eS*	**Sg**	**23 19 06.8**	**-1.0**
	19nm,0.2s						
DJR	**Jarkent**	**2.12**	**6**	Pg	**Pb**	**23 18 38.5**	**0.0**
	0.7nm,0.3s						
DJR				Lg	Lg	23 19 06.8	
	11nm,0.3s						
ULHL	**Ulahol**	**2.40**	**272**	⇓*iP*	**Pb**	**23 18 42.7**	**-0.5**
	baz=74						
ULHL				⇓*iS*	**Sb**	**23 19 13.5**	**+0.5**
	baz=74						
BOOM	**Boomskoye usch**	**2.63**	**277**	⇑*iP*	**Pb**	**23 18 46.2**	**-0.9**
	baz=79						
BOOM				⇑*iS*	**Sb**	**23 19 19.8**	**+0.1**
	baz=79						
NRN	**Naryn**	**2.71**	**254**	⇑*iP*	**Pb**	**23 18 46.9**	**-1.7**
	baz=56						
NRN				⇑*iS*	**Sb**	**23 19 21.2**	**-0.9**
	baz=56						
TKM2	**Tokmak 2**	**2.94**	**285**	⇑*eP*	**Pb**	**23 18 50.4**	**-2.1**
	baz=86						
TKM2				⇑*iS*	**Sb**	**23 19 27.2**	**-1.6**
	baz=86						
TKM2	**Tokmak 2**	**2.94**	**285**	⇑Pg	**Pb**	**23 18 51.0**	**-1.5**
	5.4nm,1.2s						
TKM2				⇑Lg	Lg	23 19 33.3	
	3.5nm,0.7s						
KAPS	**Kapalarasan**	**3.07**	**359**	Pg	**Pb**	**23 18 54.5**	**0.0**
	0.8nm,0.3s						
KAPS				Lg	Lg	23 19 34.8	
	7.6nm,0.6s						
AAK	**Ala-Archa**	**3.71**	**278**	⇑Pg	**Pg**	**23 19 08.4**	**-2.2**
	2.9nm,1.2s						
AAK				⇑Lg	Lg	23 20 02.1	
	3.3nm,0.9s						
MAKZ	**Makanchi**	**4.93**	**20**	⇑Pn	**Pn**	**23 19 15.4**	**+1.4**
	2.2nm,1.2s						
MAKZ				⇓Lg	Lg	23 20 34.0	
	1.0nm,1.1s						
MK31	**Makanchi Array**	**5.00**	**23**	⇑Pn	**Pn**	**23 19 16.5**	**+1.5**
	0.1nm,0.4s,baz=211,slow=15,SNR=3.5						
MK31				⇓Sn	**Sn**	**23 20 15.7**	**+2.6**
	0.4nm,0.6s,baz=220,slow=22						
MK31				⇓Lg	Lg	23 20 36.5	
	0.6nm,0.7s,baz=209,slow=27						

*FUNV **05** 23:34:04.3, 6.6′94N×73.2′2W, h155km, MW2.5*
*RSNC **05** 23:34:05.1±1.1, 6.6′82N×73.2′14W, h149km±5km, ML2.7, Mw2.9*

ISC 05 23:34:02.5±1.3, **6.6′86N**±0.0′03×**73.2′08W**±0.0′03, **h164**km±8km, **n30**, σ1§**41**/57, **1C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**202**	*eP*	**Pn**	**23 34 25.3**	**+0.3**
BARC				*eS*	**Sn**	**23 34 40.4**	**-1.9**
BARC				*i*		23 34 42.9	
	comp=Z,153nm,0.3s						
PAMC	**Pamplona, Colo**	**0.61**	**38**	⇑*iP*	**Pn**	**23 34 28.1**	**+1.4**
PAMC				*eS*	**Sn**	**23 34 45.5**	**+0.4**
PAMC				*i*		23 34 47.3	
	comp=Z,71nm,0.3s						
BRRC	**Barranca, Sant**	**0.68**	**292**	*eP*	**Pn**	**23 34 27.2**	**+0.8**
BRRC				*eS*	**Sn**	**23 34 44.3**	**-0.4**
BRRC				*i*		23 34 47.9	
	comp=Z,57nm,0.5s						
BRRC				*i*		23 34 48.1	
	comp=Z,52nm,0.1s						
RUSC	**La Rusia**	**0.96**	**180**	⇓*iP*	**Pn**	**23 34 29.2**	**+0.3**
RUSC				*eS*	**Sn**	**23 34 47.6**	**-1.6**
RUSC				*i*		23 34 49.1	
	comp=Z,42nm,0.4s						
RUSC				*i*		23 34 49.1	
	comp=Z,38nm,0.4s						
RUSC	**La Rusia**	**0.96**	**180**	*eP*	**Pn**	**23 34 29.2**	**+0.3**
RUSC				*eS*	**Sn**	**23 34 48.0**	**-1.1

	comp=Z,26nm,0.4s								
HELC					*i*			23 35 24.0	
	comp=Z,21nm,0.4s								
HELC	**Santa Helena**	**2.52**	**255**		*e*P		**Pn**	**23 34 45.4**	**+0.4**
HELC					*e*S		**Sn**	**23 35 13.5**	**-4.3**
VIGV	**El Vigia**	**2.60**	**41**		*e*P		**Pn**	**23 34 47.5**	**+1.9**
VIGV					*e*S		**Sn**	**23 35 17.5**	**-1.6**
SOCV	**Socops**	**2.62**	**57**		*e*P		**Pn**	**23 34 47.4**	**+1.6**
SOCV					*e*S		**Sn**	**23 35 19.4**	**0.0**
GUY2C	**Guyana, Caldas**	**2.79**	**235**		*e*P		**Pn**	**23 34 49.5**	**+1.1**
GUY2C					*e*S		**Sn**	**23 35 24.3**	**+0.4**
GUY2C					*i*			23 35 31.8	
	comp=Z,32nm,0.4s								
GUY2C					*i*			23 35 32.0	
	comp=Z,32nm,0.4s								
VILC	**Villavicencio,**	**2.79**	**193**		*e*P		**Pn**	**23 34 47.7**	**-0.4**
VILC					*e*S		**Sn**	**23 35 23.2**	**-0.3**
VILC					*i*			23 35 28.4	
	comp=Z,25nm,0.7s								
CBOC	**Ciudad Bolivar**	**3.08**	**251**		*e*P		**Pn**	**23 34 53.1**	**+1.5**
CBOC					*e*S		**Sn**	**23 35 29.2**	**-0.4**
CBOC					*i*			23 35 40.7	
	comp=Z,15nm,0.1s								
CBOC					*i*			23 35 43.0	
	comp=Z,13nm,0.3s								
CODC	**Agustn Codazz**	**3.08**	**353**		*e*P		**Pn**	**23 34 52.7**	**+1.2**
CODC					*e*S		**Sn**	**23 35 30.4**	**+0.8**
CODC					*i*			23 35 37.5	
	comp=Z,10nm,0.5s								
CODC					*i*			23 35 46.2	
	comp=Z,11nm,3.2s								
SDV	**Santo Domingo**	**3.15**	**50**		*e*P		**Pn**	**23 34 54.3**	**+1.7**
SDV					*e*S		**Sn**	**23 35 29.4**	**-2.0**
ELOV	**Elorza**	**3.57**	**87**		*e*P		**Pn**	**23 34 59.2**	**+1.5**
ELOV					*e*S		**Sn**	**23 35 40.1**	**-0.5**
ORTC	**Ortega, Tolima**	**3.64**	**217**		*e*P		**Pn**	**23 34 59.7**	**+1.1**
ORTC					*e*S		**Sn**	**23 35 42.8**	**+0.5**
ORTC					*i*			23 35 50.0	
	comp=Z,15nm,0.2s								
ORTC					*i*			23 35 53.2	
	comp=Z,15nm,1.2s								
SJCC	**San Jacinto, C**	**3.67**	**326**		*e*P		**Pn**	**23 34 59.5**	**+0.5**
SJCC					*e*S		**Sn**	**23 35 40.8**	**-2.2**
SJCC					*i*			23 36 05.5	
	comp=Z,8.0nm,0.6s								
CURV	**Curarigua**	**4.40**	**44**		*e*P		**Pn**	**23 35 09.3**	**+0.9**
CURV					*e*S		**Sn**	**23 35 56.1**	**-3.8**
TEPV	**Terepaima**	**4.93**	**51**		*e*P		**Pn**	**23 35 16.1**	**+0.8**
BAUV	**El Baul**	**5.40**	**67**		*e*P		**Pn**	**23 35 21.0**	**-0.5**
BAUV					*e*S		**Sn**	**23 36 21.0**	**-2.4**
MAPV	**Macapo**	**5.44**	**57**		*e*P		**Pn**	**23 35 22.8**	**+0.7**

IDC 06 00:18:00.3±2.0, 20.72N×146.46E, h0km, mb3.9/8, mb1 3.9/8, mb1mx3.6/46, mbtmp3.9/8, Error ellipse: s-maj=87.6km s-min=21.5km az=82.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**19.19**	**93**	T	T	00 42 26.6	
	baz=281						
H11S1	**WAKE ISLAND Hy**	**19.20**	**93**	T	T	00 42 25.6	
	baz=281						
H11N1	**WAKE ISLAND Hy**	**19.21**	**89**	T	T	00 42 26.5	
	baz=276,slow=74,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**19.21**	**93**	T	T	00 42 27.9	
	baz=281						
H11N2	**WAKE ISLAND Hy**	**19.21**	**89**	T	T	00 42 27.8	
	baz=276,slow=74,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**19.22**	**89**	T	T	00 42 30.0	
	baz=276,slow=74,SNR=4.4						
KSRS	**Korea Array**	**23.18**	**320**	P	P	00 23 10.1	+1.5
	1.9nm,0.7s,baz=150,slow=8.5,SNR=7.5						
WRA	**Warramunga Arr**	**42.12**	**197**	P	P	00 25 54.3	-0.1
	0.9nm,0.8s,baz=13,slow=9.2,SNR=3.3						
ASAR	**Alice Springs**	**45.78**	**196**	P	P	00 26 24.0	+0.1
	0.2nm,0.7s,baz=9.4,slow=8.5,SNR=2.8						
ZALV	**Zalesovo Beam**	**56.87**	**322**	P	P	00 27 45.7	-1.0
	0.4nm,0.4s,baz=97,slow=6.0,SNR=4.8						
KURBB	**Kurchatov Arra**	**60.32**	**317**	P	P	00 28 10.5	-0.4
	1.2nm,0.5s,baz=92,slow=7.6,SNR=16						
BVAR	**Borovoye Array**	**65.39**	**320**	P	P	00 28 44.5	-0.1
	1.9nm,0.6s,baz=92,slow=7.2,SNR=20						
ARCES	**ARCESS Array B**	**80.80**	**342**	P	P	00 30 16.5	+1.0
	1.4nm,0.9s,baz=72,slow=3.9,SNR=2.8						
FINES	**FINESS Array B**	**85.36**	**335**	P	P	00 30 38.6	-0.6
	0.7nm,0.4s,baz=74,slow=4.1,SNR=20						

*IDC **06** 00:32:28.8±1.8, 6.00S×152.24E, h0km, mb3.8/6, mb1 4.0/7, mb1mx3.8/29, mbtmp3.9/7, ML2.1/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/28, Error ellipse: s-maj=60.9km s-min=18.9km az=117.0*

*NEIC **06** 00:32:37.1±2.5, 5.9S±0.1×152.06E±0.09, h61km±7km, mb4.6/10, Error ellipse: s-maj=18.8km s-min=11.4km az=163.0*

ISC 06 00:32:34.9±0.6, 5.97S±0.07×152.05E±0.09, h36km, n22, σ1§50/25, mb4.3/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.65**	**359**	Pn	**Pn**	**00 33 01.6**	**+0.2**
	83nm,0.3s,baz=126,slow=2.2,SNR=26						
KRVT				Sn	**Sn**	**00 33 24.9**	**+3.6**
	211nm,0.3s,baz=153,slow=22,SNR=17						
PMG	**Port Moresby**	**5.93**	**235**	Pn	**Pn**	**00 34 00.6**	**+0.4**
	2.8nm,0.3s,baz=54,slow=8.8,SNR=6.5						
PMG				Sn	**Sn**	**00 35 07.6**	**+0.7**
	2.0nm,0.3s,baz=135,slow=14,SNR=5.5						
PMG				LR	LR	00 36 22.7	
	comp=Z,35nm,18.4s,baz=10.0,slow=38						
PMG	**Port Moresby**	**5.93**	**235**		**Pn**	**00 34 02.6**	**+2.4**
PMG					**Sn**	**00 35 07.4**	**+0.5**
HNR	**Honiara**	**8.55**	**114**	Pn	**Pn**	**00 34 38.4**	**+2.2**
COEN	**Coen**	**11.80**	**227**	Pn	**Pn**	**00 35 22.4**	**+1.6**
MTN	**Manton Dam**	**21.72**	**250**	P	**P**	**00 37 22.7**	**-0.6**
WRA	**Warramunga Arr**	**22.12**	**229**	P	**P**	**00 37 29.0**	**+1.6**
	0.7nm,0.3s,baz=55,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**24.79**	**223**	P	**P**	**00 37 54.2**	**+0.5**
	2.2nm,0.8s,baz=54,slow=8.7,SNR=14						
KNRA	**Kununurra**	**24.80**	**245**	P	**P**	**00 37 52.7**	**-1.0**
KNRA				IAmb	IAmb	00 37 59.7	
	comp=Z,20nm,1.0s						
FITZ	**Fitzroy Crossi**	**28.45**	**243**	P	**P**	**00 38 25.9**	**-0.8**
	comp=Z,28nm,0.7s,baz=47,slow=8.1,SNR=8.2						
TOO	**Toolangi**	**32.02**	**190**		**P**	**00 38 58.0**	**0.0**
TOO				IAmb	IAmb	00 39 15.7	
	comp=Z,11nm,1.1s						
PPTF	**Pamatai, Papee**	**58.11**	**107**	P	**P**	**00 42 23.8**	**-1.6**
GAMB	**Gambell**	**74.70**	**16**	P	**P**	**00 44 09.4**	**-1.1**
RDOG	**Red Dog Mine**	**80.30**	**16**	P	**P**	**00 44 41.7**	**-0.1**
RDOG				IAmb	IAmb	00 44 44.1	
	comp=Z,6.8nm,0.7s						
MKAR	**Makanchi Array**	**80.71**	**319**	P	**P**	**00 44 43.4**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=126,slow=4.1,SNR=2.8						
GHO	**Glory Hole Cre**	**81.23**	**24**	P	**P**	**00 44 47.3**	**+0.4**
GHO				IAmb	IAmb	00 44 58.9	
	comp=Z,5.3nm,0.9s						
SML	**Sawmill**	**81.49**	**24**	P	**P**	**00 44 48.4**	**+0.1**
SML				IAmb	IAmb	00 45 07.0	
	comp=Z,17nm,1.2s						
ZALV	**Zalesovo Beam**	**81.71**	**327**	P	**P**	**00 44 48.9**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=122,slow=7.0,SNR=3.0						
ILAR	**Eielson Array**	**83.52**	**22**	P	**P**	**00 44 58.2**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=247,slow=4.8,SNR=8.6						
DOT	**Dot Lake**	**84.09**	**24**	P	**P**	**00 44 58.4**	**-3.4**
MDPB	**Devils Postpil**	**92.71**	**53**	P	**P**	**00 45 43.2**	**-0.8**
MDPB				IAmb	IAmb	00 45 47.4	
	comp=Z,7nm,0.8s						
TORD	**Torodi Ar. Bea**	**149.93**	**286**	PKPbc	**PKPbc**	**00 52 22.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=71,slow=2.7,SNR=12						

*KRNET **06** 00:47:35.8±0.1, 40.06N×72.97E, mb2.9*

*SOME **06** 00:47:36.2, 40.07N×72.92E, h10km*

*NNC **06** 00:47:41.6±3.5, 40.40N×72.91E, h0km, mb3.2, mpv3.0, Error ellipse: s-maj=27.5km s-min=14.3km az=173.0*

ISC 06 00:47:35.3±1.4, 40.08N±0.07×73.09E±0.03, h10km, n23, σ1§55/42, 23C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.24**	**356**	⇑*e*P	**Pg**	**00 47 59.4**	**+0.2**
	baz=0.0						
ARSB				⇑*i*S	**Sn**	**00 48 16.8**	**+1.0**
	baz=0.0						
BTK	**Batken**	**1.74**	**270**	⇑*i*P	**Pn**	**00 48 06.1**	**+0.5**
	baz=71						
BTK				⇑*i*S	**Sb**	**00 48 28.6**	**-0.7**
	baz=71						
ARLS	**Aral**	**2.01**	**27**	⇑*i*P	**Pb**	**00 48 13.0**	**+1.0**
	baz=29						
ARLS				⇑*i*S	**Sg**	**00 48 40.2**	**+0.3**
	baz=29						
AML	**Almayashu**	**2.10**	**12**	⇑*i*P	**Pb**	**00 48 13.8**	**+0.1**
	baz=15						
AML				⇑*i*S	**Sg**	**00 48 41.8**	**-1.0**
	baz=15						
UCH	**Uchtor**	**2.40**	**26**	⇑*i*P	**Pb**	**00 48 18.3**	**-0.5**
	baz=28						
UCH				⇑*i*S	**Sb**	**00 48 50.0**	**+1.4**
	baz=28						
KZA	**Kyzart**	**2.58**	**39**	⇑*i*P	**Pb**	**00 48 20.9**	**-1.0**
	baz=40						
KZA				⇑*i*S	**Sb**	**00 48 53.9**	**+0.1**
	baz=40						
NRN	**Naryn**	**2.59**	**58**	⇑*i*P	**Pb**	**00 48 21.2**	**-0.9**
	baz=58						
NRN				⇑*i*S	**Sb**	**00 48 54.5**	**+0.4**
	baz=58						
EKS2	**Erkin-Say**	**2.63**	**11**	⇑*i*P	**Pb**	**00 48 21.4**	**-1.2**
	baz=13						
EKS2				⇑*i*S	**Sb**	**00 48 54.1**	**-0.8**
	baz=13						
MRKS	**Merke**	**2.66**	**2**	*e*P	**Pg**	**00 48 24.8**	**-1.5**
	6.9nm,0.2s						
MRKS				*e*S	**Sg**	**00 48 58.7**	**-2.1**
	37nm,0.3s						
MRKS	**Merke**	**2.66**	**2**	Pg	**Pg**	**00 48 24.8**	**-1.5**
	4.5nm,0.1s						
MRKS				Lg	Lg	00 48 57.4	
	18nm,0.3s						
AAK	**Ala-Archa**	**2.76**	**22**	⇓Pn	**Pb**	**00 48 23.2**	**-1.7**
	1.2nm,0.3s						
AAK				⇓Pg	**Pg**	**00 48 27.4**	**-0.9**
	2.1nm,0.3s						
AAK				⇑Sn	**Sb**	**00 48 59.6**	**+0.7**
	5.4nm,0.3s						
IUG	**Iuzhnay**	**3.09**	**313**	*e*P	**Pb**	**00 48 32.0**	**+1.5**
	1.4nm,0.2s						
IUG				*e*S	**Sg**	**00 49 10.8**	**-3.9**
	22nm,0.3s						
IUG	**Iuzhnay**	**3.09**	**313**	Pg	**Pn**	**00 48 26.9**	**+2.7**
	0.5nm,0.2s						
IUG				Lg	Lg	00 49 00.8	
	18nm,0.4s						
BOOM	**Boomskoye usch**	**3.23**	**41**	⇓*e*P	**Pb**	**00 48 30.2**	**-2.6**
	baz=42						
BOOM				⇓*e*S	**Sb**	**00 49 09.6**	**-2.6**
	baz=42						
TKM2	**Tokmak 2**	**3.41**	**33**	⇑Pn	**Pn**	**00 48 32.5**	**+3.9**
	9.6nm,1.6s						
TKM2				⇑Pg	**Pg**	**00 48 39.1**	**-1.4**
	16nm,2.1s						
TKM2				⇑Lg	Lg	00 49 23.8	
	11nm,0.8s						
SGDS	**Sogindy**	**3.56**	**18**	Pg	**Pg**	**00 48 42.8**	**-0.6**
	2.0nm,0.2s						
SGDS				Lg	Lg	00 49 27.7	
	5.3nm,0.3s						
KK31	**Karatay Array**	**3.58**	**328**	⇓Pn	**Pn**	**00 48 32.3**	**+1.4**
	0.3nm,0.3s						
KK31				⇑Pg	**Pb**	**00 48 40.5**	**+1.7**
	0.6nm,0.2s,baz=143,slow=16,SNR=12						
KK31				⇑Sn	**Sn**	**00 49 13.2**	**-0.1**
	3.5nm,0.3s,baz=136,slow=26						
KK31				⇑Lg	Lg	00 49 23.7	
	2.9nm,0.3s,baz=139,slow=29						
TNSS	**Tian-Shan**	**4.14**	**43**	*e*P	**Pg**	**00 48 53.9**	**-0.6**
	2.7nm,0.4s						
TNSS				*e*S	**Sg**	**00 49 48.9**	**+0.8**
	17nm,1.5s						
TNSS	**Tian-Shan**	**4.14**	**43**	Pg	**Pg**	**00 48 55.2**	**+0.7**
	2.7nm,0.4s						
TNSS				Lg	Lg	00 49 48.9	
	16nm,1.4s						
KTBS	**Karatobe**	**4.51**	**35**	*e*P	**Pg**	**00 49 00.3**	**-1.4**
	1.1nm,0.4s						
KTBS				*e*S	**Sg**	**00 49 59.2**	**-0.9**
	7.2nm,0.5s						
KTBS	**Karatobe**	**4.51**	**35**	Pg	**Pg**	**00 49 01.1**	**-0.6**
	1.3nm,0.3s						
KTBS				Lg	Lg	00 49 59.1	
	7.2nm,0.5s						
CHKK	**Chushkaly**	**4.76**	**36**	*e*P	**Pg**	**00 49 05.0**	**-1.4**
	1.1nm,0.1s						
CHKK				*e*S	**Sg**	**00 50 06.9**	**-1.2**
	3.5nm,0.5s						
CHKK	**Chushkaly**	**4.76**	**36**	Pg	**Pg**	**00 49 05.1**	**-1.4**
	1.1nm,0.1s						
CHKK				Lg	Lg	00 50 06.3	
	3.5nm,0.5s						

*IDC **06** 01:10:03.9±1.1, 8.60S×105.42E, h0km, mb4.2/12, mb1 4.4/14, mb1mx4.2/34, mbtmp4.3/14, ML4.9/2, MS3.2/2, Ms1 3.3/2, ms1mx2.8/43, Error ellipse: s-maj=33.0km s-min=15.2km az=50.0*

*BJI **06** 01:10:04.0±0.0, 8.60S×105.50E, h10km, mB5.2/15, mb4.6/25, Ms4.8/4, Ms7 4.8/4*

*NEIC **06** 01:10:07.8±2.1, 8.7S±0.1×105.41E±0.08, h30km±5km, mb4.6/15, Error ellipse: s-maj=17.5km s-min=9.2km az=209.0*

*DJA **06** 01:10:08.4±0.7, 8°S±3°×10°6E±°, h21km±7km, M4.7/19, mB5.7/3, mb5.0/16, MLv4.5/19, Mw(mB)5.3/3*

ISC 06 01:10:08.1±2.5, 8.58S±0.07×105.64E±0.06, h28km±17km, n83, σ1§93/83, mb4.6/30, 1C, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**1.81**	**30**	P	**Pn**	**01 10 35.8**	**-1.6**
SKJI				S	**Sn**	**01 10 59.1**	**-0.3**
CNJI	**Cibinong**	**1.94**	**50**	S	**Sn**	**01 11 03.2**	**+0.5**
CGJI	**Cibinong**	**1.95**	**2**	P	**Pn**	**01 10 38.4**	**-1.0**
DBJI	**Dramaga**	**2.29**	**29**	P	**Pn**	**01 10 44.5**	**+0.4**
DBJI				S	**Sn**	**01 11 11.0**	**-0.4**
CISI	**Cisompet, Garu**	**2.38**	**65**	P	**Pn**	**01 10 45.7**	**+0.3**
CISI				S	**Sn**	**01 11 12.3**	**-1.4**
CISI	**Cisompet, Garu**	**2.38**	**65**		**Pn**	**01 10 44.9**	**-0.4**
CISI				Sn	**Sn**	**01 11 07.9**	**-5.8**
CBJI	**Citeko**	**2.46**	**29**	P	**Pn**	**01 10 44.4**	**-1.9**
CBJI				S	**Sn**	**01 11 11.0**	**-4.4**
TNG	**Tangerang**	**2.59**	**23**	P	**Pn**	**01 10 48.8**	**+0.6**
LEM	**Lembang**	**2.62**	**49**	Pn	**Pn**	**01 10 51.5**	**+2.7**
	102nm,0.3s,baz=286,slow=4.9,SNR=75						
LEM				LR	LR	01 11 44.3	
	comp=Z,386nm,20.9s,baz=230,slow=36						
LEM	**Lembang**	**2.62**	**49**	P	**Pn**	**01 10 50.5**	**+1.8**
KASI	**Kota Agung**	**3.24**	**339**	P	**Pn**	**01 10 55.7**	**-1.4**
KASI				S	**Sn**	**01 11 33.6**	**-1.1**
KPJI	**Karang Pucung**	**3.49**	**69**	P	**Pn**	**01 11 01.5**	**+1.0**
KPJI				S	**Sn**	**01 11 44.1**	**+3.2**
LWLI	**Liwa**	**3.87**	**336**	P	**Pn**	**01 11 05.5**	**-0.4**
LWLI				S	**Sn**	**01 11 48.0**	**-2.4**
KLSI		**3.97**	**347**	P	**Pn**	**01 11 05.6**	**-1.5**
MDSI	**Maura Dua**	**4.32**	**340**	P	**Pn**	**01 11 11.1**	**-0.8**
YOGI	**Yogyakarta**	**4.67**	**81**	P	Pn	01 11 20.2	+3.4
UGM	**Wanagama**	**4.88**	**83**	P	**Pn**	**01 11 20.2**	**+0.5**
UGM	**Wanagama**	**4.88**	**83**	Pn	**Pn**	**01 11 20.0**	**+0.3**
UGM					**Sn**	**01 12 08.2**	**-7.1**
MNAI	**Manna**	**4.96**	**327**	P	**Pn**	**01 11 19.6**	**-1.3**
MNAI	**Manna**	**4.96**	**327**	Pn	**Pn**	**01 11 18.2**	**-2.7**
SMRI	**Semarang**	**4.99**	**73**	P	**Pn**	**01 11 22.2**	**+0.9**
	0.8nm79nm,0.6s						
WOJI	**Wonogiri, Jawa**	**5.28**	**82**	P	**Pn**	**01 11 26.7**	**+1.5**
	0.3nm57nm,0.8s						
PCJI	**Pacitan**	**5.49**	**86**	P	**Pn**	**01 11 28.3**	**+0.2**
KSI	**Kapahiang**	**5.75**	**328**	P	**Pn**	**01 11 31.1**	**-0.7**
	0.7nm128nm,0.6s						
NGJI	**Ngawi**	**5.89**	**79**	P	Pn	01 11 40.5	+6.9
PWJI	**Pagerwojo**	**6.13**	**85**	P	**Pn**	**01 11 38.4**	**+1.6**
GMJI	**Gumukmas**	**7.73**	**88**	P	**Pn**	**01 12 00.4**	**+1.6**
	0.3nm63nm,1.0s						
JAGI	**Jajag, Banyuwa**	**8.42**	**90**	P	**Pn**	**01 12 10.2**	**+1.9**
	0.3nm100nm,0.8s						
JAGI	**Jajag, Banyuwa**	**8.42**	**90**	Pn	**Pn**	**01 12 09.4**	**+1.1**
JAGI					**Sn**	**01 13 39.7**	**-2.8**
IGBI	**Denpasar**	**9.40**	**92**	P	**Pn**	**01 12 23.9**	**+2.1**
	131nm,0.9s						
SRBI	**Singaraja**	**9.49**	**88**	P	**Pn**	**01 12 24.3**	**+1.3**
	101nm,0.8s						
PLAI	**Plampang**	**12.00**	**92**	P	**Pn**	**01 12 57.9**	**+0.5**
	65nm,0.9s						
GSI	**Gunungsitoli**	**12.69**	**320**	Pn	**Pn**	**01 13 04.5**	**-2.3**
GIRL	**Giralia**	**16.24**	**150**	Pn	**Pn**	**01 13 50.5**	**-3.9**
MPSI	**Mapaga**	**16.74**	**59**	P	**P**	**01 14 02.9**	**+0.1**
	20nm,1.3s						
BATI	**Baumata**	**17.86**	**97**	P	**P**	**01 14 16.9**	**+1.7**
	7.4nm,0.3s,baz=263,slow=8.1,SNR=2.4						
SOEI	**Soe**	**18.43**	**95**	P	**Pn**	**01 14 23.8**	**+2.0**
SOEI				IAmb	IAmb	01 14 38.4	
	comp=Z,31nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.62**	**118**	P	**P**	**01 14 57.8**	**+1.7**
	comp=Z,2.6nm,0.8s,baz=294,slow=10.0,SNR=3.9						
FITZ				S	**S**	**01 18 49.1**	**-5.3**
	comp=Z,3.7nm,1.0s,baz=342,slow=20,SNR=3.0						
KNRA	**Kununurra**	**23.67**	**110**	P	**P**	**01 15 16.9**	**-0.6**
MTN	**Manton Dam**	**25.40**	**102**	P	**P**	**01 15 33.7**	**+0.3**
MTN				IAmb	IAmb	01 15 51.4	
	comp=Z,28nm,1.4s						
H01W3	**Cape Leeuwin H**	**27.32**	**165**	T	T	01 44 36.5	
	baz=341						
H01W1	**Cape Leeuwin H**	**27.33**	**165**	T	T	01 44 42.5	
	baz=341						
H01W2	**Cape Leeuwin H**	**27.33**	**165**	T	T	01 44 40.0	
	baz=341						
CMAR	**Chiang Mai Arr**	**27.66**	**346**	P	**P**	**01 15 54.2**	**+0.4**
	comp=Z,4.6nm,0.4s,baz=182,slow=8.2,SNR=26						
CMAR				LR	LR	01 28 46.2	
	comp=Z,52nm,18.9s,baz=185,slow=41						
CHTO	**Chiang Mai**	**28.01**	**346**	P	**P**	**01 15 54.9**	**-2.0**
WRA	**Warramunga Arr**	**29.97**	**115**	P	**P**	**01 16 15.3**	**+1.0**
	comp=Z,1.4nm,0.9s,baz=286,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**30.93**	**122**	P	**P**	**01 16 24.3**	**+1.4**
	comp=Z,1.4nm,0.9s,baz=298,slow=8.1,SNR=9.9						
H08S2	**Diego Garcia H**	**32.82**	**269**	T	T	01 52 27.9	
	baz=90,slow=76,SNR=43						
H08S3	**Diego Garcia H**	**32.83**	**269**	T	T	01 52 27.5	
	baz=90,slow=76,SNR=28						
H08S1	**Diego Carcia H**	**32.84**	**269**	T	T	01 52 27.5	
	baz=90,slow=76,SNR=26						
SHL	**Shillong**	**36.48**	**339**	P	**P**	**01 17 11.2**	**0.0**
SHL				IAmb	IAmb	01 17 12.0	
	comp=Z,14nm,1.2s						
RAMN	**Ramite**	**39.85**	**333**	*e*P	**P**	**01 17 40.8**	**+1.1**
	comp=Z,15nm,0.6s						
LSA	**Lhasa**	**40.53**	**340**	P	**P**	**01 17 46.7**	**+1.2**
LSA				IAmb	IAmb	01 17 58.9	
	comp=Z,5.8nm,0.6s						
STKA	**Stephens Creek**	**40.63**	**130**	P	**P**	**01 17 47.2**	**+1.4**
	comp=Z,4.2nm,0.8s,baz=318,slow=10,SNR=5.4						
STKA	**Stephens Creek**	**40.63**	**130**	IAmb	IAmb	01 17 50.4	
	comp=Z,2.6nm,1.2s						
JIRN	**Jiri**	**40.65**	**333**	*e*P	**P**	**01 17 47.0**	**+0.6**
	comp=Z,34nm,0.6s						
PKI	**Pulchoki**	**40.93**	**332**	*e*P	**P**	**01 17 50.2**	**+1.5**
	comp=Z,0.9nm,0.5s						
PKIN	**Phulchoki**	**40.94**	**332**	*e*P	**P**	**01 17 49.9**	**+1.2**
	comp=Z,6.5nm,0.5s						
GUN	**Gumba**	**41.00**	**333**	*e*P	**P**	**01 17 49.9**	**+0.6**
	comp=Z,33nm,0.7s						
DMN	**Daman**	**41.10**	**332**	*e*P	**P**	**01 17 51.7**	**+1.7**
	comp=Z,23nm,0.8s						
KKN	**Kakani**	**41.17**	**332**	*e*P	**P**	**01 17 51.2**	**+0.7**
	comp=Z,22nm,0.7s						
DANN	**Dangsing**	**42.36**	**331**	*e*P	**P**	**01 18 01.1**	**+0.7**
	comp=Z,58nm,0.6s						
GTA	**Gaotai**	**48.05**	**354**	*e*P	**P**	**01 18 46.3**	**+1.2**
GTA				pP	pP	01 18 50.5	-1.9
GTA				sP	sP	01 18 53.6	-1.8
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSRS	**Korea Array**	**50.32**	**23**	P	**P**	**01 19 02.1**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=212,slow=8.4,SNR=11						
NIL	**Nilore**	**52.05**	**325**	P	**P**	**01 19 14.2**	**-1.4**
NIL				IAmb	IAmb	01 19 24.4	
	comp=Z,7.4nm,0.9s						
KSH	**Kashi**	**55.19**	**332**	P	**P**	**01 19 40.3**	**+1.7**
KSH				sP	pP	01 19 47.4	+1.4
KSH				S	**S**	**01 27 23.0**	**+2.7**
KSH				sS	pS	01 27 28.1	-1.3
KSH				SS	**SS**	**01 31 01.8**	**-3.1**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				LR	LR		
	comp=Z,210nm,5.3s						
KSH				LR	LR		
	comp=Z,210nm,4.6s						
KSH				LR	LR		
	comp=Z,470nm,7.8s						
SONM	**Songino Array**	**56.17**	**1**	P	**P**	**01 19 46.0**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=175,slow=8.1,SNR=14						
USRK	**Ussuriysk Ar.**	**57.69**	**22**	P	**P**	**01 19 56.3**	**+0.2**
	comp=Z,2.5nm,0.5s,baz=202,slow=6.0,SNR=13						
MK31	**Makanchi Array**	**58.92**	**341**	P	**P**	**01 20 03.8**	**-0.9**
MK31				IAmb	IAmb	01 20 22.9	
	comp=Z,4.0nm,1.1s						
MKAR	**Makanchi Array**	**58.92**	**341**	P	**P**	**01 20 04.6**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=150,slow=8.5,SNR=38						
KURK	**Kurchatov**	**63.53**	**341**	P	**P**	**01 20 36.3**	**+0.5**
ZAA0	**Zalesovo Array**	**64.73**	**347**	P	**P**	**01 20 43.5**	**0.0**
ZAA0				IAmb

Azm304.0000°; N -0.3790, Plg39.0000°, Azm212.0000°; P -1.1560, Plg51.0000°, Azm37.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

ISC 06 01:25:11.1±0.3,20.78S±0.05×172.65E±0.05,h35km,n612, σ1§30/513,mb5.3/114,MS4.8/71,42C-16D,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.92**	**256**	*e*Pn		**Pn**	**01 26 37.1**	**+0.7**
	507nm,1.4s							
DZM				*e*LR		LR	01 27 59.6	
	comp=Z,9μm,26.1s							
DZM	**Mont Dzumac**	**5.92**	**256**	Pn		**Pn**	**01 26 36.0**	**-0.4**
	3.0nm,0.3s,baz=86,slow=15,SNR=42							
DZM				LR		LR	01 28 41.6	
	comp=Z,6μm,21.6s,baz=84,slow=36							
DZM	**Mont Dzumac**	**5.92**	**256**			**Pn**	**01 26 37.1**	**+0.7**
DZM				Sn		**Sn**	**01 27 41.6**	**-1.5**
MSVF	**Nonsavu**	**5.94**	**60**	*i* P		**Pn**	**01 26 35.2**	**-1.5**
MSVF	**Nonsavu**	**5.94**	**60**			**Pn**	**01 26 34.9**	**-1.7**
RAO	**Raoul Island**	**12.01**	**136**	LR		LR	01 31 47.5	
	comp=Z,6μm,19.8s,baz=302,slow=33							
OUZ	**Omahuta**	**14.41**	**177**			**P**	**01 28 36.5**	**-2.4**
LHI	**Lord Howe Isla**	**16.20**	**226**	Pn		**Pn**	**01 28 56.0**	**-0.1**
LHI				IAmb		IAmb	01 29 40.3	
	comp=Z,354nm,1.8s							
AFI	**Afiamalu**	**16.36**	**68**	LR		LR	01 33 25.7	
	comp=Z,447nm,19.2s,baz=224,slow=31							
HNR	**Honiara**	**16.65**	**311**	Pn		**Pn**	**01 28 59.8**	**-2.1**
	comp=Z,7.1nm,0.3s,baz=141,slow=17,SNR=6.6							
HNR				LR		LR	01 34 22.9	
	comp=Z,3μm,18.9s,baz=134,slow=34							
HNR	**Honiara**	**16.65**	**311**	P		**Pn**	**01 29 02.0**	**+0.2**
HNR	**Honiara**	**16.65**	**311**			**Pn**	**01 28 59.7**	**-2.1**
HNR				IAmb		IAmb	01 29 20.8	
	comp=Z,236nm,1.1s							
HIZ	**Hauiti**	**17.77**	**174**	P		**P**	**01 29 18.4**	**+2.2**
HIZ				IAmb		IAmb	01 29 22.6	
	comp=Z,252nm,1.3s							
URZ	**Urewera**	**17.84**	**168**	P		**P**	**01 29 21.9**	**+4.9**
	comp=Z,0.9nm,0.3s,baz=7.7,slow=8.0,SNR=33							
URZ				LR		LR	01 34 40.0	
	comp=Z,3μm,21.5s,baz=349,slow=32							
URZ	**Urewera**	**17.84**	**168**	P		**P**	**01 29 21.3**	**+4.3**
QRZ	**Quartz Range**	**19.98**	**180**	P		**Pn**	**01 29 42.3**	**0.0**
BFZ	**Birch Farm**	**20.07**	**172**	P		Pn	01 29 43.2	-0.1
BFZ				IAmb		IAmb	01 30 02.1	
	comp=Z,125nm,0.9s							
EIDS	**Eidsvold**	**20.35**	**253**	P		Pn	01 29 46.5	-0.3
NNZ	**Nelson**	**20.38**	**178**	P		Pn	01 29 47.1	+0.2
TUWZ	**Tuamarina**	**20.61**	**177**	P		Pn	01 29 49.0	-0.7
BHW	**Baring Head**	**20.65**	**175**	P		**P**	**01 29 48.8**	**+1.1**
MSIZ	**Moikau Station**	**20.69**	**174**	P		Pn	01 29 50.5	-0.2
PLWZ	**Palliser**	**20.84**	**174**	P		Pn	01 29 51.5	-0.9
THZ	**Tophouse**	**20.92**	**179**	IAmb		IAmb	01 30 18.6	
	comp=Z,264nm,1.8s							
ARMA	**Armidale**	**21.21**	**239**	P		**P**	**01 29 55.0**	**+1.0**
KHZ	**Kahutara**	**21.58**	**178**	P		**P**	**01 29 57.6**	**-0.1**
KHZ				IAmb		IAmb	01 30 05.2	
	comp=Z,185nm,1.6s							
KHZ				IAMs_20		IAMs_20	01 38 22.4	
	comp=Z,3μm,18.0s							
LTZ	**Lake Taylor**	**21.94**	**181**	P		**P**	**01 30 02.8**	**+1.2**
LTZ				IAmb		IAmb	01 30 19.7	
	comp=Z,142nm,1.3s							
FOZ	**Fox Glacier**	**22.81**	**185**	P		**P**	**01 30 12.5**	**+1.8**
FOZ				IAmb		IAmb	01 30 19.0	
	comp=Z,109nm,1.1s							
MQZ	**McQueen's Vall**	**22.86**	**180**	P		**P**	**01 30 09.4**	**-1.8**
RPZ	**Rata Peaks**	**22.91**	**183**	P		**P**	**01 30 16.6**	**+4.8**
	comp=Z,32nm,1.0s,baz=346,slow=11,SNR=3.2							
RPZ				LR		LR	01 37 51.7	
	comp=Z,1μm,21.0s,baz=15,slow=33							
RPZ	**Rata Peaks**	**22.91**	**183**	P		**P**	**01 30 12.1**	**+0.3**
KNTN	**Kanton**	**23.51**	**42**	P		**P**	**01 30 15.2**	**-2.9**
KNTN				IAmb		IAmb	01 30 18.1	
	comp=Z,119nm,1.1s							
LBZ	**Lake Benmore**	**23.63**	**184**	P		**P**	**01 30 20.2**	**+1.2**
LBZ				IAmb		IAmb	01 30 43.8	
	comp=Z,183nm,1.7s							
WKZ	**Wanaka**	**24.17**	**186**	P		**P**	**01 30 24.2**	**+0.2**
WKZ				IAmb		IAmb	01 31 18.0	
	comp=Z,165nm,1.4s							
ODZ	**Otahua Downs**	**24.25**	**183**	P		**P**	**01 30 24.6**	**-0.1**
CTA	**Charters Tower**	**24.73**	**267**	P		**P**	**01 30 30.1**	**+0.7**
	comp=Z,24nm,1.1s,baz=79,slow=12,SNR=13							
CTA				LR		LR	01 39 43.5	
	comp=Z,2μm,18.6s,baz=180,slow=35							
MLZ	**Mavora Lakes**	**24.80**	**188**	P		**P**	**01 30 31.6**	**+1.8**
MLZ				IAmb		IAmb	01 30 41.4	
	comp=Z,145nm,1.2s							
DCZ	**Deep Cove**	**25.03**	**189**	P		**P**	**01 30 33.7**	**+1.9**
DCZ				IAmb		IAmb	01 30 39.0	
	comp=Z,124nm,1.2s							
CAN	**Canberra**	**25.32**	**230**	P		**P**	**01 30 33.0**	**-1.6**
CAN				pmax		pmax		
	comp=Z,174nm,2.0s							
CAN	**Canberra**	**25.32**	**230**	P		**P**	**01 30 33.0**	**-1.6**
CAN				IAmb		IAmb	01 30 43.9	
	comp=Z,174nm,2.0s							
WHZ	**Wether Hill Ro**	**25.34**	**188**	P		**P**	**01 30 35.0**	**+0.4**
WHZ				IAmb		IAmb	01 30 50.2	
	comp=Z,119nm,1.2s							
RAR	**Rarotonga**	**25.74**	**96**	LR		LR	01 38 35.3	
	comp=Z,1μm,21.2s,baz=266,slow=32							
KRVT	**Keravat (AS076**	**25.89**	**306**	P		**P**	**01 30 39.8**	**-0.1**
	comp=Z,62nm,0.5s,baz=293,slow=15,SNR=3.5							
PMG	**Port Moresby**	**27.04**	**291**	*i* P		**P**	**01 30 51.4**	**+1.1**
PMG				pmax		pmax		
	comp=Z,131nm,2.0s							
PMG	**Port Moresby**	**27.04**	**291**	P		**P**	**01 30 49.7**	**-0.6**
	comp=Z,5.7nm,0.4s,baz=84,slow=14,SNR=3.9							
PMG				LR		LR	01 39 56.9	
	comp=Z,2μm,19.0s,baz=112,slow=33							
PMG	**Port Moresby**	**27.04**	**291**	P		**P**	**01 30 50.1**	**-0.2**
COEN	**Coen**	**28.90**	**279**	P		**P**	**01 31 04.8**	**-2.2**
COEN				IAMs_20		IAMs_20	01 40 18.2	
	comp=Z,2μm,21.0s							
STKA	**Stephens Creek**	**29.84**	**242**	P		**P**	**01 31 16.0**	**+0.9**
	comp=Z,19nm,0.8s,baz=77,slow=11,SNR=20							
STKA				LR		LR	01 43 04.7	
	comp=Z,622nm,18.1s,baz=70,slow=36							
BBOO	**Buckleboo**	**34.62**	**242**	P		**P**	**01 31 56.0**	**-1.0**
BBOO				IAmb		IAmb	01 32 05.1	
	comp=Z,72nm,1.1s							
TBI	**Tubuai**	**35.15**	**101**	*e*S		**S**	**01 37 38.0**	**+5.5**
	comp=Z,436nm,25.8s							
TBI				*e*LQ		LQ	01 39 52.7	
	comp=Z,2μm,30.5s							
TBI				*e*LR		LR	01 41 32.8	
	comp=Z,4μm,31.2s,baz=266							
WR0	**Warramunga Arr**	**35.68**	**264**	IAMs_20		IAMs_20	01 45 24.2	
	comp=Z,2μm,22.0s							
WR9	**Warramunga Arr**	**35.70**	**264**	IAMs_20		IAMs_20	01 46 16.9	
	comp=Z,2μm,19.0s							
WR8	**Warramunga Arr**	**35.72**	**264**	IAMs_20		IAMs_20	01 46 18.2	
	comp=Z,2μm,19.0s							
WR7	**Warramunga Arr**	**35.74**	**264**	IAMs_20		IAMs_20	01 46 18.8	
	comp=Z,2μm,19.0s							
WR6	**Warramunga Arr**	**35.76**	**264**	IAMs_20		IAMs_20	01 45 14.7	
	comp=Z,2μm,22.0s							
PPT2	**Papeete2**	**35.77**	**91**	*e*S		**S**	**01 37 46.9**	**+4.6**
	comp=Z,522nm,25.0s							
PPT2				*e*LQ		LQ	01 40 01.8	
	comp=Z,2μm,34.2s							
PPT2				*e*LR		LR	01 41 52.9	
	comp=Z,5μm,28.8s,baz=256							
PPT	**Papeete**	**35.77**	**91**	LR		LR	01 43 13.4	
	comp=Z,551nm,20.5s,baz=214,slow=30							
WR4	**Warramunga Arr**	**35.80**	**264**	IAMs_20		IAMs_20	01 45 16.5	
	comp=Z,2μm,22.0s							
WR3	**Warramunga Arr**	**35.82**	**264**	IAMs_20		IAMs_20	01 45 17.0	
	comp=Z,2μm,22.0s							
WC3	**Warramunga Arr**	**35.84**	**264**	IAMs_20		IAMs_20	01 45 28.3	
	comp=Z,2μm,22.0s							
WB7	**Warramunga Arr**	**35.84**	**265**	IAMs_20		IAMs_20	01 45 28.8	
	comp=Z,2μm,22.0s							
WR2	**Warramunga Arr**	**35.84**	**264**	IAMs_20		IAMs_20	01 45 28.6	
	comp=Z,2μm,22.0s							
WB8	**Warramunga Arr**	**35.85**	**265**	IAMs_20		IAMs_20	01 45 39.6	
	comp=Z,2μm,21.0s							
WB9	**Warramunga Arr**	**35.85**	**265**	IAMs_20		IAMs_20	01 45 38.6	
	comp=Z,2μm,20.0s							
WB5	**Warramunga Arr**	**35.85**	**265**	IAMs_20		IAMs_20	01 45 38.8	
	comp=Z,2μm,20.0s							
WB4	**Warramunga Arr**	**35.85**	**265**	IAMs_20		IAMs_20	01 45 19.0	
	comp=Z,2μm,22.0s							
WB3	**Warramunga Arr**	**35.85**	**264**	IAMs_20		IAMs_20	01 45 28.9	
	comp=Z,2μm,22.0s							
WB1	**Warramunga Ar.**	**35.86**	**264**	IAMs_20		IAMs_20	01 45 25.9	
	comp=Z,2μm,20.0s							
WRAB	**Tennant Creek**	**35.86**	**264**	*i* P		**P**	**01 32 08.9**	**+1.0**
WRAB				pmax		pmax		
	comp=Z,10.0nm,1.1s							
WRAB	**Tennant Creek**	**35.86**	**264**	IAMs_20		IAMs_20	01 45 29.6	
	comp=Z,2μm,21.0s							
WR1	**Warramunga Arr**	**35.87**	**264**	IAMs_20		IAMs_20	01 45 29.2	
	comp=Z,2μm,22.0s							
WRA	**Warramunga Arr**	**35.87**	**264**	P		**P**	**01 32 06.6**	**-1.3**
	comp=Z,4.1nm,1.2s,baz=96,slow=8.8,SNR=8.0							
WRA				LR		LR	01 46 42.9	
	comp=Z,1μm,18.8s,baz=95,slow=36							
WC1	**Warramunga Arr**	**35.87**	**264**	IAMs_20		IAMs_20	01 45 40.3	
	comp=Z,2μm,20.0s							
AS31	**Alice Springs**	**35.91**	**258**	P		**P**	**01 32 08.6**	**+0.3**
ASAR	**Alice Springs**	**35.91**	**258**	P		**P**	**01 32 07.5**	**-0.8**
	comp=Z,3.4nm,0.8s,baz=90,slow=9.2,SNR=25							
ASAR				LR		LR	01 45 47.4	
	comp=Z,1μm,20.5s,baz=98,slow=34							
GENI	**Genyem**	**36.45**	**295**	P		**P**	**01 32 16.9**	**+4.0**
	comp=Z,4μmcomp=Z,212nm,1.2s							
H11S2	**WAKE ISLAND Hy**	**39.46**	**351**	T		T	02 14 14.2	
	baz=171,slow=76,SNR=8.4							
H11S3	**WAKE ISLAND Hy**	**39.47**	**351**	T		T	02 14 17.4	
	baz=171,slow=76,SNR=4.5							
H11S1	**WAKE ISLAND Hy**	**39.48**	**351**	T		T	02 14 17.7	
	baz=171,slow=76,SNR=6.4							
FORT	**Forrest**	**41.13**	**247**	P		**P**	**01 32 50.9**	**-1.2**
FORT				IAmb		IAmb	01 32 55.9	
	comp=Z,67nm,1.0s							
KNRA	**Kununurra**	**41.89**	**269**	P		**P**	**01 32 58.5**	**+0.1**
KNRA				IAMs_20		IAMs_20	01 50 11.4	
	comp=Z,2μm,20.0s							
FAKI	**Fak Fak**	**43.15**	**289**	P		**P**	**01 33 04.1**	**-4.5**
FITZ	**Fitzroy Crossi**	**44.29**	**265**	LR		LR	01 51 12.1	
	comp=Z,1μm,20.4s,baz=99,slow=35							
FITZ	**Fitzroy Crossi**	**44.29**	**265**	IAmb		IAmb	01 33 26.1	
	comp=Z,39nm,1.1s							
FITZ				IAMs_20		IAMs_20	01 50 50.2	
	comp=Z,1μm,22.0s							
SIJI	**Sorong**	**44.98**	**291**	LR		LR	01 51 36.5	
	comp=Z,1μm,19.8s,baz=122,slow=35							
SWI	**Sorong**	**44.99**	**291**	P		P	01 33 29.7	+6.3
SARN	**Sarigan**	**45.64**	**323**	IAMs_20		IAMs_20	01 49 17.0	
	comp=Z,1μm,21.0s							
TAOE	**Nuku Hiva Isla**	**46.99**	**83**	*e*S		**S**	**01 40 31.6**	**+2.8**
	comp=Z,626nm,26.6s							
TAOE				*e*LR		LR	01 47 03.0	
	comp=Z,2μm,28.5s							
NLAI	**Namlea**	**47.62**	**285**	P		P	01 33 51.6	+7.5
SOEI	**Soe**	**47.78**	**276**	IAMs_20		IAMs_20	01 52 31.7	
	comp=Z,1μm,21.0s							
BATI	**Baumata**	**48.19**	**275**	LR		LR	01 53 30.9	
	comp=Z,2μm,20.8s,baz=145,slow=35							
BATI	**Baumata**	**48.19**	**275**	P		P	01 33 57.5	+8.9
PSAB3	**Pilbara Seismi**	**49.03**	**259**	IAMs_20		IAMs_20	01 54 37.4	
	comp=Z,1μm,19.0s							
MBWA	**Marble Bar**	**49.21**	**260**	IAMs_20		IAMs_20	01 54 21.2	
	comp=Z,1μm,21.0s							
NWAO	**Narrogin (SRO)**	**50.39**	**244**	P		**P**	**01 34 04.6**	**-0.5**
NWAO				pmax		pmax		
	comp=Z,26nm,0.9s							
NWAO	**Narrogin (SRO)**	**50.39**	**244**	LR		LR	01 53 58.7	
	comp=Z,657nm,21.8s,baz=92,slow=34							
NWAO	**Narrogin (SRO)**	**50.39**	**244**	P		**P**	**01 34 04.6**	**-0.5**
NWAO	**Narrogin (SRO)**	**50.39**	**244**	IAmb		IAmb	01 34 08.7	
	comp=Z,21nm,0.9s							
BBSI	**Bau Bau**	**50.85**	**280**	P		P	01 34 21.9	+13
MORW	**Morawa**	**51.58**	**249**	IAMs_20		IAMs_20	01 56 02.2	
	comp=Z,1μm,21.0s							
LUWI	**Luwuk**	**52.46**	**285**	P		**P**	**01 34 24.0**	**+3.2**
	comp=Z,3μmcomp=Z,47nm,1.0s							
LUWI	**Luwuk**	**52.46**	**285**	P		**P**	**01 34 20.4**	**-0.5**
BKSI	**Bulukumba**	**53.17**	**279**	P		**P**	**01 34 29.7**	**+3.6**
	comp=Z,24nm,1.0s							
BNSI	**Bone**	**53.53**	**280**	P		P	01 34 33.9	+5.1
	comp=Z,27nm,1.3s							
DAV	**Davao City (W)**	**53.88**	**296**	LR		LR	01 56 04.2	
	comp=Z,365nm,20.4s,baz=108,slow=34							
PLAI	**Plampang**	**54.13**	**274**	P		P	01 34 40.3	+7.2
KCP	**Kidapawan**	**54.26**	**296**	*i* P		P	**01 34 34.0**	**-0.2**
TTSI	**Tana Toraja**	**54.32**	**282**	P		P	01 34 47.8	+13
MPSI	**Mapaga**	**55.64**	**285**	P		**P**	**01 34 44.0**	**-0.1**
	comp=Z,491nmcomp=Z,30nm,1.1s							
SRBI	**Singaraja**	**56.77**	**274**	P		P	01 34 59.7	+7.6
VNDA	**Vanda**	**57.03**	**183**	P		**P**	**01 34 53.8**	**+0.8**
VNDA	**Vanda**	**57.03**	**183**	P		**P**	**01 34 53.8**	**+0.8**
KPJI	**Karang Pucung**	**62.89**	**272**	P		P	01 35 50.3	+16
CISI	**Cisompet, Garu**	**63.86**	**272**	P		**P**	**01 35 39.9**	**-0.8**
JOW	**Kunigami**	**63.94**	**316**	IAMs_20		IAMs_20	02 04 55.5	
	comp=Z,578nm,19.0s							
LEM	**Lembang**	**64.28**	**272**	P		**P**	**01 35 44.0**	**+0.4**
LEM	**Lembang**	**64.28**	**272**	P		**P**	**01 35 44.0**	**+0.4**
	comp=Z,18nm,0.5s,baz=21,slow=14,SNR=3.5							
DBJI	**Dramaga**	**65.19**	**272**	P		**P**	**01 35 51.9**	**+2.6**
MJAR	**Matsushiro Arr**	**65.64**	**330**	P		**P**	**01 35 50.6**	**-1.2**
	comp=Z,4.6nm,0.8s,baz=150,slow=5.8,SNR=8.7							
MJAR				LR		LR	01 59 02.1	
	comp=Z,321nm,21.7s,baz=135,slow=31							
MAJO	**Matsushiro**	**65.65**	**330**	*i* P		**P**	**01 35 49.4**	**-2.4**
MAJO				pmax		pmax		
	comp=Z,6.0nm,0.8s							
MAJO	**Matsushiro**	**65.65**	**330**	IAMs_20		IAMs_20	02 01 01.6	
	comp=Z,576nm,19.0s							
MJB9	**Matsu-Tunnel**	**65.65**	**330**	IAMs_20		IAMs_20	02 01 11.9	
	comp=Z,605nm,21.0s							
JNU	**Nakatsue**	**66.81**	**323**	P		**P**	**01 35 56.1**	**-3.2**
SSLB	**Suanglung**	**67.05**	**309**	IAMs_20		IAMs_20	02 00 06.5	
	comp=Z,712nm,21.0s							
YHNB	**Yeheng**	**67.28**	**310**	IAMs_20		IAMs_20	02 01 51.4	
	comp=Z,900nm,22.0s							
KASI	**Kota Agung**	**67.64**	**273**	P		**P**	**01 36 07.9**	**+2.9**
	comp=Z,52nm,1.2s							
MDSI	**Maura Dua**	**68.30**	**273**	P		**P**	**01 36 08.2**	**-1.0**
QSPA	**South Pole Qui**	**69.28**	**180**	P		**P**	**01 36 15.4**	**+0.8**
TJN	**Taejon**	**71.15**	**323**	*ce*P		**P**	**01 36 26.7**	**+0.5**
KSRS	**Korea Array**	**71.61**	**324**	P		**P**	**01 36 29.0**	**0.0**
KSRS	**Korea Array**	**71.61**	**324**	P		**P**	**01 36 28.9**	**0.0**
	comp=Z,7.1nm,0.9s,baz=137,slow=5.7,SNR=13							
KSRS				LR		LR	02 04 33.5	
	comp=Z,225nm,21.3s,baz=144,slow=33							
YSS	**Yuzh-Sakhalins**	**72.62**	**339**	*ie*P		**P**	**01 36 35.1**	**+0.4**
YSS				*e*			01 36 50.0	
YSS				*e*S		**S**	**01 45 56.4**	**-0.7**
YSS				pmax		pmax		
	comp=Z,20nm,0.9s							
BKNI	**Bangkinang**	**72.95**	**277**	P		**P**	**01 36 37.1**	**-0.4**
QIZ	**Qiongzhong**	**73.13**	**298**	P		**P**	**01 36 37.9**	**-0.5**
QIZ				S		**SKiKP**	**01 46 07.2**	**-1.1**
QIZ				LR		LR		
	comp=Z,460nm,36.8s							
QIZ				LR		LR		
	comp=Z,410nm,36.3s							
NJ2	**Nanjing**	**73.56**	**314**	*e*P		**P**	**01 36 42.1**	**+1.4**
NJ2				pmax		pmax		
	comp=Z,16nm,0.6s							
NJ2				LR		LR		
	comp=Z,610nm,18.5s							
NJ2				LR		LR		
	comp=Z,380nm,18.4s							
NJ2				LR		LR		
	comp=Z,450nm,13.7s							
PET	**Petropavlovsk**	**74.49**	**351**	*e*P		**P**	**01 36 49.2**	**+3.6**
PET				*e*S		**S**	**01 46 21.1**	**+3.1**
USA0B	**Ussuriysk Arra**	**74.60**	**331**	*i* P		**P**	**01 36 47.0**	**+0.5**
USRK	**Ussuriysk Ar.**	**74.60**	**331**	P		**P**	**01 36 45.3**	**-1.2**
	comp=Z,6.7nm,0.8s,baz=156,slow=4.8,SNR=11							
USRK				LR		LR	02 04 58.2	
	comp=Z,404nm,21.5s,baz=133,slow=32							
PEA0B	**Petropavlovsk-**	**74.72**	**351**	*i* P		**P**	**01 36 47.1**	**+0.1**
PEA0B	**Petropavlovsk-**	**74.72**	**351**	P		**P**	**01 36 44.8**	**-2.2**
PETK	**Petropavlovsk-**	**74.72**	**351**	P		**P**	**01 36 45.9**	**-1.1**
	comp=Z,23nm,0.9s,baz=119,slow=5.4,SNR=12							
WHN	**Wuhan**	**75.77**	**311**	P		**P**	**01 36 53.2**	**-0.3**
RPSI	**Rantau Prapat**	**75.79**	**278**	IAmb		IAmb	01 37 01.4	
	comp=Z,42nm,1.4s							
DL2	**Dalian**	**76.19**	**321**	P		**P**	**01 36 54.6**	**-1.1**
DL2				S		**S**	**01 46 39.4**	**+1.9**
DL2				SS		**SS**	**01 51 34.4**	**+2.3**
DL2				pmax		pmax		
	comp=Z,87nm,1.2s							
DL2				pmax		pmax		
	comp=Z,300nm,7.0s							
DL2				LR		LR		
	comp=Z,220nm,12.8s							
DL2				LR		LR		
	comp=Z,410nm,22.7s							
DL2				LR		LR		
	comp=Z,480nm,22.1s							
GSI	**Gunungsitoli**	**76.52**	**277**	P		**P**	**01 36 59.5**	**+1.2**
	comp=Z,41nm,0.9s							
GSI	**Gunungsitoli**	**76.52**	**277**	P		**P**	**01 36 56.6**	**-1.6**
GSI				IAmb		IAmb	01 37 06.1	
	comp=Z,50nm,1.1s							
CN2	**Changchun**	**77.46**	**327**	*e*P		**P**	**01 37 02.3**	**-0.5**
CN2				*e*S		**S**	**01 46 50.0**	**-1.2**
CN2				pmax		pmax		
	comp=Z,20nm,0.9s							
CN2				pmax		pmax		
	comp=Z,170nm,5.6s							
CN2				LR		LR		
	comp=Z,260nm,26.0s							
CN2				LR		LR		
	comp=Z,250nm,26.0s							
CN2				LR		LR		
	comp=Z,390nm,24.0s							
GRNR	**Gornyy**	**78.06**	**337**	*ij* P		**P**	**01 37 06.4**	**+0.4**
GRNR				*e*S		**S**	**01 47 01.8**	**+4.4**
GRNR				pmax		pmax		
	comp=Z,10.0nm,1.1s							
GRNR				smax		smax		
	comp=N,6.0nm,0.7s							
MAW	**Mawson**	**78.20**	**202**	P		**P**	**01 37 07.9**	**+1.3**
	comp=N,7.1nm,1.1s,baz=135,slow=4.3,SNR=4.0							
MAW				LR		LR	02 05 48.8	
	comp=N,142nm,21.9s,baz=72,slow=31							
MAW	**Mawson**	**78.20**	**202**	IAmb		IAmb	01 37 11.7	
	comp=Z,7.0nm,1.5s							
KLR	**Kul'dur**	**78.62**	**334**	*i* P		**P**	**01 37 09.4**	**+0.3**
KLR				pmax		pmax		
	comp=Z,5.0nm,0.9s							
MLSI	**Meulaboh, Aceh**	**78.70**	**279**	P		P	01 37 17.8	+7.4
ENH	**Enshi**	**79.13**	**308**	IAMs_20		IAMs_20	02 07 14.6	
	comp=Z,407nm,21.0s							
GYA	**Guiyang**	**79.33**	**304**	*e*P		**P**	**01 37 15.4**	**+1.7**
GYA				pP		PcP	01 37 22.0	+0.2
GYA				PP		**PP**	**01 40 15.8**	**+1.6**
GYA				S		**S**	**01 47 12.6**	**+0.4**
GYA				SKS		**SKSac**	**01 47 25.4**	**-2.3**
GYA				pmax		pmax		
	comp=Z,20nm,1.1s							
GYA				pmax		pmax		
	comp=Z,120nm,5.3s							
PBKT	**Sadao Pong**	**79.50**	**292**	P		**P**	**01 37 15.8**	**+1.1**
BJI	**Beijing**	**80.17**	**319**	*ij* P		**P**	**01 37 17.4**	**-0.3**
BJI				PP		**PP**	**01 40 25.8**	**+5.1**
BJI				S		**S**	**01 47 25.4**	**+5.2**
BJI				SS		**SS**	**01 52 31.0**	**-0.9**
BJI				pmax		pmax		
	comp=Z,15nm,1.1s							
BJI				pmax		pmax		
	comp=Z,230nm,4.4s							
BJI				LR		LR		
	comp=Z,230nm,17.0s							
BJI				LR		LR		
	comp=Z,260nm,24.6s							
BJI				LR		LR		
	comp=Z,880nm,35.3s							
XAN	**Xi'an**	**81.52**	**311**	P		**P**	**01 37 25.3**	**+0.1**
XAN				pP		pP	01 37 35.7	+0.4
XAN				pmax		pmax		
	comp=Z,14nm,1.4s							
KMI	**Kunming**	**81.81**	**301**	P		**P**	**01 37 28.2**	**+1.0**
KMI				pP		pP	01 37 35.2	-2.0
KMI				sP		sP	01 37 38.9	-2.0
KMI				pmax		pmax		
	comp=Z,21nm,0.6s							
KMI				pmax		pmax		
	comp=Z,210nm,5.3s							
CM31	**Chiang Mai Arr**	**82.05**	**293**	P		**P**	**01 37 29.4**	**+1.1**
CMAR	**Chiang Mai Arr**	**82.05**	**293**	*i* P		**P**	**01 37 29.7**	**+1.4**
CMAR				pmax		pmax		
	comp=Z,7.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**82.05**	**293**	P		**P**	**01 37 29.0**	**+0.7**
	comp=Z,7.4nm,0.8s,baz=131,slow=4.0,SNR=34							
CMAR				LR		LR	02 16 22.4	
	comp=Z,78nm,18.2s,baz=150,slow=38							
CHTO	**Chiang Mai**	**82.20**	**293**	P		**P**	**01 37 30.1**	**+1.0**
CHTO				pmax		pmax		
	comp=Z,22nm,1.0s							
CHTO	**Chiang Mai**	**82.20**	**293**	P		**P**	**01 37 30.1**	**

PASC	Pasadena Art C	85.49	51	IAmb	IAmb	01 37 47.2													
	comp=Z,31nm,1.0s																		
VES	Vestal, Richgr	85.65	49	P	P	01 37 46.6	+0.3												
	baz=241,SNR=13																		
109C	Camp Elliot, M	85.68	53	IAmb	IAmb	01 37 48.4													
	comp=Z,30nm,1.1s																		
109C	Camp Elliot, M	85.68	53	P	P	01 37 46.9	+0.4												
	baz=242																		
VOG	Valley Oaks Go	85.68	49	P	P	01 37 47.0	+0.6												
	baz=240																		
WDC	Whiskeytown Da	85.72	44	IAmb	IAmb	01 37 48.7													
	comp=Z,46nm,1.2s																		
N02D	Trinity Center	85.82	43	P	P	01 37 48.3	+1.2												
	baz=238																		
CMB	Columbia Colle	85.83	47	IAmb	IAmb	01 37 49.0													
	comp=Z,36nm,1.1s																		
ORV	Oroville	85.86	45	IAmb	IAmb	01 37 49.1													
	comp=Z,44nm,1.2s																		
L02E	Cave Junction	85.88	42	P	P	01 37 48.3	+1.0												
	baz=237,SNR=7.8																		
BAR	Barrett	85.90	53	IAmb	IAmb	01 37 49.5													
	comp=Z,26nm,1.4s																		
BFSC	Mount Baldy Ra	85.90	51	P	P	01 37 48.0	+0.2												
	baz=242																		
MURC	Murrieta	85.94	52	P	P	01 37 48.3	+0.4												
	baz=242																		
M02C	Callahan	85.94	43	P	P	01 37 48.9	+1.2												
	baz=238																		
EDW2	Edwards Air Fo	85.97	50	P	P	01 37 48.7	+0.7												
	baz=242,SNR=42																		
ISA	Isabella, Lake	86.00	50	P	P	01 37 48.9	+0.8												
	baz=241																		
O03E	Paynes Creek	86.05	44	P	P	01 37 48.6	+0.4												
	baz=239																		
K02D	Willamette Mer	86.13	41	P	P	01 37 49.2	+0.6												
	baz=237,SNR=11																		
LZH	Lanzhou	86.15	311	*e*P	P	01 37 50.2	+1.2												
LZH				pP	pP	01 37 56.6	-2.5												
LZH				sP	sP	01 38 00.3	-2.5												
LZH				S	S	01 48 21.4	0.0												
LZH				SS	SS	01 54 05.8	+4.7												
LZH				pmax	pmax														
	comp=Z,30nm,1.1s																		
LZH				pmax	pmax														
	comp=Z,300nm,4.9s																		
LZH				LR	LR														
	comp=Z,310nm,15.3s																		
LZH				LR	LR														
	comp=Z,350nm,16.8s																		
LZH				LR	LR														
	comp=Z,400nm,16.3s																		
MONP2	Monument Peak	86.19	53	P	P	01 37 50.1	+0.8												
	baz=242,SNR=18																		
YBH	Yreka Blue Hor	86.22	43	IAmb	IAmb	01 37 51.4													
	comp=Z,36nm,1.1s																		
J01E	Myrtle Point	86.22	41	P	P	01 37 49.6	+0.7												
	baz=237																		
IKP	In-Ko-Pah, Jac	86.31	53	P	P	01 37 50.6	+0.8												
	baz=243,SNR=15																		
BBRC	Big Bear Solar	86.45	51	P	P	01 37 51.2	+0.6												
	baz=242																		
LRMC	Laurel Mtn Rad	86.48	50	P	P	01 37 51.1	+0.6												
	baz=242,SNR=17																		
PFO	Pinyon Flats O	86.49	52	*i* P	P	01 37 51.0	+0.3												
PFO				pmax	pmax														
	comp=Z,39nm,1.3s																		
PFO	Pinyon Flats O	86.49	52	P	P	01 37 50.7	0.0												
PFO				IAmb	IAmb	01 37 52.7													
	comp=Z,26nm,1.2s																		
PFO	Pinyon Flats O	86.49	52	P	P	01 37 51.2	+0.6												
	baz=242,SNR=14																		
XPFO	Pion Flat	86.49	52	P	P	01 37 50.7	0.0												
XPFO				IAmb	IAmb	01 37 52.7													
	comp=Z,24nm,1.2s																		
CWC	Cottonwood Cre	86.65	49	P	P	01 37 52.0	+0.5												
	baz=241																		
SWSC	Sam W. Stewart	86.67	53	P	P	01 37 52.2	+0.8												
	baz=243,SNR=12																		
RRX	Edison Barstow	86.69	51	P	P	01 37 51.9	+0.4												
	baz=242																		
MLAC	Mammoth, Mammo	86.70	48	P	P	01 37 52.4	+0.6												
	baz=241																		
L04D	Klamath Falls	86.73	42	P	P	01 37 52.2	+0.6												
	baz=238,SNR=22																		
BEKR	Beckworth	86.78	45	IAmb	IAmb	01 37 53.8													
	comp=Z,29nm,1.0s																		
I02D	Swisshome	86.79	40	P	P	01 37 52.8	+1.1												
	baz=237																		
M04C	Macdoel	86.80	43	P	P	01 37 52.6	+0.6												
	baz=239,SNR=17																		
TIN	Tinemaha, Big	86.84	48	P	P	01 37 53.2	+1.0												
	baz=241																		
I03D	Drain, OR	86.87	41	P	P	01 37 52.7	+0.6												
	baz=238,SNR=8.4																		
MPMC	Manual Prospec	86.89	50	P	P	01 37 53.2	+0.6												
	baz=242,SNR=28																		
BELC	Belle Mtn. Jos	87.01	52	P	P	01 37 54.0	+0.8												
	baz=243,SNR=24																		
GSC	Goldstone, Bar	87.02	51	IAmb	IAmb	01 37 55.2													
	comp=Z,32nm,1.2s																		
GSC	Goldstone, Bar	87.02	51	P	P	01 37 53.8	+0.6												
	baz=242,SNR=19																		
YERR	Yerington	87.09	46	IAmb	IAmb	01 37 55.5													
	comp=Z,36nm,1.1s																		
HEC	Hector,Ludlow	87.14	51	P	P	01 37 54.3	+0.6												
	baz=242,SNR=56																		
BC3	Big Chuckawall	87.26	53	P	P	01 37 55.1	+0.7												
	baz=243,SNR=17																		
K04D	Chiloquin, OR	87.29	42	P	P	01 37 54.8	+0.5												
	baz=239																		
PAHR	Pah Rah Range	87.35	46	IAmb	IAmb	01 37 56.7													
	comp=Z,36nm,1.2s																		
J04D	Umpqua Nationa	87.39	42	P	P	01 37 55.4	+0.5												
	baz=238,SNR=12																		
RYN	Ryan	87.40	47	IAmb	IAmb	01 37 57.0													
	comp=Z,28nm,1.2s																		
GRAC	Grapevine Rang	87.42	49	P	P	01 37 55.9	+0.8												
	baz=242																		
GLA	Glamis	87.45	53	P	P	01 37 56.1	+0.8												
	baz=243																		
NVAR	Mina Array Bea	87.45	47	P	P	01 37 55.9	+0.5												
	comp=Z,12nm,1.0s,baz=228,slow=8.0,SNR=67																		
NVAR				LR	LR	02 09 35.8													
	comp=Z,176nm,19.7s,baz=234,slow=30																		
I04A	Tendick Farm,	87.50	41	P	P	01 37 55.3	+0.1												
	baz=238,SNR=9.3																		
FURC	Furnace Creek,	87.53	50	P	P	01 37 56.2	+0.7												
	baz=242,SNR=8.2																		
NV11	Mina Array Sit	87.56	47	IAmb	IAmb	01 37 57.8													
	comp=Z,36nm,1.2s																		
GMRC	Granite Mounta	87.62	51	P	P	01 37 56.6	+0.5												
	baz=243,SNR=12																		
H04D	Lebanon	87.68	40	P	P	01 37 56.5	+0.5												
	baz=238,SNR=9.7																		
SHOC	Shoshone, Teco	87.68	50	P	P	01 37 56.9	+0.6												
	baz=242																		
NVL	N'lazarevskaya	87.71	186	*e*P	P	01 37 54.5	-1.3												
NVL				pmax	pmax														
	comp=Z,14nm,0.9s																		
IRM	Iron Mountain	87.71	52	P	P	01 37 57.4	+0.9												
	baz=243,SNR=22																		
TUQ	Turquoise Moun	87.72	51	P	P	01 37 57.2	+0.6												
	baz=243,SNR=10.0																		
G03D	McMinnville, O	87.74	40	P	P	01 37 56.9	+0.6												
	baz=238,SNR=5.0																		
SNAA	Sanae	87.74	181	P	P	01 37 55.4	-0.7												
SNAA	Sanae	87.74	181	*i* P	P	01 37 57.8	+1.8												
SNAA	Sanae	87.74	181	P	P	01 37 55.5	-0.5												
SNAA				IAmb	IAmb	01 37 59.4													
	comp=Z,28nm,1.3s																		
J05D	Fort Rock, OR	87.96	42	P	P	01 37 58.4	+0.9												
	baz=239,SNR=33																		
Y12C	Blythe	87.99	53	IAmb	IAmb	01 38 00.1													
	comp=Z,34nm,1.2s																		
Y12C	Blythe	87.99	53	P	P	01 37 58.7	+1.0												
	baz=244,SNR=13																		
113A	Mohawk Valley,	88.12	54	IAmb	IAmb	01 38 00.8													
	comp=Z,30nm,1.4s																		
TPNV	Topopah Spring	88.19	49	IAmb	IAmb	01 38 00.9													
	comp=Z,28nm,1.1s																		
TPNV	Topopah Spring	88.19	49	P	P	01 37 59.6	+0.8												
	baz=242,SNR=23																		
VNA3	Neumayer Olymp	88.20	179	P	P	01 37 58.3	+0.1												
F04D	Rainier, OR	88.36	39	P	P	01 38 00.2	+1.0												
	baz=238																		
NEE2	Needles Airpor	88.37	52	P	P	01 38 00.3	+0.8												
	baz=244																		
I05D	Terrebonne, OR	88.44	41	P	P	01 38 00.1	+0.4												
	baz=239,SNR=8.8																		
214A	Organ Pipe Nat	88.50	55	IAmb	IAmb	01 38 02.7													
	comp=Z,19nm,1.1s																		
214A	Organ Pipe Nat	88.50	55	P	P	01 38 01.4	+1.1												
	baz=245																		
BILL	Bilibino	88.69	358	*e*P	P	01 38 00.1	-0.1												
BILL				pmax	pmax														
	comp=Z,33nm,1.3s																		
BILL	Bilibino	88.69	358	P	P	01 37 59.9	-0.3												
HSIG		88.72	58	IAmb	IAmb	01 38 03.6													
	comp=Z,21nm,1.1s																		
SHPR	Sheep Range	88.76	50	IAmb	IAmb	01 38 04.0													
	comp=Z,32nm,1.3s																		
VNA1	Neumayer--Stat	88.81	180	P	P	01 38 01.5	+0.4												
E04D	Cinebar	88.87	39	P	P	01 38 02.2	+0.7												
	baz=238																		
G05D	Wamic, OR	88.92	40	P	P	01 38 02.5	+0.6												
	baz=239																		
W13A	Hualapai Mount	89.06	52	IAmb	IAmb	01 38 05.4													
	comp=Z,31nm,1.4s																		
D04E	Lakebay	89.08	38	P	P	01 38 03.7	+1.2												
	baz=238																		
D03D	Eldon	89.09	38	P	P	01 38 03.4	+0.8												
	baz=238																		
F05D	White Salmon	89.17	40	P	P	01 38 03.5	+0.5												
	baz=239																		
Y14A	Wickenburg	89.21	53	IAmb	IAmb	01 38 05.7													
	comp=Z,20nm,1.4s																		
R11A	Troy Canyon, C	89.30	48	P	P	01 38 04.5	+0.5												
	baz=243,SNR=17																		
YAK	Yakutsk	89.33	341	*i* P	P	01 38 03.7	+0.4												
YAK				pmax	pmax														
	comp=Z,30nm,1.7s																		
LON	Longmire	89.41	39	IAmb	IAmb	01 38 05.5													
	comp=Z,16nm,1.1s																		
A04D	Lummi Island	89.94	37	P	P	01 38 07.2	+0.7												
	baz=238																		
ULN	Ulaanbaatar	90.03	322	*ce*P	P	01 38 06.8	-0.4												
ULN				pmax	pmax														
	comp=Z,30nm,1.7s																		
ULN	Ulaanbaatar	90.03	322	P	P	01 38 06.5	-0.7												
ULN				IAmb	IAmb	01 38 08.2													
	comp=Z,40nm,1.6s																		
B05A	Bryant	90.04	37	P	P	01 38 07.5	+0.5												
	baz=238																		
F07A	Phinny Hill Vi	90.09	40	IAmb	IAmb	01 38 09.1													
	comp=Z,27nm,1.0s																		
TUC	Tucson	90.21	55	P	P	01 38 08.5	+0.2												
TUC				pmax	pmax														
	comp=Z,27nm,1.2s																		
TUC	Tucson	90.21	55	P	P	01 38 08.5	+0.2												
TUC				IAmb	IAmb	01 38 11.7													
	comp=Z,27nm,1.2s																		
TUC	Tucson	90.21	55	P	P	01 38 09.7	+1.4												
	baz=246																		
LTY	Liberty	90.34	39	IAmb	IAmb	01 38 09.9													
	comp=Z,23nm,1.0s																		
G08A	Pilot Rock	90.38	41	IAmb	IAmb	01 38 10.6													
	comp=Z,29nm,1.0s																		
SONM	Songino Array	90.39	322	P	P	01 38 08.1	-0.7												
	comp=Z,7.0nm,1.1s,baz=132,slow=4.1,SNR=31																		
SONM				LR	LR	02 17 25.2													
	comp=Z,123nm,19.8s,baz=109,slow=35																		
E07A	Sunnyside	90.47	40	IAmb	IAmb	01 38 10.9													
	comp=Z,32nm,1.0s																		
HDA	Harding Lake	90.47	16	P	P	01 38 09.0	+0.3												
	baz=217																		
B06A	Marblemount	90.53	37	IAmb	IAmb	01 38 10.4													
	comp=Z,27nm,1.0s																		
C06D	Leavenworth	90.55	38	P	P	01 38 09.6	+0.1												
	baz=239																		
HAWA	Hanford	90.58	40	P	P	01 38 10.1	+0.5												
X16A	Lo Mia Camp, P	90.58	53	IAmb	IAmb	01 38 12.8													
	comp=Z,35nm,1.1s																		
MDM	Murphy Dome	90.59	16	P	P	01 38 07.3	-2.0												
TCOL	CIGO, UAF Yank	90.61	16	P	P	01 38 08.1	-1.2												
	baz=217																		
COLA	College	90.61	16	*i* P	P	01 38 09.5	+0.2												
COLA				pmax	pmax														
	comp=Z,12nm,1.0s																		
COLA	College	90.61	16	P	P	01 38 07.2	-2.1												
COLA				IAmb	IAmb	01 38 09.8													
	comp=Z,17nm,0.9s																		
ILAR	Eielson Array	90.78	16	P	P	01 38 08.5	-1.6												
	comp=Z,4.2nm,0.7s,baz=232,slow=4.9,SNR=56																		
ILAR				LR	LR	02 12 32.1													
	comp=Z,423nm,19.3s,baz=218,slow=31																		
SHL	Shillong	90.90	297	IAmb	IAmb	01 38 12.2													
	comp=Z,21nm,1.2s																		
POKR	Poker Flat Res	90.92	16	P	P	01 38 10.3	-0.5												
	baz=217																		
319A	Douglas	91.00	57	IAmb	IAmb	01 38 14.8													
	comp=Z,28nm,1.1s																		
WUAZ	Wupatki	91.09	52	P	P	01 38 13.6	+1.1												
	baz=245																		
LLLB	Lillott	91.40	35	IAmb	IAmb	01 38 14.8													
	comp=Z,28nm,1.2s																		
B08A	Colville Reser	91.68	38	IAmb	IAmb	01 38 15.7													
	comp=Z,21nm,1.4s																		
X18A	Snowflake	91.75	54	IAmb	IAmb	01 38 17.9													
	comp=Z,26nm,1.1s																		
F10A	Beach Ranch, E	91.78	41	IAmb	IAmb	01 38 16.4													
	comp=Z,12nm,0.9s																		
C09A	Chrisman Ranch	92.02	39	IAmb	IAmb	01 38 17.5													
	comp=Z,21nm,1.4s																		
DUG	Dugway, Tooele	92.05	48	IAmb	IAmb	01 38 18.5													
	comp=Z,25nm,1.5s																		
DUG	Dugway, Tooele	92.05	48	P	P	01 38 17.2	+0.5												
	baz=245																		
BOD	Bodaibo	92.14	333	*e*P	P	01 38 13.8	-2.7												
BOD				pmax	pmax														
	comp=Z,14nm,1.6s																		
W18A	Petrified Fore	92.15	53	P	P	01 38 18.2	+0.8												
	baz=246																		
121A	Cookes Peak, D	92.62	56	IAmb	IAmb	01 38 22.6													
	comp=Z,12nm,1.0s																		
121A	Cookes Peak, D	92.62	56	P	P	01 38 20.6	+1.0												
	baz=247																		
NEW	Newport	92.92	39	P	P	01 38 19.9	-0.5												
	baz=242																		
ZAIG	Zacatecas	93.28	67	IAmb	IAmb	01 38 26.0													
	comp=Z,32nm,1.7s																		
TOLK	Toolik Lake Re	93.28	13	P	P	01 38 22.6	+0.9												
	baz=215																		
ZAK	Zakamensk	93.43	323	*e*P	P	01 38 20.7	-2.1												
ZAK				pmax	pmax														
	comp=Z,12nm,1.4s																		
TLY	Talaya	93.86	324	*i* P	P	01 38 24.6	-0.1												
TLY				pmax	pmax														
	comp=Z,13nm,1.0s																		
MVCO	Mesa Verde	93.90	52	P	P	01 38 25.7	+0.2												
	baz=247																		
MNTX	Cornudas Mount	94.19	58	P	P	01 38 27.0	+0.3												
	baz=248																		
ANMO	Albuquerque	94.56	54	*ce*P	P	01 38 28.9	+0.4												
ANMO				pmax	pmax														
	comp=Z,4.0nm,1.1s																		
ANMO	Albuquerque	94.56	54	P	P	01 38 28.2	-0.4												
ANMO	Albuquerque	94.56	54	P	P	01 38 28.9	+0.4												
	baz=248																		
REDW	Red Top Meadow	94.71	45	IAmb	IAmb	01 38 30.6													
	comp=Z,15nm,1.2s																		
TXAR	Lajitas Array	94.71	61	P	P	01 38 29.4	+0.2												
	comp=Z,4.6nm,0.9s,baz=232,slow=5.5,SNR=26																		
TXAR				LR	LR	02 12 28.7													
	comp=Z,189nm,21.9s,baz=0.0,slow=30																		
EPYK	Eagle Plains	94.80	18	P	P	01 38 27.5	-1.2												
	baz=227																		
O20A	White River Ci	95.22	49	P	P	01 38 32.0	+0.6												
	baz=247																		
PLCA	Paso Flores	95.24	137	LR	LR	02 12 09.1													
	comp=Z,362nm,21.7s,baz=266,slow=30																		
H17A	Grant Village	95.31	44	P	P	01 38 33.1	+1.2												
	baz=246																		
S22A	4UR Ranch, Cre	95.33	52	P	P	01 38 32.8	+0.6												
	baz=248																		
BW06	Boulder Array	95.34	46	P	P	01 38 32.1	+0.2												
	baz=247																		
PDAR	Pinedale Array	95.34	46	P	P	01 38 31.6	-0.4												
	comp=Z,1.9nm,0.9s,baz=225,slow=1.9,SNR=11																		
PDAR				LR	LR	02 13 04.5													
	comp=Z,119nm,21.8s,baz=354,slow=30																		
SDCO	Great Sand Dun	96.31	52	P	P	01 38 36.6	0.0												
	baz=249																		
RLMT	Red Lodge	96.45	44	P	P	01 38 36.6	-0.4												
	baz=247																		
T25A	Trinidad	96.90	53	P	P	01 38 38.9	-0.3												
	baz=249																		
TIXI	Tiksi	96.93	347	*e*P	P	01 38 37.4	-0.8												
TIXI				pmax	pmax														
	comp=Z,2.0nm,1.3s																		
Q24A	Divide	97.01	51	P	Pdif	01 38 40.1	+0.2												
	baz=249																		
INK	Inuvik	97.02	18	P	P	01 38 37.0	-1.6												
	comp=Z,7.6nm,1.1s,baz=243,slow=5.5,SNR=6.6																		
INK	Inuvik	97.02	18	IAmb	IAmb	01 38 38.6													
	comp=Z,15nm,1.2s																		
MSTX	Muleshoe	97.05	56	IAmb	IAmb	01 38 41.0													
	comp=Z,12nm,1.1s																		
MSTX	Muleshoe	97.05	56	P	Pdif	01 38 40.0	0.0												
	baz=250																		
N23A	Red Feather La	97.13	49	P	P	01 38 39.4	-0.8												
	baz=249																		
EGMT	Eagleton	97.27	41	P	P	01 38 40.3	-0.1												
	baz=247																		
833A	Chaparral WMA,	97.88	63	P	P	01 38 43.3	-0.2												
	baz=251																		
AMTX	Amarillo	98.21	56	P	P	01 38 44.8	-0.2												
	baz=251																		
LAO	LASA Array	99.01	44	Pdiff	Pdif	01 38 48.7	+0.5												
	baz=250															

LANS	Liptovska Anna	144.52 329	*e*PKP	PKPdf	01 44 44.0	+0.2
LOT	Lotru	144.53 321	⇑P	PKPbc	01 44 42.7	0.0
OKC	Ostrava-Krasne	144.65 331	*e*PKIKP	PKPab	01 44 42.2	-0.4
OKC			*e*		01 44 49.6	
OKC			*e*		01 44 55.6	
OKC	Ostrava-Krasne	144.65 331	*e*PKP	PKPab	01 44 42.2	-0.4
OKC			*ep*PKP	PKiKP	01 44 49.6	+2.0
OKC			*ex*	x	01 44 55.6	
KSP	Ksiaz	144.71 334	*e*PKIKP	PKPbc	01 44 42.9	0.0
KSP	Ksiaz	144.71 334	*e*PKP	PKPbc	01 44 42.9	0.0
PVL	Pavlikeni	144.73 317	P	PKPdf	01 44 44.5	+0.3
VLAD	Vladila	144.92 319	⇑P	PKPdf	01 44 44.4	-0.2
OSTC	Ostas	144.96 334	*e*PKP	PKPab	01 44 43.4	-0.3
OSTC			*ex*	x	01 44 47.5	
MORC	Moravsky Berou	144.97 332	⇑PKIKP	PKPab	01 44 43.8	0.0
MORC	Moravsky Berou	144.97 332	⇑P	PKPab	01 44 43.8	0.0
MORC	Moravsky Berou	144.97 332	*e*PKP	PKPab	01 44 43.5	-0.3
CHVC	Chvalec	145.00 334	*e*PKP	PKPbc	01 44 43.2	-0.7
CHVC			*ex*	x	01 44 54.4	
YER	Yerkesik	145.06 306	P	PKPbc	01 44 44.3	-0.3
DPC	Dobruska-Polom	145.07 333	*e*PKIKP	PKPbc	01 44 43.7	-0.5
DPC			*e*		01 44 49.3	
DPC	Dobruska-Polom	145.07 333	*e*PKP	PKPbc	01 44 43.7	-0.5
DPC			*ep*PKP	PKiKP	01 44 49.3	+0.7
UPC	Upice	145.08 334	*e*PKIKP	PKPbc	01 44 43.5	-0.6
UPC			*e*		01 44 49.2	
UPC	Upice	145.08 334	*e*PKP	PKPbc	01 44 43.5	-0.6
UPC			*ep*PKP	PKiKP	01 44 49.2	+0.7
KRLC	Kraliky	145.08 333	*e*PKIKP	PKPbc	01 44 43.4	-0.8
KRLC			*e*		01 44 51.1	
KRLC			*e*		01 44 56.5	
KRLC	Kraliky	145.08 333	*e*PKP	PKPbc	01 44 43.4	-0.8
KRLC			*ep*PKP	PKiKP	01 44 51.1	+2.5
KRLC			*ex*	x	01 44 56.5	
PLVB	Pleven	145.10 318	⇓P	PKPab	01 44 44.4	0.0
GZR	Gura Zlata	145.14 322	⇑P	PKPbc	01 44 43.5	-1.1
PSZ	Piszkesteto	145.14 327	⇑PKIKP	PKPbc	01 44 44.5	0.0
PSZ	Piszkesteto	145.14 327	⇑P	PKPbc	01 44 44.5	0.0
SIRR	Siria	145.26 324	⇑P	PKPbc	01 44 44.3	-0.5
VYHS	Vyhne	145.28 329	*e*PKIKP	PKPdf	01 44 45.2	+0.1
VYHS	Vyhne	145.28 329	*e*PKP	PKPdf	01 44 45.2	+0.1
SRE	Strehaia	145.30 320	⇑PKIKP	PKPdf	01 44 45.7	+0.5
SRE	Strehaia	145.30 320	⇑P	PKPdf	01 44 45.7	+0.5
ALN	Alexandroupoli	145.31 313	P	PKPbc	01 44 44.3	-0.9
ALN	Alexandroupoli	145.31 313	PKIKP	PKPbc	01 44 44.2	-0.9
ALN	Alexandroupoli	145.31 313		PKPbc	01 44 44.2	-0.9
KDZ	Kurdzhali	145.41 314	*i* P	PKPab	01 44 45.7	0.0
RDO	Rodhopi	145.55 314	P	PKPdf	01 44 45.8	+0.1
EZN	Ezine	145.56 311	P	PKPdf	01 44 45.7	-0.1
JAVC	Velka Javorina	145.57 330	*e*PKP	PKPab	01 44 46.8	+0.7
NRDL	Niedersach Rie	145.58 341	*e*PKPbc	PKPbc	01 44 45.4	-0.1
	baz=33,slow=2.8					
CLL	Collm	145.62 337	*i* PKIKP	PKPdf	01 44 45.4	-0.1
CLL			pmax	pmax		
	comp=Z,131nm,1.0s					
CLL	Collm	145.62 337	*i* PKPdf	PKPdf	01 44 45.4	-0.1
	comp=Z,131nm,1.0s					
CLL			*i* pPKPdf	PKiKP	01 44 52.2	+2.6
CLL			*i* pPKiKP	pPKPbc	01 44 56.1	-0.1
CLL	Collm	145.62 337	*e*PKPbc	PKPdf	01 44 45.3	-0.2
	baz=33,slow=2.8					
BRG	Berggiesshubel	145.62 336	*i* PKP	PKPdf	01 44 45.4	-0.2
	comp=Z,14nm,1.0s					
BRG			*i*		01 44 58.0	
	comp=Z,105nm,1.2s					
BRG	Berggiesshubel	145.62 336	*e*PKPbc	PKPdf	01 44 45.6	0.0
	baz=33,slow=2.8					
PVCC	Panska Ves	145.65 335	*e*PKIKP	PKPdf	01 44 45.2	-0.4
PVCC			*e*		01 44 52.5	
PVCC			*e*		01 44 58.5	
PVCC	Panska Ves	145.65 335	*e*PKP	PKPdf	01 44 45.2	-0.4
PVCC			*ep*PKP	PKiKP	01 44 58.5	-0.9
PVCC			*ex*	x	01 44 58.5	
MPEP	Malo Peshtene	145.66 318	P	PKPbc	01 44 46.2	0.0
PUNG	Punghina	145.67 320	⇑P	PKPab	01 44 47.6	+1.1
BZS	Buzias	145.67 323	⇑PKP2	PKPdf	01 44 45.1	-0.7
BZS	Buzias	145.67 323	⇑P	PKPdf	01 44 45.1	-0.7
ASSE	Asse, Remlinge	145.72 340	*e*PKPbc	PKPbc	01 44 45.9	-0.1
	baz=33,slow=2.8					
VRAC	Vranov	145.73 332	⇓PKP2	PKPbc	01 44 46.3	0.0
VRAC	Vranov	145.73 332	⇓P	PKPbc	01 44 46.3	0.0
VRAC	Vranov	145.73 332	*e*PKP	PKPbc	01 44 46.2	0.0
FBE	Freiberg	145.80 337	*e*PKPbc	PKPbc	01 44 46.4	0.0
	baz=33,slow=2.8					
BODT	Bodrum	145.82 306	P	PKPab	01 44 47.7	+0.3
SMTH	Samothraki Isl	145.84 312	P	PKPdf	01 44 45.9	-0.4
RZH	Rozhen	145.85 315	P	PKPdf	01 44 46.6	+0.1
SMOL	Smolenice	145.93 330	*e*PKP2	PKPab	01 44 47.7	+0.3
SMOL	Smolenice	145.93 330	*e*PKP	PKPab	01 44 47.7	+0.3
SRO	Srobarova	146.00 329	*e*PKP2	PKPab	01 44 47.9	+0.3
SRO	Srobarova	146.00 329	*e*PKP	PKPab	01 44 47.9	+0.3
KRUC	Moravsky	146.00 332	*e*PKP	PKPbc	01 44 46.9	-0.2
GOPC	GO Pecny, Ondr	146.04 334	*e*PKP2	PKPdf	01 44 46.3	0.0
GOPC	GO Pecny, Ondr	146.04 334	*e*PKP	PKPdf	01 44 46.3	0.0
GOPC			*ep*PKP	PKiKP	01 44 53.1	+2.6
GOPC			*ex*	x	01 44 58.7	
CLZ	Clausthal	146.06 340	*e*PKPbc	PKPbc	01 44 46.9	-0.3
	baz=33,slow=2.8					
PRA	Prague	146.06 335	*e*PKP2	PKPbc	01 44 46.8	-0.4
PRA	Prague	146.06 335	*e*PKP	PKPbc	01 44 46.8	-0.4
PRA			*ex*	x	01 44 59.3	
PRU	Pruhonice	146.08 334	*e*PKP2	PKPdf	01 44 46.8	+0.4
PRU	Pruhonice	146.08 334	*e*PKP	PKPdf	01 44 46.8	+0.4
PRU			*ex*	x	01 44 57.4	
BANR	Banloc	146.08 323	⇑P	PKPab	01 44 48.1	+0.1
MDVR	Moldovita	146.11 322	⇑P	PKPbc	01 44 47.5	-0.1
NEUB	Neuenburg	146.13 338	*e*PKPbc	PKPbc	01 44 47.2	-0.2
	baz=33,slow=2.8					
TREC	Trest	146.22 333	*e*PKP2	PKPbc	01 44 47.6	-0.2
TREC	Trest	146.22 333	*e*PKP	PKPbc	01 44 47.6	-0.2
TREC			*ep*PKP	pPKPdf	01 44 54.0	-3.1
TREC			*ex*	x	01 44 59.7	
VTS	Vitosha	146.36 317	P	PKPbc	01 44 48.5	-0.1
VTS	Vitosha	146.36 317	⇑PKIKP	PKPdf	01 44 46.7	-0.6
VTS	Vitosha	146.36 317	⇑P	PKPdf	01 44 46.7	-0.6
IBBN	Ibbenburen	146.42 343	*e*PKPbc	PKPbc	01 44 48.4	+0.2
	baz=33,slow=2.8					
GTTG	Gvttingen	146.44 340	*e*PKPbc	PKPbc	01 44 48.4	+0.1
	baz=33,slow=2.8					
PBCC	Pribram	146.54 335	*e*PKP	PKPbc	01 44 48.8	+0.1
PBCC			*ex*	x	01 44 55.0	
TANN	Tannenbergstha	146.54 337	*e*PKPbc	PKPbc	01 44 48.5	-0.2
	baz=33,slow=2.8					
MMB	Musomiste	146.55 315	P	PKPbc	01 44 48.7	-0.3
NVR	Nevrokopi	146.58 315	P	PKPbc	01 44 49.0	-0.1
GUNZ	Gunzen	146.63 337	*e*PKPbc	PKPbc	01 44 48.8	-0.1
	baz=33,slow=2.8					
MOX	Moxa	146.66 338	*e*PKPbc	PKPbc	01 44 49.1	+0.2
	baz=33,slow=2.8					
WERN	Wernitzgruen	146.68 337	*e*PKPbc	PKPbc	01 44 49.1	0.0
	baz=33,slow=2.8					
NKC	Novy Kostel	146.70 337	*e*PKP2	PKPbc	01 44 48.8	-0.3
NKC	Novy Kostel	146.70 337	*e*PKP	PKPbc	01 44 48.8	-0.3
NKC			*ep*PKP	pPKPdf	01 44 55.2	-2.6
MORH	Mrgy, Hungar	146.91 326	*e*P	PKPdf	01 44 47.4	-0.5
FRGS	Fruska Gora	146.96 324	⇓*i*P	PKPdf	01 44 47.3	-0.8
MANZ	Manzenberg	147.03 337	*e*PKPbc	PKPbc	01 44 50.1	0.0
	baz=33,slow=2.8					
UBBA	Unterbreizbach	147.06 340	*e*PKPbc	PKPbc	01 44 50.0	0.0
	baz=33,slow=2.8					
CONA	Conrad Observa	147.08 331	*i* PKPbc	PKPdf	01 44 47.9	-0.3
	comp=Z,45nm,1.1s,SNR=20					
KHC	Kasperske Hory	147.14 334	*e*PKP2	PKPbc	01 44 49.7	-0.8
KHC	Kasperske Hory	147.14 334	*e*PKP	PKPbc	01 44 49.7	-0.8
KHC			*ep*PKP	pPKPdf	01 44 57.7	-0.9
ROTZ	Rotzenmuhle	147.17 336	*e*PKPbc	PKPbc	01 44 50.4	-0.1
	baz=33,slow=2.8					
GEC2	GERESS Array S	147.32 334	*e*PKPbc	PKPbc	01 44 50.6	-0.4
	baz=33,slow=2.8					
GERES	GERESS Array B	147.32 334	PKPbc	PKPbc	01 44 50.1	-0.9
	comp=Z,25nm,0.9s,baz=31,slow=3.1,SNR=126					
BUG	Bochum--Univer	147.33 343	*e*PKPbc	PKPbc	01 44 51.2	+0.4
	baz=33,slow=2.8					
WET	Wettzell	147.41 335	*e*PKPbc	PKPbc	01 44 51.0	-0.2
	baz=33,slow=2.8					
VAY	Valandovo	147.44 316	*i* P	PKPbc	01 44 50.2	-1.2
IOSP	Ios island	147.47 306	P	PKPdf	01 44 50.2	+1.1
STIP	Stip	147.50 317	*i* P	PKPbc	01 44 52.4	+0.7
DIVS	Divibare	147.51 322	⇓*i*P	PKPbc	01 44 51.1	-0.6
GRF	Grafenberg Arr	147.59 337	*e*PKPbc	PKPbc	01 44 51.3	-0.4
	baz=33,slow=2.8					
NPS	Neapolis	147.69 304	P	PKPbc	01 44 51.9	-0.5
ARSA	Arzberg	147.73 330	*i* PKPab	PKPbc	01 44 50.9	-1.3
	comp=Z,31nm,1.6s					
LAST	Lasithi	147.83 303	P	PKPbc	01 44 52.3	-0.5
SKO	Skopje	147.84 318	*i* P	PKPbc	01 44 52.3	-0.3
MOA	Molln	147.85 332	*i* PKPab	PKPbc	01 44 51.3	-1.1
	comp=Z,38nm,1.5s					
BBLS	Lazići	147.98 322	⇓*i*P	PKPbc	01 44 52.7	-0.3
TNS	Taunus Mts	148.07 341	*e*PKPbc	PKPbc	01 44 52.8	-0.2
	baz=33,slow=2.8					
HAPS	Han Pijesak,Bl	148.11 323	*e*P	PKPdf	01 44 51.7	+1.6
RUDO	Rudo	148.15 322	*e*P	PKPbc	01 44 52.6	-0.7
DOB	Doboj	148.17 324	*e*P	PKPdf	01 44 50.6	+0.6
AHRW	Bad Neuenahr-A	148.19 342	*e*PKPbc	PKPbc	01 44 53.3	+0.1
	baz=33,slow=2.8					
PERS	Pernice	148.37 330	*i* PKPbc	PKPbc	01 44 53.5	-0.4
SOKA	Soboth	148.38 330	*i* PKPdf	PKPdf	01 44 49.7	-0.7
	comp=Z,13nm,0.8s					
MEM	Membach	148.42 344	PKiKP	PKPbc	01 44 53.7	-0.1
FNA	Florina	148.49 316	P	PKPbc	01 44 53.2	-1.2
BSTI	Sart Tilman	148.56 344	PKiKP	PKPbc	01 44 53.9	-0.2
RJOB	Jochberg	148.56 334	*e*PKPbc	PKPbc	01 44 53.9	-0.5
	baz=33,slow=2.8					
BLY	Banja Luka	148.65 325	⇑P	PKPbc	01 44 53.5	-1.1
BLY	Banja Luka	148.65 325	*e*P	PKPbc	01 44 53.5	-1.1
UPM	Unac-Piva	148.68 322	*e*P	PKPbc	01 44 53.2	-1.7
AGG	Agios Georgios	148.70 312	PKP2	PKPbc	01 44 54.0	-0.9
AGG	Agios Georgios	148.70 312		PKPbc	01 44 54.0	-0.9
OHR	Ohrid	148.70 317	*i* P	PKPbc	01 44 54.2	-0.7
OBKA	Obir	148.73 330	*i* pPKPdf	PKPbc	01 44 54.1	-0.8
	comp=Z,23nm,1.1s					
BCLA	Clavier	148.78 344	PKPbc	PKPbc	01 44 52.9	-1.8
BCLA			PKiKP	PKiKP	01 44 54.6	-1.5
CRES	Cresnjev	148.79 328	*e*P	PKPdf	01 44 49.1	-1.9
FUR	Furstenfeldbru	148.83 336	*e*PKPbc	PKPbc	01 44 54.4	-0.5
	baz=33,slow=2.8					
KBA	Koenigsnisper	148.84 332	*i* PKPbc	PKPdf	01 44 53.1	+1.8
	comp=Z,22nm,1.0s,SNR=6.0					
MGRS	Mrkonjic Grad	148.93 325	⇓*i*P	PKPab	01 45 00.5	+1.1
PDG	Podgorica	148.93 320	⇑P	PKPbc	01 44 55.0	-0.3
PDG	Podgorica	148.93 320	*e*P	PKPbc	01 44 54.7	-0.6
BMRD	Maredsous	149.02 345	PKPbc	PKPdf	01 44 53.1	+1.9
BMRD			PKiKP	PKPbc	01 44 54.9	-0.4
MYKA	Terra Mystica	149.05 331	*i* pPKPdf	PKPbc	01 44 54.7	-1.0
	comp=Z,14nm,0.8s					
BRY	Bratogost	149.07 321	*e*P	PKPbc	01 44 55.1	-0.8
LJU	Ljubljana	149.08 330	*e*PKPbc	PKPbc	01 44 55.1	-0.5
LJU	Ljubljana	149.08 330	⇓*i*P	PKPbc	01 44 54.8	-0.8
STU	Stuttgart	149.08 338	PKP2	PKPbc	01 44 54.4	-1.1
STU	Stuttgart	149.08 338	*e*PKPbc	PKPbc	01 44 55.4	-0.1
	baz=33,slow=2.8					
STU	Stuttgart	149.08 338	PKPbc	PKPbc	01 44 54.4	-1.1
DRME	Dracevica, Mon	149.11 320	*e*P	PKPbc	01 44 55.3	-0.5
TIR	Tirane	149.16 318	PKP2	PKPbc	01 44 56.6	+0.6
TIR	Tirane	149.16 318		PKPbc	01 44 56.5	+0.6
WLF	Walferdange	149.24 343	*e*PKPbc	PKPbc	01 44 56.2	+0.3
	baz=33,slow=2.8					
WLF	Walferdange	149.24 343	PKiKP	PKPbc	01 44 55.3	-0.6
CEY	Cerknica	149.35 329	⇓*i*P	PKPbc	01 44 55.8	-0.6
HCY	Herceg Novi	149.37 321	*e*P	PKPbc	01 44 55.7	-0.8
WATA	Walderalm	149.38 334	*i* pPKPdf	PKPbc	01 44 54.8	-1.7
	comp=Z,21nm,0.9s,SNR=9.7					
VOJS	Vojsko	149.39 330	*e*PKPbc	PKPbc	01 44 55.7	-0.8
WTTA	Wattenberg	149.42 334	*i* PKiKP	PKPbc	01 44 56.0	-0.6
	comp=Z,71nm,1.4s,SNR=8.8					
ABTA	Abfaltersbach	149.46 333	*i* pPKPdf	PKPbc	01 44 55.0	-1.7
	comp=Z,25nm,0.9s,SNR=6.0					
MOTA	Moosalm	149.57 335	*i* PKiKP	PKPbc	01 44 55.9	-1.1
	comp=Z,53nm,1.1s,SNR=12					
STON	Ston	149.58 322	*e*P	PKPbc	01 44 55.3	-1.6
RETA	Reutte	149.59 335	*i* PKiKP	PKPbc	01 44 56.3	-0.7
	comp=Z,34nm,1.6s					
SQTA	Sauzuirin	149.62 335	*i* PKiKP	PKPbc	01 44 55.9	-1.2
	comp=Z,41nm,1.0s,SNR=9.1					
RIY	Rijeka	149.63 329	*e*P	PKPbc	01 44 55.2	-1.8
UBR	Ueberruh	149.68 336	*e*PKPbc	PKPbc	01 44 56.6	-0.6
	baz=33,slow=2.8					
STAL	STALIGIAL	149.75 332	PKPbc	PKPbc	01 44 56.4	-1.0
BFO	Black Forest	149.76 339	PKP2	PKPbc	01 44 56.6	-0.7
BFO	Black Forest	149.76 339	*e*PKPbc	PKPbc	01 44 57.2	-0.1
	baz=33,slow=2.8					
BFO	Black Forest	149.76 339		PKPbc	01 44 56.6	-0.7
FETA	Feichten	149.98 335	*i* PKPbc	PKPdf	01 44 54.5	+1.4
	comp=Z,46nm,1.0s,SNR=10.0					
DAVA	Damuels	150.09 336	*i* PKiKP	PKPbc	01 44 57.4	-0.9
	comp=Z,47nm,1.2s,SNR=6.1					
FUORN	Ofenpass-Fuorn	150.49 335		PKPbc	01 44 59.0	-0.3
TUE	Stuetta	150.97 336	PKPdf	PKPdf	01 44 54.7	-0.1
TUE				PKPbc	01 44 59.8	-0.7
SENIN	Lac Senin/Sane	151.81 338		PKPbc	01 45 00.5	-1.9
AQU	L'Aquila	152.29 326	*e*P	PKPbc	01 45 00.9	-2.5
TIP	Timpagrande	152.35 317	⇑P	PKPbc	01 45 02.1	-1.6
ESDC	Sonseca Array	160.95 352	PKPab	PKPab	01 45 49.7	-0.8
	comp=Z,3.1nm,0.9s,baz=3,9,slow=3.6,SNR=11					
DBIC	Dimbokro	165.76 190	PKP	PKPdf	01 45 12.5	-0.6
	comp=Z,4.2nm,1.0s,baz=158,slow=2.6,SNR=4.0					
DBIC			PKPab	PKPab	01 46 13.3	+1.2
	comp=Z,5.7nm,0.9s,baz=135,slow=5.4,SNR=5.1					
TAM	Tamanrasset	167.87 282	PKiKP	PKPdf	01 45 13.7	-1.0
TAM	Tamanrasset	167.87 282		PKPdf	01 45 13.7	-1.0
TOA0	Torodi Ar. Sit	168.49 230		PKPdf	01 45 14.1	-0.9
TORD	Torodi Ar. Bea	168.49 230	PKP	PKPdf	01 45 14.4	-0.7
	comp=Z,6.5nm,1.1s,baz=167,slow=0.5,SNR=17					
TORD			PKPab	PKPab	01 46 24.5	+0.1
	comp=Z,1.3nm,1.1s,baz=112,slow=6.4,SNR=2.5					

NNC 06 01:34:00.2±2.3, 41°.56N×84°.44E, h0km, mb3.9, mpv3.5, 7C-10D, Error ellipse: s-maj=17.8km s-min=11.7km az=143.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	4.07	297	⇓Pn	Pn	01 35 04.3	+0.6
PDGK				⇑Pg	Pb	01 35 13.6	+0.9
	11nm,0.8s						
PDGK				⇑Sn	Sn	01 35 53.8	+1.7
	26nm,0.9s						
PDGK				⇓Lg	Lg	01 36 07.7	
	66nm,1.0s						
MK31	Makanchi Array	5.46	344	⇓Pn	Pn	01 35 24.1	+1.4
	0.3nm,0.3s,baz=157,slow=15,SNR=29						
MK31				⇓Pg	Pg	01 35 40.8	-3.9
	0.4nm,0.3s,baz=160,slow=16,SNR=5.6						
MK31				⇑Sn	Sn	01 36 27.0	+0.8
	2.5nm,0.6s						
MK31				⇑Lg	Lg	01 36 55.7	
	11nm,0.6s,baz=157,slow=28						
MAKZ	Makanchi	5.54	342	⇓Pn	Pn	01 35 24.3	+0.5
	1.2nm,0.7s						
MAKZ				⇓Pg	Pg	01 35 44.7	-1.6
	4.3nm,1.1s						
MAKZ				⇑Sn	Sn	01 36 29.4	+1.2
	2.5nm,0.6s						
MAKZ				⇓Lg	Lg	01 36 56.1	
	10nm,1.1s						
TKM2	Tokmak 2	6.70	285	⇑Pn	Pn	01 35 39.3	-0.7
	14nm,1.4s						
TKM2				⇓Sn	Sn	01 36 53.8	-3.4
	6.5nm,1.1s						
TKM2				⇓Lg	Lg	01 37 31.9	
	19nm,1.1s						
KURBB	Kurchatov Arra	9.95	338	⇑Pn	Pn	01 36 22.8	-1.5
	5.9nm,1.5s						
KURK	Kurchatov	10.00	338	⇓Pn	Pn	01 36 23.6	-1.5
	6.4nm,1.7s						

*SOME **06** 01:35:34.8, 42°.68N×80°.62E, h15km*
*KRNET **06** 01:35:46.8±0.1, 41°.82N×79°.74E, h16km, mb2.5*
ISC 06 01:35:36.5±2.4, 42°.76N±0°.06×80°.54E±0°.09, h13km±11km, n23, σ2°58/36, 10C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	0.89	297	*e*P	Pg	01 35 48.5	-5.2
	25nm,0.4s						
SHLS				*e*S	Sg	01 35 58.8	-6.6
	97nm,0.4s						
PDGK	Podgornoye	0.96	307	S	Sg	01 36 06.9	-0.8
	17nm,0.6s						
PDGK	Podgornoye	0.96	307	P	Pg	01 35 54.5	-0.6
	5.3nm,0.3s						
UZB	Uzynbulak	1.18	290	*e*P	Pn	01 35 58.3	-0.6
	5.3nm,0.4s						
UZB				*e*S	Sb	01 36 14.7	+0.6
	20nm,0.3s						
UZB	Uzynbulak	1.18	290	S	Sb	01 36 15.0	+0.8
	22nm,0.3s						
UZB	Uzynbulak	1.18	290	P	Pg	01 35 59.6	+0.3
	5.2nm,0.3s						
KPKS	Kokpek	1.53	298	*e*P	Pb	01 36 05.1	+0.3
	19nm,0.3s						
KPKS				*e*S	Sg	01 36 26.9	+1.0
	52nm,0.2s						
PRZ	Przheval'sk	1.60	261	⇑*i*P	Pg	01 36 09.3	+2.0
	baz=5.0						
PRZ				⇑*i*S	Sn	01 36 25.7	+0.4
	baz=5.0						
DJR	Jarkent	1.67	341	*e*P	Pb	01 36 07.0	-0.1
	3.4nm,0.3s						
DJR				*e*S	Sb	01 36 29.9	+1.8
	9.9nm,0.5s						
ANVS	Anan'yevo	2.12	272	⇑*i*P	Pg	01 36 20.4	+3.3
	baz=3.0						
ANVS				⇑*i*S	Sg	01 36 44.6	0.0
	baz=3.0						
TARG	Taragay, Kyrgy	2.27	244	⇓*i*P	Pn	01 36 13.7	-0.4
	baz=67						
TARG				⇓*i*S	Sn	01 36 33.7	-8.5
	baz=67						
ARXS	Arharly	2.46	307	*e*P	Pb	01 36 21.6	+1.1
	4.4nm,0.7s						
ARXS				*e*S	Sg	01 36 55.3	-0.1
	18nm,0.8s						
ARXS	Arharly	2.46	307	Pg	Pg	01 36 23.1	-0.5
	1.7nm,0.6s						
ARXS	Arharly	2.46	307	Lg	Lg	01 36 55.4	
	18nm,0.8s						
KDJ	Kajisay	2.56	257	⇑*i*P	Pb	01 36 22.6	+0.1
	baz=80						
KDJ				⇑*i*S	Sn	01 36 48.5	-0.5
	baz=80						
TNSS	Tian-Shan	2.66	277	*e*P	Pb	01 36 24.8	+0.7
	5.6nm,0.5s						
TNSS				*e*S	Sg	01 37 01.3	-0.6
	9.1nm,0.7s						
KAPS	Kapalarasan	2.67	342	*e*P	Pb	01 36 25.3	+1.1
	4.9nm,0.2s						
KAPS				*e*S	Sg	01 37 01.3	-1.0
	8.0nm,0.5s						
KTBS	Karatobe	2.98	290	*e*P	Pb	01 36 30.3	+0.9
	2.1nm,0.6s						
KTBS				*e*S	Sg	01 37 10.6	-1.6
	28nm,0.5s						
KST	Kastek	3.38	276	*e*P	Pb	01 36 37.2	+0.9
	6.2nm,0.5s						
KST				*e*S	Sg	01 37 22.2	-2.7
	12nm,0.9s						
BOOM	Boomskoye usch	3.41	267	⇑*i*P	Pb	01 36 35.7	-1.1
	baz=85						
BOOM				⇑*i*S	Sn	01 37 11.3	+1.5
	baz=85						
DGS	Degeres	3.53	280	*e*P	Pb	01 36 39.8	+0.9
	2.9nm,0.5s						
DGS				*e*S	Sb	01 37 26.4	+4.6
	8.0nm,0.5s						
DGS	Degeres	3.53	280	Lg	Lg	01 37 26.3	
	8.0nm,0.5s						
NRN	Naryn	3.63	250	⇑*i*P	Pn	01 36 34.9	+2.2
	baz=63						
NRN				⇑*i*S	Sn	01 37 10.2	-5.3
	baz=63						

YARS 06 01:36:03.1±0.0, 56°.89N×129°.38E, h6km, ML3.9/16, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGD	Chagda	1.98	19	*e*Pg	Pb	01 36 39.9	+0.3
	0.1nm,0.2s						
CGD				*e*Sg	Sg	01 37 05.8	-0.9
	2.0nm,0.4s						
CGD				*e*Sg	Sg	01 37 05.8	-0.9
	0.8nm,0.3s						
BMKR	Bomnak	2.20	188	*e*Pg	Pb	01 36 42.0	-1.3
	0.2nm,0.2s						
BMKR				*e*Sg	Sb	01 37 09.5	-1.3
	1.5nm,0.2s						
CLNS	Chul'man	2.46	271	*e*Pg	Pb	01 36 48.2	+0.5
	0.1nm,0.4s						
CLNS				*e*Sg	Sb	01 37 19.5	+1.2
	0.6nm,0.4s						
CLNS				*e*Sg	Sb	01 37 19.5	+1.2
	1.1nm,0.5s						
IENR	Iengra	2.59	257	*e*Sg	Sg	01 37 24.5	-1.7
	0.3nm,0.8s						
ALDR	Aldan

KICM	Kanaga Island	1.24	281			Pn		01 38 47.1 +1.0
KICM						Sn		01 39 03.8 +2.1
KIMD	Kanaga Island	1.25	273			Pn		01 38 46.7 +0.4
TAPA	Tanaga Point A	1.61	275			Pn		01 38 52.2 +0.9
TAFP	Tanaga Falls P	1.73	278			Pn		01 38 54.0 +1.2
TAFP						Sn		01 39 16.3 +2.7
TASE	Tanaga Southea	1.75	275			Pn		01 38 54.5 +1.3
NIKH	Nikolski High	4.11	69	Pn		Pn		01 39 27.7 +2.3
OKFG	Magazine Ridge	4.78	66			Pn		01 39 37.7 +3.0
MREP	Makushin Rep't	5.56	64			Pn		01 39 48.5 +3.0
MSW	Makushin Switc	5.58	63			Pn		01 39 48.3 +2.6
UNV	Unalaska Valle	5.71	65	Pn		Pn		01 39 48.0 +0.6
SPIA	Saint Paul Isl	6.20	26	Pn		Pn		01 39 51.8 -2.4
SPIA						Sn		01 41 02.3 -1.4
AKUT	Akutan	6.21	63	Pn		Pn		01 39 55.2 +0.8
SMY	Shemya	6.64	283	Pn		Pn		01 39 59.8 -0.5
SDPT	Sand Point	9.51	62	Pn		Pn		01 40 40.7 +1.3
GAMB	Gambell	12.25	7	Pn		Pn		01 41 18.5 +1.6
SII	Sitkinak Islan	13.24	60	Pn		Pn		01 41 29.6 -0.8
ANM	Nome	13.88	18	Pn		P		01 41 44.2 -2.4
KDAK	Kodiak Island	14.38	56	P		P		01 41 50.6 -1.6
BRLK	Bradley Lake	15.83	50	Pn		Pn		01 42 05.1 +0.1
SUA	Susitna One	16.54	44	Pn		Pn		01 42 15.3 +1.1
SUA				IAmb		IAmb		01 42 20.8
	comp=Z,12nm,1.2s							
SEW	Seward	16.62	50	Pn		Pn		01 42 14.8 -0.2
PPLA	Purkeypile	16.63	39	P		Pn		01 42 16.8 +1.5
PPLA				IAmb		IAmb		01 42 30.9
	comp=Z,16nm,1.3s							
GHO	Glory Hole Cre	17.47	45	Pn		Pn		01 42 25.7 +0.1
KTH	Kantishna Hill	17.47	38	P		P		01 42 28.2 +1.7
KTH				IAmb		IAmb		01 42 31.4
	comp=Z,15nm,1.0s							
KNK	Knik Glacier	17.53	46	Pn		Pn		01 42 27.4 +1.0
KNK				IAmb		IAmb		01 42 41.8
	comp=Z,17nm,1.3s							
TRF	Thorofare Moun	17.66	39			P		01 42 30.2 +1.6
TRF				IAmb		IAmb		01 42 37.7
	comp=Z,12nm,1.3s							
BPAW	Bear Paw Mtn.	17.74	36			P		01 42 31.9 +2.5
BPAW				IAmb		IAmb		01 42 33.3
	comp=Z,16nm,1.4s							
SML	Sawmill	17.74	45	Pn		Pn		01 42 28.6 -0.4
SML				IAmb		IAmb		01 42 31.1
	comp=Z,33nm,1.4s							
SCM	Sheep Creek Mo	18.19	45	Pn		P		01 42 34.0 -0.5
SCM				IAmb		IAmb		01 42 36.8
	comp=Z,29nm,1.2s							
RND	Reindeer	18.20	40			P		01 42 35.2 +0.7
BWN	Browne	18.34	37	P		Pn		01 42 37.6 +1.4
BWN				IAmb		IAmb		01 42 42.7
	comp=Z,24nm,1.2s							
MLY	Manley	18.35	34	P		Pn		01 42 38.6 +2.2
DHY	Denali Highway	18.66	42	P		Pn		01 42 40.9 +0.7
DHY				IAmb		IAmb		01 42 43.3
	comp=Z,9.2nm,1.2s							
BILL	Bilibino	18.69	338	P		Pn		01 42 42.6 +2.2
BILL				IAmb		IAmb		01 42 43.6
	comp=Z,14nm,1.3s							
NEA	Nenana	18.70	36	P		P		01 42 40.7 +0.8
WRH	Wood River Hil	19.01	37	P		P		01 42 43.1 -0.2
CCB	Clear Creek Bu	19.20	37	P		P		01 42 44.1 -1.3
MDM	Murphy Dome	19.20	36	P		P		01 42 46.7 +1.2
PAX	Paxson	19.41	43	P		P		01 42 48.6 +0.7
HDA	Harding Lake	19.42	38	P		P		01 42 48.3 +0.6
HDA				IAmb		IAmb		01 43 03.3
	comp=Z,7.0nm,0.6s							
IL31		19.61	37	P		P		01 42 49.5 -0.3
IL31				IAmb		IAmb		01 43 02.2
	comp=Z,8.7nm,1.4s							
ILAR	Eielson Array	19.61	37	P		P		01 42 48.2 -1.7
	comp=Z,0.4nm,0.3s,baz=221,slow=9.4,SNR=33							
GLB	Gilahina Butte	19.66	48	P		P		01 42 51.0 +0.5
GLB				IAmb		IAmb		01 43 07.3
	comp=Z,19nm,1.4s							
RIDG	Independent Ri	19.97	41	P		P		01 42 54.4 +0.6
RIDG				IAmb		IAmb		01 42 59.0
	comp=Z,15nm,1.2s							
MCARA	McCarthy VSAT	20.01	49	P		P		01 42 54.8 +0.5
DOT	Dot Lake	20.25	42	P		P		01 42 57.4 +0.5
DOT				IAmb		IAmb		01 43 01.3
	comp=Z,8.0nm,0.7s							
SCRK	Sand Creek	20.41	41	P		P		01 42 58.5 -0.2
TOLK	Toolik Lake Re	20.95	26	P		Pn		01 43 06.8 -0.3
TOLK				IAmb		IAmb		01 43 09.0
	comp=Z,12nm,1.4s							
EGAK	Eagle	21.85	40	P		P		01 43 14.7 +0.7
INK	Inuvik	25.92	34	P		P		01 43 53.5 +0.4
	comp=Z,0.8nm,0.5s,baz=203,slow=7.0,SNR=9.2							
INK	Inuvik	25.92	34	P		P		01 43 53.7 +0.6
YKA	Yellowknife Ar	33.38	47	P		P		01 44 59.2 -0.2
	comp=Z,0.2nm,0.5s,baz=280,slow=7.4,SNR=6.8							
YKA				PcP		PcP		01 47 40.1 +0.1
	comp=Z,0.2nm,0.4s,baz=286,slow=3.1,SNR=5.9							
H11N2	WAKE ISLAND Hy	34.86	210	T		T		02 21 54.8
	baz=18,slow=76,SNR=156							
H11N3	WAKE ISLAND Hy	34.87	210	T		T		02 22 00.6
	baz=18,slow=76,SNR=142							
H11N1	WAKE ISLAND Hy	34.88	210	T		T		02 21 56.2
	baz=18,slow=76,SNR=142							
USRK	Ussuriysk Ar.	35.46	279	P		P		01 45 16.7 -0.8
	comp=Z,0.9nm,0.5s,baz=63,slow=8.6,SNR=3.8							
H11S1	WAKE ISLAND Hy	36.07	210	T		T		02 24 08.5
	baz=19,slow=76,SNR=291							
H11S2	WAKE ISLAND Hy	36.08	210	T		T		02 23 54.8
	baz=19,slow=76,SNR=183							
H11S3	WAKE ISLAND Hy	36.08	210	T		T		02 23 53.0
	baz=19,slow=76,SNR=115							
MCMT	McKenzie Canyo	40.95	74	P		P		01 46 05.0 +1.0
KSRS	Korea Array	41.86	273	P		P		01 46 11.0 -0.2
	comp=Z,1.0nm,0.6s,baz=55,slow=6.6,SNR=3.8							
BW06	Boulder Array	44.07	75	P		P		01 46 30.5 +1.0
BW06				IAmb		IAmb		01 46 31.0
	comp=Z,2.0nm,0.8s							
PD31	Pinedale Array	44.08	75	P		P		01 46 30.4 +1.0
PD31				IAmb		IAmb		01 46 31.0
	comp=Z,1.6nm,0.8s							
PDAR	Pinedale Array	44.08	75	P		P		01 46 30.4 +1.0
	comp=Z,1.4nm,0.5s,baz=308,slow=3.5,SNR=20							
SZCU	Shurtz Canyon	45.04	83	P		P		01 46 38.7 +1.6
ULM	Lac du Bonnet	47.62	59	P		P		01 46 56.9 0.0
	comp=Z,0.7nm,0.4s,baz=281,slow=5.2,SNR=3.5							
ULM	Lac du Bonnet	47.62	59	IAmb		IAmb		01 47 01.4
	comp=Z,5.5nm,1.4s							
TXAR	Lajitas Array	56.40	84	P		P		01 48 03.6 +0.9
	comp=Z,0.3nm,0.6s,baz=304,slow=6.4,SNR=4.0							
KURK	Kurchatov	60.39	315	P		P		01 48 29.4 -0.6
KURBB	Kurchatov Array	60.49	315	P		P		01 48 29.4 -1.4
	comp=Z,0.7nm,0.5s,baz=44,slow=6.2,SNR=16							
MKAR	Makanchi Array	61.55	310	P		P		01 48 36.5 -1.6
	comp=Z,0.2nm,0.3s,baz=47,slow=5.8,SNR=10							
BVAR	Borovoye Array	62.05	321	P		P		01 48 39.9 -1.4
	comp=Z,0.7nm,0.3s,baz=53,slow=7.2,SNR=6.3							
CMAR	Chiang Mai Arr	73.19	279	P		P		01 49 50.9 -1.1
	comp=Z,1.2nm,0.3s,baz=27,slow=6.2,SNR=4.9							
WRA	Warramunga Arr	83.83	227	P		P		01 50 49.2 -1.2
	comp=Z,0.5nm,0.7s,baz=44,slow=6.1,SNR=3.8							
BRTR	Keskin Array B	85.53	338	P		P		01 50 57.2 -1.9
	comp=Z,0.3nm,0.6s,baz=0.0,slow=5.8,SNR=2.4							
ASAR	Alice Springs	87.27	225	P		P		01 51 07.2 -0.2
	comp=Z,0.7nm,0.7s,baz=26,slow=5.5,SNR=7.0							
TORD	Torodi Ar. Bea	115.36	3	PKP		PKiKP		01 57 01.1 -1.6
	comp=Z,0.1nm,0.4s,baz=18,slow=4.3,SNR=3.1							
BOSA	Boshof	152.31	319	PKPbc		PKPbc		01 58 16.5 -0.1
	comp=Z,3.1nm,0.5s,baz=8.3,slow=2.9,SNR=15							

*IDC **06** 01:38:56.0±1.1, 8.°61S×105.°45E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.8/51, mbtmp3.9/14, ML4.2/1, Error ellipse: s-maj=30.5km s-min=15.5km az=48.0*

*NEIC **06** 01:39:00.5±0.7, 8.°6S±0.°1×105.°46E±0.°09, h32km±7km, mb4.3/9, Error ellipse: s-maj=17.9km s-min=11.3km az=203.0*

ISC 06 01:39:01.2±0.8, 8.°7S±0.°1×105.°56E±0.°09, h35km, n34, σ1s91°01/33, mb4.2/23, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	2.48	64	Pn		Pn		01 39 37.8	-1.5
LEM	Lembang	2.73	49	Pn		Pn		01 39 43.0	+0.3
	41nm,0.3s,baz=306,slow=2.8,SNR=32								
LEM				Sn		Sn		01 40 15.9	+1.3
	24nm,0.3s,baz=38,slow=22,SNR=6.4								
JAGI	Jajag, Banyuwa	8.50	89			Pn		01 41 00.9	-1.1
BKNI	Bangkinang	9.99	333	Pn		Pn		01 41 15.8	-6.5
FITZ	Fitzroy Crossi	21.66	118	P		P		01 43 49.8	+0.9
	3.3nm,0.9s,baz=300,slow=8.1,SNR=2.3								
TNTI	Ternate	23.66	68	P		P		01 44 08.9	-0.8
PBKT	Sadao Pong	25.46	350	P		P		01 44 25.3	-0.8
PBKT				IAmb		IAmb		01 44 26.4	
	comp=Z,5.7nm,0.7s								
CMAR	Chiang Mai Arr	27.71	346	P		P		01 44 46.2	-0.2
	comp=Z,2.9nm,0.6s,baz=181,slow=8.2,SNR=14								
WRA	Warramunga Arr	30.01	115	P		P		01 45 07.8	+0.8
	comp=Z,0.4nm,0.6s,baz=285,slow=12,SNR=4.9								
ASAR	Alice Springs	30.96	122	P		P		01 45 16.4	+1.1
	comp=Z,0.3nm,0.6s,baz=302,slow=7.5,SNR=3.2								
TAPN	Taplejung	39.75	335	eP		P		01 46 31.5	+0.4
	comp=Z,19nm,0.9s								
LSA	Lhasa	40.57	341	P		P		01 46 36.9	-1.2
LSA				IAmb		IAmb		01 46 38.8	
	comp=Z,7.2nm,1.2s								
STKA	Stephens Creek	40.65	130	P		P		01 46 38.6	+0.5
	comp=Z,3.3nm,0.7s,baz=291,slow=8.6,SNR=3.3								
STKA	Stephens Creek	40.65	130	IAmb		IAmb		01 46 54.9	
	comp=Z,12nm,2.0s								
JIRN	Jiri	40.67	333	eP		P		01 46 39.4	+0.6
	comp=Z,13nm,0.6s								
PKIN	Phulchoki	40.96	332	eP		P		01 46 43.1	+2.0
	comp=Z,2.9nm,0.3s								
GUN	Gumba	41.03	333	eP		P		01 46 42.7	+1.0
	comp=Z,16nm,0.7s								
DMN	Daman	41.13	332	eP		P		01 46 44.9	+2.5
KKN	Kakani	41.20	332	eP		P		01 46 44.1	+1.1
	comp=Z,10nm,0.5s								
DANN	Dangsing	42.39	331	eP		P		01 46 53.6	+0.8
	comp=Z,26nm,0.6s								
GTA	Gaotai	48.11	354	eP		P		01 47 39.1	+1.3
GTA				pP		pP		01 47 42.6	-4.3
GTA				sP		sP		01 47 45.5	-5.0
GTA				pmax		pmax			
	comp=Z,3.0nm,0.8s								
GTA				pmax		pmax			
	comp=Z,130nm,6.2s								
GTA				LR		LR			
	comp=N,240nm,21.0s								
GTA				LR		LR			
	comp=E,310nm,21.3s								
GTA				LR		LR			
	comp=Z,470nm,21.3s								
KSRS	Korea Array	50.41	23	P		P		01 47 54.8	-0.5
	comp=Z,0.8nm,0.5s,baz=214,slow=8.1,SNR=4.1								
WMQ	Urumqi	54.68	344	P		P		01 48 26.4	-0.5
KSH	Kashi	55.22	332	P		P		01 48 29.6	-1.3
KSH				pP		pP		01 48 36.4	-3.2
KSH				pmax		pmax			
	comp=Z,340nm,5.6s								
SONM	Songino Array	56.24	1	P		P		01 48 38.2	+0.1
	comp=Z,0.7nm,0.4s,baz=179,slow=8.9,SNR=4.1								
USRK	Ussuriysk Ar.	57.79	22	P		P		01 48 48.7	-0.2
	comp=Z,1.3nm,0.5s,baz=198,slow=4.8,SNR=6.1								
MK31	Makanchi Array	58.97	342	P		P		01 48 56.7	-0.5
MKAR	Makanchi Array	58.97	342	P		P		01 48 57.0	-0.2
	comp=Z,1.0nm,0.5s,baz=148,slow=7.9,SNR=14								
KURBB	Kurchatov Array	63.52	341	P		P		01 49 27.4	-0.5
	comp=Z,1.1nm,0.7s,baz=156,slow=6.2,SNR=10								
KURK	Kurchatov	63.57	341	P		P		01 49 27.4	-0.8
ZALV	Zalesovo Beam	64.78	347	P		P		01 49 35.5	-0.6
	comp=Z,0.8nm,0.4s,baz=151,slow=4.4,SNR=3.9								
BVAR	Borovoye Array	68.33	338	P		P		01 49 58.4	-0.4
	comp=Z,0.8nm,0.6s,baz=146,slow=8.2,SNR=3.9								
ABKAR	Akbulak array	70.11	330	P		P		01 50 09.3	-0.6
ABKAR				IAmb		IAmb		01 50 22.9	
	comp=Z,3.9nm,1.1s								
BRTR	Keskin Array B	81.86	312	P		P		01 51 17.2	-0.2
	comp=Z,0.8nm,1.0s,baz=145,slow=6.6,SNR=3.6								

*TEH **06** 01:39:41.6,27.°08N×61.°81E, h10km, ML3.8*

*IDC **06** 01:39:42.9±1.5, 27.°34N×61.°28E, h0km, mb3.7/12, mb1 3.9/15, mb1mx3.7/59, mbtmp3.8/15, ML3.4/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/37, Error ellipse: s-maj=32.0km s-min=19.6km az=145.0*

*NEIC **06** 01:39:47.5±2.1, 27.°14N±0.°07×61.°63E±0.°03, h54km±7km, Error ellipse: s-maj=10.7km s-min=2.2km az=198.0*

*DSN **06** 01:39:57.9±2.4, 26.°63N×60.°81E, h15km, ML4.0/8, Error ellipse: s-maj=54.1km s-min=16.7km az=2.0*

*OMAN **06** 01:39:59.3±1.2, 26.°68N×60.°68E, h23km±45km, ml3.7/10, Error ellipse: s-maj=58.1km s-min=7.2km az=235.0*

ISC 06 01:39:39.7±0.6, 26.°71N±0.°05×61.°28E±0.°05, h10km, n94, σ2s14°91, mb3.8/12, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SZD1	Zahaedan-tmp	2.79	353	ePn		Pn		01 40 26.2	+1.6
KHNJ	Kahnooj	3.41	292	ePn		Pb		01 40 41.1	+0.8
KHNJ	Kahnooj	3.41	292	Pn		Pb		01 40 41.0	+0.8
NIAN	Nian	4.05	283	ePn		Pb		01 40 51.7	+0.5
WSAR	Wadi Sarin	4.21	215	Pn		Pg		01 40 57.3	-3.0
	1.2nm,0.3s,baz=31,slow=4.3,SNR=34								
WSAR				Sn		Sb		01 41 45.5	+0.8
	5.4nm,0.3s,baz=53,slow=24,SNR=19								
BANOM	Banah	4.54	261	i P		Pb		01 40 59.3	-0.2
	SNR=26								
BANOM				S		Sb		01 41 48.9	-5.4
BANOM	Banah	4.54	261	P		Pb		01 40 58.9	-0.5
CHMN	Cheshme madani	4.56	314	ePn		Pn		01 40 53.6	+4.5
CHMN				e				01 40 54.3	
CHMN	Cheshme madani	4.56	314	Pn		Pn		01 40 53.5	+4.5
WBK	Wadi Bani Khal	4.59	208	P		Pb		01 41 02.3	+2.0
	SNR=182								
GENO	Geno	4.61	280	ePn		Pb		01 41 00.5	-0.3
GENO				e				01 41 59.0	
GENO	Geno	4.61	280	Pn		Pb		01 41 00.4	-0.3
SHME	Shamm	4.66	263	P		Pb		01 41 02.1	+0.6
SHME	Shamm	4.66	263	ePn		Pb		01 41 01.4	-0.1
SMDO	Samad	4.67	220	P		Pb		01 41 04.3	+2.5
	SNR=26								
SMDO				S		Sb		01 41 52.7	-5.4
MDH	Madha	4.70	254	i P		Pb		01 41 01.6	-0.6
	SNR=20								
MDH	Madha	4.70	254	P		Pb		01 41 01.6	-0.6
	SNR=20								
HOQ	Hoqain	4.75	230	P		Pb		01 41 03.8	+0.7
	SNR=21								
HOQ				S		Sb		01 41 56.9	-3.6
NHDN	Nehbandan	4.79	347	ePn		Pn		01 40 53.0	+0.9
NHDN				e				01 40 53.9	
MSFE	Esma-Masafi	4.80	255	P		Pb		01 41 03.3	-0.6
MSFE	Esma-Masafi	4.80	255	ePn		Pb		01 41 02.8	-1.1
UOSS	Minazif	4.90	250	i P		Pb		01 41 04.0	-1.6
	SNR=12								
UOSS	Minazif	4.90	250	ePn		Pb		01 41 04.0	-1.6
UOSS	Minazif	4.90	250	Pn		Pb		01 41 03.9	-1.8
UOSS				Sn		Sn		01 41 56.1	+5.8
UOSS	Minazif	4.90	250	P		Pb		01 41 04.0	-1.6
NGRK	Negar Kerman	4.97	307	ePn		Pb		01 41 02.2	-4.8
SOHO	SOHO	5.00	240	P		Pb		01 41 06.6	-0.7
	SNR=25								
SOHO				S		Sb		01 42 00.9	-6.5
HATD	Hatta, Dubai	5.00	249	P		Pb		01 41 05.9	-1.5
HATD	Hatta, Dubai	5.00	249	ePn		Pb		01 41 06.0	-1.4
HATD	Hatta, Dubai	5.00	249	Pn		Pb		01 41 06.0	-1.4
ASHO	Ashiyiah	5.12	248	i P		Pb		01 41 08.3	-1.2
	SNR=21								
ASHO	Ashiyiah	5.12	248	ePn		Pb		01 41 08.3	-1.2
ASHO	Ashiyiah	5.12	248	Pn		Pb		01 41 08.2	-1.2
ASHO	Ashiyiah	5.12	248	P		Pb		01 41 08.6	-0.9
	SNR=21								
TVBK	TV Kerman	5.15	310	e				01 41 06.3	
TVBK				ePn		Pn		01 41 03.1	+5.9
JMDO	Jabal Madar	5.20	215	P		Pb		01 41 12.1	+1.4
	SNR=65								
NAZ	Nazwa, Dubai	5.34	253	P		Pb		01 41 12.8	-0.4
NAZ	Nazwa, Dubai	5.34	253	ePn		Pb		01 41 10.8	-2.4
BSY	Bisya	5.41	224	P		Pb		01 41 16.1	+1.7
	SNR=19								
FAQ	Al Faqa, Dubai	5.49	250	ePn		Pb		01 41 13.2	-2.5
KHGB	Koh Gabri	5.59	312	e		Pn		01 41 09.4	+6.3
ALNE	Al Ain	5.65	243	ePn		Pb		01 41 16.9	-1.6
ALNE	Al Ain	5.65	243	Pn		Pb		01 41 16.9	-1.6
ASUD	Al Ashush, Dub	5.75	250	i P		Pb		01 41 18.9	-1.3
	SNR=15								
IKOO	Kooshah	6.03	341	ePn		Pn		01 41 10.3	+1.0
IKOO				e				01 41 12.5	
IKOO	Kooshah	6.03	341	Pn		Pn		01 41 10.2	+1.0
IDAH	Dahanechah	6.14	349	ePn		Pn		01 41 11.3	+0.6
IDAH	Dahanechah	6.14	349	Pn		Pn		01 41 11.3	+0.6
ITEG	Tejag	6.55	341	ePn		Pn		01 41 17.3	+1.0
IMON	Monand	6.62	348	ePn		Pn		01 41 18.1	+0.9
IMON	Monand	6.62	348	Pn		Pn		01 41 18.1	+0.9
IBAF	Bafgh	6.97	316	ePn		Pn		01 41 26.7	+4.6
IBAF	Bafgh	6.97	316	Pn		Pn		01 41 26.7	+4.6
AFRZ	Afriz	6.98	344	ePn		Pn		01 41 22.9	+0.8
TPRV	Parvadeh(Tabas	7.46	329	ePn		Pn		01 41 31.8	+3.1
HRA	Herat	7.70	6	Pn		Pn		01 41 28.3	-3.8
TKDS	Koohdasht(Taba	7.77	333	ePn		Pn		01 41 35.9	+2.9
IPAY	Payeh	9.91	349	ePn		Pn		01 42 04.4	+2.0
IAKL	Akhelmad	10.10	348	ePn		Pn		01 42 06.2	+1.2
IAKL	Akhelmad	10.10	348	Pn		Pn		01 42 06.2	+1.2
SBZV	Sabzevar	10.15	343	ePn		Pn		01 42 07.5	+1.8
THW	Thamme Wali	10.93	54	P		Pn		01 42 17.2	+1.0
GEYT	Alibeck	11.51	347	LR		LR		01 46 20.7	
	comp=Z,21nm,20.8s,baz=335,slow=36								
DHRM	DHARAMSHALA	14.20	64	eP		Pn		01 43 03.4	+2.3
DHRM				eS		Sn		01 45 29.3	-9.5
SMLA	Simla	14.59	69	eP		P		01 43 09.7	-3.0
SMLA				eS		Sn		01 45 34.5	-14
RAYN	Ar Rayn	14.64	261	Pn		P		01 43 13.8	+0.4
RAYN						Sn		01 45 48.4	-1.0
GNI	Garni	19.20	318	PKHKP		Pn		01 44 05.9	+1.1
GNI				pmax		pmax			
	comp=Z,11nm,1.0s								
GNI	Garni	19.20	318	P		P		01 44 02.8	-1.1
	comp=Z,0.2nm,0.3s,baz=208,slow=6.0,SNR=2.4								
GNI	Garni	19.20	318	P		Pn		01 44 05.9	+1.1
GNI				IAmb		IAmb		01 44 25.2	
	comp=Z,11nm,1.0s								
AAK	Ala-Archa	19.21	31	P		P		01 44 02.8	-1.2
	comp=Z,0.2nm,0.3s,baz=240,slow=9.4,SNR=3.6								
AAK	Ala-Archa	19.21	31	IAmb		IAmb		01 44 16.4	
	comp=Z,9.4nm,1.4s								
TBLG	Delisi	20.24	322	PKIKP		Pn		01 44 15.3	-1.7
TBLG				pmax		pmax			
	comp=Z,15nm,1.4s								
TBLG	Delisi	20.24	322	P		P		01 44 15.3	+0.2
TBLG				IAmb		IAmb		01 44 22.0	
	comp=Z,15nm,1.4s								
AKH	Akhalkalaki	20.73	320	P		P		01 44 19.4	-1.2
AKH				IAmb		IAmb		01 44 24.6	
	comp=Z,5.5nm,1.1s								
ASF	Jabal al Asfar	21.90	290	PKIKP		Pn		01 44 35.3	
ASF	Jabal al Asfar	21.90	290	P		P		01 44 35.3	+2.1
	comp=Z,2.2nm,0.9s,baz=178,slow=5.3,SNR=3.7								
ABKAR	Akbulak array	22.54	358	P		P		01 44 37.4	-2.3
KBZ	Khabaz	22.59	323	P		P		01 44 41.4	+1.1
	comp=Z,2.9nm,0.9s,baz=132,slow=14,SNR=4.2								
KVAR	Kislovodsk Ar	22.85	324	LR		LR		01 55 55.2	
	comp=Z,97nm,19.1s,baz=198,slow=44								
MKAR	Makanchi Array	26.04	34	P		P		01 45 13.1	+0.1
	comp=Z,0.2nm,0.4s,baz=224,slow=9.4,SNR=5.9								
BVAR	Borovoye Array	27.16	12	P		P		01 45 23.3	+0.3
	comp=Z,0.8nm,0.4s,baz=174,slow=9.2,SNR=5.2								
KURBB	Kurchatov Array	27.28	24	P		P		01 45 24.6	+0.4
	comp=Z,0.4nm,0.7s,baz=223,slow=7.9,SNR=4.0								
ZALV	Zalesovo Beam	32.30	26	P		P		01 46 07.0	-1.6
	comp=Z,0.6nm,0.3s,baz=240,slow=12,SNR=3.4								
ZALV	Zalesovo Beam	32.30	26	P		P		01 46 07.0	-1.6
AKASG	Malin Array Be	34.20	323	P		P		01 46 25.1	-0.1
	comp=Z,0.4nm,0.3s,baz=129,slow=8.0,SNR=6.8								
AKBB	Malin Array Si	34.20	323	P		P		01 46 25.9	+0.6
BUR08	Bucovina Ar. S	35.10	316	P		P		01 46 34.8	+1.6
FINES	FINESS Array B	41.99	336	P		P		01 47 30.9	+0.1
	comp=Z,2.9nm,0.3s,baz=136,slow=8.3,SNR=77								
GERES	GERESS Array B	42.76	314	P		P		01 47 38.1	+0.8
	comp=Z,0.4nm,0.6s,baz=113,slow=9.7,SNR=3.7								
ARCES	ARCESS Array B	47.65	344	P		P		01 48 15.7	0.0
	comp=Z,1.7nm,0.3s,baz=141,slow=8.6,SNR

STIP				*e*Lg	Lg	01 43 06.1		
	comp=E,3.8nm,0.2s							
VAY	**Valandovo**	**0.57**	**158**	*e*Pg	Pg	01 43 11.9	-0.8	
VAY				*i* Sg	Sg	01 43 19.2	-0.9	
VAY				*e*Lg	Lg	01 43 19.4		
	comp=E,2.1nm,0.3s							

ROM 06 01:43:48.4±0.0, 43°.375N±0°.002×12°.541E±0°.003, h8km, Md1.6/7, ML1.8/19, Error ellipse: s-maj=0.2km s-min=0.1km az=225.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.02**	**110**	P	Pg	01 43 49.9	-0.1
ATFO				S	Sg	01 43 50.9	-0.1
ATFO				END			
ATVO	**AVT- Monte Val**	**0.10**	**274**	P	Pg	01 43 51.1	+0.3
ATVO				S	Sg	01 43 53.0	+0.6
ATVO				AML	AML		
	comp=E,838μm,1.1s						
ATVO				AML	AML		
	comp=N,811μm,0.3s						
ATVO				END			
MURB	**Monte Urbino**	**0.11**	**186**	P	Pg	01 43 51.7	+0.7
MURB				AML	AML		
	comp=E,1390μm,0.2s						
MURB				AML	AML		
	comp=N,1920μm,0.3s						
MURB				AML	AML		
	comp=E,1500μm,0.3s						
MURB				AML	AML		
	comp=N,1925μm,0.3s						
MURB				AML	AML		
	comp=N,1770μm,0.3s						
MURB				END			
ATPI	**Pietralunga -**	**0.13**	**307**	P	Pg	01 43 51.6	+0.4
ATPI				S	Sg	01 43 54.1	+0.9
ATPI				AML	AML		
	comp=E,526μm,0.3s						
ATPI				AML	AML		
	comp=N,681μm,1.4s						
ATPI				AML	AML		
	comp=E,525μm,0.3s						
ATPI				AML	AML		
	comp=N,680μm,1.4s						
ATPI				END			
PIEI	**Pieia**	**0.16**	**359**	P	Pg	01 43 52.4	+0.5
PIEI				S	Sg	01 43 55.5	+1.3
PIEI				AML	AML		
	comp=E,1210μm,0.2s						
PIEI				AML	AML		
	comp=N,1098μm,0.2s						
PIEI				END			
FOSV	**Fossato di Vic**	**0.18**	**116**	P	Pg	01 43 52.9	+0.8
FOSV				S	Sg	01 43 56.2	+1.6
FOSV				AML	AML		
	comp=E,178μm,1.6s						
FOSV				AML	AML		
	comp=E,178μm,1.6s						
FOSV				AML	AML		
	comp=N,202μm,0.4s						
SSFR	**Montelago di S**	**0.19**	**71**	P	Pg	01 43 52.9	+0.6
SSFR				S	Sg	01 43 56.3	+1.5
SSFR				AML	AML		
	comp=N,1103μm,0.2s						
SSFR				AML	AML		
	comp=N,1385μm,1.5s						
SSFR				AML	AML		
	comp=E,1340μm,0.2s						
SSFR				AML	AML		
	comp=E,1450μm,0.2s						
FRON	**Frontone**	**0.20**	**43**	P	Pg	01 43 53.0	+0.6
FRON				S	Sg	01 43 56.5	+1.4
FRON				AML	AML		
	comp=E,321μm,0.1s						
FRON				AML	AML		
	comp=N,576μm,1.6s						
FRON				END			
ATTE	**AVT- Monte Tez**	**0.22**	**218**	P	Pg	01 43 53.5	+0.6
ATTE				S	Sg	01 43 57.2	+1.2
ATTE				AML	AML		
	comp=E,204μm,0.4s						
ATTE				AML	AML		
	comp=E,204μm,0.4s						
ATTE				AML	AML		
	comp=N,146μm,0.4s						
ATTE				END			
NARO	**Abbazia di Nar**	**0.24**	**7**	P	Pg	01 43 53.6	+0.5
NARO				S	Sg	01 43 57.7	+1.3
NARO				AML	AML		
	comp=N,156μm,0.9s						
NARO				AML	AML		
	comp=E,206μm,1.1s						
NARO				END			
CDCA	**Citt' di Caste**	**0.24**	**291**	P	Pg	01 43 53.9	+0.7
BADI	**Badiali**	**0.26**	**302**	P	Pg	01 43 54.2	+0.7
BADI				S	Sb	01 43 58.6	-1.3
BADI				AML	AML		
	comp=N,1014μm,0.2s						
BADI				AML	AML		
	comp=E,935μm,0.6s						
BADI				END			
MPAG	**Monte Paganucc**	**0.30**	**32**	P	Pg	01 43 55.1	+0.7
MPAG				S	Sb	01 44 00.2	-1.0
MPAG				AML	AML		
	comp=N,111μm,0.3s						
MPAG				AML	AML		
	comp=E,104μm,1.2s						
SNTG	**Esanatoglia**	**0.32**	**112**	P	Pg	01 43 55.3	+0.7
SNTG				S	Sb	01 44 00.7	-0.9
SNTG				AML	AML		
	comp=N,214μm,0.2s						
SNTG				AML	AML		
	comp=E,262μm,0.2s						
ARVD	**Arcevia**	**0.32**	**67**	P	Pg	01 43 55.3	+0.7
ARVD				S	Sb	01 44 00.9	-0.7
ARVD				AML	AML		
	comp=E,198μm,0.8s						
ARVD				AML	AML		
	comp=N,122μm,0.1s						
PE3	**Peglio**	**0.32**	**354**	P	Pg	01 43 55.6	+0.8
PE3				S	Sb	01 44 01.4	-0.4
PE3				AML	AML		
	comp=E,154μm,1.6s						
PE3				AML	AML		
	comp=N,258μm,1.4s						
ASSB	**Assisi San Ben**	**0.34**	**165**	P	Pg	01 43 55.9	+0.8
ASSB				S	Sb	01 44 01.7	-0.8
ASSB				AML	AML		
	comp=E,176μm,0.2s						
ASSB				AML	AML		
	comp=N,220μm,0.6s						
PARC	**Parchiule**	**0.35**	**321**	P	Pg	01 43 56.1	+0.8
PARC				S	Sb	01 44 02.1	-0.6
PARC				AML	AML		
	comp=N,140μm,0.2s						
PARC				AML	AML		
	comp=E,144μm,1.1s						
FSSB	**Fossombrone**	**0.36**	**28**	P	Pg	01 43 56.3	+0.8
FSSB				S	Sb	01 44 02.2	-0.8
FSSB				AML	AML		
	comp=E,255μm,0.6s						
FSSB				AML	AML		
	comp=N,290μm,1.2s						
EL6	**Elcito**	**0.41**	**96**	P	Pg	01 43 57.1	+0.7
EL6				S	Sb	01 44 04.0	-0.5
CESI	**CESI - Serrava**	**0.46**	**144**	P	Pb	01 43 58.2	-0.5
CESI				S	Sb	01 44 05.5	-0.2
CESI				AML	AML		
	comp=N,54μm,1.3s						
CESI				AML	AML		
	comp=E,22μm,1.6s						
CPGN	**Carpegna, Ital**	**0.46**	**340**	P	Pb	01 43 58.5	-0.3
CING	**Cingoli**	**0.48**	**90**	P	Pg	01 43 58.2	+0.6
FDMO	**Fiordimonte**	**0.52**	**130**	P	Pg	01 43 59.0	+0.5
MGAB	**Montegabbione**	**0.56**	**214**	P	Pg	01 43 59.8	+0.6
MGAB				AML	AML		
	comp=E,156μm,0.5s						
MGAB				AML	AML		
	comp=N,158μm,0.2s						
CSP1	**Cessapalombo**	**0.56**	**120**	P	Pg	01 43 59.9	+0.6

*IDC **06** 02:17:22.7±1.9, 54°.21S×143°.45E, h0km, mb4.1/5, mb1 4.2/5, mb1mx4.0/24, mbtmp4.1/5, MS3.8/10, Ms1 3.8/10, ms1mx3.6/19, Error ellipse: s-maj=140.1km s-min=21.3km az=83.0*

ISC 06 02:17:24.8±1.5, 54°.3S±0°.2×142°.9E±0°.8, h10km, n25, σ0876/9, mb4.1/5, MS3.8/10, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**21.13**	**72**	LR	LR	02 28 38.2	
	comp=Z,404nm,18.3s,baz=216,slow=32						
STKA	**Stephens Creek**	**22.39**	**357**	P	**P**	**02 22 22.9**	**-0.3**
	6.8nm,0.9s,baz=154,slow=8.5,SNR=3.8						
STKA				LR	LR	02 29 54.6	
	comp=Z,210nm,18.3s,baz=194,slow=34						
H01W1	**Cape Leeuwin H**	**27.88**	**302**	T	T	02 53 05.6	
	baz=142,slow=75,SNR=8.1						
H01W2	**Cape Leeuwin H**	**27.88**	**302**	T	T	02 53 25.7	
	baz=142,slow=75,SNR=9.5						
H01W3	**Cape Leeuwin H**	**27.89**	**302**	T	T	02 53 04.2	
	baz=142,slow=75,SNR=7.2						
NWAO	**Narrogin (SRO)**	**28.02**	**309**	LR	LR	02 32 00.2	
	comp=Z,336nm,21.3s,baz=124,slow=31						
URZ	**Urewera**	**28.19**	**70**	LR	LR	02 32 48.3	
	comp=Z,274nm,19.4s,baz=232,slow=33						
ASAR	**Alice Springs**	**31.29**	**344**	P	**P**	**02 23 45.0**	**+0.2**
	0.7nm,0.6s,baz=163,slow=9.0,SNR=7.7						
WRA	**Warramunga Arr**	**34.88**	**346**	P	**P**	**02 24 15.8**	**-0.4**
	2.1nm,0.5s,baz=169,slow=7.9,SNR=21						
QSPA	**South Pole Qui**	**35.85**	**180**	P	**P**	**02 24 24.2**	**-0.2**
	1.3nm,0.3s,baz=348,slow=1.8,SNR=5.4						
MAW	**Mawson**	**38.11**	**218**	LR	LR	02 40 16.7	
	comp=Z,130nm,18.0s,baz=60,slow=36						
FITZ	**Fitzroy Crossi**	**38.47**	**333**	P	**P**	**02 24 46.6**	**-0.2**
	1.6nm,0.7s,baz=146,slow=15,SNR=3.4						
H08S2	**Diego Garcia H**	**72.42**	**282**	T	T	03 48 54.5	
	baz=144,slow=76,SNR=8.5						
H08S1	**Diego Carcia H**	**72.44**	**282**	T	T	03 48 51.0	
	baz=144,slow=76,SNR=5.4						
H08S3	**Diego Garcia H**	**72.44**	**282**	T	T	03 49 03.8	
	baz=144,slow=76,SNR=9.5						
PLCA	**Paso Flores**	**81.12**	**155**	LR	LR	03 00 21.6	
	comp=Z,61nm,18.4s,baz=210,slow=32						
BOSA	**Boshof**	**81.58**	**232**	LR	LR	03 00 24.8	
	comp=Z,59nm,19.2s,baz=337,slow=32						
CMAR	**Chiang Mai Arr**	**81.60**	**318**	LR	LR	03 05 04.4	
	comp=Z,42nm,19.8s,baz=188,slow=35						
MJAR	**Matsushiro Arr**	**90.52**	**356**	LR	LR	03 09 56.9	
	comp=Z,19nm,19.6s,baz=90,slow=35						
KSRS	**Korea Array**	**92.25**	**348**	LR	LR	03 12 19.5	
	comp=Z,13nm,19.2s,baz=320,slow=36						
TORD	**Torodi Ar. Bea**	**128.94**	**232**	PKP	**PKPdf**	**02 36 32.9**	**+0.2**
	0.3nm,0.7s,baz=151,slow=3.3,SNR=2.9						
YKA	**Yellowknife Ar**	**140.90**	**46**	PKhKP	PKPpre	02 36 45.3	
	0.3nm,0.9s,baz=245,slow=2.9,SNR=4.4						
FINES	**FINESS Array B**	**146.87**	**308**	PKPbc	**PKPbc**	**02 37 05.7**	**-0.2**
	1.1nm,0.6s,baz=149,slow=0.4,SNR=12						
GERES	**GERESS Array B**	**148.53**	**281**	PKPbc	**PKiKP**	**02 37 11.7**	**-0.8**
	0.5nm,0.7s,baz=145,slow=3.3,SNR=4.9						
ARCES	**ARCESS Array B**	**148.54**	**323**	PKPbc	**PKPdf**	**02 37 08.1**	**+1.6**
	1.7nm,0.6s,baz=93,slow=2.4,SNR=7.0						

NNC 06 03:16:03.2±3.8, 41°.87N×84°.48E, h0km, mb3.8, mpv3.4, 3C-2D, Error ellipse: s-maj=46.2km s-min=17.8km az=171.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.93**	**291**	Pg	Pn	03 17 08.4	+3.6
	13nm,0.4s						
SHLS				Lg	Lg	03 17 59.0	
	24nm,0.5s						
PDGK	**Podgornoye**	**3.96**	**293**	⇓Pn	Pn	03 17 05.2	-0.1
	32nm,2.1s						
PDGK				⇓Pg	Pg	03 17 16.6	-2.5
	35nm,2.5s						
PDGK				⇑Lg	Lg	03 18 08.0	
	28nm,1.1s						
KAPS	**Kapalarasan**	**5.05**	**314**	Pg	Pn	03 17 23.5	+3.4
	2.2nm,0.4s						
KAPS				Lg	Lg	03 18 25.7	
	2.7nm,0.6s						
MK31	**Makanchi Array**	**5.16**	**343**	⇑Pn	Pn	03 17 22.5	+0.7
	2.6nm,1.5s,baz=158,slow=14,SNR=4.4						
MK31				⇑Lg	Lg	03 18 55.4	
	3.3nm,0.5s,baz=160,slow=24						
KTBS	**Karatobe**	**6.03**	**290**	Pg	Pb	03 17 52.0	+3.0
	3.6nm,1.4s						
KTBS				Lg	Lg	03 19 14.1	
	6.1nm,0.5s						

*IDC **06** 03:42:17.9±0.9, 2°.38N×126°.54E, h0km, mb3.9/8, mb1 4.1/9, mb1mx3.9/39, mbtmp4.0/9, ML3.7/1, Error ellipse: s-maj=46.7km s-min=15.2km az=65.0*

*NEIC **06** 03:42:24.0±0.7, 2°.4N±0°.1×126°.58E±0°.06, h44km±10km, mb4.3/7, Error ellipse: s-maj=16.0km s-min=8.0km az=190.0*

*DJA **06** 03:42:25.3±0.3, 3°N±3°×12°7E±°, h40km±7km, M4.2/16, mB5.1/2, mb4.4/11, MLv4.2/16, Mw(mB)4.5/2*

ISC 06 03:42:23.1±0.7, 2°.68N±0°.08×127°.06E±0°.09, h35km, n30, σ1968/28, mb4.1/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.92**	**171**	P	**Pn**	**03 42 53.7**	**+0.3**
TNTI				S	**Sn**	**03 43 17.8**	**+1.4**
TNTI	**Ternate**	**1.92**	**171**		**Pn**	**03 42 51.9**	**-1.5**
LBMI	**Labuha**	**3.33**	**172**	P	**Pn**	**03 43 13.9**	**+1.2**
KMSI	**Cibinong**	**3.73**	**236**	P	**Pn**	**03 43 19.1**	**+0.9**
SANI	**Sanana**	**4.82**	**193**	P	**Pn**	**03 43 34.8**	**+1.5**
SWI	**Sorong**	**5.48**	**130**	P	**Pn**	**03 43 44.5**	**+2.2**
	0.1nm15nm,0.7s						
SIJI	**Sorong**	**5.49**	**130**	Pn	**Pn**	**03 43 45.8**	**+3.4**
	1.9nm,0.3s,baz=321,slow=16,SNR=5.0						
MRSI	**Marisa**	**5.57**	**247**	P	**Pn**	**03 43 43.6**	**+0.1**
	0.3nm79nm,0.5s						
LUWI	**Luwuk**	**5.67**	**229**	P	**Pn**	**03 43 46.2**	**+1.3**
	0.6nm69nm,0.6s						
LUWI	**Luwuk**	**5.67**	**229**	Pn	Pn	03 43 37.6	-7.3
AAI	**Ambon**	**6.43**	**170**	P	**Pn**	**03 43 57.6**	**+2.2**
	0.2nm44nm,1.0s						
APSI	**Ampana**	**6.48**	**237**	P	**Pn**	**03 43 57.6**	**+1.5**
	0.2nm678nm63nm,1.2s						
MPSI	**Mapaga**	**7.53**	**252**	P	**Pn**	**03 44 11.3**	**+0.8**
	0.1nm14nm,0.8s						
SBUM	**Sibu**	**14.83**	**269**	Pn	Pn	03 45 44.2	-6.2
TWSI	**Taliwang, Sumb**	**15.22**	**222**	P	**Pn**	**03 45 57.4**	**+1.8**
	25nm,0.9s						
FITZ	**Fitzroy Crossi**	**20.70**	**184**	P	**P**	**03 46 57.8**	**-2.6**
	0.6nm,0.3s,baz=5.1,slow=11,SNR=5.2						
FITZ	**Fitzroy Crossi**	**20.70**	**184**	IAmb	IAmb	03 47 17.8	
	comp=Z,24nm,1.5s						
WRA	**Warramunga Arr**	**23.59**	**163**	P	**P**	**03 47 28.3**	**-2.6**
	comp=Z,2.3nm,0.5s,baz=343,slow=11,SNR=20						
ASAR	**Alice Springs**	**27.02**	**166**	P	**P**	**03 48 00.2**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=351,slow=7.7,SNR=12						
ASAR				PcP	**PcP**	**03 51 22.8**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=342,slow=1.1,SNR=4.3						
CMAR	**Chiang Mai Arr**	**31.69**	**302**	P	**P**	**03 48 41.6**	**-2.1**
	comp=Z,1.3nm,0.3s,baz=119,slow=7.3,SNR=4.9						
KSRS	**Korea Array**	**34.61**	**1**	P	**P**	**03 49 11.8**	**+2.9**
	comp=Z,0.9nm,0.6s,baz=174,slow=10,SNR=2.4						
STKA	**Stephens Creek**	**37.04**	**159**	P	**P**	**03 49 29.0**	**-0.8**
	comp=Z,3.0nm,0.6s,baz=344,slow=8.2,SNR=7.9						
STKA	**Stephens Creek**	**37.04**	**159**	IAmb	IAmb	03 50 14.1	
	comp=Z,7.6nm,1.9s						
MK31	**Makanchi Array**	**58.60**	**325**	P	**P**	**03 52 16.5**	**-0.1**
MKAR	**Makanchi Array**	**58.60**	**325**	P	**P**	**03 52 16.5**	**-0.1**
	comp=Z,1.1nm,0.4s,baz=117,slow=7.9,SNR=39						
ZAAO	**Zalesovo Array**	**61.67**	**333**	P	**P**	**03 52 36.5**	**-0.9**
ZALV	**Zalesovo Beam**	**61.67**	**333**	P	**P**	**03 52 36.9**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=125,slow=8.3,SNR=3.7						
KURK	**Kurchatov**	**62.80**	**328**	P	**P**	**03 52 45.2**	**+0.1**
KK31	**Karatay Array**	**64.22**	**317**	P	**P**	**03 52 54.6**	**-0.1**
ABKAR	**Akbulak array**	**73.17**	**321**	P	**P**	**03 53 50.2**	**-0.1**

*SJA **06** 03:45:23.2±0.7, 20°.52S×71°.07W, h36km±16km, ML3.7, MW4.0*

*GUC **06** 03:45:27.7±0.5, 20°.62S×70°.65W, h34km±2km, ML3.5*

ISC 06 03:45:24.8±2.0, 20°.59S±0°.04×70°.82W±0°.08, h12km±11km, n20, σ1913/31, 7C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.59**	**88**	*e*P	**Pg**	**03 45 36.7**	**+0.3**
TA01				*i* S	**Sg**	**03 45 42.9**	**-1.4**
TA01				IAML		03 45 43.8	
	comp=N,4μm,0.5s						
PSGC	**Pisagua**	**1.18**	**33⇑**	*e*P	**Pb**	**03 45 47.0**	**-0.3**
PSGC				*i* S	**Sb**	**03 46 02.0**	**-0.6**
PSGC				IAML		03 46 05.4	
	comp=E,2μm,0.4s						
PB11	**IPOC Station P**	**1.37**	**53⇓**	*e*P	**Pn**	**03 45 50.0**	**+0.1**
PB11				*i* S	**Sb**	**03 46 06.5**	**-1.4**
PB11				IAML		03 46 09.8	
	comp=N,3μm,0.4s						
PB11	**IPOC Station P**	**1.37**	**53**	*i* P	**Pn**	**03 45 50.0**	**+0.1**
PB11				*i* S	**Sg**	**03 46 09.9**	**+1.0**
PB11				IAML		03 46 12.1	
	comp=Z,1μm,0.8s						
PB08	**IPOC Station P**	**1.62**	**74⇓**	*i* P	**Pn**	**03 45 53.7**	**+0.1**
PB08				*i* S	**Sn**	**03 46 13.6**	**-1.0**
PB08				IAML		03 46 18.3	
	comp=N,701nm,0.3s						
PB03	**IPOC Station P**	**1.75**	**146⇑**	*i* P	**Pn**	**03 45 55.7**	**+0.5**
PB03				*i* S	**Sn**	**03 46 17.6**	**0.0**
PB03				IAML		03 46 31.4	
	comp=E,620nm,0.3s						
PB04	**IPOC Station P**	**1.84**	**160⇑**	*e*P	**Pn**	**03 45 56.8**	**+0.5**
PB04				*i* S	**Sn**	**03 46 17.9**	**-1.8**
PB04				IAML		03 46 30.7	
	comp=N,1μm,0.4s						
PB04	**IPOC Station P**	**1.84**	**160**	*i* P	**Pn**	**03 45 57.0**	**+0.6**
MNMC	**Minye Minye**	**1.85**	**39⇑**	*i* P	**Pn**	**03 45 58.0**	**+1.4**
MNMC				*e*S	**Sb**	**03 46 21.5**	**-0.5**
MNMC				IAML		03 46 28.8	
	comp=N,2μm,0.7s						
PB09	**IPOC Station P**	**1.90**	**130⇑**	*i* P	**Pn**	**03 45 57.7**	**+0.6**
PB09				*i* S	**Sn**	**03 46 20.9**	**-0.1**
PB09				IAML		03 46 36.3	
	comp=E,800nm,0.3s						
PB09	**IPOC Station P**	**1.90**	**130**	*i* P	**Pb**	**03 45 58.7**	**-0.8**
PB09				IAML		03 46 33.3	
	comp=Z,490nm,0.6s						
AP01	**Chacalluta**	**2.25**	**11**	*e*S	**Sb**	**03 46 32.7**	**-0.6**
PB05	**IPOC Station P**	**2.32**	**166⇑**	*i* P	**Pn**	**03 46 03.1**	**+0.1**
PB05				*i* S	**Sn**	**03 46 32.7**	**+1.2**
PB05				IAML		03 46 43.2	
	comp=E,423nm,0.5s						
PB05	**IPOC Station P**	**2.32**	**166**	*i* P	**Pn**	**03 46 03.2**	**+0.3**
PB05				IAML		03 46 43.9	
	comp=Z,367nm,0.5s						
PB06	**IPOC Station P**	**2.40**	**151⇑**	*i* P	**Pn**	**03 46 04.4**	**+0.3**
PB06				*i* S	**Sn**	**03 46 33.5**	**0.0**
PB06				IAML		03 46 42.0	
	comp=E,673nm,0.5s						
LVC	**Limon Verde**	**2.68**	**139⇑**	*i* P	**Pn**	**03 46 10.2**	**+2.1**
LVC				IAML		03 47 00.1	
	comp=Z,112nm,0.5s						
PB15	**IPOC Station P**	**2.89**	**155**	*i* P	**Pn**	**03 46 11.4**	**+0.6**
PB15				IAML		03 47 01.2	
	comp=Z,1μm,0.4s						
PB10	**IPOC Station P**	**2.92**	**175**	*i* P	**Pn**	**03 46 11.4**	**+0.3**
PB10				IAML		03 47 02.2	
	comp=Z,104nm,0.6s						
PB14	**IPOC Station P**	**4.03**	**175**	*i* P	**Pn**	**03 46 27.6**	**+0.9**
PB14				IAML		03 47 36.1	
	comp=Z,49nm,0.6s						
YJA	**Yavi**	**5.18**	**109**	*i* P	**Pn**	**03 46 46.2**	**+3.6**

*IDC **06** 03:53:40.2±0.6, 50°.09N×178°.71E, h0km, mb4.2/26, mb1 4.4/28, mb1mx4.3/38, mbtmp4.3/28, ML3.8/2, MS3.1/2, Ms1 3.2/2, ms1mx2.7/38, Error ellipse: s-maj=19.6km s-min=11.5km az=170.0*

*MOS **06** 03:53:43.5±1.1, 50°.15N×178°.75E, h33km, mb4.6/29, Error ellipse: s-maj=9.8km s-min=7.1km az=98.4*

*NEIC **06** 03:53:45.4±2.0, 50°.2N±0°.1×178°.79E±0°.09, h34km±5km, mb4.4/96, ML4.2/31(AEIC), Error ellipse: s-maj=16.2km s-min=8.2km az=169.0*

*AEIC **06** 03:53:47.0±5.8, 50°.9N±0°.2×178°.88E±0°.09, h151km±7km, Error ellipse: s-maj=25.2km s-min=8.2km az=173.0*

ISC 06 03:53:45.7±0.5, 50°.28N±0°.09×178°.81E±0°.04, h35km, n226, σ1959/220, mb4.4/104, 18C-1D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAEA	**Gareloi East**	**2.16**	**45**		**Pn**	**03 54 20.4**	**+1.2**
TASE	**Tanaga Southea**	**2.53**	**51**		**Pn**	**03 54 25.4**	**+1.1**
TAFP	**Tanaga Falls P**	**2.59**	**50**		**Pn**	**03 54 26.1**	**+0.9**
TAFP					**Sn**	**03 54 57.6**	**+2.1**
TAPA	**Tanaga Point A**	**2.63**	**53**		**Pn**	**03 54 26.7**	**+1.0**
TAPA					**Sn**	**03 54 58.1**	**+1.7**
KIMD	**Kanaga Island**	**2.91**	**58**		**Pn**	**03 54 30.0**	**+0.5**
KIWB	**Kanaga Island**	**3.00**	**57**		**Pn**	**03 54 31.4**	**+0.7**
KIWB				Sn	**Sn**	**03 55 04.1**	**-1.3**
KIKV	**Kanaga Island**	**3.00**	**56**		**Pn**	**03 54 31.4**	**+0.6**
KIKV					**Sn**	**03 55 06.4**	**+0.9**
KICM	**Kanaga Island**	**3.01**	**55**		**Pn**	**03 54 31.9**	**+1.1**
ADK	**Adak**	**3.27**	**59**	P	**Pn**	**03 54 35.1**	**+0.7**
ADK						03 55 12.0	
ADK	**Adak**	**3.27**	**59**		**Pn**	**03 54 34.6**	**+0.3**
ADK	**Adak**	**3.27**	**59**		**Pn**	**03 54 35.1**	**+0.7**
ADK	**Adak**	**3.27**	**59**		**Sn**	**03 55 12.0**	**0.0**
ADAG	**Mount Adagdak**	**3.35**	**58**		**Pn**	**03 54 36.9**	**+1.2**
GSTD	**Great Sitkin T**	**3.64**	**59**		**Pn**	**03 54 40.3**	**+0.7**
GSTD					**Sn**	**03 55 21.6**	**+0.2**
GSMY	**Great Sitkin M**	**3.68**	**59**		**Pn**	**03 54 41.0**	**+0.8**
GSTR	**Great Sitkin T**	**3.71**	**59**		**Pn**	**03 54 41.2**	**+0.7**
SMY	**Shemya**	**3.83**	**312**	Pn	**Pn**	**03 54 42.0**	**-0.1**
SMY	**Shemya**	**3.83**	**312**		**Sn**	**03 55 24.9**	**-0.9**
ATKA	**Atka Island**	**4.80**	**64**		**Pn**	**03 54 55.5**	**+0.1**
ATKA	**Atka Island**	**4.80**	**64**		**Sn**	**03 55 46.1**	**-3.6**
ATKA	**Atka Island**	**4.80**	**64**		**Sn**	**03 55 49.1**	**-0.7**
KOKL	**Mount Kliuchef**	**4.84**	**62**		**Pn**	**03 54 57.2**	**+1.1**
KOFP	**Korovin Flat P**	**4.88**	**63**		**Pn**	**03 54 57.5**	**+0.9**
NIKH	**Nikolski High**	**8.14**	**66**	Pn	**Pn**	**03 55 41.6**	**+0.4**
NIKH				Sn	**Sn**	**03 57 09.1**	**-2.8**
OKSP	**Okmok Steeple**	**8.54**	**65**		**Pn**	**03 55 47.6**	**+0.8**
OKTU	**Okmok Mt. Tuli**	**8.72**	**64**		**Pn**	**03 55 50.5**	**+1.3**
SPIA	**Saint Paul Isl**	**9.47**	**39**	Pn	**Pn**	**03 55 56.0**	**-3.5**
MREP	**Makushin Rep't**	**9.58**	**63**		**Pn**	**03 56 01.6**	**+0.6**
MSW	**Makushin Switc**	**9.58**	**62**		**Pn**	**03 56 01.2**	**+0.1**
UNV	**Unalaska Valle**	**9.72**	**63**	Pn	**Pn**	**03 56 03.4**	**+0.5**
UNV					**Sn**	**03 57 52.1**	**+1.4**
AKBBA	**Akutan Broad B**	**10.12**	**62**		**Pn**	**03 56 09.5**	**+1.1**
AKUT	**Akutan**	**10.22**	**62**	Pn	**Pn**	**03 56 10.3**	**+0.6**
PET	**Petropavlovsk**	**12.81**	**290**	*i* P	**Pn**	**03 56 45.1**	**0.0**
PEA0B	**Petropavlovsk-**	**13.39**	**290**	*i* P	**Pn**	**03 56 53.5**	**+0.4**
PEA0B	**Petropavlovsk-**	**13.39**	**290**	Pn	**Pn**	**03 56 53.8**	**+0.8**
PETK	**Petropavlovsk-**	**13.39**	**290**	Pn	**Pn**	**03 56 52.9**	**-0.2**
	2.0nm,0.3s,baz=101,slow=20,SNR=14						
PETK				Sn	**Sn**	**03 59 13.2**	**-7.3**
	0.3nm,0.3s,baz=286,slow=41,SNR=2.7						
PETK				LR	LR	04 03 08.2	
	comp=Z,61

	comp=Z,9.0nm,1.3s							
PMR	**Palmer**	**20.98**	**45**	P	**P**	**03 58 28.4**	**+2.8**	
GHO	**Glory Hole Cre**	**21.13**	**45**	P	**P**	**03 58 26.2**	**-1.1**	
GHO				IAmb	IAmb	03 58 44.7		
	comp=Z,11nm,0.8s							
BPAW	**Bear Paw Mtn.**	**21.15**	**38**	P	**P**	**03 58 28.7**	**+1.3**	
BPAW				IAmb	IAmb	03 58 31.9		
	comp=Z,13nm,1.0s							
TRF	**Thorofare Moun**	**21.15**	**40**	P	**P**	**03 58 28.4**	**+0.8**	
KNK	**Knik Glacier**	**21.24**	**46**	P	**P**	**03 58 28.1**	**-0.3**	
KNK				IAmb	IAmb	03 58 36.5		
	comp=Z,35nm,1.4s							
SML	**Sawmill**	**21.41**	**45**	P	**P**	**03 58 29.9**	**-0.3**	
SML				IAmb	IAmb	03 58 42.7		
	comp=Z,13nm,1.0s							
MLY	**Manley**	**21.68**	**36**	P	**P**	**03 58 34.2**	**+1.1**	
MLY				IAmb	IAmb	03 58 39.6		
	comp=Z,20nm,1.5s							
RND	**Reindeer**	**21.73**	**41**	P	**P**	**03 58 33.4**	**-0.3**	
RND				pmax	pmax			
	comp=Z,18nm,1.3s							
RND	**Reindeer**	**21.73**	**41**	P	**P**	**03 58 33.4**	**-0.3**	
RND				IAmb	IAmb	03 58 38.4		
	comp=Z,18nm,1.3s							
BWN	**Browne**	**21.78**	**38**	P	**P**	**03 58 33.5**	**-0.6**	
BWN				IAmb	IAmb	03 58 50.7		
	comp=Z,34nm,1.4s							
MCK	**McKinley**	**21.82**	**40**	P	**P**	**03 58 33.6**	**-1.0**	
MCK				pmax	pmax			
	comp=Z,7.0nm,1.0s							
MCK	**McKinley**	**21.82**	**40**	P	**P**	**03 58 33.6**	**-1.0**	
SCM	**Sheep Creek Mo**	**21.88**	**45**	P	**P**	**03 58 34.9**	**-0.4**	
SCM				pmax	pmax			
	comp=Z,19nm,1.0s							
SCM	**Sheep Creek Mo**	**21.88**	**45**	P	**P**	**03 58 34.9**	**-0.4**	
SCM				IAmb	IAmb	03 58 37.4		
	comp=Z,19nm,1.0s							
NEA	**Nenana**	**22.11**	**38**	P	**P**	**03 58 37.4**	**-0.2**	
DHY	**Denali Highway**	**22.24**	**42**	P	**P**	**03 58 39.7**	**+0.5**	
DHY				IAmb	IAmb	03 58 44.3		
	comp=Z,14nm,0.7s							
WRH	**Wood River Hil**	**22.45**	**38**	P	**P**	**03 58 39.8**	**-1.5**	
MDM	**Murphy Dome**	**22.60**	**37**	P	**P**	**03 58 41.9**	**-1.0**	
MDM				IAmb	IAmb	03 58 46.2		
	comp=Z,7.9nm,0.6s							
CCB	**Clear Creek Bu**	**22.64**	**38**	P	**P**	**03 58 43.0**	**-0.3**	
COLA	**College**	**22.71**	**37**	*i* P	**P**	**03 58 44.3**	**+0.3**	
COLA				pmax	pmax			
	comp=Z,3.0nm,0.9s							
PAX	**Paxson**	**23.03**	**43**	P	**P**	**03 58 47.9**	**+0.4**	
PAX				pmax	pmax			
	comp=Z,7.0nm,0.9s							
PAX	**Paxson**	**23.03**	**43**	P	**P**	**03 58 47.9**	**+0.4**	
IL31		**23.05**	**38**	P	**P**	**03 58 45.8**	**-1.7**	
ILAR	**Eielson Array**	**23.05**	**38**	P	**P**	**03 58 45.1**	**-2.5**	
	comp=Z,0.5nm,0.4s,baz=259,slow=10.0,SNR=14							
ILAR				LR	LR	04 07 54.0		
	comp=Z,59nm,19.5s,baz=290,slow=37							
GLB	**Gilahina Butte**	**23.41**	**47**	P	**P**	**03 58 51.6**	**+0.3**	
GLB				IAmb	IAmb	03 59 05.3		
	comp=Z,10nm,0.9s							
RIDG	**Independent Ri**	**23.53**	**41**	P	**P**	**03 58 52.5**	**+0.1**	
RIDG				IAmb	IAmb	03 59 11.3		
	comp=Z,18nm,1.3s							
VRDI	**Verde Repeater**	**23.54**	**48**	P	**P**	**03 58 52.0**	**-0.7**	
VRDI				IAmb	IAmb	03 58 59.4		
	comp=Z,20nm,1.2s							
CRQM	**Cirque**	**23.61**	**49**	P	**P**	**03 58 54.5**	**+1.1**	
TGL	**Tana Glacier**	**23.76**	**49**	P	**P**	**03 58 53.9**	**-0.8**	
MCARA	**McCarthy VSAT**	**23.77**	**48**	P	**P**	**03 58 54.9**	**+0.2**	
MENT	**Mentasta**	**23.79**	**44**	P	**P**	**03 58 55.3**	**+0.4**	
DOT	**Dot Lake**	**23.84**	**42**	P	**P**	**03 58 54.9**	**-0.4**	
PRP	**Porcupine Dome**	**23.87**	**37**	P	**P**	**03 58 54.3**	**-1.4**	
TOLK	**Toolik Lake Re**	**23.95**	**28**	P	**P**	**03 58 57.4**	**+1.0**	
SCRK	**Sand Creek**	**23.96**	**41**	P	**P**	**03 58 55.9**	**-0.6**	
BARN	**Barnard Glacie**	**24.37**	**49**	P	**P**	**03 59 00.8**	**+0.4**	
FYU	**Fort Yukon**	**24.39**	**35**	P	**P**	**03 58 59.5**	**-0.8**	
FYU				IAmb	IAmb	03 59 02.6		
	comp=Z,8.3nm,0.8s							
CTGM	**Chitina Glacie**	**24.52**	**49**	P	**P**	**03 59 01.0**	**-0.7**	
CTGM				IAmb	IAmb	03 59 16.7		
	comp=Z,15nm,1.1s							
ASAJ	**Asahikawa**	**25.18**	**270**	P	**P**	**03 59 06.4**	**-1.3**	
	comp=Z,22nm,0.9s,baz=89,slow=15,SNR=7.0							
EGAK	**Eagle**	**25.37**	**40**	P	**P**	**03 59 09.8**	**+0.6**	
EGAK				IAmb	IAmb	03 59 11.2		
	comp=Z,19nm,1.2s							
EGAK				PcP	**PcP**	**04 02 41.3**	**+0.6**	
GRNR	**Gornyy**	**26.69**	**288**	*eP*	**P**	**03 59 17.8**	**-3.5**	
GRNR				pmax	pmax			
	comp=Z,9.0nm,0.9s							
YAK	**Yakutsk**	**29.03**	**313**	*eP*	**P**	**03 59 41.8**	**-0.2**	
YAK				pmax	pmax			
	comp=Z,10.0nm,0.8s							
YAK				pmax	pmax			
	comp=E,6.0nm,1.1s							
YAK	**Yakutsk**	**29.03**	**313**	P	**P**	**03 59 41.0**	**-0.9**	
	comp=E,8.3nm,0.4s,baz=130,slow=2.2,SNR=5.3							
INK	**Inuvik**	**29.22**	**34**	P	**P**	**03 59 44.1**	**+0.4**	
INK				pmax	pmax			
	comp=Z,5.0nm,1.2s							
INK	**Inuvik**	**29.22**	**34**	P	**P**	**03 59 45.5**	**+1.9**	
	comp=Z,1.8nm,0.8s,baz=250,slow=13,SNR=7.1							
INK	**Inuvik**	**29.22**	**34**	P	**P**	**03 59 44.1**	**+0.4**	
KLR	**Kul'dur**	**30.03**	**286**	*i* P	**P**	**03 59 51.4**	**+0.4**	
KLR				pmax	pmax			
	comp=Z,8.0nm,0.9s							
TIXI	**Tiksi**	**30.87**	**332**	P	**P**	**03 59 58.3**	**+0.1**	
	comp=Z,1.6nm,0.3s,baz=67,slow=7.7,SNR=4.9							
TIXI				PcP	**PcP**	**04 02 53.9**	**-0.2**	
	comp=Z,1.5nm,0.4s,baz=126,slow=3.9,SNR=3.6							
USRK	**Ussuriysk Ar.**	**31.93**	**277**	P	**P**	**04 00 05.9**	**-1.9**	
	comp=Z,2.0nm,0.7s,baz=45,slow=12,SNR=4.6							
MJAR	**Matsushiro Arr**	**32.11**	**260**	P	**P**	**04 00 09.1**	**-0.3**	
	comp=Z,1.7nm,0.6s,baz=53,slow=7.7,SNR=4.4							
YKA	**Yellowknife Ar**	**37.09**	**45**	P	**P**	**04 00 53.1**	**+1.0**	
	comp=Z,0.8nm,0.4s,baz=280,slow=8.0,SNR=26							
YKA				PcP	**PcP**	**04 03 12.0**	**+0.1**	
	comp=Z,0.5nm,0.6s,baz=294,slow=3.3,SNR=4.4							
HIA	**Hailar**	**37.29**	**292**	*i* P	**P**	**04 00 52.8**	**-1.3**	
HIA				pmax	pmax			
	comp=Z,16nm,1.0s							
KSRS	**Korea Array**	**38.13**	**270**	P	**P**	**04 01 01.9**	**+0.7**	
	comp=Z,4.3nm,0.8s,baz=59,slow=8.0,SNR=13							
NEW	**Newport**	**40.70**	**67**	P	**P**	**04 01 23.1**	**+0.4**	
NEW				pmax	pmax			
	comp=Z,7.0nm,1.2s							
NEW	**Newport**	**40.70**	**67**	P	**P**	**04 01 23.1**	**+0.4**	
NEW				IAmb	IAmb	04 01 28.0		
	comp=Z,6.5nm,1.1s							
WALA	**Waterton Lakes**	**42.20**	**65**	IAmb	IAmb	04 01 36.9		
	comp=Z,15nm,1.3s							
PAHR	**Pah Rah Range**	**43.79**	**79**	IAmb	IAmb	04 01 50.1		
	comp=Z,8.2nm,1.3s							
VCNR	**Virginia City**	**43.86**	**80**	IAmb	IAmb	04 01 53.1		
	comp=Z,6.8nm,1.2s							
PNTR	**Pine Nut**	**44.01**	**80**	IAmb	IAmb	04 02 09.0		
	comp=Z,7.3nm,0.8s							
YERR	**Yerington**	**44.30**	**80**	IAmb	IAmb	04 01 54.4		
	comp=Z,8.2nm,1.4s							
WAKR	**Walker**	**44.45**	**81**	IAmb	IAmb	04 01 56.0		
	comp=Z,9.1nm,1.4s							
RYN	**Ryan**	**44.96**	**80**	IAmb	IAmb	04 01 59.4		
	comp=Z,6.8nm,1.2s							
EGMT	**Eagleton**	**45.12**	**64**	IAmb	IAmb	04 02 12.3		
	comp=Z,7.2nm,0.8s							
NVAR	**Mina Array Bea**	**45.22**	**80**	P	**P**	**04 02 00.8**	**+1.3**	
	comp=Z,1.2nm,0.7s,baz=290,slow=8.4,SNR=12							
ULN	**Ulaanbaatar**	**45.38**	**296**	*ceP*	**P**	**04 02 01.6**	**+1.0**	
ULN				pmax	pmax			
	comp=Z,6.0nm,1.3s							
SONM	**Songino Array**	**45.78**	**296**	P	**P**	**04 02 03.0**	**-0.8**	
	comp=Z,1.9nm,0.9s,baz=72,slow=6.4,SNR=7.7							
SONM				PcP	**PcP**	**04 03 41.0**	**+0.2**	
	comp=Z,0.8nm,0.6s,baz=64,slow=2.0,SNR=4.9							
ELK	**Elko**	**45.78**	**75**	IAmb	IAmb	04 02 17.2		
	comp=Z,3.2nm,0.8s							
HHC	**Hu-ho-hao-te**	**46.52**	**285**	*eP*	**P**	**04 02 10.3**	**+0.6**	
HHC				pmax	pmax			
	comp=Z,9.0nm,0.8s							
HHC				pmax	pmax			
	comp=Z,90nm,5.7s							
ISA	**Isabella, Lake**	**46.79**	**83**	IAmb	IAmb	04 02 13.7		
	comp=Z,6.4nm,1.2s							
R11A	**Troy Canyon, C**	**46.98**	**78**	IAmb	IAmb	04 02 15.8		
	comp=Z,4.9nm,1.3s							

TPNV	**Topopah Spring**	**47.41**	**80**	IAmb	IAmb	04 02 22.5		
	comp=Z,6.8nm,0.9s							
DUG	**Dugway, Tooele**	**47.61**	**75**	IAmb	IAmb	04 02 30.7		
	comp=Z,4.6nm,0.9s							
GSC	**Goldstone, Bar**	**48.08**	**82**	IAmb	IAmb	04 02 23.7		
	comp=Z,4.7nm,0.8s							
PD31	**Pinedale Array**	**48.10**	**70**	IAmb	IAmb	04 02 23.5		
	comp=Z,5.5nm,1.2s							
PDAR	**Pinedale Array**	**48.10**	**70**	P	**P**	**04 02 22.6**	**+0.5**	
	comp=Z,1.3nm,0.6s,baz=294,slow=4.7,SNR=12							
PFO	**Pinyon Flats O**	**49.37**	**84**	P	**P**	**04 02 32.6**	**+0.8**	
PFO				pmax	pmax			
	comp=Z,4.0nm,1.0s							
PFO	**Pinyon Flats O**	**49.37**	**84**	P	**P**	**04 02 32.6**	**+0.8**	
PFO				IAmb	IAmb	04 02 36.0		
	comp=Z,4.1nm,1.0s							
XPFO	**Pion Flat**	**49.37**	**84**	P	**P**	**04 02 32.3**	**+0.5**	
XPFO				IAmb	IAmb	04 02 36.0		
	comp=Z,4.1nm,1.0s							
BAR	**Barrett**	**49.84**	**85**	IAmb	IAmb	04 02 47.3		
	comp=Z,4.9nm,0.9s							
WHN	**Wuhan**	**51.20**	**273**	P	**P**	**04 02 43.6**	**-1.9**	
WUAZ	**Wupatki**	**51.38**	**79**	IAmb	IAmb	04 02 59.9		
	comp=Z,5.0nm,0.9s							
ULM	**Lac du Bonnet**	**51.56**	**55**	P	**P**	**04 02 47.5**	**-0.4**	
ULM						04 04 01.2		
ULM				pmax	pmax			
	comp=Z,9.0nm,1.4s							
ULM	**Lac du Bonnet**	**51.56**	**55**	P	**P**	**04 02 48.0**	**+0.1**	
	comp=Z,1.2nm,0.6s,baz=307,slow=10,SNR=4.6							
ULM				PcP	**PcP**	**04 04 01.2**	**-0.3**	
	comp=Z,0.8nm,0.4s,baz=329,slow=5.9,SNR=2.9							
ULM	**Lac du Bonnet**	**51.56**	**55**	P	**P**	**04 02 47.5**	**-0.4**	
ULM				IAmb	IAmb	04 02 49.5		
	comp=Z,9.0nm,1.4s							
X18A	**Snowflake**	**52.91**	**79**	IAmb	IAmb	04 03 02.4		
	comp=Z,3.0nm,0.8s							
ZALV	**Zalesovo Beam**	**53.68**	**313**	P	**P**	**04 03 03.4**	**-0.2**	
	comp=Z,1.2nm,0.6s,baz=39,slow=5.1,SNR=5.2							
ZALV				PcP	**PcP**	**04 04 09.6**	**+0.2**	
	comp=Z,0.4nm,0.3s,baz=31,slow=3.4,SNR=3.7							
TUC	**Tucson**	**53.83**	**81**	P	**P**	**04 03 04.5**	**-0.6**	
TUC				pmax	pmax			
	comp=Z,6.0nm,1.1s							
TUC	**Tucson**	**53.83**	**81**	P	**P**	**04 03 04.5**	**-0.6**	
TUC				IAmb	IAmb	04 03 06.7		
	comp=Z,5.9nm,1.1s							
GTA	**Gaotai**	**54.55**	**291**	*eP*	**P**	**04 03 11.0**	**+0.7**	
GTA				pP	pP	04 03 15.3	-3.4	
GTA				sP	sP	04 03 18.2	-3.8	
GTA				pmax	pmax			
	comp=Z,5.0nm,1.0s							
ANMO	**Albuquerque**	**54.82**	**76**	*ceP*	**P**	**04 03 12.6**	**+0.2**	
ANMO				pmax	pmax			
	comp=Z,3.0nm,1.3s							
MNTX	**Cornudas Mount**	**57.65**	**78**	IAmb	IAmb	04 03 34.1		
	comp=Z,5.6nm,1.1s							
CD2	**Chengdu**	**57.70**	**281**	P	**P**	**04 03 32.4**	**-0.4**	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
WMQ	**Urumqi**	**58.65**	**302**	*eP*	**P**	**04 03 42.4**	**+3.1**	
WMQ				pmax	pmax			
	comp=Z,6.0nm,0.7s							
WMQ				pmax	pmax			
	comp=N,160nm,5.1s							
WMQ				LR	LR			
	comp=N,650nm,28.9s							
WMQ				LR	LR			
	comp=E,1μm,29.2s							
WMQ				LR	LR			
	comp=Z,57nm,13.1s							
KURK	**Kurchatov**	**58.67**	**313**	*ceP*	**P**	**04 03 38.7**	**-0.5**	
KURK				pmax	pmax			
	comp=Z,16nm,1.3s							
KURK	**Kurchatov**	**58.67**	**313**	P	**P**	**04 03 38.2**	**-1.0**	
ARCES	**ARCESS Array B**	**58.90**	**349**	P	**P**	**04 03 41.1**	**+0.5**	
	comp=Z,2.7nm,0.8s,baz=25,slow=9.2,SNR=9.1							
MK31	**Makanchi Array**	**59.52**	**308**	IAmb	IAmb	04 03 46.0		
	comp=Z,2.5nm,1.0s							
MKAR	**Makanchi Array**	**59.52**	**308**	P	**P**	**04 03 45.2**	**0.0**	
	comp=Z,2.3nm,0.6s,baz=50,slow=5.9,SNR=25							
MAKZ	**Makanchi**	**59.66**	**308**	P	**P**	**04 03 45.8**	**-0.4**	
MAKZ				pmax	pmax			
	comp=Z,3.0nm,0.6s							
MAKZ	**Makanchi**	**59.66**	**308**	P	**P**	**04 03 45.8**	**-0.4**	
TX32	**Lajitas Array**	**60.34**	**79**	P	**P**	**04 03 50.0**	**-1.1**	
TXAR	**Lajitas Array**	**60.34**	**79**	P	**P**	**04 03 51.5**	**+0.3**	
	comp=Z,1.8nm,0.6s,baz=309,slow=5.7,SNR=17							
SCHQ	**Schefferville**	**61.80**	**37**	P	**P**	**04 04 01.8**	**+1.2**	
	comp=Z,2.0nm,0.7s,baz=291,slow=4.3,SNR=6.5							
SCHQ	**Schefferville**	**61.80**	**37**	P	**P**	**04 03 59.6**	**-1.0**	
TMCR	**Tamitsa**	**61.85**	**342**	*eP*	**P**	**04 04 01.3**	**+0.6**	
TMCR				pmax	pmax			
	comp=Z,22nm,1.4s							
ARU	**Arti**	**62.72**	**327**	*d iP*	**P**	**04 04 08.4**	**+1.7**	
ARU						04 04 49.8		
ARU						04 06 26.3		
ARU				S	**S**	**04 12 36.8**	**+4.2**	
ARU				SS	**SS**	**04 16 42.7**	**+6.1**	
ARU				pmax	pmax			
	comp=Z,20nm,1.6s							
ARU	**Arti**	**62.72**	**327**	P	**P**	**04 04 07.0**	**+0.3**	
AAK	**Ala-Archa**	**66.38**	**309**	*ceP*	**P**	**04 04 30.5**	**-0.5**	
AAK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
FINES	**FINESS Array B**	**66.50**	**346**	P	**P**	**04 04 32.0**	**+0.8**	
	comp=Z,2.1nm,0.7s,baz=32,slow=7.6,SNR=9.8							
ABKAR	**Akbulak array**	**67.88**	**322**	P	**P**	**04 04 40.0**	**-0.2**	
ABKAR				IAmb	IAmb	04 04 43.4		
	comp=Z,1.9nm,0.7s							
KSH	**Kashi**	**67.92**	**306**	P	P	04 04 45.5	+4.7	
KSH				pP	pwP	04 04 55.1	-3.6	
KSH				PP	**PP**	**04 07 16.4**	**+6.1**	
KSH				pmax	pmax			
	comp=Z,21nm,0.5s							
KSH				pmax	pmax			
	comp=Z,730nm,7.9s							
KK31	**Karatay Array**	**67.99**	**311**	P	**P**	**04 04 40.8**	**-0.3**	
KK31				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KK31	**Karatay Array**	**67.99**	**311**	P	**P**	**04 04 40.8**	**-0.3**	
NB2	**NORSAR Subarra**	**68.58**	**354**	P	**P**	**04 04 45.9**	**+1.4**	
	comp=Z,2.1nm,0.7s,baz=7.0,slow=6.5							
NOA	**NORSAR Array B**	**68.58**	**354**	P	**P**	**04 04 45.5**	**+1.0**	
	comp=Z,4.3nm,0.8s,baz=11,slow=6.3,SNR=10							
CMAR	**Chiang Mai Arr**	**69.60**	**275**	P	**P**	**04 04 50.9**	**-0.5**	
	comp=Z,1.1nm,0.3s,baz=30,slow=7.4,SNR=4.7							
TAPN	**Taplejung**	**70.15**	**289**	*eP*	**P**	**04 04 55.5**	**+0.5**	
OBN	**Obninsk**	**70.34**	**338**	*eP*	**P**	**04 04 55.4**	**+0.1**	
OBN				pmax	pmax			
	comp=Z,5.0nm,0.9s							
JIRN	**Jiri**	**70.84**	**290**	*eP*	**P**	**04 05 00.0**	**+0.7**	
	comp=Z,28nm,0.7s							
GUN	**Gumba**	**70.84**	**291**	*eP*	**P**	**04 05 00.0**	**+0.7**	
RAMN	**Ramite**	**71.11**	**289**	*eP*	**P**	**04 05 01.3**	**+0.5**	
	comp=Z,26nm,0.4s							
KKN	**Kakani**	**71.29**	**291**	*eP*	**P**	**04 05 02.7**	**+0.8**	
	comp=Z,16nm,0.5s							
PKIN	**Phulchoki**	**71.38**	**291**	*eP*	**P**	**04 05 02.9**	**+0.5**	
GKN	**Gorkha**	**71.52**	**292**	*eP*	**P**	**04 05 04.2**	**+1.0**	
	comp=Z,7.3nm,0.2s							
DANN	**Dangsing**	**71.78**	**292**	*eP*	**P**	**04 05 05.4**	**+0.5**	
	comp=Z,37nm,0.9s							
KOLN	**Koldanda**	**72.31**	**292**	*eP*	**P**	**04 05 08.4**	**+0.5**	
	comp=Z,18nm,0.8s							
NIL	**Nilore**	**73.77**	**303**	P	**P**	**04 05 15.2**	**-1.1**	
NIL				pmax	pmax			
	comp=Z,34nm,1.3s							
NIL	**Nilore**	**73.77**	**303**	P	**P**	**04 05 15.2**	**-1.1**	
KBL	**Kabul**	**75.30**	**307**	P	**P**	**04 05 25.4**	**+0.1**	
KBL				pmax	pmax			
	comp=Z,9.0nm,0.9s							
KBL	**Kabul**	**75.30**	**307**	P	**P**	**04 05 25.4**	**+0.1**	
AKASG	**Malin Array Be**	**76.10**	**341**	P	**P**	**04 05 30.2**	**+0.8**	
	comp=Z,1.5nm,0.5s,baz=24,slow=5.9,SNR=5.4							
KIV	**Kislovodsk**	**78.66**	**329**	*eP*	**P**	**04 05 44.1**	**+0.1**	
KIV				*e*		04 08 44.2		
KIV				pmax	pmax			
	comp=Z,2.0nm,0.9s							
KBZ	**Khabaz**	**78.80**	**329**	*i* P	**P**	**04 05 44.8**	**+0.2**	
KBZ	**Khabaz**	**78.80**	**329**	P	**P**	**04 05 45.9**	**+1.3**	
	comp=Z,2.8nm,0.8s,baz=340,slow=2.3,SNR=5.8							
SHA1	**Shidzhatmaz**	**78.87**	**329**	*i* P	**P**	**04 05 45.1**	**-0.2**	
KOLS	**Kolonicke sedl**	**79.13**	**344**	*eP*	**P**	**04 05 48.6**	**+2.2**	
KOLS	**Kolonicke sedl**	**79.13**	**344**	*eP*	**P**	**04 05 48.6**	**+2.2**	
ZEI	**Tsey**	**79.29**	**328**	*eP*	**P**	**04 05 48.4**	**+0.8**	

ZEI				pmax	pmax			
	comp=Z,10.0nm,1.5s							
BCLA	**Clavier**	**79.53**	**356**	sP	sP	04 06 00.4	+0.1	
BUR08	**Bucovina Ar. S**	**79.83**	**342**	P	**P**	**04 05 51.8**	**+1.4**	
BUR08				IAmb	IAmb	04 05 53.2		
	comp=Z,5.8nm,1.1s							
BURAR	**Bucovina Array**	**79.86**	**342**	⇑P	**P**	**04 05 52.5**	**+2.0**	
BURAR	**Bucovina Array**	**79.86**	**342**	⇑P	**P**	**04 05 52.5**	**+2.0**	
TRPA	**Tarpa**	**79.86**	**344**	⇑P	**P**	**04 05 52.3**	**+2.0**	
DOU	**Dourbes**	**79.88**	**356**	P	**P**	**04 05 50.3**	**-0.1**	
VYHS	**Vyhne**	**80.11**	**347**	*eP*	**P**	**04 05 53.8**	**+2.1**	
VYHS	**Vyhne**	**80.11**	**347**	*eP*	**P**	**04 05 53.8**	**+2.1**	
WRA	**Warramunga Arr**	**80.17**	**222**	P	**P**	**04 05 50.5**	**-1.8**	
	comp=Z,0.8nm,0.5s,baz=31,slow=5.7,SNR=7.9							
BIZ	**Bicaz**	**80.33**	**341**	⇑P	**P**	**04 05 55.0**	**+2.1**	
GERES	**GERESS Array B**	**80.43**	**350**	P	**P**	**04 05 54.7**	**+1.1**	
	comp=Z,0.8nm,0.5s,baz=28,slow=6.0,SNR=11							
MODS	**Modra-Piesok**	**80.45**	**348**	*eP*	**P**	**04 05 55.1**	**+1.6**	
MODS	**Modra-Piesok**	**80.45**	**348**	*eP*	**P**	**04 05 55.1**	**+1.6**	
CONA	**Conrad Observa**	**81.07**	**348**	*i PcP*	**P**	**04 05 58.8**	**+1.8**	
	comp=Z,8.9nm,1.8s							
DRGR		**81.12**	**344**	⇑P	**P**	**04 05 58.7**	**+1.5**	
DRGR		**81.12**	**344**	⇑P	**P**	**04 05 58.7**	**+1.5**	
DOPR	**Dopca**	**81.40**	**342**	⇑P	**P**	**04 06 01.3**	**+2.6**	
MLR	**Muntele Rosu**	**81.74**	**341**	⇑P	**P**	**04 06 02.7**	**+2.1**	
MLR	**Muntele Rosu**	**81.74**	**341**	⇑P	**P**	**04 06 02.7**	**+2.1**	
VOIR		**81.98**	**342**	⇑P	**P**	**04 06 03.3**	**+1.5**	
VOIR		**81.98**	**342**	⇑P	**P**	**04 06 03.3**	**+1.5**	
WATA	**Walderalm**	**82.14**	**351**	*i PcP*	**P**	**04 06 04.3**	**+1.6**	
	comp=Z,6.7nm,1.1s							
MOTA	**Moosalm**	**82.18**	**352**	*i PcP*	**P**	**04 06 05.5**	**+2.6**	
	comp=Z,12nm,1.5s							
WTTA	**Wattenberg**	**82.21**	**351**	*i PcP*	**P**	**04 06 04.9**	**+1.8**	
	comp=Z,6.9nm,0.8s							
KBA	**Koelnbreinsper**	**82.21**	**350**	*i PcP*	**P**	**04 06 05.5**	**+2.4**	
	comp=Z,5.3nm,0.6s							
SOKA	**Soboth**	**82.41**	**349**	*i PcP*	**P**	**04 06 05.8**	**+1.8**	
	comp=Z,4.1nm,0.7s							
GZR	**Gura Zlata**	**82.46**	**343**	⇑P	**P**	**04 06 05.5**	**+1.2**	
GZR	**Gura Zlata**	**82.46**	**343**	⇑P	**P**	**04 06 05.5**	**+1.2**	
FETA	**Feichten**	**82.53**	**352**	*i PcP*	**P**	**04 06 06.5**	**+1.7**	
	comp=Z,7.4nm,1.2s							
ABTA	**Abfaltersbach**	**82.63**	**351**	*i P*	**P**	**04 06 02.9**	**-2.2**	
	comp=Z,8.0nm,1.3s							
ASAR	**Alice Springs**	**83.66**	**221**	P	**P**	**04 06 09.4**	**-1.1**	
	comp=Z,0.6nm,0.6s,baz=26,slow=5.6,SNR=6.6							
PLVB	**Pleven**	**84.03**	**341**	⇑P	**P**	**04 06 13.4**	**+1.1**	
BR131	**Keskin Array S**	**85.29**	**334**	IAmb	IAmb	04 06 20.5		
	comp=Z,3.8nm,1.1s							
BRTR	**Keskin Array B**	**85.29**	**334**	P	**P**	**04 06 20.1**	**+1.2**	
	comp=Z,2.4nm,0.7s,baz=43,slow=3.0,SNR=18							
BOSA	**Boshof**	**150.51**	**307**	PKIKP	**PKPbc**	**04 13 33.1**	**-0.5**	
BOSA	**Boshof**	**150.51**	**307**	PKPbc	**PKiKP**	**04 13 33.8**	**-0.5**	
	comp=Z,4.3nm,0.9s,baz=351,slow=1.6,SNR=3.7							
BOSA	**Boshof**	**150.51**	**307**		**PKPbc**	**04 13 33.0**	**-0.5**	

*IDC **06** 03:58:59.4±0.5, 20°.61S×70°.47W, h0km, mb4.7/17, mb1 4.7/21, mb1mx4.6/30, mbtmp4.6/21, ML4.2/4, MS4.4/21, Ms1 4.4/21, ms1mx4.3/29, Error ellipse: s-maj=20.2km s-min=13.4km az=62.0*

*VAO **06** 03:59:01.6±0.4, 20°.70S×70°.47W, h10km, mb5.0*

*NEIC **06** 03:59:02.0±2.8, 20°.73S±0°.04×70°.64W±0°.07, h20km±3km, Error ellipse: s-maj=9.2km s-min=6.0km az=101.0*

*BJI **06** 03:59:02.0±0.0, 20°.80S×70°.70W, h13km, mB5.5/4, Ms5.4/6, Ms7 5.2/6*

*MOS **06** 03:59:02.7±1.7, 20°.64S×70°.79W, h33km, mb5.3/6, Error ellipse: s-maj=17.2km s-min=8.4km az=105.7*

*GUC **06** 03:59:03.3±0.6, 20°.78S×70

SAML Sn **Sn** **04 04 47.6 +0.1**
AQDB Aquidauana 13.99 92 *e*P **Pn** **04 02 18.0 -1.2**
SALV Santo Antonio 14.97 74 *e*P **Pn** **04 02 31.4 -1.2**
PP1B Ponte de Pedra 15.21 81 *e*P **Pn** **04 02 34.7 -1.0**
ATAH Atahualpa 15.45 330 Pn **Pn** **04 02 40.9 +1.6**
comp=E,0.3nm,0.3s,baz=126,slow=18,SNR=2.7
ATAH LR LR 04 09 09.5
comp=E,848nm,19.1s,baz=177,slow=40
ITQB Itaqui 15.49 128 *e*P **Pn** **04 02 38.8 -0.5**
TRCB Terra Rica 16.85 100 *e*P **Pn** **04 02 55.8 -1.1**
C2SB Chapadao do Su 16.87 86 *e*P **Pn** **04 02 57.5 +0.5**
CLDB Colider 17.30 58 *e*P **Pn** **04 03 01.1 -1.4**
PTGB Pitanga 17.59 107 *e*P **Pn** **04 03 05.4 -0.7**
LPA La Plata 18.03 144 *e*P **P** **04 03 13.9 +2.3**
LPA PPP PPP 04 03 31.8
LPA S **Sn** **04 06 32.8 +1.0**
LPA SSS SSS 04 07 04.5
LPA PCP **PcP** **04 07 46.5 +1.1**
PCMB Pacaembu 18.09 96 *e*P **Pn** **04 03 11.4 -0.8**
ITAB Concordia 18.10 115 *e*P **Pn** **04 03 11.8 -0.4**
CPSB Cacapava Do Su 18.25 125 *e*P **Pn** **04 03 11.4 -2.7**
ARAG Araguaiana, MT 18.56 78 *e*P **P** **04 03 17.1 -0.4**
PLTB Pedras Altas 18.80 129 *e*P **Pn** **04 03 21.1 +0.4**
ITRB Iturama 19.06 91 *e*P **Pn** **04 03 23.6 -0.4**
OGAUY Aigu 19.55 137 *e*P **P** **04 03 28.9 +0.7**
FRTB Fartura 19.71 101 *e*P **P** **04 03 29.7 -0.5**
CNLB Canela 19.85 119 *e*P **P** **04 03 31.8 +0.1**
PLCA Paso Flores 19.95 180 *e*P **Pn** **04 03 34.5 -0.1**
PLCA Paso Flores 19.95 180 P **Pn** **04 03 34.0 -0.6**
comp=E,11nm,0.8s,baz=22,slow=13,SNR=22
PLCA PcP **PcP** **04 07 50.1 +1.3**
comp=E,2.5nm,0.8s,baz=352,slow=4.3,SNR=4.3
PLCA LR LR 04 10 52.2
comp=E,726nm,19.0s,baz=22,slow=36
PLCA Paso Flores 19.95 180 *e*P **Pn** **04 03 34.4 -0.1**
PLCA Paso Flores 19.95 180 P **P** **04 03 32.0 -0.7**
PLCA IAmb IAmb 04 03 47.8
comp=Z,304nm,1.9s
BB19B Bebedouro 20.66 95 *e*P **P** **04 03 40.1 -0.4**
PTLC Puerto Leguiza 21.16 348 *e*P **P** **04 03 42.8 -3.1**
IPMB Ipameri, GO 21.33 87 *e*P **P** **04 03 46.6 -1.2**
RCLB Rio Claro- Sao 21.55 99 *e*P **P** **04 03 48.3 -1.9**
SPB Sao Paulo 21.68 102 *e*P **P** **04 03 50.8 -0.7**
SPB Sao Paulo 21.68 102 P **P** **04 03 50.4 -1.0**
BDFB Brasilia 22.07 81 P **P** **04 03 54.0 -1.8**
comp=Z,6.5nm,0.5s,baz=263,slow=10,SNR=12
BDFB LR LR 04 13 51.2
comp=Z,4µm,18.7s,baz=269,slow=41
VAO Valinhos 22.08 100 *e*P **P** **04 03 54.6 -1.3**
OTAV Otavalo 22.18 339 P **P** **04 03 56.1 -1.3**
OTAV pmax pmax
comp=Z,26nm,1.0s
OTAV Otavalo 22.18 339 *e*P **P** **04 04 00.8 +3.4**
OTAV Otavalo 22.18 339 P **P** **04 03 56.1 -1.3**
FLOC Florencia 22.70 347 *e*P **P** **04 04 05.3 +2.8**
PMNB Patos De Minas 22.89 89 *e*P **P** **04 04 04.6 +0.1**
MACC Macarena, Meta 22.94 352 *e*P **P** **04 04 03.2 -1.7**
CRUC La Cruz 23.00 344 *e*P **P** **04 04 10.5 +4.6**
SOTA Rioblanco 23.45 345 *e*P **P** **04 04 14.3 +3.6**
BBAC Balboa, Cauca 23.51 343 *e*P **P** **04 04 12.0 +1.1**
PCON Cinco Dias 23.59 345 *e*P **P** **04 04 15.0 +3.0**
ESAR Angra dos Reis 24.41 100 *e*P **P** **04 04 19.5 +0.5**
ORTC Ortega, Tolima 24.89 349 *e*P **P** **04 04 24.8 +1.4**
SMTB Santa Maria do 25.17 65 *e*P **P** **04 04 25.6 -0.5**
YOTC Yotoco, Valle 25.18 347 *e*P **P** **04 04 27.0 +0.9**
CHIC Chingaza 25.37 353 *e*P **P** **04 04 28.8 +0.6**
ROSC El Rosal 25.66 351 P **P** **04 04 32.6 +1.8**
comp=Z,18nm,0.5s,baz=159,slow=10,SNR=10
ROSC LR LR 04 15 50.8
comp=Z,1µm,19.4s,baz=197,slow=40
ROSC El Rosal 25.66 351 *e*P **P** **04 04 32.7 +1.9**
ROSC El Rosal 25.66 351 P **P** **04 04 31.9 +1.2**
JANB Januaria 25.66 82 *e*P **P** **04 04 29.7 -0.8**
RREF El Recreo 25.88 349 *e*P **P** **04 04 35.3 +2.2**
PLMC San Jos del P 26.06 347 *e*P **P** **04 04 35.0 +0.9**
GUY2C Guyana, Caldas 26.20 349 *e*P **P** **04 04 37.1 +1.3**
SPBC San Pablo de B 26.42 352 *e*P **P** **04 04 38.4 +1.0**
NORC Norcasia 26.45 351 *e*P **P** **04 04 38.8 +1.2**
RUSC La Rusia 26.55 355 *e*P **P** **04 04 40.3 +1.3**
CBOC Ciudad Bolivar 26.94 348 *e*P **P** **04 04 43.9 +1.8**
HELC Santa Helena 27.17 349 *e*P **P** **04 04 45.0 +0.5**
BARC Barichara 27.25 354 *e*P **P** **04 04 45.4 +0.3**
PTBC PUERTO BERRIO, 27.35 352 *e*P **P** **04 04 44.3 -1.3**
SJMB Sao Joao De Ma 27.78 91 *e*P **P** **04 04 49.6 0.0**
BSFB Barra de Sao F 28.08 91 *e*P **P** **04 04 52.3 +0.1**
DBBC Dabeiba 28.10 348 *e*P **P** **04 04 53.5 +1.1**
ZARC Zaragoza, Cauc 28.34 351 *e*P **P** **04 04 54.0 -0.5**
UREC San Jos de Ur 28.70 350 *e*P **P** **04 04 57.2 -0.5**
SDV Santo Domingo 29.42 0 P **P** **04 05 03.8 -0.5**
comp=Z,12nm,0.8s,baz=184,slow=8.1,SNR=13
SDV LR LR 04 16 08.2
comp=Z,980nm,19.4s,baz=200,slow=35
SDV Santo Domingo 29.42 0 *e*P **P** **04 05 04.1 -0.2**
SDV Santo Domingo 29.42 0 P **P** **04 05 03.4 -0.9**
SDV IAmb IAmb 04 05 38.3
comp=Z,24nm,1.1s
SMLC San Martn de 29.53 353 *e*P **P** **04 05 03.6 -1.5**
NBIT Itapeh - BA 30.23 84 *e*P **P** **04 05 11.8 +0.5**
SJCC San Jacinto, C 30.75 351 *e*P **P** **04 05 15.4 -0.5**
NBPN Ponto Novo - B 30.84 76 *e*P **P** **04 05 15.6 -1.2**
MDP Montagnes des 31.16 37 P **P** **04 05 19.3 -0.2**
comp=Z,68nm,1.0s,baz=180,slow=7.9
EFI East Falkland 32.42 165 P **P** **04 05 30.6 +0.4**
EFI pmax pmax
comp=Z,218nm,1.8s
EFI East Falkland 32.42 165 P **P** **04 05 30.6 +0.4**
NBPS Pedro II - PI 32.69 64 *e*P **P** **04 05 33.0 -0.1**
NBLA Lagarto - SE 32.98 78 *e*P **P** **04 05 34.5 -1.1**
TOSP Speyside 33.33 18 P **P** **04 05 39.0 +0.5**
NBTA Tacaratu-PE 33.45 75 *e*P **P** **04 05 39.2 -0.5**
NBMA Muriti-CE 33.56 71 *e*P **P** **04 05 40.7 0.0**
NBPB Pedra_Branca-C 33.70 68 *e*P **P** **04 05 42.5 +0.6**
JTS Las Juntas de 33.88 334 *i* P **P** **04 05 43.6 +0.3**
JTS pmax pmax
comp=Z,4.0nm,1.0s
USHA Ushuaia 34.10 178 P **P** **04 05 46.0 +1.2**
comp=Z,6.2nm,0.9s,baz=0.0,slow=10,SNR=3.6
NBMO Morrinhos-CE 34.45 64 *e*P **P** **04 05 48.6 +0.3**
NBAN Anadia - AL 34.86 77 *e*P **P** **04 05 52.5 +0.6**
SVB Belmont 35.02 16 P **P** **04 05 51.4 -1.8**
NBLI Livramento-PB 35.18 73 *e*P **P** **04 05 55.7 +1.0**
NBCL Cascavel-CE 35.47 67 *e*P **P** **04 05 58.4 +1.3**
NBPA Parau_RN 35.76 70 *e*P **P** **04 05 59.3 -0.4**
NBRF Rio Formoso - 36.28 76 *e*P **P** **04 06 04.8 +0.7**
FDF Fort de France 36.44 16 P **P** **04 06 04.1 -1.3**
FDF pmax pmax
comp=Z,466nm,2.0s
FDF Fort de France 36.44 16 P **P** **04 06 04.1 -1.3**
RCBR Riachuelo 36.79 71 P **P** **04 06 08.9 +0.4**
RCBR pmax pmax
comp=Z,60nm,0.8s
RCBR Riachuelo 36.79 71 *e*P **P** **04 06 08.7 +0.2**
RCBR Riachuelo 36.79 71 P **P** **04 06 08.9 +0.4**
NBPV Pedro Velho 37.07 73 *e*P **P** **04 06 11.3 +0.5**
CRPR Cabo Rojo, PR 38.64 5 P **P** **04 06 22.6 -1.3**
OBIP Obispado Ponce 38.72 6 IAmb IAmb 04 06 25.8
comp=Z,45nm,0.8s
SJG San Juan 38.84 7 P **P** **04 06 24.5 -1.1**
SJG pmax pmax
comp=Z,60nm,0.9s
SJG San Juan 38.84 7 P **P** **04 06 24.2 -1.4**
comp=Z,55nm,0.8s,baz=56,slow=9.5,SNR=13
SJG San Juan 38.84 7 P **P** **04 06 24.5 -1.1**
MPR Mayaguez 38.84 5 P **P** **04 06 25.2 -0.4**
HUMP Col San Antoni 38.90 7 P **P** **04 06 24.2 -1.9**
HUMP IAmb IAmb 04 06 40.9
comp=Z,45nm,1.1s
AOPR Arecibo Observ 39.01 6 IAmb IAmb 04 06 26.8
comp=Z,41nm,0.8s
STVI Saint Thomas 39.23 9 P **P** **04 06 26.9 -1.9**
STVI IAmb IAmb 04 06 32.3
comp=Z,59nm,1.1s
TEIG Tepich 44.20 336 P **P** **04 07 07.5 -2.1**
Z58A St. Stephen 54.46 351 P **P** **04 08 29.2 +1.5**
baz=170
Z57A Bowman 54.56 350 P **P** **04 08 29.5 +1.0**
baz=168
152A Waverly Hall 54.77 345 P **P** **04 08 30.2 +0.2**
baz=164
Z52A Williamson 55.20 346 P **P** **04 08 32.5 -0.7**
baz=164
X58A Rowland 55.59 351 P **P** **04 08 36.5 +0.6**
X58A IAmb IAmb 04 10 11.1
comp=Z,14nm,0.8s
X58A Rowland 55.59 351 P **P** **04 08 36.9 +1.1**
baz=170
Z50A Ashland 55.62 344 IAmb IAmb 04 08 58.4
comp=Z,11nm,0.7s
Z50A Ashland 55.62 344 P **P** **04 08 36.2 0.0**
baz=163
X55A Gracelyn & Ava 55.87 349 P **P** **04 08 38.7 +0.8**
baz=166
Y51A Rockmart 56.03 346 P **P** **04 08 39.1 0.0**
baz=164
W58A Raeford 56.03 351 P **P** **04 08 39.4 +0.3**
baz=170
W59A Clinton 56.07 352 P **P** **04 08 40.5 +1.2**
baz=171
833A Chaparral WMA, 56.12 329 P **P** **04 08 40.8 +1.0**
baz=147
W56A Indian Trail 56.34 350 P **P** **04 08 41.5 +0.2**
baz=169
V59A Middlesex 56.63 353 P **P** **04 08 44.4 +1.1**
baz=172
V58A Windy Hill, Pi 56.77 352 P **P** **04 08 45.1 +0.8**
baz=171
W53A Cullowhee 56.84 348 P **P** **04 08 45.5 +0.5**
baz=166
W52A Murphy 56.92 347 P **P** **04 08 46.1 +0.6**
baz=165
V57A Coltrane Farms 56.96 351 P **P** **04 08 45.8 +0.2**
baz=170
V56A Mocksville 56.99 350 P **P** **04 08 46.8 +1.0**
baz=169
V55A Taylorsville 57.15 350 P **P** **04 08 48.0 +1.0**
baz=168
U59A Littleton 57.16 353 P **P** **04 08 46.6 -0.5**
U59A IAmb IAmb 04 08 49.1
comp=Z,15nm,0.9s
U59A Littleton 57.16 353 P **P** **04 08 47.7 +0.6**
baz=172
W51A Cleveland 57.17 346 P **P** **04 08 47.1 0.0**
baz=164
V54A Nebo 57.20 349 P **P** **04 08 48.0 +0.6**
baz=167
W50A Signal Mountai 57.33 346 P **P** **04 08 48.3 0.0**
baz=164
U56A King 57.50 351 P **P** **04 08 50.6 +1.1**
baz=169
V52A Sevierville 57.58 348 IAmb IAmb 04 08 51.5
comp=Z,40nm,1.4s
V52A Sevierville 57.58 348 P **P** **04 08 50.1 +0.1**
baz=166
V51A Loudon 57.70 347 P **P** **04 08 50.7 -0.2**
baz=165
V50A Pikeville 57.73 346 P **P** **04 08 51.5 +0.3**
baz=164
T59A Double "B" Far 57.75 353 IAmb IAmb 04 08 53.1
comp=Z,25nm,1.0s
T59A Double "B" Far 57.75 353 P **P** **04 08 52.2 +1.0**
baz=172
T58A Grand View Acr 57.83 353 P **P** **04 08 52.9 +1.1**
baz=171
T57A Hurt 57.98 352 P **P** **04 08 53.8 +0.9**
baz=170
V49A McMinnville 58.01 345 P **P** **04 08 53.0 -0.1**
baz=163
V48A Smith Brothers 58.21 345 IAmb IAmb 04 09 10.8
comp=Z,29nm,1.4s
T55A Pulaski 58.31 350 P **P** **04 08 56.4 +1.2**
baz=169
U50A Jamestown 58.39 347 P **P** **04 08 55.8 0.0**
baz=164
T53A Wise 58.48 349 P **P** **04 08 56.3 -0.1**
baz=167
S57A Dark Hollow, R 58.69 352 IAmb IAmb 04 08 59.8
comp=Z,21nm,1.1s
S57A Dark Hollow, R 58.69 352 P **P** **04 08 58.9 +1.1**
baz=171
R58B Mineral 58.76 353 IAmb IAmb 04 09 06.4
comp=Z,25nm,1.2s
WVT Waverly 58.83 344 P **P** **04 08 58.3 -0.5**
baz=161
S55A Lewisburg 58.91 351 P **P** **04 09 00.5 +1.1**
baz=169
TXAR Lajitas Array 59.08 326 P **P** **04 09 01.3 +0.5**
comp=Z,1.1nm,0.8s,baz=159,slow=11,SNR=5.7
TXAR LR LR 04 31 42.0
comp=Z,151nm,19.9s,baz=0.0,slow=33
MIAR Mount Ida 59.13 338 P **P** **04 08 59.6 -1.3**
MIAR pmax pmax
comp=Z,14nm,1.1s
MIAR Mount Ida 59.13 338 P **P** **04 08 59.6 -1.3**
MIAR IAmb IAmb 04 09 17.0
comp=Z,14nm,1.1s
MIAR Mount Ida 59.13 338 P **P** **04 09 01.7 +0.8**
baz=155
R57A Stanardsville 59.17 353 P **P** **04 09 02.5 +1.4**
baz=171
T49A Edmonton 59.20 346 IAmb IAmb 04 09 02.2
comp=Z,29nm,1.2s
T49A Edmonton 59.20 346 P **P** **04 09 01.3 -0.1**
baz=164
R54A Victor 59.39 351 P **P** **04 09 03.4 +0.7**
baz=169
T47A Sharon Grove 59.46 345 IAmb IAmb 04 09 04.0
comp=Z,20nm,1.1s
S49A Springfield 59.80 347 P **P** **04 09 05.3 -0.2**
baz=164
Q57A Strasburg 59.88 353 P **P** **04 09 07.8 +1.8**
baz=172
R51A Hillsboro 59.95 348 P **P** **04 09 06.4 -0.1**
baz=166
Q56A Snyder Ridge, 59.98 352 IAmb IAmb 04 09 08.7
comp=Z,20nm,0.8s
Q56A Snyder Ridge, 59.98 352 P **P** **04 09 08.2 +1.4**
baz=171
Q53A Leroy 60.13 350 P **P** **04 09 08.2 +0.4**
baz=168
Q54A Coxs Mills 60.15 351 P **P** **04 09 08.2 +0.4**
baz=169
P59A Jarrettsville 60.26 355 P **P** **04 09 10.1 +1.6**
baz=174
P57A Homestead Farm 60.28 353 IAmb IAmb 04 09 11.4
comp=Z,19nm,1.1s
P57A Homestead Farm 60.28 353 P **P** **04 09 10.5 +1.7**
baz=172
P56A Dayton Farm, R 60.40 353 P **P** **04 09 11.2 +1.7**
baz=171
P55A Reedsville 60.52 352 P **P** **04 09 11.6 +1.2**
baz=170
U40A Yellville 60.53 339 P **P** **04 09 10.8 +0.3**
baz=156
S44A Carbondale 60.69 343 IAmb IAmb 04 09 31.3
comp=Z,21nm,0.9s
P54A Burton 60.71 351 P **P** **04 09 12.3 +0.6**
baz=170
HHAR Hobbs 60.83 339 IAmb IAmb 04 09 23.1
comp=Z,11nm,1.0s
P52A Corning 60.99 350 P **P** **04 09 13.3 -0.2**
baz=168
O56A Blue Knob Stat 61.12 353 IAmb IAmb 04 09 16.8
comp=Z,16nm,0.9s
O56A Blue Knob Stat 61.12 353 P **P** **04 09 16.0 +1.5**
baz=172
O55A Ligonier 61.15 352 P **P** **04 09 15.7 +1.1**
baz=171
TUL1 Leonard 61.15 337 IAmb IAmb 04 09 26.0
comp=Z,36nm,1.6s
VNA3 Neumayer Olymp 61.33 161 P **P** **04 09 17.1 +1.5**
N57A Milroy 61.49 354 P **P** **04 09 18.1 +1.1**
baz=173
VNA1 Neumayer--Stat 61.56 160 P **P** **04 09 18.7 +1.7**
CCM Cathedral Cave 61.59 342 P **P** **04 09 15.0 -2.6**
CCM pmax pmax
comp=Z,15nm,1.1s
CCM Cathedral Cave 61.59 342 P **P** **04 09 15.0 -2.6**
CCM IAmb IAmb 04 09 40.2
comp=Z,15nm,1.1s
N55A Marion Center 61.67 353 P **P** **04 09 19.3 +1.1**
baz=171
ACSO Alum Creek Sta 61.72 349 P **P** **04 09 17.5 -0.9**
ACSO IAmb IAmb 04 09 19.3
comp=Z,21nm,1.1s
ACSO Alum Creek Sta 61.72 349 P **P** **04 09 18.1 -0.3**
baz=167
N56A West Decatur 61.73 353 P **P** **04 09 19.6 +1.0**
baz=172
MNTX Cornudas Mount 61.85 327 IAmb IAmb 04 09 30.9
comp=Z,18nm,1.7s
MNTX Cornudas Mount 61.85 327 P **P** **04 09 19.9 +0.3**
baz=143
N54A Moraine State 61.98 352 P **P** **04 09 21.2 +1.0**
baz=170
M57A Sunshine Farm, 62.03 354 P **P** **04 09 22.0 +1.4**
baz=173
M59A Waymart 62.10 356 P **P** **04 09 22.3 +1.2**
baz=175
M56A Emporium 62.28 354 P **P** **04 09 23.1 +0.8**
baz=172
M55A Ridgway 62.33 353 P **P** **04 09 23.7 +1.1**
baz=171
MSTX Muleshoe 62.41 330 IAmb IAmb 04 09 51.6
comp=Z,15nm,1.1s
MSTX Muleshoe 62.41 330 P **P** **04 09 23.8 +0.4**
baz=146
M54A Oil Creek Stat 62.47 352 IAmb IAmb 04 09 25.1
comp=Z,24nm,1.0s
M54A Oil Creek Stat 62.47 352 P **P** **04 09 24.4 +0.8**
baz=170
N49A Columbus Grove 62.60 348 P **P** **04 09 24.3 -0.1**
baz=166
L59A Walton 62.72 356 P **P** **04 09 26.7 +1.5**
baz=175
M52A Chesterland 62.73 351 P **P** **04 09 25.4 +0.1**
baz=169
BINY Binghamton 62.79 356 P **P** **04 09 27.3 +1.6**
baz=174
L56A Greenwood 62.86 354 P **P** **04 09 27.3 +1.1**
baz=173
L53A Girard 62.99 352 P **P** **04 09 27.2 +0.2**
baz=170
L55A Hinsdale 63.00 354 P **P** **04 09 27.8 +0.7**
baz=172
M49A Liberty Center 63.10 349 P **P** **04 09 27.7 0.0**
baz=166
L54A Sinclairville 63.15 353 P **P** **04 09 28.8 +0.8**
baz=171
TRY Troy 63.19 357 IAmb IAmb 04 09 30.7
comp=Z,25nm,1.0s
K59A Cooperstown 63.29 357 P **P** **04 09 30.2 +1.2**
baz=176
K58A Earlville 63.33 356 P **P** **04 09 30.3 +1.0**
baz=175
K54A Basiliko Farm, 63.45 353 P **P** **04 09 31.1 +1.1**
baz=172
SNAA Sanae 63.54 161 P **P** **04 09 31.7 +1.2**
SNAA Sanae 63.54 161 P **P** **04 09 31.7 +1.2**
SNAA pmax pmax
comp=Z,48nm,1.2s
SNAA Sanae 63.54 161 P **P** **04 09 31.7 +1.2**
319A Douglas 63.70 323 IAmb IAmb 04 10 06.7
comp=Z,25nm,1.4s
J59A Piesco 63.96 357 P **P** **04 09 34.6 +1.2**
baz=176
I59A Olmsteadville 64.26 357 P **P** **04 09 37.3 +2.0**
baz=177
I61A Oroboro, Fairl 64.35 359 P **P** **04 09 38.2 +2.3**
baz=178
ANMO Albuquerque 64.97 328 *i* P **P** **04 09 40.6 +0.2**
ANMO pmax pmax
comp=Z,11nm,2.6s
ANMO Albuquerque 64.97 328 P **P** **04 09 42.2 +1.7**
baz=143
H59A Cadyville 65.10 358 P **P** **04 09 42.2 +1.4**
baz=177
H53A Bobcaygeon 65.38 354 P **P** **04 09 43.0 +0.4**
baz=172
H52A Wyevale 65.59 353 P **P** **04 09 44.1 +0.2**
baz=170
G62A West of Eustis 65.62 0 P **P** **04 09 46.1 +2.0**
G62A West of Eustis 65.62 0 P **P** **04 09 45.9 +1.8**
baz=180
SDCO Great Sand Dun 66.77 330 IAmb IAmb 04 10 04.8
comp=Z,12nm,1.2s
SDCO Great Sand Dun 66.77 330 P **P** **04 09 53.6 +1.6**
baz=144
D57A Chemin Vers le 67.48 358 P **P** **04 09 57.0 +1.0**
baz=177
D58A Chemin du LacG 67.53 358 P **P** **04 09 57.5 +1.2**
baz=178
D55A Sainte-Anne-du 67.56 356 P **P** **04 09 57.0 +0.6**
baz=175
TAOE Nuku Hiva Isla 67.81 269 *e*LR LR 04 30 17.0
comp=Z,420nm,24.5s
TAOE Nuku Hiva Isla 67.81 269 *e*T T 05 23 44.2
comp=Z,37nm,0.2s
WUAZ Wupatki 67.96 325 IAmb IAmb 04 10 38.1
comp=Z,12nm,1.1s
WUAZ Wupatki 67.96 325 P **P** **04 10 02.1 +2.6**
baz=139
NVL N'lazarevskaya 68.13 159 *e*P **P** **04 09 59.5 -0.4**
NVL pmax pmax
comp=Z,46nm,1.1s
ECSD EROS Data Cent 68.42 340 P **P** **04 10 02.5 +0.5**
baz=154
VLDQ Val d'Or 68.78 355 IAmb IAmb 04 10 16.9
comp=Z,45nm,1.7s
BAR Barrett 68.96 319 P **P** **04 10 06.8 +1.2**
IRM Iron Mountain 69.08 322 P **P** **04 10 08.8 +2.4**
baz=136
U15A North Rim 69.14 325 IAmb IAmb 04 10 28.6
comp=Z,12nm,1.2s
QSPA South Pole Qui 69.47 180 P **P** **04 10 09.6 +1.2**
XPFO Pion Flat 69.47 320 P **P** **04 10 09.5 +0.6**
PFO Pinyon Flats O 69.47 320 P **P** **04 10 09.5 +0.6**
PFO pmax pmax
comp=Z,7.0nm,1.3s
PFO Pinyon Flats O 69.47 320 P **P** **04 10 09.5 +0.6**
PFO Pinyon Flats O 69.47 320 P **P** **04 10 11.4 +2.5**
baz=134
LSQQ Lebel-sur-Quev 69.69 356 P **P** **04 10 10.1 +0.3**
baz=174
LIC Lamto 69.73 75 *e*P **P** **04 10 10.1 -0.7**
comp=Z,37nm,1.1s
GMRC Granite Mounta 69.83 322 P **P** **04 10 13.9 +2.9**
baz=135
TIC Toumodi 69.91 74 *e*P **P** **04 10 11.3 -0.6**
comp=Z,1.4nm,0.2s
O20A White River Ci 69.95 330 P **P** **04 10 14.1 +2.3**
baz=143
KIC Kosan Boka 70.05 75 *e*P **P** **04 10 12.3 -0.4**
comp=Z,39nm,0.8s
DBIC Dimbokro 70.07 74 P **P** **04 10 12.6 -0.2**
comp=Z,23nm,0.8s,baz=220,slow=7.3,SNR=24
DBIC LR LR 04 39 28.0
comp=Z,645nm,20.5s,baz=234,slow=35
SZCU Shurtz Canyon 70.43 325 P **P** **04 10 12.9 -1.9**
TUQ Turquoise Moun 70.44 322 P **P** **04 10 17.3 +2.5**
baz=135
BFSC Mount Baldy Ra 70.63 320 P **P** **04 10 18.7 +2.7**
baz=134
GSC Goldstone, Bar 70.86 321 IAmb IAmb 04 11 25.6
comp=Z,16nm,1.7s
GSC Goldstone, Bar 70.86 321 P **P** **04 10 19.9 +2.6**
baz=134
LRMC Laurel Mtn Rad 71.49 321 P **P** **04 10 23.8 +2.5**
baz=134
TPNV Topopah Spring 71.69 323 P **P** **04 10 25.3 +2.8**
baz=135
FURC Furnace Creek, 71.70 322 P **P** **04 10 25.4 +3.1**
baz=135
MPMC Manual Prospec 71.78 322 P **P** **04 10 25.2 +2.2**
baz=134
ISA Isabella, Lake 72.09 321 P **P** **04 10 27.3 +2.6**
baz=133
TBI Tubuai 72.22 251 *e*S **S** **04 19 46.7 -0.5**
comp=Z,153nm,27.5s
TBI Tubuai 72.22 251 *e*LR LR 04 32 31.8
comp=Z,478nm,27.0s,baz=114
DUG Dugway, Tooele 72.22 327 P **P** **04 10 27.8 +2.3**
baz=139
R11A Troy Canyon, C 72.33 324 IAmb IAmb 04 10 39.4
comp=Z,27nm,2.0s
R11A Troy Canyon, C 72.33 324 P **P** **04 10 29.0 +2.8**
baz=136
PKM Mcpherson Peak 72.37 319 P **P** **04 10 29.0 +2.4**
baz=132
CWC Cottonwood Cre 72.39 321 P **P** **04 10 29.1 +2.5**
baz=134
VES Vestal, Richgr 72.57 320 P **P** **04 10 30.2 +2.7**
baz=133
PDAR Pinedale Array 72.64 331 P **P** **04 10 28.9 +0.9**
comp=Z,0.5nm,0.6s,baz=131,slow=8.1,SNR=4.6
PDAR LR LR 04 44 20.8
comp=Z,93nm,21.2s,baz=58,slow=38
HWUT Hardware Ranch 72.68 329 IAmb IAmb 04 10 56.3
comp=Z,31nm,1.8s

SMMC	**Simmler**	**72.77**	**319**	P	**P**	**04 10 31.5**	**+2.8**
	baz=132								
MDND	**Maddock**	**73.04**	**340**	P	**P**	**04 10 31.3**	**+1.3**
	baz=152								
REDW	**Red Top Meadow**	**73.70**	**331**	IAmb	IAmb	04 10 59.1	
	comp=Z,13nm,1.4s								
ELK	**Elko**	**73.87**	**326**	P	**P**	**04 10 34.0**	**-1.4**
ELK				pmax	pmax		
	comp=Z,4.0nm,1.0s								
ELK	**Elko**	**73.87**	**326**	P	**P**	**04 10 34.0**	**-1.4**
NVAR	**Mina Array Bea**	**73.89**	**323**	P	**P**	**04 10 37.0**	**+1.4**
	comp=Z,1.6nm,0.8s,baz=157,slow=7.1,SNR=15								
NVAR				LR	LR	04 39 42.0	
	comp=Z,130nm,19.9s,baz=64,slow=33								
PPT2	**Papeete2**	**73.92**	**257**	*e*S	**S**	**04 20 06.0**	**-0.9**
	comp=Z,192nm,24.8s								
PPT2	**Papeete2**	**73.92**	**257**	*e*LQ	LQ	04 30 14.8	
PPT2	comp=Z,773nm,32.2s			*e*LR	LR	04 33 20.6	
	comp=Z,551nm,24.5s								
PPT	**Papeete**	**73.93**	**257**	LR	LR	04 33 36.6	
	comp=Z,57nm,21.8s,baz=166,slow=28								
ULM	**Lac du Bonnet**	**74.10**	**343**	*e*P	**P**	**04 10 34.9**	**-1.3**
ULM				pmax	pmax		
	comp=Z,3.0nm,0.8s								
ULM	**Lac du Bonnet**	**74.10**	**343**	P	**P**	**04 10 35.5**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=149,slow=6.6,SNR=6.7								
ULM				LR	LR	04 45 24.8	
	comp=Z,206nm,21.3s,baz=122,slow=38								
ULM	**Lac du Bonnet**	**74.10**	**343**	IAmb	IAmb	04 10 58.1	
	comp=Z,18nm,1.4s								
FLWY	**Flagg Ranch**	**74.19**	**331**	IAmb	IAmb	04 10 52.3	
	comp=Z,14nm,0.9s								
RLMT	**Red Lodge**	**74.37**	**333**	IAmb	IAmb	04 11 32.9	
	comp=Z,29nm,1.8s								
RLMT	**Red Lodge**	**74.37**	**333**	P	**P**	**04 10 40.1**	**+1.9**
	baz=143								
LAO	**LASA Array**	**74.40**	**335**	IAmb	IAmb	04 11 05.1	
	comp=Z,14nm,1.1s								
LAO	**LASA Array**	**74.40**	**335**	P	**P**	**04 10 39.0**	**+0.9**
	baz=146								
YERR	**Yerington**	**74.81**	**323**	IAmb	IAmb	04 10 54.7	
	comp=Z,27nm,1.9s								
SCHQ	**Schefferville**	**75.31**	**2**	P	**P**	**04 10 42.2**	**-0.9**
	comp=Z,2.2nm,0.8s,baz=201,slow=9.5,SNR=3.6								
SCHQ	**Schefferville**	**75.31**	**2**	IAmb	IAmb	04 11 39.2	
	comp=Z,20nm,1.4s								
ORV	**Oroville**	**76.48**	**322**	IAmb	IAmb	04 11 08.8	
	comp=Z,15nm,1.3s								
EGMT	**Eagleton**	**76.89**	**334**	IAmb	IAmb	04 11 34.9	
	comp=Z,12nm,1.1s								
EGMT	**Eagleton**	**76.89**	**334**	P	**P**	**04 10 53.2**	**+0.8**
	baz=143								
SYO	**Syowa Base**	**77.79**	**160**⇓	*e*P	**P**	**04 10 56.2**	**-0.9**
BMO	**Blue Mountains**	**77.89**	**328**	IAmb	IAmb	04 11 11.2	
	comp=Z,27nm,2.0s								
M04C	**Macdoel**	**78.16**	**323**	P	**P**	**04 11 01.3**	**+1.6**
	baz=132								
TORD	**Torodi Ar. Bea**	**78.62**	**71**	P	**P**	**04 11 02.5**	**-0.1**
	comp=Z,43nm,0.8s,baz=251,slow=5.3,SNR=241								
TORD				LR	LR	04 45 14.3	
	comp=Z,909nm,18.9s,baz=280,slow=35								
I05D	**Terrebonne, OR**	**79.60**	**326**	P	**P**	**04 11 09.7**	**+2.3**
	baz=133								
HAWA	**Hanford**	**80.09**	**328**	IAmb	IAmb	04 11 22.5	
	comp=Z,27nm,1.8s								
C09A	**Chrisman Ranch**	**80.47**	**330**	IAmb	IAmb	04 11 20.6	
	comp=Z,48nm,2.0s								
LTY	**Liberty**	**81.25**	**328**	IAmb	IAmb	04 11 30.2	
	comp=Z,19nm,1.5s								
FCC	**Fort Churchill**	**81.52**	**348**	IAmb	IAmb	04 11 19.1	
	comp=Z,20nm,1.3s								
D05A	**Enumclaw**	**81.86**	**327**	IAmb	IAmb	04 11 30.4	
	comp=Z,38nm,1.4s								
LLLB	**Lillooet**	**84.13**	**330**	IAmb	IAmb	04 11 53.6	
	comp=Z,15nm,1.3s								
BOSA	**Boshof**	**85.24**	**119**	P	**P**	**04 11 37.6**	**+0.1**
BOSA				pmax	pmax		
	comp=Z,136nm,1.8s								
BOSA	**Boshof**	**85.24**	**119**	P	**P**	**04 11 37.6**	**+0.1**
	comp=Z,16nm,1.2s,baz=273,slow=2.7,SNR=5.5								
BOSA				LR	LR	04 46 02.8	
	comp=Z,360nm,21.7s,baz=232,slow=33								
BOSA	**Boshof**	**85.24**	**119**	IAmb	IAmb	04 11 39.3	
	comp=Z,136nm,1.8s								
MAW	**Mawson**	**85.53**	**164**	LR	LR	04 50 06.9	
	comp=Z,205nm,18.3s,baz=240,slow=36								
TAM	**Tamanrasset**	**85.92**	**64**	P	**P**	**04 11 41.4**	**+0.5**
TAM				pmax	pmax		
	comp=Z,26nm,1.2s								
TAM	**Tamanrasset**	**85.92**	**64**	P	**P**	**04 11 41.4**	**+0.5**
TAM				IAmb	IAmb	04 11 43.5	
	comp=Z,26nm,1.2s								
ESDC	**Sonseca Array**	**86.42**	**45**	P	**P**	**04 11 43.5**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=224,slow=5.9,SNR=5.6								
ESDC				LR	LR	04 46 30.2	
	comp=Z,232nm,21.7s,baz=270,slow=33								
YKA	**Yellowknife Ar**	**89.92**	**341**	P	**P**	**04 11 59.3**	**+0.5**
	comp=Z,4.8nm,0.8s,baz=136,slow=4.8,SNR=80								
KEST	**Kesra**	**94.13**	**53**	LR	LR	04 54 57.6	
	comp=Z,401nm,19.9s,baz=234,slow=36								
INK	**Inuvik**	**99.66**	**340**	LR	LR	04 57 20.8	
	comp=Z,136nm,20.6s,baz=92,slow=36								
BRTR	**Keskin Array B**	**113.70**	**55**	PKiKP	**PKiKP**	**04 17 39.6**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=341,slow=2.6,SNR=4.3								
OBN	**Obninsk**	**116.55**	**38**	*e*PKiKP	**PKPdf**	**04 17 43.4**	**-0.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s								
KIV	**Kislovodsk**	**120.73**	**50**	*e*PKiKP	**PKPdf**	**04 17 51.8**	**-0.6**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s								
KBZ	**Khabaz**	**120.88**	**51**	PKP	**PKiKP**	**04 17 53.3**	**+0.7**
	comp=Z,3.0nm,0.9s,baz=172,slow=1.5,SNR=6.3								
BILL	**Bilibino**	**121.21**	**338**	*e*PKiKP	**PKiKP**	**04 17 52.7**	**+0.1**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s								
H11S2	**WAKE ISLAND Hy**	**126.17**	**278**	T	T	06 37 19.8	
	baz=102,slow=74,SNR=1073								
H11S1	**WAKE ISLAND Hy**	**126.18**	**278**	T	T	06 37 20.5	
	baz=102,slow=74,SNR=974								
H11S3	**WAKE ISLAND Hy**	**126.19**	**278**	T	T	06 37 21.3	
	baz=102,slow=74,SNR=809								
H11N3	**WAKE ISLAND Hy**	**126.24**	**280**	T	T	06 37 41.5	
	baz=103,slow=74,SNR=307								
H11N2	**WAKE ISLAND Hy**	**126.26**	**280**	T	T	06 37 42.7	
	baz=103,slow=74,SNR=306								
H11N1	**WAKE ISLAND Hy**	**126.26**	**280**	T	T	06 37 39.2	
	baz=103,slow=74,SNR=248								
TIXI	**Tiksi**	**127.81**	**352**	PKiKP	**PKiKP**	**04 18 05.4**	**-0.2**
TIXI	**Tiksi**	**127.81**	**352**		**PKiKP**	**04 18 05.4**	**-0.2**
ARU	**Arti**	**128.40**	**33**	*i* PKiKP	**PKiKP**	**04 18 07.0**	**-0.2**
ARU						04 20 12.1	
ARU						04 25 17.8	
ARU				SS	SS	04 37 25.3	-0.1
SEY	**Seymchan**	**128.74**	**336**	*i* PKiKP	**PKiKP**	**04 18 07.6**	**-0.1**
ASAR	**Alice Springs**	**129.82**	**210**	PKP	**PKPdf**	**04 18 10.7**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=146,slow=2.1,SNR=17								
ABKAR	**Akbulak array**	**131.66**	**42**		**PKiKP**	**04 18 14.7**	**+0.7**
WRA	**Warramunga Arr**	**132.77**	**213**	*e*PKiKP	**PKiKP**	**04 18 17.9**	**+0.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s								
WRA	**Warramunga Arr**	**132.77**	**213**	PKP	**PKiKP**	**04 18 16.8**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=157,slow=1.6,SNR=10								
ZALV	**Zalesovo Beam**	**141.91**	**23**	PKhKP	PKPpre	04 18 27.6	
	comp=Z,7.5nm,0.7s,baz=307,slow=5.3,SNR=9.0								
ZALV				PKP	**PKPdf**	**04 18 32.9**	**+1.1**
	comp=Z,8.1nm,0.7s,baz=284,slow=3.2,SNR=18								
ZEA	**Zeya**	**144.31**	**342**	*e*PKiKP	**PKPdf**	**04 18 37.4**	**+1.4**
ZEA				pmax	pmax		
	comp=Z,21nm,1.2s								
NRN	**Naryn**	**145.06**	**46**	PKiKP	**PKPdf**	**04 18 39.6**	**+1.4**
NRN	**Naryn**	**145.06**	**46**		**PKPdf**	**04 18 39.6**	**+1.4**
NIL	**Nilore**	**145.57**	**60**	PKP2	**PKPab**	**04 18 39.9**	**+0.5**
NIL	**Nilore**	**145.57**	**60**		**PKPab**	**04 18 39.9**	**+0.5**
MAKZ	**Makanchi**	**145.75**	**34**	PKP2	**PKPab**	**04 18 39.9**	**+0.4**
MAKZ	**Makanchi**	**145.75**	**34**		**PKPab**	**04 18 39.9**	**+0.4**
KSH	**Kashi**	**145.84**	**49**⇑	*i* PKPbc	**PKPab**	**04 18 41.3**	**+1.0**
KSH				PP	PP	**04 22 02.2**	**+1.1**
KSH				SKS	**SKSdf**	**04 25 40.7**	**-6.1**
KSH				SKKS	**SKKSac**	**04 28 48.9**	**-2.9**
KSH				SS	**SS**	**04 40 53.0**	**-1.0**
MKAR	**Makanchi Array**	**145.92**	**34**	PKPbc	**PKPab**	**04 18 40.2**	**-0.1**
	comp=Z,23nm,0.7s,baz=326,slow=3.0,SNR=205								
MOY	**Mondy**	**148.43**	**10**	*e*PKP2	**PKiKP**	**04 18 48.6**	**+0.3**
MOY				pmax	pmax		
	comp=Z,42nm,2.2s								
TLY	**Talaya**	**148.78**	**7**	*e*PKP2	**PKPbc**	**04 18 46.6**	**-0.9**
TLY				pmax	pmax		
	comp=Z,34nm,1.5s								
URV	**Uravakonda**	**148.94**	**95**	*e*PKiKP	**PKPbc**	**04 18 48.9**	**-0.1**
KLRI	**Killari**	**149.01**	**89**	*e*PKiKP	**PKPbc**	**04 18 49.6**	**+0.4**
DMPR	**Damasthipur**	**149.95**	**91**	*e*PKiKP	**PKPbc**	**04 18 51.1**	**-0.4**
USA0B	**Ussuriysk Arra**	**149.98**	**326**	PKP2	**PKiKP**	**04 18 52.0**	**+0.4**
USA0B	**Ussuriysk Arra**	**149.98**	**326**	PKPdf	**PKPdf**	**04 18 45.0**	**-0.7**
USA0B					**PKiKP**	**04 18 52.0**	**+0.4**
USA0B				PKPab	**sPKPbc**	**04 19 01.8**	**-0.4**
USRK	**Ussuriysk Ar.**	**149.98**	**326**	PKPbc	**PKiKP**	**04 18 52.0**	**+0.4**
	comp=Z,13nm,0.9s,baz=21,slow=0.7,SNR=16								
ZAK	**Zakamensk**	**150.01**	**8**	*e*PKP2	**PKiKP**	**04 18 51.5**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,11nm,1.4s								
MJAR	**Matsushiro Arr**	**150.32**	**308**	PKPbc	**PKiKP**	**04 18 53.1**	**+0.5**
	comp=Z,7.8nm,0.9s,baz=66,slow=2.6,SNR=13								
MAJO	**Matsushiro**	**150.32**	**308**	PKIKP	**PKiKP**	**04 18 53.3**	**+0.7**
MAJO	**Matsushiro**	**150.32**	**308**		**PKiKP**	**04 18 53.3**	**+0.7**
MAT	**Matsushiro**	**150.32**	**308**	PKP	**PKiKP**	**04 18 52.7**	**+0.1**
MJB9	**Matsu-Tunnel**	**150.32**	**308**		**PKiKP**	**04 18 53.3**	**+0.7**
HYBB	**Hyderabad (bro**	**150.72**	**91**	*e*PKiKP	**PKPbc**	**04 18 53.1**	**-0.2**
HYB	**Hyderabad**	**150.72**	**91**	*i* PKP	**PKiKP**	**04 18 54.0**	**+0.1**
WMQ	**Urumqi**	**150.74**	**33**	*e*PKPbc	**PKPdf**	**04 18 47.1**	**0.0**
WMQ				LR	LR		
	comp=Z,210nm,28.9s								
WMQ				LR	LR		
	comp=Z,540nm,29.0s								
WMQ				LR	LR		
	comp=Z,190nm,21.5s								
SRLM	**Srisailam**	**150.75**	**94**	*e*PKiKP	**PKPbc**	**04 18 52.6**	**-0.8**
SRSP	**Sriramsagar**	**150.78**	**88**	*e*PKiKP	**PKPbc**	**04 18 53.1**	**-0.3**
SKHT	**Srikalahasti**	**150.87**	**99**	*e*PKiKP	**PKPbc**	**04 18 53.2**	**-0.5**
NJS	**Nagarjunasagar**	**151.24**	**93**	*e*PKiKP	**PKPbc**	**04 18 54.0**	**-0.4**
GGR	**Gangavaram**	**152.34**	**91**	*e*PKiKP	**PKPbc**	**04 18 56.2**	**-0.8**
SONM	**Songino Array**	**152.84**	**4**	PKP	**PKPdf**	**04 18 51.9**	**+1.7**
	comp=Z,1.9nm,1.0s,baz=216,slow=1.3,SNR=6.6								
SONM				PKPbc	**pPKPdf**	**04 18 58.6**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=359,slow=1.8,SNR=9.5								
ULN	**Ulaanbaatar**	**152.85**	**3**	PKIKP	**PKiKP**	**04 18 59.0**	**+1.4**
ULN	**Ulaanbaatar**	**152.85**	**3**	PKPdf	**PKPdf**	**04 18 48.3**	**-2.0**
ULN					**PKiKP**	**04 18 59.0**	**+1.4**
ULN					**PKPab**	**04 19 09.1**	**+0.7**
KSRS	**Korea Array**	**156.81**	**320**	PKP	**PKPdf**	**04 18 57.5**	**+1.7**
	comp=Z,1.2nm,0.6s,baz=11,slow=1.3,SNR=5.3								
GTA	**Gaotai**	**159.64**	**22**	*e*PKP	**PKPdf**	**04 18 57.3**	**-2.1**
HHC	**Hu-ho-hao-te**	**159.84**	**355**	*e*PKP	**PKPdf**	**04 19 02.6**	**+3.1**
SHL	**Shillong**	**163.22**	**70**	PKP2	**PKPab**	**04 19 55.0**	**+1.0**
SHL						05 19 03.6	
SHL	**Shillong**	**163.22**	**70**	PKPdf	**PKPdf**	**04 19 03.6**	**0.0**
SHL					**PKPab**	**04 19 55.0**	**+1.0**
LZH	**Lanzhou**	**163.94**	**16**	*e*PKP	**PKPdf**	**04 19 03.0**	**-1.0**
LZH				pPKP	pPKPdf	04 19 13.1	+0.6
NJ2	**Nanjing**	**165.88**	**325**	*e*PKP	**PKPdf**	**04 19 05.2**	**-0.3**
CD2	**Chengdu**	**168.67**	**25**	PKP	**PKPdf**	**04 19 06.7**	**-1.0**
WHN	**Wuhan**	**169.23**	**336**	PKPbc	**PKPdf**	**04 19 14.0**	**+6.1**
CHTO	**Chiang Mai**	**170.01**	**99**	PKP2	**PKPab**	**04 20 21.3**	**-2.7**
CHTO						05 19 07.0	
CHTO	**Chiang Mai**	**170.01**	**99**		**PKPdf**	**04 19 07.0**	**-1.7**
CHTO				PKPab	**PKPab**	**04 20 21.3**	**-2.7**

*SKHL **06** 04:03:45.2±0.2,46.40N×152.70E,h111km±5km,mb4.7/4, msha4.9/4*
*MOS **06** 04:03:46.9±1.2,46.90N×152.26E,h10km,mb3.8/7,Error ellipse: s-maj=10.4km s-min=6.6km az=69.7*
*NEIC **06** 04:03:47.8±1.7,46.9N±0.1×152.2E±0.2,h108km±8km, mb4.4/15,Error ellipse: s-maj=21.2km s-min=12.2km az=133.0*
*IDC **06** 04:03:50.6±2.2,46.93N×152.23E,h131km±20km, mb3.6/15,mb1 3.8/21,mb1mx3.6/37,mbtmp4.1/21,Error ellipse: s-maj=17.7km s-min=12.2km az=121.0*

ISC 06 04:03:46.4±0.8,46.81N±0.08×152.36E±0.09,h100km, n117,σ1.9s0.50/107,mb4.0/29,30C-8D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		ISC	h m s	ISC
KUR	**Kuril'sk**	**3.50**	**245**	*d*	iPN	**Pn**	**04 04 39.2**	**+0.3**
KUR				*i*	S	**Sn**	**04 05 22.9**	**+3.5**
KUR					pmax	pmax		
	comp=Z,56nm,0.3s							
KUR					pmax	pmax		
	comp=N,54nm,0.1s							
KUR					pmax	pmax		
	comp=E,25nm,0.2s							
KUR					smax	smax		
	comp=N,190nm,0.6s							
KUR					smax	smax		
	comp=E,86nm,0.3s							
KUR	**Kuril'sk**	**3.50**	**245**	⇓	iP	**Pn**	**04 04 39.2**	**+0.3**
KUR					AMB	AMB	04 04 47.1	
	comp=E,40nm,0.4s							
KUR					AMB	AMB	04 04 47.1	
	comp=E,30nm,0.4s							
KUR					AMB	AMB	04 04 47.1	
	comp=E,50nm,0.4s							
KUR				*i*	S	**Sn**	**04 05 19.6**	**+0.2**
KUR					A	A	04 05 24.0	
	comp=E,190nm,0.6s							
KUR					A	A	04 05 24.0	
	comp=E,90nm,0.6s							
SKR	**Severo-Kuril's**	**4.61**	**31**	⇑	ePN	**Pn**	**04 04 54.6**	**+0.9**
SKR	**Severo-Kuril's**	**4.61**	**31**	*e*	P	Pn	04 04 55.7	+2.0
YUK	**Yuzh-Kuril'sk**	**5.35**	**241**	*e*	PN	**Pn**	**04 05 06.2**	**+2.4**
YUK				*i*	S	**Sn**	**04 06 03.8**	**-0.3**
YUK					pmax	pmax		
	comp=Z,118nm,0.3s							
YUK					pmax	pmax		
	comp=E,68nm,0.5s							
YUK					pmax	pmax		
	comp=N,103nm,0.4s							
YUK					smax	smax		
	comp=N,168nm,0.5s							
YUK					smax	smax		
	comp=E,142nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**5.35**	**241**	*e*	P	**Pn**	**04 05 04.6**	**+0.8**
YUK					AMB	AMB	04 05 09.0	
	comp=E,20nm,0.5s							
YUK					eS	**Sn**	**04 06 04.3**	**+0.2**
YUK					A	A	04 06 09.0	
	comp=E,30nm,0.6s							
YUK					A	A	04 06 09.0	
	comp=E,10.0nm,0.6s							
GRPR	**Tuman**	**5.42**	**241**	*e*	PN	**Pn**	**04 05 06.6**	**+1.8**
GRPR					eS	**Sn**	**04 06 05.2**	**-0.7**
GRPR					pmax	pmax		
	comp=Z,63nm,0.2s							
GRPR					smax	smax		
	comp=E,92nm,0.2s							
GRPR					smax	smax		
	comp=N,179nm,0.3s							
GRPR	**Tuman**	**5.42**	**241**	*e*	P	**Pn**	**04 05 06.6**	**+1.8**
GRPR					AMB	AMB	04 05 10.0	
	comp=N,60nm,0.4s							
GRPR					eS	**Sn**	**04 06 05.8**	**-0.1**
GRPR					A	A	04 06 08.0	
	comp=N,20nm,0.5s							
GRPR					A	A	04 06 08.0	
	comp=N,10.0nm,0.5s							
PAU	**Pauzhetka**	**5.50**	**30**	*e*	P	Pn	04 05 08.9	+3.0
GLVR	**Golovnino**	**5.72**	**240**		PN	**Pn**	**04 05 10.1**	**+1.3**
GLVR					eS	**Sn**	**04 06 11.0**	**-2.1**
GLVR					pmax	pmax		
	comp=Z,126nm,0.6s							
GLVR					smax	smax		
	comp=E,179nm,0.4s							
GLVR					smax	smax		
	comp=N,252nm,0.7s							
GLVR	**Golovnino**	**5.72**	**240**	*e*	P	**Pn**	**04 05 10.1**	**+1.3**
GLVR					AMB	AMB	04 05 17.0	
	comp=N,30nm,0.6s							
GLVR					eS	**Sn**	**04 06 12.3**	**-0.8**
GLVR					A	A	04 06 15.0	
	comp=N,30nm,0.7s							
GLVR					A	A	04 06 15.0	
	comp=N,20nm,0.7s							
NMR	**Nemuro--Hokkai**	**5.82**	**236**	*d*	iPN	**Pn**	**04 05 10.1**	**-0.1**
NMR	**Nemuro--Hokkai**	**5.82**	**236**	⇓	iP	**Pn**	**04 05 10.1**	**-0.1**
PEA0B	**Petropavlovsk-**	**7.19**	**27**		PN	Pn	04 05 31.1	+2.4
PEA0B	**Petropavlovsk-**	**7.19**	**27**		Pn	Pn	04 05 31.1	+2.4
PETK	**Petropavlovsk-**	**7.19**	**27**		P	Pn	04 05 30.8	+2.0
	comp=N,21nm,0.3s,baz=195,slow=12,SNR=19							
JKA	**Kamikawa-asahi**	**7.37**	**252**	*e*	P	Pn	04 05 34.8	+3.5
JKA	**Kamikawa-asahi**	**7.37**	**252**			Pn	04 05 34.8	+3.6
ASAJ	**Asahikawa**	**7.37**	**252**		P	Pn	04 05 34.8	+3.5
	comp=N,0.5nm,0.3s,baz=41,slow=9.4,SNR=4.0							
ERM	**Erimo**	**8.14**	**237**		PN	**Pn**	**04 05 41.9**	**+0.1**
ERM	**Erimo**	**8.14**	**237**		Pn	**Pn**	**04 05 41.9**	**+0.1**
ERM						**Sn**	**04 07 05.0**	**-7.0**
EKMR	**Ekimchan**	**13.96**	**304**	*e*	P	**P**	**04 07 02.8**	**-1.6**
EKMR					AMB	AMB	04 07 07.8	
	comp=N,10.0nm,0.7s							
KLR	**Kul'dur**	**14.00**	**288**		P	**P**	**04 07 04.8**	**-0.1**
	comp=N,0.1nm,0.3s,baz=78,slow=14,SNR=2.6							
USA0B	**Ussuriysk Arra**	**14.52**	**267**	⇑	eP	**P**	**04 07 09.0**	**-1.7**
USA0B	**Ussuriysk Arra**	**14.52**	**267**		P	**P**	**04 07 08.4**	**-2.2**
USRK	**Ussuriysk Ar.**	**14.52**	**267**		P	**P**	**04 07 09.5**	**-1.1**
	baz=70,slow=14,SNR=2.8								
MJA0	**Matsu Arr-Jizo**	**14.69**	**231**		eP	**P**	**04 07 14.8**	**+2.2**
MJAR	**Matsushiro Arr**	**14.71**	**231**		P	**P**	**04 07 14.0**	**+1.1**
MJAR	**Matsushiro Arr**	**14.71**	**231**		P	**P**	**04 07 14.0**	**+1.1**
	comp=N,0.1nm,0.3s,baz=29,slow=11,SNR=10								
MAJO	**Matsushiro**	**14.71**	**231**⇑	*e*	P	**P**	**04 07 12.8**	**0.0**
SEY	**Seymchan**	**16.16**	**0**⇑	*e*	P	**P**	**04 07 26.8**	**-1.9**
SEY	**Seymchan**	**16.16**	**0**		P	**P**	**04 07 28.8**	**+0.1**
	comp=N,0.8nm,0.3s,baz=180,slow=10,SNR=11								
SEY	**Seymchan**	**16.16**	**0**⇑	*e*	P	**P**	**04 07 26.8**	**-1.9**
BMKR	**Bomnak**	**16.79**	**307**⇓	*i*	P	**P**	**04 07 37.0**	**+1.3**
BMKR					AMB	AMB	04 07 38.0	
	comp=N,10.0nm,0.5s							
KROS	**Kirovskiy**	**17.75**	**305**⇓	*i*	P	**Pn**	**04 07 48.2**	**+1.3**
KROS					AMB	AMB	04 07 48.6	
	comp=N,10.0nm,0.6s							
YAK	**Yakutsk**	**20.00**	**328**	*e*	P	**Pn**	**04 08 10.8**	**-2.5**
YAK					pmax	pmax		
	comp=Z,13nm,0.8s							
YAK					pmax	pmax		
	comp=N,2.0nm,0.8s							
YAK					pmax	pmax		
	comp=E,4.0nm,0.9s							
YAK	**Yakutsk**	**20.00**	**328**		P	**Pn**	**04 08 11.2**	**-2.1**
	comp=E,0.1nm,0.3s,baz=9.4,slow=0.9,SNR=6.3								
YAK	**Yakutsk**	**20.00**	**328**		P	**Pn**	**04 08 11.2**	**-2.1**
KSRS	**Korea Array**	**20.32**	**251**		P	Pn	04 08 16.9	-0.4
	comp=E,1.2nm,0.6s,baz=62,slow=9.1,SNR=4.9								
BILL	**Bilibino**	**22.46**	**14**⇑	*e*	P	**P**	**04 08 35.8**	**-1.0**
BILL					pmax	pmax		
	comp=Z,3.0nm,0.8s								
TIXI	**Tiksi**	**27.27**	**344**⇓	*e*	P	**P**	**04 09 18.1**	**-2.7**
TIXI					pmax	pmax		
	comp=Z,1.0nm,0.9s								
H11N2	**WAKE ISLAND Hy**	**29.51**	**151**		T	T	04 41 27.1	
	baz=340,slow=76,SNR=108								
H11N1	**WAKE ISLAND Hy**	**29.53**	**151**		T	T	04 41 25.1	
	baz=340,slow=76,SNR=90								
H11N3	**WAKE ISLAND Hy**	**29.53**	**151**		T	T	04 41 18.0	
	baz=340,slow=76,SNR=74								
H11S1	**WAKE ISLAND Hy**	**30.59**	**152**		T	T	04 42 44.5	
	baz=340,slow=76,SNR=79								
H11S3	**WAKE ISLAND Hy**	**30.60**	**153**		T	T	04 42 43.0	
	baz=340,slow=76,SNR=44								
H11S2	**WAKE ISLAND Hy**	**30.61**	**152**		T	T	04 42 41.1	
	baz=340,slow=76,SNR=67								
KTH	**Kantishna Hill**	**35.05**	**41**		P	P	04 10 31.3	+1.9
KTH					IAmb	IAmb	04 10 37.1	
	comp=Z,6.3nm,1.2s								
TRF	**Thorofare Moun**	**35.34**	**41**		P	**P**	**04 10 33.3**	**+1.4**
TRF					IAmb	IAmb	04 10 34.0	
	comp=Z,10.0nm,1.4s								
TOLK	**Toolik Lake Re**	**35.97**	**32**		P	**P**	**04 10 38.7**	**+1.6**
GHO	**Glory Hole Cre**	**36.01**	**44**		P	**P**	**04 10 38.3**	**+0.8**
SML	**Sawmill**	**36.29**	**44**		P	**P**	**04 10 40.8**	**+0.9**
COLA	**College**	**36.41**	**38**⇑	*e*	P	**P**	**04 10 38.0**	**-2.8**
COLA					pmax	pmax		
	comp=Z,2.0nm,1.1s								
CCB	**Clear Creek Bu**	**36.43**	**39**		P	P	04 10 43.0	+2.0
DHY	**Denali Highway**	**36.66**	**41**		P	**P**	**04 10 44.0**	**+0.9**
DHY					IAmb	IAmb	04 11 00.6	
	comp=Z,8.0nm,1.4s								
HDA	**Harding Lake**	**36.81**	**39**		P	**P**	**04 10 45.1**	**+0.9**
**IL31

BRTR	**Keskin Array B**	**77.99**	**316**	P	**P**	**04 15 34.1**	**+0.3**
	comp=Z,1.0nm,0.9s,baz=54,slow=3.2,SNR=6.0						
GZR	**Gura Zlata**	**78.04**	**326**	⇑P	**P**	**04 15 34.1**	**+0.2**
GZR	**Gura Zlata**	**78.04**	**326**	⇑P	**P**	**04 15 34.1**	**+0.2**
GERES	**GERESS Array B**	**78.18**	**334**	P	**P**	**04 15 35.0**	**+0.4**
GERES	**GERESS Array B**	**78.18**	**334**	P	**P**	**04 15 35.0**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=38,slow=5.3,SNR=7.9						
BZS	**Buzias**	**78.29**	**327**	⇑P	**P**	**04 15 35.8**	**+0.7**
BZS	**Buzias**	**78.29**	**327**	⇑P	**P**	**04 15 35.8**	**+0.7**
VTS	**Vitosha**	**80.19**	**324**	⇑P	**P**	**04 15 47.3**	**+1.6**
VTS	**Vitosha**	**80.19**	**324**	⇑P	**P**	**04 15 47.3**	**+1.6**
PLCA	**Paso Flores**	**146.73**	**95**	PKPbc	**PKiKP**	**04 23 21.2**	**-1.8**
	comp=Z,1.4nm,0.9s,baz=262,slow=4.4,SNR=4.2						

*INET **06** 04:18:08.1,14°.72N×87°.70W,h0km,MD3.6*
SNET 06 04:18:05.9±1.1,14°.93N×87°.78W,h13km±8km, ML2.6, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.00**	**151**	*e*P	Pb	04 18 23.4	-1.7
TGUH				*e*S	Sb	04 18 37.5	-0.7
FAGO	**Alcalda de S**	**1.27**	**195**	*e*P	Pn	04 18 28.2	-1.1
FAGO				*e*S	Sb	04 18 45.0	-1.0
PACA	**Pacayal**	**1.55**	**200**	*e*P	Pn	04 18 33.7	+0.4
PACA				*e*S	Sb	04 18 54.2	+0.1
TECA	**Tecapa**	**1.59**	**206**	*e*P	Pn	04 18 34.5	+0.5
TECA				*e*S	Sb	04 18 55.9	+0.5
COEB	**Comit de Eme**	**1.60**	**207**	*e*P	Pn	04 18 34.2	+0.2
COEB				*e*S	Sb	04 18 55.5	-0.1
COEB	comp=Z,85nm,0.3s			IAML		04 19 02.3	
LCND	**La Caada**	**1.62**	**184**	*e*P	Pn	04 18 34.3	+0.2
LCND				*e*S	Sn	04 18 55.0	+0.1
LCND	comp=Z,101nm,0.3s			IAML		04 18 60.0	
MTO3	**Montecristo**	**1.62**	**251**	*e*P	Pn	04 18 34.1	-0.3
COEG	**Centro de Oper**	**1.69**	**219**	*e*P	Pn	04 18 35.5	+0.3
COEG				*e*S	Sb	04 18 58.1	+0.1
COEG	comp=Z,52nm,0.4s			IAML		04 19 01.3	
JUCU	**Jucuar¡n**	**1.73**	**195**	*e*P	Pn	04 18 35.6	-0.2
JUCU				*e*S	Sb	04 18 58.7	-0.6

*IDC **06** 04:18:23.8±1.8, 7°.65S×69°.08E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.5/27, mbtmp3.6/5, MS3.8/4, Ms1 3.8/4, ms1mx3.2/43, Error ellipse: s-maj=72.8km s-min=28.0km az=47.0*
*NEIC **06** 04:18:23.4±1.9, 7°.69S±0°.06×68°.89E±0°.03, h3km±4km, mb4.2/2, Error ellipse: s-maj=8.9km s-min=3.8km az=184.0*
ISC 06 04:18:24.3±0.9, 7°.7S±0°.1×69°.01E±0°.06, h10km, n25, σ1§70/21, mb3.8/7, MS3.8/4, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**2.38**	**56**	Pn	**Pn**	**04 19 03.5**	**+0.4**
H08N3				T	T	04 22 12.5	
	baz=244,slow=75,SNR=1446						
H08N2	**Diego Garcia H**	**2.40**	**56**	Pn	**Pn**	**04 19 03.9**	**+0.6**
H08N2				T	T	04 22 13.4	
	baz=244,slow=75,SNR=1454						
H08N1	**Diego Garcia H**	**2.40**	**56**	Pn	**Pn**	**04 19 04.1**	**+0.7**
H08N1				Sn	**Sg**	**04 19 40.3**	**-1.1**
H08N1				T	T	04 22 16.4	
	baz=244,slow=75,SNR=1254						
DGAR	**Diego Garcia**	**3.42**	**86**		**Pb**	**04 19 22.7**	**-2.4**
DGAR					**Sn**	**04 19 56.5**	**-2.0**
H08S1	**Diego Garcia H**	**3.43**	**89**	Pn	**Pb**	**04 19 22.8**	**-2.4**
	baz=352,slow=74,SNR=108						
H08S1				Sn	**Sb**	**04 20 10.1**	**+3.3**
H08S1				T	T	04 24 28.3	
	baz=275,slow=74,SNR=21						
H08S3	**Diego Garcia H**	**3.44**	**89**	Pn	**Pb**	**04 19 22.9**	**-2.4**
	baz=64,slow=74,SNR=129						
H08S3				T	T	04 24 26.9	
	baz=275,slow=74,SNR=20						
H08S2	**Diego Garcia H**	**3.45**	**89**	Pn	**Pb**	**04 19 23.0**	**-2.4**
H08S2				T	T	04 24 18.8	
	baz=275,slow=74,SNR=22						
MSEY	**Mahe Island**	**13.78**	**282**	Pn	**Pn**	**04 21 38.2**	**-1.8**
RPSI	**Rantau Prapat**	**31.57**	**72**	P	**P**	**04 24 48.7**	**+1.3**
RPSI				IAmb	IAmb	04 24 51.1	
	comp=Z,11nm,1.5s						
KMBO	**Kilima Mbogo**	**32.31**	**280**	LR	LR	04 34 36.7	
	comp=Z,93nm,21.7s,baz=93,slow=30						
H01W3	**Cape Leeuwin H**	**49.41**	**130**	T	T	05 21 01.0	
	baz=292,slow=75,SNR=26						
H01W2	**Cape Leeuwin H**	**49.42**	**130**	T	T	05 21 01.3	
	baz=292,slow=75,SNR=26						
H01W1	**Cape Leeuwin H**	**49.43**	**130**	T	T	05 21 02.3	
	baz=292,slow=75,SNR=24						
KKAR	**Karatay Array**	**50.57**	**1**	P	**P**	**04 27 23.1**	**-0.1**
KKAR				IAmb	IAmb	04 27 36.8	
	comp=Z,2.3nm,1.3s						
MKAR	**Makanchi Array**	**55.52**	**11**	P	**P**	**04 27 59.2**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=186,slow=7.3,SNR=3.9						
FITZ	**Fitzroy Crossi**	**55.97**	**107**	LR	LR	04 49 57.1	
	comp=Z,54nm,18.7s,baz=246,slow=34						
BRTR	**Keskin Array B**	**57.41**	**328**	P	**P**	**04 28 15.2**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=153,slow=7.2,SNR=5.0						
ASAR	**Alice Springs**	**63.98**	**112**	P	**P**	**04 28 59.1**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=276,slow=5.6,SNR=4.2						
WRA	**Warramunga Arr**	**64.26**	**108**	P	**P**	**04 29 01.6**	**+1.3**
	comp=Z,1.1nm,1.0s,baz=278,slow=6.7,SNR=5.7						
SONM	**Songino Array**	**64.38**	**27**	P	**P**	**04 29 01.8**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=216,slow=7.1,SNR=2.3						
TLY	**Talaya**	**66.19**	**23**	LR	LR	04 56 49.2	
	comp=Z,79nm,21.6s,baz=335,slow=35						
STKA	**Stephens Creek**	**71.20**	**121**	LR	LR	05 00 20.3	
	comp=Z,139nm,18.4s,baz=201,slow=35						
YKA	**Yellowknife Ar**	**125.24**	**2**	PKP	**PKPdf**	**04 37 24.2**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=338,slow=2.1,SNR=4.5						
PDAR	**Pinedale Array**	**145.04**	**358**	PKPbc	**PKPbc**	**04 38 01.9**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=35,slow=3.3,SNR=2.8						
NVAR	**Mina Array Bea**	**148.69**	**11**	PKPbc	**PKiKP**	**04 38 13.9**	**-0.2**
	comp=Z,1.0nm,0.8s,baz=263,slow=1.5,SNR=9.5						

MAN 06 04:39:42.7, 7°.78N×124°.13E, h1km, mb4.5, ML3.4, MS3.2, Mindanao

*SJA **06** 04:40:55.5±0.4, 23°.29S×66°.71W, h249km±8km, ML3.1, MW3.4*
*IDC **06** 04:41:01.7±2.5, 22°.99S×66°.60W, h224km±28km, mb3.0/1, mb1 3.1/4, mb1mx2.9/26, mbtmp3.6/4, Error ellipse: s-maj=37.9km s-min=20.9km az=99.0*
ISC 06 04:40:58.9±0.9, 23°.22S±0°.07×66°.77W±0°.06, h200km, n10, σ1§37/13, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.25**	**90**	*i* P	**Pn**	**04 41 32.5**	**+1.4**
HJA				IAML		04 42 04.0	
	comp=Z,12nm,0.9s						
AZAP	**Zapla**	**1.86**	**123**	*i* P	**Pn**	**04 41 36.7**	**+0.5**
PB06	**IPOC Station P**	**2.63**	**281**	*i* P	**Pn**	**04 41 45.1**	**+0.6**
PB06				*i* S	**Sn**	**04 42 22.2**	**+2.2**
PB06				IAML		04 42 23.9	
	comp=Z,108nm,0.1s						
PB10	**IPOC Station P**	**3.49**	**264**	*i* P	**Pn**	**04 41 54.4**	**0.0**
PB10				IAML		04 42 47.3	
	comp=Z,28nm,0.3s						
PB14	**IPOC Station P**	**3.61**	**246**	*i* P	**Pn**	**04 41 55.7**	**-0.5**
PB14				*i* S	**Sn**	**04 42 40.3**	**-0.8**
PB14				IAML		04 42 40.5	
	comp=Z,32nm,0.1s						
LPAZ	**La Paz**	**7.01**	**349**	P	**Pn**	**04 42 41.3**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=168,slow=7.7,SNR=16						
LPAZ				S	**Sn**	**04 43 58.6**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=33,slow=17,SNR=1.7						
PLCA	**Paso Flores**	**17.75**	**189**	P	**Pn**	**04 44 55.9**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=28,slow=9.0,SNR=6.7						
BDFB	**Brasilia**	**19.21**	**70**	P	**P**	**04 45 07.4**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=234,slow=11,SNR=4.7						
TORD	**Torodi Ar. Bea**	**76.09**	**69**	P	**P**	**04 52 23.3**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=252,slow=5.7,SNR=5.6						
MKAR	**Makanchi Array**	**145.79**	**39**	PKPbc	**PKPdf**	**05 00 13.3**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=302,slow=3.2,SNR=2.6						

*NEIC **06** 05:15:50.5±2.5, 16°.00N±0°.08×94°.01W±0°.01, h90km±14km, Error ellipse: s-maj=11.8km s-min=1.5km az=183.0*
*MEX **06** 05:15:52.1±0.5, 15°.88N×94°.06W, h86km±9km, MD3.9*
ISC 06 05:15:50.1±1.1, 15°.93N±0°.07×94°.01W±0°.04, h88km, n12, σ1§11/22, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.80**	**106**	*e*P	**Pn**	**05 16 08.1**	**+0.7**
PCIG				*e*S	**Sn**	**05 16 21.2**	**+0.9**
PCIG		**0.80**	**106**		**Pn**	**05 16 08.1**	**+0.7**
PCIG					**Sn**	**05 16 21.2**	**+0.9**
CMIG	**Matias Romero**	**1.43**	**324**	*e*P	**Pn**	**05 16 16.1**	**+1.3**
CMIG				*i* S	**Sn**	**05 16 34.1**	**+0.6**
CMIG	**Matias Romero**	**1.43**	**324**		**Pn**	**05 16 16.1**	**+1.3**
CMIG					**Sn**	**05 16 34.1**	**+0.6**
HUIG	**Huatulco**	**2.02**	**266**	*i* P	**Pn**	**05 16 22.6**	**+0.2**
HUIG				*i* S	**Sn**	**05 16 46.4**	**-0.8**
HUIG	**Huatulco**	**2.02**	**266**		**Pn**	**05 16 22.6**	**+0.2**
HUIG					**Sn**	**05 16 46.4**	**-0.8**
VHO	**Vista Hermosa**	**2.85**	**294**	*i* P	**Pn**	**05 16 34.7**	**+1.0**
VHO				*i* S	**Sn**	**05 17 07.2**	**0.0**
PNIG	**Pinotepa**	**3.98**	**277**	*e*P	**Pn**	**05 16 49.7**	**+0.9**
PNIG				*i* S	**Sn**	**05 17 34.3**	**-0.1**
PNIG	**Pinotepa**	**3.98**	**277**		**Pn**	**05 16 49.7**	**+0.9**
PNIG					**Sn**	**05 17 34.3**	**-0.1**
TGUH	**Tegucigalpa,Un**	**6.77**	**105**	Sn	**Sn**	**05 18 44.1**	**+1.4**
TEIG	**Tepich**	**6.93**	**51**	Pn	**Pn**	**05 17 27.6**	**-1.4**
TEIG				Sn	**Sn**	**05 18 43.6**	**-2.8**
JTS	**Las Juntas de**	**10.45**	**121**	Pn	**Pn**	**05 18 16.2**	**-0.9**

IDC 06 05:20:50.1±2.4, 1°.66N×126°.81E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/35, mbtmp3.3/3, Error ellipse: s-maj=193.8km s-min=27.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.70**	**161**	P	P	05 25 54.2	+0.6
	0.6nm,0.4s,baz=340,slow=11,SNR=5.4						
ASAR	**Alice Springs**	**26.10**	**165**	P	P	05 26 25.2	-0.6
	0.3nm,0.4s,baz=348,slow=7.3,SNR=5.3						
MKAR	**Makanchi Array**	**59.30**	**326**	P	P	05 30 53.8	+0.1
	0.2nm,0.5s,baz=121,slow=7.3,SNR=3.6						

WEL 06 05:28:42.7, 36°S±11°×17°8E±1°.7, h235km±14km, M3.7/23, ML4.1/3, MLv3.7/23, Error ellipse: s-maj=0.0km s-min=0.0km az=92.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.80**	**181**	P	Pn	05 29 22.3	+0.2
MXZ				S	S	05 29 49.9	-3.1
HAZ	**Te Kaha**	**2.04**	**193**	P	Pn	05 29 24.2	0.0
PUZ	**Puketiti**	**2.31**	**182**	P	Pn	05 29 27.9	+1.0
PUZ				S	S	05 30 00.0	-1.7
KUZ	**Kuaotunu**	**2.34**	**244**	P	Pn	05 29 27.3	+0.1
MWZ	**Matawai**	**2.65**	**194**	P	Pn	05 29 31.7	+1.3
MWZ				S	S	05 30 06.8	-1.3
URZ	**Urewera**	**2.69**	**201**	P	Pn	05 29 31.7	+0.9
URZ				S	S	05 30 07.4	-1.2
TKGZ	**Te Karaka**	**2.71**	**188**	P	Pn	05 29 32.2	+1.3
TKGZ				S	S	05 30 08.9	-0.1
RAGZ	**Rawiri**	**2.83**	**195**	P	Pn	05 29 33.9	+1.4
RAGZ				S	S	05 30 10.8	-0.9
TARZ	**Mount Tarawera**	**2.88**	**210**	P	Pn	05 29 35.8	+2.8
RIGZ	**Rimuhau**	**2.98**	**189**	P	Pn	05 29 35.0	+1.0
MUGZ	**Murupara**	**2.99**	**204**	P	Pn	05 29 35.4	+1.3
MUGZ				S	S	05 30 14.1	-0.6
RTZ	**Ruatahuna**	**3.05**	**200**	P	Pn	05 29 35.5	+0.7
RTZ				S	S	05 30 14.7	-1.3
SNGZ	**Shannon Statio**	**3.12**	**195**	P	Pn	05 29 36.9	+1.3
SNGZ				S	S	05 30 16.4	-1.0
PRGZ	**Paritu Road**	**3.18**	**186**	P	Pn	05 29 37.2	+0.9
KNZ	**Kokohu**	**3.30**	**189**	P	Pn	05 29 38.1	+0.5
RAHZ	**Arahi**	**3.31**	**197**	P	Pn	05 29 39.0	+1.3
RAHZ				S	S	05 30 20.1	-1.0
MHGZ	**Mahia Peninsul**	**3.41**	**186**	P	Pn	05 29 40.2	+1.4
WHHZ	**Waihua**	**3.43**	**195**	P	Pn	05 29 40.4	+1.3
ARHZ	**Aropaoanui**	**3.66**	**197**	P	Pn	05 29 42.8	+1.1
MCHZ	**McNeill Hill**	**3.91**	**199**	P	Pn	05 29 45.8	+1.1
HIZ	**Hauiti**	**3.91**	**224**	P	Pn	05 29 48.6	+3.9
KRVZ	**Karewarewa**	**3.96**	**212**	P	Pn	05 29 47.3	+1.8
KWHZ	**Kaweka Forest**	**3.96**	**202**	P	Pn	05 29 46.3	+0.9
CKHZ	**Cape Kidnapper**	**4.02**	**194**	P	Pn	05 29 46.7	+0.7
NGZ	**Ngauruhoe**	**4.05**	**212**	P	Pn	05 29 48.1	+1.6
TUVZ	**Tukino**	**4.10**	**211**	P	Pn	05 29 48.3	+1.1
BHHZ	**Black Hill Sta**	**4.14**	**205**	P	Pn	05 29 47.8	+0.3
KRHZ	**Kereru**	**4.18**	**201**	P	Pn	05 29 48.4	+0.4
MOVZ	**Moawhango**	**4.18**	**209**	P	Pn	05 29 48.3	+0.3
KAHZ	**Kahuranaki**	**4.19**	**196**	P	Pn	05 29 48.9	+0.8
PNHZ	**Pukenui**	**4.48**	**202**	P	Pn	05 29 51.7	+0.1
TSZ	**Takapari Road**	**4.69**	**203**	P	Pn	05 29 54.0	-0.1
PRHZ	**Porangahau**	**4.70**	**196**	P	Pn	05 29 54.7	+0.4
DVHZ	**Dannevirke**	**4.85**	**200**	P	Pn	05 29 55.9	-0.2
POWZ	**Post Office Ro**	**5.05**	**203**	P	Pn	05 29 58.9	+0.3
PRWZ	**Pori Road**	**5.14**	**201**	P	Pn	05 30 00.0	+0.3
BFZ	**Birch Farm**	**5.19**	**198**	P	Pn	05 30 00.0	-0.2
MRZ	**Mangatainoka R**	**5.36**	**203**	P	Pn	05 30 01.5	-0.8
TIWZ	**Tintock**	**5.37**	**200**	P	Pn	05 30 02.4	-0.2
CPWZ	**Castlepoint**	**5.41**	**197**	P	Pn	05 30 03.7	+0.7
HOWZ	**Holdsworth Sta**	**5.59**	**203**	P	Pn	05 30 04.4	-0.9
OGWZ	**Otaki Gorge**	**5.63**	**205**	P	Pn	05 30 05.2	-0.7
TMWZ	**Te Maipa**	**5.68**	**199**	P	Pn	05 30 05.9	-0.5
KIW	**Kapiti Island**	**5.77**	**207**	P	Pn	05 30 06.6	-0.9
MTW	**Mount Morrison**	**5.83**	**202**	P	Pn	05 30 07.2	-1.2
CAW	**Cannon Point**	**5.93**	**205**	P	Pn	05 30 08.2	-1.3
TRWZ	**Traveller**	**6.00**	**199**	P	Pn	05 30 09.8	-0.7
PAWZ	**Paruwai Farm**	**6.06**	**201**	P	Pn	05 30 10.3	-0.9
MSWZ	**Moikau Station**	**6.15**	**202**	P	Pn	05 30 11.2	-1.1

NNC 06 05:39:09.9±6.0, 48°.18N×68°.86E, h0km, mb3.5, mpv3.2, 5C, Error ellipse: s-maj=101.7km s-min=38.1km az=172.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVA1	**Borovoye Array**	**4.95**	**11**	⇑P	Pn	05 40 27.0	+1.5
	1.4nm,0.4s						
AB31	**Akbulak array**	**6.00**	**284**	P	Pn	05 40 39.0	-0.9
	0.2nm,0.6s,baz=90,slow=6.5,SNR=9.0						
KURBB	**Kurchatov Arra**	**6.76**	**65**	⇑Pn	Pn	05 40 50.2	-0.2
	5.6nm,1.4s,baz=265,slow=12						
KURBB				⇑Lg	Lg	05 42 41.6	
	5.4nm,1.1s						
KURK	**Kurchatov**	**6.85**	**65**	⇑Pn	Pn	05 40 51.0	-0.5
	9.2nm,2.3s						
KURK				⇑Lg	Lg	05 42 44.9	
	6.0nm,1.7s						

IDC 06 05:50:18.5±6.7, 21°.68N×143°.02E, h320km±66km, mb3.1/7, mb1 3.2/7, mb1mx2.9/40, mbtmp3.8/7, Error ellipse: s-maj=69.3km s-min=19.4km az=85.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.44**	**324**	P	P	05 54 32.1	-0.4
	1.0nm,0.7s,baz=139,slow=8.1,SNR=4.3						
USRK	**Ussuriysk Ar.**	**24.25**	**340**	P	P	05 55 07.3	+0.1
	0.9nm,0.7s,baz=139,slow=13,SNR=3.1						
KLR	**Kul'dur**	**28.92**	**345**	P	P	05 55 48.9	+0.3
	1.5nm,0.5s,baz=192,slow=6.4,SNR=11						
WRA	**Warramunga Arr**	**42.23**	**192**	P	P	05 57 41.1	-0.1
	0.6nm,0.6s,baz=14,slow=8.6,SNR=5.4						
MKAR	**Makanchi Array**	**54.60**	**313**	P	P	05 59 14.9	+0.2
	0.2nm,0.5s,baz=86,slow=8.8,SNR=2.4						
ARCES	**ARCESS Array B**	**78.89**	**341**	P	P	06 01 46.5	0.0
	1.7nm,0.8s,baz=67,slow=9.8,SNR=3.9						
FINES	**FINESS Array B**	**83.13**	**334**	P	P	06 02 08.2	-0.5
	3.1nm,1.1s,baz=66,slow=3.5,SNR=6.2						

*ATH **06** 05:53:23.9, 39°.28N×28°.02E, h14km±2km, ML2.6/1, Error ellipse: s-maj=4.3km s-min=2.1km az=290.0*
*DDA **06** 05:53:25.0, 39°.27N×27°.93E, h7km±2km, ML2.3*
*ISK **06** 05:53:25.3, 39°.27N×27°.95E, h7km, ML2.5/19*
ISC 06 05:53:25.1±1.1, 39°.27N±0°.02×27°.95E±0°.02, h8km±9km, n39, σ0§57/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEP	**BALIKESIR_Sava**	**0.21**	**300**	*i* P	**Pg**	**05 53 29.2**	**-0.1**
STEP				*i* S	**Sg**	**05 53 32.5**	**+0.2**
BALB	**Balikesir**	**0.37**	**351**	PG	**Pb**	**05 53 33.3**	**-0.7**
BALB				SG	**Sb**	**05 53 39.5**	**-0.5**
AKS	**Akhisar**	**0.41**	**196**	PG	**Pg**	**05 53 33.6**	**+0.6**
AKS				SG	**Sb**	**05 53 39.7**	**-1.3**
DURS	**Dursunbey**	**0.52**	**51**	*i* P	**Pg**	**05 53 35.1**	**-0.1**
DURS				*i* S	**Sb**	**05 53 43.5**	**-0.8**
BALY	**Balya**	**0.54**	**331**	*i* P	**Pg**	**05 53 35.9**	**+0.4**
BALY				*i* S	**Sb**	**05 53 43.7**	**-1.0**
DEMI	**Demirci**	**0.64**	**111**	*i* P	**Pg**	**05 53 37.7**	**+0.4**
DEMI				*i* S	**Sb**	**05 53 47.1**	**-0.5**
ZEDA	**zmir-Bergama**	**0.75**	**246**	*i* P	**Pg**	**05 53 39.8**	**+0.3**
ZEDA				*i* S	**Sb**	**05 53 50.0**	**-0.7**
GONE	**Gonen-Balikesi**	**0.80**	**345**	PG	**Pb**	**05 53 41.4**	**+0.1**
GONE				SG	**Sb**	**05 53 52.7**	**+0.4**
DKL	**Dikili**	**0.84**	**257**	PG	**Pb**	**05 53 41.8**	**-0.1**
DKL				SG	**Sb**	**05 53 53.8**	**+0.4**
MANT	**Manisa**	**0.91**	**149**	*i* P	**Pb**	**05 53 43.3**	**0.0**
MANT				*i* S	**Sg**	**05 53 54.9**	**+0.4**
AYVA	**Ayvalik**	**0.98**	**273**	*i* P	**Pb**	**05 53 44.6**	**+0.3**
SHAP	**Saphane-Kutahy**	**1.02**	**104**	PG	**Pn**	**05 53 45.4**	**-0.4**
KCTX	**Karacabey (Bur**	**1.04**	**17**	PG	**Pb**	**05 53 45.7**	**+0.3**
KCTX				SG	**Sn**	**05 54 00.2**	**-0.6**
KNL	**Balıkesir**	**1.05**	**342**	*i* P	**Pg**	**05 53 44.5**	**-0.8**
KNL				*i* S	**Sb**	**05 53 59.8**	**+0.3**
KNL				IAML		05 54 02.0	
	comp=E,63nm,0.5s						
BLCB	**Balcova**	**1.14**	**219**	PN	**Pn**	**05 53 47.3**	**0.0**
BAYC	**CANAKKALE_Bayr**	**1.19**	**294**	*i* P	**Pg**	**05 53 47.1**	**-0.8**
BAYC				*i* S	**Sb**	**05 54 03.5**	**+0.1**
BAYC				IAML		05 54 05.0	
	comp=N,61nm,0.5s						
KRBG	**Karabiga-Canak**	**1.23**	**336**	PN	**Pg**	**05 53 48.9**	**+0.2**
ULDT	**Uludag**	**1.26**	**46**	*i* P	**Pg**	**05 53 50.4**	**+1.1**
ULDT				*i* S	**Sn**	**05 54 06.7**	**+0.2**
ULDT				IAML		05 54 10.0	
	comp=E,80nm,0.5s						
PRK	**Paraskevi**	**1.31**	**269**	P	**Pn**	**05 53 49.1**	**-0.6**
PRK				S	**Sn**	**05 54 08.3**	**+1.0**
PRK				AML	AML	05 54 15.2	
	comp=N,320μm,0.8s						
PRK				AML	AML	05 54 15.7	
	comp=E,422μm,0.6s						
MDNY	**Mudanya-Bursa**	**1.31**	**33**	PN	**Pg**	**05 53 50.2**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**1.32**	**182**	PN	**Pb**	**05 53 50.2**	**-0.1**
MRMT	**Marmara Adasi**	**1.36**	**348**	PN	**Pg**	**05 53 51.3**	**+0.1**
EZN	**Ezine**	**1.38**	**294**	PN	**Pg**	**05 53 51.4**	**-0.1**
IGD	**Bursa**	**1.38**	**44**	*i* P	**Pg**	**05 53 51.5**	**-0.1**
URLA	**Izmir**	**1.40**	**230**	PN	**Pb**	**05 53 51.4**	**-0.1**
LPK	**Lapseki**	**1.43**	**320**	PN	**Pb**	**05 53 52.1**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.54**	**337**	PN	**Pb**	**05 53 53.7**	**-0.2**
BOZC	**Bozcaada**	**1.58**	**292**	PN	**Pb**	**05 53 54.2**	**-0.3**
BOZC	**Bozcaada**	**1.58**	**292**	*i* P	**Pb**	**05 53 54.0**	**-0.5**
BOZC				*i* S	**Sn**	**05 54 13.8**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.60**	**315**	PN	**Pb**	**05 53 54.6**	**-0.3**
SIGR	**SIGRI**	**1.63**	**269**	P	**Pb**	**05 53 55.4**	**-0.1**
SIGR	**SIGRI**	**1.63**	**269**	PN	**Pb**	**05 53 55.1**	**-0.3**
YLV	**Yalova**	**1.69**	**40**	PN	**Pb**	**05 53 56.1**	**-0.4**
CHOS	**Chios island**	**1.73**	**240**	P	**Pn**	**05 53 56.1**	**+0.6**
CHOS				S	**Sg**	**05 54 20.0**	**-0.6**
ERIK	**Erikli-Kesan**	**1.78**	**322**	PN	**Pb**	**05 53 57.2**	**-0.8**
SMG	**Samos**	**1.79**	**210**	P	**Pb**	**05 53 57.3**	**-0.9**
GADA	**Gvkgeada**	**1.83**	**301**	PN	**Pn**	**05 53 57.8**	**+0.9**
ALN	**Alexandroupoli**	**2.19**	**319**	P	**Pn**	**05 54 02.4**	**+0.7**
ALN				S	**Sn**	**05 54 30.3**	**+1.3**
SMTH	**Samothraki Isl**	**2.22**	**303**	P	**Pn**	**05 54 03.0**	**+0.7**

*SJA **06** 05:53:26.5±0.7, 24°.26S×67°.20W, h211km±9km, ML3.5, MW3.8*
*IDC **06** 05:53:28.9±1.0, 24°.25S×67°.05W, h166km±10km, mb3.7/5, mb1 3.8/12, mb1mx3.6/29, mbtmp4.2/12, Error ellipse: s-maj=15.7km s-min=13.2km az=59.0*
*NEIC **06** 05:53:28.1±2.3, 24°.29S±0°.06×67°.05W±0°.09, h162km±6km, mb4.5/6, Md4.4(SJA), Error ellipse: s-maj=12.1km s-min=8.2km az=81.0*
*VAO **06** 05:53:30.9±0.4, 24°.10S×67°.16W, h196km±5km, mb4.2*
*GUC **06** 05:53:30.9±0.3, 24°.27S×67°.63W, h219km±7km, ML4.6*
ISC 06 05:53:28.6±0.6, 24°.28S±0°.04×67°.25W±0°.04, h180km±6km, n90, σ1§55/115, mb4.1/6, 10C-2D, Chile-Argentina border region

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

PB06	**IPOC Station P**	**2.65**	**306**	⇑	*i* P	**Pn**	**05 54 14.9**	**+1.7**
PB06					*i* S	**Sn**	**05 54 48.0**	**+0.1**
PB06					IAML		05 54 50.1	
	comp=N,2µm,0.2s							
PB14	**IPOC Station P**	**2.90**	**263**	⇑	*e* P	**Pn**	**05 54 17.2**	**+0.9**
PB14					*i* S	**Sn**	**05 54 52.5**	**-0.9**
PB14	**IPOC Station P**	**2.90**	**263**		*i* P	**Pn**	**05 54 17.1**	**+0.8**
PB14					IAML		05 54 58.7	
	comp=Z,299nm,0.5s							
AHML	**Horco Molle**	**3.03**	**146**		*i* P	**Pn**	**05 54 17.6**	**-0.1**
AHML					IAML		05 54 58.4	
	comp=Z,26nm,0.7s							
PB05	**IPOC Station P**	**3.06**	**297**	⇑	*e* P	**Pn**	**05 54 19.2**	**+1.1**
PB05					*i* S	**Sn**	**05 54 55.5**	**-1.2**
PB05					IAML		05 54 58.2	
	comp=E,636nm,0.6s							
PB09	**IPOC Station P**	**3.08**	**323**	⇑	*i* P	**Pn**	**05 54 20.7**	**+2.3**
PB09					*i* S	**Sn**	**05 54 58.5**	**+1.2**
PB09					IAML		05 54 59.9	
	comp=N,672nm,0.5s							
PB10	**IPOC Station P**	**3.12**	**283**	⇑	*e* P	**Pn**	**05 54 19.2**	**+0.4**
PB10					*i* S	**Sn**	**05 54 55.8**	**-2.0**
PB10	**IPOC Station P**	**3.12**	**283**			**Pn**	**05 54 20.5**	**+1.7**
PB10					Sn	**Sn**	**05 54 57.9**	**0.0**
PB10	**IPOC Station P**	**3.12**	**283**		*i* P	**Pn**	**05 54 18.9**	**+0.1**
PB10					IAML		05 55 02.3	
	comp=Z,239nm,0.2s							
PB03	**IPOC Station P**	**3.20**	**313**	⇑	*e* P	**Pn**	**05 54 21.1**	**+1.2**
PB03					*i* S	**Sn**	**05 54 58.8**	**-1.1**
PB03					IAML		05 55 00.4	
	comp=E,1µm,0.3s							
PB04	**IPOC Station P**	**3.30**	**305**	⇑	*e* P	**Pn**	**05 54 21.9**	**+0.8**
PB04					*i* S	**Sn**	**05 55 00.8**	**-1.2**
PB04					IAML		05 55 04.8	
	comp=N,964nm,0.4s							
PB04	**IPOC Station P**	**3.30**	**305**			**Pn**	**05 54 22.2**	**+1.1**
PB04					Sn	**Sn**	**05 55 01.5**	**-0.5**
PB08	**IPOC Station P**	**4.48**	**336**	⇑	*e* P	**Pn**	**05 54 37.6**	**+1.3**
PB08					*i* S	**Sn**	**05 55 28.8**	**-0.5**
PB11	**IPOC Station P**	**5.02**	**333**			**Pn**	**05 54 42.8**	**-0.3**
PB11					Sn	**Sn**	**05 55 38.6**	**-2.9**
ACLC	**CERRO LA CRUZ**	**5.13**	**177**		*i* P	**Pn**	**05 54 44.0**	**-0.4**
ACLC					IAML		05 55 44.2	
	comp=Z,23nm,0.4s							
MNMC	**Minye Minye**	**5.57**	**336**			**Pn**	**05 54 50.0**	**-0.3**
MNMC					Sn	**Sn**	**05 55 53.0**	**-1.5**
GO04	**Tololo Observa**	**6.67**	**208**			**Pn**	**05 55 02.8**	**-1.8**
GO04					Sn	**Sn**	**05 56 18.5**	**-1.7**
CFA	**Coronel Fontan**	**7.35**	**187**		P	**Pn**	**05 55 13.7**	**+0.3**
	comp=Z,1.4nm,0.3s,baz=279,slow=12,SNR=50							
CFA					S	**Sn**	**05 56 32.1**	**-4.1**
	comp=Z,3.1nm,0.3s,baz=103,slow=22,SNR=7.9							
LPAZ	**La Paz**	**8.00**	**354**		P	**Pn**	**05 55 23.4**	**+0.9**
	comp=Z,2.6nm,0.3s,baz=127,slow=5.7,SNR=54							
LPAZ					S	**Sn**	**05 56 50.5**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=341,slow=18,SNR=6.7							
LPAZ	**La Paz**	**8.00**	**354**		*e* P	**Pn**	**05 55 23.1**	**+0.6**
LPAZ	**La Paz**	**8.00**	**354**			**Pn**	**05 55 23.1**	**+0.6**
LPAZ						**Sn**	**05 56 51.2**	**-1.4**
CPUP	**Villa Florida**	**9.20**	**105**		P	**Pn**	**05 55 36.5**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=283,slow=12,SNR=12							
CPUP	**Villa Florida**	**9.20**	**105**			**Pn**	**05 55 35.9**	**-1.9**
ROC1	**El Roble**	**9.27**	**200**		Pn	**Pn**	**05 55 36.5**	**-2.3**
ROC1					Sn	**Sn**	**05 57 20.1**	**-2.3**
SIV	**San Ignacio**	**10.08**	**36**		P	**Pn**	**05 55 47.4**	**-1.9**
	comp=Z,1.7nm,0.3s,baz=226,slow=13,SNR=51							
SIV					S	Sn	05 57 29.2	-12
	comp=Z,0.2nm,0.3s,baz=229,slow=17,SNR=6.4							
ITQB	**Itaqui**	**10.89**	**122**		*e* P	**P**	**05 56 02.4**	**-4.6**
AQDB	**Aquidauana**	**11.33**	**73**		*e* P	**Pn**	**05 56 06.6**	**+1.1**
GO05	**Huala**	**11.44**	**200**		Pn	**Pn**	**05 56 08.4**	**+1.5**
PP1B	**Ponte de Pedra**	**13.32**	**62**		*e* P	**Pn**	**05 56 28.7**	**-2.3**
TRCB	**Terra Rica**	**13.49**	**87**		*e* P	**Pn**	**05 56 32.2**	**-0.8**
SALV	**Santo Antonio**	**13.68**	**55**		*e* P	**Pn**	**05 56 33.9**	**-1.5**
PTGB	**Pitanga**	**13.83**	**95**		*e* P	**P**	**05 56 41.6**	**+1.6**
ITAB	**Concordia**	**13.94**	**105**		*e* P	**P**	**05 56 40.2**	**-0.9**
PLTB	**Pedras Altas**	**14.16**	**125**		*e* P	**P**	**05 56 43.7**	**+0.2**
C2SB	**Chapadao do Su**	**14.48**	**71**		*e* P	**P**	**05 56 45.4**	**-1.8**
OGAUY	**Aigu**	**14.82**	**135**		*e* P	**P**	**05 56 52.2**	**+1.5**
PCMB	**Pacaembu**	**14.96**	**83**		*e* P	**Pn**	**05 56 50.1**	**-1.3**
CNLB	**Canela**	**15.47**	**112**		*e* P	**P**	**05 56 57.2**	**-0.9**
SAML	**Samuel**	**15.73**	**15**		*e* P	**Pn**	**05 57 00.2**	**-0.5**
SAML	**Samuel**	**15.73**	**15**	Pn		**P**	**05 56 59.2**	**-1.8**
FRTB	**Fartura**	**16.21**	**90**		*e* P	**Pn**	**05 57 06.6**	**0.0**
ITRB	**Iturama**	**16.31**	**77**		*e* P	**Pn**	**05 57 08.5**	**+0.8**
PLCA	**Paso Flores**	**16.64**	**189**		P	**Pn**	**05 57 13.2**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=36,slow=9.6,SNR=13							
PLCA	**Paso Flores**	**16.64**	**189**		*e* P	**Pn**	**05 57 13.4**	**+1.8**
PLCA	**Paso Flores**	**16.64**	**189**			**Pn**	**05 57 13.1**	**+1.6**
PLCA					Pn	**Pn**	**05 57 13.3**	**+1.6**
PLCA					IAmb	IAmb	05 57 21.4	
	comp=Z,13nm,0.6s							
ARAG	**Araguaiana, MT**	**16.82**	**62**		*e* P	**Pn**	**05 57 13.2**	**-0.6**
CLDB	**Colider**	**17.21**	**41**		*e* P	**P**	**05 57 16.2**	**-1.2**
BB19B	**Bebedouro**	**17.57**	**83**		*e* P	**Pn**	**05 57 22.0**	**-0.8**
SPB	**Sao Paulo**	**18.13**	**92**		*e* P	**Pn**	**05 57 27.8**	**-1.5**
RCLB	**Rio Claro- Sao**	**18.20**	**88**		*e* P	**Pn**	**05 57 28.2**	**-2.0**
VAO	**Valinhos**	**18.63**	**90**		*e* P	**Pn**	**05 57 32.6**	**-2.7**
IPMB	**Ipameri, GO**	**18.82**	**74**		*e* P	**Pn**	**05 57 35.0**	**-2.6**
BDFB	**Brasilia**	**20.00**	**68**		P	**P**	**05 57 47.7**	**+0.1**
	comp=Z,3.6nm,0.3s,baz=243,slow=10,SNR=71							
BDFB	**Brasilia**	**20.00**	**68**		P	**P**	**05 57 47.6**	**-0.1**
PMNB	**Patos De Minas**	**20.19**	**78**		*e* P	Pn	05 57 50.3	-3.7
ESAR	**Angra dos Reis**	**20.93**	**91**		*e* P	**P**	**05 57 58.3**	**+0.9**
JANB	**Januaria**	**23.43**	**71**		*e* P	**P**	**05 58 21.7**	**-0.2**
SMTB	**Santa Maria do**	**24.24**	**54**		*e* P	**P**	**05 58 29.5**	**+0.3**
BSFB	**Barra de Sao F**	**25.12**	**83**		*e* P	**P**	**05 58 36.3**	**-0.9**
NBIT	**Itapeh - BA**	**27.75**	**76**		*e* P	**P**	**05 59 00.5**	**-0.2**
NBPN	**Ponto Novo - B**	**28.97**	**67**		*e* P	**P**	**05 59 10.7**	**-0.8**
USHA	**Ushuaia**	**30.53**	**181**		P	**P**	**05 59 26.3**	**+1.6**
	comp=Z,6.5nm,0.8s,baz=324,slow=8.7,SNR=2.6							
NBLA	**Lagarto - SE**	**30.94**	**70**		*e* P	**P**	**05 59 27.5**	**-1.4**
NBTA	**Tacaratu-PE**	**31.66**	**67**		*e* P	**P**	**05 59 34.1**	**-1.1**
NBPS	**Pedro II - PI**	**31.75**	**56**		*e* P	**P**	**05 59 35.4**	**-0.7**
NBMA	**Muriti-CE**	**32.04**	**63**		*e* P	**P**	**05 59 37.9**	**-0.7**
NBPB	**Pedra_Branca-C**	**32.46**	**59**		*e* P	**P**	**05 59 41.6**	**-0.6**
NBAN	**Anadia - AL**	**32.89**	**69**		*e* P	**P**	**05 59 45.6**	**-0.4**
QSPA	**South Pole Qui**	**65.92**	**180**		P	**P**	**06 03 56.8**	**+1.6**
QSPA					IAmb	IAmb	06 03 58.5	
	comp=Z,5.8nm,0.6s							
DBIC	**Dimbokro**	**68.10**	**72**		P	**P**	**06 04 08.7**	**-0.8**
	comp=Z,1.6nm,0.6s,baz=223,slow=7.6,SNR=5.3							
DBIC	**Dimbokro**	**68.10**	**72**		P	**P**	**06 04 09.4**	**-0.1**
DBIC					IAmb	IAmb	06 04 11.9	
	comp=Z,7.4nm,1.3s							
SYO	**Syowa Base**	**73.37**	**159**	⇓	*e* P	**P**	**06 04 41.4**	**+1.0**
SYO	**Syowa Base**	**73.37**	**159**	⇓	*e* PcP	**PcP**	**06 04 53.0**	**-2.7**
TORD	**Torodi Ar. Bea**	**76.88**	**69**		P	**P**	**06 05 02.2**	**+0.8**
	comp=Z,1.7nm,0.4s,baz=253,slow=5.3,SNR=26							
PDAR	**Pinedale Array**	**77.27**	**329**		P	**P**	**06 05 05.1**	**+1.8**
	comp=Z,0.1nm,0.4s,baz=133,slow=8.7,SNR=2.5							
YKA	**Yellowknife Ar**	**94.31**	**340**		P	**P**	**06 06 29.4**	**+2.4**
	comp=Z,0.3nm,0.5s,baz=135,slow=4.2,SNR=8.9							
ASAR	**Alice Springs**	**128.11**	**205**		PKP	**PKiKP**	**06 12 16.1**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=146,slow=1.8,SNR=14							
WRA	**Warramunga Arr**	**131.27**	**207**		PKP	**PKiKP**	**06 12 22.6**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=161,slow=1.6,SNR=12							
ZALV	**Zalesovo Beam**	**143.75**	**28**		PKP	**PKiKP**	**06 12 42.7**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=307,slow=4.9,SNR=3.8							
KSH	**Kashi**	**145.54**	**55**		PKPbc	**PKPab**	**06 12 44.7**	**-2.0**
KSH					pPKP	pPKPdf	06 13 40.9	+6.9
KSH					PP	**PP**	**06 16 11.7**	**+3.5**
KSH					AMB	AMB		
	comp=Z,570nm,7.0s							
MKAR	**Makanchi Array**	**146.88**	**40**		PKPbc	**PKiKP**	**06 12 50.4**	**-1.7**
	comp=Z,0.5nm,0.6s,baz=294,slow=4.2,SNR=6.9							

*IDC **06** 05:59:24.5±1.6, 4.°49N×126.°13E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.6/34, mbtmp3.8/5, Error ellipse: s-maj=106.5km s-min=21.6km az=67.0*
*DJA **06** 05:59:33.3±0.5, 5.°N±4.°×12.°7E±.°, h122km±6km, M4.3/12, mB4.9/5, mb4.3/7, MLv4.5/12, Mw(mB)4.2/5*
*MAN **06** 05:59:38.4, 4.°44N×126.°05E, h11km, mb4.8, ML3.7, MS3.6*
ISC 06 05:59:35.2±1.2, 4.°5N±0.°1×126.°6E±0.°1, h85km, n16, σ1°56/16, mb3.9/5, 2C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GSPH	**General Santos**	**2.27**	**316**	⇑	*ip*	**Pn**	**06 00 12.5**	**+1.5**
KCP	**Kidapawan**	**2.92**	**330**	⇑	*i* P	**Pn**	**06 00 22.6**	**+2.9**
KCP					*i* S	Sn	06 01 03.0	+9.0

TNTI	**Ternate**	**3.75**	**167**		P	**Pn**	**06 00 31.4**	**+0.6**
KMSI	**Cibinong**	**4.63**	**214**		P	**Pn**	**06 00 44.8**	**+2.0**
MRSI	**Marisa**	**6.07**	**229**		P	**Pn**	**06 01 03.4**	**+1.0**
	0.7nm2µm187nm,0.6s							
SANI	**Sanana**	**6.49**	**185**		P	**Pn**	**06 01 07.7**	**-0.4**
	0.3nm1µm27nm,0.6s							
LUWI	**Luwuk**	**6.64**	**215**		P	**Pn**	**06 01 11.5**	**+1.3**
	0.2nm58nm,0.7s							
APSI	**Ampana**	**7.24**	**223**		P	**Pn**	**06 01 19.0**	**+0.6**
	0.1nm752nm29nm,0.6s							
NLAI	**Namlea**	**7.66**	**176**		P	**Pn**	**06 01 25.2**	**+1.1**
MPSI	**Mapaga**	**7.80**	**239**		P	**Pn**	**06 01 26.3**	**+0.2**
	0.1nm5.0nm,0.6s							
SPSI	**Sidrap Palu**	**10.76**	**219**		P	**Pn**	**06 02 06.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**22.43**	**182**		P	**P**	**06 04 24.7**	**-2.5**
	1.6nm,0.8s,baz=353,slow=9.7,SNR=3.1							
WRA	**Warramunga Arr**	**25.43**	**163**		P	**P**	**06 04 55.4**	**+0.3**
	3.0nm,0.6s,baz=341,slow=10,SNR=19							
ASAR	**Alice Springs**	**28.86**	**166**		P	**P**	**06 05 26.4**	**+0.5**
	0.3nm,0.6s,baz=349,slow=7.5,SNR=7.5							
STKA	**Stephens Creek**	**38.87**	**159**		P	**P**	**06 06 53.5**	**+1.1**
	1.5nm,0.3s,baz=337,slow=7.8,SNR=6.6							
MKAR	**Makanchi Array**	**56.86**	**325**		P	**P**	**06 09 09.1**	**-2.1**
	0.4nm,0.4s,baz=120,slow=8.0,SNR=14							

*IDC **06** 06:16:29.1±2.1, 2.°24N×128.°20E, h150km±20km, mb3.8/10, mb1 3.9/11, mb1mx3.6/38, mbtmp4.2/11, MS4.0/1, Ms1 4.0/1, ms1mx2.6/37, Error ellipse: s-maj=41.6km s-min=9.5km az=71.0*
*NEIC **06** 06:16:29.3±1.7, 2.°18N±0.°09×128.°11E±0.°09, h151km±8km, mb4.3/14, Error ellipse: s-maj=14.6km s-min=11.2km az=49.0*
*MAN **06** 06:16:30.3, 2.°67N×128.°34E, h227km, mb5.1, ML4.0, MS4.1*
*DJA **06** 06:16:30.6±0.4, 2.°N±3.°×12.°8E±.°, h122km±5km, M4.4/17, mB4.9/4, mb4.4/9, MLv4.4/2, MLv4.3/17, Mw(mB)4.2/4, Mwp7.1/1*
ISC 06 06:16:27.8±0.6, 2.°24N±0.°05×128.°22E±0.°06, h134km, n44, σ1°81/53, mb4.2/14, 2C, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.69**	**210**		P	**Pn**	**06 17 00.1**	**+1.7**
TNTI	**Ternate**	**1.69**	**210**			**Pn**	**06 17 00.4**	**+2.0**
TNTI					Sn	**Sn**	**06 17 22.5**	**+0.8**
LBMI	**Labuha**	**2.95**	**194**		P	**Pn**	**06 17 14.4**	**+0.5**
LBMI					S	**Sn**	**06 17 49.8**	**+0.3**
SWI	**Sorong**	**4.33**	**135**		P	**Pn**	**06 17 33.8**	**+1.8**
SWI					S	**Sn**	**06 18 24.7**	**+2.7**
SIJI	**Sorong**	**4.34**	**135**		P	**Pn**	**06 17 34.6**	**+2.4**
	11nm,0.3s,baz=332,slow=8.2,SNR=16							
SIJI					S	**Sn**	**06 18 24.7**	**+2.5**
	baz=221,slow=19,SNR=2.8							
KMSI	**Cibinong**	**4.55**	**249**		P	**Pn**	**06 17 36.8**	**+1.8**
KMSI					S	**Sn**	**06 18 29.0**	**+1.8**
DDMP	**Don Marcelino,**	**4.58**	**327**		*e* P	**Pn**	**06 17 36.7**	**+1.3**
DDMP					*e* S	**Sn**	**06 18 31.9**	**+1.7**
SANI	**Sanana**	**4.81**	**208**		P	**Pn**	**06 17 39.1**	**+0.6**
NLAI	**Namlea**	**5.56**	**192**		P	**Pn**	**06 17 50.3**	**+1.8**
	0.2nm48nm,0.8s							
MSAI	**Masohi**	**5.59**	**173**		P	**Pn**	**06 17 50.0**	**+1.0**
	0.1nm1µm11nm,0.5s							
SKMP	**Bagumbayan, Su**	**5.61**	**319**		*e* P	**Pn**	**06 17 51.4**	**+2.2**
SKMP					*e* S	**Sn**	**06 18 53.1**	**+0.4**
KCP	**Kidapawan**	**5.67**	**327**	⇑	*i* P	**Pn**	**06 17 52.7**	**+2.6**
AAI	**Ambon**	**5.89**	**180**		P	**Pn**	**06 17 55.4**	**+2.5**
	0.3nm93nm,0.8s							
CTBH	**Cotabato--PC H**	**6.34**	**321**	⇑	*i* P	**Pn**	**06 17 59.8**	**+0.9**
LUWI	**Luwuk**	**6.35**	**239**		P	**Pn**	**06 17 59.9**	**+0.8**
	0.4nm6µm18nm,0.7s							
MRSI	**Marisa**	**6.52**	**254**		P	**Pn**	**06 18 03.7**	**+2.4**
	0.4nm85nm,0.6s							
FAKI	**Fak Fak**	**6.52**	**142**		P	**Pn**	**06 18 04.0**	**+2.6**
	0.5nm1µm134nm,1.1s							
FAKI	**Fak Fak**	**6.52**	**142**			**Pn**	**06 18 04.6**	**+3.2**
MTN	**Manton Dam**	**15.26**	**169**		Pn	**Pn**	**06 19 56.5**	**+0.2**
MTN					IAmb	IAmb	06 20 01.6	
	comp=Z,23nm,1.4s							
KNRA	**Kununurra**	**17.81**	**178**		P	**Pn**	**06 20 27.2**	**-0.2**
KNRA					IAmb	IAmb	06 20 27.7	
	comp=Z,15nm,0.5s							
FITZ	**Fitzroy Crossi**	**20.37**	**187**		P	**P**	**06 20 53.4**	**-0.7**
	comp=Z,1.7nm,0.4s,baz=8.5,slow=9.4,SNR=9.3							
FITZ	**Fitzroy Crossi**	**20.37**	**187**		P	**P**	**06 20 53.3**	**-0.7**
WRA	**Warramunga Arr**	**22.85**	**165**		P	**P**	**06 21 19.5**	**-0.3**
	comp=Z,11nm,0.3s,baz=344,slow=10,SNR=87							
WRA					S	**S**	**06 25 18.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=338,slow=19,SNR=3.2							
WR0	**Warramunga Arr**	**22.92**	**165**		P	**P**	**06 21 14.1**	**-6.3**
WR0						**P**	**06 21 20.4**	**+0.1**
WR0					IAmb	IAmb	06 21 21.8	
	comp=Z,6.8nm,0.6s							
AS31	**Alice Springs**	**26.34**	**168**		P	**P**	**06 21 50.6**	**-0.8**
ASAR	**Alice Springs**	**26.34**	**168**		P	**P**	**06 21 51.0**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=352,slow=7.8,SNR=58							
ASAR					PcP	**PcP**	**06 25 13.6**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=356,slow=2.2,SNR=17							
ASAR					S	**S**	**06 26 10.4**	**-4.3**
	comp=Z,0.3nm,0.8s,baz=351,slow=20,SNR=3.0							
KSRS	**Korea Array**	**35.04**	**360**		P	**P**	**06 23 07.2**	**-0.6**
	comp=Z,1.1nm,0.5s,baz=182,slow=9.7,SNR=3.9							
BBOO	**Buckleboo**	**35.64**	**169**		P	**P**	**06 23 12.5**	**-0.4**
STKA	**Stephens Creek**	**36.23**	**161**		P	**P**	**06 23 17.9**	**0.0**
	comp=Z,4.2nm,0.5s,baz=351,slow=7.8,SNR=22							
STKA	**Stephens Creek**	**36.23**	**161**		P	**P**	**06 23 17.8**	**-0.2**
ARMA	**Armidale**	**39.42**	**147**		P	**P**	**06 23 45.5**	**+0.6**
TOO	**Toolangi**	**42.73**	**160**		P	**P**	**06 24 13.2**	**+1.4**
SONM	**Songino Array**	**49.18**	**341**		P	**P**	**06 25 02.8**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=148,slow=7.9,SNR=3.7							
MK31	**Makanchi Array**	**59.62**	**325**		P	**P**	**06 26 18.1**	**+0.4**
MK31					IAmb	IAmb	06 26 18.8	
	comp=Z,1.1nm,0.5s							
MKAR	**Makanchi Array**	**59.62**	**325**		P	**P**	**06 26 18.5**	**+0.8**
	comp=Z,1.9nm,0.4s,baz=118,slow=8.5,SNR=52							
RPZ	**Rata Peaks**	**59.70**	**145**		LR	LR	06 51 16.5	
	comp=Z,116nm,20.2s,baz=50,slow=35							
MAKZ	**Makanchi**	**59.81**	**325**		P	**P**	**06 26 19.7**	**+0.7**
MAKZ					IAmb	IAmb	06 26 20.3	
	comp=Z,2.1nm,0.5s							
KSH	**Kashi**	**60.14**	**315**		P	P	06 26 27.5	+5.9
KSH					pP	pwP	06 26 57.7	+0.8
KSH					pmax	pmax		
	comp=Z,300nm,6.5s							
ZALV	**Zalesovo Beam**	**62.58**	**333**		P	**P**	**06 26 35.8**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=127,slow=6.4,SNR=2.9							
KURK	**Kurchatov**	**63.79**	**327**		P	**P**	**06 26 44.8**	**-0.7**
KURK					IAmb	IAmb	06 26 47.1	
	comp=Z,3.4nm,0.9s							
ABKAR	**Akbulak array**	**74.24**	**321**		P	**P**	**06 27 49.9**	**-0.2**
ABKAR					IAmb	IAmb	06 27 53.8	
	comp=Z,5.1nm,1.5s							
ARCES	**ARCESS Array B**	**92.35**	**340**		P	**P**	**06 29 21.4**	**-1.4**
	comp=Z,2.3nm,0.7s,baz=76,slow=5.1,SNR=7.8							
FINES	**FINESS Array B**	**93.84**	**332**		P	**P**	**06 29 27.8**	**-1.9**
	comp=Z,0.8nm,0.9s,baz=57,slow=7.0,SNR=4.5							
TORD	**Torodi Ar. Bea**	**124.79**	**288**		PKP	**PKPdf**	**06 35 12.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=76,slow=2.1,SNR=5.8							

*IDC **06** 06:20:29.7±1.1, 36.°85N×143.°44E, h0km, mb3.4/6, mb1 3.7/9, mb1mx3.5/37, mbtmp3.5/9, ML3.4/3, Error ellipse: s-maj=26.8km s-min=21.0km az=128.0*
*JMA **06** 06:20:33.7±0.2, 37.°01N×143.°20E, h64km, M3.4*
ISC 06 06:20:34.5±2.5, 37.°02N±0.°06×143.°3E±0.°1, h41km±30km, n25, σ1°08/36, mb3.5/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakikobu**	**1.91**	**313**		*e*S	**Sn**	**06 21 26.9**	**-0.5**
JFK	**Kawauchi**	**1.93**	**281**		*e*S	**Sn**	**06 21 27.1**	**-0.7**
ONAJ	**Iwakimizuishiy**	**1.96**	**273**		P	**Pn**	**06 21 05.1**	**-0.2**
ONAJ					*e*S	**Sn**	**06 21 28.1**	**-0.6**
JMST	**Minamisoumatoc**	**2.01**	**291**		P	**Pn**	**06 21 05.5**	**-0.3**
JMST					S	**Sn**	**06 21 29.3**	**-0.4**
JIO	**Ouri**	**2.08**	**314**		P	**Pn**	**06 21 06.5**	**-0.3**
JIO					S	**Sn**	**06 21 30.9**	**-0.5**
JMM	**Marumori**	**2.13**	**294**		P	**Pn**	**06 21 07.3**	**-0.2**
JMM					*e*S	**Sn**	**06 21 32.7**	**0.0**
JFT	**Otama**	**2.38**	**283**		P	**Pn**	**06 21 11.6**	**+0.7**
JFT					S	**Sn**	**06 21 39.4**	**+0.6**
JMK	**Ichinoseki**	**2.51**	**321**		P	**Pn**	**06 21 12.7**	**0.0**
JMK					*e*S	**Sn**	**06 21 41.4**	**-0.6**

JOM	**Ohasama**	**2.89**	**328**		P	**Pn**	**06 21 18.4**	**+0.4**
JOM					*e*S	**Sn**	**06 21 51.8**	**+0.3**
JYK	**Kaneyama**	**2.97**	**311**		P	**Pn**	**06 21 19.6**	**+0.6**
BSO1	**Boso 1**	**3.00**	**219**		P	**Pn**	**06 21 18.4**	**-0.6**
BSO1					*e*S	**Sn**	**06 21 53.8**	**+0.4**
JAG	**Ashikaga**	**3.11**	**260**		P	**Pn**	**06 21 20.9**	**0.0**
JAG					*e*S	**Sn**	**06 21 56.5**	**-0.3**
JRY	**Ryogami san**	**3.64**	**255**		P	**Pn**	**06 21 27.9**	**-0.4**
JRY					*e*S	**Sn**	**06 22 07.8**	**-2.3**
JOD2	**Odawara 2**	**3.80**	**244**		P	**Pn**	**06 21 29.9**	**-0.6**
JOD2					S	**Sn**	**06 22 12.2**	**-1.7**
MJAR	**Matsushiro Arr**	**4.07**	**265**		Pn	**Pn**	**06 21 35.3**	**+1.0**
	0.3nm,0.3s,baz=74,slow=13,SNR=14							
MJAR					Sn	**Sn**	**06 22 24.4**	**+3.7**
	0.3nm,0.3s,baz=110,slow=25,SNR=4.9							
MAT	**Matsushiro**	**4.08**	**265**		P	**Pn**	**06 21 35.2**	**+0.9**
MAT					S	**Sn**	**06 22 21.7**	**+1.0**
JYN	**Shimob**	**4.09**	**250**		P	**Pn**	**06 21 35.0**	**+0.4**
JYN					*e*S	**Sn**	**06 22 19.9**	**-1.4**
ASAJ	**Asahikawa**	**7.11**	**356**		Pn	**Pn**	**06 22 15.7**	**-0.1**
	1.7nm,0.3s,baz=214,slow=3.6,SNR=4.5							
ASAJ					Sn	**Sn**	**06 23 33.6**	**-1.6**
	0.4nm,0.3s,baz=221,slow=19,SNR=2.5							
JNU	**Nakatsue**	**10.86**	**253**		Pn	**Pn**	**06 23 08.8**	**+1.5**
	0.3nm,0.3s,baz=118,slow=15,SNR=2.1							
MKAR	**Makanchi Array**	**45.37**	**302**		P	P	06 28 52.1	+3.5
	0.1nm,0.5s,baz=85,slow=8.0,SNR=2.0							
KURBB	**Kurchatov Arra**	**47.16**	**308**		P	P	06 29 04.5	+1.9
	0.6nm,0.7s,baz=82,slow=7.4,SNR=2.8							
ILAR	**Eielson Array**	**48.72**	**32**		P	P	06 29 16.4	+1.9
	0.5nm,0.8s,baz=260,slow=7.0,SNR=6.2							
WRA	**Warramunga Arr**	**57.28**	**190**		P	**P**	**06 30 17.1**	**-0.8**
	0.2nm,0.4s,baz=6.7,slow=7.9,SNR=3.1							
ASAR	**Alice Springs**	**61.00**	**190**		P	**P**	**06 30 44.1**	**+0.4**
	0.2nm,0.6s,baz=9.6,slow=6.7,SNR=4.3							
YKA	**Yellowknife Ar**	**63.08**	**31**		P	P	06 30 59.1	+1.9
	0.2nm,0.7s,baz=304,slow=7.0,SNR=4.1					

QRZ	**Quartz Range**	**8.02**	**226**	Pn		**Pn**	**06 44 59.3**	**-0.4**
THZ	**Tophouse**	**8.43**	**220**	Pn		**Pn**	**06 45 02.8**	**-2.8**
KHZ	**Kahutara**	**8.61**	**215**	Pn		**Pn**	**06 45 06.4**	**-1.5**
ODZ	**Otahua Downs**	**11.97**	**214**	Pn		**Pn**	**06 45 50.6**	**-3.3**
DZM	**Mont Dzumac**	**17.97**	**315**	*e*LR		LR	06 51 26.3	
	comp=Z,254nm,24.0s							
RAR	**Rarotonga**	**22.63**	**56**	LR		LR	06 54 28.0	
	comp=Z,30nm,20.7s,baz=218,slow=31							
TBI	**Tubuai**	**28.98**	**74**	*e*LR		LR	06 56 29.4	
	comp=Z,94nm,24.5s							
TBI	**Tubuai**	**28.98**	**74**	*e*T		T	07 19 01.7	
	4.1nm,0.3s							
STKA	**Stephens Creek**	**32.15**	**265**	LR		LR	07 00 25.2	
	comp=Z,47nm,20.3s,baz=15,slow=32							
PAE	**Paea**	**32.19**	**64**	*e*T		T	07 23 00.4	
	0.8nm,0.3s							
PPT2	**Papeete2**	**32.24**	**64**	*e*LR		LR	06 57 55.9	
	comp=Z,98nm,25.2s							
AS31	**Alice Springs**	**41.58**	**274**	P		**P**	**06 50 48.6**	**-1.8**
ASAR	**Alice Springs**	**41.58**	**274**	P		**P**	**06 50 49.0**	**-1.4**
	0.6nm,0.3s,baz=114,slow=7.8,SNR=13							
ASAR				LR		LR	07 08 41.6	
	comp=Z,113nm,18.2s,baz=119,slow=37							
WRA	**Warramunga Arr**	**43.03**	**279**	P		**P**	**06 51 00.6**	**-1.7**
	2.7nm,0.7s,baz=121,slow=7.5,SNR=13							
WRA				LR		LR	07 08 49.4	
	comp=Z,60nm,18.0s,baz=135,slow=36							
KNRA	**Kununurra**	**49.79**	**280**	P		**P**	**06 51 54.6**	**-0.6**
FITZ	**Fitzroy Crossi**	**51.03**	**275**	P		**P**	**06 52 04.5**	**-0.1**
FITZ				IAmb		IAmb	06 52 21.8	
	comp=Z,14nm,1.5s							
QSPA	**South Pole Qui**	**54.61**	**180**	P		**P**	**06 52 32.9**	**+2.3**
	comp=Z,1.0nm,0.8s,baz=20,slow=3.3,SNR=4.0							
QSPA	**South Pole Qui**	**54.61**	**180**	P		**P**	**06 52 28.7**	**-1.9**
QSPA				IAmb		IAmb	06 52 46.5	
	comp=Z,2.0nm,0.8s							
KURBB	**Kurchatov Arra**	**123.40**	**312**	PKP		**PKPdf**	**07 01 55.9**	**-2.7**
	comp=Z,0.2nm,0.4s,baz=115,slow=1.8,SNR=2.8							
ARCES	**ARCESS Array B**	**143.19**	**345**	PKP		PKPab	07 02 32.4	+1.6
	comp=Z,7.4nm,1.1s,baz=11,slow=0.9,SNR=4.2							
FINES	**FINESS Array B**	**149.28**	**336**	PKPbc		**PKPdf**	**07 02 48.0**	**+2.4**
	comp=Z,1.7nm,0.7s,baz=31,slow=4.4,SNR=7.0							
BRTR	**Keskin Array B**	**153.24**	**289**	PKPbc		**PKPdf**	**07 02 56.8**	**+4.3**
	comp=Z,0.4nm,0.8s,baz=147,slow=3.0,SNR=2.8							
BRTR				PKPab		**pPKPbc**	**07 03 10.5**	**0.0**
	comp=Z,0.5nm,0.5s,baz=61,slow=2.1,SNR=4.0							
TORD	**Torodi Ar. Bea**	**157.69**	**184**	PKPab		**PKPab**	**07 03 30.6**	**-0.7**
	comp=Z,1.0nm,0.9s,baz=176,slow=0.2,SNR=3.5							

IDC 06 06:59:34.7±45.0, 15°07′S×171°04′W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/28, mbtmp4.0/3, Error ellipse: s-maj=891.2km s-min=197.2km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**46.17**	**240**	P		P	07 08 01.3	-0.1
	0.8nm,0.4s,baz=73,slow=11,SNR=4.5							
WRA	**Warramunga Arr**	**52.13**	**256**	P		P	07 08 46.9	-0.4
	0.3nm,0.3s,baz=92,slow=6.9,SNR=6.4							
ASAR	**Alice Springs**	**52.37**	**252**	P		P	07 08 49.1	+0.1
	3.6nm,0.5s,baz=89,slow=8.1,SNR=88							

MAN 06 07:14:32.6, 10.01N×123.88E, h32km, mb4.2, ML3.0, MS2.7, 1D, Cebu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.32**	**16**	*e*P		Pn	07 14 42.1	+1.0
LLP				*i* S		Sn	07 14 48.2	+1.6
MSLP	**Maasin**	**0.98**	**82**	*e*P		Pn	07 14 49.8	-0.3
MSLP				*e*S		Sn	07 15 01.7	-1.1

*SNET **06** 07:21:30.0±0.5, 13.41N×90.29W, h24km±5km, ML2.5*
*GCG **06** 07:21:31.6±0.4, 13.54N×90.51W, h29km±5km, MD3.5*
ISC 06 07:21:29.9±3.0, 13.4N±0.2×90.37W±0.08, h38km, n7, σ0°26/11, 2C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.76**	**355**	*e*P		**Pn**	**07 21 44.3**	**0.0**
SBLS	**San Blas**	**0.84**	**59**	↑*e*P		**Pn**	**07 21 45.2**	**-0.2**
SBLS				*e*S		**Sn**	**07 21 57.1**	**+0.3**
SNJE	**San Jose**	**0.87**	**58**	↑*e*P		**Pn**	**07 21 45.7**	**-0.2**
SNJE				*e*S		**Sn**	**07 21 57.6**	**+0.1**
FUG	**Fuego 3**	**1.13**	**336**	*e*P		**Pn**	**07 21 49.7**	**+0.3**
FUG				*e*S		**Sn**	**07 22 03.5**	**-0.2**
SNET	**Serv Nac Est T**	**1.14**	**76**	*e*P		**Pn**	**07 21 49.5**	**+0.2**
SNET				IAML			07 21 49.9	
	comp=Z,109nm,0.3s							
LFU	**La Fuente**	**1.27**	**74**	*e*P		**Pn**	**07 21 51.0**	**-0.1**
STG3	**Santiaguito 3,**	**1.74**	**318**	*e*P		**Pn**	**07 21 57.8**	**+0.1**
STG3				*e*S		**Sn**	**07 22 18.4**	**-0.4**

*MOS **06** 07:27:15.0±0.9, 45.95N×152.92E, h43km, mb4.6/1, Error ellipse: s-maj=26.8km s-min=12.2km az=142.5*
*SKHL **06** 07:27:20.9±0.5, 46.30N×152.20E, h102km±4km, mb5.0/5, msha5.6/5*
*IDC **06** 07:27:25.6±2.8, 46.95N×151.57E, h117km±25km, mb3.1/7, mb1 3.4/11, mb1mx3.2/48, mbtmp3.7/11, Error ellipse: s-maj=43.1km s-min=15.4km az=157.0*
ISC 06 07:27:20.5±0.9, 46.2N±0.1×152.12E±0.09, h100km, n46, σ2°58/56, mb3.5/7, 3C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.13**	**254**	*d i*PN		**Pn**	**07 28 10.7**	**+2.7**
KUR				*i* S		**Sn**	**07 28 49.5**	**+4.9**
KUR				pmax		pmax		
	comp=N,21nm,0.1s							
KUR				pmax		pmax		
	comp=E,48nm,0.1s							
KUR				pmax		pmax		
	comp=Z,109nm,0.1s							
KUR				smax		smax		
	comp=N,485nm,0.2s							
KUR				smax		smax		
	comp=E,241nm,0.3s							
KUR				smax		smax		
	comp=E,1μm,2.5s							
KUR				smax		smax		
	comp=N,799nm,2.4s							
KUR	**Kuril'sk**	**3.13**	**254**	↓*i*P		**Pn**	**07 28 10.7**	**+2.7**
KUR				AMB		AMB	07 28 12.0	
	comp=N,40nm,0.5s							
KUR				AMB		AMB	07 28 12.0	
	comp=N,50nm,0.5s							
KUR				AMB		AMB	07 28 12.0	
	comp=N,110nm,0.5s							
KUR				*i* S		**Sn**	**07 28 48.2**	**+3.6**
KUR				A		A	07 28 59.1	
	comp=N,480nm,0.7s							
KUR				A		A	07 28 59.1	
	comp=N,240nm,0.7s							
KUR				A		A	07 29 00.7	
	comp=N,800nm,2.5s							
KUR				A		A	07 29 00.7	
	comp=N,1μm,2.5s							
YUK	**Yuzh-Kuril'sk**	**4.93**	**246**	↑*i*PN		**Pn**	**07 28 35.3**	**+3.1**
YUK	**Yuzh-Kuril'sk**	**4.93**	**246**	↑*i*P		**Pn**	**07 28 35.3**	**+3.1**
YUK				*e*S		**Sn**	**07 29 30.7**	**+2.7**
YUK				A		A	07 29 47.0	
	comp=N,150nm,0.7s							
YUK				A		A	07 29 47.0	
	comp=N,230nm,0.7s							
GRPR	**Tuman**	**5.01**	**246**	*e*PN		**Pn**	**07 28 35.7**	**+2.5**
GRPR				pmax		pmax		
	comp=Z,93nm,0.3s							
GRPR	**Tuman**	**5.01**	**246**	*e*P		**Pn**	**07 28 35.8**	**+2.5**
GRPR				AMB		AMB	07 28 42.0	
	comp=Z,90nm,0.5s							
GRPR				*e*S		**Sn**	**07 29 33.0**	**+3.1**
GRPR				A		A	07 29 52.0	
	comp=Z,130nm,0.7s							
GRPR				A		A	07 29 52.0	
	comp=Z,210nm,0.7s							
SKR	**Severo-Kuril's**	**5.22**	**29**	*e*P		**Pn**	**07 28 35.2**	**-0.8**
SKR				AMB		AMB	07 28 39.1	
	comp=Z,50nm,0.6s							
SKR				*e*S		**Sn**	**07 29 31.2**	**-3.7**
SKR				A		A	07 29 48.7	
	comp=Z,70nm,0.5s							
SKR				A		A	07 29 48.7	
	comp=Z,40nm,0.5s							
GLVR	**Golovnino**	**5.29**	**245**	*e*PN		**Pn**	**07 28 39.1**	**+2.0**
GLVR				pmax		pmax		
	comp=Z,128nm,0.6s							
GLVR	**Golovnino**	**5.29**	**245**	*e*P		**Pn**	**07 28 39.1**	**+2.0**
GLVR				AMB		AMB	07 28 40.0	
	comp=Z,100nm,0.6s							
GLVR				*e*S		**Sn**	**07 29 40.7**	**+3.9**
GLVR				A		A	07 29 56.0	
	comp=Z,120nm,0.9s							
GLVR				A		A	07 29 56.0	
	comp=Z,210nm,0.9s							
NEM2	**Nemuro 2**	**5.35**	**240**	P		**Pn**	**07 28 39.2**	**+1.3**
NEM2				*e*S		**Sn**	**07 29 37.9**	**-0.3**
NMR	**Nemuro--Hokkai**	**5.36**	**240**	↑*i*PN		**Pn**	**07 28 39.0**	**+1.0**
NMR	**Nemuro--Hokkai**	**5.36**	**240**	↓*i*P		**Pn**	**07 28 39.5**	**+1.5**
NMR				*e*S		**Sn**	**07 29 40.4**	**+2.0**
JRA	**Rausu**	**5.45**	**248**	P		**Pn**	**07 28 42.5**	**+3.2**
JNK	**Nakash**	**5.87**	**246**	P		**Pn**	**07 28 47.5**	**+2.5**
JAK	**Akkeshi**	**6.19**	**242**	P		**Pn**	**07 28 50.2**	**+0.8**
JAK				*e*S		**Sn**	**07 29 57.4**	**-1.3**
YSS	**Yuzh-Sakhalins**	**6.50**	**280**	*e*P		**Pn**	**07 28 55.7**	**+2.2**
JAR	**Ashorobuto**	**6.62**	**247**	P		**Pn**	**07 28 57.7**	**+2.6**
JAR				*e*S		**Sn**	**07 30 12.2**	**+3.1**
JOB	**Onbets**	**6.78**	**244**	P		**Pn**	**07 28 58.9**	**+1.6**
JOB				*e*S		**Sn**	**07 30 12.8**	**-0.1**
JKK2	**Kamakawa 2**	**7.04**	**254**	P		**Pn**	**07 29 04.0**	**+3.1**
JKA	**Kamikawa-asahi**	**7.05**	**256**	*e*P		**Pn**	**07 29 04.8**	**+3.8**
ASAJ	**Asahikawa**	**7.05**	**256**	P		**Pn**	**07 29 04.8**	**+3.8**
	comp=Z,1.2nm,0.3s,baz=65,slow=12,SNR=4.6							
JCH	**Churui**	**7.22**	**243**	P		**Pn**	**07 29 04.4**	**+1.0**
JCH				*e*S		**Sn**	**07 30 21.8**	**-2.0**
JNBK	**Urakawa-nobuka**	**7.78**	**243**	P		**Pn**	**07 29 11.9**	**+0.9**
JNBK				*e*S		**Sn**	**07 30 35.4**	**-2.0**
PETK	**Petropavlovsk-**	**7.80**	**26**	P		**Pn**	**07 29 09.2**	**-2.0**
	comp=Z,2.3nm,0.3s,baz=199,slow=15,SNR=24							
JNB	**Noboribetsu**	**8.78**	**249**	P		**Pn**	**07 29 26.0**	**+1.5**
JNB				*e*S		**Sn**	**07 31 01.1**	**-0.4**
JKB	**Kayabe**	**9.07**	**246**	P		**Pn**	**07 29 28.6**	**+0.1**
JKB				*e*S		**Sn**	**07 31 04.4**	**-4.4**
JANG	**Nango**	**9.68**	**237**	P		**Pn**	**07 29 35.7**	**-1.0**
JANG				*e*S		**Sn**	**07 31 16.3**	**-7.2**
JTM	**Tenmabayashi**	**9.68**	**240**	P		**Pn**	**07 29 36.3**	**-0.5**
EKMR	**Ekimchan**	**14.18**	**306**	*e*P		**Pn**	**07 30 35.1**	**-1.4**
USRK	**Ussuriysk Ar.**	**14.34**	**269**	P		**Pn**	**07 30 38.5**	**-0.1**
	baz=67,slow=12,SNR=17							
BMKR	**Bomnak**	**17.03**	**308**	*e*P		**Pn**	**07 31 09.8**	**-2.5**
KROS	**Kirovskiy**	**17.98**	**306**	*e*P		**P**	**07 31 22.3**	**-0.6**
KSRS	**Korea Array**	**19.98**	**253**	P		**Pn**	**07 31 47.8**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=54,slow=11,SNR=6.7							
H11N2	**WAKE ISLAND Hy**	**29.06**	**150**	T		T	08 04 41.2	
	baz=339,slow=76,SNR=297							
H11N1	**WAKE ISLAND Hy**	**29.07**	**150**	T		T	08 04 45.4	
	baz=339,slow=76,SNR=232							
H11N3	**WAKE ISLAND Hy**	**29.08**	**150**	T		T	08 04 42.3	
	baz=339,slow=76,SNR=181							
H11S1	**WAKE ISLAND Hy**	**30.13**	**152**	T		T	08 06 06.0	
	baz=340,slow=76,SNR=216							
H11S3	**WAKE ISLAND Hy**	**30.14**	**152**	T		T	08 06 09.3	
	baz=340,slow=76,SNR=186							
H11S2	**WAKE ISLAND Hy**	**30.15**	**152**	T		T	08 06 07.8	
	baz=340,slow=76,SNR=122							
ILAR	**Eielson Array**	**37.41**	**38**	P		**P**	**07 34 22.9**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=254,slow=8.1,SNR=3.6							
INK	**Inuvik**	**42.48**	**32**	P		**P**	**07 35 05.8**	**+0.6**
	comp=Z,0.3nm,0.2s,baz=302,slow=5.7,SNR=10.0							
MKAR	**Makanchi Array**	**46.59**	**297**	P		**P**	**07 35 35.8**	**-2.5**
	comp=Z,0.5nm,0.4s,baz=64,slow=6.8,SNR=13							
BVAR	**Borovoye Array**	**50.68**	**309**	P		**P**	**07 36 07.0**	**-2.4**
	comp=Z,0.4nm,0.5s,baz=46,slow=10,SNR=4.3							
YKA	**Yellowknife Ar**	**51.77**	**36**	P		**P**	**07 36 17.9**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=297,slow=6.9,SNR=4.1							
NVAR	**Mina Array Bea**	**63.30**	**62**	P		**P**	**07 37 42.0**	**+3.1**
	comp=Z,0.2nm,0.4s,baz=310,slow=7.0,SNR=2.9							
TXAR	**Lajitas Array**	**78.36**	**60**	P		**P**	**07 39 12.6**	**+2.5**
	comp=Z,0.3nm,0.4s,baz=270,slow=3.7,SNR=5.8							

*IDC **06** 07:27:48.6±1.1, 27.80N×139.81E, h470km±13km, mb3.3/17, mb1 3.4/22, mb1mx3.2/47, mbtmp4.1/22, Error ellipse: s-maj=25.0km s-min=11.4km az=71.0*
*JMA **06** 07:27:50.1±0.2, 28.16N×140.00E, h448km, M4.0*
ISC 06 07:27:48.8±0.6, 28.00N±0.07×140.1E±0.1, h478km, n43, σ1°77/55, mb3.6/18, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.06**	**115**	P		**P**	**07 28 51.9**	**-0.3**
CBIJ				*e*S		**S**	**07 29 40.4**	**-3.2**
JCJ	**Chichijima**	**2.06**	**115**	P		**P**	**07 28 52.0**	**-0.2**
	146nm,0.3s,baz=332,slow=1.5,SNR=58							
JCJ				S		**S**	**07 29 39.1**	**-4.5**
	90nm,0.3s,baz=111,slow=22,SNR=4.1							
JHH2	**Haha-jima-NKT2**	**2.29**	**126**	P		**P**	**07 28 53.7**	**+0.2**
JHH2				*e*S		**S**	**07 29 44.0**	**-2.0**
JHJ2	**Mitsune**	**5.11**	**357**	P		**P**	**07 29 14.7**	**-0.7**
BSO1	**Boso 1**	**6.68**	**6**	P		**P**	**07 29 32.0**	**+1.8**
BSO1				*e*S		**S**	**07 30 51.8**	**-1.7**
BSO3	**Boso 3**	**6.79**	**3**	P		**P**	**07 29 32.6**	**+0.9**
BSO3				*e*S		**S**	**07 30 53.2**	**-2.9**
BSO4	**Boso 4**	**6.98**	**2**	*e*S		**S**	**07 30 56.1**	**-3.7**
JKN2	**Miekihoku**	**7.03**	**333**	P		**P**	**07 29 37.0**	**+2.6**
JOD2	**Odawara 2**	**7.30**	**353**	P		**P**	**07 29 37.8**	**+0.7**
JHU	**Hanno**	**7.86**	**355**	P		**P**	**07 29 43.0**	**0.0**
JRY	**Ryogami san**	**8.06**	**353**	P		**P**	**07 29 44.8**	**-0.4**
JRY				*e*S		**S**	**07 31 16.8**	**-4.0**
JYT	**Yasato**	**8.21**	**1**	P		**P**	**07 29 46.0**	**-0.6**
JAG	**Ashikaga**	**8.42**	**356**	P		**P**	**07 29 48.9**	**0.0**
JAG				*e*S		**S**	**07 31 22.6**	**-5.1**
JHO	**Hitachi**	**8.60**	**3**	P		**P**	**07 29 52.3**	**+1.5**
JHO				*e*S		**S**	**07 31 28.6**	**-2.6**
MJAR	**Matsushiro Arr**	**8.67**	**350**	P		**P**	**07 29 52.2**	**+0.6**
	0.1nm,0.3s,baz=175,slow=12,SNR=5.3							
JFK	**Kawauchi**	**9.37**	**4**	P		**P**	**07 30 01.1**	**+2.1**
JFK				*e*S		**S**	**07 31 44.7**	**-1.5**
JNU	**Nakatsue**	**9.45**	**305**	P		**P**	**07 29 59.5**	**-0.4**
	1.1nm,0.3s,baz=12,slow=5.1,SNR=5.5							
JSJ	**Shimokoshiki**	**9.73**	**295**	P		**P**	**07 30 02.8**	**-0.2**
JMK	**Ichinoseki**	**10.97**	**5**	P		**P**	**07 30 18.6**	**+2.5**
KSRS	**Korea Array**	**13.92**	**316**	P		**P**	**07 30 47.2**	**-0.5**
	baz=145,slow=8.2,SNR=3.7							
USRK	**Ussuriysk Ar.**	**17.43**	**340**	P		**P**	**07 31 25.3**	**+0.8**
	baz=153,slow=9.0,SNR=13							
KLR	**Kul'dur**	**22.16**	**345**	P		**P**	**07 32 10.0**	**+2.1**
	2.0nm,0.4s,baz=161,slow=8.1,SNR=11							
SONM	**Songino Array**	**32.79**	**316**	P		**P**	**07 33 41.7**	**+0.4**
SONM	**Songino Array**	**32.79**	**316**	P		**P**	**07 33 41.7**	**+0.4**
	0.8nm,0.4s,baz=123,slow=8.6,SNR=5.5							
TLY	**Talaya**	**36.08**	**321**	P		**P**	**07 34 06.6**	**-2.2**
	1.6nm,0.6s,baz=115,slow=17,SNR=2.6							
ZALV	**Zalesovo Beam**	**47.60**	**319**	P		**P**	**07 35 40.0**	**0.0**
	1.0nm,0.5s,baz=99,slow=8.0,SNR=4.7							
ZALV				PcP		**PcP**	**07 37 01.2**	**+0.6**
	0.8nm,0.4s,baz=108,slow=4.7,SNR=3.7							
WRA	**Warramunga Arr**	**47.98**	**187**	P		**P**	**07 35 42.5**	**-0.8**
	0.3nm,0.3s,baz=4.6,slow=7.4,SNR=4.6							
WRA				PcP		**PcP**	**07 37 02.4**	**-0.1**
	0.5nm,0.5s,baz=359,slow=4.3,SNR=4.3							
MKAR	**Makanchi Array**	**48.47**	**309**	P		**P**	**07 35 47.0**	**+0.2**
MKAR	**Makanchi Array**	**48.47**	**309**	P		**P**	**07 35 47.0**	**+0.2**
	1.4nm,0.8s,baz=87,slow=9.3,SNR=8.6							
MKAR				PcP		**PcP**	**07 37 04.0**	**0.0**
	0.8nm,0.8s,baz=76,slow=7.6,SNR=4.2							
AAK	**Ala-Archa**	**54.22**	**304**	P		**P**	**07 36 28.8**	**0.0**
	1.0nm,0.4s,baz=124,slow=3.6,SNR=3.3							
STKA	**Stephens Creek**	**59.56**	**179**	P		**P**	**07 37 04.0**	**-1.3**
	1.2nm,0.7s,baz=342,slow=6.4,SNR=2.8							
ARU	**Arti**	**62.58**	**322**	P		**P**	**07 37 24.9**	**-0.1**
	1.5nm,0.3s,baz=159,slow=12,SNR=3.3							
AKTO	**Aktyubinsk**	**64.09**	**315**	P		**P**	**07 37 34.4**	**-0.5**
	2.0nm,0.7s,baz=68,slow=13,SNR=7.4							
ARCES	**ARCESS Array B**	**72.08**	**340**	P		**P**	**07 38 24.6**	**+1.3**
	5.8nm,0.8s,baz=44,slow=8.4,SNR=14							
YKA	**Yellowknife Ar**	**72.23**	**28**	P		**P**	**07 38 26.9**	**+2.7**
	0.3nm,0.5s,baz=297,slow=6.1,SNR=5.3							
KBZ	**Khabaz**	**76.04**	**312**	P		**P**	**07 38 46.8**	**+0.6**
	2.1nm,0.7s,baz=119,slow=5.0,SNR=5.8							
FINES	**FINESS Array B**	**76.32**	**333**	P		**P**	**07 38 48.5**	**+1.1**
	4.8nm,0.4s,baz=71,slow=5.0,SNR=69							
AKASG	**Malin Array Be**	**80.79**	**323**	P		**P**	**07 39 12.2**	**+0.5**
	1.0nm,0.4s,baz=52,slow=5.4,SNR=12							
NB2	**NORSAR Subarra**	**82.08**	**338**	P		**P**	**07 39 19.0**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=45,slow=4.6							
NOA	**NORSAR Array B**	**82.08**	**338**	P		**P**	**07 39 19.0**	**+0.9**
	comp=Z,1.4nm,0.5s,baz=45,slow=4.9,SNR=5.4							
BRTR	**Keskin Array B**	**84.03**	**312**	P		**P**	**07 39 28.9**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=101,slow=5.2,SNR=4.3							
GERES	**GERESS Array B**	**89.78**	**328**	P		**P**	**07 39 55.7**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=14,slow=6.9,SNR=3.9							
TORD	**Torodi Ar. Bea**	**122.59**	**310**	PKP		**PKiKP**	**07 45 50.4**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=37,slow=0.8,SNR=3.2							

*IDC **06** 07:56:07.4±0.7, 20.47S×70.50W, h0km, mb4.3/11, mb1 4.4/14, mb1mx4.1/31, mbtmp4.3/14, ML3.9/3, MS4.0/8, Ms1 4.0/8, ms1mx3.7/20, Error ellipse: s-maj=24.1km s-min=16.0km az=56.0*
*NEIC **06** 07:56:09.1±2.8, 20.74S±0.03×70.79W±0.06, h12km±3km, Error ellipse: s-maj=8.8km s-min=4.4km az=102.0*
*GUC **06** 07:56:11.0±0.8, 20.77S×70.72W, h30km±4km, ML4.6*
*BJI **06** 07:56:12.0±0.0, 20.80S×70.60W, h20km, Ms7 5.0/1*
*VAO **06** 07:56:17.0±0.9, 20.75S×70.38W, h66km±7km, mb4.6*
ISC 06 07:56:08.8±1.7, 20.75S±0.03×70.75W±0.05, h11km±10km, n136, σ1°65/145, mb4.8/20, MS4.3/6, 10C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.56**	**72**	↓*e*P		**Pg**	**07 56 20.6**	**+0.8**
PSGC	**Pisagua**	**1.29**	**27**	↑*i*P		**Pn**	**07 56 32.6**	**-0.2**
PSGC				*i* S		**Sb**	**07 56 49.2**	**-0.5**
PSGC				IAML			07 56 52.0	
	comp=N,12μm,0.3s							
PB11	**IPOC Station P**	**1.42**	**47**	↑*i*P		**Pn**	**07 56 34.7**	**0.0**
PB11				*i* S		**Sn**	**07 56 52.9**	**-0.6**
PB11				IAML			07 56 56.1	
	comp=N,29μm,0.7s							
PB11	**IPOC Station P**	**1.42**	**47**	Pn		**Pn**	**07 56 35.0**	**+0.3**
PB11				Sn		**Sb**	**07 56 54.0**	**+0.4**
PB03	**IPOC Station P**	**1.59**	**144**	↑*i*P		**Pn**	**07 56 36.5**	**-0.6**
PB03				*i* S		**Sn**	**07 56 56.9**	**-0.9**
PB08	**IPOC Station P**	**1.62**	**68**	↓*e*P		**Pn**	**07 56 37.9**	**+0.3**
PB08				*i* S		**Sn**	**07 56 58.7**	**+0.1**
PB08				IAML			07 57 00.5	
	comp=N,13μm,0.6s							
PB04	**IPOC Station P**	**1.68**	**161**	↑*e*P		**Pn**	**07 56 38.4**	**+0.1**
PB04				*i* S		**Sn**	**07 56 58.5**	**-1.3**
PB04				IAML			07 57 05.3	
	comp=E,12μm,0.5s							
PB04	**IPOC Station P**	**1.68**	**161**	Pn		**Pn**	**07 56 38.7**	**+0.5**
PB04				Sn		**Sn**	**07 56 59.6**	**-0.2**
PB09	**IPOC Station P**	**1.75**	**127**	↑*e*P		**Pb**	**07 56 40.9**	**-0.2**
PB09				*i* S		**Sb**	**07 57 03.5**	**+0.3**
PB09				IAML			07 57 16.5	
	comp=N,10μm,0.3s							
MNMC	**Minye Minye**	**1.94**	**34**	↑*i*P		**Pn**	**07 56 42.2**	**+0.3**
MNMC				*i* S		**Sn**	**07 57 07.5**	**+1.0**
MNMC	**Minye Minye**	**1.94**	**34**	Pn		**Pn**	**07 56 42.5**	**+0.5**
MNMC				Sn		**Sn**	**07 57 07.2**	**+0.7**
PB05	**IPOC Station P**	**2.16**	**166**	↑*i*P		**Pn**	**07 56 44.6**	**-0.2**
PB06	**IPOC Station P**	**2.24**	**151**	*e*P		**Pn**	**07 56 46.0**	**0.0**
PB06				*i* S		**Sn**	**07 57 14.7**	**+1.1**
PB06				IAML			07 57 24.5	
	comp=E,5μm,0.4s							
LVC	**Limon Verde**	**2.52**	**138**	*e*P		**Pn**	**07 56 52.1**	**+2.1**
LVC				*i* S		**Sb**	**07 57 23.6**	**-2.0**
LVC	**Limon Verde**	**2.52**	**138**	Pn		**Pn**	**07 56 52.1**	**+2.1**
	comp=E,126nm,0.3s,baz=312,slow=10.0,SNR=839							
LVC				Sn		**Sb**	**07 57 24.9**	**-0.6**
	comp=E,466nm,0.3s,baz=60,slow=22,SNR=19							
LVC	**Limon Verde**	**2.52**	**138**	*e*P		**Pb**	**07 56 52.6**	**-1.8**
LVC	**Limon Verde**	**2.52**	**138**			**Pn**	**07 56 52.2**	**+2.1**
LVC				Sn		**Sn**	**07 57 22.6**	**+1.6**
PB15	**IPOC Station P**	**2.72**	**154**	↑*i*P		**Pn**	**07 56 52.9**	**+0.2**
PB10	**IPOC Station P**	**2.76**	**176**	Pn		**Pn**	**07 56 52.5**	**-0.5**
PB10				Sn		**Sn**	**07 57 25.7**	**-0.6**
LPAZ	**La Paz**	**5.08**	**30**	Pn		**Pn**	**07 57 30.3**	**+4.8**
	comp=E,4.4nm,0.3s,baz=210,slow=7.9,SNR=48							
LPAZ	**La Paz**	**5.08**	**30**	Pn		**Pn**	**07 57 28.3**	**+2.7**
LPAZ				Sn		**Sn**	**07 58 21.7**	**-2.9**
GO04	**Tololo Observa**	**9.39**	**180**	Pn		**P

comp=Z,17nm,0.7s
OBIP Obispado Ponce 38.76 6 P **P** **08 03 33.9 +0.5**
PDPR Patillas Dam, 38.80 7 P **P** **08 03 32.6 -1.1**
PDPR IAmb IAmb 08 03 32.8
comp=Z,22nm,0.8s
SJG San Juan 38.88 7 P **P** **08 03 31.7 -2.7**
comp=Z,14nm,0.8s,baz=193,slow=19,SNR=3.6
SJG San Juan 38.88 7 P **P** **08 03 33.4 -1.0**
SJG IAmb IAmb 08 03 33.5
comp=Z,22nm,0.9s
CBYP Canovanas 39.07 7 P **P** **08 03 34.8 -1.2**
CBYP IAmb IAmb 08 03 35.1
comp=Z,22nm,0.8s
GCPR Guaynabo City 39.08 7 P **P** **08 03 35.3 -0.8**
GCPR IAmb IAmb 08 03 35.4
comp=Z,20nm,0.8s
TEIG Tepich 44.18 336 P **P** **08 04 18.7 +0.8**
TEIG IAmb IAmb 08 04 23.9
comp=Z,22nm,1.2s
Z50A Ashland 55.62 345 P **P** **08 05 45.5 +0.8**
Z50A IAmb IAmb 08 05 59.8
comp=Z,7.6nm,1.0s
BIRD Birdtown, Kers 55.85 350 P **P** **08 05 46.3 0.0**
TXAR Lajitas Array 59.04 326 P **P** **08 06 08.2 -0.8**
comp=Z,0.3nm,0.8s,baz=148,slow=7.4,SNR=2.6
VNA1 Neumayer--Stat 61.57 160 P **P** **08 06 28.4 +2.8**
M56A Emporium 62.30 354 P **P** **08 06 31.9 +1.0**
M55A Ridgway 62.34 353 P **P** **08 06 32.2 +1.0**
WVNY West Valley, N 63.25 353 P **P** **08 06 38.5 +1.3**
SNAA Sanae 63.55 161 P **P** **08 06 40.3 +1.3**
SNAA Sanae 63.55 161 P **P** **08 06 40.4 +1.3**
SNAA IAmb IAmb 08 06 51.7
comp=Z,14nm,1.2s
QSPA South Pole Qui 69.44 180 P **P** **08 07 18.7 +1.8**
QSPA IAmb IAmb 08 07 28.3
comp=Z,8.5nm,0.9s
LIC Lamto 69.84 75 *e*P **P** **08 07 19.1 -0.9**
comp=Z,4.8nm,0.6s
TIC Toumodi 70.02 74 *e*P **P** **08 07 18.6 -2.6**
KIC Kosan Boka 70.16 75 *e*P **P** **08 07 20.5 -1.5**
comp=Z,17nm,0.9s
DBIC Dimbokro 70.18 75 P **P** **08 07 19.8 -2.3**
comp=Z,8.1nm,0.9s,baz=218,slow=7.0,SNR=9.8
DBIC LR LR 08 36 35.8
comp=Z,161nm,20.4s,baz=326,slow=35
DBIC Dimbokro 70.18 75 P **P** **08 07 21.3 -0.8**
DBIC IAmb IAmb 08 07 21.5
comp=Z,7.4nm,0.8s
MSU Marysvale 70.60 327 P **P** **08 07 26.6 +2.1**
NVAR Mina Array Bea 73.85 323 P **P** **08 07 44.1 +0.2**
comp=Z,0.2nm,0.6s,baz=156,slow=6.7,SNR=3.5
ULM Lac du Bonnet 74.10 344 P **P** **08 07 44.9 +0.1**
comp=Z,0.9nm,0.6s,baz=98,slow=7.1,SNR=2.2
ULM Lac du Bonnet 74.10 344 IAmb IAmb 08 07 45.0
comp=Z,4.2nm,1.2s
SYO Syowa Base 77.80 160⇑ *e*P **P** **08 08 05.6 -0.1**
SYO Syowa Base 77.80 160⇑ *e*pP pP 08 08 10.6 +1.7
TORD Torodi Ar. Bea 78.73 71 P **P** **08 08 10.8 -1.0**
comp=Z,11nm,0.6s,baz=249,slow=5.4,SNR=71
TORD LR LR 08 42 59.3
comp=Z,194nm,18.9s,baz=300,slow=36
MAW Mawson 85.53 164 LR LR 08 48 38.9
comp=Z,41nm,18.3s,baz=58,slow=37
YKA Yellowknife Ar 89.92 341 P **P** **08 09 07.4 -0.1**
comp=Z,1.3nm,0.8s,baz=135,slow=4.8,SNR=27
H11S2 WAKE ISLAND Hyl 26.07 278 T T 10 34 20.8
baz=103,slow=75,SNR=247
H11S1 WAKE ISLAND Hyl 26.08 278 T T 10 34 12.6
baz=103,slow=75,SNR=231
H11S3 WAKE ISLAND Hyl 26.09 278 T T 10 34 13.7
baz=103,slow=75,SNR=262
H11N3 WAKE ISLAND Hyl 26.14 280 T T 10 34 25.8
baz=102,slow=75,SNR=130
H11N2 WAKE ISLAND Hyl 26.15 280 T T 10 34 23.4
baz=102,slow=75,SNR=90
H11N1 WAKE ISLAND Hyl 26.16 280 T T 10 34 23.3
baz=102,slow=75,SNR=85
ASAR Alice Springs 129.74 210 PKP **PKiKP** **08 15 19.3 -0.4**
comp=Z,1.0nm,0.9s,baz=152,slow=1.5,SNR=8.0
ABKAR Akbulak array 131.75 42 **PKiKP** **08 15 23.4 +0.6**
WRA Warramunga Arr 132.69 213 PKP **PKiKP** **08 15 25.2 -0.5**
comp=Z,0.6nm,0.7s,baz=160,slow=1.6,SNR=5.3
ZALV Zalesovo Beam 141.98 23 PKhKP PKPpre 08 15 34.4
comp=Z,0.5nm,0.5s,baz=300,slow=3.2,SNR=2.3
ZALV PKP **PKPdf** **08 15 40.6 +0.1**
comp=Z,1.9nm,0.6s,baz=301,slow=4.3,SNR=7.2
NRN Naryn 145.16 46 **PKPdf** **08 15 48.3 +1.3**
NIL Nilore 145.68 60 **PKPab** **08 15 48.3 -0.1**
MAKZ Makanchi 145.83 34 **PKPab** **08 15 48.8 +0.3**
KSH Kashi 145.94 49 PKPbc **PKPab** **08 15 50.5 +1.2**
KSH PP **PP** **08 19 15.8 +5.5**
KSH PKS **PKSdf** **08 19 27.7 +4.0**
KSH SKKS 08 26 03.3
MK31 Makanchi Array 146.00 34 **PKPab** **08 15 49.0 -0.2**
MKAR Makanchi Array 146.00 34 PKPbc **PKPbc** **08 15 48.5 -0.2**
comp=Z,7.5nm,0.7s,baz=326,slow=2.6,SNR=76
USRK Ussuriysk Ar. 149.94 326 PKPbc **PKPbc** **08 15 58.5 -0.8**
comp=Z,3.9nm,0.9s,baz=5.7,slow=1.4,SNR=6.8
MJAR Matsushiro Arr 150.26 308 PKPbc **PKiKP** **08 16 00.7 -0.5**
comp=Z,2.0nm,0.8s,baz=78,slow=1.7,SNR=4.2
WMQ Urumqi 150.82 33 *e*PKPbc **PKPdf** **08 15 55.9 0.0**
WMQ pPKP pPKPbc 08 16 06.8 +1.9
WMQ LR LR
comp=Z,160nm,15.7s
HYB Hyderabad 150.83 91 *i* PKP **PKPdf** **08 15 55.5 -1.1**
HYB *e* 08 16 02.0
SONM Songino Array 152.88 4 PKPbc **PKiKP** **08 16 06.9 +0.5**
comp=Z,0.8nm,0.7s,baz=348,slow=2.1,SNR=3.4
HHC Hu-ho-hao-te 159.86 355 *e*PKP **PKPdf** **08 16 10.7 +2.4**
NJ2 Nanjing 165.84 325 *e*PKP **PKPdf** **08 16 15.0 +0.8**
CD2 Chengdu 168.74 25 PKP **PKPdf** **08 16 15.5 -0.9**

NIED ***06*** *08:17:00,36˚20N×138˚80E,h150km,Mw4.1 Best double couple: M0 1.60000×10^15 NP1:ϕs93.00000°, δ52.00000°,λ-58.00000°. NP2:ϕs228.00000°,δ48.00000°, λ-124.00000°.*

IDC ***06*** *08:17:58.9±0.6,36˚22N×138˚70E,h143km±4km,mb3.7/22, mb1 3.8/25,mb1mx3.7/57,mbtmp4.1/25,MS4.2/1, Ms1 4.0/1,ms1mx2.7/36,Error ellipse: s-maj=14.1km s-min=12.0km az=106.0*

JMA ***06*** *08:17:59.6±0.1,36˚23N×138˚82E,h142km±1km,M3.7 Broadband fault plane solution: P waves. NP1: ϕs230.00000°,δ45.00000°,λ-126.00000°. NP2: ϕs95.00000°,δ55.00000°,λ-60.00000°. Principal axes: T Plg5.0000°, Azm164.0000°; N Plg24.0000°, Azm256.0000°; P Plg65.0000°, Azm62.0000°;*

JMA Felt I J1.

BJI ***06*** *08:17:59.0±0.0,36˚17N×138˚46E,h126km,mB5.0/18, mb4.6/23*

NEIC ***06*** *08:17:59.7±1.7,36˚25N±0˚06×138˚75E±0˚09, h145km±5km,mb4.3/101,Error ellipse: s-maj=10.8km s-min=8.7km az=82.0*

ISC 06 08:17:59.5±0.6,36˚29N±0˚05×138˚81E±0˚05,h144km±5km, n161,σ1s20/178,mb4.2/74,4C-6D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JRY	**Ryogami san**	**0.28**	**165**	⇓P	**Pn**	**08 18 19.3**	**0.0**
JRY				S	**Sn**	**08 18 34.3**	**0.0**
JAG	**Ashikaga**	**0.53**	**75**	⇓P	**Pn**	**08 18 20.4**	**+0.1**
JAG				S	**Sn**	**08 18 36.1**	**0.0**
MJAR	**Matsushiro Arr**	**0.55**	**298**	LR	LR	08 18 13.7	
	comp=Z,39nm,20.4s,baz=70,slow=31						
MJAR				P	**Pn**	**08 18 20.1**	**-0.3**
	78nm,0.3s,baz=136,slow=3.3,SNR=2608						
MJAR				S	**Sn**	**08 18 36.3**	**-0.1**
	34nm,0.3s,baz=349,slow=8.2,SNR=5.8						
MAJO	**Matsushiro**	**0.55**	**298**		**Pn**	**08 18 20.5**	**+0.1**
MAJO				Sn	**Sn**	**08 18 36.4**	**0.0**
MAT	**Matsushiro**	**0.55**	**298**	P	**Pn**	**08 18 20.4**	**0.0**
MAT				S	**Sn**	**08 18 36.3**	**-0.1**
MAT	**Matsushiro**	**0.55**	**298**	P	**Pn**	**08 18 20.4**	**0.0**
MAT				S	**Sn**	**08 18 36.3**	**-0.1**
MJB9	**Matsu-Tunnel**	**0.56**	**298**		**Pn**	**08 18 20.5**	**+0.1**
MJB9				Sn	**Sn**	**08 18 36.3**	**-0.1**
JKT	**Katashina**	**0.59**	**36**	⇓P	**Pn**	**08 18 21.2**	**+0.5**
JKT				S	**Sn**	**08 18 37.6**	**+0.6**
JYN	**Shimob**	**0.82**	**196**	⇓P	**Pn**	**08 18 21.7**	**-0.6**
JYN				S	**Sn**	**08 18 39.1**	**-0.5**
JOD2	**Odawara 2**	**1.05**	**168**	⇓P	**Pn**	**08 18 23.5**	**-0.6**
JOD2				S	**Sn**	**08 18 42.1**	**-0.8**
JFNN	**Fujinakano**	**1.10**	**185**	P	**Pn**	**08 18 24.4**	**-0.2**
JNS	**Sasagawa**	**1.58**	**15**	⇑P	**Pn**	**08 18 30.5**	**+1.1**
JNS				S	**Sn**	**08 18 53.9**	**+1.5**
JSZ	**Suzu**	**1.64**	**315**	⇑P	**Pn**	**08 18 30.6**	**+0.6**
JSZ				S	**Sn**	**08 18 53.9**	**+0.4**
JFT	**Otama**	**1.73**	**44**	⇑P	**Pn**	**08 18 32.6**	**+1.5**
INU	**Inuyama**	**1.73**	**238**		**Pn**	**08 18 30.5**	**-0.6**
INU				Sn	**Sn**	**08 18 54.0**	**-1.4**
JSD	**Sado**	**1.80**	**346**	⇑P	**Pn**	**08 18 32.6**	**+0.7**
JSD				S	**Sn**	**08 18 57.6**	**+0.8**
JYTA	**Yamagatataniai**	**1.82**	**248**	⇓P	**Pn**	**08 18 32.3**	**+0.2**
JHJ2	**Mitsune**	**3.27**	**165**		**Pn**	**08 18 49.5**	**-0.6**
JHJ2				Sn	**Sn**	**08 19 27.7**	**-1.6**
ERM	**Erimo**	**6.64**	**29**	Pn	**Pn**	**08 19 33.5**	**-1.0**
ERM					**Sn**	**08 20 47.4**	**-1.6**
JNU	**Nakatsue**	**7.26**	**247**	P	**Pn**	**08 19 41.2**	**-1.7**
	0.5nm,0.3s,baz=52,slow=7.2,SNR=9.3						
JNU	**Nakatsue**	**7.26**	**247**		**Pn**	**08 19 43.5**	**+0.5**
ASAJ	**Asahikawa**	**8.34**	**19**	P	**Pn**	**08 19 55.2**	**-2.0**
	3.5nm,0.3s,baz=212,slow=14,SNR=13						
ASAJ				S	**Sn**	**08 21 25.0**	**-4.9**
	0.6nm,0.3s,baz=259,slow=33,SNR=1.4						
JKA	**Kamikawa-asahi**	**8.34**	**19**		**Pn**	**08 19 55.2**	**-2.0**
JKA					**Sn**	**08 21 25.0**	**-4.9**
KSRS	**Korea Array**	**8.80**	**281**	P	**Pn**	**08 20 02.7**	**-0.8**
	0.2nm,0.3s,baz=94,slow=14,SNR=2.6						
USRK	**Ussuriysk Ar.**	**9.46**	**329**	P	**Pn**	**08 20 13.9**	**+1.6**
	baz=140,slow=11,SNR=14						
USA0B	**Ussuriysk Arra**	**9.47**	**329**		**Pn**	**08 20 11.7**	**-0.6**
NJ2	**Nanjing**	**17.05**	**261**	*e*P	**Pn**	**08 21 49.8**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PETK	**Petropavlovsk-**	**21.41**	**32**	P	**P**	**08 22 35.5**	**-0.2**
	2.0nm,0.6s,baz=222,slow=8.6,SNR=4.5						
HHC	**Hu-ho-hao-te**	**21.75**	**290**	*e*P	**P**	**08 22 40.5**	**+1.0**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,72nm,5.7s						
MA2	**Magadan**	**24.56**	**15**	P	**P**	**08 23 06.1**	**+0.5**
	10nm,0.7s,baz=204,slow=9.7,SNR=8.3						
MA2	**Magadan**	**24.56**	**15**	P	**P**	**08 23 05.7**	**+0.1**
MA2				IAmb	IAmb	08 23 07.3	
	comp=Z,14nm,0.8s						
YAK	**Yakutsk**	**26.40**	**350**	P	**P**	**08 23 21.9**	**-0.2**
SONM	**Songino Array**	**26.50**	**306**	P	**P**	**08 23 21.8**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=103,slow=9.9,SNR=3.1						
SEY	**Seymchan**	**27.96**	**13**	P	**P**	**08 23 36.0**	**0.0**
	comp=Z,0.7nm,0.5s,baz=175,slow=12,SNR=4.2						
LZH	**Lanzhou**	**28.14**	**280**	*e*P	**P**	**08 23 37.5**	**-0.6**
LZH				pP	pP	08 24 08.5	-0.8
LZH				sP	sP	08 24 26.3	+0.1
LZH				pmax	pmax		
	comp=Z,11nm,1.0s						
CD2	**Chengdu**	**29.58**	**270**	P	**P**	**08 23 50.4**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WMQ	**Urumqi**	**39.31**	**297**	*e*P	**P**	**08 25 16.2**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,210nm,6.3s						
WMQ				LR	LR		
	comp=Z,500nm,29.2s						
WMQ				LR	LR		
	comp=Z,850nm,28.9s						
WMQ				LR	LR		
	comp=Z,150nm,12.9s						
ZALV	**Zalesovo Beam**	**40.88**	**313**	P	**P**	**08 25 26.5**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=94,slow=8.6,SNR=1.9						
ZALV				PcP	**PcP**	**08 27 24.0**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=78,slow=3.1,SNR=6.1						
MK31	**Makanchi Array**	**42.75**	**302**	P	**P**	**08 25 41.8**	**-0.6**
MKAR	**Makanchi Array**	**42.75**	**302**	P	**P**	**08 25 41.8**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=85,slow=11,SNR=8.8						
ANM	**Nome**	**43.32**	**31**	P	**P**	**08 25 48.8**	**+2.2**
KURK	**Kurchatov**	**44.75**	**308**	P	**P**	**08 25 58.0**	**-0.2**
KURK				IAmb	IAmb	08 25 58.1	
	comp=Z,4.3nm,0.6s						
TTA	**Tatalina**	**47.22**	**34**	P	**P**	**08 26 18.9**	**+1.3**
KSH	**Kashi**	**48.80**	**294**	P	P	08 26 35.3	+5.3
KSH				pP	pP	08 27 04.7	+1.6
KSH				PP	**PP**	**08 28 27.7**	**+3.3**
KSH				S	S	08 33 31.8	+10
KSH				sS	sS	08 34 22.0	+2.8
KSH				SS	**SS**	**08 36 53.1**	**-1.1**
KSH				pmax	pmax		
	comp=Z,400nm,5.6s						
KSH				LR	LR		
	comp=Z,380nm,3.9s						
KSH				LR	LR		
	comp=Z,340nm,5.0s						
KSH				LR	LR		
	comp=Z,630nm,7.9s						
PPLA	**Purkeypile**	**48.97**	**35**	P	**P**	**08 26 32.8**	**+1.8**
KDAK	**Kodiak Island**	**49.04**	**41**	P	**P**	**08 26 32.4**	**+0.9**
MTN	**Manton Dam**	**49.40**	**190**	P	**P**	**08 26 32.5**	**-2.1**
MTN				IAmb	IAmb	08 26 45.9	
	comp=Z,9.8nm,1.1s						
KTH	**Kantishna Hill**	**49.53**	**34**	P	**P**	**08 26 36.8**	**+1.6**
MLY	**Manley**	**49.59**	**32**	P	**P**	**08 26 37.5**	**+1.9**
MLY				IAmb	IAmb	08 26 38.2	
	comp=Z,5.7nm,1.1s						
SUA	**Susitna One**	**49.70**	**36**	P	**P**	**08 26 37.3**	**+0.7**
SUA				IAmb	IAmb	08 26 38.6	
	comp=Z,10nm,1.0s						
BRLK	**Bradley Lake**	**49.76**	**39**	P	**P**	**08 26 36.8**	**-0.1**
TRF	**Thorofare Moun**	**49.82**	**34**	P	**P**	**08 26 39.0**	**+1.5**
TRF				IAmb	IAmb	08 26 40.3	
	comp=Z,6.0nm,0.8s						
TOLK	**Toolik Lake Re**	**50.09**	**27**	P	**P**	**08 26 40.8**	**+1.6**
BWN	**Browne**	**50.16**	**33**	P	**P**	**08 26 42.0**	**+2.2**
MCK	**McKinley**	**50.41**	**33**	P	**P**	**08 26 42.1**	**+0.3**
MCK				IAmb	IAmb	08 26 43.9	
	comp=Z,4.7nm,0.8s						
ARSB	**Arslanbob**	**50.45**	**297**	P	**P**	**08 26 40.9**	**-1.6**
ARSB				IAmb	IAmb	08 26 47.3	
	comp=Z,5.8nm,1.1s						
RND	**Reindeer**	**50.46**	**34**	P	**P**	**08 26 43.4**	**+1.2**
PMR	**Palmer**	**50.47**	**36**	P	**P**	**08 26 42.8**	**+0.7**
PMR				IAmb	IAmb	08 26 49.4	
	comp=Z,9.0nm,1.2s						
GHO	**Glory Hole Cre**	**50.55**	**36**	P	**P**	**08 26 44.0**	**+1.1**
GHO				IAmb	IAmb	08 26 46.2	
	comp=Z,6.0nm,0.7s						
MDM	**Murphy Dome**	**50.65**	**32**	P	**P**	**08 26 45.3**	**+1.7**
MDM				IAmb	IAmb	08 26 46.0	
	comp=Z,6.7nm,0.7s						
WRH	**Wood River Hil**	**50.74**	**32**	P	**P**	**08 26 45.1**	**+1.0**
KNK	**Knik Glacier**	**50.80**	**36**	P	**P**	**08 26 45.6**	**+0.9**
KNK				IAmb	IAmb	08 26 51.0	
	comp=Z,11nm,1.1s						
SML	**Sawmill**	**50.83**	**36**	P	**P**	**08 26 46.9**	**+2.0**
CCB	**Clear Creek Bu**	**50.85**	**32**	P	**P**	**08 26 46.0**	**+1.0**
CCB				IAmb	IAmb	08 26 48.0	
	comp=Z,3.8nm,1.0s						
DHY	**Denali Highway**	**51.16**	**34**	P	**P**	**08 26 48.6**	**+1.1**
DHY				IAmb	IAmb	08 26 49.9	
	comp=Z,12nm,1.4s						
HDA	**Harding Lake**	**51.24**	**32**	P	**P**	**08 26 48.3**	**+0.4**
HDA				IAmb	IAmb	08 26 49.2	
	comp=Z,5.6nm,0.7s						
IL31		**51.24**	**32**	P	**P**	**08 26 48.2**	**+0.3**
IL31				IAmb	IAmb	08 26 49.2	
	comp=Z,3.1nm,0.8s						
ILAR	**Eielson Array**	**51.24**	**32**	P	**P**	**08 26 48.3**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=272,slow=4.9,SNR=54						
SCM	**Sheep Creek Mo**	**51.30**	**36**	P	**P**	**08 26 49.7**	**+1.2**
FYU	**Fort Yukon**	**51.79**	**30**	P	**P**	**08 26 53.8**	**+1.8**
FYU				IAmb	IAmb	08 27 01.9	
	comp=Z,8.7nm,1.3s						
EYAK	**Cordova Ski Ar**	**52.22**	**37**	P	**P**	**08 26 56.3**	**+1.1**
RIDG	**Independent Ri**	**52.22**	**33**	P	**P**	**08 26 55.9**	**+0.6**
RIDG				IAmb	IAmb	08 26 57.1	
	comp=Z,7.4nm,1.2s						
KNRA	**Kununurra**	**52.55**	**192**	P	**P**	**08 26 57.6**	**-0.4**
SCRK	**Sand Creek**	**52.57**	**33**	P	**P**	**08 26 57.9**	**0.0**
SCRK				IAmb	IAmb	08 26 59.7	
	comp=Z,3.6nm,0.7s						
DOT	**Dot Lake**	**52.58**	**33**	P	**P**	**08 26 59.0**	**+1.2**
DOT				IAmb	IAmb	08 26 59.2	
	comp=Z,3.5nm,0.7s						
MENT	**Mentasta**	**52.83**	**34**	P	**P**	**08 27 01.4**	**+1.6**
MENT				IAmb	IAmb	08 27 11.6	
	comp=Z,5.5nm,0.6s						
GLB	**Gilahina Butte**	**53.01**	**36**	P	**P**	**08 27 02.1**	**+1.0**
GAR	**Garm**	**53.12**	**295**	P	**P**	**08 27 01.3**	**-1.1**
GAR				IAmb	IAmb	08 27 15.7	
	comp=Z,4.8nm,1.2s						
VRDI	**Verde Repeater**	**53.22**	**36**	P	**P**	**08 27 02.8**	**0.0**
MCARA	**McCarthy VSAT**	**53.40**	**36**	P	**P**	**08 27 05.7**	**+1.9**
EGAK	**Eagle**	**53.67**	**32**	P	**P**	**08 27 06.9**	**+1.1**
EGAK				IAmb	IAmb	08 27 07.5	
	comp=Z,3.2nm,0.7s						
BALM	**Baldy**	**53.78**	**36**	P	**P**	**08 27 08.0**	**+1.1**
CHGR	**Chuyangaron**	**54.09**	**295**	P	**P**	**08 27 08.7**	**-0.6**
CHGR				IAmb	IAmb	08 27 15.7	
	comp=Z,5.3nm,0.7s						
BARN	**Barnard Glacie**	**54.10**	**36**	P	**P**	**08 27 09.7**	**+0.5**
MESA	**MESA**	**54.14**	**37**	P	**P**	**08 27 10.6**	**+1.1**
CTGM	**Chitina Glacie**	**54.28**	**36**	P	**P**	**08 27 11.6**	**+1.2**
EPYK	**Eagle Plains**	**55.20**	**29**	P	**P**	**08 27 18.6**	**+1.7**
FITZ	**Fitzroy Crossi**	**55.51**	**195**	P	**P**	**08 27 18.9**	**-0.6**
FITZ				IAmb	IAmb	08 27 19.7	
	comp=Z,7.0nm,1.2s						
ARU	**Arti**	**55.53**	**318**	P	**P**	**08 27 18.7**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=237,slow=21,SNR=3.7						
INK	**Inuvik**	**55.99**	**27**	P	**P**	**08 27 23.6**	**+1.2**
INK				IAmb	IAmb	08 27 24.2	
	comp=Z,3.7nm,0.7s						
WRA	**Warramunga Arr**	**56.08**	**185**	P	**P**	**08 27 22.2**	**-1.4**
	comp=Z,2.5nm,0.4s,baz=360,slow=7.6,SNR=54						
HYT	**Haines Junctio**	**56.13**	**36**	P	**P**	**08 27 21.9**	**-1.9**
HYT				IAmb	IAmb	08 27 26.8	
	comp=Z,3.7nm,0.7s						
WHY	**Whitehorse**	**57.42**	**36**	P	**P**	**08 27 34.9**	**+2.2**
WHY				IAmb	IAmb	08 27 51.4	
	comp=Z,3.9nm,1.2s						
C36M	**Paulatuk**	**58.98**	**24**	P	**P**	**08 27 44.4**	**+1.2**
AS31	**Alice Springs**	**59.81**	**185**	P	**P**	**08 27 49.1**	**-0.5**
ASAR	**Alice Springs**	**59.81**	**185**	P	**P**	**08 27 48.8**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=357,slow=5.9,SNR=28						
ARCES	**ARCESS Array B**	**63.95**	**339**	P	**P**	**08 28 16.3**	**-0.4**
	comp=Z,1.9nm,0.8s,baz=56,slow=7.1,SNR=6.9						
YKA	**Yellowknife Ar**	**65.49**	**29**	P	**P**	**08 28 27.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=304,slow=6.8,SNR=24						
TULEG	**Thule**	**66.10**	**7**	P	**P**	**08 28 30.5**	**+0.1**
TULEG				IAmb	IAmb	08 28 30.7	
	comp=Z,5.4nm,0.9s						
FIA1	**FINESS Array S**	**68.48**	**332**	P	**P**	**08 28 45.6**	**0.0**
FIA1				IAmb	IAmb	08 28 58.6	
	comp=Z,8.5nm,1.1s						
FINES	**FINESS Array B**	**68.49**	**332**	P	**P**	**08 28 45.1**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=61,slow=6.8,SNR=21						
NLWA	**Neilton Lookou**	**68.75**	**46**	P	**P**	**08 28 48.8**	**+1.2**
KBZ	**Khabaz**	**69.79**	**310**	LR	LR	08 59 39.6	
	comp=Z,152nm,21.0s,baz=312,slow=36						
LON	**Longmire**	**70.29**	**46**	P	**P**	**08 28 57.6**	**+0.5**
LTY	**Liberty**	**70.67**	**45**	P	**P**	**08 29 00.0**	**+0.6**
LTY				IAmb	IAmb	08 29 03.4	
	comp=Z,4.3nm,1.1s						
B08A	**Colville Reser**	**70.83**	**44**	P	**P**	**08 29 00.8**	**+0.4**
H04A	**Detroit Lake**	**71.17**	**48**	P	**P**	**08 29 03.4**	**+1.0**
H04A				IAmb	IAmb	08 29 04.4	
	comp=Z,5.8nm,0.8s						
SUMG	**Summit**	**71.41**	**359**	P	**P**	**08 29 04.8**	**+0.9**
G06A	**Carlson Farm,**	**71.79**	**47**	P	**P**	**08 29 07.4**	**+1.2**
HUMO	**Hull Mountain**	**71.82**	**50**	P	**P**	**08 29 08.4**	**+2.1**
F07A	**Phinny Hill Vi**	**71.84**	**46**	P	**P**	**08 29 07.8**	**+1.4**
F07A				IAmb	IAmb	08 29 08.5	
	comp=Z,6.2nm,0.7s						
E08A	**Dider Farm, El**	**72.02**	**45**	P	**P**	**08 29 08.5**	**+1.1**
E08A				IAmb	IAmb	08 29 09.2	
	comp=Z,4.4nm,0.7s						
PINE	**Pine Mountain**	**72.41**	**48**	P	**P**	**08 29 11.5**	**+1.4**
PINE				IAmb	IAmb	08 29 12.6	
	comp=Z,8.3nm,0.8s						
YBH	**Yreka Blue Hor**	**72.44**	**51**	P	**P**	**08 29 12.3**	**+2.1**
E09A	**Wood Farm, Sta**	**72.53**	**45**	P	**P**	**08 29 12.2**	**+1.8**
E09A				IAmb	IAmb	08 29 12.4	
	comp=Z,2.7nm,0.7s						
KCPM	**Cahto Peak**	**73.00**	**53**	P	**P**	**08 29 15.2**	**+1.6**
KCPM				IAmb	IAmb	08 29 15.7	
	comp=Z,7.4nm,1.1s						
F10A	**Beach Ranch, E**	**73.36**	**45**	P	**P**	**08 29 16.7**	**+1.2**
F10A				IAmb	IAmb	08 29 17.4	
	comp=Z,4.3nm,1.2s						
WALA	**Waterton Lakes**	**73.38**	**41**	P	**P**	**08 29 14.8**	**-0.8**
WALA				IAmb	IAmb	08 29 16.8	
	comp=Z,4.2nm,1.1s						
AKASG	**Malin Array Be**	**73.59**	**321**	P	**P**	**08 29 15.9**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=48,slow=6.5,SNR=7.5						
AKBB	**Malin Array Si**	**73.59**	**321**	P	**P**	**08 29 16.8**	**+0.2**
AKBB				IAmb	IAmb	08 29 35.1	
	comp=Z,5.1nm,1.2s						
NC405	**NORSAR Array S**	**73.83**	**336**	P	**P**	**08 29 17.8**	**-0.1**
MOD	**Modoc Plateau**	**73.85**	**50**	P	**P**	**08 29 19.9**	**+1.4**
HFS	**Hagfors**	**73.89**	**335**	P	**P**	**08 29 18.0**	**-0.2**
	comp=Z,6.3nm,1.2s,baz=77,slow=2.0,SNR=10						
BMO	**Blue Mountains**	**73.96**	**46**	P	**P**	**08 29 18.9**	**-0.1**
NOA	**NORSAR Array B**	**74.05**	**336**	P	**P**	**08 29 18.6**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=54,slow=7.7,SNR=4.0						
ORV	**Oroville**	**74.42**	**52**	P	**P**	**08 29 22.7**	**+1.1**
WVOR	**Wild Horse Val**	**74.56**	**49**	P	**P**	**08 29 23.6**	**+1.0**
FCC	**Fort Churchill**	**75.59**	**25**	P	**P**	**08 29 28.7**	**+0.8**
FCC				IAmb	IAmb	08 29 28.9	
	comp=Z,3.3nm,1.0s						
PAHR	**Pah Rah Range**	**75.67**	**51**	P	**P**	**08 29 30.1**	**+1.1**
VCNR	**Virginia City**	**75.74**	**52**	P	**P**	**08 29 30.9**	**+1.4**
PNTR	**Pine Nut**	**75.89**	**52**	P	**P**	**08 29 31.9**	**+1.5**
YERR	**Yerington**	**76.18**	**52**	P	**P**	**08 29 33.3**	**+1.3**
YERR				IAmb	IAmb	08 29 34.0	

ellipse: s-maj=1.5km s-min=0.7km az=256.0
*DDA **06** 08:23:38.5,39.78N 26.11E,h17km,1km,MW3.7*
*ISK **06** 08:23:38.6,39.79N 26.13E,h8km,ML3.9/39*
*THE **06** 08:23:39.1,39.79N 26.12E,h9km,1km,ML3.5/12,Error ellipse: s-maj=1.7km s-min=0.6km az=85.0*
*SOF **06** 08:23:40.4,39.96N 26.05E,h12km,MD3.4*
ISC 06 08:23:39.1±0.8,39.79N±0.01 26.11E±0.02,h13km±4km, n150,σ0.88/192,24C-7D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.07**	**320**	PG	**Pg**	**08 23 41.7**	**0.0**
BOZC				SG	**Sg**	**08 23 43.4**	**-0.2**
BOZC	**Bozcaada**	**0.07**	**320**	*i* P	**Pg**	**08 23 41.7**	**0.0**
BOZC				*i* S	**Sg**	**08 23 43.2**	**-0.4**
EZN	**Ezine**	**0.17**	**77**	P	**Pg**	**08 23 42.6**	**-0.4**
EZN				S	**Sg**	**08 23 44.9**	**-0.8**
	37μm,0.3s						
EZN	**Ezine**	**0.17**	**77**	⇑P	**Pg**	**08 23 43.4**	**+0.4**
EZN				⇑S	**Sb**	**08 23 48.8**	**+1.4**
EZN	**Ezine**	**0.17**	**77**	PG	**Pg**	**08 23 42.6**	**-0.4**
EZN				SG	**Sg**	**08 23 45.0**	**-0.8**
GPNR	**Gulpinar-Canak**	**0.33**	**177**	PG	**Pg**	**08 23 45.8**	**0.0**
GPNR				SG	**Sg**	**08 23 50.7**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**0.34**	**98**	*i* P	**Pg**	**08 23 46.2**	**+0.3**
GADA	**Gvkgeada**	**0.43**	**338**	P	**Pg**	**08 23 47.9**	**+0.2**
GADA				S	**Sg**	**08 23 53.8**	**+0.3**
GADA	**Gvkgeada**	**0.43**	**338**	PG	**Pg**	**08 23 47.9**	**+0.2**
GADA				SG	**Sb**	**08 23 54.3**	**-0.8**
PRK	**Paraskevi**	**0.56**	**167**	P	**Pb**	**08 23 51.0**	**+0.3**
PRK				S	**Sg**	**08 23 56.8**	**-0.5**
	7μm,0.4s						
PRK	**Paraskevi**	**0.56**	**167**	P	**Pb**	**08 23 50.9**	**+0.3**
PRK				S	**Sb**	**08 23 58.7**	**+0.2**
PRK				AML	AML	08 24 00.9	
	comp=N,15571μm,0.6s						
PRK				AML	AML	08 24 03.9	
	comp=E,13502μm,0.3s						
SIGR	**SIGRI**	**0.61**	**199**	P	**Pg**	**08 23 51.0**	**+0.1**
SIGR				S	**Sg**	**08 23 59.3**	**+0.3**
	comp=E,14μm,0.2s						
SIGR	**SIGRI**	**0.61**	**199**	P	**Pg**	**08 23 51.0**	**+0.1**
SIGR				S	**Sb**	**08 24 00.1**	**+0.1**
SIGR				AML	AML	08 24 02.8	
	comp=E,27733μm,0.3s						
SIGR				AML	AML	08 24 03.0	
	comp=N,27331μm,0.2s						
SIGR	**SIGRI**	**0.61**	**199**	PG	**Pg**	**08 23 51.1**	**+0.1**
SIGR				SG	**Sb**	**08 23 59.9**	**-0.1**
AYVA	**Ayvalik**	**0.66**	**137**	*i* P	**Pg**	**08 23 51.6**	**-0.2**
AYVA				*i* S	**Sg**	**08 24 00.7**	**+0.3**
AYVA				IAML		08 24 04.0	
	comp=N,5μm,0.3s						
AYVA				IAML		08 24 06.0	
	comp=E,3μm,0.6s						
GELI	**Tayfur-Gelibol**	**0.67**	**24**	PG	**Pg**	**08 23 51.9**	**-0.2**
GELI				SG	**Sb**	**08 24 01.7**	**-0.1**
LPK	**Lapseki**	**0.77**	**40**	PG	**Pg**	**08 23 53.6**	**-0.4**
LPK				SG	**Sb**	**08 24 04.6**	**0.0**
SMTH	**Samothraki Isl**	**0.81**	**327**	P	**Pg**	**08 23 54.9**	**+0.1**
SMTH				S	**Sb**	**08 24 06.1**	**+0.1**
	comp=E,4μm,0.3s						
SMTH	**Samothraki Isl**	**0.81**	**327**	P	**Pg**	**08 23 54.9**	**+0.1**
SMTH				S	**Sb**	**08 24 06.1**	**+0.1**
SMTH				AML	AML	08 24 09.1	
	comp=E,6807μm,0.3s						
SMTH				AML	AML	08 24 10.0	
	comp=N,10400μm,0.4s						
ENZZ	**Sultanice-Enez**	**0.82**	**2**	PG	**Pg**	**08 23 54.9**	**0.0**
EFSA	**Agios Efstrati**	**0.90**	**254**	P	**Pb**	**08 23 56.7**	**+0.1**
EFSA				S	**Sb**	**08 24 09.1**	**+0.6**
EFSA				AML	AML	08 24 11.8	
	comp=N,13333μm,0.6s						
EFSA				AML	AML	08 24 13.1	
	comp=E,6648μm,0.5s						
ERIK	**Erikli-Kesan**	**0.93**	**19**	PG	**Pb**	**08 23 56.9**	**-0.2**
ERIK				SG	**Sb**	**08 24 09.4**	**0.0**
DKL	**Dikili**	**0.94**	**139**	PG	**Pb**	**08 23 56.9**	**-0.4**
KRBG	**Karabiga-Canak**	**1.09**	**56**	PN	**Pb**	**08 23 59.1**	**-0.7**
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pb**	**08 23 59.7**	**-0.4**
ALN				S	**Sn**	**08 24 15.3**	**-0.2**
	comp=E,3μm,0.4s						
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pb**	**08 23 59.7**	**-0.4**
ALN				S	**Sg**	**08 24 15.0**	**+0.1**
ALN				AML	AML	08 24 16.4	
	comp=E,6435μm,0.5s						
ALN				AML	AML	08 24 16.9	
	comp=N,6240μm,0.5s						
ALN	**Alexandroupoli**	**1.11**	**357**	PN	**Pb**	**08 23 59.8**	**-0.4**
ZEDA	**zmir-Bergama**	**1.11**	**137**	*i* P	**Pb**	**08 23 59.8**	**-0.3**
ZEDA				*i* S	**Sg**	**08 24 15.1**	**+0.2**
ZEDA				IAML		08 24 17.0	
	comp=N,2μm,0.3s						
KESN	**Edirne-Kesan**	**1.12**	**23**	*i* P	**Pb**	**08 23 59.7**	**-0.9**
BALY	**Balya**	**1.16**	**92**	*i* P	**Pb**	**08 24 00.7**	**-0.3**
BALY				*i* S	**Sg**	**08 24 16.6**	**-0.1**
BALY				IAML		08 24 18.0	
	comp=N,2μm,0.4s						
BALY				IAML		08 24 18.0	
	comp=E,869nm,0.4s						
RKY	**Sarkoy-Tekirda**	**1.21**	**42**	PN	**Pb**	**08 24 01.9**	**0.0**
GONE	**Gonen-Balikesi**	**1.24**	**77**	PN	**Pb**	**08 24 02.4**	**+0.1**
KRBN	**Karaburun**	**1.24**	**164**	PN	**Pb**	**08 24 02.2**	**-0.1**
STEP	**BALIKESIR_Sava**	**1.31**	**108**	*i* P	**Pb**	**08 24 03.4**	**-0.2**
PSRA	**Psara**	**1.31**	**199**	P	**Pb**	**08 24 03.6**	**0.0**
PSRA				S	**Sg**	**08 24 21.2**	**-0.2**
PSRA				AML	AML	08 24 26.4	
	comp=N,7531μm,0.2s						
PSRA				AML	AML	08 24 27.4	
	comp=E,9583μm,0.2s						
THAS	**Thassos island**	**1.34**	**308**	P	**Pn**	**08 24 03.2**	**-0.3**
THAS				S	**Sb**	**08 24 20.4**	**-0.8**
	comp=E,910nm,0.4s						
THAS	**Thassos island**	**1.34**	**308**	P	**Pn**	**08 24 03.3**	**-0.2**
THAS				S	**Sb**	**08 24 20.6**	**-0.6**
THAS				AML	AML	08 24 21.4	
	comp=N,1968μm,0.4s						
THAS				AML	AML	08 24 22.0	
	comp=E,1683μm,0.4s						
BALB	**Balikesir**	**1.37**	**96**	PN	**Pn**	**08 24 04.1**	**+0.2**
MRMT	**Marmara Adasi**	**1.40**	**54**	PN	**Pn**	**08 24 04.4**	**0.0**
CHOS	**Chios island**	**1.40**	**182**	P	**Pn**	**08 24 03.9**	**-0.4**
CHOS				S	**Sg**	**08 24 23.9**	**-0.2**
	comp=E,3μm,0.4s						
CHOS	**Chios island**	**1.40**	**182**	P	**Pn**	**08 24 04.1**	**-0.3**
CHOS				S	**Sb**	**08 24 22.8**	**-0.1**
CHOS				AML	AML	08 24 27.5	
	comp=E,6892μm,0.3s						
CHOS				AML	AML	08 24 27.6	
	comp=N,3548μm,0.2s						
CHOS	**Chios island**	**1.40**	**182**	PN	**Pn**	**08 24 04.0**	**-0.4**
RDO	**Rodhopi**	**1.43**	**342**	P	**Pn**	**08 24 04.9**	**+0.2**
RDO				S	**Sn**	**08 24 23.1**	**-0.2**
	comp=N,865nm,0.4s						
RDO	**Rodhopi**	**1.43**	**342**	P	**Pn**	**08 24 04.8**	**+0.2**
RDO				S	**Sn**	**08 24 22.9**	**-0.3**
RDO				AML	AML	08 24 27.0	
	comp=E,1384μm,0.2s						
RDO				AML	AML	08 24 29.8	
	comp=N,1778μm,0.2s						
RDO	**Rodhopi**	**1.43**	**342**	PN	**Pb**	**08 24 05.3**	**-0.2**
EDC	**Edincik**	**1.46**	**67**	PN	**Pn**	**08 24 05.5**	**+0.4**
CESE	**eme**	**1.46**	**174**	PN	**Pn**	**08 24 05.1**	**0.0**
URLA	**Izmir**	**1.47**	**165**	PN	**Pn**	**08 24 05.1**	**-0.3**
URLA	**Izmir**	**1.47**	**165**	*i* P	**Pn**	**08 24 04.7**	**-0.7**
URLA				*i* S	**Sn**	**08 24 23.8**	**-0.7**
SKY	**Skiros Island**	**1.51**	**234**	P	**Pn**	**08 24 05.3**	**-0.6**
SKY				S	**Sb**	**08 24 26.8**	**+0.7**
	comp=N,1μm,0.2s						
SKY	**Skiros Island**	**1.51**	**234**	P	**Pn**	**08 24 05.3**	**-0.6**
BLCB	**Balcova**	**1.58**	**152**	PN	**Pn**	**08 24 07.2**	**+0.5**
AKHS	**Akhisar**	**1.60**	**124**	*i* P	**Pn**	**08 24 07.7**	**+0.6**
AKHS				*i* S	**Sg**	**08 24 29.7**	**-0.9**
AKS	**Akhisar**	**1.60**	**124**	PN	**Pn**	**08 24 07.3**	**+0.2**
TKR	**Tekirdag**	**1.62**	**42**	PN	**Pn**	**08 24 08.0**	**+0.7**
KAVA	**Kavala**	**1.72**	**315**	P	**Pn**	**08 24 08.8**	**+0.2**
KAVA				S	**Sn**	**08 24 29.7**	**-0.8**
	comp=N,438nm,0.4s						
KAVA	**Kavala**	**1.72**	**315**	P	**Pn**	**08 24 08.8**	**+0.2**
KAVA				S	**Sn**	**08 24 30.1**	**-0.4**
KAVA				AML	AML	08 24 30.6	
	comp=E,733μm,0.3s						
KAVA				AML	AML	08 24 31.2	
	comp=N,1027μm,0.4s						
OUR	**Ouranopolis**	**1.72**	**289**	P	**Pn**	**08 24 08.7**	**0.0**
OUR	**Ouranopolis**	**1.72**	**289**	P	**Pn**	**08 24 08.8**	**0.0**
OUR				S	**Sn**	**08 24 31.0**	**+0.4**
OUR				AML	AML	08 24 35.2	
	comp=N,1171μm,0.4s						
OUR				AML	AML	08 24 37.8	
	comp=E,1220μm,0.4s						
OUR	**Ouranopolis**	**1.72**	**289**	PN	**Pn**	**08 24 09.0**	**+0.3**
KVLA	**Kavala**	**1.75**	**312**	P	**Pn**	**08 24 09.5**	**+0.4**
KCTX	**Karacabey (Bur**	**1.79**	**74**	PN	**Pn**	**08 24 09.9**	**+0.2**
CRLT	**Corlu**	**1.82**	**42**	PN	**Pn**	**08 24 10.8**	**+0.6**
DURS	**Dursunbey**	**1.83**	**95**	*i* P	**Pn**	**08 24 10.6**	**+0.3**
DURS				*i* S	**Sn**	**08 24 33.0**	**-0.4**
DURS				IAML		08 24 35.0	
	comp=E,559nm,0.6s						
AOS	**Alonnisos**	**1.83**	**251**	P	**Pn**	**08 24 10.4**	**+0.1**
AOS	**Alonnisos**	**1.83**	**251**	PN	**Pn**	**08 24 10.6**	**+0.3**
PAIG	**Paliouri**	**1.88**	**275**	P	**Pn**	**08 24 10.8**	**-0.1**
PAIG	**Paliouri**	**1.88**	**275**	P	**Pn**	**08 24 10.7**	**-0.1**
KDZ	**Kurdzhali**	**1.93**	**344**	*i* P	**Pn**	**08 24 12.2**	**+0.6**
KDZ	**Kurdzhali**	**1.93**	**344**	PN	**Pn**	**08 24 12.3**	**+0.6**
EDRB	**Edirne**	**2.11**	**13**	P	**Pn**	**08 24 14.1**	**0.0**
EDRB	**Edirne**	**2.11**	**13**	PN	**Pn**	**08 24 14.6**	**+0.5**
PLG	**Polygyros**	**2.13**	**287**	P	**Pn**	**08 24 14.7**	**+0.3**
PLG	**Polygyros**	**2.13**	**287**	P	**Pn**	**08 24 14.6**	**+0.3**
PHSR	**Pinarhisar**	**2.13**	**30**	⇑P	**Pb**	**08 24 16.0**	**-1.5**
PHSR	**Pinarhisar**	**2.13**	**30**	⇓S	**Sb**	**08 24 45.3**	**+1.4**
PHSR	**Pinarhisar**	**2.13**	**30**	PN	**Pn**	**08 24 14.9**	**+0.5**
SB02	**Marmara Sea**	**2.14**	**56**	PN	**Pn**	**08 24 15.3**	**+0.9**
SMG	**Samos**	**2.15**	**164**	P	**Pn**	**08 24 14.3**	**-0.4**
SMG				S	**Sn**	**08 24 41.0**	**-0.2**
	comp=E,1μm,0.4s						
SMG	**Samos**	**2.15**	**164**	P	**Pn**	**08 24 14.4**	**-0.2**
SMG				S	**Sn**	**08 24 41.2**	**0.0**
SMG				AML	AML	08 24 51.2	
	comp=E,2436μm,0.4s						
SMG				AML	AML	08 24 52.2	
	comp=N,1874μm,0.4s						
SLVT	**Silivri**	**2.15**	**47**	PN	**Pn**	**08 24 15.5**	**+0.8**
RZN	**Rozhen**	**2.17**	**331**	P	**Pn**	**08 24 15.8**	**+0.7**
EREA	**Eretria**	**2.18**	**232**	P	**Pn**	**08 24 14.7**	**-0.3**
KARY	**Karystos**	**2.19**	**217**	P	**Pn**	**08 24 15.1**	**0.0**
MDNY	**Mudanya-Bursa**	**2.21**	**74**	PN	**Pn**	**08 24 16.7**	**+1.3**
MRKA	**Markates**	**2.24**	**242**	P	**Pn**	**08 24 15.8**	**0.0**
MRKA	**Markates**	**2.24**	**242**	P	**Pn**	**08 24 16.2**	**+0.3**
GCAM	**G?zelcaml?**	**2.26**	**157**	PN	**Pn**	**08 24 16.7**	**+0.6**
MANT	**Manisa**	**2.30**	**123**	*i* P	**Pg**	**08 24 22.8**	**-0.4**
DIM	**Dimitrovgrad**	**2.30**	**349**	P	**Pn**	**08 24 17.4**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**2.30**	**142**	PN	**Pn**	**08 24 17.3**	**+0.4**
NVR	**Nevrokopi**	**2.32**	**313**	P	**Pn**	**08 24 18.1**	**+1.1**
NVR				S	**Sn**	**08 24 45.4**	**0.0**
	comp=N,148nm,0.5s						
NVR	**Nevrokopi**	**2.32**	**313**	P	**Pn**	**08 24 17.7**	**+0.8**
SMAA	**Simav-Kutahya**	**2.33**	**106**	PN	**Pn**	**08 24 17.8**	**+0.7**
CTKS	**Kestanelik-??a**	**2.33**	**51**	PN	**Pn**	**08 24 18.0**	**+0.9**
SOH	**Sokhos**	**2.35**	**297**	P	**Pn**	**08 24 18.0**	**+0.6**
ULDT	**Uludag**	**2.35**	**80**	*i* P	**Pn**	**08 24 18.5**	**+1.0**
ULDT				*i* S	**Sb**	**08 24 52.2**	**+1.7**
HVHR	**Bakirkoy-Istan**	**2.40**	**60**	PN	**Pn**	**08 24 18.9**	**+0.9**
HORT	**Hortiatis**	**2.44**	**290**	PN	**Pn**	**08 24 19.6**	**+0.8**
GEMT	**Gemlik**	**2.45**	**74**	PN	**Pn**	**08 24 19.8**	**+1.1**
BGKT	**Bogazkoy**	**2.46**	**55**	PN	**Pn**	**08 24 20.2**	**+1.3**
PTL	**Penteli**	**2.47**	**226**	P	**Pn**	**08 24 19.1**	**+0.1**
USAK	**Uak-Merkez**	**2.50**	**114**	*i* P	**Pn**	**08 24 20.5**	**+1.0**
PLD	**Plovdiv**	**2.55**	**336**	PN	**Pn**	**08 24 21.8**	**+1.7**
MMB	**Musomiste**	**2.55**	**316**	P	**Pn**	**08 24 20.9**	**+0.7**
ISK	**Istanbul-Kandi**	**2.59**	**59**	P	**Pn**	**08 24 22.2**	**+1.6**
ISK	**Istanbul-Kandi**	**2.59**	**59**	PN	**Pn**	**08 24 22.1**	**+1.5**
KAVV	**Kandilli-Istan**	**2.59**	**60**	PN	**Pn**	**08 24 22.3**	**+1.7**
YLV	**Yalova**	**2.62**	**72**	⇑P	**Pb**	**08 24 23.9**	**-1.9**
YLV	**Yalova**	**2.62**	**72**	⇑S	**Sg**	**08 25 01.2**	**-2.0**
YLV	**Yalova**	**2.62**	**72**	PN	**Pn**	**08 24 22.4**	**+1.3**
TUZL	**Tuzla-Istanbul**	**2.62**	**66**	PN	**Pn**	**08 24 22.5**	**+1.4**
IZI	**Iznik**	**2.64**	**77**	PN	**Pn**	**08 24 22.8**	**+1.4**
YLVH	**Yalova**	**2.65**	**69**	PN	**Pn**	**08 24 22.9**	**+1.4**
KLYT	**Kilyos**	**2.67**	**56**	⇑P	**Pb**	**08 24 24.7**	**-2.0**
KLYT	**Kilyos**	**2.67**	**56**	⇓S	**Sb**	**08 25 00.4**	**+1.0**
KLYT	**Kilyos**	**2.67**	**56**	PN	**Pn**	**08 24 23.1**	**+1.3**
JMB	**Yambol**	**2.70**	**7**	P	**Pn**	**08 24 23.5**	**+1.3**
GDZ	**Gediz**	**2.70**	**104**	*i* P	**Pn**	**08 24 22.5**	**+0.1**
APE	**Apeiranthos**	**2.75**	**190**	⇑P	**Pn**	**08 24 22.4**	**-0.6**
KNT	**Kendrikon**	**2.81**	**300**	P	**Pn**	**08 24 24.6**	**+0.9**
SILT	**Sile**	**3.02**	**62**	⇑P	**Pb**	**08 24 29.8**	**-2.9**
VAY	**Valandovo**	**3.10**	**301**	*i* Pn	**Pn**	**08 24 29.5**	**+1.8**
PGB	**Panagyurishte**	**3.13**	**333**	P	**Pn**	**08 24 27.7**	**-0.4**
ELND	**Elena**	**3.14**	**357**	⇑P	**Pn**	**08 24 29.7**	**+1.4**
THR3	**Thira Island,**	**3.42**	**190**	P	**Pn**	**08 24 31.3**	**-0.8**
SZH	**Strazhica**	**3.48**	**358**	*i* P	**Pn**	**08 24 34.1**	**+1.2**
STIP	**Stip**	**3.54**	**304**	⇑*i* Pn	**Pn**	**08 24 33.3**	**-0.4**
PRD	**Provadia**	**3.54**	**15**	P	**Pb**	**08 24 41.1**	**-0.5**
VTS	**Vitosha**	**3.56**	**323**	P	**Pn**	**08 24 35.5**	**+1.3**
VTS	**Vitosha**	**3.56**	**323**	P	**Pn**	**08 24 35.6**	**+1.3**
RAZG	**Razgrad**	**3.79**	**4**	⇑P	**Pn**	**08 24 38.8**	**+1.6**
MPEP	**Malo Peshtene**	**3.98**	**334**	P	**Pn**	**08 24 40.8**	**+1.0**
COPA	**Copaceanca**	**4.39**	**352**	⇑P	**Pn**	**08 24 46.4**	**+1.0**
ARR	**Arges**	**5.68**	**349**	⇓P	**Pn**	**08 25 04.2**	**+0.9**
MLR	**Muntele Rosu**	**5.70**	**359**	⇓P	**Pn**	**08 25 05.8**	**+2.3**
BISRR	**Bisoca**	**5.77**	**4**	⇑P	**Pn**	**08 25 06.1**	**+1.6**
LOT	**Lotru**	**5.92**	**344**	⇑P	**Pn**	**08 25 06.9**	**+0.5**
MDVR	**Moldovita**	**5.96**	**328**	⇑P	**Pn**	**08 25 07.9**	**+0.8**
PLOR	**Plostina**	**6.07**	**4**	⇑P	**Pn**	**08 25 11.2**	**+2.7**
VRI	**Vrincioaia**	**6.09**	**4**	⇑P	**Pn**	**08 25 11.5**	**+2.7**
GZR	**Gura Zlata**	**6.12**	**337**	⇑P	**Pn**	**08 25 10.2**	**+1.0**
DOPR	**Dopca**	**6.20**	**355**	⇑P	**Pn**	**08 25 12.5**	**+2.2**
OZUR		**6.31**	**358**	⇑P	**Pn**	**08 25 13.0**	**+1.2**
BZS	**Buzias**	**6.70**	**332**	⇑P	**Pn**	**08 25 18.2**	**+1.1**
TESR	**Tescani**	**6.73**	**3**	⇑P	**Pn**	**08 25 19.8**	**+2.2**
BIZ	**Bicaz**	**7.15**	**360**	⇑P	**Pn**	**08 25 25.0**	**+1.7**
SIRR	**Siria**	**7.25**	**335**	⇓P	**Pn**	**08 25 24.5**	**-0.1**
DRGR		**7.43**	**342**	⇓P	**Pn**	**08 25 28.0**	**+0.9**
BURAR	**Bucovina Array**	**7.85**	**356**	⇑P	**Pn**	**08 25 35.1**	**+2.1**

*NIED **06** 08:39:00,21.10N 120.10E,h71km,Mw4.5 Best double couple: M0 6.65000×10^15 NP1:φs245.00000°,δ50.00000°, λ102.00000°. NP2:φs47.00000°,δ41.00000°,λ76.00000°.*
*IDC **06** 08:39:53.1±0.6,21.06N 120.08E,h0km,mb4.0/15, mb1 4.2/17,mb1mx4.0/40,mbtmp4.0/17,ML3.5/2,MS3.3/3, Ms1 3.4/3,ms1mx3.0/33,Error ellipse: s-maj=22.5km s-min=13.1km az=74.0*
*TAP **06** 08:39:56.5,21.22N 120.07E,h83km,ML4.3,C*
*NEIC **06** 08:39:56.2±2.1,21.12N±0.06 119.97E±0.06,h23km±4km, mb4.4/15,Error ellipse: s-maj=8.3km s-min=8.0km az=204.0*
*JMA **06** 08:39:57.1±0.2,21.14N 120.15E,h61km,M4.1*
ISC 06 08:39:56.7±0.6,21.19N±0.04 119.99E±0.04,h25km,n137, σ1.9 21/190,mb4.2/23,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWK1	**Hengchun**	**1.07**	**45**	*i* P	**Pb**	**08 40 16.1**	**-0.4**
	baz=44						
TWK1				*e*S	**Sn**	**08 40 30.4**	**+0.2**
	baz=44						
HEN	**Hengchun**	**1.07**	**40**	*e*P	**Pb**	**08 40 16.4**	**-0.2**
	baz=46						
HEN				*e*S	**Sn**	**08 40 31.0**	**+0.7**
	baz=46						
TWKBT	**Hengchun**	**1.07**	**45**	*e*P	**Pb**	**08 40 16.1**	**-0.5**
	baz=44						
TWKBT				*e*S	**Sn**	**08 40 30.4**	**+0.2**
	baz=44						
TSEB	**Hengchuen, Pin**	**1.11**	**50**	P	**Pb**	**08 40 16.5**	**-0.6**
	baz=47						
TSEB				S	**Sn**	**08 40 31.0**	**0.0**
	baz=47						
TWP	**Hsiaoliuchiu**	**1.21**	**17**	*e*P	**Pb**	**08 40 18.9**	**+0.1**
	baz=14						
TWP				*e*S	**Sb**	**08 40 35.5**	**+1.5**
	baz=14						
WLCH	**Liuqiu**	**1.22**	**17**	*e*P	**Pb**	**08 40 18.9**	**-0.1**
	baz=14						
WLCH				*e*S	**Sb**	**08 40 36.0**	**+1.7**
	baz=14						
SCZT	**Fangliau**	**1.32**	**26**	P	**Pb**	**08 40 19.2**	**-1.5**
	baz=33						
SCZT				*e*S	**Sb**	**08 40 36.0**	**-1.3**
	baz=33						
SSPT	**Xinbi**	**1.40**	**22**	*e*P	**Pb**	**08 40 20.9**	**-1.2**
	baz=30						
SSPT				*e*S	**Sb**	**08 40 39.0**	**-0.6**
	baz=30						
KAU	**Kaohsiung**	**1.41**	**12**	*e*P	**Pb**	**08 40 22.8**	**+0.5**
	baz=10.0						
KAU				*e*S	**Sb**	**08 40 39.4**	**-0.4**
	baz=10.0						
EAST	**Anshuo**	**1.43**	**34**	*e*P	**Pb**	**08 40 21.2**	**-1.6**
	baz=39						
EAST				*e*S	**Sb**	**08 40 38.8**	**-1.8**
	baz=39						
TAW	**Tawu**	**1.44**	**36**	*e*P	**Pb**	**08 40 21.2**	**-1.6**
	baz=34						
TAW				*e*S	**Sb**	**08 40 39.0**	**-1.7**
	baz=34						
WSSB	**Gushan**	**1.47**	**10**	*e*P	**Pb**	**08 40 22.2**	**-1.2**
	baz=7.0						
WSSB				*e*S	**Sb**	**08 40 41.0**	**-0.7**
	baz=7.0						
MASBT	**Mashibuluo**	**1.54**	**23**	*e*P	**Pn**	**08 40 22.2**	**-0.3**
	baz=28						
MASBT				*e*S	**Sb**	**08 40 41.0**	**-2.6**
	baz=28						
SNJT	**Kaohsiung City**	**1.59**	**12**	*e*P	**Pb**	**08 40 24.0**	**-1.4**
	baz=1.0						
SNJT				*e*S	**Sb**	**08 40 43.7**	**-1.5**
	baz=1.0						
SGLT	**Jiouru**	**1.60**	**17**	*e*S	**Sb**	**08 40 45.1**	**-0.3**
	baz=15						
SSD	**Sandimen**	**1.66**	**21**	*e*P	**Pn**	**08 40 24.2**	**-0.1**
	baz=19						
SSD				*e*S	**Sb**	**08 40 44.8**	**-2.4**
	baz=19						
ECL	**Taimali**	**1.67**	**32**	P	**Pn**	**08 40 24.0**	**-0.3**
	baz=24						
ECL				*e*S	**Sn**	**08 40 43.4**	**-1.5**
	baz=24						
TWM1	**Shoushan**	**1.68**	**14**	*e*P	**Pb**	**08 40 25.4**	**-1.6**
	baz=12						
LAY	**Lan-yu**	**1.68**	**59**	*e*P	**Pn**	**08 40 23.6**	**-1.0**
	baz=59						
LAY				*e*S	**Sn**	**08 40 44.4**	**-1.0**
	baz=59						
SLGT	**Liugui**	**1.90**	**19**	*e*P	**Pn**	**08 40 27.5**	**0.0**
	baz=25						
SLGT				*e*S	**Sn**	**08 40 50.0**	**-0.7**
	baz=25						
TWG	**Pinlang**	**1.91**	**31**	*e*P	**Pn**	**08 40 27.4**	**-0.2**
	baz=30						
TWG				*e*S	**Sn**	**08 40 50.3**	**-0.7**
	baz=30						
TWG	**Pinlang**	**1.91**	**31**	Pn	**Pn**	**08 40 27.6**	**0.0**
TWG				Sn	**Sb**	**08 40 51.1**	**-3.2**
TWGBT	**Beinan**	**1.91**	**32**	*e*P	**Pn**	**08 40 27.4**	**-0.3**
	baz=30						
TWGBT				*e*S	**Sn**	**08 40 50.3**	**-0.7**
	baz=30						
SGST	**Jiashian**	**1.97**	**16**	*e*P	**Pn**	**08 40 27.5**	**-1.0**
	baz=5.0						
SGST				*e*S	**Sn**	**08 40 51.4**	**-0.9**
	baz=5.0						
SCLT	**Jiali**	**1.99**	**5**	*e*S	**Sn**	**08 40 52.9**	**+0.1**
	baz=4.0						
CHN1	**Nanshi**	**2.05**	**14**	*e*P	**Pn**	**08 40 29.4**	**-0.2**
	baz=12						
CHN1				*e*S	**Sn**	**08 40 53.8**	**-0.7**
	baz=12						
TWH	**Lutao**	**2.05**	**42**	*i* P	**Pn**	**08 40 28.2**	**-1.4**
	baz=42						
TWH				*i* S	**Sn**	**08 40 52.1**	**-2.3**
	baz=42						
SNST	**Tainan City**	**2.08**	**13**	*e*P	**Pn**	**08 40 30.2**	**+0.3**
	baz=11						
WDGT	**Dungji**	**2.09**	**352**	*e*P	**Pb**	**08 40 31.3**	**-2.6**
	baz=350						
STYT	**Tauyuan**	**2.09**	**20**	*e*P	**Pn**	**08 40 30.6**	**+0.3**
	baz=9.0						
STYT				*e*S	**Sn**	**08 40 54.8**	**-0.8**
	baz=9.0						
TWK	**Hsinying**	**2.12**	**12**	*e*P	**Pn**	**08 40 30.3**	**-0.3**
	baz=11						
TWK				*e*S	**Sn**	**08 40 55.4**	**-0.8**
	baz=11						
WTP	**Ta-pu**	**2.13**	**16**	*e*P	**Pn**	**08 40 30.8**	**0.0**
	baz=14						
WTP				*e*S	**Sn**	**08 40 55.3**	**-1.1**
	baz=14						
TPUB	**Ta-pu**	**2.19**	**16**	*e*P	**Pn**	**08 40 31.0**	**-0.5**
	baz=14						
TPUB				*e*S	**Sn**

WHP					*e*S		**Sn**	**08 41 22.3**	**-0.6**
	baz=21								
TWQ1	**Liyutan**	**3.23**	**13**	*e*P			**Pn**	**08 40 46.9**	**+1.0**
	baz=12								
TWT	**Tachien**	**3.24**	**19**	*e*P			**Pn**	**08 40 47.0**	**+0.8**
	baz=12								
NSY	**Sanyi**	**3.29**	**12**	*e*S			**Sn**	**08 41 24.7**	**-0.4**
	baz=12								
ETLH	**Xiulin Townshi**	**3.31**	**24**	*e*P			**Pn**	**08 40 47.8**	**+0.8**
	baz=33								
NACB	**Ninganchiao**	**3.32**	**26**	Pn			**Pn**	**08 40 47.9**	**+0.8**
NACB				Sn			**Sn**	**08 41 26.9**	**+1.0**
ZPLA	**Ao Xicun**	**3.43**	**323**	*e*P			**Pn**	**08 40 47.9**	**-0.6**
	baz=322								
NNSH	**Datong**	**3.47**	**21**	*e*P			**Pn**	**08 40 50.4**	**+1.1**
	baz=21								
KNM	**Kinmen**	**3.52**	**336**	*e*P			**Pn**	**08 40 49.2**	**-0.6**
	baz=333								
NSTT	**Nanjuang**	**3.55**	**15**	*e*P			**Pn**	**08 40 50.5**	**+0.3**
	baz=14								
LIOB	**Emei**	**3.57**	**15**	*e*P			**Pn**	**08 40 50.8**	**+0.3**
	baz=14								
KNMB	**Chin-men Tao**	**3.58**	**336**	*e*P			**Pn**	**08 40 50.0**	**-0.6**
	baz=335								
KNMB	**Chin-men Tao**	**3.58**	**336**	Pn			**Pn**	**08 40 50.0**	**-0.6**
KNMB				Sn			**Sn**	**08 41 29.9**	**-2.3**
NDT	**Datong Townshi**	**3.68**	**22**	*e*P			**Pn**	**08 40 54.0**	**+2.0**
	baz=13								
NSK	**Sanguang**	**3.70**	**20**	*e*P			**Pn**	**08 40 53.5**	**+1.2**
	baz=19								
YHNB	**Yeheng**	**3.70**	**20**	*e*P			**Pn**	**08 40 53.4**	**+1.1**
	baz=19								
YHNB	**Yeheng**	**3.70**	**20**	Pn			**Pn**	**08 40 53.7**	**+1.4**
YHNB				Sn			**Sn**	**08 41 35.6**	**+0.5**
ENTT	**Nioudou**	**3.73**	**23**	*e*P			**Pn**	**08 40 54.8**	**+2.0**
	baz=14								
NWLT	**Wulai**	**3.84**	**21**	*e*P			**Pn**	**08 40 55.5**	**+1.3**
	baz=10.0								
PTMZ	**Houxiangcun**	**3.92**	**348**	*e*P			**Pn**	**08 40 54.8**	**-0.5**
	baz=347								
PTMZ				*e*S			**Sn**	**08 41 37.3**	**-3.2**
	baz=347								
ZZJH	**Jiuhuzhen**	**3.93**	**327**	*e*P			**Pn**	**08 40 54.8**	**-0.6**
	baz=326								
ZZJH				*e*S			**Sn**	**08 41 38.8**	**-1.9**
	baz=326								
TIPB	**Shuangxi**	**4.13**	**24**	*e*P			**Pn**	**08 40 59.7**	**+1.5**
	baz=33								
AXDP	**Jialang**	**4.14**	**334**	*e*P			**Pn**	**08 40 57.3**	**-1.0**
	baz=333								
YM10	**YM10**	**4.21**	**20**	*e*P			**Pn**	**08 40 59.6**	**+0.3**
	baz=19								
YM05	**YM05**	**4.22**	**20**	*e*P			**Pn**	**08 40 58.6**	**-0.9**
	baz=19								
JYNG	**Yonagunijimaku**	**4.24**	**39**	P			**Pn**	**08 41 00.7**	**+1.0**
YOJ	**Yonaguni jima**	**4.29**	**40**	*e*P			**Pn**	**08 41 00.5**	**+0.1**
	baz=40								
YOJ	**Yonaguni jima**	**4.29**	**40**	S			**Sn**	**08 41 49.9**	**+0.3**
YOJ	**Yonaguni jima**	**4.29**	**40**	Pn			**Pn**	**08 40 58.8**	**-1.6**
YOJ							**Sn**	**08 41 49.9**	**+0.3**
HATJ	**Hateruma jima**	**4.54**	**50**	S			**Sn**	**08 41 52.6**	**-3.1**
IRIF	**Iriomote-Funau**	**4.66**	**47**	P			**Pn**	**08 41 05.5**	**0.0**
IRIF				*e*S			**Sn**	**08 41 57.9**	**-0.9**
JKRS	**Kuro-shima**	**4.80**	**50**	P			**Pn**	**08 41 07.6**	**+0.3**
JKRS				*e*S			**Sn**	**08 42 00.1**	**-2.0**
MATB	**Ma-tsu**	**4.94**	**360**	*e*P			**Pn**	**08 41 09.0**	**-0.4**
	baz=359								
JIJ	**Ishigaki jima**	**4.97**	**50**	P			**Pn**	**08 41 10.3**	**+0.6**
JIJ				S			**Sn**	**08 42 04.0**	**-2.4**
MHZQ	**Yeshan**	**4.97**	**350**	*e*P			**Pn**	**08 41 11.2**	**+1.5**
	baz=349								
JISG	**Ishigakijimahi**	**5.23**	**49**	P			**Pn**	**08 41 13.4**	**+0.1**
JISG				S			**Sn**	**08 42 10.6**	**-2.2**
LYJJ	**Jianjiangzhen**	**5.34**	**358**	*e*P			**Pn**	**08 41 16.5**	**+1.7**
	baz=357								
JTJ	**Tarama**	**5.54**	**51**	*e*S			**Sn**	**08 42 18.2**	**-2.3**
HKPS	**Hong Kong Po S**	**5.54**	**282**	Pn			**Pn**	**08 41 16.1**	**-1.6**
XPSS	**Dashiqiu**	**5.72**	**2**	*e*P			**Pn**	**08 41 20.8**	**+0.8**
	baz=1.0								
JIRB	**Irabujima**	**6.00**	**52**	S			**Sn**	**08 42 29.9**	**-1.8**
QIZ	**Qiongzhong**	**9.77**	**259**	Pn			**Pn**	**08 42 14.6**	**-1.1**
JNU	**Nakatsue**	**15.32**	**37**	Pn			**P**	**08 43 33.2**	**-2.8**
	0.2nm,0.3s,baz=222,slow=14,SNR=2.1								
KSRS	**Korea Array**	**17.61**	**21**	P			**P**	**08 44 01.7**	**+0.5**
	0.2nm,0.3s,baz=206,slow=10,SNR=3.3								
KSRS						LR	LR	08 51 59.9	
	comp=Z,75nm,18.3s,baz=335,slow=41								
CHTO	**Chiang Mai**	**19.92**	**267**	P			**P**	**08 44 26.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**19.98**	**266**	P			Pn	08 44 28.8	-0.4
	1.9nm,0.4s,baz=71,slow=9.2,SNR=14								
CMAR						LR	LR	08 52 55.6	
	comp=Z,151nm,18.5s,baz=74,slow=39								
MJAR	**Matsushiro Arr**	**22.05**	**42**	P			**P**	**08 44 50.0**	**+0.4**
	1.6nm,0.7s,baz=226,slow=6.8,SNR=4.7								
MJAR						LR	LR	08 54 18.6	
	comp=Z,61nm,19.9s,baz=270,slow=39								
SIJI	**Sorong**	**24.54**	**152**	P			**P**	**08 45 13.8**	**-0.7**
	12nm,0.6s,baz=17,slow=8.7,SNR=5.6								
LSA	**Lhasa**	**27.33**	**294**	P			**P**	**08 45 41.6**	**+1.3**
LSA						IAmb	IAmb	08 45 45.6	
	comp=Z,5.5nm,0.8s								
KLR	**Kul'dur**	**29.51**	**16**	P			**P**	**08 46 00.8**	**+1.9**
	comp=Z,1.2nm,0.8s,baz=219,slow=8.2,SNR=4.6								
MKAR	**Makanchi Array**	**39.79**	**319**	P			**P**	**08 47 29.0**	**+1.3**
	comp=Z,1.3nm,0.7s,baz=114,slow=9.8,SNR=17								
MKAR					PcP		**PcP**	**08 49 33.5**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=113,slow=3.7,SNR=2.6								
YAK	**Yakutsk**	**41.36**	**7**	P			**P**	**08 47 41.7**	**+1.3**
	comp=Z,7.1nm,0.4s,baz=332,slow=0.7,SNR=3.8								
ZALV	**Zalesovo Beam**	**42.21**	**330**	P			**P**	**08 47 48.5**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=132,slow=6.0,SNR=4.0								
WRA	**Warramunga Arr**	**43.22**	**160**	P			**P**	**08 47 54.7**	**-1.3**
	comp=Z,4.5nm,0.7s,baz=342,slow=9.1,SNR=29								
WRA					PcP		**PcP**	**08 49 44.5**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=344,slow=3.3,SNR=6.0								
KURBB	**Kurchatov Arra**	**43.74**	**322**	P			**P**	**08 48 01.6**	**+1.7**
	comp=Z,1.7nm,0.8s,baz=126,slow=7.2,SNR=11								
AS31	**Alice Springs**	**46.59**	**162**	P			**P**	**08 48 21.7**	**-1.2**
AS31						IAmb	IAmb	08 48 33.8	
	comp=Z,0.8nm,0.7s								
ASAR	**Alice Springs**	**46.59**	**162**	P			**P**	**08 48 21.9**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=347,slow=6.9,SNR=28								
ASAR					PcP		**PcP**	**08 49 56.4**	**-0.3**
	comp=Z,1.1nm,0.8s,baz=348,slow=2.6,SNR=8.4								
STKA	**Stephens Creek**	**56.68**	**158**	P			**P**	**08 49 37.5**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=339,slow=7.4,SNR=7.2								
STKA	**Stephens Creek**	**56.68**	**158**	P			**P**	**08 49 38.0**	**0.0**
TTA	**Tatalina**	**68.65**	**29**	P			**P**	**08 50 59.5**	**+1.9**
TTA						IAmb	IAmb	08 51 18.2	
	comp=Z,7.1nm,1.3s								
PPLA	**Purkeypile**	**70.39**	**29**	P			**P**	**08 51 09.4**	**+0.9**
PPLA						IAmb	IAmb	08 51 26.8	
	comp=Z,11nm,1.3s								
MLY	**Manley**	**70.71**	**27**	P			**P**	**08 51 12.3**	**+2.0**
MLY						IAmb	IAmb	08 51 13.4	
	comp=Z,3.3nm,0.9s								
RND	**Reindeer**	**71.80**	**28**	P			**P**	**08 51 17.2**	**+0.3**
RND						IAmb	IAmb	08 51 26.2	
	comp=Z,6.2nm,1.0s								
WRH	**Wood River Hil**	**71.93**	**27**	P			**P**	**08 51 19.0**	**+1.4**
WRH						IAmb	IAmb	08 51 35.0	
	comp=Z,2.2nm,1.0s								
SML	**Sawmill**	**72.35**	**30**	P			**P**	**08 51 22.1**	**+1.9**
ILAR	**Eielson Array**	**72.37**	**27**	P			**P**	**08 51 20.8**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=272,slow=5.2,SNR=11								
HDA	**Harding Lake**	**72.42**	**27**	P			**P**	**08 51 21.3**	**+0.8**
HDA						IAmb	IAmb	08 51 21.6	
	comp=Z,1.8nm,0.8s								
SCM	**Sheep Creek Mo**	**72.81**	**30**	P			**P**	**08 51 24.8**	**+1.8**
FINES	**FINESS Array B**	**73.47**	**330**	P			**P**	**08 51 27.7**	**+0.9**
	comp=Z,2.6nm,0.9s,baz=64,slow=6.3,SNR=4.4								
SCRK	**Sand Creek**	**73.79**	**27**	P			**P**	**08 51 29.4**	**+0.6**
CTGM	**Chitina Glacie**	**75.82**	**30**	P			**P**	**08 51 40.2**	**-0.4**
INK	**Inuvik**	**76.40**	**22**	P			**P**	**08 51 43.2**	**-0.4**
INK						IAmb	IAmb	08 51 46.0	
	comp=Z,2.3nm,1.0s								
CLL	**Collm**	**83.77**	**323**	*ep*P			**pP**	**08 52 30.0**	**-0.7**
CLL				*ep*P		*e*P		08 52 35.0	
GERES	**GERESS Array B**	**84.44**	**320**	P			**P**	**08 52 28.8**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=43,slow=4.5,SNR=5.5								
YKA	**Yellowknife Ar**	**86.15**	**22**	P			**P**	**08 52 36.0**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=315,slow=4.5,SNR=11								

NEIC ***06*** *08:41:15.8±2.9, 35°.31N±0°.03×103°.07W±0°.03, h5km±2km,*

mb3.3/1, Error ellipse: s-maj=6.8km s-min=3.0km az=42.0
IDC ***06*** *08:41:20.5±1.3, 35°.21N×102°.91W, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.5/34, mbtmp3.4/4, ML3.2/3, MS2.6/1, Ms1 2.6/1, ms1mx2.4/29, Error ellipse: s-maj=36.6km s-min=9.6km az=84.0*
ANF ***06*** *08:41:21.4±0.4, 35°.22N×102°.82W, h0km, ML4.3/11, Error ellipse: s-maj=3.9km s-min=2.8km az=40.0*

ISC 06 08:41:17.2±0.6, 35°.30N±0°.03×102°.98W±0°.03, h10km, n76, σ2s11/101, Northwestern Texas-Oklahoma border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMTX	**Amarillo**	**1.14**	**111**	Pg	**Pb**	**08 41 40.6**	**+1.5**
AMTX				Sg	**Sb**	**08 41 54.2**	**+0.1**
AMTX	**Amarillo**	**1.14**	**111**	P	**Pb**	**08 41 40.6**	**+1.5**
	baz=292						
AMTX				S	**Sb**	**08 41 54.6**	**+0.5**
	baz=292						
MSTX	**Muleshoe**	**1.34**	**173**		**Pn**	**08 41 44.2**	**+2.1**
MSTX				Sn	**Sb**	**08 42 01.2**	**+1.5**
MSTX	**Muleshoe**	**1.34**	**173**	P	**Pg**	**08 41 45.1**	**+2.2**
	baz=3.7						
MSTX				S	**Sg**	**08 42 03.0**	**+2.7**
	baz=3.7						
T25A	**Trinidad**	**2.17**	**328**		**Pn**	**08 41 53.1**	**-0.5**
T25A				Sn	**Sn**	**08 42 18.2**	**-2.5**
T25A	**Trinidad**	**2.17**	**328**	P	**Pg**	**08 42 01.3**	**+2.4**
	baz=143						
T25A				S	**Sg**	**08 42 32.4**	**+5.5**
	baz=143						
CPRX	**Cap Rock**	**2.38**	**198**	Pn	**Pn**	**08 41 54.8**	**-1.6**
ANMO	**Albuquerque**	**2.87**	**264**		**Pn**	**08 42 02.1**	**-1.1**
ANMO	**Albuquerque**	**2.87**	**264**	P	**Pb**	**08 42 11.0**	**+2.4**
	baz=84						
ANMO				Sb	**Sg**	**08 42 53.2**	**+3.7**
	baz=84						
CLNB	**Carlsbad**	**3.12**	**194**	Pn	**Pn**	**08 42 04.7**	**-1.8**
LPM	**Los Pinos Moun**	**3.16**	**253**	Pn	**Pn**	**08 42 06.6**	**-0.6**
SDCO	**Great Sand Dun**	**3.17**	**321**		**Pn**	**08 42 08.1**	**+0.6**
SDCO				Sn	**Sn**	**08 42 43.4**	**-2.2**
SDCO	**Great Sand Dun**	**3.17**	**321**	P	**Pb**	**08 42 15.1**	**+1.2**
	baz=137						
SDCO				Sb	**Sg**	**08 43 03.5**	**+4.3**
	baz=137						
BNM	**Barren Site**	**3.21**	**250**	Pn	**Pn**	**08 42 07.3**	**-0.7**
GDL2	**Guadalupe Moun**	**3.30**	**201**	Pn	**Pn**	**08 42 07.2**	**-1.9**
U32A	**Winter Ranch,**	**3.41**	**70**		**Pn**	**08 42 11.8**	**+1.3**
U32A				Sn	**Sn**	**08 42 53.5**	**+2.5**
TVZX	**PASSCAL Wareho**	**3.47**	**250**	Sb	**Sg**	**08 43 13.1**	**+4.5**
	baz=71						
Y22D	**IRIS PASSCAL I**	**3.47**	**251**	Pn	**Pn**	**08 42 11.1**	**-0.3**
Y22D	**IRIS PASSCAL I**	**3.47**	**251**	Sb	**Sg**	**08 43 13.1**	**+4.5**
	baz=71						
LENM	**Lemitar**	**3.48**	**252**	Pn	**Pn**	**08 42 11.0**	**-0.6**
WMOK	**Wichita Mounta**	**3.49**	**98**	Pn	**Pn**	**08 42 12.0**	**+0.4**
WMOK				Sn	**Sn**	**08 42 54.1**	**+1.1**
WMOK	**Wichita Mounta**	**3.49**	**98**	P	**Pn**	**08 42 14.4**	**+2.8**
	baz=280						
KSCO	**Kaye Shedlock'**	**3.72**	**4**		**Pn**	**08 42 16.2**	**+1.4**
KSCO				Sn	**Sn**	**08 43 01.3**	**+2.5**
KSCO	**Kaye Shedlock'**	**3.72**	**4**	P	Pn	08 42 20.9	+6.1
	baz=181						
ABTX	**Abilene, Hawle**	**3.85**	**133**		**Pn**	**08 42 17.3**	**+0.8**
ABTX				Sn	**Sn**	**08 43 00.8**	**-1.0**
S22A	**4UR Ranch, Cre**	**3.95**	**309**	Pn	**Pn**	**08 42 17.3**	**-0.8**
S22A				Sn	**Sn**	**08 43 00.2**	**-4.4**
Q24A	**Divide**	**4.05**	**335**	Pn	**Pn**	**08 42 19.8**	**+0.3**
Q24A				Sn	**Sn**	**08 43 07.4**	**+0.2**
MNTX	**Cornudas Mount**	**4.11**	**210**		**Pn**	**08 42 18.2**	**-1.9**
MNTX				Sn	**Sn**	**08 43 08.5**	**+0.1**
MNTX	**Cornudas Mount**	**4.11**	**210**	P	Pn	08 42 25.8	+5.7
	baz=32						
X34A	**Smith Ranch, M**	**4.29**	**98**	Pn	**Pn**	**08 42 22.8**	**+0.3**
CBKS	**Cedar Bluff**	**4.36**	**36**		**Pn**	**08 42 26.2**	**+2.6**
CBKS				Sn	**Sn**	**08 43 16.4**	**+1.8**
CBKS	**Cedar Bluff**	**4.36**	**36**	P	**Pn**	**08 42 28.0**	**+4.4**
	baz=214						
CBKS				S	**Sn**	**08 43 16.2**	**+1.6**
	baz=214						
OKCFA	**Oklahoma City**	**4.52**	**87**	Pn	**Pn**	**08 42 25.9**	**+0.2**
OKCFA				Sn	**Sn**	**08 43 18.8**	**+0.4**
FNO	**Franklin**	**4.57**	**89**	Pn	**Pn**	**08 42 26.4**	**0.0**
FNO				Sn	**Sn**	**08 43 20.4**	**+0.9**
121A	**Cookes Peak, D**	**4.85**	**237**	Pn	**Pn**	**08 42 30.4**	**-0.1**
121A				Sn	**Sn**	**08 43 24.9**	**-1.9**
ISCO	**Idaho Springs**	**4.96**	**336**	Pn	**Pn**	**08 42 31.4**	**-0.6**
W35A	**Tecumseh**	**5.00**	**90**		**Pn**	**08 42 35.0**	**+2.7**
JCT	**Junction City**	**5.50**	**150**		**Pn**	**08 42 37.9**	**-1.3**
W18A	**Petrified Fore**	**5.53**	**270**	Pn	**Pn**	**08 42 37.4**	**-2.5**
WHTX	**Lake Whitney,**	**5.67**	**124**	Pn	**Pn**	**08 42 39.6**	**-1.9**
WHTX				Sn	**Sn**	**08 43 47.0**	**+0.3**
X18A	**Snowflake**	**5.78**	**264**		**Pn**	**08 42 41.2**	**-1.9**
TUL1	**Leonard**	**5.89**	**82**	Pn	**Pn**	**08 42 45.2**	**+0.7**
TXAR	**Lajitas Array**	**5.98**	**186**	Pn	**Pn**	**08 42 49.3**	**+3.4**
	0.4nm,0.3s,baz=13,slow=11,SNR=24						
TXAR				Pg	**Pb**	**08 43 02.7**	**+1.2**
	3.4nm,0.3s,baz=6.7,slow=16,SNR=16						
TXAR				Lg	Lg	08 44 25.0	
	6.3nm,0.3s,baz=4.6,slow=24,SNR=4.7						
TXAR				LR	LR	08 45 22.9	
	comp=Z,59nm,20.3s,baz=0.0,slow=41						
N23A	**Red Feather La**	**6.05**	**338**	Pn	**Pn**	**08 42 44.8**	**-2.3**
PHWY	**Pilot Hill**	**6.30**	**343**	Pn	Pn	08 42 47.1	-3.4
KSU1	**Kansas State U**	**6.34**	**51**	P	**Pn**	**08 42 54.9**	**+4.1**
	baz=233						
O20A	**White River Ci**	**6.38**	**321**	Pn	**Pn**	**08 42 48.7**	**-2.7**
319A	**Douglas**	**6.56**	**235**	Pn	**Pn**	**08 42 52.6**	**-1.3**
WUAZ	**Wupatki**	**6.86**	**274**	Pn	**Pn**	**08 42 56.6**	**-1.4**
SRU	**San Rafael Swe**	**7.12**	**305**	Pn	**Pn**	**08 43 00.6**	**-1.0**
TUC	**Tucson**	**7.15**	**248**	Pn	**Pn**	**08 43 02.5**	**+0.6**
BGNE	**Belgrade**	**7.18**	**30**	Pn	**Pn**	**08 43 00.5**	**-1.8**
BGNE				Sn	**Sn**	**08 44 22.0**	**-2.0**
RWWY	**Rawlins**	**7.19**	**334**	Pn	Pn	08 42 59.0	-3.6
RWWY				Sn	**Sn**	**08 44 20.7**	**-3.7**
HHAR	**Hobbs**	**7.41**	**80**	Pn	**Pn**	**08 43 05.9**	**+0.4**
W39A	**Magazine**	**7.53**	**88**	Pn	**Pn**	**08 43 08.7**	**+1.7**
833A	**Chaparral WMA,**	**7.59**	**155**	Pn	**Pn**	**08 43 06.3**	**-1.6**
833A				Sn	**Sn**	**08 44 33.7**	**-0.4**
MIAR	**Mount Ida**	**7.76**	**93**	Pn	**Pn**	**08 43 08.6**	**-1.6**
MIAR				Sn	**Sn**	**08 44 36.0**	**-2.2**
NATX	**Nacogdoches**	**7.79**	**115**	Pn	Pn	08 43 07.9	-2.7
NATX				Sn	**Sn**	**08 44 38.9**	**0.0**
K22A	**Casper**	**7.84**	**340**	Pn	**Pn**	**08 43 08.9**	**-2.6**
K22A				Sn	**Sn**	**08 44 39.0**	**-1.4**
HKT	**Hockley**	**8.05**	**130**	Pn	**Pn**	**08 43 14.3**	**+0.2**
TCRU	**Three Creeks R**	**8.27**	**296**	Pn	**Pn**	**08 43 15.6**	**-1.8**
U40A	**Yellville**	**8.29**	**80**	Pn	**Pn**	**08 43 18.5**	**+1.0**
Y14A	**Wickenburg**	**8.37**	**264**	Pn	**Pn**	**08 43 16.3**	**-2.4**
X40A	**Basin Creek Fa**	**8.38**	**93**	Pn	**Pn**	**08 43 21.8**	**+3.1**
WHAR	**Wooly Hollow**	**8.74**	**87**	Pn	**Pn**	**08 43 23.7**	**0.0**
WHAR				Sn	**Sn**	**08 45 03.1**	**+0.8**
214A	**Organ Pipe Nat**	**8.85**	**251**	Pn	**Pn**	**08 43 23.7**	**-1.5**
214A				Sn	**Sn**	**08 44 59.2**	**-5.8**
RSSD	**Black Hills**	**8.85**	**355**	Pn	**Pn**	**08 43 25.2**	**-0.2**
MGMO	**Mountain Grove**	**8.85**	**75**		**Pn**	**08 43 23.9**	**-1.3**
MGMO				Sn	**Sn**	**08 45 02.1**	**-2.9**
PDAR	**Pinedale Array**	**9.04**	**328**	Pn	Pn	08 43 36.2	+8.3
	0.1nm,0.3s,baz=135,slow=14,SNR=5.5						
PDAR				Lg	Lg	08 46 07.0	
	0.2nm,0.3s,baz=137,slow=33,SNR=2.2						
ECSD	**EROS Data Cent**	**9.75**	**28**	Pn	**Pn**	**08 43 36.4**	**-1.1**
ECSD				Sn	**Sn**	**08 45 26.2**	**-0.8**
CCM	**Cathedral Cave**	**9.82**	**70**	Pn	**Pn**	**08 43 37.6**	**-0.9**
P43A	**Skaggs, Pawnee**	**11.54**	**64**	Pn	Pn	08 43 59.2	-2.7
L42A	**Oliver, Polo**	**12.37**	**53**	Pn	**Pn**	**08 44 14.5**	**+1.2**
ULM	**Lac du Bonnet**	**15.81**	**17**	Pn	**Pn**	**08 45 01.2**	**+1.3**
	0.2nm,0.3s,baz=194,slow=13,SNR=2.2						
ULM				Lg	Lg	08 49 27.1	
	0.2nm,0.3s,baz=117,slow=20,SNR=1.6						
ULM	**Lac du Bonnet**	**15.81**	**17**		**Pn**	**08 44 58.6**	**-1.3**
ULM				IAmb	IAmb	08 45 03.5	
	comp=Z,2.7nm,1.1s						
ILAR	**Eielson Array**	**39.44**	**332**	P	P	08 48 52.9	+5.8
	comp=Z,0.8nm,0.8s,baz=124,slow=7.4,SNR=11						

NNC 06 08:48:06.5±9.3, 34°.04N×69°.98E, h0km, mb4.4, mpv4.0, 1C-2D, Error ellipse: s-maj=63.8km s-min=35.0km az=0.0, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay**	**8.10**	**0**	Pg	Pg	08 50 39.6	-2.0
	2.7nm,0.1s						
IUG				Lg	Lg	08 51 41.1	
	15nm,0.2s						
BRLS	**Borolday**	**8.98**	**359**	Pg	Pg	08 50 47.8	-11
	0.5nm,0.2s						
MRKS	**Merke**	**9.06**	**15**	Pg	Pn	08 50 50.0	+31
	7.2nm,0.3s						
MRKS				Lg	Lg	08 52 01.2	
	6.9nm,0.6s						
KK31	**Karatay Array**	**9.06**	**2**	Pg	Pn	08 50 51.8	+33
	1.0nm,0.4s,baz=181,slow=12,SNR=22						
KK31				⇓S	Sn	08 52 02.0	+0.7
	4.8nm,0.5s,baz=183,slow=26						
AAK	**Ala-Archa**	**9.29**	**21**	⇓Pg	Pn	08 50 54.3	+33
	16nm,1.9s						
AAK				⇑S	Sn	08 52 08.9	+1.8
	12nm,0.9s						

BJI ***06*** *08:56:31.2±0.0, 20°.56N×147°.36E, h25km, mB5.1/25, mb4.7/40, Ms4.6/9, Ms7 4.3/9*
IDC ***06*** *08:56:32.7±0.6, 20°.78N×146°.90E, h0km, mb4.3/24, mb1 4.4/27, mb1mx4.3/50, mbtmp4.3/27, ML4.0/3, MS3.6/2, Ms1 3.6/2, ms1mx2.8/55, Error ellipse: s-maj=19.4km s-min=12.3km az=92.0*
MOS ***06*** *08:56:34.5±0.8, 20°.68N×146°.84E, h23km, mb4.8/21, Error ellipse: s-maj=22.4km s-min=7.5km az=113.7*
NEIC ***06*** *08:56:34.2±1.2, 20°.74N±0°.06×146°.9E±0°.1, h10km±1km, mb4.8/45, Error ellipse: s-maj=16.4km s-min=10.5km az=86.0*

ISC 06 08:56:37.9±0.4, 20°.77N±0°.04×146°.89E±0°.08, h35km, n146, σ1s34/156, mb4.7/78, 10C-10D, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	**Sarigan**	**4.19**	**195**	Pn	**Pn**	**08 57 36.4**	**-2.9**
SARN				Sn	**Sn**	**08 58 25.1**	**-2.0**
GUMO	**Guam**	**7.40**	**195**	Pn	**Pn**	**08 58 26.0**	**+2.6**
	6.0nm,0.3s,baz=351,slow=19,SNR=2.7						
GUMO				Sn	**Sn**	**08 59 46.9**	**+0.7**
	4.8nm,0.3s,baz=7.7,slow=22,SNR=1.9						
GUMO	**Guam**	**7.40**	**195**	Pn	**Pn**	**08 58 21.9**	**-1.5**
GUMO				Sn	**Sn**	**08 59 42.1**	**-4.2**
JCJ	**Chichijima**	**7.62**	**327**	Pn	**Pn**	**08 58 24.6**	**-1.8**
	22nm,0.3s,baz=84,slow=23,SNR=8.1						
JCJ				Sn	**Sn**	**08 59 44.8**	**-6.9**
	38nm,0.3s,baz=286,slow=20,SNR=10						
INU	**Inuyama**	**16.92**	**331**		**Pn**	**09 00 30.9**	**-1.0**
INU				IAmb	IAmb	09 00 36.6	
	comp=Z,39nm,0.8s						
MJAR	**Matsushiro Arr**	**17.45**	**336**	P	**Pn**	**09 00 36.7**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=147,slow=12,SNR=10						
MAJO	**Matsushiro**	**17.45**	**336**	⇑*e*P	**P**	**09 00 40.2**	**+0.7**
MAJO	**Matsushiro**	**17.45**	**336**	P	**P**	**09 00 39.3**	**-0.1**
MAT	**Matsushiro**	**17.45**	**336**	P	**P**	**09 00 39.9**	**+0.4**
MAT				*e*S	**Sn**	**09 03 49.0**	**-2.7**
MJB9	**Matsu-Tunnel**	**17.45**	**336**		**Pn**	**09 00 38.9**	**+0.3**
PATS	**Pohnpei**	**17.73**	**140**	Pn	**Pn**	**09 00 40.5**	**-1.5**
H11S3	**WAKE ISLAND Hy**	**18.78**	**94**	T	T	09 19 09.7	
	baz=282						
H11S1	**WAKE ISLAND Hy**	**18.79**	**93**	T	T	09 19 08.9	
	baz=282

WRA	**Warramunga Arr**	**42.29**	**198**	P		**P**	**09 04 28.2**	**0.0**
	comp=Z,2.2nm,0.6s,baz=20,slow=8.7,SNR=14							
WRA				PcP		**PcP**	**09 06 22.1**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=13,slow=3.2,SNR=2.6							
SEY	**Seymchan**	**42.30**	**4**	⇓*iP*		**P**	**09 04 29.1**	**+1.3**
SEY	**Seymchan**	**42.30**	**4**	P		**P**	**09 04 29.4**	**+1.6**
	comp=Z,6.4nm,0.6s,baz=181,slow=7.3,SNR=28							
YAK	**Yakutsk**	**42.91**	**348**	P		**P**	**09 04 32.4**	**-0.4**
YAK				IAmb		IAmb	09 04 33.7	
	comp=Z,13nm,0.8s							
FITZ	**Fitzroy Crossi**	**43.89**	**210**	P		**P**	**09 04 41.4**	**+0.2**
	comp=Z,5.9nm,1.0s,baz=31,slow=11,SNR=8.0							
FITZ	**Fitzroy Crossi**	**43.89**	**210**	P		**P**	**09 04 42.3**	**+1.1**
GTA	**Gaotai**	**44.22**	**306**	*eP*		**P**	**09 04 44.4**	**+0.5**
GTA				pP		pP	09 04 48.8	-3.6
GTA				sP		sP	09 04 52.3	-3.6
GTA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
ZAK	**Zakamensk**	**45.20**	**322**	*eP*		**P**	**09 04 51.4**	**-0.1**
ZAK				pmax		pmax		
	comp=Z,5.0nm,1.0s							
TLY	**Talaya**	**45.55**	**323**	*eP*		**P**	**09 04 53.5**	**-0.7**
TLY				pmax		pmax		
	comp=Z,23nm,1.0s							
TLY	**Talaya**	**45.55**	**323**	P		**P**	**09 04 55.6**	**+1.5**
TLY				IAmb		IAmb	09 04 56.3	
	comp=Z,18nm,1.4s							
AS31	**Alice Springs**	**45.95**	**197**	P		**P**	**09 04 57.2**	**-0.4**
ASAR	**Alice Springs**	**45.95**	**197**	P		**P**	**09 04 57.8**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=18,slow=7.8,SNR=20							
BILL	**Bilibino**	**48.80**	**10**	⇓*eP*		**P**	**09 05 20.0**	**+0.8**
BILL				pmax		pmax		
	comp=Z,13nm,1.7s							
BILL	**Bilibino**	**48.80**	**10**	P		**P**	**09 05 19.8**	**+0.6**
BILL				IAmb		IAmb	09 05 21.2	
	comp=Z,8.2nm,0.9s							
PSAD3	**Pilbara Seismi**	**49.79**	**214**	P		**P**	**09 05 26.8**	**-0.5**
PSAD3				IAmb		IAmb	09 05 29.4	
	comp=Z,20nm,1.2s							
LSA	**Lhasa**	**50.79**	**292**	P		**P**	**09 05 34.7**	**-0.8**
LSA				IAmb		IAmb	09 05 38.4	
	comp=Z,12nm,0.9s							
TIXI	**Tiksi**	**51.95**	**353**	⇓*eP*		**P**	**09 05 43.5**	**+0.5**
TIXI				pmax		pmax		
	comp=Z,7.0nm,1.7s							
TIXI	**Tiksi**	**51.95**	**353**	P		**P**	**09 05 43.3**	**+0.3**
STKA	**Stephens Creek**	**52.60**	**186**	P		**P**	**09 05 48.4**	**+0.2**
	comp=Z,0.6nm,0.4s,baz=36,slow=7.7,SNR=3.5							
STKA	**Stephens Creek**	**52.60**	**186**	P		**P**	**09 05 48.1**	**-0.1**
WMQ	**Urumqi**	**53.83**	**310**	*eP*		**P**	**09 05 59.2**	**+1.8**
WMQ				pP		sP	09 06 10.8	+1.2
WMQ				pmax		pmax		
	comp=Z,11nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,180nm,10.5s							
WMQ				LR		LR		
	comp=Z,460nm,29.1s							
WMQ				LR		LR		
	comp=Z,130nm,11.7s							
TAPN	**Taplejung**	**54.02**	**289**	*eP*		**P**	**09 06 00.4**	**+1.1**
ODAN	**Odare**	**54.36**	**289**	*eP*		**P**	**09 06 02.5**	**+0.8**
	comp=Z,25nm,0.7s							
RAMN	**Ramite**	**55.05**	**289**	*eP*		**P**	**09 06 07.6**	**+0.9**
	comp=Z,32nm,0.8s							
JIRN	**Jiri**	**55.32**	**290**	*eP*		**P**	**09 06 10.1**	**+1.3**
	comp=Z,60nm,0.7s							
GUN	**Gumba**	**55.56**	**290**	*eP*		**P**	**09 06 11.6**	**+1.0**
	comp=Z,65nm,1.1s							
PKI	**Pulchoki**	**56.02**	**290**	*eP*		**P**	**09 06 14.2**	**+0.4**
PKIN	**Phulchoki**	**56.03**	**290**	*eP*		**P**	**09 06 14.6**	**+0.8**
KKN	**Kakani**	**56.10**	**290**	*eP*		**P**	**09 06 15.0**	**+0.7**
	comp=Z,23nm,0.7s							
DMN	**Daman**	**56.28**	**290**	*eP*		**P**	**09 06 16.7**	**+1.1**
GKN	**Gorkha**	**56.64**	**290**	*eP*		**P**	**09 06 18.8**	**+0.8**
ZAA0	**Zalesovo Array**	**57.08**	**322**	P		**P**	**09 06 20.2**	**-0.3**
ZALV	**Zalesovo Beam**	**57.08**	**322**	P		**P**	**09 06 20.5**	**0.0**
	comp=Z,10nm,0.5s,baz=106,slow=7.6,SNR=49							
ZALV				PcP		**PcP**	**09 07 15.1**	**0.0**
	comp=Z,1.8nm,0.6s,baz=98,slow=2.9,SNR=2.4							
DANN	**Dangsing**	**57.36**	**291**	*eP*		**P**	**09 06 24.4**	**+1.1**
	comp=Z,51nm,0.5s							
KOLN	**Koldanda**	**57.58**	**290**	*eP*		**P**	**09 06 25.3**	**+0.5**
	comp=Z,19nm,0.8s							
MK31	**Makanchi Array**	**57.86**	**313**	*i* P		**P**	**09 06 26.2**	**0.0**
MK31	**Makanchi Array**	**57.86**	**313**	P		**P**	**09 06 26.9**	**+0.7**
MK31				IAmb		IAmb	09 06 27.6	
	comp=Z,6.0nm,0.9s							
MKAR	**Makanchi Array**	**57.86**	**313**	P		**P**	**09 06 26.8**	**+0.6**
	comp=Z,6.7nm,0.7s,baz=90,slow=9.0,SNR=51							
MAKZ	**Makanchi**	**58.08**	**313**	P		**P**	**09 06 27.7**	**0.0**
MAKZ	**Makanchi**	**58.08**	**313**	P		**P**	**09 06 28.6**	**+0.9**
MAKZ				IAmb		IAmb	09 06 29.2	
	comp=Z,10nm,0.9s							
PDGK	**Podgornoye**	**59.77**	**309**	P		**P**	**09 06 39.7**	**+0.1**
SCM	**Sheep Creek Mo**	**60.49**	**30**	P		**P**	**09 06 44.6**	**+0.4**
SCM				IAmb		IAmb	09 06 55.2	
	comp=Z,11nm,1.1s							
KURK	**Kurchatov**	**60.50**	**317**	*d iP*		**P**	**09 06 44.4**	**+0.1**
KURK				pmax		pmax		
	comp=Z,12nm,0.7s							
KURK	**Kurchatov**	**60.50**	**317**	P		**P**	**09 06 44.6**	**+0.3**
DHY	**Denali Highway**	**60.72**	**28**	P		**P**	**09 06 45.9**	**+0.1**
DHY				IAmb		IAmb	09 06 56.5	
	comp=Z,16nm,1.4s							
WRH	**Wood River Hil**	**60.72**	**27**	P		**P**	**09 06 46.1**	**+0.5**
TOLK	**Toolik Lake Re**	**61.26**	**22**	P		**P**	**09 06 50.7**	**+1.5**
TOLK				IAmb		IAmb	09 06 51.8	
	comp=Z,7.6nm,1.3s							
ILAR	**Eielson Array**	**61.30**	**27**	P		**P**	**09 06 48.9**	**-0.6**
	comp=Z,1.5nm,1.0s,baz=267,slow=5.9,SNR=8.1							
SCRK	**Sand Creek**	**62.38**	**28**	P		**P**	**09 06 56.1**	**-0.9**
SCRK				IAmb		IAmb	09 06 58.9	
	comp=Z,9.5nm,1.4s							
KSH	**Kashi**	**62.61**	**305**	P		**P**	**09 07 02.7**	**+3.8**
KSH				pP		sP	09 07 11.6	+0.4
KSH				PP		PP	09 09 26.4	+10
KSH				S		**S**	**09 15 27.4**	**+2.6**
KSH				sS		sS	09 15 45.8	+5.7
KSH				ScS		**SKKSac**	**09 16 47.5**	**-1.5**
KSH				SS		**SS**	**09 19 35.5**	**+6.2**
KSH				pmax		pmax		
	comp=Z,17nm,0.5s							
KSH				LR		LR		
	comp=Z,390nm,6.5s							
KSH				LR		LR		
	comp=Z,700nm,7.4s							
TKM2	**Tokmak 2**	**62.63**	**308**	P		**P**	**09 06 59.0**	**-0.2**
AAK	**Ala-Archa**	**63.46**	**308**	*ceP*		**P**	**09 07 05.6**	**+1.0**
AAK				pmax		pmax		
	comp=Z,2.0nm,0.7s							
AAK	**Ala-Archa**	**63.46**	**308**	LR		LR	09 35 29.1	
	comp=Z,124nm,21.8s,baz=312,slow=37							
NIL	**Nilore**	**65.52**	**298**	P		**P**	**09 07 18.1**	**0.0**
KK31	**Karatay Array**	**66.33**	**309**	P		**P**	**09 07 23.8**	**+0.7**
KKAR	**Karatay Array**	**66.33**	**309**	P		**P**	**09 07 23.9**	**+0.8**
INK	**Inuvik**	**67.03**	**23**	P		**P**	**09 07 26.1**	**-0.9**
	comp=Z,2.4nm,0.9s,baz=254,slow=5.8,SNR=8.2							
INK	**Inuvik**	**67.03**	**23**	P		**P**	**09 07 27.5**	**+0.5**
CHGR	**Chuyangaron**	**67.98**	**304**	P		**P**	**09 07 34.3**	**+0.6**
KBL	**Kabul**	**68.80**	**300**	P		**P**	**09 07 39.8**	**+0.7**
WHZ	**Wether Hill Ro**	**69.05**	**164**	P		**P**	**09 07 40.2**	**+0.3**
C36M	**Paulatuk**	**70.41**	**22**	P		**P**	**09 07 48.6**	**+0.6**
C36M				IAmb		IAmb	09 07 49.0	
	comp=Z,4.2nm,0.8s							
SVE	**Sverdlovsk**	**70.84**	**324**	⇓*eP*		**P**	**09 07 52.0**	**+1.1**
SVE				pmax		pmax		
	comp=Z,15nm,1.0s							
ARU	**Arti**	**72.04**	**324**	*d iP*		**P**	**09 07 58.5**	**+0.4**
ARU							09 10 33.4	
ARU				S		**S**	**09 17 18.7**	**+1.4**
ARU				pmax		pmax		
	comp=Z,12nm,0.6s							
ARU	**Arti**	**72.04**	**324**	P		**P**	**09 07 58.6**	**+0.4**
AB31	**Akbulak array**	**72.60**	**317**	*i* P		**P**	**09 08 01.5**	**-0.2**
ABKAR	**Akbulak array**	**72.60**	**317**	P		**P**	**09 08 02.1**	**+0.5**
ABKAR				IAmb		IAmb	09 08 02.7	
	comp=Z,7.7nm,0.8s							
YKA	**Yellowknife Ar**	**75.64**	**28**	P		**P**	**09 08 19.4**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=287,slow=5.9,SNR=23							
GEYT	**Alibeck**	**76.61**	**306**	P		**P**	**09 08 25.2**	**0.0**
	comp=Z,0.8nm,0.3s,baz=77,slow=9.3,SNR=4.7							
GYA0B	**ALIBECK ARRAY**	**76.61**	**306**	P		**P**	**09 08 24.5**	**-0.7**
GYA0B				IAmb		IAmb	09 08 25.4	
	comp=Z,4.6nm,0.5s							
PRGR	**Permogore**	**77.14**	**331**	*eP*		**P**	**09 08 25.3**	**-2.3**
PRGR				*e**SP		**pP**	**09 08 36.9**	**+0.4**
PRGR				pmax		pmax		
	comp=Z,19nm,0.8s							
ARCES	**ARCESS Array B**	**80.87**	**342**	P		**P**	**09 08 48.5**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=66,slow=7.0,SNR=3.7							
KVN	**Kaiserville**	**80.93**	**52**	P		**P**	**09 08 48.3**	**-0.8**
NVAR	**Mina Array Bea**	**80.98**	**52**	P		**P**	**09 08 50.8**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=268,slow=5.9,SNR=8.9							
ELK	**Elko**	**82.42**	**49**	P		**P**	**09 08 57.7**	**+0.7**
TPNV	**Topopah Spring**	**83.02**	**53**	P		**P**	**09 09 00.2**	**+0.1**
TPNV				IAmb		IAmb	09 09 14.9	
	comp=Z,6.1nm,1.5s							
VRH	**Novokhopyorsk**	**83.11**	**322**	*eP*		**P**	**09 08 59.7**	**-0.3**
VRH				*e**SP		**sP**	**09 09 11.9**	**-0.9**
VRH				pmax		pmax		
	comp=Z,20nm,0.8s							
LPSR	**Galich'ya Gora**	**84.07**	**324**	*eP*		**P**	**09 09 04.7**	**-0.2**
LPSR				*e**SP		**sP**	**09 09 17.0**	**-0.1**
LPSR				pmax		pmax		
	comp=Z,10.0nm,0.8s							
OBN	**Obninsk**	**84.15**	**327**	⇓*eP*		**P**	**09 09 05.5**	**+0.2**
OBN				*e*			09 12 20.2	
OBN				pmax		pmax		
	comp=Z,7.0nm,0.9s							
OBN				MLR		MLR		
	comp=Z,221nm,11.0s							
VSR	**Storozhevoye**	**84.55**	**323**	*eP*		**P**	**09 09 07.1**	**-0.3**
VSR				*e**SP		**sP**	**09 09 19.9**	**+0.3**
VSR				pmax		pmax		
	comp=Z,10.0nm,0.9s							
VORD	**Divnogorie**	**84.59**	**323**	*eP*		**P**	**09 09 07.6**	**0.0**
VORD				*e**SP		**sP**	**09 09 20.1**	**+0.3**
VORD				pmax		pmax		
	comp=Z,8.0nm,0.9s							
FINES	**FINESS Array B**	**85.48**	**336**	*i* P		**P**	**09 09 11.3**	**-0.5**
FINES				pmax		pmax		
	comp=Z,5.0nm,0.7s							
FINES	**FINESS Array B**	**85.48**	**336**	P		**P**	**09 09 11.1**	**-0.7**
	comp=Z,5.0nm,0.7s,baz=65,slow=5.1,SNR=20							
KBZ	**Khabaz**	**85.48**	**315**	⇓*eP*		**P**	**09 09 12.9**	**+0.7**
KBZ	**Khabaz**	**85.48**	**315**	P		**P**	**09 09 12.5**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=71,slow=4.7,SNR=9.3							
PDAR	**Pinedale Array**	**85.58**	**46**	P		**P**	**09 09 13.3**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=318,slow=2.0,SNR=3.8							
AKASG	**Malin Array Be**	**90.24**	**326**	*ceP*		**P**	**09 09 34.7**	**-0.2**
AKASG				pmax		pmax		
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**90.24**	**326**	P		**P**	**09 09 34.0**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=51,slow=5.2,SNR=6.1							
BRTR	**Keskin Array B**	**93.47**	**315**	*ceP*		**P**	**09 09 49.0**	**-1.3**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.8s							
BRTR	**Keskin Array B**	**93.47**	**315**	P		**P**	**09 09 49.5**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=54,slow=2.5,SNR=4.8							
VYHS	**Vyhne**	**96.92**	**328**	*eP*		**P**	**09 10 07.3**	**+1.6**
VYHS	**Vyhne**	**96.92**	**328**	*eP*		**P**	**09 10 07.3**	**+1.6**
LPAZ	**La Paz**	**146.54**	**88**	PKPbc		**PKPbc**	**09 16 16.8**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=320,slow=2.9,SNR=7.5							

*IDC **06** 09:05:48.3±0.6, 7.66S×130.06E, h0km, mb4.4/14, mb1 4.5/19, mb1mx4.4/37, mbtmp4.5/19, ML4.0/4, MS3.5/13, Ms1 3.5/13, ms1mx3.3/48, Error ellipse: s-maj=21.9km s-min=13.9km az=74.0*

*BJI **06** 09:05:49.3±0.0, 8.02S×130.55E, h39km, mB5.1/18, mb4.7/35, Ms4.7/11, Ms7 4.6/9*

*NEIC **06** 09:05:52.0±2.5, 7.71S±0.05×130.15E±0.04, h26km±4km, mb4.8/32, Error ellipse: s-maj=7.6km s-min=6.0km az=188.0*

*DJA **06** 09:05:54.6±0.2, 8.2S±1.1×13.0E±0.1, h62km±3km, M4.9/48, mb5.0/48, mB5.4/23, MLv5.3/15, Mw(mB)4.8/23*

ISC 06 09:05:53.0±0.3, 7.85S±0.04×130.25E±0.04, h35km, n136, σ2.9s 39/142, mb4.8/39, MS3.6/9, 5C, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.05**	**97**	P	**Pn**	**09 06 15.8**	**+4.6**
SAUI				S	**Sn**	**09 06 31.5**	**+6.8**
SAUI	**Saumlaki**	**1.05**	**97**		**Pn**	**09 06 15.2**	**+3.9**
SAUI				Sn	**Sn**	**09 06 27.1**	**+2.4**
BNDI	**Bandanaira**	**3.32**	**354**	P	**Pn**	**09 06 45.1**	**+2.6**
BNDI				S	**Sn**	**09 07 22.9**	**+2.1**
AAI	**Ambon**	**4.61**	**334**	P	**Pn**	**09 07 02.8**	**+2.6**
AAI				S	**Sn**	**09 07 57.1**	**+4.5**
MSAI	**Masohi**	**4.66**	**344**	P	**Pn**	**09 07 04.2**	**+3.3**
MSAI				S	**Sn**	**09 07 57.5**	**+3.6**
MTN	**Manton Dam**	**5.04**	**170**		**Pn**	**09 07 08.3**	**+2.2**
MTN				Sn	**Sn**	**09 08 02.4**	**-0.7**
FAKI	**Fak Fak**	**5.29**	**22**	P	**Pn**	**09 07 09.5**	**0.0**
	1.6nm8μm412nm,0.7s						
FAKI	**Fak Fak**	**5.29**	**22**	Pn	**Pn**	**09 07 09.3**	**-0.3**
FAKI				Sn	**Sn**	**09 08 05.9**	**-3.4**
KMPI	**Kaimana, Papua**	**5.40**	**40**	P	**Pn**	**09 07 11.2**	**+0.1**
	4.3nm9μm655nm,1.0s						
KMPI				S	**Sn**	**09 08 10.7**	**-1.3**
	4.3nm9μm655nm,1.0s						
NLAI	**Namlea**	**5.55**	**325**	P	**Pn**	**09 07 17.7**	**+4.6**
	1.1nm3μm296nm,0.6s						
SOEI	**Soe**	**6.20**	**252**	P	**Pn**	**09 07 25.2**	**+3.0**
	2.1nm2μm195nm,0.7s						
SOEI	**Soe**	**6.20**	**252**		**Pn**	**09 07 25.4**	**+3.2**
SOEI				Sn	**Sn**	**09 08 32.8**	**+0.8**
BATI	**Baumata**	**6.91**	**250**	Pn	**Pn**	**09 07 34.1**	**+2.3**
	10nm,0.3s,baz=108,slow=6.4,SNR=5.6						
BATI				Sn	**Sn**	**09 08 50.8**	**+1.5**
	25nm,0.3s,baz=117,slow=16,SNR=1.9						
BATI	**Baumata**	**6.91**	**250**	P	**Pn**	**09 07 35.4**	**+3.6**
	0.6nm2μm115nm,0.7s						
SIJI	**Sorong**	**7.01**	**8**	Pn	**Pn**	**09 07 31.7**	**-1.5**
	baz=180,slow=8.7						
SIJI				Sn	**Sn**	**09 08 45.7**	**-6.0**
	baz=0.0,slow=20						
SWI	**Sorong**	**7.01**	**8**	P	**Pn**	**09 07 34.0**	**+0.8**
	1.0nm3μm96nm,0.7s						
SANI	**Sanana**	**7.15**	**323**	P	**Pn**	**09 07 39.6**	**+4.4**
	0.5nm2μm142nm,0.8s						
RKPI	**Ransiki, Papua**	**7.42**	**32**	P	**Pn**	**09 07 38.9**	**+0.1**
	4.9nm5μm405nm,0.6s						
LBMI	**Labuha**	**7.67**	**339**	P	**Pn**	**09 07 44.7**	**+2.4**
	2.2nm11μm267nm,0.8s						
KNRA	**Kununurra**	**7.91**	**190**		**Pn**	**09 07 47.0**	**+1.4**
KNRA				Sn	**Sn**	**09 09 15.2**	**+1.3**
MMRI	**Maumere**	**7.96**	**264**	P	**Pn**	**09 07 50.9**	**+4.6**
	87nm,0.6s						
MMRI	**Maumere**	**7.96**	**264**	Pn	**Pn**	**09 07 45.0**	**-1.3**
BBSI	**Bau Bau**	**7.98**	**287**	P	Pn	09 07 51.5	+5.0
	329nm22nm,0.8s						
KDI	**Kendari**	**8.51**	**297**	P	**Pn**	**09 07 58.3**	**+4.5**
	123nm,1.1s						
BAKI	**Biak**	**8.82**	**42**	P	**Pn**	**09 07 58.6**	**+0.5**
	2μm132nm,0.8s						
TNTI	**Ternate**	**9.03**	**341**	P	**Pn**	**09 08 03.6**	**+2.6**
	1μm48nm,0.9s						
LUWI	**Luwuk**	**10.06**	**312**	P	Pn	09 08 06.8	-8.3
BKSI	**Bulukumba**	**10.37**	**283**	P	**Pn**	**09 08 22.5**	**+3.3**
	481nm31nm,0.9s						
BNSI	**Bone**	**10.65**	**288**	P	Pn	09 08 28.1	+5.0
	642nm48nm,0.9s						
KAPI	**Kappang**	**10.80**	**284**	LR	LR	09 12 31.7	
	comp=Z,144nm,21.9s,baz=124,slow=38						
APSI	**Ampana**	**11.00**	**308**	P	**Pn**	**09 08 31.4**	**+3.5**
	646nm42nm,0.8s						
SPSI	**Sidrap Palu**	**11.11**	**290**	P	**Pn**	**09 08 31.9**	**+2.4**
	747nm46nm,0.9s						
FITZ	**Fitzroy Crossi**	**11.13**	**203**	Pn	**Pn**	**09 08 29.2**	**-0.5**
	3.2nm,0.3s,baz=26,slow=11,SNR=86						
FITZ				Sn	**Sn**	**09 10 25.1**	**-7.8**
	7.6nm,0.3s,baz=100,slow=11,SNR=6.7						
FITZ				LR	LR	09 14 04.6	
	comp=Z,80nm,20.2s,baz=30,slow=44						
FITZ	**Fitzroy Crossi**	**11.13**	**203**		**Pn**	**09 08 29.4**	**-0.3**
FITZ				Sn	**Sn**	**09 10 26.4**	**-6.6**
TTSI	**Tana Toraja**	**11.42**	**294**	P	**Pn**	**09 08 36.9**	**+3.2**
	25nm,0.6s						
JAY	**Jayapura**	**11.69**	**64**	Pn	**Pn**	**09 08 37.7**	**+0.4**
	1.6nm,0.3s,baz=265,slow=6.1,SNR=8.1						
JAY				Sn	**Sn**	**09 10 46.9**	**+0.2**
	0.6nm,0.3s,baz=64,slow=13,SNR=2.8						
JAY	**Jayapura**	**11.69**	**64**	P	**Pn**	**09 08 37.8**	**+0.4**
	26nm,0.8s						
MRSI	**Marisa**	**11.71**	**315**	P	**Pn**	**09 08 41.8**	**+4.2**
	926nm42nm,0.6s						
PLAI	**Plampang**	**12.38**	**265**	P	**Pn**	**09 08 49.9**	**+3.1**
	1μm97nm,0.7s						
WRAB	**Tennant Creek**	**12.65**	**162**		**Pn**	**09 08 49.8**	**-0.8**
WRA	**Warramunga Arr**	**12.66**	**162**	Pn	**Pn**	**09 08 49.5**	**-1.1**
	1.3nm,0.3s,baz=342,slow=13,SNR=46						
WRA				Sn	**Sn**	**09 11 03.2**	**-7.2**
	6.7nm,0.3s,baz=348,slow=22,SNR=9.6						
WRA				LR	LR	09 14 33.0	
	comp=Z,245nm,18.2s,baz=355,slow=41						
WR0	**Warramunga Arr**	**12.74**	**161**		**Pn**	**09 08 50.4**	**-1.3**
MPSI	**Mapaga**	**13.14**	**308**	P	**Pn**	**09 09 01.4**	**+4.2**
	25nm,1.0s						
COEN	**Coen**	**14.07**	**117**		**Pn**	**09 09 08.3**	**-1.6**
SRBI	**Singaraja**	**14.89**	**268**	P	**P**	**09 09 24.0**	**-2.3**
	32nm,0.8s						
IGBI	**Denpasar**	**14.97**	**265**	P	**Pn**	**09 09 24.0**	**+1.9**
	49nm,0.9s						
KCP	**Kidapawan**	**15.63**	**341**	⇑*iP*	**Pn**	**09 09 31.3**	**+0.4**
JAGI	**Jajag, Banyuwa**	**15.94**	**267**	Pn	**Pn**	**09 09 33.6**	**-1.2**
JAGI				IAmb	IAmb	09 09 51.4	
	comp=Z,77nm,1.4s						
AS31	**Alice Springs**	**16.11**	**168**		**Pn**	**09 09 38.1**	**+1.1**
ASAR	**Alice Springs**	**16.11**	**168**	Pn	**Pn**	**09 09 36.1**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=342,slow=8.3,SNR=59						
ASAR				Sn	**Sn**	**09 12 29.1**	**-5.5**
	comp=Z,1.9nm,0.3s,baz=327,slow=18,SNR=4.9						
ASAR				LR	LR	09 16 31.6	
	comp=Z,138nm,20.3s,baz=322,slow=39						
CTBH	**Cotabato--PC H**	**16.12**	**338**	⇑*iP*	**P**	**09 09 40.5**	**+0.5**
PMG	**Port Moresby**	**16.79**	**97**	Pn	**P**	**09 09 47.6**	**+0.2**
	comp=Z,2.0nm,0.3s,baz=282,slow=8.1,SNR=12						
PMG				LR	LR	09 17 28.6	
	comp=Z,151nm,21.2s,baz=266,slow=41						
PMG	**Port Moresby**	**16.79**	**97**	P	**P**	**09 09 47.8**	**+0.4**
PSA00	**Pilbara Seismi**	**16.93**	**215**	P	**P**	**09 09 50.5**	**+1.5**
PWJI	**Pagerwojo**	**18.27**	**268**	P	**Pn**	**09 10 04.7**	**+0.9**
	comp=Z,35nm,2.3s						
NGJI	**Ngawi**	**18.63**	**270**	P	**Pn**	**09 10 09.9**	**+1.7**
	comp=Z,54nm,1.4s						
PCJI	**Pacitan**	**18.89**	**268**	P	**Pn**	**09 10 12.1**	**+0.8**
	comp=Z,60nm,1.4s						
WOJI	**Wonogiri, Jawa**	**19.14**	**269**	P	**Pn**	**09 10 15.5**	**+1.1**
	comp=Z,40nm,1.6s						
UWJI	**Ujung Watu**	**19.20**	**273**	P	**Pn**	**09 10 15.8**	**+0.6**
	comp=Z,92nm,0.8s						
UGM	**Wanagama**	**19.54**	**268**	P	**P**	**09 10 17.9**	**+0.2**
	comp=Z,238nm,1.9s						
UGM	**Wanagama**	**19.54**	**268**	P	**P**	**09 10 15.9**	**-1.8**
SMRI	**Semarang**	**19.65**	**271**	P	**P**	**09 10 19.3**	**+0.3**
	comp=Z,119nm,1.5s						
KKM	**Kota Kinabalu**	**19.66**	**314**	P	**P**	**09 10 17.2**	**-1.9**
KKM				IAmb	IAmb	09 10 32.8	
	comp=Z,68nm,1.1s						
CTA	**Charters Tower**	**19.71**	**130**	P	**Pn**	**09 10 23.0**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=310,slow=14,SNR=15						
YOGI	**Yogyakarta**	**19.77**	**269**	P	**Pn**	**09 10 21.7**	**-0.2**
	comp=Z,138nm,1.8s						
SBUM	**Sibu**	**20.69**	**299**	P	**P**	**09 10 30.5**	**+0.3**
SBUM				IAmb	IAmb	09 10 33.1	
	comp=Z,35nm,1.3s						
GIRL	**Giralia**	**21.30**	**225**	P	**P**	**09 10 38.5**	**+1.8**
KRVT	**Keravat (AS076**	**21.94**	**82**	LR	LR	09 20 30.2	
	comp=Z,108nm,19.4s,baz=270,slow=40						
FORT	**Forrest**	**22.90**	**185**	P	**P**	**09 10 54.2**	**+0.4**
CNJI	**Cibinong**	**22.92**	**270**	P	**P**	**09 10 55.6**	**+1.5**
TGY	**Tagaytay City**	**23.69**	**337**	P	**P**	**09 11 00.4**	**-1.3**
	comp=Z,133nm,0.3s,baz=169,slow=5.2,SNR=3.7						
SBJI	**Serang**	**24.00**	**273**	P	**P**	**09 11 04.7**	**+0.1**
	comp=Z,5μmcomp=Z,105nm,1.0s						
MORW	**Morawa**	**24.99**	**211**	P	**P**	**09 11 14.6**	**+1.0**
MORW				IAmb	IAmb	09 11 17.1	
	comp=Z,14nm,0.9s						
BBOO	**Buckleboo**	**25.42**	**169**	P	**P**	**09 11 17.7**	**+0.4**
BBOO				IAmb	IAmb	09 11 36.5	
	comp=Z,17nm,0.7s						
STKA	**Stephens Creek**	**26.14**	**158**	P	**P**	**09 11 26.2**	**+2.3**
	comp=Z

KSH			LR	LR	
	comp=Z,260nm,6.4s				
KSH			LR	LR	
	comp=Z,290nm,4.5s				
KSH			LR	LR	
	comp=Z,720nm,6.9s				
MK31	**Makanchi Array**	**69.07 327**	IAmb	IAmb	09 16 55.6
	comp=Z,6.5nm,0.7s				
MKAR	**Makanchi Array**	**69.07 327**	P	**P**	**09 16 55.1 -0.2**
	comp=Z,10.0nm,0.6s,baz=113,slow=8.6,SNR=128				
MAKZ	**Makanchi**	**69.25 327**	P	**P**	**09 16 55.7 -0.7**
MAKZ			IAmb	IAmb	09 17 12.6
	comp=Z,7.2nm,0.7s				
YAK	**Yakutsk**	**69.67 360**	P	**P**	**09 16 58.1 -0.6**
AAK	**Ala-Archa**	**71.34 320**	P	**P**	**09 17 09.7 +0.2**
	comp=Z,3.3nm,0.8s,baz=152,slow=10,SNR=5.2				
AAK	**Ala-Archa**	**71.34 320**	IAmb	IAmb	09 17 22.4
	comp=Z,8.5nm,1.1s				
VNDA	**Vanda**	**71.58 173**	P	**P**	**09 17 13.2 +3.0**
ARSB	**Arslanbob**	**71.68 318**	IAmb	IAmb	09 17 28.8
	comp=Z,17nm,1.4s				
GAR	**Garm**	**72.44 315**	P	**P**	**09 17 15.6 -0.5**
GAR			IAmb	IAmb	09 17 33.4
	comp=Z,15nm,1.1s				
ZAA0	**Zalesovo Array**	**72.45 334**	IAmb	IAmb	09 17 23.7
	comp=Z,4.6nm,0.7s				
ZALV	**Zalesovo Beam**	**72.45 334**	P	**P**	**09 17 14.4 -1.2**
	comp=Z,4.1nm,0.6s,baz=123,slow=5.4,SNR=18				
KURBB	**Kurchatov Arra**	**73.36 329**	P	**P**	**09 17 20.2 -1.0**
	comp=Z,7.0nm,0.6s,baz=124,slow=3.8,SNR=5.9				
KURK	**Kurchatov**	**73.37 329**	P	**P**	**09 17 20.2 -1.0**
KURK	**Kurchatov**	**73.37 329**	IAmb	IAmb	09 17 21.3
	comp=Z,9.0nm,0.8s				
KK31	**Karatay Array**	**74.14 319**	P	**P**	**09 17 25.9 -0.1**
KKAR	**Karatay Array**	**74.14 319**	P	**P**	**09 17 25.9 -0.1**
GEYT	**Alibeck**	**80.95 310**	P	**P**	**09 18 03.4 -0.7**
	comp=Z,1.3nm,0.6s,baz=104,slow=6.1,SNR=3.0				
QSPA	**South Pole Qui**	**82.13 180**	LR	LR	09 53 06.4
	comp=Z,87nm,19.5s,baz=274,slow=34				
QSPA	**South Pole Qui**	**82.13 180**	P	**P**	**09 18 11.3 +1.4**
SYO	**Syowa Base**	**82.96 201**↑	*eP*	P	09 18 03.0 -11
SYO	**Syowa Base**	**82.96 201**↑	*eP*	**P**	**09 18 14.7 +0.7**
SYO	**Syowa Base**	**82.96 201**↑	*epP*	pP	09 18 25.6 +0.7
ABKAR	**Akbulak array**	**83.32 322**	P	**P**	**09 18 16.0 -0.3**
ABKAR			IAmb	IAmb	09 18 17.9
	comp=Z,5.5nm,1.1s				
ARU	**Arti**	**86.55 328**	P	**P**	**09 18 32.2 -0.2**
ILAR	**Eielson Array**	**94.01 25**	P	**P**	**09 19 05.5 -1.6**
	comp=Z,0.5nm,0.8s,baz=272,slow=4.4,SNR=6.1				
ILAR			LR	LR	09 58 38.6
	comp=Z,79nm,19.1s,baz=41,slow=34				
ARCES	**ARCESS Array B**	**102.45 340**	P	**Pdif**	**09 19 43.8 -1.3**
	comp=Z,2.8nm,0.8s,baz=88,slow=6.4,SNR=5.0				
TORD	**Torodi Ar. Bea**	**129.21 281**	PKP	**PKPdf**	**09 24 58.8 +0.2**
	comp=Z,1.1nm,0.5s,baz=91,slow=2.0,SNR=6.6				
CPUP	**Villa Florida**	**145.24 168**	PKPbc	**PKPdf**	**09 25 29.0 +1.2**
	comp=Z,1.7nm,0.6s,baz=162,slow=3.2,SNR=3.3				
LPAZ	**La Paz**	**149.90 143**	PKPbc	**PKiKP**	**09 25 43.5 +1.2**
	comp=Z,2.3nm,0.4s,baz=207,slow=3.9,SNR=10				

*UUSS **06** 09:14:12.1±2.7, 44.°76N±0.°04×110.°78W±0.°05, h10km±5km, ML3.5/6, Error ellipse: s-maj=5.3km s-min=4.8km az=145.0*

NEIC 06 09:14:13.3±2.7, 44.°74N±0.°02×110.°76W±0.°05, h5km±6km, Error ellipse: s-maj=5.1km s-min=2.4km az=99.0, Yellowstone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YNM	**Yellowstone No**	**0.04**	**101**	Pg	Pg	09 14 15.5	+0.7
YNM				Sg	Sg	09 14 16.4	+0.6
YNR	**Norris Junctio**	**0.06**	**108**	Pg	Pg	09 14 15.7	+0.7
YNR				Sg	Sg	09 14 17.1	+0.9
YMR	**Madison River**	**0.16**	**245**	Pg	Pg	09 14 17.1	+0.5
YMR				Sg	Sg	09 14 18.7	0.0
YUF	**Upper Falls**	**0.18**	**97**	Pg	Pg	09 14 17.9	+1.0
YUF				Sg	Sg	09 14 20.4	+1.1
YHB	**Horse Butte**	**0.31**	**273**	Pg	Pg	09 14 19.6	+0.3
YHB				Sg	Sg	09 14 23.6	+0.1
LKWY	**Lake**	**0.31**	**123**	Pg	Pb	09 14 20.5	-1.0
LKWY					Sg	09 14 20.7	-2.8
YHL	**Hebgen Lake**	**0.32**	**291**		Pg	09 14 19.6	0.0
YHL				Sg	Sg	09 14 22.6	-1.3
H17A	**Grant Village**	**0.36**	**159**	Pg	Pg	09 14 21.3	+0.9
H17A					Sg	09 14 21.7	-3.6
YMP	**Mirror Lake Pl**	**0.43**	**89**	Pg	Pb	09 14 23.5	-0.1
YPP	**Pitchstone Pla**	**0.47**	**184**	Pg	Pb	09 14 23.7	-0.4
QLMT	**Earthquake Lak**	**0.48**	**282**		Pg	09 14 22.4	-0.3
YNE	**Yellowstone No**	**0.60**	**63**	Pg	Pg	09 14 25.4	+0.6
FLWY	**Flagg Ranch**	**0.65**	**176**	Pg	Pg	09 14 26.2	+0.4
MOOW	**Moose Ponds**	**0.99**	**179**	Pg	Pg	09 14 31.6	-0.6
RLMT	**Red Lodge**	**1.19**	**69**		Pg	09 14 36.0	0.0
TPAW	**Teton Pass**	**1.25**	**186**	Pn	Pg	09 14 36.4	-0.9
SNOW	**Snow King Moun**	**1.27**	**180**	Pn	Pg	09 14 36.8	-0.9
SNOW					Pb	09 14 37.3	-0.5
GCMT	**Greycliff**	**1.31**	**36**	Pn	Pn	09 14 38.1	-0.3
GCMT					Sn	09 14 55.3	-0.1
REDW	**Red Top Meadow**	**1.37**	**183**	Pn	Pn	09 14 37.9	-1.4
DLMT	**Dillon**	**1.44**	**296**	Pn	Pn	09 14 40.0	-0.2
DLMT					Sn	09 14 59.2	-0.3
MCMT	**McKenzie Canyo**	**1.49**	**274**		Pn	09 14 41.1	+0.2
MCMT					Sg	09 15 01.4	+0.3
AHID	**Auburn Hatcher**	**1.98**	**187**	Pn	Pn	09 14 48.5	+0.8
BW06	**Boulder Array**	**2.15**	**156**	Pn	Pn	09 14 50.9	+0.8
PD31	**Pinedale Array**	**2.15**	**156**	Pn	Pn	09 14 49.6	-0.5
MSO	**Missoula**	**3.05**	**314**		Pn	09 15 03.0	+0.7
HWUT	**Hardware Ranch**	**3.18**	**191**		Pn	09 15 03.5	-0.6
EGMT	**Eagleton**	**3.36**	**12**	Pn	Pn	09 15 09.2	+2.6
SPUT	**South Promonto**	**3.64**	**200**	Pn	Pn	09 15 12.7	+2.3
TCUT	**Toone Canyon**	**3.65**	**180**	Pn	Pn	09 15 12.2	+1.6
K22A	**Casper**	**3.71**	**123**	Pn	Pn	09 15 10.7	-0.7
LAO	**LASA Array**	**3.73**	**57**	Pn	Pn	09 15 14.0	+2.4
JTMT	**Jette**	**3.88**	**322**	Pn	Pn	09 15 13.2	-0.5
MFID	**Camas Ranch**	**3.88**	**252**		Pn	09 15 11.9	-1.8
CTU	**Camp Tracy**	**4.11**	**191**	Pn	Pn	09 15 15.4	-1.4
BGU	**Big Grassy Mou**	**4.16**	**204**	Pn	Pn	09 15 19.0	+1.5
JLU	**Jordanelle**	**4.16**	**187**	Pn	Pn	09 15 16.5	-1.2
RDMU	**Red Mountain**	**4.25**	**168**	Pn	Pn	09 15 17.8	-1.1
BMO	**Blue Mountains**	**4.66**	**274**	Pn	Pn	09 15 24.2	-0.1
F10A	**Beach Ranch, E**	**4.72**	**287**		Pn	09 15 27.1	+1.9
DUG	**Dugway, Tooele**	**4.78**	**199**		Pn	09 15 25.8	-0.3
WALA	**Waterton Lakes**	**4.83**	**335**	Pn	Pn	09 15 27.6	+0.8
WALA				Sn	Sn	09 16 20.7	-2.5
RSSD	**Black Hills**	**4.86**	**95**	Pn	Pn	09 15 25.4	-1.8
ELK	**Elko**	**5.17**	**221**	Pn	Pn	09 15 30.0	-1.5
P17A	**Butcher Ranch,**	**5.26**	**180**	Pn	Pn	09 15 31.1	-1.6
E09A	**Wood Farm, Sta**	**5.47**	**292**	Pn	Pn	09 15 35.1	-0.4
NEW	**Newport**	**5.63**	**311**	Pn	Pn	09 15 39.0	+1.3
HAWA	**Hanford**	**6.38**	**288**	Pn	Pn	09 15 46.4	-1.4
E07A	**Sunnyside**	**6.63**	**289**		Pn	09 15 50.4	-0.9
B08A	**Colville Reser**	**6.93**	**305**	Pn	Pn	09 15 54.3	-1.2
LTY	**Liberty**	**7.35**	**294**	Pn	Pn	09 15 58.5	-2.7

IDC 06 09:17:19.6±1.1, 28.°35N×91.°79E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.5/35, mbtmp3.5/8, ML3.4/1, Error ellipse: s-maj=53.1km s-min=19.3km az=55.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.87**	**341**	P	P	09 21 52.8	+0.5
	0.1nm,0.3s,baz=153,slow=9.7,SNR=3.5						
KURBB	**Kurchatov Arra**	**24.41**	**339**	P	P	09 22 40.0	+0.4
	0.7nm,0.7s,baz=159,slow=8.8,SNR=6.9						
ZALV	**Zalesovo Beam**	**26.09**	**351**	P	P	09 22 54.9	+0.1
	1.2nm,0.5s,baz=179,slow=9.8,SNR=3.6						
BRTR	**Keskin Array B**	**48.74**	**299**	P	P	09 26 07.0	+0.7
	0.5nm,0.6s,baz=90,slow=10,SNR=3.4						
AKASG	**Malin Array Be**	**51.48**	**314**	P	P	09 26 25.2	-1.5
	0.4nm,0.6s,baz=82,slow=5.9,SNR=3.7						
WRA	**Warramunga Arr**	**63.21**	**135**	P	P	09 27 49.7	-0.2
	0.5nm,0.7s,baz=316,slow=8.1,SNR=6.9						
ASAR	**Alice Springs**	**65.74**	**138**	P	P	09 28 06.7	+0.3
	0.4nm,0.8s,baz=321,slow=6.8,SNR=6.1						
ILAR	**Eielson Array**	**76.68**	**22**	P	P	09 29 11.9	-0.2
	0.4nm,0.9s,baz=311,slow=4.5,SNR=4.2						

IDC 06 09:20:35.9±1.1, 28.°36N×91.°85E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.3/40, mbtmp3.4/6, ML2.9/1, MS3.7/1, Ms1 3.7/1, ms1mx2.8/45, Error ellipse: s-maj=65.1km s-min=20.3km az=55.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**19.88**	**340**	P	P	09 25 09.0	+0.3
	0.0nm,0.3s,baz=163,slow=9.7,SNR=2.9						
KURBB	**Kurchatov Arra**	**24.42**	**339**	P	P	09 25 56.1	+0.1
	0.5nm,0.7s,baz=151,slow=9.5,SNR=4.5						
ZALV	**Zalesovo Beam**	**26.09**	**351**	P	P	09 26 10.8	-0.3
	0.6nm,0.5s,baz=147,slow=8.1,SNR=3.0						
KVAR	**Kislovodsk Arr**	**42.01**	**305**	LR	LR	09 51 00.1	
	comp=Z,83nm,18.2s,baz=190,slow=43						
BRTR	**Keskin Array B**	**48.79**	**299**	P	P	09 29 22.9	-0.1
	0.5nm,0.8s,baz=99,slow=8.9,SNR=2.5						
WRA	**Warramunga Arr**	**63.18**	**135**	P	P	09 31 05.8	-0.2
	0.4nm,0.5s,baz=317,slow=7.9,SNR=5.7						
ASAR	**Alice Springs**	**65.70**	**138**	P	P	09 31 22.8	+0.2
	0.5nm,0.8s,baz=317,slow=7.3,SNR=6.4						

*DDA **06** 09:40:46.6, 35.°95N×29.°66E, h0km±3km, ML2.9*
*ISK **06** 09:40:49.4, 36.°15N×29.°68E, h3km, ML2.8/10*
*ATH **06** 09:40:52.6, 36.°11N×29.°53E, h28km±8km, ML2.2/1, Error ellipse: s-maj=9.3km s-min=3.1km az=67.0*

ISC 06 09:40:50.1±1.1, 36.°06N±0.°05×29.°69E±0.°04, h10km, n26, σ2s10/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.18**	**339**	PG	**Pg**	**09 40 52.0**	**-2.1**
AKAS				SG	**Sg**	**09 40 53.8**	**-3.1**
AKAS	**Kas**	**0.18**	**339**	*i* P	**Pg**	**09 40 52.0**	**-2.1**
AKAS				IAML		09 40 56.0	
	comp=Z,2μm,0.6s						
DEMR	**Demre-Antalya**	**0.25**	**46**	PG	**Pg**	**09 40 54.3**	**-1.0**
ELL	**Elmali**	**0.71**	**15**	PG	**Pg**	**09 41 01.9**	**-2.0**
FETY	**Fethiye**	**0.75**	**320**	PG	**Pg**	**09 41 03.3**	**-1.4**
FETY				SG	**Sg**	**09 41 13.5**	**-1.0**
FETY	**Fethiye**	**0.75**	**320**	*i* P	**Pg**	**09 41 03.0**	**-1.6**
FETY				*i* S	**Sb**	**09 41 15.0**	**-0.7**
TURN	**Turunc**	**1.19**	**313**	PN	**Pg**	**09 41 15.2**	**+2.2**
TURN				SN	**Sn**	**09 41 34.1**	**+5.0**
TURN	**Turunc**	**1.19**	**313**	*i* P	**Pg**	**09 41 14.2**	**+1.2**
TURN				*i* S	**Sn**	**09 41 36.2**	**+7.1**
ARG	**Arkhangelos**	**1.27**	**277**	P	**Pg**	**09 41 14.5**	**-0.1**
ARG				S	**Sn**	**09 41 30.2**	**-0.9**
ARG				AML	AML	09 41 36.9	
	comp=E,280μm,0.7s						
ARG				AML	AML	09 41 37.1	
	comp=N,150μm,0.3s						
ARG	**Arkhangelos**	**1.27**	**277**	PN	**Pg**	**09 41 13.9**	**-0.7**
TAVA	**DENIZLI_Tavas**	**1.53**	**336**	*i* P	**Pb**	**09 41 18.3**	**-0.4**
TAVA				*i* S	**Sg**	**09 41 41.9**	**+2.4**
YER	**Yerkesik**	**1.56**	**314**	PN	**Pb**	**09 41 17.9**	**-1.2**
YER				SN	**Sg**	**09 41 38.6**	**-1.6**
KEPZ	**Antalya-Kepez**	**1.76**	**61**	*i* P	**Pg**	**09 41 23.9**	**+0.1**
DAT	**Datca**	**1.83**	**292**	PN	**Pb**	**09 41 22.1**	**-1.6**
BASM	**Basmaki-Afyon**	**1.88**	**9**	PN	**Pn**	**09 41 22.1**	**-0.3**
MLSB	**Milas**	**1.97**	**309**	PN	**Pn**	**09 41 23.8**	**+0.2**
KARP	**Karpathos**	**2.12**	**257**	P	**Pb**	**09 41 26.7**	**-1.9**
KARP				S	**Sn**	**09 41 51.9**	**-0.1**
KARP	**Karpathos**	**2.12**	**257**	PN	**Pb**	**09 41 26.9**	**-1.7**
AYDN	**Tasoluk**	**2.15**	**318**	*i* P	**Pb**	**09 41 27.2**	**-2.1**
AYDN				*i* S	**Sb**	**09 41 55.8**	**-0.4**
KHAL	**Karahalli**	**2.31**	**356**	*i* P	**Pn**	**09 41 28.9**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**2.37**	**323**	PN	**Pn**	**09 41 29.3**	**+0.1**
DOGA	**KONYA_Doganhis**	**2.58**	**37**	*i* P	**Pb**	**09 41 37.0**	**+0.3**
USAK	**Usak-Merkez**	**2.70**	**349**	*i* P	**Pn**	**09 41 33.1**	**+0.1**
SMG	**Samos**	**2.81**	**307**	P	**Pn**	**09 41 36.3**	**+1.1**
ZKR	**Zakros**	**2.98**	**253**	P	**Pn**	**09 41 39.3**	**+1.9**
NPS	**Neapolis**	**3.41**	**258**	P	**Pn**	**09 41 45.1**	**+1.7**

*SJA **06** 09:46:37.1±0.8, 32.°49S×70.°28W, h100km±9km, ML3.0, MW3.2*
*GUC **06** 09:46:39.6±0.7, 32.°17S×70.°21W, h93km±13km, ML3.3*

ISC 06 09:46:40.5±2.0, 32.°32S±0.°06×70.°20W±0.°06, h104km±19km, n15, σ0s88/26, 1C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.92**	**207**	*i*↑P	**Pn**	**09 46 59.8**	**-0.7**
PEL				*i* S	**Sn**	**09 47 15.2**	**-0.3**
PEL				IAML		09 47 16.0	
	comp=N,1μm,0.4s						
RTLS	**Leoncito**	**0.92**	**56**	*i* P	**Pn**	**09 47 00.3**	**-0.6**
RTLS				*i* S	**Sn**	**09 47 17.3**	**+1.3**
ROCH	**El Roble**	**0.95**	**226**	*i*↓P	**Pn**	**09 47 00.4**	**-0.6**
ROCH				*i* S	**Sn**	**09 47 16.1**	**-0.2**
ROCH				IAML		09 47 17.6	
	comp=N,2μm,0.6s						
FCH	**Farellones**	**1.01**	**185**	*i*↓P	**Pn**	**09 47 01.6**	**-0.1**
FCH				*i* S	**Sn**	**09 47 18.2**	**+0.6**
FCH				IAML		09 47 20.2	
	comp=E,573nm,0.3s						
CLCH	**Cerro Calan**	**1.11**	**195**	*i*↓P	**Pn**	**09 47 02.4**	**-0.2**
CLCH				*i* S	**Sn**	**09 47 19.6**	**+0.4**
CLCH				IAML		09 47 22.1	
	comp=N,488nm,0.5s						
RCDM	**Rinconada Maip**	**1.27**	**204**	*e*P	**Pn**	**09 47 04.7**	**+0.3**
RCDM				*i* S	**Sn**	**09 47 23.8**	**+1.4**
ANTU	**Antumapu**	**1.30**	**196**	*i* S	**Sn**	**09 47 23.5**	**+0.5**
ANTU				IAML		09 47 24.9	
	comp=N,684nm,0.3s						
VA01	**Torpederas**	**1.41**	**240**	*e*P	**Pn**	**09 47 05.2**	**-0.8**
VA01				*i* S	**Sn**	**09 47 24.4**	**-0.8**
RTCV	**Cerro Valdivia**	**1.48**	**72**	*i* P	**Pn**	**09 47 05.6**	**-1.2**
RTCV				IAML		09 47 28.3	
	comp=Z,106nm,0.2s						
ZON	**Zonda**	**1.50**	**59**	*i* P	**Pn**	**09 47 06.3**	**-0.9**
ZON				*i* S	**Sn**	**09 47 27.4**	**+0.1**
ZON				IAML		09 47 31.8	
	comp=Z,142nm,0.3s						
LMEL	**Las Melosas**	**1.52**	**180**	*i*↓P	**Pn**	**09 47 07.6**	**+0.1**
LMEL				*i* S	**Sn**	**09 47 29.5**	**+1.6**
LMEL				IAML		09 47 37.4	
	comp=N,570nm,0.1s						
RTLL	**Cerro Villicun**	**1.77**	**56**	*i* P	**Pn**	**09 47 10.0**	**-0.4**
RTLL				IAML		09 47 35.6	
	comp=Z,200nm,0.3s						
AMOG	**MOGNA**	**2.00**	**47**	*i* P	**Pn**	**09 47 13.2**	**-0.2**
AMOG				*i* S	**Sn**	**09 47 40.2**	**+1.8**
AMOG				IAML		09 47 43.2	
	comp=Z,181nm,0.3s						
ACAN	**Cantantal**	**2.55**	**90**	*i* P	**Pn**	**09 47 19.0**	**-1.4**
ACAN				*i* S	**Sn**	**09 47 50.6**	**-0.4**
ACAN				IAML		09 47 51.4	
	comp=Z,38nm,0.5s						
AGUA	**GUANDACOL**	**3.18**	**28**	*i* P	**Pn**	**09 47 29.3**	**+0.4**
AGUA				IAML		09 48 11.9	
	comp=Z,14nm,0.4s						

WEL 06 09:46:57.2±0.4, 34.°5S±6.°×18.°0W±1.°5, h33km, M4.1/18, mB4.8/6, ML4.4/18, MLv4.2/18, Mw(mB)4.0/6, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.74**	**202**	P	Pn	09 47 53.7	+1.1
MXZ				S	Sn	09 48 37.0	+1.6
WMGZ	**Waiomatatini S**	**3.94**	**199**	P	Pn	09 47 57.8	+2.4
HAZ	**Te Kaha**	**4.09**	**206**	P	Pn	09 47 59.1	+1.7
HAZ				S	Sn	09 48 44.2	+0.1
PUZ	**Puketiti**	**4.22**	**200**	P	Pn	09 48 00.5	+1.3
PUZ				S	Sn	09 48 48.1	+0.6
RUGZ	**Raukumara Rang**	**4.31**	**206**	P	Pn	09 48 01.3	+0.7
RUGZ				S	Sn	09 48 48.8	-1.1
CNGZ	**Carnagh Statio**	**4.62**	**198**	P	Pn	09 48 05.9	+1.1
TKGZ	**Te Karaka**	**4.69**	**202**	P	Pn	09 48 05.9	+0.3
TKGZ				S	Sn	09 48 59.1	+0.3
OPRZ	**Ohinepanea**	**4.69**	**216**	P	Pn	09 48 06.4	+0.7
MWZ	**Matawai**	**4.70**	**205**	P	Pn	09 48 06.2	+0.4
MWZ				S	Sn	09 48 58.0	-1.1
URZ	**Urewera**	**4.79**	**209**	P	Pn	09 48 07.1	+0.1
EDRZ	**Edgecumbe**	**4.82**	**213**	P	Pn	09 48 09.6	+2.1
RAGZ	**Rawiri**	**4.88**	**205**	P	Pn	09 48 08.6	+0.3
RAGZ				S	Sn	09 49 03.2	-0.5
RIGZ	**Rimuhau**	**4.96**	**201**	P	Pn	09 48 09.1	-0.3
RIGZ				S	Sn	09 49 04.8	-0.8
TARZ	**Mount Tarawera**	**5.03**	**214**	P	Pn	09 48 12.6	+2.2
RRRZ	**Republican Roa**	**5.11**	**213**	P	Pn	09 48 12.3	+0.8
MUGZ	**Murupara**	**5.11**	**210**	P	Pn	09 48 10.6	-0.9
GLKZ	**Green Lake**	**5.12**	**20**	S	Sn	09 49 08.4	-1.1
PRGZ	**Paritu Road**	**5.12**	**199**	P	Pn	09 48 11.6	0.0
RTZ	**Ruatahuna**	**5.14**	**208**	P	Pn	09 48 10.6	-1.4
SNGZ	**Shannon Statio**	**5.16**	**204**	P	Pn	09 48 11.8	-0.4
PRRZ	**Plateau Road**	**5.29**	**213**	P	Pn	09 48 14.0	0.0
MHGZ	**Mahia Peninsul**	**5.33**	**198**	P	Pn	09 48 13.9	-0.6
ALRZ	**Allen Road**	**5.37**	**213**	P	Pn	09 48 14.6	-0.4
RAHZ	**Arahi**	**5.37**	**206**	P	Pn	09 48 13.8	-1.2
MRHZ	**Matea Rd**	**5.56**	**211**	P	Pn	09 48 17.3	-0.4
HIZ	**Hauiti**	**6.08**	**222**	P	Pn	09 48 26.3	+1.4
TWVZ	**Taurewa**	**6.20**	**215**	P	Pn	09 48 25.5	-1.0
PXZ	**Pawanui**	**6.45**	**202**	P	Pn	09 48 26.8	-3.0
PNHZ	**Pukenui**	**6.57**	**207**	P	Pn	09 48 28.0	-3.5
PRHZ	**Porangahau**	**6.73**	**203**	P	Pn	09 48 30.0	-3.8
TSZ	**Takapari Road**	**6.79**	**208**	P	Pn	09 48 31.3	-3.2
DVHZ	**Dannevirke**	**6.92**	**205**	P	Pn	09 48 32.8	-3.5
PRWZ	**Pori Road**	**7.22**	**206**	P	Pn	09 48 37.4	-3.0
BFZ	**Birch Farm**	**7.24**	**204**	P	Pn	09 48 36.2	-4.5
TIWZ	**Tintock**	**7.44**	**205**	P	Pn	09 48 39.9	-3.6
MRZ	**Mangatainoka R**	**7.46**	**207**	P	Pn	09 48 39.0	-4.6
HOWZ	**Holdsworth Sta**	**7.69**	**207**	P	Pn	09 48 41.3	-5.5
TMWZ	**Te Maipa**	**7.74**	**204**	P	Pn	09 48 42.2	-5.3
OGWZ	**Otaki Gorge**	**7.75**	**209**	P	Pn	09 48 42.0	-5.7
KIW	**Kapiti Island**	**7.89**	**210**	P	Pn	09 48 43.5	-6.1
MTW	**Mount Morrison**	**7.92**	**206**	P	Pn	09 48 44.8	-5.2
CAW	**Cannon Point**	**8.04**	**208**	P	Pn	09 48 45.2	-6.4
TRWZ	**Traveller**	**8.06**	**204**	P	Pn	09 48 46.8	-5.2
PAWZ	**Paruwai Farm**	**8.14**	**205**	P	Pn	09 48 47.3	-5.8

MAN 06 10:14:04.9, 9.°99N×123.°92E, h35km, mb4.2, ML3.0, MS2.7, Negros

*BJI **06** 10:14:23.4±0.0, 0.°85N×126.°89E, h39km, mb4.5/7*
*DJA **06** 10:14:27.2±0.2, 1.°N±2.°×12.°6E±.°, h10km, M4.5/14, mB5.0/3, mb4.7/12, MLv4.4/14, Mw(mB)4.3/3*
*IDC **06** 10:14:31.4±2.3, 1.°27N×126.°19E, h57km±20km, mb3.8/15, mb1 3.9/18, mb1mx3.8/52, mbtmp4.1/18, ML4.0/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/46, Error ellipse: s-maj=20.4km s-min=9.8km az=79.0*
*NEIC **06** 10:14:32.0±1.9, 1.°23N±0.°09×126.°28E±0.°06, h60km±7km, mb4.5/19, Error ellipse: s-maj=12.5km s-min=9.0km az=177.0*

ISC 06 10:14:30.8±0.4, 1.°27N±0.°04×126.°29E±0.°04, h47km, n66, σ1s46/69, mb4.4/24, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**115**	P	**Pn**	**10 14 49.4**	**-1.5**
TNTI				S	**Sn**	**10 15 06.6**	**+0.8**
TNTI	**Ternate**	**1.18**	**115**		**Pn**	**10 14 49.9**	**-1.0**
LBMI	**Labuha**	**2.24**	**147**	P	**Pn**	**10 15 06.5**	**+1.0**
LBMI				S	**Sn**	**10 15 36.2**	**+4.3**
KMSI	**Cibinong**	**2.41**	**253**	P	**Pn**	**10 15 07.4**	**-0.4**
KMSI				S	**Sn**	**10 15 37.1**	**+1.0**
SANI	**Sanana**	**3.31**	**185**	P	**Pn**	**10 15 19.5**	**-0.6**
SANI				S	**Sn**	**10 16 02.1**	**+3.9**
LUWI	**Luwuk**	**4.20**	**237**	P	**Pn**	**10 15 32.0**	**-0.4**
LUWI				S	**Sn**	**10 16 23.9**	**+3.7**
LUWI	**Luwuk**	**4.20**	**237**		**Pn**	**10 15 33.5**	**+1.1**
MRSI	**Marisa**	**4.42**	**260**	P	**Pn**	**10 15 34.4**	**-1.0**
NLAI	**Namlea**	**4.55**	**170**	P	**Pn**	**10 15 37.0**	**-0.1**
APSI	**Ampana**	**5.12**	**245**	P	**Pn**	**10 15 44.5**	**-0.5**
	0.9nm3μm263nm,0.7s						
SIJI	**Sorong**	**5.41**	**113**	P	**Pn**	**10 15 51.0**	**+2.1**
	1.6nm,0.3s,baz=246,slow=19,SNR=3.3						
KCP	**Kidapawan**	**5.83**	**348**↑	*e*P	**Pn**	**10 15 58.3**	**+3.5**
KCP				*e*S	**Sn**	**10 17 04.5**	**+4.1**
MPSI	**Mapaga**	**6.46**	**262**	P	**Pn**	**10 16 03.8**	**+0.4**
	0.2nm40nm,0.8s						
PCI	**Palu**	**6.81**	**252**	P	Pn	10 16 02.2	-6.0
BBSI	**Bau Bau**	**7.67**	**209**	P	**Pn**	**10 16 20.9**	**+0.9**
	0.1nm6.8nm,0.7s						
TTSI	**Tana Toraja**	**7.76**	**237**	P	**Pn**	**10 16

KURK	Kurchatov	63.58	328	P	P	10 24 55.2	-1.4
BVAR	Borovoye Array	69.14	328	P	P	10 25 30.2	-2.0
	comp=Z,0.8nm,0.6s,baz=102,slow=5.3,SNR=5.7						
ABKAR	Akbulak array	73.78	321	P	P	10 25 60.0	-0.2
MAW	Mawson	81.31	200	P	P	10 26 39.4	-2.4
	comp=Z,4.0nm,0.4s,baz=49,slow=17,SNR=13						
MAW	Mawson	81.31	200	IAmb	IAmb	10 26 40.5	
	comp=Z,1.0nm,0.8s						
TTA	Tatalina	83.28	27	P	P	10 26 53.0	+0.6
TTA				IAmb	IAmb	10 26 56.2	
	comp=Z,7.8nm,1.4s						
ILAR	Eielson Array	87.50	25	P	P	10 27 12.3	-1.0
	comp=Z,0.2nm,0.5s,baz=249,slow=4.8,SNR=3.0						
BRTR	Keskin Array B	91.25	310	P	P	10 27 31.6	0.0
	comp=Z,0.5nm,0.8s,baz=130,slow=6.3,SNR=2.9						
AKASG	Malin Array Be	93.52	321	P	P	10 27 40.8	-0.8
	comp=Z,0.3nm,0.4s,baz=73,slow=4.7,SNR=2.7						
YKA	Yellowknife Ar	101.91	24	P	Pdif	10 28 19.2	0.0
	comp=Z,0.1nm,0.6s,baz=293,slow=4.2						
TORD	Torodi Ar. Bea	123.23	287	PKP	PKiKP	10 33 23.6	-0.2
	comp=Z,0.6nm,0.7s,baz=50,slow=2.3,SNR=3.1						

*IDC **06** 10:22:21.7±0.9, 1°.37N×126°.43E, h0km, mb4.0/6, mb1 4.1/8, mb1mx3.8/39, mbtmp4.0/8, ML4.0/2, Error ellipse: s-maj=51.8km s-min=16.1km az=71.0*
*DJA **06** 10:22:25.0±0.2, 1°.N±2°×12°.6E±°, h10km, M4.5/14, mB5.6/4, mb4.7/11, MLv4.2/14, Mw(mB)5.1/4*
*NEIC **06** 10:22:28.1±0.9, 1°.28N±0°.07×126°.38E±0°.06, h48km±9km, mb4.3/14, Error ellipse: s-maj=12.2km s-min=6.1km az=149.0*

ISC 06 10:22:28.3±0.6, **1°.30N**±0°.07×**126°.29E**±0°.05, **h47**km, **n44**, σ0s**98**/46, **mb4.1**/13, **1D**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.20	116	P	Pn	10 22 47.2	-1.5
TNTI				S	Sn	10 23 04.9	+1.0
TNTI	Ternate	1.20	116		Pn	10 22 47.0	-1.7
LBMI	Labuha	2.28	148	P	Pn	10 23 03.6	+0.1
KMSI	Cibinong	2.42	253	P	Pn	10 23 04.4	-1.0
KMSI				S	Sn	10 23 34.8	+1.0
SANI	Sanana	3.34	185	P	Pn	10 23 17.7	-0.4
LUWI	Luwuk	4.22	236	P	Pn	10 23 30.6	+0.5
LUWI	Luwuk	4.22	236		Pn	10 23 31.4	+1.2
LUWI				Sn	Sn	10 24 18.3	+0.1
MRSI	Marisa	4.42	259	P	Pn	10 23 32.3	-0.7
NLAI	Namlea	4.58	170	P	Pn	10 23 35.6	+0.4
APSI	Ampana	5.14	245	P	Pn	10 23 42.6	-0.1
	0.6nm2µm150nm,0.7s						
KCP	Kidapawan	5.79	348	⇓eP	Pn	10 23 58.6	+6.8
KDI	Kendari	6.38	215	P	Pn	10 24 05.6	+5.7
MPSI	Mapaga	6.46	262	P	Pn	10 23 59.4	-1.6
	0.1nm25nm,0.8s						
TTSI	Tana Toraja	7.78	236	P	Pn	10 24 18.6	-0.4
	0.2nm60nm,0.8s						
SPSI	Sidrap Palu	8.36	231	P	Pn	10 24 26.3	-0.7
	31nm,0.6s						
RKPI	Ransiki, Papua	8.37	109	P	Pn	10 24 26.7	-0.4
	2µm31nm,0.6s						
BNSI	Bone	8.38	227	P	Pn	10 24 26.7	-0.6
	28nm,0.7s						
KAPI	Kappang	9.06	226	Pn	Pn	10 24 37.7	+1.1
	1.3nm,0.3s,baz=92,slow=6.0,SNR=4.8						
KAPI	Kappang	9.06	226		Pn	10 24 37.2	+0.6
MTN	Manton Dam	14.86	161	Pn	Pn	10 25 54.8	-0.7
KNRA	Kununurra	17.05	172		Pn	10 26 23.1	-0.4
KNRA				IAmb	IAmb	10 26 24.2	
	comp=Z,23nm,1.1s						
MMPI	Merauke	17.08	125	P	P	10 26 28.2	+3.1
FITZ	Fitzroy Crossi	19.29	182	P	P	10 26 48.4	-1.0
	comp=Z,0.3nm,0.3s,baz=22,slow=10,SNR=8.2						
FITZ	Fitzroy Crossi	19.29	182	P	P	10 26 48.2	-1.2
WRAB	Tennant Creek	22.54	160	P	P	10 27 23.3	-1.2
WRAB				IAmb	IAmb	10 27 29.2	
	comp=Z,18nm,1.1s						
WRA	Warramunga Arr	22.54	160	P	P	10 27 23.0	-1.6
	comp=Z,6.4nm,0.8s,baz=338,slow=11,SNR=22						
WRA				PcP	PcP	10 31 17.8	+0.7
	comp=Z,0.4nm,0.3s,baz=336,slow=2.0,SNR=4.7						
TPUB	Ta-pu	22.55	346	P	P	10 27 25.0	+0.4
TPUB				IAmb	IAmb	10 27 34.3	
	comp=Z,21nm,1.0s						
WR0	Warramunga Arr	22.63	159	P	P	10 27 24.5	-1.0
WR0				IAmb	IAmb	10 27 30.2	
	comp=Z,17nm,1.2s						
PMG	Port Moresby	23.35	118	P	P	10 27 31.8	-1.0
PMG				IAmb	IAmb	10 27 50.2	
	comp=Z,12nm,0.8s						
PSA00	Pilbara Seismi	23.59	195	P	P	10 27 34.9	-0.1
PSA00				IAmb	IAmb	10 27 36.9	
	comp=Z,4.6nm,0.7s						
AS31	Alice Springs	25.90	164	P	P	10 27 55.7	-0.5
ASAR	Alice Springs	25.90	164	P	P	10 27 55.7	-0.4
	comp=Z,1.6nm,0.5s,baz=346,slow=6.7,SNR=56						
ASAR				PcP	PcP	10 31 24.9	+0.6
	comp=Z,1.1nm,0.4s,baz=353,slow=2.1,SNR=18						
BBOO	Buckleboo	35.16	166	P	P	10 29 17.2	-0.6
STKA	Stephens Creek	36.05	158	P	P	10 29 25.5	+0.1
	comp=Z,2.3nm,0.6s,baz=348,slow=8.9,SNR=6.0						
STKA	Stephens Creek	36.05	158	P	P	10 29 25.3	-0.1
SONM	Songino Array	49.45	342	P	P	10 31 15.2	+1.3
	comp=Z,0.5nm,0.6s,baz=157,slow=9.3,SNR=2.5						
MSVF	Nonsavu	54.34	113	P	P	10 31 50.6	-0.2
MK31	Makanchi Array	59.30	326	P	P	10 32 25.3	-0.1
MK31				IAmb	IAmb	10 32 30.3	
	comp=Z,1.2nm,0.7s						
MKAR	Makanchi Array	59.30	326	P	P	10 32 24.1	-1.3
	comp=Z,0.8nm,0.3s,baz=123,slow=7.3,SNR=14						
KSH	Kashi	59.46	316	P	P	10 32 31.7	+4.9
KSH				pmax	pmax		
	comp=Z,660nm,7.2s						
ZALV	Zalesovo Beam	62.55	334	P	P	10 32 47.8	+0.6
	comp=Z,0.6nm,0.5s,baz=142,slow=7.0,SNR=3.1						
KURK	Kurchatov	63.55	328	P	P	10 32 53.1	-0.8
ABKAR	Akbulak array	73.75	321	P	P	10 33 57.5	0.0
ABKAR				IAmb	IAmb	10 33 59.4	
	comp=Z,2.6nm,1.3s						
TORD	Torodi Ar. Bea	123.22	287	PKP	PKPdf	10 41 20.7	-0.3
	comp=Z,0.4nm,0.7s,baz=90,slow=0.4,SNR=3.0						

*MAN **06** 10:56:45.8, 4°.06N×126°.19E, h4km, mb5.0, ML3.9, MS4.0*
*DJA **06** 10:56:48.4±0.4, 3°.N±3°×12°.6E±°, h10km, M4.0/7, mB5.2/3, mb4.3/3, MLv3.8/7, Mw(mB)4.5/3*

ISC 06 10:56:42.8±1.5, **3°.90N**±0°.06×**126°.5E**±0°.1, **h10**km, **n7**, σ1s**76**/10, **1D**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	2.33	341	eP	Pn	10 57 21.4	+0.3
DDMP				eS	Sn	10 57 48.6	-1.2
TNTI	Ternate	3.22	164	P	Pn	10 57 33.8	+0.3
SKMP	Bagumbayan, Su	3.25	324	eP	Pn	10 57 34.0	+0.1
SKMP				eS	Sn	10 58 10.3	-2.3
KCP	Kidapawan	3.39	336	⇓eP	Pn	10 57 39.1	+3.2
MRSI	Marisa	5.67	233	P	Pn	10 58 08.6	+1.5
	0.1nm815nm17nm,0.5s						
MRSI				S	Sn	10 59 11.1	-1.3
	0.1nm815nm17nm,0.5s						
SANI	Sanana	5.92	185	P	Pn	10 58 09.8	-0.9
NLAI	Namlea	7.11	175	P	Pn	10 58 27.5	+0.5

*JMA **06** 11:07:16.8±0.3, 23°.92N×122°.51E, h17km±5km, M2.9*
*TAP **06** 11:07:17.3, 23°.97N×122°.53E, h25km, ML3.4, D*

ISC 06 11:07:15.5±1.1, **23°.89N**±0°.02×**122°.52E**±0°.02, **h9**km±9km, **n99**, σ0s**61**/159, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.68	35	P	Pb	11 07 29.4	-0.2
JYNG				S	Sg	11 07 37.5	-0.1
YOJ	Yonaguni jima	0.72	38	P	Pb	11 07 30.3	0.0
	baz=50						
YOJ				S	Sg	11 07 39.0	+0.1
	baz=50						
YOJ	Yonaguni jima	0.72	38	P	Pb	11 07 30.3	0.0
YOJ				eS	Sg	11 07 39.3	+0.3
EOS1	EOS1	0.75	331	eP	Pb	11 07 31.0	+0.3
	baz=328						
EOS1				eS	Sb	11 07 41.1	+0.1
	baz=328						
ENLB	Shoufeng	0.84	271	eS	Sb	11 07 44.1	+0.4
	baz=253						
TWD	Chiawan	0.87	283	eP	Pb	11 07 33.0	+0.2
	baz=278						
TWD				eS	Sb	11 07 44.5	+0.1
	baz=278						
NANB	Nanao	0.88	307	eP	Pb	11 07 33.3	+0.2
	baz=303						
NANB				eS	Sb	11 07 45.2	+0.3
	baz=303						
ENA	Nanau	0.89	307	eP	Pb	11 07 33.3	+0.1
	baz=303						
ENA				eS	Sb	11 07 45.5	+0.3
	baz=303						
NACB	Ninganchiao	0.89	289	eP	Pb	11 07 33.4	+0.2
	baz=268						
NACB				eS	Sb	11 07 45.4	+0.2
	baz=268						
TWC	Suao	0.94	320	P	Pg	11 07 33.7	0.0
	baz=316						
TWC				eS	Sg	11 07 45.2	-0.7
	baz=316						
ESL	Shilin	1.00	266	eP	Pg	11 07 34.7	0.0
	baz=261						
ETLH	Xiulin Townshi	1.00	289	eP	Pg	11 07 35.1	+0.4
	baz=271						
ETLH				eS	Sb	11 07 48.8	+0.4
	baz=271						
EGFH	Guangfu	1.02	258	eS	Sb	11 07 49.5	+0.5
	baz=253						
HGSD	Ruisui	1.08	249	eP	Pg	11 07 36.4	+0.1
	baz=245						
HGSD				eS	Sg	11 07 50.3	-0.1
	baz=245						
EGS		1.09	331	eP	Pb	11 07 36.8	+0.2
	baz=315						
EGS				eS	Sg	11 07 50.9	+0.2
	baz=315						
TWE	Neicheng	1.14	317	eP	Pg	11 07 37.6	+0.2
	baz=314						
TWE				eS	Sg	11 07 52.0	-0.1
	baz=314						
ENTT	Nioudou	1.15	311	*i* P	Pg	11 07 37.7	+0.1
	baz=292						
NTC	Toucheng	1.15	327	eP	Pb	11 07 37.9	+0.3
	baz=324						
NTC				eS	Sb	11 07 53.1	+0.6
	baz=324						
NDT	Datong Townshi	1.16	308	eP	Pg	11 07 38.0	+0.1
	baz=304						
EHY	Hungye	1.16	251	eP	Pg	11 07 37.8	0.0
	baz=256						
EHY				eS	Sg	11 07 52.7	-0.3
	baz=256						
NNSH	Datong	1.17	297	eP	Pg	11 07 38.0	0.0
	baz=293						
WHF	Hehuan Shan	1.18	283	P	Pg	11 07 38.2	0.0
	baz=265						
WHF				eS	Sg	11 07 53.5	0.0
	baz=265						
SLBB	Yuanshan	1.18	317	eP	Pg	11 07 37.7	-0.5
	baz=314						
SLBB				eS	Sg	11 07 53.3	-0.2
	baz=314						
NNS	Nan Shan	1.18	298	P	Pg	11 07 38.2	-0.1
	baz=294						
NNS				eS	Sg	11 07 52.9	-0.8
	baz=294						
HATJ	Hateruma jima	1.19	82	P	Pn	11 07 38.7	+0.4
HATJ				S	Sb	11 07 54.4	+0.7
IRIF	Iriomote-Funau	1.19	68	P	Pn	11 07 38.7	+0.3
TWB1	Santiao Chiao	1.21	337	eP	Pg	11 07 38.1	-0.8
	baz=335						
YULB	Yu-li	1.23	246	eP	Pb	11 07 39.0	+0.1
	baz=243						
YULB				eS	Sg	11 07 54.7	-0.3
	baz=243						
OWD	Renai	1.23	273	eP	Pg	11 07 39.0	-0.2
	baz=269						
CHGB	Renai	1.24	278	eP	Pg	11 07 39.2	-0.3
	baz=263						
CHGB				eS	Sg	11 07 55.0	-0.6
	baz=263						
TWF1	Yuli	1.24	245	P	Pn	11 07 39.4	+0.3
	baz=241						
TWF1				eS	Sg	11 07 55.5	-0.1
	baz=241						
TIPB	Shuangxi	1.25	330	P	Pb	11 07 39.5	+0.2
	baz=328						
TIPB				eS	Sg	11 07 55.4	-0.4
	baz=328						
NWLT	Wulai	1.28	314	eP	Pn	11 07 40.0	+0.4
	baz=297						
NWLT				eS	Sb	11 07 56.2	-0.2
	baz=297						
TWT	Tachien	1.28	287	eP	Pg	11 07 40.6	+0.4
	baz=271						
TDCB	Techi	1.30	286	eP	Pn	11 07 40.0	0.0
	baz=270						
TDCB				eS	Sg	11 07 56.1	-1.2
	baz=270						
YHNB	Yeheng	1.30	307	eP	Pn	11 07 40.1	+0.1
	baz=290						
YHNB				eS	Sb	11 07 56.7	-0.4
	baz=290						
NSK	Sanguang	1.32	307	P	Pn	11 07 40.2	+0.1
	baz=290						
NSK				eS	Sb	11 07 56.5	-1.1
	baz=290						
FULB	Fuli	1.32	239	eP	Pn	11 07 39.9	-0.3
	baz=223						
FULB				eS	Sb	11 07 57.1	-0.5
	baz=223						
CHKT	Chengkung	1.32	234	eS	Sb	11 07 55.6	-1.9
	baz=218						
NWF	Wu-fen Shan	1.35	330	eP	Pn	11 07 40.3	-0.4
	baz=328						
NWF				eS	Sb	11 07 58.1	-0.5
	baz=328						
WFSB	Wu-fen Shan	1.35	330	eP	Pn	11 07 40.4	-0.3
	baz=329						
WFSB				eS	Sb	11 07 58.2	-0.3
	baz=329						
TWA	Mucha	1.38	322	eP	Pn	11 07 41.5	+0.5
	baz=320						
TWA				eS	Sb	11 07 59.6	+0.3
	baz=320						
JKRS	Kuro-shima	1.40	75	P	Pb	11 07 42.2	+0.3
JKRS				S	Sb	11 07 59.8	-0.1
TATO	Taipei	1.43	319	eP	Pb	11 07 42.7	+0.3
	baz=317						
SSLB	Suanglung	1.44	266	eP	Pn	11 07 42.3	+0.4
	baz=263						
SSLB				eS	Sn	11 07 59.5	-1.3
	baz=263						
DPDB	Guoxing	1.47	276	eP	Pn	11 07 42.8	+0.6
	baz=263						
DPDB				eS	Sn	11 08 01.0	-0.6
	baz=263						
SMLT	Sun Moon Lake	1.48	270	eP	Pn	11 07 43.0	+0.5
	baz=267						
SMLT				eS	Sn	11 08 01.3	-0.8
	baz=267						
WHP	Taichung City	1.49	285	eP	Pb	11 07 43.9	+0.4
	baz=270						
YUS	Yu-Shan	1.49	255	eP	Pn	11 07 43.3	+0.4
	baz=251						
YUS				eS	Sn	11 08 01.2	-1.6
	baz=251						
TWH	Lutao	1.52	219	eP	Pn	11 07 42.8	0.0
	baz=216						
TWH				eS	Sn	11 08 01.3	-1.4
	baz=216						
YM01	YM01	1.52	325	eP	Pn	11 07 43.2	+0.3
	baz=323						
TYC	Yuchr	1.52	271	eP	Pn	11 07 43.6	+0.6
	baz=268						
TYC				eS	Sn	11 08 02.8	-0.1
	baz=268						
YM10	YM10	1.53	325	eP	Pn	11 07 43.6	+0.5
	baz=323						
YM11	YM11	1.53	326	eP	Pn	11 07 43.8	+0.6
	baz=324						
YM05	YM05	1.54	326	eP	Pn	11 07 42.7	-0.5
	baz=324						
WHYT	Xinyi Township	1.54	263	eP	Pb	11 07 44.3	+0.1
	baz=259						
YM04	YM04	1.54	325	eP	Pn	11 07 43.7	+0.4
	baz=323						
YM08	YM08	1.54	327	eP	Pn	11 07 43.1	-0.2
	baz=325						
ELDTW	Lidau	1.55	243	eP	Pn	11 07 43.2	-0.1
	baz=240						
ELDTW				eS	Sn	11 08 02.0	-1.6
	baz=240						
JIJ	Ishigaki jima	1.56	72	P	Pn	11 07 43.4	0.0
LIOB	Emei	1.57	299	eP	Pb	11 07 45.0	+0.3
	baz=296						
LIOB				eS	Sn	11 08 03.6	-0.4
	baz=296						
TWS1	Kuangyinshan	1.57	320	eP	Pn	11 07 44.3	+0.7
	baz=336						
TWS1				eS	Sn	11 08 03.9	-0.1
	baz=336						
NSTT	Nanjuang	1.57	298	eP	Pb	11 07 44.9	+0.1
	baz=295						
NSTT				eS	Sn	11 08 03.9	-0.2
	baz=295						
TWY	Chenhua	1.61	329	eP	Pn	11 07 44.7	+0.6
	baz=327						
ALS	Alishan	1.62	257	eP	Pn	11 07 44.9	+0.4
	baz=254						
ALS				eS	Sn	11 08 04.3	-1.4
	baz=254						
WJS	Zhushan	1.64	268	eP	Pg	11 07 47.2	+0.2
	baz=265						
WJS				eS	Sg	11 08 08.9	+0.6
	baz=265						
TWQ1	Liyutan	1.66	286	P	Pb	11 07 46.5	+0.2
	baz=284						
TWQ1				eS	Sb	11 08 07.6	+0.3
	baz=284						
WNT	Mingjian	1.68	270	eP	Pb	11 07 47.5	+0.8
	baz=266						
NSY	Sanyi	1.69	288	eP	Pb	11 07 47.3	+0.5
	baz=285						
TWGBT	Beinan	1.70	231	eP	Pn	11 07 45.5	+0.1
	baz=218						
TWGBT				eS	Sn	11 08 06.4	-0.9
	baz=218						
NMLH	Miaoli	1.71	293	eP	Pb	11 07 47.2	+0.2
	baz=289						
TWG	Pinlang	1.71	232	eP	Pn	11 07 46.0	+0.5
	baz=218						
TWG				eS	Sn	11 08 06.9	-0.5
	baz=218						
CHN5	Tsauling	1.71	261	eP	Pb	11 07 47.2	0.0
	baz=247						
CHN5				eS	Sb	11 08 09.7	+0.8
	baz=247						
STYT	Tauyuan	1.77	246	eP	Pn	11 07 47.2	+0.8
	baz=234						
STYT				eS	Sn	11 08 10.3	+1.2
	baz=234						
JISG	Ishigakijimahi	1.77	67	P	Pn	11 07 46.0	-0.4
WCHH	Zhanghua	1.81	276	eP	Pb	11 07 48.9	+0.1
	baz=273						
WCHH				eS	Sb	11 08 12.3	+0.9
	baz=273						
TPUB	Ta-pu	1.83	252	eP	Pb	11 07 49.1	-0.1
	baz=238						
TPUB				eS	Sn	11 08 11.3	+0.8
	baz=238						
CHN4	Tsaushan	1.85	253	eP	Pb	11 07 49.6	+0.1
	baz=251						
CHN4				eS	Sb	11 08 13.8	+1.1
	baz=251						
WTP	Ta-pu	1.86	250	eP	Pb	11 07 49.5	-0.2
	baz=237						
WTP				eS	Sn	11 08 12.8	+1.4
	baz=237						
SLGT	Liugui	1.94	243	eP	Pb	11 07 50.9	-0.2
	baz=240						
SGST	Jiashian	1.95	246	eP	Pb	11 07 51.9	+0.6
	baz=243						
SGST				eS	Sb	11 08 15.9	+0.1
	baz=243						
CHN1	Nanshi	1.96	249	eP	Pb	11 07 51.4	0.0
	baz=247						
CHN1				eS	Sb	11 08 16.1	+0.2
	baz=247						
TWK	Hsinying	1.96	252	eP	Pb	11 07 51.1	-0.5
	baz=249						
TWK				eS	Sb	11 08 16.5	+0.3
	baz=249						
SNST	Tainan City	1.97	251	eP	Pb	11 07 51.7	+0.1
	baz=248						
LAY	Lan-yu	2.05	206	eP	Pn	11 07 49.6	-0.6
	baz=204						
LAY				eS	Sn	11 08 14.6	-1.3
	baz=204						
SSD	Sandimen	2.08	237	eP	Pb	11 07 52.8	-0.6
	baz=226						
JTJ	Tarama	2.13	69	P	Pn	11 07 52.8	+1.6
EAST	Anshuo	2.15	226	eP	Pn	11 07 51.9	+0.3
	baz=224						
MASBT	Mashibuluo	2.15	234	eP	Pn	11 07 52.8	+1.2
	baz=225						
MASBT				eS	Sn	11 08 19.6	+1.1
	baz=225						
SCZT	Fangliau	2.31	230	eP	Pn	11 07 55.1	+1.3
	baz=219						
TWKBT	Hengchun	2.50	219	eP	Pn	11 07 57.2	+0.9
	baz=217						
PHUB	P'eng-hu	2.73	263	eP	Pn	11 08 00.7	+1.2
	baz=260						
PHUB				eS	Sn	11 08 32.9	+0.3
	baz=260						
PNG	Penghu	2.74	264	eP	Pn	11 08 01.0	+1.4
	baz=262						
PNG				eS	Sn	11 08 33.1	+0.3
	baz=262						
PTMZ	Houxiangcun	3.30	291	eP	Pn	11 08 07.2	-0.2
	baz=288						
XPSS	Dashiqiu	3.69	326	eP	Pn	11 08 12.2	-0.5
	baz=324						
KNM	Kinmen	3.77	279	eP	Pn	11 08 15.7	+1.8
	baz=276						
KNMB	Chin-men Tao	3.82	279	eP	Pn	11 08 14.4	-0.1
	baz=277						
MHZQ	Yeshan	3.86	306	eP	Pn	11 08 14.4	-0.6
	baz=303						
AXDP	Jialang	4.27	285	eP	Pn	11 08 20.8	+0.1
	baz=282						

*INET **06** 11:13:06.0, 12°.14N×87°.90W, h4km, ML4.1*
*SNET **06** 11:13:06.5±0.7, 12°.20N×88°.06W, h3km±10km, ML3.9*
*UCR **06** 11:13:07.2±1.4, 12°.17N×87°.95W, h22km±7km, ML3.9*
*IDC **06** 11:13:11.3±2.5, 12°.18N×87°.65W, h81km±22km, mb3.5/6, mb1 3.7/9, mb1mx3.4/44, mbtmp3.7/9, MS3.0/2, Ms1 3.0/2, ms1mx2.7/31, Error ellipse: s-maj=53.7km s-min=23.5km az=40.0*

ISC 06 11:13:08.5±1.3, **12°.15N**±0°.07×**87°.91W**±0°.07, **h50**km±13km, **n41**, σ1s**14**/48, **mb3.9**/6, **6C**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	1.13	4	eP	Pn	11 13 27.1	-1.0
CNCH				IAML		11 13 46.1	
	comp=Z,3µm,0.4s						
CNCH	Conchagua	1.13	4	eP	Pn	11 13 27.1	-1.0
CNCH				IAML		11 13 46.1	
	comp=Z,3µm,0.4s						
JUCU	Jucuarįn	1.15	343	eP	Pn	11 13 26.9	-1.5
JUCU				eS	Sn	11 13 42.5	-0.5
JUCU				IAML		11 13 49.1	
	comp=Z,3µm,0.3s						
LCND	La Caada	1.16	1	eP	Pn	11 13 27.2	-1.2
LCND				eS	Sn	11 13 43.7	+0.5
LCND				IAML		11 13 47.6	
	comp=Z,4µm,0.3s						
LCND	La Caada	1.16	1	eP	Pn	11 13 27.2	-1.2
LCND				eS	Sn	11 13 43.7	+0.5
LCND				IAML		11 13 47.6	
	comp=Z,4µm,0.3s						
LCY	Lacayo	1.32	344	eP	Pn	11 13 30.1	-0.6
LCY	Lacayo	1.32	344	eP	Pn	11 13 30.1	-0.6
PACA	Pacayal	1.38	343	eP	Pn	11 13 30.5	-1.0
PACA				eS	Sn	11 13 49.0	+0.4
PACA	Pacayal	1.38	343	eP	Pn	11 13 30.5	-1.0
PACA				eS	Sn	11 13 49.0	+0.4
TECA	Tecapa	1.46	337	eP	Pn	11 13 31.6	-1.1
TECA	Tecapa	1.46	337	eP	Pn	11 13 31.6	-1.1
COEB	Comit de Eme	1.47	336	eP	Pn	11 13 31.6	-1.2

COEB eS Sn 11 13 51.4 +0.4
COEB IAML 11 14 00.1
comp=Z,1µm,0.4s
FAGO Alcalda de S 1.55 353 eP Pn **11 13 33.1 -0.7**
COEG Centro de Oper 1.74 327⇓ eP Pn **11 13 36.1 -0.4**
COEG IAML 11 14 10.9
comp=Z,1µm,0.4s
LFRS El Faro 1.85 323 eP Pn **11 13 36.8 -1.1**
LBRS Las Brisas 1.93 325 eP Pn **11 13 38.6 -0.4**
LFU La Fuente 1.98 324 eP Pn **11 13 38.8 -0.9**
LFU La Fuente 1.98 324 eP Pn **11 13 38.8 -0.9**
BOQS Boqueron 2.07 320 eP Pn **11 13 41.0 0.0**
SBLS San Blas 2.37 315 eP Pn **11 13 44.8 -0.4**
SBLS San Blas 2.37 315 eP Pn **11 13 44.8 -0.4**
NY14 Universidad de 2.77 122 eP Pn **11 13 50.8 +0.3**
LAPC Finca la Perla 2.79 119 eP Pn **11 13 51.1 +0.3**
LAPC eS Sn **11 14 22.4 -0.9**
GB1A Borinquen Arri 2.79 118 eP Pn **11 13 52.5 +1.6**
BUEV Buena Vista 2.80 118 eP Pn **11 13 51.7 +0.8**
BUAI Buenos Aires 2.83 116 eP Pn **11 13 51.7 +0.4**
GPS3 Bodega del ICE 2.85 119 eP Pn **11 13 54.2 +2.5**
COLC Colonia 3.04 119 eP Pn **11 13 55.0 +0.9**
HORNC Hornillas 3.04 118⇑ eP Pn **11 13 55.6 +1.4**
CUI Cuipilapa 3.07 119 eP Pn **11 13 56.2 +1.5**
PTEN Parque Tenorio 3.20 116 eP Pn **11 13 57.5 +1.1**
JTS Las Juntas de 3.44 122 P Pn **11 14 00.1 +0.4**
comp=Z,3.3nm,0.3s,baz=12,slow=20,SNR=16
JTS S Sn 11 14 54.6 +15
comp=Z,7.9nm,0.3s,baz=170,slow=19,SNR=7.4
APG El Apazote 3.77 319 P Pn 11 14 08.4 +4.0
comp=Z,1.3nm,0.3s,baz=95,slow=17,SNR=5.3
APG LR LR 11 15 10.4
comp=Z,72nm,18.4s,baz=344,slow=30
TEIG Tepich 8.04 358 P Pn **11 15 06.1 +3.3**
CMIG Matias Romero 8.35 307 P Pn **11 15 07.9 +0.9**
comp=Z,0.6nm,0.3s,baz=112,slow=9.7,SNR=7.3
CMIG S Sn **11 16 40.9 +0.9**
comp=Z,0.3nm,0.3s,baz=233,slow=20,SNR=2.4
CMIG LR LR 11 18 52.5
comp=Z,200nm,19.0s,baz=64,slow=40
TXAR Lajitas Array 22.53 322 P P **11 18 06.0 +1.6**
comp=Z,4.1nm,0.6s,baz=137,slow=9.8,SNR=32
PDAR Pinedale Array 35.83 332 P P **11 20 05.5 +1.9**
comp=Z,0.8nm,0.7s,baz=122,slow=10,SNR=7.7
ULM Lac du Bonnet 38.55 352 P P **11 20 25.4 -0.9**
comp=Z,1.2nm,0.5s,baz=189,slow=10,SNR=4.3
SCHQ Schefferville 45.70 17 P P **11 21 23.0 -1.5**
comp=Z,2.3nm,0.7s,baz=202,slow=3.9,SNR=9.6
YKA Yellowknife Ar 53.79 345 P P **11 22 25.2 -0.5**
comp=Z,0.3nm,0.5s,baz=150,slow=6.7,SNR=13
ILAR Eielson Array 66.11 336 P P **11 23 50.0 -0.3**
comp=Z,0.2nm,0.6s,baz=128,slow=5.9,SNR=5.3

*DJA **06** 11:13:46.1±0.7, 10°S±3°×11°9E±°, h29km±7km, M4.4/17, mB5.2/3, mb4.5/8, MLv4.3/17, Mw(mB)4.6/3*
*NEIC **06** 11:13:47.3±1.4, 10°34S±0°06×119°32E±0°06, h48km±10km, mb4.1/13, Error ellipse: s-maj=9.4km s-min=7.9km az=199.0*
*IDC **06** 11:13:48.8±3.3, 10°29S×119°38E, h64km±31km, mb3.9/4, mb1 4.1/9, mb1mx3.7/33, mbtmp4.2/9, ML3.9/5, MS3.1/3, Ms1 3.1/3, ms1mx2.7/44, Error ellipse: s-maj=32.4km s-min=13.6km az=57.0*
ISC 06 11:13:46.1±0.5, 10°37S±0°05×119°36E±0°04, h35km, n50, σ1s68/75, mb4.2/10, Sumba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**1.15**	**53**	P	**Pn**	**11 14 06.5**	**+0.8**
WSI				S	**Sn**	**11 14 22.2**	**+1.9**
PLAI	**Plampang**	**2.19**	**314**	P	**Pn**	**11 14 20.6**	**+0.6**
PLAI				S	**Sn**	**11 14 46.4**	**+0.6**
MMRI	**Maumere**	**3.32**	**59**	P	**Pn**	**11 14 35.8**	**+0.3**
MMRI				S	**Sn**	**11 15 14.9**	**+1.1**
MMRI	**Maumere**	**3.32**	**59**	Pn	**Pn**	**11 14 36.6**	**+1.0**
MMRI				Sn	**Sn**	**11 15 13.2**	**-0.6**
BATI	**Baumata**	**4.24**	**88**	P	**Pn**	**11 14 51.7**	**+3.5**
	9.4nm,0.3s,baz=17,slow=0.4,SNR=11						
BATI				S	**Sn**	**11 15 39.0**	**+2.5**
	12nm,0.3s,baz=253,slow=19,SNR=6.1						
BATI	**Baumata**	**4.24**	**88**	P	**Pn**	**11 14 49.4**	**+1.2**
BATI				S	**Sn**	**11 15 38.8**	**+2.3**
DNP	**Denpasar**	**4.43**	**292**	P	**Pn**	**11 14 50.0**	**-0.8**
DNP				S	**Sn**	**11 15 42.1**	**+1.0**
IGBI	**Denpasar**	**4.43**	**290**	P	**Pn**	**11 14 50.0**	**-0.9**
IGBI				S	**Sn**	**11 15 41.8**	**+0.5**
SRBI	**Singaraja**	**4.68**	**299**	P	**Pn**	**11 14 54.9**	**+0.6**
SRBI				S	**Sn**	**11 15 48.3**	**+0.9**
SOEI	**Soe**	**4.87**	**83**	P	**Pn**	**11 14 58.6**	**+1.6**
SOEI				S	**Sn**	**11 15 53.7**	**+1.5**
SOEI	**Soe**	**4.87**	**83**	Pn	**Pn**	**11 14 59.2**	**+2.2**
SOEI				Sn	**Sn**	**11 15 51.4**	**-0.8**
BKSI	**Bulukumba**	**5.07**	**9**	P	**Pn**	**11 14 59.7**	**+0.1**
	0.5nm1µm144nm,0.7s						
BKSI				S	**Sn**	**11 15 58.1**	**+1.1**
	0.5nm1µm144nm,0.7s						
KAPI	**Kappang**	**5.33**	**4**	P	**Pn**	**11 15 04.4**	**+1.2**
	2.6nm,0.3s,baz=188,slow=4.6,SNR=17						
KAPI				S	**Sn**	**11 16 04.9**	**+1.5**
	3.8nm,0.3s,baz=195,slow=20,SNR=4.6						
KAPI				LR	LR	11 17 15.9	
	comp=Z,116nm,19.8s,baz=151,slow=39						
KAPI	**Kappang**	**5.33**	**4**		**Pn**	**11 15 03.4**	**+0.2**
KAPI				Sn	**Sn**	**11 16 04.3**	**+0.9**
JAGI	**Jajag, Banyuwa**	**5.47**	**290**	P	**Pn**	**11 15 06.0**	**+0.8**
	0.2nm25nm,0.7s						
JAGI				S	**Sn**	**11 16 06.8**	**-0.2**
	0.2nm25nm,0.7s						
JAGI	**Jajag, Banyuwa**	**5.47**	**290**	Pn	**Pn**	**11 15 05.8**	**+0.6**
JAGI				Sn	**Sn**	**11 16 05.6**	**-1.4**
BBSI	**Bau Bau**	**5.80**	**33**	P	**Pn**	**11 15 09.4**	**-0.2**
	0.0nm7.1nm,0.9s						
BBSI				S	**Sn**	**11 16 15.9**	**+1.0**
	0.0nm7.1nm,0.9s						
BNSI	**Bone**	**5.97**	**7**	P	**Pn**	**11 15 12.6**	**+0.5**
	0.1nm34nm,0.8s						
BNSI				S	**Sn**	**11 16 20.6**	**+1.3**
	0.1nm34nm,0.8s						
GMJI	**Gumukmas**	**6.20**	**289**	P	**Pn**	**11 15 15.6**	**+0.4**
	0.2nm32nm,0.9s						
GMJI				S	**Sn**	**11 16 25.3**	**+0.4**
	0.2nm32nm,0.9s						
KMMI	**Kalianget**	**6.27**	**301**	P	**Pn**	**11 15 16.0**	**-0.1**
	0.3nm72nm,1.0s						
KMMI				S	**Sn**	**11 16 28.3**	**+1.7**
	0.3nm72nm,1.0s						
TTSI	**Tana Toraja**	**7.29**	**4**	P	**Pn**	**11 15 29.6**	**-0.5**
	0.2nm4µm26nm,0.9s						
GRJI	**Gresik**	**7.62**	**296**	P	**Pn**	**11 15 34.2**	**-0.5**
	0.3nm91nm,1.2s						
KBKI	**Kotabaru**	**7.70**	**335**	P	**Pn**	**11 15 35.2**	**-0.6**
UGM	**Wanagama**	**9.06**	**285**	Pn	**Pn**	**11 15 55.0**	**+0.5**
UGM				Sn	**Sn**	**11 17 32.9**	**-2.5**
FITZ	**Fitzroy Crossi**	**9.80**	**142**	P	**Pn**	**11 16 06.3**	**+1.7**
	1.0nm,0.3s,baz=334,slow=9.9,SNR=30						
FITZ				S	**Sn**	**11 17 51.9**	**-1.6**
	2.3nm,0.3s,baz=180,slow=18,SNR=18						
FITZ				LR	LR	11 20 11.3	
	comp=Z,88nm,18.1s,baz=308,slow=39						
FITZ	**Fitzroy Crossi**	**9.80**	**142**		**Pn**	**11 16 06.8**	**+2.1**
FITZ				Sn	**Sn**	**11 17 51.4**	**-2.1**
KNRA	**Kununurra**	**10.57**	**121**	Pn	**Pn**	**11 16 17.4**	**+2.3**
KNRA				Sn	**Sn**	**11 18 11.6**	**-0.8**
PSA00	**Pilbara Seismi**	**11.15**	**178**	Pn	**Pn**	**11 16 24.1**	**+1.0**
MTN	**Manton Dam**	**11.79**	**103**	Pn	**Pn**	**11 16 32.3**	**+0.4**
GIRL	**Giralia**	**13.16**	**201**	Pn	**Pn**	**11 16 52.0**	**+1.5**
KKM	**Kota Kinabalu**	**16.60**	**349**	P	**P**	**11 17 37.8**	**-0.7**
WRA	**Warramunga Arr**	**17.30**	**125**	P	**Pn**	**11 17 44.8**	**-0.2**
	0.3nm,0.3s,baz=294,slow=13,SNR=12						
WRA				S	**Sn**	**11 20 47.6**	**-9.0**
	0.4nm,0.3s,baz=290,slow=21,SNR=6.0						
WRAB	**Tennant Creek**	**17.30**	**125**	Pn	**Pn**	**11 17 45.5**	**+0.5**
MORW	**Morawa**	**18.86**	**189**	P	**Pn**	**11 18 04.7**	**+0.6**
MORW				IAmb	IAmb	11 18 13.5	
	comp=Z,18nm,1.4s						
AS31	**Alice Springs**	**19.17**	**135**	P	**Pn**	**11 18 07.9**	**0.0**
ASAR	**Alice Springs**	**19.17**	**135**	P	**Pn**	**11 18 09.5**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=316,slow=14,SNR=43						
ASAR				S	**Sn**	**11 21 37.6**	**-4.1**
	comp=Z,0.3nm,0.3s,baz=303,slow=22,SNR=11						
NWAO	**Narrogin (SRO)**	**22.54**	**185**	P	**P**	**11 18 44.0**	**+0.9**
NWAO				IAmb	IAmb	11 18 58.6	
	comp=Z,16nm,1.2s						

COEN Coen 23.55 101 P **P** **11 18 54.7 +1.2**
RPSI Rantau Prapat 24.13 301 P **P** **11 18 60.0 +1.0**
RPSI IAmb IAmb 11 19 13.4
comp=Z,6.5nm,0.7s
STKA Stephens Creek 29.68 139 LR LR 11 31 40.6
comp=Z,66nm,20.3s,baz=342,slow=36
CMAR Chiang Mai Arr 35.02 325 P **P** **11 20 35.4 -0.2**
comp=Z,1.2nm,0.4s,baz=152,slow=6.7,SNR=5.2
SONM Songino Array 59.08 350 P **P** **11 23 41.8 -1.1**
comp=Z,0.7nm,0.5s,baz=169,slow=7.3,SNR=5.9
MK31 Makanchi Array 65.83 333 P **P** **11 24 27.3 -0.6**
MK31 IAmb IAmb 11 24 27.9
comp=Z,1.7nm,0.8s
MKAR Makanchi Array 65.83 333 P **P** **11 24 27.4 -0.6**
comp=Z,2.2nm,0.6s,baz=152,slow=5.8,SNR=30
MAKZ Makanchi 65.98 333 P **P** **11 24 28.6 -0.3**
MAKZ IAmb IAmb 11 24 39.4
comp=Z,2.4nm,1.4s
ARSB Arslanbob 66.82 324 P **P** **11 24 34.5 -0.1**
KURK Kurchatov 70.37 334 P **P** **11 24 55.7 -0.6**
KURK IAmb IAmb 11 24 56.3
comp=Z,2.1nm,1.0s
ZAA0 Zalesovo Array 70.44 339 P **P** **11 24 56.2 -0.5**
ZAA0 IAmb IAmb 11 25 06.6
comp=Z,2.3nm,1.2s
ZALV Zalesovo Beam 70.44 339 P **P** **11 24 55.0 -1.6**
comp=Z,1.7nm,0.5s,baz=155,slow=5.0,SNR=8.5
ABKAR Akbulak array 78.88 325 P **P** **11 25 45.1 -0.6**

MAN 06 11:15:18.0, 15°47N×122°45E, h1km, mb4.8, ML3.7, MS3.6, 4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALP	**Baler**	**0.88**	**288**	eP	Pg	11 15 35.2	+0.3
BALP				eS	Sb	11 15 47.5	-0.8
POLP	**Polilio Island**	**0.88**	**214**	eP	Pg	11 15 35.0	0.0
POLP				eS	Sg	11 15 46.7	+0.2
PCPH	**Palayan**	**1.30**	**274**⇓	eP	Pg	11 15 42.3	-0.7
PCPH				eS	Sn	11 16 01.2	-0.2
GQP	**Guinayangan**	**1.56**	**180**⇓	iP	Pn	11 15 46.4	-0.5
GQP				*i* S	Sn	11 16 07.5	-0.2
CAUP	**Cauayan**	**1.58**	**338**	eP	Pn	11 15 46.8	-0.4
CAUP				eS	Sn	11 16 07.8	-0.6
LQP	**Lukban**	**1.61**	**213**⇓	eP	Pn	11 15 47.9	+0.1
LQP				*i* S	Sg	11 16 10.9	+1.2
SMPP	**San Manuel, Pa**	**1.83**	**292**	eP	Pn	11 15 50.7	+0.1
SMPP				eS	Sn	11 16 12.6	-1.9
TGY	**Tagaytay City**	**1.99**	**227**⇓	eP	Pg	11 15 56.8	+0.5
APYP	**Conner**	**2.64**	**334**	eP	Pn	11 16 01.5	-0.3
APYP				eS	Sn	11 16 32.3	-2.3

*IDC **06** 11:23:30.5±0.8, 12°23N×143°88E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.8/48, mbtmp3.9/10, Error ellipse: s-maj=28.4km s-min=17.4km az=115.0*
*NEIC **06** 11:23:31.9±0.8, 12°18N±0°10×143°86E±0°07, h10km±1km, mb4.5/7, Error ellipse: s-maj=18.5km s-min=8.9km az=149.0*
ISC 06 11:23:34.3±0.7, 12°2N±0°1×143°8E±0°1, h26km, n26, σ0s70/22, mb4.2/15, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.71**	**36**	Pn	**Pn**	**11 24 02.1**	**-0.3**
	152nm,0.3s,baz=10,slow=4.5,SNR=103						
GUMO				Sn	**Sn**	**11 24 23.8**	**+0.4**
	101nm,0.3s,baz=170,slow=24,SNR=8.0						
GUMO	**Guam**	**1.71**	**36**		**Pn**	**11 24 02.3**	**-0.1**
GUMO				Sn	**Sn**	**11 24 24.0**	**+0.5**
SARN	**Sarigan**	**4.85**	**23**	Pn	**Pn**	**11 24 45.2**	**-0.5**
H11S3	**WAKE ISLAND Hy**	**22.90**	**71**	T	T	11 52 12.7	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**22.91**	**71**	T	T	11 52 13.9	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**22.91**	**71**	T	T	11 52 12.7	
	baz=252						
H11N1	**WAKE ISLAND Hy**	**23.37**	**68**	T	T	11 52 38.6	
	baz=255,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hy**	**23.38**	**68**	T	T	11 52 42.4	
	baz=255,slow=75,SNR=5.5						
H11N3	**WAKE ISLAND Hy**	**23.39**	**68**	T	T	11 52 43.2	
	baz=255,slow=75,SNR=8.8						
YHNB	**Yeheng**	**24.61**	**303**	P	**P**	**11 28 52.9**	**+0.2**
YHNB				IAmb	IAmb	11 29 00.3	
	comp=Z,18nm,1.0s						
WRA	**Warramunga Arr**	**33.28**	**196**	P	**P**	**11 30 09.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=19,slow=9.5,SNR=6.7						
ENH	**Enshi**	**36.52**	**305**	P	**P**	**11 30 38.1**	**+0.2**
ENH				IAmb	IAmb	11 30 38.3	
	comp=Z,5.5nm,0.4s						
AS31	**Alice Springs**	**36.95**	**195**	P	**P**	**11 30 41.0**	**-0.4**
ASAR	**Alice Springs**	**36.95**	**195**	P	**P**	**11 30 42.3**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=21,slow=12,SNR=6.1						
BBOO	**Buckleboo**	**45.37**	**189**	P	**P**	**11 31 50.3**	**-0.3**
MORW	**Morawa**	**49.03**	**213**	P	**P**	**11 32 19.4**	**+0.2**
MORW				IAmb	IAmb	11 32 28.5	
	comp=Z,9.2nm,1.4s						
MKAR	**Makanchi Array**	**61.79**	**317**	P	**P**	**11 33 52.0**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=87,slow=9.7,SNR=4.0						
MAKZ	**Makanchi**	**62.01**	**317**	P	**P**	**11 33 52.2**	**-0.2**
MAKZ				IAmb	IAmb	11 34 00.8	
	comp=Z,0.9nm,1.1s						
ZAA0	**Zalesovo Array**	**62.17**	**325**	P	**P**	**11 33 53.2**	**-0.1**
ZAA0				IAmb	IAmb	11 33 59.0	
	comp=Z,1.4nm,0.6s						
ZALV	**Zalesovo Beam**	**62.17**	**325**	P	**P**	**11 33 53.5**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=119,slow=8.6,SNR=3.5						
KURBB	**Kurchatov Arra**	**65.03**	**320**	P	**P**	**11 34 12.8**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=101,slow=6.9,SNR=14						
ILAR	**Eielson Array**	**70.25**	**25**	P	**P**	**11 34 43.4**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=253,slow=6.0,SNR=11						
BVAR	**Borovoye Array**	**70.39**	**322**	P	**P**	**11 34 46.8**	**+0.7**
	comp=Z,1.2nm,0.4s,baz=99,slow=7.7,SNR=9.1						
YKA	**Yellowknife Ar**	**84.55**	**27**	P	**P**	**11 36 05.4**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=286,slow=5.2,SNR=12						
NVAR	**Mina Array Bea**	**88.57**	**51**	P	**P**	**11 36 26.8**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=263,slow=5.1,SNR=13						
FINES	**FINESS Array B**	**91.98**	**335**	P	**P**	**11 36 39.6**	**-1.0**
	comp=Z,3.2nm,1.0s,baz=84,slow=5.1,SNR=9.3						

*UCR **06** 11:24:37.0±1.0, 12°71N×88°56W, h22km±8km, ML3.7*
*INET **06** 11:24:37.0, 12°78N×88°47W, h15km, ML3.4*
*SNET **06** 11:24:37.8±0.7, 12°76N×88°52W, h35km±2km, ML3.7*
*GCG **06** 11:24:39.9±1.1, 12°57N×88°76W, h34km±999km, MD4.2*
ISC 06 11:24:39.0±2.5, 12°8N±0°1×88°49W±0°04, h34km±3km, n31, σ0s85/41, 12D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JUCU	**Jucuar¡n**	**0.52**	**26**⇓	iP	**Pb**	**11 24 49.4**	**-0.6**
JUCU				eS	**Sn**	**11 24 58.5**	**+0.8**
JUCU				IAML		11 25 01.6	
	comp=Z,3µm,0.2s						
LCY	**Lacayo**	**0.66**	**16**⇓	eP	**Pn**	**11 24 51.5**	**-0.5**
LCY				eS	**Sb**	**11 25 02.2**	**+0.8**
LCY	**Lacayo**	**0.66**	**16**⇓	eP	**Pn**	**11 24 51.5**	**-0.5**
LCY				eS	**Sb**	**11 25 02.2**	**+0.8**
PACA	**Pacayal**	**0.70**	**13**⇓	eP	**Pn**	**11 24 51.9**	**-0.6**
PACA				eS	**Sb**	**11 25 03.1**	**+0.7**
PACA	**Pacayal**	**0.70**	**13**⇓	eP	**Pn**	**11 24 51.9**	**-0.6**
PACA				eS	**Sb**	**11 25 03.1**	**+0.7**
TECA	**Tecapa**	**0.70**	**359**⇓	iP	**Pn**	**11 24 52.0**	**-0.8**
TECA	**Tecapa**	**0.70**	**359**⇓	iP	**Pn**	**11 24 52.0**	**-0.8**
COEB	**Comit de Eme**	**0.71**	**356**⇓	iP	**Pn**	**11 24 51.9**	**-0.8**
COEB				eS	**Sb**	**11 25 02.9**	**+0.2**
COEB				IAML		11 25 03.7	
	comp=Z,2µm,0.3s						
LCND	**La Caada**	**0.78**	**48**⇓	eP	**Pn**	**11 24 52.5**	**-1.1**
LCND				IAML		11 25 08.3	
	comp=Z,2µm,0.3s						
LCND	**La Caada**	**0.78**	**48**⇓	eP	**Pn**	**11 24 52.5**	**-1.1**
LCND				IAML		11 25 08.3	
	comp=Z,2µm,0.3s						
CNCH	**Conchagua**	**0.80**	**52**	eP	**Pn**	**11 24 53.2**	**-0.8**
CNCH				eS	**Sb**	**11 25 06.3**	**+1.0**
CNCH	**Conchagua**	**0.80**	**52**	eP	**Pn**	**11 24 53.2**	**-0.8**
CNCH				eS	**Sb**	**11 25 06.3**	**+1.0**
COEG	**Centro de Oper**	**0.91**	**335**	eP	**Pn**	**11 24 54.6**	**-0.9**
COEG				eS	**Sb**	**11 25 07.5**	**-0.9**
COEG				IAML		11 25 11.2	
	comp=Z,3µm,0.3s						
FAGO	**Alcalda de S**	**0.98**	**22**⇓	iP	**Pn**	**11 24 55.3**	**-1.0**
LFRS	**El Faro**	**1.00**	**326**⇓	iP	**Pn**	**11 24 55.6**	**-1.1**
LBRS	**Las Brisas**	**1.09**	**330**	eP	**Pn**	**11 24 57.6**	**-0.3**
LFU	**La Fuente**	**1.14**	**327**	eP	**Pn**	**11 24 57.8**	**-0.8**
LFU	**La Fuente**	**1.14**	**327**	eP	**Pn**	**11 24 57.8**	**-0.8**
SNET	**Serv Nac Est T**	**1.15**	**321**	eP	**Pn**	**11 24 57.7**	**-1.1**
SNET				IAML		11 25 15.2	
	comp=Z,1µm,0.2s						
SNET	**Serv Nac Est T**	**1.15**	**321**	eP	**Pn**	**11 24 57.7**	**-1.1**
SNET				IAML		11 25 15.2	
	comp=Z,1µm,0.2s						
BOQS	**Boqueron**	**1.22**	**321**	eP	**Pn**	**11 24 59.0**	**-0.9**
SBLS	**San Blas**	**1.52**	**314**	eP	**Pn**	**11 25 03.4**	**-0.6**
SBLS	**San Blas**	**1.52**	**314**	eP	**Pn**	**11 25 03.4**	**-0.6**
SNJE	**San Jose**	**1.53**	**315**	eP	**Pn**	**11 25 03.4**	**-0.7**
SNJE	**San Jose**	**1.53**	**315**	eP	**Pn**	**11 25 03.4**	**-0.7**
RTR	**El Retiro**	**1.58**	**315**	eP	**Pn**	**11 25 04.3**	**-0.4**
RTR	**El Retiro**	**1.58**	**315**	eP	**Pn**	**11 25 04.3**	**-0.4**
FAME	**Alcalda de S**	**1.82**	**305**	eP	**Pn**	**11 25 06.9**	**-1.1**
IXG	**Ixpaco**	**2.35**	**306**	eP	**Pn**	**11 25 15.4**	**+0.1**
FUG	**Fuego 3**	**2.83**	**306**	eS	**Sn**	**11 25 56.1**	**+1.2**
STG3	**Santiaguito 3,**	**3.56**	**303**	eP	**Pn**	**11 25 33.0**	**+1.0**
STG3				eS	**Sn**	**11 26 13.0**	**+0.1**

*NEIC **06** 11:27:26.6±1.8, 19°69S±0°05×70°56W±0°05, h31km±9km, Error ellipse: s-maj=9.4km s-min=4.1km az=136.0*
*GUC **06** 11:27:27.2±0.7, 19°65S×70°48W, h38km±2km, ML4.0*
*IDC **06** 11:27:31.7±3.3, 19°76S×70°34W, h73km±27km, mb3.4/3, mb1 3.7/7, mb1mx3.4/25, mbtmp3.8/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/17, Error ellipse: s-maj=40.5km s-min=28.4km az=90.0*
ISC 06 11:27:25.6±0.8, 19°63S±0°03×70°54W±0°05, h22km±6km, n31, σ1s45/43, mb3.9/4, 1C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.40**	**85**⇓	eP	**Pn**	**11 27 35.8**	**-0.4**
PSGC				*i* S	**Sn**	**11 27 42.0**	**-1.0**
PB11	**IPOC Station P**	**0.84**	**99**⇓	iP	**Pn**	**11 27 42.8**	**+0.4**
PB11				*i* S	**Sn**	**11 27 53.3**	**-0.9**
PB11				IAML		11 27 54.9	
	comp=N,10µm,0.2s						
PB11	**IPOC Station P**	**0.84**	**99**		**Pn**	**11 27 42.7**	**+0.4**
PB11				Sn	**Sb**	**11 27 51.8**	**-0.9**
TA01	**Diego Aracena**	**0.99**	**160**	eP	**Pb**	**11 27 44.0**	**-0.1**
TA01				*i* S	**Sb**	**11 27 54.6**	**-2.1**
MNMC	**Minye Minye**	**1.02**	**61**⇓	iP	**Pn**	**11 27 46.1**	**+1.2**
MNMC				*i* S	**Sn**	**11 27 59.2**	**+0.5**
MNMC				IAML		11 28 03.6	
	comp=N,7µm,0.4s						
MNMC	**Minye Minye**	**1.02**	**61**		**Pn**	**11 27 45.9**	**+1.0**
MNMC				Sn	**Sn**	**11 27 58.4**	**-0.3**
AP01	**Chacalluta**	**1.27**	**9**	eP	**Pb**	**11 27 49.4**	**+0.5**
AP01				eS	**Sb**	**11 28 06.5**	**+1.7**
AP01				IAML		11 28 15.3	
	comp=E,17µm,1.0s						
PB08	**IPOC Station P**	**1.40**	**111**⇓	iP	**Pb**	**11 27 51.4**	**+0.1**
PB08				*i* S	**Sb**	**11 28 09.6**	**+0.7**
PB16	**IPOC Station P**	**1.62**	**37**⇑	iP	**Pb**	**11 27 56.0**	**+0.8**
PB16				*i* S	**Sb**	**11 28 17.1**	**+1.7**
PB09	**IPOC Station P**	**2.47**	**151**	eP	**Pn**	**11 28 07.0**	**+2.2**
PB09				*i* S	**Sn**	**11 28 36.6**	**+2.2**
PB09				IAML		11 28 48.7	
	comp=N,523nm,0.5s						
PB03	**IPOC Station P**	**2.51**	**163**	eP	**Pn**	**11 28 06.0**	**+0.6**
PB03				*i* S	**Sn**	**11 28 37.4**	**+2.0**
PB03				IAML		11 28 45.2	
	comp=E,342nm,0.6s						
PB04	**IPOC Station P**	**2.71**	**172**		**Pn**	**11 28 07.8**	**-0.2**
LVC	**Limon Verde**	**3.33**	**153**	P	**Pn**	**11 28 18.8**	**+2.1**
	comp=E,3.6nm,0.3s,baz=351,slow=12,SNR=29						
LVC				S	**Sb**	**11 29 04.2**	**-0.3**
	comp=E,10nm,0.3s,baz=212,slow=23,SNR=3.2						
LVC	**Limon Verde**	**3.33**	**153**		**Pn**	**11 28 18.9**	**+2.1**
LVC				Sn	**Sn**	**11 28 57.9**	**+2.1**
PB10	**IPOC Station P**	**3.86**	**180**	Pn	**Pn**	**11 28 22.7**	**-1.0**
PB10				Sn	**Sn**	**11 29 08.3**	**-0.1**
LPAZ	**La Paz**	**4.04**	**35**	P	**Pb**	**11 28 32.8**	**-3.7**
	comp=E,3.8nm,0.3s,baz=230,slow=6.1,SNR=39						
LPAZ				LR	LR	11 30 17.1	
	comp=E,76nm,21.1s,baz=12,slow=41						
LPAZ	**La Paz**	**4.04**	**35**		**Pb**	**11 28 33.4**	**-3.2**
SIV	**San Ignacio**	**9.72**	**70**	P	**Pn**	**11 29 45.1**	**+0.8**
	comp=E,2.0nm,0.3s,baz=264,slow=9.8,SNR=48						
NNA	**Nana**	**9.72**	**321**	Pn	**Pn**	**11 29 45.3**	**+1.0**
GO04	**Tololo Observa**	**10.50**	**181**	Pn	**Pn**	**11 29 54.7**	**-0.4**
SAML	**Samuel**	**12.79**	**35**		**Pn**	**11 30 26.3**	**0.0**
CPUP	**Villa Florida**	**13.87**	**121**	P	**Pn**	**11 30 43.2**	**+2.3**
	comp=E,0.1nm,0.3s,baz=312,slow=16,SNR=3.8						
CPUP	**Villa Florida**	**13.87**	**121**		**Pn**	**11 30 40.7**	**-0.2**
GO05	**Huala**	**15.37**	**184**		**P**	**11 31 04.3**	**-1.4**
GO05				IAmb	IAmb	11 31 11.5	
	comp=Z,30nm,1.3s						
BDFB	**Brasilia**	**21.83**	**83**	P	**P**	**11 32 17.2**	**+0.4**

KURBB	**Kurchatov Arra**	**46.00**	**308**	P		**P**	**11 36 49.5**	**-2.3**
	0.5nm,0.3s,baz=83,slow=7.9,SNR=5.3							
WRA	**Warramunga Arr**	**57.05**	**188**	P		**P**	**11 38 14.3**	**-0.3**
	0.2nm,0.5s,baz=6.3,slow=7.5,SNR=3.3							

*IDC **06** 11:32:13.8±3.3,30.68N×141.25E,h0km,mb3.6/5, mb1 3.7/6,mb1mx3.4/53,mbtmp3.6/6,ML3.7/1,MS3.7/1, Ms1 3.9/1,ms1mx2.7/46,Error ellipse: s-maj=126.8km s-min=22.3km az=72.0*

*NEIC **06** 11:32:31.8±2.8,32.70N±0.07×141.1E±0.1,h50km±10km, mb4.2/9,Error ellipse: s-maj=15.5km s-min=4.9km az=55.0*

*JMA **06** 11:32:36.5±0.1,32.83N×140.76E,h63km±4km,M3.9*

ISC 06 11:32:34.0±1.9,32.75N±0.07×140.9E±0.1,h66km±13km, n36,σ1843/45,mb4.0/9,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.01**	**291**	P	**Pn**	**11 32 52.9**	**+0.5**
JHJ2				S	**Sn**	**11 33 05.1**	**-1.0**
JHJ2	**Mitsune**	**1.01**	**291**		**Pn**	**11 32 52.9**	**+0.5**
JHJ2				Sn	**Sn**	**11 33 04.7**	**-1.4**
JHCJ	**Hachijojimakas**	**1.01**	**289**	P	**Pn**	**11 32 52.7**	**+0.3**
JHCJ				S	**Sn**	**11 33 04.3**	**-1.8**
JAOM	**Aogashimamukai**	**1.03**	**254**	P	**Pn**	**11 32 53.8**	**+1.1**
JAOM				S	**Sn**	**11 33 06.5**	**-0.2**
JMKN	**Mikurajimanish**	**1.60**	**316**	P	**Pn**	**11 33 00.8**	**+0.6**
JMKN				S	**Sn**	**11 33 18.4**	**-1.6**
BSO3	**Boso 3**	**2.08**	**350**	P	**Pn**	**11 33 08.4**	**+2.1**
BSO3				S	**Sn**	**11 33 32.1**	**+1.1**
JKO	**Kozu shima**	**2.08**	**314**	P	**Pn**	**11 33 07.6**	**+1.0**
JKO				S	**Sn**	**11 33 29.8**	**-1.7**
JSKK	**Shikinejimakit**	**2.14**	**318**	P	**Pn**	**11 33 08.3**	**+0.9**
JSKK				S	**Sn**	**11 33 32.3**	**-0.6**
JTHY	**Toshimahigashi**	**2.24**	**322**	P	**Pn**	**11 33 10.1**	**+1.3**
JTHY				S	**Sn**	**11 33 34.3**	**-1.1**
JIM2	**Oshima 3**	**2.33**	**328**	P	**Pn**	**11 33 10.8**	**+0.8**
JIM2				S	**Sn**	**11 33 35.7**	**-1.9**
INU	**Inuyama**	**4.16**	**310**		**Pn**	**11 33 37.2**	**+2.3**
INU				Sn	**Sn**	**11 34 23.8**	**+1.5**
MAJO	**Matsushiro**	**4.40**	**330**	Pn	**Pn**	**11 33 40.0**	**+1.7**
MAJO				Sn	**Sn**	**11 34 29.5**	**+1.2**
MAT	**Matsushiro**	**4.40**	**330**	P	**Pn**	**11 33 40.2**	**+1.9**
MAT				S	**Sn**	**11 34 28.3**	**0.0**
MJB9	**Matsu-Tunnel**	**4.41**	**330**	Pn	**Pn**	**11 33 40.0**	**+1.7**
MJB9				Sn	**Sn**	**11 34 30.0**	**+1.6**
JNU	**Nakatsue**	**8.47**	**275**	Pn	**Pn**	**11 34 35.8**	**+1.9**
ERM	**Erimo**	**9.41**	**10**		Pn	11 34 35.2	-12
ERM				Sn	**Sn**	**11 36 25.9**	**-5.0**
KLR	**Kul'dur**	**17.84**	**340**	P	Pn	11 36 46.8	+9.3
	0.2nm,0.3s,baz=196,slow=3.8,SNR=5.1						
KLR	**Kul'dur**	**17.84**	**340**		P	11 36 46.8	+9.4
SONM	**Songino Array**	**30.06**	**310**	P	**P**	**11 38 37.0**	**+0.1**
	0.5nm,0.6s,baz=91,slow=7.2,SNR=3.3						
WMQ	**Urumqi**	**42.57**	**301**	P	**P**	**11 40 22.7**	**-0.7**
MK31	**Makanchi Array**	**46.18**	**306**	P	**P**	**11 40 52.1**	**0.0**
MKAR	**Makanchi Array**	**46.18**	**306**	P	**P**	**11 40 52.6**	**+0.6**
	2.2nm,0.9s,baz=92,slow=9.6,SNR=16						
MKAR	**Makanchi Array**	**46.18**	**306**	P	**P**	**11 40 52.1**	**+0.1**
MAKZ	**Makanchi**	**46.39**	**306**	P	**P**	**11 40 54.3**	**+0.6**
MAKZ				IAmb	IAmb	11 40 55.1	
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**48.36**	**311**	P	**P**	**11 41 07.6**	**-1.3**
KURK				IAmb	IAmb	11 41 11.6	
	comp=Z,1.6nm,0.9s						
KURBB	**Kurchatov Arra**	**48.42**	**311**	P	**P**	**11 41 09.7**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=87,slow=7.6,SNR=6.2						
WRA	**Warramunga Arr**	**52.78**	**188**	P	P	11 41 15.7	-27
	comp=Z,0.3nm,0.5s,baz=2.1,slow=7.6,SNR=5.0						
WRA	**Warramunga Arr**	**52.78**	**188**	P	**P**	**11 41 42.1**	**-0.3**
ILAR	**Eielson Array**	**53.34**	**31**	LR	LR	12 01 59.0	
	comp=Z,85nm,21.9s,baz=41,slow=32						
KK31	**Karatay Array**	**55.02**	**303**	P	**P**	**11 41 58.7**	**0.0**
KK31				IAmb	IAmb	11 42 00.8	
	comp=Z,5.3nm,1.4s						
KKAR	**Karatay Array**	**55.02**	**303**	P	**P**	**11 41 59.2**	**+0.6**
KKAR				IAmb	IAmb	11 42 00.8	
	comp=Z,5.3nm,1.4s						
ASAR	**Alice Springs**	**56.50**	**188**	P	P	11 41 43.1	-26
	comp=Z,0.2nm,0.8s,baz=27,slow=10,SNR=3.6						
ASAR	**Alice Springs**	**56.50**	**188**	P	**P**	**11 42 07.7**	**-1.7**
CHGR	**Chuyangaron**	**57.23**	**298**	P	**P**	**11 42 14.5**	**-0.2**
ABKAR	**Akbulak array**	**60.45**	**312**	P	**P**	**11 42 36.4**	**-0.2**
ABKAR	**Akbulak array**	**60.45**	**312**	P	**P**	**11 42 36.7**	**0.0**

*IDC **06** 11:44:47.8±2.6,6.59S×130.97E,h66km±29km,mb4.1/1, mb1 4.2/6,mb1mx3.7/37,mbtmp4.3/6,ML4.3/5,MS4.0/2, Ms1 4.0/2,ms1mx2.8/42,Error ellipse: s-maj=45.0km s-min=23.0km az=91.0*

ISC 06 11:44:45.9±0.9,6.64S±0.06×131.1E±0.1,h62km,n8, σ342/10,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.73**	**2**	P	**Pn**	**11 46 09.3**	**+0.8**
	9.1nm,0.3s,baz=192,slow=14,SNR=72						
SIJI				S	**Sn**	**11 47 08.6**	**-4.4**
	5.8nm,0.3s,baz=318,slow=24,SNR=7.6						
BATI	**Baumata**	**8.17**	**244**	P	**Pn**	**11 46 44.2**	**+2.3**
	2.6nm,0.3s,baz=63,slow=6.8,SNR=2.5						
BATI				S	**Sn**	**11 48 10.0**	**-2.8**
	3.8nm,0.3s,baz=135,slow=20,SNR=4.3						
FITZ	**Fitzroy Crossi**	**12.58**	**205**	P	**Pn**	**11 47 42.4**	**+0.3**
	1.7nm,0.3s,baz=20,slow=11,SNR=34						
FITZ				S	Sn	11 49 52.8	-7.7
	0.8nm,0.3s,baz=168,slow=19,SNR=5.0						
WRA	**Warramunga Arr**	**13.59**	**167**	P	**Pn**	**11 47 57.6**	**+1.7**
	1.2nm,0.3s,baz=346,slow=13,SNR=34						
WRA				S	**Sn**	**11 50 23.0**	**-2.4**
	1.4nm,0.3s,baz=336,slow=24,SNR=9.2						
ASAR	**Alice Springs**	**17.14**	**171**	P	**P**	**11 48 44.6**	**+2.3**
	1.1nm,0.3s,baz=348,slow=11,SNR=99						
ASAR				S	**Sn**	**11 51 45.7**	**-5.8**
	0.1nm,0.3s,baz=350,slow=26,SNR=4.5						
RAO	**Raoul Island**	**52.96**	**122**	LR	LR	12 12 55.0	
	comp=Z,378nm,21.8s,baz=310,slow=32						
AFI	**Afiamalu**	**56.56**	**102**	LR	LR	12 19 57.3	
	comp=Z,65nm,19.8s,baz=8.0,slow=37						
MKAR	**Makanchi Array**	**68.53**	**326**	P	**P**	**11 55 42.7**	**+0.8**
	1.8nm,0.4s,baz=128,slow=7.9,SNR=54						

*IDC **06** 11:53:41.2±0.8,13.72N×144.79E,h117km±7km,mb3.1/5, mb1 3.4/5,mb1mx3.1/41,mbtmp3.4/5,Error ellipse: s-maj=47.2km s-min=19.6km az=110.0*

*NEIC **06** 11:53:42.0±0.5,13.6N±0.1×144.86E±0.09,h121km±7km, mb3.7/2,Error ellipse: s-maj=19.6km s-min=5.9km az=216.0*

ISC 06 11:53:41.8±0.9,13.66N±0.10×144.8E±0.1,h123km±7km, n11,σ0882/13,mb3.5/8,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.09**	**146**	P	**Pn**	**11 53 58.8**	**+0.3**
	368nm,0.3s,baz=35,slow=0.0,SNR=382						
GUMO				S	**Sn**	**11 54 10.7**	**-0.5**
	885nm,0.3s,baz=41,slow=19,SNR=154						
SARN	**Sarigan**	**3.16**	**17**	Pn	**Pn**	**11 54 30.9**	**+0.6**
PATS	**Pohnpei**	**14.91**	**116**		**Pn**	**11 57 07.3**	**+0.8**
PATS				Sn	**Sn**	**11 59 50.4**	**-1.0**
WRA	**Warramunga Arr**	**34.95**	**197**	P	**P**	**12 00 22.1**	**-0.1**
	0.4nm,0.5s,baz=20,slow=9.6,SNR=4.1						
FITZ	**Fitzroy Crossi**	**36.80**	**211**	P	**P**	**12 00 38.1**	**+0.1**
FITZ				IAmb	IAmb	12 00 54.2	
	comp=Z,1.1nm,0.9s						
AS31	**Alice Springs**	**38.60**	**196**	P	**P**	**12 00 53.5**	**+0.3**
AS31				IAmb	IAmb	12 00 60.0	
	comp=Z,2.0nm,1.4s						
ASAR	**Alice Springs**	**38.61**	**196**	P	**P**	**12 00 53.3**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=15,slow=12,SNR=7.4						
MKAR	**Makanchi Array**	**61.40**	**316**	P	**P**	**12 03 44.7**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=95,slow=7.7,SNR=1.8						
ILAR	**Eielson Array**	**68.52**	**25**	P	**P**	**12 04 30.0**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=251,slow=5.6,SNR=10.0						
YKA	**Yellowknife Ar**	**82.82**	**27**	P	**P**	**12 05 51.1**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=283,slow=5.1						
NVAR	**Mina Array Bea**	**86.91**	**51**	P	**P**	**12 06 14.8**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=280,slow=5.0,SNR=4.3						

MAN 06 11:56:59.9,9.73N×123.61E,h4km,mb4.4,ML3.3,MS3.0, Negros

IDC 06 12:09:50.7±2.2,13.79N×120.91E,h151km±5km,mb3.5/3, mb1 3.6/3,mb1mx3.0/49,mbtmp3.9/3,Error ellipse: s-maj=60.5km s-min=16.3km az=3.0,Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.32**	**4**	P	Pn	12 10 11.9	+0.5
	351nm,0.3s,baz=188,slow=1.0,SNR=19						
TGY				S	Sn	12 10 28.7	+1.4
	158nm,0.3s,baz=70,slow=20,SNR=6.4						
CMAR	**Chiang Mai Arr**	**21.60**	**285**	P	P	12 14 28.9	0.0
	1.1nm,0.7s,baz=95,slow=7.1,SNR=11						
MKAR	**Makanchi Array**	**46.09**	**323**	P	P	12 17 59.0	-0.6
	13nm,0.4s,baz=127,slow=8.2,SNR=2.3						
ZALV	**Zalesovo Beam**	**49.08**	**333**	P	P	12 18 22.6	+0.2
	1.0nm,0.4s,baz=113,slow=6.0,SNR=5.2						
ARCES	**ARCESS Array B**	**79.08**	**339**	P	P	12 21 38.1	+0.1
	2.8nm,1.0s,baz=91,slow=5.8,SNR=3.0						

*NIED **06** 12:10:00,39.00N×142.40E,h26km,Mw3.8 Best double couple: M0 5.96000×10^14 NP1:ϕ1=231.00000°,δ1=67.00000°, λ1=-88.00000°. NP2:ϕ2=45.00000°,δ2=23.00000°,λ2=-95.00000°.*

*JMA **06** 12:10:19.9±0.1,39.02N×142.38E,h33km±1km,M3.9*

JMA Felt I J1.

*IDC **06** 12:10:23.8±2.7,38.95N×142.36E,h59km±25km,mb3.4/10, mb1 3.6/13,mb1mx3.4/50,mbtmp3.6/13,ML3.0/3,MS2.9/2, Ms1 2.9/2,ms1mx2.5/38,Error ellipse: s-maj=25.3km s-min=13.1km az=113.0*

ISC 06 12:10:21.2±1.7,39.05N±0.05×142.27E±0.08,h28km±11km, n31,σ1890/31,mb3.7/11,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.47**	**273**	P	**Pn**	**12 10 31.2**	**-0.8**
OFUJ				S	**Sn**	**12 10 38.9**	**-0.5**
MIYJ	**Miyakonagasawa**	**0.63**	**327**	P	**Pb**	**12 10 33.1**	**-0.5**
MIYJ				S	**Sb**	**12 10 42.5**	**+0.4**
JKMT	**Kesennumamotoy**	**0.67**	**249**	P	**Pb**	**12 10 33.7**	**-0.5**
JKMT				S	**Sb**	**12 10 43.1**	**0.0**
JMK	**Ichinoseki**	**0.82**	**263**	P	**Pb**	**12 10 36.4**	**-0.5**
JOM	**Ohasama**	**0.86**	**299**	P	**Pn**	**12 10 37.4**	**-0.1**
JOM				S	**Sn**	**12 10 50.1**	**+0.9**
JIO	**Ouri**	**0.94**	**230**	P	**Pn**	**12 10 37.1**	**-1.3**
JTH	**Tanohata**	**0.94**	**341**	P	**Pn**	**12 10 37.6**	**-0.9**
JKZ	**Kuzumaki**	**1.18**	**322**	P	**Pb**	**12 10 42.1**	**-0.8**
JKZ				S	**Sb**	**12 10 58.5**	**+0.7**
JRG	**Rokugo**	**1.31**	**286**	P	**Pb**	**12 10 44.7**	**-0.5**
MAT	**Matsushiro**	**4.08**	**233**	P	**Pn**	**12 11 24.4**	**+2.7**
MAT				eS	**Sn**	**12 12 10.3**	**+1.8**
MJAR	**Matsushiro Arr**	**4.08**	**233**	P	**Pn**	**12 11 24.3**	**+2.6**
	0.3nm,0.3s,baz=42,slow=13,SNR=15						
MJAR				S	**Sn**	**12 12 14.3**	**+5.8**
	0.1nm,0.3s,baz=42,slow=28,SNR=2.7						
MJAR				LR	LR	12 13 04.4	
	comp=Z,111nm,20.7s,baz=30,slow=40						
ASAJ	**Asahikawa**	**5.06**	**3**	P	**Pn**	**12 11 37.0**	**+1.8**
	2.2nm,0.3s,baz=232,slow=7.2,SNR=17						
ASAJ				S	**Sn**	**12 12 38.0**	**+5.2**
	0.7nm,0.3s,baz=336,slow=20,SNR=1.6						
USRK	**Ussuriysk Ar.**	**9.25**	**307**	P	Pn	12 12 37.5	+4.8
	baz=112,slow=14,SNR=3.8						
KSRS	**Korea Array**	**11.39**	**266**	LR	LR	12 17 09.2	
	comp=Z,79nm,21.4s,baz=350,slow=35						
MA2	**Magadan**	**21.24**	**12**	P	**P**	**12 15 03.6**	**-1.1**
	6.8nm,0.7s,baz=212,slow=9.5,SNR=4.1						
SEY	**Seymchan**	**24.68**	**11**	P	**P**	**12 15 39.6**	**+0.2**
	1.4nm,0.8s,baz=124,slow=17,SNR=2.3						
SONM	**Songino Array**	**27.28**	**301**	P	**P**	**12 16 03.7**	**+0.5**
	0.2nm,0.4s,baz=84,slow=4.5,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	**28.68**	**125**	T	T	12 46 47.1	
	baz=318,slow=76,SNR=136						
H11N1	**WAKE ISLAND Hy**	**28.69**	**125**	T	T	12 46 38.4	
	baz=318,slow=76,SNR=84						
H11N3	**WAKE ISLAND Hy**	**28.70**	**125**	T	T	12 46 54.2	
	baz=318,slow=76,SNR=117						
H11S1	**WAKE ISLAND Hy**	**29.46**	**127**	T	T	12 47 37.2	
	baz=318,slow=76,SNR=27						
H11S3	**WAKE ISLAND Hy**	**29.46**	**127**	T	T	12 47 35.9	
	baz=318,slow=76,SNR=36						
H11S2	**WAKE ISLAND Hy**	**29.48**	**127**	T	T	12 47 38.4	
	baz=318,slow=76,SNR=26						
ZALV	**Zalesovo Beam**	**41.08**	**311**	P	**P**	**12 18 01.4**	**-0.8**
	0.7nm,0.6s,baz=79,slow=7.6,SNR=3.4						
MKAR	**Makanchi Array**	**43.65**	**300**	P	**P**	**12 18 23.4**	**+0.2**
	34nm,0.6s,baz=87,slow=9.3,SNR=7.2						
ILAR	**Eielson Array**	**47.43**	**33**	P	**P**	**12 18 52.8**	**-0.1**
	1.0nm,0.7s,baz=270,slow=6.0,SNR=8.2						
INK	**Inuvik**	**52.28**	**28**	P	**P**	**12 19 29.9**	**+0.3**
	0.8nm,0.8s,baz=276,slow=7.2,SNR=4.3						
WRA	**Warramunga Arr**	**59.15**	**189**	P	**P**	**12 20 17.3**	**-2.1**
	0.8nm,0.4s,baz=6.0,slow=7.0,SNR=15						
YKA	**Yellowknife Ar**	**61.73**	**31**	P	**P**	**12 20 36.4**	**-0.1**
	0.2nm,0.7s,baz=299,slow=6.7						
ASAR	**Alice Springs**	**62.88**	**189**	P	**P**	**12 20 43.2**	**-1.5**
	0.6nm,0.8s,baz=17,slow=7.6,SNR=6.9						
PDAR	**Pinedale Array**	**75.78**	**46**	P	**P**	**12 22 03.4**	**-1.3**
	0.3nm,0.6s,baz=302,slow=2.0,SNR=3.3						

*SJA **06** 12:14:05.1±1.4,20.82S×70.72W,h14km±14km,ML3.5, MW3.6*

*GUC **06** 12:14:06.7±0.7,20.61S×70.61W,h33km±2km,ML3.3*

ISC 06 12:14:04.4±2.4,20.65S±0.03×70.73W±0.09,h14km±14km, n22,σ970/30,2C-4D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.52**	**81**	↓↓*i* P	**Pb**	**12 14 15.3**	**+0.1**
TA01				*i* S	**Sg**	**12 14 21.6**	**0.0**
PATCX	**Punta Patache**	**0.57**	**108**	*e*P	**Pb**	**12 14 16.4**	**+0.3**
PATCX				*i* S	**Sg**	**12 14 23.3**	**+0.1**
PSGC	**Pisagua**	**1.19**	**29**	↓↓*i* P	**Pb**	**12 14 26.5**	**-0.2**
PSGC				*e*S	**Sb**	**12 14 41.6**	**-0.4**
PSGC				IAML		12 14 43.3	
	comp=N,666nm,0.5s						
PSGCX	**Pisagua**	**1.19**	**29**	*e*P	**Pb**	**12 14 26.6**	**-0.1**
PB11	**IPOC Station P**	**1.34**	**49**	↓↓*i* P	**Pn**	**12 14 28.7**	**0.0**
PB11				*i* S	**Sn**	**12 14 45.0**	**-1.4**
PB11				IAML		12 14 47.5	
	comp=N,2μm,0.2s						
PB11	**IPOC Station P**	**1.34**	**49**	*e*P	**Pn**	**12 14 28.7**	**0.0**
PB08	**IPOC Station P**	**1.56**	**72**	↓↓*i* P	**Pn**	**12 14 32.1**	**+0.1**
PB08				*i* S	**Sn**	**12 14 51.9**	**-0.3**
PB08				IAML		12 14 54.7	
	comp=E,442nm,0.5s						
PB08	**IPOC Station P**	**1.56**	**72**	*e*P	**Pn**	**12 14 32.1**	**+0.1**
PB03	**IPOC Station P**	**1.67**	**147**	↑↑*i* P	**Pn**	**12 14 34.0**	**+0.7**
PB03				*i* S	**Sb**	**12 14 56.6**	**+0.7**
PB03	**IPOC Station P**	**1.67**	**147**	*e*P	**Pn**	**12 14 34.0**	**+0.7**
PB04	**IPOC Station P**	**1.77**	**162**	*e*P	**Pn**	**12 14 35.2**	**+0.5**
PB04				*e*S	**Sn**	**12 14 56.6**	**-0.4**
PB04				IAML		12 15 05.1	
	comp=E,466nm,0.3s						
PB04	**IPOC Station P**	**1.77**	**162**	*i* P	**Pn**	**12 14 35.3**	**+0.6**
PB04				IAML		12 15 09.4	
	comp=Z,349nm,0.2s						
PB09	**IPOC Station P**	**1.80**	**130**	*e*P	**Pb**	**12 14 37.0**	**-0.2**
PB09				*e*S	**Sb**	**12 14 60.0**	**+0.3**
PB09	**IPOC Station P**	**1.80**	**130**	*i* P	**Pb**	**12 14 37.0**	**-0.2**
PB09				IAML		12 15 05.8	
	comp=Z,402nm,0.3s						
MNMC	**Minye Minye**	**1.84**	**35**	↑↑*i* P	**Pn**	**12 14 36.6**	**+0.7**
MNMC				*i* S	**Sn**	**12 15 00.3**	**+1.1**
MNMC				IAML		12 15 01.6	
	comp=E,806nm,0.1s						
PB05	**IPOC Station P**	**2.25**	**168**	*i* P	**Pn**	**12 14 41.6**	**+0.3**
PB06	**IPOC Station P**	**2.31**	**153**	*e*S	**Sb**	**12 15 14.8**	**+0.3**
PB06	**IPOC Station P**	**2.31**	**153**	*i* P	**Pn**	**12 14 42.7**	**+0.4**
LVC	**Limon Verde**	**2.58**	**139**	↑↑*i* P	**Pb**	**12 14 48.5**	**-2.2**
PB15	**IPOC Station P**	**2.81**	**156**	*i* P	**Pn**	**12 14 49.7**	**+0.7**
PB15				IAML		12 15 37.5	
	comp=Z,320nm,0.2s						
PB10	**IPOC Station P**	**2.86**	**177**	*i* P	**Pn**	**12 14 49.9**	**+0.3**
LPAZ	**La Paz**	**4.99**	**30**	*i* P	Pb	12 15 25.8	-6.0

*JMA **06** 12:21:32.1±0.2,21.87N×121.32E,h66km,M3.1*

*TAP **06** 12:21:33.4,21.92N×121.43E,h23km,ML3.4,C*

ISC 06 12:21:32.1±1.5,21.92N±0.05×121.39E±0.03,h13km±9km, n66,σ1803/110,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAY	**Lan-yu**	**0.19**	**53**	*i* P	**Pb**	**12 21 38.7**	**+1.1**
	baz=52						
LAY				*e*S	**Sb**	**12 21 42.3**	**+1.1**
	baz=52						
TSEB	**Hengchuen, Pin**	**0.45**	**267**	*e*P	**Pn**	**12 21 44.5**	**+0.2**
	baz=268						
TSEB				*e*S	**Sn**	**12 21 52.9**	**+0.7**
	baz=268						
TWKBT	**Hengchun**	**0.53**	**272**	*e*P	**Pn**	**12 21 44.9**	**-0.5**
	baz=284						
TWKBT				*e*S	**Sn**	**12 21 53.5**	**-0.8**
	baz=284						
TWK1	**Hengchun**	**0.54**	**272**	*e*P	**Pn**	**12 21 44.9**	**-0.6**
	baz=284						
TWK1				*e*S	**Sn**	**12 21 53.5**	**-0.9**
	baz=284						
HEN	**Hengchun**	**0.61**	**278**	*e*P	**Pn**	**12 21 46.5**	**0.0**
	baz=287						
HEN				*e*S	**Sn**	**12 21 55.5**	**-0.6**
	baz=287						
TAW	**Tawu**	**0.63**	**314**	*e*P	**Pn**	**12 21 45.7**	**-1.0**
	baz=312						
TAW				*e*S	**Sb**	**12 21 54.9**	**+1.2**
	baz=312						
EAST	**Anshuo**	**0.68**	**313**	*e*P	**Pn**	**12 21 46.6**	**-0.9**
	baz=311						
EAST				*e*S	**Sn**	**12 21 56.3**	**-1.7**
	baz=311						
ECL	**Taimali**	**0.78**	**329**	*e*P	**Pb**	**12 21 47.8**	**+0.1**
	baz=327						
ECL				*e*S	**Sb**	**12 21 58.1**	**-0.1**
	baz=327						
TWH	**Lutao**	**0.79**	**6**	*e*P	**Pg**	**12 21 47.0**	**-0.5**
	baz=3.0						
TWH				*e*S	**Sg**	**12 21 57.5**	**-0.4**
	baz=3.0						
SCZT	**Fangliau**	**0.84**	**302**	*e*P	**Pn**	**12 21 49.5**	**-0.1**
	baz=308						
TWGBT	**Beinan**	**0.94**	**343**	*e*P	**Pg**	**12 21 50.2**	**0.0**
	baz=328						
TWGBT				*e*S	**Sg**	**12 22 02.6**	**+0.2**
	baz=328						
SSPT	**Xinbi**	**0.94**	**307**	*e*P	**Pn**	**12 21 52.3**	**+1.3**
	baz=317						
TWG	**Pinlang**	**0.94**	**342**	*e*P	**Pg**	**12 21 50.2**	**-0.2**
	baz=328						
TWG				*e*S	**Sg**	**12 22 02.5**	**-0.2**
	baz=328						
MASBT	**Mashibuluo**	**0.98**	**315**	*e*P	**Pn**	**12 21 51.4**	**-0.2**
	baz=319						
MASBT				*e*S	**Sg**	**12 22 04.3**	**+0.5**
	baz=319						
SSD	**Sandimen**	**1.08**	**320**	*e*P	**Pg**	**12 21 53.5**	**+0.6**
	baz=324						
SSD				*e*S	**Sb**	**12 22 06.6**	**0.0**
	baz=324						
SGLT	**Jiouru**	**1.15**	**314**	*e*P	**Pg**	**12 21 56.1**	**+1.8**
	baz=321						
CHKT	**Chengkung**	**1.17**	**359**	*e*P	**Pn**	**12 21 53.8**	**-0.5**
	baz=5.0						
CHKT				*e*S	**Sb**	**12 22 08.8**	**-0.5**
	baz=5.0						
WSSB	**Gushan**	**1.26**	**305**	*e*P	**Pg**	**12 21 56.9**	**+0.4**
	baz=304						
TWM1	**Shoushan**	**1.27**	**315**	*e*P	**Pg**	**12 21 58.5**	**+2.0**
	baz=315						
SLGT	**Liugui**	**1.27**	**328**	*e*P	**Pg**	**12 21 56.8**	**+0.2**
	baz=331						
FULB	**Fuli**	**1.27**	**356**	*e*P	**Pb**	**12 21 56.1**	**+0.1**
	baz=3.0						
FULB				*e*S	**Sn**	**12 22 13.2**	**+0.5**
	baz=3.0						
ELDTW	**Lidau**	**1.31**	**345**	*e*P	**Pn**	**12 21 55.5**	**-0.7**
	baz=343						
STYT	**Tauyuan**	**1.36**	**335**	*e*P	**Pb**	**12 21 57.7**	**+0.1**
	baz=340						
STYT				*e*S	**Sn**	**12 22 14.9**	**-0.1**
	baz=340						
SGST	**Jiashian**	**1.37**	**327**	*e*P	**Pg**	**12 21 58.4**	**-0.2**
	baz=326						
SGST				*e*S	**Sg**	**12 22 16.7**	**+0.3**
	baz=326						
TWF1	**Yuli**	**1.43**	**357**	*e*P	**Pn**	**12 21 57.5**	**-0.3**
	baz=341						
TWF1				*e*S	**Sn**	**12 22 15.5**	**-0.9**
	baz=341						
YULB	**Yu-li**	**1.47**	**357**	*e*P	**Pn**	**12 21 57.5**	**-0.9**
	baz=342						
YULB				*e*S	**Sn**	**12 22 16.7**	**-0.7**
	baz=342						
CHN1	**Nanshi**	**1.49**	**328**	*e*P	**Pg**	**12 22 01.1**	**+0.3**
	baz=326						
CHN1				*e*S	**Sg**	**12 22 20.2**	**+0.1**
	baz=326						
WTP	**Ta-pu**	**1.50**	**332**	P	**Pg**	**12 22 00.9**	**0.0**
	baz=330						
WTP				*e*S	**Sg**	**12 22 20.4**	**-0.1**
	baz=330						
SNST	**Tainan City**	**1.53**	**328**	*e*P	**Pg**	**12 22 01.1**	**-0.5**
	baz=326						
SNST				*e*S	**Sg**	**12 22 21.9**	**+0.

baz=3.0
WHP Taichung City 2.38 350 *e*P **Pb 12 22 13.2 -1.8**
baz=335
TWQ1 Liyutan 2.48 347 *e*P **Pn 12 22 13.1 +0.8**
baz=346
NNS Nan Shan 2.51 360 *e*P **Pn 12 22 14.2 +1.5**
NNS baz=358 *e*S **Sn 12 22 45.4 +2.1**
baz=358
ENA Nanau 2.52 7 *e*P **Pn 12 22 14.2 +1.5**
ENA baz=15 *e*S **Sn 12 22 43.7 +0.4**
baz=15
NANB Nanao 2.52 8 *e*P **Pn 12 22 13.8 +1.0**
NANB baz=15 *e*S **Sn 12 22 44.0 +0.6**
baz=15
NDT Datong Townshi 2.67 3 *e*P **Pn 12 22 16.9 +2.0**
NDT baz=353 *e*S **Sn 12 22 48.8 +1.7**
baz=353
TWC Suao 2.71 9 *e*P **Pn 12 22 16.5 +1.1**
baz=14
ENTT Nioudou 2.71 3 *e*P **Pn 12 22 17.3 +1.8**
ENTT baz=1.0 *e*S **Sn 12 22 49.1 +1.0**
baz=1.0
NSTT Nanjuang 2.72 353 *e*P **Pb 12 22 18.6 -2.0**
NSTT baz=336 *e*S **Sn 12 22 50.5 +2.1**
baz=336
LIOB Emei 2.73 353 *e*P **Pb 12 22 18.9 -2.0**
baz=338
YHNB Yeheng 2.74 360 *e*P **Pn 12 22 18.0 +2.2**
YHNB baz=357 *e*S **Sn 12 22 51.2 +2.3**
baz=357
NSK Sanguang 2.74 359 *e*P **Pn 12 22 17.9 +2.0**
baz=8.0
JYNG Yonagunijimaku 2.90 29 S **Sn 12 22 52.2 -0.5**
TIPB Shuangxi 3.06 8 *e*P **Pn 12 22 22.0 +1.7**
baz=354
TIPB baz=354 *e*S **Sn 12 22 56.8 -0.1**
baz=354
JIJ Ishigaki jima 3.52 46 P **Pn 12 22 27.3 +0.8**
JIJ *e*S **Sn 12 23 05.9 -2.0**
JISG Ishigakijimahi 3.78 45 P **Pn 12 22 30.3 +0.2**
JISG *e*S **Sn 12 23 13.1 -1.3**
JTJ Tarama 4.08 48 P **Pn 12 22 34.8 +0.6**
JTJ S **Sn 12 23 20.3 -1.5**

*JMA **06** 12:26:26.6±0.4, 32°.33N×137°.64E, h415km, M3.4*
*IDC **06** 12:26:26.2±0.9, 32°.27N×137°.80E, h393km±10km, mb2.9/6, mb1 3.0/11, mb1mx2.8/39, mbtmp3.7/11, Error ellipse: s-maj=21.9km s-min=10.9km az=81.0*
ISC 06 12:26:26.5±0.8, 32°21N±0°.07×137°69E±0°.07, h400km, n25, σ1$21/33, mb3.0/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIE	**Ise**	**2.32**	**340**	P	**Pn**	**12 27 25.5**	**+1.1**
JKN2	**Miekihoku**	**2.34**	**330**	P	**Pn**	**12 27 25.6**	**+1.0**
JWY	**Kouya**	**2.66**	**319**	P	**Pn**	**12 27 27.9**	**+0.9**
JAI	**Aioi**	**3.14**	**301**	P	**Pn**	**12 27 31.4**	**+0.6**
JAI				*e*S	**S**	**12 28 22.1**	**-0.8**
JOD2	**Odawara 2**	**3.26**	**21**	P	**Pn**	**12 27 33.9**	**+2.2**
BSO3	**Boso 3**	**3.50**	**42**	P	**Pn**	**12 27 35.4**	**+1.9**
BSO4	**Boso 4**	**3.54**	**38**	P	**Pn**	**12 27 35.9**	**+1.8**
BSO4				*e*S	**S**	**12 28 29.9**	**+0.9**
BSO1	**Boso 1**	**3.67**	**48**	P	**Pn**	**12 27 36.0**	**+1.2**
BSO1				*e*S	**S**	**12 28 30.5**	**+0.2**
JHU	**Hanno**	**3.86**	**20**	P	**Pn**	**12 27 38.2**	**+1.1**
JHU				*e*S	**S**	**12 28 32.1**	**-2.4**
JRY	**Ryogami san**	**3.92**	**15**	P	**Pn**	**12 27 39.0**	**+1.2**
JRY				*e*S	**S**	**12 28 35.3**	**-0.4**
MJAR	**Matsushiro Arr**	**4.34**	**6**	P	**Pn**	**12 27 42.0**	**+0.3**
	0.3nm,0.3s,baz=175,slow=9.6,SNR=18						
MJAR				S	**S**	**12 28 40.9**	**-2.0**
	baz=192,slow=22,SNR=3.3						
MAT	**Matsushiro**	**4.34**	**6**	P	**Pn**	**12 27 42.1**	**+0.4**
MAT				*e*S	**S**	**12 28 42.2**	**-0.7**
JAG	**Ashikaga**	**4.45**	**19**	P	**Pn**	**12 27 42.3**	**-0.5**
JYT	**Yasato**	**4.51**	**27**	P	**Pn**	**12 27 43.0**	**-0.4**
JHO	**Hitachi**	**4.99**	**28**	P	**Pn**	**12 27 47.9**	**-0.4**
JNU	**Nakatsue**	**5.81**	**281**	P	**Pn**	**12 27 57.4**	**+0.4**
	0.4nm,0.3s,baz=126,slow=5.6,SNR=4.3						
JCJ	**Chichijima**	**6.43**	**141**	P	**Pn**	**12 28 03.1**	**-0.8**
	3.7nm,0.3s,baz=210,slow=20,SNR=3.8						
JCJ				S	**S**	**12 29 21.2**	**-2.0**
	10nm,0.3s,baz=277,slow=18,SNR=6.0						
KSRS	**Korea Array**	**9.57**	**306**	P	**P**	**12 28 38.6**	**-0.6**
	0.4nm,0.3s,baz=120,slow=9.7,SNR=8.1						
USRK	**Ussuriysk Ar.**	**12.77**	**341**	P	**P**	**12 29 14.7**	**+0.3**
	baz=164,slow=11,SNR=5.9						
WRA	**Warramunga Arr**	**51.96**	**184**	P	**P**	**12 34 56.6**	**+0.1**
	0.3nm,0.3s,baz=0.1,slow=7.6,SNR=12						
ILAR	**Eielson Array**	**55.20**	**30**	P	**P**	**12 35 17.7**	**-1.5**
	0.3nm,0.7s,baz=282,slow=6.3,SNR=5.5						
ASAR	**Alice Springs**	**55.68**	**184**	P	**P**	**12 35 24.9**	**+1.8**
	0.3nm,0.5s,baz=21,slow=11,SNR=11						
ARCES	**ARCESS Array B**	**67.41**	**339**	P	**P**	**12 36 40.2**	**+0.3**
	5.2nm,1.0s,baz=52,slow=10,SNR=2.9						
YKA	**Yellowknife Ar**	**69.50**	**28**	P	**P**	**12 36 54.0**	**+1.2**
	0.1nm,0.4s,baz=297,slow=6.3,SNR=4.1						
FINES	**FINESS Array B**	**71.62**	**332**	P	**P**	**12 37 05.1**	**-0.3**
	0.5nm,0.4s,baz=72,slow=6.2,SNR=9.1						

*IDC **06** 12:30:14.8±1.0, 17°.30N×95°.22W, h79km±8km, mb3.1/2, mb1 3.4/4, mb1mx3.1/31, mbtmp3.3/4, Error ellipse: s-maj=19.9km s-min=16.9km az=25.0*
*MEX **06** 12:30:16.6±1.0, 17°.74N×95°.28W, h43km±21km, MD3.9*
ISC 06 12:30:13.5±1.9, 17°79N±0°.07×95°21W±0°.04, h37km±2km, n11, σ1$60/19, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.76**	**156**	P	**Pn**	**12 30 29.0**	**+1.4**
	51nm,0.3s,baz=299,slow=11,SNR=1243						
CMIG				S	**Sn**	**12 30 39.1**	**+1.2**
	300nm,0.3s,baz=300,slow=20,SNR=108						
CMIG	**Matias Romero**	**0.76**	**156**	*e*P	**Pn**	**12 30 29.2**	**+1.6**
CMIG				*e*S	**Sn**	**12 30 39.1**	**+1.2**
VHO	**Vista Hermosa**	**1.62**	**244**	*e*P	**Pn**	**12 30 40.7**	**+1.0**
VHO				*e*S	**Sn**	**12 30 58.6**	**-0.8**
TPIG	**Tehuac#an**	**2.14**	**287**	*e*P	**Pn**	**12 30 48.2**	**+1.4**
TPIG				*i* S	**Sn**	**12 31 11.6**	**-0.7**
HUIG	**Huatulco**	**2.18**	**203**	*e*P	**Pn**	**12 30 47.0**	**-0.3**
HUIG				*i* S	**Sn**	**12 31 11.6**	**-1.4**
PNIG	**Pinotepa**	**3.12**	**244**	*e*P	**Pn**	**12 30 59.2**	**-0.9**
PNIG				*i* S	**Sn**	**12 31 35.5**	**-0.6**
APG	**El Apazote**	**5.33**	**121**	P	**Pn**	**12 31 30.2**	**-0.5**
	baz=15,slow=20,SNR=3.4						
APG				S	**Sn**	**12 32 27.6**	**-3.4**
	11nm,0.3s,baz=88,slow=16,SNR=15						
TEIG	**Tepich**	**6.99**	**69**	P	**Pn**	**12 31 56.1**	**+2.8**
TEIG				S	**Sn**	**12 33 09.7**	**-1.9**
TXAR	**Lajitas Array**	**13.86**	**328**	P	**P**	**12 33 34.7**	**-0.6**
	0.1nm,0.3s,baz=147,slow=12,SNR=3.8						
NVAR	**Mina Array Bea**	**28.80**	**320**	P	**P**	**12 36 08.5**	**+0.2**
	0.3nm,0.7s,baz=136,slow=9.2,SNR=3.6						
YKA	**Yellowknife Ar**	**46.67**	**348**	P	**P**	**12 38 38.3**	**+0.1**
	0.3nm,0.4s,baz=154,slow=7.4,SNR=7.8						

IDC 06 12:49:44.4±26.0, 21°00S×173°08W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.8/36, mbtmp4.2/4, Error ellipse: s-maj=480.5km s-min=154.9km az=74.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.02**	**264**	P	P	12 57 05.4	+0.7
	4.0nm,0.5s,baz=92,slow=11,SNR=18						
STKA	**Stephens Creek**	**41.74**	**245**	P	P	12 57 34.1	-1.5
	1.1nm,0.4s,baz=97,slow=9.1,SNR=4.7						
ASAR	**Alice Springs**	**48.88**	**256**	P	P	12 58 32.0	-0.4
	1.5nm,0.5s,baz=89,slow=7.7,SNR=55						
WRA	**Warramunga Arr**	**49.09**	**261**	P	P	12 58 34.2	+0.3
	1.0nm,0.3s,baz=94,slow=8.3,SNR=55						

IDC 06 12:52:45.1±52.0, 15°93S×172°91W, h0km, mb4.2/3, mb1 4.3/3, mb1mx3.7/38, mbtmp4.2/3, Error ellipse:
s-maj=1012.0km s-min=186.9km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**44.19**	**241**	P	P	13 00 56.7	+0.7
	0.8nm,0.3s,baz=68,slow=11,SNR=4.6						
WRA	**Warramunga Arr**	**50.18**	**257**	P	P	13 01 42.3	-0.7
	0.4nm,0.3s,baz=98,slow=7.0,SNR=9.2						
ASAR	**Alice Springs**	**50.40**	**252**	P	P	13 01 44.5	-0.1
	3.6nm,0.4s,baz=89,slow=7.9,SNR=114						

*ATA **06** 12:57:06.6±2.3, 38°.72N×43°.12E, h10km±242km, ML1.4, MW3.8*
DDA 06 12:57:08.8, 38°57N×43°29E, h28km, ML1.6, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVAN	**Van**	**0.10**	**114**	*e*P	Pb	12 57 13.9	-0.3
TVAN				*e*S	Sb	12 57 17.5	-0.3
TVAN				IAML		12 57 19.9	
	comp=Z,52nm,0.4s						
TVAN	**Van**	**0.10**	**114**	*i* P	Pb	12 57 14.2	0.0
TVAN				IAML		12 57 18.0	
	comp=E,112nm,0.3s						
TVAN				*i* S	Sb	12 57 18.1	+0.2
TVAN				IAML		12 57 19.0	
	comp=N,123nm,0.5s						
GEVA	**Gevas**	**0.31**	**215**	*e*P	Pb	12 57 16.8	+0.3
GEVA				*e*S	Sb	12 57 21.8	+0.2
GEVA				IAML		12 57 26.1	
	comp=Z,32nm,0.4s						
GEVA	**Gevas**	**0.31**	**215**	*i* P	Pb	12 57 16.8	+0.3
GEVA				IAML		12 57 25.0	
	comp=N,36nm,0.5s						
GEVA				IAML		12 57 25.0	
	comp=E,37nm,0.4s						
VMUR	**Van-Muradiye**	**0.47**	**28**	*i* P	Pb	12 57 18.9	0.0
VMUR				*i* S	Sb	12 57 26.5	+0.8
BLIS	**Bitlis-Merkez**	**0.93**	**261**	*e*P	Pn	12 57 22.4	-3.8
BLIS				IAML		12 57 30.5	
	comp=Z,6.9nm,0.0s						

*DDA **06** 13:10:49.9, 39°.79N×26°.16E, h7km±5km, ML2.5*
*ISK **06** 13:10:49.7, 39°.79N×26°.15E, h9km, ML2.6/15*
*ATH **06** 13:10:49.8, 39°.78N×26°.09E, h30km±1km, ML2.4/6, Error ellipse: s-maj=2.4km s-min=0.9km az=85.0*
*THE **06** 13:10:50.2, 39°.79N×26°.12E, h6km±1km, ML2.3/10, Error ellipse: s-maj=1.4km s-min=0.5km az=80.0*
ISC 06 13:10:50.0±0.8, 39°80N±0°.02×26°14E±0°.02, h12km±5km, n47, σ0$54/75, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.08**	**303**	PG	**Pg**	**13 10 52.7**	**+0.1**
BOZC				SG	**Sg**	**13 10 54.4**	**-0.1**
EZN	**Ezine**	**0.15**	**80**	P	**Pg**	**13 10 53.6**	**+0.1**
EZN				S	**Sg**	**13 10 56.0**	**0.0**
	2µm,0.1s						
EZN	**Ezine**	**0.15**	**80**	PG	**Pg**	**13 10 53.6**	**+0.1**
EZN				SG	**Sg**	**13 10 55.9**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.32**	**100**	*i* P	**Pn**	**13 11 00.8**	**+0.2**
GADA	**Gvkgeada**	**0.43**	**335**	*i* P	**Pg**	**13 10 58.9**	**+0.3**
GADA				S	**Sg**	**13 11 04.9**	**+0.6**
GADA	**Gvkgeada**	**0.43**	**335**	PG	**Pg**	**13 10 58.9**	**+0.3**
PRK	**Paraskevi**	**0.56**	**169**	P	**Pg**	**13 11 01.7**	**+0.7**
PRK				S	**Sg**	**13 11 08.8**	**+0.4**
	475nm,0.4s						
PRK	**Paraskevi**	**0.56**	**169**	P	**Pg**	**13 11 01.6**	**+0.6**
PRK				S	**Sb**	**13 11 09.6**	**-0.2**
PRK				AML	AML	13 11 13.3	
	comp=N,757µm,0.4s						
PRK				AML	AML	13 11 14.9	
	comp=E,907µm,0.3s						
SIGR	**SIGRI**	**0.63**	**200**	P	**Pg**	**13 11 02.0**	**-0.1**
SIGR				S	**Sg**	**13 11 10.6**	**+0.2**
	comp=E,812nm,0.2s						
SIGR	**SIGRI**	**0.63**	**200**	P	**Pg**	**13 11 02.0**	**-0.1**
SIGR				S	**Sg**	**13 11 11.0**	**+0.6**
SIGR				AML	AML	13 11 13.8	
	comp=N,1595µm,0.2s						
SIGR				AML	AML	13 11 13.8	
	comp=E,1611µm,0.2s						
SIGR	**SIGRI**	**0.63**	**200**	PG	**Pg**	**13 11 02.1**	**-0.1**
SIGR				SG	**Sg**	**13 11 11.3**	**+0.9**
AYVA	**Ayvalik**	**0.65**	**139**	*i* P	**Pg**	**13 11 02.8**	**+0.2**
AYVA				IAML		13 11 15.0	
	comp=N,329nm,0.5s						
GELI	**Tayfur-Gelibol**	**0.65**	**23**	PG	**Pg**	**13 11 02.9**	**+0.2**
LPK	**Lapseki**	**0.75**	**40**	PG	**Pb**	**13 11 04.6**	**-0.3**
LPK				SG	**Sb**	**13 11 15.4**	**+0.3**
SMTH	**Samothraki Isl**	**0.82**	**325**	P	**Pb**	**13 11 05.9**	**-0.3**
SMTH				S	**Sb**	**13 11 17.0**	**-0.2**
	comp=N,210nm,0.3s						
SMTH	**Samothraki Isl**	**0.82**	**325**	P	**Pb**	**13 11 05.8**	**-0.3**
SMTH				S	**Sb**	**13 11 17.3**	**+0.1**
SMTH				AML	AML	13 11 21.1	
	comp=N,506µm,0.3s						
SMTH				AML	AML	13 11 21.9	
	comp=E,327µm,0.3s						
ERIK	**Erikli-Kesan**	**0.92**	**18**	PG	**Pb**	**13 11 07.5**	**-0.4**
EFSA	**Agios Efstrati**	**0.92**	**254**	P	**Pb**	**13 11 07.4**	**-0.5**
EFSA				S	**Sb**	**13 11 20.4**	**+0.2**
DKL	**Dikili**	**0.94**	**140**	PG	**Pb**	**13 11 07.9**	**-0.3**
KRBG	**Karabiga-Canak**	**1.07**	**56**	PG	**Pn**	**13 11 10.3**	**-0.5**
ALN	**Alexandroupoli**	**1.10**	**356**	P	**Pb**	**13 11 10.7**	**-0.3**
ALN				S	**Sn**	**13 11 26.1**	**-0.2**
	comp=E,180nm,0.5s						
ALN	**Alexandroupoli**	**1.10**	**356**	P	**Pb**	**13 11 10.6**	**-0.3**
ALN				S	**Sn**	**13 11 26.2**	**-0.2**
ALN				AML	AML	13 11 27.5	
	comp=E,364µm,0.5s						
ALN				AML	AML	13 11 27.9	
	comp=N,378µm,0.5s						
ALN	**Alexandroupoli**	**1.10**	**356**	PN	**Pg**	**13 11 11.4**	**+0.2**
KESN	**Edirne-Kesan**	**1.11**	**22**	*i* P	**Pn**	**13 11 11.3**	**-0.3**
KESN				*i* S	**Sb**	**13 11 25.1**	**-0.7**
ZEDA	**zmir-Bergama**	**1.11**	**139**	*i* P	**Pb**	**13 11 11.0**	**0.0**
ZEDA				*i* S	**Sn**	**13 11 25.9**	**-0.6**
BALY	**Balya**	**1.14**	**92**	*i* P	**Pg**	**13 11 12.2**	**+0.2**
BALY				IAML		13 11 29.0	
	comp=N,97nm,0.5s						
RKY	**Sarkoy-Tekirda**	**1.19**	**42**	PN	**Pg**	**13 11 12.9**	**0.0**
SART	**Tekirdag**	**1.19**	**42**	*i* P	**Pb**	**13 11 12.7**	**0.0**
SART				*i* S	**Sg**	**13 11 30.7**	**+2.2**
GONE	**Gonen-Balikesi**	**1.22**	**78**	PN	**Pg**	**13 11 13.2**	**-0.2**
THAS	**Thassos island**	**1.35**	**307**	P	**Pn**	**13 11 14.3**	**-0.4**
THAS				S	**Sg**	**13 11 33.9**	**+0.3**
	comp=N,55nm,0.4s						
THAS	**Thassos island**	**1.35**	**307**	P	**Pn**	**13 11 13.8**	**-1.0**
THAS				S	**Sn**	**13 11 31.6**	**-1.0**
BALB	**Balikesir**	**1.35**	**96**	PN	**Pb**	**13 11 14.8**	**-0.5**
MRMT	**Marmara Adasi**	**1.38**	**54**	PN	**Pb**	**13 11 15.4**	**-0.3**
CHOS	**Chios island**	**1.41**	**183**	P	**Pn**	**13 11 15.0**	**-0.6**
CHOS				S	**Sb**	**13 11 34.5**	**+0.2**
	comp=N,142nm,0.2s						
CHOS	**Chios island**	**1.41**	**183**	P	**Pn**	**13 11 15.0**	**-0.6**
CHOS				S	**Sn**	**13 11 33.1**	**-1.1**
CHOS				AML	AML	13 11 38.5	
	comp=E,366µm,0.2s						
CHOS				AML	AML	13 11 38.6	
	comp=N,175µm,0.2s						
CHOS	**Chios island**	**1.41**	**183**	PN	**Pn**	**13 11 15.7**	**+0.1**
RDO	**Rodhopi**	**1.42**	**341**	P	**Pb**	**13 11 16.2**	**-0.2**
RDO				S	**Sb**	**13 11 34.9**	**+0.4**
	comp=N,40nm,0.4s						
RDO	**Rodhopi**	**1.42**	**341**	P	**Pn**	**13 11 15.9**	**+0.3**
RDO				S	**Sb**	**13 11 34.3**	**-0.2**
RDO				AML	AML	13 11 35.1	
	comp=E,79µm,0.3s						
RDO				AML	AML	13 11 40.8	
	comp=N,92µm,0.2s						
RDO	**Rodhopi**	**1.42**	**341**	PN	**Pb**	**13 11 16.3**	**-0.2**
EDC	**Edincik**	**1.43**	**67**	PN	**Pb**	**13 11 16.2**	**-0.5**
URLA	**Izmir**	**1.48**	**166**	PN	**Pn**	**13 11 16.2**	**-0.3**
URLA	**Izmir**	**1.48**	**166**	*i* P	**Pn**	**13 11 16.5**	**0.0**
URLA				*i* S	**Sb**	**13 11 36.2**	**-0.1**
KAVA	**Kavala**	**1.72**	**314**	P	**Pn**	**13 11 20.2**	**+0.4**
KAVA				S	**Sn**	**13 11 42.3**	**+0.5**
	comp=N,18nm,0.4s						
KAVA	**Kavala**	**1.72**	**314**	P	**Pn**	**13 11 20.2**	**+0.4**
KAVA				S	**Sn**	**13 11 40.4**	**-1.3**

OUR	**Ouranopolis**	**1.74**	**289**	P	**Pn**	**13 11 20.7**	**+0.7**
AOS	**Alonnisos**	**1.86**	**251**	P	**Pn**	**13 11 22.3**	**+0.6**
SMG	**Samos**	**2.16**	**165**	P	**Pn**	**13 11 26.0**	**+0.2**
SMG				S	**Sn**	**13 11 53.9**	**+1.4**
	comp=N,72nm,0.5s						

*JMA **06** 13:11:55.2±0.1, 23°.12N×121°.49E, h10km±2km, M3.4*
*TAP **06** 13:11:56.8, 23°.16N×121°.33E, h14km, ML3.7, B*
ISC 06 13:11:56.3±0.9, 23°13N±0°.01×121°40E±0°.02, h18km±3km, n127, σ1$00/209, 14C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.04**	**225**	⇑*i*P	**Pg**	**13 12 00.1**	**+0.6**
CHKT	baz=135			*i* S	**Sg**	**13 12 02.4**	**+0.7**
FULB	**Fuli**	**0.12**	**305**	⇑*i*P	**Pg**	**13 11 60.0**	**-0.3**
FULB	baz=324			*i* S	**Sg**	**13 12 02.5**	**-0.3**
TWF1	**Yuli**	**0.24**	**337**	⇓*i*P	**Pb**	**13 12 02.0**	**0.0**
TWF1	baz=344			*i* S	**Sb**	**13 12 05.7**	**-0.1**
YULB	**Yu-li**	**0.28**	**340**	⇓P	**Pb**	**13 12 02.5**	**-0.2**
YULB	baz=346			S	**Sb**	**13 12 06.4**	**-0.6**
ELDTW	**Lidau**	**0.36**	**279**	⇓*i*P	**Pg**	**13 12 03.1**	**-0.8**
ELDTW	baz=276			S	**Sg**	**13 12 07.1**	**-1.9**
HGSD	**Ruisui**	**0.36**	**4**	*e*P	**Pb**	**13 12 04.4**	**+0.2**
HGSD	baz=28			*e*S	**Sb**	**13 12 11.5**	**+1.9**
EHY	**Hungye**	**0.38**	**349**	*e*P	**Pb**	**13 12 04.6**	**0.0**
EHY	baz=350			*e*S	**Sb**	**13 12 09.9**	**-0.2**
TWH	**Lutao**	**0.42**	**170**	⇓P	**Pb**	**13 12 06.5**	**+1.2**
TWH	baz=163			*e*S	**Sb**	**13 12 13.6**	**+2.1**
TWGBT	**Beinan**	**0.43**	**223**	⇑P	**Pg**	**13 12 05.0**	**-0.1**
TWGBT	baz=213			S	**Sg**	**13 12 11.0**	**-0.1**
TWG	**Pinlang**	**0.43**	**224**	⇑P	**Pg**	**13 12 05.0**	**-0.1**
TWG	baz=213			S	**Sg**	**13 12 11.0**	**-0.2**
TTN	**Taitung**	**0.44**	**212**	*e*P	**Pb**	**13 12 06.3**	**+0.7**
TTN	baz=191			S	**Sb**	**13 12 13.6**	**+1.7**
EGFH	**Guangfu**	**0.54**	**3**	*e*P	**Pb**	**13 12 07.9**	**+0.7**
ALS	**Alishan**	**0.66**	**305**	⇓*e*P	**Pb**	**13 12 09.2**	**-0.3**
ALS	baz=298			*e*S	**Sb**	**13 12 17.3**	**-1.2**
ECL	**Taimali**	**0.67**	**218**	⇑*i*P	**Pg**	**13 12 08.4**	**-1.2**
ECL	baz=210			*e*S	**Sg**	**13 12 17.4**	**-1.1**
ESL	**Shilin**	**0.68**	**3**	*e*P	**Pg**	**13 12 09.3**	**-0.5**
SLGT	**Liugui**	**0.71**	**259**	⇑P	**Pb**	**13 12 09.8**	**-0.3**
SLGT	baz=261			*e*S	**Sb**	**13 12 18.6**	**-0.9**
TPUB	**Ta-pu**	**0.73**	**284**	⇓P	**Pb**	**13 12 10.4**	**-0.1**
TPUB	baz=288			S	**Sb**	**13 12 19.7**	**-0.5**
WTP	**Ta-pu**	**0.73**	**279**	⇓*i*P	**Pb**	**13 12 10.5**	**-0.1**
WTP	baz=279			S	**Sb**	**13 12 20.2**	**0.0**
SGST	**Jiashian**	**0.75**	**266**	*e*P	**Pg**	**13 12 10.0**	**-1.1**
SGST	baz=262			*e*S	**Sg**	**13 12 19.6**	**-1.5**
WHYT	**Xinyi Township**	**0.75**	**318**	⇓*e*P	**Pb**	**13 12 10.9**	**-0.1**
WHYT	baz=321			*e*S	**Sb**	**13 12 20.1**	**-0.9**
SSLB	**Suanglung**	**0.77**	**328**	⇓P	**Pg**	**13 12 10.7**	**-0.7**
SSLB	baz=332			*e*S	**Sg**	**13 12 19.2**	**-2.5**
CHN4	**Tsaushan**	**0.77**	**287**	⇓*i*P	**Pb**	**13 12 11.4**	**+0.2**
CHN4	baz=291			S	**Sb**	**13 12 21.7**	**+0.2**
ENLB	**Shoufeng**	**0.79**	**14**	*e*P	**Pg**	**13 12 11.4**	**-0.4**
ENLB	baz=4.0			S	**Sn**	**13 12 24.3**	**+0.3**
CHN1	**Nanshi**	**0.80**	**274**	*e*P	**Pb**	**13 12 12.1**	**+0.3**
CHN1	baz=266			S	**Sn**	**13 12 22.9**	**-1.4**
SSD	**Sandimen**	**0.81**	**242**	⇑*i*P	**Pg**	**13 12 10.8**	**-1.2**
SSD	baz=229			S	**Sg**	**13 12 20.4**	**-2.3**
CHN5	**Tsauling**	**0.81**	**305**	⇓*i*P	**Pb**	**13 12 12.2**	**+0.3**
CHN5	baz=305			*e*S	**Sb**	**13 12 22.2**	**-0.3**
SNST	**Tainan City**	**0.83**	**276**	*e*P	**Pn**	**13 12 13.0**	**-0.2**
SNST	baz=273			*e*S	**Sn**	**13 12 24.1**	**-0.9**
OWD	**Renai**	**0.84**	**346**	*e*P	**Pg**	**13 12 12.5**	**-0.4**
OWD	baz=351			*e*S	**Sb**	**13 12 24.1**	**+0.5**
TWK	**Hsinying**	**0.85**	**279**	*e*P	**Pb**	**13 12 12.6**	**0.0**
TWK	baz=276			S	**Sn**	**13 12 24.4**	**-1.1**
HWA	**Hwalien**	**0.86**	**13**	*e*P	**Pb**	**13 12 13.5**	**+0.7**
HWA	baz=4.0			*e*S	**Sn**	**13 12 26.1**	**+0.4**
MASBT	**Mashibuluo**	**0.88**	**234**	⇑P	**Pg**	**13 12 12.2**	**-1.2**
TAW	**Tawu**	**0.90**	**211**	⇑*i*P	**Pg**	**13 12 12.1**	**-1.7**
EAST	**Anshuo**	**0.90**	**214**	⇑*i*P	**Pg**	**13 12 12.2**	**-1.7**
EAST	baz=208			*e*S	**Sg**	**13 12 23.2**	**-2.6**
WJS	**Zhushan**	**0.92**	**318**	*e*P	**Pn**	**13 12 14.9**	**+0.5**
WJS	baz=319			*e*S	**Sn**	**13 12 27.5**	**+0.2**
SGLT	**Jiouru**	**0.93**	**244**	*e*P	**Pb**	**13 12 14.4**	**+0.5**
SGLT	baz=235			*e*S	**Sb**	**13 12 26.6**	**+0.7**
WGK	**Gukeng**	**0.95**	**306**	P	**Pn**	**13 12 15.0**	**+0.3**
WGK	baz=305			*e*S	**Sn**	**13 12 28.0**	**+0.2**
CHGB	**Renai**	**0.95**	**347**	⇑P	**Pg**	**13 12 14.4**	**-0.5**
CHGB	baz=353			S	**Sg**	**13 12 27.6**	**-0.5**
TWM1	**Shoushan**	**0.95**	**251**	⇑P	**Pn**	**13 12 15.5**	**+0.6**
TWM1	baz=246			*e*S	**Sn**	**13 12 29.8**	**+1.8**
CHN3	**Shinhua**	**0.95**	**267**	*e*P	**Pn**	**13 12 16.0**	**+1.2**
CHN3	baz=262			*e*S	**Sn**	**13 12 29.5**	**+1.5**
TWD	**Chiawan**	**0.96**	**11**	*e*P	**Pb**	**13 12 14.3**	**-0.1**
TWD	baz=18			*e*S	**Sn**	**13 12 28.5**	**+0.3**
CHY	**Chiayi**	**0.97**	**292**	*e*P	**Pn**	**13 12 14.8**	**-0.2**
	baz=290						

CHY					*e*S		**Sn**	13 12 27.9	-0.4
	baz=290								
WNT	**Mingjian**	**0.99**	**319**		P		**Pn**	13 12 16.0	+0.7
WNT	baz=320				S		**Sn**	13 12 29.5	+0.5
	baz=320								
DPDB	**Guoxing**	**1.00**	**334**		*e*P		**Pg**	13 12 15.5	-0.2
DPDB	baz=345				*e*S		**Sg**	13 12 27.6	-1.2
	baz=345								
SSPT	**Xinbi**	**1.00**	**230**		⇑P		**Pb**	13 12 15.2	0.0
SSPT	baz=217				*e*S		**Sb**	13 12 28.2	+0.2
	baz=217								
WHF	**Hehuan Shan**	**1.02**	**353**		*e*P		**Pg**	13 12 15.6	-0.5
WHF	baz=359				*e*S		**Sb**	13 12 29.0	+0.2
	baz=359								
SCZT	**Fangliau**	**1.04**	**224**		P		**Pb**	13 12 15.2	-0.7
SCZT	baz=210				S		**Sb**	13 12 28.8	-0.4
	baz=210								
SNJT	**Kaohsiung City**	**1.05**	**249**		*e*P		**Pn**	13 12 18.1	+2.0
SNJT	baz=244				*e*S		**Sn**	13 12 34.4	+4.0
	baz=244								
NACB	**Ninganchiao**	**1.05**	**10**		*e*P		**Pb**	13 12 14.7	-1.3
NACB	baz=16				*e*S		**Sg**	13 12 30.5	-0.1
	baz=16								
WLGB	**Puzi**	**1.07**	**289**		*e*P		**Pn**	13 12 17.0	+0.6
WLGB	baz=286				*e*S		**Sn**	13 12 32.2	+1.4
	baz=286								
ETLH	**Xiulin Townshi**	**1.07**	**4**		*e*P		**Pb**	13 12 15.9	-0.6
ETLH	baz=10.0				*e*S		**Sg**	13 12 31.1	-0.2
	baz=10.0								
TAI1	**Yung-k'ang**	**1.08**	**265**		*e*P		**Pn**	13 12 16.9	+0.3
TAI1	baz=273				*e*S		**Sn**	13 12 33.8	+2.7
	baz=273								
LAY	**Lan-yu**	**1.10**	**173**		*e*P		**Pb**	13 12 15.4	-1.4
LAY	baz=159				*e*S		**Sb**	13 12 30.4	-0.3
	baz=159								
SCLT	**Jiali**	**1.11**	**272**		*e*P		**Pg**	13 12 17.4	+0.4
SCLT	baz=268				*e*S		**Sn**	13 12 34.0	+2.1
	baz=268								
CHN8	**Yiju**	**1.11**	**281**		P		**Pn**	13 12 17.5	+0.4
CHN8	baz=278				S		**Sn**	13 12 33.1	+1.2
	baz=278								
TWT	**Tachien**	**1.14**	**350**		*e*P		**Pg**	13 12 18.4	0.0
TDCB	baz=349				*e*S		**Sb**	13 12 31.3	-0.8
	baz=354								
TDCB	**Techi**	**1.14**	**349**		P		**Pb**	13 12 17.3	-0.3
WSSB	baz=354				S		**Sn**	13 12 36.9	+3.9
	baz=240								
WSSB	**Gushan**	**1.16**	**245**		⇑P		**Pg**	13 12 19.5	+0.8
WSF	baz=240				*e*S		**Sg**	13 12 38.0	-0.6
	baz=205								
WSF	**Szhu**	**1.19**	**295**		P		**Pg**	13 12 18.6	-0.9
TWKBT	baz=292				S		**Sn**	13 12 34.6	+0.7
	baz=292								
TCU	**Taichung**	**1.21**	**327**		*e*P		**Pg**	13 12 20.4	+0.6
WHP	baz=312 **Taichung City**	**1.22**	**340**		*e*P		**Pg**	13 12 20.4	+0.5
	baz=348								
RLNB	**Erlin**	**1.22**	**309**		*e*P		**Pg**	13 12 19.0	-0.9
WCHH	baz=307 **Zhanghua**	**1.22**	**321**		*e*P		**Pg**	13 12 19.7	-0.2
WCHH	baz=320				*e*S		**Sn**	13 12 36.2	+1.7
	baz=320								
WLCH	**Liuqiu**	**1.22**	**231**		*e*P		**Pg**	13 12 22.0	+2.1
WTCT	baz=221 **Ta-ch'eng**	**1.26**	**306**		*e*P		**Pg**	13 12 20.3	-0.4
WTCT	baz=304				*e*S		**Sg**	13 12 36.7	-0.5
	baz=304								
HEN	**Hengchun**	**1.28**	**209**		*e*P		**Pn**	13 12 19.6	+0.3
NNSH	baz=209 **Datong**	**1.29**	**359**		*e*P		**Pn**	13 12 20.1	+0.5
	baz=13								
NNS	**Nan Shan**	**1.30**	**359**		*e*P		**Pn**	13 12 20.0	+0.2
NNS	baz=18				*e*S		**Sg**	13 12 38.0	-0.6
	baz=18								
TWKBT	**Hengchun**	**1.30**	**205**		*e*P		**Pn**	13 12 18.8	-0.8
TWK1	baz=205 **Hengchun**	**1.30**	**205**		*e*P		**Pn**	13 12 19.3	-0.3
	baz=205								
ENA	**Nanau**	**1.33**	**14**		*e*P		**Pn**	13 12 20.5	+0.5
NANB	baz=2.0 **Nanao**	**1.33**	**14**		*e*P		**Pn**	13 12 19.2	-0.8
NANB	baz=5.0				*e*S		**Sb**	13 12 38.0	+0.5
	baz=5.0								
WDJ	**Dajia District**	**1.40**	**330**		*e*P		**Pg**	13 12 23.1	-0.2
WDJ	baz=330				*e*S		**Sg**	13 12 41.8	+0.2
	baz=330								
NSY	**Sanyi**	**1.41**	**336**		P		**Pg**	13 12 23.7	+0.2
NSY	baz=337				S		**Sg**	13 12 42.3	+0.4
	baz=337								
PTSB	**Yuanli**	**1.46**	**334**		*e*P		**Pg**	13 12 24.2	-0.3
PTSB	baz=334				*e*S		**Sg**	13 12 43.5	+0.1
	baz=334								
NDT	**Datong Townshi**	**1.47**	**4**		*e*P		**Pn**	13 12 22.7	+0.8
NMLH	baz=16 **Miaoli**	**1.51**	**338**		*e*P		**Pb**	13 12 24.4	+0.6
NMLH	baz=339				*e*S		**Sg**	13 12 45.1	+0.1
	baz=339								
ENTT	**Nioudou**	**1.51**	**6**		*e*P		**Pn**	13 12 22.9	+0.4
TWC	baz=6.0 **Suao**	**1.53**	**16**		*e*P		**Pn**	13 12 23.5	+0.8
	baz=2.0								
YHNB	**Yeheng**	**1.53**	**359**		*e*P		**Pn**	13 12 23.6	+0.8
NSTT	baz=13 **Nanjuang**	**1.54**	**346**		*e*P		**Pb**	13 12 24.7	+0.4
NSTT	baz=2.0				*e*S		**Sg**	13 12 45.2	-0.8
	baz=2.0								
NSK	**Sanguang**	**1.54**	**359**		*e*P		**Pn**	13 12 23.6	+0.7
NSK	baz=19				*e*S		**Sn**	13 12 43.3	+0.8
	baz=19								
LIOB	**Emei**	**1.55**	**347**		P		**Pb**	13 12 24.7	+0.2
LIOB	baz=2.0				S		**Sg**	13 12 45.4	-1.0
	baz=2.0								
EOS1	**EOS1**	**1.56**	**25**		*e*P		**Pn**	13 12 24.0	+0.8
EOS1	baz=44				*e*S		**Sn**	13 12 44.7	+1.8
	baz=44								
WDGT	**Dungji**	**1.61**	**275**		P		**Pn**	13 12 24.2	+0.5
WDGT	baz=270				*e*S		**Sb**	13 12 44.5	-0.9
	baz=270								
SLBB	**Yuanshan**	**1.63**	**8**		*e*P		**Pn**	13 12 24.4	+0.3
NWLT	baz=7.0 **Wulai**	**1.64**	**3**		*e*P		**Pn**	13 12 24.8	+0.5
	baz=16								
WLTB	**Daxi**	**1.72**	**356**		*e*P		**Pb**	13 12 27.2	-0.2
WLTB	baz=12				*e*S		**Sb**	13 12 49.6	+1.0
	baz=12								
PHUB	**P'eng-hu**	**1.72**	**283**		P		**Pn**	13 12 25.2	-0.1
PHUB	baz=278				S		**Sn**	13 12 46.7	-0.2
	baz=278								
PNG	**Penghu**	**1.75**	**285**		P		**Pn**	13 12 26.1	+0.4
PNG	baz=280				*e*S		**Sn**	13 12 47.5	-0.1
	baz=280								
NTC	**Toucheng**	**1.76**	**13**		*e*P		**Pn**	13 12 27.0	+1.1
EGS	baz=10.0	**1.77**	**16**		*e*P		**Pb**	13 12 29.0	+0.6
TATO	baz=1.0 **Taipei**	**1.84**	**3**		*e*P		**Pn**	13 12 27.9	+0.9
	baz=13								

TWA	**Mucha**	**1.85**	**5**		*e*P		**Pb**	13 12 29.2	-0.4
TWA	baz=24				*e*S		**Sn**	13 12 51.0	+0.9
	baz=24								
TIPB	**Shuangxi**	**1.87**	**12**		*e*P		**Pn**	13 12 28.6	+1.0
TIPB	baz=17				*e*S		**Sn**	13 12 51.0	+0.3
	baz=17								
JYNG	**Yonagunijimaku**	**1.93**	**47**		P		**Pn**	13 12 28.8	+0.5
JYNG					*e*S		**Sn**	13 12 52.6	+0.5
TWB1	**Santiao Chiao**	**1.94**	**16**		*e*P		**Pn**	13 12 30.1	+1.7
	baz=2.0								
TWS1	**Kuangyinshan**	**1.96**	**0**		*e*P		**Pn**	13 12 30.6	+1.9
	baz=12								
NWF	**Wu-fen Shan**	**1.96**	**10**		*e*P		**Pn**	13 12 30.5	+1.7
	baz=4.0								
WFSB	**Wu-fen Shan**	**1.96**	**10**		*e*P		**Pn**	13 12 30.6	+1.9
	baz=4.0								
YOJ	**Yonaguni jima**	**1.98**	**48**		*e*P		**Pn**	13 12 29.3	+0.4
	baz=47								
YOJ	**Yonaguni jima**	**1.98**	**48**		P		**Pn**	13 12 29.7	+0.7
YOJ					*e*S		**Sn**	13 12 53.6	+0.2
YM01	**YM01**	**2.01**	**4**		*e*P		**Pn**	13 12 30.3	+0.9
	baz=16								
YM10	**YM10**	**2.02**	**4**		*e*P		**Pn**	13 12 30.9	+1.3
	baz=15								
YM11	**YM11**	**2.03**	**4**		*e*P		**Pn**	13 12 29.9	+0.1
	baz=15								
ANP	**Anpu**	**2.05**	**3**		*e*P		**Pn**	13 12 31.9	+1.9
	baz=14								
HATJ	**Hateruma jima**	**2.39**	**67**		P		**Pn**	13 12 34.8	+0.2
HATJ					S		**Sn**	13 13 02.5	-1.0
IRIF	**Iriomote-Funau**	**2.45**	**60**		P		**Pn**	13 12 36.0	+0.6
IRIF					S		**Sn**	13 13 05.1	+0.2
JKRS	**Kuro-shima**	**2.63**	**65**		P		**Pn**	13 12 38.5	+0.6
JKRS					*e*S		**Sn**	13 13 09.6	+0.2
PTTC	**Pingtan**	**2.79**	**328**		*e*P		**Pn**	13 12 41.0	+0.9
	baz=328								
JIJ	**Ishigaki jima**	**2.80**	**63**		P		**Pn**	13 12 40.0	-0.2
JIJ					S		**Sn**	13 13 13.0	-0.5
PTMZ	**Houxiangcun**	**2.82**	**313**		*e*P		**Pn**	13 12 40.9	+0.4
	baz=312								
KNM	**Kinmen**	**3.00**	**296**		*e*P		**Pn**	13 12 44.7	+1.7
	baz=290								
JISG	**Ishigakijimahi**	**3.03**	**61**		P		**Pn**	13 12 43.3	-0.1
JISG					S		**Sn**	13 13 18.8	-0.5
KNMB	**Chin-men Tao**	**3.06**	**296**		*e*P		**Pn**	13 12 43.8	0.0
	baz=292								
MATB	**Ma-tsu**	**3.29**	**337**		*e*P		**Pn**	13 12 47.5	+0.6
	baz=336								
JTJ	**Tarama**	**3.38**	**63**		P		**Pn**	13 12 48.4	+0.3
JTJ					*e*S		**Sn**	13 13 29.0	+1.2
ZPLA	**Ao Xicun**	**3.44**	**284**		*e*P		**Pn**	13 12 49.5	+0.5
	baz=279								
AXDP	**Jialang**	**3.60**	**300**		*e*P		**Pn**	13 12 51.3	+0.1
	baz=296								
MHZQ	**Yeshan**	**3.66**	**324**		*e*P		**Pn**	13 12 53.0	+1.0
	baz=326								
ZZJH	**Jiuhuzhen**	**3.70**	**292**		*e*P		**Pn**	13 12 53.1	+0.5
	baz=287								
LYJJ	**Jianjiangzhen**	**3.71**	**337**		*e*P		**Pn**	13 12 54.7	+1.9
	baz=339								
JIRB	**Irabujima**	**3.84**	**63**		P		**Pn**	13 12 54.6	0.0
JIRB					*e*S		**Sn**	13 13 37.5	-1.8
JMJ2	**Miyako jima3**	**3.94**	**65**		P		**Pn**	13 12 56.5	+0.7
JMJ2					*e*S		**Sn**	13 13 39.3	-2.3
JMJ	**Miyako jima 2**	**3.94**	**64**		*e*P		**Pn**	13 12 56.5	+0.6
	baz=71								
XPSS	**Dashiqiu**	**3.94**	**344**		*e*P		**Pn**	13 12 56.3	+0.4
	baz=343								
JIKM	**Ikemajima**	**3.94**	**62**		P		**Pn**	13 12 56.2	+0.2
JIKM					*e*S		**Sn**	13 13 41.0	-0.8
JOGS	**Gusukube**	**4.01**	**65**		P		**Pn**	13 12 57.8	+0.9

*IDC **06** 13:40:23.7±1.4, 22°.74N×12°.33W, h0km, mb3.9/7, mb1 4.0/9, mb1mx3.7/45, mbtmp3.9/9, ML3.7/2, Error ellipse: s-maj=42.1km s-min=27.0km az=73.0*
*NEIC **06** 13:40:26.1±1.7, 22°.7N±0°.1×12°.1W±0°.1, h14km±4km, mb4.3/8, Error ellipse: s-maj=23.3km s-min=8.4km az=132.0*
ISC 06 13:40:25.8±0.9, **22°.68N**±0°.10×**12°.0W**±0°.1, **h10**km, **n22,** σ1§**42**/20, **mb4.2**/10, **Mauritania**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
I11CV	**MAIO ISLAND IN**	**12.90**	**237**	*i*			14 51 50.0	
	baz=46,slow=315,SNR=1.8							
TOA0	**Torodi Ar. Sit**	**16.10**	**124**	Pn		**Pn**	**13 44 12.9**	**+0.5**
TORD	**Torodi Ar. Bea**	**16.10**	**124**	Pn		**Pn**	**13 44 13.2**	**+0.9**
	0.2nm,0.3s,baz=316,slow=12,SNR=11							
TORD				Sn		**Sn**	**13 47 08.2**	**-2.9**
	0.1nm,0.3s,baz=308,slow=24,SNR=3.5							
TORD				Lg		Lg	13 49 02.2	
	0.0nm,0.3s,baz=325,slow=27,SNR=2.9							
TORD	**Torodi Ar. Bea**	**16.10**	**124**	IAmb		IAmb	13 44 22.3	
	comp=Z,1.3nm,0.6s							
DBIC	**Dimbokro**	**17.34**	**156**	P		**Pn**	**13 44 29.1**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=332,slow=8.6,SNR=5.0							
DBIC				S		Sn	13 47 30.3	-11
	comp=Z,0.1nm,0.3s,baz=56,slow=18,SNR=2.7							
DBIC				Lg		Lg	13 49 31.7	
	baz=40,slow=20,SNR=4.1							
DBIC	**Dimbokro**	**17.34**	**156**	Pn		**Pn**	**13 44 26.7**	**-1.4**
DBIC				IAmb		IAmb	13 45 16.0	
	comp=Z,11nm,1.4s							
ESDC	**Sonseca Array**	**18.27**	**20**	P		**Pn**	**13 44 37.9**	**-1.6**
TUE	**Stuetta**	**29.35**	**31**	P		**P**	**13 46 28.2**	**-0.9**
TUE				IAmb		IAmb	13 46 35.8	
	comp=Z,10.0nm,1.2s							
GERES	**GERESS Array B**	**33.11**	**32**	P		**P**	**13 47 01.8**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=218,slow=8.4,SNR=7.9							
GERES	**GERESS Array B**	**33.11**	**32**	P		**P**	**13 47 01.6**	**-0.5**
BRTR	**Keskin Array B**	**42.09**	**55**	P		**P**	**13 48 19.9**	**+1.7**
	comp=Z,0.3nm,0.4s,baz=243,slow=6.3,SNR=3.5							
FINES	**FINESS Array B**	**46.72**	**24**	P		**P**	**13 48 54.6**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=224,slow=5.3,SNR=8.3							
ARCES	**ARCESS Array B**	**51.93**	**16**	P		**P**	**13 49 34.1**	**-0.4**
	comp=Z,5.9nm,1.2s,baz=232,slow=4.4,SNR=2.7							
SPB	**Sao Paulo**	**57.47**	**219**	P		**P**	**13 50 14.6**	**-0.6**
KURBB	**Kurchatov Arra**	**73.13**	**42**	P		**P**	**13 51 57.1**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=286,slow=6.5,SNR=10							
KURK	**Kurchatov**	**73.16**	**42**	P		**P**	**13 51 57.1**	**+0.4**
KURK	**Kurchatov**	**73.16**	**42**	IAmb		IAmb	13 54 36.7	
	comp=Z,12nm,1.8s							
YKA	**Yellowknife Ar**	**75.76**	**332**	P		**P**	**13 52 09.8**	**-1.7**
	comp=Z,0.2nm,0.6s,baz=69,slow=6.7							
MKAR	**Makanchi Array**	**76.64**	**45**	P		**P**	**13 52 17.8**	**+0.9**
	comp=Z,20nm,0.3s,baz=292,slow=5.6,SNR=4.1							
SONM	**Songino Array**	**90.72**	**36**	P		**P**	**13 53 29.5**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=282,slow=6.6,SNR=4.3							
WRA	**Warramunga Arr**	**148.56**	**91**	PKPbc		**PKPdf**	**14 00 13.3**	**+3.2**
	comp=Z,0.7nm,0.7s,baz=292,slow=2.4,SNR=7.2							
ASAR	**Alice Springs**	**148.68**	**99**	PKPbc		**PKPbc**	**14 00 14.6**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=296,slow=1.9,SNR=14							

*IDC **06** 13:44:25.5±0.9, 44°.96N×150°.25E, h0km, mb3.7/9, mb1 4.0/12, mb1mx3.7/50, mbtmp3.8/12, ML3.3/2, MS2.8/1, Ms1 2.8/1, ms1mx2.5/51, Error ellipse: s-maj=23.2km s-min=19.9km az=130.0*
*NEIC **06** 13:44:26.8±1.6, 44°.93N±0°.04×150°.4E±0°.1, h11km±5km, mb4.5/9, Error ellipse: s-maj=14.9km s-min=5.8km az=86.0*
*JMA **06** 13:44:31.8±0.8, 45°.05N×149°.78E, h30km, M4.4*
*MOS **06** 13:44:35.9±1.2, 44°.78N×149°.45E, h73km, mb4.0/6, Error ellipse: s-maj=10.6km s-min=8.1km az=135.9*
*SKHL **06** 13:44:35.1±0.4, 44°.80N×149°.60E, h69km±5km, mb4.7/2*
ISC 06 13:44:35.9±1.4, **44°.71N**±0°.06×**149°.45E**±0°.09, **h64**km±11km, **n91,** σ2§**47**/95, **mb3.7**/16, **9C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KUR	**Kuril'sk**	**1.24**	**296**	*d*	iPN	**Pn**	**13 44 55.7**	**-1.4**
KUR				*i*	S	**Sn**	**13 45 11.2**	**-1.9**
KUR				pmax		pmax		
	comp=Z,275nm,0.3s							
KUR				pmax		pmax		
	comp=N,119nm,0.2s							
KUR				pmax		pmax		
	comp=E,70nm,0.2s							
KUR				smax		smax		
	comp=E,342nm,0.2s							
KUR				smax		smax		
	comp=N,522nm,0.3s							
KUR	**Kuril'sk**	**1.24**	**296**	‖ *i*	P	**Pn**	**13 44 55.8**	**-1.4**
KUR					AMB	AMB	13 44 58.0	
	comp=N,130nm,0.3s							
KUR					AMB	AMB	13 44 58.0	
	comp=N,40nm,0.3s							
KUR					AMB	AMB	13 44 58.0	
	comp=N,250nm,0.3s							
KUR				*i*	S	**Sn**	**13 45 11.2**	**-1.9**
KUR					A	A	13 45 15.0	
	comp=N,570nm,0.3s							
KUR					A	A	13 45 15.0	
	comp=N,570nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.66**	**257**	*e*	PN	**Pn**	**13 45 18.0**	**+1.7**
YUK					*e*S	**Sn**	**13 45 50.8**	**+3.5**
YUK					pmax	pmax		
	comp=Z,96nm,0.4s							
YUK					pmax	pmax		
	comp=N,26nm,0.2s							
YUK					smax	smax		
	comp=E,585nm,0.5s							
YUK					smax	smax		
	comp=N,165nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**2.66**	**257**	*e*	P	**Pn**	**13 45 17.5**	**+1.2**
YUK					AMB	AMB	13 45 20.0	
	comp=N,30nm,0.4s							
YUK					AMB	AMB	13 45 20.0	
	comp=N,100nm,0.4s							
YUK					*e*S	**Sn**	**13 45 49.5**	**+2.2**
YUK					A	A	13 46 00.0	
	comp=N,170nm,0.5s							
YUK					A	A	13 46 00.0	
	comp=N,590nm,0.5s							
GRPR	**Tuman**	**2.73**	**256**	*e*	PN	**Pn**	**13 45 19.5**	**+2.2**
GRPR					S	**Sn**	**13 45 52.6**	**+3.5**
GRPR					smax	smax		
	comp=N,107nm,0.3s							
GRPR					smax	smax		
	comp=E,379nm,0.4s							
GRPR	**Tuman**	**2.73**	**256**	*e*	P	**Pn**	**13 45 19.0**	**+1.7**
GRPR					*e*S	**Sn**	**13 45 51.6**	**+2.5**
GRPR					A	A	13 46 01.0	
	comp=E,110nm,0.4s							
GRPR					A	A	13 46 01.0	
	comp=E,380nm,0.4s							
GLVR	**Golovnino**	**2.98**	**252**	*e*	PN	**Pn**	**13 45 24.0**	**+3.2**
GLVR					*e*S	**Sn**	**13 46 00.2**	**+4.9**
GLVR					smax	smax		
	comp=N,331nm,0.4s							
GLVR					smax	smax		
	comp=E,169nm,0.4s							
GLVR	**Golovnino**	**2.98**	**252**	*e*	P	**Pn**	**13 45 22.0**	**+1.2**
GLVR					*e*S	**Sn**	**13 45 57.4**	**+2.1**
GLVR					A	A	13 46 07.0	
	comp=E,330nm,0.4s							
GLVR					A	A	13 46 07.0	
	comp=E,170nm,0.4s							
NEM2	**Nemuro 2**	**2.99**	**245**		P	**Pn**	**13 45 21.0**	**+0.2**
NEM2					*e*S	**Sn**	**13 45 58.0**	**+2.6**
NMR	**Nemuro--Hokkai**	**2.99**	**245**	*e*	PN	**Pn**	**13 45 21.1**	**+0.2**
NMR					S	**Sn**	**13 46 00.8**	**+5.2**
NMR	**Nemuro--Hokkai**	**2.99**	**245**	⇑ *i*	P	**Pn**	**13 45 21.2**	**+0.3**
NMR				‖ *i*	S	**Sn**	**13 45 59.4**	**+3.8**
JRA	**Rausu**	**3.20**	**258**		P	**Pn**	**13 45 25.3**	**+1.6**
JNK	**Nakash**	**3.58**	**253**		P	**Pn**	**13 45 30.6**	**+1.6**
JNK					*e*S	**Sn**	**13 46 16.0**	**+6.0**
JAK	**Akkeshi**	**3.83**	**245**		P	**Pn**	**13 45 32.8**	**+0.4**
JAK					*e*S	**Sn**	**13 46 17.8**	**+1.6**
JTKR	**Abashiri--Toko**	**4.04**	**261**		P	**Pn**	**13 45 38.2**	**+3.0**
JAR	**Ashorobuto**	**4.33**	**253**		P	**Pn**	**13 45 41.5**	**+2.3**
JAR					*e*S	**Sn**	**13 46 36.0**	**+7.6**
JMP	**Maruseppu**	**4.42**	**263**		P	**Pn**	**13 45 43.6**	**+3.2**
JOB	**Onbets**	**4.44**	**248**		P	**Pn**	**13 45 42.2**	**+1.5**
JKK2	**Kamakawa 2**	**4.88**	**263**		P	**Pn**	**13 45 50.4**	**+3.7**
JCH	**Churui**	**4.88**	**247**		P	**Pn**	**13 45 47.7**	**+1.0**
JKA	**Kamikawa-asahi**	**4.94**	**266**	*e*	P	**Pn**	**13 45 51.1**	**+3.6**
JKA	**Kamikawa-asahi**	**4.94**	**266**			**Pn**	**13 45 51.1**	**+3.6**
JKA						Sn	13 46 56.2	+13
ASAJ	**Asahikawa**	**4.94**	**266**		Pn	**Pn**	**13 45 51.1**	**+3.5**
	comp=E,2.3nm,0.3s,baz=83,slow=10,SNR=23							
ASAJ					Sn	Sn	13 46 56.2	+13
	comp=E,0.6nm,0.3s,baz=77,slow=17,SNR=1.7							
YSS	**Yuzh-Sakhalins**	**5.19**	**298**		PN	**Pn**	**13 45 52.1**	**+1.2**
YSS	**Yuzh-Sakhalins**	**5.19**	**298**	*e*	P	**Pn**	**13 45 52.1**	**+1.2**
YSS	**Yuzh-Sakhalins**	**5.19**	**298**	Pn		**Pn**	**13 45 52.1**	**+1.2**
ERM	**Erimo**	**5.31**	**242**		PN	**Pn**	**13 45 55.0**	**+2.3**
ERM	**Erimo**	**5.31**	**242**			**Pn**	**13 45 55.0**	**+2.3**
JNBK	**Urakawa-nobuka**	**5.44**	**246**		P	**Pn**	**13 45 54.7**	**+0.4**
JBT2	**Biratori 2**	**5.48**	**252**		P	**Pn**	**13 45 56.7**	**+1.8**
JNB	**Noboribetsu**	**6.50**	**253**		P	**Pn**	**13 46 10.6**	**+1.7**
JKB	**Kayabe**	**6.75**	**248**		P	**Pn**	**13 46 13.2**	**+0.9**
JKB					*e*S	**Sn**	**13 47 28.1**	**+0.4**
JYR2	**Yakumo 2**	**7.10**	**252**		P	**Pn**	**13 46 18.4**	**+1.4**
JANG	**Nango**	**7.28**	**236**		*e*S	**Sn**	**13 47 35.8**	**-4.9**
JTH	**Tanohata**	**7.36**	**232**		*e*S	**Sn**	**13 47 37.7**	**-5.1**
SKR	**Severo-Kuril's**	**7.48**	**35**	‖ *e*	PN	**Pn**	**13 46 21.2**	**-1.1**
SKR	**Severo-Kuril's**	**7.48**	**35**	‖ *e*	P	**Pn**	**13 46 21.2**	**-1.1**
TYV	**Tymovskoe**	**7.67**	**326**		*e*P	**Pn**	**13 46 25.2**	**+0.4**
JOSM	**Okushiri--Mats**	**7.72**	**254**		P	**Pn**	**13 46 27.0**	**+1.5**
JIO	**Ouri**	**8.70**	**227**		*e*S	**Sn**	**13 48 09.8**	**-5.8**
PEA0B	**Petropavlovsk-**	**10.01**	**30**	*ce*	PN	Pn	13 47 00.6	+3.9
PETK	**Petropavlovsk-**	**10.01**	**30**	*e*	PN	**Pn**	**13 46 57.8**	**+1.0**
PETK					pmax	pmax		
	comp=Z,1.0nm,0.3s							
PET	**Petropavlovsk**	**10.29**	**33**	⇑ *e*	PN	**Pn**	**13 47 02.9**	**+2.3**
PET	**Petropavlovsk**	**10.29**	**33**	*e*	P	**Pn**	**13 47 02.4**	**+1.8**
USRK	**Ussuriysk Ar.**	**12.49**	**274**		Pn	**Pn**	**13 47 32.5**	**+1.8**
	baz=91,slow=13,SNR=4.8							
KLR	**Kul'dur**	**12.90**	**297**	‖ *e*	PN	Pn	13 47 31.8	-4.4
KLR	**Kul'dur**	**12.90**	**297**	‖ *e*	P	Pn	13 47 31.8	-4.4
EKMR	**Ekimchan**	**13.68**	**314**		*e*P	**Pn**	**13 47 44.4**	**-2.3**
BMKR	**Bomnak**	**16.61**	**314**		*e*P	**Pn**	**13 48 20.6

comp=Z,1.0nm,0.9s
KURK Kurchatov 46.37 304⇑ eP P 13 52 56.1 +0.6
KURK Kurchatov 46.37 304 P P 13 52 55.4 0.0
KURBB Kurchatov Arra 46.45 304 P P 13 52 55.4 -0.7
comp=Z,0.5nm,0.4s,baz=74,slow=8.3,SNR=4.7
KURBB PcP **PcP 13 54 29.4 -0.4**
comp=Z,0.4nm,0.6s,baz=58,slow=3.5,SNR=4.6
YKA Yellowknife Ar 54.08 35 P P 13 53 47.6 -6.0
comp=Z,0.2nm,0.7s,baz=300,slow=7.6
ABKAR Akbulak array 57.74 309 P P 13 54 20.1 +0.1
ABKAR IAmb IAmb 13 54 56.8
comp=Z,8.9nm,1.9s
ABKAR Akbulak array 57.74 309 P P 13 54 20.1 +0.1
FINES FINESS Array B 64.76 334 *i* P **P 13 55 07.5 +0.3**
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 64.76 334 P P 13 55 04.9 -2.3
comp=Z,1.8nm,0.9s,baz=35,slow=5.1,SNR=4.8
WRA Warramunga Arr 65.80 196 P P 13 55 14.6 +0.3
comp=Z,0.5nm,0.7s,baz=18,slow=7.1,SNR=4.3
ASAR Alice Springs 69.51 195 P P 13 55 38.5 +0.9
comp=Z,0.3nm,0.6s,baz=13,slow=6.1,SNR=7.4
KBZ Khabaz 70.39 312 *eP* **P 13 55 45.0 +2.1**
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 70.39 312 P P 13 55 43.1 +0.3
comp=Z,2.5nm,0.8s,baz=68,slow=5.6,SNR=6.0
KBZ Khabaz 70.39 312 *eP* **P 13 55 45.0 +2.1**
BUR08 Bucovina Ar. S 75.81 325 P P 13 56 14.9 -0.1
GERES GERESS Array B 79.11 332 P P 13 56 32.5 -0.9
comp=Z,0.6nm,0.6s,baz=39,slow=6.3,SNR=5.7
TXAR Lajitas Array 80.75 58 P P 13 56 37.6 -5.0
comp=Z,0.2nm,0.4s,baz=332,slow=5.2,SNR=2.5

*IDC **06** 13:47:40.2±0.7, 18.97N×120.38E, h0km, mb3.9/12, mb1 4.0/13,mb1mx3.8/41,mbtmp3.8/13,ML3.5/1,MS3.8/2, Ms1 3.8/2,ms1mx2.9/47,Error ellipse: s-maj=26.1km s-min=15.4km az=70.0*
*MAN **06** 13:47:43.3, 18.99N×120.17E, h9km, mb5.2, ML4.2, MS4.3*
*NEIC **06** 13:47:45.3±1.8, 19.0N±0.1×120.3E±0.2, h35km±9km, mb4.2/10, Error ellipse: s-maj=24.0km s-min=14.5km az=86.0*
ISC 06 13:47:44.5±0.6, 19.01N±0.05×120.3E±0.1, h28km, n40, σ0s94/34, mb4.0/16, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**1.09**	**173⇓**	*eP*		**Pn**	**13 48 03.7**		**-0.3**
SIPP				*eS*		Sb	13 48 38.9		+20
APYP	**Conner**	**1.44**	**143**	*eP*		**Pn**	**13 48 09.4**		**+0.7**
APYP				*eS*		**Sb**	**13 48 30.9**		**+2.4**
CAUP	**Cauayan**	**2.50**	**145**	*eP*		**Pb**	**13 48 26.9**		**-1.8**
TWG	**Pinlang**	**3.85**	**10**	Pn		**Pn**	**13 48 41.9**		**0.0**
TPUB	**Ta-pu**	**4.28**	**4**	Pn		**Pn**	**13 48 47.1**		**-0.7**
YULB	**Yu-li**	**4.45**	**12**	Pn		**Pn**	**13 48 49.3**		**-0.9**
SSLB	**Suanglung**	**4.79**	**7**	Pn		**Pn**	**13 48 54.1**		**-0.7**
LQP	**Lukban**	**5.01**	**166⇑**	*eP*		**Pn**	**13 48 58.3**		**+0.3**
NACB	**Ninganchiao**	**5.27**	**13**	Pn		**Pn**	**13 49 01.3**		**-0.1**
YHNB	**Yeheng**	**5.71**	**10**	Pn		**Pn**	**13 49 08.5**		**+0.9**
DAV	**Davao City (W)**	**12.92**	**156**	LR		LR	13 57 00.7		
	comp=Z,207nm,19.6s,baz=330,slow=44								
KSRS	**Korea Array**	**19.54**	**18**	P		**Pn**	**13 52 10.6**		**-0.7**
	0.1nm,0.3s,baz=205,slow=11,SNR=5.3								
CMAR	**Chiang Mai Arr**	**20.26**	**272**	P		Pn	13 52 18.8		-1.3
	1.7nm,0.9s,baz=85,slow=8.1,SNR=13								
CMAR	**Chiang Mai Arr**	**20.26**	**272**	P		**P**	**13 52 17.7**		**-0.2**
BJT	**Baijiatuan**	**21.24**	**351**	P		**P**	**13 52 28.6**		**+0.3**
BJT					IAmb	IAmb	13 52 33.0		
	comp=Z,14nm,1.1s								
USRK	**Ussuriysk Ar.**	**26.95**	**19**	P		**P**	**13 53 25.5**		**+2.0**
	comp=Z,1.4nm,0.7s,baz=241,slow=15,SNR=3.8								
SONM	**Songino Array**	**30.91**	**342**	P		**P**	**13 53 59.1**		**+0.3**
	comp=Z,0.2nm,0.4s,baz=156,slow=7.6,SNR=3.1								
SONM	**Songino Array**	**30.91**	**342**	IAmb		IAmb	13 54 08.1		
	comp=Z,1.2nm,1.2s								
FITZ	**Fitzroy Crossi**	**37.25**	**172**	P		**P**	**13 54 53.6**		**-0.3**
	comp=Z,1.5nm,0.9s,baz=0.0,slow=4.0,SNR=3.4								
FITZ	**Fitzroy Crossi**	**37.25**	**172**	IAmb		IAmb	13 56 16.1		
	comp=Z,20nm,1.8s								
WRA	**Warramunga Arr**	**41.08**	**160**	P		**P**	**13 55 25.2**		**-0.8**
	comp=Z,1.1nm,0.9s,baz=337,slow=9.3,SNR=5.8								
WRA	**Warramunga Arr**	**41.08**	**160**	IAmb		IAmb	13 55 29.7		
	comp=Z,0.1nm,0.9s								
MK31	**Makanchi Array**	**41.65**	**320**	P		**P**	**13 55 30.9**		**+0.4**
MKAR	**Makanchi Array**	**41.65**	**320**	P		**P**	**13 55 29.7**		**-0.7**
	comp=Z,13nm,0.3s,baz=118,slow=9.0,SNR=9.4								
MAKZ	**Makanchi**	**41.84**	**320**	P		**P**	**13 55 32.7**		**+0.6**
MAKZ					IAmb	IAmb	13 55 33.6		
	comp=Z,3.2nm,1.2s								
ZAA0	**Zalesovo Array**	**44.24**	**331**	P		**P**	**13 55 50.4**		**-0.9**
ZAA0					IAmb	IAmb	13 55 52.1		
	comp=Z,2.8nm,1.1s								
ZALV	**Zalesovo Beam**	**44.24**	**331**	P		**P**	**13 55 50.5**		**-0.7**
	comp=Z,1.0nm,0.6s,baz=122,slow=7.0,SNR=6.8								
ZALV	**Zalesovo Beam**	**44.24**	**331**	P		**P**	**13 55 50.1**		**-1.1**
ASAR	**Alice Springs**	**44.44**	**162**	P		**P**	**13 55 52.3**		**-0.9**
	comp=Z,0.8nm,0.5s,baz=336,slow=6.8,SNR=23								
KURK	**Kurchatov**	**45.65**	**324**	P		**P**	**13 56 03.0**		**+0.5**
KURK	**Kurchatov**	**45.65**	**324**	IAmb		IAmb	13 56 50.5		
	comp=Z,7.5nm,1.4s								
KURBB	**Kurchatov Arra**	**45.66**	**324**	P		**P**	**13 56 03.0**		**+0.4**
	comp=Z,1.1nm,0.7s,baz=122,slow=7.9,SNR=9.5								
ABKAR	**Akbulak array**	**56.57**	**317**	P		**P**	**13 57 24.3**		**-0.3**
GEYT	**Alibeck**	**56.84**	**303**	P		**P**	**13 57 28.2**		**+1.4**
	comp=Z,5.8nm,1.1s,baz=88,slow=12,SNR=6.9								
GEYT	**Alibeck**	**56.84**	**303**	P		**P**	**13 57 27.4**		**+0.6**
GYA0B	**ALIBECK ARRAY**	**56.84**	**303**	P		**P**	**13 57 27.8**		**+1.0**
KBZ	**Khabaz**	**68.14**	**310**	P		**P**	**13 58 42.6**		**+0.5**
	comp=Z,2.4nm,1.1s,baz=63,slow=5.6,SNR=3.6								
ILAR	**Eielson Array**	**74.17**	**26**	P		**P**	**13 59 17.1**		**-1.1**
	comp=Z,0.8nm,1.1s,baz=282,slow=5.4,SNR=4.1								
YKA	**Yellowknife Ar**	**88.03**	**22**	P		**P**	**14 00 32.2**		**+0.2**
	comp=Z,2.0nm,1.1s,baz=316,slow=4.6,SNR=15								
YBH	**Yreka Blue Hor**	**96.11**	**42**	LR		LR	14 36 60.0		
	comp=Z,75nm,20.4s,baz=34,slow=31								

*OTT **06** 14:28:50.8±0.3, 58.68N×53.92W, h18km, ML3.6/4, LAlbertaRADOR Sea Seismic Zone. 488km east from Nutak, NI*
ISC 06 14:28:46.3±1.0, 58.68N±0.06×53.95W±0.07, h10km, n10, σ3s43/18, Labrador Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MKVL	**Makkovik**	**4.60**	**221**			PN	**Pn**	**14 29 58.8**	**+2.9**
MKVL						SN	**Sn**	**14 30 48.3**	**-0.9**
MKVL						Trac		14 30 54.7	
	comp=Z,1.4nm,0.0s								
NRS	**Narsarsuaq**	**4.96**	**56**	*i*	P	**Pn**		**14 30 02.8**	**+2.0**
NRS				*i*	S	**Sn**		**14 30 54.8**	**-3.3**
KAJQ	**Kangiqsualujju**	**6.25**	**275**		PN	**Pn**		**14 30 22.5**	**+4.1**
KAJQ					SN	**Sn**		**14 31 28.5**	**-1.3**
KAJQ					Trac			14 31 35.3	
	comp=Z,11nm,0.2s								
SCHQ	**Schefferville**	**8.06**	**247**		PN	**Pn**		**14 30 46.8**	**+3.5**
SCHQ					SN	**Sn**		**14 32 11.2**	**-3.2**
SCHQ					Trac			14 32 14.2	
	comp=Z,27nm,0.6s								
SFJD	**Kangerlussuaq**	**8.48**	**9**	*i*	P	**Pn**		**14 30 51.0**	**+1.9**
SFJD				*i*	S	Sn		14 32 17.4	-7.3
SFJD	**Kangerlussuaq**	**8.48**	**9**		PN	**Pn**		**14 30 51.3**	**+2.2**
SFJD					SN	**Sn**		**14 32 19.7**	**-5.0**
SFJD					Trac			14 32 21.6	
	comp=Z,0.7nm,0.1s								
KNGQ	**Kangiqsujuaq**	**9.43**	**296**		PN	**Pn**		**14 31 04.8**	**+2.8**
KNGQ					Trac			14 32 43.8	
	comp=Z,1.5nm,0.1s								
KNGQ					SN	**Sn**		**14 32 44.1**	**-3.9**
DRLN	**Deer Lake**	**9.67**	**194**		PN	**Pn**		**14 31 07.5**	**+2.1**
DRLN					SN	**Sn**		**14 32 49.2**	**-4.7**
DRLN					Trac			14 33 06.8	
	comp=Z,1μm,3.8s								
NATG	**Natashquan Que**	**9.85**	**215**		PN	**Pn**		**14 31 10.6**	**+2.7**
NATG					SN	**Sn**		**14 32 53.9**	**-4.5**
NATG					Trac			14 32 54.6	
	comp=Z,101nm,1.2s								
ICQ	**Pointe Anglais**	**12.03**	**226**		PN	**Pn**		**14 31 38.2**	**+0.5**

IDC 06 14:43:13.1±2.0, 2.82S×152.52E, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.5/44, mbtmp3.8/4, Error ellipse: s-maj=123.2km s-min=27.9km az=127.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.59**	**225**			P	P	14 48 35.5	+0.2
	0.7nm,0.5s,baz=48,slow=9.3,SNR=15								
ASAR	**Alice Springs**	**27.45**	**219**			P	P	14 49 00.6	-0.6
	0.8nm,0.4s,baz=54,slow=8.9,SNR=58								
FITZ	**Fitzroy Crossi**	**30.41**	**238**			P	P	14 49 27.9	+0.5
	2.3nm,1.0s,baz=51,slow=13,SNR=4.4								
ILAR	**Eielson Array**	**80.44**	**22**			P	P	14 55 26.5	-0.1
	0.3nm,0.6s,baz=247,slow=5.7,SNR=4.8								

*IDC **06** 14:43:14.2±17.0, 19.86S×178.05W, h520km±147km, mb3.0/4, mb1 3.2/4, mb1mx2.8/43, mbtmp3.9/4, Error ellipse: s-maj=203.6km s-min=45.9km az=134.0*
*NEIC **06** 14:43:14.1±0.3, 20.2S±0.2×177.8W±0.2, h539km±8km, mb4.0/5, Error ellipse: s-maj=29.6km s-min=24.8km az=56.0*
ISC 06 14:43:16.8±1.9, 19.9S±0.4×178.1W±0.3, h550km, n16, σ0s85/15, mb3.6/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.19**	**300**			P	**P**	**14 44 40.8**	**+0.5**
URZ	**Urewera**	**18.79**	**192**			P	P	14 46 56.8	-4.9
CTA	**Charters Tower**	**33.43**	**263**			P	**P**	**14 49 10.9**	**+0.2**
	0.7nm,0.3s,baz=107,slow=11,SNR=3.1								
WR0	**Warramunga Arr**	**44.37**	**261**			P	**P**	**14 50 37.9**	**-1.1**
WR0						IAmb	IAmb	14 50 38.7	
	comp=Z,15nm,1.6s								
AS31	**Alice Springs**	**44.54**	**256**			P	**P**	**14 50 39.9**	**-0.5**
AS31						IAmb	IAmb	14 51 34.7	
	comp=Z,2.6nm,1.6s								
ASAR	**Alice Springs**	**44.54**	**256**			P	**P**	**14 50 40.2**	**-0.1**
	comp=Z,1.5nm,0.7s,baz=92,slow=7.8,SNR=18								
ASAR						PcP	**PcP**	**14 52 11.4**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=101,slow=3.8,SNR=4.2								
ASAR	**Alice Springs**	**44.54**	**256**			P	**P**	**14 50 39.8**	**-0.6**
WRAB	**Tennant Creek**	**44.55**	**261**			P	**P**	**14 50 40.1**	**-0.3**
WRAB						IAmb	IAmb	14 51 08.9	
	comp=Z,4.8nm,0.8s								
WRA	**Warramunga Arr**	**44.56**	**261**			P	**P**	**14 50 40.0**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=97,slow=7.8,SNR=9.7								
WRA	**Warramunga Arr**	**44.56**	**261**			P	**P**	**14 50 39.7**	**-0.8**
ILAR	**Eielson Array**	**87.73**	**13**			P	**P**	**14 55 06.4**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=215,slow=5.6,SNR=7.4								
ILAR	**Eielson Array**	**87.73**	**13**			P	**P**	**14 55 05.9**	**-0.9**
AKASG	**Malin Array Be**	**142.40**	**331**			PKhKP	PKPpre	15 01 43.0	
	comp=Z,0.4nm,0.3s,baz=37,slow=4.0,SNR=5.6								
BRTR	**Keskin Array B**	**146.31**	**313**			PKPbc	**PKPdf**	**15 01 56.2**	**+1.9**
	comp=Z,0.4nm,0.5s,baz=85,slow=1.7,SNR=2.9								
GERES	**GERESS Array B**	**149.56**	**344**			PKPbc	**PKPbc**	**15 02 05.0**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=33,slow=2.3,SNR=4.2								
GERES	**GERESS Array B**	**149.56**	**344**				**PKPbc**	**15 02 03.8**	**-0.7**

*IDC **06** 14:44:45.7±1.0, 34.93N×23.64E, h0km, mb4.0/9, mb1 3.8/12,mb1mx3.6/56,mbtmp3.8/12,ML3.5/3,MS3.4/1, Ms1 3.4/1,ms1mx2.7/40, Error ellipse: s-maj=21.5km s-min=12.4km az=161.0*
*ISK **06** 14:44:49.4, 34.63N×24.06E, h31km, ML3.7/12*
*NEIC **06** 14:44:50.6±2.4, 34.82N±0.10×23.92E±0.07, h34km±8km, mb4.2/3, ML3.7(THE), Error ellipse: s-maj=14.6km s-min=8.5km az=192.0*
*ATH **06** 14:44:51.5, 34.82N×23.97E, h30km±1km, ML3.5/6, Error ellipse: s-maj=3.2km s-min=1.3km az=26.0*
*THE **06** 14:44:54.1, 34.91N×24.06E, h14km, ML3.3/11, Error ellipse: s-maj=0.8km s-min=0.5km az=218.0*
*DDA **06** 14:44:56.0, 34.82N×24.87E, h15km±415km, MW4.0*
ISC 06 14:44:50.8±0.7, 34.87N±0.04×24.02E±0.03, h32km±4km, n115, σ2s09/148, mb4.1/12, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.06**	**117**			P	**Pb**	**14 44 56.8**	**+0.5**
GVD						S	**Sb**	**14 44 59.3**	**-0.7**
	67μm,0.3s								
GVD	**Gavdhos**	**0.06**	**117**			P	**Pb**	**14 44 56.7**	**+0.5**
GVD						S	**Sb**	**14 45 00.9**	**+0.9**
GVD						AML	AML	14 45 01.7	
GVD						AML	AML	14 45 03.1	
GVD	**Gavdhos**	**0.06**	**117**	PG		**Pb**		**14 44 56.4**	**+0.1**
GVD				SG		**Sb**		**14 45 01.2**	**+1.2**
GVDS	**Gavdos**	**0.07**	**113**	P		**Pb**		**14 44 56.6**	**+0.3**
GVDS				S		**Sb**		**14 44 59.3**	**-0.7**
	64μm,0.3s								
GVDS	**Gavdos**	**0.07**	**113**	PG		**Pb**		**14 44 56.6**	**+0.3**
GVDS				SG		**Sb**		**14 45 01.2**	**+1.2**
VAM	**Vamos**	**0.56**	**15**	P		**Pn**		**14 45 04.2**	**+1.7**
VAM				S		**Sn**		**14 45 11.8**	**+1.2**
	6μm,0.5s								
VAM	**Vamos**	**0.56**	**15**	P		**Pn**		**14 45 04.1**	**+1.7**
VAM				S		**Sn**		**14 45 12.1**	**+1.5**
VAM				AML		AML		14 45 17.8	
	comp=E,13607μm,0.6s								
VAM				AML		AML		14 45 23.3	
	comp=N,8678μm,0.5s								
IMMV	**Iera Moni Meta**	**0.59**	**357**	P		**Pn**		**14 45 04.5**	**+1.6**
IMMV				S		**Sn**		**14 45 13.2**	**+1.7**
	comp=N,7μm,0.5s								
IMMV	**Iera Moni Meta**	**0.59**	**357**	P		**Pn**		**14 45 04.6**	**+1.7**
IMMV				S		**Sn**		**14 45 13.8**	**+2.4**
IMMV				AML		AML		14 45 20.1	
	comp=N,12374μm,0.6s								
IMMV				AML		AML		14 45 20.3	
	comp=E,15984μm,0.4s								
IMMV	**Iera Moni Meta**	**0.59**	**357**	PG		**Pn**		**14 45 04.5**	**+1.6**
IMMV				SG		**Sn**		**14 45 16.9**	**+5.4**
PRNS	**Prines Rethymn**	**0.63**	**39**	P		**Pn**		**14 45 04.7**	**+1.2**
PRNS				S		**Sb**		**14 45 12.3**	**+0.1**
TMBK	**Timbaki Herakl**	**0.65**	**72**	P		**Pn**		**14 45 05.7**	**+2.0**
TMBK				S		**Sn**		**14 45 14.2**	**+1.4**
	comp=E,2μm,0.5s								
CHAN	**Chania**	**0.65**	**2**	P		**Pn**		**14 45 05.7**	**+2.0**
CHAN				S		**Sn**		**14 45 14.8**	**+1.9**
	comp=E,2μm,0.8s								
SIVA	**Sivas**	**0.67**	**77**	P		**Pn**		**14 45 05.7**	**+1.8**
SIVA				S		**Sn**		**14 45 15.8**	**+2.5**
	comp=E,7μm,0.7s								
SIVA	**Sivas**	**0.67**	**77**	P		**Pn**		**14 45 05.7**	**+1.8**
SIVA				S		**Sn**		**14 45 16.5**	**+3.2**
SIVA				AML		AML		14 45 21.9	
	comp=E,15077μm,0.4s								
SIVA				AML		AML		14 45 24.6	
	comp=N,11461μm,0.4s								
RODP	**Rodopos**	**0.72**	**343**	P		**Pn**		**14 45 07.2**	**+2.5**
RODP				S		**Sn**		**14 45 18.4**	**+3.7**
	comp=N,758nm,0.5s								
RODP	**Rodopos**	**0.72**	**343**	PG		**Pn**		**14 45 06.9**	**+2.2**
RODP				SG		**Sn**		**14 45 19.8**	**+5.1**
IDI	**Anoyia**	**0.83**	**59**	Pg		**Pb**		**14 45 08.1**	**+1.3**
	comp=N,60nm,0.3s,baz=247,slow=9.7,SNR=277								
IDI				Lg		Lg		14 45 22.7	
	comp=N,157nm,0.3s,baz=325,slow=21,SNR=29								
IDI	**Anoyia**	**0.83**	**59**	P		**Pb**		**14 45 08.1**	**+1.3**
IDI				S		**Sn**		**14 45 22.0**	**+4.6**
IDI				AML		AML		14 45 24.2	
	comp=N,2781μm,0.8s								
IDI				AML		AML		14 45 26.0	
	comp=E,2991μm,0.4s								
KSTL	**Kastelli Herak**	**0.97**	**63**	P		Pb		14 45 14.2	+5.2
IACM	**Heraklion**	**0.97**	**63**	P		**Pb**		**14 45 11.9**	**+2.9**
IACM	**Heraklion**	**0.97**	**63**	P		**Pb**		**14 45 11.9**	**+2.9**
HRKL	**Herakleio**	**0.99**	**63**	P		**Pb**		**14 45 11.7**	**+2.2**
ANKY	**Antikythira Is**	**1.16**	**330**	P		**Pb**		**14 45 14.6**	**+2.4**
ANKY				S		**Sb**		**14 45 31.0**	**+4.1**
	comp=E,855nm,0.7s								
ANKY	**Antikythira Is**	**1.16**	**330**	P		**Pb**		**14 45 13.9**	**+1.7**
LAST	**Lasithi**	**1.23**	**76**	P		**Pb**		**14 45 15.4**	**+1.8**
LAST				S		**Sb**		**14 45 31.0**	**+1.8**
	comp=E,560nm,0.7s								
LAST	**Lasithi**	**1.23**	**76**	P		**Pb**		**14 45 15.2**	**+1.7**
LAST				S		**Sb**		**14 45 32.2**	**+3.0**
LAST				AML		AML		14 45 46.2	
	comp=E,784μm,1.1s								
LAST				AML		AML		14 45 46.4	
	comp=N,1345μm,0.5s								
NPS	**Neapolis**	**1.37**	**73**	P		**Pb**		**14 45 17.4**	**+1.6**
NPS	**Neapolis**	**1.37**	**73**	P		**Pb**		**14 45 17.6**	**+1.8**
KTHA	**Kythira Island**	**1.59**	**331**	P		**Pb**		**14 45 20.5**	**+1.0**
KTHA				S		**Sb**		**14 45 40.1**	**+0.8**
	comp=N,680nm,0.6s								
KTHA	**Kythira Island**	**1.59**	**331**	P		**Pb**		**14 45 19.7**	**+0.2**
KTHA	**Kythira Island**	**1.59**	**331**	PN		**Pb**		**14 45 19.5**	**0.0**
KTHA				SN		**Sb**		**14 45 41.0**	**+1.7**
KTHR	**Kythira**	**1.62**	**330**	P		**Pb**		**14 45 20.5**	**+0.5**
ZKR	**Zakros**	**1.82**	**82**	P		**Pb**		**14 45 23.3**	**-0.2**
ZKR	**Zakros**	**1.82**	**82**	P		**Pb**		**14 45 23.2**	**-0.3**
ZKR	**Zakros**	**1.82**	**82**	PN		**Pn**		**14 45 19.6**	**-0.2**
THR6	**Thira Island,**	**1.86**	**37**	P		**Pb**		**14 45 23.8**	**-0.3**
THR5	**Thira Island,**	**1.89**	**35**	P		**Pb**		**14 45 23.9**	**-0.7**
SANT	**Santorini**	**1.90**	**38**	PN		**Pb**		**14 45 23.6**	**-1.3**
SANT	**Santorini**	**1.90**	**38**	Pn		**Pb**		**14 45 23.9**	**-0.9**
THR3	**Thira Island,**	**1.91**	**36**	P		**Pb**		**14 45 24.2**	**-0.7**
THR8	**Santorini-Mono**	**1.94**	**37**	P		**Pb**		**14 45 24.4**	**-1.1**
VLI	**Veliai**	**2.04**	**335**	P		**Pb**		**14 45 26.6**	**-0.6**
IOSP	**Ios island**	**2.12**	**29**	P		**Pb**		**14 45 26.6**	**-1.9**
APE	**Apeiranthos**	**2.52**	**29**	PN		**Pn**		**14 45 31.5**	**+2.1**
APE				SN		**Sb**		**14 46 03.3**	**-2.5**
KRND	**KRANIDI**	**2.60**	**345**	P		**Pn**		**14 45 33.8**	**+3.1**
KARP	**Karpathos**	**2.66**	**74**	P		**Pn**		**14 45 34.5**	**+3.0**
KARP	**Karpathos**	**2.66**	**74**	P		**Pn**		**14 45 34.6**	**+3.2**
KARP	**Karpathos**	**2.66**	**74**					**14 45 34.4**	**+3.0**
ITM	**Ithomi**	**2.86**	**324**	P		**Pn**		**14 45 37.5**	**+3.3**
ITM	**Ithomi**	**2.86**	**324**	Pn		**Pn**		**14 45 35.5**	**+1.4**
DAT	**Datca**	**3.44**	**56**	PN		**Pn**		**14 45 44.1**	**+1.9**
DAT	**Datca**	**3.44**	**56**	*i*	P	**Pn**		**14 45 45.1**	**+3.0**
DAT				*i*	S	**Sn**		**14 46 23.1**	**+1.2**
ARG	**Arkhangelos**	**3.61**	**67**	P		**Pn**		**14 45 47.3**	**+2.9**
ARG	**Arkhangelos**	**3.61**	**67**	PN		**Pn**		**14 45 46.2**	**+1.8**
ARG				SN		**Sn**		**14 46 26.8**	**+0.9**
YER	**Yerkesik**	**4.13**	**56**	PN		**Pn**		**14 45 53.1**	**+1.5**
TURN	**Turunc**	**4.23**	**60**	PN		**Pn**		**14 45 50.9**	**-2.0**
TURN	**Turunc**	**4.23**	**60**	*i*	P	**Pn**		**14 45 51.7**	**-1.2**
TURN				*i*	S	**Sn**		**14 46 35.1**	**-6.0**
AGG	**Agios Georgios**	**4.36**	**342**	PN		Pn		14 45 58.8	+4.0
AGG	**Agios Georgios**	**4.36**	**342**	Pn		**Pn**		**14 45 57.3**	**+2.5**
FETY	**Fethiye**	**4.48**	**65**	PN		**Pn**		**14 45 58.7**	**+2.3**
FETY	**Fethiye**	**4.48**	**65**	*i*	P	**Pn**		**14 45 58.5**	**+2.1**
FETY				*i*	S	**Sn**		**14 46 46.6**	**-0.9**
TAVA	**DENIZLI_Tavas**	**4.73**	**55**	*i*	P	**Pn**		**14 46 03.4**	**+3.4**
TAVA				*e*	S	**Sn**		**14 46 54.4**	**+0.7**
AKAS	**Kas**	**4.75**	**72**	PN		**Pn**		**14 46 01.5**	**+1.2**
AKAS	**Kas**	**4.75**	**72**	*i*	P	**Pn**		**14 46 01.7**	**+1.5**
AKAS				*i*	S	**Sn**		**14 46 53.7**	**-0.6**
GOLH	**Golhisar**	**5.07**	**61**	*i*	P	**Pn**		**14 46 07.7**	**+3.0**
GOLH				*i*	S	**Sn**		**14 47 04.0**	**+1.8**
ELL	**Elmali**	**5.14**	**67**	PN		**Pn**		**14 46 07.3**	**+1.7**
ELL	**Elmali**	**5.14**	**67**			**Pn**		**14 46 08.3**	**+2.7**
AKUM	**Antalya-Kumluc**	**5.35**	**72**	*i*	P	**Pn**		**14 46 09.9**	**+1.5**
AKUM				*i*	S	**Sn**		**14 47 05.6**	**-3.3**
FNA	**Florina**	**6.26**	**341**	Pn		**Pn**		**14 46 22.4**	**+1.4**
KEPZ	**Antalya-Kepez**	**6.48**	**70**	*i*	P	**Pn**		**14 46 25.9**	**+2.0**
KEPZ				*i*	S	**Sn**		**14 47 35.1**	**-1.7**
GAZI	**Gazipasa**	**6.90**	**76**	PG		**Pn**		**14 46 29.4**	**-0.2**
GAZI				SG				14 46 43.5	
GAZI	**Gazipasa**	**6.90**	**76**	*i*	P	**Pn**		**14 46 28.7**	**-0.9**
GAZI				*i*	S	**Sn**		**14 47 42.0**	**-5.0**
TIP	**Timpagrande**	**7.22**	**309**	Pn		**Pn**		**14 46 34.2**	**+0.1**
LEF	**Lefka**	**7.29**	**86**	PG		**Pn**		**14 46 30.9**	**-4.0**
TEKE	**Tekeli-Mersin**	**7.53**	**78**	PN		**Pn**		**14 46 37.3**	**-0.9**
BERE	**Bereket-Mersin**	**7.64**	**76**	PN		**Pn**		**14 46 39.9**	**0.0**
CSS	**Mathiatis**	**7.65**	**87**	PN		**Pn**		**14 46 38.4**	**-1.5**
CSS	**Mathiatis**	**7.65**	**87**	Pn		**Pn**		**14 46 38.5**	**-1.5**
TEVE	**Tevekalti-Mers**	**7.83**	**76**	PN		**Pn**		**14 46 42.8**	**+0.3**
IKL	**Isikli**	**8.00**	**77**	PN		**Pn**		**14 46 43.9**	**-0.8**
KEBE	**Keben-

az=133.0
*MAN **06** 15:12:38.9, 19°.10N×120°.17E, h15km, mb5.0, ML3.9, MS4.0*

ISC 06 15:12:38.6±0.4, 19°.07N±0°.04×120°.18E±0°.06, h10km, n75, σ1§19/68, mb4.1/26, MS3.6/9, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**1.17**	**167**	*eP*		**Pb**	**15 12 59.3**	**-1.6**
SIPP				*i* S		**Sg**	**15 13 18.1**	**+1.7**
APYP	**Conner**	**1.57**	**140**	*eP*		**Pn**	**15 13 05.9**	**-0.7**
APYP				*eS*		**Sn**	**15 13 27.3**	**+0.3**
SGCP	**Mt. Cagua**	**1.95**	**115**	*eP*		**Pn**	**15 13 12.6**	**+0.8**
SGCP				*eS*		**Sn**	**15 13 37.3**	**+0.9**
BBP	**Basco**	**2.16**	**51**	*eP*		**Pn**	**15 13 14.4**	**-0.3**
BBP				*eS*		**Sn**	**15 13 38.6**	**-3.0**
CAUP	**Cauayan**	**2.63**	**143**	*eP*		**Pn**	**15 13 23.6**	**+2.4**
SMPP	**San Manuel, Pa**	**2.94**	**171**	*eP*		**Pn**	**15 13 25.8**	**+0.3**
TPUB	**Ta-pu**	**4.23**	**6**	Pn		**Pn**	**15 13 41.9**	**-1.3**
YULB	**Yu-li**	**4.42**	**13**			**Pn**	**15 13 46.0**	**+0.1**
SSLB	**Suanglung**	**4.75**	**9**			**Pn**	**15 13 49.2**	**-1.1**
TGY	**Tagaytay City**	**5.00**	**172**	LR		LR	15 16 06.8	
	comp=Z,331nm,20.9s,baz=64,slow=43							
NACB	**Ninganchiao**	**5.25**	**14**	Pn		**Pn**	**15 13 56.9**	**-0.3**
YHNB	**Yeheng**	**5.68**	**11**			**Pn**	**15 14 04.8**	**+1.6**
YOJ	**Yonaguni jima**	**5.97**	**26**	Pn		**Pn**	**15 14 07.9**	**+0.8**
HKPS	**Hong Kong Po S**	**6.49**	**300**	Pn		**Pn**	**15 14 12.7**	**-1.5**
QIZ	**Qiongzhong**	**9.78**	**271**	Pn		**Pn**	**15 14 58.1**	**-1.3**
DAV	**Davao City (W)**	**13.03**	**156**	LR		LR	15 21 56.0	
	comp=Z,457nm,18.1s,baz=341,slow=43							
JNU	**Nakatsue**	**16.96**	**32**	Pn		**Pn**	**15 16 37.0**	**+1.0**
	0.1nm,0.3s,baz=191,slow=17,SNR=3.0							
JNU	**Nakatsue**	**16.96**	**32**	P		**Pn**	**15 16 37.0**	**+1.0**
JNU	**Nakatsue**	**16.96**	**32**	IAmb		IAmb	15 16 49.5	
	comp=Z,29nm,1.2s							
KMI	**Kunming**	**17.24**	**294**			**Pn**	**15 16 40.7**	**+0.8**
KMI				IAmb		IAmb	15 16 41.7	
	comp=Z,21nm,1.2s							
XAN	**Xi'an**	**17.97**	**328**			**Pn**	**15 16 50.1**	**+1.5**
KSRS	**Korea Array**	**19.53**	**19**	P		**P**	**15 17 06.6**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=202,slow=11,SNR=14							
KSRS				LR		LR	15 24 04.4	
	comp=Z,69nm,21.4s,baz=335,slow=35							
KS19	**Wonju Array Si**	**19.56**	**19**	P		**P**	**15 17 07.1**	**+0.5**
KS19				IAmb		IAmb	15 17 11.1	
	comp=Z,34nm,1.6s							
CHTO	**Chiang Mai**	**20.09**	**273**	P		**P**	**15 17 13.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**20.12**	**272**	P		**P**	**15 17 13.8**	**+0.9**
	comp=Z,1.2nm,0.7s,baz=78,slow=8.7,SNR=5.7							
CMAR				LR		LR	15 26 28.0	
	comp=Z,26nm,18.0s,baz=55,slow=41							
BJT	**Baijiatuan**	**21.16**	**351**	P		**P**	**15 17 24.2**	**+0.3**
BJT				IAmb		IAmb	15 17 28.7	
	comp=Z,12nm,0.9s							
SIJI	**Sorong**	**22.61**	**150**	P		**P**	**15 17 39.2**	**-0.5**
	comp=Z,2.6nm,0.6s,baz=249,slow=22,SNR=9.2							
MJAR	**Matsushiro Arr**	**23.54**	**39**	P		**P**	**15 17 52.0**	**+2.9**
	comp=Z,1.6nm,0.7s,baz=242,slow=9.5,SNR=3.0							
KAPI	**Kappang**	**23.94**	**181**	LR		LR	15 30 00.6	
	comp=Z,55nm,19.0s,baz=316,slow=44							
GUMO	**Guam**	**24.30**	**99**	LR		LR	15 26 43.3	
	comp=Z,49nm,20.1s,baz=312,slow=35							
FAKI	**Fak Fak**	**24.87**	**150**	P		**P**	**15 18 01.0**	**-0.7**
FAKI				IAmb		IAmb	15 18 58.3	
	comp=Z,16nm,1.0s							
USRK	**Ussuriysk Ar.**	**26.94**	**19**	P		**P**	**15 18 20.8**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=211,slow=3.5,SNR=8.1							
USRK	**Ussuriysk Ar.**	**26.94**	**19**	P		**P**	**15 18 20.1**	**0.0**
SONM	**Songino Array**	**30.81**	**342**	P		**P**	**15 18 55.4**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=158,slow=9.4,SNR=3.7							
SONM	**Songino Array**	**30.81**	**342**	IAmb		IAmb	15 18 57.7	
	comp=Z,0.9nm,1.0s							
ODAN	**Odare**	**31.10**	**291**	*eP*		**P**	**15 18 58.5**	**+0.8**
	comp=Z,7.3nm,0.7s							
RAMN	**Ramite**	**31.81**	**291**	*eP*		**P**	**15 19 04.9**	**+1.0**
	comp=Z,8.1nm,0.6s							
GUN	**Gumba**	**32.58**	**292**	*eP*		**P**	**15 19 11.2**	**+0.5**
	comp=Z,18nm,0.8s							
KKN	**Kakani**	**33.09**	**292**	*eP*		**P**	**15 19 15.2**	**+0.1**
DANN	**Dangsing**	**34.49**	**292**	*eP*		**P**	**15 19 27.3**	**-0.1**
	comp=Z,13nm,0.9s							
KOLN	**Koldanda**	**34.56**	**291**	*eP*		**P**	**15 19 28.2**	**+0.3**
FITZ	**Fitzroy Crossi**	**37.33**	**171**	P		**P**	**15 19 49.5**	**-1.8**
	comp=Z,1.6nm,0.7s,baz=38,slow=3.5,SNR=5.6							
PMG	**Port Moresby**	**38.84**	**134**	LR		LR	15 35 37.8	
	comp=Z,44nm,18.6s,baz=291,slow=36							
KRVT	**Keravat (AS076**	**39.02**	**123**	LR		LR	15 33 05.2	
	comp=Z,94nm,20.0s,baz=287,slow=32							
WRA	**Warramunga Arr**	**41.18**	**160**	P		**P**	**15 20 21.9**	**-1.7**
	comp=Z,0.7nm,0.5s,baz=341,slow=9.0,SNR=12							
MKAR	**Makanchi Array**	**41.51**	**320**	P		**P**	**15 20 26.7**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=116,slow=11,SNR=10.0							
ZALV	**Zalesovo Beam**	**44.12**	**331**	P		**P**	**15 20 47.5**	**+0.4**
	comp=Z,1.8nm,0.7s,baz=126,slow=8.5,SNR=8.6							
ZALV				LR		LR	15 38 19.0	
	comp=Z,187nm,20.6s,baz=293,slow=35							
AS31	**Alice Springs**	**44.54**	**162**	P		**P**	**15 20 49.4**	**-1.3**
ASAR	**Alice Springs**	**44.54**	**162**	P		**P**	**15 20 49.7**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=335,slow=6.7,SNR=25							
ASAR	**Alice Springs**	**44.54**	**162**	P		**P**	**15 20 49.5**	**-1.3**
PETK	**Petropavlovsk-**	**44.65**	**31**	P		**P**	**15 20 51.7**	**+0.3**
	comp=Z,5.0nm,1.0s,baz=169,slow=8.8,SNR=6.7							
KURK	**Kurchatov**	**45.52**	**324**	P		**P**	**15 20 59.1**	**+0.8**
KURK				IAmb		IAmb	15 21 00.7	
	comp=Z,3.0nm,0.9s							
KURBB	**Kurchatov Arra**	**45.53**	**324**	P		**P**	**15 20 59.4**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=122,slow=7.9,SNR=27							
ARSB	**Arslanbob**	**45.76**	**310**	P		**P**	**15 20 58.6**	**-1.9**
CTA	**Charters Tower**	**46.56**	**145**	P		**P**	**15 21 05.9**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=342,slow=16,SNR=2.7							
KKAR	**Karatay Array**	**47.97**	**311**	P		**P**	**15 21 17.4**	**-0.2**
CHGR	**Chuyangaron**	**48.10**	**305**	P		**P**	**15 21 16.5**	**-2.3**
CHGR				IAmb		IAmb	15 21 59.9	
	comp=Z,8.1nm,1.2s							
HNR	**Honiara**	**48.36**	**122**	LR		LR	15 39 17.8	
	comp=Z,84nm,19.9s,baz=344,slow=33							
FORT	**Forrest**	**50.14**	**171**	P		**P**	**15 21 33.1**	**-1.1**
BBOO	**Buckleboo**	**53.78**	**163**	P		**P**	**15 22 00.4**	**-1.0**
STKA	**Stephens Creek**	**54.66**	**158**	P		**P**	**15 22 07.1**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=320,slow=7.7,SNR=5.6							
STKA	**Stephens Creek**	**54.66**	**158**	P		**P**	**15 22 05.8**	**-2.0**
STKA				IAmb		IAmb	15 22 09.2	
	comp=Z,9.1nm,1.9s							
ABKAR	**Akbulak array**	**56.43**	**317**	P		**P**	**15 22 21.4**	**+1.0**
ABKAR	**Akbulak array**	**56.43**	**317**	P		**P**	**15 22 20.7**	**+0.3**
GEYT	**Alibeck**	**56.69**	**303**	P		**P**	**15 22 24.3**	**+1.8**
	comp=Z,1.8nm,0.7s,baz=134,slow=4.3,SNR=5.4							
GEYT	**Alibeck**	**56.69**	**303**	P		**P**	**15 22 23.6**	**+1.1**
ARU	**Arti**	**58.68**	**325**	P		**P**	**15 22 35.9**	**-0.2**
KBZ	**Khabaz**	**68.00**	**310**	P		**P**	**15 23 38.8**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=110,slow=15,SNR=2.4							
ILAR	**Eielson Array**	**74.17**	**26**	P		**P**	**15 24 14.5**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=286,slow=4.6,SNR=5.7							
ILAR	**Eielson Array**	**74.17**	**26**	P		**P**	**15 24 13.7**	**-1.5**
AKASG	**Malin Array Be**	**76.08**	**319**	P		**P**	**15 24 26.4**	**0.0**
	comp=Z,0.2nm,0.3s,baz=57,slow=6.8,SNR=2.7							
AKASG	**Malin Array Be**	**76.08**	**319**	P		**P**	**15 24 25.0**	**-1.4**
NOA	**NORSAR Array B**	**82.29**	**332**	LR		LR	16 03 25.3	
	comp=Z,81nm,19.2s,baz=235,slow=37							
KMBO	**Kilima Mbogo**	**83.68**	**267**	LR		LR	16 00 11.2	
	comp=Z,47nm,20.5s,baz=241,slow=34							
YKA	**Yellowknife Ar**	**88.03**	**22**	P		**P**	**15 25 29.0**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=311,slow=4.5							

*ATA **06** 15:18:45.9±1.9, 38°.66N×40°.54E, h10km±73km, ML2.0, MW3.6*
*ISK **06** 15:18:53.3, 38°.79N×40°.92E, h26km, ML1.9/5*
*DDA **06** 15:18:54.9, 38°.81N×41°.10E, h7km±5km, ML1.2*

ISC 06 15:18:52.1±1.7, 38°.70N±0°.05×40°.96E±0°.04, h0km±15km, n16, σ1§10/23, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BNGL	**BINGOL**	**0.29**	**31**	*eP*		**Pg**	**15 18 57.3**	**-0.5**
BNGL				IAML			15 19 05.1	
	comp=Z,1μm,0.9s							
BNGL	**BINGOL**	**0.29**	**31**	*i* P		**Pg**	**15 18 57.3**	**-0.5**
BNGL				*i* S		**Sg**	**15 19 01.3**	**-0.2**
BNGB	**Bingl**	**0.36**	**323**	PG		**Pg**	**15 19 00.1**	**+1.0**
BNGB				SG		**Sb**	**15 19 06.2**	**-1.6**
MUSM	**Mu-Merkez**	**0.43**	**87**	*eP*		**Pg**	**15 19 00.2**	**-0.3**
MUSM				IAML			15 19 10.6	
	comp=Z,32nm,0.9s							
MUSM	**Mu-Merkez**	**0.43**	**87**	*i* P		**Pg**	**15 18 59.9**	**-0.6**
MUSM				*i* S		**Sg**	**15 19 06.8**	**+0.6**
MUSM				IAML			15 19 07.0	
	comp=E,20nm,0.5s							
MUSM				IAML			15 19 12.0	
	comp=N,23nm,0.5s							
SVAN	**Silvan-Diyarba**	**0.58**	**161**	PG		**Pn**	**15 19 07.4**	**-0.3**
SVAN				SG		**Sn**	**15 19 17.4**	**-0.6**
SVAN	**Silvan-Diyarba**	**0.58**	**161**	*i* P		**Pn**	**15 19 08.2**	**+0.5**
SVAN				*i* S		**Sn**	**15 19 17.6**	**-0.3**
SVAN				IAML			15 19 21.0	
	comp=E,12nm,0.6s							
VRTB	**Varto-Mus**	**0.60**	**40**	PG		**Pb**	**15 19 05.2**	**-0.4**
KARO	**Karliova-Bingo**	**0.61**	**7**	PG		**Pg**	**15 19 04.9**	**+1.0**
KARO				SG		**Sg**	**15 19 12.9**	**+1.1**
YEDI	**Yedisu-Bingol**	**0.80**	**337**	PG		**Pg**	**15 19 08.1**	**+0.6**
ECAT	**Cat-ERZURUM**	**0.90**	**1**	*eP*		**Pg**	**15 19 06.9**	**-2.5**
ECAT				*eS*		**Sg**	**15 19 20.1**	**-1.0**
ECAT				IAML			15 19 27.4	
	comp=N,7.8nm,0.3s							
SRTM	**Siirt_Merkez**	**1.04**	**133**	*i* P		**Pn**	**15 19 16.3**	**+2.3**
TNCL	**Tunceli-Merkez**	**1.18**	**291**	*eP*		Pg	15 19 03.8	-11
TNCL				*eS*		Sg	15 19 16.6	-13
TNCL				IAML			15 19 18.1	
	comp=Z,7.0nm,0.5s							
TNCL	**Tunceli-Merkez**	**1.18**	**291**	*i* P		**Pg**	**15 19 14.2**	**-0.5**
TNCL				*i* S		**Sn**	**15 19 33.3**	**+0.6**
TNCL				IAML			15 19 39.0	
	comp=N,20nm,0.6s							
TNCL				IAML			15 19 44.0	
	comp=E,23nm,0.9s							
HOMI	**Horasan**	**1.53**	**28**	*i* P		**Pg**	**15 19 22.5**	**+1.0**
EATA	**Eleskirt**	**1.66**	**45**	*i* P		**Pg**	**15 19 24.4**	**+0.3**
EATA				IAML			15 19 48.0	
	comp=N,5.6nm,0.6s							
EATA				IAML			15 19 52.0	
	comp=E,5.1nm,0.5s							

*NIED **06** 15:57:00, 37°.50N×141°.60E, h44km, Mw4.0 Best double couple: Ms1.00000×10^15 NP1:φ=74.00000°, δ61.00000°, λ96.00000°. NP2:φ=242.00000°, δ29.00000°, λ80.00000°.*
*JMA **06** 15:57:34.4±0.1, 37°.53N×141°.57E, h42km±2km, M3.9*
JMA Felt II J1.
*NEIC **06** 15:57:35.3±1.4, 37°.53N±0°.06×141°.7E±0°.1, h52km±6km, mb4.7/16, Error ellipse: s-maj=12.9km s-min=8.4km az=115.0*
*IDC **06** 15:57:36.2±2.2, 37°.55N×141°.52E, h52km±18km, mb3.6/24, mb1 3.7/30, mb1mx3.7/61, mbtmp3.8/30, ML2.9/6, MS3.1/2, Ms1 3.1/2, ms1mx2.7/34, Error ellipse: s-maj=16.9km s-min=12.1km az=123.0*

ISC 06 15:57:34.2±0.5, 37°.52N±0°.05×141°.65E±0°.06, h39km±4km, n83, σ1§14/87, mb4.0/27, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JFK	**Kawauchi**	**0.64**	**256**	P		**Pn**	**15 57 46.3**	**-0.6**
JFK				S		**Sn**	**15 57 54.2**	**-1.6**
JMST	**Minamisoumatoc**	**0.64**	**289**	P		**Pn**	**15 57 46.2**	**-0.7**
JMST				S		**Sn**	**15 57 54.3**	**-1.5**
JMM	**Marumori**	**0.76**	**297**	P		**Pn**	**15 57 48.1**	**-0.4**
JMM				S		**Sn**	**15 57 57.6**	**-1.2**
ONAJ	**Iwakimizuishiy**	**0.80**	**239**	P		**Pn**	**15 57 48.5**	**-0.6**
ONAJ				S		**Sn**	**15 57 58.0**	**-1.8**
JIKH	**Ishinomakikobu**	**0.80**	**350**	P		**Pn**	**15 57 49.0**	**-0.1**
JIKH				S		**Sn**	**15 57 59.0**	**-0.8**
JIO	**Ouri**	**0.96**	**346**	P		**Pn**	**15 57 51.3**	**0.0**
JFT	**Otama**	**1.04**	**270**	P		**Pn**	**15 57 52.6**	**+0.2**
JFT				S		**Sn**	**15 58 05.2**	**-0.6**
JOU	**Okura**	**1.15**	**318**	P		**Pn**	**15 57 53.8**	**0.0**
JOU				*eS*		**Sn**	**15 58 08.2**	**-0.2**
JYS	**Shirataka**	**1.44**	**300**	P		**Pn**	**15 57 58.1**	**+0.3**
JMK	**Ichinoseki**	**1.47**	**347**	P		**Pn**	**15 57 58.6**	**+0.4**
JMK				*eS*		**Sn**	**15 58 16.9**	**+0.7**
MJAR	**Matsushiro Arr**	**2.92**	**252**	P		**Pn**	**15 58 19.7**	**+1.5**
	0.7nm,0.3s,baz=111,slow=5.0,SNR=38							
MJAR				S		**Sn**	**15 58 58.5**	**+6.4**
	1.3nm,0.3s,baz=89,slow=30,SNR=6.2							
MJAR				LR		LR	15 59 47.2	
	comp=Z,158nm,18.5s,baz=350,slow=47							
MAJO	**Matsushiro**	**2.92**	**252**			**Pn**	**15 58 19.9**	**+1.7**
MAT	**Matsushiro**	**2.92**	**252**	P		**Pn**	**15 58 20.0**	**+1.8**
MAT				S		**Sn**	**15 58 52.8**	**+0.7**
MJB9	**Matsu-Tunnel**	**2.92**	**252**			**Pn**	**15 58 19.8**	**+1.6**
INU	**Inuyama**	**4.32**	**241**			**Pn**	**15 58 39.5**	**+2.1**
ERM	**Erimo**	**4.64**	**14**	Pn		**Pn**	**15 58 42.0**	**+0.3**
JHJ2	**Mitsune**	**4.65**	**199**	Pn		**Pn**	**15 58 42.4**	**+0.5**
ASAJ	**Asahikawa**	**6.63**	**6**	P		**Pn**	**15 59 09.7**	**+0.7**
	1.7nm,0.3s,baz=210,slow=15,SNR=28							
ASAJ				S		**Sn**	**16 00 23.6**	**+0.3**
	0.1nm,0.3s,baz=164,slow=18,SNR=2.0							
JKA	**Kamikawa-asahi**	**6.63**	**6**			**Pn**	**15 59 09.7**	**+0.7**
JKA						**Sn**	**16 00 23.6**	**+0.3**
USA0B	**Ussuriysk Arra**	**9.90**	**315**	Pn		**Pn**	**15 59 54.4**	**+0.5**
USRK	**Ussuriysk Ar.**	**9.90**	**315**	P		**Pn**	**15 59 54.6**	**+0.7**
	baz=120,slow=14,SNR=6.8							
JCJ	**Chichijima**	**10.40**	**177**	P		**Pn**	**15 59 59.4**	**-1.5**
	7.2nm,0.3s,baz=331,slow=19,SNR=6.0							
KSRS	**Korea Array**	**10.91**	**274**	P		**Pn**	**16 00 10.1**	**+2.3**
	0.1nm,0.3s,baz=95,slow=15,SNR=3.0							
KSAR	**Wonju Array Be**	**10.94**	**274**	Pn		**Pn**	**16 00 09.8**	**+1.6**
KLR	**Kul'dur**	**13.72**	**332**	P		**Pn**	**16 00 46.3**	**+0.2**
	0.1nm,0.3s,baz=132,slow=12,SNR=2.3							
PETK	**Petropavlovsk-**	**19.17**	**30**	P		**Pn**	**16 01 55.4**	**0.0**
	0.0nm,0.3s,baz=214,slow=10,SNR=3.2							
YOJ	**Yonaguni jima**	**20.56**	**236**	P		Pn	16 02 10.3	-1.7
YOJ				IAmb		IAmb	16 02 49.2	
	comp=Z,104nm,1.3s							
YAK	**Yakutsk**	**25.64**	**347**	P		**P**	**16 03 00.1**	**+0.3**
	comp=Z,2.5nm,0.3s,baz=348,slow=2.3,SNR=4.6							
YAK	**Yakutsk**	**25.64**	**347**	P		**P**	**16 02 59.5**	**-0.3**
SEY	**Seymchan**	**26.28**	**11**	P		**P**	**16 03 06.2**	**+0.7**
	comp=Z,1.5nm,0.7s,baz=282,slow=23,SNR=2.7							
ENH	**Enshi**	**27.57**	**264**	P		**P**	**16 03 16.6**	**-1.0**
SONM	**Songino Array**	**27.67**	**303**	P		**P**	**16 03 18.8**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=91,slow=8.8,SNR=5.2							
SONM	**Songino Array**	**27.67**	**303**	P		**P**	**16 03 17.6**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**28.24**	**122**	T		T	16 33 31.7	
	baz=314,slow=75,SNR=241							
H11N1	**WAKE ISLAND Hy**	**28.25**	**122**	T		T	16 33 35.8	
	baz=314,slow=75,SNR=307							
H11N3	**WAKE ISLAND Hy**	**28.26**	**122**	T		T	16 33 36.5	
	baz=314,slow=75,SNR=313							
H11S1	**WAKE ISLAND Hy**	**28.97**	**124**	T		T	16 34 31.4	
	baz=316,slow=76,SNR=188							
H11S3	**WAKE ISLAND Hy**	**28.97**	**124**	T		T	16 34 34.3	
	baz=316,slow=76,SNR=156							
H11S2	**WAKE ISLAND Hy**	**28.98**	**124**	T		T	16 34 35.5	
	baz=316,slow=76,SNR=120							
ADK	**Adak**	**32.43**	**50**	P		**P**	**16 03 58.6**	**-1.7**
TIXI	**Tiksi**	**34.83**	**353**	P		**P**	**16 04 20.7**	**-0.2**
NIKH	**Nikolski High**	**37.31**	**49**	P		**P**	**16 04 42.2**	**-0.2**
ZALV	**Zalesovo Beam**	**41.73**	**312**	P		**P**	**16 05 19.4**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=92,slow=7.0,SNR=7.8							
ZALV				PcP		**PcP**	**16 07 14.8**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=100,slow=3.5,SNR=2.9							
CMAR	**Chiang Mai Arr**	**41.80**	**255**	P		**P**	**16 05 19.8**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=43,slow=9.9,SNR=3.8							
MKAR	**Makanchi Array**	**44.02**	**302**	P		**P**	**16 05 37.6**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=82,slow=8.3,SNR=11							
KURK	**Kurchatov**	**45.78**	**308**	P		**P**	**16 05 51.2**	**-0.6**
KURK				IAmb		IAmb	16 06 03.5	
	comp=Z,4.4nm,0.9s							
ILAR	**Eielson Array**	**48.98**	**33**	P		**P**	**16 06 17.5**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=266,slow=6.3,SNR=17							
INK	**Inuvik**	**53.87**	**27**	P		**P**	**16 06 54.1**	**+1.2**
	comp=Z,0.9nm,0.4s,baz=272,slow=7.8,SNR=7.5							
INK	**Inuvik**	**53.87**	**27**	IAmb		IAmb	16 07 05.2	
	comp=Z,17nm,2.0s							
GAR	**Garm**	**54.66**	**295**	P		**P**	**16 06 58.9**	**-0.5**
GAR				IAmb		IAmb	16 07 19.5	
	comp=Z,25nm,1.8s							
CHGR	**Chuyangaron**	**55.63**	**295**	P		**P**	**16 07 05.9**	**-0.4**
ARU	**Arti**	**56.12**	**318**	P		**P**	**16 07 08.8**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=73,slow=4.1,SNR=9.8							
ARU	**Arti**	**56.12**	**318**	P		**P**	**16 07 08.8**	**-0.6**
ARU				IAmb		IAmb	16 07 09.9	
	comp=Z,5.4nm,0.6s							
WRA	**Warramunga Arr**	**57.57**	**188**	P		**P**	**16 07 19.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=5.3,slow=7.2,SNR=14							
WRA	**Warramunga Arr**	**57.57**	**188**	P		**P**	**16 07 18.9**	**-1.0**
ABKAR	**Akbulak array**	**57.77**	**310**	P		**P**	**16 07 20.3**	**-0.9**
ABKAR				IAmb		IAmb	16 07 21.5	
	comp=Z,2.1nm,0.7s							
AKTO	**Aktyubinsk**	**58.49**	**312**	P		**P**	**16 07 26.2**	**0.0**
	comp=Z,1.5nm,0.8s,baz=75,slow=14,SNR=4.2							
ASAR	**Alice Springs**	**61.30**	**188**	P		**P**	**16 07 46.1**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=14,slow=11,SNR=6.7							
ASAR	**Alice Springs**	**61.30**	**188**	P		**P**	**16 07 45.8**	**+0.1**
RES	**Resolute Bay**	**62.08**	**15**	P		**P**	**16 07 50.6**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=5.8,slow=4.5,SNR=5.9							
RES	**Resolute Bay**	**62.08**	**15**	P		**P**	**16 07 50.4**	**0.0**
RES				IAmb		IAmb	16 09 50.7	
	comp=Z,15nm,1.9s							
PALK	**Pallekele**	**62.66**	**258**	LR		LR	16 39 35.2	
	comp=Z,31nm,18.3s,baz=347,slow=40							
YKA	**Yellowknife Ar**	**63.29**	**30**	P		**P**	**16 07 59.4**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=300,slow=6.4,SNR=9.5							
FINES	**FINESS Array B**	**68.47**	**332**	P		**P**	**16 08 31.8**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=39,slow=8.8,SNR=14							
FINES	**FINESS Array B**	**68.47**	**332**	P		**P**	**16 08 31.6**	**-0.3**
HFS	**Hagfors**	**73.72**	**336**	P		**P**	**16 09 03.4**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=54,slow=3.8,SNR=9.0							
NB2	**NORSAR Subarra**	**73.81**	**337**	P		**P**	**16 09 04.4**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=39,slow=6.2							
NOA	**NORSAR Array B**	**73.81**	**337**	P		**P**	**16 09 04.4**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=39,slow=6.0,SNR=4.7							
AKASG	**Malin Array Be**	**74.03**	**322**	P		**P**	**16 09 05.2**	**-0.4**
	comp=Z,1.6nm,0.4s,baz=46,slow=6.2,SNR=19							
AKASG	**Malin Array Be**	**74.03**	**322**	P		**P**	**16 09 05.5**	**-0.2**
NVAR	**Mina Array Bea**	**74.55**	**53**	P		**P**	**16 09 10.6**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=284,slow=7.3,SNR=3.0							
NVAR	**Mina Array Bea**	**74.55**	**53**	P		**P**	**16 09 08.2**	**-1.0**
PDAR	**Pinedale Array**	**77.19**	**46**	P		**P**	**16 09 25.7**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=306,slow=2.1,SNR=3.5							
PDAR	**Pinedale Array**	**77.19**	**46**	P		**P**	**16 09 25.0**	**+0.7**
BRTR	**Keskin Array B**	**78.67**	**312**	P		**P**	**16 09 31.7**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=48,slow=4.5,SNR=2.7							
BRTR	**Keskin Array B**	**78.67**	**312**	P		**P**	**16 09 31.1**	**-1.3**
GERES	**GERESS Array B**	**82.40**	**328**	P		**P**	**16 09 51.8**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=26,slow=7.4,SNR=4.0							
GERES	**GERESS Array B**	**82.40**	**328**	P		**P**	**16 09 51.5**	**-0.6**
EKA	**Eskdalemuir Ar**	**82.74**	**341**	P		**P**	**16 09 55.0**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=23,slow=8.1,SNR=3.8							
TXAR	**Lajitas Array**	**89.67**	**53**	P		**P**	**16 10 29.6**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=263,slow=3.3,SNR=5.3							
TXAR	**Lajitas Array**	**89.67**	**53**	P		**P**	**16 10 29.0**	**+0.5**

comp=Z,11nm,0.8s
KEST Kesra 47.83 37 LR LR 16 32 17.6
comp=Z,696nm,18.2s,baz=211,slow=38
ROSC El Rosal 51.04 277 LR LR 16 31 09.2
comp=Z,541nm,19.3s,baz=116,slow=34
BNI Bardonecchia 53.25 26 P P 16 11 32.3 +2.4
BNI pmax pmax
comp=Z,18nm,1.1s
BNI Bardonecchia 53.25 26 P P 16 11 32.3 +2.4
BNI lAmb lAmb 16 11 38.4
comp=Z,18nm,1.1s
BOSA Boshof 53.98 125 P P 16 11 37.0 +1.5
BOSA pmax pmax
comp=Z,22nm,1.1s
BOSA Boshof 53.98 125 P P 16 11 37.0 +1.5
comp=Z,11nm,1.0s,baz=271,slow=5.2,SNR=6.8
BOSA LR LR 16 30 19.4
comp=Z,431nm,20.0s,baz=309,slow=31
BOSA Boshof 53.98 125 lAmb lAmb 16 11 40.2
comp=Z,22nm,1.1s
MBAR Mbarara 54.31 90⇓ eP P 16 11 39.7 +1.5
MBAR pmax pmax
comp=Z,12nm,1.8s
SENIN Lac Senin/Sane 54.55 26 P P 16 11 40.5 +1.1
SENIN lAmb lAmb 16 11 51.6
comp=Z,19nm,1.1s
ZCCA Zocca 54.76 30 P P 16 11 42.7 +1.9
NRCA Norcia 54.80 33 P P 16 11 42.2 +1.1
TEOL Teolo 55.83 29 P P 16 11 49.0 +0.5
TEOL lAmb lAmb 16 12 00.5
comp=Z,39nm,1.5s
DAVA Damuels 56.40 27 i P P 16 11 53.1 +0.4
comp=Z,24nm,1.7s
FETA Feichten 56.59 28 i P P 16 11 54.1 +0.1
comp=Z,16nm,1.1s
RETA Reutte 56.95 27 i P P 16 11 56.2 -0.2
comp=Z,8.2nm,1.3s
SQTA Sankt Quirin 56.95 28 i P P 16 11 56.4 -0.2
comp=Z,17nm,1.6s
STAL STALIGIAL 56.98 29 P P 16 11 57.4 +0.7
STAL lAmb lAmb 16 11 59.3
comp=Z,23nm,1.5s
MOTA Moosalm 57.00 27 i P P 16 11 56.9 0.0
comp=Z,11nm,1.3s
WATA Walderalm 57.21 28 i P P 16 11 58.3 -0.1
comp=Z,12nm,1.4s
ABTA Abfaltersbach 57.23 29 i P P 16 11 59.2 +0.7
comp=Z,15nm,1.3s
MYKA Terra Mystica 57.70 30 i P P 16 12 02.9 +1.1
comp=Z,6.6nm,1.0s
KBA Koelnbreinsper 57.87 29 i P P 16 12 04.1 +1.0
comp=Z,10nm,1.9s
PLCA Paso Flores 57.91 221 LR LR 16 34 19.3
comp=Z,197nm,21.8s,baz=81,slow=33
IDI Anoyia 57.93 46 P P 16 12 04.5 +0.9
comp=Z,7.5nm,0.8s,baz=348,slow=7.3,SNR=5.3
PDG Podgorica 58.02 36 ⇑P P 16 12 05.4 +1.4
OBKA Obir 58.06 30 i P P 16 12 06.3 +1.9
comp=Z,7.6nm,1.0s
EFI East Falkland 58.09 205⇑ eP P 16 12 02.3 -2.0
EFI pmax pmax
comp=Z,43nm,1.3s
FNA Florina 58.37 39 P P 16 12 07.5 +0.9
FNA pmax pmax
comp=Z,15nm,0.9s
FNA Florina 58.37 39 P P 16 12 07.5 +0.9
FNA lAmb lAmb 16 12 19.0
comp=Z,15nm,0.9s
SOKA Soboth 58.42 30 i P P 16 12 07.6 +0.7
comp=Z,16nm,1.6s
GRF Grafenberg Arr 58.79 26 eP P 16 12 21.0 +12
comp=Z,8.7nm,1.1s,baz=217,slow=7.0
MOA Molln 58.85 29 i P P 16 12 10.4 +0.7
comp=Z,8.0nm,1.1s
ARSA Arzberg 59.06 30 i P P 16 12 11.5 +0.3
comp=Z,9.3nm,1.7s
GEC2 GERESS Array S 59.29 28 P P 16 12 13.6 +0.8
GEC2 lAmb lAmb 16 12 27.0
comp=Z,12nm,1.2s
GERES GERESS Array B 59.29 28 P P 16 12 13.8 +0.9
comp=Z,3.1nm,0.8s,baz=232,slow=4.8,SNR=9.5
GERES LR LR 16 36 43.3
comp=Z,456nm,20.4s,baz=286,slow=35
KHC Kasperske Hory 59.43 27 eP P 16 12 14.3 +0.5
KHC e 16 12 17.4
KHC Kasperske Hory 59.43 27 eP P 16 12 14.3 +0.5
KHC epP sP 16 12 17.4 +1.0
KHC ex x 16 12 24.6
KHC Kasperske Hory 59.43 27 P P 16 12 14.9 +1.1
CONA Conrad Observa 59.69 30 i P P 16 12 16.4 +0.7
comp=Z,8.6nm,1.6s
VTS Vitosha 60.54 38 ⇓P P 16 12 23.1 +1.4
VTS Vitosha 60.54 38 ⇓P P 16 12 23.1 +1.4
KRUC Moravsky 60.72 29 eP P 16 12 24.0 +1.5
CLL Collm 60.75 25 eP P 16 12 20.0 -2.7
CLL pmax pmax
comp=Z,58nm,2.3s
CLL Collm 60.75 25 eP P 16 12 21.0 -1.7
comp=Z,58nm,2.3s
KMBO Kilima Mbogo 60.82 91 LR LR 16 36 02.6
comp=Z,933nm,19.0s,baz=274,slow=33
BRG Berggiesshubel 60.84 26 e(P) P 16 12 36.0 +13
comp=Z,15nm,1.6s
MDVR Moldovita 60.85 35 ⇓P P 16 12 25.0 +1.4
JAVC Velka Javorina 61.21 30 eP P 16 12 25.7 -0.3
BZS Buzias 61.28 35 ⇑P P 16 12 27.9 +1.4
BZS Buzias 61.28 35 ⇑P P 16 12 27.9 +1.4
VYHS Vyhne 61.56 31 eP P 16 12 29.8 +1.5
VYHS pmax pmax
comp=Z,23nm,1.4s
VYHS Vyhne 61.56 31 eP P 16 12 29.8 +1.5
SIRR Siria 61.69 34 ⇑P P 16 12 30.0 +0.8
PSZ Piszkesteto 61.74 32 ⇓P P 16 12 30.9 +1.3
PSZ Piszkesteto 61.74 32 ⇓P P 16 12 30.9 +1.3
MORC Moravsky Berou 61.75 29 ⇑P P 16 12 30.1 +0.5
MORC Moravsky Berou 61.75 29 ⇑P P 16 12 30.1 +0.5
MORC Moravsky Berou 61.75 29 eP P 16 12 29.9 +0.3
MORC Moravsky Berou 61.75 29 P P 16 12 29.4 -0.2
MORC lAmb lAmb 16 12 35.4
comp=Z,35nm,1.8s
GZR Gura Zlata 61.82 35 ⇓P P 16 12 31.2 +1.0
GZR Gura Zlata 61.82 35 ⇓P P 16 12 31.2 +1.0
ELL Elmali 62.22 47 P P 16 12 33.5 +0.4
ELL pmax pmax
comp=Z,27nm,1.0s
ELL Elmali 62.22 47 P P 16 12 33.5 +0.4
LANS Liptovska Anna 62.30 30 eP P 16 12 35.9 +2.6
LANS pmax pmax
comp=Z,2.0nm,1.0s
LANS Liptovska Anna 62.30 30 eP P 16 12 35.9 +2.6
DRGR 62.59 34 ⇑P P 16 12 36.8 +1.5
DRGR 62.59 34 ⇑P P 16 12 36.8 +1.5
ARR Arges 62.89 36 ⇓P P 16 12 39.3 +1.9
VOIR 63.17 36 ⇑P P 16 12 40.1 +0.9
VOIR 63.17 36 ⇑P P 16 12 40.1 +0.9
TRPA Tarpa 63.28 33 ⇑P P 16 12 40.6 +0.9
UZH Uzhgorod 63.44 32 eP P 16 12 41.2 +0.4
DOPR Dopca 63.66 36 ⇑P P 16 12 44.4 +2.0
MLR Muntele Rosu 63.73 37 ⇑P P 16 12 44.3 +1.3
MLR Muntele Rosu 63.73 37 P P 16 12 43.9 +0.8
comp=Z,12nm,1.1s,baz=253,slow=19,SNR=3.6
MLR Muntele Rosu 63.73 37 ⇑P P 16 12 44.3 +1.3
MLR Muntele Rosu 63.73 37 P P 16 12 43.1 0.0
OZUR 63.96 36 ⇑P P 16 12 45.7 +1.3
PLOR Plostina 64.34 37 ⇓P P 16 12 49.1 +2.2
PLOR Plostina 64.34 37 ⇓P P 16 12 49.1 +2.2
VRI Vrincioaia 64.40 37 ⇓P P 16 12 48.6 +1.4
VRI Vrincioaia 64.40 37 ⇓P P 16 12 48.6 +1.4
BURAR Bucovina Array 64.46 34 ⇑P P 16 12 49.5 +1.8
BURAR Bucovina Array 64.46 34 ⇑P P 16 12 49.5 +1.8
BIZ Bicaz 64.60 35 ⇑P P 16 12 50.6 +2.1
CFR Carcaliu 64.90 38 ⇓P P 16 12 53.1 +2.6
CFR Carcaliu 64.90 38 ⇓P P 16 12 53.1 +2.6
LVV L'vov 65.06 32 eP P 16 12 53.7 +2.2
SCHQ Schefferville 66.09 334 LR LR 16 37 25.6
comp=Z,387nm,20.1s,baz=122,slow=32
BR131 Keskin Array S 66.11 45⇑ eP P 16 12 58.9 +0.3
BR131 Keskin Array B 66.11 45 P P 16 12 58.2 -0.4
BRTR Keskin Array B 66.11 45 P P 16 12 58.7 +0.1
comp=Z,2.5nm,0.7s,baz=233,slow=6.9,SNR=13
SORM Soroca 66.52 35 ⇑P P 16 13 01.8 +0.9
SORM Soroca 66.52 35 ⇑P P 16 13 01.8 +0.9
NB2 NORSAR Subarra 67.52 17 P P 16 13 07.4 +0.4
comp=Z,3.8nm,1.2s,baz=218,slow=6.5
NOA NORSAR Array B 67.52 17 P P 16 13 07.5 +0.5
comp=Z,1.7nm,0.8s,baz=214,slow=6.3,SNR=4.9
NOA LR LR 16 39 30.2
comp=Z,203nm,21.9s,baz=245,slow=33
AKASG Malin Array Be 68.33 33 i P P 16 13 12.5 +0.2
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 68.33 33 P P 16 13 12.0 -0.3
comp=Z,1.1nm,0.5s,baz=241,slow=6.7,SNR=14
AKBB Malin Array Si 68.33 33 deP P 16 13 12.1 -0.2
AKBB Malin Array Si 68.33 33 P P 16 13 11.0 -1.3
AKBB lAmb lAmb 16 13 26.7
comp=Z,24nm,1.2s
BATM Batumi 72.50 46 ⇓P P 16 13 42.2 +4.2
FINES FINESS Array B 72.92 23 i P P 16 13 40.5 +0.5
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 72.92 23 P P 16 13 40.0 0.0
comp=Z,3.1nm,0.8s,baz=150,slow=3.1,SNR=5.8
FINES LR LR 16 44 37.7
comp=Z,407nm,19.9s,baz=248,slow=35
NEY Neytrino 73.73 44⇓ eP P 16 13 45.4 -0.1
NEY pmax pmax
comp=Z,1.0nm,1.1s
AKH Akhalkalaki 73.74 46 ⇑P P 16 13 50.9 +5.3
KIV Kislovodsk 73.92 43⇑ eP P 16 13 45.9 -0.6
KIV i 16 14 00.8
KIV pmax pmax
comp=Z,3.0nm,0.9s
KIV MLR MLR
comp=Z,114nm,12.0s
KBZ Khabaz 73.99 44 P P 16 13 47.3 +0.5
comp=Z,3.6nm,1.0s,baz=204,slow=5.1,SNR=2.9
VORD Divnogorie 74.16 36 eP P 16 13 47.9 +0.4
VORD pmax pmax
comp=Z,8.0nm,1.4s
VSR Storozhevoye 74.18 36 eP P 16 13 47.8 +0.1
VSR pmax pmax
comp=Z,9.0nm,1.3s
GNI Garni 74.31 48 P P 16 13 48.1 -0.8
GNI pmax pmax
comp=Z,18nm,1.2s
GNI Garni 74.31 48 P P 16 13 48.1 -0.8
GNI lAmb lAmb 16 14 07.0
comp=Z,18nm,1.1s
OBN Obninsk 74.35 31⇑ eP P 16 13 48.8 +0.3
OBN pmax pmax
comp=Z,2.0nm,0.9s
ZEI Tsey 74.42 45 eP P 16 13 55.6 +6.0
ZEI pmax pmax
comp=Z,9.0nm,1.4s
MOS Moscow 75.16 31 eP P 16 13 54.4 +1.1
ARCES ARCESS Array B 77.77 16 LR LR 16 47 41.0
comp=Z,245nm,19.9s,baz=234,slow=35
SYO Syowa Base 79.57 161⇑ esP sP 16 14 22.8 +2.6
ULM Lac du Bonnet 79.63 322⇑ eP P 16 14 16.7 -1.7
FCC Fort Churchill 80.97 330 P P 16 14 24.9 -0.6
FCC pmax pmax
comp=Z,10.0nm,1.1s
FCC Fort Churchill 80.97 330 P P 16 14 24.9 -0.6
TXAR Lajitas Array 81.91 300 P P 16 14 32.8 +1.5
comp=Z,1.3nm,1.0s,baz=124,slow=5.6,SNR=4.2
GEYT Alibeck 84.14 52 LR LR 16 56 06.1
comp=Z,204nm,18.2s,baz=335,slow=38
ANMO Albuquerque 84.80 305⇓ eP P 16 14 44.9 -1.3
ANMO pmax pmax
comp=Z,1.0nm,1.0s
ARU Arti 86.58 33 c iP P 16 14 54.6 +0.3
ARU 16 18 11.4
ARU S S 16 25 21.0 -10
ARU SS SS 16 31 12.9 +1.2
ARU pmax pmax
comp=Z,5.0nm,1.8s
ABKAR Akbulak array 86.61 41 P P 16 14 54.4 -0.2
PDAR Pinedale Array 87.81 313 P P 16 14 60.0 -0.9
comp=Z,0.2nm,0.5s,baz=87,slow=6.4,SNR=3.4
PDAR LR LR 16 49 39.0
comp=Z,125nm,18.6s,baz=64,slow=32
QSPA South Pole Qui 88.94 180 P P 16 15 06.1 +0.6
QSPA lAmb lAmb 16 15 24.2
comp=Z,10.0nm,0.9s
YKA Yellowknife Ar 91.48 332 P P 16 15 16.7 -0.6
comp=Z,0.6nm,0.6s,baz=95,slow=5.1,SNR=14
KSH Kashi 98.09 50 P P 16 15 43.5 -4.8
KSH pP sP 16 15 51.5 +0.6
KSH PP PP 16 19 48.4 +1.0
KSH SKS SKSac 16 26 24.8 -1.8
KSH S S 16 27 09.7 -6.2
KSH sS ScS 16 27 16.8 +0.8
KSH SS SS 16 33 55.0 -3.2
LZH Lanzhou 120.24 48 ePKP PKPdf 16 20 59.1 -3.9
CD2 Chengdu 122.09 54 PKP PKPdf 16 21 05.5 -1.1
HHC Hu-ho-hao-te 123.40 40 ePKP PKiKP 16 21 10.1 +1.0
NJ2 Nanjing 133.10 45 ePKP PKPdf 16 21 26.1 -1.3
STKA Stephens Creek 144.28 158 PKP PKPdf 16 21 50.0 +2.1
comp=Z,3.1nm,0.8s,baz=134,slow=10,SNR=4.4
ASAR Alice Springs 147.03 140 PKPbc PKPbc 16 21 55.5 +0.6
comp=Z,3.9nm,0.4s,baz=210,slow=2.2,SNR=38
WRA Warramunga Arr 149.87 135 PKPbc PKPbc 16 22 02.4 0.0
comp=Z,1.2nm,0.6s,baz=231,slow=2.1,SNR=18

MAN 06 16:04:31.7, 9.99N×123.92E, h32km, mb4.0, ML2.8, MS2.4, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.33	8	⇓ iP		16 04 41.3	+1.0
LLP				i S	Sn	16 04 47.6	+1.5
MSLP	Maasin	0.94	81	eS	Sn	16 05 00.7	-0.3
MSLP				eP	Pn	16 04 48.4	-0.3

IDC 06 16:08:37.8±0.9, 20.°58S×63.°20W, h570km±20km, mb3.6/1, mb1 3.2/6, mb1mx2.9/36, mbtmp4.0/6, Error ellipse: s-maj=26.2km s-min=19.9km az=98.0

ISC 06 16:08:37.9±1.0, 20.59S±0.°10×63.1W±0.°1, h564km, n6, σ0.83/9, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIV	San Ignacio	4.98	24	P	P	16 10 08.8	+0.2
	0.8nm,0.3s,baz=209,slow=10.0,SNR=9.7						
LVC	Limon Verde	5.73	248	P	P	16 10 15.8	+0.6
	3.2nm,0.3s,baz=66,slow=6.8,SNR=45						
LVC				S	S	16 11 34.0	-0.7
	1.3nm,0.3s,baz=297,slow=22,SNR=21						
LPAZ	La Paz	6.38	311	P	P	16 10 22.6	+1.1
	0.8nm,0.3s,baz=113,slow=7.5,SNR=16						
LPAZ				S	S	16 11 45.0	-1.0
	0.3nm,0.3s,baz=263,slow=17,SNR=2.4						
CPUP	Villa Florida	7.82	138	P	P	16 10 34.5	+0.3
	0.6nm,0.3s,baz=335,slow=9.8,SNR=12						
CFA	Coronel Fontan	11.88	202	P	P	16 11 15.6	+0.3
	0.8nm,0.3s,baz=56,slow=20,SNR=11						
CFA				S	S	16 13 23.9	-0.8
	0.2nm,0.3s,baz=335,slow=18,SNR=3.2						
TORD	Torodi Ar. Bea	72.00	68	P	P	16 19 05.2	-0.4
	2.0nm,0.4s,baz=252,slow=5.6,SNR=18						

IDC 06 16:08:58.7±3.8, 34.°10N×108.°27E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.2/49, mbtmp3.3/4, Error ellipse: s-maj=405.1km s-min=22.3km az=52.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	23.37	311	P	P	16 14 08.8	-0.1
	0.2nm,0.6s,baz=112,slow=11,SNR=3.6						
KURBB	Kurchatov Arra	27.24	316	P	P	16 14 44.3	0.0
	0.2nm,0.7s,baz=116,slow=8.4,SNR=2.9						
WRA	Warramunga Arr	59.20	151	P	P	16 19 02.1	+0.4
	0.3nm,0.4s,baz=342,slow=7.3,SNR=5.6						
ASAR	Alice Springs	62.41	153	P	P	16 19 23.1	-0.4
	0.2nm,0.5s,baz=332,slow=6.7,SNR=7.4						

MAN 06 16:10:58.9, 9.92N×123.87E, h32km, mb4.1, ML2.9, MS2.6, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.41	14	⇓ eP	Pn	16 11 09.0	+0.4
LLP				i S	Sn	16 11 15.6	+0.5
MSLP	Maasin	1.00	78	eP	Pn	16 11 16.3	-0.4
MSLP				eS	Sn	16 11 28.6	-1.1

MAN 06 16:12:50.9, 9.74N×123.61E, h0km, mb4.1, ML2.9, MS2.5, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	Lapu-Lapu	0.67	32	⇓ iP	Pg	16 13 04.5	+0.7
LLP				i S	Sb	16 13 15.1	-0.3
DCPH	Dipolog City	1.18	192	⇑ iP	Pn	16 13 25.7	+11

KRSC 06 16:18:20.1±2.2, 53.°44N×157.°41E, h250km±20km, ML3.9, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GNL	Ganaly	0.41	51	eP	Pn	16 18 54.3	+1.5
APC	Apacha	0.54	197	eP	Pn	16 18 53.5	+0.4
KRX	Arik	0.74	96	eP	Pn	16 18 55.6	+1.6
KRMR	Karymshinskiy	0.75	144	eP	Pn	16 18 55.0	+1.1
KOK	Koryaka	0.75	101	eP	Pn	16 18 55.7	+1.7
KRER	Koryakskii	0.81	99	eP	Pn	16 18 55.9	+1.5
AVH	Avacha	0.81	102	eP	Pn	16 18 56.0	+1.7
SMAR	Somma	0.85	101	eP	Pn	16 18 56.4	+1.8
PET	Petropavlovsk	0.85	119	eP	Pn	16 18 55.5	+1.2
UGLR	Uglovaya	0.88	105	eP	Pn	16 18 56.3	+1.7
SDLR	Sedlovina	0.90	100	eP	Pn	16 18 56.0	+1.3
GRL	Gorelyy	0.97	155	eP	Pn	16 18 56.7	+1.5
MTVR	Mutnovka	1.06	154	eP	Pn	16 18 56.9	+1.2
ASAK	Asacha	1.10	164	eP	Pn	16 18 57.3	+1.5
NLC	Nalytchevo	1.19	102	eP	Pn	16 18 57.3	+1.1
RUS	Russkaya	1.21	146	eP	Pn	16 18 56.7	+0.3
RUS				eS	S	16 19 26.3	+1.4
SPN	Mys Shipunski	1.60	101	eP	Pn	16 18 59.2	0.0
SPN				eS	S	16 19 29.4	-0.5
KDTR	Khodutka, Kamc	1.68	166	eS	S	16 19 30.1	-1.0
KZV	Kizimen	2.38	44	eP	Pn	16 19 07.3	+1.1
TUMR	Tumrok	2.44	40	eP	Pn	16 19 08.4	+1.6
TUMD	Tumrok D	2.49	43	eP	Pn	16 19 08.1	+1.0
MKZ	Mys Kozlova	2.78	65	eP	Pn	16 19 09.9	-0.2
MKZ				eS	S	16 19 48.4	-1.4
SKR	Severo-Kuril's	2.87	197	eS	S	16 19 52.8	+1.2
KBG	Krutoberegovo	4.16	45	eP	Pn	16 19 26.3	+0.7
KBTR	Krutoberegovo	4.18	46	eP	Pn	16 19 26.3	+0.4
BKI	Bering	5.31	67	eS	S	16 20 39.5	-3.5

VAO 06 16:23:21.8±0.8, 20.°46S×68.°78W, h92km±6km, mb4.3
IDC 06 16:23:21.5±1.7, 20.°46S×68.°72W, h101km±17km, mb3.9/11, mb1 4.1/14, mb1mx3.9/38, mbtmp4.3/14, Error ellipse: s-maj=18.4km s-min=15.5km az=122.0
SJA 06 16:23:21.9±0.9, 20.°57S×69.°05W, h104km±6km, ML4.1, MW4.2
GUC 06 16:23:22.1±0.5, 20.°52S×68.°98W, h104km±3km, ML4.2
NEIC 06 16:23:22.0±2.4, 20.°52S±0.°04×68.°82W±0.°09, h105km±5km, mb4.6/44, ML4.2(GUC), Error ellipse: s-maj=12.8km s-min=6.5km az=88.0

ISC 06 16:23:21.5±0.6, 20.54S±0.03×68.90W±0.05, h105km±5km, n151, σ1.35/165, mb4.6/25, 2C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.46	329	eP	Pn	16 23 38.8	+0.7
PB08				i S	Sn	16 23 51.1	+0.6
PB08				IAML		16 23 51.8	
	comp=E,29μm,0.5s						
PB08	IPOC Station P	0.46	329	eP	Pn	16 23 38.8	+0.7
PB08				i S	Sn	16 23 51.0	+0.6
GO01	Chusmiza	0.91	342	Pn	Pn	16 23 42.6	+0.7
PB11	IPOC Station P	1.05	317	eP	Pn	16 23 43.3	+0.3
PB11				i S	Sn	16 23 59.5	+0.3
PB11	IPOC Station P	1.05	317		Pn	16 23 43.1	+0.1
PB11	IPOC Station P	1.05	317	eP	Pn	16 23 43.3	+0.3
PB11				i S	Sn	16 23 59.4	+0.1
TA01	Diego Aracena	1.20	268	eP	Pn	16 23 44.4	0.0
TA01				i S	Sn	16 24 01.6	-0.3
TA01				IAML		16 24 05.0	
	comp=E,5μm,0.7s						
PB09	IPOC Station P	1.29	194	eP	Pn	16 23 46.8	+1.1
PB09				i S	Sn	16 24 05.9	+1.8
PB09				IAML		16 24 08.1	
	comp=N,5μm,0.5s						
PB09	IPOC Station P	1.29	194	eP	Pn	16 23 46.9	+1.1
PB09				IAML		16 24 07.5	
	comp=Z,3μm,0.5s						
PSGC	Pisagua	1.48	309	eP	Pn	16 23 47.8	-0.1
PSGC				i S	Sn	16 24 07.7	-0.3
PSGC				IAML		16 24 09.7	
	comp=N,5μm,0.6s						
PSGCX	Pisagua	1.48	309	eP	Pn	16 23 48.1	+0.2
PSGCX				i S	Sn	16 24 08.0	0.0
MNMC	Minye Minye	1.54	335	eP	Pn	16 23 49.8	+0.9
MNMC				i S	Sn	16 24 10.7	+1.0
MNMC	Minye Minye	1.54	335		Pn	16 23 49.8	+0.9
MNMCX	Minye Minye	1.54	335	eP	Pn	16 23 49.9	+1.0
MNMCX				i S	Sn	16 24 10.9	+1.3
PB03	IPOC Station P	1.70	208	eP	Pn	16 23 51.0	+0.4
PB03				i S	Sn	16 24 13.4	+0.6
PB03				IAML		16 24 15.3	
	comp=E,3μm,0.7s						
PB03	IPOC Station P	1.70	208	eP	Pn	16 23 51.1	+0.4
PB03				i S	Sn	16 24 13.2	+0.4
LVC	Limon Verde	2.06	180	P	Pn	16 23 57.1	+1.6
	comp=E,188nm,0.3s,baz=38,slow=13,SNR=721						
LVC				S	Sn	16 24 23.4	+2.1
	comp=E,69nm,0.3s,baz=356,slow=9.9,SNR=8.4						
LVC	Limon Verde	2.06	180	eP	Pn	16 23 57.1	+1.6
LVC	Limon Verde	2.06	180		Pn	16 23 56.8	+1.4
LVC	Limon Verde	2.06	180	eP	Pn	16 23 57.0	+1.6
PB04	IPOC Station P	2.13	213		Pn	16 23 55.6	-0.5
PB04	IPOC Station P	2.13	213	eP	Pn	16 23 56.7	+0.5
PB06	IPOC Station P	2.24	196	eP	Pn	16 23 58.4	+0.8
PB06				IAML		16 24 35.9	
	comp=Z,2μm,0.3s						
PB16	IPOC Station P	2.27	345	eP	Pn	16 24 00.1	+1.8
PB05	IPOC Station P	2.60	207	eP	Pn	16 24 02.4	+0.2
PB05				i S	Sn	16 24 32.1	-1.4
PB10	IPOC Station P	3.33	207		Pn	16 24 11.1	-0.7
HJA	Humahuaca	4.19	130	eP	Pn	16 24 27.0	+3.3
HJA				IAML		16 24 27.7	
	comp=Z,93nm,0.6s						
LPAZ	La Paz	4.29	10	P	Pn	16 24 27.6	+2.3
	comp=Z,24nm,0.3s,baz=192,slow=6.5,SNR=178						
LPAZ				S	Sn	16 25 12.8	-1.9
	comp=Z,2.3nm,0.3s,baz=222,slow=17,SNR=2.0						
LPAZ	La Paz	4.29	10	Pn	Pn	16 24 28.0	+2.7
GO02	Mina Guanaco	4.65	188	Pn	Pn	16 24 29.3	-0.4
GO03	Copiap	7.13	190		Pn	16 25 00.4	-2.8
SIV	San Ignacio	8.71	60	P	Pn	16 25 22.6	-2.1
	comp=Z,12nm,0.3s,baz=260,slow=11,SNR=184						
GO04	Tololo Observa	9.74	190		Pn	16 25 35.0	-3.9
CFA	Coronel Fontan	11.04	177	P	Pn	16 25 52.3	-3.9
	comp=Z,1.9nm,0.3s,baz=311,slow=12,SNR=36						
CFA				S	Sn	16 27 46.1	-12
	baz=170,slow=17,SNR=1.8						
CPUP	Villa Florida	12.08	121	P	Pn	16 26 07.9	-2.2
	comp=Z,0.2nm,0.3s,baz=305,slow=12,SNR=10						
CPUP	Villa Florida	12.08	121	eP	Pn	16 26 08.9	-1.2
CPUP	Villa Florida	12.08	121		Pn	16 26 09.4	-0.8
AQDB	Aquidauana	12.37	92	eP	Pn	16 26 12.7	-1.4
ROC1	El Roble	12.53	188	Pn	Pn	16 26 15.2	-1.0
SAML	Samuel	12.78	26		Pn	16 26 17.3	-2.1
SALV	Santo Antonio	13.37	72	eP	Pn	16 26 24.8	-2.3
PP1B	Ponte de Pedra	13.58	80	eP	Pn	16 26 28.6	-1.2
ITQB	Itaqui	14.36	132	eP	Pn	16 26 40.4	+0.7
C2SB	Chapadao do Su	15.24	86	eP	Pn	16 26 51.1	+0.1
TRCB	Terra Rica	15.29	101	eP	Pn	16 26 51.7	0.0
CLDB	Colider	15.85	55	eP	Pn	16 26 58.5	-0.3
PTGB	Pitanga	16.09	108	eP	P	16 27 02.5	-0.6
PCMB	Pacaembu	16.50	97	eP	Pn	16 27 06.8	+0.1
ITAB	Concordia	16.71	117	eP	P	16 27 09.6	-0.2
ARAG	Araguaiana, MT	16.94	76	eP	P	16 27 12.5	+0.1
CPSB	Cacapava Do Su	17.05	128	eP	P	16 27 13.9	+0.3
ITRB	Iturama	17.44	90	eP	Pn	16 27 18.6	+0.4
PLTB	Pedras Altas	17.69	132	eP	Pn	16 27 21.2	+0.1
FRTB	Fartura	18.16	102	eP	P	16 27 25.9	+0.1
CNLB	Canela	18.54	122	eP	P	16 27 30.2	+0.2
BB19B	Bebedouro	19.06	95	eP	P	16 27 35.1	-0.5

IPMB	**Ipameri, GO**	**19.70**	**86**	*eP*		**P**		**16 27 41.5**	**-1.2**
RCLB	**Rio Claro- Sao**	**19.98**	**99**	*eP*		**P**		**16 27 45.0**	**-0.6**
SPB	**Sao Paulo**	**20.13**	**103**	*eP*		**P**		**16 27 47.9**	**+0.7**
PLCA	**Paso Flores**	**20.18**	**184**	P		**P**		**16 27 48.6**	**+1.0**
	comp=Z,4.5nm,0.9s,baz=22,slow=12,SNR=5.8								
PLCA	**Paso Flores**	**20.18**	**184**	*eP*		**P**		**16 27 48.9**	**+1.2**
BDFB	**Brasilia**	**20.44**	**80**	P		**P**		**16 27 49.6**	**-1.2**
	comp=Z,2.8nm,0.5s,baz=219,slow=7.6,SNR=4.7								
VAO	**Valinhos**	**20.52**	**101**	*eP*		**P**		**16 27 51.4**	**-0.1**
PMNB	**Patos De Minas**	**21.26**	**88**	*eP*		**P**		**16 27 59.4**	**-0.1**
ESAR	**Angra dos Reis**	**22.84**	**101**	*eP*		**P**		**16 28 17.8**	**+2.0**
SMTB	**Santa Maria do**	**23.62**	**64**	*eP*		**P**		**16 28 23.0**	**-0.3**
VAS01	**Vassouras-RJ**	**23.76**	**99**	*eP*		**P**		**16 28 24.9**	**+0.5**
SOTA	**Rioblanco**	**23.77**	**341**	*eP*		**P**		**16 28 28.3**	**+3.2**
BBAC	**Balboa, Cauca**	**23.87**	**339**	*eP*		**P**		**16 28 26.9**	**+1.3**
POPC	**Popayan, Colom**	**24.17**	**341**	*eP*		**P**		**16 28 30.8**	**+2.4**
ORTC	**Ortega, Tolima**	**25.08**	**345**	*eP*		**P**		**16 28 36.9**	**+0.5**
YOTC	**Yotoco, Valle**	**25.44**	**342**	*eP*		**P**		**16 28 39.2**	**-0.6**
YOTC				*eP*		**P**		**16 28 41.9**	**+2.1**
RREF	**El Recreo**	**26.06**	**345**	*eP*		**P**		**16 28 48.0**	**+2.0**
SJMB	**Sao Joao De Ma**	**26.16**	**91**	*eP*		**P**		**16 28 46.5**	**+0.3**
GUY2C	**Guyana, Caldas**	**26.38**	**345**	*eP*		**P**		**16 28 48.0**	**-0.6**
GUY2C				*eP*		**P**		**16 28 49.2**	**+0.6**
BSFB	**Barra de Sao F**	**26.46**	**91**	*eP*		**P**		**16 28 50.1**	**+1.3**
RUSC	**La Rusia**	**26.59**	**351**	*eP*		**P**		**16 28 50.7**	**+0.2**
NORC	**Norcasia**	**26.59**	**347**	*eP*		**P**		**16 28 49.0**	**-1.1**
HELC	**Santa Helena**	**27.35**	**346**	*eP*		**P**		**16 28 57.7**	**+0.5**
PTBC	**PUERTO BERRIO,**	**27.46**	**348**	*eP*		**P**		**16 28 55.5**	**-2.3**
PAMC	**Pamplona, Colo**	**27.95**	**352**	*eP*		**P**		**16 29 02.3**	**-0.5**
SDV	**Santo Domingo**	**29.29**	**357**	*eP*		**P**		**16 29 16.6**	**+2.4**
SDV	**Santo Domingo**	**29.29**	**357**	P		**P**		**16 29 15.2**	**+0.9**
SDV				IAmb		IAmb		16 29 29.9	
	comp=Z,28nm,1.9s								
SMLC	**San Martn de**	**29.60**	**350**	*eP*		**P**		**16 29 14.2**	**-2.5**
GO09	**Cerro Castillo**	**30.79**	**184**	P		**P**		**16 29 27.5**	**+0.5**
SJCC	**San Jacinto, C**	**30.87**	**348**	*eP*		**P**		**16 29 27.9**	**-0.1**
NBLA	**Lagarto - SE**	**31.36**	**77**	*eP*		**P**		**16 29 33.5**	**+1.2**
OBIP	**Obispado Ponce**	**38.41**	**4**	P		**P**		**16 30 32.2**	**-0.6**
PDPR	**Patillas Dam,**	**38.42**	**4**	P		**P**		**16 30 31.0**	**-1.9**
SJG	**San Juan**	**38.51**	**4**	P		**P**		**16 30 31.4**	**-2.2**
MTP	**Monte Pirata**	**38.54**	**5**	P		**P**		**16 30 31.7**	**-2.2**
MTP				IAmb		IAmb		16 30 59.9	
	comp=Z,26nm,1.0s								
MPR	**Mayaguez**	**38.55**	**3**	P		**P**		**16 30 32.6**	**-1.4**
ANWB	**Willy Bob**	**38.61**	**11**	P		**P**		**16 30 34.6**	**+0.1**
CBYP	**Canovanas**	**38.69**	**5**	P		**P**		**16 30 33.4**	**-1.8**
AOPR	**Arecibo Observ**	**38.70**	**3**	P		**P**		**16 30 33.7**	**-1.6**
SDD	**Santo Domingo**	**38.77**	**358**	P		**P**		**16 30 35.4**	**-0.4**
DR12	**Loma Pena Alta**	**39.09**	**359**	P		**P**		**16 30 36.5**	**-2.1**
TXAR	**Lajitas Array**	**59.85**	**325**	P		**P**		**16 33 16.5**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=150,slow=9.3,SNR=3.3								
SDCO	**Great Sand Dun**	**67.43**	**329**	P		**P**		**16 34 06.9**	**+0.7**
LIC	**Lamto**	**68.12**	**74**	*eP*		**P**		**16 34 09.9**	**-0.7**
	comp=Z,5.5nm,0.4s								
TIC	**Toumodi**	**68.30**	**74**	*eP*		**P**		**16 34 11.4**	**-0.4**
KIC	**Kosan Boka**	**68.43**	**74**	*eP*		**P**		**16 34 12.1**	**-0.5**
	comp=Z,10nm,0.7s								
DBIC	**Dimbokro**	**68.46**	**74**	P		**P**		**16 34 12.1**	**-0.6**
	comp=Z,5.8nm,0.6s,baz=220,slow=7.7,SNR=9.8								
DBIC	**Dimbokro**	**68.46**	**74**	IAmb		IAmb		16 34 13.1	
	comp=Z,5.4nm,0.7s								
WUAZ	**Wupatki**	**68.76**	**324**	P		**P**		**16 34 16.0**	**+1.6**
QSPA	**South Pole Qui**	**69.65**	**180**	P		**P**		**16 34 20.8**	**+1.4**
QSPA				IAmb		IAmb		16 35 21.7	
	comp=Z,21nm,1.8s								
U15A	**North Rim**	**69.94**	**324**	P		**P**		**16 34 23.2**	**+1.5**
KNB	**Kanab**	**70.66**	**324**	P		**P**		**16 34 28.2**	**+2.2**
LCMT	**Little Creek M**	**70.89**	**324**	P		**P**		**16 34 29.3**	**+2.0**
MTPU	**Mount Pierson**	**71.05**	**325**	P		**P**		**16 34 30.3**	**+1.7**
CCUT	**Cedar City**	**71.34**	**324**	P		**P**		**16 34 32.1**	**+1.9**
PSUT	**Pine Spring**	**72.31**	**324**	P		**P**		**16 34 37.9**	**+1.9**
TPNV	**Topopah Spring**	**72.55**	**322**	P		**P**		**16 34 39.5**	**+2.2**
ISA	**Isabella, Lake**	**72.99**	**320**	P		**P**		**16 34 41.7**	**+1.8**
ISA				IAmb		IAmb		16 34 42.8	
	comp=Z,3.5nm,0.7s								
PDAR	**Pinedale Array**	**73.28**	**330**	P		**P**		**16 34 42.4**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=126,slow=7.5,SNR=4.6								
HWUT	**Hardware Ranch**	**73.38**	**328**	P		**P**		**16 34 43.0**	**+0.9**
HWUT				IAmb		IAmb		16 34 45.8	
	comp=Z,3.3nm,0.7s								
ULM	**Lac du Bonnet**	**74.41**	**342**	P		**P**		**16 34 47.5**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=148,slow=6.8,SNR=5.5								
ULM	**Lac du Bonnet**	**74.41**	**342**	IAmb		IAmb		16 36 10.2	
	comp=Z,14nm,1.6s								
OMMB	**Old Mammoth Mi**	**74.61**	**321**	P		**P**		**16 34 50.7**	**+1.1**
NVAR	**Mina Array Bea**	**74.75**	**322**	P		**P**		**16 34 51.2**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=162,slow=7.8,SNR=8.9								
FLWY	**Flagg Ranch**	**74.83**	**330**	P		**P**		**16 34 52.3**	**+1.8**
FLWY				IAmb		IAmb		16 34 53.3	
	comp=Z,8.3nm,0.8s								
RLMT	**Red Lodge**	**74.97**	**332**	P		**P**		**16 34 52.5**	**+1.2**
RLMT				IAmb		IAmb		16 34 53.7	
	comp=Z,3.8nm,0.7s								
H17A	**Grant Village**	**75.01**	**330**	P		**P**		**16 34 54.0**	**+2.4**
H17A				IAmb		IAmb		16 37 08.5	
	comp=Z,19nm,1.7s								
KVN	**Kaiserville**	**75.05**	**322**	P		**P**		**16 34 53.2**	**+1.3**
LKWY	**Lake**	**75.06**	**331**	P		**P**		**16 34 54.3**	**+2.4**
LKWY				IAmb		IAmb		16 37 10.6	
	comp=Z,13nm,0.8s								
SCHQ	**Schefferville**	**75.08**	**1**	P		**P**		**16 34 51.4**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=192,slow=6.6,SNR=8.3								
SCHQ	**Schefferville**	**75.08**	**1**	IAmb		IAmb		16 36 08.9	
	comp=Z,37nm,1.9s								
YNE	**Yellowstone No**	**75.22**	**331**	P		**P**		**16 34 54.2**	**+1.4**
YHB	**Horse Butte**	**75.57**	**330**	P		**P**		**16 34 56.6**	**+1.8**
TOA0	**Torodi Ar. Sit**	**77.03**	**71**	P		**P**		**16 35 02.5**	**-0.9**
TOA0				IAmb		IAmb		16 35 33.9	
	comp=Z,7.9nm,0.8s								
TORD	**Torodi Ar. Bea**	**77.03**	**71**	P		**P**		**16 35 02.7**	**-0.7**
	comp=Z,5.3nm,0.6s,baz=252,slow=5.3,SNR=48								
ORV	**Oroville**	**77.36**	**321**	P		**P**		**16 35 06.0**	**+1.2**
ORV				IAmb		IAmb		16 35 07.7	
	comp=Z,6.5nm,1.2s								
SYO	**Syowa Base**	**77.39**	**160**‖	*eP*		**P**		**16 35 04.4**	**-0.1**
SYO	**Syowa Base**	**77.39**	**160**‖	*e*PcP		**PcP**		**16 35 12.0**	**-2.6**
EGMT	**Eagleton**	**77.44**	**333**	P		**P**		**16 35 06.0**	**+0.9**
EGMT				IAmb		IAmb		16 35 06.9	
	comp=Z,6.5nm,0.7s								
BMO	**Blue Mountains**	**78.61**	**327**	P		**P**		**16 35 13.0**	**+1.3**
FCC	**Fort Churchill**	**81.70**	**347**	P		**P**		**16 35 28.1**	**+0.3**
FCC				IAmb		IAmb		16 35 28.8	
	comp=Z,6.8nm,0.5s								
MAW	**Mawson**	**85.24**	**163**	P		**P**		**16 35 46.7**	**+0.8**
	comp=Z,2.1nm,0.6s,baz=186,slow=7.0,SNR=6.2								
MAW	**Mawson**	**85.24**	**163**	IAmb		IAmb		16 37 24.8	
	comp=Z,9.0nm,1.7s								
YKA	**Yellowknife Ar**	**90.29**	**341**	P		**P**		**16 36 10.5**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=132,slow=4.6,SNR=64								
YKW3	**Yellowknife Ar**	**90.34**	**341**	P		**P**		**16 36 10.3**	**+0.1**
YKW3				IAmb		IAmb		16 36 11.8	
	comp=Z,7.1nm,1.1s								
ASAR	**Alice Springs**	**130.76**	**208**	PKP		**PKPdf**		**16 42 21.2**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=122,slow=1.6,SNR=30								
WRA	**Warramunga Arr**	**133.78**	**211**	PKP		**PKPdf**		**16 42 27.4**	**+0.5**
	comp=Z,1.0nm,0.6s,baz=156,slow=1.8,SNR=12								
ZALV	**Zalesovo Beam**	**141.08**	**25**	PKP		**PKPdf**		**16 42 39.7**	**+0.6**
	comp=Z,1.4nm,0.4s,baz=293,slow=3.0,SNR=9.1								
MAKZ	**Makanchi**	**144.67**	**35**			**PKPdf**		**16 42 45.4**	**-0.4**
JKA	**Kamikawa-asahi**	**144.84**	**319**			**PKPdf**		**16 42 46.7**	**+0.5**
ASAJ	**Asahikawa**	**144.84**	**319**	PKP		**PKPdf**		**16 42 46.7**	**+0.6**
	comp=Z,8.4nm,0.8s,baz=256,slow=6.8,SNR=5.7								
MK31	**Makanchi Array**	**144.85**	**35**			**PKPdf**		**16 42 46.0**	**-0.2**
MKAR	**Makanchi Array**	**144.85**	**35**	PKP		**PKPdf**		**16 42 46.1**	**0.0**
	comp=Z,18nm,0.3s,baz=326,slow=3.0,SNR=1.8								
USRK	**Ussuriysk Ar.**	**150.70**	**328**	PKPbc		**PKiKP**		**16 43 02.1**	**+0.2**
	comp=Z,3.2nm,0.7s,baz=273,slow=0.7,SNR=6.5								
SONM	**Songino Array**	**152.50**	**7**	PKPbc		**PKiKP**		**16 43 05.9**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=311,slow=1.5,SNR=12								
SONM				PKPab		**PKPab**		**16 43 16.5**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=354,slow=4.4,SNR=4.1								

*IDC **06** 16:28:31.2±6.1,20°.32N×94°.84E,h82km±51km,mb3.2/3, mb1 3.3/4,mb1mx3.0/45,mbtmp3.5/4,ML3.7/1,Error ellipse: s-maj=76.6km s-min=18.1km az=57.0*

ISC 06 16:28:32.2±1.3,20°.2N±0°.3×94°.5E±0°.3,h100km,n15, σ0°33/14,mb3.7/4,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**4.56**	**111**	P	Pn	16 29 36.0	-3.0
	1.1nm,0.3s,baz=290,slow=14,SNR=63						
CMAR				S	Sn	16 30 22.9	-7.9
	0.9nm,0.3s,baz=313,slow=16,SNR=4.6						
ODAN	**Odare**	**9.29**	**317**	*eP*	**Pn**	**16 30 43.9**	**+0.5**
	4.8nm,0.4s						
TAPN	**Taplejung**	**9.44**	**320**	*eP*	**Pn**	**16 30 45.4**	**-0.2**
	7.6nm,0.4s						
RAMN	**Ramite**	**9.87**	**314**	*eP*	**Pn**	**16 30 51.4**	**+0.1**
	8.5nm,0.5s						
JIRN	**Jiri**	**10.62**	**316**	*eP*	**Pn**	**16 31 01.5**	**-0.1**
	8.1nm,0.3s						
GUN	**Gumba**	**10.99**	**316**	*eP*	**Pn**	**16 31 06.4**	**-0.2**
	7.1nm,0.3s						
PKI	**Pulchoki**	**11.08**	**313**	*eP*	**Pn**	**16 31 08.0**	**+0.2**
	0.7nm,0.4s						
PKIN	**Phulchoki**	**11.09**	**313**	*eP*	**Pn**	**16 31 07.8**	**-0.1**
	4.4nm,0.3s						
GKN	**Gorkha**	**11.88**	**313**	*eP*	**Pn**	**16 31 17.9**	**-0.5**
	12nm,0.3s						
KOLN	**Koldanda**	**12.48**	**309**	*eP*	**Pn**	**16 31 26.2**	**-0.2**
	7.2nm,0.3s						
DANN	**Dangsing**	**12.70**	**312**	*eP*	**Pn**	**16 31 29.3**	**-0.1**
	13nm,0.5s						
MKAR	**Makanchi Array**	**28.35**	**342**	P	**P**	**16 34 17.2**	**+0.6**
	14nm,0.3s,baz=166,slow=8.2,SNR=1.8						
ZALV	**Zalesovo Beam**	**34.51**	**350**	P	**P**	**16 35 10.1**	**-0.4**
	0.7nm,0.5s,baz=168,slow=7.7,SNR=4.3						
WRA	**Warramunga Arr**	**55.81**	**133**	P	**P**	**16 37 59.2**	**-0.1**
	0.6nm,1.1s,baz=316,slow=7.6,SNR=4.9						
ASAR	**Alice Springs**	**58.11**	**137**	P	**P**	**16 38 15.7**	**+0.1**
	0.2nm,0.6s,baz=322,slow=7.8,SNR=4.1						

*IDC **06** 16:44:23.4±1.0,20°.79S×67°.46W,h181km±9km,mb3.3/7, mb1 3.6/10,mb1mx3.5/25,mbtmp3.9/10,Error ellipse: s-maj=24.0km s-min=10.0km az=103.0*
*NEIC **06** 16:44:23.6±1.7,20°.87S±0°.07×67°.5W±0°.1,h190km±8km, mb4.5/6,Error ellipse: s-maj=15.8km s-min=9.6km az=96.0*
*SJA **06** 16:44:24.1±1.1,20°.82S×67°.54W,h180km±14km,ML3.5, MW3.5*

ISC 06 16:44:23.3±0.7,20°.80S±0°.05×67°.52W±0°.05,h186km±7km, n42,σ1°46/48,mb3.4/6,1C,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.67**	**293**	*eP*	**Pn**	**16 44 59.1**	**+1.3**
PB08				IAML		16 45 29.1	
	comp=Z,85nm,0.2s						
PB09	**IPOC Station P**	**1.89**	**238**	*eP*	**Pn**	**16 45 01.1**	**+1.3**
PB09				IAML		16 45 30.4	
	comp=Z,111nm,0.3s						
GO01	**Chusmiza**	**1.93**	**305**		**Pn**	**16 45 01.6**	**+1.0**
LVC	**Limon Verde**	**2.22**	**215**	P	**Pn**	**16 45 04.5**	**+1.0**
	comp=Z,8.1nm,0.3s,baz=12,slow=9.8,SNR=71						
LVC				S	**Sn**	**16 45 35.2**	**+0.3**
	comp=Z,14nm,0.3s,baz=234,slow=19,SNR=36						
LVC	**Limon Verde**	**2.22**	**215**		**Pn**	**16 45 04.2**	**+0.7**
LVC	**Limon Verde**	**2.22**	**215**	*eP*	**Pn**	**16 45 04.4**	**+0.9**
LVC				*i* S	**Sn**	**16 45 35.4**	**+0.5**
LVC				IAML		16 45 40.9	
	comp=Z,38nm,0.6s						
PB11	**IPOC Station P**	**2.26**	**297**	Pn	**Pn**	**16 45 04.2**	**+0.4**
PB11	**IPOC Station P**	**2.26**	**297**	*eP*	**Pn**	**16 45 04.4**	**+0.7**
PB11				IAML		16 45 37.9	
	comp=Z,223nm,0.2s						
YJA	**Yavi**	**2.32**	**127**	*eP*	**Pn**	**16 45 05.9**	**+1.2**
YJA				*i* S	**Sn**	**16 45 38.0**	**+1.1**
YJA				IAML		16 45 40.1	
	comp=Z,66nm,1.0s						
PB03	**IPOC Station P**	**2.42**	**239**	*eP*	**Pn**	**16 45 06.2**	**+0.6**
PB03				*i* S	**Sn**	**16 45 37.8**	**-0.8**
PB03				IAML		16 45 39.1	
	comp=Z,326nm,0.4s						
MNMC	**Minye Minye**	**2.56**	**310**		**Pn**	**16 45 08.3**	**+0.9**
MNMCX	**Minye Minye**	**2.56**	**310**	*eP*	**Pn**	**16 45 08.5**	**+1.1**
MNMCX				IAML		16 45 45.7	
	comp=Z,214nm,0.2s						
PB06	**IPOC Station P**	**2.69**	**225**	*eP*	**Pn**	**16 45 09.8**	**+1.1**
PB06				IAML		16 46 16.7	
	comp=Z,210nm,0.9s						
PSGCX	**Pisagua**	**2.72**	**296**	*eP*	**Pn**	**16 45 09.2**	**+0.2**
PSGCX				*i* S	**Sn**	**16 45 43.5**	**-1.1**
PSGCX				IAML		16 45 44.8	
	comp=Z,194nm,0.3s						
PB04	**IPOC Station P**	**2.88**	**238**		**Pn**	**16 45 11.4**	**+0.4**
PB15	**IPOC Station P**	**3.00**	**217**	*eP*	**Pn**	**16 45 13.7**	**+1.2**
PB15				IAML		16 45 56.8	
	comp=Z,862nm,0.1s						
PB16	**IPOC Station P**	**3.09**	**322**	*eP*	**Pn**	**16 45 16.0**	**+2.1**
PB16				IAML		16 45 57.7	
	comp=Z,86nm,1.1s						
HJA	**Humahuaca**	**3.09**	**141**	*eP*	**Pn**	**16 45 15.4**	**+1.7**
HJA				*i* S	**Sn**	**16 45 53.4**	**+0.2**
HJA				IAML		16 45 58.6	
	comp=Z,125nm,0.5s						
PB05	**IPOC Station P**	**3.22**	**230**	*eP*	**Pn**	**16 45 15.6**	**+0.6**
PB05				IAML		16 45 58.4	
	comp=Z,90nm,0.6s						
PB10	**IPOC Station P**	**3.90**	**226**	Pn	**Pn**	**16 45 23.2**	**-0.1**
LPAZ	**La Paz**	**4.53**	**353**	P	**Pn**	**16 45 33.8**	**+1.8**
	comp=Z,6.1nm,0.3s,baz=148,slow=6.3,SNR=109						
LPAZ				S	**Sn**	**16 46 25.6**	**0.0**
	comp=Z,1.0nm,0.3s,baz=27,slow=22,SNR=6.3						
LPAZ	**La Paz**	**4.53**	**353**		**Pn**	**16 45 33.2**	**+1.3**
LPAZ	**La Paz**	**4.53**	**353**	*eP*	**Pn**	**16 45 33.9**	**+2.0**
GO02	**Mina Guanaco**	**4.74**	**203**		**Pn**	**16 45 34.0**	**-0.3**
GO03	**Copiap**	**7.20**	**200**		**Pn**	**16 46 03.4**	**-2.7**
SIV	**San Ignacio**	**7.77**	**53**	P	**Pn**	**16 46 11.9**	**-1.7**
	comp=Z,8.2nm,0.3s,baz=252,slow=11,SNR=159						
SIV				S	**Sn**	**16 47 36.1**	**-4.9**
	baz=142,slow=21,SNR=3.2						
GO04	**Tololo Observa**	**9.79**	**197**	Pn	**Pn**	**16 46 36.7**	**-3.5**
ROC1	**El Roble**	**12.52**	**194**	P	**P**	**16 47 19.7**	**-0.1**
GO06	**Curarrehue**	**19.03**	**189**	P	**P**	**16 48 32.1**	**+0.9**
GO06				IAmb	IAmb	16 48 33.6	
	comp=Z,11nm,0.8s						
PLCA	**Paso Flores**	**20.04**	**187**	P	**P**	**16 48 43.8**	**+1.8**
	comp=Z,4.1nm,0.8s,baz=19,slow=9.6,SNR=8.8						
PLCA	**Paso Flores**	**20.04**	**187**	P	**P**	**16 48 43.3**	**+1.3**
PAYG	**Puerto Ayora**	**29.91**	**309**	P	**P**	**16 50 12.8**	**-1.2**
GO09	**Cerro Castillo**	**30.64**	**186**	P	**P**	**16 50 18.9**	**-1.0**
ESTN	**Estel**	**38.45**	**330**	P	**P**	**16 51 28.2**	**+0.9**
TXAR	**Lajitas Array**	**60.81**	**324**	P	**P**	**16 54 16.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=140,slow=7.1,SNR=4.0						
PDAR	**Pinedale Array**	**74.17**	**329**	P	**P**	**16 55 40.9**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=123,slow=6.6,SNR=3.0						
ULM	**Lac du Bonnet**	**75.05**	**342**	P	**P**	**16 55 45.2**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=156,slow=7.4,SNR=3.9						
ULM	**Lac du Bonnet**	**75.05**	**342**	IAmb	IAmb	16 58 20.5	
	comp=Z,25nm,1.7s						
NVAR	**Mina Array Bea**	**75.75**	**321**	P	**P**	**16 55 48.7**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=163,slow=9.4,SNR=5.5						
TORD	**Torodi Ar. Bea**	**75.90**	**70**	P	**P**	**16 55 49.8**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=231,slow=5.4,SNR=2.9						
SYO	**Syowa Base**	**76.70**	**159**‖	*e*X	P	16 56 06.0	+13
YKA	**Yellowknife Ar**	**90.97**	**340**	P	**P**	**16 57 06.9**	**+1.3**
	comp=Z,0.8nm,0.5s,baz=132,slow=4.4,SNR=25						

*IDC **06** 16:56:26.4±1.1,37°.49N×143°.17E,h0km,mb3.7/6, mb1 3.8/8,mb1mx3.5/35,mbtmp3.7/8,ML2.9/2,Error ellipse: s-maj=30.1km s-min=19.1km az=81.0*
*JMA **06** 16:56:29.0±0.1,37°.53N×142°.90E,h25km,M3.8*
*NEIC **06** 16:56:30.4±1.3,37°.48N±0°.08×143°.2E±0°.1,h32km±6km, mb4.4/6,Error ellipse: s-maj=16.8km s-min=10.1km az=118.0*

ISC 06 16:56:26.6±3.2,37°.56N±0°.05×142°.96E±0°.08,h1km±19km, n43,σ1°57/51,mb3.8/8,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.40**	**303**	P	**Pn**	**16 56 52.9**	**-0.3**
JIKH				*e*S	**Sg**	**16 57 10.5**	**-1.1**
JIO	**Ouri**	**1.56**	**306**	P	**Pn**	**16 56 55.6**	**+0.2**
JIO				*e*S	**Sn**	**16 57 14.5**	**-1.6**
JMST	**Minamisoumatoc**	**1.65**	**276**	P	**Pn**	**16 56 56.2**	**-0.5**
JMST				*e*S	**Sn**	**16 57 15.9**	**-2.6**
JFK	**Kawauchi**	**1.67**	**264**	P	**Pn**	**16 56 56.7**	**-0.3**
JFK				*e*S	**Sn**	**16 57 16.8**	**-2.2**
JKMT	**Kesennumamotoy**	**1.71**	**317**	P	**Pn**	**16 56 57.9**	**+0.3**
JKMT				*e*S	**Sn**	**16 57 19.0**	**-1.1**
JMM	**Marumori**	**1.74**	**281**	P	**Pn**	**16 56 57.8**	**-0.2**
JMM				*e*S	**Sn**	**16 57 18.5**	**-2.3**
ONAJ	**Iwakimizuishiy**	**1.78**	**256**	P	**Pn**	**16 56 58.5**	**0.0**
ONAJ				S	**Sn**	**16 57 18.7**	**-3.1**
JMK	**Ichinoseki**	**1.95**	**316**	P	**Pn**	**16 57 01.5**	**+0.7**
JMK				*e*S	**Sn**	**16 57 25.3**	**-0.7**
JOU	**Okura**	**1.98**	**295**	P	**Pn**	**16 57 02.0**	**+0.7**
JFT	**Otama**	**2.08**	**270**	P	**Pn**	**16 57 03.2**	**+0.5**
JFT				*e*S	**Sn**	**16 57 28.5**	**-0.7**
JOM	**Ohasama**	**2.32**	**326**	P	**Pn**	**16 57 06.8**	**+0.9**
JYK	**Kaneyama**	**2.46**	**304**	P	**Pn**	**16 57 08.8**	**+1.0**
JAG	**Ashikaga**	**3.02**	**249**	P	**Pn**	**16 57 16.6**	**+1.0**
BSO1	**Boso 1**	**3.31**	**210**	P	**Pn**	**16 57 20.2**	**+1.2**
BSO1				*e*S	**Sn**	**16 57 58.3**	**-0.4**
JRY	**Ryogami san**	**3.60**	**246**	P	**Pn**	**16 57 24.5**	**+1.0**
JRY				*e*S	**Sn**	**16 58 05.3**	**-1.4**
MJAR	**Matsushiro Arr**	**3.93**	**257**	Pn	**Pn**	**16 57 30.3**	**+2.2**
	0.3nm,0.3s,baz=86,slow=23,SNR=25						
MJAR				Sn	**Sn**	**16 58 18.6**	**+3.8**
	0.1nm,0.3s,baz=172,slow=37,SNR=3.6						
MJAR	**Matsushiro Arr**	**3.93**	**257**		**Pn**	**16 57 29.9**	**+1.8**
MAJO	**Matsushiro**	**3.93**	**257**		**Pn**	**16 57 30.9**	**+2.8**
MAT	**Matsushiro**	**3.93**	**257**	P	**Pn**	**16 57 31.0**	**+2.9**
MAT				*e*S	**Sn**	**16 58 15.6**	**+0.8**
MJB9	**Matsu-Tunnel**	**3.93**	**257**		**Pn**	**16 57 30.9**	**+2.8**
JHJ2	**Mitsune**	**5.12**	**211**	Pn	**Pn**	**16 57 43.9**	**-0.6**
INU	**Inuyama**	**5.27**	**247**	Pn	**Pn**	**16 57 48.3**	**+1.9**
JKA	**Kamikawa-asahi**	**6.56**	**358**		**Pn**	**16 58 05.8**	**+1.6**
JKA					**Sn**	**16 59 20.4**	**+0.9**
ASAJ	**Asahikawa**	**6.56**	**358**	Pn	**Pn**	**16 58 05.8**	**+1.6**
	0.4nm,0.3s,baz=204,slow=20,SNR=4.1						
ASAJ				Sn	**Sn**	**16 59 20.4**	**+0.9**
	0.1nm,0.3s,baz=209,slow=19,SNR=2.0						
H11N2	**WAKE ISLAND Hy**	**27.39**	**124**	T	T	17 31 16.2	
	baz=316,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**27.39**	**124**	T	T	17 31 01.4	
	baz=316,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**27.40**	**124**	T	T	17 31 17.6	
	baz=316,slow=75,SNR=20						
ULN	**Ulaanbaatar**	**28.09**	**303**	P	**P**	**17 02 19.4**	**-0.5**
ULN				IAmb	IAmb	17 03 19.8	
	comp=Z,8.3nm,1.6s						
H11S1	**WAKE ISLAND Hy**	**28.14**	**126**	T	T	17 32 14.0	
	baz=318,slow=76,SNR=8.9						
H11S3	**WAKE ISLAND Hy**	**28.14**	**126**	T	T	17 32 13.1	
	baz=318,slow=76,SNR=7.8						
H11S2	**WAKE IS

comp=Z,171nm,19.3s,baz=355,slow=35
MMRI Maumere 68.98 85 P P 17 12 03.3 -0.7
ASAR Alice Springs 69.80 105 P P 17 12 08.6 -0.4
comp=Z,8.2nm,0.7s,baz=233,slow=5.9,SNR=149
ASAR LR LR 17 38 21.4
comp=Z,144nm,20.6s,baz=237,slow=32
AS31 Alice Springs 69.80 105 P P 17 12 08.5 -0.5
KNRA Kununurra 70.14 95 P P 17 12 10.8 -0.3
KNRA IAmb IAmb 17 12 11.9
comp=Z,18nm,0.9s
CM31 Chiang Mai Arr 70.78 47 P P 17 12 14.7 -0.1
CM31 IAmb IAmb 17 12 15.7
comp=Z,18nm,0.9s
CMAR Chiang Mai Arr 70.78 47 P P 17 12 14.5 -0.4
comp=Z,9.5nm,0.8s,baz=231,slow=6.9,SNR=92
CMAR LR LR 17 37 10.5
comp=Z,69nm,18.4s,baz=342,slow=31
CHTO Chiang Mai 71.06 47 P P 17 12 16.4 -0.2
KOLN Koldanda 71.08 29 eP P 17 12 15.6 -1.1
comp=Z,74nm,1.5s
STKA Stephens Creek 71.15 116 P P 17 12 16.6 -0.6
comp=Z,8.3nm,0.9s,baz=262,slow=4.3,SNR=9.7
STKA LR LR 17 36 26.8
comp=Z,116nm,21.9s,baz=213,slow=30
STKA Stephens Creek 71.15 116 P P 17 12 16.9 -0.2
DMN Daman 71.54 31 eP P 17 12 18.7 -0.9
RAMN Ramite 71.58 32 eP P 17 12 19.3 -0.5
comp=Z,60nm,1.2s
PKI Pulchoki 71.63 31 eP P 17 12 18.8 -1.4
PKIN Phulchoki 71.63 31 eP P 17 12 18.7 -1.4
DANN Dangsing 71.66 29 eP P 17 12 18.5 -1.9
comp=Z,20nm,1.1s
GKN Gorkha 71.70 30 eP P 17 12 19.3 -1.1
KKN Kakani 71.77 31 eP P 17 12 19.8 -1.1
comp=Z,44nm,1.3s
ODAN Odare 71.84 33 eP P 17 12 20.6 -0.8
comp=Z,50nm,1.3s
JIRN Jiri 72.03 31 eP P 17 12 21.8 -0.9
comp=Z,46nm,0.9s
GUN Gumba 72.12 31 eP P 17 12 22.5 -0.7
comp=Z,68nm,1.2s
WRA Warramunga Arr 72.17 102 P P 17 12 22.8 -0.6
comp=Z,9.3nm,0.8s,baz=232,slow=5.4,SNR=69
WRAB Tennant Creek 72.18 102 P P 17 12 23.7 +0.2
WRAB IAmb IAmb 17 12 24.4
comp=Z,14nm,0.8s
TAPN Taplejung 72.40 33 eP P 17 12 24.3 -0.5
comp=Z,36nm,1.3s
SHL Shillong 72.79 37 P P 17 12 27.0 0.0
SHL IAmb IAmb 17 12 27.6
comp=Z,14nm,0.8s
KBL Kabul 73.11 15 P P 17 12 28.1 -0.7
NIL Nilore 73.20 18 P P 17 12 29.0 -0.1
NIL IAmb IAmb 17 12 29.9
comp=Z,17nm,1.4s
LUWI Luwuk 74.00 79 P P 17 12 34.7 +0.5
GEYT Alibeck 74.98 5 P P 17 12 38.1 -1.3
comp=Z,0.9nm,0.3s,baz=235,slow=5.2,SNR=6.0
GEYT LR LR 17 42 55.4
comp=Z,110nm,20.2s,baz=225,slow=34
GAZ Gaziantep 75.31 348 P P 17 12 42.1 +0.7
GAZ IAmb IAmb 17 12 43.1
comp=Z,10nm,1.0s
LSA Lhasa 75.95 34 P P 17 12 45.8 +0.1
LSA IAmb IAmb 17 12 47.3
comp=Z,16nm,1.0s
KARP Karpathos 76.03 339 P P 17 12 46.7 +1.2
ELL Elmali 76.43 342 P P 17 12 47.5 -0.3
CHGR Chuyangaron 77.12 14 P P 17 12 52.5 +0.8
GNI Garni 77.30 354 P P 17 12 54.0 +1.3
GNI IAmb IAmb 17 13 01.2
comp=Z,16nm,1.2s
GAR Garm 77.68 14 P P 17 12 55.2 +0.4
GAR IAmb IAmb 17 12 56.0
comp=Z,19nm,1.3s
KMI Kunming 78.17 46 P P 17 12 58.7 +0.7
KMI pmax pmax
comp=Z,10.0nm,0.8s
KMI pmax pmax
comp=Z,150nm,6.3s
MANT Manisa 78.42 341 P P 17 13 00.2 +1.1
BRTR Keskin Array B 78.44 346 P P 17 12 57.9 -1.1
comp=Z,2.3nm,1.0s,baz=174,slow=5.7,SNR=9.5
AKH Akhalkalaki 78.66 353 ⇑P P 17 13 01.3 +1.1
AKH Akhalkalaki 78.66 353 P P 17 13 00.7 +0.5
AKH IAmb IAmb 17 13 02.2
comp=Z,16nm,1.3s
BTK Batken 78.80 15 P P 17 13 01.8 +0.8
TBLG Delisi 78.87 354 P P 17 13 01.7 +0.5
TBLG IAmb IAmb 17 13 02.9
comp=Z,17nm,1.1s
KSH Kashi 79.45 19 P P 17 13 02.7 -1.9
KSH pP pwP 17 13 11.2 -0.1
KSH PP **PP** **17 16 06.4 +1.1**
KSH S **S** **17 22 59.7 -6.0**
KSH sS sS 17 23 14.0 +6.0
KSH SS **SS** **17 28 15.9 +1.9**
KSH pmax pmax
comp=Z,42nm,1.1s
KSH LR LR
comp=Z,300nm,4.6s
KSH LR LR
comp=Z,670nm,6.2s
KBZ Khabaz 81.01 353 P P 17 13 11.9 -0.8
comp=Z,5.2nm,1.1s,baz=219,slow=4.0,SNR=6.3
KIV Kislovodsk 81.26 353 ⇓P P 17 13 14.4 +0.2
KIV Kislovodsk 81.26 353 P P 17 13 14.5 +0.3
KIV IAmb IAmb 17 13 16.1
comp=Z,19nm,1.1s
GYA Guiyang 81.47 48 ⇓iP P 17 13 15.5 -0.2
GYA S **S** **17 23 29.2 +1.8**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,30nm,4.9s
LIT Litokhoron 81.63 337 P P 17 13 17.6 +1.5
KK31 Karatay Array 81.68 13 P P 17 13 16.9 +0.6
KKAR Karatay Array 81.68 13 P P 17 13 16.9 +0.6
AAK Ala-Archa 82.05 16 P P 17 13 19.4 +1.0
AAK IAmb IAmb 17 13 20.7
comp=Z,24nm,1.5s
KEST Kesra 82.74 326 P P 17 13 23.1 +0.9
comp=Z,8.0nm,1.0s,baz=139,slow=13,SNR=3.5
KEST LR LR 17 49 31.5
comp=Z,402nm,20.9s,baz=299,slow=35
CD2 Chengdu 83.22 43 eP P 17 13 26.0 +1.3
VTS Vitosha 83.72 339 ⇑P P 17 13 27.3 +0.2
VTS Vitosha 83.72 339 P P 17 13 27.3 +0.2
HARR Harsova 84.43 343 ⇓P P 17 13 30.5 0.0
CFR Carcaliu 84.84 343 ⇓P P 17 13 32.4 -0.1
HUMR Humele 85.01 341 ⇑P P 17 13 33.3 -0.1
MLR Muntele Rosu 85.66 342 ⇑P P 17 13 36.8 0.0
MLR Muntele Rosu 85.66 342 P P 17 13 36.8 0.0
VRI Vrincioaia 85.82 342 ⇑P P 17 13 37.5 +0.1
PLOR Plostina 85.83 342 ⇑P P 17 13 37.4 -0.1
VOIR 85.84 341 ⇑P P 17 13 37.0 -0.6
ARR Arges 85.88 341 ⇓P P 17 13 37.6 -0.2
PLWZ Palliser 85.93 141 P P 17 13 38.1 -0.4
ENH Enshi 85.96 47 P P 17 13 38.1 -0.4
MDVR Moldovita 86.14 339 ⇓P P 17 13 39.4 +0.3
DOPR Dopca 86.25 342 ⇓P P 17 13 39.6 0.0
OZUR 86.27 342 ⇑P P 17 13 39.0 -0.7
PLCA Paso Flores 86.34 220 P P 17 13 40.4 -0.2
comp=Z,6.2nm,1.0s,baz=165,slow=9.2,SNR=6.3
PLCA LR LR 17 46 55.7
comp=Z,66nm,18.4s,baz=89,slow=32
PLCA Paso Flores 86.34 220 P P 17 13 40.6 0.0
PLCA IAmb IAmb 17 13 43.2
comp=Z,11nm,1.2s
ABKAR Akbulak array 86.38 5 P P 17 13 40.1 0.0
ABKAR IAmb IAmb 17 13 41.2
comp=Z,13nm,1.5s
GZR Gura Zlata 86.40 340 ⇓P P 17 13 40.4 0.0
WMQ Urumqi 86.88 25 eP P 17 13 44.3 +1.5
WMQ pmax pmax
comp=Z,7.0nm,0.6s
WMQ LR LR
comp=Z,730nm,29.2s
WMQ LR LR
comp=Z,190nm,14.9s
BZS Buzias 86.93 339 ⇓P P 17 13 43.1 +0.2
LZH Lanzhou 87.28 40 eP P 17 13 45.3 +0.3
LZH pP pwP 17 13 50.6 -1.3
LZH sP sP 17 13 53.8 +5.9
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,51nm,4.3s
LZH LR LR
comp=Z,390nm,12.6s
LZH LR LR
comp=Z,610nm,13.6s
LZH LR LR
comp=Z,540nm,13.9s
SIRR Siria 87.52 339 ⇑P P 17 13 46.1 +0.4
GO06 Curarrehue 87.66 220 P P 17 13 47.0 -0.1
GO06 IAmb IAmb 17 15 23.7
comp=Z,18nm,1.5s
DRGR 87.71 340 ⇓P P 17 13 46.8 +0.1
BURAR Bucovina Array 87.83 342 ⇓P P 17 13 48.0 +0.7
BUR08 Bucovina Ar. S 87.86 342 P P 17 13 48.3 +0.8
MK31 Makanchi Array 87.90 20 P P 17 13 47.7 +0.2
MKAR Makanchi Array 87.90 20 P P 17 13 47.3 -0.3
comp=Z,20nm,0.4s,baz=210,slow=5.2,SNR=1.7
CPUP Villa Florida 88.46 238 P P 17 13 50.3 -0.6
comp=Z,4.6nm,1.1s,baz=107,slow=4.5,SNR=4.2
CPUP Villa Florida 88.46 238 P P 17 13 51.7 +0.8
CPUP IAmb IAmb 17 13 52.7
comp=Z,12nm,1.4s
TRPA Tarpa 88.98 341 ⇓P P 17 13 52.4 -0.1
WHN Wuhan 89.05 50 P P 17 13 52.7 -0.7
KOLS Kolonicke sedl 89.79 341 eP P 17 13 58.6 +2.2
AKASG Malin Array Be 89.85 346 P P 17 13 55.6 -0.9
comp=Z,2.5nm,0.9s,baz=175,slow=4.3,SNR=9.5
SOKA Soboth 89.92 335 iP P 17 13 57.8 +0.7
comp=Z,8.8nm,1.2s
OBKA Obir 89.93 335 iP P 17 13 58.8 +1.5
comp=Z,10nm,1.3s
ARSA Arzberg 90.26 336 iP P 17 13 58.9 +0.2
comp=Z,6.3nm,1.2s
CONA Conrad Observa 90.75 337 iP P 17 14 02.2 +1.2
comp=Z,8.2nm,1.2s
LANS Liptovska Anna 90.75 339 eP P 17 14 02.2 +1.3
KBA Koelnbreinsper 90.83 335 iP P 17 14 02.8 +1.2
comp=Z,5.8nm,1.4s
ABTA Altersbach 90.84 334 iP P 17 14 02.5 +1.1
comp=Z,7.5nm,1.1s
MOA Molln 91.19 336 iP P 17 14 03.6 +0.6
comp=Z,7.2nm,1.2s
WATA Walderalm 91.67 334 iP P 17 14 06.3 +0.9
comp=Z,9.7nm,1.4s
SQTA Sankt Quirin 91.70 333 iP P 17 14 06.7 +1.2
comp=Z,3.3nm,0.8s
MOTA Moosalm 91.85 333 iP P 17 14 07.1 +0.9
comp=Z,8.4nm,1.6s
RETA Reutte 92.09 333 iP P 17 14 09.0 +1.8
comp=Z,10nm,1.5s
GERES GERESS Array B 92.25 336 P P 17 14 07.5 -0.5
comp=Z,1.0nm,0.9s,baz=142,slow=8.1,SNR=7.1
KHC Kasperske Hory 92.54 336 eP P 17 14 08.7 -0.5
DPC Dobruska-Polom 92.74 338 eP P 17 14 11.1 +1.0
NJ2 Nanjing 92.87 51 eP P 17 14 12.4 +1.3
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
CLL Collm 94.61 337 eP P 17 14 20.0 +1.4
HHC Hu-ho-hao-te 94.84 41 eP P 17 14 21.8 +1.7
HHC pmax pmax
comp=Z,4.0nm,0.7s
ZAA0 Zalesovo Array 95.09 19 P P 17 14 19.6 -1.2
ZALV Zalesovo Beam 95.09 19 P P 17 14 18.6 -2.2
comp=Z,1.8nm,0.6s,baz=207,slow=5.1,SNR=9.7
D62A Allapoint, All 136.25 302 P PKPdf 17 20 19.6 +0.2
baz=99
G63A Kingsbury 136.29 299 P PKPdf 17 20 19.8 +0.2
baz=101
M64A Tiverton 136.67 294 P PKPdf 17 20 20.3 0.0
baz=104
I63A Otisfield 136.76 298 P PKPdf 17 20 20.3 -0.1
baz=102
D60A Saint Jean D'O 137.49 302 P PKPdf 17 20 21.5 -0.2
baz=98
G61A St-Isidore-de- 137.65 299 P PKPdf 17 20 21.9 -0.2
baz=100
K62A Royalston 137.66 295 P PKPdf 17 20 21.8 -0.3
baz=102
LBNH Lisbon 137.75 298 P PKPdf 17 20 22.4 +0.1
baz=100
E60A Ste Agathe de 137.76 301 P PKPdf 17 20 22.5 +0.2
baz=98
LONY Lake Ozonia 139.69 298 PKPdf 17 20 25.6 -0.3
LONY Lake Ozonia 139.69 298 P PKPdf 17 20 26.0 +0.2
baz=99
R60A Leonardtown, M 139.87 288 P PKPdf 17 20 26.8 +0.5
baz=105
N59A Ste Game Lan 139.88 292 P PKPdf 17 20 26.8 +0.5
baz=102
J56A Wolcott 141.11 295 P PKPdf 17 20 29.6 +1.2
baz=99
Q54A Coxs Mills 143.28 288 P PKPdf 17 20 31.4 -1.0
baz=102
Y54A Tignall 143.36 279 P PKPbc 17 20 30.4 +0.5
baz=109
T54A Tazewell 143.40 284 P PKPbc 17 20 30.1 +0.1
baz=105
U54A Nelsons Funny 143.45 283 P PKPbc 17 20 30.2 0.0
baz=105
GOGA Godfrey 143.83 278 P PKPab 17 20 30.9 +0.3
baz=109
Z53A Monticello 143.87 277 P PKPbc 17 20 31.3 -0.1
baz=109
V53A Saluda 143.99 281 P PKPab 17 20 31.5 +0.3
baz=106
U53A Fall Branch 144.00 283 P PKPab 17 20 31.5 +0.3
baz=105
X53A Estanollee 144.04 279 P PKPab 17 20 31.8 +0.4
baz=108
T53A Wise 144.12 284 P PKPbc 17 20 32.4 +0.2
baz=105
W53A Cullowhee 144.13 281 P PKPab 17 20 32.1 +0.3
baz=107
O52A Adamsville 144.26 289 P PKPbc 17 20 32.7 +0.3
baz=101
N52A McGinn's Farm, 144.27 290 P PKPbc 17 20 32.9 +0.5
baz=100
252A Lumpkin 144.36 275 P PKPab 17 20 33.0 +0.3
baz=111
Q52A Bidwell 144.36 287 P PKPab 17 20 32.8 +0.4
baz=102
P52A Corning 144.40 288 P PKPab 17 20 32.9 +0.3
baz=101
Y52A Lilburn 144.44 278 P PKPab 17 20 32.5 -0.4
baz=108
T52A Hallie 144.50 284 P PKPab 17 20 32.6 -0.5
baz=104
Z52A Williamson 144.51 277 P PKPab 17 20 32.4 -0.8
baz=109
R52A Catlettsburg 144.52 286 P PKPab 17 20 32.4 -0.7
baz=103,SNR=6.8
152A Waverly Hall 144.58 276 P PKPab 17 20 33.6 +0.1
baz=110
U52A Thorn Hill 144.62 282 P PKPab 17 20 33.6 0.0
baz=105
V52A Sevierville 144.65 281 P PKPab 17 20 33.3 -0.4
baz=106
W52A Murphy 144.71 280 P PKPab 17 20 33.5 -0.4
baz=107
S52A Salyersville 144.71 285 P PKPab 17 20 33.5 -0.3
baz=104
M51A Elyria 144.72 291 P PKPab 17 20 34.0 +0.2
baz=99
ANM Nome 144.76 27 PKPdf 17 20 34.2 0.0
TZTN Tazewell 144.80 283 P PKPab 17 20 34.4 +0.2
baz=105
N51A Ashland 144.80 290 P PKPab 17 20 34.1 +0.1
baz=99
O51A Pataskala 144.85 289 P PKPab 17 20 34.4 +0.1
baz=100,SNR=5.8
F49A Sandfield 145.05 299 P PKPbc 17 20 34.7 0.0
baz=92
P51A Williamsport 145.07 288 PKPbc 17 20 35.0 -0.1
P51A Williamsport 145.07 288 P PKPbc 17 20 34.9 -0.1
baz=101,SNR=5.2
S51A Beattyville 145.10 284 PKPbc 17 20 35.3 +0.2
S51A Beattyville 145.10 284 P PKPbc 17 20 35.1 0.0
baz=103
U51A La Follette 145.12 282 P PKPbc 17 20 35.3 0.0
baz=105
ACSO Alum Creek Sta 145.15 289 P PKPbc 17 20 35.1 -0.1
baz=100
Z51A Franklin 145.15 277 PKPbc 17 20 35.5 +0.1
E48A Lockeyer 145.16 300 P PKPbc 17 20 35.0 0.0
baz=91
Q51A Peebles 145.20 287 P PKPbc 17 20 35.4 -0.1
baz=102
T51A Gray 145.21 283 P PKPbc 17 20 35.4 -0.2
baz=104
V51A Loudon 145.23 281 PKPbc 17 20 35.6 -0.1
V51A Loudon 145.23 281 P PKPbc 17 20 35.6 -0.1
baz=106,SNR=5.4
R51A Hillsboro 145.23 286 P PKPbc 17 20 35.5 -0.1
baz=102
K50A Casco 145.24 294 P PKPdf 17 20 35.9 +0.2
baz=96
Y51A Rockmart 145.25 278 P PKPbc 17 20 35.7 -0.1
baz=108,SNR=6.6
X51A Calhoun 145.28 279 PKPbc 17 20 36.0 +0.2
X51A Calhoun 145.28 279 P PKPbc 17 20 35.9 +0.1
baz=107,SNR=5.5
L50A Kingsville 145.28 292 P PKPbc 17 20 35.7 +0.1
baz=97
N50A Nevada 145.36 290 P PKPdf 17 20 36.2 +0.2
baz=99,SNR=6.3
M50A Fremont 145.37 291 P PKPbc 17 20 36.0 +0.1
baz=98
W51A Cleveland 145.38 280 P PKPbc 17 20 35.9 -0.3
baz=106
F48A Evansville 145.45 299 P PKPab 17 20 36.5 +0.2
baz=92
I49A Point Hope 145.49 296 P PKPdf 17 20 36.2 +0.1
baz=95
O50A Cable 145.61 289 P PKPdf 17 20 36.6 +0.1
baz=100
Q50A Georgetown 145.65 286 P PKPdf 17 20 36.7 +0.1
baz=102
P50A Jamestown 145.66 288 P PKPdf 17 20 36.7 +0.2
baz=100
J49A Marlette 145.67 295 P PKPbc 17 20 37.0 +0.2
baz=95
Z50A Ashland 145.72 276 PKPdf 17 20 37.0 +0.1
Z50A Ashland 145.72 276 P PKPdf 17 20 36.8 -0.1
baz=109
S50A Richmond 145.73 284 P PKPdf 17 20 37.0 +0.3
baz=103
U50A Jamestown 145.78 282 P PKPdf 17 20 37.2 +0.3
baz=105
V50A Pikevile 145.78 281 P PKPbc 17 20 37.4 0.0
baz=106
R50A Paris 145.80 285 P PKPdf 17 20 36.9 0.0
baz=102
W50A Signal Mountai 145.82 280 P PKPdf 17 20 37.4 +0.3
baz=106
BRAL Brewton 145.91 272 P PKPdf 17 20 37.7 +0.5
baz=112
T50A Nancy 145.92 283 P PKPdf 17 20 37.5 +0.3
baz=104
E47A Iron Bridge 145.93 300 P PKPbc 17 20 37.3 -0.2
baz=91
M49A Liberty Center 146.08 291 P PKPbc 17 20 38.3 +0.1
baz=98
I48A Sherman Twp 146.14 296 P PKPbc 17 20 37.9 -0.3
baz=94
N49A Columbus Grove 146.16 290 P PKPbc 17 20 38.1 -0.2
baz=98
TOLK Toolik Lake Re 146.32 14 PKPab 17 20 38.9 0.0
TOLK Toolik Lake Re 146.32 14 P PKPab 17 20 39.4 +0.5
baz=328
K48A Perry 146.33 293 P PKPbc 17 20 38.8 -0.1
baz=96
Q49A Aurora 146.38 286 P PKPbc 17 20 39.0 -0.1
baz=101
S49A Springfield 146.44 284 P PKPbc 17 20 39.0 -0.3
baz=102
V49A McMinnville 146.44 280 P PKPbc 17 20 39.0 -0.4
baz=105
R49A Shelbyville 146.46 285 PKPdf 17 20 38.7 +0.7
R49A Shelbyville 146.46 285 P PKPbc 17 20 39.0 -0.4
baz=102
T49A Edmonton 146.48 283 P PKPbc 17 20 39.3 -0.2
baz=104
U49A Red Boiling Sp 146.53 282 P PKPbc 17 20 39.7 0.0
baz=104
W49A Belvidere 146.55 279 P PKPbc 17 20 40.0 +0.2
baz=106,SNR=7.4
M48A Edgerton 146.63 291 P PKPbc 17 20 39.7 -0.1
baz=97
N48A Decatur 146.78 290 P PKPbc 17 20 40.0 -0.3
baz=98
O48A Farmland 146.79 289 P PKPbc 17 20 39.8 -0.5
baz=99
CLTN Cedars of Leba 146.86 281 PKPbc 17 20 40.0 -0.6
P48A Milroy 146.87 287 P PKPbc 17 20 40.5 -0.1
baz=100
K47A Vermontville 146.97 293 P PKPbc 17 20 40.4 -0.2
baz=95
X48A Hartselle 146.98 278 PKPbc 17 20 41.1 +0.2
Q48A North Vernon 147.01 286 P PKPbc 17 20 40.6 -0.3
baz=101
V48A Smith Brothers 147.16 280 PKiKP 17 20 43.7 -0.1
WCI Wyandotte Cave 147.31 285 P PKPbc 17 20 41.2 -0.6
baz=102
COLD Coldfoot 147.38 16 PKPab 17 20 42.1 -0.9
K46A Dorr 147.54 293 P PKPbc 17 20 41.7 -0.5
baz=95
T47A Sharon Grove 147.68 282 PKPbc 17 20 42.3 -0.5
C36M Paulatuk 147.75 357 PKPbc 17 20 41.5 -0.4
C36M Paulatuk 147.75 357 P PKPbc 17 20 41.6 -0.4
baz=5.6
WVT Waverly 148.04 280 PKPbc 17 20 42.6 -1.2
WVT Waverly 148.04 280 P PKPbc 17 20 43.3 -0.5
baz=104
INK Inuvik 148.70 4 PKPbc 17 20 44.9 +0.3
FYU Fort Yukon 148.95 13 PKiKP 17 20 46.5 0.0
MLY Manley 149.04 19 PKPbc 17 20 46.1 +0.6
TTA Tatalina 149.05 25 PKiKP 17 20 46.8 -0.2
FCC Fort Churchill 149.31 325 PKPbc 17 20 45.9 -0.4
BPAW Bear Paw Mtn. 149.72 20 PKPbc 17 20 47.3 +0.1
POKR Poker Plat Res 149.77 16 P PKPbc 17 20 47.2 -0.1
baz=328
PRP Porcupine Dome 149.83 15 PKiKP 17 20 48.4 -0.2
TCOL CIGO_UAF Yank 149.88 17 P PKPbc 17 20 47.8 +0.3
baz=327
P43A Skaggs, Pawnee 150.03 287 PKPbc 17 20 49.0 +0.3
CCB Clear Creek Bu 150.08 17 PKPbc 17 20 47.7 -0.4
WRH Wood River Hil 150.16 18 PKPbc 17 20 48.2 -0.1
IL31 150.18 16 PKPbc 17 20 47.9 -0.3
ILAR Eielson Array 150.18 16 PKPbc PKPbc 17 20 46.9 -1.5
comp=Z,12nm,0.8s,baz=314,slow=3.2,SNR=78
PBMO Poplar Bluff 150.23 281 PKPbc 17 20 48.8 -0.5
PPLA Purkeypile 150.29 22 PKPbc 17 20 49.1 +0.3
EPYK Eagle Plains 150.36 7 PKPbc 17 20 48.5 -0.3
EPYK Eagle Plains 150.36 7 P PKPbc 17 20 48.9 +0.2
baz=346
L42A Oliver, Polo 150.37 291 PKPbc 17 20 49.6 +0.1
TRF Thorofare Moun 150.42 20 PKPbc 17 20 49.3 +0.1
HDA Harding Lake 150.48 17 P PKPbc 17 20 48.7 -0.3
baz=328
MCK McKinley 150.56 19 PKPbc 17 20 49.2 -0.1
LCAR Lake Charles 150.65 279 PKPbc 17 20 50.2 -0.1
JFWS Jewell Farm 150.84 293 P PKPbc 17 20 50.6 +0.1
baz=92
RND Reindeer 150.84 19 PKPbc 17 20 50.0 0.0
CCM Cathedral Cave 151.11 283 PKPbc 17 20 51.1 -0.3
CCM Cathedral Cave 151.11 283 P PKPbc 17 20 51.5 +0.1
baz=100
EGAK Eagle 151.29 12 PKPbc 17 20 51.2 +0.3
W41B Gary Mavity, V 151.29 277 P PKPbc 17 20 52.1 +0.3
baz=105
EYMN Ely 151.41 304 PKPbc 17 20 51.9 +0.2
EYMN Ely 151.41 304 P PKPbc 17 20 51.6 -0.1
baz=82
DHY Denali Highway 151.50 19 PKiKP 17 20 52.6 +0.5
SCRK Sand Creek 151.50 15 PKiKP 17 20 52.4 +0.3
X40A Basin Creek Fa 151.58 275 P PKiKP 17 20 53.2 +0.3
baz=106
MGMO Mountain Grove 151.75 281 PKPbc 17 20 53.0 +0.1
SUA Susitna One 151.82 23 PKiKP 17 20 52.8 0.0
U40A Yellville 152.05 279 P PKPbc 17 20 53.5 -0.1
baz=102
YKW3 Yellowknife Ar 153.35 346 PKPbc PKPbc 17 20 55.5 -0.1
YKA Yellowknife Ar 153.41 346 PKP PKPdf 17 20 47.2 -0.9
comp=Z,1.5nm,1.0s,baz=19,slow=1.9,SNR=12
YKA PKPbc PKPbc 17 20 55.6 -0.1
comp=Z,3.8nm,0.8s,baz=19,slow=2.0,SNR=32
JCT Junction City 155.81 262 PKPdf 17 20 52.8 +0.2
JCT Junction City 155.81 262 P PKPdf 17 20 52.6 0.0
baz=114
WMOK Wichita Mounta 156.38 273 PKPdf 17 20 53.2 0.0
TXAR Lajitas Array 158.34 256 PKP PKPdf 17 20 55.4 -0.5

comp=Z,2.8nm,0.9s,baz=165,slow=3.7,SNR=13
TXAR PKPab **PKPab** **17 21 30.1 -0.2**
comp=Z,2.4nm,1.1s,baz=119,slow=7.3,SNR=5.9
TX31 Lajitas Ar. Si 158.34 256 PKPdf 17 20 56.5 +0.6
TX32 Lajitas Array 158.34 256 PKPdf 17 20 56.5 +0.6
MNTX Cornudas Mount 160.69 260 PKPdf 17 20 58.7 +0.3
MNTX PKPab 17 21 40.4 0.0
MNTX Cornudas Mount 160.69 260 P PKPdf 17 20 58.5 +0.1
baz=113
SDCO Great Sand Dun 162.25 278 P PKPdf 17 21 00.0 -0.2
baz=95
ISCO Idaho Springs 162.41 285 P PKPdf 17 21 00.1 -0.3
baz=89
ANMO Albuquerque 162.56 269 P PKPdf 17 21 00.4 -0.1
baz=104
N23A Red Feather La 162.60 289 P PKPdf 17 21 00.8 +0.4
baz=85
121A Cookes Peak, D 162.89 260 P PKPdf 17 21 01.4 +0.5
baz=112
EGMT Eagleton 162.90 315 P PKPdf 17 21 00.8 +0.5
baz=58
S22A 4UR Ranch, Cre 163.30 278 P PKPdf 17 21 01.3 0.0
baz=95
319A Douglas 163.59 255 PKPdf 17 21 01.6 +0.1
RLMT Red Lodge 163.96 305 P PKPdf 17 21 01.2 -0.3
baz=67
O20A White River Ci 164.41 287 P PKPdf 17 21 02.3 +0.2
baz=86
MVCO Mesa Verde 164.57 276 P PKPdf 17 21 02.0 -0.4
baz=96
BW06 Boulder Array 164.93 297 P PKPdf 17 21 02.9 +0.4
baz=75
PDAR Pinedale Array 164.93 297 PKP PKPdf 17 21 01.4 -1.1
comp=Z,2.1nm,1.1s,baz=174,slow=2.7,SNR=6.4
TUC Tucson 165.14 256 P PKPdf 17 21 02.6 -0.2
baz=114
YMR Madison River 165.24 306 PKPdf 17 21 02.5 -0.2
YHL Hebgen Lake 165.31 306 PKPdf 17 21 03.8 +0.9
YHB Horse Butte 165.36 306 PKPdf 17 21 03.1 +0.3
MSO Missoula 165.91 317 P PKPdf 17 21 02.5 -0.5
baz=52
SRU San Rafael Swe 166.23 283 PKPdf 17 21 04.0 +0.3
WUAZ Wupatki 166.61 268 P PKPdf 17 21 04.4 +0.4
baz=102
TMUT Trail Mountain 166.75 284 PKPdf 17 21 05.5 +1.4
DUG Dugway, Tooele 167.88 289 P PKPdf 17 21 04.9 +0.1
baz=81
B05A Bryant 168.19 341 P PKPdf 17 21 04.6 +0.1
baz=23
D03D Eldon 169.11 343 P PKPdf 17 21 05.9 +0.8
baz=20
GMRC Granite Mounta 169.82 260 P PKPdf 17 21 06.7 +0.5
baz=108
R11A Troy Canyon, C 170.22 280 P PKPdf 17 21 06.9 +0.6
baz=88
HEC Hector,Ludlow 170.37 259 P PKPdf 17 21 06.5 +0.1
baz=108
TPNV Topopah Spring 170.72 272 P PKPdf 17 21 07.3 +0.7
baz=96
GSC Goldstone, Bar 170.87 261 P PKPdf 17 21 07.7 +1.1
baz=106
BFSC Mount Baldy Ra 171.19 253 P PKPdf 17 21 08.1 +1.2
baz=113
MPMC Manual Prospec 171.59 265 P PKPdf 17 21 08.2 +1.1
baz=102
LRMC Laurel Mtn Rad 171.61 261 P PKPdf 17 21 08.4 +1.3
baz=106
EDW2 Edwards Air Fo 171.68 257 P PKPdf 17 21 08.6 +1.6
baz=110
H04D Lebanon 171.74 334 P PKPdf 17 21 08.2 +1.5
baz=30
CWC Cottonwood Cre 172.12 267 P PKPdf 17 21 08.8 +1.5
baz=99
NV11 Mina Array Sit 172.23 282 PKPdf 17 21 09.0 +1.7
I04A Tendick Farm, 172.24 329 P PKPdf 17 21 07.9 +0.9
baz=34
ISA Isabella, Lake 172.28 261 PKPdf 17 21 09.0 +1.7
NVAR Mina Array Bea 172.35 282 PKP PKPdf 17 21 05.6 -1.8
comp=Z,2.0nm,0.9s,baz=298,slow=1.9,SNR=5.2
NVAR PKPab **PKPab** **17 22 32.1 +0.2**
comp=Z,0.5nm,0.9s,baz=101,slow=3.8,SNR=3.2

*JMA **06** 17:09:03.7±0.1,24.35N×122.45E,h51km±2km,M1.7*
*TAP **06** 17:09:04.7,24.51N×122.38E,h48km,ML2.5,C*
ISC 06 17:09:04.2±1.3,**24.47N**±0.05×**122.45E**±0.02,**h44**km±11km,
n52,σ0°**57**/74,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.31**	**286**	*i* P	**Pn**	**17 09 12.9**	**+0.1**
	baz=285						
EOS1				S	**Sn**	**17 09 19.4**	**+0.6**
	baz=285						
JYNG	**Yonagunijimaku**	**0.45**	**92**	P	**Pn**	**17 09 14.7**	**+0.2**
JYNG				S	**Sn**	**17 09 22.2**	**+0.4**
YOJ	**Yonaguni jima**	**0.51**	**90**	P	**Pn**	**17 09 15.3**	**+0.1**
YOJ				*e*S	**Sn**	**17 09 23.3**	**+0.2**
TWC	**Suao**	**0.57**	**285**	*i* P	**Pn**	**17 09 15.4**	**-0.6**
	baz=287						
TWC				*i* S	**Sn**	**17 09 23.1**	**-1.2**
	baz=287						
NANB	**Nanao**	**0.64**	**267**	*e*P	**Pn**	**17 09 17.1**	**+0.2**
	baz=264						
NANB				*e*S	**Sn**	**17 09 25.9**	**-0.2**
	baz=264						
ENA	**Nanau**	**0.65**	**267**	*i* P	**Pn**	**17 09 17.3**	**+0.2**
	baz=264						
ENA				*e*S	**Sn**	**17 09 26.1**	**-0.2**
	baz=264						
TWB1	**Santiao Chiao**	**0.68**	**322**	*i* P	**Pn**	**17 09 17.4**	**-0.2**
	baz=333						
TWB1				S	**Sn**	**17 09 26.7**	**-0.4**
	baz=333						
NTC	**Toucheng**	**0.69**	**304**	*i* P	**Pn**	**17 09 17.3**	**-0.2**
	baz=311						
NTC				*e*S	**Sn**	**17 09 26.4**	**-0.8**
	baz=311						
TWE	**Neicheng**	**0.76**	**290**	*i* P	**Pn**	**17 09 18.3**	**-0.3**
	baz=292						
TWE				*i* S	**Sn**	**17 09 28.2**	**-0.7**
	baz=292						
TIPB	**Shuangxi**	**0.76**	**312**	*i* P	**Pn**	**17 09 18.3**	**-0.3**
	baz=318						
TIPB				*e*S	**Sn**	**17 09 28.9**	**-0.1**
	baz=318						
SLBB	**Yuanshan**	**0.80**	**291**	*e*P	**Pn**	**17 09 18.0**	**-1.1**
	baz=296						
ENTT	**Nioudou**	**0.82**	**282**	*i* P	**Pn**	**17 09 19.6**	**+0.1**
	baz=287						
ENTT				*e*S	**Sn**	**17 09 30.7**	**+0.1**
	baz=287						
NACB	**Ninganchiao**	**0.83**	**250**	*e*P	**Pn**	**17 09 18.8**	**-0.8**
	baz=245						
NWF	**Wu-fen Shan**	**0.86**	**315**	*i* P	**Pn**	**17 09 19.9**	**-0.1**
	baz=316						
WFSB	**Wu-fen Shan**	**0.86**	**315**	*e*P	**Pn**	**17 09 19.9**	**0.0**
	baz=316						
NDT	**Datong Townshi**	**0.86**	**279**	*e*P	**Pn**	**17 09 20.9**	**+0.9**
	baz=281						
NWLT	**Wulai**	**0.92**	**290**	*i* P	**Pn**	**17 09 20.7**	**0.0**
	baz=297						
ETLH	**Xiulin Townshi**	**0.92**	**254**	P	**Pn**	**17 09 21.2**	**+0.3**
	baz=240						
TWA	**Mucha**	**0.94**	**303**	*e*P	**Pn**	**17 09 20.9**	**-0.2**
	baz=303						
NNSH	**Datong**	**0.97**	**268**	*e*P	**Pn**	**17 09 21.6**	**0.0**
	baz=254						
NNSH				*e*S	**Sn**	**17 09 34.7**	**+0.3**
	baz=254						
NNS	**Nan Shan**	**0.98**	**269**	P	**Pn**	**17 09 22.6**	**+0.8**
	baz=255						
NNS				*i* S	**Sn**	**17 09 35.0**	**+0.5**
	baz=255						
YHNB	**Yeheng**	**1.00**	**282**	P	**Pn**	**17 09 22.2**	**+0.3**
	baz=280						
YHNB				*e*S	**Sn**	**17 09 35.2**	**+0.3**
	baz=280						
NSK	**Sanguang**	**1.02**	**282**	*e*P	**Pn**	**17 09 22.5**	**+0.3**
	baz=280						
NSK				*e*S	**Sn**	**17 09 35.5**	**+0.2**
	baz=280						
YM10	**YM10**	**1.06**	**310**	*e*P	**Pn**	**17 09 22.4**	**-0.4**
	baz=311						
YM05	**YM05**	**1.06**	**311**	*e*P	**Pn**	**17 09 22.3**	**-0.4**
	baz=301						
YM04	**YM04**	**1.08**	**310**	*e*P	**Pn**	**17 09 22.6**	**-0.3**
	baz=310						
IRIF	**Iriomote-Funau**	**1.17**	**96**	P	**Pn**	**17 09 24.1**	**-0.1**
IRIF				S	**Sn**	**17 09 38.9**	**-0.1**
TWT	**Tachien**	**1.18**	**260**	*e*P	**Pn**	**17 09 25.2**	**+0.7**
	baz=257						
TWT				*e*S	**Sn**	**17 09 40.0**	**+0.5**
	baz=257						
TDCB	**Techi**	**1.20**	**260**	*i* P	**Pn**	**17 09 25.1**	**+0.4**
	baz=248						
TDCB				*e*S	**Sn**	**17 09 40.0**	**+0.1**
	baz=248						
CHGB	**Renai**	**1.23**	**251**	*e*P	**Pn**	**17 09 25.2**	**-0.1**
	baz=237						
CHGB				*e*S	**Sn**	**17 09 40.9**	**+0.1**
	baz=237						
OWD	**Renai**	**1.27**	**247**	*e*P	**Pn**	**17 09 25.3**	**-0.4**
	baz=234						
LIOB	**Emei**	**1.32**	**278**	*e*P	**Pn**	**17 09 26.9**	**+0.7**
	baz=277						
NSTT	**Nanjuang**	**1.33**	**277**	*e*P	**Pn**	**17 09 27.2**	**+0.9**
	baz=276						
HGSD	**Ruisui**	**1.35**	**224**	*e*P	**Pn**	**17 09 26.0**	**-0.7**
	baz=214						
WHP	**Taichung City**	**1.39**	**263**	*e*P	**Pn**	**17 09 28.1**	**+0.9**
	baz=252						
JKRS	**Kuro-shima**	**1.44**	**99**	P	**Pn**	**17 09 28.0**	**+0.2**
JKRS				S	**Sn**	**17 09 45.9**	**+0.4**
DPDB	**Guoxing**	**1.46**	**253**	*e*P	**Pn**	**17 09 29.2**	**+1.1**
	baz=242						
YULB	**Yu-li**	**1.50**	**225**	*e*P	**Pn**	**17 09 27.4**	**-1.4**
	baz=233						
SSLB	**Suanglung**	**1.53**	**244**	*e*P	**Pn**	**17 09 30.0**	**+0.9**
	baz=231						
SMLT	**Sun Moon Lake**	**1.53**	**248**	*e*P	**Pn**	**17 09 29.7**	**+0.5**
	baz=235						
TWF1	**Yuli**	**1.53**	**224**	*e*P	**Pn**	**17 09 28.1**	**-1.0**
	baz=232						
JIJ	**Ishigaki jima**	**1.54**	**93**	P	**Pn**	**17 09 29.1**	**-0.2**
TYC	**Yuchr**	**1.56**	**249**	*e*P	**Pn**	**17 09 30.6**	**+1.1**
	baz=237						
FULB	**Fuli**	**1.65**	**220**	*e*P	**Pn**	**17 09 30.9**	**+0.2**
	baz=208						
WHYT	**Xinyi Township**	**1.65**	**243**	*e*P	**Pn**	**17 09 31.3**	**+0.5**
	baz=233						
WHYT				*e*S	**Sn**	**17 09 51.4**	**+0.6**
	baz=233						
YUS	**Yu-Shan**	**1.68**	**235**	*e*P	**Pn**	**17 09 32.0**	**+0.4**
	baz=232						
JISG	**Ishigakijimahi**	**1.70**	**86**	P	**Pn**	**17 09 31.3**	**-0.1**
JISG				*e*S	**Sn**	**17 09 51.7**	**-0.2**
ALS	**Alishan**	**1.78**	**238**	*e*P	**Pn**	**17 09 33.2**	**+0.4**
	baz=226						
ELDTW	**Lidau**	**1.83**	**226**	*e*P	**Pn**	**17 09 32.3**	**-1.0**
	baz=223						
CHN5	**Tsauling**	**1.84**	**242**	*e*P	**Pn**	**17 09 33.6**	**+0.2**
	baz=229						
TWH	**Lutao**	**1.96**	**207**	*e*P	**Pn**	**17 09 33.7**	**-1.3**
	baz=204						
JTJ	**Tarama**	**2.06**	**85**	S	**Sn**	**17 10 01.1**	**+0.3**

MAN 06 17:10:11.9,6.21N×124.87E,h4km,mb3.8,ML2.6,MS2.1,
1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.15**	**147**	*i* P	Pg	17 10 18.8	+3.9
GSPH				*i* S	Sg	17 10 25.2	+8.4
SKMP	**Bagumbayan, Su**	**0.45**	**313**	*e*P	Pg	17 10 20.9	+0.3
SKMP				*e*S	Sb	17 10 28.1	-1.3
DDMP	**Don Marcelino,**	**0.84**	**97**	*e*P	Pg	17 10 28.6	+0.5
DDMP				*e*S	Sb	17 10 41.7	+0.9
CTBH	**Cotabato--PC H**	**1.18**	**328**	*i* P	Pg	17 10 34.0	-0.5
CTBH				*i* S	Sb	17 10 50.4	-0.1

IDC 06 17:16:45.8±505.0,31.87N×132.56E,h0km,Error ellipse:
s-maj=226.8km s-min=133.3km az=35.0,Southeast of
Shikoku

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I30JP	**ISUMI INFRASON**	**7.32**	**60**	*i*		18 00 55.0	
	baz=244,slow=334,SNR=19						
I45RU	**USSURIYSK INFR**	**12.31**	**358**	*i*		18 30 20.0	
	baz=183,slow=368,SNR=4.3						
I34MN	**SONGINO INFRAS**	**25.44**	**316**	*i*		19 54 40.0	
	baz=117,slow=336,SNR=4.1						

*IDC **06** 17:18:05.5±1.1,20.95S×67.60W,h152km±15km,mb3.5/2,*
mb1 3.5/5,mb1mx3.3/31,mbtmp3.7/5,MS3.5/1,Ms1 3.5/1,
ms1mx2.6/20,Error ellipse: s-maj=31.8km s-min=11.3km
az=105.0
*GUC **06** 17:18:08.2±0.6,20.94S×68.00W,h172km±7km,ML3.3*
*SCB **06** 17:18:08.3±2.6,20.96S×67.92W,h182km±21km,ML4.0/2,*
Error ellipse: s-maj=10.0km s-min=7.7km az=1.0
ISC 06 17:18:06.4±0.9,**20.92S**±0.04×**67.87W**±0.06,**h166**km±9km,
n27,σ1°**23**/45,**1C-4D,Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**1.43**	**303**	*i* P	**Pn**	**17 18 37.8**	**+0.9**
PB08				*i* S	**Sn**	**17 19 01.1**	**+0.8**
PB08				IAML		17 19 03.1	
	comp=E,137nm,0.3s						
PB08	**IPOC Station P**	**1.43**	**303**	P	**Pn**	**17 18 37.7**	**+0.8**
PB08				S	**Sn**	**17 19 00.9**	**+0.6**
PB09	**IPOC Station P**	**1.54**	**235**	*e*P	**Pn**	**17 18 38.8**	**+1.0**
PB09				*i* S	**Sn**	**17 19 03.1**	**+1.1**
PB09				IAML		17 19 05.0	
	comp=N,137nm,0.2s						
LVC	**Limon Verde**	**1.94**	**210**	P	**Pn**	**17 18 43.2**	**+1.0**
	comp=N,1.8nm,0.3s,baz=51,slow=12,SNR=12						
LVC				S	**Sn**	**17 19 09.6**	**-0.3**
	comp=N,4.7nm,0.3s,baz=246,slow=21,SNR=36						
PB11	**IPOC Station P**	**2.03**	**304**	*i* P	**Pn**	**17 18 43.3**	**+0.2**
PB11				*e*S	**Sn**	**17 19 10.5**	**-0.8**
PB11	**IPOC Station P**	**2.03**	**304**	P	**Pn**	**17 18 43.0**	**0.0**
PB11				S	**Sn**	**17 19 10.0**	**-1.3**
PB11				AML	AML	17 19 10.7	
	comp=N,816nm,0.4s						
PB03	**IPOC Station P**	**2.08**	**237**	*i* P	**Pn**	**17 18 43.9**	**+0.3**
PB03				*i* S	**Sn**	**17 19 11.4**	**-0.9**
PB03				IAML		17 19 12.7	
	comp=E,244nm,0.4s						
TA01	**Diego Aracena**	**2.19**	**279**	*e*P	**Pn**	**17 18 44.5**	**-0.1**
TA01				*e*S	**Sn**	**17 19 12.5**	**-1.7**
TA01				IAML		17 19 13.9	
	comp=E,220nm,0.2s						
PB06	**IPOC Station P**	**2.38**	**221**	*e*P	**Pn**	**17 18 47.7**	**+0.8**
PB06				*e*S	**Sn**	**17 19 18.0**	**-0.5**
PB06	**IPOC Station P**	**2.38**	**221**	P	**Pn**	**17 18 48.0**	**+1.0**
PB06				S	**Sn**	**17 19 17.9**	**-0.5**
MNMC	**Minye Minye**	**2.41**	**317**	*i* P	**Pn**	**17 18 48.3**	**+0.8**
MNMC				*i* S	**Sn**	**17 19 19.8**	**+0.5**
MNMC	**Minye Minye**	**2.41**	**317**	P	**Pn**	**17 18 47.8**	**+0.3**
MNMC				S	**Sn**	**17 19 19.1**	**-0.2**
MNMC				AML	AML	17 19 20.4	
	comp=E,389nm,0.3s						
PSGC	**Pisagua**	**2.49**	**302**	*e*P	**Pn**	**17 18 47.9**	**-0.5**
PSGC				*e*S	**Sn**	**17 19 19.0**	**-1.7**
PSGC				IAML		17 19 20.7	
	comp=N,98nm,0.1s						
PSGC	**Pisagua**	**2.49**	**302**	P	**Pn**	**17 18 47.8**	**-0.5**
PSGC				S	**Sn**	**17 19 18.6**	**-2.1**
YJA	**Yavi**	**2.53**	**120**	P	**Pn**	**17 18 49.2**	**+0.1**
YJA				S	**Sn**	**17 19 21.1**	**-1.0**
PB04	**IPOC Station P**	**2.54**	**236**	*e*P	**Pn**	**17 18 49.7**	**+0.7**
PB04				*e*S	**Sn**	**17 19 20.4**	**-1.6**
PB04				IAML		17 19 23.5	
	comp=E,145nm,0.3s						
PB15	**IPOC Station P**	**2.71**	**213**	*e*P	**Pn**	**17 18 52.4**	**+1.3**
PB15				*i* S	**Sn**	**17 19 25.6**	**-0.2**
PB05	**IPOC Station P**	**2.89**	**228**	*e*P	**Pn**	**17 18 53.5**	**+0.3**
PB05				*i* S	**Sn**	**17 19 27.7**	**-1.9**
PB05				IAML		17 19 30.0	
	comp=E,78nm,0.3s						
BBOJ	**La Paz, Jacaqu**	**3.94**	**356**	P	**Pn**	**17 19 09.1**	**+2.3**
BBOE	**La Paz, Chanca**	**4.09**	**359**	P	**Pn**	**17 19 10.9**	**+2.1**
BBOD	**La Paz, Gloria**	**4.32**	**351**	P	**Pn**	**17 19 13.8**	**+2.1**
LPAZ	**La Paz**	**4.62**	**357**	P	**Pn**	**17 19 17.0**	**+1.3**
	comp=E,1.6nm,0.3s,baz=158,slow=5.7,SNR=30						
LPAZ				S	**Sn**	**17 20 08.2**	**-1.6**
	baz=238,slow=19,SNR=1.8						
BBOB	**La Paz, Bander**	**4.76**	**357**	P	**Pn**	**17 19 18.4**	**+0.9**
SIV	**San Ignacio**	**8.11**	**54**	P	**Pn**	**17 19 58.2**	**-3.1**
	comp=E,1.5nm,0.3s,baz=246,slow=12,SNR=26						
SDV	**Santo Domingo**	**29.75**	**354**	LR	LR	17 37 43.3	
	comp=E,102nm,21.0s,baz=96,slow=40						
TORD	**Torodi Ar. Bea**	**76.25**	**70**	P	**P**	**17 29 36.3**	**-0.9**
	comp=E,0.9nm,0.5s,baz=261,slow=5.1,SNR=6.9						
YKA	**Yellowknife Ar**	**90.97**	**340**	P	**P**	**17 30 52.1**	**+1.1**
	comp=E,0.2nm,0.7s,baz=128,slow=3.8,SNR=5.9						

*IDC **06** 17:48:46.6±1.2,25.77N×64.81E,h0km,mb3.6/7,*
mb1 3.7/9,mb1mx3.5/36,mbtmp3.7/9,ML3.9/2,Error
ellipse: s-maj=28.4km s-min=22.3km az=145.0
*OMAN **06** 17:48:55.9±1.8,26.06N×64.13E,h12km±84km,Error*
ellipse: s-maj=157.0km s-min=16.0km az=254.0
*DSN **06** 17:48:59.3±2.6,26.27N×63.88E,h10km,ML4.4/4,Error*
ellipse: s-maj=70.6km s-min=19.2km az=7.0
ISC 06 17:48:51.2±1.3,**26.1N**±0.1×**64.4E**±0.1,**h10**km,**n33,**
σ2°04/44,mb3.5/7,Southwestern Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**6.00**	**243**	Pn	**Pn**	**17 50 20.8**	**+0.7**
	6.3nm,0.3s,baz=78,slow=5.0,SNR=138						
WSAR				Sn	**Sn**	**17 51 24.6**	**-4.3**
	2.6nm,0.3s,baz=219,slow=7.1,SNR=3.6						
WSAR	**Wadi Sarin**	**6.00**	**243**	P	**Pn**	**17 50 21.0**	**+0.9**
	SNR=94						
WSAR				S	**Sn**	**17 51 25.1**	**-3.8**
WBK	**Wadi Bani Khal**	**6.08**	**236**	P	**Pn**	**17 50 22.0**	**+0.9**
	SNR=56						
BIDO	**Bidbid**	**6.28**	**247**	P	**Pn**	**17 50 25.8**	**+2.0**
	SNR=5.8						
BIDO				S	**Sn**	**17 51 35.3**	**-0.4**
SMDO	**Samad**	**6.55**	**243**	P	**Pn**	**17 50 29.1**	**+1.3**
	SNR=11						
JMDO	**Jabal Madar**	**6.87**	**238**	P	**Pn**	**17 50 34.1**	**+2.1**
	SNR=16						
HOQ	**Hoqain**	**6.93**	**250**	P	**Pn**	**17 50 33.4**	**+0.5**
	SNR=49						
HOQ				S	**Sn**	**17 51 49.6**	**-2.3**
BANOM	**Banah**	**7.30**	**270**	*i* P	**Pn**	**17 50 39.6**	**+1.6**
	SNR=36						
BANOM				S	**Sn**	**17 51 58.1**	**-3.0**
BANOM	**Banah**	**7.30**	**270**	P	**Pn**	**17 50 39.1**	**+1.1**
	SNR=36						
BANOM				S	**Sn**	**17 51 59.6**	**-1.5**
MDH	**Madha**	**7.37**	**265**	P	**Pn**	**17 50 39.6**	**+0.8**
MDH	**Madha**	**7.37**	**265**	P	**Pn**	**17 50 39.9**	**+1.1**
MDH				S	**Sn**	**17 52 01.3**	**-1.3**
BSY	**Bisya**	**7.39**	**244**	P	**Pn**	**17 50 41.7**	**+2.5**
	SNR=11						
SOHO	**SOHO**	**7.42**	**256**	P	**Pn**	**17 50 39.9**	**+0.4**
	SNR=21						
SOHO				S	**Sn**	**17 52 01.4**	**-2.3**
SHME	**Shamm**	**7.44**	**271**	P	**Pn**	**17 50 42.2**	**+2.4**
MSFE	**Esma-Masafi**	**7.48**	**266**	P	**Pn**	**17 50 41.2**	**+0.7**
UOSS	**Minazif**	**7.51**	**263**	*i* P	**Pn**	**17 50 40.7**	**-0.1**
	SNR=20						
UOSS	**Minazif**	**7.51**	**263**	P	**Pn**	**17 50 40.7**	**-0.1**
UOSS				S	**Sn**	**17 52 03.6**	**-2.5**
HATD	**Hatta, Dubai**	**7.60**	**262**	P	**Pn**	**17 50 42.7**	**+0.7**
HATD	**Hatta, Dubai**	**7.60**	**262**	P	**Pn**	**17 50 42.5**	**+0.5**
HATD				S	**Sn**	**17 52 07.4**	**-0.8**
ASHO	**Ashiyiah**	**7.69**	**261**	*i* P	**Pn**	**17 50 44.6**	**+1.2**
	SNR=11						
ASHO	**Ashiyiah**	**7.69**	**261**	P	**Pn**	**17 50 44.8**	**+1.4**
	SNR=17						
ASHO				S	**Sn**	**17 52 12.7**	**+2.0**
ARQ	**Araqi**	**7.70**	**250**	P	**Pn**	**17 50 47.3**	**+3.9**
	SNR=29						
ARQ				S	**Sn**	**17 52 13.2**	**+2.4**
ALNE	**Al Ain**	**8.12**	**257**	P	**Pn**	**17 50 52.4**	**+3.1**
ASUD	**Al Ashush, Dub**	**8.35**	**262**	*i* P	**Pn**	**17 50 56.2**	**+3.8**
	SNR=13						
ASUD	**Al Ashush, Dub**	**8.35**	**262**	P	**Pn**	**17 50 56.4**	**+4.0**
	SNR=13						
AAK	**Ala-Archa**	**18.42**	**24**	P	**P**	**17 53 05.3**	**-1.4**
	0.1nm,0.3s,baz=202,slow=16,SNR=3.7						
KBZ	**Khabaz**	**24.77**	**321**	P	**P**	**17 54 14.6**	**+1.6**
	1.4nm,0.8s,baz=180,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**25.02**	**30**	P	**P**	**17 54 13.8**	**-1.5**
	2.2nm,0.5s,baz=215,slow=10,SNR=32						
KURBB	**Kurchatov Arra**	**26.74**	**20**	P	**P**	**17 54 31.2**	**+0.4**
	0.6nm,0.6s,baz=212,slow=8.6,SNR=8.1						
BVAR	**Borovoye Array**	**27.23**	**8**	P	**P**	**17 54 35.3**	**+0.1**
	0.3nm,0.5s,baz=186,slow=12,SNR=3.2						
AKASG	**Malin Array Be**	**36.36**	**322**	P	**P**	**17 55 54.7**	**-0.7**
	0.4nm,0.5s,baz=116,slow=7.8,SNR=3.3						
TORD	**Torodi Ar. Bea**	**59.98**	**271**	P	**P**	**17 58 58.4**	**+0.1**
	0.4nm,0.6s,baz=84,slow=6.6,SNR=3.7						
ASAR	**Alice Springs**	**83.46**	**120**	P	P	18 01 13.3	-6.1
	0.1nm,0.5s,baz=315,slow=7.0,SNR=8.7						

*IDC **06** 18:00:45.8±1.3,38.46N×99.60E,h0km,mb3.3/3,*
mb1 3.5/8,mb1mx3.3/44,mbtmp3.5/8,ML3.3/5,MS3.7/1,
Ms1 3.7/1,ms1mx2.9/23,Error ellipse: s-maj=31.8km
s-min=19.8km az=67.0
ISC 06 18:00:50.6±1.1,**38.5N**±0.1×**99.4E**±0.2,**h35**km,**n9**,σ1°**67**/8,
mb3.2/3,**Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**10.63**	**26**	Pn	**Pn**	**18 03 20.4**	**0.0**
	1.5nm,0.3s,baz=208,slow=15,SNR=22						
SONM				Lg	Lg	18 06 21.4	
	0.2nm,0.3s,baz=209,slow=30,SNR=4.3						
MKAR	**Makanchi Array**	**15.03**	**309**	Pn	**Pn**	**18 04 17.6**	**-2.7**
	0.0nm,0.3s,baz=116,slow=8.2,SNR=3.6						
MKAR				Lg	Lg	18 08 50.8	
	baz=129,slow=30,SNR=2.1						
ZALV	**Zalesovo Beam**	**18.38**	**332**	P	**P**	**18 05 02.4**	**+0.1**
	0.1nm,0.3s,baz=136,slow=10,SNR=7.4						
KURBB	**Kurchatov Arra**	**19.09**	**316**	P	**P**	**18 05 10.2**	**+0.2**
	0.0nm,0.3s,baz=121,slow=11,SNR=11						
CMAR	**Chiang Mai Arr**	**19.98**	**181**	P	**P**	**18 05 19.4**	**-0.6**
	0.2nm,0.3s,baz=354,slow=9.2,SNR=5.7						
BVAR	**Borovoye Array**	**24.68**	**315**	P	**P**	**18 06 09.6**	**+1.7**
	0.5nm,0.7s,baz=111,slow=8.1,SNR=4.6						
JNU	**Nakatsue**	**26.03**	**92**	LR	LR	18 17 06.2	
	comp=Z,152nm,18.1s,baz=336,slow=38						
BRTR	**Keskin Array B**	**49.96**	**293**	P	**P**	**18 09 43.1**	**+1.8**
	0.3nm,0.5s,baz=97,slow=6.3,SNR=3.3						
ASAR	**Alice Springs**	**69.81**	**146**	P	**P**	**18 11 57.2**	**-0.3**
	0.2nm,0.7s,baz=334,slow=6.2,SNR=3.3						

IDC 06 18:01:32.0±48.0,**18.21S**×**176.91W**,**h0**km,**mb4.2**/3,
mb1 4.4/3,**mb1mx3.7**/37,**mbtmp4.2**/3,**Error ellipse:**
s-maj=887.5km s-min=155.2km az=80.0,Fiji Islands
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.74**	**242**	P	P	18 09 07.0	+0.4
	0.9nm,0.3s,baz=85,slow=8.1,SNR=6.2						
**W

ASAR	**Alice Springs**	**25.59 223**	P	**P**	**18 36 29.8**	**-0.2**
	1.1nm,0.7s,baz=57,slow=9.3,SNR=16						
FITZ	**Fitzroy Crossi**	**29.26 242**	P	**P**	**18 37 02.2**	**-0.7**
	1.4nm,0.6s,baz=43,slow=8.8,SNR=5.5						
FITZ			LR	LR	18 50 15.0		
	comp=Z,64nm,18.2s,baz=9.0,slow=39						
KSRS	**Korea Array**	**48.58 334**	LR	LR	18 55 49.2		
	comp=Z,98nm,20.4s,baz=336,slow=30						
CMAR	**Chiang Mai Arr**	**58.10 296**	P	**P**	**18 40 53.6**	**-0.6**
	0.3nm,0.7s,baz=105,slow=6.6,SNR=3.9						
CMAR			LR	LR	19 05 35.7		
	comp=Z,78nm,19.8s,baz=334,slow=36						
MKAR	**Makanchi Array**	**80.79 319**	P	**P**	**18 43 13.4**	**-0.5**
	0.4nm,0.8s,baz=101,slow=5.8,SNR=5.2						
ZALV	**Zalesovo Beam**	**81.68 326**	P	**P**	**18 43 18.0**	**-0.4**
	0.5nm,0.3s,baz=111,slow=6.0,SNR=3.5						
ILAR	**Eielson Array**	**82.83 22**	P	**P**	**18 43 24.2**	**0.0**
	0.4nm,0.6s,baz=246,slow=5.5,SNR=8.2						
YKA	**Yellowknife Ar**	**96.08 28**	P	**P**	**18 44 28.4**	**+1.0**
	0.2nm,0.6s,baz=267,slow=4.6,SNR=5.2						
TORD	**Torodi Ar. Bea**	**150.43 287**	PKPbc	**PKPbc**	**18 50 52.5**	**-0.2**
	0.5nm,0.7s,baz=98,slow=3.2,SNR=3.2						

JMA 06 18:48:13.3±0.1, 24°.96N×125°.71E, h52km±1km, M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.34**	**234**	P	Pn	18 48 22.9	-0.1
JOGS				S	Sn	18 48 30.0	+0.1
JMJ2	**Miyako jima3**	**0.41**	**238**	P	Pn	18 48 23.6	-0.1
JMJ2				S	Sn	18 48 31.2	+0.1
JIKM	**Ikemajima**	**0.42**	**265**	P	Pn	18 48 23.8	0.0
JIKM				*e*S	Sn	18 48 31.5	+0.2
JIRB	**Irabujima**	**0.51**	**255**	P	Pn	18 48 24.5	-0.2
JIRB				S	Sn	18 48 32.5	-0.5
JTJ	**Tarama**	**0.97**	**251**	P	Pn	18 48 31.3	+0.6
JTJ				S	Sn	18 48 43.5	+0.1
JISG	**Ishigakijimahi**	**1.32**	**254**	P	Pn	18 48 35.9	+0.5
JISG				*e*S	Sn	18 48 52.0	0.0
JIJ	**Ishigaki jima**	**1.54**	**248**	P	Pn	18 48 39.0	+0.6
JIJ				*e*S	Sn	18 48 57.4	0.0

*NIED **06** 18:49:00,25°.30N×122°.80E,h230km,Mw4.9 Best double couple: M0=2.97000×10^16 NP1:φ=65.00000°, δ=80.00000°, λ=64.00000°. NP2:φ=315.00000°, δ=28.00000°, λ=158.00000°.*

*BJI **06** 18:49:39.5±0.0,25°.44N×122°.54E,h217km,mB5.1/55, mb5.4/76*

*NEIC **06** 18:49:40.8±1.4,25°.43N±0°.07×122°.77E±0°.08, h235km±4km,mb5.1/263,Error ellipse: s-maj=10.9km s-min=9.4km az=107.0*

*TAP **06** 18:49:40.5,25°.38N×122°.95E,h227km,ML5.8,C*

*MOS **06** 18:49:40.0±0.9,25°.50N×122°.79E,h239km,mb5.4/27, Error ellipse: s-maj=5.8km s-min=3.6km az=113.8*

*GCMT **06** 18:49:40.8±0.4,25°.41N±0°.02×122°.80E±0°.03, h232km±3km,MW5.0/82,Moment Tensor Solution. s21,c24; s82,c118; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.62±.19; Mθθ-2.39±.19; Mφφ1.77±.23; Mrθ3.68±.15; Mθφ0.73±.16; Mφr1.90±.17; Best double couple: M0=4.71100×10^16 NP1:φ=323.00000°, δ27.00000°, λ170.00000°. NP2:φ=62.00000°, δ85.00000°, λ63.00000°. Principal axes: T 4.5300, Plg43.0000°, Azm306.0000°; N 0.3670, Plg27.0000°, Azm64.0000°; P -4.8930, Plg35.0000°, Azm175.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*JMA **06** 18:49:41.3±0.2,25°.29N×122°.80E,h223km±3km,M4.9*

*IDC **06** 18:49:41.2±1.0,25°.47N×122°.82E,h240km±9km,mb4.7/28, mb1 4.8/32,mb1mx4.7/36,mbtmp5.2/32,Error ellipse: s-maj=9.0km s-min=7.2km az=79.0*

*BGR **06** 18:49:44.6±0.0,25°.59N×121°.35E,h246km±5km,mb5.2*

ISC 06 18:49:40.7±0.3, 25°.45N±0°.03×122°.79E±0°.02, h236km±2km, h237km:pP-P,n1207,σ1.9 30/1390, mb5.1/309, 221C-32D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.85**	**239**	⇑*i*P	**Pn**	**18 50 12.9**	**-0.5**
	baz=251						
TWB1				*i* S	**S**	**18 50 36.9**	**-2.1**
	baz=251						
NWF	**Wu-fen Shan**	**0.99**	**248**	⇑*i*P	**Pn**	**18 50 14.1**	**-0.2**
	baz=253						
NWF				S	**S**	**18 50 38.6**	**-1.9**
	baz=253						
WFSB	**Wu-fen Shan**	**0.99**	**248**	⇑P	**Pn**	**18 50 14.0**	**-0.2**
	baz=253						
WFSB				S	**S**	**18 50 38.5**	**-1.9**
	baz=253						
TIPB	**Shuangxi**	**1.00**	**242**	⇑*i*P	**Pn**	**18 50 13.9**	**-0.3**
	baz=248						
TIPB				*i* S	**S**	**18 50 38.1**	**-2.4**
	baz=248						
JYNG	**Yonagunijimaku**	**1.01**	**172**	⇑P	**Pn**	**18 50 12.7**	**-1.6**
JYNG				S	**S**	**18 50 37.9**	**-2.8**
YOJ	**Yonaguni jima**	**1.01**	**168**	P	**Pn**	**18 50 12.8**	**-1.5**
YOJ	**Yonaguni jima**	**1.01**	**168**	⇑P	**Pn**	**18 50 12.8**	**-1.5**
	baz=168						
YOJ				S	**S**	**18 50 36.4**	**-4.3**
	baz=168						
YOJ	**Yonaguni jima**	**1.01**	**168**	⇑P	**Pn**	**18 50 12.7**	**-1.5**
YOJ				S	**S**	**18 50 37.6**	**-3.1**
YOJ	**Yonaguni jima**	**1.01**	**168**		**Pn**	**18 50 12.8**	**-1.5**
NTC	**Toucheng**	**1.05**	**236**	⇑*i*P	**Pn**	**18 50 13.9**	**-0.7**
	baz=233						
NTC				S	**S**	**18 50 38.5**	**-2.6**
	baz=233						
EOS1	**EOS1**	**1.08**	**214**	⇑P	**Pn**	**18 50 13.8**	**-0.9**
	baz=213						
EOS1				S	**S**	**18 50 38.8**	**-2.5**
	baz=213						
TWY	**Chenhua**	**1.09**	**261**	⇓*i*P	**Pn**	**18 50 15.0**	**+0.2**
	baz=267						
TWY				*i* S	**S**	**18 50 40.1**	**-1.4**
	baz=267						
YM08	**YM08**	**1.12**	**257**	⇑*i*P	**Pn**	**18 50 14.8**	**-0.2**
	baz=263						
YM08				S	**S**	**18 50 40.0**	**-1.8**
	baz=263						
YM11	**YM11**	**1.14**	**256**	⇑*i*P	**Pn**	**18 50 15.1**	**-0.1**
	baz=263						
YM11				S	**S**	**18 50 40.5**	**-1.7**
	baz=263						
YM01	**YM01**	**1.15**	**255**	⇑*i*P	**Pn**	**18 50 15.2**	**-0.1**
	baz=263						
YM01				S	**S**	**18 50 40.4**	**-1.8**
	baz=263						
YM10	**YM10**	**1.15**	**255**	⇑*i*P	**Pn**	**18 50 15.1**	**-0.2**
	baz=263						
YM10				S	**S**	**18 50 40.0**	**-2.3**
	baz=263						
ILA	**Ilan**	**1.17**	**234**	⇑P	**Pn**	**18 50 14.6**	**-0.7**
	baz=240						
ILA				S	**S**	**18 50 39.9**	**-2.5**
	baz=240						
ANP	**Anpu**	**1.18**	**257**	⇑P	**Pn**	**18 50 15.1**	**-0.4**
	baz=263						
ANP				*e*S	**S**	**18 50 39.8**	**-2.9**
	baz=263						
TWA	**Mucha**	**1.19**	**247**	⇑*i*P	**Pn**	**18 50 14.9**	**-0.5**
	baz=243						
TWA				S	**S**	**18 50 40.6**	**-2.0**
	baz=243						
TWC	**Suao**	**1.20**	**226**	⇑*i*P	**Pn**	**18 50 14.2**	**-1.3**
	baz=225						
TWC				S	**S**	**18 50 38.9**	**-3.9**
	baz=225						
TAP1	**Taipei**	**1.22**	**251**	⇑*i*P	**Pn**	**18 50 15.3**	**-0.3**
	baz=255						
TAP1				*e*S	**S**	**18 50 40.0**	**-2.9**
	baz=255						
TAP	**Taipei**	**1.23**	**251**	⇑*i*P	**Pn**	**18 50 15.3**	**-0.4**
	baz=255						
TAP				*e*S	**S**	**18 50 41.2**	**-1.8**
	baz=255						
NTST	**Danshui**	**1.25**	**257**	*e*P	**Pn**	**18 50 15.9**	**+0.1**
	baz=260						
NTST				*e*S	**S**	**18 50 41.5**	**-1.7**
	baz=260						
TWE	**Neicheng**	**1.25**	**235**	⇑*i*P	**Pn**	**18 50 15.0**	**-0.8**
	baz=233						
TWE				S	**S**	**18 50 40.9**	**-2.5**
	baz=233						
SLBB	**Yuanshan**	**1.26**	**237**	⇑*e*P	**Pn**	**18 50 14.1**	**-1.9**
	baz=235						
TATO	**Taipei**	**1.27**	**248**	⇑P	**Pn**	**18 50 15.4**	**-0.6**
	baz=246						
TATO				S	**S**	**18 50 40.6**	**-3.0**
	baz=246						
TATO	**Taipei**	**1.27**	**248**		**Pn**	**18 50 15.3**	**-0.6**
TWS1	**Kuangyinshan**	**1.29**	**255**	⇑*i*P	**Pn**	**18 50 16.1**	**-0.1**
	baz=261						
TWS1				S	**S**	**18 50 42.5**	**-1.3**
	baz=261						
NWLT	**Wulai**	**1.35**	**240**	⇑*e*P	**Pn**	**18 50 15.7**	**-0.9**
	baz=240						
NWLT				*e*S	**S**	**18 50 42.0**	**-2.7**
	baz=240						
ENTT	**Nioudou**	**1.37**	**234**	⇑*i*P	**Pn**	**18 50 16.1**	**-0.7**
	baz=235						
ENTT				*e*S	**S**	**18 50 42.4**	**-2.6**
	baz=235						
NANB	**Nanao**	**1.39**	**223**	⇑*i*P	**Pn**	**18 50 16.0**	**-0.9**
	baz=225						
NANB				S	**S**	**18 50 41.8**	**-3.4**
	baz=225						
ENA	**Nanau**	**1.40**	**223**	⇑*i*P	**Pn**	**18 50 16.1**	**-0.9**
	baz=225						
ENA				S	**S**	**18 50 42.6**	**-2.7**
	baz=225						
IRIF	**Iriomote-Funau**	**1.40**	**142**	⇑P	**Pn**	**18 50 15.4**	**-1.6**
IRIF				S	**S**	**18 50 41.7**	**-3.6**
NDT	**Datong Townshi**	**1.43**	**234**	⇑P	**Pn**	**18 50 16.7**	**-0.6**
	baz=239						
NDT				S	**S**	**18 50 43.3**	**-2.5**
	baz=239						
YHNB	**Yeheng**	**1.50**	**239**	⇑P	**Pn**	**18 50 17.0**	**-0.8**
	baz=243						
YHNB				S	**S**	**18 50 43.3**	**-3.6**
	baz=243						
YHNB	**Yeheng**	**1.50**	**239**		**Pn**	**18 50 17.1**	**-0.8**
NSK	**Sanguang**	**1.51**	**240**	⇑*i*P	**Pn**	**18 50 17.1**	**-0.8**
	baz=244						
NSK				S	**S**	**18 50 43.5**	**-3.5**
	baz=244						
WLTB	**Daxi**	**1.52**	**247**	⇑P	**Pn**	**18 50 17.6**	**-0.2**
	baz=242						
WLTB				*e*S	**S**	**18 50 44.8**	**-2.1**
	baz=242						
NCU	**National Centr**	**1.53**	**252**	P	**Pn**	**18 50 17.8**	**-0.2**
	baz=263						
NCU				S	**S**	**18 50 45.0**	**-2.0**
	baz=263						
NCUH	**Zhongli**	**1.53**	**252**	⇑P	**Pn**	**18 50 17.8**	**-0.1**
	baz=263						
NCUH				*e*S	**S**	**18 50 45.0**	**-2.1**
	baz=263						
JISG	**Ishigakijimahi**	**1.63**	**122**	⇑P	**Pn**	**18 50 17.3**	**-1.4**
JISG				S	**S**	**18 50 45.3**	**-3.2**
NNS	**Nan Shan**	**1.63**	**232**	⇑*i*P	**Pn**	**18 50 18.4**	**-0.6**
	baz=236						
NNS				S	**S**	**18 50 45.7**	**-3.2**
	baz=236						
NNSH	**Datong**	**1.63**	**232**	⇑*e*P	**Pn**	**18 50 18.3**	**-0.7**
	baz=236						
NNSH				*e*S	**S**	**18 50 45.5**	**-3.4**
	baz=236						
JIJ	**Ishigaki jima**	**1.64**	**131**	⇑P	**Pn**	**18 50 17.4**	**-1.4**
JIJ				S	**S**	**18 50 44.5**	**-4.2**
JKRS	**Kuro-shima**	**1.64**	**137**	⇑P	**Pn**	**18 50 17.9**	**-1.0**
JKRS				S	**S**	**18 50 45.5**	**-3.2**
HATJ	**Hateruma jima**	**1.67**	**146**	⇑P	**Pn**	**18 50 18.2**	**-0.9**
HATJ				*e*S	**S**	**18 50 45.6**	**-3.6**
NACB	**Ninganchiao**	**1.67**	**221**	⇑P	**Pn**	**18 50 17.7**	**-1.5**
	baz=221						
NACB				S	**S**	**18 50 45.5**	**-3.8**
	baz=221						
NACB	**Ninganchiao**	**1.67**	**221**		**Pn**	**18 50 17.8**	**-1.3**
ETLH	**Xiulin Townshi**	**1.72**	**224**	⇑*e*P	**Pn**	**18 50 18.7**	**-1.0**
	baz=235						
ETLH				*e*S	**S**	**18 50 46.6**	**-3.5**
	baz=235						
TWD	**Chiawan**	**1.74**	**219**	⇑*i*P	**Pn**	**18 50 18.6**	**-1.1**
	baz=222						
TWD				*e*S	**S**	**18 50 46.4**	**-3.9**
	baz=222						
SBCB	**Hsinchu**	**1.76**	**249**	⇑P	**Pn**	**18 50 19.7**	**-0.2**
	baz=245						
SBCB				S	**S**	**18 50 48.0**	**-2.5**
	baz=245						
HSN	**Hsinchu**	**1.77**	**249**	P	**Pn**	**18 50 19.4**	**-0.6**
	baz=245						
HSN				S	**S**	**18 50 47.9**	**-2.7**
	baz=245						
LIOB	**Emei**	**1.80**	**244**	⇑*i*P	**Pn**	**18 50 19.8**	**-0.5**
	baz=241						
LIOB				S	**S**	**18 50 48.0**	**-3.2**
	baz=241						
NSTT	**Nanjuang**	**1.82**	**244**	⇑*i*P	**Pn**	**18 50 19.8**	**-0.6**
	baz=240						
NSTT				S	**S**	**18 50 48.4**	**-3.0**
	baz=240						
HWA	**Hwalien**	**1.82**	**217**	⇑P	**Pn**	**18 50 19.6**	**-0.8**
	baz=220						
HWA				*e*S	**S**	**18 50 48.9**	**-2.6**
	baz=220						
ENLB	**Shoufeng**	**1.88**	**215**	⇑*i*P	**Pn**	**18 50 19.1**	**-1.8**
	baz=224						
ENLB				*e*S	**S**	**18 50 48.4**	**-4.1**
	baz=224						
TDCB	**Techi**	**1.90**	**232**	⇑P	**Pn**	**18 50 21.2**	**-0.2**
	baz=241						
TDCB				S	**S**	**18 50 50.3**	**-2.8**
	baz=241						
JTJ	**Tarama**	**1.91**	**115**	⇑P	**Pn**	**18 50 20.4**	**-0.8**
JTJ				S	**S**	**18 50 50.3**	**-2.6**
CHGB	**Renai**	**2.02**	**227**	⇑P	**Pn**	**18 50 22.4**	**-0.1**
	baz=230						
CHGB				S	**S**	**18 50 52.4**	**-2.8**
	baz=230						
NMLH	**Miaoli**	**2.03**	**244**	⇑*e*P	**Pn**	**18 50 21.9**	**-0.5**
	baz=240						
NMLH				*e*S	**S**	**18 50 52.4**	**-2.5**
	baz=240						
WHP	**Taichung City**	**2.04**	**235**	⇑*i*P	**Pn**	**18 50 22.3**	**-0.2**
	baz=244						
WHP				S	**S**	**18 50 52.3**	**-3.0**
	baz=244						
ESL	**Shilin**	**2.04**	**217**	⇑*i*P	**Pn**	**18 50 20.9**	**-1.6**
	baz=228						
ESL				*e*S	**S**	**18 50 51.0**	**-4.3**
	baz=228						
OWD	**Renai**	**2.09**	**225**	⇑P	**Pn**	**18 50 22.7**	**-0.4**
	baz=230						
OWD				*e*S	**S**	**18 50 53.4**	**-2.9**
	baz=230						
NSY	**Sanyi**	**2.11**	**241**	⇑*i*P	**Pn**	**18 50 22.9**	**-0.2**
	baz=244						
NSY				S	**S**	**18 50 54.5**	**-1.8**
	baz=244						
TWQ1	**Liyutan**	**2.14**	**239**	⇑*i*P	**Pn**	**18 50 22.9**	**-0.5**
	baz=242						
TWQ1				*e*S	**S**	**18 50 54.5**	**-2.3**
	baz=242						
PTSB	**Yuanli**	**2.14**	**243**	*e*P	**Pn**	**18 50 23.3**	**-0.1**
	baz=240						
PTSB				S	**S**	**18 50 54.7**	**-2.1**
	baz=240						
EGFH	**Guangfu**	**2.17**	**215**	⇑*e*P	**Pn**	**18 50 21.9**	**-1.7**
	baz=227						
EGFH				*e*S	**S**	**18 50 53.2**	**-4.1**
	baz=227						
DPDB	**Guoxing**	**2.21**	**231**	⇑*i*P	**Pn**	**18 50 23.9**	**-0.2**
	baz=233						
DPDB				S	**S**	**18 50 55.4**	**-2.7**
	baz=233						
WDJ	**Dajia District**	**2.24**	**241**	⇑P	**Pn**	**18 50 24.2**	**-0.1**
	baz=243						
WDJ				*e*S	**S**	**18 50 56.2**	**-2.4**
	baz=243						
JIRB	**Irabujima**	**2.25**	**106**	⇑P	**Pn**	**18 50 23.2**	**-1.2**
JIRB				S	**S**	**18 50 55.2**	**-3.4**
JIKM	**Ikemajima**	**2.29**	**103**	⇑P	**Pn**	**18 50 24.3**	**-0.5**
JIKM				S	**S**	**18 50 56.6**	**-2.8**
HGSD	**Ruisui**	**2.31**	**213**	⇑P	**Pn**	**18 50 24.3**	**-0.8**
	baz=223						
HGSD				*e*S	**S**	**18 50 55.0**	**-4.9**
	baz=223						
TCU	**Taichung**	**2.32**	**236**	⇑P	**Pn**	**18 50 24.9**	**-0.2**
	baz=244						
TCU				*e*S	**S**	**18 50 57.8**	**-2.2**
	baz=244						
SMLT	**Sun Moon Lake**	**2.32**	**228**	⇑P	**Pn**	**18 50 25.0**	**-0.3**
	baz=231						
SMLT				S	**S**	**18 50 58.0**	**-2.3**
	baz=231						
TYC	**Yuchr**	**2.34**	**229**	⇑P	**Pn**	**18 50 25.0**	**-0.3**
	baz=232						
TYC				S	**S**	**18 50 58.0**	**-2.3**
	baz=232						
SSLB	**Suanglung**	**2.35**	**226**	⇑P	**Pn**	**18 50 25.2**	**-0.3**
	baz=236						
SSLB				S	**S**	**18 50 57.9**	**-2.8**
	baz=236						
SSLB	**Suanglung**	**2.35**	**226**		**Pn**	**18 50 25.0**	**-0.5**
EHY	**Hungye**	**2.35**	**215**	P	**Pn**	**18 50 23.6**	**-1.9**
	baz=218						
EHY				*e*S	**S**	**18 50 56.4**	**-4.3**
	baz=218						
JMJ2	**Miyako jima3**	**2.41**	**107**	⇑P	**Pn**	**18 50 25.7**	**-0.3**
JMJ2				S	**S**	**18 50 59.8**	**-1.7**
WCHH	**Zhanghua**	**2.45**	**237**	*e*P	**Pn**	**18 50 26.0**	**-0.4**
	baz=239						
WCHH				*e*S	**S**	**18 50 59.5**	**-2.8**
	baz=239						
YULB	**Yu-li**	**2.46**	**214**	⇑P	**Pn**	**18 50 24.8**	**-1.8**
	baz=222						
YULB				*e*S	**S**	**18 50 57.3**	**-5.3**
	baz=222						
YULB	**Yu-li**	**2.46**	**214**		**Pn**	**18 50 24.9**	**-1.8**
JOGS	**Gusukube**	**2.47**	**106**	⇑P	**Pn**	**18 50 26.4**	**-0.3**
JOGS				S	**S**	**18 51 00.2**	**-2.5**
WNT	**Mingjian**	**2.48**	**231**	P	**Pn**	**18 50 26.4**	**-0.3**
	baz=227						
WNT				S	**S**	**18 51 00.2**	**-2.6**
	baz=227						
WJS	**Zhushan**	**2.48**	**230**	⇑P	**Pn**	**18 50 26.4**	**-0.4**
	baz=232						
WJS				S	**S**	**18 51 01.0**	**-2.0**
	baz=232						
WHYT	**Xinyi Township**	**2.48**	**226**	⇑P	**Pn**	**18 50 26.7**	**-0.2**
	baz=228						
WHYT				*e*S	**S**	**18 51 01.3**	**-1.8**
	baz=228						
TWF1	**Yuli**	**2.49**	**213**	⇑P	**Pn**	**18 50 25.4**	**-1.6**
	baz=221						
TWF1				*e*S	**S**	**18 50 57.9**	**-5.4**
	baz=221						
YUS	**Yu-Shan**	**2.57**	**221**	P	**Pn**	**18 50 28.1**	**-0.2**
	baz=223						
YUS				*e*S	**S**	**18 51 03.1**	**-2.5**
	baz=223						
FULB	**Fuli**	**2.63**	**212**	⇑*i*P	**Pn**	**18 50 27.5**	**-0.9**
	baz=219						
FULB				*e*S	**S**	**18 51 03.6**	**-2.2**
	baz=219						
ALS	**Alishan**	**2.65**	**224**	⇑*e*P	**Pn**	**18 50 28.6**	**-0.3**
	baz=232						
ALS				*e*S	**S**	**18 51 04.2**	**-2.5**
	baz=232						
MATB	**Ma-tsu**	**2.66**	**286**	⇓*e*P	**Pn**	**18 50 28.7**	**+0.2**
	baz=285						
MATB				*e*S	**S**	**18 51 04.7**	**-1.5**
	baz=285						
CHN5	**Tsauling**	**2.67**	**227**	⇑*i*P	**Pn**	**18 50 28.4**	**-0.5**
	baz=229						
CHN5				*e*S	**S**	**18 51 04.5**	**-2.1**
	baz=229						
CHKT	**Chengkung**	**2.68**	**209**	⇑P	**Pn**	**18 50 27.6**	**-1.3**
	baz=207						
CHKT				*e*S	**S**	**18 51 03.8**	**-3.0**
	baz=207						
WGK	**Gukeng**	**2.68**	**230**	P	**Pn**	**18 50 28.6**	**-0.3**
	baz=231						
WGK				*e*S	**S**	**18 51 04.9**	**-1.9**
	baz=231						
RLNB	**Erlin**	**2.70**	**235**	⇑P	**Pn**	**18 50 28.6**	**-0.5**
	baz=233						
RLNB				S	**S**	**18 51 04.4**	**-2.7**
	baz=233						
PTTC	**Pingtan**	**2.73**	**272**	⇓*e*P	**Pn**	**18 50 28.9**	**-0.5**
	baz=272						
PTTC				*e*S	**S**	**18 51 05.2**	**-2.4**
	baz=272						
XPSS	**Dashiqiu**	**2.76**	**303**	⇓*e*P	**Pn**	**18 50 29.9**	**+0.2**
	baz=302						
XPSS				*e*S	**S**	**18 51 06.9**	**-1.3**
	baz=302						
ELDTW	**Lidau**	**2.77**	**216**	⇑P	**Pn**	**18 50 29.0**	**-1.0**
	baz=216						
ELDTW				*e*S	**S**	**18 51 05.7**	**-3.1**
	baz=216						
WTCT	**Ta-ch'eng**	**2.78**	**236**	*e*P	**Pn**	**18 50 29.4**	**-0.5**
	baz=233						
WTCT				*e*S	**S**	**18 51 06.1**	**-2.5**
	baz=233						
CHN2	**Minshiung**	**2.85**	**228**	⇑*e*P	**Pn**	**18 50 30.4**	**-0.3**
	baz=230						
CHN2				*e*S	**S**	**18 51 08.3**	**-1.7**
	baz=230						
CHN4	**Tsaushan**	**2.90**	**224**	⇑P	**Pn**	**18 50 30.8**	**-0.4**
	baz=226						
CHN4				S	**S**	**18 51 08.2**	**-2.7**
	baz=226						
CHY	**Chiayi**	**2.90**	**228**	⇑P	**Pn**	**18 50 31.0**	**-0.3**
	baz=230						
CHY				*e*S	**S**	**18 51 08.5**	**-2.6**
	baz=230						
TPUB	**Ta-pu**	**2.91**	**223**	⇑P	**Pn**	**18 50 30.9**	**-0.5**
	baz=231						
TPUB				S	**S**	**18 51 08.2**	**-3.1**
	baz=231						
TPUB	**Ta-pu**	**2.91**	**223**		**Pn**	**18 50 30.7**	**-0.7**
LYJJ	**Jianjiangzhen**	**2.94**	**293**	⇓P	**Pn**	**18 50 33.7**	**+2.1**
	baz=292						
LYJJ				*e*S	**S**	**18 51 10.4**	**-1.3**
	baz=292						
STYT	**Tauyuan**	**2.94**	**220**	⇑P	**Pn**	**18 50 31.3**	**-0.5**
	baz=227						
STYT				*e*S	**S**	**18 51 08.9**	**-3.0**
	baz=227						
WSF	**Szhu**	**2.95**	**233**	*e*P	**Pn**	**18 50 31.2**	**-0.7**
	baz=234						
WSF				S	**S**	**18 51 09.7**	**-2.4**
	baz=234						
WTP	**Ta-pu**	**2.96**	**223**	⇑*i*P	**Pn**	**18 50 31.4**	**-0.6**
	baz=232						
WTP				S	**S**	**18 51 10.2**	**-2.1**
	baz=232						
TWH	**Lutao**	**2.98**	**204**	⇑*i*P	**Pn**	**18 50 31.2**	**-1.0**
	baz=207						
TWH				S	**S**	**18 51 09.3**	**-3.4**
	baz=207						
WLGB	**Puzi**	**3.00**	**230**	P	**Pn**	**18 50 32.0**	**-0.4**
	baz=227						
WLGB				S	**S**	**18 51 10.4**	**-2.6**
	baz=227						
TWK	**Hsinying**	**3.02**	**224**	⇑*i*P	**Pn**	**18 50 32.2**	**-0.5**
	baz=226						
TWK				*e*S	**S**	**18 51 10.7**	**-2.9**
	baz=226						
SNST	**Tainan City**	**3.05**	**224**	⇑P	**Pn**	**18 50 32.5**	**-0.4**
	baz=230						
SNST				S	**S**	**18 51 11.2**	**-2.8**
	baz=230						
TWGBT	**Beinan**	**3.05**	**211**	*e*P	**Pn**	**18 50 31.3**	**-1.6**
	baz=215						
TWGBT				S	**S**	**18 51 10.8**	**-3.4**
	baz=215						
TWG	**Pinlang**	**3.05**	**211**	*e*P	**Pn**	**18 50 31.3**	**-1.7**
	baz=215						
TWG				S	**S**	**18 51 10.3**	**-3.8**
	baz=215						
TWG	**Pinlang**	**3.05**	**211**		**Pn**	**18 50 31.0**	**-2.0**
CHN1	**Nanshi**	**3.06**	**223**	⇑P	**Pn**	**18 50 32.5**	**-0.5**
	baz=229						
CHN1				*e*S	**S**	**18 51 11.6**	**-2.7**
	baz=229						
TTN	**Taitung**	**3.08**	**210**	*e*P	**Pn**	**18 50 32.6**	**-0.6**
	baz=214						
SGST	**Jiashian**	**3.10**	**221**	⇑P	**Pn**	**18 50 32.4**	**-1.2**

SLGT	**Liugui**	**3.13**	**219**	*e*P		**Pn**	**18 50 33.6**	**-0.3**
	baz=225								
SLGT				*e*S		**S**	**18 51 13.7**	**-2.1**
	baz=225								
CHN8	**Yiju**	**3.15**	**229**	*e*P		**Pn**	**18 50 33.7**	**-0.3**
	baz=226								
CHN8				*e*S		**S**	**18 51 13.7**	**-2.3**
	baz=226								
CHN3	**Shinhua**	**3.24**	**224**	*e*P		**Pn**	**18 50 35.0**	**0.0**
	baz=225								
ECL	**Taimali**	**3.30**	**211**	*e*P		**Pn**	**18 50 33.5**	**-2.2**
	baz=212								
SSD	**Sandimen**	**3.34**	**217**	*e*P		**Pn**	**18 50 35.7**	**-0.5**
	baz=218								
PTMZ	**Houxiangcun**	**3.35**	**264**	*e*P		**Pn**	**18 50 36.0**	**-0.2**
	baz=264								
PTMZ				*e*S		**S**	**18 51 17.5**	**-2.5**
	baz=264								
TAI1	**Yung-k'ang**	**3.35**	**225**	*e*P		**Pn**	**18 50 37.5**	**+1.2**
	baz=226								
TWM1	**Shoushan**	**3.40**	**220**	*e*P		**Pn**	**18 50 37.7**	**+0.8**
	baz=221								
SGLT	**Jiouru**	**3.43**	**218**	*e*P		**Pn**	**18 50 37.9**	**+0.6**
	baz=226								
MASBT	**Mashibuluo**	**3.45**	**215**⇑	*e*P		**Pn**	**18 50 37.0**	**-0.5**
	baz=217								
MASBT				*e*S		**S**	**18 51 19.5**	**-2.7**
	baz=217								
MHZQ	**Yeshan**	**3.45**	**282**	⇓P		**Pn**	**18 50 37.7**	**+0.3**
	baz=281								
MHZQ				*e*S		**S**	**18 51 20.2**	**-1.9**
	baz=281								
PNG	**Penghu**	**3.49**	**238**	*e*P		**Pn**	**18 50 37.5**	**-0.4**
	baz=239								
SNJT	**Kaohsiung City**	**3.50**	**220**	*e*P		**Pn**	**18 50 37.6**	**-0.5**
	baz=222								
PHUB	**P'eng-hu**	**3.51**	**237**	*e*P		**Pn**	**18 50 37.5**	**-0.6**
	baz=238								
PHUB				*e*S		**S**	**18 51 19.9**	**-3.6**
	baz=238								
EAST	**Anshuo**	**3.53**	**211**	*e*P		**Pn**	**18 50 38.0**	**-0.5**
	baz=219								
TAW	**Tawu**	**3.53**	**210**	*e*P		**Pn**	**18 50 38.2**	**-0.3**
	baz=217								
LAY	**Lan-yu**	**3.58**	**199**	*e*P		**Pn**	**18 50 37.8**	**-1.3**
	baz=198								
SSPT	**Xinbi**	**3.59**	**215**	*e*P		**Pn**	**18 50 38.6**	**-0.5**
	baz=216								
WDGT	**Dungji**	**3.59**	**233**	⇑P		**Pn**	**18 50 38.8**	**-0.3**
	baz=229								
WDGT				*e*S		**S**	**18 51 22.0**	**-3.1**
	baz=229								
SCZT	**Fangliau**	**3.65**	**213**⇑	*e*P		**Pn**	**18 50 39.5**	**-0.4**
	baz=215								
JKE	**Kume jima 2**	**3.70**	**76**	⇑P		**Pn**	**18 50 39.1**	**-1.3**
WLCH	**Liuqiu**	**3.79**	**216**	*e*P		**Pn**	**18 50 43.6**	**+2.1**
	baz=211								
QZH	**Quanzhou**	**3.84**	**263**	P		**Pn**	**18 50 42.2**	**+0.3**
QZH				S		**S**	**18 51 27.6**	**-2.7**
QZH				smax	smax				
	comp=N,230nm,0.9s								
QZH				smax	smax				
	comp=E,250nm,0.9s								
HEN	**Hengchun**	**3.91**	**209**	*e*P		**Pn**	**18 50 43.4**	**+0.5**
	baz=217								
TSEB	**Hengchuen, Pin**	**3.94**	**206**	*e*P		**Pn**	**18 50 43.1**	**-0.1**
	baz=215								
TWKBT	**Hengchun**	**3.94**	**208**	*e*P		**Pn**	**18 50 44.0**	**+0.8**
	baz=216								
TWKBT				*e*S		**S**	**18 51 29.3**	**-3.3**
	baz=216								
TWK1	**Hengchun**	**3.94**	**208**	*e*P		**Pn**	**18 50 43.0**	**-0.3**
	baz=216								
KNM	**Kinmen**	**4.09**	**256**	*e*P		**Pn**	**18 50 45.8**	**+0.9**
	baz=256								
KNMB	**Chin-men Tao**	**4.11**	**257**	*e*P		**Pn**	**18 50 44.3**	**-1.0**
	baz=257								
KNMB	**Chin-men Tao**	**4.11**	**257**			**Pn**	**18 50 44.8**	**-0.5**
JAGN	**Aguni-jima**	**4.16**	**73**	⇑P		**Pn**	**18 50 44.3**	**-1.5**
JAGN				S		**S**	**18 51 32.4**	**-4.9**
AXDP	**Jialang**	**4.40**	**264**	*e*P		**Pn**	**18 50 48.8**	**+0.1**
	baz=263								
JJT3	**Tamagusuku3**	**4.55**	**80**	P		**Pn**	**18 50 49.3**	**-1.3**
JJT3				S		**S**	**18 51 41.2**	**-4.7**
ZZJH	**Jiuhuzhen**	**4.78**	**259**	*e*P		**Pn**	**18 50 52.9**	**-0.5**
	baz=258								
ZPLA	**Ao Xicun**	**4.83**	**253**	*e*P		**Pn**	**18 50 54.3**	**+0.3**
	baz=252								
BBP	**Basco**	**5.04**	**189**	*e*P		**Pn**	**18 50 56.4**	**-0.3**
BBP				*e*S		**S**	**18 51 57.4**	**+0.3**
JOW	**Kunigami**	**5.12**	**73**	*e*P		**Pn**	**18 50 54.9**	**-2.6**
	baz=73								
JOW	**Kunigami**	**5.12**	**73**			**Pn**	**18 50 55.0**	**-2.6**
SSE	**Sheshan**	**5.80**	**346**			**Pn**	**18 51 06.8**	**+0.8**
SGCP	**Mt. Cagua**	**7.21**	**186**	*e*P		**Pn**	**18 51 24.7**	**+0.8**
NJ2	**Nanjing**	**7.43**	**333**	*e*P		**Pn**	**18 51 27.4**	**+0.8**
NJ2				S		**S**	**18 52 51.4**	**-0.1**
NJ2				pmax	pmax				
	comp=Z,110nm,0.7s								
NJ2				smax	smax				
	comp=N,57nm,1.4s								
NJ2				smax	smax				
	comp=E,84nm,1.3s								
NJ2				LR	LR				
	comp=N,500nm,6.2s								
NJ2				LR	LR				
	comp=E,380nm,6.2s								
NJ2				LR	LR				
	comp=Z,230nm,6.4s								
APYP	**Conner**	**7.69**	**191**	*e*P		**Pn**	**18 51 29.4**	**-0.7**
APYP				*e*S		**S**	**18 52 55.8**	**-2.0**
SIPP	**Brgy, Tapao**	**7.80**	**197**⇑	*i*P		**Pn**	**18 51 31.8**	**+0.3**
CAUP	**Cauayan**	**8.51**	**186**	*e*P		**Pn**	**18 51 42.5**	**+1.9**
GZH	**Guangzhou**	**8.93**	**257**	P		Pn	18 51 40.9	-5.0
WHN	**Wuhan**	**9.02**	**306**⇓	*i*P		**Pn**	**18 51 48.5**	**+1.6**
WHN				S		**S**	**18 53 30.9**	**+2.2**
WHN				pmax	pmax				
	comp=Z,240nm,0.9s								
WHN				pmax	pmax				
	comp=Z,550nm,7.0s								
WHN				LR	LR				
	comp=N,2µm,6.3s								
WHN				LR	LR				
	comp=E,1µm,4.8s								
WHN				LR	LR				
	comp=Z,1µm,8.5s								
SMPP	**San Manuel, Pa**	**9.46**	**192**	*e*P		**Pn**	**18 51 52.1**	**-0.6**
SCZP	**Santa Cruz**	**10.00**	**196**	*e*P		**Pn**	**18 51 59.6**	**+0.2**
JNU	**Nakatsue**	**10.40**	**41**	P		**Pn**	**18 52 06.5**	**+1.9**
	2.0nm,0.3s,baz=218,slow=5.8,SNR=21								
JNU				S		**S**	**18 54 03.0**	**+1.8**
	0.6nm,0.3s,baz=343,slow=20,SNR=1.8								
JNU	**Nakatsue**	**10.40**	**41**			**Pn**	**18 52 06.1**	**+1.6**
TGY	**Tagaytay City**	**11.43**	**189**	P		**Pn**	**18 52 18.7**	**+1.1**
	98nm,0.3s,baz=117,slow=5.4,SNR=9.1								
TJN	**Taejon**	**11.57**	**19**⇓	*e*P		**Pn**	**18 52 20.1**	**+0.9**
TIA	**Tai'an**	**11.78**	**337**	P		**P**	**18 52 23.7**	**-1.8**
TIA				pmax	pmax				
	comp=Z,160nm,0.9s								
BOAC	**Boac**	**11.96**	**184**	*e*P		**Pn**	**18 52 25.4**	**+1.1**
INCN	**Inchon**	**12.43**	**14**	P		**P**	**18 52 31.5**	**-1.3**
INCN	**Inchon**	**12.43**	**14**	P		**P**	**18 52 31.5**	**-1.3**
ENH	**Enshi**	**12.71**	**295**	P		**P**	**18 52 34.7**	**-1.2**
KSRS	**Korea Array**	**12.74**	**19**	P		**Pn**	**18 52 34.8**	**+1.1**
	13nm,0.3s,baz=199,slow=13,SNR=109								
KSRS				S		**S**	**18 54 55.3**	**+0.5**
	baz=197,slow=20,SNR=2.4								
KSRS				ScP		**ScP**	**19 00 59.6**	**-0.8**
	0.1nm,0.3s,baz=199,slow=2.0,SNR=5.6								
KS19	**Wonju Array Si**	**12.77**	**19**	P		**P**	**18 52 35.4**	**-1.1**
SJMP	**San Jose**	**13.02**	**187**	*e*P		**Pn**	**18 52 38.1**	**+0.7**
DL2	**Dalian**	**13.45**	**356**	P		**P**	**18 52 43.9**	**-0.2**
DL2				*es*P		Pn	18 53 38.8	+56
DL2				S		**S**	**18 55 13.5**	**+2.2**
DL2				pmax	pmax				
	comp=Z,270nm,0.7s								
DL2				pmax	pmax				
	comp=Z,670nm,8.6s								
QIZ	**Qiongzhong**	**13.58**	**245**	P		**P**	**18 52 45.9**	**+0.2**
QIZ				PcP		**PcP**	**18 57 51.4**	**+0.1**
QIZ				LR	LR				
	comp=E,330nm,12.0s								
QIZ				LR	LR				
	comp=Z,360nm,11.3s								
RCP	**Roxas**	**13.82**	**180**⇓	*e*P		**P**	**18 52 49.0**	**+0.6**
OCLP	**Ormoc**	**14.43**	**173**	*e*P		**P**	**18 52 57.3**	**+2.1**
ENPP	**El Nido**	**14.52**	**193**	*e*P		**Pn**	**18 52 55.7**	**-0.1**
GYA	**Guiyang**	**14.54**	**277**⇑	*i*P		**P**	**18 52 57.7**	**+1.2**
GYA				sP		Pn	18 53 53.2	+57
GYA				S		**S**	**18 55 34.2**	**-2.9**
GYA				PcP		**PcP**	**18 57 54.8**	**+2.2**
GYA				ScP		**ScP**	**19 01 08.0**	**+4.2**
GYA				ScS		**ScS**	**19 04 42.7**	**+0.9**
GYA				pmax	pmax				
	comp=Z,70nm,1.0s								
GYA				pmax	pmax				
	comp=Z,320nm,5.0s								
GYA				LR	LR				
	comp=N,190nm,6.0s								
GYA				LR	LR				
	comp=E,190nm,5.5s								
GYA				LR	LR				
	comp=Z,120nm,6.0s								
XAN	**Xi'an**	**14.77**	**309**	P		**P**	**18 52 59.3**	**+0.5**
XAN				sP		Pn	18 53 49.7	+51
XAN				pmax	pmax				
	comp=Z,200nm,0.6s								
XAN				pmax	pmax				
	comp=Z,750nm,3.9s								
XAN	**Xi'an**	**14.77**	**309**	P		**P**	**18 52 59.8**	**+1.0**
XAN	**Xi'an**	**14.77**	**309**	P		**P**	**18 52 59.8**	**+1.0**
TIY	**Taiyuan**	**15.06**	**327**	*e*P		**Pn**	**18 53 04.0**	**+1.8**
TIY				S		**S**	**18 55 45.2**	**-3.3**
TIY				pmax	pmax				
	comp=Z,150nm,0.7s								
TIY				LR	LR				
	comp=N,360nm,8.4s								
TIY				LR	LR				
	comp=E,340nm,11.4s								
TIY				LR	LR				
	comp=Z,280nm,10.8s								
BJT	**Baijiatuan**	**15.55**	**341**	P		**Pn**	**18 53 08.8**	**+0.9**
BJT				pmax	pmax				
	comp=Z,71nm,0.6s								
BJT	**Baijiatuan**	**15.55**	**341**	P		**Pn**	**18 53 08.8**	**+0.9**
BJT				IAmb	IAmb		18 53 09.6		
	comp=Z,71nm,0.6s								
BJI	**Beijing**	**15.57**	**341**⇑	*i*P		**Pn**	**18 53 08.5**	**+0.4**
BJI				S		**S**	**18 55 59.8**	**+0.7**
BJI				pmax	pmax				
	comp=Z,96nm,0.7s								
INU	**Inuyama**	**15.73**	**48**	P		**Pn**	**18 53 11.3**	**+1.1**
SNY	**Shenyang**	**16.35**	**2**	⇑P		**P**	**18 53 15.6**	**-0.4**
SNY				pmax	pmax				
	comp=Z,220nm,0.7s								
CGP	**Cagayan de Oro**	**17.00**	**174**⇓	*e*P		**Pn**	**18 53 24.6**	**-0.7**
MAJO	**Matsushiro**	**17.21**	**46**	*ce*P		**P**	**18 53 25.9**	**+0.4**
MAJO	**Matsushiro**	**17.21**	**46**	P		**Pn**	**18 53 27.0**	**-0.5**
MAT	**Matsushiro**	**17.21**	**46**	P		**P**	**18 53 25.3**	**-0.2**
MAT				*e*S		**S**	**18 56 32.4**	**0.0**
MJB9	**Matsu-Tunnel**	**17.21**	**46**	P		**Pn**	**18 53 26.6**	**-0.9**
MJAR	**Matsushiro Arr**	**17.21**	**46**	P		**P**	**18 53 25.9**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=224,slow=7.7,SNR=24								
MJAR				S		**S**	**18 56 33.6**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=242,slow=17,SNR=3.6								
MJAR				ScP		**ScP**	**19 01 07.8**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=250,slow=3.6,SNR=6.4								
MJAR	**Matsushiro Arr**	**17.21**	**46**	IAmb		IAmb	18 53 31.9		
	comp=Z,11nm,0.9s								
BUKP	**Musuan**	**17.61**	**173**	*e*P		**P**	**18 53 31.2**	**+1.1**
CD2	**Chengdu**	**17.63**	**292**⇑	*i*P		**P**	**18 53 31.4**	**+1.2**
CD2				S		**S**	**18 56 39.9**	**-1.1**
CD2				pmax	pmax				
	comp=Z,590nm,0.6s								
CD2				pmax	pmax				
	comp=Z,450nm,7.8s								
HHC	**Hu-ho-hao-te**	**17.98**	**331**	*e*P		**Pn**	**18 53 35.6**	**-1.1**
HHC				pmax	pmax				
	comp=Z,68nm,1.1s								
HHC				pmax	pmax				
	comp=Z,300nm,6.6s								
KMI	**Kunming**	**18.14**	**273**	P		**Pn**	**18 53 38.4**	**-0.4**
KMI				sP		sP	18 54 36.8	-6.8
KMI				S		**S**	**18 56 49.2**	**-2.2**
KMI				pmax	pmax				
	comp=Z,230nm,0.8s								
KMI				pmax	pmax				
	comp=Z,330nm,3.2s								
KMI				LR	LR				
	comp=Z,250nm,7.3s								
KMI				LR	LR				
	comp=Z,220nm,8.9s								
KMI				LR	LR				
	comp=Z,220nm,9.0s								
KMI	**Kunming**	**18.14**	**273**	P		**Pn**	**18 53 38.2**	**-0.7**
KMI				pmax	pmax				
	comp=Z,170nm,0.8s								
KMI	**Kunming**	**18.14**	**273**	P		**Pn**	**18 53 38.2**	**-0.7**
CTBH	**Cotabato--PC H**	**18.18**	**175**⇓	*e*P		**P**	**18 53 37.4**	**+1.1**
CN2	**Changchun**	**18.43**	**6**	*e*P		**P**	**18 53 38.7**	**0.0**
CN2				*e*S		**S**	**18 56 53.6**	**-2.9**
CN2				pmax	pmax				
	comp=Z,110nm,1.0s								
CN2				pmax	pmax				
	comp=Z,230nm,4.9s								
CN2				LR	LR				
	comp=Z,360nm,14.0s								
CN2				LR	LR				
	comp=Z,420nm,14.0s								
CN2				LR	LR				
	comp=Z,550nm,14.0s								
KCP	**Kidapawan**	**18.47**	**173**⇑	*i*P		**P**	**18 53 40.1**	**+0.6**
UBPT	**Khong Chiam**	**19.11**	**241**	P		**Pn**	**18 53 48.7**	**-1.4**
VLA	**Vladivostok**	**19.14**	**21**⇑	*e*P		**P**	**18 53 46.9**	**+0.6**
LZH	**Lanzhou**	**19.39**	**308**	*e*P		**P**	**18 53 50.3**	**+1.0**
LZH				sP		sP	18 54 54.2	-3.2
LZH				pmax	pmax				
	comp=Z,29nm,1.1s								
LZH				pmax	pmax				
	comp=Z,100nm,4.3s								
MDJ	**Mudanjiang**	**19.90**	**14**	P		**P**	**18 53 55.3**	**+0.9**
USA0B	**Ussuriysk Arra**	**20.15**	**20**	*de*P		**P**	**18 53 57.3**	**+0.3**
USA0B	**Ussuriysk Arra**	**20.15**	**20**	P		**P**	**18 53 57.3**	**+0.3**
USA0B				IAmb	IAmb		18 53 58.3		
	comp=Z,60nm,1.1s								
USRK	**Ussuriysk Ar.**	**20.15**	**20**	P		**P**	**18 53 57.4**	**+0.4**
	comp=Z,30nm,0.4s,baz=203,slow=8.1,SNR=188								
USRK				ScP		**ScP**	**19 01 13.7**	**-1.2**
	comp=Z,1.7nm,0.7s,baz=203,slow=3.0,SNR=5.0								
KKM	**Kota Kinabalu**	**20.30**	**199**	P		**P**	**18 53 59.2**	**+0.1**
KKM				IAmb	IAmb		18 54 00.0		
	comp=Z,54nm,0.8s								
SPMM	**Sapulut**	**21.50**	**197**	P		**P**	**18 54 12.0**	**+0.7**
PBKT	**Sadao Pong**	**22.18**	**251**	P		**P**	**18 54 18.7**	**+1.1**
PBKT				IAmb	IAmb		18 54 20.6		
	comp=Z,27nm,0.6s								
TEY	**Ternei**	**22.50**	**26**⇑	*e*P		**P**	**18 54 16.1**	**-4.2**
TEY				pmax	pmax				
	comp=E,10.0nm,1.8s								
TEY				pmax	pmax				
	comp=N,10.0nm,1.1s								
TEY				pmax	pmax				
	comp=Z,10.0nm,2.3s								
CHTO	**Chiang Mai**	**23.04**	**258**	P		**P**	**18 54 26.0**	**+0.6**
CHTO							18 58 07.9		
CHTO				pmax	pmax				
	comp=Z,40nm,0.9s								
CHTO	**Chiang Mai**	**23.04**	**258**	P		**P**	**18 54 26.0**	**+0.6**
CHTO				IAmb	IAmb		18 54 27.3		
	comp=Z,40nm,0.8s								
CHTO						**PcP**	**18 58 07.9**	**+0.5**
CM31	**Chiang Mai Arr**	**23.17**	**257**	P		**P**	**18 54 27.6**	**+0.9**
CM31						**PcP**	**18 58 09.2**	**+1.6**
CMAR	**Chiang Mai Arr**	**23.17**	**257**	P		**P**	**18 54 27.5**	**+0.9**
	comp=Z,10nm,0.8s,baz=57,slow=7.9,SNR=104								
CMAR				PcP		**PcP**	**18 58 08.6**	**+0.9**
	comp=Z,5.3nm,0.6s,baz=23,slow=1.2,SNR=22								
CMAR				ScP		**ScP**	**19 01 23.6**	**+0.5**
	comp=Z,2.5nm,0.7s,baz=58,slow=1.1,SNR=15								
ERM	**Erimo**	**23.57**	**40**	P		**P**	**18 54 28.7**	**-1.3**
ERM				pmax	pmax				
	comp=Z,56nm,0.9s								
ERM	**Erimo**	**23.57**	**40**	P		**P**	**18 54 28.7**	**-1.3**
ERM				IAmb	IAmb		18 54 43.6		
	comp=Z,56nm,0.9s								
GTA	**Gaotai**	**23.78**	**311**	⇑P		**P**	**18 54 32.0**	**-0.2**
GTA				pP		pP	18 55 14.6	-0.6
GTA				sP		sP	18 55 41.8	-3.1
GTA				PcP		**PcP**	**18 58 09.9**	**+1.1**
GTA				ScP		**ScP**	**19 01 25.4**	**+0.9**
GTA				PcS		**PcS**	**19 01 48.1**	**-0.5**
GTA				ScS		**ScS**	**19 05 11.8**	**+0.1**
GTA				pmax	pmax				
	comp=Z,100nm,1.0s								
GTA				pmax	pmax				
	comp=Z,380nm,10.3s								
GTA				LR	LR				
	comp=Z,210nm,8.9s								
GTA				LR	LR				
	comp=Z,230nm,9.6s								
GTA				LR	LR				
	comp=Z,250nm,11.0s								
GUMO	**Guam**	**23.88**	**115**	P		**P**	**18 54 33.7**	**+0.6**
GUMO				pmax	pmax				
	comp=Z,204nm,0.9s								
GUMO	**Guam**	**23.88**	**115**	P		**P**	**18 54 33.6**	**+0.6**
	comp=Z,280nm,1.1s,baz=345,slow=8.5,SNR=6.8								
GUMO	**Guam**	**23.88**	**115**	P		**P**	**18 54 33.7**	**+0.6**
HIA	**Hailar**	**23.89**	**355**	P		**P**	**18 54 32.5**	**-0.4**
HIA				pmax	pmax				
	comp=Z,55nm,0.9s								
HIA	**Hailar**	**23.89**	**355**	P		**P**	**18 54 32.5**	**-0.4**
HIA				IAmb	IAmb		18 54 35.5		
	comp=Z,56nm,0.9s								
ASAJ	**Asahikawa**	**24.61**	**36**	P		**P**	**18 54 38.8**	**-0.7**
	comp=Z,21nm,0.4s,baz=228,slow=9.2,SNR=50								
JKA	**Kamikawa-asahi**	**24.62**	**36**	P		**P**	**18 54 38.8**	**-0.7**
KLR	**Kul'dur**	**24.75**	**14**	P		**P**	**18 54 41.0**	**+0.4**
	comp=Z,30nm,0.5s,baz=208,slow=8.6,SNR=59								
KLR				PcP		**PcP**	**18 58 11.0**	**+0.5**
	comp=Z,5.3nm,0.5s,baz=190,slow=4.3,SNR=5.9								
KMSI	**Cibinong**	**24.76**	**177**	P		**P**	**18 54 40.6**	**-0.4**
	comp=Z,999nmcomp=Z,112nm,0.8s								
MRSI	**Marisa**	**24.84**	**182**	P		**P**	**18 54 41.8**	**0.0**
	comp=Z,2µmcomp=Z,184nm,0.8s								
TNTI	**Ternate**	**24.93**	**169**	P		**P**	**18 54 40.1**	**-2.5**
	comp=Z,1µmcomp=Z,104nm,0.8s								
TNTI	**Ternate**	**24.93**	**169**	P		**P**	**18 54 42.6**	**0.0**
SBUM	**Sibu**	**25.03**	**206**	P		**P**	**18 54 44.0**	**+0.5**
SBUM				IAmb	IAmb		18 54 46.1		
	comp=Z,43nm,0.7s								
SBUM	**Sibu**	**25.03**	**206**	P		**P**	**18 54 44.0**	**+0.5**
MPSI	**Mapaga**	**25.12**	**187**	P		**P**	**18 54 45.2**	**+0.9**
	comp=Z,852nmcomp=Z,68nm,1.3s								
ULN	**Ulaanbaatar**	**25.59**	**335**	P		**P**	**18 54 48.6**	**+0.2**
ULN				pmax	pmax				
	comp=Z,57nm,0.7s								
ULN	**Ulaanbaatar**	**25.59**	**335**	P		**P**	**18 54 48.6**	**+0.2**
ULN				IAmb	IAmb		18 54 49.5		
	comp=Z,56nm,0.7s								
SONM	**Songino Array**	**25.82**	**334**	P		**P**	**18 54 50.7**	**+0.2**
	comp=Z,78nm,0.8s,baz=145,slow=9.1,SNR=324								
SONM				PcP		**PcP**	**18 58 13.4**	**+0.2**
	comp=Z,4.0nm,0.6s,baz=159,slow=3.4,SNR=6.2								
SONM				ScP		**ScP**	**19 01 29.2**	**-0.9**
	comp=Z,4.6nm,0.9s,baz=165,slow=3.1,SNR=12								
SONM	**Songino Array**	**25.82**	**334**	IAmb		IAmb	18 54 51.7		
	comp=Z,78nm,1.0s								
APSI	**Ampana**	**26.23**	**183**	P		**P**	**18 54 54.9**	**+0.7**
	comp=Z,2µmcomp=Z,163nm,1.3s								
SMKI	**Samarinda**	**26.30**	**193**	P		**P**	**18 54 56.7**	**+1.8**
	comp=Z,152nm,0.8s								
LUWI	**Luwuk**	**26.34**	**180**	P		**P**	**18 54 54.3**	**-0.9**
	comp=Z,1µmcomp=Z,140nm,0.7s								
LUWI	**Luwuk**	**26.34**	**180**	P		**P**	**18 54 54.3**	**-0.9**
YSS	**Yuzh-Sakhalins**	**26.69**	**31**⇓	*e*P		**P**	**18 55 01.0**	**+3.0**
YSS				*e**PP		**pP**	**18 55 48.1**	**+3.5**
YSS				*e*PPP		PPP	18 56 15.6	
YSS				*e*S		**S**	**18 59 17.9**	**+2.4**
YSS				pmax	pmax				
	comp=Z,110nm,0.8s								
YSS				pmax	pmax				
	comp=N,40nm,0.6s								
YSS				pmax	pmax				
	comp=E,50nm,0.9s								
YSS				pmax	pmax				
	comp=Z,300nm,4.3s								
YSS				MLR	MLR				
	comp=Z,300nm,13.0s								
YSS	**Yuzh-Sakhalins**	**26.69**	**31**	P		**P**	**18 54 58.5**	**+0.5**
KSM	**Kuching**	**26.71**	**209**	P		**P**	**18 54 58.8**	**+0.3**
KSM				IAmb	IAmb		18 54 59.9		
	comp=Z,60nm,0.9s								
KSM	**Kuching**	**26.71**	**209**	P		**P**	**18 54 59.0**	**+0.5**
TEZP	**TEZPUR**	**26.95**	**279**	*ex*		**P**	**18 55 00.8**	**+0.2**
TEZP				IAmb	IAmb		18 55 04.9		
	comp=Z,58nm,0.5s								
BKB	**Balikpapan**	**27.16**	**193**	P		**P**	**18 55 03.5**	**+0.9**
SWI	**Sorong**	**27.41**	**161**	P		**P**	**18 55 04.5**	**-0.3**
	comp=Z,36nm,1.0s								
SIJI	**Sorong**	**27.42**	**161**	P		**P**	**18 55 04.5**	**-0.3**
	comp=Z,19nm,0.8s,baz=329,slow=2.3,SNR=15								
SANI	**Sanana**	**27.51**	**173**	P		**P**	**18 55 04.7**	**-1.0**
	comp=Z,1µmcomp=Z,165nm,0.8s								
SHL	**Shillong**	**27.86**	**277**	P		**P**	**18 55 09.6**	**+0.6**
SHL				pmax	pmax				
	comp=Z,44nm,0.7s								
SHL	**Shillong**	**27.86**	**277**	*e*P		**P**	**18 55 09.3**	**+0.3**
SHL				IAmb	IAmb		18 55 11.6		
	comp=Z,506nm,0.1s								
SHL	**Shillong**	**27.86**	**277**	P		**P**	**18 55 09.6**	**+0.6**
SHL				IAmb	IAmb		18 55 10.6		
	comp=Z,44nm,0.7s								
LSA	**Lhasa**	**28.32**	**286**	P		**P**	**18 55 14.4**	**+1.2**
LSA				pmax	pmax				
	comp=Z,260nm,0.7s								
LSA				pmax	pmax				
	comp=Z,600nm,5.0s								
LSA				LR	LR				
	comp=Z,770nm,9.6s								
LSA				LR	LR				
	comp=Z,690nm,8.2s								
LSA				LR	LR				
	comp=Z,1µm,8.7s

comp=Z,521nmcomp=Z,34nm,1.0s
TLY Talaya 29.98 336*c iP* **P 18 55 26.9 -0.2**
TLY pmax pmax
comp=Z,63nm,0.9s
TLY Talaya 29.98 336 P **P 18 55 27.5 +0.4**
comp=Z,45nm,0.8s,baz=167,slow=5.6,SNR=33
TLY Talaya 29.98 336 P **P 18 55 27.5 +0.4**
GTK Tadong 30.63 281 *eP* **P 18 55 34.0 +0.7**
GTK IAmb IAmb 18 55 40.8
comp=Z,23nm,0.6s
BKSI Bulukumba 30.70 185 P **P 18 55 34.3 +0.5**
comp=Z,24nm,0.8s
MOY Mondy 31.00 333 *eP* **P 18 55 36.1 -0.1**
MOY pmax pmax
comp=Z,116nm,1.7s
SMPI Sarmi 31.34 148 P **P 18 55 40.1 +0.7**
comp=Z,811nmcomp=Z,102nm,1.1s
TAPN Taplejung 31.42 281 *eP* **P 18 55 41.4 +1.0**
comp=Z,95nm,0.5s
TPI Tanjungpandan 31.65 210 P **P 18 55 43.3 +1.2**
comp=Z,74nm,0.8s
ODAN Odare 31.75 280 *eP* **P 18 55 44.0 +0.8**
comp=Z,118nm,0.5s
PSI Prapat 32.16 229 P **P 18 55 48.3 +1.5**
PSI pmax pmax
comp=Z,12nm,0.7s
RPSI Rantau Prapat 32.24 229 P **P 18 55 48.3 +1.1**
RAMN Ramite 32.44 281 *eP* **P 18 55 49.8 +0.6**
comp=Z,53nm,0.5s
GENI Genyem 32.57 146 P **P 18 55 50.5 +0.4**
comp=Z,66nm,1.1s
BKNI Bangkinang 32.64 223 P **P 18 55 52.8 +2.1**
comp=Z,1µmcomp=Z,137nm,1.0s
BKNI Bangkinang 32.64 223 P **P 18 55 51.9 +1.2**
JIRN Jiri 32.74 282 *eP* **P 18 55 52.7 +0.7**
comp=Z,94nm,0.4s
MLSI Meulaboh, Aceh 32.94 235 P **P 18 55 56.6 +3.2**
comp=Z,62nm,0.7s
BOD Bodaibo 32.95 351 *eP* **P 18 55 51.5 -1.4**
BOD pmax pmax
comp=Z,13nm,0.9s
GUN Gumba 32.99 283 *eP* **P 18 55 54.7 +0.5**
comp=Z,89nm,0.4s
PKI Pulchoki 33.44 282 *eP* **P 18 55 58.1 +0.1**
comp=Z,9.5nm,0.4s
PKIN Phulchoki 33.45 282 *eP* **P 18 55 58.1 +0.1**
comp=Z,75nm,0.4s
BOK Bokaro 33.52 275 *eP* **P 18 55 59.6 +1.3**
BOK IAmb IAmb 18 56 01.1
comp=Z,72nm,0.2s
BOK *i* x x 18 58 35.0
KKN Kakani 33.53 282 *eP* **P 18 55 59.0 +0.3**
comp=Z,77nm,0.4s
GRJI Gresik 33.70 199 P **P 18 56 01.3 +1.5**
comp=Z,1µmcomp=Z,130nm,1.1s
DMN Daman 33.70 282 *eP* **P 18 56 00.4 +0.2**
comp=Z,52nm,0.5s
WMQ Urumqi 33.87 312 P **P 18 56 02.1 +0.9**
WMQ pP pP 18 56 46.7 -2.1
WMQ PcP **PcP 18 58 34.1 0.0**
WMQ pmax pmax
comp=Z,48nm,0.9s
WMQ pmax pmax
comp=Z,480nm,10.1s
WMQ LR LR
comp=Z,290nm,14.7s
WMQ LR LR
comp=Z,430nm,29.3s
WMQ LR LR
comp=Z,130nm,14.7s
WMQ Urumqi 33.87 312 P **P 18 56 01.8 +0.7**
WMQ 18 58 34.3
WMQ pmax pmax
comp=Z,64nm,0.7s
WMQ Urumqi 33.87 312 P **P 18 56 01.8 +0.7**
WMQ PcP **PcP 18 58 34.3 +0.2**
MMRI Maumere 33.89 181 P **P 18 56 01.2 -0.3**
comp=Z,2µmcomp=Z,204nm,0.9s
MMRI Maumere 33.89 181 P **P 18 56 00.7 -0.8**
PDSI Padang 33.96 223 P **P 18 56 03.3 +1.1**
comp=Z,20nm,0.6s
GKN Gorkha 34.08 283 *eP* **P 18 56 03.4 +0.1**
comp=Z,83nm,0.4s
SRBI Singaraja 34.14 193 P **P 18 56 04.5 +0.9**
GSI Gunungsitoli 34.17 229 P **P 18 56 04.3 +0.3**
comp=Z,30nm,1.2s
GSI Gunungsitoli 34.17 229 P **P 18 56 04.0 0.0**
KRJI Kerinci 34.30 220 P **P 18 56 08.2 +3.0**
PLAI Plampang 34.42 189 P **P 18 56 06.1 +0.1**
comp=Z,1µmcomp=Z,101nm,1.0s
NGJI Ngawi 34.43 200 P **P 18 56 08.6 +2.4**
comp=Z,140nm,0.9s
TWSI Taliwang, Sumb 34.47 190 P **P 18 56 06.6 +0.2**
comp=Z,873nmcomp=Z,88nm,0.9s
JAGI Jajag, Banyuwa 34.75 195 P **P 18 56 09.5 +0.6**
comp=Z,17nm,0.5s
JAGI Jajag, Banyuwa 34.75 195 P **P 18 56 09.4 +0.5**
JAGI IAmb IAmb 18 56 17.6
comp=Z,42nm,1.0s
MDSI Maura Dua 34.82 214 P **P 18 56 10.4 +0.9**
comp=Z,61nm,1.0s
DANN Dangsing 34.83 284 *eP* **P 18 56 10.5 +0.7**
comp=Z,74nm,0.3s
IGBI Denpasar 34.87 193 P **P 18 56 11.2 +1.4**
comp=Z,2µmcomp=Z,204nm,0.8s
KSI Kapahiang 34.94 217 P **P 18 56 11.6 +1.0**
PWJI Pagerwojo 34.95 199 P **P 18 56 11.0 +0.4**
comp=Z,2µmcomp=Z,203nm,0.7s
KOLN Koldanda 35.02 283 *eP* **P 18 56 11.8 +0.4**
comp=Z,117nm,1.0s
SOEI Soe 35.02 177 P **P 18 56 10.2 -1.1**
comp=Z,63nm,0.8s
SOEI Soe 35.02 177 P **P 18 56 09.1 -2.2**
SOEI IAmb IAmb 18 56 24.3
comp=Z,46nm,0.8s
WOJI Wonogiri, Jawa 35.05 201 P **P 18 56 12.3 +0.9**
comp=Z,158nm,1.0s
SISI Saibi 35.14 224 P **P 18 56 13.0 +0.8**
comp=Z,51nm,1.2s
UGM Wanagama 35.25 201 P **P 18 56 15.2 +2.0**
comp=Z,220nm,1.1s
UGM Wanagama 35.25 201 P **P 18 56 13.9 +0.8**
KPJI Karang Pucung 35.27 204 P **P 18 56 15.0 +1.7**
comp=Z,2µmcomp=Z,175nm,1.3s
LWLI Liwa 35.33 214 P **P 18 56 14.8 +0.8**
comp=Z,40nm,0.7s
MNAI Manna 35.34 216 P **P 18 56 14.9 +0.9**
comp=Z,191nm,1.1s
DBJI Dramaga 35.43 208 P **P 18 56 17.0 +2.3**
KASI Kota Agung 35.55 213 P **P 18 56 16.7 +1.0**
comp=Z,49nm,0.8s
CMJI Cimerak 35.86 205 P **P 18 56 17.8 -0.5**
comp=Z,77nm,1.4s
CISI Cisompet, Garu 35.90 206 P **P 18 56 19.2 +0.5**
comp=Z,104nm,0.8s
CISI Cisompet, Garu 35.90 206 P **P 18 56 18.2 -0.5**
CISI IAmb IAmb 18 56 21.7
comp=Z,74nm,0.8s
MANU Manus Island 36.24 135 P **P 18 56 21.9 +0.3**
CHLP Challavanipeta 36.48 267 *eP* **P 18 56 25.4 +1.8**
CHLP IAmb IAmb 18 56 26.2
comp=Z,45nm,0.9s
YAK Yakutsk 36.86 5*c iP* **P 18 56 25.5 -0.7**
YAK *e**PP **pP 18 57 15.2 +0.7**
YAK *e* 18 57 54.2
YAK *e* 18 58 41.9
YAK *e*S **S 19 01 51.7 -0.9**
YAK *e**SS **sS 19 03 19.9 +1.7**
YAK *e*SS **SS 19 04 41.8 -2.8**
YAK *e* 19 06 11.1
YAK pmax pmax
comp=Z,132nm,0.8s
YAK pmax pmax
comp=E,10.0nm,0.9s
YAK pmax pmax
comp=N,32nm,0.8s
YAK pmax pmax
comp=Z,37nm,1.8s
YAK pmax pmax
comp=N,39nm,2.0s
YAK pmax pmax
comp=E,38nm,1.9s
YAK smax smax
comp=N,104nm,2.7s
YAK smax smax
comp=E,54nm,2.7s

YAK Yakutsk 36.86 5 P **P 18 56 25.6 -0.7**
YAK **PcP 18 58 42.0 -0.4**
PETK Petropavlovsk- 38.00 34 P **P 18 56 35.2 -0.7**
comp=E,4.7nm,0.7s,baz=219,slow=6.4,SNR=17
PETK PcP **PcP 18 58 45.7 -0.5**
comp=E,6.2nm,0.9s,baz=150,slow=2.2,SNR=3.2
MK31 Makanchi Array 38.48 314 *eP* **P 18 56 40.3 +0.3**
MK31 Makanchi Array 38.48 314 P **P 18 56 40.0 0.0**
MKAR Makanchi Array 38.48 314 P **P 18 56 40.2 +0.2**
comp=E,152nm,0.5s,baz=101,slow=9.9,SNR=3538
MKAR PcP **PcP 18 58 47.9 0.0**
comp=E,12nm,0.7s,baz=106,slow=4.7,SNR=4.7
MKAR ScP **ScP 19 02 13.0 -0.2**
comp=E,4.5nm,0.6s,baz=101,slow=5.8,SNR=10
MAKZ Makanchi 38.68 314 P **P 18 56 41.7 -0.1**
MAKZ Makanchi 38.68 314 P **P 18 56 41.6 -0.1**
MTN Manton Dam 38.92 167 P **P 18 56 43.1 -0.9**
PVM Polavaram 39.08 266 *eP* **P 18 56 46.6 +1.3**
PVM IAmb IAmb 18 56 47.3
comp=Z,26nm,0.8s
MA2 Magadan 39.26 22⇑ *eP* **P 18 56 45.6 -0.7**
MA2 pmax pmax
comp=Z,14nm,0.9s
PDGK Podgornoye 39.43 308 P **P 18 56 47.8 -0.3**
DDI Dehra Dun 39.65 287 *eP* **P 18 56 50.8 +0.9**
DDI IAmb IAmb 18 56 52.4
comp=Z,53nm,0.8s
ZAA0 Zalesovo Array 40.00 326 P **P 18 56 51.4 -1.1**
ZAA0 IAmb IAmb 18 56 52.7
comp=Z,90nm,0.8s
ZALV Zalesovo Beam 40.00 326 P **P 18 56 51.9 -0.5**
comp=Z,100nm,0.7s,baz=112,slow=7.7,SNR=403
ZALV PP **PP 18 58 31.7 +2.1**
comp=Z,7.1nm,0.8s,baz=134,slow=6.4,SNR=3.5
ZALV PcP **PcP 18 58 51.8 -0.7**
comp=Z,9.1nm,0.4s,baz=110,slow=4.5,SNR=9.4
ZALV ScP **ScP 19 02 18.0 -0.8**
comp=Z,5.6nm,0.7s,baz=129,slow=3.8,SNR=12
PRZ Przheval'sk 40.05 306 P **P 18 56 55.0 +1.7**
PRZ 18 58 54.4
PRZ pmax pmax
comp=Z,170nm,0.7s
PRZ Przheval'sk 40.05 306 P **P 18 56 55.0 +1.7**
PRZ **PcP 18 58 54.4 +1.2**
MYLAV Mylavaram 40.13 266 *eP* **P 18 56 55.5 +1.5**
MYLAV IAmb IAmb 18 56 56.3
comp=Z,24nm,0.8s
GGR Gangavaram 40.17 268 *eP* **P 18 56 55.5 +1.1**
GGR IAmb IAmb 18 56 56.2
comp=Z,41nm,0.6s
NGP Nagpur 40.27 273 *eP* **P 18 56 55.4 +0.3**
NGP *i* x x 18 58 53.7
SMLA Simla 40.35 289 *eP* **P 18 56 51.2 -4.4**
SMLA IAmb IAmb 18 56 58.0
comp=Z,105nm,0.8s
SMLA *i* x x 18 58 48.3
RPR Rampur 40.68 270 *eP* **P 18 56 59.5 +1.0**
RPR IAmb IAmb 18 57 00.1
comp=Z,28nm,0.7s
KDJ Kajisay 40.88 306 P **P 18 57 01.3 +1.2**
KDJ pmax pmax
comp=Z,196nm,0.7s
KDJ Kajisay 40.88 306 P **P 18 57 01.3 +1.2**
DHRM DHARAMSHALA 41.03 291 *eP* **P 18 56 58.4 -3.0**
DHRM IAmb IAmb 18 57 13.4
comp=Z,38nm,0.7s
ADKI Addanki 41.04 265 *eP* **P 18 57 03.0 +1.6**
ADKI IAmb IAmb 18 57 03.9
comp=Z,20nm,0.8s
BHPL Bhopal 41.24 277 *eP* **P 18 57 03.3 +0.2**
BHPL IAmb IAmb 18 57 04.6
comp=Z,36nm,0.3s
KNRA Kununurra 41.29 171 P **P 18 57 02.5 -0.8**
NJS Nagarjunasagar 41.40 266 *eP* **P 18 57 05.5 +1.1**
NJS IAmb IAmb 18 57 06.3
comp=Z,16nm,0.6s
KSH Kashi 41.46 302⇑ *iP* **P 18 57 08.7 +4.0**
KSH pP pP 18 57 53.6 -0.4
KSH PP **PnPn 18 58 49.7 -3.4**
KSH S **S 19 03 06.5 +4.5**
KSH sS sS 19 04 25.5 -3.5
KSH SS **SS 19 06 09.5 -6.8**
KSH ScS **ScS 19 06 42.2 -0.1**
KSH pmax pmax
comp=Z,430nm,1.1s
KSH pmax pmax
comp=Z,780nm,6.1s
KSH LR LR
comp=Z,450nm,7.5s
KSH LR LR
comp=Z,350nm,4.4s
KSH LR LR
comp=Z,920nm,9.2s
SRSP Sriramsagar 41.52 270 *eP* **P 18 57 06.0 +0.7**
SRSP IAmb IAmb 18 57 06.8
comp=Z,22nm,0.7s
ULHL Ulahol 41.59 306 P **P 18 57 07.1 +1.2**
SNR=112
NRN Naryn 41.65 304 P **P 18 57 07.5 +1.0**
NRN pmax pmax
comp=Z,234nm,1.0s
NRN Naryn 41.65 304 P **P 18 57 07.5 +1.0**
HYB Hyderabad 41.79 268 *i* P **P 18 57 08.0 +0.4**
comp=Z,46nm,0.8s
HYB Hyderabad 41.79 268 *eP* **P 18 57 08.8 +1.2**
HYB *i* x x 18 58 59.3
HYBB Hyderabad (bro 41.79 268 *eP* **P 18 57 08.5 +0.9**
HYBB IAmb IAmb 18 57 08.9
comp=Z,18nm,0.7s
SRLM Srisailam 41.93 266 *eP* **P 18 57 09.6 +0.9**
SRLM IAmb IAmb 18 57 10.4
comp=Z,12nm,0.8s
PMG Port Moresby 42.00 143 P **P 18 57 09.5 +0.4**
PMG pmax pmax
comp=Z,60nm,0.8s
PMG Port Moresby 42.00 143 P **P 18 57 09.5 +0.4**
PMG IAmb IAmb 18 57 10.6
comp=Z,60nm,0.8s
SKHT Srikalahasti 42.05 262 *eP* **P 18 57 11.0 +1.4**
SKHT IAmb IAmb 18 57 12.1
comp=Z,27nm,1.0s
KURK Kurchatov 42.08 319*c iP* **P 18 57 09.1 -0.3**
KURK pmax pmax
comp=Z,166nm,0.9s
KURK Kurchatov 42.08 319 P **P 18 57 09.1 -0.3**
TKM2 Tokmak 2 42.16 307 P **P 18 57 11.6 +1.2**
TKM2 Tokmak 2 42.16 307 P **P 18 57 11.7 +1.3**
SNR=283
KZA Kyzart 42.29 305 P **P 18 57 13.6 +1.9**
SNR=63
SEY Seymchan 42.30 20⇑ *eP* **P 18 57 09.1 -1.8**
DMPR Damasthipur 42.53 268 *eP* **P 18 57 14.3 +0.8**
DMPR IAmb IAmb 18 57 15.0
comp=Z,20nm,0.7s
KBK Karagaybulak 42.59 306 P **P 18 57 15.2 +1.3**
SNR=156
CHMS Chumysh 42.78 307 P **P 18 57 16.1 +0.8**
SNR=172
UCH Uchtor 42.85 305 P **P 18 57 18.2 +1.9**
SNR=360
AAK Ala-Archa 42.92 306 P **P 18 57 17.3 +0.8**
AAK Ala-Archa 42.92 306 P **P 18 57 17.6 +1.0**
SNR=9.8
AAK Ala-Archa 42.92 306 *i* P **P 18 57 17.5 +1.0**
SNR=6.2
AAK Ala-Archa 42.92 306 P **P 18 57 17.4 +0.8**
AAK IAmb IAmb 18 57 18.4
comp=Z,68nm,0.7s
USP Ospenovka 43.01 307 P **P 18 57 17.7 +0.7**
SNR=82
KLRI Killari 43.35 270 *eP* **P 18 57 21.0 +0.9**
KLRI IAmb IAmb 18 57 21.7
comp=Z,198nm,0.5s
FITZ Fitzroy Crossi 43.38 176 P **P 18 57 19.4 -0.7**
FITZ IAmb IAmb 18 57 20.5
comp=Z,104nm,0.8s
AML Almayashu 43.45 305 P **P 18 57 22.5 +1.5**
SNR=113
EKS2 Erkin-Say 43.45 306 P **P 18 57 21.6 +1.0**
SNR=72
NIL Nilore 43.52 293 P **P 18 57 21.4 +0.1**
NIL pmax pmax
comp=Z,80nm,0.9s
NIL Nilore 43.52 293 P **P 18 57 21.4 +0.1**
NIL IAmb IAmb 18 57 22.9

comp=Z,80nm,0.8s
URV Uravakonda 43.80 265 *eP* **P 18 57 24.9 +1.1**
URV IAmb IAmb 18 57 25.6
comp=Z,28nm,0.7s
ARSB Arslanbob 43.90 304 P **P 18 57 25.4 +1.1**
ARSB IAmb IAmb 18 57 26.4
comp=Z,107nm,0.9s
COEN Coen 43.92 151 P **P 18 57 25.1 +0.6**
COEN IAmb IAmb 18 57 26.1
comp=Z,86nm,0.8s
PALK Pallekele 44.00 253 P **P 18 57 26.9 +1.6**
PALK pmax pmax
comp=Z,98nm,1.8s
PALK Pallekele 44.00 253 P **P 18 57 26.8 +1.6**
PALK Pallekele 44.00 253 P **P 18 57 26.9 +1.6**
PALK IAmb IAmb 18 57 27.9
comp=Z,98nm,1.8s
ANR Andizhan 44.32 303 P **P 18 57 28.3 +0.8**
BTK Batken 45.46 302 P **P 18 57 37.0 +0.5**
BTK pmax pmax
comp=Z,60nm,0.7s
BTK Batken 45.46 302 P **P 18 57 37.0 +0.5**
BTK IAmb IAmb 18 57 37.8
comp=Z,60nm,0.7s
POO Poona 45.70 272 *eP* **P 18 57 37.5 -1.2**
POO IAmb IAmb 18 57 40.8
comp=Z,144nm,0.9s
GAR Garm 45.81 300 P **P 18 57 40.2 +0.8**
KK31 Karatay Array 45.88 306 *i* P **P 18 57 40.3 +0.6**
KK31 Karatay Array 45.88 306 P **P 18 57 40.1 +0.4**
KK31 IAmb IAmb 18 59 13.4
comp=Z,42nm,0.7s
KKAR Karatay Array 45.88 306 P **P 18 57 40.1 +0.4**
KKAR pmax pmax
comp=Z,42nm,0.7s
KKAR Karatay Array 45.88 306 P **P 18 57 40.1 +0.4**
KKAR IAmb IAmb 18 59 13.5
comp=Z,42nm,0.7s
TIXI Tiksi 46.36 3 P **P 18 57 42.1 -0.8**
TIXI pmax pmax
comp=Z,56nm,0.9s
TIXI Tiksi 46.36 3 P **P 18 57 42.1 -0.8**
TIXI IAmb IAmb 18 57 43.4
comp=Z,56nm,0.9s
WRAB Tennant Creek 46.49 165*d iP* **P 18 57 44.4 -0.2**
WRAB pmax pmax
comp=Z,77nm,0.8s
WRAB Tennant Creek 46.49 165 P **P 18 57 44.4 -0.2**
WRAB IAmb IAmb 18 57 45.5
comp=Z,69nm,0.8s
WRA Warramunga Arr 46.50 165 P **P 18 57 44.6 0.0**
comp=Z,58nm,0.7s,baz=347,slow=8.4,SNR=324
WRA ScP **ScP 19 02 45.7 0.0**
comp=Z,2.9nm,0.9s,baz=348,slow=4.9,SNR=6.2
WRA Warramunga Arr 46.50 165 IAmb IAmb 18 57 45.6
comp=Z,5.1nm,0.7s
WR0 Warramunga Arr 46.56 165 P **P 18 57 44.7 -0.5**
WR0 IAmb IAmb 18 57 46.0
comp=Z,76nm,0.7s
TAS Tashkent 46.67 304 P **P 18 57 47.0 +1.2**
TAS pmax pmax
comp=Z,197nm,0.6s
TAS Tashkent 46.67 304 P **P 18 57 47.0 +1.2**
TRD Trivandrum 46.69 257 *eP* **P 18 57 45.3 -1.1**
GOA Goa 46.71 268 *eP* **P 18 57 45.1 -1.4**
GOA IAmb IAmb 18 57 49.2
comp=Z,100nm,1.3s
CHGR Chuyangaron 46.72 300 P **P 18 57 46.8 +0.4**
PSA00 Pilbara Seismi 46.83 184 P **P 18 57 46.3 -0.9**
PSA00 IAmb IAmb 18 57 47.4
comp=Z,71nm,0.8s
KBL Kabul 46.96 294 P **P 18 57 49.0 +0.6**
KBL pmax pmax
comp=Z,190nm,1.4s
KBL Kabul 46.96 294 P **P 18 57 49.0 +0.6**
KBL IAmb IAmb 18 57 51.2
comp=Z,190nm,1.4s
AS31 Alice Springs 50.00 167 P **P 18 58 11.3 0.0**
ASAR Alice Springs 50.00 167 P **P 18 58 11.6 +0.2**
comp=Z,32nm,0.8s,baz=345,slow=7.0,SNR=291
ASAR ScP **ScP 19 03 00.5 -0.1**
comp=Z,1.4nm,0.7s,baz=349,slow=4.6,SNR=4.7
BILL Bilibino 50.00 20*de* **P 18 58 10.9 +0.2**
BILL pmax pmax
comp=Z,15nm,0.6s
BILL Bilibino 50.00 20 P **P 18 58 10.7 0.0**
HRA Herat 52.56 295 P **P 18 58 30.6 +0.1**
HRA **PcP 18 59 36.9 -0.6**
AB31 Akbulak array 53.62 314 *eP* **P 18 58 37.8 +0.1**
ABKAR Akbulak array 53.62 314 P **P 18 58 38.2 +0.5**
SVE Sverdlovsk 53.90 323 *eP* **P 18 58 39.6 0.0**
SVE pmax pmax
comp=Z,115nm,1.0s
MORW Morawa 54.59 187 P **P 18 58 44.7 -0.2**
ARU Arti 54.99 322*c iP* **P 18 58 47.0 -0.4**
ARU *PP **pP 18 59 39.1 -0.4**
ARU 18 59 45.3
ARU 19 00 49.0
ARU S **S 19 06 11.9 +1.4**
ARU 19 08 10.1
ARU pmax pmax
comp=Z,126nm,1.3s
ARU Arti 54.99 322 P **P 18 58 46.9 -0.6**
ASHT Ashkhabad 55.22 300 P **P 18 58 51.6 +2.2**
ASHT pmax pmax
comp=Z,219nm,1.1s
ASHT Ashkhabad 55.22 300 P **P 18 58 51.6 +2.2**
GEYT Alibeck 55.43 300 P **P 18 58 52.3 +1.4**
comp=Z,76nm,0.7s,baz=82,slow=2.2,SNR=164
GEYT Alibeck 55.43 300 IAmb IAmb 18 58 53.4
comp=Z,77nm,0.8s
FORT Forrest 56.14 175 P **P 18 58 56.3 +0.4**
EIDS Eidsvold 57.45 149 P **P 18 59 05.1 -0.1**
NWAO Narrogin (SRO) 58.30 185 P **P 18 59 11.2 +0.3**
NWAO pmax pmax
comp=Z,41nm,0.9s
NWAO Narrogin (SRO) 58.30 185 P **P 18 59 11.2 +0.3**
NWAO IAmb IAmb 18 59 11.9
comp=Z,41nm,0.9s
NWAO Narrogin (SRO) 58.30 185 P **P 18 59 11.2 +0.3**
NWAO IAmb IAmb 18 59 11.9
comp=Z,32nm,0.9s
BANOM Banah 59.30 286 P **P 18 59 19.7 +1.6**
BBOO Buckleboo 59.30 167 P **P 18 59 17.9 +0.1**
BBOO IAmb IAmb 18 59 18.8
comp=Z,41nm,0.8s
SHME Shamm 59.40 286 P **P 18 59 21.1 +2.3**
ANM Nome 59.52 28 P **P 18 59 19.5 +0.6**
ANM pmax pmax
comp=Z,15nm,0.8s
ANM Nome 59.52 28 P **P 18 59 19.5 +0.6**
STKA Stephens Creek 59.77 161 P **P 18 59 21.2 +0.2**
STKA pmax pmax
comp=Z,2.0nm,0.9s
STKA Stephens Creek 59.77 161 P **P 18 59 20.9 0.0**
comp=Z,5.3nm,0.5s,baz=15,slow=6.3,SNR=16
STKA Stephens Creek 59.77 161 P **P 18 59 21.2 +0.2**
ASUD Al Ashush, Dub 60.49 285 P **P 18 59 27.0 +0.8**
PRGR Permogore 61.87 328⇑ *iP* **P 18 59 34.4 -0.4**
PRGR *e**PP **pP 19 00 28.3 +0.2**
PRGR pmax pmax
comp=Z,103nm,0.6s
ARMA Armidale 62.05 152 P **P 18 59 37.9 +1.4**
ARMA IAmb IAmb 18 59 40.1
comp=Z,29nm,0.9s
AKT Akhty 62.80 305 *eP* **P 18 59 41.8 +0.4**
AKT *e* 19 00 17.7
AKT *e**PP **pP 19 00 35.4 +0.4**
AKT pmax pmax
comp=Z,57nm,0.6s
DZM Mont Dzumac 63.44 134 P **P 18 59 47.0 +1.2**
DZM IAmb IAmb 18 59 48.0
comp=Z,35nm,1.0s
TTA Tatalina 63.68 30 P **P 18 59 47.7 +0.9**
TTA pmax pmax
comp=Z,21nm,0.7s
TTA Tatalina 63.68 30 P **P 18 59 47.7 +0.9**
TTA IAmb IAmb 18 59 48.5
comp=Z,21nm,0.7s
GROC Groznyy 63.88 307 *eP* **P 18 59 46.2 -2.1**
GROC *e* 19 00 19.2
GROC *e**PP **pP 19 00 37.4 -4.6**
GROC *e* 19 02 09.5
GROC pmax pmax

comp=Z,72nm,0.8s
TBLG Delisi 64.94 306 P P 18 59 55.6 +0.3
TBLG pmax pmax
comp=Z,22nm,0.7s
TBLG Delisi 64.94 306 P P 18 59 55.6 +0.3
TBLG IAmb IAmb 18 59 58.9
comp=Z,22nm,0.7s
VRH Novokhopyorsk 65.13 317 *e*P **P 18 59 55.6 -0.6**
VRH pmax pmax
comp=Z,240nm,1.6s
TMCR Tamitsa 65.14 331 *e*P **P 18 59 54.3 -1.7**
TMCR pmax pmax
comp=Z,92nm,0.9s
GNI Garni 65.29 304*c i*P **P 18 59 58.8 +1.1**
GNI pmax pmax
comp=Z,165nm,1.1s
GNI Garni 65.29 304 *i* P **P 18 59 59.0 +1.3**
SNR=16
GNI Garni 65.29 304 P **P 18 59 58.8 +1.1**
GNI IAmb IAmb 19 00 08.9
comp=Z,41nm,0.8s
ZEI Tsey 65.32 307 *e*P **P 18 59 55.8 -2.1**
ZEI pmax pmax
comp=Z,91nm,0.8s
PPLA Purkeypile 65.43 30 P **P 18 59 59.0 +0.9**
PPLA IAmb IAmb 19 00 00.0
comp=Z,24nm,0.7s
GOF Gofitskoye 65.44 310⇓ *i*P P 19 00 11.9 +13
RSO Redoubt South 65.51 33 P **P 18 59 59.5 +0.8**
COLD Coldfoot 65.67 25 P **P 19 00 00.6 +1.2**
TASB TASBURUN-IGDIR 65.71 304 *e*P **P 19 00 01.6 +1.3**
TOLK Toolik Lake Re 65.71 24 P **P 19 00 00.5 +0.8**
TOLK IAmb IAmb 19 00 01.6
comp=Z,29nm,0.7s
TOLK Toolik Lake Re 65.71 24 P **P 19 00 00.7 +0.9**
baz=278
MLY Manley 65.76 28 P **P 19 00 01.2 +1.1**
MLY IAmb IAmb 19 00 02.2
comp=Z,34nm,0.8s
BPAW Bear Paw Mtn. 65.79 29 P **P 19 00 01.0 +0.7**
BPAW IAmb IAmb 19 00 02.1
comp=Z,26nm,0.7s
KBZ Khabaz 65.83 309 P **P 19 00 01.3 +0.5**
comp=Z,64nm,0.8s,baz=88,slow=6.4,SNR=167
SOCY Socotra 65.84 272 P **P 19 00 00.4 -1.1**
KTH Kantishna Hill 65.90 29 P **P 19 00 02.0 +1.0**
KTH IAmb IAmb 19 00 02.6
comp=Z,20nm,0.8s
AKH Akhalkalaki 65.93 306 P **P 19 00 03.1 +1.3**
AKH pmax pmax
comp=Z,118nm,0.9s
AKH Akhalkalaki 65.93 306⇑P **P 19 00 03.4 +1.6**
AKH Akhalkalaki 65.93 306 P **P 19 00 03.1 +1.3**
KIV Kislovodsk 65.93 309*c i*P **P 19 00 02.4 +0.8**
KIV *i* *PP **pP 19 00 56.8 +1.1**
KIV *e* 19 02 29.9
KIV pmax pmax
comp=Z,116nm,0.8s
KIV Kislovodsk 65.93 309⇑P **P 19 00 02.6 +1.0**
KIV Kislovodsk 65.93 309 *i* P **P 19 00 02.5 +0.8**
SNR=19
KIV Kislovodsk 65.93 309 P **P 19 00 02.2 +0.6**
NEY Neytrino 66.06 308*de*P **P 19 00 03.3 +0.7**
NEY pmax pmax
comp=Z,18nm,0.8s
CLDR Caldiran 66.15 303 *e*P **P 19 00 04.6 +1.3**
TRF Thorofare Moun 66.19 29 P **P 19 00 03.4 +0.4**
SUA Susitna One 66.32 32 P **P 19 00 03.8 0.0**
LPSR Galich'ya Gora 66.57 319 *e*P **P 19 00 04.7 -0.7**
LPSR pmax pmax
comp=Z,80nm,0.6s
MOS Moscow 66.70 322 *e*P **P 19 00 03.9 -2.2**
MOS *e**PP **pP 19 00 58.4 -1.9**
MOS *e*S **S 19 08 35.6 -2.7**
MOS pmax pmax
comp=Z,100nm,0.9s
VSR Storozhevoye 66.71 317 *e*P **P 19 00 05.0 -1.3**
VSR pmax pmax
comp=Z,110nm,1.0s
AGRB Hanur-Agry 66.74 304 *e*P **P 19 00 08.4 +1.4**
MCK McKinley 66.74 29 P **P 19 00 06.3 0.0**
MCK pmax pmax
comp=Z,26nm,0.8s
MCK McKinley 66.74 29 P **P 19 00 06.3 0.0**
MCK IAmb IAmb 19 00 08.2
comp=Z,26nm,0.8s
MDM Murphy Dome 66.82 28 P **P 19 00 07.5 +0.7**
RND Reindeer 66.84 29 P **P 19 00 07.1 +0.1**
RND pmax pmax
comp=Z,84nm,0.8s
RND Reindeer 66.84 29 P **P 19 00 07.0 +0.1**
CUKT Cukurca 66.86 302 *e*P **P 19 00 08.3 +0.6**
SENK Senkaya-Erzuru 66.97 305 *e*P **P 19 00 10.0 +1.6**
WRH Wood River Hil 66.97 28 P **P 19 00 08.1 +0.4**
WRH IAmb IAmb 19 00 10.6
comp=Z,26nm,0.9s
TCOL CIGO, UAF Yank 66.99 28 P **P 19 00 09.0 +1.2**
baz=281
COLA College 67.00 28⇓ *e*P **P 19 00 08.5 +0.7**
COLA pmax pmax
comp=Z,16nm,0.8s
COLA College 67.00 28 P **P 19 00 08.2 +0.3**
COLA IAmb IAmb 19 00 10.4
comp=Z,31nm,0.9s
PMR Palmer 67.06 31 P **P 19 00 08.1 -0.1**
PMR pmax pmax
comp=Z,17nm,0.8s
PMR Palmer 67.06 31 P **P 19 00 08.1 -0.1**
CCB Clear Creek Bu 67.06 28 P **P 19 00 07.8 -0.4**
AKDM Akdamar-Van 67.06 303 *e*P **P 19 00 09.3 +0.3**
GHO Glory Hole Cre 67.12 31 P **P 19 00 08.8 0.0**
POKR Poker Plat Res 67.12 27 P **P 19 00 09.8 +1.1**
baz=281
BATM Batumi 67.19 307⇓P **P 19 00 10.3 +0.8**
SML Sawmill 67.39 31 P **P 19 00 10.6 +0.1**
SML IAmb IAmb 19 00 13.5
comp=Z,27nm,0.7s
KNK Knik Glacier 67.41 31 P **P 19 00 10.8 +0.3**
KNK IAmb IAmb 19 00 11.7
comp=Z,39nm,0.9s
OBN Obninsk 67.42 322*ce*P **P 19 00 09.9 -0.7**
OBN *i* 19 00 36.1
OBN *e* 19 02 41.6
OBN pmax pmax
comp=Z,107nm,1.4s
OBN Obninsk 67.42 322⇑P **P 19 00 10.2 -0.4**
OBN Obninsk 67.42 322 P **P 19 00 10.0 -0.6**
OBN IAmb IAmb 19 00 10.7
comp=Z,39nm,0.8s
IL31 67.42 28 P **P 19 00 09.6 -0.8**
ILAR Eielson Array 67.42 28 P **P 19 00 10.0 -0.6**
ILAR Eielson Array 67.42 28 P **P 19 00 10.0 -0.6**
comp=Z,8.4nm,0.7s,baz=266,slow=4.9,SNR=83
HDA Harding Lake 67.47 28 P **P 19 00 10.4 -0.5**
HDA IAmb IAmb 19 00 11.2
comp=Z,27nm,0.8s
HDA Harding Lake 67.47 28 P **P 19 00 10.3 -0.5**
baz=282
KOPR Koprukoy-ERZUR 67.48 305 *e*P **P 19 00 13.1 +1.5**
DHY Denali Highway 67.56 30 P **P 19 00 11.4 -0.3**
SIRT Sirnak 67.69 302 *e*P **P 19 00 13.7 +0.8**
FYU Fort Yukon 67.71 26 P **P 19 00 13.3 +1.0**
FYU IAmb IAmb 19 00 14.7
comp=Z,25nm,0.8s
GURO Guroymak-BITLI 67.72 303 *e*P **P 19 00 14.4 +1.3**
PRP Porcupine Dome 67.83 27 P **P 19 00 13.2 -0.1**
PRP IAmb IAmb 19 00 15.1
comp=Z,37nm,1.4s
SCM Sheep Creek Mo 67.85 31 P **P 19 00 13.9 +0.6**
SCM pmax pmax
comp=Z,70nm,0.8s
SCM Sheep Creek Mo 67.85 31 P **P 19 00 13.9 +0.6**
VRTB Varto-Mus 67.99 304 *e*P **P 19 00 16.5 +1.7**
SOC Sochi 68.11 309 *e*P **P 19 00 13.2 -2.0**
SOC *e* 19 02 46.9
SOC *e*PPP PPP 19 04 28.1
SOC *e*S **S 19 08 52.7 -2.9**
SOC *e*SS **SS 19 13 15.7 -6.9**
SOC pmax pmax
comp=Z,44nm,0.6s
PAX Paxson 68.43 29 P **P 19 00 17.2 +0.3**
PAX pmax pmax
comp=Z,22nm,0.8s
PAX Paxson 68.43 29 P **P 19 00 17.2 +0.3**

PAX IAmb IAmb 19 00 18.3
comp=Z,22nm,0.8s
SVAN Silvan-Diyarba 68.46 303 *e*P **P 19 00 18.5 +0.9**
RIDG Independent Ri 68.52 29 P **P 19 00 17.1 -0.4**
RIDG IAmb IAmb 19 00 18.3
comp=Z,49nm,1.3s
SPA0 Spitsbergen Ar 68.56 348 *e*P **P 19 00 16.6 -0.8**
BNGB Bingl 68.62 304 *e*P **P 19 00 19.9 +1.3**
MSVF Nonsavu 68.80 123⇑ *i*P **P 19 00 21.8 +1.9**
MSVF pmax pmax
comp=Z,110nm,4.5s
MSVF Nonsavu 68.80 123 P **P 19 00 21.4 +1.6**
SCRK Sand Creek 68.83 28 P **P 19 00 19.5 0.0**
SCRK IAmb IAmb 19 00 20.4
comp=Z,118nm,1.9s
DOT Dot Lake 68.88 29 P **P 19 00 19.7 0.0**
DOT IAmb IAmb 19 00 20.6
comp=Z,23nm,0.8s
ARCES ARCESS Array B 68.91 338 P **P 19 00 19.7 0.0**
comp=Z,14nm,0.7s,baz=49,slow=5.5,SNR=46
ARE0 ARCESS Array S 68.91 338 *e*P **P 19 00 19.6 -0.1**
HAMF Hammerfest 69.19 339 *e*P **P 19 00 21.3 0.0**
MENT Mentasta 69.21 29 P **P 19 00 22.4 +0.7**
MENT IAmb IAmb 19 00 23.6
comp=Z,34nm,0.8s
MAZI Mazidag 69.22 302 *e*P **P 19 00 23.1 +0.7**
DYBB Diyarbakir 69.32 303 *e*P **P 19 00 23.8 +0.9**
ANN Anapa 69.38 311*c i*P **P 19 00 22.3 -0.7**
ANN pmax pmax
comp=Z,146nm,0.9s
RAYN Ar Rayn 69.38 287 P **P 19 00 23.3 -0.1**
RAYN pmax pmax
comp=Z,56nm,1.4s
RAYN Ar Rayn 69.38 287 *i* P **P 19 00 23.7 +0.2**
SNR=22
RAYN Ar Rayn 69.38 287 P **P 19 00 23.3 -0.1**
RAYN IAmb IAmb 19 00 24.8
comp=Z,56nm,1.4s
GLB Gilahina Butte 69.57 31 P **P 19 00 24.7 +0.7**
GLB IAmb IAmb 19 00 25.5
comp=Z,22nm,0.7s
PUL Pulkovo 69.58 327*c i*P **P 19 00 23.9 0.0**
PUL pmax pmax
comp=Z,112nm,0.7s
VRDI Verde Repeater 69.80 31 P **P 19 00 25.6 +0.1**
VRDI IAmb IAmb 19 00 26.9
comp=Z,26nm,0.8s
EGAK Eagle 69.80 27 P **P 19 00 25.6 +0.4**
EGAK IAmb IAmb 19 00 26.4
comp=Z,24nm,0.8s
KTK1 Kautokeino 69.84 338 *e*P **P 19 00 25.3 -0.1**
MCARA McCarthy VSAT 69.95 31 P **P 19 00 27.2 +1.0**
MCARA IAmb IAmb 19 00 29.1
comp=Z,41nm,0.8s
CRQM Cirque 70.07 31 P **P 19 00 27.1 0.0**
CRQM IAmb IAmb 19 00 29.1
comp=Z,59nm,1.1s
TGL Tahtsa Glacier 70.22 31 P **P 19 00 28.2 +0.2**
TGL IAmb IAmb 19 00 29.7
comp=Z,36nm,0.9s
BALM Baldy 70.36 31 P **P 19 00 29.2 +0.4**
URFA Urfa 70.47 303 *e*P **P 19 00 30.4 +0.5**
MALT Malatya 70.50 304 *e*P **P 19 00 31.5 +1.4**
BARN Barnard Glacie 70.68 31 P **P 19 00 31.5 +0.7**
BARN IAmb IAmb 19 00 32.6
comp=Z,30nm,0.8s
DAWY Dawson 70.75 27 P **P 19 00 31.5 +0.5**
DAWY IAmb IAmb 19 00 32.6
comp=Z,27nm,0.8s
CTGM Chitina Glacie 70.86 31 P **P 19 00 32.9 +1.1**
TRO Tromso 71.06 339 *e*P **P 19 00 32.3 -0.4**
SVSK Karacayir 71.08 306 *e*P **P 19 00 34.5 +1.1**
FIA1 FINESS Array S 71.09 330 P **P 19 00 32.9 -0.1**
FIA1 IAmb IAmb 19 00 34.9
comp=Z,32nm,0.7s
FINES FINESS Array B 71.09 330 P **P 19 00 32.9 -0.1**
comp=Z,25nm,0.5s,baz=64,slow=5.8,SNR=319
DARE Darende-Malaty 71.13 304 *e*P **P 19 00 35.5 +1.6**
NOR Nord 71.23 354 *i* P **P 19 00 32.9 -0.7**
comp=Z,5.1nm,0.9s
TOKT Tokat 71.29 306 *e*P **P 19 00 35.3 +0.6**
KVT Kavak 71.42 307 *e*P **P 19 00 36.4 +0.9**
INK Inuvik 71.50 22 P **P 19 00 35.4 0.0**
INK pmax pmax
comp=Z,24nm,0.8s
INK Inuvik 71.50 22 P **P 19 00 35.4 0.0**
INK IAmb IAmb 19 00 36.5
comp=Z,24nm,0.8s
SIM Simferopol' 71.59 312*c i*P **P 19 00 36.4 0.0**
SIM *e* 19 00 55.0
SIM pmax pmax
comp=Z,72nm,0.8s
VSU Vasula 71.73 327*c i*P **P 19 00 36.9 0.0**
VSU pmax pmax
comp=Z,157nm,0.7s
VSU Vasula 71.73 327 *e*P **P 19 00 37.1 +0.2**
GAZ Gaziantep 71.77 303 *e*P **P 19 00 38.7 +1.0**
GAZ Gaziantep 71.77 303 P **P 19 00 38.5 +0.9**
DIKM Dikmen 71.81 308⇑P **P 19 00 38.1 +0.4**
SEVA Sevastopol 72.02 311⇑P **P 19 00 39.1 +0.2**
BNN Bunyan 72.26 305 *e*P **P 19 00 41.3 +0.7**
YOZ Yozgat 72.40 306 *e*P **P 19 00 40.8 -0.6**
MICGM Minsk 72.42 322 *e* **P 19 00 40.0 -1.1**
MNK Minsk 72.42 322 *e*P **P 19 00 40.0 -1.1**
BZK Bozkurt 72.60 309⇑P **P 19 00 42.5 +0.1**
BZK Bozkurt 72.60 309 *e*P **P 19 00 43.3 +0.9**
HYT Haines Junctio 72.67 30 P **P 19 00 43.9 +1.3**
KOZT Kozan 72.72 304 *e*P **P 19 00 43.9 +0.7**
IDID Didziasalis 72.77 323 *e*P **P 19 00 43.8 +0.7**
IDID IAML 19 00 44.7
comp=Z,23nm,0.6s
IZAR Zarasai 72.89 324 *e*P **P 19 00 43.8 0.0**
IZAR IAML 19 00 45.6
comp=Z,21nm,0.5s
NACGM Naroch 72.89 323 *e*P **P 19 00 43.0 -0.8**
NACGM PM 19 00 44.0
comp=Z,0.4nm,1.0s
AKASG Malin Array Be 72.90 318 P **P 19 00 43.4 -0.5**
comp=Z,20nm,0.6s,baz=58,slow=6.3,SNR=82
AKASG PP **PP 19 03 25.8 -3.4**
comp=Z,4.1nm,0.9s,baz=61,slow=8.8,SNR=4.2
AKASG Malin Array Be 72.90 318 IAmb IAmb 19 00 44.6
comp=Z,9.5nm,0.8s
AKBB Malin Array Si 72.90 318*c i*P **P 19 00 43.0 -0.9**
AKBB Malin Array Si 72.90 318 P **P 19 00 43.3 -0.7**
AKBB IAmb IAmb 19 00 43.8
comp=Z,26nm,0.7s
CEYT Ceyhan 72.93 303 *e*P **P 19 00 45.5 +1.1**
STEI Steigen 72.98 338 *e*P **P 19 00 43.7 -0.4**
ISAL Salakas 73.01 324 *e*P **P 19 00 44.6 +0.1**
IIGN Ignalina 73.04 324 *e*P **P 19 00 44.6 0.0**
IIGN IAML 19 00 46.2
comp=Z,15nm,0.4s
ILGA Ilgaz 73.10 308 P **P 19 00 46.1 +0.4**
LOF Lofoten 73.46 338 *e*P **P 19 00 46.2 -0.7**
DAMY Dhamar 73.57 279 P **P 19 00 49.4 +0.6**
DAMY IAmb IAmb 19 00 51.2
comp=Z,38nm,0.8s
BR131 Keskin Array S 73.60 306*c i*P **P 19 00 48.3 -0.1**
BR131 Keskin Array S 73.60 306 P **P 19 00 48.4 -0.1**
BR131 IAmb IAmb 19 00 49.6
comp=Z,42nm,0.8s
BRTR Keskin Array B 73.60 306 *i* P **P 19 00 48.4 -0.1**
BRTR pmax pmax
comp=Z,39nm,0.8s
BRTR Keskin Array B 73.60 306 P **P 19 00 48.4 -0.1**
comp=Z,38nm,0.8s,baz=96,slow=5.2,SNR=218
WHY Whitehorse 73.92 30 P **P 19 00 50.9 +1.0**
MOR8 Moi Rana 74.04 336 *e*P **P 19 00 49.0 -1.4**
RCY Rachaya 74.04 300 *e*P **P 19 00 51.8 +0.6**
BHL Bhannes 74.05 300 *e*P **P 19 00 51.2 +0.1**
AFSR Afar-Bala (An 74.10 306 *e*P **P 19 00 51.8 +0.5**
C36M Paulatuk 74.12 20 P **P 19 00 50.1 -0.6**
C36M IAmb IAmb 19 00 51.3
comp=Z,33nm,1.1s
C36M Paulatuk 74.12 20 P **P 19 00 50.3 -0.4**
baz=300
QRWL Qaraoun 74.15 300 *e*P **P 19 00 52.0 +0.4**
ANTO Ankara 74.16 307 P **P 19 00 52.5 +0.9**
ANTO Ankara 74.16 307⇓P **P 19 00 51.7 +0.2**
ANTO Ankara 74.16 307 P **P 19 00 51.8 +0.2**
PABE Paberze 74.18 324 *e*P **P 19 00 51.4 +0.1**
BR231 Keskin MP Arra 74.18 307 P **P 19 00 52.0 +0.2**
BR231 IAmb IAmb 19 00 53.0

comp=Z,50nm,0.8s
SKAG Skagway 74.19 31 P **P 19 00 52.6 +1.3**
SLIT Slitere, Latvi 74.24 327 *e*P **P 19 00 51.6 0.0**
SORM Soroca 74.31 316⇑P **P 19 00 51.4 -0.8**
SORM Soroca 74.31 316⇑P **P 19 00 51.4 -0.8**
KIZK Mersin 74.32 303 *e*P **P 19 00 52.2 -0.3**
KONS Konsvik 74.37 337 *e*P **P 19 00 51.2 -1.0**
MILM Milestii Mici 74.44 315⇑P **P 19 00 51.9 -1.1**
SILI Silifke-Mersin 74.53 303 *e*P **P 19 00 53.9 +0.2**
CHBY Cihanbeyli 74.53 306 *e*P **P 19 00 54.1 +0.3**
KEBE Keben-Mersin 74.66 303 *e*P **P 19 00 54.7 +0.2**
IKL Isikli 74.75 303 *e*P **P 19 00 54.7 -0.3**
AKKU Akkuyu-Mersin 74.88 303 *e*P **P 19 00 55.5 -0.2**
LEOM Leova 74.97 314⇑P **P 19 00 56.0 0.0**
LEOM Leova 74.97 314⇑P **P 19 00 56.0 0.0**
PBUR Paburg 75.05 325 *e*P **P 19 00 56.5 +0.3**
LADK Ladik-KONYA 75.05 305 *e*P **P 19 00 56.5 -0.3**
TLCR 75.06 313⇑P **P 19 00 56.7 +0.2**
TLCR 75.06 313⇑P **P 19 00 56.7 +0.2**
BERE Bereket-Mersin 75.06 303 *e*P **P 19 00 56.9 -0.1**
IAS Iasi 75.14 315⇓P **P 19 00 57.0 0.0**
IAS Iasi 75.14 315⇓P **P 19 00 57.0 0.0**
KONT Konya--Tatoy 75.15 305 *e*P P 19 00 52.4 -4.9
JURR Jurilovca 75.17 313⇓P **P 19 00 57.1 -0.1**
SUW Suwalki 75.17 323 P **P 19 00 56.8 -0.2**
SUW pmax pmax
comp=Z,169nm,0.9s
SUW Suwalki 75.17 323 *e*P **P 19 00 56.6 -0.4**
SUW Suwalki 75.17 323 P **P 19 00 56.8 -0.2**
VASR Vaslui 75.20 315⇑P **P 19 00 57.6 +0.3**
TEKE Tekeli-Mersin 75.22 303 *e*P **P 19 00 57.6 -0.1**
SVRH Sivrihisar-ESK 75.23 307 *e*P **P 19 00 57.9 +0.1**
DAG Danmarks Havn 75.34 351 *i* P **P 19 00 56.7 -0.9**
DAG pmax pmax
comp=Z,11nm,1.0s
DAG Danmarks Havn 75.34 351 *i* P **P 19 00 56.7 -0.9**
comp=Z,11nm,1.0s
BIR Birlad 75.44 314 P **P 19 00 59.9 +1.2**
BIR Birlad 75.44 314⇓P **P 19 00 59.4 +0.7**
TOPG Topolog 75.46 313⇑P **P 19 00 59.4 +0.6**
CSS Mathiatis 75.47 302 P **P 19 00 59.2 +0.1**
CFR Carcaliu 75.51 313⇑P **P 19 00 58.9 -0.2**
CFR Carcaliu 75.51 313⇑P **P 19 00 58.9 -0.2**
TIRR Tirgusor 75.59 313⇑P **P 19 00 59.6 0.0**
TIRR Tirgusor 75.59 313⇑P **P 19 00 59.6 0.0**
TIRR Tirgusor 75.59 313 P **P 19 00 59.5 0.0**
GULT Gulveren 75.60 308 *e*P **P 19 00 59.8 0.0**
GHRR 75.66 314⇑P **P 19 01 01.1 +1.2**
SRCK Saricakaya, Es 75.66 308 *e*P **P 19 00 59.9 -0.2**
TUDR 75.66 314⇑P **P 19 01 00.9 +1.0**
NSS Namsos 75.73 335 *e*P **P 19 00 59.2 -0.7**
LEF Lefka 75.75 302⇑P **P 19 01 01.5 +0.8**
LEF Lefka 75.75 302 *e*P P 19 00 54.2 -6.5
GAZI Gazipasa 75.79 303 *e*P **P 19 01 00.2 -0.7**
PETR Petresti 75.90 314⇑P **P 19 01 02.3 +1.1**
PRAR RASCA 75.92 316⇑P **P 19 01 01.7 +0.2**
TESR Tescani 75.98 315⇑P **P 19 01 01.9 +0.1**
ODBI Odobesti 76.00 314⇓P **P 19 01 03.6 +1.8**
PSN Preselentsi 76.03 312 *e*P **P 19 01 02.3 +0.2**
ICOR Ion Corvin 76.12 312⇑P **P 19 01 03.4 +0.8**
ATD Arta Tunnel 76.14 276 P **P 19 01 04.6 +1.3**
ATD IAmb IAmb 19 01 05.6
comp=Z,34nm,0.9s
BIZ Bicaz 76.16 316⇓P **P 19 01 02.9 +0.1**
VRI Vrincioaia 76.17 314⇑P **P 19 01 04.3 +1.4**
VRI Vrincioaia 76.17 314⇑P **P 19 01 04.3 +1.4**
PLOR Plostina 76.23 314⇑P **P 19 01 04.3 +1.1**
PLOR Plostina 76.23 314⇑P **P 19 01 04.3 +1.1**
SHUT Suhut-Afyon 76.26 306 *e*P **P 19 01 04.0 +0.4**
BISRR Bisoca 76.30 314⇓P **P 19 01 05.0 +1.3**
LVV L'vov 76.32 319 *e*P **P 19 01 04.1 +0.5**
KLYT Kilyos 76.34 309⇑P **P 19 01 04.4 +0.6**
KLYT Kilyos 76.34 309 *e*P **P 19 01 03.8 0.0**
YLV Yalova 76.36 309 *e*P **P 19 01 03.9 -0.2**
BUR08 Bucovina Ar. S 76.46 316 P **P 19 01 04.4 -0.2**
BUR08 IAmb IAmb 19 01 05.7
comp=Z,35nm,1.1s
BURAR Bucovina Array 76.46 316 P **P 19 01 05.4 +0.8**
BURAR Bucovina Array 76.46 316⇑P **P 19 01 04.7 +0.1**
ISR Istrita 76.58 314⇑P **P 19 01 06.2 +1.0**
ISR Istrita 76.58 314⇑P **P 19 01 06.2 +1.0**
OZUR 76.69 315⇑P **P 19 01 06.4 +0.6**
PRD Provadia 76.74 312 *e*P **P 19 01 06.8 +0.8**
NEF NEVSHA 76.80 312 *e*P **P 19 01 06.7 +0.3**
MLR Muntele Rosu 76.82 314⇑P **P 19 01 07.5 +0.8**
MLR Muntele Rosu 76.82 314⇑P **P 19 01 07.5 +0.8**
MLR Muntele Rosu 76.82 314 P **P 19 01 06.6 -0.1**
SECR 76.92 314⇑P **P 19 01 07.7 +0.6**
SLVT Silivri 76.93 309 *e*P **P 19 01 07.3 +0.1**
SULR 76.93 313⇑P **P 19 01 07.8 +0.6**
DOPR Dopca 76.99 315⇑P **P 19 01 07.8 +0.4**
KWP Kalwaria Pacla 77.19 319 *e*P **P 19 01 09.1 +0.6**
KWP Kalwaria Pacla 77.19 319 *e*P **P 19 01 09.1 +0.6**
KWP Kalwaria Pacla 77.19 319 P **P 19 01 08.9 +0.5**
RAZG Razgrad 77.20 312⇑P **P 19 01 09.1 +0.5**
ARCR ARCALIA 77.21 316⇓P **P 19 01 09.4 +0.7**
PHSR Pinarhisar 77.25 310 *e*P **P 19 01 09.2 +0.2**
SGRR Singureni 77.30 313⇑P **P 19 01 09.8 +0.6**
BEL Belsk 77.38 322 *e*P **P 19 01 10.0 +0.6**
BEL Belsk 77.38 322 *e*P **P 19 01 10.0 +0.6**
ELL Elmali 77.40 305 P **P 19 01 09.6 -0.5**
ELL pmax pmax
comp=Z,216nm,0.6s
ELL Elmali 77.40 305 *e*P **P 19 01 09.9 -0.2**
ELL Elmali 77.40 305 P **P 19 01 09.6 -0.5**
VOIR 77.42 314⇑P **P 19 01 10.3 +0.3**
VOIR 77.42 314⇑P **P 19 01 10.3 +0.3**
MTUR Matau 77.50 314 P **P 19 01 13.0 +2.6**
MTUR Matau 77.50 314⇑P **P 19 01 11.5 +1.1**
BMR Baia Mare 77.50 317⇑P **P 19 01 10.9 +0.7**
BMR Baia Mare 77.50 317⇑P **P 19 01 10.9 +0.7**
EDC Edincik 77.51 309 *e*P **P 19 01 10.5 +0.1**
NC405 NORSAR Array S 77.54 332 P **P 19 01 10.0 -0.2**
JMB Yambol 77.57 311 *e*P **P 19 01 11.1 +0.4**
NC303 NORSAR Array S 77.63 333 P **P 19 01 10.1 -0.6**
NC303 IAmb IAmb 19 01 10.7
comp=Z,43nm,0.8s
SZH Strazhica 77.70 312 *e*P **P 19 01 11.5 +0.1**
GOLR 77.72 314⇑P **P 19 01 12.2 +0.7**
ARR Arges 77.72 314⇑P **P 19 01 12.1 +0.5**
MANT Manisa 77.73 307 P **P 19 01 11.4 -0.6**
KOLS Kolonicke sedl 77.73 318 *e*P **P 19 01 11.7 +0.2**
KOLS pmax pmax
comp=Z,13nm,1.1s
KOLS Kolonicke sedl 77.73 318 *e*P **P 19 01 11.7 +0.2**
NB201 NORSAR Array S 77.75 332 *e*P **P 19 01 10.7 -0.7**
NB2 NORSAR Subarra 77.79 332 P **P 19 01 10.9 -0.7**
comp=Z,19nm,0.6s,baz=61,slow=5.6
NB2 NORSAR Subarra 77.79 332 P **P 19 01 10.9 -0.7**
baz=61,slow=5.6
NOA NORSAR Array B 77.79 332 P **P 19 01 11.1 -0.5**
comp=Z,22nm,0.7s,baz=52,slow=5.6,SNR=107
NC602 NORSAR Array S 77.80 332 P **P 19 01 10.9 -0.8**
AKAS Kas 77.82 304 *e*P **P 19 01 11.6 -0.8**
HUMR Humele 77.83 314⇑P **P 19 01 11.7 -0.4**
COPA Copaceanca 77.83 313⇑P **P 19 01 11.4 -0.7**
CJR Cluj-Napoca 77.83 316⇑P **P 19 01 12.8 +0.7**
CJR Cluj-Napoca 77.83 316⇑P **P 19 01 12.8 +0.7**
UZH Uzhgorod 77.85 318 *e*P **P 19 01 12.1 0.0**
UZH *e* 19 01 18.0
NC204 NORSAR Array S 77.85 333 P **P 19 01 11.6 -0.4**
ELND Elena 77.87 312⇓P **P 19 01 12.6 +0.2**
ZIMR 77.92 313⇑P **P 19 01 13.3 +0.7**
ZIMR 77.92 313⇑P **P 19 01 13.3 +0.7**
NBO00 NORSAR Array S 77.97 333 P **P 19 01 12.5 -0.1**
TULEG Thule 77.99 3 P **P 19 01 12.0 -0.4**
FETY Fethiye 78.06 305 *e*P **P 19 01 12.4 -1.2**
PVL Pavlikeni 78.12 312 *e*P **P 19 01 14.5 +0.8**
DOMB Dombas 78.14 334 *e*P **P 19 01 13.3 -0.2**
STHS Stebnicka Huta 78.14 319 *e*P **P 19 01 15.5 +1.7**
STHS pmax pmax
comp=Z,31nm,0.9s
STHS Stebnicka Huta 78.14 319 *e*P **P 19 01 15.5 +1.7**
ERIK Erikli-Kesan 78.33 309 *e*P **P 19 01 14.4 -0.5**
DRGR 78.36 316⇑P **P 19 01 15.2 +0.2**
DRGR 78.36 316⇑P **P 19 01 15.2 +0.2**
AYDB Zeytinkoy-Aydi 78.42 306 *e*P **P 19 01 17.1 +1.4**
MOL Molde 78.45 335 *e*P **P 19 01 15.2 +0.1**
DIM Dimitrovgrad 78.45 311 *e*P **P 19 01 15.8 +0.2**
YER Yerkesik 78.45 306 *e*P **P 19 01 16.6 +0.8**
PLVB Pleven 78.53 313⇑P **P 19 01 16.2 +0.3**

OSL Oslo 78.56 332 eP P 19 01 15.0 -0.7
ALN Alexandroupoli 78.56 310 P P 19 01 15.8 -0.4
ALN pmax pmax
comp=Z,23nm,1.2s
ALN Alexandroupoli 78.56 310 P P 19 01 15.8 -0.4
DEV Deva 78.61 315 ⇑P P 19 01 16.4 0.0
DEV Deva 78.61 315 ⇑P P 19 01 16.4 0.0
OJC Ojcow 78.64 320 eP P 19 01 16.8 +0.4
OJC Ojcow 78.64 320 eP P 19 01 16.8 +0.4
OJC Ojcow 78.64 320 P P 19 01 16.8 +0.4
GKP Gorka Klasztor 78.69 324 eP P 19 01 16.6 0.0
GKP Gorka Klasztor 78.69 324 eP P 19 01 16.6 0.0
KDZ Kurdzhali 78.69 311 eP P 19 01 17.2 +0.3
NIE Niedzica 78.70 319 eP P 19 01 17.6 +0.8
NIE Niedzica 78.70 319 eP P 19 01 17.6 +0.8
BLCB Balcova 78.86 307 eP P 19 01 17.7 -0.2
AKN Aaknes 78.88 334 eP P 19 01 17.8 +0.3
GZR Gura Zlata 78.90 315 ⇑P P 19 01 18.1 +0.1
GZR Gura Zlata 78.90 315 ⇑P P 19 01 18.1 +0.1
SRE Strehaia 78.93 314 ⇑P P 19 01 19.1 +0.9
SRE Strehaia 78.93 314 ⇑P P 19 01 19.1 +0.9
KECS Kecovo 79.00 319 eP P 19 01 18.8 +0.4
KECS pmax pmax
comp=Z,10.0nm,0.6s
KECS Kecovo 79.00 319 eP P 19 01 18.8 +0.4
PLD Plovdiv 79.00 311 eP P 19 01 18.8 +0.3
GCAM G?zelcaml? 79.00 306 eP P 19 01 19.0 +0.4
BSD Bornholm Skovb 79.03 326 i P P 19 01 18.3 -0.1
BSD pmax pmax
comp=Z,4.0nm,0.5s
BSD Bornholm Skovb 79.03 326 i P P 19 01 18.3 -0.1
comp=Z,4.4nm,0.5s
DAT Datca 79.13 305 eP P 19 01 18.8 -0.7
RZN Rozhen 79.16 311 eP P 19 01 19.6 -0.1
PGB Panagyurishte 79.18 312 eP P 19 01 19.6 0.0
SKAR Skarslia 79.19 333 eP P 19 01 19.5 +0.2
KONO Kongsberg 79.20 332 eP P 19 01 19.7 +0.4
SIRR Siria 79.24 316 ⇑P P 19 01 20.1 +0.3
PUNG Punghina 79.27 314 ⇑P P 19 01 20.7 +0.7
LANS Liptovska Anna 79.31 319 eP P 19 01 21.0 +0.9
LANS pmax pmax
comp=Z,9.0nm,0.8s
LANS Liptovska Anna 79.31 319 eP P 19 01 21.0 +0.9
BZS Buzias 79.54 316 ⇑P P 19 01 21.0 -0.4
BZS Buzias 79.54 316 ⇑P P 19 01 21.0 -0.4
PSZ Piszkesteto 79.60 318 ⇑P P 19 01 22.7 +0.9
PSZ Piszkesteto 79.60 318 ⇑P P 19 01 22.7 +0.9
PSZ Piszkesteto 79.60 318 P P 19 01 21.9 +0.1
PSZ IAmb IAmb 19 01 23.1
comp=Z,25nm,1.0s
BSZH Besenyszg 79.65 318 eP P 19 01 23.0 +1.1
OKC Ostrava-Krasne 79.76 320 eP P 19 01 22.6 +0.1
OKC Ostrava-Krasne 79.76 320 eP P 19 01 22.6 +0.1
HYA Hoyanger 79.77 334 eP P 19 01 21.9 -0.4
VTS Vitosha 79.77 312 ⇑P P 19 01 23.7 +0.8
VTS Vitosha 79.77 312 ⇑P P 19 01 23.7 +0.8
VTS Vitosha 79.77 312 eP P 19 01 23.4 +0.5
VTS Vitosha 79.77 312 P P 19 01 23.4 +0.5
MDVR Moldovita 79.84 315 ⇑P P 19 01 23.2 +0.1
MMB Musomiste 79.87 311 eP P 19 01 32.1 +8.8
KARP Karpathos 79.92 304 P P 19 01 23.2 -0.4
FOO Floro 79.97 335 eP P 19 01 23.1 -0.2
VYHS Vyhne 79.97 319 eP P 19 01 24.5 +0.8
VYHS pmax pmax
comp=Z,57nm,1.1s
VYHS Vyhne 79.97 319 eP P 19 01 24.5 +0.8
MORC Moravsky Berou 80.14 321 ⇑P P 19 01 25.1 +0.5
MORC Moravsky Berou 80.14 321 ⇑P P 19 01 25.1 +0.5
MORC Moravsky Berou 80.14 321 eP P 19 01 24.7 +0.1
MORC Moravsky Berou 80.14 321 P P 19 01 24.8 +0.1
MORC IAmb IAmb 19 01 25.9
comp=Z,32nm,1.1s
KKB Krupnik 80.19 312 eP P 19 01 25.3 +0.3
ODD1 Odda 80.31 333 eP P 19 01 25.4 +0.1
BUD Budapest 80.32 318 eP P 19 01 25.7 +0.2
KSP Ksiaz 80.34 322 eP P 19 01 26.1 +0.5
KSP Ksiaz 80.34 322 eP P 19 01 26.1 +0.5
KRLC Kraliky 80.43 321 eP P 19 01 26.4 +0.3
KRLC Kraliky 80.43 321 eP P 19 01 26.4 +0.3
JAVC Velka Javorina 80.49 320 eP P 19 01 28.0 +1.5
OSTC Ostas 80.52 322 eP P 19 01 27.6 +1.0
DPC Dobruska-Polom 80.56 321 eP P 19 01 27.4 +0.6
DPC Dobruska-Polom 80.56 321 eP P 19 01 27.4 +0.6
DPC ePCP PcP 19 01 32.2 -0.8
ASK Askoy 80.56 334 eP P 19 01 26.4 -0.1
BER Bergen 80.57 333 eP P 19 01 26.0 -0.5
SRO Srobarova 80.60 319 eP P 19 01 27.6 +0.6
SRO pmax pmax
comp=Z,25nm,0.8s
SRO Srobarova 80.60 319 eP P 19 01 27.6 +0.6
CHVC Chvalec 80.60 322 eP P 19 01 27.3 +0.3
BLS5 Blasjo 80.66 332 eP P 19 01 27.3 +0.2
UPC Upice 80.66 322 eP P 19 01 27.4 +0.1
UPC Upice 80.66 322 eP P 19 01 27.4 +0.1
UPC ePCP PcP 19 01 32.5 -0.8
VAY Valandovo 80.78 311 i P P 19 01 27.7 -0.4
SMOL Smolenice 80.79 319 eP P 19 01 29.0 +1.0
SMOL pmax pmax
comp=Z,12nm,1.1s
SMOL Smolenice 80.79 319 eP P 19 01 29.0 +1.0
STIP Stip 80.87 312 i P P 19 01 27.3 -1.2
FRS Fruska Gora 80.89 316 ⇑i P P 19 01 27.8 -0.8
VRAC Vranov 80.90 320 ⇑P P 19 01 29.5 +0.9
VRAC Vranov 80.90 320 ⇑P P 19 01 29.5 +0.9
VRAC Vranov 80.90 320 eP P 19 01 29.2 +0.6
RUE Ruedersdorf 80.91 324 eP P 19 01 28.9 +0.5
comp=Z,25nm,0.7s,baz=59,slow=5.1
MODS Modra-Piesok 80.95 319 eP P 19 01 28.7 -0.2
MODS Modra-Piesok 80.95 319 eP P 19 01 28.7 -0.2
MORH Mrgy, Hungar 81.13 317 ⇑i P P 19 01 29.6 -0.2
KRUC Moravsky 81.14 320 eP P 19 01 30.2 +0.4
YKW3 Yellowknife Ar 81.19 23 P P 19 01 29.8 0.0
YKA Yellowknife Ar 81.24 23 P P 19 01 29.9 -0.1
comp=Z,10nm,0.7s,baz=312,slow=4.9,SNR=222
YKA PKKPbc PKKPbc 19 20 01.6 -3.4
comp=Z,0.2nm,0.4s,baz=131,slow=2.3,SNR=6.1
DIVS Divibare 81.25 315 ⇑i P P 19 01 30.3 -0.3
SKO Skopje 81.25 312 i P P 19 01 30.9 +0.3
LIT Litokhoron 81.36 310 P P 19 01 30.2 -1.0
LIT pmax pmax
comp=Z,43nm,0.7s
LIT Litokhoron 81.36 310 P P 19 01 30.2 -1.0
LIT IAmb IAmb 19 01 31.0
comp=Z,43nm,0.7s
SUMG Summit 81.39 354 i P P 19 01 31.0 -0.2
SUMG pmax pmax
comp=Z,86nm,1.2s
SUMG Summit 81.39 354 i P P 19 01 31.0 -0.2
comp=Z,86nm,1.2s
SUMG Summit 81.39 354 P P 19 01 31.0 -0.2
SUMG IAmb IAmb 19 01 32.4
comp=Z,28nm,1.1s
PVCC Panska Ves 81.45 322 eP P 19 01 31.7 +0.3
PVCC Panska Ves 81.45 322 eP P 19 01 31.7 +0.3
TREC Trest 81.55 321 eP P 19 01 32.2 +0.2
TREC Trest 81.55 321 eP P 19 01 32.2 +0.2
BRG Berggiesshubel 81.63 323 i P P 19 01 32.2 -0.1
comp=Z,14nm,0.7s
BRG e 19 03 49.4
comp=Z,5.6nm,0.2s
BRG Berggiesshubel 81.63 323 eP P 19 01 32.4 0.0
comp=Z,12nm,0.7s,baz=59,slow=5.1
GOPC GO Pecny, Ondr 81.64 322 eP P 19 01 32.0 -0.5
GOPC GO Pecny, Ondr 81.64 322 eP P 19 01 32.0 -0.5
GOPC ePCP PcP 19 01 36.2 -1.4
BBLS Lazići 81.73 315 eP P 19 01 32.6 -0.5
PRU Pruhonice 81.74 322 eP P 19 01 33.1 +0.2
PRU Pruhonice 81.74 322 eP P 19 01 33.1 +0.2
PRU ex x 19 01 43.1
FNA Florina 81.82 311 P P 19 01 32.6 -1.1
FNA pmax pmax
comp=Z,26nm,0.7s
FNA Florina 81.82 311 P P 19 01 32.6 -1.1
FNA IAmb IAmb 19 01 33.3
comp=Z,26nm,0.7s
RUDO Rudo 81.87 314 eP P 19 01 33.2 -0.6
CLL Collm 81.92 323 ⇑i P P 19 01 33.6 -0.2
CLL e*PP pP 19 02 31.0 +0.7
CLL pmax pmax
comp=Z,30nm,0.7s
CLL Collm 81.92 323 ⇑i P P 19 01 33.6 -0.2
comp=Z,30nm,0.7s
CLL epP pP 19 02 31.0 +0.7
CLL ePP PP 19 04 44.0 -0.3
CLL Collm 81.92 323 eP P 19 01 33.8 -0.1
comp=Z,23nm,0.7s,baz=59,slow=5.1
FBE Freiberg 81.92 323 eP P 19 01 34.2 +0.3
comp=Z,21nm,0.7s,baz=59,slow=5.1
BSEG Bad Segeberg 81.93 327 eP P 19 01 34.6 +0.8
baz=59,slow=5.1
BSEG epP pP 19 02 34.5 +4.2
AGG Agios Georgios 81.94 309 P P 19 01 32.3 -2.0
AGG pmax pmax
comp=Z,60nm,0.8s
AGG Agios Georgios 81.94 309 P P 19 01 32.3 -2.0
CONA Conrad Observa 82.00 319 i P P 19 01 35.0 +0.6
comp=Z,6.8nm,0.6s,SNR=8.4
PBCC Pribram 82.19 322 eP P 19 01 35.5 +0.2
UPM Unac-Piva 82.36 314 eP P 19 01 36.0 -0.6
PDG Podgorica 82.49 313 ⇑P P 19 01 37.0 0.0
PDG Podgorica 82.49 313 P P 19 01 36.7 -0.2
PDG IAmb IAmb 19 01 38.6
comp=Z,32nm,0.7s
PDG Podgorica 82.49 313 ⇑i P P 19 01 36.6 -0.4
KALN Kalnik 82.51 318 i P P 19 01 37.1 0.0
ARSA Arzberg 82.53 319 i P P 19 01 37.1 0.0
comp=Z,2.5nm,0.5s
MOSL Moslavina 82.58 317 i P P 19 01 36.8 -0.6
TIR Tirane 82.59 312 ⇑P P 19 01 38.2 +0.7
TIR Tirane 82.59 312 ⇑P P 19 01 38.2 +0.7
TIR Tirane 82.59 312 P P 19 01 37.3 -0.2
NEUB Neuenburg 82.63 324 eP P 19 01 37.9 +0.4
baz=59,slow=5.1
DRME Dracevica, Mon 82.65 313 ⇑i P P 19 01 37.5 -0.3
TANN Tannenbergstha 82.67 323 eP P 19 01 38.2 +0.3
baz=59,slow=5.1
KHC Kasperske Hory 82.71 321 eP P 19 01 37.9 -0.2
KHC Kasperske Hory 82.71 321 eP P 19 01 37.9 -0.2
KHC ePCP PcP 19 01 42.9 +0.5
KHC Kasperske Hory 82.71 321 P P 19 01 37.8 -0.3
BLY Banja Luka 82.73 316 ⇑P P 19 01 38.5 +0.3
BLY Banja Luka 82.73 316 P P 19 01 38.0 -0.2
BLY IAmb IAmb 19 01 39.5
comp=Z,37nm,1.0s
BLY Banja Luka 82.73 316 ⇑i P P 19 01 38.4 +0.2
BRY Bratogost 82.74 314 ⇑i P P 19 01 38.1 -0.4
GUNZ Gunzen 82.77 323 eP P 19 01 38.9 +0.5
baz=59,slow=5.1
NKC Novy Kostel 82.77 323 eP P 19 01 38.2 -0.1
NKC Novy Kostel 82.77 323 eP P 19 01 38.2 -0.1
WERN Wernitzgruen 82.78 323 eP P 19 01 38.9 +0.5
baz=59,slow=5.1
GEC2 GERESS Array S 82.79 321 eP P 19 01 38.5 0.0
comp=Z,24nm,0.9s,baz=59,slow=5.1
GEC2 GERESS Array S 82.79 321 P P 19 01 38.6 0.0
GEC2 IAmb IAmb 19 01 39.5
comp=Z,29nm,0.8s
GERES GERESS Array B 82.79 321 P P 19 01 38.5 0.0
comp=Z,25nm,0.8s,baz=58,slow=4.8,SNR=159
NRDL Niesach Rie 82.82 325 eP P 19 01 39.2 +0.8
comp=Z,6.0nm,0.8s,baz=59,slow=5.1
PTJ Puntijarka 82.92 318 i P P 19 01 37.7 -1.6
GROS Grobnik 82.93 318 i P P 19 01 38.9 -0.4
TREB Trebinje 82.95 314 eP P 19 01 38.6 -0.8
MGRS Mrkonjic Grad 82.95 316 ⇑i P P 19 01 40.2 +0.8
MOA Molln 82.97 320 i PcP P 19 01 39.7 +0.3
comp=Z,18nm,0.6s,SNR=9.5
MOA i PP PP 19 04 55.3 +2.3
comp=Z,8.2nm,1.2s
HCY Herceg Novi 82.98 314 eP P 19 01 38.6 -0.9
MOX Moxa 83.01 323 eP P 19 01 39.6 0.0
baz=59,slow=5.1
MOX epP pP 19 02 37.3 +1.1
CLZ Clausthal 83.03 325 eP P 19 01 39.8 +0.2
comp=Z,7.6nm,0.8s,baz=59,slow=5.1
CLZ epP pP 19 02 38.1 +1.9
ITM Ithomi 83.05 308 P P 19 01 38.7 -1.3
PERS Pernice 83.07 319 i P P 19 01 39.9 -0.1
MANZ Manzenberg 83.09 323 eP P 19 01 40.2 +0.2
baz=59,slow=5.1
WET Wettzell 83.10 322 eP P 19 01 40.3 +0.3
baz=59,slow=5.1
SOKA Soboth 83.10 319 i P P 19 01 39.9 -0.2
comp=Z,24nm,0.8s,SNR=14
ROTZ Rotzenmuhle 83.15 322 eP P 19 01 40.6 +0.3
comp=Z,16nm,0.9s,baz=59,slow=5.1
CRES Cresnjev 83.27 318 ⇑i P P 19 01 40.8 -0.1
STON Ston 83.30 314 i P P 19 01 40.2 -0.9
STON Ston 83.30 314 ⇑i P P 19 01 39.8 -1.3
GTTG Gyttingen 83.41 325 eP P 19 01 42.4 +1.0
baz=59,slow=5.1
OBKA Obir 83.47 319 i P P 19 01 41.8 -0.3
comp=Z,24nm,0.8s,SNR=7.7
OBKA i PP PP 19 04 57.1 -0.2
comp=Z,4.3nm,0.8s
MAKA Makarska 83.53 315 i P P 19 01 41.5 -0.8
KIJV Kijevo 83.58 316 i P P 19 01 42.3 -0.3
UDBI Udbina 83.72 317 i P P 19 01 43.2 -0.1
LJU Ljubljana 83.72 318 i P P 19 01 43.2 0.0
LJU Ljubljana 83.72 318 ⇑i P P 19 01 42.9 -0.3
GRF Grafenberg Arr 83.73 323 eP P 19 01 43.9 +0.7
comp=Z,10nm,0.7s,baz=59,slow=5.1
UBBA Unterbreizbach 83.78 324 eP P 19 01 43.9 +0.6
baz=59,slow=5.1
KBA Hohenleipsger 83.90 320 i P P 19 01 43.9 -0.4
comp=Z,17nm,0.8s,SNR=13
KBA i PP PP 19 04 59.1 -1.6
comp=Z,12nm,1.4s
CEY Cerknica 83.94 318 i P P 19 01 44.1 -0.2
CEY Cerknica 83.94 318 ⇑i P P 19 01 44.1 -0.2
MYKA Terra Mystica 83.95 319 i P P 19 01 44.0 -0.5
comp=Z,12nm,0.8s
MYKA i PP PP 19 05 02.0 +0.9
comp=Z,7.9nm,1.1s
MORI Morici 84.08 316 i P P 19 01 44.6 -0.5
RIY Rijeka 84.11 318 eP P 19 01 44.6 -0.6
VOJS Vojsko 84.11 319 i P P 19 01 44.6 -0.7
IBBN Ibbenburen 84.12 326 eP P 19 01 46.0 +0.9
baz=59,slow=5.1
ZIRJ Zirje 84.23 316 i P P 19 01 45.2 -0.6
NVLJ Novalja 84.26 317 i P P 19 01 45.4 -0.6
DUGI Dugi Otok 84.43 316 i P P 19 01 46.4 -0.5
FUR Furstenfeldbru 84.52 321 eP P 19 01 47.6 +0.4
comp=Z,57nm,0.8s,baz=59,slow=5.1
ABTA Abfaltersbach 84.56 320 i P P 19 01 46.7 -0.9
comp=Z,13nm,0.6s,SNR=14
STAL STALIGIAL 84.70 319 P P 19 01 47.4 -0.8
STAL IAmb IAmb 19 01 48.0
comp=Z,37nm,1.0s
WATA Walderalm 84.79 320 i PcP P 19 01 48.3 -0.5
comp=Z,4.2nm,0.4s
WATA i PP PP 19 05 06.1 -1.9
comp=Z,9.6nm,1.2s
BUG Bochum--Univer 84.86 325 eP P 19 01 49.5 +0.7
comp=Z,31nm,0.9s,baz=59,slow=5.1
TNS Taunus Mts 84.94 324 eP P 19 01 49.7 +0.4
comp=Z,9.9nm,0.8s,baz=59,slow=5.1
MATE Matera 85.02 313 ⇑P P 19 01 49.4 -0.4
MOTA Moosalm 85.06 321 i PcP P 19 01 49.6 -0.5
comp=Z,5.3nm,0.5s
MOTA i PP PP 19 05 10.4 +0.3
comp=Z,13nm,1.5s
SQTA Sankt Quirin 85.06 320 i PcP P 19 01 49.9 -0.2
comp=Z,14nm,1.1s,SNR=7.2
SQTA i PP PP 19 05 09.9 -0.3
comp=Z,9.9nm,1.2s
RETA Reutte 85.17 321 i PcP P 19 01 50.4 -0.2
comp=Z,3.3nm,0.6s
RETA i PP PP 19 05 11.8 +0.8
comp=Z,8.2nm,1.4s
LLLB Lillooet 85.24 35 P P 19 01 51.5 +0.7
STU Stuttgart 85.35 323 P P 19 01 51.2 -0.1
STU Stuttgart 85.35 323 eP P 19 01 51.5 +0.2
comp=Z,14nm,0.9s,baz=59,slow=5.1
STU Stuttgart 85.35 323 P P 19 01 51.2 -0.1
UBR Ueberruh 85.44 321 eP P 19 01 51.8 -0.1
baz=59,slow=5.1
FETA Feichten 85.45 320 i P P 19 01 51.2 -0.9
comp=Z,3.6nm,0.7s
FETA i PP PP 19 05 12.5 -0.8
comp=Z,10nm,1.4s
ACER Acerenza 85.46 313 P P 19 01 51.7 -0.4
AHRW Bad Neuenahr-A 85.48 325 eP P 19 01 52.5 +0.7
comp=Z,12nm,1.0s,baz=59,slow=5.1
TIP Timpagrande 85.71 311 ⇑P P 19 01 53.6 +0.3
TIP Timpagrande 85.71 311 P P 19 01 53.1 -0.3
TIP IAmb IAmb 19 01 54.5
comp=Z,30nm,0.8s
ABPO Ambohimpanom 85.71 247 P P 19 01 53.8 +0.1
ABPO pmax pmax
comp=Z,29nm,0.8s
ABPO Ambohimpanom 85.71 247 P P 19 01 53.8 +0.1
ABPO IAmb IAmb 19 01 55.0
comp=Z,29nm,0.8s
DAVA Damuels 85.79 321 i PcP P 19 01 53.5 -0.2
comp=Z,6.3nm,0.5s
DAVA i PP PP 19 05 15.9 0.0
comp=Z,9.8nm,1.4s
TEOL Teolo 85.79 319 P P 19 01 53.3 -0.3
TEOL IAmb IAmb 19 01 55.3
comp=Z,42nm,0.8s
A04D Lummi Island 85.88 37 P P 19 01 55.1 +1.2
baz=304
FUORN Ofenpass-Fuorn 85.93 320 P P 19 01 54.4 -0.1
FUORN IAmb IAmb 19 01 56.0
comp=Z,24nm,0.7s
MEM Membach 86.00 325 ⇓P P 19 01 54.5 +0.1
BFO Black Forest 86.07 322 P P 19 01 54.9 0.0
BFO pmax pmax
comp=Z,24nm,1.2s
BFO Black Forest 86.07 322 eP P 19 01 55.2 +0.3
comp=Z,7.5nm,0.9s,baz=59,slow=5.1
BFO Black Forest 86.07 322 P P 19 01 54.9 0.0
BFO IAmb IAmb 19 01 55.6
comp=Z,24nm,1.2s
INTR Introdacqua 86.16 315 P P 19 01 55.6 +0.1
BSTI Sart Tilman 86.24 325 P P 19 01 55.8 +0.2
NRCA Norcia 86.24 316 P P 19 01 56.1 +0.2
NRCA IAmb IAmb 19 01 57.2
comp=Z,40nm,1.2s
AQU L'Aquila 86.31 316 P P 19 01 56.4 +0.2
AQU pmax pmax
comp=Z,36nm,0.9s
AQU L'Aquila 86.31 316 P P 19 01 56.4 +0.2
AQU IAmb IAmb 19 01 57.6
comp=Z,36nm,0.9s
AQU L'Aquila 86.31 316 ⇑i P P 19 01 56.1 -0.1
D03D Eidon 86.33 38 P P 19 01 57.9 +1.7
baz=304
MURB Monte Urbino 86.38 317 P P 19 01 56.8 +0.3
MURB IAmb IAmb 19 01 58.7
comp=Z,43nm,0.9s
KMBO Kilima Mbogo 86.45 267 P P 19 01 58.2 +0.7
comp=Z,6.3nm,0.9s,baz=44,slow=9.4,SNR=13
KMBO Kilima Mbogo 86.45 267 i P P 19 01 58.4 +0.9
SNR=8.5
KMBO Kilima Mbogo 86.45 267 P P 19 01 57.0 -0.5
B05A Bryant 86.47 37 P P 19 01 58.2 +1.4
baz=305
WLF Walferdange 86.47 324 P P 19 01 57.0 +0.2
WLF pmax pmax
comp=Z,61nm,0.9s
WLF Walferdange 86.47 324 eP P 19 01 57.6 +0.8
comp=Z,42nm,0.8s,baz=59,slow=5.1
WLF Walferdange 86.47 324 ⇓P P 19 01 57.4 +0.7
comp=Z,59nm,1.0s
WLF Walferdange 86.47 324 P P 19 01 57.0 +0.2
TUE Stuetta 86.54 321 P P 19 01 57.1 -0.3
B06A Marblemount 86.66 37 P P 19 01 58.1 +0.4
B06A IAmb IAmb 19 02 00.0
comp=Z,20nm,0.8s
ZCCA Zocca 86.75 318 P P 19 01 58.5 +0.2
ZCCA IAmb IAmb 19 02 05.3
comp=Z,16nm,0.7s
CEL Celeste 86.75 311 P P 19 01 58.2 -0.2
ECH Echery 86.78 323 P P 19 01 57.5 -0.8
ECH pmax pmax
comp=Z,20nm,1.1s
ECH Echery 86.78 323 P P 19 01 57.5 -0.8
BMRD Maredsous 86.81 325 ⇓P P 19 01 58.6 +0.2
DOU Dourbes 87.03 325 ⇓P P 19 01 59.6 +0.2
OSSC Osservatorio P 87.03 317 P P 19 01 58.9 -0.7
D05A Enumclaw 87.14 38 P P 19 02 01.7 +1.6
D05A IAmb IAmb 19 02 02.8
comp=Z,27nm,0.8s
LATE Laterza 87.17 316 P P 19 01 59.4 -0.9
LATE IAmb IAmb 19 02 00.7
comp=Z,21nm,0.8s
E04D Cinebar 87.18 39 P P 19 02 01.8 +1.6
baz=305
C06D Leavenworth 87.32 37 P P 19 02 02.2 +1.2
baz=306
LON Longmire 87.50 38 P P 19 02 02.3 +0.5
LON pmax pmax
comp=Z,11nm,1.0s
LON Longmire 87.50 38 P P 19 02 02.3 +0.5
F04A Amboy 87.62 39 P P 19 02 01.9 -0.4
F04A IAmb IAmb 19 02 04.3
comp=Z,21nm,0.7s
SENIN Lac Senin/Sane 87.77 321 P P 19 02 02.9 -0.5
LTY Liberty 87.84 38 P P 19 02 04.2 +0.7
B08A Colville Reser 87.91 36 P P 19 02 04.4 +0.7
B08A IAmb IAmb 19 02 05.6
comp=Z,24nm,0.8s
F05D White Salmon 88.19 39 P P 19 02 06.7 +1.6
baz=306
KEBM Edson Butte 88.20 43 P P 19 02 07.1 +1.8
H04D Lebanon 88.24 41 P P 19 02 06.7 +1.4
baz=305
J01E Myrtle Point 88.29 42 P P 19 02 07.0 +1.5
baz=304
I03D Drain, OR 88.34 42 P P 19 02 06.9 +1.1
baz=304
H04A Detroit Lake 88.47 40 P P 19 02 06.9 +0.5
G05D Wamic, OR 88.65 39 P P 19 02 08.5 +1.2
baz=306
E07A Sunnyside 88.70 38 P P 19 02 08.8 +1.3
E07A IAmb IAmb 19 02 09.9
comp=Z,27nm,1.0s
K02D Willamette Mer 88.71 43 P P 19 02 08.4 +0.8
baz=304
C09A Chrisman Ranch 88.81 36 P P 19 02 09.0 +1.1
C09A IAmb IAmb 19 02 10.0
comp=Z,44nm,1.5s
I04A Tendick Farm, 88.84 41 P P 19 02 09.4 +1.2
baz=305,SNR=7.8
BNI Bardonecchia 88.89 320 P P 19 02 08.1 -0.4
BNI pmax pmax
comp=Z,27nm,1.0s
BNI Bardonecchia 88.89 320 P P 19 02 08.1 -0.4
BNI IAmb IAmb 19 02 09.4
comp=Z,27nm,1.0s
HAWA Hanford 88.98 38 P P 19 02 08.6 -0.2
HAWA IAmb IAmb 19 02 11.1
comp=Z,18nm,0.9s
G06A Carlson Farm, 89.05 39 P P 19 02 10.6 +1.4
L02E Cave Junction 89.05 43 P P 19 02 10.4 +1.2
baz=304
F07A Phinny Hill Vi 89.06 38 P P 19 02 09.1 +0.1
F07A IAmb IAmb 19 02 11.6
comp=Z,19nm,0.9s
NEW Newport 89.13 35 P P 19 02 10.5 +1.0
NEW pmax pmax
comp=Z,17nm,0.9s
NEW Newport 89.13 35 P P 19 02 10.5 +1.0
NEW IAmb IAmb 19 02 11.5
comp=Z,17nm,0.8s
NEW Newport 89.13 35 P P 19 02 10.4 +0.9
baz=309
I05D Terrebonne, OR 89.16 40 P P 19 02 11.1 +1.4
baz=306
E08A Dider Farm, El 89.18 38 P P 19 02 10.4 +0.7
E08A IAmb IAmb 19 02 11.9
comp=Z,15nm,0.9s
HUMO Hull Mountain 89.19 42 P P 19 02 10.2 +0.4
J04D Umpqua Nationa 89.34 41 P P 19 02 12.1 +1.3
baz=305,SNR=8.6
E09A Wood Farm, Sta 89.67 37 P P 19 02 13.4 +1.4
E09A IAmb IAmb 19 02 14.4
comp=Z,23nm,1.1s
PINE Pine Mountain 89.72 40 P P 19 02 14.0 +1.5
PINE IAmb IAmb 19 02 15.3
comp=Z,25nm,0.9s
L04D Klamath Falls 89.81 42 P P 19 02 14.1 +1.2
baz=305,SNR=13
J05D Fort Rock, OR 89.84 41 P P 19 02 14.4 +1.4
baz=306
YBH Yreka Blue Hor 89.84 43 P P 19 02 13.9 +0.9
YBH pmax pmax
comp=Z,12nm,1.2s
YBH Yreka Blue Hor 89.84 43 P P 19 02 13.8 +0.9
M02C Callahan 89.94 43 P P 19 02 15.0 +1.6
baz=305,SNR=6.4

G08A	**Pilot Rock**	**89.96**	**38**	P	**P**		**19 02 14.0 +0.5**
SSB	**Saint Sauveur**	**89.97**	**322**	P	**P**		**19 02 13.3 -0.1**
SSB				pmax	pmax		
	comp=Z,19nm,0.8s						
SSB	**Saint Sauveur**	**89.97**	**322**	P	**P**		**19 02 13.2 -0.1**
SSB				IAmb	IAmb		19 02 14.0
	comp=Z,19nm,0.8s						
WALA	**Waterton Lakes**	**90.26**	**33**	P	**P**		**19 02 15.9 +1.1**
WALA				IAmb	IAmb		19 02 17.1
	comp=Z,19nm,1.0s						
N02D	**Trinity Center**	**90.27**	**44**	P	**P**		**19 02 16.2 +1.2**
	baz=305						
M04C	**Macdoel**	**90.34**	**43**	P	**P**		**19 02 16.6 +1.3**
	baz=305,SNR=10						
F10A	**Beach Ranch, E**	**90.50**	**37**	P	**P**		**19 02 17.3 +1.4**
WDC	**Whiskeytown Da**	**90.60**	**44**	P	**P**		**19 02 17.4 +1.0**
WDC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WDC	**Whiskeytown Da**	**90.60**	**44**	P	**P**		**19 02 17.4 +1.0**
O02D	**Mt. Diablo Mer**	**90.67**	**44**	P	**P**		**19 02 18.3 +1.4**
	baz=305						
FCC	**Fort Churchill**	**90.69**	**18**	P	**P**		**19 02 16.2 -0.2**
FCC				pmax	pmax		
	comp=Z,17nm,1.0s						
FCC	**Fort Churchill**	**90.69**	**18**	P	**P**		**19 02 16.2 -0.2**
FCC				IAmb	IAmb		19 02 17.0
	comp=Z,17nm,1.0s						
JTMT	**Jette**	**90.93**	**35**	P	**P**		**19 02 18.3 +0.3**
JTMT				IAmb	IAmb		19 02 20.1
	comp=Z,14nm,0.9s						
BMO	**Blue Mountains**	**91.16**	**38**	P	**P**		**19 02 19.8 +0.8**
BMO				pmax	pmax		
	comp=Z,12nm,1.0s						
BMO	**Blue Mountains**	**91.16**	**38**	P	**P**		**19 02 19.8 +0.8**
MOD	**Modoc Plateau**	**91.20**	**42**	P	**P**		**19 02 20.0 +0.6**
MOD				IAmb	IAmb		19 02 21.7
	comp=Z,19nm,0.9s						
O03E	**Paynes Creek**	**91.22**	**44**	P	**P**		**19 02 19.9 +0.5**
	baz=305						
FFC	**Flin Flon**	**91.39**	**24**	P	**P**		**19 02 19.4 -0.3**
FFC				pmax	pmax		
	comp=Z,22nm,1.0s						
FFC	**Flin Flon**	**91.39**	**24**	P	**P**		**19 02 19.4 -0.3**
FFC				IAmb	IAmb		19 02 20.6
	comp=Z,22nm,0.9s						
GDXM	**Geysers**	**91.44**	**45**	P	**P**		**19 02 21.5 +1.1**
MSO	**Missoula**	**91.71**	**35**	P	**P**		**19 02 21.8 +0.2**
MSO	**Missoula**	**91.71**	**35**	P	**P**		**19 02 22.1 +0.6**
	baz=311						
ORV	**Oroville**	**91.84**	**44**	P	**P**		**19 02 22.4 +0.2**
ORV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ORV	**Oroville**	**91.84**	**44**	P	**P**		**19 02 22.4 +0.2**
WVOR	**Wild Horse Val**	**91.88**	**41**	P	**P**		**19 02 23.8 +1.4**
WVOR				pmax	pmax		
	comp=Z,12nm,1.0s						
WVOR	**Wild Horse Val**	**91.88**	**41**	P	**P**		**19 02 23.8 +1.4**
MBAR	**Mbarara**	**92.11**	**270**	P	**P**		**19 02 24.2 +0.1**
MBAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MBAR	**Mbarara**	**92.11**	**270**	P	**P**		**19 02 24.2 +0.1**
BEKR	**Beckworth**	**92.37**	**43**	P	**P**		**19 02 25.6 +0.8**
AFDM	**Forest Hills D**	**92.53**	**44**	P	**P**		**19 02 25.8 +0.4**
KEST	**Kesra**	**92.53**	**312**	P	**P**		**19 02 25.8 +0.2**
	comp=Z,26nm,0.7s,baz=355,slow=0.4,SNR=25						
KEST	**Kesra**	**92.53**	**312**	P	**P**		**19 02 25.8 +0.2**
MFID	**Camas Ranch**	**92.89**	**39**	P	**P**		**19 02 28.2 +1.1**
RUBR	**Rubicon Trail**	**92.98**	**44**	P	**P**		**19 02 28.6 +0.8**
RUBR				IAmb	IAmb		19 02 34.5
	comp=Z,18nm,0.9s						
EGMT	**Eagleton**	**93.00**	**32**	P	**P**		**19 02 27.8 +0.4**
EGMT				IAmb	IAmb		19 02 28.8
	comp=Z,11nm,0.9s						
EGMT	**Eagleton**	**93.00**	**32**	P	**P**		**19 02 27.8 +0.4**
	baz=314						
PAHR	**Pah Rah Range**	**93.07**	**43**	P	**P**		**19 02 28.7 +0.7**
PAHR				IAmb	IAmb		19 02 29.8
	comp=Z,13nm,0.9s						
VCNR	**Virginia City**	**93.15**	**44**	P	**P**		**19 02 29.4 +0.9**
VCNR				IAmb	IAmb		19 02 30.4
	comp=Z,13nm,0.8s						
PNTR	**Pine Nut**	**93.31**	**44**	P	**P**		**19 02 30.1 +0.8**
PNTR				IAmb	IAmb		19 02 31.3
	comp=Z,12nm,0.8s						
DLMT	**Dillon**	**93.38**	**36**	P	**P**		**19 02 30.0 +0.6**
DLMT				IAmb	IAmb		19 02 31.4
	comp=Z,10nm,0.8s						
CMB	**Columbia Colle**	**93.43**	**45**	P	**P**		**19 02 30.2 +0.6**
CMB				pmax	pmax		
	comp=Z,11nm,0.9s						
CMB	**Columbia Colle**	**93.43**	**45**	P	**P**		**19 02 30.1 +0.6**
CMB				IAmb	IAmb		19 02 31.2
	comp=Z,11nm,0.9s						
YERR	**Yerington**	**93.59**	**44**	P	**P**		**19 02 31.2 +0.7**
MCMT	**McKenzie Canyo**	**93.60**	**36**	P	**P**		**19 02 31.4 +0.9**
WAKR	**Walker**	**93.76**	**44**	P	**P**		**19 02 32.5 +1.2**
BMN	**Battle Mountai**	**93.95**	**42**	P	**P**		**19 02 32.6 +0.5**
BMN	**Battle Mountai**	**93.95**	**42**	P	**P**		**19 02 32.5 +0.5**
PMPB	**Monarch Peak**	**94.23**	**47**	P	**P**		**19 02 34.3 +1.0**
PMPB				IAmb	IAmb		19 02 37.4
	comp=Z,12nm,0.9s						
RYN	**Ryan**	**94.25**	**44**	P	**P**		**19 02 34.4 +0.9**
RYN				IAmb	IAmb		19 02 35.5
	comp=Z,13nm,1.0s						
KVN	**Kaiserville**	**94.26**	**43**	P	**P**		**19 02 34.2 +0.6**
KVN				pmax	pmax		
	comp=Z,12nm,1.0s						
KVN	**Kaiserville**	**94.26**	**43**	P	**P**		**19 02 34.2 +0.6**
KVN				IAmb	IAmb		19 02 36.1
	comp=Z,12nm,1.0s						
YHL	**Hebgen Lake**	**94.46**	**35**	P	**P**		**19 02 34.8 +0.3**
MDPB	**Devils Postpil**	**94.50**	**45**	P	**P**		**19 02 35.0 +0.2**
NVAR	**Mina Array Bea**	**94.51**	**44**	P	**P**		**19 02 35.7 +0.9**
	comp=Z,6.3nm,0.8s,baz=286,slow=5.1,SNR=44						
YHB	**Horse Butte**	**94.53**	**35**	P	**P**		**19 02 35.8 +1.1**
OMMB	**Old Mammoth Mi**	**94.57**	**45**	P	**P**		**19 02 35.9 +0.8**
NV11	**Mina Array Sit**	**94.60**	**44**	P	**P**		**19 02 35.6 +0.6**
PAGB	**Antelope Grade**	**94.88**	**47**	P	**P**		**19 02 36.9 +0.7**
PAGB				IAmb	IAmb		19 02 38.1
	comp=Z,12nm,0.8s						
ELK	**Elko**	**94.92**	**40**	P	**P**		**19 02 37.3 +0.7**
ELK				pmax	pmax		
	comp=Z,6.0nm,0.2s						
ELK	**Elko**	**94.92**	**40**	P	**P**		**19 02 37.3 +0.7**
H17A	**Grant Village**	**95.09**	**35**	P	**P**		**19 02 39.7 +2.4**
	baz=313						
RLMT	**Red Lodge**	**95.26**	**34**	P	**P**		**19 02 38.8 +0.8**
	baz=314						
SMMC	**Simmler**	**95.29**	**47**	P	**P**		**19 02 39.3 +1.1**
	baz=306						
LAO	**LASA Array**	**95.64**	**31**	P	**P**		**19 02 40.3 +0.8**
	baz=317						
PKM	**Mcpherson Peak**	**95.66**	**47**	P	**P**		**19 02 40.6 +0.6**
	baz=306						
CWC	**Cottonwood Cre**	**95.86**	**45**	P	**P**		**19 02 41.3 +0.4**
	baz=308						
ISA	**Isabella, Lake**	**96.08**	**46**	P	**P**		**19 02 41.6 -0.1**
ISA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ISA	**Isabella, Lake**	**96.08**	**46**	P	**P**		**19 02 41.6 -0.1**
ISA	**Isabella, Lake**	**96.08**	**46**	P	**P**		**19 02 42.0 +0.3**
	baz=307						
R11A	**Troy Canyon, C**	**96.24**	**42**	P	**P**		**19 02 43.2 +0.6**
R11A	**Troy Canyon, C**	**96.24**	**42**	P	**P**		**19 02 43.1 +0.6**
	baz=309						
MPMC	**Manual Prospec**	**96.47**	**45**	P	**P**		**19 02 44.2 +0.5**
	baz=308						
DUG	**Dugway, Tooele**	**96.69**	**40**	P	**P**		**19 02 45.3 +0.8**
	baz=311						
LRMC	**Laurel Mtn Rad**	**96.70**	**46**	P	**P**		**19 02 45.3 +0.6**
	baz=308						
TPNV	**Topopah Spring**	**96.71**	**44**	P	**P**		**19 02 45.2 +0.5**
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TPNV	**Topopah Spring**	**96.71**	**44**	P	**P**		**19 02 45.2 +0.5**
TPNV	**Topopah Spring**	**96.71**	**44**	P	**P**		**19 02 45.3 +0.5**
	baz=309						
PDAR	**Pinedale Array**	**96.75**	**36**	P	**P**		**19 02 44.6 -0.2**
	comp=Z,0.7nm,0.9s,baz=332,slow=2.2,SNR=4.2						
EDW2	**Edwards Air Fo**	**96.86**	**46**	P	**P**		**19 02 46.1 +0.8**
	baz=308						
GSC	**Goldstone, Bar**	**97.38**	**45**	P		Pdif	19 02 48.2 +0.5
GSC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GSC	**Goldstone, Bar**	**97.38**	**45**	P		Pdif	19 02 48.1 +0.5
	baz=308						
BFSC	**Mount Baldy Ra**	**97.47**	**47**	P		Pdif	19 02 48.8 +0.6
	baz=308						
CIS	**Catalina Islan**	**97.47**	**48**	P		Pdif	19 02 49.0 +1.0
	baz=307						
TUQ	**Turquoise Moun**	**97.86**	**45**	P		Pdif	19 02 50.5 +0.7
	baz=309						
HEC	**Hector,Ludlow**	**97.97**	**45**	P		Pdif	19 02 50.8 +0.5
	baz=309						
ESDC	**Sonseca Array**	**98.38**	**321**	PP		PP	19 06 46.6 -7.9
	comp=Z,0.3nm,0.4s,baz=59,slow=7.2,SNR=4.6						
GMRC	**Granite Mounta**	**98.43**	**45**	P		Pdif	19 02 52.9 +0.5
	baz=309						
RSSD	**Black Hills**	**98.57**	**32**	P		**P**	**19 02 53.7 +0.8**
	baz=318						
PFO	**Pinyon Flats O**	**98.64**	**47**	P		**P**	**19 02 54.3 +0.9**
	baz=308						
MONP2	**Monument Peak**	**99.11**	**47**	P		**Pdif**	**19 02 56.6 +1.0**
	baz=308						
IRM	**Iron Mountain**	**99.16**	**45**	P		**Pdif**	**19 02 56.5 +1.0**
	baz=309						
TXAR	**Lajitas Array**	**109.60**	**42**	PKiKP		**PKiKP**	**19 07 43.6 -0.2**
	comp=Z,0.2nm,0.5s,baz=343,slow=1.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**110.99**	**297**	PKiKP		**PKiKP**	**19 07 45.9 -0.8**
	comp=Z,0.7nm,0.4s,baz=124,slow=2.0,SNR=17						
TORD				PP		PP	19 08 12.8 -16
	comp=Z,2.0nm,1.1s,baz=48,slow=4.9,SNR=4.6						
SYO	**Syowa Base**	**111.11**	**203**	*e*X		**Pdif**	**19 03 43.2 -4.4**
DBIC	**Dimbokro**	**119.95**	**295**	PKP		**PKPdf**	**19 08 03.2 -0.6**
	comp=Z,3.7nm,0.7s,baz=70,slow=2.4,SNR=7.7						
DBIC	**Dimbokro**	**119.95**	**295**			**PKPdf**	**19 08 02.5 -1.4**
KIC	**Kosan Boka**	**120.02**	**294**	*e*PKIKP		**PKPdf**	**19 08 03.3 -0.7**
	comp=Z,9.3nm,0.6s						
TIC	**Toumodi**	**120.09**	**295**	*e*PKIKP		**PKPdf**	**19 08 03.4 -0.8**
	comp=Z,4.0nm,0.3s						
LIC	**Lamto**	**120.34**	**294**	*e*PKIKP		**PKPdf**	**19 08 03.9 -0.7**
	comp=Z,4.2nm,0.3s						
SJCC	**San Jacinto, C**	**140.75**	**29**	*e*P		**PKPdf**	**19 08 36.9 -6.3**
SMLC	**San Martn de**	**142.20**	**28**	*e*P		**PKPdf**	**19 08 40.7 -5.0**
ZARC	**Zaragoza, Cauc**	**143.03**	**30**	*e*P		PKPab	19 08 42.3 -0.6
SDV	**Santo Domingo**	**143.45**	**23**	*e*P		PKPbc	19 08 46.1 +0.1
BRRC	**Barranca, Sant**	**143.87**	**29**	*e*P		PKPbc	19 08 47.2 +0.1
CBOC	**Ciudad Bolivar**	**143.90**	**33**	*e*P		PKPab	19 08 47.0 +0.3
SOCV	**Socops**	**143.93**	**23**	*e*P		PKPab	19 08 46.4 -0.2
PTBC	**PUERTO BERRIO,**	**144.05**	**30**	*e*P		**PKPab**	**19 08 46.6 -0.4**
PAMC	**Pamplona, Colo**	**144.09**	**27**	*e*P		**PKPab**	**19 08 47.5 -0.2**
BARC	**Barichara**	**144.56**	**28**	*e*P		PKPbc	19 08 49.5 +0.1
NORC	**Norcasia**	**144.72**	**32**	*e*P		**PKPab**	**19 08 48.5 -1.1**
GUY2C	**Guyana, Caldas**	**144.77**	**33**	*e*P		PKPbc	19 08 49.9 -0.5
SPBC	**San Pablo de B**	**145.01**	**30**	*e*P		**PKPbc**	**19 08 50.4 -0.2**
RREF	**El Recreo**	**145.06**	**33**	*e*P		**PKPbc**	**19 08 51.1 -0.4**
RUSC	**La Rusia**	**145.23**	**28**	*e*P		**PKPdf**	**19 08 51.1 -0.6**
YOTC	**Yotoco, Valle**	**145.34**	**35**	*e*P		**PKPdf**	**19 08 51.1 -0.3**
TOLC	**Tolima**	**145.35**	**33**	*e*P		**PKPdf**	**19 08 50.8 -0.8**
ANIL	**Santa Ana**	**145.39**	**33**	*e*P		**PKPbc**	**19 08 52.0 0.0**
ROSC	**El Rosal**	**145.61**	**31**	PKPbc		**PKPbc**	**19 08 52.7 -0.1**
	comp=Z,19nm,0.5s,baz=326,slow=7.3,SNR=12						
ROSC	**El Rosal**	**145.61**	**31**	*e*P		**PKPbc**	**19 08 53.0 +0.1**
ROSC	**El Rosal**	**145.61**	**31**			**PKPdf**	**19 08 52.4 +0.2**
ORTC	**Ortega, Tolima**	**145.97**	**34**	*e*P		**PKPdf**	**19 08 52.2 -0.1**
CHIC	**Chingaza**	**146.07**	**31**	*e*P		**PKPbc**	**19 08 53.9 -0.3**
POPC	**Popayan, Colom**	**146.38**	**37**	*e*P		**PKPbc**	**19 08 54.1 -0.8**
BBAC	**Balboa, Cauca**	**146.50**	**38**	*e*P		**PKPbc**	**19 08 54.7 -0.5**
VILC	**Villavicencio,**	**146.54**	**31**	*e*P		**PKPbc**	**19 08 54.6 -0.6**
PCON	**Cinco Dias**	**146.71**	**37**	*e*P		**PKPbc**	**19 08 56.5 +0.2**
SOTA	**Hoblanco**	**146.76**	**37**	*e*P		**PKPbc**	**19 08 55.8 -0.5**
BETC	**Betania**	**146.92**	**35**	*e*P		**PKPdf**	**19 08 54.7 +0.8**
CRUC	**La Cruz**	**147.03**	**38**	*e*P		**PKPbc**	**19 08 57.4 +0.5**
GCUF	**Volcan Galeras**	**147.09**	**39**	*e*P		**PKPbc**	**19 08 57.2 0.0**
PTGC	**Puerto Gaitan,**	**147.16**	**28**	*e*P		**PKPdf**	**19 08 53.7 -0.6**
OTAV	**Otavalo**	**147.23**	**42**	PKP2		**PKPbc**	**19 08 56.4 -1.2**
OTAV	**Otavalo**	**147.23**	**42**			**PKPbc**	**19 08 56.4 -1.2**
FLOC	**Florencia**	**147.73**	**36**	*e*P		**PKPbc**	**19 08 58.6 +0.2**
MACC	**Macarena, Meta**	**148.18**	**33**	*e*P		**PKPdf**	**19 08 57.2 +1.2**
GUVC	**San Jose del G**	**148.41**	**30**	*e*P		**PKPbc**	**19 08 59.4 -0.8**
PTLC	**Puerto Leguiza**	**149.38**	**36**	*e*P		**PKPbc**	**19 09 02.9 +0.3**
RCBR	**Riachuelo**	**151.77**	**310**	PKIKP		**PKPbc**	**19 09 08.1 -0.1**
RCBR	**Riachuelo**	**151.77**	**310**			**PKPbc**	**19 09 08.1 -0.1**
LPAZ	**La Paz**	**166.32**	**50**	PKP		**PKPdf**	**19 09 18.8 -0.2**
	comp=Z,3.9nm,0.9s,baz=32,slow=2.6,SNR=9.6						
LPAZ				PKPab		**PKPab**	**19 10 20.8 -0.9**
	comp=Z,4.5nm,0.9s,baz=3.1,slow=4.2,SNR=6.4						
LPAZ	**La Paz**	**166.32**	**50**			**PKPdf**	**19 09 18.7 -0.3**
LPAZ						**PKPab**	**19 10 20.5 -1.1**
BDFB	**Brasilia**	**166.99**	**317**	PKP		**PKPdf**	**19 09 18.6 -0.3**
	comp=Z,6.4nm,0.7s,baz=136,slow=3.4,SNR=8.4						
BDFB				PKPab		**PKPab**	**19 10 23.3 -0.7**
	comp=Z,8.4nm,0.6s,baz=48,slow=5.6,SNR=10						
GO02	**Mina Guanaco**	**168.79**	**91**			**PKPdf**	**19 09 20.9 +0.7**
CPUP	**Villa Florida**	**179.12**	**173**	PKP		**PKPdf**	**19 09 23.5 +0.2**
	comp=Z,0.8nm,0.4s,baz=323,slow=1.8,SNR=4.3						

ROM 06 18:58:57.6±0.0, 43°37.4'N±0.002×12°55.0'E±0.004, h10km, ML1.2/5, Error ellipse: s-maj=0.2km s-min=0.2km az=289.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATVO	**AVT- Monte Val**	**0.10**	**275**	P	Pg	18 59 00.6	+0.3
ATVO				S	Sg	18 59 02.6	+0.4
ATVO				AML	AML		
	comp=E,101μm,0.2s						
ATVO				AML	AML		
	comp=N,109μm,0.5s						
ATVO				AML	AML		
	comp=E,102μm,0.2s						
ATVO				AML	AML		
	comp=N,109μm,0.5s						
MURB	**Monte Urbino**	**0.11**	**190**	P	Pg	18 59 00.8	+0.4
MURB				S	Sg	18 59 03.1	+0.7
MURB				AML	AML		
	comp=E,303μm,1.2s						
MURB				AML	AML		
	comp=N,296μm,0.3s						
MURB				AML	AML		
	comp=E,296μm,1.2s						
MURB				AML	AML		
	comp=N,351μm,0.3s						
MURB				AML	AML		
	comp=E,296μm,1.2s						
PIEI	**Pieia**	**0.16**	**356**	P	Pg	18 59 01.8	+0.6
PIEI				S	Sg	18 59 04.9	+1.2
PIEI				AML	AML		
	comp=E,150μm,0.3s						
PIEI				AML	AML		
	comp=N,105μm,0.2s						
SSFR	**Montelago di S**	**0.18**	**70**	P	Pg	18 59 02.1	+0.6
SSFR				S	Sg	18 59 05.2	+1.1
FRON	**Frontone**	**0.19**	**42**	P	Pg	18 59 02.2	+0.6
FRON				S	Sg	18 59 05.7	+1.2
FRON				AML	AML		
	comp=N,126μm,0.8s						
FRON				AML	AML		
	comp=E,71μm,1.5s						
ATCC	**AVT- Casa Cast**	**0.20**	**161**	P	Pg	18 59 02.5	+0.7
ATCC				S	Sg	18 59 06.4	+1.8
ATTE	**AVT- Monte Tez**	**0.23**	**219**	P	Pg	18 59 02.8	+0.5
NARO	**Abbazia di Nar**	**0.24**	**5**	P	Pg	18 59 03.0	+0.5
NARO				S	Sg	18 59 07.1	+1.4
BADI	**Badiali**	**0.26**	**301**	P	Pb	18 59 03.8	-0.7
BADI				S	Sb	18 59 08.4	-0.6
BADI				AML	AML		
	comp=E,82μm,1.5s						
BADI				AML	AML		
	comp=N,103μm,1.6s						
MPAG	**Monte Paganucc**	**0.30**	**31**	P	Pg	18 59 04.3	+0.7
MPAG				S	Sb	18 59 09.4	-0.7
SNTG	**Esanatoglia**	**0.31**	**112**	P	Pg	18 59 04.3	+0.5
SNTG				S	Sb	18 59 09.5	-0.9
ASSB	**Assisi San Ben**	**0.34**	**166**	P	Pg	18 59 05.0	+0.6
ASSB				S	Sb	18 59 10.5	-0.8
FSSB	**Fossombrone**	**0.36**	**27**	P	Pb	18 59 05.8	-0.3
FSSB				AML	AML		
	comp=E,56μm,1.4s						
FSSB				AML	AML		
	comp=N,56μm,1.0s						

FUNV ***06*** *19:51:26.3, 7.00N×72.45W, h3km, MW2.6*
RSNC ***06*** *19:51:28.0±2.5, 7.02N×72.37W, h5km±13km, ML2.4*
ISC 06 19:51:25.5±1.2, 6.99N±0.03×72.40W±0.03, h13km±10km, n22, σ1§21/42, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAMC	**Pamplona, Colo**	**0.46**	**320**	*e*P	**Pg**	**19 51 35.0**	**+0.2**
PAMC				*e*S	**Sg**	**19 51 41.3**	**+0.3**
PAMC				*i*		19 51 43.1	
	comp=Z,594nm,0.2s						
TAMC	**Tame, Arauca**	**0.82**	**132**	*e*P	**Pn**	**19 51 42.9**	**+0.1**
TAMC				*e*S	**Sb**	**19 51 53.5**	**+0.9**
TAMC				*i*		19 51 56.2	
	comp=Z,64nm,0.3s						
BARC	**Barichara**	**0.87**	**243**	*e*P	**Pg**	**19 51 42.5**	**+0.1**
BARC				*e*S	**Sg**	**19 51 53.0**	**-0.9**
BARC				*i*		19 51 54.6	
	comp=Z,85nm,0.2s						
RUSC	**La Rusia**	**1.28**	**212**	*e*P	**Pn**	**19 51 49.6**	**0.0**
RUSC				*i*		19 51 51.9	
	comp=Z,37nm,0.3s						
RUSC				*e*S	**Sb**	**19 52 05.2**	**-1.1**
RUSC	**La Rusia**	**1.28**	**212**	*e*P	**Pn**	**19 51 49.4**	**-0.2**
RUSC				*e*S	**Sb**	**19 52 06.1**	**-0.3**
BRRC	**Barranca, Sant**	**1.31**	**275**	*e*P	**Pg**	**19 51 51.0**	**+0.4**
BRRC				*i*		19 51 51.8	
	comp=Z,67nm,0.4s						
BRRC				*e*S	**Sg**	**19 52 08.3**	**+0.6**
OCAC	**Ocana**	**1.54**	**324**	*e*P	**Pg**	**19 51 54.9**	**-0.3**
OCAC				*e*S	**Sg**	**19 52 14.8**	**-0.4**
OCAC				*i*		19 52 17.1	
	comp=Z,94nm,0.3s						
SOCV	**Socops**	**2.00**	**50**	*e*P	**Pn**	**19 52 00.7**	**+1.6**
SOCV	**Socops**	**2.00**	**50**	*e*P	**Pb**	**19 52 00.9**	**-0.9**
SOCV				*e*S	**Sb**	**19 52 26.4**	**-0.3**
PTBC	**PUERTO BERRIO,**	**2.09**	**258**	*e*P	**Pb**	**19 52 03.0**	**-0.4**
PTBC				*e*S	**Sb**	**19 52 30.2**	**+1.0**
PTBC				*i*		19 52 32.5	
	comp=Z,39nm,0.5s						
VIGV	**El Vigia**	**2.11**	**29**	*e*P	**Pb**	**19 52 02.4**	**-1.2**
VIGV				*e*S	**Sb**	**19 52 28.9**	**-0.8**
SDV	**Santo Domingo**	**2.57**	**43**	*e*P	**Pn**	**19 52 09.2**	**+2.0**
SDV				*e*S	**Sn**	**19 52 39.4**	**+1.0**
SDV	**Santo Domingo**	**2.57**	**43**	*e*P	**Pn**	**19 52 08.8**	**+1.7**
SDV				*e*S	**Sn**	**19 52 40.2**	**+1.8**
CHIC	**Chingaza**	**2.69**	**210**	*e*P	**Pn**	**19 52 11.6**	**+2.6**
CHIC				*e*S	**Sb**	**19 52 46.3**	**-0.7**
CHIC				*i*		19 52 56.0	
	comp=Z,6.8nm,0.5s						
ELOV	**Elorza**	**2.90**	**90**	*e*P	**Pn**	**19 52 12.9**	**+1.5**
ELOV				*e*S	**Sn**	**19 52 47.7**	**+1.6**
HELC	**Santa Helena**	**3.21**	**256**	*e*P	**Pn**	**19 52 16.9**	**+0.9**
HELC				*e*S	**Sn**	**19 52 54.0**	**-0.2**
CURV	**Curarigua**	**3.85**	**39**	*e*P	**Pn**	**19 52 25.9**	**+1.3**
CURV				*e*S	**Sn**	**19 53 09.9**	**0.0**
DABV	**Dabajuro**	**4.28**	**24**	*e*P	**Pn**	**19 52 31.4**	**+0.9**
BAUV	**El Baul**	**4.74**	**65**	*e*P	**Pn**	**19 52 37.5**	**+0.8**
BAUV				*e*S	**Sn**	**19 53 30.4**	**-1.1**
MAPV	**Macapo**	**4.82**	**54**	*e*P	**Pn**	**19 52 38.8**	**+1.0**
MAPV				*e*S	**Sn**	**19 53 32.5**	**-1.1**
PAYV	**Puerto Ayacuch**	**4.97**	**108**	*e*P	**Pn**	**19 52 40.8**	**+0.9**
PAYV				*e*S	**Sn**	**19 53 36.0**	**-1.3**
MONV	**Montecano**	**5.49**	**26**	*e*P	**Pn**	**19 52 47.6**	**+0.6**
MONV				*e*S	**Sn**	**19 53 46.8**	**-3.2**

IDC 06 19:54:29.3±1.4, 8.05S×158.24E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.5/33, mbtmp3.6/5, ML3.4/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/23, Error ellipse: s-maj=33.3km s-min=29.0km az=54.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.18**	**129**	Pn	Pn	19 55 07.0	+0.1
	11nm,0.3s,baz=304,slow=3.6,SNR=11						
HNR				Sn	Sn	19 55 26.0	-8.7
	67nm,0.3s,baz=10,slow=23,SNR=16						
HNR	**Honiara**	**2.18**	**129**	P	Pg	19 55 17.0	+5.8
WRA	**Warramunga Arr**	**25.99**	**240**	P	P	20 00 04.7	+0.6
	0.3nm,0.2s,baz=68,slow=9.4,SNR=7.1						
H11S3	**WAKE ISLAND Hy**	**27.66**	**17**	T	T	20 28 54.6	
	baz=198,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**27.66**	**18**	T	T	20 28 55.1	
	baz=198,slow=76,SNR=26						
H11S1	**WAKE ISLAND Hy**	**27.67**	**17**	T	T	20 29 07.5	
	baz=198,slow=76,SNR=14						
SIJI	**Sorong**	**27.80**	**284**	LR	LR	20 13 16.7	
	comp=Z,22nm,18.9s,baz=340,slow=41						
ASAR	**Alice Springs**	**28.02**	**234**	P	P	20 00 22.0	-0.4
	0.3nm,0.5s,baz=63,slow=9.8,SNR=11						
H11N1	**WAKE ISLAND Hy**	**28.87**	**17**	T	T	20 30 26.0	
	baz=196,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**28.88**	**17**	T	T	20 30 28.0	
	baz=196,slow=76,SNR=

TGUH Tegucigalpa,Un 19.85 341 P P 20 10 10.9 -0.9
TGUH IAmb IAmb 20 10 17.7
comp=Z,32nm,0.9s
PB04 IPOC Station P 20.21 150 P P 20 10 15.2 -0.5
LVC Limon Verde 21.07 148 P P 20 10 26.7 +1.5
comp=Z,24nm,1.0s,baz=310,slow=8.4,SNR=17
LVC Limon Verde 21.07 148 P P 20 10 23.1 -2.2
LVC IAmb IAmb 20 10 28.2
comp=Z,45nm,1.1s
PCRV Puerto La Cruz 21.94 47 P P 20 10 35.0 +0.6
comp=Z,12nm,0.9s,baz=216,slow=8.7,SNR=2.0
PLCV Puerto La Cruz 21.97 47 P P 20 10 35.0 +0.4
SIV San Ignacio 22.31 121 P P 20 10 37.8 -0.4
comp=Z,12nm,0.7s,baz=308,slow=11,SNR=41
GO02 Mina Guanaco 22.89 153 P P 20 10 44.7 0.0
GO02 IAmb IAmb 20 10 47.2
comp=Z,67nm,1.4s
GO03 Copiap 24.76 157 P P 20 11 01.5 -0.5
GO03 IAmb IAmb 20 11 14.7
comp=Z,20nm,1.1s
CLDB Colider 25.46 105 eP P 20 11 07.1 -1.4
SALV Santo Antonio 26.98 116 eP P 20 11 22.4 +0.2
DLPL La Plaine 27.87 44 P P 20 11 29.6 -0.4
PP1B Ponte de Pedra 28.35 119 eP P 20 11 34.5 +0.1
AQDB Aquidauana 28.92 125 eP P 20 11 40.0 +0.5
CFA Coronel Fontan 29.11 158 P P 20 11 41.6 +0.5
comp=Z,7.9nm,0.8s,baz=334,slow=8.3,SNR=11
ARAG Araguaiana, MT 30.44 113 eP P 20 11 52.4 -0.6
C2SB Chapadao do Su 30.59 119 eP P 20 11 55.2 +0.9
CPUP Villa Florida 30.98 136 P P 20 11 57.3 -0.3
comp=Z,2.3nm,0.3s,baz=294,slow=7.6,SNR=5.2
CPUP LR LR 20 26 58.2
comp=Z,415nm,21.8s,baz=328,slow=41
CPUP Villa Florida 30.98 136 eP P 20 11 57.5 -0.1
CPUP Villa Florida 30.98 136 P P 20 11 57.0 -0.6
GO05 Huala 31.12 166 P P 20 11 58.6 -0.2
TRCB Terra Rica 32.54 126 eP P 20 12 10.8 -0.6
ITRB Iturama 33.11 119 eP P 20 12 16.0 -0.5
PCMB Pacaembu 33.12 123 eP P 20 12 15.7 -0.8
SMTB Santa Maria do 33.20 99 eP P 20 12 16.9 -0.3
ITQB Itaqui 33.64 140 eP P 20 12 21.8 +0.9
BDFB Brasilia 33.94 111 P P 20 12 23.5 -0.3
comp=Z,3.5nm,0.7s,baz=284,slow=9.8,SNR=5.4
BDFB LR LR 20 26 43.6
comp=Z,106nm,21.1s,baz=296,slow=37
BDFB Brasilia 33.94 111 P P 20 12 22.3 -1.4
BDFB IAmb IAmb 20 12 24.6
comp=Z,10nm,1.2s
PTGB Pitanga 33.94 128 eP P 20 12 23.7 0.0
IPMB Ipameri, GO 34.42 115 eP P 20 12 27.1 -0.8
BB19B Bebedouro 35.22 120 eP P 20 12 33.7 -1.0
ITAB Concordia 35.24 132 eP P 20 12 35.2 +0.4
GO06 Curarrehue 35.60 168 P P 20 12 38.0 +0.2
PMNB Patos De Minas 36.19 115 eP P 20 12 43.5 +0.3
CPSB Cacapava Do Su 36.21 138 eP P 20 12 42.6 -0.5
PLCA Paso Flores 36.90 167 P P 20 12 49.3 +0.4
comp=Z,6.1nm,0.6s,baz=7.0,slow=9.1,SNR=16
PLCA LR LR 20 24 53.1
comp=Z,164nm,19.6s,baz=51,slow=31
PLCA Paso Flores 36.90 167 eP P 20 12 49.9 +1.0
PLCA Paso Flores 36.90 167 P P 20 12 49.2 +0.3
PLCA IAmb IAmb 20 12 49.8
comp=Z,9.1nm,0.7s
PLTB Pedras Altas 36.97 140 eP P 20 12 49.6 +0.1
SPB Sao Paulo 37.16 123 eP P 20 12 50.3 -0.9
SPB Sao Paulo 37.16 123 P P 20 12 50.1 -1.2
JANB Januaria 37.28 108 eP P 20 12 51.6 -0.8
CNLB Canela 37.35 134 eP P 20 12 52.4 -0.4
Z54A Sparta 37.92 357 P P 20 12 56.9 -0.6
baz=176
OGAUY Aigu 38.02 144 eP P 20 12 59.5 +1.1
LRAL Lakeview Retre 38.13 352 P P 20 12 57.7 -1.6
baz=170
Z50A Ashland 38.20 353 P P 20 12 58.6 -1.2
baz=171
Y51A Rockmart 38.74 354 P P 20 13 03.9 -0.5
baz=173
X55A Gracelyn & Ava 39.11 359 P P 20 13 07.3 -0.1
baz=178
NBPS Pedro II - PI 39.22 91 eP P 20 13 08.8 0.0
JCT Junction City 39.55 334 P P 20 13 12.4 +1.1
JCT IAmb IAmb 20 13 13.8
comp=Z,16nm,1.4s
JCT Junction City 39.55 334 P P 20 13 11.2 -0.1
baz=149
W54A Cherokee Point 39.74 358 P P 20 13 11.2 -1.4
baz=178
W53A Cullowhee 39.86 357 P P 20 13 12.9 -0.9
baz=176
W51A Cleveland 39.96 355 P P 20 13 14.3 -0.2
baz=174
V53A Saluda 40.34 357 P P 20 13 17.5 -0.3
baz=177
TXAR Lajitas Array 40.47 328 P P 20 13 19.2 +0.3
comp=Z,0.7nm,0.8s,baz=146,slow=8.3,SNR=5.8
TXAR LR LR 20 28 44.5
comp=Z,114nm,19.5s,baz=0.0,slow=34
TXAR Lajitas Array 40.47 328 P P 20 13 19.4 +0.4
V50A Pikevile 40.50 355 P P 20 13 18.8 -0.2
baz=173
V52A Sevierville 40.55 356 P P 20 13 19.2 -0.2
V52A Sevierville 40.55 356 P P 20 13 19.2 -0.2
baz=175
V51A Loudon 40.57 356 P P 20 13 17.7 -1.9
V51A Loudon 40.57 356 P P 20 13 18.2 -1.3
baz=174
NBMO Morrinhos-CE 40.67 89 eP P 20 13 20.7 -0.1
V49A McMinnville 40.68 354 P P 20 13 19.6 -0.8
baz=172
MIAR Mount Ida 40.99 344 P P 20 13 23.4 +0.3
MIAR Mount Ida 40.99 344 P P 20 13 23.8 +0.8
baz=160
SJMB Sao Joao De Ma 41.02 113 eP P 20 13 23.0 -0.6
U53A Fall Branch 41.02 358 P P 20 13 23.1 -0.2
baz=177
NBPB Pedra_Branca-C 41.04 93 eP P 20 13 23.3 -0.5
U57A Blanch 41.08 2 P P 20 13 21.3 -2.5
baz=182
U51A La Follette 41.12 356 P P 20 13 23.8 -0.2
baz=175
U50A Jamestown 41.22 355 P P 20 13 24.2 -0.8
baz=174
W41B Gary Mavity, V 41.24 346 P P 20 13 24.4 -0.6
baz=162
TZTN Tazewell 41.25 357 P P 20 13 24.5 -0.7
baz=176
WVT Waverly 41.29 351 P P 20 13 24.5 -1.0
baz=169
ABTX Abilene, Hawle 41.34 336 P P 20 13 26.9 +0.9
ABTX IAmb IAmb 20 13 28.1
comp=Z,18nm,1.1s
ABTX Abilene, Hawle 41.34 336 P P 20 13 26.1 +0.1
baz=151
WHAR Wooly Hollow 41.36 346 P P 20 13 26.3 +0.2
WHAR IAmb IAmb 20 13 27.5
comp=Z,15nm,1.0s
BSFB Barra de Sao F 41.37 113 eP P 20 13 25.9 -0.5
X37A Clayton 41.56 342 P P 20 13 29.4 +1.6
X37A IAmb IAmb 20 13 30.2
comp=Z,14nm,0.8s
T57A Hurt 41.65 2 P P 20 13 27.9 -0.5
baz=182
W39A Magazine 41.66 344 P P 20 13 29.7 +1.2
W39A IAmb IAmb 20 13 30.9
comp=Z,20nm,0.8s
W39A Magazine 41.66 344 P P 20 13 28.7 +0.2
baz=160,SNR=5.4
T50A Nancy 41.82 355 P P 20 13 29.3 -0.5
baz=174
LCAR Lake Charles 41.84 347 P P 20 13 30.0 0.0
LCAR IAmb IAmb 20 13 31.0
comp=Z,8.0nm,0.8s
NBMA Muriti-CE 41.85 96 eP P 20 13 30.4 -0.2
NBIT Itapeh - BA 41.88 107 eP P 20 13 30.9 +0.2
FCAR Ozark Folk Cen 41.89 346 P P 20 13 30.8 +0.3
FCAR IAmb IAmb 20 13 31.6
comp=Z,12nm,0.9s
T49A Edmonton 41.96 354 P P 20 13 30.2 -0.8
T49A Edmonton 41.96 354 P P 20 13 30.4 -0.6
baz=173
T47A Sharon Grove 42.03 352 P P 20 13 30.4 -1.1
S58A Poland Farm, P 42.31 3 P P 20 13 33.2 -0.6
baz=184
S51A Beattyville 42.34 357 P P 20 13 33.6 -0.5
baz=176
X34A Smith Ranch, M 42.40 339 P P 20 13 36.4 +1.8
X34A IAmb IAmb 20 13 36.6
comp=Z,19nm,0.9s
S50A Richmond 42.44 356 P P 20 13 34.0 -0.8
baz=174
U40A Yellville 42.51 346 P P 20 13 36.3 +0.8
U40A Yellville 42.51 346 P P 20 13 35.7 +0.2
baz=162,SNR=10.0
W35A Tecumseh 42.56 340 P P 20 13 35.8 -0.2
NBTA Tacaratu-PE 42.60 98 eP P 20 13 36.3 -0.3
S49A Springfield 42.61 355 P P 20 13 35.8 -0.5
baz=173
HHAR Hobbs 42.72 344 P P 20 13 37.8 +0.6
HHAR IAmb IAmb 20 13 38.9
comp=Z,11nm,1.0s
FNO Franklin 42.84 340 P P 20 13 40.0 +1.9
WMOK Wichita Mounta 42.86 338 P P 20 13 39.0 +0.6
WMOK Wichita Mounta 42.86 338 P P 20 13 38.6 +0.2
baz=153
TUL1 Leonard 42.91 342 P P 20 13 38.8 +0.1
TUL1 Leonard 42.91 342 P P 20 13 38.6 -0.1
baz=158
R57A Stanardsville 42.97 3 P P 20 13 38.4 -0.7
baz=183
R51A Hillsboro 43.00 357 P P 20 13 39.0 -0.4
baz=176
R49A Shelbyville 43.11 355 P P 20 13 39.6 -0.7
baz=173
MGMO Mountain Grove 43.13 347 P P 20 13 41.1 +0.6
WCI Wyandotte Cave 43.16 354 P P 20 13 40.5 -0.2
baz=172
MNTX Cornudas Mount 43.24 329 P P 20 13 42.1 +0.6
MNTX Cornudas Mount 43.24 329 P P 20 13 42.8 +1.3
baz=143,SNR=6.1
Q53A Leroy 43.49 359 P P 20 13 43.0 -0.3
baz=179
Q52A Bidwell 43.60 358 P P 20 13 43.3 -0.9
baz=178
Q55A Buckhannon 43.62 1 P P 20 13 43.8 -0.7
baz=181
NBLI Livramento-PB 43.65 96 eP P 20 13 45.6 +0.4
Q51A Peebles 43.71 357 P P 20 13 44.5 -0.7
Q51A IAmb IAmb 20 13 45.3
comp=Z,22nm,1.1s
Q51A Peebles 43.71 357 P P 20 13 44.4 -0.7
baz=176
CCM Cathedral Cave 43.77 348 P P 20 13 45.8 +0.2
baz=165
MSTX Muleshoe 43.84 333 P P 20 13 47.5 +1.1
MSTX IAmb IAmb 20 13 48.3
comp=Z,14nm,0.9s
MSTX Muleshoe 43.84 333 P P 20 13 46.7 +0.3
baz=147
Q60A Greensboro 43.86 6 P P 20 13 45.6 -0.7
baz=187
AMTX Amarillo 44.14 335 P P 20 13 49.7 +0.9
AMTX Amarillo 44.14 335 P P 20 13 48.7 -0.1
baz=149
P52A Corning 44.27 359 P P 20 13 49.0 -0.6
baz=178
MCWV Mont Chateau 44.29 1 P P 20 13 49.6 -0.1
baz=181
NBAN Anadia - AL 44.39 99 eP P 20 13 50.9 -0.2
O51A Pataskala 44.80 358 P P 20 13 53.4 -0.4
baz=177
O53A New Philadelph 44.87 360 P P 20 13 53.3 -1.1
baz=179
O58A Lewisberry 44.88 4 P P 20 13 52.9 -1.6
baz=185
ACSO Alum Creek Sta 44.90 358 P P 20 13 54.0 -0.6
baz=177
319A Douglas 45.12 325 P P 20 13 58.6 +1.9
319A IAmb IAmb 20 13 59.2
comp=Z,11nm,0.8s
N58A Sunbury 45.61 4 P P 20 13 59.8 -0.5
baz=185
M50A Fremont 46.07 358 P P 20 14 03.3 -0.5
baz=177
KSU1 Kansas State U 46.10 343 P P 20 14 04.6 +0.4
baz=158
M54A Oil Creek Stat 46.14 1 P P 20 14 03.9 -0.5
baz=181
M49A Liberty Center 46.19 357 P P 20 14 03.9 -0.8
baz=175
M60A Port Jervis 46.29 6 P P 20 14 04.0 -1.6
baz=188
ANMO Albuquerque 46.37 331 P P 20 14 08.3 +1.7
ANMO IAmb IAmb 20 14 08.9
comp=Z,9.6nm,0.9s
ANMO Albuquerque 46.37 331 P P 20 14 07.4 +0.8
baz=143
TUC Tucson 46.67 324 P P 20 14 09.3 +0.5
baz=137
CBKS Cedar Bluff 46.85 340 P P 20 14 11.3 +1.2
CBKS IAmb IAmb 20 14 22.4
comp=Z,11nm,0.8s
L60A Shokan 46.99 7 P P 20 14 11.1 0.0
baz=189
T25A Trinidad 47.22 334 P P 20 14 14.9 +1.7
T25A IAmb IAmb 20 14 15.7
comp=Z,12nm,0.9s
T25A Trinidad 47.22 334 P P 20 14 14.4 +1.2
baz=147,SNR=6.2
L61A Hillsdale 1, H 47.27 7 P P 20 14 13.3 +0.1
baz=190
214A Organ Pipe Nat 47.62 322 P P 20 14 17.9 +1.6
214A IAmb IAmb 20 14 18.6
comp=Z,5.4nm,0.8s
214A Organ Pipe Nat 47.62 322 P P 20 14 17.5 +1.3
baz=134
X18A Snowflake 47.85 327 P P 20 14 19.5 +1.4
X18A IAmb IAmb 20 14 20.5
comp=Z,7.0nm,0.8s
W18A Petrified Fore 48.18 328 P P 20 14 22.3 +1.6
W18A Petrified Fore 48.18 328 P P 20 14 21.8 +1.1
baz=140
SDCO Great Sand Dun 48.20 334 P P 20 14 21.8 +0.8
SDCO IAmb IAmb 20 14 23.1
comp=Z,6.2nm,0.8s
SDCO Great Sand Dun 48.20 334 P P 20 14 21.7 +0.8
baz=146,SNR=7.3
I51A Listowel 48.42 360 P P 20 14 22.6 +0.4
baz=179
X16A Lo Mia Camp, P 48.58 326 P P 20 14 25.4 +1.6
113A Mohawk Valley, 48.77 322 P P 20 14 26.5 +1.5
S22A 4UR Ranch, Cre 48.80 332 P P 20 14 26.4 +0.8
baz=144
I48A Sherman Twp 48.88 357 P P 20 14 25.4 -0.2
baz=176
Y14A Wickenburg 49.13 324 P P 20 14 29.2 +1.3
Y14A IAmb IAmb 20 14 30.0
comp=Z,5.1nm,0.8s
MVCO Mesa Verde 49.17 331 P P 20 14 29.4 +1.1
MVCO Mesa Verde 49.17 331 P P 20 14 29.6 +1.3
baz=142
WUAZ Wupatki 49.36 327 P P 20 14 31.4 +1.7
WUAZ IAmb IAmb 20 14 31.8
comp=Z,8.1nm,0.9s
WUAZ Wupatki 49.36 327 P P 20 14 31.1 +1.4
baz=138,SNR=6.3
Y12C Blythe 49.90 323 P P 20 14 34.7 +1.1
Y12C IAmb IAmb 20 14 36.0
comp=Z,9.0nm,1.1s
Y12C Blythe 49.90 323 P P 20 14 34.5 +0.9
baz=134
ISCO Idaho Springs 49.96 335 P P 20 14 35.7 +1.3
ISCO IAmb IAmb 20 14 36.4
comp=Z,4.3nm,0.8s
ISCO Idaho Springs 49.96 335 P P 20 14 34.1 -0.3
baz=147
IKP In-to-Pah, Jac 50.14 321 P P 20 14 36.7 +1.1
baz=131
G60A Masonville 50.29 8 P P 20 14 36.4 0.0
baz=191
BC3 Big Chuckawall 50.40 322 P P 20 14 38.5 +0.9
baz=133
ECSD EROS Data Cent 50.42 345 P P 20 14 37.7 +0.3
baz=159
W13A Hualapai Mount 50.47 325 P P 20 14 39.8 +1.6
W13A IAmb IAmb 20 14 40.2
comp=Z,4.9nm,0.9s
MONP2 Monument Peak 50.50 321 P P 20 14 39.4 +1.0
baz=131
BAR Barrett 50.52 320 P P 20 14 39.7 +1.3
IRM Iron Mountain 50.56 323 P P 20 14 39.9 +1.2
baz=133
G62A West of Eustis 50.67 9 P P 20 14 38.5 -0.8
baz=193
BELC Belle Mtn. Jos 50.97 322 P P 20 14 43.0 +1.1
baz=132
XPFO Pion Flat 50.99 321 P P 20 14 43.6 +1.5
XPFO IAmb IAmb 20 15 28.7
comp=Z,14nm,1.8s
PFO Pinyon Flats O 51.00 321 P P 20 14 43.6 +1.5
PFO IAmb IAmb 20 15 28.7
comp=Z,14nm,1.8s
PFO Pinyon Flats O 51.00 321 P P 20 14 43.6 +1.5
baz=132
N23A Red Feather La 51.02 336 P P 20 14 42.9 +0.6
baz=147
E54A Lac Daplat, Po 51.15 3 P P 20 14 42.3 -0.5
baz=184
KNB Kanab 51.25 327 P P 20 14 45.9 +1.9
PKCU Pink Cliffs 51.29 328 P P 20 14 46.5 +2.0
GMRC Granite Mounta 51.30 323 P P 20 14 45.8 +1.5
baz=133
O20A White River Ci 51.38 333 P P 20 14 46.3 +1.3
O20A White River Ci 51.38 333 P P 20 14 45.6 +0.7
baz=144
LCMT Little Creek M 51.48 327 P P 20 14 46.6 +0.9
SRU San Rafael Swe 51.65 331 P P 20 14 47.5 +0.5
HEC Hector,Ludlow 51.73 322 P P 20 14 48.5 +1.0
baz=132,SNR=6.4
SZCU Shurtz Canyon 51.82 327 P P 20 14 50.1 +1.8
D55A Sainte-Anne-du 51.85 5 P P 20 14 47.6 -0.4
baz=186
TUQ Turquoise Moun 51.90 323 P P 20 14 50.4 +1.6
baz=133
SCI2 San Clemente I 51.92 319 P P 20 14 50.3 +1.5
baz=129
CCUT Cedar City 51.94 327 P P 20 14 51.2 +2.0
D57A Chemin Vers le 51.99 6 P P 20 14 48.3 -0.8
baz=188
MSU Marysvale 52.02 329 P P 20 14 51.6 +1.8
P17A Butcher Ranch, 52.03 331 P P 20 14 51.0 +1.2
BFSC Mount Baldy Ra 52.16 321 P P 20 14 52.0 +1.2
baz=131
SHPR Sheep Range 52.19 325 P P 20 14 52.7 +1.7
SHPR IAmb IAmb 20 14 53.5
comp=Z,15nm,1.6s
D60A Saint Jean D'O 52.27 9 P P 20 14 51.3 +0.2
baz=192
GSC Goldstone, Bar 52.34 323 P P 20 14 53.5 +1.5
GSC Goldstone, Bar 52.34 323 P P 20 14 53.7 +1.7
baz=132
K22A Casper 52.72 336 P P 20 14 55.7 +0.9
baz=147
EDW2 Edwards Air Fo 52.79 321 P P 20 14 57.0 +1.7
baz=131
PSUT Pine Spring 52.92 328 P P 20 14 58.2 +1.8
LRMC Laurel Mtn Rad 52.99 322 P P 20 14 58.0 +1.1
baz=131
RSSD Black Hills 53.04 339 P P 20 14 58.9 +1.6
RSSD Black Hills 53.04 339 P P 20 14 58.0 +0.8
baz=150
TPNV Topopah Spring 53.13 324 P P 20 14 59.1 +1.2
TPNV Topopah Spring 53.13 324 P P 20 14 59.1 +1.2
baz=134
FURC Furnace Creek, 53.16 324 P P 20 14 59.0 +1.1
baz=133
JLU Jordanelle 53.25 331 P P 20 15 00.3 +1.4
MPMC Manual Prospec 53.25 323 P P 20 14 59.9 +0.9
baz=132
ISA Isabella, Lake 53.59 322 P P 20 15 02.0 +0.8
ISA IAmb IAmb 20 15 03.6
comp=Z,14nm,1.8s
ISA Isabella, Lake 53.59 322 P P 20 15 02.7 +1.4
baz=131
DUG Dugway, Tooele 53.61 330 P P 20 15 03.1 +1.7
DUG IAmb IAmb 20 15 14.6
comp=Z,7.7nm,1.1s
DUG Dugway, Tooele 53.61 330 P P 20 15 02.3 +0.8
baz=139
TCUT Toone Canyon 53.63 331 P P 20 15 01.7 +0.1
R11A Troy Canyon, C 53.73 326 P P 20 15 04.1 +1.8
R11A Troy Canyon, C 53.73 326 P P 20 15 03.3 +0.9
baz=135,SNR=5.1
CWC Cottonwood Cre 53.87 323 P P 20 15 04.7 +1.4
baz=132
PKM Mcpherson Peak 53.94 320 P P 20 15 04.6 +0.6
baz=129
HWUT Hardware Ranch 54.09 332 P P 20 15 05.5 +0.6
PD31 Pinedale Array 54.09 334 P P 20 15 05.2 +0.2
PDAR Pinedale Array 54.09 334 P P 20 15 05.2 +0.2
comp=Z,1.7nm,0.9s,baz=132,slow=8.8,SNR=12
PDAR pP pP 20 15 16.1 -1.2
comp=Z,2.3nm,0.8s,baz=99,slow=9.2,SNR=11
BW06 Boulder Array 54.09 334 P P 20 15 05.5 +0.5
BW06 IAmb IAmb 20 15 06.8
comp=Z,23nm,1.9s
BW06 Boulder Array 54.09 334 P P 20 15 05.4 +0.5
baz=144
SPUT South Promonto 54.28 331 P P 20 15 06.9 +0.6
AGMN Agassiz Nation 54.54 348 P P 20 15 07.7 -0.2
PAGB Antelope Grade 54.74 321 P P 20 15 10.3 +0.7
PAGB IAmb IAmb 20 17 06.0
comp=Z,17nm,1.5s
REDW Red Top Meadow 55.14 334 P P 20 15 13.0 +0.5
REDW IAmb IAmb 20 15 14.4
comp=Z,15nm,1.4s
SNOW Snow King Moun 55.17 334 P P 20 15 12.8 0.0
SNOW IAmb IAmb 20 16 23.3
comp=Z,5.1nm,0.5s
OMMB Old Mammoth Mi 55.19 323 P P 20 15 14.2 +1.1
NV11 Mina Array Sit 55.24 325 P P 20 15 14.4 +1.1
NV11 IAmb IAmb 20 15 15.7
comp=Z,9.4nm,1.3s
ELK Elko 55.26 328 P P 20 15 14.4 +0.9
comp=Z,1.5nm,0.7s,baz=143,slow=7.2,SNR=7.4
ELK pP pP 20 15 25.2 -0.6
comp=Z,1.7nm,0.9s,baz=59,slow=0.9,SNR=4.4
ELK Elko 55.26 328 P P 20 15 14.6 +1.1
NVAR Mina Array Bea 55.33 324 P P 20 15 15.2 +1.2
comp=Z,2.0nm,0.6s,baz=128,slow=7.3,SNR=23
NVAR pP pP 20 15 26.0 -0.3
comp=Z,2.3nm,0.8s,baz=128,slow=6.3,SNR=8.1
NVAR LR LR 20 36 47.1
comp=Z,200nm,21.3s,baz=28,slow=34
MOOW Moose Ponds 55.40 334 P P 20 15 15.0 +0.6
MOOW IAmb IAmb 20 15 15.8
comp=Z,11nm,1.8s
PMPB Monarch Peak 55.40 321 P P 20 15 15.5 +1.2
RYN Ryan 55.59 324 P P 20 15 16.9 +1.1
KVN Kaiserville 55.63 325 P P 20 15 17.1 +1.0
WAKR Walker 56.04 324 P P 20 15 20.5 +1.4
WAKR IAmb IAmb 20 15 21.6
comp=Z,19nm,1.9s
YNE Yellowstone No 56.09 335 P P 20 15 19.9 +0.5
BMN Battle Mountai 56.09 327 P P 20 15 20.5 +1.1
ULM Lac du Bonnet 56.40 348 P P 20 15 20.7 -0.5
comp=Z,2.2nm,0.7s,baz=143,slow=7.5,SNR=4.8
ULM pP pP 20 15 32.0 -1.6
comp=Z,13nm,1.0s,baz=153,slow=8.0,SNR=9.8
YHL Hebgen Lake 56.46 334 P P 20 15 23.9 +1.8
VCNR Virginia City 56.69 324 P P 20 15 24.8 +1.1
VCNR IAmb IAmb 20 16 01.6
comp=Z,4.9nm,0.6s
PAHR Pah Rah Range 56.81 325 P P 20 15 25.6 +1.1
BEKR Beckworth 57.48 324 P P 20 15 30.1 +0.9
MFID Camas Ranch 57.51 330 P P 20 15 30.5 +1.2
LRM Limekiln Ridge 57.78 334 P P 20 15 37.5 +6.1
ORV Oroville 57.94 323 P P 20 15 33.3 +1.0
ORV IAmb IAmb 20 15 34.7
comp=Z,7.5nm,1.1s
WVOR Wild Horse Val 58.25 328 P P 20 15 35.1 +0.5
WVOR IAmb IAmb 20 15 36.3
comp=Z,12nm,1.1s
EGMT Eagleton 58.46 338 P P 20 15 37.0 +1.2
baz=145
O03E Paynes Creek 58.59 324 P P 20 15 38.3 +1.4
baz=130
MOD Modoc Plateau 58.80 326 P P 20 15 39.3 +0.9
MSO Missoula 59.21 334 P P 20 15 42.0 +0.8
MSO IAmb IAmb 20 15 54.2
comp=Z,7.5nm,1.0s
MSO Missoula 59.21 334 P P 20 15 41.8 +0.7
baz=140
KCPM Cahto Peak 59.27 322 P P 20 15 43.0 +1.3
N02D Trinity Center 59.56 324 P P 20 15 44.5 +1.0
baz=129
M04C Macdoel 59.58 325 P P 20 15 44.7 +1.0
baz=130
YBH Yreka Blue Hor 60.04 325 P P 20 15 46.4 -0.5

YBH					IAmb	IAmb	20 15 51.4			
	comp=Z,13nm,1.8s									
L04D	**Klamath Falls**	**60.12**	**325**		P	**P**	**20 15 49.2**	**+1.7**		
	baz=130									
J05D	**Fort Rock, OR**	**60.23**	**327**		P	**P**	**20 15 49.8**	**+1.6**		
	baz=132									
PINE	**Pine Mountain**	**60.41**	**328**		P	**P**	**20 15 49.0**	**-0.6**		
PINE					IAmb	IAmb	20 16 03.3			
	comp=Z,9.5nm,1.1s									
G08A	**Pilot Rock**	**60.42**	**330**		P	**P**	**20 15 48.3**	**-1.2**		
SCHQ	**Schefferville**	**60.59**	**9**		pP	pP	20 16 00.4	-2.4		
	comp=Z,5.1nm,0.9s,baz=147,slow=3.7,SNR=4.4									
J04D	**Umpqua Nationa**	**60.68**	**326**		P	**P**	**20 15 52.7**	**+1.3**		
	baz=131									
L02E	**Cave Junction**	**60.83**	**325**		P	**P**	**20 15 53.3**	**+1.2**		
	baz=129									
E09A	**Wood Farm, Sta**	**60.90**	**331**		P	**P**	**20 15 52.9**	**+0.3**		
E09A					IAmb	IAmb	20 16 06.1			
	comp=Z,6.0nm,0.9s									
K02D	**Willamette Mer**	**61.20**	**325**		P	**P**	**20 15 56.6**	**+1.8**		
	baz=129									
G05D	**Wamic, OR**	**61.59**	**329**		P	**P**	**20 15 58.4**	**+1.1**		
	baz=132									
J01E	**Myrtle Point**	**61.65**	**325**		P	**P**	**20 16 00.0**	**+2.4**		
	baz=129									
D03D	**Eldon**	**64.04**	**330**		P	**P**	**20 16 14.9**	**+1.4**		
	baz=132									
FCC	**Fort Churchill**	**64.29**	**352**		P	**P**	**20 16 15.6**	**+0.7**		
FCC					IAmb	IAmb	20 16 26.1			
	comp=Z,10nm,0.9s									
YKA	**Yellowknife Ar**	**71.93**	**344**		P	**P**	**20 17 02.5**	**-0.3**		
	comp=Z,0.6nm,0.9s,baz=138,slow=6.1,SNR=10									
LIC	**Lamto**	**76.43**	**82**		*e*P	**P**	**20 17 29.9**	**-0.1**		
	comp=Z,7.5nm,0.6s									
TIC	**Toumodi**	**76.49**	**82**		*e*P	**P**	**20 17 30.4**	**0.0**		
	comp=Z,1.3nm,0.2s									
DBIC	**Dimbokro**	**76.65**	**82**		P	**P**	**20 17 31.6**	**+0.3**		
	comp=Z,3.3nm,0.7s,baz=239,slow=6.5,SNR=8.4									
DBIC					LR	LR	20 50 48.0			
	comp=Z,173nm,18.6s,baz=342,slow=35									
DBIC	**Dimbokro**	**76.65**	**82**		IAmb	IAmb	20 18 11.5			
	comp=Z,16nm,1.4s									
KIC	**Kosan Boka**	**76.73**	**82**		*e*P	**P**	**20 17 31.6**	**-0.1**		
	comp=Z,17nm,1.0s									
VNA3	**Neumayer Olymp**	**79.42**	**162**		P	**P**	**20 17 45.2**	**-0.4**		
INK	**Inuvik**	**81.58**	**343**		P	**P**	**20 17 57.2**	**+0.1**		
	comp=Z,1.1nm,1.0s,baz=113,slow=3.3,SNR=2.4									
SNAA	**Sanae**	**81.64**	**162**		P	**P**	**20 17 56.9**	**-0.6**		
SNAA	**Sanae**	**81.64**	**162**		P	**P**	**20 17 57.0**	**-0.6**		
TOA0	**Torodi Ar. Sit**	**83.80**	**76**		P	**P**	**20 18 08.5**	**-1.2**		
TOA0					IAmb	IAmb	20 20 01.0			
	comp=Z,9.0nm,1.5s									
TORD	**Torodi Ar. Bea**	**83.80**	**76**		P	**P**	**20 18 09.4**	**-0.4**		
	comp=Z,2.1nm,0.6s,baz=287,slow=5.5,SNR=23									
TORD	**Torodi Ar. Bea**	**83.80**	**76**		P	**P**	**20 18 09.1**	**-0.7**		
ILAR	**Eielson Array**	**84.42**	**337**		P	**P**	**20 18 11.9**	**+0.1**		
	comp=Z,0.5nm,0.9s,baz=141,slow=3.2,SNR=3.8									
ILAR					pP	**pP**	**20 18 23.8**	**-1.2**		
	comp=Z,0.8nm,0.9s,baz=139,slow=4.5,SNR=5.4									
ILAR					LR	LR	20 56 17.4			
	comp=Z,98nm,22.0s,baz=60,slow=36									
ILAR	**Eielson Array**	**84.42**	**337**		P	**P**	**20 18 11.2**	**-0.7**		
QSPA	**South Pole Qui**	**85.24**	**180**		P	**P**	**20 18 16.1**	**0.0**		
SYO	**Syowa Base**	**95.93**	**162**	⇑	*e*X	P	20 19 14.0	+7.8		
H11S2	**WAKE ISLAND Hy**	**12.86**	**288**		T	T	22 26 13.6			
	baz=88,slow=75,SNR=8.0									
H11S1	**WAKE ISLAND Hy**	**12.86**	**288**		T	T	22 26 13.5			
	baz=88,slow=75,SNR=9.1									
H11S3	**WAKE ISLAND Hy**	**12.87**	**288**		T	T	22 26 13.9			
	baz=88,slow=75,SNR=6.3									
ZALV	**Zalesovo Beam**	**129.66**	**11**		PKP	**PKPdf**	**20 24 48.0**	**-0.5**		
	comp=Z,0.5nm,0.3s,baz=243,slow=1.3,SNR=5.1									
ZALV					pPKP	**pPKPdf**	**20 24 59.7**	**-2.3**		
	comp=Z,2.6nm,0.8s,baz=5.7,slow=3.0,SNR=5.5									
ZALV	**Zalesovo Beam**	**129.66**	**11**			**PKPdf**	**20 24 47.4**	**-1.2**		
MKAR	**Makanchi Array**	**135.72**	**17**		PKP	**PKPdf**	**20 24 59.4**	**-0.9**		
	comp=Z,0.6nm,0.8s,baz=327,slow=2.4,SNR=6.6									
MKAR	**Makanchi Array**	**135.72**	**17**			**PKPdf**	**20 24 59.0**	**-1.3**		
ASAR	**Alice Springs**	**135.87**	**229**		PKhKP	PKPpre	20 24 51.5			
	comp=Z,0.5nm,0.8s,baz=170,slow=1.6,SNR=4.8									
ASAR					PKP	**PKPdf**	**20 25 00.8**	**-0.4**		
	comp=Z,0.9nm,0.8s,baz=94,slow=1.9,SNR=7.0									
ASAR	**Alice Springs**	**135.87**	**229**			**PKPdf**	**20 25 01.0**	**-0.3**		
SONM	**Songino Array**	**136.72**	**353**		PKP	**PKPdf**	**20 25 02.2**	**-0.1**		
	comp=Z,0.2nm,0.6s,baz=48,slow=2.1,SNR=3.0									
WRA	**Warramunga Arr**	**137.59**	**233**		PKP	**PKPdf**	**20 25 04.1**	**-0.4**		
	comp=Z,0.7nm,0.7s,baz=118,slow=2.1,SNR=7.5									
WRA					pPKP	**pPKPdf**	**20 25 15.8**	**-2.2**		
	comp=Z,1.3nm,0.7s,baz=128,slow=1.8,SNR=6.6									
KSH	**Kashi**	**139.59**	**28**		PKP	**PKiKP**	**20 25 11.2**	**+1.1**		
KSH					sPKP		20 25 25.3			
KSH					PP	**PP**	**20 28 07.4**	**+5.4**		
KSH					AMB	AMB				
	comp=Z,490nm,8.9s									
FITZ	**Fitzroy Crossi**	**145.37**	**228**			**PKPbc**	**20 25 17.6**	**-0.7**		
WHN	**Wuhan**	**150.72**	**333**		PKPbc	**PKPab**	**20 25 47.1**	**+7.8**		
CD2	**Chengdu**	**153.72**	**351**		PKPbc	**PKPdf**	**20 25 29.1**	**-2.3**		
CMAR	**Chiang Mai Arr**	**166.47**	**1**		PKP	**PKPdf**	**20 25 45.5**	**-0.4**		
	comp=Z,0.7nm,0.8s,baz=292,slow=2.2,SNR=5.6									

MAN 06 20:29:02.5, 9.90N×124.04E, h36km, mb4.4, ML3.3, MS3.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°		Phase	ID	Time	Res
					Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.42**	**350**	⇓	*e*P	Pn	20 29 13.7	+1.8
LLP					*i* S	Sn	20 29 20.9	+2.2
MSLP	**Maasin**	**0.84**	**74**		*e*P	Pn	20 29 18.9	+1.2
MSLP					*e*S	Sn	20 29 29.7	+0.8

*IDC **06** 21:10:31.0±2.9, 36°.81N×71°.32E, h71km±26km, mb3.5/11, mb1 3.7/16, mb1mx3.4/43, mbtmp3.9/16, Error ellipse: s-maj=22.5km s-min=16.3km az=23.0*
*NNC **06** 21:10:33.8±3.9, 37°.42N×71°.13E, h0km, mb4.4, mpv4.4, Error ellipse: s-maj=33.6km s-min=29.7km az=44.0*
*BJI **06** 21:10:34.1±0.0, 37°.19N×71°.29E, h111km, mB4.9/10, mb4.4/13*
*NEIC **06** 21:10:34.6±1.4, 37°.09N±0°.06×71°.36E±0°.10, h108km±6km, mb4.0/4, Error ellipse: s-maj=11.2km s-min=8.9km az=79.0*

ISC 06 21:10:34.5±0.6, 37°.04N±0°.05×71°.53E±0°.06, h106km, n80, σ2s08°/87, mb3.6/14, 3C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°		Phase	ID	Time	Res
					Op	ISC	h m s	ISC
BTK	**Batken**	**3.07**	**350**			**Pn**	**21 11 21.7**	**+0.3**
KBL	**Kabul**	**3.21**	**220**			**Pn**	**21 11 23.1**	**-0.2**
KBL						Sn	21 11 54.1	-7.0
CEP	**Cherat**	**3.22**	**174**		P	**Pn**	**21 11 24.7**	**+1.2**
CEP					S	**Sn**	**21 12 04.0**	**+2.8**
CHCP	**Chirah Chowk**	**3.65**	**157**		P	**Pn**	**21 11 31.3**	**+2.1**
NIL	**Nilore**	**3.66**	**157**			**Pn**	**21 11 31.6**	**+2.4**
NIL						**Sn**	**21 12 07.7**	**-3.8**
THW	**Thamme Wali**	**4.23**	**178**		P	**Pn**	**21 11 37.4**	**+0.4**
KSH	**Kashi**	**4.28**	**53**		P	**Pn**	**21 11 36.2**	**-1.5**
KSH					S	**Sn**	**21 12 21.6**	**-5.1**
KSH					smax	smax		
	comp=N,1μm,0.6s							
KSH					smax	smax		
	comp=E,530nm,0.5s							
ARSB	**Arslanbob**	**4.43**	**14**			**Pn**	**21 11 39.7**	**0.0**
ARSB						**Sn**	**21 12 24.4**	**-5.8**
TAS	**Tashkent**	**4.62**	**339**		*e*P	Pn	21 11 59.8	+18
TAS					*e*S	**Sn**	**21 12 30.4**	**-4.3**
IUG	**Iuzhnay**	**5.24**	**348**		Pg	**Pn**	**21 11 50.0**	**-0.5**
	6.0nm,0.3s							
IUG					Lg	Lg	21 12 46.3	
	61nm,0.3s							
AML	**Almayashu**	**5.36**	**17**		P	**Pn**	**21 11 52.9**	**+0.5**
	SNR=98							
NRN	**Naryn**	**5.60**	**37**			**Pn**	**21 11 56.5**	**+0.9**
UCH	**Uchtor**	**5.67**	**23**		P	**Pn**	**21 11 57.6**	**+0.9**
	SNR=24							
KZA	**Kyzart**	**5.80**	**29**		P	**Pn**	**21 11 59.5**	**+1.1**
	SNR=10.0							
MRKS	**Merke**	**5.85**	**12**		Pg	**Pn**	**21 11 59.3**	**+0.5**
	51nm,0.4s							
MRKS					Lg	Lg	21 13 02.6	
	25nm,0.5s							
EKS2	**Erkin-Say**	**5.88**	**16**		P	**Pn**	**21 12 00.2**	**+0.9**
	SNR=26							
AAK	**Ala-Archa**	**6.04**	**21**		P	**Pn**	**21 12 02.8**	**+1.3**
	8.1nm,0.3s,baz=178,slow=6.1,SNR=178							
AAK					S	**Sn**	**21 13 09.2**	**-0.1**
	2.0nm,0.3s,baz=287,slow=21,SNR=4.2							
AAK	**Ala-Archa**	**6.04**	**21**		P	**Pn**	**21 12 03.1**	**+1.6**
	SNR=24							
AAK	**Ala-Archa**	**6.04**	**21**			**Pn**	**21 12 02.7**	**+1.3**
AAK						**Sn**	**21 13 06.2**	**-3.1**
AAK	**Ala-Archa**	**6.04**	**21**	⇓	P	**Pn**	**21 12 03.1**	**+1.6**
	18nm,0.5s							
AAK				⇑	S	**Sn**	**21 13 09.4**	**0.0**
	34nm,0.7s							
KK31	**Karatay Array**	**6.11**	**353**			**Pn**	**21 12 01.4**	**-1.0**
KK31						**Sn**	**21 13 05.3**	**-5.5**
KK31	**Karatay Array**	**6.11**	**353**	⇓	P	**Pn**	**21 12 01.3**	**-1.0**
	8.5nm,0.2s,baz=179,slow=13,SNR=893							
KK31				⇓	S	**Sn**	**21 13 07.2**	**-3.6**
	7.5nm,0.3s,baz=186,slow=23							
KKAR	**Karatay Array**	**6.11**	**353**			**Pn**	**21 12 01.4**	**-0.9**
DHRM	**DHARAMSHALA**	**6.18**	**139**		*e*P	**Pn**	**21 12 04.5**	**+1.0**
DHRM					*e*S	**Sn**	**21 13 11.5**	**-1.4**
DHRM					IAML		21 13 34.7	
	comp=N,113nm,0.2s							
DHRM					IAML		21 13 35.0	
	comp=E,125nm,0.4s							
KBK	**Karagaybulak**	**6.20**	**24**		P	**Pn**	**21 12 05.3**	**+1.7**
	SNR=11							
ULHL	**Ulahol**	**6.35**	**33**		P	**Pn**	**21 12 07.9**	**+2.2**
	SNR=10							
CHMS	**Chumysh**	**6.45**	**22**		P	**Pn**	**21 12 08.0**	**+1.2**
	SNR=56							
USP	**Ospenovka**	**6.63**	**19**		P	**Pn**	**21 12 09.8**	**+0.5**
	SNR=33							
TKM2	**Tokmak 2**	**6.66**	**27**		P	**Pn**	**21 12 11.2**	**+1.3**
	SNR=15							
TKM2	**Tokmak 2**	**6.66**	**27**	⇓	P	**Pn**	**21 12 11.1**	**+1.3**
	comp=E,19nm,0.6s							
KDJ	**Kajisay**	**6.70**	**39**		Pn	**Pn**	**21 12 11.5**	**+1.1**
KST	**Kastek**	**6.90**	**28**		Pg	**Pn**	**21 12 14.9**	**+1.9**
KST					Lg	Lg	21 13 30.0	
SMLA	**Simla**	**7.52**	**140**		*e*P	**Pn**	**21 12 21.6**	**+0.2**
SMLA					*e*S	**Sn**	**21 13 41.3**	**-3.8**
SMLA					IAML		21 13 46.2	
	comp=N,132nm,0.6s							
SMLA					IAML		21 13 47.1	
	comp=E,149nm,0.4s							
DDI	**Dehra Dun**	**8.62**	**139**		IAML		21 14 19.6	
	comp=E,139nm,0.2s							
DDI					IAML		21 14 20.2	
	comp=N,146nm,0.2s							
JOSI	**Joshimath**	**9.29**	**132**		*e*P	**Pn**	**21 12 46.0**	**+0.3**
JOSI					*e*S	**Sn**	**21 14 22.1**	**-6.3**
JOSI					IAML		21 14 34.3	
	comp=N,108nm,0.6s							
JOSI					IAML		21 14 34.5	
	comp=E,71nm,0.4s							
KUDL	**Kundal**	**9.80**	**153**		*e*P	Pn	21 12 47.7	-4.7
KUDL					*e*S	Sn	21 14 27.2	-13
GEYT	**Alibeck**	**10.70**	**279**		P	Pn	21 12 58.1	-6.6
	comp=E,0.4nm,0.3s,baz=93,slow=9.7,SNR=8.9							
GEYT					S	Sn	21 14 48.8	-14
	comp=E,1.5nm,0.3s,baz=110,slow=17,SNR=8.4							
MAKZ	**Makanchi**	**12.47**	**35**			**Pn**	**21 13 28.2**	**+0.1**
MAKZ	**Makanchi**	**12.47**	**35**	⇓	P	**Pn**	**21 13 28.4**	**+0.2**
	comp=E,5.0nm,1.4s							
MK31	**Makanchi Array**	**12.61**	**36**			**Pn**	**21 13 30.5**	**+0.6**
MK31	**Makanchi Array**	**12.61**	**36**		P	**Pn**	**21 13 30.2**	**+0.3**
	comp=E,1.8nm,0.5s,baz=226,slow=16,SNR=26							
MKAR	**Makanchi Array**	**12.61**	**36**		P	**Pn**	**21 13 30.5**	**+0.5**
	comp=E,0.6nm,0.3s,baz=226,slow=15,SNR=39							
DANN	**Dangsing**	**13.44**	**127**		*e*P	**Pn**	**21 13 38.4**	**-2.9**
	comp=E,11nm,0.3s							
WMQ	**Urumqi**	**14.04**	**56**		*e*P	**Pn**	**21 13 50.5**	**+1.8**
WMQ					pmax	pmax		
	comp=E,4.0nm,0.7s							
WMQ					pmax	pmax		
	comp=E,670nm,11.3s							
WMQ					LR	LR		
	comp=E,650nm,8.7s							
WMQ					LR	LR		
	comp=E,330nm,9.3s							
WMQ					LR	LR		
	comp=E,260nm,12.7s							
KURBB	**Kurchatov Arra**	**14.48**	**18**		P	**Pn**	**21 13 53.0**	**-1.2**
	comp=E,0.0nm,0.3s,baz=215,slow=12,SNR=8.1							
KURBB	**Kurchatov Arra**	**14.48**	**18**	⇓	P	**P**	**21 13 57.8**	**-0.1**
	comp=E,3.8nm,0.7s							
KURK	**Kurchatov**	**14.59**	**18**			**Pn**	**21 13 54.8**	**-0.8**
KURK	**Kurchatov**	**14.59**	**18**	⇑	P	**P**	**21 13 58.0**	**-1.0**
	comp=E,4.4nm,1.5s							
KKN	**Kakani**	**14.81**	**125**		*e*P	**Pn**	**21 13 56.6**	**-2.2**
	comp=E,4.9nm,0.2s							
DMN	**Daman**	**14.82**	**125**		*e*P	**Pn**	**21 13 56.9**	**-2.0**
	comp=E,6.1nm,0.2s							
AB31	**Akbulak array**	**14.84**	**329**	⇑	P	Pn	21 13 54.5	-4.1
	comp=E,1.1nm,0.5s,baz=143,slow=12,SNR=71							
AB31				⇓	S	Sn	21 16 25.0	-17
	comp=E,5.1nm,0.7s							
ABKAR	**Akbulak array**	**14.84**	**329**			Pn	21 13 54.5	-4.2
PKIN	**Phulchoki**	**15.03**	**125**		*e*P	**Pn**	**21 13 59.8**	**-1.8**
	comp=E,5.3nm,0.2s							
PKI	**Pulchoki**	**15.04**	**125**		*e*P	**Pn**	**21 13 59.8**	**-2.0**
	comp=E,1.3nm,0.4s							
GUN	**Gumba**	**15.13**	**123**		*e*P	**Pn**	**21 14 00.1**	**-2.8**
	comp=E,6.5nm,0.3s							
JIRN	**Jiri**	**15.50**	**123**		*e*P	**Pn**	**21 14 05.5**	**-2.1**
BVAR	**Borovoye Array**	**16.01**	**357**		P	**Pn**	**21 14 11.7**	**-1.7**
	comp=E,0.5nm,0.3s,baz=160,slow=14,SNR=20							
RAMN	**Ramite**	**16.24**	**124**		*e*P	**Pn**	**21 14 14.4**	**-2.3**
	comp=E,17nm,0.4s							
AKTO	**Aktyubinsk**	**16.54**	**328**		P	**Pn**	**21 14 19.4**	**-0.5**
	comp=E,0.5nm,0.3s,baz=132,slow=9.0,SNR=3.6							
AKTO					S	Sn	21 17 09.7	-14
	comp=E,0.2nm,0.3s,baz=202,slow=19,SNR=3.9							
TAPN	**Taplejung**	**16.73**	**121**		*e*P	**Pn**	**21 14 20.9**	**-1.9**
	comp=E,8.7nm,0.3s							
ODAN	**Odare**	**16.83**	**123**		*e*P	**Pn**	**21 14 22.1**	**-1.8**
	comp=E,18nm,0.6s							
ZAA0	**Zalesovo Array**	**19.25**	**24**		P	**P**	**21 14 50.6**	**+0.3**
ZAA0					IAmb	IAmb	21 14 55.6	
	comp=Z,4.1nm,0.6s							
ZALV	**Zalesovo Beam**	**19.25**	**24**		P	**P**	**21 14 51.4**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=219,slow=11,SNR=14							
SHL	**Shillong**	**20.76**	**118**		P	**P**	**21 15 08.1**	**+0.9**
ARU	**Arti**	**21.27**	**340**		P	**P**	**21 15 14.0**	**+1.9**
	comp=Z,0.7nm,0.5s,baz=160,slow=12,SNR=5.8							
GTA	**Gaotai**	**22.31**	**75**		*e*P	**P**	**21 15 27.7**	**+4.3**
GTA					pmax	pmax		
	comp=E,8.0nm,0.8s							
GAZ	**Gaziantep**	**27.29**	**281**		P	**P**	**21 16 06.4**	**-2.7**
GAZ					IAmb	IAmb	21 16 08.7	
	comp=Z,3.0nm,0.6s							
SONM	**Songino Array**	**27.68**	**56**		P	**P**	**21 16 14.3**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=266,slow=8.7,SNR=6.7							
ULN	**Ulaanbaatar**	**28.12**	**56**		P	**P**	**21 16 16.8**	**+0.3**
CMAR	**Chiang Mai Arr**	**30.34**	**120**		P	**P**	**21 16 37.2**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=304,slow=7.9,SNR=4.1							
HHC	**Hu-ho-hao-te**	**31.18**	**70**		*e*P	**P**	**21 16 44.4**	**+0.9**
HHC					pmax	pmax		
	comp=Z,5.0nm,0.8s							
HHC					pmax	pmax		
	comp=Z,100nm,5.7s							
FINES	**FINESS Array B**	**37.28**	**326**		P	**P**	**21 17 36.7**	**+1.0**
	comp=Z,5.4nm,1.1s,baz=121,slow=9.5,SNR=7.7							
ARCES	**ARCESS Array B**	**40.82**	**337**		P	**P**	**21 18 06.3**	**+1.2**
	comp=Z,7.3nm,1.1s,baz=99,slow=7.5,SNR=4.1							
NB2	**NORSAR Subarra**	**44.21**	**323**		P	**P**	**21 18 34.0**	**+1.3**
	comp=Z,1.0nm,0.7s,baz=91,slow=7.9							
NOA	**NORSAR Array B**	**44.21**	**323**		P	**P**	**21 18 33.3**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=96,slow=7.9,SNR=2.6							
TORD	**Torodi Ar. Bea**	**66.16**	**269**		P	**P**	**21 21 10.1**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=55,slow=6.4,SNR=9.1							
ILAR	**Eielson Array**	**74.15**	**16**		P	**P**	**21 22 00.4**	**+1.5**
	comp=Z,0.7nm,1.0s,baz=324,slow=4.6,SNR=4.9							
YKA	**Yellowknife Ar**	**80.69**	**3**		P	**P**	**21 22 37.0**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=349,slow=5.4,SNR=27							
WRA	**Warramunga Arr**	**81.91**	**122**		P	**P**	**21 22 42.8**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=324,slow=5.3,SNR=5.8							
ASAR	**Alice Springs**	**84.21**	**125**		P	**P**	**21 22 54.8**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=319,slow=6.0,SNR=5.5							

*IDC **06** 21:17:13.0±1.6, 35°.04S×72°.55W, h0km, mb3.7/3, mb1 4.0/6, mb1mx3.8/33, mbtmp3.8/6, ML4.1/3, MS2.9/1, Ms1 2.9/1, ms1mx2.7/24, Error ellipse: s-maj=40.6km s-min=29.1km az=91.0*

*GUC **06** 21:17:16.0±0.6, 35°.05S×72°.65W, h20km±5km, ML4.2*
*NEIC **06** 21:17:17.6±1.2, 35°.01S±0°.07×72°.4W±0°.2, h32km±4km, Error ellipse: s-maj=19.1km s-min=10.3km az=95.0*

ISC 06 21:17:13.8±2.0, 35°.02S±0°.05×72°.71W±0°.07, h10km±13km, n26, σ1s06°/30, mb3.9/3, 2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°		Phase	ID	Time	Res
					Op	ISC	h m s	ISC
GO05	**Huala**	**0.64**	**89**	⇓	*i*P	**Pb**	**21 17 26.9**	**-0.1**
GO05					*i* S	**Sb**	**21 17 35.0**	**-1.0**
GO05					IAML		21 17 35.9	
	comp=E,13μm,0.3s							
GO05	**Huala**	**0.64**	**89**		Pn	**Pg**	**21 17 26.7**	**+0.5**
COCH	**Cobquecura**	**1.11**	**183**	⇓	*i*P	**Pb**	**21 17 34.3**	**-0.7**
COCH					*e*S	**Sb**	**21 17 48.4**	**-1.1**
CCHI	**Chillan**	**1.66**	**162**		*e*P	**Pn**	**21 17 42.9**	**0.0**
CCHI					*i* S	**Sn**	**21 18 03.4**	**-0.8**
CCHI					IAML		21 18 08.5	
	comp=E,4μm,0.1s							
BI03	**Tigo**	**1.84**	**188**		*e*P	**Pn**	**21 17 46.4**	**+1.0**
BI03					*e*S	**Sn**	**21 18 09.1**	**+0.4**
BI03					IAML		21 18 12.9	
	comp=N,5μm,0.4s							
VA01	**Torpederas**	**2.18**	**24**		*e*P	**Pn**	**21 17 50.1**	**0.0**
MT05	**Renca**	**2.30**	**46**		IAML		21 18 35.8	
	comp=E,2μm,0.3s							
MT03	**Universidad Ad**	**2.37**	**51**		IAML		21 18 32.6	
	comp=N,3μm,0.3s							
LMEL	**Las Melosas**	**2.38**	**61**		*e*P	**Pn**	**21 17 54.5**	**+1.5**
LMEL					*i* S	**Sb**	**21 18 25.4**	**-0.8**
LMEL					IAML		21 18 30.3	
	comp=N,2μm,0.6s							
CLCH	**Cerro Calan**	**2.42**	**49**		*e*P	**Pn**	**21 17 54.9**	**+1.4**
CLCH					*e*S	**Sn**	**21 18 24.2**	**+1.0**
CLCH					IAML		21 18 35.7	
	comp=N,2μm,0.5s							
ROC1	**El Roble**	**2.48**	**35**			**Pn**	**21 17 54.3**	**-0.1**
PEL	**Peldehue**	**2.51**	**42**		*e*P	**Pn**	**21 17 55.8**	**+1.1**
PEL					*e*S	**Sb**	**21 18 27.2**	**-2.9**
PEL					IAML		21 18 37.6	
	comp=N,929nm,0.6s							
PEL	**Peldehue**	**2.51**	**42**			**Pn**	**21 17 55.4**	**+0.6**
GO06	**Curarrehue**	**4.66**	**168**		Pn	**Pn**	**21 18 23.6**	**-0.7**
CFA	**Coronel Fontan**	**5.06**	**49**		Pn	**Pn**	**21 18 31.0**	**+1.2**
	comp=N,4.7nm,0.3s,baz=221,slow=13,SNR=40							
CFA					Lg	Lg	21 19 44.0	
	comp=N,9.6nm,0.3s,baz=131,slow=19,SNR=8.8							
CFA					LR	LR	21 20 46.1	
	comp=N,146nm,21.0s,baz=256,slow=43							
GO04	**Tololo Observa**	**5.10**	**19**			**Pn**	**21 18 30.9**	**+0.4**
PLCA	**Paso Flores**	**5.95**	**164**		Pn	**Pn**	**21 18 42.4**	**+0.4**
	comp=N,1.1nm,0.3s,baz=353,slow=13,SNR=10.0							
PLCA					Lg	Lg	21 20 14.2	
	comp=N,0.7nm,0.3s,baz=114,slow=22,SNR=4.8							
PLCA	**Paso Flores**	**5.95**	**164**			**Pn**	**21 18 43.0**	**+1.0**
GO03	**Copiap**	**7.70**	**17**			**Pn**	**21 19 05.6**	**-0.4**
GO02	**Mina Guanaco**	**10.19**	**16**		Pn	**Pn**	**21 19 39.2**	**-1.2**
MNMC	**Minye Minye**	**16.07**	**11**		Pn	**Pn**	**21 20 59.0**	**-1.1**
MNMC					IAmb	IAmb	21 21 07.1	
	comp=Z,13nm,0.8s							
LPAZ	**La Paz**	**19.10**	**14**		P	**P**	**21 21 37.6**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=266,slow=1.0,SNR=5.0							
LPAZ	**La Paz**	**19.10**	**14**		IAmb	IAmb	21 21 45.4	
	comp=Z,2.9nm,0.9s							
SIV	**San Ignacio**	**21.63**	**32**		P	**P**	**21 22 04.1**	**-0.1**
	comp=Z,3.9nm,0.6s,baz=224,slow=10,SNR=17							
TXAR	**Lajitas Array**	**70.36**	**332**		P	**P**	**21 28 29.4**	**+1.6**
	comp=

	6.5nm,0.6s							
AAK				⇑Lg	Lg	21 45 51.2		
	29nm,1.0s							
KBK	**Karagaybulak**	**3.17**	**9**	P	**Pb**	**21 45 10.2**	**-0.1**	
	SNR=16							
BOOM	**Boomskoye usch**	**3.22**	**22**	⇑*iP*	**Pb**	**21 45 10.5**	**-0.6**	
	baz=22							
BOOM				⇑*iS*	**Sb**	**21 45 50.1**	**-0.3**	
	baz=22							
MRKS	**Merke**	**3.33**	**346**	*eP*	**Pb**	**21 45 11.9**	**-1.0**	
	5.5nm,0.3s							
MRKS				*eS*	**Sg**	**21 45 58.6**	**-2.1**	
	11nm,0.8s							
MRKS	**Merke**	**3.33**	**346**	Pg	**Pb**	**21 45 11.9**	**-1.0**	
	4.0nm,0.3s							
MRKS				Lg	Lg	21 45 59.0		
	11nm,0.8s							
KDJ	**Kajisay**	**3.40**	**39**	⇓*iP*	**Pb**	**21 45 12.7**	**-1.5**	
	baz=38							
KDJ				⇓*eS*	**Sb**	**21 45 54.7**	**-1.0**	
	baz=38							
TKM2	**Tokmak 2**	**3.54**	**16**	⇑Pn	**Pn**	**21 45 12.3**	**+3.3**	
	3.5nm,0.7s							
TKM2				⇑Lg	Lg	21 46 04.2		
	6.9nm,0.5s							
KST	**Kastek**	**3.74**	**19**	*eP*	**Pb**	**21 45 18.4**	**-1.6**	
	15nm,0.5s							
KST				*eS*	**Sg**	**21 46 09.9**	**-3.9**	
	10nm,0.5s							
KST	**Kastek**	**3.74**	**19**	Pg	**Pb**	**21 45 18.4**	**-1.6**	
	15nm,0.5s							
KST				Lg	Lg	21 46 09.9		
	10nm,0.7s							
DGS	**Degeres**	**3.88**	**16**	*eP*	**Pb**	**21 45 22.3**	**-0.1**	
	4.4nm,0.4s							
DGS				*eS*	**Sg**	**21 46 15.9**	**-2.6**	
	11nm,0.6s							
DGS	**Degeres**	**3.88**	**16**	Pg	**Pb**	**21 45 22.3**	**-0.1**	
	4.4nm,0.4s							
DGS				Lg	Lg	21 46 15.9		
	11nm,0.6s							
TNSS	**Tian-Shan**	**4.04**	**29**	*eP*	**Pb**	**21 45 26.0**	**+0.7**	
	5.4nm,0.4s							
TNSS				*eS*	**Sg**	**21 46 23.1**	**-0.4**	
	6.8nm,0.7s							
TNSS	**Tian-Shan**	**4.04**	**29**	Pg	**Pb**	**21 45 25.6**	**+0.4**	
	2.0nm,0.4s							
MDOK	**Medeo**	**4.19**	**29**	*eP*	**Pb**	**21 45 27.9**	**+0.3**	
	5.9nm,1.0s							
MDOK				*eS*	**Sg**	**21 46 26.8**	**-1.5**	
	7.4nm,0.9s							
MDOK	**Medeo**	**4.19**	**29**	Pg	**Pb**	**21 45 27.9**	**+0.3**	
	5.9nm,1.0s							
MDOK				Lg	Lg	21 46 26.8		
	7.4nm,0.9s							
KOTS	**Kotyrbulak**	**4.27**	**29**	*eP*	**Pb**	**21 45 30.1**	**+1.0**	
	2.4nm,0.4s							
KOTS				*eS*	**Sg**	**21 46 29.6**	**-1.3**	
	16nm,0.6s							
KOTS	**Kotyrbulak**	**4.27**	**29**	Pg	**Pb**	**21 45 30.1**	**+1.0**	
	2.4nm,0.4s							
KRBS	**Karabastau**	**4.30**	**13**	*eP*	**Pb**	**21 45 27.9**	**-1.6**	
	0.5nm,0.3s							
KRBS				*eS*	**Sg**	**21 46 26.5**	**-5.4**	
	4.9nm,0.8s							
KTBS	**Karatobe**	**4.55**	**22**	*eP*	**Pb**	**21 45 34.2**	**+0.4**	
	2.8nm,0.5s							
KTBS				*eS*	**Sg**	**21 46 36.4**	**-3.6**	
	11nm,0.5s							
KTBS	**Karatobe**	**4.55**	**22**	Pg	**Pb**	**21 45 34.2**	**+0.4**	
	0.8nm,0.4s							
KTBS				Lg	Lg	21 46 36.8		
	11nm,0.5s							
KK31	**Karatay Array**	**4.58**	**323**	Pn	Pn	21 45 27.9	+4.7	
	0.3nm,0.3s,baz=134,slow=12,SNR=23							
KK31				⇑Pg	**Pg**	**21 45 39.1**	**-2.5**	
	0.6nm,0.3s,baz=140,slow=13,SNR=3.9							
KK31				⇓Lg	Lg	21 46 37.7		
	6.9nm,0.7s,baz=135,slow=26							
CHKK	**Chushkaly**	**4.78**	**24**	*eP*	**Pb**	**21 45 38.2**	**+0.6**	
	0.8nm,0.1s							
CHKK				*eS*	**Sg**	**21 46 43.6**	**-3.5**	
	5.7nm,0.4s							
CHKK	**Chushkaly**	**4.78**	**24**	Pg	**Pb**	**21 45 38.2**	**+0.6**	
CHKK				Lg	Lg	21 46 43.5		
BRLS	**Boroldaу**	**4.87**	**318**	*eP*	**Pb**	**21 45 36.7**	**-2.4**	
	0.5nm,0.3s							
BRLS				*eS*	**Sb**	**21 46 40.7**	**+3.0**	
	3.5nm,0.7s							
BTLS	**Baital**	**5.53**	**358**	*eP*	**Pb**	**21 45 53.8**	**+3.5**	
	0.9nm,0.3s							
BTLS				*eS*	**Sg**	**21 47 10.4**	**-0.7**	
	3.8nm,0.5s							
BTLS	**Baital**	**5.53**	**358**	Pg	**Pb**	**21 45 52.4**	**+2.1**	
	1.0nm,0.2s							
BTLS				Lg	Lg	21 47 07.8		
	3.8nm,0.5s							

*GUC **06** 21:54:20.5±0.7,22°.10S×68°.56W,h115^{km}±5^{km},ML3.0*
*SJA **06** 21:54:20.4±1.3,22°.15S×68°.55W,h115^{km}±7^{km},ML3.1, MW3.2*

ISC 06 21:54:21.6±1.5,**22°.13S**±0°.04×**68°.59W**±0°.06, **h114**^{km}±10^{km},**n21,σ0°64/34,6C-2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.56**	**212**	⇑*iP*		**Pn**	**21 54 39.4**	**-0.5**
LVC				*eS*		**Sn**	**21 54 53.2**	**-0.4**
LVC	**Limon Verde**	**0.56**	**212**	⇑*iP*		**Pn**	**21 54 39.3**	**-0.5**
LVC				*iS*		**Sn**	**21 54 53.1**	**-0.4**
LVC				IAML			21 54 54.2	
	comp=Z,358nm,0.1s							
PB09	**IPOC Station P**	**0.69**	**298**	⇑*iP*		**Pn**	**21 54 40.3**	**-0.2**
PB09				*eS*		**Sn**	**21 54 55.0**	**+0.2**
PB09				IAML			21 54 55.8	
	comp=N,362nm,0.2s							
PB09	**IPOC Station P**	**0.69**	**298**	*iP*		**Pn**	**21 54 40.4**	**-0.2**
PB09				*iS*		**Sn**	**21 54 54.9**	**+0.2**
PB09				IAML			21 54 55.7	
	comp=Z,387nm,0.7s							
PB06	**IPOC Station P**	**1.07**	**237**	⇑*iP*		**Pn**	**21 54 44.0**	**0.0**
PB06				*eS*		**Sn**	**21 55 01.8**	**+0.7**
PB06				IAML			21 55 02.8	
	comp=E,619nm,0.1s							
PB06	**IPOC Station P**	**1.07**	**237**	*iP*		**Pn**	**21 54 44.1**	**0.0**
PB06				*iS*		**Sn**	**21 55 01.4**	**+0.3**
PB06				IAML			21 55 04.1	
	comp=Z,335nm,0.3s							
PB03	**IPOC Station P**	**1.08**	**274**	⇑*iP*		**Pn**	**21 54 43.9**	**-0.3**
PB03				*eS*		**Sn**	**21 55 01.7**	**+0.4**
PB03				IAML			21 55 03.3	
	comp=N,312nm,0.1s							
PB15	**IPOC Station P**	**1.35**	**217**	⇓*eP*		**Pn**	**21 54 47.3**	**+0.2**
PB15				*eS*		**Sn**	**21 55 07.8**	**+1.2**
PB15	**IPOC Station P**	**1.35**	**217**	*iP*		**Pn**	**21 54 47.6**	**+0.4**
PB15				*iS*		**Sn**	**21 55 07.8**	**+1.2**
PB15				IAML			21 55 11.7	
	comp=Z,1μm,0.1s							
PB04	**IPOC Station P**	**1.46**	**262**	⇑*iP*		**Pn**	**21 54 48.0**	**-0.4**
PB04				*eS*		**Sn**	**21 55 09.4**	**+0.7**
PB04				IAML			21 55 11.6	
	comp=N,265nm,0.4s							
PB04	**IPOC Station P**	**1.46**	**262**	*iP*		**Pn**	**21 54 48.0**	**-0.4**
PB04				*iS*		**Sn**	**21 55 09.6**	**+0.9**
PB05	**IPOC Station P**	**1.66**	**244**	⇑*iP*		**Pn**	**21 54 50.3**	**-0.4**
PB05				*eS*		**Sn**	**21 55 12.3**	**-0.5**
PB05				IAML			21 55 17.5	
	comp=N,117nm,0.1s							
PB05	**IPOC Station P**	**1.66**	**244**	*iP*		**Pn**	**21 54 50.3**	**-0.4**
PB05				IAML			21 55 17.9	
	comp=Z,84nm,0.5s							
TA01	**Diego Aracena**	**2.15**	**316**	*eP*		**Pn**	**21 54 55.5**	**-1.2**
TA01				*eS*		**Sn**	**21 55 22.7**	**-0.8**
PB10	**IPOC Station P**	**2.28**	**232**	*iP*		**Pn**	**21 54 58.1**	**-0.2**
PB10				IAML			21 55 37.9	
	comp=Z,37nm,0.2s							
GO01	**Chusmiza**	**2.51**	**347**	⇓*iP*		**Pn**	**21 55 01.9**	**0.0**
GO01				*iS*		**Sn**	**21 55 32.4**	**-0.2**
PB14	**IPOC Station P**	**2.99**	**213**	*iS*		**Sn**	**21 55 42.7**	**-1.0**
PB14				IAML			21 55 52.5	
	comp=Z,54nm,0.4s							
AZAP	**Zapla**	**3.86**	**123**	*iP*		**Pn**	**21 55 19.3**	**-0.1**
AZAP				IAML			21 56 48.9	
	comp=Z,4.1nm,2.3s							
ASTB	**Santa Barbara**	**4.22**	**116**	*iP*		**Pn**	**21 55 23.4**	**-0.7**
ASTB				IAML			21 56 13.5	
	comp=Z,4.1nm,2.5s							
LPAZ	**La Paz**	**5.82**	**4**	*iP*		**Pn**	**21 55 47.5**	**+1.2**
RTLS	**Leoncito**	**9.65**	**184**	*iP*		Pn	21 56 34.0	-3.8
RTLS				IAML			21 58 29.0	
	comp=Z,2.8nm,3.5s							

*TRN **06** 22:25:24.4, 11°.01N×62°.30W, h123^{km}, MD3.5*
*FUNV **06** 22:25:25.3, 10°.96N×62°.27W, h112^{km}, MW3.2*

ISC 06 22:25:22.1±1.3,**10°.97N**±0°.03×**62°.31W**±0°.04,**h138**^{km}±9^{km}, **n35,σ1°68/60,1C,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.95**	**109**	⇑*iP*		**Pn**	**22 25 47.1**	**+2.0**
TRN				*eS*		**Sn**	**22 26 01.7**	**-1.0**
CRUV	**Carupano**	**0.95**	**252**	*eP*		**Pn**	**22 25 45.6**	**+0.4**
CRUV				*eS*		**Sn**	**22 26 00.8**	**-2.0**
GUNV	**Guanoco**	**1.01**	**218**	*eP*		**Pn**	**22 25 47.2**	**+1.4**
GUNV				*eS*		**Sn**	**22 26 02.5**	**-1.4**
TBH	**Brigand Hill**	**1.31**	**111**	*eP*		**Pn**	**22 25 50.5**	**+1.7**
TBH				*eS*		**Sn**	**22 26 08.9**	**-0.1**
GRGR	**Grenville**	**1.33**	**29**	*eP*		**Pn**	**22 25 49.0**	**+0.2**
GRGR				*eS*		**Sn**	**22 26 07.7**	**-1.6**
GRGR	**Grenville**	**1.33**	**29**	*eP*		**Pn**	**22 25 49.1**	**+0.2**
GRGR				*eS*		**Sn**	**22 26 07.9**	**-1.4**
GRHS	**Sauteurs**	**1.41**	**28**	*eP*		**Pn**	**22 25 50.8**	**+1.1**
GRHS				*eS*		**Sn**	**22 26 09.7**	**-1.2**
GRSS	**Sisters**	**1.49**	**27**	*eP*		**Pn**	**22 25 52.2**	**+1.6**
GRSS				*eS*		**Sn**	**22 26 12.0**	**-0.4**
TOSP	**Speyside**	**1.77**	**79**	*eP*		**Pn**	**22 25 54.3**	**+0.6**
TOSP				*eS*		**Sn**	**22 26 16.9**	**-1.2**
TOSP	**Speyside**	**1.77**	**79**	*eP*		**Pn**	**22 25 54.4**	**+0.7**
TOSP				*eS*		**Sn**	**22 26 16.2**	**-1.8**
ORIV	**Oritupano**	**2.17**	**210**	*eP*		**Pn**	**22 26 01.1**	**+2.5**
ORIV				*eS*		**Sn**	**22 26 27.9**	**+1.3**
ORIV	**Oritupano**	**2.17**	**210**	*eP*		**Pn**	**22 25 59.6**	**+1.0**
ORIV				*eS*		**Sn**	**22 26 25.7**	**-0.9**
PCRV	**Puerto La Cruz**	**2.42**	**251**	*eP*		**Pn**	**22 26 02.8**	**+1.2**
PCRV				*eS*		**Sn**	**22 26 31.5**	**-0.5**
SVB	**Belmont**	**2.52**	**24**	*eP*		**Pn**	**22 26 03.7**	**+0.9**
SVB				*eS*		**Sn**	**22 26 32.6**	**-1.6**
SVCV	**St. Vincent, C**	**2.56**	**26**	*eP*		**Pn**	**22 26 04.0**	**+0.7**
SVCV				*eS*		**Sn**	**22 26 34.6**	**-0.6**
RIOV	**Rio Grande**	**2.92**	**170**	*eP*		**Pn**	**22 26 09.1**	**+1.1**
RIOV				*eS*		**Sn**	**22 26 41.8**	**-1.6**
MCLT	**Moule a Chique**	**3.04**	**26**	*eP*		**Pn**	**22 26 10.5**	**+1.0**
MCLT				*eS*		**Sn**	**22 26 43.6**	**-2.5**
PRGV	**PARIAGUAN**	**3.18**	**227**	*eP*		**Pn**	**22 26 13.1**	**+1.8**
PRGV				*eS*		**Sn**	**22 26 48.4**	**-0.9**
SLBI	**Saint Lucia, B**	**3.31**	**23**	*eP*		**Pn**	**22 26 13.9**	**+1.0**
SLBI				*eS*		**Sn**	**22 26 52.0**	**-0.3**
CUPV	**Cpira**	**3.54**	**256**	*eP*		**Pn**	**22 26 17.9**	**+1.9**
CUPV				*eS*		**Sn**	**22 26 56.6**	**-1.1**
BIM	**Bigot**	**3.73**	**19**	*eP*		**Pn**	**22 26 21.2**	**+2.7**
TRMF	**Trois Ilets**	**3.75**	**19**	*eP*		**Pn**	**22 26 20.4**	**+1.7**
ZAM	**Aeronautique**	**3.80**	**19**	*eP*		**Pn**	**22 26 21.4**	**+2.1**
LPMF	**Morne Lapointe**	**3.82**	**20**	*eP*		**Pn**	**22 26 22.8**	**+3.1**
FDF	**Fort de France**	**3.91**	**17**	*eP*		**Pn**	**22 26 22.6**	**+1.8**
FDF				*eS*		**Sn**	**22 27 04.7**	**-1.9**
BIRV	**Birongo**	**3.92**	**263**	*eP*		**Pn**	**22 26 22.4**	**+1.4**
BIRV				*eS*		**Sn**	**22 27 05.1**	**-1.6**
PML	**Morne Lenard**	**3.95**	**16**	*eP*		**Pn**	**22 26 23.0**	**+1.7**
PCM	**Pelee Case Pet**	**3.97**	**16**	*eP*		**Pn**	**22 26 23.3**	**+1.6**
MERV	**Las Mercedes**	**4.28**	**247**	*eP*		**Pn**	**22 26 27.2**	**+1.5**
MERV				*eS*		**Sn**	**22 27 13.3**	**-1.8**
LUEV	**Luepa**	**5.16**	**171**	*eP*		**Pn**	**22 26 38.5**	**+0.9**
LUEV				*eS*		**Sn**	**22 27 32.5**	**-4.0**
TURV	**Turiamo**	**5.46**	**265**	*eP*		**Pn**	**22 26 43.5**	**+2.1**
BAUV	**El Baul**	**5.99**	**251**	*eP*		**Pn**	**22 26 49.8**	**+1.3**
BAUV	**El Baul**	**5.99**	**251**	*eP*		**Pn**	**22 26 49.6**	**+1.0**
BAUV				*eS*		**Sn**	**22 27 53.4**	**-2.7**
MAPV	**Macapo**	**6.15**	**260**	*eS*		**Sn**	**22 27 56.6**	**-3.4**
PAYV	**Puerto Ayacuch**	**7.64**	**224**	*eP*		**Pn**	**22 27 11.8**	**+1.1**
PAYV				*eS*		Sn	22 28 29.8	-6.0

MAN 06 22:25:29.7,9°.93N×124°.11E,h1^{km},mb4.4,ML3.3,MS3.1, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**1.58**	**158**	⇓*eP*		Pn	22 25 58.7	-0.2
CGP				*eS*		Sn	22 26 20.8	+0.3
RCP	**Roxas**	**2.10**	**321**	⇑*eP*		Pn	22 26 07.0	+0.9
RCP				*eS*		Sn	22 26 33.9	+1.0

*DDA **06** 22:46:28.5, 42°.56N×43°.45E, h14^{km}±2^{km}, ML2.0*
*NORS **06** 22:46:28.7±0.0, 42°.55N×43°.44E, h4^{km}, MPVA3.1*
*TIF **06** 22:46:29.2, 42°.56N×43°.48E, h14^{km}*

ISC 06 22:46:29.6±0.8,**42°.55N**±0°.02×**43°.48E**±0°.02,**h13**^{km}±5^{km}, **n39,σ0°77/73,Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ONI	**Oni**	**0.04**	**333**	P		**Pg**	**22 46 31.9**	**-0.2**
ONI				S		**Sg**	**22 46 34.0**	**0.0**
ONI	**Oni**	**0.04**	**333**	*ePg*		**Pg**	**22 46 32.1**	**-0.1**
ONI				*eSg*		**Sg**	**22 46 34.0**	**0.0**
DIGR	**Digorskoe uzhe**	**0.35**	**12**	*ePg*		**Pg**	**22 46 36.1**	**-0.8**
DIGR				*eSg*		**Sg**	**22 46 41.4**	**-0.4**
ZEI	**Tsey**	**0.39**	**53**	*iPg*		**Pg**	**22 46 37.2**	**-0.4**
ZEI				*eSg*		**Sg**	**22 46 42.7**	**-0.2**
TKB	**Tkibuli**	**0.41**	**241**	P		**Pg**	**22 46 38.0**	**+0.1**
TKB				S		**Sb**	**22 46 44.5**	**-0.4**
TKB	**Tkibuli**	**0.41**	**241**	*ePg*		**Pg**	**22 46 38.0**	**+0.1**
TKB				*eSg*		**Sb**	**22 46 44.5**	**-0.4**
LACR	**Lac**	**0.66**	**65**	*iPg*		**Pg**	**22 46 41.8**	**-0.7**
LACR				*eSg*		**Sg**	**22 46 50.7**	**-0.7**
GUDG	**Gudauri**	**0.74**	**96**	P		**Pg**	**22 46 42.5**	**-1.5**
GUDG				S		**Sg**	**22 46 53.5**	**-0.4**
GUDG	**Gudauri**	**0.74**	**96**	*ePg*		**Pg**	**22 46 42.5**	**-1.5**
GUDG				*eSg*		**Sg**	**22 46 53.5**	**-0.4**
LSNR	**Lesken**	**0.77**	**19**	*iPg*		**Pg**	**22 46 44.4**	**-0.2**
LSNR				*eSg*		**Sb**	**22 46 56.2**	**+1.0**
ARNR	**Ardon**	**0.86**	**43**	*iPg*		**Pb**	**22 46 46.8**	**+0.4**
ARNR				*eSg*		**Sn**	**22 46 60.0**	**0.0**
NEY	**Neytrino**	**0.89**	**322**	*ePg*		**Pb**	**22 46 46.8**	**-0.2**
NEY				*eSg*		**Sg**	**22 46 57.5**	**-1.1**
STDR	**Stavd-Durt**	**0.92**	**28**	*iPg*		**Pn**	**22 46 48.4**	**+0.1**
STDR				*eSg*		**Sn**	**22 47 01.5**	**+0.1**
KMGR	**Komgaron**	**1.14**	**63**	*ePg*		**Pn**	**22 46 52.3**	**+1.0**
KMGR				*eSg*		**Sn**	**22 47 08.2**	**+1.4**
AKH	**Akhalkalaki**	**1.14**	**179**	P		**Pg**	**22 46 51.1**	**-0.5**
AKH				S		**Sn**	**22 47 07.2**	**+0.1**
AKH	**Akhalkalaki**	**1.14**	**179**	*ePg*		**Pg**	**22 46 51.1**	**-0.5**
AKH				*eSg*		**Sn**	**22 47 07.2**	**+0.1**
EPOS	**Posof**	**1.19**	**208**	*iP*		**Pg**	**22 46 51.7**	**-0.8**
EPOS				*iS*		**Sn**	**22 47 08.3**	**+0.2**
EPOS				IAML			22 47 15.0	
	comp=E,21nm,0.3s							
EPOS				IAML			22 47 16.0	
	comp=N,32nm,0.4s							
TBLG	**Delisi**	**1.25**	**131**	P		**Pn**	**22 46 52.3**	**-0.4**
TBLG				S		**Sn**	**22 47 10.9**	**+1.5**
TBLG	**Delisi**	**1.25**	**131**	*ePg*		**Pn**	**22 46 52.3**	**-0.4**
TBLG				*eSg*		**Sn**	**22 47 10.9**	**+1.5**
TBLG	**Delisi**	**1.25**	**131**	*iP*		**Pn**	**22 46 52.2**	**-0.4**
KBZ	**Khabaz**	**1.25**	**340**	*ePg*		**Pn**	**22 46 52.4**	**-0.3**
KBZ				*eSg*		**Sb**	**22 47 09.2**	**+0.2**
KBTC	**Kuba-Taba**	**1.27**	**358**	*ePg*		**Pg**	**22 46 53.7**	**-0.2**
BGD	**Bogdanovka**	**1.29**	**176**	P		**Pb**	**22 46 54.0**	**+0.1**
BGD				S		**Sn**	**22 47 11.5**	**+0.8**
BGD	**Bogdanovka**	**1.29**	**176**	*ePg*		**Pb**	**22 46 54.0**	**+0.1**
BGD				*eSg*		**Sn**	**22 47 11.5**	**+0.8**
BTNK	**Botanikuri**	**1.31**	**131**	P		**Pb**	**22 46 54.3**	**+0.2**
BTNK				S		**Sn**	**22 47 12.3**	**+1.3**
BTNK	**Botanikuri**	**1.31**	**131**	*ePg*		**Pb**	**22 46 54.3**	**+0.2**
BTNK				*eSg*		**Sn**	**22 47 12.3**	**+1.3**
BTNK	**Botanikuri**	**1.31**	**131**	*iP*		**Pn**	**22 46 53.9**	**+0.3**
SHA1	**Shidzhatmaz**	**1.33**	**333**	*ePg*		**Pb**	**22 46 54.5**	**0.0**
SHA1				*ePg*		**Pg**	**22 46 55.0**	**-0.1**
SHA1				*eSg*		**Sg**	**22 47 12.0**	**-0.5**
KIV0	**Kislovodsk Arr**	**1.52**	**338**	*ePg*		**Pn**	**22 46 54.7**	**-1.8**
KIV0				*eSg*		**Sb**	**22 47 17.3**	**+0.5**
KIV	**Kislovodsk**	**1.52**	**338**	*ePg*		**Pb**	**22 46 57.8**	**+0.2**
PYA1	**Pyatigorsk**	**1.54**	**350**	*ePg*		**Pb**	**22 46 58.0**	**+0.1**
PYA1				*eSg*		**Sb**	**22 47 18.0**	**+0.7**
DBOC	**Borcka**	**1.81**	**229**	*iP*		**Pn**	**22 47 01.5**	**+1.0**
DBOC				*iS*		**Sn**	**22 47 24.4**	**+1.1**
DBOC				IAML			22 47 27.0	
	comp=E,38nm,0.2s							
EAK	**Akyaka**	**1.87**	**177**	*iP*		**Pb**	**22 47 03.0**	**-0.7**
EAK				*iS*		**Sb**	**22 47 28.2**	**+1.2**
EAK				IAML			22 47 29.0	
	comp=E,13nm,0.4s							
DAGI	**Agillar**	**1.88**	**219**	*iP*		**Pb**	**22 47 03.8**	**-0.1**
DAGI				*iS*		**Sg**	**22 47 29.0**	**-1.1**
DAGI				IAML			22 47 30.0	
	comp=N,11nm,0.7s							
DAGI				IAML			22 47 31.0	
	comp=E,9.6nm,0.3s							
DBAD	**Bademkaya**	**2.03**	**222**	*iP*		**Pb**	**22 47 06.1**	**-0.3**
DBAD				*iS*		**Sb**	**22 47 32.4**	**+0.8**
DBAD				IAML			22 47 35.0	
	comp=E,25nm,0.6s							
DBAD				IAML			22 47 37.0	
	comp=N,26nm,0.5s							
DDEM	**Demirkent**	**2.10**	**219**	*iP*		**Pb**	**22 47 06.3**	**-1.4**
DDEM				*iS*		**Sb**	**22 47 34.9**	**+1.2**
DDEM				IAML			22 47 37.0	
	comp=E,27nm,0.4s							
LGD	**Lagodekhi**	**2.18**	**108**	P		**Pg**	**22 47 10.2**	**-1.1**
LGD				S		**Sg**	**22 47 38.4**	**-1.1**
DDFL	**Dedoflistskaro**	**2.26**	**118**	P		**Pg**	**22 47 12.4**	**-0.5**
DDFL	**Dedoflistskaro**	**2.26**	**118**	*iP*		**Pg**	**22 47 12.9**	**0.0**

WEL 06 22:54:43.4,41°.S±1°.×**17°.7E**±°,**h19**^{km}±3^{km},**M3.5**/31, **ML3.8**/31,**MLv3.5**/31,**Error ellipse: s-maj=0.0km s-min=0.0km az=95.5,North Island**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BFZ	**Birch Farm**	**0.26**	**287**	P		Pg	22 54 50.4	+1.1
BFZ				S		Sg	22 54 54.6	+1.2
ANWZ	**Angora Road**	**0.31**	**347**	P		Pb	22 54 50.8	+0.5
ANWZ				S		Sb	22 54 55.5	+0.6
CPWZ	**Castlepoint**	**0.32**	**241**	P		Pn	22 54 53.6	+0.6
PRHZ	**Porangahau**	**0.49**	**6**	P		Pb	22 54 54.3	+0.8
PRHZ				S		Sb	22 55 01.6	+1.2
PRWZ	**Pori Road**	**0.50**	**294**	P		Pb	22 54 54.2	+0.6
PRWZ				S		Sb	22 55 01.3	+0.8
TIWZ	**Tintock**	**0.52**	**268**	P		Pn	22 54 55.1	-0.7
TIWZ				S		Sb	22 55 02.6	+1.5
DVHZ	**Dannevirke**	**0.55**	**326**	P		Pb	22 54 54.3	-0.1
DVHZ				S		Sb	22 55 01.4	-0.5
TMWZ	**Te Maipa**	**0.62**	**236**	P		Pn	22 54 57.2	0.0
WPHZ	**Waipukurau**	**0.70**	**352**	P		Pg	22 54 57.4	+0.1
POWZ	**Post Office Ro**	**0.71**	**301**	P		Pg	22 54 57.3	-0.1
MRZ	**Mangatainoka R**	**0.76**	**277**	P		Pg	22 54 58.2	-0.1
PXZ	**Pawanui**	**0.76**	**17**	P		Pg	22 54 58.4	0.0
HOWZ	**Holdsworth Sta**	**0.81**	**260**	P		Pg	22 54 59.2	-0.1
TSZ	**Takapari Road**	**0.84**	**326**	P		Pb	22 54 59.0	-0.4
PNHZ	**Pukenui**	**0.89**	**341**	P		Pb	22 54 60.0	-0.3
MTW	**Mount Morrison**	**0.90**	**243**	P		Pb	22 55 00.5	+0.1
TRWZ	**Traveller**	**0.92**	**226**	P		Pn	22 55 01.2	-0.2
KAHZ	**Kahuranaki**	**0.99**	**14**	P		Pb	22 55 01.5	-0.5
OGWZ	**Otaki Gorge**	**1.06**	**266**	P		Pb	22 55 02.8	-0.4
PAWZ	**Paruwai Farm**	**1.06**	**234**	P		Pb	22 55 03.0	-0.3
OHWZ	**Ohakea**	**1.10**	**300**	P		Pb	22 55 04.2	+0.3
KRHZ	**Kereru**	**1.12**	**352**	P		Pn	22 55 03.4	-0.7
CKHZ	**Cape Kidnapper**	**1.17**	**20**	P		Pg	22 55 06.0	0.0
CAW	**Cannon Point**	**1.19**	**252**	P		Pn	22 55 04.5	-0.5
MSWZ	**Moikau Station**	**1.19**	**236**	P		Pn	22 55 04.4	-0.7
KIW	**Kapiti Island**	**1.26**	**265**	P		Pn	22 55 05.6	-0.4
MCHZ	**McNeill Hill**	**1.32**	**4**	P		Pn	22 55 06.4	-0.4
BHHZ	**Black Hill Sta**	**1.32**	**343**	P		Pn	22 55 05.6	-1.4
KWHZ	**Kaweka Forest**	**1.34**	**355**	P		Pn	22 55 06.8	-0.4
BHW	**Baring Head**	**1.44**	**243**	P		Pn	22 55 07.9	-0.5
MOVZ	**Moawhango**	**1.49**	**335**	P		Pn

ASUD				S	Sn	23 20 41.0	+1.5
MSFE	**Esma-Masafi**	**5.18**	**126**	*i* P	**Pn**	**23 19 41.4**	**+0.1**
	SNR=6.7						
MDH	**Madha**	**5.32**	**126**	P	**Pn**	**23 19 43.5**	**+0.3**
MDH				S	**Sn**	**23 20 42.1**	**-1.7**
KHMZ	**Khomeyn**	**5.39**	**346**	*e*Pn	**Pn**	**23 19 44.3**	**0.0**
KHMZ	**Khomeyn**	**5.39**	**346**	*e*Pn	**Pn**	**23 19 44.3**	**0.0**
CHMN	**Cheshme madani**	**5.42**	**74**	*e*Pn	**Pn**	**23 19 45.2**	**+0.3**
KHNJ	**Kahnooj**	**5.47**	**94**	*e*Pn	**Pn**	**23 19 44.9**	**-0.4**
UOSS	**Minazif**	**5.48**	**129**	P	**Pn**	**23 19 45.4**	**0.0**
UOSS	**Minazif**	**5.48**	**129**	P	**Pn**	**23 19 45.6**	**+0.2**
UOSS				S	**Sn**	**23 20 48.4**	**+0.8**
HATD	**Hatta, Dubai**	**5.51**	**131**	P	**Pn**	**23 19 46.7**	**+0.9**
HATD	**Hatta, Dubai**	**5.51**	**131**	P	**Pn**	**23 19 46.9**	**+1.1**
HATD				S	**Sn**	**23 20 48.3**	**-0.2**
ASHO	**Ashiyiah**	**5.56**	**132**	*i* P	**Pn**	**23 19 47.1**	**+0.6**
	SNR=8.5						
ASHO	**Ashiyiah**	**5.56**	**132**	P	**Pn**	**23 19 47.4**	**+0.9**
	SNR=8.6						
ASHO				S	**Sn**	**23 20 48.9**	**-0.8**
SOHO	**SOHO**	**6.25**	**133**	P	**Pn**	**23 19 56.3**	**+0.3**
	SNR=7.7						
SOHO				S	**Sn**	**23 21 06.7**	**0.0**
HOQ	**Hoqain**	**7.14**	**132**	P	**Pn**	**23 20 09.0**	**+0.7**
HOQ				S	**Sn**	**23 21 26.2**	**-2.5**
RAYN	**Ar Rayn**	**7.35**	**229**	*i* P	**Pn**	**23 20 11.8**	**+0.6**
	SNR=31						
BSY	**Bisya**	**7.68**	**137**	P	**Pn**	**23 20 16.3**	**+0.6**
	SNR=36						
DQM	**DQM**	**10.14**	**146**	P	**Pn**	**23 20 48.8**	**-0.6**
	SNR=6.1						
WHFO	**Wadi Hawf**	**10.74**	**169**	P	**Pn**	**23 20 57.0**	**-0.6**
	SNR=6.9						
DMTO	**DMTO**	**11.19**	**163**	P	**Pn**	**23 21 03.8**	**0.0**
	SNR=9.2						

*IDC **06** 23:30:36.4±4.7, 1°.30S×101°.70E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/34, mbtmp3.7/4, MS3.3/2, Ms1 3.2/2, ms1mx2.8/37, Error ellipse: s-maj=268.4km s-min=27.8km az=54.0*

*DJA **06** 23:30:45.1±0.5, 2°.S±2°.×10°.1E±°, h37km±11km, M3.8/10, MLv3.8/10*

ISC 06 23:30:45.7±1.3, **1°.84S**±0°.04×**100°.78E**±0°.05, **h35km**, **n14**, σ**0**s**86**/14, **mb3.8**/4, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRJI	**Kerinci**	**0.72**	**111**	P		**Pn**		**23 31 00.0**	**+0.4**
PDSI	**Padang**	**0.97**	**341**	P		**Pn**		**23 31 02.6**	**-0.3**
PDSI				S		**Sn**		**23 31 16.6**	**+1.1**
SDSI	**Sungai Dareh**	**1.10**	**36**	P		**Pn**		**23 31 04.2**	**-0.5**
SDSI				S		**Sn**		**23 31 19.6**	**+0.9**
PPSI	**Pulau Pagai**	**1.20**	**220**	P		**Pn**		**23 31 05.7**	**-0.3**
PPSI				S		**Sn**		**23 31 22.5**	**+1.4**
SISI	**Saibi**	**1.77**	**287**	P		**Pn**		**23 31 13.4**	**-0.4**
SISI				S		**Sn**		**23 31 35.8**	**+0.7**
PBSI	**Pulau Batu**	**3.06**	**305**	P		**Pn**		**23 31 31.5**	**-0.2**
MNAI	**Manna**	**3.32**	**139**	P		**Pn**		**23 31 34.7**	**-0.5**
MNAI				S		**Sn**		**23 32 12.6**	**-0.8**
MDSI	**Maura Dua**	**4.29**	**128**	P		**Pn**		**23 31 48.1**	**-0.5**
GSI	**Gunungsitoli**	**4.47**	**314**	P		**Pn**		**23 31 49.7**	**-1.4**
LEM	**Lembang**	**8.43**	**126**	LR		LR		23 36 21.9	
	comp=Z,78nm,18.8s,baz=238,slow=43								
WRA	**Warramunga Arr**	**37.40**	**121**	P		P		23 37 47.0	-8.7
	0.4nm,0.3s,baz=292,slow=8.4,SNR=6.3								
ASAR	**Alice Springs**	**38.72**	**127**	P		P		23 37 59.1	-7.7
	1.3nm,0.6s,baz=302,slow=7.8,SNR=25								
STKA	**Stephens Creek**	**48.68**	**132**	P		P		23 39 20.1	-6.6
	1.1nm,0.6s,baz=315,slow=7.1,SNR=3.3								
STKA				LR		LR		00 01 21.7	
	comp=Z,69nm,20.6s,baz=212,slow=38								
MKAR	**Makanchi Array**	**51.09**	**344**	P		P		23 39 38.8	-6.0
	0.1nm,0.4s,baz=156,slow=8.9,SNR=4.4								

IDC 06 23:58:45.1±4.0, **5°.06S**×**148°.35E**, **h0**km, **mb3.5**/3, **mb1 3.8**/3, **mb1mx3.4**/24, **mbtmp3.6**/3, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.4**/32, **Error ellipse: s-maj=120.1km s-min=48.2km az=112.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**18.84**	**349**	LR		LR		00 09 51.8	
	comp=Z,45nm,19.8s,baz=109,slow=35								
WRA	**Warramunga Arr**	**20.12**	**221**	P		P		00 03 21.0	+0.2
	0.8nm,0.4s,baz=47,slow=12,SNR=18								
ASAR	**Alice Springs**	**23.15**	**216**	P		P		00 03 53.7	+0.3
	1.6nm,0.8s,baz=50,slow=8.6,SNR=7.5								
FITZ	**Fitzroy Crossi**	**25.70**	**238**	P		P		00 04 16.4	-0.8
	0.5nm,0.4s,baz=49,slow=11,SNR=5.8								
TORD	**Torodi Ar. Bea**	**146.14**	**286**	PKPbc		PKPdf		00 18 27.9	+0.4
	0.2nm,0.5s,baz=70,slow=4.7,SNR=5.2								

*IDC **07** 00:23:13.9±1.5, 37°.08N×135°.04E, h374km±30km, mb2.8/4, mb1 3.0/6, mb1mx2.7/39, mbtmp3.5/6, Error ellipse: s-maj=70.0km s-min=17.4km az=60.0*

*JMA **07** 00:23:13.1±0.1, 37°.15N×135°.19E, h384km, M3.0*

ISC 07 00:23:13.7±0.9, **37°.16N**±0°.09×**135°.2E**±0°.1, **h372km**, **n21**, σ**0**s**78**/21, **mb3.1**/4, **Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKY	**Yasaka**	**1.53**	**183**	P		**Pn**		**00 24 05.0**	**+0.7**
JSZ	**Suzu**	**1.75**	**80**	P		**Pn**		**00 24 06.7**	**+1.3**
JWT	**Wachi**	**1.88**	**175**	P		**Pn**		**00 24 07.3**	**+1.0**
JYTA	**Yamagatataniai**	**1.99**	**141**	P		**Pn**		**00 24 07.8**	**+0.8**
JNG	**Nsakai**	**2.45**	**107**	P		**Pn**		**00 24 10.8**	**+0.5**
MAT	**Matsushiro**	**2.49**	**103**	P		**Pn**		**00 24 11.4**	**+0.8**
MAT	**Matsushiro**	**2.49**	**103**	P		**Pn**		**00 24 11.2**	**+0.6**
MJAR	**Matsushiro Arr**	**2.49**	**103**	P		**Pn**		**00 24 11.7**	**+1.2**
	0.6nm,0.3s,baz=281,slow=9.0,SNR=34								
JSD	**Sado**	**2.59**	**69**	P		**Pn**		**00 24 12.1**	**+0.9**
JIE	**Ise**	**3.02**	**156**	P		**Pn**		**00 24 15.8**	**+0.8**
JHK	**Hiroka**	**3.05**	**87**	P		**Pn**		**00 24 15.4**	**+0.3**
JRY	**Ryogami san**	**3.19**	**110**	P		**Pn**		**00 24 17.0**	**+0.6**
JAG	**Ashikaga**	**3.49**	**101**	P		**Pn**		**00 24 19.5**	**+0.4**
JOD2	**Odawara 2**	**3.67**	**120**	P		**Pn**		**00 24 21.2**	**+0.3**
JFK	**Kawauchi**	**4.53**	**86**	P		**Pn**		**00 24 29.0**	**-0.4**
JRG	**Rokugo**	**4.83**	**61**	P		**Pn**		**00 24 33.1**	**+0.7**
USRK	**Ussuriysk Ar.**	**7.45**	**342**	P		**P**		**00 25 03.1**	**+0.6**
	baz=149,slow=10,SNR=9.6								
SONM	**Songino Array**	**23.64**	**306**	P		**P**		**00 27 52.2**	**-0.8**
	0.2nm,0.5s,baz=100,slow=7.6,SNR=2.5								
MKAR	**Makanchi Array**	**39.82**	**301**	P		**P**		**00 30 11.6**	**-0.6**
	0.3nm,0.5s,baz=83,slow=10,SNR=5.3								
WRA	**Warramunga Arr**	**56.80**	**181**	P		**P**		**00 32 20.1**	**-0.5**
	0.6nm,0.4s,baz=355,slow=7.6,SNR=8.1								
FINES	**FINESS Array B**	**66.32**	**330**	P		**P**		**00 33 22.9**	**-0.1**
	1.2nm,0.8s,baz=54,slow=7.1,SNR=3.7								

*ROM **07** 00:43:40.8±0.0, 43°.047N±0°.002×12°.875E±0°.004, h8km, ML3.4/59, Error ellipse: s-maj=0.2km s-min=0.2km az=200.0*

*IDC **07** 00:43:41.7±1.2, 43°.14N×12°.81E, h0km, mb3.4/3, mb1 3.5/7, mb1mx3.3/38, mbtmp3.3/7, ML3.2/4, MS4.0/1, Ms1 4.0/1, ms1mx3.0/20, Error ellipse: s-maj=31.2km s-min=14.0km az=100.0*

*LDG **07** 00:43:41.7±0.1, 43°.05N×12°.90E, h8km, Ml2.9/20, Error ellipse: s-maj=2.4km s-min=1.8km az=28.0*

*PRU **07** 00:43:42.2±0.0, 43°.07N×13°.00E, h4km*

ISC 07 00:43:41.3±0.8, **43°.04N**±0°.02×**12°.85E**±0°.02, **h9**km±4km, **n166**, σ**1**s**94**/226, **mb3.4**/3, **5C-3D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CESI	**CESI - Serrava**	**0.05**	**129**	P		**Pg**		**00 43 42.8**	**-0.3**
CESI				S		**Sg**		**00 43 44.0**	**-0.4**
CESI				AML		AML			
	comp=N,79600µm,0.4s								
CESI				AML		AML			
	comp=E,28550µm,0.4s								
CESI				AML		AML			
	comp=N,79600µm,0.4s								
SEF1	**Sefro**	**0.13**	**31**	*e*P		**Pg**		**00 43 43.8**	**-0.5**
SEF1				S		**Sg**		**00 43 46.1**	**-0.2**
SEF1				AML		AML			
	comp=N,48200µm,1.2s								
SEF1				AML		AML			
	comp=E,66050µm,0.2s								
SEF1				AML		AML			
	comp=N,48250µm,1.2s								
SEF1				AML		AML			
	comp=E,66050µm,0.2s								
SEF1				AML		AML			
	comp=E,66000µm,0.2s								
ASSB	**Assisi San Ben**	**0.14**	**273**	P		**Pg**		**00 43 44.8**	**+0.4**
ASSB				S		**Sg**		**00 43 47.6**	**+0.9**
FEMA	**Monte Fema**	**0.16**	**117**	P		**Pg**		**00 43 44.9**	**+0.1**
FEMA				S		**Sg**		**00 43 48.0**	**+0.8**
FEMA				AML		AML			
	comp=E,23800µm,0.8s								
FEMA				AML		AML			
	comp=N,28600µm,0.6s								
FEMA				AML		AML			
	comp=E,23800µm,0.8s								
FEMA				AML		AML			
	comp=E,23800µm,0.8s								
FEMA				AML		AML			
	comp=N,28650µm,0.6s								
FEMA				AML		AML			
	comp=N,28600µm,0.6s								
FEMA				AML		AML			
	comp=N,28650µm,0.6s								
FIU1	**Fiuminata**	**0.16**	**20**	*e*P		**Pg**		**00 43 44.4**	**-0.4**
FIU1				S		**Sg**		**00 43 46.9**	**-0.3**
FIU1				AML		AML			
	comp=N,15700µm,1.5s								
FIU1				AML		AML			
	comp=N,15650µm,1.5s								
FIU1				AML		AML			
	comp=E,15650µm,0.4s								
FIU1				AML		AML			
	comp=N,15650µm,1.5s								
FDMO	**Fiordimonte**	**0.17**	**89**	P		**Pg**		**00 43 44.8**	**-0.1**
FDMO				S		**Sg**		**00 43 47.6**	**+0.2**
ATCC	**AVT- Casa Cast**	**0.22**	**314**	P		**Pg**		**00 43 45.9**	**+0.2**
ATCC				S		**Sg**		**00 43 49.9**	**+1.2**
ATCC				AML		AML			
	comp=E,44650µm,1.2s								
ATCC				AML		AML			
	comp=N,38450µm,0.2s								
ATCC				AML		AML			
	comp=E,44600µm,1.2s								
ATCC				AML		AML			
	comp=E,44600µm,1.2s								
ATCC				AML		AML			
	comp=E,44600µm,1.2s								
ATCC				AML		AML			
	comp=N,38450µm,0.2s								
SNTG	**Esanatoglia**	**0.23**	**16**	P		**Pg**		**00 43 45.6**	**-0.4**
SNTG				S		**Sg**		**00 43 49.8**	**+0.7**
SNTG				AML		AML			
	comp=E,1735µm,0.4s								
SNTG				AML		AML			
	comp=E,1730µm,0.4s								
SNTG				AML		AML			
	comp=E,13290µm,0.4s								
SNTG				AML		AML			
	comp=N,10940µm,0.7s								
SNTG				AML		AML			
	comp=E,13290µm,0.4s								
SNTG				AML		AML			
	comp=N,1310µm,0.7s								
GAG1	**Gagliole**	**0.26**	**37**	P		**Pg**		**00 43 46.4**	**0.0**
GAG1				S		**Sg**		**00 43 50.7**	**+0.8**
GAG1				AML		AML			
	comp=N,50400µm,0.4s								
GAG1				AML		AML			
	comp=N,50450µm,0.4s								
GAG1				AML		AML			
	comp=N,50400µm,0.4s								
GAG1				AML		AML			
	comp=E,36000µm,0.4s								
GAG1				AML		AML			
	comp=N,50450µm,0.4s								
CSP1	**Cessapalombo**	**0.26**	**77**	*e*P		**Pg**		**00 43 46.5**	**-0.1**
CSP1				S		**Sg**		**00 43 50.9**	**+0.7**
CSP1				AML		AML			
	comp=E,14300µm,0.4s								
CSP1				AML		AML			
	comp=E,14300µm,0.4s								
CSP1				AML		AML			
	comp=N,20200µm,1.4s								
FOSV	**Fossato di Vic**	**0.27**	**345**	P		**Pg**		**00 43 46.5**	**-0.2**
FOSV				S		**Sg**		**00 43 50.8**	**+0.5**
FOSV				AML		AML			
	comp=N,19200µm,1.1s								
FOSV				AML		AML			
	comp=E,17750µm,1.1s								
FOSV				AML		AML			
	comp=N,19200µm,1.1s								
NRCA	**Norcia**	**0.28**	**136**	P		**Pg**		**00 43 47.0**	**+0.2**
NRCA				S		**Sg**		**00 43 51.9**	**+1.3**
NRCA				AML		AML			
	comp=E,12950µm,1.0s								
NRCA				AML		AML			
	comp=N,19750µm,0.2s								
NRCA				AML		AML			
	comp=N,19700µm,0.2s								
NRCA				AML		AML			
	comp=E,13800µm,1.0s								
NRCA				AML		AML			
	comp=N,20700µm,0.2s								
NRCA				AML		AML			
	comp=E,13800µm,1.0s								
SSM1	**San Severino M**	**0.31**	**51**	*e*P		**Pg**		**00 43 47.1**	**-0.2**
SSM1				S		**Sb**		**00 43 52.0**	**-2.1**
MOMA	**Monte Martano**	**0.31**	**222**	P		**Pg**		**00 43 48.0**	**+0.5**
MOMA				S		**Sg**		**00 43 54.0**	**+2.4**
MOMA				AML		AML			
	comp=E,17750µm,0.2s								
MOMA				AML		AML			
	comp=E,17800µm,0.2s								
MOMA				AML		AML			
	comp=N,18400µm,0.5s								
MOMA				AML		AML			
	comp=N,18400µm,0.5s								
MOMA				AML		AML			
	comp=E,18350µm,0.2s								
MOMA				AML		AML			
	comp=N,17300µm,0.5s								
MURB	**Monte Urbino**	**0.33**	**314**	P		**Pg**		**00 43 48.1**	**+0.2**
MURB				S		**Sg**		**00 43 53.9**	**+1.6**
MURB				AML		AML			
	comp=E,49150µm,0.3s								
MURB				AML		AML			
	comp=N,37000µm,0.3s								
MURB				AML		AML			
	comp=E,54100µm,0.3s								
MURB				AML		AML			
	comp=N,42300µm,0.3s								
MURB				AML		AML			
	comp=E,49150µm,0.3s								
MURB				AML		AML			
	comp=N,42300µm,0.3s								
MURB				AML		AML			
	comp=E,54100µm,0.3s								
MURB				AML		AML			
	comp=E,49150µm,0.3s								
EL6	**Elcito**	**0.35**	**32**	P		**Pg**		**00 43 47.9**	**-0.3**
EL6				S		**Sb**		**00 43 53.3**	**-2.1**
EL6				AML		AML			
	comp=E,38050µm,0.4s								
EL6				AML		AML			
	comp=N,21500µm,0.6s								
EL6				AML		AML			
	comp=E,38050µm,0.4s								
ATFO	**Monte Foce - G**	**0.39**	**328**	P		**Pg**		**00 43 48.9**	**-0.1**
ATFO				S		**Sb**		**00 43 55.6**	**-1.1**
ATFO				AML		AML			
	comp=N,13150µm,0.3s								
ATFO				AML		AML			
	comp=E,16700µm,1.4s								
ATTE	**AVT- Monte Tez**	**0.40**	**294**	P		**Pg**		**00 43 49.2**	**+0.1**
ATTE				S		**Sg**		**00 43 55.9**	**+1.4**
ATTE				AML		AML			
	comp=E,4500µm,0.5s								
ATTE				AML		AML			
	comp=N,3540µm,0.3s								
ATTE				AML		AML			
	comp=N,3545µm,0.3s								
SSFR	**Montelago di S**	**0.41**	**353**	P		**Pg**		**00 43 48.9**	**-0.3**
SSFR				S		**Sb**		**00 43 55.9**	**-1.1**
SSFR				AML		AML			
	comp=N,34850µm,0.2s								
SSFR				AML		AML			
	comp=E,59300µm,0.3s								
SSFR				AML		AML			
	comp=E,55000µm,0.3s								
SSFR				AML		AML			
	comp=E,59350µm,0.3s								
SSFR				AML		AML			
	comp=N,34850µm,0.2s								
SSFR				AML		AML			
	comp=E,59300µm,0.3s								
SSFR				AML		AML			
	comp=E,59350µm,0.3s								
SSFR				AML		AML			
	comp=N,31250µm,1.4s								
CING	**Cingoli**	**0.42**	**36**	P		**Pg**		**00 43 49.2**	**-0.4**
CING				S		**Sb**		**00 43 55.9**	**-1.7**
CING				AML		AML			
	comp=E,6065µm,0.3s								
CING				AML		AML			
	comp=N,10785µm,0.4s								
LNSS	**Leonessa**	**0.45**	**162**	P		**Pg**		**00 43 50.2**	**+0.1**
LNSS				AML		AML			
	comp=N,14050µm,0.1s								
LNSS				AML		AML			
	comp=E,10530µm,0.2s								
ARVD	**Arcevia**	**0.47**	**8**	P		**Pg**		**00 43 49.9**	**-0.5**
ARVD				S		**Sb**		**00 43 57.1**	**-1.7**
ARVD				AML		AML			
	comp=E,4980µm,0.4s								
ARVD				AML		AML			
	comp=N,3970µm,0.8s								
CESX	**Cesi**	**0.47**	**206**	P		**Pg**		**00 43 50.6**	**+0.2**
CESX				S		**Sg**		**00 43 58.5**	**+1.9**
CESX				AML		AML			
	comp=E,7800µm,0.3s								
CESX				AML		AML			
	comp=N,10005µm,0.3s								
ATVO	**AVT- Monte Val**	**0.48**	**317**	P		**Pg**		**00 43 50.4**	**-0.2**
ATVO				S		**Sb**		**00 43 58.5**	**-0.6**
ATVO				AML		AML			
	comp=E,8335µm,1.4s								
ATVO				AML		AML			
	comp=N,8955µm,0.3s								
ATVO				AML		AML			
	comp=N,8950µm,0.3s								
FRON	**Frontone**	**0.49**	**349**	P		**Pg**		**00 43 50.3**	**-0.5**
FRON				S		**Sb**		**00 43 58.3**	**-1.2**
FRON				AML		AML			
	comp=N,9225µm,0.3s								
FRON				AML		AML			
	comp=E,5950µm,0.2s								
FRON				AML		AML			
	comp=N,9230µm,0.3s								
ATMI	**Monte Miggiano**	**0.52**	**305**	P		**Pg**		**00 43 51.3**	**-0.1**
ATMI				AML		AML			
	comp=N,7415µm,0.3s								
ATMI				AML		AML			
	comp=E,6985µm,0.7s								
SMA1	**SAN MARTINO**	**0.54**	**139**	P		**Pg**		**00 43 51.6**	**-0.1**
SMA1				AML		AML			
	comp=E,5030µm,1.6s								
SMA1				AML		AML			
	comp=E,5035µm,1.6s								
SMA1				AML		AML			
	comp=N,4280µm,0.9s								
PIEI	**Pieia**	**0.55**	**335**	P		**Pg**		**00 43 51.5**	**-0.5**
PIEI				S		**Sb**		**00 44 00.4**	**-0.9**
PIEI				AML		AML			
	comp=E,5730µm,0.4s								
PIEI				AML		AML			
	comp=N,3940µm,0.3s								
MGAB	**Montegabbione**	**0.56**	**258**	P		**Pg**		**00 43 52.3**	**+0.2**
MGAB				AML		AML			
	comp=N,8090µm,0.3s								
MGAB				AML		AML			
	comp=N,8015µm,0.3s								
MGAB				AML		AML			
	comp=E,7090µm,0.2s								
MGAB				AML		AML			
	comp=E,7280µm,0.5s								
MPAG	**Monte Paganucc**	**0.60**	**353**	P		**Pg**		**00 43 52.4**	**-0.5**
MPAG				AML		AML			
	comp=E,3265µm,0.7s								
MPAG				AML		AML			
	comp=N,2910µm,1.4s								
MPAG				AML		AML			
	comp=E,3345µm,0.4s								
MPAG				AML		AML			
	comp=N,2835µm,1.4s								
MPAG				AML		AML			
	comp=E,3350µm,0.4s								
MPAG				AML		AML			
	comp=N,2840µm,1.4s								
COR1	**Corinaldo**	**0.61**	**10**	P		**Pg**		**00 43 53.1**	**+0.1**
COR1				AML		AML			
	comp=E,9830µm,0.5s								
COR1				AML		AML			
	comp=N,9625µm,0.9s								
COR1				AML		AML			
	comp=N,7270µm,1.2s								
COR1				AML		AML			
	comp=N,7265µm,1.2s								
COR1				AML		AML			
	comp=E,4910µm,0.5s								
NARO	**Abbazia di Nar**	**0.61**	**341**	P		**Pg**		**00 43 52.5**	**-0.6**
NARO				AML		AML			
	comp=E,2470µm,1.0s								
NARO				AML		AML			
	comp=N,2195µm,0.2s								
OFFI	**Offida**	**0.62**	**99**	AML		AML			
	comp=E,4310µm,0.9s								
OFFI				AML		AML			
	comp=N,4520µm,1.0s								
CDCA	**Citt' di Caste**	**0.62**	**313**	AML		AML			
	comp=E,2765µm,0.8s								
CDCA				AML		AML			
	comp=N,12700µm,0.4s								
CDCA				AML		AML			
	comp=N,2880µm,0.7s								
CDCA				AML		AML			
	comp=N,12700µm,0.4s								
CDCA				AML		AML			
	comp=E,6395µm,0.6s								
CDCA				AML		AML			
	comp=E,6400µm,0.6s								
CDCA				AML		AML			
	comp=E,2750µm,0.8s								
CDCA				AML		AML			
	comp=N,2890µm,0.7s								
CAMP	**Campotosto**	**0.65**	**140**	P		**Pg**		**00 43 53.4**	**-0.4**
CAMP				AML		AML			
	comp=E,1410µm,0.5s								
CAMP				AML		AML			
	comp=N,1280µm,0.6s								
BADI	**Badiali**	**0.65**	**317**	AML		AML			
	comp=E,4610µm,0.2s								
BADI				AML		AML			
	comp=N,6735µm,0.3s								
BADI				AML		AML			
	comp=E,4605µm,0.2s								
FSSB	**Fossombrone**	**0.66**	**355**	P		**Pg**		**00 43 53.4**	**-0.6**
FSSB				AML		AML			
	comp=E,9190µm,0.4s								
FSSB				AML		AML			
	comp=N,14550µm,0.4s								
FSSB				AML		AML			
	comp=E,9185µm,0.4s								
CADA	**Capodarco di F**	**0.68**	**76**	AML		AML			
	comp=E,5880µm,0.4s								
CADA				AML		AML			
	comp=E,5875µm,0.4s								
CADA				AML		AML			
	comp=N,4205µm,1.2s								
TERO	**Teramo**	**0.69**	**126**	P		**Pg**		**00 43 54.0**	**-0.6**
TERO				AML		AML			
	comp=E,824µm,1.4s								
TERO				AML		AML			
	comp=N,803µm,0.6s								
PE3	**Peglio**	**0.71**	**339**	P		**Pg**		**00 43 54.8**	**-0.2**
PE3				AML		AML			
	comp=E,6165µm,0.6s								
PE3				AML		AML			
	comp=E,6160µm,0.6s								
PE3				AML		AML			
	comp=N,10700µm,0.5s								

PE3				AML	AML					
	comp=N,10650µm,0.5s									
CAFI	**Castiglion Fio**	**0.71**	**295**	AML	AML					
	comp=N,1615µm,0.7s									
CAFI				AML	AML					
	comp=E,2700µm,0.7s									
SACS	**San Casciano d**	**0.72**	**255**	AML	AML					
	comp=N,3285µm,0.5s									
SACS				AML	AML					
	comp=N,3320µm,0.5s									
SACS				AML	AML					
	comp=E,3330µm,0.4s									
SACS				AML	AML					
	comp=E,3225µm,0.4s									
SENI	**Senigallia**	**0.72**	**22**	P	**Pb**	**00 43 55.5**	**-0.6**			
SENI				AML	AML					
	comp=N,7455µm,0.5s									
SENI				AML	AML					
	comp=N,2054µm,1.0s									
SENI				AML	AML					
	comp=N,2055µm,1.0s									
SENI				AML	AML					
	comp=E,1975µm,0.6s									
SENI				AML	AML					
	comp=E,8440µm,0.4s									
SENI				AML	AML					
	comp=E,1985µm,0.6s									
SENI				AML	AML					
	comp=N,7455µm,0.5s									
SENI				AML	AML					
	comp=E,8440µm,0.4s									
AOI	**Ancona**	**0.75**	**46**	P	**Pg**	**00 43 55.3**	**-0.5**			
AOI				AML	AML					
	comp=N,2140µm,0.4s									
AOI				AML	AML					
	comp=E,1610µm,0.3s									
SSP9	**Sansepolcro**	**0.75**	**316**	P	**Pg**	**00 43 55.8**	**-0.1**			
SSP9				AML	AML					
	comp=E,1600µm,0.5s									
SSP9				AML	AML					
	comp=N,1770µm,0.4s									
PARC	**Parchiule**	**0.76**	**324**	P	**Pg**	**00 43 55.8**	**-0.2**			
PARC				AML	AML					
	comp=N,2575µm,1.4s									
PARC				AML	AML					
	comp=E,3500µm,0.4s									
T0104	**Madonna delle**	**0.76**	**152**	P	**Pg**	**00 43 55.5**	**-0.5**			
T0104				AML	AML					
	comp=E,2960µm,0.4s									
T0104				AML	AML					
	comp=N,2835µm,1.0s									
T0104				AML	AML					
	comp=N,2770µm,1.0s									
T0104				AML	AML					
	comp=E,2820µm,0.4s									
AQU	**L'Aquila**	**0.79**	**149**	P	**Pg**	**00 43 56.1**	**-0.4**			
AQU				AML	AML					
	comp=N,1910µm,1.0s									
AQU				AML	AML					
	comp=E,1715µm,0.6s									
AQU				AML	AML					
	comp=E,1810µm,0.6s									
AQU				AML	AML					
	comp=N,1920µm,1.0s									
AQU	**L'Aquila**	**0.79**	**149**	*e*Pn	**Pg**	**00 43 56.1**	**-0.4**			
GUMA	**Gualdo di Mace**	**0.79**	**88**	P	Pg	00 43 48.5	-8.1			
GUMA				S	Sg	00 43 54.5	-12			
GUMA				AML	AML					
	comp=E,30650µm,0.5s									
GUMA				AML	AML					
	comp=E,33950µm,0.4s									
GUMA				AML	AML					
	comp=E,30650µm,0.5s									
GUMA				AML	AML					
	comp=N,22550µm,1.0s									
GUMA				AML	AML					
	comp=E,30650µm,0.5s									
GUMA				AML	AML					
	comp=N,22300µm,0.4s									
GUMA				AML	AML					
	comp=E,33950µm,0.4s									
GUMA				AML	AML					
	comp=N,22550µm,1.0s									
CPGN	**Carpegna, Ital**	**0.86**	**333**	P	**Pg**	**00 43 58.0**	**+0.2**			
CPGN				AML	AML					
	comp=E,3450µm,0.3s									
CPGN				AML	AML					
	comp=N,2685µm,0.3s									
CPGN				AML	AML					
	comp=E,3215µm,0.3s									
CPGN				AML	AML					
	comp=N,2640µm,0.3s									
LATE	**Laterza**	**0.88**	**242**	P	**Pg**	**00 43 58.5**	**+0.3**			
LATE				AML	AML					
	comp=N,4805µm,0.4s									
LATE				AML	AML					
	comp=E,3895µm,0.5s									
MCIV	**Monte Civitell**	**0.90**	**254**	P	**Pg**	**00 43 58.7**	**+0.1**			
MCIV				AML	AML					
	comp=E,1155µm,1.0s									
MCIV				AML	AML					
	comp=N,1147µm,0.8s									
PESA	**Pesaro**	**0.91**	**359**	P	**Pg**	**00 43 58.1**	**-0.6**			
PESA				AML	AML					
	comp=E,4275µm,0.3s									
PESA				AML	AML					
	comp=N,3625µm,0.2s									
FAGN	**Fagnano**	**0.94**	**145**	P	**Pg**	**00 43 58.3**	**-1.0**			
FAGN				AML	AML					
	comp=E,2755µm,1.3s									
FAGN				AML	AML					
	comp=N,2150µm,1.6s									
VCEL	**Villa Celiera**	**0.97**	**131**	P	**Pg**	**00 43 59.2**	**-0.7**			
VCEL				AML	AML					
	comp=N,2295µm,1.1s									
VCEL				AML	AML					
	comp=E,2645µm,0.6s									
MTCE	**Montecelio**	**1.01**	**185**	P	**Pg**	**00 43 59.7**	**-1.1**			
MTCE				AML	AML					
	comp=E,1390µm,1.3s									
MTCE				AML	AML					
	comp=N,956µm,0.4s									
ASQU	**Asqua**	**1.09**	**315**	P	**Pg**	**00 44 01.8**	**-0.4**			
ASQU				AML	AML					
	comp=E,880µm,0.5s									
ASQU				AML	AML					
	comp=N,932µm,0.5s									
CERT	**Cerreto**	**1.09**	**175**	P	**Pg**	**00 44 00.9**	**-1.3**			
CERT				AML	AML					
	comp=N,902µm,0.5s									
CERT				AML	AML					
	comp=E,1375µm,0.6s									
SFI	**Santa Sofia**	**1.14**	**320**	P	**Pg**	**00 44 02.4**	**-0.7**			
SFI				AML	AML					
	comp=E,856µm,0.7s									
SFI				AML	AML					
	comp=N,892µm,0.5s									
SFI				AML	AML					
	comp=N,672µm,0.5s									
SFI				AML	AML					
	comp=E,612µm,0.7s									
TOLF	**Tolfa**	**1.16**	**213**	P	**Pb**	**00 44 02.9**	**-0.6**			
TOLF				AML	AML					
	comp=E,764µm,0.9s									
TOLF				AML	AML					
	comp=N,762µm,0.6s									
RMP	**Rome, Mte Porz**	**1.23**	**185**	AML	AML					
	comp=N,1635µm,0.5s									
RMP				AML	AML					
	comp=E,1505µm,1.0s									
FROS	**Frosini**	**1.25**	**279**	P	**Pn**	**00 44 04.8**	**-0.3**			
FROS				AML	AML					
	comp=E,622µm,0.4s									
FROS				AML	AML					
	comp=N,568µm,1.3s									
RUFI	**Rufina**	**1.27**	**310**	P	**Pn**	**00 44 04.2**	**-1.1**			
OSSC	**Osservatorio P**	**1.27**	**293**	P	**Pn**	**00 44 04.8**	**-0.6**			
OSSC				AML	AML					
	comp=N,336µm,1.0s									
OSSC				AML	AML					
	comp=E,414µm,0.7s									
RDP	**Rocca di Papa**	**1.28**	**185**	P	**Pn**	**00 44 04.6**	**-0.8**			
RDP				AML	AML					
	comp=E,2060µm,0.5s									
RDP				AML	AML					
	comp=N,2350µm,0.4s									
INTR	**Introdacqua**	**1.28**	**142**	P	**Pn**	**00 44 04.1**	**-1.5**			
INTR				AML	AML					
	comp=N,1925µm,0.7s									
INTR				AML	AML					
	comp=E,1145µm,0.8s									
LPEL	**Lama dei Pelig**	**1.39**	**135**	AML	AML					
	comp=N,530µm,0.9s									
LPEL				AML	AML					
	comp=E,640µm,0.9s									
TRIF	**Trifonti**	**1.43**	**274**	P	**Pn**	**00 44 07.3**	**-0.2**			
TRIF				AML	AML					
	comp=E,383µm,0.7s									
TRIF				AML	AML					
	comp=N,296µm,0.6s									
CASP	**Castiglione de**	**1.48**	**261**	AML	AML					
	comp=E,108µm,0.6s									
CASP				AML	AML					
	comp=N,121µm,0.7s									
LATB	**Latina**	**1.54**	**177**	AML	AML					
	comp=E,138µm,1.6s									
LATB				AML	AML					
	comp=N,123µm,0.8s									
DUGI	**Dugi Otok**	**1.87**	**58**	*e*Pn	**Pb**	**00 44 15.5**	**-0.1**			
BRJN	**Brijuni**	**1.98**	**19**	*i* Pn	**Pn**	**00 44 14.8**	**-0.1**			
BRJN				Sn	**Sn**	**00 44 40.1**	**+0.2**			
NVLJ	**Novalja**	**2.11**	**43**	*e*Pn	**Pn**	**00 44 16.8**	**0.0**			
NVLJ				Sn	**Sn**	**00 44 43.5**	**+0.3**			
SARO	**Sassorosso**	**2.12**	**304**	AML	AML					
	comp=E,68µm,0.6s									
SARO				AML	AML					
	comp=N,108µm,0.5s									
ZIRJ	**Zirje**	**2.13**	**72**	*e*Pn	**Pn**	**00 44 17.3**	**+0.3**			
ZIRJ				Sn	**Sn**	**00 44 44.0**	**+0.5**			
MORI	**Morici**	**2.24**	**67**	*e*Pn	**Pn**	**00 44 18.9**	**+0.3**			
MORI				Sn	**Sn**	**00 44 46.2**	**-0.1**			
RIY	**Rijeka**	**2.57**	**27**	*e*Pn	**Pn**	**00 44 23.3**	**+0.1**			
RIY	**Rijeka**	**2.57**	**27**	*e*Pn	**Pn**	**00 44 23.4**	**+0.3**			
UDBI	**Udbina**	**2.58**	**54**	*e*Pn	**Pn**	**00 44 24.6**	**+1.3**			
UDBI				Sn	**Sn**	**00 44 55.4**	**+0.5**			
HVAR	**Hvar**	**2.64**	**86**	*i* Pn	**Pn**	**00 44 24.9**	**+0.8**			
HVAR				Sn	**Sn**	**00 44 55.3**	**-0.9**			
SKDS	**Skadanscina**	**2.65**	**18**	*i* Pn	**Pn**	**00 44 23.9**	**-0.3**			
SKDS				*e*Sn	**Sn**	**00 44 57.5**	**+1.0**			
	comp=Z,84nm,0.6s									
KNDS	**Knezji Dol**	**2.72**	**23**	*i* Pn	**Pn**	**00 44 25.5**	**+0.1**			
KNDS				*i* Sn	**Sn**	**00 44 60.0**	**+1.6**			
	comp=Z,33nm,0.3s									
KIJV	**Kijevo**	**2.76**	**68**	*e*Pn	**Pn**	**00 44 26.6**	**+0.8**			
KIJV				Sn	**Sn**	**00 45 00.4**	**+1.2**			
PGF	**Pioggiola**	**2.88**	**262**	*e*Pn	**Pn**	**00 44 27.9**	**+0.4**			
PGF				*e*Sn	**Sn**	**00 44 59.0**	**-3.3**			
	comp=Z,11nm,0.5s									
CEY	**Cerknica**	**2.93**	**22**	*e*Pn	**Pn**	**00 44 28.0**	**-0.1**			
MAKA	**Makarska**	**3.06**	**84**	*i* Pn	**Pn**	**00 44 31.0**	**+1.2**			
GBAS	**Gorenja Brezov**	**3.11**	**21**	*i* Pn	**Pn**	**00 44 31.1**	**+0.4**			
GBAS				*e*Sn	**Sn**	**00 45 09.2**	**+1.2**			
	comp=Z,25nm,0.3s									
OZLJ	**Ozalj**	**3.19**	**35**	*e*Pn	**Pn**	**00 44 32.1**	**+0.5**			
OZLJ				Sn	**Sn**	**00 45 09.6**	**-0.2**			
LJU	**Ljubljana**	**3.24**	**21**	*e*Pn	**Pn**	**00 44 33.0**	**+0.7**			
CRES	**Cresnjev**	**3.36**	**33**	*e*Pn	**Pn**	**00 44 34.1**	**+0.2**			
MGRS	**Mrkonjic Grad**	**3.36**	**64**	*e*Pn	**Pn**	**00 44 34.7**	**+0.6**			
STON	**Ston**	**3.56**	**91**	*e*Pn	**Pn**	**00 44 37.6**	**+0.9**			
STON				Sn	**Sn**	**00 45 18.0**	**-0.9**			
STON	**Ston**	**3.56**	**91**	*e*Pn	**Pn**	**00 44 37.1**	**+0.4**			
BLY	**Banja Luka**	**3.57**	**60**	⇑P	**Pn**	**00 44 33.5**	**-3.4**			
BLY	**Banja Luka**	**3.57**	**60**	⇓S	**Sn**	**00 45 18.5**	**-0.6**			
BLY	**Banja Luka**	**3.57**	**60**	*e*Pn	**Pb**	**00 44 41.2**	**-3.4**			
ZAG	**Zagreb**	**3.58**	**38**	*e*Pn	**Pb**	**00 44 44.7**	**-0.1**			
SG1	**Sgolgore (BA)**	**3.60**	**126**	⇑*i* Pn	**Pn**	**00 44 40.7**	**+3.4**			
MYKA	**Terra Mystica**	**3.64**	**9**	*i* Pn	**Pn**	**00 44 39.2**	**+1.4**			
	comp=Z,4.3nm,0.4s									
MYKA				*i* Sg	**Sg**	**00 45 40.1**	**+2.0**			
	comp=Z,13nm,0.4s									
OBKA	**Obir**	**3.68**	**19**	*i* Pn	**Pn**	**00 44 41.2**	**+2.7**			
	comp=Z,1.1nm,0.2s									
OBKA				*i* Sg	**Sg**	**00 45 41.7**	**+2.3**			
	comp=Z,25nm,0.4s									
ABTA	**Abfaltersbach**	**3.72**	**356**	*i* Pn	**Pn**	**00 44 39.8**	**+0.8**			
	comp=Z,16nm,0.5s,SNR=10									
ABTA				*i* Sn	**Sn**	**00 45 22.4**	**-0.6**			
	comp=Z,22nm,0.4s									
MATE	**Matera**	**3.74**	**128**	⇑P	**Pn**	**00 44 41.3**	**+2.2**			
SOKA	**Soboth**	**3.96**	**22**	*i* Pn	**Pn**	**00 44 42.9**	**+0.6**			
	comp=Z,0.7nm,0.2s									
SOKA				*i* Sn	**Sn**	**00 45 28.8**	**-0.1**			
	comp=Z,9.8nm,0.6s									
SBF	**Sospel**	**4.03**	**284**	*e*Pn	**Pn**	**00 44 42.6**	**-0.7**			
SBF	**Sospel**	**4.03**	**284**	*e*Pg	**Pb**	**00 44 55.9**	**+3.4**			
SBF				*e*Sn	**Sn**	**00 45 27.9**	**-2.8**			
	comp=Z,20nm,0.6s									
TREB	**Trebinje**	**4.05**	**93**	*e*Pn	**Pn**	**00 44 45.1**	**+1.6**			
KBA	**Koelnbreinsper**	**4.06**	**5**	*i* Pn	**Pn**	**00 44 44.7**	**+1.0**			
	comp=Z,3.4nm,0.3s									
KBA				*i* Sn	**Sn**	**00 45 31.4**	**-0.1**			
	comp=Z,3.6nm,0.2s									
BRY	**Bratogost**	**4.17**	**90**	*e*Pn	**Pn**	**00 44 46.4**	**+1.1**			
HCY	**Herceg Novi**	**4.20**	**96**	*e*Pn	**Pn**	**00 44 47.9**	**+2.4**			
FETA	**Feichten**	**4.26**	**340**	*i* Pn	**Pn**	**00 44 49.0**	**+2.4**			
	comp=Z,6.7nm,0.6s,SNR=5.8									
FETA				*i* Sn	**Sn**	**00 45 36.4**	**-0.1**			
	comp=Z,4.3nm,0.4s									
DAVOX	**Davos/Dischmat**	**4.30**	**332**	Pn	**Pn**	**00 44 49.2**	**+2.2**			
	comp=Z,3.4nm,0.3s,baz=153,slow=14,SNR=38									
DAVOX				Sn	**Sn**	**00 45 39.2**	**+1.8**			
	comp=Z,0.4nm,0.3s,baz=325,slow=18,SNR=1.6									
SQTA	**Sankt Quirin**	**4.34**	**345**	Pn	**Pn**	**00 44 49.4**	**+1.8**			
	comp=Z,3.0nm,0.2s,SNR=24									
SQTA				*i* Sn	**Sn**	**00 45 41.2**	**+2.8**			
	comp=Z,0.8nm,0.3s									
WATA	**Walderalm**	**4.39**	**349**	Pn	**Pn**	**00 44 50.7**	**+2.4**			
	comp=Z,3.9nm,0.2s,SNR=20									
WATA				*i* Sn	**Sn**	**00 45 39.9**	**+0.1**			
	comp=Z,4.7nm,0.3s									
UPM	**Unac-Piva**	**4.43**	**86**	*e*Pn	**Pn**	**00 44 52.3**	**+3.4**			
MOTA	**Moosalm**	**4.48**	**345**	*i* Pn	**Pn**	**00 44 52.4**	**+2.8**			
	comp=Z,1.4nm,0.3s,SNR=13									
MOTA				*i* Sn	**Sn**	**00 45 42.7**	**+0.8**			
	comp=Z,7.4nm,0.5s									
HAPS	**Han Pijesak,Bl**	**4.55**	**75**	*e*Pn	**Pn**	**00 44 52.0**	**+1.5**			
FRF	**La Foret Royal**	**4.56**	**279**	*e*Pn	**Pn**	**00 44 50.0**	**-0.5**			
FRF				*e*Sn	**Sn**	**00 45 40.1**	**-3.5**			
	comp=Z,2.4nm,0.3s									
ARSA	**Arzberg**	**4.62**	**23**	*i* Pn	**Pn**	**00 44 51.2**	**-0.1**			
	comp=Z,3.2nm,0.3s,SNR=6.3									
ARSA				*i* Sn	**Sn**	**00 45 43.1**	**-2.0**			
	comp=Z,4.5nm,0.4s									
RETA	**Reutte**	**4.69**	**342**	Pn	**Pn**	**00 44 54.6**	**+2.3**			
	comp=Z,2.8nm,0.3s,SNR=14									
RETA				*i* Sn	**Sn**	**00 45 47.2**	**+0.3**			
	comp=Z,3.7nm,0.5s									
MBDF	**Montbardon**	**4.71**	**293**	*e*Pn	**Pn**	**00 44 52.1**	**-0.6**			
MBDF				*e*Sn	**Sn**	**00 45 43.2**	**-4.3**			
	comp=Z,5.9nm,0.6s									
DAVA	**Damuels**	**4.74**	**335**	Pn	**Pn**	**00 44 55.3**	**+2.2**			
	comp=Z,4.4nm,0.3s,SNR=9.5									
DAVA				*i* Sn	**Sn**	**00 45 49.1**	**+0.8**			
DRME	**Dracevica, Mon**	**4.75**	**98**	*e*Pn	**Pn**	**00 44 54.4**	**+1.3**			
PDG	**Podgorica**	**4.75**	**95**	⇑P	**Pn**	**00 44 54.5**	**+1.4**			
PDG	**Podgorica**	**4.75**	**95**	*e*Pn	**Pn**	**00 44 55.4**	**+2.3**			
RUDO	**Rudo**	**4.79**	**81**	*e*Pn	**Pn**	**00 44 54.5**	**+0.9**			
BBLS	**Lazići**	**4.84**	**78**	*e*Pn	**Pn**	**00 44 54.7**	**+0.3**			
MOA	**Molln**	**4.92**	**11**	Pn	**Pn**	**00 44 56.4**	**+1.0**			
	comp=Z,1.4nm,0.3s,SNR=7.8									
MOA				*i* Sn	**Sn**	**00 45 52.5**	**+0.1**			
	comp=Z,9.2nm,0.3s									
LPG	**La Plagne**	**5.03**	**301**	*e*Pn	**Pn**	**00 44 56.7**	**-0.5**			
LPG				*e*Sn	**Sn**	**00 45 52.2**	**-3.3**			
	comp=Z,1.9nm,0.4s									
LPL	**La Plagne**	**5.05**	**302**	*e*Pn	**Pn**	**00 44 56.8**	**-0.6**			
LPL	**La Plagne**	**5.05**	**302**	*e*P	**Pn**	**00 45 00.3**	**+2.9**			
LPL				*e*Sn	**Sn**	**00 45 51.4**	**-4.5**			
	comp=Z,5.6nm,0.5s									
MORH	**Mrgy, Hungar**	**5.21**	**50**	*e*Pn	**Pn**	**00 45 01.8**	**+2.4**			
DIVS	**Divibare**	**5.29**	**76**	*e*Pn	**Pn**	**00 45 02.3**	**+1.7**			
CONA	**Conrad Observa**	**5.33**	**22**	Pn	**Pn**	**00 45 00.6**	**-0.5**			
	comp=Z,0.9nm,0.2s,SNR=5.7									
CONA				*i* Sn	**Sn**	**00 46 02.7**	**0.0**			
	comp=Z,8.0nm,0.5s									
ORIF	**Oris-en-Rattie**	**5.37**	**293**	*e*P	**Pn**	**00 45 04.1**	**+2.4**			
ORIF				*e*Sn	**Sn**	**00 45 59.5**	**-4.3**			
	comp=Z,3.6nm,0.6s									
SMRF	**Simiane la Rot**	**5.38**	**283**	*e*P	**Pn**	**00 45 03.4**	**+1.7**			
SMRF				*e*Sn	**Sn**	**00 45 59.1**	**-4.7**			
	comp=Z,0.3nm,0.2s									
FRGS	**Fruska Gora**	**5.44**	**65**	*e*Pn	**Pn**	**00 45 02.8**	**+0.2**			
TIR	**Tirane**	**5.47**	**106**	⇑P	**Pn**	**00 45 04.5**	**+1.5**			
GERES	**GERESS Array B**	**5.84**	**6**	Pn	**Pn**	**00 45 08.7**	**+0.5**			
	comp=Z,0.5nm,0.3s,baz=179,slow=13,SNR=15									
GERES				Sn	**Sn**	**00 46 12.3**	**-2.9**			
	comp=Z,1.7nm,0.3s,baz=189,slow=25,SNR=6.9									
CABF	**La Chapelle**	**6.00**	**309**	*e*Pn	**Pn**	**00 45 09.6**	**-0.7**			
CABF				*e*Sn	**Sn**	**00 46 14.6**	**-4.5**			
	comp=Z,1.2nm,0.3s									
KHC	**Kasperske Hory**	**6.12**	**4**	*e*PN	**Pn**	**00 45 11.6**	**-0.3**			
KHC				*e*SN	**Sn**	**00 46 20.2**	**-1.8**			
MODS	**Modra-Piesok**	**6.17**	**29**	*e*PN	**Pn**	**00 45 12.8**	**+0.2**			
MODS				*e*SN	**Sn**	**00 46 18.7**	**-4.6**			
SMOL	**Smolenice**	**6.34**	**29**	*e*PN	**Pn**	**00 45 16.2**	**+1.2**			
HINF	**Hinteralfeld**	**6.38**	**321**	*e*Pn	**Pn**	**00 45 14.3**	**-1.2**			
HINF	**Hinteralfeld**	**6.38**	**321**	*e*P	**Pn**	**00 45 19.1**	**+3.6**			
HINF				*e*Sn	**Sn**	**00 46 22.7**	**-5.7**			
	comp=Z,12nm,0.5s									
TREC	**Trest**	**6.52**	**15**	*e*PN	**Pn**	**00 45 17.0**	**-0.4**			
TREC				*e*SN	**Sn**	**00 46 28.8**	**-3.1**			
LASF	**Ste Croix**	**6.62**	**282**	*e*Pn	**Pn**	**00 45 18.0**	**-0.8**			
LASF				*e*Sn	**Sn**	**00 46 29.2**	**-5.2**			
	comp=Z,1.4nm,0.4s									
CDF	**Champ du Feu**	**6.64**	**326**	*e*Pn	**Pn**	**00 45 18.2**	**-1.0**			
CDF				*e*Sn	**Sn**	**00 46 30.0**	**-5.0**			
	comp=Z,2.9nm,0.3s									
HAU	**Haudompre**	**6.75**	**320**	*e*Pn	**Pn**	**00 45 19.6**	**-1.0**			
HAU				*e*Sn	**Sn**	**00 46 31.9**	**-5.7**			
	comp=Z,8.9nm,0.4s									
VRAC	**Vranov**	**6.79**	**21**	Pn	**Pn**	**00 45 24.4**	**+3.3**			
	comp=Z,0.1nm,0.3s,baz=213,slow=15,SNR=2.2									
BZS	**Buzias**	**6.79**	**65**	⇓P	**Pn**	**00 45 18.3**	**-2.8**			
VYHS	**Vyhne**	**6.88**	**35**	*e*PN	**Pn**	**00 45 24.2**	**+1.9**			
PRU	**Pruhonice**	**7.05**	**9**	*e*SN	**Sn**	**00 46 41.6**	**-3.3**			
NKC	**Novy Kostel**	**7.21**	**358**	*e*SN	**Sn**	**00 46 45.1**	**-3.7**			
SMF	**Signal de Mont**	**7.35**	**302**	*e*Pn	**Pn**	**00 45 28.2**	**-0.6**			
SMF				*e*Sn	**Sn**	**00 46 46.1**	**-6.3**			
	comp=Z,2.5nm,0.4s									
LOR	**Lormes**	**7.64**	**307**	*e*Pn	**Pn**	**00 45 31.2**	**-1.5**			
	baz=131									
LOR				*e*Sn	**Sn**	**00 46 53.3**	**-6.1**			
	comp=Z,3.1nm,0.4s,baz=133									
VTS	**Vitosha**	**7.64**	**90**	⇓P	**Pn**	**00 45 33.4**	**+0.4**			
AVF	**Avril sur Loir**	**7.72**	**302**	*e*Pn	**Pn**	**00 45 33.2**	**-0.6**			
AVF				*e*Sn	**Sn**	**00 46 54.7**	**-6.6**			
	comp=Z,0.2nm,0.2s									
SSF	**Saint Saulge**	**7.75**	**305**	*e*Pn	**Pn**	**00 45 33.2**	**-1.0**			
SSF				*e*Sn	**Sn**	**00 46 56.0**	**-6.0**			
	comp=Z,0.5nm,0.2s									
KEST	**Kesra**	**7.78**	**202**	Pn	**Pn**	**00 45 39.5**	**+4.7**			
	comp=Z,0.2nm,0.3s,baz=349,slow=9.3,SNR=5.8									
BRG	**Berggiesshubel**	**7.88**	**5**	SG	**Sg**	**00 47 57.8**	**+3.9**			
	comp=Z,1.4nm,0.6s									
BGF	**Bois d'Agland**	**7.94**	**300**	*e*Pn	**Pn**	**00 45 35.4**	**-1.5**			
JMIC	**Jan Mayen**	**29.98**	**346**	LR	LR	01 01 20.7				
	comp=Z,300nm,19.2s,baz=80,slow=36									
TORD	**Torodi Ar. Bea**	**31.30**	**201**	P	**P**	**00 50 03.1**	**+1.2**			
	comp=Z,0.3nm,0.6s,baz=1.1,slow=7.2,SNR=3.7									
MKAR	**Makanchi Array**	**47.85**	**60**	P	**P**	**00 52 20.3**	**+1.0**			
	comp=Z,0.5nm,0.8s,baz=293,slow=6.1,SNR=5.9									
YKA	**Yellowknife Ar**	**66.72**	**336**	P	**P**	**00 54 33.1**	**+0.8**			
	comp=Z,0.2nm,0.7s,baz=45,slow=6.0,SNR=6.1									

HEL 07 00:45:44.0±0.0, 67.84N×20.21E, h0km, ML1.3, ML0.9(UPP), Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**22**	*i* P	Pg	00 45 46.2	-0.3
KUA				*i* S	Sg	00 45 47.9	-0.2
RATU	**Laukkuluspa**	**0.23**	**267**	*i* P	Pg	00 45 48.1	-0.3
RATU				*i* S	Sg	00 45 51.5	-0.1
KOVU	**Salmi**	**0.39**	**357**	*i* P	Pg	00 45 51.0	-0.5
KOVU				*i* S	Sg	00 45 56.1	-0.4
LANU	**Lannavaara** baz=254	**0.70**	**71**	*e*P	Pg	00 45 56.9	-0.6
LANU				*e*S	Sg	00 46 06.3	-0.2
KIF	**Kilpisjarvi** baz=176	**1.20**	**10**	*e*PB	Pg	00 46 06.6	-0.3
KIF				MSG		00 46 21.6	
	comp=Z,2.2nm,0.2s						
KIF				*e*S	Sg	00 46 22.2	-0.1
PAJU	**Pajala**	**1.39**	**125**	*e*P	Pg	00 46 09.0	-1.5
PAJU				*e*S	Sg	00 46 27.5	-0.9
HEF	**Hetta** baz=251	**1.42**	**64**	*e*PG	Pn	00 46 09.6	-1.4
HEF				MSG		00 46 26.8	
	comp=Z,2.1nm,0.2s						
HEF				*e*SB	Sg	00 46 27.8	-1.6
ERTU	**Ertsjaerv** baz=320	**1.50**	**148**	*e*PN

PDGK	**Podgornoye**	**1.21**	**37**	P	Pn	01 11 28.4	-10
	0.3nm,0.5s						
PDGK				S	Sb	01 11 52.1	-1.9
	0.7nm,0.2s						
BOOM	**Boomskoye usch**	**1.89**	**275**⇑	*i*P	Pb	01 11 50.8	+0.5
	baz=75						
BOOM			⇑	*i*S	Sg	01 12 16.0	-1.2
	baz=75						
DJR	**Jarkent**	**2.18**	**25**	*e*P	Pb	01 11 54.0	-1.2
	0.6nm,0.3s						
DJR				*e*S	Sb	01 12 20.9	-1.0
	1.7nm,0.2s						
DJR	**Jarkent**	**2.18**	**25**	Pg	Pn	01 11 45.9	-5.7
	1.1nm,0.6s						
DJR				Lg	Lg	01 12 22.1	
	3.4nm,0.5s						

MAN 07 01:18:31.8, 9.85N×124.04E, h2km, mb4.3, ML3.1, MS2.8, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.47**	**351**⇓	*i*P	Pg	01 18 41.1	+0.3
LLP				*i* S	Sg	01 18 47.7	+0.6
MSLP	**Maasin**	**0.86**	**70**	*e*P	Pg	01 18 48.5	+0.2
MSLP				*e*S	Sb	01 19 00.6	-0.7
OCLP	**Ormoc**	**1.32**	**25**	*e*P	Pg	01 18 56.3	-0.8
OCLP				*e*S	Sn	01 19 18.0	+2.5
SCPH	**Surigao**	**1.43**	**92**⇓	*e*P	Pn	01 18 58.0	-0.7
SCPH				*e*S	Sn	01 19 18.6	+0.4
CGP	**Cagayan de Oro**	**1.53**	**155**⇓	*e*P	Pn	01 18 58.8	-1.3
CGP				*e*S	Sn	01 19 19.8	-0.7
GUIM	**Jordan**	**1.62**	**299**	*e*P	Pn	01 19 00.9	-0.5
GUIM				*e*S	Sb	01 19 23.2	-0.2
RCP	**Roxas**	**2.12**	**323**⇑	*e*P	Pn	01 19 08.3	0.0
BUKP	**Musuan**	**2.20**	**153**	*e*P	Pn	01 19 10.8	+1.4
BUKP				*e*S	Sg	01 19 46.5	+3.9

*IDC **07** 01:31:23.0±1.3, 68.29N×136.45W, h0km, mb3.8/3, mb1 4.0/6, mb1mx3.4/67, mbtmp3.8/6, ML3.7/3, MS3.8/1, Ms1 3.8/1, ms1mx2.7/46, Error ellipse: s-maj=22.7km s-min=11.2km az=173.0*
*PGC **07** 01:31:26.3±1.4, 68.24N×136.20W, h20km, ML3.0/1, 110km west of Inuvik, Nt Northern Yukon Territory, Canada*
ISC 07 01:31:22.5±0.7, 68.18N±0.05×136.22W±0.05, h10km, n28, σ2s56/40, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	**Inuvik**	**1.01**	**82**	Pg	Pn	**01 31 43.9**	**+1.1**
	27nm,0.3s,baz=257,slow=17,SNR=721						
INK				Lg	Lg	01 31 58.5	
	74nm,0.3s,baz=152,slow=17,SNR=25						
INK				LR	LR	01 32 01.2	
	comp=Z,97nm,21.8s,baz=118,slow=35						
INK	**Inuvik**	**1.01**	**82**	P	Pn	**01 31 43.8**	**+1.1**
INK				S	Sn	**01 31 58.6**	**+1.6**
COLD	**Coldfoot**	**5.41**	**266**	Pn	Pn	**01 32 44.7**	**+1.6**
COLD				Sn	Sn	**01 33 43.7**	**-1.7**
COLD				Sg	Sg	**01 34 13.9**	**-2.1**
ILAR	**Eielson Array**	**5.47**	**236**	Pn	Pn	**01 32 44.9**	**+0.8**
	0.7nm,0.3s,baz=41,slow=13,SNR=57						
ILAR				Sn	Sn	**01 33 44.9**	**-2.0**
	1.3nm,0.3s,baz=46,slow=24,SNR=6.8						
ILAR				Lg	Lg	01 34 13.1	
	1.3nm,0.3s,baz=61,slow=30,SNR=5.1						
YUK1	**Sand Pete Hill**	**6.32**	**199**	Pn	Pn	**01 32 58.3**	**+2.6**
YUK1				Sn	Sn	**01 34 06.3**	**-1.7**
PAX	**Paxson**	**6.48**	**221**	Pn	Pn	**01 33 00.4**	**+2.5**
YUK3	**Moose Creek**	**6.68**	**198**	Pn	Pn	**01 33 02.1**	**+1.3**
YUK3				Sn	Sn	**01 34 14.7**	**-2.2**
YUK2	**White River**	**6.71**	**199**	Pn	Pn	**01 33 03.0**	**+1.9**
YUK2				Sn	Sn	**01 34 16.8**	**-0.8**
YUK4	**Talbot Arm**	**6.94**	**190**	Pn	Pn	**01 33 04.5**	**+0.1**
YUK4				Sn	Sn	**01 34 18.1**	**-5.3**
YUK5	**Granite Creek**	**7.11**	**186**	Pn	Pn	**01 33 09.1**	**+2.4**
YUK5				Sn	Sn	**01 34 25.1**	**-2.5**
YUK6	**Outpost Mounta**	**7.33**	**188**	Pn	Pn	**01 33 12.3**	**+2.6**
HYT	**Haines Junctio**	**7.41**	**185**	Pn	Pn	**01 33 13.5**	**+2.8**
HYT				Sn	Sn	**01 34 32.8**	**-2.0**
PTPK	**Patty Peak**	**7.51**	**204**	Pn	Pn	**01 33 13.9**	**+1.7**
CTGM	**Chitina Glacie**	**7.57**	**199**	Pn	Pn	**01 33 15.5**	**+2.6**
WHY	**Whitehorse**	**7.58**	**175**	Pn	Pn	**01 33 14.6**	**+1.6**
WHY				Sn	Sn	**01 34 36.6**	**-2.2**
BALM	**Baldy**	**7.64**	**203**	Pn	Pn	**01 33 15.8**	**+2.0**
YUK7	**Dusty Glacier**	**7.73**	**187**	Pn	Pn	**01 33 17.2**	**+2.0**
KIAG	**Kiagna River**	**7.75**	**203**	Pn	Pn	**01 33 17.1**	**+2.7**
GRNC	**Granite Creek**	**7.85**	**200**	Pn	Pn	**01 33 18.5**	**+1.7**
KUKN	**Kugluktuk,NWT**	**7.93**	**83**	Pn	Pn	**01 33 18.2**	**+0.6**
KUKN				Sn	Sn	**01 34 41.3**	**-6.0**
YKW3	**Yellowknife Ar**	**10.58**	**112**	Pn	Pn	**01 33 53.7**	**-0.3**
YKW3				Sn	Sn	01 35 45.0	-7.4
YKA	**Yellowknife Ar**	**10.63**	**112**	Pn	Pn	**01 33 54.4**	**-0.3**
	1.3nm,0.3s,baz=313,slow=13,SNR=29						
YKA				Sn	Sn	01 35 46.0	-7.6
	1.2nm,0.3s,baz=311,slow=23,SNR=9.3						
YKA				Lg	Lg	01 36 54.4	
	baz=308,slow=30,SNR=3.7						
YKW1	**Yellowknife Ar**	**10.66**	**112**	Pn	Pn	**01 33 55.4**	**+0.3**
YKW1				Sn	Sn	01 35 46.8	-7.5
RES	**Resolute Bay**	**14.36**	**45**	Pn	Pn	**01 34 45.6**	**+0.2**
	0.3nm,0.3s,baz=244,slow=14,SNR=11						
RES				Sn	Sn	**01 37 17.9**	**-6.6**
	0.2nm,0.3s,baz=133,slow=19,SNR=5.4						
FRB	**Frobisher Bay**	**26.63**	**67**	P	P	**01 37 03.0**	**+2.3**
	1.0nm,0.6s,baz=311,slow=9.3,SNR=4.2						
NVAR	**Mina Array Bea**	**31.41**	**152**	P	P	**01 37 47.5**	**+3.9**
	0.1nm,0.4s,baz=358,slow=7.5,SNR=3.2						
FINES	**FINESS Array B**	**50.04**	**11**	P	P	**01 40 17.9**	**+1.4**
	3.3nm,1.0s,baz=341,slow=6.5,SNR=2.8						
JAY	**Jayapura**	**89.74**	**263**	LR	LR	02 20 41.1	
	comp=Z,46nm,21.6s,baz=40,slow=33						

*IDC **07** 01:32:39.8±4.0, 63.82N×3.33E, h0km, mb1 3.3/4, mb1mx3.0/55, mbtmp3.2/4, ML2.4/4, Error ellipse: s-maj=38.6km s-min=21.5km az=92.0*
*BER **07** 01:32:40.1±3.5, 63.76N×2.73E, h15km±14km, ML2.0, MW2.3, ML2.1(NAO), Confirmed Earthquake*
*NAO **07** 01:32:41.4±2.4, 63.75N×3.82E, ML2.1*
*UPP **07** 01:32:45.7±3.1, 63.74N×3.97E, h0km, ML1.9, Suspected explosion*
ISC 07 01:32:38.4±1.4, 63.74N±0.04×3.03E±0.08, h10km, n59, σ1s94/97, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FOO	**Floro**	**2.34**	**156**	Pn	Pn	**01 33 17.6**	**+0.8**
FOO				Sn	Sn	**01 33 45.2**	**-0.3**
FOO	**Floro**	**2.34**	**156**	*e*P	Pn	**01 33 17.8**	**+1.0**
FOO				*e*S	Sn	**01 33 45.2**	**-0.3**
FOO				IAML		01 33 47.7	
	comp=Z,16nm,0.5s						
MOL	**Molde**	**2.36**	**118**	Pn	Pn	**01 33 18.5**	**+1.3**
MOL				Sn	Sn	**01 33 43.9**	**-2.2**
MOL				Lg	Lg	01 33 47.5	
MOL	**Molde**	**2.36**	**118**	*e*P	Pn	**01 33 18.4**	**+1.3**
MOL				*e*S	Sn	**01 33 46.8**	**+0.7**
MOL				IAML		01 33 49.9	
	comp=Z,20nm,0.3s						
AKN	**Aaknes**	**2.39**	**129**	Pn	Pn	**01 33 19.6**	**+2.0**
AKN				Sn	Sn	**01 33 48.4**	**+1.4**
AKN	**Aaknes**	**2.39**	**129**	Pn	Pn	**01 33 19.6**	**+2.0**
AKN				Sn	Sn	**01 33 48.4**	**+1.4**
AKN				IAML		01 33 50.4	
	comp=Z,58nm,0.2s						
HYA	**Hoyanger**	**2.97**	**149**	*e*P	Pn	**01 33 26.9**	**+1.4**
HYA				*e*S	Sn	**01 34 00.4**	**-0.6**
HYA				IAML		01 34 06.5	
	comp=Z,14nm,0.1s						
HYA				IAML		01 34 06.8	
	comp=Z,12nm,0.2s						
DOMB	**Dombas**	**3.24**	**119**	*e*P	Pn	**01 33 30.7**	**+1.4**
DOMB				*e*S	Sn	**01 34 08.6**	**+0.6**
DOMB				IAML		01 34 16.0	
	comp=Z,9.7nm,0.3s						
TBLU	**Trondheim**	**3.28**	**95**	*e*P	Pn	**01 33 32.1**	**+2.4**
TBLU				*e*S	Sn	**01 34 11.3**	**+2.6**
TBLU				IAML		01 34 17.2	
	comp=Z,6.5nm,0.2s						
ASK	**Askoy**	**3.42**	**162**	*e*P	Pn	**01 33 33.2**	**+1.6**
ASK				*e*S	Sn	**01 34 09.7**	**-2.5**
ASK				IAML		01 34 11.3	
	comp=Z,9.1nm,0.8s						
BER	**Bergen**	**3.54**	**161**	*e*P	Pn	**01 33 32.1**	**-1.2**
BER				*e*S	Sn	**01 34 12.3**	**-2.7**
BER				IAML		01 34 17.2	
	comp=Z,15nm,0.9s						
SKAR	**Skarslia**	**3.94**	**139**	*e*P	Pn	**01 33 40.6**	**+1.8**
SKAR				*e*S	Sn	**01 34 25.0**	**-0.1**
SKAR				IAML		01 34 40.2	
	comp=Z,7.9nm,0.3s						
NSS	**Namsos**	**4.00**	**75**	*e*P	Pn	**01 33 40.8**	**+1.2**
NSS				*e*S	Sn	**01 34 26.2**	**-0.2**
NSS				IAML		01 34 27.8	
	comp=Z,15nm,0.2s						
ODD1	**Odda**	**4.20**	**154**	*e*P	Pn	**01 33 43.6**	**+1.1**
ODD1				*e*S	Sn	**01 34 29.2**	**-2.3**
ODD1				IAML		01 34 31.6	
	comp=Z,3.8nm,0.2s						
NC204	**NORSAR Array S**	**4.35**	**121**	*e*P	Pn	**01 33 45.6**	**+1.1**
NC204				*e*S	Sn	**01 34 35.0**	**-0.3**
NC204				IAML		01 34 37.8	
	comp=Z,7.7nm,0.6s						
NC204				IAML		01 34 37.9	
	comp=Z,4.9nm,0.6s						
NBO00	**NORSAR Array S**	**4.51**	**123**	*e*P	Pn	**01 33 48.2**	**+1.5**
NBO00				*e*S	Sn	**01 34 37.9**	**-1.3**
NBO00				IAML		01 34 41.7	
	comp=Z,4.3nm,0.5s						
NBO00				IAML		01 34 41.9	
	comp=Z,6.6nm,0.1s						
NC303	**NORSAR Array S**	**4.62**	**119**	*e*P	Pn	**01 33 49.1**	**+1.0**
NC303				*e*S	Sn	**01 34 41.3**	**-0.4**
NC303				IAML		01 34 58.1	
	comp=Z,3.2nm,0.5s						
NC303				IAML		01 34 58.2	
	comp=Z,4.9nm,0.6s						
BLS5	**Blasjo**	**4.63**	**158**	*e*P	Pn	**01 33 49.2**	**+0.9**
BLS5				*e*S	Sn	**01 34 38.2**	**-3.9**
BLS5				IAML		01 34 52.2	
	comp=Z,10nm,1.0s						
NB2	**NORSAR Subarra**	**4.67**	**122**	Pn	Pn	**01 33 49.8**	**+0.9**
	baz=311,slow=14						
NB2				Sn	Sn	**01 34 43.7**	**+0.6**
	baz=307,slow=28						
NB2	**NORSAR Subarra**	**4.67**	**122**	Pn	Pn	**01 33 49.8**	**+0.9**
	baz=311,slow=14						
NB2				Sn	Sn	**01 34 43.7**	**+0.6**
	baz=307,slow=28						
NOA	**NORSAR Array B**	**4.67**	**122**	Pn	Pn	**01 33 48.8**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=312,slow=17,SNR=6.5						
NOA				Sn	Sn	**01 34 42.9**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=311,slow=24,SNR=6.0						
NAO01	**NORSAR Array S**	**4.68**	**125**	*e*P	Pn	**01 33 50.3**	**+1.4**
NAO01				*e*S	Sn	**01 34 42.7**	**-0.4**
NAO01				IAML		01 34 60.0	
	comp=Z,3.7nm,0.3s						
NB201	**NORSAR Array S**	**4.70**	**121**	*e*P	Pn	**01 33 50.2**	**+0.9**
NB201				*e*S	Sn	**01 34 43.1**	**-0.6**
NB201				IAML		01 35 00.5	
	comp=Z,4.1nm,0.6s						
STOK	**Stokkvaagen**	**4.97**	**54**	*e*P	Pn	**01 33 53.2**	**+0.3**
STOK				*e*S	Sn	**01 34 46.4**	**-3.9**
STOK				IAML		01 34 53.3	
	comp=Z,0.6nm,0.1s						
NRA0	**NORESS Array S**	**4.99**	**123**	Pn	Pn	**01 33 53.8**	**+0.6**
	baz=322,slow=14						
NRA0				Sn	Sn	**01 34 49.6**	**-1.3**
	baz=306,slow=28						
NRA0				Lg	Lg	01 35 04.6	
	baz=306,slow=28						
NRA0	**NORESS Array S**	**4.99**	**123**	Pn	Pn	**01 33 53.8**	**+0.6**
	baz=322,slow=14						
NRA0				Sn	Sn	**01 34 49.6**	**-1.3**
	baz=306,slow=28						
NRA0				Sg	Sb	**01 35 04.6**	**-1.1**
	baz=306,slow=28						
NC602	**NORSAR Array S**	**4.99**	**123**	*e*P	Pn	**01 33 53.8**	**+0.6**
NC602				*e*S	Sn	**01 34 49.2**	**-1.7**
NC602				IAML		01 34 52.1	
	comp=Z,4.1nm,0.6s						
KONS	**Konsvik**	**5.08**	**52**	*e*P	Pn	**01 33 54.6**	**+0.1**
KONS				*e*S	Sn	**01 34 48.1**	**-4.9**
KONS				IAML		01 34 56.3	
	comp=Z,4.5nm,0.5s						
KONS				IAML		01 34 57.5	
	comp=Z,6.3nm,0.5s						
KONO	**Kongsberg**	**5.16**	**140**	*e*P	Pn	**01 33 57.5**	**+2.1**
KONO				*e*S	Sn	**01 34 53.2**	**-1.7**
KONO				IAML		01 34 58.3	
	comp=Z,7.9nm,1.0s						
OSL	**Oslo**	**5.27**	**133**	*e*S	Sn	**01 34 55.0**	**-2.8**
OSL				IAML		01 35 10.4	
	comp=Z,6.1nm,0.2s						
NOD	**Norderasen**	**5.29**	**88**	*e*P	Pn	**01 33 59.5**	**+2.2**
NOD				*e*S	Sn	**01 34 57.7**	**-0.6**
NOD	**Norderasen**	**5.29**	**88**	P	Pn	**01 33 59.3**	**+2.0**
MOR8	**Moi Rana**	**5.43**	**58**	*e*P	Pn	**01 34 02.0**	**+2.8**
MOR8				*e*S	Sn	**01 35 02.3**	**+0.6**
MOR8				IAML		01 35 06.1	
	comp=Z,8.0nm,0.4s						
LOF	**Lofoten**	**6.15**	**40**	*e*P	Pn	**01 34 07.8**	**-1.3**
LOF				*e*S	Sn	**01 35 13.9**	**-5.6**
LOF				IAML		01 35 24.3	
	comp=Z,7.6nm,0.7s						
UDD	**Uddeholm**	**6.19**	**121**	S	Sn	**01 35 17.3**	**-3.0**
HFS	**Hagfors**	**6.19**	**121**	Pn	Pn	**01 34 10.6**	**+0.9**
	baz=293,slow=14						
HFS				Sn	Sn	**01 35 17.1**	**-3.4**
	baz=308,slow=22						
HFS	**Hagfors**	**6.19**	**121**	Pn	Pn	**01 34 10.6**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=302,slow=12,SNR=13						
HFS				Sn	Sn	**01 35 19.5**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=318,slow=24,SNR=13						
HFS	**Hagfors**	**6.19**	**121**	Pn	Pn	**01 34 10.6**	**+0.9**
	baz=293,slow=14						
HFS				Sn	Sn	**01 35 17.1**	**-3.4**
	baz=308,slow=22						
STEI	**Steigen**	**6.54**	**45**	*e*P	Pn	**01 34 14.8**	**+0.3**
STEI				*e*S	Sn	**01 35 25.1**	**-3.8**
STEI				IAML		01 35 30.3	
	comp=Z,5.0nm,0.8s						
FALU	**Falun**	**6.83**	**113**	P	Pn	**01 34 20.1**	**+1.8**
NRAU	**Nora**	**7.08**	**121**	P	Pn	**01 34 22.8**	**+1.0**
NRAU				S	Sn	**01 35 39.6**	**-2.6**
OSTU	**Oestervaala**	**7.51**	**112**	P	Pn	**01 34 28.6**	**+0.9**
BACU	**Backbrunna**	**7.72**	**114**	P	Pn	**01 34 31.3**	**+0.7**
FIBU	**Brunna**	**7.79**	**113**	P	Pn	**01 34 32.1**	**+0.6**
ESKU	**Esalstuna**	**7.82**	**119**	P	Pn	**01 34 33.9**	**+1.9**
FLYU	**Flymyra**	**7.88**	**111**	P	Pn	**01 34 33.4**	**+0.6**
GRAU	**Graesoe**	**8.04**	**108**	P	Pn	**01 34 35.6**	**+0.5**
LNKU	**Linkoeping**	**8.20**	**127**	P	Pn	**01 34 38.5**	**+1.4**
LNKU				S	Sn	**01 36 06.1**	**-3.6**
VXJU	**Vaexsjoe**	**9.02**	**134**	S	Sn	**01 36 25.2**	**-4.8**
ARA0	**ARCESS Array S**	**10.60**	**47**	Pn	Pn	**01 35 09.2**	**-0.8**
	baz=241,slow=14						
ARA0				Sn	Sn	01 37 01.8	-6.7
	baz=238,slow=22						
ARA0	**ARCESS Array S**	**10.60**	**47**	Pn	Pn	**01 35 09.2**	**-0.8**
	baz=241,slow=14						
ARA0				Sn	Sn	01 37 01.8	-6.7
	baz=238,slow=22						
ARCES	**ARCESS Array B**	**10.60**	**47**	Pn	Pn	**01 35 09.3**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=240,slow=13,SNR=8.4						
ARCES				Sn	Sn	01 37 02.1	-6.4
	comp=Z,0.2nm,0.3s,baz=234,slow=23,SNR=4.1						
FIA0	**FINESS Array S**	**10.85**	**92**	Pn	Pn	01 35 11.4	-2.0
	baz=294,slow=12						
FIA0	**FINESS Array S**	**10.85**	**92**	Pn	Pn	01 35 11.4	-2.0
	baz=294,slow=12						
FINES	**FINESS Array B**	**10.85**	**92**	Pn	Pn	**01 35 14.2**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=296,slow=12,SNR=6.9						
FINES				Sn	Sn	**01 37 09.9**	**-4.8**
	comp=Z,0.1nm,0.3s,baz=289,slow=22,SNR=3.3						
APA0	**Apatity Array**	**12.86**	**59**	Pn	Pn	**01 35 39.7**	**-1.2**
	baz=267,slow=9.3						
APA0	**Apatity Array**	**12.86**	**59**	Pn	Pn	**01 35 39.7**	**-1.2**
	baz=267,slow=9.3						
SPA0	**Spitsbergen Ar**	**15.07**	**11**	P	Pn	**01 36 13.3**	**+2.3**
	baz=185,slow=14						
SPA0	**Spitsbergen Ar**	**15.07**	**11**	P	Pn	**01 36 13.3**	**+2.3**
	baz=185,slow=14						

*IDC **07** 01:46:37.1±1.0, 16.99S×167.43E, h0km, mb3.9/8, mb1 4.2/10, mb1mx3.9/33, mbtmp4.1/10, ML4.7/2, MS3.1/2, Ms1 3.1/2, ms1mx2.8/37, Error ellipse: s-maj=29.3km s-min=20.9km az=97.0*
*NEIC **07** 01:46:42.2±1.7, 17.09S±0.08×167.32E±0.08, h42km±6km, mb4.1/6, Error ellipse: s-maj=11.6km s-min=10.0km az=215.0*
ISC 07 01:46:40.6±0.7, 17.07S±0.07×167.32E±0.10, h25km, n28, σ1s08/26, mb3.9/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.04**	**189**	Pn	Pn	**01 47 56.0**	**+1.2**
	13nm,0.3s,baz=308,slow=17,SNR=112						
DZM				Sn	Sn	**01 48 51.3**	**-1.1**
	16nm,0.3s,baz=132,slow=23,SNR=11						
DZM	**Mont Dzumac**	**5.04**	**189**		Pn	**01 47 55.4**	**+0.6**
DZM					Sn	**01 48 51.6**	**-0.7**
MSVF	**Nonsavu**	**10.26**	**95**	Pn	Pn	**01 49 06.6**	**+0.2**
HNR	**Honiara**	**10.45**	**316**	Pn	Pn	**01 49 10.2**	**+1.3**
	14nm,0.3s,baz=186,slow=10,SNR=2.4						
HNR				LR	LR	01 52 51.7	
	comp=Z,88nm,19.4s,baz=48,slow=36						
HNR	**Honiara**	**10.45**	**316**		Pn	**01 49 09.6**	**+0.7**
EIDS	**Eidsvold**	**17.23**	**239**	Pn	Pn	**01 50 38.6**	**-1.2**
AFI	**Afiamalu**	**20.38**	**84**	LR	LR	01 57 14.5	
	comp=Z,81nm,21.7s,baz=356,slow=31						
URZ	**Urewera**	**22.79**	**160**	P	P	**01 51 42.2**	**+0.8**
	2.8nm,0.6s,baz=299,slow=10,SNR=2.2						
URZ	**Urewera**	**22.79**	**160**	P	P	**01 51 41.3**	**-0.1**
URZ				IAmb	IAmb	01 51 44.0	
	comp=Z,5.7nm,1.0s						
STKA	**Stephens Creek**	**27.57**	**233**	P	P	**01 52 27.5**	**+1.7**
	comp=Z,0.9nm,0.5s,baz=27,slow=4.5,SNR=3.2						
WRA	**Warramunga Arr**	**31.38**	**260**	P	P	**01 53 00.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=79,slow=5.7,SNR=5.3						
WRA	**Warramunga Ar**	**31.38**	**260**	P	P	**01 52 59.6**	**-0.1**
ASAR	**Alice Springs**	**31.96**	**253**	P	P	**01 53 05.6**	**+0.8**
	comp=Z,2.3nm,0.6s,baz=80,slow=8.6,SNR=35						
ASAR	**Alice Springs**	**31.96**	**253**	P	P	**01 53 05.1**	**+0.2**
KNRA	**Kununurra**	**36.98**	**266**	P	P	**01 53 45.6**	**-2.7**
FITZ	**Fitzroy Crossi**	**39.69**	**262**	P	P	**01 54 09.7**	**-1.4**
FITZ				IAmb	IAmb	01 54 13.1	
	comp=Z,5.1nm,1.1s						
PETK	**Petropavlovsk-**	**70.38**	**354**	P	P	**01 57 52.6**	**+0.4**
	comp=Z,3.0nm,0.8s,baz=153,slow=8.1,SNR=2.8						
PETK	**Petropavlovsk-**	**70.38**	**354**	P	P	**01 57 52.3**	**+0.1**
SONM	**Songino Array**	**84.40**	**324**	P	P	**01 59 11.6**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=124,slow=7.2,SNR=3.2						
SONM	**Songino Array**	**84.40**	**324**	P	P	**01 59 09.7**	**-1.4**
ILAR	**Eielson Array**	**88.73**	**18**	P	P	**01 59 30.9**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=221,slow=5.8,SNR=4.1						
ILAR	**Eielson Array**	**88.73**	**18**	P	P	**01 59 30.3**	**-1.3**
MKAR	**Makanchi Array**	**98.92**	**316**	P	Pdif	02 00 19.9	+1.0
	comp=Z,0.2nm,0.6s,baz=104,slow=4.6,SNR=2.7						
MKAR	**Makanchi Array**	**98.92**	**316**	P	Pdif	02 00 18.5	-0.4
ARCES	**ARCESS Array B**	**122.52**	**345**	PKP	**PKiKP**	**02 05 32.8**	**-0.7**
	comp=Z,3.5nm,0.9s,baz=66,slow=4.1,SNR=5.6						
ABTA	**Abfaltersbach**	**143.81**	**330**	*i* PKPdf	**PKPdf**	**02 06 13.1**	**-0.7**
SQTA	**Sankt Quirin**	**144.06**	**332**	*i* PKPdf	PKPbc	02 06 11.6	-0.6
	comp=Z,5.2nm,1.3s						
FETA	**Feichten**	**144.42**	**332**	*i* PKiKP	**PKPdf**	**02 06 16.0**	**+1.0**
	comp=Z,7.4nm,1.4s						

IDC 07 01:57:01.5±3.1, 5.79S×133.76E, h0km, mb3.5/1, mb1 4.0/4, mb1mx3.5/36, mbtmp3.8/4, ML3.9/3, Error ellipse: s-maj=121.4km s-min=30.7km az=83.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.09**	**178**	Pn	Pn	02 00 20.9	-1.6
	0.3nm,0.3s,baz=355,slow=13,SNR=9.6						
WRA				Sn	Sn	02 02 48.8	-11
	0.3nm,0.3s,baz=358,slow=23,SNR=4.4						
FITZ	**Fitzroy Crossi**	**14.58**	**212**	Pn	Pn	02 00 29.4	+0.2
	1.1nm,0.3s,baz=33,slow=12,SNR=31						
FITZ				Sn	Sn	02 03 02.0	-10
	0.1nm,0.3s,baz=194,slow=17,SNR=2.1						
ASAR	**Alice Springs**	**17.78**	**180**	P	P	02 01 11.3	-0.1
	0.3nm,0.3s,baz=2.5,slow=11,SNR=12						
ASAR				S	Sn	02 04 19.4	-10
	0.2nm,0.3s,baz=2.8,slow=27,SNR=2.9						
MKAR	**Makanchi Array**	**69.32**	**325**	P	P	02 08 10.9	+0.1
	0.3nm,0.6s,baz=142,slow=6.1,SNR=4.5						

IDC 07 02:02:31.4±1.9, 0.06S×126.22E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.5/31, mbtmp3.7/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/38, Error ellipse: s-maj=183.8km s-min=25.1km az=65.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**15.01**	**340**	LR	LR	02 13 05.0	
	comp=Z,120nm,18.5s,baz=134,slow=42						
WRA	**Warramunga Arr**	**21.30**	**159**	P	P	02 07 19.4	-0.6
	1.6nm,0.4s,baz=337,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**24.62**	**163**	P	P	02 07 54.2	+0.4
	1.0nm,0.4s,baz=346,slow=12,SNR=9.6						
MKAR	**Makanchi Array**	**60.39**	**327**	P	P	02 12 42.6	-0.1
	0.3nm,0.3s,baz=112,slow=8.0,SNR=8.9						

*IDC **07** 02:06:04.8±1.2, 7.37S×120.36E, h553km±14km, mb2.9/6, mb1 3.0/10, mb1mx2.9/35, mbtmp3.8/10, Error ellipse: s-maj=54.9km s-min=12.5km az=63.0*
**ISC 07 02:06:04.1±1.2, 7.35S±0.2×120

IDC 07 02:15:12.3±1.1, 12°41N×141°39E, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.7/32, mbtmp3.7/7, Error ellipse: s-maj=37.8km s-min=21.8km az=92.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.89**	**192**	P	P	02 21 48.1	-0.2
	2.0nm,0.8s,baz=11,slow=9.6,SNR=10						
ASAR	**Alice Springs**	**36.59**	**192**	P	P	02 22 20.1	-0.2
	0.6nm,0.7s,baz=22,slow=12,SNR=7.9						
CMAR	**Chiang Mai Arr**	**41.29**	**284**	P	P	02 23 00.7	+0.8
	1.7nm,0.3s,baz=81,slow=5.9,SNR=6.1						
SONM	**Songino Array**	**45.82**	**327**	P	P	02 23 36.2	0.0
	0.3nm,0.6s,baz=130,slow=5.8,SNR=2.8						
MKAR	**Makanchi Array**	**60.01**	**317**	P	P	02 25 19.4	-1.5
	0.3nm,0.7s,baz=99,slow=6.3,SNR=3.7						
ILAR	**Eielson Array**	**71.08**	**25**	P	P	02 26 31.5	-0.7
	0.7nm,0.9s,baz=241,slow=5.6,SNR=3.9						
YKA	**Yellowknife Ar**	**85.45**	**27**	P	P	02 27 53.0	+1.3
	0.3nm,0.6s,baz=289,slow=4.4,SNR=4.5						

IDC 07 02:23:18.1±2.9, 5°76S×134°19E, h0km, mb3.5/1, mb1 4.1/5, mb1mx3.8/25, mbtmp3.9/5, ML4.0/4, MS2.8/1, Ms1 2.8/1, ms1mx2.2/24, Error ellipse: s-maj=100.9km s-min=21.9km az=81.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.66**	**329**	Pn	Pn	02 24 43.1	-0.5
	2.5nm,0.3s,baz=315,slow=20,SNR=6.0						
SIJI				Sn	Sn	02 25 39.4	-10
	1.7nm,0.3s,baz=143,slow=20,SNR=3.4						
WRA	**Warramunga Arr**	**14.10**	**179**	Pn	Pn	02 26 38.8	-0.5
	0.5nm,0.3s,baz=355,slow=13,SNR=15						
WRA				Sn	Sn	02 29 15.2	-1.5
	0.3nm,0.3s,baz=4.8,slow=23,SNR=3.5						
WRA				Lg	Lg	02 30 49.3	
	0.3nm,0.3s,baz=347,slow=28,SNR=5.0						
FITZ	**Fitzroy Crossi**	**14.84**	**214**	Pn	Pn	02 26 47.4	-1.9
	1.2nm,0.3s,baz=31,slow=11,SNR=46						
FITZ				Sn	Sn	02 29 24.4	-10
	0.2nm,0.3s,baz=0.0,slow=0.0,SNR=2.9						
FITZ				LR	LR	02 33 32.3	
	comp=Z,40nm,20.7s,baz=28,slow=41						
ASAR	**Alice Springs**	**17.81**	**181**	P	P	02 27 28.1	-0.4
	0.9nm,0.3s,baz=356,slow=10,SNR=29						
MKAR	**Makanchi Array**	**69.55**	**325**	P	P	02 34 29.2	+0.4
	0.4nm,0.6s,baz=120,slow=7.1,SNR=4.6						

DJA 07 02:45:54.1±0.3, 2°S±3°×12°1E±°, h10km, M3.5/11, MLv3.5/11, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**1.25**	**234**	P	Pn	02 46 15.9	-1.8
TTSI				S	Sb	02 46 33.1	-0.9
APSI	**Ampana**	**1.60**	**31**	P	Pn	02 46 22.0	-0.5
APSI				S	Sn	02 46 43.0	-0.3
SPSI	**Sidrap Palu**	**1.96**	**213**	P	Pn	02 46 27.6	+0.1
BNSI	**Bone**	**2.21**	**199**	P	Pn	02 46 31.4	+0.6
LUWI	**Luwuk**	**2.31**	**57**	P	Pn	02 46 31.8	-0.4
KDI	**Kendari**	**2.43**	**133**	P	Pn	02 46 33.9	0.0
MPSI	**Mapaga**	**2.78**	**340**	P	Pn	02 46 39.1	+0.4
BKSI	**Bulukumba**	**3.08**	**193**	P	Pn	02 46 43.2	+0.3
WSI	**Waingapu**	**7.34**	**184**	P	Pn	02 47 43.2	+1.8

*DDA **07** 02:46:26.9, 39°39N×39°10E, h11km±2km, ML2.5*
*ATA **07** 02:46:26.4±1.3, 39°40N×39°11E, h7km±30km, ML2.5, MW3.5*
*ISK **07** 02:46:26.9, 39°37N×39°14E, h4km, ML2.9/12*

ISC 07 02:46:27.8±1.1, 39°37N±0°02×39°12E±0°01, h1km±10km, n62, σ1°45/89, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
REFA	**Refahiye_ERZN**	**0.27**	**275**	*eP*	**Pn**	**02 46 38.5**	**-0.7**
REFA				*eS*	**Sb**	**02 46 46.7**	**+5.8**
REFA				IAML		02 46 50.4	
	comp=Z,163nm,0.3s						
REFA	**Refahiye_ERZN**	**0.27**	**275**	*i* P	**Pn**	**02 46 38.5**	**-0.7**
REFA				*i* S	**Sb**	**02 46 46.3**	**+5.5**
REFA				IAML		02 46 47.0	
	comp=E,339nm,0.3s						
REFA				IAML		02 46 49.0	
	comp=N,279nm,0.4s						
TNCL	**Tunceli-Merkez**	**0.42**	**128**	*eP*	**Pg**	**02 46 35.8**	**0.0**
TNCL				*eS*	**Sg**	**02 46 41.9**	**+0.7**
TNCL				IAML		02 46 46.1	
	comp=Z,730nm,0.2s						
TNCL	**Tunceli-Merkez**	**0.42**	**128**	*i* P	**Pg**	**02 46 35.8**	**0.0**
TNCL				*i* S	**Sg**	**02 46 41.8**	**+0.5**
TNCL				IAML		02 46 43.0	
	comp=E,1μm,0.4s						
TNCL				IAML		02 46 45.0	
	comp=N,1μm,0.2s						
KEMA	**Kemaliye**	**0.49**	**258**	*eP*	**Pg**	**02 46 36.5**	**-0.7**
KEMA				*eS*	**Sg**	**02 46 43.9**	**+0.2**
KEMA				IAML		02 46 45.3	
	comp=Z,153nm,0.3s						
KEMA	**Kemaliye**	**0.49**	**258**	*i* P	**Pg**	**02 46 36.6**	**-0.7**
KEMA				*i* S	**Sg**	**02 46 44.3**	**+0.6**
KEMA				IAML		02 46 45.0	
	comp=E,1μm,0.3s						
KEMA				IAML		02 46 45.0	
	comp=N,1μm,0.5s						
ERZN	**Erzincan**	**0.52**	**65**	PG	**Pg**	**02 46 37.1**	**-0.6**
ERZN				SG	**Sg**	**02 46 44.6**	**+0.2**
ARPR	**Arapgir-MALATY**	**0.67**	**246**	PG	**Pg**	**02 46 40.4**	**-0.2**
ARPR				SG	**Sg**	**02 46 50.8**	**+1.6**
KELT	**Kelkit**	**0.78**	**8**	*eP*	**Pg**	**02 46 41.8**	**-1.1**
KELT				*eS*	**Sg**	**02 46 52.2**	**-0.8**
KELT				IAML		02 46 53.3	
	comp=Z,201nm,0.4s						
KELT	**Kelkit**	**0.78**	**8**	*i* P	**Pg**	**02 46 41.7**	**-1.1**
KELT				*i* S	**Sg**	**02 46 52.4**	**-0.6**
KELT				IAML		02 46 53.0	
	comp=E,192nm,0.8s						
KELT				IAML		02 46 53.0	
	comp=N,253nm,0.4s						
ELZG	**Elazig**	**0.88**	**187**	*i* P	**Pg**	**02 46 44.2**	**-0.4**
ELZG				*i* S	**Sg**	**02 46 57.3**	**+1.3**
SUSE	**Susehri**	**1.09**	**320**	*i* P	**Pg**	**02 46 47.7**	**-1.1**
SUSE				IAML		02 47 05.0	
	comp=N,146nm,0.2s						
SUSE				IAML		02 47 08.0	
	comp=E,111nm,0.5s						
YEDI	**Yedisu-Bingol**	**1.11**	**86**	PN	**Pg**	**02 46 48.5**	**-0.5**
CUZAR	**Zara_SIVAS**	**1.16**	**297**	*i* P	**Pg**	**02 46 49.0**	**-1.1**
CUZAR				*i* S	**Sn**	**02 47 06.8**	**-1.1**
CUZAR				IAML		02 47 08.0	
	comp=E,126nm,0.4s						
CUZAR				IAML		02 47 11.0	
	comp=N,117nm,0.2s						
KOPT	**Kop Dagi**	**1.25**	**58**	*eP*	**Pg**	**02 46 51.0**	**-0.7**
KOPT				*eS*	**Sn**	**02 47 09.3**	**-1.0**
KOPT				IAML		02 47 11.9	
	comp=Z,62nm,0.7s						
KOPT	**Kop Dagi**	**1.25**	**58**	*i* P	**Pg**	**02 46 51.2**	**-0.5**
KOPT				IAML		02 47 11.0	
	comp=E,72nm,0.4s						
KOPT				IAML		02 47 18.0	
	comp=N,85nm,0.4s						
BNGB	**Bingl**	**1.27**	**107**	PN	**Pg**	**02 46 51.1**	**-1.1**
BNGB				SN	**Sb**	**02 47 09.1**	**-0.5**
CUKAN	**kangal_SIVAS**	**1.28**	**268**	*i* P	**Pg**	**02 46 50.6**	**-1.7**
CUKAN				*i* S	**Sb**	**02 47 09.3**	**-0.5**
CUKAN				IAML		02 47 13.0	
	comp=N,217nm,0.3s						
CUKAN				IAML		02 47 14.0	
	comp=E,235nm,0.3s						
HANI	**Diyarbakir_Han**	**1.38**	**133**	*i* P	**Pn**	**02 46 53.4**	**-1.0**
HANI				IAML		02 47 17.0	
	comp=N,49nm,0.5s						
HANI				IAML		02 47 22.0	
	comp=E,61nm,0.7s						
AKCD	**Akcadag**	**1.42**	**221**	*i* P	**Pn**	**02 46 53.3**	**-1.7**
AKCD				*i* S	**Sb**	**02 47 12.7**	**-1.2**
ECAT	**Cat-ERZURUM**	**1.46**	**80**	*i* P	**Pn**	**02 46 54.0**	**-1.5**
ECAT				*i* S	**Sn**	**02 47 15.3**	**-0.1**
KARO	**Karliova-Bingo**	**1.50**	**92**	PN	**Pn**	**02 46 55.5**	**-0.6**
DARE	**Darende-Malaty**	**1.50**	**238**	PN	**Pn**	**02 46 55.4**	**-0.6**
CUGUR	**Gurin_SVAS**	**1.57**	**246**	*i* P	**Pn**	**02 46 56.8**	**-0.3**
CUGUR				*i* S	**Sn**	**02 47 17.8**	**-0.4**
SCER	**sogukcermik**	**1.61**	**288**	*i* P	**Pb**	**02 46 57.5**	**-1.0**
SCER				IAML		02 47 22.0	
	comp=E,72nm,0.5s						
SCER				IAML		02 47 29.0	
	comp=N,128nm,0.3s						
MACK	**Trabzon**	**1.65**	**17**	*i* P	**Pb**	**02 46 57.7**	**-1.3**
MACK				IAML		02 47 22.0	
	comp=E,205nm,0.3s						
MACK				IAML		02 47 22.0	
	comp=N,134nm,0.3s						
KRIK	**Erzurum-spir**	**1.69**	**55**	*i* P	**Pg**	**02 47 02.6**	**+2.3**
KRIK				*i* S	**Sg**	**02 47 28.6**	**+6.3**
SVSK	**Karacayir**	**1.72**	**289**	PN	**Pn**	**02 46 58.7**	**-0.2**
VRTB	**Varto-Mus**	**1.83**	**96**	PN	**Pn**	**02 47 00.0**	**-0.5**
VRTB	**Varto-Mus**	**1.83**	**96**	*i* P	**Pb**	**02 47 01.6**	**-0.5**
VRTB				IAML		02 47 38.0	
	comp=N,57nm,0.8s						
VRTB				IAML		02 47 39.0	
	comp=E,87nm,1.0s						
CUALT	**Altinyayla-SIV**	**1.84**	**268**	*i* P	**Pn**	**02 47 00.6**	**0.0**
CUALT				*i* S	**Sg**	**02 47 26.4**	**-0.4**
CUALT				IAML		02 47 29.0	
	comp=N,107nm,0.3s						
CUALT				IAML		02 47 32.0	
	comp=E,104nm,0.3s						
ELBS	**KAHRAMANMARAS**	**1.87**	**237**	*i* P	**Pb**	**02 47 02.5**	**-0.4**
ELBS				*i* S	**Sg**	**02 47 29.0**	**+1.1**
ELBS				IAML		02 47 33.0	
	comp=E,163nm,0.8s						
AKDA	**Akdag**	**1.88**	**66**	*i* P	Pg	02 47 28.4	+25
ORDU	**Ordu-Boztepe**	**1.88**	**330**	*i* P	**Pn**	**02 47 01.0**	**-0.2**
ORDU				*i* S	**Sb**	**02 47 25.9**	**-1.1**
ORDU				IAML		02 47 26.0	
	comp=E,117nm,0.8s						
ORDU				IAML		02 47 30.0	
	comp=N,85nm,1.3s						
URFA	**Urfa**	**1.94**	**187**	PN	**Pn**	**02 47 01.7**	**-0.3**
MUSM	**Mu-Merkez**	**1.97**	**108**	*i* P	**Pn**	**02 47 03.2**	**+0.6**
MUSM				*i* S	**Sb**	**02 47 29.5**	**-0.3**
SVAN	**Silvan-Diyarba**	**2.03**	**126**	PN	**Pn**	**02 47 03.0**	**-0.2**
SVAN	**Silvan-Diyarba**	**2.03**	**126**	*i* P	**Pb**	**02 47 05.0**	**-0.6**
SVAN				*i* S	**Sb**	**02 47 32.2**	**+0.8**
SVAN				IAML		02 47 34.0	
	comp=E,33nm,1.0s						
SVAN				IAML		02 47 36.0	
	comp=N,25nm,0.6s						
CHOM	**Cayeli-Rize**	**2.13**	**36**	PN	**Pn**	**02 47 04.8**	**+0.2**
TOKT	**Tokat**	**2.19**	**296**	PN	**Pn**	**02 47 05.9**	**+0.4**
SANL	**SANLIURFA_Merk**	**2.20**	**183**	*i* P	**Pn**	**02 47 05.7**	**+0.2**
SANL				*i* S	**Sb**	**02 47 37.9**	**+1.7**
SANL				IAML		02 47 43.0	
	comp=E,23nm,0.7s						
SANL				IAML		02 47 43.0	
	comp=N,34nm,0.6s						
CUSAR	**Sarkisla-SIVAS**	**2.23**	**272**	*i* P	**Pn**	**02 47 05.8**	**-0.2**
CUSAR				IAML		02 47 46.0	
	comp=E,19nm,0.4s						
CUSAR				IAML		02 47 48.0	
	comp=N,29nm,0.5s						
ERBA	**Erbaa**	**2.24**	**307**	*i* P	**Pn**	**02 47 05.5**	**-0.5**
TOKA	**Tokat**	**2.24**	**296**	*i* P	**Pn**	**02 47 03.2**	**-2.9**
HOMI	**Horasan**	**2.25**	**72**	*i* P	**Pb**	**02 47 07.6**	**-1.8**
GZT	**Gaziantep**	**2.35**	**212**	*i* P	**Pn**	**02 47 08.0**	**+0.3**
GZT				*i* S	**Sg**	**02 47 43.5**	**+0.1**
GZT				IAML		02 47 47.0	
	comp=E,36nm,0.6s						
GZT				IAML		02 47 47.0	
	comp=N,47nm,0.4s						
MARD	**Mardin**	**2.44**	**147**	*i* P	**Pb**	**02 47 10.9**	**-1.5**
MARD				*i* S	**Sb**	**02 47 42.4**	**-0.6**
MARD				IAML		02 47 47.0	
	comp=N,61nm,0.4s						
MARD				IAML		02 47 48.0	
	comp=E,51nm,0.5s						
BLIS	**Bitlis-Merkez**	**2.53**	**111**	*i* P	**Pb**	**02 47 12.8**	**-1.3**
DBAD	**Bademkaya**	**2.57**	**49**	*i* P	**Pb**	**02 47 13.2**	**-1.5**
DBAD				IAML		02 47 53.0	
	comp=N,17nm,0.7s						
DBAD				IAML		02 47 59.0	
	comp=E,12nm,0.6s						
SRTM	**Siirt_Merkez**	**2.59**	**121**	*i* P	**Pb**	**02 47 14.5**	**-0.7**
SRTM				*i* S	**Sb**	**02 47 49.5**	**+1.9**
SRTM				IAML		02 47 51.0	
	comp=N,38nm,0.6s						
SRTM				IAML		02 47 53.0	
	comp=E,22nm,0.4s						
AYKD	**Aykdinkavak**	**2.67**	**224**	*i* P	**Pn**	**02 47 12.2**	**+0.3**
AYKD				IAML		02 47 58.0	
	comp=N,36nm,0.6s						
AYKD				IAML		02 48 04.0	
	comp=E,49nm,0.7s						
HCB	**Kahramanmara**	**2.67**	**221**	*i* P	**Pn**	**02 47 11.9**	**0.0**
DAGI	**Agillar**	**2.74**	**51**	*i* P	**Pn**	**02 47 13.7**	**+0.7**
SAIM	**ADANA**	**2.75**	**241**	*i* P	**Pn**	**02 47 13.8**	**+0.6**
DBOC	**Borcka**	**2.77**	**44**	*i* P	**Pn**	**02 47 13.5**	**+0.1**
TUTA	**Tutak**	**2.87**	**88**	*i* P	**Pb**	**02 47 19.8**	**-0.1**
SAMS	**Samsun-Alacam**	**2.99**	**313**	*i* P	**Pb**	**02 47 22.8**	**+0.9**
SAMS				IAML		02 48 07.0	
	comp=N,20nm,0.2s						
SAMS				IAML		02 48 13.0	
	comp=E,11nm,0.3s						
SIRC	**Yozgat**	**3.08**	**271**	*i* P	**Pn**	**02 47 17.5**	**-0.2**
YAHY	**KAYSERI_Yahyal**	**3.20**	**248**	*i* P	**Pn**	**02 47 20.4**	**+1.0**
YAHY				IAML		02 48 17.0	
	comp=E,8.3nm,0.7s						
YAHY				IAML		02 48 18.0	
	comp=N,12nm,0.7s						
COAL	**Corum-Alaca**	**3.30**	**287**	*i* P	**Pn**	**02 47 22.9**	**+2.1**
AVNS	**Nevsehir-Avano**	**3.37**	**262**	*i* P	**Pn**	**02 47 21.4**	**-0.3**
EPOS	**Posof**	**3.48**	**51**	*i* P	**Pb**	**02 47 30.7**	**+0.3**

IDC 07 02:51:37.4±2.6, 5°98S×130°39E, h0km, mb3.3/1, mb1 3.3/3, mb1mx3.2/20, mbtmp3.2/3, ML3.1/2, Error ellipse: s-maj=157.6km s-min=33.1km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.40**	**165**	Pn	Pn	02 55 01.9	-0.8
	0.1nm,0.3s,baz=348,slow=13,SNR=4.1						
WRA				Sn	Sn	02 57 28.9	-14
	0.1nm,0.3s,baz=353,slow=23,SNR=3.5						
ASAR	**Alice Springs**	**17.90**	**169**	P	P	02 55 48.5	-0.3
	0.1nm,0.3s,baz=342,slow=9.2,SNR=5.1						
MKAR	**Makanchi Array**	**67.60**	**326**	P	P	03 02 36.0	0.0
	0.1nm,0.3s,baz=109,slow=8.2,SNR=3.7						

MAN 07 02:57:17.4, 5°78N×125°02E, h1km, mb4.4, ML3.3, MS3.1, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**0.32**	**347**	*i* P	Pb	02 57 25.0	-1.0
GSPH				*i* S	Sb	02 57 32.1	+0.4
DDMP	**Don Marcelino,**	**0.76**	**64**	*eP*	Pg	02 57 32.3	+0.3
DDMP				*eS*	Sn	02 57 47.5	+0.1
SKMP	**Bagumbayan, Su**	**0.88**	**327**	*eP*	Pg	02 57 34.7	+0.4
SKMP				*eS*	Sg	02 57 45.9	+0.2
KCP	**Kidapawan**	**1.23**	**3**	*eP*	Pg	02 57 40.7	-0.3
KCP				*i* S	Sn	02 58 15.8	+17
DMPH	**Davao City--Mi**	**1.39**	**20**	*eP*	Pn	02 57 43.4	-0.6
DMPH				*i* S	Sn	02 58 03.7	+0.8
CTBH	**Cotabato--PC H**	**1.63**	**332**	*i* P	Pn	02 57 47.5	+0.2
CTBH				*i* S	Sb	02 58 09.5	+0.1
BUKP	**Musuan**	**2.09**	**1**	*eP*	Pn	02 57 53.9	+0.2
BUKP				*eS*	Sb	02 58 23.1	+0.4

*IDC **07** 03:05:25.7±1.5, 18°36S×68°68W, h147km±11km, mb3.7/2, mb1 3.4/6, mb1mx3.2/29, mbtmp3.9/6, MS2.7/1, Ms1 2.7/1, ms1mx2.5/27, Error ellipse: s-maj=43.2km s-min=9.4km az=100.0*
*GUC **07** 03:05:26.2±0.6, 18°27S×69°05W, h148km±4km, ML3.4*

ISC 07 03:05:24.5±1.0, 18°30S±0°05×69°0W±0°1, h156km±10km, n16, σ0°98/25, 2C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB16	**IPOC Station P**	**0.47**	**265**	*i* P	**Pn**	**03 05 47.8**	**+0.6**
PB16				*i* S	**Sn**	**03 06 04.6**	**+0.3**
MNMC	**Minye Minye**	**1.00**	**214**	*i* P	**Pn**	**03 05 51.0**	**+0.8**
MNMC				*i* S	**Sn**	**03 06 09.2**	**-0.6**
MNMC				IAML		03 06 10.7	
	comp=N,2μm,0.6s						
AP01	**Chacalluta**	**1.27**	**267**	*i* P	**Pn**	**03 05 52.8**	**+0.6**
AP01				*i* S	**Sn**	**03 06 12.8**	**-0.6**
GO01	**Chusmiza**	**1.37**	**187**	*i* P	**Pn**	**03 05 54.7**	**+0.9**
GO01				*i* S	**Sn**	**03 06 17.4**	**+1.0**
GO01				IAML		03 06 21.8	
	comp=N,799nm,0.1s						
PB11	**IPOC Station P**	**1.58**	**203**	*i* P	**Pn**	**03 05 56.0**	**+0.4**
PB11				*i* S	**Sn**	**03 06 18.6**	**-0.8**
PB11				IAML		03 06 19.8	
	comp=E,956nm,0.3s						
PSGC	**Pisagua**	**1.67**	**219**	*i* P	**Pn**	**03 05 56.5**	**+0.1**
PSGC				*i* S	**Sn**	**03 06 19.8**	**-1.2**
PSGC				IAML		03 06 21.1	
	comp=E,335nm,0.2s						
PSGC				IAML		03 06 21.1	
	comp=N,259nm,0.3s						
PB08	**IPOC Station P**	**1.84**	**184**	*i* P	**Pn**	**03 05 59.6**	**+1.1**
PB08				*i* S	**Sn**	**03 06 25.5**	**+0.6**
PB08				IAML		03 06 26.4	
	comp=E,195nm,0.3s						
LPAZ	**La Paz**	**2.17**	**23**	P	**Pn**	**03 06 04.0**	**+1.3**
	comp=E,12nm,0.3s,baz=198,slow=16,SNR=266						
LPAZ				S	**Sn**	**03 06 31.4**	**-0.6**
	comp=E,3.4nm,0.3s,baz=149,slow=19,SNR=23						
TA01	**Diego Aracena**	**2.51**	**206**	*i* P	**Pn**	**03 06 06.1**	**+0.1**
TA01				IAML		03 06 42.3	
	comp=N,109nm,0.3s						
TA01				IAML		03 06 44.1	
	comp=N,96nm,0.2s						
TA01				IAML		03 06 44.1	
	comp=E,96nm,0.1s						
PB09	**IPOC Station P**	**3.49**	**184**	*eP*	**Pn**	**03 06 19.0**	**+0.5**
PB03	**IPOC Station P**	**3.80**	**190**	*i* P	**Pn**	**03 06 22.5**	**+0.1**
LVC	**Limon Verde**	**4.29**	**179**	P	**Pn**	**03 06 30.3**	**+1.2**
	comp=E,7.5nm,0.3s,baz=352,slow=11,SNR=55						
LVC				S	**Sn**	**03 07 18.4**	**-0.9**
	comp=E,3.6nm,0.3s,baz=159,slow=21,SNR=5.7						
SIV	**San Ignacio**	**7.93**	**74**	P	**Pn**	**03 07 15.0**	**-2.1**
	comp=E,0.6nm,0.3s,baz=261,slow=14,SNR=11						
SIV				LR	LR	03 09 44.4	
	comp=E,60nm,21.8s,baz=87,slow=34						
BDFB	**Brasilia**	**20.25**	**86**	P	**P**	**03 09 46.4**	**-1.7**
	comp=E,0.2nm,0.3s,baz=266,slow=13,SNR=2.9						
DBIC	**Dimbokro**	**67.95**	**75**	P	**P**	**03 16 07.3**	**+0.2**
	comp=E,1.6nm,0.6s,baz=233,slow=7.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**76.39**	**71**	P	**P**	**03 16 57.9**	**+0.7**
	comp=E,0.9nm,0.5s,baz=250,slow=5.2,SNR=18						

*TAP **07** 03:11:45.0, 24°78N×121°79E, h82km, ML3.8, B*
*JMA **07** 03:11:45.0±0.1, 24°74N×121°83E, h80km±2km, M2.9*

ISC 07 03:11:44.4±1.3, 24°81N±0°03×121°81E±0°02, h88km±5km, n112, σ0°73/196, 2C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NTC	**Toucheng**	**0.05**	**25**	*eP*	**Pn**	**03 11 57.1**	**+0.2**
	baz=43						
NTC				*eS*	**Sn**	**03 12 05.7**	**-0.4**
	baz=43						
ILA	**Ilan**	**0.07**	**232**	*eP*	**Pn**	**03 11 57.6**	**+0.7**
	baz=255						
ILA				*eS*	**Sn**	**03 12 07.1**	**+1.0**
	baz=255						
EGS		**0.12**	**72**	*eP*	**Pn**	**03 11 57.4**	**+0.4**
	baz=79						
EGS				*eS*	**Sn**	**03 12 06.2**	**-0.1**
	baz=79						
TWE	**Neicheng**	**0.15**	**236**	P	**Pn**	**03 11 57.5**	**+0.5**
	baz=253						
TWE				*eS*	**Sn**	**03 12 06.3**	**-0.1**
	baz=253						
SLBB	**Yuanshan**	**0.16**	**251**	*eP*	**Pn**	**03 11 56.6**	**-0.6**
	baz=271						
TIPB	**Shuangxi**	**0.17**	**6**	*eP*	**Pn**	**03 11 57.3**	**+0.2**
	baz=358						
TIPB				*eS*	**Sn**	**03 12 06.2**	**-0.4**
	baz=358						
TWC	**Suao**	**0.20**	**169**	P	**Pn**	**03 11 57.8**	**+0.6**
	baz=159						
TWC				*eS*	**Sn**	**03 12 07.4**	**+0.7**
	baz=159						
TWB1	**Santiao Chiao**	**0.26**	**40**	*eP*	**Pn**	**03 11 57.7**	**+0.2**
	baz=48						
TWB1				*eS*	**Sn**	**03 12 06.6**	**-0.6**
	baz=48						
NWF	**Wu-fen Shan**	**0.26**	**355**	P	**Pn**	**03 11 57.8**	**+0.2**
	baz=351						
NWF				*eS*	**Sn**	**03 12 07.1**	**-0.3**
	baz=351						
WFSB	**Wu-fen Shan**	**0.26**	**355**	*eP*	**Pn**	**03 11 57.8**	**+0.3**
	baz=351						
WFSB				*eS*	**Sn**	**03 12 07.1**	**-0.1**
	baz=351						
TWA	**Mucha**	**0.27**	**311**	*eP*	**Pn**	**03 11 57.7**	**+0.2**
	baz=323						
TWA				*eS*	**Sn**	**03 12 07.2**	**-0.1**
	baz=323						
ENTT	**Nioudou**	**0.27**	**233**	P	**Pn**	**03 11 58.0**	**+0.4**
	baz=245						
ENTT				*eS*	**Sn**	**03 12 07.1**	**-0.2**
	baz=245						
NWLT	**Wulai**	**0.28**	**264**	*eP*	**Pn**	**03 11 57.6**	**0.0**
	baz=268						
NWLT				*eS*	**Sn**	**03 12 06.4**	**-1.0**
	baz=268						
TATO	**Taipei**	**0.33**	**300**	*eP*	**Pn**	**03 11 58.0**	**+0.2**
	baz=298						
NDT	**Datong Townshi**	**0.34**	**233**	*eP*	**Pn**	**03 11 58.2**	**+0.3**
	baz=244						
NDT				*eS*	**Sn**	**03 12 07.2**	**-0.6**
	baz=244						
TAP	**Taipei**	**0.36**	**310**	*eP*	**Pn**	**03 11 58.8**	**+0.8**
	baz=315						
TAP				*eS*	**Sn**	**03 12 07.9**	**-0.2**
	baz=315						
NANB	**Nanao**	**0.38**	**188**	*eP*	**Pn**	**03 11 58.7**	**+0.5**
	baz=192						
NANB				*eS*	**Sn**	**03 12 08.9**	**+0.6**
	baz=192						
ENA	**Nanau**	**0.38**	**189**	*eP*	**Pn**	**03 11 58.7**	**+0.5**
	baz=192						
ENA				*eS*	**Sn**	**03 12 08.3**	**-0.1**
	baz=192						
EOS1	**EOS1**	**0.39**	**131**	*eP*	**Pn**	**03

	baz=329						
NTST	**Danshui**	**0.48**	**318**	*e*P	**Pn**	**03 11 59.5**	**+0.7**
	baz=326						
TWY	**Chenhua**	**0.50**	**338**	*e*P	**Pn**	**03 11 59.6**	**+0.6**
	baz=334						
TWY				*e*S	**Sn**	**03 12 10.1**	**+0.2**
	baz=334						
WLTB	**Daxi**	**0.50**	**275**	*e*P	**Pn**	**03 11 59.5**	**+0.5**
	baz=278						
WLTB				*e*S	**Sn**	**03 12 09.8**	**-0.1**
	baz=278						
NNS	**Nan Shan**	**0.54**	**227**	P	**Pn**	**03 11 59.8**	**+0.3**
	baz=229						
NNS				*e*S	**Sn**	**03 12 09.8**	**-0.8**
	baz=229						
NNSH	**Datong**	**0.54**	**226**	*e*P	**Pn**	**03 11 59.9**	**+0.4**
	baz=229						
NNSH				*e*S	**Sn**	**03 12 10.2**	**-0.5**
	baz=229						
NCU	**National Centr**	**0.58**	**286**	*e*P	**Pn**	**03 12 00.1**	**+0.4**
	baz=280						
NCU				*e*S	**Sn**	**03 12 11.1**	**0.0**
	baz=280						
NCUH	**Zhongli**	**0.59**	**286**	*e*P	**Pn**	**03 12 00.1**	**+0.4**
	baz=288						
NCUH				*e*S	**Sn**	**03 12 10.9**	**-0.2**
	baz=288						
NACB	**Ninganchiao**	**0.66**	**197**	*e*P	**Pn**	**03 11 59.9**	**-0.6**
	baz=202						
NACB				*e*S	**Sn**	**03 12 11.0**	**-1.3**
	baz=202						
ETLH	**Xiulin Townshi**	**0.67**	**206**	*e*P	**Pn**	**03 12 00.6**	**0.0**
	baz=212						
ETLH				*e*S	**Sn**	**03 12 12.2**	**-0.4**
	baz=212						
LIOB	**Emei**	**0.74**	**258**	*e*P	**Pn**	**03 12 01.5**	**+0.3**
	baz=252						
LIOB				*e*S	**Sn**	**03 12 13.7**	**0.0**
	baz=252						
SBCB	**Hsinchu**	**0.74**	**269**	*e*P	**Pn**	**03 12 01.6**	**+0.4**
	baz=270						
SBCB				*e*S	**Sn**	**03 12 13.2**	**-0.6**
	baz=270						
TWD	**Chiawan**	**0.75**	**195**	*e*P	**Pn**	**03 12 01.1**	**-0.2**
	baz=200						
TWD				*e*S	**Sn**	**03 12 12.9**	**-0.9**
	baz=200						
NSTT	**Nanjuang**	**0.75**	**257**	P	**Pn**	**03 12 01.5**	**+0.2**
	baz=251						
NSTT				*e*S	**Sn**	**03 12 13.2**	**-0.8**
	baz=251						
HSN	**Hsinchu**	**0.76**	**270**	*e*P	**Pn**	**03 12 01.4**	**0.0**
	baz=265						
HSN				*e*S	**Sn**	**03 12 12.1**	**-1.9**
	baz=265						
TWT	**Tachien**	**0.80**	**226**	P	**Pn**	**03 12 03.1**	**+1.1**
	baz=222						
TWT				*e*S	**Sn**	**03 12 15.5**	**+0.4**
	baz=222						
TDCB	**Techi**	**0.81**	**227**	*e*P	**Pn**	**03 12 02.9**	**+0.8**
	baz=221						
TDCB				*e*S	**Sn**	**03 12 14.9**	**-0.3**
	baz=221						
WHF	**Hehuan Shan**	**0.82**	**217**	*e*P	**Pn**	**03 12 03.0**	**+0.4**
	baz=208						
WHF				*e*S	**Sn**	**03 12 15.1**	**-0.9**
	baz=208						
HWA	**Hwalien**	**0.85**	**192**	*e*P	**Pn**	**03 12 02.4**	**+0.1**
	baz=200						
ENLB	**Shoufeng**	**0.92**	**192**	*e*P	**Pn**	**03 12 02.8**	**-0.3**
	baz=199						
CHGB	**Renai**	**0.94**	**218**	*e*P	**Pn**	**03 12 04.4**	**+0.8**
	baz=218						
CHGB				*e*S	**Sn**	**03 12 17.9**	**0.0**
	baz=218						
WHP	**Taichung City**	**0.94**	**236**	*e*P	**Pn**	**03 12 04.3**	**+0.8**
	baz=244						
WHP				*e*S	**Sn**	**03 12 17.9**	**+0.2**
	baz=244						
NMLH	**Miaoli**	**0.96**	**254**	*e*P	**Pn**	**03 12 04.2**	**+0.6**
	baz=256						
NMLH				*e*S	**Sn**	**03 12 17.9**	**-0.1**
	baz=256						
OWD	**Renai**	**1.02**	**214**	*e*P	**Pn**	**03 12 05.3**	**+0.9**
	baz=220						
OWD				*e*S	**Sn**	**03 12 19.4**	**-0.1**
	baz=220						
NSY	**Sanyi**	**1.03**	**248**	*e*P	**Pn**	**03 12 05.1**	**+0.7**
	baz=258						
NSY				*e*S	**Sn**	**03 12 18.6**	**-0.7**
	baz=258						
ESL	**Shilin**	**1.04**	**199**	*e*P	**Pn**	**03 12 03.8**	**-0.8**
	baz=189						
ESL				*e*S	**Sn**	**03 12 17.7**	**-1.9**
	baz=189						
TWQ1	**Liyutan**	**1.04**	**244**	P	**Pn**	**03 12 05.0**	**+0.4**
	baz=246						
TWQ1				*e*S	**Sn**	**03 12 19.1**	**-0.5**
	baz=246						
DPDB	**Guoxing**	**1.11**	**226**	*e*P	**Pn**	**03 12 06.1**	**+0.7**
	baz=235						
DPDB				*e*S	**Sn**	**03 12 20.8**	**-0.3**
	baz=235						
YOJ	**Yonaguni jima**	**1.15**	**107**	*e*P	**Pn**	**03 12 05.7**	**-0.1**
	baz=101						
YOJ				*e*S	**Sn**	**03 12 20.8**	**-0.9**
	baz=101						
YOJ	**Yonaguni jima**	**1.15**	**107**	P	**Pn**	**03 12 05.6**	**-0.1**
YOJ				S	**Sn**	**03 12 20.9**	**-0.9**
WDJ	**Dajia District**	**1.16**	**247**	P	**Pn**	**03 12 06.5**	**+0.7**
	baz=255						
WDJ				*e*S	**Sn**	**03 12 21.8**	**-0.1**
	baz=255						
EGFH	**Guangfu**	**1.18**	**197**	*e*P	**Pn**	**03 12 06.1**	**-0.1**
	baz=196						
VWDT	**VWDT**	**1.21**	**210**	*e*P	**Pn**	**03 12 07.5**	**+0.9**
	baz=220						
VWDT				*e*S	**Sn**	**03 12 22.6**	**-0.5**
	baz=220						
SMLT	**Sun Moon Lake**	**1.24**	**222**	*e*P	**Pn**	**03 12 07.8**	**+0.9**
	baz=223						
SMLT				*e*S	**Sn**	**03 12 24.2**	**+0.3**
	baz=223						
TYC	**Yuchr**	**1.25**	**224**	P	**Pn**	**03 12 07.8**	**+0.8**
	baz=225						
TYC				*e*S	**Sn**	**03 12 24.1**	**+0.2**
	baz=225						
SSLB	**Suanglung**	**1.28**	**218**	*e*P	**Pn**	**03 12 08.1**	**+0.8**
	baz=229						
SSLB				*e*S	**Sn**	**03 12 25.2**	**+0.6**
	baz=229						
WCHH	**Zhanghua**	**1.35**	**238**	*e*P	**Pn**	**03 12 08.6**	**+0.5**
	baz=240						
WCHH				*e*S	**Sn**	**03 12 26.0**	**-0.1**
	baz=240						
HGSD	**Ruisui**	**1.35**	**195**	*e*P	**Pn**	**03 12 09.0**	**+0.7**
	baz=198						
HGSD				*e*S	**Sn**	**03 12 27.0**	**+0.8**
	baz=198						
EHY	**Hungye**	**1.37**	**199**	*e*P	**Pn**	**03 12 08.3**	**-0.2**
	baz=190						
EHY				*e*S	**Sn**	**03 12 26.3**	**-0.3**
	baz=190						
WNT	**Mingjian**	**1.38**	**228**	*e*P	**Pn**	**03 12 09.4**	**+0.8**
	baz=239						
WNT				*e*S	**Sn**	**03 12 26.6**	**-0.2**
	baz=239						
WJS	**Zhushan**	**1.39**	**225**	*e*P	**Pn**	**03 12 09.8**	**+1.1**
	baz=237						
WJS				*e*S	**Sn**	**03 12 27.3**	**+0.3**
	baz=237						
WHYT	**Xinyi Township**	**1.41**	**218**	*e*P	**Pn**	**03 12 10.0**	**+1.0**
	baz=227						
WHYT				*e*S	**Sn**	**03 12 28.5**	**+1.0**
	baz=227						
YULB	**Yu-li**	**1.48**	**198**	*e*P	**Pn**	**03 12 09.0**	**-1.0**
	baz=191						
YULB				*e*S	**Sn**	**03 12 26.8**	**-2.4**
	baz=191						
TWF1	**Yuli**	**1.52**	**198**	*e*P	**Pn**	**03 12 09.7**	**-0.7**
	baz=195						
TWF1				*e*S	**Sn**	**03 12 29.1**	**-1.0**
	baz=195						
YUS	**Yu-Shan**	**1.53**	**211**	*e*P	**Pn**	**03 12 12.4**	**+1.5**
	baz=222						
ALS	**Alishan**	**1.58**	**215**	*e*P	**Pn**	**03 12 12.5**	**+1.1**
	baz=225						
ALS				*e*S	**Sn**	**03 12 32.6**	**+0.8**
	baz=225						
CHN5	**Tsauling**	**1.58**	**221**	P	**Pn**	**03 12 12.0**	**+0.7**
	baz=222						
CHN5				*e*S	**Sn**	**03 12 31.5**	**-0.1**
	baz=222						
RLNB	**Erlin**	**1.60**	**236**	*e*P	**Pn**	**03 12 11.8**	**+0.4**
	baz=238						
RLNB				*e*S	**Sn**	**03 12 31.5**	**-0.3**
	baz=238						
FULB	**Fuli**	**1.67**	**196**	*e*P	**Pn**	**03 12 12.0**	**-0.3**
	baz=193						
FULB				*e*S	**Sn**	**03 12 33.9**	**+0.5**
	baz=193						
CHKT	**Chengkung**	**1.75**	**193**	*e*P	**Pn**	**03 12 12.9**	**-0.4**
	baz=192						
ELDTW	**Lidau**	**1.77**	**204**	*e*P	**Pn**	**03 12 14.4**	**+0.7**
	baz=196						
ELDTW				*e*S	**Sn**	**03 12 35.8**	**0.0**
	baz=196						
CHY	**Chiayi**	**1.81**	**224**	*e*S	**Sn**	**03 12 37.3**	**+0.5**
	baz=236						
IRIF	**Iriomote-Funau**	**1.81**	**105**	P	**Pn**	**03 12 14.0**	**-0.1**
IRIF				S	**Sn**	**03 12 36.0**	**-0.7**
CHN4	**Tsaushan**	**1.82**	**218**	*e*P	**Pn**	**03 12 15.4**	**+1.1**
	baz=219						
CHN4				*e*S	**Sn**	**03 12 38.1**	**+1.1**
	baz=219						
TPUB	**Ta-pu**	**1.84**	**216**	*e*P	**Pn**	**03 12 15.4**	**+0.8**
	baz=218						
TPUB				*e*S	**Sn**	**03 12 37.1**	**-0.4**
	baz=218						
WSF	**Szhu**	**1.86**	**231**	*e*S	**Sn**	**03 12 38.4**	**+0.7**
	baz=235						
STYT	**Tauyuan**	**1.90**	**211**	*e*P	**Pn**	**03 12 16.7**	**+1.3**
	baz=222						
STYT				*e*S	**Sn**	**03 12 39.2**	**+0.4**
	baz=222						
WTP	**Ta-pu**	**1.90**	**215**	*e*P	**Pn**	**03 12 16.1**	**+0.8**
	baz=215						
WTP				*e*S	**Sn**	**03 12 39.2**	**+0.4**
	baz=215						
PTTC	**Pingtan**	**1.97**	**291**	*e*P	**Pn**	**03 12 15.8**	**-0.4**
	baz=290						
HATJ	**Hateruma jima**	**1.97**	**112**	P	**Pn**	**03 12 17.0**	**+0.8**
HATJ				S	**Sn**	**03 12 40.6**	**+0.2**
SNST	**Tainan City**	**1.98**	**217**	*e*P	**Pn**	**03 12 17.3**	**+0.9**
	baz=219						
SNST				*e*S	**Sn**	**03 12 40.8**	**+0.1**
	baz=219						
CHN1	**Nanshi**	**1.99**	**216**	*e*P	**Pn**	**03 12 17.5**	**+0.9**
	baz=218						
CHN1				*e*S	**Sn**	**03 12 41.0**	**0.0**
	baz=218						
JKRS	**Kuro-shima**	**2.09**	**105**	P	**Pn**	**03 12 18.4**	**+0.7**
JKRS				*e*S	**Sn**	**03 12 42.8**	**-0.3**
TWG	**Pinlang**	**2.09**	**199**	*e*P	**Pn**	**03 12 18.9**	**+1.1**
	baz=185						
TWG				*e*S	**Sn**	**03 12 40.7**	**-2.5**
	baz=185						
TWGBT	**Beinan**	**2.09**	**199**	*e*P	**Pn**	**03 12 18.2**	**+0.4**
	baz=189						
SLGT	**Liugui**	**2.09**	**211**	*e*P	**Pn**	**03 12 19.4**	**+1.5**
	baz=224						
SLGT				*e*S	**Sn**	**03 12 44.9**	**+1.5**
	baz=224						
TWH	**Lutao**	**2.11**	**188**	*e*P	**Pn**	**03 12 17.6**	**-0.4**
	baz=178						
TWH				*e*S	**Sn**	**03 12 42.4**	**-1.3**
	baz=178						
VWUC	**VWUC**	**2.15**	**275**	*e*P	**Pn**	**03 12 18.1**	**-0.4**
	baz=275						
MATB	**Ma-tsu**	**2.15**	**309**	*e*P	**Pn**	**03 12 17.8**	**-0.8**
	baz=307						
JIJ	**Ishigaki jima**	**2.17**	**101**	P	**Pn**	**03 12 18.7**	**-0.2**
JIJ				S	**Sn**	**03 12 43.9**	**-1.3**
JISG	**Ishigakijimahi**	**2.29**	**95**	P	**Pn**	**03 12 20.9**	**+0.5**
JISG				*e*S	**Sn**	**03 12 48.1**	**+0.2**
PNG	**Penghu**	**2.40**	**239**	*e*P	**Pn**	**03 12 21.5**	**-0.3**
	baz=241						
PHUB	**P'eng-hu**	**2.41**	**238**	*e*P	**Pn**	**03 12 21.6**	**-0.4**
	baz=241						
PHUB				*e*S	**Sn**	**03 12 48.8**	**-2.1**
	baz=241						
MASBT	**Mashibuluo**	**2.44**	**206**	*e*P	**Pn**	**03 12 23.7**	**+1.3**
	baz=220						
PTMZ	**Houxiangcun**	**2.45**	**276**	*e*P	**Pn**	**03 12 22.5**	**0.0**
	baz=276						
LYJJ	**Jianjiangzhen**	**2.53**	**314**	*e*P	**Pn**	**03 12 24.9**	**+1.2**
	baz=311						
EAST	**Anshuo**	**2.57**	**200**	*e*P	**Pn**	**03 12 25.3**	**+1.1**
	baz=190						
JTJ	**Tarama**	**2.64**	**93**	*e*S	**Sn**	**03 12 58.0**	**+1.7**
VCHM	**Qimei**	**2.69**	**234**	*e*P	**Pn**	**03 12 25.4**	**-0.4**
	baz=228						
LAY	**Lan-yu**	**2.77**	**185**	*e*P	**Pn**	**03 12 26.5**	**-0.3**
	baz=178						
KNM	**Kinmen**	**3.09**	**263**	*e*P	**Pn**	**03 12 32.5**	**+1.3**
	baz=263						
KNMB	**Chin-men Tao**	**3.13**	**264**	*e*P	**Pn**	**03 12 31.1**	**-0.5**
	baz=264						
AXDP	**Jialang**	**3.48**	**272**	*e*P	**Pn**	**03 12 36.5**	**+0.1**
	baz=272						
ZPLA	**Ao Xicun**	**3.80**	**258**	*e*P	**Pn**	**03 12 40.3**	**-0.5**
	baz=256						

*BER **07** 03:14:00.6±1.6, 79°.12N×2°.74E, h26km±16km, ML2.1, ML2.5(NAO), Confirmed Earthquake*
*IEPN **07** 03:14:02.0, 79°.06N×3°.81E, h15km*
*NAO **07** 03:14:05.6±2.3, 78°.84N×5°.52E, ML2.5*

ISC 07 03:13:55.5±1.1, **79°.08N**±0°.07×**2°.71E**±0°.05, **h10**km, **n23,** σ**2**§**32**/42, **2C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.78**	**90**	Pg	**Pb**	**03 14 28.1**	**-0.1**
KBS				Lg	Lg	03 14 47.7	
KBS	**Kingsbay**	**1.78**	**90**	*e*P	**Pb**	**03 14 27.9**	**-0.2**
KBS				*e*S	**Sn**	**03 14 47.6**	**-1.2**
KBS				IAML		03 14 52.4	
	comp=Z,39nm,0.2s						
KBS	**Kingsbay**	**1.78**	**90**	⇑*i*P	**Pb**	**03 14 28.0**	**-0.2**
KBS				*e*S	**Sn**	**03 14 47.1**	**-1.7**
BRBB	**Barentsburg B**	**2.49**	**108**	Pn	**Pn**	**03 14 38.1**	**+2.1**
BRBB				Pg	**Pb**	**03 14 39.5**	**-0.8**
BRBB				Lg	Lg	03 15 05.6	
BRBB	**Barentsburg B**	**2.49**	**108**	Pn	**Pn**	**03 14 38.1**	**+2.1**
BRBB				Sn	**Sn**	**03 15 05.6**	**-0.8**
BRBA	**Barentsburg A**	**2.51**	**108**	Pn	**Pn**	**03 14 38.1**	**+1.8**
BRBA				Pg	**Pb**	**03 14 39.8**	**-0.8**
BRBA				Lg	Lg	03 15 05.9	
BRBA	**Barentsburg A**	**2.51**	**108**	Pn	**Pn**	**03 14 38.1**	**+1.8**
BRBA				Sn	**Sn**	**03 15 05.9**	**-0.9**
SPA0	**Spitsbergen Ar**	**2.85**	**102**	Pn	**Pn**	**03 14 43.9**	**+2.9**
	baz=288,slow=8.6						
SPA0				Lg	Lg	03 15 17.0	
SPA0	**Spitsbergen Ar**	**2.85**	**102**	Pn	**Pn**	**03 14 43.9**	**+2.9**
	baz=288,slow=8.6						
SPA0				*e*S	**Sn**	**03 15 14.6**	**-0.7**
SPA0	**Spitsbergen Ar**	**2.85**	**102**	⇑*i*P	**Pn**	**03 14 43.9**	**+2.9**
SPA0				*i* S	**Sn**	**03 15 15.0**	**-0.3**
HSPB	**Hornsund (broa**	**3.38**	**122**	Pn	**Pn**	**03 14 51.5**	**+3.2**
HSPB				Sn	**Sn**	**03 15 28.2**	**-0.1**
HSPB	**Hornsund (broa**	**3.38**	**122**	*e*P	**Pn**	**03 14 50.0**	**+1.8**
HSPB				*e*S	**Sn**	**03 15 28.4**	**+0.1**
HSPB				IAML		03 15 33.2	
	comp=Z,4.6nm,0.4s						
HSPB	**Hornsund (broa**	**3.38**	**122**	*e*P	**Pn**	**03 14 49.7**	**+1.4**
HSPB				*e*S	**Sn**	**03 15 26.8**	**-1.6**
NOR	**Nord**	**4.11**	**317**	*i* P	**Pn**	**03 15 00.1**	**+1.9**
NOR				*e*S	**Sn**	**03 15 43.5**	**-2.7**
DAG	**Danmarks Havn**	**5.02**	**253**	*i* P	**Pn**	**03 15 12.8**	**+2.1**
DAG				*i* S	**Sn**	**03 16 05.5**	**-3.2**
DAG	**Danmarks Havn**	**5.02**	**253**	*i* P	**Pn**	**03 15 12.8**	**+2.1**
DAG				*i* S	**Sn**	**03 16 05.5**	**-3.2**
DAG				IAML		03 16 07.7	
	comp=Z,5.5nm,0.3s						
HOPEN	**Hopen**	**5.36**	**107**	Pn	**Pn**	**03 15 17.2**	**+1.8**
HOPEN				Sn	**Sn**	**03 16 14.1**	**-2.8**
HOPEN	**Hopen**	**5.36**	**107**	*e*P	**Pn**	**03 15 17.3**	**+1.9**
HOPEN				*e*S	**Sn**	**03 16 13.6**	**-3.3**
HOPEN				IAML		03 16 18.6	
	comp=Z,7.6nm,0.5s						
HOPEN	**Hopen**	**5.36**	**107**	*e*P	**Pn**	**03 15 16.9**	**+1.6**
HOPEN				*e*S	**Sn**	**03 16 13.8**	**-3.1**
DBG	**Daneborg**	**7.07**	**239**	*i* P	**Pn**	**03 15 40.2**	**+1.3**
DBG				*i* S	**Sn**	**03 16 53.6**	**-5.6**
DBG				IAML		03 17 01.0	
	comp=Z,4.0nm,0.4s						
ZFI2	**Zemlya Franca-**	**7.87**	**56**	*e*P	**Pn**	**03 15 51.9**	**+2.1**
ZFI2				*e*S	**Sn**	**03 17 14.4**	**-4.2**
	comp=Z,4.6nm,1.0s						
ARA0	**ARCESS Array S**	**11.26**	**136**	Pn	**Pn**	**03 16 38.4**	**+2.2**
	baz=342,slow=11						
ARA0	**ARCESS Array S**	**11.26**	**136**	Pn	**Pn**	**03 16 38.4**	**+2.2**
	baz=342,slow=11						

IDC 07 03:17:41.5±2.1, **6°.78S**×**67°.74E, h0**km, **mb3.6**/6, **mb1 3.7**/6, **mb1mx3.4**/52, **mbtmp3.6**/6, **Error ellipse: s-maj=71.4km s-min=27.1km az=54.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08N3	**Diego Garcia H**	**3.26**	**83**	T	T	03 21 02.8	
	baz=262,slow=75						
H08N2	**Diego Garcia H**	**3.27**	**82**	T	T	03 21 03.1	
	baz=262,slow=75						
H08N1	**Diego Garcia H**	**3.29**	**83**	T	T	03 21 04.4	
	baz=262,slow=75						
H01W3	**Cape Leeuwin H**	**50.96**	**130**	T	T	04 20 58.3	
	baz=293,slow=74						
H01W2	**Cape Leeuwin H**	**50.97**	**130**	T	T	04 20 58.7	
	baz=293,slow=74						
H01W1	**Cape Leeuwin H**	**50.98**	**130**	T	T	04 20 58.4	
	baz=293						
MKAR	**Makanchi Array**	**54.88**	**12**	P	P	03 27 13.2	-0.6
	0.8nm,0.7s,baz=202,slow=8.2,SNR=9.9						
ZALV	**Zalesovo Beam**	**62.19**	**11**	P	P	03 28 05.0	+0.4
	1.1nm,0.8s,baz=207,slow=5.0,SNR=5.2						
SONM	**Songino Array**	**64.16**	**28**	P	P	03 28 18.2	+0.2
	0.3nm,0.7s,baz=222,slow=7.1,SNR=2.8						
ASAR	**Alice Springs**	**65.50**	**113**	P	P	03 28 26.9	-0.3
	0.2nm,0.5s,baz=278,slow=5.5,SNR=4.3						
WRA	**Warramunga Arr**	**65.75**	**109**	P	P	03 28 28.5	-0.3
	0.3nm,0.6s,baz=279,slow=6.1,SNR=4.7						
AKASG	**Malin Array Be**	**66.19**	**334**	P	P	03 28 30.2	-0.7
	0.4nm,0.6s,baz=130,slow=6.0,SNR=2.5						
NVAR	**Mina Array Bea**	**148.02**	**9**	PKPbc	PKiKP	03 37 30.9	-0.8
	0.5nm,0.7s,baz=343,slow=1.9,SNR=4.5						

*VIE **07** 03:19:50.1±0.5, 49°.16N×17°.51E, h5km±3km, mb1.6/2, ml2.3/5, Error ellipse: s-maj=4.2km s-min=2.5km az=110.0*
56 km SSE of Olomouc
*IPEC **07** 03:19:51.9±0.1, 49°.22N×17°.48E, h16km, ML1.9/11, Error ellipse: s-maj=0.2km s-min=0.2km az=122.0*
*PRU **07** 03:19:52.4±0.0, 49°.23N×17°.40E, h4km, Otrokovice*

ISC 07 03:19:51.4±0.7, **49°.20N**±0°.02×**17°.47E**±0°.02, **h10**km, **n32,** σ**0**§**87**/60, **2C, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAVC	**Velka Javorina**	**0.37**	**159**	*e*PG	**Pg**	**03 19 59.3**	**+0.5**
JAVC				*e*SG	**Sg**	**03 20 04.6**	**+1.0**
JAVC	**Velka Javorina**	**0.37**	**159**	*e*Pg	**Pg**	**03 19 59.2**	**+0.5**
	baz=160						
JAVC				*e*Sg	**Sg**	**03 20 04.6**	**+1.0**
	44nm,0.6s,baz=160						
MORC	**Moravsky Berou**	**0.58**	**5**	*e*PG	**Pg**	**03 20 02.7**	**0.0**
MORC				*e*SG	**Sg**	**03 20 10.1**	**-0.2**
MORC	**Moravsky Berou**	**0.58**	**5**	*e*Pg	**Pg**	**03 20 02.6**	**-0.1**
	baz=5.0						
MORC				*e*Sg	**Sg**	**03 20 10.1**	**-0.2**
	41nm,0.2s,baz=5.0						
VRAC	**Vranov**	**0.58**	**281**	*e*PG	**Pg**	**03 20 02.6**	**-0.2**
VRAC				*e*SG	**Sg**	**03 20 10.3**	**-0.3**
VRAC	**Vranov**	**0.58**	**281**	*e*Pg	**Pg**	**03 20 02.6**	**-0.2**
	baz=280						
VRAC				*e*Sg	**Sg**	**03 20 10.2**	**-0.3**
	36nm,0.2s,baz=280						
MUVC	**Mutkov**	**0.61**	**348**	*e*Pg	**Pg**	**03 20 03.3**	**0.0**
	baz=348						
MUVC				*e*Sg	**Sg**	**03 20 11.2**	**-0.2**
	31nm,0.1s,baz=348						
SMOL	**Smolenice**	**0.69**	**182**	*e*PG	**Pg**	**03 20 05.6**	**+0.8**
SMOL				*e*SG	**Sb**	**03 20 15.8**	**+0.7**
SMOL				*e*LG	Lg	03 20 16.6	
LIPC	**Lipinka**	**0.70**	**337**	*e*Pg	**Pg**	**03 20 04.7**	**-0.3**
	baz=337						
LIPC				*e*Sg	**Sg**	**03 20 13.9**	**-0.2**
	37nm,0.2s,baz=337						
KRUC	**Moravsky**	**0.72**	**259**	⇑*i*PG	**Pg**	**03 20 05.1**	**-0.3**
KRUC				*e*SG	**Sg**	**03 20 14.7**	**-0.1**
KRUC	**Moravsky**	**0.72**	**259**	⇑*i*Pg	**Pg**	**03 20 05.1**	**-0.3**
	baz=259						
KRUC				*e*Sg	**Sg**	**03 20 14.6**	**-0.2**
	54nm,0.2s,baz=259						
OKC	**Ostrava-Krasne**	**0.77**	**34**	*e*PG	**Pg**	**03 20 05.9**	**-0.5**
OKC				*e*SG	**Sg**	**03 20 16.0**	**-0.5**
	comp=Z,20nm,0.3s						
MODS	**Modra-Piesok**	**0.84**	**189**	*e*PG	**Pg**	**03 20 07.6**	**0.0**
MODS				*e*SG	**Sg**	**03 20 18.8**	**+0.3**
MODS				*e*LG	Lg	03 20 19.1	
KRLC	**Kraliky**	**0.98**	**333**	*e*SG	**Sg**	**03 20 22.9**	**-0.3**
	comp=Z,19nm,0.3s						
VYHS	**Vyhne**	**1.15**	**128**	*e*PG	**Pb**	**03 20 11.4**	**-1.9**
VYHS				*e*SG	**Sb**	**03 20 26.0**	**-2.3**
TREC	**Trest**	**1.30**	**275**	*e*PG	**Pn**	**03 20 15.4**	**-0.3**
TREC				*e*SG	**Sb**	**03 20 32.4**	**-0.4**
	comp=Z,134nm,1.6s						
LANS	**Liptovska Anna**	**1.31**	**91**	*e*PG	**Pn**	**03 20 16.1**	**+0.2**
LANS				*e*SG	**Sg**	**03 20 34.3**	**+0.7**
LANS				*e*LG	Lg	03 20 35.7	
DPC	**Dobruska-Polom**	**1.37**	**327**	*e*PG	**Pn**	**03 20 16.8**	**+0.1**
DPC				*e*SG	**Sb**	**03 20 34.9**	**+0.1**
	comp=Z,10.0nm,0.3s						
OSTC	**Ostas**	**1.58**	**330**	*e*PG	**Pn**	**03 20 20.3**	**+0.7**
OSTC				*e*SG	**Sb**	**03 20 41.2**	**+0.4**
UPC	**Upice**	**1.61**	**325**	*e*SG	**Sn**	**03 20 41.4**	**+0.6**
CHVC	**Chvalec**	**1.66**	**327**	*e*PG	**Pn**	**03 20 21.6**	**+0.9**
CHVC				*e*SG	**Sb**	**03 20 43.5**	**+0.3**
CONA	**Conrad Observa**	**1.66**	**221**	*i* Pn	**Pn**	**03 20 19.1**	**-1.6**
	0.2nm,0.1s						
CONA				*i* Sn	**Sn**	**03 20 42.2**	**0.0**
	1.3nm,0.2s						
KSP	**Ksiaz**	**1.81**	**336**	*e*Pg	**Pg**	**03 20 26.2**	**0.0**
KSP				*e*Sg	**Sg**	**03 20 49.0**	**-0.6**
OJC	**Ojcow**	**1.82**	**55**	*e*Pg	**Pn**	**03 20 23.6**	**+0.8**
OJC				*e*Sg	**Sg**	**03 20 49.3**	**-0.7**
NIE	**Niedzica**	**1.86**	**82**	*e*Pg	**Pb**	**03 20 26.4**	**+0.8**
NIE				*e*Sg	**Sg**	**03 20 50.7**	**-0.6**
GOPC	**GO Pecny, Ondr**	**

ZKR	**Zakros**	**0.28**	**320**	P	**Pg**	**03 23 30.8**	**+0.1**
ZKR				S	**Sg**	**03 23 35.1**	**+0.7**
ZKR				AML	AML	03 23 35.5	
	comp=N,18772μm,0.3s						
ZKR				AML	AML	03 23 35.7	
	comp=E,34934μm,0.4s						
ZKR	**Zakros**	**0.28**	**320**	PG	**Pg**	**03 23 31.1**	**+0.3**
ZKR				SG	**Sg**	**03 23 35.1**	**+0.7**
STIA	**Sitia Lasithi**	**0.41**	**317**	P	**Pg**	**03 23 33.4**	**+0.1**
STIA				S	**Sb**	**03 23 39.6**	**-1.5**
FRMA	**Ierapetra Chan**	**0.59**	**281**	P	**Pg**	**03 23 35.2**	**-1.4**
FRMA				S	**Sg**	**03 23 42.8**	**-1.5**
	comp=E,2μm,0.3s						
NPS	**Neapolis**	**0.76**	**298**	P	**Pg**	**03 23 40.1**	**+0.1**
NPS				S	**Sb**	**03 23 51.6**	**+0.3**
	comp=E,3μm,0.5s						
NPS	**Neapolis**	**0.76**	**298**	P	**Pg**	**03 23 40.0**	**+0.1**
LAST	**Lasithi**	**0.82**	**288**	P	**Pg**	**03 23 40.9**	**-0.2**
LAST				S	**Sb**	**03 23 54.2**	**+1.1**
	comp=E,1μm,0.8s						
LAST	**Lasithi**	**0.82**	**288**	P	**Pg**	**03 23 40.9**	**-0.2**
KARP	**Karpathos**	**0.88**	**43**	P	**Pg**	**03 23 41.4**	**-0.7**
KARP				S	**Sb**	**03 23 54.7**	**+0.2**
	comp=E,2μm,0.6s						
KARP	**Karpathos**	**0.88**	**43**	P	**Pg**	**03 23 41.3**	**-0.8**
KARP				S	**Sb**	**03 23 54.4**	**-0.1**
KARP				AML	AML	03 23 59.1	
	comp=E,4331μm,0.5s						
KARP				AML	AML	03 23 59.4	
	comp=N,4858μm,0.7s						
HRKL	**Herakleio**	**1.17**	**291**	P	**Pb**	**03 23 48.0**	**+0.4**
HRKL	**Herakleio**	**1.17**	**291**	PN	**Pn**	**03 23 48.4**	**+0.6**
KSTL	**Kastelli Herak**	**1.19**	**290**	P	Pg	03 23 43.2	-4.8
KSTL				S	**Sg**	**03 23 58.2**	**-5.3**
IDI	**Anoyia**	**1.32**	**287**	Pg	**Pg**	**03 23 50.4**	**-0.2**
	comp=N,32nm,0.3s,baz=277,slow=23,SNR=115						
IDI				Lg	Lg	03 24 10.1	
	comp=N,34nm,0.3s,baz=347,slow=18,SNR=9.3						
IDI	**Anoyia**	**1.32**	**287**	P	**Pg**	**03 23 50.0**	**-0.6**
IDI	**Anoyia**	**1.32**	**287**	PN	**Pg**	**03 23 50.5**	**-0.2**
SIVA	**Sivas**	**1.34**	**275**	P	**Pg**	**03 23 50.5**	**-0.5**
SIVA	**Sivas**	**1.34**	**275**	P	**Pg**	**03 23 50.5**	**-0.5**
SANT	**Santorini**	**1.67**	**332**	P	**Pn**	**03 23 54.8**	**+0.1**
SANT				S	**Sn**	**03 24 16.7**	**+0.4**
	comp=N,575nm,0.4s						
SANT	**Santorini**	**1.67**	**332**	P	**Pn**	**03 23 55.0**	**+0.2**
SANT	**Santorini**	**1.67**	**332**	PN	**Pb**	**03 23 56.1**	**-0.1**
THR6	**Thira Island,**	**1.68**	**330**	P	**Pn**	**03 23 55.4**	**+0.6**
THR6	**Thira Island,**	**1.68**	**330**	P	**Pn**	**03 23 55.7**	**+0.9**
SAP1	**Santorini-Akro**	**1.68**	**330**	P	**Pn**	**03 23 55.1**	**+0.2**
THR8	**Santorini-Mono**	**1.69**	**333**	P	**Pn**	**03 23 55.1**	**+0.1**
THR8	**Santorini-Mono**	**1.69**	**333**	P	**Pn**	**03 23 55.3**	**+0.3**
SAP2K	**Karterados**	**1.71**	**332**	P	**Pn**	**03 23 55.1**	**-0.1**
THR3	**Thira Island,**	**1.72**	**331**	P	**Pn**	**03 23 55.8**	**+0.4**
THR3	**Thira Island,**	**1.72**	**331**	P	**Pn**	**03 23 56.0**	**+0.6**
THR7	**Fira-Santorini**	**1.72**	**332**	P	**Pn**	**03 23 55.9**	**+0.4**
THR7	**Fira-Santorini**	**1.72**	**332**	P	**Pn**	**03 23 56.3**	**+0.8**
THT2	**Imerovigli**	**1.74**	**332**	P	**Pn**	**03 23 56.2**	**+0.6**
THT2				S	**Sn**	**03 24 18.0**	**0.0**
	comp=N,882nm,0.6s						
THT2	**Imerovigli**	**1.74**	**332**	PN	**Pn**	**03 23 56.3**	**+0.6**
THR5	**Thira Island,**	**1.75**	**330**	P	**Pn**	**03 23 56.2**	**+0.4**
THR5	**Thira Island,**	**1.75**	**330**	P	**Pn**	**03 23 56.4**	**+0.6**
NISR	**Nisiros**	**1.80**	**18**	P	**Pn**	**03 23 57.2**	**+0.7**
NISR				S	**Sb**	**03 24 20.7**	**-0.3**
	comp=N,845nm,0.7s						
NISR	**Nisiros**	**1.80**	**18**	P	**Pn**	**03 23 57.1**	**+0.7**
KOSK	**Kos Island**	**1.90**	**13**	PN	**Pb**	**03 23 59.9**	**-0.2**
VAM	**Vamos**	**1.90**	**286**	P	**Pb**	**03 24 00.2**	**+0.1**
ARG	**Arkhangelos**	**1.90**	**46**	P	**Pn**	**03 23 59.7**	**+1.8**
ARG				S	**Sg**	**03 24 25.7**	**-0.7**
ARG	**Arkhangelos**	**1.90**	**46**	P	**Pb**	**03 23 59.8**	**-0.3**
ARG	**Arkhangelos**	**1.90**	**46**	PN	**Pn**	**03 23 59.7**	**+1.8**
AMGA	**Amorgos Island**	**1.97**	**347**	P	**Pn**	**03 23 59.3**	**+0.4**
AMGA	**Amorgos Island**	**1.97**	**347**	P	**Pn**	**03 23 59.6**	**+0.7**
IOSP	**Ios island**	**2.04**	**333**	P	**Pn**	**03 24 00.2**	**+0.4**
DAT	**Datca**	**2.04**	**27**	PN	**Pb**	**03 24 02.0**	**-0.7**
DAT	**Datca**	**2.04**	**27**	*i* P	**Pn**	**03 24 01.0**	**+1.0**
DAT				*i* S	**Sb**	**03 24 28.7**	**+0.4**
DAT				IAML		03 24 33.0	
	comp=E,39nm,0.8s						
DAT				IAML		03 24 36.0	
	comp=N,42nm,0.4s						
IMMV	**Iera Moni Meta**	**2.08**	**286**	P	**Pb**	**03 24 03.6**	**+0.3**
IMMV	**Iera Moni Meta**	**2.08**	**286**	PN	**Pb**	**03 24 02.9**	**-0.4**
APE	**Apeiranthos**	**2.28**	**342**	P	**Pn**	**03 24 03.5**	**+0.3**
APE				S	**Sn**	**03 24 31.7**	**+0.2**
	comp=N,210nm,0.4s						
APE	**Apeiranthos**	**2.28**	**342**	P	**Pn**	**03 24 03.8**	**+0.6**
APE	**Apeiranthos**	**2.28**	**342**	PN	**Pn**	**03 24 04.5**	**+1.3**
RODP	**Rodopos**	**2.29**	**287**	PN	**Pn**	**03 24 05.7**	**+2.5**
MLSB	**Milas**	**2.62**	**24**	PN	**Pn**	**03 24 10.1**	**+2.2**
TURN	**Turunc**	**2.64**	**41**	PN	**Pn**	**03 24 06.5**	**-1.5**
TURN	**Turunc**	**2.64**	**41**	*i* P	**Pn**	**03 24 05.7**	**-2.3**
YER	**Yerkesik**	**2.68**	**33**	P	**Pn**	**03 24 10.0**	**+1.3**
YER	**Yerkesik**	**2.68**	**33**	PN	**Pn**	**03 24 10.9**	**+2.2**
FETY	**Fethiye**	**2.76**	**51**	P	**Pn**	**03 24 10.7**	**+0.9**
FETY	**Fethiye**	**2.76**	**51**	*i* P	**Pn**	**03 24 10.6**	**+0.8**
GCAM	**G?zelcaml?**	**2.87**	**13**	PN	**Pn**	**03 24 13.8**	**+2.7**
GCAM	**G?zelcaml?**	**2.87**	**13**	*i* P	**Pn**	**03 24 12.7**	**+1.6**
GCAM				*i* S	**Sn**	**03 24 44.2**	**-1.5**
GCAM				IAML		03 24 46.0	
	comp=N,20nm,0.3s						
GCAM				IAML		03 24 53.0	
	comp=E,35nm,0.9s						
AKAS	**Kas**	**2.91**	**62**	*i* P	**Pn**	**03 24 13.0**	**+1.2**
AYDN	**Tasoluk**	**2.99**	**23**	*i* P	**Pn**	**03 24 14.1**	**+1.2**
KTHA	**Kythira Island**	**3.06**	**297**	P	**Pn**	**03 24 15.6**	**+1.7**
KTHA	**Kythira Island**	**3.06**	**297**	PN	**Pn**	**03 24 16.5**	**+2.6**
DGB	**zmir**	**3.16**	**6**	*i* P	**Pn**	**03 24 16.1**	**+0.9**
DGB				*i* S	**Sn**	**03 24 51.7**	**-1.4**
DGB				IAML		03 25 11.0	
	comp=E,35nm,0.8s						
DGB				IAML		03 25 16.0	
	comp=N,32nm,0.6s						
TAVA	**DENIZLI_Tavas**	**3.25**	**37**	*i* P	**Pn**	**03 24 18.6**	**+2.0**
TAVA				*i* S	**Sb**	**03 24 59.7**	**-3.2**
TAVA				IAML		03 25 15.0	
	comp=N,38nm,0.6s						
TAVA				IAML		03 25 19.0	
	comp=E,22nm,0.8s						
ZEY	**zmir**	**3.33**	**1**	*i* P	**Pn**	**03 24 16.5**	**-1.1**
ELL	**Elmali**	**3.37**	**56**	PN	**Pn**	**03 24 20.9**	**+2.7**
GOLH	**Golhisar**	**3.44**	**47**	*i* P	**Pn**	**03 24 21.2**	**+2.0**
CHOS	**Chios island**	**3.49**	**355**	PN	**Pn**	**03 24 22.6**	**+2.8**
MANT	**Manisa**	**3.97**	**25**	*i* P	**Pn**	**03 24 28.6**	**+2.0**
MANT				*i* S	**Sn**	**03 25 14.3**	**+1.0**
MANT				IAML		03 25 15.0	
	comp=N,7.6nm,0.6s						
BRDR	**BURDUR-Merkez**	**4.04**	**45**	*i* P	**Pn**	**03 24 28.6**	**+1.2**
BRDR				*i* S	**Sn**	**03 25 18.4**	**+3.4**
BRDR				IAML		03 25 34.0	
	comp=N,15nm,0.7s						
ZEDA	**zmir-Bergama**	**4.09**	**7**	*i* P	**Pn**	**03 24 29.2**	**+1.3**
ZEDA				*i* S	**Sn**	**03 25 15.9**	**-0.1**
ZEDA				IAML		03 25 23.0	
	comp=N,11nm,0.6s						
ZEDA				IAML		03 25 52.0	
	comp=E,15nm,1.4s						
KHAL	**Karahalli**	**4.25**	**35**	*i* P	**Pn**	**03 24 30.1**	**-0.1**
ITM	**Ithomi**	**4.30**	**303**	PN	**Pn**	**03 24 34.7**	**+3.8**
USAK	**Uak-Merkez**	**4.33**	**28**	*i* P	**Pn**	**03 24 33.7**	**+2.3**
DEMI	**Demirci**	**4.52**	**23**	*i* P	**Pn**	**03 24 36.2**	**+2.2**
STEP	**BALIKESIR_Sava**	**4.58**	**13**	*i* P	**Pn**	**03 24 37.5**	**+2.7**
KEPZ	**Antalya-Kepez**	**4.65**	**63**	*i* P	**Pn**	**03 24 37.6**	**+2.0**
KEPZ				*i* S	**Sn**	**03 25 31.2**	**+1.4**
KEPZ				IAML		03 25 34.0	
	comp=E,9.5nm,1.2s						
KEPZ				IAML		03 25 51.0	
	comp=N,14nm,1.2s						
BAYC	**CANAKKALE_Bayr**	**4.83**	**1**	*i* P	**Pn**	**03 24 38.7**	**+0.5**
DURS	**Dursunbey**	**4.96**	**19**	*i* P	**Pn**	**03 24 41.8**	**+1.7**
AGG	**Agios Georgios**	**5.26**	**323**	PN	**Pn**	**03 24 47.3**	**+3.2**
BRTR	**Keskin Array B**	**7.49**	**48**	Pn	**Pn**	**03 25 17.3**	**+2.4**
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=4.5						
MMAI	**Mount Meron Ar**	**7.69**	**102**	Pn	**Pn**	**03 25 17.2**	**-0.3**
	comp=N,0.7nm,0.3s,baz=289,slow=10,SNR=4.8						
MMAI				Sn	**Sn**	**03 26 43.2**	**-1.6**
	comp=N,0.7nm,0.3s,baz=294,slow=26,SNR=2.9						
KBZ	**Khabaz**	**15.47**	**50**	Pn	**Pn**	**03 27 05.4**	**+1.8**
	comp=N,0.0nm,0.3s,baz=220,slow=16,SNR=2.1						
ESDC	**Sonseca Array**	**24.58**	**290**	P	**P**	**03 28 44.8**	**-0.9**
	comp=N,0.3nm,0.5s,baz=84,slow=9.7,SNR=4.1						
TORD	**Torodi Ar. Bea**	**31.14**	**232**	P	**P**	**03 29 45.9**	**+1.4**
	comp=N,0.5nm,0.5s,baz=36,slow=9.1,SNR=9.1						
ARCES	**ARCESS Array B**	**34.69**	**359**	P	**P**	**03 30 14.0**	**-1.0**
	comp=N,6.3nm,1.2s,baz=182,slow=9.7,SNR=2.7						
MKAR	**Makanchi Array**	**43.04**	**56**	P	**P**	**03 31 25.5**	**+0.2**
	comp=N,0.5nm,0.6s,baz=284,slow=7.2,SNR=9.0						
ZALV	**Zalesovo Beam**	**44.43**	**46**	P	**P**	**03 31 36.0**	**-0.3**
	comp=N,0.6nm,0.4s,baz=273,slow=8.6,SNR=3.2						
SONM	**Songino Array**	**58.84**	**51**	P	**P**	**03 33 22.8**	**-1.5**
	comp=N,0.2nm,0.5s,baz=288,slow=7.2,SNR=2.2						

*ATH **07** 03:29:20.3,39°.83N×20°.80E,h26km±7km,ML1.8/1,Error ellipse: s-maj=9.8km s-min=1.8km az=151.0*

SKO 07 03:29:03.1,41°.28N×20°.48E,h33km,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	**Ohrid**	**0.29**	**125**	*i* Pg	Pn	03 29 12.2	+1.0
OHR				*i* Sg	Sn	03 29 16.6	+0.2
OHR				*e*Lg	Lg	03 29 16.7	
	comp=E,114nm,0.3s						
PENT	**Pentalofos**	**1.19**	**155**	P	Pb	03 29 29.8	+4.5
STIP	**Stip**	**1.35**	**72**	*e*Pg	Pb	03 29 30.8	+3.0
STIP				*i* Sg	Sb	03 29 46.3	+1.6
STIP				*e*Lg	Lg	03 29 47.9	
	comp=E,1.6nm,0.3s						
KPRO	**Kipourio**	**1.48**	**153**	P	Pb	03 29 29.9	-0.2
JAN	**Janina**	**1.65**	**170**	P	Pn	03 29 25.9	-3.9
JAN				S	Sn	03 29 30.1	-20
JAN				AML	AML	03 29 30.3	
	comp=E,494μm,0.2s						
JAN				AML	AML	03 29 30.9	
	comp=N,650μm,0.2s						
KEK	**Kerkira**	**1.65**	**199**	P	Pb	03 29 35.6	+2.7
IGT	**Igoumenitsa**	**1.75**	**184**	P	Pn	03 29 30.3	-0.9

*VAO **07** 03:43:13.4±1.1,21°.03S×69°.89W,h10km,mb5.6*

*SJA **07** 03:43:21.2±1.1,20°.82S×69°.81W,h50km,ML4.8,MW5.0*

*NEIC **07** 03:43:22.9±1.5,21°.03S±0°.04×69°.66W±0°.08,h83km±4km, Error ellipse: s-maj=10.6km s-min=5.2km az=93.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.79; Mθθ=0.06; Mϕϕ=0.73; Mrθ=-0.29; Mrϕ=0.18; Mθϕ=-0.84; Fault plane solution: M₀1.18000×10¹⁷ NP1: ϕs191.06000°,δ20.66000°,λ-96.34000°. NP2:ϕs17.83000°, δ69.47000°,λ-87.61000°. Principal axes: T 1.1766, Plg24.0000°, Azm106.0000°; N 0.0162, Plg2.0000°, Azm197.0000°; P -1.1927, Plg65.0000°, Azm292.0000°;*

*GUC **07** 03:43:23.0±0.7,20°.99S×69°.73W,h97km±4km,ML5.2*

*MOS **07** 03:43:24.2±1.2,20°.85S×69°.62W,h93km,mb5.7/14,Error ellipse: s-maj=12.3km s-min=6.8km az=100.4*

*IDC **07** 03:43:24.8±0.3,20°.89S×69°.49W,h89km±2km,mb5.0/24, mb1 5.0/29,mb1mx4.9/38,mbtmp5.3/29,MS4.2/12, Ms1 4.2/12,ms1mx4.1/17,Error ellipse: s-maj=11.2km s-min=5.3km az=74.0*

*BJI **07** 03:43:25.0±0.0,21°.00S×69°.60W,h97km,mB5.4/24*

*NEIC **07** 03:43:26,21°.02S×69°.55W,h80km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.88; Mθθ-0.01; Mϕϕ 0.89; Mrθ-0.22; Mϕϕ 0.32; Mϕr-0.76; Fault plane solution: M₀1.23000×10¹⁷ NP1:ϕs200.00000°, δ25.00000°,λ-87.00000°. NP2:ϕs17.00000°,δ65.00000°, λ-91.00000°. Principal axes: T 1.2809, Plg20.0000°, Azm108.0000°; N -0.1117, Plg1.0000°, Azm17.0000°; P -1.1693, Plg70.0000°, Azm284.0000°;*

*GCMT **07** 03:43:27.0±0.1,21°.07S±0°.01×69°.89W±0°.01,h104km±1km, MW5.4/148,Moment Tensor Solution. s125,c194; s148,c251; Duration: 1s2 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.70±.02; Mθθ-0.12±.02; Mϕϕ 0.82±.03; Mrθ-0.17±.01; Mrϕ 0.21±.02; Mθr-1.11±.02; Best double couple: M₀1.37100×10¹⁷ NP1:ϕs196.00000°,δ18.00000°, λ-83.00000°. NP2:ϕs9.00000°,δ73.00000°,λ-92.00000°. Principal axes: T 1.4550, Plg27.0000°, Azm101.0000°; N -0.1670, Plg2.0000°, Azm10.0000°; P -1.2880, Plg62.0000°, Azm276.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **07** 03:43:27,21°.09S×69°.92W,h101km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-0.72; Mθθ-0.05; Mϕϕ 0.77; Mrθ-0.18; Mϕϕ 0.17; Mϕr-1.17; Fault plane solution: M₀1.41000×10¹⁷ NP1:ϕs195.00000°, δ16.00000°,λ-85.00000°. NP2:ϕs9.00000°,δ74.00000°, λ-92.00000°. Principal axes: T 1.4489, Plg29.0000°, Azm100.0000°; N -0.0821, Plg2.0000°, Azm9.0000°; P -1.3668, Plg61.0000°, Azm277.0000°;*

ISC 07 03:43:23.4±0.3,21°.01S±0°.02×69°.72W±0°.04,h87km±2km, h87km:pP-P,n1044,σ1ᵎ39/970,mb5.7/222,26C-23D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.62**	**316**	*i*P	**Pn**	**03 43 39.7**	**+0.8**
TA01				*i* S	**Sn**	**03 43 51.8**	**+1.5**
PB09	**IPOC Station P**	**0.90**	**150**	*i*P	**Pn**	**03 43 43.5**	**+1.5**
PB09				*i* S	**Sn**	**03 43 58.2**	**+2.4**
PB09				IAML		03 44 00.2	
	comp=E,67μm,0.3s						
PB08	**IPOC Station P**	**1.02**	**32**	*i*P	**Pn**	**03 43 44.6**	**+1.1**
PB08				*i* S	**Sn**	**03 44 00.1**	**+1.6**
PB08				IAML		03 44 01.6	
	comp=N,100μm,0.3s						
PB03	**IPOC Station P**	**1.03**	**182**	*i*P	**Pn**	**03 43 44.7**	**+1.2**
PB03				*i* S	**Sn**	**03 44 00.4**	**+1.9**
PB03				IAML		03 44 02.1	
	comp=E,79μm,0.5s						
PB11	**IPOC Station P**	**1.25**	**3**	*i*P	**Pn**	**03 43 46.6**	**+0.6**
PB11				*i* S	**Sn**	**03 44 04.4**	**+1.4**
PB11	**IPOC Station P**	**1.25**	**3**		**Pn**	**03 43 46.2**	**+0.1**
PB11				Sn	**Sn**	**03 44 02.8**	**-0.2**
PB04	**IPOC Station P**	**1.38**	**197**	*i*P	**Pn**	**03 43 48.5**	**+0.9**
PB04				IAML		03 44 08.7	
	comp=N,65μm,0.7s						
PB04	**IPOC Station P**	**1.38**	**197**		**Pn**	**03 43 47.7**	**0.0**
PB04				Sn	**Sn**	**03 44 06.0**	**+0.1**
PB04	**IPOC Station P**	**1.38**	**197**	*i*P	**Pn**	**03 43 48.6**	**+0.9**
PB04				*i* S	**Sn**	**03 44 07.5**	**+1.7**
GO01	**Chusmiza**	**1.43**	**20**	*e*P	**Pn**	**03 43 49.3**	**+0.7**
GO01				*i* S	**Sn**	**03 44 08.7**	**+1.2**
GO01	**Chusmiza**	**1.43**	**20**		**Pn**	**03 43 49.0**	**+0.4**
GO01				Sn	**Sn**	**03 44 06.2**	**-1.3**
PSGC	**Pisagua**	**1.46**	**345**	*i*P	**Pn**	**03 43 48.6**	**+0.1**
PSGC				*i* S	**Sn**	**03 44 07.6**	**0.0**
PB06	**IPOC Station P**	**1.69**	**175**	*i*P	**Pn**	**03 43 52.6**	**+0.9**
PB06				*i* S	**Sn**	**03 44 14.6**	**+1.5**
PB06				IAML		03 44 16.5	
	comp=E,35μm,0.6s						
LVC	**Limon Verde**	**1.76**	**155**	*e*P	**Pn**	**03 43 54.3**	**+1.5**
LVC				*i* S	**Sn**	**03 44 17.5**	**+2.5**
LVC	**Limon Verde**	**1.76**	**155**	P	**Pn**	**03 43 54.5**	**+1.8**
	comp=E,2μm,0.3s,baz=353,slow=9.1						
LVC				S	**Sn**	**03 44 17.1**	**+2.1**
	comp=E,6μm,0.3s,baz=353,slow=7.0,SNR=61						
LVC				LR	LR	03 44 34.8	
	comp=E,15μm,19.5s,baz=40,slow=39						
LVC	**Limon Verde**	**1.76**	**155**		**Pn**	**03 43 52.0**	**-0.7**
LVC					**Sn**	**03 44 15.5**	**+0.5**
LVC	**Limon Verde**	**1.76**	**155**	*i* P	**Pn**	**03 43 54.7**	**+1.9**
LVC				*i* S	**Sn**	**03 44 18.6**	**+3.7**
LVC				IAML		03 44 20.3	
	comp=Z,10μm,0.3s						
MNMC	**Minye Minye**	**1.87**	**4**	*e*P	**Pn**	**03 43 54.9**	**+0.7**
MNMC				*i* S	**Sn**	**03 44 18.8**	**+1.3**
MNMC	**Minye Minye**	**1.87**	**4**		**Pn**	**03 43 54.3**	**+0.2**
MNMC				Sn	**Sn**	**03 44 15.9**	**-1.6**
PB05	**IPOC Station P**	**1.89**	**194**	*i*P	**Pn**	**03 43 54.7**	**+0.5**
PB05				*i* S	**Sn**	**03 44 17.0**	**-0.5**
PB05				IAML		03 44 30.4	
	comp=E,19μm,0.6s						
PB05	**IPOC Station P**	**1.89**	**194**	*i* P	**Pn**	**03 43 54.7**	**+0.5**
PB05				*e*S	**Sn**	**03 44 15.8**	**-1.8**
PB05				IAML		03 44 35.5	
	comp=Z,16μm,0.5s						
PB15	**IPOC Station P**	**2.20**	**174**	*i*P	**Pn**	**03 43 59.2**	**+0.8**
PB15				*i* S	**Sn**	**03 44 27.4**	**+2.4**
PB15	**IPOC Station P**	**2.20**	**174**	*i* P	**Pn**	**03 43 59.3**	**+0.9**
PB15				*e*S	**Sn**	**03 44 25.3**	**+0.2**
PB10	**IPOC Station P**	**2.61**	**197**		**Pn**	**03 44 02.5**	**-1.1**
PB10				Sn	**Sn**	**03 44 28.7**	**-5.8**
PB10	**IPOC Station P**	**2.61**	**197**	*i* P	**Pn**	**03 44 03.3**	**-0.3**
PB10				*e*S	**Sn**	**03 44 26.7**	**-7.8**
PB10				IAML		03 44 28.7	
	comp=Z,7μm,0.8s						
AP01	**Chacalluta**	**2.69**	**347**	*i*P	**Pn**	**03 44 05.1**	**+0.4**
PB14	**IPOC Station P**	**3.65**	**190**	*i* P	**Pn**	**03 44 17.0**	**-1.0**
PB14				IAML		03 45 28.8	
	comp=Z,3μm,0.9s						
YJA	**Yavi**	**4.08**	**107**	*i* P	**Pn**	**03 44 26.9**	**+2.9**
YJA				IAML		03 45 52.1	
	comp=Z,349nm,2.7s						
GO02	**Mina Guanaco**	**4.13**	**178**		**Pn**	**03 44 23.3**	**-1.3**
GO02				Sn	**Sn**	**03 45 10.0**	**-1.9**
HJA	**Humahuaca**	**4.56**	**119**	*i* P	**Pn**	**03 44 32.8**	**+2.5**
HJA				IAML		03 45 30.5	
	comp=Z,276nm,1.8s						
LPAZ	**La Paz**	**4.93**	**18**	P	**Pn**	**03 44 36.5**	**+0.8**
LPAZ	**La Paz**	**4.93**	**18**	P	**Pn**	**03 44 38.8**	**+3.1**
	comp=Z,18nm,0.3s,baz=214,slow=3.3,SNR=232						
LPAZ	**La Paz**	**4.93**	**18**		**Pn**	**03 44 36.5**	**+0.8**
AZAP	**Zapla**	**5.36**	**127**	*i* P	**Pn**	**03 44 42.3**	**+1.2**
AZAP				IAML		03 45 56.9	
	comp=Z,214nm,1.6s						
GO03	**Copiap**	**6.57**	**184**		**Pn**	**03 44 55.2**	**-2.2**
GO03				Sn	**Sn**	**03 46 09.8**	**-1.2**
GO03	**Copiap**	**6.57**	**184**	*i* P	**Pn**	**03 44 54.7**	**-2.8**
AHML	**Horco Molle**	**7.01**	**146**	*i* P	**Pn**	**03 45 04.3**	**+0.9**
AHML				IAML		03 46 42.9	
	comp=Z,97nm,1.6s						
ACLC	**CERRO LA CRUZ**	**8.74**	**164**	*i* P	**Pn**	**03 45 25.9**	**-1.3**
GO04	**Tololo Observa**	**9.18**	**186**		**Pn**	**03 45 29.8**	**-3.4**
SIV	**San Ignacio**	**9.60**	**60**	P	**Pn**	**03 45 36.6**	**-2.3**
	comp=Z,17nm,0.3s,baz=255,slow=13,SNR=521						
CFA	**Coronel Fontan**	**10.63**	**173**	P	**Pn**	**03 45 49.7**	**-3.2**
	comp=Z,27nm,0.3s,baz=351,slow=13,SNR=104						
CFA				S	**Sn**	**03 47 41.4**	**-8.7**
	comp=Z,7.0nm,0.3s,baz=90,slow=20,SNR=2.8						
NNA	**Nana**	**11.27**	**322**	P	**Pn**	**03 46 01.4**	**-0.2**
NNA						03 48 03.0	
NNA	**Nana**	**11.27**	**322**	P	**Pn**	**03 46 01.7**	**+0.1**
	comp=Z,17nm,0.3s,baz=179,slow=14,SNR=43						
NNA				S	**Sn**	**03 48 01.9**	**-3.9**
	comp=Z,70nm,0.3s,baz=196,slow=4.6,SNR=6.5						
NNA	**Nana**	**11.27**	**322**		**Pn**	**03 46 01.4**	**-0.2**
NNA					**Sn**	**03 48 03.0**	**-2.8**
ROC1	**El Roble**	**11.97**	**185**		**Pn**	**03 46 09.8**	**-1.4**
PEL	**Peldehue**	**12.12**	**184**	P	**Pn**	**03 46 12.7**	**-0.2**
PEL	**Peldehue**	**12.12**	**184**		**Pn**	**03 46 12.7**	**-0.2**
CPUP	**Villa Florida**	**12.53**	**117**	P	**Pn**	**03 46 16.4**	**-2.1**
	comp=Z,0.7nm,0.3s,baz=297,slow=13,SNR=18						
SAML	**Samuel**	**13.55**	**29**	P	**Pn**	**03 46 29.7**	**-2.4**
SAML	**Samuel**	**13.55**	**29**	*e*P	**Pn**	**03 46 29.0**	**-3.0**
SAML	**Samuel**	**13.55**	**29**		**Pn**	**03 46 29.7**	**-2.4**
GO05	**Huala**	**14.08**	**187**		**Pn**	**03 46 39.3**	**+0.4**
SALV	**Santo Antonio**	**14.24**	**71**	*e*P	**Pn**	**03 46 37.7**	**-3.4**
PP1B	**Ponte de Pedra**	**14.42**	**79**	*e*P	**Pn**	**03 46 39.0**	**-4.3**
TRCB	**Terra Rica**	**15.96**	**100**	*e*P	**Pn**	**03 47 00.1**	**-2.8**
C2SB	**Chapadao do Su**	**16.04**	**85**	*e*P	**Pn**	**03 47 01.3**	**-2.6**
ATAH	**Atahualpa**	**16.15**	**327**	P	**P**	**03 47 07.3**	**0.0**
	comp=Z,1.6nm,0.3s,baz=154,slow=9.2,SNR=41						
PTGB	**Pitanga**	**16.68**	**106**	*e*P	**Pn**	**03 47 10.1**	**-1.9**
PCMB	**Pacaembu**	**17.21**	**95**	*e*P	**Pn**	**03 47 16.4**	**-2.1**
CPSB	**Cacapava Do Su**	**17.38**	**126**	*e*P	**Pn**	**03 47 18.7**	**-1.7**
ARAG	**Araguaiana, MT**	**17.80**	**76**	*e*P	**P**	**03 47 23.9**	**-1.3**
PLTB	**Pedras Altas**	**17.95**	**130**	*e*P	**P**	**03 47 24.4**	**-2.3**
GO06	**Curarrehue**	**18.57**	**184**	P	**P**	**03 47 33.8**	**+0.1**
FRTB	**Fartura**	**18.81**	**101**	*e*P	**P**	**03 47 35.8**	**-0.5**
CNLB	**Canela**	**18.96**	**120**	*e*P	**P**	**03 47 36.5**	**-1.4**
PLCA	**Paso

NBPA Parau_RN 35.06 69 *e*P P 03 50 07.5 -0.8
NBRF Rio Formoso - 35.52 75 *e*P P 03 50 13.2 +1.0
RCBR Riachuelo 36.08 70 P P 03 50 17.1 0.0
RCBR pmax pmax
comp=Z,137nm,0.8s
RCBR Riachuelo 36.08 70 P P 03 50 16.3 -0.7
comp=Z,137nm,0.8s,baz=66,slow=0.2,SNR=16
RCBR Riachuelo 36.08 70 *e*P P 03 50 17.0 0.0
RCBR Riachuelo 36.08 70 P P 03 50 17.1 0.0
RPN Rapa Nui 36.57 253 P P 03 50 24.0 +3.0
comp=Z,95nm,0.8s,baz=90,slow=9.8,SNR=5.6
MLPR Magueyes Islan 38.83 4 P P 03 50 37.9 -2.2
MLPR IAmb IAmb 03 50 38.9
comp=Z,104nm,1.1s
CRPR Cabo Rojo, PR 38.86 4 P P 03 50 39.2 -1.1
CRPR IAmb IAmb 03 50 40.1
comp=Z,89nm,0.9s
CRPR pP 03 51 00.7 -0.4
TGUH Tegucigalpa,Un 38.88 332 P P 03 50 40.6 -0.1
OBIP Obispado Ponce 38.93 5 P P 03 50 39.2 -1.7
OBIP IAmb IAmb 03 50 42.2
comp=Z,82nm,0.8s
PDPR Patillas Dam, 38.96 6 P P 03 50 39.5 -1.6
PDPR IAmb IAmb 03 50 40.5
comp=Z,93nm,0.7s
PDPR pP 03 51 00.9 -1.0
SJG San Juan 39.04 5 P P 03 50 40.0 -1.8
comp=Z,72nm,0.7s,baz=323,slow=5.4,SNR=12
SJG pP 03 51 01.7 -0.9
comp=Z,61nm,0.7s,baz=189,slow=10,SNR=4.7
SJG San Juan 39.04 5 P P 03 50 40.0 -1.8
SJG IAmb IAmb 03 50 41.1
comp=Z,92nm,0.8s
SJG pP 03 51 01.4 -1.1
MPR Mayaguez 39.06 4 P P 03 50 40.3 -1.7
MPR IAmb IAmb 03 50 42.1
comp=Z,86nm,0.9s
MPR pP 03 51 01.8 -1.0
MTP Monte Pirata 39.08 6 P P 03 50 40.2 -2.0
MTP IAmb IAmb 03 50 41.1
comp=Z,49nm,0.7s
AOPR Arecibo Observ 39.22 4 IAmb IAmb 03 50 42.8
comp=Z,56nm,0.7s
CBYP Canovanas 39.22 6 P P 03 50 41.8 -1.6
CBYP IAmb IAmb 03 50 42.7
comp=Z,107nm,0.8s
CBYP pP 03 51 03.5 -0.8
GCPR Guaynabo City 39.24 5 P P 03 50 41.3 -2.2
GCPR IAmb IAmb 03 50 42.4
comp=Z,61nm,0.6s
SNET Serv Nac Est T 39.45 329 IAmb IAmb 03 50 49.5
comp=Z,181nm,1.0s
MTDJ Mount Denham 39.74 348 IAmb IAmb 03 50 49.5
comp=Z,117nm,1.1s
APG El Apazote 41.18 329 P P 03 51 01.3 +1.4
comp=Z,106nm,0.9s,baz=236,slow=1.0,SNR=29
TEIG Tepich 44.82 335 P P 03 51 29.2 +0.3
TEIG IAmb IAmb 03 51 30.6
comp=Z,103nm,0.7s
TEIG pP pP 03 51 51.2 +1.1
TLIG Tlapa 47.64 321 IAmb IAmb 03 51 54.6
comp=Z,89nm,0.7s
061Z Ochoppi 47.85 346 P P 03 51 53.1 +0.6
baz=166
060A Indiantown 48.86 347 P P 03 52 01.5 +1.2
baz=167
DWPF Disney Wildern 50.13 346 P P 03 52 10.7 +0.8
baz=166
456A Hilliard 52.78 347 P P 03 52 30.6 +1.0
456A pP 03 52 52.4 +1.0
257A Skidaway Islan 53.79 348 P P 03 52 38.0 +1.0
baz=167
TIGA Tifton 53.82 345 P P 03 52 37.6 +0.4
baz=164
353A Camilla 53.88 345 P P 03 52 37.8 +0.1
baz=163,SNR=5.9
256A Glennville 53.96 347 P P 03 52 39.1 +0.8
baz=166
255A Hazlehurst 54.04 347 P P 03 52 39.0 +0.2
baz=165
352A Blakely 54.19 344 P P 03 52 39.9 0.0
baz=162,SNR=11
254A Abbeville 54.24 346 P P 03 52 40.5 +0.2
baz=164,SNR=6.7
158A Hollywood 54.37 349 P P 03 52 41.8 +0.6
baz=168
157A Early Branch 54.46 348 P P 03 52 41.5 -0.4
baz=167
BRAL Brewton 54.48 342 P P 03 52 42.7 +0.6
BRAL pP 03 53 03.8 -0.2
BRAL Brewton 54.48 342 P P 03 52 42.3 +0.2
baz=160,SNR=8.7
156A Sylvania 54.54 348 P P 03 52 43.0 +0.6
baz=166
253A Americus 54.55 345 P P 03 52 42.3 -0.2
baz=163,SNR=7.1
252A Lumpkin 54.63 344 P P 03 52 43.0 -0.1
baz=163,SNR=7.2
155A Kite 54.70 347 P P 03 52 44.1 +0.4
baz=165,SNR=8.7
NHSC New Hope 54.73 349 P P 03 52 44.6 +0.7
baz=168,SNR=7.3
154A Montrose 54.84 346 P P 03 52 44.8 +0.2
baz=165,SNR=13
Z58A St. Stephen 54.89 350 P P 03 52 45.8 +0.8
baz=168,SNR=6.5
Z57A Bowman 55.01 349 P P 03 52 46.6 +0.7
baz=167,SNR=12
250A Grady 55.02 343 IAmb IAmb 03 52 46.9
comp=Z,92nm,0.8s
153A Fort Valley 55.04 345 P P 03 52 46.0 -0.1
baz=164
Z56A Williston 55.16 348 P P 03 52 47.3 +0.3
baz=167
Z55A Blythe 55.22 347 P P 03 52 47.7 +0.3
baz=166
152A Waverly Hall 55.27 345 P P 03 52 47.3 -0.5
baz=163,SNR=12
Y60A Bolivia 55.30 351 P P 03 52 48.5 +0.6
baz=170,SNR=6.8
Z54A Sparta 55.38 347 P P 03 52 48.4 -0.1
baz=165,SNR=7.3
Y59A Loris 55.38 351 P P 03 52 49.4 +0.8
Y59A pP 03 53 11.1 +0.7
Y59A Loris 55.38 351 P P 03 52 48.9 +0.4
baz=170
Y58A Scranton 55.43 350 P P 03 52 49.5 +0.7
baz=169,SNR=6.6
Z53A Monticello 55.58 346 P P 03 52 49.6 -0.4
baz=164,SNR=6.5
Y56A Pelion 55.60 348 P P 03 52 50.3 +0.2
baz=167
Y57A Sumter 55.66 349 P P 03 52 50.8 +0.3
baz=168,SNR=8.8
GOGA Godfrey 55.68 346 IAmb IAmb 03 52 51.5
comp=Z,56nm,1.1s
GOGA Godfrey 55.68 346 P P 03 52 50.6 -0.1
baz=164,SNR=5.5
Z52A Williamson 55.69 345 P P 03 52 50.4 -0.4
baz=163,SNR=7.2
X60A Albert Glenn T 55.84 352 P P 03 52 52.2 +0.4
baz=171,SNR=6.8
Y55A Saluda 55.85 348 P P 03 52 52.1 +0.1
baz=166,SNR=11
X59A McDuffie Farm, 55.92 351 P P 03 52 52.5 +0.1
baz=170,SNR=7.6
Y54A Tignall 55.95 347 P P 03 52 52.7 +0.1
baz=165,SNR=9.1
X58A Rowland 56.01 350 P P 03 52 53.4 +0.4
X58A pP 03 53 13.5 -1.5
X58A Rowland 56.01 350 P P 03 52 53.6 +0.6
baz=169,SNR=17
X57A Johnson Farm, 56.04 350 P P 03 52 53.3 +0.1
baz=168
Z50A Ashland 56.13 344 P P 03 52 53.6 -0.4
baz=162,SNR=27
Y53A Monroe 56.14 346 P P 03 52 53.7 -0.3
baz=164,SNR=5.8
LRAL Lakeview Retre 56.22 343 IAmb IAmb 03 52 54.7
comp=Z,32nm,0.6s
LRAL Lakeview Retre 56.22 343 P P 03 52 54.2 -0.4
baz=160,SNR=12
X56A White Oak 56.23 349 P P 03 52 54.9 +0.3
baz=167,SNR=15
Y52A Lilburn 56.26 346 IAmb IAmb 03 52 55.6
comp=Z,43nm,1.0s
Y52A Lilburn 56.26 346 P P 03 52 54.7 -0.1
baz=164,SNR=8.0
W60A Pink Hill 56.27 352 P P 03 52 55.4 +0.5
baz=171,SNR=5.5
W61A Ground Anchor 56.30 353 P P 03 52 55.8 +0.7
baz=172,SNR=6.1
X55A Gracelyn & Ava 56.33 348 P P 03 52 55.6 +0.3
baz=167,SNR=12
W58A Raeford 56.45 351 P P 03 52 56.8 +0.7
baz=169,SNR=29
CNNC Cliffs of the 56.48 352 P P 03 52 56.8 +0.5
baz=171
W59A Clinton 56.48 351 P P 03 52 56.4 +0.1
baz=170
Y51A Rockmart 56.53 345 P P 03 52 56.3 -0.5
baz=163,SNR=20
X54A Belton 56.55 347 P P 03 52 57.3 +0.4
baz=166,SNR=15
VBMS Vicksburg 56.55 339 IAmb IAmb 03 52 57.6
comp=Z,46nm,0.8s
HKT Hockley 56.56 333 P P 03 52 57.8 +0.8
HKT pmax pmax
comp=Z,130nm,1.2s
HKT Hockley 56.56 333 P P 03 52 57.8 +0.8
HKT IAmb IAmb 03 52 59.4
comp=Z,130nm,1.1s
X53A Estanollee 56.70 347 P P 03 52 57.8 -0.1
baz=165,SNR=6.7
W57A Gilead 56.70 350 P P 03 52 58.5 +0.6
W57A IAmb IAmb 03 52 59.5
comp=Z,89nm,0.9s
W57A pP 03 53 18.7 -1.2
W57A Gilead 56.70 350 P P 03 52 58.2 +0.3
baz=168,SNR=11
PAULI Pauline 56.70 348 IAmb IAmb 03 52 59.5
comp=Z,72nm,1.0s
W56A Indian Trail 56.78 349 P P 03 52 58.6 +0.1
baz=168,SNR=14
833A Chaparral WMA, 56.81 329 P P 03 52 59.9 +1.0
833A pP 03 53 20.7 -0.2
833A Chaparral WMA, 56.81 329 P P 03 52 59.9 +1.0
baz=146,SNR=31
V61A Roper 56.86 353 P P 03 52 59.5 +0.5
baz=172
V60A Jim Taylor Roa 56.92 353 IAmb IAmb 03 53 01.1
comp=Z,93nm,0.9s
V60A Jim Taylor Roa 56.92 353 P P 03 52 59.9 +0.5
baz=172
KMSC Kings Mountain 56.92 349 P P 03 52 60.0 +0.5
KMSC IAmb IAmb 03 53 01.0
comp=Z,61nm,0.9s
KMSC pP 03 53 20.4 -1.2
KMSC Kings Mountain 56.92 349 P P 03 53 00.2 +0.7
baz=167,SNR=11
W54A Cherokee Point 57.03 348 P P 03 53 00.9 +0.6
baz=166,SNR=15
V59A Middlesex 57.04 352 P P 03 53 01.0 +0.7
baz=170,SNR=16
X51A Calhoun 57.11 345 IAmb IAmb 03 53 01.8
comp=Z,116nm,1.1s
X51A Calhoun 57.11 345 P P 03 53 00.6 -0.2
baz=163,SNR=9.1
V58A Windy Hill, Pi 57.19 351 P P 03 53 01.7 +0.3
V58A IAmb IAmb 03 53 02.9
comp=Z,129nm,1.1s
V58A pP 03 53 22.6 -0.8
V58A Windy Hill, Pi 57.19 351 P P 03 53 01.7 +0.3
baz=170,SNR=15
W53A Cullowhee 57.31 347 P P 03 53 02.4 0.0
baz=165,SNR=22
V57A Coltrane Farms 57.38 350 P P 03 53 02.9 +0.2
baz=169,SNR=13
U61A Possum Corner 57.38 354 P P 03 53 03.0 +0.4
baz=172
W52A Murphy 57.40 346 IAmb IAmb 03 53 04.1
comp=Z,64nm,0.9s
W52A Murphy 57.40 346 P P 03 53 02.9 -0.1
baz=164,SNR=9.9
V56A Mocksville 57.42 350 P P 03 53 03.8 +0.7
baz=168,SNR=25
U59A Littleton 57.56 352 IAmb IAmb 03 53 05.7
comp=Z,104nm,0.9s
U59A Littleton 57.56 352 P P 03 53 04.2 +0.3
baz=171,SNR=10
X48A Hartselle 57.56 343 IAmb IAmb 03 53 04.8
comp=Z,134nm,1.1s
V55A Taylorsville 57.59 349 IAmb IAmb 03 53 06.1
comp=Z,103nm,0.8s
V55A Taylorsville 57.59 349 P P 03 53 04.9 +0.7
baz=167,SNR=18
U60A Pendleton 57.60 353 P P 03 53 04.6 +0.3
baz=172,SNR=5.4
V54A Nebo 57.65 348 P P 03 53 05.0 +0.3
baz=166,SNR=18
W51A Cleveland 57.66 345 P P 03 53 04.5 -0.2
baz=163,SNR=15
NATX Nacogdoches 57.66 335 P P 03 53 06.1 +1.3
baz=152,SNR=29
U58A Oxford 57.70 352 P P 03 53 05.2 +0.3
baz=170,SNR=11
V53A Saluda 57.72 347 IAmb IAmb 03 53 06.3
comp=Z,44nm,0.8s
V53A Saluda 57.72 347 P P 03 53 05.0 -0.1
baz=166,SNR=9.5
W50A Signal Mountai 57.83 345 IAmb IAmb 03 53 06.9
comp=Z,98nm,0.9s
W50A Signal Mountai 57.83 345 P P 03 53 05.8 -0.1
baz=163,SNR=20
U57A Blanch 57.85 351 P P 03 53 06.5 +0.5
baz=169,SNR=14
CPCT Cooper Cave 57.88 346 P P 03 53 06.2 0.0
CPCT IAmb IAmb 03 53 07.2
comp=Z,89nm,1.0s
CPCT pP pP 03 53 27.3 -1.1
TKL Tuckaleechee C 57.91 347 P P 03 53 06.6 +0.1
comp=Z,74nm,0.8s,baz=159,slow=8.4,SNR=46
TKL pP pP 03 53 28.8 +0.2
comp=Z,27nm,0.9s,baz=170,slow=9.5,SNR=4.0
TKL Tuckaleechee C 57.91 347 IAmb IAmb 03 53 07.3
comp=Z,90nm,0.8s
U56A King 57.93 350 IAmb IAmb 03 53 09.3
comp=Z,99nm,1.1s
U56A King 57.93 350 P P 03 53 07.5 +0.9
baz=168,SNR=11
W49A Belvidere 57.99 344 P P 03 53 06.4 -0.6
baz=162,SNR=11
435B Jarrell 58.04 332 P P 03 53 08.1 +0.7
435B IAmb IAmb 03 53 09.2
comp=Z,104nm,0.8s
435B pP 03 53 28.6 -0.9
435B Jarrell 58.04 332 P P 03 53 08.2 +0.7
baz=149,SNR=14
V52A Sevierville 58.05 347 P P 03 53 07.2 -0.2
baz=165,SNR=23
T59A Double "B" Far 58.14 353 P P 03 53 08.4 +0.4
baz=171,SNR=18
V51A Loudon 58.18 346 IAmb IAmb 03 53 09.2
comp=Z,60nm,0.8s
V51A Loudon 58.18 346 P P 03 53 08.1 -0.2
baz=164,SNR=15
U55A TA2, Sparta 58.20 349 P P 03 53 08.8 +0.3
baz=168,SNR=11
T60A Surry 58.21 353 P P 03 53 09.0 +0.5
baz=172
V50A Pikevile 58.23 345 P P 03 53 08.4 -0.2
baz=163,SNR=48
T58A Grand View Acr 58.24 352 P P 03 53 09.3 +0.6
baz=170,SNR=25
Z41A Richland Creek 58.29 337 P P 03 53 10.0 +0.9
baz=154,SNR=27
OXF Oxford 58.30 341 P P 03 53 08.4 -0.8
baz=158,SNR=24
U53A Fall Branch 58.34 348 P P 03 53 09.5 0.0
baz=166,SNR=10
PLAL Pickwick Lake 58.35 342 P P 03 53 09.1 -0.5
PLAL IAmb IAmb 03 53 09.8
comp=Z,98nm,1.1s
PLAL pP 03 53 30.0 -1.6
U54A Nelsons Funny 58.35 349 P P 03 53 09.8 +0.2
baz=167,SNR=20
T57A Hurt 58.39 351 IAmb IAmb 03 53 11.1
comp=Z,110nm,1.1s
T57A Hurt 58.39 351 P P 03 53 10.4 +0.6
baz=170,SNR=15
V49A McMinnville 58.51 345 P P 03 53 10.1 -0.6
baz=162,SNR=30
U52A Thorn Hill 58.53 347 P P 03 53 10.5 -0.3
baz=165
T56A Rocky Mt 58.54 350 P P 03 53 11.8 +1.0
baz=169,SNR=12
S61A Accomac 58.65 354 P P 03 53 12.5 +1.0
baz=173
U51A La Follette 58.66 347 P P 03 53 11.4 -0.3
baz=164,SNR=9.2
TZTN Tazewell 58.72 347 IAmb IAmb 03 53 13.0
comp=Z,47nm,0.9s
TZTN Tazewell 58.72 347 P P 03 53 11.7 -0.4
baz=165,SNR=7.6
T55A Pulaski 58.75 350 P P 03 53 13.2 +0.9
baz=168,SNR=28
S60A Water View 58.77 354 P P 03 53 13.2 +0.9
baz=172
X43A Marvell 58.77 340 P P 03 53 12.5 +0.1
baz=157,SNR=12
BLA Blacksburg 58.78 350 IAmb IAmb 03 53 14.5
comp=Z,58nm,0.7s
BLA Blacksburg 58.78 350 P P 03 53 13.2 +0.6
baz=168,SNR=11
JCT Junction City 58.80 330 P P 03 53 13.2 +0.5
baz=147,SNR=54
T54A Tazewell 58.83 349 P P 03 53 13.2 +0.2
baz=167,SNR=14
S58A Poland Farm, P 58.84 352 IAmb IAmb 03 53 14.7
comp=Z,72nm,1.1s
S58A Poland Farm, P 58.84 352 P P 03 53 13.1 +0.3
baz=171,SNR=6.3
U50A Jamestown 58.88 346 P P 03 53 12.8 -0.4
baz=164,SNR=26
S59A Mechanicsville 58.89 353 P P 03 53 14.0 +0.8
baz=172
CLTN Cedars of Leba 58.93 344 IAmb IAmb 03 53 14.4
comp=Z,59nm,0.9s
T53A Wise 58.94 348 P P 03 53 13.4 -0.2
baz=166,SNR=19
WHTX Lake Whitney, 59.02 333 P P 03 53 14.9 +0.7
baz=150,SNR=49
S57A Dark Hollow, R 59.10 351 P P 03 53 15.5 +0.9
baz=170,SNR=21
S56A Natural Bridge 59.10 351 P P 03 53 15.4 +0.7
baz=169,SNR=14
T52A Hallie 59.14 348 IAmb IAmb 03 53 15.9
comp=Z,75nm,0.9s
T52A Hallie 59.14 348 P P 03 53 15.0 0.0
baz=166,SNR=9.3
R58B Mineral 59.16 352 P P 03 53 15.8 +0.7
baz=171,SNR=15
U49A Red Boiling Sp 59.19 345 P P 03 53 14.7 -0.6
baz=162,SNR=14
T51A Gray 59.21 347 P P 03 53 15.4 -0.1
baz=164,SNR=18
R61A Willards 59.26 355 P P 03 53 17.1 +1.3
baz=174
R59A King George, V 59.30 353 P P 03 53 16.7 +0.7
baz=172,SNR=6.7
CBN Corbin Frederi 59.34 353 IAmb IAmb 03 53 18.1
comp=Z,80nm,0.8s
CBN Corbin Frederi 59.34 353 P P 03 53 16.9 +0.7
baz=172
S55A Lewisburg 59.34 350 P P 03 53 17.3 +0.9
baz=168,SNR=35
WVT Waverly 59.36 343 P P 03 53 15.9 -0.5
WVT pmax pmax
comp=Z,103nm,0.7s
WVT Waverly 59.36 343 P P 03 53 15.9 -0.5
WVT Waverly 59.36 343 P P 03 53 15.6 -0.8
baz=160
X40A Basin Creek Fa 59.41 338 P P 03 53 16.5 -0.3
baz=155,SNR=8.4
T50A Nancy 59.45 346 P P 03 53 16.7 -0.4
baz=164,SNR=17
R58A Rapidan 59.51 352 P P 03 53 17.9 +0.5
baz=171,SNR=16
S54A Dingess, Beckl 59.51 349 P P 03 53 18.0 +0.4
S54A pP 03 53 38.8 -0.9
S54A Dingess, Beckl 59.51 349 P P 03 53 17.8 +0.3
baz=167,SNR=17
S53A Williamson 59.53 349 P P 03 53 17.3 -0.4
baz=166,SNR=8.4
R57A Stanardsville 59.57 352 P P 03 53 19.0 +1.1
baz=170,SNR=19
T49A Edmonton 59.70 345 P P 03 53 18.3 -0.5
baz=163,SNR=48
S52A Salyersville 59.72 348 P P 03 53 18.7 -0.2
baz=166
MIAR Mount Ida 59.73 337 P P 03 53 19.3 +0.2
baz=154,SNR=73
S51A Beattyville 59.78 347 IAmb IAmb 03 53 20.2
comp=Z,50nm,0.9s
S51A Beattyville 59.78 347 P P 03 53 19.1 -0.3
baz=165,SNR=6.6
R55A Marlinton 59.78 351 P P 03 53 20.6 +1.2
baz=169,SNR=13
R56A Bull Pasture M 59.80 351 P P 03 53 20.6 +1.0
baz=170,SNR=9.5
TX32 Lajitas Array 59.80 326 IAmb IAmb 03 53 21.9
comp=Z,49nm,1.1s
TXAR Lajitas Array 59.80 326 P P 03 53 20.5 +0.7
comp=Z,26nm,0.9s,baz=145,slow=8.1,SNR=179
TXAR pP pP 03 53 42.6 +0.7
comp=Z,7.7nm,1.0s,baz=91,slow=15,SNR=3.1
TXAR LR LR 04 17 53.0
comp=Z,77nm,20.7s,baz=0.0,slow=35
TXAR Lajitas Array 59.80 326 P P 03 53 20.3 +0.6
TXAR pP 03 53 40.2 -1.7
TX31 Lajitas Ar. Si 59.80 326 IAmb IAmb 03 53 21.9
comp=Z,44nm,1.1s
R54A Victor 59.82 350 P P 03 53 20.2 +0.6
baz=168,SNR=19
W41B Gary Mavity, V 59.83 339 P P 03 53 19.7 -0.1
baz=156,SNR=26
Q59A Harwood 59.91 354 P P 03 53 20.8 +0.6
baz=172
WHAR Wooly Hollow 59.95 339 IAmb IAmb 03 53 21.6
comp=Z,80nm,0.9s
Q60A Greensboro 59.97 354 P P 03 53 21.5 +0.9
baz=173
T47A Sharon Grove 59.97 344 P P 03 53 20.9 +0.2
S50A Richmond 59.99 347 P P 03 53 20.5 -0.3
baz=164,SNR=28
Q58A Fox Den Farm, 60.10 353 P P 03 53 22.4 +0.8
baz=171,SNR=12
R53A Hurricane 60.13 349 P P 03 53 21.9 +0.1
R53A IAmb IAmb 03 53 23.7
comp=Z,94nm,1.1s
R53A Hurricane 60.13 349 P P 03 53 22.0 +0.2
baz=167,SNR=8.6
R52A Catlettsburg 60.27 348 P P 03 53 22.4 -0.3
baz=166,SNR=5.9
Q57A Strasburg 60.28 352 P P 03 53 23.9 +1.1
baz=171,SNR=34
LCAR Lake Charles 60.29 340 IAmb IAmb 03 53 23.5
comp=Z,74nm,0.8s
S49A Springfield 60.29 346 P P 03 53 22.3 -0.6
baz=163,SNR=15
W39A Magazine 60.38 337 P P 03 53 24.4 +0.9
baz=154,SNR=45
Q56A Snyder Ridge, 60.39 352 P P 03 53 24.9 +1.4
baz=170,SNR=36
R51A Hillsboro 60.42 347 P P 03 53 23.5 -0.2
baz=165,SNR=20
Q55A Buckhannon 60.47 351 P P 03 53 25.4 +1.3
baz=169,SNR=22
ABTX Abilene, Hawle 60.52 331 P P 03 53 25.2 +0.6
baz=148,SNR=67
P61A Hammonton 60.55 356 P P 03 53 25.5 +1.0
baz=174
R50A Paris 60.55 347 IAmb IAmb 03 53 25.5
comp=Z,92nm,1.1s
R50A Paris 60.55 347 P P 03 53 24.3 -0.3
baz=164,SNR=14
Q53A Leroy 60.57 349 P P 03 53 24.9 +0.1
baz=167,SNR=15
Q54A Coxs Mills 60.58 350 IAmb IAmb 03 53 26.2
comp=Z,84nm,0.8s
Q54A Coxs Mills 60.58 350 P P 03 53 24.9 +0.1
baz=168,SNR=16
P58A Pank, Wackersv 60.60 353 P P 03 53 25.6 +0.7
baz=172,SNR=14
P59A Jarrettsville 60.63 354 P P 03 53 25.9 +0.8
baz=173,SNR=16
P57A Homestead Farm 60.67 353 P P 03 53 26.6 +1.2
baz=171
R49A Shelbyville 60.75 346 IAmb IAmb 03 53 26.5
comp=Z,76nm,1.1s
R49A Shelbyville 60.75 346 P P 03 53 25.3 -0.7
baz=163,SNR=14
P60A Greenville 60.76 355 IAmb IAmb 03 53 27.6

comp=Z,69nm,0.8s
P60A Greenville 60.76 355 P P 03 53 26.3 +0.4
baz=174,SNR=7.7
VNA3 Neumayer Olymp 60.78 161 P P 03 53 27.0 +1.2
P56A Dayton Farm, R 60.80 352 P P 03 53 27.5 +1.3
baz=170,SNR=20
Q52A Bidwell 60.80 349 P P 03 53 26.2 -0.1
baz=166,SNR=7.1
PSUB Penn St. - Bra 60.86 355 IAmb IAmb 03 53 28.4
comp=Z,64nm,1.0s
P55A Reedsville 60.94 351 P P 03 53 28.3 +1.0
baz=169,SNR=22
WCI Wyandotte Cave 60.95 345 P P 03 53 26.8 -0.5
WCI pmax pmax
comp=Z,129nm,1.1s
WCI Wyandotte Cave 60.95 345 P P 03 53 26.8 -0.5
WCI IAmb IAmb 03 53 27.8
comp=Z,129nm,1.1s
WCI Wyandotte Cave 60.95 345 P P 03 53 26.5 -0.8
baz=162
O61A Allentown 60.95 356 P P 03 53 27.9 +0.7
baz=175
VNA1 Neumayer--Stat 61.00 160 P P 03 53 29.2 +2.0
Q50A Georgetown 61.02 347 P P 03 53 27.2 -0.5
baz=185,SNR=14
Q51A Peebles 61.07 348 IAmb IAmb 03 53 29.0
comp=Z,75nm,1.0s
Q51A Peebles 61.07 348 P P 03 53 27.7 -0.4
baz=165,SNR=12
MCWV Mont Chateau 61.09 351 IAmb IAmb 03 53 30.3
comp=Z,96nm,0.8s
MCWV Mont Chateau 61.09 351 P P 03 53 29.1 +0.9
baz=169,SNR=38
U40A Yellville 61.11 339 P P 03 53 28.2 -0.2
baz=155,SNR=73
P54A Burton 61.13 351 P P 03 53 29.2 +0.6
baz=168,SNR=32
P53A Whipple 61.16 350 P P 03 53 29.0 +0.3
baz=168,SNR=23
O58A Lewisberry 61.19 354 P P 03 53 29.9 +1.1
baz=172,SNR=17
O60A Telford 61.24 355 P P 03 53 29.9 +0.7
baz=174,SNR=7.7
PAGS Pennsylvania G 61.27 354 IAmb IAmb 03 53 31.2
comp=Z,63nm,0.9s
O59A Robesonia 61.30 354 P P 03 53 30.4 +0.8
baz=173,SNR=6.9
O57A Amberson 61.35 353 P P 03 53 31.0 +1.0
baz=172,SNR=17
Q49A Aurora 61.37 347 P P 03 53 29.4 -0.8
baz=164,SNR=12
HHAR Hobbs 61.41 338 IAmb IAmb 03 53 32.3
comp=Z,92nm,0.8s
P52A Corning 61.43 349 P P 03 53 30.2 -0.4
baz=167,SNR=14
P51A Williamsport 61.46 348 IAmb IAmb 03 53 31.4
comp=Z,117nm,1.1s
P51A Williamsport 61.46 348 P P 03 53 30.2 -0.5
baz=166,SNR=15
Q48A North Vernon 61.48 346 P P 03 53 30.4 -0.5
baz=163,SNR=19
O56A Blue Knob Stat 61.52 352 P P 03 53 32.3 +1.1
baz=171,SNR=27
BRNJ Basking Ridge 61.54 356 IAmb IAmb 03 53 33.7
comp=Z,92nm,0.9s
O55A Ligonier 61.55 352 P P 03 53 32.2 +0.8
baz=170,SNR=35
N61A South Mountain 61.59 356 P P 03 53 32.3 +0.8
baz=175,SNR=7.3
CPNY Central Park 61.61 356 IAmb IAmb 03 53 33.3
comp=Z,50nm,1.1s
O54A Avella 61.68 351 IAmb IAmb 03 53 33.7
comp=Z,57nm,0.8s
O54A Avella 61.68 351 P P 03 53 32.5 +0.3
baz=169,SNR=13
P50A Jamestown 61.72 348 P P 03 53 32.1 -0.4
baz=165,SNR=14
TUL1 Leonard 61.76 336 P P 03 53 32.9 +0.1
baz=152,SNR=61
N60A Cedar Hill Far 61.77 355 P P 03 53 33.1 +0.4
baz=174,SNR=6.6
SSPA Standing Stone 61.80 353 P P 03 53 33.8 +0.8
SSPA IAmb IAmb 03 53 35.1
comp=Z,78nm,0.9s
SSPA pP pP 03 53 54.0 -1.4
SSPA Standing Stone 61.80 353 P P 03 53 33.6 +0.6
baz=171
PAL Palisades 61.82 356 IAmb IAmb 03 53 34.8
comp=Z,58nm,1.0s
PAL Palisades 61.82 356 P P 03 53 33.6 +0.5
baz=176
O52A Adamsville 61.85 349 P P 03 53 33.2 -0.2
baz=167,SNR=14
N59A State Game Lan 61.87 355 IAmb IAmb 03 53 35.6
comp=Z,51nm,0.9s
N59A State Game Lan 61.87 355 P P 03 53 34.4 +1.0
baz=174,SNR=9.0
N58A Sunbury 61.88 354 P P 03 53 34.3 +0.9
baz=173,SNR=19
O53A New Philadelph 61.88 350 P P 03 53 33.7 +0.2
baz=168,SNR=8.9
OLIL Olney 61.88 344 IAmb IAmb 03 53 33.7
comp=Z,67nm,0.8s
N57A Milroy 61.88 353 P P 03 53 34.1 +0.6
baz=172,SNR=19
BLO Bloomington 61.90 345 IAmb IAmb 03 53 33.6
comp=Z,106nm,1.1s
P48A Milroy 61.92 346 IAmb IAmb 03 53 33.4
comp=Z,40nm,0.6s
P48A Milroy 61.92 346 P P 03 53 32.5 -1.3
baz=163,SNR=15
WMOK Wichita Mounta 61.94 333 P P 03 53 33.8 -0.3
baz=149,SNR=21
ODNJ Ogdensburg 61.94 356 IAmb IAmb 03 53 35.6
comp=Z,47nm,1.0s
WSPT Westport, CT 61.95 357 IAmb IAmb 03 53 35.8
comp=Z,101nm,0.9s
OKCFA Oklahoma City 61.97 334 IAmb IAmb 03 53 35.3
comp=Z,138nm,1.1s
O51A Pataskala 62.02 349 P P 03 53 34.1 -0.4
baz=166,SNR=13
N55A Marion Center 62.08 352 P P 03 53 35.9 +1.0
baz=170,SNR=53
M61A Granite Spring 62.12 357 P P 03 53 35.6 +0.5
baz=176
N56A West Decatur 62.12 353 P P 03 53 35.9 +0.7
baz=171,SNR=21
M63A Gales Ferry 62.13 358 P P 03 53 34.6 -0.6
baz=178
CCM Cathedral Cave 62.14 341 P P 03 53 35.3 0.0
CCM pmax pmax
comp=Z,139nm,1.0s
CCM Cathedral Cave 62.14 341 P P 03 53 35.3 0.0
CCM Cathedral Cave 62.14 341 P P 03 53 34.9 -0.4
baz=157
ACSO Alum Creek Sta 62.17 349 P P 03 53 35.1 -0.3
baz=166,SNR=32
M60A Port Jervis 62.19 356 P P 03 53 35.8 +0.2
baz=175,SNR=6.1
M62A Hamden 62.20 357 P P 03 53 36.5 +0.8
baz=177,SNR=5.9
O50A Cable 62.21 348 P P 03 53 35.2 -0.5
baz=165,SNR=17
N53A Lisbon 62.36 350 IAmb IAmb 03 53 38.4
comp=Z,143nm,1.1s
N53A Lisbon 62.36 350 P P 03 53 36.9 +0.2
baz=168,SNR=11
SLM Saint Louis 62.38 342 IAmb IAmb 03 53 37.6
comp=Z,91nm,1.0s
M58A Price's Panora 62.38 354 P P 03 53 38.0 +1.1
baz=173,SNR=23
N54A Moraine State 62.39 351 P P 03 53 37.5 +0.5
baz=169,SNR=25
O49A Covington 62.39 347 IAmb IAmb 03 53 37.6
comp=Z,139nm,1.1s
O49A Covington 62.39 347 P P 03 53 36.5 -0.4
baz=165,SNR=19
M57A Sunshine Farm, 62.41 354 IAmb IAmb 03 53 39.4
comp=Z,146nm,1.1s
M57A Sunshine Farm, 62.41 354 P P 03 53 38.0 +1.0
baz=172,SNR=14
M59A Waymart 62.46 355 P P 03 53 38.2 +0.8
baz=174,SNR=21
N52A McGinn's Farm, 62.51 350 P P 03 53 37.4 -0.3
baz=167,SNR=17
MNTX Cornudas Mount 62.57 326 IAmb IAmb 03 53 39.8
comp=Z,85nm,0.9s
MNTX Cornudas Mount 62.57 326 P P 03 53 38.5 +0.1
baz=142,SNR=123
L63A North Scituate 62.58 358 P P 03 53 38.8 +0.7
baz=178,SNR=9.4
O48A Farmland 62.63 347 P P 03 53 37.8 -0.7
baz=164,SNR=26
L64A Middleborough 62.64 359 P P 03 53 39.0 +0.5
baz=179
M56A Emerium 62.67 353 P P 03 53 39.3 +0.5
baz=171,SNR=17
N50A Nevada 62.72 349 P P 03 53 38.7 -0.4
baz=166,SNR=15
M55A Ridgway 62.72 352 P P 03 53 39.8 +0.6
baz=170,SNR=26
N51A Ashland 62.73 349 P P 03 53 38.9 -0.3
N51A IAmb IAmb 03 53 40.0
comp=Z,77nm,0.9s
N51A pP 03 54 00.2 -1.3
N51A Ashland 62.73 349 P P 03 53 38.8 -0.4
baz=167,SNR=9.5
L62A Suffield 62.78 358 P P 03 53 40.3 +0.8
baz=177
L60A Shokan 62.82 356 P P 03 53 40.6 +0.8
baz=175,SNR=11
M54A Oil Creek Stat 62.88 352 P P 03 53 40.8 +0.5
baz=170,SNR=24
M53A Wf Miller and 62.96 351 P P 03 53 41.0 +0.3
baz=168,SNR=12
L61A Hillsdale 1, H 62.98 357 P P 03 53 41.7 +0.8
baz=176,SNR=5.1
SNAA Sanae 62.99 161 P P 03 53 42.4 +1.7
SNAA Sanae 62.99 161 *i*P P 03 53 42.3 +1.7
SNAA *i* *PP pP 03 54 04.3 +1.3
SNAA Sanae 62.99 161 P P 03 53 41.3 +0.6
L58A Harry Jones Me 62.99 355 P P 03 53 42.1 +1.2
baz=174,SNR=21
L57A Andrews Acres 63.04 354 P P 03 53 42.0 +0.7
baz=172,SNR=9.4
N49A Columbus Grove 63.06 348 P P 03 53 41.1 -0.3
baz=165,SNR=41
L59A Walton 63.07 356 P P 03 53 42.5 +1.0
baz=174,SNR=23
MSTX Muleshoe 63.09 329 P P 03 53 42.1 +0.2
baz=145,SNR=66
M51A Elyria 63.09 350 P P 03 53 41.3 -0.3
baz=167,SNR=14
BINY Binghamton 63.16 355 P P 03 53 42.9 +0.8
baz=173,SNR=16
M52A Chesterland 63.16 350 P P 03 53 42.5 +0.4
M52A IAmb IAmb 03 53 43.3
comp=Z,104nm,0.8s
M52A pP 03 54 03.3 -1.2
M52A Chesterland 63.16 350 P P 03 53 41.9 -0.1
baz=168,SNR=10.0
N48A Decatur 63.18 347 P P 03 53 41.5 -0.7
baz=164,SNR=16
SFIN Lafayette 63.18 345 IAmb IAmb 03 53 42.1
comp=Z,102nm,0.8s
SFIN Lafayette 63.18 345 P P 03 53 40.8 -1.4
baz=162,SNR=17
L61B Northampton 63.20 358 P P 03 53 43.0 +0.8
baz=177,SNR=9.6
HRV Adam Dziewonsk 63.22 358 P P 03 53 42.8 +0.4
HRV pmax pmax
comp=Z,88nm,0.9s
HRV Adam Dziewonsk 63.22 358 P P 03 53 42.8 +0.4
HRV IAmb IAmb 03 53 44.5
comp=Z,88nm,0.8s
HRV Adam Dziewonsk 63.22 358 P P 03 53 43.4 +1.0
baz=178
L56A Greenwood 63.24 353 IAmb IAmb 03 53 44.5
comp=Z,92nm,0.8s
L56A Greenwood 63.24 353 P P 03 53 43.3 +0.6
baz=172,SNR=12
O44A Mansfield 63.31 344 IAmb IAmb 03 53 43.0
comp=Z,86nm,0.9s
M50A Fremont 63.31 349 IAmb IAmb 03 53 43.9
comp=Z,88nm,0.9s
M50A Fremont 63.31 349 P P 03 53 42.6 -0.4
baz=166,SNR=9.6
AMTX Amarillo 63.34 331 P P 03 53 43.5 0.0
baz=146
N47A Urbana 63.34 346 IAmb IAmb 03 53 44.8
comp=Z,74nm,0.9s
N47A Urbana 63.34 346 P P 03 53 42.1 -1.1
baz=163,SNR=15
L55A Hinsdale 63.39 353 P P 03 53 44.4 +0.8
baz=171,SNR=12
K62A Royalston 63.40 358 P P 03 53 43.9 +0.3
baz=177
L53A Girard 63.40 351 P P 03 53 43.7 +0.1
baz=169,SNR=8.9
K63A Dunstable 63.40 359 P P 03 53 44.0 +0.4
baz=178
K60A Five Rivers En 63.42 357 P P 03 53 44.4 +0.6
baz=176
K61A Williamstown 63.45 357 P P 03 53 45.1 +1.2
baz=176,SNR=8.7
ERPA Erie 63.52 351 P P 03 53 45.1 +0.7
baz=169
TRY Troy 63.53 357 P P 03 53 45.0 +0.6
TRY pP 03 54 05.9 -0.9
L54A Sinclairville 63.55 352 P P 03 53 45.2 +0.6
baz=170,SNR=17
M49A Liberty Center 63.56 348 P P 03 53 44.2 -0.5
baz=165,SNR=13
K59A Cooperstown 63.64 356 P P 03 53 45.9 +0.7
baz=175,SNR=31
HSIG 63.68 320 IAmb IAmb 03 53 49.5
comp=Z,75nm,1.1s
K58A Earlville 63.69 355 P P 03 53 46.4 +0.9
baz=174,SNR=19
M48A Edgerton 63.71 347 P P 03 53 45.0 -0.7
baz=164,SNR=9.7
K57A Scipio Center 63.73 354 P P 03 53 46.3 +0.5
baz=173,SNR=6.2
K56A Middlesex 63.78 354 P P 03 53 46.5 +0.4
baz=172,SNR=6.1
M47A Cromwell 63.78 347 P P 03 53 45.5 -0.7
baz=163,SNR=6.2
K54A Basiliko Farm, 63.84 353 P P 03 53 47.0 +0.5
baz=171,SNR=11
K55A Perry 63.88 353 P P 03 53 47.1 +0.3
baz=171,SNR=5.4
L50A Kingsville 63.89 349 P P 03 53 46.3 -0.5
baz=166
HDIL Hopedale 63.90 343 IAmb IAmb 03 53 47.2
comp=Z,128nm,0.8s
HDIL Hopedale 63.90 343 P P 03 53 46.2 -0.8
baz=160,SNR=20
J62A Henniker 63.95 358 P P 03 53 47.8 +0.7
baz=178
J60A Lant Hill Farm 64.03 357 P P 03 53 48.5 +0.8
baz=176,SNR=5.1
J61A Chester 64.09 358 P P 03 53 48.8 +0.6
baz=177
L48A N Adams 64.10 348 P P 03 53 47.6 -0.6
baz=165,SNR=6.6
L49A Milan 64.13 348 P P 03 53 48.0 -0.4
baz=165,SNR=11
J58A Remsen 64.25 355 P P 03 53 50.0 +0.7
baz=174,SNR=6.1
K52A Tillsonburg 64.28 351 P P 03 53 49.5 +0.2
baz=169
L47A Sherwood 64.28 347 P P 03 53 48.7 -0.7
baz=164,SNR=13
J56A Wolcott 64.30 354 IAmb IAmb 03 53 50.9
comp=Z,129nm,0.8s
J56A Wolcott 64.30 354 P P 03 53 49.7 +0.2
baz=173,SNR=5.7
J59A Piesco 64.31 356 P P 03 53 50.4 +0.8
baz=175,SNR=24
K51A Iona Station 64.34 350 P P 03 53 49.3 -0.5
baz=168
J57A Williamstown 64.36 355 IAmb IAmb 03 53 51.6
comp=Z,117nm,0.9s
J57A Williamstown 64.36 355 P P 03 53 50.4 +0.5
baz=173,SNR=6.9
J55A Hilton 64.39 353 P P 03 53 50.3 +0.3
baz=172
HNH Hanover 64.44 358 IAmb IAmb 03 53 53.8
comp=Z,110nm,1.2s
J54A Appleton 64.49 353 P P 03 53 51.2 +0.5
baz=171
121A Cookes Peak, D 64.49 325 IAmb IAmb 03 53 54.5
comp=Z,110nm,0.9s
121A Cookes Peak, D 64.49 325 P P 03 53 53.1 +1.9
baz=140,SNR=58
L46A Eue Claire 64.55 346 IAmb IAmb 03 53 51.3
comp=Z,102nm,1.1s
L46A Eue Claire 64.55 346 P P 03 53 50.3 -0.9
baz=163
K50A Casco 64.57 350 IAmb IAmb 03 53 51.9
comp=Z,143nm,0.9s
K50A Casco 64.57 350 P P 03 53 50.7 -0.6
baz=167,SNR=8.2
I62A Tamworth 64.58 359 P P 03 53 52.6 +1.3
baz=178
I60A Shoreham 64.62 357 P P 03 53 52.5 +1.0
baz=176,SNR=13
I61A Oroboro, Fairl 64.66 358 P P 03 53 53.1 +1.3
baz=177,SNR=10
K49A Clarkson 64.73 349 P P 03 53 51.4 -0.9
baz=166
I63A Otisfield 64.75 359 P P 03 53 53.8 +1.5
baz=179
NCB Newcomb 64.79 356 IAmb IAmb 03 53 55.4
comp=Z,62nm,1.1s
I57A Carthage 64.86 355 P P 03 53 53.8 +0.6
baz=174,SNR=8.0
K48A Perry 64.87 348 P P 03 53 52.4 -0.8
baz=165,SNR=8.0
KSU1 Kansas State U 64.88 337 P P 03 53 53.2 -0.2
baz=152,SNR=20
K47A Vermontville 64.91 348 P P 03 53 52.8 -0.7
baz=164
LBNH Lisbon 64.96 358 IAmb IAmb 03 53 56.3
comp=Z,70nm,1.1s
LBNH Lisbon 64.96 358 P P 03 53 54.9 +1.1
baz=178,SNR=7.0
L44A Lake County Fo 65.08 345 P P 03 53 53.8 -0.8
baz=161
K46A Dorr 65.09 347 P P 03 53 53.7 -0.9
baz=163
J49A Marlette 65.23 349 P P 03 53 54.8 -0.7
baz=166
TVZX PASSCAL Wareho 65.23 326 P P 03 53 57.4 +1.7
baz=142,SNR=6.9
Y22D IRIS PASSCAL I 65.23 326 IAmb IAmb 03 53 59.1
comp=Z,81nm,0.9s
Y22D IRIS PASSCAL I 65.23 326 P P 03 53 57.6 +1.7
baz=142,SNR=7.1
H58A Gabriels 65.24 356 P P 03 53 56.3 +0.7
baz=175,SNR=18
H61A Lyndonville 65.25 358 P P 03 53 56.8 +1.1
baz=178,SNR=6.0
H62A Milan 65.28 359 P P 03 53 56.1 +0.3
baz=178
J48A Bridge Port 65.28 349 P P 03 53 55.2 -0.7
baz=166,SNR=7.1
H60A Morristown 65.31 358 P P 03 53 57.2 +1.2
baz=177
I55A Frankford 65.31 354 P P 03 53 56.3 +0.2
baz=172,SNR=6.4
I51A Listowel 65.32 351 P P 03 53 55.9 -0.2
baz=168,SNR=5.2
H64A Troy 65.33 0 P P 03 53 57.1 +1.0
baz=180
H63A New Sharon 65.35 360 P P 03 53 57.5 +1.3
baz=180
H57A Richville 65.36 356 P P 03 53 56.9 +0.6
baz=174,SNR=11
H65A Eastbrook 65.40 1 P P 03 53 57.4 +0.8
baz=181
J47A Sunmer 65.42 348 P P 03 53 56.3 -0.5
baz=164,SNR=9.9
H59A Cadyville 65.44 357 P P 03 53 58.2 +1.3
baz=176
LONY Lake Ozonia 65.46 356 P P 03 53 57.8 +0.8
baz=175
I52A Shelburne 65.46 352 P P 03 53 57.3 +0.2
baz=169
H66A Whiting 65.51 2 P P 03 53 58.3 +1.1
baz=182
H56A Elgin 65.56 355 P P 03 53 58.1 +0.5
baz=173,SNR=6.5
H55A Tweed 65.60 354 P P 03 53 58.4 +0.6
baz=172
FRNY Flat Rock 65.62 357 IAmb IAmb 03 54 00.2
comp=Z,102nm,1.1s
ANMO Albuquerque 65.68 327 P P 03 53 59.8 +1.0
comp=Z,32nm,0.9s,baz=142,slow=8.5,SNR=130
ANMO pP pP 03 54 21.6 +0.2
comp=Z,13nm,0.7s,baz=128,slow=8.0,SNR=4.3
ANMO Albuquerque 65.68 327 P P 03 53 59.6 +0.7
ANMO IAmb IAmb 03 54 02.7
comp=Z,61nm,1.1s
ANMO pP 03 54 18.5 -2.9
ANMO Albuquerque 65.68 327 P P 03 54 00.3 +1.5
baz=142
J46A Howard City 65.69 347 P P 03 53 57.6 -0.9
baz=164
I49A Point Hope 65.74 350 P P 03 53 58.2 -0.6
baz=166
H53A Bobcaygeon 65.77 353 P P 03 53 59.1 +0.1
baz=171,SNR=8.0
G63A Kingsbury 65.81 0 P P 03 54 00.0 +0.8
baz=180
CBKS Cedar Bluff 65.83 335 P P 03 54 00.3 +0.8
baz=149,SNR=70
G60A Masonville 65.83 358 P P 03 54 00.9 +1.5
baz=177
L40A Anamosa 65.83 343 IAmb IAmb 03 54 00.2
comp=Z,136nm,1.1s
G59A Clarenceville 65.85 357 P P 03 54 00.3 +0.9
baz=176
G62A West of Eustis 65.91 359 IAmb IAmb 03 54 02.5
comp=Z,64nm,0.8s
G62A West of Eustis 65.91 359 P P 03 54 01.3 +1.3
baz=179,SNR=11
G64A Maxfield 65.95 1 P P 03 54 01.2 +1.1
baz=181
PKME Peaks-Kenny Pk 65.96 0 P P 03 54 00.9 +0.8
baz=180
G58A Ormstown 65.96 357 P P 03 54 01.3 +1.1
baz=176,SNR=6.7
G57A Newington 65.97 356 P P 03 54 01.0 +0.7
baz=175,SNR=11
TUC Tucson 65.99 322 P P 03 54 01.5 +0.7
TUC pmax pmax
comp=Z,49nm,1.1s
TUC Tucson 65.99 322 P P 03 54 01.5 +0.7
TUC Tucson 65.99 322 P P 03 54 02.4 +1.7
baz=138
H52A Wyevale 65.99 352 P P 03 54 00.2 -0.2
baz=170
G61A St-Isidore-de- 65.99 359 P P 03 54 01.6 +1.1
baz=178,SNR=7.8
SADO Sadowa 66.02 353 IAmb IAmb 03 54 01.9
comp=Z,89nm,1.0s
I47A Gladwin 66.12 348 IAmb IAmb 03 54 01.8
comp=Z,84nm,0.9s
I47A Gladwin 66.12 348 P P 03 54 00.5 -0.7
baz=165,SNR=7.2
I48A Sherman Twp 66.13 349 P P 03 54 00.5 -0.8
baz=166,SNR=9.3
I46A Reed City 66.22 348 P P 03 54 00.8 -1.1
baz=164,SNR=10
G55A Calabogie 66.25 355 P P 03 54 02.7 +0.6
baz=173,SNR=6.8
SCIA State Center 66.27 341 P P 03 54 02.0 -0.3
baz=156,SNR=5.6
G53A Haliburton 66.31 353 P P 03 54 02.6 +0.1
baz=171,SNR=9.4
JFWS Jewell Farm 66.36 344 IAmb IAmb 03 54 03.8
comp=Z,95nm,0.9s
JFWS Jewell Farm 66.36 344 P P 03 54 02.5 -0.3
baz=159,SNR=17
F63A Nahmakanta, Br 66.40 0 P P 03 54 03.9 +0.9
baz=181
T25A Trinidad 66.44 330 IAmb IAmb 03 54 06.4
comp=Z,67nm,0.9s
T25A Trinidad 66.44 330 P P 03 54 05.1 +1.3
baz=145,SNR=32
G54A Lake Saint Pet 66.53 354 P P 03 54 04.4 +0.5
baz=171,SNR=5.5
H48A Harrisville 66.56 349 P P 03 54 03.7 -0.3
baz=166
F64A Sherman 66.56 1 P P 03 54 05.1 +1.0
baz=181
F59A Saint Guilaume 66.60 358 P P 03 54 05.1 +0.9
baz=177
H47A Mio 66.62 349 P P 03 54 03.9 -0.6
baz=165
F61A St Evariste 66.67 359 P P 03 54 05.6 +0.9
baz=179
F60A Warwick 66.69 358 P P 03 54 05.4 +0.6

baz=178,SNR=6.4
H46A **Fife Lake** 66.75 348 P P 03 54 04.3 -1.0
baz=164,SNR=16
F55A **Otter Lake** 66.80 355 P P 03 54 06.0 +0.5
baz=173
214A **Organ Pipe Nat** 66.91 321 IAmb IAmb 03 54 10.1
comp=Z,133nm,0.9s
214A **Organ Pipe Nat** 66.91 321 P P 03 54 08.7 +2.1
baz=136,SNR=62
GLMI **Grayling** 66.91 349 P P 03 54 05.5 -0.8
baz=165
I42A **Draeger Farm,** 66.94 345 IAmb IAmb 03 54 07.5
comp=Z,115nm,1.1s
TRQ **Mont Tremblant** 67.06 356 P P 03 54 07.8 +0.6
TRQ pP 03 54 28.1 -1.7
ALGO **Algonquin Park** 67.07 354 P P 03 54 07.4 +0.2
baz=172,SNR=6.8
E60A **Ste Agathe de** 67.08 359 P P 03 54 08.0 +0.8
baz=178
G47A **Hillman** 67.11 349 P P 03 54 08.6 +1.1
baz=166
E63A **Oxbow** 67.12 1 P P 03 54 08.4 +0.9
E63A **Oxbow** 67.12 1 P P 03 54 09.0 +1.4
baz=181
E61A **Lac Etchemin** 67.12 359 P P 03 54 08.6 +1.0
baz=179
E64A **Bridgewater** 67.13 1 P P 03 54 08.4 +0.8
baz=182
E58A **La Victoria** 67.14 357 P P 03 54 08.2 +0.5
baz=176,SNR=10
X18A **Snowflake** 67.18 325 IAmb IAmb 03 54 11.8
comp=Z,70nm,1.1s
KSCO **Kaye Shedlock'** 67.19 333 P P 03 54 09.3 +1.0
KSCO pP 03 54 28.3 -2.7
KSCO **Kaye Shedlock'** 67.19 333 P P 03 54 09.3 +1.0
baz=147,SNR=34
E59A **St. Maurice** 67.22 358 P P 03 54 09.1 +0.9
baz=177
H43A **Windswept, Lux** 67.22 346 IAmb IAmb 03 54 09.0
comp=Z,118nm,0.9s
E57A **Chemin Saint G** 67.22 357 P P 03 54 08.6 +0.3
baz=176,SNR=8.9
F51A **Arnstein** 67.26 352 P P 03 54 08.4 0.0
baz=170
I40A **Norwalk** 67.37 344 IAmb IAmb 03 54 10.1
comp=Z,54nm,0.8s
E55A **Montcerf-Lytto** 67.39 355 P P 03 54 09.5 +0.3
baz=174,SNR=5.9
F49A **Sandfield** 67.39 351 P P 03 54 08.9 -0.3
baz=168
E56A **St. Veronique** 67.41 356 P P 03 54 09.7 +0.3
baz=175,SNR=14
SDCO **Great Sand Dun** 67.44 330 IAmb IAmb 03 54 12.9
comp=Z,125nm,1.1s
SDCO **Great Sand Dun** 67.44 330 P P 03 54 11.5 +1.3
baz=144,SNR=77
E53A **Dumoine, Ponti** 67.45 354 P P 03 54 09.9 +0.2
baz=172
E52A **Mattawa** 67.46 353 P P 03 54 09.8 0.0
baz=171
E54A **Lac Daplat, Po** 67.46 354 P P 03 54 10.0 +0.2
baz=172
BGNE **Belgrade** 67.47 337 P P 03 54 10.4 +0.4
baz=151,SNR=46
W18A **Petrified Fore** 67.51 325 IAmb IAmb 03 54 14.4
comp=Z,112nm,1.1s
W18A **Petrified Fore** 67.51 325 P P 03 54 12.4 +1.8
baz=140,SNR=51
F48A **Evansville** 67.54 350 P P 03 54 09.8 -0.5
baz=167
NVL **N'lazarevskaya** 67.56 159 *e*P P 03 54 11.2 +1.1
NVL *e*S S 04 03 03.8 +4.2
NVL pmax pmax
comp=Z,28nm,0.9s
D60A **Saint Jean D'O** 67.61 359 P P 03 54 11.3 +0.7
baz=179
D59A **Saint-Raymond** 67.72 358 P P 03 54 12.1 +0.8
baz=178
D63A **Stockholm** 67.74 1 P P 03 54 12.4 +1.0
baz=182
D62A **Allapoint, All** 67.78 0 IAmb IAmb 03 54 13.8
comp=Z,71nm,1.0s
D62A **Allapoint, All** 67.78 0 P P 03 54 12.5 +0.8
baz=181,SNR=14
E51A **G1948 Merrick** 67.80 353 P P 03 54 12.1 +0.2
baz=170,SNR=5.1
D57A **Chemin Vers le** 67.81 357 P P 03 54 12.7 +0.7
baz=176,SNR=17
D58A **Chemin du LacG** 67.85 358 P P 03 54 12.7 +0.6
baz=177,SNR=22
D56A **ZEC Mazanza, M** 67.89 356 P P 03 54 12.9 +0.4
baz=175
D61A **St Aubert, Com** 67.89 360 P P 03 54 13.5 +1.1
baz=180
D55A **Sainte-Anne-du** 67.91 356 P P 03 54 13.1 +0.5
baz=174
X16A **Lo Mia Camp, P** 67.92 324 IAmb IAmb 03 54 16.6
comp=Z,69nm,1.0s
BATG **Bathurst New B** 68.05 3 P P 03 54 14.2 +0.8
BATG IAmb IAmb 03 54 15.3
comp=Z,52nm,0.9s
113A **Mohawk Valley,** 68.05 321 IAmb IAmb 03 54 16.9
comp=Z,51nm,0.9s
S22A **4UR Ranch, Cre** 68.08 329 P P 03 54 15.5 +1.3
baz=143,SNR=32
E48A **Lockeyer** 68.11 351 P P 03 54 13.7 -0.1
baz=167
LATQ **La Tuque** 68.13 358 P P 03 54 14.7 +0.8
baz=177,SNR=10
D54A **Lac Fusel, La** 68.13 355 P P 03 54 13.9 0.0
baz=173,SNR=11
E47A **Iron Bridge** 68.26 350 P P 03 54 14.3 -0.4
baz=166
Q24A **Divide** 68.27 331 IAmb IAmb 03 54 17.9
comp=Z,126nm,0.9s
Q24A **Divide** 68.27 331 P P 03 54 16.6 +1.2
baz=144,SNR=24
D51A **Lot 18 Range I** 68.34 353 P P 03 54 15.2 0.0
baz=170,SNR=6.3
Y14A **Wickenburg** 68.45 322 IAmb IAmb 03 54 19.4
comp=Z,52nm,0.8s
D50A **G1974 Best Tow** 68.47 353 P P 03 54 16.2 +0.2
baz=170,SNR=11
MVCO **Mesa Verde** 68.48 327 IAmb IAmb 03 54 19.4
comp=Z,119nm,0.8s
MVCO **Mesa Verde** 68.48 327 P P 03 54 18.1 +1.5
baz=141,SNR=77
OGNE **Ogallala** 68.56 334 IAmb IAmb 03 54 19.0
comp=Z,119nm,0.8s
OGNE **Ogallala** 68.56 334 P P 03 54 17.7 +0.9
baz=148,SNR=16
TAOE **Nuku Hiva Isla** 68.66 268 *e*LR LR 04 15 12.7
comp=Z,1µm,30.8s
WUAZ **Wupatki** 68.69 324 IAmb IAmb 03 54 21.4
comp=Z,162nm,1.0s
WUAZ **Wupatki** 68.69 324 P P 03 54 20.1 +2.2
baz=138,SNR=113
GLA **Glamis** 68.88 320 IAmb IAmb 03 54 22.4
comp=Z,86nm,1.1s
GLA **Glamis** 68.88 320 P P 03 54 20.9 +1.9
baz=135,SNR=9.7
LIC **Lamto** 68.98 74 *e*P P 03 54 19.6 -0.4
comp=Z,19nm,0.7s
ECSD **EROS Data Cent** 68.99 339 P P 03 54 19.3 -0.1
baz=153,SNR=45
VLDQ **Val d'Or** 69.15 354 IAmb IAmb 03 54 22.1
comp=Z,90nm,1.1s
ISCO **Idaho Springs** 69.15 331 P P 03 54 22.3 +1.4
baz=144,SNR=48
TIC **Toumodi** 69.17 74 *e*P P 03 54 20.7 -0.4
comp=Z,3.0nm,0.2s
QSPA **South Pole Qui** 69.18 180 P P 03 54 22.2 +1.7
SPMN **Marine on St.** 69.19 343 IAmb IAmb 03 54 21.4
comp=Z,86nm,1.1s
SPMN **Marine on St.** 69.19 343 P P 03 54 19.8 -0.7
baz=157,SNR=19
Y12C **Blythe** 69.19 321 IAmb IAmb 03 54 24.3
comp=Z,97nm,0.8s
Y12C **Blythe** 69.19 321 P P 03 54 22.9 +2.1
baz=135,SNR=34
SMCO **Snowmass** 69.28 330 IAmb IAmb 03 54 24.7
comp=Z,50nm,0.7s
KIC **Kosan Boka** 69.30 74 *e*P P 03 54 21.2 -0.7
comp=Z,24nm,0.8s
DBIC **Dimbokro** 69.33 74 P P 03 54 21.4 -0.7
comp=Z,12nm,0.7s,baz=221,slow=5.9,SNR=28
DBIC pP pP 03 54 44.0 -0.8
comp=Z,43nm,1.0s,baz=220,slow=6.2,SNR=8.1
DBIC LR LR 04 24 41.4
comp=Z,173nm,18.8s,baz=323,slow=36
IKP **In-Ko-Pah, Jac** 69.37 319 P P 03 54 24.3 +2.2
baz=134,SNR=53
SWSC **Sam W. Stewart** 69.39 320 P P 03 54 24.2 +2.1
baz=134,SNR=19
BC3 **Big Chuckawall** 69.67 320 P P 03 54 26.0 +2.1
baz=135,SNR=103
MONP2 **Monument Peak** 69.73 319 P P 03 54 26.5 +2.1
baz=134,SNR=67
BAR **Barrett** 69.74 319 IAmb IAmb 03 54 27.6
comp=Z,126nm,0.9s
IRM **Iron Mountain** 69.84 321 P P 03 54 27.0 +2.1
baz=135,SNR=100
U15A **North Rim** 69.87 324 IAmb IAmb 03 54 29.0
comp=Z,117nm,1.1s
NEE2 **Needles Airpor** 69.97 322 P P 03 54 27.3 +1.7
baz=136
LSQQ **Lebel-sur-Quev** 70.05 355 P P 03 54 25.5 -0.2
baz=173
109C **Camp Elliot, M** 70.15 319 P P 03 54 28.5 +1.8
baz=133,SNR=8.4
N23A **Red Feather La** 70.19 332 IAmb IAmb 03 54 29.7
comp=Z,77nm,0.8s
N23A **Red Feather La** 70.19 332 P P 03 54 28.4 +1.2
baz=144,SNR=45
BELC **Belle Mtn. Jos** 70.24 320 P P 03 54 29.6 +2.1
baz=134,SNR=60
XPFO **Pion Flat** 70.24 320 P P 03 54 28.1 +0.7
XPFO IAmb IAmb 03 54 30.9
comp=Z,79nm,0.9s
PFO **Pinyon Flats O** 70.25 320 *d i*P P 03 54 29.3 +1.8
PFO pmax pmax
comp=Z,126nm,1.0s
PFO **Pinyon Flats O** 70.25 320 P P 03 54 28.1 +0.6
PFO IAmb IAmb 03 54 30.9
comp=Z,78nm,0.9s
PFO **Pinyon Flats O** 70.25 320 P P 03 54 29.7 +2.2
baz=134,SNR=81
SUSD **Miller** 70.41 338 IAmb IAmb 03 54 29.4
comp=Z,106nm,0.8s
SUSD **Miller** 70.41 338 P P 03 54 28.2 +0.1
baz=151
GMRC **Granite Mounta** 70.59 321 P P 03 54 31.9 +2.4
baz=135,SNR=149
O20A **White River Ci** 70.64 330 IAmb IAmb 03 54 32.6
comp=Z,121nm,0.9s
O20A **White River Ci** 70.64 330 P P 03 54 31.3 +1.5
baz=142,SNR=66
MURC **Murrieta** 70.69 319 P P 03 54 32.1 +2.1
baz=133,SNR=21
MATQ **Matagami** 70.80 355 P P 03 54 30.1 -0.2
baz=172,SNR=14
BBRC **Big Bear Solar** 70.97 320 P P 03 54 34.5 +2.4
baz=134,SNR=17
HEC **Hector,Ludlow** 71.02 321 P P 03 54 34.5 +2.4
baz=134,SNR=145
SCI2 **San Clemente I** 71.10 318 P P 03 54 34.3 +1.8
baz=132,SNR=17
TUQ **Turquoise Moun** 71.20 321 P P 03 54 35.3 +2.1
baz=135,SNR=92
CIS **Catalina Islan** 71.30 318 P P 03 54 35.8 +2.0
baz=132,SNR=21
EYMN **Ely** 71.37 345 IAmb IAmb 03 54 34.6
comp=Z,71nm,0.9s
EYMN **Ely** 71.37 345 P P 03 54 33.3 -0.5
baz=158,SNR=17
RWWY **Rawlins** 71.39 331 IAmb IAmb 03 54 36.2
comp=Z,82nm,1.1s
BFSC **Mount Baldy Ra** 71.40 320 P P 03 54 36.4 +1.9
baz=133,SNR=83
FMP **Fort Macarthur** 71.43 319 P P 03 54 36.8 +2.3
baz=132,SNR=7.9
RRX **Edison Barstow** 71.44 320 P P 03 54 36.9 +2.4
baz=134,SNR=12
SHPR **Sheep Range** 71.51 323 IAmb IAmb 03 54 38.7
comp=Z,70nm,0.9s
GSC **Goldstone, Bar** 71.62 321 IAmb IAmb 03 54 38.7
comp=Z,55nm,0.8s
GSC **Goldstone, Bar** 71.62 321 P P 03 54 38.1 +2.4
baz=134,SNR=84
MWC **Mount Wilson** 71.63 319 IAmb IAmb 03 54 39.2
comp=Z,102nm,0.8s
PASC **Papadena Art C** 71.68 319 IAmb IAmb 03 54 39.4
comp=Z,126nm,1.0s
SHOC **Shoshone, Teco** 71.72 322 P P 03 54 38.1 +1.9
baz=134,SNR=5.9
DECC **Green Verdugo** 71.82 319 P P 03 54 39.0 +2.2
baz=132,SNR=12
K22A **Casper** 71.86 332 P P 03 54 38.2 +1.1
baz=144,SNR=19
SNCC **San Nicolas Is** 71.89 318 IAmb IAmb 03 54 40.3
comp=Z,70nm,0.9s
SNCC **San Nicolas Is** 71.89 318 P P 03 54 39.1 +1.8
baz=131,SNR=10
RSSD **Black Hills** 72.03 335 P P 03 54 37.7 -0.5
RSSD pmax pmax
comp=Z,59nm,0.9s
RSSD **Black Hills** 72.03 335 P P 03 54 37.7 -0.5
RSSD **Black Hills** 72.03 335 P P 03 54 39.3 +1.1
baz=146
EDW2 **Edwards Air Fo** 72.04 320 P P 03 54 40.0 +1.8
baz=133,SNR=97
D32A **Dogwood Acres,** 72.16 341 IAmb IAmb 03 54 39.6
comp=Z,118nm,0.7s
BLG **Laguna Peak, P** 72.17 319 P P 03 54 40.8 +1.9
baz=132,SNR=20
LRMC **Laurel Mtn Rad** 72.26 320 P P 03 54 41.7 +2.1
baz=133,SNR=42
OSI **Osito Audit: C** 72.30 319 P P 03 54 41.5 +1.7
baz=132
TPNV **Topopah Spring** 72.44 322 IAmb IAmb 03 54 44.5
comp=Z,124nm,1.0s
TPNV **Topopah Spring** 72.44 322 P P 03 54 43.3 +2.6
baz=135,SNR=132
SCZ2 **Santa Cruz Isl** 72.45 318 P P 03 54 42.7 +2.0
baz=132,SNR=22
FURC **Furnace Creek,** 72.46 322 P P 03 54 43.0 +2.5
baz=134,SNR=120
MPMC **Manual Prospec** 72.54 321 P P 03 54 43.1 +1.8
baz=134,SNR=94
ARVC **Arvin** 72.71 320 P P 03 54 44.1 +2.0
baz=132,SNR=14
SBC **Santa Barbara** 72.80 318 P P 03 54 44.4 +1.8
baz=132
ISA **Isabella, Lake** 72.86 320 IAmb IAmb 03 54 46.6
comp=Z,133nm,0.8s
ISA **Isabella, Lake** 72.86 320 P P 03 54 45.3 +2.2
baz=133,SNR=163
DUG **Dugway, Tooele** 72.93 327 IAmb IAmb 03 54 47.4
comp=Z,76nm,1.1s
DUG **Dugway, Tooele** 72.93 327 P P 03 54 45.4 +1.9
baz=138,SNR=88
TBI **Tubuai** 72.94 251 *e*S S 04 04 04.9 +1.0
comp=Z,340nm,26.5s
TBI **Tubuai** 72.94 251 *e*LR LR 04 17 13.0
comp=Z,508nm,31.8s
R11A **Troy Canyon, C** 73.06 324 P P 03 54 46.6 +2.3
baz=136,SNR=97
GRAC **Grapevine Rang** 73.12 322 P P 03 54 46.8 +2.3
baz=134,SNR=30
CWC **Cottonwood Cre** 73.15 321 P P 03 54 47.0 +2.1
baz=133
PKM **Mcpherson Peak** 73.15 319 P P 03 54 47.1 +2.1
baz=132,SNR=137
BW06 **Boulder Array** 73.31 330 P P 03 54 46.5 +0.8
baz=141,SNR=36
PDAR **Pinedale Array** 73.31 330 P P 03 54 46.5 +0.7
comp=Z,12nm,0.6s,baz=133,slow=6.4,SNR=77
PDAR LR LR 04 29 42.4
comp=Z,115nm,19.5s,baz=80,slow=38
VES **Vestal, Richgr** 73.34 320 P P 03 54 47.9 +2.1
baz=132,SNR=68
HWUT **Hardware Ranch** 73.37 329 IAmb IAmb 03 54 49.8
comp=Z,60nm,0.7s
SMMC **Simmler** 73.55 319 P P 03 54 49.5 +2.4
baz=132,SNR=80
MDND **Maddock** 73.61 340 P P 03 54 47.9 +0.8
baz=151,SNR=48
TIN **Tinemaha, Big** 73.66 321 P P 03 54 50.2 +2.4
baz=133,SNR=25
PAGB **Antelope Grade** 73.98 319 IAmb IAmb 03 54 52.5
comp=Z,70nm,0.9s
AHID **Auburn Hatcher** 74.03 330 IAmb IAmb 03 54 52.4
comp=Z,112nm,0.7s
SNOW **Snow King Moun** 74.41 330 IAmb IAmb 03 54 54.9
comp=Z,67nm,0.8s
MLAC **Mammoth, Mammo** 74.41 321 P P 03 54 54.4 +2.1
baz=133,SNR=26
OMMB **Old Mammoth Mi** 74.49 321 IAmb IAmb 03 54 56.0
comp=Z,114nm,0.9s
MDPB **Devils Postpil** 74.55 321 IAmb IAmb 03 54 56.3
comp=Z,69nm,0.9s
ULM **Lac du Bonnet** 74.63 343 P P 03 54 52.6 -0.3
comp=Z,28nm,0.8s,baz=149,slow=6.1,SNR=55
ULM pP pP 03 55 16.3 +0.3
comp=Z,8.0nm,0.5s,baz=156,slow=6.5,SNR=2.5
ULM LR LR 04 30 03.2
comp=Z,109nm,20.2s,baz=113,slow=38
PMPB **Monarch Peak** 74.63 319 IAmb IAmb 03 54 57.1
comp=Z,100nm,0.8s
NVAR **Mina Array Bea** 74.64 322 P P 03 54 55.5 +1.8
comp=Z,41nm,0.8s,baz=151,slow=6.3,SNR=242
NVAR LR LR 04 26 17.0
comp=Z,152nm,19.4s,baz=46,slow=34
NVAR **Mina Array Bea** 74.64 322 P P 03 54 55.0 +1.4
PAE **Paea** 74.67 257 *e*P P 03 54 55.8 +1.8
comp=Z,25nm,1.1s
PPT2 **Papeete2** 74.69 257 *e*P P 03 54 55.5 +1.3
comp=Z,87nm,1.3s
PPT2 **Papeete2** 74.69 257 *e*LR LR 04 18 00.5
comp=Z,714nm,34.0s
PPT **Papeete** 74.70 257 LR LR 04 21 18.9
comp=Z,53nm,19.6s,baz=186,slow=30
FLWY **Flagg Ranch** 74.86 331 IAmb IAmb 03 54 57.9
comp=Z,142nm,0.8s
KVN **Kaiserville** 74.96 323 IAmb IAmb 03 54 58.2
comp=Z,93nm,0.9s
LAO **LASA Array** 75.02 335 IAmb IAmb 03 54 57.9
comp=Z,151nm,1.1s
LAO **LASA Array** 75.02 335 P P 03 54 56.4 +1.0
baz=145,SNR=26
RLMT **Red Lodge** 75.03 332 IAmb IAmb 03 54 58.5
comp=Z,73nm,0.8s
RLMT **Red Lodge** 75.03 332 P P 03 54 57.1 +1.4
baz=142,SNR=33
H17A **Grant Village** 75.04 331 P P 03 54 57.9 +2.0
baz=141,SNR=26
LKWY **Lake** 75.09 331 IAmb IAmb 03 55 00.1
comp=Z,91nm,0.9s
SAO **San Andreas Ge** 75.39 319 P P 03 54 58.7 +1.0
SAO pmax pmax
comp=Z,24nm,0.8s
SAO **San Andreas Ge** 75.39 319 P P 03 54 58.7 +1.0
SCHQ **Schefferville** 75.57 2 P P 03 54 58.7 +0.4
comp=Z,38nm,0.9s,baz=194,slow=3.5,SNR=27
SCHQ pP pP 03 55 21.2 -0.1
comp=Z,12nm,0.8s,baz=138,slow=6.1,SNR=3.9
SCHQ LR LR 04 31 42.7
comp=Z,97nm,18.4s,baz=14,slow=38
DGMT **Dagmar** 75.73 337 P P 03 55 00.5 +1.1
baz=147
PNTR **Pine Nut** 75.83 322 IAmb IAmb 03 55 04.0
comp=Z,86nm,0.8s
RUBR **Rubicon Trail** 76.13 322 IAmb IAmb 03 55 08.6
comp=Z,70nm,1.0s
PAHR **Pah Rah Range** 76.13 323 IAmb IAmb 03 55 05.5
comp=Z,156nm,0.9s
MCCM **Marconi Confer** 77.15 320 IAmb IAmb 03 55 10.5
comp=Z,90nm,0.9s
VNDA **Vanda** 77.20 190 P P 03 55 09.8 +2.4
comp=Z,4.1nm,0.8s,baz=187,slow=2.0,SNR=7.6
SYO **Syowa Base** 77.22 160⇑ *e*P P 03 55 04.0 -3.6
SYO **Syowa Base** 77.22 160⇑ pP pP 03 55 28.1 -2.5
SYO **Syowa Base** 77.22 160⇓ *e*sP sP 03 55 39.4 -0.7
ORV **Oroville** 77.24 321 IAmb IAmb 03 55 11.4
comp=Z,139nm,1.1s
EGMT **Eagleton** 77.52 334 IAmb IAmb 03 55 11.8
comp=Z,103nm,1.0s
EGMT **Eagleton** 77.52 334 P P 03 55 10.5 +0.9
baz=142,SNR=37
O03E **Paynes Creek** 77.90 322 P P 03 55 12.4 +0.5
baz=131,SNR=16
TOA0 **Torodi Ar. Sit** 77.91 71 P P 03 55 11.7 -0.6
TOA0 IAmb IAmb 03 55 22.6
comp=Z,62nm,0.6s
TORD **Torodi Ar. Bea** 77.91 71 P P 03 55 11.9 -0.4
comp=Z,22nm,0.8s,baz=253,slow=5.2,SNR=133
TORD PKKPbc PKKPbc 04 14 13.6 +1.0
comp=Z,0.6nm,0.8s,baz=116,slow=0.3,SNR=4.0
TORD LR LR 04 30 15.2
comp=Z,209nm,18.1s,baz=335,slow=36
TORD **Torodi Ar. Bea** 77.91 71 P P 03 55 11.4 -1.0
O02D **Mt. Diablo Mer** 78.40 321 P P 03 55 15.4 +0.8
baz=130,SNR=7.2
MSO **Missoula** 78.43 331 P P 03 55 16.3 +1.6
baz=138,SNR=32
N02D **Trinity Center** 78.87 322 P P 03 55 17.7 +0.5
baz=131,SNR=16
M04C **Macdoel** 78.90 323 P P 03 55 18.9 +1.5
baz=131,SNR=53
KMRM **Mail Ridge** 78.97 321 IAmb IAmb 03 55 21.9
comp=Z,87nm,1.1s
M02C **Callahan** 79.22 322 P P 03 55 20.0 +0.9
baz=130,SNR=22
K04D **Chiloquin, OR** 79.41 324 P P 03 55 21.6 +1.4
baz=132,SNR=18
L04D **Klamath Falls** 79.45 323 P P 03 55 21.4 +1.0
baz=131,SNR=27
JCC **Jacoby Creek,** 79.54 321 IAmb IAmb 03 55 23.9
comp=Z,82nm,1.0s
J05D **Fort Rock, OR** 79.57 324 P P 03 55 22.6 +1.5
baz=132,SNR=58
PINE **Pine Mountain** 79.75 325 IAmb IAmb 03 55 25.4
comp=Z,112nm,0.8s
KRMB **Red Mountain** 79.91 322 IAmb IAmb 03 55 26.0
comp=Z,74nm,0.9s
J04D **Umpqua Nationa** 80.02 324 P P 03 55 24.9 +1.4
baz=131,SNR=45
WALA **Waterton Lakes** 80.08 332 IAmb IAmb 03 55 26.1
comp=Z,64nm,0.9s
L02E **Cave Junction** 80.15 322 P P 03 55 25.6 +1.6
baz=130,SNR=28
I05D **Terrebonne, OR** 80.33 325 P P 03 55 26.9 +1.9
baz=132,SNR=92
FFC **Flin Flon** 80.33 342 P P 03 55 24.1 -0.5
FFC pmax pmax
comp=Z,31nm,1.0s
FFC **Flin Flon** 80.33 342 P P 03 55 24.1 -0.5
K02D **Willamette Mer** 80.53 323 P P 03 55 27.7 +1.6
baz=130,SNR=31
KBO **Bosley Butte** 80.54 322 IAmb IAmb 03 55 29.6
comp=Z,132nm,1.2s
I04A **Tendick Farm,** 80.55 324 P P 03 55 27.0 +0.9
baz=131
HAWA **Hanford** 80.79 328 IAmb IAmb 03 55 29.8
comp=Z,63nm,0.8s
G05D **Wamic, OR** 80.92 326 P P 03 55 30.2 +2.1
baz=132,SNR=35
NEW **Newport** 80.95 330 P P 03 55 28.7 +0.5
baz=136,SNR=24
J01E **Myrtle Point** 80.98 323 P P 03 55 30.2 +1.9
baz=130,SNR=13
I03D **Drain, OR** 81.00 324 P P 03 55 29.8 +1.4
baz=130,SNR=20
H04A **Detroit Lake** 81.01 325 IAmb IAmb 03 55 30.7
comp=Z,76nm,0.7s
KEBM **Edson Butte** 81.02 323 IAmb IAmb 03 55 31.9
comp=Z,164nm,1.1s
C09A **Chrisman Ranch** 81.16 329 IAmb IAmb 03 55 32.0
comp=Z,97nm,0.8s
H04D **Lebanon** 81.20 325 P P 03 55 30.3 +0.8
baz=131,SNR=8.6
F05D **White Salmon** 81.43 326 P P 03 55 32.4 +1.7
baz=132,SNR=15
I02D **Swisshome** 81.53 324 P P 03 55 33.0 +1.7
baz=130,SNR=10
COR **Corvallis** 81.55 324 P P 03 55 32.9 +1.6
COR pmax pmax
comp=Z,179nm,1.0s
COR **Corvallis** 81.55 324 P P 03 55 32.9 +1.6
COR IAmb IAmb 03 55 34.6
comp=Z,179nm,0.9s
G03D **McMinnville, O** 81.93 325 P P 03 55 35.0 +1.7
baz=131,SNR=8.5
F04A **Amboy** 81.96 326 IAmb IAmb 03 55 36.0
comp=Z,127nm,1.0s
FCC **Fort Churchill** 81.99 347 IAmb IAmb 03 55 35.0
comp=Z,56nm,0.7s
F04D **Rainier, OR** 82.37 326 P P 03 55 37.3 +1.6
baz=131
E04D **Cinebar** 82.45 326 P P 03 55 36.8 +0.8
baz=131,SNR=9.0
C06D **Leavenworth** 82.52 328 P P 03 55 37.0 +0.6
baz=133
D05A **Enumclaw** 82.57 327 IAmb IAmb 03 55 38.9

comp=Z,79nm,0.9s
D04E Lakebay 82.96 327 P P 03 55 40.1 +1.5
baz=131
B06A Marblemount 83.21 328 IAmb IAmb 03 55 41.6
comp=Z,64nm,0.8s
B05A Bryant 83.34 328 P P 03 55 41.0 +0.4
baz=132,SNR=27
D03D Eldon 83.36 327 P P 03 55 41.6 +0.8
baz=131,SNR=8.1
A04D Lummi Island 83.95 328 P P 03 55 44.8 +1.2
baz=131,SNR=10
PGC Sidney 84.28 327 IAmb IAmb 03 55 47.3
comp=Z,57nm,0.9s
BOSA Boshof 84.34 118 P P 03 55 46.8 +0.3
comp=Z,23nm,0.9s,baz=248,slow=3.5,SNR=27
LLLB Lillooet 84.81 330 IAmb IAmb 03 55 49.9
comp=Z,66nm,1.1s
MAW Mawson 85.01 164 P P 03 55 50.4 +1.6
comp=Z,4.8nm,0.6s,baz=206,slow=6.6,SNR=11
MAW LR LR 04 35 58.2
comp=Z,66nm,18.1s,baz=233,slow=37
TAM Tamanrasset 85.28 64 P P 03 55 50.8 -0.4
TAM pmax pmax
comp=Z,13nm,1.1s
TAM Tamanrasset 85.28 64 P P 03 55 50.8 -0.4
LBTB Lobatse 85.91 115 P P 03 55 54.2 -0.2
LBTB pmax pmax
comp=Z,26nm,0.9s
LBTB Lobatse 85.91 115 P P 03 55 54.2 -0.2
ESDC Sonseca Array 86.02 45 P P 03 55 55.1 +0.7
comp=Z,4.2nm,1.1s,baz=237,slow=5.9,SNR=6.7
ESDC LR LR 04 30 46.8
comp=Z,281nm,20.6s,baz=240,slow=33
ESDC Sonseca Array 86.02 45 P P 03 55 54.0 -0.4
ANGG Ammassalik, Gr 89.75 13 IAmb IAmb 03 56 12.9
comp=Z,30nm,0.8s
YKA Yellowknife Ar 90.48 341 P P 03 56 15.9 +0.9
comp=Z,52nm,0.7s,baz=136,slow=4.5,SNR=836
DLBC Dease Lake 93.42 333 IAmb IAmb 03 56 31.0
comp=Z,34nm,1.0s
SUMG Summit 95.70 9 *i* P **P 03 56 40.0 +0.7**
SUMG Summit 95.70 9 *i* P **P 03 56 40.0 +0.7**
C36M Paulatuk 98.05 343 Pdiff **P 03 56 49.4 -0.1**
baz=130
MBAR Mbarara 99.55 94⇑ *e*P **Pdif 03 56 57.2 -0.6**
MBAR pmax pmax
comp=Z,2.0nm,1.0s
INK Inuvik 100.23 340 P Pdif 03 56 59.3 +0.1
comp=Z,8.8nm,0.9s,baz=98,slow=5.8,SNR=28
EPYK Eagle Plains 100.31 338 Pdiff **Pdif 03 56 59.6 -0.2**
baz=119
EGAK Eagle 101.22 336 Pdif 03 57 03.6 -0.1
HDA Harding Lake 103.38 334 Pdiff **Pdif 03 57 13.5 +0.1**
baz=110
ILAR Eielson Array 103.48 335 Pdiff **Pdif 03 57 13.7 -0.1**
comp=Z,1.1nm,0.8s,baz=165,slow=3.8,SNR=9.6
POKR Poker Plat Res 103.82 335 Pdiff **Pdif 03 57 15.3 0.0**
baz=110
TCOL CIGO, UAF Yank 103.91 335 Pdiff **Pdif 03 57 15.7 +0.1**
baz=110
VYHS Vyhne 104.51 43 *e*P **Pdif 03 57 22.0 +3.2**
VYHS Vyhne 104.51 43 *e*PDIFF **Pdif 03 57 22.0 +3.2**
BPAW Bear Paw Mtn. 104.95 333 Pdif 03 57 20.8 +0.4
BZS Buzias 105.62 47⇑P **PKKPdf 04 13 20.3 +7.0**
TOLK Toolik Lake Re 105.75 338 PKiKP **PKiKP 04 01 36.2 0.0**
baz=107
SIRR Siria 105.81 46⇑P **PKKPdf 04 13 20.0 +7.0**
GZR Gura Zlata 106.36 47⇑P **PKKPdf 04 13 16.4 +4.4**
DRGR 106.63 46⇑P **PKKPdf 04 13 16.3 +4.8**
TRPA Tarpa 106.82 44⇑P **PKKPdf 04 13 15.6 +4.5**
BURAR Bucovina Array 108.48 45⇑P **PKKPdf 04 13 08.6 +0.5**
MLR Muntele Rosu 108.56 48 PKKP **PKKPdf 04 13 08.1 +0.1**
comp=Z,1.7nm,0.8s,baz=210,slow=9.5,SNR=4.0
MLR Muntele Rosu 108.56 48⇑P **PKKPdf 04 13 07.9 0.0**
VRI Vrincioaia 109.17 47⇑P **PKKPdf 04 13 05.1 -1.5**
TESR Tescani 109.23 47⇑P **PKKPdf 04 13 04.4 -2.1**
ARCES ARCESS Array B 111.32 22 PKKPbc PKKPbc 04 12 44.0 -0.8
comp=Z,3.8nm,0.8s,baz=66,slow=3.0,SNR=6.3
AKASG Malin Array Be 111.56 42 PKiKP **PKiKP 04 01 47.4 -0.1**
comp=Z,0.5nm,0.6s,baz=263,slow=2.6,SNR=5.7
AKASG PKKPbc **PKKPbc 04 12 43.1 -0.3**
comp=Z,1.2nm,0.6s,baz=67,slow=3.8,SNR=6.5
BR131 Keskin Array S 113.17 55⇓ *i*PKiKP **PKiKP 04 01 51.7 +0.6**
BRTR Keskin Array B 113.17 55 PKiKP **PKiKP 04 01 51.8 +0.6**
comp=Z,0.9nm,0.8s,baz=278,slow=0.4,SNR=7.0
APA Apatity 114.24 24⇓ *i*PKiKP PKPdf 04 01 48.7 -3.4
APA pmax pmax
comp=Z,7.0nm,0.9s
LVZ Lovozero 114.69 24⇑ *i*PKiKP **PKiKP 04 01 53.5 +0.4**
OBN Obninsk 116.25 38⇓ *i*PKiKP **PKiKP 04 01 57.3 +1.0**
OBN SS SS 04 19 12.0 +12
OBN pmax pmax
comp=Z,19nm,1.3s
STKA Stephens Creek 119.45 211 PKiKP **PKiKP 04 02 04.0 +0.5**
STKA Stephens Creek 119.45 211 PKP **PKiKP 04 02 04.0 +0.5**
comp=Z,2.4nm,0.7s,baz=308,slow=5.6,SNR=4.6
KIV Kislovodsk 120.25 51⇓ *i*PKiKP **PKiKP 04 02 05.5 +0.9**
KIV pmax pmax
comp=Z,5.0nm,0.8s
NEY Neytrino 120.27 51⇓ *i*PKiKP **PKiKP 04 02 06.5 +1.7**
PRGR Permogore 120.28 30 *e*PKiKP **PKPdf 04 01 59.7 -4.2**
PRGR pmax pmax
comp=Z,12nm,0.9s
KBZ Khabaz 120.40 51 PKP **PKiKP 04 02 05.2 +0.5**
comp=Z,6.9nm,0.8s,baz=239,slow=5.3,SNR=17
KBZ pPKP **pPKPdf 04 02 31.1 +1.8**
comp=Z,5.8nm,0.9s,baz=200,slow=2.2,SNR=3.9
AKH Akhalkalaki 120.79 54⇑P **PKKPab 04 12 14.3 +3.9**
ZEI Tsey 121.12 52 *i* PKiKP **PKiKP 04 02 07.0 +0.5**
ZEI pmax pmax
comp=Z,3.0nm,0.8s
BILL Bilibino 121.79 338 *i* PKiKP **PKiKP 04 02 07.8 +1.0**
BILL *e* 04 03 38.9
BILL pmax pmax
comp=Z,6.0nm,0.9s
H11S2 WAKE ISLAND Hyl 27.06 278 T T 06 22 05.8
baz=103,slow=74
H11S1 WAKE ISLAND Hyl 27.07 278 T T 06 22 07.0
baz=103,slow=74
H11S3 WAKE ISLAND Hyl 27.08 278 T T 06 22 05.9
baz=103,slow=74
H11N3 WAKE ISLAND Hyl 27.13 279 T T 06 22 07.0
baz=102,slow=74
H11N2 WAKE ISLAND Hyl 27.15 279 T T 06 22 13.7
baz=102,slow=74
H11N1 WAKE ISLAND Hyl 27.15 279 T T 06 22 12.8
baz=102,slow=74
ARU Arti 128.17 34 *i* PKiKP **PKiKP 04 02 20.4 +0.6**
ARU 04 04 26.0
ARU 04 09 22.8
ARU SS SS 04 21 27.4 -4.0
TIXI Tiksi 128.21 353⇑ *i*PKiKP **PKiKP 04 02 19.3 -0.2**
TIXI Tiksi 128.21 353 PKiKP 04 02 19.3 -0.2
SVE Sverdlovsk 129.08 33 *e*PKiKP **PKiKP 04 02 21.8 +0.2**
SEY Seymchan 129.35 337⇑ *i*PKiKP **PKiKP 04 02 22.6 +0.6**
AKTO Aktyubinsk 129.77 41 PKiKP **PKiKP 04 02 23.5 +0.3**
AS31 Alice Springs 129.98 209 PKPdf 04 02 23.0 -0.8
ASAR Alice Springs 129.98 209 PKP **PKiKP 04 02 24.6 0.0**
comp=Z,11nm,0.8s,baz=141,slow=2.3,SNR=69
ASAR pPKP **pPKPdf 04 02 49.6 +1.2**
comp=Z,7.6nm,0.9s,baz=144,slow=2.2,SNR=7.0
ASAR Alice Springs 129.98 209 PKPdf 04 02 23.9 0.0
PET Petropavlovsk 131.22 323 pmax pmax
comp=Z,35nm,0.4s
AB31 Akbulak array 131.30 42 *i* PKiKP **PKiKP 04 02 26.7 +0.4**
ABKAR Akbulak array 131.30 42 PKPdf 04 02 25.8 +0.5
PMG Port Moresby 132.81 234 *c i* PKiKP **PKiKP 04 02 31.3 +0.9**
WRA Warramunga Arr 132.98 212 PKhKP PKPpre 04 02 17.9
comp=Z,1.0nm,0.8s,baz=122,slow=3.0,SNR=8.2
WRA PKP **PKiKP 04 02 30.3 -0.4**
comp=Z,9.1nm,0.7s,baz=154,slow=1.7,SNR=6.3
WRA pPKP pPKPdf 04 02 55.5 +1.3
comp=Z,7.1nm,1.0s,baz=153,slow=1.6,SNR=4.8
WRA SKPbc **SKPbc 04 05 50.0 +0.4**
comp=Z,2.7nm,0.9s,baz=147,slow=2.9,SNR=4.8
WRA Warramunga Arr 132.98 212 PKPdf 04 02 29.8 +0.2
WRAB Tennant Creek 132.98 212 *d i* PKiKP **PKiKP 04 02 30.2 -0.5**
WRAB Tennant Creek 132.98 212 PKPdf 04 02 29.5 -0.1
PSA00 Pilbara Seismi 136.66 193 PKPdf 04 02 36.3 0.0
YAK Yakutsk 136.87 347⇑ *e*PKiKP **PKPdf 04 02 36.1 +0.7**
KURK Kurchatov 141.33 32 *c e*PKiKP **PKPdf 04 02 44.1 +0.2**
KURK Kurchatov 141.33 32 PKPdf 04 02 44.2 +0.2
ZALV Zalesovo Beam 141.83 24 PKhKP PKPpre 04 02 39.7
comp=Z,2.5nm,0.7s,baz=314,slow=3.1,SNR=8.4
ZALV PKP **PKPdf 04 02 45.1 +0.4**
comp=Z,8.5nm,0.6s,baz=311,slow=4.2,SNR=12
ZALV pPKP pPKPdf 04 03 10.7 +1.3
comp=Z,11nm,0.6s,baz=300,slow=3.1,SNR=5.9
ZALV SKPbc **SKiKP 04 06 16.0 0.0**
comp=Z,3.3nm,0.8s,baz=289,slow=4.4,SNR=3.6
ZALV Zalesovo Beam 141.83 24 PKPdf 04 02 44.9 +0.2
ARSB Arslanbob 142.59 49 PKPdf 04 02 45.0 -1.6
YSS Yuzh-Sakhalins 143.09 322 *e*PKiKP PKPbc 04 02 45.1 +0.8
YSS *e* 04 03 13.2
YSS MLR MLR
comp=Z,300nm,19.0s
AAK Ala-Archa 143.12 46 *de*PKiKP **PKPdf 04 02 47.3 -0.3**
AAK Ala-Archa 143.12 46 PKPdf 04 02 47.6 0.0
BOD Bodaibo 143.14 357 *e*PKHKP PKPab 04 02 43.5 +0.9
BOD pmax pmax
comp=Z,28nm,1.3s
GRNR Gornyy 143.90 332⇑ *i*PKiKP **PKPdf 04 02 47.6 -0.9**
GRNR pmax pmax
comp=Z,50nm,0.7s
SAUI Saumlaki 144.55 218 PKP **PKPdf 04 02 51.4 +0.7**
ASAJ Asahikawa 144.68 318 PKP **PKPdf 04 02 50.3 +0.3**
comp=Z,49nm,0.8s,baz=240,slow=3.4,SNR=19
ASAJ pPKP **pPKPdf 04 03 15.7 +0.9**
comp=Z,19nm,0.7s,baz=85,slow=16,SNR=3.2
ZEA Zeya 144.85 342 *e*PKiKP **PKPdf 04 02 50.0 0.0**
ZEA *e* 04 03 24.0
ZEA pmax pmax
comp=N,21nm,0.8s
ZEA pmax pmax
comp=Z,170nm,1.2s
NIL Nilore 144.97 61 PKiKP **PKPdf 04 02 51.1 +0.2**
NIL Nilore 144.97 61 PKPdf 04 02 51.1 +0.2
GOA Goa 145.00 93 *ex* x 04 03 13.1
ERM Erimo 145.33 315 *d* PKiKP **PKPab 04 02 52.7 +1.3**
ERM Erimo 145.33 315 PKPab 04 02 53.1 +1.7
KSH Kashi 145.38 50⇓ *i*PKPbc **PKPab 04 02 52.8 +0.9**
KSH pPKP pPKPdf 04 03 17.5 +1.3
KSH sPKP 04 03 27.2
KSH PP **PP 04 06 09.1 -3.0**
KSH SKS **SKSdf 04 09 47.2 -6.0**
KSH SKKS **SKKSac 04 12 54.5 -2.0**
KSH SS **SS 04 24 52.4 -4.9**
KSH AMB AMB
comp=Z,420nm,7.2s
KSH LR LR
comp=Z,450nm,4.9s
KSH LR LR
comp=Z,260nm,5.6s
KSH LR LR
comp=Z,470nm,7.5s
MAKZ Makanchi 145.50 35 PKiKP **PKPab 04 02 52.0 0.0**
MAKZ Makanchi 145.50 35 PKPab 04 02 52.0 0.0
TRD Trivandrum 145.55 106 *e*P **PKPdf 04 02 49.4 -3.0**
TRD *i* pP pPKPbc 04 03 16.5 -0.6
POO Poona 145.68 88 *i* pP pPKPdf 04 03 16.2 -1.0
MK31 Makanchi Array 145.68 35 *i* PKP2 **PKPab 04 02 53.0 +0.4**
MKAR Makanchi Array 145.68 35 PKPbc **PKPab 04 02 52.9 +0.3**
comp=Z,11nm,0.5s,baz=309,slow=4.0,SNR=186
MKAR pPKPbc pPKPab 04 03 17.4 +0.8
comp=Z,17nm,0.7s,baz=318,slow=3.3,SNR=10
MKAR Makanchi Array 145.68 35 PKPbc 04 02 52.4 +0.2
PDGK Podgornoye 146.04 42 PKP2 **PKPab 04 02 54.4 +0.4**
GUMO Guam 146.21 263 PKPbc **PKPab 04 02 55.1 -0.4**
comp=Z,307nm,0.8s,baz=174,slow=5.7,SNR=9.6
GUMO Guam 146.21 263 PKPab 04 02 55.2 -0.3
BATI Baumata 146.30 204 PKPbc **PKPab 04 02 56.0 +0.2**
comp=Z,77nm,0.8s,baz=236,slow=2.6,SNR=9.3
BATI pPKPbc pPKPab 04 03 21.4 +1.6
comp=Z,83nm,0.9s,baz=99,slow=4.0,SNR=3.0
BATI Baumata 146.30 204 PKP **PKPab 04 02 56.4 +0.6**
SOEI Soe 146.48 206 PKP **PKPab 04 02 56.6 0.0**
KLR Kul'dur 147.05 334 *d* PKiKP **PKPdf 04 02 54.2 +0.3**
KLR Kul'dur 147.05 334 PKPbc **PKPbc 04 02 55.4 -0.8**
comp=Z,20nm,0.6s,baz=40,slow=2.9,SNR=54
TEY Ternei 147.69 324⇓ *e*PKiKP **PKPdf 04 02 56.2 +1.1**
TEY pmax pmax
comp=E,10.0nm,1.3s
TEY pmax pmax
comp=Z,20nm,1.6s
DHRM DHARAMSHALA 147.76 63 *e*P **PKPdf 04 02 52.7 -3.2**
DHRM *i* pP **pPKPdf 04 03 20.0 -0.6**
FAKI Fak Fak 147.92 225 PKP **PKPbc 04 02 59.0 -0.6**
FAKI Fak Fak 147.92 225 PKPdf **PKPdf 04 02 54.9 -1.5**
KLRI Killari 148.16 89 *e*PKPab **PKiKP 04 03 01.5 -0.3**
MOY Mondy 148.56 11 *e*PKP2 **PKiKP 04 03 01.6 -0.1**
MOY pmax pmax
comp=Z,103nm,1.7s
SMLA Simla 148.70 64 *e*P **PKPdf 04 02 54.6 -2.6**
SMLA IAML 04 03 43.1
comp=Z,82nm,1.0s
TLY Talaya 148.95 8 *c e*PKiKP **PKPdf 04 02 58.0 +1.0**
DMPR Damasthipur 149.09 91 *e*PKPbc **PKPdf 04 02 59.4 +1.2**
BHPL Bhopal 149.52 80 *ex* pPKPdf 04 03 23.9 +0.4
DDI Dehra Dun 149.60 66 *ex* **PKPbc 04 03 00.3 -3.2**
DDI *i* pP **pPKPdf 04 03 23.1 -0.3**
MSAI Masohi 149.67 219 PKP **PKPbc 04 03 01.9 -2.1**
MSAI PKP **PKiKP 04 03 02.3 -2.7**
TWSI Taliwang, Sumb 149.73 193 PKP **PKPdf 04 03 00.1 +0.7**
TWSI PKP **PKPbc 04 03 02.0 -2.1**
AAI Ambon 149.82 218 PKP **PKPdf 04 03 00.8 +1.3**
HYBB Hyderabad (bro 149.86 91 *e*PKPab **PKiKP 04 03 06.0 +0.8**
HYB Hyderabad 149.86 91 *i* PKP **PKiKP 04 03 05.0 -0.3**
HYB Hyderabad 149.86 91 *ex* pPKPbc 04 03 26.4 -2.4
SRLM Srisailam 149.88 94 *e*PKiKP **PKPbc 04 03 03.8 -0.6**
SRSP Sriramsagar 149.94 88 *e*PKiKP **PKPbc 04 03 03.4 -1.1**
IGBI Denpasar 149.97 190 PKP **PKPbc 04 03 02.4 -2.3**
IGBI PKP **PKiKP 04 03 03.6 -2.0**
IGBI PKP **PKPab 04 03 05.6 -4.8**
SIJI Sorong 150.09 226 PKPbc **PKiKP 04 03 06.7 +0.8**
comp=Z,69nm,0.7s,baz=22,slow=6.8,SNR=20
SIJI PKPab **PKPab 04 03 12.3 +1.2**
comp=Z,44nm,0.9s,baz=117,slow=5.6,SNR=6.1
SWI Sorong 150.10 226 PKP **PKPdf 04 03 02.5 +2.5**
SWI PKP **PKPbc 04 03 03.1 -2.0**
ZAK Zakamensk 150.17 9 *e*PKiKP **PKiKP 04 03 05.2 +0.1**
ZAK pmax pmax
comp=Z,23nm,1.4s
NJS Nagarjunasagar 150.37 93 *e*PKiKP **PKPbc 04 03 05.8 +0.2**
JAGI Jajag, Banyuwa 150.46 188 PKPbc 04 03 05.5 -0.4
WMQ Urumqi 150.50 34 *e*PKPbc **PKPdf 04 02 59.0 -0.8**
WMQ sPKP 04 03 33.1
WMQ LR LR
comp=Z,880nm,29.0s
WMQ LR LR
comp=Z,2μm,29.2s
WMQ LR LR
comp=Z,170nm,14.3s
SRBI Singaraja 150.68 190 PKP **PKPdf 04 02 59.0 -1.9**
SRBI PKP **PKPbc 04 03 03.5 -2.9**
USA0B Ussuriysk Arra 150.69 327⇑ *e*PKiKP **PKPdf 04 03 00.8 +0.9**
USA0B Ussuriysk Arra 150.69 327 PKPbc 04 03 05.6 +0.1
USRK Ussuriysk Ar. 150.69 327 PKiKP **PKPbc 04 03 05.8 +0.3**
USRK Ussuriysk Ar. 150.69 327 PKPbc **PKiKP 04 03 06.8 +0.6**
comp=Z,36nm,0.7s,baz=349,slow=1.9,SNR=31
USRK pPKPbc **pPKPbc 04 03 31.8 +1.7**
comp=Z,38nm,0.9s,baz=29,slow=1.4,SNR=9.2
USRK Ussuriysk Ar. 150.69 327 PKPbc 04 03 05.8 +0.3
NLAI Namlea 150.80 216 PKP **PKPdf 04 03 02.7 +1.6**
JOSI Joshimath 150.83 65 *e*P **PKPdf 04 02 58.6 -2.3**
MJAR Matsushiro Arr 151.18 309 PKiKP **PKPdf 04 03 01.1 +0.1**
MJAR 04 03 15.2
MJAR Matsushiro Arr 151.18 309 PKPdf 04 03 01.9 +0.9
comp=Z,2.5nm,1.0s,baz=318,slow=1.7,SNR=4.9
MJAR PKPbc **PKiKP 04 03 07.9 +0.4**
comp=Z,23nm,0.9s,baz=77,slow=1.4,SNR=34
MJAR PKPab **PKPab 04 03 15.8 +0.7**
comp=Z,27nm,0.9s,baz=74,slow=2.4,SNR=21
MJAR pPKPbc **sPKPdf 04 03 33.9 -1.1**
comp=Z,15nm,0.7s,baz=87,slow=1.9,SNR=5.9
MJAR Matsushiro Arr 151.18 309 PKPdf 04 03 01.1 +0.1
MJAR **PKPbc 04 03 06.7 -0.3**
MJAR **PKPab 04 03 15.2 +0.1**
MAJO Matsushiro 151.18 309 PKiKP **PKPdf 04 03 00.6 -0.4**
MAJO Matsushiro 151.18 309 PKPdf **PKPdf 04 03 00.6 -0.4**
MAT Matsushiro 151.18 309 PKPdf 04 03 07.7 +0.2
GGR Gangavaram 151.48 91 *e*PKiKP **PKPbc 04 03 07.4 -0.8**
CISI Cisompet, Garu 151.51 175 PKPdf 04 03 01.3 -0.9
MYLAV Mylavaram 151.66 94 *e*PKiKP **PKiKP 04 03 09.5 +0.6**
SANI Sanana 152.40 216 PKP **PKPdf 04 03 04.9 +1.4**
SANI PKP **PKPbc 04 03 06.2 -4.2**
KAPI Kappang 152.52 201 PKPbc **PKiKP 04 03 12.2 +1.4**
comp=Z,32nm,0.8s,baz=214,slow=3.5,SNR=9.2
KAPI PKPab **PKPab 04 03 23.4 +2.4**
comp=Z,57nm,0.8s,baz=197,slow=4.8,SNR=10
INU Inuyama 152.55 307 PKPdf **PKPdf 04 03 02.9 -0.1**
INU **PKPab 04 03 20.9 +0.2**
SONM Songino Array 153.06 6 PKP **PKPdf 04 03 05.3 +1.7**
comp=Z,4.3nm,0.8s,baz=323,slow=1.2,SNR=21
SONM PKPbc **PKiKP 04 03 12.2 +1.0**
comp=Z,8.9nm,0.8s,baz=315,slow=1.8,SNR=22
SONM PKPab **PKPab 04 03 24.0 +1.4**
comp=Z,7.4nm,0.8s,baz=329,slow=4.3,SNR=12
SONM Songino Array 153.06 6 PKPdf 04 03 04.2 +0.6
SONM **PKiKP 04 03 11.2 +0.1**
SONM **PKPab 04 03 22.5 -0.1**
ULN Ulaanbaatar 153.08 5 PKIKP **PKPdf 04 03 03.7 +0.1**
ULN Ulaanbaatar 153.08 5 PKPdf 04 03 03.7 +0.1
CN2 Changchun 154.00 334 *e*P **PKPab 04 03 25.1 -1.5**
KOLN Koldanda 154.82 69 *e*P **PKPdf 04 03 07.1 +0.3**
DANN Dangsing 154.86 68 *e*P **PKPdf 04 03 08.0 +1.1**
comp=Z,37nm,0.9s
GUN Gumba 156.78 68 *e*P **PKPdf 04 03 09.9 +0.3**
KSRS Korea Array 157.58 321 PKP **PKPdf 04 03 11.3 +1.5**
comp=Z,9.8nm,0.9s,baz=51,slow=1.0,SNR=37
KSRS PKPab **PKPab 04 03 43.2 +1.1**
comp=Z,8.2nm,0.9s,baz=95,slow=1.2,SNR=6.7
RAMN Ramite 157.59 70 *e*P **PKPdf 04 03 11.4 +0.9**
ODAN Odare 158.30 70 *e*P **PKPdf 04 03 11.9 +0.5**
comp=Z,14nm,0.8s
TAPN Taplejung 158.48 69 *e*P **PKPdf 04 03 12.1 +0.4**
GTA Gaotai 159.58 24 *e*PKP **PKPdf 04 03 13.9 +1.5**
GTA LR LR
comp=Z,120nm,11.7s
GTA LR LR
comp=Z,220nm,11.0s
GTA LR LR
comp=Z,180nm,15.5s
HHC Hu-ho-hao-te 160.19 357 *e*PKP **PKPdf 04 03 14.6 +1.6**
HHC PP **PP 04 07 38.9 +4.2**
HHC SKS **SKSdf 04 10 03.6 -7.0**
HHC SKKS **SKKSac 04 14 16.5 +0.1**
HHC AMB AMB
comp=Z,96nm,7.7s
SHL Shillong 162.51 71 *i* x **PKPdf 04 03 17.9 +1.9**
TIA Tai'an 163.72 340 PKP **PKPdf 04 03 18.1 +1.5**
LZH Lanzhou 163.96 19 *e*PKP **PKPdf 04 03 14.6 -2.4**
LZH pPKP pPKPdf 04 03 44.1 +2.3
LZH sPKP 04 03 54.9
LZH LR LR
comp=Z,310nm,14.1s
LZH LR LR
comp=Z,320nm,14.6s
LZH LR LR
comp=Z,430nm,14.7s
NJ2 Nanjing 166.60 327 *e*PKP **PKPdf 04 03 19.2 +0.1**
XAN Xi'an 166.97 5 PKP **PKPdf 04 03 21.0 +1.6**
CD2 Chengdu 168.53 29 PKP **PKPdf 04 03 19.1 -1.5**
CMAR Chiang Mai Arr 169.03 101 PKPdf 04 03 20.2 -0.9
comp=Z,1.8nm,0.3s,baz=252,slow=2.0,SNR=10
CMAR pPKP **pPKPdf 04 03 47.6 +1.7**
comp=Z,1.1nm,0.4s,baz=270,slow=1.7,SNR=1.6
CMAR Chiang Mai Arr 169.03 101 PKPdf 04 03 20.4 -0.8
WHN Wuhan 169.82 340 PKP **PKPdf 04 03 22.5 +1.2**
KMI Kunming 171.94 58 PKP **PKPdf 04 03 21.5 -1.4**

*TRN **07** 03:46:36.6, 18°.74N×62°.92W, h5km, MD4.0*
ISC 07 03:46:35.0±1.8, 18°.88N±0°.07×62°.93W±0°.04, h12km±10km, n37, σ1§48/59, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMRT	**St. Maarten**	**0.84**	**190**	*e*P	**Pn**	**03 46 53.0**	**+0.4**
SMRT				*e*S	**Sn**	**03 47 05.8**	**+0.9**
SMRT	**St. Maarten**	**0.84**	**190**	Pg	**Pg**	**03 46 49.6**	**-1.7**
SMRT					**Sn**	**03 47 04.1**	**-0.8**
SABA	**Saba**	**1.29**	**193**	*e*P	**Pg**	**03 47 01.7**	**+1.8**
SABA				*e*S	**Sg**	**03 47 19.3**	**+2.6**
SABA	**Saba**	**1.29**	**193**		**Pb**	**03 46 58.8**	**-0.4**
SABA					**Sb**	**03 47 13.9**	**-1.9**
SEUS	**St. Eustatius**	**1.38**	**182**	*e*P	**Pg**	**03 47 02.8**	**+1.2**
SEUS				*e*S	**Sg**	**03 47 21.9**	**+2.3**
SEUS	**St. Eustatius**	**1.38**	**182**		**Pb**	**03 47 00.4**	**-0.4**
SEUS				Sg	**Sn**	**03 47 15.8**	**-2.5**
SKI	**Saint Kitts**	**1.55**	**173**	*e*P	**Pg**	**03 47 04.8**	**0.0**
SKI				*e*S	**Sg**	**03 47 25.3**	**+0.3**
SKI	**Saint Kitts**	**1.55**	**173**		**Pn**	**03 47 02.8**	**+0.3**
SKI					**Sn**	**03 47 21.3**	**-1.2**
SKOC	**St. Kitts, UWI**	**1.59**	**173**	*e*P	**Pg**	**03 47 06.3**	**+0.6**
SKOC				*e*S	**Sg**	**03 47 26.0**	**-0.3**
ANWB	**Willy Bob**	**1.62**	**138**	*e*P	**Pb**	**03 47 05.2**	**+0.3**
ANWB				*e*S	**Sg**	**03 47 29.1**	**+1.7**
ANWB	**Willy Bob**	**1.62**	**138**		**Pb**	**03 47 04.2**	**-0.7**
ANWB					**Sn**	**03 47 23.7**	**-0.6**
NEV	**Hard Times**	**1.77**	**169**	*e*P	**Pg**	**03 47 08.4**	**-0.6**
NEV				*e*S	**Sg**	**03 47 31.4**	**-0.7**
NEV	**Hard Times**	**1.77**	**169**		**Pg**	**03 47 08.4**	**-0.6**
NEV					**Sg**	**03 47 31.4**	**-0.7**
STVI	**Saint Thomas**	**1.99**	**255**	Pn	**Pb**	**03 47 09.1**	**-2.2**
BPA	**Boggy Peak**	**2.09**	**151**	*e*P	**Pb**	**03 47 12.1**	**-0.9**
BPA				*e*S	**Sb**	**03 47 39.3**	**+0.4**
BPA	**Boggy Peak**	**2.09**	**151**		**Pb**	**03 47 12.1**	**-0.9**
BPA					**Sb**	**03 47 39.3**	**+0.4**
MLYT	**Lee's Yard**	**2.26**	**162**	*e*P	**Pb**	**03 47 15.4**	**-0.4**
MLYT				*e*S	**Sb**	**03 47 43.0**	**-0.8**
MTP	**Monte Pirata**	**2.61**	**253**		**Pn**	**03 47 18.1**	**+1.1**
MTP				Sn	**Sn**	**03 47 50.1**	**+1.5**
CBYP	**Canovanas**	**2.84**	**258**	Pn	**Pn**	**03 47 20.0**	**-0.3**
HUMP	**Col San Antoni**	**2.87**	**256**		**Pn**	**03 47 21.3**	**+0.8**
HUMP				Sn	**Sn**	**03 47 56.3**	**+1.3**
GCPR	**Guaynabo City**	**3.05**	**260**	Pn	**Pn**	**03 47 23.1**	**0.0**
PDPR	**Patillas Dam,**	**3.06**	**254**	Pn	**Pn**	**03 47 24.7**	**+1.5**
PDPR				Sn	**Sn**	**03 48 00.6**	**+0.8**
IGPR	**InterUniversit**	**3.15**	**254**	Pn	**Pn**	**03 47 26.0**	**+1.5**
SJG	**San Juan**	**3.15**	**256**		**Pn**	**03 47 25.5**	**+1.1**
ICMP	**Isla Caja de M**	**3.56**	**254**	Pn	**Pn**	**03 47 30.3**	**+0.3**
MDPO	**Dominica; Chan**	**3.58**	**157**	*e*P	**Pn**	**03 47 33.2**	**+2.9**
MDPO				*e*S	**Sn**	**03 48 14.6**	**+2.1**
OBIP	**Obispado Ponce**	**3.59**	**257**	Pn	**Pn**	**03 47 31.2**	**+0.7**
BBL	**Barber's Block**	**3.62**	**157**	*e*P	**Pn**	**03 47 34.8**	**-4.2**
BBL				*e*S	**Sn**	**03 48 15.7**	**+2.2**
BBL	**Barber's Block**	**3.62**	**157**		**Pb**	**03 47 34.8**	**-4.2**
BBL					**Sn**	**03 48 15.7**	**+2.2**
AOPR	**Arecibo Observ**	**3.67**	**262**	Pn	**Pn**	**03 47 31.8**	**+0.2**
AGPR	**Aguadilla, PR**	**3.99**	**265**	Pn	**Pn**	**03 47 35.8**	**-0.1**
MLPR	**Magueyes Islan**	**4.01**	**258**	Pn	**Pn**	**03 47 37.3**	**+1.0**
MPR	**Mayaguez**	**4.05**	**261**	Pn	**Pn**	**03 47 37.5**	**+0.7**
CRPR	**Cabo Rojo, PR**	**4.07**	**258**	Pn	**Pn**	**03 47 38.1**	**+1.1**
DR12	**Loma Pena Alta**	**6.11**	**270**	Pn	**Pn**	**03 48 05.5**	**+0.3**
SC01	**Santiago de lo**	**7.39**	**275**	Pn	**Pn**	**03 48 23.7**	**+0.9**
SDDR	**Presa de Saban**	**7.91**	**272**		**Pn**	**03 48 29.6**	**-0.3**

*RSNC **07** 03:52:17.3±1.1, 5°.86N×77°.71W, h25km±4km, ML3.2, Mw3.9*
*UPA **07** 03:52:20.8±1.9, 7°.81N×76°.41W, h0km±15km, MW4.3*
ISC 07 03:52:16.0±0.9, 5°.88N±0°.04×77°.68W±0°.04, h10km, n28, σ1§53/41, 2C, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOLC	**Bahia Solano**	**0.43**	**38**⇑ *i*P		**Pg**	**03 52 25.9**	**+1.3**
SOLC				*e*S	**Sb**	**03 52 34.0**	**+1.6**
SOLC				*i*		03 52 35.9	
	comp=Z,7μm,0.9s						
PTAC	**Punta Ardita,**	**1.26**	**354**	*e*P	**Pn**	**03 52 38.4**	**-1.3**
PTAC				*e*S	**Sb**	**03 52 55.2**	**-1.0**
PTAC				*i*		03 53 06.9	
	comp=Z,671nm,0.3s						
CBOC	**Ciudad Bolivar**	**1.66**	**91**⇑ *i*P		**Pn**	**03 52 43.6**	**-1.7**
CBOC				*e*S	**Sn**	**03 53 05.7**	**-1.1**
CBOC				*i*		03 53 11.4	
	comp=Z,263nm,0.4s						
PLMC	**San Jos del P**	**1.70**	**125**	*e*P	**Pn**	**03 52 44.1**	**-1.7**
PLMC				*e*S	**Sn**	**03 53 05.7**

HELC	**Santa Helena**	**2.16**	**82**	*i* P		**Pn**	**03 52 52.4**	**-0.1**
HELC				*i* S		**Sn**	**03 53 19.2**	**-0.2**
YOTC	**Yotoco, Valle**	**2.31**	**145**	*e*P		**Pn**	**03 52 53.9**	**-0.4**
YOTC				*e*S		**Sn**	**03 53 20.8**	**-2.1**
YOTC				*i*			03 53 31.8	
	comp=Z,46nm,0.8s							
GUY2C	**Guyana, Caldas**	**2.39**	**106**	*e*P		**Pn**	**03 52 55.6**	**-0.1**
GUY2C				*e*S		**Sn**	**03 53 24.5**	**-0.9**
GUY2C				*i*			03 53 34.9	
	comp=Z,117nm,0.7s							
UPD2	**Meteti**	**2.67**	**353**	*e*P		Pn	03 52 52.1	-7.0
NORC	**Norcasia**	**2.81**	**96**	*e*P		**Pn**	**03 53 02.0**	**+0.9**
NORC				*e*S		**Sn**	**03 53 35.8**	**+0.6**
NORC				*i*			03 53 47.3	
	comp=Z,68nm,1.2s							
ORTC	**Ortega, Tolima**	**3.12**	**129**	*e*P		**Pn**	**03 53 06.9**	**+1.6**
ORTC				*e*S		**Sn**	**03 53 45.1**	**+2.4**
ORTC				*i*			03 53 56.9	
	comp=Z,65nm,0.7s							
AZU	**Azuero**	**3.20**	**306**	*i* P		**Pn**	**03 53 06.2**	**-0.2**
AZU				*e*P		**Pg**	**03 53 20.5**	**+3.1**
ZARC	**Zaragoza, Cauc**	**3.22**	**60**	*e*P		**Pn**	**03 53 08.4**	**+1.6**
ZARC				*e*S		**Sn**	**03 53 44.3**	**-1.0**
ZARC				*i*			03 54 04.7	
	comp=Z,36nm,0.8s							
PTBC	**PUERTO BERRIO,**	**3.27**	**78**	*e*P		**Pn**	**03 53 08.4**	**+1.0**
PTBC				*e*S		**Sn**	**03 53 45.6**	**-0.8**
PTBC				*i*			03 53 59.2	
	comp=Z,69nm,1.4s							
CACAO	**El Cacao, Vera**	**3.48**	**295**	*i* P		**Pb**	**03 53 16.0**	**-1.8**
CACAO				*e*P		Pg	03 53 28.8	+6.0
CHPO	**Chepo, Panama**	**3.56**	**337**	*e*P		**Pn**	**03 53 09.6**	**-1.8**
UPA	**Univ. de Panam**	**3.58**	**329**	*e*P		**Pn**	**03 53 12.8**	**+1.1**
VTON	**El Valle, Cocl**	**3.63**	**318**	*e*P		**Pb**	**03 53 20.0**	**-0.4**
CHOR3	**La Chorrera**	**3.64**	**325**	*e*P		Pn	03 53 17.6	+5.1
OCU3	**Ocu, Herrera**	**3.69**	**304**	*e*P		**Pn**	**03 53 13.5**	**+0.3**
ZANG	**Zanguenga, Cho**	**3.75**	**325**	*e*P		**Pb**	**03 53 19.5**	**-2.8**
BCIP	**Isla Barro Col**	**3.90**	**327**	*e*P		**Pn**	**03 53 17.4**	**+1.4**
GMAL	**Guarumal, Vera**	**3.99**	**299**	*i* P		**Pn**	**03 53 18.5**	**+1.1**
PAMC	**Pamplona, Colo**	**5.15**	**73**	*e*P		**Pn**	**03 53 36.2**	**+2.4**
PAMC				*e*S		**Sn**	**03 54 32.0**	**-1.5**
PAMC				*i*			03 54 51.4	
	comp=Z,23nm,1.0s							
LOMA3	**Las Lomas, Chi**	**5.32**	**299**	*e*P		**Pn**	**03 53 32.8**	**-2.7**
CHGR2	**Aguacate**	**5.37**	**305**	*e*P		**Pn**	**03 53 34.5**	**-1.8**
BCO2	**Palmira**	**5.58**	**301**	*e*P		**Pn**	**03 53 40.1**	**+0.9**

*IDC **07** 03:54:35.4±3.3,23.31N×143.43E,h0km,mb3.8/4, mb1 4.0/6,mb1mx3.7/48,mbtmp3.8/6,ML3.5/2,MS3.4/2, Ms1 3.4/2,ms1mx2.9/34,Error ellipse: s-maj=84.9km s-min=44.7km az=38.0*

ISC 07 03:54:41.9±1.2,23.6N±0.1×143.6E±0.2,h31km,n8, σ0.66/8,mb3.7/4,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.73**	**341**	Pn	**Pn**	**03 55 37.5**	**+0.2**
	8.7nm,0.3s,baz=106,slow=7.4,SNR=4.7						
JCJ				Sn	**Sn**	**03 56 20.0**	**-0.2**
	20nm,0.3s,baz=41,slow=20,SNR=8.8						
JCJ				LR	LR	03 56 28.9	
	comp=Z,63nm,18.8s,baz=49,slow=29						
MJAR	**Matsushiro Arr**	**13.73**	**342**	Pn	**Pn**	**03 57 54.9**	**+0.4**
	0.1nm,0.3s,baz=159,slow=11,SNR=3.4						
LEM	**Lembang**	**46.32**	**234**	PKP	**P**	**04 03 05.6**	**+0.2**
ILAR	**Eielson Array**	**60.22**	**28**	P	**P**	**04 04 46.1**	**-0.7**
	0.5nm,0.7s,baz=253,slow=6.3,SNR=4.6						
YKA	**Yellowknife Ar**	**74.64**	**28**	P	**P**	**04 06 18.1**	**+0.1**
	0.6nm,0.7s,baz=292,slow=5.9,SNR=7.5						
FINES	**FINESS Array B**	**81.65**	**334**	P	**P**	**04 06 55.9**	**-0.9**
	2.1nm,0.9s,baz=75,slow=6.3,SNR=3.1						
NVAR	**Mina Array Bea**	**81.71**	**52**	P	**P**	**04 06 58.6**	**+0.7**
	0.1nm,0.4s,baz=282,slow=7.4,SNR=4.5						
BRTR	**Keskin Array B**	**89.32**	**314**	LR	LR	04 50 28.1	
	comp=Z,132nm,21.2s,baz=300,slow=38						

KRSC 07 04:01:23.1±1.8,52.95N×163.13E,h62km±35km,ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.81**	**333**	*e*P	Pn	04 01 54.0	+2.1
MKZ				*e*S	Sn	04 02 14.8	+1.0
SPN	**Mys Shipunski**	**1.88**	**276**	*e*P	Pn	04 01 55.5	+2.6
SPN				*e*S	Sn	04 02 17.4	+1.8
NLC	**Nalytchevo**	**2.30**	**277**	*e*P	Pn	04 02 01.1	+2.6
NLC				*e*S	Sn	04 02 27.3	+1.7
SDLR	**Sedlovina**	**2.58**	**279**	*i* P	Pn	04 02 05.9	+3.4
UGLR	**Uglovaya**	**2.61**	**277**	*e*P	Pn	04 02 06.5	+3.6
UGLR				*e*S	Sn	04 02 36.9	+3.4
SMAR	**Somma**	**2.63**	**279**	*i* P	Pn	04 02 06.5	+3.2
KRER	**Koryakskii**	**2.67**	**279**	*e*P	Pn	04 02 07.3	+3.6
AVH	**Avacha**	**2.67**	**278**	*e*P	Pn	04 02 07.4	+3.7
PET	**Petropavlovsk**	**2.71**	**273**	*i* P	Pn	04 02 07.5	+3.4
KRX	**Arik**	**2.73**	**280**	*e*P	Pn	04 02 07.9	+3.3
KOK	**Koryaka**	**2.73**	**279**	*e*P	Pn	04 02 07.9	+3.4
KZV	**Kizimen**	**2.74**	**323**	*e*P	Pn	04 02 07.8	+3.1
KZV				*e*S	Sn	04 02 39.1	+2.5
TUMD	**Tumrok D**	**2.77**	**326**	*e*P	Pn	04 02 07.8	+2.8
TUMD				*e*S	Sn	04 02 39.2	+1.9
BKI	**Bering**	**2.81**	**35**	*e*P	Pn	04 02 06.6	+1.1
BKI				*e*S	Sn	04 02 36.9	-1.2
RUS	**Russkaya**	**2.86**	**261**	*e*P	Pn	04 02 09.1	+2.9
RUS				*e*S	Sn	04 02 40.8	+1.4
TUMR	**Tumrok**	**2.92**	**324**	*e*P	Pn	04 02 10.6	+3.4
TUMR				*e*S	Sn	04 02 43.8	+2.7
KRMR	**Karymshinskiy**	**3.03**	**270**	*e*P	Pn	04 02 11.5	+3.0
KRMR				*e*S	Sn	04 02 45.4	+1.8
GRL	**Gorelyy**	**3.10**	**265**	*i* P	Pn	04 02 13.3	+3.7
GRL				*e*S	Sn	04 02 48.4	+2.9
GNL	**Ganaly**	**3.20**	**285**	*i* P	Pn	04 02 15.1	+4.1
GNL				*e*S	Sn	04 02 51.9	+4.0
ASAK	**Asacha**	**3.24**	**262**	*e*P	Pn	04 02 15.0	+3.6
ASAK				*e*S	Sn	04 02 51.4	+2.6
KMNR	**Kamenistaya**	**3.28**	**330**	*e*P	Pn	04 02 15.6	+3.6
KMNR				*e*S	Sn	04 02 52.4	+2.6
KDTR	**Khodutka, Kamc**	**3.30**	**252**	*e*P	Pn	04 02 14.5	+2.3
KDTR				*e*S	Sn	04 02 51.0	+0.8
ZLN	**Zelenaya**	**3.36**	**337**	*e*P	Pn	04 02 16.9	+3.8
ZLN				*e*S	Sn	04 02 54.8	+3.1
BZWR	**Bezymyannyi-We**	**3.39**	**334**	*e*P	Pn	04 02 16.5	+2.9
KIRR	**Kirishev**	**3.42**	**333**	*e*P	Pn	04 02 17.3	+3.3
KIRR				*e*S	Sn	04 02 56.4	+3.1
LGNR	**Loginova**	**3.44**	**337**	*e*P	Pn	04 02 18.6	+4.2
CIRR	**Tsirk**	**3.46**	**337**	*e*P	Pn	04 02 18.1	+3.6
KPT	**Kopyto**	**3.46**	**332**	*e*P	Pn	04 02 18.9	+4.4
KPT				*e*S	Sn	04 02 58.3	+4.0
KRSR	**Krestovskiy**	**3.60**	**336**	*e*P	Pn	04 02 19.6	+3.3
KRSR				*e*S	Sn	04 02 59.4	+1.8
KOZ	**Kozyrevsk**	**3.65**	**330**	*e*P	Pn	04 02 21.1	+4.2
KOZ				*e*S	Sn	04 03 02.5	+3.8
KLY	**Klyuchi**	**3.66**	**338**	*e*S	Sn	04 03 02.6	+3.6
BDR	**Baidarnaya**	**3.79**	**344**	*e*P	Pn	04 02 23.2	+4.2
SRKR	**Sorokina**	**3.88**	**344**	*e*P	Pn	04 02 24.8	+4.6
ESO	**Esso**	**3.94**	**321**	*e*P	Pn	04 02 24.8	+3.8
ESO				*e*S	Sn	04 03 09.0	+3.0

*IDC **07** 04:05:00.6±0.7,0.41N×123.38E,h0km,mb4.2/13, mb1 4.4/15,mb1mx4.1/32,mbtmp4.2/15,ML4.4/2,MS3.4/4, Ms1 3.4/4,ms1mx3.1/30,Error ellipse: s-maj=22.4km s-min=13.2km az=80.0*

*DJA **07** 04:05:04.0±0.2,0.7N±2.2×12.3E±.7,h10km,M4.6/21,mB5.1/7, mb4.9/12,MLv4.6/21,Mw(mB)4.5/7*

*NEIC **07** 04:05:06±1.2,0.30N±0.07×123.13E±0.07,h57km±10km, mb4.5/27,Error ellipse: s-maj=11.6km s-min=8.0km az=135.0*

ISC 07 04:05:05.2±0.4,0.31N±0.04×123.08E±0.05,h35km,n90, σ1.975/96,mb4.4/33,1C-3D,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.94**	**74**	P	**Pn**	**04 05 23.2**	**+1.3**
KMSI				S	**Sn**	**04 05 38.2**	**+4.1**
MRSI	**Marisa**	**1.15**	**278**	P	**Pn**	**04 05 22.7**	**-2.1**
LUWI	**Luwuk**	**1.38**	**193**	P	**Pn**	**04 05 27.1**	**-0.8**
LUWI	**Luwuk**	**1.38**	**193**		**Pn**	**04 05 27.8**	**-0.2**
LUWI				Sn	**Sn**	**04 05 47.0**	**+2.1**

APSI	**Ampana**	**1.88**	**230**	P		**Pn**	**04 05 35.6**	**+0.8**
MPSI	**Mapaga**	**3.18**	**271**	P		**Pn**	**04 05 53.1**	**+0.3**
SANI	**Sanana**	**3.73**	**129**	P		**Pn**	**04 06 00.2**	**-0.2**
KDI	**Kendari**	**4.26**	**186**	P		**Pn**	**04 06 08.3**	**+0.6**
TNTI	**Ternate**	**4.31**	**84**	P		**Pn**	**04 06 10.4**	**+2.1**
TNTI	**Ternate**	**4.31**	**84**	Pn		**Pn**	**04 06 08.7**	**+0.4**
TNTI						**Sn**	**04 06 56.5**	**-0.8**
TTSI	**Tana Toraja**	**4.66**	**224**	P		**Pn**	**04 06 14.2**	**+1.1**
NLAI	**Namlea**	**5.34**	**131**	P		**Pn**	**04 06 24.3**	**+1.8**
	1.8nm3μm109nm,0.5s							
SPSI	**Sidrap Palu**	**5.38**	**218**	P		**Pn**	**04 06 24.0**	**+0.9**
	0.7nm2μm124nm,0.8s							
BNSI	**Bone**	**5.54**	**212**	P		**Pn**	**04 06 25.9**	**+0.7**
	0.6nm2μm186nm,0.8s							
BBSI	**Bau Bau**	**5.78**	**185**	P		**Pn**	**04 06 29.9**	**+1.4**
	441nm0.2nm40nm,1.3s							
KAPI	**Kappang**	**6.25**	**212**	Pn		**Pn**	**04 06 36.4**	**+1.5**
	7.0nm,0.3s,baz=31,slow=6.4,SNR=15							
KAPI				Sn		**Sn**	**04 07 45.2**	**+0.1**
	22nm,0.3s,baz=127,slow=20,SNR=7.0							
KAPI				LR		LR	04 09 28.6	
	comp=Z,341nm,18.4s,baz=60,slow=41							
KAPI	**Kappang**	**6.25**	**212**			**Pn**	**04 06 36.5**	**+1.5**
KAPI						**Sn**	**04 07 46.0**	**+0.9**
DDMP	**Don Marcelino,**	**6.33**	**24**	*e*P		**Pn**	**04 06 37.8**	**+1.8**
DDMP				*e*S		**Sn**	**04 07 46.0**	**-1.2**
SKMP	**Bagumbayan, Su**	**6.34**	**13**	*e*P		**Pn**	**04 06 36.3**	**+0.1**
SKMP				*e*S		**Sn**	**04 07 43.6**	**-3.8**
AAI	**Ambon**	**6.47**	**128**	P		**Pn**	**04 06 40.4**	**+2.4**
	0.7nm174nm,0.9s							
MSAI	**Masohi**	**6.88**	**122**	P		**Pn**	**04 06 46.4**	**+2.7**
	0.3nm28nm,0.8s							
KCP	**Kidapawan**	**6.95**	**17**	⇓*i*P		**Pn**	**04 06 48.6**	**+3.9**
KCP				*i* S		**Sn**	**04 08 06.5**	**+3.9**
CTBH	**Cotabato--PC H**	**6.96**	**10**	⇓*i*P		**Pn**	**04 06 47.5**	**+2.7**
DAV	**Davao City (W)**	**7.16**	**20**	LR		LR	04 09 45.1	
	comp=Z,322nm,21.1s,baz=243,slow=41							
BUKP	**Musuan**	**7.77**	**15**	*e*P		**Pn**	**04 06 56.1**	**+0.1**
BUKP				*e*S		**Sn**	**04 08 23.8**	**+0.9**
KBKI	**Kotabaru**	**7.79**	**243**	P		**Pn**	**04 06 56.5**	**+0.4**
	0.1nm1μm18nm,0.5s							
SIJI	**Sorong**	**8.27**	**98**	Pn		**Pn**	**04 07 04.2**	**+1.5**
	0.8nm,0.3s,baz=105,slow=20,SNR=3.2							
BNDI	**Bandanaira**	**8.34**	**125**	P		**Pn**	**04 07 06.1**	**+2.5**
	26μm280nm,0.7s							
KKM	**Kota Kinabalu**	**8.91**	**310**			**Pn**	**04 07 13.2**	**+1.5**
FAKI	**Fak Fak**	**9.71**	**109**			**Pn**	**04 07 22.8**	**+0.3**
BATI	**Baumata**	**10.46**	**177**	LR		LR	04 11 31.0	
	comp=Z,240nm,19.5s,baz=1.5,slow=37							
KNRA	**Kununurra**	**16.85**	**161**	P		**Pn**	**04 08 58.7**	**+0.3**
KNRA				IAmb		IAmb	04 09 03.1	
	comp=Z,20nm,0.7s							
FITZ	**Fitzroy Crossi**	**18.46**	**172**	P		**Pn**	**04 09 19.2**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=2.2,slow=7.3,SNR=43							
FITZ	**Fitzroy Crossi**	**18.46**	**172**	P		**P**	**04 09 18.1**	**0.0**
PSAD1	**Pilbara Seismi**	**21.86**	**188**	P		**P**	**04 09 54.0**	**-1.0**
PSAD1				IAmb		IAmb	04 10 11.3	
	comp=Z,15nm,0.9s							
PSAC1	**Pilbara Seismi**	**21.94**	**188**	P		**P**	**04 09 53.8**	**-2.1**
PSAB2	**Pilbara Seismi**	**21.96**	**188**	P		**P**	**04 09 54.8**	**-1.3**
PSAB2				IAmb		IAmb	04 10 11.2	
	comp=Z,23nm,1.1s							
PSAC2	**Pilbara Seismi**	**21.96**	**188**	P		**P**	**04 09 54.9**	**-1.2**
PSAC2				IAmb		IAmb	04 10 11.3	
	comp=Z,22nm,1.1s							
PSAA2	**Pilbara Seismi**	**21.97**	**188**	P		**P**	**04 09 56.1**	**0.0**
PSA00	**Pilbara Seismi**	**21.98**	**188**	P		**P**	**04 09 55.2**	**-1.0**
PSA00				IAmb		IAmb	04 10 09.6	
	comp=Z,16nm,0.9s							
PSAB1	**Pilbara Seismi**	**21.98**	**188**	P		**P**	**04 09 54.6**	**-1.6**
PSAB1				IAmb		IAmb	04 10 11.0	
	comp=Z,15nm,0.9s							
PSAA3	**Pilbara Seismi**	**21.98**	**188**	P		**P**	**04 09 55.8**	**-0.5**
PSAA1	**Pilbara Seismi**	**21.98**	**188**	P		**P**	**04 09 54.5**	**-1.8**
PSAA1				IAmb		IAmb	04 10 11.1	
	comp=Z,16nm,1.0s							
PSAB3	**Pilbara Seismi**	**22.00**	**188**	P		**P**	**04 09 55.4**	**-1.0**
PSAB3				IAmb		IAmb	04 10 09.8	
	comp=Z,16nm,0.9s							
PSAD3	**Pilbara Seismi**	**22.06**	**188**	P		**P**	**04 09 56.8**	**-0.3**
PSAD3				IAmb		IAmb	04 10 12.3	
	comp=Z,19nm,1.0s							
WRA	**Warramunga Arr**	**22.95**	**152**	P		**P**	**04 10 06.2**	**-0.5**
	comp=Z,6.5nm,0.6s,baz=333,slow=9.9,SNR=55							
WRA	**Warramunga Arr**	**22.95**	**152**	P		**P**	**04 10 06.0**	**-0.6**
WR0	**Warramunga Arr**	**23.06**	**152**	P		**P**	**04 10 07.5**	**-0.3**
SSLB	**Suanglung**	**23.43**	**355**	P		**P**	**04 10 09.5**	**-1.9**
SSLB				IAmb		IAmb	04 10 14.2	
	comp=Z,16nm,0.8s							
RPSI	**Rantau Prapat**	**24.26**	**276**	P		**P**	**04 10 24.1**	**+4.8**
PSI	**Prapat**	**24.27**	**276**	P		**P**	**04 10 24.1**	**+4.5**
	comp=Z,1.4nm,0.4s,baz=6.3,slow=18,SNR=2.2							
COEN	**Coen**	**24.43**	**126**	P		**P**	**04 10 19.3**	**-1.5**
COEN				IAmb		IAmb	04 10 37.3	
	comp=Z,9.7nm,0.8s							
PMG	**Port Moresby**	**25.84**	**113**	P		**P**	**04 10 36.6**	**+3.0**
	comp=Z,9.2nm,0.2s,baz=15,slow=20,SNR=4.1							
AS31	**Alice Springs**	**26.05**	**157**	P		**P**	**04 10 33.3**	**-2.2**
ASAR	**Alice Springs**	**26.05**	**157**	P		**P**	**04 10 36.4**	**+0.9**
	comp=Z,2.0nm,0.5s,baz=328,slow=8.0,SNR=32							
ASAR				PcP		**PcP**	**04 14 02.4**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=341,slow=2.2,SNR=4.1							
ASAR	**Alice Springs**	**26.05**	**157**	P		**P**	**04 10 34.1**	**-1.3**
CMAR	**Chiang Mai Arr**	**29.79**	**309**	P		**P**	**04 11 10.4**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=128,slow=7.4,SNR=4.8							
CMAR	**Chiang Mai Arr**	**29.79**	**309**	P		**P**	**04 11 07.7**	**-1.2**
WHN	**Wuhan**	**31.19**	**345**	P		**P**	**04 11 24.4**	**+3.2**
JCJ	**Chichijima**	**32.35**	**33**	P		**P**	**04 11 28.4**	**-3.0**
	comp=Z,99nm,0.7s,baz=219,slow=18,SNR=4.6							
ENH	**Enshi**	**32.48**	**338**	P		**P**	**04 11 32.7**	**+0.1**
STKA	**Stephens Creek**	**36.49**	**153**	P		**P**	**04 12 07.2**	**0.0**
	comp=Z,1.0nm,0.4s,baz=343,slow=7.3,SNR=4.4							
STKA	**Stephens Creek**	**36.49**	**153**	P		**P**	**04 12 04.5**	**-2.7**
KSRS	**Korea Array**	**37.23**	**6**	LR		LR	04 26 44.4	
	comp=Z,44nm,20.6s,baz=315,slow=35							
MJAR	**Matsushiro Arr**	**38.69**	**20**	P		**P**	**04 12 25.1**	**-0.6**
	comp=Z,6.6nm,0.8s,baz=193,slow=8.9,SNR=12							
MJAR	**Matsushiro Arr**	**38.69**	**20**	P		**P**	**04 12 24.2**	**-1.6**
LSA	**Lhasa**	**42.18**	**317**	P		**P**	**04 12 53.8**	**-1.5**
LSA				IAmb		IAmb	04 12 59.6	
	comp=Z,6.9nm,0.7s							
CAN	**Canberra**	**42.91**	**148**	P		**P**	**04 12 59.0**	**-1.6**
RAMN	**Ramite**	**43.94**	**310**	*e*P		**P**	**04 13 11.2**	**+1.9**
	comp=Z,17nm,0.6s							
GTA	**Gaotai**	**44.35**	**334**	*e*P		**P**	**04 13 14.1**	**+1.8**
GTA				pP		pP	04 13 21.2	-1.4
GTA				pmax		pmax		
	comp=Z,6.0nm,1.2s							
USRK	**Ussuriysk Ar.**	**44.41**	**9**	P		**P**	**04 13 12.9**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=180,slow=9.0,SNR=3.1							
USRK	**Ussuriysk Ar.**	**44.41**	**9**	P		**P**	**04 13 10.9**	**-1.6**
JIRN	**Jiri**	**44.61**	**311**	*e*P		**P**	**04 13 16.0**	**+1.1**
	comp=Z,18nm,0.4s							
GUN	**Gumba**	**44.98**	**311**	*e*P		**P**	**04 13 19.1**	**+1.4**
	comp=Z,20nm,0.6s							
KOLN	**Koldanda**	**46.65**	**309**	*e*P		**P**	**04 13 32.0**	**+1.2**
	comp=Z,27nm,0.9s							
DANN	**Dangsing**	**46.81**	**310**	*e*P		**P**	**04 13 33.0**	**+0.8**
	comp=Z,38nm,0.8s							
KLR	**Kul'dur**	**49.30**	**7**	P		**P**	**04 13 51.0**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=30,slow=20,SNR=2.6							
SONM	**Songino Array**	**49.51**	**345**	P		**P**	**04 13 53.8**	**+1.4**
	comp=Z,2.5nm,0.7s,baz=152,slow=9.8,SNR=3.6							
MK31	**Makanchi Array**	**58.39**	**328**	P		**P**	**04 14 57.0**	**-0.2**
MKAR	**Makanchi Array**	**58.39**	**328**	P		**P**	**04 14 58.2**	**+0.9**
	comp=Z,8.6nm,0.5s,baz=124,slow=8.6,SNR=132							
MKAR	**Makanchi Array**	**58.39**	**328**	P		**P**	**04 14 57.4**	**+0.2**
MAKZ	**Makanchi**	**58.57**	**328**	P		**P**	**04 14 57.4**	**-1.1**
PETK	**Petropavlovsk-**	**59.97**	**23**	P		**P**	**04 15 08.5**	**+0.5**
	comp=Z,6.3nm,0.8s,baz=208,slow=3.4,SNR=7.6							
ZALV	**Zalesovo Beam**	**62.07**	**336**	P		**P**	**04 15 21.9**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=135,slow=6.3,SNR=8.0							
ZALV	**Zalesovo Beam**	**62.07**	**336**	P		**P**	**04 15 20.9**	**-1.3**
KURK	**Kurchatov**	**62.75**	**330**	P		**P**	**04 15 26.3**	**-0.5**
TIXI	**Tiksi**	**71.32**	**2**	P		**P**	**04 16 18.9**	**-2.0**
TIXI				IAmb		IAmb	04 16 20.4	
	comp=Z,6.5nm,1.1s							
SYO	**Syowa Base**	**87.94**	**201**	⇑*e*P		**P**	**04 17 49.0**	**-2.1**
SYO	**Syowa Base**	**87.94**	**201**	⇓*e*pP		pP	04 18 06.2	+4.7
ILAR	**Eielson Array**	**89.74**	**25**	P		**P**	**04 17 57.7**	**-2.0**
	comp=Z,0.5nm,0.9s,baz=240,slow=5.1,SNR=5.8							

*NNC **07** 04:14:13.3±2.4,39.33N×73.93E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=19.8km s-min=10.9km az=160.0*

*SOME **07** 04:14:14.1,39.33N×73.92E,h10km*

*KRNET **07** 04:14:21.1±0.1,39.55N×73.13E,mb3.2*

ISC 07 04:14:15.7±2.2,39.42N±0.09×73.79E±0.04,h4km±12km, n30,σ1.994/41,24C-4D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.69**	**86**	Pn	Pg	04 14 49.7	+1.6
KSH				Sn	Sg	04 15 18.9	+8.9
KSH				smax	smax		
	comp=N,550nm,1.3s						
KSH				smax	smax		
	comp=E,250nm,1.1s						
ANR	**Andizhan**	**1.73**	**321**	P	Pn	04 14 34.4	-12
ANR				S	**Sn**	**04 15 09.4**	**+0.4**
ARSB	**Arslanbob**	**2.00**	**342**	⇑*e*P	**Pg**	**04 14 54.3**	**+0.3**
	baz=56						
ARSB				⇑*i*S	**Sb**	**04 15 18.5**	**+0.5**
	baz=56						
BTK	**Batken**	**2.38**	**286**	⇑*e*P	**Pn**	**04 14 55.7**	**+0.1**
	baz=86						
BTK				⇑*i*S	**Sn**	**04 15 20.8**	**-4.5**
	baz=86						
ARLS	**Aral**	**2.47**	**9**	⇑*e*P	**Pg**	**04 15 04.4**	**+1.4**
	baz=21						
ARLS				⇑*i*S	**Sg**	**04 15 36.6**	**+1.6**
	baz=21						
NRN	**Naryn**	**2.62**	**39**	⇑*e*P	Pg	04 15 10.6	+4.7
	baz=48						
NRN				⇑*i*S	**Sg**	**04 15 46.0**	**+6.1**
	baz=48						
AML	**Almayashu**	**2.71**	**358**	⇓*i*P	**Pg**	**04 15 06.8**	**-0.8**
	baz=9.0						
AML				⇓*i*S	**Sb**	**04 15 40.1**	**+1.5**
	baz=9.0						
ARK	**Arkit**	**2.75**	**330**	⇑*i*P	**Pb**	**04 15 03.7**	**-1.8**
	baz=39						
ARK				⇑*i*S	**Sn**	**04 15 34.8**	**+0.3**
	baz=39						
UCH	**Uchtor**	**2.85**	**11**	⇑*e*P	**Pg**	**04 15 09.9**	**-0.5**
	baz=21						
UCH				⇑*i*S	**Sg**	**04 15 46.4**	**-1.0**
	baz=21						
EKS2	**Erkin-Say**	**3.24**	**360**	⇑*i*P	**Pb**	**04 15 13.8**	**0.0**
	baz=9.0						
EKS2				⇑*i*S	**Sb**	**04 15 52.6**	**-1.0**
	baz=9.0						
AAK	**Ala-Archa**	**3.25**	**9**	⇑*e*P	**Pg**	**04 15 15.7**	**-2.4**
	baz=18						
AAK				⇑*i*S	**Sb**	**04 15 55.0**	**+0.8**
	baz=18						
AAK	**Ala-Archa**	**3.25**	**9**	⇑Pg	**Pb**	**04 15 15.4**	**+1.3**
	comp=E,6.4nm,0.5s						
AAK				⇑Lg	Lg	04 15 59.7	
	comp=E,19nm,0.6s						
MRKS	**Merke**	**3.35**	**353**	*e*P	**Pb**	**04 15 17.2**	**+1.5**
	comp=E,10nm,0.4s						
MRKS				*e*S	**Sg**	**04 16 02.4**	**-0.8**
	comp=E,11nm,0.2s						
ULHL	**Ulahol**	**3.38**	**33**	⇑*i*P	**Pg**	**04 15 20.3**	**-0.1**
	baz=40						
ULHL				⇑*i*S	**Sg**	**04 16 03.5**	**-0.6**
	baz=40						
BOOM	**Boomskoye usch**	**3.47**	**27**	⇑*i*P	**Pg**	**04 15 20.4**	**-1.7**
	baz=35						
BOOM				⇑*i*S	**Sg**	**04 16 04

ASAR	**Alice Springs**	**41.65**	**262**	P	**P**	**05 12 55.2**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=96,slow=8.4,SNR=23						
ASAR	**Alice Springs**	**41.65**	**262**	P	**P**	**05 12 54.9**	**+0.2**
WR0	**Warramunga Arr**	**41.94**	**268**	P	**P**	**05 12 56.0**	**-1.0**
WR0				IAmb	IAmb	05 12 58.1	
	comp=Z,3.8nm,0.8s						
WRA	**Warramunga Arr**	**42.12**	**267**	P	**P**	**05 12 58.1**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=104,slow=8.0,SNR=22						
WRA	**Warramunga Arr**	**42.12**	**267**	IAmb	IAmb	05 12 59.2	
	comp=Z,0.2nm,0.6s						
KNRA	**Kununurra**	**48.47**	**271**	P	**P**	**05 13 46.1**	**-1.0**
KNRA				IAmb	IAmb	05 13 52.5	
	comp=Z,17nm,1.4s						
MLOA	**Mauna Loa Obse**	**50.38**	**31**	P	**P**	**05 14 01.8**	**+0.2**
FITZ	**Fitzroy Crossi**	**50.53**	**267**	P	**P**	**05 14 02.7**	**+0.3**
SOEI	**Soe**	**54.73**	**276**	P	**P**	**05 14 32.2**	**-0.5**
SOEI				IAmb	IAmb	05 14 34.7	
	comp=Z,25nm,0.5s						
MJAR	**Matsushiro Arr**	**72.70**	**326**	P	**P**	**05 16 26.7**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=158,slow=3.6,SNR=4.8						
KSRS	**Korea Array**	**78.97**	**320**	P	**P**	**05 17 01.1**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=134,slow=7.2,SNR=4.0						
PETK	**Petropavlovsk-**	**80.14**	**347**	P	**P**	**05 17 07.5**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=131,slow=8.0,SNR=5.6						
USRK	**Ussuriysk Ar.**	**81.58**	**327**	P	**P**	**05 17 15.7**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=115,slow=6.5,SNR=2.7						
SYO	**Syowa Base**	**81.88**	**193**	*e*PcP	**P**	**05 17 18.4**	**+1.9**
TXAR	**Lajitas Array**	**91.21**	**58**	P	**P**	**05 18 03.2**	**+1.1**
	comp=Z,0.2nm,0.8s,baz=218,slow=5.7,SNR=2.4						
ILAR	**Eielson Array**	**93.17**	**14**	P	**P**	**05 18 08.8**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=206,slow=6.0,SNR=3.5						
FINES	**FINESS Array B**	**139.43**	**341**	PKhKP	PKPpre	05 24 10.4	
	comp=Z,2.4nm,0.8s,baz=48,slow=2.1,SNR=3.8						
NOA	**NORSAR Array B**	**143.15**	**351**	PKhKP	PKPpre	05 24 21.8	
	comp=Z,0.6nm,0.7s,baz=11,slow=2.4,SNR=2.9						
AKASG	**Malin Array Be**	**145.78**	**326**	PKPbc	**PKPdf**	**05 24 32.1**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=45,slow=4.2,SNR=11						
BRTR	**Keskin Array B**	**148.06**	**306**	PKPbc	**PKPbc**	**05 24 39.0**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=132,slow=2.4,SNR=4.8						

MAN 07 05:21:03.9, 9°.91N×124°.15E, *h*1km, mb4.2, ML3.0, MS2.6, Mindanao

IDC 07 05:22:33.9±7.2, 19°.11S×176°.21W, *h*0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/24, mbtmp3.6/3, Error ellipse: s-maj=313.0km s-min=39.3km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.48**	**260**	P	P	05 31 02.1	-1.0
	0.2nm,0.5s,baz=99,slow=8.2,SNR=4.7						
ASAR	**Alice Springs**	**46.49**	**255**	P	P	05 31 03.7	+0.5
	1.2nm,0.4s,baz=89,slow=8.7,SNR=25						
ILAR	**Eielson Array**	**86.60**	**12**	P	P	05 35 18.6	-0.1
	0.2nm,0.7s,baz=221,slow=5.5,SNR=4.7						

IDC 07 05:50:07.6±8.6, 7°.45S×128°.93E, *h*149km±91km, mb3.4/1, mb1 3.2/5, mb1mx3.0/42, mbtmp3.7/5, Error ellipse: s-maj=82.0km s-min=25.5km az=37.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.88**	**242**	P	Pn	05 51 33.9	+1.1
	11nm,0.3s,baz=59,slow=4.3,SNR=4.4						
BATI				S	Sn	05 52 39.6	+0.3
	5.5nm,0.3s,baz=25,slow=17,SNR=3.3						
FITZ	**Fitzroy Crossi**	**11.06**	**197**	P	Pn	05 52 40.9	-0.7
	0.1nm,0.3s,baz=21,slow=9.4,SNR=8.5						
FITZ				S	Sn	05 54 36.5	-7.5
	0.2nm,0.3s,baz=108,slow=20,SNR=4.1						
WRA	**Warramunga Arr**	**13.48**	**158**	P	Pn	05 53 11.6	-1.5
	0.2nm,0.3s,baz=329,slow=14,SNR=10						
WRA				S	Sn	05 55 33.2	-9.2
	0.3nm,0.3s,baz=335,slow=22,SNR=6.2						
ASAR	**Alice Springs**	**16.82**	**164**	P	Pn	05 53 56.0	+1.5
	0.1nm,0.3s,baz=338,slow=9.3,SNR=7.0						
ASAR				S	S	05 56 58.7	-2.9
	0.1nm,0.3s,baz=344,slow=22,SNR=3.0						
MKAR	**Makanchi Array**	**68.02**	**327**	P	P	06 00 50.7	-0.1
	0.7nm,0.6s,baz=120,slow=7.3,SNR=5.9						

IDC 07 05:54:43.8±1.7, 2°.23N×127°.42E, *h*0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/46, mbtmp3.5/5, Error ellipse: s-maj=112.7km s-min=19.2km az=71.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.27**	**185**	P	P	05 59 20.7	-0.5
	0.8nm,0.8s,baz=18,slow=9.6,SNR=2.6						
WRA	**Warramunga Arr**	**23.06**	**163**	P	P	05 59 50.2	-0.8
	0.3nm,0.3s,baz=343,slow=10,SNR=7.0						
ASAR	**Alice Springs**	**26.50**	**167**	P	P	06 00 23.7	+0.5
	0.1nm,0.3s,baz=344,slow=10,SNR=3.7						
MKAR	**Makanchi Array**	**59.17**	**325**	P	P	06 04 47.0	+0.3
	0.8nm,0.5s,baz=120,slow=8.3,SNR=14						
KURBB	**Kurchatov Arra**	**63.36**	**328**	P	P	06 05 14.7	-0.2
	0.7nm,0.5s,baz=128,slow=6.5,SNR=8.2						

*IDC **07** 06:03:57.4±1.8, 0°.38S×124°.57E, *h*0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/36, mbtmp3.3/3, Error ellipse: s-maj=191.1km s-min=25.9km az=63.0*

*DJA **07** 06:04:01.3±0.4, 0°.5±3°×12°.5E±°, *h*10km, M3.7/7, MLv3.7/7, MLv3.7/3*

ISC 07 06:04:00.3±1.5, 0°.1S±0°.1×125°.12E±0°.08, *h*10km, n7, σ2=95/6, mb3.1/3, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.34**	**302**	P	**Pn**	**06 04 25.0**	**-0.1**
SANI	**Sanana**	**2.08**	**155**	P	**Pn**	**06 04 35.4**	**+0.1**
LBMI	**Labuha**	**2.43**	**102**	P	**Pn**	**06 04 41.9**	**+1.8**
LUWI	**Luwuk**	**2.51**	**249**	P	**Pn**	**06 04 43.3**	**+2.1**
WRA	**Warramunga Arr**	**21.65**	**156**	P	**P**	**06 08 49.3**	**-1.8**
	0.5nm,0.8s,baz=332,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**24.89**	**161**	P	**P**	**06 09 22.3**	**-1.2**
	0.3nm,0.7s,baz=342,slow=7.1,SNR=4.4						
MKAR	**Makanchi Array**	**59.86**	**327**	P	P	06 14 04.2	-2.0
	0.2nm,0.4s,baz=110,slow=8.6,SNR=7.7						

*BJI **07** 06:07:51.9±0.0, 54°.77N×160°.47W, *h*25km, mB5.3/55, mb5.3/68, Ms5.2/59, Ms7 4.9/57*

*MOS **07** 06:07:54.9±0.9, 54°.88N×160°.23W, *h*40km, mb5.4/65, MS4.7/16, Error ellipse: s-maj=7.9km s-min=4.4km az=94.9*

*AEIC **07** 06:07:56.0±3.1, 54°.68N±0°.04×160°.02W±0°.08, *h*16km±3km, Error ellipse: s-maj=6.7km s-min=5.3km az=118.0*

*IDC **07** 06:07:56.9±1.5, 54°.94N×160°.21W, *h*40km±12km, mb4.6/36, mb1 4.7/40, mb1mx4.6/64, mbtmp4.8/40, ML4.5/4, MS4.5/36, Ms1 4.5/36, ms1mx4.4/43, Error ellipse: s-maj=12.1km s-min=7.6km az=4.0*

*NEIC **07** 06:07:56.4±2.0, 54°.81N±0°.06×160°.08W±0°.08, *h*40km±4km, mb5.2/322, Mww5.2, ML5.1/80(AEIC), Error ellipse: s-maj=8.8km s-min=6.0km az=152.0*

*GCMT **07** 06:07:57.4±0.2, 54°.67N±0°.01×159°.92W±0°.02, *h*38km, MW5.2/120, Moment Tensor Solution. s104,c151; s120,c201; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr0.73±.02; Mθθ-0.55±.02; Mϕϕ-0.17±.01; Mrθ0.52±.02; Mrϕ-0.34±.01; Mθϕ0.26±.01; Best double couple: M=0.94300×10^17 NP1:ϕ=237.00000°, δ26.00000°, λ.86.00000°. NP2:ϕ=62.00000°, δ64.00000°, λ.92.00000°. Principal axes: T 0.9320, Plg71.0000°, Azm336.0000°; N 0.0220, Plg2.0000°, Azm241.0000°; P -0.9540, Plg19.0000°, Azm150.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **07** 06:07:58.6±0.0, 55°.41N×162°.31W, h33km, mb5.0*

*NEIC **07** 06:07:58, 54°.76N×160°.49W, h30km, Moment Tensor Solution. Moment tensor: Scale 10^16 Nm; Mrr5.46; Mθθ-3.02; Mϕϕ-2.44; Mrθ5.99; Mrϕ-3.87; Mθϕ3.94; Fault plane solution: Mo 9.43000×10^16 NP1:ϕ=216.00000°, δ21.00000°, λ.73.00000°. NP2:ϕ=55.00000°, δ70.00000°, λ.96.00000°. Principal axes: T 8.8725, Plg64.0000°, Azm336.0000°; N 1.0224, Plg6.0000°, Azm233.0000°; P -9.8949, Plg25.0000°, Azm140.0000°;*

ISC 07 06:07:56.2±0.5, 54°.81N±0°.05×160°.10W±0°.03, *h*41km±3km, *h*41km:pP-P, n1167, σ1=06/1094, mb5.2/313, MS4.7/66, 76C-6D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CNBA	**Chernabura Isl**	**0.29**	**87**		**Pn**	**06 08 02.1**	**-2.3**
CNBA	**Chernabura Isl**	**0.29**	**87**		**Sn**	**06 08 07.5**	**-2.7**
SDPT	**Sand Point**	**0.59**	**338**		**Pn**	**06 08 07.8**	**-0.3**
SDPT	**Sand Point**	**0.59**	**338**		**Sn**	**06 08 17.2**	**+0.7**
PN6	**Pavlof North-6**	**1.23**	**303**		**Pn**	**06 08 18.3**	**+1.3**
VNWF	**Veniaminof 8**	**1.38**	**12**		**Pn**	**06 08 20.5**	**+1.4**
BLHA	**Black Hill**	**1.44**	**309**		**Pn**	**06 08 20.9**	**+1.1**
VNSS	**Veniaminof 8**	**1.47**	**14**		**Pn**	**06 08 22.0**	**+1.7**
VNFG	**Fog Glacier, M**	**1.52**	**12**		**Pn**	**06 08 23.0**	**+2.1**
VNNF	**Veniaminof 3**	**1.55**	**16**		**Pn**	**06 08 23.1**	**+1.8**
BALA	**Baldy Mountain**	**1.60**	**285**		**Pn**	**06 08 23.3**	**+1.4**
FALS	**False Pass**	**1.92**	**273**		**Pn**	**06 08 26.5**	**+0.2**
FALS	**False Pass**	**1.92**	**273**		**Sn**	**06 08 52.0**	**+2.8**
SSLW	**Shishaldin Wes**	**2.33**	**271**		**Pn**	**06 08 33.0**	**+1.0**
SSBA	**Shishaldin**	**2.33**	**271**		**Pn**	**06 08 33.0**	**+1.0**
SSBA					**Sn**	**06 08 57.7**	**+1.2**
WESE	**West Dahl East**	**2.63**	**265**		**Pn**	**06 08 37.2**	**+1.1**
WEBT	**Westdahl Beart**	**2.71**	**267**		**Pn**	**06 08 38.3**	**+1.1**
CHIR	**Chirikof Islan**	**2.75**	**66**		**Pn**	**06 08 37.8**	**0.0**
AKSA	**Akutan Strait**	**3.34**	**261**		**Pn**	**06 08 46.7**	**+1.0**
AKSA					**Sn**	**06 09 25.3**	**+1.2**
AKUT	**Akutan**	**3.38**	**261**		**Pn**	**06 08 47.2**	**+0.9**
PLBL	**Peulik Blue Cr**	**3.43**	**31**		**Pn**	**06 08 49.0**	**+2.0**
AKLV	**Akutan Long Va**	**3.48**	**262**		**Pn**	**06 08 48.4**	**+0.7**
AKBBA	**Akutan Broad B**	**3.48**	**261**		**Pn**	**06 08 48.6**	**+0.9**
AKGG	**Akutan Green G**	**3.49**	**262**		**Pn**	**06 08 48.7**	**+0.8**
AKMO	**Akutan Morgan**	**3.53**	**261**		**Pn**	**06 08 49.1**	**+0.8**
PLK1	**Peulik 1**	**3.58**	**31**		**Pn**	**06 08 50.6**	**+1.6**
PLK3	**Peulik 3**	**3.59**	**35**		**Pn**	**06 08 51.1**	**+1.8**
SII	**Sitkinak Islan**	**3.78**	**60**		**Pn**	**06 08 51.9**	**0.0**
UNV	**Unalaska Valle**	**3.87**	**258**		**Pn**	**06 08 53.1**	**0.0**
UNV					**Sn**	**06 09 40.5**	**+3.2**
MTBL	**Makushin Table**	**3.94**	**260**		**Pn**	**06 08 54.7**	**+0.6**
MSW	**Makushin Switc**	**4.01**	**260**		**Pn**	**06 08 55.1**	**0.0**
MSW					**Sn**	**06 09 41.1**	**+0.3**
MREP	**Makushin Rep't**	**4.02**	**258**		**Pn**	**06 08 55.2**	**0.0**
MCIR	**Makushin Cirqu**	**4.07**	**261**		**Pn**	**06 08 56.4**	**+0.6**
KJL	**Kejulik**	**4.11**	**36**		**Pn**	**06 08 57.6**	**+1.1**
CAHL	**Cahill**	**4.21**	**37**		**Pn**	**06 08 58.9**	**+1.1**
ANCK	**Angle Creek**	**4.25**	**35**		**Pn**	**06 08 58.9**	**+0.5**
OHAK	**Old Harbor**	**4.52**	**55**		**Pn**	**06 09 01.4**	**-0.6**
KARR	**Katmai Rainbow**	**4.75**	**37**		**Pn**	**06 09 06.4**	**+1.3**
KAHC	**Katmai Hardscr**	**4.76**	**34**		**Pn**	**06 09 06.9**	**+1.5**
OKFG	**Magazine Ridge**	**4.81**	**256**		**Pn**	**06 09 06.4**	**+0.5**
OKTU	**Okmok Mt. Tuli**	**4.89**	**256**		**Pn**	**06 09 07.7**	**+0.6**
OKCE	**Okmok Cone E**	**4.94**	**257**		**Pn**	**06 09 08.6**	**+0.7**
OKSP	**Okmok Steeple**	**5.08**	**256**		**Pn**	**06 09 10.4**	**+0.7**
KDAK	**Kodiak Island**	**5.14**	**51**	P	**Pn**	**06 09 09.8**	**-0.7**
KDAK	**Kodiak Island**	**5.14**	**51**		**Pn**	**06 09 09.8**	**-0.7**
FOSS	**Fourpeaked Sta**	**5.33**	**39**		**Pn**	**06 09 13.9**	**+0.8**
NIKH	**Nikolski High**	**5.50**	**254**		**Pn**	**06 09 15.1**	**-0.3**
AUW	**Augustine West**	**5.83**	**36**		**Pn**	**06 09 20.1**	**+2.0**
SPIA	**Saint Paul Isl**	**6.17**	**297**	Pn	**Pn**	**06 09 21.2**	**-3.4**
ILS	**Iliamna Low So**	**6.41**	**33**		**Pn**	**06 09 29.7**	**+1.7**
HOM	**Homer**	**6.69**	**40**		**Pn**	**06 09 32.8**	**+1.2**
SVW2	**Sparrevohn**	**6.75**	**19**		**Pn**	**06 09 32.8**	**+0.2**
RSO	**Redoubt South**	**6.90**	**32**		**Pn**	**06 09 35.1**	**+0.2**
BRLK	**Bradley Lake**	**7.04**	**41**		**Pn**	**06 09 36.5**	**-0.2**
BRSE	**Bradley Lake S**	**7.08**	**42**		**Pn**	**06 09 36.3**	**-0.9**
SPWE	**Spurr West**	**7.62**	**29**		**Pn**	**06 09 46.8**	**+2.2**
SPNN	**North Nagishla**	**7.66**	**28**		**Pn**	**06 09 47.0**	**+1.9**
SPBG	**Spurr Blockage**	**7.66**	**29**		**Pn**	**06 09 47.3**	**+2.2**
SLKM	**Skilak Lake**	**7.79**	**39**		**Pn**	**06 09 46.6**	**-0.3**
SEW	**Seward**	**7.81**	**43**		**Pn**	**06 09 47.6**	**+0.5**
SUA	**Susitna One**	**8.30**	**33**		**Pn**	**06 09 54.0**	**+0.1**
RC01	**Rabbit Creek A**	**8.36**	**37**		**Pn**	**06 09 55.2**	**+0.5**
TT01	**Tatalina**	**8.39**	**13**		**Pn**	**06 09 56.3**	**+1.2**
TTA	**Tatalina**	**8.42**	**13**	P	**Pn**	**06 09 56.7**	**+1.2**
TTA	**Tatalina**	**8.42**	**13**		**Pn**	**06 09 56.7**	**+1.2**
KOKFP	**Korovin Flat P**	**8.71**	**259**		**Pn**	**06 10 00.3**	**+0.7**
PWL	**Port Wells**	**8.72**	**41**		**Pn**	**06 09 58.0**	**-1.6**
MID	**Middleton Isla**	**8.80**	**53**	P	**Pn**	**06 10 00.4**	**-0.2**
MID	**Middleton Isla**	**8.80**	**53**	Pn	**Pn**	**06 10 00.3**	**-0.2**
ATKA	**Atka Island**	**8.80**	**259**		**Pn**	**06 10 00.6**	**0.0**
PMR	**Palmer**	**8.92**	**36**	P	**Pn**	**06 10 02.7**	**+0.4**
PMR	**Palmer**	**8.92**	**36**		**Pn**	**06 10 02.7**	**+0.4**
KNK	**Knik Glacier**	**9.04**	**38**		**Pn**	**06 10 03.1**	**-0.8**
PPLA	**Purkeypile**	**9.08**	**24**		**Pn**	**06 10 07.3**	**+2.6**
GHO	**Glory Hole Cre**	**9.12**	**36**		**Pn**	**06 10 04.8**	**-0.4**
SML	**Sawmill**	**9.35**	**37**		**Pn**	**06 10 08.5**	**+0.3**
EYAK	**Cordova Ski Ar**	**9.59**	**47**		**Pn**	**06 10 11.1**	**-0.4**
SCM	**Sheep Creek Mo**	**9.72**	**38**	P	**Pn**	**06 10 11.7**	**-1.6**
SCM	**Sheep Creek Mo**	**9.72**	**38**		**Pn**	**06 10 11.7**	**-1.6**
GSTR	**Great Sitkin T**	**9.90**	**261**	Pn	**Pn**	**06 10 16.2**	**+0.4**
GSMY	**Great Sitkin M**	**9.92**	**260**		**Pn**	**06 10 15.8**	**-0.2**
KTH	**Kantishna Hill**	**9.94**	**24**		**Pn**	**06 10 17.1**	**+0.7**
RAGM	**Ragged Mountai**	**9.98**	**50**		**Pn**	**06 10 17.7**	**-1.1**
TRF	**Thorne Moun**	**10.02**	**26**		**Pn**	**06 10 17.6**	**+0.2**
GOAT	**Goat Mountain**	**10.04**	**49**		**Pn**	**06 10 17.1**	**-0.7**
ANM	**Nome**	**10.14**	**347**	P	**Pn**	**06 10 20.8**	**+1.8**
ANM	**Nome**	**10.14**	**347**	Pn	**Pn**	**06 10 20.8**	**+1.8**
SUCK	**Suckling Hills**	**10.24**	**52**	Pn	**Pn**	**06 10 21.0**	**+0.6**
ADK	**Adak**	**10.34**	**260**	P	**Pn**	**06 10 21.7**	**0.0**
ADK	**Adak**	**10.34**	**260**		**Pn**	**06 10 21.7**	**0.0**
RND	**Reindeer**	**10.37**	**29**	P	**Pn**	**06 10 20.6**	**-1.5**
RND	**Reindeer**	**10.37**	**29**		**Pn**	**06 10 20.6**	**-1.5**
KIWB	**Kanaga Island**	**10.62**	**261**		**Pn**	**06 10 25.1**	**-0.4**
GAMB	**Gambell**	**10.76**	**331**		**Pn**	**06 10 28.7**	**+1.4**
BWN	**Browne**	**10.82**	**26**	Pn	**Pn**	**06 10 29.6**	**+1.4**
MESA	**MESA**	**11.13**	**54**	Pn	**Pn**	**06 10 33.4**	**+0.7**
NEA	**Nenana**	**11.25**	**25**		**Pn**	**06 10 33.6**	**-0.5**
MLY	**Manley**	**11.26**	**21**	Pn	**Pn**	**06 10 36.1**	**+1.7**
BALM	**Baldy**	**11.29**	**49**		**Pn**	**06 10 35.3**	**+0.5**
CCB	**Clear Creek Bu**	**11.63**	**27**	Pn	**Pn**	**06 10 37.5**	**-1.8**
IMAR	**Indian Mountai**	**11.64**	**13**	Pn	**Pn**	**06 10 41.5**	**+2.1**
HDA	**Harding Lake**	**11.68**	**29**	P	**Pn**	**06 10 38.5**	**-1.5**
	baz=221,SNR=20						
CTGM	**Chitina Glacie**	**11.71**	**51**		**Pn**	**06 10 40.1**	**-0.5**
TCOL	**CIGO, UAF Yank**	**11.80**	**26**	P	**Pn**	**06 10 40.5**	**-1.1**
	baz=217,SNR=12						
COLA	**College**	**11.80**	**26**	P	**Pn**	**06 10 41.7**	**+0.1**
COLA	**College**	**11.80**	**26**		**Pn**	**06 10 41.7**	**+0.1**
PCA	**Pinnacle**	**11.90**	**56**	Pn	**Pn**	**06 10 43.6**	**+0.4**
IL31		**11.97**	**28**		**Pn**	**06 10 42.5**	**-1.4**
ILAR	**Eielson Array**	**11.97**	**28**	P	**Pn**	**06 10 42.3**	**-1.7**
ILAR	**Eielson Array**	**11.97**	**28**	P	**Pn**	**06 10 41.6**	**-2.5**
	1.2nm,0.3s,baz=217,slow=13,SNR=73						
ILAR				S	**Sn**	**06 12 51.2**	**-4.8**
	0.6nm,0.3s,baz=212,slow=13,SNR=2.8						
ILAR				LR	LR	06 15 42.7	
	comp=Z,4μm,19.3s,baz=240,slow=39						
ILAR	**Eielson Array**	**11.97**	**28**		**Pn**	**06 10 42.3**	**-1.7**
POKR	**Poker Flat Res**	**12.10**	**26**	P	**Pn**	**06 10 45.7**	**-0.1**
	baz=218,SNR=14						
SCRK	**Sand Creek**	**12.29**	**35**		**Pn**	**06 10 47.7**	**-0.6**
BCAR	**Beaver Creek A**	**12.52**	**41**	Pn	**Pn**	**06 10 51.4**	**-0.1**
COLD	**Coldfoot**	**13.33**	**17**		**Pn**	**06 11 04.1**	**+1.6**
RDOG	**Red Dog Mine**	**13.36**	**355**		**Pn**	**06 11 04.7**	**+1.7**
HYT	**Haines Junctio**	**13.42**	**54**	Pn	**Pn**	**06 11 05.0**	**+1.1**
SKAG	**Skagway**	**14.19**	**61**		**Pn**	**06 11 13.8**	**-0.4**
JIS	**Juneau Island**	**14.56**	**66**	Pn	**Pn**	**06 11 20.4**	**+1.2**
BMAR	**Burnt Mountain**	**14.65**	**24**	Pn	**Pn**	**06 11 21.1**	**+0.7**
TOLK	**Toolik Lake Re**	**14.71**	**15**	P	**Pn**	**06 11 21.7**	**+0.4**
	baz=205,SNR=40						
CRAG	**Craig**	**15.41**	**76**	Pn	**Pn**	**06 11 29.8**	**-0.5**
WRAK	**Wrangell Islan**	**15.72**	**73**	Pn	**Pn**	**06 11 34.2**	**-0.2**
EPYK	**Eagle Plains**	**16.18**	**35**		**Pn**	**06 11 39.1**	**-1.1**
EPYK				IAmb	IAmb	06 11 49.5	
	comp=Z,198nm,0.9s						
EPYK	**Eagle Plains**	**16.18**	**35**	P	**Pn**	**06 11 39.2**	**-1.1**
	baz=236						
DIB	**Dawson Inlet,**	**16.28**	**84**		**Pn**	**06 11 42.6**	**+1.1**
MOBC	**Moresby Island**	**16.59**	**84**		**P**	**06 11 46.7**	**-0.8**
DLBC	**Dease Lake**	**16.86**	**65**	P	**Pn**	**06 11 48.5**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=282,slow=9.4,SNR=7.6						
DLBC				S	**Sn**	**06 14 54.8**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=151,slow=17,SNR=3.5						
DLBC	**Dease Lake**	**16.86**	**65**		**Pn**	**06 11 49.6**	**+0.6**
INK	**Inuvik**	**18.30**	**32**	P	**P**	**06 12 05.0**	**-1.2**
	comp=Z,3.5nm,0.3s,baz=235,slow=16,SNR=52						
INK				S	**Sn**	**06 15 28.0**	**-1.5**
	baz=252,slow=20,SNR=3.1						
INK				LR	LR	06 19 44.5	
	comp=Z,2μm,18.6s,baz=225,slow=39						
BBB	**Bella Bella**	**19.12**	**85**	P	**P**	**06 12 15.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=270,slow=8.8,SNR=2.6						
BILL	**Bilibino**	**20.48**	**323**	*c* P	**P**	**06 12 30.1**	**+0.1**
BILL				*i* *SP	**pP**	**06 12 40.7**	**+0.5**
BILL				*i*		06 12 45.1	
BILL				S	**S**	**06 16 19.0**	**+2.4**
BILL				*i* SSS	SSS	06 16 46.7	
BILL				pmax	pmax		
	comp=Z,25nm,0.8s						
BILL				MLR	MLR		
	comp=Z,5μm,16.0s						
BILL	**Bilibino**	**20.48**	**323**	P	**P**	**06 12 28.7**	**-1.4**
C36M	**Paulatuk**	**21.81**	**34**	P	**P**	**06 12 43.2**	**-1.0**
C36M				IAmb	IAmb	06 12 49.0	
	comp=Z,130nm,1.1s						
C36M	**Paulatuk**	**21.81**	**34**	P	**P**	**06 12 43.2**	**-1.0**
	baz=247,SNR=77						
A04D	**Lummi Island**	**23.71**	**89**	P	**P**	**06 13 03.9**	**-0.1**
	baz=299						
NLWA	**Neilton Lookou**	**23.71**	**93**	P	**P**	**06 13 06.3**	**+2.2**
D03D	**Eldon**	**24.09**	**92**	P	**P**	**06 13 08.2**	**+0.6**
	baz=302						
PET	**Petropavlovsk**	**24.11**	**283**	*e*P	**P**	**06 13 07.3**	**-0.4**
PET				*e*S	**S**	**06 17 18.9**	**-3.5**
PET				pmax	pmax		
	comp=Z,900nm,2.9s						
PET				pmax	pmax		
	comp=Z,380nm,0.7s						
PET				pmax	pmax		
	comp=Z,400nm,5.1s						
PET				MLR	MLR		
	comp=Z,1μm,16.0s						
PET				MLR	MLR		
	comp=Z,1μm,17.0s						
PET	**Petropavlovsk**	**24.11**	**283**	P	**P**	**06 13 07.3**	**-0.4**
B05A	**Bryant**	**24.29**	**90**	P	**P**	**06 13 09.8**	**+0.5**
	baz=300,SNR=17						
YKA	**Yellowknife Ar**	**24.41**	**53**	P	**P**	**06 13 11.0**	**+0.7**
	comp=Z,16nm,0.9s,baz=264,slow=7.3,SNR=117						
YKA				PcP	**PcP**	**06 16 48.3**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=268,slow=1.9,SNR=6.9						
YKA				ScP	**ScP**	**06 20 23.6**	**+0.4**
	comp=Z,1.7nm,1.0s,baz=280,slow=2.8,SNR=5.5						
YKA				LR	LR	06 24 03.7	
	comp=Z,236nm,18.2s,baz=264,slow=40						
D04E	**Lakebay**	**24.46**	**93**	P	**P**	**06 13 10.5**	**-0.4**
	baz=302						
B06A	**Marblemount**	**24.52**	**89**	P	**P**	**06 13 12.8**	**+1.4**
PEA0B	**Petropavlovsk-**	**24.62**	**284**	*c* P	**P**	**06 13 11.3**	**-1.1**
PETK	**Petropavlovsk-**	**24.62**	**284**	P	**P**	**06 13 12.2**	**-0.1**
	comp=Z,100nm,0.5s,baz=79,slow=13,SNR=310						
PETK				PcP	**PcP**	**06 16 49.3**	**+0.5**
	comp=Z,4.9nm,1.0s,baz=115,slow=2.9,SNR=5.4						
PETK				LR	LR	06 22 57.0	
	comp=Z,820nm,21.5s,baz=74,slow=37						
D05A	**Enumclaw**	**24.91**	**92**	P	**P**	**06 13 17.4**	**+2.4**
E04D	**Cinebar**	**24.91**	**94**	P	**P**	**06 13 15.7**	**+0.6**
	baz=303,SNR=6.8						
F04D	**Rainier, OR**	**24.92**	**95**	P	**P**	**06 13 15.1**	**0.0**
	baz=309						
C06D	**Leavenworth**	**25.16**	**90**	P	**P**	**06 13 18.1**	**+0.8**
	baz=301						
LON	**Longmire**	**25.25**	**93**	P	**P**	**06 13 19.5**	**+1

comp=Z,44nm,1.4s
PAHR Pah Rah Range 30.98 102 lAmb lAmb 06 14 21.8
comp=Z,26nm,1.1s
VCNR Virginia City 31.11 103 lAmb lAmb 06 14 23.4
comp=Z,32nm,1.1s
PNTR Pine Nut 31.28 103 lAmb lAmb 06 14 24.9
comp=Z,52nm,1.0s
DLMT Dillon 31.35 88 P **P** **06 14 13.9 +1.2**
EGMT Eagleton 31.53 81 lAmb lAmb 06 14 30.5
comp=Z,33nm,1.2s
EGMT Eagleton 31.53 81 P **P** **06 14 14.5 +0.3**
baz=302,SNR=5.9
YERR Yerington 31.55 103 lAmb lAmb 06 14 27.1
comp=Z,25nm,1.1s
CMB Columbia Colle 31.57 106 P **P** **06 14 16.0 +1.4**
CMB pmax pmax
comp=Z,11nm,1.2s
CMB Columbia Colle 31.57 106 P **P** **06 14 16.0 +1.4**
RES Resolute Bay 31.72 27 P **P** **06 14 15.5 0.0**
RES pmax pmax
comp=Z,10.0nm,1.0s
RES Resolute Bay 31.72 27 P **P** **06 14 15.4 0.0**
WAKR Walker 31.77 104 lAmb lAmb 06 14 29.4
comp=Z,26nm,1.2s
SAO San Andreas Ge 31.90 108 P **P** **06 14 16.1 -1.3**
SAO pmax pmax
comp=Z,6.0nm,1.1s
SAO San Andreas Ge 31.90 108 P **P** **06 14 16.1 -1.3**
KVN Kaiserville 32.15 102 lAmb lAmb 06 14 32.2
comp=Z,22nm,1.2s
NVAR Mina Array Bea 32.47 103 P **P** **06 14 24.7 +2.1**
comp=Z,3.3nm,0.7s,baz=306,slow=8.8,SNR=26
NVAR PcP **PcP** **06 17 09.7 +0.8**
comp=Z,3.9nm,0.8s,baz=276,slow=2.7,SNR=7.5
NVAR ScP **ScP** **06 20 50.3 +1.2**
comp=Z,1.7nm,0.8s,baz=295,slow=2.9,SNR=8.1
MDPB Devils Postpil 32.59 105 P **P** **06 14 26.8 +3.0**
OMMB Old Mammoth Mi 32.65 105 P **P** **06 14 27.5 +3.1**
ELK Elko 32.65 97 P **P** **06 14 26.4 +2.1**
comp=Z,5.1nm,0.8s,baz=296,slow=6.7,SNR=14
ELK PcP **PcP** **06 17 09.8 +0.4**
comp=Z,1.2nm,0.6s,baz=307,slow=5.3,SNR=3.2
ELK Elko 32.65 97 lAmb lAmb 06 14 36.6
comp=Z,26nm,1.2s
FFC Flin Flon 32.70 66 P **P** **06 14 24.7 +0.5**
FFC pmax pmax
comp=Z,6.0nm,1.0s
FFC Flin Flon 32.70 66 P **P** **06 14 24.7 +0.5**
MLAC Mammoth, Mammo 32.73 104 P **P** **06 14 24.8 -0.1**
baz=315
H17A Grant Village 33.08 87 lAmb lAmb 06 14 46.2
comp=Z,39nm,1.2s
H17A Grant Village 33.08 87 P **P** **06 14 28.7 +0.7**
baz=306,SNR=9.2
LKWY Lake 33.08 87 lAmb lAmb 06 14 46.0
comp=Z,21nm,1.0s
PAGB Antelope Grade 33.31 108 P **P** **06 14 30.2 +0.4**
PAGB lAmb lAmb 06 14 45.9
comp=Z,24nm,1.2s
RLMT Red Lodge 33.41 85 lAmb lAmb 06 14 47.3
comp=Z,40nm,1.1s
RLMT Red Lodge 33.41 85 P **P** **06 14 31.4 +0.6**
baz=306,SNR=8.9
TIXI Tiksi 33.59 327⇑ *e*P **P** **06 14 30.9 -0.9**
TIXI pmax pmax
comp=Z,23nm,1.0s
TIXI MLR MLR
comp=Z,1μm,17.0s
TIXI Tiksi 33.59 327 P **P** **06 14 31.0 -0.9**
TIXI lAmb lAmb 06 14 32.2
comp=Z,21nm,1.0s
SMMC Simmler 33.76 109 P **P** **06 14 34.1 +0.4**
baz=318
VES Vestal, Richgr 33.87 107 P **P** **06 14 35.9 +1.2**
baz=317
TYV Tymovskoe 33.98 288 *e*P **P** **06 14 35.6 +0.2**
TYV *e*S **S** **06 19 58.9 +1.5**
TYV pmax pmax
comp=Z,300nm,2.9s
TYV pmax pmax
comp=Z,99nm,0.9s
TYV smax smax
comp=E,6.0nm,0.8s
TYV smax smax
comp=E,900nm,7.6s
TYV MLR MLR
comp=Z,2μm,21.0s
CWC Cottonwood Cre 34.00 105 P **P** **06 14 37.2 +1.2**
baz=316
GRAC Grapevine Rang 34.00 104 P **P** **06 14 36.8 +1.0**
baz=316
R11A Troy Canyon, C 34.06 100 lAmb lAmb 06 14 48.7
comp=Z,32nm,1.2s
R11A Troy Canyon, C 34.06 100 P **P** **06 14 36.6 0.0**
baz=314
PKM Mcpherson Peak 34.17 109 P **P** **06 14 38.3 +0.8**
baz=318
LAO LASA Array 34.27 81 lAmb lAmb 06 14 49.5
comp=Z,34nm,1.4s
LAO LASA Array 34.27 81 P **P** **06 14 38.6 +0.5**
baz=304
ISA Isabella, Lake 34.34 107 P **P** **06 14 38.9 +0.1**
baz=317
DAC Darwin (Calif) 34.39 105 P **P** **06 14 40.2 +0.8**
DAC pmax pmax
comp=Z,16nm,1.1s
DAC Darwin (Calif) 34.39 105 P **P** **06 14 40.2 +0.8**
DUG Dugway, Tooele 34.41 95 P **P** **06 14 40.5 +1.0**
baz=311
DGMT Dagmar 34.45 77 P **P** **06 14 40.2 +0.5**
DGMT lAmb lAmb 06 14 50.9
comp=Z,18nm,1.0s
DGMT Dagmar 34.45 77 P **P** **06 14 39.9 +0.3**
baz=302
ARVC Arvin 34.54 108 P **P** **06 14 41.4 +1.0**
baz=318
MPMC Manual Prospec 34.60 105 P **P** **06 14 41.8 +0.6**
baz=317
BW06 Boulder Array 34.65 89 P **P** **06 14 41.5 -0.2**
baz=308
PDAR Pinedale Array 34.65 89 P **P** **06 14 43.5 +1.8**
comp=Z,1.4nm,0.6s,baz=282,slow=4.5,SNR=8.3
PDAR PcP **PcP** **06 17 14.5 -0.5**
comp=Z,0.9nm,0.8s,baz=343,slow=2.8,SNR=3.2
PDAR ScP **ScP** **06 20 54.6 -2.1**
comp=Z,1.0nm,1.0s,baz=347,slow=1.2,SNR=4.2
PDAR LR LR 06 27 34.5
comp=Z,432nm,19.8s,baz=328,slow=34
CTU Camp Tracy 34.70 94 P **P** **06 14 42.3 +0.3**
LRMC Laurel Mtn Rad 34.92 106 P **P** **06 14 44.3 +0.4**
baz=317
FCC Fort Churchill 35.06 56 P **P** **06 14 45.4 +0.8**
FCC pmax pmax
comp=Z,50nm,1.2s
FCC Fort Churchill 35.06 56 P **P** **06 14 45.4 +0.8**
FCC lAmb lAmb 06 14 46.6
comp=Z,50nm,1.1s
EDW2 Edwards Air Fo 35.18 107 P **P** **06 14 47.3 +1.2**
baz=318
SHOC Shoshone, Teco 35.40 104 P **P** **06 14 48.2 +0.3**
baz=316
GSC Goldstone, Bar 35.53 105 P **P** **06 14 51.4 +2.3**
GSC pmax pmax
comp=Z,30nm,1.4s
GSC Goldstone, Bar 35.53 105 P **P** **06 14 51.4 +2.3**
GSC lAmb lAmb 06 15 01.6
comp=Z,30nm,1.4s
GSC Goldstone, Bar 35.53 105 P **P** **06 14 49.9 +0.8**
baz=317
SNCC San Nicolas Is 35.56 110 P **P** **06 14 49.9 +0.6**
baz=320
MWC Mount Wilson 35.63 108 P **P** **06 14 50.5 +0.4**
MWC pmax pmax
comp=Z,19nm,1.3s
MWC Mount Wilson 35.63 108 P **P** **06 14 50.5 +0.4**
TCRU Three Creeks R 35.68 97 P **P** **06 14 51.5 +1.0**
YAK Yakutsk 35.77 311 *e*P **P** **06 14 48.7 -2.0**
YAK *e**PP **pP** **06 14 56.6 -5.4**
YAK *e* 06 17 17.5
YAK *e*S **S** **06 20 20.4 -4.2**
YAK *e*SSS SSS 06 23 16.2
YAK *e* 06 25 05.1
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=Z,41nm,0.9s
YAK pmax pmax
comp=E,15nm,1.4s
YAK smax smax
comp=E,185nm,20.3s
YAK MLR MLR
comp=Z,3μm,22.0s
YAK MLR MLR
comp=N,550nm,16.0s
YAK MLR MLR
comp=E,1μm,18.0s
YAK Yakutsk 35.77 311 P **P** **06 14 49.2 -1.5**
BFSC Mount Baldy Ra 35.84 107 P **P** **06 14 52.6 +0.8**
baz=318
CCUT Cedar City 35.88 99 P **P** **06 14 53.9 +1.7**
YUK Yuzh-Kuril'sk 35.91 275 P **P** **06 14 49.2 -2.9**
YUK S **S** **06 20 31.5 +4.4**
YUK MLR MLR
comp=Z,438nm,16.0s
TUQ Turquoise Moun 35.93 104 P **P** **06 14 52.3 -0.3**
baz=317
YSS Yuzh-Sakhalins 35.99 282 *e*P **P** **06 14 52.1 -0.6**
YSS *e**SP **pP** **06 15 05.5 +1.4**
YSS *e* 06 16 12.7
YSS *e*S **S** **06 20 24.5 -3.8**
YSS *e*SSS SSS 06 23 20.8
YSS pmax pmax
comp=Z,40nm,0.9s
YSS MLR MLR
comp=N,200nm,17.0s
YSS MLR MLR
comp=Z,600nm,17.0s
YSS MLR MLR
comp=E,400nm,19.0s
YSS Yuzh-Sakhalins 35.99 282 P **P** **06 14 52.4 -0.4**
SZCU Shurtz Canyon 36.01 99 P **P** **06 14 54.3 +1.0**
CIS Catalina Islan 36.05 109 P **P** **06 14 53.5 0.0**
baz=319
HEC Hector,Ludlow 36.14 105 P **P** **06 14 54.6 +0.3**
baz=317
LCMT Little Creek M 36.33 100 P **P** **06 14 58.4 +2.4**
SRU San Rafael Swe 36.45 95 P **P** **06 14 58.7 +1.6**
SRU pmax pmax
comp=Z,55nm,1.0s
SRU San Rafael Swe 36.45 95 P **P** **06 14 58.7 +1.6**
K22A Casper 36.48 87 lAmb lAmb 06 15 12.8
comp=Z,21nm,1.0s
K22A Casper 36.48 87 P **P** **06 14 57.1 -0.2**
baz=309
GMRC Granite Mounta 36.55 105 P **P** **06 14 58.0 +0.1**
baz=317
MURC Murrieta 36.58 108 P **P** **06 14 58.7 +0.7**
baz=319
BELC Belle Mtn. Jos 36.94 106 P **P** **06 15 01.6 +0.4**
baz=318
PFO Pinyon Flats O 36.97 107 P **P** **06 15 03.6 +2.2**
comp=Z,4.5nm,0.9s,baz=298,slow=6.5,SNR=7.1
PFO ScP **ScP** **06 21 05.4 +0.2**
comp=Z,2.2nm,0.9s,baz=280,slow=2.2,SNR=4.4
PFO LR LR 06 27 17.6
comp=Z,1μm,20.2s,baz=314,slow=31
PFO Pinyon Flats O 36.97 107 P **P** **06 15 02.4 +0.9**
PFO Pinyon Flats O 36.97 107 P **P** **06 15 02.4 +0.9**
baz=319
XPFO Pion Flat 36.98 107 P **P** **06 15 02.8 +1.3**
RSSD Black Hills 37.02 83 P **P** **06 15 03.0 +1.1**
RSSD pmax pmax
comp=Z,26nm,1.1s
RSSD Black Hills 37.02 83 P **P** **06 15 03.0 +1.1**
RSSD lAmb lAmb 06 15 17.5
comp=Z,26nm,1.1s
RSSD Black Hills 37.02 83 P **P** **06 15 01.7 -0.1**
baz=307
O20A White River Ci 37.09 91 P **P** **06 15 03.4 +0.9**
baz=311,SNR=15
109C Camp Elliot, M 37.16 108 P **P** **06 15 03.2 +0.3**
109C lAmb lAmb 06 15 19.6
comp=Z,38nm,1.4s
109C Camp Elliot, M 37.16 108 P **P** **06 15 03.7 +0.8**
baz=319
U15A North Rim 37.28 99 P **P** **06 15 03.6 -0.6**
U15A lAmb lAmb 06 15 16.0
comp=Z,24nm,1.2s
IRM Iron Mountain 37.30 105 P **P** **06 15 05.5 +1.3**
baz=318,SNR=7.0
W13A Hualapai Mount 37.32 103 lAmb lAmb 06 15 16.8
comp=Z,26nm,1.2s
GRNR Gornyy 37.44 291⇑ *i*P **P** **06 15 04.3 -0.8**
GRNR *e* 06 16 27.0
GRNR *e*S **S** **06 20 51.4 +1.0**
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR smax smax
comp=N,4.0nm,0.9s
GRNR MLR MLR
comp=Z,500nm,11.0s
BC3 Big Chuckawall 37.50 106 P **P** **06 15 05.8 -0.1**
baz=318
MONP2 Monument Peak 37.53 108 P **P** **06 15 06.9 +0.6**
baz=319
SWSC Sam W. Stewart 37.84 107 P **P** **06 15 09.4 +0.8**
baz=319
TULEG Thule 37.85 22 P **P** **06 15 07.6 -0.6**
TULEG lAmb lAmb 06 15 15.8
comp=Z,27nm,1.2s
IKP In-Ko-Pah, Jac 37.89 107 P **P** **06 15 09.7 +0.5**
baz=319
N23A Red Feather La 37.93 89 P **P** **06 15 10.3 +0.6**
N23A lAmb lAmb 06 15 26.3
comp=Z,34nm,1.4s
N23A Red Feather La 37.93 89 P **P** **06 15 09.4 -0.3**
baz=310
Y12C Blythe 37.95 105 P **P** **06 15 09.2 -0.3**
Y12C lAmb lAmb 06 15 22.0
comp=Z,39nm,1.2s
Y12C Blythe 37.95 105 P **P** **06 15 09.9 +0.3**
baz=318
ULM Lac du Bonnet 38.11 69 *i* P **P** **06 15 11.6 +0.8**
ULM Lac du Bonnet 38.11 69 P **P** **06 15 11.2 +0.4**
comp=Z,14nm,0.9s,baz=300,slow=8.8,SNR=22
ULM Lac du Bonnet 38.11 69 lAmb lAmb 06 15 29.9
comp=Z,28nm,0.9s
GLA Glamis 38.30 106 P **P** **06 15 13.4 +0.8**
GLA pmax pmax
comp=Z,29nm,1.3s
GLA Glamis 38.30 106 P **P** **06 15 13.4 +0.8**
GLA lAmb lAmb 06 15 24.8
comp=Z,29nm,1.2s
GLA Glamis 38.30 106 P **P** **06 15 13.0 +0.4**
baz=319
WUAZ Wupatki 38.45 100 P **P** **06 15 13.7 -0.3**
WUAZ lAmb lAmb 06 15 26.2
comp=Z,30nm,1.0s
WUAZ Wupatki 38.45 100 P **P** **06 15 14.8 +0.8**
baz=316,SNR=6.0
Y14A Wickenburg 38.66 103 P **P** **06 15 16.1 +0.5**
ERM Erimo 38.71 275 *ce*P **P** **06 15 13.7 -2.2**
ERM pmax pmax
comp=Z,25nm,0.8s
ISCO Idaho Springs 38.83 90 P **P** **06 15 17.2 -0.1**
baz=312
MVCO Mesa Verde 38.91 95 lAmb lAmb 06 15 34.0
comp=Z,30nm,1.1s
MVCO Mesa Verde 38.91 95 P **P** **06 15 18.3 +0.4**
baz=314
AGMN Agassiz Nation 39.20 72 P **P** **06 15 19.9 0.0**
AGMN lAmb lAmb 06 15 30.0
comp=Z,45nm,1.1s
S22A 4UR Ranch, Cre 39.51 93 P **P** **06 15 22.5 -0.4**
baz=313
Q24A Divide 39.66 90 P **P** **06 15 23.8 -0.4**
baz=312
W18A Petrified Fore 39.67 99 P **P** **06 15 25.5 +1.3**
W18A Petrified Fore 39.67 99 P **P** **06 15 24.7 +0.5**
baz=316
SUSD Miller 39.73 79 P **P** **06 15 24.4 0.0**
baz=308,SNR=5.4
X18A Snowflake 39.97 99 lAmb lAmb 06 15 39.1
comp=Z,31nm,1.1s
OGNE Ogallala 40.16 85 P **P** **06 15 28.6 +0.5**
baz=311
214A Organ Pipe Nat 40.24 105 P **P** **06 15 29.1 +0.4**
214A Organ Pipe Nat 40.24 105 P **P** **06 15 29.2 +0.4**
baz=319
SDCO Great Sand Dun 40.28 92 P **P** **06 15 29.4 +0.1**
baz=313
TEY Ternei 40.59 283⇑ *e*P **P** **06 15 30.3 -1.1**
TEY pmax pmax
comp=N,10.0nm,1.1s
TEY pmax pmax
comp=Z,20nm,1.1s
TEY pmax pmax
comp=E,20nm,1.1s
ZEA Zeya 40.67 300 *e*P **P** **06 15 30.8 -1.2**
ZEA pmax pmax
comp=Z,29nm,1.0s
ZEA MLR MLR
comp=Z,1μm,14.0s
ZEA MLR MLR
comp=N,1μm,15.0s
KLR Kul'dur 40.80 291 *c i*P **P** **06 15 32.4 -0.8**
KLR pmax pmax
comp=Z,35nm,1.0s
KLR MLR MLR
comp=Z,956nm,19.0s
KSCO Kaye Shedlock' 41.09 88 lAmb lAmb 06 15 52.7
comp=Z,30nm,1.1s
KSCO Kaye Shedlock' 41.09 88 P **P** **06 15 36.0 +0.2**
baz=312
TUC Tucson 41.12 102 P **P** **06 15 36.4 +0.3**
TUC Tucson 41.12 102 P **P** **06 15 36.4 +0.3**
TUC Tucson 41.12 102 P **P** **06 15 36.7 +0.6**
baz=318
KULLO Kullorsuaq 41.31 23⇑ *i*P **P** **06 15 37.6 +0.6**
KULLO pmax pmax
comp=Z,51nm,0.9s
KULLO Kullorsuaq 41.31 23⇑ *i*P **P** **06 15 37.6 +0.6**
comp=Z,51nm,0.9s
T25A Trinidad 41.32 92 P **P** **06 15 38.4 +0.5**
baz=314
ECSD EROS Data Cent 41.49 78 P **P** **06 15 39.0 +0.1**
ECSD EROS Data Cent 41.49 78 P **P** **06 15 39.4 +0.5**
baz=309
ANMO Albuquerque 41.68 96 P **P** **06 15 41.7 +0.9**
comp=Z,2.1nm,0.9s,baz=325,slow=14,SNR=3.2
ANMO PcP **PcP** **06 17 38.0 +1.2**
comp=Z,8.3nm,0.9s,baz=266,slow=2.9,SNR=11
ANMO ScP **ScP** **06 21 22.1 -1.3**
comp=Z,3.0nm,1.1s,baz=323,slow=9.1,SNR=4.2
ANMO Albuquerque 41.68 96 P **P** **06 15 41.2 +0.4**
baz=316
EYMN Ely 41.79 70 lAmb lAmb 06 15 42.7
comp=Z,42nm,0.9s
EYMN Ely 41.79 70 P **P** **06 15 41.4 +0.1**
baz=306,SNR=12
LENM Lemitar 41.94 97 P **P** **06 15 43.9 +1.0**
LPM Los Pinos Moun 42.03 97 P **P** **06 15 44.0 +0.3**
Y22D IRIS PASSCAL I 42.03 97 P **P** **06 15 45.6 +2.0**
Y22D lAmb lAmb 06 16 01.0
comp=Z,31nm,0.7s
Y22D IRIS PASSCAL I 42.03 97 P **P** **06 15 44.2 +0.5**
baz=316
BGNE Belgrade 42.09 82 P **P** **06 15 44.3 +0.4**
baz=310
BNM Barren Site 42.15 97 P **P** **06 15 45.5 +0.9**
NOR Nord 42.43 7⇑ *i*P **P** **06 15 46.6 +0.5**
comp=Z,40nm,1.0s
E38A The Farm, Brul 42.56 72 lAmb lAmb 06 15 48.7
comp=Z,39nm,0.9s
121A Cookes Peak, D 42.66 99 lAmb lAmb 06 16 01.1
comp=Z,65nm,1.5s
121A Cookes Peak, D 42.66 99 P **P** **06 15 49.2 +0.4**
baz=318
SPMN Marine on St. 42.71 74 P **P** **06 15 49.1 +0.3**
baz=308
CBKS Cedar Bluff 42.89 86 lAmb lAmb 06 16 06.9
comp=Z,38nm,1.1s
CBKS Cedar Bluff 42.89 86 P **P** **06 15 50.3 -0.1**
baz=312
H11N2 WAKE ISLAND Hy 43.03 229 T T 07 01 46.0
baz=28,slow=76,SNR=418
H11N3 WAKE ISLAND Hy 43.04 229 T T 07 01 41.3
baz=28,slow=76,SNR=413
H11N1 WAKE ISLAND Hy 43.05 229 T T 07 01 48.0
baz=28,slow=76,SNR=369
USA0B Ussuriysk Arra 43.69 285 P **P** **06 15 56.0 -0.7**
USA0B pmax pmax
comp=Z,8.0nm,1.0s
USA0B Ussuriysk Arra 43.69 285 P **P** **06 15 56.0 -0.7**
USRK Ussuriysk Ar. 43.69 285 P **P** **06 15 55.9 -0.9**
comp=Z,5.1nm,0.7s,baz=59,slow=9.6,SNR=12
USRK LR LR 06 36 52.3
comp=Z,406nm,18.2s,baz=39,slow=40
G40A Rib Lake 44.12 72 lAmb lAmb 06 16 10.2
comp=Z,49nm,1.2s
H11S1 WAKE ISLAND Hy 44.20 228 T T 07 03 31.2
baz=27,slow=76,SNR=122
H11S2 WAKE ISLAND Hy 44.21 228 T T 07 03 09.1
baz=27,slow=76,SNR=100
H11S3 WAKE ISLAND Hy 44.21 228 T T 07 03 13.7
baz=27,slow=76,SNR=71
KSU1 Kansas State U 44.50 83 P **P** **06 16 03.8 +0.5**
baz=312
MSTX Muleshoe 44.50 94 P **P** **06 16 03.5 0.0**
baz=316
SCIA State Center 44.58 78 P **P** **06 16 03.9 0.0**
baz=311
MNTX Cornudas Mount 44.65 98 P **P** **06 16 06.2 +1.6**
MNTX Cornudas Mount 44.65 98 P **P** **06 16 05.8 +1.2**
baz=318,SNR=9.1
BOD Bodaibo 44.69 311 *e*P **P** **06 16 02.6 -1.9**
BOD pmax pmax
comp=Z,20nm,1.4s
I40A Norwalk 44.76 74 lAmb lAmb 06 16 06.4
comp=Z,32nm,0.8s
MDJ Mudanjiang 44.76 287 P **P** **06 16 04.8 -0.5**
MSHR Mys Shultsa 45.20 284 *i* P **P** **06 16 08.0 -0.7**
MJAR Matsushiro Arr 45.22 273 P **P** **06 16 09.1 +0.1**
comp=Z,13nm,0.8s,baz=35,slow=5.5,SNR=26
MJAR LR LR 06 33 59.4
comp=Z,521nm,21.8s,baz=55,slow=35
MJAR Matsushiro Arr 45.22 273 lAmb lAmb 06 16 12.8
comp=Z,9.9nm,0.8s
MAJO Matsushiro 45.22 273 *c i*P **P** **06 16 09.1 +0.1**
MAJO pmax pmax
comp=Z,61nm,0.9s
MAJO Matsushiro 45.22 273 P **P** **06 16 09.1 +0.1**
MAT Matsushiro 45.22 273 P **P** **06 16 08.9 -0.1**
MAT *e*S **S** **06 22 47.0 +1.1**
JFWS Jewell Farm 45.60 75 P **P** **06 16 11.8 -0.2**
baz=311
E44A Grand Marais A 45.61 68 P **P** **06 16 11.9 -0.1**
baz=309
I42A Draeger Farm, 45.71 73 lAmb lAmb 06 16 23.3
comp=Z,48nm,1.1s
WMOK Wichita Mounta 46.26 90 P **P** **06 16 17.7 +0.4**
baz=316
F45A CMU Biological 46.42 69 P **P** **06 16 18.8 +0.4**
baz=310
DAG Danmarks Havn 46.43 11 *i* P **P** **06 16 18.2 +0.1**
DAG pmax pmax
comp=Z,90nm,1.1s
DAG Danmarks Havn 46.43 11 *i* P **P** **06 16 18.2 +0.1**
comp=Z,90nm,1.1s
KBS Kingsbay 46.44 2 P **P** **06 16 19.7 +1.6**
KBS pmax pmax
comp=Z,85nm,1.1s
KBS Kingsbay 46.44 2 *e*P **P** **06 16 19.4 +1.3**
KBS Kingsbay 46.44 2 P **P** **06 16 19.7 +1.6**
SUMG Summit 46.69 21 P **P** **06 16 21.4 +0.8**
SUMG pmax pmax
comp=Z,92nm,1.2s
SUMG Summit 46.69 21 *i* P **P** **06 16 21.3 +0.7**
comp=Z,188nm,1.1s
SUMG Summit 46.69 21 P **P** **06 16 21.4 +0.8**
INU Inuyama 46.74 272 P **P** **06 16 20.8 -0.2**
INU lAmb lAmb 06 16 39.4
comp=Z,16nm,0.8s
TUL1 Leonard 47.16 86 lAmb lAmb 06 16 42.0
comp=Z,16nm,0.8s
TUL1 Leonard 47.16 86 P **P** **06 16 24.0 -0.4**
baz=315
SPA0 Spitsbergen Ar 47.26 1 *e*P **P** **06 16 25.5 +0.9**
ABTX Abilene, Hawle 47.28 92 P **P** **06 16 25.2 -0.1**
baz=317
H46A Fife Lake 47.32 70 P **P** **06 16 24.7 -0.7**
baz=311
L44A Lake County Fo 47.38 74 P **P** **06 16 25.6 -0.3**
baz=312
TX31 Lajitas Ar. Si 47.39 99 lAmb lAmb 06 16 39.2
comp=Z,18nm,1.0s
TX32 Lajitas Array 47.39 99 lAmb lAmb 06 16 39.2
comp=Z,18nm,1.0s
TXAR Lajitas Array 47.40 99 P **P** **06 16 27.7 +1.4**
comp=Z,3.9nm,0.7s,baz=304,slow=5.3,SNR=16

TXAR PcP PcP 06 17 56.9 +0.5
comp=Z,2.5nm,0.8s,baz=318,slow=3.3,SNR=6.3
TXAR ScP ScP 06 21 47.8 +1.0
comp=Z,1.3nm,0.9s,baz=268,slow=4.8,SNR=6.0
TXAR LR LR 06 35 05.6
comp=Z,698nm,19.6s,baz=0.0,slow=34
GLMI Grayling 47.46 69 P P 06 16 26.3 -0.2
baz=311
CN2 Changchun 47.57 289 *e*P P 06 16 26.5 -0.9
CN2 *ep*P pP 06 16 38.4 -0.6
CN2 *eS* S 06 23 19.2 -0.2
CN2 pmax pmax
comp=Z,50nm,1.0s
CN2 pmax pmax
comp=Z,190nm,3.0s
CN2 LR LR
comp=Z,530nm,20.0s
CN2 LR LR
comp=Z,650nm,20.0s
CN2 LR LR
comp=Z,810nm,20.0s
I46A Reed City 47.58 71 P P 06 16 27.1 -0.4
baz=311
SFJD Kangerlussuaq 47.63 30 P P 06 16 28.6 +1.1
SFJD pmax pmax
comp=Z,43nm,1.0s
SFJD Kangerlussuaq 47.63 30 *i*P P 06 16 28.4 +0.9
SFJD Kangerlussuaq 47.63 30 P P 06 16 28.6 +1.1
HDIL Hopedale 47.69 77 P P 06 16 27.8 -0.6
baz=312,SNR=10.0
E48A Lockeyer 47.70 66 P P 06 16 28.1 -0.2
baz=310
H47A Mio 47.83 69 P P 06 16 28.5 -0.9
baz=311
J46A Howard City 47.86 71 P P 06 16 28.6 -1.0
baz=311
F48A Evansville 47.88 67 P P 06 16 29.2 -0.5
baz=310
MATQ Matagami 47.94 60 P P 06 16 29.5 -0.7
baz=310
HHAR Hobbs 47.97 84 IAmb IAmb 06 16 44.5
comp=Z,21nm,1.0s
I47A Gladwin 48.04 70 P P 06 16 30.2 -0.8
baz=311
F49A Sandfield 48.23 67 P P 06 16 31.6 -0.9
baz=311
H48A Harrisville 48.24 69 P P 06 16 31.2 -1.3
baz=311
CCM Cathedral Cave 48.29 81 P P 06 16 32.7 -0.3
baz=314
MGMO Mountain Grove 48.32 82 IAmb IAmb 06 16 46.7
comp=Z,20nm,1.0s
I48A Sherman Twp 48.37 69 P P 06 16 33.0 -0.5
baz=311
J47A Sunmer 48.39 71 P P 06 16 33.3 -0.4
baz=312
L46A Eue Claire 48.39 73 P P 06 16 33.4 -0.3
baz=312
O44A Mansfield 48.43 76 IAmb IAmb 06 16 34.5
comp=Z,23nm,0.8s
HSPB Hornsund (broa 48.43 1 *e*P P 06 16 33.7 +0.2
D50A G1974 Best Tow 48.48 64 P P 06 16 33.4 -1.0
baz=310
U40A Yellville 48.55 83 IAmb IAmb 06 16 48.7
comp=Z,17nm,0.9s
U40A Yellville 48.55 83 P P 06 16 34.3 -0.8
baz=315
K47A Vermontville 48.67 72 P P 06 16 35.4 -0.5
baz=312
LSQQ Lebel-sur-Quev 48.72 60 P P 06 16 35.6 -0.6
baz=310
JCT Junction City 48.76 94 IAmb IAmb 06 16 48.7
comp=Z,33nm,1.1s
JCT Junction City 48.76 94 P P 06 16 36.6 -0.2
baz=318
D51A Lot 18 Range I 48.77 64 P P 06 16 35.7 -0.8
baz=311
W39A Magazine 48.83 85 IAmb IAmb 06 16 52.3
comp=Z,41nm,1.2s
W39A Magazine 48.83 85 P P 06 16 37.2 0.0
baz=315
HOPEN Hopen 48.91 358 *e*P P 06 16 38.6 +1.3
J48A Bridge Port 48.91 70 P P 06 16 37.6 -0.1
baz=312
WHTX Lake Whitney, 49.01 91 P P 06 16 38.6 0.0
baz=317
I49A Point Hope 49.01 69 P P 06 16 37.6 -0.8
baz=312
L47A Sherwood 49.02 72 P P 06 16 38.2 -0.3
baz=312
SFIN Lafayette 49.04 75 P P 06 16 38.5 -0.2
baz=313
K48A Perry 49.06 71 P P 06 16 38.7 -0.1
baz=312
E51A G1948 Merrick 49.07 64 P P 06 16 38.6 -0.3
baz=311
VLDQ Val d'Or 49.09 62 IAmb IAmb 06 16 37.9
comp=Z,29nm,1.1s
M47A Cromwell 49.20 73 P P 06 16 39.7 -0.3
baz=313
FCAR Ozark Folk Cen 49.29 83 P P 06 16 39.7 -1.0
FCAR IAmb IAmb 06 16 54.3
comp=Z,31nm,1.1s
MIAR Mount Ida 49.41 86 IAmb IAmb 06 16 56.5
comp=Z,21nm,1.1s
MIAR Mount Ida 49.41 86 P P 06 16 41.9 +0.2
baz=316
K49A Clarkson 49.44 71 P P 06 16 40.9 -0.8
baz=312
L48A N Adams 49.47 72 P P 06 16 42.0 0.0
baz=313
N47A Urbana 49.49 74 P P 06 16 41.5 -0.6
baz=313
P46A Rosedale 49.50 76 IAmb IAmb 06 17 00.1
comp=Z,34nm,0.9s
M48A Edgerton 49.62 73 P P 06 16 42.5 -0.7
baz=313
PBMO Poplar Bluff 49.64 81 IAmb IAmb 06 16 57.2
comp=Z,32nm,1.3s
E52A Mattawa 49.67 64 P P 06 16 43.1 -0.4
baz=312
S44A Carbondale 49.67 79 IAmb IAmb 06 16 57.4
comp=Z,29nm,0.8s
L49A Milan 49.72 71 P P 06 16 43.7 -0.2
baz=313
W41B Gary Mavity, V 49.73 84 P P 06 16 43.5 -0.6
baz=316
SCHQ Schefferville 49.76 49 P P 06 16 44.1 0.0
comp=Z,18nm,1.2s,baz=344,slow=7.1,SNR=8.1
SCHQ Schefferville 49.76 49 IAmb IAmb 06 16 54.2
comp=Z,12nm,0.8s
435B Jarrell 49.82 92 P P 06 16 44.8 0.0
baz=318
N48A Decatur 49.87 73 P P 06 16 44.0 -1.1
baz=313,SNR=5.6
X40A Basin Creek Fa 49.88 85 P P 06 16 45.0 -0.2
baz=316
K50A Casco 49.90 70 P P 06 16 44.4 -0.8
baz=312
SNY Shenyang 49.91 288 ⇑P P 06 16 44.3 -1.0
SNY pmax pmax
comp=Z,60nm,1.1s
SNY pmax pmax
comp=Z,510nm,3.3s
SNY LR LR
comp=Z,630nm,20.4s
SNY LR LR
comp=Z,570nm,18.0s
SNY LR LR
comp=Z,1μm,18.8s
M49A Liberty Center 50.03 72 P P 06 16 46.3 0.0
baz=313
I51A Listowel 50.07 68 P P 06 16 46.7 +0.1
baz=312
E53A Dumoine, Ponti 50.12 63 P P 06 16 46.7 -0.2
baz=312
D54A Lac Fusel, La 50.13 62 P P 06 16 46.8 -0.2
baz=312
ALGO Algonquin Park 50.20 64 P P 06 16 47.4 -0.1
baz=312
O48A Farmland 50.21 74 P P 06 16 46.4 -1.3
baz=314,SNR=5.4
L50A Kingsville 50.29 71 P P 06 16 47.8 -0.5
baz=313
N49A Columbus Grove 50.30 73 P P 06 16 48.0 -0.3
baz=313
E54A Lac Daplat, Po 50.33 63 P P 06 16 48.0 -0.5
baz=312
I52A Shelburne 50.34 67 P P 06 16 48.5 -0.1
baz=312
SADO Sadowa 50.42 66 P P 06 16 49.1 -0.1
comp=Z,15nm,0.8s,baz=297,slow=3.5,SNR=5.4
SADO Sadowa 50.42 66 IAmb IAmb 06 16 49.5
comp=Z,30nm,1.1s
G53A Haliburton 50.46 65 P P 06 16 49.5 0.0
baz=312
KS19 Wonju Array Si 50.48 281 IAmb IAmb 06 16 52.0
comp=Z,22nm,0.9s
KSRS Korea Array 50.49 281 P P 06 16 50.2 +0.5
comp=Z,13nm,0.8s,baz=49,slow=7.0,SNR=52
KSRS LR LR 06 37 12.2
comp=Z,285nm,22.0s,baz=10,slow=35
K51A Iona Station 50.54 69 P P 06 16 50.2 +0.1
baz=313
G54A Lake Saint Pet 50.55 65 P P 06 16 50.5 +0.3
baz=312
M50A Fremont 50.60 72 P P 06 16 50.6 0.0
baz=313
P48A Milroy 50.61 75 P P 06 16 49.6 -1.1
baz=314
O49A Covington 50.72 74 P P 06 16 50.4 -1.1
baz=314
Z41A Richland Creek 50.78 86 P P 06 16 51.3 -0.7
baz=317
NATX Nacogdoches 50.79 89 P P 06 16 51.5 -0.7
baz=317
Q48A North Vernon 50.80 76 P P 06 16 51.5 -0.7
baz=314
D55A Sainte-Anne-du 50.82 61 P P 06 16 51.7 -0.4
baz=312
H53A Bobcaygeon 50.85 66 P P 06 16 51.3 -1.1
baz=313
E55A Montcerf-Lytto 50.90 62 P P 06 16 52.3 -0.5
baz=312
K52A Tillsonburg 50.93 69 P P 06 16 52.4 -0.6
baz=313
N50A Nevada 50.97 72 P P 06 16 53.1 -0.3
baz=314
WCI Wyandotte Cave 50.98 77 P P 06 16 53.1 -0.3
baz=314
X43A Marvell 50.98 84 P P 06 16 53.4 -0.1
baz=316
M51A Elyria 51.12 71 P P 06 16 53.9 -0.6
baz=314
O50A Cable 51.14 73 P P 06 16 53.8 -0.9
baz=314
D56A ZEC Mazanza, M 51.16 61 P P 06 16 54.2 -0.6
baz=312
F55A Otter Lake 51.17 63 P P 06 16 53.9 -0.8
baz=312
Q49A Aurora 51.22 75 P P 06 16 54.9 -0.4
baz=314
N51A Ashland 51.30 72 P P 06 16 55.1 -0.7
baz=314
E56A St. Veronique 51.36 62 P P 06 16 55.5 -0.8
baz=313
G55A Calabogie 51.37 64 P P 06 16 55.8 -0.5
baz=313
P50A Jamestown 51.41 74 P P 06 16 56.2 -0.5
baz=314
M52A Chesterland 51.42 70 P P 06 16 55.8 -0.9
baz=314
ACSO Alum Creek Sta 51.44 73 P P 06 16 55.8 -1.1
baz=314
SCO Scoresbysund 51.46 17 *i*P P 06 16 57.7 +1.1
SCO pmax pmax
comp=Z,150nm,1.5s
SCO Scoresbysund 51.46 17 *i* P P 06 16 57.7 +1.1
comp=Z,148nm,1.5s
TJN Taejon 51.56 281 *ce*P P 06 16 58.1 +0.3
R49A Shelbyville 51.56 76 P P 06 16 56.0 -1.8
baz=315
I55A Frankford 51.57 65 P P 06 16 56.9 -0.9
baz=313
WVT Waverly 51.58 80 P P 06 16 57.9 -0.1
WVT pmax pmax
comp=Z,47nm,0.9s
WVT Waverly 51.58 80 P P 06 16 57.9 -0.1
WVT Waverly 51.58 80 P P 06 16 58.1 +0.1
baz=316
H55A Tweed 51.60 65 P P 06 16 57.6 -0.5
baz=313
D57A Chemin Vers le 51.62 61 P P 06 16 57.6 -0.6
baz=313
O51A Pataskala 51.70 72 P P 06 16 58.7 -0.2
baz=314
L53A Girard 51.74 69 P P 06 16 58.3 -0.8
baz=314
N52A McGinn's Farm, 51.75 71 P P 06 16 58.5 -0.7
baz=314
OXF Oxford 51.83 82 IAmb IAmb 06 17 15.3
comp=Z,38nm,0.9s
OXF Oxford 51.83 82 P P 06 16 59.6 -0.3
baz=316
Q50A Georgetown 51.84 75 P P 06 16 59.5 -0.5
baz=315
S49A Springfield 51.85 76 P P 06 16 59.5 -0.5
baz=315
M53A Wi Miller and 51.87 70 P P 06 16 59.6 -0.5
baz=314
JNU Nakatsue 51.88 275 P P 06 17 00.3 0.0
JNU IAmb IAmb 06 17 02.4
comp=Z,26nm,1.0s
E57A Chemin Saint G 51.90 61 P P 06 16 60.0 -0.4
baz=313
P51A Williamsport 51.91 73 P P 06 17 00.0 -0.4
baz=314
LATQ La Tuque 51.93 60 P P 06 16 59.7 -0.8
baz=313
R50A Paris 52.04 75 IAmb IAmb 06 17 11.1
comp=Z,54nm,1.4s
R50A Paris 52.04 75 P P 06 17 01.0 -0.5
baz=315
L54A Sinclairville 52.05 68 P P 06 17 00.8 -0.6
baz=314
H56A Elgin 52.06 64 P P 06 17 00.8 -0.6
baz=313
Q51A Peebles 52.07 74 P P 06 17 01.0 -0.6
baz=315,SNR=8.5
D58A Chemin du LacG 52.08 60 P P 06 17 00.8 -0.8
baz=313
K54A Basiliko Farm, 52.13 68 P P 06 17 01.4 -0.7
baz=314
J55A Hilton 52.15 66 P P 06 17 01.7 -0.4
baz=314
O52A Adamsville 52.15 72 P P 06 17 01.1 -1.1
baz=314
T49A Edmonton 52.19 77 P P 06 17 01.0 -1.6
baz=315
ANGG Ammassalik, Gr 52.21 26 IAmb IAmb 06 17 02.6
comp=Z,36nm,1.1s
N53A Lisbon 52.22 71 P P 06 17 01.5 -1.2
baz=314
P52A Corning 52.32 73 P P 06 17 02.6 -0.9
baz=314
G57A Newington 52.37 63 P P 06 17 03.1 -0.6
baz=313
M54A Oil Creek Stat 52.37 69 P P 06 17 03.5 -0.3
baz=314
E58A La Victoria 52.37 61 P P 06 17 02.4 -1.3
baz=313
K55A Perry 52.38 67 P P 06 17 03.8 -0.1
baz=314
O53A New Philadelph 52.40 71 P P 06 17 03.6 -0.4
baz=314
S50A Richmond 52.43 76 P P 06 17 03.7 -0.6
baz=315
V48A Smith Brothers 52.43 79 IAmb IAmb 06 17 18.2
comp=Z,27nm,1.2s
R51A Hillsboro 52.45 75 P P 06 17 04.0 -0.5
baz=315,SNR=14
CLTN Cedars of Leba 52.46 79 IAmb IAmb 06 17 15.4
comp=Z,34nm,1.1s
U49A Red Boiling Sp 52.47 78 P P 06 17 04.3 -0.4
baz=316
IVI Ivigtut 52.50 34 IAmb IAmb 06 17 06.7
comp=Z,36nm,0.9s
L55A Hinsdale 52.56 68 P P 06 17 04.8 -0.5
baz=314
N54A Moraine State 52.57 70 P P 06 17 04.7 -0.6
baz=314
H57A Richville 52.60 64 P P 06 17 04.7 -0.7
baz=314
J56A Wolcott 52.65 66 P P 06 17 04.8 -1.0
baz=314
T50A Nancy 52.65 77 P P 06 17 05.5 -0.4
baz=315
D59A Saint-Raymond 52.66 59 P P 06 17 05.4 -0.4
baz=314
E59A St. Maurice 52.68 60 P P 06 17 05.1 -1.0
baz=314
Q52A Bidwell 52.72 73 P P 06 17 05.9 -0.5
baz=315
K56A Middlesex 52.80 67 P P 06 17 06.3 -0.7
baz=314
G58A Ormstown 52.81 62 P P 06 17 05.9 -1.2
baz=314,SNR=5.6
I57A Carthage 52.82 64 P P 06 17 06.7 -0.4
baz=314,SNR=5.2
P53A Whipple 52.83 72 P P 06 17 06.8 -0.4
baz=315
M55A Ridgway 52.88 69 P P 06 17 07.3 -0.3
baz=314,SNR=5.4
O54A Avella 52.90 71 IAmb IAmb 06 17 17.2
comp=Z,36nm,0.9s
O54A Avella 52.90 71 P P 06 17 07.3 -0.5
baz=315
S51A Beattyville 52.91 75 P P 06 17 07.3 -0.6
baz=315
V49A McMinnville 52.94 79 P P 06 17 07.6 -0.5
baz=316
R52A Catlettsburg 52.95 74 P P 06 17 07.5 -0.6
baz=315
F59A Saint Guilaume 52.98 61 P P 06 17 07.1 -1.1
baz=314
J57A Williamstown 53.01 65 P P 06 17 07.7 -0.8
baz=314
L56A Greenwood 53.06 67 P P 06 17 08.7 -0.3
baz=314,SNR=5.2
U50A Jamestown 53.07 77 P P 06 17 08.8 -0.3
baz=316
D60A Saint Jean D'O 53.18 59 P P 06 17 09.0 -0.6
baz=314
M56A Emporium 53.18 68 P P 06 17 09.4 -0.4
baz=314,SNR=5.2
T51A Gray 53.19 76 P P 06 17 09.4 -0.6
baz=316
W49A Belvidere 53.19 80 P P 06 17 09.5 -0.5
baz=316
Q53A Leroy 53.20 73 P P 06 17 09.3 -0.6
baz=315
TLY Talaya 53.22 309 *c i*P P 06 17 09.8 -0.2
TLY MLR MLR
comp=Z,610nm,22.0s
TLY Talaya 53.22 309 P P 06 17 10.0 0.0
TLY IAmb IAmb 06 17 11.2
comp=Z,26nm,0.8s
N55A Marion Center 53.24 69 P P 06 17 09.3 -1.0
baz=315
P54A Burton 53.25 72 P P 06 17 09.6 -0.8
baz=315
H58A Gabriels 53.26 63 P P 06 17 09.5 -0.9
baz=314
E60A Ste Agathe de 53.29 60 P P 06 17 09.7 -0.9
baz=314
G59A Clarenceville 53.31 62 P P 06 17 09.4 -1.3
baz=314
F60A Warwick 53.32 60 P P 06 17 10.0 -0.8
baz=314
R53A Hurricane 53.34 74 P P 06 17 10.4 -0.6
baz=315
D61A St Aubert, Com 53.34 58 P P 06 17 10.4 -0.4
baz=314,SNR=5.8
H59A Cadyville 53.35 63 P P 06 17 10.4 -0.6
baz=314
J58A Remsen 53.41 65 P P 06 17 11.6 +0.1
baz=314,SNR=5.1
V50A Pikeville 53.46 78 P P 06 17 11.3 -0.6
baz=316
O55A Ligonier 53.47 70 P P 06 17 11.0 -0.9
baz=315
Q54A Coxs Mills 53.49 72 P P 06 17 11.5 -0.6
baz=315
N56A West Decatur 53.52 69 P P 06 17 11.9 -0.4
baz=315,SNR=6.6
L57A Andrews Acres 53.54 67 P P 06 17 12.0 -0.5
baz=315
NCB Newcomb 53.54 64 IAmb IAmb 06 17 13.6
comp=Z,49nm,1.2s
MCWV Mont Chateau 53.56 71 P P 06 17 12.2 -0.4
baz=315
U51A La Follette 53.57 77 P P 06 17 12.4 -0.3
baz=316
T52A Hallie 53.63 75 P P 06 17 13.1 0.0
baz=316
K58A Earlville 53.64 66 P P 06 17 13.4 +0.2
baz=314
P55A Reedsville 53.68 71 P P 06 17 13.3 -0.3
baz=315
W50A Signal Mountai 53.68 79 IAmb IAmb 06 17 27.4
comp=Z,38nm,1.1s
W50A Signal Mountai 53.68 79 P P 06 17 13.3 -0.3
baz=316
TZTN Tazewell 53.71 76 P P 06 17 12.6 -1.2
TZTN IAmb IAmb 06 17 29.2
comp=Z,35nm,1.1s
TZTN Tazewell 53.71 76 P P 06 17 14.4 +0.6
baz=316
E61A Lac Etchemin 53.73 59 P P 06 17 13.4 -0.4
baz=314
G60A Masonville 53.73 61 P P 06 17 13.2 -0.5
baz=314
J59A Piesco 53.75 64 IAmb IAmb 06 17 14.9
comp=Z,32nm,0.9s
J59A Piesco 53.75 64 P P 06 17 13.2 -0.7
baz=314
V51A Loudon 53.79 78 P P 06 17 13.8 -0.5
baz=316
F61A St Evariste 53.80 60 P P 06 17 13.6 -0.7
baz=314
O56A Blue Knob Stat 53.83 70 P P 06 17 14.0 -0.6
baz=315
M57A Sunshine Farm, 53.85 68 P P 06 17 14.3 -0.4
baz=315
BINY Binghamton 53.86 66 P P 06 17 14.8 0.0
baz=315
Q55A Buckhannon 53.90 72 P P 06 17 14.7 -0.5
baz=315
H60A Morristown 53.92 62 P P 06 17 14.5 -0.7
baz=314
U52A Thorn Hill 53.92 76 P P 06 17 15.1 -0.2
baz=316
SSPA Standing Stone 53.94 69 P P 06 17 15.1 -0.3
baz=315
T53A Wise 53.97 75 P P 06 17 15.2 -0.5
baz=316
R54A Victor 53.97 73 P P 06 17 14.9 -0.8
baz=316
FPAL Fort Paine 53.98 80 IAmb IAmb 06 17 30.0
comp=Z,20nm,1.1s
D62A Allapoint, All 53.98 58 P P 06 17 15.4 -0.2
D62A IAmb IAmb 06 17 16.9
comp=Z,40nm,1.1s
D62A Allapoint, All 53.98 58 P P 06 17 15.1 -0.5
baz=314
G61A St-Isidore-de- 54.01 61 P P 06 17 14.8 -1.0
baz=314
W51A Cleveland 54.02 78 P P 06 17 15.5 -0.5
baz=316
Y49A Blount Mountai 54.02 81 P P 06 17 15.3 -0.7
Y49A IAmb IAmb 06 17 33.0
comp=Z,18nm,1.0s
N57A Milroy 54.03 69 P P 06 17 15.3 -0.7
baz=315
L58A Harry Jones Me 54.04 66 P P 06 17 15.4 -0.7
baz=315
K59A Cooperstown 54.05 65 P P 06 17 15.6 -0.6
baz=315
S54A Dingess, Beckl 54.07 74 P P 06 17 15.7 -0.7
baz=316
I60A Shoreham 54.11 63 P P 06 17 16.0 -0.6
baz=315
M58A Price's Panora 54.19 67 P P 06 17 16.6 -0.6
baz=315
V52A Sevierville 54.19 77 P P 06 17 16.7 -0.5
V52A IAmb IAmb 06 17 30.6
comp=Z,23nm,1.1s
V52A Sevierville 54.19 77 P P 06 17 16.2 -1.1
baz=316
P56A Dayton Farm, R 54.22 70 P P 06 17 17.1 -0.3
baz=315
TKL Tuckaleechee C 54.22 77 P P 06 17 19.4 +1.9
comp=Z,9nm,0.9s,baz=296,slow=9.9,SNR=3.8
LRAL Lakeview Retre 54.28 82 P P 06 17 17.2 -0.7

baz=317
ZAK Zakamensk 54.30 308 *e*P **P** **06 17 17.7 -0.3**
ZAK pmax pmax
comp=Z,11nm,1.1s
ULN Ulaanbaatar 54.31 304 P **P** **06 17 17.8 -0.4**
ULN pmax pmax
comp=Z,18nm,0.9s
ULN Ulaanbaatar 54.31 304 P **P** **06 17 17.8 -0.4**
ULN IAmb IAmb 06 17 19.8
comp=Z,18nm,0.8s
H61A Lyndonville 54.33 62 P **P** **06 17 17.9 -0.3**
baz=315
Q56A Snyder Ridge, 54.36 71 P **P** **06 17 18.1 -0.3**
baz=316
L59A Walton 54.36 66 P **P** **06 17 18.4 -0.1**
L59A Walton 54.36 66 P **P** **06 17 18.8 +0.3**
baz=315
O57A Amberson 54.37 69 P **P** **06 17 18.3 -0.3**
baz=315,SNR=6.5
R55A Marlinton 54.38 72 P **P** **06 17 18.6 -0.1**
baz=316
U53A Fall Branch 54.39 76 P **P** **06 17 18.1 -0.6**
baz=316
MOY Mondy 54.40 311 *e*P **P** **06 17 19.1 +0.4**
MOY pmax pmax
comp=Z,25nm,0.9s
N58A Sunbury 54.42 68 P **P** **06 17 19.6 +0.7**
N58A IAmb IAmb 06 17 28.7
comp=Z,24nm,0.9s
N58A Sunbury 54.42 68 P **P** **06 17 18.3 -0.6**
baz=315
T54A Tazewell 54.45 74 P **P** **06 17 18.8 -0.4**
baz=316
J60A Lant Hill Farm 54.47 64 P **P** **06 17 19.4 +0.2**
baz=315,SNR=9.9
D63A Stockholm 54.48 57 P **P** **06 17 18.8 -0.4**
baz=315
S55A Lewisburg 54.54 73 P **P** **06 17 19.6 -0.2**
baz=316
LBNH Lisbon 54.54 62 P **P** **06 17 19.8 +0.1**
LBNH pmax pmax
comp=Z,37nm,1.0s
LBNH Lisbon 54.54 62 P **P** **06 17 19.8 +0.1**
LBNH IAmb IAmb 06 17 20.5
comp=Z,37nm,1.0s
LBNH Lisbon 54.54 62 P **P** **06 17 19.5 -0.2**
baz=315
W52A Murphy 54.54 78 P **P** **06 17 19.5 -0.3**
baz=317
G62A West of Eustis 54.55 60 P **P** **06 17 19.9 +0.1**
G62A IAmb IAmb 06 17 20.0
comp=Z,26nm,0.9s
G62A West of Eustis 54.55 60 P **P** **06 17 19.3 -0.5**
baz=315
I61A Oroboro, Fairl 54.61 62 P **P** **06 17 20.3 +0.1**
baz=315
M59A Waymart 54.61 66 P **P** **06 17 19.5 -0.8**
baz=315
SONM Songino Array 54.64 304 P **P** **06 17 20.7 +0.2**
comp=Z,22nm,0.9s,baz=43,slow=6.6,SNR=116
SONM PcP **PcP** **06 18 22.7 -0.3**
comp=Z,8.5nm,0.9s,baz=41,slow=3.0,SNR=5.2
SONM LR LR 06 43 12.4
comp=Z,2µm,18.7s,baz=28,slow=39
SONM Songino Array 54.64 304 IAmb IAmb 06 17 21.7
comp=Z,20nm,1.0s
K60A Five Rivers En 54.67 65 P **P** **06 17 20.6 0.0**
baz=315
P57A Homestead Farm 54.68 70 P **P** **06 17 20.7 -0.1**
baz=316
R56A Bull Pasture M 54.69 72 P **P** **06 17 20.6 -0.4**
baz=316
H62A Milan 54.69 61 P **P** **06 17 20.9 +0.1**
H62A Milan 54.69 61 P **P** **06 17 20.5 -0.3**
baz=315
U54A Nelsons Funny 54.70 75 P **P** **06 17 21.2 +0.1**
baz=316
Z50A Ashland 54.74 81 IAmb IAmb 06 17 35.7
comp=Z,52nm,1.4s
Z50A Ashland 54.74 81 P **P** **06 17 21.0 -0.3**
baz=317
V53A Saluda 54.75 77 P **P** **06 17 21.3 -0.1**
V53A IAmb IAmb 06 17 31.9
comp=Z,42nm,1.2s
V53A Saluda 54.75 77 P **P** **06 17 21.2 -0.2**
baz=316
E63A Oxbow 54.75 58 P **P** **06 17 20.5 -0.7**
E63A Oxbow 54.75 58 P **P** **06 17 20.7 -0.5**
baz=315
Y51A Rockmart 54.76 80 P **P** **06 17 21.0 -0.5**
baz=317
Q57A Strasburg 54.79 71 P **P** **06 17 21.0 -0.6**
baz=316
O58A Lewisberry 54.82 69 P **P** **06 17 21.4 -0.4**
baz=316
J61A Chester 54.84 63 P **P** **06 17 22.0 +0.1**
baz=315
N59A State Game Lan 54.88 67 P **P** **06 17 21.8 -0.4**
baz=315
W53A Cullowhee 54.92 77 P **P** **06 17 22.5 -0.2**
baz=317
F63A Nahmakanta, Br 54.93 59 P **P** **06 17 22.5 0.0**
F63A IAmb IAmb 06 17 23.0
comp=Z,39nm,1.0s
F63A Nahmakanta, Br 54.93 59 P **P** **06 17 22.1 -0.4**
baz=315
K61A Williamstown 54.95 64 P **P** **06 17 22.6 -0.1**
baz=315
BLA Blacksburg 54.98 74 P **P** **06 17 22.8 -0.2**
baz=316
E64A Bridgewater 55.05 58 P **P** **06 17 22.8 -0.5**
baz=315
P58A Pank, Wackersv 55.07 69 P **P** **06 17 23.4 -0.1**
baz=316
O59A Robesonia 55.08 68 P **P** **06 17 23.1 -0.6**
baz=316
G63A Kingsbury 55.09 60 P **P** **06 17 23.0 -0.7**
baz=315
S56A Natural Bridge 55.12 73 P **P** **06 17 24.2 +0.2**
baz=316
L61A Hillsdale 1, H 55.14 65 P **P** **06 17 24.5 +0.5**
baz=315,SNR=6.2
PKME Peaks-Kenny Pk 55.14 59 P **P** **06 17 23.2 -0.8**
baz=315
U55A TA2, Sparta 55.14 75 P **P** **06 17 23.8 -0.4**
baz=316
V54A Nebo 55.16 76 P **P** **06 17 24.3 0.0**
baz=316
F64A Sherman 55.19 58 P **P** **06 17 23.6 -0.7**
F64A Sherman 55.19 58 P **P** **06 17 24.0 -0.3**
baz=315
M60A Port Jervis 55.19 66 P **P** **06 17 24.3 -0.2**
baz=316
Q58A Fox Den Farm, 55.25 70 P **P** **06 17 24.2 -0.7**
baz=316,SNR=5.2
R57A Stanardsville 55.25 71 P **P** **06 17 24.5 -0.4**
baz=316
N60A Cedar Hill Far 55.27 67 P **P** **06 17 25.0 +0.1**
baz=316
J62A Henniker 55.31 63 P **P** **06 17 24.9 -0.4**
baz=315
X53A Estanollee 55.32 78 P **P** **06 17 25.2 -0.2**
baz=317
T56A Rocky Mt 55.33 73 P **P** **06 17 25.0 -0.5**
baz=316
Y52A Lilburn 55.35 79 P **P** **06 17 26.2 +0.5**
baz=317
I63A Otisfield 55.36 61 P **P** **06 17 24.9 -0.6**
baz=315
S57A Dark Hollow, R 55.40 72 P **P** **06 17 25.7 -0.3**
baz=316
G64A Maxfield 55.42 59 P **P** **06 17 25.8 -0.2**
baz=316
P59A Jarrettsville 55.45 69 P **P** **06 17 26.1 -0.2**
baz=316
K62A Royalston 55.49 63 P **P** **06 17 27.1 +0.5**
K62A Royalston 55.49 63 P **P** **06 17 26.2 -0.4**
baz=316
O60A Telford 55.50 67 P **P** **06 17 26.5 -0.1**
baz=316
KSCT Kent School, K 55.51 65 P **P** **06 17 27.1 +0.4**
KSCT IAmb IAmb 06 17 28.1
comp=Z,35nm,0.9s
R58A Rapidan 55.53 71 P **P** **06 17 26.6 -0.3**
baz=316
Z52A Williamson 55.65 80 P **P** **06 17 28.4 +0.6**
baz=317
N61A South Mountain 55.78 66 P **P** **06 17 28.4 -0.3**
baz=316
X54A Belton 55.81 77 P **P** **06 17 28.6 -0.4**
baz=317
K63A Dunstable 55.84 63 P **P** **06 17 29.2 +0.1**
baz=316
R58B Mineral 55.84 71 P **P** **06 17 28.9 -0.3**
baz=316
ARCES ARCESS Array B 55.90 358 P **P** **06 17 28.8 -0.4**
comp=Z,12nm,0.9s,baz=3.6,slow=7.7,SNR=15
ARCES LR LR 06 43 42.3
comp=Z,362nm,19.3s,baz=287,slow=38
ARE0 ARCESS Array S 55.90 358 *e*P **P** **06 17 30.1 +0.9**
ARE0 ARCESS Array S 55.90 358 P **P** **06 17 28.7 -0.4**
I64A Boothbay 55.93 61 P **P** **06 17 29.2 -0.5**
baz=316
CBN Corbin Frederi 55.95 71 P **P** **06 17 29.0 -0.8**
baz=316
V56A Mocksville 55.95 75 P **P** **06 17 29.2 -0.8**
baz=317
HRV Adam Dziewonsk 55.96 63 P **P** **06 17 29.1 -0.8**
baz=316
KMSC Kings Mountain 55.97 76 P **P** **06 17 29.2 -0.9**
baz=317
S58A Poland Farm, P 56.00 72 P **P** **06 17 29.6 -0.7**
baz=316
M62A Hamden 56.02 65 P **P** **06 17 29.6 -0.7**
baz=316
Z53A Monticello 56.06 79 P **P** **06 17 29.1 -1.7**
baz=318
H65A Eastbrook 56.07 59 P **P** **06 17 29.1 -1.5**
baz=316
R59A King George, V 56.09 70 P **P** **06 17 31.6 +0.7**
baz=316
Y54A Tignall 56.13 78 P **P** **06 17 31.1 -0.2**
baz=317
U57A Blanch 56.15 73 P **P** **06 17 31.0 -0.3**
baz=317
T58A Grand View Acr 56.22 72 P **P** **06 17 31.6 -0.2**
baz=317
X55A Gracelyn & Ava 56.29 77 P **P** **06 17 31.9 -0.5**
baz=317
S59A Mechanicsville 56.31 71 P **P** **06 17 32.5 +0.1**
baz=316
R60A Leonardtown, M 56.33 70 P **P** **06 17 31.7 -1.0**
baz=316
252A Lumpkin 56.34 81 P **P** **06 17 31.8 -1.0**
baz=318
BRYW Bryant College 56.39 64 P **P** **06 17 33.4 +0.3**
GGN Saint George 56.46 58 P **P** **06 17 33.1 -0.3**
GGN IAmb IAmb 06 17 42.4
comp=Z,39nm,1.1s
H66A Whiting 56.47 59 P **P** **06 17 32.8 -0.6**
baz=316
KTK1 Kautokeino 56.47 359 *e*P **P** **06 17 34.2 +1.0**
M63A Gales Ferry 56.49 64 P **P** **06 17 34.1 +0.4**
baz=316
Q61A Milford 56.57 69 P **P** **06 17 32.9 -1.4**
baz=316
U58A Oxford 56.61 73 P **P** **06 17 34.5 -0.1**
baz=317
X56A White Oak 56.61 76 P **P** **06 17 34.1 -0.6**
baz=317
352A Blakely 56.61 82 P **P** **06 17 33.8 -0.9**
baz=318
W57A Gilead 56.71 75 P **P** **06 17 35.4 +0.1**
baz=317
V58A Windy Hill, Pi 56.73 74 P **P** **06 17 35.5 0.0**
baz=317
L64A Middleborough 56.74 63 P **P** **06 17 35.0 -0.4**
baz=316
T59A Double "B" Far 56.74 72 P **P** **06 17 35.5 0.0**
baz=317
M64A Tiverton 56.82 64 P **P** **06 17 36.2 +0.2**
baz=316
HHC Hu-ho-hao-te 57.05 295 *e*P **P** **06 17 38.1 +0.3**
HHC S **S** **06 25 26.3 -3.1**
HHC sS pS 06 25 44.0 +0.6
HHC ScS **ScS** **06 27 21.7 -1.9**
HHC pmax pmax
comp=Z,18nm,0.9s
HHC pmax pmax
comp=Z,110nm,5.6s
HHC LR LR
comp=Z,310nm,14.7s
HHC LR LR
comp=Z,280nm,16.2s
HHC LR LR
comp=Z,590nm,14.7s
LVZ Lovozero 57.12 353 *ce*P **P** **06 17 37.8 -0.1**
LVZ pmax pmax
comp=Z,97nm,2.5s
155A Kite 57.17 79 P **P** **06 17 37.7 -1.0**
baz=318
W58A Raeford 57.23 75 P **P** **06 17 39.0 -0.1**
baz=317
V59A Middlesex 57.24 73 P **P** **06 17 39.5 +0.4**
baz=317
S61A Accomac 57.25 70 P **P** **06 17 38.3 -0.8**
baz=317
U60A Pendleton 57.32 72 P **P** **06 17 40.0 +0.3**
baz=317
APA Apatity 57.53 354 ⇓ *i*P P 06 17 49.5 +8.8
APA pmax pmax
comp=Z,11nm,1.1s
APA MLR MLR
comp=Z,1µm,15.0s
STEI Steigen 57.53 2 *e*P **P** **06 17 41.0 +0.4**
M66A Nantucket 57.59 63 P **P** **06 17 40.1 -1.4**
baz=317
U61A Possum Corner 57.81 71 P **P** **06 17 43.0 -0.1**
baz=317
Y60A Bolivia 58.55 75 P **P** **06 17 48.6 +0.3**
baz=318
KONS Konsvik 58.91 3 *e*P **P** **06 17 51.5 +1.2**
GUMO Guam 59.14 248 LR LR 06 39 51.5
comp=Z,61nm,21.7s,baz=79,slow=32
ZALV Zalesovo Beam 59.16 321 P **P** **06 17 52.2 0.0**
comp=Z,3.7nm,0.6s,baz=63,slow=6.8,SNR=22
ZALV LR LR 06 45 32.3
comp=Z,2µm,19.9s,baz=44,slow=38
MOR8 Moi Rana 59.28 3 *e*P **P** **06 17 52.4 -0.5**
NJ2 Nanjing 59.53 283 *e*P **P** **06 17 53.9 -1.2**
NJ2 pmax pmax
comp=Z,16nm,0.5s
NJ2 LR LR
comp=Z,380nm,18.5s
NJ2 LR LR
comp=Z,330nm,15.6s
NJ2 LR LR
comp=Z,660nm,19.8s
TMCR Tamitsa 60.54 351 *e*P **P** **06 18 00.3 -1.2**
TMCR pmax pmax
comp=Z,51nm,1.0s
NSS Namsos 60.84 4 *e*P **P** **06 18 04.2 +0.7**
PRGR Permogore 62.14 346 ⇑ *i*P **P** **06 18 12.4 0.0**
PRGR *e**SP **pP** **06 18 26.2 +1.8**
PRGR pmax pmax
comp=Z,54nm,1.1s
AKN Aaknes 62.92 7 *e*P **P** **06 18 18.3 +0.7**
DOMB Dombas 63.18 6 *e*P **P** **06 18 20.2 +0.8**
WHN Wuhan 63.19 285 P **P** **06 18 17.6 -2.3**
WHN S S 06 26 36.0 -12
WHN pmax pmax
comp=Z,50nm,0.9s
WHN LR LR
comp=Z,3µm,25.0s
WHN LR LR
comp=Z,2µm,19.3s
WHN LR LR
comp=Z,850nm,14.0s
XAN Xi'an 63.51 292 P **P** **06 18 21.6 -0.4**
XAN pmax pmax
comp=Z,31nm,1.3s
XAN pmax pmax
comp=Z,140nm,3.7s
XAN LR LR
comp=Z,640nm,14.1s
XAN LR LR
comp=Z,580nm,16.3s
XAN LR LR
comp=Z,660nm,15.2s
XAN Xi'an 63.51 292 IAmb IAmb 06 18 22.4
comp=Z,23nm,0.8s
SVE Sverdlovsk 63.90 336 *d i*P **P** **06 18 24.5 +0.3**
SVE pmax pmax
comp=Z,46nm,1.0s
FIA1 FINESS Array S 63.99 357 P **P** **06 18 25.0 +0.3**
FINES FINESS Array B 63.99 357 *i* P **P** **06 18 24.7 0.0**
FINES pmax pmax
comp=Z,19nm,0.7s
FINES FINESS Array B 63.99 357 P **P** **06 18 24.5 -0.1**
comp=Z,19nm,0.7s,baz=15,slow=7.9,SNR=36
FINES LR LR 06 45 13.9
comp=Z,330nm,21.8s,baz=338,slow=35
KURK Kurchatov 64.01 323 P **P** **06 18 25.2 +0.3**
KURK Kurchatov 64.01 323 P **P** **06 18 25.0 0.0**
GTA Gaotai 64.09 302 P **P** **06 18 25.6 -0.3**
GTA pP pP 06 18 35.8 -2.1
GTA sP sP 06 18 39.9 -2.7
GTA pmax pmax
comp=Z,47nm,1.1s
GTA pmax pmax
comp=Z,190nm,5.8s
GTA LR LR
comp=Z,960nm,15.5s
GTA LR LR
comp=Z,930nm,18.6s
GTA LR LR
comp=Z,2µm,16.8s
NB2 NORSAR Subarra 64.30 5 P **P** **06 18 26.8 +0.1**
comp=Z,46nm,1.2s,baz=356,slow=6.5
NB2 NORSAR Subarra 64.30 5 P **P** **06 18 26.8 +0.1**
baz=356,slow=6.5
NOA NORSAR Array B 64.30 5 P **P** **06 18 26.8 +0.1**
comp=Z,21nm,1.0s,baz=355,slow=6.6,SNR=33
ASK Askoy 64.46 8 *e*P **P** **06 18 29.0 +1.2**
NAO01 NORSAR Array S 64.47 5 *e*P **P** **06 18 27.9 0.0**
SKAR Skarslia 64.49 6 *e*P **P** **06 18 28.7 +0.7**
NC602 NORSAR Array S 64.61 5 P **P** **06 18 28.7 -0.1**
SSLB Suanglung 64.62 276 P **P** **06 18 29.0 -0.4**
SSLB IAmb IAmb 06 18 31.5
comp=Z,35nm,1.1s
LZH Lanzhou 64.62 297 *e*P **P** **06 18 29.6 +0.2**
LZH sP sP 06 18 45.6 -0.6
LZH SS SS 06 31 17.8 +1.2
LZH pmax pmax
comp=Z,78nm,1.1s
LZH pmax pmax
comp=Z,170nm,4.9s
LZH LR LR
comp=Z,910nm,13.0s
LZH LR LR
comp=Z,430nm,12.5s
LZH LR LR
comp=Z,870nm,14.2s
ARU Arti 64.73 337 *c i*P **P** **06 18 29.4 -0.2**
ARU 06 19 02.0
ARU 06 20 49.8
ARU S **S** **06 27 08.8 +2.2**
ARU 06 28 24.2
ARU SS **SS** **06 31 17.1 +0.1**
ARU pmax pmax
comp=Z,30nm,0.7s
ARU MLR MLR
comp=Z,708nm,17.0s
ARU Arti 64.73 337 P **P** **06 18 29.5 -0.1**
KONO Kongsberg 65.60 6 *ce*P **P** **06 18 34.5 -0.7**
KONO pmax pmax
comp=Z,45nm,1.7s
KONO Kongsberg 65.60 6 *e*P **P** **06 18 35.9 +0.8**
TAOE Nuku Hiva Isla 65.60 158 *e*T T 07 29 27.2
comp=Z,100nm,0.2s
BLS5 Blasjo 65.61 8 *e*P **P** **06 18 35.6 +0.3**
MK31 Makanchi Array 65.92 318 *i*P **P** **06 18 36.6 -0.9**
MK31 Makanchi Array 65.92 318 IAmb IAmb 06 18 38.2
comp=Z,23nm,1.4s
MKAR Makanchi Array 65.92 318 P **P** **06 18 37.1 -0.4**
comp=Z,6.6nm,0.7s,baz=49,slow=5.6,SNR=72
MKAR LR LR 06 49 17.8
comp=Z,1µm,20.9s,baz=14,slow=38
MAKZ Makanchi 66.03 318 P **P** **06 18 37.6 -0.6**
MAKZ pmax pmax
comp=Z,35nm,1.4s
MAKZ Makanchi 66.03 318 P **P** **06 18 37.6 -0.6**
MAKZ IAmb IAmb 06 18 38.3
comp=Z,35nm,1.4s
WMQ Urumqi 66.16 313 *e*P **P** **06 18 39.5 +0.3**
WMQ pP pP 06 18 46.9 -4.3
WMQ pmax pmax
comp=Z,24nm,1.1s
WMQ pmax pmax
comp=Z,300nm,9.3s
WMQ LR LR
comp=Z,510nm,25.3s
WMQ LR LR
comp=Z,380nm,16.1s
WMQ LR LR
comp=Z,780nm,22.9s
KPL Plockton 66.31 15 *e*P **P** **06 18 40.3 +0.6**
MDO Dochfour 66.39 14 *e*P **P** **06 18 40.9 +0.6**
MCD Coleburn Disti 66.41 13 *e*P **P** **06 18 41.0 +0.6**
VSU Vasula 66.95 356 *ce*P **P** **06 18 42.7 -1.1**
VSU pmax pmax
comp=Z,90nm,0.8s
VSU Vasula 66.95 356 *e*P **P** **06 18 42.9 -0.9**
DRUM Mains of Drumt 67.16 13 *e*P **P** **06 18 46.0 +0.8**
DRUM IAmb IAmb 06 18 47.2
comp=Z,136nm,0.6s
LAWE Loch Awe, Argy 67.38 15 *e*P **P** **06 18 47.1 +0.5**
INVG Invergeldie, C 67.42 14 *e*P **P** **06 18 47.5 +0.6**
EDI Edinburgh 68.03 14 *e*P **P** **06 18 51.3 +0.7**
ESK Eskdalemuir 68.61 14 *e*P **P** **06 18 55.2 +0.8**
ESK Eskdalemuir 68.61 14 P **P** **06 18 55.6 +1.2**
ESK pmax pmax
comp=Z,36nm,0.9s
ESK Eskdalemuir 68.61 14 P **P** **06 18 55.6 +1.2**
CD2 Chengdu 68.69 293 ⇑ *i*P **P** **06 18 55.7 +0.4**
CD2 S **S** **06 27 55.3 +0.1**
CD2 pmax pmax
comp=Z,180nm,0.7s
CD2 pmax pmax
comp=Z,310nm,5.5s
CD2 LR LR
comp=Z,940nm,25.5s
CD2 LR LR
comp=Z,1µm,21.0s
MOS Moscow 68.87 349 *e*P **P** **06 18 51.6 -4.3**
MOS pmax pmax
comp=Z,41nm,0.9s
OBN Obninsk 69.59 350 *c i*P **P** **06 19 00.0 -0.4**
OBN *e**SP **pP** **06 19 13.5 +0.9**
OBN *e* 06 19 18.8
OBN pmax pmax
comp=Z,66nm,1.7s
OBN MLR MLR
comp=Z,651nm,21.0s
IZAR Zarasai 69.68 356 *e*P **P** **06 19 01.8 +0.8**
IZAR IAmb IAmb 06 19 03.2
comp=Z,9.3nm,0.8s
ISAL Salakas 69.87 356 *e*P **P** **06 19 02.6 +0.5**
PDGK Podgornoye 69.90 318 P **P** **06 19 02.4 -0.3**
PABE Paberze 70.00 358 *e*P **P** **06 19 02.8 -0.1**
PABE IAmb IAmb 06 19 04.6
comp=Z,54nm,1.0s
IIGN Ignalina 70.08 356 *e*P **P** **06 19 02.8 -0.6**
IIGN IAmb IAmb 06 19 05.7
comp=Z,9.4nm,0.8s
BSD Bornholm Skovb 70.37 3 *e*P **P** **06 19 06.1 +1.0**
BSD Bornholm Skovb 70.37 3 *i*P **P** **06 19 06.1 +1.0**
AKTO Aktyubinsk 70.39 335 P **P** **06 19 05.3 -0.1**
GYA Guiyang 70.61 286 ⇓ *i*P **P** **06 19 07.0 -0.3**
GYA pP pP 06 19 17.3 -2.2
GYA PP **PP** **06 21 45.5 +1.9**
GYA S **S** **06 28 13.1 -5.0**
GYA sS pS 06 28 30.0 -3.0
GYA SKS **SKSac** **06 29 01.2 -4.8**
GYA SS **SS** **06 32 44.6 -4.9**
GYA pmax pmax
comp=Z,20nm,0.5s
GYA pmax pmax
comp=Z,120nm,5.8s
KRVT Keravat (AS076 70.95 231 LR LR 06 46 55.5
comp=Z,163nm,19.6s,baz=63,slow=33
FOEL Foel Wylfa 70.97 15 *e*P **P** **06 19 10.1 +1.1**
FOEL IAmb IAmb 06 19 10.9
comp=Z,75nm,0.9s
AB31 Akbulak array 71.00 334 *i*P **P** **06 19 09.1 0.0**
ABKAR Akbulak array 71.00 334 P **P** **06 19 09.8 +0.7**
ABKAR Akbulak array 71.00 334 IAmb IAmb 06 19 10.8
comp=Z,37nm,1.0s
BSEG Bad Segeberg 71.34 6 *e*P **P** **06 19 12.3 +1.2**
comp=Z,13nm,0.8s,baz=356,slow=5.8

CWF Charnwood Fore 71.39 13 eP P 06 19 12.1 +0.7
SUW Suwalki 71.51 358 eP P 06 19 11.8 -0.4
SUW Suwalki 71.51 358 eP P 06 19 11.8 -0.4
WACR West Acre 71.65 12 eP P 06 19 14.3 +1.4
WACR IAmb IAmb 06 19 15.8
comp=Z,235nm,1.0s
TKM2 Tokmak 2 71.73 320 P P 06 19 13.7 -0.2
TKM2 Tokmak 2 71.73 320 P P 06 19 14.5 +0.6
SNR=19
LPSR Galich'ya Gora 71.80 348 eP P 06 19 11.9 -2.0
LPSR pmax pmax
comp=Z,30nm,0.8s
KDJ Kajisay 71.81 319 IAmb IAmb 06 19 16.3
comp=Z,38nm,0.9s
USP Ospenovka 71.83 321 P P 06 19 15.2 +0.9
SNR=19
MCH1 Michaelchurch 71.87 15 eP P 06 19 14.9 +0.6
MCH1 IAmb IAmb 06 19 15.5
comp=Z,128nm,1.3s
CHMS Chumysh 71.97 321 P P 06 19 16.1 +1.0
SNR=27
BOOM Boomskoye usch 71.97 320 IAmb IAmb 06 19 16.8
comp=Z,30nm,0.8s
KBK Karagaybulak 72.19 321 P P 06 19 17.7 +1.0
SNR=26
AAK Ala-Archa 72.38 321 P P 06 19 18.4 +0.6
AAK Ala-Archa 72.38 321 P P 06 19 18.7 +0.9
SNR=19
AAK Ala-Archa 72.38 321 P P 06 19 18.6 +0.9
AAK IAmb IAmb 06 19 19.8
comp=Z,41nm,1.0s
KZA Kyzart 72.58 320 P P 06 19 20.3 +1.0
SNR=16
EKS2 Erkin-Say 72.62 321 P P 06 19 20.1 +1.0
SNR=16
PPT Papeete 72.64 169 LR LR 06 44 23.2
comp=Z,481nm,21.8s,baz=357,slow=30
PPT2 Papeete2 72.66 169 eS S 06 28 40.7 -0.7
comp=Z,273nm,29.2s
PPT2 Papeete2 72.66 169 eLR LR 06 41 35.0
comp=Z,812nm,22.2s
PPT2 Papeete2 72.66 169 eT T 07 38 16.5
comp=Z,12nm,0.3s
UCH Uchtor 72.73 321 P P 06 19 21.0 +0.8
SNR=11
PAE Paea 72.73 170 eT T 07 38 21.7
comp=Z,4.3nm,0.4s
NRDL Niedersach Rie 72.76 6 eP P 06 19 20.3 +0.8
comp=Z,11nm,0.9s,baz=356,slow=5.8
IBBN Ibbenburen 72.78 8 eP P 06 19 20.9 +1.2
comp=Z,13nm,0.8s,baz=356,slow=5.8
VRH Novokhoyorsk 72.80 346 eP P 06 19 18.2 -1.7
VRH pmax pmax
comp=Z,30nm,1.0s
TVO Taravao 72.89 169 eT T 07 38 33.3
comp=Z,7.7nm,0.3s
RUE Ruedersdorf 72.96 4 eP P 06 19 21.2 +0.4
baz=356,slow=5.8
AML Almayashu 73.11 321 P P 06 19 23.6 +1.2
SNR=15
VSR Storozhevoye 73.13 347 eP P 06 19 20.2 -1.6
VSR pmax pmax
comp=Z,30nm,0.7s
ASSE Asse, Remlinge 73.16 6 eP P 06 19 22.4 +0.5
comp=Z,12nm,0.9s,baz=356,slow=5.8
VORD Divnogorie 73.36 347 eP P 06 19 22.2 -1.0
VORD pmax pmax
comp=Z,50nm,1.0s
KK31 Karatay Array 73.38 324 i P P 06 19 23.7 +0.2
KKAR Karatay Array 73.38 324 P P 06 19 24.2 +0.7
KKAR Karatay Array 73.38 324 P P 06 19 24.2 +0.7
KKAR Karatay Array 73.38 324 IAmb IAmb 06 19 24.9
comp=Z,58nm,1.1s
CLZ Clausthal 73.43 6 eP P 06 19 24.3 +0.6
comp=Z,13nm,0.9s,baz=356,slow=5.8
BUG Bochum--Univer 73.60 8 eP P 06 19 25.5 +0.9
comp=Z,22nm,0.9s,baz=356,slow=5.8
GTTG Gvttingen 73.70 6 eP P 06 19 25.9 +0.7
comp=Z,32nm,0.8s,baz=356,slow=5.8
KMI Kunming 73.81 291 P P 06 19 26.6 +0.1
KMI pmax pmax
comp=Z,17nm,0.5s
KMI pmax pmax
comp=Z,180nm,6.2s
KMI LR LR
comp=Z,370nm,17.6s
KMI LR LR
comp=Z,350nm,16.9s
KMI LR LR
comp=Z,390nm,19.0s
ARSB Arslanbob 74.07 321 IAmb IAmb 06 19 29.5
comp=Z,39nm,1.1s
CLL Collm 74.10 4⇑ i P P 06 19 27.7 +0.2
CLL e 06 19 39.0
CLL pmax pmax
comp=Z,31nm,1.2s
CLL Collm 74.10 4⇑ i P P 06 19 27.7 +0.2
comp=Z,31nm,1.2s
CLL epP pP 06 19 39.0 -0.8
CLL Collm 74.10 4 eP P 06 19 27.9 +0.4
comp=Z,11nm,0.9s,baz=356,slow=5.8
CLL Collm 74.10 4 IAmb IAmb 06 19 28.6
comp=Z,29nm,1.2s
NEUB Neuenburg 74.14 5 eP P 06 19 28.3 +0.5
comp=Z,22nm,0.9s,baz=356,slow=5.8
BSTI Sart Tilman 74.30 9 P P 06 19 29.0 +0.3
MEM Membach 74.31 9 P P 06 19 29.7 +0.9
MEM pP pP 06 19 38.7 -2.3
AHRW Bad Neuenahr-A 74.48 8 eP P 06 19 31.0 +1.3
comp=Z,11nm,0.8s,baz=356,slow=5.8
BMRD Maredsous 74.50 10 P P 06 19 29.6 -0.2
BMRD pP pP 06 19 39.5 -2.6
FBE Freiberg 74.50 4 eP P 06 19 30.7 +0.9
comp=Z,18nm,0.9s,baz=356,slow=5.8
KSH Kashi 74.53 318⇑ i P P 06 19 34.2 +3.8
KSH pP PcP 06 19 45.4 +0.7
KSH PP PP 06 22 21.3 +4.7
KSH S S 06 29 05.8 +3.3
KSH sS sS 06 29 23.2 +0.3
KSH SKS SKSac 06 29 30.7 -4.5
KSH pmax pmax
comp=Z,250nm,1.1s
KSH pmax pmax
comp=Z,620nm,6.6s
KSH LR LR
comp=Z,320nm,5.6s
KSH LR LR
comp=Z,340nm,7.5s
KSH LR LR
comp=Z,840nm,9.2s
BRG Berggiesshubel 74.57 4 i P P 06 19 30.9 +0.6
comp=Z,33nm,1.2s
BRG Berggiesshubel 74.57 4 i P P 06 19 30.9 +0.6
BRG pmax pmax
comp=Z,33nm,1.2s
BRG Berggiesshubel 74.57 4 eP P 06 19 31.0 +0.7
comp=Z,12nm,0.9s,baz=356,slow=5.8
AKASG Malin Array Be 74.58 354 P P 06 19 30.1 -0.2
comp=Z,14nm,0.5s,baz=8.7,slow=5.8,SNR=81
AKASG LR LR 06 52 12.9
comp=Z,462nm,21.9s,baz=0.0,slow=36
AKASG Malin Array Be 74.58 354 IAmb IAmb 06 19 31.5
comp=Z,21nm,1.4s
KSP Ksiaz 74.68 2 eP P 06 19 31.6 +0.7
KSP Ksiaz 74.68 2 eP P 06 19 31.6 +0.7
MOX Moxa 74.69 5 eP P 06 19 31.7 +0.7
comp=Z,16nm,0.8s,baz=356,slow=5.8
QIZ Qiongzhong 74.71 281 P P 06 19 27.8 -3.8
QIZ S S 06 29 05.4 +0.6
QIZ LR LR
comp=Z,290nm,22.8s
QIZ LR LR
comp=Z,400nm,21.6s
BUKP Musuan 74.87 262 eP P 06 19 32.8 +0.2
JAY Jayapura 74.89 243 LR LR 06 48 08.9
comp=Z,181nm,20.9s,baz=2.5,slow=32
TNS Taunus Mts 74.90 8 eP P 06 19 33.0 +0.7
comp=Z,12nm,0.8s,baz=356,slow=5.8
CHVC Chvalec 74.93 3 eP P 06 19 33.3 +0.9
CHVC ex x 06 19 43.2
OSTC Ostas 74.96 2 eP P 06 19 33.7 +1.1
TANN Tannenbergstha 74.97 5 eP P 06 19 33.2 +0.6
baz=356,slow=5.8
GUNZ Gunzen 75.01 5 eP P 06 19 33.7 +0.8
comp=Z,8.6nm,1.0s,baz=356,slow=5.8
WERN Wernitzgruen 75.09 5 eP P 06 19 33.9 +0.5
comp=Z,15nm,1.1s,baz=356,slow=5.8
NKC Novy Kostel 75.15 5 eP P 06 19 34.7 +1.0
NKC Novy Kostel 75.15 5 eP P 06 19 34.7 +1.0
DPC Dobruska-Polom 75.17 2 eP P 06 19 34.7 +0.9
DPC e 06 19 41.8
DPC Dobruska-Polom 75.17 2 eP P 06 19 34.7 +0.9
DPC ex x 06 19 41.8
WLF Walferdange 75.26 9 eP P 06 19 35.9 +1.6
comp=Z,15nm,0.8s,baz=356,slow=5.8
WLF Walferdange 75.26 9 P P 06 19 35.6 +1.3
OJC Ojcow 75.35 0 eP P 06 19 35.4 +0.6
OJC Ojcow 75.35 0 eP P 06 19 35.4 +0.6
OJC Ojcow 75.35 0 IAmb IAmb 06 19 36.0
comp=Z,20nm,1.2s
MANZ Manzenberg 75.38 5 eP P 06 19 35.9 +1.0
comp=Z,4.6nm,0.9s,baz=356,slow=5.8
KRLC Kraliky 75.46 2 eP P 06 19 36.5 +1.0
KRLC Kraliky 75.46 2 eP P 06 19 36.5 +1.0
PRU Pruhonice 75.48 4 eP P 06 19 36.2 +0.7
PRU e 06 19 47.1
PRU Pruhonice 75.48 4 eP P 06 19 36.2 +0.7
PRU epP pP 06 19 47.1 -0.7
KCP Kidapawan 75.56 262⇓ i P P 06 19 37.8 +1.2
GOPC GO Pecny, Ondr 75.56 3 eP P 06 19 36.4 +0.3
GOPC GO Pecny, Ondr 75.56 3 eP P 06 19 36.4 +0.3
ROTZ Rotzenmuhle 75.60 5 eP P 06 19 37.4 +1.1
comp=Z,8.0nm,0.9s,baz=356,slow=5.8
GRF Grafenberg Arr 75.62 6 eP P 06 19 37.4 +1.0
comp=Z,12nm,0.8s,baz=356,slow=5.8
LVV L'vov 75.69 357 eP P 06 19 37.0 +0.3
OKC Ostrava-Krasne 75.72 1 eP P 06 19 37.4 +0.5
OKC Ostrava-Krasne 75.72 1 eP P 06 19 37.4 +0.5
MORC Moravsky Berou 75.77 2 ⇑P P 06 19 37.9 +0.6
MORC Moravsky Berou 75.77 2 eP P 06 19 37.7 +0.4
MORC Moravsky Berou 75.77 2 IAmb IAmb 06 19 38.6
comp=Z,22nm,1.2s
KWP Kalwaria Pacla 75.91 358 eP P 06 19 38.9 +0.9
KWP Kalwaria Pacla 75.91 358 eP P 06 19 38.9 +0.9
BTK Batken 75.97 322 IAmb IAmb 06 19 40.2
comp=Z,28nm,0.9s
LSA Lhasa 76.11 302 IAmb IAmb 06 19 42.9
comp=Z,38nm,0.9s
STHS Stebnicka Huta 76.14 359 eP P 06 19 40.5 +1.1
STHS Stebnicka Huta 76.14 359 eP P 06 19 40.5 +1.1
NIE Niedzica 76.15 360 eP P 06 19 40.6 +1.2
NIE Niedzica 76.15 360 eP P 06 19 40.6 +1.2
VRAC Vranov 76.22 2 ⇑P P 06 19 41.0 +1.2
VRAC Vranov 76.22 2 eP P 06 19 40.3 +0.5
WET Wettzell 76.25 5 eP P 06 19 40.8 +0.7
comp=Z,9.4nm,1.1s,baz=356,slow=5.8
KHC Kasperske Hory 76.30 4 eP P 06 19 41.2 +0.9
KHC Kasperske Hory 76.30 4 eP P 06 19 41.2 +0.9
KHC ex x 06 19 45.0
LANS Liptovska Anna 76.42 0 eP P 06 19 42.6 +1.7
LANS pmax pmax
comp=Z,15nm,1.1s
LANS Liptovska Anna 76.42 0 eP P 06 19 42.6 +1.7
KRUC Moravsky 76.46 2 eP P 06 19 41.5 +0.3
GEC2 GERESS Array S 76.59 4 eP P 06 19 42.2 +0.2
comp=Z,8.5nm,0.9s,baz=356,slow=5.8
GERES GERESS Array B 76.59 4 P P 06 19 42.6 +0.6
comp=Z,7.2nm,0.8s,baz=358,slow=4.1,SNR=40
GERES LR LR 06 51 41.0
comp=Z,246nm,21.9s,baz=350,slow=34
KOLS Kolonicke sedl 76.61 358 eP P 06 19 43.0 +1.0
KOLS pmax pmax
comp=Z,20nm,1.2s
KOLS Kolonicke sedl 76.61 358 eP P 06 19 43.0 +1.0
JAVC Velka Javorina 76.69 2 eP P 06 19 44.1 +1.6
BFO Black Forest 76.78 8 P P 06 19 43.6 +0.6
BFO pmax pmax
comp=Z,14nm,1.0s
BFO Black Forest 76.78 8 eP P 06 19 43.6 +0.6
comp=Z,7.6nm,0.8s,baz=356,slow=5.8
BFO Black Forest 76.78 8 P P 06 19 43.6 +0.6
BFO IAmb IAmb 06 19 44.3
comp=Z,14nm,1.0s
ECH Echery 76.79 9 P P 06 19 44.0 +0.9
ECH pmax pmax
comp=Z,20nm,0.9s
ECH Echery 76.79 9 P P 06 19 44.0 +0.9
ECH IAmb IAmb 06 19 45.4
comp=Z,20nm,0.9s
UZH Uzhgorod 76.92 358⇑ i P P 06 19 44.0 +0.3
UZH i 06 20 03.6
SMOL Smolenice 77.03 2 eP P 06 19 45.8 +1.4
SMOL pmax pmax
comp=Z,13nm,1.1s
SMOL Smolenice 77.03 2 eP P 06 19 45.8 +1.4
VYHS Vyhne 77.07 1 eP P 06 19 45.5 +0.9
VYHS pmax pmax
comp=Z,35nm,1.3s
VYHS Vyhne 77.07 1 eP P 06 19 45.5 +0.9
KECS Kecovo 77.08 360 eP P 06 19 45.9 +1.2
KECS pmax pmax
comp=Z,14nm,1.0s
KECS Kecovo 77.08 360 eP P 06 19 45.9 +1.2
FUR Furstenfeldbru 77.14 6 eP P 06 19 45.7 +0.7
comp=Z,22nm,1.0s,baz=356,slow=5.8
MODS Modra-Piesok 77.17 2 eP P 06 19 45.7 +0.5
MODS pmax pmax
comp=Z,39nm,1.1s
MODS Modra-Piesok 77.17 2 eP P 06 19 45.7 +0.5
SORM Soroca 77.19 354 ⇑P P 06 19 45.2 0.0
TRPA Tarpa 77.41 358 ⇑P P 06 19 47.6 +1.1
OBIP Obispado Ponce 77.44 77 P P 06 19 47.4 +0.3
UBR Ueberruh 77.55 7 eP P 06 19 48.0 +0.6
comp=Z,9.6nm,0.9s,baz=356,slow=5.8
CONA Conad Observa 77.58 3 i P P 06 19 48.5 +0.9
comp=Z,23nm,1.1s,SNR=8.0
MOA Molln 77.61 4 i P P 06 19 48.5 +0.9
comp=Z,13nm,1.3s
PSZ Piszkesteto 77.65 0 ⇑P P 06 19 49.5 +1.6
PSZ Piszkesteto 77.65 0 IAmb IAmb 06 19 50.6
comp=Z,24nm,1.0s
RJOB Jochberg 77.66 5 eP P 06 19 48.8 +0.9
comp=Z,24nm,0.8s,baz=356,slow=5.8
PMG Port Moresby 77.68 234 LR LR 06 50 02.9
comp=Z,165nm,19.8s,baz=22,slow=32
RETA Reutte 77.79 6 i P P 06 19 49.6 +0.9
comp=Z,10nm,0.9s
CHGR Chuyangaron 77.80 323 P P 06 19 49.2 +0.2
BURAR Bucovina Array 77.86 356 ⇑P P 06 19 49.7 +0.6
BURAR Bucovina Array 77.86 356 P P 06 19 49.9 +0.8
DAVA Damuels 77.93 7 i P P 06 19 50.6 +1.0
comp=Z,9.9nm,1.0s
MOTA Moosalm 77.95 6 i P P 06 19 50.6 +0.9
comp=Z,29nm,0.9s,SNR=6.5
WATA Walderalm 77.99 6 i P P 06 19 50.7 +0.7
comp=Z,41nm,1.2s,SNR=9.1
SQTA Sankt Quirin 78.08 6 i P P 06 19 51.7 +1.2
comp=Z,46nm,1.1s,SNR=14
ARSA Arzberg 78.25 3 i P P 06 19 52.3 +1.1
comp=Z,20nm,1.1s,SNR=6.5
FETA Feichten 78.25 6 i P P 06 19 52.3 +0.9
comp=Z,26nm,0.9s,SNR=12
KIS Kishinev 78.29 354⇑ i P P 06 19 51.0 -0.4
comp=Z,150nm,1.0s
KIS Kishinev 78.29 354 i PcP PcP 06 20 04.0 +3.3
KIS Kishinev 78.29 354 ePP PP 06 22 20.0 -28
KIS eL L 06 50 50.0
KIS LRM MLR 06 57 03.0
comp=Z,800nm,14.0s
KIS Kishinev 78.29 354⇑ i P P 06 19 51.0 -0.4
KIS i 06 20 04.0
KIS pmax pmax
comp=Z,150nm,1.0s
KIS MLR MLR
comp=Z,800nm,14.0s
KBA Koelnbreinsper 78.34 5 i P P 06 19 53.0 +1.1
comp=Z,42nm,1.1s,SNR=11
TBI Tubuai 78.37 170 eS S 06 29 43.8 -0.3
comp=Z,543nm,31.8s
TBI Tubuai 78.37 170 eLQ LQ 06 40 55.9
comp=Z,367nm,26.5s
TBI eLR LR 06 44 14.5
comp=Z,721nm,22.8s,baz=348
TBI Tubuai 78.37 170 eT T 07 45 23.9
comp=Z,64nm,0.3s
MILM Milestii Mici 78.37 354 ⇑P P 06 19 51.9 0.0
BIZ Bicaz 78.49 356 ⇑P P 06 19 53.5 +0.9
SIJI Sorong 78.55 252 LR LR 06 50 08.4
comp=Z,168nm,21.4s,baz=266,slow=32
GOF Gofitskoye 78.59 343⇑ eP P 06 19 53.5 +0.4
GOF pmax pmax
comp=Z,169nm,0.7s
FUORN Ofenpass-Fuorn 78.62 7 IAmb IAmb 06 19 56.1
comp=Z,20nm,0.9s
ABTA Abfaltersbach 78.63 5 i P P 06 19 54.5 +1.1
comp=Z,20nm,1.0s,SNR=7.1
VASR Vaslui 78.71 354 ⇑P P 06 19 54.3 +0.6
DRGR 78.75 358 ⇑P P 06 19 54.4 +0.4
MYKA Terra Mystica 78.80 4 i P P 06 19 55.2 +0.9
comp=Z,9.1nm,1.0s
SOKA Soboth 78.81 3 i P P 06 19 55.3 +0.9
comp=Z,40nm,1.2s,SNR=17
PERS Pernice 78.85 3 i P P 06 19 55.5 +1.0
OBKA Obir 78.96 4 i P P 06 19 56.2 +1.0
comp=Z,50nm,0.8s,SNR=24
CADS Cadrg 79.20 4 i P P 06 19 56.7 +0.2
SIRR Siria 79.29 359 ⇑P P 06 19 57.8 +0.8
MORH Mrgy, Hungar 79.35 1 eP P 06 19 57.7 +0.5
OZUR 79.35 356 ⇑P P 06 19 58.6 +1.3
VRI Vrincioaia 79.54 355 ⇑P P 06 19 58.8 +0.5
PLOR Plostina 79.56 355 ⇑P P 06 19 59.2 +0.8
KIV Kislovodsk 79.72 343 c iP P 06 20 00.2 +0.8
KIV *PP PcP 06 20 09.0 +1.9
KIV *SP pP 06 20 13.0 +1.2
KIV pmax pmax
comp=Z,47nm,1.1s
KIV MLR MLR
comp=Z,447nm,24.0s
KIV Kislovodsk 79.72 343 ⇑P P 06 20 00.5 +1.1
CEY Cerknica 79.72 4⇑ i P P 06 19 59.4 +0.1
TAPN Taplejung 79.74 303 eP P 06 20 00.2 +0.1
comp=Z,133nm,0.8s
MAK Makhachkala 79.80 340 eP P 06 19 58.7 -1.0
MAK eS S 06 29 59.2 -0.1
MAK pmax pmax
comp=Z,161nm,1.2s
BNI Bardonecchia 79.88 9 IAmb IAmb 06 20 14.3
comp=Z,23nm,1.0s
KBZ Khabaz 79.91 343 P P 06 20 01.5 +1.2
comp=Z,29nm,0.9s,baz=16,slow=1.7,SNR=52
KBZ LR LR 06 59 27.7
comp=Z,369nm,21.0s,baz=358,slow=39
BZS Buzias 79.94 359 ⇑P P 06 20 01.1 +0.6
MLR Muntele Rosu 79.95 356 ⇑P P 06 20 02.1 +1.5
VOIR 80.04 356 ⇑P P 06 20 02.0 +0.9
ARR Arges 80.12 357 ⇑P P 06 20 02.5 +0.9
RIY Rijeka 80.14 4⇑ i P P 06 20 01.8 +0.3
GZR Gura Zlata 80.15 358 ⇑P P 06 20 02.6 +0.9
GUN Gumba 80.15 305 eP P 06 20 02.6 +0.3
comp=Z,251nm,1.0s
JIRN Jiri 80.21 305 eP P 06 20 03.2 +0.5
comp=Z,202nm,0.6s
ISR Istrita 80.29 355 ⇑P P 06 20 02.7 +0.3
ODAN Odare 80.31 303 eP P 06 20 03.1 +0.1
comp=Z,97nm,0.9s
SEVA Sevastopol 80.35 350 ⇑P P 06 20 03.3 +0.7
NEY Neytrino 80.40 343⇓ eP P 06 20 04.2 +1.0
NEY pmax pmax
comp=Z,3.0nm,1.0s
FRGS Fruska Gora 80.41 0⇑ i P P 06 20 02.9 -0.1
TOPG Topolog 80.43 354 ⇑P P 06 20 03.6 +0.5
JURR Jurilovca 80.51 354 ⇑P P 06 20 04.2 +0.7
KKN Kakani 80.53 305 eP P 06 20 04.4 +0.2
comp=Z,54nm,0.8s
SOC Sochi 80.54 346 c iP P 06 20 03.5 -0.2
SOC ePPP PPP 06 25 02.4
SOC eS S 06 30 07.1 0.0
SOC eSS SS 06 35 20.2 +1.8
SOC eSSS SSS 06 38 43.8
SOC pmax pmax
comp=Z,31nm,0.8s
SOC MLR MLR
comp=Z,578nm,22.0s
RAMN Ramite 80.61 304 eP P 06 20 04.7 0.0
comp=Z,259nm,0.9s
HARR Harsova 80.64 354 ⇑P P 06 20 04.9 +0.7
ZEI Tsey 80.65 342 eP P 06 20 02.5 -2.1
ZEI pmax pmax
comp=Z,26nm,1.0s
GKN Gorkha 80.66 306 eP P 06 20 04.8 0.0
comp=Z,99nm,0.9s
PKI Pulchoki 80.66 305 eP P 06 20 04.9 -0.1
PKIN Phulchoki 80.66 305 eP P 06 20 04.8 -0.2
comp=Z,40nm,0.8s
NIL Nilore 80.71 317 P P 06 20 05.7 +0.8
NIL pmax pmax
comp=Z,80nm,1.1s
NIL Nilore 80.71 317 P P 06 20 05.7 +0.8
DMN Daman 80.77 305 eP P 06 20 05.8 +0.3
comp=Z,72nm,0.8s
DANN Dangsig 80.77 307 eP P 06 20 06.0 +0.4
comp=Z,417nm,0.8s
MDVR Moldovita 80.78 359 ⇑P P 06 20 05.8 +0.8
BLY Banja Luka 80.79 2 ⇑P P 06 20 05.0 -0.1
BLY Banja Luka 80.79 2 eP P 06 20 04.2 -0.8
MSSA Maissana 80.86 8 P P 06 20 05.8 +0.3
MSSA IAmb IAmb 06 20 07.6
comp=Z,29nm,1.3s
HUMR Humele 80.95 356 ⇑P P 06 20 05.9 0.0
CHTO Chiang Mai 80.96 290 P P 06 20 05.9 -0.5
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 80.96 290 P P 06 20 05.9 -0.5
VLC Villacollemand 81.08 7 IAmb IAmb 06 20 09.0
comp=Z,31nm,1.3s
PBRG Braganca 81.11 20 eP P 06 20 08.9 +2.1
AKT Akhty 81.18 339 eP P 06 20 08.1 +0.8
AKT pmax pmax
comp=Z,63nm,0.9s
CMAR Chiang Mai Arr 81.25 289 i P P 06 20 07.9 0.0
CMAR pmax pmax
comp=Z,26nm,0.9s
CMAR Chiang Mai Arr 81.25 289 P P 06 20 07.9 0.0
comp=Z,20nm,0.9s,baz=14,slow=5.5,SNR=56
CMAR LR LR 07 00 43.5
comp=Z,217nm,18.3s,baz=13,slow=39
KOLN Koldanda 81.34 307 eP P 06 20 08.6 +0.1
comp=Z,99nm,1.0s
PVRL Vila Real 81.42 21 eP P 06 20 10.6 +2.1
comp=Z,118nm,1.8s
DIVS Divibare 81.47 360⇑ i P P 06 20 09.3 +0.5
KBL Kabul 81.52 321 P P 06 20 08.7 -0.6
KBL pmax pmax
comp=Z,31nm,1.0s
KBL Kabul 81.52 321 P P 06 20 08.7 -0.6
KBL IAmb IAmb 06 20 09.4
comp=Z,31nm,1.0s
MVO Moncorvo 81.67 20 eP P 06 20 11.6 +1.8
BBLS Lazi?i 81.70 0⇑ iP P 06 20 11.1 +1.1
DZM Mont Dzumac 81.75 211 eLR LR 06 45 53.0
comp=Z,610nm,21.3s
OSSC Osservatorio P 81.77 6 IAmb IAmb 06 20 13.3
comp=Z,17nm,1.1s
PVIS Viseu 81.92 21 eP P 06 20 13.1 +1.9
comp=Z,104nm,1.7s
RUDO Rudo 81.95 0 eP P 06 20 10.8 -0.4
GEYT Alibeck 81.99 330 P P 06 20 12.5 +0.9
comp=Z,22nm,0.8s,baz=330,slow=5.1,SNR=30
GEYT LR LR 07 02 19.3
comp=Z,550nm,18.4s,baz=35,slow=40
AKH Akhalkalaki 82.06 342 IAmb IAmb 06 20 15.2
comp=Z,14nm,1.0s
PLVB Pleven 82.10 357 ⇑P P 06 20 11.8 -0.2
NEF NEVSHA 82.10 355 i P P 06 20 12.8 +0.8
MTE Manteigas 82.30 21 eP P 06 20 15.4 +2.2
comp=Z,106nm,1.2s
COI Coimbra 82.30 22 eP P 06 20 15.9 +2.8
UPM Unac-Piva 82.36 1 eP P 06 20 13.9 +0.3
PCAS Casmilo, Conde 82.43 22 eP P 06 20 16.1 +2.3
comp=Z,183nm,1.8s
CASP Castiglione de 82.47 7 IAmb IAmb 06 20 15.9
comp=Z,25nm,1.1s
SDV Santo Domingo 82.50 85 P P 06 20 16.3 +1.5
comp=Z,4.5nm,1.0s,baz=196,slow=19,SNR=3.2
SDV Santo Domingo 82.50 85 P P 06 20 15.0 +0.3
NRCA Norcia 82.56 5 IAmb IAmb 06 20 28.7
comp=Z,24nm,1.1s
BRY Bratogost 82.66 1⇑ iP P 06 20 15.3 +0.2
STON Ston 82.68 2⇑ iP P 06 20 14.9 -0.1
LATE Laterza 82.71 6 IAmb IAmb 06 20 17.1
comp=Z,43nm,1.2s
PCBR Castelo Branco 82.85 21 eP P 06 20 17.4 +1.5
comp=Z,97nm,1.1s
PTOM Tomar 82.87 22 eP P 06 20 17.8 +1.8
VTS Vitosha 82.91 358 IAmb IAmb 06 20 17.3

	comp=Z,13nm,1.0s								
GNI	**Garni**	**83.05**	**341**		P		**P**	**06 20 19.0**	**+1.8**
GNI					pmax		pmax		
	comp=Z,15nm,0.8s								
GNI	**Garni**	**83.05**	**341**		P		**P**	**06 20 19.0**	**+1.8**
GNI					IAmb		IAmb	06 20 34.3	
	comp=Z,15nm,0.8s								
HCY	**Herceg Novi**	**83.11**	**1**	*eP*			**P**	**06 20 17.0**	**-0.3**
PDG	**Podgorica**	**83.14**	**0**	⇑P			**P**	**06 20 17.5**	**+0.1**
PDG	**Podgorica**	**83.14**	**0**	IAmb			IAmb	06 20 19.0	
	comp=Z,25nm,1.0s								
PDG	**Podgorica**	**83.14**	**0**	⇑*iP*			**P**	**06 20 17.8**	**+0.4**
PMRV	**Marv??o**	**83.26**	**21**	*eP*			**P**	**06 20 19.4**	**+1.3**
	comp=Z,54nm,1.5s								
PMAFR	**Mafra**	**83.31**	**23**	*eP*			**P**	**06 20 20.5**	**+2.1**
DRME	**Dracevica, Mon**	**83.38**	**1**	⇑*iP*			**P**	**06 20 19.2**	**+0.5**
INTR	**Introdacqua**	**83.42**	**4**	IAmb			IAmb	06 20 21.3	
	comp=Z,18nm,1.0s								
PMTG	**Montargil**	**83.43**	**22**	*eP*			**P**	**06 20 20.0**	**+1.0**
	comp=Z,69nm,1.4s								
SKO	**Skopje**	**83.59**	**359**	*iP*			**P**	**06 20 21.2**	**+1.4**
ROSC	**El Rosal**	**83.64**	**91**	LR			LR	06 58 58.2	
	comp=Z,157nm,21.1s,baz=16,slow=37								
ESDC	**Sonseca Array**	**83.69**	**18**	P			**P**	**06 20 21.6**	**+1.2**
	comp=Z,30nm,0.8s,baz=344,slow=4.8,SNR=85								
ESDC				LR			LR	06 59 54.1	
	comp=Z,220nm,19.2s,baz=345,slow=37								
ESDC	**Sonseca Array**	**83.69**	**18**	IAmb			IAmb	06 20 22.8	
	comp=Z,37nm,0.9s								
PAB	**San Pablo**	**83.75**	**19**	P			**P**	**06 20 21.8**	**+1.1**
PAB				pmax			pmax		
	comp=Z,32nm,1.1s								
PAB	**San Pablo**	**83.75**	**19**	P			**P**	**06 20 21.8**	**+1.1**
PAB				IAmb			IAmb	06 20 23.0	
	comp=Z,32nm,1.1s								
PESTR	**Estremoz**	**83.76**	**21**	IAmb			IAmb	06 20 23.0	
	comp=Z,31nm,1.0s								
ILGA	**Ilgaz**	**83.79**	**350**	IAmb			IAmb	06 20 24.4	
	comp=Z,20nm,1.1s								
STIP	**Stip**	**83.85**	**358**	*iP*			**P**	**06 20 21.5**	**+0.4**
HRA	**Herat**	**84.00**	**326**	IAmb			IAmb	06 20 23.1	
	comp=Z,18nm,1.1s								
VAY	**Valandovo**	**84.22**	**358**	*iP*			**P**	**06 20 24.2**	**+1.2**
PNCL	**Nicolau / Gran**	**84.29**	**22**	*eP*			**P**	**06 20 25.0**	**+1.7**
	comp=Z,129nm,1.1s								
PAOL	**Paolisi**	**84.43**	**4**	IAmb			IAmb	06 20 25.3	
	comp=Z,25nm,1.1s								
OHR	**Ohrid**	**84.45**	**359**	*iP*			**P**	**06 20 25.1**	**+0.9**
PBEJ	**Beja**	**84.51**	**22**	*eP*			**P**	**06 20 26.2**	**+1.7**
	comp=Z,65nm,1.7s								
ALN	**Alexandroupoli**	**84.53**	**355**	IAmb			IAmb	06 20 26.4	
	comp=Z,18nm,1.0s								
FNA	**Florina**	**84.78**	**359**	IAmb			IAmb	06 20 26.9	
	comp=Z,17nm,0.9s								
MATE	**Matera**	**84.88**	**2**	⇑P			**P**	**06 20 27.0**	**+0.8**
ANTO	**Ankara**	**85.05**	**350**	P			**P**	**06 20 29.0**	**+1.7**
ANTO				pmax			pmax		
	comp=Z,33nm,1.0s								
ANTO	**Ankara**	**85.05**	**350**	⇑P			**P**	**06 20 28.5**	**+1.2**
ANTO	**Ankara**	**85.05**	**350**	P			**P**	**06 20 29.0**	**+1.7**
BR131	**Keskin Array S**	**85.11**	**349**	*c iP*			**P**	**06 20 28.5**	**+0.8**
BR131	**Keskin Array S**	**85.11**	**349**	IAmb			IAmb	06 20 29.6	
	comp=Z,17nm,0.9s								
BRTR	**Keskin Array B**	**85.11**	**349**	P			**P**	**06 20 28.4**	**+0.8**
	comp=Z,13nm,0.9s,baz=29,slow=2.8,SNR=61								
BRTR				LR			LR	07 06 03.5	
	comp=Z,185nm,19.2s,baz=336,slow=41								
TIP	**Timpagrande**	**86.35**	**2**	⇑P			**P**	**06 20 34.6**	**+0.9**
AGG	**Agios Georgios**	**86.52**	**358**	IAmb			IAmb	06 20 35.5	
	comp=Z,21nm,1.0s								
GAZ	**Gaziantep**	**87.19**	**346**	IAmb			IAmb	06 20 41.7	
	comp=Z,9.2nm,0.8s								
CTA	**Charters Tower**	**87.47**	**229**	P			**P**	**06 20 39.3**	**+0.1**
	comp=Z,7.1nm,0.9s,baz=52,slow=4.3,SNR=7.5								
MTN	**Manton Dam**	**88.60**	**245**	IAmb			IAmb	06 20 45.1	
	comp=Z,20nm,1.3s								
CHLP	**Challavanipeta**	**88.98**	**301**	*eP*			**P**	**06 20 46.3**	**-0.3**
KEST	**Kesra**	**89.37**	**9**	P			**P**	**06 20 49.4**	**+1.2**
	comp=Z,11nm,0.9s,baz=331,slow=4.1,SNR=9.4								
KEST	**Kesra**	**89.37**	**9**	IAmb			IAmb	06 20 50.2	
	comp=Z,13nm,1.0s								
PVM	**Polavaram**	**91.25**	**303**	*eP*			**P**	**06 20 57.3**	**+0.2**
GGR	**Gangavaram**	**91.44**	**304**	*eP*			**P**	**06 20 57.3**	**-0.8**
KNRA	**Kununurra**	**92.22**	**246**	P			**P**	**06 21 00.3**	**-1.2**
KNRA				IAmb			IAmb	06 21 01.1	
	comp=Z,14nm,1.1s								
RPN	**Rapa Nui**	**92.49**	**136**	LR			LR	06 54 06.0	
	comp=Z,247nm,18.8s,baz=338,slow=30								
HYBB	**Hyderabad (bro**	**92.58**	**305**	*eP*			**P**	**06 21 02.9**	**-0.4**
HYB	**Hyderabad**	**92.58**	**305**	*iP*			**P**	**06 21 03.0**	**-0.3**
DMPR	**Damasthipur**	**92.90**	**306**	*eP*			**P**	**06 21 03.6**	**-1.2**
WRA	**Warramunga Arr**	**92.93**	**239**	P			**P**	**06 21 03.9**	**-0.8**
	comp=Z,3.7nm,0.9s,baz=38,slow=5.4,SNR=27								
WRA				LR			LR	06 58 49.7	
	comp=Z,116nm,21.2s,baz=0.0,slow=33								
WRA	**Warramunga Arr**	**92.93**	**239**	IAmb			IAmb	06 21 04.7	
	comp=Z,0.3nm,0.9s								
PSI	**Prapat**	**94.05**	**281**	LR			LR	07 03 21.7	
	comp=Z,103nm,20.9s,baz=17,slow=35								
FITZ	**Fitzroy Crossi**	**95.88**	**247**	P			**P**	**06 21 18.0**	**-0.2**
FITZ				IAmb			IAmb	06 21 20.0	
	comp=Z,7.5nm,1.1s								
ASAR	**Alice Springs**	**96.29**	**237**	P			**P**	**06 21 19.6**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=36,slow=4.1,SNR=15								
ASAR				LR			LR	07 03 52.9	
	comp=Z,180nm,18.4s,baz=30,slow=35								
LEM	**Lembang**	**96.85**	**268**	LR			LR	07 01 02.1	
	comp=Z,111nm,21.1s,baz=282,slow=33								
RAYN	**Ar Rayn**	**98.95**	**336**	P			Pdif	06 21 33.0	+0.7
RAYN				pmax			pmax		
	comp=Z,11nm,1.0s								
RAYN	**Ar Rayn**	**98.95**	**336**	P			Pdif	06 21 33.0	+0.7
RAYN				IAmb			IAmb	06 21 33.7	
	comp=Z,11nm,0.9s								
STKA	**Stephens Creek**	**99.77**	**227**	LR			LR	07 02 13.5	
	comp=Z,348nm,20.8s,baz=21,slow=33								
TORD	**Torodi Ar. Bea**	**110.58**	**19**	PKiKP			**PKiKP**	**06 26 23.4**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=348,slow=1.8,SNR=5.9								
PLCA	**Paso Flores**	**121.77**	**117**	PKP			**PKPdf**	**06 26 44.5**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=331,slow=2.5,SNR=5.7								
KMBO	**Kilima Mbogo**	**124.64**	**339**	PKP			**PKiKP**	**06 26 52.2**	**+0.4**
	comp=Z,3.1nm,0.9s,baz=336,slow=5.1,SNR=6.5								
QSPA	**South Pole Qui**	**144.58**	**180**				**PKPab**	**06 27 24.7**	**-0.5**
BOSA	**Boshof**	**153.54**	**349**	PKiKP			**PKPbc**	**06 27 48.9**	**-1.1**
BOSA	**Boshof**	**153.54**	**349**	PKPbc			**PKiKP**	**06 27 51.2**	**+1.2**
	comp=Z,3.3nm,0.6s,baz=36,slow=3.4,SNR=5.7								
BOSA	**Boshof**	**153.54**	**349**				**PKPbc**	**06 27 48.9**	**-1.1**
SYO	**Syowa Base**	**163.14**	**205**	‖ *iP*			**PKPdf**	**06 27 49.0**	**-3.3**
SYO	**Syowa Base**	**163.14**	**205**	⇑*e*PKPdf			**PKPdf**	**06 27 51.0**	**-1.3**
SYO	**Syowa Base**	**163.14**	**205**	⇑*es*PKPdf			sPKPdf	06 28 09.4	-0.4
SYO	**Syowa Base**	**163.14**	**205**	⇑*e*PKPab			**PKPab**	**06 28 43.4**	**+0.6**

*NEIC **07** 06:09:04.9±2.1, 18°.07N±0°.04×99°.78W±0°.04, h52km±6km, Error ellipse: s-maj=5.5km s-min=5.2km az=120.0*
*MEX **07** 06:09:06.5±0.8, 18°.05N×99°.81W, h50km±4km, MD4.3*
*IDC **07** 06:09:09.3±1.2, 18°.34N×99°.39W, h87km±7km, mb3.9/9, mb1 4.0/14, mb1mx3.8/47, mbtmp4.1/14, Error ellipse: s-maj=29.1km s-min=11.0km az=31.0*

ISC 07 06:09:05.0±0.5, **18°.05N**±0°.03×**99°.78W**±0°.03, **h56**km±4km, **n170**, σ**1s00**/185, **mb4.2**/18, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MEIG	**Mezcala**	**0.20**	**131**	*i*	P		**Pn**	**06 09 13.4**	**-0.7**
MEIG				*e*	S		**Sn**	**06 09 19.8**	**-0.8**
MEIG	**Mezcala**	**0.20**	**131**				**Pn**	**06 09 13.4**	**-0.7**
MEIG							**Sn**	**06 09 19.8**	**-0.8**
PLIG	**Platanillo**	**0.42**	**38**	*i*	P		**Pn**	**06 09 15.4**	**-0.5**
PLIG				*e*	S		**Sn**	**06 09 22.8**	**-1.1**
PLIG	**Platanillo**	**0.42**	**38**				**Pn**	**06 09 15.4**	**-0.5**
PLIG							**Sn**	**06 09 22.8**	**-1.1**
ARIG	**Puente Sto Nin**	**0.59**	**293**	*i*	P		**Pn**	**06 09 17.0**	**-0.7**
ARIG				*e*	S		**Sn**	**06 09 25.7**	**-1.2**
ARIG	**Puente Sto Nin**	**0.59**	**293**				**Pn**	**06 09 17.0**	**-0.7**
ARIG							**Sn**	**06 09 25.7**	**-1.2**
YAIG	**Yautepec**	**1.05**	**40**	*i*	P		**Pn**	**06 09 23.1**	**-0.6**
YAIG				*e*	S		**Sn**	**06 09 36.7**	**-0.8**
YAIG	**Yautepec**	**1.05**	**40**				**Pn**	**06 09 23.1**	**-0.6**
YAIG							**Sn**	**06 09 36.7**	**-0.8**
CAIG	**El Cayaco**	**1.10**	**205**	*i*	P		**Pn**	**06 09 23.5**	**-0.8**
CAIG				*e*	S		**Sn**	**06 09 37.9**	**-0.7**
CAIG	**El Cayaco**	**1.10**	**205**				**Pn**	**06 09 23.5**	**-0.8**
CAIG							**Sn**	**06 09 37.9**	**-0.7**
TOVM	**TOLUCA**	**1.23**	**4**	*e*	P		**Pn**	**06 09 25.9**	**-0.4**
TOVM	**TOLUCA**	**1.23**	**4**				**Pn**	**06 09 25.9**	**-0.4**
TLIG	**Tlapa**	**1.25**	**113**	*i*	P		**Pn**	**06 09 27.0**	**+0.7**
TLIG				*i*	S		**Sn**	**06 09 42.6**	**+0.3**
TLIG	**Tlapa**	**1.25**	**113**				**Pn**	**06 09 27.1**	**+0.7**
TLIG					Sn		**Sn**	**06 09 42.3**	**0.0**
TLIG	**Tlapa**	**1.25**	**113**				**Pn**	**06 09 27.0**	**+0.7**
TLIG							**Sn**	**06 09 42.6**	**+0.3**
UNM	**Universidad Na**	**1.39**	**24**	*i*	P		**Pn**	**06 09 28.6**	**+0.3**
UNM				*e*	S		**Sn**	**06 09 46.2**	**+0.3**
UNM	**Universidad Na**	**1.39**	**24**				**Pn**	**06 09 28.6**	**+0.3**
UNM					Sn		**Sn**	**06 09 42.9**	**-2.9**
AMVM	**AMECAMECA**	**1.43**	**41**	*e*	P		**Pn**	**06 09 28.8**	**-0.1**
AMVM	**AMECAMECA**	**1.43**	**41**				**Pn**	**06 09 28.8**	**-0.1**
PPM	**Popocatepetl**	**1.48**	**47**	*e*	P		**Pn**	**06 09 29.8**	**0.0**
PPM				*i*	S		**Sn**	**06 09 47.8**	**-0.7**
PTVM	**Pico Tres Padr**	**1.65**	**22**	*i*	P		**Pn**	**06 09 31.7**	**-0.3**
PTVM	**Pico Tres Padr**	**1.65**	**22**				**Pn**	**06 09 31.7**	**-0.3**
ZIIG	**Zihuatanejo**	**1.67**	**255**	*e*	P		**Pn**	**06 09 30.9**	**-1.0**
ZIIG	**Zihuatanejo**	**1.67**	**255**				**Pn**	**06 09 30.9**	**-1.0**
MOIG	**Morelia**	**2.10**	**321**	*e*	P		**Pn**	**06 09 38.6**	**+0.6**
MOIG	**Morelia**	**2.10**	**321**				**Pn**	**06 09 38.7**	**+0.6**
MOIG	**Morelia**	**2.10**	**321**				**Pn**	**06 09 38.6**	**+0.6**
PNIG	**Pinotepa**	**2.28**	**136**	*e*	P		**Pn**	**06 09 40.3**	**0.0**
PNIG	**Pinotepa**	**2.28**	**136**				**Pn**	**06 09 40.3**	**0.0**
TPIG	**Tehuac#an**	**2.32**	**81**	*e*	P		**Pn**	**06 09 41.5**	**+0.6**
TPIG				*i*	S		**Sn**	**06 10 08.3**	**-0.2**
TPIG	**Tehuac#an**	**2.32**	**81**				**Pn**	**06 09 41.5**	**+0.6**
TPIG							**Sn**	**06 10 08.3**	**-0.2**
DEIG	**Demacu**	**2.34**	**17**	*e*	P		**Pn**	**06 09 40.4**	**-0.9**
JRQG	**Juriquilla Cam**	**2.71**	**347**	*e*	P		**Pn**	**06 09 45.8**	**-0.6**
JRQG	**Juriquilla Cam**	**2.71**	**347**				**Pn**	**06 09 45.8**	**-0.6**
MMIG	**Aquila**	**3.40**	**274**	*e*	P		**Pn**	**06 09 54.7**	**-0.9**
MMIG				*i*	S		**Sn**	**06 10 34.7**	**0.0**
MMIG	**Aquila**	**3.40**	**274**				**Pn**	**06 09 54.7**	**-0.9**
MMIG							**Sn**	**06 10 34.7**	**0.0**
CMIG	**Matias Romero**	**4.76**	**101**	P			**Pn**	**06 10 15.6**	**+1.4**
	3.4nm,0.3s,baz=259,slow=12,SNR=116								
CMIG				S			**Sn**	**06 11 05.6**	**-2.6**
	16nm,0.3s,baz=13,slow=18,SNR=6.8								
ZAIG	**Zacatecas**	**5.37**	**331**				**Pn**	**06 10 22.8**	**-0.1**
APG	**El Apazote**	**9.43**	**107**	P			**Pn**	**06 11 20.6**	**+2.2**
	1.5nm,0.3s,baz=336,slow=20,SNR=3.4								
APG				S			**Sn**	**06 12 59.4**	**-3.8**
	1.3nm,0.3s,baz=348,slow=19,SNR=2.8								
TEIG	**Tepich**	**11.08**	**77**	Pn			**Pn**	**06 11 43.8**	**+3.0**
TXAR	**Lajitas Array**	**11.78**	**343**	P			**Pn**	**06 11 52.6**	**+2.3**
	0.2nm,0.3s,baz=162,slow=14,SNR=12								
TX31	**Lajitas Ar. Si**	**11.78**	**343**				**Pn**	**06 11 51.1**	**+0.7**
TX32	**Lajitas Array**	**11.78**	**343**				**Pn**	**06 11 51.7**	**+1.3**
JCT	**Junction City**	**12.37**	**360**	P			**Pn**	**06 11 59.1**	**+0.7**
	baz=180								
NATX	**Nacogdoches**	**14.41**	**18**	P			**Pn**	**06 12 26.9**	**+1.0**
	baz=200								
MNTX	**Cornudas Mount**	**14.50**	**341**	Pn			**Pn**	**06 12 28.2**	**+1.1**
319A	**Douglas**	**15.81**	**329**	P			**P**	**06 12 46.9**	**-0.2**
319A				IAmb			IAmb	06 12 52.2	
	comp=Z,16nm,0.8s								
MSTX	**Muleshoe**	**16.08**	**351**	P			**P**	**06 12 50.1**	**+0.2**
MSTX				IAmb			IAmb	06 13 01.1	
	comp=Z,35nm,1.0s								
MSTX	**Muleshoe**	**16.08**	**351**	P			**Pn**	**06 12 46.3**	**-1.2**
	baz=169,SNR=6.0								
121A	**Cookes Peak, D**	**16.12**	**335**	P			**P**	**06 12 49.7**	**-0.9**
JTS	**Las Juntas de**	**16.30**	**116**	P			**P**	**06 12 52.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=328,slow=19,SNR=2.2								
JTS	**Las Juntas de**	**16.30**	**116**	P			**P**	**06 12 54.8**	**+2.3**
JTS				IAmb			IAmb	06 13 06.5	
	comp=Z,18nm,1.4s								
Z41A	**Richland Creek**	**16.38**	**21**	P			**Pn**	**06 12 51.8**	**+0.6**
	baz=204								
WMOK	**Wichita Mounta**	**16.64**	**3**	P			**Pn**	**06 12 53.7**	**-0.8**
	baz=183								
AMTX	**Amarillo**	**16.85**	**355**	P			**Pn**	**06 12 56.9**	**-0.3**
AMTX				IAmb			IAmb	06 13 13.4	
	comp=Z,13nm,0.8s								
BNM	**Barren Site**	**17.16**	**340**	P			**P**	**06 13 03.0**	**+0.8**
W35A	**Tecumseh**	**17.23**	**8**	P			**Pn**	**06 13 01.7**	**-0.1**
LENM	**Lemitar**	**17.29**	**340**	P			**P**	**06 13 03.2**	**-0.3**
MIAR	**Mount Ida**	**17.33**	**17**	P			**Pn**	**06 13 02.3**	**-0.7**
MIAR	**Mount Ida**	**17.33**	**17**	P			**Pn**	**06 13 03.1**	**0.0**
	baz=200								
ANMO	**Albuquerque**	**17.85**	**342**	P			**P**	**06 13 10.8**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=146,slow=11,SNR=11								
ANMO	**Albuquerque**	**17.85**	**342**	P			**P**	**06 13 10.8**	**+1.2**
ANMO	**Albuquerque**	**17.85**	**342**	P			**P**	**06 13 09.8**	**+0.2**
	baz=159								
TUL1	**Leonard**	**18.13**	**10**	P			**P**	**06 13 11.8**	**-0.7**
TUL1				IAmb			IAmb	06 13 28.1	
	comp=Z,16nm,0.8s								
TUL1	**Leonard**	**18.13**	**10**	P			**P**	**06 13 12.8**	**+0.2**
	baz=192								
214A	**Organ Pipe Nat**	**18.17**	**322**	P			**Pn**	**06 13 13.7**	**+0.3**
	baz=136								
WHAR	**Wooly Hollow**	**18.41**	**20**	P			**Pn**	**06 13 16.4**	**+0.1**
LRAL	**Lakeview Retre**	**18.83**	**35**	P			**P**	**06 13 19.9**	**-0.3**
LRAL	**Lakeview Retre**	**18.83**	**35**	P			**P**	**06 13 20.2**	**0.0**
	baz=221								
HHAR	**Hobbs**	**18.88**	**15**	P			**P**	**06 13 21.1**	**+0.3**
HHAR				IAmb			IAmb	06 13 25.6	
	comp=Z,16nm,1.3s								
FCAR	**Ozark Folk Cen**	**19.02**	**19**	P			**P**	**06 13 22.4**	**+0.2**
FCAR				IAmb			IAmb	06 13 25.5	
	comp=Z,9.5nm,0.9s								
W18A	**Petrified Fore**	**19.17**	**334**	P			**Pn**	**06 13 25.9**	**+0.4**
U40A	**Yellville**	**19.23**	**17**	IAmb			IAmb	06 13 42.5	
	comp=Z,8.7nm,0.8s								
U40A	**Yellville**	**19.23**	**17**	P			**P**	**06 13 24.7**	**0.0**
	baz=200								
T25A	**Trinidad**	**19.45**	**349**	P			**Pn**	**06 13 29.0**	**+0.2**
T25A	**Trinidad**	**19.45**	**349**	P			**P**	**06 13 27.4**	**+0.2**
	baz=166								
Z50A	**Ashland**	**19.59**	**37**	P			**P**	**06 13 27.0**	**-1.6**
Z50A	**Ashland**	**19.59**	**37**	P			**P**	**06 13 28.8**	**+0.2**
	baz=223								
DWPF	**Disney Wildern**	**19.60**	**56**	P			**P**	**06 13 28.4**	**-0.3**
	baz=243								
152A	**Waverly Hall**	**19.89**	**40**	P			**P**	**06 13 31.8**	**0.0**
	baz=227								
MGMO	**Mountain Grove**	**20.14**	**18**	P			**P**	**06 13 35.2**	**+0.7**
MGMO				IAmb			IAmb	06 13 38.6	
	comp=Z,12nm,1.0s								
WUAZ	**Wupatki**	**20.21**	**332**	IAmb			IAmb	06 13 38.4	
	comp=Z,10nm,0.8s								
WUAZ	**Wupatki**	**20.21**	**332**	P			Pn	06 13 37.1	-0.7
	baz=146,SNR=12								
SDCO	**Great Sand Dun**	**20.25**	**347**	P			**P**	**06 13 36.8**	**+0.8**
SDCO	**Great Sand Dun**	**20.25**	**347**	P			**P**	**06 13 36.9**	**+0.8**
	baz=164								
Y12C	**Blythe**	**20.46**	**323**	P			**P**	**06 13 39.1**	**+1.1**
	baz=136								
Y51A	**Rockmart**	**20.55**	**37**	P			**P**	**06 13 38.9**	**-0.1**
	baz=224								
MVCO	**Mesa Verde**	**20.57**	**340**	IAmb			IAmb	06 13 43.4	
	comp=Z,10nm,0.7s								
MVCO	**Mesa Verde**	**20.57**	**340**	P			**P**	**06 13 39.9**	**+0.5**
	baz=156,SNR=10								
S22A	**4UR Ranch, Cre**	**20.57**	**344**	IAmb			IAmb	06 13 58.7	
	comp=Z,13nm,0.9s								
S22A	**4UR Ranch, Cre**	**20.57**	**344**	P			**P**	**06 13 40.2**	**+0.7**
	baz=160,SNR=7.3								
SWSC	**Sam W. Stewart**	**20.67**	**319**	P			**P**	**06 13 41.7**	**+1.4**
	baz=132								
IKP	**In-Ko-Pah, Jac**	**20.68**	**318**	P			**P**	**06 13 41.6**	**+1.2**
	baz=130								
CBKS	**Cedar Bluff**	**20.68**	**0**	P			**P**	**06 13 40.1**	**-0.3**
CBKS	**Cedar Bluff**	**20.68**	**0**	P			**P**	**06 13 40.7**	**+0.2**
	baz=180								
W49A	**Belvidere**	**20.82**	**33**	P			**P**	**06 13 43.0**	**+1.1**
	baz=219								
WVT	**Waverly**	**20.88**	**28**	P			**P**	**06 13 42.7**	**+0.2**
WVT				IAmb			IAmb	06 13 59.4	
	comp=Z,15nm,1.4s								
WVT	**Waverly**	**20.88**	**28**	P			**P**	**06 13 43.0**	**+0.5**
	baz=214								
KSCO	**Kaye Shedlock'**	**21.03**	**354**	P			**P**	**06 13 44.7**	**+0.4**
	baz=172								
MONP2	**Monument Peak**	**21.03**	**318**	P			**P**	**06 13 45.5**	**+1.1**
	baz=130,SNR=6.8								
IRM	**Iron Mountain**	**21.11**	**322**	P			**P**	**06 13 46.0**	**+0.9**
	baz=135								
KSU1	**Kansas State U**	**21.15**	**7**	P			**P**	**06 13 45.7**	**+0.3**
	baz=188								
CCM	**Cathedral Cave**	**21.28**	**19**	P			**P**	**06 13 47.6**	**+0.8**
CCM				IAmb			IAmb	06 14 04.5	
	comp=Z,24nm,1.4s								
CCM	**Cathedral Cave**	**21.28**	**19**	P			**P**	**06 13 47.2**	**+0.5**
	baz=203								
W50A	**Signal Mountai**	**21.38**	**34**	P			**P**	**06 13 48.2**	**+0.3**
	baz=221								
109C	**Camp Elliot, M**	**21.47**	**317**	P			**P**	**06 13 49.6**	**+0.8**
	baz=129								
BELC	**Belle Mtn. Jos**	**21.51**	**321**	P			**P**	**06 13 50.0**	**+0.6**
	baz=133								
XPFO	**Pion Flat**	**21.52**	**319**	P			**P**	**06 13 51.5**	**+1.9**
PFO	**Pinyon Flats O**	**21.53**	**319**	P			**P**	**06 13 51.6**	**+1.9**
	comp=Z,1.0nm,0.5s,baz=121,slow=12,SNR=5.5								
PFO	**Pinyon Flats O**	**21.53**	**319**	P			**P**	**06 13 51.3**	**+1.7**
PFO	**Pinyon Flats O**	**21.53**	**319**	P			**P**	**06 13 50.8**	**+1.2**
	baz=132								
W51A	**Cleveland**	**21.64**	**35**	P			**P**	**06 13 50.7**	**0.0**
	baz=222								
V50A	**Pikeville**	**21.84**	**34**	P			**P**	**06 13 52.9**	**0.0**
	baz=220								
GMRC	**Granite Mounta**	**21.86**	**323**	P			**P**	**06 13 54.1**	**+0.9**
	baz=135								
SMCO	**Snowmass**	**21.96**	**345**	P			**P**	**06 13 56.5**	**+2.0**
SMCO				IAmb			IAmb	06 13 59.0	
	comp=Z,4.5nm,0.8s								
ISCO	**Idaho Springs**	**22.25**	**348**	P			**P**	**06 13 58.0**	**+0.4**
	baz=165								
V51A	**Loudon**	**22.34**	**35**	P			**P**	**06 13 58.1**	**-0.1**
V51A	**Loudon**	**22.34**	**35**	P			**P**	**06 13 58.2**	**-0.1**
	baz=222								
TUQ	**Turquoise Moun**	**22.48**	**324**	P			**P**	**06 14 00.1**	**+0.3**
	baz=136,SNR=11								
TKL	**Tuckaleechee C**	**22.55**	**36**	P			**P**	**06 13 57.6**	**-2.9**
	comp=Z,4.3nm,0.9s,baz=194,slow=12,SNR=4.1								
TKL	**Tuckaleechee C**	**22.55**	**36**	IAmb			IAmb	06 14 04.1	
	comp=Z,18nm,1.5s								
W54A	**Cherokee Point**	**23.07**	**39**	P			**P**	**06 14 04.8**	**-1.0**
	baz=227								
MSU	**Marysvale**	**23.08**	**335**	P			**P**	**06 14 08.0**	**+1.9**
V53A	**Saluda**	**23.11**	**37**	P			**P**	**06 14 05.6**	**-0.6**
V53A	**Saluda**	**23.11**	**37**	P			**P**	**06 14 05.4**	**-0.8**
	baz=225								
O20A	**White River Ci**	**23.19**	**343**	IAmb			IAmb	06 14 09.9	
	comp=Z,10nm,1.0s								
O20A	**White River Ci**	**23.19**	**343**	P			**P**	**06 14 07.3**	**+0.2**
	baz=159,SNR=5.5								
EDW2	**Edwards Air Fo**	**23.32**	**320**	P			**P**	**06 14 08.7**	**+0.4**
	baz=131								
N23A	**Red Feather La**	**23.37**	**348**	P			**P**	**06 14 08.7**	**-0

THZ	**Tophouse**	**28.89**	**171**	P		**P**	**06 24 47.6**	**+1.5**
MSWZ	**Moikau Station**	**28.98**	**167**	P		**P**	**06 24 46.5**	**-0.4**
STKA	**Stephens Creek**	**29.90**	**227**	P		**P**	**06 24 55.9**	**+0.7**
	comp=Z,9.8nm,0.5s,baz=49,slow=9.2,SNR=29							
STKA	**Stephens Creek**	**29.90**	**227**	P		**P**	**06 24 55.8**	**+0.6**
TOO	**Toolangi**	**31.01**	**215**	P		**P**	**06 25 04.3**	**-0.6**
TOO				IAmb	IAmb		06 25 06.1	
	comp=Z,8.7nm,0.8s							
WRA	**Warramunga Arr**	**32.10**	**254**	P		**P**	**06 25 14.1**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=85,slow=9.1,SNR=16							
WRA	**Warramunga Arr**	**32.11**	**254**	P		**P**	**06 25 13.8**	**-0.8**
AS31	**Alice Springs**	**33.12**	**247**	P		**P**	**06 25 23.0**	**-0.5**
AS31				IAmb	IAmb		06 25 23.5	
	comp=Z,4.7nm,0.2s							
ASAR	**Alice Springs**	**33.12**	**247**	P		**P**	**06 25 22.9**	**-0.6**
	comp=Z,3.8nm,0.4s,baz=76,slow=9.2,SNR=85							
ASAR				ScP		**ScP**	**06 31 29.3**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=86,slow=3.3,SNR=12							
BBOO	**Buckleboo**	**34.43**	**230**	P		**P**	**06 25 34.5**	**-0.1**
MTN	**Manton Dam**	**35.06**	**266**	P		**P**	**06 25 40.1**	**-0.1**
MTN				IAmb	IAmb		06 25 49.7	
	comp=Z,16nm,1.4s							
KNRA	**Kununurra**	**37.21**	**261**	P		**P**	**06 25 58.6**	**+0.1**
KNRA				IAmb	IAmb		06 25 59.7	
	comp=Z,10.0nm,0.5s							
FORT	**Forrest**	**39.98**	**238**	P		**P**	**06 26 20.7**	**-0.7**
FITZ	**Fitzroy Crossi**	**40.19**	**258**	P		**P**	**06 26 22.9**	**-0.4**
NWAO	**Narrogin (SRO)**	**49.43**	**238**	P		**P**	**06 27 35.2**	**-0.9**
NWAO				IAmb	IAmb		06 27 40.2	
	comp=Z,35nm,1.2s							
MORW	**Morawa**	**49.83**	**243**	P		**P**	**06 27 38.7**	**-0.5**
PETK	**Petropavlovsk-**	**66.54**	**354**	P		**P**	**06 29 35.4**	**+0.9**
	comp=Z,1.5nm,0.7s,baz=164,slow=5.7,SNR=5.1							
CNBA	**Chernabura Isl**	**73.38**	**19**	P		**P**	**06 30 16.3**	**+0.2**
QSPA	**South Pole Qui**	**76.81**	**180**	P		**P**	**06 30 35.5**	**-0.4**
QSPA				IAmb	IAmb		06 30 46.9	
	comp=Z,12nm,1.5s							
SUA	**Susitna One**	**81.50**	**19**	P		**P**	**06 31 01.9**	**+0.7**
SUA				IAmb	IAmb		06 31 07.1	
	comp=Z,15nm,1.4s							
KNK	**Knik Glacier**	**82.20**	**20**	P		**P**	**06 31 05.2**	**+0.4**
KNK				IAmb	IAmb		06 31 17.0	
	comp=Z,19nm,1.4s							
GHO	**Glory Hole Cre**	**82.31**	**19**	P		**P**	**06 31 06.0**	**+0.6**
GHO				IAmb	IAmb		06 31 07.7	
	comp=Z,8.7nm,1.2s							
SCM	**Sheep Creek Mo**	**82.88**	**20**	P		**P**	**06 31 09.2**	**+0.8**
SCM				IAmb	IAmb		06 31 25.3	
	comp=Z,12nm,1.2s							
KTH	**Kantishna Hill**	**83.03**	**18**	P		**P**	**06 31 08.6**	**-0.5**
KTH				IAmb	IAmb		06 31 24.6	
	comp=Z,16nm,1.5s							
TRF	**Thorofare Moun**	**83.14**	**18**	P		**P**	**06 31 09.7**	**-0.1**
TRF				IAmb	IAmb		06 31 17.6	
	comp=Z,9.9nm,1.4s							
RND	**Reindeer**	**83.54**	**18**	P		**P**	**06 31 12.2**	**+0.6**
RND				IAmb	IAmb		06 31 13.8	
	comp=Z,3.3nm,0.6s							
MCK	**McKinley**	**83.75**	**18**	P		**P**	**06 31 12.8**	**+0.1**
MCK				IAmb	IAmb		06 31 16.9	
	comp=Z,7.5nm,1.2s							
BALM	**Baldy**	**84.08**	**22**	P		**P**	**06 31 13.7**	**-0.8**
BALM				IAmb	IAmb		06 31 28.2	
	comp=Z,24nm,1.4s							
IMAR	**Indian Mountai**	**84.14**	**15**	P		**P**	**06 31 16.0**	**+1.5**
MLY	**Manley**	**84.20**	**17**	P		**P**	**06 31 15.5**	**+0.6**
WRH	**Wood River Hil**	**84.55**	**18**	P		**P**	**06 31 16.5**	**-0.1**
CCB	**Clear Creek Bu**	**84.76**	**18**	P		**P**	**06 31 17.7**	**0.0**
HDA	**Harding Lake**	**84.85**	**18**	P		**P**	**06 31 18.7**	**+0.6**
IL31		**85.12**	**18**	P		**P**	**06 31 19.8**	**+0.3**
ILAR	**Eielson Array**	**85.12**	**18**	P		**P**	**06 31 19.1**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=242,slow=4.9,SNR=41							
YKA	**Yellowknife Ar**	**96.26**	**27**	P		**P**	**06 32 11.2**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=255,slow=4.7							
ARCES	**ARCESS Array B**	**118.75**	**346**	PKP		**PKPdf**	**06 37 30.4**	**0.0**
	comp=Z,1.5nm,0.5s,baz=60,slow=2.1,SNR=14							
FINES	**FINESS Array B**	**124.27**	**339**	PKP		**PKPdf**	**06 37 41.2**	**0.0**
	comp=Z,2.0nm,0.7s,baz=90,slow=1.9,SNR=4.7							

*ISN **07** 06:36:35.6±1.1,34°.28N×45°.46E,h7km±5km,ML3.0*
*TEH **07** 06:36:36.1,34°.28N×45°.61E,h10km,ML3.1*
ISC 07 06:36:36.4±1.6,**34°.42N**±0°.04×**45°.54E**±0°.04,**h3**km±14km,
n18,σ0°.81/24,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IDHR	**Dehrash**	**0.75**	**68**	*e*Pg		**Pg**	**06 36 50.6**	**-0.3**
IDHR				*e*Sg		**Sb**	**06 37 02.6**	**-0.5**
IDHR				*e*			06 37 04.1	
IGHG	**Ghaleghazi**	**0.86**	**96**	*e*Pg		**Pg**	**06 36 52.7**	**-0.2**
KCHF	**Cheshme Sefid,**	**1.25**	**96**	*e*Pg		**Pn**	**06 37 00.6**	**-0.4**
KCHF				*e*			06 37 20.6	
ILIN	**Lien**	**1.27**	**67**	*e*Pg		**Pn**	**06 37 00.8**	**-0.6**
ILIN				*e*			06 37 21.1	
KER	**Kermanshah**	**1.32**	**91**	*e*Pg		**Pn**	**06 37 01.0**	**-0.9**
IBDR	**Badra**	**1.35**	**166**	*e*Pn		**Pn**	**06 37 02.0**	**-0.2**
IBDR				AML		AML	06 37 02.8	
	comp=Z,116nm,0.4s							
IBDR				*e*Sn		**Sb**	**06 37 22.0**	**+2.0**
IKRK	**Kirkuk**	**1.39**	**315**	*e*Pg		**Pn**	**06 37 02.0**	**-0.7**
IKRK				AML		AML	06 37 05.1	
	comp=Z,102nm,0.6s							
IKRK				*e*Sg		**Sg**	**06 37 22.0**	**+1.0**
BHD	**Baghdad**	**1.50**	**220**	*e*Pn		**Pn**	**06 37 03.0**	**-1.2**
BHD				AML		AML	06 37 05.4	
	comp=Z,5μm,0.6s							
BHD				*e*Sn		**Sn**	**06 37 24.0**	**-0.3**
IKOM	**Komasi**	**1.65**	**98**	*e*			06 37 43.6	
IKOM				*e*Pg		**Pn**	**06 37 06.8**	**+0.3**
IBZA	**Bozab**	**1.92**	**88**	*e*Pn		**Pn**	**06 37 10.6**	**+0.3**
IKFM	**Kafar-mosalman**	**2.12**	**114**	*e*Pn		**Pn**	**06 37 11.5**	**-1.2**
IKFM				*e*			06 37 49.0	
IDOB	**Doab**	**2.28**	**105**	*e*Pn		**Pn**	**06 37 14.5**	**-0.7**
IDOB				*e*			06 38 00.2	
MAHB	**Mahabad**	**2.34**	**3**	*e*Pn		**Pb**	**06 37 19.0**	**-0.4**
MAHB				*e*			06 37 53.5	
HSRG	**Sareghieh**	**2.40**	**69**	*e*Pn		**Pn**	**06 37 17.8**	**+0.9**
HSRG				*e*			06 37 58.8	
HSAM	**Samen**	**2.54**	**94**	*e*Pn		**Pn**	**06 37 18.3**	**-0.6**
MSL	**Mosul**	**2.80**	**316**	*e*Pn		**Pn**	**06 37 22.0**	**-0.1**
MSL				*e*Sn		**Sn**	**06 37 57.0**	**+0.6**
HAGD	**Aghdareh**	**3.00**	**81**	*e*Pn		**Pn**	**06 37 25.6**	**+0.5**
HAGD				*e*			06 38 23.6	
NSR	**Nassriya**	**3.44**	**171**	*e*Pn		**Pn**	**06 37 31.0**	**+0.1**
NSR				*e*Sn		**Sn**	**06 38 12.0**	**-0.2**

*IDC **07** 06:38:57.1±1.9,4°.15N×126°.77E,h0km,mb3.4/4,*
mb1 3.7/4,mb1mx3.4/40,mbtmp3.5/4,Error ellipse:
s-maj=125.3km s-min=23.6km az=71.0
*MAN **07** 06:39:31.0,5°.60N×125°.41E,h1km,mb4.4,ML3.3,MS3.1*
ISC 07 06:38:59.4±1.2,**4°.0N**±0°.1×**126°.4E**±0°.3,**h10**km,**n8,**
σ0°.92/10,mb3.5/4,1C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DDMP	**Don Marcelino,**	**2.19**	**343**	*e*P		**Pg**	**06 39 42.2**	**+0.7**
DDMP				*e*S		**Sg**	**06 40 09.5**	**-0.5**
MATI	**Mati**	**2.93**	**358**	*e*P		Pg	06 40 00.1	+4.5
SKMP	**Bagumbayan, Su**	**3.09**	**324**	*e*P		**Pb**	**06 39 55.0**	**+0.4**
SKMP				*e*S		**Sb**	**06 40 31.2**	**-1.3**
KCP	**Kidapawan**	**3.25**	**337**	*i*P		Pg	06 40 07.2	+5.5
KCP				*i* S		**Sg**	**06 40 44.4**	**+0.5**
FITZ	**Fitzroy Crossi**	**21.97**	**182**	P		**P**	**06 43 54.9**	**+1.4**
	1.4nm,0.3s,baz=4.0,slow=8.5,SNR=8.4							
WRA	**Warramunga Arr**	**25.05**	**162**	P		**P**	**06 44 23.6**	**-0.5**
	0.5nm,0.5s,baz=341,slow=10,SNR=4.9							
ASAR	**Alice Springs**	**28.46**	**165**	P		**P**	**06 44 53.8**	**-1.0**
	0.2nm,0.5s,baz=343,slow=6.9,SNR=4.8							
MKAR	**Makanchi Array**	**57.13**	**325**	P		**P**	**06 48 46.3**	**-0.1**
	0.2nm,0.5s,baz=109,slow=8.8,SNR=4.2							
MKAR				PcP		**PcP**	**06 49 40.7**	**-0.3**
	0.4nm,0.6s,baz=128,slow=3.3,SNR=4.6							

*KRSC **07** 06:46:01.2±1.0,54°.52N×162°.60E,h47km±13km,ML4.3,*
FELT [II] at GMS Kronoki.
*MOS **07** 06:46:03.1±0.6,54°.55N×162°.61E,h46km,mb4.0/1,Error*
ellipse: s-maj=7.5km s-min=4.6km az=85.7
*IDC **07** 06:46:08.4±4.2,54°.71N×161°.88E,h75km±36km,mb3.4/7,*
mb1 3.6/8,mb1mx3.2/41,mbtmp3.7/8,ML3.0/1,Error
ellipse: s-maj=35.3km s-min=26.0km az=84.0
ISC 07 06:46:02.9±1.8,**54°.54N**±0°.03×**162°.63E**±0°.05,**h30**km±12km,
n101,σ1§14/161,mb3.7/7,1C,Near east coast of
Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MKZ	**Mys Kozlova**	**0.53**	**272**	PN		**Pn**	**06 46 13.4**	**-0.9**
MKZ				S		**Sb**	**06 46 20.6**	**-0.5**
MKZ	**Mys Kozlova**	**0.53**	**272**	*i* P		**Pn**	**06 46 13.4**	**-0.9**
MKZ				*e*S		**Sb**	**06 46 20.6**	**-0.5**
TUMD	**Tumrok D**	**1.45**	**298**	*e*P		**Pn**	**06 46 26.5**	**-0.6**
TUMD				*e*S		**Sn**	**06 46 43.5**	**-1.6**
KZV	**Kizimen**	**1.47**	**294**	PN		**Pn**	**06 46 26.9**	**-0.6**
KZV				S		**Sn**	**06 46 44.2**	**-1.6**
KZV	**Kizimen**	**1.47**	**294**	*i* P		**Pn**	**06 46 26.9**	**-0.6**
KZV				*e*S		**Sn**	**06 46 44.2**	**-1.6**
TUMR	**Tumrok**	**1.62**	**298**	PN		**Pn**	**06 46 29.5**	**0.0**
TUMR				S		**Sn**	**06 46 48.6**	**-0.7**
TUMR	**Tumrok**	**1.62**	**298**	*e*P		**Pn**	**06 46 29.5**	**0.0**
TUMR				*e*S		**Sn**	**06 46 48.6**	**-0.7**
KBTR	**Krutoberegovo**	**1.67**	**4**	PN		**Pn**	**06 46 29.7**	**-0.4**
KBTR				S		**Sn**	**06 46 49.0**	**-0.8**
KBTR	**Krutoberegovo**	**1.67**	**4**	*e*P		**Pn**	**06 46 29.7**	**-0.4**
KBTR				*e*S		**Sn**	**06 46 49.0**	**-0.8**
KBG	**Krutoberegovo**	**1.72**	**1**	PN		**Pn**	**06 46 30.3**	**-0.4**
KBG				S		**Sn**	**06 46 51.9**	**+0.3**
KBG	**Krutoberegovo**	**1.72**	**1**	*e*P		**Pn**	**06 46 30.3**	**-0.4**
KBG				*e*S		**Sn**	**06 46 51.9**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**1.79**	**322**	PN		**Pn**	**06 46 32.2**	**+0.4**
BZGR				S		**Sn**	**06 46 54.0**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**1.79**	**322**	*e*P		**Pn**	**06 46 32.2**	**+0.4**
BZGR				*e*S		**Sn**	**06 46 54.0**	**+0.5**
ZLN	**Zelenaya**	**1.81**	**325**	PN		**Pn**	**06 46 33.2**	**+1.1**
ZLN				S		**Sn**	**06 46 55.2**	**+1.1**
ZLN	**Zelenaya**	**1.81**	**325**	*e*P		**Pn**	**06 46 33.2**	**+1.1**
ZLN				*e*S		**Sn**	**06 46 55.2**	**+1.1**
KMNR	**Kamenistaya**	**1.84**	**312**	PN		**Pn**	**06 46 33.1**	**+0.6**
KMNR				S		**Sn**	**06 46 54.6**	**-0.1**
KMNR	**Kamenistaya**	**1.84**	**312**	*e*P		**Pn**	**06 46 33.1**	**+0.6**
KMNR				*e*S		**Sn**	**06 46 54.6**	**-0.1**
BZMR	**Bezymyannaya**	**1.86**	**320**	*e*S		**Sn**	**06 46 54.9**	**-0.5**
BZWR	**Bezymyannyi-We**	**1.88**	**320**	PN		**Pn**	**06 46 33.7**	**+0.6**
BZWR	**Bezymyannyi-We**	**1.88**	**320**	*e*P		**Pn**	**06 46 33.7**	**+0.6**
LGNR	**Loginova**	**1.90**	**325**	PN		**Pn**	**06 46 34.3**	**+0.8**
LGNR				S		**Sn**	**06 46 58.0**	**+1.4**
LGNR	**Loginova**	**1.90**	**325**	*e*P		**Pn**	**06 46 34.3**	**+0.8**
LGNR				*e*S		**Sn**	**06 46 58.0**	**+1.4**
CIRR	**Tsirk**	**1.91**	**326**	PN		**Pn**	**06 46 34.4**	**+0.9**
CIRR	**Tsirk**	**1.91**	**326**	*e*P		**Pn**	**06 46 34.4**	**+0.9**
KIRR	**Kirishev**	**1.93**	**318**	PN		**Pn**	**06 46 34.3**	**+0.5**
KIRR				S		**Sn**	**06 46 57.6**	**+0.5**
KIRR	**Kirishev**	**1.93**	**318**	*e*P		**Pn**	**06 46 34.3**	**+0.5**
KIRR				*e*S		**Sn**	**06 46 57.6**	**+0.5**
KPT	**Kopyto**	**1.99**	**317**	PN		**Pn**	**06 46 35.4**	**+0.9**
KPT				S		**Sn**	**06 46 58.9**	**+0.5**
KPT	**Kopyto**	**1.99**	**317**	*e*P		**Pn**	**06 46 35.4**	**+0.9**
KPT				*e*S		**Sn**	**06 46 58.9**	**+0.5**
BKI	**Bering**	**2.04**	**70**	PN		Pn	06 46 36.0	+0.9
BKI				S		Sn	06 46 59.6	0.0
BKI	**Bering**	**2.04**	**70**	*e*P		Pn	06 46 36.0	+0.9
BKI				*e*S		Sn	06 46 59.6	0.0
KLY	**Klyuchi**	**2.10**	**328**	PN		**Pn**	**06 46 35.8**	**-0.2**
KLY				S		**Sn**	**06 47 00.6**	**-0.5**
KLY	**Klyuchi**	**2.10**	**328**	*e*P		**Pn**	**06 46 35.8**	**-0.2**
KLY				*e*S		**Sn**	**06 47 00.6**	**-0.5**
SPN	**Mys Shipunski**	**2.12**	**228**	PN		**Pn**	**06 46 36.0**	**-0.2**
SPN				S		**Sn**	**06 46 59.9**	**-1.6**
SPN	**Mys Shipunski**	**2.12**	**228**	*i* P		**Pn**	**06 46 36.0**	**-0.2**
SPN				*e*S		**Sn**	**06 46 59.9**	**-1.6**
SMKR	**Semkarok**	**2.15**	**343**	PN		**Pn**	**06 46 37.8**	**+1.1**
SMKR				S		**Sn**	**06 47 03.6**	**+1.2**
SMKR	**Semkarok**	**2.15**	**343**	*e*P		**Pn**	**06 46 37.8**	**+1.1**
SMKR				*e*S		**Sn**	**06 47 03.6**	**+1.2**
BDR	**Baidarnaya**	**2.19**	**339**	PN		**Pn**	**06 46 37.9**	**+0.6**
BDR				S		**Sn**	**06 47 04.5**	**+1.2**
BDR	**Baidarnaya**	**2.19**	**339**	*e*P		**Pn**	**06 46 37.9**	**+0.6**
BDR				*e*S		**Sn**	**06 47 04.5**	**+1.2**
KOZ	**Kozyrevsk**	**2.19**	**315**	PN		**Pn**	**06 46 38.1**	**+0.8**
KOZ				S		**Sn**	**06 47 04.0**	**+0.7**
KOZ	**Kozyrevsk**	**2.19**	**315**	*e*P		**Pn**	**06 46 38.1**	**+0.8**
KOZ				*e*S		**Sn**	**06 47 04.0**	**+0.7**
SRKR	**Sorokina**	**2.27**	**339**	PN		**Pn**	**06 46 39.2**	**+0.7**
SRKR				S		**Sn**	**06 47 05.5**	**0.0**
SRKR	**Sorokina**	**2.27**	**339**	*e*P		**Pn**	**06 46 39.2**	**+0.7**
SRKR				*e*S		**Sn**	**06 47 05.5**	**0.0**
NLC	**Nalytchevo**	**2.38**	**236**	PN		**Pn**	**06 46 40.1**	**+0.2**
NLC				S		**Sn**	**06 47 07.7**	**-0.3**
NLC	**Nalytchevo**	**2.38**	**236**	*e*P		**Pn**	**06 46 40.1**	**+0.2**
NLC				*e*S		**Sn**	**06 47 07.7**	**-0.3**
SRDR	**Sredinnyy**	**2.44**	**318**	PN		**Pn**	**06 46 41.2**	**+0.6**
SRDR				S		**Sn**	**06 47 08.8**	**-0.6**
SRDR	**Sredinnyy**	**2.44**	**318**	*e*P		**Pn**	**06 46 41.2**	**+0.6**
SRDR				*e*S		**Sn**	**06 47 08.8**	**-0.6**
SDLR	**Sedlovina**	**2.55**	**242**	PN		**Pn**	**06 46 43.2**	**+0.9**
SDLR				S		**Sn**	**06 47 13.1**	**+0.7**
SDLR	**Sedlovina**	**2.55**	**242**	*e*P		**Pn**	**06 46 43.2**	**+0.9**
SDLR				*e*S		**Sn**	**06 47 13.1**	**+0.7**
SMAR	**Somma**	**2.60**	**242**	PN		**Pn**	**06 46 44.0**	**+0.9**
SMAR				S		**Sn**	**06 47 13.5**	**-0.3**
SMAR	**Somma**	**2.60**	**242**	*e*P		**Pn**	**06 46 44.0**	**+0.9**
SMAR				*e*S		**Sn**	**06 47 13.5**	**-0.3**
KRER	**Koryakskii**	**2.61**	**243**	PN		**Pn**	**06 46 44.6**	**+1.4**
KRER				S		**Sn**	**06 47 15.1**	**+1.2**
KRER	**Koryakskii**	**2.61**	**243**	*e*P		**Pn**	**06 46 44.6**	**+1.4**
KRER				*e*S		**Sn**	**06 47 15.1**	**+1.2**
UGLR	**Uglovaya**	**2.62**	**241**	PN		**Pn**	**06 46 44.4**	**+1.1**
UGLR				S		**Sn**	**06 47 14.7**	**+0.6**
UGLR	**Uglovaya**	**2.62**	**241**	*e*P		**Pn**	**06 46 44.4**	**+1.1**
UGLR				*e*S		**Sn**	**06 47 14.7**	**+0.6**
AVH	**Avacha**	**2.64**	**243**	PN		**Pn**	**06 46 44.9**	**+1.5**
AVH				S		**Sn**	**06 47 15.5**	**+1.1**
AVH	**Avacha**	**2.64**	**243**	*e*P		**Pn**	**06 46 44.9**	**+1.5**
AVH				*e*S		**Sn**	**06 47 15.5**	**+1.1**
KRX	**Arik**	**2.64**	**245**	PN		**Pn**	**06 46 44.6**	**+1.1**
KRX				S		**Sn**	**06 47 14.7**	**+0.2**
KRX	**Arik**	**2.64**	**245**	*e*P		**Pn**	**06 46 44.6**	**+1.1**
KRX				*e*S		**Sn**	**06 47 14.7**	**+0.2**
ESO	**Esso**	**2.65**	**303**	PN		**Pn**	**06 46 44.0**	**+0.5**
ESO				S		**Sn**	**06 47 14.7**	**+0.2**
ESO	**Esso**	**2.65**	**303**	*e*P		**Pn**	**06 46 44.0**	**+0.5**
ESO				*e*S		**Sn**	**06 47 14.7**	**+0.2**
KOK	**Koryaka**	**2.67**	**244**	PN		**Pn**	**06 46 45.2**	**+1.2**
KOK	**Koryaka**	**2.67**	**244**	*e*P		**Pn**	**06 46 45.2**	**+1.2**
PET	**Petropavlovsk**	**2.81**	**239**	*i* PN		**Pn**	**06 46 46.8**	**+1.1**
PET				*i* S		**Sn**	**06 47 18.9**	**+0.4**
PET				pmax		pmax		
	comp=Z,113nm,0.6s							
PET				smax		smax		
	comp=E,764nm,0.8s							
PET				smax		smax		
	comp=N,810nm,0.7s							
PET				MLR		MLR		
	comp=Z,200nm,17.0s							
GNL	**Ganaly**	**2.89**	**255**	PN		**Pn**	**06 46 48.1**	**+1.2**
GNL				S		**Sn**	**06 47 22.4**	**+1.7**
GNL	**Ganaly**	**2.89**	**255**	*e*P		**Pn**	**06 46 48.1**	**+1.2**
GNL				*e*S		**Sn**	**06 47 22.4**	**+1.7**
KRMR	**Karymshinskiy**	**3.18**	**239**	PN		**Pn**	**06 46 51.7**	**+0.9**
KRMR				S		**Sn**	**06 47 28.3**	**+0.6**
KRMR	**Karymshinskiy**	**3.18**	**239**	*e*P		**Pn**	**06 46 51.7**	**+0.9**
KRMR				*e*S		**Sn**	**06 47 28.3**	**+0.6**
RUS	**Russkaya**	**3.24**	**231**	PN		**Pn**	**06 46 52.1**	**+0.4**
RUS				S		**Sn**	**06 47 28.5**	**-0.7**
RUS	**Russkaya**	**3.24**	**231**	*e*P		**Pn**	**06 46 52.1**	**+0.4**
RUS				*e*S		**Sn**	**06 47 28.5**	**-0.7**
PETK	**Petropavlovsk-**	**3.26**	**246**	P		**Pn**	**06 46 53.1**	**+1.2**
	comp=Z,11nm,0.3s,baz=74,slow=18,SNR=126							
PETK				S		**Sn**	**06 47 33.0**	**+3.3**
	comp=Z,22nm,0.3s,baz=82,slow=39,SNR=20							
MTVR	**Mutnovka**	**3.36**	**234**	PN		**Pn**	**06 46 54.5**	**+1.0**
MTVR	**Mutnovka**	**3.36**	**234**	*e*P		**Pn**	**06 46 54.5**	**+1.0**
GRL	**Gorelyy**	**3.37**	**236**	PN		**Pn**	**06 46 55.3**	**+1.7**
GRL				S		**Sn**	**06 47 34.0**	**+1.4**
GRL	**Gorelyy**	**3.37**	**236**	*e*P		**Pn**	**06 46 55.3**	**+1.7**
GRL				*e*S		**Sn**	**06 47 34.0**	**+1.4**
ASAK	**Asacha**	**3.56**	**235**	PN		**Pn**	**06 46 58.0**	**+1.9**
ASAK				S		**Sn**	**06 47 38.6**	**+1.4**
ASAK	**Asacha**	**3.56**	**235**	*e*P		**Pn**	**06 46 58.0**	**+1.9**
ASAK				*e*S		**Sn**	**06 47 38.6**	**+1.4**
APC	**Apacha**	**3.63**	**246**	PN		**Pn**	**06 46 58.4**	**+1.4**
APC				S		**Sn**	**06 47 40.5**	**+1.7**
APC	**Apacha**	**3.63**	**246**	*e*P		**Pn**	**06 46 58.4**	**+1.4**
APC				*e*S		**Sn**	**06 47 40.5**	**+1.7**
KDTR	**Khodutka, Kamc**	**3.87**	**227**	PN		**Pn**	**06 47 00.1**	**-0.2**
KDTR				S		**Sn**	**06 47 44.0**	**-0.8**
KDTR	**Khodutka, Kamc**	**3.87**	**227**	*e*P		**Pn**	**06 47 00.1**	**-0.2**
KDTR				*e*S		**Sn**	**06 47 44.0**	**-0.8**
PAU	**Pauzhetka**	**4.67**	**231**	PN		**Pn**	**06 47 13.4**	**+2.1**
PAU	**Pauzhetka**	**4.67**	**231**	*e*P		**Pn**	**06 47 13.4**	**+2.1**
OSSR	**Ossora**	**4.73**	**3**	PN		**Pn**	**06 47 11.9**	**-0.1**
OSSR	**Ossora**	**4.73**	**3**	*e*P		**Pn**	**06 47 11.9**	**-0.1**
PALN	**Palana**	**4.79**	**343**	PN		**Pn**	**06 47 16.3**	**+3.4**
PALN	**Palana**	**4.79**	**343**	*e*P		**Pn**	**06 47 16.3**	**+3.4**
TILK	**Tilichiki**	**6.21**	**16**	PN		**Pn**	**06 47 35.9**	**+3.5**
TILK	**Tilichiki**	**6.21**	**16**	*e*P		**Pn**	**06 47 35.9**	**+3.5**
H11N2	**WAKE ISLAND Hy**	**34.90**	**173**	T		T	07 30 11.6	
	baz=355,slow=76,SNR=31							
H11N3	**WAKE ISLAND Hy**	**34.92**	**173**	T		T	07 30 16.1	
	baz=355,slow=76,SNR=44							
H11N1	**WAKE ISLAND Hy**	**34.92**	**173**	T		T	07 30 18.5	
	baz=355,slow=76,SNR=41							
H11S1	**WAKE ISLAND Hy**	**36.10**	**173**	T		T	07 31 40.5	
	baz=352							
H11S3	**WAKE ISLAND Hy**	**36.12**	**173**	T		T	07 31 41.8	
	baz=352							
H11S2	**WAKE ISLAND Hy**	**36.12**	**173**	T		T	07 31 38.6	
	baz=352							
MKAR	**Makanchi Array**	**48.88**	**296**	P		P	06 54 41.3	-4.2
	comp=Z,0.4nm,0.5s,baz=50,slow=6.3,SNR=6.5							
FINES	**FINESS Array B**	**59.37**	**337**	P		**P**	**06 56 00.2**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=38,slow=7.0,SNR=9.2							
AKASG	**Malin Array Be**	**68.13**	**330**	P		**P**	**06 56 57.8**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=27,slow=6.8,SNR=3.7							
TXAR	**Lajitas Array**	**68.70**	**69**	P		**P**	**06 57 05.7**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=304,slow=6.4,SNR=3.7							
BRTR	**Keskin Array B**	**76.44**	**322**	P		**P**	**06 57 48.4**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=68,slow=4.5,SNR=3.1							
WRA	**Warramunga Arr**	**78.05**	**207**	P		**P**	**06 57 58.3**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=19,slow=5.9,SNR=4.8							
ASAR	**Alice Springs**	**81.71**	**206**	P		**P**	**06 58 18.6**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=26,slow=4.5,SNR=3.6							

*IDC **07** 06:50:54.7±0.9,56°.89S×26°.18W,h0km,mb4.0/4,*
mb1 4.1/4,mb1mx3.8/20,mbtmp4.0/4,MS3.7/2,Ms1 3.7/2,
ms1mx3.3/20,Error ellipse: s-maj=40.2km s-min=28.0km
az=99.0
*NEIC **07** 06:51:09.2±1.2,57°.0S±0°.2×26°.7W±0°.2,h124km±8km,*
*

PMSA	**Palmer Station**	**18.31**	**237**	P		**P**	**07 07 31.8**	**-0.4**
	0.3nm,0.3s,baz=120,slow=20,SNR=1.7							
PMSA	**Palmer Station**	**18.31**	**237**	P		**P**	**07 07 32.1**	**0.0**
NVL	**N'lazarevskaya**	**18.97**	**141**	*e*P		**P**	**07 07 39.7**	**+0.4**
NVL				*e*S		**S**	**07 11 00.9**	**-8.2**
NVL				pmax	pmax			
	comp=Z,33nm,0.8s							
EFI	**East Falkland**	**19.64**	**280**	*e*P		**P**	**07 07 46.2**	**-0.6**
EFI	**East Falkland**	**19.64**	**280**	P		**P**	**07 07 46.2**	**-0.6**
EFI				IAmb	IAmb		07 08 02.0	
	comp=Z,197nm,1.4s							
USHA	**Ushuaia**	**23.20**	**263**	P		**P**	**07 08 23.2**	**-0.9**
	comp=Z,23nm,0.7s,baz=116,slow=11,SNR=11							
SYO	**Syowa Base**	**28.45**	**137**⇑	*e*P		P	07 09 07.0	-4.2
QSPA	**South Pole Qui**	**30.64**	**180**	P		**P**	**07 09 32.8**	**+2.1**
	comp=Z,16nm,0.5s,baz=215,slow=1.1,SNR=147							
QSPA	**South Pole Qui**	**30.64**	**180**	P		**P**	**07 09 32.5**	**+1.7**
QSPA				IAmb	IAmb		07 09 33.3	
	comp=Z,21nm,0.6s							
PLCA	**Paso Flores**	**33.42**	**284**	P		**P**	**07 09 54.4**	**-0.9**
	comp=Z,3.7nm,0.7s,baz=171,slow=6.8,SNR=24							
PLCA	**Paso Flores**	**33.42**	**284**	*e*P		**P**	**07 09 54.2**	**-1.1**
PLCA	**Paso Flores**	**33.42**	**284**	P		**P**	**07 09 54.1**	**-1.2**
PLCA				IAmb	IAmb		07 10 13.4	
	comp=Z,29nm,1.6s							
PLTB	**Pedras Altas**	**33.43**	**314**	*e*P		**P**	**07 09 54.6**	**-0.8**
CNLB	**Canela**	**34.71**	**320**	*e*P		**P**	**07 10 04.9**	**-1.6**
GO06	**Curarrehue**	**34.76**	**285**	P		**P**	**07 10 06.2**	**-0.6**
GO06				IAmb	IAmb		07 10 26.9	
	comp=Z,24nm,1.6s							
MAW	**Mawson**	**36.92**	**140**	P		**P**	**07 10 22.5**	**-2.3**
ITAB	**Concordia**	**37.05**	**319**	*e*P		**P**	**07 10 24.6**	**-1.8**
GO05	**Huala**	**38.59**	**289**	P		**P**	**07 10 38.2**	**-1.2**
GO05				IAmb	IAmb		07 10 59.5	
	comp=Z,13nm,0.8s							
VAO	**Valinhos**	**39.48**	**329**	*e*P		**P**	**07 10 46.4**	**-0.5**
PEL	**Peldehue**	**39.52**	**292**	P		**P**	**07 10 46.2**	**-0.9**
PEL				pmax	pmax			
	comp=Z,66nm,0.6s							
PEL	**Peldehue**	**39.52**	**292**	P		**P**	**07 10 46.2**	**-0.9**
CPUP	**Villa Florida**	**39.71**	**313**	P		**P**	**07 10 47.3**	**-1.3**
	comp=Z,3.3nm,0.8s,baz=129,slow=3.7,SNR=7.1							
CPUP	**Villa Florida**	**39.71**	**313**	*e*P		**P**	**07 10 47.4**	**-1.3**
CPUP	**Villa Florida**	**39.71**	**313**	P		**P**	**07 10 47.5**	**-1.2**
ROC1	**El Roble**	**39.82**	**292**	P		**P**	**07 10 48.7**	**-1.1**
SUR	**Sutherland**	**41.07**	**70**	P		**P**	**07 11 02.3**	**+2.2**
	comp=Z,9.9nm,0.8s,baz=210,slow=9.9,SNR=5.7							
SUR	**Sutherland**	**41.07**	**70**	P		**P**	**07 11 02.0**	**+2.0**
BB19B	**Bebedouro**	**41.75**	**327**	*e*P		**P**	**07 11 04.9**	**-0.6**
GO04	**Tololo Observa**	**42.05**	**294**	P		**P**	**07 11 07.6**	**-0.5**
GO04				IAmb	IAmb		07 11 24.4	
	comp=Z,38nm,1.3s							
BSFB	**Barra de Sao F**	**42.13**	**339**	*e*P		**P**	**07 11 07.9**	**-0.7**
SJMB	**Sao Joao De Ma**	**42.32**	**338**	*e*P		**P**	**07 11 09.5**	**-0.6**
SBA	**Scott Base**	**42.57**	**184**	P		**P**	**07 11 13.8**	**+2.3**
SBA				pmax	pmax			
	comp=Z,28nm,1.2s							
SBA	**Scott Base**	**42.57**	**184**	P		**P**	**07 11 13.8**	**+2.3**
SBA				IAmb	IAmb		07 11 15.3	
	comp=Z,28nm,1.2s							
VNDA	**Vanda**	**43.04**	**182**	P		**P**	**07 11 17.5**	**+2.2**
	comp=Z,11nm,0.6s,baz=190,slow=7.0,SNR=39							
VNDA	**Vanda**	**43.04**	**182**	P		**P**	**07 11 17.7**	**+2.4**
VNDA				IAmb	IAmb		07 11 18.9	
	comp=Z,12nm,0.7s							
GO03	**Copiap**	**43.98**	**297**	P		**P**	**07 11 23.4**	**-0.1**
AQDB	**Aquidauana**	**44.51**	**318**	*e*P		**P**	**07 11 25.6**	**-2.0**
IPMB	**Ipameri, GO**	**44.61**	**329**	*e*P		**P**	**07 11 27.4**	**-1.1**
GO02	**Mina Guanaco**	**45.79**	**299**	P		**P**	**07 11 37.8**	**-0.3**
GO02				IAmb	IAmb		07 11 39.0	
	comp=Z,29nm,0.7s							
BOSA	**Boshof**	**46.32**	**71**	P		**P**	**07 11 43.8**	**+1.7**
	comp=Z,7.6nm,0.5s,baz=205,slow=6.9,SNR=19							
BOSA	**Boshof**	**46.32**	**71**	P		**P**	**07 11 43.8**	**+1.7**
BOSA				IAmb	IAmb		07 11 44.5	
	comp=Z,19nm,1.1s							
BDFB	**Brasilia**	**46.80**	**330**	P		**P**	**07 11 45.3**	**-0.5**
	comp=Z,2.6nm,0.3s,baz=179,slow=8.4,SNR=7.2							
BDFB	**Brasilia**	**46.80**	**330**	P		**P**	**07 11 45.7**	**-0.2**
PP1B	**Ponte de Pedra**	**46.92**	**321**	*e*P		**P**	**07 11 45.5**	**-1.1**
PB10	**IPOC Station P**	**47.65**	**299**	P		**P**	**07 11 51.7**	**-0.6**
PB10				IAmb	IAmb		07 12 11.8	
	comp=Z,20nm,1.0s							
LVC	**Limon Verde**	**47.72**	**302**	*e*P		**P**	**07 11 53.4**	**+0.1**
LVC	**Limon Verde**	**47.72**	**302**	*e*P		**P**	**07 11 52.9**	**-0.4**
LVC	**Limon Verde**	**47.72**	**302**	P		**P**	**07 11 53.4**	**+0.1**
LVC				IAmb	IAmb		07 12 15.6	
	comp=Z,42nm,1.3s							
ARAG	**Araguaiana, MT**	**47.77**	**325**	*e*P		**P**	**07 11 52.7**	**-0.6**
NBCP	**Cabaceiras do**	**47.96**	**342**	*e*P		**P**	**07 11 52.9**	**-1.8**
PB04	**IPOC Station P**	**48.50**	**300**	P		**P**	**07 11 58.8**	**-0.3**
SALV	**Santo Antonio**	**48.77**	**321**	*e*P		**P**	**07 11 59.9**	**-1.1**
LBTB	**Lobatse**	**49.51**	**69**	P		**P**	**07 12 08.3**	**+1.7**
LBTB				pmax	pmax			
	comp=Z,16nm,0.8s							
LBTB	**Lobatse**	**49.51**	**69**	P		**P**	**07 12 08.3**	**+1.7**
LBTB				IAmb	IAmb		07 12 09.2	
	comp=Z,16nm,0.8s							
GO01	**Chusmiza**	**50.44**	**303**	P		**P**	**07 12 13.7**	**-0.4**
PB11	**IPOC Station P**	**50.56**	**302**	P		**P**	**07 12 14.4**	**-0.3**
MNMC	**Minye Minye**	**51.09**	**303**	P		**P**	**07 12 18.8**	**0.0**
H10N1	**ASCENSION HYDR**	**52.37**	**14**	T		T	08 08 34.9	
	baz=190							
H10N3	**ASCENSION HYDR**	**52.37**	**14**	T		T	08 09 35.5	
	baz=190,slow=74							
H10N2	**ASCENSION HYDR**	**52.38**	**14**	T		T	08 09 36.5	
	baz=190,slow=74							
LPAZ	**La Paz**	**53.02**	**306**	P		**P**	**07 12 33.2**	**-0.3**
LPAZ				pmax	pmax			
	comp=Z,15nm,1.2s							
LPAZ	**La Paz**	**53.02**	**306**	P		**P**	**07 12 33.3**	**-0.3**
	comp=Z,6.2nm,0.5s,baz=122,slow=3.9,SNR=30							
LPAZ	**La Paz**	**53.02**	**306**	*e*P		**P**	**07 12 32.8**	**-0.7**
LPAZ	**La Paz**	**53.02**	**306**	P		**P**	**07 12 33.2**	**-0.3**
LPAZ				IAmb	IAmb		07 12 53.4	
	comp=Z,15nm,1.2s							
CLDB	**Colider**	**53.53**	**322**	*e*P		**P**	**07 12 33.8**	**-2.7**
RCBR	**Riachuelo**	**54.19**	**348**	*e*P		**P**	**07 12 40.5**	**-0.9**
SAML	**Samuel**	**57.81**	**315**	P		**P**	**07 13 05.7**	**-1.4**
SAML				pmax	pmax			
	comp=Z,11nm,0.7s							
SAML	**Samuel**	**57.81**	**315**	*e*P		**P**	**07 13 06.0**	**-1.1**
SAML	**Samuel**	**57.81**	**315**	P		**P**	**07 13 05.7**	**-1.4**
SAML				IAmb	IAmb		07 13 07.1	
	comp=Z,11nm,0.7s							
LSZ	**Lusaka**	**59.12**	**66**	P		**P**	**07 13 18.3**	**+1.9**
LSZ				pmax	pmax			
	comp=Z,10.0nm,0.9s							
LSZ	**Lusaka**	**59.12**	**66**	P		**P**	**07 13 18.3**	**+1.9**
LSZ				IAmb	IAmb		07 13 19.4	
	comp=Z,10nm,0.8s							
NNA	**Nana**	**60.58**	**299**	*i* P		**P**	**07 13 25.8**	**-0.5**
NNA				pmax	pmax			
	comp=Z,5.0nm,0.4s							
DBIC	**Dimbokro**	**68.16**	**23**	P		**P**	**07 14 16.7**	**+1.2**
DBIC				pmax	pmax			
	comp=Z,11nm,1.4s							
DBIC	**Dimbokro**	**68.16**	**23**	P		**P**	**07 14 17.1**	**+1.6**
	comp=Z,2.2nm,0.7s,baz=209,slow=7.4,SNR=4.1							
DBIC	**Dimbokro**	**68.16**	**23**	P		**P**	**07 14 16.7**	**+1.2**
PTLC	**Puerto Leguiza**	**70.63**	**307**	*e*P		**P**	**07 14 28.1**	**-2.8**
OTAV	**Otavalo**	**72.20**	**304**	P		**P**	**07 14 41.1**	**+0.2**
OTAV				pmax	pmax			
	comp=Z,7.0nm,1.1s							
OTAV	**Otavalo**	**72.20**	**304**	*e*P		**P**	**07 14 40.7**	**-0.1**
OTAV	**Otavalo**	**72.20**	**304**	P		**P**	**07 14 41.1**	**+0.2**
SOTA	**Rioblanco**	**73.15**	**306**	*e*P		**P**	**07 14 47.0**	**+0.5**
ORTC	**Ortega, Tolima**	**74.20**	**308**	*e*P		**P**	**07 14 51.2**	**-0.9**
CHIC	**Chingaza**	**74.26**	**310**	*e*P		**P**	**07 14 51.1**	**-1.8**
ROSC	**El Rosal**	**74.69**	**309**	P		**P**	**07 14 55.3**	**0.0**
	comp=Z,4.2nm,0.4s,baz=86,slow=9.5,SNR=5.0							
ROSC	**El Rosal**	**74.69**	**309**	P		**P**	**07 14 55.4**	**0.0**
YOTC	**Yotoco, Valle**	**74.71**	**307**	*e*P		**P**	**07 14 54.0**	**-1.1**
MLZ	**Mavora Lakes**	**74.76**	**190**	P		**P**	**07 14 55.2**	**+0.2**
RUSC	**La Rusia**	**75.17**	**311**	*e*P		**P**	**07 14 55.7**	**-2.4**
SPBC	**San Pablo de B**	**75.33**	**310**	*e*P		**P**	**07 14 55.6**	**-3.0**
NORC	**Norcasia**	**75.56**	**309**	*e*P		**P**	**07 14 57.1**	**-2.8**
TOA0	**Torodi Ar. Sit**	**75.86**	**28**	P		**P**	**07 15 03.1**	**+1.7**
TOA0				IAmb	IAmb		07 15 23.6	
	comp=Z,6.4nm,0.6s							
TORD	**Torodi Ar. Bea**	**75.86**	**28**	P		**P**	**07 15 03.5**	**+2.1**
	comp=Z,3.9nm,0.5s,baz=199,slow=6.3,SNR=38							
CBOC	**Ciudad Bolivar**	**76.29**	**308**	*e*P		**P**	**07 15 01.8**	**-2.3**
PTBC	**PUERTO BERRIO,**	**76.29**	**310**	*e*P		**P**	**07 15 00.1**	**-3.8**
HELC	**Santa Helena**	**76.39**	**309**	*e*P		**P**	**07 15 01.5**	**-3.5**
LTZ	**Lake Taylor**	**76.88**	**194**	P		**P**	**07 15 08.6**	**+1.5**
SDV	**Santo Domingo**	**77.01**	**314**	*e*P		**P**	**07 15 08.0**	**-0.2**
SDV	**Santo Domingo**	**77.01**	**314**	P		**P**	**07 15 07.5**	**-0.7**
SNZO	**South Karori**	**78.01**	**196**	P		**P**	**07 15 14.9**	**+1.6**
SMLC	**San Martn de**	**78.21**	**311**	*e*P		**P**	**07 15 12.2**	**-2.5**
NWAO	**Narrogin (SRO)**	**82.89**	**149**	P		**P**	**07 15 40.4**	**+0.8**
NWAO				pmax	pmax			
	comp=Z,23nm,1.2s							
NWAO	**Narrogin (SRO)**	**82.89**	**149**	P		**P**	**07 15 40.4**	**+0.8**
NWAO				IAmb	IAmb		07 15 45.1	
	comp=Z,23nm,1.1s							
TOO	**Toolangi**	**82.92**	**173**	P		**P**	**07 15 40.8**	**+1.1**
TOO				pmax	pmax			
	comp=Z,15nm,1.3s							
TOO	**Toolangi**	**82.92**	**173**	P		**P**	**07 15 40.8**	**+1.1**
TOO				IAmb	IAmb		07 15 45.4	
	comp=Z,15nm,1.3s							
STVI	**Saint Thomas**	**83.94**	**323**	P		**P**	**07 15 44.6**	**-0.3**
STVI				IAmb	IAmb		07 15 46.0	
	comp=Z,43nm,1.1s							
CAN	**Canberra**	**85.33**	**176**	P		**P**	**07 15 52.9**	**+0.9**
CAN				pmax	pmax			
	comp=Z,34nm,1.3s							
CAN	**Canberra**	**85.33**	**176**	P		**P**	**07 15 52.9**	**+0.9**
CAN				IAmb	IAmb		07 15 60.0	
	comp=Z,34nm,1.3s							
BBOO	**Buckleboo**	**86.72**	**165**	P		**P**	**07 15 59.5**	**+0.7**
BBOO				IAmb	IAmb		07 16 04.9	
	comp=Z,24nm,1.4s							
FORT	**Forrest**	**87.41**	**158**	P		**P**	**07 16 03.9**	**+1.8**
STKA	**Stephens Creek**	**88.27**	**169**	*e*P		**P**	**07 16 07.7**	**+1.5**
STKA	**Stephens Creek**	**88.27**	**169**	P		**P**	**07 16 08.2**	**+2.0**
	comp=Z,4.5nm,0.7s,baz=145,slow=6.2,SNR=8.8							
STKA	**Stephens Creek**	**88.27**	**169**	P		**P**	**07 16 08.0**	**+1.8**
ASAR	**Alice Springs**	**95.39**	**161**	P		**P**	**07 16 40.4**	**+1.0**
	comp=Z,3.7nm,0.6s,baz=183,slow=4.2,SNR=70							
AS31	**Alice Springs**	**95.39**	**161**	P		**P**	**07 16 40.3**	**+0.9**
WRA	**Warramunga Arr**	**99.11**	**161**	P		**Pdif**	**07 16 56.6**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=199,slow=4.5,SNR=5.0							
WRAB	**Tennant Creek**	**99.12**	**161**	*i* P		**Pdif**	**07 16 54.2**	**-2.0**
WRAB				pmax	pmax			
	comp=Z,3.0nm,1.3s							
PDAR	**Pinedale Array**	**122.77**	**300**	PKP		**PKPdf**	**07 22 09.5**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=116,slow=4.1,SNR=3.7							
CMAR	**Chiang Mai Arr**	**123.14**	**112**	PKP		**PKiKP**	**07 22 12.6**	**+1.4**
	comp=Z,1.2nm,0.3s,baz=217,slow=4.0,SNR=5.5							
FINES	**FINESS Array B**	**127.20**	**28**	PKP		**PKiKP**	**07 22 18.3**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=298,slow=4.1,SNR=3.9							
KSH	**Kashi**	**128.80**	**76**	PKP		**PKPdf**	**07 22 19.8**	**-1.5**
KSH				sPKP			07 22 55.4	
KSH				SKS		**SKSdf**	**07 29 16.0**	**-7.4**
KSH				SKKS		**SKKSac**	**07 31 10.8**	**-5.5**
KSH				SS		**SS**	**07 41 35.6**	**-4.5**
KSH				AMB	AMB			
	comp=Z,570nm,5.5s							
KSH				LR	LR			
	comp=Z,150nm,4.7s							
KSH				LR	LR			
	comp=Z,120nm,4.9s							
KSH				LR	LR			
	comp=Z,380nm,6.1s							
ARCES	**ARCESS Array B**	**133.99**	**22**	PKP		**PKiKP**	**07 22 32.1**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=218,slow=2.7,SNR=7.0							
CD2	**Chengdu**	**135.98**	**108**	Pdif		**Pdif**	**07 19 39.2**	**-0.5**
MKAR	**Makanchi Array**	**137.28**	**74**	PKhKP		PKPpre	07 22 27.0	
	comp=Z,0.1nm,0.2s,baz=108,slow=3.2,SNR=2.3							
WMQ	**Urumqi**	**137.85**	**81**	*e*PKP		**PKiKP**	**07 22 39.5**	**-0.5**
WMQ				AMB	AMB			
	comp=Z,450nm,8.3s							
WMQ				LR	LR			
	comp=Z,600nm,29.2s							
WMQ				LR	LR			
	comp=Z,2μm,29.3s							
WMQ				LR	LR			
	comp=Z,140nm,14.1s							
YKA	**Yellowknife Ar**	**139.23**	**315**	PKP		**PKPdf**	**07 22 40.9**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=128,slow=2.2,SNR=18							
ZALV	**Zalesovo Beam**	**143.21**	**67**	PKhKP		PKPbc	07 22 45.5	+0.9
	comp=Z,1.3nm,0.4s,baz=219,slow=4.2,SNR=6.5							
NJ2	**Nanjing**	**143.84**	**124**	*e*PKP		**PKPdf**	**07 22 50.2**	**+1.1**
HHC	**Hu-ho-hao-te**	**147.70**	**106**	*e*PKPbc		**PKPdf**	**07 22 55.0**	**-0.5**
HHC				PP		**PP**	**07 26 27.3**	**+0.7**
HHC				AMB	AMB			
	comp=Z,71nm,10.2s							
INK	**Inuvik**	**148.94**	**317**	PKP2		**PKPbc**	**07 23 01.0**	**+0.4**
INK	**Inuvik**	**148.94**	**317**			**PKPbc**	**07 23 01.0**	**+0.4**
EPYK	**Eagle Plains**	**149.41**	**312**			**PKPbc**	**07 23 02.5**	**+0.5**
SONM	**Songino Array**	**150.09**	**92**	PKPbc		**PKiKP**	**07 23 06.2**	**+1.1**
	comp=Z,6.5nm,0.8s,baz=228,slow=2.6,SNR=27							
ZAK	**Zakamensk**	**150.13**	**85**	*e*PKIKP		**PKiKP**	**07 23 05.3**	**+0.2**
ZAK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
DOT	**Dot Lake**	**151.36**	**305**			**PKiKP**	**07 23 07.7**	**+0.6**
SCRK	**Sand Creek**	**151.45**	**305**			**PKiKP**	**07 23 08.1**	**+0.7**
RIDG	**Independent Ri**	**151.72**	**305**			**PKiKP**	**07 23 08.9**	**+1.0**
KSRS	**Korea Array**	**152.20**	**131**	PKPbc		**PKiKP**	**07 23 10.4**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=185,slow=1.4,SNR=6.2							
KSRS				PKPab		**PKPab**	**07 23 22.1**	**+2.6**
	comp=Z,2.8nm,0.8s,baz=199,slow=4.2,SNR=8.9							
IL31		**152.90**	**306**			**PKiKP**	**07 23 10.5**	**+0.4**
ILAR	**Eielson Array**	**152.90**	**306**	PKPbc		**PKiKP**	**07 23 10.4**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=160,slow=1.7,SNR=17							
ILAR				PKPab		**PKPab**	**07 23 22.5**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=347,slow=1.4,SNR=6.2							
CN2	**Changchun**	**156.49**	**119**	*e*PKP		**PKPdf**	**07 23 08.4**	**+0.1**

IDC 07 07:10:26.4±3.0, 57°.56S×26°.75W, h0km, mb4.1/2, mb1 4.3/2, mb1mx3.8/22, mbtmp4.1/2, Error ellipse: s-maj=109.5km s-min=48.8km az=172.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**51.45**	**306**	P	P	07 19 33.9	-0.1
	1.6nm,0.4s,baz=129,slow=6.5,SNR=9.9						
TORD	**Torodi Ar. Bea**	**74.26**	**29**	P	P	07 22 05.2	0.0
	0.7nm,0.4s,baz=195,slow=7.2,SNR=7.1						
YKA	**Yellowknife Ar**	**137.44**	**317**	PKP	PKPdf	07 29 50.4	0.0
	0.1nm,0.3s,baz=136,slow=2.0,SNR=5.8						
ILAR	**Eielson Array**	**151.28**	**310**	PKPbc	PKPbc	07 30 19.9	-0.4
	1.1nm,0.8s,baz=119,slow=2.9,SNR=11						

*BKK **07** 07:27:19.9±0.9, 22°.N×7°.7×10°.0E±1°.1, h0km, M3.7/8, MLv3.7/8*
*IDC **07** 07:27:21.9±2.5, 19°.95N×98°.09E, h0km, mb3.3/2, mb1 3.6/2, mb1mx3.3/34, mbtmp3.3/2, Error ellipse: s-maj=22.4km s-min=18.3km az=142.0*
ISC 07 07:27:21.4±2.2, 19°.9N±0°.1×98°.1E±0°.1, h10km, n12, σ1§68/13, Thailand

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMMT	**Chiang Mai**	**1.39**	**143**	P	**Pn**	**07 27 46.8**	**-0.2**
CMMT				S	**Sg**	**07 28 06.9**	**+0.7**
CMAR	**Chiang Mai Arr**	**1.69**	**150**	Pg	**Pn**	**07 27 51.6**	**+0.6**
	58nm,0.3s,baz=327,slow=18,SNR=223						
CMAR				Lg	Lg	07 28 16.2	
	409nm,0.3s,baz=330,slow=32,SNR=41						
CMAR				LR	LR	07 28 42.5	
	comp=Z,143nm,18.6s,baz=275,slow=48						
MHMT	**Maesarieng**	**1.75**	**184**	P	**Pn**	**07 27 49.4**	**-2.5**
MHMT				S	**Sn**	**07 28 13.1**	**-1.0**
PAYA	**Payao**	**1.80**	**108**	P	**Pn**	**07 27 50.8**	**-1.8**
LAMP	**Lampang**	**2.04**	**133**	P	**Pb**	**07 27 57.8**	**-0.8**
PHRA	**Phrae**	**2.50**	**124**	P	**Pn**	**07 28 00.4**	**-1.7**
PBKT	**Sadao Pong**	**4.34**	**140**	P	**Pn**	**07 28 26.6**	**-0.8**
NONG	**Nongkai**	**5.16**	**110**	P	**Pn**	**07 28 37.2**	**-1.5**
CHAI	**Chaiyaphum**	**5.48**	**136**	P	Pn	07 28 34.3	-8.8
SRDT	**SRDT**	**5.64**	**169**	P	**Pn**	**07 28 44.8**	**-0.6**
WRA	**Warramunga Arr**	**53.23**	**136**	P	**P**	**07 36 43.1**	**+2.7**
	0.3nm,0.6s,baz=322,slow=7.6,SNR=3.5						
ASAR	**Alice Springs**	**55.67**	**139**	P	**P**	**07 36 59.8**	**+1.7**
	0.3nm,0.7s,baz=323,slow=7.2,SNR=4.9						

*KRNET **07** 07:31:02.1±0.1, 42°.48N×78°.50E, h18km, mb3.4*
*NNC **07** 07:31:02.6±0.5, 42°.55N×78°.53E, h0km, mb3.8, mpv3.7, Error ellipse: s-maj=3.5km s-min=1.5km az=163.0*
*SOME **07** 07:31:02.6, 42°.53N×78°.47E, h10km*
ISC 07 07:31:03.1±0.9, 42°.52N±0°.03×78°.44E±0°.02, h6km±6km,

n66, σ1§08/123, 23C-10D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.05**	**214**	⇓*i* P	**Pg**	**07 31 04.6**	**-0.1**
	baz=71						
PRZ				⇓*i* S	**Sg**	**07 31 06.5**	**+0.6**
	baz=71						
SATY	**Saty**	**0.54**	**358**	*e*P	**Pg**	**07 31 13.1**	**-0.3**
	74nm,0.2s						
SATY				*e*S	**Sg**	**07 31 20.8**	**+0.4**
	296nm,0.2s						
SATY	**Saty**	**0.54**	**358**	P	**Pg**	**07 31 13.1**	**-0.3**
	74nm,0.2s						
SATY				S	**Sg**	**07 31 20.8**	**+0.4**
	296nm,0.2s						
ANVS	**Anan'yevo**	**0.62**	**295**	⇓*i* P	**Pg**	**07 31 15.4**	**+0.3**
	baz=97						
ANVS				⇓*i* S	**Sb**	**07 31 25.0**	**-0.6**
	baz=97						
ZHN	**Zhinishke**	**0.64**	**360**	*e*P	**Pg**	**07 31 15.0**	**-0.5**
	baz=56						
ZHN				*e*S	**Sg**	**07 31 23.8**	**-0.1**
	baz=56						
ZHN	**Zhinishke**	**0.64**	**360**	*e*P	**Pg**	**07 31 15.0**	**-0.5**
	32nm,0.1s						
ZHN				*e*S	**Sg**	**07 31 23.8**	**-0.1**
	102nm,0.2s						
ZHN	**Zhinishke**	**0.64**	**360**	P	**Pg**	**07 31 15.0**	**-0.5**
	32nm,0.1s						
ZHN				S	**Sg**	**07 31 23.8**	**-0.1**
	102nm,0.2s						
UZB	**Uzunbulak**	**0.76**	**34**	*e*P	**Pg**	**07 31 16.5**	**-1.2**
	baz=30						
UZB				*e*S	**Sg**	**07 31 26.4**	**-1.1**
	baz=30						
UZB	**Uzunbulak**	**0.76**	**34**	*e*P	**Pg**	**07 31 16.5**	**-1.2**
	54nm,0.1s						
UZB				*e*S	**Sg**	**07 31 26.4**	**-1.1**
	215nm,0.1s						
UZB	**Uzunbulak**	**0.76**	**34**	P	**Pg**	**07 31 16.5**	**-1.2**
	54nm,0.1s						
UZB				S	**Sg**	**07 31 26.4**	**-1.1**
	215nm,0.1s						
KPKS	**Kokpek**	**0.96**	**11**	*e*P	**Pg**	**07 31 20.6**	**-0.9**
	baz=7.0						
KPKS				*e*S	**Sg**	**07 31 33.5**	**-0.5**
	baz=7.0						
KPKS	**Kokpek**	**0.96**	**11**	*e*P	**Pg**	**07 31 20.6**	**-0.9**
	142nm,0.1s						
KPKS				*e*S	**Sg**	**07 31 33.4**	**-0.5**
	137nm,0.3s						
KURS	**Kuram**	**0.98**	**349**	*e*P	**Pg**	**07 31 21.4**	**-0.6**
	baz=46						
KURS				*e*S	**Sg**	**07 31 34.8**	**0.0**
	baz=46						
KURS	**Kuram**	**0.98**	**349**	*e*P	**Pg**	**07 31 21.4**	**-0.6**
	6.8nm,0.2s						
KURS				*e*S	**Sg**	**07 31 34.8**	**0.0**
	13nm,0.2s						
KURS	**Kuram**	**0.98**	**349**	P	**Pg**	**07 31 21.3**	**-0.6**
	6.8nm,0.2s						
KURS				S	**Sg**	**07 31 34.8**	**0.0**
	13nm,0.2s						
SHLS	**Shalkode**	**0.98**	**50**	*e*P	**Pn**	**07 31 25.2**	**+1.7**
	baz=56						
SHLS				*e*S	**Sn**	**07 31 41.4**	**+3.6**
	baz=56						
SHLS	**Shalkode**	**0.98**	**50**	*e*P	**Pn**	**07 31 25.2**	**+1.7**
	71nm,0.2s						
SHLS				*e*S	**Sn**	**07 31 41.4**	**+3.6**
	89nm,0.2s						
SHLS	**Shalkode**	**0.98**	**50**	P	**Pn**	**07 31 25.2**	**+1.7**
	71nm,0.2s						
SHLS				S	**Sn**	**07 31 41.4**	**+3.6**
	89nm,0.2s						
KDJ	**Kajisay**	**1.01**	**248**⇑	*i* P	**Pg**	**07 31 21.4**	**-1.1**
	baz=50

	22nm,0.3s							
KTBS				*e*S		**Sg**	**07 31 59.1**	**-0.2**
	47nm,0.3s							
KTBS	**Karatobe**	**1.75**	**313**	P		**Pb**	**07 31 35.4**	**-0.1**
	22nm,0.3s							
KTBS				S		**Sg**	**07 31 59.1**	**-0.2**
	47nm,0.3s							
BOOM	**Boomskoye usch**	**1.85**	**270**	⇑*i*P		**Pb**	**07 31 36.1**	**-1.2**
	baz=71							
BOOM				⇑*i*S		**Sb**	**07 32 01.0**	**+0.3**
	baz=71							
KST	**Kastek**	**1.89**	**287**	*e*P		**Pb**	**07 31 37.9**	**-0.1**
	14nm,0.3s							
KST				*e*S		**Sg**	**07 32 03.4**	**-0.5**
	55nm,0.4s							
KST	**Kastek**	**1.89**	**287**	Pg		**Pb**	**07 31 37.9**	**-0.1**
	14nm,0.3s							
KST				Lg		Lg	07 32 03.4	
	55nm,0.4s							
DJR	**Jarkent**	**2.06**	**28**	*e*P		**Pb**	**07 31 40.0**	**-0.8**
	18nm,0.2s							
DJR				*e*S		**Sb**	**07 32 07.1**	**+0.3**
	60nm,0.3s							
DJR	**Jarkent**	**2.06**	**28**	Pg		**Pb**	**07 31 40.0**	**-0.8**
	18nm,0.2s							
DJR				Lg		Lg	07 32 07.1	
	60nm,0.3s							
NRN	**Naryn**	**2.12**	**240**	⇑*i*P		**Pn**	**07 31 39.6**	**+0.3**
	baz=42							
NRN				⇑*i*S		**Sb**	**07 32 07.0**	**-1.7**
	baz=42							
TKM2	**Tokmak 2**	**2.13**	**282**	⇑*i*P		**Pn**	**07 31 40.3**	**+1.0**
	baz=83							
TKM2				⇑*i*S		**Sb**	**07 32 08.1**	**-0.8**
	baz=83							
TKM2	**Tokmak 2**	**2.13**	**282**	⇑Pn		**Pb**	**07 31 41.5**	**-0.6**
	6.6nm,0.5s							
TKM2				⇑Sn		**Sg**	**07 32 10.2**	**-1.3**
	22nm,0.3s							
KZA	**Kyzart**	**2.41**	**260**	⇓*i*P		**Pn**	**07 31 44.1**	**+0.8**
	baz=62							
KZA				⇓*e*S		**Sn**	**07 32 14.4**	**+1.1**
	baz=62							
TDK	**Taldyqorghan**	**2.48**	**359**	*e*P		**Pb**	**07 31 48.5**	**+0.5**
	20nm,0.2s							
TDK				*e*S		**Sg**	**07 32 21.2**	**-1.5**
	48nm,0.3s							
TDK	**Taldyqorghan**	**2.48**	**359**	Pg		**Pb**	**07 31 48.5**	**+0.5**
	20nm,0.2s							
TDK				Lg		Lg	07 32 21.2	
	48nm,0.3s							
KBK	**Karagaybulak**	**2.58**	**274**	⇓*i*P		**Pn**	**07 31 46.5**	**+1.0**
	baz=75							
KBK				⇓*i*S		**Sn**	**07 32 18.6**	**+1.4**
	baz=75							
CHMS	**Chumysh**	**2.75**	**281**	⇓*i*P		**Pn**	**07 31 49.0**	**+1.2**
	baz=82							
CHMS				⇓*i*S		**Sn**	**07 32 23.0**	**+1.6**
	baz=82							
KAPS	**Kapalarasan**	**2.84**	**13**	*e*P		**Pb**	**07 31 55.0**	**+0.8**
	7.1nm,0.2s							
KAPS				*e*S		**Sg**	**07 32 32.5**	**-1.7**
	14nm,0.3s							
KAPS	**Kapalarasan**	**2.84**	**13**	Pg		**Pb**	**07 31 54.9**	**+0.8**
	7.1nm,0.2s							
KAPS				Lg		Lg	07 32 32.5	
	14nm,0.3s							
AAK	**Ala-Archa**	**2.91**	**274**	⇑*i*P		**Pn**	**07 31 51.0**	**+0.9**
	baz=74							
AAK				⇑*e*S		**Sn**	**07 32 26.5**	**+1.0**
	baz=74							
AAK	**Ala-Archa**	**2.91**	**274**	⇑Sn		**Sb**	**07 32 29.0**	**-2.4**
	12nm,0.5s							
UCH	**Uchtor**	**2.92**	**266**	⇑*i*P		**Pn**	**07 31 51.2**	**+0.8**
	baz=66							
UCH				⇑*i*S		**Sn**	**07 32 27.0**	**+0.9**
	baz=66							
ARLS	**Aral**	**3.13**	**259**	⇑*i*P		**Pn**	**07 31 53.6**	**+0.6**
	baz=60							
ARLS				⇑*i*S		**Sn**	**07 32 31.4**	**+0.7**
	baz=60							
MRKS	**Merke**	**3.85**	**275**	*e*P		**Pb**	**07 32 13.4**	**+2.0**
	2.4nm,0.2s							
MRKS				*e*S		**Sg**	**07 33 04.0**	**-2.7**
	6.3nm,0.3s							
MRKS	**Merke**	**3.85**	**275**	Pg		**Pb**	**07 32 13.5**	**+2.0**
	2.4nm,0.2s							
MRKS				Lg		Lg	07 33 04.0	
	6.3nm,0.3s							
MAKZ	**Makanchi**	**4.97**	**29**	⇑Pn		**Pn**	**07 32 18.5**	**+0.3**
	0.8nm,0.2s							
MK31	**Makanchi Array**	**5.08**	**31**	⇑Pn		**Pn**	**07 32 19.3**	**-0.4**
	0.9nm,0.2s,baz=213,slow=11,SNR=31							

*KRNET **07** 07:41:58.9±0.1,42.°48N×78.°49E,h19km,mb3.2*
*SOME **07** 07:41:58.8,42.°50N×78.°48E,h10km*
*NNC **07** 07:41:59.0±0.5,42.°52N×78.°51E,h0km,mb3.5,mpv3.5,*
Error ellipse: s-maj=3.7km s-min=1.5km az=164.0
ISC 07 07:41:59.7±0.9,**42.°51N**±0.°03×**78.°44E**±0.°02,**h7**km±6km,
n73,σ1.°19/135,**19C-25D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.04**	**230**	⇓*i*P		**Pg**	**07 42 01.4**	**0.0**
	baz=78							
PRZ				⇓*i*S		**Sg**	**07 42 03.4**	**+0.8**
	baz=78							
SATY	**Saty**	**0.55**	**357**	*e*P		**Pg**	**07 42 09.9**	**-0.5**
	60nm,0.2s							
SATY				*e*S		**Sg**	**07 42 17.8**	**+0.2**
	243nm,0.1s							
SATY	**Saty**	**0.55**	**357**	P		**Pg**	**07 42 09.9**	**-0.5**
	60nm,0.2s							
SATY				S		**Sg**	**07 42 17.8**	**+0.2**
	243nm,0.1s							
ANVS	**Anan'yevo**	**0.63**	**296**	⇓*i*P		**Pg**	**07 42 12.2**	**+0.3**
	baz=97							
ANVS				⇓*i*S		**Sb**	**07 42 21.7**	**-0.6**
	baz=97							
ZHN	**Zhinishke**	**0.66**	**360**	*e*P		**Pg**	**07 42 11.8**	**-0.6**
	baz=57							
ZHN				*e*S		**Sg**	**07 42 21.3**	**+0.3**
	baz=57							
ZHN	**Zhinishke**	**0.66**	**360**	*e*P		**Pg**	**07 42 11.8**	**-0.6**
	19nm,0.2s							
ZHN				*e*S		**Sg**	**07 42 21.3**	**+0.3**
	80nm,0.2s							
ZHN	**Zhinishke**	**0.66**	**360**	P		**Pg**	**07 42 11.8**	**-0.6**
	19nm,0.2s							
ZHN				S		**Sg**	**07 42 21.3**	**+0.3**
	80nm,0.2s							
UZB	**Uzynbulak**	**0.77**	**34**	*e*P		**Pg**	**07 42 13.3**	**-1.2**
	baz=30							
UZB				*e*S		**Sg**	**07 42 23.7**	**-0.8**
	baz=30							
UZB	**Uzynbulak**	**0.77**	**34**	*e*P		**Pg**	**07 42 13.3**	**-1.2**
	43nm,0.1s							
UZB				*e*S		**Sg**	**07 42 23.7**	**-0.8**
	151nm,0.1s							
UZB	**Uzynbulak**	**0.77**	**34**	P		**Pg**	**07 42 13.3**	**-1.2**
	43nm,0.1s							
UZB				S		**Sg**	**07 42 23.7**	**-0.8**
	151nm,0.1s							
KPKS	**Kokpek**	**0.97**	**10**	*e*P		**Pg**	**07 42 17.4**	**-1.0**
	baz=8.0							
KPKS				*e*S		**Sb**	**07 42 30.8**	**-1.2**
	baz=8.0							
KPKS	**Kokpek**	**0.97**	**10**	*e*P		**Pg**	**07 42 17.4**	**-1.0**
	133nm,0.1s							
KPKS				*e*S		**Sb**	**07 42 30.7**	**-1.2**
	79nm,0.2s							
SHLS	**Shalkode**	**0.99**	**49**	*e*P		**Pn**	**07 42 21.8**	**+1.7**
	baz=56							
SHLS				*e*S		**Sn**	**07 42 38.4**	**+4.0**
	baz=56							
SHLS	**Shalkode**	**0.99**	**49**	*e*P		**Pn**	**07 42 21.8**	**+1.7**
	63nm,0.2s							
SHLS				*e*S		**Sn**	**07 42 38.4**	**+4.0**
	72nm,0.6s							
SHLS	**Shalkode**	**0.99**	**49**	P		**Pn**	**07 42 21.8**	**+1.7**
	63nm,0.2s							
SHLS				S		**Sn**	**07 42 38.4**	**+4.0**
	72nm,0.6s							
KURS	**Kuram**	**1.00**	**349**	*e*P		**Pg**	**07 42 18.2**	**-0.7**
	baz=47							
KURS				*e*S		**Sb**	**07 42 32.0**	**-0.7**
	baz=47							
KURS	**Kuram**	**1.00**	**349**	*e*P		**Pg**	**07 42 18.2**	**-0.7**
	6.3nm,0.1s							
KURS				*e*S		**Sb**	**07 42 32.0**	**-0.7**
	8.2nm,0.2s							
KURS	**Kuram**	**1.00**	**349**	P		**Pg**	**07 42 18.2**	**-0.7**
	6.3nm,0.1s							
KURS				S		**Sb**	**07 42 32.0**	**-0.7**
	8.2nm,0.2s							
KDJ	**Kajisay**	**1.01**	**248**	⇓*i*P		**Pg**	**07 42 18.2**	**-0.8**
	baz=51							
KDJ				⇓*i*S		**Sg**	**07 42 31.8**	**-0.3**
	baz=51							
PDGK	**Podgornoye**	**1.12**	**43**	P		**Pg**	**07 42 19.4**	**-1.9**
	8.3nm,0.1s							
PDGK				S		**Sg**	**07 42 34.2**	**-1.7**
	28nm,0.1s							
PDGK	**Podgornoye**	**1.12**	**43**	⇓P		**Pg**	**07 42 19.4**	**-1.9**
	5.7nm,0.4s							
PDGK				⇑S		**Sg**	**07 42 33.9**	**-1.9**
	13nm,0.2s							
MDOK	**Medeo**	**1.22**	**303**	*e*P		**Pn**	**07 42 22.4**	**-0.8**
	baz=3.0							
MDOK				*e*S		**Sb**	**07 42 39.0**	**0.0**
	baz=3.0							
MDOK	**Medeo**	**1.22**	**303**	*e*P		**Pn**	**07 42 22.4**	**-0.8**
	16nm,0.3s							
MDOK				*e*S		**Sb**	**07 42 39.0**	**0.0**
	43nm,0.5s							
MDOK	**Medeo**	**1.22**	**303**	⇑P		**Pn**	**07 42 22.2**	**-1.0**
	7.3nm,0.4s							
MDOK				⇑S		**Sb**	**07 42 38.7**	**-0.3**
	35nm,0.6s							
MDOK	**Medeo**	**1.22**	**303**	Pg		**Pn**	**07 42 22.3**	**-0.8**
	16nm,0.3s							
MDOK				Lg		Lg	07 42 39.0	
	43nm,0.5s							
KOTS	**Kotyrbulak**	**1.22**	**307**	*e*P		**Pn**	**07 42 22.4**	**-0.8**
	baz=7.0							
KOTS				*e*S		**Sg**	**07 42 39.2**	**+0.4**
	baz=7.0							
KOTS	**Kotyrbulak**	**1.22**	**307**	*e*P		**Pn**	**07 42 22.4**	**-0.8**
	52nm,0.3s							
KOTS				*e*S		**Sg**	**07 42 39.2**	**+0.4**
	134nm,0.4s							
KOTS	**Kotyrbulak**	**1.22**	**307**	P		**Pn**	**07 42 22.4**	**-0.8**
	52nm,0.3s							
KOTS				S		**Sg**	**07 42 39.2**	**+0.4**
	134nm,0.4s							
TNSS	**Tian-Shan**	**1.22**	**296**	*e*P		**Pn**	**07 42 22.4**	**-1.1**
	baz=97							
TNSS				*e*S		**Sb**	**07 42 39.3**	**-0.1**
	baz=97							
TNSS	**Tian-Shan**	**1.22**	**296**	*e*P		**Pn**	**07 42 22.4**	**-1.1**
	4.1nm,0.1s							
TNSS				*e*S		**Sb**	**07 42 39.3**	**-0.1**
	61nm,0.2s							
TNSS	**Tian-Shan**	**1.22**	**296**	P		**Pn**	**07 42 22.4**	**-1.1**
	4.1nm,0.1s							
TNSS				S		**Sb**	**07 42 39.3**	**-0.1**
	61nm,0.2s							
AAA	**Alma-Ata**	**1.32**	**302**	*e*P		**Pb**	**07 42 24.7**	**-0.1**
	baz=3.0							
AAA				*e*S		**Sg**	**07 42 43.2**	**+1.0**
	baz=3.0							
AAA	**Alma-Ata**	**1.32**	**302**	*e*P		**Pb**	**07 42 24.7**	**-0.1**
	26nm,0.2s							
AAA				*e*S		**Sg**	**07 42 43.2**	**+1.0**
	55nm,0.1s							
AAA	**Alma-Ata**	**1.32**	**302**	P		**Pb**	**07 42 24.7**	**-0.1**
	26nm,0.2s							
AAA				S		**Sg**	**07 42 43.2**	**+1.0**
	55nm,0.1s							
MTBS	**Maitube**	**1.60**	**293**	*e*P		**Pb**	**07 42 29.4**	**-0.2**
	baz=94							
MTBS				*e*S		**Sg**	**07 42 51.4**	**+0.1**
	baz=94							
MTBS	**Maitube**	**1.60**	**293**	*e*P		**Pb**	**07 42 29.4**	**-0.2**
	4.1nm,0.2s							
MTBS				*e*S		**Sg**	**07 42 51.4**	**+0.1**
	73nm,0.2s							
MTBS	**Maitube**	**1.60**	**293**	P		**Pb**	**07 42 29.4**	**-0.2**
	4.1nm,0.2s							
MTBS				S		**Sg**	**07 42 51.4**	**+0.1**
	73nm,0.2s							
ULHL	**Ulahol**	**1.65**	**262**	⇑*i*P		**Pb**	**07 42 29.6**	**-0.9**
	baz=63							
ULHL				⇑*i*S		**Sb**	**07 42 51.6**	**0.0**
	baz=63							
CHKK	**Chushkaly**	**1.71**	**322**	*e*P		**Pb**	**07 42 31.2**	**-0.3**
	baz=22							
CHKK				*e*S		**Sg**	**07 42 54.4**	**-0.3**
	baz=22							
CHKK	**Chushkaly**	**1.71**	**322**	*e*P		**Pb**	**07 42 31.2**	**-0.3**
	29nm,0.3s							
CHKK				*e*S		**Sg**	**07 42 54.4**	**-0.3**
	106nm,0.3s							
CHKK	**Chushkaly**	**1.71**	**322**	P		**Pb**	**07 42 31.2**	**-0.3**
	29nm,0.3s							
CHKK				S		**Sg**	**07 42 54.4**	**-0.3**
	106nm,0.3s							
ARXS	**Arharly**	**1.76**	**345**	*e*P		**Pb**	**07 42 31.9**	**-0.4**
	40nm,0.2s							
ARXS				*e*S		**Sg**	**07 42 55.9**	**-0.3**
	60nm,0.2s							
ARXS	**Arharly**	**1.76**	**345**	P		**Pb**	**07 42 31.9**	**-0.4**
	40nm,0.2s							
ARXS				S		**Sg**	**07 42 55.9**	**-0.3**
	60nm,0.2s							
KTBS	**Karatobe**	**1.76**	**314**	*e*P		**Pb**	**07 42 32.1**	**-0.2**
	16nm,0.1s							
KTBS				*e*S		**Sg**	**07 42 56.2**	**-0.1**
	46nm,0.3s							
KTBS	**Karatobe**	**1.76**	**314**	P		**Pb**	**07 42 32.1**	**-0.2**
	16nm,0.1s							
KTBS				S		**Sg**	**07 42 56.2**	**-0.1**
	46nm,0.3s							
BOOM	**Boomskoye usch**	**1.85**	**270**	⇑*i*P		**Pb**	**07 42 33.0**	**-0.9**
	baz=71							
BOOM				⇑*i*S		**Sb**	**07 42 57.6**	**+0.3**
	baz=71							
KST	**Kastek**	**1.90**	**287**	*e*P		**Pb**	**07 42 34.4**	**-0.3**
	baz=88							
KST				*e*S		**Sb**	**07 42 59.8**	**+1.1**
	baz=88							
KST	**Kastek**	**1.90**	**287**	*e*P		**Pb**	**07 42 34.4**	**-0.3**
	16nm,0.3s							
KST				*e*S		**Sb**	**07 42 59.8**	**+1.1**
	48nm,0.4s							
KST	**Kastek**	**1.90**	**287**	P		**Pb**	**07 42 34.4**	**-0.3**
	16nm,0.3s							
KST				S		**Sb**	**07 42 59.8**	**+1.1**
	48nm,0.4s							
DJR	**Jarkent**	**2.07**	**28**	*e*P		**Pb**	**07 42 37.4**	**-0.2**
	9.4nm,0.2s							
DJR				*e*S		**Sg**	**07 43 05.3**	**-0.9**
	46nm,0.3s							
DJR	**Jarkent**	**2.07**	**28**	Pg		**Pb**	**07 42 37.4**	**-0.2**
	9.4nm,0.2s							
DJR				Lg		Lg	07 43 05.3	
	46nm,0.3s							
DGS	**Degeres**	**2.09**	**291**	*e*P		**Pb**	**07 42 38.5**	**+0.4**
	6.4nm,0.3s							
DGS				*e*S		**Sg**	**07 43 07.1**	**+0.2**
	47nm,0.3s							
DGS	**Degeres**	**2.09**	**291**	Pg		**Pb**	**07 42 38.5**	**+0.4**
	6.4nm,0.3s							
DGS				Lg		Lg	07 43 07.1	
	47nm,0.3s							
NRN	**Naryn**	**2.11**	**240**	⇓*i*P		**Pb**	**07 42 36.7**	**-1.8**
	baz=42							
NRN				⇓*i*S		**Sb**	**07 43 03.6**	**-1.4**
	baz=42							
TKM2	**Tokmak 2**	**2.14**	**282**	⇓*i*P		**Pb**	**07 42 37.4**	**-1.4**
	baz=83							
TKM2				⇓*i*S		**Sb**	**07 43 04.9**	**-0.7**
	baz=83							
TKM2	**Tokmak 2**	**2.14**	**282**	⇓Pg		**Pb**	**07 42 38.5**	**-0.3**
	5.2nm,0.4s							
TKM2				⇓Lg		Lg	07 43 08.5	
	17nm,0.3s							
KZA	**Kyzart**	**2.41**	**261**	⇓*e*P		**Pn**	**07 42 40.9**	**+1.1**
	baz=62							
KZA				⇓*i*S		**Sn**	**07 43 11.0**	**+1.3**
	baz=62							
TDK	**Taldyqorghan**	**2.49**	**359**	*e*P		**Pb**	**07 42 44.7**	**-0.1**
	21nm,0.3s							
TDK				*e*S		**Sg**	**07 43 17.4**	**-2.3**
	56nm,0.4s							
TDK	**Taldyqorghan**	**2.49**	**359**	Pg		**Pb**	**07 42 44.7**	**-0.1**
	21nm,0.3s							
TDK				Lg		Lg	07 43 17.4	
	56nm,0.4s							
KBK	**Karagaybulak**	**2.58**	**274**	⇓*i*P		**Pn**	**07 42 43.3**	**+1.3**
	baz=75							
KBK				⇓*i*S		**Sn**	**07 43 15.2**	**+1.4**
	baz=75							
KAPS	**Kapalarasan**	**2.85**	**13**	*e*P		**Pb**	**07 42 50.7**	**-0.2**
	6.1nm,0.2s							
KAPS				*e*S		**Sg**	**07 43 27.9**	**-3.4**
	9.6nm,0.3s							
KAPS	**Kapalarasan**	**2.85**	**13**	Pg		**Pb**	**07 42 50.7**	**-0.2**
	6.1nm,0.2s							
KAPS				Lg		Lg	07 43 27.9	
	9.6nm,0.3s							
AAK	**Ala-Archa**	**2.92**	**274**	⇑*e*P		**Pn**	**07 42 48.1**	**+1.5**
	baz=74							
AAK				⇑*i*S		**Sn**	**07 43 23.6**	**+1.6**
	baz=74							
AAK	**Ala-Archa**	**2.92**	**274**	⇑Pn		**Pn**	**07 42 48.4**	**+1.8**
	1.4nm,0.4s							
AAK				⇓Sn		**Sb**	**07 43 26.2**	**-1.8**
	10.0nm,0.5s							
UCH	**Uchtor**	**2.92**	**266**	⇑*i*P		**Pn**	**07 42 48.0**	**+1.1**
	baz=67							
UCH				⇑*i*S		**Sn**	**07 43 23.4**	**+0.9**
	baz=67							
USP	**Ospenovka**	**2.99**	**286**	⇑*e*P		**Pn**	**07 42 49.2**	**+1.7**
	baz=86							
USP				⇑*i*S		**Sn**	**07 43 25.5**	**+1.8**
	baz=86							
ARLS	**Aral**	**3.13**	**259**	⇓*i*P		**Pn**	**07 42 50.3**	**+0.8**
	baz=60							
ARLS				⇓*i*S		**Sn**	**07 43 28.1**	**+1.0**
	baz=60							
EKS2	**Erkin-Say**	**3.45**	**274**	⇓*i*P		**Pn**	**07 42 55.3**	**+1.5**
	baz=75							
EKS2				⇓*i*S		**Sn**	**07 43 36.0**	**+1.0**
	baz=75							
AML	**Almayashu**	**3.54**	**265**	⇑*i*P		**Pn**	**07 42 56.6**	**+1.2**
	baz=66							
AML				⇑*e*S		**Sn**	**07 43 38.3**	**+0.7**
	baz=66							
MAKZ	**Makanchi**	**4.98**	**29**	⇓Pn		**Pn**	**07 43 15.6**	**+0.7**
	0.7nm,0.2s							
MK31	**Makanchi Array**	**5.09**	**31**	⇓Pn		**Pn**	**07 43 17.4**	**+1.1**
	0.7nm,0.2s,baz=213,slow=14,SNR=26							
MK31				⇑Lg		Lg	07 44 39.8	
	0.7nm,0.4s,baz=208,slow=27,SNR=4.2							
KK31	**Karatay Array**	**5.86**	**278**	⇓Pg		**Pg**	**07 43 47.8**	**-4.1**
	1.1nm,0.7s,baz=94,slow=17,SNR=6.4							
KK31				⇑Lg		Lg	07 45 07.5	
	1.9nm,0.8s,baz=98,slow=28,SNR=5.8							
KURBB	**Kurchatov Arra**	**8.12**	**0**	⇑Lg		Lg	07 46 15.6	
	4.8nm,0.7s							

*IDC **07** 08:08:04.9±5.2,22.°17N×121.°55E,h0km,mb3.5/3,*
mb1 3.7/3,mb1mx3.3/39,mbtmp3.5/3,Error ellipse:
s-maj=398.5km s-min=28.6km az=60.0
*JMA **07** 08:08:04.4±0.3,22.°80N×122.°67E,h43km,M3.5*
*TAP **07** 08:08:05.3,22.°81N×122.°66E,h60km±1km,ML4.1,D*
ISC 07 08:08:06.9±1.0,**22.°83N**±0.°03×**122.°69E**±0.°03,**h60**km,**n126,**
σ1.°75/223,**mb3.5**/3,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TWH	**Lutao**	**1.13**	**264**	*i* P		**Pn**	**08 08 23.7**	**-2.9**
	baz=270							
TWH				*e*S		**Sn**	**08 08 37.7**	**-3.6**
	baz=270							
CHKT	**Chengkung**	**1.25**	**283**	P		**Pn**	**08 08 25.5**	**-2.7**
	baz=287							
CHKT				S		**Sn**	**08 08 39.7**	**-4.5**
	baz=287							
LAY	**Lan-yu**	**1.32**	**233**	*e*P		**Pn**	**08 08 28.2**	**-0.9**
	baz=233							
LAY				*e*S		**Sn**	**08 08 42.4**	**-3.4**
	baz=233							
FULB	**Fuli**	**1.34**	**286**	*i* P		**Pn**	**08 08 26.8**	**-2.7**
	baz=295							
FULB				S		**Sn**	**08 08 43.1**	**-3.3**
	baz=295							
HGSD	**Ruisui**	**1.34**	**300**	*i* P		**Pn**	**08 08 26.6**	**-2.8**
	baz=301							
HGSD				*e*S		**Sn**	**08 08 43.4**	**-2.9**
	baz=301							
TWF1	**Yuli**	**1.39**	**292**	P		**Pn**	**08 08 27.8**	**-2.3**
	baz=293							
TWF1				S		**Sn**	**08 08 43.4**	**-4.0**
	baz=293							
YULB	**Yu-li**	**1.40**	**294**	*i* P		**Pn**	**08 08 28.1**	**-2.2**
	baz=295							
YULB				*e*S		**Sn**	**08 08 45.3**	**-2.5**
	baz=295							
TTN	**Taitung**	**1.43**	**267**	*e*P		**Pn**	**08 08 28.4**	**-2.2**
	baz=267							
TTN				*e*S		**Sn**	**08 08 45.8**	**-2.6**
	baz=267							
EHY	**Hungye**	**1.43**	**298**	P		**Pn**	**08 08 28.1**	**-2.6**
	baz=299							
EHY				S		**Sn**	**08 08 45.6**	**-2.8**
	baz=299							
EGFH	**Guangfu**	**1.43**	**306**	P		**Pn**	**08 08 28.5**	**-2.1**
	baz=307							
EGFH				S		**Sn**	**08 08 45.8**	**-2.7**
	baz=307							
ENLB	**Shoufeng**	**1.46**	**317**	*e*P		**Pn**	**08 08 28.4**	**-2.7**
	baz=327							
ENLB				*e*S		**Sn**	**08 08 46.1**	**-3.1**
	baz=327							
TWGBT	**Beinan**	**1.49**	**270**	P		**Pn**	**08 08 29.5**	**-1.9**
	baz=270							
TWGBT				*e*S		**Sn**	**08 08 46.9**	**-2.9**
	baz=270							
TWG	**Pinlang**	**1.50**	**270**	P		**Pn**	**08 08 29.5**	**-2.0**
	baz=270							
TWG				*e*S		**Sn**	**08 08 46.8**	**-3.3**
	baz=270							
ESL	**Shilin**	**1.52**	**310**	P		**Pn**	**08 08 28.9**	**-2.9**
	baz=312							
ESL				S		**Sn**	**08 08 46.9**	**-3.6**
	baz=312							
HWA	**Hwalien**	**1.52**	**319**	*e*S		**Sn**	**08 08 47.4**	**-3.1**
	baz=328							
ELDTW	**Lidau**	**1.58**	**283**	P		**Pn**	**08 08 30.5**	**-2.3**
	baz=291							
ELDTW				*e*S		**Sn**	**08 08 49.0**	**-3.3**
	baz=291							
HATJ	**Hateruma jima**	**1.59**	**40**	P		**Pn**	**08 08 31.3**	**-1.5**
HATJ				*e*S		**Sn**	**08 08 50.3**	**-2.0**
TWD	**Chiawan**	**1.60**	**321**	P		**Pn**	**08 08 30.8**	**-2.1**
	baz=323							
TWD				*e*S		**Sn**	**08 08 49.2**	**-3.3**
	baz=323							
ECL	**Taimali**	**1.62**	**262**	P		**Pn**	**08 08 31.4**	**-1.9**
	baz=262							
ECL				*e*S		**Sn**	**08 08 50.2**	**-2.9**
	baz=262							
JYNG	**Yonagunijimaku**	**1.63**	**8**	P		**Pn**	**08 08 32.7**	**-0.6**
JYNG				*e*S		**Sn**	**08 08 52.3**	**-0.9**
YOJ	**Yonaguni jima**	**1.65**	**10**	*e*P		**Pn**	**08 08 32.7**	**-0.9**
	baz=20							
YOJ				S		**Sn**	**08 08 52.9**	**-0.8**
	baz=20

	baz=264							
ETLH	**Xiulin Townshi**	**1.76**	**321**	P		**Pn**	**08 08 33.3**	**-1.9**
	baz=326							
ETLH				S		**Sn**	**08 08 54.5**	**-2.2**
	baz=326							
IRIF	**Iriomote-Funau**	**1.77**	**32**	P		**Pn**	**08 08 34.1**	**-1.2**
IRIF				eS		**Sn**	**08 08 55.2**	**-1.5**
EOS1	**EOS1**	**1.79**	**343**	P		**Pn**	**08 08 34.7**	**-0.7**
	baz=337							
EOS1				S		**Sn**	**08 08 55.3**	**-1.7**
	baz=337							
OWD	**Renai**	**1.79**	**309**	*e*P		**Pn**	**08 08 34.0**	**-1.6**
	baz=310							
OWD				*e*S		**Sn**	**08 08 55.2**	**-2.1**
	baz=310							
NANB	**Nanao**	**1.81**	**332**	P		**Pn**	**08 08 34.5**	**-1.3**
	baz=325							
NANB				*e*S		**Sn**	**08 08 55.8**	**-1.8**
	baz=325							
ENA	**Nanau**	**1.81**	**331**	P		**Pn**	**08 08 34.7**	**-1.1**
	baz=325							
ENA				S		**Sn**	**08 08 56.0**	**-1.8**
	baz=325							
STYT	**Tauyuan**	**1.81**	**281**	P		**Pn**	**08 08 34.9**	**-0.9**
	baz=281							
STYT				*e*S		**Sn**	**08 08 56.6**	**-1.3**
	baz=281							
JKRS	**Kuro-shima**	**1.85**	**41**	P		**Pn**	**08 08 35.3**	**-1.0**
JKRS				eS		**Sn**	**08 08 56.7**	**-1.9**
WHF	**Hehuan Shan**	**1.85**	**315**	P		**Pn**	**08 08 34.9**	**-1.8**
	baz=324							
WHF				*e*S		**Sn**	**08 08 55.6**	**-3.7**
	baz=324							
CHGB	**Renai**	**1.85**	**312**	*e*P		**Pn**	**08 08 35.3**	**-1.3**
	baz=320							
CHGB				*e*S		**Sn**	**08 08 57.2**	**-1.8**
	baz=320							
SSLB	**Suanglung**	**1.86**	**301**	P		**Pn**	**08 08 35.2**	**-1.2**
	baz=302							
SSLB				S		**Sn**	**08 08 56.8**	**-2.1**
	baz=302							
ALS	**Alishan**	**1.86**	**292**	*e*P		**Pn**	**08 08 36.3**	**-0.5**
	baz=292							
SLGT	**Liugui**	**1.89**	**275**	P		**Pn**	**08 08 36.5**	**-0.5**
	baz=272							
WHYT	**Xinyi Township**	**1.90**	**297**	*e*P		**Pn**	**08 08 36.5**	**-0.5**
	baz=303							
WHYT				*e*S		**Sn**	**08 08 57.7**	**-2.1**
	baz=303							
SSD	**Sandimen**	**1.90**	**268**	*e*P		**Pn**	**08 08 36.0**	**-1.1**
	baz=263							
MASBT	**Mashibuluo**	**1.91**	**264**	*i* P		**Pn**	**08 08 36.1**	**-1.1**
	baz=264							
TWC	**Suao**	**1.93**	**337**	P		**Pn**	**08 08 35.8**	**-1.6**
	baz=338							
TWC				S		**Sn**	**08 08 58.5**	**-2.0**
	baz=338							
SMLT	**Sun Moon Lake**	**1.95**	**303**	P		**Pn**	**08 08 36.9**	**-0.9**
	baz=303							
SMLT				*e*S		**Sn**	**08 09 00.6**	**-0.6**
	baz=303							
TWKBT	**Hengchun**	**1.95**	**243**	*e*P		**Pn**	**08 08 37.1**	**-0.6**
	baz=243							
TWKBT				*e*S		**Sn**	**08 08 59.7**	**-1.5**
	baz=243							
TPUB	**Ta-pu**	**1.96**	**284**	P		**Pn**	**08 08 38.0**	**+0.2**
	baz=291							
TPUB				*e*S		**Sn**	**08 09 01.1**	**-0.2**
	baz=291							
TWK1	**Hengchun**	**1.96**	**244**	*e*P		**Pn**	**08 08 36.1**	**-1.7**
	baz=243							
TWK1				S		**Sn**	**08 08 58.9**	**-2.4**
	baz=243							
WTP	**Ta-pu**	**1.96**	**283**	P		**Pn**	**08 08 38.2**	**+0.4**
	baz=290							
WTP				*e*S		**Sn**	**08 09 03.4**	**+2.0**
	baz=290							
SGST	**Jiashian**	**1.96**	**278**	P		**Pn**	**08 08 37.3**	**-0.6**
	baz=278							
SGST				*e*S		**Sn**	**08 09 01.0**	**-0.4**
	baz=278							
SCZT	**Fangliau**	**1.97**	**257**	P		**Pn**	**08 08 37.6**	**-0.3**
	baz=261							
SCZT				*e*S		**Sn**	**08 08 59.2**	**-2.3**
	baz=261							
HEN	**Hengchun**	**1.99**	**246**	*e*P		**Pn**	**08 08 37.6**	**-0.6**
	baz=239							
HEN				S		**Sn**	**08 08 59.0**	**-2.9**
	baz=239							
NNSH	**Datong**	**1.99**	**323**	P		**Pn**	**08 08 37.3**	**-1.1**
	baz=324							
NNSH				S		**Sn**	**08 08 59.8**	**-2.5**
	baz=324							
SSPT	**Xinbi**	**1.99**	**260**	*e*P		**Pn**	**08 08 37.1**	**-1.1**
	baz=264							
TDCB	**Techi**	**2.00**	**315**	*e*P		**Pn**	**08 08 37.5**	**-1.0**
	baz=324							
TDCB				*e*S		**Sn**	**08 08 60.0**	**-2.4**
	baz=324							
TYC	**Yuchr**	**2.00**	**303**	P		**Pn**	**08 08 37.1**	**-1.2**
	baz=303							
TYC				*e*S		**Sn**	**08 09 00.8**	**-1.4**
	baz=303							
CHN4	**Tsaushan**	**2.00**	**285**	P		**Pn**	**08 08 38.9**	**+0.5**
	baz=292							
CHN4				*e*S		**Sn**	**08 09 02.1**	**-0.2**
	baz=292							
CHN5	**Tsauling**	**2.00**	**293**	P		**Pn**	**08 08 38.9**	**+0.4**
	baz=297							
CHN5				*e*S		**Sn**	**08 09 01.9**	**-0.6**
	baz=297							
NNS	**Nan Shan**	**2.01**	**323**	P		**Pn**	**08 08 37.1**	**-1.5**
	baz=324							
NNS				S		**Sn**	**08 09 00.8**	**-1.8**
	baz=324							
DPDB	**Guoxing**	**2.02**	**307**	*e*P		**Pn**	**08 08 37.7**	**-0.9**
	baz=314							
DPDB				*e*S		**Sn**	**08 09 01.0**	**-1.8**
	baz=314							
JIJ	**Ishigaki jima**	**2.02**	**41**	P		**Pn**	**08 08 37.3**	**-1.4**
JIJ				eS		**Sn**	**08 09 00.2**	**-2.6**
CHN1	**Nanshi**	**2.02**	**280**	P		**Pn**	**08 08 39.5**	**+0.8**
	baz=281							
CHN1				S		**Sn**	**08 09 03.9**	**+0.9**
	baz=281							
WJS	**Zhushan**	**2.06**	**299**	*e*P		**Pn**	**08 08 39.7**	**+0.5**
	baz=304							
WJS				*e*S		**Sn**	**08 09 04.2**	**+0.5**
	baz=304							
SNST	**Tainan City**	**2.06**	**281**	P		**Pn**	**08 08 40.1**	**+1.0**
	baz=290							
SNST				*e*S		**Sn**	**08 09 05.5**	**+1.7**
	baz=290							
NDT	**Datong Townshi**	**2.07**	**329**	P		**Pn**	**08 08 38.1**	**-1.2**
	baz=329							
NDT				*e*S		**Sn**	**08 09 01.8**	**-2.2**
	baz=329							
ENTT	**Nioudou**	**2.08**	**330**	P		**Pn**	**08 08 37.7**	**-1.6**
	baz=325							
ENTT				S		**Sn**	**08 09 03.2**	**-0.9**
	baz=325							
TWM1	**Shoushan**	**2.09**	**270**	*e*P		**Pn**	**08 08 40.3**	**+0.7**
	baz=268							
TWM1				*e*S		**Sn**	**08 09 06.3**	**+1.7**
	baz=268							
TWE	**Neicheng**	**2.10**	**334**	P		**Pn**	**08 08 39.6**	**-0.2**
	baz=328							
TWE				S		**Sn**	**08 09 03.5**	**-1.2**
	baz=328							
WNT	**Mingjian**	**2.12**	**300**	*e*P		**Pn**	**08 08 40.3**	**+0.4**
	baz=300							
WNT				*e*S		**Sn**	**08 09 06.0**	**+0.8**
	baz=300							
EGS		**2.12**	**341**	*e*P		**Pn**	**08 08 40.3**	**+0.3**
	baz=342							
EGS				*e*S		**Sn**	**08 09 03.5**	**-1.7**
	baz=342							
WGK	**Gukeng**	**2.14**	**294**	*e*P		**Pn**	**08 08 40.5**	**+0.3**
	baz=294							
WGK				*e*S		**Sn**	**08 09 06.5**	**+0.8**
	baz=294							
SLBB	**Yuanshan**	**2.14**	**333**	P		**Pn**	**08 08 39.3**	**-1.1**
	baz=334							
SLBB				S		**Sn**	**08 09 03.9**	**-2.0**
	baz=334							
WHP	**Taichung City**	**2.15**	**312**	*e*P		**Pn**	**08 08 39.7**	**-0.9**
	baz=317							
WHP				*e*S		**Sn**	**08 09 04.8**	**-1.4**
	baz=317							
CHN3	**Shinhua**	**2.16**	**277**	*e*P		**Pn**	**08 08 41.9**	**+1.4**
	baz=277							
CHN3				*e*S		**Sn**	**08 09 08.9**	**+2.7**
	baz=277							
NTC	**Toucheng**	**2.16**	**339**	*e*P		**Pn**	**08 08 41.1**	**+0.6**
	baz=349							
NTC				S		**Sn**	**08 09 04.8**	**-1.4**
	baz=349							
SNJT	**Kaohsiung City**	**2.18**	**268**	*e*P		**Pn**	**08 08 41.9**	**+1.2**
	baz=268							
SNJT				*e*S		**Sn**	**08 09 09.5**	**+2.9**
	baz=268							
CHY	**Chiayi**	**2.19**	**288**	*e*P		**Pn**	**08 08 41.1**	**+0.2**
	baz=288							
WLCH	**Liuqiu**	**2.19**	**258**	*e*P		**Pn**	**08 08 41.9**	**+1.0**
	baz=257							
YHNB	**Yeheng**	**2.19**	**327**	*e*P		**Pn**	**08 08 40.6**	**-0.4**
	baz=328							
YHNB				*e*S		**Sn**	**08 09 05.0**	**-2.1**
	baz=328							
NSK	**Sanguang**	**2.21**	**327**	P		**Pn**	**08 08 40.8**	**-0.4**
	baz=327							
NSK				*e*S		**Sn**	**08 09 05.4**	**-2.0**
	baz=327							
NWLT	**Wulai**	**2.22**	**331**	P		**Pn**	**08 08 40.5**	**-0.9**
	baz=332							
NWLT				S		**Sn**	**08 09 06.5**	**-1.3**
	baz=332							
TWB1	**Santiao Chiao**	**2.26**	**344**	*e*S		**Sn**	**08 09 06.5**	**-2.2**
	baz=356							
TCU	**Taichung**	**2.27**	**306**	*e*P		**Pn**	**08 08 42.7**	**+0.8**
	baz=306							
TCU				*e*S		**Sn**	**08 09 09.7**	**+0.8**
	baz=306							
TIPB	**Shuangxi**	**2.27**	**340**	*e*P		**Pn**	**08 08 41.8**	**-0.3**
	baz=348							
TIPB				S		**Sn**	**08 09 08.1**	**-1.0**
	baz=348							
JISG	**Ishigakijimahi**	**2.29**	**40**	P		**Pn**	**08 08 40.7**	**-1.6**
JISG				S		**Sn**	**08 09 06.7**	**-2.7**
TWQ1	**Liyutan**	**2.32**	**311**	*e*P		**Pn**	**08 08 43.1**	**+0.3**
	baz=317							
TWQ1				*e*S		**Sn**	**08 09 09.3**	**-0.8**
	baz=317							
WCHH	**Zhanghua**	**2.32**	**303**	*e*P		**Pn**	**08 08 43.1**	**+0.4**
	baz=311							
WCHH				*e*S		**Sn**	**08 09 10.8**	**+0.7**
	baz=311							
CHN8	**Yiju**	**2.34**	**283**	*e*S		**Sn**	**08 09 11.8**	**+1.2**
	baz=283							
TWA	**Mucha**	**2.37**	**335**	P		**Pn**	**08 08 43.7**	**+0.3**
	baz=345							
TWA				S		**Sn**	**08 09 11.6**	**+0.3**
	baz=345							
LIOB	**Emei**	**2.37**	**320**	*e*P		**Pn**	**08 08 44.7**	**+1.2**
	baz=321							
LIOB				*e*S		**Sn**	**08 09 09.7**	**-1.7**
	baz=321							
NSY	**Sanyi**	**2.37**	**312**	P		**Pn**	**08 08 44.4**	**+0.9**
	baz=313							
NWF	**Wu-fen Shan**	**2.38**	**340**	*e*P		**Pn**	**08 08 43.1**	**-0.5**
	baz=352							
NWF				*e*S		**Sn**	**08 09 10.6**	**-1.0**
	baz=352							
WFSB	**Wu-fen Shan**	**2.38**	**340**	*e*P		**Pn**	**08 08 42.7**	**-0.8**
	baz=352							
WFSB				*e*S		**Sn**	**08 09 10.8**	**-0.8**
	baz=352							
RLNB	**Erlin**	**2.39**	**297**	*e*S		**Sn**	**08 09 12.1**	**+0.3**
	baz=297							
TATO	**Taipei**	**2.40**	**333**	*e*P		**Pn**	**08 08 44.4**	**+0.5**
	baz=325							
TATO				S		**Sn**	**08 09 11.3**	**-0.8**
	baz=325							
WLTB	**Daxi**	**2.41**	**327**	*e*S		**Sn**	**08 09 11.1**	**-1.0**
	baz=328							
WDJ	**Dajia District**	**2.41**	**309**	*e*P		**Pn**	**08 08 43.9**	**-0.1**
	baz=320							
WDJ				*e*S		**Sn**	**08 09 14.2**	**+1.8**
	baz=320							
PTSB	**Yuanli**	**2.43**	**312**	*e*S		**Sn**	**08 09 13.2**	**+0.4**
	baz=321							
YM01	**YM01**	**2.52**	**336**	*e*P		**Pn**	**08 08 46.5**	**+0.9**
	baz=347							
YM01				S		**Sn**	**08 09 14.7**	**-0.4**
	baz=347							
YM10	**YM10**	**2.53**	**336**	*e*P		**Pn**	**08 08 46.1**	**+0.4**
	baz=347							
YM10				*e*S		**Sn**	**08 09 15.0**	**-0.4**
	baz=347							
NCU	**National Centr**	**2.54**	**327**	S		**Sn**	**08 09 16.1**	**+0.8**
	baz=328							
NCUH	**Zhongli**	**2.54**	**327**	*e*P		**Pn**	**08 08 45.3**	**-0.3**
	baz=328							
NCUH				S		**Sn**	**08 09 16.0**	**+0.6**
	baz=328							
YM05	**YM05**	**2.54**	**336**	*e*P		**Pn**	**08 08 46.8**	**+1.0**
	baz=347							
YM05				*e*S		**Sn**	**08 09 14.8**	**-0.8**
	baz=347							
TWS1	**Kuangyinshan**	**2.54**	**333**	*e*S		**Sn**	**08 09 15.5**	**0.0**
	baz=334							
YM04	**YM04**	**2.54**	**336**	*e*P		**Pn**	**08 08 45.6**	**-0.1**
	baz=336							
YM04				S		**Sn**	**08 09 15.2**	**-0.4**
	baz=336							
YM08	**YM08**	**2.55**	**337**	*e*S		**Sn**	**08 09 15.3**	**-0.5**
	baz=338							
JTJ	**Tarama**	**2.58**	**45**	P		**Pn**	**08 08 45.3**	**-0.9**
JTJ				S		**Sn**	**08 09 14.6**	**-1.7**
TWY	**Chenhua**	**2.63**	**338**	*e*P		**Pn**	**08 08 46.8**	**-0.2**
	baz=349							
TWY				*e*S		**Sn**	**08 09 17.1**	**-0.6**
	baz=349							
WDGT	**Dungji**	**2.83**	**279**	*e*P		**Pn**	**08 08 48.9**	**-0.7**
	baz=279							
PHUB	**P'eng-hu**	**2.95**	**284**	*e*P		**Pn**	**08 08 50.0**	**-1.3**
	baz=283							
PHUB				*e*S		**Sn**	**08 09 23.4**	**-2.2**
	baz=283							
PNG	**Penghu**	**2.98**	**285**	*e*P		**Pn**	**08 08 51.9**	**+0.2**
	baz=284							
PNG				*e*S		**Sn**	**08 09 24.2**	**-2.0**
	baz=284							
VCHM	**Qimei**	**3.03**	**278**	*e*P		**Pn**	**08 08 52.2**	**-0.1**
	baz=277							
VCHM				*e*S		**Sn**	**08 09 26.3**	**-1.2**
	baz=277							
JMJ	**Miyako jima 2**	**3.09**	**50**	*e*S		**Sn**	**08 09 27.4**	**-1.6**
	baz=50							
JIKM	**Ikemajima**	**3.13**	**48**	P		**Pn**	**08 08 52.8**	**-1.0**
JIKM				S		**Sn**	**08 09 28.6**	**-1.4**
VWUC	**VWUC**	**3.66**	**307**	*e*P		**Pn**	**08 09 00.5**	**-0.6**
	baz=306							
VWUC				*e*S		**Sn**	**08 09 41.1**	**-1.9**
	baz=306							
PTTC	**Pingtan**	**3.77**	**315**	*e*P		**Pn**	**08 09 01.6**	**-0.8**
	baz=316							
PTTC				*e*S		**Sn**	**08 09 43.5**	**-2.0**
	baz=316							
PTMZ	**Houxiangcun**	**3.94**	**305**	*e*S		**Sn**	**08 09 48.2**	**-1.6**
	baz=304							
MATB	**Ma-tsu**	**4.14**	**323**	*e*P		**Pn**	**08 09 07.2**	**-0.4**
	baz=324							
MATB				*e*S		**Sn**	**08 09 53.4**	**-1.5**
	baz=324							
KNM	**Kinmen**	**4.21**	**293**	*e*P		**Pn**	**08 09 10.6**	**+2.1**
	baz=290							
KNMB	**Chin-men Tao**	**4.27**	**293**	P		**Pn**	**08 09 09.0**	**-0.3**
	baz=292							
LYJJ	**Jianjiangzhen**	**4.56**	**325**	*e*P		**Pn**	**08 09 14.3**	**+1.0**
	baz=325							
XPSS	**Dashiqiu**	**4.67**	**331**	*e*P		**Pn**	**08 09 13.9**	**-1.0**
	baz=332							
ZPLA	**Ao Xicun**	**4.67**	**284**	*e*P		**Pn**	**08 09 15.5**	**+0.6**
	baz=283							
MKAR	**Makanchi Array**	**40.27**	**316**	P		P	08 15 41.6	+3.5
	0.6nm,0.8s,baz=120,slow=8.5,SNR=4.8							
WRA	**Warramunga Arr**	**44.01**	**164**	P		**P**	**08 16 11.5**	**+2.8**
	0.7nm,0.7s,baz=343,slow=8.5,SNR=5.0							
ASAR	**Alice Springs**	**47.49**	**166**	P		**P**	**08 16 39.0**	**+2.9**
	0.2nm,0.7s,baz=351,slow=8.5,SNR=3.2							

*IDC **07** 08:08:21.9±1.6,35°.57N×23°.20E,h0km,mb3.9/3,*
mb1 3.8/4,mb1mx3.4/30,mbtmp3.7/4,ML2.7/1,Error

ellipse: s-maj=63.9km s-min=26.9km az=138.0
*THE **07** 08:08:30.0,35°.38N×23°.34E,h19km±1km,ML3.0/9,Error*
ellipse: s-maj=1.8km s-min=0.5km az=48.0
*ATH **07** 08:08:30.3,35°.52N×23°.51E,h42km±1km,ML3.0/5,Error*
ellipse: s-maj=4.9km s-min=1.0km az=221.0

ISC 07 08:08:29.1±1.1,35°.42N±0°.06×23°.41E±0°.06,h43km±9km,
n43,σ1§75/59,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RODP	**Rodopos**	**0.32**	**64**	P	**Pn**	**08 08 38.1**	**+0.3**
RODP				S	**Sn**	**08 08 44.4**	**+0.5**
	972nm,0.4s						
ANKY	**Antikythira Is**	**0.45**	**349**	P	**Pn**	**08 08 39.7**	**+0.3**
ANKY				S	**Sn**	**08 08 47.0**	**+0.4**
	2μm,0.6s						
ANKY	**Antikythira Is**	**0.45**	**349**	P	**Pn**	**08 08 39.7**	**+0.3**
ANKY				S	**Sn**	**08 08 46.5**	**-0.1**
ANKY				AML	AML	08 08 49.2	
	comp=N,4365μm,0.6s						
ANKY				AML	AML	08 08 49.7	
	comp=E,4126μm,0.5s						
IMMV	**Iera Moni Meta**	**0.47**	**85**	P	**Pn**	**08 08 40.0**	**+0.5**
IMMV				S	**Sn**	**08 08 48.4**	**+1.5**
	comp=E,3μm,0.4s						
IMMV	**Iera Moni Meta**	**0.47**	**85**	P	**Pn**	**08 08 40.1**	**+0.5**
IMMV				S	**Sn**	**08 08 48.4**	**+1.5**
IMMV				AML	AML	08 08 49.9	
	comp=E,4539μm,0.5s						
IMMV				AML	AML	08 08 50.9	
	comp=N,5391μm,0.4s						
CHAN	**Chania**	**0.53**	**79**	P	**Pn**	**08 08 41.0**	**+0.8**
CHAN				S	**Sn**	**08 08 49.8**	**+1.6**
	comp=N,878nm,0.6s						
VAM	**Vamos**	**0.65**	**91**	P	**Pn**	**08 08 42.7**	**+0.9**
VAM				S	**Sn**	**08 08 53.3**	**+2.3**
	comp=N,2μm,0.6s						
VAM	**Vamos**	**0.65**	**91**	P	**Pn**	**08 08 42.8**	**+1.0**
VAM				S	**Sn**	**08 08 52.2**	**+1.2**
GVDS	**Gavdos**	**0.80**	**136**	P	**Pn**	**08 08 44.8**	**+0.8**
GVDS				S	**Sn**	**08 08 56.0**	**+1.2**
	comp=N,1μm,0.5s						
KTHA	**Kythira Island**	**0.88**	**341**	P	**Pn**	**08 08 46.7**	**+1.7**
KTHA				S	**Sn**	**08 08 59.5**	**+2.8**
	comp=N,2μm,0.5s						
KTHA	**Kythira Island**	**0.88**	**341**	P	**Pn**	**08 08 46.7**	**+1.7**
KTHA				S	**Sn**	**08 08 59.3**	**+2.6**
KTHA				AML	AML	08 09 03.0	
	comp=N,2574μm,0.4s						
KTHA				AML	AML	08 09 03.1	
	comp=E,3869μm,0.4s						
PRNS	**Prines Rethymn**	**0.89**	**93**	P	**Pn**	**08 08 46.2**	**+1.0**
PRNS				S	**Sn**	**08 08 59.1**	**+2.2**
KTHR	**Kythira**	**0.90**	**339**	P	**Pn**	**08 08 46.8**	**+1.5**
KTHR				S	**Sn**	**08 08 59.9**	**+2.7**
	comp=E,1μm,0.4s						
SIVA	**Sivas**	**1.22**	**109**	P	**Pn**	**08 08 51.9**	**+2.3**
SIVA	**Sivas**	**1.22**	**109**	P	**Pn**	**08 08 51.8**	**+2.3**
IDI	**Anoyia**	**1.22**	**96**	P	**Pn**	**08 08 51.5**	**+1.8**
IDI				S	**Sn**	**08 09 05.7**	**+0.7**
MNVA	**Monemvasia**	**1.30**	**347**	P	**Pn**	**08 08 52.9**	**+2.2**
VLI	**Veliai**	**1.35**	**344**	P	**Pn**	**08 08 53.5**	**+2.1**
VLI				S	**Sn**	**08 09 11.6**	**+3.4**
	comp=E,462nm,0.4s						
VLI	**Veliai**	**1.35**	**344**	P	**Pn**	**08 08 53.4**	**+2.0**
VLI				AML	AML	08 09 15.3	
	comp=E,694μm,0.5s						
VLI				AML	AML	08 09 16.6	
	comp=N,945μm,0.4s						
MHLA	**Plaka, Milos I**	**1.55**	**32**	P	**Pn**	**08 08 55.6**	**+1.4**
LAST	**Lasithi**	**1.71**	**98**	P	**Pn**	**08 08 59.4**	**+2.9**
LAST				S	**Sn**	**08 09 21.4**	**+4.2**
LAST	**Lasithi**	**1.71**	**98**	P	**Pn**	**08 08 58.9**	**+2.4**
NPS	**Neapolis**	**1.81**	**94**	P	**Pn**	**08 08 59.0**	**+1.3**
THR3	**Thira Island,**	**1.89**	**58**	P	**Pn**	**08 09 00.6**	**+1.7**
SANT	**Santorini**	**1.91**	**60**	P	**Pn**	**08 09 00.4**	**+1.2**
SERI	**Serifos**	**1.94**	**26**	P	**Pn**	**08 08 60.0**	**+0.4**
KRND	**KRANIDI**	**1.97**	**354**	P	**Pn**	**08 09 02.2**	**+2.3**
PYL	**PYLOS**	**2.00**	**318**	P	**Pn**	**08 09 01.3**	**+1.0**
IOSP	**Ios island**	**2.00**	**49**	P	**Pn**	**08 09 01.4**	**+1.0**
IOSP				AML	AML	08 09 28.1	
	comp=N,512μm,0.3s						
IOSP				AML	AML	08 09 30.9	
	comp=E,427μm,0.4s						
DID	**Didima**	**2.08**	**356**	P	**Pn**	**08 09 03.0**	**+1.4**
ZKR	**Zakros**	**2.32**	**97**	P	**Pn**	**08 09 07.0**	**+2.3**
APE	**Apeiranthos**	**2.37**	**46**	P	**Pn**	**08 09 06.1**	**+0.5**
VLY	**Voula,Athens**	**2.44**	**7**	P	**Pn**	**08 09 08.0**	**+1.5**
VLY	**Voula,Athens**	**2.44**	**7**	P	**Pn**	**08 09 07.9**	**+1.5**
AMGA	**Amorgos Island**	**2.45**	**54**	P	**Pn**	**08 09 07.2**	**+0.6**
LTK	**Loutraki**	**2.62**	**352**	P	**Pn**	**08 09 10.5**	**+1.6**
KARY	**Karystos**	**2.73**	**17**	P	**Pn**	**08 09 11.3**	**+0.9**
VIL2	**Platees**	**2.79**	**358**	P	**Pn**	**08 09 11.4**	**+0.2**
KARP	**Karpathos**	**3.06**	**87**	P	**Pn**	**08 09 16.0**	**+1.0**
BRTR	**Keskin Array B**	**9.18**	**59**	Pn	**Pn**	**08 10 39.6**	**+0.5**
	comp=E,0.1nm,0.3s,baz=255,slow=16,SNR=3.3						
TORD	**Torodi Ar. Bea**	**29.59**	**227**	P	**P**	**08 14 28.6**	**-1.5**
	comp=E,0.5nm,0.5s,baz=30,slow=10.0,SNR=4.1						
ARCES	**ARCESS Array B**	**34.19**	**1**	P	**P**	**08 15 07.4**	**-2.6**
	comp=E,4.5nm,1.0s,baz=183,slow=9.7,SNR=2.8						
MKAR	**Makanchi Array**	**44.82**	**57**	P	**P**	**08 16 37.5**	**-1.3**
	comp=E,0.5nm,0.7s,baz=275,slow=7.8,SNR=4.6						

*SOME **07** 08:09:10.6,43°.08N×78°.37E,h10km*
NNC 07 08:09:11.3±0.7,43°.10N×78°.42E,h0km,mb1.3,mpv1.6,
2C-2D,Error ellipse: s-maj=8.8km s-min=3.9km
az=168.0,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.04**	**195**	*e*P	Pg	08 09 12.4	+0.3
	30nm,0.1s						
SATY				*e*S	Sg	08 09 13.8	+1.2
	39nm,0.1s						
SATY	**Saty**	**0.04**	**195**	P	Pg	08 09 12.4	+0.3
	30nm,0.1s						
SATY				S	Sg	08 09 13.8	+1.2
	39nm,0.1s						
ZHN	**Zhinishke**	**0.07**	**9**	*e*P	Pg	08 09 13.3	+0.7
	1.4nm,0.1s						
ZHN				*e*S	Sg	08 09 15.3	+1.8
	5.8nm,0.1s						
ZHN	**Zhinishke**	**0.07**	**9**	P	Pg	08 09 13.3	+0.7
	1.4nm,0.1s						
ZHN				S	Sg	08 09 15.3	+1.8
	5.8nm,0.1s						
PDGK	**Podgornoye**	**0.81**	**73**	P	Pg	08 09 26.6	-0.3
	0.1nm,0.1s						
PDGK				S	Sg	08 09 38.2	+0.7
	0.7nm,0.2s						
PDGK	**Podgornoye**	**0.81**	**73**	⇓P	Pb	08 09 27.8	-0.6
	0.3nm,0.5s						
PDGK				⇓S	Sg	08 09 37.8	+0.3
	1.0nm,0.4s						
MDOK	**Medeo**	**1.01**	**274**	⇑P	Pb	08 09 31.4	-0.3
	0.4nm,0.3s						
MDOK				⇑S	Sg	08 09 44.1	+0.4

	baz=72							
NRN	**Naryn**	**2.12**	**242**	⇑*i*P	Pb	08 10 37.7	-0.9	
	baz=42							
NRN				⇑*i*S	Sb	08 11 05.3	+0.8	
	baz=42							

*IDC **07** 08:20:31.3±6.5, 17°.89S×175°.50W, h0km, mb4.0/3, mb1 4.3/3, mb1mx3.7/24, mbtmp4.0/3, Error ellipse: s-maj=289.2km s-min=35.4km az=142.0*
*NEIC **07** 08:20:42.9±1.1, 18°.7S±0°.1×174°.4W±0°.1, h161km±12km, mb4.2/9, Error ellipse: s-maj=15.9km s-min=14.6km az=188.0*

ISC 07 08:20:45.6±1.3, 19°.0S±0°.2×174°.9W±0°.2, h147km, n17, σ0961/14, mb4.1/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.71**	**92**	Pn	Pn	08 21 46.5	-8.7
NIUE				Sn	Sn	08 22 32.3	-17
AFI	**Afiamalu**	**5.85**	**31**	Pn	Pn	08 22 02.8	-7.6
AFI				Sn	Sn	08 22 59.6	-17
MSVF	**Nonsavu**	**6.80**	**279**	Pn	Pn	08 22 27.4	+4.4
DZM	**Mont Dzumac**	**17.74**	**257**	P	**Pn**	**08 24 44.7**	**+1.0**
DZM	comp=Z,9.9nm,1.0s			IAmb	IAmb	08 24 48.4	
URZ	**Urewera**	**20.45**	**198**	P	**P**	**08 25 10.9**	**-0.6**
URZ	comp=Z,17nm,1.3s			IAmb	IAmb	08 25 26.6	
AS31	**Alice Springs**	**47.72**	**255**	P	**P**	**08 29 08.2**	**+0.3**
WRA	**Warramunga Arr**	**47.72**	**260**	P	**P**	**08 29 07.6**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=96,slow=7.7,SNR=24						
WRA	**Warramunga Arr**	**47.72**	**260**	P	**P**	**08 29 07.5**	**-0.4**
ASAR	**Alice Springs**	**47.72**	**255**	P	**P**	**08 29 08.0**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=88,slow=8.7,SNR=58						
ASAR	**Alice Springs**	**47.72**	**255**	P	**P**		
KNRA	**Kununurra**	**53.69**	**264**	P	**P**	**08 29 52.0**	**-0.6**
KNRA	comp=Z,5.5nm,0.8s			IAmb	IAmb	08 29 54.0	
FITZ	**Fitzroy Crossi**	**56.13**	**261**	P	**P**	**08 30 09.9**	**-0.3**
FITZ	comp=Z,3.7nm,1.4s			IAmb	IAmb	08 30 18.1	
PSAA3	**Pilbara Seismi**	**60.85**	**255**	P	**P**	**08 30 42.7**	**-0.2**
NWAO	**Narrogin (SRO)**	**61.66**	**242**	P	**P**	**08 30 47.5**	**-0.6**
QSPA	**South Pole Qui**	**71.11**	**180**	P	**P**	**08 31 48.5**	**+0.7**
ILAR	**Eielson Array**	**86.20**	**12**	P	**P**	**08 33 09.6**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=222,slow=6.6,SNR=5.6						
BRTR	**Keskin Array B**	**147.86**	**316**	PKPbc	**PKPbc**	**08 40 14.6**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=61,slow=3.8,SNR=4.8						

JMA 07 08:24:09.5±0.3, 37°.30N×144°.46E, h57km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.58**	**294**	P	Pn	08 24 50.0	+1.2
JIKH				*e*S	Sn	08 25 19.6	+0.7
JIO	**Ouri**	**2.72**	**296**	P	Pn	08 24 52.0	+1.3
JIO				*e*S	Sn	08 25 23.2	+0.8
JFK	**Kawauchi**	**2.86**	**272**	P	Pn	08 24 54.1	+1.4
JMST	**Minamisoumatoc**	**2.87**	**280**	P	Pn	08 24 54.0	+1.2
ONAJ	**Iwakimizuishiy**	**2.93**	**267**	P	Pn	08 24 54.8	+1.1
ONAJ				*e*S	Sn	08 25 28.4	+0.7
JMM	**Marumori**	**2.97**	**282**	P	Pn	08 24 55.4	+1.3
JMK	**Ichinoseki**	**3.04**	**304**	P	Pn	08 24 56.5	+1.4
JMK				*e*S	Sn	08 25 31.4	+1.1
JFT	**Otama**	**3.29**	**275**	P	Pn	08 25 01.0	+2.4
JFT				*e*S	Sn	08 25 39.6	+3.1
JOM	**Ohasama**	**3.30**	**312**	P	Pn	08 25 00.3	+1.6
JOM				*e*S	Sn	08 25 37.5	+0.8
JYK	**Kaneyama**	**3.62**	**298**	P	Pn	08 25 04.7	+1.7
JANG	**Nango**	**3.83**	**324**	P	Pn	08 25 06.5	+0.5
JANG				*e*S	Sn	08 25 48.3	-1.5
BSO1	**Boso 1**	**3.87**	**228**	P	Pn	08 25 06.6	+0.7
JAG	**Ashikaga**	**4.11**	**259**	P	Pn	08 25 11.5	+1.7
JAG				*e*S	Sn	08 25 57.8	+1.3
JRY	**Ryogami san**	**4.65**	**256**	P	Pn	08 25 18.6	+1.4
JRY				*e*S	Sn	08 26 10.1	+0.2
JOD2	**Odawara 2**	**4.79**	**247**	*e*S	Sn	08 26 13.5	+0.1
JOT	**Ohata**	**4.86**	**328**	P	Pn	08 25 20.9	+0.9
JOT				*e*S	Sn	08 26 12.4	-2.5
JCH	**Churui**	**5.37**	**351**	P	Pn	08 25 25.3	-1.8
JCH				*e*S	Sn	08 26 22.4	-5.2
JHJ2	**Mitsune**	**5.65**	**224**	*e*S	Sn	08 26 31.1	-3.3

*SOME **07** 08:28:34.9, 42°.48N×78°.47E, h10km*
*KRNET **07** 08:28:35.0±0.1, 42°.48N×78°.50E, h19km, mb3.6*
*NNC **07** 08:28:35.0±0.5, 42°.52N×78°.51E, h0km, mb3.8, mpv3.9, Error ellipse: s-maj=3.3km s-min=1.4km az=163.0*

ISC 07 08:28:35.5±1.0, 42°.50N±0°.03×78°.48E±0°.03, h8km±6km, n71, σ0992/129, 34C-18D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.06**	**258**	⇓*i*P	**Pg**	**08 28 37.5**	**0.0**
PRZ	baz=71			⇓*i*S	**Sg**	**08 28 39.5**	**+0.6**
SATY	**Saty**	**0.57**	**355**	*e*P	**Pg**	**08 28 46.0**	**-0.5**
SATY	160nm,0.2s			*e*S	**Sg**	**08 28 53.8**	**-0.1**
SATY	**Saty**	**0.57**	**355**	P	**Pg**	**08 28 46.0**	**-0.5**
SATY	160nm,0.2s			S	**Sg**	**08 28 54.0**	**+0.1**
ANVS	**Anan'yevo**	**0.66**	**296**	⇓*i*P	**Pg**	**08 28 48.3**	**0.0**
ANVS	baz=97			⇓*i*S	**Sg**	**08 28 57.8**	**+0.8**
ZHN	**Zhinishke**	**0.67**	**357**	*e*P	**Pg**	**08 28 47.9**	**-0.6**
ZHN	baz=56			*e*S	**Sg**	**08 28 57.4**	**+0.1**
ZHN	**Zhinishke**	**0.67**	**357**	*e*P	**Pg**	**08 28 47.9**	**-0.6**
ZHN	42nm,0.2s			*e*S	**Sg**	**08 28 57.4**	**+0.1**
ZHN	**Zhinishke**	**0.67**	**357**	P	**Pg**	**08 28 47.9**	**-0.6**
ZHN	42nm,0.2s			S	**Sg**	**08 28 57.4**	**+0.1**
UZB	**Uzynbulak**	**0.77**	**31**	*e*P	**Pg**	**08 28 49.3**	**-0.9**
UZB	baz=30			*e*S	**Sg**	**08 28 59.9**	**-0.3**
UZB	**Uzynbulak**	**0.77**	**31**	*e*P	**Pg**	**08 28 49.3**	**-0.9**
UZB	116nm,0.2s			*e*S	**Sg**	**08 28 59.9**	**-0.3**
UZB	**Uzynbulak**	**0.77**	**31**	P	**Pg**	**08 28 49.3**	**-0.9**
UZB	116nm,0.2s			S	**Sg**	**08 28 59.9**	**-0.3**
KPKS	**Kokpek**	**0.98**	**9**	*e*P	**Pg**	**08 28 53.4**	**-1.0**
KPKS	baz=8.0			*e*S	**Sg**	**08 29 06.9**	**-0.3**
KPKS	**Kokpek**	**0.98**	**9**	*e*P	**Pg**	**08 28 53.4**	**-1.0**
KPKS	177nm,0.1s			*e*S	**Sg**	**08 29 06.8**	**-0.3**
KURS	**Kuram**	**1.02**	**347**	*e*P	**Pg**	**08 28 54.3**	**-0.8**
KURS	baz=47			*e*S	**Sg**	**08 29 08.2**	**-0.1**
KURS	**Kuram**	**1.02**	**347**	*e*P	**Pg**	**08 28 54.3**	**-0.8**
KURS	18nm,0.2s			*e*S	**Sg**	**08 29 08.2**	**-0.1**
KURS	**Kuram**	**1.02**	**347**	P	**Pg**	**08 28 54.3**	**-0.8**
KURS	18nm,0.2s			S	**Sg**	**08 29 08.2**	**-0.1**
KDJ	**Kajisay**	**1.03**	**250**	⇑*i*P	**Pg**	**08 28 54.4**	**-0.8**
KDJ	baz=50			⇑*i*S	**Sg**	**08 29 08.2**	**-0.4**
PDGK	**Podgornoye**	**1.12**	**41**	⇑P	**Pg**	**08 28 55.5**	**-1.4**
PDGK	21nm,0.5s			⇑S	**Sg**	**08 29 10.2**	**-1.2**
MDOK	**Medeo**	**1.25**	**303**	*e*P	**Pn**	**08 28 58.1**	**-1.3**
	36nm,0.3s						
	baz=3.0						
MDOK				*e*S	**Sg**	**08 29 14.9**	**-0.6**
	baz=3.0						
MDOK	**Medeo**	**1.25**	**303**	*e*P	**Pn**	**08 28 58.1**	**-1.3**
	43nm,0.3s						
MDOK				*e*S	**Sg**	**08 29 14.9**	**-0.6**
	88nm,0.4s						
MDOK	**Medeo**	**1.25**	**303**	⇑P	**Pn**	**08 28 58.3**	**-1.1**
	16nm,0.3s						
MDOK				⇓S	**Sg**	**08 29 15.6**	**0.0**
	44nm,0.4s						
MDOK	**Medeo**	**1.25**	**303**	Pg	**Pn**	**08 28 58.1**	**-1.3**
	43nm,0.3s						
MDOK				Lg	Lg	08 29 14.9	
	88nm,0.4s						
KOTS	**Kotyrbulak**	**1.25**	**307**	*e*P	**Pn**	**08 28 58.6**	**-0.8**
	baz=7.0						
KOTS				*e*S	**Sg**	**08 29 15.5**	**-0.1**
	baz=7.0						
KOTS	**Kotyrbulak**	**1.25**	**307**	*e*P	**Pn**	**08 28 58.6**	**-0.8**
	158nm,0.3s						
KOTS				*e*S	**Sg**	**08 29 15.5**	**-0.1**
	224nm,0.4s						
KOTS	**Kotyrbulak**	**1.25**	**307**	P	**Pn**	**08 28 58.6**	**-0.8**
	158nm,0.3s						
KOTS				S	**Sg**	**08 29 15.5**	**-0.1**
	224nm,0.4s						
TNSS	**Tian-Shan**	**1.25**	**296**	*e*P	**Pg**	**08 28 58.7**	**-0.8**
	baz=96						
TNSS				*e*S	**Sg**	**08 29 15.4**	**-0.3**
	baz=96						
TNSS	**Tian-Shan**	**1.25**	**296**	*e*P	**Pg**	**08 28 58.7**	**-0.8**
	18nm,0.1s						
TNSS				*e*S	**Sg**	**08 29 15.4**	**-0.3**
	98nm,0.2s						
TNSS	**Tian-Shan**	**1.25**	**296**	P	**Pg**	**08 28 58.7**	**-0.8**
	18nm,0.1s						
TNSS				S	**Sg**	**08 29 15.4**	**-0.3**
	98nm,0.2s						
KNDC	**Almaty**	**1.32**	**304**	⇑P	**Pn**	**08 28 59.9**	**-0.5**
	26nm,0.6s						
KNDC				⇑S	**Sn**	**08 29 18.4**	**+0.1**
	66nm,0.6s						
MTBS	**Maitube**	**1.64**	**294**	*e*P	**Pb**	**08 29 05.6**	**-0.4**
	baz=94						
MTBS				*e*S	**Sg**	**08 29 27.6**	**-0.4**
	baz=94						
MTBS	**Maitube**	**1.64**	**294**	*e*P	**Pb**	**08 29 05.6**	**-0.4**
	12nm,0.2s						
MTBS				*e*S	**Sg**	**08 29 27.6**	**-0.4**
	96nm,0.4s						
MTBS	**Maitube**	**1.64**	**294**	P	**Pb**	**08 29 05.6**	**-0.4**
	12nm,0.2s						
MTBS				S	**Sg**	**08 29 27.6**	**-0.4**
	96nm,0.4s						
ULHL	**Ulahol**	**1.68**	**262**	⇑*i*P	**Pb**	**08 29 05.9**	**-0.8**
	baz=63						
ULHL				⇑*i*S	**Sb**	**08 29 28.2**	**+0.1**
	baz=63						
CHKK	**Chushkaly**	**1.74**	**322**	*e*P	**Pb**	**08 29 07.3**	**-0.5**
	baz=22						
CHKK				*e*S	**Sb**	**08 29 30.6**	**+0.8**
	baz=22						
CHKK	**Chushkaly**	**1.74**	**322**	*e*P	**Pb**	**08 29 07.2**	**-0.5**
	74nm,0.2s						
CHKK				*e*S	**Sb**	**08 29 30.5**	**+0.8**
	247nm,0.3s						
CHKK	**Chushkaly**	**1.74**	**322**	P	**Pb**	**08 29 07.2**	**-0.5**
	74nm,0.2s						
CHKK				S	**Sb**	**08 29 30.5**	**+0.8**
	247nm,0.3s						
ARXS	**Arharly**	**1.78**	**345**	*e*P	**Pb**	**08 29 08.1**	**-0.4**
	102nm,0.2s						
ARXS				*e*S	**Sg**	**08 29 32.0**	**-0.7**
	168nm,0.2s						
ARXS	**Arharly**	**1.78**	**345**	P	**Pb**	**08 29 08.1**	**-0.4**
	102nm,0.2s						
ARXS				S	**Sg**	**08 29 32.0**	**-0.7**
	168nm,0.2s						
KTBS	**Karatobe**	**1.79**	**313**	*e*P	**Pb**	**08 29 08.3**	**-0.3**
	28nm,0.2s						
KTBS				*e*S	**Sg**	**08 29 32.3**	**-0.8**
	269nm,0.3s						
KTBS	**Karatobe**	**1.79**	**313**	P	**Pb**	**08 29 08.3**	**-0.3**
	28nm,0.2s						
KTBS				S	**Sg**	**08 29 32.3**	**-0.8**
	269nm,0.3s						
BOOM	**Boomskoye usch**	**1.88**	**271**	⇓*e*P	**Pb**	**08 29 09.3**	**-0.8**
	baz=71						
BOOM				⇓*i*S	**Sb**	**08 29 34.1**	**+0.3**
	baz=71						
KST	**Kastek**	**1.93**	**287**	*e*P	**Pb**	**08 29 10.5**	**-0.5**
	baz=88						
KST				*e*S	**Sb**	**08 29 36.1**	**+0.8**
	baz=88						
KST	**Kastek**	**1.93**	**287**	*e*P	**Pb**	**08 29 10.5**	**-0.5**
	49nm,0.3s						
KST				*e*S	**Sb**	**08 29 36.1**	**+0.8**
	71nm,0.4s						
KST	**Kastek**	**1.93**	**287**	Pg	**Pb**	**08 29 10.5**	**-0.5**
	49nm,0.3s						
KST				Lg	Lg	08 29 36.1	
	71nm,0.4s						
DJR	**Jarkent**	**2.07**	**27**	*e*P	**Pb**	**08 29 12.5**	**-0.9**
	32nm,0.2s						
DJR				*e*S	**Sb**	**08 29 39.6**	**+0.3**
	145nm,0.2s						
DJR	**Jarkent**	**2.07**	**27**	Pg	**Pb**	**08 29 12.5**	**-0.9**
	32nm,0.2s						
DJR				Lg	Lg	08 29 39.6	
	145nm,0.2s						
DGS	**Degeres**	**2.12**	**291**	*e*P	**Pb**	**08 29 14.3**	**0.0**
	8.8nm,0.2s						
DGS				*e*S	**Sg**	**08 29 42.5**	**-1.3**
	103nm,0.3s						
DGS	**Degeres**	**2.12**	**291**	Pg	**Pb**	**08 29 14.3**	**0.0**
	8.8nm,0.2s						
DGS				Lg	Lg	08 29 42.5	
	103nm,0.3s						
NRN	**Naryn**	**2.13**	**241**	⇑*i*P	**Pn**	**08 29 12.8**	**+1.1**
	baz=42						
NRN				⇑*i*S	**Sb**	**08 29 40.3**	**-1.0**
	baz=42						
TKM2	**Tokmak 2**	**2.17**	**282**	⇑*i*P	**Pn**	**08 29 13.3**	**+1.2**
	baz=83						
TKM2				⇑*i*S	**Sb**	**08 29 41.0**	**-1.2**
	baz=83						
TKM2	**Tokmak 2**	**2.17**	**282**	⇑Pn	**Pb**	**08 29 14.2**	**-0.9**
	9.2nm,0.4s						
TKM2				⇓Sn	**Sb**	**08 29 42.5**	**+0.4**
	52nm,0.5s						
KZA	**Kyzart**	**2.43**	**261**	⇓*i*P	**Pn**	**08 29 17.1**	**+1.2**
	baz=62						
KZA				⇓*i*S	**Sn**	**08 29 47.4**	**+1.3**
	baz=62						
TDK	**Taldyqorghan**	**2.51**	**359**	*e*P	**Pb**	**08 29 20.7**	**-0.1**
	39nm,0.3s						
TDK				*e*S	**Sb**	**08 29 53.5**	**+1.7**
	243nm,0.7s						
TDK	**Taldyqorghan**	**2.51**	**359**	Pg	**Pb**	**08 29 20.7**	**-0.1**
	39nm,0.3s						
TDK				Lg	Lg	08 29 53.5	
	243nm,0.7s						
KBK	**Karagaybulak**	**2.61**	**275**	⇑*i*P	**Pn**	**08 29 19.5**	**+1.3**
	baz=75						
KBK				⇑*i*S	**Sn**	**08 29 51.7**	**+1.5**
	baz=75						
CHMS	**Chumysh**	**2.79**	**282**	⇑*i*P	**Pn**	**08 29 21.6**	**+1.1**
	baz=82						
CHMS				⇑*i*S	**Sn**	**08 29 55.6**	**+1.2**
	baz=82						
FRU1	**Bishkek**	**2.85**	**278**	⇑*i*P	**Pn**	**08 29 22.9**	**+1.5**
	baz=78						
FRU1				⇑*i*S	**Sn**	**08 29 57.5**	**+1.5**
	baz=78						
KAPS	**Kapalarasan**	**2.86**	**13**	*e*P	**Pb**	**08 29 26.1**	**-0.7**
	30nm,0.3s						
KAPS				*e*S	**Sb**	**08 30 03.3**	**+1.3**
	28nm,0.5s						
KAPS	**Kapalarasan**	**2.86**	**13**	Pg	**Pb**	**08 29 26.1**	**-0.7**
	30nm,0.3s						
KAPS				Lg	Lg	08 30 03.3	
	28nm,0.5s						
AAK	**Ala-Archa**	**2.94**	**274**	⇓*e*P	**Pn**	**08 29 24.0**	**+1.2**
	baz=74						
AAK				⇓*e*S	**Sn**	**08 29 59.7**	**+1.3**
	baz=74						
AAK	**Ala-Archa**	**2.94**	**274**	⇑Pn	**Pn**	**08 29 24.2**	**+1.5**
	2.9nm,0.4s						
AAK				⇑Sn	**Sn**	**08 30 00.7**	**+2.3**
	14nm,0.5s						
UCH	**Uchtor**	**2.95**	**266**	⇑*i*P	**Pn**	**08 29 24.3**	**+1.2**
	baz=66						
UCH				⇑*i*S	**Sn**	**08 30 00.2**	**+1.3**
	baz=66						
SGDS	**Sogindy**	**2.98**	**290**	Pg	**Pb**	**08 29 29.2**	**+0.3**
	13nm,0.3s						
SGDS				Lg	Lg	08 30 08.2	
	34nm,0.4s						
ARLS	**Aral**	**3.15**	**260**	⇓*i*P	**Pn**	**08 29 26.8**	**+1.2**
	baz=60						
ARLS				⇓*i*S	**Sn**	**08 30 04.4**	**+0.9**
	baz=60						
EKS2	**Erkin-Say**	**3.48**	**274**	⇑*e*P	**Pn**	**08 29 31.4**	**+1.4**
	baz=75						
EKS2				⇑*i*S	**Sn**	**08 30 12.3**	**+0.9**
	baz=75						
AML	**Almayashu**	**3.56**	**266**	⇑*i*P	**Pn**	**08 29 32.6**	**+1.1**
	baz=66						
AML				⇑*i*S	**Sn**	**08 30 14.9**	**+0.9**
	baz=66						
ARSB	**Arslanbob**	**4.26**	**256**	⇓*i*P	**Pn**	**08 29 42.0**	**+1.1**
	baz=56						
ARSB				⇓*i*S	**Sn**	**08 30 31.1**	**+0.2**
	baz=56						
MAKZ	**Makanchi**	**4.98**	**29**	⇑Pn	**Pn**	**08 29 51.7**	**+1.0**
	1.7nm,0.3s						
MAKZ				⇑Lg	Lg	08 31 11.3	
	3.0nm,0.7s						
MK31	**Makanchi Array**	**5.09**	**31**	⇑Pn	**Pn**	**08 29 52.8**	**+0.7**
	2.4nm,0.3s,baz=214,slow=13,SNR=55						
MK31				⇑Sn	**Sn**	**08 30 52.7**	**+1.7**
	3.3nm,0.5s						
MK31				⇓Lg	Lg	08 31 14.3	
	2.8nm,0.5s						
KK31	**Karatay Array**	**5.89**	**279**	Pg	**Pg**	**08 30 24.2**	**-4.1**
	2.1nm,0.6s,baz=89,slow=15,SNR=10						
KK31				⇑Lg	Lg	08 31 43.4	
	4.2nm,0.6s						
KURBB	**Kurchatov Arra**	**8.13**	**0**	⇓Lg	Lg	08 32 52.0	
	14nm,0.8s						
KURK	**Kurchatov**	**8.22**	**1**	⇑Lg	Lg	08 32 53.8	
	5.1nm,0.8s						

IDC 07 08:41:38.5±12.0, 1°.96N×127°.80E, h170km±119km, mb3.2/5, mb1 3.3/5, mb1mx3.0/42, mbtmp3.7/5, MS3.4/1, Ms1 3.4/1, ms1mx2.5/22, Error ellipse: s-maj=115.6km s-min=21.4km az=62.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.04**	**186**	P	P	08 45 58.5	-0.1
	1.1nm,0.9s,baz=14,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**22.69**	**164**	P	P	08 46 25.2	-0.6
	1.0nm,0.7s,baz=345,slow=9.6,SNR=9.8						
ASAR	**Alice Springs**	**26.16**	**167**	P	P	08 46 57.6	+0.4
	0.2nm,0.3s,baz=335,slow=7.5,SNR=8.9						
ASAR				PcP	PcP	08 50 19.7	-0.3
	0.1nm,0.4s,baz=4.3,slow=1.8,SNR=1.6						
JCJ	**Chichijima**	**28.55**	**28**	LR	LR	08 57 20.7	
	comp=Z,74nm,18.7s,baz=104,slow=33						
STKA	**Stephens Creek**	**36.11**	**160**	P	P	08 48 24.2	0.0
	1.6nm,0.6s,baz=344,slow=9.6,SNR=5.9						
MKAR	**Makanchi Array**	**59.61**	**325**	P	P	08 51 24.5	-0.1
	0.6nm,0.3s,baz=116,slow=7.6,SNR=19						

*NNC **07** 08:59:05.9±1.3, 42°.52N×78°.50E, h0km, mb3.1, mpv3.1, Error ellipse: s-maj=10.3km s-min=3.8km az=167.0*
*KRNET **07** 08:59:06.2±0.1, 42°.49N×78°.46E, h19km, mb3.1*
*SOME **07** 08:59:06.1, 42°.47N×78°.50E, h15km*

ISC 07 08:59:06.8±0.9, 42°.53N±0°.04×78°.43E±0°.02, h6km±7km, n48, σ1531/88, 16C-14D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.05**	**204**	⇑*i*P	**Pg**	**08 59 08.5**	**0.0**
PRZ	baz=68			⇑*i*S	**Sg**	**08 59 10.5**	**+0.8**
SATY	**Saty**	**0.53**	**358**	⇓*i*P	**Pg**	**08 59 17.1**	**0.0**
SATY	23nm,0.2s			*e*S	**Sg**	**08 59 24.8**	**+0.9**
SATY	**Saty**	**0.53**	**358**	P	**Pg**	**08 59 17.1**	**0.0**
SATY	23nm,0.2s			S	**Sg**	**08 59 24.8**	**+0.9**
ANVS	**Anan'yevo**	**0.62**	**294**	⇑*i*P	**Pg**	**08 59 18.6**	**-0.1**
ANVS	baz=97			⇑*i*S	**Sg**	**08 59 28.3**	**+1.5**
UZB	**Uzynbulak**	**0.75**	**35**	*e*P	**Pg**	**08 59 20.3**	**-1.0**
UZB				*e*S	**Sg**	**08 59 30.8**	**-0.4**
UZB	**Uzynbulak**	**0.75**	**35**	P	**Pg**	**08 59 20.3**	**-1.0**
UZB				S	**Sg**	**08 59 30.8**	**-0.4**
KPKS	**Kokpek**	**0.95**	**11**	*e*P	**Pb**	**08 59 24.4**	**-1.4**
KPKS	baz=9.0			*e*S	**Sb**	**08 59 37.8**	**-0.9**
KPKS	**Kokpek**	**0.95**	**11**	*e*P	**Pb**	**08 59 24.4**	**-1.4**
KPKS	33nm,0.1s			*e*S	**Sb**	**08 59 37.8**	**-0.9**
SHLS	**Shalkode**	**0.98**	**50**	*e*P	**Pn**	**08 59 29.1**	**+1.7**
SHLS	baz=57			*e*S	**Sn**	**08 59 45.9**	**+4.2**
SHLS	**Shalkode**	**0.98**	**50**	*e*P	**Pn**	**08 59 29.1**	**+1.7**
SHLS	20nm,0.2s			*e*S	**Sn**	**08 59 45.9**	**+4.2**
SHLS	**Shalkode**	**0.98**	**50**	P	**Pn**	**08 59 29.0**	**+1.7**
SHLS	20nm,0.2s			S	**Sn**	**08 59 45.9**	**+4.2**
KDJ	**Kajisay**	**1.01**	**247**	⇑*i*P	**Pb**	**08 59 25.5**	**-1.4**
KDJ	baz=50			⇑*i*S	**Sb**	**08 59 39.0**	**-1.5**
PDGK	**Podgornoye**	**1.11**	**44**	P	**Pb**	**08 59 26.6**	**-2.0**
PDGK	3.9nm,0.1s			S	**Sb**	**08 59 41.3**	**-2.1**
PDGK	**Podgornoye**	**1.11**	**44**	⇓P	**Pb**	**08 59 26.2**	**-2.4**
PDGK	2.0nm,0.3s			⇓S	**Sb**	**08 59 41.3**	**-2.1**
KOTS	**Kotyrbulak**	**1.20**	**306**	*e*P	**Pn**	**08 59 29.6**	**-0.7**
	4.9nm,0.3s						
KOTS	baz=7.0			*e*S	**Sn**	**08 59 46.4**	**-0.6**
KOTS	**Kotyrbulak**	**1.20**	**306**	*e*P	**Pn**	**08 59 29.6**	**-0.7**
KOTS	14nm,0.3s			*e*S	**Sn**	**08 59 46.3**	**-0.6**
KOTS	**Kotyrbulak**	**1.20**	**306**	P	**Pn**	**08 59 29.5**	**-0.7**
KOTS	14nm,0.3s			S	**Sn**	**08 59 46.3**	**-0.6**
MDOK	**Medeo**	**1.20**	**302**	*e*P	**Pn**	**08 59 28.8**	**-1.5**
	baz=4.0						
MDOK				*e*S	**Sb**	**08 59 45.0**	**-0.8**
	baz=4.0						
MDOK	**Medeo**	**1.20**	**302**	*e*P	**Pn**	**08 59 28.8**	**-1.5**
	4.2nm,0.3s						
MDOK				*e*S	**Sb**	**08 59 45.0**	**-0.8**
	12nm,0.6s						
MDOK	**Medeo**	**1.20**	**302**	⇑P	**Pn**	**08 59 28.7**	**-1.5**
	4.7nm,0.6s						
MDOK				⇑S	**Sb**	**08 59 45.4**	**-0.4**
	9.8nm,0.5s						
MDOK	**Medeo**	**1.20**	**302**	Pg	**Pn**	**08 59 28.8**	**-1.5**
	4.2nm,0.3s						
MDOK				Lg	Lg	08 59 45.0	
	12nm,0.6s						
TNSS	**Tian-Shan**	**1.20**	**295**	*e*P	**Pn**	**08 59 29.4**	**-1.2**
	baz=97						
TNSS				*e*S	**Sb**	**08 59 46.3**	**+0.1**
	baz=97						
TNSS	**Tian-Shan**	**1.20**	**295**	*e*P	**Pn**	**08 59 29.4**	**-1.2**
	1.4nm,0.1s						
TNSS				*e*S	**Sb**	**08 59 46.3**	**+0.1**
	14nm,0.1s						
TNSS	**Tian-Shan**	**1.20**	**295**	P	**Pn**	**08 59 29.4**	**-1.2**
	1.4nm,0.1s						

TNSS				S		Sb	08 59 46.3	+0.1
	14nm,0.1s							
MTBS	**Maitube**	**1.59**	**293**	*eP*		**Pg**	**08 59 37.2**	**-0.1**
	2.3nm,0.1s							
MTBS				*eS*		**Sg**	**08 59 59.4**	**+1.5**
	16nm,0.2s							
MTBS	**Maitube**	**1.59**	**293**	P		**Pg**	**08 59 37.2**	**-0.1**
	2.3nm,0.1s							
MTBS				S		**Sg**	**08 59 59.4**	**+1.5**
	16nm,0.2s							
CHKK	**Chushkaly**	**1.69**	**322**	⇓*iP*		**Pb**	**08 59 38.2**	**-0.1**
	baz=23							
CHKK				⇓*eS*		**Sg**	**09 00 01.5**	**+0.4**
	baz=23							
CHKK	**Chushkaly**	**1.69**	**322**	⇓*iP*		**Pb**	**08 59 38.2**	**-0.1**
	6.9nm,0.3s							
CHKK				*eS*		**Sg**	**09 00 01.6**	**+0.4**
	36nm,0.3s							
CHKK	**Chushkaly**	**1.69**	**322**	P		**Pb**	**08 59 38.2**	**-0.1**
	6.9nm,0.3s							
CHKK				S		**Sg**	**09 00 01.6**	**+0.4**
	36nm,0.3s							
ARXS	**Arharly**	**1.74**	**346**	*eP*		**Pb**	**08 59 39.2**	**0.0**
	13nm,0.2s							
ARXS				*eS*		**Sg**	**09 00 03.0**	**+0.3**
	32nm,0.3s							
ARXS	**Arharly**	**1.74**	**346**	P		**Pb**	**08 59 39.2**	**0.0**
	13nm,0.2s							
ARXS				S		**Sg**	**09 00 03.0**	**+0.3**
	32nm,0.3s							
KTBS	**Karatobe**	**1.74**	**313**	*eP*		**Pb**	**08 59 39.2**	**0.0**
	3.6nm,0.3s							
KTBS				*eS*		**Sb**	**09 00 02.7**	**+1.4**
	38nm,0.3s							
KTBS	**Karatobe**	**1.74**	**313**	P		**Pb**	**08 59 39.2**	**0.0**
	3.6nm,0.3s							
KTBS				S		**Sb**	**09 00 02.7**	**+1.4**
	38nm,0.3s							
BOOM	**Boomskoye usch**	**1.84**	**270**	⇑*iP*		**Pb**	**08 59 40.0**	**-1.0**
	baz=71							
BOOM				⇑*iS*		**Sb**	**09 00 04.7**	**+0.3**
	baz=71							
KST	**Kastek**	**1.89**	**287**	⇓*iP*		**Pb**	**08 59 41.8**	**0.0**
	3.5nm,0.2s							
KST				⇑*iS*		**Sg**	**09 00 07.4**	**0.0**
	11nm,0.5s							
KST	**Kastek**	**1.89**	**287**	Pg		**Pb**	**08 59 41.8**	**0.0**
	3.5nm,0.2s							
KST				Lg		Lg	09 00 10.7	
	11nm,0.5s							
DJR	**Jarkent**	**2.05**	**28**	*eP*		**Pb**	**08 59 43.5**	**-1.1**
	3.8nm,0.3s							
DJR				*eS*		**Sb**	**09 00 10.7**	**+0.3**
	37nm,0.3s							
DJR	**Jarkent**	**2.05**	**28**	Pg		**Pb**	**08 59 43.5**	**-1.1**
	3.8nm,0.3s							
DJR				Lg		Lg	09 00 10.7	
	37nm,0.3s							
DGS	**Degeres**	**2.08**	**291**	*eP*		**Pb**	**08 59 45.2**	**+0.2**
	3.0nm,0.4s							
DGS				*eS*		**Sg**	**09 00 13.3**	**-0.3**
	13nm,0.3s							
DGS	**Degeres**	**2.08**	**291**	Pg		**Pb**	**08 59 45.2**	**+0.2**
	3.0nm,0.4s							
DGS				Lg		Lg	09 00 13.3	
	13nm,0.3s							
TKM2	**Tokmak 2**	**2.12**	**281**	⇓*iP*		**Pb**	**08 59 44.2**	**-1.7**
	baz=83							
TKM2				⇓*iS*		**Sb**	**09 00 11.4**	**-1.1**
	baz=83							
TKM2	**Tokmak 2**	**2.12**	**281**	⇓Pn		**Pb**	**08 59 44.5**	**-1.4**
	2.4nm,0.6s							
TKM2				⇑Sn		**Sb**	**09 00 13.4**	**+0.8**
	4.5nm,0.4s							
KBK	**Karagaybulak**	**2.57**	**274**	⇓*iP*		**Pn**	**08 59 50.3**	**+1.1**
	baz=75							
KBK				⇓*iS*		**Sn**	**09 00 22.2**	**+1.3**
	baz=75							
KAPS	**Kapalarasan**	**2.83**	**13**	*eP*		**Pb**	**08 59 58.4**	**+0.5**
	1.5nm,0.2s							
KAPS				*eS*		**Sg**	**09 00 35.9**	**-2.0**
	6.5nm,0.3s							
KAPS	**Kapalarasan**	**2.83**	**13**	Pg		**Pb**	**08 59 58.4**	**+0.5**
	1.5nm,0.2s							
KAPS				Lg		Lg	09 00 35.9	
	6.5nm,0.3s							
MAKZ	**Makanchi**	**4.97**	**29**	⇑Pn		**Pn**	**09 00 21.6**	**-0.4**
	0.9nm,0.8s							
MAKZ				⇑Lg		Lg	09 01 42.6	
	2.1nm,1.1s							
MK31	**Makanchi Array**	**5.07**	**32**	⇓Pn		**Pn**	**09 00 22.7**	**-0.7**
	0.3nm,0.3s,baz=216,slow=13,SNR=5.0							
MK31				⇓Sn		**Sn**	**09 01 22.1**	**-0.2**
	0.7nm,0.6s,baz=211,slow=24,SNR=4.4							
MK31				⇑Lg		Lg	09 01 45.8	
	0.5nm,0.5s							
KK31	**Karatay Array**	**5.85**	**278**	⇑Lg		Lg	09 02 14.7	
	0.6nm,0.5s,baz=191,slow=24,SNR=4.3							

*ECX **07** 09:13:20.1±0.5, 31°.29N×114°.32W, h7km, MD3.0, ML3.0*
*MEX **07** 09:13:23.5±0.5, 31°.49N×114°.49W, h16km±58km, MD4.0*
ISC 07 09:13:20.6±1.3, 31°.34N±0°.06×114°.50W±0°.04,
h29km±12km, n11, σ1°.95/17, 1C-3D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFX	**San Felipe**	**0.43**	**225**	⇑*eP*	**Pb**	**09 13 29.6**	**-0.3**
SFX				*eS*	**Sb**	**09 13 36.1**	**0.0**
SPIG	**San Pedro Mart**	**0.88**	**251**	*iP*	**Pb**	**09 13 38.6**	**+1.0**
SPIG				*eS*	**Sn**	**09 13 50.2**	**+0.9**
SPIG	**San Pedro Mart**	**0.88**	**251**	*eP*	**Pb**	**09 13 38.1**	**+0.5**
SPX	**San Pedro Mart**	**0.89**	**250**	⇓*eP*	**Pn**	**09 13 37.7**	**+0.3**
SPX				*eS*	**Sn**	**09 13 51.8**	**+2.4**
SPX				IAML		09 13 53.0	
	comp=N,223nm,0.9s						
PIX	**Pinacate**	**0.91**	**76**	⇓*eP*	**Pn**	**09 13 33.8**	**-3.6**
ESJX	**Sierra Juarez**	**1.40**	**298**	*eP*	**Pb**	**09 13 47.3**	**+1.0**
SQX	**San Quintin**	**1.41**	**238**	*eP*	**Pb**	**09 13 46.3**	**+0.1**
VTX	**Valle De La Tr**	**1.46**	**230**	*eP*	**Pn**	**09 13 43.2**	**-1.9**
VTX				*eS*	**Sn**	**09 14 00.3**	**-2.9**
CBX	**Cerro Bola**	**2.08**	**298**	*eP*	**Pb**	**09 13 56.9**	**-0.9**
CBX				IAML		09 14 36.2	
	comp=N,149nm,0.6s						
CBX				*e*		09 14 36.2	
CBX				IAML		09 14 44.5	
	comp=E,152nm,0.7s						
CBX				⇓*e*		09 14 44.5	
TJIG	**Tijuana**	**2.15**	**301**	*iP*	**Pn**	**09 13 55.3**	**+0.7**
TJIG				*eS*	**Sn**	**09 14 18.5**	**-1.7**
CGIG		**5.69**	**98**	*eP*	**Pn**	**09 14 45.2**	**+1.9**
CGIG				*iS*	**Sn**	**09 15 50.5**	**+2.8**

*IDC **07** 09:30:30.7±0.7, 28°.52N×139°.59E, h418km±8km, mb3.1/16, mb1 3.3/19, mb1mx3.2/44, mbtmp3.9/19, Error ellipse: s-maj=18.0km s-min=10.3km az=77.0*
*JMA **07** 09:30:31.7±0.1, 28°.66N×139°.84E, h425km±3km, M3.9*
ISC 07 09:30:32.6±0.5, 28°.61N±0°.07×139°.9E±0°.1, h450km, n38,
σ2s01/49, mb3.4/16, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.50**	**126**	P	**P**	**09 31 34.1**	**-2.1**
CBIJ				*eS*	**S**	**09 32 23.0**	**-4.7**
JCJ	**Chichijima**	**2.50**	**126**	P	**P**	**09 31 34.2**	**-2.0**
	158nm,0.3s,baz=68,slow=3.3,SNR=74						
JCJ				S	**S**	**09 32 22.9**	**-4.8**
	216nm,0.3s,baz=282,slow=23,SNR=29						
JHH2	**Haha-jima-NKT2**	**2.80**	**134**	P	**P**	**09 31 36.4**	**-1.8**
JHH2				*eS*	**S**	**09 32 27.6**	**-3.8**
BSO1	**Boso 1**	**6.10**	**8**	P	**P**	**09 32 06.5**	**-0.6**
JOD2	**Odawara 2**	**6.68**	**354**	P	**P**	**09 32 12.6**	**-1.2**
JRY	**Ryogami san**	**7.44**	**354**	P	**P**	**09 32 20.5**	**-1.4**
JRY				*eS*	**S**	**09 33 46.6**	**-4.9**
MJAR	**Matsushiro Arr**	**8.04**	**350**	P	**P**	**09 32 26.7**	**-1.7**
	0.3nm,0.3s,baz=163,slow=9.9,SNR=20						
MAT	**Matsushiro**	**8.05**	**350**	P	**P**	**09 32 26.4**	**-2.0**
MAT				*eS*	**S**	**09 33 59.1**	**-4.3**
JSJ	**Shimokoshiki**	**9.35**	**292**	P	**P**	**09 32 42.5**	**-0.1**
JMK	**Ichinoseki**	**10.38**	**6**	P	**P**	**09 32 54.5**	**+0.9**
JOW	**Kunigami**	**10.47**	**263**	P	**P**	**09 32 54.8**	**-0.1**
JTU	**Tsushima**	**10.74**	**306**	P	**P**	**09 32 57.2**	**-0.4**
JKE	**Kume jima 2**	**11.89**	**262**	P	**P**	**09 33 08.7**	**-1.5**
JOT	**Ohata**	**12.78**	**4**	P	**P**	**09 33 21.1**	**+1.4**
JKB	**Kayabe**	**13.28**	**4**	P	**P**	**09 33 26.6**	**+1.5**
JOSM	**Okushiri--Mats**	**13.45**	**359**	P	**P**	**09 33 28.3**	**+1.4**
JCH	**Churui**	**14.25**	**10**	P	**P**	**09 33 37.2**	**+1.7**
JHR	**Hokuryu**	**15.18**	**5**	P	**P**	**09 33 48.1**	**+2.7**
USRK	**Ussuriysk Ar.**	**16.81**	**340**	P	**P**	**09 34 02.8**	**+0.2**
	baz=176,slow=11,SNR=17						
KLR	**Kul'dur**	**21.53**	**345**	P	**P**	**09 34 48.5**	**+0.9**
	2.2nm,0.6s,baz=161,slow=6.9,SNR=10						
SONM	**Songino Array**	**32.24**	**316**	P	**P**	**09 36 21.9**	**-0.4**
	1.3nm,0.5s,baz=125,slow=8.3,SNR=5.6						
SEY	**Seymchan**	**35.28**	**10**	P	**P**	**09 36 49.1**	**+1.4**
	0.4nm,0.3s,baz=326,slow=7.3,SNR=2.1						
ZALV	**Zalesovo Beam**	**47.04**	**319**	P	**P**	**09 38 21.0**	**-0.7**
	0.6nm,0.4s,baz=102,slow=6.2,SNR=5.1						
ZALV				PcP	**pP**	**09 39 45.6**	**-1.8**
	0.7nm,0.4s,baz=60,slow=3.6,SNR=4.3						
MKAR	**Makanchi Array**	**47.97**	**309**	P	**P**	**09 38 28.2**	**-0.8**
	0.8nm,0.5s,baz=94,slow=9.1,SNR=12						
MKAR				PcP	**PcP**	**09 39 49.4**	**+0.6**
	0.7nm,0.6s,baz=79,slow=8.0,SNR=7.5						
MKAR				ScP	**ScP**	**09 43 00.8**	**+1.2**
	0.4nm,0.5s,baz=79,slow=6.5,SNR=7.0						
WRA	**Warramunga Arr**	**48.56**	**187**	P	**P**	**09 38 33.8**	**+0.1**
	0.4nm,0.6s,baz=1.7,slow=7.7,SNR=8.2						
WRA				PcP	**PcP**	**09 39 52.6**	**+1.4**
	0.5nm,0.7s,baz=1.4,slow=4.1,SNR=3.0						
WRA				ScP	**ScP**	**09 43 04.5**	**+2.2**
	0.7nm,0.8s,baz=1.9,slow=4.4,SNR=4.8						
ASAR	**Alice Springs**	**52.29**	**187**	P	**P**	**09 39 00.8**	**-0.2**
	0.4nm,0.8s,baz=1.6,slow=6.5,SNR=4.3						
ASAR				PcP	**PcP**	**09 40 06.2**	**+1.1**
	0.2nm,0.7s,baz=3.4,slow=4.6,SNR=2.9						
ILAR	**Eielson Array**	**57.36**	**29**	P	**P**	**09 39 38.3**	**+2.1**
	0.2nm,0.4s,baz=248,slow=5.8,SNR=8.7						
INK	**Inuvik**	**62.49**	**25**	P	**P**	**09 40 13.2**	**+2.8**
	0.4nm,0.7s,baz=225,slow=5.7,SNR=3.8						
ARCES	**ARCESS Array B**	**71.46**	**340**	P	**P**	**09 41 07.0**	**+1.1**
	5.5nm,0.8s,baz=67,slow=8.2,SNR=14						
YKA	**Yellowknife Ar**	**71.76**	**28**	P	**P**	**09 41 10.3**	**+2.5**
	0.3nm,0.6s,baz=296,slow=6.0,SNR=6.1						
KBZ	**Khabaz**	**75.52**	**312**	P	**P**	**09 41 29.1**	**-0.5**
	2.7nm,0.8s,baz=104,slow=5.5,SNR=7.8						
FINES	**FINESS Array B**	**75.71**	**333**	P	**P**	**09 41 31.1**	**+0.7**
	2.9nm,0.3s,baz=69,slow=4.8,SNR=43						
AKASG	**Malin Array Be**	**80.22**	**323**	P	**P**	**09 41 54.9**	**-0.1**
	0.2nm,0.3s,baz=48,slow=4.8,SNR=5.6						
NB2	**NORSAR Subarra**	**81.46**	**337**	P	**P**	**09 42 01.8**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=45,slow=5.3						
NOA	**NORSAR Array B**	**81.46**	**337**	P	**P**	**09 42 01.6**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=41,slow=4.8,SNR=4.1						
BRTR	**Keskin Array B**	**83.51**	**312**	P	**P**	**09 42 12.5**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=45,slow=6.5,SNR=3.0						
TORD	**Torodi Ar. Bea**	**122.08**	**310**	PKP	**PKiKP**	**09 48 36.4**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=80,slow=0.7,SNR=6.6						
PLCA	**Paso Flores**	**152.31**	**124**	PKPbc	**PKiKP**	**09 49 38.7**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=154,slow=2.2,SNR=4.3						

UCR 07 09:56:06.6±1.6, 9°.05N×85°.72W, h7km, MD4.0, MW3.2,
Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**1.45**	**32**	*eP*	Pn	09 56 32.2	-1.1
NY14	**Universidad de**	**1.60**	**7**	*iP*	Pn	09 56 35.2	-0.2
CASO	**Castillo**	**1.69**	**35**	*iP*	Pn	09 56 36.1	-0.5
CUI	**Cuipilapa**	**1.69**	**19**	*iP*	Pn	09 56 36.3	-0.3
CUI				*eP*	Pb	09 56 36.4	-1.7
CUI				*eS*	Sn	09 56 58.0	-0.6
LIM1	**Limonal**	**1.70**	**16**	*iP*	Pn	09 56 36.1	-0.7
ARE1	**Arenal 1**	**1.72**	**35**	*eP*	Pn	09 56 36.9	-0.1
CEDE	**Laguna Cedeo**	**1.75**	**35**	*eP*	Pn	09 56 37.6	+0.2
BUEV	**Buena Vista**	**1.77**	**10**	*eP*	Pn	09 56 37.5	-0.3
GB1A	**Borinquen Arri**	**1.79**	**10**	*eP*	Pn	09 56 37.8	-0.2
LCR2	**La Lucha 2**	**1.83**	**68**	*eP*	Pn	09 56 37.3	-1.5
ICCO	**Coco Island**	**3.73**	**201**	*eP*	Pn	09 57 03.5	-1.1

*IDC **07** 10:20:28.6±0.5, 18°.63N×62°.70W, h0km, mb4.2/18, mb1 4.4/21, mb1mx4.2/38, mbtmp4.2/21, ML3.6/3, MS3.8/7, Ms1 3.8/7, ms1mx3.5/31, Error ellipse: s-maj=13.5km s-min=13.0km az=101.0*
*TRN **07** 10:20:32.1, 18°.63N×62°.81W, h17km, MD4.4*
*NEIC **07** 10:20:35.1±2.2, 18°.61N±0°.05×62°.87W±0°.05, h43km±6km, mb4.5/84, Md4.4/63(TRN), Error ellipse: s-maj=7.4km s-min=6.1km az=218.0*
*OSPL **07** 10:20:52.9±0.6, 18°.54N×64°.32W, h1km±999km, ML3.5*
ISC 07 10:20:32.1±1.1, 18°.67N±0°.04×62°.80W±0°.03, h23km±8km,
n258, σ1s71/307, mb4.5/51, MS3.8/4, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**0.67**	**203**	*eP*	**Pb**	**10 20 46.6**	**+1.4**
SMRT				*eS*	**Sb**	**10 20 56.7**	**+2.6**
SMRT	**St. Maarten**	**0.67**	**203**	Pn	**Pb**	**10 20 46.7**	**+1.5**
SMRT				Sn	**Sb**	**10 20 56.1**	**+2.0**
SABA	**Saba**	**1.13**	**202**	*eP*	**Pb**	**10 20 54.4**	**+1.4**
SABA				*eS*	**Sb**	**10 21 10.8**	**+3.5**
SABA	**Saba**	**1.13**	**202**		**Pb**	**10 20 54.0**	**+1.0**
SABA					**Sn**	**10 21 04.8**	**-2.6**
SEUS	**St. Eustatius**	**1.19**	**189**	*eP*	**Pb**	**10 20 54.9**	**+0.9**
SEUS				*eS*	**Sb**	**10 21 12.2**	**+3.3**
SEUS	**St. Eustatius**	**1.19**	**189**	Pn	**Pb**	**10 20 55.2**	**+1.3**
SEUS				Sn	**Sn**	**10 21 07.6**	**-1.1**
SKI	**Saint Kitts**	**1.33**	**178**	*eP*	**Pb**	**10 20 56.9**	**+0.4**
SKI				*eS*	**Sb**	**10 21 15.1**	**+2.0**
SKI	**Saint Kitts**	**1.33**	**178**	Pn	**Pb**	**10 20 57.3**	**+0.9**
SKI				Sn	**Sn**	**10 21 12.4**	**0.0**
SKOC	**St. Kitts, UWI**	**1.38**	**177**	*eP*	**Pn**	**10 20 57.2**	**+1.3**
SKOC				*eS*	**Sb**	**10 21 16.5**	**+2.2**
ANWB	**Willy Bob**	**1.39**	**136**	*eP*	**Pb**	**10 20 57.5**	**+0.1**
ANWB				*eS*	**Sb**	**10 21 16.3**	**+1.7**
ANWB	**Willy Bob**	**1.39**	**136**	Pn	**Pn**	**10 20 56.9**	**+0.9**
ANWB				Sn	**Sb**	**10 21 14.7**	**+0.1**
NEV	**Hard Times**	**1.54**	**172**	*eP*	**Pb**	**10 21 00.7**	**+0.6**
NEV				*eS*	**Sb**	**10 21 20.6**	**+1.4**
NEV	**Hard Times**	**1.54**	**172**		**Pb**	**10 21 00.7**	**+0.6**
NEV					**Sb**	**10 21 20.6**	**+1.4**
NVDO	**Nevis, Disaste**	**1.56**	**174**	*eS*	**Sb**	**10 21 20.6**	**+1.1**
BPA	**Boggy Peak**	**1.85**	**151**	*eP*	**Pn**	**10 21 03.8**	**+1.3**
BPA				*eS*	**Sb**	**10 21 27.2**	**-0.8**
BPA	**Boggy Peak**	**1.85**	**151**		**Pn**	**10 21 03.8**	**+1.3**
BPA					**Sb**	**10 21 27.2**	**-0.8**
MLYT	**Lee's Yard**	**2.03**	**163**	*eP*	**Pn**	**10 21 06.9**	**+2.0**
MLYT				*eS*	**Sb**	**10 21 32.3**	**-0.8**
STVI	**Saint Thomas**	**2.07**	**261**	Pn	**Pn**	**10 21 07.2**	**+1.8**
STVI				Sn	**Sn**	**10 21 25.9**	**-4.6**
ABD	**La Joyeuse, An**	**2.52**	**150**	*eP*	**Pn**	**10 21 14.3**	**+2.7**
MTP	**Monte Pirata**	**2.68**	**258**		**Pn**	**10 21 16.0**	**+2.1**
CBE	**Ff, Capester**	**2.83**	**156**	*eP*	**Pn**	**10 21 18.6**	**+2.6**
H05N1	**Guadeloupe/Mar**	**2.87**	**144**	Pn	**Pn**	**10 21 17.1**	**+0.6**
H05N1				Sn	**Sn**	**10 21 53.9**	**+3.5**
DEG	**La Desirade**	**2.87**	**145**	*eP*	**Pn**	**10 21 19.2**	**+2.6**
DEG				*eS*	**Sn**	**10 21 53.7**	**+3.2**
DEG	**La Desirade**	**2.87**	**145**		**Pn**	**10 21 19.2**	**+2.6**
DEG					**Sn**	**10 21 53.7**	**+3.2**
HUMP	**Col San Antoni**	**2.95**	**260**		**Pn**	**10 21 19.1**	**+1.6**
HUMP				Sn	**Sn**	**10 21 49.7**	**-2.5**
TDBA	**Terre de Bas,**	**3.02**	**158**	*eP*	**Pn**	**10 21 21.4**	**+2.8**
PDPR	**Patillas Dam,**	**3.13**	**258**		**Pn**	**10 21 22.0**	**+1.9**
PDPR				Sn	**Sn**	**10 21 55.0**	**-1.7**
GCPR	**Guaynabo City**	**3.14**	**264**	Pn	**Pn**	**10 21 21.0**	**+0.8**
GCPR				Sn	**Sn**	**10 21 55.6**	**-1.4**
IGPR	**InterUniversit**	**3.22**	**258**		**Pn**	**10 21 22.6**	**+1.3**
SJG	**San Juan**	**3.23**	**261**	*eP*	**Pn**	**10 21 24.1**	**+2.6**
SJG				*eS*	**Sn**	**10 22 01.4**	**+2.1**
SJG	**San Juan**	**3.23**	**261**	Pn	**Pn**	**10 21 22.5**	**+1.1**
	10nm,0.3s,baz=97,slow=6.5,SNR=19						
SJG				Sn	**Sn**	**10 22 02.4**	**+3.1**
	34nm,0.3s,baz=144,slow=15,SNR=6.0						
SJG				LR	LR	10 22 52.0	
	comp=Z,1μm,18.5s,baz=70,slow=43						
SJG	**San Juan**	**3.23**	**261**	*eP*	**Pn**	**10 21 22.0**	**+0.5**
SJG	**San Juan**	**3.23**	**261**		**Pn**	**10 21 22.6**	**+1.1**
SJG					**Sn**	**10 21 56.0**	**-3.3**
MDPO	**Dominica; Chan**	**3.34**	**157**	*eP*	**Pn**	**10 21 25.3**	**+2.4**
MDPO				*eS*	**Sn**	**10 22 04.3**	**+2.4**
BBL	**Barber's Block**	**3.38**	**158**	*eP*	**Pn**	**10 21 25.2**	**+1.7**
BBL				*eS*	**Sn**	**10 22 05.4**	**+2.5**
BBL	**Barber's Block**	**3.38**	**158**		**Pn**	**10 21 25.2**	**+1.7**
BBL					**Sn**	**10 22 05.4**	**+2.5**
DWS	**Wesley**	**3.40**	**155**	*eP*	**Pn**	**10 21 25.3**	**+1.5**
DWS				*eS*	**Sn**	**10 22 04.7**	**+1.3**
DWS	**Wesley**	**3.40**	**155**		**Pn**	**10 21 25.3**	**+1.5**
DWS					**Sn**	**10 22 04.7**	**+1.3**
MDN	**Morne-Daniel**	**3.60**	**158**	*eP*	**Pn**	**10 21 28.2**	**+1.7**
MDN	**Morne-Daniel**	**3.60**	**158**		**Pn**	**10 21 28.2**	**+1.7**
MDN					**Sn**	**10 22 09.4**	**+1.2**
ICMP	**Isla Caja de M**	**3.63**	**258**	Pn	**Pn**	**10 21 28.6**	**+1.7**
DBCT	**Belle View Cho**	**3.66**	**157**	*eP*	**Pn**	**10 21 29.5**	**+2.1**
DBCT				*eS*	**Sn**	**10 22 11.1**	**+1.2**
DBCT	**Belle View Cho**	**3.66**	**157**		**Pn**	**10 21 29.5**	**+2.1**
DBCT					**Sn**	**10 22 11.1**	**+1.2**
OBIP	**Obispado Ponce**	**3.67**	**261**		**Pn**	**10 21 27.6**	**+0.1**
OBIP				Sn	**Sn**	**10 22 11.1**	**+0.9**
AOPR	**Arecibo Observ**	**3.77**	**266**		**Pn**	**10 21 30.4**	**+1.6**
AOPR				Sn	**Sn**	**10 22 06.5**	**-6.0**
MLPR	**Magueyes Islan**	**4.09**	**261**	Pn	**Pn**	**10 21 34.1**	**+0.8**
AGPR	**Aguadilla, PR**	**4.10**	**268**	*iP*	**Pn**	**10 21 34.6**	**+1.3**
AGPR				IAML		10 22 50.8	
	comp=Z,196nm,1.2s						
AGPR	**Aguadilla, PR**	**4.10**	**268**	Pn	**Pn**	**10 21 34.2**	**+0.8**
SVN	**Savane Anatole**	**4.12**	**157**	*eP*	**Pn**	**10 21 36.4**	**+2.7**
PCM	**Pelee Case Pet**	**4.13**	**158**	*eP*	**Pn**	**10 21 35.9**	**+2.1**
MPR	**Mayaguez**	**4.15**	**264**	*iP*	**Pn**	**10 21 35.6**	**+1.5**
MPR				IAML		10 22 52.5	
	comp=Z,170nm,0.7s						
MPR	**Mayaguez**	**4.15**	**264**	Pn	**Pn**	**10 21 34.7**	**+0.7**
BAMF	**Morne Balai**	**4.15**	**157**	*eP*	**Pn**	**10 21 37.1**	**+2.9**
CRPR	**Cabo Rojo, PR**	**4.15**	**261**	Pn	**Pn**	**10 21 35.6**	**+1.6**
CRPR				Sn	**Sn**	**10 22 20.8**	**-1.1**
GBMF	**Grand Be**	**4.16**	**158**	*eP*	**Pn**	**10 21 37.5**	**+3.2**
FDF	**Fort de France**	**4.22**	**158**	*eP*	**Pn**	**10 21 37.4**	**+2.2**
FDF	**Fort de France**	**4.22**	**158**	*eS*	**Sn**	**10 22 25.9**	**+2.1**
FDF	**Fort de France**	**4.22**	**158**	Pn	**Pn**	**10 21 36.7**	**+1.6**
FDF					**Sn**	**10 22 24.0**	**+0.2**
ZAM	**Aeronautique**	**4.42**	**157**	*eP*	**Pn**	**10 21 41.0**	**+3.2**
LPMF	**Morne Lapointe**	**4.44**	**156**	*eP*	**Pn**	**10 21 40.4**	**+2.3**
TRMF	**Trois Ilets**	**4.44**	**158**	*eP*	**Pn**	**10 21 41.6**	**+3.5**
BIM	**Bigot**	**4.45**	**158**	*eP*	**Pn**	**10 21 41.5**	**+3.2**
MPOM	**Morne Pois Mar**	**4.60**	**156**	*eP*	**Pn**	**10 21 43.4**	**+3.1**
SLBI	**Saint Lucia, B**	**4.95**	**159**	*eP*	**Pn**	**10 21 47.5**	**+2.5**
SLBI	**Saint Lucia, B**	**4.95**	**159**	*eS*	**Sn**	**10 22 42.7**	**+1.2**
SLBI	**Saint Lucia, B**	**4.95**	**159**		**Pn**	**10 21 46.5**	**+1.5**
SLBI					**Sn**	**10 22 42.7**	**+1.2**
MCLT	**Moule a Chique**	**5.25**	**160**	*eP*	**Pn**	**10 21 52.1**	**+2.9**
MCLT	**Moule a Chique**	**5.25**	**160**	*eS*	**Sn**	**10 22 50.4**	**+1.3**
MCLT	**Moule a Chique**	**5.25**	**160**	Pn	**Pn**	**10 21 52.0**	**+2.9**
MCLT					**Sn**	**10 22 50.4**	**+1.8**
PCDR	**Punta Cana, DR**	**5.30**	**269**	*iP*	**Pn**	**10 21 51.9**	**+2.0**
PCDR				IAML		10 23 17.9	
	comp=Z,194nm,1.1s						
PCDR	**Punta Cana, DR**	**5.30**	**269**	Pn	**Pn**	**10 21 49.8**	**-0.1**
SVB	**Belmont**	**5.57**	**164**	*eP*	**Pn**	**10 21 56.1**	**+2.4**
SVB	**Belmont**	**5.57**	**164**	*eS*	**Sn**	**10 22 57.7**	**+0.6**
SVB	**Belmont**	**5.57**	**164**	Pn	**Pn**	**10 21 54.9**	**+1.2**
SVB					**Sn**	**10 22 56.5**	**-0.6**
SVCV	**St. Vincent, C**	**5.60**	**163**	*eP*	**Pn**	**10 21 56.5**	**+2.5**
SVCV	**St. Vincent, C**	**5.60**	**163**	*eS*	**Sn**	**10 22 58.0**	**+0.2**
SVCV	**St. Vincent, C**	**5.60**	**163**		**Pn**	**10 21 56.5**	**+2.5**
SVCV					**Sn**	**10 22 58.0**	**+0.2**
DR12	**Loma Pena Alta**	**6.24**	**272**		**Pn**	**10 22 03.5**	**+0.6**
DR12				Sn	**Sn**	**10 23 12.1**	**-1.4**
GRSS	**Sisters**	**6.44**	**170**	*eP*	**Pn**	**10 22 08.6**	**

OTAV IAmb IAmb 10 25 52.0
comp=Z,8.5nm,0.8s
TEIG Tepich 24.07 278 P **P** **10 25 47.3 +1.4**
comp=Z,20nm,0.9s
TEIG Tepich 24.07 278 P **P** **10 25 46.0 +0.1**
BLA Blacksburg 24.08 324 P **P** **10 25 45.1 -0.8**
BRYW Bryant College 24.34 344 P **P** **10 25 50.4 +2.2**
V52A Sevierville 25.10 317 P **P** **10 25 55.0 -0.2**
V52A IAmb IAmb 10 26 03.7
comp=Z,14nm,1.2s
SSPA Standing Stone 25.44 333 P **P** **10 25 59.4 +1.3**
SSPA IAmb IAmb 10 26 14.7
comp=Z,13nm,1.3s
CPCT Cooper Cave 25.47 315 P **P** **10 25 59.4 +0.9**
TZTN Tazewell 25.50 318 P **P** **10 25 56.6 -2.2**
T52A Hallie 25.51 320 P **P** **10 25 56.7 -2.2**
T52A IAmb IAmb 10 26 05.2
comp=Z,27nm,1.4s
V51A Loudon 25.57 316 P **P** **10 26 00.9 +1.5**
M56A Emporium 26.26 333 P **P** **10 26 07.9 +2.2**
M56A IAmb IAmb 10 26 13.2
comp=Z,24nm,1.4s
LMN Caledonia Moun 27.15 357 P **P** **10 26 13.1 -0.5**
ATAH Atahualpa 29.91 212 P **P** **10 26 39.4 +0.5**
comp=Z,3.9nm,0.8s,baz=51,slow=14,SNR=3.2
X40A Basin Creek Fa 30.99 307 P **P** **10 26 48.5 +0.7**
X40A IAmb IAmb 10 26 56.3
comp=Z,11nm,1.5s
FCAR Ozark Folk Cen 31.03 310 P **P** **10 26 49.2 +1.0**
FCAR IAmb IAmb 10 26 54.3
comp=Z,8.8nm,1.4s
CCM Cathedral Cave 31.42 314 P **P** **10 26 51.5 -0.1**
CCM IAmb IAmb 10 26 57.1
comp=Z,11nm,1.4s
NATX Nacogdoches 31.51 301 P **P** **10 26 52.1 -0.3**
W35A Tecumseh 34.33 305 P **P** **10 27 17.5 +0.4**
LPAZ La Paz 35.14 189 P **P** **10 27 24.0 -0.9**
comp=Z,4.1nm,0.7s,baz=38,slow=4.4,SNR=9.2
LPAZ LR LR 10 42 25.8
comp=Z,167nm,19.0s,baz=6.0,slow=38
LPAZ La Paz 35.14 189 P **P** **10 27 23.6 -1.2**
LPAZ IAmb IAmb 10 27 30.4
comp=Z,5.2nm,0.8s
WMOK Wichita Mounta 35.68 304 P **P** **10 27 29.5 +0.7**
SCHQ Schefferville 36.23 356 P **P** **10 27 33.3 +0.2**
comp=Z,3.5nm,0.8s,baz=184,slow=14,SNR=3.2
ECSD EROS Data Cent 37.80 319 P **P** **10 27 47.5 +0.8**
ECSD IAmb IAmb 10 27 48.0
comp=Z,4.4nm,0.7s
MNMC Minye Minye 38.16 190 P **P** **10 27 47.8 -2.4**
MNMC IAmb IAmb 10 27 59.0
comp=Z,9.4nm,1.2s
GO01 Chusmiza 38.62 190 P **P** **10 27 52.3 -2.0**
TXAR Lajitas Array 38.64 294 P **P** **10 27 55.1 +1.0**
comp=Z,1.1nm,0.6s,baz=115,slow=8.6,SNR=16
TXAR PcP **PcP** **10 30 07.3 +1.2**
comp=Z,0.8nm,0.7s,baz=119,slow=5.7,SNR=5.5
TXAR LR LR 10 47 29.7
comp=Z,43nm,20.8s,baz=0.0,slow=42
TXAR Lajitas Array 38.64 294 P **P** **10 27 54.6 +0.5**
TXAR PcP **PcP** **10 30 07.2 +1.2**
TX31 Lajitas Ar. Si 38.64 294 P **P** **10 27 53.6 -0.5**
TX32 Lajitas Array 38.64 294 P **P** **10 27 54.5 +0.4**
PB11 IPOC Station P 38.78 190 P **P** **10 27 53.1 -2.2**
AGMN Agassiz Nation 39.88 325 P **P** **10 28 03.6 -0.4**
AGMN IAmb IAmb 10 28 05.8
comp=Z,15nm,1.4s
MNTX Cornudas Mount 40.41 297 P **P** **10 28 09.2 +0.5**
ULM Lac du Bonnet 41.06 328 P **P** **10 28 13.9 +0.2**
comp=Z,3.9nm,0.6s,baz=132,slow=8.1,SNR=17
ULM LR LR 10 47 51.6
comp=Z,96nm,18.6s,baz=34,slow=40
ULM Lac du Bonnet 41.06 328 P **P** **10 28 14.0 +0.2**
ULM IAmb IAmb 10 28 14.5
comp=Z,4.4nm,0.7s
LVC Limon Verde 41.47 189 P **P** **10 28 16.3 -1.5**
LVC IAmb IAmb 10 28 16.6
comp=Z,7.1nm,0.6s
SDCO Great Sand Dun 41.73 306 P **P** **10 28 20.8 +1.0**
BNM Barren Site 41.84 301 P **P** **10 28 21.6 +0.9**
ANMO Albuquerque 41.85 302 P **P** **10 28 22.1 +1.4**
PB10 IPOC Station P 42.61 191 P **P** **10 28 24.6 -2.1**
PB10 IAmb IAmb 10 28 32.3
comp=Z,9.5nm,1.1s
GO02 Mina Guanaco 44.07 189 P **P** **10 28 37.5 -1.3**
GO02 IAmb IAmb 10 28 48.8
comp=Z,7.5nm,0.6s
X18A Snowflake 44.62 300 P **P** **10 28 41.4 -1.7**
CPUP Villa Florida 45.05 173 P **P** **10 28 45.3 -0.9**
comp=Z,3.9nm,0.5s,baz=4.7,slow=7.0,SNR=17
CPUP Villa Florida 45.05 173 P **P** **10 28 45.0 -1.3**
CPUP IAmb IAmb 10 28 46.5
comp=Z,4.6nm,0.5s
BW06 Boulder Array 46.09 312 P **P** **10 28 55.8 +1.0**
BW06 IAmb IAmb 10 29 03.6
comp=Z,6.1nm,1.3s
PD31 Pinedale Array 46.09 312 P **P** **10 28 54.7 0.0**
PD31 IAmb IAmb 10 29 03.6
comp=Z,5.7nm,1.3s
PDAR Pinedale Array 46.09 312 P **P** **10 28 55.9 +1.1**
comp=Z,1.8nm,0.7s,baz=113,slow=9.5,SNR=22
PDAR PcP **PcP** **10 30 30.7 -0.1**
comp=Z,0.7nm,0.7s,baz=104,slow=7.5,SNR=2.8
PDAR Pinedale Array 46.09 312 P **P** **10 28 55.2 +0.5**
PDAR **PcP** **10 30 31.1 +0.3**
RLMT Red Lodge 46.60 315 P **P** **10 28 59.8 +1.0**
RLMT IAmb IAmb 10 29 08.7
comp=Z,3.9nm,1.0s
U15A North Rim 46.78 303 P **P** **10 28 58.8 -1.5**
JLU Jordanelle 46.91 308 P **P** **10 29 02.2 +1.0**
REDW Red Top Meadow 47.16 312 P **P** **10 29 04.2 +1.0**
REDW IAmb IAmb 10 29 23.4
comp=Z,5.4nm,1.2s
HWUT Hardware Ranch 47.23 310 P **P** **10 29 04.5 +0.9**
TPAW Teton Pass 47.27 312 P **P** **10 29 04.8 +0.8**
SPUT South Promonto 47.80 309 P **P** **10 29 07.4 -0.6**
YHL Hebgen Lake 47.81 314 P **P** **10 29 08.4 +0.1**
DUG Dugway, Tooele 47.84 308 P **P** **10 29 08.8 +0.5**
BGU Big Grassy Mou 48.15 309 P **P** **10 29 10.8 +0.1**
PSUT Pine Spring 48.34 305 P **P** **10 29 13.2 +0.9**
DLMT Dillon 48.92 314 P **P** **10 29 18.1 +1.6**
DLMT IAmb IAmb 10 29 31.9
comp=Z,6.7nm,1.2s
GO04 Tololo Observa 49.17 189 P **P** **10 29 18.1 -0.6**
ELK Elko 49.76 308 P **P** **10 29 24.6 +1.4**
TPNV Topopah Spring 50.00 303 P **P** **10 29 25.8 +0.8**
TPNV IAmb IAmb 10 29 28.2
comp=Z,2.8nm,0.8s
JTMT Jette 50.71 317 P **P** **10 29 31.2 +1.0**
NVAR Mina Array Bea 51.78 305 P **P** **10 29 39.7 +1.3**
comp=Z,1.3nm,0.6s,baz=94,slow=7.7,SNR=16
NVAR Mina Array Bea 51.78 305 P **P** **10 29 40.4 +1.9**
ROC1 El Roble 51.96 189 P **P** **10 29 39.0 -0.7**
WAKR Walker 52.67 305 P **P** **10 29 47.0 +2.0**
NEW Newport 52.69 317 P **P** **10 29 45.7 +0.9**
NEW IAmb IAmb 10 29 46.5
comp=Z,3.5nm,0.7s
GO05 Huala 54.09 189 P **P** **10 29 54.8 -0.3**
ORV Oroville 54.37 306 P **P** **10 29 58.2 +1.0**
ORV IAmb IAmb 10 29 60.0
comp=Z,3.6nm,0.7s
H10N3 ASCENSION HYDR 54.43 115 T T 11 28 31.8
baz=300,slow=75,SNR=20
H10N2 ASCENSION HYDR 54.43 115 T T 11 28 33.7
baz=300,slow=75,SNR=35
H10N1 ASCENSION HYDR 54.45 115 T T 11 28 33.3
baz=300,slow=75,SNR=19
H10S3 ASCENSION HYDR 54.84 116 T T 11 28 45.7
baz=293,slow=74,SNR=54
H10S2 ASCENSION HYDR 54.86 116 T T 11 28 52.9
baz=287,slow=74,SNR=45
YBH Yreka Blue Hor 55.48 308 P **P** **10 30 05.0 -0.3**
KRMB Red Mountain 56.35 308 P **P** **10 30 12.1 +0.4**
KRMB IAmb IAmb 10 30 13.3
comp=Z,5.6nm,1.0s
YKA Yellowknife Ar 56.36 334 P **P** **10 30 11.5 +0.4**
comp=Z,1.6nm,0.6s,baz=106,slow=7.4,SNR=29
JCC Jacoby Creek, 56.39 307 P **P** **10 30 13.7 +2.0**
DBIC Dimbokro 57.55 94 P **P** **10 30 19.6 -0.8**
comp=Z,3.5nm,0.9s,baz=277,slow=10,SNR=5.5
DBIC Dimbokro 57.55 94 P **P** **10 30 21.1 +0.8**
GO06 Curarrehue 58.52 188 P **P** **10 30 26.6 -0.2**
GO06 IAmb IAmb 10 30 32.5
comp=Z,4.5nm,1.1s
PLCA Paso Flores 59.54 187 P **P** **10 30 33.4 -0.3**
comp=Z,1.9nm,0.6s,baz=34,slow=7.9,SNR=13
PLCA Paso Flores 59.54 187 P **P** **10 30 33.7 0.0**
PLCA IAmb IAmb 10 30 34.2
comp=Z,2.3nm,0.7s
TOA0 Torodi Ar. Sit 61.99 85 P **P** **10 30 51.4 +0.4**
TOA0 IAmb IAmb 10 30 51.8
comp=Z,3.0nm,0.8s
TORD Torodi Ar. Bea 61.99 85 P **P** **10 30 51.0 +0.1**
comp=Z,2.1nm,0.7s,baz=291,slow=6.6,SNR=14
TORD LR LR 10 52 04.9
comp=Z,165nm,21.7s,baz=335,slow=31
TORD Torodi Ar. Bea 61.99 85 P **P** **10 30 51.2 +0.3**
ECH Echery 63.00 45 P **P** **10 30 57.3 +0.1**
KEST Kesra 65.07 59 P **P** **10 31 10.7 -0.4**
comp=Z,3.1nm,0.8s,baz=248,slow=5.4,SNR=3.8
INK Inuvik 65.68 337 P **P** **10 31 14.5 +0.1**
GERES GERESS Array B 67.35 44 P **P** **10 31 26.2 +0.7**
comp=Z,0.2nm,0.3s,baz=282,slow=4.6,SNR=3.2
BCAR Beaver Creek A 68.54 331 P **P** **10 31 34.7 +2.0**
IL31 70.77 333 P **P** **10 31 46.7 +0.4**
IL31 IAmb IAmb 10 31 57.4
comp=Z,6.7nm,1.4s
ILAR Eielson Array 70.77 333 P **P** **10 31 46.7 +0.4**
comp=Z,0.7nm,0.8s,baz=105,slow=3.8,SNR=7.6
ILAR Eielson Array 70.77 333 P **P** **10 31 46.8 +0.5**
VYHS Vyhne 70.77 44 *eP* **P** **10 31 47.2 +0.6**
TRF Thorofare Moun 72.36 332 P **P** **10 31 57.6 +1.4**
TRF IAmb IAmb 10 32 08.6
comp=Z,5.0nm,0.8s
MLY Manley 72.39 334 P **P** **10 31 56.5 +0.4**
MLY IAmb IAmb 10 32 07.3
comp=Z,5.9nm,1.2s
BPAW Bear Paw Mtn. 72.60 333 P **P** **10 31 56.8 -0.6**
BPAW IAmb IAmb 10 32 00.4
comp=Z,12nm,1.4s
KTH Kantishna Hill 72.64 332 P **P** **10 31 58.6 +1.0**
KTH IAmb IAmb 10 32 06.6
comp=Z,8.5nm,1.1s
PPLA Purkeypile 73.29 331 P **P** **10 32 01.1 -0.6**
PPLA IAmb IAmb 10 32 09.6
comp=Z,9.0nm,1.3s
IMAR Indian Mountai 73.50 335 P **P** **10 32 03.1 +0.4**
BURAR Bucovina Array 75.13 44 P **P** **10 32 12.4 -0.3**
BRTR Keskin Array B 83.07 51 P **P** **10 32 56.6 +0.3**
comp=Z,0.7nm,0.8s,baz=283,slow=7.2,SNR=3.7
CD2 Chengdu 129.03 15 PKP **PKPdf** **10 39 38.8 0.0**
ASAR Alice Springs 163.65 249 PKPab **PKPab** **10 41 25.9 0.0**
comp=Z,0.3nm,0.6s,baz=116,slow=5.0,SNR=7.7
WRA Warramunga Arr 163.77 263 PKPab **PKPab** **10 41 26.0 -0.5**
comp=Z,0.2nm,0.5s,baz=88,slow=3.7,SNR=3.9

*IDC **07** 10:39:16.7±0.6, 17.18S×172.81W, h0km, mb4.2/13, mb1 4.5/13, mb1mx4.3/32, mbtmp4.2/13, MS4.1/18, Ms1 4.1/18, ms1mx4.0/26, Error ellipse: s-maj=26.4km s-min=15.8km az=144.0*
*NEIC **07** 10:39:17.2±1.7, 17.4S±0.1×172.47W±0.06, h10km±1km, mb4.8/58, Error ellipse: s-maj=17.4km s-min=9.8km az=192.0*
*GCMT **07** 10:39:23.2±0.4, 17.14S±0.03×172.31W±0.02, h24km±1km, MW5.0/66, Moment Tensor Solution. s34,c38; s66,c97; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 2.42±.24; Mθθ 0.85±.17; Mϕϕ -3.27±.16; Mrθ 1.05±.26; Mrϕ -1.14±.09; Mθϕ 1.04±.17; Best double couple: M0 3.40300×10^16 NP1: ϕs 171.00000°, δ 38.00000°, λ 54.00000°. NP2: ϕs 34.00000°, δ 60.00000°, λ 115.00000°. Principal axes: T 2.9780, Plg 66.0000°, Azm 349.0000°; N 0.8480, Plg 21.0000°, Azm 201.0000°; P -3.8270, Plg 12.0000°, Azm 106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 10:39:17.5±0.4, 17.47S±0.08×172.47W±0.06, h10km, n169, σ1$16/150, mb4.7/42, MS4.1/21, 23C, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.90**	**124**	Pn	**Pn**	**10 40 04.3**	**+0.5**
NIUE				Sn	**Sn**	**10 40 38.1**	**-0.7**
AFI	**Afiamalu**	**3.60**	**11**	Pn	Pn	10 40 05.1	-8.4
	16nm,0.3s,baz=208,slow=4.3,SNR=8.3						
AFI				Sn	Sn	10 40 38.7	-17
	27nm,0.3s,baz=145,slow=18,SNR=5.1						
MSVF	**Nonsavu**	**9.04**	**267**	Pn	**Pn**	**10 41 28.2**	**0.0**
MSVF				Sn	**Sn**	**10 43 10.5**	**+0.3**
RAR	**Rarotonga**	**12.55**	**109**	Pn	**Pn**	**10 42 14.2**	**-2.0**
DZM	**Mont Dzumac**	**20.36**	**254**	*e*LR	LR	10 48 53.4	
	comp=Z,1μm,24.4s						
DZM	**Mont Dzumac**	**20.36**	**254**	LR	LR	10 50 20.3	
	comp=Z,773nm,19.2s,baz=82,slow=33						
OUZ	**Omahuta**	**21.60**	**212**	P	**P**	**10 44 07.8**	**+0.2**
OUZ				IAmb	IAmb	10 44 31.7	
	comp=Z,44nm,1.3s						
PPT2	**Papeete2**	**21.84**	**94**	*e*LQ	LQ	10 48 07.3	
	comp=Z,1μm,26.8s						
PPT2				*e*LR	LR	10 49 20.0	
	comp=Z,1μm,26.5s,baz=265						
PPT	**Papeete**	**21.84**	**94**	LR	LR	10 51 18.9	
	comp=Z,413nm,18.6s,baz=230,slow=33						
TBI	**Tubuai**	**22.34**	**109**	*e*LQ	LQ	10 48 36.4	
	comp=Z,714nm,26.8s						
TBI				*e*LR	LR	10 49 29.1	
	comp=Z,1μm,29.2s,baz=282						
URZ	**Urewera**	**22.64**	**202**	P	**P**	**10 44 20.7**	**+2.0**
	comp=Z,6.2nm,0.7s,baz=254,slow=3.7,SNR=13						
URZ	**Urewera**	**22.64**	**202**	P	**P**	**10 44 20.1**	**+1.4**
URZ				IAmb	IAmb	10 45 09.3	
	comp=Z,95nm,1.6s						
HIZ	**Hauiti**	**23.72**	**205**	P	**P**	**10 44 29.8**	**+0.2**
QRZ	**Quartz Range**	**26.63**	**206**	P	**P**	**10 44 58.1**	**+1.8**
HNR	**Honiara**	**27.96**	**283**	LR	LR	10 54 28.2	
	comp=Z,1μm,18.3s,baz=124,slow=33						
LTZ	**Lake Taylor**	**28.38**	**204**	P	**P**	**10 45 10.5**	**-1.4**
TAOE	**Nuku Hiva Isla**	**32.58**	**79**	*e*LR	LR	10 54 11.4	
	comp=Z,529nm,26.5s						
EIDS	**Eidsvold**	**34.74**	**251**	P	**P**	**10 46 08.6**	**+0.5**
ARMA	**Armidale**	**35.10**	**242**	P	**P**	**10 46 10.8**	**-0.4**
ARMA				IAmb	IAmb	10 47 06.2	
	comp=Z,34nm,1.6s						
CTA	**Charters Tower**	**39.09**	**259**	P	**P**	**10 46 42.5**	**-2.7**
	comp=Z,2.0nm,0.6s,baz=85,slow=10.0,SNR=5.5						
PMG	**Port Moresby**	**40.00**	**276**	P	**P**	**10 46 51.6**	**-1.2**
PMG				IAmb	IAmb	10 46 57.7	
	comp=Z,18nm,1.2s						
H11S2	**WAKE ISLAND Hy**	**41.18**	**329**	T	T	11 30 39.7	
	baz=149						
H11S3	**WAKE ISLAND Hy**	**41.20**	**329**	T	T	11 30 48.9	
	baz=149						
H11S1	**WAKE ISLAND Hy**	**41.20**	**329**	T	T	11 30 55.4	
	baz=149						
OPA	**Opana**	**41.41**	**21**	P	**P**	**10 47 02.7**	**-1.5**
TOO	**Toolangi**	**41.89**	**233**	P	**P**	**10 47 09.0**	**+0.8**
H11N3	**WAKE ISLAND Hy**	**42.14**	**330**	T	T	11 31 45.8	
	baz=153						
H11N1	**WAKE ISLAND Hy**	**42.14**	**330**	T	T	11 32 00.9	
	baz=153						
H11N2	**WAKE ISLAND Hy**	**42.15**	**330**	T	T	11 31 47.2	
	baz=153						
COEN	**Coen**	**42.77**	**268**	P	**P**	**10 47 14.4**	**-1.2**
STKA	**Stephens Creek**	**43.82**	**242**	P	**P**	**10 47 23.6**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=60,slow=8.1,SNR=3.7						
STKA				LR	LR	11 04 20.7	
	comp=Z,231nm,18.0s,baz=64,slow=34						
STKA	**Stephens Creek**	**43.82**	**242**	P	**P**	**10 47 24.6**	**+0.8**
BBOO	**Buckleboo**	**48.58**	**241**	P	**P**	**10 48 00.8**	**-0.5**
WR0	**Warramunga Arr**	**50.08**	**258**	P	**P**	**10 48 12.3**	**-0.7**
WR0				IAmb	IAmb	10 49 29.5	
	comp=Z,28nm,1.9s						
WRAB	**Tennant Creek**	**50.26**	**258**	P	**P**	**10 48 13.0**	**-1.4**
WRAB				IAmb	IAmb	10 48 31.8	
	comp=Z,8.5nm,1.2s						
WRA	**Warramunga Arr**	**50.27**	**258**	P	**P**	**10 48 11.9**	**-2.6**
	comp=Z,1.1nm,0.6s,baz=98,slow=6.2,SNR=4.6						
WRA				PcP	**PcP**	**10 49 34.2**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=92,slow=3.4,SNR=2.3						
WRA				LR	LR	11 08 57.9	
	comp=Z,336nm,18.2s,baz=85,slow=36						
WRA	**Warramunga Arr**	**50.27**	**258**	P	**P**	**10 48 12.1**	**-2.4**
AS31	**Alice Springs**	**50.35**	**253**	P	**P**	**10 48 13.2**	**-1.8**
ASAR	**Alice Springs**	**50.35**	**253**	P	**P**	**10 48 12.9**	**-2.1**
	comp=Z,6.7nm,0.6s,baz=88,slow=8.5,SNR=96						
ASAR				LR	LR	11 09 38.2	
	comp=Z,336nm,18.4s,baz=93,slow=36						
KNRA	**Kununurra**	**56.16**	**263**	P	**P**	**10 48 57.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**58.67**	**259**	P	**P**	**10 49 14.6**	**-1.0**
FITZ				IAmb	IAmb	10 51 07.2	
	comp=Z,15nm,1.7s						
RPN	**Rapa Nui**	**58.69**	**111**	LR	LR	11 06 28.4	
	comp=Z,47nm,20.7s,baz=262,slow=28						
VNDA	**Vanda**	**61.42**	**186**	LR	LR	11 11 20.5	
	comp=Z,70nm,21.5s,baz=310,slow=31						
PSA00	**Pilbara Seismi**	**63.48**	**254**	P	**P**	**10 49 46.8**	**-1.5**
PSA00				IAmb	IAmb	10 50 00.2	
	comp=Z,12nm,1.1s						
MJAR	**Matsushiro Arr**	**71.08**	**320**	LR	LR	11 15 20.0	
	comp=Z,86nm,21.8s,baz=70,slow=31						
QSPA	**South Pole Qui**	**72.59**	**180**	P	**P**	**10 50 45.0**	**+0.1**
KMRM	**Mail Ridge**	**73.15**	**37**	P	**P**	**10 50 47.7**	**-0.8**
KMRM				IAmb	IAmb	10 50 50.9	
	comp=Z,11nm,0.8s						
CMB	**Columbia Colle**	**73.74**	**40**	P	**P**	**10 50 50.9**	**-1.0**
AFDM	**Forest Hills D**	**73.95**	**39**	P	**P**	**10 50 52.9**	**-0.2**
MDPB	**Devils Postpil**	**74.31**	**41**	P	**P**	**10 50 55.0**	**-0.6**
WAKR	**Walker**	**74.61**	**41**	P	**P**	**10 50 57.5**	**+0.2**
WAKR				IAmb	IAmb	10 51 28.2	
	comp=Z,7.0nm,1.3s						
YBH	**Yreka Blue Hor**	**74.71**	**36**	P	**P**	**10 50 58.9**	**+1.3**
PETK	**Petropavlovsk-**	**74.86**	**342**	P	**P**	**10 50 56.7**	**-1.4**
	comp=Z,6.2nm,0.8s,baz=144,slow=10.0,SNR=7.7						
PETK				LR	LR	11 19 33.7	
	comp=Z,73nm,21.2s,baz=346,slow=32						
PETK	**Petropavlovsk-**	**74.86**	**342**	P	**P**	**10 50 58.0**	**-0.1**
PNTR	**Pine Nut**	**74.87**	**40**	P	**P**	**10 50 58.4**	**-0.3**
BEKR	**Beckworth**	**74.89**	**39**	P	**P**	**10 50 58.7**	**-0.1**
YERR	**Yerington**	**75.03**	**40**	P	**P**	**10 50 58.3**	**-1.4**
NVAR	**Mina Array Bea**	**75.28**	**41**	P	**P**	**10 51 02.0**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=229,slow=9.7,SNR=20						
NVAR				LR	LR	11 19 47.8	
	comp=Z,154nm,18.6s,baz=356,slow=32						
NVAR	**Mina Array Bea**	**75.28**	**41**	P	**P**	**10 51 01.5**	**+0.4**
UGM	**Wanagama**	**75.32**	**266**	P	**P**	**10 51 01.1**	**-0.6**
NV11	**Mina Array Sit**	**75.37**	**41**	P	**P**	**10 51 01.6**	**0.0**
NV11				IAmb	IAmb	10 51 05.2	
	comp=Z,6.8nm,1.2s						
KVN	**Kaiserville**	**75.78**	**41**	P	**P**	**10 51 03.8**	**-0.2**
KVN				IAmb	IAmb	10 51 33.7	
	comp=Z,8.0nm,1.5s						
MOD	**Modoc Plateau**	**76.20**	**37**	P	**P**	**10 51 07.0**	**+0.8**
MOD				IAmb	IAmb	10 51 36.8	
	comp=Z,6.4nm,1.2s						
PINE	**Pine Mountain**	**77.04**	**36**	P	**P**	**10 51 10.9**	**-0.1**
PINE				IAmb	IAmb	10 51 14.1	
	comp=Z,6.9nm,1.1s						
U15A	**North Rim**	**78.09**	**46**	P	**P**	**10 51 16.4**	**-0.7**
U15A				IAmb	IAmb	10 51 32.4	
	comp=Z,20nm,1.9s						
PSUT	**Pine Spring**	**78.19**	**43**	P	**P**	**10 51 17.2**	**-0.3**
KSRS	**Korea Array**	**78.25**	**315**	P	**P**	**10 51 16.5**	**-1.1**
	comp=Z,2.2nm,1.1s,baz=129,slow=4.8,SNR=5.4						
KSRS				LR	LR	11 22 35.8	
	comp=Z,99nm,18.8s,baz=342,slow=33						
LEM	**Lembang**	**78.39**	**266**	P	**P**	**10 51 19.9**	**+0.8**
	comp=Z,24nm,0.6s,baz=163,slow=6.4,SNR=4.6						
ELK	**Elko**	**78.55**	**41**	P	**P**	**10 51 18.7**	**-0.8**
MSU	**Marysvale**	**79.28**	**44**	P	**P**	**10 51 23.2**	**-0.4**
USRK	**Ussuriysk Ar.**	**79.56**	**323**	LR	LR	11 21 38.5	
	comp=Z,100nm,20.2s,baz=326,slow=32						
TMUT	**Trail Mountain**	**80.34**	**44**	P	**P**	**10 51 29.0**	**-0.4**
F10A	**Beach Ranch, E**	**80.47**	**36**	P	**P**	**10 51 29.2**	**-0.5**
F10A				IAmb	IAmb	10 51 56.0	
	comp=Z,11nm,1.4s						
MNTX	**Cornudas Mount**	**80.75**	**53**	P	**P**	**10 51 32.3**	**+0.9**
MNTX				IAmb	IAmb	10 52 15.3	
	comp=Z,16nm,1.9s						
TX31	**Lajitas Ar. Si**	**81.03**	**56**	P	**P**	**10 51 31.7**	**-1.4**
TX32	**Lajitas Array**	**81.03**	**56**	P	**P**	**10 51 32.9**	**-0.2**
TXAR	**Lajitas Array**	**81.03**	**56**	P	**P**	**10 51 34.7**	**+1.6**
	comp=Z,2.7nm,1.1s,baz=224,slow=6.9,SNR=11						
TXAR	**Lajitas Array**	**81.03**	**56**	P	**P**	**10 51 32.4**	**-0.7**
TTA	**Tatalina**	**81.17**	**8**	P	**P**	**10 51 33.1**	**+0.1**
TTA				IAmb	IAmb	10 52 27.4	
	comp=Z,28nm,1.8s						
TCUT	**Toone Canyon**	**81.17**	**42**	P	**P**	**10 51 32.8**	**-1.0**
ANMO	**Albuquerque**	**81.45**	**49**	P	**P**	**10 51 33.8**	**-1.6**
ANMO				IAmb	IAmb	10 52 01.2	
	comp=Z,7.6nm,1.6s						
NJ2	**Nanjing**	**82.11**	**307**	*e*P	**P**	**10 51 39.1**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MCMT	**McKenzie Canyo**	**82.31**	**38**	P	**P**	**10 51 40.1**	**+0.4**
S22A	**4UR Ranch, Cre**	**82.52**	**47**	P	**P**	**10 51 40.2**	**-0.8**
S22A				IAmb	IAmb	10 51 46.5	
	comp=Z,17nm,1.6s						
TPAW	**Teton Pass**	**82.72**	**40**	P	**P**	**10 51 41.2**	**-0.7**
TPAW				IAmb	IAmb	10 52 12.6	
	comp=Z,12nm,1.6s						
SNOW	**Snow King Moun**	**82.83**	**40**	P	**P**	**10 51 41.8**	**-0.7**
MOOW	**Moose Ponds**	**82.99**	**40**	P	**P**	**10 51 42.0**	**-1.3**
MOOW				IAmb	IAmb	10 54 40.0	
	comp=Z,15nm,2.0s						
BW06	**Boulder Array**	**83.21**	**41**	P	**P**	**10 51 42.0**	**-2.4**
BW06				IAmb	IAmb	10 51 55.5	
	comp=Z,13nm,1.8s						
PD31	**Pinedale Array**	**83.21**	**41**	P	**P**	**10 51 43.2**	**-1.2**
PD31				IAmb	IAmb	10 51 55.5	
	comp=Z,11nm,1.7s						
PDAR	**Pinedale Array**	**83.21**	**41**	P	**P**	**10 51 44.7**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=223,slow=3.6,SNR=13						
PDAR				LR	LR	11 24 50.1	
	comp=Z,102nm,18.8s,baz=28,slow=33						
PDAR	**Pinedale Array**	**83.21**	**41**	P	**P**	**10 51 44.2**	**-0.2**
CN2	**Changchun**	**83.23**	**320**	*e*P	P	10 51 35.1	-9.1
YHB	**Horse Butte**	**83.25**	**39**	P	**P**	**10 51 44.4**	**-0.2**
YHL	**Hebgen Lake**	**83.31**	**39**	P	**P**	**10 51 45.1**	**+0.2**
WRH	**Wood River Hil**	**83.81**	**10**	P	**P**	**10 51 45.5**	**-1.2**
MLY	**Manley**	**83.90**	**9**	P	**P**	**10 51 46.5**	**-0.7**
MLY				IAmb	IAmb	10 52 18.8	
	comp=Z,14nm,1.6s						
HDA	**Harding Lake**	**83.95**	**11**	P	**P**	**10 51 47.2**	**-0.2**
CCB	**Clear Creek Bu**	**84.02**	**10**	P	**P**	**10 51 47.3**	**-0.4**
CCB				IAmb	IAmb	10 51 58.6	
	comp=Z,12nm,1.2s						
ILAR	**Eielson Array**	**84.30**	**11**	P	**P**	**10 51 48.2**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=226,slow=5.9,SNR=7.7						
ILAR	**Eielson Array**	**84.30**	**11**	P	**P**	**10 51 46.9**	**-2.3**
IMAR	**Indian Mountai**	**84.39**	**8**	P	**P**	**10 51 47.1**	**-2.4**
WHN	**Wuhan**	**84.98**	**304**	P	**P**	**10 51 55.2**	**+1.8**
PLCA	**Paso Flores**	**87.47**	**132**	P	**P**	**10 52 08.7**	**+2.9**
	comp=Z,2.3nm,0.8s,baz=267,slow=9.8,SNR=5.8						
SYO	**Syowa Base**	**90.75**	**191**	⇑*e*X	P	10 52 14.0	-6.4
HHC	**Hu-ho-hao-te**	**91.07**	**313**	*e*P	**P**	**10 52 23.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,99nm,6.4s						
YKA	**Yellowknife Ar**	**91.63**	**23**	P	**P**	**10 52 24.3**	**-0.1**
	comp=Z,0.6nm,1.0s,baz=234,slow=4.3,S

CHVC			ex	x	10 59 05.5		
OSTC	**Ostas**	**146.26 350**	*e*PKP	**PKiKP**	**10 59 01.5**	**+0.1**
DPC	**Dobruska-Polom**	**146.44 350**	*e*PKP	**PKPab**	**10 59 00.7**	**+1.0**
BURAR	**Bucovina Array**	**146.61 338**	⇑P	**PKPab**	**10 59 02.1**	**+1.5**
MORC	**Moravsky Berou**	**146.77 348**	⇑P	**PKPab**	**10 59 01.4**	**+0.4**
MORC	**Moravsky Berou**	**146.77 348**	*e*PKP	**PKPbc**	**10 58 59.8**	**0.0**
MORC	**Moravsky Berou**	**146.77 348**	PKPbc	**PKPdf**	**10 58 59.6**	**+1.5**
TRPA	**Tarpa**	**147.04 341**	⇑P	**PKPbc**	**10 59 01.9**	**+1.4**
JURR	**Jurilovca**	**147.42 331**	⇑P	**PKPbc**	**10 59 03.2**	**+1.5**
VRI	**Vrincioaia**	**147.48 335**	⇑P	**PKPbc**	**10 59 03.3**	**+1.4**
TOPG	**Topolog**	**147.56 332**	⇑P	**PKPab**	**10 59 03.9**	**-0.3**
JAVC	**Velka Javorina**	**147.62 347**	*e*PKP	**PKPdf**	**10 59 00.9**	**+1.3**
OZUR		**147.67 336**	⇑P	**PKPbc**	**10 59 03.9**	**+1.4**
VYHS	**Vyhne**	**147.71 346**	*e*PKP	**PKPbc**	**10 59 03.1**	**+0.7**
HARR	**Harsova**	**147.91 332**	⇑P	**PKPbc**	**10 59 04.4**	**+1.3**
DOPR	**Dopca**	**147.93 336**	⇑P	**PKPbc**	**10 59 04.3**	**+1.2**
KHC	**Kasperske Hory**	**148.04 352**	*e*PKP	**PKPbc**	**10 59 04.0**	**+0.7**
MLR	**Muntele Rosu**	**148.11 335**	⇑P	**PKPbc**	**10 59 05.3**	**+1.5**
MLR	**Muntele Rosu**	**148.11 335**		**PKPbc**	**10 59 03.9**	**+0.1**
MODS	**Modra-Piesok**	**148.16 348**	*e*PKP	**PKiKP**	**10 59 05.7**	**+0.3**
DRGR		**148.17 340**	⇑P	**PKPbc**	**10 59 04.3**	**+0.5**
MANR	**Mangalia**	**148.27 330**	⇑P	**PKiKP**	**10 59 06.2**	**+0.5**
GERES	**GERESS Array B**	**148.30 352**	PKPbc	**PKPbc**	**10 59 03.4**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=33,slow=2.3,SNR=8.2					
GERES	**GERESS Array B**	**148.30 352**		**PKPbc**	**10 59 04.2**	**+0.1**
BR131	**Keskin Array S**	**148.31 320**		**PKPbc**	**10 59 04.3**	**-0.2**
BRTR	**Keskin Array B**	**148.31 320**	PKPbc	**PKPbc**	**10 59 05.6**	**+1.1**
	comp=Z,2.5nm,0.9s,baz=78,slow=3.6,SNR=10					
BRTR	**Keskin Array B**	**148.31 320**		**PKPbc**	**10 59 04.3**	**-0.2**
VOIR		**148.50 336**	⇑P	**PKiKP**	**10 59 06.7**	**+0.4**
ARR	**Arges**	**148.72 336**	⇑P	**PKiKP**	**10 59 07.3**	**+0.6**
CONA	**Conrad Observa**	**148.86 349**	*i* PKiKP	**PKPbc**	**10 59 06.5**	**+0.9**
	comp=Z,6.9nm,1.0s					
SIRR	**Siria**	**148.97 341**	⇑P	**PKPbc**	**10 59 07.1**	**+1.3**
MOA	**Molln**	**149.20 351**	*i* sPKiKP	**PKPab**	**10 59 11.6**	**+0.9**
	comp=Z,3.6nm,0.8s					
GZR	**Gura Zlata**	**149.38 339**	⇑P	**PKiKP**	**10 59 09.1**	**+1.0**
BZS	**Buzias**	**149.57 340**	⇑P	**PKPbc**	**10 59 07.6**	**+0.3**
ARSA	**Arzberg**	**149.57 349**	*i* PKiKP	**PKPbc**	**10 59 08.3**	**+1.0**
	comp=Z,5.9nm,1.2s					
RETA	**Reutte**	**149.94 356**	*i* pPKiKP	**PKiKP**	**10 59 11.8**	**+2.6**
	comp=Z,7.3nm,1.0s					
WATA	**Walderalm**	**150.03 354**	*i* pPKPdf	pPKPdf	10 59 05.7	+1.3
	comp=Z,8.8nm,1.2s					
MOTA	**Moosalm**	**150.06 355**	*i* PKiKP	**PKPbc**	**10 59 09.4**	**+0.7**
	comp=Z,14nm,1.6s					
KBA	**Koelnbreinsper**	**150.08 352**	*i* PKiKP	**PKPbc**	**10 59 08.4**	**-0.4**
	comp=Z,9.5nm,1.4s					
SQTA	**Sankt Quirin**	**150.17 355**	*i* pPKPbc	**PKiKP**	**10 59 11.0**	**+1.2**
	comp=Z,7.2nm,1.0s					
DAVA	**Damuels**	**150.20 357**	*i* PKiKP	**PKPbc**	**10 59 08.8**	**-0.2**
	comp=Z,12nm,1.4s					
SOKA	**Soboth**	**150.21 350**	*i* PKiKP	**PKPbc**	**10 59 09.6**	**+0.6**
	comp=Z,12nm,1.7s					
MDVR	**Moldovita**	**150.28 339**	⇑P	**PKiKP**	**10 59 10.7**	**+0.7**
PLVB	**Pleven**	**150.38 334**	⇑P	**PKiKP**	**10 59 11.3**	**+1.2**
FETA	**Feichten**	**150.41 356**	*i* pPKPbc	**PKiKP**	**10 59 10.7**	**+0.4**
	comp=Z,5.1nm,1.1s					
MYKA	**Terra Mystica**	**150.48 351**	*i* sPKPdf	sPKPdf	10 59 07.0	+1.6
	comp=Z,9.4nm,1.1s					
VTS	**Vitosha**	**151.58 335**	⇑P	**PKiKP**	**10 59 14.2**	**+1.4**
BLY	**Banja Luka**	**151.62 345**	⇑P	**PKiKP**	**10 59 14.0**	**+1.4**
BLY	**Banja Luka**	**151.62 345**	PKPdf	**PKPdf**	**10 59 05.1**	**-0.8**
BLY				**PKPbc**	**10 59 12.7**	**+0.5**
BLY			PKPab	**PKPab**	**10 59 21.2**	**+0.5**
TORD	**Torodi Ar. Bea**	**172.92 127**	PKP	**PKPdf**	**10 59 28.5**	**+0.5**
	comp=Z,1.3nm,1.1s,baz=258,slow=1.2,SNR=3.6					
TORD			PKPab	**sPKPab**	**11 00 56.4**	**+0.7**
	comp=Z,1.6nm,0.9s,baz=256,slow=4.6,SNR=5.7					
TORD	**Torodi Ar. Bea**	**172.92 127**		**PKPdf**	**10 59 27.8**	**-0.2**

*SJA **07** 10:41:13.9±0.6, 23.98S×66.82W, h235km±8km, ML3.1, MW3.3*
*GUC **07** 10:41:17.8±0.6, 23.84S×67.38W, h234km±9km, ML3.4*
ISC 07 10:41:14.3±2.0, 23.99S±0.06×66.91W±0.05, h225km±18km, n26, σ1§44/40, 7C-3D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SLA	**San Lorenzo**	**1.48**	**120**	*i* P		**Pn**	**10 41 50.7**	**+0.5**
HJA	**Humahuaca**	**1.58**	**61**	*i* P		**Pn**	**10 41 51.7**	**+0.3**
AZAP	**Zapla**	**1.70**	**98**	⇓*i* P		**Pn**	**10 41 52.3**	**+0.1**
AZAP				IAML			10 41 52.4	
	comp=Z,76nm,0.6s							
YJA	**Yavi**	**2.21**	**36**	*i* P		**Pn**	**10 41 58.7**	**+1.3**
YJA				*i* S		**S**	**10 42 30.8**	**-0.1**
ASTB	**Santa Barbara**	**2.25**	**90**	*i* P		**Pn**	**10 41 57.6**	**+0.2**
LVC	**Limon Verde**	**2.29**	**306**	*e*P		**Pn**	**10 41 59.2**	**+1.2**
LVC				*i* S		**S**	**10 42 31.3**	**-0.9**
LVC	**Limon Verde**	**2.29**	**306**	⇑*i*P		**Pn**	**10 41 59.3**	**+1.2**
PB15	**IPOC Station P**	**2.47**	**288**	⇑*i*P		**Pn**	**10 42 01.1**	**+1.3**
PB15				*i* S		**S**	**10 42 34.4**	**-0.8**
PB15	**IPOC Station P**	**2.47**	**288**	*i* P		**Pn**	**10 42 01.1**	**+1.3**
PB15				*i* S		**S**	**10 42 36.5**	**+1.3**
GO02	**Mina Guanaco**	**2.71**	**244**	⇑*i*P		**Pn**	**10 42 03.5**	**+1.1**
GO02				*i* S		**S**	**10 42 39.3**	**-0.6**
PB06	**IPOC Station P**	**2.76**	**297**	⇑*i*P		**Pn**	**10 42 04.1**	**+1.3**
PB06				*i* S		**S**	**10 42 39.5**	**-1.2**
PB06				IAML			10 42 41.1	
	comp=E,116nm,0.1s							
PB06	**IPOC Station P**	**2.76**	**297**	*i* P		**Pn**	**10 42 04.1**	**+1.3**
PB09	**IPOC Station P**	**3.06**	**315**	⇑*i*P		**Pn**	**10 42 08.0**	**+1.7**
PB09				*i* S		**S**	**10 42 46.2**	**-0.6**
PB09				IAML			10 42 48.6	
	comp=N,29nm,0.4s							
PB05	**IPOC Station P**	**3.23**	**290**	⇓*i*P		**Pn**	**10 42 09.0**	**+1.0**
PB05				*i* S		**S**	**10 42 47.8**	**-2.3**
PB05				IAML			10 42 52.0	
	comp=N,43nm,0.4s							
PB05	**IPOC Station P**	**3.23**	**290**	*i* P		**Pn**	**10 42 09.3**	**+1.3**
PB14	**IPOC Station P**	**3.25**	**258**	*e*P		**Pn**	**10 42 09.3**	**+0.8**
PB14				*e*S		**S**	**10 42 48.9**	**-2.1**
PB14				IAML			10 42 51.4	
	comp=E,43nm,0.1s							
PB03	**IPOC Station P**	**3.25**	**306**	⇑*i*P		**Pn**	**10 42 09.4**	**+1.0**
PB03				*i* S		**S**	**10 42 48.9**	**-1.9**
PB03				IAML			10 42 50.3	
	comp=E,56nm,0.1s							
PB10	**IPOC Station P**	**3.37**	**277**	⇑*i*P		**Pn**	**10 42 10.8**	**+1.2**
PB10				*i* S		**S**	**10 42 50.8**	**-2.1**
PB10	**IPOC Station P**	**3.37**	**277**	*i* P		**Pn**	**10 42 10.8**	**+1.2**
PB04	**IPOC Station P**	**3.41**	**298**	⇓*i*P		**Pn**	**10 42 11.3**	**+1.2**
PB04				*i* S		**S**	**10 42 51.6**	**-2.3**
PB04	**IPOC Station P**	**3.41**	**298**	*i* P		**Pn**	**10 42 11.4**	**+1.2**
PB08	**IPOC Station P**	**4.36**	**331**	⇑*i*P		**Pn**	**10 42 24.5**	**+2.7**
PB08				*i* S		**S**	**10 43 14.1**	**-0.9**
PB08				IAML			10 43 19.1	
	comp=E,18nm,0.2s							
PB11	**IPOC Station P**	**4.92**	**328**	*e*P		**Pn**	**10 42 29.9**	**+1.3**
PB11				*i* S		**S**	**10 43 24.1**	**-3.0**
ACLC	**CERRO LA CRUZ**	**5.42**	**180**	*i* P		**Pn**	**10 42 35.5**	**+0.8**
APLL	**PUNTA DE LOS L**	**6.39**	**177**	*i* P		**Pn**	**10 42 47.2**	**+0.3**
APLL				IAML			10 45 25.2	
	comp=Z,3.4nm,0.2s							
ACAN	**Cantantal**	**8.26**	**182**	*i* P		**Pn**	**10 43 11.7**	**+0.8**

KRNET 07 11:12:38.5±0.1, 40.44N×71.28E, h35km, mb2.4, 14C-8D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BTK	**Batken**	**0.52**	**223**	⇓*i*P		Pn	11 12 50.7	+1.2
	baz=23							
BTK				⇓*i*S		Sn	11 12 59.9	+2.7
	baz=23							
ARK	**Arkit**	**1.45**	**21**	⇑*i*P		Pn	11 13 03.6	+1.2
	baz=21							
ARK				⇑*i*S		Sn	11 13 21.4	+1.1
	baz=21							
ARSB	**Arslanbob**	**1.56**	**55**	⇑*i*P		Pn	11 13 05.2	+1.2
	baz=55							
ARSB				⇑*i*S		Sn	11 13 24.1	+1.0
	baz=55							
TAS	**Tashkent**	**1.74**	**301**	⇓*i*P		Pn	11 13 07.5	+1.2
	baz=1.0							
TAS				⇓*i*S		Sn	11 13 28.4	+1.1
	baz=1.0							
AML	**Almayashu**	**2.48**	**46**	⇑*i*P		Pn	11 13 11.3	-5.5
	baz=31							
AML				⇑*i*S		Sn	11 13 47.3	+1.2
	baz=31							
AML	**Almayashu**	**2.48**	**46**	⇓*i*P		Pn	11 13 12.5	-4.3
	baz=46							
AML				⇓*i*S		Sn	11 13 44.0	-2.1
	baz=46							
ARLS	**Aral**	**2.70**	**57**	⇑*i*P		Pn	11 13 20.9	+1.3
	baz=57							
ARLS				⇑*i*S		Sn	11 13 51.7	+0.5
	baz=57							
EKS2	**Erkin-Say**	**2.91**	**39**	⇓*i*P		Pn	11 13 18.6	-3.8
	baz=27							
EKS2				⇓*i*S		Sn	11 13 58.9	+2.8
	baz=27							
EKS2	**Erkin-Say**	**2.91**	**39**	⇑*i*P		Pn	11 13 19.1	-3.3
	baz=39							
EKS2				⇑*i*S		Sn	11 13 55.6	-0.5
	baz=39							
UCH	**Uchtor**	**3.02**	**53**	⇑*i*P		Pn	11 13 18.2	-6.1
	baz=39							
UCH				⇑*i*S		Sn	11 13 57.6	-1.8
	baz=39							
UCH	**Uchtor**	**3.02**	**53**	⇑*e*P		Pn	11 13 18.7	-5.6
	baz=53							
UCH				⇑*i*S		Sn	11 13 55.4	-4.0
	baz=53							

*IDC **07** 11:26:32.4±0.9, 52.91S×9.70E, h0km, mb4.3/9, mb1 4.5/10, mb1mx4.2/39, mbtmp4.4/10, ML4.5/1, MS4.2/9, Ms1 4.1/9, ms1mx3.8/31, Error ellipse: s-maj=29.7km s-min=17.1km az=115.0*
*NEIC **07** 11:26:33.5±1.3, 52.91S±0.08×9.9E±0.2, h10km±1km, mb4.8/9, Error ellipse: s-maj=23.5km s-min=10.7km az=64.0*
*GCMT **07** 11:26:38.5±0.3, 53.01S±0.02×9.97E±0.04, h12km, MW4.9/89, Moment Tensor Solution. s4,c5; s89,c110; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.61±.12; Mθθ2.50±.09; Mϕϕ-1.89±.10; Mrθ1.23±.31; Mrϕ-0.02±.10; Mθϕ-1.15±.34; Best double couple: M◎2.80300×10^16 NP1:ϕs47.00000°, δ51.00000°, λ-170.00000°. NP2: ϕs311.00000°, δ82.00000°, λ-40.00000°. Principal axes: T 2.9620, Plg20.0000°, Azm5.0000°; N -0.3200, Plg50.0000°, Azm121.0000°; P -2.6440, Plg33.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 07 11:26:34.0±0.6, 52.93S±0.09×9.9E±0.2, h12km, n39, σ0§57/28, mb4.6/9, MS4.0/9, 1D, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
VNA1	**Neumayer--Stat**	**19.57**	**198**	P		**Pn**	**11 31 02.9**	**+0.3**
SNAA	**Sanae**	**19.62**	**192**	P		**P**	**11 31 02.1**	**+0.2**
SNAA	**Sanae**	**19.62**	**192**	P		**P**	**11 31 01.8**	**-0.2**
	1.3nm,0.3s,baz=19,slow=10,SNR=62							
SNAA	**Sanae**	**19.62**	**192**	P		**P**	**11 31 01.8**	**-0.2**
VNA3	**Neumayer Olymp**	**20.32**	**198**	P		**P**	**11 31 09.6**	**0.0**
SYO	**Syowa Base**	**21.27**	**150**	‖*e*Pn		**P**	**11 31 18.9**	**-0.8**
SUR	**Sutherland**	**22.02**	**25**	P		**P**	**11 31 28.5**	**+0.2**
	13nm,1.0s,baz=183,slow=11,SNR=5.2							
SUR				LR		LR	11 37 55.9	
	comp=Z,519nm,21.4s,baz=166,slow=31							
SUR	**Sutherland**	**22.02**	**25**	P		**P**	**11 31 27.8**	**-0.5**
SUR				IAmb		IAmb	11 31 44.3	
	comp=Z,72nm,1.4s							
BOSA	**Boshof**	**26.83**	**31**	P		**P**	**11 32 15.2**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=226,slow=7.1,SNR=2.3							
BOSA				LR		LR	11 41 08.2	
	comp=Z,380nm,19.3s,baz=202,slow=33							
MAW	**Mawson**	**28.99**	**141**	LR		LR	11 41 41.3	
	comp=Z,239nm,21.9s,baz=260,slow=31							
LBTB	**Lobatse**	**30.31**	**29**	LR		LR	11 43 02.7	
	comp=Z,348nm,18.6s,baz=198,slow=33							
MATP	**Matopo**	**35.50**	**31**	P		**P**	**11 33 30.8**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=204,slow=8.2,SNR=4.5							
MATP				LR		LR	11 45 40.2	
	comp=Z,301nm,21.3s,baz=202,slow=32							
QSPA	**South Pole Qui**	**37.30**	**180**	P		**P**	**11 33 45.2**	**-0.5**
VNDA	**Vanda**	**48.65**	**172**	P		**P**	**11 35 17.5**	**+0.4**
	comp=Z,4.1nm,0.7s,baz=228,slow=5.3,SNR=12							
VNDA				LR		LR	11 55 00.5	
	comp=Z,456nm,19.4s,baz=191,slow=35							
VNDA	**Vanda**	**48.65**	**172**	P		**P**	**11 35 17.7**	**+0.7**
VNDA				IAmb		IAmb	11 35 21.2	
	comp=Z,5.7nm,0.8s							
PLCA	**Paso Flores**	**53.55**	**249**	P		**P**	**11 35 54.4**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=139,slow=11,SNR=5.0							
PLCA	**Paso Flores**	**53.55**	**249**	P		**P**	**11 35 54.8**	**+0.4**
CPUP	**Villa Florida**	**55.81**	**271**	P		**P**	**11 36 09.4**	**-1.5**
	comp=Z,8.6nm,1.1s,baz=120,slow=6.1,SNR=8.3							
CPUP	**Villa Florida**	**55.81**	**271**	P		**P**	**11 36 10.4**	**-0.5**
KMBO	**Kilima Mbogo**	**56.44**	**34**	LR		LR	11 58 02.1	
	comp=Z,184nm,21.0s,baz=98,slow=34							
ROC1	**El Roble**	**59.20**	**255**	P		**P**	**11 36 35.0**	**0.0**
DBIC	**Dimbokro**	**60.67**	**343**	P		**P**	**11 36 44.6**	**-0.2**
	comp=Z,7.4nm,0.8s,baz=160,slow=11,SNR=10							
DBIC	**Dimbokro**	**60.67**	**343**	P		**P**	**11 36 44.4**	**-0.5**
DBIC				IAmb		IAmb	11 36 45.9	
	comp=Z,6.1nm,0.8s							
TORD	**Torodi Ar. Bea**	**66.18**	**351**	P		**P**	**11 37 21.2**	**-0.1**
	comp=Z,2.8nm,1.0s,baz=180,slow=6.1,SNR=9.2							
TORD				LR		LR	12 01 50.4	
	comp=Z,148nm,18.9s,baz=325,slow=32							
TORD	**Torodi Ar. Bea**	**66.18**	**351**	P		**P**	**11 37 21.1**	**-0.2**
H08N3	**Diego Garcia H**	**67.81**	**70**	T		T	12 51 39.7	
	baz=216,slow=76,SNR=4.3							
H08N1	**Diego Garcia H**	**67.82**	**70**	T		T	12 51 36.8	
	baz=216,slow=76,SNR=4.0							
H08N2	**Diego Garcia H**	**67.83**	**70**	T		T	12 51 42.9	
	baz=216,slow=76,SNR=5.1							
LPAZ	**La Paz**	**69.94**	**269**	P		**P**	**11 37 46.4**	**+0.6**
	comp=Z,3.6nm,0.8s,baz=166,slow=3.0,SNR=9.0							
LPAZ	**La Paz**	**69.94**	**269**	P		**P**	**11 37 46.3**	**+0.4**
LPAZ				IAmb		IAmb	11 37 56.8	
	comp=Z,7.2nm,0.7s							
H01W2	**Cape Leeuwin H**	**70.70**	**122**	T		T	12 55 43.5	
	baz=219,slow=75,SNR=27							
H01W3	**Cape Leeuwin H**	**70.71**	**122**	T		T	12 55 57.0	
	baz=219,slow=75,SNR=27							
H01W1	**Cape Leeuwin H**	**70.71**	**122**	T		T	12 55 31.0	
	baz=219,slow=75,SNR=35							
EIL	**Elat**	**85.12**	**22**	LR		LR	12 17 00.5	
	comp=Z,173nm,18.1s,baz=282,slow=36							
WVOR	**Wild Horse Val**	**144.49**	**274**			**PKPdf**	**11 46 10.4**	**+0.8**
JTMT	**Jette**	**144.74**	**285**			PKPbc	11 46 08.8	-0.1
WALA	**Waterton Lakes**	**145.16**	**287**			**PKPdf**	**11 46 11.1**	**+0.5**
YKA	**Yellowknife Ar**	**149.76**	**311**	PKPbc		**PKPbc**	**11 46 22.4**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=97,slow=2.5,SNR=29							
ILAR	**Eielson Array**	**163.24**	**324**	PKPab		**PKPab**	**11 47 26.4**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=32,slow=4.1,SNR=4.6							

*BJI **07** 11:33:12.1±0.0, 0.27N×123.61E, h126km, mB4.9/33, mb4.7/44*
*NEIC **07** 11:33:12.1±1.8, 0.02S±0.05×123.51E±0.05, h140km±4km, mb4.8/49, Error ellipse: s-maj=9.5km s-min=3.3km az=138.0*
*KLM **07** 11:33:13.0, 0.21S×123.56E, h144km, mb4.6*
*IDC **07** 11:33:13.6±1.5, 0.03S×123.48E, h156km±14km, mb4.2/23, mb1 4.3/27, mb1mx4.0/60, mbtmp4.7/27, MS3.1/2, Ms1 3.3/2, ms1mx2.7/43, Error ellipse: s-maj=15.8km s-min=8.0km az=88.0*
*DJA **07** 11:33:14.9±0.2, 0°S±3°×12°4E±°, h107km±6km, M4.5/18, mB4.8/7, mb4.8/13, MLv4.7/18, Mw(mB)4.1/7*
ISC 07 11:33:13.7±0.3, 0.08S±0.04×123.53E±0.04, h157km, n147, σ1§88/164, mb4.7/51, 2C-1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
KMSI	**Cibinong**	**0.79**	**35**	P		**Pn**	**11 33 36.0**	**-1.5**
LUWI	**Luwuk**	**1.22**	**218**	P		**Pn**	**11 33 38.7**	**-2.3**
LUWI	**Luwuk**	**1.22**	**218**			**Pn**	**11 33 38.8**	**-2.3**
LUWI					Sn	**Sn**	**11 33 56.9**	**-5.2**
MRSI	**Marisa**	**1.68**	**289**	P		**Pn**	**11 33 43.2**	**-2.5**
APSI	**Ampana**	**2.06**	**246**	P		**Pn**	**11 33 48.2**	**-1.7**
SANI	**Sanana**	**3.14**	**129**	P		**Pn**	**11 33 59.9**	**-3.2**
MPSI	**Mapaga**	**3.66**	**276**	P		**Pn**	**11 34 08.8**	**-0.9**
TNTI	**Ternate**	**3.93**	**78**	P		**Pn**	**11 34 11.3**	**-1.9**
TNTI	**Ternate**	**3.93**	**78**			**Pn**	**11 34 11.4**	**-1.8**
TNTI					Sn	**Sn**	**11 34 55.0**	**-4.5**
KDI	**Kendari**	**3.96**	**193**	P		**Pn**	**11 34 13.9**	**+0.2**
TTSI	**Tana Toraja**	**4.74**	**231**	P		**Pn**	**11 34 23.4**	**-0.4**

NLAI	**Namlea**	**4.75**	**131**	P		**Pn**	**11 34 23.1**	**-0.9**
SPSI	**Sidrap Palu**	**5.39**	**224**	P		**Pn**	**11 34 33.3**	**+0.9**
	0.6nm2µm117nm,0.6s							
BNSI	**Bone**	**5.49**	**218**	P		**Pn**	**11 34 35.9**	**+2.2**
	0.4nm1µm112nm,0.6s							
AAI	**Ambon**	**5.88**	**128**	P		**Pn**	**11 34 39.5**	**+0.6**
	2µm192nm,0.5s							
KAPI	**Kappang**	**6.19**	**218**	P		**Pn**	**11 34 43.3**	**+0.3**
	10nm,0.3s,baz=4.2,slow=6.3,SNR=13							
KAPI				S		**Sn**	**11 35 50.0**	**-3.1**
	baz=195,slow=20,SNR=1.5							
KAPI	**Kappang**	**6.19**	**218**			**Pn**	**11 34 42.1**	**-0.9**
KAPI					Sn	**Sn**	**11 35 50.7**	**-2.3**
BKSI	**Bulukumba**	**6.22**	**213**	P		**Pn**	**11 34 44.1**	**+0.6**
	0.2nm656nm77nm,0.6s							
MSAI	**Masohi**	**6.30**	**121**	P		**Pn**	**11 34 45.2**	**+0.8**
	838nm57nm,0.5s							
KCP	**Kidapawan**	**7.21**	**12**	⇑*i*P		**Pn**	**11 34 59.3**	**+2.6**
CTBH	**Cotabato--PC H**	**7.28**	**6**	⇑*i*P		**Pn**	**11 34 58.6**	**+1.0**
DAV	**Davao City (W)**	**7.39**	**16**	P		**Pn**	**11 35 02.9**	**+3.9**
	40nm,0.3s,baz=218,slow=3.4,SNR=5.4							
SIJI	**Sorong**	**7.78**	**96**	P		**Pn**	**11 35 05.5**	**+1.4**
	3.9nm,0.3s,baz=158,slow=18,SNR=12							
SIJI				S		**Sn**	**11 36 29.8**	**-1.3**
	0.9nm,0.3s,baz=287,slow=23,SNR=1.2							
SPMM	**Sapulut**	**8.51**	**304**	P		**Pn**	**11 35 16.0**	**+2.1**
FAKI	**Fak Fak**	**9.16**	**108**	Pn		Pn	**11 35 21.5**	**-1.1**
FAKI					Sn	**Sn**	**11 37 00.3**	**-4.1**
KKM	**Kota Kinabalu**	**9.50**	**310**			**Pn**	**11 35 26.0**	**-1.2**
KKM					Sn	**Sn**	**11 37 09.6**	**-3.2**
SOEI	**Soe**	**9.64**	**176**	P		Pn	11 35 42.3	+1.3
SOEI	**Soe**	**9.64**	**176**			**Pn**	**11 35 28.6**	**-0.5**
BATI	**Baumata**	**10.06**	**179**	P		**Pn**	**11 35 35.4**	**+0.9**
	6.8nm,0.3s,baz=157,slow=2.6,SNR=3.8							
BATI	**Baumata**	**10.06**	**179**	P		P	11 35 49.6	+5.2
PLAI	**Plampang**	**10.41**	**213**	P		**P**	**11 35 47.0**	**-1.3**
JAGI	**Jajag, Banyuwa**	**12.52**	**228**	P		**P**	**11 36 15.9**	**+3.9**
GMJI	**Gumukmas**	**12.94**	**231**	P		**P**	**11 36 20.7**	**+4.1**
NGJI	**Ngawi**	**14.05**	**239**	P		**P**	**11 36 29.8**	**+0.9**
	46nm,2.5s							
PWJI	**Pagerwojo**	**14.10**	**236**	P		**P**	**11 36 30.1**	**+0.5**
	28nm,1.0s							
PCJI	**Pacitan**	**14.72**	**236**	P		**P**	**11 36 39.8**	**+3.4**
	102nm,0.6s							
WOJI	**Wonogiri, Jawa**	**14.74**	**238**	P		**P**	**11 36 37.9**	**+1.2**
	43nm,1.6s							
MTN	**Manton Dam**	**14.76**	**150**			**Pn**	**11 36 35.1**	**+0.2**
KPJI	**Karang Pucung**	**16.25**	**243**	P		**P**	**11 36 56.6**	**+3.3**
	60nm,0.9s							
KNRA	**Kununurra**	**16.34**	**162**			**P**	**11 36 54.6**	**+0.3**
KNRA					IAmb	IAmb	11 36 58.9	
	comp=Z,39nm,0.6s							
FITZ	**Fitzroy Crossi**	**18.03**	**174**	P		**P**	**11 37 13.5**	**+0.7**
	comp=Z,5.4nm,0.3s,baz=2.8,slow=7.6,SNR=123							
FITZ	**Fitzroy Crossi**	**18.03**	**174**	P		**Pn**	**11 37 13.8**	**-0.7**
FITZ					IAmb	IAmb	11 37 15.3	
	comp=Z,54nm,1.1s							
DLV	**T Lat**	**19.12**	**309**	P		**P**	**11 37 24.9**	**-0.1**
DLV					IAmb	IAmb	11 37 28.1	
	comp=Z,40nm,0.7s							
PSA00	**Pilbara Seismi**	**21.67**	**189**	P		**P**	**11 37 52.2**	**+0.2**
WRAB	**Tennant Creek**	**22.40**	**152**	P		**P**	**11 37 58.9**	**-0.5**
WRAB					IAmb	IAmb	11 38 00.9	
	comp=Z,22nm,0.7s							
WRA	**Warramunga Arr**	**22.40**	**152**	P		**P**	**11 37 59.2**	**-0.2**
	comp=Z,15nm,0.5s,baz=334,slow=10.0,SNR=231							
WRA		

MJAR Matsushiro Arr 38.90 19 P **P** 11 40 22.4 -1.7
comp=Z,6.8nm,0.7s,baz=191,slow=8.5,SNR=17
MJAR Matsushiro Arr 38.90 19 P **P** 11 40 21.8 -2.2
MJB9 Matsu-Tunnel 38.90 19 P **P** 11 40 22.0 -2.1
MJB9 IAmb IAmb 11 40 23.2
comp=Z,7.6nm,0.5s
ARMA Armidale 40.30 141 P **P** 11 40 38.3 +2.4
ARMA IAmb IAmb 11 40 38.9
comp=Z,12nm,0.6s
LZH Lanzhou 40.37 335 *e*P **P** 11 40 38.3 +1.9
LZH pP pP 11 41 09.4 -1.3
LZH sP sP 11 41 24.5 -4.0
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,77nm,4.6s
HHC Hu-ho-hao-te 42.16 346 *e*P **P** 11 40 53.4 +2.5
HHC pmax pmax
comp=Z,4.0nm,0.8s
HHC pmax pmax
comp=Z,75nm,6.0s
CAN Canberra 42.35 149 P **P** 11 40 54.8 +2.3
CAN IAmb IAmb 11 40 55.5
comp=Z,19nm,0.5s
TOO Toolangi 42.46 154 P **P** 11 40 55.6 +2.3
TOO IAmb IAmb 11 40 56.6
comp=Z,18nm,1.1s
CN2 Changchun 43.72 2 *e*P **P** 11 41 04.6 +1.4
USA0B Ussuriysk Arra 44.72 9 P **P** 11 41 10.8 -0.4
USRK Ussuriysk Ar. 44.72 9 P **P** 11 41 11.0 -0.2
comp=Z,4.5nm,0.6s,baz=194,slow=6.5,SNR=19
USRK Ussuriysk Ar. 44.72 9 P **P** 11 41 10.4 -0.8
MDJ Mudanjiang 44.83 6 P **P** 11 41 12.2 +0.3
GTA Gaotai 44.89 334 *e*P **P** 11 41 13.7 +0.9
GTA pmax pmax
comp=Z,18nm,0.9s
ASAJ Asahikawa 47.17 19 P **P** 11 41 30.5 +0.2
comp=Z,12nm,0.8s,baz=219,slow=7.8,SNR=7.8
JKA Kamikawa-asahi 47.17 19 P **P** 11 41 30.5 +0.2
HYB Hyderabad 47.55 294 *i* P **P** 11 41 32.0 -1.8
ULN Ulaanbaatar 49.85 346 P **P** 11 41 50.5 -0.6
SONM Songino Array 49.99 345 P **P** 11 41 51.3 -0.8
comp=Z,6.1nm,0.8s,baz=159,slow=8.0,SNR=39
SONM Songino Array 49.99 345 P **P** 11 41 51.6 -0.4
WMQ Urumqi 54.13 328 *e*P **P** 11 42 24.5 +1.9
KSH Kashi 58.59 318 P **P** 11 42 56.3 +2.0
KSH pP pP 11 43 31.3 +0.3
KSH PP **PP** 11 45 12.4 +6.6
KSH S **S** 11 50 44.0 -2.2
KSH sS sS 11 51 47.2 +0.3
KSH ScS **ScS** 11 52 29.5 +0.6
KSH SS **SS** 11 54 49.4 +7.7
KSH pmax pmax
comp=Z,56nm,1.2s
KSH pmax pmax
comp=Z,640nm,5.5s
KSH LR LR
comp=Z,340nm,5.4s
KSH LR LR
comp=Z,290nm,4.8s
KSH LR LR
comp=Z,560nm,7.3s
MK31 Makanchi Array 58.96 328 P **P** 11 42 56.5 -0.1
MKAR Makanchi Array 58.96 328 P **P** 11 42 56.0 -0.6
comp=Z,4.3nm,0.6s,baz=124,slow=8.1,SNR=6.5
PEA0B Petropavlovsk- 60.15 23 P **P** 11 43 05.4 +0.9
PETK Petropavlovsk- 60.15 23 P **P** 11 43 05.2 +0.6
comp=Z,7.2nm,0.6s,baz=195,slow=4.6,SNR=26
PETK Petropavlovsk- 60.15 23 P **P** 11 43 05.3 +0.7
THZ Tophouse 60.79 139 P **P** 11 43 10.9 +1.6
TUWZ Tuamarina 61.31 139 P **P** 11 43 13.0 +0.3
KHZ Kahutara 61.52 140 P **P** 11 43 15.5 +1.4
URZ Urewera 62.08 134 P **P** 11 43 17.0 -0.9
YAK Yakutsk 62.12 3 P **P** 11 43 16.9 -0.7
comp=Z,11nm,0.6s,baz=321,slow=1.0,SNR=11
MA2 Magadan 63.17 15 P **P** 11 43 25.4 +0.7
comp=Z,24nm,0.7s,baz=189,slow=6.8,SNR=19
MA2 Magadan 63.17 15 P **P** 11 43 25.6 +0.9
KURBB Kurchatov Arra 63.30 335 P **P** 11 43 24.5 -1.2
comp=Z,4.5nm,0.6s,baz=135,slow=6.1,SNR=6.3
KURK Kurchatov 63.31 330 P **P** 11 43 24.7 -1.1
KURK IAmb IAmb 11 44 53.8
comp=Z,11nm,0.8s
SEY Seymchan 66.45 14 P **P** 11 43 46.1 +0.3
comp=Z,5.2nm,0.8s,baz=220,slow=6.4,SNR=12
TIXI Tiksi 71.69 2 P **P** 11 44 16.7 -1.3
comp=Z,4.4nm,0.4s,baz=180,slow=24,SNR=14
TIXI Tiksi 71.69 2 P **P** 11 44 16.7 -1.3
TIXI IAmb IAmb 11 45 15.3
comp=Z,14nm,0.8s
ATKA Atka Island 73.42 35 P **P** 11 44 29.7 +1.1
AKUT Akutan 78.85 34 P **P** 11 44 59.9 +0.7
VNDA Vanda 80.10 172 P **P** 11 45 05.8 +0.3
comp=Z,3.0nm,0.8s,baz=324,slow=8.3,SNR=5.9
VNDA Vanda 80.10 172 P **P** 11 45 06.8 +1.2
VNDA IAmb IAmb 11 46 31.4
comp=Z,16nm,1.5s
ANM Nome 82.03 24 P **P** 11 45 17.3 +1.3
ANM IAmb IAmb 11 48 04.3
comp=Z,15nm,1.3s
SDPT Sand Point 82.12 34 P **P** 11 45 16.7 +0.1
RDOG Red Dog Mine 83.96 21 P **P** 11 45 26.9 +1.0
RDOG IAmb IAmb 11 45 28.1
comp=Z,11nm,0.8s
CCB Clear Creek Bu 89.49 25 P **P** 11 45 51.8 -0.9
CCB IAmb IAmb 11 46 57.2
comp=Z,23nm,2.0s
QSPA South Pole Qui 89.86 180 P **P** 11 45 55.3 +0.8
baz=31,slow=5.9
QSPA South Pole Qui 89.86 180 P **P** 11 45 55.5 +1.0
ILAR Eielson Array 89.89 25 P **P** 11 45 53.1 -1.5
comp=Z,0.7nm,0.6s,baz=243,slow=5.2,SNR=19
ILAR Eielson Array 89.89 25 P **P** 11 45 53.7 -0.9
BRTR Keskin Array B 89.96 310 P **P** 11 45 54.8 -0.9
comp=Z,0.5nm,0.5s,baz=106,slow=2.4,SNR=3.5
BRTR Keskin Array B 89.96 310 P **P** 11 45 54.4 -1.3
ARCES ARCESS Array B 92.89 340 P **P** 11 46 07.7 -0.7
comp=Z,4.8nm,1.0s,baz=101,slow=4.7,SNR=2.5
MATP Matopo 94.69 250 P **P** 11 46 17.5 -0.4
comp=Z,2.0nm,0.4s,baz=120,slow=2.1,SNR=7.8
ULM Lac du Bonnet 119.81 28 PKP **PKPdf** 11 51 44.6 -0.8
comp=Z,2.0nm,0.7s,baz=273,slow=5.3,SNR=3.4
ULM Lac du Bonnet 119.81 28 **PKiKP** 11 51 45.5 +0.1
TORD Torodi Ar. Bea 120.94 285 PKP **PKPdf** 11 51 47.7 -0.8
comp=Z,1.0nm,0.7s,baz=101,slow=1.9,SNR=4.9
TORD Torodi Ar. Bea 120.94 285 **PKPdf** 11 51 48.3 -0.2
SCHQ Schefferville 124.76 7 PKP **PKPdf** 11 51 54.7 0.0
comp=Z,6.1nm,0.9s,baz=68,slow=2.8,SNR=6.2
SCHQ Schefferville 124.76 7 **PKiKP** 11 51 55.0 -0.1

MOS ***07*** *11:37:11.0±0.9,36°.46N×70°.48E,h213km,mb4.7/33,Error ellipse: s-maj=6.1km s-min=3.8km az=79.8*
BJI ***07*** *11:37:11.5±0.0,36°.53N×70°.50E,h203km,mB4.7/21, mb4.4/33*
IDC ***07*** *11:37:12.5±0.6,36°.40N×70°.40E,h215km±5km,mb3.9/37, mb1 4.0/42,mb1mx3.9/66,mbtmp4.5/42,Error ellipse: s-maj=8.5km s-min=6.8km az=3.0*
NEIC ***07*** *11:37:12.0±2.0,36°.49N±0°.05×70°.39E±0°.08,h210km±5km, mb4.6/78,Error ellipse: s-maj=9.3km s-min=7.8km az=83.0*
NNC ***07*** *11:37:14.3±2.7,36°.84N×70°.28E,h197km±28km,mb3.8, mpv4.8,Error ellipse: s-maj=26.5km s-min=16.7km az=165.0*
ISC 07 11:37:11.7±0.4,36°.47N±0°.03×70°.42E±0°.03,h207km,±3km, h207km:pP-P,n347,σ1°.62/410,mb4.5/93,15C-19D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.23**	**211**	PN	**Pn**	**11 37 53.9**	**+0.5**
KBL				S	**S**	**11 38 24.8**	**-0.6**
KBL	**Kabul**	**2.23**	**211**		**Pn**	**11 37 53.9**	**+0.5**
KBL				S	**S**	**11 38 24.8**	**-0.6**
CHGR	**Chuyangaron**	**2.40**	**336**		**Pn**	**11 37 54.9**	**0.0**
CHGR				S	**S**	**11 38 25.9**	**-2.5**
GAR	**Garm**	**2.52**	**358**		**Pn**	**11 37 56.6**	**+0.3**
GAR				S	**S**	**11 38 29.2**	**-1.7**
CEP	**Cherat**	**2.91**	**155**	S	**S**	**11 38 39.0**	**+0.3**
BTK	**Batken**	**3.59**	**5**	PN	**Pn**	**11 38 10.0**	**+1.3**
BTK				S	**S**	**11 38 51.1**	**-2.1**
BTK	**Batken**	**3.59**	**5**		**Pn**	**11 38 10.0**	**+1.3**
BTK				S	**S**	**11 38 51.1**	**-2.1**
CHCP	**Chirah Chowk**	**3.65**	**140**	P	**Pn**	**11 38 11.0**	**+1.5**
NIL	**Nilore**	**3.65**	**140**	PN	**Pn**	**11 38 11.1**	**+1.6**
NIL				S	**S**	**11 38 54.0**	**-0.3**
NIL	**Nilore**	**3.65**	**140**		**Pn**	**11 38 11.1**	**+1.6**
NIL				S	**S**	**11 38 54.0**	**-0.3**
THW	**Thamme Wali**	**3.83**	**163**	P	**Pn**	**11 38 12.6**	**+0.9**
SAM	**Samarkand**	**4.19**	**321**	*e*S	**S**	**11 39 04.1**	**-2.2**
FRG	**Fergana**	**4.39**	**14**	P	**Pn**	**11 38 15.8**	**-2.7**
FRG				S	S	11 39 01.7	-9.1
ANR	**Andizhan**	**4.54**	**19**	S	**S**	**11 39 11.5**	**-2.6**
SARP	**Sargodha**	**4.91**	**157**	P	**Pn**	**11 38 25.2**	**+0.1**
TAS	**Tashkent**	**4.92**	**350**		**Pn**	**11 38 25.8**	**+0.6**
TAS				S	**S**	**11 39 19.8**	**-3.2**
TAS	**Tashkent**	**4.92**	**350**	*e*P	**Pn**	**11 38 26.3**	**+1.1**
TAS				*e*S	**S**	**11 39 20.6**	**-2.4**
CHRV	**Charvak**	**5.17**	**356**	*e*P	**Pn**	**11 38 28.9**	**+0.5**
CHRV				*e*S	**S**	**11 39 25.4**	**-3.4**
ARSB	**Arslanbob**	**5.24**	**22**		**Pn**	**11 38 29.2**	**-0.1**
ARSB				S	**S**	**11 39 24.8**	**-5.7**
KSH	**Kashi**	**5.33**	**54**	⇓*i*P	**Pn**	**11 38 26.3**	**-4.2**
KSH				sP		11 39 07.7	
KSH				S	S	11 39 22.1	-10
NUT	**Nurota**	**5.52**	**319**	*i* S	**S**	**11 39 31.8**	**-4.9**
IUG	**luzhnay**	**5.67**	**357**	*d* iPN	**Pn**	**11 38 35.2**	**+0.4**
IUG	**luzhnay**	**5.67**	**357**	⇓*i*P	**Pn**	**11 38 35.3**	**+0.4**
IUG				⇑*i*S	**S**	**11 39 36.6**	**-3.9**
CHM	**Chimkent**	**5.87**	**354**	*i* PN	**Pn**	**11 38 37.6**	**+0.3**
CHM	**Chimkent**	**5.87**	**354**	*i* P	**Pn**	**11 38 37.6**	**+0.3**
CHM				*e*S	**S**	**11 39 41.6**	**-3.3**
JBG	**Jabagly**	**5.94**	**1**	*e*PN	**Pn**	**11 38 39.7**	**+1.4**
JBG				*e*S	**S**	**11 39 45.0**	**-1.8**
JBG				pmax	pmax		
	comp=Z,22nm,0.6s						
JBG				smax	smax		
	comp=N,166nm,1.2s						
THN	**Thein Dam**	**5.95**	**131**	*e*P	**Pn**	**11 38 38.5**	**+0.2**
THN				*e*S	**S**	**11 39 45.0**	**-1.7**
AML	**Almayashu**	**6.19**	**23**	P	**Pn**	**11 38 41.8**	**0.0**
	SNR=336						
DHRM	**DHARAMSHALA**	**6.43**	**129**	⇑*i*P	**Pn**	**11 38 44.9**	**+0.1**
DHRM				*e*S	**S**	**11 39 56.2**	**-2.2**
DHRM				IAML		11 39 58.4	
	comp=E,2μm,0.7s						
DHRM				IAML		11 39 58.4	
	comp=N,970nm,0.1s						
UCH	**Uchtor**	**6.56**	**28**	P	**Pn**	**11 38 46.7**	**+0.1**
	SNR=102						
BRLS	**Borolday**	**6.56**	**356**	*i* S	S	11 39 49.9	-11
	comp=N,9.0nm,1.0s						
NRN	**Naryn**	**6.59**	**40**	PN	**Pn**	**11 38 45.4**	**-1.4**
NRN	**Naryn**	**6.59**	**40**		**Pn**	**11 38 45.4**	**-1.4**
NRN				S	**S**	**11 39 55.8**	**-6.4**
KK31	**Karatay Array**	**6.62**	**1**	PN	**Pn**	**11 38 46.8**	**-0.2**
KK31	**Karatay Array**	**6.62**	**1**		**Pn**	**11 38 46.6**	**-0.3**
KK31				S	**S**	**11 39 57.9**	**-4.7**
KK31	**Karatay Array**	**6.62**	**1**	⇓P	**Pn**	**11 38 46.8**	**-0.2**
	comp=N,17nm,0.4s,baz=175,slow=11,SNR=568						
KK31				⇓S	**S**	**11 39 56.7**	**-5.8**
	comp=N,49nm,0.5s,baz=191,slow=17,SNR=11						
KKAR	**Karatay Array**	**6.62**	**1**	PN	**Pn**	**11 38 46.6**	**-0.4**
KKAR	**Karatay Array**	**6.62**	**1**		**Pn**	**11 38 46.6**	**-0.4**
KKAR				S	**S**	**11 39 57.8**	**-4.7**
KKAR	**Karatay Array**	**6.62**	**1**	Pn	**Pn**	**11 38 46.5**	**-0.5**
KKAR				S	**S**	**11 39 57.6**	**-5.0**
EKS2	**Erkin-Say**	**6.70**	**22**	P	**Pn**	**11 38 48.4**	**+0.3**
	SNR=24						
KZA	**Kyzart**	**6.73**	**32**	P	**Pn**	**11 38 48.5**	**-0.3**
	SNR=57						
AAK	**Ala-Archa**	**6.91**	**26**	⇓*i*PN	**Pn**	**11 38 51.2**	**+0.3**
AAK				pmax	pmax		
	comp=Z,21nm,0.5s						
AAK	**Ala-Archa**	**6.91**	**26**	P	**Pn**	**11 38 51.1**	**+0.3**
	comp=Z,18nm,0.3s,baz=170,slow=5.9,SNR=147						
AAK				S	**S**	**11 40 06.0**	**-3.6**
	comp=Z,18nm,0.3s,baz=320,slow=22,SNR=21						
AAK	**Ala-Archa**	**6.91**	**26**	P	**Pn**	**11 38 50.9**	**+0.1**
	SNR=72						
AAK	**Ala-Archa**	**6.91**	**26**		**Pn**	**11 38 51.2**	**+0.3**
AAK					**S**	**11 40 07.2**	**-2.4**
AAK	**Ala-Archa**	**6.91**	**26**	⇓P	**Pn**	**11 38 51.0**	**+0.1**
	comp=Z,24nm,0.5s						
AAK				S	**S**	**11 40 06.7**	**-2.8**
	comp=Z,196nm,0.6s						
HRA	**Herat**	**7.00**	**255**		**Pn**	**11 38 52.2**	**+0.1**
KBK	**Karagaybulak**	**7.09**	**28**	P	**Pn**	**11 38 53.8**	**+0.6**
	SNR=40						
ULHL	**Ulahol**	**7.32**	**36**	P	**Pn**	**11 38 55.9**	**-0.2**
	SNR=28						
CHMS	**Chumysh**	**7.32**	**26**	P	**Pn**	**11 38 56.0**	**0.0**
	SNR=12						
USP	**Ospenovka**	**7.47**	**24**	P	**Pn**	**11 38 58.3**	**+0.3**
	SNR=30						
TKM2	**Tokmak 2**	**7.57**	**30**	PN	**Pn**	**11 38 59.4**	**0.0**
TKM2	**Tokmak 2**	**7.57**	**30**	P	**Pn**	**11 38 59.6**	**+0.2**
	SNR=183						
TKM2	**Tokmak 2**	**7.57**	**30**	⇑P	**Pn**	**11 38 59.5**	**0.0**
	comp=Z,74nm,0.5s						
TKM2				⇓S	**S**	**11 40 18.2**	**-7.0**
	comp=Z,97nm,0.9s						
SGDS	**Sogindy**	**7.68**	**24**	⇓*e*P	**Pn**	**11 38 59.9**	**-0.8**
	comp=Z,2.5nm,0.3s						
SGDS				*i* S	**S**	**11 40 24.0**	**-3.7**
	comp=Z,15nm,0.7s						
KDJ	**Kajisay**	**7.70**	**41**	PN	**Pn**	**11 39 00.9**	**-0.2**
KDJ	**Kajisay**	**7.70**	**41**		**Pn**	**11 39 00.9**	**-0.2**
KDJ					**S**	**11 40 23.7**	**-4.5**
SMLA	**Simla**	**7.74**	**132**	*e*P	**Pn**	**11 39 01.3**	**-0.2**
SMLA				*e*S	**S**	**11 40 26.1**	**-2.9**
SMLA				IAML		11 40 29.0	
	comp=E,559nm,0.7s						
SMLA				IAML		11 40 29.7	
	comp=N,511nm,0.7s						
TNSS	**Tian-Shan**	**8.26**	**35**	*i* PN	**Pn**	**11 39 08.4**	**-0.1**
TNSS				pmax	pmax		
	comp=Z,76nm,0.5s						
TNSS	**Tian-Shan**	**8.26**	**35**	*i* P	**Pn**	**11 39 08.5**	**-0.1**
	comp=Z,76nm,0.5s						
TNSS				*e*S	**S**	**11 40 39.6**	**-2.1**
MDOK	**Medeo**	**8.40**	**35**	*i* PN	**Pn**	**11 39 10.3**	**+0.2**
MDOK	**Medeo**	**8.40**	**35**	*i* P	**Pn**	**11 39 10.4**	**+0.2**
MDOK				*e*S	**S**	**11 40 40.7**	**-4.1**
MDOK	**Medeo**	**8.40**	**35**	⇑P	**Pn**	**11 39 10.4**	**+0.2**
	comp=Z,44nm,0.7s						
PRZ	**Przheval'sk**	**8.60**	**43**	PN	**Pn**	**11 39 13.4**	**+0.6**
PRZ	**Przheval'sk**	**8.60**	**43**		**Pn**	**11 39 13.4**	**+0.6**
DDI	**Dehra Dun**	**8.85**	**132**	*e*P	**Pn**	**11 39 16.5**	**+0.5**
CHKK	**Chushkaly**	**8.92**	**32**	*e*PN	**Pn**	**11 39 15.4**	**-1.3**
CHKK	**Chushkaly**	**8.92**	**32**	*e*P	**Pn**	**11 39 15.5**	**-1.3**
SATY	**Saty**	**9.00**	**41**	*c* iPN	**Pn**	**11 39 16.3**	**-1.5**
SATY				pmax	pmax		
	comp=Z,20nm,0.7s						
SATY	**Saty**	**9.00**	**41**	⇑*i*P	**Pn**	**11 39 16.4**	**-1.5**
	comp=Z,20nm,0.7s						
SATY				*e*S	**S**	**11 40 57.0**	**-2.0**
UZB	**Uzunbulak**	**9.39**	**42**	*d* iP	**Pn**	**11 39 22.7**	**-0.2**
UZB				pmax	pmax		
	comp=Z,7.0nm,0.5s						
UZB	**Uzunbulak**	**9.39**	**42**	⇓*i*P	**Pn**	**11 39 22.8**	**-0.2**
	comp=Z,6.8nm,0.5s						
KPKS	**Kokpek**	**9.43**	**40**	*de*P	**Pn**	**11 39 21.9**	**-1.5**
KPKS				pmax	pmax		
	comp=Z,18nm,0.5s						
KPKS	**Kokpek**	**9.43**	**40**	⇓*e*P	**Pn**	**11 39 22.0**	**-1.5**
	comp=Z,18nm,0.5s						
JOSI	**Joshimath**	**9.64**	**125**	*e*P	**Pn**	**11 39 26.1**	**-0.3**
JOSI				*ex*	x	11 41 07.8	
JOSI				IAML		11 41 18.9	
	comp=E,263nm,0.7s						
JOSI				IAML		11 41 19.4	
	comp=N,496nm,0.8s						
NDI	**New Delhi**	**9.65**	**142**	*e*P	**Pn**	**11 39 26.0**	**-0.3**
NDI				*ex*	x	11 41 05.5	
KUDL	**Kundal**	**9.76**	**147**	*e*P	Pn	11 39 21.0	-6.7
KUDL				*e*S	S	11 41 03.5	-14
PDGK	**Podgornoye**	**9.76**	**43**	P	**Pn**	**11 39 27.4**	**-0.3**
PDGK	**Podgornoye**	**9.76**	**43**	⇓P	**Pn**	**11 39 26.9**	**-0.9**
	comp=N,24nm,0.8s						
AYAN	**Aya Nagar**	**9.77**	**143**	*e*P	**Pn**	**11 39 27.1**	**-0.7**
AYAN				*e*S	**S**	**11 41 10.5**	**-6.9**
GEYT	**Alibeck**	**9.93**	**282**	P	**Pn**	**11 39 27.8**	**-2.0**
	comp=N,13nm,0.3s,baz=105,slow=11,SNR=122						
GEYT				S	**S**	**11 41 15.6**	**-5.4**
	comp=N,1.9nm,0.3s,baz=104,slow=30,SNR=2.8						
GEYT	**Alibeck**	**9.93**	**282**		**Pn**	**11 39 27.0**	**-2.8**
GEYT					**S**	**11 41 15.4**	**-5.6**
GYA0B	**ALIBECK ARRAY**	**9.93**	**282**		**Pn**	**11 39 27.7**	**-2.1**
GYA0B				S	**S**	**11 41 18.6**	**-2.5**
GYA0B	**ALIBECK ARRAY**	**9.93**	**282**	⇓P	**Pn**	**11 39 27.7**	**-2.1**
SONA	**Sohna**	**9.94**	**144**	*ex*	**Pn**	**11 39 31.7**	**+1.6**
SONA				*e*S	S	11 41 11.9	-10
MAKZ	**Makanchi**	**13.45**	**36**	P	**Pn**	**11 40 14.2**	**-0.2**
MAKZ	**Makanchi**	**13.45**	**36**		**Pn**	**11 40 14.2**	**-0.2**
MAKZ	**Makanchi**	**13.45**	**36**	⇓P	**Pn**	**11 40 14.1**	**-0.2**
	comp=N,29nm,0.7s						
MK31	**Makanchi Array**	**13.59**	**37**	P	**Pn**	**11 40 16.4**	**+0.3**
MK31	**Makanchi Array**	**13.59**	**37**		**Pn**	**11 40 16.4**	**+0.3**
MK31	**Makanchi Array**	**13.59**	**37**	P	**Pn**	**11 40 16.0**	**-0.1**
	comp=N,3.6nm,0.5s,baz=222,slow=12,SNR=45						
MKAR	**Makanchi Array**	**13.59**	**37**	P	**Pn**	**11 40 15.9**	**-0.2**
MKAR				S	**S**	**11 42 46.4**	**-0.4**
MKAR	**Makanchi Array**	**13.59**	**37**	P	**Pn**	**11 40 16.3**	**+0.2**
	comp=N,1.1nm,0.3s,baz=221,slow=17,SNR=36						
MKAR				S	**S**	**11 42 45.4**	**-1.4**
	baz=242,slow=9.3,SNR=1.9						
MKAR	**Makanchi Array**	**13.59**	**37**	Pn	**Pn**	**11 40 15.9**	**-0.2**
MKAR				S	**S**	**11 42 46.4**	**-0.4**
BRZS	**Berezniki**	**13.60**	**6**	*i* P	**Pn**	**11 40 15.8**	**-0.4**
BRZS				*e*S	**S**	**11 42 48.2**	**+1.2**
BRZS				pmax	pmax		
	comp=Z,29nm,0.5s						
BRZS				smax	smax		
	comp=N,14nm,1.2s						
BRZS	**Berezniki**	**13.60**	**6**	*i* P	**Pn**	**11 40 15.8**	**-0.4**
	comp=N,29nm,0.5s						
BRZS				*e*S	**S**	**11 42 48.3**	**+1.2**
	comp=N,14nm,1.2s						
DANN	**Dangsing**	**13.86**	**122**	*e*P	**Pn**	**11 40 18.7**	**-1.3**
	comp=N,26nm,0.5s						
KOLN	**Koldanda**	**14.13**	**124**	*e*P	**Pn**	**11 40 22.0**	**-1.1**
	comp=N,86nm,0.5s						
BHPL	**Bhopal**	**14.51**	**153**	*e*P	**P**	**11 40 29.0**	**+0.2**
BHPL				*e*S	**S**	**11 43 00.2**	**-8.4**
BHPL				IAML		11 43 18.8	
	comp=N,33nm,0.2s						
BHPL				IAML		11 43 19.9	
	comp=E,33nm,0.5s						
GKN	**Gorkha**	**14.68**	**121**	*e*P	**Pn**	**11 40 29.2**	**-0.7**
	comp=E,376nm,0.5s						
AB31	**Akbulak array**	**14.89**	**332**	*e*P	**Pn**	**11 40 30.7**	**-1.3**
AB31	**Akbulak array**	**14.89**	**332**	P	**Pn**	**11 40 30.8**	**-1.3**
	comp=E,18nm,0.6s,baz=146,slow=11,SNR=486						
AB31				⇑S	**S**	**11 43 11.0**	**-5.9**
	comp=E,8.6nm,0.5s						
ABKAR	**Akbulak array**	**14.89**	**332**	P	**Pn**	**11 40 30.8**	**-1.2**
ABKAR	**Akbulak array**	**14.89**	**332**		**Pn**	**11 40 30.9**	**-1.2**
WMQ	**Urumqi**	**15.09**	**56**	*e*P	**P**	**11 40 35.0**	**-0.1**
WMQ				sP	sP	11 41 31.1	-5.5
WMQ				S	**S**	**11 43 20.1**	**-1.8**
WMQ				pmax	pmax		
	comp=E,27nm,0.9s						
WMQ				pmax	pmax		
	comp=E,200nm,5.5s						
WMQ				LR	LR		
	comp=E,520nm,29.3s						
WMQ				LR	LR		
	comp=E,730nm,29.0s						
WMQ				LR	LR		
	comp=E,130nm,22.3s						
WMQ	**Urumqi**	**15.09**	**56**	P	**P**	**11 40 35.3**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,29nm,0.8s						
WMQ	**Urumqi**	**15.09**	**56**		**P**	**11 40 35.3**	**+0.2**
DMN	**Daman**	**15.25**	**121**	*e*P	**Pn**	**11 40 36.8**	**-0.2**
	comp=Z,174nm,0.6s						
KKN	**Kakani**	**15.26**	**120**	*e*P	**Pn**	**11 40 36.8**	**-0.2**
	comp=Z,282nm,0.5s						
KURBB	**Kurchatov Arra**	**15.30**	**20**	P	**Pn**	**11 40 36.4**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=212,slow=9.7,SNR=18						
ZSN	**Zaisan**	**15.32**	**40**	*i* P	**Pn**	**11 40 36.1**	**-1.3**
ZSN				*e*S	**S**	**11 43 26.0**	**-1.0**
ZSN	**Zaisan**	**15.32**	**40**	*i* P	**Pn**	**11 40 36.2**	**-1.2**
ZSN				*e*S	**S**	**11 43 26.1**	**-1.0**
KURK	**Kurchatov**	**15.41**	**20**	P	**Pn**	**11 40 37.6**	**-0.7**
KURK	**Kurchatov**	**15.41**	**20**	P	**Pn**	**11 40 38.0**	**-0.3**
KURK				IAmb	IAmb	11 40 41.1	
	comp=Z,13nm,0.8s						
KURK	**Kurchatov**	**15.41**	**20**	⇓P	**Pn**	**11 40 37.6**	**-0.7**
	comp=Z,13nm,0.8s						
PKI	**Pulchoki**	**15.49**	**121**	*e*P	**P**	**11 40 39.5**	**-0.3**
	comp=Z,47nm,0.7s						
GUN	**Gumba**	**15.61**	**119**	*e*P	**P**	**11 40 40.8**	**-0.4**
	comp=Z,470nm,0.8s						
JIRN	**Jiri**	**15.98**	**119**	*e*P	**Pn**	**11 40 46.0**	**+0.2**
	comp=Z,763nm,0.6s						
BVAR	**Borovoye Array**	**16.55**	**360**	P	**Pn**	**11 40 52.1**	**+0.1**
	comp=Z,3.9nm,0.3s,baz=164,slow=9.4,SNR=40						
AKTO	**Aktyubinsk**	**16.58**	**331**	P	**Pn**	**11 40 52.5**	**+0.1**
	comp=Z,2.7nm,0.3s,baz=149,slow=11,SNR=68						
AKTO				S	**S**	**11 43 50.3**	**-3.6**
	comp=Z,0.4nm,0.3s,baz=348,slow=19,SNR=3.1						
AKTO	**Aktyubinsk**	**16.58**	**331**	⇑P	**Pn**	**11 40 52.3**	**0.0**
	comp=Z,31nm,1.0s						
WSAR	**Wadi Sarin**	**16.67**	**221**	P	**Pn**	**11 40 55.4**	**+1.6**
	comp=Z,0.7nm,0.3s,baz=8.1,slow=7.1,SNR=5.1						
RAMN	**Ramite**	**16.70**	**120**	*e*P	**Pn**	**11 40 54.1**	**-0.2**
	comp=Z,251nm,0.6s						
UOSS	**Minazif**	**16.76**	**231**	P	**P**	**11 40 53.7**	**+0.2**
UOSS				IAmb	IAmb	11 41 01.5	
	comp=Z,26nm,1.1s						
ASHO	**Ashiyiah**	**17.04**	**230**	P	**Pn**	**11 40 58.3**	**+0.2**
	SNR=5.6						
TAPN	**Taplejung**	**17.25**	**117**	*e*P	**Pn**	**11 41 01.3**	**+0.5**
	comp=Z,187nm,0.6s						
ODAN	**Odare**	**17.31**	**119**	*e*P	**Pn**	**11 41 01.9**	**+0.4**
	comp=Z,223nm,0.7s						
POO	**Poona**	**18.13**	**170**	*ex*	**Pn**	**11 41 14.5**	**+3.6**
POO				IAmb	IAmb	11 45 37.8	
	comp=Z,24nm,0.5s						
AKT	**Akhty**	**18.32**	**293**	*e*P	**Pn**	**11 41 12.3**	**-0.8**
AKT				*e*S	**S**	**11 44 30.5**	**+1.5**
AKT				pmax	pmax		
	comp=Z,18nm,0.5s						
BOK	**Bokaro**	**18.37**	**129**	*ex*	**P**	**11 41 13.5**	**+2.5**
LSA	**Lhasa**	**18.62**	**105**	P	**P**	**11 41 13.9**	**-

comp=Z,4.0nm,0.7s
WHFO Wadi Hawf 23.62 223 P P 11 42 04.2 0.0
ABTO Aybut 24.34 223 P P 11 42 11.0 +0.3
SNR=7.9
RAYN Ar Rayn 25.06 246 P P 11 42 16.0 -1.2
RAYN pmax pmax
comp=Z,7.0nm,1.1s
RAYN Ar Rayn 25.06 246 P P 11 42 16.0 -1.2
KIRV Kirov 26.06 335 P P 11 42 27.1 +1.4
comp=Z,29nm,0.6s,baz=47,slow=1.3,SNR=12
VSR Storozhevoye 26.68 313 *e*P **P 11 42 31.3 -0.1**
VSR *e**PP **pP 11 43 12.7 -0.3**
VSR pmax pmax
comp=Z,10.0nm,2.0s
LZH Lanzhou 26.87 81 *e*P **P 11 42 34.7 +1.3**
LZH pP pP 11 43 12.4 -4.0
LZH pmax pmax
comp=Z,19nm,1.0s
LPSR Galich'ya Gora 27.35 316 *e*P **P 11 42 40.9 +3.6**
LPSR *e**PP **pP 11 43 18.1 -0.9**
LPSR pmax pmax
comp=Z,9.0nm,0.9s
ZAK Zakamensk 27.36 49 *e*P **P 11 42 38.8 +1.3**
ZAK pmax pmax
comp=Z,4.0nm,1.0s
TLY Talaya 28.00 47 P **P 11 42 44.3 +1.2**
TLY pmax pmax
comp=Z,9.0nm,0.5s
TLY Talaya 28.00 47 P **P 11 42 44.9 +1.8**
comp=Z,8.5nm,0.5s,baz=238,slow=6.6,SNR=12
TLY Talaya 28.00 47 P **P 11 42 44.3 +1.2**
TLY IAmb IAmb 11 42 46.5
comp=Z,9.5nm,0.5s
CD2 Chengdu 28.20 92 P **P 11 42 45.2 +0.1**
CD2 pmax pmax
comp=Z,20nm,0.5s
SONM Songino Array 28.73 55 P **P 11 42 51.5 +1.7**
comp=Z,4.0nm,0.7s,baz=264,slow=9.4,SNR=16
SONM Songino Array 28.73 55 P **P 11 42 50.3 +0.5**
BR131 Keskin Array S 29.00 288 *i* P **P 11 42 53.6 +1.3**
BR131 Keskin Array S 29.00 288 P **P 11 42 51.9 -0.4**
BRTR Keskin Array B 29.00 288 *ce*P **P 11 42 54.5 +2.2**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 29.00 288 P **P 11 42 52.8 +0.5**
comp=Z,0.8nm,0.7s,baz=106,slow=9.1,SNR=4.7
BRTR Keskin Array B 29.00 288 P **P 11 42 50.1 -2.2**
ULN Ulaanbaatar 29.17 56 *i* P **P 11 42 54.9 +1.2**
ULN pmax pmax
comp=Z,4.0nm,0.5s
ULN Ulaanbaatar 29.17 56 P **P 11 42 54.9 +1.2**
ULN IAmb IAmb 11 42 56.2
comp=Z,4.5nm,0.6s
PRGR Permogore 29.61 336 *e*P **P 11 42 57.1 0.0**
PRGR pmax pmax
comp=Z,25nm,0.7s
OBN Obninsk 29.66 320 *e*P **P 11 42 58.1 +0.5**
OBN 11 45 52.0
OBN pmax pmax
comp=Z,7.0nm,0.9s
KMI Kunming 29.84 103 P **P 11 43 02.3 +2.4**
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI pmax pmax
comp=Z,160nm,4.5s
CMAR Chiang Mai Arr 30.85 118 P **P 11 43 08.9 +0.4**
comp=Z,0.9nm,0.4s,baz=308,slow=7.5,SNR=8.7
CMAR pP **pP 11 43 51.4 -0.5**
comp=Z,1.6nm,0.8s,baz=307,slow=9.7,SNR=2.4
CMAR Chiang Mai Arr 30.85 118 P **P 11 43 09.1 +0.6**
HHC Hu-ho-hao-te 32.21 69 *e*P **P 11 43 22.0 +1.6**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,77nm,7.0s
AKASG Malin Array Be 32.60 309 P **P 11 43 23.5 0.0**
comp=Z,1.0nm,0.5s,baz=80,slow=7.2,SNR=9.6
AKASG pP **pP 11 44 07.8 +1.9**
comp=Z,1.5nm,0.5s,baz=85,slow=7.1,SNR=3.9
AKASG PcP **PcP 11 46 03.8 -0.7**
comp=Z,0.8nm,0.5s,baz=74,slow=3.6,SNR=4.3
TMCR Tamitsa 33.88 335 *e*P **P 11 43 35.1 +0.8**
TMCR pmax pmax
comp=Z,24nm,0.6s
MLR Muntele Rosu 34.39 299 P **P 11 43 39.5 +0.3**
comp=Z,2.0nm,0.8s,baz=69,slow=8.6,SNR=4.6
MLR Muntele Rosu 34.39 299 P **P 11 43 37.9 -1.3**
BURAR Bucovina Array 34.91 303 P **P 11 43 41.4 -2.2**
BUR08 Bucovina Ar. S 34.92 303 P **P 11 43 43.0 -0.7**
BOD Bodaibo 35.66 39 *e*P **P 11 43 49.7 0.0**
BOD pmax pmax
comp=Z,13nm,1.7s
WHN Wuhan 36.86 86 P **P 11 44 00.4 +0.2**
KOLS Kolonicke sedl 36.91 305 *e*P **P 11 44 02.3 +1.9**
KOLS Kolonicke sedl 36.91 305 *e*P **P 11 44 02.3 +1.9**
FIA1 FINESS Array S 37.25 326 P **P 11 44 03.2 +0.2**
FIA1 IAmb IAmb 11 44 04.8
comp=Z,11nm,0.8s
FINES FINESS Array B 37.25 326 P **P 11 44 03.7 +0.7**
comp=Z,8.3nm,0.7s,baz=122,slow=9.8,SNR=13
FINES pP **pP 11 44 48.8 +2.5**
comp=Z,4.8nm,0.8s,baz=120,slow=8.5,SNR=2.8
FINES FINESS Array B 37.25 326 P **P 11 44 03.5 +0.5**
LVZ Lovozero 37.31 339 *ce*P **P 11 44 06.1 +2.5**
LVZ pmax pmax
comp=Z,81nm,2.5s
LVZ Lovozero 37.31 339 P **P 11 44 04.4 +0.8**
VYHS Vyhne 39.19 304 *e*P **P 11 44 20.7 +1.2**
VYHS Vyhne 39.19 304 *e*P **P 11 44 20.7 +1.2**
NJ2 Nanjing 39.94 82 *e*P **P 11 44 26.3 +0.5**
NJ2 pmax pmax
comp=Z,14nm,0.5s
ARCES ARCESS Array B 40.99 338 P **P 11 44 35.1 +1.2**
comp=Z,16nm,0.6s,baz=112,slow=8.0,SNR=62
ARCES ARCESS Array B 40.99 338 P **P 11 44 34.9 +0.9**
ARE0 ARCESS Array S 40.99 338 *e*P **P 11 44 35.1 +1.2**
ARE0 ARCESS Array S 40.99 338 P **P 11 44 34.9 +0.9**
KTK1 Kautokeino 41.45 336 *e*P **P 11 44 38.6 +0.9**
CN2 Changchun 42.03 62 *e*P **P 11 44 45.3 +2.6**
HAMF Hammerfest 42.08 339 *e*P **P 11 44 44.4 +1.7**
GERES GERESS Array B 42.57 305 P **P 11 44 47.3 +0.2**
comp=Z,0.3nm,0.6s,baz=74,slow=7.2,SNR=3.5
HFS Hagfors 42.80 322 P **P 11 44 49.0 +0.4**
comp=Z,7.2nm,0.8s,baz=103,slow=11,SNR=10
HFS pP **pP 11 45 34.1 +1.2**
comp=Z,4.6nm,0.5s,baz=98,slow=11,SNR=3.1
TRO Tromso 43.11 336 *e*P **P 11 44 51.1 +0.2**
MOR8 Moi Rana 43.61 331 *e*P **P 11 44 55.4 +0.3**
DGAR Diego Garcia 43.69 177 P **P 11 44 54.5 -1.8**
DGAR pmax pmax
comp=Z,47nm,1.1s
DGAR Diego Garcia 43.69 177 P **P 11 44 54.5 -1.8**
STEI Steigen 43.79 333 *e*P **P 11 44 57.2 +0.8**
NC405 NORSAR Array S 43.89 323 P **P 11 44 56.2 -1.2**
NC602 NORSAR Array S 43.93 323 *e*P **P 11 44 58.1 +0.4**
NC602 NORSAR Array S 43.93 323 P **P 11 44 58.4 +0.7**
NC303 NORSAR Array S 44.07 323 P **P 11 44 59.2 +0.4**
NB2 NORSAR Subarra 44.12 323 P **P 11 44 59.4 +0.1**
comp=Z,16nm,1.1s,baz=98,slow=7.9
NB2 NORSAR Subarra 44.12 323 P **P 11 44 59.4 +0.1**
baz=98,slow=7.9
NOA NORSAR Array B 44.12 323 P **P 11 44 59.1 -0.1**
comp=Z,7.7nm,0.8s,baz=97,slow=7.8,SNR=16
NOA pP **pP 11 45 44.0 +0.2**
comp=Z,2.5nm,0.8s,baz=97,slow=8.1,SNR=3.0
KONS Konsvik 44.21 331 *e*P **P 11 44 59.8 0.0**
YAK Yakutsk 44.26 35 *e*P **P 11 45 00.3 +0.1**
YAK *e* 11 45 46.5
YAK pmax pmax
comp=Z,29nm,0.7s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK Yakutsk 44.26 35 P **P 11 45 00.4 +0.2**
comp=N,24nm,0.7s,baz=229,slow=0.8,SNR=19
YAK Yakutsk 44.26 35 P **P 11 45 00.6 +0.4**
NAO01 NORSAR Array S 44.26 323 P **P 11 44 59.9 -0.4**
NAO01 IAmb IAmb 11 45 02.8
comp=Z,40nm,1.3s
LOF Lofoten 44.46 333 *e*P **P 11 45 02.2 +0.5**
HOPEN Hopen 44.91 346 *e*P **P 11 45 07.2 +1.9**
KSRS Korea Array 45.33 71 P **P 11 45 09.6 +0.5**
comp=Z,1.5nm,0.7s,baz=277,slow=6.6,SNR=7.0
KSRS pP **pP 11 45 55.8 +0.8**
comp=Z,0.8nm,0.6s,baz=295,slow=9.1,SNR=2.6
KSRS PcP **PcP 11 46 44.2 -0.7**
comp=Z,1.5nm,0.7s,baz=286,slow=5.0,SNR=6.1
DAVOX Davos/Dischmat 45.38 303 P **P 11 45 09.8 +0.2**
comp=Z,2.6nm,0.8s,baz=33,slow=4.8,SNR=4.7
TIXI Tiksi 45.97 22 P **P 11 45 14.4 +0.8**
comp=Z,7.0nm,0.3s,baz=180,slow=24,SNR=19
TIXI pP **pP 11 45 58.9 -0.3**
comp=Z,2.4nm,0.3s,baz=281,slow=5.3,SNR=1.5
TIXI Tiksi 45.97 22 P **P 11 45 14.3 +0.8**
USRK Ussuriysk Ar. 46.59 61 P **P 11 45 19.7 +1.0**
USRK Ussuriysk Ar. 46.59 61 P **P 11 45 19.4 +0.6**
comp=Z,2.2nm,0.8s,baz=295,slow=6.2,SNR=4.5
USRK Ussuriysk Ar. 46.59 61 P **P 11 45 19.7 +1.0**
HSPB Hornsund (broa 47.04 345 *e*P **P 11 45 23.1 +1.2**
SENIN Lac Senin/Sane 47.21 303 P **P 11 45 24.1 +0.2**
WLF Walferdange 47.37 307 P **P 11 45 24.4 -0.3**
WLF pmax pmax
comp=Z,32nm,1.3s
WLF Walferdange 47.37 307 P **P 11 45 24.4 -0.3**
WLF IAmb IAmb 11 45 38.6
comp=Z,32nm,1.3s
SPA0 Spitsbergen Ar 47.41 347 *e*P **P 11 45 26.4 +1.7**
SPA0 Spitsbergen Ar 47.41 347 P **P 11 45 26.7 +2.0**
SPA0 IAmb IAmb 11 45 33.6
comp=Z,34nm,1.1s
KMBO Kilima Mbogo 48.47 227 *i* P **P 11 45 35.0 +1.1**
KMBO pmax pmax
comp=Z,4.0nm,0.6s
KMBO Kilima Mbogo 48.47 227 P **P 11 45 34.7 +0.8**
comp=Z,3.9nm,0.6s,baz=34,slow=12,SNR=12
KMBO Kilima Mbogo 48.47 227 P **P 11 45 33.1 -0.7**
KBS Kingsbay 48.53 347 P **P 11 45 33.6 +0.4**
KBS pmax pmax
comp=Z,35nm,1.1s
KBS Kingsbay 48.53 347 *e*P **P 11 45 33.8 +0.5**
KBS Kingsbay 48.53 347 P **P 11 45 33.6 +0.4**
KBS IAmb IAmb 11 45 36.2
comp=Z,35nm,1.1s
KEST Kesra 48.60 288 P **P 11 45 34.8 +0.3**
EKA Eskdalemuir Ar 51.98 316 P **P 11 45 59.3 -0.1**
comp=Z,5.2nm,0.8s,baz=78,slow=7.3,SNR=4.0
YSS Yuzh-Sakhalins 53.22 55 *e*P **P 11 46 09.3 +0.8**
YSS pmax pmax
comp=Z,30nm,0.8s
YSS Yuzh-Sakhalins 53.22 55 P **P 11 46 07.4 -1.1**
MJB9 Matsu-Tunnel 53.39 68 P **P 11 46 09.6 -0.4**
MAJO Matsushiro 53.39 68 P **P 11 46 09.8 -0.3**
MAJO pmax pmax
comp=Z,5.0nm,0.8s
MAJO Matsushiro 53.39 68 P **P 11 46 09.8 -0.3**
MAT Matsushiro 53.39 68 P **P 11 46 09.5 -0.5**
MJAR Matsushiro Arr 53.40 68 P **P 11 46 10.4 +0.4**
comp=Z,2.9nm,0.8s,baz=314,slow=9.4,SNR=6.4
MJAR Matsushiro Arr 53.40 68 P **P 11 46 09.9 -0.1**
ASAJ Asahikawa 53.96 58 P **P 11 46 14.5 +0.5**
baz=180,slow=15
JKA Kamikawa-asahi 53.97 58 P **P 11 46 14.5 +0.4**
DAG Danmarks Havn 54.62 344 *i* P **P 11 46 19.0 +0.7**
DAG pmax pmax
comp=Z,10.0nm,0.8s
DAG Danmarks Havn 54.62 344 *i* P **P 11 46 19.0 +0.7**
comp=Z,9.8nm,0.8s
MA2 Magadan 54.67 38 P **P 11 46 18.0 -0.9**
MA2 pmax pmax
comp=Z,29nm,1.3s
MA2 Magadan 54.67 38 P **P 11 46 19.1 +0.2**
comp=Z,5.9nm,0.7s,baz=312,slow=14,SNR=3.7
MA2 Magadan 54.67 38 P **P 11 46 18.0 -0.9**
MA2 IAmb IAmb 11 46 22.7
comp=Z,29nm,1.3s
SEY Seymchan 54.70 34 P **P 11 46 20.1 +1.1**
comp=Z,6.9nm,0.7s,baz=267,slow=7.4,SNR=17
ESDC Sonseca Array 57.06 298 P **P 11 46 36.5 +0.3**
comp=Z,0.8nm,0.6s,baz=71,slow=8.3,SNR=4.9
BILL Bilibino 58.84 26 *ie*P **P 11 46 49.3 +1.3**
BILL *e* 11 47 36.8
BILL *i* 11 49 01.2
BILL pmax pmax
comp=Z,11nm,1.7s
BILL Bilibino 58.84 26 P **P 11 46 48.9 +0.9**
BILL IAmb IAmb 11 46 50.4
comp=Z,7.9nm,0.9s
PEA0B Petropavlovsk- 60.31 44 P **P 11 46 58.6 +0.3**
PEA0B pmax pmax
comp=Z,40nm,1.4s
PEA0B Petropavlovsk- 60.31 44 P **P 11 46 58.6 +0.3**
PETK Petropavlovsk- 60.31 44 P **P 11 46 58.5 +0.2**
comp=Z,2.9nm,0.7s,baz=257,slow=14,SNR=4.8
SUMG Summit 60.94 341 P **P 11 47 04.1 +1.4**
SUMG pmax pmax
comp=Z,14nm,1.0s
SUMG Summit 60.94 341 *i* P **P 11 47 03.0 +0.3**
comp=Z,39nm,1.0s
SUMG Summit 60.94 341 P **P 11 47 04.1 +1.4**
SUMG IAmb IAmb 11 47 05.7
comp=Z,14nm,1.0s
TOA0 Torodi Ar. Sit 65.25 268 P **P 11 47 30.4 -1.1**
TOA0 IAmb IAmb 11 47 32.4
comp=Z,4.4nm,0.7s
TOA0 Torodi Ar. Sit 65.25 268 P **P 11 47 30.0 -1.4**
SNR=8.4
TORD Torodi Ar. Bea 65.25 268 P **P 11 47 30.1 -1.3**
comp=Z,4.4nm,0.6s,baz=48,slow=5.9,SNR=32
TORD Torodi Ar. Bea 65.25 268 P **P 11 47 30.1 -1.3**
ANM Nome 70.23 22 P **P 11 48 02.8 +1.0**
ANM pmax pmax
comp=Z,15nm,1.3s
ANM Nome 70.23 22 P **P 11 48 02.8 +1.0**
TOLK Toolik Lake Re 71.06 14 P **P 11 48 07.3 +0.6**
COLD Coldfoot 72.12 15 P **P 11 48 13.9 +0.9**
COLD IAmb IAmb 11 48 15.1
comp=Z,8.0nm,1.0s
IMAR Indian Mountai 72.34 17 P **P 11 48 14.4 0.0**
BMAR Burnt Mountain 73.08 13 P **P 11 48 20.5 +1.8**
FYU Fort Yukon 73.71 14 P **P 11 48 23.9 +1.6**
FYU IAmb IAmb 11 48 25.0
comp=Z,17nm,1.0s
MLY Manley 73.84 17 P **P 11 48 23.6 +0.4**
MLY IAmb IAmb 11 48 25.0
comp=Z,9.3nm,1.1s
INK Inuvik 74.00 9 P **P 11 48 24.7 +0.7**
INK pmax pmax
comp=Z,15nm,1.1s
INK Inuvik 74.00 9 P **P 11 48 24.6 +0.7**
INK IAmb IAmb 11 48 26.1
comp=Z,15nm,1.1s
PSAC1 Pilbara Seismi 74.18 133 P **P 11 48 25.4 -0.3**
PSAC1 IAmb IAmb 11 48 29.9
comp=Z,13nm,1.2s
DBIC Dimbokro 74.23 267 P **P 11 48 25.4 -0.8**
comp=Z,4.8nm,0.5s,baz=29,slow=6.3,SNR=12
DBIC Dimbokro 74.23 267 P **P 11 48 25.1 -1.1**
DBIC IAmb IAmb 11 48 27.3
comp=Z,6.0nm,0.7s
KIC Kosan Boka 74.32 266 *e*P **P 11 48 25.7 -1.1**
comp=Z,5.7nm,0.6s
LBTB Lobatse 74.35 222 P **P 11 48 27.1 +0.4**
LBTB pmax pmax
comp=Z,12nm,0.7s
LBTB Lobatse 74.35 222 P **P 11 48 27.1 +0.4**
LBTB IAmb IAmb 11 48 28.4
comp=Z,12nm,0.7s
TIC Toumodi 74.38 267 *e*P **P 11 48 25.9 -1.2**
comp=Z,2.8nm,0.3s
MDM Murphy Dome 74.47 16 P **P 11 48 27.4 +0.5**
MDM IAmb IAmb 11 48 29.1
comp=Z,11nm,0.9s
BPAW Bear Paw Mtn. 74.56 18 P **P 11 48 27.7 +0.4**
PRP Porcupine Dome 74.57 15 P **P 11 48 27.8 +0.3**
COLA College 74.63 16 P **P 11 48 27.3 -0.3**
COLA pmax pmax
comp=Z,17nm,0.9s
COLA College 74.63 16 P **P 11 48 27.3 -0.3**
LIC Lamto 74.63 266 *e*P **P 11 48 27.4 -1.1**
comp=Z,8.8nm,0.6s
BWN Browne 74.86 17 P **P 11 48 28.2 -0.8**
IL31 74.93 16 P **P 11 48 29.2 -0.2**
ILAR Eielson Array 74.93 16 P **P 11 48 29.4 -0.1**
comp=Z,5.2nm,1.0s,baz=319,slow=4.5,SNR=34
ILAR Eielson Array 74.93 16 P **P 11 48 29.0 -0.4**
KTH Kantishna Hill 75.03 18 P **P 11 48 30.4 +0.3**
KTH IAmb IAmb 11 48 32.1
comp=Z,10nm,0.9s
FITZ Fitzroy Crossi 75.25 126 P **P 11 48 31.7 -0.2**
comp=Z,2.7nm,0.8s,baz=356,slow=5.0,SNR=5.9
FITZ Fitzroy Crossi 75.25 126 P **P 11 48 30.4 -1.4**
KNRA Kununurra 75.60 122 P **P 11 48 33.7 -0.2**
SCRK Sand Creek 76.24 15 P **P 11 48 37.4 +0.4**
SCRK IAmb IAmb 11 48 38.7
comp=Z,7.9nm,0.9s
DHY Denali Highway 76.29 17 P **P 11 48 37.4 +0.1**
DHY IAmb IAmb 11 48 38.9
comp=Z,8.7nm,0.8s
DOT Dot Lake 76.52 15 P **P 11 48 38.8 +0.4**
PAX Paxson 76.81 16 P **P 11 48 39.7 -0.5**
PAX pmax pmax
comp=Z,10.0nm,0.9s
PAX Paxson 76.81 16 P **P 11 48 39.7 -0.5**
PAX IAmb IAmb 11 48 41.5
comp=Z,10nm,0.9s
SML Sawmill 77.15 18 P **P 11 48 42.3 +0.2**
SCM Sheep Creek Mo 77.37 17 P **P 11 48 43.5 +0.2**
SCM pmax pmax
comp=Z,13nm,0.9s
SCM Sheep Creek Mo 77.37 17 P **P 11 48 43.5 +0.2**
SCM IAmb IAmb 11 48 45.0
comp=Z,13nm,0.9s
BOSA Boshof 77.43 220 P **P 11 48 44.3 +0.2**
BOSA pmax pmax
comp=Z,17nm,1.1s
BOSA Boshof 77.43 220 P **P 11 48 44.2 +0.2**
comp=Z,5.9nm,0.7s,baz=51,slow=4.8,SNR=11
BOSA Boshof 77.43 220 P **P 11 48 44.3 +0.2**
BOSA IAmb IAmb 11 48 45.1
comp=Z,17nm,1.1s
EYAK Cordova Ski Ar 78.87 17 P **P 11 48 52.9 +1.4**
EYAK IAmb IAmb 11 48 54.4
comp=Z,17nm,1.1s
BALM Baldy 79.22 16 P **P 11 48 54.6 +1.2**
CRQM Cirque 79.29 16 P **P 11 48 54.9 +0.9**
KDAK Kodiak Island 79.40 22 P **P 11 48 54.8 +0.5**
KDAK Kodiak Island 79.40 22 P **P 11 48 54.8 +0.5**
CTGM Chitina Glacie 79.50 15 P **P 11 48 56.3 +1.3**
CTGM IAmb IAmb 11 48 57.0
comp=Z,12nm,0.9s
MESA MESA 80.07 16 P **P 11 48 58.8 +0.6**
HYT Haines Junctio 80.39 13 P **P 11 49 00.1 +0.3**
HYT IAmb IAmb 11 49 01.9
comp=Z,6.8nm,0.8s
WHY Whitehorse 81.01 12 P **P 11 49 03.5 +0.4**
WHY IAmb IAmb 11 49 03.7
comp=Z,6.5nm,0.9s
YKW3 Yellowknife Ar 81.22 2 P **P 11 49 04.9 +0.9**
YKW3 IAmb IAmb 11 49 05.4
comp=Z,9.6nm,1.0s
YKA Yellowknife Ar 81.29 2 P **P 11 49 05.0 +0.7**
YKA Yellowknife Ar 81.29 2 P **P 11 49 05.0 +0.7**
comp=Z,4.1nm,0.6s,baz=348,slow=5.4,SNR=72
YKA Yellowknife Ar 81.29 2 P **P 11 49 04.4 +0.1**
SCHQ Schefferville 81.94 337 P **P 11 49 08.2 +0.3**
comp=Z,5.8nm,0.8s,baz=346,slow=0.8,SNR=3.8
SCHQ Schefferville 81.94 337 P **P 11 49 08.0 +0.1**
SCHQ IAmb IAmb 11 49 24.6
comp=Z,15nm,1.2s
WRA Warramunga Arr 82.37 122 P **P 11 49 09.2 -1.4**
comp=Z,6.2nm,0.8s,baz=321,slow=4.7,SNR=48
WRA pP **pP 11 50 03.3 +1.0**
comp=Z,1.9nm,0.9s,baz=325,slow=4.9,SNR=2.9
WRA Warramunga Arr 82.37 122 P **P 11 49 09.4 -1.2**
WRAB Tennant Creek 82.37 122 *ce*P **P 11 49 10.5 -0.1**
WRAB pmax pmax
comp=Z,14nm,2.5s
WRAB Tennant Creek 82.37 122 P **P 11 49 09.7 -0.9**
WRAB IAmb IAmb 11 49 10.3
comp=Z,7.2nm,0.8s
AS31 Alice Springs 84.62 125 P **P 11 49 21.3 -0.7**
ASAR Alice Springs 84.62 125 P **P 11 49 20.9 -1.1**
comp=Z,5.5nm,0.6s,baz=310,slow=4.9,SNR=77
ASAR pP **pP 11 50 15.3 +1.4**
comp=Z,1.2nm,0.7s,baz=320,slow=5.6,SNR=3.4
ASAR Alice Springs 84.62 125 P **P 11 49 21.3 -0.8**
COEN Coen 84.83 111 P **P 11 49 22.3 -0.9**
COEN IAmb IAmb 11 49 23.3
comp=Z,10nm,1.2s
ULM Lac du Bonnet 92.81 351 P **P 11 50 00.1 -0.3**
comp=Z,2.6nm,0.7s,baz=57,slow=3.7,SNR=4.4
ULM Lac du Bonnet 92.81 351 P **P 11 50 00.0 -0.3**
ULM IAmb IAmb 11 50 00.7
comp=Z,3.9nm,0.8s
QSPA South Pole Qui 126.27 180 PKP **PKPdf 11 55 47.7 -0.8**
comp=Z,3.9nm,0.7s,baz=312,slow=1.9,SNR=22
QSPA South Pole Qui 126.27 180 PKPdf **PKPdf 11 55 48.3 -0.3**
CPUP Villa Florida 134.75 268 PKP **PKPdf 11 56 05.1 -0.7**
comp=Z,1.4nm,0.7s,baz=64,slow=4.7,SNR=3.9
PLCA Paso Flores 149.38 250 PKPbc **PKPbc 11 56 35.8 -0.1**
comp=Z,5.2nm,0.9s,baz=20,slow=5.0,SNR=13
PLCA Paso Flores 149.38 250 **PKPbc 11 56 36.4 +0.5**

IDC 07 11:44:09.3±5.3, 23.16N×93.73E, h81km±46km, mb3.0/3, mb1 3.3/4, mb1mx2.9/46, mbtmp3.4/4, ML3.8/1, Error ellipse: s-maj=108.6km s-min=25.6km az=60.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.75**	**133**	P	Pn	11 45 45.9	0.0
	0.5nm,0.3s,baz=309,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**25.32**	**341**	P	P	11 49 28.5	0.0
	0.8nm,0.7s,baz=161,slow=10,SNR=4.5						
WRA	**Warramunga Arr**	**58.35**	**134**	P	P	11 53 55.9	-0.5
	0.1nm,0.5s,baz=322,slow=7.6,SNR=1.3						
ASAR	**Alice Springs**	**60.74**	**137**	P	P	11 54 13.2	+0.4
	0.2nm,0.5s,baz=318,slow=7.0,SNR=1.7						

*IDC **07** 12:04:32.5±1.0, 18.77N×145.25E, h515km±13km, mb3.0/15, mb1 3.2/18, mb1mx3.0/57, mbtmp3.9/18, Error ellipse: s-maj=19.4km s-min=10.5km az=89.0*
*NEIC **07** 12:04:32.3±1.2, 18.8N±0.1×145.2E±0.2, h512km±10km, mb3.9/24, Error ellipse: s-maj=26.5km s-min=15.2km az=91.0*

ISC 07 12:04:31.6±0.6, 18.78N±0.07×145.2E±0.2, h500km, n54, σ1.9 09/55, mb3.7/26, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.18**	**184**	P	P	**12 06 02.9**	**+2.6**
	6.6nm,0.3s,baz=302,slow=9.0,SNR=4.3						
GUMO				S	S	**12 07 14.0**	**+1.4**
	3.2nm,0.3s,baz=24,slow=20,SNR=3.8						
GUMO	**Guam**	**5.18**	**184**	P	P	**12 05 59.0**	**-1.3**
GUMO					S	**12 07 13.9**	**+1.4**
JCJ	**Chichijima**	**8.74**	**342**	P	P	**12 06 37.0**	**+1.4**
	2.8nm,0.3s,baz=286,slow=20,SNR=2.5						
JCJ				S	S	**12 08 18.9**	**+1.4**
	3.4nm,0.3s,baz=256,slow=18,SNR=3.1						
MJAR	**Matsushiro Arr**	**18.74**	**342**	P	P	**12 08 18.5**	**-0.2**
	0.1nm,3.3s,baz=154,slow=9.4,SNR=3.3						
KSRS	**Korea Array**	**23.99**	**324**	P	P	**12 09 05.8**	**-0.3**
	0.9nm,0.8s,baz=141,slow=8.8,SNR=4.4						
PETK	**Petropavlovsk-**	**35.60**	**13**	P	P	**12 10 47.2**	**+1.0**
	3.2nm,0.9s,baz=227,slow=14,SNR=5.0						
KNRA	**Kununurra**	**37.89**	**206**	P	P	**12 11 04.0**	**-1.5**
WR0	**Warramunga Arr**	**39.91**	**196**	P	P	**12 11 21.6**	**-0.3**
WR0				IAmb	IAmb	12 11 33.6	
	comp=Z,7.9nm,1.4s						
WRA	**Warramunga Arr**	**39.94**	**196**	P	P	**12 11 22.3**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=18,slow=8.3,SNR=11						
WRA	**Warramunga Arr**	**39.94**	**196**	P	P	**12 11 21.4**	**-0.8**
FITZ	**Fitzroy Crossi**	**41.40**	**209**	P	P	**12 11 34.3**	**+0.5**
FITZ				IAmb	IAmb	12 11 45.9	
	comp=Z,11nm,1.4s						
SONM	**Songino Array**	**42.80**	**322**	P	P	**12 11 45.4**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=108,slow=6.9,SNR=2.2						
ASAR	**Alice Springs**	**43.62**	**195**	P	P	**12 11 51.0**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=13,slow=6.8,SNR=10						
ASAR	**Alice Springs**	**43.62**	**195**	P	P	**12 11 51.2**	**-0.1**
SEY	**Seymchan**	**44.39**	**5**	P	P	**12 11 57.6**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=180,slow=18,SNR=2.4						
ZALV	**Zalesovo Beam**	**57.68**	**323**	P	P	**12 13 32.6**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=116,slow=7.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**57.68**	**323**	P	P	**12 13 33.2**	**-0.4**
MK31	**Makanchi Array**	**58.09**	**314**	P	P	**12 13 36.4**	**-0.1**
MKAR	**Makanchi Array**	**58.09**	**314**	P	P	**12 13 36.9**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=91,slow=8.2,SNR=13						
MKAR	**Makanchi Array**	**58.09**	**314**	P	P	**12 13 36.7**	**+0.2**
MAKZ	**Makanchi**	**58.30**	**314**	P	P	**12 13 38.5**	**+0.5**
MAKZ				IAmb	IAmb	12 13 39.6	

	comp=Z,5.0nm,1.4s							
SUA	**Susitna One**	**61.31**	**29**	P	**P**	**12 13 58.0**	**+0.1**
SUA				IAmb	IAmb	12 13 59.1	
	comp=Z,2.6nm,0.7s							
IMAR	**Indian Mountai**	**61.32**	**24**	P	**P**	**12 13 57.9**	**+0.2**
BPAW	**Bear Paw Mtn.**	**61.88**	**27**	P	**P**	**12 14 01.5**	**0.0**
BPAW				IAmb	IAmb	12 14 10.6	
	comp=Z,5.8nm,1.4s							
PMR	**Palmer**	**62.10**	**30**	P	**P**	**12 14 01.3**	**-1.6**
PMR				IAmb	IAmb	12 14 05.8	
	comp=Z,5.3nm,1.0s							
GHO	**Glory Hole Cre**	**62.23**	**29**	P	**P**	**12 14 00.3**	**-3.6**
MLY	**Manley**	**62.23**	**26**	P	**P**	**12 14 04.2**	**+0.5**
MLY				IAmb	IAmb	12 14 08.9	
	comp=Z,3.0nm,1.2s							
KNK	**Knik Glacier**	**62.37**	**30**	P	**P**	**12 14 03.4**	**-1.3**
SML	**Sawmill**	**62.51**	**29**	P	P	12 14 01.4	-4.3
TOLK	**Toolik Lake Re**	**63.68**	**22**	P	**P**	**12 14 13.6**	**+0.5**
ILAR	**Eielson Array**	**63.77**	**26**	P	**P**	**12 14 12.2**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=249,slow=5.6,SNR=9.5							
PAX	**Paxson**	**64.04**	**28**	P	**P**	**12 14 15.7**	**+0.2**
PAX				IAmb	IAmb	12 14 16.0	
	comp=Z,2.3nm,0.7s							
SCRK	**Sand Creek**	**64.86**	**27**	P	**P**	**12 14 21.0**	**+0.2**
SCRK				IAmb	IAmb	12 14 29.2	
	comp=Z,6.6nm,1.4s							
MCARA	**McCarthy VSAT**	**64.95**	**30**	P	**P**	**12 14 21.4**	**+0.2**
BMAR	**Burnt Mountain**	**65.22**	**24**	P	**P**	**12 14 23.5**	**+0.7**
BCAR	**Beaver Creek A**	**65.72**	**29**	P	**P**	**12 14 25.8**	**-0.3**
KK31	**Karatay Array**	**66.37**	**310**	P	**P**	**12 14 29.9**	**-0.6**
KKAR	**Karatay Array**	**66.37**	**310**	P	**P**	**12 14 30.4**	**-0.1**
KKAR	**Karatay Array**	**66.37**	**310**	P	**P**	**12 14 28.3**	**-2.2**
KKAR				IAmb	IAmb	12 14 31.5	
	comp=Z,1.6nm,1.0s							
EPYK	**Eagle Plains**	**68.16**	**25**	P	**P**	**12 14 41.3**	**+0.2**
EPYK				IAmb	IAmb	12 14 47.1	
	comp=Z,2.2nm,1.1s							
INK	**Inuvik**	**69.47**	**23**	P	**P**	**12 14 48.7**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=214,slow=3.6,SNR=3.6							
INK	**Inuvik**	**69.47**	**23**	P	**P**	**12 14 47.9**	**-0.9**
INK				IAmb	IAmb	12 15 05.2	
	comp=Z,3.1nm,1.3s							
ARU	**Arti**	**72.74**	**324**	P	**P**	**12 15 08.0**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=300,slow=4.6,SNR=3.9							
ARU	**Arti**	**72.74**	**324**	P	**P**	**12 15 07.9**	**-0.4**
ARU				IAmb	IAmb	12 15 22.5	
	comp=Z,5.3nm,1.4s							
ABKAR	**Akbulak array**	**72.98**	**317**	P	**P**	**12 15 09.3**	**-0.6**
ABKAR	**Akbulak array**	**72.98**	**317**	P	**P**	**12 15 08.7**	**-1.1**
YKA	**Yellowknife Ar**	**78.12**	**28**	P	**P**	**12 15 37.7**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=288,slow=5.0,SNR=15							
ARCES	**ARCESS Array B**	**82.28**	**342**	P	**P**	**12 15 59.0**	**-0.8**
	comp=Z,3.8nm,0.8s,baz=55,slow=7.8,SNR=5.3							
NVAR	**Mina Array Bea**	**83.44**	**52**	P	**P**	**12 16 06.7**	**0.0**
	comp=Z,0.6nm,0.7s,baz=259,slow=5.5,SNR=6.9							
NVAR	**Mina Array Bea**	**83.44**	**52**	P	**P**	**12 16 06.4**	**-0.2**
MFID	**Camas Ranch**	**83.58**	**46**	P	**P**	**12 16 06.8**	**-0.3**
MFID				IAmb	IAmb	12 16 07.9	
	comp=Z,1.9nm,0.8s							
FINES	**FINESS Array B**	**86.62**	**335**	P	**P**	**12 16 18.9**	**-2.4**
	comp=Z,1.6nm,0.7s,baz=66,slow=6.5,SNR=4.4							
FINES	**FINESS Array B**	**86.62**	**335**	P	**P**	**12 16 19.2**	**-2.1**
BRG	**Berggiesshubel**	**98.54**	**331**	*eP*	Pdif	12 17 15.7	-0.4
	comp=Z,12nm,1.4s							

*IDC **07** 12:06:07.7±0.6, 44°.63S×79°.49W, h0km, mb4.2/12, mb1 4.4/14, mb1mx4.3/28, mbtmp4.3/14, ML5.5/1, MS4.3/16, Ms1 4.2/16, ms1mx4.1/27, Error ellipse: s-maj=23.9km s-min=17.0km az=97.0*

*GCMT **07** 12:06:09.6±0.2, 44°.70S±0°.01×79°.90W±0°.02, h24km, MW5.2/119, Moment Tensor Solution. s52,c68; s119,c175; Duration: 0 Moment tensor: Scale 10^16^Nm; M_{rr}=0.15±.19; $M_{\theta\theta}$=3.07±.17; $M_{\phi\phi}$=-2.92±.17; $M_{r\theta}$=-0.73±.34; $M_{\theta\phi}$=-5.76±.13; $M_{r\phi}$=0.94±.35; Best double couple: M_o=6.59700×10^16^ NP1:ϕ_s256.00000°, δ81.00000°, λ176.00000°. NP2:ϕ_s347.00000°, δ86.00000°, λ9.00000°. Principal axes: T 6.7480, Plg9.0000°, Azm212.0000°; N -0.3050, Plg80.0000°, Azm8.0000°; P -6.4460, Plg4.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **07** 12:06:09.6±2.8, 44°.42S±0°.06×79°.2W±0°.1, h10km±1km, mb5.0/38 Error ellipse: s-maj=17.1km s-min=8.4km az=289.0*

*GUC **07** 12:06:10.8±2.4, 44°.24S×79°.42W, h10km, mb5.3*

ISC 07 12:06:13.4±0.3, 44°.51S±0°.06×79°.27W±0°.07, h35km, n160, σ2^{S}67/158, mb4.9/30, MS4.4/17, 18C-2D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
COYC	**Coyhaique**	**5.20**	**104**	*eP*		**Pn**	**12 07 31.3**	**+2.6**
LL01	**San Ignacio de**	**5.42**	**69**	*iP*		**Pn**	**12 07 31.3**	**-0.4**
BI04	**Isla Mocha**	**7.31**	**35**	*eP*		**Pn**	**12 07 55.8**	**-1.8**
PLCA	**Paso Flores**	**7.45**	**63**	Pn		**Pn**	**12 08 00.5**	**+0.9**
	17nm,0.3s,baz=257,slow=11,SNR=494							
PLCA				Sn		Sn	12 09 33.6	+11
	baz=344,slow=19,SNR=0.7							
PLCA				LR		LR	12 10 44.3	
	comp=Z,4μm,18.8s,baz=260,slow=36							
PLCA	**Paso Flores**	**7.45**	**63**	*eP*		**Pn**	**12 08 00.4**	**+0.7**
PLCA	**Paso Flores**	**7.45**	**63**	Pn		**Pn**	**12 08 00.3**	**+0.7**
GO06	**Curarrehue**	**7.61**	**52**	*iP*		**Pn**	**12 08 01.5**	**-0.3**
GO06	**Curarrehue**	**7.61**	**52**	Pn		**Pn**	**12 08 01.6**	**-0.3**
COCH	**Cobquecura**	**9.72**	**33**	*iP*		**Pn**	**12 08 28.1**	**-2.5**
GO05	**Huala**	**11.04**	**33**			**Pn**	**12 08 46.6**	**-2.1**
USHA	**Ushuaia**	**12.47**	**150**	Pn		**Pn**	**12 09 05.3**	**-2.9**
	0.4nm,0.3s,baz=356,slow=16,SNR=4.8							
PEL	**Peldehue**	**13.16**	**33**	*iP*		**Pn**	**12 09 15.3**	**-2.5**
PEL	**Peldehue**	**13.16**	**33**			**Pn**	**12 09 15.2**	**-2.6**
ROC1	**El Roble**	**13.19**	**32**			**Pn**	**12 09 15.9**	**-2.5**
ROCH	**El Roble**	**13.19**	**32**	*eP*		**Pn**	**12 09 16.0**	**-2.4**
CFA	**Coronel Fontan**	**15.52**	**38**	LR		LR	12 15 10.2	
	comp=Z,706nm,18.2s,baz=254,slow=34							
GO04	**Tololo Observa**	**15.80**	**28**	*eP*		**Pn**	**12 09 51.5**	**-1.9**
GO04				IAmb		IAmb	12 10 02.4	
	comp=Z,325nm,1.3s							
GO04	**Tololo Observa**	**15.80**	**28**			**Pn**	**12 09 50.9**	**-2.5**
GO03	**Copiap**	**18.37**	**26**	*eP*		**Pn**	**12 10 25.8**	**+0.4**
GO03				IAmb		IAmb	12 10 29.1	
	comp=Z,109nm,0.9s							
GO03	**Copiap**	**18.37**	**26**			**P**	**12 10 24.5**	**-0.6**
GO03				IAmb		IAmb	12 10 29.4	
	comp=Z,108nm,0.9s							
LPA	**La Plata**	**18.96**	**67**	*eP*		**P**	**12 10 25.4**	**-6.1**
LPA				PPP		PPP	12 11 33.0	
LPA				S		**Sn**	**12 14 00.0**	**-3.6**
LPA				SSS		SSS	12 14 31.9	
LPA				PCP		**PcP**	**12 14 51.2**	**-4.9**
LPA				SCS		**ScS**	**12 22 17.5**	**+7.1**
LPA				PKIKP		**PKiKP**	**12 22 47.6**	**+1.4**
LPA				SKIKS			12 29 53.5	
GO02	**Mina Guanaco**	**20.84**	**25**	Pn		**P**	**12 10 53.2**	**+0.8**
PMSA	**Palmer Station**	**22.01**	**163**	LR		LR	12 17 59.5	
	comp=Z,197nm,18.2s,baz=334,slow=32							
PB10	**IPOC Station P**	**22.13**	**22**	P		**P**	**12 11 05.4**	**-0.5**
PB10				IAmb		IAmb	12 11 15.2	
	comp=Z,124nm,1.2s							
PB04	**IPOC Station P**	**23.36**	**22**	P		**P**	**12 11 17.6**	**-1.3**
PB04				IAmb		IAmb	12 11 29.2	
	comp=Z,65nm,0.9s							
LVC	**Limon Verde**	**23.45**	**25**	P		**P**	**12 11 20.9**	**+0.9**
	comp=Z,14nm,1.0s,baz=190,slow=9.0,SNR=21							
LVC				LR		LR	12 19 12.0	
	comp=Z,294nm,18.6s,baz=221,slow=33							
LVC	**Limon Verde**	**23.45**	**25**	*eP*		**P**	**12 11 20.2**	**+0.3**
LVC	**Limon Verde**	**23.45**	**25**	P		**P**	**12 11 19.3**	**-0.6**
PB03	**IPOC Station P**	**23.74**	**22**	*eP*		**P**	**12 11 22.8**	**+0.2**
PB03				IAmb		IAmb	12 11 28.2	
	comp=Z,171nm,1.6s							
CPUP	**Villa Florida**	**25.34**	**52**	P		**P**	**12 11 38.4**	**+1.5**
	comp=Z,77nm,0.9s,baz=232,slow=9.4,SNR=26							
CPUP				LR		LR	12 22 00.3	
	comp=Z,999nm,18.0s,baz=209,slow=37							
CPUP	**Villa Florida**	**25.34**	**52**	P		**P**	**12 11 35.4**	**-1.5**
PB11	**IPOC Station P**	**25.95**	**21**	P		**P**	**12 11 42.0**	**-0.7**
PB11				IAmb		IAmb	12 12 23.9	
	comp=Z,40nm,1.0s							
GO01	**Chusmiza**	**26.16**	**22**	P		**P**	**12 11 42.5**	**-2.4**
MNMC	**Minye Minye**	**26.57**	**21**	P		**P**	**12 11 46.9**	**-1.5**
MNMC				IAmb		IAmb	12 12 01.6	
	comp=Z,37nm,1.1s							
ITAB	**Concordia**	**27.75**	**61**	*eP*		**P**	**12 12 03.6**	**+4.9**
HOPE	**Hope Point**	**29.09**	**125**	P		**P**	**12 12 12.5**	**+2.1**
LPAZ	**La Paz**	**29.67**	**22**	P		**P**	**12 12 16.4**	**-0.1**
	comp=Z,3.5nm,0.9s,baz=181,slow=5.6,SNR=6.8							
LPAZ	**La Paz**	**29.67**	**22**	*eP*		**P**	**12 12 17.1**	**+0.7**
LPAZ	**La Paz**	**29.67**	**22**	P		**P**	**12 12 14.0**	**-2.5**
RPN	**Rapa Nui**	**29.69**	**296**	LR		LR	12 20 46.2	
	comp=Z,837nm,21.1s,baz=134,slow=30							
RPN	**Rapa Nui**	**29.69**	**296**	P		**P**	**12 12 15.2**	**-0.7**
TRCB	**Terra Rica**	**30.76**	**54**	*eP*		**P**	**12 12 29.9**	**+4.4**
BB19B	**Bebedouro**	**34.51**	**57**	*eP*		P	12 13 05.0	+6.6
SALV	**Santo Antonio**	**34.79**	**42**	*eP*		**P**	**12 13 04.9**	**+4.2**
ARAG	**Araguaiana, MT**	**36.92**	**48**	*eP*		**P**	**12 13 23.5**	**+4.6**
SAML	**Samuel**	**38.08**	**26**	P		**P**	**12 13 28.3**	**-0.4**
SAML				IAmb		IAmb	12 13 40.1	
	comp=Z,19nm,1.1s							
BDFB	**Brasilia**	**39.06**	**52**	P		**P**	**12 13 39.5**	**+2.4**
	comp=Z,5.8nm,0.8s,baz=225,slow=10,SNR=4.7							
BDFB				LR		LR	12 30 26.9	
	comp=Z,591nm,20.3s,baz=217,slow=37							
BDFB	**Brasilia**	**39.06**	**52**	P		**P**	**12 13 33.9**	**-3.2**
VNA3	**Neumayer Olymp**	**42.12**	**153**	P		**P**	**12 14 00.3**	**-1.4**
SNAA	**Sanae**	**44.29**	**154**	P		**P**	**12 14 16.2**	**-3.0**
SNAA	**Sanae**	**44.29**	**154**	P		**P**	**12 14 19.1**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=264,slow=10,SNR=3.0							
SNAA	**Sanae**	**44.29**	**154**	P		**P**	**12 14 20.5**	**+1.3**
SNAA				IAmb		IAmb	12 14 26.9	
	comp=Z,28nm,1.3s							
OTAV	**Otavalo**	**44.56**	**1**	*eP*		P	12 14 27.8	+5.3
OTAV	**Otavalo**	**44.56**	**1**	P		**P**	**12 14 23.2**	**+0.8**
OTAV				IAmb		IAmb	12 14 35.7	
	comp=Z,19nm,1.3s							
PTCN	**Pitcairn Islan**	**45.23**	**278**	P		**P**	**12 14 27.1**	**-0.2**
QSPA	**South Pole Qui**	**45.73**	**180**	P		**P**	**12 14 28.8**	**-2.1**
	comp=Z,3.6nm,0.9s,baz=160,slow=2.5,SNR=8.6							
QSPA	**South Pole Qui**	**45.73**	**180**	P		**P**	**12 14 34.1**	**+3.2**
SOTA	**Rioblanco**	**46.50**	**4**	*eP*		**P**	**12 14 39.9**	**+2.1**
YOTC	**Yotoco, Valle**	**48.35**	**4**	*eP*		**P**	**12 14 54.1**	**+2.4**
CHIC	**Chingaza**	**49.17**	**7**	*eP*		**P**	**12 15 01.2**	**+2.8**
RREF	**El Recreo**	**49.31**	**5**	*eP*		**P**	**12 15 02.1**	**+2.4**
ROSC	**El Rosal**	**49.33**	**7**	P		**P**	**12 14 59.0**	**-0.6**
	comp=Z,6.0nm,0.3s,baz=17,slow=19,SNR=2.1							
ROSC				LR		LR	12 33 45.6	
	comp=Z,810nm,18.6s,baz=201,slow=34							
ROSC	**El Rosal**	**49.33**	**7**	P		**P**	**12 14 57.7**	**-1.8**
ROSC				IAmb		IAmb	12 15 12.2	
	comp=Z,18nm,1.3s							
GUY2C	**Guyana, Caldas**	**49.63**	**5**	*eP*		**P**	**12 15 05.7**	**+3.7**
CBOC	**Ciudad Bolivar**	**50.23**	**4**	*eP*		**P**	**12 15 06.5**	**+0.4**
RUSC	**La Rusia**	**50.48**	**8**	*eP*		**P**	**12 15 09.2**	**+0.8**
VNDA	**Vanda**	**52.65**	**194**	LR		LR	12 35 08.2	
	comp=Z,135nm,18.2s,baz=135,slow=33							
VNDA	**Vanda**	**52.65**	**194**	P		**P**	**12 15 26.2**	**+2.8**
VNDA				IAmb		IAmb	12 15 29.0	
	comp=Z,25nm,1.7s							
SOCV	**Socops**	**53.09**	**10**	*eP*		**P**	**12 15 28.8**	**+1.4**
SMLC	**San Martn de**	**53.27**	**6**	*eP*		**P**	**12 15 28.8**	**+0.1**
SDV	**Santo Domingo**	**53.72**	**11**	*eP*		**P**	**12 15 35.0**	**+2.8**
SDV	**Santo Domingo**	**53.72**	**11**	P		**P**	**12 15 30.7**	**-1.4**
SDV				IAmb		IAmb	12 15 42.6	
	comp=Z,19nm,0.9s							
RCBR	**Riachuelo**	**53.99**	**58**	P		**P**	**12 15 33.9**	**-0.1**
SYO	**Syowa Base**	**58.18**	**158**	*ePKP*		**P**	**12 16 00.0**	**-3.2**
SYO	**Syowa Base**	**58.18**	**158**	*epP*		**P**	**12 16 03.0**	**-0.2**
TBI	**Tubuai**	**60.12**	**266**	*eS*		**S**	**12 24 25.4**	**-2.9**
	comp=Z,241nm,27.4s							
TBI				*e*LQ		LQ	12 31 30.5	
	comp=Z,550nm,33.5s							
TBI				*e*LR		LR	12 33 45.0	
	comp=Z,436nm,26.0s							
PPT2	**Papeete2**	**63.91**	**271**	*e*LR		LR	12 35 23.1	
	comp=Z,358nm,25.5s							
PPT	**Papeete**	**63.92**	**271**	LR		LR	12 36 18.4	
	comp=Z,134nm,20.6s,baz=168,slow=28							
MAW	**Mawson**	**64.61**	**165**	LR		LR	12 42 41.6	
	comp=Z,260nm,21.7s,baz=220,slow=34							
TX31	**Lajitas Ar. Si**	**76.80**	**338**	P		**P**	**12 18 01.6**	**+0.3**
TX31				IAmb		IAmb	12 18 13.4	
	comp=Z,11nm,1.2s							
TX32	**Lajitas Array**	**76.80**	**338**	P		**P**	**12 18 01.7**	**+0.4**
TX32				IAmb		IAmb	12 18 13.4	
	comp=Z,12nm,1.2s							
TXAR	**Lajitas Array**	**76.80**	**338**	P		**P**	**12 18 00.5**	**-0.8**
	comp=Z,1.0nm,0.8s,baz=158,slow=6.6,SNR=8.8							
TXAR				LR		LR	12 46 56.2	
	comp=Z,91nm,19.2s,baz=0.0,slow=32							
TXAR	**Lajitas Array**	**76.80**	**338**	P		**P**	**12 18 00.2**	**-1.1**
JCT	**Junction City**	**76.95**	**342**	P		**P**	**12 18 02.6**	**+0.6**
BOSA	**Bonof**	**79.92**	**120**	P		**P**	**12 18 18.1**	**-0.8**
	comp=Z,3.6nm,0.8s,baz=210,slow=6.2,SNR=4.0							
BOSA				LR		LR	12 50 02.9	
	comp=Z,169nm,19.7s,baz=216,slow=33							
LIC	**Lamto**	**83.22**	**74**	*e*PKIKP		**P**	**12 18 35.8**	**-0.5**
	comp=Z,29nm,1.1s							
KIC	**Kosan Boka**	**83.52**	**75**	*e*PKIKP		**P**	**12 18 36.3**	**-1.6**
	comp=Z,38nm,1.5s							
TIC	**Toumodi**	**83.53**	**74**	*e*PKIKP		**P**	**12 18 36.4**	**-1.5**
DBIC	**Dimbokro**	**83.66**	**74**	P		**P**	**12 18 39.1**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=261,slow=2.4,SNR=4.0							
DBIC				LR		LR	12 50 35.9	
	comp=Z,130nm,20.5s,baz=340,slow=32							
XPFO	**Pion Flat**	**84.79**	**330**	P		**P**	**12 18 44.5**	**+0.5**
XPFO				IAmb		IAmb	12 18 58.6	
	comp=Z,10nm,1.2s							
PFO	**Pinyon Flats O**	**84.80**	**330**	P		**P**	**12 18 44.5**	**+0.5**
PFO				IAmb		IAmb	12 18 58.6	
	comp=Z,10nm,1.2s							
S22A	**4UR Ranch, Cre**	**85.59**	**338**	P		**P**	**12 18 49.0**	**+1.0**
KNB	**Kanab**	**86.65**	**334**	P		**P**	**12 18 54.0**	**+0.8**
SZCU	**Shurtz Canyon**	**87.27**	**334**	P		**P**	**12 18 56.8**	**+0.6**
Q16A	**Castle Valley**	**87.89**	**336**	P		**P**	**12 18 58.5**	**-0.7**
N23A	**Red Feather La**	**88.34**	**340**	P		**P**	**12 19 02.4**	**+1.1**
N23A				IAmb		IAmb	12 19 12.5	
	comp=Z,8.2nm,1.0s							
PSUT	**Pine Spring**	**88.37**	**334**	P		**P**	**12 19 01.6**	**+0.2**
R11A	**Troy Canyon, C**	**88.76**	**332**	P		**P**	**12 19 01.9**	**-1.4**
R11A				IAmb		IAmb	12 19 08.0	
	comp=Z,10nm,1.6s							
NLU	**North Lily Min**	**89.12**	**335**	P		**P**	**12 19 04.7**	**-0.3**
DUG	**Dugway, Tooele**	**89.56**	**335**	P		**P**	**12 19 06.0**	**-1.0**
NVAR	**Mina Array Bea**	**89.77**	**330**	P		**P**	**12 19 09.6**	**+1.6**
	comp=Z,2.0nm,0.6s,baz=129,slow=7.1,SNR=3.2							
HWUT	**Hardware Ranch**	**90.49**	**336**	P		**P**	**12 19 11.7**	**+0.4**
DZM	**Mont Dzumac**	**90.69**	**238**	*e*LR		LR	12 48 05.8	
	comp=Z,214nm,29.7s							
PDAR	**Pinedale Array**	**91.02**	**338**	P		**P**	**12 19 13.2**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=139,slow=8.4,SNR=3.0							
PDAR	**Pinedale Array**	**91.02**	**338**	P		**P**	**12 19 15.0**	**+1.2**
TORD	**Torodi Ar. Bea**	**92.78**	**74**	P		**P**	**12 19 21.9**	**-0.3**
	comp=Z,0.8nm,1.0s,baz=246,slow=5.1,SNR=3.1							
TORD				LR		LR	12 57 57.6	
	comp=Z,135nm,19.0s,baz=265,slow=34							
GCMT	**Greycliff**	**93.86**	**339**	P		**P**	**12 19 26.3**	**-0.4**
STKA	**Stephens Creek**	**95.35**	**214**	LR		LR	12 54 28.0	
	comp=Z,236nm,19.2s,baz=98,slow=30							
H11S2	**WAKE ISLAND Hyl**	**19.78**	**267**	T		T	14 35 37.9	
	baz=132,slow=76,SNR=17							
H11S1	**WAKE ISLAND Hyl**	**19.80**	**267**	T		T	14 35 34.9	
	baz=132,slow=76,SNR=11							
H11S3	**WAKE ISLAND Hyl**	**19.80**	**267**	T		T	14 35 38.9	
	baz=132,slow=76,SNR=13							
H11N3	**WAKE ISLAND Hyl**	**20.44**	**268**	T		T	14 36 36.6	
	baz=131							
H11N1	**WAKE ISLAND Hyl**	**20.45**	**268**	T		T	14 36 31.4	
	baz=131,slow=74							
H11N2	**WAKE ISLAND Hyl**	**20.45**	**268**	T		T	14 36 34.8	
	baz=131,slow=74							
ILAR	**Eielson Array**	**120.96**	**332**	PKP		**PKiKP**	**12 25 01.7**	**+0.8**
	comp=Z,0.7nm,0.9s,baz=160,slow=2.9,SNR=4.7							
ILAR	**Eielson Array**	**120.96**	**332**			**PKiKP**	**12 25 01.5**	**+0.5**
FYU	**Fort Yukon**	**121.59**	**335**			**PKPdf**	**12 25 00.9**	**-1.0**
GERES	**GERESS Array B**	**123.30**	**52**	PKP		**PKiKP**	**12 25 06.8**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=284,slow=4.0,SNR=10							
GERES	**GERESS Array B**	**123.30**	**52**			**PKiKP**	**12 25 07.0**	**+0.8**
TOLK	**Toolik Lake Re**	**124.18**	**335**			**PKiKP**	**12 25 09.1**	**+1.9**
MORC	**Moravsky Berou**	**125.94**	**53**	↑P		PKiKP	12 25 19.2	+7.9
MDVR	**Moldovita**	**125.98**	**60**	↑P		**PKiKP**	**12 25 18.3**	**+6.7**
BZS	**Buzias**	**126.33**	**59**	↓P		**PKiKP**	**12 25 19.2**	**+7.0**
SIRR	**Siria**	**126.67**	**58**	↑P		**PKiKP**	**12 25 19.8**	**+7.0**
DRGR		**127.56**	**58**	↑P		**PKiKP**	**12 25 21.6**	**+6.9**
ARR	**Arges**	**128.07**	**60**	↑P		**PKiKP**	**12 25 22.6**	**+6.8**
TRPA	**Tarpa**	**128.08**	**56**	↑P		**PKiKP**	**12 25 22.1**	**+6.6**
VOIR		**128.37**	**60**	↑P		**PKiKP**	**12 25 22.6**	**+6.2**
MLR	**Muntele Rosu**	**128.95**	**61**	↑P		**PKiKP**	**12 25 23.9**	**+6.3**
BURAR	**Bucovina Array**	**129.46**	**58**	↑P		**PKiKP**	**12 25 26.1**	**+7.6**
PLOR	**Plostina**	**129.55**	**61**	↑P		**PKiKP**	**12 25 24.5**	**+5.9**
VRI	**Vrincioaia**	**129.61**	**61**	↑P		**PKiKP**	**12 25 24.1**	**+5.4**
TESR	**Tescani**	**129.85**	**60**	↑P		**PKiKP**	**12 25 25.4**	**+6.2**
TOPG	**Topolog**	**130.20**	**63**	↑P		**PKiKP**	**12 25 26.3**	**+6.3**
BRTR	**Keskin Array B**	**131.26**	**71**	PKP		**PKiKP**	**12 25 22.8**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=213,slow=4.5,SNR=3.3							
AKASG	**Malin Array Be**	**133.12**	**56**	PKP		**PKiKP**	**12 25 25.6**	**0.0**
	comp=Z,0.6nm,0.6s,baz=256,slow=2.2,SNR=1.9							
AKASG	**Malin Array Be**	**133.12**	**56**			**PKPdf**	**12 25 21.4**	**-3.0**
KIV	**Kislovodsk**	**139.17**	**70**	↑P		**PKiKP**	**12 25 43.5**	**+5.2**
SEY	**Seymchan**	**145.52**	**321**	PKPbc		**PKPdf**	**12 25 46.5**	**-0.1**
	comp=Z,6.6nm,0.8s,baz=133,slow=4.1,SNR=6.9							
POO	**Poona**	**145.71**	**130**	*eP*		**PKPab**	**12 25 49.0**	**-0.1**
HYB	**Hyderabad**	**147.18**	**138**	*i* PKP		**PKPdf**	**12 25 51.0**	**+0.1**
GEYT	**Alibeck**	**147.56**	**87**	PKPbc		**PKPbc**	**12 25 52.5**	**-1.1**
	comp=Z,2.7nm,0.6s,baz=29,slow=3.4,SNR=6.1							
GEYT	**Alibeck**	**147.56**	**87**			**PKPbc**	**12 25 52.7**	**-0.9**
MJAR	**Matsushiro Arr**	**150.63**	**267**	PKPbc		**PKPbc**	**12 25 59.2**	**-2.1**
	comp=Z,0.9nm,0.7s,baz=95,slow=2.7,SNR=2.7							
MJAR	**Matsushiro Arr**	**150.63**	**267**	PKPdf		**PKPdf**	**12 25 53.0**	**-2.8**
MJAR				PKPbc		**PKPbc**	**12 26 00.2**	**-1.1**
MJAR				PKPab		**PKPab**	**12 26 08.4**	**+0.1**
ARU	**Arti**	**151.10**	**51**			**PKiKP**	**12 26 03.8**	**+1.5**
ARU				PKPab		**PKPab**	**12 26 09.2**	**-0.5**
ABKAR	**Akbulak array**	**151.97**	**66**			**PKPbc**	**12 26 02.8**	**-1.2**
ABKAR				PKPab		**sPKPdf**	**12 26 11.3**	**0.0**
CMAR	**Chiang Mai Arr**	**153.98**	**176**	PKPbc		**PKiKP**	**12 26 10.0**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=215,slow=3.7,SNR=8.9							
CMAR	**Chiang Mai Arr**	**153.98**	**176**			**PKPbc**	**12 26 07.8**	**-1.5**
CMAR				PKPab		**pPKPbc**	**12 26 20.9**	**+1.3**
KSH	**Kashi**	**160.97**	**97**	PKP		**PKPdf**	**12 26 08.4**	**-1.2**
KSH				PP		**PP**	**12 30 35.7**	**-0.5**
KSH				AMB		AMB		
	comp=Z,540nm,5.7s							
NJ2	**Nanjing**	**161.16**	**235**	*eP*		**PKPdf**	**12 26 08.3**	**-1.6**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
ZAA0	**Zalesovo Array**	**165.98**	**42**			**PKPdf**	**12 26 12.7**	**-1.0**
ZAA0				PKPab		**PKPab**	**12 27 14.6**	**+0.6**
ZALV	**Zalesovo Beam**	**165.98**	**42**	PKP		**PKPdf**	**12 26 11.9**	**-1.7**
	comp=Z,1.4

KKUL	**Konya-Kulu**	**0.53**	**237**	*i*	P	**Pg**	**12 39 37.5**	**+0.3**
KKUL				*i*	S	**Sn**	**12 39 46.0**	**-1.5**
KULU	**Kulu**	**0.56**	**222**		PG	**Pg**	**12 39 37.9**	**+0.1**
KULU					SG	**Sg**	**12 39 46.2**	**+0.8**
YAYX	**Yaylak**	**0.58**	**154**		PG	**Pg**	**12 39 37.8**	**-0.4**
DELI	**KIRIKKALE**	**0.63**	**32**	*i*	P	**Pb**	**12 39 38.3**	**-0.6**
DELI				*i*	S	**Sb**	**12 39 47.4**	**0.0**
AKSY	**AKSARAY - Alti**	**0.84**	**165**	*i*	P	**Pg**	**12 39 42.7**	**-0.2**
AKSY				*i*	S	**Sn**	**12 39 54.7**	**-0.4**
AKSY					IAML		12 40 02.0	
	comp=N,29nm,0.5s							
CHBY	**Cihanbeyli**	**0.99**	**208**		PG	**Pg**	**12 39 45.9**	**+0.1**
CMDR	**Camlidere-ANKA**	**1.29**	**323**	*i*	P	**Pg**	**12 39 51.6**	**+0.1**
COAL	**Corum-Alaca**	**1.40**	**55**	*i*	P	**Pg**	**12 39 54.3**	**+0.7**
COAL					IAML		12 40 15.0	
	comp=E,11nm,0.7s							
YOZ	**Yozgat**	**1.43**	**82**		PN	**Pb**	**12 39 53.5**	**+0.9**
CTAK	**Corum_Osmancik**	**1.55**	**40**	*i*	P	**Pb**	**12 39 55.5**	**+0.8**
CTAK				*i*	S	**Sg**	**12 40 17.4**	**+0.7**
CUSAR	**Sarkisla-SIVAS**	**2.14**	**90**	*i*	P	**Pb**	**12 40 04.3**	**-0.4**
CUSAR				*i*	S	**Sg**	**12 40 35.2**	**-0.2**

IDC 07 13:01:60.0±2.9, 5°.55S×152°.76E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.3/37, mbtmp3.3/4, ML1.4/1, Error ellipse: s-maj=54.2km s-min=16.1km az=81.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.44**	**330**	Pg	Pn	13 02 26.0	-1.3
	74nm,0.3s,baz=151,slow=1.8,SNR=101						
KRVT				Lg	Lg	13 02 46.0	
	105nm,0.3s,baz=57,slow=18,SNR=10						
PMG	**Port Moresby**	**6.74**	**235**	Pn	Pn	13 03 42.5	+2.2
	0.5nm,0.3s,baz=45,slow=7.1,SNR=2.6						
PMG				Sn	Sn	13 04 54.6	-3.3
	1.8nm,0.3s,baz=169,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**22.92**	**230**	P	P	13 07 05.2	-0.7
	0.4nm,0.7s,baz=54,slow=10,SNR=2.6						
ASAR	**Alice Springs**	**25.57**	**223**	P	P	13 07 30.3	-0.6
	0.5nm,0.9s,baz=55,slow=9.6,SNR=4.1						
MKAR	**Makanchi Array**	**80.86**	**319**	P	P	13 14 16.6	+0.6
	0.2nm,0.7s,baz=102,slow=5.4,SNR=3.1						

IDC 07 13:06:56.5±2.9, 32°.22S×179°.50W, h0km, mb3.5/2, mb1 3.9/3, mb1mx3.6/31, mbtmp3.7/3, ML3.8/1, Error ellipse: s-maj=65.0km s-min=45.1km az=109.0

NEIC 07 13:07:01.3±2.6, 32°.6S±0°.1×179°.5W±0°.2, h43km±13km, mb4.5/6, Error ellipse: s-maj=29.2km s-min=16.7km az=118.0

WEL 07 13:07:15.2±1.1, 34°.S±14°×17°.9W±1°.8, h221km±24km, M4.0/20, mB4.5/7, MLv4.3/20, Mw(mB)3.7/7

ISC 07 13:07:01.6±1.2, 32°.43S±0°.09×179°.8W±0°.2, h35km, n51, σ2s°71/52, 1C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**5.34**	**196**	P	Pn	13 08 23.9	+5.2
MXZ				S	**Sn**	**13 09 17.9**	**-1.1**
WMGZ	**Waiomatatini S**	**5.56**	**194**	P	Pn	13 08 27.4	+5.6
WMGZ				S	**Sn**	**13 09 23.1**	**-1.4**
HAZ	**Te Kaha**	**5.66**	**199**	P	**Pn**	**13 08 26.4**	**+3.2**
PKGZ	**Pakihiroa**	**5.71**	**197**	P	**Pn**	**13 08 28.6**	**+4.7**
PKGZ				S	**Sn**	**13 09 23.8**	**-4.3**
PUZ	**Puketiti**	**5.84**	**195**	P	**Pn**	**13 08 29.1**	**+3.4**
PUZ				S	**Sn**	**13 09 28.2**	**-3.1**
RUGZ	**Raukumara Rang**	**5.88**	**200**	P	Pn	13 08 31.4	+5.0
RUGZ				S	**Sn**	**13 09 31.4**	**-1.2**
OPRZ	**Ohinepanea**	**6.16**	**208**	P	Pn	13 08 37.5	+7.5
CNGZ	**Carnagh Statio**	**6.25**	**194**	P	**Pn**	**13 08 35.0**	**+3.8**
MWZ	**Matawai**	**6.27**	**199**	P	**Pn**	**13 08 35.4**	**+3.8**
TKGZ	**Te Karaka**	**6.28**	**197**	P	**Pn**	**13 08 36.0**	**+4.2**
TKGZ				S	**Sn**	**13 09 43.7**	**+1.4**
URZ	**Urewera**	**6.33**	**202**	Pn	**Pn**	**13 08 35.1**	**+2.8**
	1.7nm,0.3s,baz=266,slow=5.1,SNR=34						
URZ				Sn	**Sn**	**13 09 42.1**	**-1.2**
	1.3nm,0.3s,baz=240,slow=20,SNR=6.1						
URZ	**Urewera**	**6.33**	**202**	P	**Pn**	**13 08 35.3**	**+3.0**
URZ	**Urewera**	**6.33**	**202**		**Pn**	**13 08 34.6**	**+2.3**
RAGZ	**Rawiri**	**6.45**	**200**	P	Pn	13 08 39.1	+5.0
TOZ	**Tahuroa Road**	**6.52**	**215**	P	Pn	13 08 45.4	+10
RIGZ	**Rimuhau**	**6.56**	**197**	P	**Pn**	**13 08 39.9**	**+4.3**
MUGZ	**Murupara**	**6.63**	**204**	P	**Pn**	**13 08 40.6**	**+4.0**
PRGZ	**Paritu Road**	**6.74**	**195**	P	**Pn**	**13 08 41.9**	**+3.9**
SNGZ	**Shannon Statio**	**6.74**	**199**	P	**Pn**	**13 08 42.6**	**+4.6**
KNZ	**Kokohu**	**6.88**	**196**	P	**Pn**	**13 08 42.4**	**+2.5**
RAHZ	**Arahi**	**6.94**	**200**	P	**Pn**	**13 08 44.6**	**+3.8**
MHGZ	**Mahia Peninsul**	**6.95**	**195**	P	**Pn**	**13 08 44.1**	**+3.1**
MTHZ	**Maungataniwha**	**6.95**	**202**	P	**Pn**	**13 08 45.0**	**+4.0**
ARHZ	**Aropaoanui**	**7.28**	**200**	P	**Pn**	**13 08 48.7**	**+3.2**
MCHZ	**McNeill Hill**	**7.54**	**201**	P	**Pn**	**13 08 51.6**	**+2.6**
BHHZ	**Black Hill Sta**	**7.79**	**204**	P	**Pn**	**13 08 55.1**	**+2.7**
KAHZ	**Kahuranaki**	**7.81**	**199**	P	**Pn**	**13 08 54.9**	**+2.1**
KRHZ	**Kereru**	**7.82**	**202**	P	**Pn**	**13 08 54.3**	**+1.4**
TSZ	**Takapari Road**	**8.33**	**203**	P	**Pn**	**13 09 00.9**	**+1.0**
BFZ	**Birch Farm**	**8.81**	**200**	Pn	**Pn**	**13 09 06.4**	**-0.1**
MSWZ	**Moikau Station**	**9.79**	**202**	Pn	**Pn**	**13 09 19.6**	**-0.3**
BHWZ	**Baring Head**	**9.91**	**204**	Pn	**Pn**	**13 09 19.8**	**-1.7**
TUWZ	**Tuamarina**	**10.26**	**207**	Pn	**Pn**	**13 09 24.5**	**-1.8**
NNZ	**Nelson**	**10.31**	**210**	Pn	**Pn**	**13 09 26.1**	**-0.9**
QRZ	**Quartz Range**	**10.38**	**214**	Pn	**Pn**	**13 09 30.0**	**+2.1**
CMWZ	**Cape Campbell**	**10.44**	**205**	Pn	**Pn**	**13 09 28.9**	**+0.2**
BSWZ	**Blackbirch Sta**	**10.53**	**207**	Pn	**Pn**	**13 09 28.8**	**-1.2**
THZ	**Tophouse**	**10.96**	**210**	Pn	**Pn**	**13 09 35.2**	**-0.8**
KHZ	**Kahutara**	**11.27**	**206**	Pn	**Pn**	**13 09 37.5**	**-2.5**
ASAR	**Alice Springs**	**41.48**	**270**	P	**P**	**13 14 47.8**	**+2.3**
	0.3nm,0.5s,baz=111,slow=7.8,SNR=13						
ASAR	**Alice Springs**	**41.48**	**270**	P	**P**	**13 14 46.8**	**+1.3**
WR0	**Warramunga Arr**	**42.48**	**275**	P	**P**	**13 14 51.8**	**-1.8**
WR0				IAmb	IAmb	13 16 04.4	
	comp=Z,9.9nm,1.4s						
WRAB	**Tennant Creek**	**42.66**	**275**	P	**P**	**13 14 53.5**	**-1.6**
WRA	**Warramunga Arr**	**42.66**	**275**	P	**P**	**13 14 57.2**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=115,slow=7.9,SNR=6.2						
MTN	**Manton Dam**	**48.80**	**282**	P	**P**	**13 15 44.7**	**+1.1**
KNRA	**Kununurra**	**49.34**	**277**	P	**P**	**13 15 49.7**	**+2.0**
FITZ	**Fitzroy Crossi**	**50.83**	**272**	P	**P**	**13 16 00.5**	**+1.5**
FITZ				IAmb	IAmb	13 17 40.4	
	comp=Z,16nm,1.8s						
SYO	**Syowa Base**	**74.78**	**194**	⇑*eX*	**P**	**13 18 39.0**	**+1.4**
LPAZ	**La Paz**	**98.72**	**115**	P	**P**	**13 20 34.9**	**-3.8**
FINES	**FINESS Array B**	**146.47**	**338**	PKPbc	**PKPdf**	**13 26 37.6**	**+0.8**
	comp=Z,8.6nm,1.2s,baz=57,slow=5.1,SNR=6.1						
FINES	**FINESS Array B**	**146.47**	**338**	PKPdf	**PKPdf**	**13 26 36.6**	**-0.2**

NIED 07 13:11:00, 35°.40N×140°.40E, h23km, Mw4.1 Best double couple: Mo1.52000×10^15 NP1:φs65.00000°, δ70.00000°, λ91.00000°. NP2:φs241.00000°, δ20.00000°, λ86.00000°.

IDC 07 13:11:44.0±0.6, 35°.31N×140°.37E, h0km, mb3.8/16, mb1 4.0/20, mb1mx3.9/47, mbtmp3.9/20, ML3.2/3, MS3.4/4, Ms1 3.4/4, ms1mx3.0/47, Error ellipse: s-maj=17.5km s-min=13.9km az=79.0

NEIC 07 13:11:46.7±1.6, 35°.31N±0°.05×140°.47E±0°.09, h22km±5km, mb4.5/16, Error ellipse: s-maj=10.6km s-min=7.7km az=79.0

JMA 07 13:11:48.0±0.2, 35°.39N×140°.34E, h25km±2km, M3.8 Broadband fault plane solution: P waves. NP1: φs262.00000°, δ30.00000°, λ90.00000°. NP2:φs82.00000°, δ60.00000°, λ90.00000°. Principal axes: T Plg75.0000°, Azm352.0000°; N Plg0.0000°, Azm82.0000°; P Plg15.0000°, Azm172.0000°;

JMA Felt III J1.

ISC 07 13:11:48.1±0.6, 35°.31N±0°.03×140°.34E±0°.04, h29km±4km, n67, σ1s°34/72, mb4.0/20, 4C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.15**	**314**	⇓P	**Pb**	**13 11 53.1**	**-0.6**
JCN				S	**Sb**	**13 11 57.7**	**+0.2**
KTR	**Katsuura**	**0.17**	**186**	⇑P	**Pb**	**13 11 53.9**	**+0.1**
KTR				*e*S	**Sb**	**13 11 58.3**	**+0.7**
JKUC	**kamogawauchiur**	**0.19**	**217**	⇑P	**Pb**	**13 11 54.0**	**0.0**
JKUC				S	**Sb**	**13 11 58.8**	**+0.7**
BSO4	**Boso 4**	**0.32**	**180**	⇑P	**Pn**	**13 11 56.8**	**0.0**
BSO4				X		13 12 06.0	
JSMT	**Sammumatsuo**	**0.34**	**15**	⇓P	**Pb**	**13 11 55.1**	**-0.9**
JSMT				S	**Sb**	**13 12 00.7**	**-0.7**
BSO3	**Boso 3**	**0.53**	**164**	⇓P	**Pn**	**13 11 59.8**	**+0.3**
BSO1	**Boso 1**	**0.84**	**141**	⇓P	**Pn**	**13 12 03.2**	**-0.3**
JYT	**Yasato**	**0.92**	**353**	⇓P	**Pn**	**13 12 03.0**	**-2.1**
JYT				S	**Sb**	**13 12 14.7**	**-2.7**
JIM2	**Oshima 3**	**0.95**	**232**	P	**Pn**	**13 12 04.7**	**-0.8**
JIM2				*e*S	**Sb**	**13 12 17.7**	**-0.6**
JHU	**Hanno**	**1.01**	**302**	⇓P	**Pn**	**13 12 05.0**	**-1.4**
JOD2	**Odawara 2**	**1.02**	**268**	⇑P	**Pn**	**13 12 06.0**	**-0.5**
JOD2				S	**Sn**	**13 12 19.6**	**-0.3**
MJAR	**Matsushiro Arr**	**2.12**	**306**	Pn	**Pn**	**13 12 22.2**	**+0.6**
	2.1nm,0.3s,baz=137,slow=12,SNR=60						
MJAR				Sn	**Sb**	**13 12 50.5**	**-1.2**
	3.5nm,0.3s,baz=134,slow=12,SNR=6.9						
MJAR	**Matsushiro Arr**	**2.12**	**306**		**Pn**	**13 12 21.4**	**-0.2**
MAJO	**Matsushiro**	**2.12**	**306**		**Pn**	**13 12 21.9**	**+0.3**
MAT	**Matsushiro**	**2.12**	**306**	P	**Pn**	**13 12 21.8**	**+0.2**
MAT				*e*S	**Sn**	**13 12 45.0**	**-2.0**
MJB9	**Matsu-Tunnel**	**2.12**	**306**		**Pn**	**13 12 22.1**	**+0.5**
JHJ2	**Mitsune**	**2.24**	**191**		**Pn**	**13 12 22.7**	**-0.5**
INU	**Inuyama**	**2.71**	**272**		**Pn**	**13 12 30.4**	**+0.7**
ERM	**Erimo**	**7.05**	**17**	Pn	**Pn**	**13 13 27.3**	**-2.0**
JCJ	**Chichijima**	**8.34**	**169**	Pn	**Pn**	**13 13 45.0**	**-2.1**
	16nm,0.3s,baz=293,slow=21,SNR=14						
JCJ				Sn	**Sn**	**13 15 14.3**	**-6.0**
	2.0nm,0.3s,baz=241,slow=19,SNR=2.4						
ASAJ	**Asahikawa**	**8.96**	**10**	Pn	**Pn**	**13 13 54.0**	**-1.5**
	0.6nm,0.3s,baz=219,slow=19,SNR=6.5						
ASAJ				Sn	**Sn**	**13 15 38.9**	**+3.4**
	0.1nm,0.3s,baz=0.0,slow=20,SNR=1.8						
JKA	**Kamikawa-asahi**	**8.96**	**11**		**Pn**	**13 13 54.0**	**-1.5**
JKA					**Sn**	**13 15 38.9**	**+3.4**
KSRS	**Korea Array**	**10.24**	**286**	Pn	**Pn**	**13 14 13.8**	**+0.8**
	0.1nm,0.3s,baz=97,slow=14,SNR=3.6						
KSRS				LR	LR	13 18 03.7	
	comp=Z,173nm,20.1s,baz=105,slow=37						
USRK	**Ussuriysk Ar.**	**10.95**	**327**	Pn	**Pn**	**13 14 26.3**	**+3.5**
	baz=130,slow=16,SNR=2.7						
USRK				LR	LR	13 18 45.2	
	comp=Z,82nm,19.4s,baz=154,slow=38						
USRK	**Ussuriysk Ar.**	**10.95**	**327**		**Pn**	**13 14 22.9**	**+0.2**
NACB	**Ninganchiao**	**19.66**	**241**	P	**P**	**13 16 13.7**	**-1.1**
NACB				IAmb	IAmb	13 16 47.2	
	comp=Z,19nm,0.8s						
TPUB	**Ta-pu**	**20.90**	**240**	P	**P**	**13 16 28.6**	**+0.4**
MA2	**Magadan**	**25.22**	**12**	P	**P**	**13 17 10.0**	**-1.1**
SONM	**Songino Array**	**28.07**	**307**	P	**P**	**13 17 36.6**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=118,slow=8.4,SNR=4.0						
H11N2	**WAKE ISLAND Hy**	**28.09**	**117**	T	T	13 46 47.4	
	baz=309,slow=75,SNR=446						
H11N1	**WAKE ISLAND Hy**	**28.09**	**117**	T	T	13 46 56.5	
	baz=309,slow=75,SNR=474						
H11N3	**WAKE ISLAND Hy**	**28.11**	**117**	T	T	13 46 56.2	
	baz=309,slow=75,SNR=453						
H11S3	**WAKE ISLAND Hy**	**28.73**	**119**	T	T	13 47 43.2	
	baz=311,slow=75,SNR=453						
H11S1	**WAKE ISLAND Hy**	**28.73**	**119**	T	T	13 47 44.1	
	baz=311,slow=75,SNR=200						
H11S2	**WAKE ISLAND Hy**	**28.74**	**119**	T	T	13 47 46.5	
	baz=311,slow=75,SNR=146						
TIXI	**Tiksi**	**36.90**	**354**	P	**P**	**13 18 53.7**	**-0.1**
ZAA0	**Zalesovo Array**	**42.45**	**314**	P	**P**	**13 19 40.0**	**-0.2**
ZALV	**Zalesovo Beam**	**42.45**	**314**	P	**P**	**13 19 40.4**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=95,slow=6.4,SNR=11						
ZALV				PcP	**PcP**	**13 21 33.5**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=132,slow=2.6,SNR=4.2						
ZALV	**Zalesovo Beam**	**42.45**	**314**	P	**P**	**13 19 39.8**	**-0.4**
ZALV					**PcP**	**13 21 32.7**	**0.0**
MK31	**Makanchi Array**	**44.32**	**303**	P	**P**	**13 19 55.2**	**-0.2**
MK31				IAmb	IAmb	13 19 56.1	
	comp=Z,2.8nm,1.1s						
MKAR	**Makanchi Array**	**44.32**	**303**	P	**P**	**13 19 55.5**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=84,slow=10,SNR=21						
MKAR	**Makanchi Array**	**44.32**	**303**	P	**P**	**13 19 55.1**	**-0.3**
KURK	**Kurchatov**	**46.33**	**309**	P	**P**	**13 20 10.6**	**-0.6**
KURK				IAmb	IAmb	13 20 20.7	
	comp=Z,11nm,0.7s						
ILAR	**Eielson Array**	**51.41**	**32**	P	**P**	**13 20 49.6**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=267,slow=5.9,SNR=12						
FITZ	**Fitzroy Crossi**	**54.92**	**197**	P	**P**	**13 21 16.9**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=6.3,slow=9.2,SNR=5.3						
FITZ	**Fitzroy Crossi**	**54.92**	**197**	IAmb	IAmb	13 22 51.1	
	comp=Z,18nm,1.6s						
WR0	**Warramunga Arr**	**55.24**	**187**	P	**P**	**13 21 18.8**	**+0.2**
WR0				IAmb	IAmb	13 21 27.9	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**55.24**	**187**	P	**P**	**13 21 18.8**	**+0.2**
	comp=Z,4.4nm,0.5s,baz=1.1,slow=7.4,SNR=49						
WRA	**Warramunga Arr**	**55.24**	**187**	IAmb	IAmb	13 21 27.4	
	comp=Z,0.7nm,1.4s						
CHGR	**Chuyangaron**	**55.63**	**296**	P	**P**	**13 21 21.6**	**+0.2**
INK	**Inuvik**	**56.31**	**26**	P	**P**	**13 21 27.4**	**+1.6**
	comp=Z,0.7nm,0.8s,baz=274,slow=1.2,SNR=3.2						
INK	**Inuvik**	**56.31**	**26**	IAmb	IAmb	13 22 58.5	
	comp=Z,7.9nm,1.7s						
ABKAR	**Akbulak array**	**58.39**	**311**	P	**P**	**13 21 40.7**	**0.0**
ABKAR				pP	**pP**	**13 21 49.3**	**-0.3**
ABKAR				IAmb	IAmb	13 21 50.6	
	comp=Z,3.8nm,1.1s						
ABKAR	**Akbulak array**	**58.39**	**311**	P	**P**	**13 21 40.7**	**0.0**
ABKAR				pP	**pP**	**13 21 49.4**	**-0.2**
AS31	**Alice Springs**	**58.97**	**187**	P	**P**	**13 21 44.4**	**-0.6**
ASAR	**Alice Springs**	**58.97**	**187**	P	**P**	**13 21 45.8**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=1.8,slow=6.6,SNR=37						
ASAR	**Alice Springs**	**58.97**	**187**	P	**P**	**13 21 44.6**	**-0.4**
DZM	**Mont Dzumac**	**62.21**	**153**	LR	LR	13 46 05.8	
	comp=Z,41nm,19.4s,baz=214,slow=33						
YKA	**Yellowknife Ar**	**65.73**	**29**	P	**P**	**13 22 30.1**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=303,slow=6.6,SNR=6.8						
FINES	**FINESS Array B**	**69.93**	**332**	P	**P**	**13 22 56.4**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=106,slow=15,SNR=3.7						
KBZ	**Khabaz**	**71.36**	**311**	P	**P**	**13 23 06.0**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=167,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**58.97**	**187**	P	**P**	**13 21 44.6**	**-0.4**
DZM	**Mont Dzumac**	**62.21**	**153**	LR	LR	13 46 05.8	
	comp=Z,41nm,19.4s,baz=214,slow=33						
YKA	**Yellowknife Ar**	**65.73**	**29**	P	**P**	**13 22 30.1**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=303,slow=6.6,SNR=6.8						
FINES	**FINESS Array B**	**69.93**	**332**	P	**P**	**13 22 56.4**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=106,slow=15,SNR=3.7						
KBZ	**Khabaz**	**71.36**	**311**	P	**P**	**13 23 06.0**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=167,slow=11,SNR=3.8						
AKASG	**Malin Array Be**	**75.12**	**322**	P	**P**	**13 23 26.9**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=46,slow=6.0,SNR=4.1						
RAO	**Raoul Island**	**75.32**	**143**	LR	LR	13 52 16.7	
	comp=Z,51nm,18.5s,baz=132,slow=32						
NOA	**NORSAR Array B**	**75.43**	**337**	P	**P**	**13 23 29.4**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=13,slow=8.0,SNR=2.8						
NVAR	**Mina Array Bea**	**76.72**	**52**	P	**P**	**13 23 38.0**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=277,slow=5.0,SNR=4.1						
PDAR	**Pinedale Array**	**79.50**	**45**	P	**P**	**13 23 52.6**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=284,slow=1.7,SNR=7.2						
TXAR	**Lajitas Array**	**91.86**	**52**	P	**P**	**13 24 54.8**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=269,slow=4.1,SNR=2.5						

IDC 07 13:15:06.9±0.9, 20°.38S×172°.49E, h0km, mb4.2/14, mb1 4.3/17, mb1mx4.2/34, mbtmp4.2/17, ML3.9/3, MS3.9/28, Ms1 3.9/28, ms1mx3.8/37, Error ellipse: s-maj=31.1km s-min=17.9km az=151.0

BGR 07 13:15:09.4±0.0, 20°.65S×174°.94E, h33km

BJI 07 13:15:12.0±0.0, 20°.40S×172°.40E, h42km, mB5.2/10, mb4.8/15, Ms4.8/3, Ms7 4.5/3

GCMT 07 13:15:13.0±0.3, 20°.47S±0°.02×172°.48E±0°.02, h27km±1km, MW5.0/79, Moment Tensor Solution. s23,c23; s79,c105; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=.1.34±.28; Mθθ=0.15±.20; Mφφ 1.49±.18; Mrθ 0.13±.37; Mrφ 3.46±.11; Mθφ 0.60±.29; Best double couple: Mo3.60700×10^16 NP1:φs83.00000°, δ79.00000°, λ-3.00000°. NP2: φs174.00000°, δ87.00000°, λ-169.00000°. Principal axes: T 4.2800, Plg6.0000°, Azm308.0000°; N -1.3490, Plg79.0000°, Azm189.0000°; P -2.9340, Plg10.0000°, Azm39.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

NEIC 07 13:15:13.0±1.0, 20°.5S±0°.1×172°.44E±0°.09, h41km±7km, mb4.9/51 Error ellipse: s-maj=17.1km s-min=11.3km az=168.0

ISC 07 13:15:12.6±0.5, 20°.48S±0°.10×172°.46E±0°.07, h35km, n206, σ0s°72/182, mb4.8/41, MS3.9/28, 1C, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.83**	**253**	*e*Pn	**Pn**	**13 16 36.8**	**+0.2**
	3.6nm,0.3s						
DZM				*e*LR	LR	13 17 56.1	
	comp=Z,1μm,25.5s						
DZM	**Mont Dzumac**	**5.83**	**253**	Pn	**Pn**	**13 16 36.2**	**-0.4**
	1.4nm,0.3s,baz=168,slow=11,SNR=13						
DZM				LR	LR	13 18 30.2	
	comp=Z,688nm,21.4s,baz=90,slow=34						
DZM	**Mont Dzumac**	**5.83**	**253**		**Pn**	**13 16 36.4**	**-0.2**
MSVF	**Nonsavu**	**5.95**	**64**		**Pn**	**13 16 37.6**	**-0.8**
RAO	**Raoul Island**	**12.34**	**137**	LR	LR	13 21 47.6	
	comp=Z,1μm,19.5s,baz=312,slow=32						
HNR	**Honiara**	**16.32**	**310**	Pn	**Pn**	**13 18 59.1**	**-0.1**
	1.5nm,0.3s,baz=211,slow=18,SNR=3.5						
HNR				LR	LR	13 24 21.9	
	comp=Z,488nm,18.8s,baz=160,slow=34						
HNR	**Honiara**	**16.32**	**310**	IAmb	IAmb	13 19 17.3	
	comp=Z,109nm,1.2s						
AFI	**Afiamalu**	**16.41**	**69**	LR	LR	13 24 10.1	
	comp=Z,129nm,19.1s,baz=135,slow=33						
URZ	**Urewera**	**18.17**	**168**	P	**P**	**13 19 22.4**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=341,slow=16,SNR=2.9						
EIDS	**Eidsvold**	**20.27**	**252**	P	**P**	**13 19 45.6**	**+0.4**
BFZ	**Birch Farm**	**20.39**	**172**	P	Pn	13 19 48.1	-0.5
SNZO	**South Karori**	**20.85**	**175**	P	**P**	**13 19 52.5**	**+1.3**
TUWZ	**Tuamarina**	**20.92**	**177**	P	**P**	**13 19 51.7**	**-0.4**
BHW	**Baring Head**	**20.96**	**175**	P	**P**	**13 19 53.9**	**+1.3**
MSWZ	**Moikau Station**	**21.00**	**174**	P	**P**	**13 19 54.0**	**+1.0**
PLWZ	**Palliser**	**21.16**	**174**	P	**P**	**13 19 53.1**	**-1.6**
BSWZ	**Blackbirch Sta**	**21.20**	**177**	P	**P**	**13 19 57.5**	**+2.4**
KHZ	**Kahutara**	**21.89**	**178**	P	**P**	**13 20 01.2**	**-1.2**
LTZ	**Lake Taylor**	**22.23**	**180**	P	**P**	**13 20 05.7**	**-0.6**
LTZ				IAmb	IAmb	13 20 31.7	
	comp=Z,95nm,1.6s						
FOZ	**Fox Glacier**	**23.09**	**185**	P	**P**	**13 20 15.8**	**+0.7**
ODZ	**Otahua Downs**	**24.54**	**183**	P	**P**	**13 20 29.1**	**+0.2**
CTA	**Charters Tower**	**24.58**	**266**	P	**P**	**13 20 29.6**	**+0.1**
	comp=Z,4.8nm,1.0s,baz=105,slow=16,SNR=3.6						
CTA				LR	LR	13 29 50.5	
	comp=Z,416nm,19.8s,baz=94,slow=36						
WHZ	**Wether Hill Ro**	**25.61**	**187**	P	**P**	**13 20 37.8**	**-0.8**
RAR	**Rarotonga**	**25.95**	**97**	LR	LR	13 28 34.7	
	comp=Z,226nm,19.7s,baz=274,slow=31						
PMG	**Port Moresby**	**26.77**	**291**	LR	LR	13 29 56.2	
	comp=Z,381nm,19.3s,baz=116,slow=33						
STKA	**Stephens Creek**	**29.83**	**241**	P	**P**	**13 21 16.8**	**+0.2**
	comp=Z,4.7nm,0.9s,baz=76,slow=9.0,SNR=5.0						
STKA				LR	LR	13 33 04.6	
	comp=Z,175nm,18.2s,baz=68,slow=36						
STKA	**Stephens Creek**	**29.83**	**241**	P	**P**	**13 21 16.8**	**+0.2**
TBI	**Tubuai**	**35.38**	**102**	*e*LR	LR	13 31 39.6	
	comp=Z,559nm,27.5s						
WRA	**Warramunga Arr**	**35.72**	**264**	P	**P**	**13 22 07.0**	**-1.2**
	comp=Z,2.6nm,1.2s,baz=94,slow=9.0,SNR=3.3						
WRA				LR	LR	13 36 42.0	
	comp=Z,270nm,18.9s,baz=100,slow=36						
WRA	**Warramunga Arr**	**35.72**	**264**	IAmb	IAmb	13 22 14.2	
	comp=Z,0.2nm,1.1s						
JAY	**Jayapura**	**35.75**	**296**	LR	LR	13 36 08.0	
	comp=Z,196nm,20.1s,baz=147,slow=35						
**

YBH IAmb IAmb 13 27 51.4
comp=Z,5.8nm,0.9s
MONP2 Monument Peak 86.14 53 P **P** **13 27 50.0 -0.6**
baz=243
IKP In-Ko-Pah, Jac 86.27 53 P **P** **13 27 50.3 -0.8**
baz=243
LRMC Laurel Mtn Rad 86.42 50 P **P** **13 27 51.0 -0.7**
baz=242
HUMO Hull Mountain 86.42 42 P **P** **13 27 51.6 +0.1**
HUMO IAmb IAmb 13 27 52.9
comp=Z,7.0nm,1.0s
PFO Pinyon Flats O 86.45 52 P **P** **13 27 51.4 -0.6**
baz=243
MDPB Devils Postpil 86.46 48 P **P** **13 27 52.0 -0.1**
OMMB Old Mammoth Mi 86.50 48 P **P** **13 27 52.1 -0.3**
CWC Cottonwood Cre 86.59 49 P **P** **13 27 52.4 -0.2**
baz=242
L04D Klamath Falls 86.63 43 P **P** **13 27 51.8 -0.8**
baz=238,SNR=6.0
SWSC Sam W. Stewart 86.64 53 P **P** **13 27 52.6 -0.1**
baz=243
WAKR Walker 86.64 47 P **P** **13 27 52.8 -0.1**
WAKR IAmb IAmb 13 27 54.1
comp=Z,11nm,1.2s
I02D Swisshome 86.67 40 P **P** **13 27 52.2 -0.4**
baz=237
BEKR Beckworth 86.69 45 P **P** **13 27 52.6 -0.5**
M04C Macdoel 86.70 43 P **P** **13 27 52.3 -0.7**
baz=239
TIN Tinemaha, Big 86.78 49 P **P** **13 27 52.9 -0.6**
baz=241
PNTR Pine Nut 86.81 46 P **P** **13 27 53.5 -0.2**
PNTR IAmb IAmb 13 27 54.8
comp=Z,9.7nm,1.1s
MPMC Manual Prospec 86.83 50 P **P** **13 27 53.3 -0.6**
baz=242
BELC Belle Mtn. Jos 86.97 52 P **P** **13 27 53.8 -0.7**
baz=243
GSC Goldstone, Bar 86.97 51 P **P** **13 27 54.0 -0.4**
GSC IAmb IAmb 13 27 55.8
comp=Z,11nm,1.6s
GSC Goldstone, Bar 86.97 51 P **P** **13 27 54.3 -0.1**
baz=242
YERR Yerington 87.01 46 P **P** **13 27 53.6 -1.1**
YERR IAmb IAmb 13 27 55.5
comp=Z,6.9nm,1.1s
HEC Hector,Ludlow 87.09 51 P **P** **13 27 54.2 -0.8**
baz=243
BC3 Big Chuckawall 87.21 53 P **P** **13 27 55.1 -0.6**
baz=243
J04D Umpqua Nationa 87.28 42 P **P** **13 27 55.7 -0.2**
baz=239
RYN Ryan 87.33 47 P **P** **13 27 55.9 -0.3**
GRAC Grapevine Rang 87.36 49 P **P** **13 27 55.5 -0.7**
baz=242
NVAR Mina Array Bea 87.38 47 P **P** **13 27 56.5 0.0**
comp=Z,2.1nm,1.0s,baz=230,slow=9.0,SNR=13
NVAR LR LR 14 00 27.2
comp=Z,48nm,19.2s,baz=2.0,slow=31
GLA Glamis 87.41 53 P **P** **13 27 56.4 -0.2**
baz=244
FURC Furnace Creek, 87.47 50 P **P** **13 27 56.7 0.0**
baz=242
NV11 Mina Array Sit 87.48 47 P **P** **13 27 56.3 -0.6**
GMRC Granite Mounta 87.57 52 P **P** **13 27 56.3 -1.1**
baz=243
IRM Iron Mountain 87.67 52 P **P** **13 27 56.9 -0.8**
baz=243
TUQ Turquoise Moun 87.67 51 P **P** **13 27 56.7 -1.2**
baz=243
MOD Modoc Plateau 87.75 44 P **P** **13 27 57.7 -0.4**
MOD IAmb IAmb 13 27 59.0
comp=Z,6.5nm,1.1s
KVN Kaiserville 87.82 47 P **P** **13 27 58.0 -0.6**
KVN IAmb IAmb 13 27 59.3
comp=Z,7.4nm,1.3s
J05D Fort Rock, OR 87.85 42 P **P** **13 27 58.1 -0.4**
baz=239,SNR=6.6
Y12C Blythe 87.95 53 P **P** **13 27 59.0 0.0**
baz=244
TPNV Topopah Spring 88.13 49 P **P** **13 27 59.6 -0.4**
TPNV IAmb IAmb 13 28 00.9
comp=Z,7.1nm,1.1s
TPNV Topopah Spring 88.13 49 P **P** **13 28 00.1 +0.1**
baz=243
PINE Pine Mountain 88.30 42 P **P** **13 28 00.8 +0.1**
PINE IAmb IAmb 13 28 01.9
comp=Z,10nm,1.1s
I05D Terrebonne, OR 88.33 41 P **P** **13 28 00.7 +0.1**
baz=239
BILL Bilibino 88.38 358 P **P** **13 28 00.7 +0.4**
BILL IAmb IAmb 13 28 08.3
comp=Z,9.4nm,1.4s
SHPR Sheep Range 88.71 50 P **P** **13 28 02.4 -0.3**
E04D Cinebar 88.74 39 P **P** **13 28 03.2 +0.7**
baz=238
W13A Hualapai Mount 89.01 52 P **P** **13 28 04.2 -0.2**
WVOR Wild Horse Val 89.09 44 P **P** **13 28 04.3 0.0**
WVOR IAmb IAmb 13 28 05.5
comp=Z,7.3nm,1.2s
R11A Troy Canyon, C 89.23 48 P **P** **13 28 04.9 -0.4**
baz=243
B05A Bryant 89.91 37 P **P** **13 28 08.0 +0.1**
baz=238
SONM Songino Array 90.04 322 P **P** **13 28 08.7 -0.1**
comp=Z,0.6nm,0.7s,baz=122,slow=5.4,SNR=5.5
SONM Songino Array 90.04 322 IAmb IAmb 13 28 09.7
comp=Z,3.0nm,1.4s
TUC Tucson 90.18 56 P **P** **13 28 09.9 +0.2**
TUC IAmb IAmb 13 28 11.1
comp=Z,11nm,1.5s
TUC Tucson 90.18 56 P **P** **13 28 09.4 -0.3**
baz=246
GTA Gaotai 90.19 312 *e*P **P** **13 28 10.1 +0.5**
GTA pmax pmax
comp=Z,1.0nm,0.9s
G08A Pilot Rock 90.27 41 P **P** **13 28 09.4 -0.4**
LCMT Little Creek M 90.31 50 P **P** **13 28 09.9 -0.4**
E07A Sunnyside 90.35 40 P **P** **13 28 09.1 -1.0**
E07A IAmb IAmb 13 28 10.8
comp=Z,7.0nm,1.0s
CCUT Cedar City 90.46 50 P **P** **13 28 11.1 +0.1**
ILAR Eielson Array 90.54 16 P **P** **13 28 08.7 -1.8**
comp=Z,1.0nm,0.8s,baz=239,slow=4.8,SNR=9.0
ILAR LR LR 14 03 22.3
comp=Z,110nm,19.5s,baz=236,slow=32
X16A Lo Mia Camp, P 90.55 53 P **P** **13 28 11.3 -0.2**
X16A IAmb IAmb 13 28 12.9
comp=Z,9.2nm,1.2s
ELK Elko 90.55 46 P **P** **13 28 11.0 -0.4**
ELK IAmb IAmb 13 28 12.2
comp=Z,5.6nm,1.1s
KNB Kanab 90.62 51 P **P** **13 28 11.8 0.0**
POKR Poker Plat Res 90.68 16 P **P** **13 28 11.8 +0.6**
baz=217
U15A North Rim 90.75 51 P **P** **13 28 12.6 +0.1**
WUAZ Wupatki 91.05 52 P **P** **13 28 13.6 -0.2**
WUAZ Wupatki 91.05 52 P **P** **13 28 13.6 -0.2**
baz=246
DUG Dugway, Tooele 91.98 48 P **P** **13 28 17.9 0.0**
baz=245
W18A Petrified Fore 92.11 53 P **P** **13 28 18.1 -0.6**
W18A Petrified Fore 92.11 53 P **P** **13 28 18.4 -0.3**
baz=246
TOLK Toolik Lake Re 93.03 13 P **P** **13 28 23.1 +1.1**
baz=215
TXAR Lajitas Array 94.72 61 P **P** **13 28 30.4 -0.3**
comp=Z,0.8nm,0.9s,baz=251,slow=3.8,SNR=7.1
TXAR LR LR 14 02 28.0
comp=Z,55nm,21.4s,baz=0.0,slow=30
PDAR Pinedale Array 95.26 46 P **P** **13 28 31.8 -1.3**
comp=Z,0.2nm,0.5s,baz=226,slow=4.8,SNR=2.8
S22A 4UR Ranch, Cre 95.28 52 P **P** **13 28 32.6 -0.9**
baz=248
PLCA Paso Flores 95.58 137 LR LR 14 03 41.9
comp=Z,53nm,18.1s,baz=248,slow=30
RLMT Red Lodge 96.36 44 P **P** **13 28 36.9 -1.1**
baz=247
INK Inuvik 96.78 18 P **P** **13 28 37.7 -1.3**
comp=Z,2.3nm,1.1s,baz=291,slow=7.4,SNR=3.6
T25A Trinidad 96.86 53 P **P** **13 28 39.2 -1.3**
baz=250
ISCO Idaho Springs 96.91 50 P **P** **13 28 39.2 -1.6**
baz=249
WMQ Urumqi 100.26 313 *e*P **Pdif** **13 28 55.9 +0.5**
WMQ pmax pmax
comp=Z,7.0nm,0.6s
WMQ pmax pmax
comp=Z,82nm,5.7s
WMQ LR LR
comp=Z,250nm,29.0s
WMQ LR LR
comp=Z,870nm,28.8s
WMQ LR LR
comp=Z,190nm,25.3s
KOLS Kolonicke sedl 142.93 327 *e*PKP **PKiKP** **13 34 46.0 +0.3**
MORC Moravsky Berou 144.62 332 *e*PKP **PKPab** **13 34 43.3 -0.8**
CHVC Chvalec 144.66 334 *e*PKP **PKPab** **13 34 44.1 0.0**
DPC Dobruska-Polom 144.72 333 *e*PKP PKPbc 13 34 44.7 +0.2
DPC *ex* x 13 34 51.7
KRLC Kraliky 144.73 333 *e*PKP PKPbc 13 34 44.5 -0.1
UPC Upice 144.73 334 *e*PKP PKPbc 13 34 44.7 +0.2
PSZ Piszkesteto 144.80 327 **PKPab** **13 34 44.5 -0.3**
VYHS Vyhne 144.93 329 *e*PKP PKPbc 13 34 45.2 0.0
KOLL Kolacno 145.08 330 *e*PKP **PKPdf** **13 34 46.7 +0.5**
JAVC Velka Javorina 145.22 330 *e*PKP **PKPdf** **13 34 47.3 +0.8**
NRDL Niedersach Rie 145.24 341 *e*PKPbc **PKPbc** **13 34 45.3 -0.6**
baz=29,slow=2.7
CLL Collm 145.27 337⇑ *i*PKPdf **PKPbc** **13 34 45.9 -0.3**
comp=Z,22nm,1.0s
CLL *e*PKiKP **PKiKP** **13 34 52.0 +1.7**
CLL Collm 145.27 337 *e*PKPbc **PKPbc** **13 34 46.0 -0.2**
baz=29,slow=2.7
BRG Berggiesshubel 145.27 336 *e*PKPbc **PKPbc** **13 34 46.1 -0.1**
baz=29,slow=2.7
PVCC Panska Ves 145.30 335 *e*PKP **PKPdf** **13 34 46.6 +0.1**
ASSE Asse, Remlinge 145.38 340 *e*PKPbc **PKPbc** **13 34 46.2 -0.2**
baz=29,slow=2.7
VRAC Vranov 145.38 332 *e*PKP **PKPbc** **13 34 46.5 -0.1**
FBE Freiberg 145.46 337 *e*PKPbc **PKPbc** **13 34 46.7 0.0**
baz=29,slow=2.7
KRUC Moravsky 145.66 332 *e*PKP **PKPbc** **13 34 47.4 -0.1**
GOPC GO Pecny, Ondr 145.69 334 *e*PKP **PKPdf** **13 34 47.3 +0.1**
CLZ Clausthal 145.72 340 *e*PKPbc **PKPdf** **13 34 47.1 -0.2**
baz=29,slow=2.7
MODS Modra-Piesok 145.75 330 *e*PKP **PKPdf** **13 34 47.1 -0.3**
NEUB Neuenburg 145.79 338 *e*PKPbc **PKPbc** **13 34 47.6 -0.2**
baz=29,slow=2.7
GTTG Gvttingen 146.10 340 *e*PKPbc **PKPbc** **13 34 48.5 -0.2**
baz=29,slow=2.7
TANN Tannenbergstha 146.20 337 *e*PKPbc **PKPbc** **13 34 49.0 -0.2**
baz=29,slow=2.7
GUNZ Gunzen 146.29 337 *e*PKPbc **PKPbc** **13 34 49.5 0.0**
baz=29,slow=2.7
MOX Moxa 146.31 338 *e*PKPbc **PKPdf** **13 34 48.8 +0.5**
baz=29,slow=2.7
WERN Wernitzgruen 146.34 337 *e*PKPbc **PKPbc** **13 34 49.5 -0.1**
baz=29,slow=2.7
CONA Conrad Observa 146.73 331 *i* PKPab **PKPbc** **13 34 50.5 -0.4**
comp=Z,11nm,1.3s
KHC Kasperske Hory 146.80 334 *e*PKP **PKPbc** **13 34 50.5 -0.4**
KHC Kasperske Hory 146.80 334 **PKPbc** **13 34 50.6 -0.4**
GEC2 GERESS Array S 146.97 334 *e*PKPbc **PKPbc** **13 34 51.1 -0.4**
baz=29,slow=2.7
GEC2 GERESS Array S 146.97 334 **PKPbc** **13 34 50.9 -0.7**
GERES GERESS Array B 146.97 334 PKPbc **PKPbc** **13 34 51.1 -0.4**
comp=Z,2.8nm,0.7s,baz=43,slow=2.7,SNR=22
WET Wettzell 147.07 335 *e*PKPbc **PKPbc** **13 34 51.5 -0.3**
baz=29,slow=2.7
ARSA Arzberg 147.38 330 *i* PKiKP **PKiKP** **13 34 54.9 0.0**
comp=Z,7.5nm,1.6s
MOA Molln 147.50 332 *i* PKPbc **PKPbc** **13 34 51.6 -1.3**
comp=Z,9.6nm,1.6s
SOKA Soboth 148.03 330 *i* PKPbc **PKPbc** **13 34 53.0 -1.5**
comp=Z,1.9nm,0.9s
FNA Florina 148.16 316 PKPdf **PKPdf** **13 34 51.1 -0.6**
BLY Banja Luka 148.31 325 **PKPbc** **13 34 54.5 -0.7**
OBKA Obir 148.38 330 *i* PKPab **PKiKP** **13 34 57.7 +0.6**
KBA Koelnbreinsper 148.50 332 *i* PKPab **PKiKP** **13 34 57.5 +0.1**
comp=Z,6.7nm,1.3s
MYKA Terra Mystica 148.71 331 *i* PKPbc **PKPbc** **13 34 54.9 -1.3**
ABTA Abfaltersbach 149.11 333 *i* PKPbc **PKPbc** **13 34 56.1 -1.2**
comp=Z,3.0nm,0.7s
MOTA Moosalm 149.22 335 *i* PKPbc **PKPbc** **13 34 56.6 -1.0**
comp=Z,3.5nm,0.7s
RETA Reutte 149.24 335 *i* PKPab **PKPab** **13 35 01.6 -0.5**
comp=Z,6.5nm,1.3s
SQTA Sankt Quirin 149.28 335 *i* PKPdf **PKPdf** **13 34 53.2 -0.3**
comp=Z,6.4nm,0.8s
UBR Ueberruh 149.33 336 *e*PKPbc **PKPbc** **13 34 57.2 -0.5**
baz=29,slow=2.7
STAL STALIGIAL 149.40 332 **PKPbc** **13 34 56.8 -1.2**
FETA Feichten 149.63 335 *i* PKPbc **PKPbc** **13 34 57.8 -0.9**
comp=Z,8.9nm,1.1s
DAVA Damuels 149.75 336 *i* PKiKP **PKPbc** **13 34 58.6 -0.3**
comp=Z,12nm,1.5s
FUORN Ofenpass-Fuorn 150.15 335 **PKPbc** **13 34 59.3 -0.8**
TUE Stuetta 150.63 336 **PKPbc** **13 34 59.8 -1.4**

*SJA **07** 13:19:08.0±0.7,22°.15S×67°.26W,h190km±7km, ML3.0, MW3.2*
*GUC **07** 13:19:09.2±0.7,22°.08S×67°.66W,h208km±7km, ML3.4*
ISC 07 13:19:07.6±1.5,22°.12S±0°.05×67°.32W±0°.05, h198km±14km,n30,σ1s20/46,8C,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.55**	**251**	*e*P		**Pn**		**13 19 42.8**	**+0.9**
LVC				*e*S		**Sn**		**13 20 08.8**	**+0.3**
LVC	**Limon Verde**	**1.55**	**251**⇑	*i*P		**Pn**		**13 19 42.9**	**+0.9**
YJA	**Yavi**	**1.67**	**92**	*i*P		**Pn**		**13 19 42.9**	**-0.2**
YJA				*i*S		**Sn**		**13 20 10.0**	**-0.7**
YJA				IAML				13 20 10.3	
comp=Z,103nm,0.5s									
PB09	**IPOC Station P**	**1.81**	**280**⇑	*i*P		**Pn**		**13 19 45.4**	**+1.1**
PB09	**IPOC Station P**	**1.81**	**280**	*i*P		**Pn**		**13 19 45.1**	**+0.8**
PB09				IAML				13 20 17.9	
comp=Z,45nm,0.3s									
PB06	**IPOC Station P**	**2.16**	**254**	*e*P		**Pn**		**13 19 48.4**	**+0.6**
PB06				*e*S		**Sn**		**13 20 19.5**	**+0.4**
PB06				IAML				13 20 25.4	
comp=N,95nm,0.1s									
PB06	**IPOC Station P**	**2.16**	**254**	*i*P		**Pn**		**13 19 48.7**	**+0.9**
PB06				IAML				13 20 21.4	
comp=Z,52nm,0.2s									
PB03	**IPOC Station P**	**2.26**	**271**	*e*P		**Pn**		**13 19 49.4**	**+0.6**
PB03				*i*S		**Sn**		**13 20 19.9**	**-1.0**
PB03				IAML				13 20 21.8	
comp=E,145nm,0.3s									
PB15	**IPOC Station P**	**2.26**	**241**	*e*P		**Pn**		**13 19 50.2**	**+1.3**
PB15				*i*S		**Sn**		**13 20 21.2**	**+0.1**
PB15	**IPOC Station P**	**2.26**	**241**	*i*P		**Pn**		**13 19 49.7**	**+0.8**
PB08	**IPOC Station P**	**2.61**	**319**⇑	*i*P		**Pn**		**13 19 54.3**	**+1.3**
PB08				*i*S		**Sn**		**13 20 29.2**	**+0.8**
PB08				IAML				13 20 31.6	
comp=E,85nm,0.2s									
PB04	**IPOC Station P**	**2.63**	**265**	*e*P		**Pn**		**13 19 53.8**	**+0.8**
PB04				*i*S		**Sn**		**13 20 27.0**	**-1.4**
PB04				IAML				13 20 31.4	
comp=N,119nm,0.2s									
PB04	**IPOC Station P**	**2.63**	**265**	*i*P		**Pn**		**13 19 54.0**	**+1.0**
PB05	**IPOC Station P**	**2.76**	**254**	*e*P		**Pn**		**13 19 55.2**	**+0.8**
PB05				*i*S		**Sn**		**13 20 29.7**	**-1.3**
PB05				IAML				13 20 34.2	
comp=E,47nm,0.3s									
AZAP	**Zapla**	**2.94**	**136**⇑	*i*P		**Pn**		**13 19 56.9**	**+0.3**
GO01	**Chusmiza**	**3.01**	**324**⇑	*i*P		**Pn**		**13 19 58.7**	**+1.0**
GO01				*e*S		**Sn**		**13 20 37.5**	**+0.8**
SLA	**San Lorenzo**	**3.08**	**148**	*i*P		**Pn**		**13 19 58.6**	**+0.5**
TA01	**Diego Aracena**	**3.08**	**300**⇑	*i*P		**Pn**		**13 19 58.0**	**-0.1**
TA01				*i*S		**Sn**		**13 20 35.5**	**-2.0**
PB11	**IPOC Station P**	**3.21**	**317**⇑	*i*P		**Pn**		**13 19 59.9**	**+0.1**
PB11				*i*S		**Sn**		**13 20 38.7**	**-1.8**
PB10	**IPOC Station P**	**3.29**	**245**	*e*P		**Pn**		**13 20 01.1**	**+0.6**
PB10				*i*S		**Sn**		**13 20 40.2**	**-1.8**
PB10				IAML				13 20 42.5	
comp=N,37nm,0.3s									
PB10	**IPOC Station P**	**3.29**	**245**	*i*P		**Pn**		**13 20 02.2**	**+1.6**
PB10				IAML				13 20 45.5	
comp=Z,21nm,0.2s									
PSGC	**Pisagua**	**3.63**	**313**⇑	*i*P		**Pn**		**13 20 04.1**	**-0.8**
PSGC				*i*S		**Sn**		**13 20 46.5**	**-3.2**
GO02	**Mina Guanaco**	**3.67**	**214**⇑	*i*P		**Pn**		**13 20 06.9**	**+1.4**
GO02				*i*S		**Sn**		**13 20 50.5**	**-0.5**
GO02				IAML				13 20 52.1	
comp=E,133nm,0.5s									
PB14	**IPOC Station P**	**3.77**	**228**	*e*P		**Pn**		**13 20 07.7**	**+1.0**
PB14				*i*S		**Sn**		**13 20 50.8**	**-2.4**
PB14				IAML				13 20 55.2	
comp=E,28nm,0.1s									
PB14	**IPOC Station P**	**3.77**	**228**	*i*P		**Pn**		**13 20 07.7**	**+1.0**
PB14				IAML				13 20 55.6	
comp=Z,30nm,0.2s									
PB16	**IPOC Station P**	**4.29**	**331**⇑	*i*P		**Pn**		**13 20 14.7**	**+1.2**
PB16				*i*S		**Sn**		**13 21 04.1**	**-1.2**
PB16				IAML				13 21 07.8	
comp=N,27nm,0.5s									
LPAZ	**La Paz**	**5.86**	**352**	*i*P		**Pn**		**13 20 35.5**	**+1.9**
APLL	**PUNTA DE LOS L**	**8.27**	**175**	*i*P		**Pn**		**13 21 04.8**	**+0.4**
APLL				IAML				13 23 21.9	
comp=Z,1.5nm,3.3s									
TCA	**Tanti**	**9.49**	**166**	*i*P		**Pn**		**13 21 20.8**	**+0.5**
MRA	**San Martin**	**10.35**	**172**	*i*P		**Pn**		**13 21 31.7**	**+0.2**

*IDC **07** 13:20:26.9±2.5,46°.42N×152°.84E,h0km,mb3.7/7, mb1 3.8/9,mb1mx3.5/44,mbtmp3.7/9,ML2.9/2,MS4.3/1, Ms1 4.3/1,ms1mx2.7/48, Error ellipse: s-maj=60.5km s-min=26.4km az=162.0*
*SKHL **07** 13:20:29.5±0.8,45°.00N×153°.30E,h30km±5km,mb4.3/2*
*NEIC **07** 13:20:32.4±1.7,46°.2N±0°.1×152°.8E±0°.2,h48km±9km, mb4.7/13, Error ellipse: s-maj=20.8km s-min=11.3km az=145.0*
ISC 07 13:20:29.4±0.8,46°0N±0°.1×153°00E±0°.09,h31km,n36, σ2s16/33,mb4.2/12,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.68**	**261**	*e*P		**Pn**		**13 21 27.4**	**+3.3**
KUR						AMB	AMB	13 21 27.9	
20nm,0.4s									
KUR						AMB	AMB	13 21 27.9	
10.0nm,0.4s									
KUR						AMB	AMB	13 21 27.9	
30nm,0.4s									
KUR				*e*S		**Sn**		**13 22 11.2**	**+4.9**
KUR						A	A	13 22 20.0	
70nm,0.4s									
KUR						A	A	13 22 20.0	
100nm,0.4s									
YUK	**Yuzh-Kuril'sk**	**5.42**	**252**	*e*P		**Pn**		**13 21 49.9**	**+1.9**
YUK						AMB	AMB	13 21 51.0	
20nm,0.4s									
YUK						AMB	AMB	13 21 51.0	
10.0nm,0.4s									
YUK						AMB	AMB	13 21 51.0	
20nm,0.4s									
YUK				*e*S		**Sn**		**13 22 49.5**	**+0.3**
YUK						A	A	13 22 54.0	
70nm,0.4s									
YUK						A	A	13 22 54.0	
50nm,0.4s									
NMR	**Nemuro--Hokkai**	**5.79**	**246**	*e*P		**Pn**		**13 21 53.0**	**-0.2**
NMR				*i*S		**Sn**		**13 22 56.0**	**-2.5**
JKA	**Kamikawa-asahi**	**7.59**	**260**			**Pn**		**13 22 20.7**	**+2.8**
ASAJ	**Asahikawa**	**7.60**	**260**	Pn		**Pn**		**13 22 20.7**	**+2.8**
0.4nm,0.3s,baz=66,slow=10.0,SNR=3.4									
PEA0B	**Petropavlovsk-**	**7.79**	**21**	Pn		**Pn**		**13 22 18.4**	**-2.2**
PETK	**Petropavlovsk-**	**7.79**	**21**	Pn		**Pn**		**13 22 16.6**	**-4.0**
0.2nm,0.3s,baz=177,slow=13,SNR=12									
PETK						Sn		**Sn**		**13 23 52.5**	**+4.9**
0.1nm,0.3s,baz=192,slow=20,SNR=2.2									
PETK	**Petropavlovsk-**	**7.79**	**21**			**Pn**		**13 22 20.7**	**+0.1**
MAJO	**Matsushiro**	**14.55**	**235**	Pn		**Pn**		**13 23 54.8**	**+1.8**
MJB9	**Matsu-Tunnel**	**14.55**	**235**	Pn		**Pn**		**13 23 54.8**	**+1.8**
MDJ	**Mudanjiang**	**16.52**	**274**	Pn		**Pn**		**13 24 17.6**	**-1.1**
YAK	**Yakutsk**	**20.96**	**329**	P		**P**		**13 25 06.8**	**-2.8**
SPIA	**Saint Paul Isl**	**25.14**	**50**	P		**P**		**13 25 52.3**	**+1.0**
H11N2	**WAKE ISLAND Hy**	**28.55**	**152**	T		T		13 57 59.9	
baz=340,slow=75,SNR=5.4									
H11N1	**WAKE ISLAND Hy**	**28.56**	**152**	T		T		13 58 09.0	
baz=340,slow=75,SNR=5.4									
H11N3	**WAKE ISLAND Hy**	**28.56**	**152**	T		T		13 58 15.7	
baz=340,slow=75,SNR=4.3									
H11S1	**WAKE ISLAND Hy**	**29.62**	**153**	T		T		13 59 26.2	
baz=340,slow=76,SNR=4.8									
H11S3	**WAKE ISLAND Hy**	**29.63**	**153**	T		T		13 59 27.7	
baz=340,slow=76,SNR=5.3									
H11S2	**WAKE ISLAND Hy**	**29.64**	**153**	T		T		13 59 32.1	
baz=340,slow=76,SNR=4.2									
TLY	**Talaya**	**32.49**	**298**	P		**P**		**13 26 55.7**	**-1.2**
TLY				IAmb		IAmb		13 26 57.0	
comp=Z,16nm,1.2s									
PPLA	**Purkeypile**	**34.82**	**41**	P		**P**		**13 27 18.7**	**+1.5**
PPLA				IAmb		IAmb		13 27 41.6	
comp=Z,35nm,1.6s									
NEA	**Nenana**	**36.28**	**38**	P		**P**		**13 27 30.6**	**+1.1**
MENT	**Mentasta**	**38.69**	**41**	P		**P**		**13 27 51.1**	**+1.1**
MENT				IAmb		IAmb		13 27 55.3	
comp=Z,29nm,1.8s									
INK	**Inuvik**	**42.37**	**32**	P		**P**		**13 28 20.1**	**-0.1**
comp=Z,0.9nm,1.0s,baz=304,slow=2.4,SNR=2.5									
INK	**Inuvik**	**42.37**	**32**	IAmb		IAmb		13 29 32.6	
comp=Z,23nm,2.0s									
ZALV	**Zalesovo Beam**	**43.02**	**306**	P		**P**		**13 28 23.0**	**-2.8**
comp=Z,0.3nm,0.3s,baz=101,slow=4.6,SNR=2.2									
MK31	**Makanchi Array**	**47.25**	**298**	P		**P**		**13 28 58.9**	**-0.6**
MK31				IAmb		IAmb		13 30 38.4	
comp=Z,12nm,1.9s									
MKAR	**Makanchi Array**	**47.25**	**298**	P		**P**		**13 28 58.9**	**-0.5**
comp=Z,0.2nm,0.5s,baz=60,slow=7.2,SNR=3.9									
KKM	**Kota Kinabalu**	**50.90**	**230**	P		**P**		**13 29 28.7**	**+0.9**
ARCES	**ARCESS Array B**	**58.59**	**341**	P		**P**		**13 30 21.6**	**-1.1**
comp=Z,3.5nm,0.9s,baz=29,slow=6.2,SNR=2.7									
ARCES						LR	LR	14 00 49.5	
comp=Z,215nm,18.4s,baz=249,slow=42									
ABKAR	**Akbulak array**	**58.88**	**310**	P		**P**		**13 30 24.1**	**-0.9**
ABKAR	**Akbulak array**	**58.88**	**310**	P		**P**		**13 30 24.2**	**-0.9**
WDC	**Whiskeytown Da**	**58.97**	**62**	P		**P**		**13 30 25.8**	**+0.1**
WDC				IAmb		IAmb		13 30 46.4	
comp=Z,7.3nm,1.5s									
FINES	**FINESS Array B**	**64.73**	**335**	P		**P**		**13 31 03.5**	**-0.6**
comp=Z,1.0nm,0.8s,baz=38,slow=7.0,SNR=2.8									
AKASC	**Malin Array Be**	**72.17**	**326**	P		**P**		**13 31 50.5**	**-0.4**
comp=Z,0.5nm,0.4s,baz=39,slow=6.4,SNR=4.8									
TXAR	**Lajitas Array**	**77.95**	**60**	P		**P**		**13 32 25.6**	**+1.0**
comp=Z,0.2nm,0.6s,baz=294,slow=4.5,SNR=2.5									

*IDC **07** 13:34:18.8±2.8,7°.00S×129°.86E,h89km±38km,mb3.5/1, mb1 3.7/5,mb1mx3.3/35,mbtmp3.8/5, Error ellipse: s-maj=69.1km s-min=23.1km az=91.0*
*NEIC **07** 13:34:21.0±0.6,6°.86S±0°.05×130°.0E±0°.1,h127km±11km, mb4.3/4, Error ellipse: s-maj=18.1km s-min=7.3km az=88.0*
ISC 07 13:34:18.3±0.7,6°98S±0°.06×129°88E±0°.09,h104km,n21, σ2s78/22,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.72**	**125**	Pn		Pn		13 34 52.7	+5.2
FAKI	**Fak Fak**	**4.67**	**30**	Pn		**Pn**		**13 35 27.2**	**+0.5**
MTN	**Manton Dam**	**5.95**	**168**			**Pn**		**13 35 47.2**	**+3.1**
SOEI	**Soe**	**6.20**	**243**	Pn		Pn		13 35 52.8	+5.3
SIJI	**Sorong**	**6.23**	**13**	P		**Pn**		**13 35 48.6**	**+0.9**
1.7nm,0.3s,baz=226,slow=23,SNR=5.2									
SIJI				S		**Sn**		**13 36 52.0**	**-5.5**
1.5nm,0.3s,baz=162,slow=19,SNR=1.6									
KNRA	**Kununurra**	**8.71**	**187**			**Pn**		**13 36 23.7**	**+2.2**
LUWI	**Luwuk**	**9.22**	**309**	Pn		**Pn**		**13 36 25.1**	**-3.4**
KAPI	**Kappang**	**10.26**	**280**	Pn		**Pn**		**13 36 42.7**	**+0.1**
FITZ	**Fitzroy Crossi**	**11.80**	**200**	P		**Pn**		**13 37 03.5**	**+0.2**
0.5nm,0.3s,baz=30,slow=6.9,SNR=23									
FITZ				S		**Sn**		**13 39 08.8**	**-4.3**
0.3nm,0.3s,baz=270,slow=20,SNR=2.0									
FITZ	**Fitzroy Crossi**	**11.80**	**200**			**Pn**		**13 37 03.7**	**+0.5**
WRAB	**Tennant Creek**	**13.59**	**162**	Pn		**Pn**		**13 37 27.5**	**+0.7**
WRA	**Warramunga Arr**	**13.59**	**162**	P		**Pn**		**13 37 26.2**	**-0.6**
0.8nm,0.3s,baz=345,slow=12,SNR=22									
WRA				S		Sn	

KMI				IAmb	IAmb	13 42 53.7		
	comp=Z,19nm,0.5s							
MQZ	**McQueen's Vall**	**52.30**	**142**	P	**P**	**13 43 19.0**	**-0.2**
MKAR	**Makanchi Array**	**68.15**	**327**	P	**P**	**13 45 09.3**	**+2.1**
	comp=Z,0.5nm,0.5s,baz=118,slow=7.7,SNR=8.8							

BUC 07 13:34:24.7±0.7, 45°.61N × 26°.73E, h30 km ± 3km, ml0.6/1, 4C-9D, Error ellipse: s-maj=4.3km s-min=2.2km az=117.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BISRR	**Bisoca**	**0.07**	**194**	⇓P	Pb	13 34 30.1	0.0
BISRR				⇓S	Sb	13 34 34.2	+0.5
BISRR	**Bisoca**	**0.07**	**194**	⇓P	Pb	13 34 30.1	0.0
BISRR	**Bisoca**	**0.07**	**194**	⇓S	Sb	13 34 34.2	+0.5
PLOR	**Plostina**	**0.25**	**347**	⇓P	Pb	13 34 31.8	+0.1
PLOR				⇓S	Sb	13 34 36.2	-0.1
PLOR	**Plostina**	**0.25**	**347**	⇓P	Pb	13 34 31.8	+0.1
VRI	**Vrincioaia**	**0.26**	**359**	⇓P	Pb	13 34 31.9	+0.2
VRI				⇓S	Sn	13 34 37.1	-0.4
VRI	**Vrincioaia**	**0.26**	**359**	⇓P	Pb	13 34 31.9	+0.2
MLR	**Muntele Rosu**	**0.57**	**258**	⇑P	Pb	13 34 36.1	-0.2
MLR				⇑S	Sn	13 34 45.2	-0.1
MLR	**Muntele Rosu**	**0.57**	**258**	⇑P	Pb	13 34 36.1	-0.2

MAN 07 13:49:12.9, 9°.92N × 124°.01E, h1 km, mb5.0, ML4.0, MS4.0, 3C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.40**	**353**	⇓*e*P	Pg	13 49 20.9	+0.3
LLP				*i* S	Sg	13 49 26.9	+1.1
MSLP	**Maasin**	**0.86**	**75**	*e*P	Pg	13 49 29.4	0.0
MSLP				*e*S	Sb	13 49 42.5	-0.1
OCLP	**Ormoc**	**1.27**	**27**	*e*P	Pg	13 49 35.7	-1.6
OCLP				*e*S	Sn	13 49 55.7	+0.2
DCPH	**Dipolog City**	**1.48**	**206**	⇓*i*P	Pn	13 49 39.9	-0.8
DCPH				*i* S	Sg	13 49 59.5	-1.0
CGP	**Cagayan de Oro**	**1.60**	**155**	⇓*e*P	Pg	13 49 44.2	+0.6
BUTP	**Butuan**	**1.84**	**121**	*e*P	Sg	13 50 14.4	+2.2
BUTP				*e*S	Sb	13 50 26.9	+16
RCP	**Roxas**	**2.05**	**323**	⇑*e*P	Pb	13 49 50.4	-0.6
RCP				*e*S	Sn	13 50 15.5	+0.6
PAGZ	**Pagadian**	**2.15**	**197**	*e*P	Pn	13 49 49.0	-0.9
PAGZ				*e*S	Sn	13 50 17.4	+0.2
BUKP	**Musuan**	**2.27**	**153**	*e*P	Pn	13 49 51.8	+0.1
BUKP				*e*S	Sn	13 50 21.9	+1.5
CTBH	**Cotabato--PC H**	**2.69**	**175**	⇑*i*P	Pn	13 49 58.9	+1.6
KCP	**Kidapawan**	**3.08**	**160**	⇑*i*P	Pn	13 50 04.8	+2.0
KCP				*i* S	Sn	13 50 28.4	-12

NDI 07 13:50:22.7±3.0, 20°.71N × 74°.00E, h15 km ± 17km, MD3.3, ML3.5, 1C, Southern India

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POO	**Poona**	**2.17**	**184**	⇑*i*PN	Pn	13 50 57.5	-0.8
	22nm,0.9s						
POO				*e*P	Pb	13 50 59.4	-2.4
POO				*i* SN	Sn	13 51 24.0	-1.0
POO				*e*S	Sb	13 51 25.4	-3.1
POO				IAML		13 51 27.4	
	comp=E,397nm,0.3s						
POO				IAML		13 51 28.1	
	comp=N,206nm,0.3s						
BHPL	**Bhopal**	**4.06**	**51**	*e*P	Pb	13 51 32.4	-1.6
BHPL				*e*S	Sn	13 52 08.0	-3.7
BHPL				IAML		13 52 09.2	
	comp=N,28nm,0.2s						
BHPL				IAML		13 52 09.6	
	comp=N,20nm,0.2s						
BHUJ	**Bhuj**	**4.76**	**303**	*e*P	Pn	13 51 34.5	+0.5
BHUJ				*e*S	Sn	13 52 26.8	-2.2
BHUJ				IAML		13 52 54.2	
	comp=N,52nm,0.5s						
BHUJ				IAML		13 52 54.7	
	comp=E,222nm,0.9s						
GOA	**Goa**	**5.19**	**182**	*e*SB	Sb	13 52 57.8	+2.5
GOA				IAML		13 53 06.5	
	comp=N,228nm,0.3s						
GOA				IAML		13 53 06.9	
	comp=E,455nm,0.6s						
HYB	**Hyderabad**	**5.41**	**126**	*ex*	Sn	13 52 41.9	-3.1
HYB				*e*SB	Sb	13 53 05.7	+3.9
HYB				IAML		13 53 14.3	
	comp=E,145nm,0.2s						
HYB				IAML		13 53 15.5	
	comp=N,256nm,0.5s						

*JMA **07** 14:16:28.8±0.1, 39°.19N × 142°.31E, h36 km ± 1km, M3.9*
JMA Felt II J1.
*IDC **07** 14:16:30.1±2.8, 39°.13N × 142°.68E, h54 km ± 23km, mb3.4/7, mb1 3.5/12, mb1mx3.3/37, mbtmp3.6/12, ML3.1/3, Error ellipse: s-maj=33.0km s-min=15.6km az=112.0*
ISC 07 14:16:29.4±1.2, 39°.19N ± 0°.05 × 142°.30E ± 0°.10, h38 km ± 3km, n29, σ1s 27/32, mb3.6/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.50**	**258**	P	**Pn**	**14 16 39.4**	**-0.6**
OFUJ				S	**Sn**	**14 16 46.5**	**-1.0**
MIYJ	**Miyakonagasawa**	**0.54**	**317**	P	**Pn**	**14 16 39.7**	**-1.0**
MIYJ				S	**Sn**	**14 16 47.2**	**-1.3**
JKMT	**Kesennumamotoy**	**0.74**	**240**	P	**Pn**	**14 16 42.8**	**-0.5**
JKMT				S	**Sn**	**14 16 52.4**	**-1.0**
JTH	**Tanohata**	**0.82**	**336**	P	**Pn**	**14 16 43.8**	**-0.7**
JOM	**Ohasama**	**0.83**	**291**	P	**Pn**	**14 16 44.3**	**-0.3**
JOM				S	**Sn**	**14 16 55.5**	**-0.1**
JMK	**Ichinoseki**	**0.87**	**255**	P	**Pn**	**14 16 44.8**	**-0.3**
JMK				S	**Sn**	**14 16 56.4**	**-0.2**
JIO	**Ouri**	**1.04**	**226**	P	**Pn**	**14 16 46.7**	**-0.7**
JIO				S	**Sn**	**14 16 59.5**	**-1.2**
JKZ	**Kuzumaki**	**1.09**	**317**	P	**Pn**	**14 16 48.4**	**+0.2**
JKZ				S	**Sn**	**14 17 02.6**	**+0.5**
JRG	**Rokugo**	**1.31**	**280**	P	**Pn**	**14 16 52.0**	**+0.9**
JRG				S	**Sn**	**14 17 09.2**	**+1.9**
JANG	**Nango**	**1.33**	**333**	P	**Pn**	**14 16 51.4**	**0.0**
JANG				S	**Sn**	**14 17 08.5**	**+0.6**
MJAR	**Matsushiro Arr**	**4.17**	**232**	P	**Pn**	**14 17 32.6**	**+2.1**
	0.4nm,0.3s,baz=40,slow=12,SNR=17						
MJAR				S	Sn	14 18 29.2	+11
	0.2nm,0.3s,baz=32,slow=24,SNR=2.9						
MAT	**Matsushiro**	**4.17**	**232**	P	**Pn**	**14 17 33.2**	**+2.6**
MAT				S	**Sn**	**14 18 20.3**	**+2.2**
ASAJ	**Asahikawa**	**4.93**	**3**	P	**Pn**	**14 17 41.7**	**+0.8**
	1.0nm,0.3s,baz=234,slow=6.1,SNR=11						
ASAJ				S	**Sn**	**14 18 39.6**	**+2.9**
	1.0nm,0.3s,baz=32,slow=19,SNR=2.9						
USRK	**Ussuriysk Ar.**	**9.19**	**306**	P	Pn	14 18 45.5	+6.1
	baz=104,slow=16,SNR=2.7						
KSRS	**Korea Array**	**11.42**	**266**	P	Pn	14 19 16.0	+6.1
	0.2nm,0.3s,baz=73,slow=14,SNR=4.2						
PETK	**Petropavlovsk-**	**17.49**	**32**	P	**Pn**	**14 20 28.7**	**-1.4**
	baz=238,slow=16,SNR=3.0						
MA2	**Magadan**	**21.11**	**12**	P	**P**	**14 21 09.1**	**-1.3**
	6.6nm,0.8s,baz=182,slow=15,SNR=3.3						
YAK	**Yakutsk**	**24.14**	**345**	P	**P**	**14 21 40.6**	**-0.9**
	3.2nm,0.4s,baz=226,slow=1.4,SNR=4.0						
SEY	**Seymchan**	**24.55**	**11**	P	**P**	**14 21 45.2**	**0.0**
	0.9nm,0.5s,baz=248,slow=23,SNR=4.1						
H11N2	**WAKE ISLAND Hy**	**28.74**	**125**	T	T	14 52 46.2	
	baz=318,slow=75,SNR=2111						
H11N1	**WAKE ISLAND Hy**	**28.75**	**125**	T	T	14 52 47.7	
	baz=318,slow=75,SNR=936						
H11N3	**WAKE ISLAND Hy**	**28.75**	**125**	T	T	14 52 47.6	
	baz=318,slow=75,SNR=698						
H11S1	**WAKE ISLAND Hy**	**29.53**	**127**	T	T	14 53 43.3	
	baz=319,slow=76,SNR=196						
H11S3	**WAKE ISLAND Hy**	**29.53**	**127**	T	T	14 53 43.5	
	baz=319,slow=76,SNR=119						
H11S2	**WAKE ISLAND Hy**	**29.54**	**127**	T	T	14 53 44.5	
	baz=319,slow=76,SNR=86						
ZALV	**Zalesovo Beam**	**41.01**	**311**	P	**P**	**14 24 09.4**	**+0.9**
	0.3nm,0.5s,baz=97,slow=8.0,SNR=2.4						
MKAR	**Makanchi Array**	**43.60**	**300**	P	**P**	**14 24 31.0**	**+1.2**
	0.2nm,0.6s,baz=82,slow=10,SNR=3.8						
WRA	**Warramunga Arr**	**59.29**	**189**	P	**P**	**14 26 26.5**	**-0.7**
	0.3nm,0.6s,baz=3.9,slow=7.0,SNR=4.1						
AKASG	**Malin Array Be**	**73.02**	**322**	P	**P**	**14 27 55.5**	**+0.4**
	0.2nm,0.4s,baz=46,slow=6.4,SNR=4.1						

*NEIC **07** 14:21:28.4±0.5, 36°.13N ± 0°.07 × 68°.68E ± 0°.07, h65 km ± 12km, mb4.7/7, Error ellipse: s-maj=9.8km s-min=8.6km az=198.0*
*NNC **07** 14:21:33.2±4.4, 36°.47N × 68°.83E, h107 km ± 110km, mb2.9, mpv3.2, Error ellipse: s-maj=34.6km s-min=32.5km az=76.0*
ISC 07 14:21:30.9±0.7, 36°.26N ± 0°.07 × 68°.71E ± 0°.07, h100 km, n29, σ2s 09/31, mb4.7/9, 3C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**1.74**	**171**		**Pn**	**14 21 56.3**	**-4.1**
CHGR	**Chuyangaron**	**2.41**	**8**		**Pn**	**14 22 08.0**	**-1.0**
GAR	**Garm**	**3.01**	**25**		**Pn**	**14 22 15.7**	**-1.2**
BTK	**Batken**	**4.13**	**23**		**Pn**	**14 22 31.2**	**-0.8**
NIL	**Nilore**	**4.55**	**124**	Pn	**Pn**	**14 22 34.1**	**-3.5**
ARSB	**Arslanbob**	**6.05**	**32**	Pn	**Pn**	**14 22 55.6**	**-2.4**
KSH	**Kashi**	**6.59**	**58**	P	**Pn**	**14 23 01.9**	**-3.4**
KSH				pmax	pmax		
	comp=Z,190nm,5.2s						
KK31	**Karatay Array**	**6.97**	**11**		**Pn**	**14 23 09.5**	**-0.8**
KK31	**Karatay Array**	**6.97**	**11**	⇑P	**Pn**	**14 23 09.8**	**-0.5**
	comp=Z,0.2nm,0.2s,baz=200,slow=16,SNR=22						
KK31				⇑S	**Sn**	**14 24 26.1**	**-1.9**
	comp=Z,1.5nm,0.6s,baz=195,slow=23,SNR=4.1						
KKAR	**Karatay Array**	**6.97**	**11**		**Pn**	**14 23 09.6**	**-0.7**
AAK	**Ala-Archa**	**7.78**	**33**		**Pn**	**14 23 18.9**	**-2.5**
AAK	**Ala-Archa**	**7.78**	**33**	⇓P	**Pn**	**14 23 20.4**	**-1.0**
	comp=Z,1.9nm,0.7s						
AAK				⇓S	**Sn**	**14 24 44.6**	**-3.3**
	comp=Z,2.4nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**8.63**	**284**	Pn	**Pn**	**14 23 30.0**	**-2.9**
AB31	**Akbulak array**	**14.48**	**336**	P	**Pn**	**14 24 51.4**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=154,slow=12,SNR=17						
AB31				⇓S	**Sn**	**14 27 28.1**	**-2.1**
	comp=Z,0.5nm,0.6s,baz=156,slow=23,SNR=2.9						
ABKAR	**Akbulak array**	**14.48**	**336**	Pn	**Pn**	**14 24 51.0**	**+0.2**
WMQ	**Urumqi**	**16.36**	**57**	*e*P	**P**	**14 25 16.6**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,8.7s						
WMQ				LR	LR		
	comp=N,400nm,28.9s						
WMQ				LR	LR		
	comp=E,570nm,28.9s						
WMQ				LR	LR		
	comp=Z,70nm,21.1s						
WMQ	**Urumqi**	**16.36**	**57**	P	P	14 25 22.0	+6.3
WMQ				IAmb	IAmb	14 25 25.8	
	comp=Z,35nm,0.7s						
KIV	**Kislovodsk**	**21.28**	**299**	P	**P**	**14 26 10.5**	**+1.3**
SOCY	**Socotra**	**27.40**	**213**	P	**P**	**14 27 04.3**	**-2.9**
SOCY				IAmb	IAmb	14 27 38.6	
	comp=Z,19nm,1.5s						
LZH	**Lanzhou**	**28.27**	**80**	*e*P	**P**	**14 27 17.0**	**+2.1**
LZH				pP	pP	14 27 33.0	-4.8
LZH				sP	sP	14 27 40.9	-8.8
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,4.3s						
LZH				LR	LR		
	comp=N,230nm,9.2s						
LZH				LR	LR		
	comp=E,380nm,11.9s						
LZH				LR	LR		
	comp=Z,400nm,12.4s						
CD2	**Chengdu**	**29.57**	**90**	P	**P**	**14 27 26.3**	**-0.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
KMI	**Kunming**	**31.15**	**101**	P	**P**	**14 27 42.1**	**+1.6**
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,110nm,5.1s						
HHC	**Hu-ho-hao-te**	**33.57**	**69**	*e*P	**P**	**14 28 00.4**	**-1.0**
HHC				sP	pP	14 28 27.2	+2.9
HHC				S	**S**	**14 33 18.7**	**+2.2**
HHC				sS	sS	14 33 42.8	-13
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,65nm,5.6s						
PSZ	**Piszkesteto**	**37.46**	**304**	P	**P**	**14 28 35.9**	**+1.3**
PSZ				IAmb	IAmb	14 29 12.1	
	comp=Z,17nm,1.7s						
TIP	**Timpagrande**	**40.74**	**290**	P	**P**	**14 29 03.1**	**+1.2**
NJ2	**Nanjing**	**41.34**	**81**	*e*P	**P**	**14 29 08.6**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,18nm,0.6s						
CN2	**Changchun**	**43.35**	**62**	*e*P	P	14 29 27.1	+4.1
MJB9	**Matsu-Tunnel**	**54.75**	**67**	P	**P**	**14 30 52.0**	**+1.8**
MJB9				IAmb	IAmb	14 31 14.6	
	comp=Z,12nm,1.2s						
MAJO	**Matsushiro**	**54.75**	**67**	P	**P**	**14 30 51.9**	**+1.7**
MAJO				IAmb	IAmb	14 31 14.7	
	comp=Z,12nm,1.2s						

*BJI **07** 14:24:06.6±0.0, 36°.82N × 121°.67E, h7 km, mB4.5/25, mb4.1/28, ML4.6/19, Ms4.2/33, Ms7 4.0/27*
*IDC **07** 14:24:08.8±0.7, 36°.86N × 121°.78E, h0 km, mb4.1/19, mb1 4.2/24, mb1mx4.1/42, mbtmp4.0/24, ML3.5/5, MS3.5/13, Ms1 3.6/13, ms1mx3.3/46, Error ellipse: s-maj=15.5km s-min=11.9km az=173.0*
*NEIC **07** 14:24:11.2±1.6, 36°.89N ± 0°.08 × 121°.81E ± 0°.09, h10 km ± 1km, mb4.3/14, Error ellipse: s-maj=14.8km s-min=12.0km az=154.0*
ISC 07 14:24:10.9±0.4, 36°.92N ± 0°.04 × 121°.72E ± 0°.04, h10 km, n86, σ1s 78/88, mb4.3/35, MS3.4/9, 2C, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DL2	**Dalian**	**1.98**	**358**	Pn	**Pn**	**14 24 42.9**	**-1.5**
DL2				Pg	**Pb**	**14 24 44.4**	**-2.6**
DL2				Sg	**Sn**	**14 25 11.6**	**+2.3**
DL2				smax	smax		
	comp=N,6μm,0.6s						
DL2				smax	smax		
	comp=E,7μm,0.6s						
TIA	**Tai'an**	**3.77**	**260**	Pg	**Pb**	**14 25 15.5**	**-1.9**
TIA				Sg	**Sb**	**14 26 04.0**	**+0.9**
TIA				smax	smax		
	comp=N,2μm,0.6s						
TIA				smax	smax		
	comp=E,1μm,0.6s						
INCN	**Inchon**	**3.96**	**80**	Pn	**Pn**	**14 25 11.0**	**-0.7**
INCN					**Pb**	**14 25 20.4**	**-0.4**
KS19	**Wonju Array Si**	**4.94**	**81**	Pn	**Pn**	**14 25 23.1**	**-2.1**
KS19				Pg	**Pb**	**14 25 38.9**	**+1.4**
KSAR	**Wonju Array Be**	**4.95**	**82**	Pn	**Pn**	**14 25 23.1**	**-2.1**
KSRS	**Korea Array**	**4.98**	**82**	Pn	**Pn**	**14 25 23.2**	**-2.5**
	9.5nm,0.3s,baz=263,slow=14,SNR=107						
KSRS				Pg	**Pb**	**14 25 39.2**	**+1.1**
	20nm,0.3s,baz=264,slow=18,SNR=60						
KSRS				Sn	**Sn**	**14 26 20.2**	**-3.1**
	12nm,0.3s,baz=268,slow=26,SNR=4.9						
KSRS				Lg	Lg	14 26 43.7	
	52nm,0.3s,baz=262,slow=30,SNR=14						
KSRS				LR	LR	14 27 46.0	
	comp=Z,242nm,18.2s,baz=285,slow=44						
SNY	**Shenyang**	**5.11**	**16**	⇑Pn	**Pn**	**14 25 25.4**	**-2.0**
SNY				Sn	**Sn**	**14 26 26.5**	**+0.2**
BJT	**Baijiatuan**	**5.34**	**307**		**Pn**	**14 25 28.5**	**-2.1**
BJI	**Beijing**	**5.35**	**307**	Pn	**Pn**	**14 25 28.5**	**-2.2**
BJI				Sn	**Sn**	**14 26 28.8**	**-3.5**
BJI				LR	LR		
	comp=N,1μm,17.4s						
BJI				LR	LR		
	comp=E,960nm,13.5s						
NJ2	**Nanjing**	**5.40**	**207**	*e*Pn	**Pn**	**14 25 30.3**	**-1.2**
NJ2				Pg	**Pb**	**14 25 43.5**	**-1.9**
NJ2				Sg	**Sb**	**14 26 53.1**	**+2.8**
NJ2				smax	smax		
	comp=N,790nm,0.7s						
NJ2				smax	smax		
	comp=E,640nm,0.8s						
SSE	**Sheshan**	**5.83**	**184**	Pn	**Pn**	**14 25 35.3**	**-2.1**

TIY	**Taiyuan**	**7.44**	**279**	*e*P	**Pn**	**14 26 03.0**	**+3.5**
TIY				S	**Sn**	**14 27 25.7**	**+1.7**
TIY				pmax	pmax		
	comp=Z,100nm,7.2s						
TIY				LR	LR		
	comp=N,990nm,10.7s						
TIY				LR	LR		
	comp=E,480nm,7.2s						
TIY				LR	LR		
	comp=Z,470nm,13.2s						
JNU	**Nakatsue**	**8.42**	**114**	Pn	**Pn**	**14 26 12.8**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=26,slow=21,SNR=10						
JNU				Sn	**Sn**	**14 27 46.4**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=344,slow=20,SNR=2.7						
JNU				Lg	Lg	14 28 30.4	
	comp=Z,1.0nm,0.3s,baz=197,slow=7.4,SNR=7.0						
JNU				LR	LR	14 29 12.2	
	comp=Z,252nm,18.1s,baz=312,slow=36						
JNU	**Nakatsue**	**8.42**	**114**	Pn	**Pn**	**14 26 13.4**	**+0.5**
HHC	**Hu-ho-hao-te**	**8.83**	**299**	*e*P	**Pn**	**14 26 16.2**	**-2.5**
HHC				PP	**PnPn**	**14 26 25.3**	**-0.9**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,74nm,5.7s						
HHC				LR	LR		
	comp=Z,240nm,7.6s						
HHC				LR	LR		
	comp=Z,220nm,9.6s						
WHN	**Wuhan**	**8.84**	**226**	P	**Pn**	**14 26 18.2**	**-0.4**
WHN				S	**Sn**	**14 27 51.9**	**-6.4**
WHN				LR	LR		
	comp=Z,3μm,8.2s						
WHN				LR	LR		
	comp=Z,3μm,7.8s						
WHN				LR	LR		
	comp=Z,3μm,8.7s						
USA0B	**Ussuriysk Arra**	**10.66**	**44**	Pn	**Pn**	**14 26 44.8**	**+1.2**
USRK	**Ussuriysk Ar.**	**10.66**	**44**	Pn	**Pn**	**14 26 44.9**	**+1.2**
	baz=236,slow=12,SNR=12						
USRK				Lg	Lg	14 29 48.1	
	baz=218,slow=28,SNR=15						
USRK	**Ussuriysk Ar.**	**10.66**	**44**	Pn	**Pn**	**14 26 46.2**	**+2.6**
HIA	**Hailar**	**12.42**	**354**	Pn	**Pn**	**14 27 09.1**	**+1.4**
MJAR	**Matsushiro Arr**	**13.24**	**87**	LR	LR	14 32 01.9	
	comp=Z,116nm,18.3s,baz=250,slow=36						
KLR	**Kul'dur**	**14.30**	**28**	Pn	**Pn**	**14 27 33.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=248,slow=13,SNR=4.7						
KLR				Lg	Lg	14 31 44.9	
	comp=Z,0.2nm,0.3s,baz=154,slow=20,SNR=6.1						
KLR				LR	LR	14 32 41.5	
	comp=Z,157nm,19.8s,baz=234,slow=36						
ULN	**Ulaanbaatar**	**15.36**	**320**		**Pn**	**14 27 46.8**	**-1.0**
SONM	**Songino Array**	**15.69**	**319**	Pn	**Pn**	**14 27 51.2**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=129,slow=12,SNR=20						
SONM				Lg	Lg	14 32 34.2	
	comp=Z,0.1nm,0.3s,baz=135,slow=25,SNR=7.1						
SONM	**Songino Array**	**15.69**	**319**		**Pn**	**14 27 51.7**	**-0.3**
GYA	**Guiyang**	**16.50**	**235**	pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	**Guiyang**	**16.50**	**235**	pmax	pmax		
	comp=Z,80nm,5.0s						
GYA	**Guiyang**	**16.50**	**235**	⇑*i*P	**P**	**14 28 06.3**	**+1.1**
GYA	**Guiyang**	**16.50**	**235**	PP	P	14 28 19.8	+15
GYA	**Guiyang**	**16.50**	**235**	S	**Sn**	**14 31 10.9**	**+5.0**
GYA	**Guiyang**	**16.50**	**235**	SS	**S**	**14 31 23.6**	**+5.7**
GYA	**Guiyang**	**16.50**	**235**	LR	LR		
	comp=Z,380nm,12.2s						
GYA	**Guiyang**	**16.50**	**235**	LR	LR		
	comp=E,230nm,12.7s						
GYA	**Guiyang**	**16.50**	**235**	LR	LR		
	comp=N,330nm,12.5s						
ASAJ	**Asahikawa**	**17.40**	**59**	LR	LR	14 34 30.1	
	comp=N,92nm,18.1s,baz=340,slow=36						
TLY	**Talaya**	**19.54**	**325**	LR	LR	14 36 56.5	
	comp=N,230nm,19.2s,baz=84,slow=39						
KMI	**Kunming**	**20.03**	**239**	P	**P**	**14 28 45.3**	**+1.1**
KMI				pP	sP	14 28 48.1	-0.3
KMI				sP	pP	14 28 51.7	+4.6
KMI				PP	**PnPn**	**14 28 58.9**	**-1.3**
KMI				sS	S	14 32 25.0	-4.5
KMI				pmax	pmax		
	comp=N,11nm,0.5s						
KMI				pmax	pmax		
	comp=N,120nm,4.9s						
KMI				LR	LR		
	comp=N,350nm,12.4s						
KMI				LR	LR		
	comp=N,250nm,11.3s						
KMI				LR	LR		
	comp=N,350nm,14.0s						
SLVN	**Son La**	**21.93**	**230**	P	**P**	**14 29 05.7**	**+1.1**
LSA	**Lhasa**	**26.46**	**263**	P	**P**	**14 29 48.6**	**-0.1**
LSA				pP	**sP**	**14 29 53.2**	**+0.2**
LSA				pmax	pmax		
	comp=N,8.0nm,1.0s						
LSA				LR	LR		
	comp=N,250nm,6.4s						
LSA				LR	LR		
	comp=N,260nm,5.0s						
LSA				LR	LR		
	comp=N,340nm,7.1s						
WMQ	**Urumqi**	**26.69**	**296**	*e*P	**P**	**14 29 49.0**	**-1.1**
WMQ				pmax	pmax		
	comp=N,7.0nm,0.6s						
WMQ				pmax	pmax		
	comp=N,250nm,6.1s						
WMQ				LR	LR		
	comp=N,670nm,28.9s						
WMQ				LR	LR		
	comp=N,120nm,15.9s						
CHTO	**Chiang Mai**	**26.92**	**234**	P	**P**	**14 29 53.6**	**+1.2**
CHTO				IAmb	IAmb	14 29 54.5	
	comp=Z,11nm,1.5s						
CMAR	**Chiang Mai Arr**	**27.18**	**234**	P	**P**	**14 29 53.7**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=28,slow=9.0,SNR=12						
CMAR				LR	LR	14 41 50.3	
	comp=Z,106nm,20.6s,baz=4.0,slow=39						
PETK	**Petropavlovsk-**	**29.75**	**46**	LR	LR	14 43 55.8	
	comp=Z,84nm,18.7s,baz=250,slow=40						
DAV	**Davao City (W)**	**29.92**	**172**	LR	LR	14 42 29.2	
	comp=Z,89nm,20.6s,baz=326,slow=37						
TAPN	**Taplejung**	**30.20**	**261**	*e*P	**P**	**14 30 22.7**	**+0.8**
	comp=Z,7.2nm,0.7s						
ZALV	**Zalesovo Beam**	**30.54**	**316**	P	**P**	**14 30 23.9**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=100,slow=9.5,SNR=5.1						
ODAN	**Odare**	**30.68**	**261**	*e*P	**P**	**14 30 26.3**	**+0.3**
	comp=Z,16nm,0.6s						
MK31	**Makanchi Array**	**30.69**	**301**	P	**P**	**14 30 27.5**	**+1.8**
MK31				IAmb	IAmb	14 31 03.0	
	comp=Z,5.9nm,1.6s						
MKAR	**Makanchi Array**	**30.69

KAPI	**Kappang**	**41.76**	**183**	LR	LR	14 49 17.3
	comp=Z,37nm,21.2s,baz=113,slow=36					
ABKAR	**Akbulak array**	**45.56**	**306**	P	**P**	**14 32 31.5 +0.8**
ABKAR				IAmb	IAmb	14 32 33.2
	comp=Z,8.4nm,1.5s					
ARU	**Arti**	**45.70**	**316**	P	**P**	**14 32 32.6 +0.9**
AKTO	**Aktyubinsk**	**46.61**	**308**	P	**P**	**14 32 39.9 +0.9**
	comp=Z,0.6nm,0.4s,baz=85,slow=13,SNR=2.5					
WRA	**Warramunga Arr**	**57.80**	**166**	P	**P**	**14 34 00.9 -1.5**
	comp=Z,0.9nm,0.9s,baz=350,slow=7.6,SNR=4.1					
ILAR	**Eielson Array**	**57.85**	**30**	P	**P**	**14 34 01.9 -0.5**
	comp=Z,0.7nm,0.6s,baz=287,slow=7.2,SNR=9.9					
ARCES	**ARCESS Array B**	**58.03**	**336**	P	**P**	**14 34 03.9 +0.4**
	comp=Z,5.4nm,0.9s,baz=49,slow=10.0,SNR=6.2					
ARCES				LR	LR	15 03 34.1
	comp=Z,318nm,18.9s,baz=288,slow=41					
KBZ	**Khabaz**	**58.35**	**303**	P	**P**	**14 34 06.6 +0.5**
	comp=Z,1.1nm,0.4s,baz=278,slow=3.4,SNR=4.6					
KIV	**Kislovodsk**	**58.41**	**304**	P	**P**	**14 34 08.4 +1.7**
FINES	**FINESS Array B**	**60.87**	**327**	P	**P**	**14 34 23.0 -0.2**
	comp=Z,0.8nm,0.3s,baz=62,slow=6.5,SNR=18					
ASAR	**Alice Springs**	**61.35**	**167**	P	**P**	**14 34 26.6 -0.3**
	comp=Z,0.6nm,0.9s,baz=354,slow=6.9,SNR=4.6					
INK	**Inuvik**	**61.35**	**24**	P	**P**	**14 34 25.0 -1.4**
AKASG	**Malin Array Be**	**63.93**	**315**	P	**P**	**14 34 43.8 -0.1**
	comp=Z,1.0nm,0.5s,baz=58,slow=6.4,SNR=6.1					
BR131	**Keskin Array S**	**66.33**	**303**	P	**P**	**14 35 00.8 +1.0**
BR131				IAmb	IAmb	14 35 01.6
	comp=Z,1.5nm,0.8s					
BRTR	**Keskin Array B**	**66.33**	**303**	P	**P**	**14 34 60.0 +0.1**
	comp=Z,1.2nm,0.6s,baz=72,slow=7.0,SNR=7.3					
NOA	**NORSAR Array B**	**67.30**	**330**	P	**P**	**14 35 05.2 -0.4**
	comp=Z,0.6nm,0.6s,baz=56,slow=6.4,SNR=3.1					
YKA	**Yellowknife Ar**	**71.13**	**24**	P	**P**	**14 35 27.4 -1.7**
	comp=Z,2.3nm,1.0s,baz=319,slow=5.8,SNR=12					
KMBO	**Kilima Mbogo**	**86.24**	**266**	P	**P**	**14 36 53.5 +0.1**
	comp=Z,0.6nm,0.4s,baz=13,slow=18,SNR=2.8					
KMBO	**Kilima Mbogo**	**86.24**	**266**	IAmb	IAmb	14 39 39.5
	comp=Z,9.4nm,1.6s					
NVAR	**Mina Array Bea**	**86.80**	**43**	P	**P**	**14 36 55.8 -0.1**
	comp=Z,0.3nm,0.7s,baz=308,slow=4.4,SNR=3.9					
ANMO	**Albuquerque**	**95.62**	**38**	LR	LR	15 23 20.6
	comp=Z,69nm,18.2s,baz=48,slow=37					

MAN 07 14:33:41.6, 7.39N×124.82E, h17km, mb4.7, ML3.6, MS3.5, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**0.46**	**145**	⇓*e*P	Pg	14 33 51.1	+0.1
KCP				*i* S	Sn	14 34 19.9	+18
BUKP	**Musuan**	**0.54**	**26**	*e*P	Pg	14 33 51.9	-0.5
BUKP				*e*S	Sb	14 34 01.2	+0.9
CTBH	**Cotabato--PC H**	**0.59**	**254**	⇓*i*P	Pb	14 33 54.3	+0.7
CTBH				*i* S	Sn	14 34 03.7	-0.9
SKMP	**Bagumbayan, Su**	**0.91**	**198**	*e*P	Pb	14 33 58.1	-0.8
SKMP				*e*S	Sn	14 34 17.3	+5.0
CGP	**Cagayan de Oro**	**1.07**	**353**	⇑*e*P	Pn	14 34 01.8	0.0
CGP				*e*S	Sn	14 34 16.2	-0.1
PAGZ	**Pagadian**	**1.50**	**288**	*e*P	Pn	14 34 05.0	-2.8
PAGZ				*e*S	Sg	14 34 29.9	-0.1
DDMP	**Don Marcelino,**	**1.55**	**145**	*e*P	Pn	14 34 08.8	+0.3
DDMP				*e*S	Sn	14 34 28.7	+0.5
BUTP	**Butuan**	**1.76**	**27**	*e*P	Pb	14 34 13.7	+0.2
BUTP				*e*S	Sb	14 34 36.5	+1.2

IDC 07 14:40:23.4±2.3, 2.00N×127.15E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/37, mbtmp3.4/3, Error ellipse: s-maj=171.3km s-min=27.7km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.92**	**162**	P	P	14 45 29.4	+0.3
	1.4nm,0.5s,baz=342,slow=10,SNR=14						
ASAR	**Alice Springs**	**26.34**	**166**	P	P	14 46 00.9	-0.4
	0.3nm,0.6s,baz=344,slow=7.6,SNR=10.0						
MKAR	**Makanchi Array**	**59.21**	**326**	P	P	14 50 26.6	+0.1
	0.1nm,0.5s,baz=123,slow=7.5,SNR=1.7						

MAN 07 15:20:53.4, 8.68N×124.24E, h21km, mb4.6, ML3.4, MS3.3, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PAGZ	**Pagadian**	**1.18**	**226**	*e*P	Pn	15 21 13.9	-0.8
MSLP	**Maasin**	**1.57**	**23**	*e*P	Pn	15 21 19.4	-0.7
MSLP				*e*S	Sb	15 21 49.2	+8.0
SCPH	**Surigao**	**1.65**	**48**	⇓*i*P	Pn	15 21 21.1	0.0
OCLP	**Ormoc**	**2.39**	**9**	*e*S	Pn	15 21 31.5	+0.2
GUIM	**Jordan**	**2.53**	**320**	*e*P	Pn	15 21 34.0	+0.7
GUIM				*e*S	Sn	15 21 54.5	-8.9

*TEH **07** 15:29:48.1, 30.93N×50.10E, h10km, ML2.9*
*THR **07** 15:29:49.7±0.6, 31.10N×50.29E, h16km±9km, ML3.0*
ISC 07 15:29:50.6±1.9, 31.0N±0.1×50.21E±0.07, h10km, n12, σ1833/15, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLNJ	**Kolanjah**	**1.19**	**89**	*e*Pn	**Pg**	**15 30 12.0**	**-1.6**
KLNJ				*e*Sg	**Sn**	**15 30 31.2**	**+1.1**
KLNJ				*e*		15 30 36.8	
ROKH	**ROKH**	**1.52**	**28**	*e*Pn	**Pn**	**15 30 18.5**	**+0.4**
ROKH				*e*		15 30 44.0	
SHGR	**Shooshtar-Gavs**	**1.63**	**313**	*e*Pg	**Pn**	**15 30 19.2**	**-0.1**
SHGR				*e*Sg	**Sn**	**15 30 40.8**	**+0.4**
SHGR				IAML		15 30 44.6	
	comp=N,166nm,0.3s						
IPIR	**Pirpir**	**1.78**	**19**	*e*Pn	**Pn**	**15 30 21.8**	**+0.1**
IPIR				*e*		15 30 25.1	
	comp=Z,865nm,0.2s						
IRAM	**Ramesheh**	**2.03**	**66**	*e*Pn	**Pb**	**15 30 26.7**	**-1.0**
IRAM				*e*		15 31 01.6	
	comp=Z,609nm,0.4s						
IKLH	**Kolahrood**	**2.59**	**26**	*e*Pn	**Pn**	**15 30 33.9**	**+1.1**
IKLH				*e*		15 30 37.0	
	comp=Z,317nm,0.2s						
IZEF	**Zefreh**	**2.61**	**43**	*e*Pn	**Pn**	**15 30 34.6**	**+1.4**
IZEF				*e*		15 30 40.3	
	comp=Z,162nm,0.2s						
KHMZ	**Khomeyn**	**2.74**	**356**	*e*Pn	**Pn**	**15 30 34.1**	**-0.7**
KHMZ				*e*Sg	**Sb**	**15 31 12.6**	**-1.0**
ISAD	**Sadrabad**	**3.11**	**72**	*e*Pn	**Pn**	**15 30 41.8**	**+1.8**
ISAD				*e*		15 30 49.9	
	comp=Z,259nm,0.4s						
KRSH	**Karshahi**	**3.38**	**28**	*e*Pn	**Pn**	**15 30 45.2**	**+1.6**
KRSH				*e*		15 30 54.8	
HSAM	**Samen**	**3.48**	**338**	*e*	**Pb**	**15 30 54.5**	**+2.1**
ASAO	**Ashtian**	**3.54**	**358**	*e*Pn	**Pn**	**15 30 44.6**	**-1.3**

ROM 07 15:51:55.1±0.1, 43.381N±0.003×12.504E±0.004, h9km, Md1.0/4, Error ellipse: s-maj=0.3km s-min=0.1km az=25.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.05**	**106**	P	Pg	15 51 57.1	0.0
ATFO				S	Sg	15 51 58.4	0.0
ATFO				AML	AML		
ATFO				AML	AML		
ATFO				END			
ATVO	**AVT- Monte Val**	**0.07**	**271**	P	Pg	15 51 57.4	+0.2
ATVO				S	Sg	15 51 58.9	+0.1
ATVO				AML	AML		
ATVO				AML	AML		
ATVO				END			
ATPI	**Pietralunga -**	**0.10**	**313**	P	Pg	15 51 58.1	+0.4
ATPI				S	Sg	15 52 00.1	+0.7
ATPI				AML	AML		
	comp=E,74200μm,0.4s						
ATPI				AML	AML		
	comp=N,87300μm,0.2s						
ATPI				AML	AML		
	comp=E,74200μm,0.4s						
ATPI				AML	AML		
	comp=N,87350μm,0.2s						
ATPI				END			
MURB	**Monte Urbino**	**0.12**	**173**	P	Pg	15 51 58.5	+0.6
MURB				S	Sg	15 52 00.8	+0.9
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				END			
PIEI	**Pieia**	**0.16**	**8**	P	Pg	15 51 59.2	+0.6
PIEI				S	Sg	15 52 02.2	+1.3
PIEI				AML	AML		
PIEI				AML	AML		
	comp=N,93850μm,0.2s						
ATMI	**Monte Miggiano**	**0.18**	**255**	P	Pg	15 51 59.5	+0.6
ATMI				AML	AML		
	comp=E,59900μm,0.5s						
ATMI				AML	AML		
	comp=N,53150μm,0.8s						
FOSV	**Fossato di Vic**	**0.21**	**115**	P	Pg	15 52 00.2	+0.8
FOSV				AML	AML		
	comp=E,12850μm,1.3s						
FOSV				AML	AML		
	comp=N,20450μm,0.6s						
SSFR	**Montelago di S**	**0.21**	**75**	P	Pg	15 52 00.1	+0.6
SSFR				S	Sg	15 52 03.8	+1.4
SSFR				AML	AML		
	comp=E,61050μm,0.2s						
SSFR				AML	AML		
	comp=N,44300μm,1.3s						
SSFR				AML	AML		
	comp=E,66850μm,0.2s						
SSFR				AML	AML		
	comp=N,45700μm,1.3s						
FRON	**Frontone**	**0.21**	**50**	P	Pg	15 52 00.1	+0.6
FRON				AML	AML		
	comp=E,21050μm,0.4s						
FRON				AML	AML		
	comp=N,36400μm,0.6s						
ATTE	**AVT- Monte Tez**	**0.21**	**211**	P	Pg	15 52 00.0	+0.5
ATTE				AML	AML		
	comp=E,20700μm,0.9s						
ATTE				AML	AML		
	comp=N,17750μm,0.8s						
ATCC	**AVT- Casa Cast**	**0.22**	**153**	P	Pg	15 52 00.5	+0.9
ATCC				AML	AML		
	comp=N,27800μm,0.3s						
ATCC				AML	AML		
	comp=E,55950μm,1.0s						
ATCC				AML	AML		
	comp=N,27850μm,0.3s						
BADI	**Badiali**	**0.23**	**304**	P	Pg	15 52 00.5	+0.7
BADI				AML	AML		
	comp=E,87250μm,0.3s						
BADI				AML	AML		
MPAG	**Monte Paganucc**	**0.31**	**37**	P	Pg	15 52 01.9	+0.6
MPAG				AML	AML		
	comp=E,10100μm,0.5s						
MPAG				AML	AML		
	comp=N,13350μm,1.2s						
MPAG				AML	AML		
	comp=E,10270μm,0.5s						
MPAG				AML	AML		
	comp=N,13400μm,1.2s						
PE3	**Peglio**	**0.32**	**359**	P	Pg	15 52 02.0	+0.6
PE3				AML	AML		
	comp=E,37400μm,0.4s						
PE3				AML	AML		
	comp=N,51900μm,0.4s						
PARC	**Parchiule**	**0.33**	**324**	AML	AML		
	comp=N,25250μm,0.3s						
PARC				AML	AML		
	comp=E,13750μm,0.3s						
ARVD	**Arcevia**	**0.34**	**70**	AML	AML		
	comp=E,7705μm,1.0s						
ARVD				AML	AML		
	comp=N,8595μm,0.4s						
SNTG	**Esanatoglia**	**0.34**	**111**	AML	AML		
	comp=N,24000μm,0.3s						
SNTG				AML	AML		
	comp=E,1845μm,0.4s						
SNTG				AML	AML		
	comp=N,2945μm,0.3s						
SNTG				AML	AML		
	comp=E,14650μm,0.4s						
ASSB	**Assisi San Ben**	**0.36**	**161**	AML	AML		
	comp=E,9115μm,0.5s						
ASSB				AML	AML		
	comp=N,8560μm,0.4s						
FSSB	**Fossombrone**	**0.37**	**33**	AML	AML		
	comp=N,18550μm,0.6s						
FSSB				AML	AML		
	comp=E,30000μm,0.4s						
CAFI	**Castiglion Fio**	**0.40**	**263**	AML	AML		
	comp=N,10700μm,0.4s						
CAFI				AML	AML		
	comp=E,6735μm,0.3s						
FDMO	**Fiordimonte**	**0.55**	**129**	AML	AML		
	comp=E,4140μm,0.3s						
FDMO				AML	AML		
	comp=N,6205μm,0.2s						

*PRU **07** 15:51:59.8±0.0, 43.35N×12.50E, h0km*
*ROM **07** 15:52:00.1±0.1, 43.371N±0.003×12.510E±0.004, h6km, ML3.5/41, Mw3.4, Error ellipse: s-maj=0.3km s-min=0.1km az=213.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.07; $M_{\theta\theta}$0.23; $M_{\phi\phi}$0.85; $M_{r\theta}$0.14; $M_{r\phi}$-0.37; $M_{\theta r}$-0.90; Fault plane solution: M_o1.38080×10^{14} NP1:ϕ_s345.00000°, δ66.00000°, λ-82.00000°. NP2:ϕ_s147.00000°, δ26.00000°, λ-107.00000°.*
*IDC **07** 15:52:00.1±1.0, 43.44N×12.26E, h0km, mb3.5/8, mb1 3.7/11, mb1mx3.5/40, mbtmp3.5/11, ML3.2/3 Error ellipse: s-maj=23.0km s-min=14.4km az=92.0*
*LDG **07** 15:52:00.0±0.2, 43.40N×12.47E, h5km, Ml3.4/14, Error ellipse: s-maj=5.3km s-min=3.1km az=10.0*
ISC 07 15:52:01.0±0.7, 43.38N±0.01×12.45E±0.02, h10km±4km, n163, σ1885/215, mb3.5/8, 3C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.03**	**271**	P	**Pg**	**15 52 02.3**	**-0.5**
ATVO				S	**Sg**	**15 52 03.7**	**-0.4**
ATPI	**Pietralunga -**	**0.08**	**334**	P	**Pg**	**15 52 02.9**	**-0.4**
ATPI				S	**Sg**	**15 52 04.9**	**0.0**
ATFO	**Monte Foce - G**	**0.09**	**100**	P	**Pg**	**15 52 02.0**	**-1.5**
ATFO				S	**Sg**	**15 52 03.3**	**-2.0**
MURB	**Monte Urbino**	**0.13**	**155**	AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
MURB				AML	AML		
ATMI	**Monte Miggiano**	**0.14**	**250**	P	**Pg**	**15 52 04.3**	**+0.2**
ATMI				S	**Sg**	**15 52 07.4**	**+1.1**
ATMI				AML	AML		
	comp=E,59900μm,0.5s						
ATMI				AML	AML		
	comp=N,53150μm,0.8s						
PIEI	**Pieia**	**0.17**	**22**	P	**Pg**	**15 52 04.0**	**-0.6**
PIEI				S	**Sg**	**15 52 07.0**	**-0.1**
CDCA	**Citt' di Caste**	**0.17**	**296**	*e*P	**Pg**	**15 52 05.2**	**+0.5**
CDCA				S	**Sg**	**15 52 09.2**	**+2.0**
CDCA				AML	AML		
	comp=E,74400μm,0.5s						
CDCA				AML	AML		
	comp=E,36250μm,0.6s						
CDCA				AML	AML		
CDCA				AML	AML		
	comp=E,36250μm,0.6s						
CDCA				AML	AML		
	comp=E,74400μm,0.5s						
CDCA				AML	AML		
	comp=N,37250μm,0.9s						
ATTE	**AVT- Monte Tez**	**0.20**	**201**	P	**Pg**	**15 52 04.9**	**-0.2**
ATTE				S	**Sg**	**15 52 08.5**	**+0.6**
ATTE				AML	AML		
	comp=E,20700μm,0.9s						
ATTE				AML	AML		
	comp=N,17750μm,0.8s						
BADI	**Badiali**	**0.20**	**311**	P	**Pg**	**15 52 05.4**	**+0.3**
BADI				S	**Sg**	**15 52 09.5**	**+1.6**
ATCC	**AVT- Casa Cast**	**0.24**	**145**	P	**Pg**	**15 52 05.4**	**-0.5**
ATCC				S	**Sg**	**15 52 09.4**	**+0.3**
FRON	**Frontone**	**0.24**	**56**	P	**Pg**	**15 52 04.9**	**-1.0**
FRON				S	**Sg**	**15 52 08.7**	**-0.6**
FOSV	**Fossato di Vic**	**0.24**	**111**	P	**Pg**	**15 52 04.8**	**-1.1**
FOSV				S	**Sg**	**15 52 08.3**	**-0.9**
NARO	**Abbazia di Nar**	**0.25**	**23**	P	**Pg**	**15 52 05.3**	**-0.7**
NARO				S	**Sg**	**15 52 09.4**	**-0.1**
NARO				AML	AML		
	comp=E,21350μm,0.2s						
NARO				AML	AML		
	comp=N,13400μm,1.0s						
SSFR	**Montelago di S**	**0.25**	**77**	P	**Pg**	**15 52 04.9**	**-1.1**
SSFR				S	**Sg**	**15 52 08.8**	**-0.7**
SSFR				AML	AML		
	comp=N,44300μm,1.3s						
SSFR				AML	AML		
	comp=E,66850μm,0.2s						
SSFR				AML	AML		
	comp=N,45700μm,1.3s						
SSFR				AML	AML		
	comp=N,44300μm,1.3s						
SSFR				AML	AML		
	comp=E,61000μm,0.2s						
SSFR				AML	AML		
	comp=N,45700μm,1.3s						
SSFR				AML	AML		
	comp=E,66850μm,0.2s						
SSP9	**Sansepolcro**	**0.30**	**310**	P	**Pb**	**15 52 07.3**	**-1.2**
SSP9				S	**Sb**	**15 52 13.2**	**-0.4**
SSP9				AML	AML		
	comp=E,12200μm,0.8s						
SSP9				AML	AML		
	comp=N,10680μm,0.8s						
ASSB	**Assisi San Ben**	**0.37**	**156**	P	**Pg**	**15 52 07.5**	**-0.8**
ASSB				S	**Sg**	**15 52 13.5**	**+0.2**
SNTG	**Esanatoglia**	**0.38**	**109**	P	**Pg**	**15 52 07.3**	**-1.2**
SNTG				S	**Sg**	**15 52 13.2**	**-0.3**
CPGN	**Carpegna, Ital**	**0.43**	**347**	P	**Pb**	**15 52 09.9**	**-0.9**
CPGN				S	**Sb**	**15 52 18.4**	**+1.0**
CPGN				AML	AML		
	comp=E,6585μm,0.7s						
CPGN				AML	AML		
	comp=N,6165μm,0.8s						
CPGN				AML	AML		
	comp=N,6145μm,1.3s						
CPGN				AML	AML		
	comp=E,6590μm,0.7s						
CPGN				AML	AML		
	comp=N,6130μm,1.3s						
CPGN				AML	AML		
	comp=N,6170μm,0.8s						
COR1	**Corinaldo**	**0.47**	**58**	P	**Pb**	**15 52 09.7**	**-1.7**
COR1				S	**Sb**	**15 52 17.3**	**-1.2**
COR1				AML	AML		
	comp=E,20350μm,0.6s						
COR1				AML	AML		
	comp=N,19400μm,1.0s						
COR1				AML	AML		
	comp=E,11290μm,0.6s						
COR1				AML	AML		
	comp=N,12230μm,0.8s						
COR1				AML	AML		
	comp=N,19350μm,1.0s						
COR1				AML	AML		
	comp=E,20350μm,0.6s						
COR1				AML	AML		
	comp=N,12255μm,0.8s						
COR1				AML	AML		
	comp=E,11255μm,0.6s						
GAG1	**Gagliole**	**0.47**	**107**	*e*P	**Pg**	**15 52 09.2**	**-1.0**
GAG1				S	**Sg**	**15 52 16.6**	**+0.2**
GAG1				AML	AML		
	comp=N,20500μm,0.4s						
GAG1				AML	AML		
	comp=E,18500μm,1.5s						
EL6	**Elcito**	**0.48**	**96**	*e*P	**Pg**	**15 52 09.1**	**-1.2**
EL6				S	**Sg**	**15 52 16.5**	**-0.1**
CESI	**CESI - Serrava**	**0.50**	**138**	P	**Pg**	**15 52 09.7**	**-1.0**
CESI				S	**Sg**	**15 52 17.7**	**+0.3**
CESI				AML	AML		
	comp=N,2600μm,0.5s						
CESI				AML	AML		
	comp=E,1070μm,0.2s						
CESI				AML	AML		
	comp=N,2605μm,0.5s						
MGAB	**Montegabbione**	**0.53**	**208**	P	**Pb**	**15 52 11.2**	**-1.2**
MGAB				S	**Sb**	**15 52 20.8**	**+0.7**
MGAB				AML	AML		
	comp=E,11350μm,0.7s						
MGAB				AML	AML		
	comp=N,13285μm,0.6s						
MGAB				AML	AML		
	comp=E,11280μm,0.5s						
MGAB				AML	AML		
	comp=N,13750μm,0.3s						
CING	**Cingoli**	**0.54**	**90**	P	**Pg**	**15 52 10.3**	**-1.2**
CING				S	**Sg**	**15 52 18.6**	**-0.1**
CING				AML	AML		
	comp=E,4725μm,0.5s						
CING				AML	AML		
	comp=N,5640μm,0.6s						
MOMA	**Monte Martano**	**0.58**	**171**	P	**Pg**	**15 52 11.4**	**-0.9**
MOMA				S	**Sb**	**15 52 21.5**	**-0.3**
MOMA				AML	AML		
	comp=E,5195μm,1.4s						
MOMA				AML	AML		
	comp=E,5195μm,1.4s						
MOMA				AML	AML		
	comp=N,6615μm,1.0s						
MOMA				AML	AML		
	comp=N,6305μm,1.0s						
MOMA				AML	AML		
	comp=E,5135μm,1.4s						
PESA	**Pesaro**	**0.63**	**27**	P	**Pb**	**15 52 12.6**	**-1.4**
PESA				S	**Sb**	**15 52 22.9**	**0.0**
PESA				AML	AML		
	comp=E,15950μm,0.3s						
PESA				AML	AML		
	comp=N,11850μm,1.5s						
PESA				AML	AML		
	comp=E,15950μm,0.3s						
ASQU	**Asqua**	**0.63**	**311**	P	**Pb**	**15 52 13.4**	**-0.8**
ASQU				S	**Sn**	**15 52 24.5**	**-1.9**
ASQU				AML	AML		
	comp=N,5590μm,0.5s						
ASQU				AML	AML		
	comp=E,5445μm,0.6s						
SACS	**San Casciano d**	**0.66**	**217**	P	**Pb**	**15 52 13.6**	**-1.1**
SACS				S	**Sb**	**15 52 24.4**	**+0.5**
SACS				AML	AML		
	comp=E,4720μm,1.6s						
SACS				AML	AML		
	comp=N,6105μm,0.6s						
SACS				AML	AML		
	comp=N,6300μm,0.6s						
SACS				AML	AML		
	comp=E,4715μm,1.6s						
SACS				AML	AML		
	comp=N,6110μm,0.6s						
SACS				AML	AML		
	comp=E,4320μm,1.6s						
SFI	**Santa Sofia**	**0.68**	**320**	P	**Pb**	**15 52 14.0**	**-1.0**
SFI				S	**Sn**	**15 52 25.7**	**-1.8**
SFI				AML	AML		
	comp=E,2850μm,0.5s						
SFI				AML	AML		
	comp=N,2650μm,1.1s						
SFI				AML	AML		
	comp=N,3395μm,0.5s						
SFI				AML	AML		
	comp=N,2650μm,1.1s						
SFI				AML	AML		
	comp=E,2760μm,0.7s						
SFI				AML	AML		
	comp=E,2850μm,0.5s						
NRCA	**Norcia**	**0.73**	**138**	P	**Pg**	**15 52 13.7**	**-1.4**
NRCA				S	**Sb**	**15 52 25.0**	**-1.0**
NRCA				AML	AML		
	comp=E,3000μm,1.1s						
NRCA				AML	AML		
	comp=N,4515μm,0.2s						
NRCA				AML	AML		
	comp=E,3150μm,0.2s						
NRCA				AML	AML		
	comp=N,4775μm,0.2s						
NRCA				AML	AML		
	comp=E,3145μm,0.2s						
NRCA				AML	AML		
	comp=E,2995μm,1.1s						

NRCA AML AML
comp=N,4520µm,0.2s
CESX Cesi 0.78 173 P **Pg** 15 52 15.3 -0.6
CESX AML AML
comp=N,2835µm,0.5s
CESX AML AML
comp=E,4755µm,0.5s
RUFI Rufina 0.82 304 P **Pb** 15 52 16.6 -0.8
RUFI S **Sn** 15 52 29.9 -1.0
RUFI AML AML
comp=N,2585µm,1.2s
RUFI AML AML
comp=E,4220µm,0.6s
RUFI AML AML
comp=N,2600µm,1.2s
MCIV Monte Civitell 0.83 223 P **Pg** 15 52 16.4 -0.5
MCIV AML AML
comp=N,1255µm,0.8s
MCIV AML AML
comp=E,1150µm,1.4s
ARRO Arrone 0.83 164 AML AML
comp=E,1915µm,0.7s
ARRO AML AML
comp=N,1775µm,0.6s
OSSC Osservatorio P 0.89 280 P **Pn** 15 52 18.4 -1.2
OSSC AML AML
comp=E,2900µm,0.8s
OSSC AML AML
comp=N,2910µm,0.8s
OSSC AML AML
comp=E,2860µm,0.8s
OSSC AML AML
comp=N,2975µm,0.8s
OSSC AML AML
comp=E,2895µm,0.8s
OSSC AML AML
comp=N,2910µm,0.8s
LNSS Leonessa 0.89 151 P **Pg** 15 52 16.6 -1.5
LNSS AML AML
comp=E,4265µm,0.5s
LNSS AML AML
comp=E,4270µm,0.5s
LNSS AML AML
comp=N,3190µm,0.6s
LATE Laterza 0.90 212 AML AML
comp=N,4330µm,0.6s
LATE AML AML
comp=E,4625µm,1.1s
FROS Frosini 0.96 260 P **Pb** 15 52 19.2 -0.5
FROS AML AML
comp=E,2315µm,0.7s
FROS AML AML
comp=N,3020µm,0.8s
SMA1 SAN MARTINO 0.99 139 AML AML
comp=N,2335µm,1.1s
SMA1 AML AML
comp=E,2965µm,0.7s
SMA1 AML AML
comp=N,2330µm,1.1s
OFFI Offida 1.01 116 AML AML
comp=N,6380µm,0.5s
OFFI AML AML
comp=E,7200µm,0.5s
BRIS BRISIGHELLA 1.03 319 AML AML
comp=N,3570µm,0.4s
BRIS AML AML
comp=N,3565µm,0.4s
BRIS AML AML
comp=E,1230µm,0.8s
CAMP Campotosto 1.10 140 AML AML
comp=N,1300µm,0.8s
CAMP AML AML
comp=E,1525µm,0.6s
GUMA Gualdo di Mace 1.13 106 P Pg 15 52 13.7 -9.0
GUMA S Sg 15 52 25.1 -12
GUMA AML AML
comp=E,9180µm,0.4s
GUMA AML AML
comp=N,8020µm,0.7s
GUMA AML AML
comp=E,9155µm,0.4s
GUMA AML AML
comp=E,9585µm,0.5s
GUMA AML AML
comp=N,10760µm,0.7s
TERO Teramo 1.14 131 AML AML
comp=N,716µm,0.8s
TERO AML AML
comp=E,693µm,0.5s
TRIF Trifonti 1.16 257 P **Pn** 15 52 22.7 -0.7
TRIF AML AML
comp=N,902µm,1.6s
TRIF AML AML
comp=E,866µm,0.5s
FIAM Fiamignano 1.22 156 P **Pg** 15 52 22.2 -2.1
FIAM AML AML
comp=E,1420µm,0.9s
FIAM AML AML
comp=N,1440µm,0.7s
MTCR Monte La Croce 1.23 302 P **Pg** 15 52 23.4 -1.3
MTCR AML AML
comp=E,1470µm,0.6s
MTCR AML AML
comp=N,1845µm,0.7s
AQU L'Aquila 1.24 145 *e*Pn **Pn** 15 52 24.4 -0.1
CASP Castiglione de 1.30 244 P **Pn** 15 52 24.2 -1.1
CASP AML AML
comp=N,280µm,0.6s
CASP AML AML
comp=E,356µm,1.1s
TOLF Tolfa 1.36 194 P **Pn** 15 52 24.9 -1.1
TOLF AML AML
comp=E,638µm,0.8s
TOLF AML AML
comp=N,574µm,0.9s
POPM Popiglio 1.40 299 AML AML
comp=E,656µm,1.6s
POPM AML AML
comp=N,698µm,0.6s
VCEL Villa Celiera 1.42 133 AML AML
comp=N,2045µm,0.8s
VCEL AML AML
comp=E,2630µm,0.6s
CERT Cerreto 1.48 164 AML AML
comp=N,677µm,0.9s
CERT AML AML
comp=E,1074µm,0.7s
MAIM Mastiano 1.52 291 AML AML
comp=E,551µm,0.5s
MAIM AML AML
comp=N,536µm,1.0s
MAIM Mastiano 1.52 291 P **Pn** 15 52 27.6 -0.6
SARO Sassorosso 1.69 299 AML AML
comp=N,354µm,0.6s
SARO AML AML
comp=E,276µm,0.6s
VVLD Villa Vallelon 1.74 150 AML AML
comp=E,545µm,1.0s
VVLD AML AML
comp=N,600µm,0.6s
BRJN Brijuni 1.79 31 *i* Pn **Pn** 15 52 31.8 -0.1
BRJN Sn **Sg** 15 52 56.6 -1.9
EQUI Equi 1.84 296 AML AML
comp=E,225µm,0.6s
EQUI AML AML
comp=N,261µm,0.8s
EQUI Equi 1.84 296 P **Pn** 15 52 32.2 -0.4
DUGI Dugi Otok 1.99 71 *i* Pn **Pn** 15 52 34.1 -0.6
PLMA Palmaria, Port 2.00 290 AML AML
comp=N,196µm,0.5s
PLMA AML AML
comp=E,202µm,1.5s
GRAM Graiana 2.05 304 P **Pn** 15 52 36.1 +0.6
NVLJ Novalja 2.11 55 *i* Pn **Pn** 15 52 36.1 -0.2
NVLJ Sn **Sb** 15 53 03.6 -1.9
MSSA Maissana 2.32 295 AML AML
comp=E,163µm,1.6s
MSSA AML AML
comp=N,236µm,0.9s
ZIRJ Zirje 2.34 82 *i* Pn **Pn** 15 52 39.4 -0.1
ZIRJ Sn **Sn** 15 53 08.4 +0.1
MORI Morici 2.42 77 *i* Pn **Pn** 15 52 40.7 +0.1
MORI Sn **Sn** 15 53 11.4 +1.2
RIY Rijeka 2.43 36 *e*Pn **Pn** 15 52 41.0 +0.3
RIY Rijeka 2.43 36 *e*Pn **Pn** 15 52 40.4 -0.4
SKDS Skadanscina 2.44 27 *i* Pn **Pn** 15 52 40.1 -0.8
SKDS *e*Sn **Sb** 15 53 12.9 -2.1

comp=Z,128nm,0.3s
CGRP Cima Grappa 2.54 350 AML AML
comp=N,592µm,0.6s
CGRP AML AML
comp=E,610µm,0.5s
UDBI Udbina 2.65 63 *i* Pn **Pn** 15 52 44.6 +0.7
PGF Pioggiola 2.67 253 *e*Pn **Pn** 15 52 41.0 -3.1
PGF *e*Sn **Sn** 15 53 13.9 -2.6
comp=E,23nm,0.6s
MAGA Magasa 2.72 332 AML AML
comp=N,606µm,0.4s
MAGA AML AML
comp=E,916µm,0.5s
CEY Cerknica 2.75 30 *e*Pn **Pn** 15 52 44.5 -0.7
STAL STALIGIAL 2.88 4 AML AML
comp=E,348µm,0.3s
STAL AML AML
comp=N,350µm,0.3s
STAL AML AML
comp=E,436µm,0.3s
STAL AML AML
comp=N,316µm,0.3s
HVAR Hvar 2.93 93 *e*Pn **Pn** 15 52 47.6 0.0
HVAR Sn **Sn** 15 53 23.0 +0.1
KIJV Kijevo 2.94 76 *i* Pn **Pn** 15 52 48.3 +0.6
KIJV Sn **Sn** 15 53 24.9 +1.8
LJU Ljubljana 3.05 28 *e*Pn **Pn** 15 52 49.5 +0.3
MSAG Monte S. Angel 3.05 122 AML AML
comp=N,374µm,0.5s
MSAG AML AML
comp=E,260µm,0.8s
OZLJ Ozalj 3.11 43 *e*Pn **Pn** 15 52 51.1 +1.1
QLNO Quiliano 3.11 289 AML AML
comp=N,96µm,1.0s
QLNO AML AML
comp=E,60µm,1.5s
CRES Cresnjev 3.25 40 *e*Pn **Pn** 15 52 52.3 +0.2
MYKA Terra Mystica 3.36 14 *i* Pn **Pn** 15 52 54.3 +0.8
comp=E,2.7nm,0.4s
MYKA *i* Sn **Sn** 15 53 36.5 +2.9
comp=E,28nm,0.4s
ABTA Abfaltersbach 3.37 1 *i* Pn **Pn** 15 52 55.0 +1.3
comp=E,25nm,0.5s,SNR=22
ABTA *i* Sn **Sn** 15 53 36.4 +2.6
comp=E,43nm,0.5s
OBKA Obir 3.46 25 *i* Pn **Pn** 15 52 55.0 0.0
comp=E,1.5nm,0.2s
OBKA *i* Sg **Sg** 15 53 54.4 +2.2
comp=E,125nm,0.6s
MGRS Mrkonjic Grad 3.51 71 *e*Pn **Pn** 15 52 56.9 +1.3
SBF Sospel 3.67 279 *e*P **Pn** 15 52 58.7 +0.8
SBF *e*Sn **Sn** 15 53 39.1 -2.2
comp=E,46nm,0.7s
BLY Banja Luka 3.68 67 ⇓P **Pb** 15 53 05.2 -0.8
BLY Banja Luka 3.68 67 *e*Pn **Pn** 15 52 57.1 -0.8
KBA Koelnbreinsper 3.75 9 *i* Pn **Pn** 15 53 00.4 +1.3
comp=E,8.3nm,0.3s
KBA *i* Sn **Sn** 15 53 46.1 +2.7
comp=E,19nm,0.4s
SOKA Soboth 3.77 28 *i* Pn **Pn** 15 52 59.4 +0.2
comp=E,0.7nm,0.2s
SOKA *i* Sn **Sg** 15 53 57.3 -4.7
comp=E,7.2nm,0.4s
MOSL Moslavina 3.80 53 *e*Pn **Pn** 15 52 59.2 -0.4
FETA Feichten 3.84 342 *i* Pn **Pn** 15 53 03.0 +2.7
comp=E,18nm,0.5s,SNR=14
FETA *i* Sn **Sb** 15 53 50.8 -4.7
comp=E,24nm,0.7s
DAVOX Davos/Dischmat 3.85 333 Pn **Pn** 15 53 04.0 +3.5
DAVOX Sn **Sb** 15 53 51.5 -4.5
STON Ston 3.88 96 *i* Pn **Pn** 15 53 01.2 +0.6
STON Sn **Sn** 15 53 45.9 -0.3
STON Ston 3.88 96 *e*Pn **Pn** 15 52 59.8 -0.8
SQTA Sankt Quirin 3.94 348 *i* Pn **Pn** 15 53 04.9 +3.3
comp=E,17nm,0.3s,SNR=12
SQTA *i* Sn **Sn** 15 53 52.2 +4.3
comp=E,41nm,0.6s
KALN Kalnik 3.96 45 *e*Pn **Pn** 15 53 01.2 -0.6
WATA Walderalm 4.00 351 *i* Pn **Pn** 15 53 05.5 +3.0
comp=E,19nm,0.5s,SNR=6.9
WATA *i* Sn **Sn** 15 53 53.6 +4.0
comp=E,32nm,0.7s
MOTA Moosalm 4.08 347 *i* Pn **Pn** 15 53 06.8 +3.3
comp=E,19nm,0.6s,SNR=10
MOTA *i* Sn **Sn** 15 53 53.0 +1.6
comp=E,17nm,0.6s
MATE Matera 4.18 129 ⇑P **Pn** 15 53 06.8 +1.9
FRF La Foret Royal 4.23 274 *e*P **Pn** 15 53 06.1 +0.6
FRF *e*Sn **Sn** 15 53 52.4 -2.5
comp=E,12nm,0.5s
DBRK Dubrovnik 4.24 98 *i* Pn **Pn** 15 53 07.8 +2.2
DBRK Sn **Sn** 15 53 56.9 +1.8
RETA Reutte 4.27 344 *i* Pn **Pn** 15 53 09.5 +3.4
comp=E,14nm,0.4s,SNR=8.0
RETA *i* Sn **Sn** 15 54 00.5 +4.3
comp=E,13nm,0.4s
DAVA Damuels 4.30 336 *i* Pn Pn 15 53 10.8 +4.2
comp=E,23nm,0.5s,SNR=13
DAVA *i* Sn **Sn** 15 53 59.8 +2.8
comp=E,60nm,0.7s
MBDF Montbardon 4.31 290 *e*P **Pn** 15 53 07.5 +0.8
MBDF *e*Sn **Sn** 15 53 54.4 -2.7
comp=E,36nm,0.7s
LMR La Mourre 4.33 271 *e*P **Pn** 15 53 07.7 +0.8
LMR *e*Sn **Sn** 15 53 54.5 -3.0
comp=E,7.2nm,0.5s
TREB Trebinje 4.38 97 *e*Pn **Pn** 15 53 07.6 +0.1
ARSA Arzberg 4.43 28 *i* Pn **Pn** 15 53 07.4 -0.9
comp=E,1.8nm,0.2s
ARSA *i* Sn **Sn** 15 54 02.6 +2.6
comp=E,5.7nm,0.4s
BRY Bratogost 4.48 94 *e*Pn **Pn** 15 53 08.8 -0.3
HCY Herceg Novi 4.54 100 *e*Pn **Pn** 15 53 10.1 +0.4
LPG La Plagne 4.60 299 *e*Pn **Pn** 15 53 07.9 -2.9
LPG *e*Sn **Sn** 15 54 01.5 -2.9
comp=E,23nm,0.7s
LPL La Plagne 4.62 300 *e*Pn **Pn** 15 53 08.7 -2.3
LPL *e*Sn **Sn** 15 54 01.9 -2.9
comp=E,15nm,0.5s
MOA Molln 4.65 15 *i* Pn **Pn** 15 53 12.2 +1.0
comp=E,3.3nm,0.2s
UPM Unac-Piva 4.72 90 *e*Pn **Pn** 15 53 13.3 +0.9
HAPS Han Pijesak,Bl 4.76 79 *e*Pn **Pn** 15 53 12.4 -0.5
ORIF Oris-en-Rattie 4.97 290 *e*Pn **Pn** 15 53 13.3 -2.5
ORIF *e*Sn **Sn** 15 54 09.9 -3.5
comp=E,14nm,0.6s
SMRF Simiane la Rot 5.02 279 *e*P **Pn** 15 53 17.5 +1.1
BBLS Lazići 5.07 82 *e*Pn **Pn** 15 53 17.8 +0.6
PDG Podgorica 5.09 98 ⇑P **Pn** 15 53 17.9 +0.6
PDG Podgorica 5.09 98 *e*Pn **Pn** 15 53 17.7 +0.4
DRME Dracevica, Mon 5.10 101 *e*Pn **Pn** 15 53 17.8 +0.4
CONA Conrad Observa 5.14 27 *i* Pn **Pn** 15 53 17.8 -0.2
comp=E,1.3nm,0.2s
MORH Mrgy, Hungar 5.24 55 *e*Pn **Pn** 15 53 17.9 -1.4
DIVS Divibare 5.51 80 *e*Pn **Pn** 15 53 22.5 -0.7
GERES GERESS Array B 5.53 9 Pn **Pn** 15 53 23.4 0.0
comp=E,1.1nm,0.3s,baz=181,slow=13,SNR=26
GERES Sn **Sn** 15 54 26.3 -0.9
comp=E,3.9nm,0.3s,baz=182,slow=19,SNR=9.2
CABF La Chapelle 5.55 308 *e*P **Pn** 15 53 25.5 +1.8
CABF *e*Sn **Sn** 15 54 23.7 -3.9
FRGS Fruska Gora 5.58 69 *e*Pn **Pn** 15 53 23.9 -0.1
KHC Kasperske Hory 5.80 7 *e*PN **Pn** 15 53 27.0 -0.2
KHC *e*SN **Sn** 15 54 32.6 -1.2
HINF Hinteralfeld 5.92 320 *e*P **Pn** 15 53 30.2 +1.4
HINF *e*Sn **Sn** 15 54 32.3 -4.4
comp=E,18nm,0.5s
MODS Modra-Piesok 6.02 32 *e*PN **Pn** 15 53 32.1 +2.0
MODS *e*SN **Sn** 15 54 38.6 -0.6
CDF Champ du Feu 6.19 326 *e*P **Pn** 15 53 33.3 +0.8
CDF *e*Sn **Sn** 15 54 38.2 -5.2
comp=E,22nm,0.6s
LASF Ste Croix 6.26 279 *e*P **Pn** 15 53 34.4 +0.9
HAU Haudompre 6.29 319 *e*P **Pn** 15 53 35.0 +1.1
HAU *e*Sn **Sn** 15 54 41.2 -4.7
comp=E,27nm,0.5s
GOPC GO Pecny, Ondr 6.73 13 *e*PN **Pn** 15 53 38.8 -1.0
GOPC *e*SN **Sn** 15 54 53.9 -2.6
PRU Pruhonice 6.76 12 *e*SN **Sn** 15 54 53.2 -4.1
VYHS Vyhne 6.78 39 *e*PN **Pn** 15 53 41.3 +0.8
VYHS *e*SN **Sn** 15 54 54.7 -3.0
NKC Novy Kostel 6.85 360 *e*SN **Sn** 15 54 58.5 -1.1
SMF Signal de Mont 6.92 301 *e*P **Pn** 15 53 44.3 +1.9
SMF *e*Sn **Sn** 15 54 56.5 -4.7
comp=E,5.6nm,0.5s

BZS Buzias 6.93 68 ⇓P **Pn** 15 53 40.2 -2.3
LOR Lormes 7.19 306 *e*P **Pn** 15 53 48.0 +1.8
baz=125
LOR *e*Sn **Sn** 15 55 03.0 -5.0
comp=E,5.8nm,0.4s
AVF Avril sur Loir 7.28 301 *e*P **Pn** 15 53 49.4 +2.0
SSF Saint Saulge 7.31 303 *e*P **Pn** 15 53 50.3 +2.5
SSF *e*Sn **Sn** 15 55 05.9 -4.8
STIP Stip 7.39 100 *i* Pn **Pn** 15 53 50.6 +1.8
MTLF Montolieu 7.46 273 *e*P **Pn** 15 53 51.8 +2.0
BGF Bois d'Agland 7.51 298 *e*P **Pn** 15 53 52.6 +2.0
BRG Berggiesshubel 7.56 7 PG **Pn** 15 53 52.2 +0.9
BRG SN **Sn** 15 55 14.2 -2.8
BRG SG **Sg** 15 56 02.8 -0.8
comp=E,6.7nm,0.9s
TCF Toulx Ste Croi 7.84 295 *e*P **Pn** 15 53 57.0 +2.0
CLL Collm 7.94 3 *e*Pn **Pn** 15 53 57.0 +0.6
CLL *e*Pg **Pg** 15 54 31.0 -1.9
CLL *e*Sn Sn 15 55 14.0 -12
CLL *e*Sg **Sg** 15 56 15.0 -0.6
VTS Vitosha 7.94 92 ⇓P **Pn** 15 53 57.1 +0.4
VOIR 9.25 73 ⇑P **Pn** 15 54 16.7 +2.2
BRTR Keskin Array B 16.27 96 Pn **P** 15 55 52.8 0.0
comp=E,0.0nm,0.3s,baz=276,slow=14,SNR=2.8
FINES FINESS Array B 19.83 19 P **Pn** 15 56 33.4 +0.2
comp=E,0.1nm,0.3s,baz=180,slow=16,SNR=2.8
KBZ Khabaz 22.02 79 P **P** 15 56 59.0 +3.7
comp=E,1.7nm,0.9s,baz=275,slow=9.2,SNR=4.4
TORD Torodi Ar. Bea 31.52 200 P **P** 15 58 23.3 0.0
comp=E,0.5nm,0.6s,baz=14,slow=8.5,SNR=3.4
MKAR Makanchi Array 47.94 60 P **P** 16 00 41.1 +1.6
comp=E,0.4nm,0.6s,baz=269,slow=7.0,SNR=4.8
SONM Songino Array 61.84 50 P **P** 16 02 21.2 +0.9
comp=E,0.2nm,0.4s,baz=276,slow=6.5,SNR=3.4
YKA Yellowknife Ar 66.28 336 P **P** 16 02 49.1 +0.1
comp=E,0.4nm,0.7s,baz=41,slow=6.2,SNR=7.2
ILAR Eielson Array 70.97 351 P **P** 16 03 20.3 +2.1
comp=E,0.2nm,0.7s,baz=4.2,slow=5.0,SNR=3.4
CMAR Chiang Mai Arr 75.07 79 P **P** 16 03 43.9 +0.7
comp=E,0.3nm,0.6s,baz=295,slow=6.8,SNR=3.7
TXAR Lajitas Array 86.94 308 P **P** 16 04 46.2 -0.3
comp=E,0.2nm,0.7s,baz=27,slow=6.1,SNR=2.7
ASAR Alice Springs 128.46 87 PKP **PKiKP** 16 11 08.6 -0.3
comp=E,0.2nm,0.8s,baz=349,slow=1.9,SNR=3.9

*UPA **07** 15:58:34.1±1.8, 7.°14**N**×80.°00**W**, h0**km**±9**km**, MW4.1*
*UCR **07** 15:58:36.8±1.3, 7.°16**N**×80.°12**W**, h26**km**±11**km**, MW3.9*
ISC 07 15:58:32.8±1.5, **7.°03N**±0.°05×**79.°99W**±0.°03, **h16**km±10km,
n26, σ1°.**53**/**47**, **4C-1D**, **South of Panama**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res	ISC
TOSI3	**Tonosi**	**0.58**	**310**	*e*P		**Pn**	**15 58 44.5**	**-0.1**	
TOSI3				*e*S		**Sn**	**15 58 53.8**	**-1.8**	
AZU	**Azuero**	**0.81**	**340**	⇑*i*P		**Pb**	**15 58 48.6**	**+0.2**	
AZU				*e*S		**Sn**	**15 58 58.9**	**-2.2**	
AZU	**Azuero**	**0.81**	**340**	⇑*i*P		**Pb**	**15 58 48.6**	**+0.2**	
AZU				*e*S		**Sb**	**15 58 58.4**	**-0.7**	
AZU	**Azuero**	**0.81**	**340**	⇑*i*P		**Pb**	**15 58 48.7**	**+0.2**	
AZU				*e*S		**Sn**	**15 58 59.1**	**-2.0**	
CACAO	**El Cacao, Vera**	**0.92**	**290**	*e*P		**Pn**	**15 58 51.8**	**+0.9**	
CACAO				*e*S		**Sn**	**15 59 05.1**	**+1.2**	
CHIT3	**Chitre**	**1.01**	**335**	⇑*e*P		**Pg**	**15 58 52.0**	**-0.5**	
CHIT3				*e*S		**Sn**	**15 59 05.5**	**-0.7**	
PESE3	**Pese, Herrera**	**1.07**	**325**	*e*P		**Pn**	**15 58 54.6**	**+1.5**	
PESE3				*e*S		**Sn**	**15 59 08.4**	**+0.8**	
OCU3	**Ocu, Herrera**	**1.20**	**320**	*e*P		**Pg**	**15 58 55.8**	**-0.1**	
OCU3				*e*S		**Sn**	**15 59 12.5**	**+1.7**	
PONU3	**Ponuga, Veragu**	**1.30**	**311**	*e*P		**Pn**	**15 58 55.2**	**-1.0**	
PONU3				*e*S		**Sg**	**15 59 16.8**	**+2.1**	
GMAL	**Guarumal, Vera**	**1.43**	**301**	*e*P		**Pg**	**15 59 00.6**	**+0.2**	
GMAL				*e*S		**Sg**	**15 59 19.0**	**-0.1**	
STIA3	**Santiago, Vera**	**1.44**	**318**	*e*P		**Pn**	**15 58 58.3**	**+0.1**	
STIA3				*e*S		**Sg**	**15 59 19.5**	**+0.1**	
VTON	**El Valle, Cocl**	**1.58**	**356**	*e*P		**Pn**	**15 59 00.1**	**0.0**	
VTON				*e*S		**Sg**	**15 59 21.6**	**-2.1**	
CHOR3	**La Chorrera**	**1.87**	**7**	*e*P		**Pn**	**15 59 05.8**	**+1.7**	
CHOR3				*e*S		**Sb**	**15 59 29.2**	**-0.5**	
ZANG	**Zanguenga, Cho**	**1.92**	**4**	*e*P		**Pb**	**15 59 07.0**	**-0.4**	
ZANG	**Zanguenga, Cho**	**1.92**	**4**	*e*P		**Pb**	**15 59 07.6**	**+0.2**	
ZANG				*e*S		**Sn**	**15 59 28.2**	**-0.4**	
FLAM	**Flamenco Islan**	**1.93**	**13**	*e*S		**Sn**	**15 59 28.6**	**-0.1**	
UPA	**Univ. de Panam**	**1.99**	**13**	⇓*i*P		**Pn**	**15 59 07.0**	**+1.3**	
UPA				*e*S		**Sn**	**15 59 31.0**	**+0.6**	
UPA	**Univ. de Panam**	**1.99**	**13**	*e*P		**Pn**	**15 59 07.0**	**+1.3**	
UPA				*e*S		**Sn**	**15 59 30.6**	**+0.2**	
BCIP	**Isla Barro Col**	**2.13**	**4**	*e*P		**Pn**	**15 59 09.5**	**+1.9**	
BCIP	**Isla Barro Col**	**2.13**	**4**	*e*P		**Pn**	**15 59 09.0**	**+1.4**	
BCIP				*e*S		**Sb**	**15 59 35.3**	**-1.9**	
BCIP	**Isla Barro Col**	**2.13**	**4**	*e*P		**Pb**	**15 59 10.5**	**-0.4**	
BCIP				*e*S		**Sb**	**15 59 36.3**	**-0.9**	
PTAC	**Punta Ardita,**	**2.17**	**87**	*e*P		**Pn**	**15 59 07.7**	**-0.5**	
PTAC				*e*S		**Sn**	**15 59 30.6**	**-4.2**	
FRIJ	**El Hiral**	**2.20**	**7**	*e*P		**Pn**	**15 59 09.4**	**+0.8**	
FRIJ				*e*S		**Sn**	**15 59 34.6**	**-0.8**	
UPD2	**Meteti**	**2.47**	**52**	*e*P		**Pn**	**15 59 15.4**	**+3.0**	
UPD2				*e*S		**Sn**	**15 59 46.5**	**+4.3**	
SOLC	**Bahia Solano**	**2.69**	**107**	*e*P		**Pn**	**15 59 15.1**	**-0.2**	
DBBC	**Dabeiba**	**3.75**	**90**	*e*P		**Pn**	**15 59 32.6**	**+2.5**	

WEL 07 16:03:07.2, 43.°S±1.°×**17.°3E**±.°, **h36**km±3km, **M4.0**/61,
ML3.9/20, **MLv4.0**/61, **Error ellipse: s-maj=0.0km**
s-min=0.0km az=70.7, South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	Time	Res	ISC
LTZ	**Lake Taylor**	**0.50**	**292**			P	16 03 18.1	+0.3	
LTZ						S	16 03 25.0	-0.1	
CRLZ	**Canterbury Las**	**0.63**	**198**			P	16 03 20.4	+0.7	
KHZ	**Kahutara**	**0.73**	**41**			P	16 03 22.4	+1.5	
MQZ	**McQueen's Vall**	**0.75**	**193**			P	16 03 21.7	+0.4	
OKCZ	**Okains Bay**	**0.76**	**171**			P	16 03 22.8	+1.4	
AKCZ	**Akaroa Harbour**	**0.90**	**179**			P	16 03 24.4	+1.1	
INZ	**Inchbonnie**	**1.10**	**283**			P	16 03 26.6	+0.7	
THZ	**Tophouse**	**1.21**	**0**			P	16 03 28.8	+1.2	
BSWZ	**Blackbirch Sta**	**1.45**	**30**			P	16 03 32.8	+1.9	
DSZ	**Dennistn Nort**	**1.47**	**326**			P	16 03 32.2	+1.0	
RPZ	**Rata Peaks**	**1.54**	**240**			P	16 03 32.5	+0.5	
CMWZ	**Cape Campbell**	**1.56**	**39**			P	16 03 38.3	+5.9	
WVZ	**Waitaha Valley**	**1.59**	**266**			P	16 03 34.1	+1.4	
TUWZ	**Tuamarina**	**1.73**	**27**			P	16 03 36.1	+1.5	
NNZ	**Nelson**	**1.79**	**12**			P	16 03 37.6	+2.0	
TCW	**Tory Channel**	**2.04**	**31**			P	16 03 40.0	+1.1	
BHW	**Baring Head**	**2.14**	**44**			P	16 03 41.5	+1.1	
QRZ	**Quartz Range**	**2.16**	**353**			P	16 03 41.9	+1.3	
PLWZ	**Palliser**	**2.24**	**52**			P	16 03 42.7	+0.9	
DUWZ	**D'Urville Isla**	**2.30**	**20**			P	16 03 44.4	+1.8	
FOZ	**Fox Glacier**	**2.32**	**255**			P	16 03 44.4	+1.7	
MSWZ	**Moikau Station**	**2.34**	**49**			P	16 03 43.8	+0.7	
LBZ	**Lake Benmore**	**2.42**	**233**			P	16 03 44.9	+0.6	
CAW	**Cannon Point**	**2.47**	**42**			P	16 03 45.7	+0.8	
KIW	**Kapiti Island**	**2.59**	**36**			P	16 03 47.6	+1.1	
TRWZ	**Traveller**	**2.60**	**54**			P	16 03 47.5	+0.8	
ODZ	**Otahua Downs**	**2.63**	**217**			P	16 03 47.6	+0.5	
MTW	**Mount Morrison**	**2.66**	**48**			P	16 03 47.8	+0.4	
OGWZ	**Otaki Gorge**	**2.74**	**39**			P	16 03 49.4	+0.8	
TMWZ	**Te Maipa**	**2.91**	**51**			P	16 03 51.1	+0.2	
MRZ	**Mangatainoka R**	**3.06**	**42**			P	16 03 53.5	+0.5	
JCZ	**Jackson Bay**	**3.19**	**248**			P	16 03 56.0	+1.2	
PRWZ	**Pori Road**	**3.34**	**45**			P	16 03 57.3	+0.5	
HHSZ	**Highcliff Hill**	**3.34**	**209**			P	16 03 57.4	+0.5	
WKZ	**Wanaka**	**3.36**	**235**			P	16 03 57.1	0.0	
BFZ	**Birch Farm**	**3.39**	**49**			P	16 03 58.3	+0.7	
EAZ	**Earnscleugh**	**3.43**	**228**			P	16 03 58.2	+0.1	
WAZ	**Wanganui**	**3.58**	**27**			P	16 04 02.7	+2.6	
DVHZ	**Dannevirke**	**3.62**	**44**			P	16 04 06.0	+5.2	
NMEZ	**Namu Road**	**3.63**	**12**			P	16 04 04.7	+3.9	
LREZ	**Lake Rotokare**	**3.69**	**18**			P	16 04 07.0	+5.3	
TSZ	**Takapari Road**	**3.71**	**39**			P	16 04 02.0	0.0	
PREZ	**Palmer Road**	**3.75**	**15**			P	16 04 06.2	+3.7	
KHEZ	**Kahui Hut**	**3.77**	**13**			P	16 04 05.9	+3.1	
NBEZ	**Newall Road No**	**3.77**	**12**			P	16 04 05.8	+3.0	
TUZ	**Tuapeka**	**3.79**	**217**			P	16 04 03.4	+0.4	
PKE	**Pukeiti**	**3.86**	**13**			P	16 04 07.3	+3.3	
DREZ	**Durham Road**	**3.91**	**15**			P	16 04 08.6	+4.0	
VRZ	**Vera Road**	**4.09**	**21**			P	16 04 09.9	+2.7	
MOVZ	**Moawhango**	**4.16**	**32**			P	16 04 10.8	+2.5	
MLZ	**Mavora Lakes**	**4.19**	**234**			P	16 04 09.2	+0.7	
BHHZ	**Black Hill Sta**	**4.22**	**36**			P	16 04 09.8	+0.8	

KRHZ	**Kereru**	**4.23**	**39**	P	Pn	16 04 10.0	+0.9		
WTVZ	**West Tongariro**	**4.36**	**29**	P	Pn	16 04 12.4	+1.4		
KAHZ	**Kahuranaki**	**4.36**	**45**	P	Pn	16 04 12.0	+1.1		
KRVZ	**Karewarewa**	**4.39**	**29**	P	Pn	16 04 14.9	+3.4		
SYZ	**Scrubby Hill**	**4.46**	**216**	P	Pn	16 04 12.7	+0.6		
MCHZ	**McNeill Hill**	**4.54**	**40**	P	Pn	16 04 15.7	+2.3		
WHZ	**Wether Hill Ro**	**4.59**	**229**	P	Pn	16 04 13.1	-0.9		
HIZ	**Hauiti**	**4.70**	**19**	P	Pn	16 04 17.2	+1.7		
ARHZ	**Aropaoanui**	**4.83**	**41**	P	Pn	16 04 19.2	+1.9		
TLZ	**Tolley Road**	**5.05**	**24**	P	Pn	16 04 22.8	+2.3		
APZ	**The Paps**	**5.20**	**220**	P	Pn	16 04 22.2	-0.2		
KNZ	**Kokohu**	**5.35**	**44**	P	Pn	16 04 24.8	+0.3		
MHGZ	**Mahia Peninsu**	**5.38**	**46**	P	Pn	16 04 26.8	+1.9		
PRGZ	**Paritu Road**	**5.53**	**45**	P	Pn	16 04 30.6	+3.6		
TOZ	**Tahuroa Road**	**5.60**	**22**	P	Pn	16 04 30.2	+2.3		
RIGZ	**Rimuhau**	**5.64**	**43**	P	Pn	16 04 29.2	+0.7		
URZ	**Urewera**	**5.70**	**36**	P	Pn	16 04 29.0	-0.2		
MWZ	**Matawai**	**5.82**	**39**	P	Pn	16 04 30.5	-0.4		
TKGZ	**Te Karaka**	**5.89**	**41**	P	Pn	16 04 35.1	+3.2		
AWAZ	**Awhitu Peninsu**	**6.05**	**13**	P	Pn	16 04 36.2	+2.1		
RUGZ	**Raukumara Rang**	**6.19**	**38**	P	Pn	16 04 40.1	+4.0		
ETAZ	**East Tamaki Re**	**6.21**	**15**	P	Pn	16 04 38.6	+2.3		
PUZ	**Puketiti**	**6.37**	**42**	P	Pn	16 04 41.1	+2.6		
MBAZ	**Motutapu North**	**6.38**	**15**	P	Pn	16 04 42.0	+3.3		
WIAZ	**Waiheke Island**	**6.41**	**16**	P	Pn	16 04 41.2	+2.2		
HAZ	**Te Kaha**	**6.41**	**37**	P	Pn	16 04 39.5	+0.5		
WMGZ	**Waiomatatini S**	**6.65**	**41**	P	Pn	16 04 44.6	+2.3		

DDA ***07*** *16:12:34.7, 38°.37N×39°.04E, h7km±2km, ML2.1*
ISK ***07*** *16:12:34.8, 38°.39N×39°.01E, h14km, ML2.5/5*

ISC 07 16:12:34.9±1.1, 38°.39N±0°.05×39°.02E±0°.05, h12km±8km, n9, σ0s42/13, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ELZG	**Elazig**	**0.12**	**347**	*i* P		**Pg**	**16 12 38.1**	**-0.1**
ELZG					IAML		16 12 40.0	
	comp=N,2μm,0.2s							
ELZG				*i* S		**Sg**	**16 12 40.5**	**0.0**
MALT	**Malatya**	**0.47**	**261**		PG	**Pg**	**16 12 44.3**	**+0.1**
MALT					SG	**Sb**	**16 12 51.3**	**-0.8**
AKCD	**Akcadag**	**0.86**	**264**	*i* P		**Pg**	**16 12 51.4**	**-0.3**
AKCD				*i* S		**Sb**	**16 13 04.2**	**+0.7**
AKCD					IAML		16 13 05.0	
	comp=N,120nm,0.2s							
AKCD					IAML		16 13 06.0	
	comp=E,148nm,0.4s							
ARPR	**Arapgir-MALATY**	**0.88**	**323**		PG	**Pb**	**16 12 52.4**	**+0.1**
URFA	**Urfa**	**0.96**	**189**		PG	**Pn**	**16 12 54.2**	**0.0**
KEMA	**Kemaliye**	**0.97**	**335**	*i* P		**Pg**	**16 12 53.3**	**-0.4**
KEMA				*i* S		**Sb**	**16 13 07.0**	**+0.5**
KEMA					IAML		16 13 08.0	
	comp=N,25nm,0.4s							
KEMA					IAML		16 13 09.0	
	comp=E,39nm,0.3s							
DYBB	**Diyarbakir**	**0.98**	**116**		PG	**Pb**	**16 12 54.1**	**+0.2**
HANI	**Diyarbakir_Han**	**1.09**	**88**	*i* P		**Pb**	**16 12 55.6**	**-0.1**
DARE	**Darende-Malaty**	**1.22**	**279**		PN	**Pn**	**16 12 57.8**	**0.0**

WEL 07 16:18:14.0, 45°S±9°×167°E±°, h12km, M3.7/19, ML3.8/13, MLv3.7/19, Error ellipse: s-maj=0.0km s-min=0.0km az=8.0, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
DCZ	**Deep Cove**	**0.41**	**173**		P	Pb	16 18 23.6	+0.5
DCZ					S	Sb	16 18 30.0	+0.7
MSZ	**Milford Sound**	**0.71**	**57**		P	Pb	16 18 28.1	-0.2
MLZ	**Mavora Lakes**	**0.79**	**113**		P	Pn	16 18 30.5	-0.5
WHZ	**Wether Hill Ro**	**1.03**	**144**		P	Pn	16 18 34.0	-0.2
WHZ					S	Sn	16 18 48.5	-0.1
PYZ	**Puysegur Point**	**1.14**	**194**		P	Pb	16 18 34.1	-1.6
WKZ	**Wanaka**	**1.39**	**81**		P	Pg	16 18 40.5	-0.2
JCZ	**Jackson Bay**	**1.56**	**51**		P	Pn	16 18 40.8	-0.9
EAZ	**Earnscleugh**	**1.58**	**97**		P	Pb	16 18 43.2	+0.1
APZ	**The Paps**	**1.88**	**161**		P	Pn	16 18 46.6	+0.7
TUZ	**Tuapeka**	**2.00**	**117**		P	Pn	16 18 48.6	+1.1
SYZ	**Scrubby Hill**	**2.06**	**137**		P	Pn	16 18 49.1	+0.7
LBZ	**Lake Benmore**	**2.31**	**74**		P	Pn	16 18 52.7	+0.9
FOZ	**Fox Glacier**	**2.48**	**53**		P	Pn	16 18 52.8	-1.4
ODZ	**Otahua Downs**	**2.52**	**91**		P	Pn	16 18 55.2	+0.5
HHSZ	**Highcliff Hill**	**2.60**	**110**		P	Pn	16 18 57.1	+1.2
RPZ	**Rata Peaks**	**3.15**	**66**		P	Pn	16 19 03.3	0.0
WVZ	**Waitaha Valley**	**3.29**	**54**		P	Pn	16 19 03.7	-1.7
INZ	**Inchbonnie**	**3.92**	**55**		P	Pn	16 19 12.6	-1.3
MQZ	**McQueen's Vall**	**4.21**	**73**		P	Pn	16 19 17.6	-0.3
AKCZ	**Akaroa Harbour**	**4.33**	**76**		P	Pn	16 19 19.6	-0.1
LTZ	**Lake Taylor**	**4.38**	**61**		P	Pn	16 19 19.1	-1.3
OKCZ	**Okains Bay**	**4.48**	**75**		P	Pn	16 19 22.1	+0.4
THZ	**Tophouse**	**5.37**	**54**		P	Pn	16 19 33.2	-0.7
QRZ	**Quartz Range**	**5.82**	**45**		P	Pn	16 19 38.1	-1.9
NNZ	**Nelson**	**5.99**	**52**		P	Pn	16 19 41.7	-0.7
TUWZ	**Tuamarina**	**6.18**	**56**		P	Pn	16 19 45.6	+0.6
TCW	**Tory Channel**	**6.51**	**56**		P	Pn	16 19 49.7	+0.1

ROM 07 16:28:16.2±0.1, 43°.387N±0°.003×12°.505E±0°.004, h7km±1km, Md1.2/6, Error ellipse: s-maj=0.3km s-min=0.1km az=301.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ATFO	**Monte Foce - G**	**0.05**	**113**		P	Pg	16 28 17.9	0.0
ATFO					S	Sg	16 28 19.1	0.0
ATFO					END			
ATVO	**AVT- Monte Val**	**0.07**	**266**		P	Pg	16 28 18.2	+0.2
ATVO					S	Sg	16 28 19.7	+0.3
MURB	**Monte Urbino**	**0.12**	**173**		P	Pg	16 28 19.3	+0.4
MURB					S	Sg	16 28 21.8	+1.1
MURB					AML	AML		
	comp=N,3575μm,0.9s							
MURB					AML	AML		
	comp=E,2985μm,1.2s							
MURB					AML	AML		
	comp=E,3635μm,0.3s							
MURB					AML	AML		
	comp=N,3535μm,0.9s							
MURB					AML	AML		
	comp=E,2980μm,1.2s							
MURB					END			
PIEI	**Pieia**	**0.15**	**8**		P	Pg	16 28 19.8	+0.4
PIEI					S	Sg	16 28 23.0	+1.5
PIEI					AML	AML		
	comp=N,1540μm,0.2s							
PIEI					AML	AML		
	comp=N,1535μm,0.2s							
PIEI					AML	AML		
	comp=E,3275μm,0.2s							
PIEI					END			
ATMI	**Monte Miggiano**	**0.18**	**253**		P	Pg	16 28 20.4	+0.6
ATMI					S	Sg	16 28 23.5	+1.2
ATMI					AML	AML		
	comp=E,1855μm,0.6s							
ATMI					AML	AML		
	comp=E,1850μm,0.6s							
ATMI					AML	AML		
	comp=N,1660μm,0.4s							
FRON	**Frontone**	**0.21**	**51**		P	Pg	16 28 20.8	+0.5
FRON					S	Sg	16 28 24.5	+1.3
FRON					AML	AML		
	comp=N,846μm,0.3s							
FRON					AML	AML		
	comp=E,572μm,0.7s							
FRON					AML	AML		
	comp=N,848μm,0.3s							
FRON					AML	AML		
	comp=E,572μm,0.7s							
FRON					AML	AML		
	comp=N,846μm,0.3s							
FRON					END			
SSFR	**Montelago di S**	**0.21**	**76**		P	Pg	16 28 20.8	+0.4
SSFR					S	Sg	16 28 24.5	+1.3
SSFR					AML	AML		
	comp=N,1625μm,0.1s							
SSFR					AML	AML		
	comp=E,1725μm,0.2s							
SSFR					AML	AML		
	comp=E,1665μm,0.2s							
SSFR					AML	AML		
	comp=N,1390μm,0.3s							
ATTE	**AVT- Monte Tez**	**0.22**	**210**		P	Pg	16 28 21.0	+0.4
ATTE					S	Sg	16 28 24.7	+1.2
ATTE					AML	AML		
	comp=E,610μm,0.3s							
ATTE					AML	AML		
	comp=N,474μm,0.4s							
ATTE					END			
ATCC	**AVT- Casa Cast**	**0.23**	**154**		P	Pg	16 28 21.4	+0.7
ATCC					S	Sg	16 28 25.6	+1.9
ATCC					AML	AML		
	comp=N,1310μm,0.3s							
ATCC					AML	AML		
	comp=N,1305μm,0.3s							
ATCC					AML	AML		
	comp=E,1410μm,1.0s							
BADI	**Badiali**	**0.23**	**303**		P	Pg	16 28 21.3	+0.6
BADI					S	Sg	16 28 25.4	+1.6
BADI					AML	AML		
	comp=E,4045μm,0.2s							
BADI					AML	AML		
	comp=N,2450μm,0.4s							
NARO	**Abbazia di Nar**	**0.23**	**14**		P	Pg	16 28 21.3	+0.6
NARO					S	Sg	16 28 25.3	+1.4
NARO					AML	AML		
	comp=E,599μm,0.2s							
NARO					AML	AML		
	comp=N,525μm,0.3s							
NARO					END			
NARO					END			
PARC	**Parchiule**	**0.33**	**324**		AML	AML		
	comp=E,424μm,1.2s							
PARC					AML	AML		
	comp=E,423μm,1.2s							
PARC					AML	AML		
	comp=N,549μm,1.3s							
PARC					AML	AML		
	comp=N,548μm,1.3s							

ROM 07 16:28:37.2±0.1, 43°.387N±0°.003×12°.497E±0°.004, h8km, ML2.1/28, Error ellipse: s-maj=0.3km s-min=0.2km az=350.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**110**		P	Pg	16 28 39.1	0.0
ATFO					S	Sg	16 28 40.4	-0.2
ATFO					AML	AML		
	comp=N,12150μm,0.2s							
ATFO					AML	AML		
	comp=E,15050μm,0.3s							
ATVO	**AVT- Monte Val**	**0.07**	**266**		P	Pg	16 28 39.4	+0.2
ATVO					S	Sg	16 28 40.8	+0.1
ATVO					AML	AML		
	comp=N,9215μm,0.1s							
ATVO					AML	AML		
	comp=E,8610μm,0.3s							
ATPI	**Pietralunga -**	**0.09**	**313**		P	Pg	16 28 40.0	+0.4
ATPI					S	Sg	16 28 41.9	+0.6
ATPI					AML	AML		
	comp=E,3190μm,0.8s							
ATPI					AML	AML		
	comp=N,5435μm,0.1s							
ATPI					AML	AML		
	comp=E,3195μm,0.8s							
MURB	**Monte Urbino**	**0.13**	**171**		P	Pg	16 28 40.6	+0.5
MURB					S	Sg	16 28 43.0	+0.9
MURB					AML	AML		
	comp=N,3575μm,0.9s							
MURB					AML	AML		
	comp=E,2985μm,1.2s							
MURB					AML	AML		
	comp=N,3535μm,0.9s							
MURB					AML	AML		
	comp=E,3635μm,0.3s							
MURB					AML	AML		
	comp=E,2985μm,1.2s							
MURB					AML	AML		
	comp=E,2980μm,1.2s							
MURB					AML	AML		
	comp=N,3535μm,0.9s							
PIEI	**Pieia**	**0.15**	**11**		P	Pg	16 28 41.1	+0.6
PIEI					S	Sg	16 28 44.1	+1.3
PIEI					AML	AML		
	comp=E,3275μm,0.2s							
PIEI					AML	AML		
	comp=N,1540μm,0.2s							
PIEI					AML	AML		
	comp=N,1535μm,0.2s							
ATMI	**Monte Miggiano**	**0.17**	**253**	*e*P		Pg	16 28 41.5	+0.6
ATMI					S	Sg	16 28 44.8	+1.4
ATMI					AML	AML		
	comp=E,1855μm,0.6s							
ATMI					AML	AML		
	comp=E,1850μm,0.6s							
ATMI					AML	AML		
	comp=N,1660μm,0.4s							
CDCA	**Citt' di Caste**	**0.20**	**291**		P	Pg	16 28 42.3	+0.9
CDCA					S	Sg	16 28 45.6	+1.4
CDCA					AML	AML		
	comp=N,4350μm,0.9s							
CDCA					AML	AML		
	comp=E,1002μm,0.4s							
CDCA					AML	AML		
	comp=N,740μm,0.2s							
CDCA					AML	AML		
	comp=E,2365μm,0.9s							
CDCA					AML	AML		
	comp=N,4345μm,0.9s							
CDCA					AML	AML		
	comp=N,741μm,0.2s							
CDCA					AML	AML		
	comp=E,1006μm,0.4s							
FRON	**Frontone**	**0.21**	**52**		P	Pg	16 28 42.1	+0.5
FRON					S	Sg	16 28 45.8	+1.3
FRON					AML	AML		
	comp=N,847μm,0.3s							
FRON					AML	AML		
	comp=E,572μm,0.7s							
FRON					AML	AML		
	comp=N,848μm,0.3s							
FRON					AML	AML		
	comp=E,572μm,0.7s							
FRON					AML	AML		
	comp=N,846μm,0.3s							
FOSV	**Fossato di Vic**	**0.21**	**115**	*e*P		Pg	16 28 42.0	+0.5
FOSV					S	Sg	16 28 46.4	+1.9
FOSV					AML	AML		
	comp=E,397μm,1.2s							
FOSV					AML	AML		
	comp=N,500μm,0.3s							
FOSV					AML	AML		
	comp=N,499μm,0.3s							
FOSV					AML	AML		
	comp=E,398μm,1.2s							
SSFR	**Montelago di S**	**0.21**	**77**	*e*P		Pg	16 28 42.1	+0.5
SSFR					S	Sg	16 28 46.1	+1.5
SSFR					AML	AML		
	comp=E,1670μm,0.2s							
SSFR					AML	AML		
	comp=N,1625μm,0.1s							
SSFR					AML	AML		
	comp=N,1390μm,0.3s							
SSFR					AML	AML		
	comp=N,1625μm,0.1s							
SSFR					AML	AML		
	comp=E,1665μm,0.2s							
SSFR					AML	AML		
	comp=E,1725μm,0.2s							
ATTE	**AVT- Monte Tez**	**0.22**	**209**	*e*P		Pg	16 28 42.3	+0.7
ATTE					S	Sg	16 28 45.9	+1.3
ATTE					AML	AML		
	comp=E,610μm,0.3s							
ATTE					AML	AML		
	comp=N,474μm,0.4s							
ATTE					AML	AML		
	comp=E,610μm,0.3s							
BADI	**Badiali**	**0.22**	**304**	*e*P		Pg	16 28 42.4	+0.7
BADI					S	Sg	16 28 46.5	+1.8
BADI					AML	AML		
	comp=N,2450μm,0.4s							
BADI					AML	AML		
	comp=E,4045μm,0.2s							
ATCC	**AVT- Casa Cast**	**0.23**	**153**	P		Pg	16 28 42.6	+0.8
ATCC					S	Sg	16 28 47.1	+2.2
ATCC					AML	AML		
	comp=N,1309μm,0.3s							
ATCC					AML	AML		
	comp=N,1310μm,0.3s							
ATCC					AML	AML		
	comp=N,1305μm,0.3s							
ATCC					AML	AML		
	comp=E,1410μm,1.0s							
NARO	**Abbazia di Nar**	**0.23**	**15**	*e*P		Pg	16 28 42.4	+0.5
NARO					S	Sg	16 28 46.5	+1.4
NARO					AML	AML		
	comp=E,599μm,0.2s							
NARO					AML	AML		
	comp=N,525μm,0.3s							
MPAG	**Monte Paganucc**	**0.31**	**38**	*e*P		Pg	16 28 43.9	+0.5
MPAG					S	Sb	16 28 49.2	-1.0
MPAG					AML	AML		
	comp=E,352μm,0.4s							
MPAG					AML	AML		
	comp=N,298μm,0.3s							
MPAG					AML	AML		
	comp=N,298μm,0.3s							
MPAG					AML	AML		
	comp=E,352μm,0.4s							
PARC	**Parchiule**	**0.32**	**324**	*e*P		Pg	16 28 44.4	+0.8
PARC					S	Sb	16 28 50.0	-0.6
PARC					AML	AML		
	comp=E,424μm,1.2s							
PARC					AML	AML		
	comp=N,548μm,1.3s							
ARVD	**Arcevia**	**0.34**	**71**	P		Pg	16 28 44.5	+0.6
ARVD					S	Sb	16 28 50.7	-0.4
ARVD					AML	AML		
	comp=E,193μm,0.7s							
ARVD					AML	AML		
	comp=N,154μm,0.9s							
ARVD					AML	AML		
	comp=E,192μm,0.7s							
SNTG	**Esanatoglia**	**0.35**	**112**	*e*P		Pg	16 28 44.5	+0.4
SNTG					S	Sb	16 28 50.6	-0.8
SNTG					AML	AML		
	comp=E,586μm,0.5s							
SNTG					AML	AML		
	comp=N,766μm,0.4s							
SNTG					AML	AML		
	comp=E,586μm,0.5s							
SNTG					AML	AML		
	comp=N,766μm,0.4s							
ASSB	**Assisi San Ben**	**0.36**	**161**	*e*P		Pg	16 28 44.9	+0.5
ASSB					S	Sb	16 28 51.0	-0.8
ASSB					AML	AML		
	comp=N,335μm,0.3s							
ASSB					AML	AML		
	comp=E,248μm,0.5s							
ASSB					AML	AML		
	comp=N,336μm,0.3s							
FSSB	**Fossombrone**	**0.37**	**34**	*e*P		Pg	16 28 45.0	+0.5
FSSB					S	Sb	16 28 51.8	-0.1
COR1	**Corinaldo**	**0.44**	**56**		AML	AML		
	comp=E,216μm,1.6s							
COR1					AML	AML		
	comp=N,304μm,0.5s							
CESI	**CESI - Serrava**	**0.48**	**142**		AML	AML		
	comp=E,24μm,0.9s							
CESI					AML	AML		
	comp=N,80μm,0.4s							
CING	**Cingoli**	**0.51**	**91**		AML	AML		
	comp=N,146μm,0.5s							
CING					AML	AML		
	comp=E,99μm,0.5s							
MGAB	**Montegabbione**	**0.55**	**211**		P	Pg	16 28 48.5	+0.6
MGAB					AML	AML		
	comp=E,222μm,0.5s							
MGAB					AML	AML		
	comp=N,248μm,1.3s							
MGAB					AML	AML		
	comp=E,232μm,0.5s							
MGAB					AML	AML		
	comp=N,264μm,1.3s							
MGAB					AML	AML		
	comp=E,222μm,0.5s							
FDMO	**Fiordimonte**	**0.56**	**129**		AML	AML		
	comp=E,143μm,1.4s							
FDMO					AML	AML		
	comp=N,162μm,1.3s							
PESA	**Pesaro**	**0.61**	**24**	P		Pb	16 28 49.8	-0.2
PESA					AML	AML		
	comp=N,398μm,0.2s							
PESA					AML	AML		
	comp=E,480μm,0.2s							
ASQU	**Asqua**	**0.66**	**309**	P		Pb	16 28 50.6	-0.4
ASQU					AML	AML		
	comp=E,106μm,0.5s							
ASQU					AML	AML		
	comp=E,106μm,0.5s							
ASQU					AML	AML		
	comp=N,106μm,0.6s							
SACS	**San Casciano d**	**0.69**	**219**	P		Pg	16 28 50.9	+0.4
SACS					AML	AML		
	comp=N,118μm,0.5s							
SACS					AML	AML		
	comp=E,90μm,1.3s							
SFI	**Santa Sofia**	**0.70**	**318**	P		Pb	16 28 52.1	+0.4
SFI					AML	AML		
	comp=E,54μm,1.2s							
SFI					AML	AML		
	comp=N,41μm,1.6s							
SFI					AML	AML		
	comp=E,54μm,1.2s							
NRCA	**Norcia**	**0.71**	**141**	P		Pg	16 28 51.2	+0.2
NRCA					AML	AML		
	comp=E,101μm,1.1s							
NRCA					AML	AML		
	comp=N,172μm,0.2s							
NRCA					AML	AML		
	comp=E,101μm,1.1s							

IDC ***07*** *16:32:03.9±1.0, 22°.87N×94°.02E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.6/42, mbtmp3.7/10, ML3.1/1, Error ellipse: s-maj=49.7km s-min=15.6km az=53.0*
NDI ***07*** *16:32:08.5±1.5, 22°.80N×94°.20E, h33km, ML3.1*
NEIC ***07*** *16:32:10.7±1.3, 22°.9N±0°.1×94°.1E±0°.1, h53km±9km, mb4.2/13, Error ellipse: s-maj=22.6km s-min=9.5km az=52.0*

ISC 07 16:32:10.8±0.6, 22°.88N±0°.06×94°.04E±0°.06, h58km, n36, σ1s15/39, mb4.0/15, Myanmar

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
BELO	**BELONIA**	**2.41**	**279**	*e*P		**Pn**	**16 32 47.2**	**-0.6**
BELO				*e*S		**Sn**	**16 33 16.9**	**+0.6**
KOHI	**KOHIMA**	**2.83**	**1**	*e*P		**Pn**	**16 32 53.0**	**-0.7**
KOHI				*e*S		**Sn**	**16 33 26.1**	**-0.7**
KOHI					IAML		16 33 27.6	
	comp=E,159nm,0.9s							
KOHI					IAML		16 33 30.7	
	comp=N,59nm,0.7s							
KOHI					IAML		16 33 38.4	
	comp=E,50nm,0.4s							
SHL	**Shillong**	**3.32**	**324**	*e*P		**Pn**	**16 33 00.5**	**0.0**
SHL				*ex*		x	16 33 33.0	
SHL					IAML		16 33 40.8	
	comp=E,47nm,0.1s							
SHL					IAML		16 33 41.1	
	comp=N,63nm,0.6s							
SHL	**Shillong**	**3.32**	**324**		Pn	**Pn**	**16 33 00.3**	**-0.2**
CHTO	**Chiang Mai**	**6.12**	**130**			**Pn**	**16 33 37.7**	**-0.9**
CM31	**Chiang Mai Arr**	**6.36**	**133**		Pn	**Pn**	**16 33 40.8**	**-1.2**
CMAR	**Chiang Mai Arr**	**6.36**	**133**		Pn	**Pn**	**16 33 40.5**	**-1.6**
	comp=N,0.1nm,0.3s,baz=312,slow=16,SNR=7.0							
CMAR					Sn	**Sn**	**16 34 52.1**	**-1.2**
	comp=N,0.4nm,0.3s,baz=42,slow=4.7,SNR=5.8							
CMAR	**Chiang Mai Arr**	**6.36**	**133**			**Pn**	**16 33 41.2**	**-0.8**
GTK	**Tadong**	**6.62**	**313**	*e*P		**Pn**	**16 33 44.8**	**-0.8**
GTK				*e*S		**Sn**	**16 34 55.6**	**-4.2**
GTK					IAML		16 35 02.7	
	comp=E,24nm,0.6s							
GTK					IAML		16 35 03.2	
	comp=N,24nm,0.6s							
LSA	**Lhasa**	**7.27**	**340**			**Pn**	**16 33 54.7**	**-0.2**
BOK	**Bokaro**	**7.54**	**279**	*e*P		**Pn**	**16 33 58.6**	**+0.4**
BOK					IAmb	IAmb	16 34 03.1	
	comp=Z,13nm,0.3s							
BOK				*e*S		**Sn**	**16 35 19.1**	**-3.3**
BOK					IAML		16 35 23.5	
	comp=N,13nm,0.3s							

BOK				IAML			16 35 23.8	
	comp=E,9.8nm,0.2s							
PBKT	**Sadao Pong**	**9.05**	**133**		**Pn**		**16 34 18.9**	**0.0**
AAK	**Ala-Archa**	**25.55**	**325**	P	**P**		**16 37 35.4**	**+1.1**
	comp=E,0.6nm,0.5s,baz=137,slow=15,SNR=3.6							
MK31	**Makanchi Array**	**25.67**	**341**	P	**P**		**16 37 36.1**	**+0.8**
MK31				IAmb	IAmb		16 37 37.1	
	comp=Z,3.4nm,0.7s							
MKAR	**Makanchi Array**	**25.67**	**341**	P	**P**		**16 37 36.0**	**+0.7**
	comp=Z,4.5nm,0.6s,baz=148,slow=10,SNR=48							
MKAR	**Makanchi Array**	**25.67**	**341**	P	**P**		**16 37 35.9**	**+0.7**
MAKZ	**Makanchi**	**25.78**	**341**	P	**P**		**16 37 37.0**	**+0.8**
MAKZ				IAmb	IAmb		16 38 30.1	
	comp=Z,9.6nm,1.7s							
GAR	**Garm**	**25.81**	**314**	P	**P**		**16 37 37.7**	**+1.0**
GAR				IAmb	IAmb		16 37 38.8	
	comp=Z,6.4nm,0.9s							
SONM	**Songino Array**	**26.79**	**19**	P	**P**		**16 37 45.5**	**0.0**
	comp=Z,0.6nm,0.7s,baz=201,slow=7.1,SNR=5.2							
SONM	**Songino Array**	**26.79**	**19**	IAmb	IAmb		16 37 49.5	
	comp=Z,0.7nm,0.9s							
KKAR	**Karatay Array**	**28.05**	**322**	P	**P**		**16 37 56.6**	**0.0**
KKAR	**Karatay Array**	**28.05**	**322**	P	**P**		**16 37 56.8**	**+0.1**
MNAI	**Manna**	**28.44**	**161**	P	**P**		**16 38 00.9**	**+0.6**
KURBB	**Kurchatov Array**	**30.22**	**340**	P	**P**		**16 38 16.2**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=152,slow=8.1,SNR=7.6							
KURK	**Kurchatov**	**30.27**	**340**	P	**P**		**16 38 16.2**	**0.0**
KURK	**Kurchatov**	**30.27**	**340**	IAmb	IAmb		16 38 34.3	
	comp=Z,5.7nm,1.6s							
ABKAR	**Akbulak array**	**37.59**	**323**	P	**P**		**16 39 20.6**	**+1.0**
USRK	**Ussuriysk Ar.**	**37.66**	**46**	P	**P**		**16 39 19.6**	**-0.7**
TIXI	**Tiksi**	**52.67**	**13**	P	**P**		**16 41 18.2**	**-0.6**
TIXI				IAmb	IAmb		16 41 18.5	
	comp=Z,1.8nm,0.6s							
ANTO	**Ankara**	**53.96**	**303**	P	**P**		**16 41 28.7**	**-0.3**
AKASG	**Malin Array Be**	**56.77**	**317**	P	**P**		**16 41 49.0**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=83,slow=7.1,SNR=6.0							
AKBB	**Malin Array Si**	**56.77**	**317**	P	**P**		**16 41 49.0**	**+0.1**
AKBB				IAmb	IAmb		16 43 30.8	
	comp=Z,11nm,1.6s							
WRA	**Warramunga Arr**	**57.95**	**134**	P	**P**		**16 41 58.1**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=320,slow=7.7,SNR=3.3							
ASAR	**Alice Springs**	**60.35**	**137**	P	**P**		**16 42 15.1**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=318,slow=7.0,SNR=11							
ARCES	**ARCESS Array B**	**61.27**	**338**	P	**P**		**16 42 20.6**	**+0.8**
	comp=Z,2.9nm,0.9s,baz=104,slow=7.7,SNR=4.2							
GERES	**GERESS Array B**	**66.89**	**315**	P	**P**		**16 42 57.9**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=62,slow=6.8,SNR=7.4							

UPA ***07*** *16:33:43.6±1.9, 7.°20N×80.°00W, h0km±6km, ML4.1, MW4.2*
ISC 07 16:33:41.0±1.5, 7.°09N±0.°05×79.°91W±0.°03, h7km±11km, n43, σ1s26/64, 1C-1D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOSI3	**Tonosi**	**0.61**	**301**	*e*P	**Pg**	**16 33 53.8**	**+0.8**
TOSI3				*i* S	**Sb**	**16 34 02.7**	**-0.3**
AZU	**Azuero**	**0.79**	**333**	*e*P	**Pg**	**16 33 55.7**	**-0.4**
AZU				*e*S	**Sb**	**16 34 06.7**	**-1.2**
AZU	**Azuero**	**0.79**	**333**	↑ *i* P	**Pb**	**16 33 56.9**	**-0.2**
	baz=167,slow=10						
AZU				*i* S	**Sb**	**16 34 06.8**	**-1.0**
CACAO	**El Cacao, Vera**	**0.98**	**285**	*e*P	**Pg**	**16 34 00.6**	**+0.8**
CACAO				AMP		16 34 02.5	
	comp=Z,7μm,0.1s						
CACAO				*i* S	**Sn**	**16 34 14.7**	**-0.6**
CHIT3	**Chitre**	**1.00**	**330**	*i* P	**Pg**	**16 34 00.2**	**-0.1**
CHIT3				*i* S	**Sn**	**16 34 15.0**	**-0.7**
PESE3	**Pese, Herrera**	**1.07**	**319**	*i* P	**Pb**	**16 34 01.9**	**0.0**
OCU3	**Ocu, Herrera**	**1.21**	**315**	*e*P	**Pg**	**16 34 03.3**	**-1.0**
OCU3				*i* S	**Sn**	**16 34 21.1**	**+0.1**
PONU3	**Ponuga, Veragu**	**1.32**	**307**	*i* P	**Pg**	**16 34 06.6**	**+0.2**
PONU3				*i* S	**Sn**	**16 34 24.1**	**+0.4**
CRIS3	**El Cristo, Coc**	**1.35**	**329**	*e*P	**Pg**	**16 34 07.0**	**0.0**
CRIS3				*i* S	**Sn**	**16 34 24.2**	**-0.4**
STIA3	**Santiago, Vera**	**1.45**	**314**	*i* P	**Pn**	**16 34 07.7**	**0.0**
STIA3				*i* S	**Sn**	**16 34 27.7**	**+0.6**
GMAL	**Guarumal, Vera**	**1.47**	**297**	*e*P	**Pn**	**16 34 09.0**	**+1.0**
GMAL				*i* S	**Sb**	**16 34 25.9**	**-1.8**
VTON	**El Valle, Cocl**	**1.52**	**352**	*e*P	**Pg**	**16 34 10.3**	**0.0**
VTON				*e*S	**Sb**	**16 34 27.9**	**-1.4**
RSUS3	**Rio de Jesus,**	**1.52**	**306**	*e*P	**Pb**	**16 34 09.9**	**+0.2**
SFRA3	**San Francisco,**	**1.56**	**318**	*e*P	**Pn**	**16 34 08.9**	**-0.2**
MESA3	**La Mesa, Verag**	**1.64**	**310**	*e*P	**Pn**	**16 34 11.1**	**+0.8**
TABO3	**Taboga, Panama**	**1.73**	**12**	*e*P	**Pn**	**16 34 12.4**	**+0.9**
TABO3				*e*S	**Sn**	**16 34 33.8**	**0.0**
CNAZ3	**Canazas, Verag**	**1.79**	**314**	*e*P	**Pn**	**16 34 13.3**	**+0.9**
CNAZ3				*i* S	**Sb**	**16 34 35.2**	**-1.7**
CHOR3	**La Chorrera**	**1.80**	**5**	*e*P	**Pb**	**16 34 14.5**	**+0.1**
CHOR3				*i* S	**Sb**	**16 34 37.2**	**0.0**
FLAM	**Flamenco Islan**	**1.85**	**11**	*e*P	**Pn**	**16 34 14.3**	**+1.2**
ZANG	**Zanguenga, Cho**	**1.85**	**1**	*e*P	**Pn**	**16 34 14.7**	**+1.4**
ZANG				*i* S	**Sg**	**16 34 39.3**	**-1.3**
UPA	**Univ. de Panam**	**1.91**	**11**	*e*P	**Pn**	**16 34 15.0**	**+1.0**
UPA				*e*S	**Sn**	**16 34 39.1**	**+0.7**
UPA				*i*		16 34 42.8	
	comp=Z,134nm,0.5s						
UPA	**Univ. de Panam**	**1.91**	**11**	*e*P	**Pn**	**16 34 15.2**	**+1.1**
UPA				*e*S	**Sb**	**16 34 39.5**	**-0.9**
PVID3	**Puerto Vidal,**	**1.94**	**300**	*e*P	**Pn**	**16 34 14.3**	**0.0**
PML3	**Paraiso**	**1.94**	**9**	*e*P	**Pn**	**16 34 16.1**	**+1.8**
BCIP	**Isla Barro Col**	**2.06**	**2**	*e*P	**Pn**	**16 34 17.7**	**+1.6**
BCIP				*e*S	**Sb**	**16 34 44.1**	**-0.6**
BCIP	**Isla Barro Col**	**2.06**	**2**	‖ *e*P	**Pn**	**16 34 17.8**	**+1.7**
BCIP				*i* S	**Sb**	**16 34 44.1**	**-0.6**
PTAC	**Punta Ardita,**	**2.08**	**88**	*e*P	**Pn**	**16 34 17.1**	**+0.7**
PTAC				*e*S	**Sn**	**16 34 38.8**	**-3.8**
FRIJ	**El Hiral**	**2.12**	**5**	*e*P	**Pb**	**16 34 19.3**	**-0.6**
NANC3	**Nancito, Chiri**	**2.14**	**302**	*e*P	**Pb**	**16 34 20.3**	**+0.2**
PINA	**Piqa, Costa Ab**	**2.15**	**356**	*e*P	**Pb**	**16 34 20.4**	**0.0**
CHPO	**Chepo, Panama**	**2.21**	**21**	*e*P	**Pn**	**16 34 19.8**	**+1.6**
UPD2	**Meteti**	**2.37**	**52**	*e*S	**Sb**	**16 34 53.8**	**+0.3**
UPD2	**Meteti**	**2.37**	**52**	*e*P	**Pn**	**16 34 23.6**	**+3.3**
UPD2				*i* S	**Sb**	**16 34 54.2**	**+0.7**
SOLC	**Bahia Solano**	**2.63**	**109**	*e*P	**Pn**	**16 34 24.1**	**+0.2**
SOLC				*i*		16 34 25.1	
	comp=Z,34nm,0.3s						
CHIR3	**Chiriqui UPA,**	**2.73**	**299**	*e*P	**Pn**	**16 34 27.7**	**+2.5**
LOMA3	**Las Lomas, Chi**	**2.80**	**299**	*e*P	**Pn**	**16 34 28.8**	**+2.6**
DVD	**David**	**2.85**	**298**	*e*P	**Pn**	**16 34 28.6**	**+1.7**
CHGR2	**Aguacate**	**2.88**	**310**	*e*P	**Pn**	**16 34 28.8**	**+1.5**
PTAR3	**Potrerillos Ar**	**3.02**	**302**	*e*P	**Pn**	**16 34 29.1**	**-0.3**
LESP3	**La Esperanza,**	**3.14**	**295**	*e*P	**Pn**	**16 34 33.1**	**+2.2**
BRU2	**Volcan**	**3.23**	**302**	*e*P	**Pn**	**16 34 34.1**	**+1.8**
DBBC	**Dabeiba**	**3.67**	**91**	*e*P	**Pn**	**16 34 40.4**	**+2.1**
CBOC	**Ciudad Bolivar**	**4.06**	**107**	*e*P	**Pn**	**16 34 44.3**	**+0.6**

BJI ***07*** *16:52:26.1±0.0, 21.°70S×176.°23W, h132km, mB5.2/35, mb4.9/36*
MOS ***07*** *16:52:27.5±1.3, 21.°80S×176.°63W, h130km, mb5.2/10, Error ellipse: s-maj=8.2km s-min=7.0km az=56.8*
IDC ***07*** *16:52:30.1±1.0, 21.°88S×176.°57W, h149km, 8km, mb5.0/43, mb1 5.0/45, mb1mx5.0/56, mbtmp5.4/45, MS3.8/4, Ms1 3.8/4, ms1mx3.2/32, Error ellipse: s-maj=8.9km s-min=7.9km az=12.0*
NEIC ***07*** *16:52:31.3±1.5, 21.°91S±0.°08×176.°62W±0.°07, h160km±4km, mb5.1/256, Error ellipse: s-maj=11.6km s-min=9.8km az=168.0*
GCMT ***07*** *16:52:35.3±0.2, 22.°06S±0.°02×176.°21W±0.°01, h189km±1km, MW5.2/132, Moment Tensor Solution. s56,c73; s132,c202; Duration: 1s0 Moment tensor: Scale 10^16Nm; Mrr2.14±.17; Mθθ0.54±.23; Mϕϕ-2.69±.22; Mrθ-2.56±.15; Mθϕ-0.29±.22; Mϕr-6.56±.14; Best double couple: M07.45900×10^16 NP1:ϕ1≈345.00000°, δ11.00000°, λ54.00000°. NP2:ϕ2≈201.00000°, δ81.00000°, λ97.00000°. Principal axes: T 7.2860, Plg54.0000°, Azm119.0000°; N 0.3400, Plg6.0000°, Azm20.0000°; P -7.6320, Plg36.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***07*** *16:52:36.3±0.0, 23.°13S×176.°13W, h187km*
ISC 07 16:52:31.6±0.5, 21.°98S±0.°04×176.°52W±0.°04, h166km±4km, h166km:pP-P, n1046, σ1s17/1060, mb5.1/212, 102C-18D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.63**	**309**	*d i* P	**Pn**	**16 54 10.5**	**+3.7**
MSVF	**Nonsavu**	**6.63**	**309**		**Pn**	**16 54 09.3**	**+2.5**
NIUE	**Niue**	**6.82**	**66**		**Pn**	**16 54 05.4**	**-3.9**
RIZ	**Raoul Island**	**7.34**	**190**	P	**Pn**	**16 54 12.7**	**-3.4**
RIZ				S	**Sn**	**16 55 37.9**	**-0.7**
RAO	**Raoul Island**	**7.35**	**190**	P	**Pn**	**16 54 14.5**	**-1.7**
	37nm,0.3s,baz=94,slow=16,SNR=2.7						
RAO				S	**Sn**	**16 55 36.8**	**-2.0**
	306nm,0.3s,baz=94,slow=23,SNR=8.9						
GLKZ	**Green Lake**	**7.36**	**190**	P	**Pn**	**16 54 15.4**	**-1.0**
GLKZ				S	**Sn**	**16 55 35.3**	**-3.7**
AFI	**Afiamalu**	**9.21**	**30**	P	**Pn**	**16 54 36.4**	**-4.6**
	12nm,0.3s,baz=298,slow=1.8,SNR=6.7						
AFI				S	Sn	16 56 06.3	-17
	22nm,0.3s,baz=108,slow=20,SNR=3.8						
FUNA	**Funafuti**	**14.00**	**342**	P	**P**	**16 55 46.0**	**+0.3**
RAR	**Rarotonga**	**15.60**	**90**	P	**P**	**16 56 03.8**	**+0.5**
RAR				S	Sn	16 58 45.4	-11
RAR				pmax	pmax		
	comp=Z,308nm,1.0s						
RAR	**Rarotonga**	**15.60**	**90**	P	**Pn**	**16 56 02.3**	**-0.4**
	comp=Z,7.0nm,0.3s,baz=259,slow=5.1,SNR=19						
RAR				S	Sn	16 58 45.4	-11
	comp=Z,8.3nm,0.3s,baz=95,slow=16,SNR=4.0						
RAR	**Rarotonga**	**15.60**	**90**	P	**P**	**16 56 03.8**	**+0.5**
OUZ	**Omahuta**	**15.78**	**211**		**P**	**16 56 07.6**	**+2.5**
OUZ				IAmb	IAmb	16 56 33.9	
	comp=Z,108nm,1.6s						
DZM	**Mont Dzumac**	**15.80**	**266**	*e*P	**P**	**16 56 09.3**	**+3.6**
	comp=Z,628nm,0.8s						
DZM	**Mont Dzumac**	**15.80**	**266**	P	**P**	**16 56 09.6**	**+3.9**
	comp=Z,24nm,0.3s,baz=80,slow=19,SNR=199						
DZM	**Mont Dzumac**	**15.80**	**266**	P	**P**	**16 56 09.3**	**+3.6**
MXZ	**Matakaoa Point**	**16.16**	**195**	P	**P**	**16 56 10.2**	**+0.8**
MXZ	**Matakaoa Point**	**16.16**	**195**	P	**P**	**16 56 09.9**	**+0.5**
MXZ				IAmb	IAmb	16 56 56.2	
	comp=Z,94nm,1.1s						
WMGZ	**Waiomatatini S**	**16.38**	**194**	P	**Pn**	**16 56 13.4**	**+1.4**
WMGZ				S	S	16 58 57.7	-16
HAZ	**Te Kaha**	**16.47**	**196**	P	**P**	**16 56 09.4**	**-3.4**
HAZ				S	S	16 59 01.1	-14
PKGZ	**Pakihiroa**	**16.52**	**195**	P	**P**	**16 56 11.4**	**-2.1**
PKGZ				S	S	16 59 00.0	-17
RUGZ	**Raukumara Rang**	**16.70**	**196**	P	**P**	**16 56 14.0**	**-1.4**
CNGZ	**Carnagh Statio**	**17.06**	**194**	P	**P**	**16 56 18.1**	**-1.2**
MWZ	**Matawai**	**17.09**	**196**	P	**P**	**16 56 19.6**	**0.0**
MWZ				S	S	16 59 13.9	-15
URZ	**Urewera**	**17.13**	**197**	P	**P**	**16 56 17.3**	**-2.7**
	comp=Z,9.4nm,0.3s,baz=3.2,slow=3.8,SNR=26						
URZ				S	S	16 59 16.3	-14
	comp=Z,23nm,0.3s,baz=241,slow=24,SNR=13						
URZ	**Urewera**	**17.13**	**197**	P	**P**	**16 56 17.4**	**-2.6**
URZ				S	S	16 59 16.1	-14
URZ	**Urewera**	**17.13**	**197**	P	**P**	**16 56 17.6**	**-2.4**
URZ				IAmb	IAmb	16 56 33.3	
	comp=Z,53nm,0.5s						
OMRZ	**Omania**	**17.20**	**199**	P	**Pn**	**16 56 23.1**	**+1.2**
RAGZ	**Rawiri**	**17.27**	**196**	P	**P**	**16 56 21.5**	**-0.2**
RIGZ	**Rimuhau**	**17.38**	**195**	P	**P**	**16 56 22.5**	**-0.3**
RIGZ				S	S	16 59 18.6	-17
SNGZ	**Shannon Statio**	**17.55**	**196**	P	**P**	**16 56 25.1**	**+0.4**
KNZ	**Kokohu**	**17.70**	**195**	P	**P**	**16 56 26.2**	**-0.1**
RAHZ	**Arahi**	**17.75**	**197**	P	**P**	**16 56 26.8**	**0.0**
MTHZ	**Maungataniwha**	**17.75**	**197**	P	**P**	**16 56 27.1**	**+0.2**
MHGZ	**Mahia Peninsul**	**17.77**	**194**	P	**P**	**16 56 26.3**	**-0.7**
MHGZ	**Mahia Peninsul**	**17.77**	**194**	P	**Pn**	**16 56 28.9**	**+0.3**
MRHZ	**Matea Rd**	**17.86**	**198**	P	**P**	**16 56 26.9**	**-1.2**
WHHZ	**Waihua**	**17.86**	**196**	P	**P**	**16 56 27.3**	**-0.7**
RATZ	**Rangitukua**	**18.08**	**200**	P	**P**	**16 56 30.1**	**-0.4**
ARHZ	**Aropaoanui**	**18.10**	**196**	P	**P**	**16 56 28.9**	**-1.8**
MCHZ	**McNeill Hill**	**18.35**	**197**	P	**P**	**16 56 32.5**	**-0.9**
MCHZ	**McNeill Hill**	**18.35**	**197**	P	**P**	**16 56 32.0**	**-1.4**
KWHZ	**Kaweka Forest**	**18.40**	**198**	P	**P**	**16 56 33.7**	**-0.4**
CKHZ	**Cape Kidnapper**	**18.45**	**196**	P	**P**	**16 56 33.6**	**-0.9**
KAHZ	**Kahuranaki**	**18.63**	**196**	P	**P**	**16 56 35.2**	**-1.3**
DVHZ	**Dannevirke**	**19.29**	**197**	P	**Pn**	**16 56 48.1**	**+1.6**
BFZ	**Birch Farm**	**19.63**	**197**	P	**P**	**16 56 45.5**	**-1.7**
BFZ				IAmb	IAmb	16 56 56.9	
	comp=Z,85nm,1.1s						
KNTN	**Kanton**	**19.65**	**14**	P	**P**	**16 56 45.6**	**-2.1**
KNTN				IAmb	IAmb	16 57 20.4	
	comp=Z,180nm,1.3s						
MSWZ	**Moikau Station**	**20.58**	**198**	P	**P**	**16 56 54.8**	**-2.7**
SNZO	**South Karori**	**20.65**	**199**	P	**P**	**16 56 55.1**	**-2.9**
BHW	**Baring Head**	**20.69**	**199**	P	**P**	**16 56 56.6**	**-1.9**
PLWZ	**Palliser**	**20.72**	**198**	P	**P**	**16 56 57.6**	**-1.4**
QRZ	**Quartz Range**	**20.95**	**204**	P	**P**	**16 57 01.0**	**-0.3**
QRZ				IAmb	IAmb	16 57 07.5	
	comp=Z,157nm,1.2s						
NNZ	**Nelson**	**20.99**	**202**	P	**P**	**16 57 00.1**	**-1.6**
NNZ				IAmb	IAmb	16 57 16.9	
	comp=Z,78nm,1.0s						
TUWZ	**Tuamarina**	**20.99**	**200**	P	**P**	**16 56 58.5**	**-3.3**
CMWZ	**Cape Campbell**	**21.20**	**199**	P	**P**	**16 57 01.2**	**-2.8**
BSWZ	**Blackbirch Sta**	**21.27**	**200**	P	**P**	**16 57 03.3**	**-1.5**
THZ	**Tophouse**	**21.64**	**202**	P	**P**	**16 57 07.0**	**-1.8**
THZ				IAmb	IAmb	16 57 27.8	
	comp=Z,58nm,0.9s						
KHZ	**Kahutara**	**22.01**	**200**	P	**P**	**16 57 10.4**	**-2.1**
KHZ				IAmb	IAmb	16 57 19.5	
	comp=Z,46nm,0.7s						
LTZ	**Lake Taylor**	**22.76**	**202**	P	**P**	**16 57 18.5**	**-1.1**
LTZ				IAmb	IAmb	16 57 25.3	
	comp=Z,70nm,0.7s						
CRLZ	**Canterbury Las**	**23.35**	**200**	P	**P**	**16 57 24.6**	**-0.2**
MQZ	**McQueen's Vall**	**23.46**	**200**	P	**P**	**16 57 26.1**	**+0.3**
LHI	**Lord Howe Isla**	**23.74**	**241**	P	**P**	**16 57 30.8**	**+2.2**
RPZ	**Rata Peaks**	**24.00**	**203**	P	**P**	**16 57 29.9**	**-0.9**
	comp=Z,46nm,0.5s,baz=49,slow=2.5,SNR=23						
RPZ				S	**S**	**17 01 33.8**	**-1.8**
	comp=Z,34nm,0.9s,baz=356,slow=22,SNR=4.4						
RPZ	**Rata Peaks**	**24.00**	**203**	P	**P**	**16 57 30.0**	**-0.9**
RPZ				IAmb	IAmb	16 57 35.0	
	comp=Z,54nm,0.6s						
FOZ	**Fox Glacier**	**24.31**	**205**	P	**P**	**16 57 32.6**	**-1.0**
LBZ	**Lake Benmore**	**24.90**	**203**	P	**P**	**16 57 38.1**	**-0.9**
LBZ				IAmb	IAmb	16 57 56.9	
	comp=Z,63nm,1.2s						
TBI	**Tubuai**	**25.00**	**98**	*e*P	**P**	**16 57 40.7**	**+0.6**
	comp=Z,262nm,1.2s						
TBI				*e*LQ	LQ	17 02 50.8	
	comp=Z,421nm,25.5s						
TBI				*e*LR	LR	17 03 58.6	
	comp=Z,261nm,40.0s						
TBI	**Tubuai**	**25.00**	**98**	*e*T	T	17 22 32.9	
	comp=Z,21nm,0.4s						
ODZ	**Otahua Downs**	**25.31**	**202**	P	**P**	**16 57 41.7**	**-1.0**
ODZ				IAmb	IAmb	16 57 51.9	
	comp=Z,38nm,1.1s						
TARA	**Tarawa**	**25.38**	**335**	P	**P**	**16 57 42.8**	**-0.8**
PAE	**Paea**	**25.69**	**85**	*e*P	**P**	**16 57 46.3**	**-0.1**
	comp=Z,11nm,1.1s						
PAE	**Paea**	**25.69**	**85**	*e*T	T	17 23 14.8	
	comp=Z,41nm,0.3s						
WKZ	**Wanaka**	**25.71**	**204**	P	**P**	**16 57 44.8**	**-1.5**
WKZ				IAmb	IAmb	16 57 58.0	
	comp=Z,52nm,0.7s						
PPT2	**Papeete2**	**25.71**	**85**	*e*P	**P**	**16 57 46.9**	**+0.2**
	comp=Z,115nm,1.2s						
PPT2				*e*LQ	LQ	17 03 15.5	
	comp=Z,688nm,24.0s						
PPT2				*e*LR	LR	17 04 21.6	
	comp=Z,461nm,29.0s						
PPT2	**Papeete2**	**25.71**	**85**	*e*T	T	17 23 14.3	
	comp=Z,28nm,0.4s						
PPT	**Papeete**	**25.72**	**85**	P	**P**	**16 57 46.7**	**0.0**
	comp=Z,76nm,0.7s,baz=88,slow=5.5,SNR=16						
PPT				LR	LR	17 05 39.9	
	comp=Z,134nm,21.0s,baz=358,slow=31						
PPTF	**Pamatai, Papee**	**25.72**	**85**	P	**P**	**16 57 46.8**	**0.0**
HNR	**Honiara**	**25.81**	**295**	P	**P**	**16 57 48.3**	**+0.8**
	comp=Z,194nm,0.7s,baz=196,slow=4.5,SNR=23						
HNR	**Honiara**	**25.81**	**295**	P	**P**	**16 57 46.5**	**-1.1**
TVO	**Taravao**	**25.97**	**86**	*e*P	**P**	**16 57 49.2**	**+0.2**
	comp=Z,22nm,1.0s						
TVO	**Taravao**	**25.97**	**86**	*e*T	T	17 23 13.3	
	comp=Z,5.9nm,0.4s						
MLZ	**Mavora Lakes**	**26.51**	**205**	P	**P**	**16 57 53.1**	**-0.4**
MLZ				IAmb	IAmb	16 57 54.8	
	comp=Z,46nm,0.8s						
DCZ	**Deep Cove**	**26.97**	**206**	P	**P**	**16 57 56.9**	**-0.7**
DCZ				IAmb	IAmb	16 58 04.4	
	comp=Z,128nm,1.6s						
WHZ	**Wether Hill Ro**	**27.01**	**204**	P	**P**	**16 57 58.1**	**+0.1**
WHZ				IAmb	IAmb	16 57 59.9	
	comp=Z,58nm,0.9s						
ARMA	**Armidale**	**29.71**	**247**	P	**P**	**16 58 23.6**	**+1.4**
ARMA				IAmb	IAmb	16 58 25.4	
	comp=Z,57nm,0.8s						
EIDS	**Eidsvold**	**29.82**	**257**	P	**P**	**16 58 24.0**	**+0.9**
EIDS				IAmb	IAmb	16 58 25.5	
	comp=Z,32nm,0.7s						
CAN	**Canberra**	**32.87**	**239**	P	**P**	**16 58 49.8**	**-0.1**
CAN				pmax	pmax		
	comp=Z,53nm,1.0s						
CAN	**Canberra**	**32.87**	**239**	P	**P**	**16 58 49.8**	**-0.1**
CAN				IAmb	IAmb	16 58 52.3	
	comp=Z,52nm,1.0s						
CTA	**Charters Tower**	**34.74**	**266**	P	**P**	**16 59 07.2**	**+1.1**
	comp=Z,234nm,0.6s,baz=95,slow=10,SNR=534						
CTA				ScP	**ScP**	**17 05 08.5**	**+2.6**
	comp=Z,4.9nm,0.9s,baz=98,slow=3.4,SNR=3.9						
KRVT	**Keravat (AS076**	**35.18**	**295**	P	**P**	**16 59 09.0**	**-0.9**
	comp=Z,184nm,0.8s,baz=329,slow=1.3,SNR=30						
TOO	**Toolangi**	**36.17**	**236**	P	**P**	**16 59 18.4**	**+0.2**
TOO				pmax	pmax		
	comp=Z,100nm,1.6s						
TOO	**Toolangi**	**36.17**	**236**	P	**P**	**16 59 18.4**	**+0.2**
TOO				IAmb	IAmb	16 59 21.0	
	comp=Z,100nm,1.6s						
PMG	**Port Moresby**	**37.02**	**284**	P	**P**	**16 59 25.9**	**+0.4**
	comp=Z,105nm,0.7s,baz=80,slow=6.1,SNR=52						
PMG				ScP	**ScP**	**17 05 16.1**	**+1.8**
	comp=Z,8.4nm,1.0s,baz=99,slow=4.8,SNR=4.3						
PMG	**Port Moresby**	**37.02**	**284**	P	**P**	**16 59 26.0**	**+0.4**
TAOE	**Nuku Hiva Isla**	**37.30**	**75**	*e*P	**P**	**16 59 28.2**	**+0.2**
	comp=Z,504nm,1.1s						
TAOE	**Nuku Hiva Isla**	**37.30**	**75**	P	**P**	**16 59 27.0**	**-1.0**
STKA	**Stephens Creek**	**38.42**	**246**	P	**P**	**16 59 37.3**	**+0.2**
	comp=Z,53nm,0.5s,baz=96,slow=11,SNR=135						
STKA				ScP	**S**	**17 05 21.7**	**+2.0**
	comp=Z,8.6nm,0.9s,baz=93,slow=6.0,SNR=5.7						
STKA	**Stephens Creek**	**38.42**	**246**	P	**P**	**16 59 36.9**	**-0.2**
STKA				IAmb	IAmb	16 59 39.1	
	comp=Z,16nm,0.6s						
COEN	**Coen**	**39.06**	**275**	P	**P**	**16 59 43.1**	**+0.4**
MANU	**Manus Island**	**40.31**	**294**	P	**P**	**16 59 53.3**	**+0.4**
BBOO	**Buckleboo**	**43.15**	**245**	P	**P**	**17 00 14.7**	**-1.1**
AS31	**Alice Springs**	**45.54**	**258**	P	**P**	**17 00 34.4**	**-0.6**
AS31				IAmb	IAmb	17 00 38.1	
	comp=Z,23nm,0.7s						
ASAR	**Alice Springs**	**45.54**	**258**	P	**P**	**17 00 34.5**	**-0.4**
	comp=Z,92nm,0.7s,baz=97,slow=7.4,SNR=564						
ASAR				PcP	**PcP**	**17 02 11.3**	**+0.4**
	comp=Z,19nm,0.7s,baz=107,slow=3.7,SNR=9.4						
ASAR				ScP	**ScP**	**17 05 50.1**	**+2.0**
	comp=Z,4.4nm,0.6s,baz=97,slow=4.2,SNR=9.1						
ASAR				S	**S**	**17 07 00.0**	**-4.6**
	comp=Z,3.2nm,0.9s,baz=98,slow=16,SNR=5.3						
WR0	**Warramunga Arr**	**45.59**	**263**	P	**P**	**17 00 34.4**	**-1.0**
WR0				IAmb	IAmb	17 00 36.6	
	comp=Z,55nm,0.7s						
WRAB	**Tennant Creek**	**45.77**	**263**	*ce*P	**P**	**17 00 35.9**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,91nm,1.0s						
WRAB	**Tennant Creek**	**45.77**	**263**	P	**P**	**17 00 35.5**	**-1.3**
WRA	**Warramunga Arr**	**45.78**	**263**	P	**P**	**17 00 35.9**	**-0.9**
	comp=Z,73nm,0.6s,baz=100,slow=

SMKI **Samarinda** 67.89 279 P P 17 03 16.3 +3.7
QSPA **South Pole Qui** 68.10 180 P P 17 03 14.9 +1.6
comp=Z,55nm,0.9s,baz=21,slow=0.8,SNR=206
QSPA **South Pole Qui** 68.10 180 P P 17 03 14.8 +1.6
QSPA IAmb IAmb 17 03 16.1
comp=Z,52nm,0.9s
JHJ2 **Mitsune** 68.82 322 P P 17 03 16.5 -1.5
GRJI **Gresik** 69.84 271 P P 17 03 25.0 +0.3
PWJI **Pagerwojo** 70.08 269 P P 17 03 25.1 -1.1
comp=Z,94nm,0.7s
PCJI **Pacitan** 70.61 269 P P 17 03 28.6 -0.7
comp=Z,3µmcomp=Z,318nm,0.6s
NGJI **Ngawi** 70.63 270 P P 17 03 30.2 +0.7
comp=Z,96nm,0.9s
WOJI **Wonogiri, Jawa** 70.97 269 P P 17 03 30.7 -0.8
comp=Z,57nm,1.0s
UGM **Wanagama** 71.31 269 P P 17 03 32.9 -0.7
comp=Z,101nm,0.5s
UGM **Wanagama** 71.31 269 P P 17 03 32.7 -0.9
MJAR **Matsushiro Arr** 72.21 323 P P 17 03 37.7 -0.8
comp=Z,22nm,0.7s,baz=144,slow=5.7,SNR=47
MJAR **Matsushiro Arr** 72.21 323 IAmb IAmb 17 03 38.4
comp=Z,6.0nm,0.5s
MAJO **Matsushiro** 72.21 323 P P 17 03 38.0 -0.5
MAJO pmax pmax
comp=Z,24nm,0.6s
MAJO **Matsushiro** 72.21 323 P P 17 03 38.0 -0.5
MAJO IAmb IAmb 17 03 38.8
comp=Z,24nm,0.6s
MAT **Matsushiro** 72.21 323 P P 17 03 37.6 -0.9
MJB9 **Matsu-Tunnel** 72.22 323 P P 17 03 38.1 -0.4
MJB9 IAmb IAmb 17 03 38.7
comp=Z,24nm,0.6s
KPJI **Karang Pucung** 72.99 269 P P 17 03 42.5 -1.1
comp=Z,1µmcomp=Z,135nm,0.5s
STKI **Sintang** 73.36 277 P P 17 03 45.5 -0.2
KIWB **Kanaga Island** 73.51 360 P P 17 03 45.5 -0.2
ADK **Adak** 73.54 360 P P 17 03 45.1 -0.7
ADK pmax pmax
comp=Z,79nm,0.6s
ADK **Adak** 73.54 360 P P 17 03 45.1 -0.7
ATKA **Atka Island** 73.89 1 P P 17 03 47.4 -0.5
CISI **Cisompet, Garu** 73.95 268 P P 17 03 47.6 -1.6
comp=Z,69nm,0.5s
CISI **Cisompet, Garu** 73.95 268 P P 17 03 47.7 -1.5
JNU **Nakatsue** 74.29 316 P P 17 03 49.9 -0.9
comp=Z,21nm,0.8s,baz=140,slow=5.0,SNR=12
JNU **Nakatsue** 74.29 316 P P 17 03 50.1 -0.6
JNU IAmb IAmb 17 03 53.4
comp=Z,26nm,0.9s
LEM **Lembang** 74.39 269 P P 17 03 51.6 -0.3
comp=Z,124nm,0.7s,baz=32,slow=4.9,SNR=22
LEM LR LR 17 37 05.6
comp=Z,73nm,18.4s,baz=50,slow=36
KSM **Kuching** 74.98 278 P P 17 03 54.6 -0.5
KSM IAmb IAmb 17 03 56.4
comp=Z,36nm,0.8s
KSM **Kuching** 74.98 278 P P 17 03 53.0 -2.1
KSM **Kuching** 74.98 278 P P 17 03 53.0 -2.1
KSM **Kuching** 74.98 278 P P 17 03 53.0 -2.1
CBJI **Citeko** 75.24 269 P P 17 03 59.7 +3.1
DBJI **Dramaga** 75.29 269 P P 17 03 56.3 -0.6
comp=Z,53nm,0.9s
TWG **Pinlang** 75.33 302 P P 17 03 54.8 -2.1
YULB **Yu-li** 75.46 303 P P 17 03 56.5 -1.1
YULB IAmb IAmb 17 04 05.1
comp=Z,37nm,1.4s
JKA **Kamikawa-asahi** 75.68 331 P P 17 03 58.2 -0.1
ASAJ **Asahikawa** 75.68 331 P P 17 03 58.2 -0.1
comp=Z,32nm,0.8s,baz=209,slow=7.8,SNR=12
TPUB **Ta-pu** 75.93 303 P P 17 03 58.4 -1.9
SSLB **Suanglung** 75.93 303 P P 17 03 59.2 -1.2
SSLB IAmb IAmb 17 04 01.2
comp=Z,24nm,0.6s
YHNB **Yeheng** 76.07 304 P P 17 04 00.9 -0.3
YHNB IAmb IAmb 17 04 04.7
comp=Z,24nm,0.8s
SNCC **San Nicolas Is** 77.26 46 P P 17 04 08.6 +1.0
baz=233
SCZ2 **Santa Cruz Isl** 77.63 45 P P 17 04 10.9 +1.3
baz=233
KASI **Kota Agung** 77.75 269 P P 17 04 08.6 -2.1
comp=Z,73nm,0.9s
SCI2 **San Clemente I** 77.75 47 P P 17 04 11.6 +1.3
baz=234
YSS **Yuzh-Sakhalins** 77.83 333 eP P 17 04 10.9 +0.6
YSS pmax pmax
comp=Z,50nm,0.9s
YSS MLR MLR
comp=Z,300nm,13.0s
YSS **Yuzh-Sakhalins** 77.83 333 P P 17 04 11.1 +0.7
YSS IAmb IAmb 17 04 12.5
comp=Z,44nm,0.9s
SBC **Santa Barbara** 77.85 45 P P 17 04 12.5 +1.8
baz=233
PETK **Petropavlovsk-** 78.05 344 P P 17 04 11.0 -0.4
comp=Z,25nm,0.8s,baz=139,slow=9.9,SNR=29
PKM **Mcpherson Peak** 78.06 45 P P 17 04 13.7 +1.5
baz=232
BLG **Laguna Peak, P** 78.08 46 P P 17 04 12.9 +0.9
baz=233
CIS **Catalina Islan** 78.09 47 P P 17 04 13.1 +0.9
baz=234
SAO **San Andreas Ge** 78.17 42 P P 17 04 13.8 +1.2
SAO pmax pmax
comp=Z,29nm,0.9s
SAO **San Andreas Ge** 78.17 42 P P 17 04 13.8 +1.2
SAO IAmb IAmb 17 04 15.1
comp=Z,29nm,0.8s
SMMC **Simmler** 78.20 44 P P 17 04 14.6 +1.8
baz=232
PMPB **Monarch Peak** 78.24 43 P P 17 04 14.4 +1.4
PMPB IAmb IAmb 17 04 15.8
comp=Z,45nm,1.2s
PAGB **Antelope Grade** 78.29 44 P P 17 04 14.1 +0.9
MDSI **Maura Dua** 78.42 270 P P 17 04 12.2 -2.2
comp=Z,24nm,0.7s
HOPS **Hopland Field** 78.61 40 P P 17 04 15.7 +0.8
HOPS IAmb IAmb 17 04 17.5
comp=Z,32nm,1.0s
DECC **Green Verdugo** 78.65 46 P P 17 04 15.9 +0.7
baz=234
GDXM **Geysers** 78.65 40 P P 17 04 16.5 +1.3
109C **Camp Elliot, M** 78.68 48 P P 17 04 16.3 +0.9
baz=235
KCPM **Cahto Peak** 78.76 39 P P 17 04 17.1 +1.3
MWC **Mount Wilson** 78.82 46 P P 17 04 17.0 +0.6
MWC pmax pmax
comp=Z,21nm,1.0s
MWC **Mount Wilson** 78.82 46 P P 17 04 17.0 +0.6
ARVC **Arvin** 78.84 45 P P 17 04 17.3 +1.1
baz=233
BAR **Barrett** 78.86 48 P P 17 04 16.5 0.0
KSRS **Korea Array** 78.90 318 P P 17 04 16.4 -0.1
comp=Z,3.5nm,0.6s,baz=131,slow=6.0,SNR=17
MURC **Murrieta** 79.03 47 P P 17 04 18.3 +0.9
baz=234
KMRM **Mail Ridge** 79.04 38 P P 17 04 18.7 +1.4
BFSC **Mount Baldy Ra** 79.09 46 P P 17 04 18.5 +0.7
baz=234,SNR=6.9
VES **Vestal, Richgr** 79.11 44 P P 17 04 18.7 +1.1
baz=233,SNR=10
MONP2 **Monument Peak** 79.16 48 P P 17 04 19.5 +1.2
baz=235,SNR=18
VOG **Valley Oaks Go** 79.21 44 P P 17 04 19.0 +0.9
baz=232
IKP **In-Ko-Pah, Jac** 79.23 48 P P 17 04 19.8 +1.3
baz=235,SNR=10
JCC **Jacoby Creek,** 79.25 38 P P 17 04 19.5 +1.3
JCC IAmb IAmb 17 04 21.1
comp=Z,36nm,1.1s
EDW2 **Edwards Air Fo** 79.25 46 P P 17 04 19.8 +1.3
baz=234,SNR=26
PMSA **Palmer Station** 79.39 156 P P 17 04 19.9 +1.2
comp=Z,8.7nm,0.5s,baz=347,slow=5.3,SNR=5.3
ISA **Isabella, Lake** 79.40 45 P P 17 04 20.4 +1.1
ISA pmax pmax
comp=Z,33nm,1.0s
ISA **Isabella, Lake** 79.40 45 P P 17 04 20.4 +1.1
ISA IAmb IAmb 17 04 21.9
comp=Z,33nm,0.9s
ISA **Isabella, Lake** 79.40 45 P P 17 04 20.8 +1.5
baz=233,SNR=29
KHMM **Horse Mountain** 79.45 38 P P 17 04 20.9 +1.3
O02D **Mt. Diablo Mer** 79.54 39 P P 17 04 21.9 +1.9
baz=230,SNR=19

PFO **Pinyon Flats O** 79.54 47 P P 17 04 21.1 +0.9
PFO pmax pmax
comp=Z,14nm,1.0s
PFO **Pinyon Flats O** 79.54 47 P P 17 04 20.6 +0.4
comp=Z,14nm,1.0s,baz=230,slow=3.5,SNR=12
PFO **Pinyon Flats O** 79.54 47 P P 17 04 21.1 +0.9
PFO **Pinyon Flats O** 79.54 47 P P 17 04 21.3 +1.1
baz=235,SNR=7.7
XPFO **Pion Flat** 79.54 47 P P 17 04 21.1 +0.9
BBRC **Bion Bear Solar** 79.60 47 P P 17 04 21.8 +1.1
baz=234
SWSC **Sam W. Stewart** 79.62 48 P P 17 04 21.4 +0.9
baz=235
CMB **Columbia Colle** 79.63 42 P P 17 04 21.4 +0.9
CMB pmax pmax
comp=Z,20nm,1.0s
CMB **Columbia Colle** 79.63 42 P P 17 04 21.4 +0.9
KRMB **Red Mountain** 79.78 37 P P 17 04 22.7 +1.4
LRMC **Laurel Mtn Rad** 79.81 45 P P 17 04 22.8 +1.1
baz=234,SNR=15
AFDM **Forest Hills D** 79.84 41 P P 17 04 22.2 +0.7
ORV **Oroville** 79.90 40 P P 17 04 22.6 +0.8
ORV pmax pmax
comp=Z,17nm,0.9s
ORV **Oroville** 79.90 40 P P 17 04 22.6 +0.8
RRX **Edison Barstow** 79.91 46 P P 17 04 23.3 +1.3
baz=234
WDC **Whiskeytown Da** 79.94 39 P P 17 04 22.9 +0.8
WDC pmax pmax
comp=Z,23nm,1.0s
WDC **Whiskeytown Da** 79.94 39 P P 17 04 22.9 +0.8
BELC **Belle Mtn. Jos** 80.08 47 P P 17 04 24.5 +1.4
baz=235,SNR=16
N02D **Trinity Center** 80.11 38 P P 17 04 24.9 +1.9
baz=230,SNR=16
KSI **Kapahiang** 80.19 270 P P 17 04 25.4 +1.3
O03E **Paynes Creek** 80.19 39 P P 17 04 24.6 +1.0
baz=230,SNR=8.2
MDPB **Devils Postpil** 80.19 43 P P 17 04 24.4 +0.6
OMMB **Old Mammoth Mi** 80.23 43 P P 17 04 24.6 +0.5
BC3 **Big Chuckawall** 80.26 48 P P 17 04 25.5 +1.4
baz=236,SNR=8.4
MPMC **Manual Prospec** 80.28 45 P P 17 04 25.6 +1.3
baz=234,SNR=23
GSC **Goldstone, Bar** 80.28 46 P P 17 04 24.9 +0.8
GSC pmax pmax
comp=Z,18nm,0.9s
GSC **Goldstone, Bar** 80.28 46 P P 17 04 24.9 +0.8
GSC **Goldstone, Bar** 80.28 46 P P 17 04 25.3 +1.2
baz=234,SNR=15
M02C **Callahan** 80.29 38 P P 17 04 25.9 +1.9
baz=229,SNR=19
HEC **Hector,Ludlow** 80.33 46 P P 17 04 25.5 +1.2
baz=235,SNR=16
MLAC **Mammoth, Mammo** 80.35 43 P P 17 04 26.1 +1.5
baz=233
GLA **Glamis** 80.35 49 P P 17 04 26.0 +1.5
baz=236
L02E **Cave Junction** 80.37 37 P P 17 04 26.2 +1.9
baz=229
TIN **Tinemaha, Big** 80.39 44 P P 17 04 26.1 +1.4
baz=233,SNR=10
WAKR **Walker** 80.50 42 P P 17 04 26.4 +1.0
WAKR IAmb IAmb 17 05 12.8
comp=Z,29nm,1.1s
YBH **Yreka Blue Hor** 80.59 38 P P 17 04 27.0 +1.3
YBH pmax pmax
comp=Z,24nm,0.8s
YBH **Yreka Blue Hor** 80.59 38 P P 17 04 26.9 +1.3
comp=Z,23nm,0.8s,baz=199,slow=1.1,SNR=64
YBH **Yreka Blue Hor** 80.59 38 P P 17 04 27.0 +1.3
YBH IAmb IAmb 17 04 28.4
comp=Z,24nm,0.8s
MAW **Mawson** 80.64 200 P P 17 04 26.7 +1.3
MAW **Mawson** 80.64 200 P P 17 04 26.3 +0.9
comp=Z,17nm,0.6s,baz=136,slow=7.7,SNR=29
MAW **Mawson** 80.64 200 P P 17 04 26.7 +1.3
K02D **Willamette Mer** 80.69 37 P P 17 04 27.7 +1.6
baz=229
IRM **Iron Mountain** 80.75 48 P P 17 04 28.2 +1.6
baz=236,SNR=15
GMRC **Granite Mounta** 80.76 47 P P 17 04 28.0 +1.3
baz=235,SNR=14
PNTR **Pine Nut** 80.76 41 P P 17 04 27.6 +0.9
PNTR IAmb IAmb 17 04 29.2
comp=Z,32nm,0.8s
J01E **Myrtle Point** 80.85 36 P P 17 04 28.4 +1.6
baz=228,SNR=6.3
DLV **T Lat** 80.87 287 P P 17 04 28.1 +0.3
DLV IAmb IAmb 17 04 31.2
comp=Z,22nm,0.8s
GRAC **Grapevine Rang** 80.91 44 P P 17 04 28.8 +1.5
baz=234
YERR **Yerington** 80.92 42 P P 17 04 27.7 +0.1
FURC **Furnace Creek,** 80.92 45 P P 17 04 28.6 +1.3
baz=234,SNR=5.4
113A **Mohawk Valley,** 80.94 49 P P 17 04 27.9 +0.4
TUQ **Turquoise Moun** 80.95 46 P P 17 04 29.0 +1.3
baz=235,SNR=18
TYV **Tymovskoe** 80.95 335 eP P 17 04 27.3 +0.2
TYV eS S 17 14 14.9 -7.0
TYV pmax pmax
comp=Z,200nm,3.8s
TYV pmax pmax
comp=Z,19nm,1.2s
TYV smax smax
comp=E,4.0nm,1.4s
TYV smax smax
comp=E,400nm,8.5s
Y12C **Blythe** 80.95 48 P P 17 04 27.4 -0.2
Y12C **Blythe** 80.95 48 P P 17 04 29.0 +1.5
baz=236,SNR=5.6
USA0B **Ussuriysk Arra** 80.96 325 iP P 17 04 27.8 +0.5
USA0B **Ussuriysk Arra** 80.96 325 P P 17 04 27.4 0.0
USRK **Ussuriysk Ar.** 80.96 325 P P 17 04 26.6 -0.7
comp=E,13nm,0.8s,baz=122,slow=5.4,SNR=22
SHOC **Shoshone, Teco** 80.98 46 P P 17 04 28.9 +1.1
baz=235,SNR=7.0
HSIG 80.99 54 P P 17 04 28.1 +0.2
HUMO **Hull Mountain** 81.03 37 P P 17 04 29.1 +1.3
M04C **Macdoel** 81.12 38 P P 17 04 30.0 +1.5
baz=230,SNR=11
L04D **Klamath Falls** 81.14 38 P P 17 04 29.9 +1.3
baz=230,SNR=18
RYN **Ryan** 81.15 42 P P 17 04 29.4 +0.7
RYN IAmb IAmb 17 05 16.2
comp=Z,69nm,2.0s
NVAR **Mina Array Bea** 81.17 43 P P 17 04 29.6 +0.7
comp=Z,5.5nm,0.7s,baz=222,slow=7.9,SNR=43
214A **Organ Pipe Nat** 81.17 50 P P 17 04 28.8 -0.1
214A **Organ Pipe Nat** 81.17 50 P P 17 04 30.1 +1.2
baz=237
NV11 **Mina Array Sit** 81.26 43 P P 17 04 29.7 +0.3
PAHR **Pah Rah Range** 81.27 41 P P 17 04 29.7 +0.4
NEE2 **Needles Airpor** 81.45 47 P P 17 04 31.4 +1.2
baz=236
I03D **Drain, OR** 81.53 36 P P 17 04 31.7 +1.4
baz=229
I02D **Swisshome** 81.53 35 P P 17 04 31.8 +1.4
baz=228
TPNV **Topopah Spring** 81.61 45 P P 17 04 32.3 +1.1
TPNV pmax pmax
comp=Z,18nm,0.9s
TPNV **Topopah Spring** 81.61 45 P P 17 04 32.3 +1.1
TPNV **Topopah Spring** 81.61 45 P P 17 04 32.5 +1.3
baz=235,SNR=23
KVN **Kaiserville** 81.67 42 P P 17 04 32.1 +0.6
KVN pmax pmax
comp=Z,22nm,1.2s
KVN **Kaiserville** 81.67 42 P P 17 04 32.1 +0.6
K04D **Chiloquin, OR** 81.71 38 P P 17 04 32.9 +1.3
baz=230
NJ2 **Nanjing** 81.88 309 eP P 17 04 34.0 +1.5
NJ2 pmax pmax
comp=Z,8.0nm,0.5s
J04D **Umpqua Nationa** 81.91 37 P P 17 04 34.2 +1.5
baz=230,SNR=7.8
KDAK **Kodiak Island** 81.94 13 P P 17 04 33.5 +1.4
comp=Z,10nm,0.7s,baz=201,slow=8.2,SNR=4.3
SHPR **Sheep Range** 82.07 46 P P 17 04 34.7 +1.0
MOD **Modoc Plateau** 82.09 39 P P 17 04 34.5 +1.0
I04A **Tendick Farm,** 82.10 36 P P 17 04 34.6 +1.2
baz=229,SNR=7.2
Y14A **Wickenburg** 82.11 49 P P 17 04 34.7 +0.9
Y14A IAmb IAmb 17 04 36.2
comp=Z,24nm,0.8s

W13A **Hualapai Mount** 82.14 47 P P 17 04 35.2 +1.2
USHA **Ushuaia** 82.14 146 P P 17 04 34.7 +1.2
comp=Z,26nm,0.9s,baz=262,slow=6.1,SNR=5.9
H04D **Lebanon** 82.40 36 P P 17 04 36.5 +1.6
baz=229,SNR=6.5
J05D **Fort Rock, OR** 82.43 37 P P 17 04 37.0 +1.7
baz=230,SNR=30
G03D **McMinnville, O** 82.57 35 P P 17 04 37.4 +1.6
baz=229
H04A **Detroit Lake** 82.81 36 P P 17 04 37.8 +0.7
H04A IAmb IAmb 17 04 39.1
comp=Z,58nm,1.3s
TUC **Tucson** 82.82 51 P P 17 04 37.8 +0.3
TUC pmax pmax
comp=Z,32nm,0.9s
TUC **Tucson** 82.82 51 P P 17 04 37.8 +0.3
TUC IAmb IAmb 17 04 40.4
comp=Z,32nm,0.9s
TUC **Tucson** 82.82 51 P P 17 04 39.3 +1.8
baz=238
R11A **Troy Canyon, C** 82.84 44 P P 17 04 38.1 +0.5
R11A **Troy Canyon, C** 82.84 44 P P 17 04 38.5 +0.9
baz=235,SNR=12
PINE **Pine Mountain** 82.92 37 P P 17 04 39.2 +1.3
PINE IAmb IAmb 17 04 40.7
comp=Z,44nm,1.0s
BMN **Battle Mountai** 83.03 41 P P 17 04 39.1 +0.6
BMN pmax pmax
comp=Z,25nm,1.0s
BMN **Battle Mountai** 83.03 41 P P 17 04 39.1 +0.6
BMN IAmb IAmb 17 04 40.7
comp=Z,24nm,0.9s
I05D **Terrebonne, OR** 83.05 36 P P 17 04 39.8 +1.5
baz=230,SNR=11
PDSI **Padang** 83.18 272 P P 17 04 37.8 -1.9
comp=Z,14nm,0.8s
F04D **Rainier, OR** 83.28 34 P P 17 04 41.2 +1.8
baz=229
E03A **Lebam** 83.30 34 P P 17 04 40.9 +1.4
WVOR **Wild Horse Val** 83.39 39 P P 17 04 41.4 +1.1
WVOR pmax pmax
comp=Z,31nm,1.0s
WVOR **Wild Horse Val** 83.39 39 P P 17 04 41.4 +1.1
WVOR IAmb IAmb 17 04 42.5
comp=Z,30nm,1.0s
319A **Douglas** 83.44 53 P P 17 04 42.1 +1.4
319A IAmb IAmb 17 04 43.6
comp=Z,46nm,0.8s
GRNR **Gornyy** 83.45 332 ij P P 17 04 40.5 +0.3
GRNR pmax pmax
comp=Z,8.0nm,1.1s
X16A **Lo Mia Camp, P** 83.46 49 P P 17 04 42.3 +1.4
X16A IAmb IAmb 17 04 43.8
comp=Z,31nm,0.8s
F04A **Amboy** 83.49 35 P P 17 04 41.6 +1.1
F04A IAmb IAmb 17 04 42.8
comp=Z,49nm,0.8s
LCMT **Little Creek M** 83.63 46 P P 17 04 42.8 +1.2
G05D **Wamic, OR** 83.64 36 P P 17 04 42.6 +1.3
baz=230,SNR=5.8
NLWA **Neilton Lookou** 83.71 33 P P 17 04 43.1 +1.5
NLWA IAmb IAmb 17 04 44.4
comp=Z,33nm,1.0s
E04D **Cinebar** 83.83 34 P P 17 04 43.9 +1.7
baz=229,SNR=7.4
CCUT **Cedar City** 83.84 46 P P 17 04 44.0 +1.2
KNB **Kanab** 83.91 46 P P 17 04 44.5 +1.4
KNB pmax pmax
comp=Z,22nm,0.9s
KNB **Kanab** 83.91 46 P P 17 04 44.5 +1.4
U15A **North Rim** 83.95 47 P P 17 04 45.1 +1.6
U15A IAmb IAmb 17 04 46.3
comp=Z,38nm,0.8s
F05D **White Salmon** 83.97 35 P P 17 04 44.2 +1.3
baz=230
G06A **Carlson Farm,** 84.00 36 P P 17 04 44.0 +0.9
G06A IAmb IAmb 17 04 45.4
comp=Z,25nm,0.9s
SZCU **Shurtz Canyon** 84.05 46 P P 17 04 45.2 +1.3
PSUT **Pine Spring** 84.07 44 P P 17 04 44.8 +0.9
WUAZ **Wupatki** 84.09 48 P P 17 04 45.2 +1.2
WUAZ IAmb IAmb 17 04 46.8
comp=Z,23nm,1.1s
WUAZ **Wupatki** 84.09 48 P P 17 04 45.5 +1.5
baz=238
D04E **Lakebay** 84.13 34 P P 17 04 45.8 +2.1
baz=229
D03D **Eldon** 84.20 33 P P 17 04 45.7 +1.7
baz=229,SNR=5.1
CN2 **Changchun** 84.31 322 eP P 17 04 45.5 +0.8
LON **Longmire** 84.35 34 P P 17 04 45.5 +0.6
LON pmax pmax
comp=Z,12nm,0.8s
LON **Longmire** 84.35 34 P P 17 04 45.5 +0.6
RSO **Redoubt South** 84.39 12 P P 17 04 45.3 +0.3
WHN **Wuhan** 84.42 306 P P 17 04 47.3 +1.7
ELK **Elko** 84.44 42 P P 17 04 46.3 +0.5
ELK pmax pmax
comp=Z,13nm,1.0s
ELK **Elko** 84.44 42 P P 17 04 46.3 +0.5
PKCU **Pink Cliffs** 84.48 46 P P 17 04 48.2 +2.0
KLR **Kul'dur** 84.50 329 i P P 17 04 45.7 +0.2
KLR pmax pmax
comp=Z,9.0nm,1.4s
KLR **Kul'dur** 84.50 329 P P 17 04 45.3 -0.2
comp=Z,3.1nm,0.7s,baz=81,slow=5.0,SNR=5.3
D05A **Enumclaw** 84.54 34 P P 17 04 46.8 +1.0
D05A IAmb IAmb 17 04 49.4
comp=Z,70nm,1.1s
X18A **Snowflake** 84.57 50 P P 17 04 46.2 -0.3
X18A IAmb IAmb 17 04 49.2
comp=Z,17nm,0.8s
IPM **Ipoh** 84.68 277 P P 17 04 47.2 -0.1
IPM IAmb IAmb 17 04 48.4
comp=Z,45nm,0.8s
IPM **Ipoh** 84.68 277 P P 17 04 53.0 +5.7
IPM **Ipoh** 84.68 277 P P 17 04 53.0 +5.7
IPM **Ipoh** 84.68 277 P P 17 04 53.0 +5.7
F07A **Phinny Hill Vi** 84.81 36 P P 17 04 46.9 -0.2
MTPU **Mount Pierson** 84.89 46 P P 17 04 46.9 -1.4
UBPT **Khong Chiam** 84.91 289 P P 17 04 48.6 +0.3
G08A **Pilot Rock** 84.96 37 P P 17 04 47.7 -0.4
G08A IAmb IAmb 17 05 37.1
comp=Z,30nm,1.1s
W18A **Petrified Fore** 85.02 49 P P 17 04 48.7 0.0
W18A IAmb IAmb 17 08 02.4
comp=Z,39nm,0.8s
W18A **Petrified Fore** 85.02 49 P P 17 04 50.2 +1.5
baz=239
121A **Cookes Peak, D** 85.11 52 P P 17 04 50.0 +0.8
121A IAmb IAmb 17 04 52.3
comp=Z,38nm,1.1s
121A **Cookes Peak, D** 85.11 52 P P 17 04 51.0 +1.7
baz=240
MSU **Marysvale** 85.15 45 P P 17 04 50.4 +1.0
MSU **Marysvale** 85.15 45 P P 17 04 50.4 +1.0
A04D **Lummi Island** 85.18 32 P P 17 04 50.5 +1.6
baz=229
B05A **Bryant** 85.19 33 P P 17 04 50.2 +1.2
baz=229,SNR=6.9
E07A **Sunnyside** 85.26 35 P P 17 04 50.3 +0.9
E07A IAmb IAmb 17 04 51.9
comp=Z,29nm,0.9s
LTY **Liberty** 85.27 34 P P 17 04 49.5 0.0
HAWA **Hanford** 85.33 36 P P 17 04 50.2 +0.5
HAWA IAmb IAmb 17 04 52.2
comp=Z,30nm,1.1s
KULM **Kulim** 85.33 278 P P 17 04 50.1 -0.4
KULM IAmb IAmb 17 04 51.9
comp=Z,24nm,0.9s
GAMB **Gambell** 85.55 2 P P 17 04 51.2 +0.9
MA2 **Magadan** 85.57 344 P P 17 04 49.4 -1.2
comp=Z,7.2nm,0.6s,baz=144,slow=9.1,SNR=5.9
C06D **Leavenworth** 85.58 34 P P 17 04 51.8 +0.8
baz=230
SYO **Syowa Base** 85.59 192 ij eP P 17 04 49.6 -1.1
SYO **Syowa Base** 85.59 192 i eP cP PcP 17 04 54.6 +1.2
BMO **Blue Mountains** 85.62 38 P P 17 04 51.6 +0.2
BMO pmax pmax
comp=Z,6.0nm,0.9s
BMO **Blue Mountains** 85.62 38 P P 17 04 51.6 +0.2
MFID **Camas Ranch** 85.63 40 P P 17 04 51.7 +0.3
DUG **Dugway, Tooele** 85.66 44 P P 17 04 52.3 +0.6
baz=237
SUA **Susitna One** 85.70 12 P P 17 04 51.1 -0.3

SUA IAmb IAmb 17 04 53.9
comp=Z,37nm,0.8s
TLIG Tlapa 85.81 69 P **P 17 04 53.7 +0.8**
TLIG IAmb IAmb 17 04 55.4
comp=Z,50nm,1.5s
RPSI Rantau Prapat 85.95 275 P **P 17 04 52.8 -0.8**
RPSI IAmb IAmb 17 04 54.2
comp=Z,34nm,1.0s
RPSI Rantau Prapat 85.95 275 P **P 17 04 52.5 -1.1**
PSI Prapat 85.99 275 P **P 17 04 52.8 -1.1**
PSI pmax pmax
comp=Z,34nm,1.0s
PSI Prapat 85.99 275 P **P 17 04 52.5 -1.4**
comp=Z,26nm,0.9s,baz=131,slow=1.7,SNR=18
Q16A Castle Valley 86.03 45 P **P 17 04 54.8 +1.2**
KNK Knik Glacier 86.12 13 P **P 17 04 53.8 +0.5**
PMR Palmer 86.14 13 P **P 17 04 54.4 +1.1**
PMR pmax pmax
comp=Z,59nm,1.9s
PMR Palmer 86.14 13 P **P 17 04 54.4 +1.1**
PMR IAmb IAmb 17 05 40.8
comp=Z,59nm,1.9s
E09A Wood Farm, Sta 86.16 36 P **P 17 04 54.3 +0.5**
E09A IAmb IAmb 17 04 55.8
comp=Z,27nm,1.3s
TMUT Trail Mountain 86.21 45 P **P 17 04 55.2 +0.5**
PAYG Puerto Ayora 86.26 89 P **P 17 04 54.9 -0.2**
F10A Beach Ranch, E 86.34 37 P **P 17 04 54.7 -0.1**
F10A IAmb IAmb 17 05 07.0
comp=Z,23nm,0.8s
GHO Glory Hole Cre 86.35 13 P **P 17 04 54.5 0.0**
GHO IAmb IAmb 17 04 57.1
comp=Z,39nm,0.8s
MNTX Cornudas Mount 86.49 54 P **P 17 04 56.4 +0.5**
MNTX IAmb IAmb 17 04 58.4
comp=Z,31nm,1.0s
MNTX Cornudas Mount 86.49 54 P **P 17 04 57.2 +1.4**
baz=242
SNAA Sanae 86.50 178 P **P 17 04 55.6 +0.3**
SNAA Sanae 86.50 178 P **P 17 04 55.2 -0.1**
comp=Z,6.5nm,0.7s,baz=191,slow=7.1
SNAA Sanae 86.50 178 P **P 17 04 55.3 0.0**
SNAA IAmb IAmb 17 05 42.1
comp=Z,22nm,1.3s
SPUT South Promonto 86.50 43 P **P 17 04 55.9 +0.1**
LENM Lemitar 86.51 51 P **P 17 04 56.4 +0.3**
SRU San Rafael Swe 86.56 45 P **P 17 04 56.5 +0.2**
SRU pmax pmax
comp=Z,39nm,0.7s
SRU San Rafael Swe 86.56 45 P **P 17 04 56.5 +0.2**
VNA3 Neumayer Olymp 86.58 176 P **P 17 04 56.3 +0.7**
P17A Butcher Ranch, 86.61 45 P **P 17 04 56.1 -0.4**
B08A Colville Reser 86.67 34 P **P 17 04 56.3 0.0**
B08A IAmb IAmb 17 04 57.9
comp=Z,19nm,0.8s
GSI Gunungsitoli 86.68 273 P **P 17 04 56.8 -0.4**
comp=Z,107nm,0.8s
GSI Gunungsitoli 86.68 273 P **P 17 04 57.2 0.0**
TX31 Lajitas Ar. Si 86.70 57 P **P 17 04 57.7 +0.7**
TX31 IAmb IAmb 17 04 59.6
comp=Z,30nm,1.1s
TX32 Lajitas Array 86.70 57 P **P 17 04 57.8 +0.7**
TX32 IAmb IAmb 17 04 59.6
comp=Z,30nm,1.1s
TXAR Lajitas Array 86.70 57 P **P 17 04 58.1 +1.0**
comp=Z,16nm,0.9s,baz=216,slow=6.2,SNR=88
SCM Sheep Creek Mo 86.74 13 P **P 17 04 57.0 +0.6**
SCM pmax pmax
comp=Z,37nm,0.8s
SCM Sheep Creek Mo 86.74 13 P **P 17 04 57.0 +0.6**
SCM IAmb IAmb 17 04 59.2
comp=Z,37nm,0.8s
BNM Barren Site 86.75 51 P **P 17 04 57.0 -0.4**
CRQM Cirque 86.77 16 P **P 17 04 57.5 +0.8**
CRQM IAmb IAmb 17 04 60.0
comp=Z,23nm,1.0s
LLLB Lillooet 86.82 31 P **P 17 04 57.8 +0.8**
LLLB IAmb IAmb 17 04 59.1
comp=Z,18nm,0.9s
LPM Los Pinos Moun 86.83 51 P **P 17 04 57.9 +0.2**
TGL Tana Glacier 86.84 16 P **P 17 04 58.2 +1.2**
TGL IAmb IAmb 17 05 00.4
comp=Z,34nm,1.2s
C09A Chrisman Ranch 86.88 35 P **P 17 04 57.7 +0.4**
C09A IAmb IAmb 17 04 59.3
comp=Z,22nm,0.9s
MVCO Mesa Verde 86.95 48 P **P 17 04 58.9 +0.7**
baz=240
TCUT Toone Canyon 87.06 43 P **P 17 04 59.0 +0.3**
VRDI Verde Repeater 87.10 15 P **P 17 04 59.7 +1.4**
GO06 Curarrehue 87.14 132 P **P 17 05 00.2 +1.0**
GLB Gilahina Butte 87.19 15 P **P 17 04 58.9 +0.3**
GLB IAmb IAmb 17 05 01.2
comp=Z,13nm,0.8s
BALM Baldy 87.21 16 P **P 17 04 59.3 +0.6**
BALM IAmb IAmb 17 05 02.0
comp=Z,19nm,1.1s
VNA1 Neumayer--Stat 87.25 176 P **P 17 04 59.7 +0.9**
PLCA Paso Flores 87.26 133 P **P 17 05 01.0 +1.4**
comp=Z,14nm,0.7s,baz=259,slow=5.1,SNR=56
PLCA LR LR 17 35 49.1
comp=Z,51nm,21.9s,baz=116,slow=30
PLCA Paso Flores 87.26 133 P **P 17 05 00.5 +0.9**
ANMO Albuquerque 87.26 51 *i* P **P 17 05 00.0 +0.3**
ANMO pmax pmax
comp=Z,8.0nm,0.8s
ANMO Albuquerque 87.26 51 P **P 17 05 00.0 +0.3**
ANMO Albuquerque 87.26 51 P **P 17 05 00.8 +1.1**
baz=241
NVL N'lazarevskaya 87.32 183 *e*P P 17 05 11.3 +12
NVL pmax pmax
comp=Z,21nm,0.7s
MCARA McCarthy VSAT 87.34 15 P **P 17 05 00.2 +1.0**
MCARA IAmb IAmb 17 05 47.1
comp=Z,36nm,1.5s
BARN Barnard Glacie 87.40 16 P **P 17 05 00.4 +0.7**
BARN IAmb IAmb 17 05 03.4
comp=Z,15nm,0.9s
CTGM Chitina Glacie 87.41 16 P **P 17 05 00.4 +0.7**
CTGM IAmb IAmb 17 05 03.2
comp=Z,13nm,0.8s
GDL2 Guadalupe Moun 87.49 54 P **P 17 05 01.3 +0.5**
KTH Kantishna Hill 87.59 11 P **P 17 05 00.1 -0.4**
KTH IAmb IAmb 17 05 02.8
comp=Z,16nm,0.8s
TRF Thorofare Moun 87.61 11 P **P 17 05 00.6 -0.1**
NEW Newport 87.77 35 P **P 17 05 00.9 -0.7**
NEW pmax pmax
comp=Z,10.0nm,0.9s
NEW Newport 87.77 35 P **P 17 05 00.9 -0.7**
NEW Newport 87.77 35 P **P 17 05 02.3 +0.7**
baz=233
DHY Denali Highway 87.84 13 P **P 17 05 01.7 0.0**
DHY IAmb IAmb 17 05 49.4
comp=Z,26nm,1.6s
RND Reindeer 87.84 12 P **P 17 05 01.8 +0.2**
RND pmax pmax
comp=Z,49nm,1.0s
RND Reindeer 87.84 12 P **P 17 05 01.8 +0.2**
RDMU Red Mountain 87.95 45 P **P 17 05 02.6 -0.3**
ENH Enshi 88.00 304 P **P 17 05 02.9 -0.2**
ENH IAmb IAmb 17 05 07.2
comp=Z,30nm,0.9s
BPAW Bear Paw Mtn. 88.08 11 P **P 17 05 02.6 -0.1**
MCK McKinley 88.12 12 P **P 17 05 03.1 +0.2**
MCK pmax pmax
comp=Z,27nm,0.9s
MCK McKinley 88.12 12 P **P 17 05 03.1 +0.2**
MCK IAmb IAmb 17 05 05.7
comp=Z,27nm,0.9s
SEY Seymchan 88.13 346 *i* P **P 17 05 03.1 +0.3**
MCMT McKenzie Canyo 88.20 40 P **P 17 05 04.4 +0.4**
HYT Haines Junctio 88.34 18 P **P 17 05 03.5 -0.6**
S22A 4UR Ranch, Cre 88.37 48 P **P 17 05 04.5 -0.5**
S22A 4UR Ranch, Cre 88.37 48 P **P 17 05 05.6 +0.6**
baz=241
BWN Browne 88.42 11 P **P 17 05 04.5 +0.2**
BWN IAmb IAmb 17 05 12.1
comp=Z,34nm,0.9s
O20A White River Ci 88.60 45 P **P 17 05 05.4 -0.5**
O20A White River Ci 88.60 45 P **P 17 05 06.4 +0.5**
baz=240
REDW Red Top Meadow 88.61 42 P **P 17 05 05.3 -0.7**
REDW IAmb IAmb 17 05 56.6
comp=Z,32nm,0.8s

TPAW Teton Pass 88.61 42 P **P 17 05 06.1 +0.1**
DLMT Dillon 88.64 39 P **P 17 05 06.5 +0.6**
MSO Missoula 88.69 38 P **P 17 05 05.9 -0.2**
MSO Missoula 88.69 38 P **P 17 05 06.3 +0.3**
baz=236
LHMI Lhok Sumawe 88.72 276 P **P 17 05 06.0 -0.8**
SLVN Son La 88.74 293 P **P 17 05 06.2 -0.6**
WRH Wood River Hil 88.95 12 P **P 17 05 07.0 +0.3**
WRH IAmb IAmb 17 05 09.0
comp=Z,22nm,0.9s
SMCO Snowmass 88.97 47 P **P 17 05 07.7 -0.2**
SMCO IAmb IAmb 17 07 15.7
comp=Z,13nm,0.8s
LRM Limekiln Ridge 88.98 39 P **P 17 05 08.4 +0.7**
WHY Whitehorse 88.98 19 P **P 17 05 08.1 +1.0**
QLMT Earthquake Lak 89.04 40 P **P 17 05 08.6 +0.7**
DOT Dot Lake 89.06 14 P **P 17 05 08.3 +1.0**
FLWY Flagg Ranch 89.08 41 P **P 17 05 08.8 +0.7**
FLWY IAmb IAmb 17 06 18.9
comp=Z,19nm,0.8s
BW06 Boulder Array 89.10 43 P **P 17 05 08.7 +0.4**
BW06 IAmb IAmb 17 05 54.9
comp=Z,22nm,0.8s
BW06 Boulder Array 89.10 43 P **P 17 05 08.4 +0.1**
baz=239
PD31 Pinedale Array 89.10 43 P **P 17 05 07.7 -0.6**
PD31 IAmb IAmb 17 05 54.9
comp=Z,20nm,0.8s
PDAR Pinedale Array 89.10 43 P **P 17 05 08.0 -0.3**
comp=Z,4.5nm,0.8s,baz=205,slow=3.2,SNR=31
HDA Harding Lake 89.12 12 P **P 17 05 07.7 +0.2**
HDA IAmb IAmb 17 05 10.1
comp=Z,22nm,0.6s
HDA Harding Lake 89.12 12 P **P 17 05 08.3 +0.8**
baz=207,SNR=20
YHB Horse Butte 89.14 40 P **P 17 05 08.8 +0.4**
CCB Clear Creek Bu 89.16 12 P **P 17 05 07.6 -0.1**
CCB IAmb IAmb 17 05 10.1
comp=Z,20nm,0.5s
YHL Hebgen Lake 89.20 40 P **P 17 05 10.2 +1.4**
YMR Madison River 89.24 41 P **P 17 05 09.8 +0.9**
SDCO Great Sand Dun 89.29 49 P **P 17 05 09.4 +0.1**
SDCO Great Sand Dun 89.29 49 P **P 17 05 09.9 +0.6**
baz=241
H17A Grant Village 89.33 41 P **P 17 05 10.3 +1.0**
H17A Grant Village 89.33 41 P **P 17 05 10.7 +1.4**
baz=238
TCOL CIGO, UAF Yank 89.36 12 P **P 17 05 09.3 +0.8**
baz=206
SCRK Sand Creek 89.36 14 P **P 17 05 09.7 +1.0**
COLA College 89.36 12 *e*P **P 17 05 09.3 +0.7**
COLA pmax pmax
comp=Z,27nm,0.9s
COLA College 89.36 12 P **P 17 05 08.8 +0.2**
COLA IAmb IAmb 17 05 10.6
comp=Z,28nm,0.8s
MDM Murphy Dome 89.36 12 P **P 17 05 08.6 -0.1**
MDM IAmb IAmb 17 05 10.6
comp=Z,20nm,0.8s
PBKT Sadao Pong 89.39 288 P **P 17 05 10.3 +0.5**
IL31 89.45 12 P **P 17 05 09.0 0.0**
ILAR Eielson Array 89.45 12 P **P 17 05 08.8 -0.3**
comp=Z,6.8nm,0.7s,baz=210,slow=5.0,SNR=71
ILAR PKKP **PKKPdf 17 22 42.2 +0.1**
comp=Z,0.3nm,0.6s,baz=358,slow=3.2,SNR=6.4
MSTX Muleshoe 89.49 53 P **P 17 05 10.3 +0.1**
MSTX IAmb IAmb 17 05 11.9
comp=Z,22nm,0.8s
MSTX Muleshoe 89.49 53 P **P 17 05 10.6 +0.5**
baz=243
ZEA Zeya 89.59 330 *e*P **P 17 05 11.0 +1.1**
833A Chaparral WMA, 89.62 59 P **P 17 05 11.3 +0.6**
baz=245
POKR Poker Plat Res 89.66 12 P **P 17 05 10.5 +0.5**
baz=207,SNR=13
T25A Trinidad 89.76 50 P **P 17 05 11.8 +0.4**
T25A Trinidad 89.76 50 P **P 17 05 12.1 +0.6**
baz=242
WALA Waterton Lakes 89.97 36 P **P 17 05 12.2 +0.3**
WALA IAmb IAmb 17 05 13.8
comp=Z,15nm,1.0s
YNE Yellowstone No 89.99 41 P **P 17 05 12.8 +0.4**
Q24A Divide 90.11 48 P **P 17 05 14.4 +1.2**
baz=242
XAN Xi'an 90.12 307 P **P 17 05 13.6 +0.6**
XAN pmax pmax
comp=Z,10.0nm,0.9s
XAN Xi'an 90.12 307 P **P 17 05 12.8 -0.2**
XAN pmax pmax
comp=Z,26nm,1.4s
XAN Xi'an 90.12 307 P **P 17 05 12.8 -0.2**
XAN IAmb IAmb 17 05 16.8
comp=Z,26nm,1.4s
ISCO Idaho Springs 90.19 47 P **P 17 05 13.6 +0.1**
baz=241
JCT Junction City 90.22 57 P **P 17 05 13.9 +0.4**
JCT pmax pmax
comp=Z,26nm,1.4s
JCT Junction City 90.22 57 P **P 17 05 13.8 +0.4**
JCT IAmb IAmb 17 05 18.7
comp=Z,26nm,1.4s
JCT Junction City 90.22 57 P **P 17 05 13.8 +0.3**
baz=245
RDOG Red Dog Mine 90.33 5 P **P 17 05 14.0 +1.0**
RDOG IAmb IAmb 17 05 15.6
comp=Z,12nm,0.9s
PRP Porcupine Dome 90.38 12 P **P 17 05 14.0 +0.4**
RLMT Red Lodge 90.50 41 P **P 17 05 15.5 +0.8**
RLMT Red Lodge 90.50 41 P **P 17 05 15.7 +1.0**
baz=239
BILL Bilibino 90.65 354 *d* iP **P 17 05 14.6 +0.1**
BILL *e**PP **pwP 17 06 03.7 +5.4**
BILL *e*S **SKSac 17 15 29.0 -0.8**
BILL pmax pmax
comp=Z,19nm,1.3s
BILL Bilibino 90.65 354 P **P 17 05 14.0 -0.5**
BILL IAmb IAmb 17 05 16.9
comp=Z,26nm,1.3s
AMTX Amarillo 90.71 53 P **P 17 05 15.9 +0.1**
AMTX IAmb IAmb 17 05 17.3
comp=Z,20nm,1.1s
AMTX Amarillo 90.71 53 P **P 17 05 16.2 +0.4**
baz=244
K22A Casper 90.97 44 P **P 17 05 17.4 +0.5**
baz=241
COLD Coldfoot 91.08 10 P **P 17 05 17.2 +0.7**
KMI Kunming 91.24 297 P **P 17 05 19.6 +1.0**
KMI pmax pmax
comp=Z,15nm,0.9s
KMI pmax pmax
comp=Z,56nm,5.0s
ABTX Abilene, Hawle 91.25 55 P **P 17 05 18.5 +0.2**
ABTX Abilene, Hawle 91.25 55 P **P 17 05 18.9 +0.7**
baz=245
HHC Hu-ho-hao-te 91.37 314 *e*P **P 17 05 20.7 +2.0**
HHC S **S 17 16 09.4 +5.8**
HHC SS **SS 17 22 15.7 +2.0**
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,32nm,5.6s
EGMT Eagleton 91.72 38 P **P 17 05 20.9 +0.8**
baz=239
CM31 Chiang Mai Arr 91.90 289 P **P 17 05 22.4 +0.8**
CM31 IAmb IAmb 17 05 25.6
comp=Z,24nm,0.9s
CMAR Chiang Mai Arr 91.90 289 P **P 17 05 22.6 +1.1**
comp=Z,23nm,0.9s,baz=126,slow=3.0,SNR=93
CMAR PKKP **PKKPbc 17 22 39.4 +1.2**
comp=Z,1.5nm,0.7s,baz=278,slow=4.9,SNR=12
CHTO Chiang Mai 92.03 289 P **P 17 05 22.7 +0.5**
CHTO pmax pmax
comp=Z,18nm,0.7s
CHTO Chiang Mai 92.03 289 P **P 17 05 22.7 +0.5**
CHTO IAmb IAmb 17 05 25.7
comp=Z,18nm,0.7s
435B Jarrell 92.08 58 P **P 17 05 22.5 +0.5**
435B Jarrell 92.08 58 P **P 17 05 22.8 +0.7**
baz=246
TOLK Toolik Lake Re 92.47 10 P **P 17 05 24.3 +1.2**
TOLK Toolik Lake Re 92.47 10 P **P 17 05 24.6 +1.5**
baz=205
WHTX Lake Whitney, 92.67 57 P **P 17 05 24.9 +0.2**
WHTX IAmb IAmb 17 05 26.2
comp=Z,17nm,0.9s

WHTX Lake Whitney, 92.67 57 P **P 17 05 25.2 +0.4**
baz=246
CD2 Chengdu 92.74 302 P **P 17 05 25.4 +0.2**
CD2 pmax pmax
comp=Z,30nm,0.6s
WMOK Wichita Mounta 92.80 54 P **P 17 05 26.1 +0.8**
baz=245
EPYK Eagle Plains 93.05 15 P **P 17 05 27.3 +1.5**
EPYK Eagle Plains 93.05 15 P **P 17 05 27.4 +1.7**
baz=217
CFA Coronel Fontan 93.12 126 P **P 17 05 27.7 +0.6**
comp=Z,12nm,0.8s,baz=242,slow=4.0,SNR=25
HKT Hockley 93.12 59 *i* P **P 17 05 26.8 0.0**
HKT pmax pmax
comp=Z,16nm,1.4s
LAO LASA Array 93.12 40 P **P 17 05 27.8 +1.2**
LAO LASA Array 93.12 40 P **P 17 05 27.8 +1.2**
baz=241
OGNE Ogallala 93.15 47 P **P 17 05 27.6 +0.7**
baz=244
RSSD Black Hills 93.27 43 P **P 17 05 27.6 +0.1**
RSSD pmax pmax
comp=Z,31nm,0.8s
RSSD Black Hills 93.27 43 P **P 17 05 27.6 +0.1**
RSSD Black Hills 93.27 43 P **P 17 05 27.8 +0.3**
baz=242
X34A Smith Ranch, M 93.45 54 P **P 17 05 28.6 +0.2**
CBKS Cedar Bluff 93.81 50 P **P 17 05 30.1 +0.1**
baz=245
YAK Yakutsk 94.00 338 P **P 17 05 28.9 -1.2**
YAK pmax pmax
comp=Z,8.0nm,0.7s
YAK Yakutsk 94.00 338 P **P 17 05 29.1 -0.9**
comp=Z,3.5nm,0.6s,baz=235,slow=0.3,SNR=6.9
YAK Yakutsk 94.00 338 P **P 17 05 28.9 -1.2**
YAK IAmb IAmb 17 05 30.0
comp=Z,7.6nm,0.7s
LZH Lanzhou 94.76 307 *e*P **P 17 05 35.6 +1.1**
LZH pmax pmax
comp=Z,12nm,1.0s
DGMT Dagmar 95.18 40 P **P 17 05 36.9 +0.9**
baz=243
INK Inuvik 95.34 15 P **P 17 05 37.7 +1.6**
INK pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 95.34 15 P **P 17 05 37.7 +1.6**
INK IAmb IAmb 17 05 43.9
comp=Z,6.8nm,1.0s
BGNE Belgrade 96.00 48 P **P 17 05 40.7 +0.8**
baz=246
YKA Yellowknife Ar 97.28 24 P **P 17 05 44.9 -0.1**
comp=Z,2.0nm,0.7s,baz=239,slow=4.3,SNR=37
YKA PKKPbc **PKKPbc 17 22 22.8 -2.9**
comp=Z,0.2nm,0.4s,baz=30,slow=2.5,SNR=5.5
ULN Ulaanbaatar 97.38 319 *i* P **P 17 05 45.5 -0.6**
ULN pmax pmax
comp=Z,2.0nm,0.8s
PB11 IPOC Station P 97.39 115 P Pdif 17 05 48.4 +1.4
MNMC Minye Minye 97.72 114 P Pdif 17 05 50.0 +1.4
SONM Songino Array 97.77 318 P **P 17 05 47.5 -0.3**
comp=Z,0.8nm,0.7s,baz=124,slow=3.2,SNR=7.2
U40A Yellville 97.88 54 P Pdif 17 05 48.8 +0.4
baz=249
ECSD EROS Data Cent 97.96 46 P **P 17 05 48.5 -0.1**
ECSD IAmb IAmb 17 05 50.5
comp=Z,8.6nm,0.8s
ECSD EROS Data Cent 97.96 46 P Pdif 17 05 48.9 +0.3
baz=247
LPAZ La Paz 100.23 112 P **Pdif 17 06 01.3 +1.1**
comp=Z,4.5nm,0.6s,baz=258,slow=5.3,SNR=19
LPAZ La Paz 100.23 112 Pdif 17 06 02.9 +2.8
ZALV Zalesovo Beam 112.50 321 PKiKP **PKiKP 17 10 47.2 -0.4**
comp=Z,2.3nm,0.5s,baz=136,slow=1.0,SNR=10
ZALV PP **PP 17 11 33.3 -3.5**
comp=Z,1.9nm,0.9s,baz=96,slow=5.1,SNR=4.4
MKAR Makanchi Array 113.21 313 PKiKP **PKiKP 17 10 48.9 -0.4**
comp=Z,2.7nm,0.9s,baz=93,slow=2.4,SNR=12
MKAR PKKPbc **PKKPbc 17 21 36.1 -0.4**
comp=Z,1.1nm,0.7s,baz=284,slow=3.6,SNR=11
MAKZ Makanchi 113.42 313 PKIKP **PKiKP 17 10 49.1 -0.6**
KURK Kurchatov 116.01 317 *c* iPKIKP **PKPdf 17 10 54.4 0.0**
KURK pmax pmax
comp=Z,7.0nm,1.0s
KURK Kurchatov 116.01 317 PKPdf 17 10 54.0 -0.4
KURBB Kurchatov Arra 116.06 317 PKP **PKPdf 17 10 53.8 -0.8**
comp=Z,3.0nm,0.8s,baz=103,slow=1.8,SNR=19
KSH Kashi 116.86 304 PKP **PKiKP 17 10 58.1 +1.5**
KSH SKS **SKSdf 17 17 50.2 -3.0**
KSH SKKS **SKKSac 17 18 50.2 -1.8**
KSH SS **SS 17 28 04.7 +2.0**
KSH AMB AMB
comp=Z,520nm,5.7s
KSH LR LR
comp=Z,240nm,6.3s
KSH LR LR
comp=Z,220nm,5.7s
KSH LR LR
comp=Z,670nm,5.3s
NRN Naryn 117.06 306 PKIKP **PKPdf 17 10 57.0 -0.2**
NRN Naryn 117.06 306 PKPdf 17 10 57.0 -0.2
NIL Nilore 118.22 297 PKIKP **PKPdf 17 10 58.8 -0.5**
NIL Nilore 118.22 297 PKPdf 17 10 58.8 -0.5
AAK Ala-Archa 118.29 308 *c* iPKIKP **PKiKP 17 10 59.9 +0.5**
AAK pmax pmax
comp=Z,4.0nm,1.0s
AAK Ala-Archa 118.29 308 PKP **PKPdf 17 10 58.6 -0.7**
comp=Z,2.9nm,0.8s,baz=117,slow=3.2,SNR=6.8
AAK Ala-Archa 118.29 308 PKPdf 17 10 59.2 -0.1
ARSB Arslanbob 119.31 306 PKPdf 17 11 01.2 -0.2
BTK Batken 120.86 304 PKIKP **PKPdf 17 11 04.0 -0.2**
BTK Batken 120.86 304 PKPdf 17 11 04.0 -0.2
BVAR Borovoye Array 121.09 320 PKP **PKPdf 17 11 04.1 -0.1**
comp=Z,4.6nm,0.4s,baz=64,slow=3.4,SNR=29
BVAR PP **PP 17 12 32.1 -4.4**
comp=Z,0.8nm,0.6s,baz=116,slow=6.6,SNR=2.0
GAR Garm 121.18 303 PKPdf 17 11 05.0 +0.1
KK31 Karatay Array 121.24 308 PKIKP **PKPdf 17 11 04.5 -0.3**
KK31 Karatay Array 121.24 308 PKPdf 17 11 04.5 -0.3
KKAR Karatay Array 121.24 308 PKIKP **PKPdf 17 11 04.6 -0.2**
KKAR Karatay Array 121.24 308 PKPdf 17 11 04.6 -0.2
KBL Kabul 121.80 298 PKIKP **PKiKP 17 11 06.8 +0.2**
KBL Kabul 121.80 298 PKiKP 17 11 06.8 +0.2
CHGR Chuyangaron 122.06 303 PKiKP 17 11 06.9 +0.1
SUMG Summit 124.25 14 *e*PKIKP **PKPdf 17 11 10.1 -0.1**
SUMG Summit 124.25 14 *i* P **PKPdf 17 11 10.1 -0.1**
BOSA Boshof 125.49 204 PKP **PKiKP 17 11 14.7 +0.7**
comp=Z,3.6nm,0.6s,baz=167,slow=2.3,SNR=11
SVE Sverdlovsk 125.98 325 *e*PKIKP **PKiKP 17 11 14.0 +0.2**
SVE pmax pmax
comp=Z,20nm,1.2s
ARU Arti 127.20 325 *i* PKIKP **PKiKP 17 11 16.6 +0.3**
ARU 17 13 17.5
ARU PPP PPP 17 16 01.0
ARU 17 18 08.3
ARU Arti 127.20 325 PKPdf 17 11 16.0 +0.2
HRA Herat 127.39 297 PKPdf 17 11 16.9 -0.2
ABKAR Akbulak array 128.10 316 PKPdf 17 11 17.5 -0.2
AKTO Aktyubinsk 129.08 318 PKIKP **PKiKP 17 11 20.2 -0.1**
ARCES ARCESS Array B 130.61 350 PKP **PKPdf 17 11 21.9 0.0**
comp=Z,3.6nm,0.6s,baz=355,slow=2.1,SNR=17
ARCES SKPbc **SKPab 17 14 31.7 +1.3**
comp=Z,18nm,0.9s,baz=34,slow=4.5,SNR=12
GEYT Alibeck 130.73 302 PKP **PKPdf 17 11 23.3 +0.2**
comp=Z,4.5nm,0.6s,baz=222,slow=2.0,SNR=12
GEYT SKPbc **SKPab 17 14 32.2 +0.3**
comp=Z,12nm,1.1s,baz=180,slow=0.7,SNR=18
LSZ Lusaka 135.75 215 SKPbc **SKPbc 17 14 50.1 +0.6**
comp=Z,1.3nm,0.4s,baz=82,slow=3.5,SNR=3.4
FINES FINESS Array B 137.57 344 PKhKP PKPpre 17 11 24.3
comp=Z,3.1nm,0.8s,baz=29,slow=4.4,SNR=6.7
FINES PKP **PKPdf 17 11 34.8 -0.3**
comp=Z,3.8nm,0.6s,baz=80,slow=3.8,SNR=9.8
FINES SKPbc **SKPbc 17 14 54.1 +0.9**
comp=Z,25nm,0.9s,baz=50,slow=3.0,SNR=21
MOS Moscow 137.84 332 *e*PKIKP **PKPdf 17 11 35.9 +0.1**
AKT Akhty 138.17 308 *e*PKIKP **PKiKP 17 11 40.0 +0.9**
AKT *e* 17 12 32.5
AKT pmax pmax
comp=Z,18nm,1.0s
VRH Novokhopyorsk 138.41 324 *e*PKIKP **PKPdf 17 11 36.7 -0.3**
VRH pmax pmax
comp=Z,10.0nm,0.7s
OBN Obninsk 138.71 332 ⇓ *i* PKIKP **PKPdf 17 11 38.4 +1.0**
OBN pmax pmax
comp=Z,37nm,1.8s

LPSR **Galich'ya Gora** 139.12 327 *e*PKIKP **PKPdf** 17 11 36.3 -1.9
LPSR pmax pmax
comp=Z,5.0nm,0.7s
VSR Storozhevoye 139.77 325 *e*PKIKP **PKPdf** 17 11 38.8 -0.7
VSR pmax pmax
comp=Z,10.0nm,1.1s
KMBO Kilima Mbogo 139.83 240 PKHKP PKPpre 17 11 31.5
KMBO Kilima Mbogo 139.83 240 PKhKP PKPpre 17 11 34.0
comp=Z,2.6nm,0.6s,baz=46,slow=9.1,SNR=7.7
KMBO SKPbc **SKiKP** 17 15 03.6 -0.5
comp=Z,2.8nm,0.9s,baz=41,slow=5.4,SNR=4.8
KMBO Kilima Mbogo 139.83 240 PKPpre PKPpre 17 11 31.5
VORD Divnogorie 139.84 325 *e*PKIKP **PKPdf** 17 11 38.4 -1.2
VORD pmax pmax
comp=Z,9.0nm,0.8s
GOF Gofitskoye 140.32 315⇑ *e*PKIKP **PKPdf** 17 11 38.2 -2.5
NC303 NORSAR Array S 140.40 354 PKPdf 17 11 32.4 -7.9
ZEI Tsey 140.53 311 *i* PKIKP **PKiKP** 17 11 44.6 +0.6
ZEI pmax pmax
comp=Z,10.0nm,1.1s
NB2 NORSAR Subarra 140.60 354 PKP **PKPdf** 17 11 33.1 -7.7
comp=Z,3.4nm,0.8s,baz=10,slow=3.2
NOA NORSAR Array B 140.60 354 PKhKP **PKPdf** 17 11 33.2 -7.5
comp=Z,3.7nm,0.7s,baz=16,slow=4.6,SNR=14
NOA SKPbc **SKiKP** 17 15 02.9 -1.0
comp=Z,2.8nm,0.7s,baz=15,slow=4.4,SNR=6.5
GNI Garni 140.69 307*c* *i* PKIKP **PKiKP** 17 11 43.3 -1.1
GNI pmax pmax
comp=Z,55nm,1.7s
GNI Garni 140.69 307 **PKPdf** 17 11 40.6 -1.1
KBZ Khabaz 140.91 313 PKhKP PKPpre 17 11 37.4
comp=Z,0.7nm,0.6s,baz=50,slow=4.7,SNR=3.7
KIV Kislovodsk 140.97 314⇑ *i* PKIKP **PKiKP** 17 11 43.5 -1.2
KIV 17 14 47.0
KIV pmax pmax
comp=Z,11nm,1.2s
AKH Akhalkalaki 141.25 309 ⇑P **PKiKP** 17 11 45.4 -0.1
RAYN Ar Rayn 141.31 281 PKHKP PKPpre 17 11 36.7
RAYN Ar Rayn 141.31 281 PKPpre 17 11 36.7
IZAR Zarasai 142.26 339 *e*P **PKPdf** 17 11 40.6 -3.2
IZAR IAML 17 11 42.9
comp=Z,8.8nm,0.6s
ISAL Salakas 142.45 339 *e*P **PKPdf** 17 11 40.9 -3.2
IIGN Ignalina 142.59 339 *e*P **PKPdf** 17 11 41.1 -3.3
IIGN IAML 17 11 43.4
comp=Z,4.8nm,0.7s
PABE Paberze 143.19 341 *e*P PKPbc 17 11 44.1 +1.2
PABE IAML 17 11 45.1
comp=Z,21nm,0.4s
PBUR Paburg 143.35 343 *e*P PKPbc 17 11 43.4 +0.1
FURI Furi 143.77 255 **PKPdf** 17 11 48.3 +0.2
KAC Achnashellach 143.95 8 *e*P PKPbc 17 11 45.1 +0.1
ANN Anapa 144.04 317 *i* PKIKP **PKiKP** 17 11 51.0 +0.2
ANN pmax pmax
comp=Z,40nm,0.9s
KPL Plockton 144.06 8 *e*P **PKPab** 17 11 45.0 +0.3
MCD Coleburn Disti 144.10 6 *e*P PKPbc 17 11 45.3 -0.2
MDO Dochfour 144.12 7 *e*P PKPbc 17 11 46.0 +0.4
SUW Suwalki 144.70 340 *e*PKIKP PKPbc 17 11 47.6 +0.2
SUW Suwalki 144.70 340 *e*PKP PKPbc 17 11 47.6 +0.2
SUW Suwalki 144.70 340 PKPbc 17 11 47.5 +0.1
GOET G??ttrup 144.73 355 *i* P **PKPdf** 17 11 48.7 +0.6
comp=Z,213nm,0.8s
DYBB Diyarbakir 144.73 305 *e*P **PKPdf** 17 11 48.6 -0.2
DRUM Mains of Drumt 144.84 6 *e*P **PKPdf** 17 11 48.1 -0.2
AKASG Malin Array Be 144.97 331 PKP PKPbc 17 11 47.6 -0.8
comp=Z,22nm,0.7s,baz=43,slow=4.5,SNR=222
AKASG SKPbc **SKPbc** 17 15 13.3 +0.7
comp=Z,7.2nm,1.0s,baz=38,slow=2.7,SNR=8.3
AKBB Malin Array Si 144.97 331 PKIKP PKPbc 17 11 47.6 -0.8
AKBB Malin Array Si 144.97 331 PKPbc 17 11 47.5 -0.8
LAWE Loch Awe, Argy 145.14 9 *e*P **PKPbc** 17 11 48.5 -0.2
EDU Dundee 145.14 6 *e*P **PKPab** 17 11 49.4 +0.4
INVG Invergeldie, C 145.15 7 *e*P **PKPbc** 17 11 48.7 0.0
MBAR Mbarara 145.20 233 PKPbc **PKiKP** 17 11 52.6 -1.8
comp=Z,97nm,0.7s,baz=126,slow=4.1,SNR=49
MBAR Mbarara 145.20 233 **PKPab** 17 11 51.0 +0.4
MUD Monsted U'grnd 145.31 354 *i* PKIKP **PKPab** 17 11 50.0 +0.5
MUD pmax pmax
comp=Z,130nm,0.8s
MUD Monsted U'grnd 145.31 354 *i* P **PKPab** 17 11 50.0 +0.5
comp=Z,132nm,0.8s
COP Copenhagen 145.68 351 *i* PKP2 **PKPab** 17 11 51.1 +0.1
COP pmax pmax
comp=Z,74nm,0.8s
COP Copenhagen 145.68 351 *i* P **PKPab** 17 11 51.1 +0.1
comp=Z,74nm,0.8s
BSD Bornholm Skovb 145.82 348 *i* PKP2 **PKPbc** 17 11 50.8 0.0
BSD pmax pmax
comp=Z,150nm,0.9s
BSD Bornholm Skovb 145.82 348 *i* P **PKPbc** 17 11 50.8 0.0
comp=Z,149nm,0.9s
URFA Urfa 145.88 305 *e*P **PKPab** 17 11 52.6 +0.1
MALT Malatya 145.91 306 *e*P **PKPab** 17 11 52.8 +0.2
RSDY Resadiye-TOKAT 145.99 310 *e*P **PKPab** 17 11 52.9 +0.1
SIM Simferopol' 146.01 320*c* *i* PKP2 **PKPab** 17 11 52.7 +0.1
SIM pmax pmax
comp=Z,89nm,0.8s
SVSK Karacayir 146.40 310 *e*P **PKPab** 17 11 54.5 +0.2
DARE Darende-Malaty 146.53 307 *e*P **PKPbc** 17 11 54.1 +0.4
RGN Rugen 146.64 350 *e*PKPbc **PKPab** 17 11 55.0 +0.4
baz=13,slow=2.3
GKP Gorka Klasztor 147.04 345 *e*PKP2 **PKPbc** 17 11 55.0 +0.6
GKP Gorka Klasztor 147.04 345 *e*PKP **PKPbc** 17 11 55.0 +0.6
SORM Soroca 147.18 329 ⇑PKP2 **PKPbc** 17 11 55.4 +0.4
SORM Soroca 147.18 329 ⇑P **PKPbc** 17 11 55.4 +0.4
GAZ Gaziantep 147.19 305 *e*P **PKPbc** 17 11 56.4 +0.9
GAZ Gaziantep 147.19 305 **PKPbc** 17 11 56.1 +0.6
IOMK Kirk Michael 147.20 9 *e*P **PKPbc** 17 11 54.6 -0.2
BEL Belsk 147.31 340 *e*PKP2 **PKPbc** 17 11 56.2 +1.0
BEL Belsk 147.31 340 *e*PKP **PKPbc** 17 11 56.2 +1.0
KMRS Kahramanmaras 147.32 306 *e*P **PKPbc** 17 11 56.4 +0.6
PURM Purcari 147.48 325 ⇓P **PKiKP** 17 11 57.1 -0.8
BZK Bozkurt 147.59 315 ⇓P **PKPbc** 17 11 56.9 +0.6
BZK Bozkurt 147.59 315 *e*P **PKPbc** 17 11 55.5 -0.8
BNN Bunyan 147.63 309 *e*P **PKPbc** 17 11 57.4 +0.7
BSEG Bad Segeberg 147.67 352 *e*PKPbc **PKiKP** 17 11 57.9 -0.1
baz=13,slow=2.3
YOZ Yozgat 147.70 310 *e*P **PKPbc** 17 11 57.3 +0.4
KIS Kishinev 147.72 327 ⇑PKP2 **PKPbc** 17 11 56.8 +0.3
KIS Kishinev 147.72 327 ⇑P **PKPbc** 17 11 56.8 +0.3
MILM Milestii Mici 147.78 327 ⇑P **PKPbc** 17 11 57.0 +0.4
LVV L'vov 147.83 335 *e*PKP2 **PKPbc** 17 11 57.2 +0.5
KOZT Kozan 148.13 306 *e*P **PKPbc** 17 11 58.3 +0.3
ILGA Ilgaz 148.20 314 **PKPbc** 17 11 58.5 +0.2
CEYT Ceyhan 148.35 305 *e*P **PKiKP** 17 11 59.4 -0.6
LEOM Leova 148.37 326 ⇑PKP2 **PKiKP** 17 11 59.1 -0.6
LEOM Leova 148.37 326 ⇑P **PKiKP** 17 11 59.1 -0.6
CANT Cankiri 148.47 313 *e*P **PKiKP** 17 11 59.8 -0.4
VASR Vaslui 148.48 327 ⇑P **PKPbc** 17 11 59.1 +0.5
KWP Kalwaria Pacla 148.49 336 *e*PKP2 **PKPbc** 17 11 59.1 +0.6
KWP Kalwaria Pacla 148.49 336 *e*PKP **PKPbc** 17 11 59.1 +0.6
KWP Kalwaria Pacla 148.49 336 **PKPbc** 17 11 58.7 +0.2
RUE Ruedersdorf 148.53 348 *e*PKPbc **PKiKP** 17 12 00.0 +0.2
baz=13,slow=2.3
RUE Ruedersdorf 148.53 348 *e*P **PKiKP** 17 11 59.7 -0.1
FOEL Foel Wylfa 148.72 8 *e*P **PKPbc** 17 11 59.5 +0.6
PRAR RASCA 148.74 330 ⇑P **PKiKP** 17 11 59.9 -0.6
KARA Karaisali 148.78 306 *e*P **PKiKP** 17 12 00.7 -0.2
BR131 Keskin Array S 148.85 311 PKP2 **PKPbc** 17 11 59.5 -0.4
BR131 Keskin Array S 148.85 311 **PKPbc** 17 11 59.5 -0.4
BRTR Keskin Array B 148.85 311 PKPbc **PKPbc** 17 11 59.7 -0.2
comp=Z,29nm,0.8s,baz=137,slow=4.6,SNR=150
TLCR 148.91 324 ⇑PKP2 **PKiKP** 17 12 00.4 -0.5
TLCR 148.91 324 ⇑P **PKiKP** 17 12 00.4 -0.5
BUR08 Bucovina Ar. S 149.00 331 **PKiKP** 17 12 00.7 -0.4
BURAR Bucovina Array 149.02 331 ⇑PKP2 **PKiKP** 17 12 01.3 +0.1
BURAR Bucovina Array 149.02 331 ⇑P **PKiKP** 17 12 01.3 +0.1
OJC Ojcow 149.03 339 *e*PKP2 **PKPbc** 17 11 59.4 -0.4
OJC Ojcow 149.03 339 *e*PKP **PKPbc** 17 11 59.4 -0.4
OJC Ojcow 149.03 339 **PKPbc** 17 12 00.1 +0.3
BIZ Bicaz 149.10 329 ⇑P **PKiKP** 17 12 01.7 +0.4
NRDL Niedersach Rie 149.11 352 *e*PKPbc **PKiKP** 17 12 01.4 +0.4
baz=13,slow=2.3
HLM1 Long Mynd 149.12 8 *e*P **PKPbc** 17 11 60.0 0.0
JURR Jurilovca 149.14 323 ⇓P **PKiKP** 17 12 00.8 -0.5
TESR Tescani 149.14 328 ⇑P **PKPbc** 17 12 00.2 0.0
KOLS Kolonicke sedl 149.22 335 *e*PKP2 **PKiKP** 17 12 01.6 +0.1
KOLS Kolonicke sedl 149.22 335 *e*PKP **PKiKP** 17 12 01.6 +0.1
TUDR 149.25 326 ⇑P **PKiKP** 17 12 01.9 +0.3
RCY Rachaya 149.27 299 *e*P **PKiKP** 17 12 01.9 -0.3
CFR Carcaliu 149.28 325 ⇓PKP2 **PKPbc** 17 12 00.9 +0.4
CFR Carcaliu 149.28 325 ⇓P **PKPbc** 17 12 00.9 +0.4

BHL Bhannes 149.32 300 *e*P **PKPbc** 17 12 01.7 +0.5
TOPG Topolog 149.34 324 ⇓P **PKiKP** 17 12 01.5 -0.3
AFSR Afar-Bala (An 149.36 311 *e*P **PKiKP** 17 12 01.9 -0.3
ANTO Ankara 149.37 312 PKP2 **PKPbc** 17 12 01.3 +0.2
ANTO Ankara 149.37 312 **PKPbc** 17 12 01.3 +0.2
SHBL Chebaa 149.38 299 *e*P **PKiKP** 17 12 02.2 -0.2
QRWL Qaraoun 149.38 299 *e*P **PKiKP** 17 12 02.0 -0.4
ASSE Asse, Remlinge 149.39 351 *e*PKPbc **PKiKP** 17 12 02.1 +0.5
baz=13,slow=2.3
BR231 Keskin MP Arra 149.39 312 **PKPbc** 17 12 01.6 +0.4
PETR Petresti 149.39 326 ⇑P **PKiKP** 17 12 02.3 +0.5
ODBI Odobesti 149.46 327 ⇑P **PKiKP** 17 12 02.7 +0.7
UZH Uzhgorod 149.46 335 ⇑PKP2 **PKiKP** 17 12 02.2 +0.3
KSP Ksiaz 149.49 344 *e*PKP2 **PKiKP** 17 12 01.8 -0.1
KSP Ksiaz 149.49 344 *e*PKP **PKiKP** 17 12 01.8 -0.1
NIE Niedzica 149.54 338 *e*PKP2 **PKiKP** 17 12 02.5 +0.4
NIE Niedzica 149.54 338 *e*PKP **PKiKP** 17 12 02.5 +0.4
IBBN Ibbenburen 149.54 355 *e*PKPbc **PKiKP** 17 12 02.4 +0.4
baz=13,slow=2.3
VRI Vrincioaia 149.55 327 ⇑PKP2 **PKiKP** 17 12 01.9 -0.3
VRI Vrincioaia 149.55 327 ⇑P **PKiKP** 17 12 01.9 -0.3
TIRR Tirgusor 149.59 323 PKP2 **PKPbc** 17 12 01.5 +0.1
TIRR Tirgusor 149.59 323 **PKPbc** 17 12 01.4 +0.1
PLOR Plostina 149.60 327 ⇑PKP2 **PKiKP** 17 12 01.9 -0.5
PLOR Plostina 149.60 327 ⇑P **PKiKP** 17 12 01.9 -0.5
MCH1 Michaelchurch 149.62 8 *e*P **PKPbc** 17 12 01.0 -0.2
EFOR EFORIE 149.71 323 ⇑P **PKiKP** 17 12 02.6 0.0
HARR Harsova 149.71 324 ⇑PKP2 **PKiKP** 17 12 02.4 -0.2
HARR Harsova 149.71 324 ⇑P **PKiKP** 17 12 02.4 -0.2
CLZ Clausthal 149.72 352 *e*PKPbc **PKiKP** 17 12 02.8 +0.4
baz=13,slow=2.3
BMR Baia Mare 149.73 333 ⇓PKP2 **PKiKP** 17 12 02.3 -0.2
BMR Baia Mare 149.73 333 ⇓P **PKiKP** 17 12 02.3 -0.2
KIZK Mersin 149.74 305 *e*P **PKPbc** 17 12 02.3 +0.3
OSTC Ostas 149.78 344⇑ *e*PKP **PKiKP** 17 12 03.1 +0.5
BISRR Bisoca 149.78 327 ⇑P **PKiKP** 17 12 02.9 +0.1
CHVC Chvalec 149.79 344⇑ *e*PKP **PKiKP** 17 12 03.5 +0.9
CLL Collm 149.80 348 PKP2 **PKiKP** 17 12 02.2 -0.3
CLL Collm 149.80 348 *i* PKPbc **PKiKP** 17 12 02.5 0.0
comp=Z,69nm,0.9s
CLL comp=Z,41nm,0.9s *i* PKPab **PKPab** 17 12 07.2 -0.3
CLL *i* pPKPab **pPKPab** 17 12 47.6 -1.4
CLL *i* 17 13 12.2
CLL Collm 149.80 348 *e*PKPbc **PKiKP** 17 12 03.1 +0.6
baz=13,slow=2.3
CLL Collm 149.80 348 **PKiKP** 17 12 02.2 -0.3
ARCR ARCALIA 149.80 331 ⇑P **PKiKP** 17 12 03.1 +0.4
OZUR 149.86 328 ⇓P **PKiKP** 17 12 02.9 0.0
CHBY Cihanbeyli 149.86 310 *e*P **PKiKP** 17 12 02.9 -0.3
UPC Upice 149.87 344 *e*PKP2 **PKiKP** 17 12 03.6 +0.9
UPC Upice 149.87 344⇑ *e*PKP **PKiKP** 17 12 03.6 +0.9
CVDA Cernavoda 149.88 324 ⇑P **PKiKP** 17 12 03.0 +0.1
OKC Ostrava-Krasne 149.88 341 *e*PKP2 **PKiKP** 17 12 03.1 +0.4
OKC Ostrava-Krasne 149.88 341⇑ *e*PKP **PKiKP** 17 12 03.1 +0.4
MANR Mangalia 149.90 322 ⇓P **PKiKP** 17 12 03.3 +0.3
TSMN Mangalia Port- 149.90 322 ⇓P **PKiKP** 17 12 03.3 +0.3
DPC Dobruska-Polom 149.94 343 *e*PKP2 **PKiKP** 17 12 03.2 +0.3
DPC Dobruska-Polom 149.94 343⇑ *e*PKP **PKiKP** 17 12 03.2 +0.3
SILI Silifke-Mersin 149.94 305 *e*P **PKiKP** 17 12 03.3 0.0
BRG Berggiesshubel 150.02 347 *i* PKP **PKiKP** 17 12 03.7 +0.7
comp=Z,45nm,1.1s
BRG *e*pPKP **pPKPdf** 17 12 38.9 -1.2
comp=Z,5.4nm,1.4s
BRG *e*sPKP 17 12 51.0
comp=Z,9.5nm,1.0s
BRG Berggiesshubel 150.02 347 *i* PKP2 **PKiKP** 17 12 03.7 +0.7
BRG pmax pmax
comp=Z,45nm,1.1s
BRG pmax pmax
comp=Z,5.0nm,1.4s
BRG pmax pmax
comp=N,10.0nm,1.0s
BRG Berggiesshubel 150.02 347 *e*PKPbc **PKiKP** 17 12 03.8 +0.8
baz=13,slow=2.3
EREN Erenkoy 150.03 304 *e*P **PKiKP** 17 12 03.3 -0.2
LANS Liptovska Anna 150.06 339 *e*PKP2 **PKiKP** 17 12 04.3 +1.1
LANS Liptovska Anna 150.06 339 *e*PKP **PKiKP** 17 12 04.3 +1.1
GTTG Gyttingen 150.06 352 *e*PKPbc **PKiKP** 17 12 03.6 +0.5
baz=13,slow=2.3
KRLC Kraliky 150.06 343 *e*PKP2 **PKiKP** 17 12 03.6 +0.4
KRLC Kraliky 150.06 343⇑ *e*PKP **PKiKP** 17 12 03.6 +0.4
PGOR Pogoanele 150.07 325 ⇑P **PKiKP** 17 12 03.6 +0.3
KEBE Keben-Mersin 150.08 306 *e*P **PKiKP** 17 12 03.4 -0.3
AMRR Amara 150.08 325 ⇑PKP2 **PKiKP** 17 12 05.7 +2.4
AMRR Amara 150.08 325 ⇑P **PKiKP** 17 12 05.7 +2.4
FBE Freiberg 150.10 347 *e*PKPbc **PKiKP** 17 12 03.8 +0.7
baz=13,slow=2.3
MORC Moravsky Berou 150.11 342 PKP2 **PKPbc** 17 12 02.9 +0.4
MORC Moravsky Berou 150.11 342 ⇑P **PKiKP** 17 12 03.9 +0.6
MORC Moravsky Berou 150.11 342 *e*PKP **PKiKP** 17 12 03.7 +0.4
MORC Moravsky Berou 150.11 342 **PKPbc** 17 12 02.9 +0.4
NEUB Neuburg 150.12 350 *e*PKPbc **PKiKP** 17 12 03.7 +0.6
baz=13,slow=2.3
NEUB *e*pPKPbc **pPKPab** 17 12 52.0 +1.6
DOPR Dopca 150.14 328 ⇑P **PKiKP** 17 12 03.7 +0.2
IKL Isikli 150.17 305 *e*P **PKPbc** 17 12 03.2 +0.2
PVCC Panska Ves 150.21 346 *e*PKIKP **PKiKP** 17 12 04.6 +1.2
PVCC Panska Ves 150.21 346⇑ *e*PKP **PKiKP** 17 12 04.6 +1.2
MLR Muntele Rosu 150.21 327 PKIKP **PKPbc** 17 12 03.2 +0.2
MLR Muntele Rosu 150.21 327 ⇑P **PKiKP** 17 12 03.6 -0.2
MLR Muntele Rosu 150.21 327 **PKPbc** 17 12 03.1 +0.2
PSN Preselentsi 150.21 322 *e*P **PKiKP** 17 12 03.8 +0.2
KALB Balgarevo 150.25 322 ⇓P **PKiKP** 17 12 04.2 +0.5
KECS Kecovo 150.27 337 *e*PKIKP **PKiKP** 17 12 04.5 +0.9
KECS Kecovo 150.27 337 *e*PKP **PKiKP** 17 12 04.5 +0.9
TEVE Tevekalti-Mers 150.28 306 *e*P **PKiKP** 17 12 04.5 +0.4
AKUU Akkuyu-Mersin 150.30 305 *e*P **PKiKP** 17 12 04.4 +0.4
LADK Ladik-KONYA 150.40 310 *e*P **PKPbc** 17 12 03.5 -0.2
CJR Cluj-Napoca 150.43 331 ⇑PKIKP **PKiKP** 17 12 03.8 -0.2
CJR Cluj-Napoca 150.43 331 ⇑P **PKiKP** 17 12 03.8 -0.2
SVRH Sivrihisar-ESK 150.43 312 *e*P **PKPbc** 17 12 03.9 +0.2
RASA Rasa 150.44 324 ⇑P **PKiKP** 17 12 04.2 +0.2
BUG Bochum--Univer 150.44 355 *e*PKPbc **PKiKP** 17 12 04.6 +0.8
baz=13,slow=2.3
LEHL Lehliu 150.45 325 ⇑P **PKiKP** 17 12 04.5 +0.4
SECR 150.46 326 ⇑P **PKiKP** 17 12 04.4 +0.3
BERE Bereket-Mersin 150.48 306 *e*P **PKiKP** 17 12 04.4 -0.2
MDB Medias 150.50 330 ⇑PKIKP **PKiKP** 17 12 05.1 +0.9
MDB Medias 150.50 330 ⇑P **PKiKP** 17 12 05.1 +0.9
KONT Konya--Tatoy 150.50 309 *e*P **PKPbc** 17 12 03.8 0.0
SAUV Serdivan-Sakar 150.59 316 *e*P **PKiKP** 17 12 04.7 +0.2
SULR 150.61 326 ⇑P **PKiKP** 17 12 04.5 +0.1
GULF Gulveren 150.63 315 *e*P **PKiKP** 17 12 04.6 -0.1
TEKE Tekeli-Mersin 150.64 305 *e*P **PKPbc** 17 12 04.1 0.0
PRA Prague 150.66 346 *e*PKIKP **PKiKP** 17 12 05.1 +0.8
PRA Prague 150.66 346⇑ *e*PKP **PKiKP** 17 12 05.1 +0.8
MOX Moxa 150.69 349 *e*PKPbc **PKiKP** 17 12 04.8 +0.4
baz=13,slow=2.3
MOX *e*pPKPbc **pPKPab** 17 12 53.4 +0.7
VOIR 150.69 328 ⇑PKIKP **PKiKP** 17 12 04.8 +0.1
VOIR 150.69 328 ⇑P **PKiKP** 17 12 04.8 +0.1
PRU Pruhonice 150.72 345 *e*PKIKP **PKiKP** 17 12 05.0 +0.5
PRU Pruhonice 150.72 345⇑ *e*PKP **PKiKP** 17 12 05.0 +0.5
GOPC GO Pecny, Ondr 150.73 345 *e*PKIKP **PKiKP** 17 12 04.8 +0.3
GOPC GO Pecny, Ondr 150.73 345⇑ *e*PKP **PKiKP** 17 12 04.8 +0.3
DRGR 150.75 332 ⇑PKIKP **PKiKP** 17 12 05.0 +0.2
DRGR 150.75 332 ⇑P **PKiKP** 17 12 05.0 +0.2
SRCK Saricakaya, Es 150.75 314 *e*P **PKiKP** 17 12 04.6 -0.3
TANN Tannenbergstha 150.75 348 *e*PKPbc **PKiKP** 17 12 05.0 +0.4
baz=13,slow=2.3
TANN *e*pPKPbc **pPKPab** 17 12 53.5 +0.4
UBBA Unterbreizbach 150.76 352 *e*PKPbc **PKiKP** 17 12 04.8 +0.4
baz=13,slow=2.3
CIFT Cifteler, Eski 150.79 313 *e*P **PKiKP** 17 12 04.8 -0.3
VRAC Vranov 150.81 342 ⇑PKIKP **PKiKP** 17 12 05.3 +0.6
VRAC Vranov 150.81 342 ⇑P **PKiKP** 17 12 05.3 +0.6
VRAC Vranov 150.81 342 *e*PKP **PKiKP** 17 12 05.3 +0.6
SILT Sile 150.81 317 ⇑P **PKiKP** 17 12 04.9 0.0
SILT Sile 150.81 317 *e*P **PKiKP** 17 12 04.9 0.0
GUNZ Gunzen 150.83 348 *e*PKPbc **PKiKP** 17 12 05.5 +0.8
baz=13,slow=2.3
MTUR Matau 150.83 328 ⇑PKIKP **PKiKP** 17 12 04.8 -0.2
MTUR Matau 150.83 328 ⇑P **PKiKP** 17 12 04.8 -0.2
VYHS Vyhne 150.84 339 *e*PKIKP **PKiKP** 17 12 05.3 +0.5
VYHS Vyhne 150.84 339 *e*PKP **PKiKP** 17 12 05.3 +0.5
CSS Mathiatis 150.86 303 **PKPbc** 17 12 04.4 -0.3
JAVC Velka Javorina 150.89 341 *e*PKP **PKiKP** 17 12 06.7 +1.7
WERN Wernitzgruen 150.89 348 *e*PKPbc **PKiKP** 17 12 05.9 +1.0
baz=13,slow=2.3
NKC Novy Kostel 150.93 348 *e*PKIKP **PKiKP** 17 12 05.3 +0.4
NKC Novy Kostel 150.93 348⇑ *e*PKP **PKiKP** 17 12 05.3 +0.4

ARR Arges 150.94 328 ⇑P **PKiKP** 17 12 06.2 +1.0
PRD Provadia 150.96 322 *e*P **PKiKP** 17 12 05.5 +0.3
PSZ Piszkesteto 150.96 337 PKIKP **PKiKP** 17 12 05.1 -0.1
PSZ Piszkesteto 150.96 337 ⇑P **PKiKP** 17 12 05.0 -0.1
PSZ Piszkesteto 150.96 337 **PKiKP** 17 12 05.1 -0.1
HRT Hereke 150.97 316 *e*P **PKPbc** 17 12 05.1 +0.3
NEF NEVSHA 150.99 323 *e*P **PKiKP** 17 12 05.3 0.0
KRUC Moravsky 151.09 342 *e*PKP **PKiKP** 17 12 05.7 +0.4
TREC Trest 151.12 344 *e*PKIKP **PKiKP** 17 12 06.4 +1.0
TREC Trest 151.12 344⇑ *e*PKP **PKiKP** 17 12 06.4 +1.0
ADVT Abdulvahap 151.13 316 *e*P **PKiKP** 17 12 05.5 -0.1
LEF Lefka 151.15 303 *e*P **PKiKP** 17 12 05.7 -0.1
GAZI Gazipasa 151.21 306 *e*P **PKPbc** 17 12 05.0 -0.5
RAZG Razgrad 151.22 324 ⇑P **PKiKP** 17 12 06.1 +0.3
ISK Istanbul-Kandi 151.23 317 *e*P **PKPbc** 17 12 05.5 +0.2
MANZ Manzenberg 151.23 348 *e*PKPbc **PKiKP** 17 12 06.5 +0.9
baz=13,slow=2.3
MANZ *e*pPKPbc **pPKPab** 17 12 55.0 0.0
SMOL Smolenice 151.27 341 *e*PKIKP **PKiKP** 17 12 06.9 +1.2
SMOL Smolenice 151.27 341 *e*PKP **PKiKP** 17 12 06.9 +1.2
LOT Lotru 151.30 329 ⇑P **PKiKP** 17 12 05.8 -0.1
YLV Yalova 151.30 316 ⇑PKIKP **PKPbc** 17 12 05.6 0.0
YLV Yalova 151.30 316 ⇑P **PKPbc** 17 12 05.6 0.0
YLV Yalova 151.30 316 *e*P **PKPbc** 17 12 05.8 +0.2
AHRW Bad Neuenahr-A 151.35 355 *e*PKPbc **PKiKP** 17 12 06.7 +1.0
baz=13,slow=2.3
MEM Membach 151.36 357 PKPdf **PKPdf** 17 12 00.4 +1.2
MEM PKPbc **PKiKP** 17 12 06.0 +0.2
MEM PKiKP **PKPbc** 17 12 07.2 +1.9
DEV Deva 151.37 331 ⇑PKIKP **PKiKP** 17 12 06.5 +0.6
DEV Deva 151.37 331 ⇑P **PKiKP** 17 12 06.5 +0.6
HUMR Humele 151.37 327 ⇑P **PKiKP** 17 12 05.9 -0.1
ROTZ Rotzenmuhle 151.42 348 *e*PKPbc **PKiKP** 17 12 07.1 +1.2
baz=13,slow=2.3
MODS Modra-Piesok 151.44 341 *e*PKIKP **PKiKP** 17 12 06.4 +0.3
MODS Modra-Piesok 151.44 341 *e*PKP **PKiKP** 17 12 06.3 +0.2
SHUT Suhut-Afyon 151.52 312 *e*P **PKiKP** 17 12 06.9 +0.2
COPA Copaceanca 151.52 326 ⇑P **PKiKP** 17 12 06.5 +0.2
TNS Taunus Mts 151.54 353 *e*PKPbc **PKiKP** 17 12 07.0 +0.7
baz=13,slow=2.3
BCLA Clavier 151.58 358 PKPab **PKPab** 17 12 15.0 0.0
SRO Srobarova 151.60 339 *e*PKIKP **PKiKP** 17 12 07.4 +1.1
SRO *e* 17 12 15.9
SRO Srobarova 151.60 339 *e*PKP **PKiKP** 17 12 07.4 +1.1
SRO *e* 17 12 15.9
SIRR Siria 151.61 333 ⇑P **PKiKP** 17 12 07.2 +0.7
ARMT Armutlu 151.63 317 *e*P **PKPbc** 17 12 06.5 +0.2
SLVT Silivri 151.66 318 *e*P **PKiKP** 17 12 07.0 +0.3
GRF Grafenberg Arr 151.67 349 *e*PKPbc **PKiKP** 17 12 07.4 +0.9
baz=13,slow=2.3
BMRD Maredsous 151.72 358 PKPdf **PKPdf** 17 12 00.3 +0.7
BMRD PKiKP **PKiKP** 17 12 07.2 +0.7
BMRD PKPab **PKPab** 17 12 15.5 0.0
SZH Strazhica 151.73 324 *e*P **PKiKP** 17 12 06.8 0.0
KHC Kasperske Hory 151.74 346 *e*PKIKP **PKPbc** 17 12 06.2 -0.1
KHC *e* 17 12 15.5
KHC *e* 17 12 55.5
KHC Kasperske Hory 151.74 346⇑ *e*PKP **PKPbc** 17 12 06.2 -0.1
KHC *e*PKPAB **PKPab** 17 12 15.5 -0.2
KHC *e*pPKP **pPKPab** 17 12 55.5 -1.6
KHC Kasperske Hory 151.74 346 **PKPbc** 17 12 06.2 -0.1
ZIMR 151.77 325 ⇑PKIKP **PKiKP** 17 12 07.3 +0.4
ZIMR 151.77 325 ⇑P **PKiKP** 17 12 07.3 +0.4
GZR Gura Zlata 151.80 330 ⇑PKIKP **PKiKP** 17 12 07.1 +0.2
GZR Gura Zlata 151.80 330 ⇑P **PKiKP** 17 12 07.1 +0.2
TVSB Tavsanli 151.82 314 *e*P **PKiKP** 17 12 07.5 +0.2
PHSR Pinarhisar 151.85 320 *e*P **PKiKP** 17 12 07.6 +0.5
WET Wettzell 151.88 347 *e*PKPbc **PKiKP** 17 12 07.9 +1.0
baz=13,slow=2.3
DOU Dourbes 151.93 358 PKPdf **PKPdf** 17 12 00.8 +0.8
DOU PKiKP **PKiKP** 17 12 07.0 +0.1
GEC2 GERESS Array S 151.98 346 *e*PKPbc **PKiKP** 17 12 08.3 +1.1
baz=13,slow=2.3
GEC2 GERESS Array S 151.98 346 **PKiKP** 17 12 07.5 +0.2
GERES GERESS Array B 151.98 346 PKPbc **PKPbc** 17 12 06.9 -0.1
comp=N,1.5nm,0.5s,baz=24,slow=3.6,SNR=7.4
ELND Elena 151.99 323 ⇑P **PKiKP** 17 12 08.0 +0.7
VLAD Vladila 152.04 327 ⇑P **PKiKP** 17 12 08.3 +0.9
BZS Buzias 152.15 332 ⇑PKIKP **PKiKP** 17 12 07.6 0.0
BZS Buzias 152.15 332 ⇑P **PKiKP** 17 12 07.6 0.0
SRE Strehaia 152.15 329 ⇑PKIKP **PKiKP** 17 12 08.6 +1.0
SRE Strehaia 152.15 329 ⇑P **PKiKP** 17 12 08.6 +1.0
EDRB Edirne 152.18 321 P **PKPbc** 17 12 06.3 -1.2
EDRB Edirne 152.18 321 *e*P **PKiKP** 17 12 07.8 0.0
CONA Conrad Observa 152.26 342 *i* PKiKP **PKiKP** 17 12 08.7 +0.9
comp=N,14nm,0.7s,SNR=14
WLF Walferdange 152.29 356 *e*PKPbc **PKiKP** 17 12 09.2 +1.4
baz=13,slow=2.3
PLVB Pleven 152.35 325 ⇑P **PKiKP** 17 12 08.9 +0.8
MRMT Marmara Adasi 152.41 318 *e*P **PKPbc** 17 12 08.2 +0.1
BANR Banloc 152.54 332 ⇑P **PKiKP** 17 12 09.7 +1.4
PUNG Punghina 152.56 329 ⇓P **PKiKP** 17 12 08.4 0.0
KRBG Karabiga-Canak 152.71 318 *e*P **PKiKP** 17 12 09.4 +0.5
MDVR Moldovita 152.75 331 ⇑P **PKiKP** 17 12 09.6 +0.7
BALB Balikesir 152.76 316 *e

STAL	STALIGIAL	154.64	345			PKPbc	17 12 12.6	-0.1
BLY	Banja Luka	154.64	337	⇑P		PKiKP	17 12 13.6	+0.9
BLY	Banja Luka	154.64	337			PKiKP	17 12 13.2	+0.5
BLY	Banja Luka	154.64	337	*e*P		PKPbc	17 12 12.7	0.0
CEY	Cerknica	154.66	342	*i* PKPbc		PKiKP	17 12 13.6	+0.8
CEY	Cerknica	154.66	342	*e*P		PKiKP	17 12 13.2	+0.4
RUDO	Rudo	154.71	332	*e*P		PKiKP	17 12 13.0	+0.1
DAVOX	Davos/Dischmat	154.72	350	PKPbc		PKiKP	17 12 13.4	+0.3
OUR	Ouranopolis	154.75	321	P		PKPbc	17 12 12.5	-0.6
FUORN	Ofenpass-Fuorn	154.81	349			PKiKP	17 12 14.1	+0.7
FUORN				PKPab		PKPab	17 12 29.4	+0.3
STIP	Stip	154.82	326	*i* P		PKiKP	17 12 13.3	+0.1
VAY	Valandovo	154.88	325	*i* P		PKPbc	17 12 13.2	-0.2
MGRS	Mrkonjic Grad	154.96	337	*e*P		PKiKP	17 12 20.4	+6.9
SKO	Skopje	155.00	327	*i* P		PKPdf	17 12 13.4	+8.7
SENIN	Lac Senin/Sane	155.48	354			PKPab	17 12 31.9	+0.1
BRY	Bratogost	155.64	332	*e*P		PKPdf	17 12 14.6	+8.9
PDG	Podgorica	155.70	331	*e*P		PKPdf	17 12 15.4	+10
LIT	Litokhoron	155.76	322	PKIKP		PKPdf	17 12 14.6	+8.8
LIT							17 12 32.3	
LIT	Litokhoron	155.76	322	PKPdif		PKPdf	17 12 14.6	+8.8
LIT						PKPab	17 12 32.3	-0.8
DRME	Dracevica, Mon	155.93	330	*e*P		PKPdf	17 12 15.3	+9.4
STON	Ston	156.02	334	*e*P		PKPdf	17 12 14.4	+8.4
BNI	Bardonecchia	156.84	354	PKP2		PKPab	17 12 38.2	+0.6
BNI	Bardonecchia	156.84	354			PKPab	17 12 38.2	+0.6
OSSC	Osservatorio P	157.56	345			PKPab	17 12 39.9	-0.8
NRCA	Norcia	157.70	341			PKPab	17 12 41.2	-0.1
LATE	Laterza	158.28	343			PKPab	17 12 43.1	-0.7
ESDC	Sonseca Array	161.25	18	PKP		PKPdf	17 12 12.9	+0.5
	comp=N,0.4nm,0.5s,baz=343,slow=4.0,SNR=4.5							
ESDC				PKPab		PKPab	17 12 57.6	+0.7
	comp=N,2.0nm,0.7s,baz=332,slow=3.7,SNR=6.8							
LIC	Lamto	162.31	151	*e*PKIKP		PKPdf	17 12 13.9	-0.3
	comp=N,25nm,0.9s							
LIC	Lamto	162.31	151	*e*P		PKPab	17 13 02.8	+0.7
	comp=N,40nm,0.9s							
KIC	Kosan Boka	162.56	152	*e*PKIKP		PKPdf	17 12 14.0	-0.5
	comp=N,26nm,1.1s							
KIC	Kosan Boka	162.56	152	*e*P		PKPab	17 13 04.0	+0.8
	comp=N,18nm,0.5s							
TIC	Toumodi	162.69	150	*e*PKIKP		PKPdf	17 12 14.3	-0.3
	comp=N,6.1nm,0.3s							
TIC	Toumodi	162.69	150	*e*P		PKPab	17 13 04.6	+0.9
	comp=N,4.2nm,0.3s							
DBIC	Dimbokro	162.78	151	PKP2		PKPab	17 13 03.4	-0.7
DBIC							18 12 14.1	
DBIC	Dimbokro	162.78	151	PKP		PKPdf	17 12 14.4	-0.2
	comp=N,7.1nm,0.9s,baz=121,slow=4.2,SNR=9.3							
DBIC				PKPab		PKPab	17 13 03.8	-0.3
	comp=N,11nm,0.8s,baz=196,slow=6.4,SNR=14							
DBIC	Dimbokro	162.78	151			PKPdf	17 12 14.1	-0.5
DBIC						PKPab	17 13 03.4	-0.7
KEST	Kesra	165.37	341	PKPab		PKPab	17 13 14.9	-0.2
	comp=N,1.9nm,0.5s,baz=101,slow=4.3,SNR=3.1							
MDT	Midelt	167.04	32	PKPab		PKPab	17 13 23.6	+1.0
	comp=N,9.1nm,0.9s,baz=188,slow=1.5,SNR=10							
TOA0	Torodi Ar. Sit	171.05	169			PKPdf	17 12 19.9	-0.9
TOA0						PKPab	17 13 41.5	+1.0
TORD	Torodi Ar. Bea	171.05	169	PKP		PKPdf	17 12 20.1	-0.7
	comp=N,3.8nm,0.8s,baz=326,slow=0.7,SNR=20							
TORD				PKPab		PKPab	17 13 41.5	+1.0
	comp=N,13nm,0.9s,baz=174,slow=5.1,SNR=24							

NIED ***07*** *16:53:00,25.90N×129.60E,h5km,Mw3.7 Best double couple: M₀3.79000×10¹⁴ NP1:φ₁16.00000°, δ65.00000°, λ-120.00000°. NP2:φ₂251.00000°, δ38.00000°, λ-42.00000°.*

JMA 07 16:53:36.3±0.1, 25°89N×129°60E, h46km, M3.8, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMZ	Minamidaito 2	1.46	92	P	Pn	16 54 00.8	+0.6
JMZ				S	Sn	16 54 17.6	-0.6
JOW	Kunigami	1.52	309	P	Pn	16 54 01.7	+0.7
JOW				*e*S	Sn	16 54 19.3	-0.2
JKDJ	Kitadaitoujima	1.53	87	P	Pn	16 54 01.9	+0.7
JKDJ				S	Sn	16 54 19.9	0.0
JYRO	Yoronjima	1.53	318	P	Pn	16 54 02.0	+0.8
JYRO				*e*S	Sn	16 54 20.0	+0.1
JNTH	Nagotoyohara	1.55	294	P	Pn	16 54 02.0	+0.6
JNTH				S	Sn	16 54 20.1	-0.3
JJT3	Tamagusuku3	1.65	279	P	Pn	16 54 04.0	+1.1
JJT3				S	Sn	16 54 23.7	+0.8
JOKE	Okinoerabujima	1.73	328	P	Pn	16 54 05.0	+1.1
JIH	Iheya	1.85	308	P	Pn	16 54 06.6	+1.0
JIH				S	Sn	16 54 27.5	-0.4
JTK	Tokunoshima	1.98	343	P	Pn	16 54 08.5	+1.2
JTK				S	Sn	16 54 31.2	+0.3
JAGN	Aguni-jima	2.23	289	P	Pn	16 54 11.8	+1.1
JAGN				S	Sn	16 54 37.2	+0.1
JAMN	Amaminishikomi	2.37	351	P	Pn	16 54 14.0	+1.3
JZK	Kikaishima	2.44	8	P	Pn	16 54 15.7	+2.1
JZK				S	Sn	16 54 43.8	+1.6
JAM	Amami Oshima	2.51	0	P	Pn	16 54 15.6	+1.0
JKE	Kume jima 2	2.57	280	P	Pn	16 54 15.7	+0.3
JKE				*e*S	Sn	16 54 44.0	-1.4
JTAJ	Takarajima	3.27	354	P	Pn	16 54 26.2	+1.2
JTAJ				S	Sn	16 55 01.8	-0.9
JNN	Nakanoshima	3.94	3	P	Pn	16 54 35.6	+1.3
JOGS	Gusukube	3.96	254	P	Pn	16 54 35.9	+1.4
JOGS				*e*S	Sn	16 55 19.1	-0.6

KRSC 07 16:57:06.3±1.0, 60.08N×163.46E, h25km±18km, ML4.3, FELT [II] at Ilpyrskiy., Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OSSR	Ossora	0.86	194	*e*P	Pb	16 57 22.5	0.0
OSSR				*e*S	Sb	16 57 33.9	+0.4
TILK	Tilichiki	1.39	74	*i* P	Pb	16 57 32.4	+0.9
TILK				*e*S	Sb	16 57 50.6	+1.8
PALN	Palana	2.04	242	*e*P	Pb	16 57 41.5	-1.0
PALN				*e*S	Sb	16 58 06.0	-1.3
KMSK	Kamenskaya	2.74	28	*e*P	Pn	16 57 50.0	+1.5
KMSK				*e*S	Sb	16 58 24.4	-3.1
KBG	Krutoberegovo	3.86	186	*e*P	Pn	16 58 08.2	+4.3
SRDR	Sredinnyy	4.26	209	P	Pb	16 58 15.2	-5.2
KMNR	Kamenistaya	4.66	203	*e*P	Pn	16 58 19.4	+4.3
ESO	Esso	4.87	213	*e*P	Pn	16 58 22.0	+4.1
BKI	Bering	5.07	163	*e*P	Pn	16 58 23.4	+2.8

IDC ***07*** *16:57:56.5±0.8,8.80S×163.80E,h0km,mb4.4/16, mb1 4.5/17,mb1mx4.3/52,mbtmp4.4/17,ML4.8/1,MS3.7/9, Ms1 3.7/9,ms1mx3.4/35,Error ellipse: s-maj=25.1km s-min=18.3km az=132.0*

NEIC ***07*** *16:57:59.4±1.5,8.75S±0.08×163.72E±0.08,h17km±4km, mb4.9/38,Error ellipse: s-maj=12.0km s-min=11.1km az=194.0*

ISC 07 16:58:01.5±0.5, 8.76S±0.07×163.76E±0.07, h35km, n89, σ0.88/78, mb4.9/35, MS3.7/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	3.83	260	Pn	**Pn**	**16 58 58.2**	**+0.2**
HNR	71nm,0.3s,baz=185,slow=3.0,SNR=53			Sn	**Sn**	**16 59 41.1**	**-0.7**
	243nm,0.3s,baz=156,slow=10.0,SNR=5.7						
HNR	Honiara	3.83	260	*e*P	**Pn**	**16 58 58.0**	**0.0**
HNR				*i* S	**Sn**	**16 59 42.0**	**+0.2**
HNR	Honiara	3.83	260		**Pn**	**16 58 57.9**	**-0.1**
DZM	Mont Dzumac	13.48	169	Pn	**Pn**	**17 01 10.3**	**-0.2**
TARA	Tarawa	13.57	43	Pn	**Pn**	**17 01 09.1**	**-2.6**
PMG	Port Moresby	16.41	266	LR	LR	17 07 58.1	
	comp=Z,480nm,18.2s,baz=94,slow=37						
PATS	Pohnpei	16.42	341	Pn	**Pn**	**17 01 47.0**	**-2.4**
PATS				IAmb	IAmb	17 02 01.2	
	comp=Z,83nm,0.9s						
MSVF	Nonsavu	16.51	124	Pn	**Pn**	**17 01 50.0**	**-0.6**
CTA	Charters Tower	20.33	234	P	Pn	17 02 36.0	-1.1
	comp=Z,17nm,0.8s,baz=66,slow=13,SNR=6.4						
COEN	Coen	20.83	254	P	**P**	**17 02 40.0**	**-0.3**
LHI	Lord Howe Isla	23.07	190	P	**P**	**17 03 03.5**	**-0.5**
ARMA	Armidale	24.35	206	P	**P**	**17 03 16.0**	**-0.4**
ARMA				IAmb	IAmb	17 03 32.7	
	comp=Z,41nm,1.4s						
AFI	Afiamalu	24.51	104	LR	LR	17 10 40.1	
	comp=Z,130nm,19.9s,baz=302,slow=31						
RAO	Raoul Island	26.67	142	LR	LR	17 12 10.0	
	comp=Z,137nm,21.9s,baz=81,slow=32						
H11S2	WAKE ISLAND Hy	27.23	6	T	T	17 32 17.0	
	baz=189,slow=76,SNR=259						
H11S3	WAKE ISLAND Hy	27.23	6	T	T	17 32 17.1	
	baz=189,slow=76,SNR=136						
H11S1	WAKE ISLAND Hy	27.25	6	T	T	17 32 18.8	
	baz=189,slow=76,SNR=134						
STKA	Stephens Creek	30.87	219	LR	LR	17 16 27.3	
	comp=Z,160nm,18.4s,baz=47,slow=36						
URZ	Urewera	31.74	160	LR	LR	17 15 06.6	
	comp=Z,107nm,20.0s,baz=318,slow=32						
AS31	Alice Springs	32.18	239	P	**P**	**17 04 24.9**	**-1.4**
ASAR	Alice Springs	32.18	239	P	**P**	**17 04 25.4**	**-1.0**
	comp=Z,5.1nm,0.8s,baz=66,slow=9.2,SNR=4.3						
ASAR	Alice Springs	32.18	239	P	**P**	**17 04 25.1**	**-1.3**
TOO	Toolangi	33.10	207	P	**P**	**17 04 35.4**	**+1.1**
BFZ	Birch Farm	33.67	163	P	**P**	**17 04 38.7**	**-0.5**
BBOO	Buckleboo	35.06	223	P	**P**	**17 04 50.9**	**-0.3**
FITZ	Fitzroy Crossi	38.16	252	LR	LR	17 20 10.1	
	comp=Z,140nm,19.0s,baz=125,slow=35						
BATI	Baumata	39.56	265	P	**P**	**17 05 29.2**	**-0.5**
	comp=Z,25nm,0.8s,baz=104,slow=4.2,SNR=3.9						
MMRI	Maumere	41.03	267	P	**P**	**17 05 41.1**	**-0.8**
MMRI				IAmb	IAmb	17 05 44.3	
	comp=Z,59nm,1.3s						
DAV	Davao City (W)	41.18	291	LR	LR	17 19 54.7	
	comp=Z,146nm,21.0s,baz=53,slow=32						
KKM	Kota Kinabalu	49.63	286	P	**P**	**17 06 49.8**	**-0.4**
JNU	Nakatsue	52.10	325	P	**P**	**17 07 08.8**	**+0.5**
	comp=Z,8.4nm,0.8s,baz=66,slow=2.8,SNR=4.2						
JNU	Nakatsue	52.10	325	IAmb	IAmb	17 07 17.6	
	comp=Z,23nm,1.0s						
YULB	Yu-li	52.40	308	P	**P**	**17 07 10.3**	**-0.4**
YULB				IAmb	IAmb	17 07 21.6	
	comp=Z,18nm,1.2s						
TPUB	Ta-pu	52.87	308	P	**P**	**17 07 12.9**	**-1.3**
KSRS	Korea Array	56.90	326	P	**P**	**17 07 43.6**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=140,slow=7.9,SNR=3.4						
USRK	Ussuriysk Ar.	60.05	334	P	**P**	**17 08 06.2**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=90,slow=7.5,SNR=3.3						
PETK	Petropavlovsk-	61.84	356	P	**P**	**17 08 17.5**	**+0.6**
	comp=Z,2.6nm,0.7s,baz=189,slow=8.5,SNR=5.4						
PETK				LR	LR	17 30 27.7	
	comp=Z,60nm,20.9s,baz=58,slow=32						
KLR	Kul'dur	64.20	337	P	**P**	**17 08 33.5**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=71,slow=3.6,SNR=3.8						
PBKT	Sadao Pong	67.01	292	P	**P**	**17 08 52.5**	**+1.0**
PBKT				IAmb	IAmb	17 08 53.9	
	comp=Z,5.7nm,0.8s						
VNDA	Vanda	68.74	180	LR	LR	17 36 17.8	
	comp=Z,49nm,18.1s,baz=289,slow=34						
CMAR	Chiang Mai Arr	69.42	293	P	**P**	**17 09 07.5**	**+0.9**
	comp=Z,3.7nm,1.0s,baz=111,slow=4.5,SNR=8.7						
YAK	Yakutsk	75.37	344	P	**P**	**17 09 41.7**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=39,slow=1.4,SNR=5.0						
YAK	Yakutsk	75.37	344	P	**P**	**17 09 41.8**	**+0.6**
SONM	Songino Array	75.68	324	P	**P**	**17 09 44.7**	**+1.2**
	comp=Z,1.2nm,0.4s,baz=140,slow=5.4,SNR=20						
SONM	Songino Array	75.68	324	P	**P**	**17 09 43.6**	**+0.1**
SONM				IAmb	IAmb	17 09 45.5	
	comp=Z,4.1nm,1.0s						
SHL	Shillong	77.72	299	P	**P**	**17 09 55.3**	**-0.2**
MCK	McKinley	80.63	19	P	**P**	**17 10 10.7**	**+0.3**
MCK				IAmb	IAmb	17 10 20.2	
	comp=Z,17nm,1.3s						
QSPA	South Pole Qui	81.23	180	P	**P**	**17 10 14.3**	**+0.5**
	comp=Z,12nm,1.0s,baz=329,slow=1.0,SNR=15						
QSPA	South Pole Qui	81.23	180	P	**P**	**17 10 14.2**	**+0.4**
QSPA				IAmb	IAmb	17 10 15.7	
	comp=Z,14nm,1.0s						
HDA	Harding Lake	81.74	19	P	**P**	**17 10 16.8**	**+0.6**
TAPN	Taplejung	81.79	299	*e*P	**P**	**17 10 18.7**	**+1.0**
ODAN	Odare	81.95	299	*e*P	**P**	**17 10 19.4**	**+0.9**
	comp=Z,21nm,0.8s						
ILAR	Eielson Array	81.99	19	P	**P**	**17 10 17.6**	**0.0**
	comp=Z,2.0nm,0.9s,baz=240,slow=4.7,SNR=7.8						
ILAR	Eielson Array	81.99	19	P	**P**	**17 10 17.8**	**+0.2**
RAMN	Ramite	82.66	299	*e*P	**P**	**17 10 22.8**	**+0.6**
GUN	Gumba	83.50	299	*e*P	**P**	**17 10 27.4**	**+0.7**
	comp=Z,18nm,0.9s						
PKI	Pulchoki	83.83	299	*e*P	**P**	**17 10 29.0**	**+0.7**
KKN	Kakani	83.99	299	*e*P	**P**	**17 10 29.3**	**+0.3**
	comp=Z,17nm,0.9s						
DMN	Daman	84.10	299	*e*P	**P**	**17 10 30.3**	**+0.7**
	comp=Z,44nm,1.1s						
GKN	Gorkha	84.59	299	*e*P	**P**	**17 10 32.3**	**+0.3**
	comp=Z,23nm,0.8s						
MDPB	Devils Postpil	85.27	51	P	**P**	**17 10 36.0**	**+0.6**
DANN	Dangsing	85.43	299	*e*P	**P**	**17 10 36.3**	**0.0**
	comp=Z,18nm,0.7s						
KOLN	Koldanda	85.44	299	*e*P	**P**	**17 10 36.5**	**+0.2**
	comp=Z,15nm,0.8s						
NVAR	Mina Array Bea	86.06	50	P	**P**	**17 10 40.3**	**+1.1**
	comp=Z,0.3nm,0.2s,baz=238,slow=8.0,SNR=6.6						
NVAR	Mina Array Bea	86.06	50	P	**P**	**17 10 39.9**	**+0.7**
NV11	Mina Array Sit	86.18	50	P	**P**	**17 10 40.9**	**+1.2**
EPYK	Eagle Plains	86.35	20	P	**P**	**17 10 41.1**	**+1.4**
KVN	Kaiserville	86.37	50	P	**P**	**17 10 41.4**	**+0.7**
WVOR	Wild Horse Val	86.82	46	P	**P**	**17 10 43.9**	**+1.2**
WVOR				IAmb	IAmb	17 10 49.9	
	comp=Z,20nm,1.8s						
G08A	Pilot Rock	87.33	44	P	**P**	**17 10 46.1**	**+1.0**
G08A				IAmb	IAmb	17 10 48.0	
	comp=Z,6.9nm,1.2s						
SHPR	Sheep Range	88.06	53	P	**P**	**17 10 49.5**	**+0.7**
SHPR				IAmb	IAmb	17 10 53.2	
	comp=Z,6.6nm,1.2s						
R11A	Troy Canyon, C	88.12	51	P	**P**	**17 10 50.0**	**+0.8**
R11A				IAmb	IAmb	17 11 36.2	
	comp=Z,3.8nm,0.6s						
BMO	Blue Mountains	88.36	44	P	**P**	**17 10 50.8**	**+0.8**
BMO				IAmb	IAmb	17 10 52.8	
	comp=Z,10nm,1.5s						
F10A	Beach Ranch, E	88.68	43	P	**P**	**17 10 52.3**	**+0.8**
F10A				IAmb	IAmb	17 10 58.2	
	comp=Z,25nm,1.9s						
U15A	North Rim	90.31	53	P	**P**	**17 10 59.9**	**+0.3**
U15A				IAmb	IAmb	17 11 03.0	
	comp=Z,7.0nm,1.0s						
PKCU	Pink Cliffs	90.48	52	P	**P**	**17 11 01.1**	**+0.7**
MSU	Marysvale	90.78	51	P	**P**	**17 11 03.0**	**+1.3**
MCMT	McKenzie Canyo	91.45	45	P	**P**	**17 11 05.8**	**+1.2**
TMUT	Trail Mountain	91.66	51	P	**P**	**17 11 06.6**	**+0.8**
YHL	Hebgen Lake	92.62	45	P	**P**	**17 11 11.5**	**+1.4**
YMR	Madison River	92.74	45	P	**P**	**17 11 11.7**	**+1.1**
MOOW	Moose Ponds	92.75	46	P	**P**	**17 11 12.0**	**+1.4**
MOOW				IAmb	IAmb	17 11 13.9	
	comp=Z,7.6nm,1.4s						
PD31	Pinedale Array	93.45	47	P	**P**	**17 11 15.1**	**+1.1**
PD31				IAmb	IAmb	17 11 49.8	
	comp=Z,14nm,2.0s						
PDAR	Pinedale Array	93.45	47	P	**P**	**17 11 14.6**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=269,slow=1.2,SNR=9.2						
PDAR	Pinedale Array	93.45	47	P	**P**	**17 11 14.8**	**+0.9**
YKA	Yellowknife Ar	93.85	27	P	**P**	**17 11 15.0**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=256,slow=4.7,SNR=10						
KEST	Kesra	144.43	323	PKP	**PKPdf**	**17 17 34.8**	**0.0**
	comp=Z,8.7nm,1.0s,baz=322,slow=4.6,SNR=6.7						
ESDC	Sonseca Array	147.32	342	PKPbc	**PKPbc**	**17 17 42.1**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=34,slow=4.1,SNR=6.4						
TORD	Torodi Ar. Bea	161.87	286	PKPab	**PKPab**	**17 18 45.9**	**0.0**
	comp=Z,0.9nm,0.7s,baz=75,slow=5.7,SNR=4.1						

WEL 07 16:58:53.6, 37°S±7.0°×178.0°W±6.1, h9km±47km, M4.7/17, mB5.2/13, ML5.3/10, MLv5.0/17, Mw(mB)4.6/13, Error ellipse: s-maj=0.1km s-min=0.1km az=14.5,

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TKGZ	Te Karaka	2.59	222	P	Pn	16 59 16.2	-19
RIGZ	Rimuhau	2.83	220	P	Pn	16 59 17.9	-21
RAGZ	Rawiri	2.87	226	P	Pn	16 59 25.2	-14
PRGZ	Paritu Road	2.94	215	P	Pn	16 59 16.9	-24
SNGZ	Shannon Statio	3.11	223	P	Pn	16 59 25.3	-18
KNZ	Kokohu	3.12	217	P	Pn	16 59 25.8	-17
RAHZ	Arahi	3.35	224	P	Pn	16 59 29.6	-16
WHHZ	Waihua	3.38	221	P	Pn	16 59 32.3	-14
MTHZ	Maungataniwha	3.44	227	P	Pn	16 59 30.8	-17
ALRZ	Allen Road	3.58	235	P	Pn	16 59 35.7	-14
CKHZ	Cape Kidnapper	3.90	216	P	Pn	16 59 43.7	-10
KAHZ	Kahuranaki	4.11	217	P	Pn	16 59 47.0	-10
KRHZ	Kereru	4.25	222	P	Pn	16 59 47.1	-11
PXZ	Pawanui	4.30	215	P	Pn	16 59 56.3	-2.8
BHHZ	Black Hill Sta	4.32	226	P	Pn	16 59 50.4	-9.1
MOVZ	Moawhango	4.45	229	P	Pn	16 59 49.1	-12
FWVZ	Far West T-bar	4.48	231	P	Pn	16 59 51.9	-10
WPHZ	Waipukurau	4.53	218	P	Pn	16 59 55.5	-6.8
PNHZ	Pukenui	4.54	221	P	Pn	16 59 53.2	-9.3
PRHZ	Porangahau	4.59	215	P	Pn	16 59 58.8	-4.4
TSZ	Takapari Road	4.77	221	P	Pn	16 59 58.0	-7.7
ANWZ	Angora Road	4.82	215	P	Pn	17 00 04.1	-2.2
DVHZ	Dannevirke	4.84	218	P	Pn	17 00 02.8	-3.8
BFZ	Birch Farm	5.10	215	P	Pn	17 00 06.6	-3.6
POWZ	Post Office Ro	5.11	220	P	Pn	17 00 08.1	-2.3
WAZ	Wanganui	5.13	230	P	Pn	17 00 04.0	-6.6
PRWZ	Pori Road	5.13	217	P	Pn	17 00 08.6	-2.0
CPWZ	Castlepoint	5.30	214	P	Pn	17 00 14.6	+1.6
MRZ	Mangatainoka R	5.41	219	P	Pn	17 00 08.3	-6.1
TMWZ	Te Maipa	5.60	214	P	Pn	17 00 16.1	-1.0
OGWZ	Otaki Gorge	5.73	220	P	Pn	17 00 17.7	-1.2
MTW	Mount Morrison	5.83	216	P	Pn	17 00 21.5	+1.4
KIW	Kapiti Island	5.90	221	P	Pn	17 00 20.4	-0.8
TRWZ	Traveller	5.93	214	P	Pn	17 00 26.3	+4.7
CAW	Cannon Point	6.00	219	P	Pn	17 00 24.0	+1.5
PAWZ	Paruwai Farm	6.03	215	P	Pn	17 00 28.3	+5.2
MSWZ	Moikau Station	6.14	216	P	Pn	17 00 29.1	+4.6
PLWZ	Palliser	6.26	215	P	Pn	17 00 32.5	+6.3
WEL	Wellington	6.28	219	P	Pn	17 00 31.5	+5.1
BHW	Baring Head	6.32	218	P	Pn	17 00 30.5	+3.5
DUWZ	D'Urville Isla	6.42	227	P	Pn	17 00 28.2	-0.1
TCW	Tory Channel	6.49	222	P	Pn	17 00 32.8	+3.6
TUWZ	Tuamarina	6.82	222	P	Pn	17 00 37.5	+3.7
CMWZ	Cape Campbell	6.91	219	P	Pn	17 00 43.1	+8.1
NNZ	Nelson	7.00	226	P	Pn	17 00 39.9	+3.7
BSWZ	Blackbirch Sta	7.06	221	P	Pn	17 00 44.3	+7.2

MAN 07 17:02:19.4, 6.11N×125.98E, h23km, mb4.3, ML3.1, MS2.8, Mindanao

ROM 07 17:11:13.9±0.1, 43.367N±0.003×12.556E±0.004, h7km, ML1.6/11, Error ellipse: s-maj=0.3km s-min=0.2km az=326.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	Monte Foce - G	0.01	93	*e*P	Pg	17 11 15.2	-0.1
ATFO				S	Sg	17 11 15.9	-0.4
ATFO				AML	AML		
	comp=E,6860μm,0.3s						
ATFO				AML	AML		
	comp=N,8355μm,0.5s						
MURB	Monte Urbino	0.11	192	P	Pg	17 11 17.0	+0.7
MURB				S	Sg	17 11 19.3	+1.3
MURB				AML	AML		
	comp=E,1009μm,1.1s						
MURB				AML	AML		
	comp=N,1215μm,0.3s						
MURB				AML	AML		
	comp=N,1230μm,0.3s						
MURB				AML	AML		
	comp=E,921μm,0.3s						
MURB				AML	AML		
	comp=E,1008μm,1.1s						
ATVO	AVT- Monte Val	0.11	278	P	Pg	17 11 16.8	+0.4
ATVO				S	Sg	17 11 18.7	+0.6
ATVO				AML	AML		
	comp=E,442μm,0.4s						
ATVO				AML	AML		
	comp=N,418μm,0.6s						
ATVO				AML	AML		
	comp=E,442μm,0.4s						
ATPI	Pietralunga -	0.14	307	P	Pg	17 11 17.4	+0.5
ATPI				S	Sg	17 11 20.0	+1.0
ATPI				AML	AML		
	comp=E,159μm,0.5s						
ATPI				AML	AML		
	comp=N,238μm,0.7s						
PIEI	Pieia	0.17	355	P	Pg	17 11 18.0	+0.6
PIEI				S	Sg	17 11 21.3	+1.5
PIEI				AML	AML		
	comp=N,450μm,0.2s						
PIEI				AML	AML		
	comp=E,544μm,0.3s						
SSFR	Montelago di S	0.18	67	P	Pg	17 11 18.2	+0.7
SSFR				S	Sg	17 11 21.6	+1.5
SSFR				AML	AML		
	comp=E,478μm,0.1s						
SSFR				AML	AML		
	comp=N,486μm,0.3s						
SSFR				AML	AML		
	comp=E,388μm,0.2s						
SSFR				AML	AML		
	comp=N,655μm,1.6s						
ATCC	AVT- Casa Cast	0.19	161	AML	AML		
	comp=E,306μm,0.5s		

TOSP	**Speyside**	**1.80**	**74**	*eP*	**Pn**	**17 15 49.7**	**+0.4**
TOSP				*eS*	**Sn**	**17 16 11.2**	**-0.7**
ORIV	**Oritupano**	**2.04**	**213**	*eP*	**Pn**	**17 15 54.1**	**+1.6**
ORIV				*eS*	**Sn**	**17 16 18.1**	**+0.6**
PCRV	**Puerto La Cruz**	**2.39**	**255**	*eP*	**Pn**	**17 15 58.4**	**+1.3**
PCRV				*eS*	**Sn**	**17 16 25.0**	**-0.8**
RIOV	**Rio Grande**	**2.75**	**170**	*eP*	**Pn**	**17 16 03.2**	**+1.3**
RIOV				*eS*	**Sn**	**17 16 33.8**	**-0.6**
PRGV	**PARIAGUAN**	**3.08**	**229**	*eS*	**Sn**	**17 16 42.0**	**-0.2**
CUPV	**Cpira**	**3.52**	**258**	*eP*	**Pn**	**17 16 14.1**	**+1.8**
CUPV				*eS*	**Sn**	**17 16 52.4**	**-0.6**
BIRV	**Birongo**	**3.92**	**266**	*eP*	**Pn**	**17 16 18.8**	**+1.1**
MERV	**Las Mercedes**	**4.23**	**249**	*eS*	**Sn**	**17 17 08.9**	**-1.3**
LUEV	**Luepa**	**4.99**	**170**	*eP*	**Pn**	**17 16 32.5**	**+0.2**
LUEV				*eS*	**Sn**	**17 17 25.0**	**-3.8**
BAUV	**El Baul**	**5.96**	**253**	*eP*	**Pn**	**17 16 46.5**	**+1.2**
BAUV				*eS*	**Sn**	**17 17 49.0**	**-3.3**

*DJA **07** 18:03:44.1±0.2,6˚S±2˚×12˚8E±˚,h414km±3km,M4.6/21, mB4.8/7,mb4.2/21,MLv5.2/1,MLv4.6/15,Mw(mB)4.1/7, Mwp5.8/1*

*NEIC **07** 18:03:44.3±2.1,6˚20S±0˚09×127˚6E±0˚1,h426km±11km, mb4.3/32,Error ellipse: s-maj=15.1km s-min=12.6km az=95.0*

*IDC **07** 18:03:45.0±1.8,6˚23S×127˚61E,h429km±22km,mb3.3/8, mb1 3.6/13,mb1mx3.3/34,mbtmp4.3/13,Error ellipse: s-maj=29.4km s-min=9.2km az=78.0*

ISC 07 18:03:43.1±0.4,**6˚21S**±0˚04×**127˚63E**±0˚05,**h404**km,**n91,** σ1§**68**/111,**mb3.7**/14,**1C,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**2.57**	**13**	P	**P**	**18 04 46.3**	**+3.0**
AAI				S	**S**	**18 05 35.3**	**+3.3**
BNDI	**Bandanaira**	**2.81**	**54**	P	**P**	**18 04 48.4**	**+3.3**
NLAI	**Namlea**	**3.00**	**350**	P	**P**	**18 04 49.8**	**+3.2**
NLAI				S	**S**	**18 05 40.5**	**+2.4**
MSAI	**Masohi**	**3.12**	**24**	P	**P**	**18 04 56.6**	**+1.0**
MSAI				S	**S**	**18 05 40.6**	**+0.6**
SAUI	**Saumlaki**	**4.04**	**116**	P	**P**	**18 04 57.5**	**+1.8**
SAUI				S	**S**	**18 05 58.0**	**+3.1**
SAUI	**Saumlaki**	**4.04**	**116**	P	**P**	**18 04 59.4**	**+3.7**
SAUI				S	**S**	**18 05 53.2**	**-1.7**
SANI	**Sanana**	**4.45**	**338**	P	**P**	**18 05 00.2**	**+0.5**
SANI				S	**S**	**18 06 02.0**	**-0.1**
SOEI	**Soe**	**4.85**	**223**	P	**P**	**18 05 05.5**	**+1.8**
SOEI				S	**S**	**18 06 11.2**	**+1.6**
SOEI	**Soe**	**4.85**	**223**	P	**P**	**18 05 06.1**	**+2.3**
SOEI				S	**S**	**18 06 12.3**	**+2.7**
FAKI	**Fak Fak**	**5.64**	**55**	P	**P**	**18 05 13.4**	**+1.5**
	1.0nm4µm283nm,0.8s						
FAKI	**Fak Fak**	**5.64**	**55**	P	**P**	**18 05 13.8**	**+1.9**
FAKI				S	**S**	**18 06 20.5**	**-4.1**
MMRI	**Maumere**	**5.87**	**245**	P	**P**	**18 05 15.3**	**+1.0**
MMRI	**Maumere**	**5.87**	**245**	P	**P**	**18 05 15.2**	**+1.0**
SIJI	**Sorong**	**6.43**	**34**	P	**P**	**18 05 22.9**	**+2.6**
	26nm,0.3s,baz=217,slow=11,SNR=36						
SIJI				S	**S**	**18 06 37.8**	**-2.4**
	7.5nm,0.3s,baz=121,slow=23,SNR=7.5						
SWI	**Sorong**	**6.43**	**34**	P	**P**	**18 05 22.6**	**+2.3**
	0.5nm2µm131nm,1.0s						
SWI				S	**S**	**18 06 40.6**	**+0.5**
	0.5nm2µm131nm,1.0s						
KMPI	**Kaimana, Papua**	**6.56**	**68**	P	**P**	**18 05 23.9**	**+1.3**
	1.4nm4µm4µm385nm,0.8s						
KMPI				S	**S**	**18 06 42.5**	**-0.2**
	1.4nm4µm4µm385nm,0.8s						
TNTI	**Ternate**	**6.94**	**358**	P	**P**	**18 05 26.5**	**-0.4**
	0.2nm30nm,1.6s						
TNTI				S	**S**	**18 06 51.1**	**+0.5**
	0.2nm30nm,1.6s						
TNTI	**Ternate**	**6.94**	**358**	P	**P**	**18 05 27.9**	**+1.1**
LUWI	**Luwuk**	**7.06**	**316**	P	**P**	**18 05 28.1**	**-0.1**
MTN	**Manton Dam**	**7.44**	**153**	P	**P**	**18 05 34.2**	**+1.9**
KMSI	**Cibinong**	**7.66**	**331**	P	**P**	**18 05 36.5**	**+1.6**
	0.5nm1µm158nm,0.7s						
BNSI	**Bone**	**7.71**	**283**	P	**P**	**18 05 36.7**	**+1.4**
	0.1nm13nm,1.2s						
RKPI	**Ransiki, Papua**	**8.03**	**55**	P	**P**	**18 05 42.6**	**+3.8**
WSI	**Waingapu**	**8.04**	**244**	P	**P**	**18 05 41.9**	**+3.0**
	98nm,0.6s						
TTSI	**Tana Toraja**	**8.40**	**292**	P	**P**	**18 05 45.8**	**+2.8**
	14nm,0.7s						
MRSI	**Marisa**	**8.74**	**319**	P	**P**	**18 05 47.4**	**+0.6**
	469nm44nm,1.0s						
KNRA	**Kununurra**	**9.47**	**173**	P	**P**	**18 05 57.0**	**+2.1**
MPSI	**Mapaga**	**10.10**	**310**	P	**P**	**18 06 03.2**	**+1.4**
	709nm9.8nm,0.7s						
PLAI	**Plampang**	**10.11**	**255**	P	**P**	**18 06 00.6**	**-1.4**
	19nm,0.8s						
TWSI	**Taliwang, Sumb**	**10.95**	**256**	P	**P**	**18 06 11.2**	**-0.1**
	10nm,1.4s						
FITZ	**Fitzroy Crossi**	**11.97**	**189**	P	**P**	**18 06 23.8**	**+1.4**
	1.2nm,0.3s,baz=16,slow=11,SNR=66						
FITZ				S	**S**	**18 08 32.0**	**-2.1**
	0.2nm,0.3s,baz=186,slow=17,SNR=4.3						
FITZ	**Fitzroy Crossi**	**11.97**	**189**	P	**P**	**18 06 24.0**	**+1.5**
FITZ				S	**S**	**18 08 30.8**	**-3.3**
DDMP	**Don Marcelino,**	**12.38**	**351**	*eP*	P	18 06 20.3	-6.7
IGBI	**Denpasar**	**12.65**	**257**	P	**P**	**18 06 30.2**	**+0.2**
	47nm,1.4s						
SKMP	**Bagumbayan, Su**	**13.02**	**346**	*eP*	**P**	**18 06 33.7**	**-0.3**
KCP	**Kidapawan**	**13.38**	**349**	I/P	**P**	**18 06 39.0**	**+0.9**
JAY	**Jayapura**	**13.54**	**75**	P	**P**	**18 06 42.4**	**+2.6**
	0.3nm,0.3s,baz=198,slow=16,SNR=4.0						
JAGI	**Jajag, Banyuwa**	**13.56**	**260**	P	**P**	**18 06 38.8**	**-1.1**
	16nm,0.8s						
JAGI	**Jajag, Banyuwa**	**13.56**	**260**	P	**P**	**18 06 38.2**	**-1.7**
WRAB	**Tennant Creek**	**15.12**	**155**	P	**P**	**18 06 58.2**	**+1.3**
WRAB				IAmb	IAmb	18 06 59.0	
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**15.12**	**155**	P	**P**	**18 06 58.4**	**+1.5**
	comp=Z,6.7nm,0.3s,baz=343,slow=17,SNR=275						
WRA				S	**S**	**18 09 35.6**	**-1.7**
	comp=Z,0.7nm,0.3s,baz=331,slow=20,SNR=12						
WRA	**Warramunga Arr**	**15.12**	**155**	P	**P**	**18 06 56.7**	**-0.2**
WRA				S	**S**	**18 09 34.9**	**-2.4**
WR0	**Warramunga Arr**	**15.22**	**154**	P	**P**	**18 06 59.1**	**+1.1**
WR0				S	**S**	**18 09 37.3**	**-1.9**
KKM	**Kota Kinabalu**	**16.68**	**317**	P	**P**	**18 07 13.9**	**+0.2**
PSAD1	**Pilbara Seismi**	**16.93**	**206**	P	**P**	**18 07 15.7**	**-0.5**
PSAD1				IAmb	IAmb	18 07 26.2	
	comp=Z,27nm,1.4s						
PSAC2	**Pilbara Seismi**	**17.00**	**205**	P	**P**	**18 07 16.2**	**-0.8**
PSAC2				IAmb	IAmb	18 07 19.1	
	comp=Z,20nm,1.4s						
PSAB2	**Pilbara Seismi**	**17.01**	**205**	P	**P**	**18 07 16.3**	**-0.7**
PSAB2				IAmb	IAmb	18 07 43.1	
	comp=Z,13nm,1.2s						
PSAC1	**Pilbara Seismi**	**17.01**	**206**	P	**P**	**18 07 17.2**	**+0.2**
PSAC1				IAmb	IAmb	18 07 35.9	
	comp=Z,30nm,1.6s						
PSAD2	**Pilbara Seismi**	**17.02**	**205**	P	**P**	**18 07 16.7**	**-0.5**
PSAD2				IAmb	IAmb	18 07 25.9	
	comp=Z,14nm,1.2s						
PSAA2	**Pilbara Seismi**	**17.02**	**206**	P	**P**	**18 07 17.3**	**+0.1**
PSAA2				IAmb	IAmb	18 07 43.3	
	comp=Z,20nm,1.4s						
PSA00	**Pilbara Seismi**	**17.03**	**206**	P	**P**	**18 07 17.8**	**+0.5**
PSA00				IAmb	IAmb	18 07 18.2	
	comp=Z,11nm,1.0s						
COEN	**Coen**	**17.12**	**118**	P	**P**	**18 07 19.4**	**+1.1**
AS31	**Alice Springs**	**18.37**	**161**	P	**P**	**18 07 32.4**	**+0.8**
AS31				IAmb	IAmb	18 07 33.6	
	comp=Z,5.5nm,0.8s						
AS31					**S**	**18 10 40.8**	**+0.9**
ASAR	**Alice Springs**	**18.37**	**161**	P	**P**	**18 07 32.5**	**+0.9**
	comp=Z,2.9nm,0.3s,baz=348,slow=12,SNR=290						
ASAR				S	**S**	**18 10 39.6**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=344,slow=20,SNR=28						
ASAR	**Alice Springs**	**18.37**	**161**	P	**P**	**18 07 32.0**	**+0.5**
ASAR					**S**	**18 10 38.1**	**-1.9**
KPJI	**Karang Pucung**	**18.61**	**265**	P	**P**	**18 07 33.7**	**-0.4**
KSM	**Kuching**	**18.91**	**293**	P	**P**	**18 07 37.1**	**-0.1**
KSM				IAmb	IAmb	18 07 53.6	
	comp=Z,20nm,1.4s						
PMG	**Port Moresby**	**19.60**	**101**	P	**P**	**18 07 42.5**	**-1.3**
PMG				IAmb	IAmb	18 07 59.7	
	comp=Z,8.3nm,1.1s						
CISI	**Cisompet, Garu**	**19.72**	**265**	P	**P**	**18 07 43.2**	**-1.8**
MORW	**Morawa**	**25.24**	**204**	P	**P**	**18 08 31.6**	**-3.0**
MORW				IAmb	IAmb	18 08 42.7	
	comp=Z,34nm,1.5s						
NWAO	**Narrogin (SRO)**	**28.29**	**199**	P	**P**	**18 09 01.1**	**-0.5**
NWAO	**Narrogin (SRO)**	**28.29**	**199**	P	**P**	**18 08 60.0**	**-1.6**
NWAO				IAmb	IAmb	18 09 12.4	
	comp=Z,75nm,1.6s						
STKA	**Stephens Creek**	**28.68**	**155**	P	**P**	**18 09 04.8**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=336,slow=9.4,SNR=7.4						
STKA	**Stephens Creek**	**28.68**	**155**	P	**P**	**18 09 04.9**	**-0.2**
TPUB	**Ta-pu**	**30.12**	**347**	P	**P**	**18 09 15.9**	**-1.9**
TPUB				IAmb	IAmb	18 09 21.4	
	comp=Z,19nm,1.2s						
YOJ	**Yonaguni jima**	**30.82**	**352**	P	**P**	**18 09 20.2**	**-3.6**
WHN	**Wuhan**	**38.70**	**342**	P	**P**	**18 10 32.9**	**+2.6**
KSRS	**Korea Array**	**43.44**	**0**	P	**P**	**18 11 08.2**	**0.0**
	comp=Z,1.1nm,0.6s,baz=179,slow=9.5,SNR=6.7						
MJAR	**Matsushiro Arr**	**43.67**	**12**	P	**P**	**18 11 09.2**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=178,slow=8.5,SNR=5.4						
MJAR	**Matsushiro Arr**	**43.67**	**12**	P	**P**	**18 11 08.8**	**-1.3**
USRK	**Ussuriysk Ar.**	**50.33**	**4**	P	**P**	**18 12 01.1**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=189,slow=6.9,SNR=8.5						
USRK	**Ussuriysk Ar.**	**50.33**	**4**	P	**P**	**18 12 00.6**	**-0.1**
ODAN	**Odare**	**50.98**	**312**	*eP*	**P**	**18 12 04.1**	**-2.0**
GTA	**Gaotai**	**52.18**	**333**	*eP*	**P**	**18 12 14.4**	**-0.1**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**56.98**	**343**	P	**P**	**18 12 48.5**	**0.0**
	comp=Z,0.7nm,0.5s,baz=179,slow=6.2,SNR=9.0						
SONM	**Songino Array**	**56.98**	**343**	P	**P**	**18 12 48.0**	**-0.4**
PEA0B	**Petropavlovsk-**	**64.34**	**20**	P	**P**	**18 13 37.5**	**+0.3**
PETK	**Petropavlovsk-**	**64.34**	**20**	P	**P**	**18 13 37.1**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=191,slow=5.5,SNR=8.6						
PETK	**Petropavlovsk-**	**64.34**	**20**	P	**P**	**18 13 37.6**	**+0.4**
KSH	**Kashi**	**65.86**	**318**	P	**P**	**18 13 47.9**	**+0.6**
KSH				pmax	pmax		
	comp=Z,210nm,6.8s						
MK31	**Makanchi Array**	**66.30**	**328**	P	**P**	**18 13 49.3**	**-0.5**
MKAR	**Makanchi Array**	**66.30**	**328**	P	**P**	**18 13 49.4**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=116,slow=8.1,SNR=22						
MKAR	**Makanchi Array**	**66.30**	**328**	P	**P**	**18 13 49.2**	**-0.5**
MAKZ	**Makanchi**	**66.47**	**328**	P	**P**	**18 13 50.5**	**-0.4**
KDJ	**Kajisay**	**66.48**	**321**	P	**P**	**18 13 50.1**	**-1.2**
KDJ				IAmb	IAmb	18 14 09.0	
	comp=Z,5.9nm,0.8s						
YAK	**Yakutsk**	**68.06**	**1**	P	**P**	**18 14 00.2**	**-0.1**
YAK				IAmb	IAmb	18 14 00.7	
	comp=Z,7.1nm,1.0s						
ZAA0	**Zalesovo Array**	**69.86**	**335**	P	**P**	**18 14 09.7**	**-1.7**
ZALV	**Zalesovo Beam**	**69.86**	**335**	P	**P**	**18 14 10.6**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=137,slow=6.5,SNR=4.8						
KURK	**Kurchatov**	**70.64**	**329**	P	**P**	**18 14 15.8**	**-0.4**
TIXI	**Tiksi**	**77.71**	**0**	P	**P**	**18 14 55.2**	**-0.8**
ILAR	**Eielson Array**	**93.64**	**25**	P	**P**	**18 16 16.3**	**+1.8**
	comp=Z,0.1nm,0.5s,baz=270,slow=4.5,SNR=3.4						

*IDC **07** 18:06:05.2±1.0,0˚33N×98˚42E,h0km,mb4.1/13, mb1 4.2/14,mb1mx4.0/41,mbtmp4.1/14,ML4.6/1,MS3.0/3, Ms1 3.1/3,ms1mx2.8/40,Error ellipse: s-maj=30.6km s-min=19.5km az=49.0*

*BJI **07** 18:06:07.5±0.0,0˚09S×98˚55E,h52km,mB5.0/24, mb4.5/33,Ms4.4/7,Ms7 4.3/3*

*NEIC **07** 18:06:13.3±1.6,0˚49N±0˚07×98˚45E±0˚07,h52km±4km, mb4.6/43,Error ellipse: s-maj=12.8km s-min=7.1km az=223.0*

*DJA **07** 18:06:14.2±0.3,1˚N±3˚×98˚8E±˚,h57km±23km,M4.4/20, mB4.8/1,mb4.3/7,MLv4.4/20,MLv4.4/6,Mw(mB)4.1/1*

*KLM **07** 18:06:15.0,0˚58N×98˚53E,h46km,mb4.4*

ISC 07 18:06:13.0±0.4,**0˚54N**±0˚05×**98˚44E**±0˚05,**h43**km,**n121,** σ1§**46**/119,**mb4.5**/38,**1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**1.15**	**311**	P	**Pn**	**18 06 35.0**	**+2.4**
GSI	**Gunungsitoli**	**1.15**	**311**		**Pn**	**18 06 33.9**	**+1.3**
SISI	**Saibi**	**1.97**	**161**	P	**Pn**	**18 06 44.3**	**+0.4**
RPSI	**Rantau Prapat**	**2.19**	**13**		**Pn**	**18 06 48.0**	**+1.1**
PSI	**Prapat**	**2.29**	**12**	LR	LR	18 08 01.8	
	comp=Z,457nm,21.0s,baz=198,slow=48						
PDSI	**Padang**	**2.49**	**126**	P	**Pn**	**18 06 52.6**	**+1.6**
BKNI	**Bangkinang**	**2.61**	**95**	P	**Pn**	**18 06 53.7**	**+1.0**
BKNI	**Bangkinang**	**2.61**	**95**		**Pn**	**18 06 52.3**	**-0.4**
SNSI	**Sinabang, Aceh**	**2.81**	**311**	P	**Pn**	**18 06 55.0**	**-0.4**
KCSI	**Kotacane, Aceh**	**3.03**	**347**	P	**Pn**	**18 06 59.8**	**+1.3**
SDSI	**Sungai Dareh**	**3.33**	**116**	P	**Pn**	**18 07 06.4**	**+3.8**
PPSI	**Pulau Pagai**	**3.64**	**154**	P	**Pn**	**18 07 10.7**	**+3.8**
KRJI	**Kerinci**	**4.00**	**131**	P	**Pn**	**18 07 13.8**	**+1.9**
MLSI	**Meulaboh, Aceh**	**4.22**	**331**	P	**Pn**	**18 07 15.8**	**+1.0**
IPM	**Ipoh**	**4.69**	**33**		**Pn**	**18 07 22.7**	**+1.4**
IPM	**Ipoh**	**4.69**	**33**	P	**Pn**	**18 07 22.0**	**+0.7**
LHMI	**Lhok Sumawe**	**4.89**	**342**	P	**Pn**	**18 07 25.2**	**+1.2**
LHMI	**Lhok Sumawe**	**4.89**	**342**		**Pn**	**18 07 25.1**	**+1.2**
KULM	**Kulim**	**5.21**	**25**		**Pn**	**18 07 29.3**	**+0.9**
KULM	**Kulim**	**5.21**	**25**	P	**Pn**	**18 07 30.0**	**+1.6**
JRMM	**Jerantut**	**5.22**	**50**	P	**Pn**	**18 07 29.0**	**+0.4**
MYKOM	**Kota Tinggi**	**5.55**	**77**		**Pn**	**18 07 33.0**	**-0.1**
MYKOM	**Kota Tinggi**	**5.55**	**77**	P	**Pn**	**18 07 33.0**	**-0.1**
KSI	**Kapahiang**	**5.88**	**135**	P	**Pn**	**18 07 41.4**	**+3.7**
	0.4nm36nm,0.8s						
TPRI	**Tanjung Pinang**	**6.10**	**86**	P	**Pn**	**18 07 40.8**	**+0.2**
	0.5nm23nm,0.5s						
MNAI	**Manna**	**6.64**	**137**	P	**Pn**	**18 07 49.6**	**+1.5**
	1.1nm196nm,1.3s						
MNAI	**Manna**	**6.64**	**137**	Pn	**Pn**	**18 07 48.0**	**-0.1**
MNAI				Sn	**Sn**	**18 08 58.8**	**-3.8**
MDSI	**Maura Dua**	**7.61**	**131**	P	**Pn**	**18 08 01.7**	**+0.4**
	0.1nm7.8nm,2.0s						
KLSI		**8.16**	**130**	P	**Pn**	**18 08 10.0**	**+1.1**
LEM	**Lembang**	**11.72**	**129**	LR	LR	18 13 42.5	
	comp=Z,32nm,18.6s,baz=230,slow=39						
CISI	**Cisompet, Garu**	**12.34**	**131**	Pn	**Pn**	**18 09 04.2**	**-1.9**
DGPR	**DIGLIPUR**	**13.69**	**337**	*eP*	**Pn**	**18 09 21.1**	**-3.5**
SBUM	**Sibu**	**13.90**	**82**	P	**P**	**18 09 35.5**	**+0.7**
UGM	**Wanagama**	**14.69**	**125**	Pn	**Pn**	**18 09 37.5**	**-0.7**
DLV	**T Lat**	**15.09**	**41**	Pn	**Pn**	**18 09 44.7**	**+1.1**
DLV				IAmb	IAmb	18 09 58.7	
	comp=Z,41nm,1.4s						
PBKT	**Sadao Pong**	**16.12**	**9**	P	**P**	**18 09 59.1**	**-0.2**
UBPT	**Khong Chiam**	**16.20**	**25**	Pn	**Pn**	**18 09 57.6**	**-0.1**
CM31	**Chiang Mai Arr**	**17.81**	**2**	P	**Pn**	**18 10 17.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**17.81**	**2**	P	**Pn**	**18 10 17.3**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=190,slow=11,SNR=25						
CMAR				LR	LR	18 17 33.4	
	comp=Z,64nm,19.3s,baz=170,slow=38						
CMAR	**Chiang Mai Arr**	**17.81**	**2**	P	**Pn**	**18 10 16.9**	**-0.9**
CHTO	**Chiang Mai**	**18.16**	**2**	P	**Pn**	**18 10 22.8**	**+0.6**
KKM	**Kota Kinabalu**	**18.56**	**73**	P	**Pn**	**18 10 27.9**	**+0.8**
SLVN	**Son La**	**21.34**	**14**	P	**P**	**18 10 57.1**	**+0.5**
LUWI	**Luwuk**	**24.38**	**94**	P	**P**	**18 11 31.0**	**+3.5**
KMI	**Kunming**	**24.79**	**9**	P	**P**	**18 11 34.3**	**+3.0**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SHL	**Shillong**	**25.67**	**346**	P	**P**	**18 11 39.0**	**-0.2**
H08S2	**Diego Garcia H**	**27.12**	**252**	T	T	18 39 26.0	
	baz=73,slow=75						
H08S3	**Diego Garcia H**	**27.13**	**252**	T	T	18 39 26.6	
	baz=73,slow=75						
H08S1	**Diego Garcia H**	**27.14**	**252**	T	T	18 39 27.1	
	baz=73,slow=75						
TAPN	**Taplejung**	**28.57**	**340**	*eP*	**P**	**18 12 05.5**	**+0.1**
	comp=Z,5.2nm,0.5s						
RAMN	**Ramite**	**28.62**	**338**	*eP*	**P**	**18 12 07.0**	**+1.2**
	comp=Z,5.1nm,0.4s						
JIRN	**Jiri**	**29.41**	**337**	*eP*	**P**	**18 12 13.8**	**+0.8**
GUN	**Gumba**	**29.76**	**337**	*eP*	**P**	**18 12 16.5**	**+0.5**
	comp=Z,6.6nm,0.4s						
LSA	**Lhasa**	**29.82**	**347**	P	**P**	**18 12 17.9**	**+1.3**
KKN	**Kakani**	**29.89**	**336**	*eP*	**P**	**18 12 17.9**	**+0.9**
GKN	**Gorkha**	**30.34**	**335**	*eP*	**P**	**18 12 21.6**	**+0.7**
KOLN	**Koldanda**	**30.58**	**334**	*eP*	**P**	**18 12 24.2**	**+1.1**
	comp=Z,12nm,0.8s						
CD2	**Chengdu**	**30.62**	**9**	P	**P**	**18 12 24.0**	**+0.8**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DANN	**Dangsing**	**31.02**	**334**	*eP*	**P**	**18 12 27.6**	**+0.6**
	comp=Z,8.3nm,0.4s						
ENH	**Enshi**	**31.38**	**19**	P	**P**	**18 12 29.2**	**-0.7**
ENH				IAmb	IAmb	18 12 30.1	
	comp=Z,12nm,0.7s						
WHN	**Wuhan**	**33.45**	**25**	P	**P**	**18 12 48.2**	**+0.2**
XAN	**Xi'an**	**34.74**	**15**	P	**P**	**18 12 58.8**	**-0.4**
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN	**Xi'an**	**34.74**	**15**	P	**P**	**18 12 58.8**	**-0.4**
XAN				IAmb	IAmb	18 12 59.3	
	comp=Z,9.7nm,0.9s						
MTN	**Manton Dam**	**35.05**	**113**	P	**P**	**18 13 02.1**	**0.0**
NJ2	**Nanjing**	**36.80**	**30**	*eP*	**P**	**18 13 18.2**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
GTA	**Gaotai**	**38.70**	**2**	*eP*	**P**	**18 13 33.2**	**+0.2**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NIL	**Nilore**	**40.54**	**327**	P	**P**	**18 13 48.6**	**+0.3**
NIL				IAmb	IAmb	18 13 49.2	
	comp=Z,6.6nm,0.8s						
WRA	**Warramunga Arr**	**40.64**	**122**	P	**P**	**18 13 46.8**	**-2.5**
	comp=Z,0.5nm,0.7s,baz=301,slow=8.5,SNR=3.2						
WRA	**Warramunga Arr**	**40.64**	**122**	P	**P**	**18 13 47.7**	**-1.6**
HHC	**Hu-ho-hao-te**	**41.85**	**15**	*eP*	**P**	**18 14 01.0**	**+2.0**
HHC				pP	sP	18 14 15.3	-0.7
HHC				S	**S**	**18 20 20.4**	**+6.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,82nm,6.3s						
ASAR	**Alice Springs**	**42.01**	**127**	P	**P**	**18 13 57.4**	**-3.2**
	comp=Z,0.5nm,0.6s,baz=299,slow=8.2,SNR=3.7						
ASAR				PcP	**PcP**	**18 15 54.1**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=298,slow=2.0,SNR=5.5						
ASAR	**Alice Springs**	**42.01**	**127**	P	**P**	**18 14 00.3**	**-0.2**
BJT	**Baijiatuan**	**42.48**	**20**	P	**P**	**18 14 05.4**	**+1.4**
BJT				IAmb	IAmb	18 14 05.8	
	comp=Z,15nm,1.0s						
WMQ	**Urumqi**	**44.14**	**349**	*eP*	**P**	**18 14 19.0**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,140nm,6.3s						
WMQ				LR	LR		
	comp=Z,180nm,28.9s						
WMQ				LR	LR		
	comp=Z,690nm,29.2s						
JNU	**Nakatsue**	**44.49**	**40**	P	**P**	**18 14 19.7**	**-0.7**
JNU				IAmb	IAmb	18 14 23.7	
	comp=Z,20nm,1.4s						
NRN	**Naryn**	**45.48**	**336**	P	**P**	**18 14 27.5**	**-0.9**
NRN				IAmb	IAmb	18 14 30.2	
	comp=Z,10nm,1.1s						
KSAR	**Wonju Array Be**	**45.67**	**33**	P	**P**	**18 14 29.3**	**-0.3**
KSRS	**Korea Array**	**45.70**	**33**	P	**P**	**18 14 28.8**	**-1.1**
	comp=Z,4.7nm,0.9s,baz=218,slow=8.5,SNR=16						
KS19	**Wonju Array Si**	**45.70**	**33**	P	**P**	**18 14 29.4**	**-0.5**
KS19				IAmb	IAmb	18 14 57.6	
	comp=Z,13nm,1.0s						
GAR	**Garm**	**46.12**	**329**	P	**P**	**18 14 31.1**	**-2.3**
GAR				IAmb	IAmb	18 14 36.1	
	comp=Z,4.9nm,0.8s						
CHGR	**Chuyangaron**	**46.47**	**328**	P	**P**	**18 14 35.5**	**-0.6**
CHGR				IAmb	IAmb	18 14 36.6	
	comp=Z,11nm,1.2s						
AAK	**Ala-Archa**	**47.10**	**336**	P	**P**	**18 14 41.6**	**+0.7**
AAK				IAmb	IAmb	18 14 44.3	
	comp=Z,5.6nm,1.4s						
SONM	**Songino Array**	**47.61**	**7**	P	**P**	**18 14 45.1**	**+0.3**
	comp=Z,1.9nm,0.4s,baz=192,slow=8.7,SNR=27						
SONM				PcP	**PcP**	**18 16 13.8**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=192,slow=3.6,SNR=5.1						
SONM	**Songino Array**	**47.61**	**7**	P	**P**	**18 14 45.1**	**+0.3**
SONM					**PcP**	**18 16 14.0**	**-0.1**
ULN	**Ulaanbaatar**	**47.72**	**8**	P	**P**	**18 14 46.1**	**+0.4**
MK31	**Makanchi Array**	**48.18**	**345**	P	**P**	**18 14 49.8**	**+0.7**
MK31				IAmb	IAmb	18 14 50.4

PACA					IAML		18 13 17.7	
	comp=Z,3μm,0.1s							
COPN	**Copaltepe**	**1.29**	**98**	*eP*	**Pn**	**18 13 02.3**	**+0.3**	
COPN	**Copaltepe**	**1.29**	**98**	*eP*	**Pn**	**18 13 02.3**	**+0.3**	
MOMN	**Momotombo**	**1.33**	**88**	*eP*	**Pn**	**18 13 02.6**	**0.0**	
MOMN	**Momotombo**	**1.33**	**88**	*eP*	**Pn**	**18 13 02.6**	**0.0**	
FAGO	**Alcalda de S**	**1.35**	**351**	*eS*	**Sn**	**18 13 19.6**	**-0.1**	
COEG	**Centro de Oper**	**1.58**	**323**	*eS*	**Sn**	**18 13 25.0**	**-0.5**	

*IDC **07** 18:33:43.6±4.0, 20°.43S×175°.67W, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.6/32, mbtmp3.5/4, Error ellipse: s-maj=223.9km s-min=27.3km az=151.0*
*NEIC **07** 18:33:47.5±2.6, 21°.3S±0°.2×174°.55W±0°.09, h14km±7km, mb4.4/7, Error ellipse: s-maj=23.3km s-min=11.8km az=181.0*

ISC 07 18:33:48.2±0.7, 21°.3S±0°.1×174°.47W±0°.10, h27km, n17, σ2s56/16, mb3.6/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.81**	**63**			**Pn**	**18 35 01.4**	**+2.6**
NIUE					Sn	**Sn**	**18 35 51.7**	**-1.9**
MSVF	**Nonsavu**	**7.90**	**295**			**Pn**	**18 35 42.7**	**+1.2**
OUZ	**Omahuta**	**17.38**	**215**	P		**P**	**18 37 50.4**	**+0.6**
OUZ				IAmb	IAmb		18 38 18.7	
	comp=Z,35nm,1.5s							
URZ	**Urewera**	**18.39**	**201**	P		**P**	**18 37 59.9**	**-1.1**
URZ				IAmb	IAmb		18 38 07.2	
	comp=Z,37nm,1.3s							
LTZ	**Lake Taylor**	**24.12**	**204**	P		**P**	**18 38 56.4**	**-5.4**
LHI	**Lord Howe Isla**	**25.74**	**241**	P		**P**	**18 39 14.3**	**-2.2**
FOZ	**Fox Glacier**	**25.74**	**207**	P		**P**	**18 39 17.2**	**+0.8**
ASAR	**Alice Springs**	**47.55**	**257**	P		P	18 42 14.4	-7.3
	comp=Z,0.4nm,0.9s,baz=87,slow=7.7,SNR=3.4							
ASAR	**Alice Springs**	**47.55**	**257**	P		**P**	**18 42 23.2**	**+1.5**
WRA	**Warramunga Arr**	**47.76**	**262**	P		P	18 42 15.1	-8.3
	comp=Z,0.3nm,0.7s,baz=96,slow=8.3,SNR=2.7							
QSPA	**South Pole Qui**	**68.77**	**180**	P		**P**	**18 44 52.3**	**+2.7**
QSPA				IAmb	IAmb		18 44 55.7	
	comp=Z,5.6nm,1.1s							
NVAR	**Mina Array Bea**	**79.39**	**42**	P		**P**	**18 45 52.7**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=224,slow=7.6,SNR=7.7							
NVAR	**Mina Array Bea**	**79.39**	**42**	P		**P**	**18 45 53.0**	**+0.9**
TPNV	**Topopah Spring**	**79.79**	**44**	P		**P**	**18 45 55.3**	**+1.0**
ILAR	**Eielson Array**	**88.40**	**11**	P		**P**	**18 46 34.2**	**-3.0**
	comp=Z,0.3nm,0.9s,baz=210,slow=6.4,SNR=2.8							
BRTR	**Keskin Array B**	**149.80**	**314**	PKPbc		**PKPdf**	**18 53 32.2**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=90,slow=4.3,SNR=3.3							
GERES	**GERESS Array B**	**151.76**	**349**	PKPbc		**PKPbc**	**18 53 36.4**	**-3.9**
	comp=Z,1.0nm,0.8s,baz=45,slow=1.7,SNR=5.1							

*ISK **07** 18:36:24.9, 40°.05N×41°.83E, h4km, ML2.2/8*
*DDA **07** 18:36:24.5, 40°.02N×41°.84E, h8km±1km, ML1.9*
*ATA **07** 18:36:24.5±2.4, 39°.98N×41°.90E, h30km±9km, ML2.1, MW3.2*

ISC 07 18:36:24.5±0.9, 40°.01N±0°.02×41°.88E±0°.02, h10km±6km, n26, σ0s58/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KOPR	**Koprukoy-ERZUR**	**0.03**	**218**	PG		**Pg**	**18 36 26.6**	**+0.1**
HOMI	**Horasan**	**0.04**	**36**	*i* P		**Pg**	**18 36 26.5**	**-0.2**
EATA	**Eleskirt**	**0.50**	**107**	*eP*		**Pg**	**18 36 34.7**	**+0.5**
EATA				*eS*		**Sb**	**18 36 42.6**	**-0.4**
EATA				IAML			18 36 43.6	
	comp=Z,16nm,0.4s							
EATA	**Eleskirt**	**0.50**	**107**	*i* P		**Pg**	**18 36 34.5**	**+0.3**
EATA				*i* S		**Sb**	**18 36 43.0**	**0.0**
EATA				IAML			18 36 44.0	
	comp=N,81nm,0.4s							
EATA				IAML			18 36 45.0	
	comp=E,64nm,0.5s							
SENK	**Senkaya-Erzuru**	**0.66**	**33**	PG		**Pg**	**18 36 37.8**	**+0.5**
SENK				SG		**Sb**	**18 36 47.9**	**+0.4**
KRIK	**Erzurum-spir**	**0.80**	**294**	*eP*		**Pn**	**18 36 42.5**	**+0.5**
KRIK				*eS*		**Sn**	**18 36 53.6**	**-0.5**
KRIK				IAML			18 36 58.4	
	comp=Z,1μm,0.2s							
KRIK	**Erzurum-spir**	**0.80**	**294**	*i* P		**Pn**	**18 36 42.7**	**+0.7**
KRIK				*i* S		**Sn**	**18 36 54.4**	**+0.3**
ECAT	**Cat-ERZURUM**	**0.80**	**240**	*eP*		**Pg**	**18 36 39.4**	**-0.6**
ECAT				*eS*		**Sb**	**18 36 51.8**	**+0.1**
ECAT				IAML			18 36 59.3	
	comp=Z,15nm,0.4s							
ECAT	**Cat-ERZURUM**	**0.80**	**240**	*i* P		**Pg**	**18 36 39.8**	**-0.2**
ECAT				*i* S		**Sb**	**18 36 51.8**	**+0.1**
DDEM	**Demirkent**	**0.88**	**354**	*i* P		**Pg**	**18 36 41.4**	**-0.2**
DDEM				*i* S		**Sb**	**18 36 54.1**	**+0.2**
DDEM				IAML			18 36 58.0	
	comp=E,188nm,0.3s							
DDEM				IAML			18 36 58.0	
	comp=N,146nm,0.5s							
VRTB	**Varto-Mus**	**0.91**	**201**	PG		**Pn**	**18 36 43.4**	**-0.1**
TUTA	**Tutak**	**0.95**	**130**	*eP*		**Pg**	**18 36 42.6**	**-0.2**
TUTA				*eS*		**Sn**	**18 36 57.9**	**+0.1**
TUTA				IAML			18 37 00.5	
	comp=Z,46nm,0.3s							
AGRB	**Hanur-Agry**	**0.96**	**117**	PG		**Pn**	**18 36 44.9**	**+0.6**
DBAD	**Bademkaya**	**1.01**	**352**	*i* P		**Pg**	**18 36 43.5**	**-0.5**
DBAD				*i* S		**Sn**	**18 36 58.8**	**-0.5**
DBAD				IAML			18 37 04.0	
	comp=E,29nm,0.4s							
MLAZ	**Malazgirt-MUS**	**1.01**	**149**	PG		**Pn**	**18 36 45.5**	**+0.6**
DAGI	**Agillar**	**1.06**	**2**	*i* P		**Pg**	**18 36 44.3**	**-0.7**
DAGI				*i* S		**Sn**	**18 37 00.8**	**+0.3**
DAGI				IAML			18 37 01.0	
	comp=N,28nm,0.3s							
DAGI				IAML			18 37 01.0	
	comp=E,33nm,0.3s							
YEDI	**Yedisu-Bingol**	**1.18**	**241**	PN		**Pg**	**18 36 47.4**	**+0.3**
YEDI				SN		**Sn**	**18 37 04.5**	**+1.2**
BNGL	**BINGOL**	**1.20**	**208**	*eP*		**Pb**	**18 36 46.6**	**-0.9**
BNGL				*eS*		**Sg**	**18 37 03.6**	**+0.6**
BNGL				IAML			18 37 09.7	
	comp=Z,47nm,0.3s							
DIGO	**Kars**	**1.22**	**70**	*eP*		**Pb**	**18 36 46.2**	**-1.5**
DIGO				*eS*		**Sg**	**18 37 04.0**	**+0.3**
DIGO				IAML			18 37 05.5	
	comp=Z,5.5nm,0.2s							
MUSM	**Mu-Merkez**	**1.32**	**192**	*i* P		**Pn**	**18 36 48.7**	**-0.4**
DBOC	**Borcka**	**1.34**	**353**	*i* P		**Pn**	**18 36 49.0**	**-0.4**
DBOC				*i* S		**Sg**	**18 37 07.8**	**+0.2**
DBOC				IAML			18 37 08.0	
	comp=E,23nm,0.4s							
CHOM	**Cayeli-Rize**	**1.38**	**322**	PN		**Pg**	**18 36 51.1**	**+0.2**
CHOM				SN		**Sg**	**18 37 09.5**	**+0.7**
BAYT	**Aydıntepe-Bayb**	**1.38**	**287**	PN		**Pg**	**18 36 51.3**	**+0.3**
DYDN	**Diyadin**	**1.47**	**108**	*eP*		**Pn**	**18 36 50.9**	**-0.4**
BLIS	**Bitlis-Merkez**	**1.61**	**173**	*eP*		**Pn**	**18 36 51.9**	**-1.2**
BLIS				IAML			18 37 21.1	
	comp=Z,6.9nm,0.5s							
TASB	**TASBURUN-IGDIR**	**1.82**	**90**	PN		**Pb**	**18 36 58.8**	**+0.9**

*NEIC **07** 18:46:49.1±2.6, 20°.84S±0°.10×176°.7E±0°.1, h31km±5km, mb4.9/20, Error ellipse: s-maj=15.5km s-min=11.8km az=139.0*
*IDC **07** 18:46:49.1±1.3, 21°.25S×176°.08E, h0km, mb4.0/9, mb1 4.3/10, mb1mx4.1/34, mbtmp4.1/10, ML4.1/1, MS3.6/18, Ms1 3.6/18, ms1mx3.5/32, Error ellipse: s-maj=39.0km s-min=25.1km az=144.0*

ISC 07 18:46:51.0±0.7, 20°.98S±0°.08×176°.7E±0°.1, h35km, n54, σ1s48/41, mb4.7/17, MS3.8/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.48**	**22**	Pn		Pn	18 47 37.9	-4.9
MSVF				Sn		**Sn**	**18 48 20.4**	**-2.5**
DZM	**Mont Dzumac**	**9.58**	**262**	*e*Pn		**Pn**	**18 49 06.9**	**+0.4**
	121nm,1.4s							
DZM				*e*LR		LR	18 51 13.0	
	comp=Z,1μm,25.5s							
DZM	**Mont Dzumac**	**9.58**	**262**	Pn		**Pn**	**18 49 06.3**	**-0.2**
	0.7nm,0.3s,baz=86,slow=12,SNR=12							
DZM				LR		LR	18 51 44.8	
	comp=Z,120nm,20.6s,baz=86,slow=33							
DZM	**Mont Dzumac**	**9.58**	**262**			**Pn**	**18 49 06.7**	**+0.2**
RAO	**Raoul Island**	**9.58**	**150**	LR		LR	18 51 59.3	
	comp=Z,554nm,21.5s,baz=324,slow=32							
AFI	**Afiamalu**	**13.07**	**59**	LR		LR	18 54 10.2	
	comp=Z,128nm,18.2s,baz=239,slow=32							
URZ	**Urewera**	**17.22**	**179**	Pn		**Pn**	**18 50 48.2**	**-0.6**
	0.7nm,0.3s,baz=55,slow=8.0,SNR=4.6							
URZ				LR		LR	18 55 15.3	
	comp=Z,169nm,19.7s,baz=16,slow=30							
URZ	**Urewera**	**17.22**	**179**	P		**Pn**	**18 50 50.1**	**+1.3**
URZ				IAmb		IAmb	18 51 00.0	
	comp=Z,106nm,1.4s							
BFZ	**Birch Farm**	**19.64**	**181**	P		**P**	**18 51 16.5**	**-0.2**
BFZ				IAmb		IAmb	18 51 20.1	
	comp=Z,52nm,1.0s							
HNR	**Honiara**	**19.78**	**303**	LR		LR	18 58 15.4	
	comp=Z,67nm,18.0s,baz=189,slow=35							
NNZ	**Nelson**	**20.36**	**187**			**P**	**18 51 25.5**	**+1.0**
RAR	**Rarotonga**	**21.98**	**95**	LR		LR	18 58 30.2	
	comp=Z,87nm,21.6s,baz=260,slow=31							
RPZ	**Rata Peaks**	**23.15**	**190**	LR		LR	18 59 44.5	
	comp=Z,180nm,18.2s,baz=23,slow=34							
EIDS	**Eidsvold**	**23.91**	**255**	P		**P**	**18 52 00.8**	**-0.9**
EIDS				IAmb		IAmb	18 52 22.6	
	comp=Z,45nm,1.8s							
LBZ	**Lake Benmore**	**23.95**	**192**	P		**P**	**18 52 00.9**	**-1.0**
LBZ				IAmb		IAmb	18 52 38.3	
	comp=Z,57nm,1.4s							
ARMA	**Armidale**	**24.39**	**242**	P		**P**	**18 52 06.8**	**+0.5**
ODZ	**Otahua Downs**	**24.51**	**190**	P		**P**	**18 52 08.1**	**+1.1**
KRVT	**Keravat (AS076**	**29.12**	**301**	LR		LR	19 02 20.8	
	comp=Z,69nm,21.9s,baz=117,slow=32							
PMG	**Port Moresby**	**30.65**	**288**	P		**P**	**18 53 01.7**	**-0.6**
	comp=Z,11nm,0.8s,baz=140,slow=7.3,SNR=7.7							
PMG				LR		LR	19 03 33.1	
	comp=Z,118nm,20.2s,baz=93,slow=33							
PMG	**Port Moresby**	**30.65**	**288**	P		**P**	**18 53 01.7**	**-0.6**
TBI	**Tubuai**	**31.42**	**101**	*e*LQ		LQ	18 59 50.5	
	comp=Z,321nm,28.5s							
TBI				*e*LR		LR	19 01 07.0	
	comp=Z,213nm,31.2s							
TOO	**Toolangi**	**31.63**	**232**	P		**P**	**18 53 09.9**	**-1.0**
PPT2	**Papeete2**	**32.01**	**90**	*e*LR		LR	19 01 27.9	
	comp=Z,385nm,28.5s,baz=260							
PPT	**Papeete**	**32.01**	**90**	LR		LR	19 02 55.8	
	comp=Z,61nm,19.4s,baz=191,slow=30							
COEN	**Coen**	**32.65**	**277**	P		**P**	**18 53 20.4**	**+0.4**
COEN				IAmb		IAmb	18 53 33.0	
	comp=Z,24nm,1.6s							
STKA	**Stephens Creek**	**33.09**	**244**	P		**P**	**18 53 21.2**	**-2.5**
	comp=Z,2.0nm,0.7s,baz=95,slow=13,SNR=4.6							
STKA				LR		LR	19 04 50.4	
	comp=Z,151nm,19.5s,baz=49,slow=33							
STKA	**Stephens Creek**	**33.09**	**244**	P		**P**	**18 53 23.3**	**-0.4**
BBOO	**Buckleboo**	**37.87**	**243**	P		**P**	**18 54 03.5**	**-1.2**
BBOO				IAmb		IAmb	18 54 30.1	
	comp=Z,42nm,1.6s							
AS31	**Alice Springs**	**39.54**	**258**	P		**P**	**18 54 17.9**	**-1.0**
ASAR	**Alice Springs**	**39.54**	**258**	P		**P**	**18 54 17.1**	**-1.8**
	comp=Z,3.1nm,1.1s,baz=85,slow=8.6,SNR=18							
ASAR				PcP		**PcP**	**18 56 27.8**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=100,slow=3.2,SNR=3.7							
ASAR				LR		LR	19 10 15.8	
	comp=Z,143nm,18.9s,baz=102,slow=36							
ASAR	**Alice Springs**	**39.54**	**258**	P		**P**	**18 54 17.5**	**-1.4**
WRA	**Warramunga Arr**	**39.59**	**264**	P		**P**	**18 54 17.3**	**-2.0**
	comp=Z,0.5nm,0.7s,baz=102,slow=7.5,SNR=3.7							
WRA	**Warramunga Arr**	**39.59**	**264**	P		**P**	**18 54 17.6**	**-1.7**
MTN	**Manton Dam**	**44.19**	**273**	P		**P**	**18 54 54.9**	**-2.0**
MTN				IAmb		IAmb	18 55 32.9	
	comp=Z,24nm,1.1s							
NWAO	**Narrogin (SRO)**	**53.68**	**244**	P		**P**	**18 56 11.4**	**+1.8**
VNDA	**Vanda**	**57.05**	**184**	LR		LR	19 16 47.1	
	comp=Z,90nm,20.5s,baz=327,slow=32							
MJAR	**Matsushiro Arr**	**67.77**	**327**	P		**P**	**18 57 47.7**	**+2.5**
	comp=Z,3.1nm,1.0s,baz=127,slow=5.3,SNR=3.9							
MJAR	**Matsushiro Arr**	**67.77**	**327**	P		**P**	**18 57 44.7**	**-0.6**
KSM	**Kuching**	**68.56**	**280**	P		**P**	**18 57 49.9**	**-0.8**
KSM				IAmb		IAmb	18 58 14.2	
	comp=Z,9.4nm,0.9s							
QSPA	**South Pole Qui**	**69.08**	**180**	P		**P**	**18 57 51.1**	**-2.1**
QSPA				IAmb		IAmb	18 57 52.8	
	comp=Z,9.3nm,1.1s							
PETK	**Petropavlovsk-**	**75.59**	**348**	LR		LR	19 27 22.3	
	comp=Z,64nm,19.4s,baz=51,slow=32							
USA0B	**Ussuriysk Arra**	**76.67**	**329**	P		**P**	**18 58 38.8**	**+0.6**
USA0B				IAmb		IAmb	18 58 46.2	
	comp=Z,41nm,1.8s							
USRK	**Ussuriysk Ar.**	**76.67**	**329**	P		**P**	**18 58 37.8**	**-0.4**
MAW	**Mawson**	**79.38**	**201**	LR		LR	19 31 28.0	
	comp=Z,62nm,18.7s,baz=58,slow=34							
NVAR	**Mina Array Bea**	**84.87**	**46**	P		P	18 59 28.6	+6.1
	comp=Z,0.2nm,0.4s,baz=234,slow=5.4,SNR=2.6							
NVAR				LR		LR	19 32 54.7	
	comp=Z,58nm,19.2s,baz=8.0,slow=32							
NVAR	**Mina Array Bea**	**84.87**	**46**	P		**P**	**18 59 22.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**85.61**	**292**	P		**P**	**18 59 28.8**	**+2.4**
	comp=Z,1.0nm,0.8s,baz=142,slow=3.1,SNR=4.3							
CMAR	**Chiang Mai Arr**	**85.61**	**292**	P		**P**	**18 59 27.3**	**+0.9**
BBB	**Bella Bella**	**87.27**	**30**	LR		LR	19 29 45.9	
	comp=Z,54nm,21.4s,baz=2.0,slow=29							
ILAR	**Eielson Array**	**89.97**	**15**	P		P	18 59 52.4	+6.2
	comp=Z,0.9nm,1.0s,baz=219,slow=7.3,SNR=5.5							
ILAR				LR		LR	19 34 41.3	
	comp=Z,48nm,20.5s,baz=344,slow=32							
SONM	**Songino Array**	**92.89**	**321**	P		**P**	**19 00 03.6**	**+3.2**
	comp=Z,0.6nm,0.9s,baz=111,slow=3.2,SNR=3.5							
CLL	**Collm**	**147.14**	**341**	*e*PKPdf		**PKPdf**	**19 06 26.0**	**-2.0**
CLL				*e*PKiKP		**PKiKP**	**19 06 34.0**	**+1.4**
GERES	**GERESS Array B**	**149.03**	**338**	PKPbc		**PKiKP**	**19 06 38.1**	**+1.4**
	comp=Z,0.5nm,0.8s,baz=94,slow=4.0,SNR=3.6							
GERES	**GERESS Array B**	**149.03**	**338**	PKPbc		**PKPbc**	**19 06 36.0**	**+0.6**

*IDC **07** 18:51:32.3±1.1, 35°.29N×137°.59E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/42, mbtmp3.5/4, Error ellipse: s-maj=31.9km s-min=13.9km az=108.0*
*JMA **07** 18:51:33.1, 36°.35N×140°.05E, h70km±1km, M3.5 Broadband fault plane solution: P waves. NP1: ϕs255.00000°, δ9.00000°, λ-164.00000°. NP2: ϕs150.00000°, δ87.00000°, λ-81.00000°. Principal axes: T Plg42.0000°, Azm231.0000°; N Plg9.0000°, Azm329.0000°; P Plg47.0000°, Azm69.0000°;*
JMA Felt II J1.

ISC 07 18:51:33.0±1.0, 36°.33N±0°.04×140°.06E±0°.06, h71km±7km, n19, σ0s61/30, mb3.5/4, 5C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.15**	**133**	⇑P		**Pn**	**18 51 43.6**	**+0.1**
JYT				*e*S		**Sn**	**18 51 51.3**	**+0.1**
JAG	**Ashikaga**	**0.50**	**281**	⇓P		**Pn**	**18 51 45.8**	**-0.1**
JAG				*e*S		**Sn**	**18 51 55.4**	**+0.1**
JKT	**Katashina**	**0.78**	**304**	⇓P		**Pn**	**18 51 49.0**	**0.0**
JKT				*e*S		**Sn**	**18 52 00.5**	**-0.4**
JRY	**Ryogami san**	**0.99**	**252**	⇓P		**Pn**	**18 51 51.6**	**+0.2**
JRY				*e*S		**Sn**	**18 52 05.2**	**+0.1**
JFY	**Yanaizu**	**1.11**	**345**	⇑P		**Pn**	**18 51 52.8**	**-0.2**
JFY				*e*S		**Sn**	**18 52 07.9**	**0.0**
JFT	**Otama**	**1.21**	**11**	⇑P		**Pn**	**18 51 54.3**	**+0.1**
JFT				*e*S		**Sn**	**18 52 10.0**	**0.0**
JFK	**Kawauchi**	**1.22**	**32**	⇑P		**Pn**	**18 51 54.0**	**-0.4**
JHK	**Hiroka**	**1.24**	**318**	⇓P		**Pn**	**18 51 54.7**	**+0.1**
JHK				*e*S		**Sn**	**18 52 11.2**	**+0.5**
JOD2	**Odawara 2**	**1.33**	**217**	⇓P		**Pn**	**18 51 55.7**	**-0.1**
JOD2				*e*S		**Sn**	**18 52 12.1**	**-0.7**
JYN	**Shimodate**	**1.48**	**236**	⇓P		**Pn**	**18 51 58.4**	**+0.5**
JYN				*e*S		**Sn**	**18 52 16.7**	**+0.1**
MJAR	**Matsushiro Arr**	**1.50**	**279**	Pg		**Pn**	**18 51 57.2**	**-0.9**
	7.7nm,0.3s,baz=98,slow=15,SNR=359							
MJAR				Lg		Lg	18 52 16.0	
	3.0nm,0.3s,baz=4.3,slow=26,SNR=6.7							
MAT	**Matsushiro**	**1.51**	**279**	P		**Pn**	**18 51 58.4**	**+0.3**
MAT	**Matsushiro**	**1.51**	**279**	P		**Pn**	**18 51 58.5**	**+0.3**
MAT				S		**Sn**	**18 52 15.9**	**-1.1**
JFNN	**Fujinakano**	**1.59**	**225**	P		**Pn**	**18 51 59.5**	**+0.3**
JFNN				*e*S		**Sn**	**18 52 18.3**	**-0.7**
JNS	**Sasagawa**	**1.60**	**338**	⇑P		**Pn**	**18 51 59.2**	**-0.1**
ZALV	**Zalesovo Beam**	**41.59**	**313**	P		**P**	**18 59 13.7**	**+0.1**
	0.3nm,0.4s,baz=100,slow=7.5,SNR=2.7							
MKAR	**Makanchi Array**	**43.57**	**303**	P		**P**	**18 59 30.4**	**+0.5**
	0.2nm,0.5s,baz=88,slow=8.1,SNR=3.0							
WRA	**Warramunga Arr**	**56.23**	**186**	P		**P**	**19 01 04.3**	**-1.7**
	0.6nm,0.5s,baz=0.5,slow=7.5,SNR=11							
ASAR	**Alice Springs**	**59.96**	**187**	P		**P**	**19 01 33.5**	**+1.5**
	0.3nm,0.6s,baz=19,slow=12,SNR=4.2							

*NNC **07** 19:05:35.4±0.7, 42°.52N×78°.50E, h0km, mb2.4, mpv3.0, Error ellipse: s-maj=5.2km s-min=1.9km az=171.0*
*KRNET **07** 19:05:35.0±0.1, 42°.48N×78°.54E, h24km, mb2.1*

ISC 07 19:05:36.0±1.0, 42°.50N±0°.04×78°.46E±0°.03, h10km±6km, n19, σ1s28/36, 11C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.05**	**250**	⇓*i*P		**Pg**	**19 05 38.1**	**-0.1**
	baz=75							
PRZ				⇓*i*S		**Sg**	**19 05 41.0**	**+1.2**
	baz=75							
SATY	**Saty**	**0.56**	**356**	P		**Pg**	**19 05 46.6**	**-0.3**
	8.4nm,0.2s							
SATY				S		**Sg**	**19 05 54.3**	**0.0**
	27nm,0.1s							
ANVS	**Anan'yevo**	**0.65**	**296**	⇑*i*P		**Pg**	**19 05 48.8**	**+0.1**
	baz=96							
ANVS				⇑*i*S		**Sb**	**19 05 58.5**	**-0.3**
	baz=96							
UZB	**Uzynbulak**	**0.77**	**32**	P		**Pg**	**19 05 49.9**	**-0.9**
	5.6nm,0.1s							
UZB				S		**Sg**	**19 05 60.0**	**-0.8**
	19nm,0.1s							
SHLS	**Shalkode**	**0.98**	**48**	P		**Pn**	**19 05 58.5**	**+2.5**
	3.4nm,0.2s							
SHLS				S		**Sn**	**19 06 14.9**	**+4.8**
	14nm,0.3s							
KURS	**Kuram**	**1.01**	**348**	P		**Pb**	**19 05 54.8**	**-0.9**
	1.8nm,0.2s							
KURS				S		**Sb**	**19 06 08.4**	**-0.6**
	1.3nm,0.2s							
KDJ	**Kajisay**	**1.02**	**249**	⇑*i*P		**Pb**	**19 05 55.0**	**-0.9**
	baz=51							
KDJ				⇑*i*S		**Sg**	**19 06 08.8**	**-0.2**
	baz=51							
PDGK	**Podgornoye**	**1.12**	**42**	P		**Pb**	**19 05 56.2**	**-1.3**
	0.9nm,0.1s							
PDGK				S		**Sg**	**19 06 11.0**	**-1.1**
	2.6nm,0.2s							
PDGK	**Podgornoye**	**1.12**	**42**	⇑P		**Pb**	**19 05 56.1**	**-1.5**
	0.8nm,0.4s							
PDGK				⇑S		**Sg**	**19 06 10.8**	**-1.3**
	4.5nm,0.7s							
MDOK	**Medeo**	**1.23**	**303**	P		**Pn**	**19 05 59.0**	**-0.5**
	1.4nm,0.4s							
MDOK				⇑S		**Sb**	**19 06 15.7**	**+0.1**
	3.5nm,0.6s							
MDOK	**Medeo**	**1.23**	**303**	Pg		**Pb**	**19 05 59.1**	**-0.4**
	3.0nm,0.1s							
MDOK				Lg		Lg	19 06 15.8	
	4.3nm,0.4s							
KOTS	**Kotyrbulak**	**1.23**	**307**	P		**Pb**	**19 05 59.3**	**-0.3**
	8.8nm,0.1s							
KOTS				S		**Sn**	**19 06 15.9**	**-0.4**
	6.6nm,0.3s							
TNSS	**Tian-Shan**	**1.24**	**296**	P		**Pb**	**19 05 59.4**	**-0.3**
	1.6nm,0.1s							
TNSS				S		**Sb**	**19 06 16.1**	**+0.2**
	5.2nm,0.2s							
CHKK	**Chushkaly**	**1.73**	**322**	P		**Pb**	**19 06 08.0**	**+0.1**
	4.0nm,0.2s							
CHKK				S		**Sg**	**19 06 31.3**	**-0.4**
	8.9nm,0.3s							
ARXS	**Arharly**	**1.77**	**345**	P		**Pb**	**19 06 08.7**	**0.0**
	5.4nm,0.2s							
ARXS				S		**Sg**	**19 06 32.4**	**-0.6**
	5.9nm,0.1s							
KTBS	**Karatobe**	**1.78**	**313**	P		**Pb**	**19 06 08.9**	**+0.1**
	2.4nm,0.1s							
KTBS				S		**Sg**	**19 06 32.6**	**-0.6**
	11nm,0.2s							
BOOM	**Boomskoye usch**	**1.87**	**271**	⇑*i*P		**Pb**	**19 06 09.2**	**-1.1**
	baz=71							
BOOM				⇑*i*S		**Sb**	**19 06 34.2**	**+0.4**
	baz=71							
DJR	**Jarkent**	**2.07**	**27**	Pg		**Pg**	**19 06 13.6**	**-2.0**
	1.2nm,0.1s							
DJR				Lg		Lg	19 06 40.9	
	12nm,0.3s							
NRN	**Naryn**	**2.12**	**241**	⇑*i*P		**Pb**	**19 06 12.9**	**-1.9**
	baz=42							
NRN				⇑*i*S		**Sb**	**19 06 40.8**	**-0.5**
	baz=42							

*MAN **07** 19:35:50.1, 6°.49N×126°.12E, h44km, MS3.2*

ISC 07 19:35:49.4±3.3, 6°.43N±0°.08×126°.1E±0°.1, h70km±21km, n9, σ1s02/17, 1C-4D, Mindanao

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

GADA SG Sg 19 41 37.0 +0.4
PRK Paraskevi 0.55 166 P Pb 19 41 33.9 +0.2
PRK S Sb 19 41 41.5 0.0
18µm,0.8s
PRK Paraskevi 0.55 166 P Pb 19 41 33.8 +0.2
PRK S Sb 19 41 42.2 +0.7
PRK AML AML 19 41 43.1
comp=N,47932µm,0.9s
PRK AML AML 19 41 44.9
comp=E,23168µm,0.8s
SIGR SIGRI 0.60 199 P Pb 19 41 33.9 -0.6
SIGR S Sb 19 41 42.3 -0.7
comp=E,14µm,0.4s
SIGR SIGRI 0.60 199 P Pb 19 41 33.9 -0.6
SIGR S Sb 19 41 42.5 -0.4
SIGR AML AML 19 41 44.0
comp=N,27567µm,0.5s
SIGR AML AML 19 41 45.8
comp=E,28014µm,0.2s
SIGR SIGRI 0.60 199 PG Pb 19 41 33.9 -0.6
SIGR SG Sb 19 41 42.2 -0.7
AYVA Ayvalik 0.66 136 ⇑*i*P Pg 19 41 34.4 -0.4
AYVA *i* S Sb 19 41 43.6 -0.9
AYVA IAML 19 41 44.0
comp=N,6µm,0.5s
AYVA IAML 19 41 49.0
comp=E,4µm,0.6s
GELI Tayfur-Gelibol 0.68 25 PG Pg 19 41 34.9 -0.3
LPK Lapseki 0.78 40 PG Pg 19 41 36.3 -0.8
SMTH Samothraki Isl 0.82 328 P Pb 19 41 37.9 -0.3
SMTH S Sb 19 41 49.3 0.0
comp=E,8µm,0.6s
SMTH Samothraki Isl 0.82 328 P Pb 19 41 38.0 -0.3
SMTH S Sb 19 41 50.0 +0.8
SMTH AML AML 19 41 53.1
comp=N,21652µm,0.4s
SMTH AML AML 19 41 54.0
comp=E,10256µm,0.3s
ENZZ Sultanice-Enez 0.83 2 PG Pb 19 41 38.4 0.0
DKL Dikili 0.94 139 PG Pb 19 41 39.9 -0.4
ERIK Erikli-Kesan 0.94 19 PG Pg 19 41 39.4 -0.8
KRBG Karabiga-Canak 1.10 56 PN Pg 19 41 42.1 -1.2
ZEDA zmir-Bergama 1.11 137 ⇑*i*P Pg 19 41 42.7 -0.7
ZEDA *i* S Sn 19 41 58.0 -0.6
ALN Alexandroupoli 1.12 358 P Pb 19 41 42.7 -0.6
ALN S Sg 19 41 57.5 -0.6
comp=E,9µm,0.5s
ALN Alexandroupoli 1.12 358 P Pb 19 41 42.7 -0.6
ALN S Sn 19 41 58.4 -0.4
ALN AML AML 19 41 59.6
comp=E,18262µm,0.6s
ALN AML AML 19 41 59.9
comp=N,19658µm,0.5s
ALN Alexandroupoli 1.12 358 PN Pn 19 41 43.3 -0.2
KESN Edirne-Kesan 1.13 23 ⇑*i*P Pg 19 41 42.2 -1.8
KESN *i* S Sg 19 41 58.1 -0.6
BALY Balya 1.17 92 ⇓*i*P Pg 19 41 43.9 -0.7
BALY *i* S Sn 19 41 59.5 -0.7
FOCM Foa 1.17 155 PN Pn 19 41 44.2 -0.1
KNL Balıkesir 1.20 65 ⇑*i*P Pb 19 41 43.9 -0.8
KNL *i* S Sg 19 41 59.8 -0.9
RKY Sarkoy-Tekirda 1.22 42 PN Pb 19 41 44.6 -0.6
SART Tekirdag 1.23 42 ⇑*i*P Pb 19 41 43.8 -1.4
SART *i* S Sg 19 42 00.8 -0.7
KRBN Karaburun 1.24 163 PN Pg 19 41 45.3 -0.5
GONE Gonen-Balikesi 1.25 77 PN Pg 19 41 45.4 -0.6
STEP BALIKESIR_Sava 1.31 107 ⇓*i*P Pn 19 41 46.0 -0.2
STEP *i* S Sg 19 42 03.7 -0.6
THAS Thassos island 1.34 308 P Pn 19 41 46.2 -0.5
THAS S Sb 19 42 03.2 -1.1
comp=N,2µm,0.4s
THAS Thassos island 1.34 308 P Pn 19 41 46.2 -0.5
THAS AML AML 19 42 04.5
comp=N,4238µm,0.4s
THAS AML AML 19 42 05.0
comp=E,3222µm,0.4s
BALB Balikesir 1.38 95 PN Pn 19 41 46.9 -0.2
CHOS Chios island 1.39 182 P Pn 19 41 46.7 -0.7
CHOS S Sg 19 42 07.6 +0.7
comp=E,3µm,0.4s
CHOS Chios island 1.39 182 P Pn 19 41 46.8 -0.7
CHOS AML AML 19 42 10.5
comp=E,6301µm,0.3s
CHOS AML AML 19 42 13.3
comp=N,5251µm,0.5s
CHOS Chios island 1.39 182 PN Pn 19 41 46.9 -0.5
MRMT Marmara Adasi 1.41 54 PN Pn 19 41 47.2 -0.4
RDO Rodhopi 1.43 343 P Pn 19 41 47.6 -0.3
RDO S Sn 19 42 05.9 -0.7
comp=N,2µm,0.6s
RDO Rodhopi 1.43 343 P Pn 19 41 47.9 +0.1
RDO AML AML 19 42 10.4
comp=N,3690µm,0.6s
RDO AML AML 19 42 10.7
comp=E,3336µm,0.6s
RDO Rodhopi 1.43 343 PN Pn 19 41 47.8 -0.1
EDC Edincik 1.46 67 PN Pn 19 41 48.4 +0.1
SKY Skiros Island 1.51 234 P Pn 19 41 48.2 -0.7
SKY AML AML 19 42 13.2
comp=E,3747µm,0.5s
SKY AML AML 19 42 14.6
comp=N,4282µm,0.5s
ZEY zmir 1.57 168 ⇑*i*P Pn 19 41 49.1 -0.6
ZEY *i* S Sn 19 42 09.5 -0.6
BLCB Balcova 1.57 152 PN Pb 19 41 50.6 -0.5
AKHS Akhisar 1.60 124 *i*P Pn 19 41 50.0 -0.3
AKHS *i* S Sg 19 42 13.7 +0.1
AKHS IAML 19 42 16.0
comp=E,448nm,0.4s
TKR Tekirdag 1.63 42 PN Pb 19 41 51.7 -0.4
KAVA Kavala 1.72 315 P Pn 19 41 51.7 -0.1
KAVA S Sn 19 42 13.2 -0.5
comp=E,412nm,0.5s
KAVA Kavala 1.72 315 P Pn 19 41 51.9 +0.1
KAVA AML AML 19 42 14.2
comp=N,1470µm,0.4s
KAVA AML AML 19 42 14.8
comp=E,1242µm,0.4s
OUR Ouranopolis 1.72 289 P Pn 19 41 51.0 -0.8
OUR Ouranopolis 1.72 289 P Pn 19 41 51.1 -0.7
OUR Ouranopolis 1.72 289 PN Pn 19 41 51.9 +0.1
KCTX Karacabey (Bur 1.80 74 PN Pn 19 41 52.9 0.0
AOS Alonnisos 1.83 251 P Pn 19 41 53.1 -0.2
AOS Alonnisos 1.83 251 P Pn 19 41 52.4 -0.9
AOS Alonnisos 1.83 251 PN Pn 19 41 53.7 +0.4
DGB zmir 1.83 160 ⇑*i*P Pn 19 41 52.9 -0.5
DGB *i* S Sg 19 42 20.6 -0.4
CRLT Corlu 1.83 42 PN Pn 19 41 54.1 +0.7
DURS Dursunbey 1.84 95 ⇓*i*P Pn 19 41 53.4 -0.1
DURS *i* S Sn 19 42 16.8 0.0
PAIG Paliouri 1.87 275 P Pn 19 41 53.6 -0.4
PAIG Paliouri 1.87 275 P Pn 19 41 53.5 -0.4
BOTS Marmara Eregli 1.87 49 PN Pn 19 41 54.5 +0.5
KDZ Kurdzhali 1.94 345 *i*P Pn 19 41 55.0 +0.1
KDZ Kurdzhali 1.94 345 PN Pn 19 41 55.5 +0.6
EDRB Edirne 2.12 13 P Pn 19 41 56.8 -0.6
EDRB S Sn 19 42 22.9 -0.7
comp=E,1µm,0.7s
EDRB Edirne 2.12 13 PN Pn 19 41 57.5 +0.1
PLG Polygyros 2.12 287 P Pn 19 41 57.5 0.0
PLG Polygyros 2.12 287 P Pn 19 41 57.4 0.0
SKIA Skiathos 2.13 254 P Pn 19 41 57.5 0.0
SKIA Skiathos 2.13 254 P Pn 19 41 57.3 -0.2
KIRK Kırklareli 2.14 20 *i*P Pn 19 41 57.2 -0.4
KIRK *i* S Sn 19 42 23.7 -0.3
PHSR Pinarhisar 2.14 30 ⇑P Pb 19 41 59.9 -0.9
PHSR Pinarhisar 2.14 30 ⇑S Sb 19 42 28.2 +0.9
PHSR Pinarhisar 2.14 30 PN Pn 19 41 58.6 +1.0
SMG Samos 2.15 164 P Pn 19 41 57.0 -0.7
SMG S Sn 19 42 24.7 +0.4
comp=E,2µm,0.5s
SMG Samos 2.15 164 P Pn 19 41 57.2 -0.5
DEMI Demirci 2.15 109 *i*P Pn 19 41 58.3 +0.4
DEMI *i* S Sn 19 42 25.0 +0.4
SLVT Silivri 2.16 47 PN Pn 19 41 59.1 +1.2
EREA Eretria 2.17 232 P Pn 19 41 57.4 -0.6
EREA Eretria 2.17 232 P Pn 19 41 57.5 -0.6
RZN Rozhen 2.18 331 *i*P Pn 19 41 58.8 +0.5
MDNY Mudanya-Bursa 2.21 74 PN Pn 19 41 59.4 +0.8
MRKA Markates 2.23 242 P Pn 19 41 58.5 -0.4
ARMT Armutlu 2.25 69 PN Pn 19 41 59.8 +0.6
GCAM G?zelcaml? 2.26 157 PN Pn 19 41 59.4 +0.2
GCAM G?zelcaml? 2.26 157 *i*P Pn 19 41 58.7 -0.5

GCAM *i* S Sg 19 42 34.4 -0.3
XOR Xorichti 2.29 260 P Pn 19 41 59.3 -0.4
XOR Xorichti 2.29 260 P Pn 19 41 58.8 -0.9
AYDB Zeytinkoy-Aydi 2.30 142 PN Pn 19 42 00.2 +0.2
MANT Manisa 2.30 123 *e*P Pn 19 42 00.8 +0.7
MANT *i* S Sg 19 42 33.9 -2.2
DIM Dimitrovgrad 2.31 349 *i*P Pn 19 42 00.1 +0.2
NVR Nevrokopi 2.32 313 P Pn 19 42 01.0 +0.9
NVR Nevrokopi 2.32 313 P Pn 19 42 00.6 +0.5
SMAA Simav-Kutahya 2.33 106 PN Pn 19 42 01.6 +1.3
CTKS Kestanelik-??a 2.34 51 PN Pn 19 42 01.3 +1.0
SOH Sokhos 2.35 297 P Pn 19 42 00.8 +0.3
SOH Sokhos 2.35 297 P Pn 19 42 00.9 +0.3
ULDT Uludag 2.36 80 *i*P Pn 19 42 00.8 0.0
ULDT *i* S Sg 19 42 35.8 -2.0
IGD Bursa 2.43 78 *i*P Pn 19 42 01.3 -0.2
IGD *i* S Sg 19 42 38.0 -2.0
HORT Hortiatis 2.44 290 P Pn 19 42 01.8 -0.1
HORT Hortiatis 2.44 290 P Pn 19 42 02.2 +0.4
HORT Hortiatis 2.44 290 PN Pn 19 42 02.6 +0.7
GEMT Gemlik 2.45 74 PN Pn 19 42 03.4 +1.5
PTL Penteli 2.46 226 P Pn 19 42 01.3 -0.7
BGKT Bogazkoy 2.47 55 PN Pn 19 42 03.4 +1.3
USAK Uak-Merkez 2.50 114 *i*P Pn 19 42 03.3 +0.6
USAK *i* S Sb 19 42 38.7 +0.9
SHAP Saphane-Kutahy 2.53 106 PN Pn 19 42 04.1 +1.0
PLD Plovdiv 2.55 336 PN Pn 19 42 04.1 +0.8
MMB Musomiste 2.56 316 *i*P Pn 19 42 03.6 +0.2
ISK Istanbul-Kandi 2.59 59 P Pn 19 42 03.0 -0.9
ISK Istanbul-Kandi 2.59 59 PN Pn 19 42 05.1 +1.2
KAVV Kandilli-Istan 2.59 59 PN Pn 19 42 05.3 +1.4
TVSB Tavsanli 2.61 96 PN Pn 19 42 04.9 +0.7
YLV Yalova 2.62 72 ⇓P Pb 19 42 09.0 -0.1
YLV Yalova 2.62 72 ⇑S Sg 19 42 45.5 -0.9
YLV Yalova 2.62 72 PN Pn 19 42 05.8 +1.4
TUZL Tuzla-Istanbul 2.63 66 PN Pn 19 42 05.6 +1.3
VLY Voula,Athens 2.64 224 P Pn 19 42 03.6 -0.9
IZI Iznik 2.64 77 PN Pn 19 42 05.5 +0.9
KLYT Kilyos 2.68 56 PN Pn 19 42 06.5 +1.5
APE Apeiranthos 2.75 190 P Pn 19 42 04.7 -1.3
APE Apeiranthos 2.75 190 P Pn 19 42 04.8 -1.3
APE Apeiranthos 2.75 190 ⇑P Pn 19 42 04.8 -1.3
APE Apeiranthos 2.75 190 ⇑S Sg 19 42 54.1 +3.8
LIT Litokhoron 2.80 278 P Pn 19 42 06.7 0.0
MLSB Milas 2.81 152 PN Pn 19 42 08.5 +1.7
KNT Kendrikon 2.81 300 P Pn 19 42 07.6 +0.8
KNT Kendrikon 2.81 300 P Pn 19 42 07.6 +0.8
KNT Kendrikon 2.81 300 PN Pn 19 42 07.9 +1.1
ADVT Abdulvahap 2.86 76 PN Pn 19 42 08.8 +1.3
BODT Bodrum 2.88 160 P Pn 19 42 07.6 -0.2
BODT Bodrum 2.88 160 PN Pn 19 42 08.1 +0.3
CAVI Cavuskoy 2.90 80 PN Pn 19 42 09.3 +1.2
HRT Hereke 2.92 68 PN Pn 19 42 09.5 +1.1
AMGA Amorgos Island 2.95 183 P Pn 19 42 07.8 -1.0
AMGA Amorgos Island 2.95 183 P Pn 19 42 07.6 -1.1
AGG Agios Georgios 3.02 257 P Pn 19 42 10.0 +0.2
AGG Agios Georgios 3.02 257 P Pn 19 42 10.0 +0.2
AGG Agios Georgios 3.02 257 PN Pn 19 42 10.8 +1.0
SILT Sile 3.03 62 PN Pn 19 42 11.7 +1.9
GRG Griva 3.06 294 P Pn 19 42 11.7 +1.3
GRG Griva 3.06 294 P Pn 19 42 10.9 +0.6
GRG Griva 3.06 294 PN Pn 19 42 12.0 +1.6
KKB Krupnik 3.10 313 *i*P Pn 19 42 11.2 +0.4
VAY Valandovo 3.10 301 *i*Pn Pn 19 42 12.2 +1.4
VAY *i* Sn Sg 19 43 01.9 +0.3
KOSK Kos Island 3.10 167 PN Pn 19 42 11.7 +0.9
PGB Panagyurishte 3.13 333 *i*P Pn 19 42 11.5 +0.2
YER Yerkesik 3.15 146 P Pn 19 42 11.9 +0.4
YER Yerkesik 3.15 146 PN Pn 19 42 12.9 +1.4
ELND Elena 3.15 357 ⇓P Pn 19 42 12.1 +0.6
ELND Elena 3.15 357 ⇑S Sn 19 42 47.6 -1.5
THL Klokotos Trika 3.16 267 P Pn 19 42 11.6 -0.1
MAKR Makrakomi, Fth 3.17 257 P Pn 19 42 12.7 +0.8
ORH Orhaniye 3.22 69 P Pg 19 42 27.5 +3.8
DAT Datca 3.26 159 PN Pn 19 42 13.8 +0.7
SPNC Sapanca-Adapaz 3.34 73 PN Pn 19 42 16.2 +2.0
BORA Eskisehir 3.35 87 PN Pn 19 42 15.4 +1.1
SAUV Serdivan-Sakar 3.37 72 PN Pn 19 42 15.9 +1.4
KALE Kalithea 3.38 247 P Pn 19 42 15.1 +0.3
THT2 Imerovigli 3.38 189 PN Pn 19 42 16.3 +1.6
SANT Santorini 3.44 189 ⇑P Pn 19 42 14.8 -0.8
GULT Gulveren 3.44 78 PN Pn 19 42 17.4 +1.8
ROIA ROIAK 3.44 16 *i*P Pn 19 42 16.1 +0.5
SRCK Saricakaya, Es 3.49 84 PN Pn 19 42 17.6 +1.4
TURN Turunc 3.51 165 PN Pn 19 42 16.9 +0.4
STIP Stip 3.54 304 ⇓*i*Pn Pn 19 42 16.0 -0.8
PRD Provadia 3.55 15 *i*P Pn 19 42 17.2 +0.2
VTS Vitosha 3.57 324 ⇓P Pn 19 42 18.4 +1.0
VTS Vitosha 3.57 324 *i*P Pn 19 42 18.5 +1.1
NEF NEVSHA 3.59 14 *i*P Pn 19 42 16.9 -0.7
BASM Basmaki-Afyon 3.60 120 PN Pn 19 42 19.0 +1.2
SHUT Suhut-Afyon 3.67 108 PN Pn 19 42 20.2 +1.5
ESKT Eskisehir 3.67 93 PN Pn 19 42 19.9 +1.1
FNA Florina 3.75 287 P Pn 19 42 21.3 +1.4
PLVB Pleven 3.77 343 ⇓P Pn 19 42 20.8 +0.8
RAZG Razgrad 3.79 4 ⇑P Pn 19 42 21.3 +1.0
RAZG Razgrad 3.79 4 ⇑S Sn 19 43 04.5 -0.4
KALB Balgarevo 4.01 25 ⇑P Pn 19 42 24.4 +1.0
COPA Copaceanca 4.40 352 ⇑P Pn 19 42 29.2 +0.5
COPA Copaceanca 4.40 352 ⇑S Sn 19 43 19.0 -0.8
VLAD Vladila 4.40 344 ⇑P Pn 19 42 29.2 +0.5
MANR Mangalia 4.44 24 ⇓P Pn 19 42 29.9 +0.7
IDI Anoyia 4.58 193 Pn Pn 19 42 30.2 -1.2
comp=E,0.8nm,0.3s,baz=16,slow=17,SNR=8.3
IDI Sn Sn 19 43 22.5 -2.1
comp=E,2.2nm,0.3s,baz=303,slow=17,SNR=2.9
IDI LR LR 19 44 16.2
comp=E,80nm,20.4s,baz=344,slow=39
HUMR Humele 4.82 350 ⇑P Pn 19 42 35.0 +0.6
HUMR Humele 4.82 350 ⇑S Sn 19 43 29.1 -1.0
SULR 4.89 1 ⇑P Pn 19 42 37.3 +1.8
TIRR Tirgusor 4.98 19 ⇓P Pn 19 42 37.0 +0.4
ISR Istrita 5.34 3 ⇑P Pn 19 42 44.4 +2.7
TOPG Topolog 5.36 18 ⇓P Pn 19 42 42.4 +0.5
CFR Carcaliu 5.60 15 ⇑P Pn 19 42 45.1 0.0
ARR Arges 5.69 349 ⇑P Pn 19 42 47.4 +1.0
ARR Arges 5.69 349 ⇑S Sn 19 43 48.8 -2.9
MLR Muntele Rosu 5.71 359 Pn Pn 19 42 48.4 +1.7
comp=E,2.6nm,0.3s,baz=225,slow=4.1,SNR=53
MLR Sn Sn 19 43 53.8 +1.5
comp=E,2.8nm,0.3s,baz=18,slow=20,SNR=3.3
MLR Lg Lg 19 44 24.1
comp=E,3.6nm,0.3s,baz=76,slow=16,SNR=4.0
MLR Muntele Rosu 5.71 359 ⇑P Pn 19 42 48.4 +1.7
BISRR Bisoca 5.78 4 ⇓P Pn 19 42 50.7 +3.0
BRTR Keskin Array B 5.81 85 Pn Pn 19 42 49.1 +0.9
comp=E,2.6nm,0.3s,baz=255,slow=10,SNR=58
BRTR Sn Sn 19 43 52.9 -1.9
comp=E,0.9nm,0.3s,baz=266,slow=22,SNR=6.2
BRTR Lg Lg 19 44 30.9
comp=E,0.3nm,0.3s,baz=268,slow=25,SNR=8.8
PDG Podgorica 5.81 299 ⇓P Pn 19 42 51.2 +3.1
LOT Lotru 5.92 344 ⇑P Pn 19 42 50.0 +0.4
LOT Lotru 5.92 344 ⇓S Sn 19 43 54.2 -3.2
MDVR Moldovita 5.96 328 ⇑P Pn 19 42 50.6 +0.4
ODBI Odobesti 6.02 6 ⇓P Pn 19 42 53.0 +2.1
PLOR Plostina 6.08 4 ⇑P Pn 19 42 53.9 +2.1
VRI Vrincioaia 6.10 4 ⇓P Pn 19 42 54.2 +2.1
GZR Gura Zlata 6.12 337 ⇑P Pn 19 42 52.4 0.0
GZR Gura Zlata 6.12 337 ⇑S Sn 19 43 58.2 -4.2
DOPR Dopca 6.21 355 ⇑P Pn 19 42 54.8 +1.3
OZUR 6.32 358 ⇓P Pn 19 42 56.9 +1.8
MDB Medias 6.48 349 ⇓P Pn 19 42 59.8 +2.5
BZS Buzias 6.70 332 ⇑P Pn 19 43 00.3 0.0
TESR Tescani 6.74 3 ⇓P Pn 19 43 02.0 +1.2
BIZ Bicaz 7.16 360 ⇑P Pn 19 43 08.3 +1.8
SIRR Siria 7.25 335 ⇑P Pn 19 43 08.0 +0.1
SEVA Sevastopol 7.36 47 ⇓P Pn 19 43 10.0 +0.7
MILM Milestii Mici 7.40 15 ⇓P Pn 19 43 09.4 -0.4
BURAR Bucovina Array 7.86 356 ⇑P Pn 19 43 18.0 +1.7
BMR Baia Mare 8.11 347 ⇓P Pn 19 43 20.5 +0.8
SORM Soroca 8.51 10 ⇓P Pn 19 43 26.2 +1.2
KOLS Kolonicke sedl 9.55 345 *e*PN Pn 19 43 43.8 +4.4
MMAI Mount Meron Ar 10.08 129 Pn Pn 19 43 47.4 +0.6
comp=E,0.7nm,0.3s,baz=318,slow=11,SNR=5.0
VYHS Vyhne 10.15 331 *e*PN Pn 19 43 47.5 -0.1
AKASG Malin Array Be 11.14 10 Pn Pn 19 44 01.6 +0.6
comp=E,0.5nm,0.3s,baz=201,slow=12,SNR=3.4
AKASG Sn Sn 19 45 59.0 -6.4
comp=E,0.6nm,0.3s,baz=196,slow=21,SNR=4.1

FINES FINESS Array B 21.69 360 P P 19 46 12.9 +0.4
comp=E,1.2nm,0.7s,baz=186,slow=7.0,SNR=2.5
HFS Hagfors 21.81 343 P P 19 46 15.2 +1.4
comp=E,1.6nm,0.6s,baz=101,slow=7.9,SNR=4.5
NB2 NORSAR Subarra 23.19 341 P P 19 46 28.6 +0.1
comp=Z,1.1nm,0.7s,baz=147,slow=9.3
NOA NORSAR Array B 23.19 341 P P 19 46 28.6 +0.1
comp=Z,1.3nm,0.7s,baz=147,slow=9.2,SNR=4.4
EKA Eskdalemuir Ar 24.89 318 P P 19 46 44.5 0.0
comp=Z,1.1nm,0.5s,baz=110,slow=9.6,SNR=4.4
GEYT Alibeck 24.93 84 P P 19 46 46.1 +0.9
comp=Z,4.6nm,1.0s,baz=294,slow=11,SNR=7.2
TORD Torodi Ar. Bea 34.15 226 P P 19 48 07.4 +0.3
comp=Z,0.4nm,0.8s,baz=35,slow=9.2,SNR=2.5
MKAR Makanchi Array 40.74 61 P P 19 49 03.3 +0.6
comp=Z,0.4nm,0.7s,baz=292,slow=7.3,SNR=4.2
ZALV Zalesovo Beam 41.36 50 P P 19 49 08.4 +0.8
comp=Z,2.6nm,0.6s,baz=275,slow=9.2,SNR=12
SONM Songino Array 56.05 53 P P 19 51 02.0 +1.1
comp=Z,0.2nm,0.6s,baz=292,slow=8.6,SNR=2.5

*JMA **07** 19:44:05.5±0.1, 23°.48N×121°.59E, h45km±2km, M3.3*
*TAP **07** 19:44:06.2, 23°.50N×121°.60E, h40km, ML3.7, B*

ISC 07 19:44:05.5±0.9, **23°.49N**±0°.02×**121°.65E**±0°.02, **h32**km±8km, **n137**, **σ0892**/225, **12C-26D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
HGSD	**Ruisui**	**0.21**	**271**	⇑P		**Pn**	**19 44 13.6**	**+1.2**
	baz=268							
HGSD				S		**Sb**	**19 44 19.1**	**+2.5**
	baz=268							
EGFH	**Guangfu**	**0.27**	**311**	⇑*e*P		**Pn**	**19 44 14.1**	**+0.8**
	baz=305							
EGFH				S		**Sn**	**19 44 19.9**	**+1.6**
	baz=305							
EHY	**Hungye**	**0.30**	**273**	⇑*i*P		**Pn**	**19 44 14.1**	**+0.3**
	baz=271							
EHY				S		**Sn**	**19 44 19.3**	**+0.1**
	baz=271							
YULB	**Yu-li**	**0.34**	**253**	⇓P		**Pn**	**19 44 14.5**	**+0.3**
	baz=260							
YULB				*e*S		**Sn**	**19 44 20.1**	**+0.1**
	baz=260							
TWF1	**Yuli**	**0.35**	**247**	⇓*i*P		**Pn**	**19 44 14.8**	**+0.3**
	baz=254							
TWF1				S		**Sn**	**19 44 20.5**	**+0.1**
	baz=254							
ESL	**Shilin**	**0.38**	**328**	⇑*i*P		**Pn**	**19 44 14.8**	**0.0**
	baz=328							
ESL				*e*S		**Sn**	**19 44 20.8**	**-0.3**
	baz=328							
ENLB	**Shoufeng**	**0.41**	**354**	⇑*i*P		**Pn**	**19 44 15.0**	**-0.3**
	baz=6.0							
ENLB				S		**Sn**	**19 44 22.2**	**+0.3**
	baz=6.0							
FULB	**Fuli**	**0.44**	**229**	⇓*e*P		**Pn**	**19 44 16.2**	**+0.5**
	baz=236							
FULB				S		**Sn**	**19 44 24.3**	**+1.8**
	baz=236							
CHKT	**Chengkung**	**0.47**	**214**	P		**Pn**	**19 44 16.2**	**+0.2**
	baz=202							
CHKT				S		**Sn**	**19 44 23.7**	**+0.5**
	baz=202							
HWA	**Hwalien**	**0.49**	**355**	⇑P		**Pn**	**19 44 16.9**	**+0.6**
	baz=7.0							
HWA				*e*S		**Sn**	**19 44 25.1**	**+1.5**
	baz=7.0							
VWDT	**VWDT**	**0.54**	**299**	⇑P		**Pn**	**19 44 17.4**	**+0.4**
	baz=298							
VWDT				*e*S		**Sb**	**19 44 24.5**	**+0.2**
	baz=298							
TWD	**Chiawan**	**0.59**	**355**	⇑P		**Pn**	**19 44 17.9**	**+0.3**
	baz=350							
TWD				*e*S		**Sn**	**19 44 26.7**	**+0.5**
	baz=350							
OWD	**Renai**	**0.64**	**317**	*e*P		**Pn**	**19 44 18.4**	**0.0**
	baz=320							
OWD				*e*S		**Sb**	**19 44 26.8**	**-0.3**
	baz=320							
ELDTW	**Lidau**	**0.66**	**243**	⇓*i*P		**Pb**	**19 44 18.2**	**-0.5**
	baz=235							
NACB	**Ninganchiao**	**0.68**	**356**	⇑P		**Pb**	**19 44 18.8**	**-0.3**
	baz=350							
NACB				S		**Sb**	**19 44 28.1**	**-0.2**
	baz=350							
SSLB	**Suanglung**	**0.70**	**295**	⇓P		**Pn**	**19 44 19.4**	**+0.1**
	baz=292							
SSLB				*e*S		**Sb**	**19 44 28.1**	**-0.8**
	baz=292							
CHGB	**Renai**	**0.72**	**322**	⇑P		**Pn**	**19 44 19.9**	**+0.3**
	baz=333							
CHGB				*e*S		**Sb**	**19 44 28.4**	**-1.1**
	baz=333							
ETLH	**Xiulin Townshi**	**0.73**	**348**	⇑*e*P		**Pb**	**19 44 19.4**	**-0.5**
	baz=342							
ETLH				*e*S		**Sb**	**19 44 28.7**	**-1.0**
	baz=342							
WHF	**Hehuan Shan**	**0.74**	**332**	*e*P		**Pb**	**19 44 20.0**	**-0.3**
	baz=335							
WHF				*e*S		**Sb**	**19 44 29.3**	**-1.1**
	baz=335							
WHYT	**Xinyi Township**	**0.76**	**286**	*e*P		**Pn**	**19 44 20.8**	**+0.7**
	baz=284							
WHYT				*e*S		**Sn**	**19 44 30.8**	**+0.3**
	baz=284							
ALS	**Alishan**	**0.78**	**272**	⇓P		**Pn**	**19 44 21.3**	**+0.8**
	baz=279							
ALS				S		**Sn**	**19 44 31.4**	**+0.1**
	baz=279							
SMLT	**Sun Moon Lake**	**0.79**	**300**	⇓P		**Pn**	**19 44 21.1**	**+0.5**
	baz=303							
SMLT				S		**Sn**	**19 44 31.7**	**+0.3**
	baz=303							
TWH	**Lutao**	**0.79**	**192**	⇓P		**Pb**	**19 44 20.6**	**-0.4**
	baz=180							
TWH				*e*S		**Sn**	**19 44 31.4**	**+0.2**
	baz=180							
TYC	**Yuchr**	**0.84**	**300**	⇓P		**Pn**	**19 44 21.7**	**+0.6**
	baz=301							
TYC				S		**Sb**	**19 44 32.5**	**-0.1**
	baz=301							
TWGBT	**Beinan**	**0.85**	**218**	P		**Pb**	**19 44 20.6**	**-1.3**
	baz=215							
TWGBT				*e*S		**Sb**	**19 44 31.6**	**-1.5**
	baz=215							
TWG	**Pinlang**	**0.85**	**219**	*e*P		**Pb**	**19 44 20.6**	**-1.3**
	baz=215							
TWG				*e*S		**Sb**	**19 44 31.7**	**-1.4**
	baz=215							
DPDB	**Guoxing**	**0.86**	**309**	*e*P		**Pn**	**19 44 22.2**	**+0.7**
	baz=316							
DPDB				*e*S		**Sb**	**19 44 33.0**	**-0.2**
	baz=316							
TTN	**Taitung**	**0.87**	**212**	*e*P		**Pn**	**19 44 21.9**	**+0.4**
	baz=219							
TTN				*e*S		**Sn**	**19 44 34.5**	**+1.4**
	baz=219							
TWT	**Tachien**	**0.88**	**330**	P		**Pn**	**19 44 22.5**	**+0.7**
	baz=337							
TWT				S		**Sb**	**19 44 33.1**	**-0.8**
	baz=337							
TDCB	**Techi**	**0.88**	**329**	⇑P		**Pn**	**19 44 22.5**	**+0.7**
	baz=337							
TDCB				S		**Sb**	**19 44 32.6**	**-1.5**
	baz=337							
STYT	**Tauyuan**	**0.88**	**249**	⇓*i*P		**Pn**	**19 44 22.2**	**+0.4**
	baz=243							
STYT				S		**Sb**	**19 44 33.8**	**-0.2**
	baz=243							
CHN5	**Tsauling**	**0.90**	**277**	⇓*i*P		**Pn**	**19 44 23.1**	**+1.1**
	baz=277							
CHN5				S		**Sn**	**19 44 34.7**	**+0.7**
	baz=277							
WJS	**Zhushan**	**0.91**	**291**	*e*P		**Pn**	**19 44 23.1**	**+1.0**
	baz=292							
WJS				S		**Sn**	**19 44 35.3**	**+1.2**
	baz=292							
ENA	**Nanau**	**0.94**	**5**	*e*P		**Pb**	**19 44 22.8**	**-0.5**
	baz=16							
NANB	**Nanao**	**0.94**	**5**	*e*P		**Pb**	**19 44 22.8**	**-0.5**
	baz=17							
NANB				*e*S		**Sb**	**19 44 34.6**	**-0.8**
	baz=17							
TPUB	**Ta-pu**	**0.96**	**259**	⇓P		**Pn**	**19 44 23.8**	**+1.0**
	baz=258							
TPUB				*e*S		**Sn**	**19 44 36.1**	**+0.8**

	baz=258							
NNSH	**Datong**	**0.97**	**345**	*e*P	**Pb**	**19 44 23.3**	**-0.6**
	baz=348							
NNSH				*e*S	**Sb**	**19 44 35.0**	**-1.4**
	baz=348							
WNT	**Mingjian**	**0.97**	**294**	*e*P	**Pn**	**19 44 23.8**	**+0.9**
	baz=282							
WNT				*e*S	**Sn**	**19 44 37.1**	**+1.5**
	baz=282							
NNS	**Nan Shan**	**0.98**	**345**	*e*P	**Pb**	**19 44 23.5**	**-0.7**
	baz=348							
NNS				*e*S	**Sb**	**19 44 35.1**	**-1.7**
	baz=348							
CHN4	**Tsaushan**	**0.98**	**262**	⇓P	**Pb**	**19 44 24.2**	**+0.1**
	baz=261							
CHN4				*e*S	**Sn**	**19 44 37.2**	**+1.3**
	baz=261							
WTP	**Ta-pu**	**0.98**	**256**	⇓P	**Pb**	**19 44 24.2**	**+0.1**
	baz=255							
WTP				S	**Sn**	**19 44 37.5**	**+1.4**
	baz=255							
WHP	**Taichung City**	**1.02**	**321**	*e*P	**Pb**	**19 44 25.1**	**+0.4**
	baz=326							
WHP				*e*S	**Sn**	**19 44 38.0**	**+1.1**
	baz=326							
WGK	**Gukeng**	**1.02**	**281**	*e*P	**Pb**	**19 44 24.7**	**+0.1**
	baz=281							
WGK				*e*S	**Sn**	**19 44 38.4**	**+1.6**
	baz=281							
SLGT	**Liugui**	**1.05**	**242**	⇓P	**Pb**	**19 44 25.2**	**0.0**
	baz=236							
SLGT				*e*S	**Sn**	**19 44 39.6**	**+2.0**
	baz=236							
SGST	**Jiashian**	**1.06**	**248**	*e*P	**Pn**	**19 44 24.7**	**+0.5**
	baz=239							
SGST				*e*S	**Sn**	**19 44 38.7**	**+0.8**
	baz=239							
CHN1	**Nanshi**	**1.08**	**254**	⇓*i*P	**Pb**	**19 44 25.7**	**+0.1**
	baz=253							
CHN1				*e*S	**Sn**	**19 44 39.5**	**+1.2**
	baz=253							
CHN2	**Minshiung**	**1.08**	**272**	P	**Pb**	**19 44 25.9**	**+0.2**
	baz=272							
CHN2				S	**Sn**	**19 44 40.3**	**+2.0**
	baz=272							
TWK	**Hsinying**	**1.09**	**258**	⇓P	**Pb**	**19 44 25.6**	**-0.3**
	baz=258							
TWK				*e*S	**Sn**	**19 44 39.6**	**+0.9**
	baz=258							
SNST	**Tainan City**	**1.09**	**256**	*e*P	**Pb**	**19 44 25.8**	**-0.2**
	baz=255							
SNST				*e*S	**Sn**	**19 44 40.6**	**+1.9**
	baz=255							
ECL	**Taimali**	**1.10**	**216**	*e*P	**Pn**	**19 44 23.9**	**-0.8**
	baz=213							
TCU	**Taichung**	**1.11**	**306**	⇓*e*P	**Pb**	**19 44 26.6**	**+0.4**
	baz=308							
TCU				*e*S	**Sn**	**19 44 41.6**	**+2.6**
	baz=308							
NDT	**Datong Townshi**	**1.11**	**353**	*e*P	**Pb**	**19 44 25.8**	**-0.6**
	baz=356							
NDT				*e*S	**Sb**	**19 44 39.3**	**-1.2**
	baz=356							
CHY	**Chiayi**	**1.13**	**271**	*e*P	**Pb**	**19 44 26.2**	**-0.3**
	baz=270							
TWC	**Suao**	**1.13**	**9**	*e*P	**Pb**	**19 44 26.4**	**-0.2**
	baz=12							
EOS1	**EOS1**	**1.14**	**22**	*e*P	**Pb**	**19 44 26.6**	**-0.2**
	baz=37							
EOS1				*e*S	**Sb**	**19 44 41.6**	**+0.4**
	baz=37							
ENTT	**Nioudou**	**1.15**	**356**	*e*P	**Pn**	**19 44 26.0**	**+0.6**
	baz=359							
ENTT				*e*S	**Sn**	**19 44 40.6**	**+0.5**
	baz=359							
WCHH	**Zhanghua**	**1.16**	**301**	*e*P	**Pb**	**19 44 27.0**	**0.0**
	baz=301							
WCHH				*e*S	**Sb**	**19 44 42.7**	**+0.9**
	baz=301							
TWQ1	**Liyutan**	**1.17**	**317**	⇓*i*P	**Pb**	**19 44 27.4**	**+0.1**
	baz=318							
TWQ1				S	**Sb**	**19 44 42.9**	**+0.8**
	baz=318							
SSD	**Sandimen**	**1.20**	**232**	*e*P	**Pn**	**19 44 26.5**	**+0.5**
	baz=228							
SSD				*e*S	**Sb**	**19 44 42.2**	**-0.6**
	baz=228							
YHNB	**Yeheng**	**1.20**	**348**	⇓P	**Pb**	**19 44 27.1**	**-0.8**
	baz=360							
YHNB				*e*S	**Sn**	**19 44 41.7**	**+0.3**
	baz=360							
NSK	**Sanguang**	**1.21**	**347**	*e*P	**Pb**	**19 44 27.2**	**-0.8**
	baz=360							
NSK				*e*S	**Sn**	**19 44 41.7**	**0.0**
	baz=360							
TWE	**Neicheng**	**1.23**	**1**	*e*P	**Pb**	**19 44 27.4**	**-0.7**
	baz=355							
TWE				*e*S	**Sn**	**19 44 42.6**	**+0.7**
	baz=355							
NSY	**Sanyi**	**1.23**	**319**	⇓*e*P	**Pb**	**19 44 28.2**	**0.0**
	baz=333							
NSY				*e*S	**Sb**	**19 44 44.3**	**+0.5**
	baz=333							
WLGB	**Puzi**	**1.24**	**270**	*e*P	**Pb**	**19 44 27.8**	**-0.6**
	baz=270							
WLGB				*e*S	**Sb**	**19 44 43.8**	**-0.3**
	baz=270							
RLNB	**Erlin**	**1.25**	**289**	*e*P	**Pb**	**19 44 28.1**	**-0.5**
	baz=281							
RLNB				*e*S	**Sb**	**19 44 44.4**	**0.0**
	baz=281							
CHN3	**Shinhua**	**1.25**	**251**	*e*P	**Pb**	**19 44 28.7**	**+0.1**
	baz=262							
CHN3				*e*S	**Sb**	**19 44 46.0**	**+1.6**
	baz=262							
SLBB	**Yuanshan**	**1.26**	**359**	*e*P	**Pn**	**19 44 27.0**	**0.0**
	baz=2.0							
WDJ	**Dajia District**	**1.26**	**313**	*e*P	**Pb**	**19 44 28.5**	**-0.3**
	baz=314							
WDJ				*e*S	**Sb**	**19 44 45.1**	**+0.5**
	baz=314							
MASBT	**Mashibuluo**	**1.28**	**227**	*e*P	**Pn**	**19 44 27.8**	**+0.6**
	baz=225							
MASBT				*e*S	**Sb**	**19 44 44.9**	**-0.4**
	baz=225							
NSTT	**Nanjuang**	**1.28**	**332**	*e*P	**Pb**	**19 44 28.7**	**-0.4**
	baz=334							
NSTT				*e*S	**Sn**	**19 44 44.2**	**+0.8**
	baz=334							
PTSB	**Yuanli**	**1.29**	**318**	*e*P	**Pb**	**19 44 28.6**	**-0.7**
	baz=319							
PTSB				*e*S	**Sb**	**19 44 45.9**	**+0.5**
	baz=319							
NWLT	**Wulai**	**1.29**	**354**	*e*P	**Pb**	**19 44 28.6**	**-0.6**
	baz=356							
NWLT				*e*S	**Sn**	**19 44 44.3**	**+0.8**
	baz=356							
LIOB	**Emei**	**1.29**	**333**	*e*P	**Pb**	**19 44 29.1**	**-0.1**
	baz=322							
LIOB				*e*S	**Sb**	**19 44 45.1**	**-0.4**
	baz=322							
NMLH	**Miaoli**	**1.31**	**323**	*e*P	**Pb**	**19 44 28.9**	**-0.6**
	baz=324							
NMLH				*e*S	**Sb**	**19 44 45.4**	**-0.5**
	baz=324							
WTCT	**Ta-ch'eng**	**1.31**	**287**	*e*P	**Pb**	**19 44 28.7**	**-0.9**
	baz=276							
WTCT				*e*S	**Sb**	**19 44 45.4**	**-0.6**
	baz=276							
TWM1	**Shoushan**	**1.31**	**240**	*e*P	**Pb**	**19 44 30.0**	**+0.4**
	baz=238							
SGLT	**Jiouru**	**1.31**	**235**	*e*P	**Pb**	**19 44 30.1**	**+0.5**
	baz=233							
WSF	**Szhu**	**1.32**	**277**	*e*P	**Pn**	**19 44 28.1**	**+0.4**
	baz=277							
WSF				*e*S	**Sn**	**19 44 45.1**	**+0.9**
	baz=277							
EAST	**Anshuo**	**1.33**	**214**	*e*P	**Pn**	**19 44 27.4**	**-0.5**
	baz=211							
CHN8	**Yiju**	**1.33**	**264**	⇓*i*P	**Pb**	**19 44 29.0**	**-0.9**
	baz=264							
CHN8				S	**Sb**	**19 44 45.9**	**-0.8**
	baz=264							
NTC	**Toucheng**	**1.37**	**7**	*e*P	**Pb**	**19 44 30.4**	**-0.1**
	baz=19							
SCLT	**Jiali**	**1.38**	**257**	*e*P	**Pb**	**19 44 29.7**	**-0.9**
	baz=257							
SCLT				*e*S	**Sb**	**19 44 47.7**	**-0.3**
	baz=257							
WLTB	**Daxi**	**1.40**	**345**	*e*P	**Pb**	**19 44 30.9**	**-0.2**
	baz=352							
WLTB				*e*S	**Sb**	**19 44 48.8**	**+0.1**
	baz=352							
SSPT	**Xinbi**	**1.42**	**225**	*e*P	**Pb**	**19 44 31.3**	**-0.1**
	baz=210							
SNJT	**Kaohsiung City**	**1.42**	**239**	*e*P	**Pb**	**19 44 32.0**	**+0.6**
	baz=238							
SBCB	**Hsinchu**	**1.43**	**335**	*e*P	**Pb**	**19 44 31.2**	**-0.4**
	baz=321							
LAY	**Lan-yu**	**1.45**	**184**	*e*P	**Pn**	**19 44 29.4**	**-0.2**
	baz=175							
LAY				*e*S	**Sn**	**19 44 47.1**	**-0.3**
	baz=175							
SCZT	**Fangliau**	**1.46**	**221**	*e*P	**Pb**	**19 44 31.1**	**-1.1**
	baz=216							
SCZT				*e*S	**Sb**	**19 44 50.0**	**-0.4**
	baz=216							
TIPB	**Shuangxi**	**1.48**	**6**	*e*P	**Pb**	**19 44 31.9**	**-0.7**
	baz=359							
TIPB				*e*S	**Sb**	**19 44 50.5**	**-0.5**
	baz=359							
TWA	**Mucha**	**1.48**	**358**	*e*P	**Pb**	**19 44 32.1**	**-0.4**
TATO	**Taipei**	**1.49**	**354**	*e*P	**Pb**	**19 44 31.6**	**-0.9**
	baz=356							
TATO				*e*S	**Sn**	**19 44 49.6**	**+1.2**
	baz=356							
JYNG	**Yonagunijimaku**	**1.52**	**51**	P	**Pb**	**19 44 32.1**	**-1.1**
JYNG				*e*S	**Sb**	**19 44 50.9**	**-1.2**
NCUH	**Zhongli**	**1.53**	**344**	*e*P	**Pb**	**19 44 32.5**	**-0.8**
	baz=345							
WSSB	**Gushan**	**1.53**	**237**	*e*P	**Pb**	**19 44 32.9**	**-0.5**
	baz=236							
WSSB				*e*S	**Sb**	**19 44 52.6**	**+0.1**
	baz=236							
TWB1	**Santiao Chiao**	**1.54**	**11**	*e*P	**Pb**	**19 44 32.7**	**-0.8**
	baz=15							
YOJ	**Yonaguni jima**	**1.57**	**52**	*e*P	**Pn**	**19 44 32.7**	**+1.5**
	baz=54							
YOJ	**Yonaguni jima**	**1.57**	**52**	P	**Pb**	**19 44 32.9**	**-1.2**
YOJ				S	**Sb**	**19 44 52.8**	**-0.8**
NWF	**Wu-fen Shan**	**1.58**	**4**	*e*P	**Pb**	**19 44 33.5**	**-0.7**
	baz=355							
WFSB	**Wu-fen Shan**	**1.58**	**4**	*e*P	**Pb**	**19 44 33.0**	**-1.1**
	baz=355							
TWS1	**Kuangyinshan**	**1.62**	**352**	*e*P	**Pn**	**19 44 33.4**	**+1.5**
	baz=9.0							
WLCH	**Liuqiu**	**1.63**	**226**	*e*P	**Pb**	**19 44 35.4**	**+0.4**
	baz=225							
YM01	**YM01**	**1.65**	**357**	*e*P	**Pn**	**19 44 33.7**	**+1.4**
	baz=359							
YM10	**YM10**	**1.66**	**357**	*e*P	**Pb**	**19 44 34.2**	**-1.4**
	baz=359							
YM11	**YM11**	**1.67**	**358**	*e*P	**Pn**	**19 44 33.9**	**+1.3**
	baz=360							
YM08	**YM08**	**1.69**	**358**	*e*P	**Pn**	**19 44 33.0**	**+0.2**
ANP	**Anpu**	**1.69**	**356**	*e*P	**Pn**	**19 44 34.4**	**+1.5**
	baz=358							
HEN	**Hengchun**	**1.70**	**210**	*e*P	**Pb**	**19 44 34.7**	**-1.5**
	baz=196							
TWKBT	**Hengchun**	**1.73**	**207**	*e*P	**Pn**	**19 44 34.4**	**+1.1**
	baz=195							
TWK1	**Hengchun**	**1.73**	**207**	*e*P	**Pn**	**19 44 34.5**	**+1.1**
	baz=195							
TSEB	**Hengchuen, Pin**	**1.73**	**204**	*e*P	**Pn**	**19 44 34.9**	**+1.5**
	baz=195							
TWY	**Chenhua**	**1.78**	**358**	*e*P	**Pb**	**19 44 36.2**	**-1.3**
	baz=1.0							
WDGT	**Dungji**	**1.84**	**263**	⇓P	**Pn**	**19 44 35.3**	**+0.4**
	baz=263							
PHUB	**P'eng-hu**	**1.91**	**271**	⇓P	**Pn**	**19 44 36.2**	**+0.3**
	baz=271							
PHUB				*e*S	**Sn**	**19 44 58.2**	**-0.6**
	baz=271							
PNG	**Penghu**	**1.93**	**273**	⇓P	**Pn**	**19 44 36.4**	**+0.3**
	baz=272							
HATJ	**Hateruma jima**	**2.05**	**74**	P	**Pn**	**19 44 39.3**	**+1.5**
HATJ				S	**Sn**	**19 45 03.5**	**+1.2**
VCHM	**Qimei**	**2.06**	**263**	⇓*e*P	**Pn**	**19 44 38.2**	**+0.3**
	baz=262							
IRIF	**Iriomote-Funau**	**2.08**	**66**	P	**Pn**	**19 44 40.0**	**+1.8**
IRIF				*e*S	**Sn**	**19 45 05.1**	**+2.1**
JKRS	**Kuro-shima**	**2.28**	**71**	P	**Pn**	**19 44 42.8**	**+1.8**
JKRS				*e*S	**Sn**	**19 45 10.2**	**+2.2**
JIJ	**Ishigaki jima**	**2.44**	**69**	P	**Pn**	**19 44 44.3**	**+1.2**
VWUC	**VWUC**	**2.50**	**307**	*e*P	**Pn**	**19 44 43.6**	**-0.4**
	baz=307							
PTTC	**Pingtan**	**2.63**	**320**	*e*P	**Pn**	**19 44 45.9**	**+0.1**
	baz=319							
JISG	**Ishigakijimahi**	**2.67**	**65**	P	**Pn**	**19 44 47.3**	**+1.1**
JISG				S	**Sn**	**19 45 17.6**	**+0.2**
PTMZ	**Houxiangcun**	**2.78**	**304**	*e*P	**Pn**	**19 44 47.9**	**+0.1**
	baz=304							
JTJ	**Tarama**	**3.01**	**67**	P	**Pn**	**19 44 52.3**	**+1.3**
JTJ				S	**Sn**	**19 45 27.5**	**+1.4**
MATB	**Ma-tsu**	**3.07**	**330**	*e*P	**Pn**	**19 44 51.5**	**-0.3**
	baz=328							
KNM	**Kinmen**	**3.08**	**288**	*e*P	**Pn**	**19 44 53.5**	**+1.4**
	baz=287							
KNMB	**Chin-men Tao**	**3.14**	**289**	P	**Pn**	**19 44 52.5**	**-0.2**
	baz=288							
JIRB	**Irabujima**	**3.48**	**67**	P	**Pn**	**19 44 58.8**	**+1.3**
LYJJ	**Jianjiangzhen**	**3.50**	**331**	*e*P	**Pn**	**19 44 59.2**	**+1.5**
	baz=329							
MHZQ	**Yeshan**	**3.52**	**318**	*e*P	**Pn**	**19 44 58.0**	**-0.1**
	baz=317							
JMJ	**Miyako jima 2**	**3.58**	**68**	*e*P	**Pn**	**19 45 00.6**	**+1.8**
	baz=70							
JIKM	**Ikemajima**	**3.58**	**66**	*e*S	**Sn**	**19 45 40.4**	**+0.4**
JMJ2	**Miyako jima3**	**3.58**	**69**	P	**Pn**	**19 45 00.5**	**+1.6**
JMJ2				*e*S	**Sn**	**19 45 41.1**	**+1.0**
ZPLA	**Ao Xicun**	**3.60**	**278**	*e*P	**Pn**	**19 44 58.9**	**-0.2**
	baz=277							
AXDP	**Jialang**	**3.64**	**293**	*e*P	**Pn**	**19 44 59.5**	**-0.2**
	baz=293							
JOGS	**Gusukube**	**3.66**	**69**	P	**Pn**	**19 45 01.6**	**+1.7**
JOGS				*e*S	**Sn**	**19 45 43.4**	**+1.5**
XPSS	**Dashiqiu**	**3.67**	**339**	*e*P	**Pn**	**19 45 00.0**	**0.0**
	baz=327							

*IDC **07** 19:49:27.9±2.3, 6°.03S×149°.32E, h52km±23km, mb4.1/6, mb1 4.3/7, mb1mx3.7/29, mbtmp4.4/7, ML2.3/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/26, Error ellipse: s-maj=44.8km s-min=13.5km az=127.0*

*NEIC **07** 19:49:28.8±1.6, 6°.14S±0°.08×149°.4E±0°.1, h65km±7km, mb4.4/16, Error ellipse: s-maj=16.7km s-min=9.7km az=111.0*

ISC 07 19:49:27.7±0.7, 6°.11S±0°.09×149°.40E±0°.09, h58km, n34, σ1°36/36, mb4.4/10, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.17**	**56**	P	**Pn**	**19 50 15.0**	**-0.2**
	174nm,0.3s,baz=260,slow=1.6,SNR=99						
KRVT				LR	LR	19 51 33.6	
	comp=Z,534nm,18.9s,baz=268,slow=39						
PMG	**Port Moresby**	**3.96**	**214**	P	**Pn**	**19 50 27.4**	**+1.4**
	15nm,0.3s,baz=353,slow=3.7,SNR=29						
PMG				S	**Sn**	**19 51 12.5**	**+1.4**
	56nm,0.3s,baz=41,slow=20,SNR=20						
PMG				LR	LR	19 52 08.7	
	comp=Z,326nm,21.9s,baz=126,slow=40						
PMG	**Port Moresby**	**3.96**	**214**		**Pn**	**19 50 27.3**	**+1.3**
PMG					**Sn**	**19 51 11.1**	**-0.1**
COEN	**Coen**	**9.92**	**218**	Pn	**Pn**	**19 51 47.6**	**0.0**
COEN				Sn	**Sn**	**19 53 32.4**	**-5.2**
HNR	**Honiara**	**10.96**	**108**	Pn	**Pn**	**19 52 02.7**	**+0.8**
MTN	**Manton Dam**	**19.21**	**248**	P	**P**	**19 53 47.4**	**+0.3**
MTN				IAmb	IAmb	19 53 50.8	
	comp=Z,14nm,0.9s						
EIDS	**Eidsvold**	**19.22**	**175**	P	**Pn**	**19 53 48.9**	**+0.2**
WR0	**Warramunga Arr**	**19.95**	**225**	P	**P**	**19 53 55.9**	**+0.6**
WR0				IAmb	IAmb	19 53 56.8	
	comp=Z,11nm,0.7s						
WRAB	**Tennant Creek**	**20.07**	**225**	P	**P**	**19 53 57.2**	**+0.7**
WRAB				IAmb	IAmb	19 53 58.0	
	comp=Z,16nm,0.8s						
WRA	**Warramunga Arr**	**20.08**	**225**	P	**P**	**19 53 57.3**	**+0.6**
	comp=Z,10nm,0.5s,baz=50,slow=11,SNR=85						
WRA	**Warramunga Arr**	**20.08**	**225**	P	**P**	**19 53 55.5**	**-1.2**
KNRA	**Kununurra**	**22.36**	**243**	P	**P**	**19 54 20.6**	**-0.6**
KNRA				IAmb	IAmb	19 54 24.3	
	comp=Z,18nm,0.8s						
DZM	**Mont Dzumac**	**22.88**	**136**	LR	LR	20 02 04.1	
	comp=Z,119nm,19.2s,baz=235,slow=33						
DZM	**Mont Dzumac**	**22.88**	**136**	P	**P**	**19 54 24.5**	**-2.2**
DZM				IAmb	IAmb	19 54 32.5	
	comp=Z,23nm,1.5s						
AS31	**Alice Springs**	**22.96**	**219**	P	**P**	**19 54 27.7**	**+0.3**
ASAR	**Alice Springs**	**22.96**	**219**	P	**P**	**19 54 27.6**	**+0.1**
	comp=Z,7.8nm,0.5s,baz=57,slow=9.0,SNR=108						
ASAR	**Alice Springs**	**22.96**	**219**	P	**P**	**19 54 27.4**	**-0.1**
SOEI	**Soe**	**25.15**	**260**	P	**P**	**19 54 48.5**	**+0.6**
SOEI				IAmb	IAmb	19 55 11.8	
	comp=Z,16nm,0.9s						
FITZ	**Fitzroy Crossi**	**26.07**	**241**	P	**P**	**19 54 56.1**	**+0.1**
	comp=Z,11nm,0.6s,baz=53,slow=8.1,SNR=77						
FITZ	**Fitzroy Crossi**	**26.07**	**241**	P	**P**	**19 54 56.3**	**+0.3**
FITZ				IAmb	IAmb	19 54 59.3	
	comp=Z,14nm,0.7s						
STKA	**Stephens Creek**	**26.66**	**195**	P	**P**	**19 55 03.3**	**+2.1**
	comp=Z,3.8nm,0.8s,baz=11,slow=10.0,SNR=6.9						
STKA	**Stephens Creek**	**26.66**	**195**	P	**P**	**19 55 02.4**	**+1.2**
MMRI	**Maumere**	**27.05**	**263**	P	**P**	**19 55 02.6**	**-2.3**
MMRI				IAmb	IAmb	19 55 23.6	
	comp=Z,25nm,1.2s						
FORT	**Forrest**	**31.68**	**217**	P	**P**	**19 55 46.0**	**+0.1**
PEA0B	**Petropavlovsk-**	**59.41**	**6**	P	**P**	**19 59 24.7**	**+0.6**
PETK	**Petropavlovsk-**	**59.41**	**6**	P	**P**	**19 59 24.6**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=168,slow=7.7,SNR=13						
PETK	**Petropavlovsk-**	**59.41**	**6**	P	**P**	**19 59 24.3**	**+0.1**
VNDA	**Vanda**	**71.68**	**177**	P	**P**	**20 00 42.8**	**-0.2**
VNDA				IAmb	IAmb	20 00 56.1	
	comp=Z,6.0nm,1.2s						
ILAR	**Eielson Array**	**84.65**	**23**	P	**P**	**20 01 56.2**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=232,slow=3.9,SNR=4.2						
ILAR	**Eielson Array**	**84.65**	**23**	P	**P**	**20 01 56.6**	**+1.8**
TORD	**Torodi Ar. Bea**	**147.43**	**285**	PKPbc	**PKPbc**	**20 09 06.0**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=81,slow=2.4,SNR=13						
TORD	**Torodi Ar. Bea**	**147.43**	**285**		**PKPbc**	**20 09 06.3**	**+0.1**
BDFB	**Brasilia**	**152.35**	**142**	PKPbc	**PKPbc**	**20 09 18.5**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=246,slow=3.4,SNR=4.4						
BDFB	**Brasilia**	**152.35**	**142**		**PKPbc**	**20 09 16.9**	**-1.5**

*VIE **07** 20:26:42.1±0.2, 47°.05N×9°.48E, h11km±1km, mb1.7/3, ml1.7/9, Error ellipse: s-maj=1.4km s-min=1.2km az=113.0*
3 km ESE of Sargans

ZUR 07 20:26:42.5, 47°.06N×9°.49E, h7km, MLh1.2/11, 4C-14D, Error ellipse: s-maj=1.4km s-min=0.7km az=197.0, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLONS	**Plons/SG**	**0.08**	**261**	⇑Pg	Pg	**20 26 44.9**	**+0.3**
PLONS				⇑Pg	Pg	20 26 44.9	+0.3
	0.6nm,SNR=269						
PLONS				Sg	Sg	20 26 46.4	+0.4
SBUB	**Buchserberg Ma**	**0.09**	**335**	⇓Pg	Pg	**20 26 45.0**	**+0.1**
	0.2nm,SNR=22						
SBUB				⇓Pg	Pg	20 26 45.0	+0.1
SBUB				Sg	Sg	20 26 46.5	0.0
SBUA2	**Buchs, Altendo**	**0.10**	**351**	⇓Pg	Pg	**20 26 44.9**	**+0.1**
SBUA2				⇓Pg	Pg	20 26 44.9	+0.1
	1.4nm,SNR=47						
LIENZ	**Kamor/St.Gall**	**0.23**	**360**	Pg	Pg	20 26 47.4	+0.1
	0.1nm,SNR=63						
LIENZ				Pg	Pg	20 26 47.4	+0.1
LIENZ				Sg	Sg	20 26 51.1	+0.6
SGT04	**Schlatt-Haslen**	**0.30**	**341**	⇑Pg	Pg	**20 26 49.2**	**+0.6**
	SNR=18						
SGT04				⇑Pg	Pg	20 26 49.2	+0.6
DAVA	**Damuels**	**0.35**	**49**	*i* Pg	Pg	20 26 49.4	0.0
DAVA				*e*Sg	Sg	20 26 54.6	+0.6
	6.9nm,0.2s,SNR=7.6						
PANIX	**Pigniu (Panix)**	**0.35**	**228**	Pg	Pg	20 26 49.6	+0.1
	SNR=46						
PANIX				Pg	Pg	20 26 49.6	+0.1
PANIX				Sg	Sg	20 26 54.4	+0.3
DAVOX	**Davos/Dischmat**	**0.39**	**137**	⇓Pg	Pg	20 26 50.3	+0.2
	SNR=23						
DAVOX				⇓Pg	Pg	20 26 50.3	+0.2
DAVOX				Sg	Sg	20 26 56.1	+0.9
LLS	**Linth-Limmern**	**0.40**	**237**	Pg	Pg	20 26 50.3	0.0
	0.1nm,SNR=102						
LLS				Pg	Pg	20 26 50.3	0.0
SGT02	**Zihlschlacht**	**0.48**	**340**	⇓Pg	Pg	20 26 52.6	+0.7
SGT02				⇓Pg	Pg	20 26 52.6	+0.7
	0.1nm,SNR=7.1						
SGT02				Sg	Sb	20 26 59.6	-1.1
WEIN	**Weingarten**	**0.58**	**324**	⇓Pg	Pb	20 26 54.4	-0.6
WEIN				⇓Pg	Pb	20 26 54.4	-0.6
	0.1nm,SNR=8.1						
MUO	**Muotathal**	**0.59**	**261**	⇓Pg	Pg	20 26 54.3	+0.3
	SNR=8.4						
MUO				⇓Pg	Pg	20 26 54.3	+0.3
BERNI	**Berninapass**	**0.74**	**151**	Pg	Pg	20 26 57.0	+0.2
	SNR=11						
BERNI				Pg	Pg	20 26 57.0	+0.2
BNALP	**Bannalp**	**0.76**	**256**	⇓Pg	Pg	20 26 57.3	+0.2
	SNR=29						
BNALP				⇓Pg	Pg	20 26 57.3	+0.2
FETA	**Feichten**	**0.85**	**92**	*i* Pg	Pg	20 26 58.4	-0.4
	0.2nm,0.1s						
FETA				*i* Sg	Sg	20 27 10.0	+0.2
	0.2nm,0.1s						
RETA	**Reutte**	**0.96**	**63**	*e*Pg	Pg	20 27 01.3	+0.2
	0.6nm,0.1s,SNR=4.7						
RETA				*i* Sg	Sb	20 27 14.8	+0.2
	0.6nm,0.1s						
SLE	**Schleitheim**	**0.98**	**316**	Pg	Pg	20 27 01.5	+0.1
SLE				Pg	Pg	20 27 01.5	+0.1
	0.1nm,SNR=25						
MOTA	**Moosalm**	**1.13**	**75**	*e*Pg	Pb	20 27 04.5	0.0
	0.9nm,0.1s,SNR=4.5						
MOTA				*i* Sg	Sn	20 27 21.0	+0.1
	1.8nm,0.1s						
SQTA	**Sankt Quirin**	**1.18**	**82**	*e*Pg	Pn	20 27 05.5	-0.1
	0.2nm,0.1s,SNR=8.4						
SQTA				*i* Sg	Sn	20 27 22.2	+0.2
	4.5nm,0.2s						
WATA	**Walderalm**	**1.45**	**78**	*i* Pn	Pn	20 27 08.5	-0.8
	0.3nm,0.1s						
WATA				*i*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.55**	**99**	P	**Pn**	**20 59 57.8**	**+4.7**
SAUI				S	**Sn**	**21 00 31.6**	**+6.3**
SOEI	**Soe**	**4.92**	**244**	P	**Pn**	**21 00 27.0**	**+3.1**
SOEI				S	**Sn**	**21 01 21.0**	**+0.7**
BATI	**Baumata**	**5.65**	**242**	P	**Pn**	**21 00 36.9**	**+3.4**
	29nm,0.3s,baz=100,slow=4.6,SNR=41						
BATI				S	**Sn**	**21 01 38.9**	**+1.3**
	15nm,0.3s,baz=249,slow=23,SNR=16						
FAKI	**Fak Fak**	**5.82**	**37**	P	**Pn**	**21 00 35.4**	**-0.3**
	0.2nm37nm,1.3s						
FAKI				S	**Sn**	**21 01 37.3**	**-4.4**
	0.2nm37nm,1.3s						
MMRI	**Maumere**	**6.53**	**261**	P	**Pn**	**21 00 41.9**	**-3.3**
	0.1nm14nm,0.6s						
SIJI	**Sorong**	**7.15**	**21**	P	**Pn**	**21 00 54.4**	**+0.9**
	1.4nm,0.3s,baz=242,slow=23,SNR=13						
SIJI				S	**Sn**	**21 02 09.1**	**-4.6**
	1.6nm,0.3s,baz=272,slow=23,SNR=6.0						
FITZ	**Fitzroy Crossi**	**10.86**	**196**	P	**Pn**	**21 01 43.5**	**+0.8**
	0.4nm,0.3s,baz=24,slow=13,SNR=12						
FITZ				S	**Sn**	**21 03 39.5**	**-3.3**
	2.4nm,0.3s,baz=124,slow=18,SNR=11						
WRA	**Warramunga Arr**	**13.40**	**157**	P	**Pn**	**21 02 15.7**	**-0.1**
	0.3nm,0.3s,baz=333,slow=13,SNR=12						
WRA				S	**Sn**	**21 04 39.4**	**-4.8**
	0.7nm,0.3s,baz=336,slow=22,SNR=8.3						
ASAR	**Alice Springs**	**16.71**	**163**	P	**Pn**	**21 02 59.5**	**+2.6**
	0.1nm,0.3s,baz=337,slow=9.5,SNR=7.4						
ASAR				S	**S**	**21 05 56.8**	**-6.0**
	0.1nm,0.3s,baz=345,slow=26,SNR=4.2						
MKAR	**Makanchi Array**	**68.06**	**328**	P	**P**	**21 09 57.1**	**+2.3**
	0.4nm,0.6s,baz=126,slow=6.8,SNR=4.7						

*NEIC **07** 20:59:45.5±1.3,3.78N±0.08×96.06E±0.09,h76km±8km, mb4.4/19, Error ellipse: s-maj=13.8km s-min=10.8km az=101.0*

*IDC **07** 20:59:53.9±8.8,3.92N×96.12E,h147km±79km,mb3.6/10, mb1 3.8/11,mb1mx3.4/45,mbtmp4.1/11,MS2.6/1, Ms1 2.8/1,ms1mx2.4/44,Error ellipse: s-maj=46.3km s-min=20.0km az=51.0*

ISC 07 20:59:43.2±0.6,**3.81N**±0.08×**95.96E**±0.09,**h50**km,**n56**, σ0**98**/54,**mb4.2**/18,**Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**1.72**	**35**		**Pn**	**21 00 13.2**	**+2.5**
GSI	**Gunungsitoli**	**2.96**	**147**	Pn	**Pn**	**21 00 29.1**	**+1.3**
RPSI	**Rantau Prapat**	**3.16**	**110**		**Pn**	**21 00 32.7**	**+2.3**
KULM	**Kulim**	**4.90**	**72**		**Pn**	**21 00 55.7**	**+1.4**
IPM	**Ipoh**	**5.09**	**82**		**Pn**	**21 00 57.5**	**+0.5**
UBPT	**Khong Chiam**	**14.75**	**39**		**P**	**21 03 13.0**	**-0.8**
CM31	**Chiang Mai Arr**	**14.85**	**11**	P	**P**	**21 03 15.9**	**+0.9**
CMAR	**Chiang Mai Arr**	**14.85**	**11**	P	**P**	**21 03 16.1**	**+1.1**
	0.4nm,0.3s,baz=202,slow=14,SNR=23						
CMAR				LR	LR	21 09 57.0	
	comp=Z,21nm,18.8s,baz=180,slow=41						
CMAR	**Chiang Mai Arr**	**14.85**	**11**	P	**P**	**21 03 15.0**	**0.0**
CHTO	**Chiang Mai**	**15.20**	**11**	Pn	**Pn**	**21 03 16.0**	**+1.3**
PALK	**Pallekele**	**15.57**	**283**	Pn	**P**	**21 03 21.6**	**-1.5**
PALK				IAmb	IAmb	21 03 22.9	
	comp=Z,24nm,1.2s						
ODAN	**Odare**	**24.35**	**341**	*e*P	**P**	**21 04 57.3**	**+0.5**
RAMN	**Ramite**	**24.69**	**340**	*e*P	**P**	**21 05 00.5**	**+0.5**
	comp=Z,6.9nm,0.5s						
JIRN	**Jiri**	**25.49**	**340**	*e*P	**P**	**21 05 07.5**	**+0.2**
	comp=Z,5.3nm,0.3s						
PKI	**Pulchoki**	**25.69**	**338**	*e*P	**P**	**21 05 08.8**	**-0.3**
GUN	**Gumba**	**25.82**	**339**	*e*P	**P**	**21 05 10.3**	**-0.1**
	comp=Z,11nm,0.7s						
H08S2	**Diego Garcia H**	**26.04**	**244**	T	T	21 31 16.1	
	baz=64,slow=75,SNR=69						
H08S3	**Diego Garcia H**	**26.04**	**244**	T	T	21 31 15.7	
	baz=64,slow=75,SNR=77						
H08S1	**Diego Garcia H**	**26.05**	**244**	T	T	21 31 16.6	
	baz=64,slow=75,SNR=45						
GKN	**Gorkha**	**26.37**	**337**	*e*P	**P**	**21 05 15.1**	**0.0**
	comp=Z,5.5nm,0.3s						
KOLN	**Koldanda**	**26.59**	**335**	*e*P	**P**	**21 05 17.2**	**+0.1**
	comp=Z,14nm,0.7s						
DANN	**Dangsing**	**27.03**	**336**	*e*P	**P**	**21 05 21.2**	**0.0**
	comp=Z,14nm,0.6s						
YOJ	**Yonaguni jima**	**33.17**	**49**	P	**P**	**21 06 14.4**	**-0.8**
GAR	**Garm**	**42.08**	**330**	P	**P**	**21 07 30.7**	**+0.3**
GAR				IAmb	IAmb	21 07 31.7	
	comp=Z,5.0nm,0.7s						
CHGR	**Chuyangaron**	**42.41**	**328**	P	**P**	**21 07 32.8**	**-0.3**
CHGR				IAmb	IAmb	21 07 33.5	
	comp=Z,6.5nm,0.7s						
BTK	**Batken**	**42.65**	**331**	P	**P**	**21 07 34.9**	**-0.1**
BTK				IAmb	IAmb	21 07 42.9	
	comp=Z,6.6nm,1.4s						
ARSB	**Arslanbob**	**42.67**	**334**	P	**P**	**21 07 35.5**	**+0.3**
MK31	**Makanchi Array**	**44.43**	**347**	P	**P**	**21 07 48.5**	**-0.7**
MKAR	**Makanchi Array**	**44.43**	**347**	P	**P**	**21 07 48.7**	**-0.5**
	comp=Z,1.4nm,0.4s,baz=158,slow=7.8,SNR=29						
KS19	**Wonju Array Si**	**44.47**	**37**		**S**	**21 14 18.4**	**-2.9**
WRA	**Warramunga Arr**	**44.48**	**124**	P	**P**	**21 07 50.1**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=300,slow=8.9,SNR=4.2						
MAKZ	**Makanchi**	**44.52**	**346**	P	**P**	**21 07 49.4**	**-0.5**
MAKZ				IAmb	IAmb	21 07 49.5	
	comp=Z,6.7nm,1.3s						
SONM	**Songino Array**	**44.77**	**10**	P	**P**	**21 07 52.0**	**0.0**
	comp=Z,2.0nm,0.5s,baz=190,slow=9.0,SNR=22						
SONM	**Songino Array**	**44.77**	**10**	P	**P**	**21 07 52.0**	**0.0**
SONM				PcP	**PcP**	**21 09 33.5**	**0.0**
ULN	**Ulaanbaatar**	**44.92**	**11**	P	**P**	**21 07 52.7**	**-0.5**
GEYT	**Alibeck**	**48.44**	**320**	P	**P**	**21 08 22.5**	**+1.8**
	comp=Z,1.4nm,0.7s,baz=116,slow=6.6,SNR=3.4						
GEYT	**Alibeck**	**48.44**	**320**	P	**P**	**21 08 21.7**	**+0.9**
GYA0B	**ALIBECK ARRAY**	**48.44**	**320**	P	**P**	**21 08 22.2**	**+1.5**
GYA0B				IAmb	IAmb	21 08 23.2	
	comp=Z,2.9nm,0.6s						
ZAA0	**Zalesovo Array**	**50.81**	**352**	P	**P**	**21 08 38.2**	**-0.3**
ZALV	**Zalesovo Beam**	**50.81**	**352**	P	**P**	**21 08 38.0**	**-0.4**
	comp=Z,4.5nm,0.5s,baz=180,slow=7.5,SNR=30						
ZALV	**Zalesovo Beam**	**50.81**	**352**	P	**P**	**21 08 38.2**	**-0.3**
ABKAR	**Akbulak array**	**54.65**	**332**	P	**P**	**21 09 07.1**	**+0.2**
ABKAR				IAmb	IAmb	21 09 08.0	
	comp=Z,3.4nm,1.1s						
ABKAR	**Akbulak array**	**54.65**	**332**	P	**P**	**21 09 07.0**	**0.0**
BRTR	**Keskin Array B**	**66.46**	**312**	P	**P**	**21 10 27.7**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=120,slow=7.0,SNR=6.6						
BRTR	**Keskin Array B**	**66.46**	**312**	P	**P**	**21 10 27.4**	**-0.5**
KARP	**Karpathos**	**70.58**	**306**	P	**P**	**21 10 54.9**	**+1.3**
TIXI	**Tiksi**	**70.86**	**10**	P	**P**	**21 10 53.0**	**-1.4**
TIXI				IAmb	IAmb	21 10 53.4	
	comp=Z,6.8nm,1.4s						
AKASG	**Malin Array Be**	**72.45**	**322**	P	**P**	**21 11 03.2**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=89,slow=5.8,SNR=4.6						
BURAR	**Bucovina Array**	**74.26**	**318**	P	**P**	**21 11 16.5**	**+1.2**
BUR08	**Bucovina Ar. S**	**74.28**	**318**	P	**P**	**21 11 16.6**	**+1.2**
BUR08				IAmb	IAmb	21 11 47.0	
	comp=Z,6.3nm,1.6s						
LIT	**Litokhoron**	**74.93**	**310**	P	**P**	**21 11 18.4**	**-0.8**
FINES	**FINESS Array B**	**77.13**	**332**	P	**P**	**21 11 31.0**	**-0.3**
	comp=Z,2.1nm,1.0s,baz=116,slow=3.2,SNR=5.0						
ARCES	**ARCESS Array B**	**79.68**	**340**	P	**P**	**21 11 45.1**	**-0.1**
	comp=Z,9.8nm,1.1s,baz=102,slow=7.1,SNR=9.3						
ARCES	**ARCESS Array B**	**79.68**	**340**	P	**P**	**21 11 44.9**	**-0.4**
GERES	**GERESS Array B**	**82.05**	**319**	P	**P**	**21 11 59.0**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=90,slow=4.9,SNR=4.1						
GERES	**GERESS Array B**	**82.05**	**319**	P	**P**	**21 11 58.0**	**-0.4**

*IDC **07** 21:05:55.6±1.9,9.93S×119.22E,h0km,mb3.4/2, mb1 3.6/5,mb1mx3.5/31,mbtmp3.5/5,ML3.4/3,Error ellipse: s-maj=71.3km s-min=23.2km az=49.0*

*DJA **07** 21:06:07.1±0.5,9.5S±0.5×120.0E±*,h94km±14km,M4.2/6, mB4.9/1,mb4.5/1,MLv4.0/6,Mw(mB)4.2/1*

ISC 07 21:06:06.7±0.9,**9.60S**±0.07×**119.91E**±0.04,**h100**km,**n13**, σ2**17**/20,**Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**2.24**	**290**	P	**Pn**	**21 06 42.6**	**+0.2**
PLAI				S	**Sn**	**21 07 08.9**	**-0.9**
MMRI	**Maumere**	**2.49**	**68**	P	**Pn**	**21 06 45.3**	**-0.4**
MMRI				S	**Sn**	**21 07 12.9**	**-2.8**
TWSI	**Taliwang, Sumb**	**3.11**	**286**	P	**Pn**	**21 06 54.9**	**+1.0**
BATI	**Baumata**	**3.75**	**100**	Pn	**Pn**	**21 07 04.1**	**+1.6**
	48nm,0.3s,baz=145,slow=4.0,SNR=63						
BATI				Sn	**Sn**	**21 07 46.3**	**+0.6**
	2.0nm,0.3s,baz=105,slow=19,SNR=3.3						
BKSI	**Bulukumba**	**4.26**	**3**	P	**Pn**	**21 07 08.5**	**-0.9**
BKSI				S	**Sn**	**21 07 55.1**	**-3.0**
SOEI	**Soe**	**4.30**	**92**	P	**Pn**	**21 07 11.2**	**+1.1**
SOEI				S	**Sn**	**21 08 01.0**	**+1.8**
IGBI	**Denpasar**	**4.77**	**279**	P	**Pn**	**21 07 15.9**	**-0.4**
IGBI				S	**Sn**	**21 08 10.3**	**-0.1**
JAGI	**Jajag, Banyuwa**	**5.80**	**281**	P	**Pn**	**21 07 29.0**	**-1.3**
JAGI				S	**Sn**	**21 08 33.4**	**-2.1**
FITZ	**Fitzroy Crossi**	**10.11**	**147**	Pn	Pn	21 08 22.4	-6.5
	0.2nm,0.3s,baz=315,slow=16,SNR=2.6						
FITZ				Sn	**Sn**	**21 10 14.3**	**-6.2**
	1.3nm,0.3s,baz=173,slow=22,SNR=14						
WRA	**Warramunga Arr**	**17.32**	**128**	P	**Pn**	**21 10 03.7**	**+1.5**
	0.2nm,0.3s,baz=302,slow=14,SNR=3.2						
WRA				S	Sn	21 13 03.5	-12
	0.1nm,0.3s,baz=295,slow=20,SNR=3.7						
ASAR	**Alice Springs**	**19.35**	**138**	P	**Pn**	**21 10 26.1**	**-0.5**
	0.1nm,0.3s,baz=317,slow=12,SNR=3.0						
SONM	**Songino Array**	**58.43**	**349**	P	**P**	**21 15 53.7**	**+1.7**
	0.2nm,0.5s,baz=166,slow=7.5,SNR=3.0						
MKAR	**Makanchi Array**	**65.40**	**333**	P	**P**	**21 16 40.5**	**+1.9**
	0.2nm,0.5s,baz=146,slow=7.9,SNR=2.6						

*DDA **07** 21:17:22.6,37.85N×38.36E,h7km±1km,ML3.1*
*ISK **07** 21:17:22.7,37.86N×38.35E,h5km,ML2.9/15*
*ATA **07** 21:17:24.4±0.4,37.95N×38.36E,h14km±8km, ML2.8, MW3.8*

ISC 07 21:17:22.8±0.9,**37.85N**±0.02×**38.40E**±0.02,**h15**km±8km, **n45**, σ0**90**/67,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAB	**Bozova**	**0.39**	**192**	*i* P	**Pg**	**21 17 30.7**	**0.0**
ATAB				*i* S	**Sg**	**21 17 36.4**	**+0.4**
MALT	**Malatya**	**0.46**	**3**	PG	**Pg**	**21 17 31.8**	**-0.3**
MALT				SG	**Sg**	**21 17 38.6**	**+0.2**
URFA	**Urfa**	**0.53**	**140**	PG	**Pb**	**21 17 34.0**	**+0.2**
URFA				SG	**Sb**	**21 17 41.9**	**+0.6**
AKCD	**Akcadag**	**0.58**	**320**	*i* P	**Pg**	**21 17 33.7**	**-0.6**
AKCD				*i* S	**Sg**	**21 17 41.8**	**-0.3**
AKCD				IAML		21 17 42.0	
	comp=N,3μm,0.6s						
ELZG	**Elazig**	**0.80**	**35**	*i* P	**Pg**	**21 17 38.1**	**-0.2**
ELZG				*i* S	**Sb**	**21 17 49.5**	**+0.5**
GZT	**Gaziantep**	**0.83**	**233**	*i* P	**Pb**	**21 17 38.4**	**-0.5**
GZT				*i* S	**Sb**	**21 17 49.5**	**-0.4**
GZT				IAML		21 17 52.0	
	comp=E,720nm,0.4s						
GZT				IAML		21 17 52.0	
	comp=N,662nm,0.3s						
SANL	**SANLIURFA_Merk**	**0.83**	**145**	*i* P	**Pn**	**21 17 39.3**	**-0.6**
SANL				*i* S	**Sn**	**21 17 51.1**	**-0.7**
SANL				IAML		21 17 54.0	
	comp=E,845nm,0.6s						
SANL				IAML		21 17 55.0	
	comp=N,508nm,0.3s						
DARE	**Darende-Malaty**	**1.02**	**315**	PG	**Pb**	**21 17 41.4**	**-0.8**
DARE				SG	**Sg**	**21 17 56.2**	**+0.4**
KHMN	**Narli-Kahraman**	**1.09**	**245**	PG	**Pn**	**21 17 43.5**	**0.0**
KHMN				SG	**Sn**	**21 17 58.3**	**+0.1**
ELBS	**KAHRAMANMARAS**	**1.10**	**296**	*i* P	**Pb**	**21 17 42.9**	**-0.7**
ELBS				*i* S	**Sb**	**21 17 58.2**	**+0.4**
GAZ	**Gaziantep**	**1.16**	**235**	PN	**Pg**	**21 17 45.2**	**0.0**
GAZ				SN	**Sg**	**21 18 01.3**	**+0.9**
KMRS	**Kahramanmaras**	**1.24**	**254**	PN	**Pb**	**21 17 45.9**	**+0.1**
KMRS				SN	**Sg**	**21 18 03.3**	**+0.5**
ARPR	**Arapgir-MALATY**	**1.24**	**358**	PN	**Pg**	**21 17 46.6**	**-0.2**
CUGUR	**Gurin_SVAS**	**1.24**	**315**	*i* P	**Pb**	**21 17 46.0**	**0.0**
HCB	**Kahramanmara**	**1.29**	**247**	*i* P	**Pn**	**21 17 46.4**	**+0.2**
HCB				*i* S	**Sn**	**21 18 03.3**	**+0.2**
AYKD	**Aykdinkavak**	**1.34**	**251**	*i* P	**Pn**	**21 17 47.0**	**+0.1**
AYKD				*i* S	**Sg**	**21 18 05.4**	**-0.5**
AYKD				IAML		21 18 07.0	
	comp=E,434nm,0.3s						
AYKD				IAML		21 18 07.0	
	comp=N,332nm,0.3s						
DYBB	**Diyarbakir**	**1.38**	**85**	PN	**Pg**	**21 17 50.3**	**+0.9**
KEMA	**Kemaliye**	**1.42**	**3**	*e*P	**Pg**	**21 17 49.5**	**-0.6**
KEMA				*e*S	**Sg**	**21 18 09.3**	**+0.8**
KEMA				IAML		21 18 13.3	
	comp=Z,29nm,1.1s						
KEMA	**Kemaliye**	**1.42**	**3**	*i* P	**Pn**	**21 17 48.2**	**+0.1**
KEMA				*i* S	**Sg**	**21 18 09.4**	**+0.8**
KUZU	**Kuzuini**	**1.51**	**225**	*i* P	**Pb**	**21 17 50.2**	**-0.2**
KUZU				*i* S	**Sg**	**21 18 11.8**	**+0.4**
KUZU				IAML		21 18 12.0	
	comp=N,1μm,0.4s						
KUZU				IAML		21 18 13.0	
	comp=E,884nm,0.3s						
KAMA	**Osmaniye**	**1.53**	**245**	*i* P	**Pn**	**21 17 50.0**	**+0.4**
TNCL	**Tunceli-Merkez**	**1.55**	**35**	*e*P	**Pg**	**21 17 52.8**	**+0.2**
TNCL				*e*S	**Sg**	**21 18 14.7**	**+2.0**
TNCL				IAML		21 18 21.2	
	comp=Z,33nm,0.6s						
TNCL	**Tunceli-Merkez**	**1.55**	**35**	*i* P	**Pg**	**21 17 52.6**	**0.0**
REFA	**Refahiye_ERZN**	**1.57**	**10**	*e*P	Pg	21 18 01.4	+8.4
REFA				IAML		21 18 36.8	
	comp=N,14nm,0.5s						
CUKAN	**kangal_SIVAS**	**1.64**	**334**	*i* P	**Pb**	**21 17 52.5**	**-0.2**
ANDN	**Andirin**	**1.65**	**261**	*i* P	**Pn**	**21 17 51.5**	**+0.2**
ANDN				*i* S	**Sg**	**21 18 15.7**	**-0.2**
ANDN				IAML		21 18 19.0	
	comp=N,175nm,0.5s						
MAZI	**Mazidag**	**1.67**	**103**	PN	**Pg**	**21 17 54.1**	**-0.8**
HANI	**Diyarbakir_Han**	**1.68**	**70**	*i* P	**Pb**	**21 17 53.4**	**+0.1**
HANI				*i* S	**Sg**	**21 18 18.2**	**+1.4**
SAIM	**ADANA**	**1.83**	**275**	*i* P	**Pb**	**21 17 55.0**	**-1.0**
SAIM				*i* S	**Sg**	**21 18 21.4**	**-0.5**
ERZN	**Erzincan**	**2.02**	**30**	PN	**Pb**	**21 17 58.7**	**-0.6**
KOZT	**Kozan**	**2.07**	**261**	PN	**Pn**	**21 17 57.9**	**+0.9**
EUZM	**Uzumlu**	**2.11**	**28**	*e*P	**Pg**	**21 18 01.9**	**-1.4**
EUZM				*e*S	**Sg**	**21 18 30.0**	**-0.8**
EUZM				IAML		21 18 50.8	
	comp=Z,6.8nm,0.8s						
BNGB	**Bingl**	**2.12**	**57**	PN	**Pb**	**21 18 00.2**	**-0.8**
SVAN	**Silvan-Diyarba**	**2.23**	**81**	PN	**Pb**	**21 18 01.8**	**-1.0**
BNN	**Bunyan**	**2.24**	**297**	PN	**Pn**	**21 18 01.0**	**+1.6**
YEDI	**Yedisu-Bingol**	**2.31**	**46**	PN	**Pb**	**21 18 02.7**	**-1.5**
SVSK	**Karacayir**	**2.33**	**333**	PN	**Pb**	**21 18 02.8**	**-1.7**
KELT	**Kelkit**	**2.39**	**16**	*e*P	**Pb**	**21 18 05.4**	**-0.2**
KELT				IAML		21 18 44.5	
	comp=Z,14nm,1.0s						
BNGL	**BINGOL**	**2.43**	**62**	*e*P	**Pb**	**21 18 07.4**	**+1.2**
BNGL				*e*S	**Sg**	**21 18 39.5**	**-1.3**
BNGL				IAML		21 18 56.4	
	comp=Z,59nm,1.0s						
RSDY	**Resadiye-TOKAT**	**2.68**	**342**	PN	**Pn**	**21 18 07.3**	**+2.0**
KOPT	**Kop Dagi**	**2.71**	**36**	*e*P	**Pb**	**21 18 11.2**	**0.0**
TOKT	**Tokat**	**2.86**	**330**	PN	**Pn**	**21 18 09.8**	**+2.0**
BLIS	**Bitlis-Merkez**	**2.98**	**78**	*e*P	**Pb**	**21 18 15.8**	**+0.1**
BLIS				IAML		21 19 10.2	
	comp=Z,17nm,0.4s						
KRIK	**Erzurum-spir**	**3.17**	**38**	*e*P	**Pb**	**21 18 17.3**	**-1.6**
TUTA	**Tutak**	**3.79**	**65**	*e*P	**Pb**	**21 18 26.6**	**-2.9**

*ATA **07** 21:43:58.4±1.2,39.95N×41.06E,h36km±12km,ML1.9, MW3.0*
*ISK **07** 21:43:59.9,40.11N×41.01E,h15km,ML2.0/6*

ISC 07 21:44:00.9±1.1,**40.08N**±0.04×**41.01E**±0.04,**h30**km±12km, **n10**, σ0**92**/16,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRIK	**Erzurum-spir**	**0.27**	**347**	*e*P	**Pb**	**21 44 08.3**	**+0.2**
KOPT	**Kop Dagi**	**0.40**	**262**	*e*P	**Pb**	**21 44 09.1**	**-0.8**
KOPT				*e*S	**Sn**	**21 44 17.8**	**+0.3**
KOPT				IAML		21 44 19.5	
	comp=Z,76nm,0.5s						
KOPR	**Koprukoy-ERZUR**	**0.66**	**97**	PG	**Pb**	**21 44 13.3**	**-0.7**
KOPR				SG	**Sb**	**21 44 23.0**	**0.0**
YEDI	**Yedisu-Bingol**	**0.73**	**209**	PG	**Pb**	**21 44 14.9**	**-0.4**
BAYT	**Aydıntepe-Bayb**	**0.73**	**296**	PG	**Pb**	**21 44 14.3**	**-1.0**
BAYT				SG	**Sb**	**21 44 24.9**	**-0.2**
KARO	**Karlova-Bingo**	**0.77**	**177**	PG	**Pn**	**21 44 15.8**	**-0.1**
KARO				SG	**Sn**	**21 44 27.5**	**+0.9**
CHOM	**Cayeli-Rize**	**1.04**	**350**	PG	**Pn**	**21 44 19.6**	**+0.1**
CHOM				SG	**Sb**	**21 44 34.2**	**+0.7**
EUZM	**Uzumlu**	**1.07**	**250**	*e*P	**Pn**	**21 44 18.6**	**-1.4**
BNGB	**Bingl**	**1.11**	**193**	PN	**Pb**	**21 44 21.9**	**+0.2**
KELT	**Kelkit**	**1.34**	**274**	*e*P	**Pb**	**21 44 25.6**	**0.0**
KELT				*e*S	**Sb**	**21 44 44.6**	**+2.1**
KELT				IAML		21 44 51.1	
	comp=N,7.3nm,0.4s						

IDC 07 22:03:49.4±18.0,**21.12S×176.80W,h387**km±153km, **mb3.3**/4,**mb1 3.6**/4,**mb1mx3.1**/34,**mbtmp4.0**/4,**Error ellipse: s-maj=184.4km s-min=46.2km az=136.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**45.47**	**257**	P	P	22 11 32.1	0.0
	0.7nm,0.6s,baz=97,slow=7.3,SNR=10						
ASAR				PcP	PcP	22 13 04.3	+0.6
	0.4nm,0.6s,baz=106,slow=3.9,SNR=3.9						
WRA	**Warramunga Arr**	**45.63**	**262**	P	P	22 11 32.7	-0.6
	0.4nm,0.5s,baz=98,slow=8.8,SNR=6.9						
ILAR	**Eielson Array**	**88.67**	**12**	P	P	22 15 59.7	+0.4
	0.4nm,0.7s,baz=213,slow=6.5,SNR=3.2						
CMAR	**Chiang Mai Arr**	**91.38**	**289**	P	P	22 16 13.4	+0.5
	0.6nm,0.3s,baz=116,slow=2.7,SNR=4.4						
AKASG	**Malin Array Be**	**144.09**	**332**	PKP	PKPab	22 22 37.0	-1.3
	1.5nm,0.5s,baz=42,slow=4.4,SNR=9.7						
BRTR	**Keskin Array B**	**148.08**	**312**	PKPbc	PKPbc	22 22 49.5	-0.9
	0.6nm,0.6s,baz=79,slow=2.6,SNR=4.3						

*IDC **07** 22:13:01.8±2.4,26.92N×54.51E,h0km,mb3.7/7, mb1 3.9/8,mb1mx3.6/30,mbtmp3.7/8,ML3.0/1,MS3.6/2, Ms1 3.6/2,ms1mx2.8/56,Error ellipse: s-maj=51.0km s-min=25.2km az=158.0*
*DSN **07** 22:13:05.6±2.3,27.22N×54.37E,h10km,ML3.5/6,Error ellipse: s-maj=33.5km s-min=10.6km az=10.0*
*TEH **07** 22:13:06.2,27.20N×54.48E,h15km,ML3.7*
*OMAN **07** 22:13:08.0±0.4,27.16N×54.37E,h131km±8km,ml3.5/7, Error ellipse: s-maj=11.6km s-min=7.1km az=225.0*

ISC 07 22:13:06.4±0.7,**27.15N**±0.04×**54.44E**±0.05,**h18**km,**n57**, σ1**53**/58,**mb3.7**/7,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**1.55**	**331**	*e*Pn	**Pb**	**22 13 34.4**	**-0.3**
JHRM				*e*		22 14 05.2	
GENO	**Geno**	**1.56**	**80**	*e*Pn	**Pb**	**22 13 34.1**	**-0.8**
GENO				*e*		22 14 07.1	
BANOM	**Banah**	**2.07**	**126**	*e*P	**Pn**	**22 13 40.9**	**+0.6**
	SNR=41						
BANOM	**Banah**	**2.07**	**126**	P	**Pn**	**22 13 41.5**	**+1.2**
	SNR=41						
BANOM				S	**Sb**	**22 14 09.3**	**+0.5**
NIAN	**Nian**	**2.17**	**79**	*e*Pn	**Pb**	**22 13 42.8**	**-2.4**
NIAN				*e*		22 14 19.3	
NAZ	**Nazwa, Dubai**	**2.42**	**153**	*e*P	**Pn**	**22 13 47.6**	**+2.6**
	SNR=11						
NAZ	**Nazwa, Dubai**	**2.42**	**153**	*e*Pn	**Pb**	**22 13 48.3**	**-1.1**
NAZ	**Nazwa, Dubai**	**2.42**	**153**	P	**Pb**	**22 13 48.0**	**-1.5**
	SNR=11						
MDH	**Madha**	**2.49**	**137**	P	**Pn**	**22 13 47.0**	**+1.0**
MDH	**Madha**	**2.49**	**137**	*e*Pn	**Pn**	**22 13 47.9**	**+1.9**
ASUD	**Al Ashush, Dub**	**2.64**	**162**	*e*P	**Pn**	**22 13 50.1**	**+2.0**
	SNR=43						
ASUD	**Al Ashush, Dub**	**2.64**	**162**	*e*Pn	**Pb**	**22 13 51.5**	**-1.7**
ASUD	**Al Ashush, Dub**	**2.64**	**162**	P	**Pb**	**22 13 51.3**	**-1.9**
	SNR=43						
UOSS	**Minazif**	**2.71**	**144**	P	**Pn**	**22 13 50.5**	**+1.4**
UOSS	**Minazif**	**2.71**	**144**	*e*Pn	**Pn**	**22 13 51.1**	**+2.0**
HATD	**Hatta, Dubai**	**2.77**	**146**	P	**Pn**	**22 13 52.0**	**+2.0**
HATD	**Hatta, Dubai**	**2.77**	**146**	*e*Pn	**Pn**	**22 13 53.0**	**+3.0**
ASHO	**Ashiyiah**	**2.86**	**149**	*e*P	**Pn**	**22 13 53.2**	**+2.1**
	SNR=16						
ASHO	**Ashiyiah**	**2.86**	**149**	*e*Pn	**Pn**	**22 13 53.7**	**+2.5**
ASHO	**Ashiyiah**	**2.86**	**149**	P	**Pn**	**22 13 53.2**	**+2.1**
	SNR=16						
SHI	**Shiraz**	**3.01**	**326**	*e*Pn	**Pn**	**22 13 54.8**	**+1.5**
KHNJ

MATI	**Mati**	**1.92**	**28**	*e*P		**Pn**	**22 43 52.4**	**-0.8**
MATI				*e*S		**Sn**	**22 44 15.5**	**-1.7**
CTBH	**Cotabato--PC H**	**2.26**	**331**	⇑*i*P		**Pb**	**22 44 01.0**	**-0.6**
BUKP	**Musuan**	**2.65**	**354**	*e*P		**Pb**	**22 44 06.7**	**-1.4**
BUKP				*e*S		**Sg**	**22 44 46.4**	**+0.5**
FITZ	**Fitzroy Crossi**	**23.18**	**179**	P		**P**	**22 48 27.5**	**+0.1**
	0.7nm,0.5s,baz=355,slow=11,SNR=3.8							
WRA	**Warramunga Arr**	**26.53**	**161**	P		**P**	**22 48 57.5**	**-0.9**
	1.5nm,1.0s,baz=338,slow=10,SNR=4.1							
ASAR	**Alice Springs**	**29.91**	**164**	P		**P**	**22 49 29.4**	**+0.9**
	0.3nm,0.5s,baz=344,slow=7.5,SNR=4.4							
MKAR	**Makanchi Array**	**55.55**	**325**	P		**P**	**22 52 55.7**	**-0.2**
	0.3nm,0.4s,baz=116,slow=7.3,SNR=5.4							

*NEIC **07** 22:45:38.6±3.0, 19°.37S±0°.06×70°.20W±0°.07, h56km±5km, Error ellipse: s-maj=10.4km s-min=8.2km az=111.0*
*GUC **07** 22:45:39.8±0.6, 19°.29S×70°.12W, h56km±3km, ML4.5*
*IDC **07** 22:45:40.2±0.6, 19°.13S×70°.06W, h54km±5km, mb4.0/14, mb1 4.2/17, mb1mx4.0/42, mbtmp4.3/17, MS3.1/5, Ms1 3.0/5, ms1mx3.0/27, Error ellipse: s-maj=15.5km s-min=10.1km az=68.0*
*VAO **07** 22:45:44.0±0.6, 19°.18S×69°.34W, h10km, mb4.4*
ISC 07 22:45:39.1±0.5, **19°.30S**±0°.03×**70°.24W**±0°.05, **h57**km±4km, **n107,** σ1§**69**/112, **mb4.3**/17, **2C-3D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSGC	**Pisagua**	**0.31**	**160**	⇑*i*P		**Pn**	**22 45 49.9**	**+0.7**
PSGC				*i* S		**Sn**	**22 45 57.0**	**+0.7**
PSGC				IAML			22 45 58.4	
	comp=E,27μm,0.5s							
MNMC	**Minye Minye**	**0.63**	**74**	⇓*i*P		**Pn**	**22 45 52.7**	**0.0**
MNMC				*i* S		**Sn**	**22 46 01.9**	**-0.5**
MNMC				IAML			22 46 05.1	
	comp=N,89μm,0.3s							
MNMC	**Minye Minye**	**0.63**	**74**			**Pn**	**22 45 52.6**	**0.0**
PB11	**IPOC Station P**	**0.71**	**130**	⇓*i*P		**Pn**	**22 45 53.9**	**+0.4**
PB11				*i* S		**Sn**	**22 46 04.1**	**+0.1**
PB11				IAML			22 46 04.8	
	comp=E,101μm,0.4s							
PB11	**IPOC Station P**	**0.71**	**130**			**Pn**	**22 45 53.8**	**+0.3**
AP01	**Chacalluta**	**0.93**	**354**	*e*P		**Pn**	**22 45 57.0**	**+0.9**
AP01				*e*S		**Sn**	**22 46 10.5**	**+1.8**
GO01	**Chusmiza**	**1.05**	**110**	*e*P		**Pn**	**22 45 58.6**	**+0.4**
GO01				*i* S		**Sn**	**22 46 12.5**	**+0.3**
GO01				IAML			22 46 13.5	
	comp=N,42μm,0.1s							
GO01	**Chusmiza**	**1.05**	**110**			**Pn**	**22 45 58.8**	**+0.6**
PB16	**IPOC Station P**	**1.19**	**36**	⇓*i*P		**Pn**	**22 46 00.5**	**+0.4**
PB16				*i* S		**Sn**	**22 46 15.7**	**+0.1**
TA01	**Diego Aracena**	**1.26**	**178**	⇑*i*P		**Pn**	**22 46 01.4**	**+0.9**
TA01				*i* S		**Sn**	**22 46 17.3**	**+0.9**
TA01				IAML			22 46 21.7	
	comp=N,8μm,0.3s							
PB08	**IPOC Station P**	**1.32**	**129**	*e*P		**Pn**	**22 46 02.4**	**+0.7**
PB08				*e*S		**Sn**	**22 46 19.0**	**+0.5**
PB08				IAML			22 46 21.3	
	comp=E,9μm,0.2s							
PB09	**IPOC Station P**	**2.65**	**160**	*e*P		**Pn**	**22 46 22.1**	**+2.5**
PB09				*e*S		**Sn**	**22 46 53.9**	**+3.2**
PB09				IAML			22 47 03.8	
	comp=E,2μm,0.3s							
PB04	**IPOC Station P**	**3.02**	**178**			**Pn**	**22 46 25.8**	**+1.1**
PB04				Sn		**Sn**	**22 46 56.5**	**-3.1**
PB06	**IPOC Station P**	**3.44**	**170**	*e*P		**Pn**	**22 46 31.5**	**+1.0**
LVC	**Limon Verde**	**3.52**	**160**	P		**Pn**	**22 46 34.2**	**+2.6**
	comp=E,32nm,0.3s,baz=354,slow=8.1,SNR=121							
LVC				S		**Sn**	**22 47 17.8**	**+5.6**
	comp=E,43nm,0.3s,baz=205,slow=2.1,SNR=5.9							
LVC				LR		LR	22 48 00.9	
	comp=E,160nm,21.1s,baz=337,slow=39							
LVC	**Limon Verde**	**3.52**	**160**			**Pn**	**22 46 34.1**	**+2.4**
LVC						**Sn**	**22 47 06.9**	**-5.3**
LPAZ	**La Paz**	**3.61**	**34**	P		Pn	22 46 37.4	+4.2
	comp=E,12nm,0.3s,baz=230,slow=3.5,SNR=167							
LPAZ	**La Paz**	**3.61**	**34**			Pn	22 46 37.1	+4.0
PB10	**IPOC Station P**	**4.20**	**184**			**Pn**	**22 46 40.8**	**+0.1**
PB10				Sn		**Sn**	**22 47 24.2**	**-4.3**
GO02	**Mina Guanaco**	**5.86**	**174**			**Pn**	**22 47 03.7**	**0.0**
GO03	**Copiap**	**8.25**	**180**	Pn		**Pn**	**22 47 35.2**	**-1.1**
GO03				Sn		**Sn**	**22 49 03.7**	**-4.4**
SIV	**San Ignacio**	**9.34**	**71**	P		**Pn**	**22 47 50.4**	**-0.8**
	comp=E,4.0nm,0.3s,baz=266,slow=11,SNR=78							
SIV				S		**Sn**	**22 49 33.1**	**-1.7**
	comp=E,0.3nm,0.3s,baz=297,slow=16,SNR=2.8							
NNA	**Nana**	**9.66**	**318**	LR		LR	22 52 08.9	
	comp=E,59nm,19.5s,baz=180,slow=40							
NNA	**Nana**	**9.66**	**318**	Pn		**Pn**	**22 47 55.3**	**-0.2**
GO04	**Tololo Observa**	**10.83**	**183**	Pn		**Pn**	**22 48 10.9**	**-0.8**
SAML	**Samuel**	**12.36**	**35**	*e*P		**Pn**	**22 48 31.5**	**-0.9**
SAML	**Samuel**	**12.36**	**35**			**Pn**	**22 48 31.6**	**-0.8**
CFA	**Coronel Fontan**	**12.38**	**177**	P		**P**	**22 48 40.5**	**-2.4**
	comp=E,0.8nm,0.3s,baz=354,slow=14,SNR=8.5							
ROC1	**El Roble**	**13.63**	**183**	Pn		Pn	22 48 46.6	-3.4
AQDB	**Aquidauana**	**13.73**	**97**	*e*P		**Pn**	**22 48 48.1**	**-2.9**
CPUP	**Villa Florida**	**13.80**	**123**	P		**Pn**	**22 48 51.1**	**-0.8**
	comp=E,0.3nm,0.3s,baz=301,slow=12,SNR=9.8							
CPUP				LR		LR	22 55 01.0	
	comp=E,76nm,20.5s,baz=336,slow=41							
CPUP	**Villa Florida**	**13.80**	**123**	*e*P		**Pn**	**22 48 51.2**	**-0.8**
CPUP	**Villa Florida**	**13.80**	**123**			**Pn**	**22 48 50.3**	**-1.7**
SALV	**Santo Antonio**	**14.27**	**79**	*e*P		**Pn**	**22 48 55.1**	**-3.3**
PP1B	**Ponte de Pedra**	**14.67**	**86**	*e*P		**Pn**	**22 49 00.8**	**-2.8**
GO05	**Huala**	**15.72**	**185**	Pn		**Pn**	**22 49 16.9**	**-0.1**
GO05				IAmb		IAmb	22 49 22.1	
	comp=E,18nm,1.1s							
ITQB	**Itaqui**	**16.11**	**132**	*e*P		**Pn**	**22 49 23.6**	**+1.6**
CLDB	**Colider**	**16.26**	**61**	*e*P		**Pn**	**22 49 21.9**	**-2.1**
C2SB	**Chapadao do Su**	**16.46**	**91**	*e*P		**Pn**	**22 49 25.1**	**-1.4**
TRCB	**Terra Rica**	**16.80**	**105**	*e*P		**Pn**	**22 49 29.4**	**-1.3**
PTGB	**Pitanga**	**17.69**	**111**	*e*P		**P**	**22 49 42.4**	**+0.5**
PCMB	**Pacaembu**	**17.93**	**101**	*e*P		**Pn**	**22 49 42.9**	**-1.7**
ARAG	**Araguaiana, MT**	**17.93**	**81**	*e*P		**Pn**	**22 49 43.1**	**-1.6**
ITAB	**Concordia**	**18.40**	**119**	*e*P		**Pn**	**22 49 51.0**	**+0.8**
ITRB	**Iturama**	**18.75**	**95**	*e*P		**Pn**	**22 49 53.7**	**-0.8**
CPSB	**Cacapava Do Su**	**18.80**	**129**	*e*P		**Pn**	**22 49 57.1**	**+2.0**
PLTB	**Pedras Altas**	**19.44**	**133**	*e*P		**Pn**	**22 50 03.7**	**+1.0**
FRTB	**Fartura**	**19.67**	**105**	*e*P		**P**	**22 50 04.0**	**+0.3**
GO06	**Curarrehue**	**20.24**	**183**	P		**P**	**22 50 07.8**	**-1.9**
GO06				IAmb		IAmb	22 50 19.2	
	comp=E,18nm,1.4s							
CNLB	**Canela**	**20.26**	**123**	*e*P		Pn	22 50 13.2	+0.7
BB19B	**Bebedouro**	**20.45**	**99**	*e*P		**P**	**22 50 10.9**	**-1.3**
OTAV	**Otavalo**	**21.02**	**337**	P		**P**	**22 50 17.1**	**-1.7**
PLCA	**Paso Flores**	**21.36**	**181**	P		**P**	**22 50 24.2**	**+2.4**
	comp=E,1.3nm,0.6s,baz=16,slow=11,SNR=9.7							
PLCA				pP		**pP**	**22 50 36.1**	**+1.6**
	comp=E,2.2nm,0.5s,baz=12,slow=10.0,SNR=5.0							
PLCA				LR		LR	22 57 29.9	
	comp=E,82nm,20.1s,baz=20,slow=33							
PLCA	**Paso Flores**	**21.36**	**181**	*e*P		P	22 50 33.5	+12
FLOC	**Florencia**	**21.43**	**345**	P		**P**	**22 50 23.4**	**+0.7**
RCLB	**Rio Claro- Sao**	**21.44**	**102**	*e*P		**P**	**22 50 23.5**	**+0.7**
BDFB	**Brasilia**	**21.51**	**84**	P		**P**	**22 50 23.9**	**+0.2**
	comp=E,8.2nm,0.5s,baz=257,slow=13,SNR=15							
BDFB				LR		LR	22 58 18.7	
	comp=E,65nm,20.9s,baz=76,slow=36							
BDFB	**Brasilia**	**21.51**	**84**	P		**P**	**22 50 21.3**	**-2.3**
BDFB				IAmb		IAmb	22 50 26.9	
	comp=E,8.6nm,0.6s							
SPB	**Sao Paulo**	**21.64**	**105**	*e*P		**P**	**22 50 26.6**	**+1.6**
VAO	**Valinhos**	**22.01**	**104**	*e*P		**P**	**22 50 30.5**	**+1.5**
PEXB	**Peixe**	**22.28**	**75**	*e*P		**P**	**22 50 33.2**	**+1.3**
RUSC	**La Rusia**	**25.19**	**353**	P		**P**	**22 51 00.9**	**+0.7**
VAS01	**Vassouras-RJ**	**25.21**	**101**	*e*P		**P**	**22 51 03.1**	**+3.3**
SDV	**Santo Domingo**	**28.01**	**359**	*e*P		P	22 51 35.3	+10
SDV	**Santo Domingo**	**28.01**	**359**	P		**P**	**22 51 24.7**	**-0.5**
SDV				IAmb		IAmb	22 51 40.7	
	comp=E,12nm,1.5s							
MDP	**Montagnes des**	**29.80**	**37**	P		**P**	**22 51 39.2**	**-1.8**
	comp=E,21nm,1.0s,baz=209,slow=9.3,SNR=5.1							
TXAR	**Lajitas Array**	**58.12**	**325**	P		**P**	**22 55 27.5**	**+0.3**
	comp=E,0.2nm,0.6s,baz=138,slow=8.4,SNR=4.1							
TXAR	**Lajitas Array**	**58.12**	**325**	P		**P**	**22 55 26.9**	**-0.3**
SADO	**Sadowa**	**64.28**	**353**	P		**P**	**22 56 08.6**	**+0.2**
	comp=E,18nm,1.0s,baz=211,slow=1.8,SNR=6.4							
SNAA	**Sanae**	**64.75**	**161**	P		**P**	**22 56 13.1**	**+1.8**
SDCO	**Great Sand Dun**	**65.73**	**330**	P		**P**	**22 56 17.2**	**-1.2**
SDCO				IAmb		IAmb	22 56 21.5	
	comp=E,2.6nm,0.9s							

DBIC	**Dimbokro**	**69.34**	**75**	P		**P**	**22 56 40.0**	**-1.3**
	comp=E,4.9nm,0.9s,baz=194,slow=6.5,SNR=5.5							
DBIC				pP		**pP**	**22 56 57.3**	**+0.1**
	comp=E,1.4nm,0.5s,baz=232,slow=9.6,SNR=2.2							
DBIC	**Dimbokro**	**69.34**	**75**	P		**P**	**22 56 38.3**	**-3.0**
DBIC				IAmb		IAmb	22 56 40.9	
	comp=E,6.8nm,1.0s							
CCUT	**Cedar City**	**69.61**	**325**	P		**P**	**22 56 43.1**	**+0.4**
PDAR	**Pinedale Array**	**71.59**	**331**	P		**P**	**22 56 56.1**	**+1.4**
	comp=E,0.5nm,0.6s,baz=128,slow=5.8,SNR=3.9							
PDAR	**Pinedale Array**	**71.59**	**331**	P		**P**	**22 56 53.8**	**-1.0**
ULM	**Lac du Bonnet**	**72.86**	**343**	P		**P**	**22 57 01.9**	**+0.1**
	comp=E,2.4nm,0.6s,baz=147,slow=5.0,SNR=8.0							
ULM	**Lac du Bonnet**	**72.86**	**343**	IAmb		IAmb	22 57 17.3	
	comp=E,8.8nm,1.4s							
ELK	**Elko**	**72.92**	**326**	P		**P**	**22 57 02.9**	**+0.2**
	comp=E,1.0nm,0.8s,baz=81,slow=9.2,SNR=4.5							
NVAR	**Mina Array Bea**	**73.00**	**322**	P		**P**	**22 57 06.2**	**+3.0**
	comp=E,1.3nm,0.7s,baz=155,slow=6.5,SNR=9.1							
NVAR				pP		**pP**	**22 57 18.4**	**-0.4**
	comp=E,0.7nm,0.8s,baz=144,slow=7.1,SNR=4.1							
NVAR	**Mina Array Bea**	**73.00**	**322**	P		**P**	**22 57 02.2**	**-1.0**
YHH	**Holmes Hill**	**73.75**	**331**	P		**P**	**22 57 09.4**	**+1.9**
SCHQ	**Schefferville**	**73.89**	**2**	P		**P**	**22 57 08.4**	**+0.7**
	comp=E,8.6nm,1.1s,baz=214,slow=15,SNR=4.4							
SCHQ	**Schefferville**	**73.89**	**2**	IAmb		IAmb	22 57 09.0	
	comp=E,10nm,1.0s							
PAHR	**Pah Rah Range**	**74.48**	**323**	P		**P**	**22 57 13.2**	**+1.4**
PAHR				IAmb		IAmb	22 57 15.8	
	comp=E,5.5nm,0.8s							
TOA0	**Torodi Ar. Sit**	**77.82**	**71**	P		**P**	**22 57 28.8**	**-2.2**
TORD	**Torodi Ar. Bea**	**77.82**	**71**	P		**P**	**22 57 29.8**	**-1.3**
	comp=E,2.3nm,0.5s,baz=249,slow=5.4,SNR=20							
TORD	**Torodi Ar. Bea**	**77.82**	**71**	IAmb		IAmb	22 57 30.7	
	comp=E,5.0nm,1.1s							
ESDC	**Sonseca Array**	**85.16**	**45**	P		**P**	**22 58 09.4**	**0.0**
	comp=E,0.7nm,0.8s,baz=276,slow=4.3,SNR=4.5							
ESDC	**Sonseca Array**	**85.16**	**45**	P		**P**	**22 58 09.1**	**-0.3**
YKA	**Yellowknife Ar**	**88.71**	**341**	P		**P**	**22 58 27.2**	**+1.2**
	comp=E,3.5nm,0.6s,baz=135,slow=4.8,SNR=66							
YKA				pP		**pP**	**22 58 42.6**	**+0.3**
	comp=E,1.7nm,0.5s,baz=133,slow=4.8,SNR=14							
H11S2	**WAKE ISLAND Hy**	**126.33**	**279**	T		T	01 23 46.2	
	baz=101,slow=75,SNR=518							
H11S1	**WAKE ISLAND Hy**	**126.34**	**279**	T		T	01 23 45.3	
	baz=101,slow=75,SNR=681							
H11S3	**WAKE ISLAND Hy**	**126.35**	**279**	T		T	01 23 41.0	
	baz=101,slow=75,SNR=690							
H11N3	**WAKE ISLAND Hy**	**126.36**	**281**	T		T	01 23 46.1	
	baz=100,slow=75,SNR=209							
H11N2	**WAKE ISLAND Hy**	**126.38**	**281**	T		T	01 23 47.2	
	baz=100,slow=75,SNR=230							
H11N1	**WAKE ISLAND Hy**	**126.38**	**281**	T		T	01 23 47.3	
	baz=100,slow=75,SNR=201							
ASAR	**Alice Springs**	**131.23**	**210**	PKP		**PKPdf**	**23 04 46.6**	**+0.9**
	comp=E,0.2nm,0.6s,baz=138,slow=2.0,SNR=3.3							
ASAR				pPKP		**pPKPdf**	**23 05 02.0**	**-0.4**
	comp=E,1.1nm,0.9s,baz=98,slow=1.4,SNR=5.7							
ASAR	**Alice Springs**	**131.23**	**210**			**PKPdf**	**23 04 45.5**	**-0.2**
WRA	**Warramunga Arr**	**134.16**	**213**	PKP		**PKPdf**	**23 04 51.9**	**+0.7**
	comp=E,0.4nm,0.6s,baz=151,slow=1.9,SNR=4.2							
WRA				pPKP		**pPKPdf**	**23 05 07.8**	**-0.2**
	comp=E,1.0nm,1.0s,baz=188,slow=1.4,SNR=3.9							
WRA	**Warramunga Arr**	**134.16**	**213**			**PKPdf**	**23 04 50.5**	**-0.8**
ZALV	**Zalesovo Beam**	**140.47**	**23**	PKhKP		PKPpre	23 04 58.1	
	comp=E,1.4nm,0.6s,baz=301,slow=3.2,SNR=5.4							
MKAR	**Makanchi Array**	**144.54**	**33**	PKP		PKPbc	23 05 08.8	+0.8
	comp=Z,0.9nm,0.7s,baz=333,slow=4.0,SNR=9.0							
USRK	**Ussuriysk Ar.**	**149.00**	**328**	PKPbc		**PKPbc**	**23 05 22.4**	**+1.5**
	comp=Z,2.1nm,0.8s,baz=291,slow=5.9,SNR=4.1							
MJAR	**Matsushiro Arr**	**149.72**	**310**	PKPbc		**PKPbc**	**23 05 23.7**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=146,slow=0.9,SNR=4.4							
SONM	**Songino Array**	**151.41**	**5**	PKPbc		**PKiKP**	**23 05 28.2**	**+1.0**
	comp=Z,2.2nm,0.5s,baz=318,slow=1.3,SNR=17							
SONM				PKPab		**PKPab**	**23 05 36.6**	**+1.5**
	comp=Z,1.4nm,0.8s,baz=318,slow=3.9,SNR=5.4							
SONM				pPKPbc		**sPKPdf**	**23 05 44.7**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=313,slow=2.5,SNR=2.8							
SONM	**Songino Array**	**151.41**	**5**			**PKPab**	**23 05 34.6**	**-0.5**

*PRU **07** 22:51:23.7±0.0, 50°.14N×19°.10E, h0km*
ISC 07 22:51:22.9±1.0, **50°.14N**±0°.05×**19°.15E**±0°.03, **h0**km, **n10,** σ0§**84**/19, **Poland**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OJC	**Ojcow**	**0.43**	**79**	*e*Pg		**Pg**	**22 51 30.8**	**-0.3**
OJC				*e*Sg		**Sg**	**22 51 36.7**	**0.0**
OKC	**Ostrava-Krasne**	**0.71**	**245**	*e*PG		**Pg**	**22 51 37.0**	**+0.5**
OKC				*e*SG		**Sg**	**22 51 46.7**	**+1.0**
	comp=Z,4.7nm,0.4s							
LANS	**Liptovska Anna**	**1.01**	**168**	*e*PG		**Pg**	**22 51 42.3**	**+0.1**
LANS				*e*SG		**Sg**	**22 51 55.6**	**+0.3**
LANS				*e*LG		Lg	22 51 56.3	
NIE	**Niedzica**	**1.04**	**133**	*e*Pg		**Pg**	**22 51 44.2**	**+1.4**
NIE				*e*Sg		**Sb**	**22 51 58.9**	**+0.9**
MORC	**Moravsky Berou**	**1.10**	**251**	*e*PG		**Pg**	**22 51 44.3**	**+0.4**
MORC				*e*SG		**Sg**	**22 51 57.9**	**-0.2**
KRLC	**Kraliky**	**1.52**	**269**	*e*SG		**Sg**	**22 52 11.6**	**-0.2**
	7.5nm,0.4s							
VYHS	**Vyhne**	**1.66**	**187**	*e*PN		**Pn**	**22 51 52.2**	**-1.0**
VYHS				*e*SN		**Sn**	**22 52 13.7**	**-1.5**
DPC	**Dobruska-Polom**	**1.82**	**278**	*e*PG		**Pn**	**22 51 56.7**	**+1.1**
DPC				*e*SG		**Sg**	**22 52 21.1**	**-0.4**
	comp=Z,5.0nm,0.6s							
VRAC	**Vranov**	**1.85**	**244**	*e*PN		**Pn**	**22 51 57.1**	**+1.2**
VRAC				*e*SG		**Sb**	**22 52 20.9**	**-0.5**
CHVC	**Chvalec**	**2.03**	**284**	*e*PG		**Pb**	**22 52 00.0**	**-0.7**
CHVC				*e*SG		**Sg**	**22 52 28.2**	**+0.1**

*NNC **07** 22:55:17.6±1.7, 37°.71N×71°.76E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=12.9km s-min=11.1km az=170.0*
ISC 07 22:55:17.3±4.8, **37°.4N**±0°.3×**71°.7E**±0°.2, **h109**km, **n8,** σ0§**54**/11, **2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu**	**4.96**	**17**	P		**Pn**	**22 56 30.1**	**+0.2**
	SNR=22							
UCH	**Uchtor**	**5.28**	**23**	P		**Pn**	**22 56 34.2**	**0.0**
	SNR=6.1							
KZA	**Kyzart**	**5.40**	**29**	P		**Pn**	**22 56 35.5**	**-0.3**
	SNR=6.3							
EKS2	**Erkin-Say**	**5.49**	**16**	P		**Pn**	**22 56 37.8**	**+1.1**
	SNR=8.0							
AAK	**Ala-Archa**	**5.65**	**21**	P		**Pn**	**22 56 39.2**	**+0.3**
	SNR=7.1							
AAK	**Ala-Archa**	**5.65**	**21**	⇓P		**Pn**	**22 56 39.1**	**+0.2**
	2.4nm,0.4s							
AAK				⇑S		**Sn**	**22 57 42.1**	**-0.4**
	3.3nm,0.7s							
KK31	**Karatay Array**	**5.78**	**351**	P		**Pn**	**22 56 40.6**	**0.0**
	0.6nm,0.4s,baz=171,slow=12,SNR=9.0							
KK31				S		**Sn**	**22 57 45.0**	**-0.5**
	2.6nm,0.6s,baz=174,slow=23,SNR=10							
TKM2	**Tokmak 2**	**6.26**	**27**	⇓P		**Pn**	**22 56 46.7**	**-0.5**
	2.4nm,0.7s							
TKM2				⇑S		**Sn**	**22 57 58.0**	**+0.6**
	2.5nm,1.1s							

*IDC **07** 23:00:14.2±1.1, 4°.52S×106°.40W, h0km, mb4.0/13, mb1 4.3/13, mb1mx4.2/36, mbtmp4.0/13, MS4.9/3, Ms1 4.9/3, ms1mx4.3/24, Error ellipse: s-maj=42.0km s-min=16.4km az=56.0*
*NEIC **07** 23:00:17.0±2.1, 4°.5S±0°.1×106°.1W±0°.1, h10km±1km, mb4.5/52, Error ellipse: s-maj=25.7km s-min=19.7km az=229.0*
ISC 07 23:00:16.3±0.9, **4°.5S**±0°.1×**106°.2W**±0°.1, **h10**km, **n69,** σ1§**62**/42, **mb4.4**/28, **MS4.7**/5, **Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PAYG	**Puerto Ayora**	**16.31**	**77**	Pn		**Pn**	**23 04 05.6**	**-0.1**
PAYG				IAmb		IAmb	23 04 22.7	
	comp=Z,47nm,1.1s							
H06S1	**SOCORRO T**	**23.54**	**349**	T		T	23 29 46.3	
	SNR=28							
H06E1	**SOCORRO T-PHAS**	**23.58**	**349**	T		T	23 29 45.9	
	SNR=38							
JTS	**Las Juntas de**	**25.73**	**55**	P		**P**	**23 05 49.5**	**+2.3**
	comp=Z,16nm,1.0s,baz=82,slow=24,SNR=5.7							
JTS	**Las Juntas de**	**25.73**	**55**	P		**P**	**23 05 47.9**	**+0.7**

OTAV	**Otavalo**	**28.09**	**81**	P		**P**	**23 06 06.5**	**-2.5**
OTAV				IAmb		IAmb	23 06 17.5	
	comp=Z,18nm,1.4s							
HSIG		**33.62**	**352**	P		**P**	**23 06 58.5**	**+1.4**
TXAR	**Lajitas Array**	**33.70**	**4**	P		**P**	**23 06 58.9**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=196,slow=13,SNR=4.6							
TAOE	**Nuku Hiva Isla**	**34.01**	**261**	*e*T		T	23 42 15.8	
	comp=Z,64nm,0.2s							
RUSC	**La Rusia**	**34.61**	**73**	P		**P**	**23 07 06.0**	**-0.5**
319A	**Douglas**	**35.78**	**355**	P		**P**	**23 07 17.4**	**+1.5**
319A				IAmb		IAmb	23 07 27.6	
	comp=Z,5.4nm,0.7s							
MNTX	**Cornudas Mount**	**35.98**	**1**	P		**P**	**23 07 17.8**	**+0.2**
SDV	**Santo Domingo**	**37.84**	**69**	LR		LR	23 20 12.1	
	comp=Z,2μm,21.0s,baz=227,slow=32							
SDV	**Santo Domingo**	**37.84**	**69**	P		**P**	**23 07 32.7**	**-1.1**
LENM	**Lemitar**	**38.44**	**359**	P		**P**	**23 07 40.2**	**+1.7**
PFO	**Pinyon Flats O**	**39.12**	**346**	P		**P**	**23 07 42.0**	**-2.1**
	comp=Z,4.1nm,1.0s,baz=162,slow=1.9,SNR=5.2							
PFO	**Pinyon Flats O**	**39.12**	**346**	IAmb		IAmb	23 07 46.7	
	comp=Z,8.1nm,1.2s							
LPAZ	**La Paz**	**39.13**	**110**	P		**P**	**23 07 45.8**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=238,slow=6.0,SNR=3.6							
LPAZ	**La Paz**	**39.13**	**110**	IAmb		IAmb	23 07 47.3	
	comp=Z,1.6nm,0.9s							
AMTX	**Amarillo**	**39.38**	**6**	P		**P**	**23 07 48.6**	**+2.3**
AMTX				IAmb		IAmb	23 07 52.4	
	comp=Z,7.6nm,1.0s							
W18A	**Petrified Fore**	**39.53**	**355**	P		**P**	**23 07 49.4**	**+1.7**
W18A				IAmb		IAmb	23 07 52.1	
	comp=Z,10nm,1.2s							
WUAZ	**Wupatki**	**40.08**	**353**	P		**P**	**23 07 54.2**	**+2.0**
LVC	**Limon Verde**	**40.28**	**120**	P		**P**	**23 07 55.1**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=273,slow=1.7,SNR=3.9							
LVC	**Limon Verde**	**40.28**	**120**	IAmb		IAmb	23 07 56.1	
	comp=Z,6.2nm,1.1s							
GSC	**Goldstone, Bar**	**40.81**	**347**	P		**P**	**23 07 59.3**	**+1.1**
SHPR	**Sheep Range**	**41.63**	**349**	P		**P**	**23 08 06.2**	**+1.2**
KNB	**Kanab**	**41.74**	**352**	P		**P**	**23 08 07.4**	**+1.5**
CCUT	**Cedar City**	**42.35**	**352**	P		**P**	**23 08 12.5**	**+1.6**
SAML	**Samuel**	**42.90**	**98**	P		**P**	**23 08 13.5**	**-2.1**
P17A	**Butcher Ranch,**	**43.94**	**355**	P		**P**	**23 08 25.3**	**+1.7**
NVAR	**Mina Array Bea**	**44.15**	**346**	P		**P**	**23 08 26.0**	**+0.5**
	comp=Z,1.4nm,1.0s,baz=171,slow=10,SNR=8.1							
CMB	**Columbia Colle**	**44.31**	**344**	P		**P**	**23 08 28.1**	**+1.6**
RYN	**Ryan**	**44.39**	**346**	P		**P**	**23 08 28.6**	**+1.3**
RYN				IAmb		IAmb	23 08 30.1	

Azm325.0000°; N -0.3329, Plg81.0000°, Azm123.0000°; P -4.7935, Plg3.0000°, Azm235.0000°;

ISC 07 23:02:54.60.3,4°53S×0°07×**106°06W**×0°07,**h17**km,**n783**, σ1°19/511,**mb5.2**/144,**MS5.5**/265,**10C-8D**,**Central East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**16.21**	**77**		**Pn**	**23 06 41.0**	**-0.7**
PAYG				IAmb	IAmb	23 06 47.8	
	comp=Z,220nm,1.4s						
RPN	**Rapa Nui**	**22.69**	**188**	IAMs_20	IAMs_20	23 14 05.5	
	comp=Z,12μm,18.0s						
TLIG	**Tlapa**	**23.16**	**18**	P	**P**	**23 07 59.8**	**-0.8**
TLIG				IAmb	IAmb	23 08 36.0	
	comp=Z,92nm,1.5s						
H06S1	**SOCORRO T**	**23.61**	**348**	T	T	23 32 39.8	
	SNR=123						
H06E1	**SOCORRO T-PHAS**	**23.65**	**348**	T	T	23 32 26.7	
	SNR=138						
CMIG	**Matias Romero**	**24.15**	**27**	P	**P**	**23 08 11.4**	**+1.4**
	comp=Z,18nm,1.2s,baz=207,slow=6.8,SNR=3.4						
MOIG	**Morelia**	**24.53**	**11**	P	**P**	**23 08 13.2**	**-0.6**
SNET	**Serv Nac Est T**	**24.63**	**42**	P	**P**	**23 08 13.5**	**-1.0**
APG	**El Apazote**	**24.81**	**38**	P	**P**	**23 08 16.9**	**+0.6**
	comp=Z,55nm,0.8s,baz=228,slow=11,SNR=12						
JTS	**Las Juntas de**	**25.66**	**55**	P	**P**	**23 08 24.5**	**+0.7**
JTS				pmax	pmax		
	comp=Z,335nm,1.3s						
JTS				MLR	MLR		
	comp=Z,16μm,20.0s						
JTS	**Las Juntas de**	**25.66**	**55**	P	**P**	**23 08 23.9**	**+0.1**
	comp=Z,179nm,1.2s,baz=333,slow=6.7,SNR=27						
JTS	**Las Juntas de**	**25.66**	**55**	P	**P**	**23 08 24.5**	**+0.7**
JTS	**Las Juntas de**	**25.66**	**55**	IAMs_20	IAMs_20	23 15 36.9	
	comp=Z,16μm,20.0s						
HDC	**Heredia**	**26.20**	**57**	P	**P**	**23 08 29.2**	**+0.4**
HDC				IAMs_20	IAMs_20	23 15 56.1	
	comp=Z,14μm,20.0s						
TGUH	**Tegucigalpa,Un**	**26.23**	**45**	P	**P**	**23 08 28.1**	**-1.0**
ESTN	**Estel**	**26.25**	**48**	P	**P**	**23 08 29.3**	**+0.1**
ESTN				IAMs_20	IAMs_20	23 16 11.5	
	comp=Z,9μm,19.0s						
ACON	**Acoyapa**	**26.45**	**52**	P	**P**	**23 08 31.1**	**+0.1**
ZAIG	**Zacatecas**	**27.34**	**7**	P	**P**	**23 08 38.7**	**-0.5**
ZAIG				IAMs_20	IAMs_20	23 17 21.1	
	comp=Z,9μm,18.0s						
ATAH	**Atahualpa**	**27.64**	**97**	P	**P**	**23 08 41.4**	**-0.8**
	comp=Z,4.0nm,0.7s,baz=297,slow=8.2,SNR=5.7						
ATAH				LR	LR	23 16 50.5	
	comp=Z,4μm,19.4s,baz=272,slow=30						
OTAV	**Otavalo**	**27.98**	**81**	P	**P**	**23 08 44.3**	**-1.0**
OTAV				pmax	pmax		
	comp=Z,77nm,1.5s						
OTAV				MLR	MLR		
	comp=Z,14μm,21.0s						
OTAV	**Otavalo**	**27.98**	**81**	*e*P	**P**	**23 08 46.5**	**+1.1**
OTAV	**Otavalo**	**27.98**	**81**	*e*P	**P**	**23 08 44.9**	**-0.4**
OTAV	**Otavalo**	**27.98**	**81**	P	**P**	**23 08 44.2**	**-1.0**
OTAV				IAmb	IAmb	23 08 54.3	
	comp=Z,77nm,1.4s						
OTAV	**Otavalo**	**27.98**	**81**	IAMs_20	IAMs_20	23 16 42.5	
	comp=Z,14μm,21.0s						
GCUF	**Volcan Galeras**	**29.25**	**79**	*e*P	**P**	**23 08 59.2**	**+2.6**
BCIP	**Isla Barro Col**	**29.47**	**62**	P	**P**	**23 08 56.8**	**-1.1**
BCIP				pmax	pmax		
	comp=Z,175nm,1.5s						
BCIP				MLR	MLR		
	comp=Z,18μm,21.0s						
BCIP	**Isla Barro Col**	**29.47**	**62**	P	**P**	**23 08 56.8**	**-1.1**
BBAC	**Balboa, Cauca**	**29.52**	**78**	*e*P	**P**	**23 08 58.4**	**-0.3**
NNA	**Nana**	**29.83**	**106**	P	**P**	**23 09 02.7**	**+1.5**
	comp=Z,3.2nm,0.3s,baz=275,slow=12,SNR=1.9						
NNA	**Nana**	**29.83**	**106**	IAMs_20	IAMs_20	23 17 14.2	
	comp=Z,9μm,20.0s						
NNA	**Nana**	**29.83**	**106**	IAmb	IAmb	23 09 08.1	
	comp=Z,50nm,1.7s						
SOTA	**Rioblanco**	**30.16**	**78**	*e*P	**P**	**23 09 06.9**	**+2.2**
TEIG	**Tepich**	**30.17**	**35**	LR	LR	23 19 20.7	
	comp=Z,8μm,20.1s,slow=33						
PCON	**Cinco Dias**	**30.41**	**78**	*e*P	**P**	**23 09 07.8**	**+0.8**
PTCN	**Pitcairn Islan**	**30.83**	**226**	IAMs_20	IAMs_20	23 18 02.9	
	comp=Z,9μm,22.0s						
YOTC	**Yotoco, Valle**	**30.87**	**75**	*e*P	**P**	**23 09 09.9**	**-0.6**
FLOC	**Florencia**	**30.98**	**79**	*e*P	**P**	**23 09 13.3**	**+1.8**
CBOC	**Ciudad Bolivar**	**31.73**	**71**	*e*P	**P**	**23 09 18.4**	**+0.2**
ORTC	**Ortega, Tolima**	**31.91**	**75**	*e*P	**P**	**23 09 19.7**	**+0.1**
RREF	**El Recreo**	**32.08**	**73**	*e*P	**P**	**23 09 23.9**	**+2.2**
GUY2C	**Guyana, Caldas**	**32.15**	**73**	*e*P	**P**	**23 09 23.1**	**+0.9**
ROSC	**El Rosal**	**33.04**	**74**	P	**P**	**23 09 30.7**	**+0.8**
	comp=Z,4.6nm,0.4s,baz=240,slow=8.1,SNR=6.1						
ROSC				LR	LR	23 20 11.9	
	comp=Z,7μm,21.6s,baz=260,slow=31						
ROSC	**El Rosal**	**33.04**	**74**	P	**P**	**23 09 28.3**	**-1.6**
ROSC				IAmb	IAmb	23 10 12.9	
	comp=Z,54nm,1.6s						
833A	**Chaparral WMA,**	**33.28**	**11**	P	**P**	**23 09 30.5**	**-0.9**
833A				IAmb	IAmb	23 09 57.5	
	comp=Z,57nm,1.6s						
833A	**Chaparral WMA,**	**33.28**	**11**	P	**P**	**23 09 31.2**	**-0.2**
	baz=192						
CHIC	**Chingaza**	**33.55**	**75**	*e*P	**P**	**23 09 35.0**	**+0.6**
HSIG		**33.68**	**352**	P	**P**	**23 09 34.2**	**-0.7**
HSIG				IAmb	IAmb	23 09 40.7	
	comp=Z,26nm,1.0s						
TX32	**Lajitas Array**	**33.74**	**4**	P	**P**	**23 09 36.2**	**+0.7**
TXAR	**Lajitas Array**	**33.74**	**4**	P	**P**	**23 09 36.1**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=192,slow=11,SNR=11						
TXAR				PcP	**PcP**	**23 12 15.2**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=160,slow=2.9,SNR=3.0						
TXAR				LR	LR	23 20 54.6	
	comp=Z,3μm,20.9s,baz=0.0,slow=32						
TAOE	**Nuku Hiva Isla**	**34.12**	**261**	*e*LR	LR	23 18 30.0	
	comp=Z,10μm,26.6s,baz=90						
TAOE	**Nuku Hiva Isla**	**34.12**	**261**	*e*T	T	23 45 23.3	
	comp=Z,41nm,0.3s						
RUSC	**La Rusia**	**34.52**	**73**	*e*P	**P**	**23 09 44.8**	**+1.9**
JCT	**Junction City**	**35.32**	**9**	P	**P**	**23 09 50.8**	**+1.7**
JCT				pmax	pmax		
	comp=Z,45nm,1.6s						
JCT				MLR	MLR		
	comp=Z,8μm,19.0s						
JCT	**Junction City**	**35.32**	**9**	P	**P**	**23 09 50.8**	**+1.7**
JCT				IAmb	IAmb	23 10 09.2	
	comp=Z,44nm,1.6s						
JCT				IAMs_20	IAMs_20	23 22 27.4	
	comp=Z,8μm,19.0s						
JCT	**Junction City**	**35.32**	**9**	P	**P**	**23 09 48.4**	**-0.7**
	baz=191						
HKT	**Hockley**	**35.66**	**15**	P	**P**	**23 09 50.3**	**-1.5**
HKT				pmax	pmax		
	comp=Z,56nm,1.9s						
HKT				MLR	MLR		
	comp=Z,2μm,20.0s						
HKT	**Hockley**	**35.66**	**15**	P	**P**	**23 09 50.3**	**-1.5**
HKT				IAmb	IAmb	23 10 11.9	
	comp=Z,56nm,1.9s						
319A	**Douglas**	**35.83**	**355**	P	**P**	**23 09 52.2**	**-1.3**
319A				IAmb	IAmb	23 09 56.5	
	comp=Z,54nm,1.4s						
319A				IAMs_20	IAMs_20	23 21 20.9	
	comp=Z,6μm,19.0s						
MNTX	**Cornudas Mount**	**36.03**	**1**	P	**P**	**23 09 55.3**	**+0.2**
	baz=181						
214A	**Organ Pipe Nat**	**36.85**	**350**	P	**P**	**23 10 01.8**	**-0.3**
	baz=169,SNR=6.7						
121A	**Cookes Peak, D**	**36.89**	**358**	IAMs_20	IAMs_20	23 22 04.0	
	comp=Z,6μm,20.0s						
121A	**Cookes Peak, D**	**36.89**	**358**	P	**P**	**23 10 02.9**	**+0.2**
	baz=177						
TUC	**Tucson**	**36.91**	**353**	P	**P**	**23 10 02.6**	**-0.1**
TUC				pmax	pmax		
	comp=Z,25nm,1.4s						
TUC				MLR	MLR		
	comp=Z,6μm,18.0s						
TUC	**Tucson**	**36.91**	**353**	P	**P**	**23 10 02.6**	**-0.1**
TUC	**Tucson**	**36.91**	**353**	IAMs_20	IAMs_20	23 22 17.3	
	comp=Z,6μm,18.0s						
TUC	**Tucson**	**36.91**	**353**	P	**P**	**23 10 03.1**	**+0.4**
	baz=172						
WHTX	**Lake Whitney,**	**37.23**	**12**	P	**P**	**23 10 05.1**	**-0.2**
	baz=194						
ABTX	**Abilene, Hawle**	**37.45**	**9**	IAMs_20	IAMs_20	23 23 42.7	
	comp=Z,6μm,18.0s						
ABTX	**Abilene, Hawle**	**37.45**	**9**	P	**P**	**23 10 06.7**	**-0.5**
	baz=190						
SDV	**Santo Domingo**	**37.75**	**69**	PcP	**PcP**	**23 12 26.2**	**-1.0**
	comp=Z,8.0nm,0.9s,baz=236,slow=6.8,SNR=3.7						
SDV	**Santo Domingo**	**37.75**	**69**	*e*P	**P**	**23 10 10.1**	**-0.2**
SDV	**Santo Domingo**	**37.75**	**69**	P	**P**	**23 10 10.0**	**-0.2**
SDV				IAmb	IAmb	23 10 12.0	
	comp=Z,52nm,0.9s						
SDV	**Santo Domingo**	**37.75**	**69**	IAMs_20	IAMs_20	23 22 38.2	
	comp=Z,8μm,21.0s						
IKP	**In-Ko-Pah, Jac**	**38.19**	**346**	P	**P**	**23 10 13.4**	**-0.1**
	baz=164						
GLA	**Glamis**	**38.29**	**348**	P	**P**	**23 10 14.0**	**-0.3**
	baz=166						
BAR	**Barrett**	**38.35**	**346**	P	**P**	**23 10 15.1**	**+0.3**
BAR				IAmb	IAmb	23 10 17.7	
	comp=Z,79nm,1.9s						
SWSC	**Sam W. Stewart**	**38.40**	**347**	P	**P**	**23 10 14.9**	**-0.2**
	baz=164						
MNMC	**Minye Minye**	**38.41**	**115**	P	**P**	**23 10 15.1**	**-0.8**
MNMC				IAmb	IAmb	23 10 23.6	
	comp=Z,49nm,1.4s						
MSTX	**Muleshoe**	**38.41**	**4**	IAmb	IAmb	23 10 20.9	
	comp=Z,63nm,1.7s						
MSTX	**Muleshoe**	**38.41**	**4**	P	**P**	**23 10 15.8**	**+0.3**
	baz=185						
MONP2	**Monument Peak**	**38.49**	**346**	P	**P**	**23 10 15.9**	**-0.3**
	baz=163,SNR=12						
PB11	**IPOC Station P**	**38.55**	**116**	P	**P**	**23 10 16.2**	**-0.7**
PB11				IAMs_20	IAMs_20	23 21 36.5	
	comp=Z,5μm,20.0s						
109C	**Camp Elliot, M**	**38.66**	**345**	IAMs_20	IAMs_20	23 22 18.9	
	comp=Z,6μm,18.0s						
Y14A	**Wickenburg**	**38.82**	**351**	IAMs_20	IAMs_20	23 22 28.9	
	comp=Z,9μm,22.0s						
Y12C	**Blythe**	**38.90**	**349**	IAmb	IAmb	23 10 22.3	
	comp=Z,85nm,2.0s						
Y12C	**Blythe**	**38.90**	**349**	P	**P**	**23 10 19.0**	**-0.4**
	baz=167						
GO01	**Chusmiza**	**38.94**	**116**	P	**P**	**23 10 20.3**	**-0.2**
GO01				IAMs_20	IAMs_20	23 22 08.7	
	comp=Z,6μm,19.0s						
PB04	**IPOC Station P**	**38.99**	**120**	P	**P**	**23 10 21.1**	**+0.5**
PB04				IAmb	IAmb	23 10 37.8	
	comp=Z,64nm,1.2s						
PB04				IAMs_20	IAMs_20	23 21 45.9	
	comp=Z,5μm,19.0s						
BC3	**Big Chuckawall**	**39.00**	**348**	P	**P**	**23 10 20.3**	**-0.1**
	baz=165,SNR=13						
LPAZ	**La Paz**	**39.01**	**110**	*e*P	**P**	**23 10 21.0**	**-0.3**
LPAZ	**La Paz**	**39.01**	**110**	P	**P**	**23 10 21.2**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=304,slow=3.7,SNR=8.0						
LPAZ				LR	LR	23 24 03.8	
	comp=Z,2μm,19.4s,baz=277,slow=32						
LPAZ	**La Paz**	**39.01**	**110**	P	**P**	**23 10 21.2**	**-0.1**
X18A	**Snowflake**	**39.02**	**355**	IAMs_20	IAMs_20	23 23 29.3	
	comp=Z,5μm,18.0s						
PB10	**IPOC Station P**	**39.10**	**122**	P	**P**	**23 10 21.9**	**+0.6**
XPFO	**Pion Flat**	**39.19**	**346**	P	**P**	**23 10 22.3**	**+0.4**
XPFO	**Pion Flat**	**39.19**	**346**	IAMs_20	IAMs_20	23 22 23.8	
	comp=Z,7μm,20.0s						
PFO	**Pinyon Flats O**	**39.19**	**346**	*ce*P	**P**	**23 10 22.1**	**+0.1**
PFO				pmax	pmax		
	comp=Z,30nm,1.2s						
PFO	**Pinyon Flats O**	**39.19**	**346**	P	**P**	**23 10 22.1**	**+0.1**
	comp=Z,7.0nm,0.9s,baz=147,slow=9.5,SNR=10						
PFO	**Pinyon Flats O**	**39.19**	**346**	P	**P**	**23 10 22.1**	**+0.1**
PFO	**Pinyon Flats O**	**39.19**	**346**	IAMs_20	IAMs_20	23 22 23.8	
	comp=Z,7μm,20.0s						
PFO	**Pinyon Flats O**	**39.19**	**346**	P	**P**	**23 10 22.0**	**0.0**
	baz=164,SNR=11						
ANMO	**Albuquerque**	**39.26**	**359**	*i* P	**P**	**23 10 23.1**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,17nm,1.5s						
ANMO	**Albuquerque**	**39.26**	**359**	P	**P**	**23 10 23.2**	**+0.6**
ANMO	**Albuquerque**	**39.26**	**359**	P	**P**	**23 10 22.1**	**-0.6**
	baz=179						
MURC	**Murrieta**	**39.36**	**345**	P	**P**	**23 10 23.0**	**-0.3**
	baz=162						
AMTX	**Amarillo**	**39.42**	**6**	P	**P**	**23 10 23.2**	**-0.7**
	baz=187						
IRM	**Iron Mountain**	**39.42**	**348**	P	**P**	**23 10 23.3**	**-0.5**
	baz=166						
BELC	**Belle Mtn. Jos**	**39.45**	**347**	P	**P**	**23 10 24.0**	**-0.2**
	baz=164,SNR=14						
CIS	**Catalina Islan**	**39.50**	**344**	P	**P**	**23 10 24.3**	**-0.1**
	baz=160						
W18A	**Petrified Fore**	**39.59**	**355**	IAMs_20	IAMs_20	23 23 40.3	
	comp=Z,5μm,19.0s						
W18A	**Petrified Fore**	**39.59**	**355**	P	**P**	**23 10 25.0**	**-0.3**
	baz=174,SNR=21						
WMOK	**Wichita Mounta**	**39.65**	**9**	P	**P**	**23 10 26.0**	**+0.3**
	baz=191						
SNCC	**San Nicolas Is**	**39.68**	**342**	IAMs_20	IAMs_20	23 22 16.1	
	comp=Z,7μm,20.0s						
BFSC	**Mount Baldy Ra**	**40.08**	**345**	P	**P**	**23 10 29.1**	**-0.4**
	baz=162,SNR=8.0						
GMRC	**Granite Mounta**	**40.13**	**348**	P	**P**	**23 10 29.7**	**-0.1**
	baz=165,SNR=9.0						
WUAZ	**Wupatki**	**40.14**	**353**	P	**P**	**23 10 29.4**	**-0.6**
	baz=172						
PASC	**Pasadena Art C**	**40.16**	**344**	IAMs_20	IAMs_20	23 23 01.6	
	comp=Z,5μm,18.0s						
LVC	**Limon Verde**	**40.16**	**120**	P	**P**	**23 10 30.5**	**-0.1**
	comp=Z,5.9nm,0.7s,baz=278,slow=5.6,SNR=11						
LVC				LR	LR	23 22 03.9	
	comp=Z,2μm,21.8s,baz=287,slow=29						
LVC	**Limon Verde**	**40.16**	**120**	*e*P	**P**	**23 10 31.4**	**+0.9**
LVC	**Limon Verde**	**40.16**	**120**	P	**P**	**23 10 30.9**	**+0.3**
LVC	**Limon Verde**	**40.16**	**120**	IAMs_20	IAMs_20	23 22 22.4	
	comp=Z,7μm,21.0s						
MWC	**Mount Wilson**	**40.17**	**345**	IAmb	IAmb	23 10 33.4	
	comp=Z,67nm,1.6s						
MWC				IAMs_20	IAMs_20	23 23 03.0	
	comp=Z,5μm,19.0s						
DWPF	**Disney Wildern**	**40.20**	**35**	IAMs_20	IAMs_20	23 25 19.9	
	comp=Z,5μm,20.0s						
DWPF	**Disney Wildern**	**40.20**	**35**	P	**P**	**23 10 30.4**	**+0.1**
	baz=226						
HEC	**Hector,Ludlow**	**40.33**	**347**	P	**P**	**23 10 30.8**	**-0.5**
	baz=164,SNR=14						
OKCFA	**Oklahoma City**	**40.55**	**11**	IAMs_20	IAMs_20	23 26 00.8	
	comp=Z,4μm,18.0s						
GO02	**Mina Guanaco**	**40.57**	**124**	P	**P**	**23 10 33.7**	**-0.2**
GO02				IAmb	IAmb	23 11 01.3	
	comp=Z,48nm,1.1s						
MIAR	**Mount Ida**	**40.61**	**16**	P	**P**	**23 10 34.0**	**+0.4**
MIAR				pmax	pmax		
	comp=Z,71nm,1.6s						
MIAR	**Mount Ida**	**40.61**	**16**	P	**P**	**23 10 34.0**	**+0.4**
MIAR				IAmb	IAmb	23 10 58.0	
	comp=Z,71nm,1.6s						
MIAR	**Mount Ida**	**40.61**	**16**	P	**P**	**23 10 33.0**	**-0.6**
	baz=199						
OSI	**Osito Audit: C**	**40.72**	**344**	IAMs_20	IAMs_20	23 22 50.6	
	comp=Z,6μm,20.0s						
X40A	**Basin Creek Fa**	**40.76**	**17**	P	**P**	**23 10 34.7**	**-0.1**
	baz=200						
EDW2	**Edwards Air Fo**	**40.78**	**345**	P	**P**	**23 10 34.5**	**-0.6**
	baz=162,SNR=13						
TUQ	**Turquoise Moun**	**40.82**	**348**	P	**P**	**23 10 35.1**	**-0.4**
	baz=165						
SBC	**Santa Barbara**	**40.84**	**343**	P	**P**	**23 10 35.3**	**-0.3**
	baz=159						
GSC	**Goldstone, Bar**	**40.89**	**347**	IAMs_20	IAMs_20	23 23 19.6	
	comp=Z,5μm,19.0s						
GSC	**Goldstone, Bar**	**40.89**	**347**	P	**P**	**23 10 35.5**	**-0.5**
	baz=164,SNR=14						
GO03	**Copiap**	**41.10**	**128**	P	**P**	**23 10 36.6**	**-1.3**
GO03				IAmb	IAmb	23 10 45.9	
	comp=Z,63nm,1.5s						
U15A	**North Rim**	**41.16**	**352**	IAmb	IAmb	23 10 53.2	
	comp=Z,74nm,1.8s						
W39A	**Magazine**	**41.16**	**15**	IAmb	IAmb	23 11 02.8	
	comp=Z,90nm,1.7s						
W39A	**Magazine**	**41.16**	**15**	P	**P**	**23 10 38.1**	**-0.1**
	baz=199						
ARVC	**Arvin**	**41.23**	**344**	P	**P**	**23 10 38.3**	**-0.4**
	baz=161						
LRMC	**Laurel Mtn Rad**	**41.27**	**346**	P	**P**	**23 10 38.6**	**-0.5**
	baz=162,SNR=8.7						
PKM	**Mcpherson Peak**	**41.29**	**343**	P	**P**	**23 10 38.8**	**-0.6**
	baz=159,SNR=6.4						
SHOC	**Shoshone, Teco**	**41.34**	**347**	P	**P**	**23 10 39.1**	**-0.6**
	baz=165						
SDDR	**Presa de Saban**	**41.45**	**55**	P	**P**	**23 10 41.0**	**+0.2**
SDDR				IAmb	IAmb	23 10 53.9	
	comp=Z,38nm,1.1s						
T25A	**Trinidad**	**41.48**	**2**	P	**P**	**23 10 40.6**	**-0.4**
	baz=182						
LRAL	**Lakeview Retre**	**41.50**	**24**	P	**P**	**23 10 41.1**	**+0.1**
	baz=209						
W41B	**Gary Mavity, V**	**41.57**	**17**	P	**P**	**23 10 41.4**	**-0.1**
	baz=201						
MVCO	**Mesa Verde**	**41.58**	**357**	P	**P**	**23 10 40.9**	**-1.0**
	baz=176,SNR=19						
252A	**Lumpkin**	**41.61**	**28**	P	**P**	**23 10 41.6**	**-0.2**
	baz=213						
ISA	**Isabella, Lake**	**41.64**	**345**	IAMs_20	IAMs_20	23 24 16.9	
	comp=Z,6μm,19.0s						
ISA	**Isabella, Lake**	**41.64**	**345**	P	**P**	**23 10 41.9**	**-0.3**
	baz=161						
TIGA	**Tifton**	**41.69**	**29**	P	**P**	**23 10 42.6**	**+0.1**
	baz=215						
SMMC	**Simmler**	**41.74**	**343**	P	**P**	**23 10 43.2**	**+0.2**
	baz=159						
MPMC	**Manual Prospec**	**41.77**	**346**	P	**P**	**23 10 43.0**	**-0.4**
	baz=163,SNR=13						
456A	**Hilliard**	**41.91**	**32**	IAMs_20	IAMs_20	23 26 19.2	
	comp=Z,5μm,20.0s						
BANI	**BANI**	**41.91**	**56**	P	**P**	**23 10 45.7**	**+0.9**
VES	**Vestal, Richgr**	**41.97**	**344**	P	**P**	**23 10 45.2**	**+0.4**
	baz=160						
FURC	**Furnace Creek,**	**42.01**	**347**	P	**P**	**23 10 45.1**	**0.0**
	baz=164						
SDCO	**Great Sand Dun**	**42.06**	**1**	P	**P**	**23 10 45.4**	**-0.5**
	baz=181						
S22A	**4UR Ranch, Cre**	**42.06**	**359**	IAMs_20	IAMs_20	23 25 26.9	
	comp=Z,5μm,19.0s						
S22A	**4UR Ranch, Cre**	**42.06**	**359**	P	**P**	**23 10 45.5**	**-0.3**
	baz=179,SNR=17						
Z50A	**Ashland**	**42.14**	**25**	P	**P**	**23 10 46.4**	**+0.1**
	baz=211						
HHAR	**Hobbs**	**42.15**	**15**	P	**P**	**23 10 46.3**	**0.0**
152A	**Waverly Hall**	**42.18**	**27**	P	**P**	**23 10 46.5**	**0.0**
	baz=213						
PAGB	**Antelope Grade**	**42.20**	**343**	IAMs_20	IAMs_20	23 23 51.9	
	comp=Z,7μm,20.0s						
254A	**Abbeville**	**42.25**	**29**	P	**P**	**23 10 46.7**	**-0.4**
	baz=215						
CWC	**Cottonwood Cre**	**42.28**	**346**	P	**P**	**23 10 46.8**	**-0.7**
	baz=162						
SDD	**Santo Domingo**	**42.31**	**56**	IAMs_20	IAMs_20	23 26 15.2	
	comp=Z,7μm,22.0s						
TPNV	**Topopah Spring**	**42.34**	**348**	IAmb	IAmb	23 10 54.2	
	comp=Z,74nm,1.8s						
TPNV	**Topopah Spring**	**42.34**	**348**	P	**P**	**23 10 47.7**	**-0.3**
	baz=165,SNR=11						
SZCU	**Shurtz Canyon**	**42.41**	**352**	P	**P**	**23 10 48.7**	**0.0**
U40A	**Yellville**	**42.51**	**16**	P	**P**	**23 10 49.1**	**0.0**
	baz=200						
GRAC	**Grapevine Rang**	**42.63**	**347**	P	**P**	**23 10 50.7**	**+0.5**
	baz=163,SNR=16						
255A	**Hazlehurst**	**42.64**	**30**	P	**P**	**23 10 49.8**	**-0.5**
	baz=216						
LCAR	**Lake Charles**	**42.73**	**18**	IAmb	IAmb	23 11 09.5	
	comp=Z,76nm,1.8s						
Z52A	**Williamson**	**42.75**	**27**	P	**P**	**23 10 50.9**	**-0.2**
	baz=213						
SAML	**Samuel**	**42.78**	**98**	P	**P**	**23 10 50.3**	**-1.5**
SAML				pmax	pmax		
	comp=Z,24nm,1.0s						
SAML				MLR	MLR		
	comp=Z,3μm,18.0s						
SAML	**Samuel**	**42.78**	**98**	*e*P	**P**	**23 10 50.1**	**-1.7**
SAML	**Samuel**	**42.78**	**98**	P	**P**	**23 10 50.3**	**-1.5**
154A	**Montrose**	**42.89**	**29**	IAmb	IAmb	23 11 01.5	
	comp=Z,49nm,0.9s						
154A	**Montrose**	**42.89**	**29**	P	**P**	**23 10 52.3**	**+0.1**
	baz=215						
GRTK	**Grand Turk**	**42.90**	**52**	IAMs_20	IAMs_20	23 25 47.6	
	comp=Z,6μm,20.0s						
256A	**Glennville**	**42.98**	**31**	P	**P**	**23 10 52.8**	**-0.2**
	baz=217						
Y51A	**Rockmart**	**43.06**	**26**	P	**P**	**23 10 53.0**	**-0.7**
	baz=211						
155A	**Kite**	**43.21**	**30**	P	**P**	**23 10 54.4**	**-0.5**
	baz=216						
Z53A	**Monticello**	**43.22**	**28**	P	**P**	**23 10 54.7**	**-0.2**
	baz=214						
GOGA	**Godfrey**	**43.37**	**28**	P	**P**	**23 10 55.6**	**-0.7**
	baz=214						
257A	**Skidaway Islan**	**43.42**	**32**	IAMs_20	IAMs_20	23 27 07.1	
	comp=Z,5μm,20.0s						
KSCO	**Kaye Shedlock'**	**43.44**	**4**	IAmb	IAmb	23 11 05.4	
	comp=Z,47nm,1.2s						
PSUT	**Pine Spring**	**43.45**	**351**	P	**P**	**23 10 57.6**	**+0.6**
Y52A	**Lilburn**	**43.48**	**27**	P	**P**	**23 10 56.8**	**-0.2**
	baz=213						
SMCO	**Snowmass**	**43.49**	**359**	IAMs_20	IAMs_20	23 26 15.8	
	comp=Z,6μm,21.0s						
CBKS	**Cedar Bluff**	**43.52**	**7**	IAmb	IAmb	23 11 10.0	
	comp=Z,59nm,1.4s						
CBKS				IAMs_20	IAMs_20	23 27 14.5	
	comp=Z,8μm,21.0s						
CBKS	**Cedar Bluff**	**43.52**	**7**	P	**P**	**23 10 56.5**	**-0.9**
	baz=189						
Z54A	**Sparta**	**43.52**	**29**	P	**P**	**23 10 56.8**	**-0.6**
	baz=215						
PEL	**Peldehue**	**43.56**	**135**	IAMs_20	IAMs_20	23 23 49.6	
	comp=Z,7μm,22.0s						
R11A	**Troy Canyon, C**	**43.56**	**349**	P	**P

CCM pmax pmax
comp=Z,38nm,1.3s
CCM Cathedral Cave 44.55 17 P **P** 23 11 05.9 +0.3
CCM IAmb IAmb 23 11 30.7
comp=Z,38nm,1.3s
CCM Cathedral Cave 44.55 17 P **P** 23 11 05.1 -0.5
baz=201
V50A Pikevile 44.56 25 P **P** 23 11 05.1 -0.6
baz=210
Y55A Saluda 44.57 29 P **P** 23 11 05.3 -0.5
baz=216
W52A Murphy 44.57 26 IAmb IAmb 23 11 08.6
comp=Z,41nm,1.3s
W52A Murphy 44.57 26 P **P** 23 11 05.6 -0.3
baz=212
WAKR Walker 44.57 345 IAMs_20 IAMs_20 23 26 23.3
comp=Z,5µm,20.0s
NLU North Lily Min 44.61 353 P **P** 23 11 06.6 +0.3
HODGE Hodges 44.62 28 IAmb IAmb 23 11 08.4
comp=Z,50nm,1.4s
Z57A Bowman 44.63 31 P **P** 23 11 05.7 -0.6
baz=217
NHSC New Hope 44.75 31 IAMs_20 IAMs_20 23 27 57.3
comp=Z,4µm,20.0s
NHSC New Hope 44.75 31 P **P** 23 11 06.5 -0.7
baz=218
KVN Kaiserville 44.77 347 IAmb IAmb 23 12 08.3
comp=Z,65nm,2.0s
X54A Belton 44.82 28 P **P** 23 11 07.1 -0.8
baz=214
OBIP Obispado Ponce 44.91 59 P **P** 23 11 08.2 -0.6
BG3 Lake Jocassee 44.93 27 IAmb IAmb 23 11 34.0
comp=Z,65nm,1.9s
DUG Dugway, Tooele 44.93 353 IAmb IAmb 23 11 16.9
comp=Z,51nm,1.2s
DUG Dugway, Tooele 44.93 353 P **P** 23 11 08.4 -0.4
baz=170,SNR=12
W53A Cullowhee 44.97 27 P **P** 23 11 08.2 -0.9
baz=213
YERR Yerington 44.98 345 P **P** 23 11 09.8 +0.6
YERR IAmb IAmb 23 11 19.2
comp=Z,46nm,1.3s
V51A Loudon 44.99 25 P **P** 23 11 08.4 -0.7
baz=211
U49A Red Boiling Sp 45.02 23 P **P** 23 11 08.6 -0.8
baz=209
X55A Gracelyn & Ava 45.11 29 P **P** 23 11 10.0 -0.2
baz=216,SNR=5.7
TKL Tuckaleechee C 45.11 26 IAmb IAmb 23 11 12.9
comp=Z,57nm,1.4s
JSC Jenkinsville 45.14 29 IAmb IAmb 23 11 12.8
comp=Z,35nm,1.4s
PNTR Pine Nut 45.17 345 P **P** 23 11 10.6 -0.2
PNTR IAmb IAmb 23 11 15.4
comp=Z,37nm,0.9s
PNTR IAMs_20 IAMs_20 23 26 42.2
comp=Z,5µm,20.0s
N23A Red Feather La 45.20 0 IAmb IAmb 23 11 26.6
comp=Z,35nm,1.4s
N23A IAMs_20 IAMs_20 23 27 27.0
comp=Z,6µm,20.0s
N23A Red Feather La 45.20 0 P **P** 23 11 10.3 -0.8
baz=180
MCCM Marconi Confer 45.24 341 IAmb IAmb 23 11 20.3
comp=Z,46nm,1.4s
MCCM IAMs_20 IAMs_20 23 24 55.2
comp=Z,5µm,20.0s
RUBR Rubicon Trail 45.28 345 IAMs_20 IAMs_20 23 25 45.2
comp=Z,5µm,21.0s
U50A Jamestown 45.31 24 P **P** 23 11 10.8 -0.9
baz=210
SJG San Juan 45.33 59 P **P** 23 11 10.5 -1.6
SJG pmax pmax
comp=Z,123nm,1.6s
SJG MLR MLR
comp=Z,3µm,21.0s
SJG San Juan 45.33 59 P **P** 23 11 10.5 -1.6
W54A Cherokee Point 45.35 28 P **P** 23 11 11.7 -0.4
baz=214
VCNR Virginia City 45.38 345 IAmb IAmb 23 11 19.7
comp=Z,42nm,1.4s
VCNR IAMs_20 IAMs_20 23 26 58.7
comp=Z,5µm,19.0s
AFDM Forest Hills D 45.40 344 IAmb IAmb 23 11 21.9
comp=Z,58nm,1.8s
X56A White Oak 45.42 29 P **P** 23 11 12.0 -0.6
baz=216
V53A Saluda 45.55 27 IAmb IAmb 23 11 23.2
comp=Z,42nm,1.3s
V53A Saluda 45.55 27 P **P** 23 11 13.3 -0.4
baz=213
PHWY Pilot Hill 45.61 1 IAmb IAmb 23 11 27.0
comp=Z,33nm,1.3s
T49A Edmonton 45.63 23 IAmb IAmb 23 11 19.2
comp=Z,28nm,1.2s
T49A Edmonton 45.63 23 P **P** 23 11 13.7 -0.5
baz=209
Y58A Scranton 45.64 31 IAMs_20 IAMs_20 23 28 34.9
comp=Z,4µm,20.0s
BGU Big Grassy Mou 45.68 353 P **P** 23 11 15.4 +0.7
PAHR Pah Rah Range 45.70 346 IAMs_20 IAMs_20 23 27 10.3
comp=Z,4µm,18.0s
KMSC Kings Mountain 45.80 29 P **P** 23 11 15.4 -0.2
baz=216
GDXM Geysers 45.82 342 IAMs_20 IAMs_20 23 26 00.6
comp=Z,6µm,20.0s
T50A Nancy 45.83 24 P **P** 23 11 15.6 -0.2
baz=210
ELK Elko 45.83 350 IAmb IAmb 23 11 22.3
comp=Z,24nm,1.2s
TBI Tubuai 45.84 242 *e*S **S** 23 18 00.1 +0.3
comp=Z,2µm,27.5s
TBI *e*LQ LQ 23 22 08.0
comp=Z,3µm,30.0s
TBI *e*LR LR 23 24 10.3
comp=Z,8µm,28.5s,baz=71
TBI Tubuai 45.84 242 *e*T T 00 00 04.3
comp=Z,22nm,0.3s
BMN Battle Mountai 45.90 348 IAMs_20 IAMs_20 23 26 36.4
comp=Z,7µm,22.0s
U52A Thorn Hill 45.91 26 P **P** 23 11 15.7 -0.7
baz=212
TZTN Tazewell 45.96 25 P **P** 23 11 16.6 -0.2
baz=212
V54A Nebo 46.03 27 P **P** 23 11 17.2 -0.2
baz=214
BEKR Beckworth 46.10 345 IAmb IAmb 23 11 22.5
comp=Z,70nm,1.9s
BEKR IAMs_20 IAMs_20 23 26 39.8
comp=Z,5µm,19.0s
ORV Oroville 46.12 343 P **P** 23 11 18.7 +0.7
ORV pmax pmax
comp=Z,97nm,1.9s
ORV MLR MLR
comp=Z,8µm,19.0s
ORV Oroville 46.12 343 P **P** 23 11 18.7 +0.7
Y59A Loris 46.12 32 IAMs_20 IAMs_20 23 28 47.6
comp=Z,5µm,20.0s
T51A Gray 46.15 25 P **P** 23 11 18.4 0.0
baz=211
W56A Indian Trail 46.15 29 P **P** 23 11 18.2 -0.1
baz=216
X58A Rowland 46.32 31 P **P** 23 11 19.8 +0.2
baz=218
V55A Taylorsville 46.43 28 IAmb IAmb 23 11 22.7
comp=Z,40nm,1.3s
V55A Taylorsville 46.43 28 P **P** 23 11 20.2 -0.4
baz=215
Y60A Bolivia 46.48 32 IAMs_20 IAMs_20 23 28 57.1
comp=Z,4µm,20.0s
S50A Richmond 46.57 24 P **P** 23 11 21.0 -0.6
baz=210
T52A Hallie 46.68 26 P **P** 23 11 22.0 -0.5
baz=212
W58A Raeford 46.73 31 P **P** 23 11 22.2 -0.8
baz=218
V56A Mocksville 46.74 29 P **P** 23 11 22.5 -0.5
baz=216
R49A Shelbyville 46.80 23 P **P** 23 11 22.9 -0.5
baz=209
GO06 Curarrehue 46.84 143 P **P** 23 11 24.6 +0.7
GO06 IAmb IAmb 23 11 30.1
comp=Z,27nm,1.3s
KCPM Cahto Peak 46.87 341 IAmb IAmb 23 11 33.9
comp=Z,41nm,1.4s
KCPM IAMs_20 IAMs_20 23 26 11.4
comp=Z,5µm,19.0s
O03E Paynes Creek 46.89 343 P **P** 23 11 24.2 0.0
baz=158
K22A Casper 46.96 360 IAmb IAmb 23 11 37.0
comp=Z,34nm,1.1s
K22A IAMs_20 IAMs_20 23 28 39.4
comp=Z,5µm,20.0s
K22A Casper 46.96 360 P **P** 23 11 24.1 -0.7
baz=179
U55A TA2, Sparta 47.04 28 P **P** 23 11 24.6 -0.8
baz=215
O02D Mt. Diablo Mer 47.07 342 P **P** 23 11 25.9 +0.3
baz=157
R50A Paris 47.12 23 P **P** 23 11 26.1 +0.2
baz=210
V57A Coltrane Farms 47.15 29 P **P** 23 11 25.8 -0.4
baz=217
BW06 Boulder Array 47.18 356 IAmb IAmb 23 11 38.8
comp=Z,39nm,1.4s
BW06 Boulder Array 47.18 356 P **P** 23 11 26.0 -0.6
baz=175,SNR=16
PD31 Pinedale Array 47.18 356 IAmb IAmb 23 11 38.8
comp=Z,33nm,1.4s
PDAR Pinedale Array 47.18 356 P **P** 23 11 25.6 -1.0
comp=Z,8.3nm,0.6s,baz=169,slow=7.1,SNR=41
PDAR LR LR 23 28 54.7
comp=Z,4µm,18.4s,baz=186,slow=33
T54A Tazewell 47.26 27 P **P** 23 11 26.8 -0.3
baz=214
AHID Auburn Hatcher 47.29 355 IAmb IAmb 23 11 35.5
comp=Z,15nm,0.8s
AHID IAMs_20 IAMs_20 23 28 41.3
comp=Z,4µm,18.0s
WDC Whiskeytown Da 47.37 343 IAmb IAmb 23 11 56.4
comp=Z,46nm,1.6s
WDC IAMs_20 IAMs_20 23 26 41.6
comp=Z,4µm,20.0s
KMRM Mail Ridge 47.39 342 IAMs_20 IAMs_20 23 26 26.9
comp=Z,5µm,20.0s
V58A Windy Hill, Pi 47.40 30 P **P** 23 11 28.3 +0.1
baz=218
HDIL Hopedale 47.43 17 P **P** 23 11 28.0 -0.2
baz=203
R51A Hillsboro 47.44 24 P **P** 23 11 28.3 -0.1
baz=211
S53A Williamson 47.53 26 P **P** 23 11 28.9 -0.3
baz=213
Q49A Aurora 47.53 22 P **P** 23 11 29.0 0.0
baz=209
W60A Pink Hill 47.55 32 P **P** 23 11 29.0 -0.2
baz=220
CNNC Cliffs of the 47.60 32 IAMs_20 IAMs_20 23 29 41.7
comp=Z,4µm,20.0s
T55A Pulaski 47.66 27 P **P** 23 11 30.3 +0.1
baz=215
P48A Milroy 47.73 22 P **P** 23 11 30.0 -0.6
baz=208
Q50A Georgetown 47.74 23 P **P** 23 11 30.4 -0.4
baz=210
N02D Trinity Center 47.78 343 P **P** 23 11 30.7 -0.4
baz=157
U57A Blanch 47.80 29 P **P** 23 11 30.5 -0.7
baz=217
V59A Middlesex 47.82 31 P **P** 23 11 31.1 -0.3
baz=219
REDW Red Top Meadow 47.86 355 P **P** 23 11 31.5 -0.4
REDW IAmb IAmb 23 11 38.4
comp=Z,43nm,1.4s
T56A Rocky Mt 47.94 28 P **P** 23 11 32.0 -0.4
baz=216
SNOW Snow King Moun 47.96 355 IAmb IAmb 23 11 36.0
comp=Z,15nm,0.9s
SNOW IAMs_20 IAMs_20 23 29 14.8
comp=Z,4µm,18.0s
SFIN Lafayette 47.96 20 P **P** 23 11 31.9 -0.5
baz=206
SKI Saint Kitts 47.97 62 IAMs_20 IAMs_20 23 32 13.0
comp=Z,3µm,18.0s
KHMM Horse Mountain 47.99 342 IAMs_20 IAMs_20 23 27 04.3
comp=Z,5µm,20.0s
MOD Modoc Plateau 48.00 346 IAmb IAmb 23 11 50.0
comp=Z,28nm,1.0s
MOD IAMs_20 IAMs_20 23 28 32.1
comp=Z,3µm,18.0s
TPAW Teton Pass 48.00 355 IAmb IAmb 23 11 35.8
comp=Z,18nm,0.9s
TPAW IAMs_20 IAMs_20 23 29 15.0
comp=Z,5µm,18.0s
JCC Jacoby Creek, 48.04 342 IAMs_20 IAMs_20 23 26 45.4
comp=Z,4µm,22.0s
PLCA Paso Flores 48.11 144 *e*P **P** 23 11 33.3 -0.4
PLCA Paso Flores 48.11 144 P **P** 23 11 32.4 -1.4
comp=Z,3.3nm,0.8s,baz=329,slow=11,SNR=5.1
PLCA LR LR 23 27 01.2
comp=Z,8µm,18.9s,baz=345,slow=30
PLCA Paso Flores 48.11 144 *e*P **P** 23 11 33.3 -0.4
PLCA Paso Flores 48.11 144 IAmb IAmb 23 11 42.0
comp=Z,49nm,1.5s
WVOR Wild Horse Val 48.12 347 IAmb IAmb 23 11 43.3
comp=Z,44nm,1.5s
WVOR IAMs_20 IAMs_20 23 27 32.1
comp=Z,4µm,22.0s
M02C Callahan 48.21 343 P **P** 23 11 34.2 -0.2
baz=157,SNR=8.2
MOOW Moose Ponds 48.24 355 IAmb IAmb 23 11 47.0
comp=Z,35nm,1.4s
MOOW IAMs_20 IAMs_20 23 29 23.3
comp=Z,4µm,18.0s
M04C Macdoel 48.28 344 P **P** 23 11 34.9 -0.2
baz=159,SNR=14
T57A Hurt 48.29 29 P **P** 23 11 34.7 -0.3
baz=217
V60A Jim Taylor Roa 48.33 32 IAMs_20 IAMs_20 23 30 05.0
comp=Z,3µm,19.0s
S55A Lewisburg 48.33 27 P **P** 23 11 34.9 -0.5
baz=215
R54A Victor 48.44 27 P **P** 23 11 35.9 -0.3
baz=214
RSSD Black Hills 48.46 2 P **P** 23 11 36.1 -0.4
RSSD pmax pmax
comp=Z,35nm,1.2s
RSSD MLR MLR
comp=Z,2µm,21.0s
RSSD Black Hills 48.46 2 P **P** 23 11 36.1 -0.4
RSSD IAmb IAmb 23 11 48.7
comp=Z,35nm,1.2s
RSSD Black Hills 48.46 2 P **P** 23 11 35.8 -0.7
baz=183
P50A Jamestown 48.48 23 P **P** 23 11 35.7 -0.7
baz=210
YBH Yreka Blue Hor 48.48 343 IAmb IAmb 23 12 36.1
comp=Z,64nm,1.9s
YBH IAMs_20 IAMs_20 23 27 11.0
comp=Z,4µm,21.0s
U59A Littleton 48.51 31 IAMs_20 IAMs_20 23 30 22.8
comp=Z,4µm,20.0s
FLWY Flagg Ranch 48.57 356 IAMs_20 IAMs_20 23 29 45.0
comp=Z,4µm,18.0s
V61A Roper 48.71 32 IAMs_20 IAMs_20 23 30 34.1
comp=Z,4µm,20.0s
Q53A Leroy 48.77 26 P **P** 23 11 38.7 0.0
baz=213
O49A Covington 48.77 22 P **P** 23 11 38.6 0.0
baz=209
ECSD EROS Data Cent 48.79 9 P **P** 23 11 37.6 -1.1
ECSD IAmb IAmb 23 11 43.9
comp=Z,45nm,1.6s
ECSD EROS Data Cent 48.79 9 P **P** 23 11 38.5 -0.3
baz=192
L04D Klamath Falls 48.81 344 P **P** 23 11 38.9 -0.3
baz=158
H17A Grant Village 48.87 356 IAmb IAmb 23 11 55.4
comp=Z,38nm,1.3s
H17A Grant Village 48.87 356 P **P** 23 11 39.2 -0.4
baz=174
N47A Urbana 48.89 21 P **P** 23 11 39.4 -0.2
baz=207
R55A Marlinton 48.92 27 P **P** 23 11 39.8 -0.1
baz=215
O50A Cable 49.01 23 P **P** 23 11 40.6 +0.1
baz=210
LKWY Lake 49.02 356 IAmb IAmb 23 11 55.3
comp=Z,28nm,1.3s
LKWY IAMs_20 IAMs_20 23 29 45.1
comp=Z,5µm,19.0s
K04D Chiloquin, OR 49.05 345 P **P** 23 11 40.5 -0.4
baz=159
N48A Decatur 49.10 21 P **P** 23 11 40.5 -0.7
baz=208
T59A Double "B" Far 49.11 30 IAMs_20 IAMs_20 23 30 51.7
comp=Z,4µm,20.0s
T59A Double "B" Far 49.11 30 P **P** 23 11 40.8 -0.5
baz=219
L02E Cave Junction 49.13 343 P **P** 23 11 41.7 +0.3
baz=157
SUSD Miller 49.16 7 IAMs_20 IAMs_20 23 31 03.9
comp=Z,5µm,19.0s
P52A Corning 49.16 24 P **P** 23 11 41.9 +0.2
baz=212
Q54A Coxs Mills 49.17 26 P **P** 23 11 42.1 +0.3
baz=214
U61A Possum Corner 49.19 32 IAMs_20 IAMs_20 23 30 58.8
comp=Z,4µm,20.0s
ACSO Alum Creek Sta 49.33 23 P **P** 23 11 42.6 -0.3
baz=211
JFWS Jewell Farm 49.35 15 P **P** 23 11 42.9 -0.1
baz=201
R56A Bull Pasture M 49.35 28 P **P** 23 11 42.8 -0.5
baz=216
P53A Whipple 49.35 25 IAmb IAmb 23 12 13.2
comp=Z,43nm,1.3s
P53A Whipple 49.35 25 P **P** 23 11 42.8 -0.3
baz=213
HUMO Hull Mountain 49.36 344 IAmb IAmb 23 12 09.0
comp=Z,47nm,1.7s
S58A Poland Farm, P 49.36 29 P **P** 23 11 43.1 -0.1
S58A IAmb IAmb 23 12 36.3
comp=Z,52nm,1.5s
S58A Poland Farm, P 49.36 29 P **P** 23 11 42.9 -0.3
baz=218
KBO Bosley Butte 49.37 342 IAMs_20 IAMs_20 23 27 47.6
comp=Z,4µm,22.0s
RLMT Red Lodge 49.51 357 IAmb IAmb 23 11 56.6
comp=Z,24nm,1.1s
RLMT IAMs_20 IAMs_20 23 30 18.0
comp=Z,4µm,18.0s
RLMT Red Lodge 49.51 357 P **P** 23 11 44.4 -0.1
baz=176
J05D Fort Rock, OR 49.53 345 P **P** 23 11 44.1 -0.5
baz=160,SNR=16
K02D Willamette Mer 49.64 343 P **P** 23 11 45.0 -0.3
baz=157,SNR=6.5
T60A Surry 49.65 31 IAMs_20 IAMs_20 23 30 57.1
comp=Z,4µm,20.0s
R57A Stanardsville 49.67 28 P **P** 23 11 45.8 +0.2
baz=217
O52A Adamsville 49.69 24 P **P** 23 11 46.1 +0.4
baz=212
R58B Mineral 49.72 29 P **P** 23 11 46.1 +0.2
baz=218
N50A Nevada 49.73 23 P **P** 23 11 46.0 0.0
baz=210
P54A Burton 49.84 26 P **P** 23 11 47.1 +0.3
baz=214
S59A Mechanicsville 49.85 30 P **P** 23 11 47.3 +0.4
baz=219
R58A Rapidan 49.92 29 P **P** 23 11 47.9 +0.4
baz=218
PINE Pine Mountain 49.94 346 P **P** 23 11 48.1 +0.3
PINE IAmb IAmb 23 11 55.8
comp=Z,33nm,1.1s
Q56A Snyder Ridge, 49.96 27 P **P** 23 11 48.3 +0.5
baz=216
KEBM Edson Butte 50.00 342 IAMs_20 IAMs_20 23 28 18.2
comp=Z,4µm,20.0s
DLMT Dillon 50.01 354 IAmb IAmb 23 12 00.8
comp=Z,32nm,1.2s
DLMT IAMs_20 IAMs_20 23 29 47.2
comp=Z,5µm,21.0s
L47A Sherwood 50.03 20 P **P** 23 11 48.7 +0.4
baz=208
CLDB Colider 50.16 100 *e*P **P** 23 11 48.4 -1.3
MCWV Mont Chateau 50.16 26 P **P** 23 11 49.4 +0.1
baz=215
BMO Blue Mountains 50.18 350 IAMs_20 IAMs_20 23 29 45.7
comp=Z,6µm,20.0s
L48A N Adams 50.27 21 P **P** 23 11 50.0 -0.1
baz=208
R59A King George, V 50.28 30 P **P** 23 11 50.2 +0.1
baz=219
Q57A Strasburg 50.31 28 P **P** 23 11 50.6 +0.1
baz=217
I03D Drain, OR 50.47 344 P **P** 23 11 52.2 +0.7
baz=158
I05D Terrebonne, OR 50.55 346 P **P** 23 11 52.3 +0.1
baz=160
Q58A Fox Den Farm, 50.58 29 P **P** 23 11 52.6 +0.1
baz=218
L49A Milan 50.65 21 P **P** 23 11 52.9 -0.1
baz=209
N53A Lisbon 50.69 25 P **P** 23 11 53.2 -0.1
baz=213
SALV Santo Antonio 50.71 107 *e*P **P** 23 11 52.4 -1.4
O55A Ligonier 50.85 26 P **P** 23 11 54.6 +0.1
baz=215
P57A Homestead Farm 50.86 28 P **P** 23 11 54.2 -0.3
baz=217
G08A Pilot Rock 50.92 348 IAmb IAmb 23 12 04.4
comp=Z,55nm,1.5s
G08A IAMs_20 IAMs_20 23 29 36.2
comp=Z,5µm,21.0s
SPMN Marine on St. 50.93 12 IAmb IAmb 23 12 06.2
comp=Z,34nm,1.4s
SPMN IAMs_20 IAMs_20 23 32 30.6
comp=Z,3µm,18.0s
SPMN Marine on St. 50.93 12 P **P** 23 11 55.3 +0.3
baz=197
LAO LASA Array 50.99 360 P **P** 23 11 56.2 +0.6
LAO LASA Array 50.99 360 P **P** 23 11 55.7 +0.1
baz=180
Q59A Harwood 51.02 30 P **P** 23 11 55.6 -0.2
baz=219
N54A Moraine State 51.17 25 P **P** 23 11 56.8 -0.2
baz=214
P58A Pank, Wackersv 51.20 29 P **P** 23 11 57.0 -0.1
baz=218
O56A Blue Knob Stat 51.23 27 P **P** 23 11 56.9 -0.5
baz=216
J47A Sunmer 51.28 20 P **P** 23 11 57.3 -0.3
baz=208
COR Corvallis 51.28 344 IAMs_20 IAMs_20 23 29 04.1
comp=Z,5µm,22.0s
M53A WI Miller and 51.28 24 P **P** 23 11 57.6 -0.2
baz=213
CPUP Villa Florida 51.34 120 P **P** 23 11 57.1 -1.3
comp=Z,7.6nm,0.8s,baz=278,slow=8.0,SNR=9.1
CPUP LR LR 23 30 13.8
comp=Z,3µm,20.8s,baz=282,slow=32
CPUP Villa Florida 51.34 120 *e*P **P** 23 11 57.3 -1.1
CPUP Villa Florida 51.34 120 P **P** 23 11 57.2 -1.3
CPUP IAmb IAmb 23 12 04.9
comp=Z,23nm,1.1s
G05D Wamic, OR 51.39 346 P **P** 23 11 58.8 +0.3
baz=160
AQDB Aquidauana 51.42 113 *e*P **P** 23 11 59.9 +0.8
N55A Marion Center 51.46 26 P **P** 23 11 59.0 -0.1
baz=215
Q60A Greensboro 51.53 30 IAMs_20 IAMs_20 23 32 15.8
comp=Z,4µm,20.0s
G40A Rib Lake 51.56 14 IAmb IAmb 23 12 07.0
comp=Z,54nm,1.4s
MSO Missoula 51.61 353 P **P** 23 11 59.6 -0.6
MSO IAmb IAmb 23 12 12.3
comp=Z,58nm,1.9s
F07A Phinny Hill Vi 51.70 348 IAmb IAmb 23 12 26.6
comp=Z,40nm,1.2s
PP1B Ponte de Pedra 51.71 109 *e*P **P** 23 12 02.5 +1.1
M54A Oil Creek Stat 51.76 25 P **P** 23 12 01.2 -0.2
baz=214
SSPA Standing Stone 51.83 27 P **P** 23 12 01.4 -0.5
baz=217
N56A West Decatur 51.88 27 P **P** 23 12 01.8 -0.4
baz=216
E09A Wood Farm, Sta 51.94 349 IAmb IAmb 23 12 35.1
comp=Z,41nm,1.6s
E09A IAMs_20 IAMs_20 23 30 10.2
comp=Z,5µm,21.0s
N57A Milroy 52.08 27 P **P** 23 12 02.9 -0.8
baz=217
E08A Dider Farm, El 52.09 349 IAmb IAmb 23 12 21.8
comp=Z,38nm,1.5s
HAWA Hanford 52.09 348 IAmb IAmb 23 12 17.7
comp=Z,44nm,1.3s
HAWA IAMs_20 IAMs_20 23 30 44.2
comp=Z,3µm,18.0s
M55A Ridgway 52.12 26 P **P** 23 12 03.7 -0.3
baz=215
P60A Greenville 52.25 30 IAMs_20 IAMs_20 23 32 40.0

comp=Z,4µm,20.0s
F04A Amboy 52.31 346 IAMs_20 IAMs_20 23 31 04.1
comp=Z,3µm,18.0s
E07A Sunnyside 52.31 348 IAmb IAmb 23 12 18.8
comp=Z,52nm,1.5s
O59A Robesonia 52.37 29 P P 23 12 05.5 -0.4
baz=219
M56A Emporium 52.38 26 P P 23 12 05.4 -0.6
baz=216
EGMT Eagleton 52.43 357 P P 23 12 06.8 +0.6
EGMT IAmb IAmb 23 12 18.4
comp=Z,53nm,1.5s
EGMT IAMs_20 IAMs_20 23 32 11.2
comp=Z,4µm,18.0s
EGMT Eagleton 52.43 357 P P 23 12 05.9 -0.4
baz=175
MDND Maddock 52.46 5 IAMs_20 IAMs_20 23 32 45.1
comp=Z,4µm,19.0s
MDND Maddock 52.46 5 P P 23 12 06.1 -0.3
baz=188
E38A The Farm, Brul 52.51 13 IAmb IAmb 23 12 27.9
comp=Z,33nm,1.4s
JTMT Jette 52.55 353 IAmb IAmb 23 12 14.3
comp=Z,57nm,1.6s
JTMT IAMs_20 IAMs_20 23 31 13.5
comp=Z,4µm,20.0s
P61A Hammonton 52.57 30 IAMs_20 IAMs_20 23 32 56.3
comp=Z,4µm,20.0s
I49A Point Hope 52.59 21 IAMs_20 IAMs_20 23 34 11.6
comp=Z,3µm,19.0s
F03A Seaside 52.60 345 IAMs_20 IAMs_20 23 29 59.6
comp=Z,4µm,21.0s
D08A Wollman Farm, 52.61 349 IAMs_20 IAMs_20 23 30 39.9
comp=Z,4µm,21.0s
M57A Sunshine Farm, 52.74 27 P P 23 12 08.3 -0.3
baz=217
O60A Telford 52.76 29 P P 23 12 08.2 -0.5
baz=220
DGMT Dagmar 52.80 2 IAMs_20 IAMs_20 23 32 10.1
comp=Z,4µm,21.0s
DGMT Dagmar 52.80 2 P P 23 12 07.9 -1.1
baz=182,SNR=9.3
E04D Cinebar 52.93 346 P P 23 12 09.8 0.0
baz=159
LON Longmire 52.93 346 IAmb IAmb 23 12 30.5
comp=Z,30nm,1.2s
LTY Liberty 53.15 348 IAmb IAmb 23 12 36.7
comp=Z,32nm,1.3s
LTY IAMs_20 IAMs_20 23 30 42.2
comp=Z,5µm,22.0s
L56A Greenwood 53.19 26 P P 23 12 11.4 -0.5
baz=216
C09A Chrisman Ranch 53.20 350 IAmb IAmb 23 12 25.5
comp=Z,34nm,1.1s
D05A Enumclaw 53.38 347 IAMs_20 IAMs_20 23 31 11.3
comp=Z,5µm,20.0s
L57A Andrews Acres 53.39 27 P P 23 12 13.3 -0.1
baz=217
K55A Perry 53.44 26 P P 23 12 14.0 +0.2
baz=216
NEW Newport 53.46 351 P P 23 12 14.0 +0.2
NEW pmax pmax
comp=Z,33nm,1.3s
NEW MLR MLR
comp=Z,5µm,18.0s
NEW Newport 53.46 351 P P 23 12 13.9 +0.2
NEW IAmb IAmb 23 12 20.4
comp=Z,33nm,1.2s
NEW Newport 53.46 351 P P 23 12 13.4 -0.5
baz=166,SNR=12
M59A Waymart 53.69 28 P P 23 12 14.4 -1.2
baz=219
ODNJ Oqdensburg 53.73 29 IAMs_20 IAMs_20 23 33 45.1
comp=Z,3µm,21.0s
K56A Middlesex 53.74 26 P P 23 12 15.6 -0.4
baz=216
EYMN Ely 53.80 12 P P 23 12 16.1 -0.1
baz=198
L58A Harry Jones Me 53.88 28 P P 23 12 16.7 -0.3
baz=218
M60A Port Jervis 53.91 29 P P 23 12 17.3 +0.1
baz=220
B08A Colville Reser 53.93 349 IAmb IAmb 23 12 30.2
comp=Z,68nm,1.9s
B08A IAMs_20 IAMs_20 23 32 03.0
comp=Z,4µm,19.0s
BINY Binghamton 53.94 27 P P 23 12 17.6 +0.1
baz=218
D03D Eldon 53.97 346 P P 23 12 17.6 +0.1
baz=159
NLWA Neilton Lookou 54.03 345 IAMs_20 IAMs_20 23 31 49.7
comp=Z,4µm,18.0s
K57A Scipio Center 54.12 27 P P 23 12 18.7 0.0
baz=217
POHA Pohakuloa 54.28 298 IAMs_20 IAMs_20 23 30 19.7
comp=Z,4µm,20.0s
M61A Granite Spring 54.32 30 P P 23 12 20.4 +0.2
baz=221
ARAG Araguaiana, MT 54.40 106 eP P 23 12 21.0 -0.2
B05A Bryant 54.42 347 P P 23 12 21.3 +0.5
baz=160
B06A Marblemount 54.52 347 IAMs_20 IAMs_20 23 31 45.5
comp=Z,4µm,20.0s
HPAH Hawaii Prepara 54.52 298 IAMs_20 IAMs_20 23 30 36.1
comp=Z,4µm,19.0s
KHLU Kahalu`u 54.54 298 IAMs_20 IAMs_20 23 29 20.5
comp=Z,4µm,20.0s
L60A Shokan 54.61 29 P P 23 12 22.7 +0.4
baz=220
TRCB Terra Rica 54.66 115 eP P 23 12 24.0 +0.9
N63A Mattituck 54.70 31 P P 23 12 23.5 +0.6
baz=222
H53A Bobcaygeon 54.74 24 P P 23 12 23.5 +0.3
baz=214
I55A Frankford 54.82 25 P P 23 12 24.1 +0.4
baz=215
K59A Cooperstown 54.92 28 P P 23 12 24.7 +0.1
baz=219
J58A Remsen 55.17 27 P P 23 12 26.6 +0.3
baz=218
G53A Haliburton 55.18 23 P P 23 12 26.9 +0.6
baz=214
K60A Five Rivers En 55.25 29 P P 23 12 27.0 +0.1
baz=220
M63A Gales Ferry 55.25 31 P P 23 12 27.4 +0.5
baz=223
ULM Lac du Bonnet 55.26 8 P P 23 12 25.2 -1.7
comp=Z,17nm,1.1s,baz=188,slow=8.0,SNR=15
ULM LR LR 23 34 25.5
comp=Z,4µm,19.9s,baz=192,slow=34
ULM Lac du Bonnet 55.26 8 IAmb IAmb 23 12 30.9
comp=Z,45nm,1.3s
ULM IAMs_20 IAMs_20 23 34 04.3
comp=Z,4µm,20.0s
F51A Arnstein 55.36 22 P P 23 12 27.7 +0.1
baz=212
I57A Carthage 55.46 26 P P 23 12 28.8 +0.4
baz=218
PTGB Pitanga 55.56 117 eP P 23 12 29.0 -0.6
K61A Williamstown 55.59 29 P P 23 12 29.8 +0.5
baz=221
J59A Piesco 55.61 27 P P 23 12 29.9 +0.4
baz=219
G54A Lake Saint Pet 55.62 24 P P 23 12 29.6 +0.1
baz=214
PCMB Pacaembu 55.70 113 eP P 23 12 29.4 -1.2
H56A Elgin 55.72 25 P P 23 12 30.6 +0.4
baz=217
CPSB Cacapava Do Su 55.78 124 eP P 23 12 31.0 -0.1
J60A Lant Hill Farm 55.95 28 P P 23 12 32.1 +0.2
baz=220
H57A Richville 55.99 26 P P 23 12 32.5 +0.3
baz=218
M65A Busby, Falmout 56.09 32 IAMs_20 IAMs_20 23 36 15.5
comp=Z,4µm,18.0s
ALGO Algonquin Park 56.09 23 P P 23 12 32.0 -0.9
baz=214
E52A Mattawa 56.13 23 P P 23 12 33.1 0.0
baz=214
ITRB Iturama 56.25 111 eP P 23 12 32.8 -1.8
I60A Shoreham 56.47 28 P P 23 12 36.0 +0.5
baz=220
H58A Gabriels 56.50 27 P P 23 12 36.0 +0.1
baz=219
LLLB Lillooet 56.59 348 IAmb IAmb 23 12 44.9
comp=Z,34nm,1.6s
H59A Cadyville 56.90 27 P P 23 12 38.8 +0.2
baz=220

H60A Morristown 57.29 28 P P 23 12 42.0 +0.5
baz=221
D54A Lac Fusel, La 57.62 23 P P 23 12 43.7 -0.1
baz=215
CNLB Canela 57.66 122 eP P 23 12 47.0 +2.5
D55A Sainte-Anne-du 57.99 24 P P 23 12 45.6 -0.7
baz=217
BDFB Brasilia 58.04 106 P P 23 12 47.7 +0.4
comp=Z,6.0nm,0.9s,baz=274,slow=12,SNR=4.6
BDFB Brasilia 58.04 106 P P 23 12 47.8 +0.4
BDFB IAMs_20 IAMs_20 23 35 09.8
comp=Z,3µm,19.0s
IPMB Ipameri, GO 58.06 108 eP P 23 12 47.1 -0.3
BB19B Bebedouro 58.14 112 eP P 23 12 48.1 +0.1
SMTB Santa Maria do 58.19 98 eP P 23 12 49.1 +0.7
D57A Chemin Vers le 58.65 25 P P 23 12 50.6 -0.4
baz=218
F60A Warwick 58.70 27 P P 23 12 50.8 -0.4
baz=221
LSQQ Lebel-sur-Quev 59.06 22 P P 23 12 53.0 -0.8
baz=214
FFC Flin Flon 59.14 3ceP P 23 12 54.7 +0.5
FFC pmax pmax
comp=Z,55nm,1.7s
FFC Flin Flon 59.14 3 P P 23 12 53.6 -0.6
FFC IAmb IAmb 23 13 05.3
comp=Z,32nm,1.4s
D58A Chemin du LacG 59.15 26 P P 23 12 53.6 -0.8
baz=219
RCLB Rio Claro- Sao 59.25 113 eP P 23 12 56.4 +0.8
MATQ Matagami 59.41 21 P P 23 12 55.6 -0.5
baz=213
LATQ La Tuque 59.41 26 P P 23 12 56.7 +0.5
LATQ La Tuque 59.41 26 P P 23 12 55.9 -0.3
baz=219
SPB Sao Paulo 59.51 115 eP P 23 12 58.2 +0.8
SPB Sao Paulo 59.51 115 IAMs_20 IAMs_20 23 36 16.9
comp=Z,4µm,20.0s
PMNB Patos De Minas 59.80 109 eP P 23 13 00.3 +0.8
ESAR Angra dos Reis 62.16 114 eP P 23 13 16.3 +1.0
FCC Fort Churchill 63.81 7 P P 23 13 24.6 -1.0
FCC pmax pmax
comp=Z,27nm,1.0s
FCC Fort Churchill 63.81 7 P P 23 13 24.6 -1.0
NBPS Pedro II - PI 64.40 93 eP P 23 13 30.9 +0.4
SJMB Sao Joao De Ma 64.77 108 eP P 23 13 33.8 +1.0
BSFB Barra de Sao F 65.10 109 eP P 23 13 36.1 +1.2
NBPN Ponto Novo - B 65.47 100 eP P 23 13 38.7 +1.3
NBMO Morrinhos-CE 65.86 92 eP P 23 13 40.7 +0.8
NBPB Pedra_Branca-C 66.20 94 eP P 23 13 43.2 +1.0
NBIT Itapeh - BA 66.27 104 eP P 23 13 43.8 +1.2
YKA Yellowknife Ar 67.15 356 P P 23 13 45.4 -1.8
comp=Z,9.0nm,0.8s,baz=163,slow=6.4,SNR=50
SCHQ Schefferville 67.49 23 P P 23 13 47.7 -1.9
comp=Z,6.6nm,0.9s,baz=214,slow=6.7,SNR=6.5
SKAG Skagway 67.87 344 IAmb IAmb 23 14 12.6
comp=Z,18nm,1.2s
DHAK Deception Hill 68.37 343 IAMs_20 IAMs_20 23 36 24.3
comp=Z,3µm,21.0s
WHY Whitehorse 68.78 345 IAMs_20 IAMs_20 23 42 33.9
comp=Z,2µm,18.0s
PCA Pinnacle 69.80 343 IAMs_20 IAMs_20 23 37 16.0
comp=Z,3µm,21.0s
RCBR Riachuelo 69.84 95 IAMs_20 IAMs_20 23 42 38.9
comp=Z,3µm,21.0s
CTGM Chitina Glacie 70.82 343 IAMs_20 IAMs_20 23 37 17.9
comp=Z,3µm,22.0s
TGL Tana Glacier 71.11 342 IAMs_20 IAMs_20 23 37 18.6
comp=Z,2µm,21.0s
BALM Baldy 71.18 342 IAMs_20 IAMs_20 23 37 24.4
comp=Z,3µm,22.0s
CRQM Cirque 71.20 342 IAMs_20 IAMs_20 23 38 53.7
comp=Z,2µm,19.0s
HMT Hamilton 71.24 341 IAMs_20 IAMs_20 23 38 12.9
comp=Z,3µm,19.0s
MID Middleton Isla 71.25 340 IAMs_20 IAMs_20 23 36 53.7
comp=Z,2µm,22.0s
MCARA McCarthy VSAT 71.65 342 IAMs_20 IAMs_20 23 38 38.1
comp=Z,2µm,20.0s
GLB Gilahina Butte 71.94 342 P P 23 14 17.4 +0.5
GLB IAmb IAmb 23 14 37.4
comp=Z,28nm,1.2s
GLB IAMs_20 IAMs_20 23 43 50.7
comp=Z,2µm,19.0s
KDAK Kodiak Island 72.47 336 LR LR 23 38 13.8
comp=Z,6µm,20.6s,baz=137,slow=29
DAWY Dawson 72.79 345 IAmb IAmb 23 14 30.1
comp=Z,30nm,1.2s
DAWY IAMs_20 IAMs_20 23 39 42.9
comp=Z,3µm,21.0s
SEW Seward 72.84 339 IAMs_20 IAMs_20 23 37 48.8
comp=Z,3µm,22.0s
MENT Mentasta 73.07 343 IAMs_20 IAMs_20 23 40 26.0
comp=Z,2µm,20.0s
SCM Sheep Creek Mo 73.35 341 IAMs_20 IAMs_20 23 39 37.0
comp=Z,2µm,19.0s
KNK Knik Glacier 73.42 340 IAmb IAmb 23 14 36.3
comp=Z,26nm,1.0s
KNK IAMs_20 IAMs_20 23 38 35.0
comp=Z,2µm,22.0s
PAX Paxson 73.61 342 IAmb IAmb 23 15 45.9
comp=Z,15nm,0.8s
RC01 Rabbit Creek A 73.63 340 IAMs_20 IAMs_20 23 38 38.6
comp=Z,2µm,20.0s
SML Sawmill 73.66 341 IAmb IAmb 23 14 35.3
comp=Z,38nm,1.2s
SML IAMs_20 IAMs_20 23 38 45.3
comp=Z,2µm,21.0s
DOT Dot Lake 73.72 343 IAMs_20 IAMs_20 23 39 22.5
comp=Z,3µm,22.0s
PMR Palmer 73.78 340 IAmb IAmb 23 14 46.0
comp=Z,22nm,1.0s
PMR IAMs_20 IAMs_20 23 38 45.3
comp=Z,2µm,21.0s
EGAK Eagle 73.82 345 IAmb IAmb 23 14 38.7
comp=Z,20nm,0.9s
EGAK IAMs_20 IAMs_20 23 40 11.1
comp=Z,2µm,20.0s
GHO Glory Hole Cre 73.83 340 IAMs_20 IAMs_20 23 38 49.8
comp=Z,2µm,21.0s
SCRK Sand Creek 73.95 344 P P 23 14 28.7 -0.2
SCRK IAMs_20 IAMs_20 23 39 43.6
comp=Z,3µm,21.0s
RIDG Independent Ri 74.01 343 IAmb IAmb 23 14 39.7
comp=Z,25nm,1.0s
RIDG IAMs_20 IAMs_20 23 40 54.3
comp=Z,3µm,19.0s
EPYK Eagle Plains 74.10 348 IAmb IAmb 23 14 40.2
comp=Z,33nm,0.9s
SUA Susitna One 74.24 339 IAMs_20 IAMs_20 23 38 56.7
comp=Z,2µm,21.0s
DHY Denali Highway 74.27 342 IAmb IAmb 23 14 41.0
comp=Z,25nm,1.2s
DHY IAMs_20 IAMs_20 23 40 11.3
comp=Z,2µm,20.0s
SKT Skwentna 74.87 340 IAMs_20 IAMs_20 23 39 30.1
comp=Z,2µm,21.0s
RND Reindeer 74.98 342 P P 23 14 34.2 -0.6
RND pmax pmax
comp=Z,48nm,1.1s
RND MLR MLR
comp=Z,3µm,19.0s
RND Reindeer 74.98 342 P P 23 14 34.2 -0.6
HDA Harding Lake 75.13 343 P P 23 14 35.4 -0.2
baz=138
INK Inuvik 75.16 350 P P 23 14 34.5 -1.1
comp=Z,5.6nm,0.7s,baz=128,slow=5.3,SNR=19
INK LR LR 23 45 18.9
comp=Z,4µm,18.4s,baz=146,slow=34
MCK McKinley 75.23 342 IAmb IAmb 23 14 46.6
comp=Z,28nm,1.1s
ILAR Eielson Array 75.38 343 P P 23 14 35.4 -1.6
comp=Z,3.6nm,0.7s,baz=158,slow=5.1,SNR=40
TRF Thorofare Moun 75.47 341 IAmb IAmb 23 14 49.0
comp=Z,16nm,0.9s
TRF IAMs_20 IAMs_20 23 39 57.9
comp=Z,3µm,22.0s
WRH Wood River Hil 75.51 343 P P 23 14 36.6 -1.1
WRH IAmb IAmb 23 14 48.2
comp=Z,31nm,1.0s
WRH IAMs_20 IAMs_20 23 40 59.0
comp=Z,2µm,20.0s
CCB Clear Creek Bu 75.55 343 IAMs_20 IAMs_20 23 41 02.1
comp=Z,2µm,20.0s
PRP Porcupine Dome 75.56 344 IAmb IAmb 23 14 48.8
comp=Z,28nm,1.1s
PRP IAMs_20 IAMs_20 23 41 34.0
comp=Z,3µm,18.0s
PPLA Purkeypile 75.72 340 IAMs_20 IAMs_20 23 39 57.6
comp=Z,2µm,21.0s
COLA College 75.73 343 *i* P P 23 14 39.5 +0.6
COLA pmax pmax
comp=Z,19nm,1.9s
KTH Kantishna Hill 75.74 341 P P 23 14 38.0 -1.2
KTH IAMs_20 IAMs_20 23 40 03.2
comp=Z,2µm,22.0s
POKR Poker Plat Res 75.79 343 P P 23 14 38.6 -0.7
baz=137
MXZ Matakaoa Point 75.87 233 IAMs_20 IAMs_20 23 39 44.6
comp=Z,3µm,21.0s
NEA Nenana 75.88 342 IAMs_20 IAMs_20 23 42 17.1
comp=Z,2µm,18.0s
MDM Murphy Dome 75.91 343 IAmb IAmb 23 14 50.4
comp=Z,18nm,1.1s
BPAW Bear Paw Mtn. 76.14 341 IAMs_20 IAMs_20 23 41 16.7
comp=Z,2µm,19.0s
FYU Fort Yukon 76.28 345 IAMs_20 IAMs_20 23 42 22.0
comp=Z,2µm,19.0s
MLY Manley 76.71 342 IAMs_20 IAMs_20 23 41 57.7
comp=Z,2µm,19.0s
URZ Urewera 76.87 232 P P 23 14 43.6 -2.5
comp=Z,13nm,1.1s,baz=359,slow=11,SNR=3.1
URZ Urewera 76.87 232 IAmb IAmb 23 14 44.9
comp=Z,59nm,1.5s
URZ IAMs_20 IAMs_20 23 39 42.1
comp=Z,2µm,22.0s
BFZ Birch Farm 77.73 229 IAMs_20 IAMs_20 23 42 29.8
comp=Z,2µm,21.0s
HIZ Hauiti 78.66 232 IAMs_20 IAMs_20 23 40 47.3
comp=Z,3µm,22.0s
TOLK Toolik Lake Re 78.94 345 IAMs_20 IAMs_20 23 43 10.3
comp=Z,2µm,21.0s
TOLK Toolik Lake Re 78.94 345 P P 23 14 56.5 -0.5
baz=136
SNZO South Karori 78.94 229 IAMs_20 IAMs_20 23 40 39.7
comp=Z,2µm,22.0s
RES Resolute Bay 79.38 3 P P 23 14 59.0 -0.2
RES pmax pmax
comp=Z,10.0nm,0.5s
RES Resolute Bay 79.38 3 P P 23 14 59.0 -0.2
RES IAmb IAmb 23 17 42.1
comp=Z,10nm,0.5s
OUZ Omahuta 79.52 235 IAMs_20 IAMs_20 23 41 51.4
comp=Z,2µm,21.0s
NNZ Nelson 79.93 229 IAMs_20 IAMs_20 23 41 48.0
comp=Z,2µm,20.0s
THZ Tophouse 80.31 229 IAMs_20 IAMs_20 23 43 07.1
comp=Z,2µm,20.0s
QRZ Quartz Range 80.56 230 IAMs_20 IAMs_20 23 43 15.6
comp=Z,2µm,19.0s
ANM Nome 81.43 338 IAMs_20 IAMs_20 23 43 31.9
comp=Z,3µm,22.0s
RDOG Red Dog Mine 82.40 341 P P 23 15 16.0 +0.6
RDOG IAMs_20 IAMs_20 23 45 42.2
comp=Z,2µm,20.0s
TULEG Thule 83.70 8 IAmb IAmb 23 18 00.6
comp=Z,27nm,1.6s
QSPA South Pole Qui 85.53 180 P P 23 15 31.8 +0.2
QSPA South Pole Qui 85.53 180 IAMs_20 IAMs_20 23 46 09.1
comp=Z,2µm,21.0s
DZM Mont Dzumac 86.00 248 eLR LR 23 42 42.7
comp=Z,2µm,29.6s
VNDA Vanda 86.06 193 P P 23 15 36.3 +2.3
VNDA pmax pmax
comp=Z,25nm,1.5s
VNDA Vanda 86.06 193 LR LR 23 46 41.1
comp=Z,855nm,19.1s,baz=91,slow=31
VNDA Vanda 86.06 193 P P 23 15 36.3 +2.3
VNDA IAmb IAmb 23 15 46.6
comp=Z,25nm,1.4s
SUMG Summit 87.73 16 *i* P P 23 15 45.0 +2.4
SUMG pmax pmax
comp=Z,30nm,1.0s
SUMG Summit 87.73 16 *i* P P 23 15 45.0 +2.4
comp=Z,30nm,1.0s
SUMG Summit 87.73 16 P P 23 15 42.1 -0.5
SUMG IAmb IAmb 23 16 01.7
comp=Z,10nm,0.9s
H11N3 WAKE ISLAND Hy 88.72 290 T T 00 53 54.8
baz=96,slow=75,SNR=242
H11N2 WAKE ISLAND Hy 88.73 290 T T 00 53 54.8
baz=96,slow=75,SNR=236
H11N1 WAKE ISLAND Hy 88.74 290 T T 00 53 53.4
baz=96,slow=75,SNR=268
H11S2 WAKE ISLAND Hy 88.80 289 T T 00 53 59.6
baz=96,slow=75,SNR=93
H11S1 WAKE ISLAND Hy 88.81 289 T T 00 54 01.0
baz=96,slow=75,SNR=102
H11S3 WAKE ISLAND Hy 88.82 289 T T 00 53 58.9
baz=96,slow=75,SNR=106
SNAA Sanae 89.87 162 P P 23 15 53.0 +0.6
SNAA Sanae 89.87 162 P P 23 15 53.6 +1.2
SNAA pmax pmax
comp=Z,33nm,1.8s
SNAA MLR MLR
comp=Z,3µm,20.0s
SNAA Sanae 89.87 162 P P 23 15 53.6 +1.2
SNAA IAmb IAmb 23 16 01.7
comp=Z,33nm,1.8s
BILL Bilibino 93.29 338⇑ eP P 23 16 09.2 +1.1
BILL e 23 16 13.1
BILL S SKSac 23 26 41.0 -0.4
BILL e 23 28 35.0
BILL eSS SS 23 33 42.2 +12
BILL pmax pmax
comp=Z,4.0nm,1.1s
BILL MLR MLR
comp=Z,1µm,17.0s
DAG Danmarks Havn 93.78 13 eP P 23 16 16.4 +6.2
DAG Danmarks Havn 93.78 13 *i* P P 23 16 16.4 +6.2
NOR Nord 94.36 8 *i* P P 23 16 18.4 +5.6
PET Petropavlovsk 96.78 323 IAMs_20 IAMs_20 23 50 36.6
comp=Z,2µm,21.0s
PETK Petropavlovsk- 97.35 323 LR LR 23 52 09.1
comp=Z,2µm,21.1s,baz=70,slow=30
ARMA Armidale 98.29 239 IAMs_20 IAMs_20 23 54 30.5
comp=Z,1µm,20.0s
CAN Canberra 99.50 233 IAMs_20 IAMs_20 23 52 34.3
comp=Z,1µm,20.0s
MA2 Magadan 100.55 330 IAMs_20 IAMs_20 23 56 55.4
comp=Z,2µm,20.0s
TOO Toolangi 101.72 230 IAMs_20 IAMs_20 23 53 38.7
comp=Z,1µm,21.0s
CASY Casey 104.60 194 IAMs_20 IAMs_20 23 59 06.3
comp=Z,1µm,19.0s
CART Cartagena 104.68 52 IAMs_20 IAMs_20 23 53 44.4
comp=Z,1µm,19.0s
TIXI Tiksi 104.82 344 IAMs_20 IAMs_20 00 05 28.6
comp=Z,1µm,18.0s
TOC5 Torodi Ar. Sit 108.27 78 IAMs_20 IAMs_20 23 59 56.3
comp=Z,2µm,22.0s
TOC7 Torodi Ar. Sit 108.28 78 IAMs_20 IAMs_20 00 01 07.4
comp=Z,1µm,21.0s
TOB5 Torodi Ar. Sit 108.28 78 IAMs_20 IAMs_20 00 01 07.4
comp=Z,1µm,21.0s
TOB4 Torodi Ar. Sit 108.28 78 IAMs_20 IAMs_20 00 01 07.5
comp=Z,1µm,22.0s
TOA3 Torodi Ar. Sit 108.29 78 IAMs_20 IAMs_20 00 01 07.7
comp=Z,1µm,21.0s
TOA0 Torodi Ar. Sit 108.29 78 IAMs_20 IAMs_20 00 01 07.8
comp=Z,1µm,21.0s
TORD Torodi Ar. Bea 108.29 78 PP PP 23 22 00.5 +14
comp=Z,1.2nm,1.1s,baz=284,slow=6.0,SNR=3.5
TOC4 Torodi Ar. Sit 108.30 78 IAMs_20 IAMs_20 23 59 57.9
comp=Z,1µm,22.0s
TOC1 Torodi Ar. Sit 108.30 78 IAMs_20 IAMs_20 00 00 32.0
comp=Z,2µm,22.0s
TOB3 Torodi Ar. Sit 108.30 78 IAMs_20 IAMs_20 00 01 08.0
comp=Z,1µm,21.0s
TOB2 Torodi Ar. Sit 108.30 78 IAMs_20 IAMs_20 00 01 08.1
comp=Z,1µm,21.0s
TOC2 Torodi Ar. Sit 108.32 78 IAMs_20 IAMs_20 00 01 07.4
comp=Z,1µm,20.0s
TOC3 Torodi Ar. Sit 108.32 78 IAMs_20 IAMs_20 00 01 07.4
comp=Z,1µm,20.0s
YAK Yakutsk 109.50 336 IAMs_20 IAMs_20 00 05 59.0
comp=Z,1µm,18.0s
BBOO Buckleboo 110.51 233 IAMs_20 IAMs_20 23 58 41.6
comp=Z,1µm,20.0s
JHJ2 Mitsune 112.62 304 IAMs_20 IAMs_20 00 11 06.4
comp=Z,1µm,20.0s
GERES GERESS Array B 112.69 38 PP PP 23 22 22.9 +5.4
comp=Z,0.2nm,0.5s,baz=319,slow=5.3,SNR=3.4
STAL STALIGIAL 112.92 41 IAMs_20 IAMs_20 00 06 55.3

comp=Z,1μm,21.0s
MAJO Matsushiro 113.27 308 IAMs_20 IAMs_20 23 59 10.3
comp=Z,2μm,22.0s
INU Inuyama 114.47 307 IAMs_20 IAMs_20 23 59 42.8
comp=Z,1μm,21.0s
USA0B Ussuriysk Arra 115.72 317 IAMs_20 IAMs_20 00 04 55.2
comp=Z,789nm,20.0s
WR9 Warramunga Arr 115.73 245 IAMs_20 IAMs_20 00 13 14.1
comp=Z,1μm,20.0s
WR8 Warramunga Arr 115.74 245 IAMs_20 IAMs_20 00 08 35.5
comp=Z,1μm,18.0s
CLTB Caltabellotta 115.78 50 IAMs_20 IAMs_20 00 02 37.1
comp=Z,884nm,20.0s
WR6 Warramunga Arr 115.79 245 IAMs_20 IAMs_20 00 02 48.7
comp=Z,949nm,20.0s
WR3 Warramunga Arr 115.85 245 IAMs_20 IAMs_20 00 03 02.3
comp=Z,923nm,20.0s
WR2 Warramunga Arr 115.87 245 IAMs_20 IAMs_20 00 02 21.9
comp=Z,874nm,20.0s
WB3 Warramunga Arr 115.88 245 IAMs_20 IAMs_20 00 13 24.2
comp=Z,1μm,18.0s
WB4 Warramunga Arr 115.89 245 IAMs_20 IAMs_20 00 13 19.3
comp=Z,1μm,19.0s
WRAB Tennant Creek 115.89 245 IAMs_20 IAMs_20 00 02 10.0
comp=Z,942nm,20.0s
WB8 Warramunga Arr 115.89 246 IAMs_20 IAMs_20 00 01 10.4
comp=Z,1μm,22.0s
WRA Warramunga Arr 115.89 245 PKKPbc PKKPbc 23 32 16.4 +7.7
comp=Z,0.8nm,0.9s,baz=293,slow=3.0,SNR=5.2
WC1 Warramunga Arr 115.90 245 IAMs_20 IAMs_20 00 02 22.6
comp=Z,1μm,22.0s
VYHS Vyhne 115.97 37 *e*P **Pdif 23 17 52.5 +2.5**
VYHS Vyhne 115.97 37 *e*PDIFF **Pdif 23 17 52.5 +2.5**
ACER Acerenza 116.88 46 IAMs_20 IAMs_20 00 01 59.9
comp=Z,740nm,19.0s
TIP Timpagrande 117.99 48 IAMs_20 IAMs_20 00 08 37.3
comp=Z,928nm,19.0s
PDG Podgorica 118.64 44 IAMs_20 IAMs_20 00 10 53.3
comp=Z,848nm,22.0s
DRGR 119.07 38 ⇑PKIKP **PKPdf 23 21 41.8 -1.0**
DRGR 119.07 38 ⇑P **PKPdf 23 21 41.8 -1.0**
MDVR Moldovita 119.33 40 ⇓P **PKiKP 23 21 44.5 +1.0**
BURAR Bucovina Array 120.18 36 ⇓P **PKPdf 23 21 44.4 -0.6**
MTN Manton Dam 120.63 252 IAMs_20 IAMs_20 00 14 09.5
comp=Z,880nm,18.0s
AKASG Malin Array Be 120.73 31 PKP **PKPdf 23 21 44.3 -1.5**
comp=Z,1.0nm,0.8s,baz=303,slow=2.1,SNR=5.1
ARR Arges 120.92 39 ⇑P **PKPdf 23 21 45.8 -0.7**
DOPR Dopca 121.09 38 ⇑P **PKPdf 23 21 46.6 -0.1**
VTS Vitosha 121.26 42 ⇓PKIKP **PKiKP 23 21 48.4 +1.0**
VTS Vitosha 121.26 42 ⇓P **PKiKP 23 21 48.4 +1.0**
OBN Obninsk 121.29 24 ⇑*i*PKIKP **PKiKP 23 21 52.6 +5.8**
OBN SS SS 23 39 52.0 +2.5
OBN pmax pmax
comp=Z,12nm,1.3s
OBN MLR MLR
comp=Z,723nm,18.0s
MLR Muntele Rosu 121.67 38 PKIKP **PKPdf 23 21 47.2 -0.7**
MLR Muntele Rosu 121.67 38 PKPdf 23 21 47.2 -0.7
VRI Vrincioaia 121.96 37 ⇓PKIKP **PKPdf 23 21 47.4 -1.0**
VRI Vrincioaia 121.96 37 ⇓P **PKPdf 23 21 47.4 -1.0**
MILM Milestii Mici 122.63 35 ⇑P **PKiKP 23 21 50.7 +0.9**
CFR Carcaliu 123.16 37 ⇓PKIKP **PKPdf 23 21 49.4 -1.2**
CFR Carcaliu 123.16 37 ⇓P **PKPdf 23 21 49.4 -1.2**
TIRR Tirgusor 123.70 38 PKIKP **PKiKP 23 21 52.2 +0.3**
TIRR Tirgusor 123.70 38 PKiKP 23 21 52.2 +0.3
LPSR Galich'ya Gora 124.07 25 *e*PKIKP **PKPdf 23 21 48.8 -3.3**
LPSR pmax pmax
comp=Z,7.0nm,1.1s
VSR Storozhevoye 125.17 26 *e*PKIKP **PKPdf 23 21 51.5 -2.8**
VSR pmax pmax
comp=Z,2.0nm,0.5s
VRH Novokhopyorsk 126.27 25 *e*PKIKP **PKPdf 23 21 53.9 -2.5**
VRH pmax pmax
comp=Z,20nm,1.1s
ARU Arti 126.81 11 *i* PKIKP **PKiKP 23 21 58.2 +0.4**
ARU 23 23 54.0
ARU 23 29 09.3
ARU SP SP 23 33 51.0 -3.9
TLY Talaya 126.91 337 *e*PKIKP **PKPdf 23 21 51.4 -6.3**
TLY *e*SS SS 23 41 31.5 +31
TLY pmax pmax
comp=Z,20nm,1.1s
SSE Sheshan 128.38 307 IAMs_20 IAMs_20 00 09 38.3
comp=Z,1μm,22.0s
ELL Elmali 128.49 46 PKIKP **PKiKP 23 22 01.7 -0.2**
ELL Elmali 128.49 46 PKiKP 23 22 01.7 -0.2
SONM Songino Array 128.66 332 PKP **PKiKP 23 22 02.1 +0.2**
comp=Z,1.0nm,0.9s,baz=90,slow=3.0,SNR=6.0
ILGA Ilgaz 128.83 39 PKiKP 23 22 02.6 0.0
BR131 Keskin Array S 129.51 40 PKIKP **PKPdf 23 22 02.5 -0.7**
BR131 Keskin Array S 129.51 40 PKPdf 23 22 02.5 -0.7
BRTR Keskin Array B 129.51 40 PKP **PKPdf 23 22 02.8 -0.4**
comp=Z,4.5nm,0.9s,baz=175,slow=0.5,SNR=18
NJ2 Nanjing 129.86 309 *e*PKP **PKPdf 23 22 03.4 -0.4**
NJ2 LR LR
comp=Z,700nm,16.1s
NJ2 LR LR
comp=Z,1μm,20.8s
NJ2 LR LR
comp=Z,1μm,19.9s
ZAA0 Zalesovo Array 129.94 352 PKiKP 23 22 04.1 0.0
ZAA0 IAMs_20 IAMs_20 00 17 17.7
comp=Z,1μm,20.0s
ZALV Zalesovo Beam 129.94 352 PKP **PKPdf 23 22 01.9 -1.4**
comp=Z,0.3nm,0.3s,baz=357,slow=5.9,SNR=2.8
TATO Taipei 130.06 299 IAMs_20 IAMs_20 00 12 14.6
comp=Z,743nm,21.0s
YHNB Yeheng 130.25 299 IAMs_20 IAMs_20 00 14 18.7
comp=Z,846nm,20.0s
HHC Hu-ho-hao-te 130.55 322 *e*PKP **PKiKP 23 22 06.0 +0.1**
HHC PP **PP 23 24 26.6 +7.5**
HHC AMB AMB
comp=Z,31nm,9.2s
HHC LR LR
comp=Z,290nm,17.6s
HHC LR LR
comp=Z,470nm,20.6s
HHC LR LR
comp=Z,670nm,18.2s
YULB Yu-li 130.65 297 IAMs_20 IAMs_20 00 17 26.6
comp=Z,608nm,18.0s
SSLB Suanglung 130.85 298 IAMs_20 IAMs_20 00 10 20.8
comp=Z,856nm,22.0s
TPUB Ta-pu 131.27 297 IAMs_20 IAMs_20 00 14 44.9
comp=Z,686nm,20.0s
KBZ Khabaz 132.31 30 PKP **PKiKP 23 22 12.2 +3.0**
comp=Z,5.5nm,1.1s,baz=310,slow=5.2,SNR=4.2
KNMB Chin-men Tao 132.91 299 IAMs_20 IAMs_20 00 11 12.1
comp=Z,711nm,22.0s
ABKAR Akbulak array 133.87 13 PKiKP 23 22 12.4 +0.2
MAK Makhachkala 135.12 28 *e*P **Pdif 23 19 08.6 -6.7**
MAK *e* 23 29 21.6
MAK *e*SS SS 23 42 34.0 -7.2
MAK pmax pmax
comp=Z,90nm,0.8s
MKAR Makanchi Array 137.28 352 PKP **PKiKP 23 22 18.4 -0.8**
comp=Z,1.3nm,0.9s,baz=0.0,slow=0.6,SNR=6.7
MKAR PP **PP 23 25 03.1 +2.1**
comp=Z,1.5nm,1.0s,baz=26,slow=4.2,SNR=3.9
HKPS Hong Kong Po S 137.29 298 IAMs_20 IAMs_20 00 13 55.4
comp=Z,904nm,21.0s
MAKZ Makanchi 137.31 352 IAMs_20 IAMs_20 00 21 01.7
comp=Z,1μm,20.0s
LZH Lanzhou 138.24 323 PKP **PKPdf 23 22 15.2 -4.5**
LZH LR LR
comp=Z,220nm,16.3s
LZH LR LR
comp=Z,200nm,16.0s
LZH LR LR
comp=Z,340nm,16.8s
WMQ Urumqi 139.03 345 *e*P **Pdif 23 19 42.8 +10**
WMQ pmax pmax
comp=Z,170nm,5.1s
WMQ LR LR
comp=N,460nm,15.5s
WMQ LR LR
comp=E,610nm,11.3s
WMQ LR LR
comp=Z,2μm,22.5s
WMQ Urumqi 139.03 345 *e*PKP **PKPdf 23 22 21.1 +0.3**
WMQ AMB AMB
comp=Z,170nm,5.3s
WMQ LR LR
comp=Z,550nm,11.9s
WMQ LR LR
comp=Z,550nm,14.9s
WMQ LR LR
CD2 Chengdu 141.58 317 PKP **PKPdf 23 22 23.7 -2.0**
QIZ Qiongzhong 142.12 295 IAMs_20 IAMs_20 00 18 26.7
comp=Z,761nm,21.0s
GEYT Alibeck 143.75 21 PKP PKPbc 23 22 27.8 +1.0
comp=Z,3.4nm,0.9s,baz=243,slow=6.5,SNR=7.6
GYA0B ALIBECK ARRAY 143.75 21 IAMs_20 IAMs_20 00 29 11.2
comp=Z,857nm,21.0s
CISI Cisompet, Garu 144.13 251 IAMs_20 IAMs_20 00 21 58.2
comp=Z,552nm,20.0s
LEM Lembang 144.54 252 PKP PKPbc 23 22 30.5 +0.3
comp=Z,16nm,0.6s,baz=131,slow=9.3,SNR=2.5
ABPO Ambohimpanom 144.80 132 PKIKP **PKPdf 23 22 32.5 +0.6**
ABPO Ambohimpanom 144.80 132 PKPdf 23 22 32.5 +0.6
DLV T Lat 145.06 284 IAMs_20 IAMs_20 00 14 57.3
comp=Z,765nm,22.0s
KSH Kashi 145.12 357 PKPbc **PKPdf 23 22 32.7 +0.9**
KSH PP **PP 23 25 50.9 +2.0**
KSH PKS **PKSdf 23 26 09.9 +2.4**
KSH SKS **SKSdf 23 29 36.8 -3.9**
KSH SKKS **SKKSac 23 32 46.4 +4.2**
KSH SS SS 23 44 48.9 +11
KSH AMB AMB
comp=Z,490nm,4.4s
KSH LR LR
comp=Z,300nm,5.0s
KSH LR LR
comp=Z,360nm,4.8s
KSH LR LR
comp=Z,3μm,19.6s
KMI Kunming 145.59 309 PKPbc **PKPdf 23 22 32.3 -0.9**
KMI pPKP PKPab 23 22 34.8 +1.2
KMI sPKP 23 22 36.4
KMI PP **PP 23 25 53.0 -0.3**
KMI SS SS 23 44 41.9 -4.2
KMI AMB AMB
comp=Z,170nm,4.4s
KMI LR LR
comp=Z,510nm,23.1s
KMI LR LR
comp=Z,610nm,23.6s
KMI LR LR
comp=Z,1μm,24.1s
KMI Kunming 145.59 309 IAMs_20 IAMs_20 00 23 12.0
comp=Z,816nm,21.0s
SLVN Son La 146.47 303 PKPab 23 22 37.1 +0.3
SLVN IAMs_20 IAMs_20 00 17 39.0
comp=Z,620nm,21.0s
RAYN Ar Rayn 146.69 53 PKP2 **PKPdf 23 22 35.1 +0.3**
RAYN Ar Rayn 146.69 53 PKPbc **PKPdf 23 22 35.1 +0.3**
UBPT Khong Chiam 147.21 291 IAMs_20 IAMs_20 00 37 12.7
comp=Z,549nm,20.0s
PMBI Palembang 148.32 257 IAMs_20 IAMs_20 00 37 20.6
comp=Z,769nm,20.0s
HRA Herat 148.37 19 PKPbc 23 22 40.3 -0.7
ATD Arta Tunnel 148.46 75 PKPbc **PKPdf 23 22 39.5 +1.5**
DAMY Dhamar 149.24 69 PKPbc **PKiKP 23 22 45.4 +0.4**
KBL Kabul 149.79 8 PKP2 **PKiKP 23 22 46.2 +0.6**
KBL MLR MLR
comp=Z,1μm,22.0s
KBL Kabul 149.79 8 PKiKP 23 22 46.2 +0.6
KBL IAMs_20 IAMs_20 00 30 35.2
comp=Z,965nm,22.0s
MYKOM Kota Tinggi 150.02 266 IAMs_20 IAMs_20 00 33 47.1
comp=Z,584nm,20.0s
LSA Lhasa 150.13 329 PKPbc **PKPbc 23 22 43.6 -2.3**
LSA LR LR
comp=Z,150nm,3.8s
LSA LR LR
comp=Z,160nm,4.3s
LSA LR LR
comp=Z,230nm,4.4s
LSA Lhasa 150.13 329 PKIKP **PKPab 23 22 49.4 -2.3**
LSA Lhasa 150.13 329 PKPab 23 22 49.4 -2.3
PBKT Sadao Pong 150.91 296 PKPbc 23 22 46.4 -1.0
NIL Nilore 151.02 1 PKIKP **PKiKP 23 22 51.1 +3.2**
NIL Nilore 151.02 1 PKPbc **PKiKP 23 22 51.1 +3.2**
CHTO Chiang Mai 151.76 302 PKIKP **PKPbc 23 22 48.2 -1.2**
CHTO Chiang Mai 151.76 302 PKPbc **PKPbc 23 22 48.2 -1.2**
CHTO Chiang Mai 151.76 302 IAMs_20 IAMs_20 00 20 56.2
comp=Z,714nm,22.0s
CMAR Chiang Mai Arr 151.92 302 PKP **PKPdf 23 22 42.0 -1.2**
comp=Z,0.6nm,0.3s,baz=201,slow=0.5,SNR=8.6
CMAR PKPbc **PKPbc 23 22 47.6 -2.1**
comp=Z,4.4nm,0.8s,baz=25,slow=2.4,SNR=18
BKNI Bangkinang 152.61 262 IAMs_20 IAMs_20 00 30 42.7
comp=Z,580nm,20.0s
IPM Ipoh 153.00 271 IAMs_20 IAMs_20 00 38 43.2
comp=Z,802nm,20.0s
KULM Kulim 153.38 273 IAMs_20 IAMs_20 00 39 16.2
comp=Z,617nm,20.0s

*TAP **07** 23:05:39.9, 24.84N×122.35E, h127km, ML3.2, D*
*JMA **07** 23:05:40.4±0.2, 24.80N×122.35E, h119km±3km, M2.3*
ISC 07 23:05:40.0±1.5, 24.84N±0.05×122.37E±0.03, h125km±8km, n70, σ0.972/122, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.36**	**216**	P	**Pn**	**23 05 58.2**	**+0.5**
	baz=206						
EOS1				*i* S	**Sn**	**23 06 11.4**	**+0.4**
	baz=206						
NTC	**Toucheng**	**0.49**	**271**	*e*P	**Pn**	**23 05 58.4**	**+0.1**
	baz=266						
TIPB	**Shuangxi**	**0.51**	**285**	P	**Pn**	**23 05 58.7**	**+0.2**
	baz=286						
TIPB				S	**Sn**	**23 06 11.9**	**-0.6**
	baz=286						
TWC	**Suao**	**0.52**	**244**	*i* P	**Pn**	**23 05 58.5**	**-0.1**
	baz=243						
TWC				*e*S	**Sn**	**23 06 12.2**	**-0.4**
	baz=243						
NWF	**Wu-fen Shan**	**0.58**	**293**	S	**Sn**	**23 06 13.7**	**+0.3**
	baz=286						
TWE	**Neicheng**	**0.65**	**259**	P	**Pn**	**23 05 59.5**	**+0.1**
	baz=263						
TWE				*e*S	**Sn**	**23 06 14.3**	**+0.3**
	baz=263						
JYNG	**Yonagunijimaku**	**0.66**	**126**	P	**Pn**	**23 05 59.5**	**0.0**
JYNG				*e*S	**Sn**	**23 06 13.8**	**-0.4**
SLBB	**Yuanshan**	**0.67**	**263**	P	**Pn**	**23 05 58.8**	**-0.8**
	baz=269						
NANB	**Nanao**	**0.70**	**234**	P	**Pn**	**23 05 59.8**	**0.0**
	baz=231						
NANB				S	**Sn**	**23 06 14.2**	**-0.5**
	baz=231						
YOJ	**Yonaguni jima**	**0.70**	**123**	*e*P	**Pn**	**23 05 59.4**	**-0.4**
	baz=128						
YOJ				S	**Sn**	**23 06 14.9**	**+0.2**
	baz=128						
YOJ	**Yonaguni jima**	**0.70**	**123**	P	**Pn**	**23 05 59.8**	**0.0**
YOJ				S	**Sn**	**23 06 14.3**	**-0.5**
ENA	**Nanau**	**0.70**	**234**	P	**Pn**	**23 06 00.4**	**+0.5**
	baz=231						
ENA				*i* S	**Sn**	**23 06 15.1**	**+0.3**
	baz=231						
TWA	**Mucha**	**0.72**	**281**	*e*P	**Pn**	**23 05 59.9**	**-0.1**
	baz=281						
TWA				*e*S	**Sn**	**23 06 14.4**	**-0.7**
	baz=281						
ENTT	**Nioudou**	**0.75**	**255**	*i* P	**Pn**	**23 06 00.5**	**+0.3**
	baz=254						
ENTT				S	**Sn**	**23 06 16.2**	**+0.6**
	baz=254						
YM01	**YM01**	**0.78**	**293**	*i* P	**Pn**	**23 06 00.8**	**+0.3**
	baz=288						
YM01				S	**Sn**	**23 06 15.5**	**-0.5**
	baz=288						
YM08	**YM08**	**0.78**	**296**	*e*S	**Sn**	**23 06 16.1**	**+0.1**
	baz=297						
NWLT	**Wulai**	**0.79**	**265**	*i* P	**Pn**	**23 06 00.5**	**-0.1**
	baz=267						
NWLT				*i* S	**Sn**	**23 06 16.0**	**-0.1**
	baz=267						
YM11	**YM11**	**0.79**	**294**	*e*P	**Pn**	**23 06 00.8**	**+0.2**
	baz=295						
YM11				*e*S	**Sn**	**23 06 15.8**	**-0.3**
	baz=295						
YM10	**YM10**	**0.79**	**293**	P	**Pn**	**23 06 01.0**	**+0.3**
	baz=289						
YM10				*e*S	**Sn**	**23 06 15.7**	**-0.5**
	baz=289						
TATO	**Taipei**	**0.81**	**280**	*e*P	**Pn**	**23 06 00.5**	**-0.1**
	baz=280						
TATO				*e*S	**Sn**	**23 06 15.4**	**-0.9**
	baz=280						
NDT	**Datong Townshi**	**0.81**	**253**	P	**Pn**	**23 06 01.5**	**+0.8**
	baz=253						
NDT				S	**Sn**	**23 06 16.8**	**+0.4**
	baz=253						
TWS1	**Kuangyinshan**	**0.90**	**287**	*e*P	**Pn**	**23 06 01.9**	**+0.5**
	baz=292						
TWS1				*e*S	**Sn**	**23 06 17.8**	**+0.2**
	baz=292						
YHNB	**Yeheng**	**0.92**	**259**	P	**Pn**	**23 06 02.0**	**+0.3**
	baz=259						
YHNB				S	**Sn**	**23 06 17.7**	**-0.5**
	baz=259						
NSK	**Sanguang**	**0.93**	**260**	*i* P	**Pn**	**23 06 02.1**	**+0.3**
	baz=260						
NSK				S	**Sn**	**23 06 17.6**	**-0.7**
	baz=260						
NACB	**Ninganchiao**	**0.97**	**227**	P	**Pn**	**23 06 01.8**	**-0.3**
	baz=221						
NACB				S	**Sn**	**23 06 17.9**	**-0.9**
	baz=221						
NNSH	**Datong**	**0.98**	**245**	*i* P	**Pn**	**23 06 02.9**	**+0.5**
	baz=240						
NNSH				*i* S	**Sn**	**23 06 19.1**	**-0.2**
	baz=240						
NNS	**Nan Shan**	**0.99**	**246**	*i* P	**Pn**	**23 06 03.0**	**+0.6**
	baz=246						
NNS				*i* S	**Sn**	**23 06 19.1**	**-0.3**
	baz=246						
WLTB	**Daxi**	**1.01**	**271**	*e*P	**Pn**	**23 06 03.3**	**+0.8**
	baz=271						
WLTB				*e*S	**Sn**	**23 06 20.1**	**+0.6**
	baz=271						
ETLH	**Xiulin Townshi**	**1.02**	**232**	P	**Pn**	**23 06 03.0**	**+0.3**
	baz=223						
ETLH				S	**Sn**	**23 06 19.3**	**-0.6**
	baz=223						
TWD	**Chiawan**	**1.03**	**223**	*e*P	**Pn**	**23 06 03.2**	**+0.4**
	baz=220						
TWD				S	**Sn**	**23 06 19.5**	**-0.4**
	baz=220						
ENLB	**Shoufeng**	**1.17**	**217**	*e*S	**Sn**	**23 06 21.9**	**-0.5**
	baz=216						
WHF	**Hehuan Shan**	**1.22**	**235**	P	**Pn**	**23 06 05.9**	**+0.8**
	baz=229						
WHF				*i* S	**Sn**	**23 06 23.3**	**-0.8**
	baz=229						
TWT	**Tachien**	**1.23**	**242**	S	**Sn**	**23 06 24.4**	**+0.5**
	baz=241						
LIOB	**Emei**	**1.24**	**261**	*i* P	**Pn**	**23 06 05.4**	**+0.5**
	baz=261						
LIOB				S	**Sn**	**23 06 23.5**	**-0.3**
	baz=261						
TDCB	**Techi**	**1.25**	**242**	P	**Pn**	**23 06 06.3**	**+1.2**
	baz=242						
TDCB				S	**Sn**	**23 06 24.0**	**-0.1**
	baz=242						
NSTT	**Nanjuang**	**1.26**	**261**	*i* P	**Pn**	**23 06 05.4**	**+0.3**
	baz=260						
NSTT				S	**Sn**	**23 06 23.5**	**-0.6**
	baz=260						
CHGB	**Renai**	**1.34**	**235**	P	**Pn**	**23 06 06.9**	**+0.7**
	baz=239						
CHGB				S	**Sn**	**23 06 25.8**	**-0.2**
	baz=239						
IRIF	**Iriomote-Funau**	**1.34**	**112**	P	**Pn**	**23 06 06.0**	**+0.1**
IRIF				S	**Sn**	**23 06 25.5**	**-0.1**
OWD	**Renai**	**1.40**	**231**	*e*P	**Pn**	**23 06 07.3**	**+0.6**
	baz=226						
OWD				S	**Sn**	**23 06 26.4**	**-0.7**
	baz=226						
WHP	**Taichung City**	**1.41**	**247**	P	**Pn**	**23 06 07.8**	**+1.0**
	baz=253						
WHP				*i* S	**Sn**	**23 06 27.0**	**-0.1**
	baz=253						
EGFH	**Guangfu**	**1.45**	**216**	*e*S	**Sn**	**23 06 26.0**	**-1.8**
	baz=222						
HATJ	**Hateruma jima**	**1.53**	**121**	P	**Pn**	**23 06 09.5**	**+1.5**
HATJ				*e*S	**Sn**	**23 06 29.8**	**+0.4**
DPDB	**Guoxing**	**1.54**	**239**	*e*S	**Sn**	**23 06 30.4**	**+0.6**
	baz=246						
VWDT	**VWDT**	**1.56**	**226**	P	**Pn**	**23 06 08.6**	**+0.2**
	baz=221						
VWDT				S	**Sn**	**23 06 29.6**	**-0.3**
	baz=221						
HGSD	**Ruisui**	**1.60**	**213**	P	**Pn**	**23 06 09.0**	**+0.1**
	baz=207						
HGSD				S	**Sn**	**23 06 30.3**	**-0.5**
	baz=207						
JKRS	**Kuro-shima**	**1.61**	**112**	P	**Pn**	**23 06 09.6**	**+0.6**
JKRS				S	**Sn**	**23 06 31.1**	**-0.1**
EHY	**Hungye**	**1.64**	**216**	*e*S	**Sn**	**23 06 29.4**	**-2.2**
	baz=221						
SMLT	**Sun Moon Lake**	**1.64**	**235**	*i* P	**Pn**	**23 06 10.8**	**+1.2**
	baz=241						
SMLT				*i* S	**Sn**	**23 06 33.2**	**+1.2**
	baz=241						
SSLB	**Suanglung**	**1.66**	**231**	P	**Pn**	**23 06 10.8**	**+1.2**
	baz=226						
SSLB				S	**Sn**	**23 06 33.3**	**+1.1**
	baz=226						
TYC	**Yuchr**	**1.66**	**236**	P	**Pn**	**23 06 11.0**	**+1.4**
	baz=244						
TYC				S	**Sn**	**23 06 32.7**	**+0.5**
	baz=244						
JIJ	**Ishigaki jima**	**1.69**	**106**	P	**Pn**	**23 06 10.2**	**+0.3**
JIJ				S	**Sn**	**23 06 31.8**	**-0.9**
YULB	**Yu-li**	**1.74**	**214**	P	**Pn**	**23 06 09.9**	**-0.7**
	baz=219						
JISG	**Ishigakijimahi**	**1.79**	**98**	P	**Pn**	**23 06 11.3**	**+0.2**
JISG				*e*S	**Sn**	**23 06 34.4**	**-0.4**
WHYT	**Xinyi Township**	**1.79**	**231**	P	**Pn**	**23 06 12.3**	**+1.1**
	baz=239						
WHYT				S	**Sn**	**23 06 35.7**	**+0.7**
	baz=239						
FULB	**Fuli**	**1.91**	**211**	P	**Pn**	**23 06 12.2**	**-0.4**
	baz=217						
FULB				S	**Sn**	**23 06 37.6**	**+0.1**
	baz=217						
ALS	**Alishan**	**1.95**	**227**	P	**Pn**	**23 06 14.4**	**+1.1**
	baz=221						
ALS				*e*S	**Sn**	**23 06 39.1**	**+0.4**
	baz=221						
CHN5	**Tsauling**	**1.98**	**231**	S	**Sn**	**23 06 39.5**	**+0.3**
	baz=239						
ELDTW	**Lidau**	**2.06**	**217**	*e*P	**Pn**	**23 06 14.7**	**+0.2**
	baz=211						
ELDTW				*e*S	**Sn**	**23 06 39.4**	**-1.5**
	baz=211						
JTJ	**Tarama**	**2.13**	**95**	P	**Pn**	**23 06 15.7**	**+0.4**
JTJ				*e*S	**Sn**	**23 06 42.0**	**-0.4**
CHN4	**Tsaushan**	**2.20**	**228**	P	**Pn**	**23 06 16.9**	**+0.7**
	baz=235						
CHN4				S	**Sn**	**23 06 44.6**	**+0.7**
	baz=235						
TPUB	**Ta-pu**	**2.21**	**226**	*e*P	**Pn**	**23 06 16.5**	**+0.2**
	baz=235						
TPUB				*e*S	**Sn**	**23 06 44.0**	**-0.1**
	baz=235						
WTP	**Ta-pu**	**2.26**	**226**	*e*S	**Sn**	**23 06 45.0**	**-0.3**
	baz=234						
TWH	**Lutao**	**2.27**	**201**	*e*P	**Pn**	**23 06 17.0**	**-0.1**
	baz=204						
TWH				*e*S	**Sn**	**23 06 44.3**	**-1.3**
	baz=204						
TWK	**Hsinying**	**2.33**	**228**	*e*S	**Sn**	**23 06 47.4**	**+0.6**
	baz=227						
CHN1	**Nanshi**	**2.35**	**226**	S	**Sn**	**23 06 47.9**	**+0.5**
	baz=233						
SLGT	**Liugui**	**2.42**	**221**	*e*P	**Pn**	**23 06 20.3**	**+1.3**
	baz=227						
JIKM	**Ikemajima**	**2.62**	**88**	S	**Sn**	**23 06 53.3**	**-0.1**
VWUC	**VWUC**	**2.65**	**274**	*e*P	**Pn**	**23 06 21.5**	**-0.4**
	baz=274						
VWUC				*e*S	**Sn**	**23 06 52.8**	**-1.3**
	baz=274						
PHUB	**P'eng-hu**	**2.87**	**243**	*e*S	**Sn**	**23 06 56.6**	**-2.7**
	baz=243						
WDGT	**Dungji**	**2.93**	**238**	S	**Sn**	**23 06 59.0**	**-1.7**
	baz=229						

*IDC **07** 23:09:02.9±0.9, 4.54S×106.19W, h0km, mb4.4/15, mb1 4.6/15, mb1mx4.5/35, mbtmp4.4/15, MS5.1/1,*

Ms1 5.1/1,ms1mx4.0/21,Error ellipse: s-maj=28.5km s-min=14.2km az=56.0

NEIC ***07*** *23:09:05.5±1.2,4.5S±0.1×105.9W±0.1,h10km±1km, mb5.0/158,Error ellipse: s-maj=24.7km s-min=16.8km az=257.0*

GCMT ***07*** *23:09:07.6±0.3,4.38S±0.01×106.20W±0.01,h18km±1km, MW5.3/132,Moment Tensor Solution. s34,c44; s132,c216; Duration: 1s0 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.20±.03; Mθθ0.51±.03; Mφφ-0.30±.03; Mrθ0.16±.07; Mθφ0.88±.02; Mφr-0.17±.06; Best double couple: Mo1.00200×10¹⁷ NP1:φs14.00000°,δ77.00000°, λ-169.00000°. NP2:φs281.00000°,δ80.00000°, λ-14.00000°. Principal axes: T 1.0670, Plg2.0000°, Azm328.0000°; N -0.1310, Plg73.0000°, Azm64.0000°; P -0.9360, Plg17.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 07 23:09:06.7±0.5,4.54S±0.08×105.9W±0.1,h17km,n236, σ1s23/180,mb4.9/77,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**22.70**	**188**	P	**P**	**23 14 07.2**	**-0.6**
RPN				IAmb	IAmb	23 14 17.8	
	comp=Z,386nm,1.9s						
H06S1	**SOCORRO T**	**23.66**	**348**	T	T	23 38 34.4	
	SNR=58						
H06E1	**SOCORRO T-PHAS**	**23.69**	**348**	T	T	23 38 32.8	
	SNR=80						
MOIG	**Morelia**	**24.50**	**11**	P	**P**	**23 14 24.5**	**-1.1**
MOIG				IAmb	IAmb	23 14 32.8	
	comp=Z,48nm,1.1s						
SNET	**Serv Nac Est T**	**24.52**	**42**	P	**P**	**23 14 23.7**	**-1.9**
APG	**El Apazote**	**24.71**	**38**	P	**P**	**23 14 29.4**	**+1.9**
	comp=Z,11nm,0.3s,baz=259,slow=8.9,SNR=2.4						
JTS	**Las Juntas de**	**25.53**	**55**	P	**P**	**23 14 36.8**	**+2.0**
	comp=Z,17nm,1.1s,baz=290,slow=16,SNR=5.2						
JTS	**Las Juntas de**	**25.53**	**55**	P	**P**	**23 14 35.3**	**+0.5**
JTS				IAmb	IAmb	23 14 50.3	
	comp=Z,59nm,1.4s						
HDC	**Heredia**	**26.06**	**56**	P	**P**	**23 14 39.7**	**0.0**
TGUH	**Tegucigalpa,Un**	**26.12**	**45**	P	**P**	**23 14 39.6**	**-0.6**
ESPN	**Las Esperanzas**	**27.15**	**52**	P	**P**	**23 14 49.4**	**0.0**
ESPN				IAmb	IAmb	23 14 50.6	
	comp=Z,26nm,1.1s						
ZAIG	**Zacatecas**	**27.33**	**7**	P	**P**	**23 14 50.7**	**-0.5**
OTAV	**Otavalo**	**27.82**	**81**	P	**P**	**23 14 54.0**	**-1.9**
OTAV				IAmb	IAmb	23 15 13.0	
	comp=Z,35nm,1.4s						
833A	**Chaparral WMA,**	**33.26**	**10**	P	**P**	**23 15 43.6**	**+0.3**
	baz=192						
HSIG		**33.71**	**352**	P	**P**	**23 15 46.9**	**-0.4**
TXAR	**Lajitas Array**	**33.74**	**3**	P	**P**	**23 15 47.2**	**-0.4**
	comp=Z,2.1nm,1.1s,baz=185,slow=14,SNR=8.1						
TXAR				PcP	**PcP**	**23 18 25.9**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=152,slow=4.1,SNR=2.9						
TAOE	**Nuku Hiva Isla**	**34.28**	**261**	*e*LR	LR	23 24 37.5	
	comp=Z,2μm,26.2s						
TAOE	**Nuku Hiva Isla**	**34.28**	**261**	*e*T	T	23 51 16.0	
	comp=Z,48nm,0.2s						
RUSC	**La Rusia**	**34.36**	**73**	P	**P**	**23 15 54.0**	**+0.4**
JCT	**Junction City**	**35.30**	**9**	P	**P**	**23 16 01.3**	**+0.3**
JCT				IAmb	IAmb	23 16 07.1	
	comp=Z,52nm,1.9s						
JCT	**Junction City**	**35.30**	**9**	P	**P**	**23 16 01.1**	**+0.1**
	baz=191						
319A	**Douglas**	**35.86**	**355**	P	**P**	**23 16 05.4**	**-0.5**
319A				IAmb	IAmb	23 16 07.5	
	comp=Z,30nm,1.3s						
MNTX	**Cornudas Mount**	**36.03**	**1**	P	**P**	**23 16 05.8**	**-1.4**
MNTX	**Cornudas Mount**	**36.03**	**1**	P	**P**	**23 16 06.8**	**-0.5**
	baz=181,SNR=9.7						
214A	**Organ Pipe Nat**	**36.88**	**350**	P	**P**	**23 16 13.6**	**-0.9**
214A	**Organ Pipe Nat**	**36.88**	**350**	P	**P**	**23 16 14.3**	**-0.2**
	baz=169						
121A	**Cookes Peak, D**	**36.91**	**357**	P	**P**	**23 16 14.7**	**-0.2**
	baz=177						
TUC	**Tucson**	**36.94**	**353**	P	**P**	**23 16 13.9**	**-1.1**
TUC	**Tucson**	**36.94**	**353**	P	**P**	**23 16 14.7**	**-0.4**
	baz=172						
SDV	**Santo Domingo**	**37.59**	**69**	P	**P**	**23 16 21.7**	**+0.7**
	comp=Z,11nm,0.8s,baz=249,slow=8.0,SNR=27						
SDV	**Santo Domingo**	**37.59**	**69**	P	**P**	**23 16 21.2**	**+0.2**
SDV				IAmb	IAmb	23 16 23.4	
	comp=Z,22nm,0.8s						
IKP	**In-Ko-Pah, Jac**	**38.23**	**346**	P	**P**	**23 16 25.9**	**-0.1**
	baz=164						
MNMC	**Minye Minye**	**38.26**	**115**	P	**P**	**23 16 26.8**	**+0.1**
GLA	**Glamis**	**38.33**	**348**	P	**P**	**23 16 26.5**	**-0.2**
GLA				IAmb	IAmb	23 16 32.5	
	comp=Z,17nm,0.8s						
GLA	**Glamis**	**38.33**	**348**	P	**P**	**23 16 26.6**	**-0.2**
	baz=166						
PB11	**IPOC Station P**	**38.40**	**116**	P	**P**	**23 16 28.3**	**+0.6**
BAR	**Barrett**	**38.40**	**345**	P	**P**	**23 16 27.0**	**-0.4**
BAR				IAmb	IAmb	23 16 28.6	
	comp=Z,30nm,1.6s						
MSTX	**Muleshoe**	**38.41**	**4**	IAmb	IAmb	23 16 33.2	
	comp=Z,31nm,1.3s						
MSTX	**Muleshoe**	**38.41**	**4**	P	**P**	**23 16 27.3**	**-0.2**
	baz=185						
SWSC	**Sam W. Stewart**	**38.44**	**347**	P	**P**	**23 16 27.4**	**-0.2**
	baz=164						
LENM	**Lemitar**	**38.51**	**359**	P	**P**	**23 16 28.5**	**+0.1**
MONP2	**Monument Peak**	**38.54**	**346**	P	**P**	**23 16 28.5**	**-0.3**
	baz=163,SNR=7.8						
109C	**Camp Elliot, M**	**38.71**	**345**	P	**P**	**23 16 29.8**	**-0.1**
	baz=162						
PB04	**IPOC Station P**	**38.84**	**120**	P	**P**	**23 16 32.4**	**+0.9**
LPAZ	**La Paz**	**38.85**	**110**	P	**P**	**23 16 33.6**	**+1.6**
	comp=Z,3.4nm,1.1s,baz=311,slow=2.9,SNR=4.4						
LPAZ	**La Paz**	**38.85**	**110**	P	**P**	**23 16 32.6**	**+0.6**
Y12C	**Blythe**	**38.94**	**349**	P	**P**	**23 16 31.8**	**-0.1**
	baz=166						
PB10	**IPOC Station P**	**38.95**	**122**	P	**P**	**23 16 32.6**	**+0.5**
PB10				IAmb	IAmb	23 16 33.9	
	comp=Z,22nm,1.1s						
BC3	**Big Chuckawall**	**39.05**	**347**	P	**P**	**23 16 32.7**	**-0.1**
	baz=165,SNR=9.8						
SCI2	**San Clemente I**	**39.19**	**343**	P	**P**	**23 16 33.5**	**-0.5**
	baz=160						
XPFO	**Pion Flat**	**39.23**	**346**	P	**P**	**23 16 33.8**	**-0.7**
XPFO				IAmb	IAmb	23 16 40.4	
	comp=Z,30nm,1.5s						
PFO	**Pinyon Flats O**	**39.24**	**346**	P	**P**	**23 16 33.8**	**-0.7**
PFO	**Pinyon Flats O**	**39.24**	**346**	P	**P**	**23 16 34.2**	**-0.3**
	baz=163,SNR=7.3						
ANMO	**Albuquerque**	**39.27**	**359**	P	**P**	**23 16 34.7**	**-0.2**
ANMO	**Albuquerque**	**39.27**	**359**	P	**P**	**23 16 34.8**	**0.0**
	baz=179						
VBMS	**Vicksburg**	**39.37**	**21**	P	**P**	**23 16 34.7**	**-0.7**
	baz=205						
AMTX	**Amarillo**	**39.41**	**5**	P	**P**	**23 16 35.8**	**-0.1**
	baz=187						
MURC	**Murrieta**	**39.41**	**345**	P	**P**	**23 16 35.6**	**-0.2**
	baz=162						
IRM	**Iron Mountain**	**39.46**	**348**	P	**P**	**23 16 36.2**	**0.0**
	baz=166,SNR=6.7						
BELC	**Belle Mtn. Jos**	**39.50**	**347**	P	**P**	**23 16 36.5**	**-0.2**
	baz=164,SNR=9.2						
CIS	**Catalina Islan**	**39.55**	**343**	P	**P**	**23 16 36.5**	**-0.5**
	baz=160						
W18A	**Petrified Fore**	**39.61**	**355**	P	**P**	**23 16 37.9**	**+0.2**
	baz=174,SNR=5.1						
WMOK	**Wichita Mounta**	**39.63**	**9**	P	**P**	**23 16 37.2**	**-0.4**
	baz=191						
LVC	**Limon Verde**	**40.01**	**120**	P	**P**	**23 16 42.3**	**+0.9**
	comp=Z,5.9nm,0.8s,baz=268,slow=5.1,SNR=4.8						
LVC	**Limon Verde**	**40.01**	**120**	P	**P**	**23 16 42.1**	**+0.7**
BFSC	**Mount Baldy Ra**	**40.13**	**345**	P	**P**	**23 16 41.7**	**-0.3**
	baz=162,SNR=5.6						
WUAZ	**Wupatki**	**40.17**	**353**	P	**P**	**23 16 42.5**	**+0.2**
	baz=172,SNR=6.5						
GMRC	**Granite Mounta**	**40.18**	**347**	P	**P**	**23 16 42.1**	**-0.3**
	baz=165,SNR=5.2						
MWC	**Mount Wilson**	**40.23**	**344**	IAmb	IAmb	23 17 08.6	
	comp=Z,21nm,0.5s						
DECC	**Green Verdugo**	**40.33**	**344**	P	**P**	**23 16 43.9**	**+0.4**
	baz=161						
HEC	**Hector,Ludlow**	**40.37**	**347**	P	**P**	**23 16 44.0**	**+0.1**
	baz=164,SNR=8.9						
GO02	**Mina Guanaco**	**40.42**	**124**	P	**P**	**23 16 45.2**	**+0.5**
SCZ2	**Santa Cruz Isl**	**40.46**	**342**	P	**P**	**23 16 44.3**	**-0.3**
	baz=159						
MIAR	**Mount Ida**	**40.57**	**16**	P	**P**	**23 16 45.2**	**-0.2**
	baz=199						
EDW2	**Edwards Air Fo**	**40.83**	**345**	P	**P**	**23 16 47.2**	**-0.4**
	baz=162,SNR=7.4						
TUQ	**Turquoise Moun**	**40.86**	**347**	P	**P**	**23 16 48.1**	**+0.1**
	baz=165						
GSC	**Goldstone, Bar**	**40.93**	**346**	P	**P**	**23 16 48.4**	**-0.1**
	baz=163,SNR=5.4						
352A	**Blakely**	**41.01**	**28**	P	**P**	**23 16 48.6**	**-0.5**
	baz=213						
W39A	**Magazine**	**41.13**	**15**	P	**P**	**23 16 50.4**	**+0.4**
	baz=198						
353A	**Camilla**	**41.24**	**29**	P	**P**	**23 16 50.7**	**-0.3**
	baz=214						
LRMC	**Laurel Mtn Rad**	**41.32**	**345**	P	**P**	**23 16 51.7**	**0.0**
	baz=162,SNR=9.6						
TUL1	**Leonard**	**41.33**	**12**	P	**P**	**23 16 51.9**	**+0.3**
	baz=195						
X43A	**Marvell**	**41.34**	**19**	P	**P**	**23 16 51.6**	**-0.1**
	baz=203						
PKM	**Mcpherson Peak**	**41.35**	**343**	P	**P**	**23 16 52.0**	**0.0**
	baz=159						
SHOC	**Shoshone, Teco**	**41.38**	**347**	P	**P**	**23 16 52.5**	**+0.3**
	baz=164						
LRAL	**Lakeview Retre**	**41.44**	**24**	P	**P**	**23 16 52.3**	**-0.3**
	baz=209						
T25A	**Trinidad**	**41.48**	**2**	P	**P**	**23 16 53.3**	**+0.2**
	baz=182						
W41B	**Gary Mavity, V**	**41.53**	**17**	P	**P**	**23 16 53.3**	**+0.1**
	baz=201						
MVCO	**Mesa Verde**	**41.60**	**357**	IAmb	IAmb	23 17 01.2	
	comp=Z,51nm,1.8s						
MVCO	**Mesa Verde**	**41.60**	**357**	P	**P**	**23 16 53.8**	**-0.4**
	baz=176,SNR=7.3						
ISA	**Isabella, Lake**	**41.69**	**345**	P	**P**	**23 16 54.6**	**-0.2**
	baz=161						
MPMC	**Manual Prospec**	**41.82**	**346**	P	**P**	**23 16 55.8**	**-0.1**
	baz=163,SNR=6.4						
KNB	**Kanab**	**41.84**	**352**	P	**P**	**23 16 55.7**	**-0.4**
VES	**Vestal, Richgr**	**42.03**	**344**	P	**P**	**23 16 57.3**	**-0.1**
	baz=160						
SDCO	**Great Sand Dun**	**42.07**	**0**	P	**P**	**23 16 58.1**	**+0.1**
	baz=181,SNR=7.3						
S22A	**4UR Ranch, Cre**	**42.07**	**359**	IAmb	IAmb	23 17 00.5	
	comp=Z,32nm,1.5s						
S22A	**4UR Ranch, Cre**	**42.07**	**359**	P	**P**	**23 16 58.1**	**0.0**
	baz=179,SNR=8.6						
CWC	**Cottonwood Cre**	**42.33**	**345**	P	**P**	**23 17 00.7**	**+0.7**
	baz=162						
TPNV	**Topopah Spring**	**42.39**	**348**	IAmb	IAmb	23 17 05.2	
	comp=Z,72nm,1.9s						
TPNV	**Topopah Spring**	**42.39**	**348**	P	**P**	**23 17 01.1**	**+0.6**
	baz=165,SNR=8.0						
U40A	**Yellville**	**42.47**	**16**	P	**P**	**23 17 01.2**	**+0.2**
	baz=200						
SAML	**Samuel**	**42.62**	**98**	P	**P**	**23 17 02.1**	**-0.4**
PMPB	**Monarch Peak**	**42.88**	**342**	IAmb	IAmb	23 17 10.2	
	comp=Z,58nm,1.6s						
MGMO	**Mountain Grove**	**43.38**	**16**	IAmb	IAmb	23 17 13.8	
	comp=Z,34nm,1.6s						
CBKS	**Cedar Bluff**	**43.51**	**7**	IAmb	IAmb	23 17 11.0	
	comp=Z,36nm,1.2s						
CBKS	**Cedar Bluff**	**43.51**	**7**	P	**P**	**23 17 09.9**	**+0.6**
	baz=189						
Q16A	**Castle Valley**	**43.51**	**354**	P	**P**	**23 17 09.5**	**-0.1**
PBMO	**Poplar Bluff**	**43.56**	**18**	IAmb	IAmb	23 17 14.0	
	comp=Z,32nm,1.4s						
R11A	**Troy Canyon, C**	**43.60**	**349**	P	**P**	**23 17 11.1**	**+0.7**
	baz=166,SNR=7.3						
Y54A	**Tignall**	**44.04**	**28**	P	**P**	**23 17 13.3**	**-0.4**
	baz=214						
ISCO	**Idaho Springs**	**44.12**	**0**	P	**P**	**23 17 14.4**	**-0.2**
ISCO				IAmb	IAmb	23 17 20.5	
	comp=Z,29nm,1.4s						
ISCO	**Idaho Springs**	**44.12**	**0**	P	**P**	**23 17 14.4**	**-0.2**
	baz=180,SNR=8.6						
NVAR	**Mina Array Bea**	**44.27**	**346**	P	**P**	**23 17 14.8**	**-0.9**
	comp=Z,3.3nm,1.0s,baz=173,slow=9.4,SNR=15						
CFA	**Coronel Fontan**	**44.41**	**132**	P	**P**	**23 17 16.6**	**-0.2**
	comp=Z,5.7nm,1.1s,baz=283,slow=3.8,SNR=5.1						
CMB	**Columbia Colle**	**44.44**	**344**	IAmb	IAmb	23 17 17.5	
	comp=Z,20nm,1.6s						
O20A	**White River Ci**	**44.50**	**357**	P	**P**	**23 17 17.6**	**0.0**
	baz=177,SNR=12						
CCM	**Cathedral Cave**	**44.51**	**17**	P	**P**	**23 17 16.9**	**-0.5**
CCM	**Cathedral Cave**	**44.51**	**17**	P	**P**	**23 17 17.3**	**0.0**
	baz=201						
RYN	**Ryan**	**44.51**	**346**	IAmb	IAmb	23 17 19.4	
	comp=Z,46nm,1.7s						
WAKR	**Walker**	**44.63**	**345**	IAmb	IAmb	23 17 20.7	
	comp=Z,25nm,1.3s						
PPT2	**Papeete2**	**44.67**	**250**	*e*LR	LR	23 29 34.0	
	comp=Z,3μm,25.8s,baz=68						
KVN	**Kaerville**	**44.81**	**346**	IAmb	IAmb	23 17 24.4	
	comp=Z,28nm,1.5s						
DUG	**Dugway, Tooele**	**44.96**	**352**	IAmb	IAmb	23 17 23.0	
	comp=Z,17nm,1.2s						
DUG	**Dugway, Tooele**	**44.96**	**352**	P	**P**	**23 17 21.5**	**+0.4**
	baz=170,SNR=8.8						
YERR	**Yerington**	**45.03**	**345**	IAmb	IAmb	23 17 23.7	
	comp=Z,39nm,1.5s						
X55A	**Gracelyn & Ava**	**45.04**	**29**	P	**P**	**23 17 21.3**	**-0.4**
	baz=215						
JLU	**Jordanelle**	**45.21**	**354**	P	**P**	**23 17 23.4**	**+0.2**
N23A	**Red Feather La**	**45.21**	**360**	IAmb	IAmb	23 17 47.4	
	comp=Z,24nm,1.6s						
N23A	**Red Feather La**	**45.21**	**360**	P	**P**	**23 17 23.4**	**+0.2**
	baz=180						
AFDM	**Forest Hills D**	**45.46**	**343**	IAmb	IAmb	23 17 26.4	
	comp=Z,29nm,1.6s						
PAHR	**Pah Rah Range**	**45.75**	**345**	IAmb	IAmb	23 17 31.8	
	comp=Z,23nm,1.4s						
T50A	**Nancy**	**45.77**	**24**	P	**P**	**23 17 27.1**	**-0.3**
	baz=210						
U52A	**Thorn Hill**	**45.84**	**26**	P	**P**	**23 17 28.0**	**-0.1**
	baz=212						
ELK	**Elko**	**45.87**	**350**	IAmb	IAmb	23 17 32.8	
	comp=Z,47nm,2.0s						
GDXM	**Geysers**	**45.88**	**342**	P	**P**	**23 17 27.6**	**-0.7**
GDXM				IAmb	IAmb	23 17 31.5	
	comp=Z,17nm,1.4s						
TBI	**Tubuai**	**45.99**	**242**	*e*LQ	LQ	23 28 16.0	
	comp=Z,881nm,30.2s						
TBI				*e*LR	LR	23 30 11.5	
	comp=Z,2μm,27.5s,baz=66						
TBI	**Tubuai**	**45.99**	**242**	*e*T	T	00 06 04.3	
	comp=Z,14nm,0.3s						
RWWY	**Rawlins**	**46.02**	**359**	IAmb	IAmb	23 17 30.3	
	comp=Z,37nm,1.6s						
ORV	**Oroville**	**46.17**	**343**	IAmb	IAmb	23 17 32.4	
	comp=Z,32nm,1.4s						
BW06	**Boulder Array**	**47.20**	**356**	IAmb	IAmb	23 17 44.1	
	comp=Z,28nm,1.7s						
BW06	**Boulder Array**	**47.20**	**356**	P	**P**	**23 17 38.1**	**-0.8**
	baz=175,SNR=8.1						
PD31	**Pinedale Array**	**47.20**	**356**	P	**P**	**23 17 37.2**	**-1.6**
PD31				IAmb	IAmb	23 17 44.1	
	comp=Z,26nm,1.7s						
PDAR	**Pinedale Array**	**47.20**	**356**	P	**P**	**23 17 37.1**	**-1.7**
	comp=Z,1.8nm,0.7s,baz=174,slow=6.2,SNR=14						
V58A	**Windy Hill, Pi**	**47.33**	**30**	P	**P**	**23 17 39.4**	**-0.3**
	baz=218						
HDIL	**Hopedale**	**47.39**	**17**	P	**P**	**23 17 39.8**	**-0.2**
	baz=203						
WDC	**Whiskeytown Da**	**47.42**	**343**	IAmb	IAmb	23 17 39.9	
	comp=Z,13nm,1.2s						
N02D	**Trinity Center**	**47.84**	**343**	P	**P**	**23 17 43.7**	**+0.1**
	baz=157						
REDW	**Red Top Meadow**	**47.89**	**355**	IAmb	IAmb	23 18 22.4	
	comp=Z,27nm,1.6s						
PLCA	**Paso Flores**	**48.01**	**144**	P	**P**	**23 17 46.4**	**+1.3**
	comp=Z,4.3nm,1.1s,baz=306,slow=8.7,SNR=2.4						
PLCA	**Paso Flores**	**48.01**	**144**	P	**P**	**23 17 45.3**	**+0.3**
PLCA				IAmb	IAmb	23 17 48.9	
	comp=Z,18nm,1.6s						
TPAW	**Teton Pass**	**48.02**	**355**	IAmb	IAmb	23 17 50.8	
	comp=Z,32nm,1.7s						
WVOR	**Wild Horse Val**	**48.16**	**347**	IAmb	IAmb	23 17 47.0	
	comp=Z,12nm,1.4s						
MOOW	**Mose Ponds**	**48.26**	**355**	IAmb	IAmb	23 17 46.8	
	comp=Z,12nm,1.4s						
M02C	**Callahan**	**48.26**	**343**	P	**P**	**23 17 46.5**	**-0.5**
	baz=157,SNR=5.6						
M04C	**Macdoel**	**48.34**	**344**	P	**P**	**23 17 47.0**	**-0.5**
	baz=159,SNR=9.2						
R54A	**Victor**	**48.38**	**26**	P	**P**	**23 17 47.0**	**-0.8**
	baz=214						
RSSD	**Black Hills**	**48.46**	**2**	P	**P**	**23 17 48.1**	**-0.5**
YBH	**Yreka Blue Hor**	**48.53**	**343**	P	**P**	**23 17 48.1**	**-1.0**
YBH				IAmb	IAmb	23 18 24.8	
	comp=Z,13nm,1.4s						
ECSD	**EROS Data Cent**	**48.77**	**9**	P	**P**	**23 17 49.9**	**-0.9**
ECSD	**EROS Data Cent**	**48.77**	**9**	P	**P**	**23 17 50.6**	**-0.2**
	baz=192						
N47A	**Urbana**	**48.84**	**20**	P	**P**	**23 17 50.9**	**-0.4**
	baz=207						
L04D	**Klamath Falls**	**48.87**	**344**	P	**P**	**23 17 51.4**	**-0.3**
	baz=158						
H17A	**Grant Village**	**48.89**	**356**	IAmb	IAmb	23 17 55.2	
	comp=Z,25nm,1.5s						
H17A	**Grant Village**	**48.89**	**356**	P	**P**	**23 17 52.3**	**+0.4**
	baz=174,SNR=5.4						
O50A	**Cable**	**48.95**	**23**	P	**P**	**23 17 52.0**	**-0.2**
	baz=210						
L02E	**Cave Junction**	**49.19**	**343**	P	**P**	**23 17 54.1**	**+0.2**
	baz=156						
YHB	**Horse Butte**	**49.29**	**355**	P	**P**	**23 17 54.4**	**-0.6**
RLMT	**Red Lodge**	**49.53**	**357**	IAmb	IAmb	23 18 01.8	
	comp=Z,32nm,1.7s						
RLMT	**Red Lodge**	**49.53**	**357**	P	**P**	**23 17 56.1**	**-0.6**
	baz=176						
J05D	**Fort Rock, OR**	**49.58**	**345**	P	**P**	**23 17 57.4**	**+0.3**
	baz=160,SNR=6.8						
K02D	**Willamette Mer**	**49.70**	**343**	P	**P**	**23 17 58.0**	**+0.1**
	baz=157						
PINE	**Pine Mountain**	**49.98**	**346**	P	**P**	**23 18 00.1**	**-0.1**
PINE				IAmb	IAmb	23 18 01.8	
	comp=Z,25nm,1.4s						
DLMT	**Dillon**	**50.04**	**354**	IAmb	IAmb	23 18 30.7	
	comp=Z,25nm,1.6s						
I04A	**Tendick Farm,**	**50.36**	**344**	P	**P**	**23 18 02.5**	**-0.4**
	baz=158						
CPUP	**Villa Florida**	**51.19**	**120**	P	**P**	**23 18 08.9**	**-0.6**
	comp=Z,5.2nm,0.9s,baz=295,slow=9.4,SNR=8.0						
CPUP	**Villa Florida**	**51.19**	**120**	P	**P**	**23 18 10.1**	**+0.6**
F10A	**Beach Ranch, E**	**51.29**	**350**	IAmb	IAmb	23 18 13.2	
	comp=Z,22nm,1.9s						
HAWA	**Hanford**	**52.13**	**348**	P	**P**	**23 18 15.5**	**-0.6**
HAWA				IAmb	IAmb	23 18 17.3	
	comp=Z,26nm,1.5s						
JTMT	**Jette**	**52.58**	**353**	IAmb	IAmb	23 18 30.8	
	comp=Z,18nm,1.6s						
DGMT	**Dagmar**	**52.80**	**1**	P	**P**	**23 18 20.6**	**-0.5**
	baz=182						
E04D	**Cinebar**	**52.98**	**346**	P	**P**	**23 18 22.0**	**-0.3**
	baz=159						
NEW	**Newport**	**53.49**	**351**	IAmb	IAmb	23 18 26.6	
	comp=Z,28nm,1.5s						
NEW	**Newport**	**53.49**	**351**	P	**P**	**23 18 25.9**	**-0.2**
	baz=166						
EYMN	**Ely**	**53.77**	**12**	IAmb	IAmb	23 18 31.9	
	comp=Z,30nm,1.4s						
WALA	**Waterton Lakes**	**53.83**	**353**	IAmb	IAmb	23 19 24.1	
	comp=Z,25nm,1.5s						
ULM	**Lac du Bonnet**	**55.25**	**8**	P	**P**	**23 18 37.0**	**-1.8**
	comp=Z,6.7nm,1.0s,baz=233,slow=4.8,SNR=4.8						
ULM	**Lac du Bonnet**	**55.25**	**8**	IAmb	IAmb	23 19 16.8	
	comp=Z,30nm,1.6s						
H61A	**Lyndonville**	**57.56**	**28**	P	**P**	**23 18 55.1**	**-0.4**
	baz=221						
D54A	**Lac Fusel, La**	**57.57**	**23**	P	**P**	**23 18 55.2**	**-0.2**
	baz=215						
BDFB	**Brasilia**	**57.88**	**106**	P	**P**	**23 18 57.8**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=312,slow=6.0,SNR=4.2						
BDFB	**Brasilia**	**57.88**	**106**	IAmb	IAmb	23 18 59.2	
	comp=Z,7.1nm,1.1s						
USHA	**Ushuaia**	**58.54**	**156**	LR	LR	23 38 27.3	
	comp=Z,1μm,18.8s,baz=339,slow=30						
FCC	**Fort Churchill**	**63.80**	**7**	P	**P**	**23 19 36.5**	**-1.2**
YKA	**Yellowknife Ar**	**67.17**	**356**	P	**P**	**23 19 57.2**	**-2.2**
	comp=Z,2.6nm,0.9s,baz=164,slow=6.3,SNR=12						
VRDI	**Verde Repeater**	**71.72**	**342**	P	**P**	**23 20 28.0**	**+0.1**
GLB	**Gilahina Butte**	**72.00**	**342**	IAmb	IAmb	23 20 29.3	
	comp=Z,18nm,1.2s						
DAWY	**Dawson**	**72.84**	**345**	IAmb	IAmb	23 20 39.5	
	comp=Z,20nm,1.4s						
KNK	**Knik Glacier**	**73.48**	**340**	IAmb	IAmb	23 20 37.5	
	comp=Z,24nm,1.2s						
PAX	**Paxson**	**73.67**	**342**	P	**P**	**23 20 37.9**	**-1.4**
PAX				IAmb	IAmb	23 20 46.7	
	comp=Z,30nm,1.7s						
PMR	**Palmer**	**73.84**	**340**	IAmb	IAmb	23 20 40.0	
	comp=Z,23nm,1.2s						
EGAK	**Eagle**	**73.87**	**345**	IAmb	IAmb	23 20 45.3	
	comp=Z,19nm,1.1s						
SCRK	**Sand Creek**	**74.00**	**344**	P	**P**	**23 20 40.3**	**-1.0**
SCRK				IAmb	IAmb	23 20 41.4	
	comp=Z,23nm,1.5s						
DHY	**Denali Highway**	**74.33**	**342**	IAmb	IAmb	23 20 47.1	
	comp=Z,13nm,1.2s						
RND	**Reindeer**	**75.04**	**341**	P	**P**	**23 20 45.5**	**-1.7**
INK	**Inuvik**	**75.20**	**350**	IAmb	IAmb	23 20 53.0	
	comp=Z,34nm,1.6s						
MCK	**McKinley**	**75.30**	**342**	IAmb	IAmb	23 20 53.3	
	comp=Z,25nm,1.2s						
ILAR	**Eielson Array**	**75.43**	**343**	P	**P**	**23 20 47.0**	**-2.4**
	comp=Z,4.1nm,0.9s,baz=157,slow=5.3,SNR=23						
TRF	**Thorofare Moun**	**75.53**	**341**	IAmb	IAmb	23 20 54.5	
	comp=Z,27nm,1.3s						
WRH	**Wood

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.70**	**44**	Pn	**Pn**	**23 12 11.2**	**+1.5**
	473nm,0.3s,baz=175,slow=1.2,SNR=96						
AFI				Sn	**Sn**	**23 12 30.4**	**-1.2**
	1μm,0.3s,baz=193,slow=20,SNR=8.2						
AFI				LR	LR	23 12 46.7	
	comp=Z,833nm,20.2s,baz=243,slow=31						
AFI	**Afiamalu**	**1.70**	**44**		**Pn**	**23 12 10.8**	**+1.1**
AFI					**Sn**	**23 12 30.1**	**-1.4**
NIUE	**Niue**	**4.89**	**144**		**Pn**	**23 12 54.9**	**+1.2**
MSVF	**Nonsavu**	**8.97**	**252**		**Pn**	**23 13 53.7**	**+4.0**
KNTN	**Kanton**	**12.35**	**6**	Pn	**Pn**	**23 14 33.8**	**-2.1**
DZM	**Mont Dzumac**	**20.66**	**247**	P	**P**	**23 16 13.7**	**-6.4**
	6.7nm,1.0s,baz=112,slow=16,SNR=3.0						
DZM				LR	LR	23 22 58.1	
	comp=Z,387nm,19.5s,baz=30,slow=34						
DZM	**Mont Dzumac**	**20.66**	**247**	P	**P**	**23 16 16.6**	**-3.5**
DZM				IAmb	IAmb	23 16 22.9	
	comp=Z,43nm,1.2s						
THZ	**Tophouse**	**29.20**	**202**	P	**P**	**23 17 39.8**	**-1.9**
H11S2	**WAKE ISLAND Hy**	**38.94**	**328**	T	T	23 59 49.2	
	baz=63,slow=74,SNR=67						
H11S3	**WAKE ISLAND Hy**	**38.96**	**328**	T	T	23 59 46.9	
	baz=146,slow=74,SNR=47						
H11S1	**WAKE ISLAND Hy**	**38.96**	**328**	T	T	00 00 22.5	
	SNR=20						
H11N3	**WAKE ISLAND Hy**	**39.88**	**330**	T	T	00 01 56.4	
	baz=149,slow=76,SNR=12						
H11N1	**WAKE ISLAND Hy**	**39.89**	**330**	T	T	00 01 45.8	
	baz=149,slow=76,SNR=13						
H11N2	**WAKE ISLAND Hy**	**39.90**	**330**	T	T	00 01 55.8	
	baz=149,slow=76,SNR=15						
STKA	**Stephens Creek**	**44.50**	**240**	P	P	23 19 46.8	-5.1
	comp=Z,5.7nm,0.8s,baz=61,slow=7.6,SNR=8.1						
STKA	**Stephens Creek**	**44.50**	**240**	IAmb	IAmb	23 19 47.8	
	comp=Z,1.3nm,0.8s						
WRA	**Warramunga Arr**	**50.28**	**257**	P	P	23 20 31.7	-5.3
	comp=Z,1.6nm,0.5s,baz=92,slow=7.1,SNR=25						
AS31	**Alice Springs**	**50.56**	**252**	P	P	23 20 34.4	-4.7
AS31				IAmb	IAmb	23 20 46.1	
	comp=Z,5.4nm,0.7s						
ASAR	**Alice Springs**	**50.56**	**252**	P	P	23 20 33.6	-5.5
	comp=Z,13nm,0.6s,baz=86,slow=8.2,SNR=127						
VNDA	**Vanda**	**63.67**	**186**	P	**P**	**23 22 10.9**	**-0.1**
	comp=Z,5.8nm,1.0s,baz=13,slow=6.9,SNR=5.8						
H06S1	**SOCORRO T**	**69.74**	**63**	T	T	00 39 26.8	
	SNR=5.5						
H06E1	**SOCORRO T-PHAS**	**69.79**	**63**	T	T	00 39 15.3	
	SNR=9.0						
PETK	**Petropavlovsk-**	**72.50**	**342**	P	**P**	**23 23 06.0**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=145,slow=11,SNR=2.7						
BEKR	**Beckworth**	**73.42**	**40**	P	P	23 23 08.4	-4.2
BEKR				IAmb	IAmb	23 23 17.3	
	comp=Z,6.7nm,1.1s						
NVAR	**Mina Array Bea**	**73.88**	**42**	P	**P**	**23 23 17.8**	**+2.3**
	comp=Z,2.0nm,0.6s,baz=228,slow=9.5,SNR=19						
KVN	**Kaiserville**	**74.36**	**41**	P	**P**	**23 23 19.8**	**+1.6**
KVN				IAmb	IAmb	23 23 21.5	
	comp=Z,6.9nm,1.3s						
QSPA	**South Pole Qui**	**74.90**	**180**	P	**P**	**23 23 20.9**	**0.0**
PINE	**Pine Mountain**	**75.46**	**36**	P	**P**	**23 23 24.5**	**0.0**
PINE				IAmb	IAmb	23 23 28.2	
	comp=Z,8.4nm,0.9s						
X16A	**Lo Mia Camp, P**	**76.45**	**48**	P	**P**	**23 23 30.0**	**-0.4**
TXAR	**Lajitas Array**	**80.14**	**56**	P	**P**	**23 23 53.1**	**+2.3**
	comp=Z,1.4nm,1.0s,baz=222,slow=9.1,SNR=8.6						
NJ2	**Nanjing**	**80.32**	**307**	*e*P	**P**	**23 23 53.2**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
S22A	**4UR Ranch, Cre**	**81.31**	**47**	P	**P**	**23 23 55.5**	**-1.6**
SNOW	**Snow King Moun**	**81.39**	**41**	P	**P**	**23 23 56.2**	**-1.2**
WRH	**Wood River Hil**	**81.62**	**11**	P	**P**	**23 23 58.2**	**+0.4**
HDA	**Harding Lake**	**81.78**	**11**	P	**P**	**23 23 57.1**	**-1.5**
HDA				IAmb	IAmb	23 24 13.7	
	comp=Z,7.3nm,0.9s						
CCB	**Clear Creek Bu**	**81.84**	**11**	IAmb	IAmb	23 24 00.2	
	comp=Z,7.1nm,0.8s						
SCRK	**Sand Creek**	**81.97**	**12**	P	**P**	**23 23 59.3**	**-0.5**
SCRK				IAmb	IAmb	23 24 01.6	
	comp=Z,4.0nm,0.8s						
IL31		**82.12**	**11**	P	**P**	**23 23 59.8**	**-0.5**
ILAR	**Eielson Array**	**82.12**	**11**	P	**P**	**23 24 00.5**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=228,slow=6.5,SNR=28						
PRP	**Porcupine Dome**	**83.04**	**11**	P	**P**	**23 24 03.7**	**-1.6**
PRP				IAmb	IAmb	23 24 06.4	
	comp=Z,5.6nm,1.0s						
RLMT	**Red Lodge**	**83.15**	**40**	P	**P**	**23 24 05.1**	**-1.4**
RLMT				IAmb	IAmb	23 24 09.2	
	comp=Z,3.3nm,0.7s						
MAW	**Mawson**	**88.16**	**199**	P	**P**	**23 24 29.1**	**-1.7**
	comp=Z,2.3nm,0.7s,baz=148,slow=12,SNR=7.7						
MAW				LR	LR	00 01 03.6	
	comp=Z,2μm,21.2s,baz=213,slow=34						
MAW	**Mawson**	**88.16**	**199**	IAmb	IAmb	23 24 40.8	
	comp=Z,2.7nm,0.8s						
HHC	**Hu-ho-hao-te**	**89.14**	**313**	*e*P	**P**	**23 24 37.6**	**+1.6**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,50nm,5.7s						
YKA	**Yellowknife Ar**	**89.70**	**23**	P	**P**	**23 24 38.5**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=237,slow=4.7,SNR=13						
CD2	**Chengdu**	**92.01**	**301**	P	**P**	**23 24 49.2**	**-0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SNAA	**Sanae**	**93.14**	**177**	P	**P**	**23 24 53.3**	**-0.8**
KSH	**Kashi**	**115.63**	**307**	PKP	**PKPdf**	**23 30 23.3**	**+0.4**
KSH				sPKP		23 30 37.2	
KSH				PP	PP	23 31 34.5	+9.0
KSH				AMB	AMB		
	comp=Z,300nm,4.4s						
ARCES	**ARCESS Array B**	**124.41**	**352**	PKP	**PKPdf**	**23 30 37.5**	**-1.3**
	comp=Z,2.6nm,0.7s,baz=351,slow=1.6,SNR=8.1						
OSTC	**Ostas**	**143.90**	**350**	*e*PKP	PKPab	23 31 13.6	+0.9
DPC	**Dobruska-Polom**	**144.08**	**350**	*e*PKP	**PKPab**	**23 31 13.9**	**+0.5**
BUR08	**Bucovina Ar. S**	**144.25**	**339**		**PKPab**	**23 31 14.3**	**+0.1**
MOX	**Moxa**	**144.39**	**355**	*e*PKPbc	**PKPab**	**23 31 15.1**	**+0.6**
	baz=6.1,slow=2.8						
MORC	**Moravsky Berou**	**144.40**	**348**	*e*PKP	**PKPab**	**23 31 15.3**	**+0.7**
BIZ	**Bicaz**	**144.52**	**337**	⇑P	**PKPab**	**23 31 14.6**	**-0.5**
TANN	**Tannenbergstha**	**144.54**	**354**	*e*PKPbc	**PKPab**	**23 31 15.6**	**+0.4**
	baz=6.1,slow=2.8						
GUNZ	**Gunzen**	**144.60**	**354**	*e*PKPbc	**PKPab**	**23 31 15.8**	**+0.4**
	baz=6.1,slow=2.8						
TESR	**Tescani**	**144.67**	**336**	⇓P	**PKPab**	**23 31 14.9**	**-0.8**
WERN	**Wernitzgruen**	**144.67**	**354**	*e*PKPbc	**PKPab**	**23 31 16.0**	**+0.4**
	baz=6.1,slow=2.8						
TRPA	**Tarpa**	**144.69**	**342**	⇓P	**PKPab**	**23 31 15.2**	**-0.5**
PRU	**Pruhonice**	**144.71**	**352**	*e*PKP	**PKPab**	**23 31 15.4**	**-0.3**
PRU				*ex*	x	23 31 27.2	
TNS	**Taunus Mts**	**144.99**	**358**	*e*PKPbc	**PKPab**	**23 31 16.5**	**-0.3**
	baz=6.1,slow=2.8						
MANZ	**Manzenberg**	**145.00**	**354**	*e*PKPbc	**PKPab**	**23 31 16.4**	**-0.4**
	baz=6.1,slow=2.8						
ARCR	**ARCALIA**	**145.02**	**339**	⇓P	**PKPab**	**23 31 16.8**	**-0.1**
VRAC	**Vranov**	**145.03**	**349**	⇓P	**PKPab**	**23 31 17.0**	**0.0**
VRAC	**Vranov**	**145.03**	**349**	*e*PKP	**PKPab**	**23 31 16.8**	**-0.1**
CFR	**Carcaliu**	**145.14**	**334**	⇑P	**PKPbc**	**23 31 17.5**	**+0.1**
VRI	**Vrincioaia**	**145.17**	**336**	⇑P	**PKPbc**	**23 31 16.7**	**-0.8**
ROTZ	**Rotzenmuhle**	**145.21**	**354**	*e*PKPbc	**PKPbc**	**23 31 17.3**	**-0.1**
	baz=6.1,slow=2.8						
PLOR	**Plostina**	**145.22**	**336**	⇑P	**PKPbc**	**23 31 16.8**	**-0.9**
JAVC	**Velka Javorina**	**145.25**	**348**	*e*PKP	**PKPbc**	**23 31 18.1**	**+0.4**
TOPG	**Topolog**	**145.28**	**333**	⇓P	**PKPbc**	**23 31 17.4**	**-0.4**
KRUC	**Moravsky**	**145.30**	**349**	*e*PKP	**PKPbc**	**23 31 17.2**	**-0.6**
VYHS	**Vyhne**	**145.34**	**346**	*e*PKP	**PKPbc**	**23 31 17.5**	**-0.4**
OZUR		**145.35**	**337**	⇓P	**PKPbc**	**23 31 17.8**	**-0.2**
KOLL	**Kolacno**	**145.36**	**347**	*e*PKP	**PKPbc**	**23 31 18.3**	**+0.3**
GRF	**Grafenberg Arr**	**145.37**	**355**	*e*PKPbc	**PKPbc**	**23 31 17.7**	**-0.2**
	baz=6.1,slow=2.8						
WLF	**Walferdange**	**145.56**	**1**	*e*PKPbc	**PKPdf**	**23 31 18.6**	**+0.1**
	baz=6.1,slow=2.8						
WLF	**Walferdange**	**145.56**	**1**	PKPdf	**PKPdf**	**23 31 19.0**	**+0.6**
WLF				PKiKP	**pPKPdf**	**23 31 23.4**	**+3.6**
CJR	**Cluj-Napoca**	**145.60**	**340**	⇓P	**PKPdf**	**23 31 18.5**	**-0.2**
DOPR	**Dopca**	**145.61**	**337**	⇑P	**PKPdf**	**23 31 18.7**	**0.0**
SMOL	**Smolenice**	**145.63**	**348**	*e*PKP	**PKPdf**	**23 31 19.0**	**+0.4**
KHC	**Kasperske Hory**	**145.68**	**352**	*e*PKP	**PKPdf**	**23 31 18.8**	**0.0**
KHC	**Kasperske Hory**	**145.68**	**352**		**PKPdf**	**23 31 18.7**	**0.0**
WET	**Wettzell**	**145.75**	**353**	*e*PKPbc	**PKPdf**	**23 31 19.0**	**+0.2**
	baz=6.1,slow=2.8						
MLR	**Muntele Rosu**	**145.79**	**336**	⇑P	**PKPdf**	**23 31 18.5**	**-0.7**
MLR	**Muntele Rosu**	**145.79**	**336**		**PKPdf**	**23 31 18.7**	**-0.5**
MODS	**Modra-Piesok**	**145.79**	**348**	*e*PKP	**PKPdf**	**23 31 18.7**	**-0.2**
DRGR		**145.83**	**341**	⇑P	**PKPdf**	**23 31 18.6**	**-0.5**
ISR	**Istrita**	**145.86**	**335**	⇓P	**PKPdf**	**23 31 19.4**	**+0.2**
GEC2	**GERESS Array S**	**145.94**	**352**	*e*PKPbc	**PKPdf**	**23 31 19.6**	**+0.3**
	baz=6.1,slow=2.8						
GERES	**GERESS Array B**	**145.94**	**352**	PKPbc	**PKPdf**	**23 31 19.6**	**+0.3**
	comp=Z,5.5nm,1.0s,baz=20,slow=3.2,SNR=30						
KMBO	**Kilima Mbogo**	**146.00**	**244**	PKPbc	**PKPdf**	**23 31 19.4**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=51,slow=9.8,SNR=3.9						
VOIR		**146.18**	**337**	⇓P	**PKPdf**	**23 31 20.7**	**+0.9**
BRTR	**Keskin Array B**	**146.20**	**322**	PKPbc	**PKPdf**	**23 31 19.6**	**-0.4**
	comp=Z,4.9nm,0.7s,baz=106,slow=2.6,SNR=33						
ARR	**Arges**	**146.40**	**337**	⇓P	**PKPdf**	**23 31 21.8**	**+1.6**
CONA	**Conrad Observa**	**146.49**	**349**	*i* pPKPdf	**PKPdf**	**23 31 21.1**	**+0.8**
	comp=Z,8.1nm,1.0s						
DEV	**Deva**	**146.56**	**340**	⇓P	**PKPdf**	**23 31 21.4**	**+1.2**
SIRR	**Siria**	**146.62**	**341**	⇓P	**PKPdf**	**23 31 21.4**	**+1.0**
MOA	**Molln**	**146.83**	**351**	*i* PKPab	**PKPdf**	**23 31 21.7**	**+0.9**
	comp=Z,8.9nm,1.2s						
FUR	**Furstenfeldbru**	**146.88**	**355**	*e*PKPbc	**PKPdf**	**23 31 22.2**	**+1.4**
	baz=6.1,slow=2.8						
BFO	**Black Forest**	**146.88**	**358**	*e*PKPbc	**PKPdf**	**23 31 22.2**	**+1.3**
	baz=6.1,slow=2.8						
BFO	**Black Forest**	**146.88**	**358**		**PKPdf**	**23 31 22.0**	**+1.2**
GZR	**Gura Zlata**	**147.04**	**339**	⇓P	**PKPdf**	**23 31 22.4**	**+1.2**
RJOB	**Jochberg**	**147.14**	**353**	*e*PKPbc	**PKPdf**	**23 31 23.0**	**+1.7**
	baz=6.1,slow=2.8						
ARSA	**Arzberg**	**147.21**	**349**	*i* PKPab	**PKPdf**	**23 31 23.3**	**+1.9**
	comp=Z,5.9nm,1.1s						
BZS	**Buzias**	**147.22**	**341**	⇓P	**PKPdf**	**23 31 22.9**	**+1.5**
UBR	**Ueberruh**	**147.45**	**356**	*e*PKPbc	**PKPdf**	**23 31 23.5**	**+1.7**
	baz=6.1,slow=2.8						
RETA	**Reutte**	**147.60**	**355**	*i* PKPab	**PKPdf**	**23 31 24.0**	**+1.9**
	comp=Z,6.3nm,1.1s						
WATA	**Walderalm**	**147.67**	**354**	*i* PKPab	**PKPdf**	**23 31 24.2**	**+1.9**
	comp=Z,6.2nm,1.0s						
MOTA	**Moosalm**	**147.71**	**355**	*i* PKPab	**PKPdf**	**23 31 24.3**	**+1.9**
	comp=Z,8.6nm,0.9s						
KBA	**Koelnbreinsper**	**147.72**	**352**	*i* pPKPdf	**PKPdf**	**23 31 23.9**	**+1.5**
	comp=Z,2.9nm,0.6s						
SQTA	**Sankt Quirin**	**147.82**	**355**	*i* pPKPdf	**PKPdf**	**23 31 24.5**	**+2.0**
	comp=Z,5.9nm,1.0s						
SOKA	**Soboth**	**147.85**	**350**	*i* pPKPdf	**PKPdf**	**23 31 24.3**	**+1.7**
	comp=Z,8.7nm,1.0s,SNR=5.3						
DAVA	**Damuels**	**147.86**	**356**	*i* PKPab	**PKPdf**	**23 31 25.2**	**+2.5**
	comp=Z,9.5nm,0.9s						
MDVR	**Moldovita**	**147.93**	**340**	⇑P	**PKPdf**	**23 31 25.6**	**+2.9**
FETA	**Feichten**	**148.06**	**355**	*i* PKiKP	**PKPdf**	**23 31 26.0**	**+3.0**
	comp=Z,7.0nm,1.1s						
OBKA	**Obir**	**148.09**	**350**	*i* pPKPdf	**PKPdf**	**23 31 24.9**	**+2.0**
	comp=Z,4.3nm,0.8s						
MYKA	**Terra Mystica**	**148.12**	**351**	*i* pPKPdf	**PKPdf**	**23 31 24.5**	**+1.5**
	comp=Z,5.1nm,0.7s						
ABTA	**Abfaltersbach**	**148.15**	**353**	*i* pPKPdf	**PKPdf**	**23 31 25.0**	**+2.0**
	comp=Z,13nm,1.0s,SNR=6.3						
FUORN	**Ofenpass-Fuorn**	**148.50**	**356**		**PKPdf**	**23 31 26.8**	**+3.0**
TEOL	**Teolo**	**149.62**	**353**		**PKPdf**	**23 31 29.3**	**+3.9**
SSB	**Saint Sauveur**	**149.88**	**3**		**PKPdf**	**23 31 30.0**	**+4.1**
BNI	**Bardonecchia**	**150.18**	**0**		**PKPbc**	**23 31 31.2**	**-0.3**
PDG	**Podgorica**	**150.83**	**341**	⇓P	**PKPdf**	**23 31 32.1**	**+4.8**
MURB	**Monte Urbino**	**151.57**	**352**		**PKPbc**	**23 31 34.0**	**-0.7**
NRCA	**Norcia**	**151.91**	**350**		**PKPdf**	**23 31 33.9**	**+4.9**
INTR	**Introdacqua**	**152.57**	**349**		**PKPdf**	**23 31 35.5**	**+5.4**
ESDC	**Sonseca Array**	**153.74**	**19**	PKPbc	**PKPbc**	**23 31 41.1**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=301,slow=4.5,SNR=3.1						
ESDC				PKPab	**PKPab**	**23 31 52.2**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=335,slow=5.1,SNR=6.0						

ROM 07 23:19:42.1±0.2, 43°38.78N±0.004 × 12°52.5E±0.009, h6km±1km, ML1.3/6, Error ellipse: s-maj=0.7km s-min=0.2km az=263.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.04**	**109**	P	Pg	23 19 43.4	-0.1
ATFO				S	Sg	23 19 44.5	0.0
ATPI	**Pietralunga -**	**0.12**	**309**	P	Pg	23 19 44.8	+0.1
ATPI				S	Sg	23 19 47.0	+0.7
ATPI				AML	AML		
	comp=E,199μm,1.2s						
ATPI				AML	AML		
	comp=N,394μm,0.1s						
MURB	**Monte Urbino**	**0.12**	**180**	P	Pg	23 19 44.8	+0.2
MURB				S	Sg	23 19 47.3	+1.0
MURB				AML	AML		
	comp=E,412μm,0.3s						
MURB				AML	AML		
	comp=N,372μm,0.2s						
MURB				AML	AML		
	comp=E,412μm,0.3s						
PIEI	**Pieia**	**0.16**	**3**	*e*P	Pg	23 19 46.0	+0.6
PIEI				S	Sg	23 19 49.1	+1.6
PIEI				AML	AML		
	comp=E,344μm,0.4s						
PIEI				AML	AML		
	comp=N,253μm,0.3s						
FRON	**Frontone**	**0.20**	**46**	P	Pg	23 19 46.5	+0.3
FRON				S	Sg	23 19 50.3	+1.5
FRON				AML	AML		
	comp=E,98μm,0.1s						
FRON				AML	AML		
	comp=E,98μm,0.1s						
FRON				AML	AML		
	comp=N,246μm,0.1s						
ATCC	**AVT- Casa Cast**	**0.21**	**156**	P	Pg	23 19 46.8	+0.5
ATCC				S	Sg	23 19 50.9	+1.8
ATCC				AML	AML		
	comp=E,94μm,0.6s						
ATCC				AML	AML		
	comp=N,106μm,0.3s						
ATCC				AML	AML		
	comp=N,106μm,0.3s						
ATCC				AML	AML		
	comp=E,94μm,0.6s						
NARO	**Abbazia di Nar**	**0.24**	**10**	P	Pg	23 19 47.1	+0.3
NARO				S	Sg	23 19 51.4	+1.5
NARO				AML	AML		
	comp=E,61μm,1.2s						
NARO				AML	AML		
	comp=N,52μm,1.6s						

ROM 07 23:30:30.6±0.1, 43°38.6N±0.003 × 12°51.7E±0.005, h6km±1km, ML0.4/1, Error ellipse: s-maj=0.4km s-min=0.1km az=265.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.04**	**116**	P	Pg	23 30 32.0	0.0
ATFO				S	Sg	23 30 33.2	+0.2
ATFO				AML	AML		
	comp=E,69μm,1.1s						
ATFO				AML	AML		
	comp=N,64μm,0.2s						
ATVO	**AVT- Monte Val**	**0.08**	**267**	P	Pg	23 30 32.7	+0.2
ATVO				S	Sg	23 30 34.3	+0.5
MURB	**Monte Urbino**	**0.12**	**177**	P	Pg	23 30 33.5	+0.3
MURB				S	Sg	23 30 36.1	+1.1
MURB				AML	AML		
	comp=N,28μm,0.4s						
MURB				AML	AML		
	comp=E,31μm,0.8s						
PIEI	**Pieia**	**0.15**	**5**	P	Pg	23 30 34.1	+0.4
PIEI				S	Sg	23 30 36.9	+1.1
CEY	**Cerknica**	**2.72**	**29**	*e*P	Pg	23 31 27.1	+4.4
CRNS	**Crni Vrh**	**2.97**	**24**	*i* PKPbc	Pg	23 31 26.1	-1.4
LJU	**Ljubljana**	**3.02**	**28**	*i* PKPbc	Pb	23 31 26.4	+1.6
CRES	**Cresnjev**	**3.22**	**40**	*e*P	Pb	23 31 26.3	-1.9
BLY	**Banja Luka**	**3.63**	**66**		Pn	23 31 28.5	+1.1
BLY	**Banja Luka**	**3.63**	**66**	*e*P	Pn	23 31 28.1	+0.7

*NEIC **07** 23:32:48.3±1.4, 5.79N±0.08 × 126.4E±0.2, h68km±7km, mb4.4/20, Error ellipse: s-maj=23.3km s-min=8.5km az=66.0*

*IDC **07** 23:32:49.2±1.8, 5.79N × 126.49E, h71km±14km, mb3.7/14, mb1 3.9/14, mb1mx3.6/44, mbtmp4.0/14, Error ellipse: s-maj=36.8km s-min=11.4km az=68.0*

ISC 07 23:32:48.7±0.5, 5.70N±0.06 × 126.27E±0.10, h66km, n47, σ1°02/50, mb4.3/27, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.36**	**286**	⇑*i* P	**Pn**	**23 33 09.7**	**-2.2**
GSPH				*i* S	**Sn**	**23 33 30.2**	**+1.0**
DAV	**Davao City (W)**	**1.52**	**333**	P	**Pn**	**23 33 13.9**	**+0.1**
	325nm,0.3s,baz=177,slow=2.2,SNR=14						
DAV				S	**Sn**	**23 33 34.7**	**+2.0**
	237nm,0.3s,baz=117,slow=14,SNR=5.8						
DAV				LR	LR	23 33 43.5	
	comp=Z,166nm,21.7s,baz=168,slow=35						
DAV	**Davao City (W)**	**1.52**	**333**		**Pn**	**23 33 13.7**	**-0.1**
DMPH	**Davao City--Mi**	**1.56**	**331**	*e*P	**Pn**	**23 33 14.1**	**-0.3**
CGP	**Cagayan de Oro**	**3.15**	**330**	⇓P	**Pn**	**23 33 38.0**	**+2.1**
TNTI	**Ternate**	**5.02**	**167**	Pn	**Pn**	**23 34 01.9**	**+0.4**
LUWI	**Luwuk**	**7.55**	**208**	Pn	**Pn**	**23 34 37.7**	**+1.5**
KNRA	**Kununurra**	**21.39**	**173**	P	**P**	**23 37 30.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**23.66**	**181**	P	**P**	**23 37 55.2**	**+0.9**
	2.2nm,0.9s,baz=357,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**26.69**	**163**	P	**P**	**23 38 22.9**	**+1.0**
	1.2nm,0.6s,baz=343,slow=10,SNR=9.5						
CMAR	**Chiang Mai Arr**	**29.51**	**298**	P	**P**	**23 38 49.2**	**+2.2**
	0.9nm,0.4s,baz=107,slow=5.8,SNR=3.4						
CMAR				PcP	**PcP**	**23 41 52.6**	**+1.4**
	0.6nm,0.3s,baz=94,slow=0.5,SNR=4.8						
ASAR	**Alice Springs**	**30.13**	**166**	P	**P**	**23 38 51.1**	**-1.3**
	0.4nm,0.5s,baz=346,slow=7.1,SNR=8.1						
ASAR				PcP	**PcP**	**23 41 53.4**	**+0.7**
	0.5nm,0.5s,baz=352,slow=2.5,SNR=5.5						
XAN	**Xi'an**	**32.46**	**333**	P	**P**	**23 39 12.2**	**-0.7**
SHL	**Shillong**	**38.36**	**305**	P	**P**	**23 40 04.5**	**+0.6**
SHL				IAmb	IAmb	23 40 08.3	
	comp=Z,3.8nm,0.8s						
STKA	**Stephens Creek**	**40.13**	**160**	P	**P**	**23 40 18.6**	**+0.4**
	comp=Z,3.9nm,0.8s,baz=325,slow=8.4,SNR=5.5						
H11S3	**WAKE ISLAND Hy**	**41.40**	**68**	T	T	00 24 25.2	
	baz=316,slow=74,SNR=5.7						
H11S2	**WAKE ISLAND Hy**	**41.42**	**69**	T	T	00 24 27.7	
	baz=252,slow=74,SNR=5.9						
TAPN	**Taplejung**	**42.50**	**305**	*e*P	**P**	**23 40 38.5**	**+0.4**
	comp=Z,3.3nm,0.6s						
ODAN	**Odare**	**42.57**	**304**	*e*P	**P**	**23 40 40.5**	**+1.8**
	comp=Z,7.0nm,0.6s						
RAMN	**Ramite**	**43.26**	**304**	*e*P	**P**	**23 40 46.1**	**+1.9**
	comp=Z,8.5nm,0.6s						
GUN	**Gumba**	**44.21**	**305**	*e*P	**P**	**23 40 52.5**	**+0.5**
	comp=Z,8.7nm,0.6s						
ULN	**Ulaanbaatar**	**45.11**	**342**	P	**P**	**23 40 59.0**	**+0.4**
SONM	**Songino Array**	**45.29**	**341**	P	**P**	**23 40 59.6**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=151,slow=8.1,SNR=4.9						
SONM				PcP	**PcP**	**23 42 38.6**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=150,slow=2.8,SNR=2.5						
DANN	**Dangsing**	**46.12**	**304**	*e*P	**P**	**23 41 08.1**	**+1.1**
	comp=Z,1.1nm,0.7s						
MK31	**Makanchi Array**	**55.69**	**325**	P	**P**	**23 42 17.6**	**-0.7**
MK31				IAmb	IAmb	23 42 19.6	
	comp=Z,5.6nm,1.5s						
MKAR	**Makanchi Array**	**55.69**	**325**	P	**P**	**23 42 18.9**	**+0.6**
	comp=Z,1.4nm,0.4s,baz=116,slow=7.6,SNR=40						
MKAR				PcP	**PcP**	**23 43 17.1**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=108,slow=3.8,SNR=4.1						
MAKZ	**Makanchi**	**55.87**	**325**	P	**P**	**23 42 20.0**	**+0.4**
MAKZ				IAmb	IAmb	23 42 41.7	
	comp=Z,7.1nm,1.4s						
NIL	**Nilore**	**56.37**	**307**	P	**P**	**23 42 23.9**	**+0.4**
ZALV	**Zalesovo Beam**	**58.63**	**333**	P	**P**	**23 42 38.2**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=129,slow=6.6,SNR=4.0						
KURK	**Kurchatov**	**59.84**	**327**	P	**P**	**23 42 46.8**	**-0.5**
KBL	**Kabul**	**59.97**	**307**	P	**P**	**23 42 48.6**	**-0.2**
BTK	**Batken**	**60.23**	**313**	P	**P**	**23 42 50.5**	**+0.2**
BTK				IAmb	IAmb	23 43 12.1	
	comp=Z,3.0nm,0.7s						
GAR	**Garm**	**60.26**	**312**	P	**P**	**23 42 50.9**	**+0.3**
CHGR	**Chuyangaron**	**61.02**	**311**	P	**P**	**23 42 55.4**	**-0.4**

KPJI				S	**Sn**	**00 09 13.6**	**+0.9**	
CISI	**Cisompet, Garu**	**1.02**	**308**	P	**Pn**	**00 09 00.6**	**-0.8**	
CISI				S	**Sn**	**00 09 14.8**	**-0.5**	
LEM	**Lembang**	**1.68**	**324**	P	**Pn**	**00 09 10.7**	**+0.5**	
LEM				S	**Sn**	**00 09 32.5**	**+1.5**	
YOGI	**Yogyakarta**	**1.70**	**77**	P	**Pn**	**00 09 09.6**	**-0.6**	
CNJI	**Cibinong**	**1.72**	**301**	P	**Pn**	**00 09 10.7**	**+0.2**	
CNJI				S	**Sn**	**00 09 31.4**	**-0.2**	
UGM	**Wanagama**	**1.90**	**82**	P	**Pn**	**00 09 12.8**	**-0.1**	
UGM				S	**Sn**	**00 09 35.8**	**-0.2**	
SMRI	**Semarang**	**2.13**	**58**	P	**Pn**	**00 09 16.3**	**+0.3**	
SMRI				S	**Sn**	**00 09 42.8**	**+1.3**	
WOJI	**Wonogiri, Jawa**	**2.31**	**81**	P	**Pn**	**00 09 18.3**	**0.0**	
WOJI				S	**Sn**	**00 09 45.5**	**-0.2**	
PCJI	**Pacitan**	**2.53**	**90**	P	**Pn**	**00 09 21.7**	**+0.3**	
PCJI				S	**Sn**	**00 09 51.5**	**+0.4**	
UWJI	**Ujung Watu**	**2.90**	**53**	P	**Pn**	**00 09 24.8**	**-1.7**	
NGJI	**Ngawi**	**2.93**	**74**	P	Pn	00 09 39.7	+13	
JAGI	**Jajag, Banyuwa**	**5.48**	**93**	P	**Pn**	**00 10 02.4**	**+0.7**	
WRA	**Warramunga Arr**	**27.49**	**118**	P	**P**	**00 14 22.1**	**-0.6**	
	0.5nm,0.9s,baz=291,slow=11,SNR=4.0							
ASAR	**Alice Springs**	**28.69**	**125**	P	**P**	**00 14 33.0**	**-0.3**	
	0.8nm,0.8s,baz=305,slow=8.6,SNR=7.0							
H08S2	**Diego Garcia H**	**35.78**	**268**	T	T	00 53 11.4		
	baz=93,slow=74							
H08S3	**Diego Garcia H**	**35.79**	**268**	T	T	00 53 24.9		
	baz=93,slow=74							
H08S1	**Diego Garcia H**	**35.80**	**268**	T	T	00 52 58.0		
	baz=93							
STKA	**Stephens Creek**	**38.65**	**132**	P	**P**	**00 15 59.7**	**+0.1**	
	2.0nm,0.3s,baz=310,slow=9.5,SNR=9.2							
STKA				LR	LR	00 31 30.6		
	comp=Z,204nm,20.8s,baz=325,slow=35							
MKAR	**Makanchi Array**	**59.55**	**339**	P	P	00 18 35.1	-3.9	
	0.2nm,0.7s,baz=136,slow=7.0,SNR=2.4							
BRTR	**Keskin Array B**	**83.82**	**311**	LR	LR	01 00 18.9		
	comp=Z,140nm,20.3s,baz=112,slow=37							

IDC 08 00:16:04.0±17.0, 11°14'S×166°06'E, h170km±191km, mb3.7/3, mb1 3.9/4, mb1mx3.4/33, mbtmp4.2/4, ML4.4/1, Error ellipse: s-maj=137.9km s-min=52.3km az=152.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.88**	**178**	P	Pn	00 18 35.7	+0.4
	2.7nm,0.3s,baz=335,slow=19,SNR=37						
DZM				S	Sn	00 20 35.7	-0.4
	0.4nm,0.3s,baz=336,slow=20,SNR=4.6						
WRA	**Warramunga Arr**	**31.74**	**250**	P	P	00 22 11.5	-0.8
	0.8nm,0.4s,baz=83,slow=9.2,SNR=6.3						
ASAR	**Alice Springs**	**33.03**	**244**	P	P	00 22 24.1	+0.6
	2.6nm,0.6s,baz=67,slow=10,SNR=26						
MKAR	**Makanchi Array**	**93.80**	**317**	P	P	00 29 01.7	-0.2
	0.8nm,0.8s,baz=99,slow=5.7,SNR=5.8						

IDC 08 00:19:13.1±0.8, 4°58'S×151°51'E, h124km±9km, mb3.5/2, mb1 3.7/3, mb1mx3.2/33, mbtmp4.0/3, Error ellipse: s-maj=80.4km s-min=12.7km az=136.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.58**	**62**	P	Pn	00 19 32.7	+0.7
	50nm,0.3s,baz=186,slow=1.6,SNR=19						
KRVT				S	Sn	00 19 47.6	+1.4
	99nm,0.3s,baz=131,slow=23,SNR=60						
KRVT				LR	LR	00 19 48.4	
	comp=Z,316nm,18.7s,baz=318,slow=60						
PMG	**Port Moresby**	**6.45**	**222**	P	Pn	00 20 46.8	+1.1
	3.4nm,0.3s,baz=26,slow=10,SNR=6.6						
PMG				S	Sn	00 21 58.4	+0.4
	7.9nm,0.3s,baz=217,slow=20,SNR=12						
WRA	**Warramunga Arr**	**22.64**	**226**	P	P	00 24 03.1	-0.9
	2.7nm,0.5s,baz=50,slow=10.0,SNR=18						
WRA				pP	pP	00 24 27.4	-0.1
	1.3nm,0.7s,baz=51,slow=9.8,SNR=3.5						
ASAR	**Alice Springs**	**25.46**	**220**	P	P	00 24 30.7	+0.9
	1.3nm,0.8s,baz=57,slow=8.9,SNR=9.3						
ASAR				pP	pP	00 24 55.8	-0.5
	0.9nm,0.7s,baz=56,slow=9.0,SNR=2.9						
ASAR				sP	sP	00 25 11.8	+1.0
	1.2nm,0.7s,baz=53,slow=9.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**149.01**	**288**	PKPbc	PKPbc	00 38 47.0	-0.8
	0.2nm,0.3s,baz=94,slow=2.6,SNR=6.7						

IDC 08 00:21:00.5±2.8, 5°09'S×105°64'W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.8/30, mbtmp3.7/5, MS3.7/3, Ms1 3.7/3, ms1mx3.2/22, Error ellipse: s-maj=213.9km s-min=26.2km az=67.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**22.20**	**189**	LR	LR	00 32 15.9	
	comp=Z,93nm,19.8s,baz=20,slow=30						
JTS	**Las Juntas de**	**25.65**	**53**	LR	LR	00 33 51.2	
	comp=Z,114nm,18.8s,baz=322,slow=30						
NVAR	**Mina Array Bea**	**44.86**	**346**	P	P	00 29 17.2	+0.3
	0.5nm,0.7s,baz=160,slow=10,SNR=3.9						
PLCA	**Paso Flores**	**47.42**	**144**	P	P	00 29 36.9	-0.1
	1.3nm,0.8s,baz=294,slow=10.0,SNR=2.8						
PLCA				LR	LR	00 44 43.0	
	comp=Z,157nm,18.6s,baz=32,slow=30						
PDAR	**Pinedale Array**	**47.76**	**356**	P	P	00 29 39.5	-0.2
	0.9nm,0.7s,baz=169,slow=8.5,SNR=9.9						
YKA	**Yellowknife Ar**	**67.74**	**356**	P	P	00 31 59.2	-0.3
	0.5nm,0.7s,baz=170,slow=5.8,SNR=6.5						
ILAR	**Eielson Array**	**76.03**	**343**	P	P	00 32 49.5	+0.2
	0.4nm,0.9s,baz=147,slow=5.1,SNR=4.5						
H11N3	**WAKE ISLAND Hy**	**89.30**	**290**	T	T	02 12 05.1	
	baz=96,slow=75,SNR=17						
H11N2	**WAKE ISLAND Hy**	**89.31**	**290**	T	T	02 12 04.5	
	baz=96,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**89.32**	**290**	T	T	02 11 59.5	
	baz=96,slow=75,SNR=22						
H11S2	**WAKE ISLAND Hy**	**89.37**	**289**	T	T	02 12 13.5	
	baz=96,slow=75,SNR=6.6						
H11S1	**WAKE ISLAND Hy**	**89.38**	**289**	T	T	02 12 10.9	
	baz=96,slow=75,SNR=7.9						
H11S3	**WAKE ISLAND Hy**	**89.39**	**289**	T	T	02 12 11.9	
	baz=96,slow=75,SNR=6.7						

*IDC **08** 00:27:40.3±1.1, 28°14'S×177°05'W, h0km, mb3.7/3, mb1 4.1/4, mb1mx3.9/20, mbtmp3.8/4, ML3.8/1, Error ellipse: s-maj=40.1km s-min=23.6km az=128.0*
ISC 08 00:27:46.5±1.1, 28°55'S±0.1×176°8'W±0.2, h48km, n9, σ2°10/10, mb3.8/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.22**	**232**	Pn	**Pn**	**00 28 07.6**	**+0.4**
	546nm,0.3s,baz=66,slow=4.4,SNR=17						
RAO				Sn	**Sn**	**00 28 25.4**	**+2.8**
	794nm,0.3s,baz=5.1,slow=23,SNR=25						
URZ	**Urewera**	**10.97**	**206**	Pn	**Pn**	**00 30 21.7**	**+0.9**
	0.7nm,0.3s,baz=58,slow=17,SNR=5.5						
URZ				Sn	**Sn**	**00 32 18.8**	**-3.2**
	0.4nm,0.3s,baz=360,slow=19,SNR=4.0						
ASAR	**Alice Springs**	**44.28**	**264**	P	**P**	**00 35 50.0**	**-1.8**
	0.4nm,0.5s,baz=96,slow=6.2,SNR=5.5						
WRA	**Warramunga Arr**	**45.10**	**270**	P	**P**	**00 35 56.0**	**-2.3**
	0.7nm,0.5s,baz=107,slow=7.4,SNR=7.6						
NVAR	**Mina Array Bea**	**86.14**	**42**	P	**P**	**00 40 22.7**	**0.0**
	0.5nm,0.8s,baz=225,slow=8.9,SNR=3.5						
FINES	**FINESS Array B**	**143.70**	**342**	PKhKP	PKPpre	00 47 10.5	
	3.9nm,1.1s,baz=82,slow=3.1,SNR=3.4						
AKASG	**Malin Array Be**	**150.38**	**326**	PKPbc	**PKPbc**	**00 47 32.4**	**+0.2**
	0.7nm,0.5s,baz=46,slow=3.6,SNR=2.9						
BRTR	**Keskin Array B**	**152.54**	**302**	PKPbc	**PKiKP**	**00 47 39.7**	**+1.7**
	0.7nm,1.0s,baz=100,slow=2.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**164.66**	**174**	PKPab	**PKPab**	**00 48 41.8**	**+0.9**
	0.3nm,0.7s,baz=177,slow=1.8,SNR=2.6						

*DRS **08** 00:33:15.1±0.0, 40°69'N×48°05'E, h20km, MPVA3.7(MOS)*
ISC 08 00:33:13.6±2.9, 40°7'N±0°1×48°10'E±0°09, h27km±14km, n17, σ1°43/31, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKT	**Akhty**	**0.81**	**340**	*i* Pg	**Pb**	**00 33 28.5**	**-0.6**
	131nm,0.2s						
AKT				*e*Sg	**Sb**	**00 33 39.0**	**-0.7**
	601nm,0.5s						
KSMR	**Kasumkent**	**0.88**	**2**	*i* Pg	Pn	00 33 37.0	+6.7
	142nm,0.1s						
KSMR				*e*Sg	Sn	00 33 52.0	+10
	875nm,0.2s						
DRN	**Derbent**	**1.32**	**8**	*e*Pg	**Pb**	**00 33 37.7**	**0.0**
	79nm,0.8s						
DRN				*e*Sg	**Sn**	**00 33 53.5**	**+0.6**
	162nm,0.4s						
URKR	**Urkarakh**	**1.48**	**347**	*i* Pg	**Pn**	**00 33 39.4**	**+0.7**
URKR				*e*Sg	**Sn**	**00 33 57.0**	**-0.2**
KMKR	**Kumukh**	**1.60**	**332**	*e*Pg	**Pb**	**00 33 42.0**	**-0.5**
	39nm,0.3s						
KMKR				*e*Sg	**Sn**	**00 34 01.0**	**+0.9**
	107nm,0.3s						
DDFL	**Dedoflistskaro**	**1.66**	**296**	P	**Pb**	**00 33 44.3**	**+0.7**
DDFL				S	**Sb**	**00 34 08.3**	**+4.2**
LGD	**Lagodekhi**	**1.79**	**309**	P	**Pb**	**00 33 45.1**	**-0.5**
LGD				S	Sn	00 33 56.1	-8.3
GNBR	**Gunib**	**1.87**	**333**	*e*Pg	**Pb**	**00 33 46.2**	**-0.9**
	19nm,0.6s						
GNBR				*e*Sg	**Sb**	**00 34 09.8**	**-0.3**
	73nm,0.6s						
ARKR	**Arakani**	**2.05**	**337**	*e*Pg	**Pb**	**00 33 49.5**	**-0.7**
ARKR				*e*Sg	**Sb**	**00 34 16.5**	**+1.2**
	40nm,0.3s						
XNZR	**Khunzakh**	**2.10**	**331**	*e*Pg	**Pb**	**00 33 49.1**	**-1.9**
XNZR				*e*Sg	**Sn**	**00 34 14.4**	**+2.1**
DGRG	**David-gareji**	**2.18**	**290**	P	**Pb**	**00 33 50.5**	**-1.9**
DGRG				S	**Sn**	**00 34 15.2**	**+0.0**
UNCR	**Uncukul**	**2.22**	**334**	*e*Pg	**Pb**	**00 33 53.0**	**0.0**
UNCR				*e*Sg	**Sb**	**00 34 21.0**	**+1.0**
	69nm,0.7s						
BUJR	**Buynaksk**	**2.23**	**341**	*e*Pg	**Pb**	**00 33 52.1**	**-1.1**
BUJR				*e*Sg	**Sb**	**00 34 19.5**	**-0.9**
BTLR	**Botlikh**	**2.40**	**325**	*e*Pn	**Pb**	**00 33 55.6**	**-0.5**
	11nm,0.6s						
BTLR				*e*Sn	**Sb**	**00 34 25.3**	**+0.1**
	26nm,0.7s						
DBC	**Dubki**	**2.48**	**338**	*e*Pn	**Pn**	**00 33 52.5**	**+0.2**
DBC				*e*Sn	**Sn**	**00 34 19.9**	**-1.9**
BTNK	**Botanikuri**	**2.67**	**292**	P	**Pn**	**00 33 55.1**	**+0.4**
BTNK				S	**Sn**	**00 34 24.0**	**-2.2**
TBLG	**Delisi**	**2.73**	**293**	P	**Pn**	**00 33 55.8**	**+0.2**
TBLG				S	**Sn**	**00 34 25.2**	**-2.5**

*ATA **08** 01:05:56.3±2.3, 38°71'N×43°18'E, h21km±16km, ML2.0, MW4.1*
*ISK **08** 01:05:57.6, 38°70'N×43°19'E, h3km, ML2.2/9*
*DDA **08** 01:05:58.0, 38°70'N×43°14'E, h7km±2km, ML1.8*
ISC 08 01:05:58.2±0.9, 38°72'N±0°02×43°18'E±0°02, h15km±8km, n27, σ0°97/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.21**	**127**	PG	**Pg**	**01 06 03.6**	**+0.5**
VANB				SG	**Sg**	**01 06 07.8**	**+1.4**
TVAN	**Van**	**0.26**	**137**	*e*P	**Pg**	**01 06 03.5**	**-0.5**
TVAN				*e*S	**Sg**	**01 06 07.7**	**-0.3**
TVAN				IAML		01 06 08.7	
	comp=Z,260nm,0.3s						
TVAN	**Van**	**0.26**	**137**	*i* P	**Pg**	**01 06 03.5**	**-0.5**
TVAN				*i* S	**Sg**	**01 06 08.3**	**+0.3**
ADCV	**BITLIS_Adilcev**	**0.36**	**284**	*i* P	**Pb**	**01 06 06.6**	**+0.1**
ADCV				*i* S	**Sb**	**01 06 13.4**	**+1.3**
VMUR	**Van-Muradiye**	**0.41**	**49**	*i* P	**Pb**	**01 06 06.6**	**-0.7**
VMUR				*i* S	**Sb**	**01 06 13.7**	**+0.3**
VMUR				IAML		01 06 15.0	
	comp=N,101nm,0.5s						
GEVA	**Gevas**	**0.42**	**193**	*e*P	**Pb**	**01 06 06.4**	**-1.1**
GEVA				*e*S	**Sg**	**01 06 11.8**	**-0.7**
GEVA				IAML		01 06 20.7	
	comp=Z,60nm,0.3s						
GEVA	**Gevas**	**0.42**	**193**	*i* P	**Pb**	**01 06 06.3**	**-1.1**
GEVA				*i* S	**Sb**	**01 06 13.4**	**-0.2**
GEVA				IAML		01 06 16.0	
	comp=E,75nm,0.6s						
GEVA				IAML		01 06 21.0	
	comp=N,60nm,0.7s						
AKDM	**Akdamar-Van**	**0.42**	**202**	PG	**Pg**	**01 06 06.3**	**-0.5**
MLAZ	**Malazgirt-MUS**	**0.65**	**311**	PG	**Pb**	**01 06 11.5**	**+0.2**
CLDR	**Caldiran**	**0.71**	**54**	PG	**Pg**	**01 06 11.9**	**-0.3**
CLDR				SG	**Sb**	**01 06 23.1**	**+0.8**
CLDR	**Caldiran**	**0.71**	**54**	*i* P	**Pg**	**01 06 11.9**	**-0.3**
CLDR				*i* S	**Sb**	**01 06 23.0**	**+0.8**
CLDR				IAML		01 06 24.0	
	comp=N,29nm,0.2s						
CLDR				IAML		01 06 29.0	
	comp=E,32nm,0.3s						
TUTA	**Tutak**	**0.74**	**338**	*e*P	**Pg**	**01 06 12.6**	**0.0**
TUTA				*e*S	**Sg**	**01 06 22.4**	**0.0**
TUTA				IAML		01 06 25.4	
	comp=Z,48nm,0.2s						
TUTA	**Tutak**	**0.74**	**338**	*i* P	**Pg**	**01 06 12.7**	**0.0**
TUTA				*i* S	**Sb**	**01 06 23.3**	**+0.4**
TUTA				IAML		01 06 25.0	
	comp=N,62nm,0.5s						
AGRB	**Hanur-Agry**	**0.87**	**351**	PG	**Pg**	**01 06 14.8**	**-0.3**
BLIS	**Bitlis-Merkez**	**0.89**	**250**	*e*P	**Pg**	**01 06 14.7**	**-0.8**
BLIS				*e*S	**Sb**	**01 06 27.1**	**0.0**
BLIS				IAML		01 06 29.6	
	comp=Z,46nm,0.3s						
BLIS	**Bitlis-Merkez**	**0.89**	**250**	*i* P	**Pb**	**01 06 15.2**	**-0.2**
BLIS				*i* S	**Sb**	**01 06 27.1**	**0.0**
BLIS				IAML		01 06 28.0	
	comp=E,40nm,0.3s						
GURO	**Guroymak-BITLI**	**0.91**	**260**	PG	**Pb**	**01 06 15.6**	**-0.2**
GURO				SG	**Sb**	**01 06 28.8**	**+1.0**
DYDN	**Diyadin**	**0.91**	**26**	*e*P	**Pg**	**01 06 14.4**	**-1.6**
DYDN				IAML		01 06 34.7	
	comp=N,14nm,0.4s						
EATA	**Eleskirt**	**1.26**	**335**	*e*P	**Pg**	**01 06 18.9**	**-3.6**
EATA				*e*S	**Sn**	**01 06 41.0**	**+2.6**
EATA				IAML		01 06 44.6	
	comp=N,5.9nm,0.5s						
MUSM	**Mu-Merkez**	**1.30**	**271**	*i* P	**Pn**	**01 06 22.4**	**+0.4**
IGDI	**IGDIR**	**1.34**	**31**	*e*P	**Pn**	**01 06 22.2**	**-0.3**
SIRT	**Sirnak**	**1.35**	**206**	PN	**Pg**	**01 06 24.5**	**+0.3**
VRTB	**Varto-Mus**	**1.41**	**289**	PN	**Pg**	**01 06 25.3**	**-0.1**
TASB	**TASBURUN-IGDIR**	**1.51**	**33**	PN	**Pg**	**01 06 26.8**	**-0.4**
BNGL	**BINGOL**	**1.60**	**279**	*e*P	**Pn**	**01 06 25.9**	**-0.8**
BNGL				*e*S	**Sg**	**01 06 50.3**	**+0.5**
BNGL				IAML		01 07 01.9	
	comp=Z,18nm,1.2s						
SVAN	**Silvan-Diyarba**	**1.65**	**251**	PN	**Pg**	**01 06 29.1**	**-0.9**
DIGO	**Kars**	**1.70**	**5**	*e*P	**Pn**	**01 06 27.0**	**-0.6**

*ISN **08** 01:11:58.3±0.7, 34°16'N×45°54'E, h14km±3km, ML3.2*
*TEH **08** 01:12:02.2, 34°39'N×45°53'E, h11km, ML3.2*
ISC 08 01:11:59.7±0.8, 34°13'N±0°03×45°42'E±0°04, h10km, n21, σ1°63/26, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**0.97**	**78**	*e*Pg	**Pn**	**01 12 19.7**	**+0.1**
IGHG				*e*		01 12 35.3	
IDHR	**Dehrash**	**0.98**	**54**	*e*Pg	**Pg**	**01 12 16.9**	**-1.7**
IDHR				*e*		01 12 31.7	
IBDR	**Badra**	**1.10**	**157**	*e*Pg	**Pb**	**01 12 18.7**	**-2.1**
IBDR				*e*Sg	**Sg**	**01 12 33.0**	**-2.1**
BHD	**Baghdad**	**1.22**	**226**	*e*Pg	**Pn**	**01 12 22.3**	**-0.4**
BHD				*e*Sg	**Sb**	**01 12 40.0**	**+1.4**
IVIS	**Veis**	**1.25**	**71**	*e*Pg	**Pn**	**01 12 22.9**	**-0.4**
IVIS				*e*		01 12 43.2	
KCHF	**Cheshme Sefid,**	**1.35**	**83**	*e*Pg	**Pg**	**01 12 27.5**	**+1.9**
KCHF				*e*		01 12 47.9	
KER	**Kermanshah**	**1.44**	**79**	*e*Pg	**Pg**	**01 12 28.5**	**+1.1**
ILIN	**Lien**	**1.50**	**58**	*e*Pg	**Pg**	**01 12 27.6**	**-0.9**
ILIN				*e*		01 12 47.9	
IKRK	**Kirkuk**	**1.55**	**325**	*e*Pn	**Pb**	**01 12 28.0**	**-0.5**
IKRK				*e*Sn	**Sg**	**01 12 49.0**	**-0.5**
IKRK				AML	AML	01 12 51.6	
	comp=Z,494nm,0.4s						
IKOM	**Komasi**	**1.73**	**88**	*e*Pn	**Pg**	**01 12 33.7**	**+0.7**
IKOM				*e*		01 13 10.9	
IBZA	**Bozab**	**2.05**	**80**	*e*Pn	**Pb**	**01 12 37.2**	**0.0**
IBZA				*e*		01 13 09.3	
IKFM	**Kafar-mosalman**	**2.11**	**106**	*e*Pn	**Pg**	**01 12 39.9**	**-0.2**
IKFM				*e*		01 13 16.3	
IDOB	**Doab**	**2.32**	**98**	*e*Pn	**Pb**	**01 12 41.5**	**-0.2**
IKMR	**Kamar-syah**	**2.54**	**103**	*e*Pn	**Pb**	**01 12 45.3**	**0.0**
IKMR				*e*		01 13 27.7	
HSRG	**Sareghieh**	**2.60**	**64**	*e*Pn	**Pb**	**01 12 44.8**	**-1.8**
HSRG				*e*		01 13 26.1	
HSAM	**Samen**	**2.64**	**87**	*e*Pn	**Pb**	**01 12 45.9**	**-1.3**
HSAM				*e*		01 12 51.3	
MAHB	**Mahabad**	**2.64**	**5**	*e*Pn	**Pn**	**01 12 43.4**	**+0.9**
MAHB				*e*		01 13 20.8	
MSL	**Mosul**	**2.95**	**321**	*e*Pn	**Pn**	**01 12 47.5**	**+0.9**
MSL				AML	AML	01 13 04.4	
	comp=Z,266nm,0.3s						
MSL				*e*Sn	**Sn**	**01 13 23.5**	**+1.4**
HAGD	**Aghdareh**	**3.15**	**76**	*e*Pn	**Pb**	**01 12 52.3**	**-3.6**
HAGD				*e*		01 13 50.6	
NSR	**Nassriya**	**3.17**	**169**	*e*Pn	**Pn**	**01 12 50.0**	**+0.4**
NSR				AML	AML	01 12 52.2	
	comp=Z,157nm,0.1s						
NSR				*e*Sn	**Sn**	**01 13 27.5**	**+0.1**
JHBN	**Jahan bin**	**4.79**	**112**	*e*Pn	**Pn**	**01 13 16.4**	**+4.2**

*IDC **08** 01:14:25.8±1.8, 5°50'S×153°35'E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.5/33, mbtmp3.6/5, Error ellipse: s-maj=50.3km s-min=23.9km az=108.0*
ISC 08 01:14:31.7±1.4, 5°5'S±0°2×153°2'E±0°2, h37km, n7, σ0°56/8, mb3.5/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.68**	**315**	Pn	**Pn**	**01 14 58.2**	**-0.3**
	115nm,0.3s,baz=72,slow=6.4,SNR=5.5						
KRVT				Sn	**Sn**	**01 15 19.1**	**+0.3**
	53nm,0.3s,baz=90,slow=20,SNR=3.9						
KRVT				LR	LR	01 15 50.9	
	comp=Z,353nm,19.7s,baz=112,slow=48						
WRA	**Warramunga Arr**	**23.32**	**230**	P	**P**	**01 19 36.0**	**-0.7**
	0.3nm,0.5s,baz=54,slow=10,SNR=4.2						
ASAR	**Alice Springs**	**25.94**	**224**	P	**P**	**01 20 01.7**	**+0.9**
	0.2nm,0.6s,baz=56,slow=10,SNR=4.0						
PETK	**Petropavlovsk-**	**58.50**	**3**	P	**P**	**01 24 24.1**	**0.0**
	2.8nm,0.9s,baz=173,slow=6.6,SNR=3.3						
SONM	**Songino Array**	**67.13**	**328**	P	**P**	**01 25 21.8**	**0.0**
	0.3nm,0.5s,baz=117,slow=5.9,SNR=4.5						
MKAR	**Makanchi Array**	**81.12**	**319**	P	**P**	**01 26 43.4**	**0.0**
	0.5nm,0.8s,baz=120,slow=5.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**150.92**	**287**	PKPbc	**PKPbc**	**01 34 21.4**	**-0.1**
	1.0nm,0.7s,baz=84,slow=1.8,SNR=6.0						

IDC 08 01:31:22.5±2.0, 23°29'S×179°82'W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/19, mbtmp3.8/4, Error ellipse: s-maj=170.9km s-min=30.5km az=160.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.11**	**247**	P	P	01 38 17.7	-0.1
	3.4nm,1.1s,baz=82,slow=7.1,SNR=3.1						
ASAR	**Alice Springs**	**42.30**	**260**	P	P	01 39 17.8	-0.5
	0.3nm,0.3s,baz=93,slow=8.1,SNR=4.8						
WRA	**Warramunga Arr**	**42.62**	**265**	P	P	01 39 21.0	+0.1
	0.9nm,0.4s,baz=102,slow=8.5,SNR=12						
TXAR	**Lajitas Array**	**89.97**	**58**	P	P	01 44 24.2	0.0
	0.2nm,0.7s,baz=230,slow=5.4,SNR=3.0						

SOME 08 01:31:48.9, 42°38N×80°87E, h5km, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KPKS	**Kokpek**	**1.94**	**305**	*e*P	Pg	01 32 25.6	-0.4
	6.3nm,0.3s						
KPKS				*e*S	Sg	01 32 52.0	+0.9
	9.4nm,0.4s						
KURS	**Kuram**	**2.27**	**300**	*e*P	Pg	01 32 32.3	-0.1
	1.9nm,0.9s						
KURS				*e*S	Sg	01 33 03.7	+1.9
	3.1nm,0.8s						
ARXS	**Arharly**	**2.88**	**311**	*e*P	Pg	01 32 42.6	-1.4
	1.1nm,0.3s						
ARXS				*e*S	Sg	01 33 20.9	-0.3
	3.7nm,0.7s						
KAPS	**Kapalarasan**	**3.10**	**340**	*e*P	Pg	01 32 46.6	-1.7
	0.4nm,0.3s						
KAPS				*e*S	Sg	01 33 28.3	-0.2
	1.8nm,0.2s						
KTBS	**Karatobe**	**3.34**	**295**	*e*P	Pb	01 32 50.7	+2.0
	0.7nm,0.3s						
KTBS				*e*S	Sg	01 33 35.2	-1.1
	3.6nm,0.5s						

KRNET 08 01:31:57.0±0.1, 42°46N×78°55E, h14km, mb1.3, 6C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.11**	**280**	⇑*i*P	Pg	01 31 58.9	-1.6
	baz=82						
PRZ				⇑*i*S	Sg	01 32 00.5	-2.4
	baz=82						
ANVS	**Anan'yevo**	**0.72**	**296**	⇓*i*P	Pg	01 32 11.2	0.0
	baz=97						
ANVS				⇓*i*S	Sb	01 32 21.5	+0.1
	baz=97						
KDJ	**Kajisay**	**1.07**	**252**	⇑*i*P	Pb

JFK	**Kawauchi**	**1.51**	**263**	P	**Pn**	**01 52 54.9**	**-1.0**
JMM	**Marumori**	**1.58**	**281**	P	**Pn**	**01 52 56.1**	**-0.7**
JKMT	**Kesennumamotoy**	**1.59**	**321**	P	**Pn**	**01 52 56.3**	**-0.7**
JKMT				S	**Sn**	**01 53 16.8**	**-0.2**
ONAJ	**Iwakimizuishiy**	**1.62**	**254**	P	**Pn**	**01 52 56.6**	**-0.9**
ONAJ				*e*S	**Sn**	**01 53 17.2**	**-0.6**
JMK	**Ichinoseki**	**1.83**	**319**	P	**Pn**	**01 53 00.3**	**0.0**
JOU	**Okura**	**1.83**	**296**	P	**Pn**	**01 53 00.4**	**+0.1**
JFT	**Otama**	**1.92**	**269**	P	**Pn**	**01 53 02.0**	**+0.5**
JYK	**Kaneyama**	**2.31**	**306**	P	**Pn**	**01 53 07.4**	**+0.5**
JYK				*e*S	**Sn**	**01 53 36.7**	**+2.0**
JRY	**Ryogami san**	**3.46**	**244**	P	**Pn**	**01 53 22.7**	**0.0**
MJAR	**Matsushiro Arr**	**3.77**	**256**	Pn	**Pn**	**01 53 28.4**	**+1.4**
	0.3nm,0.3s,baz=74,slow=17,SNR=7.9						
MAT	**Matsushiro**	**3.78**	**256**	P	**Pn**	**01 53 27.8**	**+0.7**
MAT				*e*S	**Sn**	**01 54 10.8**	**-0.1**
KSRS	**Korea Array**	**11.78**	**274**	LR	LR	01 59 46.7	
	comp=Z,33nm,18.0s,baz=325,slow=37						
H11N2	**WAKE ISLAND Hy**	**27.53**	**124**	T	T	02 26 34.4	
	baz=316,slow=75,SNR=6.6						
H11N1	**WAKE ISLAND Hy**	**27.54**	**124**	T	T	02 26 32.6	
	baz=316,SNR=4.9						
H11N3	**WAKE ISLAND Hy**	**27.55**	**124**	T	T	02 26 32.6	
	baz=316,slow=75,SNR=5.4						
H11S1	**WAKE ISLAND Hy**	**28.28**	**126**	T	T	02 28 12.1	
	baz=317						
H11S3	**WAKE ISLAND Hy**	**28.28**	**126**	T	T	02 28 07.9	
	baz=317						
H11S2	**WAKE ISLAND Hy**	**28.30**	**126**	T	T	02 28 02.2	
	baz=317						
SONM	**Songino Array**	**28.38**	**303**	P	**P**	**01 58 23.1**	**+0.2**
	1.1nm,1.0s,baz=95,slow=10,SNR=4.5						
ZALV	**Zalesovo Beam**	**42.34**	**312**	P	**P**	**02 00 22.3**	**0.0**
	0.5nm,0.6s,baz=72,slow=9.3,SNR=3.9						
MKAR	**Makanchi Array**	**44.74**	**302**	P	**P**	**02 00 41.5**	**-0.3**
	0.4nm,0.7s,baz=92,slow=9.4,SNR=4.2						
KURBB	**Kurchatov Arra**	**46.51**	**308**	P	**P**	**02 00 55.4**	**-0.3**
	1.4nm,0.5s,baz=84,slow=7.9,SNR=13						
ILAR	**Eielson Array**	**48.47**	**33**	P	**P**	**02 01 10.3**	**-0.4**
	0.3nm,0.9s,baz=252,slow=5.4,SNR=4.1						
BVAR	**Borovoye Array**	**51.00**	**312**	P	**P**	**02 01 30.0**	**-0.2**
	0.7nm,0.6s,baz=72,slow=7.7,SNR=6.1						
WRA	**Warramunga Arr**	**57.75**	**189**	P	**P**	**02 02 20.7**	**+1.1**
	0.5nm,0.9s,baz=6.6,slow=6.6,SNR=3.2						
AKASG	**Malin Array Be**	**74.52**	**323**	P	**P**	**02 04 06.2**	**-0.7**
	0.4nm,0.5s,baz=44,slow=6.1,SNR=4.1						

MAN 08 02:19:24.0,10°.38N×124°.02E,h30km,mb4.0,ML2.7, MS2.3,1C-1D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.09**	**219**	⇓*i*P	Pb	02 19 30.3	+1.1
LLP				*i* S	Sb	02 19 33.9	+1.1
TBP	**Tagbilaran**	**0.71**	**193**	⇑*e*P	Pn	02 19 38.2	+0.2
TBP				*e*S	Sb	02 19 47.2	-0.1
MSLP	**Maasin**	**0.86**	**107**	*e*P	Pn	02 19 39.4	-0.7
MSLP				*e*S	Sb	02 19 50.0	-1.6

IDC 08 02:30:44.6±2.8,5°.42S×152°.58E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.5/26,mbtmp3.5/3,Error ellipse: s-maj=61.7km s-min=19.9km az=90.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.23**	**333**	Pn	Pn	02 31 10.1	+1.0
	123nm,0.3s,baz=121,slow=1.2,SNR=49						
KRVT				Sn	Sn	02 31 26.6	+0.2
	275nm,0.3s,baz=59,slow=23,SNR=11						
KRVT				LR	LR	02 31 37.2	
	comp=Z,39nm,18.7s,baz=247,slow=43						
WRA	**Warramunga Arr**	**22.88**	**229**	P	P	02 35 50.0	0.0
	0.6nm,0.6s,baz=53,slow=10.0,SNR=6.4						
ASAR	**Alice Springs**	**25.55**	**223**	P	P	02 36 16.4	+1.0
	0.3nm,0.4s,baz=59,slow=8.9,SNR=5.0						
FITZ	**Fitzroy Crossi**	**29.17**	**242**	P	P	02 36 47.2	-0.7
	1.3nm,0.7s,baz=64,slow=12,SNR=3.6						
TORD	**Torodi Ar. Bea**	**150.28**	**287**	PKPbc	PKPbc	02 50 37.8	-1.1
	0.2nm,0.3s,baz=80,slow=3.9,SNR=2.5						

IDC 08 03:07:58.2±8.0,14°.93S×175°.84W,h0km,mb3.9/3, mb1 4.2/3,mb1mx3.7/30,mbtmp3.9/3,Error ellipse: s-maj=358.1km s-min=34.5km az=139.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.66**	**257**	P	P	03 16 36.0	-0.8
	0.2nm,0.4s,baz=93,slow=7.5,SNR=4.7						
ASAR	**Alice Springs**	**48.02**	**252**	P	P	03 16 40.0	+0.4
	3.8nm,0.4s,baz=86,slow=8.5,SNR=42						
ILAR	**Eielson Array**	**82.46**	**12**	P	P	03 20 22.1	0.0
	0.8nm,1.1s,baz=214,slow=6.3,SNR=3.7						

*IDC **08** 03:31:07.3±16.0,52°.08N×173°.38W,h0km,mb3.6/3, mb1 3.9/4,mb1mx3.3/55,mbtmp3.5/4,ML4.1/1,Error ellipse: s-maj=311.1km s-min=73.3km az=87.0*
*NEIC **08** 03:31:30.8±1.1,52°.7N±0°.3×173°.0W±0°.2,h211km±11km, Error ellipse: s-maj=52.0km s-min=3.8km az=164.0*
*AEIC **08** 03:31:31.4±1.2,52°.6N±0°.3×173°.1W±0°.2,h217km±7km, ML3.2/24,mb3.9/18(NEIC),Error ellipse: s-maj=43.6km s-min=9.4km az=163.0*

ISC 08 03:31:31.0±1.0,53°.0N±0°.2×173°.2W±0°.1,h200km,n46, σ0°.96/37,mb3.0/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOSE	**Korovin Southe**	**0.84**	**218**		**Pn**	**03 32 00.5**	**+0.6**
KOWE	**Korovin West**	**0.91**	**225**		**Pn**	**03 32 01.0**	**+0.7**
KOFP	**Korovin Flat P**	**0.92**	**216**		**Pn**	**03 32 00.9**	**+0.6**
KOKL	**Mount Kliuchef**	**0.92**	**221**		**Pn**	**03 32 01.1**	**+0.8**
ATKA	**Atka Island**	**1.01**	**217**		**Sn**	**03 32 23.6**	**-0.2**
ATKA	**Atka Island**	**1.01**	**217**		**Pn**	**03 32 00.6**	**-0.3**
GSIG	**Igitkin Island**	**1.95**	**239**		**Pn**	**03 32 08.9**	**-0.1**
GSTR	**Great Sitkin T**	**1.97**	**243**	Pn	**Pn**	**03 32 08.9**	**-0.3**
GSTR				S	**Sn**	**03 32 39.7**	**+0.9**
GSMY	**Great Sitkin M**	**1.99**	**242**		**Pn**	**03 32 09.5**	**+0.1**
GSTD	**Great Sitkin T**	**2.03**	**243**		**Pn**	**03 32 09.9**	**0.0**
GSTD					**Sn**	**03 32 39.5**	**-0.6**
ADAG	**Mount Adagdak**	**2.32**	**245**		**Pn**	**03 32 13.7**	**+0.8**
ADK	**Adak**	**2.41**	**243**		**Pn**	**03 32 13.6**	**-0.2**
ADK	**Adak**	**2.41**	**243**	S	**Sn**	**03 32 46.3**	**-0.9**
NIKH	**Nikolski High**	**2.63**	**89**		Pn	03 32 13.9	-2.4
NIKH					Sn	03 32 50.5	-1.2
KIWB	**Kanaga Island**	**2.68**	**246**	Pn	**Pn**	**03 32 17.0**	**+0.1**
KIWB				S	**Sn**	**03 32 52.2**	**-0.4**
KIMD	**Kanaga Island**	**2.77**	**245**		**Pn**	**03 32 18.2**	**+0.4**
TAPA	**Tanaga Point A**	**3.06**	**249**		**Pn**	**03 32 22.0**	**+0.6**
TAFP	**Tanaga Falls P**	**3.12**	**251**		**Pn**	**03 32 22.9**	**+0.8**
TASE	**Tanaga Southea**	**3.18**	**250**		**Pn**	**03 32 23.9**	**+1.0**
OKFG	**Magazine Ridge**	**3.21**	**81**		Pn	03 32 23.7	+0.6
MSW	**Makushin Switc**	**3.95**	**74**		Pn	03 32 32.5	+0.4
MREP	**Makushin Rep't**	**3.95**	**76**		Pn	03 32 33.0	+0.8
UNV	**Unalaska Valle**	**4.10**	**76**		Pn	03 32 33.7	-0.2
UNV					Sn	03 33 23.6	+0.2
AHB	**Akutan Harbor**	**4.55**	**73**		Pn	03 32 39.8	+0.2
SEW	**Seward**	**14.84**	**52**	P	P	03 34 50.5	-1.2
PPLA	**Purkeypile**	**14.84**	**40**		P	03 34 52.8	+0.9
PPLA				IAmb	IAmb	03 35 07.3	
	comp=Z,9.2nm,1.2s						
KTH	**Kantishna Hill**	**15.68**	**39**	P	**P**	**03 35 02.6**	**+1.6**
TRF	**Thorofare Moun**	**15.86**	**40**	P	**Pn**	**03 35 04.6**	**+1.1**
SML	**Sawmill**	**15.94**	**47**	P	**Pn**	**03 35 04.1**	**-0.3**
SML				IAmb	IAmb	03 35 06.5	
	comp=Z,8.8nm,1.1s						
SCM	**Sheep Creek Mo**	**16.39**	**47**	P	**Pn**	**03 35 10.1**	**+0.3**
SCM				IAmb	IAmb	03 35 22.0	
	comp=Z,7.3nm,1.0s						
RND	**Reindeer**	**16.41**	**41**	P	**Pn**	**03 35 09.4**	**-0.5**
RND				IAmb	IAmb	03 35 18.4	
	comp=Z,7.8nm,1.2s						
MCK	**McKinley**	**16.53**	**40**	P	**Pn**	**03 35 11.3**	**-0.1**
MCK				IAmb	IAmb	03 35 12.6	
	comp=Z,4.6nm,1.1s						
DHY	**Denali Highway**	**16.86**	**43**	P	**Pn**	**03 35 15.3**	**-0.1**
DHY				IAmb	IAmb	03 35 18.2	
	comp=Z,6.7nm,1.2s						
PAX	**Paxson**	**17.61**	**45**	P	**Pn**	**03 35 23.4**	**-0.8**
PAX				IAmb	IAmb	03 35 29.0	
	comp=Z,3.3nm,1.1s						
HDA	**Harding Lake**	**17.62**	**39**	P	**Pn**	**03 35 23.4**	**-0.8**
IL31		**17.82**	**38**	P	**Pn**	**03 35 25.4**	**-1.1**
ILAR	**Eielson Array**	**17.82**	**38**	P	**Pn**	**03 35 25.6**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=223,slow=10,SNR=43						
GLB	**Gilahina Butte**	**17.87**	**50**	P	**Pn**	**03 35 26.0**	**-1.3**
GLB				IAmb	IAmb	03 35 28.0	
	comp=Z,4.9nm,1.2s						
RIDG	**Independent Ri**	**18.17**	**43**	P	**Pn**	**03 35 29.2**	**-1.5**
RIDG				IAmb	IAmb	03 35 29.5	
	comp=Z,5.1nm,1.0s						
DOT	**Dot Lake**	**18.46**	**43**	P	**Pn**	**03 35 31.9**	**-2.2**
SCRK	**Sand Creek**	**18.61**	**42**	P	**Pn**	**03 35 33.8**	**-2.1**
TOLK	**Toolik Lake Re**	**19.23**	**26**	P	**Pn**	**03 35 41.3**	**-1.8**
NEW	**Newport**	**35.11**	**75**	P	P	03 38 05.8	+0.7
	comp=Z,0.9nm,0.4s,baz=302,slow=8.9,SNR=4.2						
NEW	**Newport**	**35.11**	**75**	P	P	03 38 04.1	-1.0
NEW				IAmb	IAmb	03 38 06.2	
	comp=Z,1.3nm,0.5s						
PDAR	**Pinedale Array**	**42.56**	**77**	P	P	03 39 07.2	+0.1
	comp=Z,0.3nm,0.5s,baz=330,slow=3.4,SNR=4.8						
TXAR	**Lajitas Array**	**55.06**	**86**	P	P	03 40 41.6	-0.4
	comp=Z,0.2nm,0.8s,baz=304,slow=6.4,SNR=2.6						

IDC 08 03:58:50.0±2.7,13°.90S×167°.64E,h0km,mb4.0/4, mb1 4.1/4,mb1mx3.7/46,mbtmp4.0/4,MS3.2/1,Ms1 3.2/1, ms1mx2.5/31,Error ellipse: s-maj=98.9km s-min=36.9km az=133.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.80**	**229**	P	P	04 04 59.7	+0.9
	1.5nm,0.5s,baz=62,slow=10,SNR=5.9						
WRA	**Warramunga Arr**	**32.38**	**255**	P	P	04 05 21.4	-0.2
	0.6nm,0.4s,baz=86,slow=9.4,SNR=13						
ASAR	**Alice Springs**	**33.30**	**248**	P	P	04 05 28.9	-0.8
	0.8nm,0.4s,baz=75,slow=9.4,SNR=14						
GUMO	**Guam**	**35.42**	**320**	LR	LR	04 19 25.5	
	comp=Z,38nm,21.8s,baz=138,slow=35						
MKAR	**Makanchi Array**	**96.85**	**316**	P	P	04 12 24.1	+1.0
	0.4nm,0.8s,baz=103,slow=4.6,SNR=3.1						
ARCES	**ARCESS Array B**	**119.54**	**346**	PKP	PKPdf	04 17 39.9	-1.2
	5.9nm,1.0s,baz=55,slow=2.2,SNR=3.6						

*NNC **08** 03:59:55.2±1.4,42°.51N×78°.50E,h0km,mb2.7,mpv2.8, Error ellipse: s-maj=11.1km s-min=4.2km az=160.0*
*SOME **08** 03:59:55.3,42°.50N×78°.52E,h15km*
*KRNET **08** 03:59:56.2±0.1,42°.43N×78°.44E,h17km,mb2.3*

ISC 08 03:59:53.8±1.0,42°.47N±0°.03×78°.53E±0°.03,h11km±5km, n43,σ0°.84/84,18C-4D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.09**	**278**	⇑*i*P	**Pg**	**03 59 55.3**	**-1.3**
	baz=32						
PRZ				⇑*i*S	**Sg**	**03 59 57.2**	**-1.5**
	baz=32						
PRZ	**Przheval'sk**	**0.09**	**278**	⇑*i*P	**Pg**	**03 59 57.8**	**+1.2**
	baz=42						
PRZ				⇑*i*S	**Sg**	**03 59 59.6**	**+0.9**
	baz=42						
ZHN	**Zhinishke**	**0.70**	**355**	*e*P	**Pb**	**04 00 08.3**	**+0.1**
ZHN				*e*S	**Sb**	**04 00 17.8**	**-0.2**
ANVS	**Anan'yevo**	**0.71**	**297**	⇑*i*P	**Pg**	**04 00 06.4**	**-1.1**
	baz=4.0						
ANVS				⇑*i*S	**Sg**	**04 00 17.1**	**+0.3**
	baz=4.0						
ANVS	**Anan'yevo**	**0.71**	**297**	⇑*i*P	**Pb**	**04 00 09.4**	**+1.1**
	baz=2.0						
ANVS				⇑*i*S	**Sb**	**04 00 18.4**	**+0.3**
	baz=2.0						
UZB	**Uzunbulak**	**0.77**	**28**	*e*P	**Pb**	**04 00 09.7**	**+0.3**
	baz=27						
UZB				*e*S	**Sb**	**04 00 20.1**	**+0.2**
	baz=27						
UZB	**Uzunbulak**	**0.77**	**28**	*e*P	**Pb**	**04 00 09.7**	**+0.3**
	5.1nm,0.2s						
UZB				*e*S	**Sb**	**04 00 20.1**	**+0.2**
	17nm,0.2s						
UZB	**Uzunbulak**	**0.77**	**28**	P	**Pb**	**04 00 09.7**	**+0.3**
	5.1nm,0.2s						
UZB				S	**Sb**	**04 00 20.1**	**+0.2**
	17nm,0.2s						
KPKS	**Kokpek**	**1.00**	**7**	*e*P	**Pb**	**04 00 13.7**	**+0.4**
	baz=7.0						
KPKS				*e*S	**Sb**	**04 00 27.2**	**+0.6**
	baz=7.0						
KPKS	**Kokpek**	**1.00**	**7**	*e*P	**Pb**	**04 00 13.7**	**+0.4**
	13nm,0.2s						
KPKS				*e*S	**Sb**	**04 00 27.2**	**+0.6**
	13nm,0.1s						
KDJ	**Kajisay**	**1.05**	**252**	⇑*i*P	**Pg**	**04 00 11.2**	**-2.9**
	baz=55						
KDJ				⇑*i*S	**Sg**	**04 00 25.4**	**-2.5**
	baz=55						
KDJ	**Kajisay**	**1.05**	**252**	⇑*i*P	**Pn**	**04 00 14.9**	**+0.1**
	baz=52						
KDJ				⇑*i*S	**Sb**	**04 00 28.1**	**0.0**
	baz=52						
PDGK	**Podgornoye**	**1.11**	**39**	P	**Pg**	**04 00 15.5**	**+0.2**
	1.7nm,0.2s						
PDGK				S	**Sb**	**04 00 30.6**	**+0.8**
	3.8nm,0.2s						
PDGK	**Podgornoye**	**1.11**	**39**	P	**Pb**	**04 00 15.7**	**+0.4**
	0.6nm,0.3s						
PDGK				S	**Sb**	**04 00 30.6**	**+0.8**
	2.8nm,0.4s						
KOTS	**Kotyrbulak**	**1.29**	**307**	*e*P	**Pb**	**04 00 18.6**	**+0.4**
	baz=10.0						
KOTS				*e*S	**Sn**	**04 00 35.7**	**+0.3**
	baz=10.0						
KOTS	**Kotyrbulak**	**1.29**	**307**	*e*P	**Pb**	**04 00 18.6**	**+0.4**
	3.8nm,0.3s						
KOTS				*e*S	**Sn**	**04 00 35.7**	**+0.3**
	16nm,0.4s						
KOTS	**Kotyrbulak**	**1.29**	**307**	P	**Pb**	**04 00 18.6**	**+0.4**
	3.8nm,0.3s						
KOTS				S	**Sn**	**04 00 35.7**	**+0.3**
	16nm,0.4s						
TNSS	**Tian-Shan**	**1.29**	**297**	*e*P	**Pn**	**04 00 17.9**	**-0.4**
	baz=0.0						
TNSS				*e*S	**Sb**	**04 00 34.3**	**-1.0**
	baz=0.0						
TNSS	**Tian-Shan**	**1.29**	**297**	*e*P	**Pn**	**04 00 17.9**	**-0.4**
	1.0nm,0.2s						
TNSS				*e*S	**Sb**	**04 00 34.2**	**-1.0**
	6.8nm,0.3s						
TNSS	**Tian-Shan**	**1.29**	**297**	P	**Pn**	**04 00 17.9**	**-0.4**
	1.0nm,0.2s						
TNSS				S	**Sb**	**04 00 34.2**	**-1.0**
	6.8nm,0.3s						
IZV	**Izvestkoviy**	**1.52**	**293**	*e*P	**Pg**	**04 00 23.0**	**+0.1**
	1.4nm,0.1s						
IZV				*e*S	**Sg**	**04 00 43.4**	**+0.7**
	12nm,0.2s						
IZV	**Izvestkoviy**	**1.52**	**293**	P	**Pg**	**04 00 23.0**	**+0.1**
	1.4nm,0.1s						
IZV				S	**Sg**	**04 00 43.4**	**+0.7**
	12nm,0.2s						
MNBS	**Baschi**	**1.61**	**357**	*e*P	**Pb**	**04 00 24.5**	**+0.8**
	8.8nm,0.5s						
MNBS				*e*S	**Sg**	**04 00 45.6**	**-0.1**
	6.4nm,0.2s						
MNBS	**Baschi**	**1.61**	**357**	P	**Pb**	**04 00 24.5**	**+0.8**
	8.8nm,0.5s						
MNBS				S	**Sg**	**04 00 45.6**	**-0.1**
	6.4nm,0.2s						
ULHL	**Ulahol**	**1.71**	**263**	⇑*i*P	Pn	04 00 23.3	-0.5
	baz=66						
ULHL				⇑*i*S	**Sn**	**04 00 46.0**	**+0.3**
	baz=66						
ULHL	**Ulahol**	**1.71**	**263**	*i* P	**Pg**	**04 00 26.4**	**-0.2**
	baz=64						
ULHL				*i* S	**Sg**	**04 00 48.3**	**-0.5**
	baz=64						
CHKK	**Chushkaly**	**1.78**	**321**	*e*P	**Pb**	**04 00 27.2**	**+0.6**
	baz=24						
CHKK				*e*S	**Sb**	**04 00 50.1**	**+1.2**
	baz=24						
CHKK	**Chushkaly**	**1.78**	**321**	*e*P	**Pb**	**04 00 27.2**	**+0.6**
	2.9nm,0.3s						
CHKK				*e*S	**Sb**	**04 00 50.1**	**+1.2**
	13nm,0.2s						
ARXS	**Arharly**	**1.81**	**344**	*e*P	**Pb**	**04 00 26.9**	**-0.2**
	4.7nm,0.2s						
ARXS				*e*S	**Sb**	**04 00 50.0**	**+0.1**
	10nm,0.4s						
ARXS	**Arharly**	**1.81**	**344**	P	**Pb**	**04 00 26.9**	**-0.2**
	4.7nm,0.2s						
ARXS				S	**Sb**	**04 00 50.0**	**+0.1**
	10nm,0.4s						
KTBS	**Karatobe**	**1.83**	**313**	*e*P	**Pb**	**04 00 28.3**	**+0.9**
	1.4nm,0.2s						
KTBS				*e*S	**Sg**	**04 00 52.2**	**-0.6**
	14nm,0.3s						
KTBS	**Karatobe**	**1.83**	**313**	P	**Pb**	**04 00 28.3**	**+0.9**
	1.4nm,0.2s						
KTBS				S	**Sg**	**04 00 52.2**	**-0.6**
	14nm,0.3s						
BOOM	**Boomskoye usch**	**1.91**	**271**	⇑*i*P	**Pn**	**04 00 27.2**	**+0.6**
	baz=74						
BOOM				⇑*i*S	**Sb**	**04 00 53.2**	**+0.4**
	baz=74						
BOOM	**Boomskoye usch**	**1.91**	**271**	⇓*i*P	**Pb**	**04 00 29.6**	**+0.7**
	baz=73						
BOOM				⇓*i*S	**Sg**	**04 00 55.1**	**-0.2**
	baz=73						
KST	**Kastek**	**1.97**	**288**	*e*P	**Pb**	**04 00 30.9**	**+1.0**
	3.1nm,0.3s						
KST				*e*S	**Sg**	**04 00 56.6**	**-0.6**
	6.0nm,0.3s						
KST	**Kastek**	**1.97**	**288**	Pg	**Pb**	**04 00 30.9**	**+1.0**
	3.1nm,0.3s						
KST				Lg	Lg	04 00 56.6	
	6.0nm,0.3s						
DJR	**Jarkent**	**2.08**	**26**	*e*P	**Pb**	**04 00 32.4**	**+0.8**
	2.1nm,0.3s						
DJR				*e*S	**Sg**	**04 00 59.8**	**-0.8**
	6.0nm,0.3s						
NRN	**Naryn**	**2.15**	**242**	⇓*i*P	**Pn**	**04 00 29.9**	**-0.1**
	baz=44						
NRN				⇓*i*S	**Sn**	**04 00 57.6**	**+0.8**
	baz=44						
NRN	**Naryn**	**2.15**	**242**	⇑*i*P	**Pb**	**04 00 33.9**	**+0.9**
	baz=42						
NRN				⇑*i*S	**Sb**	**04 01 01.1**	**+1.3**
	baz=42						
DGS	**Degeres**	**2.17**	**292**	*e*P	**Pb**	**04 00 34.0**	**+0.8**
	1.9nm,0.4s						
DGS				*e*S	**Sg**	**04 01 02.1**	**-1.4**
	6.2nm,0.3s						
DGS	**Degeres**	**2.17**	**292**	Pg	**Pb**	**04 00 34.0**	**+0.8**
	1.9nm,0.4s						
DGS				Lg	Lg	04 01 02.1	
	6.2nm,0.3s						
TKM2	**Tokmak 2**	**2.21**	**283**	P	**Pg**	**04 00 35.4**	**-0.8**
	0.7nm,0.3s						
TKM2				S	**Sb**	**04 01 02.9**	**+1.6**
	1.8nm,0.2s						
KAPS	**Kapalarasan**	**2.88**	**12**	*e*P	**Pg**	**04 00 47.5**	**-1.5**
	0.9nm,0.2s						
KAPS				*e*S	**Sg**	**04 01 25.0**	**-1.2**
	1.6nm,0.3s						

*IDC **08** 04:05:02.2±0.5,1°.34N×126°.13E,h0km,mb4.5/30, mb1 4.5/32,mb1mx4.4/50,mbtmp4.5/32,ML4.0/2,MS3.5/9, Ms1 3.5/9,ms1mx3.2/38,Error ellipse: s-maj=18.8km s-min=10.8km az=73.0*
*BJI **08** 04:05:03.8±0.0,1°.00N×126°.70E,h45km,mB5.0/22, mb4.7/33,Ms4.5/4,Ms7 4.4/4*
*MOS **08** 04:05:07.3±0.8,1°.39N×126°.29E,h53km,mb5.0/31,Error ellipse: s-maj=12.8km s-min=6.8km az=106.4*
*DJA **08** 04:05:09.3±0.3,1°.N±3°×12°6E±°,h41km±6km,M4.6/14, mb4.8/13,mB5.2/6,MLv4.6/14,Mw(mB)4.6/6*
*NEIC **08** 04:05:09.2±1.6,1°.36N±0°.08×126°.37E±0°.05,h57km±6km, mb4.7/45,Error ellipse: s-maj=12.7km s-min=4.1km az=209.0*
*KLM **08** 04:05:10.0,1°.19N×126°.41E,h50km,mb4.7*

ISC 08 04:05:08.3±0.7,1°.37N±0°.04×126°.35E±0°.04,h42km±6km, n176,σ1°.65/187,mb4.7/74,MS3.5/8,9C-1D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.18**	**120**	P	**Pn**	**04 05 27.9**	**-0.5**
TNTI				S	**Sn**	**04 05 45.7**	**+2.5**
TNTI	**Ternate**	**1.18**	**120**		**Pn**	**04 05 27.8**	**-0.5**
LBMI	**Labuha**	**2.30**	**150**	P	**Pn**	**04 05 44.7**	**+0.9**
KMSI	**Cibinong**	**2.50**	**252**	P	**Pn**	**04 05 46.3**	**-0.2**
KMSI				S	**Sn**	**04 06 16.4**	**+0.6**
SANI	**Sanana**	**3.42**	**186**	P	**Pn**	**04 05 59.5**	**+0.4**
LUWI	**Luwuk**	**4.31**	**236**	P	**Pn**	**04 06 13.2**	**+1.8**
LUWI	**Luwuk**	**4.31**	**236**		**Pn**	**04 06 13.0**	**+1.6**
MRSI	**Marisa**	**4.50**	**259**	P	**Pn**	**04 06 14.9**	**+0.9**
NLAI	**Namlea**	**4.64**	**171**	P	**Pn**	**04 06 17.4**	**+1.5**
DDMP	**Don Marcelino,**	**4.75**	**352**	*e*P	**Pn**	**04 06 20.4**	**+3.0**
DDMP				*e*S	**Sn**	**04 07 12.4**	**+1.3**
APSI	**Ampana**	**5.22**	**244**	P	**Pn**	**04 06 24.5**	**+0.6**
	2.2nm6μm746nm,1.0s						
SIJI	**Sorong**	**5.39**	**114**	Pn	**Pn**	**04 06 26.9**	**+0.5**
	1.8nm,0.3s,baz=339,slow=18,SNR=2.5						
SIJI				LR	LR	04 08 58.2	
	comp=Z,847nm,18.6s,baz=283,slow=42						
SKMP	**Bagumbayan, Su**	**5.42**	**341**	*e*P	**Pn**	**04 06 28.1**	**+1.4**
SKMP				*e*S	**Sn**	**04 07 23.7**	**-4.2**
KCP	**Kidapawan**	**5.74**	**347**	⇓*e*P	**Pn**	**04 06 33.3**	**+2.2**
CTBH	**Cotabato--PC H**	**6.18**	**340**	⇑*i*P	**Pn**	**04 06 40.2**	**+3.1**
MPSI	**Mapaga**	**6.54**	**261**	P	**Pn**	**04 06 46.6**	**+4.6**
	0.4nm1μm104nm,0.8s						
BBSI	**Bau Bau**	**7.79**	**209**	P	**Pn**	**04 07 03.0**	**+3.8**
	0.1nm24nm,1.0s						
TTSI	**Tana Toraja**	**7.87**	**236**	P	**Pn**	**04 07 00.0**	**-0.3**
	0.4nm3μm124nm,0.8s						
**

WR0 IAmb IAmb 04 10 08.5
comp=Z,39nm,1.1s
SSLB Suanglung 22.89 347 P **P** **04 10 07.7 -0.8**
SSLB IAmb IAmb 04 10 17.6
comp=Z,14nm,0.8s
PMG Port Moresby 23.33 118 P **P** **04 10 12.7 -0.3**
PMG pmax pmax
comp=Z,31nm,1.1s
PMG Port Moresby 23.33 118 P **P** **04 10 14.3 +1.3**
comp=Z,20nm,0.7s,baz=288,slow=7.6,SNR=7.8
PMG LR LR 04 21 49.1
comp=Z,170nm,19.3s,baz=319,slow=43
PMG Port Moresby 23.33 118 P **P** **04 10 12.7 -0.3**
PMG IAmb IAmb 04 10 15.6
comp=Z,30nm,1.1s
PSA00 Pilbara Seismi 23.67 195 P **P** **04 10 15.9 -0.3**
PSA00 IAmb IAmb 04 10 24.0
comp=Z,15nm,0.8s
BKNI Bangkinang 25.33 268 P **P** **04 10 31.0 -0.5**
AS31 Alice Springs 25.95 164 P **P** **04 10 37.0 0.0**
ASAR Alice Springs 25.95 164 P **P** **04 10 36.7 -0.3**
ASAR 04 14 03.2
ASAR Alice Springs 25.95 164 P **P** **04 10 36.7 -0.3**
comp=Z,8.5nm,0.8s,baz=346,slow=6.6,SNR=41
ASAR PcP **PcP** **04 14 05.5 +0.5**
comp=Z,2.4nm,0.7s,baz=349,slow=2.4,SNR=9.7
ASAR S **S** **04 15 08.6 +3.8**
comp=Z,0.8nm,0.8s,baz=350,slow=21,SNR=4.7
KRVT Keravat (AS076 26.27 103 LR LR 04 19 50.9
comp=Z,178nm,18.5s,baz=269,slow=34
RPSI Rantau Prapat 27.44 273 P **P** **04 10 51.9 +1.3**
RPSI IAmb IAmb 04 10 53.9
comp=Z,19nm,1.1s
PSI Prapat 27.45 273 P **P** **04 10 51.9 +1.1**
PSI pmax pmax
comp=Z,19nm,1.1s
PSI Prapat 27.45 273 LR LR 04 22 57.5
comp=Z,55nm,19.9s,baz=269,slow=40
NJ2 Nanjing 31.33 348 *e*P **P** **04 11 26.0 +1.2**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
CMAR Chiang Mai Arr 31.80 304 P **P** **04 11 28.2 -0.9**
comp=Z,0.8nm,0.3s,baz=113,slow=6.9,SNR=4.7
CMAR LR LR 04 24 17.8
comp=Z,44nm,20.2s,baz=130,slow=36
JNU Nakatsue 31.87 7 P **P** **04 11 30.1 +0.5**
comp=Z,14nm,0.9s,baz=250,slow=18,SNR=4.0
JNU Nakatsue 31.87 7 IAmb IAmb 04 11 35.1
comp=Z,28nm,1.1s
KMI Kunming 32.82 318 P P 04 11 43.8 +5.5
KMI pmax pmax
comp=Z,8.0nm,1.2s
KSRS Korea Array 35.94 2 P **P** **04 12 04.7 -0.1**
comp=Z,1.4nm,0.6s,baz=176,slow=9.6,SNR=4.7
KSRS LR LR 04 29 42.7
comp=Z,55nm,18.1s,baz=320,slow=41
STKA Stephens Creek 36.09 158 P **P** **04 12 06.6 +0.4**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 36.09 158 P **P** **04 12 05.8 -0.5**
comp=Z,10nm,0.8s,baz=326,slow=11,SNR=14
STKA Stephens Creek 36.09 158 P **P** **04 12 06.6 +0.4**
CD2 Chengdu 36.35 326 P **P** **04 12 09.2 +0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
XAN Xi'an 36.36 335 P **P** **04 12 06.6 -2.0**
XAN pmax pmax
comp=Z,5.0nm,0.8s
XAN Xi'an 36.36 335 P **P** **04 12 06.6 -2.0**
XAN IAmb IAmb 04 12 14.5
comp=Z,5.2nm,0.8s
MAT Matsushiro 36.68 16 P **P** **04 12 10.7 -0.5**
MJAR Matsushiro Arr 36.68 16 P **P** **04 12 10.5 -0.7**
MJAR pmax pmax
comp=Z,3.0nm,1.0s
MJAR Matsushiro Arr 36.68 16 P **P** **04 12 10.8 -0.4**
comp=Z,5.7nm,0.8s,baz=188,slow=9.3,SNR=13
MJAR Matsushiro Arr 36.68 16 P **P** **04 12 10.5 -0.7**
LZH Lanzhou 40.36 331 *e*P **P** **04 12 43.1 +0.8**
LZH pP sP 04 12 59.8 +1.4
LZH sP pwP 04 13 02.9 +9.3
LZH *e*PP **PnPn** **04 14 21.3 +1.5**
LZH pmax pmax
comp=Z,22nm,1.0s
LZH pmax pmax
comp=Z,110nm,5.8s
LZH LR LR
comp=Z,360nm,13.5s
LZH LR LR
comp=Z,360nm,13.7s
LZH LR LR
comp=Z,500nm,17.1s
HHC Hu-ho-hao-te 41.52 343 *e*P **P** **04 12 55.2 +3.5**
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,69nm,8.9s
USA0B Ussuriysk Arra 42.94 6 P **P** **04 13 03.0 -0.1**
USA0B pmax pmax
comp=Z,17nm,1.0s
USA0B Ussuriysk Arra 42.94 6 P **P** **04 13 03.0 -0.1**
USA0B IAmb IAmb 04 13 05.3
comp=Z,17nm,0.9s
USRK Ussuriysk Ar. 42.94 6 P **P** **04 13 02.2 -0.9**
USRK Ussuriysk Ar. 42.94 6 P **P** **04 13 04.2 +1.1**
comp=Z,11nm,0.8s,baz=195,slow=7.3,SNR=18
USRK Ussuriysk Ar. 42.94 6 P **P** **04 13 02.2 -0.9**
MDJ Mudanjiang 43.16 3 P **P** **04 13 05.2 +0.4**
MDJ IAmb IAmb 04 13 07.2
comp=Z,17nm,0.9s
LSA Lhasa 43.74 313 P **P** **04 13 09.3 -1.1**
LSA pmax pmax
comp=Z,5.0nm,0.8s
LSA Lhasa 43.74 313 P **P** **04 13 09.3 -1.1**
TEY Ternei 44.42 10⇓ *e*P **P** **04 13 16.1 +1.2**
TEY pmax pmax
comp=N,40nm,0.9s
TEY pmax pmax
comp=Z,30nm,0.8s
GTA Gaotai 44.94 331 *e*P **P** **04 13 19.1 -0.3**
GTA pP pP 04 13 31.9 +1.1
GTA sP sP 04 13 36.6 +1.1
GTA PcP **PcP** **04 15 01.6 +1.3**
GTA pmax pmax
comp=Z,2.0nm,0.6s
ASAJ Asahikawa 44.94 17 P **P** **04 13 20.2 +1.0**
comp=Z,8.5nm,0.8s,baz=211,slow=13,SNR=4.2
PALK Pallekele 45.87 279 LR LR 04 34 10.2
comp=Z,57nm,20.3s,baz=49,slow=38
JIRN Jiri 46.48 308 *e*P **P** **04 13 31.2 -0.8**
comp=Z,5.8nm,0.4s
GUN Gumba 46.84 308 *e*P **P** **04 13 33.5 -1.3**
comp=Z,4.7nm,0.3s
KLR Kul'dur 47.90 5 *i* P **P** **04 13 42.9 +0.6**
KLR pmax pmax
comp=Z,12nm,0.9s
KLR Kul'dur 47.90 5 P **P** **04 13 42.7 +0.4**
comp=Z,10nm,0.8s,baz=202,slow=4.6,SNR=28
HIA Hailar 48.05 354 P **P** **04 13 43.7 +0.2**
HIA pmax pmax
comp=Z,9.0nm,1.0s
HIA Hailar 48.05 354 P **P** **04 13 43.7 +0.2**
HIA IAmb IAmb 04 13 46.4
comp=Z,9.4nm,1.0s
KOLN Koldanda 48.59 307 *e*P **P** **04 13 47.3 -0.9**
comp=Z,20nm,0.8s
DANN Dangsing 48.71 307 *e*P **P** **04 13 48.0 -1.3**
comp=Z,20nm,0.7s
ULN Ulaanbaatar 49.24 343 *ce*P **P** **04 13 51.6 -1.2**
ULN pmax pmax
comp=Z,8.0nm,2.3s
SONM Songino Array 49.41 342 P **P** **04 13 53.2 -0.9**
SONM pmax pmax
comp=Z,1.0nm,0.9s
SONM Songino Array 49.41 342 P **P** **04 13 54.4 +0.3**
comp=Z,1.3nm,0.7s,baz=154,slow=9.0,SNR=5.1
SONM Songino Array 49.41 342 P **P** **04 13 53.2 -0.9**
HYB Hyderabad 49.59 292 *i* P **P** **04 13 55.0 -0.9**
ZEA Zeya 52.20 1 *e*P **P** **04 14 14.2 -0.6**
ZEA pmax pmax
comp=Z,11nm,0.9s
WMQ Urumqi 54.45 326 *e*P **P** **04 14 31.9 +0.3**
WMQ pmax pmax
comp=Z,10.0nm,1.1s
WMQ pmax pmax
comp=Z,110nm,4.7s
WMQ LR LR
comp=Z,280nm,29.2s
WMQ LR LR
comp=Z,1μm,29.1s
WMQ Urumqi 54.45 326 P **P** **04 14 31.8 +0.2**
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ Urumqi 54.45 326 P **P** **04 14 31.8 +0.2**
WMQ IAmb IAmb 04 14 41.0
comp=Z,7.3nm,0.7s
BOD Bodaibo 57.13 352 *e*P **P** **04 14 50.8 +0.3**
BOD pmax pmax
comp=Z,10.0nm,1.4s
PETK Petropavlovsk- 57.74 22 P **P** **04 14 54.6 -0.3**
PETK Petropavlovsk- 57.74 22 P **P** **04 14 56.0 +1.1**
comp=Z,5.2nm,0.7s,baz=190,slow=5.5,SNR=9.2
PETK Petropavlovsk- 57.74 22 P **P** **04 14 54.6 -0.3**
MKAR Makanchi Array 59.28 326 P **P** **04 15 04.5 -1.3**
comp=Z,1.8nm,0.5s,baz=118,slow=8.2,SNR=27
KSH Kashi 59.46 316 P **P** **04 15 11.8 +4.5**
KSH pP sP 04 15 26.0 +2.5
KSH PP **PP** **04 17 25.3 +6.4**
KSH S **S** **04 23 16.5 +2.6**
KSH sS sS 04 23 41.0 +7.8
KSH ScS **ScS** **04 24 56.4 +2.0**
KSH SS **SS** **04 27 13.7 +4.1**
KSH pmax pmax
comp=Z,330nm,8.6s
KSH LR LR
comp=Z,220nm,6.6s
MAKZ Makanchi 59.46 326 P **P** **04 15 06.2 -0.8**
MAKZ pmax pmax
comp=Z,6.0nm,1.2s
MAKZ Makanchi 59.46 326 P **P** **04 15 06.2 -0.8**
MAKZ IAmb IAmb 04 15 17.3
comp=Z,5.8nm,1.1s
YAK Yakutsk 60.56 2 *e*P **P** **04 15 14.8 +0.6**
YAK *e**PP **pP** **04 15 24.5 -1.5**
YAK *e* 04 17 28.1
YAK *e*S **S** **04 23 29.1 +2.2**
YAK *e**SS sS 04 23 56.2 +10
YAK *e* 04 24 58.0
YAK *e*SS **SS** **04 27 32.0 +6.2**
YAK pmax pmax
comp=Z,28nm,0.8s
YAK pmax pmax
comp=N,12nm,1.0s
YAK pmax pmax
comp=Z,122nm,3.3s
YAK pmax pmax
comp=N,60nm,2.9s
YAK pmax pmax
comp=E,69nm,3.3s
YAK smax smax
comp=E,90nm,3.0s
YAK smax smax
comp=N,135nm,3.0s
YAK Yakutsk 60.56 2 P **P** **04 15 14.5 +0.3**
comp=N,14nm,0.6s,baz=154,slow=1.4,SNR=11
YAK Yakutsk 60.56 2 P **P** **04 15 14.2 0.0**
ZAA0 Zalesovo Array 62.51 334 P **P** **04 15 27.8 +0.2**
ZALV Zalesovo Beam 62.51 334 P **P** **04 15 26.4 -1.2**
comp=N,1.8nm,0.6s,baz=116,slow=6.7,SNR=8.1
KBL Kabul 62.67 309 P **P** **04 15 28.6 -0.6**
KBL pmax pmax
comp=Z,4.0nm,1.0s
KBL Kabul 62.67 309 P **P** **04 15 28.6 -0.6**
KBL IAmb IAmb 04 15 36.1
comp=Z,4.5nm,0.9s
KURBB Kurchatov Arra 63.52 328 P **P** **04 15 33.0 -1.2**
comp=Z,5.7nm,0.7s,baz=126,slow=6.2,SNR=32
KURK Kurchatov 63.52 328 *ce*P **P** **04 15 33.1 -1.2**
KURK pmax pmax
comp=Z,18nm,1.0s
KURK Kurchatov 63.52 328 P **P** **04 15 33.4 -0.9**
SEY Seymchan 64.40 13 P **P** **04 15 41.4 +1.6**
comp=Z,6.1nm,1.0s,baz=201,slow=4.5,SNR=8.7
KKAR Karatay Array 64.70 318 P **P** **04 15 41.8 -0.5**
KKAR pmax pmax
comp=Z,3.0nm,0.9s
KKAR Karatay Array 64.70 318 P **P** **04 15 41.8 -0.5**
BVAR Borovoye Array 69.09 328 P **P** **04 16 08.3 -1.6**
comp=Z,1.7nm,0.6s,baz=125,slow=9.3,SNR=3.6
TIXI Tiksi 70.19 1 *i* P **P** **04 16 16.3 0.0**
TIXI pmax pmax
comp=Z,10.0nm,0.9s
TIXI Tiksi 70.19 1 P **P** **04 16 16.0 -0.3**
TIXI IAmb IAmb 04 16 17.5
comp=Z,8.4nm,0.8s
BILL Bilibino 71.92 15 *e*P **P** **04 16 28.3 +1.4**
BILL *e* 04 16 41.0
BILL pmax pmax
comp=Z,2.0nm,1.1s
GEYT Alibeck 72.08 309 P **P** **04 16 27.5 -1.0**
comp=Z,1.3nm,0.5s,baz=124,slow=7.3,SNR=2.8
GEYT Alibeck 72.08 309 IAmb IAmb 04 16 35.2
comp=Z,1.8nm,0.8s
ABKAR Akbulak array 73.73 321 P **P** **04 16 37.6 -0.4**
SVE Sverdlovsk 75.77 329 *e*P **P** **04 16 49.2 -0.4**
SVE pmax pmax
comp=Z,13nm,1.0s
ARU Arti 76.72 328 *ce* *i*P **P** **04 16 53.7 -1.4**
ARU S **S** **04 26 40.9 +2.0**
ARU SS **SS** **04 31 32.7 -2.6**
ARU pmax pmax
comp=Z,7.0nm,0.8s
ARU Arti 76.72 328 P **P** **04 16 54.3 -0.8**
ARU IAmb IAmb 04 16 57.7
comp=Z,7.2nm,0.8s
RAYN Ar Rayn 81.06 293 P **P** **04 17 18.9 -0.8**
RAYN pmax pmax
comp=Z,3.0nm,0.6s
RAYN Ar Rayn 81.06 293 P **P** **04 17 18.9 -0.8**
MAW Mawson 81.43 200 P **P** **04 17 21.2 +0.7**
comp=Z,5.3nm,0.9s,baz=71,slow=6.7,SNR=4.1
RDOG Red Dog Mine 81.61 21 P **P** **04 17 22.0 +0.4**
RDOG IAmb IAmb 04 17 25.1
comp=Z,7.2nm,1.2s
ZEI Tsey 83.53 313 *e*P **P** **04 17 32.4 0.0**
ZEI pmax pmax
comp=Z,10.0nm,0.8s
KBZ Khabaz 84.32 314 P **P** **04 17 35.5 -0.5**
comp=Z,1.8nm,0.8s,baz=126,slow=8.7,SNR=2.6
PRGR Permogore 84.39 332 *e*P **P** **04 17 34.7 -1.3**
PRGR pmax pmax
comp=Z,11nm,0.8s
KVAR Kislovodsk Arr 84.48 314 P **P** **04 17 37.3 +0.2**
comp=Z,2.4nm,0.6s,baz=180,slow=3.0,SNR=2.7
KIV Kislovodsk 84.49 314 *e*P **P** **04 17 34.2 -2.9**
KIV pmax pmax
comp=Z,14nm,1.0s
SUA Susitna One 85.40 29 P **P** **04 17 40.8 -0.5**
VRH Novokhopyorsk 85.56 321 *e*P **P** **04 17 40.4 -1.8**
VRH pmax pmax
comp=Z,20nm,1.0s
TOLK Toolik Lake Re 86.56 21 IAmb IAmb 04 17 49.9
comp=Z,4.3nm,0.9s
SOC Sochi 86.62 313 *e*P **P** **04 17 51.6 +4.0**
SOC *e*S **S** **04 28 19.2 -2.4**
SOC pmax pmax
comp=Z,47nm,1.4s
VORD Divnogorie 87.09 321 *e*P **P** **04 17 47.3 -2.3**
VORD pmax pmax
comp=Z,6.0nm,0.9s
VSR Storozhevoye 87.17 321 *e*P **P** **04 17 48.3 -1.8**
VSR pmax pmax
comp=Z,10.0nm,0.9s
LPSR Galich'ya Gora 87.35 322 *e*P **P** **04 17 48.9 -2.0**
LPSR pmax pmax
comp=Z,10.0nm,0.6s
ILAR Eielson Array 87.38 25 P **P** **04 17 49.9 -0.9**
ILAR Eielson Array 87.38 25 P **P** **04 17 49.8 -1.0**
comp=Z,6.0nm,0.7s,baz=249,slow=4.8,SNR=9.0
ILAR Eielson Array 87.38 25 P **P** **04 17 49.9 -0.9**
OBN Obninsk 88.76 325 *e*P **P** **04 17 55.8 -1.7**
OBN *e* 04 21 25.3
OBN pmax pmax
comp=Z,6.0nm,1.0s
ASF Jabal al Asfar 88.82 302 P **P** **04 17 58.7 +0.2**
comp=Z,8.9nm,0.9s,baz=28,slow=1.3,SNR=10.0
MMAI Mount Meron Ar 90.06 303 P **P** **04 18 04.8 +0.5**
comp=Z,3.3nm,0.8s,baz=97,slow=8.0,SNR=4.2
SYO Syowa Base 90.10 201 *e*P **P** **04 18 02.8 -0.7**
SYO Syowa Base 90.10 201⇑ *e*pP pP 04 18 18.8 +3.1
BRTR Keskin Array B 91.22 310 *ce*P **P** **04 18 08.5 -1.1**
BRTR pmax pmax
comp=Z,1.0nm,0.9s
BRTR Keskin Array B 91.22 310 P **P** **04 18 08.2 -1.4**
comp=Z,1.2nm,0.9s,baz=102,slow=4.9,SNR=7.8
BRTR Keskin Array B 91.22 310 P **P** **04 18 07.3 -2.3**
CSS Mathiatis 91.70 305 P **P** **04 18 11.2 -0.5**
INK Inuvik 92.48 21 P **P** **04 18 14.7 +0.1**
comp=Z,2.1nm,1.0s,baz=264,slow=2.2,SNR=3.5
AKASG Malin Array Be 93.47 321 P **P** **04 18 18.5 -1.0**
comp=Z,0.2nm,0.4s,baz=69,slow=4.6,SNR=3.0
FINES FINESS Array B 93.72 332 P **P** **04 18 19.3 -1.2**
comp=Z,2.1nm,1.0s,baz=57,slow=5.3,SNR=2.6
BUR08 Bucovina Ar. S 96.50 318 P **P** **04 18 32.8 -0.8**
YKA Yellowknife Ar 101.79 24 P **Pdif** **04 18 56.0 -0.7**
comp=Z,0.2nm,0.5s,baz=304,slow=5.0,SNR=4.5
TORD Torodi Ar. Bea 123.26 287 PKP **PKPdf** **04 24 01.5 -0.2**
comp=Z,1.8nm,0.7s,baz=62,slow=1.8,SNR=12
TORD PKKPbc **PKKPab** **04 33 53.2 +1.3**
comp=Z,0.8nm,0.8s,baz=274,slow=3.3,SNR=4.6
TORD Torodi Ar. Bea 123.26 287 **PKPdf** **04 23 59.0 -2.8**
TXAR Lajitas Array 123.32 53 PKIKP **PKPdf** **04 23 59.6 -2.0**
TXAR Lajitas Array 123.32 53 PKP **PKiKP** **04 24 02.6 +0.7**
comp=Z,0.7nm,0.8s,baz=274,slow=0.5,SNR=8.4
TXAR Lajitas Array 123.32 53 **PKPdf** **04 23 59.6 -2.0**

*IDC **08** 04:05:41.3±1.5, 16°.51S×69°.36W, h200km±9km, mb3.3/4, mb1 3.3/6, mb1mx3.1/29, mbtmp3.7/6, Error ellipse: s-maj=33.4km s-min=19.5km az=114.0*

ISC 08 04:05:40.3±1.0, 16°.68S±0°.09×69°.4W±0°.1, h189km, n11, σ1s 70/17, mb3.6/4, 3C, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
LPAZ	**La Paz**	**1.29**	**73**	P	**Pn**	**04 06 13.8**	**+1.8**
	38nm,0.3s,baz=287,slow=4.0,SNR=861						
LPAZ				S	**Sn**	**04 06 38.1**	**+1.9**
	4.1nm,0.3s,baz=180,slow=20,SNR=6.2						
PB16	**IPOC Station P**	**1.65**	**183**	*i* P	**Pn**	**04 06 16.6**	**+1.5**
PB16				*i* S	**Sn**	**04 06 45.3**	**+3.1**
MNMC	**Minye Minye**	**2.44**	**184⇑**	*i* P	**Pn**	**04 06 23.9**	**+0.7**
MNMC				*i* S	**Sn**	**04 06 57.4**	**+0.7**
PB11	**IPOC Station P**	**3.07**	**184⇑**	*i* P	**Pn**	**04 06 30.5**	**+0.1**
PB11				*i* S	**Sn**	**04 07 08.9**	**-0.8**
LVC	**Limon Verde**	**5.92**	**175**	P	**Pn**	**04 07 08.1**	**+1.4**
	1.3nm,0.3s,baz=345,slow=9.4,SNR=21						
LVC				S	**Sn**	**04 08 12.4**	**-2.5**
	4.1nm,0.3s,baz=201,slow=18,SNR=14						
SIV	**San Ignacio**	**8.04**	**86**	P	**Pn**	**04 07 34.2**	**+0.1**
	0.2nm,0.3s,baz=268,slow=13,SNR=4.8						
SIV				S	**Sn**	**04 09 04.6**	**0.0**
	0.1nm,0.3s,baz=125,slow=16,SNR=3.2						
PLCA	**Paso Flores**	**23.99**	**182**	P	**P**	**04 10 40.4**	**+2.7**
	1.1nm,0.9s,baz=18,slow=9.6,SNR=4.4						
DBIC	**Dimbokro**	**67.91**	**75**	P	**P**	**04 16 18.5**	**-0.6**
	1.3nm,0.5s,baz=270,slow=5.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**76.24**	**72**	P	**P**	**04 17 07.6**	**-1.0**
	0.7nm,0.4s,baz=254,slow=5.5,SNR=12						
YKA	**Yellowknife Ar**	**86.50**	**341**	P	**P**	**04 17 59.9**	**-1.5**
	0.1nm,0.6s,baz=142,slow=4.9						
SONM	**Songino Array**	**148.74**	**5**	PKPbc	**PKPbc**	**04 25 04.4**	**-1.0**
	0.3nm,0.5s,baz=344,slow=2.1,SNR=4.0						

IDC 08 04:15:56.9±11.0, 26°.57N×127°.69E, h100km±107km, mb3.3/8, mb1 3.4/8, mb1mx3.3/39, mbtmp3.6/8, Error ellipse: s-maj=49.6km s-min=21.3km az=66.0, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
SONM	**Songino Array**	**27.01**	**327**	P	P	04 21 30.4	+1.0
	0.5nm,0.5s,baz=136,slow=9.3,SNR=3.3						
MKAR	**Makanchi Array**	**40.95**	**312**	P	P	04 23 29.2	-0.4
	0.8nm,0.6s,baz=101,slow=9.1,SNR=10.0						
ZALV	**Zalesovo Beam**	**41.69**	**323**	P	P	04 23 34.4	-1.1
	0.8nm,0.5s,baz=99,slow=9.6,SNR=3.7						
WRA	**Warramunga Arr**	**46.68**	**171**	P	P	04 24 15.4	-0.1
	0.1nm,0.3s,baz=354,slow=8.3,SNR=3.5						
FINES	**FINESS Array B**	**72.33**	**330**	P	P	04 27 11.1	-0.3
	4.4nm,1.2s,baz=79,slow=7.2,SNR=6.6						
BRTR	**Keskin Array B**	**76.45**	**308**	P	P	04 27 36.5	+0.6
	0.3nm,0.6s,baz=81,slow=4.6,SNR=3.4						
YKA	**Yellowknife Ar**	**78.42**	**25**	P	P	04 27 46.4	+0.1
	0.1nm,0.4s,baz=303,slow=5.8						
NOA	**NORSAR Array B**	**78.80**	**334**	P	P	04 27 48.2	-0.2
	0.7nm,0.8s,baz=54,slow=7.7,SNR=3.0						

*IDC **08** 04:22:07.4±0.4, 20°.66S×70°.47W, h0km, mb5.2/20, mb1 5.3/24, mb1mx5.2/27, mbtmp5.2/24, ML3.9/3, MS5.3/28, Ms1 5.3/28, ms1mx5.2/33, Error ellipse: s-maj=17.1km s-min=12.3km az=69.0*

*NEIC **08** 04:22:10.2±1.5, 20°.75S±0°.03×70°.63W±0°.06, h20km±1km, mb5.4/402, Ms_20 5.4/307, Mwb5.6/26, Mwr5.6/14, Mww5.7, Mwc5.7(GCMT), Mwr5.8(GUC), Error ellipse: s-maj=9.3km s-min=5.2km az=281.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.33; $M_{\theta\theta}$-0.18; $M_{\phi\phi}$-2.15; $M_{r\theta}$0.45; $M_{\theta\phi}$0.27; $M_{\phi r}$-1.49; Fault plane solution: M_o2.74000×10^{17} NP1:ϕ_s167.30000°, δ62.33000°, λ85.67000°. NP2:ϕ_s356.57000°, δ27.98000°, λ98.20000°. Principal axes: T 2.8188, Plg72.0000°, Azm67.0000°; N -0.1551, Plg4.0000°, Azm169.0000°; P -2.6636, Plg17.0000°, Azm261.0000°; Moment Tensor Solution. Moment tensor: Scale 10^{17} Nm; M_{rr}2.17; $M_{\theta\theta}$0.32; $M_{\phi\phi}$-2.49; $M_{r\theta}$-0.07; $M_{\theta\phi}$0.57; $M_{\phi r}$-1.41; Fault plane solution: M_o2.79000×10^{17} NP1:ϕ_s177.19000°, δ60.46000°, λ99.22000°. NP2:ϕ_s338.96000°, δ30.82000°, λ74.21000°. Principal axes: T 2.5790, Plg73.0000°, Azm110.0000°; N 0.3871, Plg8.0000°, Azm353.0000°; P -2.9661, Plg15.0000°, Azm260.0000°;*

*MOS **08** 04:22:10.9±1.4, 20°.61S×70°.57W, h30km, mb5.6/38, MS5.5/20 Error ellipse: s-maj=10.7km s-min=6.8km az=97.0*

*GUC **08** 04:22:11.2±0.7, 20°.77S×70°.68W, h30km±2km, MW5.8*

*VAO **08** 04:22:13.9±0.3, 20°.71S×70°.31W, h36km, mb5.5*

*NEIC **08** 04:22:14, 20°.77S×70°.65W, h26km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.53; $M_{\theta\theta}$0.21; $M_{\phi\phi}$-2.73; $M_{r\theta}$1.12; $M_{\theta\phi}$0.72; $M_{\phi r}$-3.73; Fault plane solution: M_o4.76000×10^{17} NP1:ϕ_s351.00000°, δ17.00000°, λ97.00000°. NP2:ϕ_s164.00000°, δ73.00000°, λ88.00000°. Principal axes: T 4.5656, Plg62.0000°, Azm70.0000°; N 0.3613, Plg2.0000°, Azm164.0000°; P -4.9269, Plg28.0000°, Azm256.0000°;*

*NEIC **08** 04:22:15, 20°.77S×70°.93W, h20km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.49; $M_{\theta\theta}$0.22; $M_{\phi\phi}$-2.71; $M_{r\theta}$0.64; $M_{\theta\phi}$0.33; $M_{\phi r}$-3.54; Fault plane solution: M_o4.45000×10^{17} NP1:ϕ_s358.00000°, δ18.00000°, λ97.00000°. NP2:ϕ_s170.00000°, δ72.00000°, λ88.00000°. Principal axes: T 4.3260, Plg63.0000°, Azm77.0000°; N 0.2475, Plg2.0000°, Azm171.0000°; P -4.5736, Plg27.0000°, Azm262.0000°;*

*GCMT **08** 04:22:15.2±0.1, 20°.72S±0°.01×70°.97W±0°.01, h23km, MW5.7/155, Moment Tensor Solution. s137, c238; s155, c293; Duration: 1s7 Moment tensor: Scale 10^{17} Nm; M_{rr}2.66±.04; $M_{\theta\theta}$0.26±.03; $M_{\phi\phi}$-2.92±.04; $M_{r\theta}$0.36±.05; $M_{\theta\phi}$0.33±.02; $M_{\phi r}$-2.89±.08; Best double couple: M_o4.04500×10^{17} NP1:ϕ_s355.00000°, δ22.00000°, λ92.00000°. NP2:ϕ_s173.00000°, δ68.00000°, λ89.00000°. Principal axes: T 3.8980, Plg67.0000°, Azm82.0000°; N 0.2910, Plg1.0000°, Azm173.0000°; P -4.1920, Plg23.0000°, Azm264.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 04:22:11.1±0.6, 20°.76S±0°.02×70°.62W±0°.04, h28km±3km, n1283, σ1s 34/1074, mb5.4/226, MS5.4/209, 31C-11D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
TA01	**Diego Aracena**	**0.46**	**65⇓**	*i* P	**Pb**	**04 22 20.4**	**-0.4**
TA01				*i* S	**Sb**	**04 22 27.6**	**+0.3**
PSGC	**Pisagua**	**1.25**	**22⇑**	*i* P	**Pn**	**04 22 32.5**	**-0.4**
PSGC				*i* S	**Sn**	**04 22 48.8**	**0.0**
PB11	**IPOC Station P**	**1.34**	**42⇑**	*i* P	**Pn**	**04 22 34.5**	**+0.3**
PB11				*i* S	**Sb**	**04 22 52.5**	**-0.2**
PB11	**IPOC Station P**	**1.34**	**42**		**Pn**	**04 22 34.5**	**+0.3**

PB11 Sn **Sn** **04 22 51.3 +0.1**
PB08 IPOC Station P 1.51 66 *i*P **Pn** **04 22 37.6 +1.0**
PB08 *i* S **Sb** **04 22 58.2 +0.6**
PB03 IPOC Station P 1.52 148 *e*P **Pn** **04 22 36.9 +0.3**
PB03 *i* S **Sn** **04 22 56.2 +0.8**
PB04 IPOC Station P 1.62 164 ⇑*i*P **Pn** **04 22 37.9 -0.1**
PB04 *i* S **Sn** **04 22 59.1 +0.9**
PB04 IPOC Station P 1.62 164 **Pn** **04 22 37.8 -0.3**
PB04 Sn **Sn** **04 22 56.8 -1.3**
PB09 IPOC Station P 1.65 129 ⇑*i*P **Pb** **04 22 40.5 -0.5**
PB09 *i* S **Sb** **04 23 01.9 +0.5**
GO01 Chusmiza 1.73 51 ⇑*i*P **Pn** **04 22 40.7 +1.0**
GO01 *i* S **Sb** **04 23 03.8 -0.1**
GO01 Chusmiza 1.73 51 **Pn** **04 22 40.5 +0.7**
GO01 Sn **Sn** **04 22 59.8 -1.2**
MNMC Minye Minye 1.89 31 ⇑*i*P **Pn** **04 22 42.2 +0.4**
MNMC *i* S **Sb** **04 23 07.5 -0.9**
MNMC Minye Minye 1.89 31 **Pn** **04 22 40.9 -0.9**
MNMC Sn **Sn** **04 23 02.9 -1.8**
PB05 IPOC Station P 2.12 170 ⇑*i*P **Pn** **04 22 44.2 -0.6**
PB05 *i* S **Sn** **04 23 11.3 +1.1**
PB06 IPOC Station P 2.17 153 ⇑*i*P **Pn** **04 22 45.7 +0.2**
AP01 Chacalluta 2.39 6 *e*P **Pn** **04 22 48.1 -0.4**
LVC Limon Verde 2.43 139 P **Pn** **04 22 49.0 -0.4**
LVC 04 23 19.9
LVC Limon Verde 2.43 139 Pn **Pn** **04 22 51.7 +2.3**
365nm,0.3s,baz=306,slow=11,SNR=2065
LVC Lg Lg 04 23 23.8
2µm,0.3s,baz=230,slow=24,SNR=27
LVC Limon Verde 2.43 139 *e*P **Pn** **04 22 51.3 +2.0**
LVC Limon Verde 2.43 139 **Pn** **04 22 49.0 -0.4**
LVC Sn **Sn** **04 23 19.9 +1.6**
PB16 IPOC Station P 2.63 24 ⇑*i*P **Pn** **04 22 52.8 +0.5**
PB16 *i* S **Sn** **04 23 26.3 +2.8**
PB10 IPOC Station P 2.74 179 **Pn** **04 22 51.9 -1.3**
PB10 Sn **Sn** **04 23 24.0 -1.4**
GO02 Mina Guanaco 4.48 168 **Pn** **04 23 17.2 -0.3**
GO02 Sn **Sn** **04 24 09.4 +0.5**
I08BO LAS PENAS INFR 4.97 25 Pn **Pn** **04 23 27.7 +3.4**
baz=215,slow=27,SNR=1.3
LPAZ La Paz 5.04 28 Pn **Pn** **04 23 26.4 +1.0**
5.6nm,0.3s,baz=285,slow=4.4,SNR=151
LPAZ Lg Lg 04 24 40.5
baz=211,slow=19,SNR=2.7
GO03 Copiap 6.81 177 **Pn** **04 23 48.4 -0.9**
GO03 Sn **Sn** **04 25 03.0 -2.9**
GO04 Tololo Observa 9.37 181 **Pn** **04 24 22.5 -2.1**
SIV San Ignacio 10.23 64 Pn **Pn** **04 24 34.8 -1.4**
24nm,0.3s,baz=263,slow=10,SNR=471
SIV LR LR 04 29 11.0
comp=Z,24µm,19.1s,baz=262,slow=42
NNA Nana 10.57 325 *i* P **Pn** **04 24 38.6 -2.2**
NNA Nana 10.57 325 Pn **Pn** **04 24 39.0 -1.9**
1.3nm,0.3s,baz=166,slow=13,SNR=13
NNA Sn **Sn** **04 26 31.4 -6.9**
7.3nm,0.3s,baz=42,slow=14,SNR=4.5
NNA LR LR 04 28 58.6
comp=Z,9µm,18.6s,baz=158,slow=39
NNA Nana 10.57 325 **Pn** **04 24 38.4 -2.5**
NNA **Sn** **04 26 34.3 -4.1**
CFA Coronel Fontan 11.01 169 Pn **Pn** **04 24 43.4 -3.4**
0.9nm,0.3s,baz=347,slow=13,SNR=16
CFA Sn **Sn** **04 26 41.7 -7.3**
2.4nm,0.3s,baz=202,slow=19,SNR=2.8
CFA LR LR 04 28 47.4
comp=Z,9µm,18.8s,baz=332,slow=36
ROC1 El Roble 12.17 182 **Pn** **04 25 02.1 -0.8**
PEL Peldehue 12.33 180 P **Pn** **04 25 04.5 -0.5**
PEL Peldehue 12.33 180 **Pn** **04 25 04.5 -0.5**
CPUP Villa Florida 13.39 117 PKP2 **Pn** **04 25 17.4 -1.9**
CPUP Villa Florida 13.39 117 Pn **Pn** **04 25 17.6 -1.7**
0.2nm,0.3s,baz=296,slow=14,SNR=11
CPUP LR LR 04 31 14.0
comp=Z,13µm,20.8s,baz=296,slow=41
CPUP Villa Florida 13.39 117 **Pn** **04 25 17.4 -1.9**
SAML Samuel 13.76 33 P **Pn** **04 25 21.5 -3.0**
SAML Samuel 13.76 33 **Pn** **04 25 21.5 -3.0**
GO05 Huala 14.24 184 **Pn** **04 25 31.1 +0.2**
SALV Santo Antonio 14.97 74 *e*P **Pn** **04 25 37.8 -3.1**
ATAH Atahualpa 15.50 330 Pn **Pn** **04 25 47.2 -1.0**
0.3nm,0.3s,baz=149,slow=10,SNR=4.2
ATAH LR LR 04 32 18.2
comp=Z,7µm,18.8s,baz=178,slow=40
TRCB Terra Rica 16.83 100 *e*P **Pn** **04 26 03.6 -1.3**
C2SB Chapadao do Su 16.86 86 *e*P **Pn** **04 26 05.0 -0.1**
CLDB Colider 17.31 58 *e*P **Pn** **04 26 08.9 -2.0**
PTGB Pitanga 17.56 106 *e*P **Pn** **04 26 13.8 -0.3**
LPA La Plata 17.99 144 *e*P Pn 04 26 10.0 -9.1
LPA PPP PPP 04 26 36.3
LPA S **Sn** **04 29 39.0 0.0**
LPA SSS SSS 04 31 07.6
LPA PKIK 04 38 40.7
ITAB Concordia 18.07 114 *e*P **Pn** **04 26 19.1 -1.2**
PCMB Pacaembu 18.07 96 *e*P **Pn** **04 26 19.1 -1.3**
CPSB Cacapava Do Su 18.21 125 *e*P **Pn** **04 26 19.5 -2.5**
ARAG Araguaiana, MT 18.55 77 *e*P **P** **04 26 24.5 -1.3**
PLTB Pedras Altas 18.76 129 *e*P **P** **04 26 25.1 -2.9**
GO06 Curarrehue 18.78 182 P **P** **04 26 27.1 -1.1**
GO06 IAmb IAmb 04 26 40.6
comp=Z,197nm,0.9s
ITRB Iturama 19.04 90 *e*P **P** **04 26 30.6 -0.6**
OGAUY Aigu 19.50 137 *e*P **P** **04 26 36.7 +0.6**
FRTB Fartura 19.68 101 *e*P **P** **04 26 37.5 -0.7**
CNLB Canela 19.81 119 *e*P **P** **04 26 39.2 -0.4**
PLCA Paso Flores 19.91 180 *e*P **Pn** **04 26 42.0 -0.3**
PLCA Paso Flores 19.91 180 P **Pn** **04 26 41.5 -0.9**
comp=Z,144nm,1.2s,baz=25,slow=13,SNR=50
PLCA LR LR 04 33 39.9
comp=Z,6µm,21.9s,baz=24,slow=35
PLCA Paso Flores 19.91 180 *e*P **Pn** **04 26 42.0 -0.3**
PLCA Paso Flores 19.91 180 P **P** **04 26 40.6 0.0**
PLCA IAmb IAmb 04 26 53.9
comp=Z,307nm,1.1s
BB19B Bebedouro 20.64 95 *e*P **P** **04 26 47.1 -1.6**
PTLC Puerto Leguiza 21.20 348 *e*P **P** **04 26 49.4 -5.3**
IPMB Ipameri, GO 21.32 86 *e*P **P** **04 26 54.2 -1.8**
RCLB Rio Claro- Sao 21.53 99 *e*P **P** **04 26 56.8 -1.4**
SPB Sao Paulo 21.65 102 *e*P **P** **04 27 00.1 +0.6**
SPB Sao Paulo 21.65 102 P **P** **04 26 59.3 -0.1**
SPB IAmb IAmb 04 27 03.8
comp=Z,212nm,1.0s
VAO Valinhos 22.06 100 *e*P **P** **04 27 01.5 -2.5**
BDFB Brasilia 22.06 80 P **P** **04 27 01.9 -2.1**
BDFB pmax pmax
comp=Z,300nm,1.2s
BDFB MLR MLR
comp=Z,39µm,18.0s
BDFB Brasilia 22.06 80 P **P** **04 27 01.4 -2.6**
comp=Z,104nm,1.1s,baz=257,slow=12,SNR=14
BDFB LR LR 04 37 08.0
comp=Z,38µm,18.1s,baz=262,slow=41
BDFB Brasilia 22.06 80 P **P** **04 27 01.9 -2.1**
BDFB IAmb IAmb 04 27 09.7
comp=Z,300nm,1.2s
OTAV Otavalo 22.23 339 P **P** **04 27 03.7 -2.5**
OTAV pmax pmax
comp=Z,81nm,1.2s
OTAV MLR MLR
comp=Z,5µm,21.0s
OTAV Otavalo 22.23 339 *e*P **P** **04 27 08.8 +2.6**
OTAV Otavalo 22.23 339 P **P** **04 27 03.7 -2.5**
FLOC Florencia 22.75 347 *e*P **P** **04 27 10.9 -0.4**
FLOC Florencia 22.75 347 P **P** **04 27 10.2 -1.1**
PMNB Patos De Minas 22.88 89 *e*P **P** **04 27 10.2 -2.5**
MACC Macarena, Meta 22.98 352 *e*P **P** **04 27 10.0 -3.7**
CRUC La Cruz 23.04 344 *e*P **P** **04 27 17.6 +2.9**
PEXB Peixe 23.05 72 *e*P **P** **04 27 13.3 -1.2**
SOTA Rioblanco 23.50 345 *e*P **P** **04 27 20.6 +1.3**
BBAC Balboa, Cauca 23.55 343 *e*P **P** **04 27 20.1 +0.5**
PCON Cinco Dias 23.63 345 *e*P **P** **04 27 22.0 +1.3**
BETC Betania 23.77 348 *e*P **P** **04 27 23.5 +2.0**
TUMC Tumaco 23.81 340 *e*P **P** **04 27 23.1 +1.3**
ESAR Angra dos Reis 24.39 100 *e*P **P** **04 27 26.5 -0.7**
PTGC Puerto Gaitan, 24.85 356 *e*P **P** **04 27 29.8 -1.6**
VILC Villavicencio, 24.90 353 *e*P **P** **04 27 32.4 +0.5**
ORTC Ortega, Tolima 24.93 349 *e*P **P** **04 27 32.5 +0.4**
SMTB Santa Maria do 25.17 65 *e*P **P** **04 27 33.8 -0.6**
YOTC Yotoco, Valle 25.22 346 *e*P **P** **04 27 35.1 +0.2**
VAS01 Vassouras-RJ 25.32 98 *e*P **P** **04 27 35.8 +0.2**
CHIC Chingaza 25.42 353 *e*P **P** **04 27 36.9 0.0**
JANB Januaria 25.65 82 *e*P **P** **04 27 37.2 -1.5**
ROSC El Rosal 25.70 351 P **P** **04 27 40.8 +1.3**
comp=Z,74nm,1.0s,baz=166,slow=6.1,SNR=26
ROSC LR LR 04 38 59.8
comp=Z,11µm,19.6s,baz=200,slow=40
ROSC El Rosal 25.70 351 *e*P **P** **04 27 40.3 +0.8**
ROSC El Rosal 25.70 351 P **P** **04 27 40.8 +1.3**
RREF El Recreo 25.92 349 *e*P **P** **04 27 43.4 +1.7**
PLMC San Jos del P 26.11 347 *e*P **P** **04 27 43.1 +0.3**
GUY2C Guyana, Caldas 26.24 349 *e*P **P** **04 27 44.8 +0.3**
SPBC San Pablo de B 26.47 352 *e*P **P** **04 27 45.6 -0.5**
NORC Norcasia 26.49 350 *e*P **P** **04 27 46.2 -0.1**
RUSC La Rusia 26.60 355 *e*P **P** **04 27 48.0 +0.3**
RUSC La Rusia 26.60 355 P **P** **04 27 47.6 -0.1**
CBOC Ciudad Bolivar 26.98 348 *e*P **P** **04 27 50.7 -0.2**
TAMC Tame, Arauca 27.05 357 *e*P **P** **04 27 51.3 0.0**
HELC Santa Helena 27.21 349 *e*P **P** **04 27 52.3 -0.8**
PTBC PUERTO BERRIO, 27.39 352 *e*P **P** **04 27 52.6 -1.8**
SOLC Bahia Solano 27.64 345 *e*P **P** **04 27 58.2 +1.7**
PAYG Puerto Ayora 27.71 314 P **P** **04 27 57.7 +0.5**
SJMB Sao Joao De Ma 27.77 91 *e*P **P** **04 27 56.9 -0.8**
PAMC Pamplona, Colo 28.00 356 *e*P **P** **04 27 59.5 -0.8**
BSFB Barra de Sao F 28.06 91 *e*P **P** **04 27 59.6 -0.8**
ZARC Zaragoza, Cauc 28.38 351 *e*P **P** **04 28 01.9 -1.3**
OCAC Ocana 28.94 354 *e*P **P** **04 28 05.0 -3.3**
SDV Santo Domingo 29.46 360 P **P** **04 28 12.0 -1.0**
comp=Z,55nm,1.0s,baz=189,slow=6.6,SNR=42
SDV LR LR 04 39 17.1
comp=Z,7µm,19.7s,baz=190,slow=35
SDV Santo Domingo 29.46 360 *e*P **P** **04 28 12.6 -0.4**
SDV *e*pP **sP** **04 28 24.9 +0.6**
SDV Santo Domingo 29.46 360 P **P** **04 28 11.6 -1.3**
SDV IAmb IAmb 04 28 13.3
comp=Z,79nm,1.1s
SDV Santo Domingo 29.46 360 IAMs_20 IAMs_20 04 38 55.5
comp=Z,8µm,20.0s
SMLC San Martn de 29.57 353 *e*P **P** **04 28 11.4 -2.3**
BAUV El Baul 29.63 5 *e*P **P** **04 28 12.5 -1.7**
NBIT Itapeh - BA 30.21 84 *e*P **P** **04 28 19.5 0.0**
ORIV Oritupano 30.48 14 *e*P **P** **04 28 21.3 -0.4**
ORIV Oritupano 30.48 14 P **P** **04 28 21.3 -0.4**
CODC Aguila Codazz 30.63 355 *e*P **P** **04 28 18.7 -4.4**
ARGC Ariguani, Magd 30.64 353 *e*P **P** **04 28 20.7 -2.5**
SJCC San Jacinto, C 30.79 351 *e*P **P** **04 28 23.1 -1.5**
NBPN Ponto Novo - B 30.83 76 *e*P **P** **04 28 23.9 -1.1**
MDP Montagnes des 31.18 36 P **P** **04 28 27.6 -0.4**
comp=Z,268nm,1.0s,baz=212,slow=9.9,SNR=25
PCRV Puerto La Cruz 31.30 11 P **P** **04 28 29.5 +0.4**
comp=Z,42nm,1.0s,baz=194,slow=9.8,SNR=5.7
EFI East Falkland 32.38 165 *i* P **P** **04 28 38.8 +0.7**
EFI pmax pmax
comp=Z,61nm,1.1s
EFI East Falkland 32.38 165 P **P** **04 28 38.8 +0.7**
EFI East Falkland 32.38 165 IAMs_20 IAMs_20 04 41 49.7
comp=Z,7µm,20.0s
TRN Trinidad (W) 32.50 17 P **P** **04 28 40.6 +1.1**
TRN Trinidad (W) 32.50 17 *e*P **P** **04 28 40.6 +1.1**
TRN Trinidad (W) 32.50 17 P **P** **04 28 40.6 +1.1**
NBPS Pedro II - PI 32.69 64 *e*P **P** **04 28 40.8 -0.6**
NBLA Lagarto - SE 32.98 78 *e*P **P** **04 28 42.4 -1.4**
TOSP Speyside 33.37 18 P **P** **04 28 46.2 -0.9**
TOSP IAMs_20 IAMs_20 04 43 53.3
comp=Z,8µm,20.0s
NBTA Tacaratu-PE 33.44 75 *e*P **P** **04 28 47.3 -0.6**
NBMA Muriti-CE 33.56 71 *e*P **P** **04 28 48.3 -0.7**
NBPB Pedra_Branca-C 33.79 68 *e*P **P** **04 28 50.1 0.0**
GRGR Grenville 33.85 16 *e*P **P** **04 28 49.2 -2.1**
GRGR Grenville 33.85 16 P **P** **04 28 50.5 -0.8**
JTS Las Juntas de 33.92 334 *i* P **P** **04 28 54.0 +2.0**
JTS pmax pmax
comp=Z,8.0nm,0.9s
JTS MLR MLR
comp=Z,3µm,16.0s
JTS Las Juntas de 33.92 334 P **P** **04 28 52.2 +0.1**
USHA Ushuaia 34.06 178 P **P** **04 28 54.4 +1.6**
comp=Z,37nm,1.1s,baz=23,slow=4.7,SNR=7.5
NBMO Morrinhos-CE 34.45 64 *e*P **P** **04 28 56.0 -0.6**
NBAN Anadia - AL 34.85 77 *e*P **P** **04 28 59.3 -0.9**
SVB Belmont - 35.05 16 IAMs_20 IAMs_20 04 44 59.0
comp=Z,6µm,19.0s
NBLI Livramento-PB 35.18 73 *e*P **P** **04 29 02.5 -0.5**
BBGH Gun Hill 35.40 19 *e*P **P** **04 29 07.2 +2.4**
NBCL Cascavel-CE 35.47 67 *e*P **P** **04 29 05.4 0.0**
ACON Acoyapa 35.53 335 P **P** **04 29 06.6 +0.7**
ACON IAmb IAmb 04 29 19.3
comp=Z,33nm,1.0s
SLB Belfond 35.64 16 *e*P **P** **04 29 06.8 -0.1**
SLB Belfond 35.64 16 P **P** **04 29 06.8 -0.1**
NBPA Parau_RN 35.76 70 *e*P **P** **04 29 07.4 -0.5**
RPN Rapa Nui 35.84 252 P **P** **04 29 08.7 +0.2**
RPN pmax pmax
comp=Z,106nm,1.1s
RPN Rapa Nui 35.84 252 P **P** **04 29 08.7 +0.2**
SLBI Saint Lucia, B 35.84 16 *e*P **P** **04 29 06.5 -2.0**
NBRF Rio Formoso - 36.28 76 *e*P **P** **04 29 10.8 -1.5**
FDF Fort de France 36.48 16 *e*P P 04 29 05.2 -8.8
FDF Fort de France 36.48 16 IAMs_20 IAMs_20 04 45 41.9
comp=Z,6µm,18.0s
RCBR Riachuelo 36.79 71 P **P** **04 29 17.0 +0.2**
RCBR pmax pmax
comp=Z,303nm,1.0s
RCBR MLR MLR
comp=Z,13µm,21.0s
RCBR Riachuelo 36.79 71 *e*P **P** **04 29 17.1 +0.4**
RCBR Riachuelo 36.79 71 P **P** **04 29 17.0 +0.2**
NBPV Pedro Velho 37.07 72 *e*P **P** **04 29 19.0 -0.2**
BPA Boggy Peak 38.54 14 *e*P **P** **04 29 34.7 +3.3**
CRPR Cabo Rojo, PR 38.68 5 P **P** **04 29 31.3 -1.2**
SEUS St. Eustatius 38.75 12 P **P** **04 29 32.0 -1.1**
SNET Serv Nac Est T 38.81 330 P **P** **04 29 34.6 +0.8**
SABA Saba 38.82 11 IAMs_20 IAMs_20 04 46 28.8
comp=Z,8µm,19.0s
SJG San Juan 38.88 7 P **P** **04 29 32.5 -1.7**
SJG pmax pmax
comp=Z,214nm,0.9s
SJG MLR MLR
comp=Z,3µm,20.0s
SJG San Juan 38.88 7 P **P** **04 29 32.5 -1.7**
HUMP Col San Antoni 38.94 7 IAmb IAmb 04 29 35.1
comp=Z,82nm,0.9s
AOPR Arecibo Observ 39.05 6 P **P** **04 29 34.3 -1.4**
ANWB Willy Bob 39.16 13 *e*P P 04 29 31.1 -5.5
STVI Saint Thomas 39.27 9 IAmb IAmb 04 29 51.5
comp=Z,64nm,0.9s
SMRT St. Maarten 39.27 11 IAMs_20 IAMs_20 04 46 52.8
comp=Z,8µm,19.0s
DR12 Loma Pena Alta 39.32 2 P **P** **04 29 36.1 -1.9**
MTDJ Mount Denham 39.33 350 P **P** **04 29 37.9 -0.3**
MTDJ IAmb IAmb 04 29 39.6
comp=Z,98nm,0.9s
SC01 Santiago de Io 39.94 360 IAmb IAmb 04 30 02.3
comp=Z,141nm,1.1s
GTBY Guantanamo Bay 40.68 354 IAmb IAmb 04 29 50.7
comp=Z,59nm,1.1s
GTBY IAMs_20 IAMs_20 04 49 24.6
comp=Z,4µm,18.0s
HOPE Hope Point 42.30 151 P **P** **04 30 02.5 +0.4**
HOPE pmax pmax
comp=Z,140nm,1.1s
HOPE MLR MLR
comp=Z,7µm,21.0s
HOPE Hope Point 42.30 151 P **P** **04 30 02.5 +0.4**
HOPE IAmb IAmb 04 30 12.7
comp=Z,140nm,1.1s
HOPE Hope Point 42.30 151 IAMs_20 IAMs_20 04 47 00.3
comp=Z,7µm,21.0s
PMSA Palmer Station 44.21 176 P **P** **04 30 19.4 +2.0**
comp=Z,46nm,1.0s,baz=33,slow=11,SNR=4.1
PMSA LR LR 04 48 41.0
comp=Z,3µm,18.1s,baz=350,slow=36
PMSA Palmer Station 44.21 176 *e*P **P** **04 30 19.9 +2.5**
PMSA *e*pP **sP** **04 30 30.6 +1.9**
PMSA Palmer Station 44.21 176 P **P** **04 30 18.7 +1.3**
TEIG Tepich 44.25 336 P **P** **04 30 18.4 +0.2**
TLIG Tlapa 46.92 322 P **P** **04 30 40.4 +0.7**
TLIG IAmb IAmb 04 30 51.2
comp=Z,43nm,1.1s
061Z Ochoppi 47.41 347 P **P** **04 30 43.9 +0.8**
baz=167
060A Indiantown 48.44 348 P **P** **04 30 52.1 +1.0**
baz=168
DWPF Disney Wildern 49.70 347 P **P** **04 31 00.3 -0.4**
baz=167
ZAIG Zacatecas 53.32 322 P **P** **04 31 28.6 +0.3**
ZAIG IAmb IAmb 04 31 39.8
comp=Z,33nm,1.1s
TIGA Tifton 53.37 346 P **P** **04 31 28.3 +0.2**
baz=165
257A Skidaway Islan 53.38 349 IAMs_20 IAMs_20 04 57 57.7
comp=Z,3µm,18.0s
257A Skidaway Islan 53.38 349 P **P** **04 31 28.6 +0.5**
baz=168
353A Camilla 53.43 345 P **P** **04 31 28.4 -0.2**
baz=164
256A Glennville 53.54 348 P **P** **04 31 29.7 +0.4**
baz=167,SNR=5.1
255A Hazlehurst 53.60 347 P **P** **04 31 29.7 -0.1**
baz=166
352A Blakely 53.73 345 IAMs_20 IAMs_20 04 58 33.6
comp=Z,2µm,18.0s
352A Blakely 53.73 345 P **P** **04 31 30.6 -0.1**
baz=163,SNR=7.7
254A Abbeville 53.80 347 P **P** **04 31 31.1 -0.1**
baz=165,SNR=5.4
BRAL Brewton 53.99 343 P **P** **04 31 32.9 +0.2**
baz=161
157A Early Branch 54.06 349 P **P** **04 31 33.7 +0.6**
baz=168
253A Americus 54.09 346 IAMs_20 IAMs_20 04 55 55.7
comp=Z,3µm,20.0s
253A Americus 54.09 346 P **P** **04 31 33.1 -0.3**
baz=164
156A Sylvania 54.12 349 P **P** **04 31 34.0 +0.4**
baz=168,SNR=6.9
252A Lumpkin 54.17 345 P **P** **04 31 33.5 -0.5**
baz=164,SNR=5.6
155A Kite 54.28 348 P **P** **04 31 34.7 0.0**
baz=166,SNR=7.6
Z59A Georgetown, SC 54.33 351 P **P** **04 31 35.4 +0.4**
baz=170
NHSC New Hope 54.34 350 P **P** **04 31 35.7 +0.6**
baz=169,SNR=7.4
154A Montrose 54.40 347 P **P** **04 31 35.4 -0.2**
baz=166,SNR=9.5
Z58A St. Stephen 54.50 351 P **P** **04 31 36.9 +0.6**
baz=170,SNR=5.7
250A Grady 54.54 344 IAmb IAmb 04 31 36.9
comp=Z,61nm,1.1s
153A Fort Valley 54.59 346 P **P** **04 31 36.7 -0.3**
baz=165
Z57A Bowman 54.61 350 P **P** **04 31 37.3 +0.2**
baz=168,SNR=6.3
Z56A Williston 54.75 349 IAmb IAmb 04 31 39.5
comp=Z,64nm,0.9s
Z56A IAMs_20 IAMs_20 04 54 01.2
comp=Z,3µm,22.0s
Z56A Williston 54.75 349 P **P** **04 31 38.3 +0.1**
baz=168
Z55A Blythe 54.79 348 P **P** **04 31 38.6 +0.1**
baz=167
152A Waverly Hall 54.81 345 IAMs_20 IAMs_20 04 56 06.8
comp=Z,3µm,21.0s
152A Waverly Hall 54.81 345 P **P** **04 31 37.9 -0.8**
baz=164,SNR=9.2
Y60A Bolivia 54.94 352 IAMs_20 IAMs_20 04 55 53.4
comp=Z,2µm,21.0s
Y60A Bolivia 54.94 352 P **P** **04 31 40.0 +0.5**
baz=171,SNR=9.6
Z54A Sparta 54.95 347 P **P** **04 31 39.1 -0.5**
baz=166,SNR=5.8
Y59A Loris 55.01 352 IAMs_20 IAMs_20 04 55 57.1
comp=Z,3µm,20.0s
Y59A Loris 55.01 352 P **P** **04 31 40.1 +0.1**
baz=171
Y58A Scranton 55.04 351 P **P** **04 31 40.8 +0.6**
baz=170
Z53A Monticello 55.14 347 P **P** **04 31 40.2 -0.8**
baz=165
Y56A Pelion 55.20 349 P **P** **04 31 41.3 -0.1**
baz=168
Z52A Williamson 55.24 346 P **P** **04 31 41.2 -0.5**
baz=164,SNR=7.6
GOGA Godfrey 55.25 347 P **P** **04 31 41.2 -0.5**
baz=165
Y57A Sumter 55.26 350 IAmb IAmb 04 31 43.3
comp=Z,60nm,1.0s
Y57A IAMs_20 IAMs_20 04 56 14.7
comp=Z,4µm,21.0s
Y57A Sumter 55.26 350 P **P** **04 31 42.0 +0.1**
baz=169,SNR=5.5
Y55A Saluda 55.44 349 P **P** **04 31 43.1 0.0**
baz=167,SNR=9.6
X60A Albert Glenn T 55.47 353 P **P** **04 31 43.6 +0.3**
baz=172,SNR=9.2
Y54A Tignall 55.52 348 P **P** **04 31 43.4 -0.3**
baz=166,SNR=8.3
Z51A Franklin 55.54 345 IAMs_20 IAMs_20 04 59 32.0
comp=Z,3µm,18.0s
X59A McDuffie Farm, 55.55 352 P **P** **04 31 44.1 +0.3**
baz=171,SNR=7.6
X58A Rowland 55.63 351 P **P** **04 31 44.9 +0.5**
X58A IAmb IAmb 04 32 00.9
comp=Z,41nm,0.8s
X58A IAMs_20 IAMs_20 04 56 15.5
comp=Z,2µm,21.0s
X58A Rowland 55.63 351 P **P** **04 31 44.7 +0.2**
baz=170,SNR=5.9
X57A Johnson Farm, 55.65 351 P **P** **04 31 44.8 +0.2**
baz=169
Z50A Ashland 55.66 344 IAmb IAmb 04 31 45.4
comp=Z,54nm,1.1s
Z50A Ashland 55.66 344 P **P** **04 31 44.2 -0.6**
baz=163,SNR=13
Y53A Monroe 55.70 347 P **P** **04 31 45.7 +0.7**
baz=165
ASCN Ascension 55.72 85 P **P** **04 31 46.1 +0.5**
ASCN IAMs_20 IAMs_20 04 53 53.3
comp=Z,5µm,22.0s
LRAL Lakeview Retre 55.73 343 P **P** **04 31 44.6 -0.7**
baz=162,SNR=8.2
HODGE Hodges 55.80 348 IAMs_20 IAMs_20 04 59 24.9
comp=Z,2µm,18.0s
Y52A Lilburn 55.81 346 IAMs_20 IAMs_20 04 57 10.2
comp=Z,3µm,21.0s
Y52A Lilburn 55.81 346 P **P** **04 31 45.2 -0.6**
baz=172,SNR=5.9
X56A White Oak 55.83 350 P **P** **04 31 46.0 0.0**
baz=168,SNR=9.3
BIRD Birdtown, Kers 55.89 350 IAmb IAmb 04 31 47.8
comp=Z,79nm,1.2s
BIRD IAMs_20 IAMs_20 04 56 22.3
comp=Z,2µm,20.0s
W60A Pink Hill 55.91 353 P **P** **04 31 47.0 +0.5**
baz=172,SNR=7.6
X55A Gracelyn & Ava 55.91 349 P **P** **04 31 46.6 +0.1**
baz=166,SNR=10
HKT Hockley 55.96 334 P **P** **04 31 46.7 -0.1**
HKT pmax pmax
comp=Z,29nm,1.2s
HKT Hockley 55.96 334 P **P** **04 31 46.7 -0.1**
HKT IAmb IAmb 04 32 00.9
comp=Z,29nm,1.1s
W61A Ground Anchor 55.96 354 P **P** **04 31 47.4 +0.6**
baz=173,SNR=10
VBMS Vicksburg 56.02 340 P **P** **04 31 46.9 -0.4**
baz=158
Y51A Rockmart 56.07 346 P **P** **04 31 47.0 -0.7**
baz=164,SNR=14
W58A Raeford 56.07 351 P **P** **04 31 48.1 +0.5**
baz=170,SNR=11
W59A Clinton 56.11 352 P **P** **04 31 48.5 +0.6**
baz=171
CNNC Cliffs of the 56.12 353 P **P** **04 31 48.2 +0.3**
baz=172,SNR=7.7
X54A Belton 56.13 348 P **P** **04 31 47.9 -0.1**
baz=167,SNR=8.4
833A Chaparral WMA, 56.16 329 IAmb IAmb 04 31 51.8
comp=Z,35nm,1.1s
833A Chaparral WMA, 56.16 329 P **P** **04 31 48.8 +0.4**
baz=147,SNR=5.4
X53A Estanollee 56.27 347 P **P** **04 31 48.7 -0.4**
baz=166
PAULI Pauline 56.29 349 IAmb IAmb 04 31 49.9
comp=Z,47nm,1.1s
W57A Gilead 56.31 351 IAmb IAmb 04 32 05.3
comp=Z,28nm,0.9s
W57A Gilead 56.31 351 P **P** **04 31 49.4 +0.1**
baz=170
Y49A Blount Mountai 56.36 344 IAMs_20 IAMs_20 04 57 56.8
comp=Z,2µm,20.0s
W56A Indian Trail 56.39 350 P **P** **04 31 49.8 -0.1**
baz=169,SNR=7.2
KMSC Kings Mountain 56.52 349 IAmb IAmb 04 31 51.5
comp=Z,35nm,1.1s

KMSC IAMs_20 IAMs_20 04 56 54.0
comp=Z,3µm,20.0s
KMSC Kings Mountain 56.52 349 P P 04 31 50.8 0.0
baz=168,SNR=6.9
V61A Roper 56.52 354 P P 04 31 51.2 +0.4
baz=173
V60A Jim Taylor Roa 56.57 354 IAmb IAmb 04 31 53.6
comp=Z,74nm,1.1s
V60A Jim Taylor Roa 56.57 354 P P 04 31 51.4 +0.2
baz=173,SNR=8.3
W54A Cherokee Point 56.61 349 P P 04 31 51.8 +0.2
baz=167,SNR=9.1
X51A Calhoun 56.66 346 IAmb IAmb 04 32 09.4
comp=Z,31nm,0.9s
X51A IAMs_20 IAMs_20 04 57 36.7
comp=Z,2µm,21.0s
X51A Calhoun 56.66 346 P P 04 31 51.3 -0.6
baz=164,SNR=8.0
BG3 Lake Jocassee 56.67 348 P P 04 31 52.0 +0.1
V59A Middlesex 56.68 353 P P 04 31 52.5 +0.6
baz=172,SNR=24
V58A Windy Hill, Pi 56.82 352 IAmb IAmb 04 31 53.7
comp=Z,57nm,1.1s
V58A IAMs_20 IAMs_20 04 56 50.9
comp=Z,3µm,20.0s
V58A Windy Hill, Pi 56.82 352 P P 04 31 52.9 0.0
baz=171,SNR=9.1
W53A Cullowhee 56.88 348 P P 04 31 53.2 -0.3
baz=166,SNR=14
W52A Murphy 56.97 347 IAmb IAmb 04 31 55.7
comp=Z,45nm,1.1s
W52A Murphy 56.97 347 P P 04 31 53.7 -0.4
baz=165,SNR=11
V57A Coltrane Farms 57.00 351 P P 04 31 54.2 -0.1
baz=170,SNR=6.6
V56A Mocksville 57.03 350 P P 04 31 54.8 +0.3
baz=169,SNR=13
U61A Possum Corner 57.05 354 P P 04 31 55.0 +0.5
baz=174,SNR=9.8
NATX Nacogdoches 57.08 336 P P 04 31 55.8 +0.9
baz=153
X48A Hartselle 57.09 344 IAmb IAmb 04 31 54.9
comp=Z,49nm,1.1s
V55A Taylorsville 57.19 350 IAmb IAmb 04 31 57.2
comp=Z,58nm,1.1s
V55A IAMs_20 IAMs_20 05 00 15.4
comp=Z,3µm,19.0s
V55A Taylorsville 57.19 350 P P 04 31 55.7 +0.1
baz=168,SNR=12
U59A Littleton 57.21 353 P P 04 31 56.1 +0.4
baz=172,SNR=17
W51A Cleveland 57.21 346 P P 04 31 55.4 -0.3
baz=164,SNR=6.3
V54A Nebo 57.24 349 P P 04 31 56.0 0.0
baz=168,SNR=13
U60A Pendleton 57.26 354 P P 04 31 56.2 +0.2
baz=173,SNR=10
V53A Saluda 57.30 348 IAMs_20 IAMs_20 05 00 20.6
comp=Z,2µm,18.0s
V53A Saluda 57.30 348 P P 04 31 56.1 -0.4
baz=166,SNR=6.0
U58A Oxford 57.34 352 P P 04 31 57.0 +0.4
baz=171,SNR=10
W50A Signal Mountai 57.37 346 IAmb IAmb 04 32 07.8
comp=Z,23nm,0.9s
W50A Signal Mountai 57.37 346 P P 04 31 56.2 -0.7
baz=164,SNR=11
435B Jarrell 57.42 332 P P 04 31 57.3 0.0
baz=150
CPCT Cooper Cave 57.44 347 IAmb IAmb 04 31 58.9
comp=Z,39nm,1.1s
CPCT IAMs_20 IAMs_20 04 58 09.5
comp=Z,3µm,20.0s
U57A Blanch 57.48 352 P P 04 31 57.7 +0.1
baz=170,SNR=7.8
TKL Tuckaleechee C 57.48 347 P P 04 31 57.1 -0.6
TKL pmax pmax
comp=Z,64nm,1.2s
TKL Tuckaleechee C 57.48 347 P P 04 31 57.1 -0.6
TKL IAmb IAmb 04 31 58.3
comp=Z,64nm,1.1s
W49A Belvidere 57.52 345 P P 04 31 57.2 -0.7
baz=163,SNR=6.4
SWET Sewanee 57.54 345 IAmb IAmb 04 31 58.0
comp=Z,38nm,1.1s
SWET IAMs_20 IAMs_20 05 00 34.9
comp=Z,2µm,19.0s
U56A King 57.54 351 IAmb IAmb 04 31 59.9
comp=Z,57nm,1.1s
U56A IAMs_20 IAMs_20 04 57 35.1
comp=Z,3µm,20.0s
U56A King 57.54 351 P P 04 31 58.7 +0.6
baz=169,SNR=9.9
V52A Sevierville 57.62 348 IAMs_20 IAMs_20 05 01 17.1
comp=Z,2µm,18.0s
V52A Sevierville 57.62 348 P P 04 31 58.2 -0.4
baz=166,SNR=19
V51A Loudon 57.74 347 IAmb IAmb 04 32 10.3
comp=Z,23nm,0.8s
V51A Loudon 57.74 347 P P 04 31 58.9 -0.6
baz=165,SNR=7.3
Z41A Richland Creek 57.74 338 P P 04 32 00.2 +0.7
baz=155,SNR=9.6
V50A Pikeville 57.78 346 P P 04 31 59.3 -0.4
baz=164,SNR=20
T59A Double "B" Far 57.79 353 P P 04 32 00.3 +0.5
baz=172,SNR=17
U55A TA2, Sparta 57.80 350 P P 04 32 00.1 +0.1
baz=168,SNR=5.8
OXF Oxford 57.80 342 IAmb IAmb 04 32 00.3
comp=Z,43nm,1.1s
OXF Oxford 57.80 342 P P 04 31 58.5 -1.3
baz=159
PLAL Pickwick Lake 57.86 343 IAmb IAmb 04 32 00.5
comp=Z,41nm,1.1s
T60A Surry 57.88 354 P P 04 32 01.0 +0.7
baz=173
T58A Grand View Acr 57.88 353 P P 04 32 00.8 +0.5
baz=171,SNR=19
U53A Fall Branch 57.93 349 P P 04 32 00.3 -0.6
baz=167,SNR=7.0
U54A Nelsons Funny 57.95 349 IAmb IAmb 04 32 02.1
comp=Z,64nm,1.1s
U54A IAMs_20 IAMs_20 04 57 47.8
comp=Z,3µm,19.0s
U54A Nelsons Funny 57.95 349 P P 04 32 00.8 -0.2
baz=168,SNR=10
CCAR Cane Creek 57.99 339 IAmb IAmb 04 32 07.9
comp=Z,76nm,1.1s
T57A Hurt 58.02 352 IAmb IAmb 04 32 02.5
comp=Z,62nm,1.1s
T57A Hurt 58.02 352 P P 04 32 01.8 +0.4
baz=170,SNR=14
V49A McMinnville 58.05 345 P P 04 32 00.8 -0.9
baz=163,SNR=10.0
U52A Thorn Hill 58.11 348 P P 04 32 01.4 -0.7
baz=166,SNR=5.4
T56A Rocky Mt 58.16 351 P P 04 32 03.0 +0.6
baz=170,SNR=9.7
JCT Junction City 58.16 330 P P 04 32 01.9 -0.7
JCT pmax pmax
comp=Z,18nm,0.9s
JCT Junction City 58.16 330 P P 04 32 01.9 -0.7
JCT Junction City 58.16 330 P P 04 32 02.5 -0.1
baz=148
U51A La Follette 58.22 347 P P 04 32 02.2 -0.7
baz=165,SNR=6.1
V48A Smith Brothers 58.25 345 IAmb IAmb 04 32 03.1
comp=Z,59nm,1.1s
X43A Marvell 58.25 340 P P 04 32 02.8 -0.3
baz=158
TZTN Tazewell 58.29 348 IAmb IAmb 04 32 19.9
comp=Z,36nm,1.1s
TZTN Tazewell 58.29 348 P P 04 32 02.8 -0.5
baz=166,SNR=5.8
S61A Accomac 58.32 355 P P 04 32 03.2 -0.3
baz=174
T55A Pulaski 58.36 350 P P 04 32 04.2 +0.4
baz=169,SNR=13
BLA Blacksburg 58.40 351 IAmb IAmb 04 32 05.2
comp=Z,31nm,1.0s
BLA Blacksburg 58.40 351 P P 04 32 04.6 +0.5
baz=169
WHTX Lake Whitney, 58.41 333 IAmb IAmb 04 32 15.9
comp=Z,57nm,1.1s
WHTX Lake Whitney, 58.41 333 P P 04 32 04.6 +0.3
baz=150
S60A Water View 58.43 354 P P 04 32 04.6 +0.4
baz=173
T54A Tazewell 58.43 350 P P 04 32 04.2 -0.2
baz=168,SNR=7.2
U50A Jamestown 58.44 347 P P 04 32 03.9 -0.5
baz=164,SNR=14
CLTN Cedars of Leba 58.47 345 IAmb IAmb 04 32 05.2
comp=Z,34nm,1.2s
S58A Poland Farm, P 58.48 353 IAmb IAmb 04 32 12.0
comp=Z,35nm,1.1s
S58A Poland Farm, P 58.48 353 P P 04 32 05.0 +0.4
baz=172,SNR=9.0
T53A Wise 58.52 349 P P 04 32 04.5 -0.5
baz=167,SNR=9.9
S59A Mechanicsville 58.55 354 P P 04 32 05.3 +0.2
baz=173,SNR=5.2
T52A Hallie 58.73 348 IAmb IAmb 04 32 17.6
comp=Z,28nm,0.9s
T52A Hallie 58.73 348 P P 04 32 05.8 -0.6
baz=166,SNR=7.0
S56A Natural Bridge 58.73 352 P P 04 32 06.6 +0.2
baz=170,SNR=7.5
S57A Dark Hollow, R 58.73 352 P P 04 32 06.9 +0.6
baz=171,SNR=19
U49A Red Boiling Sp 58.74 346 P P 04 32 05.6 -0.8
baz=164,SNR=12
T51A Gray 58.78 348 P P 04 32 06.2 -0.5
baz=166,SNR=10
R58B Mineral 58.81 353 P P 04 32 07.6 +0.7
baz=172,SNR=15
WVT Waverly 58.88 344 P P 04 32 06.2 -1.2
WVT pmax pmax
comp=Z,32nm,1.0s
WVT Waverly 58.88 344 P P 04 32 06.2 -1.2
WVT IAmb IAmb 04 32 06.9
comp=Z,32nm,1.0s
WVT Waverly 58.88 344 P P 04 32 06.4 -1.0
baz=161
R61A Willards 58.94 356 P P 04 32 08.1 +0.3
baz=175
S55A Lewisburg 58.96 351 P P 04 32 08.4 +0.4
baz=169,SNR=12
UALR University of 58.96 339 IAmb IAmb 04 32 09.9
comp=Z,43nm,1.1s
R59A King George, V 58.96 354 P P 04 32 08.4 +0.5
baz=173,SNR=6.5
R60A Leonardtown, M 58.98 355 P P 04 32 08.8 +0.8
baz=174
CBN Corbin Frederi 58.99 354 P P 04 32 08.4 +0.3
baz=173
T50A Nancy 59.02 347 P P 04 32 07.6 -0.8
baz=165,SNR=9.9
S54A Dingess, Beckl 59.11 350 IAmb IAmb 04 32 09.6
comp=Z,53nm,1.0s
S54A Dingess, Beckl 59.11 350 P P 04 32 08.7 -0.3
baz=168,SNR=7.7
TXAR Lajitas Array 59.12 326 P P 04 32 09.1 -0.3
TXAR Lajitas Array 59.12 326 P P 04 32 09.3 -0.1
comp=Z,5.0nm,1.1s,baz=145,slow=7.4,SNR=22
TXAR LR LR 04 54 51.1
comp=Z,868nm,20.2s,baz=0.0,slow=33
TXAR PKPPKP P'P'df 05 01 46.6 +7.9
comp=Z,0.5nm,1.0s,baz=158,slow=1.3,SNR=4.7
TXAR Lajitas Array 59.12 326 P P 04 32 09.1 -0.3
S53A Williamson 59.13 349 P P 04 32 08.8 -0.4
baz=168,SNR=5.4
HBAR Harrisburg 59.14 341 IAMs_20 IAMs_20 04 59 01.4
comp=Z,3µm,19.0s
R58A Rapidan 59.15 353 P P 04 32 09.9 +0.7
baz=172,SNR=11
MIAR Mount Ida 59.18 338 IAmb IAmb 04 32 15.7
comp=Z,44nm,1.1s
MIAR Mount Ida 59.18 338 P P 04 32 09.6 +0.1
baz=155,SNR=23
R57A Stanardsville 59.21 353 P P 04 32 10.5 +0.8
baz=172,SNR=13
T49A Edmonton 59.25 346 P P 04 32 09.3 -0.7
T49A IAMs_20 IAMs_20 04 59 14.2
comp=Z,3µm,20.0s
T49A Edmonton 59.25 346 P P 04 32 09.5 -0.5
baz=164,SNR=24
W41B Gary Mavity, V 59.30 339 P P 04 32 10.0 -0.3
baz=156,SNR=9.1
S52A Salyersville 59.30 349 P P 04 32 09.8 -0.5
baz=166
S51A Beattyville 59.36 348 P P 04 32 11.3 +0.5
baz=166
R55A Marlinton 59.40 351 IAmb IAmb 04 32 12.6
comp=Z,50nm,1.1s
R55A IAMs_20 IAMs_20 04 58 30.4
comp=Z,3µm,21.0s
R55A Marlinton 59.40 351 P P 04 32 12.0 +0.9
baz=170
WHAR Wv Hollow 59.41 339 IAmb IAmb 04 32 11.6
comp=Z,44nm,1.2s
R56A Bull Pasture M 59.43 352 P P 04 32 12.1 +0.8
baz=170
R54A Victor 59.43 351 P P 04 32 11.4 +0.1
baz=169,SNR=7.9
T47A Sharon Grove 59.51 345 IAMs_20 IAMs_20 05 01 45.1
comp=Z,2µm,18.0s
S50A Richmond 59.56 347 P P 04 32 11.5 -0.6
baz=165,SNR=14
Q59A Harwood 59.58 355 P P 04 32 12.6 +0.4
baz=174
Q60A Greensboro 59.65 355 P P 04 32 13.5 +0.9
baz=174
R53A Hurricane 59.73 350 IAmb IAmb 04 32 14.2
comp=Z,35nm,1.1s
R53A Hurricane 59.73 350 P P 04 32 13.1 -0.2
baz=168
Q58A Fox Den Farm, 59.76 354 P P 04 32 14.1 +0.7
baz=172,SNR=11
LCAR Lake Charles 59.77 341 IAmb IAmb 04 32 13.5
comp=Z,34nm,1.2s
W39A Magazine 59.84 338 IAmb IAmb 04 32 21.5
comp=Z,42nm,1.1s
W39A Magazine 59.84 338 P P 04 32 14.7 +0.7
baz=155,SNR=15
S49A Springfield 59.85 347 P P 04 32 13.2 -0.9
baz=164,SNR=8.5
R52A Cattettsburg 59.86 349 P P 04 32 13.5 -0.7
baz=167
ABTX Abilene, Hawle 59.90 332 P P 04 32 14.5 -0.1
ABTX IAmb IAmb 04 32 27.4
comp=Z,37nm,1.0s
ABTX Abilene, Hawle 59.90 332 P P 04 32 14.7 +0.1
baz=148
Q57A Strasburg 59.93 353 P P 04 32 15.7 +1.1
baz=172,SNR=24
R51A Hillsboro 60.00 348 P P 04 32 14.6 -0.5
baz=166,SNR=11
Q56A Snyder Ridge, 60.03 352 P P 04 32 16.2 +0.9
baz=171,SNR=14
Q55A Buckhannon 60.10 352 P P 04 32 16.6 +0.7
baz=170,SNR=7.2
R50A Paris 60.12 348 IAmb IAmb 04 32 32.2
comp=Z,22nm,1.0s
R50A IAMs_20 IAMs_20 04 57 33.4
comp=Z,3µm,20.0s
R50A Paris 60.12 348 P P 04 32 15.3 -0.7
baz=165,SNR=9.8
Q53A Leroy 60.18 350 P P 04 32 16.2 -0.2
baz=168,SNR=8.0
Q54A Coxs Mills 60.20 351 IAmb IAmb 04 32 16.8
comp=Z,25nm,0.9s
Q54A Coxs Mills 60.20 351 P P 04 32 16.2 -0.2
baz=169,SNR=5.9
PBMO Poplar Bluff 60.21 342 IAmb IAmb 04 32 35.5
comp=Z,36nm,1.0s
P61A Hammonton 60.24 356 IAMs_20 IAMs_20 05 01 19.7
comp=Z,2µm,20.0s
P61A Hammonton 60.24 356 P P 04 32 17.0 +0.2
baz=176
P58A Pank, Wackersv 60.26 354 P P 04 32 17.5 +0.7
baz=173,SNR=10
P59A Jarrettsville 60.30 355 P P 04 32 17.9 +0.8
baz=174,SNR=13
R49A Shelbyville 60.31 347 IAMs_20 IAMs_20 04 59 49.3
comp=Z,2µm,22.0s
R49A Shelbyville 60.31 347 P P 04 32 16.1 -1.1
baz=164,SNR=7.9
P57A Homestead Farm 60.33 353 P P 04 32 18.6 +1.3
baz=172,SNR=18
Q52A Bidwell 60.40 350 P P 04 32 17.5 -0.4
baz=168
P60A Greenville 60.44 356 IAmb IAmb 04 32 19.1
comp=Z,52nm,1.1s
P60A Greenville 60.44 356 P P 04 32 18.4 +0.3
baz=175
P56A Dayton Farm, R 60.44 353 P P 04 32 19.1 +1.0
baz=171,SNR=11
WCI Wyandotte Cave 60.50 346 P P 04 32 17.3 -1.2
WCI pmax pmax
comp=Z,40nm,1.1s
WCI Wyandotte Cave 60.50 346 P P 04 32 17.3 -1.2
WCI IAmb IAmb 04 32 18.2
comp=Z,40nm,1.1s
WCI Wyandotte Cave 60.50 346 P P 04 32 17.5 -1.0
baz=163
PSUB Penn St. - Bra 60.54 356 IAmb IAmb 04 32 19.8
comp=Z,51nm,1.2s
PSUB IAMs_20 IAMs_20 05 00 52.7
comp=Z,2µm,20.0s
P55A Reedsville 60.57 352 P P 04 32 19.5 +0.5
baz=170,SNR=6.0
USIN University of 60.57 345 IAmb IAmb 04 32 24.8
comp=Z,46nm,1.1s
U40A Yellville 60.57 339 IAmb IAmb 04 32 25.6
comp=Z,41nm,1.1s
U40A Yellville 60.57 339 P P 04 32 18.8 -0.3
baz=156,SNR=19
Q50A Georgetown 60.60 348 P P 04 32 18.2 -1.0
baz=166,SNR=5.1
O61A Allentown 60.65 357 P P 04 32 20.0 +0.5
baz=176
Q51A Peebles 60.66 349 IAmb IAmb 04 32 36.2
comp=Z,38nm,1.1s
Q51A Peebles 60.66 349 P P 04 32 18.9 -0.7
baz=166,SNR=8.2
MVL Millersville 60.68 355 IAmb IAmb 04 32 21.7
comp=Z,58nm,1.1s
MCWV Mont Chateau 60.72 352 IAmb IAmb 04 32 21.2
comp=Z,28nm,1.0s
MCWV Mont Chateau 60.72 352 P P 04 32 20.5 +0.5
baz=170,SNR=9.4
S44A Carbondale 60.73 343 P P 04 32 19.6 -0.5
P54A Burton 60.75 351 P P 04 32 20.4 +0.2
baz=170,SNR=12
P53A Whipple 60.77 350 IAmb IAmb 04 32 21.0
comp=Z,52nm,1.1s
P53A IAMs_20 IAMs_20 04 59 25.6
comp=Z,2µm,21.0s
P53A Whipple 60.77 350 P P 04 32 20.3 -0.1
baz=168,SNR=10.0
X34A Smith Ranch, M 60.83 334 IAmb IAmb 04 32 32.3
comp=Z,54nm,1.0s
O58A Lewisberry 60.85 354 P P 04 32 21.7 +0.8
baz=173,SNR=9.8
HHAR Hobbs 60.87 339 IAmb IAmb 04 32 27.9
comp=Z,50nm,1.1s
O60A Telford 60.92 356 P P 04 32 22.0 +0.6
baz=175,SNR=6.4
Q49A Aurora 60.94 347 P P 04 32 20.6 -0.9
baz=165,SNR=8.9
PAGS Pennsylvania G 60.94 355 IAmb IAmb 04 32 22.7
comp=Z,44nm,1.2s
O59A Robesonia 60.98 355 P P 04 32 22.5 +0.7
baz=174,SNR=8.6
O57A Amberson 61.01 354 P P 04 32 22.9 +0.9
baz=173,SNR=12
P52A Corning 61.03 350 P P 04 32 21.6 -0.5
baz=168
Q48A North Vernon 61.04 347 P P 04 32 21.1 -1.1
baz=164,SNR=8.8
P51A Williamsport 61.05 349 IAmb IAmb 04 32 22.0
comp=Z,27nm,0.9s
P51A IAMs_20 IAMs_20 04 59 32.8
comp=Z,2µm,18.0s
P51A Williamsport 61.05 349 P P 04 32 21.3 -0.9
baz=167,SNR=5.4
MGMO Mountain Grove 61.12 340 P P 04 32 22.3 -0.5
MGMO IAmb IAmb 04 32 24.6
comp=Z,47nm,1.1s
O56A Blue Knob Stat 61.16 353 P P 04 32 23.9 +0.8
baz=172,SNR=14
O55A Ligonier 61.19 352 P P 04 32 23.8 +0.6
baz=171,SNR=11
TUL1 Leonard 61.20 337 P P 04 32 23.3 0.0
baz=153,SNR=11
BRNJ Basking Ridge 61.24 357 IAmb IAmb 04 32 25.4
comp=Z,57nm,1.1s
BRNJ IAMs_20 IAMs_20 04 57 07.0
comp=Z,3µm,21.0s
VNA3 Neumayer Olymp 61.29 161 P P 04 32 24.8 +1.2
N61A South Mountain 61.29 357 P P 04 32 24.5 +0.6
baz=176
P50A Jamestown 61.30 348 P P 04 32 22.8 -1.2
baz=166,SNR=8.9
O54A Avella 61.31 351 P P 04 32 23.5 -0.5
baz=170
CPNY Central Park 61.31 357 IAmb IAmb 04 32 31.0
comp=Z,24nm,1.1s
WMOK Wichita Mounta 61.34 334 P P 04 32 23.8 -0.5
baz=150
OLIL Olney 61.41 344 IAmb IAmb 04 32 42.2
comp=Z,29nm,1.1s
BLO Bloomington 61.45 346 IAmb IAmb 04 32 35.2
comp=Z,25nm,0.9s
SSPA Standing Stone 61.45 354 P P 04 32 25.1 +0.1
SSPA IAmb IAmb 04 32 32.5
comp=Z,50nm,1.1s
SSPA Standing Stone 61.45 354 P P 04 32 25.7 +0.8
baz=172
N60A Cedar Hill Far 61.45 356 P P 04 32 25.1 +0.1
baz=175
O52A Adamsville 61.46 350 IAmb IAmb 04 32 25.1
comp=Z,38nm,1.0s
O52A IAMs_20 IAMs_20 04 59 45.7
comp=Z,2µm,20.0s
O52A Adamsville 61.46 350 P P 04 32 24.3 -0.7
baz=168,SNR=5.9
P48A Milroy 61.49 347 IAmb IAmb 04 32 35.5
comp=Z,24nm,1.1s
P48A IAMs_20 IAMs_20 04 58 25.5
comp=Z,2µm,21.0s
P48A Milroy 61.49 347 P P 04 32 23.7 -1.5
baz=164,SNR=5.6
O53A New Philadelph 61.49 351 P P 04 32 25.1 -0.1
baz=169
VNA1 Neumayer--Stat 61.51 160 P P 04 32 27.0 +2.0
PAL Palisades 61.52 357 IAMs_20 IAMs_20 04 58 58.6
comp=Z,3µm,22.0s
PAL Palisades 61.52 357 P P 04 32 25.7 +0.3
baz=177
N57A Milroy 61.54 354 P P 04 32 26.0 +0.5
baz=173,SNR=11
N58A Sunbury 61.55 355 P P 04 32 26.0 +0.5
baz=174,SNR=7.7
N59A State Game Lan 61.55 356 IAmb IAmb 04 32 43.8
comp=Z,37nm,1.1s
N59A State Game Lan 61.55 356 P P 04 32 26.4 +0.8
baz=175
O51A Pataskala 61.61 350 P P 04 32 25.2 -0.9
baz=167,SNR=6.7
CCM Cathedral Cave 61.63 342 P P 04 32 25.6 -0.6
CCM pmax pmax
comp=Z,33nm,1.1s
CCM Cathedral Cave 61.63 342 P P 04 32 25.6 -0.6
CCM IAmb IAmb 04 32 26.3
comp=Z,33nm,1.1s
CCM Cathedral Cave 61.63 342 P P 04 32 25.7 -0.5
baz=158
ODNJ Ogdensburg 61.64 357 IAmb IAmb 04 32 27.1
comp=Z,32nm,1.2s
ODNJ IAMs_20 IAMs_20 05 00 16.5
comp=Z,2µm,21.0s
WSPT Westport, CT 61.66 358 IAMs_20 IAMs_20 05 00 18.3
comp=Z,3µm,19.0s
N55A Marion Center 61.72 353 P P 04 32 27.5 +0.7
baz=171,SNR=22
ACSO Alum Creek Sta 61.76 349 P P 04 32 26.6 -0.5
baz=167,SNR=9.4
N56A West Decatur 61.77 353 P P 04 32 27.8 +0.6
baz=172,SNR=12
O50A Cable 61.79 349 P P 04 32 26.5 -0.8
baz=166,SNR=8.9
M61A Granite Spring 61.82 357 P P 04 32 27.7 +0.2
baz=177
M63A Gales Ferry 61.86 359 P P 04 32 28.5 +0.9
baz=178
M60A Port Jervis 61.88 357 P P 04 32 28.3 +0.5
baz=176
SLM Saint Louis 61.88 343 IAmb IAmb 04 32 27.9
comp=Z,22nm,0.8s
MNTX Cornudas Mount 61.90 327 P P 04 32 28.0 -0.2
MNTX IAmb IAmb 04 32 39.4

comp=Z,21nm,1.1s
MNTX Cornudas Mount 61.90 327 P **P** 04 32 28.0 -0.2
baz=143,SNR=16
M62A Hamden 61.92 358 P **P** 04 32 28.7 +0.7
baz=178
O49A Covington 61.97 348 IAmb IAmb 04 32 29.4
comp=Z,38nm,1.1s
O49A IAMs_20 IAMs_20 05 00 18.2
comp=Z,2µm,19.0s
O49A Covington 61.97 348 P **P** 04 32 27.5 -1.0
baz=166,SNR=11
N53A Lisbon 61.98 351 IAmb IAmb 04 32 29.2
comp=Z,53nm,1.1s
N53A IAMs_20 IAMs_20 05 00 00.7
comp=Z,3µm,21.0s
N53A Lisbon 61.98 351 P **P** 04 32 28.4 -0.1
baz=169,SNR=6.2
M64A Tiverton 62.00 359 P **P** 04 32 28.7 +0.1
baz=179
N54A Moraine State 62.02 352 P **P** 04 32 29.1 +0.3
baz=170,SNR=10
M58A Price's Panora 62.05 355 P **P** 04 32 29.8 +0.8
baz=174,SNR=12
M57A Sunshine Farm, 62.08 354 IAmb IAmb 04 32 30.7
comp=Z,59nm,1.1s
M57A Sunshine Farm, 62.08 354 P **P** 04 32 30.0 +0.9
baz=173,SNR=9.8
N52A McGinn's Farm, 62.12 351 P **P** 04 32 28.9 -0.5
baz=168,SNR=6.6
M59A Waymart 62.15 356 P **P** 04 32 30.2 +0.6
baz=175,SNR=15
KSPA Keystone Colle 62.18 356 IAmb IAmb 04 32 47.8
comp=Z,43nm,1.1s
O48A Farmland 62.20 347 P **P** 04 32 29.0 -1.0
baz=165,SNR=12
KSCT Kent School, K 62.23 358 IAmb IAmb 04 32 42.1
comp=Z,31nm,1.1s
L63A North Scituate 62.31 359 P **P** 04 32 31.3 +0.6
baz=179,SNR=7.1
N50A Nevada 62.31 349 P **P** 04 32 30.0 -0.7
baz=167,SNR=11
M56A Emporium 62.32 354 IAMs_20 IAMs_20 05 00 24.7
comp=Z,2µm,21.0s
M56A Emporium 62.32 354 P **P** 04 32 31.4 +0.6
baz=172,SNR=11
N51A Ashland 62.33 350 IAmb IAmb 04 32 44.3
comp=Z,34nm,1.1s
N51A Ashland 62.33 350 P **P** 04 32 30.0 -0.8
baz=168
BRYW Bryant College 62.37 359 P **P** 04 32 31.6 +0.5
M55A Ridgway 62.37 353 P **P** 04 32 31.6 +0.4
baz=172,SNR=16
L64A Middleborough 62.38 360 P **P** 04 32 31.6 +0.5
baz=180
MSTX Muleshoe 62.45 330 P **P** 04 32 31.8 -0.1
baz=146,SNR=11
L62A Suffield 62.50 358 P **P** 04 32 32.4 +0.5
baz=178
M54A Oil Creek Stat 62.52 352 P **P** 04 32 32.4 +0.2
baz=170,SNR=9.6
L60A Shokan 62.52 357 P **P** 04 32 32.9 +0.8
baz=176,SNR=7.2
M53A Wl Miller and 62.58 351 P **P** 04 32 32.5 0.0
baz=170
N49A Columbus Grove 62.65 348 P **P** 04 32 32.3 -0.7
baz=166,SNR=21
L58A Harry Jones Me 62.67 356 P **P** 04 32 34.0 +0.8
baz=175,SNR=11
L61A Hillsdale 1, H 62.69 358 P **P** 04 32 34.0 +0.7
baz=177
M51A Elyria 62.70 350 P **P** 04 32 32.7 -0.6
baz=168
L57A Andrews Acres 62.71 355 P **P** 04 32 33.9 +0.5
baz=174
AMTX Amarillo 62.71 331 P **P** 04 32 33.5 -0.2
AMTX IAmb IAmb 04 32 44.9
comp=Z,25nm,1.1s
AMTX **PcP** 04 33 13.3 +1.1
AMTX Amarillo 62.71 331 P **P** 04 32 33.5 -0.2
baz=147
ALLY Alegheny Colle 62.72 352 IAmb IAmb 04 32 34.1
comp=Z,53nm,1.0s
SFIN Lafayette 62.73 346 IAmb IAmb 04 32 32.7
comp=Z,36nm,0.8s
SFIN IAMs_20 IAMs_20 05 03 58.6
comp=Z,3µm,18.0s
SFIN Lafayette 62.73 346 P **P** 04 32 32.1 -1.5
baz=163,SNR=6.5
QUA2 Belchertown 62.74 359 IAmb IAmb 04 32 52.7
comp=Z,28nm,1.0s
N48A Decatur 62.75 348 P **P** 04 32 32.6 -1.0
baz=165,SNR=7.3
L59A Walton 62.77 356 P **P** 04 32 34.6 +0.8
baz=175,SNR=12
M52A Chesterland 62.78 351 IAmb IAmb 04 32 34.2
comp=Z,38nm,0.9s
M52A IAMs_20 IAMs_20 05 00 37.7
comp=Z,2µm,20.0s
M52A Chesterland 62.78 351 P **P** 04 32 33.6 -0.2
baz=169
BINY Binghamton 62.84 356 P **P** 04 32 35.0 +0.7
baz=174,SNR=7.4
O44A Mansfield 62.84 345 IAmb IAmb 04 32 33.4
comp=Z,38nm,1.1s
N47A Urbana 62.91 347 IAmb IAmb 04 32 36.0
comp=Z,51nm,1.1s
N47A IAMs_20 IAMs_20 05 04 34.0
comp=Z,2µm,18.0s
N47A Urbana 62.91 347 P **P** 04 32 33.6 -1.1
baz=164,SNR=10.0
L56A Greenwood 62.91 354 P **P** 04 32 35.0 +0.3
baz=173,SNR=9.8
M50A Fremont 62.91 350 IAmb IAmb 04 32 34.7
comp=Z,33nm,0.9s
M50A Fremont 62.91 350 P **P** 04 32 34.0 -0.7
baz=167
L61B Northampton 62.92 358 P **P** 04 32 35.3 +0.5
baz=178,SNR=6.4
HRV Adam Dziewonsk 62.95 359 P **P** 04 32 35.5 +0.5
HRV pmax pmax
comp=Z,111nm,1.1s
HRV Adam Dziewonsk 62.95 359 P **P** 04 32 35.5 +0.5
HRV Adam Dziewonsk 62.95 359 P **P** 04 32 35.8 +0.8
baz=179
L53A Girard 63.03 352 P **P** 04 32 35.5 0.0
baz=170,SNR=6.5
L55A Hinsdale 63.04 353 P **P** 04 32 36.1 +0.4
baz=172,SNR=7.6
K62A Royalston 63.12 359 P **P** 04 32 37.0 +0.9
baz=178
K60A Five Rivers En 63.13 357 P **P** 04 32 36.9 +0.8
baz=177,SNR=5.8
K63A Dunstable 63.14 359 P **P** 04 32 37.0 +0.9
baz=179
M49A Liberty Center 63.15 349 P **P** 04 32 35.4 -0.8
baz=166,SNR=8.8
ERPA Erie 63.16 352 P **P** 04 32 36.4 +0.1
baz=170,SNR=6.5
K61A Williamstown 63.16 358 P **P** 04 32 37.1 +0.7
baz=177,SNR=5.5
L54A Sinclairville 63.19 353 P **P** 04 32 37.0 +0.5
baz=171,SNR=11
M48A Edgerton 63.29 348 IAmb IAmb 04 32 37.0
comp=Z,37nm,0.9s
M48A Edgerton 63.29 348 P **P** 04 32 36.3 -0.9
baz=165,SNR=7.6
K59A Cooperstown 63.34 357 P **P** 04 32 38.5 +0.9
baz=176,SNR=12
M47A Cromwell 63.35 347 P **P** 04 32 37.0 -0.7
baz=164
K58A Earlville 63.38 356 P **P** 04 32 38.3 +0.5
baz=175,SNR=6.0
K57A Scipio Center 63.41 355 P **P** 04 32 38.3 +0.3
baz=174
HDIL Hopedale 63.43 344 IAmb IAmb 04 32 56.2
comp=Z,51nm,1.0s
HDIL Hopedale 63.43 344 P **P** 04 32 36.9 -1.2
baz=160,SNR=9.5
K56A Middlesex 63.44 354 P **P** 04 32 38.6 +0.4
baz=173
K54A Basiliko Farm, 63.49 353 P **P** 04 32 39.0 +0.5
baz=172,SNR=5.4
L50A Kingsville 63.50 350 P **P** 04 32 39.1 +0.6
baz=167
SNAA Sanae 63.50 161 P **P** 04 32 39.5 +1.1
SNAA Sanae 63.50 161 *c i*P **P** 04 32 39.5 +1.1
SNAA Sanae 63.50 161 LR LR 05 00 40.7
comp=Z,2µm,18.7s,baz=300,slow=36
SNAA Sanae 63.50 161 P **P** 04 32 38.7 +0.3
SNAA IAMs_20 IAMs_20 05 00 20.4
comp=Z,2µm,18.0s
MMNY Mt. Morris Dam 63.53 354 IAMs_20 IAMs_20 05 02 52.6
comp=Z,2µm,20.0s
K55A Perry 63.54 354 P **P** 04 32 39.3 +0.4
baz=172
J62A Henniker 63.68 359 P **P** 04 32 40.9 +1.1
baz=179
L48A N Adams 63.68 349 P **P** 04 32 38.9 -0.9
baz=166
J63A Strafford 63.72 360 P **P** 04 32 40.4 +0.4
baz=180
L49A Milan 63.72 349 P **P** 04 32 39.4 -0.6
baz=166,SNR=7.0
319A Douglas 63.74 323 IAmb IAmb 04 33 01.6
comp=Z,29nm,0.9s
319A IAMs_20 IAMs_20 05 01 19.0
comp=Z,2µm,18.0s
J60A Lant Hill Farm 63.74 358 P **P** 04 32 41.1 +1.0
baz=177,SNR=5.5
121A Cookes Peak, D 63.81 325 IAmb IAmb 04 32 51.2
comp=Z,32nm,1.1s
121A IAMs_20 IAMs_20 04 57 03.9
comp=Z,2µm,19.0s
121A Cookes Peak, D 63.81 325 P **P** 04 32 42.6 +1.5
baz=141,SNR=7.4
J61A Chester 63.81 358 P **P** 04 32 41.7 +1.0
baz=178,SNR=6.1
L47A Sherwood 63.86 348 P **P** 04 32 40.0 -1.0
baz=165,SNR=7.8
ACCN Adirondack Com 63.89 358 IAmb IAmb 04 33 01.2
comp=Z,20nm,0.9s
K52A Tillsonburg 63.91 352 P **P** 04 32 40.9 -0.4
baz=170
J58A Remsen 63.95 356 IAMs_20 IAMs_20 05 00 15.3
comp=Z,3µm,20.0s
J58A Remsen 63.95 356 P **P** 04 32 41.8 +0.2
baz=175
K51A Iona Station 63.96 351 P **P** 04 32 41.1 -0.5
baz=169
J56A Wolcott 63.98 355 P **P** 04 32 41.7 0.0
baz=174
N41A Harden Midland 63.99 343 P **P** 04 32 41.0 -0.8
N41A IAmb IAmb 04 32 41.5
comp=Z,45nm,1.0s
J59A Piesco 64.01 357 IAMs_20 IAMs_20 05 00 36.2
comp=Z,3µm,20.0s
J59A Piesco 64.01 357 P **P** 04 32 42.7 +0.8
baz=176,SNR=10
MEDO Medina 64.01 354 IAMs_20 IAMs_20 05 02 49.4
comp=Z,2µm,19.0s
J57A Williamstown 64.04 356 P **P** 04 32 42.5 +0.4
baz=174
J55A Hilton 64.05 354 IAMs_20 IAMs_20 05 02 49.4
comp=Z,2µm,19.0s
J55A Hilton 64.05 354 P **P** 04 32 42.3 +0.1
baz=173
L46A Eue Claire 64.12 347 IAMs_20 IAMs_20 05 05 29.1
comp=Z,2µm,19.0s
L46A Eue Claire 64.12 347 P **P** 04 32 41.5 -1.2
baz=164
HNH Hanover 64.17 359 IAmb IAmb 04 32 46.9
comp=Z,52nm,1.1s
K50A Casco 64.18 350 IAmb IAmb 04 32 42.8
comp=Z,42nm,0.8s
K50A IAMs_20 IAMs_20 05 01 32.5
comp=Z,2µm,19.0s
K50A Casco 64.18 350 P **P** 04 32 42.2 -0.9
baz=168
K49A Clarkson 64.33 350 P **P** 04 32 42.9 -1.1
baz=167
J52A Paris 64.33 352 P **P** 04 32 43.7 -0.3
baz=170,SNR=7.7
KSU1 Kansas State U 64.33 338 P **P** 04 32 43.6 -0.5
baz=153
I60A Shoreham 64.33 358 P **P** 04 32 44.9 +0.9
baz=177,SNR=7.2
I64A Boothbay 64.37 1 P **P** 04 32 45.1 +0.9
baz=181
I61A Oroboro, Fairl 64.39 359 P **P** 04 32 45.7 +1.3
baz=178,SNR=12
K48A Perry 64.46 349 P **P** 04 32 44.0 -0.9
baz=166,SNR=5.7
I63A Otisfield 64.49 0 P **P** 04 32 46.3 +1.3
baz=180
K47A Vermontville 64.49 348 P **P** 04 32 44.0 -1.1
baz=165
NCB Newcomb 64.50 357 IAmb IAmb 04 33 03.1
comp=Z,41nm,1.1s
I57A Carthage 64.55 356 P **P** 04 32 45.8 +0.3
baz=179
L44A Lake County Fo 64.63 346 IAMs_20 IAMs_20 05 01 59.7
comp=Z,2µm,20.0s
L44A Lake County Fo 64.63 346 P **P** 04 32 44.7 -1.3
baz=162
K46A Dorr 64.66 348 P **P** 04 32 44.9 -1.3
baz=164
LBNH Lisbon 64.69 359 IAmb IAmb 04 33 04.3
comp=Z,56nm,1.1s
LBNH Lisbon 64.69 359 P **P** 04 32 47.6 +1.2
baz=179,SNR=6.1
VT1 Waterbury 64.80 358 P **P** 04 32 47.6 +0.5
J49A Marlette 64.83 350 P **P** 04 32 46.3 -1.1
baz=167
J48A Bridge Port 64.88 349 P **P** 04 32 47.0 -0.6
baz=166
L42A Oliver, Polo 64.89 344 IAmb IAmb 04 32 47.4
comp=Z,42nm,1.1s
H58A Gabriels 64.94 357 P **P** 04 32 48.5 +0.5
baz=176,SNR=9.2
I51A Listowel 64.95 352 P **P** 04 32 47.6 -0.5
baz=169
I55A Frankford 64.98 354 P **P** 04 32 48.3 +0.1
baz=173,SNR=5.2
H61A Lyndonville 64.99 359 P **P** 04 32 49.4 +1.1
baz=179,SNR=6.5
J47A Sunmer 65.01 349 P **P** 04 32 47.7 -0.8
baz=165,SNR=8.0
ANMO Albuquerque 65.02 328 *i*P **P** 04 32 50.0 +1.0
ANMO pmax pmax
comp=Z,45nm,1.4s
ANMO Albuquerque 65.02 328 P **P** 04 32 49.7 +0.6
ANMO Albuquerque 65.02 328 P **P** 04 32 49.6 +0.6
baz=143
H57A Richville 65.05 356 P **P** 04 32 49.1 +0.4
baz=175,SNR=6.1
H64A Troy 65.09 1 P **P** 04 32 50.2 +1.2
baz=182
I52A Shelburne 65.10 352 P **P** 04 32 49.1 0.0
baz=170
H63A New Sharon 65.11 0 P **P** 04 32 50.4 +1.3
baz=181,SNR=5.9
H59A Cadyville 65.15 358 P **P** 04 32 50.2 +0.8
baz=177,SNR=6.2
LONY Lake Ozonia 65.16 357 P **P** 04 32 50.3 +0.8
baz=176
H65A Eastbrook 65.17 2 P **P** 04 32 50.8 +1.3
baz=182
K43A Burlington 65.23 346 IAMs_20 IAMs_20 05 02 41.5
comp=Z,3µm,21.0s
CBKS Cedar Bluff 65.24 335 IAmb IAmb 04 33 01.8
comp=Z,52nm,1.0s
CBKS Cedar Bluff 65.24 335 P **P** 04 32 50.5 +0.3
baz=150,SNR=10
H55A Tweed 65.27 355 P **P** 04 32 50.8 +0.6
baz=173
J46A Howard City 65.27 348 P **P** 04 32 48.6 -1.6
baz=165
TUC Tucson 65.28 323 P **P** 04 32 51.0 +0.4
TUC pmax pmax
comp=Z,12nm,1.1s
TUC MLR MLR
comp=Z,1µm,20.0s
TUC Tucson 65.28 323 P **P** 04 32 51.0 +0.4
TUC Tucson 65.28 323 P **P** 04 32 51.7 +1.1
baz=138
H66A Whiting 65.30 3 P **P** 04 32 51.3 +1.0
baz=183
L40A Anamosa 65.35 343 IAmb IAmb 04 33 07.2
comp=Z,31nm,1.1s
H53A Bobcaygeon 65.42 354 P **P** 04 32 51.3 +0.1
baz=172
G60A Masonville 65.56 359 P **P** 04 32 52.9 +0.9
baz=178
G63A Kingsbury 65.56 1 P **P** 04 32 52.8 +0.8
baz=181
H52A Wyevale 65.63 353 P **P** 04 32 52.3 -0.1
baz=170
G62A West of Eustis 65.66 0 P **P** 04 32 54.0 +1.3
baz=180,SNR=11
G58A Ormstown 65.67 357 P **P** 04 32 53.2 +0.6
baz=176
G57A Newington 65.67 357 P **P** 04 32 53.1 +0.5
baz=176,SNR=5.1
SADO Sadowa 65.67 353 IAmb IAmb 04 32 53.2
comp=Z,49nm,0.9s
G65A Princeton 65.70 2 P **P** 04 32 53.7 +0.8
baz=183
I47A Gladwin 65.71 349 P **P** 04 32 54.1 +1.1
baz=166
G64A Maxfield 65.72 1 P **P** 04 32 53.7 +0.7
baz=182
PKME Peaks-Kenny Pk 65.72 1 P **P** 04 32 53.7 +0.7
baz=181
G61A St-Isidore-de- 65.73 359 P **P** 04 32 54.4 +1.3
baz=179,SNR=7.4
I48A Sherman Twp 65.73 350 P **P** 04 32 52.4 -0.8
baz=167
PLVO Plevna 65.75 355 IAMs_20 IAMs_20 05 04 06.3
comp=Z,3µm,18.0s
SCIA State Center 65.77 342 IAmb IAmb 04 33 10.3
comp=Z,51nm,1.1s
SCIA State Center 65.77 342 P **P** 04 32 53.0 -0.4
baz=157,SNR=9.0
I46A Reed City 65.80 348 P **P** 04 32 52.3 -1.3
baz=165
T25A Trinidad 65.81 331 IAmb IAmb 04 33 06.6
comp=Z,36nm,1.1s
T25A Trinidad 65.81 331 P **P** 04 32 55.0 +0.8
baz=145,SNR=8.6
JFWS Jewell Farm 65.89 344 IAmb IAmb 04 33 05.5
comp=Z,30nm,0.8s
JFWS Jewell Farm 65.89 344 P **P** 04 32 53.5 -0.7
baz=160,SNR=6.8
G55A Calabogie 65.93 355 P **P** 04 32 54.5 +0.1
baz=174,SNR=5.1
G53A Haliburton 65.97 354 P **P** 04 32 54.8 +0.1
baz=172,SNR=9.0
I45A Fountain 66.05 348 IAMs_20 IAMs_20 05 05 24.2
comp=Z,2µm,18.0s
F63A Nahmakanta, Br 66.16 1 P **P** 04 32 56.2 +0.4
baz=182
214A Organ Pipe Nat 66.18 321 P **P** 04 32 57.9 +1.5
baz=137
G54A Lake Saint Pet 66.19 354 P **P** 04 32 56.7 +0.6
baz=172
H47A Mio 66.22 349 P **P** 04 32 55.1 -1.2
baz=166
F64A Sherman 66.34 2 P **P** 04 32 57.3 +0.4
F64A IAmb IAmb 04 33 14.5
comp=Z,30nm,0.9s
F64A IAMs_20 IAMs_20 05 00 02.0
comp=Z,3µm,22.0s
F64A Sherman 66.34 2 P **P** 04 32 57.6 +0.6
baz=182
H46A Fife Lake 66.34 349 P **P** 04 32 56.0 -1.0
baz=165,SNR=10
F61A St Evariste 66.42 360 P **P** 04 32 57.7 +0.2
baz=180
F60A Warwick 66.42 359 P **P** 04 32 58.1 +0.6
baz=179,SNR=5.6
I42A Draeger Farm, 66.49 346 IAmb IAmb 04 32 58.2
comp=Z,44nm,1.1s
I42A IAMs_20 IAMs_20 05 03 29.8
comp=Z,3µm,22.0s
LMN Caledonia Moun 66.50 4 IAmb IAmb 04 33 10.2
comp=Z,34nm,1.0s
GLMI Grayling 66.51 349 P **P** 04 32 57.6 -0.5
baz=166
KSCO Kaye Shedlock' 66.59 333 P **P** 04 32 59.8 +0.9
baz=147,SNR=9.5
SDCO Great Sand Dun 66.81 330 IAmb IAmb 04 33 15.0
comp=Z,47nm,1.1s
SDCO Great Sand Dun 66.81 330 P **P** 04 33 01.8 +1.2
baz=144,SNR=31
E60A Ste Agathe de 66.81 359 P **P** 04 33 00.5 +0.5
baz=179
W18A Petrified Fore 66.83 326 IAmb IAmb 04 33 15.6
comp=Z,55nm,1.1s
W18A Petrified Fore 66.83 326 P **P** 04 33 02.1 +1.4
baz=140,SNR=10
E58A La Victoria 66.86 358 P **P** 04 33 00.7 +0.4
baz=177,SNR=5.2
E63A Oxbow 66.89 2 IAmb IAmb 04 33 02.8
comp=Z,24nm,0.9s
E63A Oxbow 66.89 2 P **P** 04 33 01.4 +0.9
baz=182
I40A Norwalk 66.90 344 IAmb IAmb 04 33 00.7
comp=Z,28nm,1.1s
I40A IAMs_20 IAMs_20 05 02 08.7
comp=Z,2µm,20.0s
F51A Arnstein 66.91 353 P **P** 04 33 00.4 -0.2
baz=171
E64A Bridgewater 66.91 2 P **P** 04 33 01.1 +0.5
baz=183
BGNE Belgrade 66.92 338 P **P** 04 33 00.9 +0.1
baz=152,SNR=10.0
E55A Montcerf-Lytto 67.08 356 P **P** 04 33 01.9 +0.2
baz=174
E56A St. Veronique 67.10 357 P **P** 04 33 02.1 +0.2
baz=176,SNR=11
E52A Mattawa 67.12 354 P **P** 04 33 01.6 -0.4
baz=172
E53A Dumoine, Ponti 67.12 355 P **P** 04 33 02.2 +0.1
baz=173
PQI Presque Isle 67.15 2 IAmb IAmb 04 33 09.8
comp=Z,29nm,1.2s
F48A Evansville 67.16 351 P **P** 04 33 02.2 -0.1
baz=168
D60A Saint Jean D'O 67.36 360 P **P** 04 33 04.4 +1.0
baz=180
S22A 4UR Ranch, Cre 67.43 330 P **P** 04 33 05.6 +1.0
baz=143,SNR=8.7
E51A G1948 Merrick 67.45 353 P **P** 04 33 04.0 -0.2
baz=171
D59A Saint-Raymond 67.46 359 P **P** 04 33 04.8 +0.7
baz=179
D63A Stockholm 67.52 2 P **P** 04 33 05.4 +1.0
baz=183
D57A Chemin Vers le 67.52 358 P **P** 04 33 05.2 +0.6
baz=177
D62A Allapoint, All 67.54 1 P **P** 04 33 05.3 +0.7
baz=182,SNR=6.8
D58A Chemin du LacG 67.57 358 P **P** 04 33 05.4 +0.6
baz=178,SNR=17
D56A ZEC Mazanza, M 67.59 357 P **P** 04 33 05.1 +0.2
baz=176
D55A Sainte-Anne-du 67.60 356 P **P** 04 33 05.2 +0.1
baz=175,SNR=6.8
Q24A Divide 67.64 331 P **P** 04 33 06.2 +0.3
Q24A IAmb IAmb 04 33 18.9
comp=Z,19nm,0.9s
Q24A Divide 67.64 331 P **P** 04 33 06.8 +0.9
baz=145
D61A St Aubert, Com 67.64 0 P **P** 04 33 06.2 +1.0
baz=180
D54A Lac Fusel, La 67.81 356 P **P** 04 33 05.7 -0.6
baz=174
MVCO Mesa Verde 67.82 328 IAmb IAmb 04 33 20.9
comp=Z,29nm,0.9s
MVCO Mesa Verde 67.82 328 P **P** 04 33 08.1 +1.2
baz=142,SNR=18
TAOE Nuku Hiva Isla 67.83 269 *e*S **S** 04 42 00.8 -3.5
comp=Z,726nm,24.1s
TAOE Nuku Hiva Isla 67.83 269 *e*LR LR 04 53 35.2
comp=Z,2µm,24.6s
TAOE Nuku Hiva Isla 67.83 269 *e*T T 05 46 50.0
comp=Z,29nm,0.2s
LATQ La Tuque 67.85 358 P **P** 04 33 07.0 +0.4
baz=178
E46A Sault Ste Mari 67.95 350 IAmb IAmb 04 33 06.9
comp=Z,27nm,0.9s
E46A IAMs_20 IAMs_20 05 03 37.5
comp=Z,2µm,21.0s
D51A Lot 18 Range I 67.99 354 P **P** 04 33 07.6 +0.1
baz=171
WUAZ Wupatki 68.00 325 IAmb IAmb 04 33 23.4
comp=Z,33nm,1.0s
WUAZ Wupatki 68.00 325 P **P** 04 33 09.9 +1.9
baz=139,SNR=15
NVL N'lazarevskaya 68.09 159 *e*P **P** 04 33 06.2 -1.7
NVL *e*S **S** 04 41 58.5 -6.9
NVL *e*SS **SS** 04 46 25.3 -2.3
NVL pmax pmax
comp=Z,232nm,1.2s

NVL MLR MLR
comp=Z,2µm,15.0s
D50A G1974 Best Tow 68.12 353 P **P** 04 33 08.2 -0.1
baz=171,SNR=7.5
GLA Glamis 68.15 321 P **P** 04 33 10.4 +1.6
baz=136
ECSD EROS Data Cent 68.47 340 IAmb IAmb 04 33 29.8
comp=Z,31nm,1.1s
ECSD EROS Data Cent 68.47 340 P **P** 04 33 10.5 -0.1
baz=154,SNR=22
Y12C Blythe 68.47 322 P **P** 04 33 11.5 +0.7
Y12C Blythe 68.47 322 P **P** 04 33 12.6 +1.8
baz=136
E44A Grand Marais A 68.48 349 IAMs_20 IAMs_20 05 02 26.5
comp=Z,2µm,22.0s
ISCO Idaho Springs 68.53 332 IAmb IAmb 04 33 23.9
comp=Z,27nm,1.1s
ISCO Idaho Springs 68.53 332 P **P** 04 33 12.5 +1.0
baz=145,SNR=9.6
COWI Conover 68.63 346 IAmb IAmb 04 33 11.7
comp=Z,30nm,1.1s
COWI IAMs_20 IAMs_20 05 04 08.5
comp=Z,2µm,21.0s
IKP In-Ko-Pah, Jac 68.64 320 P **P** 04 33 14.1 +2.1
baz=134,SNR=12
SWSC Sam W. Stewart 68.66 320 P **P** 04 33 13.9 +2.0
baz=135
SPMN Marine on St. 68.71 343 IAmb IAmb 04 33 12.7
comp=Z,46nm,1.1s
SPMN IAMs_20 IAMs_20 05 08 04.6
comp=Z,2µm,18.0s
SPMN Marine on St. 68.71 343 P **P** 04 33 11.5 -0.6
baz=158,SNR=10
VLDQ Val d'Or 68.83 355 IAmb IAmb 04 33 30.9
comp=Z,29nm,1.1s
BC3 Big Chuckawall 68.95 321 P **P** 04 33 15.9 +2.0
baz=135,SNR=15
MONP2 Monument Peak 69.00 320 P **P** 04 33 16.1 +1.8
baz=134,SNR=10.0
BAR Barrett 69.00 319 P **P** 04 33 15.2 +1.1
BAR IAmb IAmb 04 33 32.6
comp=Z,32nm,1.1s
IRM Iron Mountain 69.12 322 P **P** 04 33 16.8 +1.9
baz=136,SNR=17
U15A North Rim 69.18 325 IAMs_20 IAMs_20 05 02 35.1
comp=Z,2µm,20.0s
NEE2 Needles Airpor 69.26 322 P **P** 04 33 17.1 +1.4
baz=136
109C Camp Elliot, M 69.41 319 P **P** 04 33 17.9 +1.3
baz=134
QSPA South Pole Qui 69.42 180 PKPPKP **P'P'bc** 05 01 23.4 -5.3
comp=Z,4.8nm,1.0s,baz=301,slow=2.4,SNR=5.8
QSPA LR LR 05 05 01.5
comp=Z,853nm,19.7s,baz=169,slow=37
QSPA South Pole Qui 69.42 180 P **P** 04 33 17.8 +1.3
QSPA IAMs_20 IAMs_20 05 07 05.6
comp=Z,2µm,19.0s
BELC Belle Mtn. Jos 69.51 321 P **P** 04 33 19.3 +1.8
baz=135,SNR=8.4
XPFO Pion Flat 69.51 320 P **P** 04 33 17.9 +0.5
PFO Pinyon Flats O 69.52 320 *i* P **P** 04 33 19.4 +1.9
PFO pmax pmax
comp=Z,24nm,1.2s
PFO Pinyon Flats O 69.52 320 P **P** 04 33 18.4 +0.9
PFO Pinyon Flats O 69.52 320 P **P** 04 33 19.4 +1.9
baz=134,SNR=7.8
N23A Red Feather La 69.57 332 IAmb IAmb 04 33 30.2
comp=Z,25nm,1.1s
N23A Red Feather La 69.57 332 P **P** 04 33 18.8 +1.0
baz=145,SNR=6.7
LIC Lamto 69.73 75 *e*P **P** 04 33 17.5 -1.5
comp=Z,226nm,1.3s
LSQQ Lebel-sur-Quev 69.73 356 P **P** 04 33 18.2 0.0
baz=174
GMRC Granite Mounta 69.87 322 P **P** 04 33 21.6 +2.0
baz=135,SNR=20
SUSD Miller 69.87 339 IAmb IAmb 04 33 19.8
comp=Z,48nm,1.1s
SUSD Miller 69.87 339 P **P** 04 33 19.1 -0.2
baz=152,SNR=8.3
TIC Toumodi 69.91 74 *e*P **P** 04 33 18.6 -1.6
comp=Z,316nm,1.3s
MURC Murrieta 69.95 320 P **P** 04 33 22.0 +2.0
baz=134
O20A White River Ci 70.00 330 IAmb IAmb 04 33 33.0
comp=Z,48nm,1.1s
O20A White River Ci 70.00 330 P **P** 04 33 21.7 +1.3
baz=143,SNR=17
KIC Kosan Boka 70.04 75 *e*P **P** 04 33 19.7 -1.3
comp=Z,354nm,1.2s
DBIC Dimbokro 70.07 74 P **P** 04 33 20.5 -0.6
DBIC pmax pmax
comp=Z,179nm,1.1s
DBIC Dimbokro 70.07 74 P **P** 04 33 20.3 -0.8
comp=Z,122nm,1.0s,baz=219,slow=5.9,SNR=98
DBIC LR LR 05 02 45.8
comp=Z,5µm,20.0s,baz=230,slow=35
DBIC Dimbokro 70.07 74 P **P** 04 33 20.5 -0.6
BBRC Big Bear Solar 70.24 320 P **P** 04 33 23.9 +1.9
baz=134
HEC Hector,Ludlow 70.29 321 P **P** 04 33 24.3 +2.2
baz=135,SNR=17
SRU San Rafael Swe 70.30 328 P **P** 04 33 22.5 +0.3
SRU pmax pmax
comp=Z,34nm,0.9s
SRU San Rafael Swe 70.30 328 P **P** 04 33 22.5 +0.3
SCI2 San Clemente I 70.36 319 P **P** 04 33 24.2 +1.7
baz=133
MATQ Matagami 70.48 355 P **P** 04 33 22.4 -0.4
baz=173,SNR=6.8
TUQ Turquoise Moun 70.48 322 P **P** 04 33 25.2 +1.8
baz=135,SNR=17
CIS Catalina Islan 70.56 319 P **P** 04 33 25.2 +1.5
baz=133
BFSC Mount Baldy Ra 70.67 320 P **P** 04 33 26.2 +1.7
baz=134,SNR=9.2
DRLN Deer Lake 70.67 9 P **P** 04 33 24.2 +0.2
FMP Fort Macarthur 70.69 319 P **P** 04 33 26.2 +1.7
baz=133
RRX Edison Barstow 70.71 321 P **P** 04 33 26.5 +1.9
baz=134
GSC Goldstone, Bar 70.90 321 P **P** 04 33 27.9 +2.1
baz=134,SNR=14
MWC Mount Wilson 70.90 320 P **P** 04 33 27.0 +1.0
MWC pmax pmax
comp=Z,22nm,1.1s
MWC Mount Wilson 70.90 320 P **P** 04 33 27.0 +1.0
MWC IAmb IAmb 04 33 45.1
comp=Z,22nm,1.1s
EYMN Ely 70.91 345 IAmb IAmb 04 33 25.4
comp=Z,30nm,1.1s
EYMN Ely 70.91 345 P **P** 04 33 24.9 -0.6
baz=159,SNR=7.5
PASC Pasadena Art C 70.94 320 IAmb IAmb 04 33 44.7
comp=Z,33nm,1.1s
SHOC Shoshone, Teco 71.01 322 P **P** 04 33 27.9 +1.5
baz=135
DECC Green Verdugo 71.09 320 P **P** 04 33 28.8 +1.8
baz=133
SNCC San Nicolas Is 71.14 318 P **P** 04 33 28.4 +1.1
baz=132
K22A Casper 71.25 333 IAmb IAmb 04 33 42.1
comp=Z,41nm,1.1s
K22A Casper 71.25 333 P **P** 04 33 28.9 +1.0
baz=145,SNR=6.2
EDW2 Edwards Air Fo 71.31 320 P **P** 04 33 29.9 +1.6
baz=134,SNR=6.9
BLG Laguna Peak, P 71.44 319 P **P** 04 33 29.9 +0.9
baz=132
RSSD Black Hills 71.45 335 P **P** 04 33 29.7 +0.5
RSSD pmax pmax
comp=Z,18nm,1.1s
RSSD Black Hills 71.45 335 P **P** 04 33 29.7 +0.5
RSSD Black Hills 71.45 335 P **P** 04 33 29.8 +0.7
baz=147
MACI Morro de la Ar 71.45 49 P **P** 04 33 30.2 +0.7
LRMC Laurel Mtn Rad 71.54 321 P **P** 04 33 31.6 +1.9
baz=134,SNR=12
OSI Osito Audit: C 71.57 320 P **P** 04 33 31.0 +1.1
baz=133
D32A Dogwood Acres, 71.65 341 IAmb IAmb 04 33 31.0
comp=Z,57nm,1.0s
SCZ2 Santa Cruz Isl 71.71 319 P **P** 04 33 31.6 +0.9
baz=132
TPNV Topopah Spring 71.74 323 IAmb IAmb 04 33 50.5
comp=Z,23nm,1.0s
TPNV Topopah Spring 71.74 323 P **P** 04 33 33.2 +2.3
baz=135,SNR=16

FURC Furnace Creek, 71.75 322 P **P** 04 33 32.9 +2.1
baz=135,SNR=14
MPMC Manual Prospec 71.82 322 P **P** 04 33 33.2 +1.6
baz=134,SNR=12
ARVC Arvin 71.98 320 P **P** 04 33 34.0 +1.7
baz=133
SBC Santa Barbara 72.06 319 P **P** 04 33 34.5 +1.8
baz=132
ISA Isabella, Lake 72.13 321 P **P** 04 33 34.1 +0.8
ISA pmax pmax
comp=Z,38nm,1.2s
ISA Isabella, Lake 72.13 321 P **P** 04 33 34.1 +0.8
ISA IAmb IAmb 04 33 46.8
comp=Z,38nm,1.1s
ISA Isabella, Lake 72.13 321 P **P** 04 33 35.3 +2.0
baz=133,SNR=13
TBI Tubuai 72.22 251 *e*S **S** 04 42 55.0 -0.3
comp=Z,1µm,27.5s
TBI Tubuai 72.22 251 *e*LR LR 04 55 40.6
comp=Z,4µm,27.2s,baz=104
DUG Dugway, Tooele 72.27 327 IAmb IAmb 04 33 49.4
comp=Z,34nm,1.1s
DUG Dugway, Tooele 72.27 327 P **P** 04 33 35.9 +1.8
baz=139,SNR=18
R11A Troy Canyon, C 72.37 324 P **P** 04 33 37.0 +2.3
baz=136,SNR=24
GRAC Grapevine Rang 72.41 322 P **P** 04 33 36.7 +1.8
baz=131
PKM Mcpherson Peak 72.42 319 P **P** 04 33 37.1 +2.0
baz=132,SNR=9.5
CWC Cottonwood Cre 72.43 321 P **P** 04 33 36.7 +1.5
baz=134
VES Vestal, Richgr 72.62 320 P **P** 04 33 38.0 +1.9
baz=133,SNR=7.3
BW06 Boulder Array 72.68 331 P **P** 04 33 37.4 +0.8
baz=142,SNR=9.6
PDAR Pinedale Array 72.68 331 P **P** 04 33 37.0 +0.4
comp=Z,5.2nm,1.1s,baz=152,slow=6.6,SNR=21
PDAR LR LR 05 07 39.3
comp=Z,569nm,20.1s,baz=122,slow=38
PDAR Pinedale Array 72.68 331 P **P** 04 33 36.2 -0.4
HWUT Hardware Ranch 72.72 329 IAmb IAmb 04 33 51.1
comp=Z,44nm,1.1s
SMMC Simmler 72.81 319 P **P** 04 33 39.5 +2.2
baz=132,SNR=6.4
TIN Tinemaha, Big 72.94 322 P **P** 04 33 40.1 +2.0
baz=134
MDND Maddock 73.08 340 P **P** 04 33 39.2 +0.7
MDND Maddock 73.08 340 P **P** 04 33 39.2 +0.7
baz=152,SNR=14
PAGB Antelope Grade 73.24 320 IAmb IAmb 04 33 59.7
comp=Z,45nm,1.2s
AHID Auburn Hatcher 73.39 330 IAmb IAmb 04 33 53.1
comp=Z,51nm,1.1s
MLAC Mammoth, Mammo 73.69 322 P **P** 04 33 44.5 +1.9
baz=134
SNOW Snow King Moun 73.77 331 IAmb IAmb 04 33 57.2
comp=Z,30nm,0.9s
TPAW Teton Pass 73.89 331 IAmb IAmb 04 33 57.4
comp=Z,25nm,0.9s
PMPB Monarch Peak 73.90 320 P **P** 04 33 44.5 +0.8
PMPB IAmb IAmb 04 34 03.0
comp=Z,44nm,1.2s
ELK Elko 73.92 326 IAMs_20 IAMs_20 05 05 23.5
comp=Z,1µm,18.0s
PPT2 Papee2 73.93 257 *e*S **S** 04 43 14.1 -1.0
comp=Z,2µm,25.2s
PPT2 Papeete2 73.93 257 *e*LR LR 04 56 30.3
comp=Z,4µm,24.5s,baz=110
PPT Papeete 73.93 257 LR LR 04 57 54.8
comp=Z,2µm,21.9s,baz=144,slow=29
NVAR Mina Array Bea 73.94 323 P **P** 04 33 45.8 +1.7
comp=Z,5.5nm,0.9s,baz=141,slow=6.2,SNR=33
NVAR LR LR 05 03 59.7
comp=Z,656nm,21.0s,baz=129,slow=34
NVAR Mina Array Bea 73.94 323 P **P** 04 33 43.6 -0.5
ULM Lac du Bonnet 74.15 343 *i* P **P** 04 33 44.0 -0.7
ULM Lac du Bonnet 74.15 343 P **P** 04 33 44.1 -0.6
comp=Z,20nm,1.0s,baz=156,slow=5.1,SNR=21
ULM LR LR 05 08 33.5
comp=Z,2µm,21.2s,baz=140,slow=38
ULM Lac du Bonnet 74.15 343 IAmb IAmb 04 33 44.8
FLWY Flagg Ranch 74.23 331 P **P** 04 33 46.2 +0.6
FLWY IAmb IAmb 04 34 00.7
comp=Z,71nm,1.0s
KVN Kaiserville 74.25 323 IAmb IAmb 04 33 53.5
comp=Z,29nm,1.1s
RLMT Red Lodge 74.42 333 IAmb IAmb 04 34 04.4
comp=Z,28nm,1.1s
RLMT Red Lodge 74.42 333 P **P** 04 33 48.1 +1.4
baz=143,SNR=16
H17A Grant Village 74.42 331 P **P** 04 33 49.1 +2.3
baz=142,SNR=13
LAO LA Array 74.44 335 IAmb IAmb 04 33 58.9
comp=Z,68nm,1.1s
LAO LASA Array 74.44 335 P **P** 04 33 47.7 +1.1
baz=146,SNR=20
LKWY Lake 74.47 332 IAmb IAmb 04 34 02.8
comp=Z,32nm,0.9s
SAO San Andreas Ge 74.65 320 P **P** 04 33 47.5 -0.5
SAO pmax pmax
comp=Z,14nm,1.1s
SAO San Andreas Ge 74.65 320 P **P** 04 33 47.5 -0.5
PNTR Pine Nut 75.12 323 IAmb IAmb 04 33 59.3
comp=Z,34nm,1.2s
DGMT Dagmar 75.17 338 P **P** 04 33 52.0 +1.3
baz=148,SNR=20
SCHQ Schefferville 75.35 2 P **P** 04 33 51.5 -0.1
comp=Z,19nm,1.0s,baz=128,slow=5.1,SNR=6.7
SCHQ LR LR 05 06 27.6
comp=Z,2µm,21.9s,baz=238,slow=35
SCHQ Schefferville 75.35 2 P **P** 04 33 52.2 +0.6
PAHR Pah Rah Range 75.42 323 IAmb IAmb 04 33 55.3
comp=Z,30nm,1.0s
SBA Scott Base 76.26 191 IAMs_20 IAMs_20 05 07 43.7
comp=Z,1µm,19.0s
MCCM Marconi Confer 76.41 320 IAmb IAmb 04 34 00.4
comp=Z,28nm,1.1s
ORV Oroville 76.53 322 P **P** 04 33 59.7 +1.0
ORV pmax pmax
comp=Z,34nm,1.2s
ORV Oroville 76.53 322 P **P** 04 33 59.7 +1.0
ORV IAmb IAmb 04 34 01.3
comp=Z,34nm,1.1s
EGMT Eagleton 76.93 334 IAmb IAmb 04 34 13.0
comp=Z,35nm,1.0s
EGMT Eagleton 76.93 334 P **P** 04 34 01.9 +1.0
baz=143,SNR=16
O03E Paynes Creek 77.19 322 P **P** 04 34 03.0 +0.5
baz=132,SNR=7.0
O02D Mt. Diablo Mer 77.68 322 P **P** 04 34 06.2 +1.0
baz=131
SYO Syowa Base 77.75 160 *i*/P **P** 04 34 04.8 -0.3
SYO Syowa Base 77.75 160 *i*/pP **P** 04 34 09.0 +3.9
SYO Syowa Base 77.75 160 *i*/PcP **PcP** 04 34 15.0 -0.1
MSO Missoula 77.80 331 P **P** 04 34 07.6 +1.8
baz=139,SNR=5.7
N02D Trinity Center 78.16 322 P **P** 04 34 08.2 +0.4
baz=131,SNR=6.2
M04C Macdoel 78.20 323 P **P** 04 34 09.4 +1.3
baz=132,SNR=7.7
M02C Callahan 78.51 323 P **P** 04 34 10.7 +0.8
baz=131
TTIG Tnine Tigouga, 78.55 51 P **P** 04 34 12.0 +1.6
SNR=28
TOA0 Torodi Ar. Sit 78.62 71 P **P** 04 34 10.4 -0.5
TORD Torodi Ar. Bea 78.62 71 P **P** 04 34 10.5 -0.4
comp=Z,172nm,0.9s,baz=254,slow=5.3,SNR=529
TORD LR LR 05 08 31.5
comp=Z,7µm,18.6s,baz=275,slow=36
TORD Torodi Ar. Bea 78.62 71 P **P** 04 34 10.2 -0.7
KHMM Horse Mountain 78.68 322 P **P** 04 34 10.8 0.0
K04D Chiloquin, OR 78.72 324 P **P** 04 34 12.0 +1.0
baz=132
L04D Klamath Falls 78.75 324 P **P** 04 34 12.2 +1.0
baz=132
J05D Fort Rock, OR 78.88 325 P **P** 04 34 13.6 +1.7
baz=133,SNR=11
OUK Oukaimeden 79.31 51 P **P** 04 34 17.0 +2.2
SNR=12
J04D Umpqua Nationa 79.32 324 P **P** 04 34 15.8 +1.4
baz=132
L02E Cave Junction 79.44 323 P **P** 04 34 16.2 +1.4
baz=131
WALA Waterton Lakes 79.47 333 IAmb IAmb 04 34 27.0
comp=Z,32nm,1.1s

I05D Terrebonne, OR 79.65 326 P **P** 04 34 17.9 +1.9
baz=133,SNR=15
K02D Willamette Mer 79.82 323 P **P** 04 34 18.5 +1.5
baz=131
FFC Flin Flon 79.83 342 *e*P **P** 04 34 16.7 +0.1
FFC Flin Flon 79.83 342 P **P** 04 34 16.7 +0.1
I04A Tendick Farm, 79.85 325 P **P** 04 34 18.0 +0.9
baz=132
HAWA Hanford 80.13 328 IAmb IAmb 04 34 20.8
comp=Z,36nm,1.1s
G05D Wamic, OR 80.25 326 P **P** 04 34 21.2 +2.1
baz=133,SNR=8.7
J01E Myrtle Point 80.27 323 P **P** 04 34 21.0 +1.7
baz=130
I03D Drain, OR 80.30 324 P **P** 04 34 20.6 +1.2
baz=131
NEW Newport 80.31 331 P **P** 04 34 20.1 +0.7
baz=137,SNR=8.6
SUR Sutherland 80.33 121 LR LR 05 07 19.8
comp=Z,2µm,18.1s,baz=246,slow=34
SUR Sutherland 80.33 121 P **P** 04 34 19.1 -1.2
ZGR Zagora 80.40 53 P **P** 04 34 21.3 +0.8
SNR=42
H04D Lebanon 80.51 325 P **P** 04 34 21.3 +0.8
baz=132
C09A Chrisman Ranch 80.52 330 P **P** 04 34 21.4 +0.9
C09A IAmb IAmb 04 34 22.7
comp=Z,31nm,0.9s
F05D White Salmon 80.76 327 P **P** 04 34 23.7 +1.8
baz=133,SNR=5.9
TZRR Tazzarine 80.78 52 P **P** 04 34 24.0 +1.5
SNR=34
I02D Swisshome 80.84 324 P **P** 04 34 24.0 +1.7
baz=131
G03D McMinnville, O 81.25 325 P **P** 04 34 26.1 +1.7
baz=131
F04A Amboy 81.28 326 IAmb IAmb 04 34 39.7
comp=Z,52nm,1.0s
LTY Liberty 81.30 328 IAmb IAmb 04 34 26.7
comp=Z,36nm,1.1s
LON Longmire 81.52 327 IAMs_20 IAMs_20 05 10 27.7
comp=Z,1µm,20.0s
FCC Fort Churchill 81.57 348 IAmb IAmb 04 34 26.8
comp=Z,46nm,1.1s
F04D Rainier, OR 81.69 326 P **P** 04 34 28.4 +1.7
baz=132
GOLM Goulmima 81.70 52 P **P** 04 34 29.0 +1.6
SNR=27
E04D Cinebar 81.78 327 P **P** 04 34 28.6 +1.4
baz=132,SNR=7.4
C06D Leavenworth 81.86 328 P **P** 04 34 28.5 +0.9
baz=134
D05A Enumclaw 81.91 327 IAmb IAmb 04 34 30.2
comp=Z,57nm,1.0s
MORF Marmelete 82.07 45 *e*P **P** 04 34 30.0 +0.9
MORF AMS AMS 05 07 21.5
comp=Z,2µm,22.1s
MORF Marmelete 82.07 45 *e*P **P** 04 34 30.4 +1.4
comp=Z,104nm,2.0s
MORF Marmelete 82.07 45 *e*P **P** 04 34 29.9 +0.9
ARF Arif 82.10 52 P **P** 04 34 30.4 +1.0
SNR=64
PTEO Sao Teotonio 82.15 45 *e*P **P** 04 34 31.3 +1.9
B06A Marblemount 82.56 329 P **P** 04 34 31.2 0.0
B06A IAmb IAmb 04 34 32.4
comp=Z,29nm,0.9s
PCVE Castro Verde 82.65 45 *e*P **P** 04 34 32.6 +0.6
comp=Z,64nm,1.8s
B05A Bryant 82.69 328 P **P** 04 34 32.4 +0.5
baz=132,SNR=8.5
D03D Eldon 82.69 327 P **P** 04 34 33.3 +1.3
baz=132,SNR=6.5
PVAQ Vaqueiros 82.74 46 *e*LR LR 05 03 29.2
comp=Z,2µm,24.0s
PBEJ Beja 82.98 45 *e*P **P** 04 34 34.7 +1.0
comp=Z,56nm,1.8s
CHEFC Chefchaouen 83.16 49 P **P** 04 34 37.0 +2.1
SNR=5.4
A04D Lummi Island 83.29 328 P **P** 04 34 35.7 +0.7
baz=132
PMTG Montargil 83.32 44 *e*P **P** 04 34 36.5 +1.1
comp=Z,133nm,1.8s
PGC Sidney 83.61 328 IAmb IAmb 04 34 38.7
comp=Z,27nm,0.9s
PCAS Casmilo, Conde 83.68 43 *e*P **P** 04 34 38.0 +0.7
comp=Z,113nm,2.1s
COI Coimbra 83.82 43 *e*P **P** 04 34 39.3 +1.3
comp=Z,224nm,1.6s
COI Coimbra 83.82 43 P **P** 04 34 38.2 +0.2
COI pmax pmax
comp=Z,23nm,1.0s
COI Coimbra 83.82 43 P **P** 04 34 38.2 +0.2
COI IAmb IAmb 04 34 50.0
comp=Z,23nm,1.0s
PMRV Marv??o 84.06 44 *e*P **P** 04 34 39.4 +0.2
PMRV Marv??o 84.06 44 *e*LQ LQ 05 00 42.0
PMRV *e*LR LR 05 03 28.4
comp=Z,1µm,18.0s
LLLB Lillooet 84.17 330 IAmb IAmb 04 34 40.8
comp=Z,40nm,1.1s
PALE Palemas 84.20 49 P **P** 04 34 42.0 +1.9
SNR=7.8
PCBR Castelo Branco 84.22 44 *e*P **P** 04 34 40.8 +0.8
comp=Z,56nm,1.9s
PVIS Viseu 84.43 43 *e*P **P** 04 34 41.0 -0.2
comp=Z,116nm,1.4s
MTE Manteigas 84.48 43 *e*P **P** 04 34 42.0 +0.6
comp=Z,119nm,1.3s
MTE Manteigas 84.48 43 *e*LQ LQ 05 01 26.1
MTE *e*LR LR 05 05 12.6
comp=Z,3µm,18.0s
FIGM Figuig 84.64 53 P **P** 04 34 43.6 +1.1
SNR=77
FIGM P **P** 04 34 43.6 +1.1
SNR=77
PVRL Vila Real 84.85 42 *e*P **P** 04 34 43.8 +0.5
comp=Z,133nm,1.4s
GOG Mont Gurugu 84.87 49 P **P** 04 34 45.0 +1.4
SNR=8.5
PCAB Cabril 84.90 42 *e*P **P** 04 34 44.0 +0.5
comp=Z,172nm,1.3s
BOSA Boshof 85.20 119 P **P** 04 34 46.0 +0.4
BOSA pmax pmax
comp=Z,45nm,1.0s
BOSA Boshof 85.20 119 P **P** 04 34 45.5 0.0
comp=Z,48nm,1.0s,baz=238,slow=4.5,SNR=34
BOSA LR LR 05 09 09.6
comp=Z,3µm,21.3s,baz=246,slow=33
BOSA Boshof 85.20 119 P **P** 04 34 46.0 +0.4
MVO Moncorvo 85.23 43 *e*P **P** 04 34 45.8 +0.6
comp=Z,105nm,1.3s
MVO Moncorvo 85.23 43 *e*LQ LQ 04 59 53.6
MVO *e*LR LR 05 07 04.1
comp=Z,2µm,18.0s
MAW Mawson 85.49 164 P **P** 04 34 46.8 +0.8
MAW pmax pmax
comp=Z,17nm,1.2s
MAW MLR MLR
comp=Z,300nm,19.0s
MAW Mawson 85.49 164 P **P** 04 34 47.3 +1.3
comp=Z,39nm,1.1s,baz=232,slow=5.4,SNR=18
MAW LR LR 05 12 56.7
comp=Z,1µm,19.0s,baz=237,slow=36
MAW Mawson 85.49 164 P **P** 04 34 46.8 +0.8
PBRG Braganca 85.75 42 *e*P **P** 04 34 48.5 +0.7
comp=Z,112nm,1.5s
TAM Tamanrasset 85.92 64 P **P** 04 34 49.7 +0.5
TAM pmax pmax
comp=Z,29nm,1.0s
TAM MLR MLR
comp=Z,4µm,20.0s
TAM Tamanrasset 85.92 64 P **P** 04 34 49.7 +0.5
TAM IAmb IAmb 04 34 53.0
comp=Z,29nm,1.0s
PAB San Pablo 86.12 45 P **P** 04 34 50.5 +0.8
PAB pmax pmax
comp=Z,41nm,1.2s
PAB San Pablo 86.12 45 P **P** 04 34 50.5 +0.8
PAB IAmb IAmb 04 34 50.8
comp=Z,41nm,1.1s
ESDC Sonseca Array 86.44 45 P **P** 04 34 51.2 0.0
comp=Z,15nm,1.1s,baz=240,slow=5.2,SNR=35
ESDC LR LR 05 09 38.4
comp=Z,2µm,22.0s,baz=230,slow=33
ESDC Sonseca Array 86.44 45 P **P** 04 34 50.8 -0.4
LBTB Lobatse 86.78 115 P **P** 04 34 53.5 +0.1
LBTB pmax pmax

comp=Z,85nm,1.2s
LBTB Lobatse 86.78 115 LR LR 05 11 31.4
comp=Z,2µm,19.7s,baz=240,slow=34
LBTB Lobatse 86.78 115 P **P** **04 34 53.5 +0.1**
CART Cartagena 87.43 48 P **P** **04 34 54.8 -1.2**
CART IAmb IAmb 04 34 58.3
comp=Z,16nm,1.1s
YKA Yellowknife Ar 89.97 341 P **P** **04 35 07.5 +0.2**
comp=Z,18nm,0.9s,baz=137,slow=4.8,SNR=183
YKA PKKP **PKKPbc** **04 52 40.6 -1.0**
comp=Z,0.1nm,0.6s,baz=297,slow=4.1,SNR=5.1
YKA LR LR 05 18 00.9
comp=Z,139nm,21.8s,baz=122,slow=37
MATP Matopo 90.97 112 LR LR 05 12 11.1
comp=Z,3µm,21.9s,baz=251,slow=33
LSZ Lusaka 92.64 107 P **P** **04 35 22.1 +1.0**
LSZ pmax pmax
comp=Z,23nm,1.2s
LSZ Lusaka 92.64 107 P **P** **04 35 22.1 +1.0**
LSZ IAmb IAmb 04 35 26.1
comp=Z,23nm,1.1s
DLBC Dease Lake 92.82 333 P **P** **04 35 21.8 +1.0**
RAO Raoul Island 94.12 237 IAMs_20 IAMs_20 05 09 01.5
comp=Z,2µm,19.0s
KEST Kesra 94.14 53 P **P** **04 35 27.9 +0.4**
comp=Z,13nm,1.1s,baz=229,slow=3.3,SNR=9.1
KEST PP **PP** **04 39 13.3 -1.2**
comp=Z,8.8nm,1.0s,baz=186,slow=6.3,SNR=4.5
KEST LR LR 05 18 06.1
comp=Z,3µm,19.9s,baz=200,slow=36
KEST Kesra 94.14 53 P **P** **04 35 27.8 +0.4**
KEST IAmb IAmb 04 35 29.5
comp=Z,16nm,1.1s
BESE Bessie Mountai 94.99 332 P **P** **04 35 31.5 +0.7**
AFI Afiamalu 95.26 253 LR LR 05 07 55.9
comp=Z,1µm,22.0s,baz=106,slow=29
SUMG Summit 95.59 9 ⇑*i* P **P** **04 35 34.2 +0.6**
SUMG pmax pmax
comp=Z,91nm,1.2s
SUMG Summit 95.59 9 ⇑*i* P **P** **04 35 34.2 +0.6**
comp=Z,91nm,1.2s
SUMG Summit 95.59 9 P **P** **04 35 33.8 +0.2**
SUMG IAmb IAmb 04 35 37.0
comp=Z,26nm,1.1s
UCC Uccle 96.80 38 IAMs_20 IAMs_20 05 15 49.2
comp=Z,1µm,19.0s
TULEG Thule 97.09 0 IAmb IAmb 04 35 51.5
comp=Z,10nm,1.0s
WLF Walferdange 97.40 40 P Pdif 04 35 42.1 +0.2
WLF pmax pmax
comp=Z,37nm,1.1s
WLF Walferdange 97.40 40 P Pdif 04 35 42.1 +0.2
MSSA Maissana 97.49 46 IAMs_20 IAMs_20 05 17 23.0
comp=Z,948nm,18.0s
CASP Castiglione de 97.85 47 IAMs_20 IAMs_20 05 26 03.5
comp=Z,855nm,20.0s
TUE Stuetta 98.16 43 IAMs_20 IAMs_20 05 15 58.6
comp=Z,2µm,19.0s
LATE Laterza 98.43 48 P Pdif 04 35 46.8 +0.1
LATE IAmb IAmb 04 35 56.4
comp=Z,9.0nm,1.1s
LATE IAMs_20 IAMs_20 05 27 54.0
comp=Z,1µm,18.0s
DAVA Damuels 98.80 43 *i* Pdiff Pdif 04 35 48.6 +0.1
comp=Z,12nm,1.3s
DAVA *i* PP **PP** **04 39 46.5 -3.8**
comp=Z,7.4nm,0.9s
FUORN Ofenpass-Fuorn 98.81 44 P Pdif 04 35 49.0 +0.3
MURB Monte Urbino 99.15 47 IAMs_20 IAMs_20 05 22 48.0
comp=Z,2µm,20.0s
FETA Feichten 99.25 43 *i* Pdiff **Pdif** **04 35 50.4 -0.1**
comp=Z,11nm,1.2s
FETA *i* PP **PP** **04 39 49.6 -4.1**
comp=Z,9.8nm,1.2s
NRCA Norcia 99.42 48 IAMs_20 IAMs_20 05 20 42.0
comp=Z,1µm,22.0s
RETA Reutte 99.43 43 *i* Pdiff **Pdif** **04 35 51.4 +0.2**
comp=Z,14nm,1.5s
RETA *i* PP **PP** **04 39 48.8 -6.2**
comp=Z,10nm,1.3s
AQU L'Aquila 99.46 48 IAMs_20 IAMs_20 05 21 48.2
comp=Z,2µm,22.0s
MOTA Moosalm 99.60 43 *i* Pdiff **Pdif** **04 35 52.1 +0.1**
comp=Z,16nm,1.3s
MOTA *i* PP **PP** **04 39 48.9 -7.5**
comp=Z,8.6nm,1.4s
SQTA Sankt Quirin 99.62 43 *i* Pdiff **Pdif** **04 35 52.3 +0.3**
comp=Z,16nm,1.1s
SQTA *i* PP **PP** **04 39 49.0 -7.5**
comp=Z,10.0nm,1.2s
INK Inuvik 99.71 340 P **Pdif** **04 35 51.8 +0.1**
INK pmax pmax
comp=Z,8.0nm,1.1s
INK Inuvik 99.71 340 **Pdif** **04 35 51.8 +0.1**
CRQM Cirque 99.73 332 IAMs_20 IAMs_20 05 25 26.4
comp=Z,1µm,21.0s
PAOL Paolisi 99.85 50 IAMs_20 IAMs_20 05 24 36.6
comp=Z,1µm,20.0s
WATA Walderalm 99.90 43 *i* Pdiff **Pdif** **04 35 53.8 +0.5**
comp=Z,13nm,1.2s
WATA *i* PP PP 04 39 50.6 -8.1
comp=Z,10.0nm,1.5s
CEL Celeste 99.93 53 IAMs_20 IAMs_20 05 20 10.1
comp=Z,2µm,21.0s
STAL STALIGIAL 100.28 44 **Pdif** **04 35 55.0 +0.1**
ABTA Abfaltersbach 100.31 44 *i* Pdiff **Pdif** **04 35 55.3 +0.2**
comp=Z,13nm,1.3s
ABTA *i* PP **PP** **04 39 57.4 -4.3**
comp=Z,8.3nm,1.0s
GLB Gilahina Butte 100.31 332 IAMs_20 IAMs_20 05 26 40.5
comp=Z,838nm,19.0s
GRF Grafenberg Arr 100.47 41 *e*P **Pdif** **04 35 56.3 +0.7**
comp=Z,5.7nm,1.0s,baz=246,slow=5.3
ACER Acerenza 100.76 50 IAMs_20 IAMs_20 05 21 58.8
comp=Z,1µm,21.0s
ROBS Robic 100.79 45 *i* Pdiff **Pdif** **04 35 57.1 -0.1**
EYAK Cordova Ski Ar 100.82 331 IAMs_20 IAMs_20 05 30 09.1
comp=Z,1µm,18.0s
KBA Koelnbreinsper 100.95 44 *i* Pdiff **Pdif** **04 35 58.9 +0.9**
comp=Z,2.6nm,0.7s
KBA *i* PP **PP** **04 40 00.4 -6.3**
comp=Z,14nm,1.4s
MYKA Terra Mystica 101.00 44 *i* Pdiff **Pdif** **04 35 58.4 +0.3**
comp=Z,8.1nm,1.2s
MYKA *i* PP **PP** **04 40 03.9 -3.1**
comp=Z,17nm,1.4s
NKC Novy Kostel 101.40 41 AMS AMS 05 17 30.0
comp=Z,1µm,20.7s
SCRK Sand Creek 101.42 334 IAMs_20 IAMs_20 05 22 07.8
comp=Z,880nm,19.0s
OBKA Obir 101.56 45 *i* Pdiff **Pdif** **04 36 01.1 +0.4**
comp=Z,5.7nm,1.1s
OBKA *i* PP **PP** **04 40 08.7 -2.5**
comp=Z,14nm,1.5s
RIDG Independent Ri 101.68 334 IAMs_20 IAMs_20 05 22 25.7
comp=Z,1µm,21.0s
GEC2 GERESS Array S 101.73 42 IAMs_20 IAMs_20 05 19 22.0
comp=Z,1µm,21.0s
GERES GERESS Array B 101.73 42 P **Pdif** **04 36 00.2 -1.2**
GERES GERESS Array B 101.73 42 P **Pdif** **04 36 00.6 -0.8**
comp=Z,1.6nm,1.0s,baz=222,slow=1.8,SNR=9.4
GERES PP **PP** **04 40 12.2 -0.2**
comp=Z,1.4nm,1.0s,baz=256,slow=5.4,SNR=3.7
GERES GERESS Array B 101.73 42 **Pdif** **04 36 00.1 -1.2**
KHC Kasperske Hory 101.75 42 *i* P **Pdif** **04 36 00.6 -0.7**
KHC pmax pmax
comp=Z,6.0nm,1.1s
KHC Kasperske Hory 101.75 42 *e*PP PP 04 39 56.5 -16
KHC AMS AMS 05 18 30.0
comp=Z,2µm,25.7s
MOA Molln 101.79 43 *i* Pdiff **Pdif** **04 36 02.0 +0.4**
comp=Z,9.0nm,1.3s
SOKA Soboth 101.93 45 *i* Pdiff **Pdif** **04 36 02.4 +0.1**
SOKA *i* PP **PP** **04 40 14.8 +0.9**
comp=Z,3.5nm,1.1s
CLL Collm 102.07 40 *e*P **Pdif** **04 36 03.0 +0.4**
CLL *e* 04 40 13.0
CLL pmax pmax
comp=Z,10.0nm,1.2s
CLL MLR MLR
comp=Z,2µm,21.3s
CLL Collm 102.07 40 *e*Pdif **Pdif** **04 36 03.0 +0.4**
comp=Z,10.0nm,1.2s
CLL *e* 04 40 02.0
CLL *e*PP **PP** **04 40 13.0 -1.8**
CLL *e*SS SS 04 54 42.0 -6.8
CLL Lm MLR 05 19 00.0
comp=N,400nm,20.8s
CLL Lm MLR 05 19 00.0
comp=E,2µm,21.5s
CLL Lm MLR 05 19 00.0
comp=Z,2µm,21.3s
CLL Collm 102.07 40 **Pdif** **04 36 03.4 +0.8**
KNK Knik Glacier 102.36 331 IAMs_20 IAMs_20 05 27 00.9
comp=Z,866nm,19.0s
ARSA Arzberg 102.42 44 *i* Pdiff **Pdif** **04 36 04.5 +0.1**
comp=Z,4.7nm,1.0s
BRG Berggiesshubel 102.50 40 *e*PDIFF **Pdif** **04 36 04.6 0.0**
comp=Z,12nm,1.3s
BRG *e*PP **PP** **04 40 12.7 -5.3**
comp=Z,27nm,1.6s
BRG SDIFF 04 47 49.0
BRG PS PS 04 49 22.0 -3.0
comp=N,894nm,23.9s
comp=E,1µm,24.8s
comp=Z,2µm,25.0s
BRG Berggiesshubel 102.50 40 *e*P **Pdif** **04 36 04.6 0.0**
BRG S **Sdif** **04 47 49.0 +2.0**
BRG PS PS 04 49 22.0 -3.0
BRG pmax pmax
comp=Z,13nm,1.3s
BRG pmax pmax
comp=Z,27nm,1.6s
BRG MLR MLR
comp=N,894nm,23.9s
BRG MLR MLR
comp=E,1µm,24.8s
BRG MLR MLR
comp=Z,2µm,25.0s
PRA Prague 102.56 41 AMS AMS 05 19 10.0
comp=Z,2µm,22.7s
MSVF Nonsavu 102.58 245 IAMs_20 IAMs_20 05 13 02.4
comp=Z,2µm,20.0s
PRU Pruhonice 102.60 41 AMS AMS 05 19 10.0
comp=Z,1µm,13.9s
PMR Palmer 102.73 331 IAMs_20 IAMs_20 05 27 09.6
comp=Z,1µm,21.0s
GOPC GO Pecny, Ondr 102.73 41 AMS AMS 05 19 00.0
comp=Z,1µm,12.6s
PVCC Panska Ves 102.78 41 AMS AMS 05 20 10.0
comp=Z,1µm,21.8s
HDA Harding Lake 102.79 334 IAMs_20 IAMs_20 05 26 11.0
comp=Z,934nm,20.0s
BLY Banja Luka 102.81 47 IAMs_20 IAMs_20 05 23 23.7
comp=Z,2µm,20.0s
RC01 Rabbit Creek A 102.83 331 IAMs_20 IAMs_20 05 27 34.3
comp=Z,1µm,20.0s
CONA Conrad Observa 102.84 44 *i* Pdiff **Pdif** **04 36 06.0 -0.2**
comp=Z,4.9nm,1.3s
CONA *i* PP **PP** **04 40 17.3 -3.4**
comp=Z,9.3nm,1.6s
ILAR Eielson Array 102.89 335 P **Pdif** **04 36 05.5 -0.5**
comp=Z,0.8nm,1.0s,baz=154,slow=3.2,SNR=6.1
ILAR PP **PP** **04 40 25.0 +4.4**
comp=Z,2.1nm,1.1s,baz=103,slow=5.9,SNR=4.6
TREC Trest 102.99 42 AMS AMS 05 19 40.0
comp=Z,2µm,22.3s
PDG Podgorica 103.61 50 ⇑P **PP** **04 40 23.1 -3.5**
PDG Podgorica 103.61 50 IAMs_20 IAMs_20 05 23 35.3
comp=Z,1µm,20.0s
DPC Dobruska-Polom 103.80 41 AMS AMS 05 19 40.0
comp=Z,900nm,21.8s
TRF Thorofare Moun 103.85 333 IAMs_20 IAMs_20 05 30 53.2
comp=Z,1µm,18.0s
MODS Modra-Piesok 103.87 43 *e*PP PP 04 40 15.4 -13
KRLC Kraliky 104.01 42 AMS AMS 05 20 10.0
comp=Z,1µm,22.4s
FNA Florina 104.72 52 IAMs_20 IAMs_20 05 24 24.7
comp=Z,928nm,22.0s
OKC Ostrava-Krasne 104.80 42 AMS AMS 05 20 20.0
comp=Z,1µm,18.0s
VYHS Vyhne 104.91 43 *e*PP **PKiKP** **04 40 25.3 -5.0**
TOLK Toolik Lake Re 105.20 338 IAMs_20 IAMs_20 05 24 53.6
comp=Z,823nm,20.0s
TOLK Toolik Lake Re 105.20 338 PKiKP **PKiKP** **04 40 30.2 -0.1**
baz=108
LIT Litokhoron 105.37 53 IAMs_20 IAMs_20 05 31 13.9
comp=Z,909nm,19.0s
PSZ Piszkesteto 105.45 44 IAMs_20 IAMs_20 05 22 16.4
comp=Z,1µm,21.0s
MDVR Moldovita 105.93 48 ⇓P **PP** **04 40 42.4 -1.4**
BZS Buzias 106.06 47 ⇑P **PP** **04 40 43.1 -1.6**
SIRR Siria 106.24 46 ⇑P **PP** **04 40 42.4 -3.6**
VTS Vitosha 106.51 50 IAMs_20 IAMs_20 05 28 56.9
comp=Z,818nm,19.0s
SANT Santorini 106.74 57 IAMs_20 IAMs_20 05 24 47.5
comp=Z,1µm,21.0s
GZR Gura Zlata 106.81 47 ⇑P **PKiKP** **04 40 35.0 +1.0**
DRGR 107.06 46 ⇑P **PP** **04 40 48.0 -4.1**
ABPO Ambohimpanom 107.42 119 IAMs_20 IAMs_20 05 21 10.8
comp=Z,2µm,20.0s
KARP Karpathos 107.90 58 IAMs_20 IAMs_20 05 30 52.6
comp=Z,1µm,20.0s
ALN Alexandroupoli 108.19 52 IAMs_20 IAMs_20 05 27 47.6
comp=Z,836nm,20.0s
VOIR 108.38 48 ⇓P **PP** **04 40 59.8 -2.0**
MLR Muntele Rosu 109.01 48 ⇑P **PP** **04 41 04.1 -2.3**
MLR Muntele Rosu 109.01 48 IAMs_20 IAMs_20 05 27 45.9
comp=Z,2µm,20.0s
OZUR 109.01 47 ⇑P **PP** **04 41 04.5 -1.8**
DZM Mont Dzumac 109.90 236 *e*PS PS 04 50 31.5 -11
comp=Z,449nm,23.8s
DZM Mont Dzumac 109.90 236 *e*LR LR 05 13 06.4
comp=Z,2µm,24.6s
RDOG Red Dog Mine 109.91 336 IAMs_20 IAMs_20 05 31 12.2
comp=Z,879nm,20.0s
CFR Carcaliu 110.48 48 ⇑PKiKP **PKiKP** **04 40 41.0 +0.2**
CFR Carcaliu 110.48 48 ⇑P **PKiKP** **04 40 41.0 +0.2**
TIRR Tirgusor 110.56 49 ⇑PKiKP **PKiKP** **04 40 41.4 +0.5**
TIRR Tirgusor 110.56 49 ⇑P **PKiKP** **04 40 41.4 +0.5**
ANM Nome 110.57 333 IAMs_20 IAMs_20 05 33 29.7
comp=Z,742nm,20.0s
SORM Soroca 111.06 45 ⇑P PP 04 41 07.5 -13
KIS Kishinev 111.22 46 *e*P **PP** **04 41 24.0 +1.8**
KIS *e*SKS 04 51 20.0
KIS *e*SKKS 04 52 18.0
KIS *e*L L 05 13 24.0
KIS LRM MLR 05 28 08.0
comp=Z,600nm,20.0s
AKASG Malin Array Be 111.94 42 *c i* PKiKP **PKiKP** **04 40 42.9 -0.5**
AKASG pmax pmax
comp=Z,1.0nm,0.7s
AKASG Malin Array Be 111.94 42 PKiKP **PKiKP** **04 40 42.6 -0.8**
comp=Z,1.1nm,0.7s,baz=270,slow=3.3,SNR=7.7
AKASG PP **PP** **04 41 24.5 -2.8**
comp=Z,4.2nm,1.0s,baz=264,slow=6.4,SNR=6.5
CSS Mathiatis 112.73 60 IAMs_20 IAMs_20 05 35 35.1
comp=Z,1µm,20.0s
TOO Toolangi 112.75 211 IAMs_20 IAMs_20 05 17 28.8
comp=Z,1µm,20.0s
ANTO Ankara 113.08 54 IAMs_20 IAMs_20 05 36 25.2
comp=Z,1µm,20.0s
BRTR Keskin Array B 113.71 55 PKiKP **PKiKP** **04 40 47.5 +0.2**
comp=Z,2.2nm,0.9s,baz=204,slow=3.2,SNR=12
ILGA Ilgaz 113.94 53 IAMs_20 IAMs_20 05 34 26.8
comp=Z,970nm,20.0s
APA Apatity 114.36 24 ⇓*i* PKIKP PKPdf 04 40 46.5 -1.0
APA pmax pmax
comp=Z,8.0nm,1.1s
ARMA Armidale 114.89 220 IAMs_20 IAMs_20 05 20 41.7
comp=Z,1µm,20.0s
ATD Arta Tunnel 115.80 87 IAMs_20 IAMs_20 05 33 59.7
comp=Z,1µm,19.0s
GAZ Gaziantep 116.16 58 IAMs_20 IAMs_20 05 35 47.9
comp=Z,963nm,20.0s
OBN Obninsk 116.57 38 *i* PKIKP **PKPdf** **04 40 51.1 -1.0**
OBN pmax pmax
comp=Z,41nm,1.7s
OBN MLR MLR
comp=Z,1µm,19.0s
ANN Anapa 117.00 49 *i* PKIKP **PKPdf** **04 40 48.7 -4.5**
ANN *e* 04 47 41.4
ANN *e*SS SS 04 58 07.6 -2.1
ANN pmax pmax
comp=Z,23nm,1.1s
MOS Moscow 117.15 37 *e*PKIKP **PKPdf** **04 40 52.9 -0.3**
MOS *e* 04 42 07.7
MOS MLR MLR
comp=Z,900nm,20.0s
LPSR Galich'ya Gora 118.05 41 *e*PKIKP **PKiKP** **04 40 55.2 +0.1**
LPSR pmax pmax
comp=Z,20nm,1.0s
VSR Storozhevoye 118.24 42 *e*PKIKP **PKPdf** **04 40 54.6 -0.9**
VSR pmax pmax
comp=Z,10.0nm,1.1s
SOC Sochi 118.58 51 *i* PKIKP **PKiKP** **04 40 56.4 0.0**
SOC *e* 04 42 12.6
SOC *e*PS **PS** **04 52 01.6 +0.3**
SOC *e*SS SS 04 58 22.9 -7.5
SOC *e*SSS SSS 05 02 59.3
EIDS Eidsvold 118.81 223 IAMs_20 IAMs_20 05 21 57.0
comp=Z,1µm,20.0s
STKA Stephens Creek 119.24 211 PKP **PKiKP** **04 40 58.4 +0.2**
comp=Z,0.9nm,0.3s,baz=187,slow=5.5,SNR=3.6
VRH Novokhopyorsk 119.85 42 *e*PKIKP **PKPdf** **04 40 58.1 -0.4**
VRH pmax pmax
comp=Z,20nm,1.0s
PRGR Permogore 120.48 30 *e*PKIKP **PKPdf** **04 40 59.3 -0.1**
PRGR pmax pmax
comp=Z,19nm,0.9s
KIV Kislovodsk 120.74 51 *i* PKIKP **PKiKP** **04 41 01.5 +0.7**
KIV *e* 04 42 31.0
KIV *e*PS **PS** **04 52 22.2 +1.3**
KIV pmax pmax
comp=Z,38nm,1.1s
KIV MLR MLR
comp=Z,2µm,22.0s
NEY Neytrino 120.77 51 *i* PKIKP **PKiKP** **04 41 02.3 +1.4**
KBZ Khabaz 120.89 51 ⇓*i* PKIKP **PKiKP** **04 41 01.1 +0.2**
KBZ Khabaz 120.89 51 PKP **PKiKP** **04 41 01.2 +0.4**
comp=Z,14nm,0.9s,baz=294,slow=2.9,SNR=18
GOF Gofitskoye 120.98 49 ⇑*e*PKIKP **PKiKP** **04 41 01.7 +0.6**
GOF pmax pmax
comp=Z,38nm,1.1s
BILL Bilibino 121.25 338 *i* PKIKP **PKiKP** **04 41 01.1 +0.2**
BILL *e* 04 42 28.8
BILL *e*PPP PPP 04 45 03.9
BILL pmax pmax
comp=Z,9.0nm,1.7s
BILL MLR MLR
comp=Z,734nm,22.0s
AKH Akhalkalaki 121.32 53 IAMs_20 IAMs_20 05 39 12.0
comp=Z,622nm,20.0s
ZEI Tsey 121.63 52 *i* PKIKP **PKPdf** **04 41 00.6 -2.0**
ZEI pmax pmax
comp=Z,10.0nm,1.0s
HNR Honiara 121.95 244 IAMs_20 IAMs_20 05 26 38.0
comp=Z,606nm,18.0s
GNI Garni 122.25 55 *c i* PKIKP **PKiKP** **04 41 05.2 +1.3**
GNI pmax pmax
comp=Z,85nm,1.7s
GNI Garni 122.25 55 **PKiKP** **04 41 04.0 0.0**
GNI Garni 122.25 55 IAMs_20 IAMs_20 05 38 10.8
comp=Z,719nm,21.0s
MAK Makhachkala 124.27 52 *e*P **Pdif** **04 37 32.9 -8.7**
MAK *i* 04 41 04.3
MAK *e*SS SS 04 59 37.9 -5.2
MAK pmax pmax
comp=Z,549nm,1.4s
AKT Akhty 124.50 53 *e*PKIKP **PKiKP** **04 41 09.3 +1.0**
AKT *e* 04 42 56.1
AKT pmax pmax
comp=Z,27nm,1.3s
CTAO Charters Tower 125.69 224 IAMs_20 IAMs_20 05 26 36.2
comp=Z,1µm,20.0s
H11S2 WAKE ISLAND Hyl 126.20 278 T T 07 00 42.4
baz=102,slow=74,SNR=685
H11S1 WAKE ISLAND Hyl 126.20 278 T T 07 00 21.6
baz=102,slow=74,SNR=747
H11S3 WAKE ISLAND Hyl 126.21 278 T T 07 00 42.7
baz=102,slow=74,SNR=642
H11N3 WAKE ISLAND Hyl 126.26 280 T T 07 00 47.6
baz=102,slow=75,SNR=525
H11N2 WAKE ISLAND Hyl 126.28 280 T T 07 00 20.7
baz=102,slow=75,SNR=477
H11N1 WAKE ISLAND Hyl 126.28 280 T T 07 00 48.9
baz=102,slow=75,SNR=480
TIXI Tiksi 127.86 352 *c* PKIKP **PKPdf** **04 41 13.3 0.0**
TIXI pmax pmax
comp=Z,16nm,1.3s
TIXI Tiksi 127.86 352 **PKiKP** **04 41 13.7 -0.2**
TIXI IAMs_20 IAMs_20 05 37 56.8
comp=Z,786nm,21.0s
ARU Arti 128.42 33 *i* PKIKP **PKiKP** **04 41 16.0 +0.5**
ARU 04 43 20.6
ARU 04 48 26.7
ARU SS SS 05 00 29.7 -4.1
ARU Arti 128.42 33 **PKiKP** **04 41 15.6 +0.1**
SEY Seymchan 128.79 336 *i* PKIKP **PKiKP** **04 41 17.0 +1.0**
SVE Sverdlovsk 129.32 32 *i* PKIKP **PKiKP** **04 41 17.8 +0.6**
SVE pmax pmax
comp=Z,34nm,1.5s
SVE MLR MLR
comp=Z,1µm,21.0s
ASAR Alice Springs 129.79 210 PKP **PKPdf** **04 41 18.9 +0.2**
comp=Z,9.2nm,0.9s,baz=150,slow=2.4,SNR=42
ASAR SKKPbc SKKPbc 04 54 23.4 +3.4
comp=Z,1.2nm,1.0s,baz=352,slow=5.6,SNR=4.4
PETK Petropavlovsk- 131.02 323 PKP **PKiKP** **04 41 21.7 +0.9**
comp=Z,12nm,1.0s,baz=98,slow=3.1,SNR=7.6
UOSS Minazif 131.07 75 IAMs_20 IAMs_20 05 48 37.0
comp=Z,893nm,18.0s
MA2 Magadan 131.35 333 IAMs_20 IAMs_20 05 48 40.2
comp=Z,674nm,20.0s
COEN Coen 132.11 227 **PKPdf** **04 41 23.2 0.0**
COEN IAMs_20 IAMs_20 05 31 03.9
comp=Z,1µm,20.0s
PMG Port Moresby 132.27 235 IAMs_20 IAMs_20 05 29 40.0
comp=Z,1µm,21.0s
WRA Warramunga Arr 132.74 213 PKhKP PKPpre 04 41 20.9
comp=Z,11nm,1.2s,baz=138,slow=1.1,SNR=21
WRA PKP **PKPdf** **04 41 24.6 +0.3**
comp=Z,10nm,1.1s,baz=156,slow=1.7,SNR=20
WRAB Tennant Creek 132.75 213 *i* PKIKP **PKPdf** **04 41 24.4 +0.2**
WRAB Tennant Creek 132.75 213 **PKPdf** **04 41 24.2 0.0**
GEYT Alibeck 132.75 57 PKP **PKiKP** **04 41 24.6 -0.2**
comp=Z,3.8nm,0.9s,baz=260,slow=5.9,SNR=8.4
SKR Severo-Kuril's 132.84 321 *i* PKIKP PKiKP 04 41 35.2 +11
SKR MLR MLR
comp=Z,200nm,16.0s
YAK Yakutsk 136.43 346 PKIKP **PKPdf** **04 41 30.2 +0.4**
YAK Yakutsk 136.43 346 **PKPdf** **04 41 30.2 +0.4**
PSA00 Pilbara Seismi 136.70 194 **PKPdf** **04 41 31.8 +0.2**
FITZ Fitzroy Crossi 138.22 204 **PKPdf** **04 41 34.3 -0.2**
MTN Manton Dam 140.35 214 **PKPdf** **04 41 39.3 +0.9**
KURK Kurchatov 141.56 32 PKIKP **PKPdf** **04 41 35.4 -4.1**
KURK MLR MLR
comp=Z,1µm,22.0s
KURK Kurchatov 141.56 32 **PKPdf** **04 41 35.4 -4.1**
YUK Yuzh-Kuril'sk 141.89 316 *i* PKIKP **PKiKP** **04 41 44.7 +1.5**
YUK *i* 04 44 41.2
YUK *i*SS SS 05 03 20.1 +4.1
YUK MLR MLR
comp=Z,758nm,21.0s
YUK MLR MLR
comp=N,433nm,14.0s
YUK MLR MLR
comp=E,574nm,14.0s
ZAA0 Zalesovo Array 141.94 23 PKPpre 04 41 34.2
ZAA0 PKPdf **PKPdf** **04 41 41.1 +1.0**
ZAA0 IAMs_20 IAMs_20 05 43 11.2
comp=Z,590nm,22.0s
ZALV Zalesovo Beam 141.94 23 PKhKP PKPpre 04 41 35.0
comp=Z,7.4nm,0.9s,baz=312,slow=5.1,SNR=24
ZALV PKP **PKPdf** **04 41 40.6 +0.6**
comp=Z,26nm,0.9s,baz=302,slow=2.1,SNR=23
ZALV Zalesovo Beam 141.94 23 PKPpre 04 41 33.5
ZALV **PKPdf** **04 41 40.5 +0.5**
BOD Bodaibo 142.83 356 *e*PKHKP PKPpre 04 41 37.6
BOD pmax pmax
comp=Z,28nm,1.5s
EKS2 Erkin-Say 143.06 46 P **PKPdf** **04 41 41.5 -1.1**
SNR=5.6
AML Almayashu 143.22 46 P **PKPdf** **04 41 41.8 -1.5**
SNR=9.5
USP Ospenovka 143.27 44 P **PKiKP** **04 41 47.9 +1.7**
SNR=5.6
GRNR Gornyy 143.28 331 *e*PKHKP PKPpre 04 41 28.9
GRNR *e* 04 41 40.5
GRNR pmax pmax
comp=Z,8.0nm,0.8s
AAK Ala-Archa 143.54 45 PKIKP **PKPdf** **04 41 43.2 -0.3**
AAK Ala-Archa 143.54 45 P **PKPdf** **04 41 42.2 -1.3**
SNR=18
AAK Ala-Archa 143.54 45 **PKPdf** **04 41 43.2 -0.3**
AAK IAMs_20 IAMs_20 05 52 15.2
comp=Z,832nm,20.0s
CHMS Chumysh 143.56 45 P **PKPdf** **04 41 42.3 -1.1**
SNR=6.4

UCH	Uchtor	143.73	46	P		PKPdf	04 41 43.5	-0.7	
	SNR=37								
KBK	Karagaybulak	143.84	45	P		PKPdf	04 41 43.6	-0.4	
	SNR=20								
JKA	Kamikawa-asahi	143.94	318			PKPdf	04 41 44.6	+0.7	
ASAJ	Asahikawa	143.94	318	PKP		PKPdf	04 41 44.6	+0.7	
	comp=Z,17nm,0.9s,baz=146,slow=1.6,SNR=3.3								
TKM2	Tokmak 2	144.14	44	P		PKPdf	04 41 44.6	0.0	
	SNR=22								
KZA	Kyzart	144.29	46	P		PKPdf	04 41 45.3	+0.1	
	SNR=30								
ZEA	Zeya	144.35	342	*i* PKIKP		PKPdf	04 41 43.8	-0.5	
ZEA				pmax	pmax				
	comp=N,65nm,1.4s								
ZEA				pmax	pmax				
	comp=Z,160nm,1.8s								
ZEA				pmax	pmax				
	comp=Z,600nm,8.0s								
BOOM	Boomskoye usch	144.56	45	PKIKP		PKPdf	04 41 45.4	+0.1	
BOOM				MLR	MLR				
	comp=Z,1μm,21.0s								
BOOM	Boomskoye usch	144.56	45			PKPdf	04 41 45.4	+0.1	
BOOM				IAMs_20	IAMs_20		05 45 43.5		
	comp=Z,970nm,21.0s								
ULHL	Ulahol	144.88	45	P		PKPdf	04 41 47.7	+1.7	
	SNR=20								
NRN	Naryn	145.08	46	PKIKP		PKPdf	04 41 46.8	+0.4	
NRN	Naryn	145.08	46			PKPdf	04 41 46.8	+0.4	
NRN				IAMs_20	IAMs_20		05 49 57.2		
	comp=Z,957nm,20.0s								
NIL	Nilore	145.58	60	PKIKP		PKPab	04 41 47.8	+0.2	
NIL				MLR	MLR				
	comp=Z,1μm,21.0s								
NIL	Nilore	145.58	60			PKPab	04 41 47.8	+0.2	
NIL	Nilore	145.58	60	IAMs_20	IAMs_20		05 48 08.3		
	comp=Z,1μm,21.0s								
MAKZ	Makanchi	145.77	34	PKP2		PKPab	04 41 47.9	0.0	
MAKZ				MLR	MLR				
	comp=Z,1μm,21.0s								
MAKZ	Makanchi	145.77	34			PKPab	04 41 47.9	0.0	
KSH	Kashi	145.86	49	*i* PKPbc		PKPab	04 41 48.6	0.0	
KSH				PP		PP	04 45 13.1	+3.6	
KSH				PKS		PKSdf	04 45 25.0	+1.9	
KSH				SKS		SKSdf	04 48 55.7	+0.8	
KSH				SKKS		SKKSac	04 52 04.9	+4.9	
KSH				AMB	AMB				
	comp=Z,380nm,4.4s								
KSH				LR	LR				
	comp=Z,220nm,5.2s								
KSH				LR	LR				
	comp=Z,240nm,4.0s								
KSH				LR	LR				
	comp=Z,360nm,8.7s								
MKAR	Makanchi Array	145.94	34	PKPbc		PKPab	04 41 48.3	-0.3	
	comp=Z,78nm,0.8s,baz=324,slow=2.4,SNR=427								
PRZ	Przheval'sk	146.17	43	IAMs_20	IAMs_20		05 45 58.8		
	comp=Z,1μm,22.0s								
SOEI	Soe	146.33	207			PKPab	04 41 51.9	+0.9	
POO	Poona	146.50	88	*i* P		PKPdf	04 41 49.0	-0.1	
	comp=Z,100nm,1.0s								
TEY	Ternei	146.99	323	*e* PKIKP		PKPdf	04 41 48.3	-0.8	
TEY				pmax	pmax				
	comp=Z,10.0nm,0.9s								
TEY				pmax	pmax				
	comp=N,10.0nm,1.5s								
TEY				pmax	pmax				
	comp=E,10.0nm,1.2s								
TEY				pmax	pmax				
	comp=Z,80nm,6.4s								
FAKI	Fak Fak	147.50	226	IAMs_20	IAMs_20		05 40 03.6		
	comp=Z,673nm,20.0s								
MMRI	Maumere	148.17	205			PKPbc	04 41 55.4	+0.2	
MMRI				IAMs_20	IAMs_20		05 38 52.5		
	comp=Z,595nm,21.0s								
IRK	Irkutsk	148.33	6	*e* PKP2		PKPbc	04 41 53.4	-1.2	
IRK				pmax	pmax				
	comp=Z,295nm,0.5s								
MOY	Mondy	148.47	10	*e* PKP2		PKPbc	04 41 53.8	-1.3	
MOY				pmax	pmax				
	comp=Z,255nm,1.9s								
TLY	Talaya	148.82	7	*e* PKIKP		PKPdf	04 41 53.4	+1.4	
TLY				*e*			04 45 24.0		
TLY				*e* SS	SS		05 04 32.7	-0.6	
TLY				pmax	pmax				
	comp=Z,144nm,1.1s								
TLY	Talaya	148.82	7			PKPdf	04 41 51.5	-0.5	
TLY				PKPbc		PKiKP	04 41 57.5	+0.3	
TLY				IAMs_20	IAMs_20		05 50 41.8		
	comp=Z,584nm,20.0s								
KLRI	Killari	149.00	89	*e* PKPdf		PKPdf	04 41 52.8	-0.5	
PALK	Pallekele	149.19	112	PKP2		PKiKP	04 41 58.8	-0.4	
PALK				MLR	MLR				
	comp=Z,1μm,19.0s								
PALK	Pallekele	149.19	112			PKiKP	04 41 58.8	-0.4	
NDI	New Delhi	149.81	68	*e* P		PKPdf	04 41 44.0	-10	
NDI				*ex*		x	04 41 58.0		
DMPR	Damasthipur	149.93	91	*e* PKPdf		PKPdf	04 41 53.2	-1.6	
USA0B	Ussuriysk Arra	150.02	326	IAMs_20	IAMs_20		05 54 22.0		
	comp=Z,760nm,20.0s								
USRK	Ussuriysk Ar.	150.02	326	PKP		PKPdf	04 41 54.9	+0.8	
	comp=Z,40nm,1.0s,baz=0.0,slow=2.9,SNR=5.3								
USRK				PKPbc		PKiKP	04 41 60.0	+0.1	
	comp=Z,54nm,1.0s,baz=46,slow=0.9,SNR=45								
ZAK	Zakamensk	150.05	8	*e* PKHKP		PKPdf	04 41 55.3	+1.2	
ZAK				pmax	pmax				
	comp=Z,61nm,1.3s								
MJAR	Matsushiro Arr	150.36	308	PKPbc		PKiKP	04 42 00.7	-0.2	
	comp=Z,25nm,0.9s,baz=35,slow=4.6,SNR=35								
MAJO	Matsushiro	150.36	308	PKIKP		PKiKP	04 42 01.1	+0.2	
MAJO	Matsushiro	150.36	308			PKiKP	04 42 01.1	+0.2	
MAT	Matsushiro	150.36	308	PKP		PKiKP	04 42 00.7	-0.2	
HIA	Hailar	150.38	346	PKIKP		PKPdf	04 41 54.9	+0.3	
HIA							04 42 00.0		
HIA	Hailar	150.38	346			PKPdf	04 41 54.9	+0.3	
HIA				PKPbc		PKPbc	04 42 00.0	+0.2	
HIA	Hailar	150.38	346	IAMs_20	IAMs_20		05 57 29.9		
	comp=Z,593nm,20.0s								
HYBB	Hyderabad (bro	150.70	91	*e* PKPdf		PKPdf	04 41 55.9	0.0	
HYB	Hyderabad	150.70	91	*i* PKP		PKPdf	04 41 56.0	0.0	
HYB				*e*			04 42 02.0		
HYB				*e*			04 42 08.5		
SRLM	Srisailam	150.73	94	*e* PKiKP		PKPbc	04 42 01.0	-0.6	
WMQ	Urumqi	150.76	33	*e* PKPbc		PKPdf	04 41 56.2	+0.8	
WMQ				LR	LR				
	comp=Z,400nm,24.5s								
WMQ				LR	LR				
	comp=Z,530nm,24.5s								
WMQ				LR	LR				
	comp=Z,1μm,21.7s								
WMQ	Urumqi	150.76	33	PKIKP		PKiKP	04 42 02.7	+1.1	
WMQ							05 41 56.1		
WMQ	Urumqi	150.76	33			PKPdf	04 41 56.1	+0.8	
WMQ				PKPbc		PKiKP	04 42 02.7	+1.1	
SRSP	Sriramsagar	150.77	88	*e* PKPdf		PKPdf	04 41 56.4	+0.4	
SKHT	Srikalahasti	150.85	99	*e* PKPbc		PKPbc	04 41 59.2	-2.6	
MDJ	Mudanjiang	150.91	329	PKPbc		PKiKP	04 42 01.6	-0.2	
NJS	Nagarjunasagar	151.22	93	*e* PKPdf		PKPdf	04 41 57.0	+0.3	
RPR	Rampur	151.65	89	*e* PKPdf		PKPdf	04 41 55.7	-1.6	
ADKI	Addanki	151.68	95	*e* PKPdf		PKPdf	04 41 57.6	+0.2	
NGP	Nagpur	151.69	84	*e* P		PKPdf	04 41 56.7	-0.7	
INU	Inuyama	151.73	307			PKiKP	04 42 04.1	+0.3	
INU				IAMs_20	IAMs_20		05 53 28.5		
	comp=Z,776nm,18.0s								
CISI	Cisompet, Garu	151.82	177			PKPbc	04 42 04.3	+0.1	
CISI				IAMs_20	IAMs_20		05 42 25.5		
	comp=Z,735nm,22.0s								
GGR	Gangavaram	152.32	91	*e* PKPdf		PKPdf	04 41 57.9	-0.5	
KAPI	Kappang	152.44	203	PKIKP		PKPdf	04 41 59.0	+0.3	
KAPI							04 42 07.7		
KAPI	Kappang	152.44	203			PKPdf	04 41 59.0	+0.3	
KAPI				PKPbc		PKPbc	04 42 07.7	+2.1	
KAPI	Kappang	152.44	203	IAMs_20	IAMs_20		05 48 28.9		
	comp=Z,896nm,20.0s								
MYLAV	Mylavaram	152.51	93	*e* PKPdf		PKPdf	04 41 59.1	+0.4	
SONM	Songino Array	152.88	4	PKP		PKPdf	04 41 59.7	+1.2	
SONM				PKPbc		PKiKP	04 42 06.4	+0.5	
	comp=Z,8.7nm,1.1s,baz=330,slow=1.7,SNR=40								
ULN	Ulaanbaatar	152.90	3			PKPdf	04 41 57.7	-0.9	
ULN				PKPab		PKPab	04 42 17.0	+0.2	
ULN	Ulaanbaatar	152.90	3	IAMs_20	IAMs_20		06 05 28.6		
	comp=Z,677nm,21.0s								
PVM	Polavaram	153.54	93	*e* PKPdf		PKPdf	04 41 59.8	-0.3	
LUWI	Luwuk	154.67	213	IAMs_20	IAMs_20		05 44 36.3		
	comp=Z,668nm,20.0s								
KOLN	Koldanda	155.51	68	*e* P		PKPdf	04 42 02.8	-0.1	
	comp=Z,47nm,1.3s								
DANN	Dangsing	155.54	67	*e* P		PKPdf	04 42 03.8	+0.7	
	comp=Z,134nm,1.0s								
CHLP	Challavanipeta	156.05	91	*e* PKPdf		PKPdf	04 42 04.1	+0.5	
GKN	Gorkha	156.37	67	*e* P		PKPdf	04 42 04.2	+0.2	
KSRS	Korea Array	156.85	320	PKP		PKPdf	04 42 05.2	+1.2	
	comp=Z,10.0nm,1.1s,baz=320,slow=0.7,SNR=20								
DMN	Daman	156.85	68	*e* P		PKPdf	04 42 04.9	+0.1	
KKN	Kakani	156.97	68	*e* P		PKPdf	04 42 04.9	0.0	
GUN	Gumba	157.46	67	*e* P		PKPdf	04 42 05.8	+0.2	
JIRN	Jiri	157.78	67	*e* P		PKPdf	04 42 05.9	-0.2	
RAMN	Ramite	158.29	69	*e* P		PKPdf	04 42 06.9	+0.3	
	comp=Z,54nm,1.1s								
ODAN	Odare	159.00	69	*e* P		PKPdf	04 42 07.8	+0.4	
DL2	Dalian	159.06	332	*e* PKP		PKPdf	04 41 57.5	-9.3	
DL2					pPKP	pPKPdf	04 42 09.3	-6.5	
DL2					PP	PP	04 46 19.7	-3.8	
TAPN	Taplejung	159.17	67	*e* P		PKPdf	04 42 07.9	+0.2	
RPSI	Rantau Prapat	159.35	149			PKPdf	04 42 08.5	+0.6	
RPSI						PKPab	04 42 46.5	+1.3	
PSI	Prapat	159.44	149	PKIKP		PKPdf	04 42 08.5	+0.4	
PSI							04 42 46.5		
KCP	Kidapawan	159.55	230	‖ *i* P		PKPdf	04 42 09.2	+1.1	
GTA	Gaotai	159.68	22	PKP		PKPdf	04 42 08.8	+1.1	
GTA				SS	SS		05 06 39.9	+7.7	
GTA				AMB	AMB				
	comp=Z,380nm,11.7s								
GTA				LR	LR				
	comp=Z,260nm,21.3s								
GTA				LR	LR				
	comp=Z,200nm,18.9s								
GTA				LR	LR				
	comp=Z,450nm,21.8s								
HHC	Hu-ho-hao-te	159.89	355	*e* PKP		PKPdf	04 42 09.6	+1.8	
HHC				PP		PP	04 46 27.3	-0.4	
HHC				SS	SS		05 06 35.1	+1.3	
HHC				AMB	AMB				
	comp=Z,230nm,8.6s								
HHC				LR	LR				
	comp=Z,370nm,18.1s								
HHC				LR	LR				
	comp=Z,220nm,17.0s								
HHC				LR	LR				
	comp=Z,500nm,19.2s								
BJT	Baijiatuan	159.94	345	PKIKP		PKPdf	04 42 08.5	+0.7	
BJT	Baijiatuan	159.94	345			PKPdf	04 42 08.5	+0.7	
BJT	Baijiatuan	159.94	345	IAMs_20	IAMs_20		06 06 17.8		
	comp=Z,694nm,19.0s								
LSA	Lhasa	161.28	58	PKP2		PKPab	04 42 54.4	+0.4	
LSA							05 42 10.7		
LSA	Lhasa	161.28	58			PKPdf	04 42 10.7	+0.6	
LSA						PKPab	04 42 54.4	+0.4	
SBUM	Sibu	161.59	189	PKPdf		PKPdf	04 42 09.7	-0.7	
SBUM						PKPab	04 42 56.0	+1.1	
TIY	Taiyuan	162.90	352	PKP		PKPdf	04 42 12.2	+1.2	
TIY				PKPab		PKPab	04 43 00.4	+0.3	
TIY				PP		PP	04 46 44.2	+0.4	
TIY				SS	SS		05 07 04.4	-0.8	
TIY				AMB	AMB				
	comp=Z,290nm,7.2s								
TIY				LR	LR				
	comp=Z,460nm,18.0s								
TIY				LR	LR				
	comp=Z,480nm,17.3s								
TIY				LR	LR				
	comp=Z,610nm,20.1s								
TIA	Tai'an	163.18	338	PKP		PKPdf	04 42 13.0	+1.7	
SHL	Shillong	163.22	70	PKP2		PKPab	04 43 02.3	0.0	
SHL							05 42 11.4		
SHL	Shillong	163.22	70	PKPdf		PKPdf	04 42 11.4	-0.5	
SHL				PKPab		PKPab	04 43 02.3	0.0	
LZH	Lanzhou	163.98	16	*e* PKP		PKPdf	04 42 11.8	-0.4	
LZH				sPKP			04 42 20.0		
LZH				PP		PP	04 46 51.7	+2.0	
LZH				SKKS			04 53 37.7		
LZH				SS		SS	05 07 18.3	+1.5	
LZH				AMB	AMB				
	comp=Z,450nm,9.5s								
LZH				LR	LR				
	comp=Z,680nm,17.4s								
LZH				LR	LR				
	comp=Z,830nm,17.3s								
LZH				LR	LR				
	comp=Z,1μm,20.1s								
NJ2	Nanjing	165.92	325	*e* PKP		PKPdf	04 42 15.0	+1.2	
XAN	Xi'an	166.77	2	PKP2		PKPab	04 43 17.3	+0.1	
XAN							05 42 14.6		
XAN	Xi'an	166.77	2			PKPdf	04 42 14.6	+0.1	
XAN				PKPab		PKPab	04 43 17.3	+0.1	
CD2	Chengdu	168.70	25	PKP		PKPdf	04 42 17.6	+1.7	
CD2				sPKP			04 42 23.0		
CD2				SKS		SKSdf	04 49 20.1	+2.2	
CD2				SS		SS	05 08 06.9	+2.0	
CD2				AMB	AMB				
	comp=Z,540nm,8.4s								
CD2				LR	LR				
	comp=Z,2μm,20.8s								
CD2				LR	LR				
	comp=Z,1μm,20.2s								
CD2				LR	LR				
	comp=Z,2μm,21.0s								
SSLB	Suanglung	168.87	288			PKPdf	04 42 17.0	+0.8	
WHN	Wuhan	169.28	336	PKP		PKPdf	04 42 17.3	+1.1	
WHN				PP		PP	04 47 17.2	+0.2	
WHN				AMB	AMB				
	comp=Z,790nm,16.9s								
WHN				LR	LR				
	comp=Z,2μm,14.4s								
WHN				LR	LR				
	comp=Z,3μm,21.1s								
WHN				LR	LR				
	comp=Z,3μm,19.0s								
CMAR	Chiang Mai Arr	169.90	101	PKP2		PKPab	04 43 32.4	+0.6	
CMAR							05 42 17.7		
CMAR	Chiang Mai Arr	169.90	101	PKP		PKPdf	04 42 17.6	+0.7	
	comp=Z,5.6nm,1.0s,baz=273,slow=1.9,SNR=23								
CMAR				PKPab		PKPab	04 43 32.4	+0.6	
	comp=Z,4.2nm,0.9s,baz=256,slow=6.1,SNR=9.1								
CMAR				PP		PP	04 47 23.2	+1.1	
	comp=Z,2.7nm,0.9s,baz=251,slow=4.5,SNR=10								
CHTO	Chiang Mai	169.99	99	PKP2		PKPab	04 43 32.5	+0.4	
CHTO							05 42 15.1		
CHTO	Chiang Mai	169.99	99			PKPdf	04 42 15.1	-1.9	
CHTO						PKPab	04 43 32.5	+0.4	
ENH	Enshi	170.53	359			PKPdf	04 42 16.6	-0.4	
ENH				PKPab		PKPab	04 43 33.8	-0.1	
QZH	Quanzhou	170.54	298	*i* PKP		PKPdf	04 42 17.8	+0.7	
QZH				PP		PP	04 47 30.2	+5.4	
QZH				SS	SS		05 08 29.6	+4.0	
QZH				AMB	AMB				
	comp=Z,280nm,4.7s								
QZH				LR	LR				
	comp=Z,530nm,20.4s								
QZH				LR	LR				
	comp=Z,450nm,19.4s								
QZH				LR	LR				
	comp=Z,680nm,17.5s								
KMI	Kunming	172.50	53	PKP		PKPdf	04 42 19.1	+0.7	
GYA	Guiyang	173.81	23	*i* PKP		PKPdf	04 42 19.8	+1.1	
GYA				PKPab		PKPab	04 43 47.8	-0.9	
GYA				PKS		PKSdf	04 45 50.6	-0.6	
GYA				PP		PP	04 47 39.5	-0.1	
GYA				SKKS			04 54 26.9		
GYA				SS		SS	05 08 52.9	-2.2	
GYA				AMB	AMB				
	comp=Z,160nm,5.0s								
GYA				LR	LR				
	comp=Z,210nm,21.8s								
GYA				LR	LR				
	comp=Z,190nm,22.0s								
GYA				LR	LR				
	comp=Z,240nm,21.5s								
SLVN	Son La	174.85	83			PKPdf	04 42 17.6	-1.5	
SLVN						PKPab	04 43 54.0	+0.2	

*IDC **08** 04:49:06.8±0.9,53°.86S×54°.14W,h0km,mb3.8/7, mb1 3.9/7,mb1mx3.8/20,mbtmp3.8/7,MS4.2/2,Ms1 4.2/2, ms1mx3.7/23,Error ellipse: s-maj=38.8km s-min=18.1km az=65.0*

*NEIC **08** 04:49:08.2±1.1,54°.27S±0°.08×54°.5W±0°.1,h16km±3km, mb4.5/11,Error ellipse: s-maj=14.0km s-min=8.6km az=222.0*

ISC 08 04:49:07.6±0.6,54°.21S±0°.08×54°.49W±0°.07,h10km,n30, σ1s26/29,mb4.1/10,1D,South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFI	East Falkland	3.33	318		Pn	04 50 01.4	+1.8
EFI				Sn	Sn	04 50 39.4	+0.1
USHA	Ushuaia	8.14	260	Pn	Pn	04 51 05.7	+0.1
	12nm,0.3s,baz=90,slow=14,SNR=82						
USHA				Sn	Sn	04 52 37.8	+0.2
	4.7nm,0.3s,baz=108,slow=20,SNR=8.6						
GO10	Punta Arenas	9.89	269		Pn	04 51 28.4	-1.2
GO10					Sn	04 53 19.9	-0.7
HOPE	Hope Point	10.54	98	Pn	Pn	04 51 37.9	-0.5
PLCA	Paso Flores	17.25	315	P	P	04 53 10.2	+0.3
	1.5nm,0.3s,baz=167,slow=10,SNR=42						
PLCA				S	Sn	04 56 08.0	-12
	0.4nm,0.3s,baz=238,slow=13,SNR=5.0						
PLCA				LR	LR	04 59 06.9	
	comp=Z,616nm,19.3s,baz=151,slow=35						
PLCA	Paso Flores	17.25	315	P	P	04 53 10.3	+0.3
PLCA				IAmb	IAmb	04 53 27.9	
	comp=Z,28nm,0.9s						
GO06	Currarehue	18.60	315	P	Pn	04 53 25.2	+0.1
GO06				IAmb	IAmb	04 53 28.5	
	comp=Z,23nm,1.1s						
PEL	Peldehue	23.98	325	P	P	04 54 22.6	+0.5
CFA	Coronel Fontan	24.64	331	P	P	04 54 27.3	-0.9
	comp=Z,1.0nm,0.4s,baz=150,slow=12,SNR=4.1						
GO04	Tololo Observa	26.75	327	P	P	04 54 48.2	+0.7
SNAA	Sanae	27.99	148	P	P	04 55 01.0	+2.9
	comp=Z,0.5nm,0.5s,baz=291,slow=8.6,SNR=4.7						
SNAA	Sanae	27.99	148	P	P	04 54 57.2	-0.9
QSPA	South Pole Qui	36.05	180	P	P	04 56 12.6	+3.8
	comp=Z,2.4nm,1.0s,baz=155,slow=3.7,SNR=5.4						
QSPA	South Pole Qui	36.05	180	P	P	04 56 07.6	-1.2
QSPA				IAmb	IAmb	04 56 22.1	
	comp=Z,7.0nm,0.8s						
GO01	Chusmiza	36.27	336	P	P	04 56 12.1	+0.6
GO01				IAmb	IAmb	04 56 13.6	
	comp=Z,9.0nm,0.9s						
MNMC	Minye Minye	36.88	336	P	P	04 56 17.1	+0.6
MNMC				IAmb	IAmb	04 56 18.9	
	comp=Z,9.3nm,0.8s						
SIV	San Ignacio	38.48	350	P	P	04 56 28.5	-1.2
	comp=Z,0.5nm,0.6s,baz=191,slow=8.7,SNR=4.0						
LPAZ	La Paz	39.30	339	P	P	04 56 35.4	-1.9
	comp=Z,0.8nm,0.7s,baz=188,slow=6.4,SNR=4.6						
LPAZ	La Paz	39.30	339	P	P	04 56 36.3	-1.0
SYO	Syowa Base	42.28	148	‖ *e* X	P	04 57 09.8	+9.2
H10N3	ASCENSION HYDR	56.24	50	T	T	05 59 18.0	
	baz=206,slow=75,SNR=34						
H10N1	ASCENSION HYDR	56.25	50	T	T	05 59 18.4	
	baz=206,slow=75,SNR=24						
H10N2	ASCENSION HYDR	56.26	50	T	T	05 59 23.0	
	baz=206,slow=75,SNR=42						
OTAV	Otavalo	57.76	331	P	P	04 58 59.1	0.0
OTAV				IAmb	IAmb	04 59 04.7	
	comp=Z,6.6nm,1.1s						
BOSA	Boshof	61.48	100	P	P	04 59 24.4	0.0
	comp=Z,1.6nm,0.7s,baz=227,slow=1.2,SNR=2.5						
DBIC	Dimbokro	73.47	52	LR	LR	05 29 48.5	
	comp=Z,179nm,18.0s,baz=332,slow=33						
TORD	Torodi Ar. Bea	82.21	55	P	P	05 01 28.0	-0.7
	comp=Z,0.5nm,0.8s,baz=211,slow=5.2,SNR=2.8						
TORD	Torodi Ar. Bea	82.21	55	P	P	05 01 27.8	-0.9
YKA	Yellowknife Ar	125.51	330	PKP	PKiKP	05 08 07.6	-0.2
	comp=Z,0.1nm,0.4s,baz=150,slow=2.2						
MKAR	Makanchi Array	151.90	87	PKPbc	PKPbc	05 09 01.4	-0.4
	comp=Z,0.2nm,0.6s,baz=242,slow=3.1,SNR=3.3						
MKAR				PKPab	PKPab	05 09 10.3	-0.8
	comp=Z,0.3nm,0.7s,baz=255,slow=4.1,SNR=3.6						

*IDC **08** 05:09:07.5±1.5,5°.70S×146°.51E,h0km,mb3.7/3, mb1 4.0/5,mb1mx3.7/30,mbtmp3.8/5,ML3.8/1,Error ellipse: s-maj=54.4km s-min=25.8km az=118.0*

ISC 08 05:09:14.1±2.0,6°.0S±0°.5×146°.7E±0°.7,h49km,n6,σ0s46/5, mb3.7/3,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.46	172	Pn	Pn	05 10 06.7	+1.2
	7.4nm,0.3s,baz=359,slow=10,SNR=9.8						
PMG				Sn	Sn	05 10 46.7	+1.4
	10nm,0.3s,baz=247,slow=20,SNR=4.2						
PMG				Lg	Lg	05 11 02.6	
	12nm,0.3s,baz=18,slow=20,SNR=4.9						
WRA	Warramunga Arr	18.34	220	P	Pn	05 13 24.7	-0.3
	0.3nm,0.3s,baz=41,slow=12,SNR=13						
ASAR	Alice Springs	21.46	214	P	P	05 13 58.9	+0.3
	1.2nm,0.7s,baz=43,slow=10,SNR=9.9						
FITZ	Fitzroy Crossi	23.80	238	P	P	05 14 22.4	-0.1
	4.6nm,0.9s,baz=76,slow=9.2,SNR=7.4						
ILAR	Eielson Array	85.58	23	P	P	05 21 46.7	-0.2
	0.5nm,0.9s,baz=259,slow=5.4,SNR=4.1						
TORD	Torodi Ar. Bea	144.75	284	PKP	PKPbc	05 28 46.0	+0.4
	0.5nm,0.7s,baz=85,slow=3.1,SNR=4.2						

*IDC **08** 05:09:28.5±3.1,19°.16S×177°.57W,h546km,21km,mb3.1/4, mb1 3.4/5,mb1mx3.1/31,mbtmp4.1/5,Error ellipse: s-maj=123.6km s-min=16.5km az=149.0*

ISC 08 05:09:29.8±2.6,19°.1S±0°.8×177°.5W±0°.5,h570km,n10, σ0s72/12,mb3.7/4,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.50	48	P	P	05 11 23.4	-0.1
	4.5nm,0.3s,baz=184,slow=4.2,SNR=3.7						
AFI				S	S	05 12 55.5	-1.0
	3.4nm,0.3s,baz=270,slow=19,SNR=2.5						
WRA	Warramunga Arr	45

DECC	**Green Verdugo**	**0.28**	**18**		**Pg**	05 33 49.4	**-0.1**
DECC					**Sg**	05 33 53.7	**0.0**
DECC	**Green Verdugo**	**0.28**	**18**	P	**Pg**	05 33 49.4	**-0.1**
	baz=202,SNR=12						
DECC				S	**Sg**	05 33 52.7	**-1.0**
	baz=202						
PASC	**Pasadena Art C**	**0.28**	**49**	Pg	**Pg**	05 33 49.1	**-0.4**
PASC	**Pasadena Art C**	**0.28**	**49**		**Sg**	05 33 53.4	**-0.3**
FMP	**Fort Macarthur**	**0.30**	**156**		**Sg**	05 33 54.1	**0.0**
FMP	**Fort Macarthur**	**0.30**	**156**	P	**Pg**	05 33 49.7	**-0.1**
	baz=333						
FMP				S	**Sg**	05 33 53.9	**-0.2**
	baz=333						
DLAC	**Del Amo**	**0.32**	**116**		**Pb**	05 33 50.8	**0.0**
DLAC					**Sb**	05 33 57.6	**+1.9**
BLCC	**Black Canyon**	**0.32**	**323**		**Pg**	05 33 50.4	**+0.2**
OAT	**Oat Mountain**	**0.38**	**338**		**Pg**	05 33 51.6	**+0.3**
MWC	**Mount Wilson**	**0.40**	**53**	Pg	**Pg**	05 33 51.6	**0.0**
MWC					**Sg**	05 33 57.0	**-0.2**
MWC	**Mount Wilson**	**0.40**	**53**		**Sg**	05 33 57.3	**+0.1**
PEM	**Pine Mountain**	**0.51**	**69**		**Sg**	05 33 53.4	**-0.2**
BLG	**Laguna Peak, P**	**0.53**	**283**		**Pg**	05 33 53.3	**-0.7**
BLG					**Sg**	05 34 00.9	**-0.2**
BLG	**Laguna Peak, P**	**0.53**	**283**	P	**Pg**	05 33 53.6	**-0.5**
	baz=103,SNR=8.5						
BLG				S	**Sg**	05 34 01.0	**-0.2**
	baz=103						
PSRC	**Puddingstone R**	**0.54**	**79**		**Pg**	05 33 54.3	**+0.2**
XTL	**Crystal Lake,**	**0.57**	**57**		**Pg**	05 33 54.6	**-0.3**
CIAC	**Catalina I. Ai**	**0.58**	**178**		**Pg**	05 33 54.8	**-0.2**
CIS	**Catalina Islan**	**0.58**	**178**	P	**Pg**	05 33 54.8	**-0.2**
	baz=356,SNR=11						
CIS				S	**Sg**	05 34 03.0	**+0.2**
	baz=356						
LRRC	**Littlerock Res**	**0.64**	**32**		**Pg**	05 33 55.8	**-0.2**
LEOC	**Leona Valley**	**0.65**	**10**		**Pg**	05 33 55.6	**-0.7**
SSK	**Sunset Peak**	**0.66**	**70**		**Pg**	05 33 56.2	**-0.3**
OSI	**Osito Audit: C**	**0.67**	**340**	Pg	**Pg**	05 33 56.6	**0.0**
HOLC	**Holcomb Ridge**	**0.68**	**46**		**Pg**	05 33 56.4	**-0.4**
STCC	**Santa Clara**	**0.69**	**297**		**Pb**	05 33 57.3	**+0.1**
BFSC	**Mount Baldy Ra**	**0.70**	**69**		**Pg**	05 33 56.1	**-1.0**
BFSC	**Mount Baldy Ra**	**0.70**	**69**	P	**Pg**	05 33 56.5	**-0.6**
	baz=250						
BFSC				Sn	**Sn**	05 34 09.2	**-0.2**
	baz=250						
BTPC	**Burnt Peak**	**0.70**	**351**		**Pg**	05 33 57.3	**0.0**
SBI	**Santa Barbara**	**0.70**	**224**		**Pg**	05 33 57.1	**-0.1**
SS2	**San Sevaine**	**0.81**	**74**		**Pb**	05 33 59.0	**-0.3**
SBB	**Saddle Back Bu**	**0.87**	**36**		**Pb**	05 33 59.5	**-0.7**
SBB					**Sb**	05 34 10.8	**-0.8**
RVR	**Riverside**	**0.89**	**89**		**Pb**	05 33 59.7	**-0.8**
SME	**Santa Rosa Min**	**0.92**	**100**		**Pb**	05 34 00.6	**-0.5**
CSP	**Cedar Springs**	**0.95**	**71**		**Pb**	05 34 01.4	**-0.2**
EDW2	**Edwards Air Fo**	**0.97**	**22**		**Pb**	05 34 01.3	**-0.6**
EDW2	**Edwards Air Fo**	**0.97**	**22**	P	**Pb**	05 34 01.3	**-0.6**
	baz=203,SNR=13						
EDW2				S	**Sb**	05 34 14.1	**-0.4**
	baz=203						
SCI2	**San Clemente I**	**1.01**	**185**	S	**Sg**	05 34 16.5	**+0.3**
	baz=4.1						
CFT	**Crafton Hills**	**1.11**	**87**		**Pb**	05 34 03.9	**-0.4**
MURC	**Murrieta**	**1.11**	**110**		**Pb**	05 34 03.6	**-0.7**
MURC					**Sb**	05 34 18.7	**+0.2**
MURC	**Murrieta**	**1.11**	**110**	P	**Pb**	05 34 03.7	**-0.7**
	baz=291						
MURC				S	**Sb**	05 34 18.8	**+0.2**
	baz=291						
HYS	**Haystack Butte**	**1.13**	**39**		**Pb**	05 34 04.6	**-0.2**
SNCC	**San Nicolas Is**	**1.17**	**231**	S	**Sn**	05 34 20.5	**-0.3**
	baz=50						
ARVC	**Arvin**	**1.18**	**344**	Pb	**Pn**	05 34 05.2	**-0.2**
	baz=165,SNR=7.0						
BACC	**Bachelor Mtn.**	**1.22**	**107**		**Pn**	05 34 05.4	**-0.6**
DGR	**Domenigoni Val**	**1.24**	**105**		**Pn**	05 34 05.7	**-0.6**
TEJ	**El Tejon**	**1.26**	**351**		**Pn**	05 34 06.6	**+0.1**
BBRC	**Big Bear Solar**	**1.29**	**77**	Pg	**Pb**	05 34 07.6	**0.0**
	baz=258,SNR=7.5						
BBRC				Sg	**Sg**	05 34 25.3	**+0.1**
	baz=258						
POB	**Polly Butte**	**1.30**	**103**		**Pn**	05 34 06.4	**-0.7**
DTP	**Desert Tortois**	**1.37**	**21**		**Pb**	05 34 08.8	**0.0**
RRX	**Edison Barstow**	**1.49**	**53**	Pg	**Pb**	05 34 11.6	**+0.8**
	baz=234						
RRX				Sg	**Sg**	05 34 31.8	**+0.3**
	baz=234						
109C	**Camp Elliot, M**	**1.56**	**134**	Pn	**Pn**	05 34 10.3	**-0.3**
LRMC	**Laurel Mtn Rad**	**1.61**	**23**	Pb	**Pn**	05 34 12.3	**+0.8**
	baz=203						
ISA	**Isabella, Lake**	**1.67**	**359**		**Pb**	05 34 13.7	**-0.3**
ISA	**Isabella, Lake**	**1.67**	**359**	Pb	**Pb**	05 34 13.3	**-0.7**
	baz=180						
PFO	**Pinyon Flats O**	**1.69**	**102**		**Pn**	05 34 13.5	**+1.0**
PFO				Sn	**Sb**	05 34 35.1	**-0.3**
PFO	**Pinyon Flats O**	**1.69**	**102**	Pn	**Pn**	05 34 12.3	**-0.3**
	baz=283						
XPFO	**Pion Flat**	**1.69**	**102**		**Pn**	05 34 13.5	**+0.9**
XPFO				Sn	**Sb**	05 34 35.1	**-0.5**
GSC	**Goldstone, Bar**	**1.88**	**45**		**Pb**	05 34 16.6	**-0.9**
HEC	**Hector,Ludlow**	**1.93**	**64**	Pg	**Pb**	05 34 19.5	**+1.1**
	baz=245						
BAR	**Barrett**	**1.97**	**131**		**Pn**	05 34 17.6	**+1.3**
MONP2	**Monument Peak**	**2.01**	**122**	P	**Pn**	05 34 16.8	**-0.2**
	baz=303						
MONP2				S	**Sn**	05 34 42.6	**+0.7**
	baz=303						
BELC	**Belle Mtn. Jos**	**2.03**	**89**	Sb	**Sb**	05 34 46.1	**+0.9**
	baz=270						
MPMC	**Manual Prospec**	**2.21**	**20**	Pg	**Pg**	05 34 25.1	**-0.8**
	baz=201						
CCX	**Cicese**	**2.59**	**144**		**Pb**	05 34 28.4	**-1.1**
TPNV	**Topopah Spring**	**3.46**	**31**	Pn	**Pn**	05 34 36.9	**+0.1**
SHPR	**Sheep Range**	**3.68**	**46**	Pn	**Pn**	05 34 41.8	**+1.9**

*IDC **08** 05:45:03.7±2.4, 18°.74S×177°.90W, h558km±21km, mb2.8/5, mb1 3.2/6, mb1mx2.9/42, mbtmp3.8/6, Error ellipse: s-maj=94.9km s-min=16.4km az=152.0*

ISC 08 05:45:03.5±1.8, 18°.7S±0°.7×178°.0W±0°.4, h557km, n11, σ0$69/13, mb3.4/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.60**	**52**	P	**P**	05 46 57.7	**0.0**
	4.3nm,0.3s,baz=230,slow=16,SNR=2.6						
AFI				S	**S**	05 48 31.4	**+0.2**
	2.9nm,0.3s,baz=114,slow=7.5,SNR=1.8						
WRA	**Warramunga Arr**	**44.92**	**260**	P	**P**	05 52 29.2	**-0.2**
	0.2nm,0.3s,baz=96,slow=8.5,SNR=7.8						
WRA				PcP	**PcP**	05 53 58.3	**-0.6**
	0.2nm,0.3s,baz=91,slow=3.4,SNR=4.6						
ASAR	**Alice Springs**	**45.00**	**255**	P	**P**	05 52 30.6	**+0.5**
	0.5nm,0.4s,baz=89,slow=7.8,SNR=8.4						
ASAR				PcP	**PcP**	05 53 58.6	**-0.6**
	0.1nm,0.3s,baz=101,slow=3.9,SNR=4.3						
FITZ	**Fitzroy Crossi**	**53.33**	**261**	P	**P**	05 53 32.6	**+1.1**
	1.8nm,0.9s,baz=82,slow=7.1,SNR=2.4						
TXAR	**Lajitas Array**	**86.05**	**57**	P	**P**	05 56 46.6	**+0.6**
	0.8nm,0.8s,baz=213,slow=6.5,SNR=9.5						
ILAR	**Eielson Array**	**86.55**	**13**	P	**P**	05 56 47.4	**+0.1**
	0.2nm,0.4s,baz=233,slow=4.9,SNR=5.2						
MKAR	**Makanchi Array**	**109.99**	**314**	PKiKP	**PKiKP**	06 02 30.7	**-1.3**
	0.1nm,0.5s,baz=87,slow=5.9,SNR=3.0						
ARCES	**ARCESS Array B**	**127.16**	**350**	PKP	**PKPdf**	06 03 03.5	**-0.7**
	3.2nm,0.9s,baz=45,slow=0.3,SNR=4.1						
AKASG	**Malin Array Be**	**141.46**	**332**	PKhKP	PKPpre	06 03 26.1	
	0.2nm,0.3s,baz=42,slow=4.4,SNR=3.2						
BRTR	**Keskin Array B**	**145.64**	**314**	PKPbc	**PKPbc**	06 03 40.6	**-0.1**
	0.5nm,0.6s,baz=152,slow=6.6,SNR=3.6						
GERES	**GERESS Array B**	**148.48**	**345**	PKPbc	**PKPbc**	06 03 47.9	**+0.1**
	0.2nm,0.4s,baz=0.0,slow=2.2,SNR=4.3						

*IDC **08** 05:46:44.4±1.8, 2°.58S×121°.96E, h0km, mb3.1/3, mb1 3.5/4, mb1mx3.3/44, mbtmp3.3/4, ML3.8/1, Error ellipse: s-maj=46.9km s-min=28.5km az=62.0*

*DJA **08** 05:46:46.8±0.3, 3°.S±2°.×12°.2E±°, h10km, M3.5/9, MLv3.5/9*

ISC 08 05:46:46.2±1.0, 2°.56S±0°.04×121°.79E±0°.06, h10km, n13, σ1$30/17, mb3.3/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.62**	**149**	P	**Pn**	05 47 14.9	**+0.1**
APSI	**Ampana**	**1.64**	**355**	P	**Pn**	05 47 14.3	**-0.9**
APSI				S	**Sn**	05 47 36.3	**-0.1**
LUWI	**Luwuk**	**1.80**	**33**	P	**Pn**	05 47 16.5	**-0.8**
LUWI				S	**Sn**	05 47 43.0	**+2.8**
TTSI	**Tana Toraja**	**2.03**	**256**	P	**Pn**	05 47 19.5	**-1.0**
SPSI	**Sidrap Palu**	**2.46**	**235**	P	**Pn**	05 47 26.5	**+0.1**
SPSI				S	**Sn**	05 47 58.9	**+2.4**
BNSI	**Bone**	**2.49**	**223**	P	**Pn**	05 47 26.8	**0.0**
MRSI	**Marisa**	**3.02**	**3**	P	**Pn**	05 47 33.4	**-0.7**
KAPI	**Kappang**	**3.18**	**220**	Pn	**Pn**	05 47 36.0	**-0.3**
	11nm,0.3s,baz=58,slow=3.4,SNR=25						
KAPI				Sn	**Sn**	05 48 12.9	**-1.5**
	2.6nm,0.3s,baz=184,slow=18,SNR=3.8						
BKSI	**Bulukumba**	**3.21**	**211**	P	**Pn**	05 47 37.4	**+0.6**
MPSI	**Mapaga**	**3.44**	**327**	P	**Pn**	05 47 40.3	**+0.3**
WRA	**Warramunga Arr**	**21.18**	**146**	P	**P**	05 51 30.4	**-1.7**
	0.3nm,0.5s,baz=328,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**24.04**	**152**	P	**P**	05 52 00.8	**-0.9**
	0.4nm,0.5s,baz=328,slow=9.8,SNR=4.7						
MKAR	**Makanchi Array**	**60.17**	**330**	P	**P**	05 56 55.0	**+0.7**
	0.2nm,0.5s,baz=129,slow=8.8,SNR=3.1						

*DDA **08** 06:02:46.7, 36°.67N×28°.90E, h7km±3km, ML1.9*
*ISK **08** 06:02:46.4, 36°.73N×28°.91E, h18km, ML2.5/1*

ISC 08 06:02:47.2±1.0, 36°.73N±0°.04×28°.94E±0°.03, h20km±4km, n17, σ1$34/26, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FETY	**Fethiye**	**0.15**	**127**	PG	**Pg**	06 02 51.4	**-0.3**
FETY				SG	**Sg**	06 02 55.2	**+0.5**
FETY	**Fethiye**	**0.15**	**127**	*i* P	**Pg**	06 02 51.3	**-0.4**
FETY				*i* S	**Sg**	06 02 55.8	**+1.2**
FETY				IAML		06 02 56.0	
	comp=N,225nm,0.4s						
TURN	**Turunc**	**0.31**	**299**	PG	**Pn**	06 02 57.4	**+0.8**
TURN				SG	**Sn**	06 03 05.9	**+3.4**
TURN	**Turunc**	**0.31**	**299**	*i* P	**Pn**	06 02 57.4	**+0.8**
TURN				*i* S	**Sn**	06 03 06.0	**+3.4**
TURN				IAML		06 03 06.0	
	comp=E,52nm,0.3s						
TURN				IAML		06 03 06.0	
	comp=N,161nm,0.3s						
GLHS	**Gihisar (BURDU**	**0.62**	**46**	PG	**Pg**	06 02 59.4	**-0.2**
GLHS				SG	**Sg**	06 03 08.7	**+0.7**
YER	**Yerkesik**	**0.67**	**308**	PG	**Pg**	06 02 59.9	**-0.5**
YER				SG	**Sg**	06 03 09.0	**-0.4**
GOLH	**Golhisar**	**0.71**	**44**	*i* P	**Pn**	06 03 01.5	**-0.8**
GOLH				IAML		06 03 14.0	
	comp=N,53nm,0.4s						
AKAS	**Kas**	**0.73**	**132**	*i* P	**Pb**	06 02 59.8	**-1.5**
AKAS				*i* S	**Sg**	06 03 11.4	**+0.1**
AKAS				IAML		06 03 14.0	
	comp=E,63nm,0.5s						
AKAS				IAML		06 03 14.0	
	comp=N,91nm,0.2s						
TAVA	**DENIZLI_Tavas**	**0.74**	**358**	*i* P	**Pg**	06 03 01.4	**-0.4**
TAVA				*i* S	**Sn**	06 03 13.4	**0.0**
TAVA				IAML		06 03 14.0	
	comp=E,36nm,0.3s						
TAVA				IAML		06 03 14.0	
	comp=N,62nm,0.6s						
ELL	**Elmali**	**0.78**	**88**	PG	**Pb**	06 03 01.6	**-0.6**
ARG	**Arkhangelos**	**0.83**	**232**	PG	**Pb**	06 03 02.0	**-0.9**
DATC	**Datca-Mugla**	**1.03**	**272**	PG	**Pg**	06 03 06.2	**-1.0**
DAT	**Datca**	**1.09**	**271**	PG	**Pb**	06 03 06.4	**-1.1**
DAT	**Datca**	**1.09**	**271**	*i* P	**Pg**	06 03 06.9	**-1.5**
DAT				*i* S	**Sg**	06 03 22.8	**-0.1**
DAT				IAML		06 03 24.0	
	comp=N,32nm,0.2s						
DAT				IAML		06 03 24.0	
	comp=E,45nm,0.6s						
BODT	**Bodrum**	**1.35**	**285**	PN	**Pb**	06 03 10.5	**-1.3**
AYDB	**Zeytinkoy-Aydi**	**1.48**	**326**	PN	**Pb**	06 03 12.6	**-1.5**
KARP	**Karpathos**	**1.86**	**231**	PN	**Pn**	06 03 18.2	**+0.2**

IDC 08 06:10:55.2±1.3, 39°.08N×106°.41E, h0km, mb3.4/3, mb1 3.4/5, mb1mx3.3/27, mbtmp3.2/5, ML2.7/2, Error ellipse: s-maj=52.7km s-min=20.5km az=67.0, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I34MN	**SONGINO INFRAS**	**8.72**	**360**	*i*		07 03 20.0	
	baz=175,slow=340,SNR=0.6						
SONM	**Songino Array**	**8.75**	**360**	Pn	Pn	06 13 04.2	+1.1
	0.1nm,0.3s,baz=174,slow=13,SNR=3.1						
SONM				Lg	Lg	06 15 34.5	
	0.1nm,0.3s,baz=173,slow=26,SNR=6.0						
MKAR	**Makanchi Array**	**19.22**	**301**	P	P	06 15 20.7	0.0
	0.0nm,0.3s,baz=100,slow=12,SNR=2.7						
ZALV	**Zelesovo Beam**	**20.80**	**322**	P	P	06 15 37.7	-1.2
	0.7nm,0.5s,baz=116,slow=9.8,SNR=3.2						
WRA	**Warramunga Arr**	**64.28**	**151**	P	P	06 21 32.4	+0.1
	0.5nm,0.9s,baz=345,slow=7.2,SNR=3.9						
ASAR	**Alice Springs**	**67.52**	**153**	P	P	06 21 53.4	+0.1
	0.4nm,0.9s,baz=338,slow=6.8,SNR=6.7						

*NEIC **08** 06:35:28.2±2.0, 21°.96S±0°.10×177°.9W±0°.1, h328km±7km, mb4.4/21, Error ellipse: s-maj=17.7km s-min=12.8km az=119.0*

*IDC **08** 06:35:30.2±2.7, 21°.88S×177°.98W, h345km±27km, mb3.7/7, mb1 3.9/10, mb1mx3.5/34, mbtmp4.4/10, Error ellipse: s-maj=21.6km s-min=17.0km az=126.0*

ISC 08 06:35:30.6±0.6, 21°.96S±0°.09×177°.98W±0°.08, h350km, n38, σ1$24/40, mb4.2/16, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**8.07**	**71**		**S**	06 38 57.6	**-1.9**
AFI	**Afiamalu**	**9.95**	**37**	P	**Pn**	06 37 47.0	**-1.1**
	4.5nm,0.3s,baz=207,slow=11,SNR=3.8						
AFI				S	S	06 39 28.5	-12
	11nm,0.3s,baz=38,slow=22,SNR=7.2						
DZM	**Mont Dzumac**	**14.45**	**267**	P	**P**	06 38 39.9	**+0.5**
	0.1nm,0.3s,baz=352,slow=12,SNR=1.9						
DZM				S	**S**	06 41 13.1	**-2.8**
	0.2nm,0.3s,baz=291,slow=23,SNR=2.7						
OUZ	**Omahuta**	**15.13**	**207**	Pn	**P**	06 38 47.0	**+0.5**
OUZ				IAmb	IAmb	06 38 49.4	
	comp=Z,26nm,1.4s						
URZ	**Urewera**	**16.79**	**193**	P	**P**	06 39 03.2	**-1.3**
	comp=Z,1.1nm,0.3s,baz=25,slow=14,SNR=6.1						
URZ				S	**S**	06 41 58.8	**-3.0**
	comp=Z,0.5nm,0.3s,baz=66,slow=20,SNR=3.4						
URZ	**Urewera**	**16.79**	**193**	IAmb	IAmb	06 39 10.6	
	comp=Z,36nm,1.3s						
BFZ	**Birch Farm**	**19.30**	**193**	P	**P**	06 39 30.5	**-0.7**
MSWZ	**Moikau Station**	**20.22**	**195**	P	**P**	06 39 39.1	**-1.4**
BHW	**Baring Head**	**20.31**	**196**	P	**P**	06 39 40.1	**-1.2**
QRZ	**Quartz Range**	**20.45**	**201**	P	**P**	06 39 42.0	**-0.7**
THZ	**Tophouse**	**21.18**	**199**	P	**P**	06 39 49.2	**-0.1**
THZ				IAmb	IAmb	06 39 59.3	
	comp=Z,37nm,1.3s						
LTZ	**Lake Taylor**	**22.30**	**199**	P	**P**	06 39 57.3	**-2.2**
LTZ				IAmb	IAmb	06 40 05.9	
	comp=Z,46nm,1.3s						
RPZ	**Rata Peaks**	**23.53**	**200**	P	**P**	06 40 10.3	**-0.2**
	comp=Z,14nm,0.8s,baz=214,slow=4.2,SNR=4.5						
RPZ	**Rata Peaks**	**23.53**	**200**	IAmb	IAmb	06 40 19.1	
	comp=Z,53nm,1.2s						
FOZ	**Fox Glacier**	**23.78**	**202**	P	**P**	06 40 11.4	**-1.5**
HNR	**Honiara**	**24.59**	**297**	P	**P**	06 40 19.4	**-1.1**
EIDS	**Eidsvold**	**28.51**	**257**	P	**P**	06 40 55.9	**+0.8**
EIDS				IAmb	IAmb	06 40 57.3	
	comp=Z,8.0nm,0.7s						
CAN	**Canberra**	**31.73**	**238**	P	**P**	06 41 22.9	**-0.4**
CAN				IAmb	IAmb	06 41 28.2	
	comp=Z,15nm,1.3s						
STKA	**Stephens Creek**	**37.19**	**246**	P	**P**	06 42 10.1	**+0.4**
	comp=Z,3.3nm,0.5s,baz=90,slow=11,SNR=14						
STKA	**Stephens Creek**	**37.19**	**246**	P	**P**	06 42 10.2	**+0.4**
COEN	**Coen**	**37.72**	**276**	P	**P**	06 42 15.1	**+0.9**
BBOO	**Buckleboo**	**41.93**	**245**	P	**P**	06 42 48.5	**+0.1**
AS31	**Alice Springs**	**44.22**	**258**	P	**P**	06 43 07.2	**+0.5**
ASAR	**Alice Springs**	**44.22**	**258**	P	**P**	06 43 07.2	**+0.4**
	comp=Z,14nm,0.8s,baz=91,slow=8.2,SNR=133						
ASAR				PcP	**PcP**	06 44 43.9	**-0.6**
	comp=Z,0.5nm,0.6s,baz=100,slow=5.0,SNR=3.6						
WRAB	**Tennant Creek**	**44.43**	**264**	P	**P**	06 43 06.5	**-1.9**
WRAB				IAmb	IAmb	06 43 09.6	
	comp=Z,17nm,1.2s						
WRA	**Warramunga Arr**	**44.44**	**264**	P	**P**	06 43 07.8	**-0.7**
	comp=Z,6.7nm,0.7s,baz=99,slow=7.9,SNR=48						
FORT	**Forrest**	**48.75**	**248**	P	**P**	06 43 41.3	**-0.1**
FORT				IAmb	IAmb	06 43 42.2	
	comp=Z,20nm,0.7s						
MTN	**Manton Dam**	**49.21**	**272**	P	**P**	06 43 44.7	**-0.4**
MTN				IAmb	IAmb	06 43 45.7	
	comp=Z,8.5nm,0.7s						
KNRA	**Kununurra**	**50.60**	**267**	P	**P**	06 43 55.4	**+0.1**
KNRA				IAmb	IAmb	06 43 56.6	
	comp=Z,11nm,0.8s						
VNDA	**Vanda**	**56.46**	**185**	P	**P**	06 44 37.9	**+1.3**
	comp=Z,1.1nm,0.8s,baz=31,slow=5.9						
QSPA	**South Pole Qui**	**68.11**	**180**	P	**P**	06 45 55.0	**+1.5**
QSPA				IAmb	IAmb	06 45 55.6	
	comp=Z,5.9nm,1.0s						
WVOR	**Wild Horse Val**	**84.23**	**40**		**PcP**	06 47 29.1	**+2.4**
ILAR	**Eielson Array**	**89.73**	**13**	P	**P**	06 47 49.4	**+0.1**
	comp=Z,0.4nm,0.6s,baz=214,slow=5.8,SNR=7.6						
CMAR	**Chiang Mai Arr**	**90.62**	**290**	P	**P**	06 47 55.2	**+0.7**
	comp=Z,1.1nm,0.3s,baz=116,slow=2.1,SNR=5.3						
AKASG	**Malin Array Be**	**144.29**	**330**	PKP	**PKPab**	06 54 23.6	**-0.7**
	comp=Z,1.7nm,0.6s,baz=43,slow=4.3,SNR=13						
BRTR	**Keskin Array B**	**147.82**	**311**	PKPbc	**PKPdf**	06 54 33.3	**+1.6**
	comp=Z,0.7nm,0.7s,baz=45,slow=4.3,SNR=5.0						
GERES	**GERESS Array B**	**151.60**	**344**	PKPbc	**PKPbc**	06 54 43.3	**-0.5**
	comp=Z,0.2nm,0.4s,baz=40,slow=2.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**171.23**	**178**	PKP	**PKPdf**	06 54 58.1	**-0.1**
	comp=Z,0.3nm,0.6s,baz=167,slow=1.3,SNR=2.3						
TORD				PKPab	**PKPab**	06 56 20.7	**+0.6**
	comp=Z,0.4nm,0.6s,baz=180,slow=4.6,SNR=3.1						

IDC 08 07:02:27.3±4.0, 7°.68S×131°.94E, h0km, mb3.2/1, mb1 3.2/3, mb1mx3.1/39, mbtmp3.1/3, ML3.1/2, MS2.8/1, Ms1 2.8/1, ms1mx2.4/16, Error ellipse: s-maj=268.2km s-min=34.3km az=73.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.80**	**354**	LR	LR	07 08 08.6	
	comp=Z,77nm,18.0s,baz=42,slow=50						
WRA	**Warramunga Arr**	**12.41**	**169**	Pn	Pn	07 05 24.4	-1.0
	0.1nm,0.3s,baz=359,slow=14,SNR=4.9						
WRA				Sn	Sn	07 07 41.4	-3.1
	0.2nm,0.3s,baz=359,slow=23,SNR=5.8						
ASAR	**Alice Springs**	**16.01**	**173**	Pn	Pn	07 06 15.3	+1.3
	0.1nm,0.3s,baz=348,slow=14,SNR=4.0						
ASAR				Sn	Sn	07 09 08.0	-4.3
	0.0nm,0.3s,baz=0.0,slow=28,SNR=3.2						
MKAR	**Makanchi Array**	**69.85**	**326**	P	P	07 13 40.0	0.0
	0.1nm,0.6s,baz=123,slow=7.1,SNR=2.2						

NNC 08 07:13:46.4±0.6, 50°.01N×78°.65E, h0km, mb3.8, mpv3.3, 9C-4D, Error ellipse: s-maj=5.1km s-min=3.4km az=69.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURBB	**Kurchatov Arra**	**0.62**	**353**	⇑P	Pg	07 13 58.7	+0.5
	29nm,0.3s						
KURBB				⇑S	Sg	07 14 07.8	+1.5
	158nm,0.6s						
KURK	**Kurchatov**	**0.71**	**358**	⇑P	Pg	07 13 60.0	+0.1
	12nm,0.3s						
KURK				⇑S	Sg	07 14 10.2	+1.1
	15nm,0.3s						
SEM	**Semipalatinsk**	**1.10**	**68**	P	Pg	07 14 06.7	-0.8
	12nm,0.2s						
SEM				S	Sg	07 14 22.4	+0.7
	57nm,0.3s						
BRZS	**Berezniki**	**3.85**	**272**	Pg	Pg	07 14 57.9	-2.3
	12nm,0.4s						
BRZS				Lg	Lg	07 15 49.0	
	20nm,0.5s						
MAKZ	**Makanchi**	**3.90**	**144**	⇑Pg	Pb	07 14 56.3	+0.3
	1.1nm,0.3s						
MAKZ				⇑Lg	Lg	07 15 47.1	
	4.4nm,0.3s						
MK31	**Makanchi Array**	**4.03**	**142**	⇑Pn	Pn	07 14 50.8	+1.5
	0.1nm,0.1s,baz=323,slow=10,SNR=66						
MK31				⇓Pg	Pb	07 15 00.6	+2.3
	0.8nm,0.3s,baz=321,slow=13,SNR=23						
MK31				⇑Lg	Lg	07 15 52.4	
	9.6nm,0.6s,baz=328,slow=26,SNR=9.2						
KAPS	**Kapalarasan**	**4.75**	**174**	Pg	Pb	07 15 12.0	+1.4
	2.1nm,0.2s						
KAPS				Lg	Lg

KZN					AML	AML	07 36 38.0		
	comp=N,2084µm,0.3s								
KZN					AML	AML	07 36 39.2		
	comp=E,2624µm,0.4s								
OHR	**Ohrid**	**0.58**	**308**	*i* Pg		**Pg**	**07 36 28.4**	**-0.1**	
OHR				*i* Sg		**Sb**	**07 36 38.6**	**-0.1**	
OHR				*e*Lg		Lg	07 36 39.2		
	comp=E,1µm,0.5s								
KTI	**Kastanea**	**0.65**	**124**	P		**Pg**	**07 36 29.8**	**-0.1**	
GRG	**Griva**	**0.78**	**75**	P		**Pg**	**07 36 32.5**	**+0.2**	
GRG	**Griva**	**0.78**	**75**	P		**Pg**	**07 36 32.4**	**+0.1**	
GRG				S		**Sg**	**07 36 43.1**	**+0.7**	
GRG				AML	AML	07 36 47.0			
	comp=E,643µm,0.5s								
GRG				AML	AML	07 36 51.7			
	comp=N,1191µm,0.7s								
KPRO	**Kipourio**	**0.80**	**182**	P		**Pg**	**07 36 32.7**	**0.0**	
KPRO				S		**Sb**	**07 36 44.7**	**-0.4**	
	comp=N,585nm,0.3s								
KPRO	**Kipourio**	**0.80**	**182**	P		**Pg**	**07 36 32.8**	**+0.1**	
KPRO				S		**Sg**	**07 36 43.7**	**+0.5**	
KPRO				AML	AML	07 36 49.7			
	comp=E,1406µm,0.3s								
KPRO				AML	AML	07 36 50.3			
	comp=N,970µm,0.3s								
VAY	**Valandovo**	**1.04**	**57**	*i* Pg		**Pb**	**07 36 37.3**	**-0.7**	
VAY				*i* Sg		**Sn**	**07 36 52.8**	**-0.9**	
VAY				*e*Lg		Lg	07 36 57.6		
	comp=N,238nm,0.6s								
LIT	**Litokhoron**	**1.05**	**128**	P		**Pb**	**07 36 37.1**	**-1.0**	
LIT				S		**Sn**	**07 36 52.9**	**-1.2**	
	comp=N,368nm,0.6s								
LIT	**Litokhoron**	**1.05**	**128**	P		**Pb**	**07 36 37.2**	**-1.0**	
LIT				S		**Sg**	**07 36 52.1**	**+0.9**	
LIT				AML	AML	07 36 57.7			
	comp=E,928µm,0.8s								
LIT				AML	AML	07 36 59.3			
	comp=N,517µm,0.3s								
STIP	**Stip**	**1.10**	**32**	*i* Pg		**Pn**	**07 36 41.2**	**+1.6**	
STIP				*i* Sg		**Sn**	**07 36 59.3**	**+4.0**	
STIP				*e*Lg		Lg	07 37 06.6		
	comp=N,23nm,0.3s								
TPE	**Tepelena**	**1.16**	**247**	*i* PG		**Pg**	**07 36 39.6**	**0.0**	
PHP	**Peshkopia**	**1.18**	**322**	P		**Pb**	**07 36 38.7**	**-1.7**	
PHP				S		**Sn**	**07 36 56.5**	**-0.7**	
PHP	**Peshkopia**	**1.18**	**322**	*i* PG		**Pb**	**07 36 38.6**	**-1.7**	
PHP				*i* SG		**Sn**	**07 36 55.6**	**-1.7**	
KNT	**Kendrikon**	**1.20**	**70**	P		**Pb**	**07 36 40.1**	**-0.5**	
KNT				S		**Sn**	**07 36 57.4**	**-0.2**	
	comp=N,258nm,0.5s								
KNT	**Kendrikon**	**1.20**	**70**	P		**Pn**	**07 36 40.0**	**-0.9**	
KNT				S		**Sn**	**07 36 56.7**	**-0.9**	
KNT				AML	AML	07 37 01.4			
	comp=N,694µm,0.5s								
KNT				AML	AML	07 37 02.4			
	comp=E,320µm,0.6s								
SKO	**Skopje**	**1.21**	**1**	*i* Pg		**Pg**	**07 36 40.8**	**+0.1**	
SKO				*i* Sg		**Sn**	**07 36 57.8**	**-0.2**	
SKO				*e*Lg		Lg	07 36 58.8		
	comp=E,10nm,0.6s								
THL	**Klokotos Trika**	**1.28**	**158**	P		**Pn**	**07 36 40.6**	**-1.4**	
THL	**Klokotos Trika**	**1.28**	**158**	P		**Pn**	**07 36 40.7**	**-1.3**	
THL				AML	AML	07 37 02.6			
	comp=E,431µm,0.5s								
THL				AML	AML	07 37 02.6			
	comp=N,420µm,0.5s								
HORT	**Hortiatis**	**1.30**	**97**	P		**Pg**	**07 36 42.3**	**+0.1**	
HORT				S		**Sg**	**07 37 00.3**	**+1.3**	
HORT	**Hortiatis**	**1.30**	**97**	P		**Pn**	**07 36 41.5**	**-0.8**	
HORT				S		**Sg**	**07 37 00.3**	**+1.3**	
HORT				AML	AML	07 37 04.4			
	comp=N,168µm,0.6s								
HORT				AML	AML	07 37 07.9			
	comp=E,117µm,0.6s								
IGT	**Igoumenitsa**	**1.48**	**214**	*i* PN		**Pg**	**07 36 46.5**	**+0.9**	
IGT				*i* SN		**Sg**	**07 37 07.8**	**+3.1**	
IGT	**Igoumenitsa**	**1.48**	**214**	P		**Pb**	**07 36 44.9**	**-0.5**	
SOH	**Sokhos**	**1.48**	**87**	P		**Pb**	**07 36 45.1**	**-0.3**	
SOH	**Sokhos**	**1.48**	**87**	P		**Pb**	**07 36 44.5**	**-0.9**	
PLG	**Polygyros**	**1.60**	**103**	P		**Pb**	**07 36 46.5**	**-1.0**	
PLG	**Polygyros**	**1.60**	**103**	P		**Pb**	**07 36 47.2**	**-0.2**	
KEK	**Kerkira**	**1.61**	**230**	P		**Pb**	**07 36 47.5**	**-0.2**	
PUK	**Puka**	**1.72**	**319**	*i* PN		**Pg**	**07 36 49.4**	**-0.9**	
PUK				*i* SN		**Sg**	**07 37 13.3**	**+0.8**	
MAKR	**Makrakomi, Fth**	**1.83**	**162**	P		**Pb**	**07 36 50.2**	**-1.2**	
EVR	**Evrytania**	**1.86**	**170**	P		**Pb**	**07 36 50.9**	**-1.1**	
AGG	**Agios Georgios**	**1.87**	**157**	P		**Pn**	**07 36 50.3**	**+0.1**	
AGG				S		**Sn**	**07 37 14.2**	**-0.1**	
AGG	**Agios Georgios**	**1.87**	**157**	P		**Pn**	**07 36 50.6**	**+0.4**	
BCI	**Bajram Curri**	**1.90**	**328**	*i* PN		**Pg**	**07 36 52.5**	**-1.2**	
BCI				*i* SN		**Sg**	**07 37 18.6**	**+0.3**	
PAIG	**Paliouri**	**1.92**	**115**	P		**Pn**	**07 36 50.8**	**0.0**	
PAIG	**Paliouri**	**1.92**	**115**	P		**Pn**	**07 36 51.0**	**+0.1**	
XOR	**Xorichti**	**1.95**	**135**	P		**Pn**	**07 36 51.2**	**-0.1**	
XOR	**Xorichti**	**1.95**	**135**	P		**Pn**	**07 36 51.3**	**+0.1**	
OUR	**Ouranopolis**	**2.01**	**101**	P		**Pb**	**07 36 53.1**	**-1.3**	
SERG	**Sergoula**	**2.39**	**168**	P		**Pn**	**07 36 57.7**	**+0.3**	
KALE	**Kalithea**	**2.43**	**166**	P		**Pn**	**07 36 58.9**	**+1.0**	
TRIZ	**Trizonia**	**2.44**	**168**	P		**Pn**	**07 36 58.7**	**+0.7**	
HVAR	**Hvar**	**4.42**	**305**	*e*Pn		**Pn**	**07 37 25.2**	**+0.1**	
HVAR				Sn		**Sn**	**07 38 16.4**	**-0.6**	
KIJV	**Kijevo**	**4.92**	**313**	*i* Pn		**Pn**	**07 37 33.7**	**+1.6**	
KIJV				Sn		**Sn**	**07 38 31.5**	**+1.9**	
ZIRJ	**Zirje**	**5.17**	**306**	*i* Pn		**Pn**	**07 37 36.1**	**+0.7**	
ZIRJ				Sn		**Sn**	**07 38 34.9**	**-0.6**	
MORI	**Morici**	**5.25**	**308**	*e*Pn		**Pn**	**07 37 37.8**	**+1.3**	
MORI				Sn		**Sn**	**07 38 37.7**	**+0.3**	
UDBI	**Udbina**	**5.61**	**314**	*i* Pn		**Pn**	**07 37 43.5**	**+1.9**	
DUGI	**Dugi Otok**	**5.71**	**307**	*i* Pn		**Pn**	**07 37 43.5**	**+0.6**	
DUGI				Sn		**Sn**	**07 38 48.4**	**-0.4**	
NVLJ	**Novalja**	**6.14**	**310**	*i* Pn		**Pn**	**07 37 49.4**	**+0.6**	

*IDC **08** 07:45:34.7±3.8, 18°.00N×106°.14W, h0km, mb3.3/7, mb1 3.7/10, mb1mx3.7/30, mbtmp3.5/10, ML3.3/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/25, Error ellipse: s-maj=72.2km s-min=32.2km az=24.0*
*MEX **08** 07:45:39.9±0.9, 18°.27N×105°.86W, h16km±37km, MD3.7*
*NEIC **08** 07:45:40.3±2.4, 18°.5N±0°.2×105°.7W±0°.2, h10km±15km, Error ellipse: s-maj=33.1km s-min=10.2km az=50.0*

ISC 08 07:45:38.7±1.1,**18°.42N**±0°.08×**105°.66W**±0°.07,**h10**km,**n44,** σ1§**42**/41,**mb3.4**/9,**Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CJM	**Chamela**	**1.23**	**29**	*e*P		**Pn**	**07 46 01.0**	**-0.9**
CJM				*i* S		**Sn**	**07 46 19.1**	**+0.6**
R15V		**1.76**	**65**	*e*P		**Pn**	**07 46 08.9**	**-0.4**
R15V				*e*S		**Sb**	**07 46 33.3**	**0.0**
MMIG	**Aquila**	**2.21**	**93**	*i* P		**Pn**	**07 46 14.7**	**-0.6**
MMIG				*i* S		**Sn**	**07 46 42.5**	**-0.2**
EZ5V		**2.22**	**61**	*e*P		**Pb**	**07 46 17.1**	**-2.0**
EZ5V				*i* S		**Sb**	**07 46 45.5**	**-1.2**
ANIG	**Ahuacatlan**	**2.83**	**22**	*e*P		**Pn**	**07 46 25.4**	**+1.3**
ANIG				*i* S		**Sn**	**07 47 00.3**	**+1.9**
ZIIG	**Zihuatanejo**	**4.08**	**101**	*i* P		**Pn**	**07 46 40.5**	**-0.6**
ZIIG				*i* S		**Sn**	**07 47 29.6**	**+0.7**
H06E1	**SOCORRO T-PHAS**	**5.00**	**275**	T		T	07 51 34.3	
	SNR=1522							
H06S1	**SOCORRO T**	**5.03**	**274**	T		T	07 51 34.1	
	SNR=597							
ARIG	**Puente Sto Nin**	**5.05**	**91**	*e*P		**Pn**	**07 46 55.6**	**+1.0**
ARIG				*i* S		**Sn**	**07 47 54.5**	**+1.4**
H06N1	**SOCORRO T-PHAS**	**5.07**	**276**	T		T	07 51 45.4	
	SNR=31							
ZAIG	**Zacatecas**	**5.21**	**33**			**Pn**	**07 46 57.3**	**+0.3**
TLIG	**Tlapa**	**6.81**	**96**			**Pn**	**07 47 20.4**	**+1.6**
CMIG	**Matias Romero**	**10.36**	**96**	Pn		Pn	07 48 12.3	+4.9
	0.3nm,0.3s,baz=280,slow=10,SNR=5.1							
CMIG				LR		LR	07 51 59.0	
	comp=Z,135nm,19.5s,baz=245,slow=36							
TXAR	**Lajitas Array**	**11.02**	**9**	Pn		Pn	07 48 22.1	+5.6
	0.1nm,0.3s,baz=188,slow=13,SNR=13							
TXAR				LR		LR	07 52 40.8	
	comp=Z,101nm,20.3s,baz=0.0,slow=37							
214A	**Organ Pipe Nat**	**14.94**	**336**	P		**P**	**07 49 15.9**	**+0.1**
214A				IAmb		IAmb	07 49 20.7	
	comp=Z,10nm,1.2s							
ABTX	**Abilene, Hawle**	**15.15**	**20**	Pn		**Pn**	**07 49 12.0**	**-0.8**
ABTX				IAmb		IAmb	07 49 22.6	
	comp=Z,22nm,1.2s							
BNM	**Barren Site**	**15.69**	**357**	Pn		**Pn**	**07 49 20.4**	**+0.2**
MSTX	**Muleshoe**	**15.70**	**9**	Pn		**Pn**	**07 49 18.0**	**-2.2**
MSTX				IAmb		IAmb	07 49 25.0	
	comp=Z,18nm,1.2s							
LENM	**Lemitar**	**15.73**	**356**	Pn		**Pn**	**07 49 21.4**	**+0.8**
113A	**Mohawk Valley,**	**16.04**	**335**	Pn		**Pn**	**07 49 21.8**	**-2.6**
ANMO	**Albuquerque**	**16.48**	**358**	Pn		**P**	**07 49 33.7**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=168,slow=15,SNR=4.3							
ANMO				LR		LR	07 54 35.1	
	comp=Z,113nm,19.6s,baz=39,slow=32							
ANMO	**Albuquerque**	**16.48**	**358**	Pn		**Pn**	**07 49 29.3**	**-0.9**
AMTX	**Amarillo**	**16.78**	**11**	Pn		**P**	**07 49 34.3**	**-1.8**
AMTX				IAmb		IAmb	07 49 38.2	
	comp=Z,17nm,1.1s							
W35A	**Tecumseh**	**18.41**	**23**	P		**Pn**	**07 49 56.2**	**+2.2**
TUL1	**Leonard**	**19.49**	**25**	P		**Pn**	**07 50 07.0**	**-0.2**
TUL1				IAmb		IAmb	07 50 11.7	
	comp=Z,17nm,0.9s							
KNB	**Kanab**	**19.57**	**343**	P		**Pn**	**07 50 07.5**	**-0.7**
HHAR	**Hobbs**	**20.59**	**28**	P		Pn	07 50 20.2	+0.1
HHAR				IAmb		IAmb	07 50 23.8	
	comp=Z,11nm,1.0s							
SMCO	**Snowmass**	**20.72**	**357**	P		Pn	07 50 21.0	-1.0
MSU	**Marysvale**	**20.81**	**345**	P		Pn	07 50 21.1	-1.9
CBKS	**Cedar Bluff**	**20.97**	**13**	P		**P**	**07 50 24.7**	**+2.7**
Q16A	**Castle Valley**	**20.98**	**348**	P		Pn	07 50 22.7	-2.2
ISCO	**Idaho Springs**	**21.31**	**0**	P		**P**	**07 50 25.5**	**-0.4**
ISCO				IAmb		IAmb	07 50 31.9	
	comp=Z,9.6nm,1.4s							
P17A	**Butcher Ranch,**	**21.44**	**349**	P		**P**	**07 50 28.1**	**+0.9**
NVAR	**Mina Array Bea**	**22.78**	**334**	P		**P**	**07 50 42.5**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=150,slow=9.3,SNR=2.6							
ELK	**Elko**	**23.73**	**342**	P		**P**	**07 50 53.1**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=147,slow=3.6,SNR=3.5							
PDAR	**Pinedale Array**	**24.50**	**353**	P		**P**	**07 50 59.0**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=160,slow=9.0,SNR=4.9							
GOGA	**Godfrey**	**24.86**	**49**	P		**P**	**07 51 03.7**	**+2.3**
CPCT	**Cooper Cave**	**25.27**	**44**	P		**P**	**07 51 07.5**	**+2.3**
CPCT				IAmb		IAmb	07 51 09.8	
	comp=Z,5.1nm,0.9s							
TPAW	**Teton Pass**	**25.39**	**351**	P		**P**	**07 51 08.0**	**+1.5**
TKL	**Tuckaleechee C**	**25.89**	**44**	P		**P**	**07 51 13.4**	**+2.6**
	comp=Z,3.0nm,0.8s,baz=209,slow=10,SNR=3.1							
ULM	**Lac du Bonnet**	**32.71**	**12**	LR		LR	08 07 38.0	
	comp=Z,110nm,18.9s,baz=28,slow=40							
YKA	**Yellowknife Ar**	**44.47**	**354**	P		**P**	**07 53 49.0**	**-0.8**
	comp=Z,0.1nm,0.7s,baz=168,slow=10							
INK	**Inuvik**	**52.87**	**347**	P		**P**	**07 54 53.0**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=144,slow=8.7,SNR=2.0							
ILAR	**Eielson Array**	**53.86**	**340**	P		**P**	**07 55 00.9**	**-0.7**
	comp=Z,1.1nm,1.1s,baz=148,slow=5.7,SNR=5.3							

*IDC **08** 08:04:16.4±1.9, 60°.35N×152°.09W, h65km±23km, mb3.4/4, mb1 3.6/8, mb1mx3.2/49, mbtmp3.7/8, Error ellipse: s-maj=36.3km s-min=14.5km az=103.0*
*NEIC **08** 08:04:17.8±1.7, 60°.34N±0°.04×151°.61W±0°.04, h72km±6km, Error ellipse: s-maj=5.0km s-min=3.0km az=180.0*
*AEIC **08** 08:04:18.8±1.8, 60°.34N±0°.03×151°.61W±0°.05, h65km±5km, ML3.3/121, Error ellipse: s-maj=5.0km s-min=3.7km az=184.0*

ISC 08 08:04:17.9±0.8,**60°.33N**±0°.03×**151°.52W**±0°.04,**h75**km±7km, **n121,** σ0§**90**/139,**Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CAPN	**Captain Cook N**	**0.48**	**22**			**Pn**	**08 04 31.6**	**+0.7**
RDT	**Redoubt**	**0.50**	**300**			**Pn**	**08 04 29.5**	**-1.8**
RSO	**Redoubt South**	**0.62**	**283**			**Pn**	**08 04 30.9**	**-1.8**
RED	**Redoubt Volcan**	**0.63**	**279**			**Pn**	**08 04 31.1**	**-1.4**
RED						**Sn**	**08 04 41.4**	**-1.9**
BRLK	**Bradley Lake**	**0.65**	**150**			**Pn**	**08 04 32.5**	**-0.2**
BRLK						**Sn**	**08 04 43.7**	**+0.1**
SLKM	**Skilak Lake**	**0.67**	**74**			**Pn**	**08 04 32.2**	**-0.7**
SLKM						**Sn**	**08 04 43.8**	**-0.2**
HOM	**Homer**	**0.68**	**185**			**Pn**	**08 04 33.0**	**+0.1**
HOM						**Sn**	**08 04 44.6**	**+0.7**
BRSE	**Bradley Lake S**	**0.71**	**146**			**Pn**	**08 04 33.1**	**-0.2**
BRSE						**Sn**	**08 04 44.9**	**+0.2**
ILIM	**Iliamna**	**0.76**	**251**			**Pn**	**08 04 33.0**	**-0.9**
IVE	**Iliamna Volcan**	**0.81**	**248**			**Pn**	**08 04 33.6**	**-0.9**
ILW	**Iliamna West**	**0.85**	**252**			**Pn**	**08 04 34.3**	**-0.8**
ILS	**Iliamna Low So**	**0.86**	**245**			**Pn**	**08 04 34.3**	**-0.8**
SPCR	**Spurr Chakacha**	**0.94**	**339**			**Pn**	**08 04 35.2**	**-0.8**
SPCR						**Sn**	**08 04 48.6**	**-0.8**
CKN	**Chakachatna No**	**0.95**	**341**			**Pn**	**08 04 35.4**	**-0.8**
SPCG	**Spurr Capps Gl**	**1.00**	**346**			**Pn**	**08 04 36.2**	**-0.5**
SPCG						**Sn**	**08 04 50.4**	**-0.4**
SPBG	**Spurr Blockage**	**1.02**	**336**			**Pn**	**08 04 36.6**	**-0.4**
SPBG						**Sn**	**08 04 50.7**	**-0.6**
FIS	**Fire Island**	**1.04**	**38**			**Pn**	**08 04 38.2**	**+1.1**
FIS						**Sn**	**08 04 54.2**	**+2.8**
SEW	**Seward**	**1.06**	**101**			**Pn**	**08 04 37.1**	**-0.2**
SPWE	**Spurr West**	**1.07**	**332**			**Pn**	**08 04 36.8**	**-0.9**
RC01	**Rabbit Creek A**	**1.16**	**48**			**Pn**	**08 04 39.0**	**+0.3**
RC01						**Sn**	**08 04 54.8**	**+0.6**
SPNN	**North Nagishla**	**1.19**	**332**			**Pn**	**08 04 39.0**	**-0.2**
SUA	**Susitna One**	**1.20**	**18**			**Pn**	**08 04 39.5**	**+0.2**
SUA						**Sn**	**08 04 56.0**	**+0.7**
AU22	**Augustine Moun**	**1.33**	**225**			**Pn**	**08 04 40.7**	**-0.1**
AU22						**Sn**	**08 04 59.2**	**+1.2**
AUP	**Augustine Pinn**	**1.36**	**225**			**Pn**	**08 04 41.5**	**+0.2**
AUQ	**Augustine Qik'**	**1.37**	**225**			**Pn**	**08 04 41.6**	**+0.2**
AUQ						**Sn**	**08 04 59.4**	**+0.5**
AUJK	**Augustine Jueg**	**1.37**	**225**			**Pn**	**08 04 41.5**	**+0.2**
AUH	**Augustine H**	**1.37**	**226**			**Pn**	**08 04 41.8**	**+0.4**
AUW	**Augustine West**	**1.38**	**226**			**Pn**	**08 04 41.8**	**+0.4**
SKT	**Skwentna**	**1.66**	**360**			**Pn**	**08 04 45.2**	**+0.1**
PWL	**Port Wells**	**1.66**	**70**			**Pn**	**08 04 44.9**	**-0.3**
PMR	**Palmer**	**1.72**	**42**			**Pn**	**08 04 45.7**	**-0.2**
PMR						**Sn**	**08 05 06.2**	**-1.0**
KNK	**Knik Glacier**	**1.85**	**53**			**Pn**	**08 04 47.8**	**+0.1**
KNK						**Sn**	**08 05 09.7**	**-0.6**
GHO	**Glory Hole Cre**	**1.92**	**40**			**Pn**	**08 04 48.5**	**-0.2**
SVW2	**Sparrevohn**	**2.14**	**293**			**Pn**	**08 04 50.0**	**-1.6**
SMT	**Sawmill**	**2.15**	**45**			**Pn**	**08 04 51.7**	**+0.1**
KAHC	**Katmai Hardscr**	**2.45**	**228**			**Pn**	**08 04 55.4**	**-0.4**
SCM	**Sheep Creek Mo**	**2.54**	**52**			**Pn**	**08 04 57.5**	**+0.6**
PPLA	**Purkeypile**	**2.60**	**353**			**Pn**	**08 04 57.9**	**+0.1**
KDAK	**Kodiak Island**	**2.61**	**193**	P		**Pn**	**08 04 57.1**	**-0.8**
	3.8nm,0.3s,baz=25,slow=14,SNR=71							
KDAK				S		**Sn**	**08 05 26.3**	**-2.2**
	13nm,0.3s,baz=1.5,slow=9.0,SNR=5.6							
KDAK	**Kodiak Island**	**2.61**	**193**			**Pn**	**08 04 57.5**	**-0.4**
VMT	**TAPS Tl Valdez**	**2.65**	**71**			**Pn**	**08 05 29.0**	**-0.3**
HUR	**Hurricane**	**2.81**	**18**			**Pn**	**08 05 01.5**	**+1.0**
KABU	**Katmai Buttres**	**2.83**	**225**			**Pn**	**08 05 01.3**	**+0.4**
EYAK	**Cordova Ski Ar**	**2.87**	**83**			**Pn**	**08 05 00.7**	**-0.6**
WAT5	**Susitna Watana**	**2.88**	**28**			**Pn**	**08 05 01.9**	**+0.3**
WAT6	**Susitna Watana**	**2.90**	**37**			**Pn**	**08 05 02.2**	**+0.3**
ANCK	**Angle Creek**	**2.95**	**225**			**Pn**	**08 05 02.8**	**+0.3**
WAT2	**Susitna Watana**	**2.99**	**27**			**Pn**	**08 05 03.5**	**+0.4**
TRF	**Thorofare Moun**	**3.19**	**10**			**Pn**	**08 05 05.7**	**-0.1**
OHAK	**Old Harbor**	**3.25**	**197**			**Pn**	**08 05 06.1**	**-0.4**
KTH	**Kantishna Hill**	**3.25**	**5**			**Pn**	**08 05 06.8**	**+0.3**
PS12	**TAPS Pump St12**	**3.32**	**67**			**Pn**	**08 05 07.3**	**-0.2**
RND	**Reindeer**	**3.34**	**21**			**Pn**	**08 05 08.1**	**+0.3**
TT01	**Tatalina**	**3.36**	**322**			**Pn**	**08 05 07.7**	**-0.3**
GOAT	**Goat Mountain**	**3.38**	**83**			**Pn**	**08 05 07.5**	**-0.8**
DHY	**Denali Highway**	**3.39**	**34**			**Pn**	**08 05 09.5**	**+0.9**
RAGM	**Ragged Mountai**	**3.40**	**86**			**Pn**	**08 05 07.6**	**-1.0**
PS11	**TAPS Pump St11**	**3.41**	**56**			**Pn**	**08 05 09.2**	**+0.4**
CHUM	**Lake Minchumin**	**3.59**	**354**			**Pn**	**08 05 10.6**	**-0.4**
HMT	**Hamilton**	**3.61**	**87**			**Pn**	**08 05 11.2**	**-0.3**
MCK	**McKinley**	**3.63**	**19**			**Pn**	**08 05 12.6**	**+0.9**
PLK1	**Peulik 1**	**3.65**	**228**			**Pn**	**08 05 11.7**	**-0.3**
BPAW	**Bear Paw Mtn.**	**3.79**	**4**			**Pn**	**08 05 13.0**	**-1.0**
PAX	**Paxson**	**3.92**	**45**			**Pn**	**08 05 16.5**	**+0.8**
GLB	**Gilahina Butte**	**3.93**	**70**			**Pn**	**08 05 15.3**	**-0.5**
SII	**Sitkinak Islan**	**4.03**	**201**			**Pn**	**08 05 16.1**	**-1.0**
VRDI	**Verde Repeater**	**4.06**	**74**			**Pn**	**08 05 17.3**	**-0.4**
GRIN	**Grindle Hills**	**4.08**	**87**			**Pn**	**08 05 18.0**	**+0.1**
PS10	**TAPS Pump St10**	**4.13**	**39**			**Pn**	**08 05 20.0**	**+1.5**
CRQM	**Cirque**	**4.16**	**80**			**Pn**	**08 05 18.6**	**-0.6**
MCARA	**McCarthy VSAT**	**4.29**	**72**			**Pn**	**08 05 20.5**	**-0.2**
NEA	**Nenana**	**4.41**	**14**			**Pn**	**08 05 22.1**	**-0.3**
WRH	**Wood River Hil**	**4.45**	**20**			**Pn**	**08 05 22.9**	**0.0**
PTPK	**Patty Peak**	**4.53**	**75**			**Pn**	**08 05 23.6**	**-0.5**
MENT	**Mentasta**	**4.55**	**52**			**Pn**	**08 05 24.2**	**-0.1**
KIAG	**Kiagna River**	**4.55**	**79**			**Pn**	**08 05 24.0**	**-0.4**
BALM	**Baldy**	**4.57**	**77**			**Pn**	**08 05 24.5**	**-0.1**
HDA	**Harding Lake**	**4.62**	**26**			**Pn**	**08 05 25.6**	**+0.5**
RIDG	**Independent Ri**	**4.65**	**40**			**Pn**	**08 05 26.5**	**+0.9**
CCB	**Clear Creek Bu**	**4.66**	**20**			**Pn**	**08 05 25.6**	**-0.1**
MLY	**Manley**	**4.73**	**4**			**Pn**	**08 05 27.1**	**+0.4**
PS08	**TAPS Pump Stn8**	**4.76**	**25**			**Pn**	**08 05 27.5**	**+0.5**
DOT	**Dot Lake**	**4.84**	**43**			**Pn**	**08 05 28.7**	**+0.4**
ANNW	**Aniakchak Nort**	**4.86**	**229**			**Pn**	**08 05 28.1**	**-0.3**
TCOL	**CIGO, UAF Yank**	**4.87**	**19**			**Pn**	**08 05 29.1**	**+0.7**
COLA	**College**	**4.87**	**19**			**Pn**	**08 05 29.1**	**+0.6**
COLA	**College**	**4.87**	**19**			**Pn**	**08 05 29.3**	**+0.8**
MDM	**Murphy Dome**	**4.89**	**17**			**Pn**	**08 05 28.6**	**-0.2**
BARN	**Barnard Glacie**	**4.90**	**77**			**Pn**	**08 05 29.6**	**+0.4**
IL31		**4.95**	**24**			**Pn**	**08 05 29.8**	**+0.2**
ILAR	**Eielson Array**	**4.95**	**24**	P		**Pn**	**08 05 29.9**	**+0.3**
	7.2nm,0.3s,baz=204,slow=14,SNR=358							
ILAR				S		**Sn**	**08 06 21.8**	**-3.6**
	2.6nm,0.3s,baz=209,slow=16,SNR=6.1							
CHIR	**Chirikof Islan**	**5.01**	**207**	Pn		**Pn**	**08 05 31.4**	**+0.9**
CTGM	**Chitina Glacie**	**5.06**	**78**			**Pn**	**08 05 31.7**	**+0.4**
SCRK	**Sand Creek**	**5.09**	**41**			**Pn**	**08 05 31.5**	**-0.1**
POKR	**Poker Plat Res**	**5.16**	**20**			**Pn**	**08 05 32.9**	**+0.4**
CHX	**Chaix Hills**	**5.20**	**88**			**Pn**	**08 05 33.7**	**+0.5**
BC03		**5.38**	**55**			**Pn**	**08 05 35.8**	**+0.3**
PCA	**Pinnacle**	**5.62**	**87**			**Pn**	**08 05 39.4**	**+0.5**
IM03		**5.76**	**351**			**Pn**	**08 05 40.0**	**-0.8**
PRP	**Porcupine Dome**	**5.88**	**25**			**Pn**	**08 05 42.8**	**+0.3**
PNL	**Peninsula**	**6.12**	**91**			**Pn**	**08 05 45.3**	**-0.3**
PS05	**TAPS Pump Stn5**	**6.52**	**3**			**Pn**	**08 05 51.7**	**+0.7**
EGAK	**Eagle**	**6.54**	**43**			**Pn**	**08 05 51.6**	**+0.2**
YUK7	**Dusty Glacier**	**6.63**	**82**			**Pn**	**08 05 52.8**	**0.0**
DAWY	**Dawson**	**6.80**	**51**			**Pn**	**08 05 55.0**	**0.0**
DHAK	**Deception Hill**	**6.85**	**95**			**Pn**	**08 05 55.3**	**-0.3**
FYU	**Fort Yukon**	**6.86**	**22**			**Pn**	**08 05 56.0**	**+0.3**
HYT	**Haines Junctio**	**6.93**	**80**	Pn		**Pn**	**08 05 58.2**	**+1.4**
COLD	**Coldfoot**	**6.95**	**4**			**Pn**	**08 05 57.8**	**+0.8**
ANM	**Nome**	**7.69**	**309**	Pn		**Pn**	**08 06 07.8**	**+0.8**
BM03	**Burnt Mountain**	**7.74**	**20**			**Pn**	**08 06 07.2**	**

AAK	**Ala-Archa**	**1.10**	**73**	⇑P		**Pg**	**08 33 33.7**	**-0.6**
	0.9nm,0.3s							
AAK				S		**Sg**	**08 33 47.6**	**-0.9**
	0.9nm,0.3s							
CHMS	**Chumysh**	**1.41**	**61**	⇑*i*P		**Pn**	**08 33 39.8**	**+0.3**
	baz=61							
CHMS				⇑*i*S		**Sb**	**08 33 58.5**	**+0.2**
	baz=61							
USP	**Ospenovka**	**1.42**	**47**	⇑*i*P		**Pn**	**08 33 39.8**	**+0.2**
	baz=48							
USP				⇑*i*S		**Sg**	**08 33 58.6**	**-0.1**
	baz=48							
USP	**Ospenovka**	**1.42**	**47**	P		**Pn**	**08 33 39.8**	**+0.2**
	SNR=9.1							
KBK	**Karagaybulak**	**1.43**	**76**	⇑*i*P		**Pn**	**08 33 39.8**	**0.0**
	baz=76							
KBK				⇑*i*S		**Sn**	**08 33 59.6**	**+0.6**
	baz=76							
KBK	**Karagaybulak**	**1.43**	**76**	P		**Pg**	**08 33 42.0**	**+1.4**
	SNR=5.7							
SGDS	**Sogindy**	**1.61**	**45**	P		**Pg**	**08 33 43.9**	**-0.2**
	3.2nm,0.2s							
SGDS				S		**Sg**	**08 34 05.3**	**+0.3**
	14nm,0.2s							
KZA	**Kyzart**	**1.63**	**98**	⇑*i*P		**Pb**	**08 33 44.0**	**0.0**
	baz=98							
KZA				⇑*i*S		**Sg**	**08 34 06.4**	**+0.7**
	baz=98							
TKM2	**Tokmak 2**	**1.96**	**71**	⇑*i*P		**Pb**	**08 33 49.4**	**0.0**
	baz=72							
TKM2				⇑*i*S		**Sg**	**08 34 15.7**	**-0.4**
	baz=72							
TKM2	**Tokmak 2**	**1.96**	**71**	P		**Pb**	**08 33 49.6**	**+0.2**
	SNR=10.0							
TKM2	**Tokmak 2**	**1.96**	**71**	⇑Pn		**Pb**	**08 33 49.3**	**-0.1**
	0.5nm,0.3s							
TKM2				⇑Sn		**Sg**	**08 34 16.1**	**0.0**
	3.5nm,0.3s							
KK31	**Karatay Array**	**2.05**	**293**	⇓Pn		**Pb**	**08 33 50.8**	**0.0**
	0.5nm,0.4s,baz=114,slow=15,SNR=14							
KK31				⇑Sn		**Sg**	**08 34 18.3**	**-0.6**
	1.2nm,0.3s,baz=118,slow=26,SNR=13							
BOOM	**Boomskoye usch**	**2.13**	**84**	⇑*i*P		**Pb**	**08 33 51.1**	**-1.2**
	baz=85							
BOOM				⇑*i*S		**Sb**	**08 34 19.6**	**+0.6**
	baz=85							
DGS	**Degeres**	**2.19**	**64**	*e*P		**Pg**	**08 33 54.9**	**-0.3**
	baz=64							
DGS				*e*S		**Sg**	**08 34 23.7**	**+0.1**
	baz=64							
DGS	**Degeres**	**2.19**	**64**	*e*P		**Pg**	**08 33 54.9**	**-0.3**
	2.5nm,0.4s							
DGS				*e*S		**Sg**	**08 34 23.7**	**+0.1**
	10nm,0.3s							
DGS	**Degeres**	**2.19**	**64**	Pg		**Pg**	**08 33 54.5**	**-0.7**
	2.5nm,0.4s							
DGS				Lg		Lg	08 34 23.4	
	10nm,0.3s							
KST	**Kastek**	**2.25**	**70**	*e*P		**Pg**	**08 33 56.0**	**-0.3**
	baz=71							
KST				*e*S		**Sg**	**08 34 25.6**	**+0.1**
	baz=71							
KST	**Kastek**	**2.25**	**70**	*e*P		**Pg**	**08 33 56.0**	**-0.3**
	3.5nm,0.4s							
KST				*e*S		**Sg**	**08 34 25.6**	**+0.1**
	14nm,0.5s							
KST	**Kastek**	**2.25**	**70**	Pg		**Pb**	**08 33 54.9**	**+0.6**
	3.5nm,0.4s							
KST				Lg		Lg	08 34 24.3	
	14nm,0.5s							
IUG	**Iuzhnay**	**2.27**	**267**	*e*P		**Pg**	**08 33 56.4**	**-0.2**
	0.6nm,0.3s							
IUG				*e*S		**Sg**	**08 34 26.6**	**+0.5**
	9.2nm,0.5s							
IUG	**Iuzhnay**	**2.27**	**267**	Pg		**Pg**	**08 33 57.3**	**+0.6**
	1.1nm,0.4s							
BRLS	**Borolday**	**2.49**	**288**	Pg		**Pb**	**08 33 59.1**	**+0.6**
	0.5nm,0.2s							
BRLS				Lg		Lg	08 34 31.3	
	2.2nm,0.4s							
BTLS	**Baital**	**2.81**	**14**	Pg		**Pb**	**08 34 02.3**	**-1.6**
	1.1nm,0.7s							
BTLS				Lg		Lg	08 34 36.7	
	1.7nm,0.3s							
TNSS	**Tian-Shan**	**2.94**	**75**	*e*P		**Pg**	**08 34 08.5**	**-1.1**
	baz=75							
TNSS				*e*S		**Sg**	**08 34 46.9**	**-0.9**
	baz=75							
TNSS	**Tian-Shan**	**2.94**	**75**	*e*P		**Pg**	**08 34 08.5**	**-1.1**
	1.5nm,0.5s							
TNSS				*e*S		**Sg**	**08 34 46.9**	**-0.9**
	5.5nm,0.5s							
KTBS	**Karatobe**	**2.99**	**61**	*e*P		**Pg**	**08 34 09.5**	**-1.0**
	baz=60							
KTBS				*e*S		**Sg**	**08 34 48.7**	**-0.5**
	baz=60							
KTBS	**Karatobe**	**2.99**	**61**	*e*P		**Pg**	**08 34 09.5**	**-1.0**
	1.0nm,0.7s							
KTBS				*e*S		**Sg**	**08 34 48.7**	**-0.5**
	4.9nm,0.4s							
KTBS	**Karatobe**	**2.99**	**61**	Pg		**Pb**	**08 34 07.8**	**+0.9**
	1.0nm,0.7s							
KTBS				Lg		Lg	08 34 46.5	
	4.9nm,0.4s							

*IDC **08** 08:46:17.9±2.5, 6°.73S×130°.62E, h63km±28km, mb3.6/2, mb1 4.3/7, mb1mx3.7/31, mbtmp4.4/7, ML4.5/5, Error ellipse: s-maj=38.0km s-min=19.6km az=80.0*
*NEIC **08** 08:46:19.0±2.2, 6°.52S±0°.05×130°.25E±0°.06, h108km±13km, mb4.3/6, Error ellipse: s-maj=10.7km s-min=5.4km az=128.0*
*DJA **08** 08:46:20.4±0.3, 7°.5±2°.3×13°.1E±°, h159km±6km, M4.5/9, mB5.3/3, mb4.4/6, MLv4.4/9, Mw(mB)4.7/3*

ISC 08 08:46:20.7±0.7, 6°.61S±0°.05×130°.68E±0°.09, h150km, n29, σ3°.30/30, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**1.49**	**156**	P		**Pn**	**08 46 51.0**	**+0.8**
SAUI				S		**Sn**	**08 47 14.6**	**+1.8**
SAUI	**Saumlaki**	**1.49**	**156**			**Pn**	**08 46 49.9**	**-0.3**
SAUI				Sn		**Sn**	**08 47 08.2**	**-4.6**
MSAI	**Masohi**	**3.69**	**332**	P		**Pn**	**08 47 17.5**	**+0.6**
AAI	**Ambon**	**3.82**	**319**	P		**Pn**	**08 47 17.8**	**-0.8**
FAKI	**Fak Fak**	**3.99**	**23**	P		**Pn**	**08 47 20.4**	**-0.4**
FAKI	**Fak Fak**	**3.99**	**23**	Pn		**Pn**	**08 47 20.4**	**-0.4**
NLAI	**Namlea**	**4.90**	**313**	P		**Pn**	**08 47 32.4**	**-0.4**
SIJI	**Sorong**	**5.74**	**6**	P		**Pn**	**08 47 42.4**	**-1.6**
	15nm,0.3s,baz=175,slow=19,SNR=24							
SIJI				S		**Sn**	**08 48 42.1**	**-6.9**
	23nm,0.3s,baz=102,slow=21,SNR=14							
MTN	**Manton Dam**	**6.21**	**176**			**Pn**	**08 47 49.9**	**-0.3**
SOEI	**Soe**	**7.08**	**243**	P		**Pn**	**08 48 00.6**	**-1.3**
	0.3nm49nm,0.8s							
SOEI	**Soe**	**7.08**	**243**			Pn	08 47 55.8	-6.1
BATI	**Baumata**	**7.81**	**242**	P		**Pn**	**08 48 08.0**	**-3.6**
	14nm,0.3s,baz=96,slow=10,SNR=7.0							
KNRA	**Kununurra**	**9.20**	**192**			**Pn**	**08 48 28.9**	**-1.2**
FITZ	**Fitzroy Crossi**	**12.43**	**203**	P		**Pn**	**08 49 09.3**	**-3.2**
	2.0nm,0.3s,baz=30,slow=11,SNR=40							
FITZ				S		Sn	08 51 17.1	-13
	2.2nm,0.3s,baz=82,slow=17,SNR=12							
FITZ	**Fitzroy Crossi**	**12.43**	**203**			**Pn**	**08 49 11.4**	**-1.2**
WRAB	**Tennant Creek**	**13.71**	**165**			**Pn**	**08 49 27.7**	**-1.3**
WRA	**Warramunga Arr**	**13.72**	**165**	P		**Pn**	**08 49 27.1**	**-2.0**
	1.9nm,0.3s,baz=349,slow=13,SNR=66							
WRA				S		**Sn**	**08 51 52.6**	**-8.5**
	1.7nm,0.3s,baz=352,slow=20,SNR=5.1							
COEN	**Coen**	**14.29**	**122**	Pn		**P**	**08 49 40.5**	**+1.4**
AS31	**Alice Springs**	**17.23**	**170**			**Pn**	**08 50 14.0**	**+1.6**
AS31				IAmb		IAmb	08 50 17.4	
	comp=Z,4.8nm,0.6s							
ASAR	**Alice Springs**	**17.24**	**170**	P		**Pn**	**08 50 14.2**	**+1.7**
	comp=Z,2.2nm,0.3s,baz=342,slow=9.0,SNR=115							
ASAR				S		**S**	**08 53 18.4**	**-5.3**
	comp=Z,0.4nm,0.3s,baz=352,slow=25,SNR=4.4							
PSA00	**Pilbara Seismi**	**18.19**	**214**	P		**Pn**	**08 50 23.8**	**-0.1**
PSA00				IAmb		IAmb	08 50 25.9	
	comp=Z,11nm,0.5s							
FORT	**Forrest**	**24.17**	**186**	P		**P**	**08 51 26.1**	**+3.0**
FORT				IAmb		IAmb	08 51 38.5	
	comp=Z,20nm,1.1s							
BBOO	**Buckleboo**	**26.54**	**170**	P		**P**	**08 51 48.8**	**+4.3**
BBOO				IAmb		IAmb	08 51 56.5	
	comp=Z,14nm,1.4s							
STKA	**Stephens Creek**	**27.12**	**159**	P		**P**	**08 51 54.6**	**+4.8**
	comp=Z,1.2nm,0.5s,baz=338,slow=7.8,SNR=7.1							
STKA	**Stephens Creek**	**27.12**	**159**	IAmb		IAmb	08 51 55.2	
	comp=Z,0.5nm,0.9s							
KSH	**Kashi**	**68.20**	**317**	P		P	08 57 11.4	+6.2
KSH				pP		pP	08 57 41.1	+0.5
KSH				PP		PP	08 59 45.1	+7.3
KSH				S		**S**	**09 05 58.1**	**+4.4**
KSH				sS		sS	09 06 52.7	-1.0
KSH	**Kashi**	**68.20**	**317**	SS		SS	09 10 26.3	+6.5
KSH				pmax		pmax		
	comp=Z,330nm,7.3s							
KSH				AMB		AMB		
	comp=Z,440nm,8.9s							
KSH				LR		LR		
	comp=N,190nm,5.1s							
KSH				LR		LR		
	comp=E,140nm,4.6s							
KSH				LR		LR		
	comp=Z,290nm,5.2s							
MKAR	**Makanchi Array**	**68.28**	**326**	P		P	08 57 12.6	+7.1
	comp=Z,0.4nm,0.4s,baz=113,slow=7.8,SNR=7.9							
YAK	**Yakutsk**	**68.45**	**359**	P		**P**	**08 57 07.8**	**+1.8**

*ISK **08** 09:03:11.7, 35°.81N×31°.91E, h29km, ML3.0/19*
*DDA **08** 09:03:12.9, 35°.80N×32°.19E, h38km±2km, ML2.6*
*NIC **08** 09:03:14.8±0.0, 35°.75N×32°.13E, h24km±3km, Md3.4/3, Ml2.7/3*

ISC 08 09:03:12.6±1.0, 35°.82N±0°.03×31°.98E±0°.03, h28km±11km, n56, σ0°.96/76, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GAZI	**Gazipasa**	**0.50**	**33**	PG		**Pb**	**09 03 23.6**	**+0.6**
GAZI				SG		**Sn**	**09 03 31.7**	**0.0**
GAZI	**Gazipasa**	**0.50**	**33**	*i*P		**Pb**	**09 03 23.5**	**+0.5**
GAZI				*i*S		**Sb**	**09 03 30.6**	**+0.5**
GAZI				IAML			09 03 32.0	
	comp=N,312nm,0.4s							
GAZI				IAML			09 03 32.0	
	comp=E,339nm,0.3s							
ALFC	**Alefka**	**0.83**	**142**	P		**Pb**	**09 03 28.3**	**-0.2**
ALFC				S		**Sb**	**09 03 39.2**	**-0.2**
ALFC				AML		AML	09 03 39.8	
	comp=E,1.0nm,0.2s							
ALFC				AML		AML	09 03 39.8	
	comp=E,1.0nm,0.2s							
ALFC				AML		AML	09 03 40.9	
	comp=E,1.4nm,0.3s							
ALFC				AML		AML	09 03 40.9	
	comp=E,1.4nm,0.3s							
ALFC				AMd			09 04 39.4	
ALFC				AMd			09 04 39.4	
AKMS	**Akamas**	**0.85**	**160**	P		**Pn**	**09 03 29.1**	**+0.4**
AKMS				S		**Sn**	**09 03 41.1**	**+0.9**
AKMS				AML		AML	09 03 42.4	
	comp=E,1.7nm,0.2s							
AKMS				AML		AML	09 03 42.4	
	comp=E,1.7nm,0.2s							
AKMS				AMd			09 04 42.9	
AKMS				AMd			09 04 42.9	
TEKE	**Tekeli-Mersin**	**0.98**	**70**	PG		**Pb**	**09 03 30.7**	**-0.3**
TEKE				SG		**Sn**	**09 03 44.1**	**+0.7**
LEF	**Lefka**	**1.02**	**133**	PG		**Pb**	**09 03 30.9**	**-0.7**
LEF	**Lefka**	**1.02**	**133**	*i*P		**Pb**	**09 03 30.4**	**-1.2**
LEF				*i*S		**Sb**	**09 03 42.1**	**-2.5**
LEF				IAML			09 03 45.0	
	comp=N,101nm,0.3s							
LEF				IAML			09 03 47.0	
	comp=E,102nm,0.6s							
ERMK	**Ermenek**	**1.12**	**42**	*i*P		**Pn**	**09 03 32.5**	**-0.1**
ERMK				*i*S		**Sb**	**09 03 47.0**	**-0.8**
ERMK				IAML			09 03 49.0	
	comp=E,277nm,0.3s							
ERMK				IAML			09 03 56.0	
	comp=N,200nm,0.3s							
KEPZ	**Antalya-Kepez**	**1.12**	**345**	*i*P		**Pn**	**09 03 31.2**	**-1.3**
KEPZ				*i*S		**Sb**	**09 03 45.5**	**-2.2**
KEPZ				IAML			09 03 46.0	
	comp=E,100nm,0.6s							
KEPZ				IAML			09 03 52.0	
	comp=N,98nm,0.6s							
BERE	**Bereket-Mersin**	**1.14**	**62**	PN		**Pn**	**09 03 32.9**	**0.0**
NATA	**Nata**	**1.14**	**155**	P		**Pb**	**09 03 35.1**	**+1.4**
YORU	**Yoruktepe-Mers**	**1.21**	**73**	PN		**Pn**	**09 03 33.9**	**+0.2**
OREN	**Orenkoy-Mersin**	**1.26**	**72**	PN		**Pn**	**09 03 34.6**	**+0.2**
SZAC	**Souni**	**1.29**	**145**	P		**Pb**	**09 03 37.1**	**+0.8**
SZAC				S		**Sb**	**09 03 54.9**	**+2.4**
SZAC				AMd			09 04 40.5	
SZAC				AMd			09 04 40.5	
AKK1	**Akkuyu-Mersin**	**1.31**	**75**	PN		**Pn**	**09 03 35.6**	**+0.6**
GULN	**MERSIN_Gulnar**	**1.32**	**73**	*i*P		**Pn**	**09 03 34.8**	**-0.5**
GULN				*i*S		**Sn**	**09 03 51.8**	**-0.1**
GULN				IAML			09 03 53.0	
	comp=N,226nm,0.4s							
GULN				IAML			09 03 53.0	
	comp=E,170nm,0.4s							
TEPK	**Tepekoy-MERSIN**	**1.33**	**72**	PN		**Pn**	**09 03 35.4**	**0.0**
TEVE	**Tevekalti-Mers**	**1.34**	**62**	PN		**Pn**	**09 03 35.6**	**+0.1**
ATHAL	**Athalassa**	**1.34**	**120**	P		**Pn**	**09 03 36.6**	**+1.1**
ATHAL				S		**Sn**	**09 03 52.3**	**0.0**
CSS	**Mathiatis**	**1.40**	**127**	PN		**Pn**	**09 03 35.8**	**-0.5**
CSS	**Mathiatis**	**1.40**	**127**	P		**Pn**	**09 03 34.7**	**-1.5**
CSS				S		**Sn**	**09 03 52.2**	**-1.5**
YESI	**Yesilovacik-Me**	**1.40**	**74**	PN		**Pn**	**09 03 36.5**	**+0.2**
AKUM	**Antalya-Kumluc**	**1.42**	**291**	*i*P		**Pn**	**09 03 36.7**	**+0.2**
AKUM				*i*S		**Sb**	**09 03 56.7**	**+0.7**
AKUM				IAML			09 04 02.0	
	comp=N,103nm,0.8s							
AKUM				IAML			09 04 06.0	
	comp=E,119nm,0.4s							
TISA	**Tisan-Mersin**	**1.42**	**75**	PN		**Pn**	**09 03 37.1**	**+0.5**
IKL	**Isikli**	**1.45**	**73**	PN		**Pn**	**09 03 37.5**	**+0.6**
AKIN	**Akıncılar- Kıb**	**1.46**	**123**	PN		**Pn**	**09 03 36.6**	**-0.5**
KARG	**Kargicak-Mersi**	**1.46**	**74**	PN		**Pn**	**09 03 37.5**	**+0.4**
ASGA	**Asgata**	**1.46**	**134**	P		**Pb**	**09 03 39.9**	**+0.8**
ASGA				S		**Sn**	**09 03 56.7**	**+1.4**
KEBE	**Keben-Mersin**	**1.54**	**65**	PN		**Pn**	**09 03 38.9**	**+0.6**
MVOU	**Mavrovouni**	**1.57**	**120**	P		**Pn**	**09 03 38.0**	**-0.7**
MVOU				S		**Sn**	**09 03 55.4**	**-2.6**
MVOU				AML		AML	09 03 56.5	
	comp=E,0.4nm,0.4s							
MVOU				AML		AML	09 03 56.5	
	comp=E,0.4nm,0.4s							
SILI	**Silifke-Mersin**	**1.67**	**70**	PN		**Pn**	**09 03 40.7**	**+0.7**
EREN	**Erenkoy**	**1.81**	**98**	PN		**Pn**	**09 03 41.9**	**0.0**
EREN	**Erenkoy**	**1.81**	**98**	*i*P		**Pn**	**09 03 42.4**	**+0.5**
EREN				*i*S		**Sn**	**09 04 02.3**	**-1.6**
EREN				IAML			09 04 07.0	
	comp=N,127nm,0.4s							
EREN				IAML			09 04 07.0	
	comp=E,125nm,0.3s							
KIZK	**Mersin**	**1.88**	**69**	PN		**Pn**	**09 03 43.4**	**+0.6**
KIZK	**Mersin**	**1.88**	**69**	*i*P		**Pn**	**09 03 42.9**	**0.0**
KIZK				IAML			09 04 10.0	
	comp=N,44nm,0.4s							
KIZK				IAML			09 04 11.0	
	comp=E,37nm,0.2s							
KMER	**Konya-Meram**	**1.97**	**9**	*i*P		**Pn**	**09 03 44.5**	**+0.2**
KONT	**Konya--Tatoy**	**2.15**	**8**	PN		**Pn**	**09 03 46.8**	**+0.2**
KONT	**Konya--Tatoy**	**2.15**	**8**	*i*P		**Pn**	**09 03 46.8**	**+0.2**
DOGA	**KONYA_Doganhis**	**2.30**	**354**	*i*P		**Pn**	**09 03 48.6**	**-0.2**
DOGA				IAML			09 04 22.0	
	comp=N,29nm,0.8s							
DOGA				IAML			09 04 24.0	
	comp=E,38nm,0.7s							
KERG	**Konya-Eregli**	**2.35**	**47**	*i*P		**Pn**	**09 03 49.4**	**-0.1**
KERG				*i*S		**Sn**	**09 04 17.6**	**+0.1**
KERG				IAML			09 04 20.0	
	comp=E,57nm,0.3s							
KERG				IAML			09 04 20.0	
	comp=N,75nm,0.4s							
BAGO	**Egridir - ISPA**	**2.37**	**337**	*i*P		**Pn**	**09 03 50.5**	**+0.7**
BAGO				*i*S		**Sn**	**09 04 18.1**	**+0.2**
BAGO				IAML			09 04 23.0	
	comp=N,7.2nm,0.3s							
BAGO				IAML			09 04 24.0	
	comp=E,11nm,0.6s							
LADK	**Ladik-KONYA**	**2.40**	**7**	PN		**Pn**	**09 03 49.9**	**-0.3**
GOLH	**Golhisar**	**2.41**	**307**	*i*P		**Pn**	**09 03 52.4**	**+2.1**
GOLH				IAML			09 04 18.0	
	comp=E,109nm,0.8s							
GOLH				IAML			09 04 31.0	
	comp=N,22nm,0.7s							
FETY	**Fethiye**	**2.48**	**290**	PN		**Pn**	**09 03 50.5**	**-0.7**
FETY	**Fethiye**	**2.48**	**290**	*i*P		**Pn**	**09 03 50.5**	**-0.7**
FETY				IAML			09 04 20.0	
	comp=E,16nm,0.4s							
FETY				IAML			09 04 21.0	
	comp=N,15nm,0.8s							
GULE	**Gulek**	**2.69**	**56**	*i*P		**Pn**	**09 03 55.6**	**+1.4**
GULE				*i*S		**Sn**	**09 04 27.6**	**+1.7**
GULE				IAML			09 04 30.0	
	comp=E,73nm,0.4s							
GULE				IAML			09 04 53.0	
	comp=N,54nm,1.4s							
KRTS	**Karatas**	**2.85**	**74**	PN		**Pn**	**09 03 57.1**	**+0.9**
CHBY	**Cihanbeyli**	**2.86**	**15**	PN		**Pn**	**09 03 56.7**	**+0.3**
KARA	**Karaisalı**	**2.87**	**59**	PN		**Pn**	**09 03 56.9**	**+0.4**
TAVA	**DENIZLI_Tavas**	**2.96**	**305**	*i*P		**Pn**	**09 03 56.7**	**-1.2**
TAVA				IAML			09 04 43.0	
	comp=N,23nm,0.5s							
TAVA				IAML			09 04 43.0	
	comp=E,36nm,0.5s							
CMRD	**Camardi-Nigde**	**3.04**	**52**	PN		**Pn**	**09 04 00.2**	**+1.2**
AKO	**Adana**	**3.24**	**58**	*i*P		**Pn**	**09 04 01.6**	**0.0**
AKO				*i*S		**Sn**	**09 04 39.8**	**+0.6**
AKO				IAML			09 04 54.0	
	comp=E,9.0nm,0.7s							
YAHY	**KAYSERI_Yahyal**	**3.54**	**49**	*i*P		**Pn**	**09 04 05.8**	**0.0**
VYHS	**Vyhne**	**15.95**	**327**	*e*P		**Pn**	**09 06 53.5**	**-1.5**
LANS	**Liptovska Anna**	**16.18**	**329**	*e*P		**Pn**	**09 06 58.9**	**+1.0**
MODS	**Modra-Piesok**	**16.59**	**324**	*e*P		**Pn**	**09 07 03.1**	**0.0**

*KRNET **08** 09:18:57.1±0.1, 39°.33N×76°.51E, mb3.1*
*SOME **08** 09:18:57.3, 39°.45N×76°.87E, h20km*
*NNC **08** 09:18:58.4±1.4, 39°.55N×76°.85E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=9.0km s-min=7.3km az=175.0*

ISC 08 09:19:00.6±2.9, 39°.4N±0°.1×76°.83E±0°.06, h25km, n37, σ2°.14/55, 12C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NRN	**Naryn**	**2.17**	**343**	⇓*i*P		**Pn**	**09 19 35.7**	**+0.2**
	baz=49							
NRN				⇓*i*S		**Sb**	**09 20 03.9**	**-2.2**
	baz=49							
KDJ	**Kajisay**	**2.79**	**5**	⇑*i*P		**Pn**	**09 19 45.8**	**+2.0**
	baz=10.0							
KDJ				⇑*i*S		**Sb**	**09 20 21.1**	**-2.5**
	baz=10.0							
ULHL	**Ulahol**	**2.93**	**351**	P		**Pb**	**09 19 49.2**	**-2.9**
	SNR=10							
KZA	**Kyzart**	**2.98**	**337**	P		**Pn**	**09 19 49.0**	**+2.4**
	SNR=18							
ARLS	**Aral**	**3.15**	**324**	⇓*i*P		**Pn**	**09 19 48.2**	**-0.6**
	baz=28							
ARLS				⇓*i*S		**Sn**	**09 20 25.8**	**+0.2**
	baz=28							
BOOM	**Boomskoye usch**	**3.21**	**348**	⇑*i*P		**Pn**	**09 19 50.5**	**+1.0**
	baz=53							
BOOM				⇑*i*S		**Sn**	**09 20 28.9**	**+1.8**
	baz=53							
UCH	**Uchtor**	**3.37**	**329**	⇑*i*P		**Pn**	**09 19 53.1**	**+1.1**
	baz=33							
UCH				⇑*i*S		**Sn**	**09 20 32.0**	**+0.6**
	baz=33							
UCH	**Uchtor**	**3.37**	**329**	P		**Pb**	**09 19 58.4**	**-1.5**
	SNR=6.5							
KBK	**Karagaybulak**	**3.60**	**337**	⇑*i*P		**Pn**	**09 19 56.5**	**+1.6**
	baz=41							
KBK				⇑*i*S		**Sn**	**09 20 39.1**	**+2.5**
	baz=41							
KBK	**Karagaybulak**	**3.60**	**337**	P		**Pb**	**09 19 59.9**	**-3.6**
	SNR=6.4							
TNSS	**Tian-Shan**	**3.68**	**1**	*e*P		**Pb**	**09 20 02.5**	**-2.7**
	12nm,0.7s							
TNSS				*e*S		**Sb**	**09 20 49.4**	**-0.2**
	13nm,0.4s							
TNSS	**Tian-Shan**	**3.68**	**1**	Pg		**Pb**	**09 20 02.5**	**-2.7**
	12nm,0.7s							
TNSS				Lg		Lg	09 20 50.3	
	13nm,0.4s							
TKM2	**Tokmak 2**	**3.69**	**346**	P		**Pn**	**09 19 58.6**	**+2.4**
	SNR=5.5							
TKM2	**Tokmak 2**	**3.69**	**346**	⇑Pg		**Pb**	**09 20 01.1**	**-4.0**
	3.5nm,0.5s							
TKM2				⇓Lg		Lg	09 20 50.0	
	13nm,0.6s							
AAK	**Ala-Archa**	**3.73**	**332**	⇓Pg		**Pb**	**09 20 04.2**	**-1.6**
	3.8nm,0.5s							
AAK				⇑Lg		Lg	09 20 51.6	
	9.2nm,0.4s							
KST	**Kastek**	**3.75**	**350**	*e*P		**Pb**	**09 20 01.8**	**-4.2**
	4.3nm,0.8s							
KST				*e*S		**Sb**	**09 20 48.4**	**-2.7**
	15nm,0.5s							
KST	**Kastek**	**3.75**	**350**	Pg		**Pb**	**09 20 01.8**	**-4.2**
	4.3nm,0.8s							
KST				Lg		Lg	09 20 49.1	
	15nm,0.5s							
MTBS	**Maitube**	**3.79**	**356**	*e*P		**Pb**	**09 20 04.6**	**-2.2**
	3.7nm,0.2s							
MTBS				*e*S		**Sb**	**09 20 53.0**	**+0.8**
	11nm,0.4s							
MDOK	**Medeo**	**3.81**	**2**	*e*P		**Pb**	**09 20 04.8**	**-2.4**
	5.0nm,0.8s							
MDOK				*e*S		**Sb**	**09 20 53.3**	**+0.3**
	23nm,0.6s							
KOTS	**Kotyrbulak**	**3.88**	**3**	*e*P		**Pb**	**09 20 06.2**	**-2.3**
	14nm,0.5s							
KOTS				*e*S		**Sb**	**09 20 55.7**	**+0.6**
	41nm,0.5s							
KOTS	**Kotyrbulak**	**3.88**	**3**	Pg		**Pb**	**09 20 06.2**	**-2.3**
	14nm,0.5s							
KOTS				Lg		Lg	09 20 56.3	
	41nm,

ARXS					*eS*		**Sb**	**09 21 26.6**	**+1.9**
	12nm,0.9s								
ARXS	**Arharly**	**4.92**	**8**	Pg		**Pb**	**09 20 24.1**	**-1.9**
	4.9nm,0.7s								
ARXS					Lg	Lg	09 21 26.9		
	12nm,0.9s								
KK31	**Karatay Array**	**6.06 310**		⇑Lg		Lg	09 22 06.4		
	2.0nm,0.6s,baz=129,slow=27,SNR=7.2								

*NEIC **08** 09:20:56.8±1.5,23.°49N±0.°08×141.°8E±0.°2, h116km±7km, mb4.5/14, Error ellipse: s-maj=24.6km s-min=11.8km az=89.0*
*JMA **08** 09:20:58.5±0.2,24.°17N×140.°67E, h0km, M5.7*
*IDC **08** 09:20:59.4±0.8,23.°57N×141.°87E, h139km±7km, mb3.7/14, mb1 3.8/16,mb1mx3.6/39,mbtmp4.1/16,MS3.6/4, Ms1 3.6/4,ms1mx3.0/37, Error ellipse: s-maj=23.9km s-min=10.7km az=95.0*

ISC 08 09:20:55.2±0.6, 23.°56N±0.°06×141.°7E±0.°1, h100km, n60, σ2s10/72, mb4.2/21, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHH2	**Haha-jima-NKT2**	**3.10**	**8**	P	**Pn**	**09 21 45.9**	**+3.7**
JHH2				*eS*	**Sn**	**09 22 21.2**	**+2.7**
JCJ	**Chichijima**	**3.55**	**7**	P	**Pn**	**09 21 52.1**	**+3.8**
	186nm,0.3s,baz=293,slow=23,SNR=185						
JCJ				S	**Sn**	**09 22 30.4**	**+0.9**
	98nm,0.3s,baz=313,slow=16,SNR=5.5						
CBIJ	**Chichi jima**	**3.56**	**7**	P	**Pn**	**09 21 51.7**	**+3.3**
CBIJ				S	**Sn**	**09 22 31.5**	**+2.0**
JHJ2	**Mitsune**	**9.66 351**		Pn	**Pn**	**09 23 13.0**	**+1.7**
JHJ2				Sn	**Sn**	**09 24 59.8**	**+1.9**
JMKN	**Mikurajimanish**	**10.46 350**		P	**Pn**	**09 23 23.2**	**+1.1**
BSO1	**Boso 1**	**11.08 357**		P	**Pn**	**09 23 30.1**	**+0.1**
BSO1				*eS*	**Sn**	**09 25 25.7**	**-5.8**
BSO3	**Boso 3**	**11.25 355**		P	**Pn**	**09 23 31.6**	**-1.0**
BSO3				*eS*	**Sn**	**09 25 32.2**	**-4.0**
BSO4	**Boso 4**	**11.46 354**		P	**Pn**	**09 23 35.7**	**+0.2**
BSO4				*eS*	**Sn**	**09 25 38.3**	**-3.0**
JOD2	**Odawara 2**	**11.88 350**		P	**Pn**	**09 23 41.9**	**+0.6**
JOD2				*eS*	**Sn**	**09 25 47.9**	**-4.0**
JHU	**Hanno**	**12.43 351**		P	**Pn**	**09 23 48.1**	**-0.4**
JHU				*eS*	**Sn**	**09 25 58.6**	**-6.6**
INU	**Inuyama**	**12.43 342**		Pn	**Pn**	**09 23 50.5**	**+1.9**
JRY	**Ryogami san**	**12.65 350**		P	**Pn**	**09 23 50.8**	**-0.7**
JRY				*eS*	**Sn**	**09 26 05.5**	**-5.1**
JAG	**Ashikaga**	**12.97 352**		P	**Pn**	**09 23 53.2**	**-2.4**
JAG				*eS*	Sn	09 26 09.5	-8.8
JHO	**Hitachi**	**13.05 356**		P	**Pn**	**09 23 54.9**	**-1.8**
JHO				*eS*	Sn	09 26 08.1	-12
MJAR	**Matsushiro Arr**	**13.29 348**		P	**Pn**	**09 23 58.8**	**-1.0**
	0.2nm,0.3s,baz=150,slow=11,SNR=7.7						
MJAR	**Matsushiro Arr**	**13.29 348**			**Pn**	**09 24 01.8**	**+1.9**
MAJO	**Matsushiro**	**13.29 348**		Pn	**Pn**	**09 24 01.7**	**+1.8**
MJB9	**Matsu-Tunnel**	**13.29 348**		Pn	**Pn**	**09 24 01.4**	**+1.5**
KSRS	**Korea Array**	**18.20 323**		P	**P**	**09 25 01.9**	**+1.6**
	1.2nm,0.3s,baz=135,slow=12,SNR=11						
KSAR	**Wonju Array Be**	**18.22 323**		P	**Pn**	**09 25 02.1**	**+0.7**
USRK	**Ussuriysk Ar.**	**22.08 341**		P	**P**	**09 25 41.7**	**-0.3**
	1.0nm,0.7s,baz=142,slow=9.9,SNR=3.3						
USRK	**Ussuriysk Ar.**	**22.08 341**		P	**P**	**09 25 44.0**	**+2.0**
KLR	**Kul'dur**	**26.80 345**		P	**P**	**09 26 27.4**	**+1.7**
	0.6nm,0.4s,baz=154,slow=9.5,SNR=3.5						
SEY	**Seymchan**	**40.02**	**8**	P	**P**	**09 28 20.9**	**+1.0**
	1.5nm,0.5s,baz=184,slow=21,SNR=6.5						
SEY				pP	**sP**	**09 28 51.5**	**-1.9**
	1.8nm,0.6s,baz=214,slow=10,SNR=3.0						
WR0	**Warramunga Arr**	**43.81 190**		P	**P**	**09 28 52.0**	**+0.7**
WRAB	**Tennant Creek**	**43.81 190**		P	**P**	**09 28 51.0**	**-0.4**
WRAB				IAmb	IAmb	09 28 52.8	
	comp=Z,5.0nm,0.6s						
WRA	**Warramunga Arr**	**43.82 190**		P	**P**	**09 28 51.8**	**+0.4**
	comp=Z,3.0nm,0.4s,baz=10,slow=8.7,SNR=42						
WRA				ScP	**ScP**	**09 34 15.7**	**-3.2**
	comp=Z,0.7nm,0.8s,baz=9.8,slow=5.7,SNR=4.1						
WRA				LR	LR	09 45 24.2	
	comp=Z,62nm,21.9s,baz=70,slow=33						
WRA	**Warramunga Arr**	**43.82 190**		P	**P**	**09 28 51.6**	**+0.2**
ASAR	**Alice Springs**	**47.54 190**		P	**P**	**09 29 21.2**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=14,slow=10,SNR=16						
ASAR				pP	**sP**	**09 29 53.4**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=21,slow=6.7,SNR=2.0						
ASAR				ScP	**ScP**	**09 34 29.8**	**-4.5**
	comp=Z,0.2nm,0.5s,baz=18,slow=3.2,SNR=4.2						
ASAR				LR	LR	09 47 34.7	
	comp=Z,85nm,20.2s,baz=42,slow=34						
ASAR	**Alice Springs**	**47.54 190**		P	**P**	**09 29 20.9**	**+0.1**
PSAD1	**Pilbara Seismi**	**49.54 207**		P	P	09 29 33.1	-2.9
PSAC2	**Pilbara Seismi**	**49.61 207**		P	**P**	**09 29 35.4**	**-1.2**
PSAC2				IAmb	IAmb	09 29 36.6	
	comp=Z,8.8nm,0.9s						
DZM	**Mont Dzumac**	**51.35 150**		LR	LR	09 49 31.3	
	comp=Z,62nm,19.1s,baz=250,slow=33						
ZALV	**Zalesovo Beam**	**51.90 321**		LR	LR	09 53 46.0	
	comp=Z,54nm,18.8s,baz=334,slow=38						
MKAR	**Makanchi Array**	**52.43 312**		P	**P**	**09 29 58.8**	**+1.3**
	comp=Z,0.2nm,0.4s,baz=81,slow=8.7,SNR=3.5						
STKA	**Stephens Creek**	**55.12 180**		P	**P**	**09 30 16.4**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=31,slow=5.5,SNR=6.2						
STKA	**Stephens Creek**	**55.12 180**		P	**P**	**09 30 17.1**	**0.0**
KDAK	**Kodiak Island**	**57.48 35**		P	**P**	**09 30 32.6**	**-1.0**
	comp=Z,9.8nm,1.0s,baz=288,slow=6.4,SNR=3.5						
FRU1	**Bishkek**	**57.84 307**			**S**	**09 38 27.3**	**-1.1**
IMAR	**Indian Mountai**	**58.41**	**26**	P	**P**	**09 30 40.8**	**+0.8**
PPLA	**Purkeypile**	**58.44**	**29**	P	**P**	**09 30 41.3**	**+0.9**
SUA	**Susitna One**	**58.89**	**31**	P	**P**	**09 30 43.5**	**-0.1**
SUA				IAmb	IAmb	09 30 46.1	
	comp=Z,6.8nm,1.1s						
KTH	**Kantishna Hill**	**59.12**	**29**	P	**P**	**09 30 45.4**	**+0.3**
KTH				IAmb	IAmb	09 30 46.2	
	comp=Z,3.8nm,1.0s						
PMR	**Palmer**	**59.67**	**31**	P	**P**	**09 30 48.1**	**-0.7**
ILAR	**Eielson Array**	**61.03**	**28**	P	**P**	**09 30 56.8**	**-1.2**
	comp=Z,1.0nm,0.8s,baz=256,slow=5.6,SNR=10						
ILAR	**Eielson Array**	**61.03**	**28**	P	**P**	**09 30 57.0**	**-1.1**
SCRK	**Sand Creek**	**62.23**	**29**	P	**P**	**09 31 06.2**	**0.0**
SCRK				IAmb	IAmb	09 31 06.8	
	comp=Z,3.0nm,0.9s						
BALM	**Baldy**	**62.91**	**32**	P	**P**	**09 31 10.4**	**-0.4**
BALM				IAmb	IAmb	09 31 27.4	
	comp=Z,11nm,1.5s						
BCAR	**Beaver Creek A**	**63.19**	**30**	P	**P**	**09 31 12.7**	**+0.2**
DAWY	**Dawson**	**64.25**	**29**	P	**P**	**09 31 19.8**	**+0.3**
INK	**Inuvik**	**66.43**	**24**	P	**P**	**09 31 32.7**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=290,slow=6.7,SNR=21						
INK	**Inuvik**	**66.43**	**24**	P	**P**	**09 31 33.3**	**-0.1**
YKW3	**Yellowknife Ar**	**75.44**	**28**	P	**P**	**09 32 27.6**	**-0.3**
YKW3				IAmb	IAmb	09 32 30.3	
	comp=Z,6.2nm,1.5s						
YKA	**Yellowknife Ar**	**75.47**	**28**	P	**P**	**09 32 27.5**	**-0.6**
	comp=Z,0.9nm,0.4s,baz=293,slow=5.9,SNR=33						
YKA				pP	**sP**	**09 33 01.6**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=292,slow=6.0,SNR=5.3						
ARCES	**ARCESS Array B**	**76.72 341**		P	**P**	**09 32 35.7**	**+0.6**
	comp=Z,4.1nm,0.9s,baz=76,slow=7.7,SNR=3.7						
KBZ	**Khabaz**	**80.09 313**		P	**P**	**09 32 55.1**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=18,slow=5.7,SNR=4.5						
FINES	**FINESS Array B**	**80.91 334**		P	**P**	**09 32 58.3**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=80,slow=3.3,SNR=9.8						
FINES	**FINESS Array B**	**80.91 334**		P	**P**	**09 32 58.5**	**+0.4**
PLCA	**Paso Flores**	**148.01 130**		PKPbc	**PKPdf**	**09 40 28.3**	**+2.3**
	comp=Z,0.7nm,0.5s,baz=270,slow=6.1,SNR=7.2						
PLCA	**Paso Flores**	**148.01 130**			**PKPdf**	**09 40 28.7**	**+2.7**

*IDC **08** 09:42:33.5±3.0,52.°13N×172.°85W, h0km, mb3.9/5, mb1 4.1/7, mb1mx3.6/48, mbtmp3.9/7, ML3.9/2, Error ellipse: s-maj=60.2km s-min=44.4km az=102.0*
*AEIC **08** 09:42:43.3±2.8,52.°01N±0.°08×172.°60W±0.°04, h37km±8km, ML3.8/29, mb4.0/13(NEIC), Error ellipse: s-maj=12.1km s-min=2.1km az=195.0*

ISC 08 09:42:37.2±0.8, 51.°45N±0.°09×172.°70W±0.°04, h27km, n63, σ1s98/62, mb4.0/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**1.20 310**			**Pb**	**09 43 00.8**	**+1.6**
ATKA	**Atka Island**	**1.20 310**			**Sb**	**09 43 14.4**	**+0.1**
KOFP	**Korovin Flat P**	**1.20 314**			**Pb**	**09 43 01.0**	**+1.7**
KOSE	**Korovin Southe**	**1.23 318**			**Pb**	**09 43 00.8**	**+1.1**
KOKL	**Mount Kliuchef**	**1.28 314**			**Pb**	**09 43 01.9**	**+1.2**
KONE	**Korovin Northe**	**1.29 318**			**Pb**	**09 43 01.4**	**+0.6**
KONE					**Sn**	**09 43 15.0**	**-0.9**
KOWE	**Korovin West**	**1.33 314**			**Pb**	**09 43 02.5**	**+1.0**
GSMY	**Great Sitkin M**	**2.17 287**			**Pb**	**09 43 16.8**	**+1.0**
GSTR	**Great Sitkin T**	**2.19 289**			**Pb**	**09 43 17.2**	**+1.1**
GSTD	**Great Sitkin T**	**2.23 287**			**Pb**	**09 43 17.8**	**+1.0**
GSTD					**Sb**	**09 43 46.6**	**+2.6**
ADAG	**Mount Adagdak**	**2.49 284**			**Pb**	**09 43 22.7**	**+1.6**
ADK	**Adak**	**2.52 282**			**Pb**	**09 43 23.1**	**+1.4**
ADK				Sn	**Sb**	**09 43 52.3**	**0.0**
KIWB	**Kanaga Island**	**2.80 280**			**Pb**	**09 43 27.0**	**+0.5**
NIKH	**Nikolski High**	**2.81 56**			**Pn**	**09 43 22.1**	**+1.8**
NIKH				Sn	**Sn**	**09 43 50.4**	**-3.0**
NIKH	**Nikolski High**	**2.81 56**			LR	09 43 52.5	
KIMD	**Kanaga Island**	**2.85 278**			**Pb**	**09 43 27.9**	**+0.7**
TAPA	**Tanaga Point A**	**3.21 279**			**Pb**	**09 43 32.7**	**-0.8**
TAFP	**Tanaga Falls P**	**3.32 280**			**Pb**	**09 43 34.7**	**-0.7**
TASE	**Tanaga Southea**	**3.35 279**			**Pb**	**09 43 35.0**	**-0.8**
OKWE	**Okmok W'ng Wal**	**3.40 52**			**Pn**	**09 43 29.9**	**+1.5**
OKRE	**Okmok R'deer P**	**3.46 51**			**Pn**	**09 43 30.8**	**+1.5**
MSW	**Makushin Switc**	**4.37 53**			**Pn**	**09 43 43.1**	**+1.5**
MTBL	**Makushin Table**	**4.45 53**			**Pn**	**09 43 44.5**	**+1.6**
UNV	**Unalaska Vale**	**4.47 55**			**Pn**	**09 43 45.0**	**+2.0**
UNV					**Sn**	**09 44 39.2**	**+5.0**
AKMO	**Akutan Morgan**	**4.85 54**			**Pn**	**09 43 50.3**	**+2.0**
AKGG	**Akutan Green G**	**4.91 53**			**Pn**	**09 43 51.3**	**+2.1**
AKUT	**Akutan**	**4.99 55**		Pn	**Pn**	**09 43 53.1**	**+2.8**
SDPT	**Sand Point**	**8.28 57**			**Pn**	**09 44 36.0**	**+0.6**
CNBA	**Chernabura Isl**	**8.57 62**		Pn	**Pn**	**09 44 40.3**	**+0.9**
OHAK	**Old Harbor**	**12.70 55**		Pn	**Pn**	**09 45 34.6**	**-1.1**
KDAK	**Kodiak Island**	**13.24 54**		Pn	**Pn**	**09 45 40.1**	**-3.1**
	0.8nm,0.3s,baz=259,slow=10,SNR=15						
KDAK	**Kodiak Island**	**13.24 54**			**Pn**	**09 45 40.3**	**-2.9**
KTH	**Kantishna Hill**	**16.74 35**		Pn	**Pn**	**09 46 28.3**	**-1.2**
MLY	**Manley**	**17.71 31**		Pn	**Pn**	**09 46 39.9**	**-1.7**
ILAR	**Eielson Array**	**18.89 35**		P	**P**	**09 46 49.5**	**-5.6**
	0.4nm,0.3s,baz=234,slow=8.8,SNR=18						
CTGM	**Chitina Glacie**	**19.69 49**		P	**P**	**09 47 04.0**	**-0.1**
CTGM				IAmb	IAmb	09 47 05.0	
	comp=Z,4.4nm,1.0s						
BCAR	**Beaver Creek A**	**20.13**	**43**	P	**P**	**09 47 09.2**	**+0.3**
INK	**Inuvik**	**25.25**	**33**	P	**P**	**09 47 55.9**	**-4.6**
	comp=Z,1.9nm,0.5s,baz=230,slow=9.4,SNR=14						
YKA	**Yellowknife Ar**	**32.39**	**47**	P	**P**	**09 49 01.1**	**-3.0**
	comp=Z,0.4nm,0.3s,baz=274,slow=9.1,SNR=15						
YKA				PcP	**PcP**	**09 51 49.7**	**-1.2**
	comp=Z,0.2nm,0.6s,baz=288,slow=2.8,SNR=3.7						
B08A	**Colville Reser**	**33.88**	**74**	P	**P**	**09 49 19.0**	**+1.6**
B08A				IAmb	IAmb	09 49 19.2	
	comp=Z,1.9nm,0.8s						
NEW	**Newport**	**35.24**	**73**	P	**P**	**09 49 30.3**	**+1.1**
NEW				IAmb	IAmb	09 49 32.9	
	comp=Z,2.3nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**35.48**	**214**	T	T	10 27 49.2	
	baz=21,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**35.49**	**214**	T	T	10 27 49.5	
	baz=21,slow=76,SNR=24						
H11N1	**WAKE ISLAND Hy**	**35.50**	**214**	T	T	10 27 50.1	
	baz=21,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**36.68**	**214**	T	T	10 29 02.9	
	baz=20,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	**36.70**	**214**	T	T	10 29 04.0	
	baz=20,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**36.70**	**214**	T	T	10 29 07.4	
	baz=20,slow=76,SNR=5.0						
WVOR	**Wild Horse Val**	**37.22**	**82**	P	**P**	**09 49 49.2**	**+3.0**
WVOR				IAmb	IAmb	09 49 50.5	
	comp=Z,1.7nm,0.9s						
MCMT	**McKenzie Canyo**	**39.49**	**75**	P	**P**	**09 50 06.6**	**+1.1**
YHL	**Hebgen Lake**	**40.49**	**74**	P	**P**	**09 50 14.9**	**+1.1**
TPAW	**Teton Pass**	**41.37**	**76**	P	**P**	**09 50 23.2**	**+2.2**
TPAW				IAmb	IAmb	09 50 32.7	
	comp=Z,3.7nm,1.4s						
BW06	**Boulder Array**	**42.62**	**76**	P	**P**	**09 50 32.0**	**+0.9**
BW06				IAmb	IAmb	09 50 32.5	
	comp=Z,2.3nm,0.7s						
PD31	**Pinedale Array**	**42.62**	**76**	P	**P**	**09 50 32.0**	**+0.9**
PD31				IAmb	IAmb	09 50 32.5	
	comp=Z,2.1nm,0.7s						
PDAR	**Pinedale Array**	**42.62**	**76**	P	**P**	**09 50 31.6**	**+0.4**
	comp=Z,2.2nm,0.6s,baz=304,slow=3.6,SNR=26						
PDAR	**Pinedale Array**	**42.62**	**76**	P	**P**	**09 50 32.2**	**+1.1**
SRU	**San Rafael Swe**	**44.17**	**81**	P	**P**	**09 50 46.2**	**+2.6**
O20A	**White River Ci**	**44.95**	**78**	P	**P**	**09 50 50.9**	**+1.0**
ULM	**Lac du Bonnet**	**46.40**	**60**	P	**P**	**09 50 59.0**	**-2.0**
	comp=Z,1.3nm,0.4s,baz=307,slow=6.9,SNR=6.6						
SDCO	**Great Sand Dun**	**48.11**	**79**	P	**P**	**09 51 16.9**	**+2.2**
TXAR	**Lajitas Array**	**54.85**	**86**	P	**P**	**09 52 06.1**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=304,slow=5.2,SNR=7.8						
TXAR	**Lajitas Array**	**54.85**	**86**	P	**P**	**09 52 06.6**	**+1.5**
L59A	**Walton**	**62.62**	**56**	P	**P**	**09 52 58.0**	**-0.8**
CLL	**Collm**	**77.51 356**		*eP*	**P**	**09 54 32.0**	**+2.1**

*INET **08** 10:03:23.2, 11.°94N×82.°96W, h6km, ML4.0*
*UCR **08** 10:03:28.9±1.7, 11.°83N×83.°41W, h17km±14km, MD4.1*

ISC 08 10:03:17.8±1.5, 11.°98N±0.°05×82.°98W±0.°03, h11km±12km, n43, σ1s46/64, 1C-1D, North of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESPN	**Las Esperanzas**	**1.31 280**		*eP*	**Pg**	**10 03 45.7**	**+2.7**
CVTR	**Volcan Turrial**	**2.09 202**		*eP*	**Pg**	**10 04 00.2**	**+2.3**
CVTR				*eS*	**Sb**	**10 04 22.6**	**+0.5**
PRVC	**Isla de Provid**	**2.10 48**		*eP*	Pg	10 04 11.5	+13
ACON	**Acoyapa**	**2.15 270**	⇑	*eP*	**Pg**	**10 03 57.9**	**-1.1**
FORC	**Fortuna**	**2.24 228**		*i P*	**Pb**	**10 03 59.1**	**+0.8**
CEDE	**Laguna Cedeo**	**2.25 229**		*eP*	**Pg**	**10 04 00.9**	**0.0**
CEDE				*eS*	**Sn**	**10 04 23.9**	**+1.1**
HDC	**Heredia**	**2.26 210**		*eP*	**Pg**	**10 04 01.2**	**+0.1**
HDC	**Heredia**	**2.26 210**		*eP*	**Pg**	**10 04 02.6**	**+1.5**
HDC				*eS*	**Sb**	**10 04 27.5**	**+0.9**
ARE1	**Arenal 1**	**2.28 229**		*eP*	**Pb**	**10 03 59.8**	**+0.9**
SJS	**Escuela Geolog**	**2.28 208**		*eP*	**Pg**	**10 04 01.9**	**+0.3**
SJS				*eS*	**Sb**	**10 04 27.4**	**0.0**
CASO	**Castillo**	**2.31 228**		*i P*	**Pb**	**10 04 00.2**	**+0.8**
PTEN	**Parque Tenorio**	**2.33 238**		*i P*	**Pb**	**10 04 00.2**	**+0.3**
PTEN				*i S*	**Sn**	**10 04 25.8**	**+0.9**
SRA1	**San Ramn**	**2.39 218**		*eP*	**Pb**	**10 04 02.1**	**+1.2**
SRA1				*eS*	**Sn**	**10 04 27.9**	**+1.6**
AMAS	**Alto Masis**	**2.40 236**		*i P*	**Pg**	**10 04 02.4**	**-1.4**
AMAS				*i S*	**Sn**	**10 04 26.5**	**0.0**
ACAL	**Aguas Claras**	**2.42 237**		*i P*	**Pb**	**10 04 01.3**	**0.0**
LCR2	**La Lucha 2**	**2.44 204**		*eP*	**Pg**	**10 04 04.1**	**-0.4**
MESS	**Mesas**	**2.50 241**		*i P*	**Pb**	**10 04 02.9**	**+0.2**
MESS				*i S*	**Sn**	**10 04 29.1**	**+0.2**
CUI	**Cuipilapa**	**2.51 239**		*eP*	**Pb**	**10 04 02.4**	**-0.5**
CUI				*i S*	**Sn**	**10 04 29.7**	**+0.4**
JTS	**Las Juntas de**	**2.56 229**	⇓	*eP*	**Pb**	**10 04 03.6**	**-0.2**
JTS	**Las Juntas de**	**2.56 229**		*eP*	**Pb**	**10 04 03.0**	**-0.8**
JTS				*eS*	**Sn**	**10 04 31.8**	**+1.3**
LIM1	**Limonal**	**2.57 241**		*i P*	**Pb**	**10 04 04.8**	**+0.9**
LIM1				*i S*	**Sn**	**10 04 30.9**	**+0.3**
GPS1	**Guardaparques**	**2.61 243**		*i P*	**Pg**	**10 04 06.3**	**-1.6**
GPS1				*i S*	**Sn**	**10 04 32.5**	**+0.7**
GB1A	**Borinquen Arri**	**2.64 244**		*eP*	**Pb**	**10 04 04.8**	**-0.3**
BUEV	**Buena Vista**	**2.65 244**		*eP*	**Pb**	**10 04 04.9**	**-0.5**
BUEV				*eS*	**Sn**	**10 04 29.8**	**-3.0**
LAPC	**Finca la Perla**	**2.69 244**		*i P*	**Pb**	**10 04 04.9**	**-1.0**
DRK0	**Durika**	**2.71 186**		*eP*	**Pg**	**10 04 09.7**	**0.0**
DRK0	**Durika**	**2.71 186**		*eP*	**Pg**	**10 04 09.6**	**-0.2**
DRK0				*eS*	**Sb**	**10 04 40.4**	**+0.6**
EDLM	**Las Mercedes**	**2.75 193**		*eP*	**Pg**	**10 04 09.9**	**-0.5**
EDLM				*eS*	**Sb**	**10 04 39.3**	**-1.4**
NY14	**Universidad de**	**2.83 242**		*i P*	**Pb**	**10 04 07.3**	**-1.1**
EDDO	**Dominical**	**2.84 198**		*eP*	**Pg**	**10 04 10.9**	**-1.4**
EDDO				*eS*	**Sb**	**10 04 43.0**	**-0.4**
MATN	**Matagalpa**	**3.03 289**		*eP*	**Pb**	**10 04 11.5**	**-0.2**
EDPN	**Palmar Norte**	**3.03 189**		*eP*	**Pg**	**10 04 15.1**	**-0.9**
BRU2	**Volcan**	**3.18 175**		*eP*	**Pg**	**10 04 19.2**	**+0.5**
BRU2	**Volcan**	**3.18 175**		*eP*	**Pg**	**10 04 19.0**	**+0.3**
BRU2				*eS*	**Sb**	**10 04 53.5**	**+0.4**
BCO2	**Palmira**	**3.27 172**		*eP*	**Pg**	**10 04 19.5**	**-1.0**
BCO2				*eS*	**Sb**	**10 04 57.9**	**+2.0**
ESTN	**Estel**	**3.49 289**		*eP*	**Pb**	**10 04 18.1**	**-1.6**
DVD	**David**	**3.56 172**		*eS*	**Sb**	**10 04 59.9**	**-4.1**
BCIP	**Isla Barro Col**	**4.17 132**		*eP*	**Pg**	**10 04 35.4**	**-2.2**
BCIP				*eS*	**Sb**	**10 05 21.1**	**-0.4**
ZANG	**Zanguenga, Cho**	**4.29 134**		*i P*	**Pb**	**10 04 36.1**	**+2.9**
UPA	**Univ. de Panam**	**4.51 131**		*eP*	**Pb**	**10 04 39.9**	**+2.9**
UPA				*eS*	**Sb**	**10 05 30.4**	**-1.0**
TGUH	**Tegucigalpa,Un**	**4.67 297**		*eP*	**Pg**	**10 04 45.9**	**-1.3**
TGUH				*eS*	**Sb**	**10 05 38.4**	**+2.3**
AZU	**Azuero**	**4.94 147**		*eP*	**Pb**	**10 04 44.4**	**0.0**
AZU				*eS*	**Sb**	**10 05 39.3**	**-4.5**
UPD2	**Meteti**	**5.96 124**		*eP*	**Pb**	**10 05 01.6**	**-0.1**

*SOME **08** 11:12:11.7, 39.°35N×75.°55E, h5km*
*KRNET **08** 11:12:13.3±0.1, 39.°14N×75.°56E, mb3.5*
*NNC **08** 11:12:15.0±1.9, 39.°44N×75.°58E, h0km, mb4.0, mpv3.5, Error ellipse: s-maj=13.7km s-min=7.7km az=161.0*
*IDC **08** 11:12:17.9±7.2, 39.°16N×75.°70E, h45km±52km, mb3.5/2, mb1 3.4/5, mb1mx3.1/66, mbtmp3.4/5, ML2.8/3, Error ellipse: s-maj=77.5km s-min=39.4km az=43.0*

ISC 08 11:12:15.7±2.2, 39.°38N±0.°08×75.°61E±0.°04, h2km±12km, n49, σ1s81/75, 20C-13D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**2.08**	**8**	⇑*iP*	**Pb**	**11 12 53.0**	**-1.3**
	baz=8.0						
NRN				⇑*iS*	**Sg**	**11 13 22.0**	**-0.4**
	baz=8.0						
ARLS	**Aral**	**2.67 339**		⇓*iP*	**Pn**	**11 13 01.2**	**+1.4**
	baz=41						
ARLS				⇓*iS*	**Sb**	**11 13 36.2**	**-1.3**
	baz=41						
KZA	**Kyzart**	**2.71 354**		⇓*iP*	**Pn**	**11 13 01.9**	**+1.2**
	baz=55						
KZA				⇓*iS*	**Sb**	**11 13 37.5**	**-1.5**
	baz=55						
KZA	**Kyzart**	**2.71 354**		P	**Pn**	**11 13 02.0**	**+1.4**
	SNR=6.3						
ARSB	**Arslanbob**	**2.80 315**	⇓	*eP*	**Pn**	**11 13 02.0**	**+0.4**
	baz=19						
ARSB				⇓*iS*	**Sn**	**11 13 37.2**	**+1.2**
	baz=19						
ULHL	**Ulahol**	**2.91**	**9**	⇑*iP*	**Pn**	**11 13 05.1**	**+2.0**
	baz=9.0						
ULHL				⇑*iS*	**Sb**	**11 13 42.6**	**-1.8**
	baz=9.0						
ULHL	**Ulahol**	**2.91**	**9**	P	**Pb**	**11 13 07.9**	**-0.4**
	SNR=16						
UCH	**Uchtor**	**2.97 344**		P	**Pn**	**11 13 05.4**	**+1.2**
	SNR=11						
KDJ	**Kajisay**	**3.00**	**23**	⇑*eP*	**Pn**	**11 13 06.8**	**+2.4**
	baz=22						
KDJ				⇑*iS*	**Sb**	**11 13 45.1**	**-1.9**
	baz=22						
AML	**Almayashu**	**3.11 333**		⇑*iP*	**Pn**	**11 13 06.6**	**+0.4**
	baz=35						
AML				⇑*iS*	**Sn**	**11 13 46.0**	**+1.9**
	baz=35						
AML	**Almayashu**	**3.11 333**		P	**Pn**	**11 13 06.8**	**+0.7**
	SNR=7.3						
KBK	**Karagaybulak**	**3.31 352**		⇑*iP*	**Pn**	**11 13 10.5**	**+1.8**
	baz=53						
KBK				⇑*iS*	**Sn**	**11 13 51.6**	**+2.8**
	baz=53						
KBK	**Karagaybulak**	**3.31 352**		P	**Pb**	**11 13 16.3

PDGK	**Podgornoye**	**4.91**	**35**	⇑Pg		**Pg**	**11 13 53.0**	**+3.2**
	5.7nm,0.6s								
PDGK				⇓Lg		Lg	11 14 50.7		
	20nm,0.8s								
IUG	**Iuzhnay**	**5.06**	**305**	Pg		**Pb**	**11 13 44.7**	**-0.3**
	1.3nm,0.6s								
IUG				Lg		Lg	11 14 53.3		
	16nm,0.9s								
KK31	**Karatay Array**	**5.35**	**316**	Pn		**Pn**	**11 13 35.2**	**-1.3**
	0.4nm,0.5s,baz=130,slow=13,SNR=8.5								
KK31				⇑Pg		**Pb**	**11 13 52.3**	**+2.4**
	0.9nm,0.5s,baz=132,slow=15,SNR=5.6								
KK31				⇑Sn		**Sn**	**11 14 39.5**	**+0.7**
	1.7nm,0.5s								
KK31				⇑Lg		Lg	11 15 03.5		
	1.7nm,0.5s,baz=120,slow=29,SNR=3.6								
BRLS	**Boroldav**	**5.68**	**312**	Pg		**Pb**	**11 13 58.4**	**+2.8**
	0.4nm,0.1s								
BRLS				Lg		Lg	11 15 15.9		
	3.0nm,0.6s								
MKAR	**Makanchi Array**	**8.88**	**31**	P		**Pn**	**11 14 26.4**	**+1.5**
	0.0nm,0.3s,baz=212,slow=14,SNR=2.0								
BVAR	**Borovoye Array**	**14.12**	**347**	P		**Pn**	**11 15 37.3**	**+0.8**
	0.1nm,0.3s,baz=165,slow=12,SNR=1.6								
FINES	**FINESS Array B**	**37.26**	**323**	P		**P**	**11 19 27.1**	**-1.4**
	4.7nm,1.0s,baz=113,slow=11,SNR=2.0								
YKA	**Yellowknife Ar**	**78.14**	**5**	P		**P**	**11 24 12.6**	**-3.3**
	0.2nm,0.6s,baz=345,slow=5.7,SNR=4.6								

IDC 08 11:21:25.2±2.1, 6.6°44S×128.99E, h0km, mb3.6/1, mb1 4.3/3, mb1mx3.7/34, mbtmp4.0/3, ML3.6/2, Error ellipse: s-maj=153.9km s-min=30.7km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.39**	**159**	Pn	Pn	11 24 50.8	+0.4
	0.4nm,0.3s,baz=342,slow=14,SNR=6.9						
WRA				Sn	Sn	11 27 14.8	-16
	0.7nm,0.3s,baz=331,slow=22,SNR=6.0						
ASAR	**Alice Springs**	**17.77**	**165**	P	Pn	11 25 34.0	-0.2
	0.2nm,0.3s,baz=341,slow=9.8,SNR=18						
ASAR				S	Sn	11 28 38.9	-14
	0.1nm,0.3s,baz=352,slow=25,SNR=5.5						
MKAR	**Makanchi Array**	**67.21**	**327**	P	P	11 32 21.4	0.0
	0.3nm,0.5s,baz=108,slow=7.4,SNR=8.3						

IDC 08 11:56:50.1±11.0, 17.68S×178.46W, h557km±120km, mb3.1/5, mb1 3.3/5, mb1mx2.9/39, mbtmp4.0/5, Error ellipse: s-maj=122.5km s-min=40.3km az=134.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.70**	**241**	P	P	12 03 27.1	+0.2
	1.6nm,0.5s,baz=76,slow=4.2,SNR=5.0						
WRA	**Warramunga Arr**	**44.63**	**259**	P	P	12 04 13.3	-0.5
	1.1nm,0.5s,baz=96,slow=6.9,SNR=23						
ASAR	**Alice Springs**	**44.81**	**254**	P	P	12 04 15.0	-0.2
	11nm,0.6s,baz=88,slow=8.4,SNR=171						
ASAR				PcP	PcP	12 05 44.9	-0.3
	0.5nm,1.0s,baz=99,slow=2.9,SNR=2.7						
ILAR	**Eielson Array**	**85.68**	**13**	P	P	12 08 30.3	+0.4
	0.1nm,0.5s,baz=229,slow=5.1,SNR=4.1						
YKA	**Yellowknife Ar**	**94.15**	**25**	P	P	12 09 08.4	-0.7
	0.1nm,0.4s,baz=232,slow=4.8,SNR=4.3						

IDC 08 12:03:35.8±5.3, 15.70S×173.37W, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.5/35, mbtmp3.4/3, Error ellipse: s-maj=405.4km s-min=28.8km az=150.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**49.80**	**257**	P	P	12 12 30.4	-0.4
	0.2nm,0.5s,baz=94,slow=7.3,SNR=3.4						
ASAR	**Alice Springs**	**50.05**	**252**	P	P	12 12 32.9	+0.2
	0.8nm,0.6s,baz=89,slow=7.8,SNR=19						
NVAR	**Mina Array Bea**	**74.53**	**42**	P	P	12 15 16.8	0.0
	0.1nm,0.4s,baz=236,slow=9.6,SNR=2.5						

IDC 08 12:04:20.4±2.4, 2.75N×127.85E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/42, mbtmp3.3/3, Error ellipse: s-maj=171.7km s-min=27.5km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.43**	**164**	P	P	12 09 31.5	0.0
	0.3nm,0.4s,baz=344,slow=10,SNR=5.1						
ASAR	**Alice Springs**	**26.91**	**168**	P	P	12 10 03.0	-0.4
	0.2nm,0.4s,baz=351,slow=9.3,SNR=9.7						
MKAR	**Makanchi Array**	**58.99**	**325**	P	P	12 14 22.4	+0.4
	0.3nm,0.5s,baz=113,slow=8.5,SNR=3.6						

IDC 08 12:08:03.0±4.6, 16.04S×176.61W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/36, mbtmp3.9/4, Error ellipse: s-maj=159.8km s-min=93.6km az=158.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.05**	**240**	P	P	12 15 48.5	0.0
	0.6nm,0.4s,baz=69,slow=7.2,SNR=3.4						
WRA	**Warramunga Arr**	**46.69**	**258**	P	P	12 16 33.5	-0.5
	0.3nm,0.6s,baz=92,slow=7.8,SNR=3.7						
ASAR	**Alice Springs**	**46.97**	**252**	P	P	12 16 35.9	-0.4
	3.3nm,0.5s,baz=89,slow=7.9,SNR=71						
ASAR				PcP	PcP	12 18 08.3	-0.5
	0.2nm,0.4s,baz=104,slow=3.9,SNR=4.0						
FITZ	**Fitzroy Crossi**	**55.05**	**259**	P	P	12 17 37.6	+0.5
	0.8nm,0.5s,baz=75,slow=12,SNR=3.0						

*IDC **08** 12:17:16.8±0.7, 6.40S×105.06E, h0km, mb4.3/21, mb1 4.4/21, mb1mx4.2/55, mbtmp4.3/21, MS3.2/6, Ms1 3.2/6, ms1mx2.9/49, Error ellipse: s-maj=24.7km s-min=10.5km az=37.0*
*NEIC **08** 12:17:24.4±1.7, 6.51S±0.10×105.11E±0.08, h60km±6km, mb4.5/26, Error ellipse: s-maj=17.1km s-min=7.2km az=215.0*
*BJI **08** 12:17:25.0±0.0, 6.60S×105.00E, h66km, mB5.0/14, mb4.7/16, Ms4.6/4, Ms7 4.5/2*
*DJA **08** 12:17:25.1±0.4, 7.5±5.5×10.5E±.°, h48km±9km, M4.5/15, mB5.1/2, mb4.8/7, MLv4.5/15, MLv4.4/6, Mw(mB)4.5/2*
ISC 08 12:17:25.2±1.1, 6.60S±0.08×105.06E±0.06, h68km±8km, n125, σ1§22/127, mb4.6/40, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.21**	**333**	P	**Pn**	**12 17 45.7**	**-0.5**
KASI				S	**Sn**	**12 18 01.6**	**-0.3**
SKJI	**Sukabumi**	**1.54**	**105**	P	**Pn**	**12 17 48.7**	**-1.9**
SKJI				S	**Sn**	**12 18 10.1**	**+0.2**
TNG	**Tangerang**	**1.64**	**75**	P	**Pn**	**12 17 51.0**	**-0.9**
DBJI	**Dramaga**	**1.69**	**88**	P	**Pn**	**12 17 51.9**	**-0.6**
DBJI				S	**Sn**	**12 18 13.1**	**-0.2**
CBJI	**Citeko**	**1.79**	**84**	P	**Pn**	**12 17 54.8**	**+0.8**
CBJI				S	**Sn**	**12 18 17.7**	**+1.9**
LWLI	**Liwa**	**1.86**	**328**	P	**Pn**	**12 17 56.3**	**+1.3**
KLSI		**1.93**	**350**	P	**Pn**	**12 17 56.7**	**+0.9**
CNJI	**Cibinong**	**2.18**	**109**	P	**Pn**	**12 17 56.8**	**-2.3**
MDSI	**Maura Dua**	**2.28**	**337**	P	**Pn**	**12 18 01.2**	**+0.7**
LEM	**Lembang**	**2.56**	**95**	Pg	**Pn**	**12 18 05.5**	**+1.1**
	47nm,0.3s,baz=266,slow=4.0,SNR=20						
LEM				Lg	Lg	12 18 40.6	
	68nm,0.3s,baz=311,slow=20,SNR=9.6						
LEM	**Lembang**	**2.56**	**95**	P	**Pn**	**12 18 04.9**	**+0.5**
CISI	**Cisompet, Garu**	**2.90**	**109**	P	**Pn**	**12 18 07.2**	**-1.8**
CISI	**Cisompet, Garu**	**2.90**	**109**	Pn	**Pn**	**12 18 07.5**	**-1.5**
CISI				Sn	**Sn**	**12 18 42.8**	**0.0**
MNAI	**Manna**	**3.05**	**317**	P	**Pn**	**12 18 11.6**	**+0.5**
MNAI	**Manna**	**3.05**	**317**	Pn	**Pn**	**12 18 11.0**	**-0.1**
MNAI				Sn	**Sn**	**12 18 47.1**	**+0.6**
CMJI	**Cimerak**	**3.57**	**109**	P	**Pn**	**12 18 16.4**	**-1.7**
PMBI	**Palembang**	**3.66**	**356**	Pn	**Pn**	**12 18 17.7**	**-1.7**
KSI	**Kapahiang**	**3.82**	**320**	P	Pn	12 18 26.5	+4.8
KPJI	**Karang Pucung**	**3.92**	**101**	P	**Pn**	**12 18 24.3**	**+1.4**
TPI	**Tanjungpandan**	**4.62**	**34**	P	**Pn**	**12 18 32.7**	**+0.2**
UGM	**Wanagama**	**5.58**	**104**	P	**Pn**	**12 18 45.6**	**-0.1**
	0.5nm0.5nm88nm,1.7s						
UGM	**Wanagama**	**5.58**	**104**	Pn	**Pn**	**12 18 44.4**	**-1.3**
UGM				Sn	**Sn**	**12 19 51.5**	**+3.0**
PWJI	**Pagerwojo**	**6.84**	**102**	P	**Pn**	**12 19 04.8**	**+1.9**
	0.3nm45nm,0.8s						
BKNI	**Bangkinang**	**7.96**	**330**	Pn	**Pn**	**12 19 15.5**	**-2.8**
MYKOM	**Kota Tinggi**	**8.42**	**352**	Pn	**Pn**	**12 19 25.6**	**+1.0**
GMJI	**Gumukmas**	**8.48**	**102**	P	**Pn**	**12 19 26.7**	**+1.3**
	36nm,0.9s						
JAGI	**Jajag, Banyuwa**	**9.21**	**102**	P	**Pn**	**12 19 35.3**	**0.0**
	1µm96nm,0.9s						
JAGI	**Jajag, Banyuwa**	**9.21**	**102**		**Pn**	**12 19 34.9**	**-0.4**
JAGI				Sn	**Sn**	**12 21 14.7**	**-2.7**
KSM	**Kuching**	**9.58**	**33**	Pn	**Pn**	**12 19 39.5**	**-1.0**
SRBI	**Singaraja**	**10.18**	**99**	P	**Pn**	**12 19 49.5**	**+0.9**
	62nm,0.8s						
RPSI	**Rantau Prapat**	**11.08**	**326**	Pn	**Pn**	**12 19 59.0**	**-1.9**
SBUM	**Sibu**	**11.49**	**39**	Pn	**Pn**	**12 20 05.5**	**-0.9**
IPM	**Ipoh**	**11.72**	**340**	Pn	**Pn**	**12 20 07.0**	**-2.7**
KAPI	**Kappang**	**14.71**	**85**	LR	LR	12 27 06.3	
	comp=Z,120nm,18.2s,baz=166,slow=40						
KKM	**Kota Kinabalu**	**16.79**	**42**	P	**P**	**12 21 17.9**	**+0.6**
KKM				IAmb	IAmb	12 21 27.3	
	comp=Z,86nm,1.5s						
MMRI	**Maumere**	**17.15**	**98**	P	**Pn**	**12 21 20.3**	**-0.3**
MMRI				IAmb	IAmb	12 21 23.5	
	comp=Z,33nm,0.7s						
GIRL	**Giralia**	**18.24**	**152**	P	**P**	**12 21 31.4**	**-1.7**
DLV	**T Lat**	**18.74**	**11**	P	**P**	**12 21 38.3**	**-0.6**
DLV				IAmb	IAmb	12 21 53.2	
	comp=Z,43nm,1.5s						
BATI	**Baumata**	**18.75**	**102**	P	**Pn**	**12 21 40.4**	**+0.3**
	comp=Z,18nm,0.3s,baz=76,slow=3.4,SNR=13						
BATI				S	**Sn**	**12 25 09.3**	**-0.1**
	comp=Z,2.4nm,0.3s,baz=298,slow=17,SNR=3.6						
BATI				LR	LR	12 31 02.9	
	comp=Z,110nm,18.2s,baz=274,slow=44						
BATI	**Baumata**	**18.75**	**102**	P	**Pn**	**12 21 40.3**	**+0.3**
	comp=Z,739nmcomp=Z,41nm,0.8s						
SOEI	**Soe**	**19.27**	**101**	P	**P**	**12 21 44.7**	**0.0**
SOEI	**Soe**	**19.27**	**101**	P	**P**	**12 21 44.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**23.10**	**122**	P	**P**	**12 22 24.4**	**-1.1**
	comp=Z,1.9nm,0.8s,baz=316,slow=6.7,SNR=5.3						
FITZ				LR	LR	12 31 07.8	
	comp=Z,33nm,20.5s,baz=338,slow=36						
FITZ	**Fitzroy Crossi**	**23.10**	**122**	P	**P**	**12 22 24.6**	**-0.9**
DAV	**Davao City (W)**	**24.57**	**57**	LR	LR	12 32 53.3	
	comp=Z,41nm,21.1s,baz=220,slow=38						
KNRA	**Kununurra**	**24.92**	**113**	P	**P**	**12 22 42.1**	**-0.1**
KNRA				IAmb	IAmb	12 22 43.7	
	comp=Z,22nm,0.7s						
CMAR	**Chiang Mai Arr**	**25.62**	**346**	P	**P**	**12 22 46.0**	**-2.5**
	comp=Z,0.8nm,0.5s,baz=180,slow=8.8,SNR=5.7						
CMAR	**Chiang Mai Arr**	**25.62**	**346**	P	**P**	**12 22 47.4**	**-1.1**
MTN	**Manton Dam**	**26.43**	**106**	P	**P**	**12 22 55.8**	**-0.1**
PALK	**Pallekele**	**27.93**	**299**	LR	LR	12 32 23.3	
	comp=Z,39nm,20.6s,baz=137,slow=33						
H01W3	**Cape Leeuwin H**	**29.36**	**165**	T	T	12 54 13.2	
	baz=343,slow=76,SNR=55						
H01W1	**Cape Leeuwin H**	**29.38**	**165**	T	T	12 54 14.3	
	baz=343,slow=76,SNR=44						
H01W2	**Cape Leeuwin H**	**29.38**	**165**	T	T	12 54 14.3	
	baz=343,slow=76,SNR=57						
WRA	**Warramunga Arr**	**31.36**	**118**	P	**P**	**12 23 39.8**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=286,slow=13,SNR=26						
WRA				PcP	**PcP**	**12 26 33.3**	**+1.0**
	comp=Z,0.8nm,0.6s,baz=316,slow=1.6,SNR=4.9						
WRA	**Warramunga Arr**	**31.36**	**118**	P	**P**	**12 23 39.4**	**-0.3**
WRAB	**Tennant Creek**	**31.37**	**118**	P	**P**	**12 23 39.2**	**-0.6**
WRAB				IAmb	IAmb	12 23 41.0	
	comp=Z,11nm,1.4s						
WR0	**Warramunga Arr**	**31.55**	**118**	P	**P**	**12 23 41.2**	**-0.2**
WR0				IAmb	IAmb	12 23 42.3	
	comp=Z,4.2nm,0.6s						
H08S2	**Diego Garcia H**	**32.32**	**266**	T	T	12 57 55.6	
	baz=90,slow=76,SNR=510						
H08S3	**Diego Garcia H**	**32.33**	**266**	T	T	12 57 56.3	
	baz=90,slow=76,SNR=517						
H08S1	**Diego Garcia H**	**32.34**	**266**	T	T	12 57 57.5	
	baz=90,slow=76,SNR=402						
ASAR	**Alice Springs**	**32.50**	**125**	P	**P**	**12 23 50.0**	**+0.3**
	comp=Z,2.8nm,0.9s,baz=295,slow=7.5,SNR=21						
ASAR				PcP	**PcP**	**12 26 36.3**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=303,slow=2.2,SNR=6.7						
ASAR				LR	LR	12 39 06.8	
	comp=Z,29nm,19.0s,baz=304,slow=40						
ASAR	**Alice Springs**	**32.50**	**125**	P	**P**	**12 23 49.8**	**+0.2**
AS31	**Alice Springs**	**32.50**	**125**	P	**P**	**12 23 49.3**	**-0.4**
KNMB	**Chin-men Tao**	**33.50**	**22**	P	**P**	**12 23 56.3**	**-2.0**
H08N1	**Diego Garcia H**	**33.82**	**268**	T	T	13 00 11.7	
	baz=148,slow=74,SNR=31						
H08N2	**Diego Garcia H**	**33.84**	**268**	T	T	13 00 13.8	
	baz=148,slow=74,SNR=42						
H08N3	**Diego Garcia H**	**33.84**	**268**	T	T	13 00 12.9	
	baz=148,slow=74,SNR=50						
CD2	**Chengdu**	**37.32**	**358**	P	**P**	**12 24 32.1**	**+1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ODAN	**Odare**	**37.41**	**333**	*e*P	**P**	**12 24 32.0**	**-0.1**
	comp=Z,8.3nm,0.5s						
TAPN	**Taplejung**	**37.70**	**334**	*e*P	**P**	**12 24 34.7**	**+0.1**
	comp=Z,4.7nm,0.3s						
RAMN	**Ramite**	**37.84**	**333**	*e*P	**P**	**12 24 36.1**	**+0.3**
	comp=Z,3.4nm,0.3s						
COEN	**Coen**	**38.17**	**104**	P	**P**	**12 24 38.2**	**-0.2**
COEN				IAmb	IAmb	12 24 43.1	
	comp=Z,12nm,1.2s						
JIRN	**Jiri**	**38.64**	**333**	*e*P	**P**	**12 24 42.2**	**-0.4**
	comp=Z,7.4nm,0.3s						
BBOO	**Buckleboo**	**38.86**	**136**	P	**P**	**12 24 44.1**	**+0.1**
GUN	**Gumba**	**38.99**	**332**	*e*P	**P**	**12 24 45.1**	**-0.5**
	comp=Z,12nm,0.4s						
GKN	**Gorkha**	**39.66**	**331**	*e*P	**P**	**12 24 50.6**	**-0.3**
	comp=Z,6.0nm,0.2s						
KOLN	**Koldanda**	**39.97**	**330**	*e*P	**P**	**12 24 53.2**	**-0.3**
	comp=Z,19nm,0.6s						
DANN	**Dangsing**	**40.37**	**330**	*e*P	**P**	**12 24 56.8**	**-0.1**
	comp=Z,27nm,0.5s						
NJ2	**Nanjing**	**40.63**	**18**	*e*P	**P**	**12 25 01.0**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
PMG	**Port Moresby**	**41.77**	**97**	P	**P**	**12 25 08.5**	**+0.2**
	comp=Z,30nm,0.7s,baz=209,slow=2.9,SNR=15						
PMG	**Port Moresby**	**41.77**	**97**	P	**P**	**12 25 08.7**	**+0.3**
STKA	**Stephens Creek**	**42.35**	**131**	P	**P**	**12 25 14.2**	**+1.4**
	comp=Z,17nm,0.7s,baz=307,slow=7.7,SNR=47						
STKA	**Stephens Creek**	**42.35**	**131**	P	**P**	**12 25 14.4**	**+1.6**
STKA				IAmb	IAmb	12 25 14.8	
	comp=Z,3.6nm,0.7s						
LZH	**Lanzhou**	**42.48**	**359**	*e*P	**P**	**12 25 16.0**	**+2.1**
LZH				pP	pP	12 25 33.2	+2.7
LZH				sP	sP	12 25 41.5	+3.3
LZH				*e*PP	**PP**	**12 26 59.1**	**+5.5**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.6s						
LZH				LR	LR		
	comp=Z,310nm,14.0s						
LZH				LR	LR		
	comp=Z,320nm,13.8s						
LZH				LR	LR		
	comp=Z,450nm,17.2s						
HHC	**Hu-ho-hao-te**	**47.60**	**7**	*e*P	**P**	**12 25 56.8**	**+2.4**
HHC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,69nm,7.1s						
NIL	**Nilore**	**50.11**	**325**	P	**P**	**12 26 13.3**	**-0.5**
WMQ	**Urumqi**	**52.59**	**344**	*e*P	**P**	**12 26 33.7**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.1s						
WMQ				LR	LR		
	comp=Z,500nm,28.8s						
WMQ				LR	LR		
	comp=Z,920nm,28.9s						
MJAR	**Matsushiro Arr**	**52.98**	**33**	P	**P**	**12 26 33.0**	**-2.1**
	comp=Z,1.1nm,0.6s,baz=271,slow=6.6,SNR=6.4						
MJAR	**Matsushiro Arr**	**52.98**	**33**	P	**P**	**12 26 33.2**	**-1.8**
KSH	**Kashi**	**53.19**	**332**	P	**P**	**12 26 35.4**	**-1.3**
KSH				pmax	pmax		
	comp=Z,180nm,4.9s						
SONM	**Songino Array**	**54.22**	**1**	P	**P**	**12 26 42.9**	**-1.1**
	comp=Z,0.5nm,0.5s,baz=183,slow=8.3,SNR=3.6						
SONM				PcP	**PcP**	**12 27 48.5**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=173,slow=3.5,SNR=6.4						
ULN	**Ulaanbaatar**	**54.26**	**2**	P	**P**	**12 26 42.4**	**-1.9**
KDJ	**Kajisay**	**54.77**	**335**	P	**P**	**12 26 49.1**	**+0.9**
KDJ				IAmb	IAmb	12 26 54.4	
	comp=Z,6.9nm,1.4s						
USA0B	**Ussuriysk Arra**	**56.10**	**23**	P	**P**	**12 26 57.7**	**+0.2**
USRK	**Ussuriysk Ar.**	**56.10**	**23**	P	**P**	**12 26 56.9**	**-0.6**
	comp=Z,4.6nm,0.7s,baz=205,slow=5.0,SNR=16						
USRK	**Ussuriysk Ar.**	**56.10**	**23**	P	**P**	**12 26 57.4**	**-0.1**
MKAR	**Makanchi Array**	**56.88**	**341**	P	**P**	**12 27 01.9**	**-1.1**
	comp=Z,1.0nm,0.4s,baz=150,slow=8.7,SNR=23						
KLR	**Kul'dur**	**60.29**	**20**	P	**P**	**12 27 25.5**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=209,slow=4.9,SNR=4.8						
ZAA0	**Zalesovo Array**	**62.69**	**347**	P	**P**	**12 27 42.0**	**-0.7**
ZAA0				IAmb	IAmb	12 27 42.2	
	comp=Z,1.6nm,0.5s						
ZALV	**Zalesovo Beam**	**62.69**	**347**	P	**P**	**12 27 41.7**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=156,slow=5.3,SNR=11						
ZALV	**Zalesovo Beam**	**62.69**	**347**	P	**P**	**12 27 42.0**	**-0.7**
AKTO	**Aktyubinsk**	**69.81**	**330**	P	**P**	**12 28 28.1**	**-0.3**
	comp=Z,1.3nm,0.5s,baz=127,slow=0.5,SNR=5.8						
ARU	**Arti**	**73.44**	**335**	P	**P**	**12 28 50.1**	**0.0**
	comp=Z,1.0nm,0.4s,baz=114,slow=12,SNR=6.2						
ARU	**Arti**	**73.44**	**335**	P	**P**	**12 28 50.7**	**+0.6**
ARU				IAmb	IAmb	12 28 50.9	
	comp=Z,8.4nm,1.2s						
PETK	**Petropavlovsk-**	**74.20**	**30**	P	**P**	**12 28 53.7**	**-0.9**
	comp=Z,3.5nm,0.6s,baz=189,slow=6.1,SNR=12						
PETK	**Petropavlovsk-**	**74.20**	**30**	P	**P**	**12 28 54.2**	**-0.4**
KBZ	**Khabaz**	**75.07**	**318**	P	**P**	**12 29 00.9**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=121,slow=7.8,SNR=3.6						
SEY	**Seymchan**	**78.08**	**20**	P	**P**	**12 29 16.0**	**-0.4**
	comp=Z,3.9nm,0.3s,baz=268,slow=1.2,SNR=27						
KIRV	**Kirov**	**78.67**	**334**	P	**P**	**12 29 20.9**	**+1.1**
	comp=Z,15nm,0.6s,baz=139,slow=0.4,SNR=8.2						
TIXI	**Tiksi**	**79.66**	**7**	P	**P**	**12 29 24.5**	**-0.4**
BR131	**Keskin Array S**	**80.13**	**312**	P	**P**	**12 29 29.0**	**+0.7**
BRTR	**Keskin Array B**	**80.13**	**312**	P	**P**	**12 29 28.9**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=147,slow=8.3,SNR=8.5						
FINES	**FINESS Array B**	**90.51**	**332**	P	**P**	**12 30 19.6**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=132,slow=4.1,SNR=3.5						
ARCES	**ARCESS Array B**	**92.50**	**340**	P	**P**	**12 30 28.4**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=72,slow=4.0,SNR=5.8						
TX31	**Lajitas Ar. Si**	**144.73**	**47**		**PKPdf**	**12 36 54.9**	**-0.2**
TX32	**Lajitas Array**	**144.73**	**47**		**PKPdf**	**12 36 54.9**	**-0.2**
TXAR	**Lajitas Array**	**144.73**	**47**	PKP	**PKPdf**	**12 36 55.2**	**+0.1**
	comp=Z,3.1nm,0.7s,baz=284,slow=1.2,SNR=40						
TXAR	**Lajitas Array**	**144.73**	**47**		**PKPdf**	**12 36 54.8**	**-0.4**
CCM	**Cathedral Cave**	**145.37**	**23**		**PKPbc**	**12 36 55.4**	**-0.4**
MGMO	**Mountain Grove**	**145.73**	**25**		**PKPab**	**12 36 57.3**	**-0.1**
U40A	**Yellville**	**146.15**	**26**		**PKPbc**	**12 36 58.3**	**0.0**
JCT	**Junction City**	**146.70**	**41**	PKPdf	**PKPdf**	**12 36 58.0**	**-0.4**
JCT					**PKPab**	**12 37 00.8**	**-0.6**
MIAR	**Mount Ida**	**147.30**	**29**	PKPdf	**PKPdf**	**12 36 59.2**	**-0.1**
MIAR					**PKPbc**	**12 37 01.5**	**-0.1**
WVT	**Waverly**	**148.33**	**20**		**PKPbc**	**12 37 04.8**	**+0.5**
V52A	**Sevierville**	**149.84**	**14**		**PKiKP**	**12 37 08.6**	**-0.5**

*IDC **08** 12:24:21.5±1.4, 6.48S×104.94E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/44, mbtmp3.6/4, ML5.1/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/44, Error ellipse: s-maj=43.5km s-min=18.0km az=24.0*
*DJA **08** 12:24:26.6±0.5, 7.5±5.5×10.5E±.°, h10km, M3.8/11, MLv4.0/11, MLv3.6/4*
*NEIC **08** 12:24:29.6±1.5, 6.5S±0.2×105.0E±0.2, h60km±11km, mb4.2/6, Error ellipse: s-maj=38.0km s-min=3.5km az=214.0*
ISC 08 12:24:29.0±1.8, 6.8S±0.1×104.9E±0.1, h52km±16km, n38, σ1§34/36, mb4.0/7, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.33**	**343**	P	**Pn**	**12 24 50.2**	**-1.1**
KASI				S	**Sn**	**12 25 07.2**	**-0.7**
SKJI	**Sukabumi**	**1.66**	**97**	P	**Pn**	**12 24 56.1**	**+0.3**
DBJI	**Dramaga**	**1.86**	**82**	P	**Pn**	**12 24 57.0**	**-1.5**
DBJI				S	**Sn**	**12 25 18.8**	**-2.0**
LWLI	**Liwa**	**1.96**	**335**	P	**Pn**	**12 25 00.4**	**+0.4**
LWLI				S	**Sn**	**12 25 25.5**	**+2.0**
CBJI	**Citeko**	**1.98**	**79**	P	**Pn**	**12 25 00.1**	**0.0**
CBJI				S	**Sn**	**12 25 26.0**	**+2.3**
KLSI		**2.10**	**355**	P	**Pn**	**12 25 01.3**	**-0.6**
CNJI	**Cibinong**	**2.27**	**103**	P	**Pn**	**12 25 02.1**	**-2.0**
MDSI	**Ma

h46km:pP-P,n129,σ1§63/142,mb4.4/46,5C-11D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.47**	**300**	⇓P	**Pn**	**12 28 29.6**	**-1.1**
OFUJ				S	**Sn**	**12 28 36.5**	**-1.8**
JKMT	**Kesennumamotoy**	**0.56**	**266**	⇓P	**Pn**	**12 28 30.5**	**-1.3**
JKMT				S	**Sn**	**12 28 37.9**	**-2.4**
JMK	**Ichinoseki**	**0.77**	**278**	⇓P	**Pn**	**12 28 33.3**	**-1.2**
JMK				S	**Sn**	**12 28 42.9**	**-2.1**
JIO	**Ouri**	**0.77**	**239**	⇓P	**Pn**	**12 28 33.1**	**-1.4**
JIO				S	**Sn**	**12 28 42.2**	**-2.9**
JOM	**Ohasama**	**0.94**	**312**	⇓P	**Pn**	**12 28 36.0**	**-0.8**
JOM				S	**Sn**	**12 28 47.8**	**-1.3**
JOU	**Okura**	**1.29**	**249**	⇓P	**Pn**	**12 28 40.4**	**-1.3**
JOU				S	**Sn**	**12 28 56.3**	**-1.5**
JRG	**Rokugo**	**1.33**	**295**	⇓P	**Pn**	**12 28 41.3**	**-0.9**
JYK	**Kaneyama**	**1.43**	**273**	⇓P	**Pn**	**12 28 42.6**	**-1.0**
JMM	**Marumori**	**1.47**	**229**	⇓P	**Pn**	**12 28 42.6**	**-1.5**
JANG	**Nango**	**1.61**	**341**	P	**Pn**	**12 28 45.4**	**-0.6**
JANG				S	**Sn**	**12 29 05.5**	**-0.1**
ERM	**Erimo**	**3.25**	**13**	P	**Pn**	**12 29 10.3**	**+1.9**
ERM						12 29 49.0	
ERM	**Erimo**	**3.25**	**13**	Pn	**Pn**	**12 29 10.3**	**+1.9**
ERM					**Sn**	**12 29 49.0**	**+3.2**
MJA0	**Matsu Arr-Jizo**	**3.88**	**235**	*eP*	**Pn**	**12 29 18.3**	**+1.0**
MJA0	comp=Z,1.0nm,0.3s			pmax	pmax		
MAJO	**Matsushiro**	**3.91**	**235**	P	**Pn**	**12 29 18.7**	**+1.1**
MAJO	**Matsushiro**	**3.91**	**235**		**Pn**	**12 29 18.6**	**+1.1**
MAT	**Matsushiro**	**3.91**	**235**	P	**Pn**	**12 29 18.3**	**+0.7**
MAT				S	**Sn**	**12 30 06.8**	**+4.6**
MJAR	**Matsushiro Arr**	**3.91**	**235**	P	**Pn**	**12 29 18.6**	**+1.0**
MJAR	**Matsushiro Arr**	**3.91**	**235**	P	**Pn**	**12 29 18.4**	**+0.8**
MJAR	comp=Z,1.0nm,0.3s,baz=45,slow=12,SNR=39			LR	LR	12 31 07.7	
MJAR	**Matsushiro Arr**	**3.91**	**235**		**Pn**	**12 29 18.6**	**+1.0**
MJB9	**Matsu-Tunnel**	**3.91**	**235**		**Pn**	**12 29 18.6**	**+1.1**
NMR	**Nemuro--Hokkai**	**5.25**	**29**	*eP*	**Pn**	**12 29 34.4**	**-1.4**
NMR				*eS*	**Sn**	**12 30 31.1**	**-3.9**
ASAJ	**Asahikawa**	**5.27**	**3**	P	**Pn**	**12 29 36.8**	**+0.6**
ASAJ	comp=Z,2.6nm,0.3s,baz=223,slow=8.3,SNR=16			S	Sn	12 30 45.0	+9.4
ASAJ	comp=Z,1.1nm,0.3s,baz=168,slow=20,SNR=3.5			LR	LR	12 32 17.1	
JKA	**Kamikawa-asahi**	**5.27**	**3**		**Pn**	**12 29 36.8**	**+0.6**
JKA	comp=Z,70nm,19.4s,baz=360,slow=44				Sn	12 30 45.0	+9.4
INU	**Inuyama**	**5.41**	**231**		**Pn**	**12 29 40.5**	**+2.4**
GLVR	**Golovnino**	**5.49**	**26**	*eP*	**Pn**	**12 29 38.4**	**-0.8**
GLVR				*eS*	**Sn**	**12 30 38.3**	**-2.7**
GLVR	comp=N,84nm,0.4s			pmax	pmax		
GLVR	comp=Z,103nm,0.4s			pmax	pmax		
GLVR	comp=E,30nm,0.1s			pmax	pmax		
GLVR	comp=N,431nm,0.3s			smax	smax		
GLVR	comp=E,449nm,0.3s			smax	smax		
GRPR	**Tuman**	**5.80**	**26**	*eP*	**Pn**	**12 29 42.4**	**-1.1**
GRPR				*eS*	**Sn**	**12 30 44.4**	**-4.2**
GRPR	comp=Z,114nm,0.2s			pmax	pmax		
GRPR	comp=E,359nm,0.2s			smax	smax		
GRPR	comp=N,388nm,0.3s			smax	smax		
YUK	**Yuzh-Kuril'sk**	**5.87**	**27**	*eP*	**Pn**	**12 29 43.2**	**-1.2**
YUK				*eS*	**Sn**	**12 30 47.6**	**-2.7**
YUK	comp=E,22nm,0.2s			pmax	pmax		
YUK	comp=Z,118nm,0.2s			pmax	pmax		
YUK	comp=N,128nm,0.4s			smax	smax		
YUK	comp=E,461nm,0.3s			smax	smax		
SHO	**Shikotan**	**6.11**	**33**	*eP*	**Pn**	**12 29 45.5**	**-2.2**
SHO				*eS*	**Sn**	**12 30 50.3**	**-5.9**
SHO	comp=N,13nm,0.4s			pmax	pmax		
SHO	comp=E,10.0nm,0.4s			pmax	pmax		
SHO	comp=Z,12nm,0.4s			smax	smax		
SHO	comp=E,130nm,0.3s			smax	smax		
SHO	comp=N,171nm,0.2s			smax	smax		
KUR	**Kuril'sk**	**7.65**	**32**	*eP*	**Pn**	**12 30 08.9**	**+0.1**
KUR				*eS*	**Sn**	**12 31 28.7**	**-5.3**
KUR	comp=Z,57nm,0.7s			pmax	pmax		
KUR	comp=E,84nm,0.4s			smax	smax		
KUR	comp=N,33nm,0.2s			smax	smax		
YSS	**Yuzh-Sakhalins**	**8.11**	**3**	*eP*	**Pn**	**12 30 15.9**	**+0.8**
USA0B	**Ussuriysk Arra**	**9.33**	**308**	P	**Pn**	**12 30 35.5**	**+3.6**
USA0B	**Ussuriysk Arra**	**9.33**	**308**		**Pn**	**12 30 35.5**	**+3.6**
USRK	**Ussuriysk Ar.**	**9.33**	**308**	P	**Pn**	**12 30 35.5**	**+3.6**
USRK	**Ussuriysk Ar.**	**9.33**	**308**	P	**Pn**	**12 30 32.2**	**+0.3**
USRK	baz=120,slow=15,SNR=21 comp=N,117nm,18.4s,baz=104,slow=36			LR	LR	12 33 58.0	
USRK	**Ussuriysk Ar.**	**9.33**	**308**		**Pn**	**12 30 35.5**	**+3.6**
JNU	**Nakatsue**	**10.80**	**242**	LR	LR	12 35 18.1	
JNU	**Nakatsue**	**10.80**	**242**	Pn	**Pn**	**12 30 54.4**	**+2.4**
KSRS	**Korea Array**	**11.32**	**267**	P	**Pn**	**12 31 02.7**	**+3.6**
KSRS	comp=N,0.3nm,0.3s,baz=75,slow=14,SNR=7.2 comp=N,76nm,21.3s,baz=48,slow=34			LR	LR	12 34 46.9	
KLR	**Kul'dur**	**12.80**	**328**	P	**Pn**	**12 31 19.0**	**-0.1**
KLR	comp=N,0.1nm,0.3s,baz=126,slow=12,SNR=4.4 comp=N,86nm,19.1s,baz=56,slow=37			LR	LR	12 36 11.3	
CN2	**Changchun**	**13.52**	**297**	*eP*	**P**	**12 31 36.3**	**-0.7**
CN2	comp=N,10.0nm,1.2s			pmax	pmax		
ZEA	**Zeya**	**18.06**	**330**	*eP*	**P**	**12 32 26.7**	**-0.6**
YAK	**Yakutsk**	**24.45**	**346**	P	**P**	**12 33 33.0**	**-1.2**
YAK	comp=Z,16nm,1.1s			pmax	pmax		
YAK	**Yakutsk**	**24.45**	**346**	P	**P**	**12 33 32.8**	**-1.3**
YAK	comp=Z,4.4nm,0.4s,baz=322,slow=2.0,SNR=5.2			IAmb	IAmb	12 33 34.0	
SEY	**Seymchan**	**24.89**	**11**	P	**P**	**12 33 39.4**	**+1.2**
BOD	comp=Z,5.0nm,0.9s,baz=202,slow=3.7,SNR=6.2 **Bodaibo**	**26.36**	**325**	*eP*	**P**	**12 33 49.8**	**-1.7**
BOD	comp=Z,7.0nm,1.8s			pmax	pmax		
SONM	**Songino Array**	**27.33**	**301**	*eP*	**P**	**12 34 02.6**	**+2.0**
SONM	comp=Z,1.0nm,0.5s			pmax	pmax		
SONM	**Songino Array**	**27.33**	**301**	P	**P**	**12 34 00.4**	**-0.2**
SONM	comp=Z,0.8nm,0.5s,baz=100,slow=8.9,SNR=5.2 **Songino Array**	**27.33**	**301**	P	**P**	**12 34 00.0**	**-0.6**
ENH	**Enshi**	**28.14**	**262**	P	**P**	**12 34 06.4**	**-1.4**
ENH	comp=Z,10.0nm,0.6s			IAmb	IAmb	12 34 13.9	
H11N2	**WAKE ISLAND Hy**	**28.61**	**125**	T	T	13 04 37.8	
H11N1	baz=317,slow=75,SNR=2764 **WAKE ISLAND Hy**	**28.62**	**125**	T	T	13 04 38.6	
H11N3	baz=317,slow=75,SNR=3305 **WAKE ISLAND Hy**	**28.63**	**125**	T	T	13 04 39.2	
H11S1	baz=317,slow=75,SNR=2134 **WAKE ISLAND Hy**	**29.39**	**127**	T	T	13 05 35.0	
H11S3	baz=319,slow=76,SNR=229 **WAKE ISLAND Hy**	**29.39**	**127**	T	T	13 05 33.9	
H11S2	baz=319,slow=76,SNR=202 **WAKE ISLAND Hy**	**29.40**	**127**	T	T	13 05 36.2	
TLY	baz=319,slow=76,SNR=201 **Talaya**	**29.65**	**308**	P	**P**	**12 34 20.1**	**-0.9**
TLY	comp=Z,7.0nm,1.1s			pmax	pmax		
TLY	**Talaya**	**29.65**	**308**	LR	LR	12 46 42.5	
TLY	comp=Z,79nm,18.8s,baz=349,slow=37 **Talaya**	**29.65**	**308**	P	**P**	**12 34 20.1**	**-0.9**
ZAK	**Zakamensk**	**29.67**	**306**	*eP*	**P**	**12 34 20.1**	**-1.2**
ZAK	comp=Z,4.0nm,1.0s			pmax	pmax		
KIWB	**Kanaga Island**	**30.97**	**52**	P	**P**	**12 34 32.2**	**-0.4**
BILL	**Bilibino**	**32.12**	**17**	*eP*	**P**	**12 34 42.4**	**-0.1**
BILL	comp=Z,9.0nm,3.0s			pmax	pmax		
TIXI	**Tiksi**	**33.57**	**352**	⇓*eP*	**P**	**12 34 54.3**	**-0.8**
TIXI	comp=Z,6.0nm,2.7s			pmax	pmax		
ZAA0	**Zalesovo Array**	**41.17**	**311**	P	**P**	**12 35 59.5**	**-0.2**
ZAA0	comp=Z,5.4nm,0.6s			IAmb	IAmb	12 35 59.9	
ZALV	**Zalesovo Beam**	**41.17**	**311**	P	**P**	**12 35 59.3**	**-0.3**
ZALV	comp=Z,4.3nm,0.5s,baz=89,slow=7.9,SNR=30 **Zalesovo Beam**	**41.17**	**311**	P	**P**	**12 35 59.2**	**-0.5**
MK31	**Makanchi Array**	**43.70**	**301**	*eP*	**P**	**12 36 19.1**	**-1.3**
MKAR	**Makanchi Array**	**43.70**	**301**	P	**P**	**12 36 19.9**	**-0.5**
MKAR	comp=Z,3.2nm,0.5s,baz=82,slow=10,SNR=36			pP	**pP**	**12 36 35.4**	**+2.4**
MAKZ	comp=Z,3.3nm,0.8s,baz=87,slow=11,SNR=8.5 **Makanchi**	**43.91**	**301**	P	**P**	**12 36 21.2**	**-0.8**
MAKZ	comp=Z,4.0nm,0.8s			pmax	pmax		
MAKZ	**Makanchi**	**43.91**	**301**	P	**P**	**12 36 21.2**	**-0.8**
MAKZ	comp=Z,4.2nm,0.8s			IAmb	IAmb	12 36 23.7	
SII	**Sitkinak Islan**	**44.58**	**45**	P	**P**	**12 36 27.3**	**0.0**
KURK	**Kurchatov**	**45.32**	**307**	*c iP*	**P**	**12 36 32.4**	**-0.7**
KURK	comp=Z,13nm,0.7s			pmax	pmax		
KURK	**Kurchatov**	**45.32**	**307**	P	**P**	**12 36 32.5**	**-0.7**
ODAN	**Odare**	**46.94**	**272**	*eP*	**P**	**12 36 46.4**	**-0.1**
JIRN	comp=Z,9.3nm,0.4s **Jiri**	**47.49**	**274**	*eP*	**P**	**12 36 51.7**	**+0.8**
RAMN	comp=Z,6.9nm,0.4s **Ramite**	**47.51**	**273**	*eP*	**P**	**12 36 50.4**	**-0.6**
GUN	comp=Z,11nm,0.7s **Gumba**	**47.61**	**274**	*eP*	**P**	**12 36 52.6**	**+0.7**
IL31	comp=Z,9.1nm,0.4s	**47.64**	**33**	P	**P**	**12 36 52.5**	**+1.4**
IL31	comp=Z,5.1nm,1.5s			IAmb	IAmb	12 37 11.3	
ILAR	**Eielson Array**	**47.64**	**33**	P	**P**	**12 36 52.5**	**+1.4**
ILAR	**Eielson Array**	**47.64**	**33**	P	**P**	**12 36 52.1**	**+0.9**
ILAR	comp=Z,1.0nm,0.6s,baz=265,slow=6.1,SNR=14			pP	**sP**	**12 37 07.6**	**-1.3**
ILAR	comp=Z,0.9nm,0.6s,baz=264,slow=6.0,SNR=9.2 **Eielson Array**	**47.64**	**33**	P	**P**	**12 36 52.5**	**+1.4**
KKN	**Kakani**	**48.13**	**275**	*eP*	**P**	**12 36 56.1**	**+0.3**
BMAR	comp=Z,12nm,0.4s **Burnt Mountain**	**48.45**	**30**	P	**P**	**12 36 56.3**	**-1.2**
SCRK	**Sand Creek**	**48.96**	**34**	P	**P**	**12 37 02.7**	**+1.2**
DANN	**Dangsing**	**49.05**	**276**	*eP*	**P**	**12 37 02.7**	**-0.2**
KOLN	comp=Z,39nm,0.7s **Koldanda**	**49.45**	**276**	*eP*	**P**	**12 37 05.0**	**-0.9**
TGL	comp=Z,6.3nm,0.5s **Tana Glacier**	**49.94**	**38**	P	**P**	**12 37 09.7**	**+0.7**
AAK	**Ala-Archa**	**50.19**	**297**	P	**P**	**12 37 11.2**	**0.0**
AAK	comp=Z,3.0nm,1.4s			pmax	pmax		
AAK	**Ala-Archa**	**50.19**	**297**	P	**P**	**12 37 11.2**	**0.0**
KSH	**Kashi**	**50.25**	**293**	P	P	12 37 16.5	+4.8
KSH				pP	sP	12 37 32.9	+3.1
KSH	comp=Z,190nm,5.4s			pmax	pmax		
INK	**Inuvik**	**52.49**	**28**	P	**P**	**12 37 29.6**	**+1.8**
INK	comp=Z,1.0nm,0.9s			pmax	pmax		
INK	**Inuvik**	**52.49**	**28**	P	**P**	**12 37 29.3**	**+1.4**
INK	comp=Z,0.7nm,0.6s,baz=258,slow=8.2,SNR=4.9 **Inuvik**	**52.49**	**28**	P	**P**	**12 37 29.6**	**+1.8**
SVE	**Sverdlovsk**	**54.21**	**318**	⇑*eP*	**P**	**12 37 40.8**	**+0.2**
SVE	comp=Z,9.0nm,0.9s			pmax	pmax		
NIL	**Nilore**	**54.65**	**287**	P	**P**	**12 37 44.4**	**+0.2**
NIL	comp=Z,6.0nm,0.9s			pmax	pmax		
NIL	**Nilore**	**54.65**	**287**	P	**P**	**12 37 44.4**	**+0.2**
NIL	comp=Z,6.2nm,0.9s			IAmb	IAmb	12 37 45.2	
ARU	**Arti**	**55.42**	**318**	*d iP*	**P**	**12 37 48.8**	**-0.6**
ARU				*PP	**pP**	**12 38 04.8**	**+2.6**
ARU				S	**S**	**12 45 32.1**	**+1.6**
ARU				SS	**SS**	**12 49 13.2**	**-1.8**
ARU	comp=Z,9.0nm,1.1s			pmax	pmax		
ARU	**Arti**	**55.42**	**318**	P	**P**	**12 37 49.2**	**-0.2**
ARU	comp=Z,1.4nm,0.6s,baz=79,slow=6.7,SNR=8.2 **Arti**	**55.42**	**318**	P	**P**	**12 37 49.0**	**-0.4**
AKTO	**Aktyubinsk**	**57.93**	**311**	P	**P**	**12 38 07.2**	**-0.1**
WRAB	comp=Z,2.4nm,0.8s,baz=71,slow=13,SNR=7.9 **Tennant Creek**	**58.93**	**189**	⇑*eP*	**P**	**12 38 13.6**	**-0.9**
WRAB	comp=Z,26nm,3.9s			pmax	pmax		
WR0	**Warramunga Arr**	**58.94**	**188**	P	**P**	**12 38 14.0**	**-0.5**
WR0	comp=Z,4.9nm,1.2s			IAmb	IAmb	12 38 17.8	
WRA	**Warramunga Arr**	**58.94**	**189**	P	**P**	**12 38 13.8**	**-0.8**
WRA	comp=Z,1.7nm,0.5s,baz=5.7,slow=7.0,SNR=32 comp=Z,1.1nm,0.6s,baz=4.9,slow=7.1,SNR=6.3			pP	**pP**	**12 38 27.9**	**+0.4**
WRA	**Warramunga Arr**	**58.94**	**189**	P	**P**	**12 38 13.9**	**-0.7**
YKA	**Yellowknife Ar**	**61.93**	**31**	P	**P**	**12 38 35.2**	**+0.7**
ASAR	comp=Z,0.3nm,0.6s,baz=300,slow=6.2,SNR=5.2 **Alice Springs**	**62.67**	**189**	P	**P**	**12 38 40.0**	**+0.1**
ASAR	**Alice Springs**	**62.67**	**189**	P	**P**	**12 38 39.5**	**-0.4**
ASAR	comp=Z,0.5nm,0.6s,baz=16,slow=11,SNR=19 **Alice Springs**	**62.67**	**189**	P	**P**	**12 38 40.0**	**+0.1**
OBN	**Obninsk**	**67.02**	**323**	*eP*	**P**	**12 39 06.6**	**-1.2**
OBN	comp=Z,4.0nm,0.8s			pmax	pmax		
FINES	**FINESS Array B**	**67.50**	**332**	P	**P**	**12 39 10.8**	**0.0**
FINES	**FINESS Array B**	**67.50**	**332**	P	**P**	**12 39 10.2**	**-0.6**
FINES	comp=Z,2.7nm,0.7s,baz=46,slow=5.5,SNR=6.6 **FINESS Array B**	**67.50**	**332**	P	**P**	**12 39 10.8**	**0.0**
KIV	**Kislovodsk**	**70.19**	**311**	*eP*	**P**	**12 39 27.0**	**-1.0**
KIV	comp=Z,26nm,1.0s			pmax	pmax		
KBZ	**Khabaz**	**70.19**	**310**	P	**P**	**12 39 27.4**	**-0.4**
GNI	comp=Z,2.7nm,0.9s,baz=132,slow=3.8,SNR=5.3 **Garni**	**71.12**	**307**	⇑*eP*	**P**	**12 39 34.5**	**+0.7**
NOA	**NORSAR Array B**	**72.75**	**337**	P	**P**	**12 39 42.8**	**-0.3**
AKASG	comp=Z,1.5nm,0.9s,baz=44,slow=5.5,SNR=3.3 **Malin Array Be**	**73.24**	**322**	P	**P**	**12 39 45.3**	**-0.7**
NVAR	comp=Z,1.6nm,0.6s,baz=45,slow=6.1,SNR=6.1 **Mina Array Bea**	**73.42**	**54**	P	**P**	**12 39 50.0**	**+2.4**
BRTR	comp=Z,0.3nm,0.6s,baz=284,slow=5.1,SNR=3.6 **Keskin Array B**	**78.11**	**312**	P	**P**	**12 40 14.4**	**+0.1**
BRTR	**Keskin Array B**	**78.11**	**312**	P	**P**	**12 40 13.9**	**-0.4**
BRTR	comp=Z,0.8nm,0.4s,baz=115,slow=3.3,SNR=7.5 **Keskin Array B**	**78.11**	**312**	P	**P**	**12 40 14.4**	**+0.1**
CLL	**Collm**	**79.83**	**330**	*eP*	**P**	**12 40 23.0**	**-0.3**
CLL	**Collm**	**79.83**	**330**	*eP*	**P**	**12 40 23.0**	**-0.3**
KHC	**Kasperske Hory**	**81.32**	**329**	⇑*eP*	**P**	**12 40 31.2**	**-0.2**
KHC	comp=Z,10.0nm,1.4s			pmax	pmax		
GERES	**GERESS Array B**	**81.49**	**328**	P	**P**	**12 40 31.8**	**-0.6**
STAL	comp=Z,0.2nm,0.2s,baz=77,slow=4.3,SNR=4.4 **STALIGIAL**	**83.95**	**327**	P	**P**	**12 40 44.2**	**-0.9**
STAL	comp=Z,6.9nm,1.3s			IAmb	IAmb	12 40 58.5	
FUORN	**Ofenpass-Fuorn**	**84.67**	**329**	P	**P**	**12 40 49.5**	**+0.4**
FUORN	comp=Z,9.1nm,1.4s			IAmb	IAmb	12 40 50.2	
TXAR	**Lajitas Array**	**88.53**	**53**	P	**P**	**12 41 08.6**	**+0.6**
TXAR	comp=Z,0.2nm,0.5s,baz=308,slow=3.2,SNR=2.8			pP	**sP**	**12 41 26.5**	**-0.1**
TXAR	comp=Z,0.2nm,0.6s,baz=321,slow=3.8,SNR=3.9 **Lajitas Array**	**88.53**	**53**	P	**P**	**12 41 09.4**	**+1.4**

*IDC **08** 12:33:53.8±1.2,24°.22S×67°.07W,h166km±12km,mb3.4/2, mb1 3.5/9,mb1mx3.3/36,mbtmp3.9/9,Error ellipse: s-maj=17.8km s-min=15.5km az=59.0*
*NEIC **08** 12:33:53.3±2.0,24°.32S±0°.06×67°.1W±0°.1,h166km±9km, mb4.0/5,Md3.5(SJA),Error ellipse: s-maj=14.6km s-min=8.3km az=105.0*
*SJA **08** 12:33:53.2±0.9,24°.30S×67°.22W,h185km±8km,ML3.4, MW3.5*
*GUC **08** 12:33:55.6±0.6,24°.19S×67°.63W,h200km±10km,ML4.0*
ISC 08 12:33:53.9±0.7,24°.30S±0°.04×67°.24W±0°.03,h174km±7km, n56,σ1§30/85,mb3.7/3,7C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.64**	**105**	*i* P	**Pn**	**12 34 27.8**	**+0.9**
SLA	comp=Z,122nm,0.6s			IAML		12 34 28.6	
SLA				*i* S	**Sn**	**12 34 53.2**	**+0.8**
AZAP	**Zapla**	**1.99**	**88**	*i* P	**Pn**	**12 34 30.9**	**+0.2**
AZAP				*i* S	**Sn**	**12 35 00.1**	**+1.0**
AZAP	comp=Z,84nm,0.7s			IAML		12 35 01.6	
HJA	**Humahuaca**	**2.00**	**57**	*i* P	**Pn**	**12 34 31.9**	**+0.9**
HJA	comp=Z,62nm,0.4s			IAML		12 34 33.5	
HJA				*i* S	**Sn**	**12 35 00.5**	**+0.9**
LVC	**Limon Verde**	**2.27**	**317**	*i* P	**Pn**	**12 34 35.3**	**+1.1**
LVC				*i* S	**Sn**	**12 35 05.2**	**+0.2**
LVC	**Limon Verde**	**2.27**	**317**	P	**Pn**	**12 34 35.3**	**+1.1**
LVC	comp=Z,17nm,0.3s,baz=120,slow=8.6,SNR=181 comp=Z,26nm,0.3s,baz=19,slow=22,SNR=78			S	**Sn**	**12 35 05.3**	**+0.2**
LVC	**Limon Verde**	**2.27**	**317**		**Pn**	**12 34 35.2**	**+1.1**
LVC					**Sn**	**12 35 05.8**	**+0.7**
LVC	**Limon Verde**	**2.27**	**317**	*eP*	**Pn**	**12 34 35.2**	**+1.1**
GO02	**Mina Guanaco**	**2.30**	**248**	*i* P	**Pn**	**12 34 35.3**	**+1.0**
GO02				*i* S	**Sn**	**12 35 07.0**	**+1.4**
GO02	comp=N,748nm,0.3s			IAML		12 35 07.8	
GO02	**Mina Guanaco**	**2.30**	**248**		**Pn**	**12 34 35.4**	**+1.0**
GO02				Sn	**Sn**	**12 35 06.8**	**+1.2**
PB15	**IPOC Station P**	**2.31**	**298**	*i* P	**Pn**	**12 34 35.4**	**+1.0**
PB15				*i* S	**Sn**	**12 35 05.6**	**0.0**
PB15	**IPOC Station P**	**2.31**	**298**	*i* P	**Pn**	**12 34 35.5**	**+1.2**
PB15				*i* S	**Sn**	**12 35 06.0**	**+0.4**
ASTB	**Santa Barbara**	**2.57**	**83**	⇑*i* P	**Pn**	**12 34 37.3**	**0.0**
ASTB				*i* S	**Sn**	**12 35 09.2**	**-1.6**
YJA	**Yavi**	**2.64**	**37**	*i* P	**Pn**	**12 34 39.4**	**+1.0**
YJA				*e*S	**Sn**	**12 35 12.7**	**-0.3**
PB06	**IPOC Station P**	**2.66**	**306**	⇑*i* P	**Pn**	**12 34 39.2**	**+0.9**
PB06				*i* S	**Sn**	**12 35 12.2**	**-0.7**
PB06	comp=N,458nm,0.4s			IAML		12 35 15.2	
PB06	**IPOC Station P**	**2.66**	**306**	*i* P	**Pn**	**12 34 39.3**	**+0.9**
PB06				*i* S	**Sn**	**12 35 12.6**	**-0.3**
PB06	comp=Z,246nm,0.5s			IAML		12 35 17.5	
PB14	**IPOC Station P**	**2.90**	**263**	⇑*i* P	**Pn**	**12 34 41.7**	**+0.3**
PB14				*i* S	**Sn**	**12 35 16.9**	**-1.4**
PB14	comp=E,138nm,0.5s			IAML		12 35 19.4	
PB14	**IPOC Station P**	**2.90**	**263**	*i* P	**Pn**	**12 34 41.7**	**+0.3**
PB14				*i* S	**Sn**	**12 35 17.3**	**-0.9**
AHML	**Horco Molle**	**3.02**	**146**	*i* P	**Pn**	**12 34 40.0**	**+0.5**
AHML				*i* S	**Sn**	**12 35 19.8**	**-0.6**
PB05	**IPOC Station P**	**3.07**	**297**	⇑*i* P	**Pn**	**12 34 43.8**	**+0.5**
PB05				*i* S	**Sn**	**12 35 19.7**	**-2.1**
PB05	comp=E,346nm,0.8s			IAML		12 35 22.8	
PB05	**IPOC Station P**	**3.07**	**297**	*i* P	**Pn**	**12 34 43.8**	**+0.5**
PB05				*i* S	**Sn**	**12 35 19.7**	**-2.1**
PB09	**IPOC Station P**	**3.10**	**323**	*i* P	**Pn**	**12 34 45.0**	**+1.3**
PB09				*i* S	**Sn**	**12 35 22.1**	**-0.3**
PB10	**IPOC Station P**	**3.13**	**284**	⇑*i* P	**Pn**	**12 34 44.5**	**+0.6**
PB10				*i* S	**Sn**	**12 35 21.3**	**-1.5**
PB10	comp=E,217nm,0.8s			IAML		12 35 27.4	
PB10	**IPOC Station P**	**3.13**	**284**		**Pn**	**12 34 44.4**	**+0.6**
PB10	**IPOC Station P**	**3.13**	**284**	*i* P	**Pn**	**12 34 44.6**	**+0.6**
PB10				*i* S	**Sn**	**12 35 22.1**	**-0.7**
PB03	**IPOC Station P**	**3.22**	**314**	*i* P	**Pn**	**12 34 45.7**	**+0.5**
PB03				*i* S	**Sn**	**12 35 23.2**	**-1.8**
PB03	comp=E,264nm,0.3s			IAML		12 35 24.5	
PB04	**IPOC Station P**	**3.31**	**306**	⇑*i* P	**Pn**	**12 34 46.4**	**+0.1**
PB04				*i* S	**Sn**	**12 35 24.9**	**-2.2**
PB04	comp=N,302nm,0.6s			IAML		12 35 29.4	
PB04	**IPOC Station P**	**3.31**	**306**		**Pn**	**12 34 46.7**	**+0.3**
PB04	**IPOC Station P**	**3.31**	**306**	*i* P	**Pn**	**12 34 46.7**	**+0.3**
PB04	comp=Z,230nm,0.4s			IAML		12 35 27.5	
GO03	**Copiap**	**4.25**	**219**	⇑*i* P	**Pn**	**12 34 57.1**	**-1.0**
GO03				*i* S	**Sn**	**12 35 46.4**	**-1.8**
GO03	comp=N,116nm,0.3s			IAML		12 35 49.4	
GO03	**Copiap**	**4.25**	**219**		**Pn**	**12 34 57.1**	**-1.0**
GO03	**Copiap**	**4.25**	**219**	*i* P	**Pn**	**12 34 57.3**	**-0.7**
GO01	**Chusmiza**	**4.95**	**338**	⇑*eP*	**Pn**	**12 35 07.7**	**+0.1**
GO01				*i* S	**Sn**	**12 36 03.1**	**-2.3**
GO01	**Chusmiza**	**4.95**	**338**		**Pn**	**12 35 07.8**	**+0.1**
PB11	**IPOC Station P**	**5.04**	**333**		**Pn**	**12 35 07.4**	**-1.2**
MNMC	**Minye Minye**	**5.59**	**336**		**Pn**	**12 35 15.5**	**-0.3**
GO04	**Tololo Observa**	**6.65**	**208**		**Pn**	**12 35 27.1**	**-2.5**
GO04					**Sn**	**12 36 42.5**	**-2.6**
CFA	**Coronel Fontan**	**7.33**	**187**	P	**Pn**	**12 35 38.3**	**-0.1**
CFA	comp=N,0.5nm,0.3s,baz=49,slow=20,SNR=5.4 comp=N,0.9nm,0.3s,baz=51,slow=18,SNR=3.6			S	**Sn**	**12 36 56.1**	**-4.9**
LPAZ	**La Paz**	**8.01**	**354**	P	**Pn**	**12 35 48.4**	**+0.3**
LPAZ	comp=N,1.5nm,0.3s,baz=162,slow=7.3,SNR=35 comp=N,0.1nm,0.3s,baz=345,slow=20,SNR=5.5			S	**Sn**	**12 37 15.5**	**-2.7**
LPAZ	**La Paz**	**8.01**	**354**		**Pn**	**12 35 47.8**	**-0.3**
CPUP	**Villa Florida**	**9.19**	**105**	P	**Pn**	**12 36 01.2**	**-1.8**
CPUP	comp=N,0.2nm,0.3s,baz=276,slow=14,SNR=4.4 **Villa Florida**	**9.19**	**105**		**Pn**	**12 36 00.8**	**-2.2**
SIV	**San Ignacio**	**10.09**	**36**	P	**Pn**	**12 36 12.0**	**-2.9**
SIV	comp=N,1.0nm,0.3s,baz=229,slow=12,SNR=21 comp=N,0.1nm,0.3s,baz=217,slow=13,SNR=3.8			S	Sn	12 37 54.6	-13
GO06	**Curarrehue**	**15.65**	**192**	P	**P**	**12 37 26.2**	**+0.4**
GO06	comp=Z,7.7nm,1.1s			IAmb	IAmb	12 37 28.7	
SAML	**Samuel**	**15.75**	**15**	P	**Pn**	**12 37 25.1**	**-1.4**
SAML	comp=Z,8.6nm,1.4s			IAmb	IAmb	12 37 26.1	
PLCA	**Paso Flores**	**16.62**	**189**	P	**Pn**	**12 37 38.6**	**+1.6**
BDFB	comp=Z,0.1nm,0.3s,baz=8.8,slow=7.5,SNR=4.5 **Brasilia**	**20.

KRVT	**Keravat (AS076**	**10.56**	**303**	LR		LR		12 45 53.7	
	comp=Z,1μm,19.2s,baz=123,slow=41								
DZM	**Mont Dzumac**	**12.98**	**157**	*e*Pn		**Pn**		**12 41 49.3**	**-2.0**
	2.1nm,0.2s								
DZM				*e*LR		LR		12 44 27.4	
	comp=Z,879nm,25.1s								
DZM	**Mont Dzumac**	**12.98**	**157**	Pn		**Pn**		**12 41 49.3**	**-2.0**
	0.6nm,0.3s,baz=39,slow=9.2,SNR=9.2								
DZM				LR		LR		12 45 57.3	
	comp=Z,544nm,19.7s,baz=15,slow=34								
DZM	**Mont Dzumac**	**12.98**	**157**	Pn		**Pn**		**12 41 47.7**	**-3.7**
PMG	**Port Moresby**	**13.58**	**272**	Pn		**Pn**		**12 42 00.7**	**+1.4**
	0.3nm,0.3s,baz=62,slow=5.9,SNR=3.8								
PMG				LR		LR		12 46 54.9	
	comp=Z,1μm,20.1s,baz=104,slow=36								
PMG	**Port Moresby**	**13.58**	**272**			**Pn**		**12 41 56.7**	**-2.6**
PATS	**Pohnpei**	**17.07**	**351**	P		**P**		**12 42 46.1**	**+1.4**
PATS				S		**Sn**		**12 45 46.8**	**-6.5**
COEN	**Coen**	**17.76**	**256**			**Pn**		**12 42 52.4**	**0.0**
EIDS	**Eidsvold**	**17.79**	**210**	P		**P**		**12 42 51.2**	**-1.3**
MSVF	**Nonsavu**	**18.25**	**116**	P		**P**		**12 42 56.3**	**-1.5**
KWAJ	**Kwajalein Atol**	**19.97**	**20**	P		**P**		**12 43 14.7**	**-1.9**
ARMA	**Armidale**	**21.95**	**202**	P		**P**		**12 43 38.2**	**+0.4**
ARMA				IAmb		IAmb		12 43 44.0	
	comp=Z,29nm,1.4s								
SMPI	**Sarmi**	**23.51**	**289**	P		**P**		**12 43 50.7**	**-3.1**
	comp=Z,61nm,1.3s								
WR0	**Warramunga Arr**	**27.24**	**246**	P		**P**		**12 44 27.7**	**+0.1**
CAN	**Canberra**	**27.31**	**202**	P		**P**		**12 44 29.3**	**+1.2**
WRAB	**Tennant Creek**	**27.40**	**246**	P		**P**		**12 44 28.6**	**-0.4**
WRAB				IAmb		IAmb		12 44 43.7	
	comp=Z,12nm,0.9s								
WRA	**Warramunga Arr**	**27.41**	**246**	P		**P**		**12 44 28.5**	**-0.7**
	comp=Z,2.5nm,0.8s,baz=74,slow=9.3,SNR=12								
WRA				LR		LR		12 54 42.2	
	comp=Z,161nm,21.7s,baz=65,slow=35								
STKA	**Stephens Creek**	**28.06**	**217**	P		**P**		**12 44 35.0**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=70,slow=14,SNR=3.0								
STKA	**Stephens Creek**	**28.06**	**217**	P		**P**		**12 44 33.6**	**-1.2**
H11S2	**WAKE ISLAND Hy**	**29.03**	**11**	T		T		13 14 04.2	
	baz=194,slow=76,SNR=24								
H11S3	**WAKE ISLAND Hy**	**29.03**	**11**	T		T		13 14 02.7	
	baz=194,slow=76,SNR=14								
H11S1	**WAKE ISLAND Hy**	**29.04**	**11**	T		T		13 14 02.2	
	baz=194,slow=76,SNR=10								
AS31	**Alice Springs**	**29.06**	**239**	P		**P**		**12 44 46.2**	**+2.4**
ASAR	**Alice Springs**	**29.06**	**239**	P		**P**		**12 44 43.0**	**-0.8**
	comp=Z,2.2nm,0.9s,baz=69,slow=9.0,SNR=12								
ASAR				LR		LR		12 56 25.2	
	comp=Z,871nm,18.1s,baz=84,slow=36								
H11N1	**WAKE ISLAND Hy**	**30.25**	**11**	T		T		13 15 24.5	
	baz=192,slow=76,SNR=18								
H11N3	**WAKE ISLAND Hy**	**30.26**	**11**	T		T		13 15 28.8	
	baz=192,slow=76,SNR=13								
H11N2	**WAKE ISLAND Hy**	**30.27**	**11**	T		T		13 15 43.2	
	baz=192,slow=76,SNR=30								
KNRA	**Kununurra**	**31.80**	**257**	P		**P**		**12 45 07.2**	**-0.8**
BBOO	**Buckleboo**	**32.14**	**222**	P		**P**		**12 45 08.4**	**-2.5**
TUWZ	**Tuamarina**	**33.20**	**162**	P		**P**		**12 45 20.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**35.06**	**253**	P		**P**		**12 45 38.1**	**+1.7**
	comp=Z,4.0nm,0.8s,baz=58,slow=10,SNR=6.0								
FITZ	**Fitzroy Crossi**	**35.06**	**253**	P		**P**		**12 45 35.4**	**-1.0**
FITZ				IAmb		IAmb		12 45 47.9	
	comp=Z,9.5nm,1.1s								
NWAO	**Narrogin (SRO)**	**46.09**	**234**	P		**P**		**12 47 07.5**	**+0.3**
PPT	**Papeete**	**48.52**	**104**	LR		LR		13 03 17.0	
	comp=Z,145nm,20.9s,baz=239,slow=30								
PPT2	**Papeete2**	**48.52**	**104**	*e*LR		LR		13 00 49.6	
	comp=Z,277nm,22.5s,baz=283								
TBI	**Tubuai**	**49.06**	**112**	*e*LR		LR		13 00 54.9	
	comp=Z,264nm,25.8s								
MJAR	**Matsushiro Arr**	**51.12**	**336**	P		**P**		**12 47 44.3**	**-1.3**
	comp=Z,1.2nm,0.6s,baz=142,slow=7.8,SNR=3.6								
MJAR				LR		LR		13 07 37.9	
	comp=Z,34nm,21.1s,baz=95,slow=34								
JKA	**Kamikawa-asahi**	**56.51**	**344**	P		**P**		**12 48 24.8**	**0.0**
ASAJ	**Asahikawa**	**56.51**	**344**	P		**P**		**12 48 24.8**	**0.0**
	comp=Z,8.2nm,0.8s,baz=135,slow=2.9,SNR=5.0								
KSRS	**Korea Array**	**56.56**	**329**	P		**P**		**12 48 25.6**	**+0.3**
	comp=Z,1.9nm,0.8s,baz=170,slow=7.4,SNR=4.1								
KSRS				LR		LR		13 14 05.3	
	comp=Z,61nm,18.1s,baz=128,slow=38								
TAOE	**Nuku Hiva Isla**	**58.07**	**94**	*e*LR		LR		13 05 17.9	
	comp=Z,272nm,27.3s								
NJ2	**Nanjing**	**58.12**	**318**	*e*P		**P**		**12 48 38.5**	**+2.1**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.5s								
USRK	**Ussuriysk Ar.**	**60.12**	**336**	P		**P**		**12 48 50.1**	**+0.1**
	comp=Z,3.8nm,0.8s,baz=120,slow=5.4,SNR=7.8								
USRK				LR		LR		13 12 38.5	
	comp=Z,78nm,21.7s,baz=166,slow=34								
PETK	**Petropavlovsk-**	**63.07**	**358**	P		**P**		**12 49 09.9**	**+0.2**
	comp=Z,3.9nm,1.0s,baz=172,slow=9.2,SNR=4.6								
PETK				LR		LR		13 12 14.7	
	comp=Z,88nm,21.7s,baz=239,slow=32								
VNDA	**Vanda**	**67.35**	**180**	P		**P**		**12 49 36.6**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=339,slow=9.7,SNR=4.1								
VNDA				LR		LR		13 13 44.7	
	comp=Z,66nm,21.5s,baz=337,slow=31								
VNDA	**Vanda**	**67.35**	**180**	P		**P**		**12 49 37.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**67.42**	**295**	P		**P**		**12 49 38.8**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=141,slow=3.3,SNR=4.6								
CMAR				LR		LR		13 17 48.4	
	comp=Z,36nm,20.5s,baz=177,slow=35								
HHC	**Hu-ho-hao-te**	**68.13**	**322**	*e*P		**P**		**12 49 44.5**	**+1.7**
HHC				pmax		pmax			
	comp=Z,7.0nm,0.8s								
HHC				pmax		pmax			
	comp=Z,65nm,5.6s								
CD2	**Chengdu**	**68.32**	**309**	P		**P**		**12 49 43.8**	**-0.3**
CD2				pmax		pmax			
	comp=Z,20nm,0.5s								
LZH	**Lanzhou**	**70.68**	**314**	*e*P		**P**		**12 49 59.8**	**+1.1**
LZH				pP		pP		12 50 12.0	-4.6
LZH				sP		PcP		12 50 16.9	-2.4
LZH				*e*PP		**PP**		**12 52 38.5**	**+2.3**
LZH				pmax		pmax			
	comp=Z,19nm,1.3s								
LZH				pmax		pmax			
	comp=Z,72nm,6.0s								
LZH				LR		LR			
	comp=Z,180nm,16.2s								
LZH				LR		LR			
	comp=Z,190nm,16.7s								
LZH				LR		LR			
	comp=Z,260nm,18.0s								
ULN	**Ulaanbaatar**	**74.84**	**326**	P		**P**		**12 50 23.6**	**+0.6**
ULN				IAmb		IAmb		12 50 32.8	
	comp=Z,5.2nm,0.8s								
GTA	**Gaotai**	**75.06**	**315**	*e*P		**P**		**12 50 24.8**	**+0.3**
SONM	**Songino Array**	**75.19**	**325**	P		**P**		**12 50 26.3**	**+1.2**
	comp=Z,3.5nm,0.8s,baz=120,slow=3.5,SNR=13								
YAK	**Yakutsk**	**75.97**	**345**	P		**P**		**12 50 28.9**	**-0.1**
KDAK	**Kodiak Island**	**77.57**	**23**	P		**P**		**12 50 38.0**	**-0.1**
	comp=Z,6.6nm,0.8s,baz=243,slow=9.0,SNR=4.0								
BILL	**Bilibino**	**78.08**	**2**	P		**P**		**12 50 41.1**	**+0.3**
BILL				IAmb		IAmb		12 50 41.9	
	comp=Z,9.1nm,0.9s								
TLY	**Talaya**	**78.79**	**328**	P		**P**		**12 50 45.5**	**+0.4**
TLY				IAmb		IAmb		12 51 02.3	
	comp=Z,11nm,1.3s								
QSPA	**South Pole Qui**	**79.85**	**180**	P		**P**		**12 50 50.8**	**+0.1**
QSPA				IAmb		IAmb		12 50 51.5	
	comp=Z,11nm,1.1s								
PPLA	**Purkeypike**	**81.23**	**20**	P		**P**		**12 50 58.6**	**+0.5**
PMR	**Palmer**	**81.42**	**22**	P		**P**		**12 50 59.3**	**+0.4**
KTH	**Kantishna Hill**	**82.09**	**20**	P		**P**		**12 51 02.4**	**-0.2**
TRF	**Thorofare Moun**	**82.24**	**20**	P		**P**		**12 51 03.1**	**-0.3**
TRF				IAmb		IAmb		12 51 04.4	
	comp=Z,12nm,1.4s								
MCK	**McKinley**	**82.88**	**20**	P		**P**		**12 51 06.9**	**+0.3**
MLY	**Manley**	**83.15**	**19**	P		**P**		**12 51 08.2**	**+0.2**
MLY				IAmb		IAmb		12 51 22.2	
	comp=Z,6.8nm,1.2s								
WRH	**Wood River Hil**	**83.64**	**20**	P		**P**		**12 51 10.6**	**+0.1**
MAW	**Mawson**	**83.75**	**202**	P		**P**		**12 51 11.2**	**+0.2**
	comp=Z,6.6nm,0.7s,baz=100,slow=7.8,SNR=7.8								
MAW	**Mawson**	**83.75**	**202**	P		**P**		**12 51 11.9**	**+0.9**
CCB	**Clear Creek Bu**	**83.85**	**20**	P		**P**		**12 51 10.9**	**-0.5**
CCB				IAmb		IAmb		12 51 24.3	
	comp=Z,12nm,1.4s								
BARN	**Barnard Glacie**	**83.98**	**24**	P		**P**		**12 51 13.5**	**+1.0**
HDA	**Harding Lake**	**83.99**	**20**	P		**P**		**12 51 12.6**	**+0.4**
HDA				IAmb		IAmb		12 51 21.7	
	comp=Z,9.8nm,1.1s								
CTGM	**Chitina Glacie**	**84.06**	**25**	P		**P**		**12 51 13.9**	**+1.1**
CTGM				IAmb		IAmb		12 51 24.9	
	comp=Z,9.1nm,1.1s								
ILAR	**Eielson Array**	**84.23**	**20**	P		**P**		**12 51 12.7**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=240,slow=5.3,SNR=15								
ILAR				LR		LR		13 24 38.2	
	comp=Z,102nm,21.7s,baz=240,slow=33								
MENT	**Mentasta**	**84.25**	**22**	P		**P**		**12 51 14.6**	**+1.0**
DOT	**Dot Lake**	**84.54**	**22**	P		**P**		**12 51 15.9**	**+0.9**
SCRK	**Sand Creek**	**84.76**	**21**	P		**P**		**12 51 17.4**	**+1.2**
SCRK				IAmb		IAmb		12 51 30.3	
	comp=Z,8.3nm,1.4s								
BCAR	**Beaver Creek A**	**85.05**	**23**	P		**P**		**12 51 18.9**	**+1.2**
WMQ	**Urumqi**	**85.13**	**316**	*e*P		**P**		**12 51 19.9**	**+1.4**
WMQ				pmax		pmax			
	comp=Z,9.0nm,0.8s								
WMQ				pmax		pmax			
	comp=Z,180nm,4.9s								
WMQ				LR		LR			
	comp=Z,170nm,28.9s								
WMQ				LR		LR			
	comp=Z,450nm,29.0s								
WMQ				LR		LR			
	comp=Z,190nm,28.8s								
HYT	**Haines Junctio**	**85.58**	**26**	P		**P**		**12 51 21.2**	**+0.7**
HYT				IAmb		IAmb		12 51 33.1	
	comp=Z,10nm,1.3s								
TOLK	**Toolik Lake Re**	**85.91**	**16**	P		**P**		**12 51 22.7**	**+0.8**
TOLK				IAmb		IAmb		12 51 36.7	
	comp=Z,4.6nm,1.2s								
EGAK	**Eagle**	**86.22**	**21**	P		**P**		**12 51 24.9**	**+1.5**
DAWY	**Dawson**	**86.49**	**22**	P		**P**		**12 51 25.9**	**+1.1**
DAWY				IAmb		IAmb		12 51 39.6	
	comp=Z,8.8nm,1.2s								
EPYK	**Eagle Plains**	**88.63**	**21**	P		**P**		**12 51 35.9**	**+0.9**
NVAR	**Mina Array Bea**	**89.11**	**51**	P		**P**		**12 51 38.8**	**+0.6**
	comp=Z,2.2nm,0.8s,baz=237,slow=6.0,SNR=13								
NVAR				LR		LR		13 24 36.6	
	comp=Z,101nm,19.8s,baz=341,slow=31								
NVAR	**Mina Array Bea**	**89.11**	**51**	P		**P**		**12 51 39.5**	**+1.4**
KVN	**Kaiserville**	**89.41**	**50**	P		**P**		**12 51 40.8**	**+1.3**
WVOR	**Wild Horse Val**	**89.81**	**47**	P		**P**		**12 51 41.6**	**+0.4**
ZALV	**Zalesovo Beam**	**90.08**	**325**	P		**P**		**12 51 43.2**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=131,slow=5.9,SNR=2.9								
ZALV	**Zalesovo Beam**	**90.08**	**325**	P		**P**		**12 51 42.6**	**+0.6**
SHPR	**Sheep Range**	**91.13**	**53**	P		**P**		**12 51 47.7**	**+0.2**
SHPR				IAmb		IAmb		12 52 01.4	
	comp=Z,5.8nm,1.2s								
R11A	**Troy Canyon, C**	**91.17**	**51**	P		**P**		**12 51 47.9**	**+0.2**
R11A				IAmb		IAmb		12 51 49.2	
	comp=Z,4.1nm,1.1s								
F10A	**Beach Ranch, E**	**91.61**	**44**	P		**P**		**12 51 49.4**	**0.0**
ELK	**Elko**	**91.93**	**49**	P		**P**		**12 51 52.0**	**+0.7**
ELK				IAmb		IAmb		12 52 05.0	
	comp=Z,2.1nm,0.9s								
KSH	**Kashi**	**92.51**	**310**	P		**P**		**12 51 54.3**	**+0.5**
KSH				PP		**PP**		**12 55 41.9**	**+5.9**
KSH				S		**S**		**13 02 55.1**	**+2.3**
KSH				SS		**SS**		**13 09 12.6**	**+6.5**
KURK	**Kurchatov**	**92.94**	**321**	P		**P**		**12 51 55.3**	**0.0**
KURK				IAmb		IAmb		12 52 04.8	
	comp=Z,5.1nm,1.3s								
KURBB	**Kurchatov Arra**	**92.97**	**321**	P		**P**		**12 51 55.9**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=111,slow=4.0,SNR=5.2								
YKA	**Yellowknife Ar**	**96.38**	**28**	P		**P**		**12 52 10.0**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=257,slow=4.5,SNR=12								
PDAR	**Pinedale Array**	**96.45**	**48**	P		**P**		**12 52 12.9**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=243,slow=3.7,SNR=3.9								
PDAR	**Pinedale Array**	**96.45**	**48**	P		**P**		**12 52 10.5**	**-1.4**
S22A	**4UR Ranch, Cre**	**97.90**	**53**	P		**P**		**12 52 16.1**	**-2.6**
TXAR	**Lajitas Array**	**99.58**	**62**	LR		LR		13 30 28.8	
	comp=Z,84nm,19.6s,baz=0.0,slow=31								

TAP 08 12:47:32.0,23°.89N×121°.69E,h26km,ML1.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.08**	**281**	*e*S	Sb	12 47 40.3	+0.4
	baz=282						
TWD	**Chiawan**	**0.21**	**337**	P	Pb	12 47 37.9	0.0
	baz=344						
TWD				S	Sb	12 47 42.1	+0.1
	baz=344						
ESL	**Shilin**	**0.24**	**252**	*i* P	Pb	12 47 38.3	0.0
	baz=261						
ESL				S	Sb	12 47 43.1	+0.4
	baz=261						
NACB	**Ninganchiao**	**0.30**	**344**	P	Pb	12 47 38.9	-0.2
	baz=343						
NACB				S	Sb	12 47 43.9	-0.1
	baz=343						
NACB	**Ninganchiao**	**0.30**	**344**	P	Sb	12 47 44.4	+0.4
EGFH	**Guangfu**	**0.32**	**227**	*e*P	Pb	12 47 39.6	+0.1
	baz=224						
EGFH				*e*S	Sb	12 47 45.3	+0.8
	baz=224						
ETLH	**Xiulin Townshi**	**0.37**	**330**	*e*P	Pb	12 47 40.8	+0.5
	baz=330						
ETLH				*e*S	Sb	12 47 46.7	+0.8
	baz=330						
HGSD	**Ruisui**	**0.46**	**211**	*e*S	Sn	12 47 49.7	-0.6
	baz=209						
WHF	**Hehuan Shan**	**0.46**	**304**	P	Pb	12 47 41.6	-0.4
	baz=299						
WHF				S	Sb	12 47 48.9	+0.1
	baz=299						
OWD	**Renai**	**0.47**	**278**	*e*P	Pb	12 47 41.5	-0.5
	baz=284						
OWD				S	Sb	12 47 48.7	+0.1
	baz=284						
CHGB	**Renai**	**0.50**	**290**	*e*P	Pb	12 47 42.6	+0.2
	baz=290						
CHGB				*e*S	Sb	12 47 49.9	+0.5
	baz=290						
EHY	**Hungye**	**0.51**	**221**	*e*S	Sb	12 47 49.9	+0.5
	baz=231						
VWDT	**VWDT**	**0.52**	**255**	*e*P	Pb	12 47 43.1	+0.5
	baz=255						
VWDT				*e*S	Sb	12 47 50.3	+0.6
	baz=255						
NANB	**Nanao**	**0.54**	**6**	*e*P	Pb	12 47 42.6	-0.4
	baz=6.0						
NANB				*e*S	Sb	12 47 50.8	+0.3
	baz=6.0						
NNSH	**Datong**	**0.60**	**333**	*e*P	Pn	12 47 44.7	-0.3
	baz=332						
NNSH				S	Sb	12 47 52.6	+0.2
	baz=332						

*GUC **08** 12:47:57.2±0.8,21°.07S×69°.07W,h114km±5km,ML3.3*
*SJA **08** 12:47:57.0±0.9,21°.15S×69°.12W,h128km±6km,ML3.0,*
MW3.0

ISC 08 12:47:58.1±1.5,21°.09S±0°.03×69°.15W±0°.06,
h118km±11km,n24,σ0°59/43,10C,Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.70**	**187**	⇑*i*P	**Pn**	**12 48 17.3**	**-0.2**
PB09				*e*S	**Sn**	**12 48 32.4**	**+0.2**
PB09				IAML		12 48 33.6	
	comp=E,965nm,0.2s						
PB09	**IPOC Station P**	**0.70**	**187**	*i* P	**Pn**	**12 48 17.3**	**-0.2**
PB09				*e*S	**Sn**	**12 48 32.7**	**+0.5**
PB08	**IPOC Station P**	**0.95**	**360**	⇑*i*P	**Pn**	**12 48 19.2**	**-0.7**
PB08				*e*S	**Sn**	**12 48 35.2**	**-1.1**
PB08				IAML		12 48 36.0	
	comp=E,518nm,0.3s						
PATCX	**Punta Patache**	**0.98**	**286**	⇑*i*P	**Pn**	**12 48 20.4**	**+0.5**
PATCX				*e*S	**Sn**	**12 48 37.0**	**+0.7**
PATCX				IAML		12 48 39.7	
	comp=N,1μm,0.2s						
TA01	**Diego Aracena**	**1.10**	**298**	⇑*i*P	**Pn**	**12 48 21.2**	**+0.2**
TA01				*e*S	**Sn**	**12 48 38.5**	**+0.3**
TA01				IAML		12 48 40.5	
	comp=E,672nm,0.2s						
PB03	**IPOC Station P**	**1.10**	**211**	⇑*i*P	**Pn**	**12 48 21.3**	**+0.1**
PB03				*e*S	**Sn**	**12 48 39.2**	**+0.5**
PB03				IAML		12 48 39.9	
	comp=E,756nm,0.1s						
PB11	**IPOC Station P**	**1.41**	**340**	⇑*i*P	**Pn**	**12 48 24.0**	**-0.5**
PB11				*e*S	**Sn**	**12 48 44.3**	**-0.3**
PB11				IAML		12 48 45.5	
	comp=E,411nm,0.2s						
GO01	**Chusmiza**	**1.42**	**358**	*e*P	**Pn**	**12 48 24.4**	**-0.6**
GO01				*i* S	**Sn**	**12 48 45.1**	**-0.2**

LVC	**Limon Verde**	**1.52**	**172**	⇑*i*P		**Pn**		**12 48 25.9**	**-0.1**
LVC				*e*S		**Sn**		**12 48 47.1**	**-0.2**
LVC	**Limon Verde**	**1.52**	**172**	*i* P		**Pn**		**12 48 25.9**	**-0.1**
LVC				*e*S		**Sn**		**12 48 46.9**	**-0.4**
LVC				IAML				12 48 49.1	
	comp=Z,123nm,0.3s								
PB04	**IPOC Station P**	**1.55**	**217**	*e*P		**Pn**		**12 48 26.5**	**+0.4**
PB04				*e*S		**Sn**		**12 48 48.6**	**+1.2**
PB04				IAML				12 48 51.6	
	comp=E,388nm,0.2s								
PB04	**IPOC Station P**	**1.55**	**217**	*i* P		**Pn**		**12 48 26.3**	**+0.2**
PB04				*e*S		**Sn**		**12 48 48.2**	**+0.8**
PB06	**IPOC Station P**	**1.65**	**194**	⇑*i*P		**Pn**		**12 48 27.4**	**+0.1**
PB06				*e*S		**Sn**		**12 48 49.8**	**+0.2**
PB06				IAML				12 48 51.2	
	comp=N,364nm,0.3s								
PB06	**IPOC Station P**	**1.65**	**194**	*i* P		**Pn**		**12 48 27.2**	**-0.2**
PB06				*e*S		**Sn**		**12 48 50.0**	**+0.3**
PSGC	**Pisagua**	**1.75**	**328**	⇑*i*P		**Pn**		**12 48 28.0**	**-0.5**
PSGC				*e*S		**Sn**		**12 48 51.7**	**+0.1**
MNMC	**Minye Minye**	**2.00**	**348**	⇑*i*P		**Pn**		**12 48 31.3**	**-0.4**
MNMC				*i* S		**Sn**		**12 48 57.9**	**+0.5**
MNMC				IAML				12 48 59.7	
	comp=N,286nm,0.1s								
PB05	**IPOC Station P**	**2.01**	**209**	*e*P		**Pn**		**12 48 31.7**	**0.0**
PB05				*i* S		**Sn**		**12 48 55.7**	**-1.6**
PB05				IAML				12 48 59.2	
	comp=E,128nm,0.2s								
PB05	**IPOC Station P**	**2.01**	**209**	*i* P		**Pn**		**12 48 31.6**	**0.0**
PB05				*e*S		**Sn**		**12 48 56.9**	**-0.5**
PB15	**IPOC Station P**	**2.13**	**188**	*i* P		**Pn**		**12 48 33.4**	**+0.2**
PB15				*e*S		**Sn**		**12 48 59.6**	**-0.6**
PB10	**IPOC Station P**	**2.74**	**208**	*i* P		**Pn**		**12 48 40.5**	**-0.4**
YJA	**Yavi**	**3.55**	**108**	*i* P		**Pn**		**12 48 53.0**	**+1.0**
PB14	**IPOC Station P**	**3.70**	**198**	*i* P		**Pn**		**12 48 52.8**	**-1.1**
HJA	**Humahuaca**	**4.05**	**122**	*i* P		**Pn**		**12 48 58.6**	**-0.1**
LPAZ	**La Paz**	**4.88**	**12**	*i* P		**Pn**		**12 49 10.9**	**+0.9**

*KRNET **08** 12:48:18.8±0.1,41°.86N×79°.25E,h16km,mb3.1*
*SOME **08** 12:48:18.2,41°.92N×79°.23E,h10km*
*NNC **08** 12:48:19.1±1.0,41°.95N×79°.27E,h0km,mb3.8,mpv3.7,*
Error ellipse: s-maj=6.9km s-min=4.1km az=148.0

ISC 08 12:48:18.5±1.4,41°.88N±0°.05×79°.25E±0°.04,h10km,n60,
σ1°42/103,29C-9D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.87**	**314**	⇑*i*P	**Pb**	**12 48 35.4**	**-0.5**
	baz=16						
PRZ				⇑*i*S	**Sb**	**12 48 47.8**	**+0.1**
	baz=16						
UZB	**Uzynbulak**	**1.28**	**353**	*e*P	**Pb**	**12 48 42.1**	**-0.7**
	9.0nm,0.2s						
UZB				*e*S	**Sn**	**12 48 59.4**	**-0.5**
	56nm,0.2s						
UZB	**Uzynbulak**	**1.28**	**353**	P	**Pn**	**12 48 41.7**	**-0.9**
	21nm,0.1s						
UZB				S	**Sn**	**12 48 59.4**	**-0.5**
	56nm,0.2s						
SHLS	**Shalkode**	**1.29**	**7**	*e*P	**Pg**	**12 48 43.4**	**+0.1**
	147nm,0.3s						
SHLS				*e*S	**Sn**	**12 49 01.8**	**+1.6**
	153nm,0.3s						
SHLS	**Shalkode**	**1.29**	**7**	P	**Pg**	**12 48 43.4**	**+0.1**
	147nm,0.3s						
SHLS				S	**Sn**	**12 49 01.8**	**+1.6**
	153nm,0.3s						
SATY	**Saty**	**1.33**	**332**	*e*P	**Pg**	**12 48 43.2**	**-1.0**
	36nm,0.1s						
SATY				*e*S	**Sg**	**12 49 00.9**	**-0.6**
	200nm,0.1s						
SATY	**Saty**	**1.33**	**332**	P	**Pg**	**12 48 43.2**	**-1.0**
	36nm,0.1s						
SATY				S	**Sg**	**12 49 00.9**	**-0.6**
	200nm,0.1s						
ZHN	**Zhinishke**	**1.42**	**335**	*e*P	**Pg**	**12 48 45.0**	**-0.9**
	28nm,0.1s						
ZHN				*e*S	**Sg**	**12 49 04.7**	**+0.4**
	155nm,0.2s						
ZHN	**Zhinishke**	**1.42**	**335**	P	**Pg**	**12 48 45.0**	**-0.9**
	28nm,0.1s						
ZHN				S	**Sg**	**12 49 04.7**	**+0.4**
	155nm,0.2s						
PDGK	**Podgornoye**	**1.46**	**7**	P	**Pb**	**12 48 44.9**	**-1.0**
	22nm,0.1s						
PDGK				S	**Sb**	**12 49 04.0**	**-0.6**
	97nm,0.4s						
PDGK	**Podgornoye**

DJR	**Jarkent**	**2.49**	**9**	*e*P		**Pb**	**12 49 01.4**	**-1.9**
	2.4nm,0.1s								
DJR				*e*S		**Sb**	**12 49 32.6**	**-1.4**
	61nm,0.4s								
DJR	**Jarkent**	**2.49**	**9**	Pg		**Pb**	**12 49 01.4**	**-1.9**
	2.4nm,0.1s								
DJR				Lg		Lg	12 49 32.6		
	61nm,0.4s								
BOOM	**Boomskoye usch**	**2.53**	**285**	⇑*i*P		**Pb**	**12 49 02.5**	**-1.7**
	baz=86								
BOOM				⇑*i*S		**Sb**	**12 49 35.4**	**-0.1**
	baz=86								
ARXS	**Arharly**	**2.56**	**336**	*e*P		**Pb**	**12 49 03.4**	**-1.1**
	6.5nm,0.3s								
ARXS				*e*S		**Sb**	**12 49 36.0**	**-0.1**
	56nm,0.5s								
ARXS	**Arharly**	**2.56**	**336**	Pg		**Pb**	**12 49 03.4**	**-1.1**
	6.5nm,0.3s								
ARXS				Lg		Lg	12 49 36.0		
	56nm,0.5s								
CHKK	**Chushkaly**	**2.58**	**321**	*e*P		**Pb**	**12 49 04.4**	**-0.5**
	5.6nm,0.2s								
CHKK				*e*S		**Sb**	**12 49 37.7**	**+1.0**
	102nm,0.3s								
CHKK	**Chushkaly**	**2.58**	**321**	Pg		**Pb**	**12 49 04.4**	**-0.5**
	5.6nm,0.2s								
CHKK				Lg		Lg	12 49 37.7		
	102nm,0.3s								
KTBS	**Karatobe**	**2.63**	**315**	*e*P		**Pb**	**12 49 05.2**	**-0.5**
	5.7nm,0.3s								
KTBS				*e*S		**Sb**	**12 49 39.2**	**+1.0**
	124nm,0.4s								
KTBS	**Karatobe**	**2.63**	**315**	Pg		**Pb**	**12 49 05.2**	**-0.5**
	5.7nm,0.3s								
KTBS				Lg		Lg	12 49 39.7		
	124nm,0.4s								
KST	**Kastek**	**2.69**	**297**	*e*P		**Pb**	**12 49 06.2**	**-0.7**
	19nm,0.3s								
KST				*e*S		**Sb**	**12 49 40.9**	**+0.8**
	62nm,0.5s								
KST	**Kastek**	**2.69**	**297**	Pg		**Pb**	**12 49 06.2**	**-0.7**
	19nm,0.3s								
KST				Lg		Lg	12 49 40.9		
	62nm,0.5s								
TKM2	**Tokmak 2**	**2.90**	**292**	⇑*i*P		**Pb**	**12 49 07.9**	**-2.5**
	baz=93								
TKM2				⇑*i*S		**Sb**	**12 49 44.4**	**-1.6**
	baz=93								
TKM2	**Tokmak 2**	**2.90**	**292**	⇑Pn		**Pb**	**12 49 07.9**	**-2.5**
	2.3nm,0.3s								
TKM2				⇑Lg		Lg	12 49 46.6		
	26nm,0.4s								
DGS	**Degeres**	**2.91**	**299**	*e*P		**Pb**	**12 49 09.5**	**-1.0**
DGS				*e*S		**Sb**	**12 49 47.1**	**+0.9**
DGS	**Degeres**	**2.91**	**299**	Pg		**Pb**	**12 49 09.5**	**-1.0**
DGS				Lg		Lg	12 49 47.1		
KZA	**Kyzart**	**2.99**	**275**	⇑*i*P		**Pb**	**12 49 09.3**	**-2.8**
	baz=76								
KZA				⇑*i*S		**Sb**	**12 49 46.5**	**-2.3**
	baz=76								
TDK	**Taldyqorghan**	**3.18**	**349**	*e*P		**Pb**	**12 49 14.6**	**-0.6**
	25nm,0.2s								
TDK				*e*S		**Sb**	**12 49 55.4**	**+1.4**
	60nm,0.3s								
TDK	**Taldyqorghan**	**3.18**	**349**	Pg		**Pb**	**12 49 14.6**	**-0.6**
	25nm,0.2s								
TDK				Lg		Lg	12 49 55.4		
	60nm,0.3s								
KAPS	**Kapalarasan**	**3.41**	**1**	*e*P		**Pb**	**12 49 18.9**	**0.0**
	5.7nm,0.2s								
KAPS				*e*S		**Sb**	**12 50 02.5**	**+2.0**
	13nm,0.2s								
KAPS	**Kapalarasan**	**3.41**	**1**	Pg		**Pb**	**12 49 18.9**	**0.0**
	5.7nm,0.2s								
KAPS				Lg		Lg	12 50 02.5		
	13nm,0.2s								
UCH	**Uchtor**	**3.54**	**277**	⇑*i*P		**Pn**	**12 49 16.8**	**+2.8**
	baz=78								
UCH				⇑*i*S		**Sn**	**12 49 59.6**	**+3.4**
	baz=78								
AAK	**Ala-Archa**	**3.61**	**284**	⇓Pn		**Pn**	**12 49 17.9**	**+3.3**
	1.5nm,0.5s								
AAK				⇑Pg		**Pg**	**12 49 25.0**	**-2.6**
	2.5nm,0.5s								
AAK				⇑Lg		Lg	12 50 09.9		
	8.4nm,0.5s								
ARLS	**Aral**	**3.68**	**271**	⇓*i*P		**Pn**	**12 49 18.1**	**+2.5**
	baz=72								
ARLS				⇓*i*S		**Sn**	**12 50 02.0**	**+2.9**
	baz=72								
SGDS	**Sogindy**	**3.75**	**296**	Pg		**Pb**	**12 49 25.4**	**+0.5**
	9.0nm,0.3s								
SGDS				Lg		Lg	12 50 13.6		
	12nm,0.4s								
MRKS	**Merke**	**4.55**	**283**	*e*P		**Pb**	**12 49 41.2**	**+2.7**
	6.7nm,0.6s								
MRKS				*e*S		**Sg**	**12 50 40.7**	**-3.9**
	12nm,0.3s								
MAKZ	**Makanchi**	**5.30**	**21**	⇓Pn		**Pn**	**12 49 39.5**	**+1.8**
	1.0nm,0.4s								
MAKZ				⇑Sn		**Sn**	**12 50 41.4**	**+2.5**
	1.6nm,0.5s								
MAKZ				⇑Lg		Lg	12 50 59.6		
	0.7nm,0.3s								
MK31	**Makanchi Array**	**5.38**	**23**	⇓Pn		**Pn**	**12 49 40.0**	**+1.2**
	0.7nm,0.3s,baz=207,slow=13,SNR=44								
MK31				⇑Sn		**Sn**	**12 50 41.9**	**+1.2**
	0.7nm,0.3s,baz=204,slow=27,SNR=4.5								
MK31				⇑Lg		Lg	12 51 02.3		
	2.3nm,0.5s								
KK31	**Karatay Array**	**6.57**	**284**	⇓Pg		**Pg**	**12 50 21.4**	**-3.0**
	0.2nm,0.3s,baz=102,slow=17,SNR=7.7								
KK31				⇓Lg		Lg	12 51 43.1		
	1.5nm,0.6s,baz=94,slow=26,SNR=5.1								

*INET **08** 13:22:00.8, 10°.64N×86°.59W, h0km, ML1.9*

UCR 08 13:22:01.6±1.1, 11°.02N×85°.77W, h175km±4km, MD3.8, MW3.6, 2C-1D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GB1A	**Borinquen Arri**	**0.41**	**119**	*e*P	Pn	13 22 25.9	+0.3
LAPC	**Finca la Perla**	**0.41**	**127**	*i* P	Pn	13 22 25.2	-0.3
LAPC				*i* S	Sn	13 22 43.9	0.0
BUEV	**Buena Vista**	**0.41**	**122**	⇓*i*P	Pn	13 22 25.8	+0.1
BUEV				*e*S	Sn	13 22 44.7	+0.7
NY14	**Universidad de**	**0.43**	**148**	*i* P	Pn	13 22 26.2	+0.6
BUAI	**Buenos Aires**	**0.45**	**108**	*i* P	Pn	13 22 25.8	+0.1
BUAI				*i* S	Sn	13 22 44.8	+0.7
GPS1	**Guardaparques**	**0.47**	**120**	*i* P	Pn	13 22 25.8	0.0
LIM1	**Limonal**	**0.60**	**122**	*i* P	Pn	13 22 26.4	0.0
LIM1				*i* S	Sn	13 22 45.5	+0.2
GUAB	**Guayabo de Bag**	**0.61**	**120**	*i* P	Pn	13 22 26.7	+0.3
MESS	**Mesas**	**0.62**	**116**	*i* P	Pn	13 22 26.6	+0.1
CUI	**Cuipilapa**	**0.69**	**121**	*i* P	Pn	13 22 27.2	+0.4
CUI				*e*S	Sn	13 22 47.7	+1.5
ACAL	**Aguas Claras**	**0.81**	**118**	*i* P	Pn	13 22 27.4	-0.2
PTEN	**Parque Tenorio**	**0.82**	**111**	*i* P	Pn	13 22 27.9	+0.2
AMAS	**Alto Masis**	**0.86**	**118**	*i* P	Pn	13 22 27.7	-0.3
JTS	**Las Juntas de**	**1.08**	**132**	⇑*i*P	Pn	13 22 30.0	+0.5
JTS				*e*S	Sn	13 22 50.8	-0.1
ARE1	**Arenal 1**	**1.17**	**118**	⇑*i*P	Pn	13 22 31.0	+0.8
ARE1				*e*S	Sn	13 22 53.9	+1.6
CASO	**Castillo**	**1.17**	**120**	*i* P	Pn	13 22 30.7	+0.5
CEDE	**Laguna Cedeo**	**1.17**	**117**	*e*P	Pn	13 22 30.9	+0.7
LCR2	**La Lucha 2**	**2.15**	**126**	*e*P	Pn	13 22 41.5	+1.3
LCR2				*e*S	Sn	13 23 11.1	+1.0

HEL 08 13:26:53.5, 67°.18N×20°.64E, h0km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.07**	**203**	*i* P	Pg	13 26 55.0	+0.2
MASU	**Masugnsbyn**	**0.59**	**62**	*i* P	Pg	13 27 04.8	-0.1
MASU				*i* S	Sg	13 27 13.0	+0.4
RATU	**Laukkuluspa**	**0.76**	**328**	*i* P	Pg	13 27 07.7	-0.3
RATU				*i* S	Sg	13 27 17.8	0.0
KUA	**Kurravaara**	**0.78**	**352**	*i* P	Pg	13 27 07.9	-0.6
ERTU	**Ertsjaerv**	**0.88**	**135**	*e*P	Pg	13 27 09.5	-0.9
	baz=315						
PAJU	**Pajala**	**0.98**	**98**	*e*P	Pg	13 27 11.7	-0.6
LANU	**Lannavaara**	**1.01**	**30**	*e*P	Pg	13 27 11.9	-1.0
HARU	**Harads**	**1.03**	**172**	*e*P	Pg	13 27 12.4	-0.8
HEF	**Hetta**	**1.68**	**42**	*e*P	Pn	13 27 23.5	-0.6
	baz=226						
HEF				MSG		13 27 43.8	
	comp=Z,4.2nm,0.2s						
HEF				*e*S	Sn	13 27 45.4	-1.0
SJUU	**Sjulsmark**	**1.73**	**166**	*e*P	Pn	13 27 24.8	0.0
KIF	**Kilpisjarvi**	**1.83**	**2**	*e*P	Pn	13 27 26.9	+0.7
	baz=179						
KIF				MSG		13 27 49.2	
	comp=Z,6.1nm,0.2s						
KIF				*e*SG	Sg	13 27 52.7	+0.5
TOF	**Tornio**	**1.84**	**125**	*e*P	Pn	13 27 26.6	+0.3
TOF				MSG		13 27 48.4	
	comp=Z,6.7nm,0.2s						
TOF				*e*SN	Sb	13 27 50.9	-0.6
RNF	**Rovaniemi**	**2.20**	**103**	*e*PB	Pn	13 27 32.3	+1.1
RNF				*e*SG	Sb	13 28 01.7	-0.1
SGF	**Sodankyl**	**2.30**	**81**	*e*PB	Pb	13 27 34.3	-1.5
	baz=270						
SGF				*e*SG	Sb	13 28 05.1	+0.4
OUL	**Oulu**	**3.00**	**132**	*e*P	Pn	13 27 39.7	-2.5
KEV	**Kevo**	**3.49**	**39**	*e*PG	Pb	13 27 57.1	+1.1
KEV				*e*S	Sn	13 28 30.3	-0.6

BER 08 13:27:30.0±1.1, 60°.40N×4°.95E, h0km, ML1.3, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASK	**Askoy**	**0.15**	**55**	*e*P	Pg	13 27 31.9	-0.9
ASK				*e*S	Sg	13 27 34.6	-0.1
ASK				IAML		13 27 36.3	
	comp=Z,92nm,0.7s						
BER	**Bergen**	**0.19**	**94**	*e*P	Pg	13 27 32.7	-1.0
BER				*e*S	Sg	13 27 35.4	-0.7
BER				IAML		13 27 37.7	
	comp=Z,48nm,0.7s						
ODD1	**Odda**	**0.97**	**119**	*e*P	Pg	13 27 47.4	-1.2
ODD1				*e*S	Sg	13 28 00.1	-1.0
ODD1				IAML		13 28 03.3	
	comp=Z,9.0nm,0.4s						
HYA	**Hoyanger**	**0.98**	**38**	*e*P	Pg	13 27 47.2	-1.5
HYA				*e*S	Sg	13 28 01.1	-0.4
HYA				IAML		13 28 04.1	
	comp=Z,8.5nm,0.5s						
FOO	**Floro**	**1.21**	**2**	*e*P	Pg	13 27 51.6	-1.4
FOO				*e*S	Sg	13 28 07.2	-1.5
FOO				IAML		13 28 10.0	
	comp=Z,6.9nm,0.8s						
BLS5	**Blasjo**	**1.24**	**142**	*e*P	Pg	13 27 52.0	-1.7
BLS5				*e*S	Sg	13 28 09.3	-0.3
BLS5				IAML		13 28 10.6	
	comp=Z,11nm,0.5s						
SKAR	**Skarslia**	**1.68**	**79**	*e*P	Pn	13 27 59.2	-1.5
SKAR				*e*S	Sn	13 28 20.4	-2.6
SKAR				IAML		13 28 25.8	
	comp=Z,3.6nm,0.5s						
AKN	**Aaknes**	**2.04**	**28**	*e*S	Sn	13 28 29.1	-2.6
AKN				IAML		13 28 41.8	
	comp=Z,3.6nm,0.7s						

ZUR 08 13:33:04.3, 46°.27N×7°.14E, h3km±1km, MLh1.4/15, 4C-2D, Error ellipse: s-maj=3.4km s-min=1.1km az=299.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRYON	**Gryon**	**0.03**	**231**	⇓Pg	Pg	13 33 05.3	+0.2
GRYON				⇓Pg	Pg	13 33 05.3	+0.2
	2.9nm,SNR=39						
GRYON				Sg	Sg	13 33 05.9	+0.2
SENIN	**Lac Senin/Sane**	**0.15**	**49**	⇑Pg	Pg	13 33 07.5	+0.2
SENIN				⇑Pg	Pg	13 33 07.5	+0.2
	0.1nm,SNR=1.2						
SIOV	**Sion-Valere**	**0.16**	**101**	Pg	Pg	13 33 07.6	+0.2
SIOV				Pg	Pg	13 33 07.6	+0.2
	0.2nm,SNR=1.6						
SIOV				Sg	Sg	13 33 09.9	+0.4
SALAN	**Lac Salanfe**	**0.17**	**223**	⇑Pg	Pg	13 33 07.8	+0.2
	0.1nm,SNR=1.3						
SALAN				⇑Pg	Pg	13 33 07.8	+0.2
SALAN				Sg	Sg	13 33 10.3	+0.4

ROM 08 13:34:29.1±0.1, 43°.391N±0°.003×12°.507E±0°.005, h6km, ML0.9/3, Error ellipse: s-maj=0.4km s-min=0.1km az=65.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.05**	**117**	P	Pg	13 34 30.8	+0.1
ATFO				S	Sg	13 34 31.9	+0.1
ATVO	**AVT- Monte Val**	**0.07**	**263**	P	Pg	13 34 31.1	+0.2
ATVO				S	Sg	13 34 32.4	+0.2
ATPI	**Pietralunga -**	**0.10**	**308**	P	Pg	13 34 31.6	+0.3
ATPI				S	Sg	13 34 33.6	+0.8
MURB	**Monte Urbino**	**0.13**	**174**	P	Pg	13 34 32.2	+0.4
MURB				S	Sg	13 34 34.6	+1.0
MURB				AML	AML		
	comp=E,153μm,1.4s						
MURB				AML	AML		
	comp=N,120μm,1.4s						
PIEI	**Pieia**	**0.15**	**8**	P	Pg	13 34 32.7	+0.5
PIEI				S	Sg	13 34 35.6	+1.4
PIEI				AML	AML		
	comp=E,69μm,0.1s						
PIEI				AML	AML		
	comp=N,84μm,0.6s						
PIEI				AML	AML		
	comp=N,84μm,0.6s						
PIEI				AML	AML		
	comp=E,69μm,0.2s						
BADI	**Badiali**	**0.23**	**302**	P	Pg	13 34 34.1	+0.6
BADI				S	Sg	13 34 38.1	+1.5
NARO	**Abbazia di Nar**	**0.23**	**14**	P	Pg	13 34 34.1	+0.5
NARO				S	Sg	13 34 37.8	+1.2
NARO				AML	AML		
	comp=N,23μm,0.5s						
NARO				AML	AML		
	comp=E,27μm,1.3s						
ATCC	**AVT- Casa Cast**	**0.23**	**155**	P	Pg	13 34 34.2	+0.7
ATCC				S	Sg	13 34 38.3	+1.7

IDC 08 13:36:28.0±2.4, 15°.48S×173°.55W, h0km, mb3.7/3, mb 4.1/3, mb1mx3.7/30, mbtmp3.7/3, MS3.1/3, Ms1 3.1/3, ms1mx2.9/25, Error ellipse: s-maj=207.0km s-min=29.8km az=154.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.32**	**48**	Pn	Pn	13 37 01.8	-5.7
	13nm,0.3s,baz=208,slow=5.1,SNR=9.1						
AFI				Sn	Sn	13 37 24.0	-13
	43nm,0.3s,baz=79,slow=18,SNR=12						
RAR	**Rarotonga**	**14.26**	**116**	LR	LR	13 44 05.0	
	comp=Z,54nm,20.8s,baz=278,slow=32						
PPT	**Papeete**	**23.07**	**99**	LR	LR	13 48 27.2	
	comp=Z,41nm,20.2s,baz=200,slow=31						
HNR	**Honiara**	**26.55**	**280**	LR	LR	13 52 05.5	
	comp=Z,50nm,18.6s,baz=115,slow=35						
WRA	**Warramunga Arr**	**49.69**	**257**	P	P	13 45 22.3	+0.2
	0.2nm,0.4s,baz=86,slow=6.5,SNR=2.5						
ASAR	**Alice Springs**	**49.95**	**252**	P	P	13 45 23.9	-0.3
	2.1nm,0.9s,baz=87,slow=8.3,SNR=18						
TXAR	**Lajitas Array**	**80.78**	**56**	P	P	13 48 44.1	+0.1
	0.9nm,1.0s,baz=220,slow=3.3,SNR=5.3						
GERES	**GERESS Array B**	**146.20**	**351**	PKPbc	PKPdf	13 56 09.4	-0.1
	0.3nm,0.3s,baz=325,slow=4.8,SNR=4.3						

*IDC **08** 14:14:50.0±0.5, 1°.37N×126°.23E, h0km, mb4.4/18, mb1 4.5/20, mb1mx4.4/30, mbtmp4.3/20, ML3.9/2, MS3.4/4, Ms1 3.4/4, ms1mx2.8/44, Error ellipse: s-maj=22.3km s-min=11.9km az=70.0*

*BJI **08** 14:14:51.3±0.0, 1°.16N×126°.49E, h31km, mB5.0/28, mb4.5/31, Ms4.7/6, Ms7 4.4/4*

*DJA **08** 14:14:53.7±0.2, 1°.N±3'×12°.6E±°, h10km, M4.5/18, mb4.7/18, mB5.0/4, MLv4.6/12, Mw(mB)4.2/4*

*NEIC **08** 14:14:55.6±2.2, 1°.32N±0°.08×126°.42E±0°.05, h43km±3km, mb4.8/44, Error ellipse: s-maj=12.1km s-min=5.7km*

az=198.0

ISC 08 14:14:56.5±0.3, 1°.39N±0°.04×126°.45E±0°.06, h47km, n118, σ1°.882/122, mb4.7/48, 2C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.10**	**124**	P	Pn	**14 15 15.4**	**-0.1**
TNTI	**Ternate**	**1.10**	**124**		Pn	**14 15 14.2**	**-1.4**
KMSI	**Cibinong**	**2.60**	**252**	P	Pn	**14 15 34.2**	**-1.9**
SANI	**Sanana**	**3.44**	**188**	P	Pn	**14 15 46.6**	**-1.1**
LUWI	**Luwuk**	**4.40**	**237**	P	Pn	**14 16 00.4**	**-0.4**
LUWI	**Luwuk**	**4.40**	**237**		Pn	**14 15 58.9**	**-1.9**
MRSI	**Marisa**	**4.60**	**259**	P	Pn	**14 16 02.5**	**-1.1**
DDMP	**Don Marcelino,**	**4.75**	**351**	*e*P	Pn	**14 16 05.8**	**+0.2**
DDMP				*e*S	Sn	**14 16 59.5**	**+0.1**
SIJI	**Sorong**	**5.31**	**115**	Pn	Pn	**14 16 15.2**	**+1.8**
	1.3nm,0.3s,baz=221,slow=19,SNR=3.6						
SIJI				LR	LR	14 18 45.1	
	comp=Z,380nm,19.2s,baz=353,slow=43						
APSI	**Ampana**	**5.32**	**245**	P	Pn	**14 16 13.9**	**+0.5**
	1.7nm5μm550nm,1.1s						
SKMP	**Bagumbayan, Su**	**5.44**	**340**	*e*P	Pn	**14 16 14.6**	**-0.6**
SKMP				*e*S	Sn	**14 17 10.8**	**-5.7**
KCP	**Kidapawan**	**5.75**	**346**	⇑*e*P	Pn	**14 16 20.7**	**+1.3**
KCP				*i* S	Sn	**14 17 28.8**	**+4.6**
CTBH	**Cotabato--PC H**	**6.20**	**339**	⇑*e*P	Pn	**14 16 25.1**	**-0.4**
MPSI	**Mapaga**	**6.63**	**261**	P	Pn	**14 16 31.0**	**-0.5**
	0.2nm505nm48nm,1.0s						
FAKI	**Fak Fak**	**7.20**	**126**	Pn	Pn	**14 16 38.9**	**-0.4**
TTSI	**Tana Toraja**	**7.96**	**236**	P	Pn	**14 16 48.7**	**-1.0**
	0.3nm836nm115nm,1.0s						
SPSI	**Sidrap Palu**	**8.53**	**231**	P	Pn	**14 16 57.8**	**+0.2**
	35nm,0.5s						
BNSI	**Bone**	**8.56**	**228**	P	Pn	**14 16 58.2**	**+0.3**
	42nm,0.7s						
BKSI	**Bulukumba**	**9.18**	**223**	P	Pn	**14 17 06.1**	**-0.4**
	403nm31nm,1.1s						
KAPI	**Kappang**	**9.23**	**226**	Pn	Pn	**14 17 07.7**	**+0.6**
	2.5nm,0.3s,baz=49,slow=6.3,SNR=4.7						
KKM	**Kota Kinabalu**	**11.21**	**295**	Pn	Pn	**14 17 34.1**	**-0.2**
SOEI	**Soe**	**11.28**	**191**	P	Pn	**14 17 36.8**	**+1.5**
	54nm,1.1s						
SOEI	**Soe**	**11.28**	**191**	Pn	Pn	**14 17 30.9**	**-4.4**
SBUM	**Sibu**	**14.26**	**274**	P	P	**14 18 22.0**	**0.0**
SRBI	**Singaraja**	**14.63**	**230**	P	Pn	**14 18 19.7**	**-1.1**
	30nm,0.9s						
JAY	**Jayapura**	**14.77**	**105**	LR	LR	14 24 05.1	
	comp=Z,103nm,19.7s,baz=207,slow=37						
MTN	**Manton Dam**	**14.88**	**162**	Pn	Pn	**14 18 23.5**	**-0.5**
DNP	**Denpasar**	**15.02**	**228**	P	P	**14 18 36.8**	**+6.4**
STKI	**Sintang**	**15.03**	**265**	P	P	**14 18 34.0**	**+3.4**
GMJI	**Gumukmas**	**16.13**	**233**	P	P	**14 18 49.5**	**+6.7**
KSM	**Kuching**	**16.14**	**271**	P	P	**14 18 42.2**	**-0.7**
KSM				IAmb	IAmb	14 18 50.2	
	comp=Z,57nm,1.1s						
KNRA	**Kununurra**	**17.11**	**172**	P	Pn	**14 18 52.2**	**-0.2**
KNRA				IAmb	IAmb	14 18 57.1	
	comp=Z,36nm,0.9s						
FITZ	**Fitzroy Crossi**	**19.38**	**182**	P	P	**14 19 16.9**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=20,slow=6.1,SNR=11						
FITZ	**Fitzroy Crossi**	**19.38**	**182**	P	P	**14 19 16.9**	**-1.7**
KPJI	**Karang Pucung**	**19.51**	**243**	P	Pn	**14 19 22.4**	**+0.8**
	comp=Z,35nm,0.9s						
CISI	**Cisompet, Garu**	**20.60**	**244**	P	P	**14 19 29.9**	**-2.1**
CISI				IAmb	IAmb	14 20 04.0	
	comp=Z,112nm,1.6s						
TWG	**Pinlang**	**21.94**	**347**	P	P	**14 19 44.8**	**-1.4**
TPUB	**Ta-pu**	**22.50**	**346**	P	P	**14 19 50.8**	**-1.5**
TPUB				IAmb	IAmb	14 19 55.8	
	comp=Z,47nm,1.1s						
COEN	**Coen**	**22.52**	**133**	P	P	**14 19 51.5**	**-1.0**
COEN				IAmb	IAmb	14 20 41.1	
	comp=Z,37nm,1.8s						
WRAB	**Tennant Creek**	**22.56**	**160**	P	P	**14 19 51.1**	**-1.8**
WRAB				IAmb	IAmb	14 20 01.5	
	comp=Z,20nm,0.8s						
WRA	**Warramunga Arr**	**22.56**	**160**	P	P	**14 19 52.1**	**-0.8**
	comp=Z,16nm,0.5s,baz=338,slow=11,SNR=98						
WRA				S	S	**14 23 58.3**	**+0.9**
	comp=Z,1.9nm,0.9s,baz=330,slow=21,SNR=4.9						
WRA	**Warramunga Arr**	**22.56**	**160**	IAmb	IAmb	14 19 56.1	
	comp=Z,0.8nm,0.5s						
MYKOM	**Kota Tinggi**	**22.60**	**271**	P	P	**14 19 52.7**	**-0.7**
MYKOM				IAmb	IAmb	14 19 57.4	
	comp=Z,56nm,1.4s						
WR0	**Warramunga Arr**	**22.65**	**160**	P	P	**14 19 53.0**	**-0.9**
WR0				IAmb	IAmb	14 19 59.0	
	comp=Z,16nm,0.8s						
SSLB	**Suanglung**	**22.90**	**347**	P	P	**14 19 56.1**	**-0.4**
PMG	**Port Moresby**	**23.25**	**118**	P	P	**14 20 01.2**	**+1.2**
	comp=Z,7.5nm,0.8s,baz=321,slow=13,SNR=3.0						
YHNB	**Yeheng**	**23.66**	**348**	P	P	**14 20 03.2**	**-0.7**
YHNB				IAmb	IAmb	14 20 10.1	
	comp=Z,63nm,1.3s						
PSA00	**Pilbara Seismi**	**23.71**	**195**	P	P	**14 20 03.1**	**-1.2**
AS31	**Alice Springs**	**25.93**	**164**	P	P	**14 20 23.5**	**-1.1**
ASAR	**Alice Springs**	**25.93**	**164**	P	P	**14 20 24.3**	**-0.3**
	comp=Z,4.6nm,0.5s,baz=344,slow=7.8,SNR=74						
ASAR				PcP	PcP	**14 23 53.4**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=346,slow=21,SNR=11						
ASAR				S	S	14 25 03.8	+12
	comp=Z,2.3nm,0.8s,baz=345,slow=21,SNR=11						
KULM	**Kulim**	**26.04**	**279**	P	P	**14 20 26.5**	**+0.8**
PDSI	**Padang**	**26.09**	**265**	P	P	**14 20 31.2**	**+5.0**
KRVT	**Keravat (AS076**	**26.17**	**103**	LR	LR	14 29 26.7	
	comp=Z,115nm,19.1s,baz=179,slow=33						
GIRL	**Giralia**	**26.69**	**206**	P	P	**14 20 31.1**	**-0.3**
RPSI	**Rantau Prapat**	**27.54**	**273**	P	P	**14 20 37.6**	**-1.6**
RPSI	**Rantau Prapat**	**27.54**	**273**	P	P	**14 20 37.6**	**-1.6**
PSI	**Prapat**	**27.54**	**273**	P	P	**14 20 37.6**	**-1.8**
	comp=Z,8.1nm,1.0s,baz=135,slow=4.7,SNR=3.9						
KCSI	**Kotacane, Aceh**	**28.73**	**275**	P	P	**14 20 46.8**	**-3.0**
NJ2	**Nanjing**	**31.33**	**348**	*e*P	P	**14 21 14.2**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.88**	**304**	P	P	**14 21 19.4**	**+1.8**
	comp=Z,0.3nm,0.3s,

	comp=Z,4.0nm,0.6s							
HHC					pmax	pmax		
	comp=Z,32nm,5.6s							
USA0B	**Ussuriysk Arra**	**42.91**	**6**	P		**P**	**14 22 51.0**	**+0.4**
USA0B				IAmb		IAmb	14 22 52.3	
	comp=Z,14nm,0.9s							
USRK	**Ussuriysk Ar.**	**42.91**	**6**	P		**P**	**14 22 51.6**	**+1.0**
	comp=Z,7.4nm,0.7s,baz=182,slow=5.7,SNR=17							
LSA	**Lhasa**	**43.80**	**313**	P		**P**	**14 22 58.9**	**+0.3**
TAPN	**Taplejung**	**45.21**	**308**	*eP*		**P**	**14 23 06.9**	**-2.7**
RAMN	**Ramite**	**45.90**	**307**	*eP*		**P**	**14 23 12.7**	**-2.4**
	comp=Z,7.7nm,0.8s							
JIRN	**Jiri**	**46.55**	**308**	*eP*		**P**	**14 23 17.9**	**-2.4**
	comp=Z,21nm,0.7s							
GUN	**Gumba**	**46.91**	**308**	*eP*		**P**	**14 23 20.4**	**-2.7**
	comp=Z,8.7nm,0.5s							
KOLN	**Koldanda**	**48.66**	**307**	*eP*		**P**	**14 23 35.1**	**-1.4**
	comp=Z,11nm,0.6s							
DANN	**Dangsing**	**48.78**	**307**	*eP*		**P**	**14 23 35.6**	**-1.9**
	comp=Z,13nm,0.6s							
SONM	**Songino Array**	**49.42**	**342**	P		**P**	**14 23 41.4**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=151,slow=8.9,SNR=5.9							
SONM				PcP		**PcP**	**14 25 03.9**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=172,slow=4.1,SNR=2.7							
WMQ	**Urumqi**	**54.49**	**326**	*eP*		**P**	**14 24 21.3**	**+1.7**
WMQ				pmax		pmax		
	comp=Z,7.0nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,90nm,5.5s							
WMQ				LR		LR		
	comp=Z,620nm,29.1s							
WMQ				LR		LR		
	comp=Z,1μm,28.9s							
PEA0B	**Petropavlovsk-**	**57.69**	**22**	P		**P**	**14 24 43.6**	**+1.4**
PETK	**Petropavlovsk-**	**57.69**	**22**	P		**P**	**14 24 43.8**	**+1.5**
	comp=Z,3.9nm,0.6s,baz=184,slow=6.6,SNR=32							
PET	**Petropavlovsk**	**57.99**	**22**	P		**P**	**14 24 43.6**	**-0.6**
MKAR	**Makanchi Array**	**59.32**	**326**	P		**P**	**14 24 52.5**	**-1.2**
	comp=Z,2.0nm,0.5s,baz=122,slow=8.0,SNR=42							
MAKZ	**Makanchi**	**59.51**	**326**	P		**P**	**14 24 54.5**	**-0.5**
MAKZ				IAmb		IAmb	14 25 11.4	
	comp=Z,16nm,1.9s							
KSH	**Kashi**	**59.51**	**316**	P		**P**	**14 24 57.5**	**+2.2**
KSH				pP		pP	14 25 09.3	+1.2
KSH				PP		**PP**	**14 27 11.8**	**+4.6**
KSH				pmax		pmax		
	comp=Z,340nm,7.0s							
KDJ	**Kajisay**	**59.92**	**319**	P		**P**	**14 24 57.4**	**-0.7**
KDJ				IAmb		IAmb	14 25 12.2	
	comp=Z,4.5nm,0.8s							
YAK	**Yakutsk**	**60.55**	**2**	P		**P**	**14 25 02.2**	**+0.5**
ZALV	**Zalesovo Beam**	**62.55**	**334**	P		**P**	**14 25 13.5**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=120,slow=5.8,SNR=3.7							
GAR	**Garm**	**63.31**	**314**	P		**P**	**14 25 20.3**	**-0.7**
GAR				IAmb		IAmb	14 25 27.5	
	comp=Z,7.2nm,0.7s							
KURK	**Kurchatov**	**63.56**	**328**	P		**P**	**14 25 21.3**	**-0.9**
KURK				IAmb		IAmb	14 25 24.7	
	comp=Z,13nm,0.8s							
CHGR	**Chuyangaron**	**64.03**	**313**	P		**P**	**14 25 25.1**	**-0.7**
CHGR				IAmb		IAmb	14 25 28.7	
	comp=Z,7.8nm,1.0s							
TIXI	**Tiksi**	**70.17**	**1**	P		**P**	**14 26 03.6**	**-0.2**
TIXI				IAmb		IAmb	14 26 04.8	
	comp=Z,6.0nm,0.7s							
ARU	**Arti**	**76.76**	**328**	P		**P**	**14 26 42.2**	**-0.8**
ARU				IAmb		IAmb	14 26 45.0	
	comp=Z,7.4nm,0.8s							
RAYN	**Ar Rayn**	**81.15**	**293**	P		**P**	**14 27 05.7**	**-2.0**
VNDA	**Vanda**	**81.15**	**173**	P		**P**	**14 27 07.3**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=316,slow=6.8,SNR=8.1							
KBZ	**Khabaz**	**84.38**	**314**	P		**P**	**14 27 25.3**	**+1.3**
	comp=Z,2.3nm,0.9s,baz=147,slow=4.6,SNR=7.0							
ILAR	**Eielson Array**	**87.33**	**25**	P		**P**	**14 27 37.1**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=241,slow=4.8,SNR=14							
BRTR	**Keskin Array B**	**91.29**	**310**	P		**P**	**14 27 56.2**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=112,slow=3.6,SNR=3.9							
ARCES	**ARCESS Array B**	**92.54**	**340**	P		**P**	**14 28 01.8**	**-0.7**
	comp=Z,5.7nm,0.9s,baz=98,slow=11,SNR=3.6							
AKASG	**Malin Array Be**	**93.52**	**321**	P		**P**	**14 28 09.0**	**+1.6**
	comp=Z,0.4nm,0.6s,baz=65,slow=3.8,SNR=3.4							
FINES	**FINESS Array B**	**93.75**	**332**	P		**P**	**14 28 09.5**	**+1.3**
	comp=Z,6.1nm,1.0s,baz=101,slow=2.8,SNR=3.4							
YKA	**Yellowknife Ar**	**101.73**	**25**	P		**Pdif**	**14 28 45.3**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=298,slow=4.5							
ULM	**Lac du Bonnet**	**117.14**	**29**	PKP		**PKiKP**	**14 33 37.0**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=275,slow=9.7,SNR=3.3							
TXAR	**Lajitas Array**	**123.23**	**53**	PKP		**PKiKP**	**14 33 50.4**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=283,slow=0.9,SNR=7.8							
TORD	**Torodi Ar. Bea**	**123.35**	**287**	PKP		**PKPdf**	**14 33 49.0**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=109,slow=2.5,SNR=6.5							
PLCA	**Paso Flores**	**137.91**	**161**	PKP		**PKiKP**	**14 34 18.6**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=302,slow=4.6,SNR=3.8							
GO02	**Mina Guanaco**	**151.74**	**148**			**PKiKP**	**14 34 48.8**	**+1.1**
LPAZ	**La Paz**	**159.37**	**137**	PKP		**PKPdf**	**14 34 52.6**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=304,slow=4.1,SNR=3.7							

*IDC **08** 14:25:45.1±0.6, 13.64N×144.86E, h122km±5km, mb3.0/7, mb1 3.3/7, mb1mx3.2/47, mbtmp3.4/7, MS2.7/1, Ms1 2.7/1, ms1mx2.3/16, Error ellipse: s-maj=28.8km s-min=18.6km az=99.0*

*NEIC **08** 14:25:45.2±1.8, 13.63N±0.10×144.9E±0.2, h124km±8km, ML4.2/2, Error ellipse: s-maj=27.9km s-min=11.3km az=70.0*

ISC 08 14:25:45.2±0.8, 13.6N±0.2×144.9E±0.2, h125km±7km, n17, σ0.977/11, mb3.2/7, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.05**	**180**	P	**Pn**	**14 26 02.6**	**+0.4**
	482nm,0.3s,baz=306,slow=10,SNR=109						
GUMO				S	**Sn**	**14 26 14.4**	**-0.6**
	800nm,0.3s,baz=345,slow=20,SNR=78						
GUMO	**Guam**	**0.05**	**180**		**Pn**	**14 26 02.5**	**+0.4**
GUMO				IAML		14 26 15.0	
	4μm,0.3s						
GUMO				IAML		14 26 15.5	
	8μm,0.6s						
PATS	**Pohnpei**	**14.85**	**116**	P	**P**	**14 29 11.4**	**-0.1**
H11S3	**WAKE ISLAND Hy**	**21.51**	**74**	T	T	14 53 22.7	
	baz=246,slow=72,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	**21.52**	**74**	T	T	14 53 24.2	
	baz=246,slow=72,SNR=2.5						
H11S2	**WAKE ISLAND Hy**	**21.52**	**74**	T	T	14 53 24.2	
	baz=246,slow=72,SNR=2.2						
H11N1	**WAKE ISLAND Hy**	**21.93**	**71**	T	T	14 53 37.8	
	baz=257,slow=75,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**21.94**	**71**	T	T	14 53 39.1	
	baz=257,slow=75,SNR=5.4						
H11N3	**WAKE ISLAND Hy**	**21.95**	**71**	T	T	14 53 38.6	
	baz=257,slow=75,SNR=7.8						
KSRS	**Korea Array**	**28.12**	**331**	LR	LR	14 42 17.4	
	comp=Z,14nm,19.0s,baz=10.0,slow=35						
WRA	**Warramunga Arr**	**34.94**	**197**	P	**P**	**14 32 24.4**	**-0.9**
	0.2nm,0.4s,baz=19,slow=9.6,SNR=3.5						
ASAR	**Alice Springs**	**38.59**	**196**	P	**P**	**14 32 57.4**	**+1.1**
	0.3nm,0.7s,baz=16,slow=9.1,SNR=5.2						
CMAR	**Chiang Mai Arr**	**44.31**	**283**	P	**P**	**14 33 42.6**	**-0.4**
	0.3nm,0.3s,baz=76,slow=3.9,SNR=4.2						
SONM	**Songino Array**	**46.69**	**325**	P	**P**	**14 34 02.0**	**+0.5**
	0.2nm,0.6s,baz=156,slow=7.3,SNR=2.2						
MKAR	**Makanchi Array**	**61.46**	**316**	P	**P**	**14 35 48.4**	**-0.2**
	0.4nm,0.5s,baz=91,slow=8.9,SNR=8.0						
ILAR	**Eielson Array**	**68.53**	**25**	P	**P**	**14 36 33.1**	**-0.7**
	0.1nm,0.3s,baz=253,slow=5.8,SNR=7.0						
YKA	**Yellowknife Ar**	**82.82**	**27**	P	**P**	**14 37 55.9**	**+0.6**
	0.1nm,0.4s,baz=285,slow=5.6						

IDC 08 14:28:22.8±3.1, 6.18S×147.15E, h0km, mb2.8/1, mb1 3.4/3, mb1mx3.2/36, mbtmp3.2/3, ML2.5/2, Error ellipse: s-maj=78.6km s-min=33.7km az=87.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.20**	**180**	Pn	Pn	14 29 14.2	-0.2
	5.9nm,0.3s,baz=36,slow=5.9,SNR=19						
PMG				Sn	Sn	14 29 54.8	+1.4
	5.8nm,0.3s,baz=78,slow=18,SNR=6.1						
WRA	**Warramunga Arr**	**18.49**	**221**	P	Pn	14 32 42.4	+1.7
	0.1nm,0.3s,baz=42,slow=12,SNR=4.3						
ASAR	**Alice Springs**	**21.55**	**215**	P	P	14 33 12.9	-1.1
	0.4nm,0.8s,baz=53,slow=8.7,SNR=8.4						
TORD	**Torodi Ar. Bea**	**145.28**	**284**	PKPbc	PKPbc	14 48 02.5	-0.9

1.2nm,0.7s,baz=80,slow=4.6,SNR=7.4

*NCEDC **08** 14:38:44.3±2.2, 36.62N±0.01×121.07W±0.02, h11km±3km, ML3.0/30, Error ellipse: s-maj=2.2km s-min=1.5km az=75.0*

NEIC 08 14:38:44.1±1.2, 36.61N±0.02×121.10W±0.02, h18km±2km, Error ellipse: s-maj=3.2km s-min=2.8km az=172.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BEMM	**Emmet**	**0.05**	**4**		Pg	14 38 47.0	-0.5
BBGB	**Big Mountain B**	**0.06**	**122**		Pg	14 38 47.0	-0.5
BBGB					Sg	14 38 49.2	-0.6
BAVM	**Antelope Valle**	**0.07**	**57**		Pg	14 38 47.0	-0.6
BEHM	**Elkhorn Ranch**	**0.08**	**313**		Pg	14 38 47.4	-0.2
BBNM	**San Benito**	**0.10**	**169**		Pg	14 38 47.6	-0.2
BPIM	**Pinnacles**	**0.13**	**204**		Pb	14 38 47.7	-0.2
BLRM	**Lewis Ranch**	**0.15**	**292**		Pg	14 38 48.7	+0.4
BJOM	**Mount Johnson**	**0.17**	**276**		Pg	14 38 48.5	-0.1
BJOM					Sg	14 38 51.5	-0.1
BHRM	**Hodges Ranch**	**0.18**	**312**		Pb	14 38 48.9	+0.2
LRV	**Little Rabbit**	**0.20**	**160**		Pg	14 38 49.0	0.0
BCGM	**Cienega Road**	**0.22**	**297**		Pb	14 38 49.7	+0.1
BSGM	**Shirttail Gulc**	**0.23**	**212**		Pg	14 38 49.1	-0.3
SCZ	**Santa Cruz**	**0.24**	**267**		Pg	14 38 49.6	-0.1
SCZ					Sg	14 38 53.4	-0.1
BMSM	**Mercy Hot Spri**	**0.25**	**79**		Pb	14 38 50.1	-0.1
BSLM	**Silva Ranch**	**0.26**	**310**		Pb	14 38 50.6	+0.3
BVYM	**Vineyard**	**0.29**	**299**		Pb	14 38 50.6	-0.2
BRMM	**Rolling Bench**	**0.32**	**45**		Pb	14 38 51.8	+0.5
SAO	**San Andreas Ge**	**0.32**	**299**	Pg	Pg	14 38 51.0	0.0
SAO	**San Andreas Ge**	**0.32**	**299**		Sb	14 38 56.6	+0.4
HLTM	**Lone Tree Road**	**0.32**	**329**		Pg	14 38 51.2	+0.2
BSRM	**Salinas Radio**	**0.34**	**280**		Pg	14 38 51.3	-0.1
FRP	**Fremont Peak**	**0.34**	**295**		Pg	14 38 51.3	-0.1
BSMM	**Soledad Missio**	**0.35**	**230**		Pg	14 38 51.5	0.0
LRC	**Lone Oak Road**	**0.36**	**173**		Pg	14 38 51.5	-0.2
BPCNC	**Pine Canyon**	**0.42**	**265**		Pb	14 38 53.0	-0.1
HAST	**Hastings Reser**	**0.42**	**239**		Pg	14 38 52.8	-0.1
PACP	**Pacheco Peak**	**0.42**	**339**		Pb	14 38 53.2	0.0
PACP					Sb	14 38 59.9	+0.5
HBTM	**San Juan Bauti**	**0.43**	**304**		Pb	14 38 53.4	+0.1
SFJWR	**San Luis Fatjo**	**0.44**	**353**		Pg	14 38 53.1	0.0
HFEM	**San Felipe**	**0.44**	**327**		Pg	14 38 53.3	+0.1
OCR	**O'Connell Ranc**	**0.45**	**313**		Pb	14 38 53.7	+0.1
PMPB	**Monarch Peak**	**0.46**	**148**		Pg	14 38 53.5	0.0
HPCM	**Pacheco Lake**	**0.47**	**343**		Pb	14 38 54.0	0.0
SLD	**San Luis Dam**	**0.47**	**348**		Pb	14 38 54.0	0.0
ANZ	**Anzar Road**	**0.48**	**305**		Pb	14 38 54.0	-0.1
HTUM	**Tustin Road**	**0.49**	**297**		Pg	14 38 53.9	-0.1
CDC	**Canada Road**	**0.52**	**324**		Pb	14 38 54.7	0.0
PCCM	**Crazy Canyon**	**0.52**	**186**		Pb	14 38 54.8	0.0
HERM	**Elkhorn Road**	**0.53**	**291**		Pb	14 38 54.8	0.0
GHS	**Gilroy Hot Spr**	**0.56**	**330**		Pb	14 38 56.1	+0.6
HLPM	**Lions Peak**	**0.61**	**315**		Pg	14 38 56.0	-0.2
PSAM	**San Ardo**	**0.61**	**164**		Pg	14 38 56.1	-0.1
BAPM	**Anderson Peak**	**0.62**	**225**		Pg	14 38 56.4	0.0
BPOM	**Post Ranch**	**0.66**	**235**		Pb	14 38 57.0	-0.1
HMOM	**Monterey**	**0.66**	**269**		Pb	14 38 57.1	0.0
JELB	**Ellicott, Sant**	**0.66**	**299**		Pb	14 38 57.0	-0.2
CADM	**Anderson Res.**	**0.69**	**323**		Pg	14 38 57.9	+0.1
PARM	**Ancline Ridg**	**0.71**	**120**		Pg	14 38 58.3	+0.2
PAPM	**Alder Peak**	**0.73**	**197**		Pg	14 38 58.5	0.0
PWMM	**Westland Maint**	**0.74**	**104**		Pg	14 38 59.1	+0.5
JLAB	**Laurel Hill**	**0.74**	**317**		Pb	14 38 58.5	-0.1
JTGM	**Trout Gulch Ro**	**0.75**	**304**		Pb	14 38 58.3	-0.4
JHLM	**Holstrom Ranch**	**0.77**	**311**		Pb	14 38 58.6	-0.4
PHSB	**Hesperia Broad**	**0.79**	**177**		Pg	14 38 59.5	0.0
CCOB	**Coe Ranch Numb**	**0.79**	**325**		Pg	14 38 59.9	+0.2
AMC	**Almaden**	**0.81**	**313**		Pb	14 38 59.2	-0.5
ARN	**Arnold Ranch**	**0.81**	**335**		Pb	14 38 59.8	0.0
JSTM	**Santa Teresa H**	**0.82**	**317**		Pb	14 38 59.8	-0.1
PVCM	**Vineyard Canyo**	**0.82**	**146**		Pb	14 38 59.8	-0.1
PSTM	**Stockdale Moun**	**0.83**	**145**		Pb	14 39 00.1	0.0
PPO	**Portuguese Can**	**0.84**	**152**		Pg	14 39 00.6	+0.1
PANM	**San Antonio Re**	**0.84**	**169**		Pg	14 39 00.4	-0.1
JUMM	**Mount Umunhum**	**0.84**	**311**		Pb	14 38 59.6	-0.7
MHC	**Mount Hamilton**	**0.85**	**329**		Pb	14 39 00.3	-0.1
MOBB	**Monterey Bay O**	**0.86**	**276**		Pg	14 39 00.7	-0.2
CMMM	**Mount Mocho**	**0.90**	**340**		Pb	14 39 01.3	-0.1
CTM	**Castle Mountai**	**0.92**	**137**		Pn	14 39 02.1	-0.1
PHFM	**Heflinger Ranc**	**0.92**	**142**		Pg	14 39 02.0	0.0
JJOM	**Saint Joseph's**	**0.92**	**311**		Pb	14 39 01.0	-0.6
PHCM	**Hearst Castle**	**0.93**	**183**		Pg	14 39 02.0	-0.2
MYLM	**Yosemite Lake**	**0.94**	**35**		Pb	14 39 01.7	-0.3
PKEM	**Kettleman Hill**	**0.97**	**124**		Pg	14 39 03.0	0.0
CMLM	**Mount Lewis**	**0.97**	**333**		Pb	14 39 02.2	-0.3
PCMM	**Cholame Hills**	**0.98**	**145**		Pg	14 39 03.2	0.0
GHC	**Gold Hill**	**0.98**	**142**		Pb	14 39 02.5	-0.2
RAMR	**Ramage Ranch**	**0.99**	**169**		Pb	14 39 02.7	0.0
JBNB	**Ben Lomond Mou**	**0.99**	**302**		Pb	14 39 02.1	-0.7
PSRM	**Scobie Ranch**	**1.00**	**138**		Pb	14 39 02.8	-0.2
JSGM	**Saratoga Golf**	**1.01**	**312**		Pb	14 39 03.0	-0.2
PKLM	**Kerr Lake**	**1.04**	**143**		Pb	14 39 03.7	+0.1
PSNM	**Stone Corral**	**1.05**	**141**		Pb	14 39 03.4	-0.4
JHUM	**Huhtala Lane,**	**1.05**	**305**		Pb	14 39 03.3	-0.5
PMCM	**McMillan Canyo**	**1.06**	**146**		Pn	14 39 04.1	-0.1
PMRM	**Maxey Ranch**	**1.08**	**139**		Pn	14 39 04.2	-0.1
TCHL	**Shandon**	**1.08**	**148**		Pn	14 39 04.7	+0.2
BLDC	**Black Mountain**	**1.08**	**172**		Pn	14 39 04.5	0.0
BLDC	**Black Mountain**	**1.08**	**172**		Pn	14 39 04.5	0.0
PCBM	**Cambria**	**1.09**	**178**		Pb	14 39 04.2	-0.3
MHDM	**Hidden Dam**	**1.09**	**62**		Pb	14 39 03.8	-0.7
CMJM	**Mission San Jo**	**1.10**	**326**		Pb	14 39 03.9	-0.8
JBMM	**Black Mountain**	**1.10**	**310**		Pb	14 39 03.9	-0.8
JPC	**Peters Creek,**	**1.11**	**307**		Pb	14 39 04.1	-0.7
PAGB	**Antelope Grade**	**1.11**	**142**		Pn	14 39 04.7	-0.2
THIS	**South End of C**	**1.13**	**141**		Pb	14 39 05.5	+0.3
WENL	**Wente Vineyard**	**1.14**	**333**		Pn	14 39 04.8	-0.4
JJRM	**Joaquin Road**	**1.15**	**310**		Pn	14 39 04.7	-0.6
ARDC	**Alexander Ranc**	**1.15**	**175**		Pn	14 39 05.1	-0.2
TRAM	**Private Proper**	**1.15**	**144**		Pb	14 39 05.5	0.0
JFP	**Foothills Park**	**1.15**	**311**		Pn	14 39 04.4	-0.9
JPSM		**1.16**	**301**		Pn	14 39 04.4	-1.0
JSFB	**Stanford Teles**	**1.17**	**313**		Pn	14 39 05.5	-0.1
CVLM	**Vallecito**	**1.17**	**330**		Pn	14 39 05.3	-0.4
FRI	**Friant**	**1.18**	**71**		Pn	14 39 04.9	-0.8
PTRM	**Twissleman Ran**	**1.19**	**143**		Pb	14 39 06.3	+0.1
JRSC	**Jasper Ridge**	**1.21**	**311**		Pn	14 39 05.2	-0.9
CNIC	**Niles Canyon**	**1.21**	**326**		Pn	14 39 05.8	-0.4
TSCN	**Private Proper**	**1.23**	**150**		Pb	14 39 06.8	+0.1
BGH	**Bear Gulch**	**1.23**	**307**		Pn	14 39 05.7	-0.7
PTAM	**Tassajara Cree**	**1.26**	**165**		Pn	14 39 07.0	+0.1
JHPM	**Huddart Park**	**1.27**	**311**		Pn	14 39 06.3	-0.7
PBPM	**Bitterwater Pu**	**1.32**	**141**		Pb	14 39 08.3	-0.2
EFD	**Emergency Oper**	**1.32**	**167**		Pn	14 39 07.5	-0.2
CMOB	**Morgan Territo**	**1.32**	**335**		Pg	14 39 10.5	+0.8
LSDC	**Los Osos Digit**	**1.33**	**171**		Pn	14 39 07.4	-0.3
MMIM	**Miami Mountain**	**1.35**	**53**		Pn	14 39 08.3	0.0
CLCB	**Lake Chabot**	**1.36**	**326**		Pn	14 39 08.2	-0.1
VPDC	**Valencia Peak**	**1.38**	**172**		Pn	14 39 08.3	-0.2
OXMT	**Ox Mountain**	**1.38**	**310**		Pn	14 39 08.4	-0.1
DPD	**Davis Peak**	**1.40**	**169**		Pn	14 39 08.3	-0.5
DCD	**Diablo Creek**	**1.41**	**171**		Pn	14 39 08.7	-0.2
MCUB	**Copperopolis B**	**1.42**	**16**		Pn	14 39 08.3	-0.7
BGC	**Bolinger Road**	**1.43**	**328**		Pn	14 39 09.3	+0.1
SAC	**San Andreas**	**1.43**	**313**		Pn	14 39 08.8	-0.4
CMB	**Columbia Colle**	**1.53**	**22**		Pn	14 39 10.6	-0.1
CMB	**Columbia Colle**	**1.53**	**22**	Pn	Pn	14 39 10.4	-0.3
MNHB	**New Hogan Dam**	**1.55**	**8**		Pn	14 39 10.4	-0.5
BRIB	**Briones**	**1.55**	**328**		Pn	14 39 10.5	-0.4
BKS	**Berkeley--Byer**	**1.56**	**325**		Pn	14 39 10.6	-0.4
CVPM	**Vollmer Peak**	**1.56**	**325**		Pn	14 39 10.5	-0.5
SMMC	**Simmler**	**1.57**	**145**		Pn	14 39 11.5	+0.3
KCC	**Kaiser Creek**	**1.59**	**63**		Pb	14 39 12.4	-0.8
CPIM	**Pinole Ridge**	**1.64**	**327**		Pn	14 39 12.4	+0.3
BCH	**Branch Mountai**	**1.64**	**150**		Pn	14 39 12.2	0.0
CARC	**Carrizo Plain**	**1.65**	**142**		Pn	14 39 11.7	-0.6
MRHM	**Rocky Hill**	**1.66**	**101**		Pn	14 39 11.8	-0.5
CSPM	**San Pablo Ridg**	**1.66**	**325**		Pn	14 39 12.2	-0.2
HELL	**Mitchell Peak,**	**1.67**	**87**		Pn	14 39 12.2	-0.5
CPMM	**Point Molate**	**1.70**	**322**		Pn	14 39 12.6	-0.2
PMLM	**Mount Lospe**	**1.76**	**167**		Pn	14 39 12.4	-1.4
AASM	**Arroyo Seco**	**1.82**	**360**		Pn	14 39 14.2	-0.3
SNT	**Sears Point**	**1.90**	**326**		Pn	14 39 15.3	-0.4
MRDM	**Red Cones**	**1.91**	**58**		Pb	14 39 17.5	-1.1
MDPB	**Devils Postpil**	**1.91**	**57**		Pn	14 39 17.1	+1.0
SPG2	**Springville 2**	**1.93**	**102**		Pn	14 39 15.9	-0.2
MINS	**Minaret Summit**	**1.94**	**57**		Pb	14 39 17.9	-1.2
MMPM	**Mammoth Pass**	**1.94**	**58**		Pb	14 39 18.2	-0.8
MMSM	**Mammoth Summit**	**1.94**	**58**		Pb	14 39 18.6	-0.7
OMMB	**Old Mammoth Mi**	**1.96**	**59**		Pn	14 39 17.9	+1.2
MDYM	**Dry Creek**	**1.97**	**57**		Pb	14 39 19.1	-0.6
MDCM	**Deadman Creek**	**1.98**	**56**		Pb	14 39 18.6	-1.2
MMLB	**Mammoth Lakes**	**1.99**	**58**		Pb	14 39 19.5	-0.5
PKM	**Mcpherson Peak**	**2.01**	**148**		Pn	14 39 17.6	+0.2
MLCM	**Laurel Creek C**	**2.01**	**60**		Pb	14 39 19.5	-0.9
MEMM	**East Mammoth H**	**2.02**	**58**		Pb	14 39 19.3	-1.3
MGPM	**Gravel Pit**	**2.03**	**59**		Pb	14 39 20.1	-0.6
MCSM	**Casa Diablo Ho**	**2.04**	**59**		Pn	14 39 19.1	+1.3
CVS	**Carmenet Viney**	**2.04**	**328**		Pn	14 39 17.6	-0.1
MCBM	**Casa Benchmark**	**2.04**	**59**		Pb	14 39 20.4	-0.5
LMCR	**Lookout Mounta**	**2.05**	**56**		Pb	14 39 20.5	-0.5
MCVM	**Convict Lake**	**2.06**	**61**		Pb	14 39 20.3	-1.0
SCHCA	**Scheelite**	**2.07**	**68**		Pb	14 39 19.9	-1.5
MLAC	**Mammoth, Mammo**	**2.08**	**60**		Pb	14 39 20.8	-0.7
MDRNC	**Doe Ridge**	**2.08**	**60**		Pb	14 39 20.9	-0.6
RCCR	**Rock Creek Can**	**2.09**	**65**		Pb	14 39 20.4	-1.4
LUL	**Lundy Lake**	**2.10**	**46**		Pb	14 39 20.9	-1.0
MLHM	**Little Hot Cre**	**2.12**	**59**		Pn	14 39 18.7	-0.1
MTUM	**Tungsten Hills**	**2.16**	**69**		Pb	14 39 21.5	-1.4
ORC	**Owens River**	**2.21**	**62**		Pb	14 39 22.7	-0.9
WOFM	**Oak Flat**	**2.21**	**118**		Pn	14 39 20.3	+0.3
NBPM	**Berryessa Peak**	**2.23**	**337**		Pn	14 39 20.4	+0.2
ASMM	**Slate Mountain**	**2.23**	**8**		Pn	14 39 22.0	+1.6
NSHM	**Saint Helena R**	**2.25**	**328**		Pn	14 39 20.1	-0.5
MFBM	**Five Bridges**	**2.29**	**68**		Pb	14 39 23.9	-1.1
BENR	**Benton**	**2.30**	**61**		Pb	14 39 23.5	-1.8
WAKR	**Walker**	**2.31**	**34**		Pb	14 39 23.7	-1.6
MCDM	**Chidago Canyon**	**2.32**	**65**		Pb	14 39 24.7	-0.8
ISA	**Isabella, Lake**	**2.33**	**113**		Pn	14 39 22.5	+0.8
ISA	**Isabella, Lake**	**2.33**	**113**	Pn	Pn	14 39 22.3	+0.7
MRCM	**Red Rock Canyo**	**2.33**	**62**		Pb	14 39 24.6	-1.1
AFDM	**Forest Hills D**	**2.34**	**2**		Pb	14 39 22.9	+1.2
POCCA	**Poleta Canyon**	**2.38**	**71**		Pn	14 39 24.4	+

MHDM	**Hidden Dam**	**1.12**	**62**		Pn	15 05 53.8	-1.0
PAGB	**Antelope Grade**	**1.12**	**140**		Pn	15 05 54.3	-0.6
THIS	**South End of C**	**1.14**	**140**		Pn	15 05 55.1	0.0
ARDC	**Alexander Ranc**	**1.14**	**174**		Pb	15 05 55.1	0.0
JJRM	**Joaquin Road**	**1.14**	**311**		Pn	15 05 55.0	0.0
WENL	**Wente Vineyard**	**1.14**	**334**		Pn	15 05 54.1	-1.0
JFP	**Foothills Park**	**1.14**	**312**		Pn	15 05 54.6	-0.5
JPSM		**1.15**	**302**		Pn	15 05 54.5	-0.6
TRAM	**Private Proper**	**1.15**	**143**		Pb	15 05 55.5	+0.1
JSFB	**Stanford Teles**	**1.16**	**314**		Pn	15 05 55.1	-0.3
CVLM	**Vallecito**	**1.17**	**331**		Pn	15 05 55.3	-0.2
PTRM	**Twissleman Ran**	**1.20**	**141**		Pb	15 05 56.4	+0.1
JRSC	**Jasper Ridge**	**1.20**	**313**		Pn	15 05 55.3	-0.6
FRI	**Friant**	**1.21**	**70**		Pn	15 05 54.9	-1.1
CNIC	**Niles Canyon**	**1.21**	**327**		Pn	15 05 55.7	-0.4
BGH	**Bear Gulch**	**1.22**	**308**		Pn	15 05 55.9	-0.3
TSCN	**Private Proper**	**1.23**	**149**		Pb	15 05 56.7	0.0
PTAM	**Tassajara Cree**	**1.25**	**164**		Pb	15 05 57.0	-0.1
JHPM	**Huddart Park**	**1.26**	**312**		Pn	15 05 56.4	-0.4
EFD	**Emergency Oper**	**1.31**	**165**		Pn	15 05 57.4	-0.1
LSDC	**Los Osos Digit**	**1.32**	**170**		Pb	15 05 58.6	+0.3
PBPM	**Bitterwater Pu**	**1.32**	**140**		Pb	15 05 58.1	-0.4
CMOB	**Morgan Territo**	**1.33**	**336**		Pn	15 05 57.5	-0.2
CLCB	**Lake Chabot**	**1.36**	**327**		Pn	15 05 58.1	0.0
VPDC	**Valencia Peak**	**1.37**	**171**		Pn	15 05 58.6	+0.4
OXMT	**Ox Mountain**	**1.37**	**311**		Pn	15 05 58.2	0.0
MMIM	**Miami Mountain**	**1.38**	**53**		Pn	15 05 58.3	-0.2
DPD	**Davis Peak**	**1.39**	**168**		Pb	15 05 59.3	-0.2
DCD	**Diablo Creek**	**1.40**	**170**		Pn	15 05 58.4	-0.2
SAC	**San Andreas**	**1.43**	**314**		Pn	15 05 58.9	-0.1
BGC	**Bolinger Road**	**1.43**	**329**		Pn	15 05 59.3	+0.2
MCUB	**Copperopolis B**	**1.44**	**116**		Pb	15 05 58.7	-0.4
CRPB	**Russellman Par**	**1.45**	**335**		Pn	15 05 59.2	-0.2
BDM	**Black Diamond**	**1.48**	**337**		Pb	15 06 00.9	-0.1
BRIB	**Briones**	**1.55**	**329**		Pn	15 06 00.3	-0.5
BKS	**Berkeley--Byer**	**1.55**	**326**		Pn	15 06 00.8	0.0
CMB	**Columbia Colle**	**1.55**	**22**		Pn	15 06 01.3	+0.4
CVPM	**Vollmer Peak**	**1.55**	**326**		Pn	15 06 00.8	0.0
MNHB	**New Hogan Dam**	**1.57**	**9**		Pn	15 06 00.9	0.0
KCC	**Kaiser Creek**	**1.62**	**63**		Pn	15 06 02.4	+0.6
CPIM	**Pinole Ridge**	**1.64**	**328**		Pn	15 06 02.5	+0.6
BCH	**Branch Mountai**	**1.64**	**149**		Pn	15 06 02.3	+0.2
CARC	**Carrizo Plain**	**1.65**	**141**		Pn	15 06 02.8	+0.5
MRHM	**Rocky Hill**	**1.68**	**100**		Pn	15 06 01.6	-0.9
CPMM	**Point Molate**	**1.69**	**323**		Pn	15 06 02.5	-0.2
HELL	**Mitchell Peak,**	**1.70**	**87**		Pn	15 06 02.5	-0.3
NLHM	**Lake Herman**	**1.72**	**332**		Pn	15 06 03.4	+0.3
PMLM	**Mount Lospe**	**1.75**	**166**		Pn	15 06 03.2	-0.2
AASM	**Arroyo Seco**	**1.83**	**1**		Pn	15 06 04.5	-0.1
SNT	**Sears Point**	**1.90**	**327**		Pn	15 06 05.7	+0.1
MRDM	**Red Cones**	**1.93**	**58**		Pn	15 06 07.6	+1.3
MDPB	**Devils Postpil**	**1.94**	**57**		Pn	15 06 07.4	+1.1
MMPM	**Mammoth Pass**	**1.96**	**58**		Pb	15 06 08.4	-1.1
MINS	**Minaret Summit**	**1.96**	**57**		Pb	15 06 08.1	-1.3
MDYM	**Dry Creek**	**2.00**	**57**		Pb	15 06 09.1	-1.0
MDCM	**Deadman Creek**	**2.00**	**56**		Pn	15 06 08.7	+1.4
PKM	**Mcpherson Peak**	**2.01**	**147**		Pn	15 06 07.7	+0.4
MMLB	**Mammoth Lakes**	**2.02**	**58**		Pb	15 06 09.6	-0.9
MLCM	**Laurel Creek C**	**2.04**	**60**		Pb	15 06 09.7	-1.1
CVS	**Carmenet Viney**	**2.04**	**329**		Pn	15 06 07.7	+0.2
MEMM	**East Mammoth H**	**2.05**	**58**		Pb	15 06 10.0	-0.9
MGPM	**Gravel Pit**	**2.06**	**59**		Pb	15 06 10.1	-0.9
MCSM	**Casa Diablo Ho**	**2.07**	**59**		Pb	15 06 10.4	-0.9
MCBM	**Casa Benchmark**	**2.07**	**59**		Pb	15 06 10.3	-0.9
LMCR	**Lookout Mounta**	**2.08**	**56**		Pb	15 06 10.3	-1.1
FIGC	**Figueroa Mtn.**	**2.08**	**153**		Pn	15 06 08.6	+0.4
MCCM	**Marconi Confer**	**2.08**	**318**		Pn	15 06 07.9	-0.1
MCVM	**Convict Lake**	**2.09**	**61**		Pb	15 06 10.5	-1.6
SCHCA	**Scheelite**	**2.10**	**68**		Pb	15 06 10.5	-1.2
MLAC	**Mammoth, Mammo**	**2.10**	**60**		Pb	15 06 10.9	-0.9
MDRNC	**Doe Ridge**	**2.11**	**60**		Pb	15 06 10.9	-1.0
RCCR	**Rock Creek Can**	**2.12**	**64**		Pb	15 06 10.7	-1.5
LUL	**Lundy Lake**	**2.13**	**46**		Pb	15 06 10.9	-1.3
MLHM	**Little Hot Cre**	**2.14**	**59**		Pn	15 06 09.0	-0.1
BCW	**Bitter Crk WRg**	**2.16**	**139**		Pb	15 06 11.6	-1.2
MTUM	**Tungsten Hills**	**2.19**	**69**		Pn	15 06 11.2	+1.5
WOFM	**Oak Flat**	**2.23**	**118**		Pn	15 06 10.4	+0.3
ORC	**Owens River**	**2.23**	**62**		Pb	15 06 12.7	-1.3
NBPM	**Berryessa Peak**	**2.23**	**338**		Pn	15 06 10.4	+0.3
NSHM	**Saint Helena R**	**2.25**	**329**		Pn	15 06 07.4	-3.0
WASM	**Alta Sierra Ca**	**2.25**	**112**		Pn	15 06 11.2	+0.7
MFBM	**Five Bridges**	**2.32**	**68**		Pb	15 06 14.5	-0.9
BENR	**Benton**	**2.33**	**61**		Pn	15 06 13.6	+1.9
WAKR	**Walker**	**2.33**	**35**		Pb	15 06 13.8	-1.9
ISA	**Isabella, Lake**	**2.34**	**113**		Pn	15 06 11.6	-0.1
MCDM	**Chidago Canyon**	**2.35**	**65**		Pb	15 06 13.9	-2.0
AFDM	**Forest Hills D**	**2.35**	**3**	Pn	Pn	15 06 12.3	+0.5
POCCA	**Poleta Canyon**	**2.41**	**71**		Pb	15 06 15.0	-1.9
NMTM	**Middletown**	**2.44**	**335**		Pn	15 06 13.6	+0.6
NMCNC	**Mill Creek, So**	**2.44**	**325**		Pn	15 06 12.5	-0.5
GAXM	**Alexander Vall**	**2.47**	**329**		Pn	15 06 13.0	-0.4
EMB	**Emerald Bay**	**2.51**	**19**		Pn	15 06 15.6	+1.4
RUBR	**Rubicon Trail**	**2.57**	**17**		Pn	15 06 17.1	+2.1
BFC	**Buffalo Canyon**	**2.59**	**27**		Pn	15 06 16.4	+1.2
LHV	**Little Huntoon**	**2.66**	**51**		Pn	15 06 18.4	+2.4
PNTR	**Pine Nut**	**2.77**	**25**		Pn	15 06 18.5	+0.8
YERR	**Yerington**	**2.82**	**32**		Pn	15 06 19.7	+1.4
HOPS	**Hopland Field**	**2.85**	**328**	Pn	Pn	15 06 18.4	-0.2
RYN	**Ryan**	**2.90**	**45**		Pn	15 06 19.6	+0.2
ORV	**Oroville**	**2.97**	**354**		Pn	15 06 20.4	+0.2
BEKR	**Beckworth**	**3.32**	**10**	Pn	Pn	15 06 25.0	-0.3
PAHR	**Pah Rah Range**	**3.40**	**23**	Pn	Pn	15 06 26.1	-0.2
KVN	**Kaiserville**	**3.43**	**43**	Pn	Pn	15 06 25.9	-0.8
GSC	**Goldstone, Bar**	**3.74**	**109**		Pn	15 06 30.3	+1.6
TPNV	**Topopah Spring**	**3.93**	**83**	Pn	Pn	15 06 34.1	+0.4

*IDC **08** 15:06:08.2±2.0, 13.66N×143.80E, h116km±22km, mb3.6/5, mb1 3.8/5, mb1mx3.3/31, mbtmp3.9/5, Error ellipse: s-maj=45.1km s-min=18.0km az=100.0*
*NEIC **08** 15:06:08.7±1.6, 13.8N±0.1×144.00E±0.08, h135km±8km, mb4.6/17, Error ellipse: s-maj=20.8km s-min=9.2km az=202.0*
ISC 08 15:06:09.5±0.7, **13.7N**±0.1×**144.0E**±0.1, **h142**km, **n23**, σ1§**58**/24, **mb4.3**/12, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.84**	**97**	P	**Pn**	**15 06 31.1**	**-1.2**
	92nm,0.3s,baz=290,slow=7.2,SNR=49						
GUMO				S	**Sn**	**15 06 47.3**	**-2.2**
	175nm,0.3s,baz=166,slow=21,SNR=38						
GUMO	**Guam**	**0.84**	**97**		**Pn**	**15 06 30.9**	**-1.3**
PATS	**Pohnpei**	**15.63**	**114**	Pn	**Pn**	**15 09 40.3**	**-2.0**
COEN	**Coen**	**27.48**	**182**	P	**P**	**15 11 43.3**	**+0.7**
COEN				IAmb	IAmb	15 12 35.1	
	comp=Z,45nm,1.9s						
WR0	**Warramunga Arr**	**34.71**	**196**	P	**P**	**15 12 47.1**	**+1.1**
WR0				IAmb	IAmb	15 13 34.5	
	comp=Z,24nm,1.8s						
WRAB	**Tennant Creek**	**34.74**	**196**	P	**P**	**15 12 47.2**	**+1.0**
WRAB				IAmb	IAmb	15 13 17.9	
	comp=Z,9.7nm,1.3s						
WRA	**Warramunga Arr**	**34.75**	**196**	P	**P**	**15 12 47.7**	**+1.3**
	comp=Z,2.8nm,0.6s,baz=21,slow=9.5,SNR=38						
WRA	**Warramunga Arr**	**34.75**	**196**	P	**P**	**15 12 46.2**	**-0.2**
FITZ	**Fitzroy Crossi**	**36.41**	**210**	P	**P**	**15 13 02.9**	**+2.3**
FITZ				IAmb	IAmb	15 14 23.0	
	comp=Z,15nm,1.7s						
AS31	**Alice Springs**	**38.42**	**195**	P	**P**	**15 13 18.3**	**+0.8**
ASAR	**Alice Springs**	**38.42**	**195**	P	**P**	**15 13 18.2**	**+0.8**
	comp=Z,0.6nm,0.4s,baz=14,slow=13,SNR=31						
HIA	**Hailar**	**40.70**	**336**	P	**P**	**15 13 35.2**	**-0.9**
HIA				IAmb	IAmb	15 13 45.3	
	comp=Z,5.1nm,1.1s						
ARMA	**Armidale**	**44.46**	**171**	P	**P**	**15 14 06.3**	**-0.5**
MNAI	**Manna**	**44.51**	**249**	P	**P**	**15 14 04.4**	**-2.9**
STKA	**Stephens Creek**	**45.37**	**183**	P	**P**	**15 14 12.8**	**-0.9**
	comp=Z,1.8nm,0.4s,baz=355,slow=8.6,SNR=5.8						
FORT	**Forrest**	**46.80**	**199**	P	**P**	**15 14 26.3**	**+1.4**
BBOO	**Buckleboo**	**46.86**	**189**	P	**P**	**15 14 25.7**	**+0.3**
BBOO				IAmb	IAmb	15 15 55.6	
	comp=Z,44nm,1.8s						
KNTN	**Kanton**	**46.86**	**107**	P	**P**	**15 14 28.4**	**+2.6**
CAN	**Canberra**	**48.97**	**175**	P	**P**	**15 14 41.8**	**+0.1**
CAN				IAmb	IAmb	15 15 14.6	
	comp=Z,34nm,1.6s						
MORW	**Morawa**	**50.37**	**212**	P	**P**	**15 14 51.2**	**-1.1**
TOO	**Toolangi**	**51.01**	**178**	P	**P**	**15 14 57.5**	**+0.5**
MKAR	**Makanchi Array**	**60.84**	**316**	P	**P**	**15 16 06.7**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=90,slow=9.3,SNR=4.9						
ILAR	**Eielson Array**	**68.84**	**25**	P	**P**	**15 17 01.2**	**+2.9**
	comp=Z,0.2nm,0.4s,baz=252,slow=5.8,SNR=7.4						

*NEIC **08** 15:17:47.9±1.4, 17.55N±0.08×94.95W±0.04, h136km±7km, Error ellipse: s-maj=12.4km s-min=2.1km az=202.0*
*MEX **08** 15:17:49.2±1.1, 17.58N×94.93W, h135km±9km, MD4.1*
ISC 08 15:17:47.8±1.0, **17.54N**±0.07×**94.93W**±0.04, **h136**km±10km, **n16**, σ0§**75**/27, **Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.45**	**175**	*i* P	**Pn**	**15 18 07.8**	**+0.4**
CMIG				*e*S	**Sn**	**15 18 21.9**	**-0.3**
CMIG	**Matias Romero**	**0.45**	**175**		**Pn**	**15 18 07.8**	**+0.4**
CMIG					**Sn**	**15 18 21.9**	**-0.3**
VHO	**Vista Hermosa**	**1.79**	**255**	*i* P	**Pn**	**15 18 20.7**	**+0.9**
VHO				*i* S	**Sn**	**15 18 44.4**	**+0.1**
TGIG		**1.89**	**114**	*e*P	**Pn**	**15 18 21.2**	**+0.4**
TGIG				*e*S	**Sn**	**15 18 45.1**	**-1.0**
TGIG		**1.89**	**114**		**Pn**	**15 18 21.2**	**+0.4**
TGIG					**Sn**	**15 18 45.1**	**-1.0**
HUIG	**Huatulco**	**2.10**	**213**	*e*P	**Pn**	**15 18 22.4**	**-1.0**
HUIG				*i* S	**Sn**	**15 18 50.4**	**-0.1**
HUIG	**Huatulco**	**2.10**	**213**		**Pn**	**15 18 22.4**	**-1.0**
HUIG					**Sn**	**15 18 50.4**	**-0.1**
PCIG		**2.45**	**138**	*e*P	**Pn**	**15 18 28.5**	**+0.8**
PCIG				*i* S	**Sn**	**15 18 58.7**	**+0.3**
PCIG		**2.45**	**138**		**Pn**	**15 18 28.5**	**+0.8**
PCIG					**Sn**	**15 18 58.7**	**+0.3**
TPIG	**Tehuac#an**	**2.48**	**291**	*i* P	**Pn**	**15 18 28.5**	**+0.4**
TPIG				*i* S	**Sn**	**15 18 58.5**	**-0.7**
TPIG	**Tehuac#an**	**2.48**	**291**		**Pn**	**15 18 28.5**	**+0.4**
TPIG					**Sn**	**15 18 58.5**	**-0.7**
TLIG	**Tlapa**	**3.47**	**271**		**Pn**	**15 18 41.1**	**+0.2**
TEIG	**Tepich**	**6.84**	**66**	Pn	**Pn**	**15 19 23.7**	**-1.9**
MIAR	**Mount Ida**	**16.98**	**4**	P	**Pn**	**15 21 37.5**	**+0.5**
MIAR				IAmb	IAmb	15 21 48.8	
	comp=Z,26nm,1.9s						
U40A	**Yellville**	**18.83**	**5**	P	**P**	**15 21 57.6**	**+0.5**
U40A				IAmb	IAmb	15 21 58.6	
	comp=Z,10nm,0.8s						
GOGA	**Godfrey**	**18.86**	**31**	P	**P**	**15 21 56.8**	**-0.6**
GOGA				IAmb	IAmb	15 22 35.8	
	comp=Z,24nm,1.5s						

*INET **08** 15:22:18.6, 12.49N×87.86W, h66km, ML3.6*
SNET 08 15:22:20.1±0.9, **12.56N**×**87.99W**, **h32**km±4km, **ML3.4**, **Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.73**	**12**	*e*P	Pn	15 22 34.0	-0.4
JUCU	**Jucuar¡n**	**0.73**	**340**	*e*P	Pb	15 22 34.9	+0.4
JUCU				*e*S	Sn	15 22 44.9	+0.4
JUCU				IAML		15 22 49.1	
	comp=Z,504nm,0.3s						
LCND	**La Caada**	**0.75**	**8**	*e*P	Pn	15 22 34.1	-0.4
LCND				*e*S	Sn	15 22 45.6	+0.9
LCND				IAML		15 22 50.0	
	comp=Z,1µm,0.3s						
LCY	**Lacayo**	**0.91**	**341**	*e*P	Pn	15 22 37.0	+0.2
LCY				*e*S	Sb	15 22 50.2	+1.0
PACA	**Pacayal**	**0.96**	**340**	*e*P	Pn	15 22 37.5	0.0
PACA				*e*S	Sb	15 22 51.3	+0.6
PACA				IAML		15 22 56.6	
	comp=Z,2µm,0.2s						

*NIC **08** 15:33:23.1±0.0, 36.30N×31.63E, h38km±28km, Md3.8/5, Ml3.3/3*
*DDA **08** 15:33:23.3, 36.30N×31.45E, h41km±1km, ML3.0*
*ISK **08** 15:33:23.2, 36.37N×31.45E, h17km, ML3.5/21*
*HLW **08** 15:33:25.3, 36.00N×30.90E, h20km±14km, Ml4.0*
ISC 08 15:33:23.2±1.0, **36.20N**±0.04×**31.40E**±0.03, **h45**km±19km, **n58**, σ1§**94**/81, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEPZ	**Antalya-Kepez**	**0.72**	**13**	*i* P	**Pn**	**15 33 36.8**	**-0.3**
KEPZ				*i* S	**Sn**	**15 33 46.0**	**-1.1**
GAZI	**Gazipasa**	**0.74**	**87**	PG	**Pn**	**15 33 37.6**	**+0.2**
GAZI				SG	**Sn**	**15 33 48.2**	**+0.7**
GAZI	**Gazipasa**	**0.74**	**87**	*i* P	**Pn**	**15 33 37.5**	**+0.2**
GAZI				*i* S	**Sn**	**15 33 48.2**	**+0.7**
GAZI				IAML		15 33 52.0	
	comp=N,556nm,0.5s						
KEMT	**Kemer-ANTALYA**	**0.79**	**301**	PG	**Pn**	**15 33 39.1**	**+1.1**
KEMT				SG	**Sn**	**15 33 48.9**	**+0.1**
AKUM	**Antalya-Kumluc**	**0.86**	**278**	*i* P	**Pn**	**15 33 40.1**	**+1.9**
AKUM				*i* S	**Sn**	**15 33 56.7**	**+6.2**
AKUM				IAML		15 34 00.0	
	comp=N,659nm,0.4s						
ANTB	**Antalya**	**0.92**	**319**	PG	**Pn**	**15 33 40.3**	**+0.5**
ANTB				SG	**Sn**	**15 33 51.5**	**-0.4**
ERMK	**Ermenek**	**1.29**	**70**	*i* P	**Pn**	**15 33 46.4**	**+1.3**
ERMK				*i* S	**Sn**	**15 34 04.0**	**+2.7**
ERMK				IAML		15 34 08.0	
	comp=N,491nm,0.3s						
ELL	**Elmali**	**1.32**	**295**	P	**Pn**	**15 33 46.9**	**+1.5**
TEKE	**Tekeli-Mersin**	**1.39**	**92**	PN	**Pn**	**15 33 47.1**	**+1.0**
AKMS	**Akamas**	**1.40**	**147**	P	**Pn**	**15 33 46.7**	**+0.4**
AKMS				AML	AML	15 34 12.2	
	comp=N,3.9nm,0.4s						
AKMS				AML	AML	15 34 12.5	
	comp=N,2.4nm,0.3s						
AKMS				AMd		15 35 04.8	
ALFC	**Alefka**	**1.43**	**137**	P	**Pn**	**15 33 46.5**	**-0.2**
ALFC				AML	AML	15 34 02.9	
	comp=N,1.7nm,0.1s						
ALFC				AML	AML	15 34 02.9	
	comp=N,1.7nm,0.1s						
ALFC				S	**Sn**	**15 34 03.0**	**-1.3**
ALFC				AML	AML	15 34 03.7	
	comp=N,1.3nm,0.2s						
ALFC				AML	AML	15 34 03.7	
	comp=N,1.3nm,0.2s						
ALFC				AMd		15 34 43.6	
ALFC				AMd		15 34 43.6	
AKAS	**Kas**	**1.45**	**272**	*i* P	**Pn**	**15 33 47.5**	**+0.3**
AKAS				*i* S	**Sn**	**15 34 03.6**	**-1.5**
BERE	**Bereket-Mersin**	**1.48**	**84**	PN	**Pn**	**15 33 48.7**	**+1.2**
YORU	**Yoruktepe-Mers**	**1.62**	**91**	PN	**Pn**	**15 33 51.2**	**+1.9**
LEF	**Lefka**	**1.62**	**131**	*i* P	**Pn**	**15 33 48.7**	**-0.7**
LEF				*i* S	**Sn**	**15 34 05.6**	**-3.4**
OREN	**Orenkoy-Mersin**	**1.66**	**89**	PN	**Pn**	**15 33 52.2**	**+2.3**
TEVE	**Tevekalti-Mers**	**1.66**	**81**	PN	**Pn**	**15 33 52.1**	**+2.1**
AKK1	**Akkuyu-Mersin**	**1.73**	**91**	PN	**Pn**	**15 33 52.9**	**+2.1**
AKK1				SN	**Sn**	**15 34 14.6**	**+2.9**
GULN	**MERSIN_Gulnar**	**1.73**	**90**	*i* P	**Pn**	**15 33 52.8**	**+2.0**
GULN				*i* S	**Sn**	**15 34 13.2**	**+1.5**
TEPK	**Tepekoy-MERSIN**	**1.73**	**89**	PN	**Pn**	**15 33 52.7**	**+1.8**
AKK2	**Akkuyu-Mersin**	**1.74**	**91**	PN	**Pn**	**15 33 53.3**	**+2.4**
AKKU	**Akkuyu-Mersin**	**1.74**	**91**	PN	**Pn**	**15 33 53.1**	**+2.2**
AKKU				SN	**Sn**	**15 34 14.9**	**+3.0**
KMER	**Konya-Meram**	**1.75**	**26**	*i* P	**Pn**	**15 33 51.5**	**+0.3**
KMER				*i* S	**Sn**	**15 34 11.6**	**-0.7**
GOLH	**Golhisar**	**1.81**	**306**	*i* P	**Pn**	**15 33 54.2**	**+2.3**
GOLH				*i* S	**Sn**	**15 34 17.6**	**+3.8**
YESI	**Yesilovacik-Me**	**1.81**	**89**	PN	**Pn**	**15 33 54.4**	**+2.5**
TISA	**Tisan-Mersin**	**1.84**	**91**	PN	**Pn**	**15 33 54.8**	**+2.5**
IKL	**Isikli**	**1.85**	**88**	PN	**Pn**	**15 33 54.3**	**+1.9**
BAGO	**Egridir - ISPA**	**1.85**	**345**	*i* P	**Pn**	**15 33 52.2**	**-0.4**
BAGO				*i* S	**Sn**	**15 34 15.4**	**+0.5**
KARG	**Kargicak-Mersi**	**1.86**	**89**	PN	**Pn**	**15 33 55.2**	**+2.5**
KEBE	**Keben-Mersin**	**1.88**	**82**	PN	**Pn**	**15 33 54.8**	**+1.8**
KONT	**Konya--Tatoy**	**1.90**	**23**	PN	**Pn**	**15 33 53.6**	**+0.4**
KONT	**Konya--Tatoy**	**1.90**	**23**	*i* P	**Pn**	**15 33 53.5**	**+0.2**
KONT				*i* S	**Sn**	**15 34 15.9**	**-0.2**
DOGA	**KONYA_Doganhis**	**1.91**	**6**	*i* P	**Pn**	**15 33 53.9**	**+0.4**
DOGA				*i* S	**Sn**	**15 34 15.6**	**-0.9**
FETY	**Fethiye**	**1.92**	**284**	*i* P	**Pn**	**15 33 53.8**	**+0.4**
FETY				*i* S	**Sn**	**15 34 16.5**	**0.0**
CSS	**Mathiatis**	**2.00**	**128**	P	**Pn**	**15 33 55.1**	**+0.6**
CSS				S	**Sn**	**15 34 17.0**	**-1.4**
SILI	**Silifke-Mersin**	**2.04**	**85**	PN	**Pn**	**15 33 57.3**	**+2.2**
LADK	**Ladik-KONYA**	**2.14**	**21**	PN	**Pn**	**15 33 56.6**	**+0.1**
MVOU	**Mavrovouni**	**2.17**	**122**	P	**Pn**	**15 33 55.7**	**-1.1**
MVOU				S	**Sn**	**15 34 20.0**	**-2.5**
MVOU				AML	AML	15 34 25.4	
	comp=N,0.4nm,0.2s						
MVOU				AML	AML	15 34 25.4	
	comp=N,0.4nm,0.2s						
MVOU				AML	AML	15 34 26.1	
	comp=N,0.5nm,0.2s						
MVOU				AML	AML	15 34 26.1	
	comp=N,0.5nm,0.2s						
MVOU				AMd		15 34 53.2	
MVOU				AMd		15 34 53.2	
KIZK	**Mersin**	**2.23**	**82**	PN	**Pn**	**15 33 59.6**	**+1.9**
EREN	**Erenkoy**	**2.34**	**106**	PN	**Pn**	**15 34 01.5**	**+2.3**
EREN	**Erenkoy**	**2.34**	**106**	*i* P	**Pn**	**15 34 01.2**	**+2.0**
EREN				*i* S	**Sn**	**15 34 28.3**	**+1.5**
EREN				IAML		15 34 32.0	
	comp=N,82nm,0.9s						
TAVA	**DENIZLI_Tavas**	**2.36**	**303**	*i* P	**Pn**	**15 34 00.6**	**+1.0**
TAVA				*i* S	**Sn**	**15 34 28.7**	**+1.3**
TAVA				IAML		15 34 38.0	
	comp=N,78nm,0.5s						
KERG	**Konya-Eregli**	**2.50**	**60**	*i* P	**Pn**	**15 34 02.5**	**+1.0**
KHAL	**Karahalli**	**2.65**	**325**	*i* P	**Pn**	**15 34 04.2**	**+0.7**
KARA	**Karaisali**	**3.12**	**69**	PN	**Pn**	**15 34 12.0**	**+2.1**
CMRD	**Camardi-Nigde**	**3.22**	**62**	PN	**Pn**	**15 34 12.7**	**+1.3**
YURE	**YUREGIR**	**3.46**	**78**	PN	**Pn**	**15 34 16.9**	**+2.2**
RSH		**5.57**	**159**	P	**Pn**	**15 34 44.1**	**+0.5**
	baz=154						
KOT	**Kottamia**	**6.27**	**177**	P	**Pn**	**15 34 56.6**	**+3.4**
	baz=172						
HMYD	**Mayadein**	**6.41**	**185**	P	**Pn**	**15 34 56.6**	**+1.5**
	baz=181						
SUZ	**Suez**	**6.46**	**169**	P	**Pn**	**15 34 57.8**	**+2.1**
	baz=164						
HNAT	**Natroun**	**6.58**	**186**	P	**Pn**	**15 34 58.8**	**+1.3**
	baz=183						
NBNS	**Bani Suef**	**7.56**	**181**	P	**Pn**	**15 35 11.6**	**+0.8**
	baz=177						
HKAT	**Jabal Katrina**	**7.96**	**163**	P	**Pn**	**15 35 19.8**	**+3.2**
	baz=159						
SWA2		**8.55**	**217**	P	**Pn**	**15 35 24.0**	**-0.5**
	baz=216						
SWA2				AMP		15 36 00.0	
	baz=216						
SWA2				S	Sn	15 36 49.2	-10
	baz=216						
HFRF	**Wahat Farafira**	**9.40**	**197**	P	**Pn**	**15 35 36.0**	**-0.1**
	baz=195						
VYHS	**Vyhne**	**15.38**	**327**	*e*PN	**Pn**	**15 36 51.3**	**-5.7**
VYHS	**Vyhne**	**15.38**	**327**	*e*P	**P**	**15 37 02.1**	**+1.1**

*NEIC **08** 15:39:17.5±1.6, 5.01S±0.08×80.0W±0.1, h72km±6km, mb4.6/38, ML4.8(ARE), Error ellipse: s-maj=21.1km s-min=10.4km az=77.0*
*IDC **08** 15:39:18.4±0.7, 4.79S×79.93W, h70km±4km, mb3.7/10, mb1 4.0/12, mb1mx3.8/31, mbtmp4.1/12, MS2.9/3, Ms1 3.0/3, ms1mx2.8/21, Error ellipse: s-maj=26.9km s-min=7.6km az=61.0*
ISC 08 15:39:17.6±0.5, **4.91S**±0.06×**80.08W**±0.09, **h70**km, **n81**, σ1§**65**/83, **mb4.5**/24, **Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.78**	**143**	P	**Pn**	**15 40 01.9**	**+1.8**
	89nm,0.3s,baz=355,slow=4.7,SNR=195						
ATAH				S	**Sn**	**15 40 34.8**	**+2.0**
	600nm,0.3s,baz=148,slow=14,SNR=17						
ATAH				LR	LR	15 40 53.6	
	comp=Z,94nm,21.9s,baz=14,slow=34						
OTAV	**Otavalo**	**5.37**	**18**	*e*P	**Pn**	**15 40 38.5**	**+2.9**
**

comp=Z,3.4nm,0.7s,baz=156,slow=8.7,SNR=8.3
ULM Lac du Bonnet 56.61 348 P **P** **15 48 52.6 -0.5**
ULM IAmb IAmb 15 48 53.8
comp=Z,6.3nm,0.8s
YHB Horse Butte 56.76 334 P **P** **15 48 54.9 +0.3**
YHL Hebgen Lake 56.83 334 P **P** **15 48 57.4 +2.2**
MCMT McKenzie Canyo 57.55 333 P **P** **15 49 00.9 +0.7**
MFID Camas Ranch 57.92 330 P **P** **15 49 03.8 +1.1**
MFID IAmb IAmb 15 49 31.3
comp=Z,4.4nm,1.1s
BEKR Beckworth 57.94 324 P **P** **15 49 03.7 +0.8**
BEKR IAmb IAmb 15 49 31.7
comp=Z,7.3nm,1.4s
MOD Modoc Plateau 59.24 326 P **P** **15 49 12.3 +0.3**
MOD IAmb IAmb 15 49 50.9
comp=Z,9.1nm,1.4s
YKA Yellowknife Ar 72.19 344 P **P** **15 50 34.6 -0.1**
comp=Z,0.5nm,0.7s,baz=138,slow=5.8,SNR=11
YKA pP **PcP** **15 50 52.7 +0.2**
comp=Z,0.2nm,0.5s,baz=143,slow=6.1,SNR=3.7
YKA sP **sP** **15 51 01.6 +0.1**
comp=Z,0.8nm,0.7s,baz=140,slow=5.6,SNR=7.7
DBIC Dimbokro 75.96 82 P **P** **15 50 57.5 -0.1**
comp=Z,3.2nm,0.6s,baz=226,slow=6.9,SNR=6.5
DBIC pP **pP** **15 51 17.3 -0.1**
comp=Z,4.5nm,0.9s,baz=232,slow=22,SNR=3.5
DBIC sP **sP** **15 51 24.4 -1.2**
comp=Z,3.1nm,0.7s,baz=236,slow=9.5,SNR=3.4
DBIC Dimbokro 75.96 82 IAmb IAmb 15 51 18.1
comp=Z,9.0nm,1.1s
SNAA Sanae 81.36 162 P **P** **15 51 26.4 +0.1**
ESDC Sonseca Array 82.51 49 P **P** **15 51 33.5 +0.6**
comp=Z,1.5nm,0.7s,baz=267,slow=5.7,SNR=9.2
ILAR Eielson Array 84.75 337 P **P** **15 51 44.5 +0.7**
comp=Z,0.3nm,0.7s,baz=95,slow=9.1,SNR=4.9
ILAR LR LR 16 34 29.3
comp=Z,35nm,18.1s,baz=41,slow=39
QSPA South Pole Qui 85.18 180 P **P** **15 51 46.4 +0.3**
QSPA IAmb IAmb 15 51 47.2
comp=Z,3.7nm,0.7s
ASAR Alice Springs 136.35 228 PKhKP PKPpre 15 58 28.2
comp=Z,0.2nm,0.5s,baz=115,slow=2.2,SNR=7.0
ASAR PKP **PKPdf** **15 58 31.4 -0.8**
comp=Z,0.2nm,0.5s,baz=115,slow=2.2,SNR=7.7
ASAR sPKP 15 58 58.8
comp=Z,0.7nm,0.6s,baz=120,slow=2.2,SNR=9.0
WRA Warramunga Arr 138.11 233 PKP **PKPdf** **15 58 34.8 -0.7**
comp=Z,0.4nm,0.5s,baz=112,slow=2.5,SNR=5.0
WRA sPKP 15 59 02.4
comp=Z,0.7nm,0.6s,baz=116,slow=2.0,SNR=7.7
KSH Kashi 139.31 29 PKP **PKPdf** **15 58 33.1 -4.2**
KSH sPKP 15 59 10.9
KSH PP **PP** **16 01 34.7 +4.0**
WMQ Urumqi 139.77 14 *e*PKP **PKPdf** **15 58 37.1 -0.9**
HHC Hu-ho-hao-te 142.72 345 *e*PKP **PKPdf** **15 58 38.8 -4.6**
GTA Gaotai 145.65 0 *e*PKPbc **PKPdf** **15 58 48.5 -0.1**
NJ2 Nanjing 147.69 329 *e*PKPbc **PKPdf** **15 58 51.0 -1.0**
LZH Lanzhou 148.76 354 *e*PKPbc **PKPdf** **15 58 50.4 -3.5**
LZH pPKP pPKPdf 15 59 12.9 -1.3
LZH sPKP 15 59 21.7
LZH LR LR
comp=Z,95nm,18.0s
LZH LR LR
comp=Z,89nm,17.9s
LZH LR LR
comp=Z,140nm,20.0s
CD2 Chengdu 153.88 352 PKPbc **PKPdf** **15 58 58.4 -3.3**

*PRE **08** 15:40:57.5±0.5,26.°42S×27.°38E,h2km,ML2.3*
*EAF **08** 15:40:57.2±1.7,26.°71S×27.°89E,h10km,MD3.6*
ISC 08 15:40:57.0±1.0,26.°47S±0.°04×27.°48E±0.°04,h6km±7km, n19,σ1ᵒ58/32,South Africa

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WDLM	**Western Deep L**	**0.06**	**311**	*e*P		**Pg**	**15 40 58.5**	**-0.3**
WDLM				*e*S		**Sg**	**15 40 59.0**	**-1.1**
WDLM				AML		AML	15 41 00.1	
comp=Z,26μm,0.1s								
KLOF	**Kloof**	**0.17**	**46**	*e*P		**Pg**	**15 41 01.7**	**+1.3**
KLOF				*e*S		**Sg**	**15 41 04.9**	**+2.2**
KLOF				AML		AML	15 41 05.5	
comp=Z,2μm,0.2s								
PRYS	**Parys**	**0.47**	**193**	*e*P		**Pb**	**15 41 07.0**	**-0.8**
PRYS				*e*S		**Sb**	**15 41 14.5**	**-0.6**
PRYS				AML		AML	15 41 26.0	
comp=Z,49nm,0.4s								
ERPM	**east rand prop**	**0.70**	**80**	*e*P		**Pn**	**15 41 12.9**	**-0.7**
ERPM				*e*S		**Sn**	**15 41 23.3**	**-1.6**
ERPM				AML		AML	15 41 31.3	
comp=Z,49nm,0.2s								
KSR	**Koster**	**0.80**	**319**	*e*P		Pg	15 41 11.1	-1.4
KSR				*e*S		**Sg**	**15 41 21.2**	**-1.7**
KSR				AML		AML	15 41 33.4	
comp=Z,27nm,0.3s								
SWZ	**Schweizer**	**2.04**	**249**	*e*P		**Pn**	**15 41 32.7**	**+0.5**
SWZ				*e*S		**Sn**	**15 41 58.2**	**+0.1**
SWZ				AML		AML	15 42 00.7	
comp=Z,45nm,0.3s								
LBTB	**Lobatse**	**2.23**	**310**	*i* P		**Pn**	**15 41 36.5**	**+1.9**
LBTB	**Lobatse**	**2.23**	**310**	*i* P		**Pn**	**15 41 37.0**	**+2.4**
LBTB	**Lobatse**	**2.23**	**310**	*e*P		**Pn**	**15 41 34.7**	**0.0**
LBTB				*e*S		**Sn**	**15 42 01.8**	**-0.8**
LBTB				AML		AML	15 42 05.6	
comp=Z,133nm,0.3s								
BOSA	**Boshof**	**2.91**	**222**	*i* P		**Pn**	**15 41 44.7**	**+0.7**
BOSA	**Boshof**	**2.91**	**222**	*i* P		**Pb**	**15 41 49.2**	**-0.3**
BOSA	**Boshof**	**2.91**	**222**	*e*P		**Pn**	**15 41 45.1**	**+1.1**
BOSA				*e*S		**Sn**	**15 42 19.6**	**+0.2**
BOSA				AML		AML	15 42 26.1	
comp=Z,12nm,0.3s								
BOSA	**Boshof**	**2.91**	**222**	*i* P		**Pn**	**15 41 45.0**	**+1.0**
BOSA				*i* S		**Sn**	**15 42 18.8**	**-0.6**
HVD	**Gariep Dam**	**4.48**	**202**	*e*P		**Pn**	**15 42 07.1**	**+1.5**
HVD				*e*S		**Sn**	**15 42 58.6**	**+0.5**
HVD				AML		AML	15 43 39.9	
comp=Z,4.2nm,0.7s								
MSNA	**Messina**	**4.71**	**30**	*i* P		Pn	15 42 14.4	+5.6
MSNA				*i* S		**Sn**	**15 43 03.8**	**-0.1**
MSNA	**Messina**	**4.71**	**30**	*i* P		**Pn**	**15 42 09.8**	**+1.0**
MSNA				*i* S		**Sn**	**15 42 58.8**	**-5.0**
MATP	**Matopo**	**6.09**	**9**	*i* P		**Pn**	**15 42 28.8**	**+1.0**
MATP				*i* S		**Sn**	**15 43 38.4**	**+0.6**
MATP	**Matopo**	**6.09**	**9**	*i* P		**Pn**	**15 42 30.1**	**+2.4**
MATP				*i* S		**Sn**	**15 43 36.3**	**-1.5**
MATP	**Matopo**	**6.09**	**9**	*i* P		**Pn**	**15 42 29.4**	**+1.7**
MATP				*i* S		**Sn**	**15 43 36.9**	**-0.9**

RSNC 08 15:50:37.9±1.8,6.°76N×76.°81W,h4km±9km,ML2.2, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.65**	**66**	*e*P		Pg	15 50 49.8	-0.6
DBBC				*e*S		Sg	15 50 59.1	+0.2
DBBC				*i*			15 51 02.2	
comp=Z,70nm,0.5s								
SOLC	**Bahia Solano**	**0.79**	**229**	*e*P		Pg	15 50 53.3	+0.2
SOLC				*e*S		Sb	15 51 05.6	+0.2
SOLC				*i*			15 51 10.7	
comp=Z,61nm,0.4s								
PTAC	**Punta Ardita,**	**1.06**	**291**	*e*P		Pg	15 50 56.2	-2.1
PTAC				*e*S		Sg	15 51 10.6	-1.6
CBOC	**Ciudad Bolivar**	**1.19**	**138**	*e*P		Pg	15 50 58.8	-1.9
CBOC				*i*			15 51 02.8	
comp=Z,52nm,0.2s								
CBOC				*e*S		Sg	15 51 13.7	-2.5
HELC	**Santa Helena**	**1.39**	**114**	*e*P		Pn	15 51 02.6	-1.9
HELC				*i*			15 51 03.4	
comp=Z,26nm,0.6s								
UREC	**San Jos de Ur**	**1.61**	**52**	*e*P		Pn	15 51 04.1	-3.0
ZARC	**Zaragoza, Cauc**	**2.07**	**69**	*e*P		Pn	15 51 11.4	-2.1
GUY2C	**Guyana, Caldas**	**2.09**	**137**	*e*P		Pn	15 51 13.4	-0.8
NORC	**Norcasia**	**2.26**	**121**	*e*P		Pn	15 51 15.9	-0.3
NORC				*i*			15 51 42.2	
comp=Z,7.7nm,0.5s								
PTBC	**PUERTO BERRIO,**	**2.35**	**95**	*e*P		Pn	15 51 15.5	-1.8
RREF	**El Recreo**	**2.35**	**142**	*e*P		Pn	15 51 17.6	-0.2
RREF				*i*			15 51 30.0	
comp=Z,48nm,0.2s								

RSNC 08 15:51:05.5±2.3,4.°62N×76.°67W,h17km±7km,ML2.3, 3C-1D,Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PLMC	**San Jos del P**	**0.48**	**54**	⇑*i*P		Pg	15 51 14.9	-0.3
PLMC				*e*S		Sb	15 51 22.2	-0.1
YOTC	**Yotoco, Valle**	**0.71**	**153**	⇑*i*P		Pg	15 51 17.9	-1.6
YOTC				*e*S		Sg	15 51 27.4	-1.6
MALC	**Bahia Malaga**	**0.90**	**228**	*e*P		Pb	15 51 21.7	-0.9
MALC				*i*			15 51 23.4	
comp=Z,56nm,0.2s								
MALC				*e*S		Sb	15 51 33.5	-0.8
ANIL	**Santa Ana**	**1.27**	**96**	⇓*i*P		Pn	15 51 27.5	-1.3
ANIL				*e*S		Sb	15 51 44.8	-0.6
ANIL				*i*			15 51 48.6	
comp=Z,102nm,0.3s								
TOLC	**Tolima**	**1.35**	**91**	*e*P		Pn	15 51 28.6	-1.3
RREF	**El Recreo**	**1.35**	**78**	*e*P		Pn	15 51 29.3	-0.8
RREF				*e*S		Sn	15 51 48.1	+0.1
CBOC	**Ciudad Bolivar**	**1.40**	**28**	*e*P		Pn	15 51 29.4	-1.0
CBOC				*e*S		Sn	15 51 44.9	-3.7
GUY2C	**Guyana, Caldas**	**1.43**	**65**	⇑*i*P		Pn	15 51 30.6	-0.5
GUY2C				*e*S		Sn	15 51 48.8	-1.1
GUY2C				*i*			15 51 53.2	
comp=Z,20nm,0.5s								
GUY2C	**Guyana, Caldas**	**1.43**	**65**	*i*		Pn	15 51 30.9	-0.3
comp=Z,15nm,0.3s								
ORTC	**Ortega, Tolima**	**1.59**	**116**	*e*P		Pn	15 51 31.7	-1.2
ORTC				*e*S		Sn	15 51 53.5	+0.3
HELC	**Santa Helena**	**1.93**	**36**	*e*S		Sn	15 52 00.2	-1.8
POPC	**Popayan, Colom**	**2.07**	**180**	*e*P		Pn	15 51 37.9	-1.8
PCON	**Cinco Dias**	**2.29**	**173**	*e*P		Pn	15 51 43.3	+0.2
SOTA	**Rioblanco**	**2.47**	**178**	*e*P		Pn	15 51 45.7	+0.2

*NIED **08** 16:50:00,46.°50N×153.°30E,h62km,Mw4.7 Best double couple: M₀1.40000×10¹⁶ NP1:φ₀195.00000°,δ60.00000°, λ113.00000°. NP2:φ₀334.00000°,δ37.00000°,λ56.00000°.*
*BJI **08** 16:50:27.9±0.0,46.°84N×153.°00E,h41km,mB5.0/52, mb5.1/69,Ms4.5/43,Ms7 4.2/33*
*JMA **08** 16:50:27.7±0.7,46.°52N×153.°33E,h30km,Ms3*
*MOS **08** 16:50:28.9±1.0,46.°67N×153.°05E,h50km,mb5.2/31, MS3.8/9,Error ellipse: s-maj=5.4km s-min=4.1km az=89.3*
*SKHL **08** 16:50:28.9±0.4,46.°50N×153.°40E,h60km±9km,mb5.4/15, mbv5.8/4,ms4.3/3,msh5.8/1*
*IDC **08** 16:50:30.1±2.2,46.°70N×152.°99E,h43km±20km,mb4.5/33, mb1 4.6/36,mb1mx4.5/49,mbtmp4.7/36,ML3.8/3,MS3.8/33, Ms1 3.9/33,ms1mx3.7/54,Error ellipse: s-maj=11.8km s-min=9.4km az=134.0*
*NEIC **08** 16:50:31.2±1.2,46.°65N±0.°08×153.°1E±0.°1,h55km±5km, mb5.0/282,Error ellipse: s-maj=13.7km s-min=9.3km az=139.0*
*BGR **08** 16:50:40.7±0.0,47.°87N×151.°58E,h33km,mb5.0*
ISC 08 16:50:28.9±0.3,46.°51N±0.°04×153.°19E±0.°04,h40km, n1080,σ1ᵒ22/1094,mb5.0/279,MS4.0/41,50C-49D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.93**	**253**	*d*iPN		**Pn**	**16 51 29.5**	**+2.8**
KUR				*e*S		**Sn**	**16 52 13.7**	**+2.2**
KUR				pmax		pmax		
comp=Z,2μm,1.2s								
KUR				pmax		pmax		
comp=Z,2μm,0.4s								
KUR				pmax		pmax		
comp=N,394nm,0.3s								
KUR				pmax		pmax		
comp=E,110nm,0.3s								
KUR				smax		smax		
comp=N,2μm,0.5s								
KUR				smax		smax		
comp=E,670nm,0.5s								
KUR				smax		smax		
comp=N,7μm,1.5s								
KUR				smax		smax		
comp=E,5μm,1.6s								
KUR	**Kuril'sk**	**3.93**	**253**	⇓*i*P		**Pn**	**16 51 29.4**	**+2.8**
KUR				AMB		AMB	16 51 30.2	
comp=E,2μm,2.0s								
KUR				AMB		AMB	16 51 30.4	
comp=E,390nm,0.5s								
KUR				AMB		AMB	16 51 30.4	
comp=E,110nm,0.5s								
KUR				AMB		AMB	16 51 30.4	
comp=E,1μm,0.5s								
KUR				*i* S		**Sn**	**16 52 13.5**	**+2.0**
KUR				A		A	16 52 18.7	
comp=E,2μm,0.5s								
KUR				A		A	16 52 18.7	
comp=E,670nm,0.5s								
KUR				A		A	16 52 19.9	
comp=E,7μm,2.0s								
KUR				A		A	16 52 19.9	
comp=E,5μm,2.0s								
SKR	**Severo-Kuril's**	**4.60**	**24**	*e*PN		**Pn**	**16 51 36.0**	**+0.2**
SKR				pmax		pmax		
comp=Z,150nm,0.5s								
SKR				MLR		MLR		
comp=Z,500nm,14.0s								
SKR	**Severo-Kuril's**	**4.60**	**24**	⇓*i*P		**Pn**	**16 51 36.0**	**+0.2**
SKR				AMB		AMB	16 51 40.0	
comp=Z,150nm,0.5s								
SKR				⇑*i*S		**Sn**	**16 52 26.6**	**-1.4**
SKR				A		A	16 52 30.0	
comp=Z,310nm,0.3s								
SKR				A		A	16 52 30.0	
comp=Z,250nm,0.3s								
SKR				AMS		AMS	16 53 15.0	
comp=Z,1μm,14.0s								
SHO	**Shikotan**	**5.21**	**242**	*d*iPN		**Pn**	**16 51 44.4**	**+0.2**
SHO				pmax		pmax		
comp=N,77nm,0.5s								
SHO				pmax		pmax		
comp=E,341nm,0.5s								
SHO				pmax		pmax		
comp=Z,485nm,0.5s								
SHO	**Shikotan**	**5.21**	**242**	⇓*i*P		**Pn**	**16 51 44.5**	**+0.2**
SHO				AMB		AMB	16 51 49.0	
comp=Z,490nm,0.5s								
SHO				⇓*i*S		**Sn**	**16 52 42.2**	**-0.9**
SHO				A		A	16 52 48.0	
comp=Z,720nm,0.6s								
SHO				A		A	16 52 48.0	
comp=Z,60nm,0.6s								
PAU	**Pauzhetka**	**5.50**	**24**	*i* P		**Pn**	**16 51 48.1**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**5.74**	**247**	*i* PN		**Pn**	**16 51 53.5**	**+2.1**
YUK				pmax		pmax		
comp=Z,1μm,0.5s								
YUK				pmax		pmax		
comp=N,292nm,0.2s								
YUK				pmax		pmax		
comp=E,409nm,0.2s								
YUK				pmax		pmax		
comp=Z,1μm,1.2s								
YUK				MLR		MLR		
comp=E,1μm,16.0s								
YUK				MLR		MLR		
comp=Z,822nm,16.0s								
YUK	**Yuzh-Kuril'sk**	**5.74**	**247**	*i* P		**Pn**	**16 51 53.0**	**+1.6**
YUK				AMB		AMB	16 51 58.0	
comp=Z,290nm,0.2s								
YUK				AMB		AMB	16 51 58.0	
comp=Z,410nm,0.2s								
YUK				AMB		AMB	16 51 58.0	
comp=Z,1μm,0.6s								
YUK				AMB		AMB	16 52 01.0	
comp=Z,1μm,2.0s								
YUK				*i* S		**Sn**	**16 52 57.0**	**+1.1**
YUK				A		A	16 53 04.0	
comp=Z,1μm,0.6s								
YUK				A		A	16 53 04.0	
comp=Z,680nm,0.6s								
YUK				AMS		AMS	16 53 05.0	
comp=Z,2μm,14.0s								
YUK				AMS		AMS	16 53 05.0	
comp=Z,2μm,14.0s								
YUK				AMS		AMS	16 53 05.0	
comp=Z,1μm,14.0s								
GRPR	**Tuman**	**5.81**	**247**	*e*PN		**Pn**	**16 51 54.1**	**+1.6**
GRPR				pmax		pmax		
comp=Z,666nm,0.5s								
GRPR				pmax		pmax		
comp=E,307nm,0.3s								
GRPR	**Tuman**	**5.81**	**247**	*e*P		**Pn**	**16 51 54.0**	**+1.6**
GRPR				AMB		AMB	16 52 05.0	
comp=E,570nm,0.5s								
GRPR				AMB		AMB	16 52 05.0	
comp=E,310nm,0.3s								
GRPR				*e*S		**Sn**	**16 52 56.0**	**-1.8**
GRPR				A		A	16 53 10.0	
comp=E,1μm,0.6s								
GRPR				A		A	16 53 10.0	
comp=E,630nm,0.6s								
GLVR	**Golovnino**	**6.09**	**246**	*d*iPN		**Pn**	**16 51 58.1**	**+1.7**
GLVR				pmax		pmax		
comp=Z,610nm,0.4s								
GLVR				pmax		pmax		
comp=E,195nm,0.1s								
GLVR	**Golovnino**	**6.09**	**246**	⇓*i*P		**Pn**	**16 51 58.0**	**+1.7**
GLVR				AMB		AMB	16 52 15.0	
comp=E,610nm,0.5s								
GLVR				*i* S		**Sn**	**16 53 03.0**	**-1.8**
GLVR				A		A	16 53 09.0	
comp=E,720nm,0.4s								
GLVR				A		A	16 53 09.0	
comp=E,1μm,0.4s								
NEM2	**Nemuro 2**	**6.15**	**242**	P		**Pn**	**16 51 57.0**	**-0.1**
NEM2				*e*S		**Sn**	**16 53 03.0**	**-3.2**
NMR	**Nemuro--Hokkai**	**6.16**	**242**	*d*iPN		**Pn**	**16 51 57.0**	**-0.2**
NMR	**Nemuro--Hokkai**	**6.16**	**242**	⇓*i*P		**Pn**	**16 51 57.1**	**-0.2**
NMR				*i* S		**Sn**	**16 53 02.9**	**-3.5**
JRA	**Rausu**	**6.25**	**249**	P		**Pn**	**16 52 00.7**	**+2.2**
JNK	**Nakash**	**6.68**	**247**	P		**Pn**	**16 52 05.5**	**+1.1**
JNK				*e*S		**Sn**	**16 53 18.8**	**-0.3**
JAK	**Akkeshi**	**7.00**	**243**	P		**Pn**	**16 52 08.6**	**-0.1**
JAK				*e*S		**Sn**	**16 53 23.2**	**-3.7**
JTKR	**Abashiri--Toko**	**7.03**	**252**	P		**Pn**	**16 52 11.6**	**+2.4**
YSS	**Yuzh-Sakhalins**	**7.19**	**277**	⇑*i*PN		**Pn**	**16 52 15.2**	**+3.9**
YSS				*e*S		**Sn**	**16 53 34.0**	**+2.4**
YSS				pmax		pmax		
comp=Z,170nm,0.6s								
YSS				pmax		pmax		
comp=Z,500nm,4.0s								
YSS				smax		smax		
comp=N,110nm,0.6s								
YSS				smax		smax		
comp=E,100nm,0.6s								
YSS				MLR		MLR		
comp=Z,2μm,17.0s								
YSS				MLR		MLR		
comp=E,1μm,15.0s								
YSS	**Yuzh-Sakhalins**	**7.19**	**277**	⇓*i*P		**Pn**	**16 52 14.8**	**+3.5**
YSS				AMB		AMB	16 52 17.2	
comp=E,170nm,0.6s								
YSS				AMB		AMB	16 52 17.4	
comp=E,500nm,4.0s								
YSS				⇓*i*S		**Sn**	**16 53 33.1**	**+1.5**
YSS				A		A	16 53 38.0	
comp=E,110nm,0.6s								
YSS				A		A	16 53 38.0	
comp=E,100nm,0.6s								
YSS				AMS		AMS	16 54 46.0	
comp=E,1μm,15.0s								
YSS				AMS		AMS	16 54 46.0	
comp=E,2μm,15.0s								
YSS	**Yuzh-Sakhalins**	**7.19**	**277**			**Pn**	**16 52 14.5**	**+3.2**
PEA0B	**Petropavlovsk-**	**7.21**	**22**	*de*PN		**Pn**	**16 52 12.5**	**+0.8**
PETK	**Petropavlovsk-**	**7.21**	**22**	P		**Pn**	**16 52 12.1**	**+0.4**
comp=E,2.9nm,0.3s,baz=183,slow=12,SNR=103								
JMP	**Maruseppu**	**7.38**	**254**	P		**Pn**	**16 52 16.7**	**+2.7**
PET	**Petropavlovsk**	**7.41**	**26**	*e*PN		**Pn**	**16 52 13.1**	**-1.3**
PET				pmax		pmax		
comp=Z,58nm,0.8s								
PET				MLR		MLR		
comp=Z,400nm,16.0s								
PET				MLR		MLR		
comp=Z,400nm,12.0s								
PET	**Petropavlovsk**	**7.41**	**26**	⇓*i*P		**Pn**	**16 52 15.1**	**+0.7**
PET				AMB		AMB	16 52 26.3	
comp=Z,60nm,0.8s								
PET				⇓*i*S		**Sn**	**16 53 33.0**	**-4.1**
PET				A		A	16 53 33.5	
comp=Z,80nm,0.6s								
PET				A		A	16 53 33.5	
comp=Z,70nm,0.6s								
PET				AMS		AMS	16 56 22.7	
comp=Z,400nm,11.0s								
PET	**Petropavlovsk**	**7.41**	**26**	Pn		**Pn**	**16 52 14.1**	**-0.2**
JAR	**Ashorobuto**	**7.42**	**248**	P		**Pn**	**16 52 16.2**	**+1.6**
JAR				*e*S		**Sn**	**16 53 37.7**	**+0.3**
JOB	**Onbets**	**7.58**	**245**	P		**Pn**	**16 52 17.3**	**+0.6**
JOB				*e*S		**Sn**	**16 53 39.5**	**-1.8**
JSE	**Soyaes**	**7.58**	**262**	P		**Pn**	**16 52 20.9**	**+4.1**
JKK2	**Kamakawa 2**	**7.83**	**254**	P		**Pn**	**16 52 23.2**	**+2.9**
JKA	**Kamikawa-asahi**	**7.84**	**256**	*e*P		**Pn**	**16 52 23.9**	**+3.6**
JKA	**Kamikawa-asahi**	**7.84**	**256**			**Pn**	**16 52 23.9**	**+3.6**
ASAJ	**Asahikawa**	**7.84**	**256**	P		**Pn**	**16 52 23.9**	**+3.6**
ASAJ	**Asahikawa**	**7.84**	**256**	P		**Pn**	**16 52 23.9**	**+3.6**
comp=Z,16nm,0.3s,baz=83,slow=17,SNR=128								
ASAJ				LR		LR	16 55 19.4	
comp=Z,862nm,20.7s,baz=42,slow=37								
UGL	**Uglegorsk**	**7.92**	**293**	*e*PN		Pn	16 52 25.7	+4.3
UGL				*e*S		**Sn**	**16 53 50.5**	**+0.9**
UGL				pmax		pmax		
comp=Z,277nm,0.9s								
UGL				smax		smax		
comp=N,96nm,0.9s								
UGL				smax		smax		
comp=E,128nm,0.6s								
UGL	**Uglegorsk**	**7.92**	**293**	⇑*i*P		**Pn**	**16 52 24.9**	**+3.5**
UGL				AMB		AMB	16 52 28.0	
comp=E,280nm,0.9s								
UGL				*e*S		**Sn**	**16 53 52.3**	**+2.7**
UGL				A		A	16 54 00.0	
comp=E,100nm,0.6s								
UGL				A		A	16 54 00.0	
comp=E,130nm,0.6s								
JWK2	**Keihoku**	**7.97**	**265**	P		Pn	16 52 27.2	+5.2
JCH	**Churui**	**8.03**	**244**	P		**Pn**	**16 52 22.6**	**-0.3**
JCH				*e*S		**Sn**	**16 53 48.2**	**-4.1**
TYV	**Tymovskoe**	**8.22**	**306**	*e*PN		**Pn**	**16 52 28.1**	**+2.7**
TYV				pmax		pmax		
comp=Z,500nm,2.7s								
TYV				pmax		pmax		
comp=Z,95nm,1.2s								
TYV	**Tymovskoe**	**8.22**	**306**	*e*P		**Pn**	**16 52 28.1**	**+2.7**
TYV				AMB		AMB	16 52 30.5	
comp=Z,500nm,3.0s								
TYV				AMB		AMB	16 52 30.6	
comp=Z,100nm,1.0s								
TYV				*e*S		**Sn**	**16 53 57.7**	**+0.8**
JFR	**Furan**	**8.24**	**250**	P		**Pn**	**16 52 27.7**	**+1.9**
JAB	**Ashibetsu**	**8.33**	**253**	P		**Pn**	**16 52 30.2**	**+3.1**
ERM	**Erimo**	**8.49**	**242**	*c*iPN		**Pn**	**16 52 30.8**	**+1.6**
ERM	**Erimo**	**8.49**	**242**			**Pn**	**16 52 30.6**	**+1.4**
JEM	**Erimo**	**8.49**	**242**	P		**Pn**	**16 52 30.8**	**+1.6**
JEM				*e*S		**Sn**	**16 54 00.0**	**-3.6**
JRBN	**Rebuntou**	**8.52**	**267**	P		Pn	16 52 34.4	+4.8
JBT2	**Biratori 2**	**8.57**	**248**	P		**Pn**	**16 52 31.1**	**+0.7**
JBT2				*e*S		**Sn**	**16 54 03.9**	**-1.8**
JNBK	**Urakawa-nobuka**	**8.59**	**244**	P		**Pn**	**16 52 30.4**	**-0.1**
JNBK				*e*S		**Sn**	**16 54 01.1**	**-5.0**
JEW	**Eniwo**	**9.13**	**251**	P		**Pn**	**16 52 40.0**	**+1.9**
JNB	**Noboribetsu**	**9.58**	**249**	P		**Pn**	**16 52 44.2**	**+0.1**
JNB				*e*S		**Sn**	**16 54 26.6**	**-3.8**
OKH	**Okha**	**9.64**	**321**	⇑*e*P		**Pn**	**16 52 47.1**	**+2.1**
OKH				AMB		AMB	16 52 49.5	
comp=Z,100nm,0.9s								
JKB	**Kayabe**	**9.88**	**246**	P		**Pn**	**16 52

NKL AMB AMB 16 53 01.3
comp=N,80nm,1.0s
JSR Shiriuchi 10.46 246 P **Pn** **16 52 55.1 -1.1**
JANG Nango 10.47 238 *e*S Sn 16 54 41.4 -11
JANG *e*S Sn 16 54 43.4 -9.1
JTM Tenmabayashi 10.48 241 P **Pn** **16 52 55.2 -1.3**
JTM *e*S Sn 16 54 43.4 -9.1
JTH Tanohata 10.55 236 *e*S Sn 16 54 42.9 -11
JOSM Okushiri--Mats 10.78 251 P **Pn** **16 53 00.6 0.0**
OFUJ Ofunato 11.25 233 P **Pn** **16 53 04.7 -2.4**
JRG Rokugo 11.62 237 P **Pn** **16 53 10.8 -1.3**
JRG *e*S **Sn** **16 55 11.8 -8.6**
TEY Ternei 11.68 269⇑ *e*P **Pn** **16 53 15.5 +2.6**
TEY AMB AMB 16 53 16.6
comp=N,30nm,0.6s
TEY AMB AMB 16 53 16.6
comp=N,50nm,0.6s
JYW Yuwa 11.77 238 P **Pn** **16 53 13.4 -0.8**
JIO Ouri 11.88 232 P **Pn** **16 53 12.6 -3.0**
JIO *e*S Sn 16 55 16.2 -10
GRNR Gornyy 11.88 297⇑ *i*PN **Pn** **16 53 19.4 +3.8**
GRNR *e*S **Sn** **16 55 33.1 +6.5**
GRNR pmax pmax
comp=Z,30nm,1.2s
GRNR smax smax
comp=N,4.0nm,0.7s
GRNR MLR MLR
comp=Z,640nm,16.0s
GRNR Gornyy 11.88 297⇑ *i*P **Pn** **16 53 19.4 +3.8**
GRNR AMB AMB 16 53 21.8
comp=Z,30nm,1.0s
GRNR AMB AMB 16 53 21.8
comp=Z,30nm,1.0s
GRNR AMS AMS 16 58 04.0
comp=Z,500nm,15.0s
GRNR AMS AMS 16 58 04.0
comp=Z,600nm,15.0s
GRNR AMS AMS 16 58 04.0
comp=Z,700nm,15.0s
JYA Atsumi 12.69 236 P **Pn** **16 53 25.6 -1.1**
MA2 Magadan 13.16 355⇓ *e*PN **Pn** **16 53 33.9 +0.9**
MA2 pmax pmax
comp=Z,81nm,1.9s
MA2 Magadan 13.16 355 P **Pn** **16 53 34.5 +1.5**
comp=Z,6.5nm,0.3s,baz=165,slow=19,SNR=32
MA2 LR LR 16 58 18.3
comp=Z,310nm,21.6s,baz=153,slow=36
MA2 Magadan 13.16 355⇓ *e*P **Pn** **16 53 33.9 +0.9**
MA2 Magadan 13.16 355 **Pn** **16 53 34.3 +1.3**
JFY Yanaizu 13.53 233 P **Pn** **16 53 36.7 -1.5**
EKMR Ekimchan 14.60 304 *e*P **Pn** **16 53 53.0 +0.4**
EKMR AMB AMB 16 53 58.0
comp=Z,30nm,0.8s
KLR Kul'dur 14.64 289 *de*P **Pn** **16 53 55.3 +2.2**
KLR pmax pmax
comp=Z,37nm,1.5s
KLR MLR MLR
comp=Z,610nm,17.0s
KLR Kul'dur 14.64 289 P **Pn** **16 53 55.1 +2.1**
comp=Z,0.3nm,0.3s,baz=95,slow=13,SNR=11
KLR LR LR 16 59 44.6
comp=Z,728nm,18.6s,baz=88,slow=38
KLR Kul'dur 14.64 289⇓ *e*P **Pn** **16 53 55.3 +2.2**
MAJO Matsushiro 14.98 234 *de*P **Pn** **16 53 56.2 -1.6**
MAJO pmax pmax
comp=Z,27nm,0.8s
MAJO Matsushiro 14.98 234 **Pn** **16 53 55.2 -2.5**
MAT Matsushiro 14.98 234 P **Pn** **16 53 55.7 -2.1**
MAT *e*S **Sn** **16 56 41.8 -0.7**
MJAR Matsushiro Arr 14.98 234 P **Pn** **16 53 55.7 -2.1**
comp=Z,0.1nm,0.3s,baz=32,slow=15,SNR=17
MJAR LR LR 17 00 03.6
comp=Z,239nm,21.6s,baz=60,slow=38
MJB9 Matsu-Tunnel 14.98 234 **Pn** **16 53 55.2 -2.6**
USA0B Ussuriysk Arra 15.08 269 P **Pn** **16 53 58.9 -0.1**
USA0B Ussuriysk Arra 15.08 269 **Pn** **16 53 58.9 -0.1**
USRK Ussuriysk Ar. 15.08 269 P **Pn** **16 53 59.6 +0.6**
baz=77,slow=13,SNR=53
USRK LR LR 16 59 33.2
comp=Z,492nm,20.7s,baz=58,slow=36
SEY Seymchan 16.46 359⇓ *e*P **P** **16 54 18.0 -0.9**
SEY Seymchan 16.46 359 P **Pn** **16 54 16.1 -0.5**
comp=Z,1.5nm,0.3s,baz=171,slow=9.0,SNR=21
INU Inuyama 16.51 233 **Pn** **16 54 16.9 -0.5**
INU P **P** **16 54 21.0 +1.4**
MDJ Mudanjiang 16.62 272 Pn **Pn** **16 54 18.1 -0.7**
BMKR Bomnak 17.43 307 *e*P **Pn** **16 54 28.5 -0.2**
BMKR AMB AMB 16 54 32.8
comp=Z,20nm,0.8s
ZEA Zeya 18.07 303 *e*P **P** **16 54 37.2 +0.6**
ZEA pmax pmax
comp=N,21nm,0.8s
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,26nm,1.0s
ZEA MLR MLR
comp=Z,600nm,16.0s
ZEA MLR MLR
comp=E,500nm,16.0s
ZEA Zeya 18.07 303 *e*P **P** **16 54 38.4 +1.8**
ZEA AMB AMB 16 54 43.7
comp=E,20nm,0.9s
ZEA AMB AMB 16 54 43.7
comp=E,20nm,0.9s
ZEA AMB AMB 16 54 43.7
comp=E,30nm,0.9s
ZEA AMS AMS 17 01 51.0
comp=E,700nm,15.0s
ZEA AMS AMS 17 01 51.0
comp=E,900nm,15.0s
KROS Kirovskiy 18.39 305⇓ *e*P **Pn** **16 54 40.0 -0.6**
KROS AMB AMB 16 54 41.7
comp=E,10.0nm,0.4s
KROS AMB AMB 16 54 41.7
comp=E,10.0nm,0.4s
KROS AMB AMB 16 54 41.7
comp=E,20nm,0.4s
CN2 Changchun 19.71 272 *e*P **P** **16 54 51.2 -3.6**
CN2 *e*S S 16 58 23.0 -12
CN2 pmax pmax
comp=E,10.0nm,0.6s
CN2 pmax pmax
comp=E,220nm,2.9s
CN2 LR LR
comp=E,360nm,18.0s
CN2 LR LR
comp=E,450nm,18.0s
YAK Yakutsk 20.55 328 *e*P **P** **16 55 03.1 -0.6**
YAK *e*S **S** **16 58 47.1 -3.9**
YAK *e*SS **SnSn** **16 59 15.5 +4.1**
YAK pmax pmax
comp=Z,31nm,0.9s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=E,7.0nm,0.9s
YAK smax smax
comp=E,63nm,2.0s
YAK smax smax
comp=N,89nm,2.0s
YAK Yakutsk 20.55 328 P **P** **16 55 02.2 -1.5**
comp=N,10nm,0.3s,baz=116,slow=4.4,SNR=37
YAK LR LR 17 02 37.4
comp=N,263nm,22.0s,baz=129,slow=36
YAK Yakutsk 20.55 328 P **P** **16 55 02.1 -1.6**
KSRS Korea Array 20.78 253 P Pn 16 55 07.7 -1.3
comp=N,33nm,0.9s,baz=59,slow=9.9,SNR=63
KSRS LR LR 17 02 07.2
comp=N,253nm,20.8s,baz=56,slow=34
KS19 Wonju Array Si 20.79 253 P Pn 16 55 08.3 -0.9
INCN Inchon 21.62 255 P **P** **16 55 16.0 +0.6**
INCN pmax pmax
comp=Z,129nm,1.3s
INCN Inchon 21.62 255 *e*P **P** **16 55 16.0 +0.6**
INCN Inchon 21.62 255 P **P** **16 55 16.0 +0.6**
INCN IAmb IAmb 16 55 17.5
comp=Z,128nm,1.2s
JNU Nakatsue 21.65 240 P **P** **16 55 17.5 +1.7**
comp=Z,26nm,0.7s,baz=310,slow=1.0,SNR=20
JNU LR LR 17 03 45.0
comp=Z,189nm,21.4s,baz=48,slow=37
JNU Nakatsue 21.65 240 P **P** **16 55 17.3 +1.5**
JNU IAmb IAmb 16 55 18.6
comp=Z,51nm,1.1s

TJN Taejon 21.76 252⇓ *e*P **P** **16 55 18.4 +1.5**
ATKA Atka Island 21.87 63 P **P** **16 55 18.1 +0.2**
HIA Hailar 22.50 289 P **P** **16 55 21.2 -3.5**
HIA pmax pmax
comp=Z,10.0nm,0.6s
HIA Hailar 22.50 289 P **P** **16 55 21.2 -3.5**
BILL Bilibino 22.61 13 *e*P **P** **16 55 24.7 -1.1**
BILL *e* 16 55 41.2
BILL *e* 16 55 51.1
BILL *e* 16 59 17.0
BILL pmax pmax
comp=Z,11nm,1.8s
BILL MLR MLR
comp=Z,257nm,19.0s
BILL Bilibino 22.61 13 *e*P **P** **16 55 24.7 -1.1**
BILL Bilibino 22.61 13 P **P** **16 55 24.1 -1.7**
DL2 Dalian 24.29 263 P **P** **16 55 42.7 +0.4**
DL2 sP **sP** **16 55 58.5 +1.7**
DL2 *e*S **S** **16 59 58.2 -0.2**
DL2 pmax pmax
comp=Z,72nm,0.7s
DL2 pmax pmax
comp=Z,570nm,4.5s
DL2 LR LR
comp=Z,360nm,15.6s
DL2 LR LR
comp=Z,470nm,17.5s
BOD Bodaibo 26.18 310 *e*P **P** **16 55 57.2 -2.1**
BOD pmax pmax
comp=Z,10.0nm,1.8s
BJT Baijiatuao 27.54 270 P **P** **16 56 12.6 +0.9**
BJT pmax pmax
comp=Z,14nm,0.8s
BJT Baijiatuao 27.54 270 P **P** **16 56 12.6 +0.9**
TIXI Tiksi 27.71 344⇓ *e*P **P** **16 56 11.1 -1.8**
TIXI pmax pmax
comp=Z,1.0nm,0.5s
TIXI MLR MLR
comp=Z,184nm,18.0s
TIXI Tiksi 27.71 344 P **P** **16 56 09.8 -3.1**
comp=Z,3.2nm,0.4s,baz=0.0,slow=24,SNR=19
TIXI LR LR 17 08 01.5
comp=Z,197nm,18.5s,baz=153,slow=38
TIXI Tiksi 27.71 344⇓ *e*P **P** **16 56 11.1 -1.8**
TIXI Tiksi 27.71 344 P **P** **16 56 10.2 -2.7**
TIA Tai'an 28.73 262 P **P** **16 56 23.4 +1.0**
TIA pmax pmax
comp=Z,12nm,0.8s
ANM Nome 28.85 36 P **P** **16 56 24.1 +1.0**
ANM pmax pmax
comp=Z,26nm,1.4s
ANM Nome 28.85 36 P **P** **16 56 24.1 +1.0**
H11N2 WAKE ISLAND Hy 28.98 153 T T 17 27 52.9
baz=340,slow=76,SNR=2464
H11N1 WAKE ISLAND Hy 29.00 153 T T 17 27 54.1
baz=340,slow=76,SNR=1714
H11N3 WAKE ISLAND Hy 29.00 153 T T 17 27 54.6
baz=340,slow=76,SNR=1597
NJ2 Nanjing 29.98 253 *e*P **P** **16 56 34.6 +1.2**
NJ2 pmax pmax
comp=Z,20nm,0.5s
H11S1 WAKE ISLAND Hy 30.07 154 T T 17 29 15.8
baz=340,slow=76,SNR=1362
H11S3 WAKE ISLAND Hy 30.08 154 T T 17 29 15.8
baz=340,slow=76,SNR=2321
H11S2 WAKE ISLAND Hy 30.09 154 T T 17 29 15.3
baz=340,slow=76,SNR=3724
HHC Hu-ho-hao-te 30.36 275 *e*P **P** **16 56 37.4 +0.5**
HHC pmax pmax
comp=Z,26nm,0.7s
HHC pmax pmax
comp=Z,60nm,4.2s
HHC LR LR
comp=Z,170nm,14.5s
HHC LR LR
comp=Z,130nm,13.6s
RDOG Red Dog Mine 30.99 30 P **P** **16 56 42.8 +0.7**
ULN Ulaanbaatar 31.03 290 P **P** **16 56 41.9 -0.9**
ULN pmax pmax
comp=Z,17nm,0.9s
ULN Ulaanbaatar 31.03 290 *e*P **P** **16 56 41.9 -0.9**
ULN Ulaanbaatar 31.03 290 P **P** **16 56 41.9 -0.9**
ULN IAmb IAmb 16 56 47.5
comp=Z,17nm,0.9s
SONM Songino Array 31.46 290 P **P** **16 56 44.1 -2.5**
comp=Z,2.0nm,0.5s,baz=74,slow=7.5,SNR=11
SONM LR LR 17 10 29.6
comp=Z,444nm,18.6s,baz=80,slow=38
SONM Songino Array 31.46 290 IAmb IAmb 16 56 52.2
comp=Z,6.6nm,1.0s
TLY Talaya 32.34 298⇑ *e*P **P** **16 56 54.2 +0.2**
TLY pmax pmax
comp=Z,6.0nm,0.8s
TLY MLR MLR
comp=Z,352nm,15.0s
TLY Talaya 32.34 298 P **P** **16 56 52.4 -1.6**
comp=Z,4.9nm,0.6s,baz=124,slow=4.8,SNR=6.5
TLY LR LR 17 10 30.0
comp=Z,387nm,20.7s,baz=80,slow=37
TLY Talaya 32.34 298 *e*P **P** **16 56 54.2 +0.2**
TLY Talaya 32.34 298 P **P** **16 56 52.5 -1.6**
SVW2 Sparrevohn 32.62 45 P **P** **16 56 57.3 +0.9**
SVW2 IAmb IAmb 16 57 17.9
comp=Z,18nm,1.2s
ZAK Zakamensk 32.83 295 *e*P **P** **16 56 55.3 -3.2**
ZAK *e* 16 59 50.5
ZAK pmax pmax
comp=Z,5.0nm,1.3s
GUMO Guam 33.56 195 LR LR 17 10 22.9
comp=Z,71nm,18.7s,baz=97,slow=35
OHAK Old Harbor 33.88 52 P **P** **16 57 07.2 -0.2**
OHAK IAmb IAmb 16 57 08.1
comp=Z,34nm,1.1s
WHN Wuhan 33.92 256 ⇓P **P** **16 57 08.8 +0.8**
WHN pmax pmax
comp=Z,32nm,0.6s
KDAK Kodiak Island 34.21 51 P **P** **16 57 10.2 0.0**
KDAK pmax pmax
comp=Z,42nm,1.0s
KDAK Kodiak Island 34.21 51 P **P** **16 57 10.1 -0.1**
comp=Z,26nm,0.8s,baz=302,slow=4.9,SNR=7.1
KDAK Kodiak Island 34.21 51 P **P** **16 57 10.2 0.0**
BPAW Bear Paw Mtn. 34.90 39 PcP **PcP** **16 59 48.5 +0.4**
KTH Kantishna Hill 34.91 40 P **P** **16 57 16.9 +0.5**
KTH IAmb IAmb 16 57 18.7
comp=Z,22nm,1.0s
MLY Manley 35.07 38 PcP **PcP** **16 59 49.0 +0.4**
TRF Thorofare Moun 35.19 41 P **P** **16 57 19.2 +0.3**
TRF IAmb IAmb 16 57 21.7
comp=Z,11nm,1.0s
COLD Coldfoot 35.50 34 P **P** **16 57 22.3 +1.0**
XAN Xi'an 35.55 266 P **P** **16 57 22.6 +0.5**
XAN pP pP 16 57 30.6 -1.7
XAN pmax pmax
comp=Z,43nm,1.1s
XAN Xi'an 35.55 266 P **P** **16 57 22.4 +0.2**
XAN pmax pmax
comp=Z,37nm,0.9s
XAN Xi'an 35.55 266 P **P** **16 57 22.4 +0.2**
BWN Browne 35.57 39 P **P** **16 57 23.1 +1.1**
SEW Seward 35.65 46 P **P** **16 57 23.9 +1.3**
NEA Nenana 35.75 39 P **P** **16 57 24.1 +0.6**
MCK McKinley 35.80 40 P **P** **16 57 24.3 +0.4**
MCK pmax pmax
comp=Z,18nm,1.2s
MCK McKinley 35.80 40 P **P** **16 57 24.2 +0.4**
MCK IAmb IAmb 16 57 53.3
comp=Z,18nm,1.2s
GHO Glory Hole Cre 35.83 43 P **P** **16 57 24.8 +0.5**
RND Reindeer 35.83 41 P **P** **16 57 23.9 -0.3**
RND pmax pmax
comp=Z,10.0nm,0.9s
RND Reindeer 35.83 41 P **P** **16 57 23.9 -0.3**
TOLK Toolik Lake Re 35.92 32 P **P** **16 57 25.5 +0.6**
TOLK IAmb IAmb 16 57 41.8
comp=Z,10nm,0.7s
TOLK Toolik Lake Re 35.92 32 P **P** **16 57 25.8 +0.9**
baz=262,SNR=9.8
KNK Knik Glacier 36.06 44 P **P** **16 57 26.3 +0.1**
KNK IAmb IAmb 16 57 27.6
comp=Z,20nm,0.9s
SML Sawmill 36.10 43 P **P** **16 57 27.1 +0.5**
WRH Wood River Hil 36.18 39 P **P** **16 57 27.4 +0.2**
COLA College 36.29 38⇓ *i*P **P** **16 57 29.3 +1.3**
COLA pmax pmax
comp=Z,30nm,2.3s
COLA College 36.29 38 P **P** **16 57 28.3 +0.3**
COLA IAmb IAmb 16 57 30.1
comp=Z,32nm,1.4s
CCB Clear Creek Bu 36.30 39 P **P** **16 57 28.7 +0.5**
POKR Poker Plat Res 36.47 38 P **P** **16 57 30.2 +0.6**
baz=269,SNR=8.6
DHY Denali Highway 36.50 41 P **P** **16 57 30.2 +0.1**
DHY IAmb IAmb 16 57 31.0
comp=Z,13nm,1.1s
SCM Sheep Creek Mo 36.58 43 P **P** **16 57 31.1 +0.4**
SCM pmax pmax
comp=Z,58nm,1.5s
SCM Sheep Creek Mo 36.58 43 P **P** **16 57 31.1 +0.4**
HDA Harding Lake 36.67 39 P **P** **16 57 31.7 +0.4**
HDA Harding Lake 36.67 39 P **P** **16 57 32.4 +1.0**
baz=270
IL31 36.70 38 P **P** **16 57 31.6 +0.1**
ILAR Eielson Array 36.70 38 P **P** **16 57 31.7 +0.1**
comp=Z,5.1nm,1.1s,baz=256,slow=7.7,SNR=21
ILAR LR LR 17 14 42.2
comp=Z,59nm,18.0s,baz=316,slow=40
PRP Porcupine Dome 37.28 37 P **P** **16 57 36.8 +0.2**
MID Middleton Isla 37.29 47 P **P** **16 57 37.0 +0.4**
MID Middleton Isla 37.29 47 P **P** **16 57 37.0 +0.4**
ENH Enshi 37.38 260 P **P** **16 57 37.4 -0.3**
FYU Fort Yukon 37.41 35 P **P** **16 57 37.5 -0.1**
FYU IAmb IAmb 16 57 55.5
comp=Z,18nm,0.8s
RIDG Independent Ri 37.62 40 P **P** **16 57 38.7 -0.7**
RIDG IAmb IAmb 16 57 55.5
comp=Z,20nm,1.4s
LZH Lanzhou 37.95 272⇓ P **P** **16 57 43.6 +0.9**
LZH pP sP 16 57 57.3 -0.1
LZH sP pwP 16 58 02.5 +5.8
LZH *e*PP **PnPn** **16 59 14.5 +3.2**
LZH pmax pmax
comp=Z,29nm,1.0s
LZH pmax pmax
comp=Z,98nm,4.9s
LZH LR LR
comp=Z,230nm,14.1s
LZH LR LR
comp=Z,320nm,14.2s
LZH LR LR
comp=Z,380nm,16.3s
DOT Dot Lake 37.97 40 P **P** **16 57 42.3 -0.1**
SCRK Sand Creek 37.98 40 P **P** **16 57 42.4 -0.2**
SCRK IAmb IAmb 16 58 07.4
comp=Z,19nm,1.7s
SCRK PcP **PcP** **16 59 58.3 +0.9**
MENT Mentasta 38.18 41 P **P** **16 57 44.5 +0.4**
GLB Gilahina Butte 38.29 44 P **P** **16 57 45.2 +0.1**
GLB IAmb IAmb 16 59 09.4
comp=Z,36nm,1.8s
VRDI Verde Repeater 38.48 44 P **P** **16 57 46.8 -0.2**
MCARA McCarthy VSAT 38.67 44 P **P** **16 57 49.4 +1.2**
MCARA IAmb IAmb 16 59 08.3
comp=Z,24nm,1.4s
CRQM Cirque 38.70 45 P **P** **16 57 49.7 +1.0**
TGL Tana Glacier 38.85 45 P **P** **16 57 51.1 +1.2**
BALM Baldy 39.04 44 P **P** **16 57 52.5 +1.0**
BALM IAmb IAmb 16 57 53.8
comp=Z,12nm,0.8s
GTA Gaotai 39.06 279 *e*P **P** **16 57 52.0 +0.1**
GTA pP pwP 16 58 04.9 -1.2
GTA sP sP 16 58 10.2 +3.6
GTA pmax pmax
comp=Z,13nm,1.2s
EGAK Eagle 39.15 38 P **P** **16 57 52.1 -0.1**
BARN Barnard Glacie 39.37 44 P **P** **16 57 55.0 +0.7**
BARN IAmb IAmb 16 57 56.8
comp=Z,20nm,0.8s
CTGM Chitina Glacie 39.54 44 P **P** **16 57 56.8 +1.1**
CTGM IAmb IAmb 16 57 58.1
comp=Z,26nm,0.7s
EPYK Eagle Plains 40.83 35 P **P** **16 58 07.0 +0.8**
EPYK IAmb IAmb 16 58 08.6
comp=Z,18nm,1.0s
EPYK Eagle Plains 40.83 35 P **P** **16 58 07.4 +1.2**
baz=277,SNR=9.7
CD2 Chengdu 40.91 266⇓ *i*P **P** **16 58 08.1 +0.8**
CD2 S **S** **17 04 14.7 -1.5**
CD2 pmax pmax
comp=Z,40nm,0.6s
CD2 pmax pmax
comp=Z,180nm,4.6s
CD2 LR LR
comp=Z,270nm,17.5s
CD2 LR LR
comp=Z,300nm,17.3s
CD2 LR LR
comp=Z,450nm,14.6s
HYT Haines Junctio 41.41 44 P **P** **16 58 12.6 +1.6**
DHAK Deception Hill 41.45 47 P **P** **16 58 12.3 +1.0**
DHAK IAmb IAmb 16 59 35.8
comp=Z,33nm,0.8s
INK Inuvik 41.82 32 P **P** **16 58 15.2 +1.0**
comp=Z,12nm,0.8s,baz=288,slow=7.6,SNR=42
INK Inuvik 41.82 32 P **P** **16 58 15.1 +1.0**
WHY Whitehorse 42.70 44 P **P** **16 58 21.6 0.0**
ZAA0 Zalesovo Array 42.79 306 P **P** **16 58 19.6 -2.7**
ZAA0 **PcP** **17 00 14.3 +1.4**
ZALV Zalesovo Beam 42.79 306 P **P** **16 58 20.0 -2.3**
comp=Z,6.4nm,0.5s,baz=62,slow=6.7,SNR=40
ZALV PcP **PcP** **17 00 14.7 +1.8**
comp=Z,1.9nm,0.6s,baz=87,slow=3.1,SNR=5.6
ZALV LR LR 17 17 27.9
comp=Z,511nm,18.2s,baz=63,slow=38
BESE Bessie Mountai 43.27 47 P **P** **16 58 27.2 +1.1**
BESE IAmb IAmb 16 58 58.5
comp=Z,40nm,1.7s
C36M Paulatuk 45.00 30 P **P** **16 58 40.3 +0.6**
C36M IAmb IAmb 16 58 41.7
comp=Z,28nm,1.0s
C36M Paulatuk 45.00 30 P **P** **16 58 40.4 +0.7**
baz=285
WMQ Urumqi 45.06 291 *e*P **P** **16 58 41.2 +0.5**
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ pmax pmax
comp=Z,140nm,5.1s
WMQ LR LR
comp=Z,490nm,28.8s
WMQ LR LR
comp=Z,110nm,29.0s
WMQ LR LR
comp=Z,170nm,19.7s
WMQ Urumqi 45.06 291 P **P** **16 58 40.3 -0.4**
WMQ pmax pmax
comp=Z,11nm,0.8s
WMQ Urumqi 45.06 291 P **P** **16 58 40.3 -0.4**
WMQ IAmb IAmb 16 59 13.4
comp=Z,11nm,0.8s
KMI Kunming 45.25 260 P **P** **16 58 43.7 +1.1**
KMI pP pP 16 58 53.1 +0.1
KMI pmax pmax
comp=Z,22nm,0.9s
KMI pmax pmax
comp=Z,100nm,3.1s
KMI Kunming 45.25 260 P **P** **16 58 43.2 +0.6**
KMI pmax pmax
comp=Z,27nm,1.0s
KMI Kunming 45.25 260 P **P** **16 58 43.2 +0.6**
KMI IAmb IAmb 16 58 45.8
comp=Z,27nm,1.0s
DLBC Dease Lake 45.72 46 P **P** **16 58 45.7 0.0**
comp=Z,8.1nm,0.7s,baz=276,slow=3.6,SNR=3.6
DLBC Dease Lake 45.72 46 P **P** **16 58 46.0 +0.3**
DAV Davao City (W) 45.91 220 LR LR 17 16 02.1
comp=Z,50nm,21.5s,baz=7.5,slow=33
DIB Dawson Inlet, 46.38 53 P **P** **16 58 52.4 +1.6**
MOBC Moresby Island 46.68 53 P **P** **16 58 53.6 +0.3**
SLVN Son La 47.03 255 P **P** **16 58 57.2 +0.7**
SLVN IAmb IAmb 16 58 59.0
comp=Z,10nm,0.8s
MK31 Makanchi Array 47.10 298 P **P** **16 58 55.1 -1.6**
MK31 pmax pmax
comp=Z,13nm,0.9s
MK31 Makanchi Array 47.10 298 P **P** **16 58 55.0 -1.6**
MK31 IAmb IAmb 16 58 56.6
comp=Z,12nm,0.9s
MKAR Makanchi Array 47.10 298 P **P** **16 58 55.3 -1.4**
comp=Z,9.6nm,0.8s,baz=71,slow=8.2,SNR=74
MKAR ScP **ScP** **17 04 17.4 -1.0**

comp=Z,0.8nm,0.9s,baz=62,slow=2.9,SNR=4.1
MKAR LR LR 17 19 54.1
comp=Z,571nm,18.5s,baz=62,slow=38
MAKZ Makanchi 47.28 298 P **P** **16 58 56.4 -1.7**
MAKZ pmax pmax
comp=Z,17nm,1.2s
MAKZ Makanchi 47.28 298 P **P** **16 58 56.4 -1.7**
MAKZ lAmb lAmb 16 58 58.1
comp=Z,17nm,1.2s
KURK Kurchatov 47.54 304 *ce*P **P** **16 58 58.0 -2.0**
KURK pmax pmax
comp=Z,14nm,0.6s
KURK Kurchatov 47.54 304⇑ *e*P **P** **16 58 58.0 -2.0**
KURK Kurchatov 47.54 304 P **P** **16 58 57.9 -2.1**
KURK lAmb lAmb 16 58 58.9
comp=Z,16nm,0.6s
LSA Lhasa 50.34 273 P **P** **16 59 23.7 +1.4**
LSA pmax pmax
comp=Z,68nm,0.7s
LSA Lhasa 50.34 273 *i* P **P** **16 59 24.2 +2.0**
SNR=5.8
LSA Lhasa 50.34 273 P **P** **16 59 23.7 +1.4**
PDGK Podgornoye 50.51 295 P **P** **16 59 21.4 -1.6**
KRVT Keravat (AS076 50.61 182 P **P** **16 59 25.6 +1.9**
comp=Z,64nm,1.0s,baz=174,slow=23,SNR=9.4
KRVT LR LR 17 24 01.9
comp=Z,34nm,18.1s,baz=67,slow=40
RES Resolute Bay 51.04 18 P **P** **16 59 27.3 +0.9**
RES pmax pmax
comp=Z,24nm,1.8s
RES Resolute Bay 51.04 18 P **P** **16 59 26.1 -0.3**
comp=Z,1.2nm,0.5s,baz=115,slow=1.1,SNR=7.7
RES Resolute Bay 51.04 18 P **P** **16 59 27.3 +0.9**
RES lAmb lAmb 16 59 45.0
comp=Z,24nm,1.8s
YKA Yellowknife Ar 51.08 37 P **P** **16 59 27.7 +0.9**
comp=Z,9.7nm,0.8s,baz=296,slow=7.2,SNR=94
NOR Nord 52.02 358 *i* P **P** **16 59 32.7 -0.9**
CHTO Chiang Mai 52.12 257 P **P** **16 59 36.2 +1.0**
CHTO pmax pmax
comp=Z,25nm,0.9s
CHTO Chiang Mai 52.12 257 P **P** **16 59 36.2 +1.0**
CM31 Chiang Mai Arr 52.37 257 P **P** **16 59 38.3 +1.3**
CM31 lAmb lAmb 16 59 39.8
comp=Z,16nm,0.9s
CMAR Chiang Mai Arr 52.37 257 P **P** **16 59 38.8 +1.8**
comp=Z,8.5nm,0.8s,baz=34,slow=7.4,SNR=68
CMAR LR LR 17 24 50.5
comp=Z,92nm,18.4s,baz=21,slow=39
SHL Shillong 52.42 269 P **P** **16 59 37.5 -0.1**
SHL pmax pmax
comp=Z,28nm,0.7s
SHL Shillong 52.42 269 P **P** **16 59 37.5 -0.1**
FAKI Fak Fak 52.59 207 P **P** **16 59 38.5 -0.1**
KDJ Kajisay 52.59 295 P **P** **16 59 38.1 -0.5**
KDJ pmax pmax
comp=Z,15nm,0.9s
KDJ Kajisay 52.59 295 P **P** **16 59 38.1 -0.5**
KDJ lAmb lAmb 16 59 39.5
comp=Z,15nm,0.8s
KBS Kingsbay 52.74 351 P **P** **16 59 37.7 -1.3**
KBS pmax pmax
comp=Z,33nm,1.1s
KBS Kingsbay 52.74 351 P **P** **16 59 37.7 -1.3**
SPA0 Spitsbergen Ar 52.85 350 P **P** **16 59 38.0 -1.9**
TKM2 Tokmak 2 53.15 296 P **P** **16 59 41.6 -1.2**
TKM2 Tokmak 2 53.15 296 P **P** **16 59 42.4 -0.4**
SNR=9.9
LLLB Lillooet 53.39 52 P **P** **16 59 44.5 +0.2**
LLLB lAmb lAmb 16 59 46.5
comp=Z,13nm,1.0s
PGC Sidney 53.54 55 P **P** **16 59 45.5 +0.3**
CHMS Chumysh 53.63 297 P **P** **16 59 45.6 -0.5**
SNR=8.4
USP Osenovka 53.64 297 P **P** **16 59 45.8 -0.4**
SNR=26
KBK Karagaybulak 53.70 296 P **P** **16 59 46.4 -0.4**
SNR=13
NRN Naryn 53.71 295 P **P** **16 59 46.1 -0.9**
NRN pmax pmax
comp=Z,6.0nm,1.0s
NRN Naryn 53.71 295 P **P** **16 59 46.1 -0.9**
FRU1 Bishkek 53.81 297 P **P** **16 59 46.4 -1.0**
FRU1 pmax pmax
comp=Z,18nm,1.1s
FRU1 Bishkek 53.81 297 P **P** **16 59 46.4 -1.0**
FRU1 lAmb lAmb 16 59 48.4
comp=Z,18nm,1.1s
KZA Kyzart 53.82 296 P **P** **16 59 48.3 +0.4**
SNR=12
A04D Lummi Island 53.92 55 P **P** **16 59 49.1 +1.0**
baz=302
AAK Ala-Archa 53.99 297⇑ *e*P **P** **16 59 47.3 -1.6**
AAK pmax pmax
comp=Z,15nm,1.0s
AAK Ala-Archa 53.99 297 P **P** **16 59 48.2 -0.6**
SNR=12
AAK Ala-Archa 53.99 297 *i* P **P** **16 59 48.4 -0.5**
SNR=17
AAK Ala-Archa 53.99 297 *e*P **P** **16 59 47.3 -1.6**
AAK Ala-Archa 53.99 297 P **P** **16 59 47.7 -1.2**
AAK lAmb lAmb 16 59 49.5
comp=Z,13nm,0.9s
SVE Sverdlovsk 54.04 317 *de*P **P** **16 59 47.5 -1.3**
SVE pmax pmax
comp=Z,12nm,0.8s
SVE Sverdlovsk 54.04 317 *e*P **P** **16 59 47.5 -1.3**
TAPN Taplejung 54.17 273 *e*P **P** **16 59 51.5 +1.0**
comp=Z,84nm,0.7s
D03D Eldon 54.33 56 P **P** **16 59 52.6 +1.5**
baz=303
TULEG Thule 54.35 11 P **P** **16 59 50.0 -0.7**
TULEG lAmb lAmb 16 59 58.5
comp=Z,19nm,1.3s
EKS2 Erkin-Say 54.41 297 P **P** **16 59 51.6 -0.3**
SNR=16
B05A Bryant 54.51 55 P **P** **16 59 53.6 +1.3**
baz=303
ODAN Odare 54.70 273 *e*P **P** **16 59 55.1 +0.8**
comp=Z,30nm,0.5s
D04E Lakebay 54.71 56 P **P** **16 59 55.0 +1.2**
baz=303
B06A Marblemount 54.72 54 P **P** **16 59 54.4 +0.6**
B06A lAmb lAmb 16 59 55.7
comp=Z,17nm,1.2s
AML Almayashu 54.76 296 P **P** **16 59 55.2 +0.4**
SNR=9.6
KSH Kashi 54.79 293 P **P** **16 59 58.8 +4.1**
KSH PP **PP** **17 02 03.3 +5.9**
KSH S **S** **17 07 36.3 +3.6**
KSH ScS **ScS** **17 09 44.1 +3.5**
KSH SS **SS** **17 11 19.1 +3.4**
KSH pmax pmax
comp=Z,29nm,0.7s
KSH pmax pmax
comp=Z,290nm,3.7s
KSH LR LR
comp=Z,170nm,4.6s
KSH LR LR
comp=Z,190nm,5.6s
JIRN Jiri 55.02 275 *e*P **P** **16 59 57.9 +1.1**
comp=Z,356nm,0.8s
GUN Gumba 55.08 275 *e*P **P** **16 59 57.9 +0.7**
comp=Z,78nm,0.6s
E04D Cinebar 55.16 57 P **P** **16 59 58.5 +1.4**
baz=303
RAMN Ramite 55.18 274 *e*P **P** **16 59 58.6 +0.8**
ARU Arti 55.22 318 *c* P **P** **16 59 55.6 -1.8**
ARU pmax pmax
comp=Z,15nm,0.7s
ARU MLR MLR
comp=Z,119nm,14.0s
ARU Arti 55.22 318 P **P** **16 59 55.5 -1.8**
ARU lAmb lAmb 16 59 56.2
comp=Z,15nm,0.7s
C06D Leavenworth 55.37 55 P **P** **16 59 59.9 +1.3**
baz=303
KKN Kakani 55.56 276 *e*P **P** **17 00 01.4 +0.9**
comp=Z,138nm,0.7s
PKI Pulchoki 55.61 275 *e*P **P** **17 00 01.6 +0.6**
comp=Z,10nm,0.7s
PKIN Phulchoki 55.62 275 *e*P **P** **17 00 01.6 +0.6**
comp=Z,70nm,0.8s
I02D Swisshome 55.77 60 P **P** **17 00 02.8 +1.3**
baz=304
DMN Daman 55.80 275 *e*P **P** **17 00 03.3 +1.1**
comp=Z,242nm,0.9s
LTY Liberty 55.86 55 P **P** **17 00 02.7 +0.5**
LTY lAmb lAmb 17 00 04.3
comp=Z,18nm,1.6s
GKN Gorkha 55.87 276 *e*P **P** **17 00 03.6 +0.9**
comp=Z,185nm,0.6s
PMG Port Moresby 55.93 187 P **P** **17 00 04.5 +1.7**
PMG pmax pmax
comp=Z,11nm,0.9s
PMG Port Moresby 55.93 187 P **P** **17 00 04.3 +1.5**
comp=Z,7.9nm,0.7s,baz=344,slow=8.4,SNR=3.5
PMG LR LR 17 19 42.7
comp=Z,30nm,21.6s,baz=2.5,slow=31
PMG Port Moresby 55.93 187 P **P** **17 00 04.5 +1.7**
PMG lAmb lAmb 17 00 05.5
comp=Z,11nm,0.9s
B08A Colville Reser 56.00 53 P **P** **17 00 03.7 +0.5**
B08A lAmb lAmb 17 00 04.7
comp=Z,8.3nm,0.8s
HNR Honiara 56.02 172 LR LR 17 20 48.7
comp=Z,66nm,21.0s,baz=21,slow=32
KK31 Karatay Array 56.16 299 *i* P **P** **17 00 03.0 -1.4**
KK31 Karatay Array 56.16 299 P **P** **17 00 02.6 -1.7**
KKAR Karatay Array 56.16 299 P **P** **17 00 03.0 -1.4**
KKAR pmax pmax
comp=Z,7.0nm,0.8s
KKAR Karatay Array 56.16 299 P **P** **17 00 03.0 -1.4**
H04D Lebanon 56.19 59 P **P** **17 00 06.0 +1.5**
baz=304
J01E Myrtle Point 56.25 61 P **P** **17 00 06.8 +1.9**
baz=305
DANN Dangsing 56.26 277 *e*P **P** **17 00 06.8 +1.2**
comp=Z,281nm,0.6s
I03D Drain, OR 56.29 60 P **P** **17 00 07.0 +1.8**
baz=305
G05D Wamic, OR 56.62 58 P **P** **17 00 08.9 +1.3**
baz=305
K02D Willamette Mer 56.67 61 P **P** **17 00 09.6 +1.5**
baz=305
E07A Sunnyside 56.72 56 P **P** **17 00 09.0 +0.7**
E07A lAmb lAmb 17 00 10.6
comp=Z,15nm,1.2s
KOLN Koldanda 56.73 277 *e*P **P** **17 00 09.9 +1.1**
comp=Z,232nm,0.9s
I04A Tendick Farm, 56.80 59 P **P** **17 00 10.2 +1.2**
baz=305
DAG Danmarks Havn 56.88 358 *i* P **P** **17 00 07.6 -1.3**
DAG pmax pmax
comp=Z,9.0nm,0.9s
DAG Danmarks Havn 56.88 358 *i* P **P** **17 00 07.6 -1.3**
comp=Z,8.6nm,0.9s
C09A Chrisman Ranch 56.90 54 P **P** **17 00 09.8 +0.3**
C09A lAmb lAmb 17 00 11.0
comp=Z,8.5nm,0.8s
HAWA Hanford 56.99 56 P **P** **17 00 11.0 +0.8**
HAWA lAmb lAmb 17 00 12.5
comp=Z,17nm,1.3s
L02E Cave Junction 57.02 62 P **P** **17 00 11.7 +1.3**
baz=306
F07A Phinny Hill Vi 57.05 56 P **P** **17 00 11.5 +0.9**
F07A lAmb lAmb 17 00 13.2
comp=Z,10nm,0.8s
I05D Terrebonne, OR 57.12 58 P **P** **17 00 12.5 +1.3**
baz=305
E08A Dider Farm, El 57.21 55 P **P** **17 00 12.1 +0.4**
E08A lAmb lAmb 17 00 13.8
comp=Z,11nm,1.1s
NEW Newport 57.27 53 P **P** **17 00 13.5 +1.3**
NEW Newport 57.27 53 P **P** **17 00 13.5 +1.3**
NEW Newport 57.27 53 P **P** **17 00 13.6 +1.4**
baz=305
J04D Umpqua Nationa 57.30 60 P **P** **17 00 14.2 +1.5**
baz=306
APA Apatity 57.58 337⇑ *i*P P 17 00 08.9 -5.0
APA pmax pmax
comp=Z,11nm,0.9s
PRGR Permogore 57.59 327 *e*P **P** **17 00 12.0 -2.1**
PRGR pmax pmax
comp=Z,10.0nm,0.6s
PINE Pine Mountain 57.67 59 P **P** **17 00 16.1 +0.8**
KHMM Horse Mountain 57.68 63 P **P** **17 00 16.6 +1.3**
KHMM lAmb lAmb 17 00 18.3
comp=Z,12nm,0.9s
E09A Wood Farm, Sta 57.71 55 P **P** **17 00 16.1 +0.9**
E09A lAmb lAmb 17 00 17.4
comp=Z,14nm,0.9s
BTK Batken 57.73 296 P **P** **17 00 14.8 -0.8**
BTK pmax pmax
comp=Z,16nm,0.9s
BTK Batken 57.73 296 P **P** **17 00 14.8 -0.8**
BTK lAmb lAmb 17 00 16.3
comp=Z,16nm,0.8s
L04D Klamath Falls 57.77 61 P **P** **17 00 17.8 +1.9**
baz=306
J05D Fort Rock, OR 57.79 59 P **P** **17 00 17.9 +1.8**
baz=306,SNR=6.8
YBH Yreka Blue Hor 57.81 62 P **P** **17 00 17.8 +1.7**
YBH pmax pmax
comp=Z,26nm,1.8s
YBH Yreka Blue Hor 57.81 62 P **P** **17 00 17.8 +1.7**
YBH lAmb lAmb 17 00 19.4
comp=Z,26nm,1.8s
M02C Callahan 57.92 62 P **P** **17 00 19.1 +2.2**
baz=306
G08A Pilot Rock 57.96 56 P **P** **17 00 18.3 +1.1**
G08A lAmb lAmb 17 00 19.5
comp=Z,7.6nm,1.0s
ARCES ARCESS Array B 58.09 341 P **P** **17 00 16.8 -0.8**
comp=Z,4.6nm,0.8s,baz=26,slow=7.1,SNR=14
ARCES LR LR 17 27 47.0
comp=Z,161nm,19.3s,baz=39,slow=39
ARE0 ARCESS Array S 58.09 341 *e*P **P** **17 00 17.2 -0.3**
ARE0 ARCESS Array S 58.09 341 P **P** **17 00 17.3 -0.3**
N02D Trinity Center 58.26 62 P **P** **17 00 21.0 +1.8**
baz=306
M04C Macdoel 58.31 61 P **P** **17 00 21.1 +1.5**
baz=306
KCPM Cahto Peak 58.48 64 P **P** **17 00 22.7 +1.8**
KCPM lAmb lAmb 17 00 23.8
comp=Z,10nm,0.8s
F10A Beach Ranch, E 58.54 55 P **P** **17 00 21.5 +0.3**
F10A lAmb lAmb 17 00 25.2
comp=Z,7.0nm,0.9s
WALA Waterton Lakes 58.55 50 P **P** **17 00 21.9 +0.6**
WALA lAmb lAmb 17 00 23.3
comp=Z,12nm,0.9s
AB31 Akbulak array 58.62 310 *i* P **P** **17 00 20.2 -1.3**
ABKAR Akbulak array 58.62 310 P **P** **17 00 20.0 -1.5**
ABKAR lAmb lAmb 17 00 20.9
comp=Z,10.0nm,0.6s
GAR Garm 58.66 295 P **P** **17 00 21.6 -0.6**
O02D Mt. Diablo Mer 58.68 63 P **P** **17 00 23.7 +1.5**
baz=307
AKTO Aktyubinsk 58.92 312 P **P** **17 00 22.4 -1.3**
AKTO Aktyubinsk 58.92 312 LR LR 17 27 34.6
comp=Z,231nm,21.1s,baz=38,slow=38
KTK1 Kautokeino 59.01 341 *e*P **P** **17 00 23.3 -0.7**
JTMT Jette 59.13 52 P **P** **17 00 26.1 +0.8**
JTMT lAmb lAmb 17 00 29.0
comp=Z,6.8nm,0.9s
MOD Modoc Plateau 59.16 60 P **P** **17 00 26.5 +0.9**
MOD lAmb lAmb 17 00 28.2
comp=Z,9.8nm,0.8s
BMO Blue Mountains 59.16 56 P **P** **17 00 26.3 +0.8**
BMO pmax pmax
comp=Z,8.0nm,0.9s
BMO Blue Mountains 59.16 56 P **P** **17 00 26.3 +0.8**
BMO lAmb lAmb 17 00 28.0
comp=Z,8.4nm,0.9s
O03E Paynes Creek 59.21 62 P **P** **17 00 27.2 +1.3**
baz=307
GDXM Geysers 59.49 64 P **P** **17 00 29.2 +1.3**
GDXM lAmb lAmb 17 00 30.9
comp=Z,11nm,1.0s
CHGR Chuyangaron 59.59 295 P **P** **17 00 27.9 -0.7**
WVOR Wild Horse Val 59.83 59 P **P** **17 00 31.5 +1.3**
WVOR pmax pmax
comp=Z,13nm,1.0s
WVOR Wild Horse Val 59.83 59 P **P** **17 00 31.5 +1.3**
WVOR lAmb lAmb 17 00 32.8
comp=Z,13nm,0.9s
ORV Oroville 59.84 63 P **P** **17 00 30.0 -0.1**
ORV pmax pmax
comp=Z,21nm,1.7s
ORV Oroville 59.84 63 P **P** **17 00 30.0 -0.1**
ORV lAmb lAmb 17 00 32.1
comp=Z,21nm,1.7s
MSO Missoula 59.86 52 P **P** **17 00 30.7 +0.3**
MSO lAmb lAmb 17 00 32.6
comp=Z,17nm,1.1s
MSO Missoula 59.86 52 P **P** **17 00 31.5 +1.2**
baz=307,SNR=11
NIL Nilore 60.03 289 P **P** **17 00 31.9 +0.3**
NIL pmax pmax
comp=Z,66nm,0.8s
NIL Nilore 60.03 289 P **P** **17 00 31.9 +0.3**
BEKR Beckworth 60.35 62 P **P** **17 00 34.3 +0.4**
BEKR lAmb lAmb 17 00 36.1
comp=Z,11nm,1.0s
AFDM Forest Hills D 60.54 63 P **P** **17 00 35.8 +0.8**
COEN Coen 60.86 191 P **P** **17 00 38.9 +1.6**
COEN lAmb lAmb 17 00 40.1
comp=Z,15nm,0.8s
MFID Camas Ranch 60.88 57 P **P** **17 00 37.6 +0.3**
MFID lAmb lAmb 17 00 39.2
comp=Z,7.2nm,0.9s
FFC Flin Flon 60.88 40 P **P** **17 00 37.5 +0.5**
FFC pmax pmax
comp=Z,19nm,0.9s
FFC Flin Flon 60.88 40 P **P** **17 00 37.5 +0.5**
SUMG Summit 60.93 4 *i* P **P** **17 00 38.1 +0.5**
SUMG pmax pmax
comp=Z,90nm,0.9s
SUMG Summit 60.93 4 *i* P **P** **17 00 38.1 +0.5**
comp=Z,90nm,0.9s
SUMG Summit 60.93 4 P **P** **17 00 37.3 -0.3**
PNTR Pine Nut 61.29 62 P **P** **17 00 41.5 +1.1**
PNTR lAmb lAmb 17 00 43.0
comp=Z,13nm,0.8s
EGMT Eagleton 61.37 49 P **P** **17 00 40.8 +0.2**
EGMT Eagleton 61.37 49 P **P** **17 00 41.6 +1.0**
baz=309,SNR=7.5
FCC Fort Churchill 61.43 33 P **P** **17 00 40.6 0.0**
FCC pmax pmax
comp=Z,13nm,0.8s
FCC Fort Churchill 61.43 33 P **P** **17 00 40.6 0.0**
FCC lAmb lAmb 17 00 41.8
comp=Z,13nm,0.8s
CMB Columbia Colle 61.46 64 P **P** **17 00 41.2 -0.1**
CMB pmax pmax
comp=Z,7.0nm,0.8s
CMB Columbia Colle 61.46 64 P **P** **17 00 41.2 -0.1**
CMB lAmb lAmb 17 00 43.7
comp=Z,7.2nm,0.8s
YERR Yerington 61.58 62 P **P** **17 00 43.2 +1.0**
YERR lAmb lAmb 17 00 44.8
comp=Z,14nm,1.0s
STEI Steigen 61.59 343 *e*P **P** **17 00 40.5 -1.1**
MCMT McKenzie Canyo 61.69 54 P **P** **17 00 43.4 +0.4**
LOF Lofoten 61.75 344 *e*P **P** **17 00 41.5 -1.1**
WAKR Walker 61.75 63 P **P** **17 00 44.7 +1.2**
WAKR lAmb lAmb 17 00 46.2
comp=Z,9.8nm,0.9s
KBL Kabul 62.20 292 P **P** **17 00 45.1 -1.4**
KBL pmax pmax
comp=Z,17nm,0.7s
KBL Kabul 62.20 292 P **P** **17 00 45.1 -1.4**
KBL Kabul 62.20 292 P **P** **17 00 45.2 -1.4**
SNR=10.0
KVN Kaiserville 62.23 62 P **P** **17 00 47.2 +0.6**
KVN pmax pmax
comp=Z,15nm,1.1s
KVN Kaiserville 62.23 62 P **P** **17 00 47.2 +0.6**
KVN lAmb lAmb 17 00 49.1
comp=Z,15nm,1.1s
RYN Ryan 62.24 62 P **P** **17 00 47.3 +0.7**
RYN lAmb lAmb 17 00 49.1
comp=Z,9.8nm,0.9s
QLMT Earthquake Lak 62.48 53 P **P** **17 00 49.0 +0.8**
NVAR Mina Array Bea 62.49 62 P **P** **17 00 50.0 +1.5**
comp=Z,6.8nm,0.7s,baz=292,slow=7.1,SNR=57
NVAR LR LR 17 25 04.2
comp=Z,45nm,20.3s,baz=354,slow=33
CHLP Challavanipeta 62.51 268 *e*P **P** **17 00 49.5 +1.0**
CHLP lAmb lAmb 17 00 50.5
comp=Z,6.7nm,0.8s
MDPB Devils Postpil 62.52 63 P **P** **17 00 49.6 +0.9**
MDPB lAmb lAmb 17 00 51.2
comp=Z,11nm,1.0s
OMMB Old Mammoth Mi 62.58 63 P **P** **17 00 50.1 +1.0**
NV11 Mina Array Sit 62.59 62 P **P** **17 00 50.0 +1.0**
NV11 lAmb lAmb 17 00 51.4
comp=Z,8.5nm,1.1s
YHL Hebgen Lake 62.60 53 P **P** **17 00 50.3 +1.2**
YHB Horse Butte 62.66 53 P **P** **17 00 50.6 +1.2**
GCMT Greycliff 62.83 51 P **P** **17 00 52.0 +1.5**
YMR Madison River 62.84 53 P **P** **17 00 51.9 +1.3**
ELK Elko 62.88 59 P **P** **17 00 52.0 +1.0**
ELK pmax pmax
comp=Z,4.0nm,0.9s
ELK Elko 62.88 59 P **P** **17 00 52.0 +1.0**
YNR Norris Junctio 62.96 53 P **P** **17 00 52.4 +0.9**
YNE Yellowstone No 63.15 52 P **P** **17 00 53.1 +0.4**
VOG Valley Oaks Go 63.16 65 P **P** **17 00 54.2 +1.6**
baz=310
LKWY Lake 63.21 53 P **P** **17 00 54.0 +0.8**
LKWY pmax pmax
comp=Z,6.0nm,0.9s
LKWY Lake 63.21 53 P **P** **17 00 54.0 +0.8**
H17A Grant Village 63.23 53 P **P** **17 00 55.4 +2.1**
H17A lAmb lAmb 17 00 57.2
comp=Z,9.4nm,0.9s
H17A Grant Village 63.23 53 P **P** **17 00 56.1 +2.8**
baz=310,SNR=9.3
KONS Konsvik 63.25 343 *e*P **P** **17 00 51.5 -1.1**
MOR8 Moi Rana 63.26 343 *e*P **P** **17 00 50.5 -2.3**
SCO Scoresbysund 63.26 358 *e*P **P** **17 00 51.9 -0.8**
SCO Scoresbysund 63.26 358 *i* P **P** **17 00 51.9 -0.8**
FLWY Flagg Ranch 63.36 53 P **P** **17 00 55.7 +1.7**
FLWY lAmb lAmb 17 00 57.2
comp=Z,12nm,1.1s
TIN Tinemaha, Big 63.41 63 P **P** **17 00 55.9 +1.5**
baz=310
RLMT Red Lodge 63.47 52 P **P** **17 00 55.7 +0.9**
RLMT lAmb lAmb 17 00 57.5
comp=Z,33nm,1.8s
RLMT Red Lodge 63.47 52 P **P** **17 00 55.8 +1.0**
baz=310,SNR=6.6
MOOW Moose Ponds 63.55 54 P **P** **17 00 56.9 +1.6**
TPAW Teton Pass 63.60 54 P **P** **17 00 57.2 +1.5**
TPAW lAmb lAmb 17 00 58.8
comp=Z,15nm,0.8s
VES Vestal, Richgr 63.65 65 P **P** **17 00 56.9 +1.1**
baz=310
SNOW Snow King Moun 63.72 54 P **P** **17 00 58.1 +1.5**
SNOW lAmb lAmb 17 00 59.7
comp=Z,12nm,0.9s
REDW Red Top Meadow 63.73 54 P **P** **17 00 58.1 +1.5**
REDW lAmb lAmb 17 00 59.5
comp=Z,16nm,1.0s
PKM Mcpherson Peak 63.80 66 P **P** **17 00 58.7 +1.6**
baz=310
CWC Cottonwood Cre 63.89 64 P **P** **17 00 58.9 +1.3**
baz=310
DGMT Dagmar 63.93 46 P **P** **17 00 58.2 +0.7**
DGMT lAmb lAmb 17 00 59.0
comp=Z,17nm,0.7s
DGMT Dagmar 63.93 46 P **P** **17 00 58.4 +0.9**
baz=312
GRAC Grapevine Rang 63.98 63 P **P** **17 00 59.3 +1.3**
baz=310,SNR=6.6
BGU Big Grassy Mou 64.06 57 P **P** **17 00 59.4 +0.8**
LAO LASA Array 64.07 49 P **P** **17 00 59.4 +0.9**
LAO lAmb lAmb 17 01 16.8
comp=Z,16nm,1.0s
LAO LASA Array 64.07 49 P **P** **17 00 60.0 +1.5**
baz=311
ISA Isabella, Lake 64.14 65 P **P** **17 00 59.3 +0.1**
ISA pmax pmax
comp=Z,6.0nm,0.9s
ISA Isabella, Lake 64.14 65 P **P** **17 00 59.3 +0.1**
ISA Isabella, Lake 64.14 65 P **P** **17 00 59.6 +0.4**
baz=310
SPUT South Promonto 64.15 57 P **P** **17 01 00.2 +1.0**
R11A Troy Canyon, C 64.20 61 P **P** **17 01 00.0 +0.4**
R11A Troy Canyon, C 64.20 61 P **P** **17 01 00.9 +1.2**
baz=310,SNR=17
FINES FINESS Array B 64.28 335 P **P** **17 00 58.2 -1.3**
comp=Z,4.7nm,0.4s,baz=38,slow=6.6,SNR=64
FINES LR LR 17 32 33.6
comp=Z,166nm,18.5s,baz=25,slow=39

HWUT Hardware Ranch 64.46 56 P P 17 01 02.5 +1.1
MPMC Manual Prospec 64.50 64 P P 17 01 03.0 +1.3
baz=310,SNR=17
FURC Furnace Creek, 64.63 63 P P 17 01 03.5 +1.3
baz=310,SNR=11
DUG Dugway, Tooele 64.66 58 P P 17 01 03.7 +1.1
DUG pmax pmax
comp=Z,15nm,1.0s
DUG Dugway, Tooele 64.66 58 P P 17 01 03.7 +1.1
DUG lAmb lAmb 17 01 05.1
comp=Z,15nm,1.0s
DUG Dugway, Tooele 64.66 58 P P 17 01 04.0 +1.5
baz=311,SNR=9.0
OSI Osito Audit: C 64.66 66 P P 17 01 03.8 +1.3
OSI Osito Audit: C 64.66 66 P P 17 01 03.9 +1.3
baz=310
TPNV Topopah Spring 64.69 62 P P 17 01 03.7 +0.8
TPNV pmax pmax
comp=Z,21nm,1.4s
TPNV Topopah Spring 64.69 62 P P 17 01 03.7 +0.8
TPNV lAmb lAmb 17 01 05.2
comp=Z,21nm,1.4s
TPNV Topopah Spring 64.69 62 P P 17 01 04.1 +1.2
baz=310,SNR=13
LRMC Laurel Mtn Rad 64.75 64 P P 17 01 04.2 +0.9
baz=310,SNR=8.6
BLG Laguna Peak, P 64.77 66 P P 17 01 04.1 +0.8
baz=311
BW06 Boulder Array 64.84 54 P P 17 01 04.4 +0.6
BW06 lAmb lAmb 17 01 05.8
comp=Z,9.0nm,0.8s
BW06 Boulder Array 64.84 54 P P 17 01 04.8 +0.9
baz=311,SNR=13
PD31 Pinedale Array 64.84 54 P P 17 01 04.3 +0.5
PD31 lAmb lAmb 17 01 05.8
comp=Z,8.7nm,0.9s
PDAR Pinedale Array 64.84 54 P P 17 01 04.8 +1.0
comp=Z,5.9nm,0.8s,baz=176,slow=25,SNR=5.3
TCUT Toone Canyon 64.87 56 P P 17 01 04.9 +0.8
EDW2 Edwards Air Fo 64.95 65 P P 17 01 05.8 +1.4
baz=311,SNR=8.9
PVM Polavaram 65.05 269 eP P 17 01 06.2 +1.0
PVM lAmb lAmb 17 01 06.4
comp=Z,5.6nm,0.8s
PSUT Pine Spring 65.12 60 P P 17 01 06.4 +0.8
NSS Namsos 65.21 343 eP P 17 01 04.8 -0.7
NLU North Lily Min 65.24 58 P P 17 01 07.4 +0.9
MWC Mount Wilson 65.33 66 P P 17 01 07.3 +0.2
MWC pmax pmax
comp=Z,34nm,1.5s
MWC Mount Wilson 65.33 66 P P 17 01 07.3 +0.2
MWC lAmb lAmb 17 01 09.2
comp=Z,34nm,1.4s
GSC Goldstone, Bar 65.42 64 P P 17 01 08.2 +0.7
GSC pmax pmax
comp=Z,11nm,1.0s
GSC Goldstone, Bar 65.42 64 P P 17 01 08.2 +0.7
GSC lAmb lAmb 17 01 09.5
comp=Z,11nm,0.9s
GSC Goldstone, Bar 65.42 64 P P 17 01 08.5 +1.0
baz=311,SNR=7.3
OBN Obninsk 65.53 326 eP P 17 01 06.6 -1.2
OBN e 17 01 39.4
OBN e 17 03 29.5
OBN pmax pmax
comp=Z,12nm,0.6s
OBN MLR MLR
comp=Z,134nm,19.0s
OBN Obninsk 65.53 326 eP P 17 01 06.6 -1.2
RPR Rampur 65.56 272 eP P 17 01 08.8 +0.3
RPR lAmb lAmb 17 01 09.7
comp=Z,6.9nm,0.7s
BFSC Mount Baldy Ra 65.57 65 P P 17 01 09.7 +1.1
baz=311
GGR Gangavaram 65.64 271 eP P 17 01 09.0 -0.1
GGR lAmb lAmb 17 01 09.8
comp=Z,6.4nm,0.6s
SHPR Sheep Range 65.65 62 P P 17 01 09.8 +0.8
TUQ Turquoise Moun 65.87 63 P P 17 01 11.5 +1.0
baz=311,SNR=16
HEC Hector,Ludlow 66.02 64 P P 17 01 12.4 +1.1
baz=311,SNR=6.5
BBRC Big Bear Solar 66.02 65 P P 17 01 12.6 +1.0
baz=311
CCUT Cedar City 66.05 60 P P 17 01 12.6 +0.8
MYLAV Mylavaram 66.08 269 eP P 17 01 12.5 +0.7
MYLAV lAmb lAmb 17 01 13.7
comp=Z,8.1nm,1.0s
MSU Marysvale 66.12 59 P P 17 01 13.5 +1.3
MSU Marysvale 66.12 59 P P 17 01 13.5 +1.3
SRSP Sriramsagar 66.17 273 eP P 17 01 12.2 -0.3
SRSP lAmb lAmb 17 01 13.3
comp=Z,12nm,0.8s
TMUT Trail Mountain 66.18 58 P P 17 01 13.4 +0.7
SZCU Shurtz Canyon 66.19 60 P P 17 01 12.5 -0.1
VRH Novokhopyorsk 66.22 320 eP P 17 01 10.2 -2.1
VRH pmax pmax
comp=Z,30nm,0.7s
MURC Murrieta 66.28 66 P P 17 01 13.9 +0.9
baz=311
RDMU Red Mountain 66.28 56 P P 17 01 14.0 +0.9
P17A Butcher Ranch, 66.33 57 P P 17 01 14.5 +1.0
LPSR Galich'ya Gora 66.42 323 eP P 17 01 11.9 -1.6
LPSR pmax pmax
comp=Z,20nm,0.7s
MTPU Mount Pierson 66.43 59 P P 17 01 15.7 +1.3
Q16A Castle Valley 66.45 58 P P 17 01 15.2 +0.9
VSU Vasula 66.45 333 eP P 17 01 12.7 -0.9
VSU pmax pmax
comp=Z,82nm,1.5s
GMRC Granite Mounta 66.46 64 P P 17 01 15.4 +1.1
baz=311,SNR=9.3
LCMT Little Creek M 66.48 61 P P 17 01 15.6 +1.3
CTA Charters Tower 66.58 187 P P 17 01 15.7 +0.9
comp=Z,4.7nm,0.8s,baz=10,slow=5.8,SNR=5.8
K22A Casper 66.59 52 P P 17 01 15.2 +0.1
K22A lAmb lAmb 17 01 17.0
comp=Z,24nm,1.5s
K22A Casper 66.59 52 P P 17 01 15.9 +0.9
baz=312
HRA Herat 66.60 296 P P 17 01 15.3 0.0
MDND Maddock 66.61 45 P P 17 01 15.7 +0.9
MDND lAmb lAmb 17 01 16.8
comp=Z,19nm,0.8s
MDND Maddock 66.61 45 P P 17 01 15.8 +0.9
baz=314
ULM Lac du Bonnet 66.67 41 P P 17 01 15.1 -0.1
comp=Z,5.7nm,0.7s,baz=312,slow=7.5,SNR=13
ULM Lac du Bonnet 66.67 41 P P 17 01 15.1 -0.1
ULM lAmb lAmb 17 03 11.8
comp=Z,49nm,1.9s
SRU San Rafael Swe 66.70 57 P P 17 01 16.4 +0.6
SRU pmax pmax
comp=Z,20nm,0.8s
SRU San Rafael Swe 66.70 57 P P 17 01 16.4 +0.6
KNB Kanab 66.73 60 P P 17 01 17.0 +1.0
KNB pmax pmax
comp=Z,14nm,0.9s
KNB Kanab 66.73 60 P P 17 01 17.0 +1.0
PFO Pinyon Flats O 66.74 65 P P 17 01 16.7 +0.7
baz=312
BELC Belle Mtn. Jos 66.77 65 P P 17 01 16.8 +0.5
baz=312,SNR=5.8
GEYT Alibeck 66.77 301 P P 17 01 16.0 -0.1
comp=Z,13nm,0.7s,baz=14,slow=3.1,SNR=31
GEYT LR LR 17 32 23.7
comp=Z,189nm,19.4s,baz=65,slow=38
GEYT Alibeck 66.77 301 lAmb lAmb 17 01 17.5
comp=Z,11nm,0.7s
GYA0B ALIBECK ARRAY 66.77 301 P P 17 01 15.7 -0.4
GYA0B lAmb lAmb 17 01 17.5
comp=Z,16nm,0.7s
RSSD Black Hills 66.93 50 P P 17 01 17.6 +0.3
RSSD pmax pmax
comp=Z,14nm,1.0s
RSSD Black Hills 66.93 50 P P 17 01 17.6 +0.3
RSSD lAmb lAmb 17 01 18.8
comp=Z,14nm,0.9s
RSSD Black Hills 66.93 50 P P 17 01 17.9 +0.6
baz=313
HYB Hyderabad 67.06 271 i P P 17 01 18.0 -0.1
HYB e 17 01 32.0
HYBB Hyderabad (bro 67.06 271 eP P 17 01 18.1 0.0
HYBB lAmb lAmb 17 01 20.0
comp=Z,6.3nm,0.7s

NJS Nagarjunasagar 67.13 270 eP P 17 01 19.0 +0.5
NJS lAmb lAmb 17 01 19.1
comp=Z,4.8nm,0.8s
ADKI Addanki 67.16 269 eP P 17 01 19.4 +0.7
ADKI lAmb lAmb 17 01 20.0
comp=Z,4.5nm,0.7s
IRM Iron Mountain 67.20 64 P P 17 01 19.9 +1.1
baz=312,SNR=12
MONP2 Monument Peak 67.23 66 P P 17 01 20.1 +0.8
baz=312
O20A White River Ci 67.33 55 P P 17 01 20.0 +0.2
O20A lAmb lAmb 17 01 21.3
comp=Z,25nm,1.4s
O20A White River Ci 67.33 55 P P 17 01 20.1 +0.3
baz=313
VSR Storozhevoye 67.33 321 eP P 17 01 17.6 -1.7
VSR pmax pmax
comp=Z,10.0nm,0.5s
BC3 Big Chuckawall 67.34 65 P P 17 01 20.7 +0.9
baz=312,SNR=5.7
VORD Divnogorie 67.46 321 eP P 17 01 18.6 -1.5
VORD pmax pmax
comp=Z,10.0nm,0.6s
DMPR Damasthipur 67.58 272 eP P 17 01 21.2 -0.2
DMPR lAmb lAmb 17 01 22.0
comp=Z,14nm,1.4s
SWSC Sam W. Stewart 67.59 65 P P 17 01 22.1 +0.8
baz=312
IKP In-Ko-Pah, Jac 67.59 66 P P 17 01 22.4 +1.0
baz=312
Y12C Blythe 67.85 64 P P 17 01 23.8 +0.8
Y12C lAmb lAmb 17 01 25.1
comp=Z,10nm,0.8s
Y12C Blythe 67.85 64 P P 17 01 24.2 +1.3
baz=312
MOL Molde 67.85 344 eP P 17 01 22.4 0.0
AFI Afiamalu 67.89 143 LR LR 17 27 14.0
comp=Z,44nm,21.4s,baz=350,slow=32
KLRI Killari 67.96 273 eP P 17 01 23.6 -0.3
KLRI lAmb lAmb 17 01 24.5
comp=Z,13nm,0.7s
DOMB Dombas 68.03 343 eP P 17 01 23.6 0.0
AGMN Agassiz Nation 68.07 42 P P 17 01 23.8 -0.2
AGMN lAmb lAmb 17 01 25.2
comp=Z,18nm,1.2s
AGMN Agassiz Nation 68.07 42 P P 17 01 23.9 -0.2
baz=316
N23A Red Feather La 68.10 53 P P 17 01 25.7 +1.0
N23A Red Feather La 68.10 53 P P 17 01 25.9 +1.1
baz=313,SNR=5.4
GLA Glamis 68.13 65 P P 17 01 25.9 +1.1
baz=312
NC303 NORSAR Array S 68.27 341 eP P 17 01 24.9 -0.3
NC303 NORSAR Array S 68.27 341 P P 17 01 24.8 -0.3
NC405 NORSAR Array S 68.29 341 P P 17 01 24.8 -0.4
WRAB Tennant Creek 68.30 199 eP P 17 01 26.9 +1.2
WRAB pmax pmax
comp=Z,10.0nm,1.0s
WRA Warramunga Arr 68.31 199 P P 17 01 26.6 +0.9
comp=Z,4.0nm,0.8s,baz=19,slow=6.7,SNR=21
WRA Warramunga Arr 68.31 199 lAmb lAmb 17 01 27.6
comp=Z,0.5nm,1.0s
AKN Aaknes 68.32 344 eP P 17 01 25.7 +0.3
NC204 NORSAR Array S 68.36 342 P P 17 01 25.4 -0.3
NB201 NORSAR Array S 68.44 341 P P 17 01 25.6 -0.7
NB2 NORSAR Subarra 68.47 341 P P 17 01 25.7 -0.7
comp=Z,12nm,0.6s,baz=26,slow=6.5
NB2 NORSAR Subarra 68.47 341 P P 17 01 25.7 -0.7
baz=26,slow=6.5
NOA NORSAR Array B 68.47 341 P P 17 01 26.1 -0.3
comp=Z,17nm,0.6s,baz=27,slow=6.3,SNR=81
NOA LR LR 17 35 03.5
comp=Z,59nm,18.5s,baz=20,slow=39
NBO00 NORSAR Array S 68.57 341 P P 17 01 26.4 -0.6
WUAZ Wupatki 68.60 61 P P 17 01 28.4 +0.6
WUAZ Wupatki 68.60 61 P P 17 01 29.2 +1.4
baz=313,SNR=6.8
Y14A Wickenburg 68.67 63 P P 17 01 28.9 +0.8
Y14A lAmb lAmb 17 01 29.8
comp=Z,8.0nm,0.7s
NC602 NORSAR Array S 68.67 341 P P 17 01 26.8 -0.8
SMCO Snowmass 68.69 55 P P 17 01 28.9 +0.3
NA001 NORSAR Array S 68.72 341 P P 17 01 27.3 -0.6
SKHT Srikalahasti 68.81 268 eP P 17 01 30.1 +1.0
SKHT lAmb lAmb 17 01 31.9
comp=Z,3.2nm,0.7s
ISCO Idaho Springs 69.03 54 P P 17 01 31.2 +0.5
ISCO pmax pmax
comp=Z,8.0nm,0.8s
ISCO Idaho Springs 69.03 54 P P 17 01 31.2 +0.5
ISCO Idaho Springs 69.03 54 P P 17 01 31.9 +1.3
baz=314,SNR=12
MVCO Mesa Verde 69.16 58 P P 17 01 31.9 +0.6
MVCO lAmb lAmb 17 01 33.2
comp=Z,10nm,0.8s
MVCO Mesa Verde 69.16 58 P P 17 01 32.3 +0.9
baz=313,SNR=6.1
FOO Floro 69.22 344 eP P 17 01 31.1 +0.1
X16A Lo Mia Camp, P 69.30 62 P P 17 01 33.4 +1.2
X16A lAmb lAmb 17 01 34.8
comp=Z,11nm,0.9s
DZM Mont Dzumac 69.31 167 eLR LR 17 22 31.0
comp=Z,107nm,24.8s
HYA Hoyanger 69.40 344 eP P 17 01 32.0 -0.1
SKAR Skarslia 69.42 342 eP P 17 01 32.0 -0.3
POO Poona 69.53 276 ex P 17 01 32.5 -1.2
URV Uravakonda 69.66 270 eP P 17 01 34.4 0.0
URV lAmb lAmb 17 01 35.3
comp=Z,10nm,0.8s
S22A 4UR Ranch, Cre 69.76 56 P P 17 01 36.1 +1.0
S22A 4UR Ranch, Cre 69.76 56 P P 17 01 36.3 +1.2
baz=314,SNR=9.3
W18A Petrified Fore 69.85 60 P P 17 01 36.6 +1.0
baz=313
Q24A Divide 69.87 54 P P 17 01 36.4 +0.5
baz=314
KONO Kongsberg 70.08 341 eP P 17 01 36.5 +0.2
214A Organ Pipe Nat 70.12 64 P P 17 01 37.7 +0.6
214A Organ Pipe Nat 70.12 64 P P 17 01 38.2 +1.1
baz=313
X18A Snowflake 70.12 61 P P 17 01 38.2 +0.9
AKT Akhty 70.19 310 eP P 17 01 37.4 -0.1
AKT e*PP pwP 17 01 51.1 -1.1
AKT e*SP PcP 17 01 57.5 -1.7
AKT e 17 01 58.5
AKT pmax pmax
comp=Z,15nm,0.7s
OGNE Ogallala 70.20 51 P P 17 01 38.0 +0.4
OGNE Ogallala 70.20 51 P P 17 01 37.9 +0.4
baz=315
ASK Askoy 70.23 344 eP P 17 01 37.5 +0.4
BER Bergen 70.29 344 eP P 17 01 38.0 +0.4
EYMN Ely 70.31 40 P P 17 01 37.7 -0.3
EYMN lAmb lAmb 17 02 14.7
comp=Z,41nm,1.9s
EYMN Ely 70.31 40 P P 17 01 38.1 +0.1
baz=319
ODD1 Odda 70.47 343 eP P 17 01 39.0 +0.3
SDCO Great Sand Dun 70.52 56 P P 17 01 40.5 +0.8
SDCO Great Sand Dun 70.52 56 P P 17 01 40.6 +0.8
baz=314,SNR=5.7
BLS5 Blasjo 70.95 343 eP P 17 01 42.0 +0.4
KIV Kislovodsk 71.00 314 eP P 17 01 42.1 -0.3
KIV pmax pmax
comp=Z,40nm,1.0s
KIV MLR MLR
comp=Z,459nm,18.0s
KIV Kislovodsk 71.00 314 P P 17 01 42.5 +0.2
KIV Kislovodsk 71.00 314 P P 17 01 42.2 -0.1
KIV Kislovodsk 71.00 314 eP P 17 01 42.1 -0.3
KIV Kislovodsk 71.00 314 P P 17 01 40.1 -2.2
KIV lAmb lAmb 17 01 48.7
comp=Z,10nm,0.7s
ECSD EROS Data Cent 71.01 46 P P 17 01 41.4 -0.9
ECSD lAmb lAmb 17 01 43.4
comp=Z,14nm,1.0s
ECSD EROS Data Cent 71.01 46 P P 17 01 42.7 +0.4
baz=317
KBZ Khabaz 71.06 314 eP P 17 01 42.3 -0.3
KBZ Khabaz 71.06 314 P P 17 01 42.9 +0.3
comp=Z,7.7nm,0.5s,baz=106,slow=3.1,SNR=53
KBZ LR LR 17 37 45.4
comp=Z,168nm,18.7s,baz=13,slow=40
KBZ Khabaz 71.06 314 eP P 17 01 42.3 -0.3
TUC Tucson 71.14 63 P P 17 01 44.0 +0.6

TUC pmax pmax
comp=Z,6.0nm,0.9s
TUC Tucson 71.14 63 P P 17 01 44.0 +0.6
TUC Tucson 71.14 63 P P 17 01 44.4 +1.1
baz=314
SUW Suwalki 71.23 331 eP P 17 01 42.1 -1.3
SUW Suwalki 71.23 331 eP P 17 01 42.1 -1.3
ZEI Tsey 71.24 313 eP P 17 01 42.0 -2.0
ZEI pmax pmax
comp=Z,5.0nm,0.6s
E38A The Farm, Brul 71.29 41 P P 17 01 43.3 -0.6
E38A lAmb lAmb 17 01 44.5
comp=Z,14nm,0.7s
KMY Karmoy 71.39 343 eP P 17 01 45.1 +0.8
T25A Trinidad 71.56 55 P P 17 01 46.3 +0.3
T25A Trinidad 71.56 55 P P 17 01 46.9 +0.9
baz=315
TBLG Delisi 71.58 312 P P 17 01 45.9 +0.1
TBLG pmax pmax
comp=Z,20nm,0.6s
TBLG Delisi 71.58 312 P P 17 01 45.9 +0.1
SPMN Marine on St. 71.75 43 P P 17 01 46.9 +0.1
baz=319
AKASG Malin Array Be 71.77 326 P P 17 01 45.9 -0.9
comp=Z,6.9nm,0.4s,baz=34,slow=6.3,SNR=60
AKASG LR LR 17 35 45.4
comp=Z,112nm,18.6s,baz=40,slow=38
AKASG Malin Array Be 71.77 326 lAmb lAmb 17 01 47.3
comp=Z,11nm,1.5s
AKBB Malin Array Si 71.77 326 P P 17 01 45.8 -1.0
AKBB pmax pmax
comp=Z,17nm,0.8s
AKBB Malin Array Si 71.77 326 P P 17 01 45.8 -1.0
AKBB lAmb lAmb 17 01 46.4
comp=Z,17nm,0.8s
SNART Snartemo 71.79 342 eP P 17 01 47.1 +0.4
ANMO Albuquerque 71.91 58 P P 17 01 49.1 +0.9
ANMO pmax pmax
comp=Z,5.0nm,0.9s
ANMO Albuquerque 71.91 58 P P 17 01 49.0 +0.9
ANMO Albuquerque 71.91 58 P P 17 01 49.4 +1.2
baz=315
BGNE Belgrade 71.92 49 P P 17 01 48.6 +0.7
baz=317
AS31 Alice Springs 72.00 199 P P 17 01 49.8 +1.5
ASAR Alice Springs 72.00 199 P P 17 01 50.2 +1.9
comp=Z,4.0nm,0.7s,baz=13,slow=5.1,SNR=64
AKH Akhalkalaki 72.45 312 P P 17 01 51.6 +0.4
AKH pmax pmax
comp=Z,6.0nm,0.9s
AKH Akhalkalaki 72.45 312 ⇑P P 17 01 51.8 +0.6
AKH Akhalkalaki 72.45 312 P P 17 01 51.6 +0.4
319A Douglas 72.70 63 P P 17 01 52.5 -0.3
GNI Garni 72.72 310 ⇓eP P 17 01 54.1 +1.3
GNI pmax pmax
comp=Z,60nm,1.7s
GNI Garni 72.72 310 P P 17 01 54.0 +1.1
GNI Garni 72.72 310 P P 17 01 53.6 +0.7
GNI lAmb lAmb 17 02 22.3
comp=Z,29nm,1.6s
BSD Bornholm Skovb 72.79 336 i P P 17 01 51.9 -0.8
BSD pmax pmax
comp=Z,4.0nm,0.4s
BSD Bornholm Skovb 72.79 336 i P P 17 01 51.9 -0.8
comp=Z,4.2nm,0.4s
121A Cookes Peak, D 72.81 61 P P 17 01 53.8 +0.3
121A Cookes Peak, D 72.81 61 P P 17 01 54.9 +1.4
baz=315,SNR=5.2
ANN Anapa 72.89 318 eP P 17 01 48.1 -5.4
ANN e*PP pwP 17 02 07.0 -1.3
ANN eS S 17 11 06.2 -11
ANN eSS SS 17 15 50.2 -6.2
ANN pmax pmax
comp=Z,24nm,0.9s
CBKS Cedar Bluff 72.96 51 P P 17 01 54.0 -0.1
baz=317
SCHQ Schefferville 73.51 23 P P 17 01 57.0 0.0
comp=Z,1.7nm,0.4s,baz=344,slow=7.4,SNR=3.2
SCIA State Center 74.04 45 P P 17 02 00.8 +0.5
baz=319
AGRB Hanur-Agry 74.06 311 eP P 17 02 01.9 +1.1
SORM Soroca 74.17 325 ⇑P P 17 02 00.3 -0.7
LVV L'vov 74.42 329 eP P 17 02 01.6 -0.8
MATQ Matagami 74.48 31 P P 17 02 02.8 0.0
baz=326
AMTX Amarillo 74.72 55 P P 17 02 05.1 +0.6
AMTX lAmb lAmb 17 02 06.4
comp=Z,15nm,0.8s
AMTX Amarillo 74.72 55 P P 17 02 05.4 +0.8
baz=317
MSTX Muleshoe 74.75 57 P P 17 02 04.9 +0.1
MSTX Muleshoe 74.75 57 P P 17 02 05.3 +0.6
baz=316
MNTX Cornudas Mount 74.84 60 P P 17 02 05.5 +0.4
MNTX Cornudas Mount 74.84 60 P P 17 02 06.0 +0.8
baz=316
MILM Milestii Mici 74.97 324 ⇑P P 17 02 05.0 -0.6
KWP Kalwaria Pacla 75.05 329 eP P 17 02 06.5 +0.4
KWP Kalwaria Pacla 75.05 329 eP P 17 02 06.5 +0.4
KWP Kalwaria Pacla 75.05 329 P P 17 02 06.0 -0.1
BSEG Bad Segeberg 75.07 338 eP P 17 02 06.3 +0.3
comp=Z,8.5nm,0.8s,baz=26,slow=5.7
GDL2 Guadalupe Moun 75.09 59 P P 17 02 06.9 +0.2
LSQQ Lebel-sur-Quev 75.30 31 P P 17 02 07.3 -0.2
baz=327
RUE Ruedersdorf 75.44 336 eP P 17 02 08.6 +0.4
comp=Z,22nm,0.7s,baz=26,slow=5.7
CUKT Cukurca 75.45 309 eP P 17 02 09.9 +1.1
OJC Ojcow 75.55 331 eP P 17 02 09.0 +0.1
OJC Ojcow 75.55 331 eP P 17 02 09.0 +0.1
OJC Ojcow 75.55 331 P P 17 02 08.4 -0.6
LEOM Leova 75.56 324 ⇑P P 17 02 09.2 +0.2
VASR Vaslui 75.61 325 ⇑P P 17 02 09.8 +0.4
PRAR RASCA 75.64 326 ⇑P P 17 02 09.2 -0.3
BNGB Bingl 75.69 312 eP P 17 02 11.3 +1.2
STHS Stebnicka Huta 75.75 330 eP P 17 02 10.0 -0.1
STHS pmax pmax
comp=Z,40nm,0.9s
STHS Stebnicka Huta 75.75 330 eP P 17 02 10.0 -0.1
KOLS Kolonicke sedl 75.80 329 eP P 17 02 10.4 0.0
KOLS pmax pmax
comp=Z,23nm,1.1s
KOLS Kolonicke sedl 75.80 329 eP P 17 02 10.4 0.0
BUR08 Bucovina Ar. S 75.80 327 P P 17 02 10.0 -0.5
D50A G1974 Best Tow 75.80 34 P P 17 02 09.8 -0.6
baz=326
BURAR Bucovina Array 75.81 327 ⇓P P 17 02 10.5 -0.1
VLDQ Val d'Or 75.92 32 P P 17 02 09.3 -1.7
BIZ Bicaz 76.03 326 ⇑P P 17 02 11.2 -0.5
UZH Uzhgorod 76.04 329 eP P 17 02 11.0 -0.7
UZH e 17 02 24.7
F49A Sandfield 76.07 36 P P 17 02 11.3 -0.6
baz=324
NIE Niedzica 76.07 330 eP P 17 02 12.6 +0.6
NIE Niedzica 76.07 330 eP P 17 02 12.6 +0.6
N41A Harden Midland 76.11 45 P P 17 02 11.8 -0.5
N41A lAmb lAmb 17 02 13.1
comp=Z,25nm,1.1s
BANOM Banah 76.12 293 i P P 17 02 13.4 +0.7
SNR=7.9
BANOM Banah 76.12 293 P P 17 02 12.4 -0.2
SNR=8.0
SHME Shamm 76.14 293 i P P 17 02 12.9 +0.2
SNR=6.6
KSP Ksiaz 76.14 334 eP P 17 02 12.6 +0.3
KSP Ksiaz 76.14 334 eP P 17 02 12.6 +0.3
TESR Tescani 76.17 325 ⇓P P 17 02 12.2 -0.3
VARL Varlezi 76.19 324 ⇑P P 17 02 13.2 +0.6
GHRR 76.24 324 ⇑P P 17 02 13.9 +1.0
TLCR 76.37 323 ⇑P P 17 02 13.4 -0.3
TRPA Tarpa 76.38 328 ⇓eP P 17 02 14.4 +0.8
TRPA Tarpa 76.38 328 ⇑P P 17 02 14.1 +0.4
OKC Ostrava-Krasne 76.42 332 eP P 17 02 14.3 +0.4
OKC Ostrava-Krasne 76.42 332 eP P 17 02 14.3 +0.4
NRDL Niedersach Rie 76.43 338 eP P 17 02 14.3 +0.6
comp=Z,8.8nm,0.8s,baz=26,slow=5.7
CHVC Chvalec 76.43 334 eP P 17 02 14.0 0.0
WMOK Wichita Mounta 76.45 54 P P 17 02 14.5 +0.1
WMOK pmax pmax
comp=Z,7.0nm,1.0s
WMOK Wichita Mounta 76.45 54 P P 17 02 14.5 +0.1
WMOK Wichita Mounta 76.45 54 P P 17 02 14.9 +0.5
baz=318
UPC Upice 76.52 333 eP P 17 02 14.7 +0.3

UPC **Upice** 76.52 333 *e*P P 17 02 14.7 +0.3
DPC **Dobruska-Polom** 76.56 333 *e*P P 17 02 15.0 +0.3
DPC **Dobruska-Polom** 76.56 333 *e*P P 17 02 15.0 +0.3
LANS **Liptovska Anna** 76.58 331 *e*P P 17 02 15.7 +0.8
LANS pmax pmax
comp=Z,19nm,0.8s
LANS **Liptovska Anna** 76.58 331 *e*P P 17 02 15.7 +0.8
ARCR **ARCALIA** 76.58 327 ⇓P P 17 02 15.1 +0.2
ASSE **Asse, Remlinge** 76.61 337 *e*P P 17 02 15.1 +0.3
baz=26,slow=5.7
MSFE **Esma-Masafi** 76.61 293 P P 17 02 15.9 +0.5
ODBI **Odobesti** 76.62 324 ⇑P P 17 02 16.0 +0.9
KRLC **Kraliky** 76.66 333 *e*P P 17 02 15.6 +0.3
KRLC **Kraliky** 76.66 333 *e*P P 17 02 15.6 +0.3
CFR **Carcaliu** 76.66 323 ⇑P P 17 02 15.4 +0.1
VRI **Vrincioaia** 76.67 325 ⇓P P 17 02 15.6 +0.2
MORC **Moravsky Berou** 76.67 332 P P 17 02 15.1 -0.3
MORC pmax pmax
comp=Z,23nm,0.9s
MORC **Moravsky Berou** 76.67 332 ⇑P P 17 02 15.7 +0.3
MORC **Moravsky Berou** 76.67 332 *e*P P 17 02 15.1 -0.3
MORC **Moravsky Berou** 76.67 332 P P 17 02 15.1 -0.3
MORC IAmb IAmb 17 02 17.0
comp=Z,23nm,0.9s
JURR **Jurilovca** 76.69 323 ⇑P P 17 02 15.6 +0.1
CLL **Collm** 76.70 336 ⇓*i*P P 17 02 15.2 -0.2
CLL pmax pmax
comp=Z,42nm,0.7s
CLL **Collm** 76.70 336 ⇓*i*P P 17 02 15.2 -0.2
comp=Z,42nm,0.7s
CLL LmV 18 04 00.0
comp=Z,200nm,22.0s
CLL **Collm** 76.70 336 *e*P P 17 02 15.4 0.0
comp=Z,28nm,0.7s,baz=26,slow=5.7
CLL **Collm** 76.70 336 P P 17 02 14.8 -0.7
PLOR **Plostina** 76.71 325 ⇑P P 17 02 16.0 +0.4
KECS **Kecovo** 76.80 330 *e*P P 17 02 16.5 +0.4
KECS pmax pmax
comp=Z,10.0nm,1.0s
KECS **Kecovo** 76.80 330 *e*P P 17 02 16.5 +0.4
TOPG **Topolog** 76.81 323 ⇓P P 17 02 16.4 +0.2
BRG **Berggiesshubel** 76.82 335 *i*P P 17 02 15.9 -0.2
comp=Z,14nm,1.0s
BRG **Berggiesshubel** 76.82 335 *i*P P 17 02 15.9 -0.2
BRG pmax pmax
comp=Z,14nm,1.0s
BRG **Berggiesshubel** 76.82 335 *e*P P 17 02 16.2 +0.1
comp=Z,6.6nm,0.8s,baz=26,slow=5.7
OZUR 76.85 325 ⇑P P 17 02 17.1 +0.7
UOSS **Minazif** 76.88 292 *i*P P 17 02 17.0 +0.1
SNR=8.0
UOSS **Minazif** 76.88 292 P P 17 02 16.9 +0.1
BISRR **Bisoca** 76.94 325 ⇑P P 17 02 17.0 0.0
PVCC **Panska Ves** 76.94 334 *e*P P 17 02 17.2 +0.4
PVCC **Panska Ves** 76.94 334 *e*P P 17 02 17.2 +0.4
FBE **Freiberg** 76.95 335 *e*P P 17 02 17.3 +0.4
comp=Z,13nm,0.8s,baz=26,slow=5.7
CLZ **Clausthal** 76.95 337 *e*P P 17 02 17.4 +0.5
comp=Z,17nm,0.7s,baz=26,slow=5.7
HATD **Hatta, Dubai** 77.01 292 *i*P P 17 02 18.5 +0.9
SNR=8.9
HATD **Hatta, Dubai** 77.01 292 P P 17 02 18.4 +0.8
SNR=8.9
DOPR **Dopca** 77.11 326 ⇑P P 17 02 18.7 +0.8
TIRR **Tirgusor** 77.13 323 P P 17 02 17.4 -0.5
TIRR pmax pmax
comp=Z,53nm,0.8s
TIRR **Tirgusor** 77.13 323 ⇓P P 17 02 18.1 +0.1
TIRR **Tirgusor** 77.13 323 P P 17 02 17.5 -0.5
TIRR **Tirgusor** 77.13 323 P P 17 02 17.4 -0.5
NEUB **Neuenburg** 77.14 336 *e*P P 17 02 18.1 +0.2
baz=26,slow=5.7
HARR **Harsova** 77.14 323 ⇑P P 17 02 18.1 +0.1
ASHO **Ashiyiah** 77.15 292 *i*P P 17 02 19.6 +1.1
SNR=5.5
ASHO **Ashiyiah** 77.15 292 P P 17 02 19.4 +0.9
SNR=5.5
CJR **Cluj-Napoca** 77.18 327 ⇓P P 17 02 19.2 +0.9
NAZ **Nazwa, Dubai** 77.19 293 P P 17 02 19.3 +0.7
IBBN **Ibbenburen** 77.19 339 *e*P P 17 02 18.7 +0.5
comp=Z,13nm,0.8s,baz=26,slow=5.7
LTVH **Ltavrtes, Hu** 77.24 328 *e*P P 17 02 27.2 +8.7
SOHO **SOHO** 77.24 291 P P 17 02 18.2 -0.7
SNR=6.2
MLR **Muntele Rosu** 77.29 325 P P 17 02 18.9 -0.1
MLR **Muntele Rosu** 77.29 325 ⇑P P 17 02 19.3 +0.3
MLR **Muntele Rosu** 77.29 325 P P 17 02 18.9 -0.1
GTTG **Gvttingen** 77.32 337 *e*P P 17 02 19.3 +0.3
comp=Z,16nm,0.7s,baz=26,slow=5.7
MFTR **Murfatlar** 77.36 323 ⇑P P 17 02 18.9 -0.3
ISR **Istrita** 77.36 324 ⇑P P 17 02 19.7 +0.3
VYHS **Vyhne** 77.36 331 *e*P P 17 02 19.5 +0.3
VYHS pmax pmax
comp=Z,15nm,0.8s
VYHS **Vyhne** 77.36 331 *e*P P 17 02 19.5 +0.3
VRAC **Vranov** 77.39 333 ⇓P P 17 02 20.1 +0.7
VRAC **Vranov** 77.39 333 *e*P P 17 02 19.4 0.0
GOPC **GO Pecny, Ondr** 77.42 334 *e*P P 17 02 19.3 -0.2
GOPC **GO Pecny, Ondr** 77.42 334 *e*P P 17 02 19.3 -0.2
PRU **Pruhonice** 77.42 334 *e*P P 17 02 19.9 +0.4
PRU **Pruhonice** 77.42 334 *e*P P 17 02 19.9 +0.4
JAVC **Velka Javorina** 77.43 332 *e*P P 17 02 20.4 +0.7
PSZ **Piszkesteto** 77.49 330 P P 17 02 20.1 +0.1
PSZ pmax pmax
comp=Z,13nm,0.8s
PSZ **Piszkesteto** 77.49 330 ⇑P P 17 02 20.2 +0.1
PSZ **Piszkesteto** 77.49 330 P P 17 02 20.1 +0.1
PSZ IAmb IAmb 17 02 21.4
comp=Z,13nm,0.8s
ILGA **Ilgaz** 77.52 318 P P 17 02 21.4 +0.9
ABTX **Abilene, Hawle** 77.52 56 P P 17 02 21.2 +0.8
baz=318
TX31 **Lajitas Ar. Si** 77.56 61 P P 17 02 21.4 +0.6
TX31 IAmb IAmb 17 02 22.6
comp=Z,11nm,0.8s
TX32 **Lajitas Array** 77.56 61 P P 17 02 21.5 +0.7
TX32 IAmb IAmb 17 02 22.6
comp=Z,11nm,0.8s
TXAR **Lajitas Array** 77.56 61 P P 17 02 21.7 +0.9
comp=Z,10nm,0.6s,baz=300,slow=4.2,SNR=119
D55A **Sainte-Anne-du** 77.56 32 P P 17 02 19.7 -0.6
baz=328
DARE **Darende-Malaty** 77.63 314 *e*P P 17 02 22.0 +1.0
TANN **Tannenbergstha** 77.66 336 *e*P P 17 02 21.2 +0.3
comp=Z,9.2nm,0.7s,baz=26,slow=5.7
ASUD **Al Ashush, Dub** 77.66 293 *i*P P 17 02 22.0 +0.7
SNR=7.9
KRUC **Moravsky** 77.66 333 *e*P P 17 02 20.9 0.0
ICOR **Ion Corvin** 77.67 323 ⇑P P 17 02 20.6 -0.4
VOIR 77.69 325 ⇑P P 17 02 21.9 +0.7
MOX **Moxa** 77.69 336 *e*P P 17 02 21.5 +0.5
comp=Z,13nm,1.0s,baz=26,slow=5.7
GUNZ **Gunzen** 77.74 336 *e*P P 17 02 21.5 +0.2
comp=Z,9.4nm,0.7s,baz=26,slow=5.7
TREC **Trest** 77.75 333 *e*P P 17 02 21.5 +0.1
TREC **Trest** 77.75 333 *e*P P 17 02 21.5 +0.1
WERN **Wernitzgruen** 77.79 336 *e*P P 17 02 22.0 +0.3
comp=Z,12nm,0.7s,baz=26,slow=5.7
D56A **ZEC Mazanza, M** 77.80 31 P P 17 02 21.6 -0.1
baz=329
SMOL **Smolenice** 77.81 332 *e*P P 17 02 22.9 +1.2
SMOL pmax pmax
comp=Z,10.0nm,0.8s
SMOL **Smolenice** 77.81 332 *e*P P 17 02 22.9 +1.2
URFA **Urfa** 77.82 312 *e*P P 17 02 23.2 +1.1
NKC **Novy Kostel** 77.82 335 *e*P P 17 02 22.1 +0.3
NKC **Novy Kostel** 77.82 335 *e*P P 17 02 22.1 +0.3
SULR 77.84 324 ⇑P P 17 02 22.3 +0.4
MTUR **Matau** 77.86 325 ⇓P P 17 02 23.0 +0.9
PBCC **Pribram** 77.86 334 *e*P P 17 02 22.0 0.0
PSN **Preselentsi** 77.86 323 P P 17 02 22.4 +0.3
BSZH **Besenyszg** 77.89 329 *e*P P 17 02 28.2 +6.0
ARR **Arges** 77.91 326 ⇑P P 17 02 23.3 +0.9
HHAR **Hobbs** 77.92 50 P P 17 02 21.7 -0.9
CCM **Cathedral Cave** 77.95 47 P P 17 02 22.4 -0.3
CCM pmax pmax
comp=Z,15nm,1.2s
CCM **Cathedral Cave** 77.95 47 P P 17 02 22.4 -0.3
CCM IAmb IAmb 17 02 23.4
comp=Z,15nm,1.2s
CCM **Cathedral Cave** 77.95 47 P P 17 02 22.2 -0.5
baz=321
UBBA **Unterbreizbach** 77.97 337 *e*P P 17 02 22.9 +0.4
comp=Z,6.9nm,0.6s,baz=26,slow=5.7

MODS **Modra-Piesok** 77.98 332 *e*P P 17 02 22.9 +0.2
MODS pmax pmax
comp=Z,21nm,1.0s
MODS **Modra-Piesok** 77.98 332 *e*P P 17 02 22.8 +0.1
BUG **Bochum--Univer** 78.11 339 *e*P P 17 02 24.0 +0.7
comp=Z,14nm,0.9s,baz=26,slow=5.7
SRO **Srobarova** 78.12 331 *e*P P 17 02 24.5 +1.1
SRO pmax pmax
comp=Z,34nm,0.7s
SRO **Srobarova** 78.12 331 *e*P P 17 02 24.5 +1.1
E56A **St. Veronique** 78.13 32 P P 17 02 22.9 -0.6
baz=328
L48A **N Adams** 78.13 40 P P 17 02 23.4 -0.3
baz=324
D57A **Chemin Vers le** 78.13 31 P P 17 02 23.3 -0.3
baz=329
MANZ **Manzenberg** 78.14 336 *e*P P 17 02 24.0 +0.4
comp=Z,4.6nm,0.8s,baz=26,slow=5.7
BUD **Budapest** 78.17 330 *e*P P 17 02 24.5 +0.8
ZST **Bratislava** 78.19 332 *e*P P 17 02 23.9 +0.1
ZST pmax pmax
comp=Z,19nm,1.0s
ZST **Bratislava** 78.19 332 *e*P P 17 02 23.9 +0.1
LATQ **La Tuque** 78.20 30 P P 17 02 23.5 -0.4
baz=330
BNN **Bunyan** 78.22 315 *e*P P 17 02 24.4 +0.1
ROTZ **Rotzenmuhle** 78.31 335 *e*P P 17 02 24.7 +0.2
comp=Z,7.9nm,0.8s,baz=26,slow=5.7
U40A **Yellville** 78.43 49 P P 17 02 24.9 -0.5
U40A IAmb IAmb 17 02 26.1
comp=Z,18nm,0.8s
U40A **Yellville** 78.43 49 P P 17 02 25.3 -0.1
baz=320
KHC **Kasperske Hory** 78.47 334 *e*P P 17 02 25.6 +0.2
KHC *e* 17 02 42.5
KHC **Kasperske Hory** 78.47 334 *e*P P 17 02 25.6 +0.2
KHC *e*p*P* **sP** 17 02 42.5 +1.7
KHC **Kasperske Hory** 78.47 334 P P 17 02 25.3 -0.2
CSKK **Cskako** 78.53 331 *e*P P 17 02 26.2 +0.5
MHTO **MHTO** 78.54 288 P P 17 02 27.4 +1.2
SNR=14
NEF **NEVSHA** 78.58 323 P P 17 02 26.2 +0.1
GZR **Gura Zlata** 78.60 327 ⇑P P 17 02 26.0 -0.2
BR131 **Keskin Array S** 78.60 317 P P 17 02 26.2 -0.2
BR131 pmax pmax
comp=Z,16nm,0.9s
BR131 **Keskin Array S** 78.60 317 P P 17 02 26.2 -0.2
BR131 IAmb IAmb 17 02 28.2
comp=Z,16nm,0.9s
BRTR **Keskin Array B** 78.60 317 P P 17 02 26.8 +0.3
comp=Z,15nm,0.8s,baz=70,slow=4.7,SNR=84
BRTR LR LR 17 42 44.8
comp=Z,35nm,19.0s,baz=349,slow=40
RAZG **Razgrad** 78.65 324 ⇓P P 17 02 26.7 +0.3
GRA1 **Grafenberg Arr** 78.66 336 P P 17 02 26.5 +0.1
GRF **Grafenberg Arr** 78.66 336 P P 17 02 26.5 +0.1
GRF pmax pmax
comp=Z,30nm,0.7s
GRF **Grafenberg Arr** 78.66 336 *e*P P 17 02 26.9 +0.5
comp=Z,23nm,0.7s,baz=26,slow=5.7
WET **Wettzell** 78.67 335 *e*P P 17 02 27.0 +0.5
comp=Z,10nm,0.8s,baz=26,slow=5.7
GEC2 **GERESS Array S** 78.69 334 *e*P P 17 02 27.0 +0.3
comp=Z,6.4nm,0.7s,baz=26,slow=5.7
GEC2 **GERESS Array S** 78.69 334 P P 17 02 26.2 -0.5
GEC2 IAmb IAmb 17 02 27.5
comp=Z,8.6nm,0.7s
GERES **GERESS Array B** 78.69 334 P P 17 02 26.4 -0.3
comp=Z,6.1nm,0.6s,baz=34,slow=5.9,SNR=60
COPA **Copaceanca** 78.70 325 ⇓P P 17 02 26.8 +0.1
P46A **Rosedale** 78.71 43 P P 17 02 26.4 -0.4
P46A IAmb IAmb 17 02 27.4
comp=Z,13nm,0.7s
STKA **Stephens Creek** 78.73 190 LR LR 17 35 06.0
comp=Z,17nm,21.8s,baz=24,slow=34
N48A **Decatur** 78.73 41 P P 17 02 26.4 -0.5
baz=324
KMRS **Kahramanmaras** 78.74 313 *e*P P 17 02 28.0 +0.9
J52A **Paris** 78.77 37 P P 17 02 26.1 -1.1
baz=326
SOP **Sopron** 78.82 332 *e*P P 17 02 28.5 +1.2
W39A **Magazine** 78.83 50 P P 17 02 27.4 -0.2
baz=320
CONA **Conrad Observa** 78.83 332 *i*P P 17 02 28.0 +0.5
comp=Z,17nm,0.7s,SNR=9.6
BZS **Buras** 78.84 328 ⇑P P 17 02 27.6 +0.2
GAZ **Gaziantep** 78.84 313 P P 17 02 27.7 0.0
ANTO **Ankara** 78.88 317 P P 17 02 28.4 +0.5
ANTO pmax pmax
comp=Z,36nm,0.7s
ANTO **Ankara** 78.88 317 P P 17 02 28.4 +0.5
E58A **La Victoria** 78.90 31 P P 17 02 27.2 -0.6
baz=330
BR231 **Keskin MP Arra** 78.91 317 P P 17 02 28.0 -0.1
TNS **Taunus Mts** 78.93 338 *e*P P 17 02 28.6 +0.7
comp=Z,15nm,0.6s,baz=26,slow=5.7
MPLH **Magyarpolny** 78.94 331 *e*P P 17 02 28.7 +0.7
MPLH **Magyarpolny** 78.94 331 ⇓*e*P P 17 02 20.9 -7.1
AHRW **Bad Neuenahr-A** 78.99 339 *e*P P 17 02 29.1 +1.0
comp=Z,16nm,1.0s,baz=26,slow=5.7
JCT **Junction City** 79.01 57 P P 17 02 28.3 -0.4
JCT pmax pmax
comp=Z,17nm,1.3s
JCT **Junction City** 79.01 57 P P 17 02 28.3 -0.4
JCT IAmb IAmb 17 02 30.0
comp=Z,17nm,1.2s
JCT **Junction City** 79.01 57 P P 17 02 29.3 +0.6
baz=318
TIH **Tihany** 79.06 331 *e*P P 17 02 29.0 +0.4
N49A **Columbus Grove** 79.06 41 P P 17 02 28.4 -0.4
baz=324
AFSR **Afar-Bala (An** 79.09 317 *e*P P 17 02 29.4 +0.3
I55A **Frankford** 79.09 35 P P 17 02 28.2 -0.6
baz=327
O48A **Farmland** 79.15 42 P P 17 02 29.0 -0.3
baz=324
MEM **Membach** 79.19 339 P P 17 02 29.6 +0.4
comp=Z,18nm,0.9s
WHTX **Lake Whitney,** 79.23 55 P P 17 02 30.3 +0.5
baz=319
D60A **Saint Jean D'O** 79.24 29 P P 17 02 29.6 0.0
baz=331
KOZT **Kozan** 79.30 314 *e*P P 17 02 30.6 +0.5
BSTI **Sart Tilman** 79.32 340 P P 17 02 30.7 +0.7
ORH **Orhaniye** 79.33 320 P P 17 02 31.7 +1.5
MORH **Mrgy, Hungar** 79.39 330 *e*P P 17 02 29.6 -0.8
MOA **Molln** 79.40 333 *i*P P 17 02 31.0 +0.5
comp=Z,8.8nm,0.7s
MIAR **Mount Ida** 79.43 50 P P 17 02 31.3 +0.4
baz=320
ELND **Elena** 79.44 324 ⇑P P 17 02 30.6 -0.2
PUNG **Punghina** 79.48 326 ⇑P P 17 02 30.9 0.0
J54A **Appleton** 79.50 36 P P 17 02 31.2 +0.1
baz=327
MDVR **Moldovita** 79.52 327 ⇑P P 17 02 30.8 -0.4
BCLA **Clavier** 79.53 340 P P 17 02 30.9 -0.2
ARSA **Arzberg** 79.53 332 *i*P P 17 02 31.5 +0.2
comp=Z,5.9nm,0.5s,SNR=5.1
O49A **Covington** 79.58 41 P P 17 02 31.4 -0.2
baz=324
N50A **Nevada** 79.64 40 P P 17 02 32.2 +0.3
baz=324
W41B **Gary Mavity, V** 79.66 49 P P 17 02 32.2 +0.2
baz=321
CTKS **Kestanelik-??a** 79.72 321 *e*P P 17 02 31.8 -0.5
M52A **Chesterland** 79.80 38 P P 17 02 32.9 +0.1
baz=325
RAO **Raoul Island** 79.82 155 LR LR 17 32 19.1
comp=Z,66nm,20.4s,baz=10,slow=31
CHBY **Cihanbeyli** 79.86 317 *e*P P 17 02 33.1 -0.2
FRGS **Fruska Gora** 79.89 329 *e*P P 17 02 32.3 -0.9
L53A **Girard** 79.92 37 P P 17 02 33.4 0.0
baz=326
Q48A **North Vernon** 79.95 43 P P 17 02 33.5 -0.1
baz=323
RJOB **Jochberg** 79.95 334 *e*P P 17 02 34.1 +0.5
baz=26,slow=5.7
EDRB **Edirne** 79.97 322 *e*P P 17 02 33.5 -0.2
STU **Stuttgart** 80.05 337 *e*P P 17 02 34.5 +0.5
comp=Z,6.9nm,0.8s,baz=26,slow=5.7
ACSO **Alum Creek Sta** 80.16 40 P P 17 02 35.0 +0.2
baz=325
M53A **WI Miller and** 80.17 38 P P 17 02 35.5 +0.7
baz=326
K55A **Perry** 80.18 36 P P 17 02 34.4 -0.4
baz=327

SOKA **Soboth** 80.20 332 *i*P P 17 02 35.0 +0.1
comp=Z,18nm,0.9s,SNR=11
PERS **Pernice** 80.21 332 *i*P P 17 02 35.3 +0.3
KALN **Kalnik** 80.21 331 *i*P P 17 02 34.8 -0.2
GROS **Grobnik** 80.24 332 *e*P P 17 02 34.9 -0.3
WCI **Wyandotte Cave** 80.24 44 P P 17 02 35.5 +0.3
baz=323
P50A **Jamestown** 80.29 41 P P 17 02 35.2 -0.3
baz=324
KBA **Koelnbreinsper** 80.38 333 *i*P P 17 02 36.5 +0.5
comp=Z,29nm,0.7s,SNR=16
O51A **Pataskala** 80.39 40 P P 17 02 36.0 0.0
baz=325
PGB **Panagyurishte** 80.45 324 P P 17 02 36.6 +0.3
OBKA **Obir** 80.50 332 *i*P P 17 02 36.9 +0.3
comp=Z,7.5nm,0.7s
MOSL **Moslavina** 80.57 331 *i*P P 17 02 35.8 -1.1
PTJ **Puntijarka** 80.57 331 P P 17 02 36.7 -0.3
KONT **Konya--Tatoy** 80.62 317 *e*P P 17 02 37.3 0.0
WATA **Walderalm** 80.68 335 *i*P P 17 02 38.3 +0.8
comp=Z,13nm,0.5s,SNR=9.0
MYKA **Terra Mystica** 80.68 333 *i*P P 17 02 37.5 0.0
comp=Z,5.0nm,0.6s
BFO **Black Forest** 80.69 337 P P 17 02 37.0 -0.5
BFO pmax pmax
comp=Z,8.0nm,0.8s
BFO **Black Forest** 80.69 337 *e*P P 17 02 37.6 +0.2
comp=Z,6.4nm,0.8s,baz=26,slow=5.7
BFO **Black Forest** 80.69 337 P P 17 02 37.0 -0.5
DIVS **Divibare** 80.74 328 *e*P P 17 02 37.2 -0.7
TVSB **Tavsanli** 80.75 319 *e*P P 17 02 38.3 +0.3
O52A **Adamsville** 80.76 40 P P 17 02 37.4 -0.6
baz=325
VTS **Vitosha** 80.76 325 P P 17 02 37.9 -0.2
VTS pmax pmax
comp=Z,39nm,0.8s
VTS **Vitosha** 80.76 325 P P 17 02 38.3 +0.2
VTS **Vitosha** 80.76 325 P P 17 02 37.9 -0.2
RETA **Reutte** 80.78 335 *i*P P 17 02 38.8 +0.7
comp=Z,8.7nm,0.7s
TAOE **Nuku Hiva Isla** 80.81 113 *e*LR LR 17 27 42.5
comp=Z,2µm,32.0s
MOTA **Moosalm** 80.81 335 *i*P P 17 02 38.3 0.0
comp=Z,25nm,1.1s,SNR=9.8
CRES **Cresnjev** 80.81 332 *e*P P 17 02 37.7 -0.5
Q50A **Georgetown** 80.83 42 P P 17 02 38.6 +0.3
baz=324
N54A **Moraine State** 80.86 38 P P 17 02 38.7 +0.2
baz=326
L56A **Greenwood** 80.89 36 P P 17 02 38.2 -0.5
baz=328
SQTA **Sankt Quirin** 80.89 335 *i*P P 17 02 39.6 +0.9
comp=Z,18nm,1.0s,SNR=5.8
KIZK **Mersin** 80.92 314 *e*P P 17 02 38.9 +0.1
LJU **Ljubljana** 80.92 332 *e*P P 17 02 38.1 -0.6
ABTA **Abfaltersbach** 80.93 334 *i*P P 17 02 39.0 +0.2
comp=Z,5.3nm,0.8s
M55A **Ridgway** 80.95 37 P P 17 02 39.0 0.0
baz=327
Q51A **Peebles** 80.97 41 P P 17 02 38.9 -0.2
Q51A IAmb IAmb 17 02 55.7
comp=Z,13nm,0.8s
Q51A **Peebles** 80.97 41 P P 17 02 39.5 +0.3
baz=325
SHUT **Suhut-Afyon** 80.98 318 *e*P P 17 02 39.7 +0.4
S49A **Springfield** 81.07 43 P P 17 02 39.9 +0.3
baz=324
ECH **Echery** 81.11 338 P P 17 02 39.3 -0.4
ECH pmax pmax
comp=Z,7.0nm,0.7s
ECH **Echery** 81.11 338 P P 17 02 39.3 -0.4
HAPS **Han Pijesak,Bl** 81.13 328 *e*P P 17 02 39.0 -1.0
BBLS **Lazići** 81.15 328 *e*P P 17 02 40.1 0.0
KEBE **Keben-Mersin** 81.16 315 *e*P P 17 02 40.6 +0.4
WVT **Waverly** 81.16 46 P P 17 02 40.2 0.0
WVT pmax pmax
comp=Z,6.0nm,0.8s
WVT **Waverly** 81.16 46 P P 17 02 40.2 0.0
WVT **Waverly** 81.16 46 P P 17 02 40.5 +0.4
baz=323
FETA **Feichten** 81.21 335 *i*P P 17 02 41.3 +0.8
comp=Z,10nm,1.0s
DAVA **Damuels** 81.22 336 *i*P P 17 02 41.1 +0.6
comp=Z,11nm,0.9s
CEY **Cerknica** 81.23 332 *e*P P 17 02 39.5 -0.9
STAL **STALIGIAL** 81.30 333 P P 17 02 39.4 -1.4
STAL IAmb IAmb 17 02 41.1
comp=Z,9.6nm,0.7s
O54A **Avella** 81.34 39 P P 17 02 41.0 -0.1
baz=326
RUDO **Rudo** 81.38 328 *e*P P 17 02 40.3 -0.9
K59A **Cooperstown** 81.41 34 P P 17 02 41.1 -0.3
baz=329
MMB **Musomiste** 81.43 324 P P 17 02 41.7 +0.1
N55A **Marion Center** 81.43 37 P P 17 02 41.3 -0.2
baz=327
R51A **Hillsboro** 81.45 42 P P 17 02 41.7 +0.1
baz=324
P53A **Whipple** 81.47 40 P P 17 02 41.4 -0.3
baz=326
BERE **Bereket-Mersin** 81.47 315 *e*P P 17 02 41.7 -0.3
T49A **Edmonton** 81.50 44 P P 17 02 42.2 +0.2
baz=324
MGRS **Mrkonjic Grad** 81.50 330 *e*P P 17 02 42.1 +0.2
Q52A **Bidwell** 81.51 40 P P 17 02 41.9 0.0
baz=325
N56A **West Decatur** 81.61 37 P P 17 02 42.3 -0.2
baz=327
FUORN **Ofenpass-Fuorn** 81.71 335 P P 17 02 43.1 -0.1
M57A **Sunshine Farm,** 81.73 36 P P 17 02 43.0 -0.1
baz=328
P54A **Burton** 81.77 39 P P 17 02 43.4 +0.1
baz=326
O55A **Ligonier** 81.78 38 P P 17 02 43.3 -0.1
baz=327
U49A **Red Boiling Sp** 81.86 44 P P 17 02 44.0 +0.2
baz=324
G65A **Princeton** 81.86 28 P P 17 02 43.1 -0.6
baz=333
T50A **Nancy** 81.90 43 P P 17 02 44.2 +0.2
baz=324
UPM **Unac-Piva** 81.91 328 *e*P P 17 02 43.7 -0.5
CLTN **Cedars of Leba** 81.93 45 P P 17 02 44.0 -0.2
Q53A **Leroy** 81.93 40 P P 17 02 44.3 +0.1
baz=326
MANT **Manisa** 81.94 319 P P 17 02 44.3 -0.2
STIP **Stip** 81.96 325 *i*P P 17 02 42.7 -1.5
PPT **Papeete** 81.98 126 LR LR 17 30 28.9
comp=Z,103nm,21.8s,baz=262,slow=29
PPT2 **Papeete2** 81.99 126 *e*LR LR 17 28 11.6
comp=Z,276nm,25.0s
GAZI **Gazipasa** 82.00 316 *e*P P 17 02 43.9 -0.7
SSPA **Standing Stone** 82.01 37 P P 17 02 44.6 +0.1
baz=327
SKO **Skopje** 82.01 326 *i*P P 17 02 45.5 +0.9
O56A **Blue Knob Stat** 82.04 37 P P 17 02 44.8 0.0
baz=327
N57A **Milroy** 82.05 36 P P 17 02 44.9 +0.2
baz=328
KIJV **Kijevo** 82.10 330 *i*P P 17 02 44.3 -0.7
TUE **Stuetta** 82.11 336 P P 17 02 45.3 +0.1
TUE IAmb IAmb 17 02 47.3
comp=Z,11nm,0.8s
NVLJ **Novalja** 82.12 331 *i*P P 17 02 43.7 -1.3
VAY **Valandovo** 82.12 325 *i*P P 17 02 45.2 +0.1
Q54A **Coxs Mills** 82.13 40 P P 17 02 45.4 +0.2
baz=326
P55A **Reedsville** 82.13 39 P P 17 02 45.5 +0.2
baz=326
BRY **Bratogost** 82.31 328 *e*P P 17 02 45.0 -1.3
L60A **Shokan** 82.32 34 P P 17 02 46.1 -0.1
baz=329
U50A **Jamestown** 82.38 44 P P 17 02 46.5 -0.2
baz=324
Q55A **Buckhannon** 82.45 39 P P 17 02 47.0 0.0
baz=326
PDG **Podgorica** 82.45 327 *e*P P 17 02 46.1 -0.7
PDG **Podgorica** 82.45 327 P P 17 02 45.9 -0.9
MORI **Morici** 82.46 330 *i*P P 17 02 45.8 -1.1
O57A **Amberson** 82.47 37 P P 17 02 47.0 -0.1
baz=328
K62A **Royalston** 82.48 32 P P 17 02 46.8 -0.2
baz=330
CSS **Mathiatis** 82.52 314 P P 17 02 46.5 -0.8
CSS IAmb IAmb 17 02 48.7
comp=Z,17nm,0.7s

TREB	**Trebinje**	**82.53**	**328**	*e*P		**P**	**17 02 45.4**	**-1.9**
P56A	**Dayton Farm, R**	**82.56**	**38**	P		**P**	**17 02 47.9**	**+0.4**
	baz=327							
N59A	**State Game Lan**	**82.63**	**35**	P		**P**	**17 02 48.0**	**+0.1**
	baz=329							
STON	**Ston**	**82.63**	**329**	*i* P		**P**	**17 02 46.0**	**-1.7**
ZIRJ	**Zirje**	**82.67**	**330**	*i* P		**P**	**17 02 46.0**	**-1.9**
AYDB	**Zeytinkoy-Aydi**	**82.68**	**319**	*e*P		**P**	**17 02 48.5**	**+0.2**
DRME	**Dracevica, Mon**	**82.69**	**327**	*e*P		**P**	**17 02 47.5**	**-0.6**
HCY	**Herceg Novi**	**82.72**	**328**	*e*P		**P**	**17 02 46.8**	**-1.4**
W49A	**Belvidere**	**82.73**	**45**	P		**P**	**17 02 49.0**	**+0.5**
	baz=323							
ELL	**Elmali**	**82.74**	**317**	P		**P**	**17 02 47.5**	**-1.1**
ELL				pmax		pmax		
	comp=Z,56nm,0.8s							
ELL	**Elmali**	**82.74**	**317**	*e*P		**P**	**17 02 49.1**	**+0.5**
ELL	**Elmali**	**82.74**	**317**	P		**P**	**17 02 47.5**	**-1.1**
HVAR	**Hvar**	**82.81**	**330**	*i* P		**P**	**17 02 46.7**	**-2.0**
SWET	**Sewanee**	**82.82**	**45**	P		**P**	**17 02 48.4**	**-0.5**
SWET				IAmb		IAmb	17 05 33.1	
	comp=Z,48nm,1.9s							
V50A	**Pikeville**	**82.86**	**44**	P		**P**	**17 02 48.9**	**-0.2**
	baz=324							
OHR	**Ohrid**	**83.00**	**326**	*i* P		**P**	**17 02 49.7**	**-0.1**
FNA	**Florina**	**83.05**	**325**	P		**P**	**17 02 49.1**	**-1.0**
FNA				pmax		pmax		
	comp=Z,13nm,0.7s							
FNA	**Florina**	**83.05**	**325**	P		**P**	**17 02 49.1**	**-1.0**
FNA				IAmb		IAmb	17 02 50.9	
	comp=Z,13nm,0.7s							
U52A	**Thorn Hill**	**83.10**	**43**	P		**P**	**17 02 50.7**	**+0.3**
	baz=325							
V51A	**Loudon**	**83.11**	**44**	P		**P**	**17 02 50.4**	**0.0**
	baz=324							
W50A	**Signal Mountai**	**83.14**	**45**	P		**P**	**17 02 50.8**	**+0.2**
	baz=324							
LIT	**Litokhoron**	**83.19**	**324**	P		**P**	**17 02 49.9**	**-0.9**
LIT				pmax		pmax		
	comp=Z,10.0nm,1.1s							
LIT	**Litokhoron**	**83.19**	**324**	P		**P**	**17 02 49.9**	**-0.9**
LIT				IAmb		IAmb	17 02 50.8	
	comp=Z,10nm,1.1s							
TURN	**Turunc**	**83.24**	**318**	*e*P		**P**	**17 02 52.8**	**+1.8**
PAL	**Palisades**	**83.29**	**34**	P		**P**	**17 02 52.0**	**+0.9**
	baz=330							
AKAS	**Kas**	**83.30**	**317**	*e*P		**P**	**17 02 51.1**	**-0.4**
T54A	**Tazewell**	**83.38**	**41**	P		**P**	**17 02 51.9**	**0.0**
	baz=326							
W51A	**Cleveland**	**83.43**	**44**	P		**P**	**17 02 51.6**	**-0.4**
	baz=324							
BODT	**Bodrum**	**83.67**	**319**	*e*P		**P**	**17 02 52.4**	**-0.9**
T55A	**Pulaski**	**83.69**	**41**	P		**P**	**17 02 53.4**	**0.0**
	baz=326							
BLA	**Blacksburg**	**83.78**	**40**	P		**P**	**17 02 54.0**	**+0.2**
	baz=326							
U55A	**TA2, Sparta**	**84.08**	**41**	P		**P**	**17 02 55.3**	**-0.2**
	baz=326							
W53A	**Cullowhee**	**84.19**	**43**	P		**P**	**17 02 55.9**	**-0.2**
	baz=325							
NRCA	**Norcia**	**84.24**	**332**	P		**P**	**17 02 55.5**	**-0.7**
Y51A	**Rockmart**	**84.30**	**45**	P		**P**	**17 02 56.6**	**+0.1**
	baz=324							
Z50A	**Ashland**	**84.40**	**46**	P		**P**	**17 02 56.5**	**-0.5**
Z50A				IAmb		IAmb	17 03 16.1	
	comp=Z,13nm,1.0s							
Z50A	**Ashland**	**84.40**	**46**	P		**P**	**17 02 56.7**	**-0.3**
	baz=324							
S58A	**Poland Farm, P**	**84.48**	**38**	P		**P**	**17 02 56.7**	**-0.7**
	baz=328							
RAYN	**Ar Rayn**	**84.58**	**299**	P		**P**	**17 02 58.0**	**-0.2**
RAYN				pmax		pmax		
	comp=Z,14nm,1.2s							
RAYN	**Ar Rayn**	**84.58**	**299**	*i* P		**P**	**17 02 58.5**	**+0.3**
	SNR=12							
RAYN	**Ar Rayn**	**84.58**	**299**	P		**P**	**17 02 58.0**	**-0.2**
RAYN				IAmb		IAmb	17 03 13.6	
	comp=Z,14nm,1.2s							
X53A	**Estanollee**	**84.67**	**44**	P		**P**	**17 02 58.8**	**+0.4**
	baz=325							
INTR	**Introdacqua**	**84.71**	**331**	P		**P**	**17 02 58.4**	**-0.1**
INTR				IAmb		IAmb	17 03 00.6	
	comp=Z,16nm,1.0s							
Y52A	**Lilburn**	**84.82**	**45**	P		**P**	**17 02 59.8**	**+0.6**
	baz=325							
T58A	**Grand View Acr**	**84.83**	**39**	P		**P**	**17 02 59.6**	**+0.5**
	baz=327							
KARP	**Karpathos**	**84.99**	**319**	P		**P**	**17 02 58.7**	**-1.3**
R61A	**Willards**	**85.01**	**36**	P		**P**	**17 02 59.9**	**0.0**
	baz=329							
Y53A	**Monroe**	**85.06**	**44**	P		**P**	**17 03 00.5**	**+0.1**
	baz=325							
X54A	**Belton**	**85.07**	**43**	P		**P**	**17 03 00.4**	**0.0**
	baz=325							
Z52A	**Williamson**	**85.19**	**45**	P		**P**	**17 03 01.4**	**+0.4**
	baz=324							
T59A	**Double "B" Far**	**85.23**	**38**	P		**P**	**17 03 01.4**	**+0.2**
	baz=328							
152A	**Waverly Hall**	**85.47**	**46**	P		**P**	**17 03 02.6**	**+0.2**
	baz=324							
Y54A	**Tignall**	**85.48**	**44**	P		**P**	**17 03 03.0**	**+0.6**
	baz=325							
Z53A	**Monticello**	**85.53**	**45**	P		**P**	**17 03 03.1**	**+0.4**
	baz=325							
V58A	**Windy Hill, Pi**	**85.54**	**40**	P		**P**	**17 03 03.0**	**+0.3**
	baz=327							
Y55A	**Saluda**	**85.81**	**43**	P		**P**	**17 03 04.0**	**-0.1**
	baz=326							
ITM	**Ithomi**	**85.91**	**323**	P		**P**	**17 03 03.1**	**-1.4**
Z54A	**Sparta**	**85.92**	**44**	P		**P**	**17 03 05.0**	**+0.4**
	baz=325							
252A	**Lumpkin**	**86.00**	**46**	P		**P**	**17 03 04.5**	**-0.5**
	baz=324							
W58A	**Raeford**	**86.13**	**41**	P		**P**	**17 03 05.1**	**-0.5**
	baz=327							
TBI	**Tubuai**	**86.71**	**129**	*e*LR		LR	17 30 33.2	
	comp=Z,112nm,27.2s							
TBI	**Tubuai**	**86.71**	**129**	*e*T		T	18 38 29.3	
	comp=Z,10nm,0.2s							
VNDA	**Vanda**	**123.88**	**178**	PKP		**PKiKP**	**17 09 21.5**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=323,slow=3.5,SNR=7.1							
LPAZ	**La Paz**	**134.40**	**63**	PKP		**PKPdf**	**17 09 44.0**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=353,slow=4.1,SNR=7.9							
QSPA	**South Pole Qui**	**136.25**	**180**			**PKiKP**	**17 09 46.1**	**-0.3**
BDFB	**Brasilia**	**144.50**	**37**	PKP		**PKPdf**	**17 10 02.3**	**+1.1**
	comp=Z,1.8nm,0.5s,baz=175,slow=9.6,SNR=3.3							
PLCA	**Paso Flores**	**148.13**	**96**	PKPbc		**PKPbc**	**17 10 10.9**	**+1.0**
	comp=Z,13nm,0.7s,baz=300,slow=2.5,SNR=51							
PLCA	**Paso Flores**	**148.13**	**96**			**PKPbc**	**17 10 10.7**	**+0.8**
CPUP	**Villa Florida**	**148.53**	**61**	PKPbc		**PKPbc**	**17 10 11.9**	**+0.6**
	comp=Z,6.5nm,0.8s,baz=298,slow=2.8,SNR=12							
CPUP	**Villa Florida**	**148.53**	**61**			**PKPbc**	**17 10 11.5**	**+0.3**
SNAA	**Sanae**	**152.34**	**196**	PKPbc		**PKPbc**	**17 10 19.4**	**+0.4**
SNAA	**Sanae**	**152.34**	**196**	PKIKP		**PKPbc**	**17 10 19.1**	**+0.1**
SNAA	**Sanae**	**152.34**	**196**			**PKPbc**	**17 10 19.1**	**+0.1**
VNA3	**Neumayer Olymp**	**153.87**	**193**	PKPbc		**PKPbc**	**17 10 22.7**	**+0.3**

*NEIC **08** 17:00:56.4±1.7, 14°.2S±0°.2×170°.7E±0°.2, h635km±16km, mb4.4/11, Error ellipse: s-maj=29.6km s-min=21.5km az=159.0*
*IDC **08** 17:00:58.3±2.1, 14°.39S×170°.46E, h622km±23km, mb3.1/7, mb1 3.4/9, mb1mx3.0/48, mbtmp4.2/9, Error ellipse: s-maj=40.1km s-min=20.5km az=151.0*
ISC 08 17:00:56.7±0.9, **14°.4S**±0°.1×**170°.57E**±0°.10, **h600km**, **n24,** σ1§**12**/**24**, **mb4.2**/13, **Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.92**	**116**	P	**P**	**17 02 57.2**	**+1.9**
DZM	**Mont Dzumac**	**8.56**	**207**	P	**P**	**17 03 03.3**	**+1.9**
	2.1nm,0.3s,baz=160,slow=9.9,SNR=27						
DZM	**Mont Dzumac**	**8.56**	**207**	P	**P**	**17 03 03.1**	**+1.7**
HNR	**Honiara**	**11.51**	**294**	P	**P**	**17 03 31.6**	**+1.0**
	2.7nm,0.3s,baz=255,slow=7.7,SNR=3.6						
CTA	**Charters Tower**	**23.88**	**253**	P	**P**	**17 05 25.8**	**+0.6**
	3.2nm,0.8s,baz=280,slow=14,SNR=6.2						
LTZ	**Lake Taylor**	**28.31**	**177**	P	**P**	**17 06 02.3**	**-1.3**
STKA	**Stephens Creek**	**31.66**	**232**	P	**P**	**17 06 32.7**	**+0.1**
	6.5nm,0.5s,baz=64,slow=8.3,SNR=30						
STKA	**Stephens Creek**	**31.66**	**232**	P	**P**	**17 06 32.6**	**0.0**
TOO	**Toolangi**	**32.06**	**219**	P	**P**	**17 06 35.9**	**-0.1**
TOO				IAmb	IAmb	17 07 35.4	
	comp=Z,14nm,1.2s						
WRA	**Warramunga Arr**	**35.00**	**256**	P	**P**	**17 06 59.8**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=86,slow=8.8,SNR=17						
WRA	**Warramunga Arr**	**35.00**	**256**	P	**P**	**17 06 59.4**	**-1.3**
AS31	**Alice Springs**	**35.77**	**249**	P	**P**	**17 07 06.4**	**-0.7**
ASAR	**Alice Springs**	**35.77**	**249**	P	**P**	**17 07 06.5**	**-0.6**
	comp=Z,2.9nm,0.4s,baz=76,slow=9.9,SNR=93						
ASAR				ScP	**S**	**17 12 04.9**	**+1.7**
	comp=Z,1.2nm,0.7s,baz=88,slow=3.7,SNR=17						
ASAR	**Alice Springs**	**35.77**	**249**	P	**P**	**17 07 06.0**	**-1.1**
BBOO	**Buckleboo**	**36.31**	**234**	P	**P**	**17 07 11.1**	**-0.3**
KNRA	**Kununurra**	**40.34**	**263**	P	**P**	**17 07 44.1**	**0.0**
KNRA				IAmb	IAmb	17 08 47.6	
	comp=Z,20nm,1.4s						
FORT	**Forrest**	**42.21**	**240**	P	**P**	**17 07 57.7**	**-1.0**
FORT				IAmb	IAmb	17 08 41.1	
	comp=Z,23nm,1.1s						
FITZ	**Fitzroy Crossi**	**43.21**	**259**	P	**P**	**17 08 06.3**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=84,slow=6.4,SNR=8.5						
NWAO	**Narrogin (SRO)**	**51.65**	**239**	P	**P**	**17 09 08.4**	**-1.0**
NWAO				IAmb	IAmb	17 10 01.0	
	comp=Z,34nm,1.4s						
QSPA	**South Pole Qui**	**75.61**	**180**	P	**P**	**17 11 39.4**	**-1.6**
QSPA				IAmb	IAmb	17 14 07.8	
	comp=Z,12nm,1.7s						
NVAR	**Mina Array Bea**	**84.66**	**48**	P	**P**	**17 12 28.6**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=243,slow=6.0,SNR=3.8						
GLA	**Glamis**	**85.31**	**54**	P	P	17 12 26.7	-5.0
GLA				IAmb	IAmb	17 12 30.3	
	comp=Z,6.6nm,0.7s						
PDAR	**Pinedale Array**	**92.40**	**47**	P	**P**	**17 13 04.7**	**0.0**
	comp=Z,0.2nm,0.5s,baz=260,slow=4.2,SNR=2.2						
ARCES	**ARCESS Array B**	**120.72**	**346**	PKP	**PKPdf**	**17 18 40.0**	**-0.9**
	comp=Z,10.0nm,1.1s,baz=46,slow=3.5,SNR=4.3						

*ASRS **08** 17:05:20.0±0.1, 51°.2N±0°.7×87°.0E±0°.8, h5km, MLh3.9/25, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed*
*NNC **08** 17:05:23.9±2.8, 51°.01N×86°.60E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=26.5km s-min=16.6km az=49.0*
ISC 08 17:05:19.5±0.7, **51°.19N**±0°.02×**86°.93E**±0°.02, **h10km**, **n39,** σ1§**96**/80, **5C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDR	**Elanda**	**0.53**	**273**	Pg	**Pg**	**17 05 29.9**	**+0.1**
ELDR				Sg	**Sg**	**17 05 36.8**	**+0.1**
ARTR	**Artybash**	**0.64**	**20**	Pg	**Pb**	**17 05 32.4**	**-0.5**
ARTR				Sg	**Sg**	**17 05 41.0**	**+0.6**
ULGR	**Ulagan, Altay**	**0.87**	**131**	Pg	**Pg**	**17 05 35.4**	**-0.8**
ULGR				Sg	**Sg**	**17 05 46.2**	**-1.4**
CHBI	**Chibit, Altay**	**0.95**	**157**	Pg	**Pg**	**17 05 36.8**	**-1.0**
CHBI				Sg	**Sg**	**17 05 48.9**	**-1.4**
AKAR	**Aktash**	**0.98**	**153**	Pg	**Pg**	**17 05 37.2**	**-1.2**
AKAR				Sg	**Sg**	**17 05 49.7**	**-1.4**
GALT	**Gorno-Altaysk,**	**0.98**	**322**	Pg	**Pg**	**17 05 38.1**	**-0.3**
GALT				Sg	**Sg**	**17 05 50.5**	**-0.7**
TUNR	**Tungur**	**1.10**	**200**	Pg	**Pg**	**17 05 39.6**	**-1.1**
TUNR				Sg	**Sg**	**17 05 53.5**	**-1.5**
UKR	**Ust'-Kan**	**1.39**	**260**	Pg	**Pb**	**17 05 45.2**	**-0.4**
UKR				Sg	**Sg**	**17 06 03.5**	**-0.6**
DGZ	**Jazzator, Alta**	**1.53**	**168**	Pg	**Pn**	**17 05 47.0**	**0.0**
DGZ				Sg	**Sb**	**17 06 07.6**	**+0.1**
TASR	**Tashtagol**	**1.68**	**20**	Pg	**Pb**	**17 05 50.2**	**-0.2**
TASR				Sg	**Sg**	**17 06 12.8**	**-0.5**
TEL	**Teeli**	**2.07**	**94**	Pg	**Pb**	**17 05 57.4**	**+0.2**
TEL				Sg	**Sg**	**17 06 25.5**	**-0.5**
ELT	**Eltsovka**	**2.11**	**349**	Pg	**Pb**	**17 05 57.1**	**-0.8**
ELT				Sg	**Sb**	**17 06 25.3**	**+1.1**
LUZB	**Luzhba, Kemero**	**2.75**	**25**	Pn	**Pn**	**17 06 05.4**	**+1.7**
LUZB				Pg	**Pb**	**17 06 08.4**	**-0.4**
LUZB				Sg	**Sg**	**17 06 45.8**	**-2.0**
VEH	**Verkhnyaya Baz**	**2.93**	**44**	Pn	**Pn**	**17 06 08.3**	**+2.0**
VEH				Pg	**Pb**	**17 06 11.9**	**0.0**
VEH				Sg	**Sb**	**17 06 49.8**	**+2.0**
DJOS	**Djoyskaya Sosn**	**3.19**	**58**	Pg	**Pb**	**17 06 17.6**	**+1.3**
DJOS				Sg	**Sg**	**17 07 02.2**	**+0.2**
CERR	**Cheremushki**	**3.23**	**57**	Pg	**Pb**	**17 06 18.4**	**+1.4**
CERR				Sg	**Sg**	**17 07 00.3**	**-2.9**
SALR	**Pechorkino, Sa**	**3.31**	**347**	Pn	**Pn**	**17 06 13.0**	**+1.6**
SALR				Sg	**Sg**	**17 07 02.3**	**-3.6**
ABNR	**Abakan**	**3.74**	**46**	Pg	**Pb**	**17 06 26.6**	**+1.0**
ABNR				Sg	**Sg**	**17 07 17.6**	**-2.0**
KHAR	**Kharino, NSO,**	**3.98**	**331**	Pn	**Pn**	**17 06 20.9**	**+0.4**
KHAR				Pg	**Pg**	**17 06 33.4**	**-2.2**
KHAR				Sg	**Sg**	**17 07 27.8**	**+0.7**
KEM	**Kemerovo**	**4.19**	**353**	Sg	**Sg**	**17 07 32.6**	**-1.2**
BSTK	**Bystrovka, Nov**	**4.26**	**324**	Pn	**Pn**	**17 06 24.4**	**+0.1**
BSTK				Pg	**Pg**	**17 06 38.8**	**-2.2**
BSTK				Sg	**Sg**	**17 07 35.0**	**-1.1**
NVS	**Novosibirsk**	**4.28**	**330**	Pn	**Pn**	**17 06 24.4**	**-0.3**
NVS				Pg	**Pg**	**17 06 39.4**	**-2.1**
NVS				Sg	**Sg**	**17 07 36.5**	**-0.3**
NVSII	**Novosibirsk**	**4.28**	**330**	Pn	**Pn**	**17 06 24.5**	**-0.2**
NVSII				Pg	**Pg**	**17 06 39.4**	**-2.1**
NVSII				Sg	**Sg**	**17 07 36.8**	**0.0**
NHES	**Novosibirsk, N**	**4.38**	**329**	Pg	**Pg**	**17 06 40.7**	**-2.6**
NHES				Sg	**Sg**	**17 07 38.9**	**-0.9**
BRCR	**Berchikul'**	**4.53**	**10**	Pn	**Pn**	**17 06 29.4**	**+1.3**
BRCR				Pg	**Pb**	**17 06 40.6**	**+1.5**
BRCR				Sg	**Sg**	**17 07 41.2**	**-3.7**
ALXA	**Alekseevka, NS**	**4.57**	**327**	Pg	**Pg**	**17 06 40.4**	**-1.6**
ALXA				Sg	**Sg**	**17 07 45.8**	**-0.3**
KZLR	**Kyzyl**	**4.73**	**81**	Pg	**Pg**	**17 06 47.0**	**-3.2**
KZLR				Sg	**Sg**	**17 07 48.1**	**-3.3**
KURK	**Kurchatov**	**5.27**	**268**	Pn	**Pn**	**17 06 39.9**	**+1.6**
KURK				Sg	**Sg**	**17 08 06.7**	**-2.1**
KURK	**Kurchatov**	**5.27**	**268**	⇓Pn	**Pn**	**17 06 40.3**	**+2.0**
	3.6nm,0.4s						
KURK				⇑Lg	Lg	17 08 03.3	
	59nm,0.8s						
KURBB	**Kurchatov Arra**	**5.34**	**267**	⇑Pn	**Pn**	**17 06 41.7**	**+2.4**
	14nm,0.5s						
KURBB				⇑Lg	Lg	17 08 07.1	
	107nm,0.7s						
MK31	**Makanchi Array**	**5.36**	**217**	⇓Pn	**Pn**	**17 06 42.4**	**+2.9**
	0.8nm,0.2s,baz=28,slow=12,SNR=154						
MK31				Lg	Lg	17 08 05.5	
	15nm,0.5s,baz=34,slow=32,SNR=8.8						
MKAR	**Makanchi Array**	**5.36**	**217**	Pn	**Pn**	**17 06 42.8**	**+3.3**
MKAR				Pg	**Pg**	**17 07 00.2**	**-1.9**
MKAR				Sg	**Sg**	**17 08 07.5**	**-4.0**
MAKZ	**Makanchi**	**5.47**	**219**	Pn	**Pn**	**17 06 43.7**	**+2.8**
MAKZ				Pg	**Pg**	**17 07 00.3**	**-3.8**
MAKZ				Sg	**Sg**	**17 08 10.6**	**-4.3**
MAKZ	**Makanchi**	**5.47**	**219**	⇑Pn	**Pn**	**17 06 43.5**	**+2.5**
	4.1nm,0.6s						
MAKZ				⇑Lg	Lg	17 08 07.4	
	28nm,0.8s						
MINR	**Mina**	**5.74**	**47**	Pg	**Pb**	**17 07 01.5**	**+1.8**
MINR				Sg	**Sg**	**17 08 19.3**	**-4.4**
TDJR	**Todzha**	**5.82**	**74**	Pg	**Pg**	**17 07 08.0**	**-2.8**
TDJR				Sg	**Sg**	**17 08 23.6**	**-2.6**
ORY	**Orie**	**6.23**	**49**	Pg	**Pb**	**17 07 10.8**	**+2.8**
ORY				Sg	**Sg**	**17 08 35.7**	**-3.6**
GZLN	**Zheleznogorsk**	**6.59**	**35**	Sg	**Sg**	**17 08 50.3**	**-0.5**
KSH	**Kashi**	**13.97**	**218**	P	**P**	**17 08 46.6**	**+1.0**
KSH				pmax	pmax		
	comp=Z,140nm,4.6s						

*NEIC **08** 17:16:30.8±1.5, 12°.8S±0°.1×166°.5E±0°.2, h36km±9km, mb4.4/4, Error ellipse: s-maj=28.6km s-min=14.3km az=65.0*
*IDC **08** 17:16:31.5±3.9, 12°.76S×166°.44E, h40km±33km, mb3.9/11, mb1 4.0/13, mb1mx3.8/34, mbtmp4.2/13, ML3.8/2, Error ellipse: s-maj=32.6km s-min=17.6km az=73.0*
ISC 08 17:16:31.1±0.8, **12°.63S**±0°.08×**166°.4E**±0°.1, **h35km**, **n22,** σ1§**52**/**24**, **mb4.2**/12, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.09**	**296**	P	**Pn**	**17 18 13.5**	**+1.1**
	13nm,0.3s,baz=142,slow=1.2,SNR=15						
HNR				S	**Sn**	**17 19 30.2**	**-1.6**
	4.9nm,0.3s,baz=117,slow=18,SNR=2.1						
HNR	**Honiara**	**7.09**	**296**	P	**Pn**	**17 18 15.0**	**+2.6**
HNR	**Honiara**	**7.09**	**296**		**Pn**	**17 18 13.7**	**+1.2**
DZM	**Mont Dzumac**	**9.39**	**180**	P	**Pn**	**17 18 42.8**	**-1.3**
	0.1nm,0.3s,baz=90,slow=20,SNR=5.2						
DZM				S	**Sn**	**17 20 32.7**	**+4.1**
	baz=70,slow=12,SNR=1.9						
URZ	**Urewera**	**27.25**	**161**	P	**P**	**17 22 12.1**	**+0.1**
	13nm,0.9s,baz=263,slow=5.6,SNR=3.6						
STKA	**Stephens Creek**	**29.77**	**226**	P	**P**	**17 22 33.6**	**-1.0**
	1.1nm,0.7s,baz=14,slow=14,SNR=3.3						
AS31	**Alice Springs**	**32.69**	**246**	P	**P**	**17 22 58.9**	**-1.7**
ASAR	**Alice Springs**	**32.70**	**246**	P	**P**	**17 22 59.1**	**-1.4**
	1.9nm,0.7s,baz=71,slow=9.4,SNR=28						
MJAR	**Matsushiro Arr**	**55.66**	**333**	P	**P**	**17 26 04.9**	**+1.0**
	1.2nm,0.6s,baz=150,slow=6.1,SNR=4.3						
USRK	**Ussuriysk Ar.**	**64.64**	**333**	P	**P**	**17 27 06.0**	**+0.7**
	1.7nm,0.6s,baz=131,slow=5.9,SNR=8.0						
CMAR	**Chiang Mai Arr**	**73.33**	**294**	P	**P**	**17 28 00.9**	**+1.0**
	0.8nm,0.8s,baz=128,slow=4.6,SNR=8.8						
CMAR	**Chiang Mai Arr**	**73.33**	**294**	P	**P**	**17 27 59.2**	**-0.7**
QSPA	**South Pole Qui**	**77.39**	**180**	P	**P**	**17 28 21.0**	**-1.4**
	4.6nm,1.0s,baz=22,slow=0.6,SNR=16						
QSPA	**South Pole Qui**	**77.39**	**180**	P	**P**	**17 28 21.1**	**-1.3**
QSPA				IAmb	IAmb	17 28 21.8	
	comp=Z,3.8nm,0.8s						
SONM	**Songino Array**	**80.31**	**324**	P	**P**	**17 28 39.5**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=133,slow=6.3,SNR=4.3						
ILAR	**Eielson Array**	**84.80**	**18**	P	**P**	**17 29 00.2**	**-1.4**
	comp=Z,0.3nm,0.8s,baz=230,slow=6.7,SNR=3.1						
MK31	**Makanchi Array**	**95.11**	**317**	P	**P**	**17 29 51.7**	**+1.0**
MK31				IAmb	IAmb	17 29 53.1	
	comp=Z,1.1nm,0.8s						
MKAR	**Makanchi Array**	**95.11**	**317**	P	**P**	**17 29 51.6**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=96,slow=6.0,SNR=12						
MKAR	**Makanchi Array**	**95.11**	**317**	P	**P**	**17 29 51.9**	**+1.2**
ZAA0	**Zalesovo Array**	**95.21**	**324**	P	**P**	**17 29 51.1**	**+0.2**
ZALV	**Zalesovo Beam**	**95.21**	**324**	P	**P**	**17 29 51.1**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=129,slow=4.2,SNR=7.3						
ZALV	**Zalesovo Beam**	**95.21**	**324**	P	**P**	**17 29 51.3**	**+0.4**

*DJA **08** 17:23:24.4±0.6, 9°.S±5°.×12°.3E±°, h118km±7km, M4.1/7, mB4.7/1, mb4.5/2, MLv3.9/7, Mw(mB)4.0/1*
*IDC **08** 17:23:37.4±6.8, 8°.61S×124°.96E, h182km±67km, mb3.6/1, mb1 3.6/3, mb1mx3.0/27, mbtmp4.0/13, Error ellipse: s-maj=128.5km s-min=52.9km az=57.0*
ISC 08 17:23:22.7±1.1, **8°.62S**±0°.08×**123°.20E**±0°.06, **h150km**, **n10,** σ2§**34**/16, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.95**	**269**	P	**Pn**	**17 23 45.6**	**-1.5**
MMRI				S	**Sn**	**17 24 02.2**	**-3.4**
SOEI	**Soe**	**1.55**	**137**	P	**Pn**	**17 23 53.0**	**+0.1**
SOEI				S	**Sn**	**17 24 16.3**	**+0.2**
WSI	**Waingapu**	**3.05**	**250**	P	**Pn**	**17 24 11.1**	**+0.4**
WSI				S	**Sn**	**17 24 47.4**	**-0.4**
BKSI	**Bulukumba**	**4.47**	**317**	P	**Pn**	**17 24 29.4**	**+0.2**
KDI	**Kendari**	**4.66**	**353**	P	**Pn**	**17 24 31.6**	**-0.1**
PLAI	**Plampang**	**5.36**	**267**	P	**Pn**	**17 24 42.0**	**+1.0**
	0.2nm958nm41nm,0.5s						
PLAI				S	**Sn**	**17 25 41.6**	**-0.5**
	0.2nm958nm41nm,0.5s						
TWSI	**Taliwang, Sumb**	**6.25**	**268**	P	**Pn**	**17 24 53.5**	**+0.8**
TWSI				S	**Sn**	**17 26 03.0**	**-0.2**
WRA	**Warramunga Arr**	**15.59**	**137**	P	**Pn**	**17 26 53.6**	**-0.9**
	0.6nm,0.3s,baz=316,slow=12,SNR=17						
WRA				S	Sn	17 29 35.7	-12
	0.3nm,0.3s,baz=325,slow=23,SNR=6.0						
ASAR	**Alice Springs**	**18.14**	**147**	P	**Pn**	**17 27 26.5**	**+1.2**
	0.4nm,0.3s,baz=329,slow=12,SNR=45						
ASAR				S	**S**	**17 30 37.3**	**-6.4**
	0.1nm,0.3s,baz=314,slow=22,SNR=6.3						
STKA	**Stephens Creek**	**28.78**	**146**	P	**P**	**17 29 09.9**	**+3.4**
	1.8nm,0.7s,baz=344,slow=9.7,SNR=7.8						

*IDC **08** 17:42:23.6±1.1, 33°.61N×38°.62W, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.8/37, mbtmp3.9/11, MS3.7/19, Ms1 3.7/19, ms1mx3.6/42, Error ellipse: s-maj=30.3km s-min=19.3km az=173.0*
*NEIC **08** 17:42:25.5±1.4, 33°.7N±0°.1×38°.5W±0°.2, h10km±1km, mb4.7/22, Error ellipse: s-maj=26.2km s-min=22.1km az=141.0*
*GCMT **08** 17:42:28.5±0

PDAR				LR	LR	18 12 55.0		
	comp=Z,75nm,21.9s,baz=59,slow=33							
PDAR	**Pinedale Array**	**54.99**	**302**	P	**P**	**17 51 56.6**	**-0.8**	
ANMO	**Albuquerque**	**55.05**	**292**	LR	LR	18 13 30.0		
	comp=Z,84nm,21.7s,baz=72,slow=34							
FLWY	**Flagg Ranch**	**55.44**	**304**	P	**P**	**17 52 01.2**	**+0.6**	
FLWY				IAmb	IAmb	17 52 14.8		
	comp=Z,4.4nm,0.9s							
BNM	**Barren Site**	**55.45**	**291**	P	**P**	**17 52 01.7**	**+0.8**	
YMR	**Madison River**	**55.47**	**304**	P	**P**	**17 52 01.5**	**+0.7**	
BRTR	**Keskin Array B**	**56.80**	**61**	P	**P**	**17 52 09.1**	**-1.2**	
	comp=Z,0.2nm,0.5s,baz=292,slow=4.5,SNR=2.5							
BRTR				LR	LR	18 14 53.9		
	comp=Z,40nm,19.8s,baz=290,slow=34							
LPAZ	**La Paz**	**57.12**	**214**	P	**P**	**17 52 12.7**	**-0.5**	
	comp=Z,0.9nm,0.6s,baz=0.6,slow=9.3,SNR=5.8							
LPAZ				LR	LR	18 14 59.1		
	comp=Z,122nm,18.0s,baz=34,slow=34							
LPAZ	**La Paz**	**57.12**	**214**	P	**P**	**17 52 13.7**	**+0.4**	
NEW	**Newport**	**58.57**	**310**	LR	LR	18 16 15.4		
	comp=Z,127nm,21.7s,baz=63,slow=35							
NEW	**Newport**	**58.57**	**310**	P	**P**	**17 52 22.8**	**+0.3**	
U15A	**North Rim**	**59.00**	**295**	P	**P**	**17 52 26.9**	**+1.0**	
U15A				IAmb	IAmb	17 52 32.1		
	comp=Z,9.0nm,1.4s							
PSUT	**Pine Spring**	**59.42**	**298**	P	**P**	**17 52 30.3**	**+1.5**	
MNMC	**Minye Minye**	**60.27**	**214**	P	**P**	**17 52 34.9**	**+0.2**	
INK	**Inuvik**	**60.94**	**335**	P	**P**	**17 52 39.0**	**+0.6**	
INK				IAmb	IAmb	17 52 48.5		
	comp=Z,8.8nm,1.3s							
KBZ	**Khabaz**	**61.99**	**54**	P	**P**	**17 52 46.2**	**+0.3**	
	comp=Z,1.3nm,0.9s,baz=292,slow=11,SNR=2.8							
NVAR	**Mina Array Bea**	**62.70**	**300**	LR	LR	18 18 41.0		
	comp=Z,93nm,19.9s,baz=22,slow=35							
EGAK	**Eagle**	**65.10**	**333**	P	**P**	**17 53 06.3**	**+0.1**	
ILAR	**Eielson Array**	**67.26**	**334**	P	**P**	**17 53 19.3**	**-0.7**	
	comp=Z,0.5nm,1.0s,baz=56,slow=6.6,SNR=3.3							
ILAR				LR	LR	18 21 25.9		
	comp=Z,57nm,18.2s,baz=56,slow=35							
ZAAO	**Zalesovo Array**	**79.99**	**30**	P	**P**	**17 54 34.2**	**-0.8**	
ZALV	**Zalesovo Beam**	**79.99**	**30**	P	**P**	**17 54 34.4**	**-0.6**	
MKAR	**Makanchi Array**	**83.86**	**36**	P	**P**	**17 54 55.9**	**+0.3**	
	comp=Z,0.6nm,0.9s,baz=310,slow=4.7,SNR=3.8							
MKAR	**Makanchi Array**	**83.86**	**36**	P	**P**	**17 54 54.6**	**-1.0**	
KSH	**Kashi**	**85.32**	**45**	P	**P**	**17 55 04.3**	**+1.1**	
KSH				pmax	pmax			
	comp=Z,200nm,5.1s							

IDC 08 17:46:37.0±6.5, 32°.97S×179°.23W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.6/21, mbtmp3.7/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/33, Error ellipse: s-maj=287.8km s-min=61.1km az=161.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.70**	**307**	LR	LR	17 55 34.1	
	comp=Z,102nm,19.0s,baz=18,slow=32						
ASAR	**Alice Springs**	**42.00**	**270**	P	P	17 54 30.0	-0.2
	0.8nm,0.7s,baz=113,slow=8.0,SNR=15						
WRA	**Warramunga Arr**	**43.22**	**276**	P	P	17 54 40.1	-0.1
	0.6nm,0.4s,baz=117,slow=7.7,SNR=7.9						
NNA	**Nana**	**93.71**	**107**	LR	LR	18 36 17.6	
	comp=Z,29nm,19.6s,baz=206,slow=32						
FINES	**FINESS Array B**	**147.16**	**338**	PKPbc	PKPbc	18 06 20.5	-0.8
	0.9nm,0.8s,baz=45,slow=6.1,SNR=3.8						

MAN 08 17:50:24.5, 9°.91N×123°.95E, h32km, mb3.7, ML2.4, MS1.9, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.23**	**202**	↑*e*P	Pn	17 50 32.5	+0.8
TBP				*e*S	Sn	17 50 36.6	+0.3
LLP	**Lapu-Lapu**	**0.41**	**2**	↓*i*P	Pn	17 50 34.9	+0.7
LLP				*i* S	Sn	17 50 42.1	+1.4
MSLP	**Maasin**	**0.93**	**76**	*e*P	Pn	17 50 41.1	-0.1
MSLP				*e*S	Sn	17 50 53.1	-0.3

*SOME **08** 17:54:58.8, 44°.73N×81°.43E, h25km*
*NNC **08** 17:54:59.5±0.5, 44°.77N×81°.26E, h0km, mb3.7, mpv3.6, Error ellipse: s-maj=5.1km s-min=2.4km az=125.0*
ISC 08 17:54:59.6±1.1, 44°.70N±0°.03×81°.21E±0°.06, h10km, n43, σ1§52/68, 8C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.08**	**251**	*e*P	**Pn**	**17 55 21.3**	**+0.4**
	9.6nm,0.1s						
DJR				*e*S	**Sn**	**17 55 37.5**	**+1.6**
	66nm,0.1s						
DJR	**Jarkent**	**1.08**	**251**	P	**Pn**	**17 55 22.0**	**+1.2**
	9.6nm,0.1s						
DJR				S	**Sn**	**17 55 37.3**	**+1.4**
	66nm,0.1s						
KAPS	**Kapalarasan**	**1.44**	**295**	*e*P	**Pb**	**17 55 26.1**	**-0.4**
	5.6nm,0.2s						
KAPS				*e*S	**Sg**	**17 55 45.9**	**+0.1**
	47nm,0.3s						
KAPS	**Kapalarasan**	**1.44**	**295**	P	**Pg**	**17 55 26.8**	**-0.3**
	13nm,0.1s						
KAPS				S	**Sg**	**17 55 46.6**	**+0.8**
	47nm,0.3s						
PDGK	**Podgornoye**	**1.84**	**223**	Pg	**Pg**	**17 55 34.0**	**-0.9**
	18nm,0.2s						
PDGK				Lg	Lg	17 56 00.7	
	30nm,0.2s						
PDGK	**Podgornoye**	**1.84**	**223**	↑Pn	**Pb**	**17 55 33.9**	**+0.4**
	8.5nm,0.2s						
PDGK				↑Sn	**Sg**	**17 56 00.3**	**+1.5**
	131nm,0.5s						
SHLS	**Shalkode**	**1.99**	**220**	*e*P	**Pn**	**17 55 33.6**	**+0.2**
	39nm,0.2s						
SHLS				*e*S	**Sn**	**17 55 59.0**	**+0.6**
	95nm,0.2s						
SHLS	**Shalkode**	**1.99**	**220**	Pg	**Pn**	**17 55 33.6**	**+0.2**
	39nm,0.2s						
SHLS				Lg	Lg	17 55 59.0	
	95nm,0.2s						
TDK	**Taldyqorghan**	**2.01**	**280**	*e*P	**Pg**	**17 55 37.5**	**-0.7**
	95nm,0.5s						
TDK				*e*S	**Sg**	**17 56 05.2**	**+1.0**
	198nm,0.6s						
MNBS	**Baschi**	**2.10**	**254**	*e*P	**Pb**	**17 55 38.5**	**+0.6**
	25nm,0.2s						
MNBS				*e*S	**Sg**	**17 56 07.4**	**+0.2**
	106nm,0.2s						
MNBS	**Baschi**	**2.10**	**254**	Pg	**Pb**	**17 55 38.5**	**+0.6**
	25nm,0.2s						
MNBS				Lg	Lg	17 56 07.7	
	106nm,0.2s						
MAKZ	**Makanchi**	**2.18**	**14**	↓Pn	**Pn**	**17 55 35.9**	**0.0**
	1.8nm,0.5s						
MAKZ				↓Sn	**Sn**	**17 56 03.9**	**+0.9**
	13nm,0.4s						
KPKS	**Kokpek**	**2.19**	**237**	*e*P	**Pg**	**17 55 40.7**	**-1.0**
	14nm,0.1s						
KPKS				*e*S	**Sg**	**17 56 10.6**	**+0.5**
	11μm,0.2s						
UZB	**Uzynbulak**	**2.21**	**226**	*e*P	**Pb**	**17 55 40.5**	**+0.8**
	7.0nm,0.1s						
UZB				*e*S	**Sg**	**17 56 10.8**	**+0.2**
	37nm,0.2s						
UZB	**Uzynbulak**	**2.21**	**226**	Pg	**Pb**	**17 55 40.5**	**+0.8**
	7.0nm,0.1s						
UZB				Lg	Lg	17 56 11.1	
	37nm,0.2s						
MK31	**Makanchi Array**	**2.23**	**20**	Pn	**Pn**	**17 55 36.6**	**0.0**
	0.6nm,0.2s,baz=193,slow=16,SNR=170						
MK31				↓Sn	**Sn**	**17 56 04.4**	**+0.1**
	6.4nm,0.2s,baz=203,slow=28,SNR=23						
ARXS	**Arharly**	**2.47**	**260**	*e*P	**Pg**	**17 55 45.2**	**-1.6**
	13nm,0.1s						
ARXS				*e*S	**Sg**	**17 56 19.1**	**+0.2**
	67nm,0.3s						
ARXS	**Arharly**	**2.47**	**260**	Pg	**Pg**	**17 55 45.2**	**-1.6**
	13nm,0.1s						
ARXS				Lg	Lg	17 56 19.1	
	67nm,0.3s						
KURS	**Kuram**	**2.50**	**242**	*e*P	**Pg**	**17 55 45.9**	**-1.5**
	4.7nm,0.3s						
KURS				*e*S	**Sg**	**17 56 19.6**	**-0.2**
	16nm,0.3s						
KURS	**Kuram**	**2.50**	**242**	Pg	**Pg**	**17 55 45.9**	**-1.5**
	4.7nm,0.3s						
KURS				Lg	Lg	17 56 19.6	
	16nm,0.3s						
ZHN	**Zhinishke**	**2.52**	**234**	*e*P	**Pg**	**17 55 46.5**	**-1.3**
	6.6nm,0.2s						
ZHN				*e*S	**Sg**	**17 56 20.8**	**+0.4**
	37nm,0.3s						
ZHN	**Zhinishke**	**2.52**	**234**	Pg	**Pb**	**17 55 46.0**	**+1.0**
	6.6nm,0.2s						
ZHN				Lg	Lg	17 56 20.9	
	37nm,0.3s						
SATY	**Saty**	**2.60**	**232**	*e*P	**Pg**	**17 55 48.1**	**-1.4**
	11nm,0.1s						
SATY				*e*S	**Sg**	**17 56 23.6**	**+0.4**
	211nm,0.2s						
SATY	**Saty**	**2.60**	**232**	Pg	**Pg**	**17 55 48.1**	**-1.4**
	11nm,0.1s						
SATY				Lg	Lg	17 56 23.7	
	211nm,0.2s						
CHKK	**Chushkaly**	**3.14**	**256**	*e*P	**Pg**	**17 55 57.6**	**-2.2**
	4.6nm,0.1s						
CHKK				*e*S	**Sg**	**17 56 39.7**	**-0.8**
	58nm,0.3s						
CHKK	**Chushkaly**	**3.14**	**256**	Pg	**Pb**	**17 55 57.0**	**+1.4**
	4.6nm,0.1s						
CHKK				Lg	Lg	17 56 39.6	
	58nm,0.3s						
KOTS	**Kotyrbulak**	**3.30**	**245**	*e*P	**Pg**	**17 56 00.4**	**-2.4**
KOTS				*e*S	**Sg**	**17 56 44.9**	**-0.6**
KOTS	**Kotyrbulak**	**3.30**	**245**	Pg	**Pg**	**17 56 00.4**	**-2.4**
KOTS				Lg	Lg	17 56 44.9	
MDOK	**Medeo**	**3.37**	**244**	*e*P	**Pg**	**17 56 02.1**	**-2.1**
	7.3nm,0.3s						
MDOK				*e*S	**Sg**	**17 56 47.5**	**-0.4**
	14nm,0.2s						
MDOK	**Medeo**	**3.37**	**244**	↑Pg	**Pg**	**17 56 04.0**	**-0.2**
	3.9nm,0.4s						
MDOK				↑Lg	Lg	17 56 48.2	
	15nm,0.5s						
MDOK	**Medeo**	**3.37**	**244**	Pg	**Pg**	**17 56 02.1**	**-2.1**
	7.3nm,0.3s						
MDOK				Lg	Lg	17 56 47.5	
	14nm,0.2s						
KTBS	**Karatobe**	**3.40**	**255**	*e*P	**Pb**	**17 56 02.0**	**+2.1**
	5.6nm,0.2s						
KTBS				*e*S	**Sg**	**17 56 47.8**	**-0.9**
	46nm,0.3s						
KTBS	**Karatobe**	**3.40**	**255**	Pg	**Pb**	**17 56 01.0**	**+1.1**
	5.6nm,0.2s						
KTBS				Lg	Lg	17 56 47.8	
	46nm,0.3s						
TNSS	**Tian-Shan**	**3.50**	**243**	*e*P	**Pg**	**17 56 04.1**	**-2.5**
	4.9nm,0.2s						
TNSS				*e*S	**Sg**	**17 56 50.9**	**-1.0**
	17nm,0.3s						
TNSS	**Tian-Shan**	**3.50**	**243**	Pg	**Pg**	**17 56 04.1**	**-2.5**
	4.9nm,0.2s						
TNSS				Lg	Lg	17 56 50.9	
	17nm,0.3s						
IZV	**Izvestkoviy**	**3.71**	**245**	*e*P	**Pg**	**17 56 08.8**	**-2.0**
	4.1nm,0.3s						
IZV				*e*S	**Sg**	**17 56 58.7**	**-0.1**
	24nm,0.5s						
IZV	**Izvestkoviy**	**3.71**	**245**	Pg	**Pg**	**17 56 08.7**	**-2.0**
	4.1nm,0.3s						
IZV				Lg	Lg	17 56 58.4	
	24nm,0.5s						
MTBS	**Maitube**	**3.79**	**247**	*e*P	**Pb**	**17 56 08.8**	**+2.2**
	2.3nm,0.2s						
MTBS				*e*S	**Sg**	**17 56 58.8**	**-2.5**
	32nm,0.4s						
KST	**Kastek**	**4.14**	**248**	*e*P	**Pb**	**17 56 15.1**	**+2.6**
	3.4nm,0.5s						
KST				*e*S	**Sg**	**17 57 09.7**	**-2.6**
	8.6nm,0.6s						
DGS	**Degeres**	**4.18**	**252**	*e*P	**Pg**	**17 56 16.8**	**-2.9**
	5.3nm,0.4s						
DGS				*e*S	**Sg**	**17 57 13.3**	**-0.5**
	15nm,0.5s						
DGS	**Degeres**	**4.18**	**252**	Pg	**Pg**	**17 56 16.8**	**-2.9**
	5.3nm,0.4s						
DGS				Lg	Lg	17 57 13.4	
	15nm,0.5s						
TKM2	**Tokmak 2**	**4.43**	**248**	↑Pg	**Pg**	**17 56 21.2**	**-3.2**
	2.9nm,0.9s						
TKM2				↑Lg	Lg	17 57 21.0	
	4.2nm,0.3s						
AAK	**Ala-Archa**	**5.29**	**249**	↑Pg	**Pg**	**17 56 37.8**	**-3.0**
	1.0nm,0.4s						
AAK				↑Lg	Lg	17 57 47.7	
	5.1nm,0.7s						

*GUC **08** 18:11:52.5±0.8, 20°.63S×70°.55W, h31km±3km, ML3.9*
*IDC **08** 18:11:59.1±3.3, 20°.65S×70°.16W, h74km±23km, mb3.8/2, mb1 3.8/6, mb1mx3.5/32, mbtmp4.0/6, MS3.4/1, Ms1 3.3/1, ms1mx2.6/30, Error ellipse: s-maj=45.5km s-min=16.1km az=90.0*
ISC 08 18:11:50.4±3.0, 20°.66S±0°.03×70°.58W±0°.06, h17km±20km, n28, σ1§08/32, 3C-5D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.38**	**76**	↓*i*P	**Pn**	**18 12 00.4**	**-0.8**
TA01				*i* S	**Sn**	**18 12 06.4**	**-1.8**
TA01				IAML		18 12 06.7	
	comp=N,9μm,0.3s						
PATCX	**Punta Patache**	**0.43**	**112**	↓*i*P	**Pn**	**18 12 01.1**	**-0.8**
PATCX				*i* S	**Sn**	**18 12 07.7**	**-1.7**
PATCX				IAML		18 12 08.0	
	comp=E,16μm,0.2s						
PSGC	**Pisagua**	**1.14**	**22**	*i* P	**Pb**	**18 12 12.3**	**+0.5**
PSGC				*i* S	**Sn**	**18 12 27.0**	**0.0**
PSGC				IAML		18 12 29.5	
	comp=N,7μm,0.5s						
PB11	**IPOC Station P**	**1.24**	**44**	↓*i*P	**Pb**	**18 12 14.2**	**+0.6**
PB11				*i* S	**Sn**	**18 12 30.7**	**+1.1**
PB11				IAML		18 12 33.4	
	comp=N,6μm,0.4s						
PB08	**IPOC Station P**	**1.43**	**69**	↓*i*P	**Pb**	**18 12 17.3**	**+0.4**
PB08				*i* S	**Sb**	**18 12 35.9**	**+0.9**
PB08				IAML		18 12 37.8	
	comp=E,1μm,0.3s						
PB03	**IPOC Station P**	**1.58**	**151**	↑*i*P	**Pn**	**18 12 18.6**	**+0.8**
PB03				*i* S	**Sb**	**18 12 39.5**	**+0.4**
GO01	**Chusmiza**	**1.63**	**53**	↓*i*P	**Pb**	**18 12 20.7**	**+0.3**
GO01				*i* S	**Sb**	**18 12 41.7**	**+0.9**
GO01				IAML		18 12 43.8	
	comp=N,5μm,0.1s						
PB09	**IPOC Station P**	**1.68**	**132**	↑*i*P	**Pb**	**18 12 21.6**	**+0.5**
PB09				*i* S	**Sb**	**18 12 44.2**	**+2.2**
PB09				IAML		18 12 48.8	
	comp=E,2μm,0.5s						
PB04	**IPOC Station P**	**1.71**	**167**	*e*P	**Pn**	**18 12 19.7**	**0.0**
PB04				*i* S	**Sb**	**18 12 43.9**	**+1.0**
MNMC	**Minye Minye**	**1.78**	**31**	*e*P	**Pb**	**18 12 22.1**	**-0.7**
MNMC				*i* S	**Sb**	**18 12 45.9**	**+1.0**
MNMC				IAML		18 12 48.1	
	comp=E,3μm,0.2s						
PB05	**IPOC Station P**	**2.21**	**171**	IAML		18 13 04.5	
	comp=E,714nm,0.6s						
PB06	**IPOC Station P**	**2.24**	**156**	↑*i*P	**Pn**	**18 12 27.4**	**+0.5**
PB06				*i* S	**Sb**	**18 12 58.6**	**+0.5**
AP01	**Chacalluta**	**2.29**	**6**	*e*P	**Pb**	**18 12 30.5**	**-0.8**
AP01				*i* S	**Sb**	**18 12 59.1**	**-0.2**
AP01				IAML		18 13 13.2	
	comp=N,2μm,0.4s						
LVC	**Limon Verde**	**2.48**	**142**	P	**Pb**	**18 12 33.1**	**-1.8**
	comp=N,25nm,0.3s,baz=332,slow=9.0,SNR=127						
LVC				S	**Sb**	**18 13 03.0**	**-2.3**
	comp=N,30nm,0.3s,baz=336,slow=10,SNR=9.2						
PB16	**IPOC Station P**	**2.52**	**24**	*e*P	**Pb**	**18 12 34.4**	**-1.2**
PB16				*i* S	**Sb**	**18 13 05.7**	**-0.9**
PB16				IAML		18 13 11.2	
	comp=N,374nm,0.7s						
LPAZ	**La Paz**	**4.93**	**29**	P	Pn	18 13 09.8	+5.5
	comp=N,1.9nm,0.3s,baz=204,slow=5.2,SNR=20						
SIV	**San Ignacio**	**10.15**	**64**	P	**Pn**	**18 14 15.9**	**+0.4**
	comp=N,2.1nm,0.3s,baz=264,slow=12,SNR=34						
CFA	**Coronel Fontan**	**11.10**	**170**	P	Pn	18 14 35.2	+6.7
	comp=N,0.4nm,0.3s,baz=311,slow=11,SNR=2.3						
BDFB	**Brasilia**	**22.01**	**81**	LR	LR	18 26 27.7	
	comp=N,89nm,18.6s,baz=33,slow=40						
QSPA	**South Pole Qui**	**69.53**	**180**	P	**P**	**18 22 59.2**	**+1.1**
	comp=N,0.6nm,0.5s,baz=158,slow=3.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**78.55**	**71**	P	**P**	**18 23 50.9**	**-0.6**
	comp=N,1.5nm,0.5s,baz=252,slow=5.8,SNR=18						
H11S2	**WAKE ISLAND Hyl**	**26.22**	**278**	T	T	20 50 05.2	
	baz=102,slow=75,SNR=110						
H11S1	**WAKE ISLAND Hyl**	**26.23**	**278**	T	T	20 50 01.9	
	baz=102,slow=75,SNR=59						
H11S3	**WAKE ISLAND Hyl**	**26.24**	**278**	T	T	20 50 02.9	
	baz=102,slow=75,SNR=69						
H11N3	**WAKE ISLAND Hyl**	**26.29**	**280**	T	T	20 49 60.0	
	baz=102,slow=75,SNR=34						
H11N2	**WAKE ISLAND Hyl**	**26.30**	**280**	T	T	20 50 01.3	
	baz=102,slow=75,SNR=35						
H11N1	**WAKE ISLAND Hyl**	**26.30**	**280**	T	T	20 50 01.9	
	baz=102,slow=75,SNR=25						
MKAR	**Makanchi Array**	**145.84**	**34**	PKPbc	**PKPab**	**18 31 29.1**	**-0.2**
	comp=N,0.9nm,0.6s,baz=330,slow=3.6,SNR=8.3						

*BGR **08** 18:12:25.6±0.5, 47°.19N×7°.13E, h11km±2km, ML2.9/17, Error ellipse: s-maj=3.3km s-min=2.2km az=37.0*
*ZUR **08** 18:12:25.3, 47°.16N×7°.15E, h8km, MLh2.8/44, Error ellipse: s-maj=1.8km s-min=0.5km az=205.0*
*STR **08** 18:12:25.9±0.3, 47°.N±2°×°±°, h10km, MLv2.7/6*
*LDG **08** 18:12:25.6±0.0, 47°.14N×7°.15E, h10km, Md3.0/2, Ml3.1/40, Error ellipse: s-maj=0.8km s-min=0.6km az=137.0*
*PRU **08** 18:12:29.7±0.0, 47°.08N×7°.40E, h0km*
ISC 08 18:12:24.4±0.7, 47°.16N±0°.01×7°.14E±0°.01, h10km, n184, σ1§47/357, 44C-17D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOURR	**Bourrignon**	**0.24**	**15**	↓Pg	**Pg**	**18 12 30.8**	**+1.4**
	3.1nm,SNR=39						
BOURR				↓Pg	**Pg**	**18 12 30.8**	**+1.4**
BOURR				Sg	**Sg**	**18 12 34.6**	**+1.8**
BOURR	**Bourrignon**	**0.24**	**15**	↓Pg	**Pg**	**18 12 30.8**	**+1.4**
BOURR				Sg	**Sg**	**18 12 34.7**	**+1.8**
SOLB	**Solothurn Schu**	**0.26**	**79**	↑Pg	**Pg**	**18 12 30.8**	**+1.1**
SOLB				↑Pg	**Pg**	**18 12 30.8**	**+1.1**
	3.0nm,SNR=8.4						
SOLZ	**Solothurn, Zeu**	**0.28**	**79**	↑Pg	**Pg**	**18 12 31.0**	**+1.0**
	1.9nm,SNR=7.5						
SOLZ				↑Pg	**Pg**	**18 12 31.0**	**+1.0**
LOMF	**Lomont**	**0.29**	**312**	Pg	**Pg**	**18 12 31.8**	**+1.6**
LOMF				Sg	**Sg**	**18 12 36.0**	**+1.9**
LOMF	**Lomont**	**0.29**	**312**	↓Pg	**Pg**	**18 12 31.8**	**+1.6**
LOMF				Sg	**Sg**	**18 12 36.0**	**+1.9**
SCOU	**Cournillens**	**0.31**	**184**	↓Pg	**Pg**	**18 12 31.5**	**+1.0**
SCOU				↓Pg	**Pg**	**18 12 31.5**	**+1.0**
	1.0nm,SNR=7.4						
SCOU				Sg	**Sg**	**18 12 36.0**	**+1.4**
CHMF	**Charmoille**	**0.34**	**285**	Pg	**Pg**	**18 12 32.5**	**+1.3**
CHMF	**Charmoille**	**0.34**	**285**	↑Pg	**Pg**	**18 12 32.5**	**+1.3**
	2.4nm,SNR=26						
CHMF				↑Pg	**Pg**	**18 12 32.5**	**+1.3**
CHMF				Sg	**Sg**	**18 12 37.5**	**+1.7**
STAF	**Tafers**	**0.36**	**171**	↓Pg	**Pg**	**18 12 32.5**	**+1.0**
STAF				↓Pg	**Pg**	**18 12 32.5**	**+1.0**
	1.1nm,SNR=7.6						
STAF				Sg	**Sg**	**18 12 37.7**	**+1.4**
TORNY	**Torny/Romont**	**0.40**	**198**	↑Pg	**Pg**	**18 12 33.5**	**+1.2**
	1.1nm,SNR=15						
TORNY				↑Pg	**Pg**	**18 12 33.5**	**+1.2**
TORNY				Sg	**Sg**	**18 12 39.3**	**+1.5**
BALST	**Balsthal**	**0.42**	**65**	↑Pg	**Pg**	**18 12 33.7**	**+1.0**
	0.6nm,SNR=7.0						
BALST				↑Pg	**Pg**	**18 12 33.7**	**+1.0**
BALST	**Balsthal**	**0.42**	**65**	*e*Pg	**Pg**	**18 12 33.7**	**+1.0**
BALST				*e*Sg	**Sg**	**18 12 39.4**	**+1.2**
SRER	**Reinach, Raine**	**0.47**	**41**	↑Pg	**Pg**	**18 12 35.0**	**+1.4**
	0.7nm,SNR=3.4						
SRER				↑Pg	**Pg**	**18 12 35.0**	**+1.4**
SBIS2	**Binningen**	**0.49**	**38**	↑Pg	**Pg**	**18 12 35.4**	**+1.5**
SBIS2				↑Pg	**Pg**	**18 12 35.4**	**+1.5**
	0.9nm,SNR=4.4						
SBIS2				Sg	**Sb**	**18 12 42.4**	**+0.1**
MATTE	**Schuetzenmatte**	**0.49**	**37**	Pg	**Pg**	**18 12 35.2**	**+1.2**
	0.7nm,SNR=2.1						
MATTE				Pg	**Pg**	**18 12 35.2**	**+1.2**
BRANT	**Les Verrieres**	**0.51**	**244**	↑Pg	**Pg**	**18 12 35.6**	**+1.3**
BRANT				↑Pg	**Pg**	**18 12 35.6**	**+1.3**
	0.8nm,SNR=5.4						
SBEG	**Bettingen Gewe**	**0.55**	**41**	Pg	**Pg**	**18 12 36.2**	**+1.1**
	0.6nm,SNR=5.2						
SBEG				Pg	**Pg**	**18 12 36.2**	**+1.1**
SAUR	**Augst-Roemermu**	**0.55**	**46**	Pg	**Pg**	**18 12 36.1**	**+1.0**
SAUR				Pg	**Pg**	**18 12 36.1**	**+1.0**
	0.9nm,SNR=5.4						
SKAF	**Kaiseraugst-Fr**	**0.55**	**46**	↑Pg	**Pg**	**18 12 36.1**	**+1.0**
	0.8nm,SNR=3.2						
SKAF				↑Pg	**Pg**	**18 12 36.1**	**+1.0**
WIMIS	**Wimmis**	**0.60**	**146**	↓Pg	**Pg**	**18 12 36.8**	**+0.8**
	0.4nm,SNR=6.0						
WIMIS				↓Pg	**Pg**	**18 12 36.8**	**+0.8**
DAGMA	**Lutertal, Dagm**	**0.60**	**83**	↑Pg	**Pg**	**18 12 36.9**	**+0.9**
	0.6nm,SNR=6.6						
DAGMA				↑Pg	**Pg**	**18 12 36.9**	**+0.9**
ROTHE	**Rothenfluh**	**0.62**	**59**	↑Pg	**Pg**	**18 12 37.6**	**+1.1**
	0.9nm,SNR=11						
ROTHE				↑Pg	**Pg**	**18 12 37.6**	**+1.1**
EMMET	**Emmethof**	**0.66**	**65**	↑Pg	**Pg**	**18 12 38.2**	**+1.0**
	1.5nm,SNR=22						
EMMET				↑Pg	**Pg**	**18 12 38.2**	**+1.0**
HINF	**Hinteralfeld**	**0.69**	**344**	*e*Pg	**Pg**	**18 12 38.7**	**+1.0**
HINF				*e*Sg	**Sg**	**18 12 47.8**	**+1.1**
	158nm,0.2s						
HINF				*e*Sn	**Sb**	**18 12 50.4**	**+2.3**
ENDD	**Endenburg**	**0.69**	**36**	↑Pg	**Pg**	**18 12 38.6**	**+0.8**
ENDD				Sg	**Sg**	**18 12 47.7**	**+0.9**
**MOF

KIZ	**Kirchzarten**	**0.96**	**33**	Pg	**Pg**	**18 12 43.6**	**+0.8**
KIZ	**Kirchzarten**	**0.96**	**33**	⇑Pg	**Pg**	**18 12 43.1**	**+0.3**
KIZ				⇑Pg	**Pg**	**18 12 43.1**	**+0.3**
	0.6nm,SNR=6.2						
KIZ	**Kirchzarten**	**0.96**	**33**	⇑Pn	**Pg**	**18 12 43.1**	**+0.3**
KIZ				Pg	**Pg**	**18 12 43.6**	**+0.8**
KIZ				Sg	**Sg**	**18 12 56.0**	**+0.7**
FBB	**Freiburg im Br**	**0.97**	**30**	Pg	**Pb**	**18 12 44.3**	**+1.0**
FBB				Sg	**Sb**	**18 12 57.1**	**+0.9**
FIESA	**Fiescheralp**	**0.98**	**137**	⇓Pn	**Pg**	**18 12 44.0**	**+0.7**
	0.4nm,SNR=8.6						
FIESA				⇓Pn	**Pg**	**18 12 44.0**	**+0.7**
HAU	**Haudompre**	**1.00**	**328**	*e*Pg	**Pg**	**18 12 44.6**	**+0.9**
HAU				*e*Sg	**Sg**	**18 12 58.0**	**+1.3**
	153nm,0.2s						
BERGE	**Lenzkirch (DE)**	**1.00**	**44**	Pn	**Pg**	**18 12 43.9**	**+0.2**
	0.5nm,SNR=9.2						
BERGE				Pn	**Pg**	**18 12 43.9**	**+0.2**
BERGE	**Lenzkirch (DE)**	**1.00**	**44**	⇑Pn	**Pg**	**18 12 43.9**	**+0.2**
BERGE				*e*Pg	**Pg**	**18 12 43.9**	**+0.2**
BERGE				*e*Sg	**Sg**	**18 12 57.7**	**+0.9**
ZUR	**Degenried**	**1.00**	**77**	Pn	**Pg**	**18 12 44.4**	**+0.7**
ZUR				Pn	**Pg**	**18 12 44.4**	**+0.7**
	0.6nm,SNR=6.1						
FLACH	**Flaach**	**1.06**	**66**	Pn	**Pg**	**18 12 45.1**	**+0.4**
FLACH				Pn	**Pg**	**18 12 45.1**	**+0.4**
	1.2nm,SNR=14						
ECH	**Echery**	**1.06**	**1**	Pg	**Pg**	**18 12 45.9**	**+1.2**
ECH	**Echery**	**1.06**	**1**	Pn	**Pg**	**18 12 45.0**	**+0.2**
ECH				Pn	**Pg**	**18 12 45.0**	**+0.2**
	0.6nm,SNR=11						
ECH	**Echery**	**1.06**	**1**	*e*Pg	**Pg**	**18 12 44.8**	**+0.1**
ECH				*e*Sg	**Sg**	**18 12 58.9**	**+0.3**
STIEG	**Stiegenhof Hun**	**1.09**	**71**	Pn	**Pg**	**18 12 45.6**	**+0.3**
	2.1nm,SNR=2.1						
STIEG				Pn	**Pg**	**18 12 45.6**	**+0.3**
SLE	**Schleitheim**	**1.10**	**56**	⇑Pn	**Pg**	**18 12 45.3**	**-0.2**
SLE				⇑Pn	**Pg**	**18 12 45.3**	**-0.2**
	1.0nm,SNR=20						
SLE	**Schleitheim**	**1.10**	**56**	*e*Pg	**Pg**	**18 12 45.3**	**-0.2**
SLE				*e*Sg	**Sg**	**18 13 00.1**	**+0.2**
SIMPL	**Simplonpass**	**1.10**	**146**	⇓Pn	**Pg**	**18 12 46.2**	**+0.6**
	0.4nm,SNR=9.0						
SIMPL				⇓Pn	**Pg**	**18 12 46.2**	**+0.6**
TRULL	**Truellikon**	**1.16**	**64**	Pn	**Pb**	**18 12 46.3**	**-0.2**
TRULL				Pn	**Pb**	**18 12 46.3**	**-0.2**
	1.5nm,SNR=18						
OG02	**Monnetier-Morn**	**1.19**	**212**	Pg	**Pg**	**18 12 48.4**	**+1.2**
OG02				Sg	**Sn**	**18 13 04.2**	**+0.9**
WILA	**Wila**	**1.23**	**77**	*e*Pn	**Pn**	**18 12 47.9**	**+0.2**
WILA				*e*Pg	**Pg**	**18 12 48.9**	**+0.8**
WILA				*e*Sg	**Sb**	**18 13 03.7**	**-0.1**
MMK	**Mattmark**	**1.25**	**152**	Pn	**Pn**	**18 12 48.7**	**+0.6**
	0.2nm,SNR=3.3						
MMK				Pn	**Pn**	**18 12 48.7**	**+0.6**
CDF	**Champ du Feu**	**1.26**	**4**	*e*Pn	**Pn**	**18 12 47.8**	**-0.3**
CDF	**Champ du Feu**	**1.26**	**4**	*e*Pg	**Pb**	**18 12 49.4**	**+1.1**
CDF				*e*Sg	**Sb**	**18 13 05.7**	**+1.1**
	97nm,0.3s						
WLS	**Welschbruch**	**1.26**	**7**	Sg	**Sg**	**18 13 06.2**	**+1.1**
LLS	**Linth-Limmern**	**1.32**	**103**	⇓Pn	**Pn**	**18 12 49.9**	**+0.8**
	0.3nm,SNR=5.0						
REMY	**Saint-Rhmy-en**	**1.32**	**179**	P	**Pn**	**18 12 50.1**	**+0.9**
THEF	**They Montfort**	**1.32**	**324**	Pg	**Pg**	**18 12 50.9**	**+1.1**
THEF				Sg	**Sg**	**18 13 08.7**	**+1.8**
SISB	**Singen-Schiene**	**1.35**	**66**	Pn	**Pn**	**18 12 49.5**	**+0.2**
SISB				Pg	**Pg**	**18 12 51.4**	**+1.1**
SISB				Sn	**Sb**	**18 13 06.9**	**-0.2**
SISB				Sg	**Sg**	**18 13 09.4**	**+1.6**
EMING	**Emmingen-Lipti**	**1.37**	**57**	*e*Pn	**Pn**	**18 12 49.0**	**-0.6**
EMING				*e*Pg	**Pb**	**18 12 51.3**	**+1.2**
EMING				*e*Sn	**Sb**	**18 13 07.0**	**-0.7**
EMING				*e*Sg	**Sg**	**18 13 09.5**	**+1.1**
SATI	**Passo dei Sala**	**1.38**	**158**	P	**Pb**	**18 12 51.5**	**+1.1**
BFO	**Black Forest**	**1.42**	**34**	*e*Pn	**Pn**	**18 12 49.5**	**-0.8**
BFO				*e*Pg	**Pb**	**18 12 52.3**	**+1.3**
BFO				*e*Sn	**Sn**	**18 13 07.4**	**-1.7**
BFO				*e*Sg	**Sb**	**18 13 10.5**	**+1.3**
WALHA	**Wallhausen, DE**	**1.47**	**65**	*e*Pn	**Pn**	**18 12 50.7**	**-0.3**
WALHA				*e*Pg	**Pb**	**18 12 53.1**	**+1.2**
WALHA				*e*Sn	**Sn**	**18 13 09.5**	**-0.8**
WALHA				*e*Sg	**Sg**	**18 13 12.8**	**+1.0**
RSL	**Roselend**	**1.51**	**194**	Pg	**Pb**	**18 12 54.1**	**+1.4**
OPP	**Oppenau**	**1.52**	**27**	Pn	**Pn**	**18 12 50.6**	**-1.0**
OPP				Pg	**Pb**	**18 12 53.9**	**+1.3**
OPP				Sg	**Sg**	**18 13 13.7**	**+0.5**
PLONS	**Plons/SG**	**1.54**	**93**	*e*Pn	**Pn**	**18 12 52.7**	**+0.8**
PLONS				*e*Pg	**Pg**	**18 12 54.7**	**+0.8**
PLONS				*e*Sn	**Sn**	**18 13 11.4**	**-0.6**
PLONS				*e*Sg	**Sg**	**18 13 14.9**	**+1.1**
CIRO	**Champorcher**	**1.58**	**169**	P	**Pb**	**18 12 54.5**	**+0.6**
LIENZ	**Kamor/St.Gall**	**1.61**	**84**	Pn	**Pn**	**18 12 53.6**	**+0.6**
LIENZ				Pg	**Pg**	**18 12 55.7**	**+0.4**
LIENZ				Sn	**Sn**	**18 13 13.4**	**-0.6**
LIENZ				Sg	**Sg**	**18 13 17.8**	**+1.5**
GUT	**Gutenstein**	**1.62**	**55**	Pn	**Pn**	**18 12 52.2**	**-0.8**
GUT				Pg	**Pb**	**18 12 55.4**	**+1.0**
GUT				Sn	**Sn**	**18 13 12.9**	**-1.1**
GUT				Sg	**Sg**	**18 13 16.7**	**+0.3**
LPL	**La Plagne**	**1.67**	**190**	*e*Pg	**Pb**	**18 12 56.6**	**+1.3**
LPL				*e*Sg	**Sg**	**18 13 19.2**	**+1.2**
	48nm,0.4s						
LPG	**La Plagne**	**1.68**	**189**	*e*P	**Pn**	**18 12 55.4**	**+1.3**
LPG	**La Plagne**	**1.68**	**189**	*e*Pg	**Pg**	**18 12 57.4**	**+0.7**
LPG				*e*Sg	**Sg**	**18 13 19.2**	**+0.7**
	64nm,0.4s						
PAGF	**Fort de Pagny**	**1.69**	**326**	*e*Pn	**Pn**	**18 12 54.3**	**+0.3**
PAGF	**Fort de Pagny**	**1.69**	**326**	*e*Pg	**Pg**	**18 12 57.8**	**+1.0**
	baz=147						
PAGF				*e*Sg	**Sg**	**18 13 19.4**	**+0.7**
	39nm,0.2s						
LSD	**Lago del Serru**	**1.70**	**180**	P	**Pb**	**18 12 56.8**	**+0.9**
SFTF	**Sexfontaines**	**1.76**	**307**	*e*Pn	**Pn**	**18 12 55.5**	**+0.5**
	baz=128						
SFTF	**Sexfontaines**	**1.76**	**307**	*e*Pg	**Pg**	**18 12 58.8**	**+0.6**
	baz=127						
SFTF				*e*Sn	**Sn**	**18 13 16.2**	**-1.3**
SFTF				*e*Sg	**Sb**	**18 13 20.9**	**+1.9**
	49nm,0.2s						
OGSM	**Saint Maurice**	**1.84**	**213**	Pg	**Pb**	**18 13 00.0**	**+1.8**
DAVA	**Damuels**	**1.87**	**85**	*e*Pn	**Pn**	**18 12 57.4**	**+0.7**
DAVA				*e*Pg	**Pg**	**18 13 00.7**	**+0.4**
DAVA				*e*Sg	**Sg**	**18 13 25.3**	**+0.7**
DAVA	**Damuels**	**1.87**	**85**	*e*Pg	**Pb**	**18 13 00.4**	**+1.6**
	2.7nm,0.1s,SNR=18						
DAVA				*i* Sn	**Sg**	**18 13 24.4**	**-0.2**
	51nm,0.2s						
LBG	**Lerchenberg**	**1.87**	**36**	Pn	**Pn**	**18 12 55.2**	**-1.3**
LBG				Pg	**Pg**	**18 13 00.7**	**+0.4**
LBG				Sg	**Sg**	**18 13 24.8**	**+0.1**
LANF	**Langenberg**	**1.88**	**14**	Sg	**Sg**	**18 13 25.6**	**+0.8**
MEZF	**Maizieres J'vi**	**1.94**	**314**	*e*Pn	**Pn**	**18 12 57.2**	**-0.3**
	baz=134						
MEZF	**Maizieres J'vi**	**1.94**	**314**	*e*Pg	**Pg**	**18 13 02.4**	**+0.7**
	baz=133						
MEZF				*e*Sg	**Sg**	**18 13 27.4**	**+0.5**
	62nm,0.3s						
PEB	**Petersbachel**	**1.95**	**11**	Sg	**Sg**	**18 13 27.4**	**+0.4**
BUCH	**Bad Urach**	**1.98**	**48**	Pg	**Pg**	**18 13 02.5**	**+0.3**
BUCH				Sg	**Sg**	**18 13 27.9**	**0.0**
UBR	**Ueberruh**	**2.08**	**74**	*e*Pg	**Pg**	**18 13 04.6**	**+0.3**
UBR				*e*Sn	**Sn**	**18 13 23.9**	**-1.6**
UBR				*e*Sg	**Sg**	**18 13 32.1**	**+0.8**
STU	**Stuttgart**	**2.12**	**40**	Pg	**Pg**	**18 13 05.6**	**+0.4**
BRET	**Bretten**	**2.13**	**29**	Pg	**Pg**	**18 13 05.7**	**+0.5**
BRET				Sn	**Sn**	**18 13 24.4**	**-2.1**
BRET				Sg	**Sg**	**18 13 32.8**	**+0.1**
OBER	**Oberstdorf**	**2.16**	**82**	Sg	**Sg**	**18 13 34.2**	**+0.3**
LOR	**Lormes**	**2.24**	**274**	*e*Pn	**Pn**	**18 13 01.1**	**-0.4**
	baz=94						
LOR	**Lormes**	**2.24**	**274**	*e*Pg	**Pb**	**18 13 07.2**	**+2.3**
	baz=95						
LOR				*e*Sg	**Sb**	**18 13 35.2**	**+2.5**
	51nm,0.3s						
DUP	**Duppenweiler**	**2.27**	**354**	Sg	**Sg**	**18 13 37.3**	**+0.1**
SMF	**Signal de Mont**	**2.32**	**258**	*e*Pn	**Pn**	**18 13 02.3**	**-0.3**
SMF	**Signal de Mont**	**2.32**	**258**	*e*P	**Pn**	**18 13 04.6**	**+2.0**
SMF	**Signal de Mont**	**2.32**	**258**	*e*Pg	**Pb**	**18 13 08.5**	**+2.2**
SMF				*e*Sn	**Sn**	**18 13 28.7**	**-2.5**
SMF				*e*Sg	**Sg**	**18 13 38.5**	**-0.3**
	26nm,0.2s						
BHB	**Bricherasio**	**2.32**	**178**	P	**Pn**	**18 13 03.6**	**+0.9**
ORIF	**Oris-en-Rattie**	**2.41**	**202**	*e*Pn	**Pn**	**18 13 04.1**	**+0.2**
ORIF	**Oris-en-Rattie**	**2.41**	**202**	*e*Pg	**Pb**	**18 13 10.1**	**+2.3**
ORIF				*e*Sn	**Sn**	**18 13 30.0**	**-3.5**
ORIF				*e*Sg	**Sb**	**18 13 40.4**	**+2.8**
	34nm,0.3s						
MBDF	**Montbardon**	**2.44**	**186**	*e*Pg	**Pb**	**18 13 09.5**	**+1.0**
MBDF				*e*Sg	**Sg**	**18 13 42.6**	**-0.3**
	31nm,0.5s						
FETA	**Feichten**	**2.46**	**92**	Pn	**Pg**	**18 13 11.2**	**-0.3**
	1.4nm,0.2s						
FETA				Sg	**Sg**	**18 13 44.1**	**+0.8**
	9.1nm,0.5s						
SSF	**Saint Saulge**	**2.48**	**269**	*e*Pn	**Pn**	**18 13 05.1**	**+0.2**
SSF	**Saint Saulge**	**2.48**	**269**	*e*Pg	**Pb**	**18 13 11.7**	**+2.6**
SSF				*e*Sn	**Sn**	**18 13 32.9**	**-2.3**
SSF				*e*Sg	**Sg**	**18 13 43.3**	**-0.8**
	17nm,0.2s						
RETA	**Reutte**	**2.49**	**81**	Pg	**Pg**	**18 13 12.1**	**0.0**
RETA				Sn	**Sn**	**18 13 33.7**	**-1.8**
RETA	**Reutte**	**2.49**	**81**	*e*Pn	**Pg**	**18 13 12.1**	**0.0**
	2.4nm,0.1s						
RETA				*i* Sg	**Sg**	**18 13 44.0**	**-0.3**
	11nm,0.2s						
IMS	**Imsbach**	**2.49**	**12**	Pn	**Pn**	**18 13 01.6**	**-3.4**
IMS				Sg	**Sg**	**18 13 44.3**	**0.0**
HDH	**Heidenheim-Cha**	**2.51**	**54**	Pg	**Pg**	**18 13 12.4**	**-0.1**
HDH				Sn	**Sn**	**18 13 33.4**	**-2.6**
SWS	**Schriesheim-Wi**	**2.55**	**24**	Sg	**Sg**	**18 13 47.2**	**+0.9**
RIVT	**Riveris**	**2.56**	**355**	Pn	**Pn**	**18 13 07.0**	**+1.0**
RIVT				*e*Pg	**Pg**	**18 13 13.5**	**0.0**
RIVT				*e*Sg	**Sb**	**18 13 45.5**	**+3.5**
WLF	**Walferdange**	**2.59**	**346**	*e*Pg	**Pg**	**18 13 14.2**	**+0.1**
WLF				*e*Sg	**Sg**	**18 13 46.8**	**-0.8**
AVF	**Avril sur Loir**	**2.62**	**263**	*e*Pn	**Pn**	**18 13 06.8**	**+0.1**
AVF	**Avril sur Loir**	**2.62**	**263**	*e*P	**Pn**	**18 13 08.2**	**+1.5**
AVF	**Avril sur Loir**	**2.62**	**263**	*e*Pg	**Pg**	**18 13 14.5**	**0.0**
AVF				*e*Sn	**Sn**	**18 13 36.1**	**-2.4**
AVF				*e*Sg	**Sg**	**18 13 47.7**	**-0.7**
	8.2nm,0.2s						
TOD	**Tromm**	**2.69**	**24**	Sg	**Sg**	**18 13 50.6**	**-0.2**
MOTA	**Moosalm**	**2.71**	**85**	*e*Pn	**Pn**	**18 13 10.9**	**+2.8**
	0.6nm,0.1s						
MOTA				*e*Sg	**Sg**	**18 13 50.2**	**-1.1**
	6.5nm,0.2s						
ABH	**Alteburg**	**2.74**	**6**	*e*Pg	**Pg**	**18 13 17.3**	**+0.5**
ABH				*e*Sg	**Sg**	**18 13 51.8**	**-0.5**
SIND	**Sindeldorf**	**2.74**	**36**	Pg	**Pg**	**18 13 16.6**	**-0.3**
SIND				Sg	**Sg**	**18 13 51.7**	**-0.8**
SQTA	**Sankt Quirin**	**2.78**	**87**	*e*Pn	**Pn**	**18 13 11.7**	**+2.7**
	0.8nm,0.1s						
SQTA				*e*Sg	**Sg**	**18 13 53.4**	**-0.2**
	26nm,0.5s						
VIVF	**Saint-Julien-l**	**2.87**	**218**	*e*Pn	**Pn**	**18 13 09.5**	**-0.8**
VIVF	**Saint-Julien-l**	**2.87**	**218**	*e*Pg	**Pb**	**18 13 18.6**	**+2.8**
VIVF				*e*Sg	**Sb**	**18 13 54.8**	**+3.8**
	41nm,0.3s						
FUR	**Furstenfeldbru**	**2.97**	**69**	*e*Sg	**Sg**	**18 13 59.6**	**-0.3**
BGF	**Bois d'Agland**	**3.00**	**260**	*e*Pn	**Pn**	**18 13 11.8**	**-0.3**
BGF	**Bois d'Agland**	**3.00**	**260**	*e*Pg	**Pg**	**18 13 21.7**	**-0.3**
BGF				*e*Sn	**Sn**	**18 13 46.2**	**-1.9**
BGF				*e*Sg	**Sg**	**18 13 59.8**	**-1.1**
	32nm,0.4s						
WATA	**Walderalm**	**3.03**	**85**	*i* Pn	**Pn**	**18 13 15.2**	**+2.7**
	0.8nm,0.1s						
HYF	**Humbligny**	**3.07**	**274**	*e*P	**Pn**	**18 13 14.8**	**+1.9**
HYF	**Humbligny**	**3.07**	**274**	*e*Pg	**Pb**	**18 13 20.5**	**+1.4**
HYF				*e*Sg	**Sg**	**18 14 02.3**	**-0.6**
TNS	**Taunus Mts**	**3.19**	**15**	*e*Sg	**Sg**	**18 14 06.2**	**-0.5**
FACH	**Fachingen**	**3.25**	**10**	Sg	**Sg**	**18 14 08.3**	**-0.5**
SBF	**Sospel**	**3.30**	**176**	*e*Pn	**Pn**	**18 13 17.3**	**+1.1**
SBF	**Sospel**	**3.30**	**176**	*e*Pg	**Pg**	**18 13 27.6**	**-0.1**
SBF				*e*Sn	**Sn**	**18 13 51.1**	**-4.4**
SBF				*e*Sg	**Sg**	**18 14 09.3**	**-1.1**
	15nm,0.5s						
GIVF	**Givet**	**3.32**	**333**	*e*Pn	**Pn**	**18 13 16.0**	**-0.4**
GIVF	**Givet**	**3.32**	**333**	*e*Pg	**Pg**	**18 13 27.7**	**-0.3**
GIVF				*e*Sg	**Sg**	**18 14 10.4**	**-0.6**
	14nm,0.5s						
SMRF	**Simiane la Rot**	**3.37**	**200**	*e*Pn	**Pn**	**18 13 16.4**	**-0.7**
SMRF	**Simiane la Rot**	**3.37**	**200**	*e*Pg	**Pg**	**18 13 27.9**	**-1.0**
SMRF				*e*Sn	**Sn**	**18 13 53.8**	**-3.3**
SMRF				*e*Sg	**Sg**	**18 14 10.4**	**-2.1**
	3.7nm,0.3s						
GRC1	**Grafenberg Arr**	**3.47**	**56**	Pg	**Pg**	**18 13 29.9**	**-0.9**
BAIF	**Baives**	**3.49**	**327**	*e*Pn	**Pn**	**18 13 20.0**	**+1.3**
BAIF	**Baives**	**3.49**	**327**	*e*Pg	**Pg**	**18 13 30.7**	**-0.6**
BAIF				*e*Sn	**Sn**	**18 13 57.7**	**-2.4**
BAIF				*e*Sg	**Sg**	**18 14 15.4**	**-1.1**
	3.8nm,0.2s						
TCF	**Toulx Ste Croi**	**3.50**	**257**	*e*Pn	**Pn**	**18 13 18.2**	**-0.7**
TCF	**Toulx Ste Croi**	**3.50**	**257**	*e*Pg	**Pg**	**18 13 30.5**	**-0.9**
TCF				*e*Sn	**Sn**	**18 13 57.1**	**-3.2**
	6.7nm,0.3s						
TCF				*e*Sg	**Sg**	**18 14 15.3**	**-1.4**
	6.7nm,0.3s						
FRF	**La Foret Royal**	**3.62**	**186**	*e*Pn	**Pn**	**18 13 19.7**	**-0.7**
FRF	**La Foret Royal**	**3.62**	**186**	*e*Pg	**Pb**	**18 13 31.8**	**+3.4**
FRF				*e*Sn	**Sn**	**18 13 59.5**	**-3.6**
	3.8nm,0.3s						
FRF				*e*Sg	**Sg**	**18 14 17.9**	**-2.5**
	3.3nm,0.2s						
GRB2	**Grafenberg Arr**	**3.69**	**53**	Pg	**Pg**	**18 13 34.1**	**-1.1**
ABTA	**Abfaltersbach**	**3.70**	**94**	*e*Pn	**Pn**	**18 13 24.0**	**+2.3**
	0.6nm,0.3s						
ABTA				*e*Sn	**Sn**	**18 14 08.6**	**+3.2**
	4.3nm,0.5s						
GRF	**Grafenberg Arr**	**3.72**	**46**	*e*Pg	**Pg**	**18 13 35.0**	**-0.6**
GRF				*e*Sg	**Sg**	**18 14 21.8**	**-1.9**
LASF	**Ste Croix**	**3.85**	**218**	*e*Pn	**Pn**	**18 13 22.1**	**-1.2**
LASF	**Ste Croix**	**3.85**	**218**	*e*Pg	**Pg**	**18 13 36.5**	**-1.6**
LASF				*e*Sn	**Sn**	**18 14 05.3**	**-3.6**
LASF				*e*Sg	**Sg**	**18 14 25.4**	**-2.5**
	17nm,0.4s						
LMR	**La Mourre**	**3.85**	**187**	*e*Pn	**Pn**	**18 13 23.0**	**-0.7**
LMR	**La Mourre**	**3.85**	**187**	*e*Pg	**Pg**	**18 13 37.6**	**-0.5**
LMR				*e*Sn	**Sn**	**18 14 05.1**	**-3.8**
LMR				*e*Sg	**Sb**	**18 14 24.5**	**+5.5**
	4.9nm,0.5s						
ROTZ	**Rotzenmuhle**	**4.26**	**50**	*e*Sg	**Sg**	**18 14 39.2**	**-2.1**
RJF	**Les Rejaudoux**	**4.32**	**247**	*e*Pn	**Pn**	**18 13 29.9**	**-0.2**
RJF	**Les Rejaudoux**	**4.32**	**247**	*e*Pg	**Pg**	**18 13 45.5**	**-1.6**
RJF				*e*Sg	**Sg**	**18 14 41.1**	**-1.9**
	2.9nm,0.3s						
NKC	**Novy Kostel**	**4.67**	**47**	*e*PG	**Pg**	**18 13 52.6**	**-1.2**
KHC	**Kasperske Hory**	**4.74**	**63**	*e*PG	**Pg**	**18 13 53.2**	**-2.0**
KHC				*e*SG	**Sg**	**18 14 56.1**	**-0.5**
PGF	**Pioggiola**	**4.80**	**163**	*e*Pn	**Pn**	**18 13 35.8**	**-1.0**
PGF				*e*Sn	**Sn**	**18 14 27.1**	**-5.3**
	0.6nm,0.4s						
LFF	**La Frestale**	**4.98**	**246**	*e*Pg	**Pg**	**18 13 57.4**	**-2.3**
LFF				*e*Sg	**Sg**	**18 15 02.0**	**-2.1**
	7.2nm,0.4s						
MFF	**Saint Martin d**	**5.03**	**266**	*e*Pn	**Pn**	**18 13 40.0**	**+0.2**
MFF				*e*Sg	**Sg**	**18 15 02.7**	**-3.0**
	2.1nm,0.2s						
LDF	**La Druitiere**	**5.09**	**289**	*e*Pn	**Pn**	**18 13 40.2**	**-0.5**
LDF	**La Druitiere**	**5.09**	**289**	*e*Pg	**Pg**	**18 13 59.7**	**-2.2**
LDF				*e*Sn	**Sn**	**18 14 36.4**	**-3.1**
LDF				*e*Sg	**Sg**	**18 15 04.8**	**-3.0**
	4.2nm,0.3s						
MTLF	**Montolieu**	**5.16**	**224**	*e*Pn	**Pn**	**18 13 40.9**	**-0.8**
MTLF	**Montolieu**	**5.16**	**224**	*e*Pg	**Pg**	**18 14 00.3**	**-2.9**
MTLF				*e*Sn	**Sn**	**18 14 37.2**	**-4.1**
MTLF				*e*Sg	**Sg**	**18 15 06.7**	**-3.3**
	3.7nm,0.3s						
FLN	**La Foliniere**	**5.36**	**290**	*e*Pn	**Pn**	**18 13 43.9**	**-0.5**
FLN	**La Foliniere**	**5.36**	**290**	*e*Pg	**Pg**	**18 14 06.5**	**-0.6**
	baz=111						
FLN				*e*Sg	**Sg**	**18 15 13.5**	**-3.0**
	9.9nm,0.3s,baz=110						
GRR	**Gorron**	**5.53**	**286**	*e*Pn	**Pn**	**18 13 46.0**	**-0.7**
GRR				*e*Sn	**Sn**	**18 14 46.7**	**-3.6**
	3.7nm,0.2s						
GRR				*e*Sg	**Sg**	**18 15 18.2**	**-3.6**
	4.9nm,0.2s						
CLL	**Collm**	**5.66**	**41**	*e*Pn	Pn	18 13 43.0	-5.4
CLL				*e*		18 15 10.0	
CLL				*e*Sg	**Sg**	**18 15 28.0**	**+2.1**
PRU	**Pruhonice**	**5.67**	**57**	*e*SG	**Sg**	**18 15 26.5**	**+0.2**
GOPC	**GO Pecny, Ondr**	**5.78**	**59**	*e*SG	**Sg**	**18 15 30.0**	**+0.2**
BRG	**Berggiesshubel**	**5.82**	**48**	SG	**Sg**	**18 15 27.6**	**-3.5**
	1.8nm,0.4s						
SGMF	**Saint Gilles**	**6.63**	**283**	*e*Pn	**Pn**	**18 14 01.0**	**-0.9**
SGMF	**Saint Gilles**	**6.63**	**283**	*e*Pg	**Pg**	**18 14 28.9**	**-2.5**
SGMF				*e*Sg	**Sg**	**18 15 54.1**	**-3.1**
	3.9nm,0.5s						
CHVC	**Chvalec**	**6.81**	**56**	*e*SG	**Sg**	**18 16 02.0**	**-0.8**

NIED ***08*** *18:15:00,24.˙60N×123.˙50E,h74km,Mw5.3 Best double couple: M0 1.01000×10^17 NP1:φs21.00000°,δ57.00000°, λ91.00000°. NP2:φs199.00000°,δ33.00000°,λ88.00000°.*
BGR ***08*** *18:15:02.7±0.0,22.˙96N×123.˙47E,h85km±1km,mb5.2*
BJI ***08*** *18:15:08.0±0.0,24.˙40N×123.˙64E,h72km,mB5.0/59, mb4.9/56,Ms5.0/78,Ms7 4.7/77*
MOS ***08*** *18:15:09.9±1.0,24.˙66N×123.˙45E,h69km,mb5.4/31, MS4.4/8,Error ellipse: s-maj=5.9km s-min=3.9km az=109.7*
JMA ***08*** *18:15:11.9±0.1,24.˙58N×123.˙46E,h70km±1km,M5.5*
JMA Felt IV J1.
TAP ***08*** *18:15:11.7,24.˙46N×123.˙41E,h73km,ML6.0,C*
NEIC ***08*** *18:15:12.1±1.6,24.˙61N±0.˙06×123.˙45E±0.˙06,h77km±4km, mb5.3/257,Mwb5.3/19,Error ellipse: s-maj=8.9km s-min=7.6km az=146.0*
IDC ***08*** *18:15:12.1±0.3,24.˙70N×123.˙52E,h79km±2km,mb4.7/35, mb1 4.8/40,mb1mx4.7/44,mbtmp5.0/40,MS4.2/25, Ms1 4.2/25,ms1mx4.1/39,Error ellipse: s-maj=9.8km s-min=6.9km az=77.0*
ASIES ***08*** *18:15:12.3,24.˙36N×123.˙36E,h32km,MW4.7*
NEIC ***08*** *18:15:12.1,24.˙61N×123.˙45E,h59km,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr0.87; Mθθ0.07; Mϕϕ-0.93; Mrθ-0.39; Mθϕ-0.09; Mϕr0.61; Fault plane solution: M0 1.16000×10^17 NP1:φs203.93000°, δ31.72000°,λ125.81000°. NP2:φs343.63000°,δ64.77000°, λ70.12000°. Principal axes: T 1.1948, Plg65.0000°, Azm220.0000°; N -0.0699, Plg18.0000°, Azm352.0000°; P -1.1249, Plg17.0000°, Azm88.0000°;*
GCMT ***08*** *18:15:13.1±0.1,24.˙53N±0.˙01×123.˙45E±0.˙01,h68km, MW5.3/139,Moment Tensor Solution. s128,c211; s139,c262; Duration: 1!1 Moment tensor: Scale 10^17 Nm; Mrr0.71±.02; Mθθ0.44±.02; Mϕϕ-1.16±.01; Mrθ-0.55±.01; Mθϕ0.05±.01; Mϕr0.55±.01; Best double couple: M0 1.27100×10^17 NP1:φs210.00000°,δ39.00000°, λ144.00000°. NP2:φs329.00000°,δ68.00000°,λ56.00000°. Principal axes: T 1.2120, Plg54.0000°, Azm197.0000°; N 0.1170, Plg31.0000°, Azm343.0000°; P -1.3310, Plg17.0000°, Azm83.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 08 18:15:11.5±0.2,24.˙55N±0.˙02×123.˙46E±0.˙02,h73km±1km, h73km:pP-P,n1094,σ1939/1358,mb5.3/326,71C-161D, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
IRIF	**Iriomote-Funau**	**0.33**	**131**	⇑P		**Pn**	**18 15 23.2**	**+0.1**
IRIF				*i* S		**Sn**	**18 15 31.9**	**+0.3**
YOJ	**Yonaguni jima**	**0.42**	**258**	P		**Pn**	**18 15 24.0**	**+0.3**
YOJ	**Yonaguni jima**	**0.42**	**258**	⇓P		**Pn**	**18 15 24.1**	**+0.3**
	baz=268							
YOJ				S		**Sn**	**18 15 32.8**	**-0.1**
	baz=268							
YOJ	**Yonaguni jima**	**0.42**	**258**	⇓P		**Pn**	**18 15 24.1**	**+0.3**
YOJ				S		**Sn

baz=243
ENLB eS Sn 18 16 00.9 -2.0
baz=243
YM08 YM08 1.81 291⇓iP Pn 18 15 42.1 +1.4
baz=285
YM08 S Sn 18 16 04.1 +1.2
baz=285
YM01 YM01 1.82 289⇓iP Pn 18 15 42.4 +1.6
baz=284
YM01 S Sn 18 16 04.5 +1.5
baz=284
YM11 YM11 1.82 290⇓iP Pn 18 15 42.4 +1.6
baz=284
YM11 S Sn 18 16 04.9 +1.8
baz=284
TAP1 Taipei 1.83 286⇓iP Pn 18 15 42.5 +1.7
baz=281
TAP1 eS Sn 18 16 05.5 +2.4
baz=281
YM05 YM05 1.83 290⇓iP Pn 18 15 42.4 +1.5
baz=284
YM05 S Sn 18 16 04.6 +1.3
baz=284
YM10 YM10 1.83 290⇓iP Pn 18 15 42.5 +1.6
baz=284
YM10 S Sn 18 16 04.5 +1.2
baz=284
ETLH Xiulin Townshi 1.84 260 ⇓P Pn 18 15 41.1 +0.1
baz=263
ETLH eS Sn 18 16 02.3 -1.2
baz=263
TWY Chenhua 1.84 294⇓iP Pn 18 15 42.8 +1.8
baz=287
TWY S Sn 18 16 04.9 +1.5
baz=287
TAP Taipei 1.84 286⇓iP Pn 18 15 42.5 +1.4
baz=289
TATO Taipei 1.84 284 ⇓P Pn 18 15 42.3 +1.3
baz=277
TATO S Sn 18 16 04.1 +0.6
baz=277
TATO Taipei 1.84 284 Pn 18 15 42.1 +1.0
YM04 YM04 1.85 289 ⇓P Pn 18 15 42.6 +1.5
baz=284
YM04 S Sn 18 16 04.1 +0.4
baz=284
ANP Anpu 1.87 290⇓iP Pn 18 15 43.0 +1.4
baz=285
ANP eS Sn 18 16 05.1 +0.7
baz=285
NNSH Datong 1.90 267 ⇓P Pn 18 15 42.5 +0.6
baz=270
NNSH eS Sn 18 16 05.0 0.0
baz=270
YHNB Yeheng 1.90 274 ⇓P Pn 18 15 43.1 +1.1
baz=277
YHNB S Sn 18 16 05.2 +0.1
baz=277
YHNB Yeheng 1.90 274 Pn 18 15 43.0 +1.1
NNS Nan Shan 1.91 267 ⇓P Pn 18 15 42.7 +0.7
baz=270
NNS eS Sn 18 16 04.7 -0.6
baz=270
NSK Sanguang 1.92 274⇓iP Pn 18 15 43.3 +1.2
baz=277
NSK eS Sn 18 16 05.3 -0.2
baz=277
NTST Danshui 1.93 289⇓iP Pn 18 15 44.1 +2.0
baz=284
NTST eS Sn 18 16 07.7 +2.2
baz=284
TWS1 Kuangyinshan 1.94 287⇓iP Pn 18 15 44.0 +1.7
baz=283
TWS1 S Sn 18 16 07.1 +1.4
baz=283
ESL Shilin 1.99 249 ⇓P Pn 18 15 42.2 -0.8
baz=244
ESL eS Sn 18 16 04.3 -2.8
baz=244
WLTB Daxi 2.03 279 ⇓P Pn 18 15 44.9 +1.3
baz=288
WLTB eS Sn 18 16 08.8 +0.7
baz=288
WHF Hehuan Shan 2.04 259⇓iP Pn 18 15 44.1 0.0
baz=262
WHF eS Sn 18 16 07.3 -1.7
baz=262
EGFH Guangfu 2.06 245 ⇓P Pn 18 15 43.1 -0.8
baz=238
EGFH eS Sn 18 16 06.1 -2.6
baz=238
TWT Tachien 2.10 262 ⇓P Pn 18 15 45.7 +0.9
baz=265
TWT S Sn 18 16 09.5 -0.6
baz=265
NCU National Centr 2.11 282⇓iP Pn 18 15 46.0 +1.4
baz=285
NCU eS Sn 18 16 10.0 0.0
baz=285
NCUH Zhongli 2.11 282⇓eP Pn 18 15 46.0 +1.4
baz=285
NCUH eS Sn 18 16 11.3 +1.3
baz=285
TDCB Techi 2.12 262 ⇓P Pn 18 15 45.8 +0.9
baz=265
TDCB eS Sn 18 16 08.9 -1.6
baz=265
HGSD Ruisui 2.14 241 ⇓P Pn 18 15 44.1 -1.0
baz=233
HGSD S Sn 18 16 07.4 -3.3
baz=233
CHGB Renai 2.14 257 ⇓P Pn 18 15 45.6 +0.3
baz=249
CHGB eS Sn 18 16 09.3 -1.8
baz=249
OWD Renai 2.17 255 ⇓P Pn 18 15 45.6 0.0
baz=257
OWD eS Sn 18 16 09.5 -2.1
baz=257
EHY Hungye 2.21 242⇓iP Pn 18 15 45.5 -0.6
baz=235
EHY S Sn 18 16 10.0 -2.5
baz=235
LIOB Emei 2.23 273⇓iP Pn 18 15 47.7 +1.4
baz=276
LIOB eS Sn 18 16 14.4 +1.6
baz=276
NSTT Nanjuang 2.24 273 ⇓P Pn 18 15 47.6 +1.2
baz=275
NSTT eS Sn 18 16 13.9 +0.8
baz=275
VWDT VWDT 2.26 250 ⇓P Pn 18 15 47.1 +0.4
baz=252
VWDT eS Sn 18 16 11.7 -1.9
baz=252
SBCB Hsinchu 2.27 277 ⇓P Pn 18 15 48.1 +1.4
baz=279
SBCB eS Sn 18 16 15.2 +1.5
baz=279
HSN Hsinchu 2.28 277 eP Pn 18 15 47.1 +0.1
baz=280
YULB Yu-li 2.29 240 ⇓P Pn 18 15 46.6 -0.5
baz=233
YULB eS Sn 18 16 11.1 -3.2
baz=233
YULB Yu-li 2.29 240 Pn 18 15 46.3 -0.8
WHP Taichung City 2.31 264⇓iP Pn 18 15 48.9 +1.5
baz=266
WHP S Sn 18 16 15.2 +0.3
baz=266
TWF1 Yuli 2.31 239⇓iP Pn 18 15 46.6 -0.7
baz=232
TWF1 eS Sn 18 16 11.9 -2.9
baz=232
DPDB Guoxing 2.37 258⇓iP Pn 18 15 49.1 +0.9
baz=260
DPDB S Sn 18 16 14.7 -1.6
baz=260
FULB Fuli 2.40 236⇓iP Pn 18 15 47.1 -1.5
baz=229
FULB S Sn 18 16 13.0 -4.0
baz=229
CHKT Chengkung 2.40 233⇓iP Pn 18 15 46.9 -1.6
baz=226
CHKT eS Sn 18 16 12.8 -4.2
baz=226
SSLB Suanglung 2.41 252 ⇓P Pn 18 15 49.1 +0.4
baz=262
SSLB S Sn 18 16 15.3 -2.0
baz=262
SSLB Suanglung 2.41 252 Pn 18 15 48.8 0.0
NMLH Miaoli 2.43 270 eP Pn 18 15 50.5 +1.5
baz=273
NMLH eS Sn 18 16 19.3 +1.5
baz=273
SMLT Sun Moon Lake 2.43 255⇓iP Pn 18 15 49.7 +0.6
baz=257
SMLT S Sn 18 16 17.3 -0.6
baz=257
TWQ1 Liyutan 2.46 266⇓iP Pn 18 15 50.6 +1.2
baz=268
TWQ1 eS Sn 18 16 17.2 -1.2
baz=268
TYC Yuchr 2.46 255⇓iP Pn 18 15 50.0 +0.7
baz=250
TYC eS Sn 18 16 18.3 -0.2
baz=250
NSY Sanyi 2.46 267 ⇓P Pn 18 15 50.9 +1.4
baz=270
NSY eS Sn 18 16 19.1 +0.6
baz=270
PTSB Yuanli 2.51 268 eP Pn 18 15 52.0 +1.9
baz=270
WHYT Xinyi Township 2.53 251⇓iP Pn 18 15 51.3 +0.9
baz=245
WHYT S Sn 18 16 19.6 -0.6
baz=245
TCU Taichung 2.57 262 ⇓P Pn 18 15 52.4 +1.5
baz=276
TCU eS Sn 18 16 21.1 0.0
baz=276
WDJ Dajia District 2.58 266 eP Pn 18 15 52.3 +1.4
baz=268
WDJ eS Sn 18 16 19.8 -1.5
baz=268
TWH Lutao 2.58 225⇓iP Pn 18 15 49.4 -1.6
baz=224
TWH S Sn 18 16 16.2 -5.2
baz=224
WJS Zhushan 2.60 254⇓iP Pn 18 15 52.9 +1.7
baz=256
WJS S Sn 18 16 23.5 +1.7
baz=256
ELDTW Lidau 2.62 239⇓iP Pn 18 15 50.7 -0.9
baz=240
ELDTW eS Sn 18 16 18.6 -3.8
baz=240
WNT Mingjian 2.62 256⇓iP Pn 18 15 53.4 +1.9
baz=247
WNT S Sn 18 16 23.0 +0.7
baz=247
ALS Alishan 2.64 247⇓iP Pn 18 15 52.9 +0.8
baz=249
ALS S Sn 18 16 22.2 -1.0
baz=249
WCHH Zhanghua 2.69 261 ⇓P Pn 18 15 53.6 +1.1
baz=274
WCHH S Sn 18 16 24.5 +0.5
baz=274
CHN5 Tsauling 2.71 250⇓iP Pn 18 15 54.0 +1.1
baz=251
CHN5 S Sn 18 16 24.2 -0.5
baz=251
TTN Taitung 2.77 230⇓iP Pn 18 15 52.6 -1.1
baz=225
TTN S Sn 18 16 22.3 -3.7
baz=225
TWGBT Beinan 2.78 232 ⇓P Pn 18 15 52.5 -1.2
baz=227
TWGBT S Sn 18 16 22.2 -4.1
baz=227
TWG Pinlang 2.79 232⇓iP Pn 18 15 52.5 -1.3
baz=227
TWG S Sn 18 16 22.6 -3.8
baz=227
TWG Pinlang 2.79 232 Pn 18 15 52.2 -1.6
WGK Gukeng 2.79 253 ⇓P Pn 18 15 55.3 +1.5
baz=254
WGK S Sn 18 16 27.9 +1.5
baz=254
WDLH Douliu 2.81 253⇓eP Pn 18 15 55.6 +1.6
baz=254
WDLH eS Sn 18 16 28.0 +1.2
baz=254
STYT Tauyuan 2.83 241⇓iP Pn 18 15 54.9 +0.4
baz=236
STYT S Sn 18 16 26.1 -1.5
baz=236
TPUB Ta-pu 2.87 245 ⇓P Pn 18 15 56.1 +1.1
baz=239
TPUB S Sn 18 16 27.6 -0.9
baz=239
TPUB Ta-pu 2.87 245 Pn 18 15 56.0 +1.0
CHN4 Tsaushan 2.88 246⇓iP Pn 18 15 56.4 +1.2
baz=247
CHN4 S Sn 18 16 29.0 +0.3
baz=247
RLNB Erlin 2.91 258 ⇓P Pn 18 15 56.4 +1.0
baz=259
RLNB S Sn 18 16 28.7 -0.6
baz=259
WTP Ta-pu 2.91 244⇓iP Pn 18 15 56.9 +1.3
baz=245
WTP S Sn 18 16 28.9 -0.6
baz=245
CHN2 Minshiung 2.91 250⇓iP Pn 18 15 57.4 +1.9
baz=251
CHN2 eS Sn 18 16 31.8 +2.3
baz=251
CHY Chiayi 2.97 250 ⇓P Pn 18 15 57.7 +1.4
baz=251
CHY eS Sn 18 16 31.9 +1.2
baz=251
WTCT Ta-ch'eng 2.98 257⇓eP Pn 18 15 57.4 +0.9
baz=259
WTCT eS Sn 18 16 31.1 0.0
baz=259
TWK Hsinying 3.01 245⇓iP Pn 18 15 57.9 +1.0
baz=246
TWK eS Sn 18 16 30.9 -0.9
baz=246
SLGT Liugui 3.01 240 ⇓P Pn 18 15 57.6 +0.8
baz=234
SLGT eS Sn 18 16 31.6 -0.2
baz=234
CHN1 Nanshi 3.01 244⇓iP Pn 18 15 58.1 +1.2
baz=256
CHN1 S Sn 18 16 32.5 +0.7
baz=256
ECL Taimali 3.01 230⇓iP Pn 18 15 55.1 -1.7
baz=239
ECL eS Sn 18 16 27.0 -4.8
baz=239
SGST Jiashian 3.01 242⇓iP Pn 18 15 57.2 +0.3
baz=235
SGST S Sn 18 16 31.8 -0.1
baz=235
SNST Tainan City 3.02 245 ⇓P Pn 18 15 58.1 +1.1
baz=245
SNST eS Sn 18 16 32.7 +0.7
baz=245
WMLT Mailiao 3.05 257 eP Pn 18 15 57.7 +0.3
baz=258
LAY Lan-yu 3.06 215⇓iP Pn 18 15 55.3 -2.2
baz=221
LAY S Sn 18 16 26.9 -6.0
baz=221
WLGB Puzi 3.08 250 ⇓P Pn 18 15 58.9 +1.1
baz=252
WLGB S Sn 18 16 32.8 -0.7
baz=252
WSF Szhu 3.10 254⇓iP Pn 18 15 58.9 +0.9
baz=267
WSF eS Sn 18 16 34.3 +0.4
baz=267
SSD Sandimen 3.15 236 ⇓P Pn 18 15 58.5 -0.3
baz=232
CHN3 Shinhua 3.19 243 ⇓P Pn 18 16 01.1 +1.8
baz=254
CHN3 eS Sn 18 16 39.2 +2.9
baz=254
CHN8 Yiju 3.21 249⇓iP Pn 18 16 00.5 +1.1
baz=250
CHN8 eS Sn 18 16 36.0 -0.5
baz=250
TAW Tawu 3.21 228 eP Pn 18 15 58.1 -1.5
baz=223
TAW eS Sn 18 16 32.5 -4.2
baz=223
EAST Anshuo 3.23 229⇓iP Pn 18 15 58.5 -1.3
baz=234
EAST S Sn 18 16 32.8 -4.3
baz=234
MASBT Mashibuluo 3.23 234 ⇓P Pn 18 15 59.5 -0.3
baz=232
MASBT eS Sn 18 16 34.5 -2.7
baz=232
TWM1 Shoushan 3.27 239 eP Pn 18 16 02.0 +1.5
baz=252
SGLT Jiouru 3.27 237 eP Pn 18 16 02.6 +2.2
baz=237
SGLT eS Sn 18 16 39.6 +1.3
baz=237
SCLT Jiali 3.29 246 ⇓P Pn 18 16 01.7 +1.1
baz=247
SCLT eS Sn 18 16 39.2 +0.6
baz=247
TAI1 Yung-k'ang 3.32 244 eP Pn 18 16 02.4 +1.4
baz=256
TAI1 eS Sn 18 16 39.5 +0.1
baz=256
SSPT Xinbi 3.36 233 ⇓P Pn 18 16 02.1 +0.5
baz=231
SSPT eS Sn 18 16 39.2 -1.1
baz=231
SNJT Kaohsiung City 3.38 239⇓eP Pn 18 16 03.5 +1.6
baz=252
SCZT Fangliau 3.39 231⇓eP Pn 18 16 01.8 -0.3
baz=227
SCZT eS Sn 18 16 38.6 -2.5
baz=227
PTTC Pingtan 3.48 287 ⇓P Pn 18 16 04.1 +0.9
baz=278
PTTC eS Sn 18 16 43.0 -0.3
baz=278
WSSB Gushan 3.50 238 eP Pn 18 16 04.6 +1.1
baz=252
WSSB eS Sn 18 16 43.9 +0.2
baz=252
KAU Kaohsiung 3.50 236 eP Pn 18 16 04.9 +1.4
baz=249
TSEB Hengchuen, Pin 3.54 222⇓iP Pn 18 16 03.9 -0.1
baz=232
TSEB eS Sn 18 16 42.6 -2.0
baz=232
MATB Ma-tsu 3.56 297⇓eP Pn 18 16 05.5 +1.2
baz=298
HEN Hengchun 3.56 225⇓eP Pn 18 16 04.1 -0.3
baz=225
HEN eS Sn 18 16 44.0 -1.3
baz=225
TWKBT Hengchun 3.56 224 ⇓P Pn 18 16 03.7 -0.6
baz=216
TWKBT eS Sn 18 16 40.7 -4.5
baz=216
TWK1 Hengchun 3.56 224⇓eP Pn 18 16 03.8 -0.6
baz=217
TWK1 eS Sn 18 16 41.1 -4.2
baz=217
WLCH Liuqiu 3.58 233 eP Pn 18 16 06.7 +2.2
baz=247
WLCH eS Sn 18 16 47.9 +2.3
baz=247
VWUC VWUC 3.67 278 ⇓P Pn 18 16 06.2 +0.3
baz=270
VWUC eS Sn 18 16 45.5 -2.5
baz=270
PHUB P'eng-hu 3.70 255 eP Pn 18 16 06.2 -0.1
baz=256
PHUB eS Sn 18 16 47.0 -1.7
baz=256
PNG Penghu 3.70 255⇓iP Pn 18 16 06.0 -0.2
baz=256
PNG eS Sn 18 16 46.6 -2.1
baz=256
WDGT Dungji 3.71 251⇓iP Pn 18 16 06.5 +0.2
baz=251
WDGT S Sn 18 16 46.8 -2.0
baz=251
XPSS Dashiqiu 3.78 309⇓eP Pn 18 16 08.2 +0.9
baz=320
LYJJ Jianjiangzhen 3.89 302 ⇓P Pn 18 16 11.8 +3.0
baz=302
VCHM Qimei 3.92 251 eP Pn 18 16 09.3 +0.1
baz=251
VCHM eS Sn 18 16 51.0 -3.1
baz=251
PTMZ Houxiangcun 3.98 278 ⇓P Pn 18 16 10.2 +0.2
baz=269
MHZQ Yeshan 4.30 292⇓eP Pn 18 16 15.2 +0.8
baz=292
QZH Quanzhou 4.44 276⇓iP Pn 18 16 16.4 0.0
QZH S Sn 18 17 02.8 -4.0
QZH smax smax
comp=N,1µm,1.3s
QZH smax smax
comp=E,860nm,1.1s
QZH LR LR
comp=N,8µm,4.0s
QZH LR LR
comp=Z,7µm,8.5s
KNM Kinmen 4.58 269⇓eP Pn 18 16 19.6 +1.3
baz=270
KNM eS Sn 18 17 09.7 -0.5
baz=270
KNMB Chin-men Tao 4.62 270⇓eP Pn 18 16 18.3 -0.5
baz=271
KNMB eS Sn 18 17 07.6 -3.6
baz=271
KNMB Chin-men Tao 4.62 270 Pn 18 16 18.3 -0.5
JOW Kunigami 4.90 61⇓eP Pn 18 16 22.1 -0.5
baz=61
JOW Kunigami 4.90 61 Pn 18 16 21.8 -0.8
AXDP Jialang 5.00 275 ⇓P Pn 18 16 24.4 +0.3
baz=267
AXDP eS Sn 18 17 17.2 -3.4
baz=267
ZPLA Ao Xicun 5.25 264 eP Pn 18 16 27.0 -0.3
baz=265
ZPLA eS Sn 18 17 23.3 -3.3
baz=265
ZZJH Jiuhuzhen 5.31 270 eP Pn 18 16 28.2 -0.1
baz=271
ZZJH eS Sn 18 17 24.7 -3.4
baz=271
SGCP Mt. Cagua 6.41 192 eP Pn 18 16 43.6 +0.3
SGCP eS Sn 18 17 49.5 -5.7
SSE Sheshan 6.82 343 P Pn 18 16 50.1 +1.2
SSE S Sn 18 18 08.0 +2.9
SSE pmax pmax
comp=Z,100nm,0.6s
SSE pmax pmax
comp=Z,300nm,3.4s
SSE LR LR
comp=N,3µm,6.0s
SSE LR LR
comp=E,6µm,6.9s
SSE Sheshan 6.82 343 Pn 18 16 49.8 +0.9
APYP Conner 6.97 198 eP Pn 18 16 51.0 0.0
APYP eS Sn 18 18 03.9 -4.9
SIPP Brgy, Tapao 7.16 204⇑eP Pn 18 16 54.6 +1.0
SIPP iS Sn 18 18 17.5 +4.0
VDOS Pratas Island 7.30 240 eP Pn 18 16 56.1 +0.7
baz=239
PALP Palanan 7.51 188 eP Pn 18 16 58.3 0.0
PALP eS Sn 18 18 17.8 -4.3
CAUP Cauayan 7.72 192 eP Pn 18 17 01.8 +0.6
CAUP eS Sn 18 18 31.2 +4.0
NJ2 Nanjing 8.50 333 eP Pn 18 17 11.8 0.0
NJ2 S Sn 18 18 44.0 -2.2
NJ2 pmax pmax
comp=Z,830nm,4.2s
NJ2 LR LR
comp=N,6µm,12.8s
NJ2 LR LR
comp=E,10µm,13.3s
NJ2 LR LR
comp=Z,5µm,12.5s
SMPP San Manuel, Pa 8.75 198 eP Pn 18 17 13.0 -2.4
SMPP eS Sn 18 18 47.6 -4.9
BOLP Bolinao 8.78 203 eP Pn 18 17 16.7 +1.0
BOLP eS Sn 18 18 55.2 +2.1
HKPS Hong Kong Po S 8.85 257 Pn 18 17 16.8 +0.1

BALP **Baler** 8.94 192 *e*P **Pn** 18 17 16.9 -1.0
BALP *e*S **Sn** 18 18 52.9 -4.1
PCPH **Palayan** 9.21 194⇓ *i*P **Pn** 18 17 22.1 +0.5
PCPH *i* S **Sn** 18 19 06.2 +2.5
SCZP **Santa Cruz** 9.34 202 *e*P **Pn** 18 17 23.7 +0.3
SCZP *e*S **Sn** 18 19 09.5 +2.6
POLP **Polilio Island** 9.88 189 *e*P **Pn** 18 17 31.9 +1.2
POLP *e*S **Sn** 18 19 13.3 -6.5
WHN **Wuhan** 10.05 308 ⇓P **Pn** 18 17 33.9 +1.0
WHN S **Sn** 18 19 26.5 +2.5
WHN LR LR
comp=Z,8μm,11.3s
GQP Guinayangan 10.63 185⇓ *e*P **Pn** 18 17 43.2 +2.2
GQP *e*S **Sn** 18 19 30.3 -8.1
TGY Tagaytay City 10.66 193 P **Pn** 18 17 44.7 +3.2
24nm,0.3s,baz=314,slow=6.6,SNR=5.8
TGY S **Sn** 18 19 41.8 +2.6
26nm,0.3s,baz=311,slow=20,SNR=5.2
TGY LR LR 18 22 22.8
comp=Z,1μm,18.8s,baz=282,slow=40
TGY Tagaytay City 10.66 193 *e*P Pn 18 17 56.1 +15
TGY *e*S **Sn** 18 19 40.4 +1.2
JNU Nakatsue 10.73 36 P **Pn** 18 17 42.0 -0.2
2.3nm,0.3s,baz=192,slow=13,SNR=20
JNU LR LR 18 22 04.5
comp=Z,1μm,20.1s,baz=214,slow=39
JNU Nakatsue 10.73 36 **Pn** 18 17 41.8 -0.5
SJMP San Jose 12.23 191 *e*P **Pn** 18 18 05.0 +2.2
TJN Taejon 12.26 15⇑ *i*P **Pn** 18 18 06.2 +3.2
TIA Tai'an 12.84 336 P **Pn** 18 18 14.0 +3.0
TIA pmax pmax
comp=Z,17nm,1.7s
TIA LR LR
comp=N,3μm,7.6s
TIA LR LR
comp=E,5μm,9.0s
TIA LR LR
comp=Z,2μm,6.5s
RCP Roxas 12.94 183⇑ *e*P **Pn** 18 18 15.3 +2.9
KSRS Korea Array 13.42 15 P **Pn** 18 18 17.7 -0.9
1.4nm,0.3s,baz=197,slow=13,SNR=57
KSRS pP P 18 18 42.8 +17
2.9nm,0.3s,baz=194,slow=10,SNR=9.2
KSRS LR LR 18 24 18.8
comp=Z,2μm,18.4s,baz=194,slow=41
KS19 Wonju Array Si 13.45 15 **Pn** 18 18 20.6 +1.5
ENH Enshi 13.65 298 **Pn** 18 18 23.4 +1.5
QIZ Qiongzhong 13.79 249 P **Pn** 18 18 25.1 +1.4
QIZ S **Sn** 18 21 02.7 +7.5
QIZ pmax pmax
comp=Z,21nm,0.9s
QIZ LR LR
comp=Z,3μm,22.6s
QIZ Qiongzhong 13.79 249 **Pn** 18 18 24.8 +1.1
DL2 Dalian 14.40 354 P **Pn** 18 18 32.6 +1.1
DL2 S **Sn** 18 21 10.5 +0.7
DL2 pmax pmax
comp=Z,52nm,1.2s
DL2 pmax pmax
comp=Z,220nm,4.5s
DL2 LR LR
comp=N,1μm,11.3s
DL2 LR LR
comp=E,3μm,16.4s
GYA Guiyang 15.29 281⇑ *i*P **P** 18 18 47.3 +0.8
GYA pP pP 18 18 58.0 -2.9
GYA sP sP 18 19 09.2 -0.7
GYA S **Sn** 18 21 36.7 +5.0
GYA sS S 18 21 51.7 +7.6
GYA pmax pmax
comp=Z,70nm,0.9s
GYA pmax pmax
comp=Z,420nm,7.2s
GYA LR LR
comp=N,3μm,10.3s
GYA LR LR
comp=E,1μm,9.7s
GYA LR LR
comp=Z,1μm,10.0s
XAN Xi'an 15.80 310 P **P** 18 18 52.6 +0.5
XAN pP pwP 18 19 08.4 0.0
XAN pmax pmax
comp=Z,100nm,1.3s
XAN pmax pmax
comp=Z,340nm,4.0s
XAN LR LR
comp=N,4μm,4.6s
XAN LR LR
comp=E,4μm,5.2s
XAN LR LR
comp=Z,2μm,9.3s
XAN Xi'an 15.80 310 P **P** 18 18 52.3 +0.2
XAN pmax pmax
comp=Z,494nm,1.8s
XAN Xi'an 15.80 310 P **P** 18 18 52.3 +0.2
XAN IAmb IAmb 18 19 15.7
comp=Z,494nm,1.8s
INU Inuyama 15.91 44 P **Pn** 18 18 50.8 -0.2
CGP Cagayan de Oro 16.05 176 *e*P **P** 18 18 57.6 +2.7
TIY Taiyuan 16.15 327 *e*P **P** 18 18 58.9 +3.0
TIY pP **pP** 18 19 09.5 -0.6
TIY S **S** 18 21 57.8 -3.7
TIY SS Sn 18 22 19.4 +27
TIY pmax pmax
comp=Z,28nm,0.5s
TIY pmax pmax
comp=Z,350nm,5.2s
TIY LR LR
comp=Z,2μm,7.2s
TIY LR LR
comp=Z,3μm,6.7s
TIY LR LR
comp=Z,1μm,12.1s
BJT Baijiatuau 16.60 340 P **P** 18 19 02.7 +1.9
BJT pmax pmax
comp=Z,158nm,1.6s
BJT Baijiatuau 16.60 340 P **P** 18 19 02.7 +1.9
JCJ Chichijima 17.05 77 P **Pn** 18 19 05.5 +0.3
comp=Z,25nm,0.3s,baz=256,slow=4.6,SNR=15
CTBH Cotabato--PC H 17.25 177⇑ *e*P **P** 18 19 09.6 +1.4
MAJO Matsushiro 17.41 43⇓ *e*P **P** 18 19 12.2 +2.3
MAJO pmax pmax
comp=Z,47nm,2.2s
MAJO Matsushiro 17.41 43 P **Pn** 18 19 08.8 -0.8
MAT Matsushiro 17.41 43 P **Pn** 18 19 09.3 -0.3
MAT S **Sn** 18 22 23.2 +0.3
MJB9 Matsu-Tunnel 17.41 43 P **Pn** 18 19 09.3 -0.3
MJAR Matsushiro Arr 17.42 43 P **Pn** 18 19 08.8 -0.9
comp=Z,0.3nm,0.3s,baz=225,slow=7.2,SNR=24
MJAR LR LR 18 26 18.5
comp=Z,2μm,20.0s,baz=235,slow=39
MJAR ScP **ScP** 18 27 14.9 -1.0
comp=Z,0.0nm,0.3s,baz=230,slow=3.1,SNR=6.8
DAV Davao City (W) 17.50 173 P **Pn** 18 19 04.6 -6.2
KCP Kidapawan 17.51 175⇑ *e*P **P** 18 19 12.2 +1.1
SLVN Son La 18.29 264 P **P** 18 19 19.5 -0.2
CD2 Chengdu 18.55 294⇓ *i*P **Pn** 18 19 23.4 0.0
CD2 pP pP 18 19 37.5 +0.7
CD2 PP **pwP** 18 19 40.4 +1.6
CD2 S **S** 18 22 44.8 -4.9
CD2 SS **SnSn** 18 23 14.2 +8.9
CD2 pmax pmax
comp=Z,40nm,1.0s
CD2 pmax pmax
comp=Z,570nm,7.9s
CD2 LR LR
comp=Z,4μm,11.2s
CD2 LR LR
comp=Z,5μm,7.3s
CD2 LR LR
comp=Z,4μm,7.0s
KMI Kunming 18.82 276 P **Pn** 18 19 28.6 +1.7
KMI PP **PnPn** 18 19 42.7 +1.3
KMI S **S** 18 22 55.3 -0.6
KMI SS **SnSn** 18 23 17.3 +5.1
KMI pmax pmax
comp=Z,250nm,3.1s
KMI LR LR
comp=Z,2μm,16.7s
KMI LR LR
comp=Z,2μm,17.3s
KMI Kunming 18.82 276 P **P** 18 19 25.2 -0.5
KMI pmax pmax
comp=Z,140nm,1.4s
KMI Kunming 18.82 276 P **P** 18 19 25.1 -0.5

DLV T Lat 18.93 231 **Pn** 18 19 28.7 +0.4
DLV IAmb IAmb 18 19 47.0
comp=Z,247nm,1.0s
HHC Hu-ho-hao-te 19.06 331 *e*P **Pn** 18 19 30.3 +0.8
HHC sP sP 18 19 49.0 -2.3
HHC S **S** 18 22 57.3 -3.2
HHC SS **SnSn** 18 23 21.9 +3.9
HHC pmax pmax
comp=Z,130nm,4.5s
HHC LR LR
comp=Z,970nm,8.9s
HHC LR LR
comp=Z,1μm,8.1s
HHC LR LR
comp=Z,810nm,8.9s
MSHR Mys Shultsa 19.08 18⇑ *e*P **P** 18 19 27.5 -0.5
CN2 Changchun 19.27 4 *e*P **Pn** 18 19 31.8 -0.1
CN2 PP **sP** 18 19 51.8 -1.6
CN2 *e*S **S** 18 23 02.8 -1.8
CN2 pmax pmax
comp=Z,1μm,3.5s
CN2 LR LR
comp=Z,2μm,16.0s
CN2 LR LR
comp=Z,760nm,16.0s
CN2 LR LR
comp=Z,2μm,18.0s
KKM Kota Kinabalu 19.67 202 P **Pn** 18 19 36.0 -0.9
KKM IAmb IAmb 18 19 40.5
comp=Z,371nm,1.2s
LZH Lanzhou 20.43 309 ⇑P Pn 18 19 44.6 -1.1
LZH pP pwP 18 19 59.2 -0.4
LZH sP sP 18 20 07.9 +1.5
LZH S **S** 18 23 24.9 -2.9
LZH sS sS 18 23 48.6 -3.3
LZH pmax pmax
comp=Z,90nm,1.0s
LZH pmax pmax
comp=Z,370nm,4.1s
LZH LR LR
comp=Z,4μm,12.8s
LZH LR LR
comp=Z,2μm,11.4s
LZH LR LR
comp=Z,4μm,13.0s
MDJ Mudanjiang 20.63 13 P **P** 18 19 44.7 -0.2
MDJ IAmb IAmb 18 20 10.2
comp=Z,216nm,1.3s
USA0B Ussuriysk Arra 20.80 17 P **P** 18 19 48.3 +1.5
USA0B pmax pmax
comp=Z,263nm,1.2s
USA0B Ussuriysk Arra 20.80 17 P **P** 18 19 48.3 +1.5
USA0B IAmb IAmb 18 20 07.8
comp=Z,263nm,1.1s
USRK Ussuriysk Ar. 20.80 17 P **P** 18 19 45.8 -1.0
comp=Z,7.0nm,0.7s,baz=200,slow=9.1,SNR=15
USRK pP **pP** 18 20 01.8 +0.7
comp=Z,23nm,0.8s,baz=200,slow=9.7,SNR=14
USRK S **S** 18 23 31.6 -3.2
comp=Z,1.3nm,0.7s,baz=202,slow=11,SNR=3.2
USRK LR LR 18 28 21.6
comp=Z,843nm,19.3s,baz=190,slow=38
GUMO Guam 22.95 114 P **P** 18 20 10.0 +0.2
comp=Z,238nm,1.0s,baz=237,slow=5.3,SNR=4.2
CHTO Chiang Mai 23.47 261 P **P** 18 20 15.6 +0.7
CHTO pmax pmax
comp=Z,221nm,1.5s
CHTO Chiang Mai 23.47 261 P **P** 18 20 15.6 +0.7
CHTO IAmb IAmb 18 20 34.1
comp=Z,221nm,1.4s
CM31 Chiang Mai Arr 23.59 260 P **P** 18 20 16.9 +1.1
CM31 IAmb IAmb 18 20 37.2
comp=Z,163nm,1.4s
CM31 Chiang Mai Arr 23.59 260 P **P** 18 20 18.2 +2.3
SNR=29
CMAR Chiang Mai Arr 23.59 260 *ce*P **P** 18 20 17.0 +1.1
CMAR pmax pmax
comp=Z,25nm,1.0s
CMAR Chiang Mai Arr 23.59 260 P **P** 18 20 16.9 +1.1
comp=Z,22nm,1.0s,baz=59,slow=8.0,SNR=103
CMAR pP **pP** 18 20 34.2 +2.4
comp=Z,11nm,0.8s,baz=59,slow=8.4,SNR=4.3
CMAR PcP **PcP** 18 23 59.7 +0.6
comp=Z,4.6nm,0.9s,baz=35,slow=1.0,SNR=8.6
CMAR ScP **ScP** 18 27 30.0 -1.0
comp=Z,0.7nm,0.3s,baz=53,slow=1.1,SNR=5.5
CMAR LR LR 18 30 08.0
comp=Z,2μm,19.4s,baz=86,slow=38
KMSI Cibinong 23.84 179 P **P** 18 20 19.1 +1.0
comp=Z,2μmcomp=Z,220nm,1.2s
ERM Erimo 23.87 38 P **P** 18 20 16.0 -2.2
ERM pmax pmax
comp=Z,61nm,1.0s
ERM Erimo 23.87 38 P **P** 18 20 16.0 -2.2
TNTI Ternate 23.94 170 P **P** 18 20 20.0 +1.0
comp=Z,2μmcomp=Z,5μmcomp=Z,301nm,1.0s
TNTI Ternate 23.94 170 P **P** 18 20 19.3 +0.3
MRSI Marisa 23.98 184 P **P** 18 20 20.2 +0.9
comp=Z,3μmcomp=Z,9μmcomp=Z,267nm,1.2s
MPSI Mapaga 24.32 189 P **P** 18 20 23.6 +1.2
comp=Z,4μmcomp=Z,216nm,1.8s
SBUM Sibu 24.51 208 P **P** 18 20 24.1 -0.1
SBUM IAmb IAmb 18 20 25.7
comp=Z,227nm,1.3s
SBUM Sibu 24.51 208 P **P** 18 20 24.0 -0.1
GTA Gaotai 24.84 312 ⇑P **P** 18 20 26.5 -0.6
GTA pP pP 18 20 41.0 -2.6
GTA PcP **PcP** 18 24 02.3 +0.7
GTA S **S** 18 24 46.4 +1.5
GTA sS sS 18 25 18.4 +4.9
GTA ScP **ScP** 18 27 33.4 -0.9
GTA pmax pmax
comp=Z,19nm,1.0s
GTA pmax pmax
comp=Z,100nm,7.6s
GTA LR LR
comp=Z,2μm,7.9s
GTA LR LR
comp=Z,1μm,7.9s
GTA LR LR
comp=Z,1μm,16.8s
HIA Hailar 24.84 354 P **P** 18 20 27.3 +0.3
HIA pmax pmax
comp=Z,184nm,1.1s
HIA Hailar 24.84 354 P **P** 18 20 27.3 +0.3
HIA IAmb IAmb 18 20 52.2
comp=Z,184nm,1.1s
ASAJ Asahikawa 25.00 34 P **P** 18 20 26.9 -1.5
comp=Z,6.6nm,0.4s,baz=236,slow=10,SNR=24
LBMI Labuha 25.34 171 P **P** 18 20 31.9 +0.1
comp=Z,303nm,0.7s
APSI Ampana 25.37 184 P **P** 18 20 32.7 +0.7
comp=Z,4μmcomp=Z,287nm,1.4s
LUWI Luwuk 25.45 182 P **P** 18 20 31.4 -1.3
comp=Z,7μmcomp=Z,543nm,1.4s
LUWI Luwuk 25.45 182 P **P** 18 20 31.4 -1.3
KLR Kul'dur 25.48 13 P **P** 18 20 31.8 -0.9
comp=Z,6.8nm,0.6s,baz=218,slow=7.6,SNR=19
KLR pP **pP** 18 20 49.9 +0.9
comp=Z,57nm,1.1s,baz=211,slow=9.4,SNR=14
KLR PcP **PcP** 18 24 03.1 +0.5
comp=Z,3.8nm,0.8s,baz=279,slow=1.8,SNR=4.1
SMKI Samarinda 25.58 195 P **P** 18 20 35.2 +1.3
comp=Z,2μmcomp=Z,334nm,1.3s
NMR Nemuro--Hokkai 26.20 39 *c* *i*P **P** 18 20 38.4 -0.8
NMR *e*S **S** 18 25 10.5 +4.5
KSM Kuching 26.23 211 P **P** 18 20 39.8 0.0
KSM IAmb IAmb 18 20 41.4
comp=Z,143nm,1.0s
KSM Kuching 26.23 211 P **P** 18 20 40.0 +0.2
SWI Sorong 26.37 162 P **P** 18 20 41.1 +0.1
comp=Z,1μmcomp=Z,100nm,1.1s
SIJI Sorong 26.38 162 P **P** 18 20 41.4 +0.2
comp=Z,74nm,0.9s,baz=354,slow=6.4,SNR=9.3
BKB Balikpapan 26.44 195 P **P** 18 20 43.2 +1.6
comp=Z,2μmcomp=Z,3μmcomp=Z,216nm,1.1s
BKB Balikpapan 26.44 195 P **P** 18 20 40.8 -0.9
BKB IAmb IAmb 18 21 02.5
comp=Z,179nm,0.9s
SANI Sanana 26.55 174 P **P** 18 20 42.0 -0.7
comp=Z,2μmcomp=Z,3μmcomp=Z,376nm,1.2s
ULN Ulaanbaatar 26.66 335 *de*P **P** 18 20 44.2 +0.6
ULN pmax pmax
comp=Z,11nm,1.3s
ULN Ulaanbaatar 26.66 335 P **P** 18 20 44.1 +0.5
YUK Yuzh-Kuril'sk 26.69 38 P **P** 18 20 44.2 +0.5

YUK *e*S **S** 18 25 14.3 +0.5
YUK MLR MLR
comp=Z,617nm,20.0s
SONM Songino Array 26.89 334 P **P** 18 20 44.8 -0.8
comp=Z,4.2nm,0.5s,baz=150,slow=9.5,SNR=38
SONM pP **pwP** 18 21 03.5 -1.1
comp=Z,21nm,0.8s,baz=157,slow=8.2,SNR=14
SONM PcP **PcP** 18 24 06.5 +0.3
comp=Z,4.8nm,0.9s,baz=150,slow=2.5,SNR=6.4
SONM ScP **ScP** 18 27 37.8 -2.2
comp=Z,0.9nm,0.5s,baz=159,slow=4.4,SNR=7.7
STKI Sintang 26.97 207 P **P** 18 20 47.6 +1.2
comp=Z,3μmcomp=Z,49nm,0.5s
SHO Shikotan 27.14 39 *e*P **P** 18 20 53.8 +6.1
SHO *e*S **S** 18 25 18.3 -2.5
SHO pmax pmax
comp=Z,16nm,0.7s
YSS Yuzh-Sakhalins 27.15 30 *e*P **P** 18 20 49.8 +2.0
YSS *e**SP **pP** 18 21 02.8 -1.5
YSS *e* 18 21 41.8
YSS *e*PPP PPP 18 21 51.7
YSS *e*S **S** 18 25 20.4 -0.6
YSS *e* 18 25 51.1
YSS MLR MLR
comp=Z,900nm,13.0s
YSS MLR MLR
comp=N,500nm,12.0s
YSS MLR MLR
comp=E,600nm,16.0s
YSS Yuzh-Sakhalins 27.15 30 P **P** 18 20 48.3 +0.5
YSS IAmb IAmb 18 21 11.6
comp=Z,176nm,1.1s
TTSI Tana Toraja 27.66 188 P **P** 18 20 53.2 +0.6
comp=Z,2μmcomp=Z,174nm,1.5s
TEZP TEZPUR 27.70 281 *e*P **P** 18 20 54.0 +1.0
TEZP IAmb IAmb 18 20 57.6
comp=Z,55nm,0.7s
NLAI Namlea 27.85 172 P **P** 18 20 55.4 +1.1
comp=Z,3μmcomp=Z,297nm,1.2s
RKPI Ransiki, Papua 27.91 157 P **P** 18 20 55.5 +0.6
comp=Z,2μmcomp=Z,90nm,0.9s
MSAI Masohi 28.23 168 P **P** 18 20 58.9 +1.2
comp=Z,503nmcomp=Z,36nm,1.4s
AAI Ambon 28.44 170 P **P** 18 21 00.1 +0.5
comp=Z,2μmcomp=Z,203nm,0.8s
SPSI Sidrap Palu 28.57 188 P **P** 18 21 01.0 +0.3
comp=Z,1μmcomp=Z,88nm,1.1s
KBKI Kotabaru 28.58 195 P **P** 18 21 01.6 +0.8
comp=Z,690nmcomp=Z,44nm,1.1s
SHL Shillong 28.59 279 P **P** 18 21 01.3 +0.2
SHL pmax pmax
comp=Z,69nm,1.0s
SHL Shillong 28.59 279 *e*P **P** 18 21 01.8 +0.6
SHL IAmb IAmb 18 21 06.2
comp=Z,30nm,0.6s
SHL Shillong 28.59 279 P **P** 18 21 01.3 +0.2
SHL IAmb IAmb 18 21 02.7
comp=Z,69nm,1.0s
FAKI Fak Fak 28.61 161 P **P** 18 21 01.3 +0.2
comp=Z,2μmcomp=Z,232nm,1.2s
FAKI Fak Fak 28.61 161 P **P** 18 21 00.5 -0.5
JRMM Jerantut 28.82 228 P **P** 18 21 04.0 +1.0
BNSI Bone 28.96 187 P **P** 18 21 04.4 +0.2
comp=Z,54nm,1.4s
KULM Kulim 29.10 233 P **P** 18 21 06.4 +0.9
KULM IAmb IAmb 18 21 07.9
comp=Z,137nm,1.3s
KULM Kulim 29.10 233 P **P** 18 21 07.0 +1.5
LSA Lhasa 29.15 287 P **P** 18 21 07.0 +0.6
LSA pmax pmax
comp=Z,21nm,0.8s
LSA Lhasa 29.15 287 P **P** 18 21 07.0 +0.6
ZEA Zeya 29.29 5 *e*P **P** 18 21 06.9 +0.2
ZEA *e* 18 21 28.3
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,32nm,1.0s
ZEA pmax pmax
comp=N,160nm,1.4s
ZEA pmax pmax
comp=E,36nm,1.2s
ZEA pmax pmax
comp=Z,160nm,1.2s
ZEA MLR MLR
comp=N,800nm,15.0s
ZEA MLR MLR
comp=Z,1μm,15.0s
IPM Ipoh 29.40 231 P **P** 18 21 08.3 +0.1
IPM IAmb IAmb 18 21 09.6
comp=Z,101nm,0.9s
IPM Ipoh 29.40 231 P **P** 18 21 09.0 +0.9
MYKOM Kota Tinggi 29.51 223 P **P** 18 21 09.2 +0.1
MYKOM IAmb IAmb 18 21 11.2
comp=Z,129nm,1.0s
MYKOM Kota Tinggi 29.51 223 P **P** 18 21 10.0 +0.9
KAPI Kappang 29.61 187 P **P** 18 21 09.8 -0.1
comp=Z,72nm,1.0s,baz=356,slow=11,SNR=39
KAPI PcP **PcP** 18 24 14.3 +1.1
comp=Z,4.2nm,0.3s,baz=12,slow=2.4,SNR=3.6
KAPI Kappang 29.61 187 P **P** 18 21 09.6 -0.3
KMPI Kaimana, Papua 29.76 159 P **P** 18 21 10.9 -0.4
comp=Z,6μmcomp=Z,223nm,1.1s
TPRI Tanjung Pinang 29.79 221 P **P** 18 21 12.2 +0.6
comp=Z,3μmcomp=Z,146nm,1.4s
BKSI Bulukumba 29.87 187 P **P** 18 21 13.1 +0.9
comp=Z,644nmcomp=Z,40nm,0.7s
ZAK Zakamensk 30.16 334 *e*P **P** 18 21 12.1 -2.5
ZAK pmax pmax
comp=Z,15nm,1.3s
SMPI Sarmi 30.25 149 P **P** 18 21 17.1 +1.5
comp=Z,64nm,1.2s
DSRI Dabo 30.89 219 P **P** 18 21 21.9 +0.6
comp=Z,2μmcomp=Z,121nm,1.2s
TLY Talaya 31.05 336 *e*P **P** 18 21 18.9 -3.5
TLY *e* 18 22 32.3
TLY *e*S **S** 18 26 21.6 -0.6
TLY pmax pmax
comp=Z,21nm,0.6s
TLY MLR MLR
comp=Z,2μm,17.0s
TLY Talaya 31.05 336 P **P** 18 21 22.2 -0.2
TPI Tanjungpandan 31.19 212 P **P** 18 21 24.5 +0.6
comp=Z,959nmcomp=Z,77nm,1.3s
GTK Tadong 31.41 283 *e*P **P** 18 21 25.6 -0.4
GTK IAmb IAmb 18 21 28.7
comp=Z,18nm,0.9s
LHMI Lhok Sumawe 31.90 237 P **P** 18 21 32.2 +2.0
comp=Z,2μmcomp=Z,135nm,1.1s
LHMI Lhok Sumawe 31.90 237 P **P** 18 21 31.9 +1.6
PSI Prapat 32.06 231 P **P** 18 21 32.4 +0.7
PSI pmax pmax
comp=Z,187nm,1.1s
RPSI Rantau Prapat 32.13 231 P **P** 18 21 32.4 +0.2
TAPN Taplejung 32.20 283 *e*P **P** 18 21 34.0 +0.9
comp=Z,232nm,1.3s
KCSI Kotacane, Aceh 32.40 234 P **P** 18 21 34.6 0.0
comp=Z,533nmcomp=Z,31nm,1.0s
BKNI Bangkinang 32.42 225 P **P** 18 21 35.0 +0.2
comp=Z,4μmcomp=Z,468nm,1.1s
BKNI Bangkinang 32.42 225 P **P** 18 21 35.0 +0.2
ODAN Odare 32.52 282 *e*P **P** 18 21 36.5 +0.7
comp=Z,142nm,0.9s
PMBI Palembang 32.80 216 P **P** 18 21 39.5 +1.5
MLSI Meulaboh, Aceh 32.93 237 P **P** 18 21 39.6 +0.4
comp=Z,138nm,1.0s
MMRI Maumere 33.01 182 P **P** 18 21 39.4 -0.4
comp=Z,6μmcomp=Z,464nm,1.3s
MMRI Maumere 33.01 182 P **P** 18 21 40.3 +0.5
TPTI 33.01 234 P **P** 18 21 41.1 +1.2
comp=Z,10nm,1.4s
SDSI Sungai Dareh 33.14 223 P **P** 18 21 41.8 +0.8
comp=Z,111nm,1.3s
RAMN Ramite 33.21 282 *e*P **P** 18 21 42.3 +0.4
comp=Z,36nm,0.5s
SAUI Saumlaki 33.23 166 P **P** 18 21 41.9 +0.2
comp=Z,304nm,1.0s
SAUI Saumlaki 33.23 166 P **P** 18 21 41.3 -0.4
SRBI Singaraja 33.42 195 P **P** 18 21 43.4 0.0
comp=Z,2μmcomp=Z,164nm,1.1s
JIRN Jiri 33.53 283 *e*P **P** 18 21 45.4 +0.6
comp=Z,62nm,0.6s
PLAI Plampang 33.63 190 P **P** 18 21 44.9 -0.4
comp=Z,3μmcomp=Z,373nm,0.9s
TWSI Taliwang, Sumb 33.70 192 P **P** 18 21 45.8 0.0
comp=Z,2μmcomp=Z,217nm,1.0s

PDSI Padang 33.73 225 P **P 18 21 45.9 -0.3**
comp=Z,690nmcomp=Z,51nm,0.9s
GUN Gumba 33.79 284 *e*P **P 18 21 47.4 +0.4**
comp=Z,41nm,0.5s
NGJI Ngawi 33.81 202 P **P 18 21 48.0 +1.2**
comp=Z,140nm,1.1s
BOD Bodaibo 33.93 351 *e*P **P 18 21 46.3 -1.1**
BOD *e* 18 22 04.1
BOD pmax pmax
comp=Z,26nm,1.8s
DNP Denpasar 33.99 195 P **P 18 21 49.2 +0.8**
comp=Z,26µmcomp=Z,2µm,1.2s
KRJI Kerinci 34.02 222 P **P 18 21 50.0 +1.2**
comp=Z,7µmcomp=Z,733nm,1.1s
JAGI Jajag, Banyuwa 34.05 197 P **P 18 21 48.1 -0.8**
comp=Z,2µmcomp=Z,136nm,1.6s
JAGI Jajag, Banyuwa 34.05 197 P **P 18 21 49.0 +0.1**
GMJI Gumukmas 34.06 198 P **P 18 21 49.4 +0.5**
comp=Z,2µmcomp=Z,113nm,1.8s
GSI Gunungsitoli 34.06 231 P **P 18 21 49.4 +0.3**
comp=Z,1µmcomp=Z,55nm,0.9s
GSI Gunungsitoli 34.06 231 P **P 18 21 48.9 -0.2**
GSI IAmb IAmb 18 21 49.8
comp=Z,96nm,1.3s
SOEI Soe 34.10 179 P **P 18 21 48.3 -1.2**
comp=Z,115nm,1.1s
SOEI Soe 34.10 179 P **P 18 21 48.0 -1.5**
IGBI Denpasar 34.14 195 P **P 18 21 50.4 +0.7**
comp=Z,5µmcomp=Z,439nm,1.6s
WSI Waingapu 34.15 186 P **P 18 21 47.2 -2.5**
comp=Z,2µmcomp=Z,183nm,0.7s
SNSI Sinabang, Aceh 34.21 234 P **P 18 21 47.8 -2.5**
BOK Bokaro 34.22 277 *e*P **P 18 21 50.5 +0.2**
BOK IAmb IAmb 18 21 56.4
comp=Z,85nm,1.6s
i x x 18 24 26.9
PKI Pulchoki 34.23 283 *e*P **P 18 21 50.8 0.0**
PKIN Phulchoki 34.24 283 *e*P **P 18 21 50.9 +0.1**
comp=Z,17nm,0.4s
KLSI 34.31 215 P **P 18 21 52.1 +1.0**
comp=Z,944nmcomp=Z,92nm,0.9s
PWJI Pagerwojo 34.31 201 P **P 18 21 51.4 +0.3**
comp=Z,2µmcomp=Z,163nm,1.2s
KKN Kakani 34.33 284 *e*P **P 18 21 51.7 +0.2**
comp=Z,67nm,0.8s
MDSI Maura Dua 34.43 216 P **P 18 21 52.7 +0.6**
comp=Z,1µmcomp=Z,96nm,1.2s
WOJI Wonogiri, Jawa 34.44 202 P **P 18 21 53.3 +1.1**
comp=Z,2µmcomp=Z,159nm,1.7s
DMN Daman 34.49 284 *e*P **P 18 21 53.4 +0.4**
comp=Z,40nm,0.6s
PBSI Pulau Batu 34.54 229 P **P 18 21 53.2 0.0**
comp=Z,135nm,1.5s
KSI Kapahiang 34.61 219 P **P 18 21 54.3 +0.5**
comp=Z,2µmcomp=Z,188nm,1.2s
UGM Wanagama 34.65 203 P **P 18 21 55.8 +1.7**
KPJI Karang Pucung 34.71 206 P **P 18 21 55.4 +0.8**
comp=Z,2µmcomp=Z,154nm,1.4s
LEM Lembang 34.80 208 P **P 18 21 56.9 +1.3**
comp=Z,1µmcomp=Z,60nm,1.0s
GKN Gorkha 34.88 284 *e*P **P 18 21 56.3 0.0**
comp=Z,48nm,0.5s
WMQ Urumqi 34.92 312 P **P 18 21 56.4 +0.1**
WMQ PcP **PcP 18 24 27.8 +0.3**
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ pmax pmax
comp=Z,42nm,3.7s
WMQ LR LR
comp=Z,240nm,9.1s
WMQ LR LR
comp=Z,460nm,11.1s
WMQ LR LR
comp=Z,390nm,7.1s
WMQ Urumqi 34.92 312 P **P 18 21 56.6 +0.3**
WMQ pmax pmax
comp=Z,43nm,1.3s
WMQ Urumqi 34.92 312 P **P 18 21 56.6 +0.3**
WMQ IAmb IAmb 18 22 45.6
comp=Z,42nm,1.3s
LWLI Liwa 34.94 215 P **P 18 21 57.6 +0.9**
comp=Z,15µmcomp=Z,108nm,0.9s
SISI Saibi 34.94 226 P **P 18 21 55.9 -0.7**
comp=Z,2µmcomp=Z,211nm,1.2s
DBJI Dramaga 34.94 210 P **P 18 21 58.0 +1.4**
comp=Z,4µmcomp=Z,302nm,1.5s
MNAI Manna 34.98 218 P **P 18 21 57.8 +0.8**
BWNR Bhubaneshwar 34.99 271 *e*P **P 18 21 57.3 +0.2**
BWNR IAmb IAmb 18 22 01.9
comp=Z,26nm,0.8s
KASI Kota Agung 35.14 214 P **P 18 21 58.3 0.0**
comp=Z,1µmcomp=Z,132nm,1.0s
MANU Manus Island 35.18 135 P **P 18 21 59.4 +0.8**
MANU IAmb IAmb 18 22 18.1
comp=Z,38nm,1.0s
CISI Cisompet, Garu 35.37 208 P **P 18 22 00.5 +0.2**
comp=Z,84nm,1.0s
CISI Cisompet, Garu 35.37 208 P **P 18 21 59.9 -0.5**
CNJI Cibinong 35.44 209 P **P 18 22 00.3 -0.6**
comp=Z,105nm,1.1s
PPSI Pulau Pagai 35.44 223 P **P 18 22 01.4 +0.5**
comp=Z,4µmcomp=Z,340nm,1.4s
DANN Dangsing 35.64 285 *e*P **P 18 22 02.9 0.0**
comp=Z,51nm,0.5s
KOLN Koldanda 35.82 284 *e*P **P 18 22 04.5 +0.2**
comp=Z,83nm,0.8s
SKR Severo-Kuril's 36.24 35 *e*P **P 18 22 09.0 +1.6**
SKR *e*S S 18 27 32.0 -10
SKR MLR MLR
comp=Z,300nm,17.0s
SKR MLR MLR
comp=Z,500nm,15.0s
CHLP Challavanipeta 37.05 269 *e*P **P 18 22 15.8 +1.2**
CHLP IAmb IAmb 18 22 17.4
comp=Z,42nm,1.2s
YAK Yakutsk 37.70 5 *e*P **P 18 22 17.6 -2.0**
YAK *e**PP **pP 18 22 36.5 0.0**
YAK *e* 18 24 34.9
YAK *e*S **S 18 28 02.8 -1.5**
YAK *e**SS **sS 18 28 28.1 -5.6**
YAK pmax pmax
comp=Z,34nm,0.9s
YAK pmax pmax
comp=N,9.0nm,0.9s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK smax smax
comp=E,97nm,3.8s
YAK smax smax
comp=N,156nm,3.7s
YAK MLR MLR
comp=Z,440nm,19.0s
YAK MLR MLR
comp=N,396nm,19.0s
YAK MLR MLR
comp=E,327nm,18.0s
YAK Yakutsk 37.70 5 P **P 18 22 17.0 -2.6**
YAK **PcP 18 24 35.0 -0.3**
MTN Manton Dam 37.91 168 P **P 18 22 20.9 -0.9**
PEA0B Petropavlovsk- 38.42 33 P **P 18 22 23.7 -2.1**
PEA0B pmax pmax
comp=Z,64nm,1.5s
PEA0B Petropavlovsk- 38.42 33 P **P 18 22 23.6 -2.1**
PEA0B IAmb IAmb 18 22 59.5
comp=Z,64nm,1.4s
PETK Petropavlovsk- 38.42 33 P **P 18 22 22.8 -3.0**
comp=Z,4.5nm,0.7s,baz=168,slow=7.5,SNR=7.0
PETK LR LR 18 38 29.8
comp=Z,544nm,21.1s,baz=236,slow=36
PET Petropavlovsk 38.85 34 *e*P **P 18 22 27.5 -1.8**
PET *e*S **S 18 28 22.7 +0.9**
PET pmax pmax
comp=Z,35nm,1.4s
PET MLR MLR
comp=Z,800nm,17.0s
PET MLR MLR
comp=Z,900nm,17.0s
PET Petropavlovsk 38.85 34 P **P 18 22 27.9 -1.5**
PET IAmb IAmb 18 22 40.1
comp=Z,66nm,1.0s
MK31 Makanchi Array 39.54 315 P **P 18 22 34.7 -0.6**
MK31 pmax pmax
comp=Z,34nm,1.1s
MK31 Makanchi Array 39.54 315 P **P 18 22 34.7 -0.6**
MK31 IAmb IAmb 18 22 35.7
comp=Z,34nm,1.1s
MKAR Makanchi Array 39.54 315 P **P 18 22 34.8 -0.5**
comp=Z,24nm,0.5s,baz=100,slow=9.6,SNR=526
MKAR pP **pwP 18 22 53.7 -1.0**
comp=Z,14nm,0.8s,baz=114,slow=5.4,SNR=3.9
MKAR PcP **PcP 18 24 41.5 +0.1**
comp=Z,5.0nm,0.7s,baz=90,slow=4.4,SNR=3.9
MKAR ScP **ScP 18 28 21.4 -2.5**
comp=Z,0.8nm,0.6s,baz=104,slow=5.2,SNR=3.8
MKAR ScS **ScS 18 32 34.8 -1.5**
comp=Z,0.1nm,0.3s,baz=96,slow=11,SNR=2.9
MKAR LR LR 18 38 38.9
comp=Z,390nm,20.9s,baz=104,slow=36
PVM Polavaram 39.64 268 *e*P **P 18 22 37.5 +1.1**
PVM IAmb IAmb 18 22 38.5
comp=Z,16nm,1.1s
MAKZ Makanchi 39.75 315 P **P 18 22 36.7 -0.3**
MAKZ pmax pmax
comp=Z,40nm,0.6s
MAKZ Makanchi 39.75 315 P **P 18 22 36.7 -0.3**
MAKZ IAmb IAmb 18 22 37.5
comp=Z,40nm,0.6s
MA2 Magadan 39.87 21‖ *e*P **P 18 22 37.7 -0.1**
MA2 pmax pmax
comp=Z,99nm,2.8s
KNRA Kununurra 40.31 172 P **P 18 22 41.6 -0.3**
H11N1 WAKE ISLAND Hy 40.40 88 T T 19 05 57.3
baz=283,slow=74,SNR=3.8
H11N2 WAKE ISLAND Hy 40.40 88 T T 19 05 57.7
baz=283,slow=74,SNR=18
H11N3 WAKE ISLAND Hy 40.41 88 T T 19 05 58.9
baz=283,slow=74,SNR=26
PDGK Podgornoye 40.47 309 P **P 18 22 42.9 -0.3**
H11S3 WAKE ISLAND Hy 40.54 90 T T 19 05 57.8
baz=286,slow=74,SNR=17
H11S1 WAKE ISLAND Hy 40.55 90 T T 19 05 57.8
baz=286,slow=74,SNR=9.2
H11S2 WAKE ISLAND Hy 40.55 90 T T 19 05 56.2
baz=286,SNR=10
MYLAV Mylavaram 40.69 267 *e*P **P 18 22 45.9 +0.8**
MYLAV IAmb IAmb 18 22 47.5
comp=Z,16nm,1.0s
GGR Gangavaram 40.76 269 *e*P **P 18 22 46.1 +0.4**
GGR IAmb IAmb 18 22 47.2
comp=Z,17nm,1.0s
PMG Port Moresby 40.91 143*c i*P **P 18 22 47.7 +0.8**
PMG pmax pmax
comp=Z,376nm,1.3s
PMG Port Moresby 40.91 143 P **P 18 22 47.5 +0.6**
PMG IAmb IAmb 18 22 49.1
comp=Z,84nm,1.1s
NGP Nagpur 40.94 274 *e*P **P 18 22 47.2 0.0**
NGP IAmb IAmb 18 22 48.6
comp=Z,23nm,0.7s
PRZ Przheval'sk 41.08 307 P **P 18 22 48.3 +0.1**
PRZ pmax pmax
comp=Z,26nm,0.8s
PRZ Przheval'sk 41.08 307 P **P 18 22 48.3 +0.1**
PRZ IAmb IAmb 18 22 50.4
comp=Z,26nm,0.8s
ZAA0 Zalesovo Array 41.09 326 P **P 18 22 46.7 -1.2**
ZALV Zalesovo Beam 41.09 326 P **P 18 22 46.5 -1.4**
comp=Z,20nm,0.5s,baz=114,slow=8.1,SNR=85
ZALV pP **pwP 18 23 06.3 -1.1**
comp=Z,14nm,0.6s,baz=117,slow=8.5,SNR=4.0
ZALV ScP **ScP 18 28 27.3 -2.4**
comp=Z,1.4nm,0.7s,baz=130,slow=4.7,SNR=3.7
ZALV S **S 18 28 54.4 -0.9**
comp=Z,1.0nm,0.7s,baz=128,slow=9.5,SNR=2.5
ZALV LR LR 18 41 28.9
comp=Z,447nm,18.3s,baz=120,slow=38
SMLA Simla 41.23 290 *e*P **P 18 22 50.4 +1.0**
SMLA IAmb IAmb 18 22 52.2
comp=Z,44nm,1.1s
SMLA *i* pP **pP 18 23 01.1 -5.6**
SMLA *es*P **sP 18 23 13.2 -1.6**
RPR Rampur 41.29 271 *e*P **P 18 22 50.5 +0.4**
RPR IAmb IAmb 18 22 52.0
comp=Z,19nm,0.9s
ADKI Addanki 41.59 266 *e*P **P 18 22 53.6 +1.1**
ADKI IAmb IAmb 18 22 55.1
comp=Z,18nm,0.9s
KDJ Kajisay 41.90 306 P **P 18 22 55.4 +0.4**
KDJ pmax pmax
comp=Z,21nm,0.7s
KDJ Kajisay 41.90 306 P **P 18 22 55.4 +0.4**
KDJ IAmb IAmb 18 22 56.6
comp=Z,21nm,0.7s
DHRM DHARAMSHALA 41.92 292 *e*P **P 18 22 55.4 +0.1**
DHRM IAmb IAmb 18 22 59.2
comp=Z,15nm,0.6s
NJS Nagarjunasagar 41.96 268 *e*P **P 18 22 56.1 +0.6**
NJS IAmb IAmb 18 22 57.1
comp=Z,17nm,1.1s
SRSP Sriramsagar 42.14 272 *e*P **P 18 22 57.5 +0.5**
SRSP IAmb IAmb 18 22 58.8
comp=Z,15nm,0.9s
HYB Hyderabad 42.38 269 *i* P **P 18 22 59.0 0.0**
HYB *ep*P **pP 18 23 17.5 +0.8**
HYB *es*P **sP 18 23 28.5 +3.5**
HYB *e*PcP **PcP 18 24 51.0 -0.2**
HYB *e* 18 25 12.0
HYB *e*S **S 18 29 16.0 +0.6**
HYBB Hyderabad (bro 42.38 269 *e*P **P 18 22 59.7 +0.7**
HYBB IAmb IAmb 18 23 00.3
comp=Z,18nm,1.1s
HYBB *ep*P **pP 18 23 17.3 +0.6**
HYBB *es*P **sP 18 23 26.8 +1.8**
HYBB *e*PcP **PcP 18 24 50.9 -0.3**
HYBB *e*S **S 18 29 15.0 -0.4**
FITZ Fitzroy Crossi 42.44 177 P **P 18 22 58.9 -0.4**
KSH Kashi 42.45 302 P **P 18 23 02.7 +3.3**
KSH pP pwP 18 23 18.1 -0.7
KSH sP sP 18 23 25.2 +0.3
KSH PcP **PcP 18 24 52.9 +1.7**
KSH S **S 18 29 22.1 +6.0**
KSH SS **SS 18 32 26.3 -1.4**
KSH pmax pmax
comp=Z,22nm,3.5s
KSH LR LR
comp=Z,940nm,10.1s
KSH LR LR
comp=Z,780nm,9.8s
KSH LR LR
comp=Z,630nm,8.6s
SRLM Srisailam 42.48 267 *e*P **P 18 23 00.3 +0.5**
SRLM IAmb IAmb 18 23 01.7
comp=Z,15nm,0.9s
SKHT Srikalahasti 42.55 264 *e*P **P 18 23 01.5 +1.2**
SKHT IAmb IAmb 18 23 03.0
comp=Z,21nm,1.0s
ULHL Ulahol 42.61 306 P **P 18 23 01.8 +1.1**
SNR=8.2
NRN Naryn 42.66 305 P **P 18 23 01.9 +0.5**
NRN pmax pmax
comp=Z,29nm,0.9s
NRN Naryn 42.66 305 P **P 18 23 01.9 +0.5**
NRN IAmb IAmb 18 23 29.1
comp=Z,30nm,0.9s
COEN Coen 42.84 151 P **P 18 23 03.8 +1.2**
SEY Seymchan 42.94 19‖ *e*P **P 18 23 05.4 +2.5**
DMPR Damasthipur 43.12 270 *e*P **P 18 23 05.2 +0.2**
DMPR IAmb IAmb 18 23 06.2
comp=Z,11nm,0.8s
KURK Kurchatov 43.16 319 P **P 18 23 04.3 -0.5**
KURK pmax pmax
comp=Z,46nm,1.0s
KURK Kurchatov 43.16 319 P **P 18 23 04.3 -0.5**
KURK IAmb IAmb 18 23 05.1
comp=Z,46nm,1.0s
TKM2 Tokmak 2 43.19 307 P **P 18 23 05.8 +0.4**
TKM2 Tokmak 2 43.19 307 P **P 18 23 05.8 +0.4**
SNR=70
KZA Kyzart 43.31 306 P **P 18 23 07.8 +1.1**
SNR=7.9
KBK Karagaybulak 43.62 307 P **P 18 23 09.5 +0.7**
SNR=17
CHMS Chumysh 43.81 307 P **P 18 23 10.2 0.0**
SNR=18
FRU1 Bishkek 43.87 307 P **P 18 23 11.0 +0.2**
FRU1 pmax pmax
comp=Z,18nm,0.9s
FRU1 Bishkek 43.87 307 P **P 18 23 11.0 +0.2**
UCH Uchtor 43.87 306 P **P 18 23 12.3 +1.1**
SNR=42
AAK Ala-Archa 43.95 307*c i*P **P 18 23 11.7 +0.3**
AAK pmax pmax
comp=Z,5.0nm,0.5s
AAK Ala-Archa 43.95 307 P **P 18 23 11.9 +0.5**
SNR=10
AAK Ala-Archa 43.95 307 *i* P **P 18 23 11.8 +0.3**
SNR=17
AAK Ala-Archa 43.95 307 P **P 18 23 11.8 +0.3**
KLRI Killari 43.97 271 *e*P **P 18 23 12.3 +0.5**
KLRI IAmb IAmb 18 23 14.0
comp=Z,43nm,0.6s
USP Ospenovka 44.03 308 P **P 18 23 11.7 -0.3**
SNR=10.0
PALK Pallekele 44.34 255 P **P 18 23 15.9 +1.1**
PALK pmax pmax
comp=Z,104nm,1.1s
PALK Pallekele 44.34 255 *i* P **P 18 23 16.9 +2.1**
SNR=11
PALK Pallekele 44.34 255 P **P 18 23 15.9 +1.1**
PALK IAmb IAmb 18 23 18.1
comp=Z,104nm,1.1s
URV Uravakonda 44.35 266 *e*P **P 18 23 15.2 +0.4**
URV IAmb IAmb 18 23 16.8
comp=Z,41nm,1.0s
NIL Nilore 44.44 294 P **P 18 23 15.6 +0.2**
NIL pmax pmax
comp=Z,29nm,0.8s
NIL Nilore 44.44 294 P **P 18 23 15.6 +0.2**
NIL IAmb IAmb 18 23 41.3
comp=Z,29nm,0.8s
AML Almayashu 44.47 306 P **P 18 23 15.8 -0.1**
SNR=17
EKS2 Erkin-Say 44.47 307 P **P 18 23 16.1 +0.4**
SNR=7.5
WRAB Tennant Creek 45.47 166 P **P 18 23 24.1 +0.5**
WRAB pmax pmax
comp=Z,316nm,0.9s
WRAB Tennant Creek 45.47 166 P **P 18 23 24.1 +0.5**
WRA Warramunga Arr 45.48 166 P **P 18 23 24.2 +0.7**
comp=Z,205nm,0.7s,baz=347,slow=8.8,SNR=423
WRA pP **pP 18 23 42.6 +1.2**
comp=Z,58nm,0.9s,baz=350,slow=8.9,SNR=3.8
WRA PcP **PcP 18 25 01.6 +0.1**
comp=Z,14nm,0.9s,baz=347,slow=4.7,SNR=4.6
WRA ScP **ScP 18 28 45.4 -2.6**
comp=Z,2.9nm,1.0s,baz=351,slow=5.1,SNR=5.3
WRA S **S 18 29 58.1 -1.9**
comp=Z,11nm,1.1s,baz=342,slow=14,SNR=13
WRA LR LR 18 41 38.0
comp=Z,78nm,21.3s,baz=300,slow=35
WR0 Warramunga Arr 45.54 165 P **P 18 23 24.7 +0.6**
PSA00 Pilbara Seismi 45.98 185 P **P 18 23 27.3 -0.2**
BTK Batken 46.45 303 P **P 18 23 31.6 +0.3**
BTK pmax pmax
comp=Z,57nm,1.6s
BTK Batken 46.45 303 P **P 18 23 31.6 +0.3**
BTK IAmb IAmb 18 24 02.3
comp=Z,57nm,1.6s
GAR Garm 46.80 301 P **P 18 23 34.5 +0.4**
GAR IAmb IAmb 18 24 00.7
comp=Z,73nm,1.0s
KK31 Karatay Array 46.91 307 P **P 18 23 35.7 +1.0**
KK31 pmax pmax
comp=Z,14nm,0.9s
KK31 Karatay Array 46.91 307 P **P 18 23 35.7 +1.0**
KKAR Karatay Array 46.91 307 P **P 18 23 35.5 +0.8**
KKAR pmax pmax
comp=Z,14nm,0.9s
KKAR Karatay Array 46.91 307 P **P 18 23 35.5 +0.8**
TIXI Tiksi 47.23 2 P **P 18 23 35.5 -1.2**
TIXI pmax pmax
comp=Z,192nm,1.1s
TIXI Tiksi 47.23 2 P **P 18 23 35.5 -1.2**
CHGR Chuyangaron 47.70 301 P **P 18 23 40.8 -0.2**
CHGR IAmb IAmb 18 24 07.7
comp=Z,66nm,0.9s
GIRL Giralia 47.76 192 P **P 18 23 42.3 +0.9**
KBL Kabul 47.88 295 P **P 18 23 43.3 +0.6**
KBL pmax pmax
comp=Z,49nm,0.9s
KBL Kabul 47.88 295 P **P 18 23 43.3 +0.6**
KBL IAmb IAmb 18 24 09.5
comp=Z,50nm,0.9s
AS31 Alice Springs 48.99 167 P **P 18 23 51.8 +0.9**
AS31 IAmb IAmb 18 23 52.9
comp=Z,19nm,0.6s
ASAR Alice Springs 48.99 167 P **P 18 23 51.8 +0.9**
comp=Z,56nm,0.8s,baz=352,slow=7.2,SNR=776
ASAR pP **pP 18 24 10.8 +1.8**
comp=Z,12nm,0.5s,baz=355,slow=6.7,SNR=3.5
ASAR PcP **PcP 18 25 14.3 +0.3**
comp=Z,19nm,0.8s,baz=360,slow=3.9,SNR=6.5
ASAR ScP **ScP 18 29 01.5 -1.1**
comp=Z,5.4nm,1.1s,baz=350,slow=3.2,SNR=7.0
ASAR S **S 18 30 48.8 -1.2**
comp=Z,5.5nm,1.1s,baz=2.9,slow=20,SNR=10
ASAR LR LR 18 43 52.4
comp=Z,40nm,20.9s,baz=340,slow=35
BILL Bilibino 50.65 19 *e*P **P 18 24 03.7 +0.8**
BILL *e**PP **pP 18 24 18.7 -1.9**
BILL *e* 18 25 18.1
BILL *e* 18 25 56.7
BILL pmax pmax
comp=Z,7.0nm,1.3s
BILL Bilibino 50.65 19 P **P 18 24 03.1 +0.2**
MNCI Minicoy 50.68 260 P **P 18 24 05.7 +1.7**
KIWB Kanaga Island 52.29 42 P **P 18 24 15.8 +0.4**
ADK Adak 52.58 42 P **P 18 24 17.6 +0.1**
ADK Adak 52.58 42 P **P 18 24 17.6 +0.1**
HRA Herat 53.49 296 P **P 18 24 24.1 -0.8**
MORW Morawa 53.78 188 P **P 18 24 26.4 -0.2**
ATKA Atka Island 54.14 42 P **P 18 24 29.2 +0.3**
AB31 Akbulak array 54.68 314 *i* P **P 18 24 32.7 -0.2**
ABKAR Akbulak array 54.68 314 P **P 18 24 32.8 -0.2**
ABKAR IAmb IAmb 18 24 33.7
comp=Z,40nm,0.8s
SVE Sverdlovsk 54.98 323‖ *e*P **P 18 24 34.7 -0.3**
SVE pmax pmax
comp=Z,18nm,0.6s
FORT Forrest 55.19 175 P **P 18 24 37.5 +0.8**
ARU Arti 56.07 323*c i*P **P 18 24 42.0 -0.8**
ARU *PP **pP 18 25 01.4 +0.5**
ARU 18 25 35.5
ARU 18 26 46.4
ARU S **S 18 32 28.0 +2.1**
ARU pmax pmax
comp=Z,14nm,0.5s
ARU MLR MLR
comp=Z,446nm,23.0s
ARU Arti 56.07 323 P **P 18 24 41.9 -0.9**
ARU IAmb IAmb 18 25 07.7
comp=Z,53nm,1.4s
EIDS Eidsvold 56.37 150 P **P 18 24 45.8 +0.5**
GEYT Alibeck 56.40 300 P **P 18 24 46.1 +0.5**
comp=Z,24nm,0.9s,baz=77,slow=3.2,SNR=60
GEYT pP **pP 18 25 05.5 +1.7**
comp=Z,7.9nm,0.8s,baz=106,slow=4.7,SNR=3.0
GEYT LR LR 18 53 28.1
comp=Z,362nm,19.8s,baz=0.0,slow=41
GYA0B ALIBECK ARRAY 56.40 300 P **P 18 24 47.3 +1.7**
GYA0B IAmb IAmb 18 24 48.4
comp=Z,38nm,0.9s
NIKH Nikolski High 57.44 42 P **P 18 24 53.0 +0.5**
NWAO Narrogin (SRO) 57.46 186 P **P 18 24 53.6 +0.7**
NWAO pmax pmax
comp=Z,250nm,1.0s
NWAO Narrogin (SRO) 57.46 186 P **P 18 24 53.5 +0.7**
NWAO Narrogin (SRO) 57.46 186 P **P 18 24 53.6 +0.7**
NWAO IAmb IAmb 18 24 54.8
comp=Z,200nm,1.0s
BBOO Buckleboo 58.29 168 P **P 18 24 59.2 +0.5**
WBK Wadi Bani Khal 58.65 282 P **P 18 25 02.6 +1.1**
SNR=9.5
STKA Stephens Creek 58.73 162 P **P 18 25 02.4 +0.7**
comp=Z,54nm,0.7s,baz=355,slow=6.6,SNR=91
STKA LR LR 18 51 59.0
comp=Z,178nm,20.2s,baz=0.2,slow=38
STKA Stephens Creek 58.73 162 P **P 18 25 02.4 +0.7**
STKA IAmb IAmb 18 25 03.5
comp=Z,14nm,0.8s
WSAR Wadi Sarin 58.78 283 P **P 18 25 03.4 +1.0**
BIDO Bidbid 59.15 284 P **P 18 25 06.3 +1.3**
SMDO Samad 59.34 283 P **P 18 25 07.5 +1.0**
JMDO Jabal Madar 59.48 282 P **P 18 25 08.1 +0.7**
HOQ Hoqain 59.85 284 P **P 18 25 10.7 +0.8**
SNR=5.2

MHTO MHTO 59.99 281 P **P** **18 25 11.0 +0.2**
ANM Nome 60.02 28 P **P** **18 25 09.1 -1.2**
ANM pmax pmax
comp=Z,29nm,1.4s
ANM Nome 60.02 28 P **P** **18 25 09.1 -1.2**
ANM IAmb IAmb 18 25 38.5
comp=Z,29nm,1.4s
BANOM **Banah 60.14 287** P **P** **18 25 12.9 +1.1**
BSY Bisya 60.18 283 P **P** **18 25 12.8 +0.7**
SHME Shamm 60.24 287 P **P** **18 25 13.7 +1.2**
SOHO SOHO 60.39 285 P **P** **18 25 13.7 +0.2**
HATD Hatta, Dubai 60.56 286 P **P** **18 25 15.7 +1.0**
ARQ Araqi 60.62 284 P **P** **18 25 16.0 +0.9**
SNR=7.6
ASHO Ashiyiah 60.66 286 *i* P **P** **18 25 16.3 +0.8**
SNR=10.0
DQM DQM 60.69 280 P **P** **18 25 15.6 0.0**
ARMA Armidale 60.97 152 P **P** **18 25 18.9 +1.6**
FAQ Al Faqa, Dubai 61.06 286 P **P** **18 25 18.8 +0.8**
ALNE Al Ain 61.10 285 *i* P **P** **18 25 19.3 +0.9**
SNR=6.1
ASUD Al Ashush, Dub 61.32 286 P **P** **18 25 20.1 +0.3**
SDPT Sand Point 62.33 39 P **P** **18 25 24.5 -1.5**
DZM Mont Dzumac 62.38 134 *e*P **P** **18 25 30.1 +3.2**
comp=Z,69nm,1.4s
DZM *e*S **S** **18 33 50.9 +2.5**
comp=Z,142nm,23.8s
DZM Mont Dzumac 62.38 134 *e*LR LR 18 44 05.1
comp=Z,862nm,26.8s
PRGR Permogore 62.96 328 *e*P **P** **18 25 28.1 -2.0**
PRGR *e**PP **pP** **18 25 48.8 +0.3**
PRGR *e* 18 26 04.5
PRGR pmax pmax
comp=Z,23nm,0.8s
SHAO Shalim 63.00 279 P **P** **18 25 31.7 +0.5**
SHAO Shalim 63.00 279 P **P** **18 25 31.6 +0.4**
AKT Akhty 63.81 306 *e*P **P** **18 25 36.7 +0.4**
AKT *e**PP **pP** **18 25 53.3 -1.6**
AKT *e**SP **sP** **18 26 01.6 -1.2**
AKT *e* 18 26 09.7
AKT pmax pmax
comp=Z,46nm,1.3s
TTA Tatalina 64.15 30 P **P** **18 25 38.5 +0.4**
TTA Tatalina 64.15 30 P **P** **18 25 38.5 +0.4**
CAN Canberra 64.27 157 P **P** **18 25 40.2 +1.1**
CAN pmax pmax
comp=Z,55nm,1.1s
CAN Canberra 64.27 157 P **P** **18 25 40.2 +1.1**
CAN IAmb IAmb 18 25 41.3
comp=Z,55nm,1.1s
SVW2 Sparrevohn 64.49 32 P **P** **18 25 41.2 +0.9**
SVW2 IAmb IAmb 18 25 44.1
comp=Z,34nm,1.3s
WHFO Wadi Hawf 64.70 279 P **P** **18 25 42.0 -0.4**
SNR=17
GROC Groznyy 64.91 308 *e*P **P** **18 25 41.9 -1.4**
GROC *e**PP **pP** **18 25 59.9 -2.0**
GROC *e**SP **sP** **18 26 08.3 -1.5**
GROC *e* 18 26 13.6
GROC *e* 18 28 06.2
GROC pmax pmax
comp=Z,30nm,1.1s
TOO Toolangi 65.17 161 P **P** **18 25 46.0 +1.1**
TOO pmax pmax
comp=Z,54nm,1.0s
TOO Toolangi 65.17 161 P **P** **18 25 46.0 +1.1**
TOO IAmb IAmb 18 25 47.3
comp=Z,54nm,0.9s
ABTO Aybut 65.32 279 P **P** **18 25 46.5 +0.1**
PPLA Purkeypile 65.90 30 P **P** **18 25 50.0 +0.5**
PPLA IAmb IAmb 18 26 31.4
comp=Z,38nm,1.3s
RSO Redoubt South 65.94 33 P **P** **18 25 50.4 +0.6**
OHAK Old Harbor 66.11 36 P **P** **18 25 50.4 -0.3**
OHAK IAmb IAmb 18 26 35.0
comp=Z,114nm,1.6s
VRH Novokhopyorsk 66.20 317 *e*P **P** **18 25 50.0 -1.5**
VRH pmax pmax
comp=Z,60nm,1.1s
TMCR Tamitsa 66.22 331 *e*P **P** **18 25 51.3 0.0**
TMCR pmax pmax
comp=Z,30nm,1.3s
MLY Manley 66.27 28 P **P** **18 25 52.2 +0.4**
BPAW Bear Paw Mtn. 66.28 29 P **P** **18 25 52.4 +0.6**
TOLK Toolik Lake Re 66.29 24 P **P** **18 25 52.0 +0.2**
TOLK Toolik Lake Re 66.29 24 P **P** **18 25 52.4 +0.6**
baz=277
GNI Garni 66.30 305 P **P** **18 25 53.3 +0.7**
GNI pmax pmax
comp=Z,74nm,1.6s
GNI Garni 66.30 305 *i* P **P** **18 25 53.3 +0.7**
SNR=8.9
GNI Garni 66.30 305 P **P** **18 25 53.3 +0.7**
GNI IAmb IAmb 18 26 36.2
comp=Z,74nm,1.6s
ZEI Tsey 66.35 308 *e*P **P** **18 25 49.3 -3.6**
ZEI pmax pmax
comp=Z,15nm,0.6s
KTH Kantishna Hill 66.38 29 P **P** **18 25 53.0 +0.4**
KDAK Kodiak Island 66.41 36 P **P** **18 25 52.4 -0.2**
KDAK pmax pmax
comp=Z,78nm,1.2s
KDAK Kodiak Island 66.41 36 P **P** **18 25 52.4 -0.2**
KDAK IAmb IAmb 18 26 13.9
comp=Z,78nm,1.1s
GOF Gofitskoye 66.49 310⇑ *e*P **P** **18 25 53.1 -0.3**
GOF pmax pmax
comp=Z,49nm,1.3s
SOCY Socotra 66.49 273 P **P** **18 25 53.2 -0.8**
SOCY IAmb IAmb 18 25 54.4
comp=Z,52nm,1.1s
TRF Thorofare Moun 66.68 29 P **P** **18 25 55.3 +0.7**
SUA Susitna One 66.77 31 P **P** **18 25 54.8 -0.2**
SUA IAmb IAmb 18 26 17.9
comp=Z,30nm,0.8s
KBZ Khabaz 66.87 309 P **P** **18 25 54.6 -1.2**
comp=Z,9.9nm,0.8s,baz=83,slow=6.0,SNR=28
KBZ LR LR 18 57 21.1
comp=Z,279nm,20.6s,baz=68,slow=38
BWN Browne 66.93 28 P **P** **18 25 57.7 +1.8**
BWN IAmb IAmb 18 27 05.0
comp=Z,26nm,0.8s
AKH Akhalkalaki 66.95 306⇑ P **P** **18 25 57.5 +0.9**
BRLK Bradley Lake 66.97 33 P **P** **18 25 55.6 -0.6**
KIV Kislovodsk 66.97 309 P **P** **18 25 57.1 +0.5**
KIV pmax pmax
comp=Z,38nm,0.8s
KIV Kislovodsk 66.97 309 *i* P **P** **18 25 56.8 +0.2**
SNR=18
KIV Kislovodsk 66.97 309 P **P** **18 25 57.1 +0.5**
KIV IAmb IAmb 18 25 58.9
comp=Z,38nm,0.8s
LVZ Lovozero 67.07 336 P **P** **18 25 57.3 +0.5**
LVZ pmax pmax
comp=Z,172nm,1.7s
LVZ Lovozero 67.07 336 P **P** **18 25 57.3 +0.5**
NEY Neytrino 67.10 308⇓ *e*P **P** **18 25 58.2 +0.6**
NEY pmax pmax
comp=Z,4.0nm,0.7s
RC01 Rabbit Creek A 67.31 32 P **P** **18 25 58.7 +0.4**
RC01 IAmb IAmb 18 26 00.1
comp=Z,59nm,1.6s
RND Reindeer 67.32 29 P **P** **18 25 58.1 -0.4**
RND pmax pmax
comp=Z,32nm,0.8s
RND Reindeer 67.32 29 P **P** **18 25 58.1 -0.4**
RND IAmb IAmb 18 26 20.7
comp=Z,32nm,0.8s
MDM Murphy Dome 67.34 27 P **P** **18 25 58.0 -0.5**
WRH Wood River Hil 67.48 28 P **P** **18 25 59.5 +0.2**
PMR Palmer 67.51 31 P **P** **18 25 58.4 -1.1**
PMR pmax pmax
comp=Z,93nm,1.8s
PMR Palmer 67.51 31 P **P** **18 25 58.4 -1.1**
PMR IAmb IAmb 18 26 21.4
comp=Z,93nm,1.8s
COLA College 67.51 28⇓ *e*P **P** **18 26 01.9 +2.4**
COLA pmax pmax
comp=Z,11nm,1.3s
CCB Clear Creek Bu 67.57 28 P **P** **18 25 59.2 -0.7**
GHO Glory Hole Cre 67.57 31 P **P** **18 25 59.9 -0.2**
APA Apatity 67.59 335⇓ *i* P **P** **18 25 59.0 -1.0**
APA *i* 18 26 17.2
APA pmax pmax
comp=Z,11nm,1.0s
APA MLR MLR
comp=Z,2µm,24.0s
POKR Poker Plat Res 67.64 27 P **P** **18 26 01.4 +1.0**
baz=280
LPSR Galich'ya Gora 67.64 319 *e*P **P** **18 25 58.6 -2.0**
LPSR pmax pmax
comp=Z,70nm,1.8s
VORD Divnogorie 67.75 317 *e*P **P** **18 25 59.9 -1.4**
VORD pmax pmax
comp=Z,20nm,1.1s
VSR Storozhevoye 67.78 317 *e*P **P** **18 25 59.5 -2.0**
VSR pmax pmax
comp=Z,30nm,1.0s
MOS Moscow 67.78 322 *e*P **P** **18 25 58.6 -2.8**
MOS *e**PP **pP** **18 26 14.9 -5.0**
MOS *e**SP **pwP** **18 26 21.9 -0.3**
MOS *e* 18 26 28.6
MOS *e*S **S** **18 34 48.0 -5.6**
MOS pmax pmax
comp=Z,48nm,1.2s
SML Sawmill 67.84 31 P **P** **18 26 01.9 +0.1**
SML IAmb IAmb 18 26 27.2
comp=Z,32nm,0.9s
KNK Knik Glacier 67.86 31 P **P** **18 26 01.8 0.0**
KNK IAmb IAmb 18 26 24.6
comp=Z,26nm,0.8s
IL31 67.93 28 P **P** **18 26 02.4 +0.3**
ILAR Eielson Array 67.93 28 P **P** **18 26 00.3 -1.9**
comp=Z,0.9nm,0.5s,baz=263,slow=3.9,SNR=26
ILAR pP **pP** **18 26 21.1 +0.4**
comp=Z,2.8nm,0.5s,baz=265,slow=4.9,SNR=7.8
ILAR LR LR 18 57 58.2
comp=Z,114nm,18.1s,baz=293,slow=38
HDA Harding Lake 67.97 28 P **P** **18 26 02.4 -0.1**
HDA Harding Lake 67.97 28 P **P** **18 26 02.9 +0.5**
baz=281
DHY Denali Highway 68.04 29 P **P** **18 26 02.9 -0.2**
SCM Sheep Creek Mo 68.31 31 P **P** **18 26 04.8 +0.1**
SCM pmax pmax
comp=Z,33nm,0.7s
SCM Sheep Creek Mo 68.31 31 P **P** **18 26 04.8 +0.1**
SCM IAmb IAmb 18 26 27.3
comp=Z,33nm,0.7s
PRP Porcupine Dome 68.35 27 P **P** **18 26 04.8 -0.2**
OBN Obninsk 68.50 322 *e*P **P** **18 26 05.2 -0.6**
OBN *e**PP **pP** **18 26 21.1 -3.3**
OBN *e* 18 26 29.3
OBN pmax pmax
comp=Z,44nm,1.3s
PAX Paxson 68.91 29 P **P** **18 26 08.3 -0.2**
PAX pmax pmax
comp=Z,12nm,0.8s
PAX Paxson 68.91 29 P **P** **18 26 08.3 -0.2**
RIDG Independent Ri 69.02 28 P **P** **18 26 08.8 -0.3**
RIDG IAmb IAmb 18 26 41.8
comp=Z,27nm,1.0s
EYAK Cordova Ski Ar 69.33 32 P **P** **18 26 10.9 0.0**
EYAK IAmb IAmb 18 26 31.4
comp=Z,63nm,1.4s
SCRK Sand Creek 69.33 28 P **P** **18 26 10.6 -0.5**
DOT Dot Lake 69.38 28 P **P** **18 26 11.1 -0.2**
SPA0 Spitsbergen Ar 69.57 348 P **P** **18 26 12.1 -0.1**
SPA0 IAmb IAmb 18 26 40.6
comp=Z,54nm,1.1s
MENT Mentasta 69.70 29 P **P** **18 26 14.1 +0.8**
RAGM Ragged Mountai 69.89 32 P **P** **18 26 15.2 +0.7**
RAGM IAmb IAmb 18 27 26.6
comp=Z,35nm,0.7s
ARCES ARCESS Array B 69.97 338 P **P** **18 26 13.7 -1.1**
comp=Z,7.0nm,0.9s,baz=54,slow=8.2,SNR=6.5
ARCES pP **pwP** **18 26 35.0 -0.8**
comp=Z,8.1nm,0.6s,baz=70,slow=4.0,SNR=5.4
ARCES LR LR 19 04 03.0
comp=Z,183nm,18.2s,baz=116,slow=42
ARE0 ARCESS Array S 69.97 338 P **P** **18 26 15.3 +0.6**
GLB Gilahina Butte 70.03 31 P **P** **18 26 15.7 +0.3**
GLB IAmb IAmb 18 26 38.3
comp=Z,35nm,1.0s
RAYN Ar Rayn 70.22 287 P **P** **18 26 17.1 -0.1**
RAYN pmax pmax
comp=Z,64nm,1.2s
RAYN Ar Rayn 70.22 287 *i* P **P** **18 26 17.2 -0.1**
SNR=11
RAYN Ar Rayn 70.22 287 P **P** **18 26 17.1 -0.1**
RAYN IAmb IAmb 18 26 18.6
comp=Z,64nm,1.1s
VRDI Verde Repeater 70.25 31 P **P** **18 26 17.0 +0.2**
VRDI IAmb IAmb 18 26 39.5
comp=Z,25nm,0.8s
EGAK Eagle 70.32 27 P **P** **18 26 17.3 +0.4**
MCARA **McCarthy VSAT 70.41 31** P **P** **18 26 19.1 +1.5**
MCARA IAmb IAmb 18 26 43.0
comp=Z,36nm,0.8s
ANN Anapa 70.42 311 *e*P **P** **18 26 15.5 -2.4**
ANN *e**PP **pP** **18 26 34.2 -2.6**
ANN *e*S **S** **18 35 22.9 -2.2**
ANN pmax pmax
comp=Z,80nm,1.5s
CRQM Cirque 70.52 31 P **P** **18 26 19.0 +0.5**
CRQM IAmb IAmb 18 26 47.9
comp=Z,24nm,0.8s
TAU Tasmania Unive 70.64 162 P **P** **18 26 19.8 +0.8**
TAU pmax pmax
comp=Z,81nm,1.3s
TAU Tasmania Unive 70.64 162 P **P** **18 26 19.8 +0.8**
TAU IAmb IAmb 18 26 21.7
comp=Z,81nm,1.2s
TGL Tana Glacier 70.67 31 P **P** **18 26 19.9 +0.6**
TGL IAmb IAmb 18 26 42.4
comp=Z,23nm,0.8s
BALM Baldy 70.82 31 P **P** **18 26 20.9 +0.6**
BARN Barnard Glacie 71.14 31 P **P** **18 26 23.5 +1.2**
BARN IAmb IAmb 18 26 45.3
comp=Z,22nm,0.8s
CTGM Chitina Glacie 71.31 31 P **P** **18 26 23.8 +0.6**
CTGM IAmb IAmb 18 26 46.5
comp=Z,40nm,0.8s
URFA Urfa 71.47 303 *e*P **P** **18 26 24.9 +0.3**
MALT Malatya 71.51 304 *e*P **P** **18 26 25.8 +1.0**
EPYK Eagle Plains 71.61 25 P **P** **18 26 24.9 +0.1**
EPYK Eagle Plains 71.61 25 P **P** **18 26 25.1 +0.3**
baz=289
INK Inuvik 72.10 22 P **P** **18 26 27.7 +0.1**
INK pmax pmax
comp=Z,20nm,1.2s
INK Inuvik 72.10 22 P **P** **18 26 27.7 +0.1**
MSEY Mahe Island 72.13 256 P **P** **18 26 29.7 +0.9**
FIA1 FINESS Array S 72.17 330 P **P** **18 26 28.2 +0.1**
FIA1 IAmb IAmb 18 26 28.8
comp=Z,32nm,1.2s
FINES FINESS Array B 72.17 330 *i* P **P** **18 26 28.1 -0.1**
FINES pmax pmax
comp=Z,14nm,0.7s
FINES FINESS Array B 72.17 330 P **P** **18 26 27.2 -1.0**
comp=Z,14nm,0.7s,baz=62,slow=5.1,SNR=42
FINES LR LR 19 00 46.5
comp=Z,450nm,20.8s,baz=76,slow=38
SIM Simferopol' 72.64 312 *ce*P **P** **18 26 30.7 -0.6**
SIM pmax pmax
comp=Z,26nm,0.8s
VSU Vasula 72.82 327⇑ *e*P **P** **18 26 32.8 +0.8**
VSU pmax pmax
comp=Z,78nm,1.3s
VSU Vasula 72.82 327 *e*P **P** **18 26 32.1 +0.1**
KMRS Kahramanmaras 72.91 304 *e*P **P** **18 26 33.5 +0.4**
SEVA Sevastopol 73.07 312⇑ P **P** **18 26 33.3 -0.5**
HYT Haines Junctio 73.14 30 P **P** **18 26 35.3 +1.2**
MICGM **Minsk 73.50 323** *e* **P** **18 26 35.0 -1.2**
MNK Minsk 73.50 323 *e*P **P** **18 26 35.0 -1.2**
CEYT Ceyhan 73.93 304 *e*P **P** **18 26 39.5 +0.4**
IZAR Zarasai 73.97 324 *e*P **P** **18 26 39.2 +0.4**
IZAR IAML 18 26 42.4
comp=Z,3.9nm,0.4s
NACGM **Naroch 73.97 323** *e* **P** **18 26 38.0 -0.9**
AKASG **Malin Array Be 73.97 319** P **P** **18 26 37.6 -1.4**
comp=Z,1.5nm,0.3s,baz=58,slow=5.9,SNR=50
AKBB Malin Array Si 73.97 319 P **P** **18 26 37.9 -1.1**
AKBB pmax pmax
comp=Z,30nm,1.2s
AKBB Malin Array Si 73.97 319 P **P** **18 26 37.9 -1.1**
AKBB IAmb IAmb 18 26 39.1
comp=Z,30nm,1.2s
ISAL Salakas 74.10 324 *e*P **P** **18 26 39.5 -0.1**
IIGN Ignalina 74.12 324 *e*P **P** **18 26 39.6 -0.2**
IIGN IAML 18 26 46.2
comp=Z,5.1nm,0.5s
ILGA Ilgaz 74.13 308 P **P** **18 26 40.2 -0.2**
ILGA IAmb IAmb 18 26 42.1
comp=Z,59nm,1.6s
WHY Whitehorse 74.40 30 P **P** **18 26 41.4 -0.1**
BR131 Keskin Array S 74.62 307 P **P** **18 26 42.9 -0.3**
BR131 pmax pmax
comp=Z,48nm,1.3s
BR131 Keskin Array S 74.62 307 P **P** **18 26 42.9 -0.3**
BR131 IAmb IAmb 18 26 44.3
comp=Z,48nm,1.3s
BRTR Keskin Array B 74.62 307 P **P** **18 26 42.5 -0.7**
comp=Z,15nm,0.8s,baz=102,slow=5.2,SNR=74
BRTR pP **pP** **18 27 04.2 +2.0**
comp=Z,12nm,1.1s,baz=84,slow=3.4,SNR=2.3
SKAG Skagway 74.64 31 P **P** **18 26 43.9 +1.2**
SKAG IAmb IAmb 18 27 06.7
comp=Z,24nm,0.8s
C36M Paulatuk 74.76 20 P **P** **18 26 43.1 0.0**
C36M Paulatuk 74.76 20 P **P** **18 26 43.2 0.0**
baz=299
ANTO Ankara 75.19 307 P **P** **18 26 45.5 -0.9**
ANTO pmax pmax
comp=Z,80nm,1.5s
ANTO Ankara 75.19 307⇑ P **P** **18 26 46.7 +0.3**
ANTO Ankara 75.19 307 P **P** **18 26 45.5 -0.9**
ANTO IAmb IAmb 18 26 47.6
comp=Z,80nm,1.4s
PABE Paberze 75.27 325 *e*P **P** **18 26 45.9 -0.4**
PABE IAML 18 26 49.0
comp=Z,10nm,0.5s
KULU Kulu 75.31 306 *e*P **P** **18 26 46.8 -0.4**
SORM Soroca 75.38 316⇑ P **P** **18 26 46.1 -1.0**
MILM Milestii Mici 75.51 315⇓ P **P** **18 26 47.1 -0.8**
CHBY Cihanbeyli 75.55 306 *e*P **P** **18 26 47.2 -1.3**
JIS Juneau Island 75.55 32 P **P** **18 26 49.0 +1.1**
JIS IAmb IAmb 18 27 18.7
comp=Z,73nm,1.5s
KEBE Keben-Mersin 75.66 304 *e*P **P** **18 26 48.9 -0.3**
TEVE Tevekalti-Mers 75.87 304 *e*P **P** **18 26 49.8 -0.6**
AKKU Akkuyu-Mersin 75.89 303 *e*P **P** **18 26 50.2 -0.1**
LEOM Leova 76.03 315⇑ P **P** **18 26 50.5 -0.4**
BERE Bereket-Mersin 76.07 304 *e*P **P** **18 26 50.9 -0.7**
TLCR 76.11 313⇑ P **P** **18 26 51.1 -0.3**
TEKE Tekeli-Mersin 76.22 304 *e*P **P** **18 26 51.9 -0.3**
JURR Jurilovca 76.22 313⇓ P **P** **18 26 51.9 -0.2**
SUW Suwalki 76.25 323 P **P** **18 26 52.3 +0.3**
SUW pmax pmax
comp=Z,148nm,1.0s
SUW Suwalki 76.25 323 *e*P **P** **18 26 51.6 -0.5**
SUW Suwalki 76.25 323 P **P** **18 26 52.3 +0.3**
SVRH Sivrihisar-ESK 76.25 307 *e*P **P** **18 26 51.8 -0.7**
DAG Danmarks Havn 76.32 352 *i* P **P** **18 26 51.0 -1.0**
DAG Danmarks Havn 76.32 352 *i* P **P** **18 26 51.0 -1.0**
CSS Mathiatis 76.47 302 P **P** **18 26 52.9 -0.8**
CSS Mathiatis 76.47 302 P **P** **18 26 53.8 +0.1**
TOPG Topolog 76.52 313⇑ P **P** **18 26 53.7 0.0**
CFR Carcaliu 76.57 314⇑ P **P** **18 26 53.5 -0.4**
TIRR Tirgusor 76.64 313 P **P** **18 26 54.0 -0.5**
TIRR pmax pmax
comp=Z,54nm,1.0s
TIRR Tirgusor 76.64 313⇑ P **P** **18 26 54.2 -0.2**
TIRR Tirgusor 76.64 313 P **P** **18 26 54.0 -0.5**
TIRR IAmb IAmb 18 26 55.2
comp=Z,54nm,1.0s
SRCK Saricakaya, Es 76.69 308 *e*P **P** **18 26 54.2 -0.7**
LEF Lefka 76.75 303⇓ P **P** **18 26 55.7 +0.5**
GAZI Gazipasa 76.79 304 *e*P **P** **18 26 54.2 -1.3**
HARR Harsova 76.88 313⇓ P **P** **18 26 55.8 0.0**
PRAR RASCA 76.99 316⇑ P **P** **18 26 56.0 -0.5**
TESR Tescani 77.04 315⇓ P **P** **18 26 55.9 -0.8**
PSN Preselentsi 77.08 312 P **P** **18 26 56.9 0.0**
BIZ Bicaz 77.23 316⇑ P **P** **18 26 57.6 -0.2**
VRI Vrincioaia 77.23 315⇓ P **P** **18 26 57.8 0.0**
PLOR Plostina 77.29 315⇑ P **P** **18 26 58.3 +0.2**
LVV L'vov 77.40 319 *i* P **P** **18 26 58.2 -0.4**
LVV *e* 18 29 48.8
LVV *e*S **S** **18 36 42.1 -1.3**
LVV *e*SSS SSS 18 45 06.0
LVV pmax pmax
comp=Z,50nm,1.3s
BUR08 Bucovina Ar. S 77.53 317 P **P** **18 26 59.2 -0.4**
BURAR **Bucovina Array 77.53 317**⇑ P **P** **18 26 59.4 -0.1**
ISR Istrita 77.64 314⇑ P **P** **18 27 00.9 +0.8**
LEHL Lehliu 77.70 313⇓ P **P** **18 27 01.1 +0.7**
TVSB Tavsanli 77.74 308 *e*P **P** **18 27 00.2 -0.7**
OZUR 77.75 315⇑ P **P** **18 27 01.0 +0.3**
PRD Provadia 77.79 312 P **P** **18 27 00.7 -0.2**
MLR Muntele Rosu 77.88 314 P **P** **18 27 01.4 -0.1**
comp=Z,18nm,0.8s,baz=60,slow=5.0,SNR=36
MLR Muntele Rosu 77.88 314⇑ P **P** **18 27 01.5 -0.1**
MLR Muntele Rosu 77.88 314 P **P** **18 27 00.7 -0.9**
RES Resolute Bay 77.96 10 P **P** **18 27 00.7 -0.6**
RES pmax pmax
comp=Z,8.0nm,0.9s
RES Resolute Bay 77.96 10 P **P** **18 27 00.7 -0.6**
SECR 77.98 314⇓ P **P** **18 27 02.6 +0.7**
SULR 77.99 314⇓ P **P** **18 27 02.4 +0.4**
DOPR Dopca 78.06 315⇑ P **P** **18 27 02.8 +0.4**
RAZG Razgrad 78.25 313⇑ P **P** **18 27 03.4 0.0**
HFS Hagfors 78.25 331 P **P** **18 27 02.7 -0.5**
comp=Z,9.4nm,0.6s,baz=77,slow=7.6,SNR=22
KWP Kalwaria Pacla 78.26 319 *e*P **P** **18 27 03.7 +0.2**
KWP Kalwaria Pacla 78.26 319 *e*P **P** **18 27 03.7 +0.2**
KWP Kalwaria Pacla 78.26 319 P **P** **18 27 03.6 +0.2**
ARCR ARCALIA 78.28 316⇓ P **P** **18 27 04.2 +0.6**
ELL Elmali 78.42 305 P **P** **18 27 04.2 -0.5**
ELL Elmali 78.42 305 P **P** **18 27 04.2 -0.5**
VOIR 78.48 315⇓ P **P** **18 27 04.5 -0.4**
BMR Baia Mare 78.58 317⇓ P **P** **18 27 04.9 -0.3**
NC405 NORSAR Array S 78.62 333 P **P** **18 27 04.3 -0.8**
NC405 IAmb IAmb 18 27 06.1
comp=Z,39nm,0.8s
NC303 NORSAR Array S 78.70 333 P **P** **18 27 05.0 -0.6**
EDRB Edirne 78.75 311 *e*P **P** **18 27 05.6 -0.7**
MANT Manisa 78.75 307 P **P** **18 27 05.9 -0.7**
ARR Arges 78.78 315⇓ P **P** **18 27 07.1 +0.6**
KOLS Kolonicke sedl 78.81 319 *e*P **P** **18 27 06.4 -0.1**
KOLS Kolonicke sedl 78.81 319 *e*P **P** **18 27 06.4 -0.1**
NB201 NORSAR Array S 78.83 333 P **P** **18 27 06.1 -0.2**
NB2 NORSAR Subarra 78.86 333 P **P** **18 27 05.6 -1.0**
comp=Z,3.4nm,0.5s,baz=52,slow=5.9
NOA NORSAR Array B 78.86 333 P **P** **18 27 05.2 -1.3**
comp=Z,7.5nm,0.7s,baz=59,slow=5.4,SNR=32
NOA pP **pwP** **18 27 27.0 -0.9**
comp=Z,0.7nm,0.5s,baz=53,slow=6.0,SNR=3.7
NOA LR LR 19 05 27.0
comp=Z,239nm,19.1s,baz=70,slow=38
COPA Copaceanca 78.89 313⇓ P **P** **18 27 06.8 -0.1**
HUMR Humele 78.89 314⇑ P **P** **18 27 06.4 -0.6**
CJR Cluj-Napoca 78.90 316⇓ P **P** **18 27 07.9 +0.9**
UZH Uzhgorod 78.92 318 *e*P **P** **18 27 06.7 -0.3**
UZH *e* 18 27 13.1
UZH *e* 18 27 28.3
NC204 NORSAR Array S 78.93 333 P **P** **18 27 06.5 -0.4**
NC204 IAmb IAmb 18 27 07.5
comp=Z,48nm,1.1s
TRPA Tarpa 78.98 318⇑ P **P** **18 27 07.4 0.0**
FETY Fethiye 79.07 305 P **P** **18 27 06.7 -1.5**
LOT Lotru 79.31 315⇑ P **P** **18 27 08.9 -0.5**
TURN Turunc 79.34 306 *e*P **P** **18 27 10.5 +1.0**
DRGR 79.43 317⇓ P **P** **18 27 10.3 +0.4**
YER Yerkesik 79.47 306 P **P** **18 27 10.1 -0.3**
PLVB Pleven 79.58 313⇑ P **P** **18 27 10.7 0.0**
DEV Deva 79.68 316⇑ P **P** **18 27 11.8 +0.6**
OJC Ojcow 79.72 321 *e*P **P** **18 27 11.5 +0.1**
OJC Ojcow 79.72 321 *e*P **P** **18 27 11.5 +0.1**
OJC Ojcow 79.72 321 P **P** **18 27 11.5 +0.1**
OJC IAmb IAmb 18 27 12.5
comp=Z,70nm,1.1s
NIE Niedzica 79.78 320 *e*P **P** **18 27 12.3 +0.6**
NIE Niedzica 79.78 320 *e*P **P** **18 27 12.3 +0.6**
GZR Gura Zlata 79.97 315⇑ P **P** **18 27 12.8 -0.1**
SRE Strehaia 79.99 315⇑ P **P** **18 27 13.2 +0.2**
GCAM G?zelcaml? 80.02 307 *e*P **P** **18 27 12.9 -0.3**
KECS Kecovo 80.07 319 *e*P **P** **18 27 13.8 +0.5**
KECS pmax pmax
comp=Z,10.0nm,1.1s
KECS Kecovo 80.07 319 *e*P **P** **18 27 13.8 +0.5**
BSD Bornholm Skovb 80.11 326 *e*P **P** **18 27 14.4 +1.1**
BSD Bornholm Skovb 80.11 326 *i* P **P** **18 27 14.4 +1.1**

PGB Panagyurishte 80.23 312 P **P** **18 27 14.4 0.0**
SIRR Siria 80.31 316 ⇑P **P** **18 27 14.8 +0.2**
PUNG Punghina 80.33 314 ⇑P **P** **18 27 15.0 +0.3**
LANS Liptovska Anna 80.38 320 *e*P **P** **18 27 16.1 +1.0**
LANS pmax pmax
comp=Z,9.0nm,1.2s
LANS Liptovska Anna 80.38 320 *e*P **P** **18 27 16.0 +1.0**
TUWZ Tuamarina 80.60 144 P **P** **18 27 16.0 0.0**
BZS Buzias 80.61 316 ⇑P **P** **18 27 15.7 -0.5**
PSZ Piszkesteto 80.67 318 P **P** **18 27 16.5 -0.2**
PSZ pmax pmax
comp=Z,25nm,1.1s
PSZ Piszkesteto 80.67 318 ⇑P **P** **18 27 16.6 0.0**
PSZ Piszkesteto 80.67 318 P **P** **18 27 16.5 -0.2**
RPZ Rata Peaks 80.75 147 P **P** **18 27 17.3 +0.5**
VTS Vitosha 80.83 313 P **P** **18 27 17.7 0.0**
VTS Vitosha 80.83 313 P **P** **18 27 17.4 -0.3**
VTS pmax pmax
comp=Z,47nm,0.8s
VTS Vitosha 80.83 313 ⇓P **P** **18 27 18.1 +0.4**
VTS Vitosha 80.83 313 P **P** **18 27 17.9 +0.2**
VTS Vitosha 80.83 313 P **P** **18 27 17.4 -0.3**
VTS lAmb lAmb 18 27 19.1
comp=Z,47nm,0.8s
OKC Ostrava-Krasne 80.84 321 *e*P **P** **18 27 17.2 -0.2**
OKC Ostrava-Krasne 80.84 321 *e*P **P** **18 27 17.2 -0.2**
MDVR Moldovita 80.91 315 ⇑P **P** **18 27 17.7 -0.2**
MMB Musomiste 80.92 312 P **P** **18 27 17.0 -1.1**
KARP Karpathos 80.93 305 P **P** **18 27 17.0 -1.2**
VYHS Vyhne 81.05 319 *e*P **P** **18 27 19.1 +0.5**
VYHS pmax pmax
comp=Z,41nm,1.1s
VYHS Vyhne 81.05 319 *e*P **P** **18 27 19.1 +0.5**
KULLO Kullorsuaq 81.11 0 *i* P P 18 27 09.8 -8.6
KULLO Kullorsuaq 81.11 0 *i* P P 18 27 09.8 -8.6
MORC Moravsky Berou 81.22 321 P **P** **18 27 19.4 -0.1**
MORC pmax pmax
comp=Z,19nm,1.0s
MORC Moravsky Berou 81.22 321 ⇑P **P** **18 27 19.5 -0.1**
MORC Moravsky Berou 81.22 321 *e*P **P** **18 27 19.4 -0.1**
MORC Moravsky Berou 81.22 321 P **P** **18 27 19.4 -0.1**
KKB Krupnik 81.25 312 P **P** **18 27 19.2 -0.5**
BFZ Birch Farm 81.34 142 P **P** **18 27 19.9 -0.1**
KSP Ksiaz 81.42 322 *e*P **P** **18 27 20.7 +0.2**
KSP Ksiaz 81.42 322 *e*P **P** **18 27 20.7 +0.2**
KRLC Kraliky 81.51 321 *e*P **P** **18 27 21.0 0.0**
KRLC Kraliky 81.51 321 *e*P **P** **18 27 21.0 0.0**
JAVC Velka Javorina 81.57 320 *e*P **P** **18 27 22.7 +1.3**
DPC Dobruska-Polom 81.64 322 *e*P **P** **18 27 21.9 +0.2**
DPC Dobruska-Polom 81.64 322 *e*P **P** **18 27 21.9 +0.2**
DPC *e*PCP **PcP** **18 27 27.3 -0.1**
DPC *ex* x 18 27 31.1
SRO Srobarova 81.67 319 *e*P **P** **18 27 22.1 +0.3**
SRO pmax pmax
comp=Z,15nm,0.8s
SRO Srobarova 81.67 319 *e*P **P** **18 27 22.1 +0.3**
CHVC Chvalec 81.68 322 *e*P **P** **18 27 21.8 -0.1**
UPC Upice 81.74 322 *e*P **P** **18 27 22.2 0.0**
UPC Upice 81.74 322 *e*P **P** **18 27 22.2 0.0**
YKW3 Yellowknife Ar 81.77 23 P **P** **18 27 21.7 -0.3**
YKA Yellowknife Ar 81.82 23 P **P** **18 27 21.9 -0.4**
comp=Z,12nm,0.7s,baz=306,slow=5.2,SNR=149
YKA PKKPbc **PKKPbc** **18 45 51.0 -3.0**
comp=Z,0.9nm,0.8s,baz=124,slow=2.5,SNR=12
YKA LR LR 19 07 19.0
comp=Z,15nm,18.1s,baz=314,slow=38
VAY Valandovo 81.83 312 *i* P **P** **18 27 21.9 -0.8**
SMOL Smolenice 81.87 320 *e*P **P** **18 27 23.7 +0.8**
SMOL pmax pmax
comp=Z,10.0nm,1.1s
SMOL Smolenice 81.87 320 *e*P **P** **18 27 23.7 +0.8**
THR6 Thira Island, 81.91 306 P **P** **18 27 21.7 -1.6**
STIP Stip 81.93 312 *i* P **P** **18 27 21.8 -1.5**
FRGS Fruska Gora 81.96 316 ⇑*i*P **P** **18 27 22.5 -0.9**
VRAC Vranov 81.98 321 P **P** **18 27 23.0 -0.4**
comp=Z,19nm,0.8s,baz=70,slow=5.4,SNR=24
VRAC Vranov 81.98 321 ⇑P **P** **18 27 24.0 +0.5**
VRAC Vranov 81.98 321 *e*P **P** **18 27 23.7 +0.2**
MODS Modra-Piesok 82.03 320 *e*P **P** **18 27 23.5 -0.2**
MODS Modra-Piesok 82.03 320 *e*P **P** **18 27 23.5 -0.2**
GRG Griva 82.10 311 P **P** **18 27 23.3 -1.0**
MORH Mrgy, Hungar 82.21 317 ⇑*e*P **P** **18 27 24.2 -0.5**
MORH Mrgy, Hungar 82.21 317 ⇑*i*P **P** **18 27 23.9 -0.8**
KRUC Moravsky 82.22 321 *e*P **P** **18 27 24.5 -0.2**
SKO Skopje 82.31 313 *i* P **P** **18 27 25.3 0.0**
SKO *i* P **P** **18 27 25.8 +0.5**
DIVS Divibare 82.32 315 ⇑*i*P **P** **18 27 24.8 -0.6**
LAST Lasithi 82.34 305 P **P** **18 27 24.9 -0.8**
SUMG Summit 82.35 355 *i* P **P** **18 27 24.9 -0.5**
SUMG *i* 18 27 44.6
SUMG Summit 82.35 355 *i* P **P** **18 27 24.9 -0.5**
SUMG *i* 18 27 44.6
SUMG Summit 82.35 355 P **P** **18 27 25.3 -0.2**
SUMG lAmb lAmb 18 27 28.3
comp=Z,38nm,1.3s
LIT Litokhoron 82.41 311 P **P** **18 27 24.7 -1.2**
LIT Litokhoron 82.41 311 P **P** **18 27 24.6 -1.3**
LIT pmax pmax
comp=Z,21nm,0.7s
LIT Litokhoron 82.41 311 P **P** **18 27 24.6 -1.3**
LIT lAmb lAmb 18 27 25.2
comp=Z,21nm,0.7s
PVCC Panska Ves 82.54 322 *e*P **P** **18 27 26.3 0.0**
PVCC Panska Ves 82.54 322 *e*P **P** **18 27 26.3 0.0**
TREC Trest 82.63 321 *e*P **P** **18 27 26.8 0.0**
TREC Trest 82.63 321 *e*P **P** **18 27 26.8 0.0**
BRG Berggiesshubel 82.71 323 *e*P **P** **18 27 26.8 -0.4**
comp=Z,12nm,1.0s
BRG *es*P **sP** **18 27 50.6 -3.7**
comp=Z,7.3nm,1.1s
BRG Berggiesshubel 82.71 323 *e*P **P** **18 27 26.8 -0.4**
BRG *e**SP **sP** **18 27 50.6 -3.7**
BRG pmax pmax
comp=Z,12nm,1.0s
BRG pmax pmax
comp=N,7.0nm,1.1s
BRG Berggiesshubel 82.71 323 *e*P **P** **18 27 27.1 -0.1**
baz=59,slow=4.9
GOPC GO Pecny, Ondr 82.72 322 *e*P **P** **18 27 27.1 -0.2**
GOPC GO Pecny, Ondr 82.72 322 *e*P **P** **18 27 27.1 -0.2**
GOPC *ex* x 18 27 35.6
IDI Anoyia 82.73 305 P **P** **18 27 26.7 -1.0**
comp=N,20nm,0.9s,baz=0.0,slow=2.0,SNR=12
BBLS Lazići 82.80 315 ⇑*i*P **P** **18 27 27.9 0.0**
KZN Kozani 82.81 311 P **P** **18 27 26.8 -1.3**
PRU Pruhonice 82.82 322 *e*P **P** **18 27 28.0 +0.2**
PRU *e* 18 27 53.5
PRU Pruhonice 82.82 322 *e*P **P** **18 27 28.0 +0.2**
PRU *ex* x 18 27 53.5
FNA Florina 82.87 312 P **P** **18 27 27.2 -1.1**
FNA pmax pmax
comp=Z,93nm,0.6s
FNA Florina 82.87 312 P **P** **18 27 27.2 -1.1**
RUDO Rudo 82.93 315 *e*P **P** **18 27 27.3 -1.2**
AGG Agios Georgios 82.98 310 P P 18 27 23.8 -5.1
AGG Agios Georgios 82.98 310 P **P** **18 27 27.2 -1.7**
AGG pmax pmax
comp=Z,43nm,0.9s
AGG Agios Georgios 82.98 310 P **P** **18 27 27.2 -1.7**
AGG lAmb lAmb 18 27 28.0
comp=Z,43nm,0.9s
CLL Collm 83.00 324 *i* P **P** **18 27 28.3 -0.4**
CLL *e*S **S** **18 37 42.0 0.0**
CLL pmax pmax
comp=Z,19nm,0.9s
CLL Collm 83.00 324 *e*S **S** **18 37 42.0 0.0**
CLL *e*SSSS 18 49 00.0
CLL LmV 19 05 00.0
comp=Z,200nm,21.9s
CLL Collm 83.00 324 *e*P **P** **18 27 28.7 0.0**
comp=Z,10nm,0.8s,baz=59,slow=4.9
CLL *ep*P **pP** **18 27 51.6 +3.6**
CLL Collm 83.00 324 P **P** **18 27 28.2 -0.4**
CLL Collm 83.00 324 *i* P **P** **18 27 28.3 -0.4**
comp=Z,19nm,0.9s
FBE Freiberg 83.01 323 *e*P **P** **18 27 29.1 +0.4**
baz=59,slow=4.9
BSEG Bad Segeberg 83.02 327 *e*P **P** **18 27 29.3 +0.6**
comp=Z,20nm,1.0s,baz=59,slow=4.9
BSEG *ep*P **sP** **18 27 52.3 -3.5**
CONA Conrad Observa 83.07 320 *i* P **P** **18 27 29.7 +0.4**
comp=Z,42nm,1.4s,SNR=14
MAKR Makrakomi, Fth 83.13 310 P **P** **18 27 27.7 -2.0**

BEHE Becsehely 83.23 318 *e*P **P** **18 27 29.9 -0.1**
BEHE Becsehely 83.23 318 ⇑*i*P **P** **18 27 29.7 -0.3**
KPRO Kipourio 83.25 311 P **P** **18 27 28.7 -1.6**
PBCC Pribram 83.28 322 *e*P **P** **18 27 30.2 0.0**
UPM Unac-Piva 83.42 315 *e*P **P** **18 27 30.8 -0.5**
PDG Podgorica 83.55 314 ⇑P **P** **18 27 31.4 -0.3**
PDG Podgorica 83.55 314 *e*P **P** **18 27 31.1 -0.6**
PDG Podgorica 83.55 314 P **P** **18 27 31.1 -0.6**
PDG lAmb lAmb 18 27 33.2
comp=Z,30nm,0.9s
ARSA Arzberg 83.60 319 *i* P **P** **18 27 32.0 +0.1**
comp=Z,19nm,1.4s,SNR=7.3
TIR Tirane 83.64 313 P **P** **18 27 32.0 -0.2**
TIR pmax pmax
comp=Z,48nm,0.8s
TIR Tirane 83.64 313 P **P** **18 27 31.9 -0.2**
TIR lAmb lAmb 18 27 37.8
comp=Z,48nm,0.8s
DRME Dracevica, Mon 83.71 314 ⇑*i*P **P** **18 27 32.1 -0.4**
NEUB Neuenburg 83.71 324 *e*P **P** **18 27 32.9 +0.6**
comp=Z,17nm,0.7s,baz=59,slow=4.9
TANN Tannenbergstha 83.75 323 *e*P **P** **18 27 32.8 +0.2**
baz=59,slow=4.9
TANN *ep*P **pP** **18 27 55.2 +3.2**
KHC Kasperske Hory 83.79 322 *e*P **P** **18 27 32.9 0.0**
KHC *e* 18 27 53.8
KHC Kasperske Hory 83.79 322 *e*P **P** **18 27 32.9 0.0**
KHC *ep*P **pP** **18 27 53.8 +1.6**
KHC Kasperske Hory 83.79 322 P **P** **18 27 32.5 -0.4**
BLY Banja Luka 83.80 317 ⇑P **P** **18 27 33.0 +0.1**
BLY Banja Luka 83.80 317 ⇑*i*P **P** **18 27 33.0 +0.1**
BLY Banja Luka 83.80 317 P **P** **18 27 32.4 -0.5**
BLY lAmb lAmb 18 27 34.2
comp=Z,45nm,1.0s
BRY Bratogost 83.80 314 *e*P **P** **18 27 32.5 -0.7**
ASSE Asse, Remlinge 83.81 325 *e*P **P** **18 27 32.8 0.0**
comp=Z,6.1nm,0.8s,baz=59,slow=4.9
GUNZ Gunzen 83.85 323 *e*P **P** **18 27 33.3 +0.1**
comp=Z,12nm,0.8s,baz=59,slow=4.9
GUNZ *ep*P **pP** **18 27 55.9 +3.4**
NKC Novy Kostel 83.86 323 *e*P **P** **18 27 33.3 +0.1**
NKC Novy Kostel 83.86 323 *e*P **P** **18 27 33.3 +0.1**
GEC2 GERESS Array S 83.87 321 *e*P **P** **18 27 33.4 0.0**
comp=Z,22nm,0.9s,baz=59,slow=4.9
GEC2 GERESS Array S 83.87 321 P **P** **18 27 33.0 -0.3**
GEC2 lAmb lAmb 18 27 34.2
comp=Z,32nm,0.9s
GERES GERESS Array B 83.87 321 P **P** **18 27 33.0 -0.3**
comp=Z,18nm,0.8s,baz=57,slow=4.9,SNR=115
GERES pP **pP** **18 27 54.2 +1.6**
comp=Z,3.3nm,0.7s,baz=57,slow=5.4,SNR=3.1
GERES PKKPbc **PKKPbc** **18 45 49.2 +0.1**
comp=Z,1.2nm,0.8s,baz=204,slow=2.9,SNR=8.1
WERN Wernitzgruen 83.87 323 *e*P **P** **18 27 33.6 +0.4**
baz=59,slow=4.9
WERN *ep*P **sP** **18 27 56.5 -3.9**
DRO Drossia 83.89 309 P **P** **18 27 33.6 0.0**
GROS Grobnik 84.00 319 *i* P **P** **18 27 33.4 -0.6**
TREB Trebinje 84.01 314 *e*P **P** **18 27 34.0 -0.1**
MGRS Mrkonjic Grad 84.02 316 *e*P **P** **18 27 34.6 +0.5**
HCY Herceg Novi 84.04 314 *e*P **P** **18 27 33.6 -0.6**
MOA Molln 84.05 320 *i* P **P** **18 27 34.4 +0.2**
comp=Z,17nm,0.8s,SNR=10
AMT Artemida-Makis 84.08 309 P **P** **18 27 32.9 -1.6**
ITM Ithomi 84.08 308 P **P** **18 27 33.1 -1.4**
ITM Ithomi 84.08 308 P **P** **18 27 33.2 -1.3**
MOX Moxa 84.09 324 *e*P **P** **18 27 34.6 +0.3**
comp=Z,5.2nm,0.8s,baz=59,slow=4.9
CLZ Clausthal 84.12 325 *e*P **P** **18 27 35.2 +0.7**
baz=59,slow=4.9
PERS Pernice 84.15 319 *i* P **P** **18 27 34.4 -0.4**
MANZ Manzenberg 84.17 323 *e*P **P** **18 27 34.9 +0.1**
comp=Z,8.9nm,0.9s,baz=59,slow=4.9
SOKA Soboth 84.18 319 *i* P **P** **18 27 34.7 -0.2**
comp=Z,20nm,0.7s,SNR=16
WET Wettzell 84.18 322 *e*P **P** **18 27 35.1 +0.3**
comp=Z,6.3nm,1.0s,baz=59,slow=4.9
ROTZ Rotzenmuhle 84.23 323 *e*P **P** **18 27 35.3 +0.2**
comp=Z,12nm,0.9s,baz=59,slow=4.9
CRES Cresnjev 84.34 318 ⇑*i*P **P** **18 27 35.5 -0.2**
STON Ston 84.36 315 ⇑*i*P **P** **18 27 34.7 -1.1**
GTTG Gvttingen 84.49 325 *e*P **P** **18 27 37.1 +0.8**
comp=Z,39nm,1.1s,baz=59,slow=4.9
OBKA Obir 84.55 319 *i* P **P** **18 27 36.6 -0.3**
comp=Z,22nm,0.8s,SNR=11
VLS Valsamata 84.58 309 P **P** **18 27 35.7 -1.4**
VISS Visnje 84.73 318 *i* P **P** **18 27 37.4 -0.3**
LJU Ljubljana 84.80 319 *e*P **P** **18 27 37.6 -0.5**
LJU Ljubljana 84.80 319 ⇑*i*P **P** **18 27 37.5 -0.5**
GRA1 Grafenberg Arr 84.81 323 P **P** **18 27 36.9 -1.1**
GRA1 lAmb lAmb 18 30 07.3
comp=Z,27nm,0.7s
GRF Grafenberg Arr 84.81 323 P **P** **18 27 36.9 -1.1**
GRF pmax pmax
comp=Z,27nm,0.7s
GRF Grafenberg Arr 84.81 323 *e*P **P** **18 27 38.2 +0.2**
comp=Z,9.6nm,0.8s,baz=59,slow=4.9
UBBA Unterbreizbach 84.87 324 *e*P **P** **18 27 38.5 +0.4**
baz=59,slow=4.9
RJOB Jochberg 84.96 321 *e*P **P** **18 27 38.6 -0.2**
comp=Z,22nm,0.8s,baz=59,slow=4.9
KBA Koelnbreinsper 84.98 320 *i* P **P** **18 27 38.6 -0.5**
comp=Z,25nm,1.2s,SNR=10.0
CEY Cerknica 85.01 318 ⇑*i*P **P** **18 27 38.6 -0.5**
MYKA Terra Mystica 85.03 319 *i* P **P** **18 27 38.6 -0.6**
comp=Z,12nm,1.0s
SCTE Santa Cesarea 85.17 312 P **P** **18 27 38.6 -1.3**
IBBN Ibbenburen 85.20 326 *e*P **P** **18 27 40.1 +0.2**
comp=Z,33nm,0.8s,baz=59,slow=4.9
ROBS Robic 85.31 319 *i* P **P** **18 27 39.2 -1.3**
FUR Furstenfeldbru 85.60 322 *e*P **P** **18 27 41.5 -0.5**
baz=59,slow=4.9
LLLB Lilloet 85.62 36 P **P** **18 27 41.0 -1.1**
ABTA Abfaltersbach 85.64 320 *i* P **P** **18 27 40.9 -1.4**
comp=Z,26nm,1.0s,SNR=15
STAL STALIGIAL 85.77 319 P **P** **18 27 41.3 -1.6**
STAL lAmb lAmb 18 27 42.7
comp=Z,36nm,1.1s
WATA Walderalm 85.87 321 *i* P **P** **18 27 43.1 -0.4**
comp=Z,11nm,0.8s,SNR=6.2
ABPO Ambohimpanom 85.92 247 P **P** **18 27 44.6 +0.5**
ABPO pmax pmax
comp=Z,122nm,1.1s
ABPO Ambohimpanom 85.92 247 P **P** **18 27 44.6 +0.5**
BUG Bochum--Univer 85.95 326 *e*P **P** **18 27 43.7 +0.2**
comp=Z,52nm,1.1s,baz=59,slow=4.9
TNS Taunus Mts 86.02 324 *e*P **P** **18 27 43.9 -0.2**
comp=Z,15nm,0.9s,baz=59,slow=4.9
MOTA Moosalm 86.14 321 *i* P **P** **18 27 43.4 -1.4**
comp=Z,18nm,1.2s,SNR=5.4
SQTA Sankt Quirin 86.14 321 *i* P **P** **18 27 44.4 -0.4**
comp=Z,27nm,1.5s,SNR=6.0
SGRT San Giovanni R 86.17 314 P **P** **18 27 44.5 -0.5**
SGRT lAmb lAmb 18 27 45.5
comp=Z,53nm,1.0s
ACER Acerenza 86.52 313 P **P** **18 27 46.8 +0.2**
ACER lAmb lAmb 18 27 47.7
comp=Z,44nm,0.9s
UBR Ueberruh 86.52 322 *e*P **P** **18 27 46.0 -0.6**
baz=59,slow=4.9
FETA Feichten 86.53 321 *i* P **P** **18 27 45.7 -1.0**
comp=Z,18nm,1.5s,SNR=7.0
AHRW Bad Neuenahr-A 86.56 325 *e*P **P** **18 27 46.6 0.0**
comp=Z,9.6nm,0.8s,baz=59,slow=4.9
TIP Timpagrande 86.76 312 ⇓P **P** **18 27 48.3 +0.4**
TIP Timpagrande 86.76 312 P **P** **18 27 48.0 +0.1**
TIP lAmb lAmb 18 27 49.1
comp=Z,46nm,1.2s
DAVA Damuels 86.87 321 *i* P **P** **18 27 46.8 -1.6**
comp=Z,20nm,0.9s,SNR=6.9
KMBO Kilima Mbogo 87.01 267 P **P** **18 27 50.4 +0.7**
comp=Z,11nm,1.0s,baz=47,slow=6.1,SNR=22
KMBO pP **pP** **18 28 12.4 +3.1**
comp=Z,7.5nm,0.9s,baz=64,slow=7.2,SNR=5.5
KMBO LR LR 19 06 27.7
comp=Z,81nm,20.6s,baz=92,slow=35
KMBO Kilima Mbogo 87.01 267 *i* P **P** **18 27 50.5 +0.7**
SNR=16
KMBO Kilima Mbogo 87.01 267 P **P** **18 27 50.5 +0.8**
KMBO lAmb lAmb 18 27 52.1
comp=Z,78nm,1.7s
FUORN Ofenpass-Fuorn 87.01 321 P **P** **18 27 48.8 -0.4**
MEM Membach 87.08 326 P **P** **18 27 48.5 -0.7**
DAVOX Davos/Dischmat 87.15 321 P **P** **18 27 49.6 -0.2**
comp=Z,14nm,0.8s,baz=90,slow=4.0,SNR=18

BFO Black Forest 87.16 323 P **P** **18 27 49.4 -0.2**
BFO pmax pmax
comp=Z,139nm,0.4s
BFO Black Forest 87.16 323 *e*P **P** **18 27 49.3 -0.3**
baz=59,slow=4.9
BFO Black Forest 87.16 323 P **P** **18 27 49.4 -0.2**
INTR Introdacqua 87.23 315 P **P** **18 27 49.7 -0.4**
BHOU Houvegnez 87.23 325 P **P** **18 27 49.8 -0.1**
NRCA Norcia 87.31 316 P **P** **18 27 50.3 -0.2**
NRCA lAmb lAmb 18 28 55.8
comp=Z,37nm,0.8s
BSTI Sart Tilman 87.32 326 P **P** **18 27 50.6 +0.4**
AQU L'Aquila 87.37 316 P **P** **18 27 50.4 -0.4**
AQU pmax pmax
comp=Z,52nm,1.0s
AQU L'Aquila 87.37 316 ⇑*i*P **P** **18 27 50.8 0.0**
AQU L'Aquila 87.37 316 P **P** **18 27 50.4 -0.4**
SALO Salr 87.41 320 P **P** **18 27 50.4 -0.4**
SALO lAmb lAmb 18 29 20.2
comp=Z,27nm,0.7s
MURB Monte Urbino 87.45 317 P **P** **18 27 51.1 -0.1**
BCLA Clavier 87.55 326 P **P** **18 27 51.0 -0.4**
WLF Walferdange 87.56 325 P **P** **18 27 51.2 -0.3**
WLF pmax pmax
comp=Z,60nm,0.9s
WLF Walferdange 87.56 325 *e*P **P** **18 27 51.6 +0.1**
comp=Z,39nm,0.9s,baz=59,slow=4.9
WLF Walferdange 87.56 325 P **P** **18 27 51.5 +0.1**
comp=Z,41nm,1.0s
WLF Walferdange 87.56 325 P **P** **18 27 51.1 -0.3**
TUE Stuetta 87.62 321 P **P** **18 27 52.4 +0.3**
CEL Celeste 87.80 311 P **P** **18 27 52.4 -0.6**
ZCCA Zocca 87.82 318 P **P** **18 27 53.5 +0.6**
ZCCA lAmb lAmb 18 27 59.9
comp=Z,20nm,0.8s
ECH Echery 87.86 323 P **P** **18 27 52.6 -0.4**
ECH pmax pmax
comp=Z,132nm,0.6s
ECH Echery 87.86 323 P **P** **18 27 52.5 -0.4**
BMRD Maredsous 87.90 326 P **P** **18 27 52.4 -0.7**
OSSC Osservatorio P 88.10 318 P **P** **18 27 53.4 -0.8**
DOU Dourbes 88.11 326 P **P** **18 27 53.5 -0.6**
comp=Z,12nm,0.9s
LTY Liberty 88.17 38 P **P** **18 27 55.0 +0.4**
LATE Laterza 88.24 317 P **P** **18 27 54.3 -0.6**
B08A Colville Reser 88.27 36 P **P** **18 27 56.0 +1.0**
B08A lAmb lAmb 18 28 19.7
comp=Z,26nm,1.1s
EKA Eskdalemuir Ar 88.36 333 P **P** **18 27 54.2 -0.9**
comp=Z,3.3nm,0.7s,baz=66,slow=4.9,SNR=9.6
EKA pP **pP** **18 28 16.1 +1.5**
comp=Z,2.0nm,0.7s,baz=52,slow=2.9,SNR=2.7
SFJD Kangerlussuaq 88.63 358 LR LR 19 10 15.0
comp=Z,179nm,18.2s,baz=320,slow=37
MSSA Maissana 88.72 319 P **P** **18 27 56.4 -0.8**
MSSA lAmb lAmb 18 29 34.7
comp=Z,26nm,1.2s
CASP Castiglione de 88.73 317 P **P** **18 27 56.1 -1.1**
SENIN Lac Senin/Sane 88.85 322 P **P** **18 27 57.7 -0.2**
E07A Sunnyside 89.03 38 P **P** **18 27 57.4 -1.1**
E07A lAmb lAmb 18 28 23.8
comp=Z,20nm,1.0s
I04A Tendick Farm, 89.12 41 P **P** **18 28 01.0 +1.9**
baz=304
C09A Chrisman Ranch 89.17 36 P **P** **18 28 00.2 +1.1**
C09A lAmb lAmb 18 28 04.1
comp=Z,27nm,1.4s
HAWA Hanford 89.31 38 P **P** **18 28 00.9 +1.0**
HAWA lAmb lAmb 18 28 25.5
comp=Z,14nm,0.8s
G06A Carlson Farm, 89.35 39 P **P** **18 28 01.3 +1.2**
G06A lAmb lAmb 18 29 15.3
comp=Z,20nm,1.3s
F07A Phinny Hill Vi 89.38 39 P **P** **18 28 00.3 +0.2**
F07A lAmb lAmb 18 28 26.0
comp=Z,19nm,0.8s
HUMO Hull Mountain 89.44 43 P **P** **18 28 00.5 -0.1**
HUMO lAmb lAmb 18 28 05.3
comp=Z,26nm,1.7s
I05D Terrebonne, OR 89.45 40 P **P** **18 28 02.3 +1.7**
baz=305
NEW Newport 89.51 36 P **P** **18 28 01.3 +0.5**
NEW pmax pmax
comp=Z,27nm,1.1s
NEW Newport 89.51 36 P **P** **18 28 01.3 +0.5**
NEW lAmb lAmb 18 28 25.1
comp=Z,27nm,1.1s
NEW Newport 89.51 36 P **P** **18 28 01.7 +0.9**
baz=308
E08A Dider Farm, El 89.52 38 P **P** **18 28 01.8 +1.1**
E08A lAmb lAmb 18 28 25.4
comp=Z,26nm,1.3s
BNI Bardonecchia 89.97 321 P **P** **18 28 02.8 -0.3**
BNI pmax pmax
comp=Z,40nm,1.0s
BNI Bardonecchia 89.97 321 P **P** **18 28 02.8 -0.3**
BNI lAmb lAmb 18 29 02.8
comp=Z,40nm,1.0s
PINE Pine Mountain 90.00 41 P **P** **18 28 04.8 +1.4**
PINE lAmb lAmb 18 28 30.0
comp=Z,18nm,1.0s
E09A Wood Farm, Sta 90.01 37 P **P** **18 28 05.4 +2.3**
E09A lAmb lAmb 18 28 28.4
comp=Z,20nm,1.0s
L04D Klamath Falls 90.06 43 P **P** **18 28 04.4 +0.8**
baz=304
J05D Fort Rock, OR 90.11 41 P **P** **18 28 04.9 +1.1**
baz=305
G08A Pilot Rock 90.28 39 P **P** **18 28 05.1 +0.5**
WALA Waterton Lakes 90.67 34 P **P** **18 28 07.1 +0.8**
WALA lAmb lAmb 18 28 35.4
comp=Z,22nm,1.1s
F10A Beach Ranch, E 90.85 37 P **P** **18 28 08.2 +1.1**
SSB Saint Sauveur 91.05 322 P **P** **18 28 07.7 -0.3**
SSB pmax pmax
comp=Z,34nm,1.0s
SSB Saint Sauveur 91.05 322 P **P** **18 28 07.7 -0.3**
JTMT Jette 91.32 35 P **P** **18 28 10.6 +1.3**
JTMT lAmb lAmb 18 28 34.4
comp=Z,18nm,0.9s
FCC Fort Churchill 91.35 19 P **P** **18 28 09.0 0.0**
FCC pmax pmax
comp=Z,24nm,1.1s
FCC Fort Churchill 91.35 19 P **P** **18 28 09.0 0.0**
FCC lAmb lAmb 18 28 11.8
comp=Z,24nm,1.1s
MOD Modoc Plateau 91.47 42 P **P** **18 28 11.6 +1.5**
MOD lAmb lAmb 18 28 15.1
comp=Z,21nm,1.4s
BMO Blue Mountains 91.48 38 P **P** **18 28 10.7 +0.6**
BMO pmax pmax
comp=Z,16nm,1.3s
BMO Blue Mountains 91.48 38 P **P** **18 28 10.7 +0.6**
BMO lAmb lAmb 18 28 14.8
comp=Z,16nm,1.2s
FFC Flin Flon 91.95 24 P **P** **18 28 12.0 +0.1**
FFC pmax pmax
comp=Z,25nm,0.9s
FFC Flin Flon 91.95 24 P **P** **18 28 12.0 +0.1**
ORV Oroville 92.06 44 P **P** **18 28 12.8 +0.1**
ORV pmax pmax
comp=Z,5.0nm,1.0s
ORV Oroville 92.06 44 P **P** **18 28 12.8 +0.1**
MSO Missoula 92.09 35 P **P** **18 28 13.7 +0.8**
MSO lAmb lAmb 18 28 37.4
comp=Z,14nm,0.9s
MSO Missoula 92.09 35 P **P** **18 28 14.3 +1.4**
baz=310
WVOR Wild Horse Val 92.16 41 P **P** **18 28 13.9 +0.6**
WVOR pmax pmax
comp=Z,7.0nm,1.0s
WVOR Wild Horse Val 92.16 41 P **P** **18 28 13.9 +0.6**
BEKR Beckworth 92.60 44 P **P** **18 28 16.3 +0.8**
MBAR Mbarara 92.73 271 P **P** **18 28 16.5 +0.1**
MBAR pmax pmax
comp=Z,16nm,1.2s
MBAR Mbarara 92.73 271 P **P** **18 28 16.5 +0.1**
MBAR lAmb lAmb 18 28 17.8
comp=Z,16nm,1.1s
AFDM Forest Hills D 92.74 45 P **P** **18 28 15.8 -0.1**
AFDM lAmb lAmb 18 28 20.4
comp=Z,13nm,1.6s
MFID Camas Ranch 93.21 39 P **P** **18 28 18.0 -0.1**
MFID lAmb lAmb 18 28 44.4
comp=Z,16nm,1.1s

PAHR Pah Rah Range 93.31 43 P **P** **18 28 17.8 -0.9**
PAHR IAmb IAmb 18 28 45.8
comp=Z,9.3nm,1.0s
EGMT Eagleton 93.43 33 P **P** **18 28 18.2 -0.8**
EGMT IAmb IAmb 18 28 42.8
comp=Z,22nm,1.4s
LRM Limekiln Ridge 93.53 35 P **P** **18 28 15.8 -4.0**
KEST Kesra 93.58 312 P **P** **18 28 19.9 0.0**
comp=Z,15nm,0.8s,baz=323,slow=3.4,SNR=19
KEST pP **pP** **18 28 40.2 +0.8**
comp=Z,7.7nm,0.8s,baz=350,slow=4.2,SNR=4.1
KEST Kesra 93.58 312 P **P** **18 28 20.0 0.0**
KEST IAmb IAmb 18 28 21.2
comp=Z,24nm,0.9s
CMB Columbia Colle 93.64 45 P **P** **18 28 20.2 +0.1**
CMB pmax pmax
comp=Z,6.0nm,0.9s
CMB Columbia Colle 93.64 45 P **P** **18 28 20.1 +0.1**
DLMT Dillon 93.75 36 P **P** **18 28 20.3 -0.3**
DLMT IAmb IAmb 18 28 45.6
comp=Z,19nm,1.1s
YERR Yerington 93.82 44 P **P** **18 28 21.6 +0.4**
YERR IAmb IAmb 18 28 25.8
comp=Z,12nm,1.4s
MCMT McKenzie Canyo 93.97 36 P **P** **18 28 21.4 -0.3**
WAKR Walker 93.97 44 P **P** **18 28 22.7 +0.8**
PPT Papeete 94.47 107 LR LR 19 01 52.6
comp=Z,101nm,19.7s,baz=334,slow=30
PPT2 Papeete2 94.48 107 *e*S **S** **18 39 31.7 +0.6**
comp=Z,147nm,28.2s
PPT2 Papeete2 94.48 107 *e*LR LR 18 58 58.0
comp=Z,821nm,33.0s
KVN Kaiserville 94.50 43 P **P** **18 28 24.8 +0.6**
KVN pmax pmax
comp=Z,16nm,1.3s
KVN Kaiserville 94.50 43 P **P** **18 28 24.8 +0.6**
KVN IAmb IAmb 18 28 50.2
comp=Z,16nm,1.3s
MDPB Devils Postpil 94.71 45 P **P** **18 28 24.4 -0.9**
QLMT Earthquake Lak 94.72 36 P **P** **18 28 25.7 +0.5**
NVAR Mina Array Bea 94.74 44 P **P** **18 28 23.0 -2.4**
comp=Z,2.0nm,0.6s,baz=298,slow=5.2,SNR=19
NVAR pP **pP** **18 28 45.4 +0.6**
comp=Z,3.4nm,0.9s,baz=295,slow=4.8,SNR=4.4
NVAR LR LR 19 05 02.2
comp=Z,111nm,21.5s,baz=293,slow=32
NV11 Mina Array Sit 94.83 44 P **P** **18 28 26.5 +0.8**
YHL Hebgen Lake 94.84 36 P **P** **18 28 25.9 +0.1**
YHB Horse Butte 94.90 36 P **P** **18 28 26.1 +0.1**
ELK Elko 95.21 41 P **P** **18 28 27.5 0.0**
ELK pmax pmax
comp=Z,19nm,1.8s
ELK Elko 95.21 41 PKKPab PKKPab 18 45 53.6
comp=Z,1.9nm,0.8s,baz=109,slow=4.2,SNR=8.1
ELK Elko 95.21 41 P **P** **18 28 27.5 0.0**
ELK IAmb IAmb 18 28 32.6
comp=Z,18nm,1.8s
RLMT Red Lodge 95.66 34 P **P** **18 28 30.6 +1.1**
baz=313
TBI Tubuai 96.90 112 *e*LR LR 19 00 10.4
comp=Z,304nm,27.5s
PDAR Pinedale Array 97.11 36 P **P** **18 28 33.9 -2.2**
comp=Z,0.3nm,0.5s,baz=13,slow=1.7,SNR=4.3
PDAR pP **pP** **18 32 30.0 -2.1**
comp=Z,0.4nm,0.8s,baz=291,slow=5.7,SNR=2.9
PDAR PKKPbc **PKKPbc** **18 45 14.5 -1.6**
comp=Z,1.0nm,1.0s,baz=107,slow=5.1,SNR=4.0
PDAR PKKPab PKKPab 18 45 45.4
comp=Z,1.0nm,0.9s,baz=119,slow=5.2,SNR=4.7
ULM Lac du Bonnet 97.78 24 P **P** **18 28 37.7 -0.9**
comp=Z,2.0nm,0.7s,baz=311,slow=4.3,SNR=3.0
ULM pP **pP** **18 28 58.2 +0.1**
comp=Z,3.4nm,0.9s,baz=349,slow=3.1,SNR=3.5
ULM LR LR 19 15 20.0
comp=Z,169nm,21.9s,baz=332,slow=37
ULM Lac du Bonnet 97.78 24 IAmb IAmb 18 32 15.2
comp=Z,27nm,1.9s
PFO Pinyon Flats O 98.81 47 P **P** **18 28 42.2 -1.6**
PFO pmax pmax
comp=Z,8.0nm,1.1s
PFO Pinyon Flats O 98.81 47 LR LR 19 06 20.6
comp=Z,21.5s,baz=290,slow=31
PFO Pinyon Flats O 98.81 47 P **P** **18 28 42.2 -1.6**
PFO IAmb IAmb 18 29 09.0
comp=Z,7.8nm,1.1s
TAOE Nuku Hiva Isla 99.40 95 *e*T T 20 19 02.4
comp=Z,43nm,0.2s
ESDC Sonseca Array 99.46 322 P **Pdif** **18 28 45.4 -1.1**
comp=Z,1.2nm,0.9s,baz=28,slow=3.9,SNR=4.3
ESDC PKKPbc **PKKPbc** **18 45 09.8 +0.5**
comp=Z,0.6nm,0.6s,baz=188,slow=1.9,SNR=6.1
VNDA Vanda 104.36 172 PP **PKiKP** **18 33 25.4 +2.3**
comp=Z,15nm,1.1s,baz=309,slow=8.1,SNR=9.3
VNDA PKKP **PKKPdf** **18 45 06.0 -0.1**
comp=Z,2.2nm,0.6s,baz=90,slow=1.0,SNR=14
MSTX Muleshoe 107.08 39 **Pdif** **18 29 18.8 -1.8**
TXAR Lajitas Array 109.85 43 PKiKP **PKiKP** **18 33 35.0 0.0**
comp=Z,1.2nm,0.8s,baz=207,slow=2.5,SNR=9.1
TXAR PKKPbc **PKKPbc** **18 44 37.0 -1.0**
comp=Z,0.4nm,0.8s,baz=126,slow=6.4,SNR=3.5
SYO Syowa Base 110.51 202[2] *e*PP **PP** **18 34 12.2 +0.4**
TORD Torodi Ar. Bea 111.94 297 PKiKP **PKiKP** **18 33 38.2 -0.9**
comp=Z,1.4nm,0.8s,baz=90,slow=1.4,SNR=6.4
TORD PKKPbc **PKKPbc** **18 44 30.2 -0.5**
comp=Z,0.5nm,0.7s,baz=266,slow=4.3,SNR=2.7
QSPA South Pole Qui 114.34 180 PKP PKPdf 18 33 41.7 -0.4
comp=Z,5.2nm,1.1s,baz=317,slow=2.8,SNR=4.4
QSPA South Pole Qui 114.34 180 PKPdf 18 33 42.0 -0.2
DBIC Dimbokro 120.88 295 PKP **PKPdf** **18 33 54.5 -1.8**
comp=Z,3.6nm,0.8s,baz=100,slow=1.4,SNR=5.0
DBIC PKKPbc **PKKPbc** **18 43 59.0 -0.4**
comp=Z,2.2nm,0.7s,baz=205,slow=6.4,SNR=5.1
KIC Kosan Boka 120.95 294 *e*PKP2 **PKPdf** **18 33 55.4 -1.0**
comp=Z,23nm,1.0s
TIC Toumodi 121.02 295 *e*PKP2 **PKPdf** **18 33 55.7 -0.9**
LIC Lamto 121.26 294 *e*PKP2 **PKPdf** **18 33 54.3 -2.7**
comp=Z,4.5nm,0.3s
SNAA Sanae 124.23 198 PKPdf **PKPdf** **18 33 59.7 -1.4**
SNAA Sanae 124.23 198 PKP **PKPdf** **18 33 59.5 -1.6**
comp=Z,3.4nm,0.9s,baz=185,slow=5.0,SNR=6.3
VNA1 Neumayer--Stat 126.27 198 PKPdf **PKiKP** **18 34 05.8 +0.5**
VNA3 Neumayer Olymp 126.33 197 PKPdf **PKPdf** **18 34 05.1 0.0**
SDV Santo Domingo 144.03 24 PKPbc 18 34 37.7 -0.1
ROSC El Rosal 146.04 33 PKPbc **PKPbc** **18 34 44.2 -0.2**
comp=Z,18nm,0.6s,baz=28,slow=6.7,SNR=5.2
ROSC pPKPbc pPKPab 18 35 05.2 +0.5
comp=Z,13nm,0.5s,baz=304,slow=20,SNR=2.7
OTAV Otavalo 147.47 44 PKP2 **PKPdf** **18 34 46.7 +0.7**
OTAV Otavalo 147.47 44 **PKPdf** **18 34 46.7 +0.7**
USHA Ushuaia 148.49 167 PKPbc **PKPbc** **18 34 49.7 +0.2**
comp=Z,96nm,0.9s,baz=219,slow=2.6,SNR=35
USHA pPKPbc **pPKPab** **18 35 12.1 -0.9**
comp=Z,31nm,0.9s,baz=163,slow=4.5,SNR=2.8
GO10 Punta Arenas 149.40 163 **PKiKP** **18 34 52.6 -0.4**
GO09 Cerro Castillo 150.68 160 **PKiKP** **18 34 56.1 +0.4**
RCBR Riachuelo 152.81 310 PKIKP **PKPbc** **18 35 01.1 0.0**
RCBR Riachuelo 152.81 310 **PKPbc** **18 35 01.1 0.0**
ATAH Atahualpa 152.84 54 PKP **PKPdf** **18 34 55.3 +1.0**
comp=Z,2.8nm,0.4s,baz=229,slow=1.1,SNR=4.4
ATAH PKPbc **PKiKP** **18 35 03.0 +1.2**
comp=Z,15nm,0.9s,baz=315,slow=2.9,SNR=5.2
EFI East Falkland 152.89 178 PKIKP **PKiKP** **18 35 00.3 +0.1**
EFI 18 35 11.2
EFI East Falkland 152.89 178 **PKiKP** **18 35 00.3 +0.1**
EFI PKPab **PKPab** **18 35 11.2 0.0**
PLCA Paso Flores 160.05 147 PKP **PKPdf** **18 35 03.2 +0.7**
comp=Z,2.0nm,0.7s,baz=297,slow=9.0,SNR=3.4
PLCA pPKP **pPKPdf** **18 35 24.6 +1.7**
comp=Z,2.3nm,1.0s,baz=205,slow=3.6,SNR=2.6
PLCA PKPab **PKPab** **18 35 43.7 +1.2**
comp=Z,6.4nm,1.0s,baz=234,slow=6.4,SNR=5.6
SAML Samuel 163.24 23 PKIKP **PKPdf** **18 35 06.9 +0.4**
SAML Samuel 163.24 23 **PKPdf** **18 35 06.9 +0.4**
LPAZ La Paz 166.38 55 PKP **PKPdf** **18 35 09.8 -0.1**
comp=Z,17nm,1.2s,baz=4.9,slow=2.3,SNR=17
LPAZ pPKP **pPKPdf** **18 35 31.6 +1.3**
comp=Z,7.0nm,1.0s,baz=16,slow=4.0,SNR=5.1
LPAZ PKPab **PKPab** **18 36 10.8 -0.8**
comp=Z,12nm,1.3s,baz=290,slow=4.2,SNR=3.9
LPAZ La Paz 166.38 55 **PKPdf** **18 35 10.8 +1.0**
MNMC Minye Minye 166.73 69 **PKPdf** **18 35 10.9 +1.3**
PB11 IPOC Station P 166.95 71 **PKPdf** **18 35 10.9 +1.2**
GO01 Chusmiza 167.31 70 **PKPdf** **18 35 11.2 +0.8**
CFA Coronel Fontan 167.51 127 PKP **PKPdf** **18 35 09.6 0.0**
comp=Z,4.1nm,0.9s,baz=263,slow=5.1,SNR=5.8
CFA PKPab **PKPab** **18 36 16.4 +0.8**
comp=Z,3.1nm,0.8s,baz=254,slow=4.9,SNR=2.7
CFA pPKPab **pPKPab** **18 36 35.9 +0.5**
comp=Z,3.2nm,0.6s,baz=275,slow=6.2,SNR=3.1
BDFB Brasilia 168.06 316 PKP **PKPdf** **18 35 10.5 0.0**
comp=Z,8.0nm,0.9s,baz=52,slow=1.3,SNR=6.4
BDFB PKPab **PKPab** **18 36 17.6 -0.8**
comp=Z,10nm,0.8s,baz=88,slow=6.9,SNR=7.6
BDFB pPKPab **pPKPab** **18 36 39.0 +1.1**
comp=Z,4.9nm,0.7s,baz=57,slow=5.3,SNR=2.7
BDFB Brasilia 168.06 316 **PKPdf** **18 35 09.7 -0.8**
BDFB **PKPab** **18 36 17.4 -0.9**
GO02 Mina Guanaco 168.13 96 **PKPdf** **18 35 11.8 +1.2**
LVC Limon Verde 168.49 83 PKP **PKPdf** **18 35 10.5 -0.5**
comp=Z,6.5nm,0.9s,baz=324,slow=3.1,SNR=5.7
LVC pPKP **pPKPdf** **18 35 31.0 -0.4**
comp=Z,6.5nm,0.9s,baz=210,slow=4.8,SNR=3.8
SIV San Ignacio 170.48 27 PKP **PKPdf** **18 35 12.3 +0.4**
comp=Z,9.5nm,0.9s,baz=43,slow=0.9,SNR=33
SIV pPKP **pPKPdf** **18 35 31.8 -0.5**
comp=Z,12nm,0.9s,baz=70,slow=0.2,SNR=12
SIV PKPab **PKPab** **18 36 27.9 -1.0**
comp=Z,1.8nm,0.7s,baz=335,slow=7.2,SNR=3.4
CPUP Villa Florida 178.09 158 PKPab PKPab 18 37 02.9
comp=Z,7.9nm,0.9s,baz=183,slow=4.2,SNR=10.0

*BGR **08** 18:27:49.0±0.4,47.°19N×7.°15E,h7km±1km,ML3.3/21,*
Error ellipse: s-maj=2.2km s-min=1.1km az=37.0
*ZUR **08** 18:27:48.6,47.°15N×7.°15E,h10km,MLh3.2/48,Error*
ellipse: s-maj=1.1km s-min=0.4km az=197.0
*STR **08** 18:27:49.2±0.4,47.°1N±2.°×±.°,h6km±4km,MLv3.1/7*
*LDG **08** 18:27:49.0±0.0,47.°15N×7.°15E,h10km,Md3.3/2,Ml3.4/44,*
Error ellipse: s-maj=1.0km s-min=0.8km az=135.0
*BNS **08** 18:27:50.3±0.3,47.°16N×6.°90E,h10km,ML2.8*
*PRU **08** 18:27:52.6±0.0,47.°12N×7.°47E,h16km*
ISC 08 18:27:48.8±0.8,**47.°16N**±0.°01×**7.°17E**±0.°01,**h11**km±6km,
n253,σ2°**05**/482,**88C-51D,Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOURR	**Bourrignon**	**0.23**	**10**	⇓Pg	**Pg**	**18 27 53.4**	**-0.4**
BOURR				⇓Pg	**Pg**	**18 27 53.4**	**-0.4**
	SNR=4.6						
BOURR	**Bourrignon**	**0.23**	**10**	⇑Pg	**Pg**	**18 27 54.1**	**+0.3**
	5.5nm,SNR=72						
BOURR				⇑Pg	**Pg**	**18 27 54.1**	**+0.3**
BOURR				Sg	**Sg**	**18 27 58.0**	**+0.8**
BOURR	**Bourrignon**	**0.23**	**10**	⇑Pg	**Pg**	**18 27 54.1**	**+0.3**
BOURR				Sg	**Sg**	**18 27 57.9**	**+0.8**
SOLB	**Solothurn Schu**	**0.24**	**80**	⇑Pg	**Pg**	**18 27 54.1**	**+0.2**
	8.2nm,SNR=24						
SOLB				⇑Pg	**Pg**	**18 27 54.1**	**+0.2**
SOLB				Sg	**Sg**	**18 27 58.3**	**+1.0**
SOLZ	**Solothurn, Zeu**	**0.26**	**80**	⇑Pg	**Pg**	**18 27 54.3**	**+0.2**
SOLZ				⇑Pg	**Pg**	**18 27 54.3**	**+0.2**
	6.5nm,SNR=29						
SBERN	**Bern, Kleine S**	**0.29**	**139**	Pg	**Pg**	**18 27 54.7**	**0.0**
SBERN				Pg	**Pg**	**18 27 54.7**	**0.0**
	8.5nm,SNR=1.8						
SBERN				Sg	**Sg**	**18 27 59.0**	**+0.4**
LOMF	**Lomont**	**0.30**	**309**	Pg	**Pg**	**18 27 55.1**	**+0.1**
LOMF				Sg	**Sg**	**18 27 58.8**	**-0.2**
LOMF	**Lomont**	**0.30**	**309**	⇓Pg	**Pg**	**18 27 55.1**	**+0.1**
LOMF				Sg	**Sg**	**18 27 59.3**	**+0.2**
SCOU	**Cournillens**	**0.31**	**188**	⇑Pg	**Pg**	**18 27 54.1**	**-1.1**
SCOU				⇑Pg	**Pg**	**18 27 54.1**	**-1.1**
	SNR=3.2						
SCOU	**Cournillens**	**0.31**	**188**	⇑Pg	**Pg**	**18 27 54.8**	**-0.3**
SCOU				⇑Pg	**Pg**	**18 27 54.8**	**-0.3**
	4.4nm,SNR=42						
SCOU				Sg	**Sg**	**18 27 59.4**	**0.0**
STAF	**Tafers**	**0.36**	**175**	⇓Pg	**Pg**	**18 27 55.1**	**-1.0**
STAF				⇓Pg	**Pg**	**18 27 55.1**	**-1.0**
	SNR=2.8						
STAF	**Tafers**	**0.36**	**175**	⇑Pg	**Pg**	**18 27 55.8**	**-0.2**
STAF				⇑Pg	**Pg**	**18 27 55.8**	**-0.2**
	3.8nm,SNR=28						
STAF				Sg	**Sg**	**18 28 01.0**	**+0.2**
CHMF	**Charmoille**	**0.36**	**284**	Pg	**Pg**	**18 27 55.9**	**-0.3**
CHMF	**Charmoille**	**0.36**	**284**	⇓Pg	**Pg**	**18 27 55.1**	**-1.0**
CHMF				⇓Pg	**Pg**	**18 27 55.1**	**-1.0**
	SNR=4.3						
CHMF	**Charmoille**	**0.36**	**284**	⇓Pg	**Pg**	**18 27 55.8**	**-0.3**
CHMF				⇓Pg	**Pg**	**18 27 55.8**	**-0.3**
	3.3nm,SNR=42						
CHMF				Sg	**Sg**	**18 28 00.8**	**-0.1**
BALST	**Balsthal**	**0.40**	**64**	⇑Pg	**Pg**	**18 27 56.2**	**-0.6**
BALST				⇑Pg	**Pg**	**18 27 56.2**	**-0.6**
	SNR=4.4						
BALST	**Balsthal**	**0.40**	**64**	⇑Pg	**Pg**	**18 27 57.0**	**+0.2**
	2.1nm,SNR=25						
BALST				⇑Pg	**Pg**	**18 27 57.0**	**+0.2**
BALST				Sg	**Sg**	**18 28 02.7**	**+0.6**
BALST	**Balsthal**	**0.40**	**64**	*e*Pg	**Pg**	**18 27 57.0**	**+0.2**
BALST				*e*Sg	**Sg**	**18 28 02.5**	**+0.4**
TORNY	**Torny/Romont**	**0.41**	**200**	⇑Pg	**Pg**	**18 27 56.8**	**-0.2**
	2.5nm,SNR=21						
TORNY				⇑Pg	**Pg**	**18 27 56.8**	**-0.2**
TORNY				Sg	**Sg**	**18 28 02.8**	**+0.2**
SRER	**Reinach, Raine**	**0.46**	**40**	⇑Pg	**Pg**	**18 27 58.3**	**+0.5**
	1.7nm,SNR=7.8						
SRER				⇑Pg	**Pg**	**18 27 58.3**	**+0.5**
SBIS2	**Binningen**	**0.47**	**37**	⇑Pg	**Pg**	**18 27 58.7**	**+0.6**
	3.2nm,SNR=13						
SBIS2				⇑Pg	**Pg**	**18 27 58.7**	**+0.6**
MATTE	**Schuetzenmatte**	**0.47**	**35**	⇓Pg	**Pg**	**18 27 58.5**	**+0.3**
	1.1nm,SNR=8.4						
MATTE				⇓Pg	**Pg**	**18 27 58.5**	**+0.3**
SBAT	**Basel-Tropenha**	**0.48**	**35**	⇑Pg	**Pg**	**18 27 58.9**	**+0.6**
SBAT				⇑Pg	**Pg**	**18 27 58.9**	**+0.6**
	3.7nm,SNR=3.7						
SBAW	**Basel, Wirtsch**	**0.48**	**37**	⇑Pg	**Pg**	**18 27 58.9**	**+0.6**
	2.4nm,SNR=7.1						
SBAW				⇑Pg	**Pg**	**18 27 58.9**	**+0.6**
SBAP	**Basel-PUK**	**0.49**	**33**	⇑Pg	**Pg**	**18 27 59.0**	**+0.5**
SBAP				⇑Pg	**Pg**	**18 27 59.0**	**+0.5**
	2.4nm,SNR=6.7						
SBAJ2	**Basel, St Joha**	**0.49**	**35**	⇑Pg	**Pg**	**18 27 59.0**	**+0.5**
	3.1nm,SNR=1.7						
SBAJ2				⇑Pg	**Pg**	**18 27 59.0**	**+0.5**
SMZW	**Muttenz-Waldha**	**0.50**	**40**	⇑Pg	**Pg**	**18 27 59.0**	**+0.3**
SMZW				⇑Pg	**Pg**	**18 27 59.0**	**+0.3**
	4.9nm,SNR=28						
OTER1	**Otterbach 1 (B**	**0.51**	**35**	Pg	**Pg**	**18 27 59.1**	**+0.3**
	SNR=1.8						
OTER1				Pg	**Pg**	**18 27 59.1**	**+0.3**
OTER2	**Otterbach 2 (B**	**0.51**	**35**	Pg	**Pg**	**18 27 58.8**	**-0.1**
	30nm,SNR=1.0						
OTER2				Pg	**Pg**	**18 27 58.8**	**-0.1**
BRANT	**Les Verrieres**	**0.53**	**245**	⇓Pg	**Pg**	**18 27 58.1**	**-1.0**
BRANT				⇓Pg	**Pg**	**18 27 58.1**	**-1.0**
	SNR=2.6						
BRANT	**Les Verrieres**	**0.53**	**245**	⇑Pg	**Pg**	**18 27 58.9**	**-0.2**
	1.6nm,SNR=13						
BRANT				⇑Pg	**Pg**	**18 27 58.9**	**-0.2**
BRANT				Sg	**Sg**	**18 28 06.2**	**0.0**
SAUR	**Augst-Roemermu**	**0.53**	**45**	⇑Pg	**Pg**	**18 27 59.4**	**+0.2**
SAUR				⇑Pg	**Pg**	**18 27 59.4**	**+0.2**
	3.5nm,SNR=24						
SBEG	**Bettingen Gewe**	**0.53**	**39**	⇑Pg	**Pg**	**18 27 59.4**	**+0.3**
SBEG				⇑Pg	**Pg**	**18 27 59.4**	**+0.3**
	2.6nm,SNR=17						
SKAF	**Kaiseraugst-Fr**	**0.53**	**45**	⇑Pg	**Pg**	**18 27 59.3**	**+0.1**
	1.4nm,SNR=4.7						
SKAF				⇑Pg	**Pg**	**18 27 59.3**	**+0.1**
DAGMA	**Lutertal, Dagm**	**0.58**	**83**	⇑Pg	**Pg**	**18 28 00.2**	**+0.1**
	1.8nm,SNR=21						
DAGMA				⇑Pg	**Pg**	**18 28 00.2**	**+0.1**
WIMIS	**Wimmis**	**0.59**	**148**	Pg	**Pg**	**18 27 60.0**	**-0.3**
	1.0nm,SNR=17						
WIMIS				Pg	**Pg**	**18 27 60.0**	**-0.3**
ROTHE	**Rothenfluh**	**0.60**	**58**	⇑Pg	**Pg**	**18 28 00.8**	**+0.3**
ROTHE				⇑Pg	**Pg**	**18 28 00.8**	**+0.3**
	2.4nm,SNR=20						
EMMET	**Emmethof**	**0.64**	**64**	⇑Pg	**Pg**	**18 28 01.4**	**+0.2**
EMMET				⇑Pg	**Pg**	**18 28 01.4**	**+0.2**
	4.4nm,SNR=55						
ENDD	**Endenburg**	**0.67**	**35**	⇑*i*Pg	**Pg**	**18 28 01.9**	**-0.1**
ENDD				SmS		18 28 13.4	
HINF	**Hinteralfeld**	**0.69**	**342**	*e*Pg	**Pg**	**18 28 02.0**	**-0.2**
HINF				*e*Sg	**Sg**	**18 28 10.9**	**-0.3**
	917nm,0.3s						
MOF	**Molkenrain**	**0.69**	**358**	Pg	**Pg**	**18 28 02.5**	**+0.3**
MOF				Sg	**Sg**	**18 28 11.5**	**+0.2**
MOF	**Molkenrain**	**0.69**	**358**	⇑*i*Pg	**Pg**	**18 28 02.5**	**+0.3**
MOF				PmP		18 28 03.7	
MOF				Sg	**Sg**	**18 28 12.1**	**+0.8**
SULZ	**Cheisacher**	**0.74**	**60**	⇑Pg	**Pb**	**18 28 03.3**	**-0.4**
	4.6nm,SNR=68						
SULZ				⇑Pg	**Pb**	**18 28 03.3**	**-0.4**
SULZ	**Cheisacher**	**0.74**	**60**	*e*Pg	**Pb**	**18 28 03.3**	**-0.4**
SULZ				*e*Sg	**Sb**	**18 28 13.3**	**-0.5**
SULZ				SmS		18 28 15.9	
HAMIK	**Hmikon, Dlik**	**0.76**	**83**	⇑Pg	**Pb**	**18 28 03.5**	**-0.5**
HAMIK				⇑Pg	**Pb**	**18 28 03.5**	**-0.5**
	2.4nm,SNR=2.2						
HAMIK				Sg	**Sb**	**18 28 13.9**	**-0.4**
HASLI	**Hasliberg/Brie**	**0.79**	**121**	⇓Pg	**Pb**	**18 28 03.9**	**-0.7**
	1.5nm,SNR=20						
HASLI				⇓Pg	**Pb**	**18 28 03.9**	**-0.7**
SENIN	**Lac Senin/Sane**	**0.81**	**174**	⇑Pg	**Pb**	**18 28 03.7**	**-1.2**
SENIN				⇑Pg	**Pb**	**18 28 03.7**	**-1.2**
	1.8nm,SNR=32						
LKBD	**Leukerbad**	**0.84**	**158**	Pg	**Pb**	**18 28 04.7**	**-0.8**
	1.4nm,SNR=19						
LKBD				Pg	**Pb**	**18 28 04.7**	**-0.8**
GIMEL	**St. Georges /**	**0.88**	**225**	⇑Pg	**Pb**	**18 28 05.4**	**-0.8**
BOBI	**Bbikon, Wasse**	**0.88**	**64**	⇑Pg	**Pb**	**18 28 06.1**	**-0.1**
BOBI				⇑Pg	**Pb**	**18 28 06.1**	**-0.1**
	2.5nm,SNR=6.1						
BNALP	**Bannalp**	**0.91**	**108**	⇓Pg	**Pb**	**18 28 06.3**	**-0.3**
BNALP				⇓Pg	**Pb**	**18 28 06.3**	**-0.3**
	0.6nm,SNR=6.7						
FELD	**Feldberg im Sc**	**0.91**	**38**	⇑Pg	**Pb**	**18 28 06.2**	**-0.6**
	1.3nm,SNR=20						
FELD				⇑Pg	**Pb**	**18 28 06.2**	**-0.6**
FELD	**Feldberg im Sc**	**0.91**	**38**	⇑*i*Pn	**Pb**	**18 28 06.2**	**-0.6**
FELD				⇓*i*Pg	**Pg**	**18 28 06.6**	**+0.2**
FELD				Sn	**Sb**	**18 28 18.3**	**-0.6**
GRYON	**Gryon**	**0.91**	**182**	⇑Pg	**Pb**	**18 28 05.6**	**-1.1**
	1.8nm,SNR=19						
GRYON				⇑Pg	**Pb**	**18 28 05.6**	**-1.1**
EWZT2	**Wettswil, ZR**	**0.92**	**79**	⇑Pg	**Pb**	**18 28 06.5**	**-0.3**
	5.0nm,SNR=28						
EWZT2				⇑Pg	**Pb**	**18 28 06.5**	**-0.3**
METMA	**Mettma DE**	**0.92**	**53**	⇑Pg	**Pb**	**18 28 06.4**	**-0.4**
METMA				⇑Pg	**Pb**	**18 28 06.4**	**-0.4**
	1.8nm,SNR=25						
METMA				Sg	**Sb**	**18 28 18.3**	**-0.7**
METMA	**Mettma DE**	**0.92**	**53**	*e*Pg	**Pb**	**18 28 06.4**	**-0.4**
METMA				*e*Sg	**Sb**	**18 28 18.3**	**-0.7**
CABF	**La Chapelle**	**0.92**	**234**	*e*Pg	**Pb**	**18 28 06.3**	**-0.6**
CABF				*e*Sg	**Sb**	**18 28 18.4**	**-0.8**
	147nm,0.3s						
KIZ	**Kirchzarten**	**0.94**	**32**	Pg	**Pb**	**18 28 06.9**	**-0.3**
KIZ				Sg	**Sb**	**18 28 19.4**	**-0.3**
KIZ	**Kirchzarten**	**0.94**	**32**	⇑Pn	**Pb**	**18 28 06.4**	**-0.8**
KIZ				Pg	**Pg**	**18 28 07.1**	**+0.1**
KIZ				Sn	**Sb**	**18 28 19.4**	**-0.3**
FBB	**Freiburg im Br**	**0.96**	**29**	⇑Pn	**Pb**	**18 28 06.6**	**-0.8**
FBB				Pg	**Pg**	**18 28 07.6**	**+0.3**
FBB				Sn	**Sb**	**18 28 20.0**	**-0.1**
FIESA	**Fiescheralp**	**0.97**	**138**	⇓Pg	**Pb**	**18 28 07.3**	**-0.5**
FIESA				⇓Pg	**Pb**	**18 28 07.3**	**-0.5**
	1.2nm,SNR=16						
BERGE	**Lenzkirch (DE)**	**0.99**	**44**	*e*Pg	**Pb**	**18 28 07.2**	**-0.8**
BERGE				*e*Sg	**Sb**	**18 28 20.5**	**-0.5**
HAU	**Haudompre**	**1.01**	**327**	*e*Pg	**Pb**	**18 28 07.9**	**-0.4**
HAU				*e*Sg	**Sb**	**18 28 21.3**	**-0.3**
	466nm,0.2s						
MUO	**Muotathal**	**1.02**	**100**	⇓Pg	**Pb**	**18 28 08.5**	**-0.2**
	0.7nm,SNR=9.4						
MUO				⇓Pg	**Pb**	**18 28 08.5**	**-0.2**
SALAN	**Lac Salanfe**	**1.03**	**188**	⇑Pg	**Pb**	**18 28 07.6**	**-1.2**
SALAN				⇑Pg	**Pb**	**18 28 07.6**	**-1.2**
	1.2nm,SNR=13						
ECH	**Echery**	**1.05**	**360**	Pg	**Pb**	**18 28 08.3**	**-0.9**
ECH	**Echery**	**1.05**	**360**	⇑Pg	**Pb**	**18 28 08.2**	**-0.9**
ECH				⇑Pg	**Pb**	**18 28 08.2**	**-0.9**
	1.3nm,SNR=26						
ECH	**Echery**	**1.05**	**360**	*e*Pg	**Pb**	**18 28 08.2**	**-0.9**
ECH				*e*Sg	**Sb**	**18 28 21.9**	**-0.9**
STIEG	**Stiegenhof Hun**	**1.06**	**71**	Pg	**Pb**	**18 28 08.8**	**-0.4**
STIEG				Pg	**Pb**	**18 28 08.8**	**-0.4**
	2.6nm,SNR=2.2						
SLE	**Schleitheim**	**1.08**	**56**	⇑Pg	**Pb**	**18 28 08.6**	**-0.9**
	3.2nm,SNR=46						
SLE				⇑Pg	**Pb**	**18 28 08.6**	**-0.9**
SLE	**Schleitheim**	**1.08**	**56**	*e*Pg	**Pb**	**18 28 08.7**	**-0.9**
SLE				*e*Pg	**Pn**	**18 28 09.6**	**-0.3**
SLE				*e*Sg	**Sb**	**18 28 23.5**	**-0.2**
DIX	**Grande Dixence**	**1.10**	**171**	Pg	**Pb**	**18 28 09.4**	**-0.6**
DIX				Pg	**Pb**	**18 28 09.4**	**-0.6**
	0.6nm,SNR=7.8						
OG02	**Monnetier-Morn**	**1.20**	**213**	Pn	**Pn**	**18 28 11.4**	**-0.1**
OG02				Sg	**Sb**	**18 28 27.5**	**+0.4**
WILA	**Wila**	**1.21**	**77**	⇓Pn	**Pn**	**18 28 11.2**	**-0.6**
WILA				⇓Pn	**Pn**	**18 28 11.2**	**-0.6**
	1.7nm,SNR=19						
WILA	**Wila**	**1.21**	**77**	*e*Pn	**Pn**	**18 28 11.1**	**-0.6**
WILA				*e*Pg	**Pb**	**18 28 12.4**	**+0.6**
WILA				*e*Sg	**Sb**	**18 28 26.9**	**-0.5**
**

CIRO	Champorcher	1.59	170		P	Pn	18 28 17.8	+0.7	
LIENZ	Kamor/St.Gall	1.59	84	⇓	Pn	Pn	18 28 16.9	-0.1	
	0.6nm,SNR=7.0								
LIENZ				⇓	Pn	Pn	18 28 16.9	-0.1	
LIENZ	Kamor/St.Gall	1.59	84	⇓	*i* Pn	Pn	18 28 16.9	-0.1	
LIENZ					Sn	Sn	18 28 36.4	-1.2	
GUT	Gutenstein	1.60	55	⇑	Pn	Pn	18 28 15.4	-1.6	
GUT	Gutenstein	1.60	55	⇑	Pn	Pn	18 28 15.4	-1.6	
LPL	La Plagne	1.68	191		*e*Pn	Pn	18 28 17.3	-1.0	
LPL	La Plagne	1.68	191		*e*Pg	Pn	18 28 19.6	+1.3	
LPL					*e*Sg	Sn	18 28 40.7	+0.9	
	77nm,0.3s								
LPG	La Plagne	1.69	190		*e*Pn	Pn	18 28 17.0	-1.5	
LPG	La Plagne	1.69	190		*e*Pg	Pn	18 28 20.3	+1.8	
LPG					*e*Sg	Sb	18 28 42.7	+1.2	
	110nm,0.3s								
PAGF	Fort de Pagny	1.70	326		*e*Pn	Pn	18 28 18.1	-0.3	
PAGF	Fort de Pagny	1.70	326		*e*Pg	Pn	18 28 21.1	+2.7	
PAGF					*e*Sg	Sb	18 28 42.6	+1.2	
	153nm,0.2s								
TRAV	Traversella	1.70	166		P	Pn	18 28 19.4	+0.9	
LSD	Lago del Serru	1.71	181		P	Pn	18 28 19.9	+1.2	
VDL	Val di Lei	1.71	113	⇓	Pn	Pn	18 28 19.8	+1.1	
VDL				⇓	Pn	Pn	18 28 19.8	+1.1	
	0.7nm,SNR=11								
SFTF	Sexfontaines	1.78	307		*e*Pn	Pn	18 28 18.8	-0.7	
	baz=127								
SFTF	Sexfontaines	1.78	307		*e*Pg	Pn	18 28 22.3	+2.8	
	baz=127								
SFTF					*e*Sn	Sn	18 28 38.8	-3.2	
SFTF					*e*Sg	Sb	18 28 46.0	+2.3	
	114nm,0.2s								
MUGIO	Muggio	1.79	133	⇓	Pn	Pn	18 28 20.2	+0.5	
	0.5nm,SNR=9.5								
MUGIO				⇓	Pn	Pn	18 28 20.2	+0.5	
DAVA	Damuels	1.85	85		*e*Pn	Pn	18 28 20.7	0.0	
DAVA					*e*Pg	Pb	18 28 24.1	+1.3	
DAVA					*e*Sg	Sb	18 28 48.4	+2.4	
DAVA	Damuels	1.85	85		*i* Pn	Pn	18 28 20.6	0.0	
	2.4nm,0.1s								
DAVA					*i* Pg	Pb	18 28 24.1	+1.3	
	0.4nm,0.1s								
DAVA					*e*Sn	Sn	18 28 43.1	-1.0	
	15nm,0.2s								
DAVA					*i* Sg	Sb	18 28 48.2	+2.2	
	94nm,0.2s								
LBG	Lerchenberg	1.86	35	⇑	*i* Pn	Pn	18 28 18.5	-2.1	
LBG					Pg	Pb	18 28 24.0	+1.2	
LBG					Sg	Sb	18 28 47.9	+1.9	
OGSM	Saint Maurice	1.86	214		Pg	Pn	18 28 23.4	+2.8	
LANF	Langenberg	1.87	13		Pg	Pb	18 28 24.3	+1.4	
DAVOX	Davos/Dischmat	1.90	101	⇓	Pn	Pn	18 28 22.1	+0.8	
	0.4nm,SNR=5.1								
DAVOX				⇓	Pn	Pn	18 28 22.1	+0.8	
PEB	Petersbachel	1.94	11		Pn	Pn	18 28 20.0	-1.7	
PEB					Pg	Pb	18 28 25.7	+1.5	
PEB					Sg	Sb	18 28 50.9	+2.6	
BUCH	Bad Urach	1.96	48		Pn	Pn	18 28 20.1	-1.9	
BUCH					Pg	Pb	18 28 26.0	+1.5	
BUCH					Sn	Sn	18 28 44.5	-2.0	
MEZF	Maizieres J'vi	1.96	314		*e*Pn	Pn	18 28 22.3	+0.4	
	baz=134								
MEZF	Maizieres J'vi	1.96	314		*e*Pg	Pb	18 28 25.9	+1.5	
	baz=134								
MEZF					*e*Sg	Sb	18 28 50.5	+1.7	
	177nm,0.4s								
RSP	Reno Superiore	2.02	178	⇑	Pn	Pn	18 28 23.4	+0.6	
RSP				⇑	Pn	Pn	18 28 23.4	+0.6	
	0.3nm,SNR=6.7								
RSP	Reno Superiore	2.02	178		P	Pn	18 28 23.4	+0.6	
UBR	Ueberruh	2.06	74		*e*Pn	Pn	18 28 23.1	-0.3	
UBR					*e*Pg	Pb	18 28 27.9	+1.6	
UBR					*e*Sn	Sn	18 28 47.2	-2.0	
UBR					*e*Sg	Sb	18 28 54.9	+3.0	
GDM	Grand'Maison	2.09	201		Pg	Pb	18 28 27.5	+0.6	
BERNI	Berninapass	2.10	110	⇓	Pn	Pn	18 28 25.8	+1.6	
	0.2nm,SNR=3.4								
BERNI				⇓	Pn	Pn	18 28 25.8	+1.6	
STU	Stuttgart	2.11	39		*e*Pg	Pb	18 28 28.8	+1.7	
STU					*e*Sg	Sb	18 28 55.1	+1.9	
BRET	Bretten	2.11	28		Pn	Pn	18 28 22.3	-1.7	
BRET					Pg	Pb	18 28 28.9	+1.8	
OBER	Oberstdorf	2.14	82		*e*Pg	Pb	18 28 29.5	+1.9	
OBER					Sn	Sn	18 28 49.3	-1.8	
OBER					*e*Sg	Sb	18 28 57.3	+2.8	
KTD	Kalmit	2.24	15		*e*Pg	Pb	18 28 31.3	+1.9	
KTD					*e*Sg	Sb	18 29 01.1	+4.0	
LOR	Lormes	2.26	274		*e*Pn	Pn	18 28 24.7	-1.4	
	baz=94								
LOR	Lormes	2.26	274		*e*Pg	Pb	18 28 30.9	+1.3	
	baz=94								
LOR					*e*Sg	Sb	18 28 58.1	+0.6	
	83nm,0.2s,baz=95								
DUP	Duppenweiler	2.26	354		Pn	Pn	18 28 25.8	-0.4	
DUP					Pg	Pb	18 28 31.7	+2.0	
DUP					Sg	Sb	18 29 00.6	+2.9	
BHB	Bricherasio	2.32	178		P	Pn	18 28 27.2	+0.2	
SMF	Signal de Mont	2.34	258		*e*Pn	Pn	18 28 25.7	-1.5	
SMF	Signal de Mont	2.34	258		*e*Pg	Pb	18 28 31.1	+0.1	
SMF					*e*Sn	Sn	18 28 52.3	-3.6	
SMF					*e*Sg	Sb	18 29 01.3	+1.5	
	51nm,0.2s								
ORIF	Oris-en-Rattie	2.42	202		*e*Pn	Pn	18 28 27.8	-0.6	
ORIF	Oris-en-Rattie	2.42	202		*e*Pg	Pb	18 28 33.4	+1.0	
ORIF					*e*Sg	Sb	18 29 03.8	+1.6	
	51nm,0.2s								
MBDF	Montbardon	2.45	187		*e*Pn	Pn	18 28 29.3	+0.4	
MBDF	Montbardon	2.45	187		*e*Pg	Pb	18 28 34.3	+1.3	
MBDF					*e*Sg	Sb	18 29 05.8	+2.6	
	87nm,0.5s								
RETA	Reutte	2.47	81		Pg	Pb	18 28 35.6	+2.4	
RETA					Sn	Sn	18 28 56.8	-2.3	
RETA					Sg	Sb	18 29 07.2	+3.6	
IMS	Imsbach	2.48	11		Pg	Pb	18 28 35.5	+2.1	
HDH	Heidenheim-Cha	2.49	54		Pg	Pb	18 28 35.7	+2.1	
HDH					Sg	Sb	18 29 07.5	+3.2	
SSF	Saint Saulge	2.50	269		*e*Pn	Pn	18 28 28.4	-1.0	
SSF	Saint Saulge	2.50	269		*e*Pg	Pb	18 28 35.7	+1.9	
SSF					*e*Sg	Sb	18 29 06.6	+2.1	
	33nm,0.3s								
SWS	Schriesheim-Wi	2.54	23	⇓	*i* Pn	Pn	18 28 27.5	-2.4	
SWS					Pg	Pb	18 28 36.9	+2.5	
RIVT	Riveris	2.56	354		*e*Pn	Pn	18 28 29.9	-0.3	
RIVT					*e*Pg	Pb	18 28 36.5	+1.8	
RIVT					*e*Sg	Sb	18 29 08.9	+2.7	
WLF	Walferdange	2.59	345		Pn	Pn	18 28 31.4	+0.7	
WLF					Pg	Pb	18 28 37.5	+2.2	
WLF					Sg	Sb	18 29 10.7	+3.5	
AVF	Avril sur Loir	2.64	263		*e*Pn	Pn	18 28 30.1	-1.2	
AVF	Avril sur Loir	2.64	263		*e*Pg	Pb	18 28 38.2	+2.1	
AVF					*e*Sg	Sb	18 29 10.8	+2.4	
	21nm,0.3s								
TOD	Tromm	2.68	23	⇓	Pn	Pn	18 28 29.4	-2.4	
TOD					Pg	Pb	18 28 39.3	+2.6	
MOTA	Moosalm	2.69	85		*e*Pn	Pn	18 28 32.2	+0.1	
	0.6nm,0.1s,SNR=6.1								
PART	Garmisch-Parte	2.70	81		*e*Pg	Pb	18 28 39.9	+2.7	
WBA	Furth	2.73	23		Pg	Pb	18 28 39.9	+2.4	
SIND	Sindeldorf	2.73	36		Pn	Pn	18 28 29.8	-2.7	
SIND					Pg	Pb	18 28 39.9	+2.3	
ABH	Alteburg	2.73	5		Pn	Pn	18 28 32.0	-0.6	
ABH	Alteburg	2.73	5		*e*Pn	Pn	18 28 32.0	-0.6	
ABH					*e*Pg	Pb	18 28 39.7	+2.0	
ABH					*e*Sg	Sb	18 29 14.9	+3.8	
SQTA	Sankt Quirin	2.76	87		*e*Pn	Pn	18 28 33.9	+0.8	
	2.0nm,0.1s,SNR=8.2								
SQTA					*i* Sg	Sb	18 29 16.7	+4.7	
	7.2nm,0.2s								
PCP	Piancastagn	2.79	159		P	Pn	18 28 34.4	+0.9	
NORI	Noerdlinger Ri	2.80	55		*e*Pg	Pb	18 28 41.4	+2.6	
LVIA	Vianden	2.85	347		Pn	Pn	18 28 34.8	+0.6	
LVIA					Sn	Sn	18 29 09.0	+0.6	
LVIA					x	x	18 29 17.9		
LVIA					Sg	Sb	18 29 18.8	+4.4	
WBB	Darmstadt	2.86	20		Pn	Pn	18 28 32.4	-1.9	
VIVF	Saint-Julien-l	2.89	218		*e*Pn	Pn	18 28 33.1	-1.7	
VIVF	Saint-Julien-l	2.89	218		*e*P	Pn	18 28 36.0	+1.2	
VIVF	Saint-Julien-l	2.89	218		*e*Pg	Pb	18 28 42.1	+1.7	
VIVF					*e*Sg	Sb	18 29 18.9	+3.2	
	61nm,0.2s								
FUR	Furstenfeldbru	2.95	69		*e*Pg	Pb	18 28 44.2	+2.7	
FUR					*e*Sn	Sn	18 29 08.0	-3.0	
FUR					*e*Sg	Sb	18 29 21.5	+4.0	
WATA	Walderalm	3.01	85		*i* Pn	Pn	18 28 37.9	+1.4	
	4.4nm,0.1s,SNR=6.7								
WATA					*i* Sn	Sn	18 29 13.4	+0.9	
	3.1nm,0.1s								
WATA					*i* Sg	Sg	18 29 26.3	+0.9	
	14nm,0.2s								
BGF	Bois d'Agland	3.03	260		*e*Pn	Pn	18 28 35.1	-1.5	
BGF	Bois d'Agland	3.03	260		*e*Pg	Pb	18 28 44.8	+2.1	
BGF					*e*Sg	Sb	18 29 23.7	+4.1	
	64nm,0.4s								
BGG	Burgeitz	3.05	2		*e*Pn	Pn	18 28 37.3	+0.4	
HYF	Humbligny	3.09	274		*e*P	Pn	18 28 38.2	+0.7	
HYF	Humbligny	3.09	274		*e*Pg	Pb	18 28 46.1	+2.4	
HYF					*e*Sg	Sb	18 29 26.3	+4.9	
BLI	Bleialf	3.13	350		Pn	Pn	18 28 38.3	+0.3	
TNS	Taunus Mts	3.18	15		*e*Pn	Pn	18 28 37.5	-1.2	
TNS					*e*Pg	Pb	18 28 48.4	+3.2	
TNS					*e*Sg	Sb	18 29 29.1	+5.1	
BHOU	Houvegnez	3.28	347		Pn	Pn	18 28 40.5	+0.3	
KOE	Koeppel	3.29	6		*e*Sn	Sn	18 29 19.4	+0.1	
IMI	Imperia	3.29	171		P	Pn	18 28 40.7	+0.3	
SBF	Sospel	3.31	177		*e*Pn	Pn	18 28 40.6	+0.1	
SBF	Sospel	3.31	177		*e*P	Pb	18 28 50.9	+3.4	
SBF					*e*Sn	Sn	18 29 16.3	-3.5	
SBF					*e*Sg	Sb	18 29 33.0	+5.3	
	25nm,0.3s								
GIVF	Givet	3.33	333		*e*Pn	Pn	18 28 41.3	+0.6	
GIVF	Givet	3.33	333		*e*Pg	Pb	18 28 50.2	+2.4	
GIVF					*e*Sg	Sb	18 29 32.8	+4.6	
	75nm,0.6s								
SMRF	Simiane la Rot	3.38	200		*e*Pn	Pn	18 28 40.2	-1.3	
SMRF	Simiane la Rot	3.38	200		*e*Pg	Pb	18 28 51.9	+3.2	
SMRF					*e*Sn	Sn	18 29 17.6	-4.0	
SMRF					*e*Sg	Sb	18 29 34.6	+4.8	
	19nm,0.4s								
AHRW	Bad Neuenahr-A	3.38	359		Pn	Pn	18 28 41.1	-0.3	
DOU	Dourbes	3.40	331		Pn	Pn	18 28 42.1	+0.4	
DOU					Sn	Sn	18 29 22.3	+0.4	
DOU					x	x	18 29 34.2		
STB	Steinbach	3.44	357		*e*Pn	Pn	18 28 42.6	+0.3	
GRC1	Grafenberg Arr	3.45	56		Pg	Pb	18 28 53.3	+3.5	
BCLA	Clavier	3.48	340		Pn	Pn	18 28 43.4	+0.5	
BCLA					Sn	Sn	18 29 21.4	-2.7	
BAIF	Baives	3.50	327		*e*Pn	Pn	18 28 42.6	-0.5	
BAIF	Baives	3.50	327		*e*Pg	Pb	18 28 52.9	+2.2	
BAIF					*e*Sg	Sb	18 29 38.3	+5.1	
	26nm,0.4s								
BGES	Gesves	3.50	338		Pn	Pn	18 28 43.6	+0.4	
BGES					Sn	Sn	18 29 22.8	-1.8	
BMRD	Maredsous	3.52	334		Pn	Pn	18 28 43.8	+0.4	
BMRD					Sn	Sn	18 29 25.4	+0.4	
BMRD					SbSb	SnSn	18 29 38.5	+2.3	
TCF	Toulx Ste Croi	3.52	257		*e*Pn	Pn	18 28 41.7	-1.8	
TCF	Toulx Ste Croi	3.52	257		*e*P	Pn	18 28 44.9	+1.4	
TCF	Toulx Ste Croi	3.52	257		*e*Pg	Pb	18 28 53.8	+2.7	
TCF					*e*Sn	Sn	18 29 21.4	-3.7	
	12nm,0.2s								
TCF					*e*Sg	Sb	18 29 38.5	+4.6	
	17nm,0.3s								
KLL	Kalltalsperre	3.53	351		*e*Pn	Pn	18 28 43.3	-0.3	
MEM	Membach	3.53	348		Pn	Pn	18 28 43.8	+0.2	
MEM	Membach	3.53	348		Pn	Pn	18 28 43.8	+0.2	
BSTI	Sart Tilman	3.58	343		Pn	Pn	18 28 44.7	+0.4	
FRF	La Foret Royal	3.62	186		*e*Pn	Pn	18 28 43.7	-1.1	
FRF	La Foret Royal	3.62	186		*e*Pg	Pb	18 28 56.0	+3.2	
FRF					*e*Sn	Sn	18 29 23.9	-3.6	
FRF					*e*Sg	Sb	18 29 41.1	+4.4	
	9.6nm,0.3s								
EQUI	Equi	3.66	144		P	Pn	18 28 47.1	+1.8	
GRB2	Grafenberg Arr	3.67	53		Pg	Pb	18 28 57.7	+3.9	
GRF	Grafenberg Arr	3.70	45		*e*Pg	Pb	18 28 58.2	+4.0	
GRF					*e*Sn	Sn	18 29 25.5	-3.9	
GRF					*e*Sg	Sg	18 29 45.9	-1.7	
LMR	La Mourre	3.86	187		*e*Pn	Pn	18 28 45.8	-2.2	
LMR	La Mourre	3.86	187		*e*Pg	Pb	18 28 59.5	+2.7	
LMR					*e*Sn	Sn	18 29 29.3	-4.0	
LMR					*e*Sg	Sb	18 29 47.0	+3.5	
	4.3nm,0.2s								
LASF	Ste Croix	3.86	218		*e*Pn	Pn	18 28 46.2	-2.0	
LASF	Ste Croix	3.86	218		*e*Pg	Pb	18 28 59.6	+2.6	
LASF					*e*Sn	Sn	18 29 29.9	-3.6	
	20nm,0.3s								
LASF					*e*Sg	Sb	18 29 49.2	+5.5	
	21nm,0.3s								
CAF	Calviac	4.20	240		*e*Pg	Pb	18 29 05.8	+3.1	
CAF					*e*Sg	Sb	18 29 57.7	+4.3	
	7.0nm,0.2s								
KBA	Koelnbreinsper	4.22	89		*i* Pn	Pn	18 28 54.4	+1.3	
	5.4nm,0.5s,SNR=4.8								
KBA					*i* Sn	Sn	18 29 43.6	+1.1	
	3.3nm,0.2s								
KBA					*i* Sg	Sg	18 30 03.9	-0.4	
	6.3nm,0.4s								
WET	Wettzell	4.30	60		*e*Pn	Pn	18 28 54.0	-0.2	
WET					*e*Pg	Pb	18 29 09.5	+5.0	
WET					*e*Sn	Sn	18 29 39.9	-4.5	
WET					*e*Sg	Sg	18 30 05.4	-1.6	
MANZ	Manzenberg	4.33	47		*e*Pg	Pb	18 29 09.9	+5.0	
MANZ					*e*Sn	Sn	18 29 41.3	-3.7	
MANZ					*e*Sg	Sb	18 30 04.5	+7.5	
RJF	Les Rejaudoux	4.34	247		*e*Pn	Pn	18 28 53.0	-1.7	
RJF	Les Rejaudoux	4.34	247		*e*Pg	Pb	18 29 08.7	+3.6	
RJF					*e*Sg	Sg	18 30 04.8	-3.3	
	21nm,0.5s								
MOX	Moxa	4.55	38		*e*Pg	Pb	18 29 13.5	+4.8	
MOX					*e*Sn	Sn	18 29 45.8	-4.7	
MOX					*e*Sg	Sg	18 30 13.1	-1.9	
NKC	Novy Kostel	4.65	47		*e*PG	Pb	18 29 14.5	+4.1	
NKC					*e*SG	Sg	18 30 16.1	-2.1	
	comp=Z,18nm,0.5s								
GEC2	GERESS Array S	4.70	67		*e*Pn	Pn	18 28 59.5	-0.2	
GEC2					*e*Sn	Sn	18 29 50.1	-4.1	
GEC2					*e*Sg	Sg	18 30 17.3	-2.3	
KHC	Kasperske Hory	4.72	63		*e*PN	Pn	18 28 59.9	0.0	
KHC					*e*PG	Pb	18 29 15.1	+3.5	
KHC					*e*SN	Sn	18 29 51.2	-3.5	
KHC					*e*SG	Sb	18 30 16.5	+8.1	
	comp=Z,16nm,0.3s								
PGF	Pioggiola	4.79	164		*e*Pn	Pn	18 28 59.8	-1.2	
PGF					*e*Sn	Sn	18 29 51.5	-5.1	
	0.8nm,0.3s								
MOA	Molln	4.86	79		*e*Pn	Pn	18 29 01.9	0.0	
	0.4nm,0.1s								
MOA					*e*Sn	Sn	18 29 57.3	-0.8	
	3.7nm,0.1s,SNR=6.9								
LFF	La Frestale	5.00	246		*e*Pg	Pb	18 29 20.7	+4.5	
LFF					*e*Sg	Sg	18 30 25.2	-4.0	
	16nm,0.4s								
MFF	Saint Martin d	5.05	266		*e*Pn	Pn	18 29 02.9	-1.5	
MFF					*e*Sn	Sn	18 29 58.3	-4.3	
	6.2nm,0.3s								
LDF	La Druitiere	5.11	289		*e*Pn	Pn	18 29 03.2	-2.0	
LDF	La Druitiere	5.11	289		*e*P	Pn	18 29 07.6	+2.4	
LDF	La Druitiere	5.11	289		*e*Pg	Pb	18 29 22.6	+4.4	
LDF					*e*Sg	Sg	18 30 28.6	-4.2	
	18nm,0.5s								
MTLF	Montolieu	5.18	224		*e*Pn	Pn	18 29 04.3	-1.9	
MTLF	Montolieu	5.18	224		*e*Pg	Pb	18 29 24.6	+5.2	
MTLF					*e*Sn	Sn	18 30 00.6	-5.3	
MTLF					*e*Sg	Sg	18 30 30.6	-4.4	
	5.9nm,0.3s								
PBCC	Pribram	5.20	58		*e*SG	Sg	18 30 32.9	-2.7	
	comp=Z,2.3nm,0.4s								
FLN	La Foliniere	5.38	290		*e*Pn	Pn	18 29 06.9	-2.1	
FLN	La Foliniere	5.38	290		*e*P	Pn	18 29 10.7	+1.7	
	baz=110								
FLN	La Foliniere	5.38	290		*e*Pg	Pb	18 29 28.0	+5.2	
FLN					*e*Sg	Sg	18 30 37.5	-4.0	
	11nm,0.3s								
GRR	Gorron	5.55	286		*e*Pn	Pn	18 29 09.8	-1.4	
GRR					*e*Sn	Sn	18 30 08.2	-6.8	
GRR					*e*Sg	Sg	18 30 42.2	-4.6	
	5.7nm,0.2s								
CLL	Collm	5.64	40		*e*Pg	Pb	18 29 34.0	+6.8	
CLL					*e*Sg	Sg	18 30 48.0	-1.7	
	comp=Z,6.0nm,0.7s								
PRU	Pruhonice	5.65	57		*e*PG	Pb	18 29 31.9	+4.5	
PRU					*e*SG	Sg	18 30 46.9	-3.2	
	comp=Z,8.7nm,0.8s								
GOPC	GO Pecny, Ondr	5.76	59		*e*SG	Sg	18 30 50.5	-3.1	
	comp=Z,6.6nm,0.7s								
BRG	Berggiesshubel	5.80	48		PG	Pg	18 29 38.2	-1.7	
BRG					SG	Sg	18 30 50.5	-4.4	
	comp=Z,5.7nm,0.5s								
EPF	Esparros	6.36	232		*e*Pg	Pb	18 29 46.1	+6.6	
EPF					*e*Sn	Sn	18 30 29.0	-6.0	
EPF					*e*Sg	Sg	18 31 07.6	-5.2	
	comp=Z,6.1nm,0.5s								
KRUC	Moravsky	6.46	70		*e*PN	Pn	18 29 23.4	-0.4	
KRUC					*e*SN	Sn	18 30 31.2	-6.3	
KRUC					*e*SG	Sg	18 31 12.5	-3.7	
VRAC	Vranov	6.65	68		*e*SN	Sn	18 30 36.1	-6.1	
VRAC					*e*SG	Sg	18 31 16.6	-5.6	
SGMF	Saint Gilles	6.65	283		*e*Pn	Pn	18 29 24.4	-2.0	
SGMF	Saint Gilles	6.65	283		*e*Pg	Pb	18 29 51.4	+7.0	
SGMF					*e*Sn	Sn	18 30 36.7	-5.5	
SGMF					*e*Sg	Sg	18 31 17.9	-4.3	
	comp=Z,3.4nm,0.3s								
CHVC	Chvalec	6.79	56		*e*SG	Sg	18 31 22.7	-3.9	
DPC	Dobruska-Polom	6.84	59		*e*SG	Sg	18 31 24.2	-4.0	
	comp=Z,6.2nm,0.7s								
QUIF	Quistinic	7.04	280		*e*Pn	Pn	18 29 29.9	-1.8	
QUIF					*e*Sn	Sn	18 30 45.9	-5.7	
QUIF					*e*Sg	Sg	18 31 29.6	-4.9	
	comp=Z,6.3nm,0.4s								
ROSF	Rostrenen	7.14	283		*e*Sg	Sg	18 31 32.3	-5.5	
	comp=Z,2.9nm,0.3s								

LDG ***08*** *18:30:29.9±0.1, 47°.15N×7°.13E, h10km, Md2.8/2, Ml2.8/21, Error ellipse: s-maj=1.0km s-min=0.7km az=92.0*
STR ***08*** *18:30:29.4±0.8, 47°.N±4°×±°, h0km, MLv2.3/6*
BGR ***08*** *18:30:29.7±0.7, 47°.17N×7°.13E, h11km±2km, ML2.3/12, Error ellipse: s-maj=4.4km s-min=3.3km az=40.0*
VIE ***08*** *18:30:35.9±2.3, 47°.03N×7°.56E, h3km, ml2.5/2, Error ellipse: s-maj=23.8km s-min=12.4km az=168.0 11 km NE of Bern*

ISC 08 18:30:30.2±1.0, 47°.19N±0°.02×7°.16E±0°.02, h18km±3km, n55, σ1$^{9}_{8}$76/108, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LOMF	Lomont	0.28	306	Pg	Pb	18 30 36.1	-0.5
LOMF				Sg	Sb	18 30 40.4	-0.5
CHMF	Charmoille	0.35	280	Pg	Pg	18 30 36.9	-0.8
CHMF				Sg	Sg	18 30 41.8	-0.9
BALST	Balsthal	0.40	68	*e*Pg	Pg	18 30 38.0	-0.4
BALST				*e*Sg	Sg	18 30 43.9	-0.1
HINF	Hinteralfeld	0.66	342	*e*Pg	Pb	18 30 43.0	-0.2
HINF	Hinteralfeld	0.66	342	*e*Pn	Pg	18 30 44.3	+1.0
HINF				*e*Sg	Sb	18 30 52.2	+0.2
	81nm,0.2s						
MOF	Molkenrain	0.67	359	Pg	Pb	18 30 43.5	+0.3
MOF				Sg	Sg	18 30 53.1	+0.8
SULZ	Cheisacher	0.73	62	*e*Pg	Pb	18 30 44.3	-0.1
SULZ				*e*Sg	Sb	18 30 54.8	+0.7
METMA	Mettma DE	0.91	54	*e*Pg	Pb	18 30 47.4	-0.1
METMA				*e*Sg	Sb	18 30 59.4	+0.2
KIZ	Kirchzarten	0.93	33	Pg	Pb	18 30 47.9	+0.2
KIZ				Sg	Sb	18 31 00.1	+0.5
CABF	La Chapelle	0.93	232	*e*Pg	Pb	18 30 47.2	-0.6
CABF				*e*Sg	Sb	18 30 58.6	-1.2
	16nm,0.2s						
BERGE	Lenzkirch (DE)	0.97	45	*e*Pg	Pb	18 30 48.1	-0.4
BERGE				*e*Sg	Sb	18 31 00.8	-0.3
HAU	Haudompre	0.99	327	*e*Pg	Pb	18 30 48.8	+0.1
HAU				*e*Sg	Sb	18 31 01.7	+0.3
	37nm,0.2s						
ECH	Echery	1.03	0	*e*Pg	Pb	18 30 50.2	+0.7
ECH				*e*Sg	Sb	18 31 03.1	+0.5
SLE	Schleitheim	1.07	57	*e*Pg	Pb	18 30 50.1	-0.1
WIL

BGF				*e*Sg		**Sb**	**18 32 03.8**		**+3.9**
	15nm,0.4s								
HYF	**Humbligny**	**3.08**	**273**	*e*Sg		**Sb**	**18 32 05.8**		**+4.2**
TCF	**Toulx Ste Croi**	**3.52**	**257**	*e*Pn		**Pn**	**18 31 22.1**		**-1.8**
TCF	**Toulx Ste Croi**	**3.52**	**257**	*e*Pg		**Pb**	**18 31 34.6**		**+2.7**
TCF				*e*Sn		**Sn**	**18 32 01.8**		**-3.2**
TCF				*e*Sg		**Sb**	**18 32 19.1**		**+4.9**
	1.7nm,0.2s								
FRF	**La Foret Royal**	**3.64**	**186**	*e*Pg		Pb	18 31 37.1		+3.1
FRF				*e*Sg		**Sb**	**18 32 21.4**		**+3.6**
	1.2nm,0.2s								
LASF	**Ste Croix**	**3.88**	**218**	*e*Pn		**Pn**	**18 31 26.8**		**-2.0**
LASF	**Ste Croix**	**3.88**	**218**	*e*Pg		Pb	18 31 41.2		+3.2
LASF				*e*Sg		**Sb**	**18 32 30.4**		**+5.9**
	4.2nm,0.4s								

RSNC 08 18:31:54.8±1.0, 3°99N×76°28W, h112km±7km, ML1.6, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
YOTC	**Yotoco, Valle**	**0.06**	**264**	*e*P			Pn	18 32 09.2	-1.1
YOTC				*e*S			Sn	18 32 21.3	-0.6
YOTC				*i*				18 32 25.1	
	comp=Z,7.8nm,0.1s								
YOTC	**Yotoco, Valle**	**0.06**	**264**	*e*P			Pn	18 32 09.2	-1.1
YOTC				*e*S			Sn	18 32 21.5	-0.4
YOTC				*i*				18 32 23.9	
	comp=Z,8.4nm,0.1s								
ANIL	**Santa Ana**	**1.01**	**60**	*e*P			Pn	18 32 15.3	-1.2
ANIL				*e*S			Sn	18 32 32.9	0.0
ANIL				*i*				18 32 35.5	
	comp=Z,20nm,0.4s								
ANIL	**Santa Ana**	**1.01**	**60**	*e*P			Pn	18 32 15.4	-1.1
ANIL				*e*S			Sn	18 32 32.0	-0.9
ORTC	**Ortega, Tolima**	**1.04**	**94**	*e*P			Pn	18 32 15.6	-0.9
ORTC				*e*S			Sn	18 32 33.1	+0.2
ORTC				*i*				18 32 34.4	
	comp=Z,7.5nm,0.3s								
ORTC	**Ortega, Tolima**	**1.04**	**94**	*e*P			Pn	18 32 15.6	-0.9
ORTC				*e*S			Sn	18 32 33.3	+0.4
ORTC				*i*				18 32 34.4	
	comp=Z,8.5nm,0.3s								
MALC	**Bahia Malaga**	**1.05**	**271**	*e*P			Pn	18 32 16.4	-0.2
MALC				*e*S			Sn	18 32 33.0	-0.2
MALC				*i*				18 32 40.0	
	comp=Z,16nm,0.5s								
GUY2C	**Guyana, Caldas**	**1.53**	**37**	*e*P			Pn	18 32 22.2	-0.3
GUY2C				*e*S			Sn	18 32 43.5	-0.1
GUY2C				*i*				18 32 47.6	
	comp=Z,3.0nm,0.4s								
GUY2C	**Guyana, Caldas**	**1.53**	**37**	*e*P			Pn	18 32 22.0	-0.6
GUY2C				*e*S			Sn	18 32 43.9	+0.3
GUY2C				*i*				18 32 47.5	
	comp=Z,3.0nm,0.6s								
SOTA	**Rioblanco**	**1.87**	**190**	*e*P			Pn	18 32 23.8	-3.0
SOTA				*e*S			Sn	18 32 47.6	-3.4
SOTA				*i*				18 32 52.8	
	comp=Z,2.3nm,0.4s								
CBOC	**Ciudad Bolivar**	**1.88**	**8**	*e*P			Pn	18 32 26.4	-0.1
CBOC				*e*S			Sn	18 32 50.2	-0.5

*IDC **08** 18:41:02.7±0.8, 1°38N×126°12E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.7/37, mbtmp3.8/8, ML3.7/1, Error ellipse: s-maj=60.9km s-min=16.8km az=76.0*
*DJA **08** 18:41:06.4±0.3, 1°1N±3°×12°6E±°, h10km, M4.1/7, mB4.8/1, mb4.8/1, MLv3.8/7, Mw(mB)4.1/1*
*NEIC **08** 18:41:08.7±1.1, 1°4N±0°1×126°38E±0°08, h49km±12km, mb4.0/5, Error ellipse: s-maj=16.5km s-min=8.5km az=213.0*

ISC 08 18:41:08.9±0.7, 1°43N±0°09×126°35E±0°05, h47km, n24, σ1s93°28, mb3.9/8, Northern Moluccа Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
TNTI	**Ternate**	**1.20**	**123**	P			**Pn**	**18 41 28.5**	**-0.8**
TNTI				S			**Sn**	**18 41 45.6**	**+1.0**
TNTI	**Ternate**	**1.20**	**123**				**Pn**	**18 41 28.6**	**-0.8**
KMSI	**Cibinong**	**2.52**	**250**	P			**Pn**	**18 41 46.7**	**-0.6**
KMSI				S			**Sn**	**18 42 17.2**	**+0.4**
SANI	**Sanana**	**3.47**	**186**	P			**Pn**	**18 41 59.9**	**-0.6**
LUWI	**Luwuk**	**4.34**	**236**	P			**Pn**	**18 42 14.1**	**+1.7**
LUWI	**Luwuk**	**4.34**	**236**				**Pn**	**18 42 12.1**	**-0.3**
MRSI	**Marisa**	**4.51**	**258**	P			**Pn**	**18 42 14.0**	**-0.7**
APSI	**Ampana**	**5.24**	**244**	P			**Pn**	**18 42 23.9**	**-0.9**
FITZ	**Fitzroy Crossi**	**19.41**	**182**	P			**P**	**18 45 29.8**	**-1.5**
	0.2nm,0.3s,baz=356,slow=11,SNR=5.8								
FITZ	**Fitzroy Crossi**	**19.41**	**182**	P			**P**	**18 45 29.5**	**-1.8**
FITZ						IAmb	IAmb	18 46 09.9	
	comp=Z,5.2nm,1.1s								
WRAB	**Tennant Creek**	**22.63**	**160**	P			**P**	**18 46 04.6**	**-1.5**
WRAB						IAmb	IAmb	18 46 07.5	
	comp=Z,21nm,1.6s								
WRA	**Warramunga Arr**	**22.64**	**160**	P			**P**	**18 46 05.4**	**-0.7**
	comp=Z,3.2nm,0.5s,baz=339,slow=11,SNR=33								
WRA						PcP	**PcP**	**18 49 59.4**	**+1.6**
	comp=Z,0.4nm,0.7s,baz=339,slow=2.4,SNR=3.3								
WRA	**Warramunga Arr**	**22.64**	**160**	P			**P**	**18 46 04.6**	**-1.5**
AS31	**Alice Springs**	**26.00**	**164**	P			**P**	**18 46 37.0**	**-0.6**
ASAR	**Alice Springs**	**26.00**	**164**	P			**P**	**18 46 37.5**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=343,slow=8.0,SNR=19								
ASAR						PcP	**PcP**	**18 50 06.3**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=341,slow=2.1,SNR=6.6								
ASAR	**Alice Springs**	**26.00**	**164**	P			**P**	**18 46 37.2**	**-0.4**
STKA	**Stephens Creek**	**36.14**	**158**	P			**P**	**18 48 07.7**	**+1.0**
	comp=Z,0.6nm,0.3s,baz=349,slow=9.0,SNR=3.7								
SONM	**Songino Array**	**49.36**	**342**	P			**P**	**18 49 52.6**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=115,slow=10.0,SNR=3.6								
PETK	**Petropavlovsk-**	**57.69**	**22**	P			**P**	**18 50 55.8**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=194,slow=5.2,SNR=5.4								
MKAR	**Makanchi Array**	**59.23**	**326**	P			**P**	**18 51 05.6**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=118,slow=8.7,SNR=12								
MKAR	**Makanchi Array**	**59.23**	**326**	P			**P**	**18 51 05.0**	**-0.6**
KURK	**Kurchatov**	**63.48**	**328**	P			**P**	**18 51 33.6**	**-0.5**
ABKAR	**Akbulak array**	**73.69**	**321**	P			**P**	**18 52 37.9**	**+0.1**
VNDA	**Vanda**	**81.20**	**173**	P			**P**	**18 53 19.4**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=14,slow=4.3,SNR=3.7								

*GUC **08** 18:49:20.7±0.8, 20°75S×70°69W, h25km±9km, ML3.6*
*IDC **08** 18:49:27.4±3.7, 20°78S×70°45W, h74km±26km, mb3.6/1, mb1 3.8/5, mb1mx3.4/36, mbtmp4.0/5, Error ellipse: s-maj=51.4km s-min=18.9km az=83.0*

ISC 08 18:49:22.7±1.5, 20°76S±0°03×70°59W±0°10, h22km±9km, n23, σ1s94°29, 9C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
PATCX	**Punta Patache**	**0.42**	**99**	↑*i*P			**Pb**	**18 49 30.8**	**-0.6**
PATCX				*e*S			**Sb**	**18 49 37.7**	**+0.3**
PATCX				IAML				18 49 42.3	
	comp=N,6μm,0.2s								
TA01	**Diego Aracena**	**0.43**	**64**	↑*i*P			**Pb**	**18 49 30.5**	**-1.1**
TA01				*e*S			**Sb**	**18 49 36.9**	**-0.8**
TA01				IAML				18 49 41.9	
	comp=N,5μm,0.3s								
PSGC	**Pisagua**	**1.23**	**21**	↓*e*P			**Pn**	**18 49 42.7**	**-2.0**
PSGC				*e*S			**Sn**	**18 49 59.7**	**-1.1**
PSGC				IAML				18 50 02.2	
	comp=N,3μm,0.4s								
PB11	**IPOC Station P**	**1.32**	**42**	↑*i*P			**Pn**	**18 49 44.5**	**-1.6**
PB11				*e*S			**Sn**	**18 50 02.7**	**-0.4**
PB11				IAML				18 50 05.0	
	comp=N,2μm,0.5s								
PB08	**IPOC Station P**	**1.48**	**66**	↑*i*P			**Pn**	**18 49 48.0**	**-0.4**
PB08				*e*S			**Sn**	**18 50 08.9**	**+1.6**
PB08				IAML				18 50 14.7	
	comp=N,870nm,0.4s								
PB03	**IPOC Station P**	**1.51**	**149**	↑*i*P			**Pn**	**18 49 47.3**	**-1.3**
PB03				*e*S			**Sn**	**18 50 08.2**	**+0.6**
PB04	**IPOC Station P**	**1.62**	**165**	↓*i*P			**Pn**	**18 49 47.9**	**-2.3**
PB04				*i* S			**Sn**	**18 50 12.1**	**+1.6**
PB09	**IPOC Station P**	**1.63**	**130**	↑*i*P			**Pn**	**18 49 50.9**	**+0.6**
PB09				*i* S			**Sb**	**18 50 13.5**	**+1.0**
PB09				IAML				18 50 16.6	
	comp=E,2μm,0.3s								
GO01	**Chusmiza**	**1.70**	**51**	↑*i*P			**Pn**	**18 49 50.6**	**-0.9**
GO01				*e*S			**Sn**	**18 50 15.1**	**+2.2**
MNMC	**Minye Minye**	**1.87**	**30**	↑*i*P			**Pn**	**18 49 51.6**	**-2.0**
MNMC				*i* S			**Sn**	**18 50 18.9**	**+2.2**
AP01	**Chacalluta**	**2.38**	**6**	↑*i*P			**Pn**	**18 50 01.7**	**+1.3**
AP01				*i* S			**Sn**	**18 50 32.5**	**+3.5**
LVC	**Limon Verde**	**2.42**	**140**	P			**Pn**	**18 50 02.1**	**+0.9**
	comp=E,18nm,0.3s,baz=318,slow=10.0,SNR=94								
LVC				S			**Sn**	**18 50 32.5**	**+2.0**
	comp=E,34nm,0.3s,baz=114,slow=21,SNR=4.4								
LPAZ	**La Paz**	**5.02**	**28**	P			**Pn**	**18 50 41.4**	**+4.1**
	comp=E,0.5nm,0.3s,baz=220,slow=4.2,SNR=20								
SIV	**San Ignacio**	**10.21**	**64**	P			**Pn**	**18 51 48.7**	**+0.7**
	comp=E,3.5nm,0.3s,baz=263,slow=5.5,SNR=42								
CFA	**Coronel Fontan**	**11.01**	**169**	P			**Pn**	**18 52 01.9**	**+2.9**
	comp=E,0.3nm,0.3s,baz=354,slow=19,SNR=1.6								
TORD	**Torodi Ar. Bea**	**78.60**	**71**	P			**P**	**19 01 20.8**	**-2.4**
	comp=E,0.6nm,0.5s,baz=244,slow=5.4,SNR=5.2								
H11S2	**WAKE ISLAND Hyl**	**26.22**	**278**	T			T	21 27 45.2	
	baz=102,slow=74,SNR=23								
H11S1	**WAKE ISLAND Hyl**	**26.23**	**278**	T			T	21 27 43.3	
	baz=102,slow=74,SNR=17								
H11S3	**WAKE ISLAND Hyl**	**26.24**	**278**	T			T	21 27 35.5	
	baz=102,slow=74,SNR=16								
H11N3	**WAKE ISLAND Hyl**	**26.29**	**280**	T			T	21 27 38.4	
	baz=102,slow=74,SNR=6.5								
H11N2	**WAKE ISLAND Hyl**	**26.30**	**280**	T			T	21 27 40.7	
	baz=102,slow=74,SNR=8.8								
H11N1	**WAKE ISLAND Hyl**	**26.30**	**280**	T			T	21 27 41.6	
	baz=102,slow=74,SNR=6.2								
MKAR	**Makanchi Array**	**145.93**	**34**	PKPbc			**PKPdf**	**19 08 57.8**	**-2.0**
	comp=E,0.6nm,0.6s,baz=282,slow=3.5,SNR=4.6								

IDC 08 18:50:44.0±6.2, 20°78S×70°55W, h58km±38km, mb3.3/1, mb1 3.7/4, mb1mx3.4/35, mbtmp3.8/4, ML3.9/1, MS3.5/1, Ms1 3.4/1, ms1mx2.7/13, Error ellipse: s-maj=85.8km s-min=20.7km az=78.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
LVC	**Limon Verde**	**2.38**	**140**	P			Pn	18 51 19.9	-1.0
	baz=300,slow=14,SNR=0.8								
LVC				S			Sn	18 51 50.0	+1.0
	8.9nm,0.3s,baz=304,slow=18,SNR=0.8								
LPAZ	**La Paz**	**5.02**	**28**	P			Pn	18 51 58.1	+0.7
	baz=270,slow=1.0,SNR=1.3								
SIV	**San Ignacio**	**10.18**	**64**	P			Pn	18 53 07.0	-0.5
	1.0nm,0.3s,baz=269,slow=10,SNR=3.2								
BDFB	**Brasilia**	**22.00**	**80**	LR			LR	19 04 28.3	
	comp=Z,107nm,18.3s,baz=204,slow=38								
TORD	**Torodi Ar. Bea**	**78.56**	**71**	P			P	19 02 39.1	-0.7
	0.3nm,0.6s,baz=255,slow=4.8,SNR=1.2								
MKAR	**Makanchi Array**	**145.92**	**34**	PKPbc			PKPbc	19 10 17.2	+0.1
	0.1nm,0.4s,baz=339,slow=3.4,SNR=1.3								

*NIED **08** 18:57:00, 36°80N×140°60E, h5km, Mw4.4 Best double couple: M₀3.79000×10¹⁵ NP1:φs175.00000°,δ66.00000°, λ-85.00000°. NP2:φs343.00000°,δ24.00000°, λ-101.00000°.*
*BJI **08** 18:57:26.9±0.0, 36°76N×141°07E, h7km, mB4.9/14, mb4.6/18, Ms4.5/5, Ms7 4.4/4*
*IDC **08** 18:57:31.2±0.5, 36°81N×140°48E, h0km, mb4.3/32, mb1 4.4/34, mb1mx4.3/51, mbtmp4.3/34, ML3.9/2, MS3.4/11, Ms1 3.4/11, ms1mx3.1/53, Error ellipse: s-maj=13.5km s-min=9.5km az=154.0*
*JMA **08** 18:57:32.7, 36°79N×140°58E, h7km±1km, M4.6 Broadband fault plane solution: P waves. NP1: φs346.00000°,δ36.00000°,λ-123.00000°. NP2: φs204.00000°,δ61.00000°,λ-68.00000°. Principal axes: T Plg13.0000°, Azm279.0000°; N Plg19.0000°, Azm13.0000°; P Plg67.0000°, Azm156.0000°;*
JMA Felt IV J1.
*MOS **08** 18:57:35.6±1.7, 36°93N×140°52E, h37km, mb4.6/16 Error ellipse: s-maj=7.0km s-min=4.8km az=87.2*
*NEIC **08** 18:57:37.0±1.9, 36°70N±0°07×140°5E±0°1, h37km±7km, mb4.6/70, Error ellipse: s-maj=11.8km s-min=10.0km az=77.0*

ISC 08 18:57:32.8±0.9, 36°78N±0°03×140°64E±0°04, h12km±5km, n231, σ1s68°232, mb4.5/78, MS3.3/8, 21C-10D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
JHO	**Hitachi**	**0.17**	**198**	↓P			**Pg**	**18 57 36.3**	**-0.4**
JHO				S			**Sg**	**18 57 39.0**	**-0.5**
JFFD	**Fukushimafurud**	**0.32**	**349**	↓P			**Pg**	**18 57 38.7**	**-0.6**
ONAJ	**Iwakimizuishiy**	**0.35**	**22**	↑↑P			**Pg**	**18 57 39.7**	**-0.2**
ONAJ				S			**Sg**	**18 57 45.0**	**+0.4**
JSB	**Shiboa**	**0.60**	**289**	↑↑P			**Pg**	**18 57 44.2**	**-0.4**
JFK	**Kawauchi**	**0.62**	**18**	↑↑P			**Pg**	**18 57 44.3**	**-0.6**
JFK				S			**Sg**	**18 57 53.0**	**-0.1**
JYT	**Yasato**	**0.65**	**213**	P			**Pg**	**18 57 44.9**	**-0.6**
JYT				S			**Sg**	**18 57 53.7**	**-0.4**
JFT	**Otama**	**0.78**	**342**	↑↑P			**Pg**	**18 57 47.1**	**-0.8**
JFT				S			**Sg**	**18 57 57.4**	**-0.7**
MJA0	**Matsu Arr-Jizo**	**1.93**	**264**	*e*P			**Pn**	**18 58 05.8**	**+0.2**
MJA0						pmax	pmax		
	comp=Z,68nm,0.3s								
MJAR	**Matsushiro Arr**	**1.96**	**264**	Pg			**Pn**	**18 58 06.1**	**+0.1**
	comp=Z,68nm,0.3s,baz=83,slow=16,SNR=2249								
MJAR						Lg	Lg	18 58 30.5	
	comp=Z,66nm,0.3s,baz=113,slow=15,SNR=16								
MJAR						LR	LR	18 59 07.9	
	comp=Z,1μm,20.6s,baz=100,slow=53								
MJAR	**Matsushiro Arr**	**1.96**	**264**				**Pn**	**18 58 05.5**	**-0.5**
MAJO	**Matsushiro**	**1.97**	**264**	*c* *i*P			**Pn**	**18 58 06.5**	**+0.5**
MAJO	**Matsushiro**	**1.97**	**264**				**Pn**	**18 58 06.3**	**+0.3**
MAT	**Matsushiro**	**1.97**	**264**	P			**Pn**	**18 58 06.4**	**+0.4**
MAT				S			**Sb**	**18 58 31.7**	**-1.3**
MJB9	**Matsu-Tunnel**	**1.97**	**264**				**Pn**	**18 58 06.3**	**+0.3**
INU	**Inuyama**	**3.26**	**245**				**Pn**	**18 58 24.9**	**+1.1**
JHJ2	**Mitsune**	**3.72**	**191**	Pn			**Pn**	**18 58 29.1**	**-0.9**
ERM	**Erimo**	**5.58**	**20**	P			**Pn**	**18 58 57.0**	**+1.3**
ERM	**Erimo**	**5.58**	**20**	Pn			**Pn**	**18 58 57.0**	**+1.3**
ASAJ	**Asahikawa**	**7.48**	**11**	Pn			**Pn**	**18 59 21.6**	**-0.1**
	comp=Z,3.7nm,0.3s,baz=223,slow=13,SNR=14								
ASAJ						Sn	**Sn**	**19 00 47.0**	**+0.6**
	comp=Z,0.7nm,0.3s,baz=114,slow=20,SNR=3.7								
JKA	**Kamikawa-asahi**	**7.48**	**11**				**Pn**	**18 59 21.6**	**-0.1**
JKA							**Sn**	**19 00 47.0**	**+0.6**
NMR	**Nemuro--Hokkai**	**7.65**	**29**	↓*i*P			**Pn**	**18 59 21.9**	**-2.2**
NMR				*i* S			**Sn**	**19 00 44.7**	**-6.0**
GRPR	**Tuman**	**8.20**	**27**	*e*P			**Pn**	**18 59 29.5**	**-2.1**
GRPR				*i* S			**Sn**	**19 01 00.8**	**-3.4**
GRPR						pmax	pmax		
	comp=Z,74nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**8.27**	**27**	*c* *i*P			**Pn**	**18 59 32.4**	**-0.1**
YUK				*i* S			**Sn**	**19 01 00.5**	**-5.4**
YUK						pmax	pmax		
	comp=Z,60nm,0.4s								
YUK						pmax	pmax		
	comp=N,23nm,0.3s								
YUK						pmax	pmax		
	comp=E,27nm,0.3s								
SHO	**Shikotan**	**8.52**	**32**	*e*P			**Pn**	**18 59 34.2**	**-1.7**
SHO				*i* S			**Sn**	**19 01 05.5**	**-6.4**
SHO						pmax	pmax		
	comp=Z,12nm,0.4s								
TEY	**Ternei**	**8.80**	**341**	↑*e*P			Pn	18 59 47.6	+7.9
TEY						pmax	pmax		
	comp=N,30nm,1.8s								
TEY						pmax	pmax		
	comp=Z,20nm,1.8s								
JNU	**Nakatsue**	**8.80**	**248**	Pn			**Pn**	**18 59 42.2**	**+2.3**
	comp=Z,0.3nm,0.3s,baz=58,slow=19,SNR=3.1								
JNU						LR	LR	19 03 19.2	
	comp=Z,238nm,20.6s,baz=68,slow=40								
JNU	**Nakatsue**	**8.80**	**248**				**Pn**	**18 59 38.9**	**-1.0**
JCJ	**Chichijima**	**9.74**	**172**	Pn			**Pn**	**18 59 49.8**	**-3.0**
	comp=Z,16nm,0.3s,baz=345,slow=20,SNR=9.7								
JCJ						Sn	**Sn**	**19 01 41.2**	**-0.9**
	comp=Z,3.4nm,0.3s,baz=143,slow=20,SNR=2.7								
USA0B	**Ussuriysk Arra**	**9.91**	**321**	P			**Pn**	**18 59 57.2**	**+2.2**
USA0B	**Ussuriysk Arra**	**9.91**	**321**	Pn			**Pn**	**18 59 57.2**	**+2.2**
USRK	**Ussuriysk Ar.**	**9.91**	**321**	P			**Pn**	**18 59 56.4**	**+1.4**
USRK	**Ussuriysk Ar.**	**9.91**	**321**	Pn			**Pn**	**18 59 57.5**	**+2.5**
	baz=115,slow=16,SNR=4.4								
USRK						LR	LR	19 03 38.8	
	comp=Z,140nm,19.2s,baz=154,slow=38								
USRK	**Ussuriysk Ar.**	**9.91**	**321**				**Pn**	**18 59 56.4**	**+1.4**
KUR	**Kuril'sk**	**10.06**	**31**	*e*P			**Pn**	**18 59 56.9**	**-0.1**
KUR				*i* S			**Sn**	**19 01 44.0**	**-5.7**
KUR						pmax	pmax		
	comp=Z,47nm,0.9s								
KSRS	**Korea Array**	**10.18**	**278**	Pn			**Pn**	**19 00 01.8**	**+3.1**
	comp=Z,0.5nm,0.3s,baz=94,slow=14,SNR=7.7								
KSRS						LR	LR	19 03 39.0	
	comp=Z,289nm,20.8s,baz=88,slow=36								
YSS	**Yuzh-Sakhalins**	**10.29**	**8**	*e*P			**Pn**	**19 00 02.7**	**+2.5**
YSS						pmax	pmax		
	comp=Z,20nm,0.9s								
YSS						MLR	MLR		
	comp=Z,200nm,18.0s								
YSS	**Yuzh-Sakhalins**	**10.29**	**8**				**Pn**	**19 00 00.6**	**+0.4**
KLR	**Kul'dur**	**14.03**	**335**	↑*e*P			**Pn**	**19 00 52.7**	**+1.4**
KLR						pmax	pmax		
	comp=Z,8.0nm,1.8s								
KLR	**Kul'dur**	**14.03**	**335**	Pn			**Pn**	**19 00 51.8**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=157,slow=10,SNR=5.4								
TYV	**Tymovskoe**	**14.16**	**5**	*e*P			**Pn**	**19 00 51.7**	**-1.3**
TYV				*e*S			**Sn**	**19 03 30.0**	**+0.1**
TYV						pmax	pmax		
	comp=Z,9.0nm,1.6s								
TYV						smax	smax		
	comp=E,7.0nm,1.3s								
TYV						MLR	MLR		
	comp=N,3μm,20.0s								
TYV						MLR	MLR		
	comp=Z,2μm,20.0s								
ZEA	**Zeya**	**19.34**	**335**	*e*P			**P**	**19 01 56.7**	**-1.2**
PEA0B	**Petropavlovsk-**	**20.23**	**31**	P			Pn	19 02 09.4	-0.1
PEA0B						pmax	pmax		
	comp=Z,65nm,1.5s								
PEA0B	**Petropavlovsk-**	**20.23**	**31**	P			Pn	19 02 09.4	-0.1
PEA0B						lAmb	lAmb	19 02 13.3	
	comp=Z,65nm,1.5s								
PETK	**Petropavlovsk-**	**20.23**	**31**	P			Pn	19 02 09.2	-0.3
PETK	**Petropavlovsk-**	**20.23**	**31**	P			Pn	19 02 08.9	-0.6
	comp=Z,3.8nm,0.9s,baz=221,slow=10,SNR=4.0								
PETK						LR	LR	19 09 31.7	
	comp=Z,71nm,19.5s,baz=240,slow=36								
PETK	**Petropavlovsk-**	**20.23**	**31**	P			Pn	19 02 09.2	-0.3
GUMO	**Guam**	**23.40**	**170**	LR			LR	19 12 28.3	
	comp=Z,40nm,18.3s,baz=114,slow=38								
MA2	**Magadan**	**23.74**	**13**	P			**P**	**19 02 45.0**	**+0.4**
	comp=Z,12nm,0.8s,baz=184,slow=12,SNR=5.2								
XAN	**Xi'an**	**25.93**	**273**	P			**P**	**19 03 04.2**	**-0.8**
XAN						pmax	pmax		
	comp=Z,29nm,1.7s								
XAN	**Xi'an**	**25.93**	**273**	P			**P**	**19 03 04.2**	**-0.8**
XAN						lAmb	lAmb	19 03 06.4	
	comp=Z,29nm,1.7s								
YAK	**Yakutsk**	**26.19**	**348**	*e*P			**P**	**19 03 07.0**	**+0.1**
YAK						pmax	pmax		
	comp=Z,11nm,0.9s								
YAK						pmax	pmax		
	comp=N,6.0nm,0.9s								
YAK	**Yakutsk**	**26.19**	**348**	P			**P**	**19 03 04.9**	**-2.0**
	comp=N,3.6nm,0.3s,baz=346,slow=3.6,SNR=10.0								
YAK						LR	LR	19 13 25.9	
	comp=N,83nm,18.2s,baz=196,slow=36								
YAK	**Yakutsk**	**26.19**	**348**	P			**P**	**19 03 06.0**	**-0.9**
YAK						lAmb	lAmb	19 03 09.1	
	comp=Z,9.4nm,0.6s								
ENH	**Enshi**	**26.69**	**265**	P			**P**	**19 03 11.2**	**-0.6**
ENH						lAmb	lAmb	19 03 15.2	
	comp=Z,9.7nm,0.7s								
ULN	**Ulaanbaatar**	**26.99**	**305**	↑*e*P			**P**	**19 03 12.3**	**-2.2**
ULN						pmax	pmax		
	comp=Z,4.0nm,1.3s								
SEY	**Seymchan**	**27.17**	**12**	↓*e*P			**P**	**19 03 18.2**	**+2.4**
SEY	**Seymchan**	**27.17**	**12**	P			**P**	**19 03 15.9**	**+0.1**
	comp=Z,7.7nm,1.0s,baz=205,slow=9.9,SNR=9.8								
SONM	**Songino Array**	**27.41**	**305**	*e*P			**P**	**19 03 17.8**	**-0.5**
SONM						pmax	pmax		
	comp=Z,5.0nm,1.0s								
SONM	**Songino Array**	**27.41**	**305**	P			**P**	**19 03 16.4**	**-2.0**
	comp=Z,5.4nm,1.0s,baz=103,slow=8.8,SNR=25								
SONM						LR	LR	19 13 50.2	
	comp=Z,85nm,20.2s,baz=354,slow=36								
SONM	**Songino Array**	**27.41**	**305**	P			**P**	**19 03 16.6**	**-1.8**
H11N2	**WAKE ISLAND Hy**	**28.56**	**119**	T			T	19 33 13.8	
	baz=312,slow=75,SNR=4323								
H11N1	**WAKE ISLAND Hy**	**28.57**	**119**	T			T	19 33 14.3	
	baz=312,slow=75,SNR=2496			

RSO	**Redoubt South**	**47.49**	**38**	P		**P**	**19 06 09.1**	**+1.5**
GKN	**Gorkha**	**47.51**	**276**	*e*P		**P**	**19 06 07.5**	**-0.7**
	comp=Z,18nm,0.7s							
KDAK	**Kodiak Island**	**47.71**	**42**	P		**P**	**19 06 10.2**	**+1.2**
KDAK				pmax	pmax			
	comp=Z,217nm,1.9s							
KDAK	**Kodiak Island**	**47.71**	**42**	P		**P**	**19 06 09.6**	**+0.5**
	comp=Z,5.3nm,0.6s,baz=300,slow=7.5,SNR=4.9							
KDAK	**Kodiak Island**	**47.71**	**42**	P		**P**	**19 06 10.2**	**+1.2**
PPLA	**Purkeypile**	**47.73**	**35**	P		**P**	**19 06 11.7**	**+2.3**
DANN	**Dangsing**	**48.06**	**277**	*e*P		**P**	**19 06 12.5**	**-0.1**
	comp=Z,36nm,0.7s							
MLY	**Manley**	**48.40**	**32**	P		**P**	**19 06 16.3**	**+1.9**
MLY				lAmb	lAmb		19 07 23.8	
	comp=Z,19nm,1.9s							
SUA	**Susitna One**	**48.44**	**37**	P		**P**	**19 06 16.4**	**+1.6**
KOLN	**Koldanda**	**48.44**	**276**	*e*P		**P**	**19 06 15.0**	**-0.4**
	comp=Z,4.4nm,0.5s							
TRF	**Thorofare Moun**	**48.59**	**34**	P		**P**	**19 06 18.6**	**+2.5**
SOEI	**Soe**	**48.77**	**202**	P		**P**	**19 06 17.6**	**-0.3**
NRN	**Naryn**	**49.34**	**296**	P		**P**	**19 06 22.1**	**-0.2**
NRN				pmax	pmax			
	comp=Z,9.0nm,1.6s							
NRN	**Naryn**	**49.34**	**296**	P		**P**	**19 06 22.1**	**-0.2**
NRN				lAmb	lAmb		19 06 25.1	
	comp=Z,9.4nm,1.6s							
COLA	**College**	**49.63**	**32**	*i* P		**P**	**19 06 26.7**	**+3.0**
KSH	**Kashi**	**49.94**	**294**	P		**P**	**19 06 31.1**	**+4.4**
KSH				sP		sP	19 06 37.3	+5.2
KSH				PP		**PP**	**19 08 23.9**	**+2.5**
KSH				S		**S**	**19 13 38.7**	**+1.8**
KSH				pmax	pmax			
	comp=Z,370nm,5.4s							
KSH				LR	LR			
	comp=Z,190nm,6.0s							
KSH				LR	LR			
	comp=Z,180nm,4.0s							
KSH				LR	LR			
	comp=Z,500nm,6.1s							
IL31		**50.05**	**32**	P		**P**	**19 06 27.6**	**+0.7**
IL31				lAmb	lAmb		19 06 42.7	
	comp=Z,22nm,2.0s							
ILAR	**Eielson Array**	**50.05**	**32**	*e*P		**P**	**19 06 27.6**	**+0.7**
ILAR				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ILAR	**Eielson Array**	**50.05**	**32**	P		**P**	**19 06 27.1**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=263,slow=5.0,SNR=15							
AAK	**Ala-Archa**	**50.06**	**298**‖	*e*P		**P**	**19 06 27.4**	**-0.2**
AAK				pmax	pmax			
	comp=Z,8.0nm,1.7s							
AAK	**Ala-Archa**	**50.06**	**298**	P		**P**	**19 06 27.6**	**+0.1**
AAK				lAmb	lAmb		19 06 29.7	
	comp=Z,13nm,1.7s							
KK31	**Karatay Array**	**52.71**	**300**	P		**P**	**19 06 46.7**	**-0.6**
KK31				pmax	pmax			
	comp=Z,13nm,1.3s							
KK31	**Karatay Array**	**52.71**	**300**	P		**P**	**19 06 46.6**	**-0.6**
KK31				lAmb	lAmb		19 06 50.8	
	comp=Z,13nm,1.3s							
KKAR	**Karatay Array**	**52.71**	**300**	P		**P**	**19 06 46.7**	**-0.5**
KKAR				pmax	pmax			
	comp=Z,13nm,1.3s							
KKAR	**Karatay Array**	**52.71**	**300**	P		**P**	**19 06 46.7**	**-0.5**
KKAR				lAmb	lAmb		19 06 50.7	
	comp=Z,13nm,1.3s							
BTK	**Batken**	**53.51**	**296**	P		**P**	**19 06 53.6**	**+0.3**
BTK				pmax	pmax			
	comp=Z,3.0nm,0.8s							
BTK	**Batken**	**53.51**	**296**	P		**P**	**19 06 53.5**	**+0.3**
EPYK	**Eagle Plains**	**54.06**	**30**	P		**P**	**19 06 58.4**	**+1.6**
NIL	**Nilore**	**54.10**	**288**	P		**P**	**19 06 57.8**	**+0.2**
NIL				pmax	pmax			
	comp=Z,6.0nm,0.8s							
NIL	**Nilore**	**54.10**	**288**	P		**P**	**19 06 57.8**	**+0.2**
NIL				lAmb	lAmb		19 06 59.7	
	comp=Z,5.9nm,0.8s							
GAR	**Garm**	**54.24**	**295**	P		**P**	**19 06 58.1**	**-0.6**
INK	**Inuvik**	**54.90**	**27**	P		**P**	**19 07 05.6**	**+2.8**
INK				pmax	pmax			
	comp=Z,13nm,1.7s							
INK	**Inuvik**	**54.90**	**27**	P		**P**	**19 07 03.6**	**+0.9**
	comp=Z,2.1nm,0.7s,baz=287,slow=5.2,SNR=6.7							
INK	**Inuvik**	**54.90**	**27**	P		**P**	**19 07 05.6**	**+2.8**
INK				lAmb	lAmb		19 08 06.1	
	comp=Z,13nm,1.6s							
SVE	**Sverdlovsk**	**54.93**	**319**	*e*P		**P**	**19 07 01.9**	**-1.3**
SVE				pmax	pmax			
	comp=Z,10.0nm,1.1s							
CHGR	**Chuyangaron**	**55.21**	**295**	P		**P**	**19 07 05.1**	**-0.6**
ARU	**Arti**	**56.14**	**318**	*d* P		**P**	**19 07 10.9**	**-1.0**
ARU							19 09 14.3	
ARU				S		**S**	**19 15 00.1**	**-0.5**
ARU				SS		**SS**	**19 18 38.8**	**-7.6**
ARU				pmax	pmax			
	comp=Z,10.0nm,1.0s							
ARU	**Arti**	**56.14**	**318**	P		**P**	**19 07 11.4**	**-0.5**
ARU				lAmb	lAmb		19 07 13.8	
	comp=Z,9.5nm,1.0s							
WRAB	**Tennant Creek**	**56.71**	**187**‖	*e*P		**P**	**19 07 15.7**	**-0.7**
WRAB				pmax	pmax			
	comp=Z,6.0nm,0.9s							
WR0	**Warramunga Arr**	**56.72**	**187**	P		**P**	**19 07 16.0**	**-0.4**
WRA	**Warramunga Arr**	**56.73**	**187**	*e*P		**P**	**19 07 16.0**	**-0.4**
WRA				pmax	pmax			
	comp=Z,3.0nm,0.5s							
WRA	**Warramunga Arr**	**56.73**	**187**	P		**P**	**19 07 15.6**	**-0.9**
	comp=Z,3.3nm,0.5s,baz=1.3,slow=7.5,SNR=39							
WRA	**Warramunga Arr**	**56.73**	**187**	lAmb	lAmb		19 07 17.4	
	comp=Z,0.7nm,1.1s							
KBL	**Kabul**	**56.92**	**291**	P		**P**	**19 07 17.3**	**-0.8**
KBL				pmax	pmax			
	comp=Z,11nm,1.3s							
KBL	**Kabul**	**56.92**	**291**	P		**P**	**19 07 17.3**	**-0.8**
KBL				lAmb	lAmb		19 07 19.7	
	comp=Z,11nm,1.2s							
ABKAR	**Akbulak array**	**57.63**	**310**	P		**P**	**19 07 21.9**	**-0.7**
ABKAR				lAmb	lAmb		19 07 24.4	
	comp=Z,5.1nm,0.8s							
C36M	**Paulatuk**	**57.92**	**25**	P		**P**	**19 07 26.6**	**+2.3**
AS31	**Alice Springs**	**60.45**	**187**	P		**P**	**19 07 42.5**	**+0.1**
ASAR	**Alice Springs**	**60.45**	**187**	P		**P**	**19 07 42.5**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=14,slow=6.7,SNR=19							
RES	**Resolute Bay**	**63.00**	**14**	P		**P**	**19 07 59.3**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=318,slow=3.6,SNR=10							
RES	**Resolute Bay**	**63.00**	**14**	lAmb	lAmb		19 08 21.5	
	comp=Z,9.5nm,1.5s							
GEYT	**Alibeck**	**63.41**	**299**	P		**P**	**19 08 01.8**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=56,slow=3.7,SNR=5.3							
GEYT	**Alibeck**	**63.41**	**299**	lAmb	lAmb		19 08 04.4	
	comp=Z,1.8nm,0.8s							
ARCES	**ARCESS Array B**	**64.02**	**339**	*e*P		**P**	**19 08 07.7**	**+1.9**
ARCES				pmax	pmax			
	comp=Z,4.0nm,0.8s							
ARCES	**ARCESS Array B**	**64.02**	**339**	P		**P**	**19 08 05.7**	**-0.1**
	comp=Z,4.1nm,0.9s,baz=31,slow=7.3,SNR=4.1							
YKA	**Yellowknife Ar**	**64.34**	**30**	P		**P**	**19 08 08.5**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=303,slow=6.6,SNR=15							
OBN	**Obninsk**	**67.93**	**323**	*e*P		**P**	**19 08 32.3**	**+1.2**
OBN				*e*			19 08 54.6	
OBN				*e*PPP		PPP	19 12 39.6	
OBN				pmax	pmax			
	comp=Z,24nm,1.7s							
STKA	**Stephens Creek**	**68.30**	**179**	P		**P**	**19 08 34.2**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=336,slow=8.3,SNR=3.7							
STKA	**Stephens Creek**	**68.30**	**179**	lAmb	lAmb		19 08 38.4	
	comp=Z,4.8nm,1.9s							
FINES	**FINESS Array B**	**68.75**	**332**	*i* P		**P**	**19 08 37.5**	**+1.3**
FINES				pmax	pmax			
	comp=Z,4.0nm,0.7s							
FINES	**FINESS Array B**	**68.75**	**332**	P		**P**	**19 08 35.9**	**-0.2**
	comp=Z,4.2nm,0.7s,baz=175,slow=8.8,SNR=8.6							
KBZ	**Khabaz**	**70.59**	**310**	*e*P		**P**	**19 08 49.9**	**+2.1**
KBZ				pmax	pmax			
	comp=Z,3.0nm,1.0s							
KBZ	**Khabaz**	**70.59**	**310**	P		**P**	**19 08 48.5**	**+0.6**
	comp=Z,3.0nm,1.0s,baz=34,slow=6.8,SNR=5.4							
KIV	**Kislovodsk**	**70.60**	**311**	*e*P		**P**	**19 08 49.6**	**+1.6**
KIV				pmax	pmax			
	comp=Z,28nm,1.0s							
KIV	**Kislovodsk**	**70.60**	**311**	P		**P**	**19 08 48.2**	**+0.1**
KIV				lAmb	lAmb		19 08 50.7	
	comp=Z,6.5nm,0.8s							
NEW	**Newport**	**70.75**	**44**	P		**P**	**19 08 50.2**	**+1.4**
	comp=Z,1.3nm,0.3s,baz=270,slow=1.0,SNR=3.4							
NEW	**Newport**	**70.75**	**44**	lAmb	lAmb		19 08 52.3	
	comp=Z,4.7nm,1.0s							
NEY	**Neytrino**	**70.96**	**310**‖	*e*P		**P**	**19 08 52.0**	**+1.7**
NEY				pmax	pmax			
	comp=Z,2.0nm,1.2s							
PINE	**Pine Mountain**	**70.98**	**49**	P		**P**	**19 08 51.2**	**+0.7**
PINE				lAmb	lAmb		19 08 54.5	
	comp=Z,7.7nm,0.9s							
GNI	**Garni**	**71.36**	**306**⇑	*e*P		**P**	**19 08 53.8**	**+1.0**
BMO	**Blue Mountains**	**72.56**	**47**	P		**P**	**19 09 01.7**	**+1.8**
BMO				pmax	pmax			
	comp=Z,5.0nm,1.3s							
BMO	**Blue Mountains**	**72.56**	**47**	P		**P**	**19 09 01.7**	**+1.8**
JTMT	**Jette**	**72.61**	**43**	P		**P**	**19 09 02.3**	**+2.2**
JTMT				lAmb	lAmb		19 09 04.2	
	comp=Z,11nm,1.4s							
AKASG	**Malin Array Be**	**74.12**	**322**	P		**P**	**19 09 08.1**	**-0.7**
	comp=Z,1.9nm,0.6s,baz=50,slow=6.0,SNR=13							
NB2	**NORSAR Subarra**	**74.18**	**337**	P		**P**	**19 09 07.4**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=41,slow=5.9							
NOA	**NORSAR Array B**	**74.18**	**337**	P		**P**	**19 09 07.8**	**-1.3**
	comp=Z,1.4nm,0.7s,baz=40,slow=5.8,SNR=4.6							
DLMT	**Dillon**	**74.96**	**44**	P		**P**	**19 09 15.7**	**+1.7**
DLMT				lAmb	lAmb		19 09 16.6	
	comp=Z,5.1nm,1.0s							
KVN	**Kaiserville**	**75.41**	**52**	P		**P**	**19 09 18.4**	**+1.7**
KVN				pmax	pmax			
	comp=Z,4.0nm,0.7s							
KVN	**Kaiserville**	**75.41**	**52**	P		**P**	**19 09 18.4**	**+1.7**
NVAR	**Mina Array Bea**	**75.64**	**53**	P		**P**	**19 09 19.8**	**+1.7**
	comp=Z,2.2nm,0.7s,baz=294,slow=5.4,SNR=17							
YHB	**Horse Butte**	**76.12**	**44**	P		**P**	**19 09 20.9**	**+0.2**
ELK	**Elko**	**76.19**	**49**	P		**P**	**19 09 22.8**	**+1.6**
	comp=Z,0.9nm,0.5s,baz=345,slow=4.7,SNR=5.2							
ELK	**Elko**	**76.19**	**49**	lAmb	lAmb		19 09 24.4	
	comp=Z,5.7nm,1.4s							
SORM	**Soroca**	**76.19**	**320**	⇑P		**P**	**19 09 19.6**	**-1.1**
SORM	**Soroca**	**76.19**	**320**	⇑P		**P**	**19 09 19.6**	**-1.1**
H17A	**Grant Village**	**76.69**	**44**	P		**P**	**19 09 27.1**	**+3.1**
H17A				lAmb	lAmb		19 09 28.5	
	comp=Z,10nm,1.2s							
MOOW	**Moose Ponds**	**77.00**	**45**	P		**P**	**19 09 28.2**	**+2.5**
R11A	**Troy Canyon, C**	**77.41**	**51**	P		**P**	**19 09 29.7**	**+1.6**
R11A				lAmb	lAmb		19 09 31.6	
	comp=Z,17nm,1.9s							
TPNV	**Topopah Spring**	**77.83**	**53**	P		**P**	**19 09 31.8**	**+1.4**
TPNV				pmax	pmax			
	comp=Z,8.0nm,1.3s							
TPNV	**Topopah Spring**	**77.83**	**53**	P		**P**	**19 09 31.8**	**+1.4**
TPNV				lAmb	lAmb		19 09 33.1	
	comp=Z,8.2nm,1.2s							
HWUT	**Hardware Ranch**	**77.86**	**47**	P		**P**	**19 09 31.4**	**+0.8**
HWUT				lAmb	lAmb		19 09 33.5	
	comp=Z,5.4nm,1.1s							
BURAR	**Bucovina Array**	**78.12**	**321**	⇑P		**P**	**19 09 32.2**	**+0.4**
BURAR	**Bucovina Array**	**78.12**	**321**	⇑P		**P**	**19 09 32.2**	**+0.4**
BIZ	**Bicaz**	**78.13**	**320**	⇑P		**P**	**19 09 32.0**	**+0.4**
TESR	**Tescani**	**78.13**	**320**	⇑P		**P**	**19 09 31.8**	**+0.1**
PD31	**Pinedale Array**	**78.29**	**45**	P		**P**	**19 09 34.2**	**+1.2**
PD31				lAmb	lAmb		19 09 50.0	
	comp=Z,12nm,1.9s							
PDAR	**Pinedale Array**	**78.29**	**45**	P		**P**	**19 09 34.0**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=285,slow=1.7,SNR=13							
VRI	**Vrincioaia**	**78.52**	**319**	⇑P		**P**	**19 09 30.0**	**-3.9**
VRI	**Vrincioaia**	**78.52**	**319**	⇑P		**P**	**19 09 29.9**	**-3.9**
BRTR	**Keskin Array B**	**78.55**	**311**	*e*P		**P**	**19 09 36.6**	**+2.2**
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.5s							
BRTR	**Keskin Array B**	**78.55**	**311**	P		**P**	**19 09 35.3**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=134,slow=3.5,SNR=6.5							
KOLS	**Kolonicke sedl**	**78.66**	**324**	*e*P		**P**	**19 09 34.9**	**+0.3**
KOLS	**Kolonicke sedl**	**78.66**	**324**	*e*P		**P**	**19 09 34.9**	**+0.3**
SHPR	**Sheep Range**	**78.79**	**53**	P		**P**	**19 09 36.9**	**+1.2**
TRPA	**Tarpa**	**79.09**	**323**	⇑P		**P**	**19 09 37.8**	**+0.9**
MSU	**Marysvale**	**79.42**	**50**	P		**P**	**19 09 41.5**	**+2.2**
MSU	**Marysvale**	**79.42**	**50**	P		**P**	**19 09 41.5**	**+2.2**
P17A	**Butcher Ranch,**	**79.69**	**48**	P		**P**	**19 09 42.6**	**+2.0**
LCMT	**Little Creek M**	**79.70**	**51**	P		**P**	**19 09 41.7**	**+1.0**
MTPU	**Mount Pierson**	**79.71**	**50**	P		**P**	**19 09 42.9**	**+1.9**
SRU	**San Rafael Swe**	**80.05**	**48**	P		**P**	**19 09 44.3**	**+1.7**
SRU				pmax	pmax			
	comp=Z,14nm,1.3s							
SRU	**San Rafael Swe**	**80.05**	**48**	P		**P**	**19 09 44.3**	**+1.7**
ULM	**Lac du Bonnet**	**80.06**	**33**	*e*P		**P**	**19 09 44.5**	**+2.3**
ULM				pmax	pmax			
	comp=Z,2.0nm,0.6s							
ULM	**Lac du Bonnet**	**80.06**	**33**	P		**P**	**19 09 44.0**	**+1.8**
	comp=Z,3.7nm,1.0s,baz=336,slow=6.6,SNR=5.0							
VYHS	**Vyhne**	**80.58**	**325**	*e*P		**P**	**19 09 45.3**	**+0.2**
VYHS	**Vyhne**	**80.58**	**325**	*e*P		**P**	**19 09 45.3**	**+0.2**
U15A	**North Rim**	**80.66**	**51**	P		**P**	**19 09 47.9**	**+1.8**
U15A				lAmb	lAmb		19 09 48.6	
	comp=Z,4.2nm,0.8s							
CLL	**Collm**	**81.01**	**330**	*e*P		**P**	**19 09 49.0**	**+1.8**
CLL	**Collm**	**81.01**	**330**	*e*P		**P**	**19 09 49.0**	**+1.8**
BZS	**Buzias**	**81.30**	**322**	⇑P		**P**	**19 09 45.5**	**-3.4**
BZS	**Buzias**	**81.30**	**322**	⇑P		**P**	**19 09 45.5**	**-3.4**
KHC	**Kasperske Hory**	**82.43**	**328**‖	*e*P		**P**	**19 09 56.6**	**+1.7**
KHC	**Kasperske Hory**	**82.43**	**328**	*e*P		**P**	**19 09 54.5**	**-0.4**
KHC	**Kasperske Hory**	**82.43**	**328**	P		**P**	**19 09 55.5**	**+0.6**
KHC				lAmb	lAmb		19 09 57.9	
	comp=Z,13nm,1.9s							
GERES	**GERESS Array B**	**82.60**	**328**	*e*P		**P**	**19 09 57.4**	**+1.6**
GERES				pmax	pmax			
	comp=Z,1.0nm,0.4s							
GERES	**GERESS Array B**	**82.60**	**328**	P		**P**	**19 09 55.3**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=40,slow=6.6,SNR=6.4							
GERES				LR	LR		19 49 22.0	
	comp=Z,57nm,19.2s,baz=328,slow=38							
S22A	**4UR Ranch, Cre**	**83.14**	**48**	P		**P**	**19 10 01.2**	**+2.1**
T25A	**Trinidad**	**84.97**	**47**	P		**P**	**19 10 09.4**	**+1.1**
ANMO	**Albuquerque**	**85.23**	**49**	P		**P**	**19 10 11.6**	**+1.9**
	comp=Z,2.0nm,0.9s,baz=313,slow=8.1,SNR=4.1							
ANMO	**Albuquerque**	**85.23**	**49**	lAmb	lAmb		19 10 12.9	
	comp=Z,2.6nm,1.0s							
FUORN	**Ofenpass-Fuorn**	**85.79**	**328**	P		**P**	**19 10 12.7**	**+0.4**
TX31	**Lajitas Ar. Si**	**90.77**	**52**	P		**P**	**19 10 37.5**	**+1.4**
TX32	**Lajitas Array**	**90.77**	**52**	P		**P**	**19 10 37.5**	**+1.4**
TXAR	**Lajitas Array**	**90.77**	**52**	P		**P**	**19 10 37.5**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=304,slow=3.3,SNR=29							
LPAZ	**La Paz**	**147.36**	**59**	PKPbc		**PKPdf**	**19 17 16.4**	**+1.1**
	comp=Z,2.0nm,0.6s,baz=330,slow=2.9,SNR=7.6							

IDC 08 19:15:48.4±3.4, 5.87S×148.83E, h84km±42km, mb3.5/3, mb1 3.6/6, mb1mx3.3/31, mbtmp3.7/6, Error ellipse: s-maj=84.4km s-min=15.3km az=131.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.54**	**64**	P		Pn	19 16 41.9	+0.7
	8.0nm,0.3s,baz=243,slow=2.3,SNR=11							
PMG	**Port Moresby**	**3.88**	**205**	P		Pn	19 16 47.8	+2.0
	2.4nm,0.3s,baz=28,slow=5.9,SNR=12							
PMG				S		Sn	19 17 30.0	-0.3
	4.0nm,0.3s,baz=19,slow=18,SNR=5.3							
WRA	**Warramunga Arr**	**19.85**	**224**	P		P	19 20 13.8	+1.0
	0.2nm,0.3s,baz=49,slow=11,SNR=6.8							
ASAR	**Alice Springs**	**22.79**	**218**	P		P	19 20 44.4	+0.1
	1.1nm,0.5s,baz=52,slow=9.4,SNR=36							
FITZ	**Fitzroy Crossi**	**25.69**	**240**	P		P	19 21 11.3	+0.4
	2.1nm,0.6s,baz=63,slow=7.2,SNR=9.1							
ILAR	**Eielson Array**	**84.65**	**23**	P		P	19 28 11.3	-1.3
	0.4nm,0.8s,baz=248,slow=4.8,SNR=3.9							

*IDC **08** 19:34:32.7±1.2,20.53S×172.59E,h0km,mb3.7/6, mb1 4.1/8,mb1mx3.9/30,mbtmp3.9/8,ML3.6/2,MS3.9/27, Ms1 3.9/27,ms1mx3.8/38,Error ellipse: s-maj=42.1km s-min=24.9km az=149.0*

*GCMT **08** 19:34:38.0±0.3,20.49S±0.01×172.52E±0.02,h15km±1km, MW4.9/89,Moment Tensor Solution. s21,c22; s89,c117; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.59±.10; Mθθ=0.53±.09; Mφφ 1.12±.09; Mrθ 1.38±.32; Mθφ 2.17±.07; Mφr0.09±.24; Best double couple: M0 2.74400×10^16 NP1:φs352.00000°,δ58.00000°,λ-169.00000°. NP2: φs256.00000°,δ81.00000°,λ-33.00000°. Principal axes: T 2.8460, Plg15.0000°, Azm308.0000°; N -0.1990, Plg56.0000°, Azm62.0000°; P -2.6420, Plg29.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 08 19:34:35.7±0.9, 20.7S±0.2×172.4E±0.1, h10km, n38, σ1§66/15, mb3.8/6, MS4.0/26, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.74**	**255**	*e*Pn		Pn	19 35 56.5	-4.6
	3.0nm,0.3s							
DZM				*e*LR		LR	19 37 14.7	
	comp=Z,474nm,22.9s							
DZM	**Mont Dzumac**	**5.74**	**255**	Pn		**Pn**	**19 36 01.3**	**+0.3**
	0.7nm,0.3s,baz=32,slow=19,SNR=5.9							
DZM				Sn		**Sn**	**19 37 05.9**	**-1.2**
	baz=119,slow=19,SNR=2.2							
DZM				LR		LR	19 38 01.9	
	comp=Z,355nm,20.2s,baz=279,slow=35							
RAO	**Raoul Island**	**12.24**	**136**	LR		LR	19 41 13.1	
	comp=Z,1μm,19.4s,baz=314,slow=33							
URZ	**Urewera**	**18.00**	**168**	P		**Pn**	**19 38 45.8**	**-0.2**
	0.4nm,0.3s,baz=26,slow=17,SNR=5.9							
URZ				LR		LR	19 44 25.4	
	comp=Z,387nm,18.0s,baz=352,slow=33							
RPZ	**Rata Peaks**	**23.02**	**183**	LR		LR	19 46 59.1	
	comp=Z,212nm,18.7s,baz=13,slow=32							
KRVT	**Keravat (AS076**	**25.64**	**307**	LR		LR	19 48 19.7	
	comp=Z,188nm,22.0s,baz=118,slow=32							
RAR	**Rarotonga**	**25.97**	**96**	LR		LR	19 48 00.9	
	comp=Z,170nm,20.7s,baz=290,slow=31							
PMG	**Port Moresby**	**26.79**	**291**	LR		LR	19 49 12.4	
	comp=Z,400nm,19.2s,baz=152,slow=33							
STKA	**Stephens Creek**	**29.71**	**242**	P		**P**	**19 40 42.4**	**+0.3**
	3.9nm,0.9s,baz=54,slow=8.6,SNR=5.8							
STKA				LR		LR	19 52 15.1	
	comp=Z,216nm,18.7s,baz=62,slow=36							
TBI	**Tubuai**	**35.38**	**101**	*e*LQ		LQ	19 49 18.0	
	433nm,29.5s							
TBI				*e*LR		LR	19 51 00.9	
	comp=Z,489nm,31.8s							
WRA	**Warramunga Arr**	**35.67**	**264**	P		**P**	**19 41 34.8**	**+0.4**
	0.5nm,0.8s,baz=100,slow=7.9,SNR=3.2							
ASAR	**Alice Springs**	**35.72**	**258**	P		**P**	**19 41 34.3**	**-0.5**
	1.2nm,0.9s,baz=87,slow=9.3,SNR=9.5							
ASAR				LR		LR	19 55 30.3	
	comp=Z,262nm,18.4s,baz=97,slow=35							
PPT2	**Papeete2**	**35.98**	**92**	*e*LR		LR	19 51 19.4	
	comp=Z,456nm,26.5s							
PPT	**Papeete**	**35.99**	**92**	LR		LR	19 52 49.1	
	comp=Z,98nm,19.3s,baz=193,slow=31							
SIJI	**Sorong**	**44.74**	**291**	LR		LR	20 00 43.3	
	comp=Z,197nm,21.2s,baz=16,slow=35							
BATI	**Baumata**	**47.97**	**275**	LR		LR	20 02 56.3	
	comp=Z,324nm,20.3s,baz=172,slow=35							
VNDA	**Vanda**	**57.14**	**183**	LR		LR	20 04 29.1	
	comp=Z,77nm,21.2s,baz=14,slow=31							
LEM	**Lembang**	**64.06**	**272**	LR		LR	20 13 56.3	
	comp=Z,125nm,19.3s,baz=48,slow=37							
MJAR	**Matsushiro Arr**	**65.44**	**330**	LR		LR	20 10 25.3	
	comp=Z,46nm,20.8s,baz=190,slow=33							
ASAJ	**Asahikawa**	**70.01**	**338**	LR		LR	20 11 26.9	
	comp=Z,130nm,21.9s,baz=160,slow=32							
KSRS	**Korea Array**	**71.39**	**324**	LR		LR	20 15 50.7	
	comp=Z,27nm,19.5s,baz=108,slow=35							
USRK	**Ussuriysk Ar.**	**74.39**	**331**	LR		LR	20 14 24.3	
	comp=Z,48nm,20.2s,baz=141,slow=32							
PETK	**Petropavlovsk-**	**74.56**	**351**	LR		LR	20 13 24.5	
	comp=Z,60nm,19.8s,baz=62,slow=31							
PSI	**Prapat**	**75.60**	**279**	LR		LR	20 21 42.0	
	comp=Z,111nm,19.3s,baz=177,slow=37							
CMAR	**Chiang Mai Arr**	**81.81**	**293**	P		**P**	**19 46 55.5**	**+0.1**
	0.2nm,0.3s,baz=131,slow=4.0,SNR=3.5							
CMAR				LR		LR	20 23 43.6	
	comp=Z,27nm,19.6s,baz=85,slow=36							
NVAR	**Mina Array Bea**	**87.53**	**47**	P		**P**	**19 47 21.9**	**-2.3**
	0.3nm,0.6s,baz=240,slow=7.2,SNR=3.4							
NVAR				LR		LR	20 18 08.8	
	comp=Z,80nm,20.8s,baz=332,slow=30							
SONM	**Songino Array**	**90.16**	**322**	LR		LR	20 26 28.8	
	comp=Z,34nm,19.9s,baz=101,slow=35							
ILAR	**Eielson Array**	**90.72**	**16**	P		P	19 47 35.1	-3.2
	0.4nm,0.9s,baz=233,slow=4.4,SNR

YM05				*e*S	Sb	19 39 21.9	-0.9	
	baz=301							
NANB	**Nanao**	**0.54 211**	P		Pb	19 39 14.5	-0.7	
NANB	baz=210			*e*S	Sb	19 39 22.7	-0.5	
	baz=210							
YM04	**YM04**	**0.54 299**	P		Pb	19 39 15.2	0.0	
YM04	baz=299			*e*S	Sb	19 39 23.7	+0.5	
	baz=299							
ENA	**Nanau**	**0.54 212**	P		Pb	19 39 15.2	-0.1	
ENA	baz=210			*e*S	Sb	19 39 23.2	-0.1	
	baz=210							
TWY	**Chenhua**	**0.56 313**	P		Pb	19 39 15.9	+0.3	
TWY	baz=313			*e*S	Sb	19 39 23.5	-0.4	
	baz=313							
ANP	**Anpu**	**0.56 302**	*e*P		Pb	19 39 15.4	-0.3	
ANP	baz=301			S	Sb	19 39 23.8	-0.3	
	baz=301							
NDT	**Datong Townshi**	**0.57 240**	P		Pb	19 39 15.6	-0.1	
NDT	baz=239			S	Sb	19 39 24.5	+0.5	
	baz=239							
NTST	**Danshui**	**0.61 297**	*e*P		Pb	19 39 16.5	0.0	
NTST	baz=296			*e*S	Sb	19 39 26.0	+0.7	
	baz=296							
TWS1	**Kuangyinshan**	**0.61 290**	*e*P		Pb	19 39 16.6	+0.2	
	baz=290							
YHNB	**Yeheng**	**0.65 250**	*e*P		Pb	19 39 16.7	-0.5	
	baz=250							

TAP 08 19:39:13.6, 24.°92N × 122.°02E, h7km, ML3.2, 4C, C,
Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.09**	**343**	⇑*i* P	Pg	19 39 16.1	+0.2
	baz=347						
TWB1				*i* S	Sg	19 39 18.5	+1.1
	baz=347						
NTC	**Toucheng**	**0.18**	**250**	*i* P	Pg	19 39 18.2	+0.9
	baz=249						
NTC				*e*S	Sg	19 39 21.9	+2.0
	baz=249						
TIPB	**Shuangxi**	**0.18**	**287**	⇑*i* P	Pg	19 39 18.3	+1.0
	baz=286						
TIPB				*i* S	Sg	19 39 21.8	+1.9
	baz=286						
NWF	**Wu-fen Shan**	**0.26**	**305**	*i* P	Pb	19 39 19.9	-0.8
	baz=305						
NWF				*i* S	Sb	19 39 24.7	-0.8
	baz=305						
WFSB	**Wu-fen Shan**	**0.26**	**305**	⇑P	Pb	19 39 20.0	-0.7
	baz=305						
WFSB				S	Sb	19 39 24.5	-1.0
	baz=305						
TWC	**Suao**	**0.34**	**207**	*i* P	Pb	19 39 21.9	-0.1
	baz=205						
TWC				*i* S	Sb	19 39 27.2	-0.5
	baz=205						
TWE	**Neicheng**	**0.37**	**238**	P	Pg	19 39 21.3	+0.3
	baz=236						
TWE				S	Sb	19 39 28.0	-0.6
	baz=236						
EOS1	**EOS1**	**0.38**	**165**	P	Pg	19 39 21.0	-0.1
	baz=164						
EOS1				*e*S	Sb	19 39 28.1	-0.6
	baz=164						
SLBB	**Yuanshan**	**0.38**	**245**	*e*P	Pg	19 39 21.2	+0.1
	baz=244						
SLBB				*e*S	Sb	19 39 28.2	-0.7
	baz=244						
TWA	**Mucha**	**0.40**	**279**	*e*P	Pb	19 39 22.6	-0.4
	baz=278						
TWA				*e*S	Sb	19 39 28.9	-0.5
	baz=278						
TAP1	**Taipei**	**0.47**	**285**	*e*P	Pb	19 39 24.1	-0.1
	baz=284						
YM01	**YM01**	**0.47**	**299**	P	Pb	19 39 23.9	-0.3
	baz=299						
YM01				S	Sb	19 39 30.8	-0.5
	baz=299						
YM08	**YM08**	**0.47**	**305**	P	Pb	19 39 23.9	-0.3
	baz=304						
YM08				S	Sb	19 39 30.6	-0.9
	baz=304						
YM11	**YM11**	**0.47**	**302**	P	Pb	19 39 24.1	-0.2
	baz=301						
YM11				*e*S	Sb	19 39 30.8	-0.7
	baz=301						
YM10	**YM10**	**0.48**	**300**	⇑P	Pb	19 39 24.2	-0.2
	baz=299						
YM05	**YM05**	**0.48**	**301**	P	Pb	19 39 24.2	-0.2
	baz=300						
NWLT	**Wulai**	**0.49**	**253**	*e*P	Pb	19 39 24.2	-0.4
	baz=253						
NWLT				*e*S	Sb	19 39 31.6	-0.3
	baz=253						
ENTT	**Nioudou**	**0.49**	**236**	P	Pb	19 39 24.0	-0.7
	baz=235						
ENTT				S	Sb	19 39 32.0	-0.1
	baz=235						
YM04	**YM04**	**0.50**	**298**	P	Pb	19 39 24.4	-0.3
	baz=298						
TWY	**Chenhua**	**0.52**	**313**	P	Pb	19 39 25.1	0.0
	baz=313						
ANP	**Anpu**	**0.53**	**301**	*e*P	Pb	19 39 24.9	-0.4
	baz=300						
NANB	**Nanao**	**0.55**	**207**	P	Pb	19 39 25.6	+0.1
	baz=206						
NANB				S	Sb	19 39 34.2	+0.7
	baz=206						
ENA	**Nanau**	**0.55**	**207**	P	Pb	19 39 25.5	-0.1
	baz=206						
ENA				S	Sb	19 39 34.3	+0.7
	baz=206						
NDT	**Datong Townshi**	**0.56**	**236**	P	Pb	19 39 25.1	-0.6
	baz=235						
NDT				*e*S	Sb	19 39 34.0	+0.1
	baz=235						
TWS1	**Kuangyinshan**	**0.57**	**289**	P	Pb	19 39 26.4	+0.4
	baz=289						
YHNB	**Yeheng**	**0.63**	**247**	*e*P	Pg	19 39 26.4	+0.5
	baz=247						
YHNB	**Yeheng**	**0.63**	**247**	*e*S	Pg	19 39 26.4	+0.5
	baz=250						
NSK	**Sanguang**	**0.65**	**248**	*e*S	Pg	19 39 26.4	+0.3
	baz=250						
NSK	**Sanguang**	**0.65**	**248**	P	Pg	19 39 26.4	+0.3
	baz=247						
WLTB	**Daxi**	**0.70**	**265**	*e*S	Sb	19 39 38.3	+0.4
	baz=264						
NCU	**National Centr**	**0.76**	**274**	*e*P	Pg	19 39 28.5	+0.3
	baz=273						
NNS	**Nan Shan**	**0.76**	**231**	*e*S	Sb	19 39 40.4	+0.7
	baz=230						
NNSH	**Datong**	**0.76**	**230**	*e*P	Pb	19 39 29.3	+0.2
	baz=229						
NNSH				*e*S	Sb	19 39 40.3	+0.6
	baz=229						
ETLH	**Xiulin Townshi**	**0.86**	**215**	*e*P	Pb	19 39 31.0	0.0
	baz=214						
ETLH				*e*S	Sn	19 39 43.9	-1.2
	baz=214						
TWD	**Chiawan**	**0.92**	**205**	P	Pb	19 39 32.2	+0.4
	baz=204						
TWD				*e*S	Sn	19 39 45.4	-0.9
	baz=204						
SBCB	**Hsinchu**	**0.95**	**263**	*e*P	Pn	19 39 33.1	-0.2
	baz=262						
SBCB				*e*S	Sn	19 39 46.7	-0.3
	baz=262						
LIOB	**Emei**	**0.95**	**254**	*e*P	Pg	19 39 31.7	-0.2
	baz=253						
LIOB				*e*S	Sn	19 39 46.5	-0.8
	baz=253						
HSN	**Hsinchu**	**0.96**	**263**	*e*S	Sb	19 39 46.2	+0.7
	baz=264						
NSTT	**Nanjuang**	**0.97**	**253**	P	Pn	19 39 33.4	-0.2
	baz=252						
TWT	**Tachien**	**1.01**	**229**	*e*P	Pn	19 39 34.2	-0.2
	baz=229						
TWT				*e*S	Sn	19 39 49.0	+0.1
	baz=229						
TDCB	**Techi**	**1.02**	**230**	*e*P	Pb	19 39 33.7	-0.1
	baz=229						
TDCB				S	Sn	19 39 48.7	-0.5
	baz=229						
WHF	**Hehuan Shan**	**1.03**	**222**	P	Pg	19 39 33.7	+0.2
	baz=221						
WHF				S	Sb	19 39 48.2	+0.2
	baz=221						
CHGB	**Renai**	**1.15**	**222**	*e*P	Pn	19 39 36.2	-0.1
	baz=221						
CHGB				*e*S	Sb	19 39 51.0	-0.1
	baz=221						
WHP	**Taichung City**	**1.17**	**237**	*e*S	Sn	19 39 52.1	-0.5
	baz=236						
ESL	**Shilin**	**1.22**	**206**	*e*S	Sn	19 39 54.7	+0.8
	baz=205						
OWD	**Renai**	**1.23**	**219**	*e*P	Pn	19 39 37.6	+0.3
	baz=218						
OWD				*e*S	Sn	19 39 53.9	-0.4
	baz=218						
HGSD	**Ruisui**	**1.52**	**201**	*e*S	Sg	19 40 02.7	+0.2
	baz=200						

*NEIC **08** 19:51:58.3±1.5, 25.°55S±0.°1 × 178.°3E±0.°2, h594km±12km, mb4.6/22, Error ellipse: s-maj=22.5km s-min=20.0km az=77.0*
*IDC **08** 19:52:01.3±2.0, 25.°55S × 178.°03E, h618km±35km, mb2.9/5, mb1 3.2/7, mb1mx2.9/42, mbtmp4.2/7, Error ellipse: s-maj=39.9km s-min=17.2km az=47.0*

ISC 08 19:51:58.6±0.8, 25.°61S±0.°09 × 178.°2E±0.°1, h600km, n40, σ1°46/43, mb4.2/12, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.84**	**359**	P	**P**	**19 53 54.3**	**-2.4**
OUZ	**Omahuta**	**10.38**	**202**	P	**P**	**19 54 23.8**	**+2.8**
DZM	**Mont Dzumac**	**11.34**	**286**	P	**P**	**19 54 31.3**	**+0.3**
	2.3nm,0.3s,baz=105,slow=11,SNR=19						
URZ	**Urewera**	**12.65**	**184**	P	**P**	**19 54 43.0**	**-0.6**
	3.4nm,0.3s,baz=328,slow=4.0,SNR=12						
URZ				S	**S**	**19 56 54.9**	**-4.5**
	0.4nm,0.3s,baz=232,slow=19,SNR=4.2						
URZ	**Urewera**	**12.65**	**184**	P	**P**	**19 54 43.2**	**-0.4**
BFZ	**Birch Farm**	**15.12**	**186**	P	**P**	**19 55 07.2**	**-0.5**
BFZ				IAmb	IAmb	19 55 11.0	
	comp=Z,54nm,1.2s						
QRZ	**Quartz Range**	**15.90**	**196**	P	**P**	**19 55 17.1**	**+2.2**
SNZO	**South Karori**	**15.93**	**190**	P	**P**	**19 55 15.6**	**+0.6**
MSWZ	**Moikau Station**	**15.96**	**188**	P	**P**	**19 55 15.5**	**+0.1**
BHW	**Baring Head**	**16.00**	**189**	P	**P**	**19 55 17.1**	**+1.3**
NNZ	**Nelson**	**16.08**	**193**	P	**P**	**19 55 17.3**	**+0.9**
PLWZ	**Palliser**	**16.11**	**188**	P	**P**	**19 55 17.9**	**+1.1**
TUWZ	**Tuamarina**	**16.17**	**192**	P	**P**	**19 55 18.0**	**+0.7**
BSWZ	**Blackbirch Sta**	**16.46**	**192**	P	**P**	**19 55 20.2**	**+0.2**
THZ	**Tophouse**	**16.70**	**194**	P	**P**	**19 55 24.0**	**+1.7**
KHZ	**Kahutara**	**17.20**	**192**	P	**P**	**19 55 27.7**	**+1.0**
KHZ				IAmb	IAmb	19 55 27.9	
	comp=Z,31nm,0.9s						
LTZ	**Lake Taylor**	**17.81**	**194**	P	**P**	**19 55 32.7**	**+0.3**
RPZ	**Rata Peaks**	**18.99**	**196**	P	**P**	**19 55 44.5**	**+1.5**
	comp=Z,1.4nm,0.3s,baz=12,slow=9.3,SNR=5.4						
RPZ	**Rata Peaks**	**18.99**	**196**	P	**P**	**19 55 44.4**	**+1.4**
RPZ				IAmb	IAmb	19 55 48.9	
	comp=Z,21nm,0.9s						
FOZ	**Fox Glacier**	**19.15**	**199**	P	**P**	**19 55 45.5**	**+1.1**
FOZ				IAmb	IAmb	19 55 53.6	
	comp=Z,30nm,1.2s						
LBZ	**Lake Benmore**	**19.84**	**197**	P	**P**	**19 55 51.5**	**+0.8**
LBZ				IAmb	IAmb	19 56 04.5	
	comp=Z,7.1nm,0.9s						
WKZ	**Wanaka**	**20.57**	**199**	P	**P**	**19 55 57.9**	**+0.6**
WKZ				IAmb	IAmb	19 56 20.8	
	comp=Z,13nm,0.9s						
MLZ	**Mavora Lakes**	**21.33**	**200**	P	**P**	**19 56 06.1**	**+2.0**
MLZ				IAmb	IAmb	19 56 08.1	
	comp=Z,19nm,0.9s						
DCZ	**Deep Cove**	**21.72**	**201**	P	**P**	**19 56 08.0**	**+0.5**
DCZ				IAmb	IAmb	19 56 25.9	
	comp=Z,27nm,1.1s						
WHZ	**Wether Hill Ro**	**21.86**	**200**	P	**P**	**19 56 10.3**	**+1.6**
WHZ				IAmb	IAmb	19 56 12.2	
	comp=Z,16nm,0.8s						
CTA	**Charters Tower**	**29.93**	**274**	P	**P**	**19 57 20.6**	**+0.7**
	comp=Z,4.1nm,0.5s,baz=93,slow=9.2,SNR=7.4						
STKA	**Stephens Creek**	**32.61**	**250**	P	**P**	**19 57 43.5**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=90,slow=11,SNR=3.1						
STKA	**Stephens Creek**	**32.61**	**250**	P	**P**	**19 57 43.3**	**+0.7**
KRVT	**Keravat (AS076**	**32.87**	**306**	P	**P**	**19 57 45.3**	**+0.4**
	comp=Z,16nm,0.3s,baz=127,slow=20,SNR=9.4						
COEN	**Coen**	**34.85**	**283**	P	**P**	**19 58 02.1**	**+0.6**
COEN				IAmb	IAmb	19 58 26.5	
	comp=Z,6.6nm,1.0s						
BBOO	**Buckleboo**	**37.31**	**249**	P	**P**	**19 58 21.6**	**+0.2**
BBOO				IAmb	IAmb	19 58 21.8	
	comp=Z,6.5nm,0.9s						
ASAR	**Alice Springs**	**40.20**	**263**	P	**P**	**19 58 45.1**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=89,slow=7.9,SNR=12						
ASAR				S	**S**	**20 04 09.5**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=97,slow=13,SNR=7.6						
WRA	**Warramunga Arr**	**40.72**	**269**	P	**P**	**19 58 48.8**	**-0.2**
	comp=Z,1.5nm,0.4s,baz=104,slow=8.1,SNR=22						
WRA				S	**S**	**20 04 14.6**	**-3.0**
	comp=Z,0.9nm,0.8s,baz=100,slow=14,SNR=3.0						
KNRA	**Kununurra**	**47.10**	**272**	P	**P**	**19 59 38.2**	**+0.1**
KNRA				IAmb	IAmb	19 59 38.5	
	comp=Z,9.0nm,1.1s						
VNDA	**Vanda**	**52.55**	**184**	P	**P**	**20 00 18.6**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=7.7,slow=8.1,SNR=7.3						
VNDA	**Vanda**	**52.55**	**184**	P	**P**	**20 00 19.3**	**+2.3**
QSPA	**South Pole Qui**	**64.48**	**180**	P	**P**	**20 01 37.3**	**+0.1**
SYO	**Syowa Base**	**80.98**	**194**	⇓*e*P	**P**	**20 03 09.6**	**-1.7**
SNAA	**Sanae**	**82.98**	**180**	P	**P**	**20 03 22.0**	**+0.5**
W13A	**Hualapai Mount**	**88.13**	**49**	P	**P**	**20 03 47.8**	**+0.8**

*IDC **08** 20:00:24.6±0.7, 1.°37N × 126.°17E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/39, mbtmp3.9/11, ML3.9/1, Error ellipse: s-maj=43.7km s-min=14.3km az=78.0*
*NEIC **08** 20:00:30.8±1.5, 1.°4N±0.°1 × 126.°45E±0.°05, h50km±10km, mb4.2/7, Error ellipse: s-maj=18.4km s-min=7.7km az=182.0*
*DJA **08** 20:00:31.4±0.4, 1.°N±5.° × 12.°6E±.°, h41km±15km, M4.3/9, mb4.4/6, mB4.8/1, MLv4.3/9, Mw(mB)4.0/1*

ISC 08 20:00:30.9±0.6, 1.°33N±0.°07 × 126.°42E±0.°06, h47km, n35, σ1°11/39, mb4.1/13, 1C-1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.10**	**120**		**Pn**	**20 00 49.5**	**-0.4**
KMSI	**Cibinong**	**2.55**	**253**	P	**Pn**	**20 01 08.8**	**-1.1**
SANI	**Sanana**	**3.39**	**187**	P	**Pn**	**20 01 22.2**	**+0.9**
LUWI	**Luwuk**	**4.34**	**237**	P	**Pn**	**20 01 35.5**	**+1.0**
LUWI	**Luwuk**	**4.34**	**237**	Pn	**Pn**	**20 01 34.9**	**+0.4**
MRSI	**Marisa**	**4.56**	**259**	P	**Pn**	**20 01 37.7**	**+0.2**
APSI	**Ampana**	**5.27**	**245**	P	**Pn**	**20 01 48.0**	**+0.8**
	0.3nm955nm88nm,0.7s						
KCP	**Kidapawan**	**5.79**	**347**	⇓*e*P	**Pn**	**20 01 58.9**	**+4.4**
KCP				*e*S	Sn	20 03 10.5	+11
CTBH	**Cotabato--PC H**	**6.24**	**340**	⇑*i*P	**Pn**	**20 01 60.0**	**-0.5**
MPSI	**Mapaga**	**6.60**	**261**	P	**Pn**	**20 02 06.2**	**+0.8**
	0.1nm18nm,0.7s						
TTSI	**Tana Toraja**	**7.90**	**237**	P	**Pn**	**20 02 23.7**	**+0.3**
	0.1nm32nm,0.9s						
SPSI	**Sidrap Palu**	**8.48**	**232**	P	**Pn**	**20 02 32.5**	**+1.3**
	13nm,0.6s						
BNSI	**Bone**	**8.50**	**228**	P	**Pn**	**20 02 32.2**	**+0.7**
	17nm,0.7s						
FITZ	**Fitzroy Crossi**	**19.32**	**182**	P	**P**	**20 04 52.4**	**0.0**
	0.3nm,0.3s,baz=357,slow=9.8,SNR=6.8						
WRAB	**Tennant Creek**	**22.52**	**160**	P	**P**	**20 05 25.5**	**-1.4**
WRAB				IAmb	IAmb	20 05 29.1	
	comp=Z,7.8nm,0.8s						
WRA	**Warramunga Arr**	**22.52**	**160**	P	**P**	**20 05 27.2**	**+0.3**
	comp=Z,4.5nm,0.5s,baz=340,slow=11,SNR=30						
WRA	**Warramunga Arr**	**22.52**	**160**	P	**P**	**20 05 27.0**	**+0.1**
WR0	**Warramunga Arr**	**22.61**	**160**	P	**P**	**20 05 27.9**	**0.0**
WR0				IAmb	IAmb	20 05 30.4	
	comp=Z,9.6nm,1.1s						
AS31	**Alice Springs**	**25.89**	**164**	P	**P**	**20 05 57.4**	**-1.3**
ASAR	**Alice Springs**	**25.89**	**164**	P	**P**	**20 05 59.5**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=352,slow=7.3,SNR=18						
ASAR				PcP	**PcP**	**20 09 28.1**	**+1.2**
	comp=Z,0.9nm,0.6s,baz=302,slow=1.2,SNR=7.8						
ASAR	**Alice Springs**	**25.89**	**164**	P	**P**	**20 05 58.3**	**-0.4**
ASAR					**PcP**	**20 09 28.4**	**+1.4**
STKA	**Stephens Creek**	**36.03**	**158**	P	**P**	**20 07 28.9**	**+1.1**
	comp=Z,2.2nm,0.7s,baz=342,slow=8.9,SNR=7.5						
STKA	**Stephens Creek**	**36.03**	**158**	P	**P**	**20 07 27.5**	**-0.3**
STKA				IAmb	IAmb	20 07 55.3	
	comp=Z,3.4nm,1.8s						
USRK	**Ussuriysk Ar.**	**42.97**	**6**	P	**P**	**20 08 25.0**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=186,slow=10,SNR=4.0						
KLR	**Kul'dur**	**47.34**	**5**	P	**P**	**20 09 05.0**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=207,slow=4.5,SNR=5.8						
SONM	**Songino Array**	**49.47**	**342**	P	**P**	**20 09 16.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=157,slow=7.4,SNR=3.9						
SONM				PcP	**PcP**	**20 10 38.8**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=160,slow=4.6,SNR=2.8						
PETK	**Petropavlovsk-**	**57.75**	**22**	P	**P**	**20 10 18.1**	**+1.0**
	comp=Z,0.9nm,0.5s,baz=184,slow=5.3,SNR=7.2						
MKAR	**Makanchi Array**	**59.35**	**326**	P	**P**	**20 10 27.3**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=124,slow=7.6,SNR=11						
MKAR				PcP	**PcP**	**20 11 15.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=118,slow=2.8,SNR=2.5						
MKAR	**Makanchi Array**	**59.35**	**326**	P	**P**	**20 10 27.2**	**-1.2**
YAK	**Yakutsk**	**60.60**	**2**	P	**P**	**20 10 37.0**	**+0.4**
KURK	**Kurchatov**	**63.59**	**328**	P	**P**	**20 10 55.8**	**-1.1**
KURK				IAmb	IAmb	20 10 59.8	
	comp=Z,3.5nm,0.8s						
ABKAR	**Akbulak array**	**73.81**	**321**	P	**P**	**20 12 00.0**	**-0.5**
ILAR	**Eielson Array**	**87.39**	**25**	P	**P**	**20 13 12.3**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=262,slow=5.4,SNR=3.2						
BRTR	**Keskin Array B**	**91.30**	**310**	P	**P**	**20 13 30.8**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=140,slow=4.7,SNR=2.7						
BRTR	**Keskin Array B**	**91.30**	**310**	P	**P**	**20 13 31.1**	**-1.0**

*MAN **08** 20:02:36.2, 5.°33N × 126.°71E, h55km, MS3.4*
*IDC **08** 20:02:38.8±1.6, 5.°65N × 126.°92E, h85km±15km, mb3.5/8, mb1 3.7/9, mb1mx3.4/41, mbtmp3.8/9, MS3.2/1, Ms1 3.2/1, ms1mx2.5/25, Error ellipse: s-maj=41.8km s-min=10.0km az=61.0*
*NEIC **08** 20:02:38.5±1.5, 5.°61N±0.°09 × 126.°9E±0.°1, h85km±10km, mb4.2/5, Error ellipse: s-maj=17.8km s-min=8.6km az=54.0*

ISC 08 20:02:38.6±0.9, 5.°45N±0.°06 × 126.°54E±0.°08, h81km±9km, n28, σ1°91/36, mb3.7/10, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.05**	**309**	*e*P	**Pn**	**20 02 58.0**	**-0.3**
DDMP				*e*S	**Sn**	**20 03 10.2**	**-2.9**
MATI	**Mati**	**1.52**	**349**	*e*P	**Pn**	**20 03 03.9**	**-0.4**
MATI				*e*S	**Sn**	**20 03 23.9**	**+0.4**
GSPH	**General Santos**	**1.70**	**292**	⇑*i*P	**Pn**	**20 03 04.2**	**-2.6**
GSPH				*i* S	**Sn**	**20 03 26.3**	**-1.8**
DAV	**Davao City (W)**	**1.87**	**330**	P	**Pn**	**20 03 09.9**	**+1.0**
	70nm,0.3s,baz=76,slow=17,SNR=11						
DAV				S	**Sn**	**20 03 34.3**	**+2.3**
	154nm,0.3s,baz=295,slow=22,SNR=10.0						
DAV	**Davao City (W)**	**1.87**	**330**		**Pn**	**20 03 09.5**	**+0.6**
SKMP	**Bagumbayan, Su**	**2.25**	**298**	*e*P	**Pn**	**20 03 15.0**	**+1.1**
SKMP				*e*S	**Sn**	**20 03 42.7**	**+1.7**
BUKP	**Musuan**	**2.83**	**329**	*e*P	**Pn**	**20 03 22.6**	**+0.8**
BUKP				*e*S	**Sn**	**20 03 55.2**	**+0.4**
CGP	**Cagayan de Oro**	**3.50**	**329**	⇓*e*P	**Pn**	**20 03 33.1**	**+2.3**
CGP				*e*S	**Sn**	**20 04 16.1**	**+4.8**
BUTP	**Butuan**	**3.62**	**346**	*e*P	**Pn**	**20 03 33.4**	**+1.0**
TNTI	**Ternate**	**4.72**	**170**	Pn	**Pn**	**20 03 48.9**	**+1.5**
LUWI	**Luwuk**	**7.46**	**210**	Pn	**Pn**	**20 04 29.6**	**+4.8**
SIJI	**Sorong**	**7.85**	**143**	P	**Pn**	**20 04 29.9**	**-0.3**
	0.9nm,0.3s,baz=210,slow=20,SNR=4.9						
SIJI				S	**Sn**	**20 05 55.0**	**-2.5**
	baz=180,slow=20,SNR=2.5						
FITZ	**Fitzroy Crossi**	**23.41**	**182**	P	**P**	**20 07 42.2**	**+1.5**
	2.7nm,1.0s,baz=356,slow=8.9,SNR=4.8						
PMG	**Port Moresby**	**25.30**	**126**	LR	LR	20 19 42.3	
	comp=Z,50nm,18.1s,baz=280,slow=41						
WRA	**Warramunga Arr**	**26.37**	**163**	P	**P**	**20 08 09.7**	**+2.3**
	1.0nm,0.4s,baz=343,slow=10,SNR=5.1						
WRA	**Warramunga Arr**	**26.37**	**163**	P	**P**	**20 08 08.0**	**+0.5**
ASAR	**Alice Springs**	**29.82**	**166**	P	**P**	**20 08 38.2**	**+0.1**
	0.3nm,0.4s,baz=353,slow=8.8,SNR=4.7						
ASAR				PcP	**PcP**	**20 11 39.6**	**-0.3**
	0.5nm,0.7s,baz=0.6,slow=2.3,SNR=4.6						
CM31	**Chiang Mai Arr**	**29.87**	**298**	P	**P**	**20 08 40.6**	**+1.9**
CM31				IAmb	IAmb	20 09 15.7	
	comp=Z,10.0nm,1.7s						
STKA	**Stephens Creek**	**39.79**	**160**	P	**P**	**20 10 04.2**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=351,slow=9.6,SNR=3.1						
STKA	**Stephens Creek**	**39.79**	**160**	P	**P**	**20 10 03.6**	**-0.3**
STKA				IAmb	IAmb	20 10 33.9	
	comp=Z,1.8nm,1.4s						
SONM	**Songino Array**	**45.62**	**341**	P	**P**	**20 10 51.1**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=155,slow=8.9,SNR=5.9						
SONM	**Songino Array**	**45.62**	**341**	P	**P**	**20 10 51.0**	**0.0**
MKAR	**Makanchi Array**	**56.05**	**325**	P	**P**	**20 12 07.9**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=116,slow=6.9,SNR=3.1						
MKAR	**Makanchi Array**	**56.05**	**325**	P	**P**	**20 12 08.1**	**-1.1**
KURK	**Kurchatov**	**60.20**	**327**	P	**P**	**20 12 37.7**	**-0.4**
KURK				IAmb	IAmb	20 14 04.6	
	comp=Z,3.8nm,1.1s						
ILAR	**Eielson Array**	**83.65**	**25**	P	**P**	**20 14 56.2**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=251,slow=5.7,SNR=7.5						
ILAR	**Eielson Array**	**83.65**	**25**	P	**P**	**20 14 55.8**	**-2.3**
ARCES	**ARCESS Array B**	**88.78**	**340**	P	**P**	**20 15 21.6**	**-1.5**
	comp=Z,3.3nm,1.0s,baz=64,slow=4.1,SNR=2.7						

*MAN **08** 20:04:47.1, 14.°75N × 124.°51E, h27km, mb4.8, ML3.7, MS3.6*
*IDC **08** 20:04:56.9±3.7, 14.°41N × 124.°37E, h92km±35km, mb3.6/12, mb1 3.7/13, mb1mx3.5/42, mbtmp3.9/13, Error ellipse: s-maj=29.4km s-min=14.5km az=71.0*
*NEIC **08** 20:04:56.4±1.2, 14.°4N±0.°1 × 124.°5E±0.°1, h91km±6km, mb4.2/5, Error ellipse: s-maj=23.7km s-min=11.7km az=222.0*

ISC 08 20:04:49.0±0.7, 14.°39N±0.°09 × 124.°27E±0.°07, h22km, n34, σ1°12/30, mb3.9/15, 2D, Luzon

| Code | Station Name | Δ° | AZ° | Phase

MKAR	**Makanchi Array**	**47.60**	**322**	P		**P**	**20**	**13**	**24.1 +0.8**
	comp=Z,0.3nm,0.6s,baz=114,slow=9.1,SNR=3.0								
STKA	**Stephens Creek**	**48.91**	**160**	P		**P**	**20**	**13**	**34.1 +0.7**
	comp=Z,1.6nm,0.9s,baz=321,slow=13,SNR=2.8								
KKAR	**Karatay Array**	**54.01**	**313**	P		**P**	**20**	**14**	**13.0 +1.4**
ABKAR	**Akbulak array**	**62.51**	**318**	P		**P**	**20**	**15**	**10.9 0.0**
ABKAR				IAmb		IAmb	20	15	12.1
	comp=Z,1.8nm,0.7s								
ARCES	**ARCESS Array B**	**79.68**	**339**	P		**P**	**20**	**16**	**54.0 -0.6**
	comp=Z,4.9nm,0.9s,baz=87,slow=6.3,SNR=3.8								
FINES	**FINESS Array B**	**81.36**	**331**	P		**P**	**20**	**17**	**03.3 -0.5**
	comp=Z,1.1nm,0.6s,baz=64,slow=4.4,SNR=7.4								
FINES	**FINESS Array B**	**81.36**	**331**	P		**P**	**20**	**17**	**03.6 -0.1**
BRTR	**Keskin Array B**	**81.43**	**309**	P		**P**	**20**	**17**	**04.2 -0.6**
	comp=Z,0.4nm,0.8s,baz=61,slow=3.6,SNR=3.1								
BRTR	**Keskin Array B**	**81.43**	**309**	P		**P**	**20**	**17**	**04.0 -0.8**
YKA	**Yellowknife Ar**	**90.80**	**23**	P		**P**	**20**	**17**	**50.1 -0.3**
	comp=Z,0.2nm,0.6s,baz=296,slow=4.7								

*ANF **08** 20:39:50.2±0.8,32°.66N×115°.71W,h24km±3km, ML2.5/14, ML2.5/7, Error ellipse: s-maj=10.2km s-min=2.8km az=164.0*
*SCEDC **08** 20:39:51.5,32°.66N×115°.74W,h6km*
*NEIC **08** 20:39:52.7±2.4,32°.60N±0°.03×115°.71W±0°.02,h22km±7km, Error ellipse: s-maj=4.5km s-min=2.0km az=151.0*
*PAS **08** 20:39:54.4±3.4,32°.63N±0°.01×115°.73W±0°.01,h7km±4km, Error ellipse: s-maj=2.1km s-min=1.5km az=152.0*
*ECX **08** 20:39:54.9±0.7,32°.64N×115°.76W,h3km, MD2.6, ML2.8*
ISC 08 20:39:53.0±1.0,32°.60N±0°.03×115°.74W±0°.02,h20km±1km, n75,σ1§29/102,2C-1D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
CEA0	**Mexicali**	**0.08**	**52**	⇑*i*P		**Pb**	**20 39 56.2**	**-0.6**
CEA0				*e*S		**Sb**	**20 39 57.8**	**-1.6**
ERPC	**Ernies Place**	**0.15**	**25**	⇑*i*P		**Pb**	**20 39 57.4**	**-1.0**
ERPC	**Ernies Place**	**0.15**	**25**			**Pb**	**20 39 57.4**	**-1.0**
WESC	**Westside Schoo**	**0.15**	**3**	*e*P		**Pb**	**20 39 57.3**	**-1.1**
WESC	**Westside Schoo**	**0.15**	**3**			**Pb**	**20 39 57.3**	**-1.1**
COK2	**Cook Ranch 2**	**0.25**	**2**	⇓*i*P		**Pb**	**20 39 59.0**	**0.0**
COK2				*e*S		**Sb**	**20 40 02.9**	**-0.1**
COK2	**Cook Ranch 2**	**0.25**	**2**			**Pb**	**20 39 59.0**	**0.0**
COK2						**Sb**	**20 40 02.9**	**-0.1**
ERMX	**Rumorosa**	**0.25**	**258**	*e*P		**Pb**	**20 39 59.8**	**+0.7**
UABX	**UABC, Campus M**	**0.26**	**84**	*e*S		**Sb**	**20 40 04.6**	**+1.4**
UABX	**UABC, Campus M**	**0.26**	**84**			**Sb**	**20 40 04.6**	**+1.4**
RMX	**La Rumorosa**	**0.28**	**270**			**Pb**	**20 39 60.0**	**+0.4**
POT2	**Potabilizadora**	**0.30**	**85**	*e*P		**Pb**	**20 40 01.1**	**+1.5**
POT2				*e*S		**Sb**	**20 40 05.9**	**+1.7**
IKP	**In-Ko-Pah, Jac**	**0.32**	**279**	*e*P		**Pb**	**20 40 00.8**	**+0.9**
IKP				*e*S		**Sb**	**20 40 05.2**	**+0.5**
IKP	**In-Ko-Pah, Jac**	**0.32**	**279**			**Pb**	**20 40 00.8**	**+0.9**
IKP						**Sb**	**20 40 05.2**	**+0.5**
IKP	**In-Ko-Pah, Jac**	**0.32**	**279**	P		**Pb**	**20 39 57.7**	**-2.3**
	baz=88,SNR=44							
IKP	**In-Ko-Pah, Jac**	**0.32**	**279**	P		**Pb**	**20 40 00.8**	**+0.9**
	baz=94							
IKP				S		**Sb**	**20 40 05.0**	**+0.3**
	baz=94							
DREC	**Desert Rsrch C**	**0.32**	**51**	*e*P		**Pb**	**20 40 00.5**	**+0.6**
DREC	**Desert Rsrch C**	**0.32**	**51**			**Pb**	**20 40 00.6**	**+0.7**
DREC						**Sb**	**20 40 06.5**	**+1.8**
SWSC	**Sam W. Stewart**	**0.34**	**352**	*e*P		**Pb**	**20 40 00.3**	**-0.1**
SWSC				*i* S		**Sb**	**20 40 04.8**	**-0.5**
SWSC	**Sam W. Stewart**	**0.34**	**352**			**Pb**	**20 40 00.3**	**-0.1**
SWSC						**Sb**	**20 40 04.8**	**-0.5**
SWSC	**Sam W. Stewart**	**0.34**	**352**	P		**Pb**	**20 39 57.2**	**-3.1**
	baz=169,SNR=55							
SWSC	**Sam W. Stewart**	**0.34**	**352**	P		**Pb**	**20 40 00.2**	**-0.1**
	baz=169							
SWSC				S		**Sb**	**20 40 04.1**	**-1.2**
	baz=169							
SUP	**Superstition M**	**0.36**	**349**			**Pb**	**20 40 00.7**	**+0.1**
SUP						**Sb**	**20 40 05.8**	**+0.1**
SNR	**Schaffner Ranc**	**0.36**	**45**			**Pb**	**20 40 01.4**	**+0.8**
SNR						**Sb**	**20 40 07.4**	**+1.5**
CPBX	**Cerro Prieto**	**0.41**	**116**	IAML			20 40 14.0	
	comp=N,3μm,0.2s							
CPBX				*e*			20 40 14.8	
CPBX				IAML			20 40 14.8	
	comp=E,2μm,0.2s							
ERRC	**Elmore Ranch**	**0.52**	**352**			**Pb**	**20 40 04.1**	**+0.7**
ERRC						**Sb**	**20 40 11.7**	**+1.3**
CLIC	**Calipatria**	**0.56**	**19**			**Pb**	**20 40 04.8**	**+0.5**
COA	**Coachella**	**0.58**	**63**			**Pb**	**20 40 05.0**	**+0.5**
ESJX	**Sierra Juarez**	**0.62**	**196**			**Pb**	**20 40 04.2**	**-1.1**
ESJX						**Sb**	**20 40 13.1**	**-0.7**
MONP2	**Monument Peak**	**0.64**	**297**			**Pb**	**20 40 06.4**	**+0.7**
MONP2	**Monument Peak**	**0.64**	**297**	P		**Pb**	**20 40 03.2**	**-2.4**
	baz=112,SNR=17							
MONP2				S		**Sb**	**20 40 11.6**	**-2.7**
	baz=112							
MONP2	**Monument Peak**	**0.64**	**297**	P		**Pb**	**20 40 06.4**	**+0.7**
	baz=114							
MONP2				S		**Sb**	**20 40 14.4**	**0.0**
	baz=114							
EMSC	**East Mesa**	**0.65**	**78**			**Pb**	**20 40 06.4**	**+0.7**
BAR	**Barrett**	**0.79**	**276**			**Pb**	**20 40 09.3**	**+1.3**
BAR						**Sb**	**20 40 19.4**	**+1.1**
FRK	**Frink**	**0.80**	**6**			**Pb**	**20 40 08.0**	**-0.2**
CBX	**Cerro Bola**	**0.83**	**250**	*e*P		**Pb**	**20 40 10.1**	**+1.3**
CBX	**Cerro Bola**	**0.83**	**250**			**Pb**	**20 40 07.5**	**-1.3**
BORC	**Borrego Spring**	**0.87**	**320**			**Pb**	**20 40 10.1**	**+0.6**
BORC						**Sb**	**20 40 21.4**	**+0.8**
GLA	**Glamis**	**0.89**	**60**			**Pb**	**20 40 09.4**	**-0.3**
GLA						**Sb**	**20 40 20.9**	**-0.3**
GLA	**Glamis**	**0.89**	**60**	P		**Pb**	**20 40 06.3**	**-3.5**
	baz=243,SNR=12							
GLA				S		**Sb**	**20 40 18.1**	**-3.1**
	baz=243							
GLA	**Glamis**	**0.89**	**60**	P		**Pb**	**20 40 09.4**	**-0.3**
	baz=241							
EML	**El Monte Cty P**	**0.97**	**287**			**Pb**	**20 40 12.0**	**+0.9**
SDRC	**San Diego Road**	**1.02**	**278**	IAML			20 40 27.7	
	comp=N,229nm,0.4s							
SDRC				*e*			20 40 27.7	
BC3	**Big Chuckawall**	**1.08**	**13**	P		**Pn**	**20 40 09.2**	**-3.8**
	baz=193							
BC3	**Big Chuckawall**	**1.08**	**13**	P		**Pn**	**20 40 12.3**	**-0.7**
	baz=192							
BC3				S		**Sb**	**20 40 25.1**	**-1.5**
	baz=192							
FRD	**Ford Ranch, An**	**1.15**	**321**			**Pn**	**20 40 12.4**	**-1.6**
XPFO	**Pion Flat**	**1.17**	**329**			**Pn**	**20 40 14.0**	**-0.3**
PFO	**Pinyon Flats O**	**1.17**	**329**			**Pn**	**20 40 14.0**	**-0.3**
PFO						**Sb**	**20 40 28.8**	**-0.6**
PFO	**Pinyon Flats O**	**1.17**	**329**	P		**Pn**	**20 40 10.7**	**-3.6**
	baz=147,SNR=12							
PFO	**Pinyon Flats O**	**1.17**	**329**	P		**Pn**	**20 40 13.9**	**-0.4**
	baz=148							
PFO				S		**Sb**	**20 40 28.5**	**-0.9**
	baz=148							
BZNA	**Buzz No.'s Pla**	**1.18**	**319**			**Pn**	**20 40 13.2**	**-1.2**
109C	**Camp Elliot, M**	**1.18**	**284**			**Pb**	**20 40 15.7**	**+1.0**
109C	**Camp Elliot, M**	**1.18**	**284**	S		**Sn**	**20 40 27.7**	**-2.2**
	baz=101							
109C	**Camp Elliot, M**	**1.18**	**284**	P		**Pb**	**20 40 15.7**	**+1.0**
	baz=102							
109C				S		**Sb**	**20 40 30.7**	**+1.1**
	baz=102							
DNR	**Dunn Ranch,Anz**	**1.22**	**322**			**Sn**	**20 40 30.5**	**-0.4**
CRY	**Cary Ranch**	**1.27**	**319**			**Pn**	**20 40 14.8**	**-0.9**
CRY						**Sn**	**20 40 31.6**	**-0.6**
BELC	**Belle Mtn. Jos**	**1.41**	**351**	P		**Pn**	**20 40 17.2**	**-0.4**
	baz=170							
BELC				S		**Sn**	**20 40 34.3**	**-1.3**
	baz=170							
EW2	**E Wide Canyon**	**1.45**	**337**			**Pn**	**20 40 17.7**	**-0.3**
POB	**Polly Butte**	**1.47**	**318**			**Pn**	**20 40 18.0**	**-0.4**
HMTC	**Hemet**	**1.53**	**316**			**Pn**	**20 40 19.3**	**+0.2**
Y12C	**Blythe**	**1.53**	**41**			**Pn**	**20 40 19.7**	**+0.5**
Y12C	**Blythe**	**1.53**	**41**	S		**Sn**	**20 40 37.9**	**-0.6**
	baz=222							
MURC	**Murrieta**	**1.57**	**310**	P		**Pn**	**20 40 19.8**	**0.0**
	baz=128							
MURC				S		**Sn**	**20 40 39.8**	**+0.3**
	baz=128							
IRM	**Iron Mountain**	**1.63**	**18**	Pb		**Pn**	**20 40 21.5**	**+1.0**
	baz=198							
IRM				S		**Sn**	**20 40 40.5**	**-0.4**
	baz=198							
113A	**Mohawk Valley,**	**1.67**	**84**	Pn		**Pn**	**20**	**40**	**21.1 +0.1**
RMR	**Rimrock**	**1.75**	**337**			**Pn**	**20**	**40**	**23.0 +0.6**
BBRC	**Big Bear Solar**	**1.93**	**330**	Sb		**Sb**	**20**	**40**	**52.0 +0.7**
	baz=148								
NEE2	**Needles Airpor**	**2.35**	**23**	S		**Sn**	**20**	**40**	**58.2 -0.5**
	baz=204								
CIS	**Catalina Islan**	**2.38**	**290**	Sb		**Sb**	**20**	**41**	**04.6 +0.4**
	baz=108								
FMP	**Fort Macarthur**	**2.41**	**298**	Sb		**Sb**	**20**	**41**	**05.9 +1.0**
	baz=116								
MWC	**Mount Wilson**	**2.52**	**310**	Pn		**Pn**	**20**	**40**	**34.2 +1.2**
214A	**Organ Pipe Nat**	**2.56**	**104**	Pn		**Pn**	**20**	**40**	**33.9 +0.5**
PASC	**Pasadena Art C**	**2.57**	**308**			**Pn**	**20**	**40**	**36.0 +2.5**
Y14A	**Wickenburg**	**2.65**	**59**			**Pb**	**20**	**40**	**41.2 +1.4**
GSC	**Goldstone, Bar**	**2.83**	**342**			**Pn**	**20**	**40**	**39.7 +2.6**

*IDC **08** 20:53:23.2±1.5,21°.69S×169°.96E,h0km, mb4.1/10, mb1 4.3/11,mb1mx4.1/35,mbtmp4.1/11,ML4.5/1,MS3.3/6, Ms1 3.3/6,ms1mx3.1/26,Error ellipse: s-maj=52.1km s-min=21.2km az=148.0*
*NEIC **08** 20:53:32.7±1.6,21°.4S±0°.2×169°.37E±0°.07,h54km±6km, mb4.5/5, Error ellipse: s-maj=28.0km s-min=5.3km az=161.0*
ISC 08 20:53:27.6±0.7,21°.4S±0°.2×169°.7E±0°.1,h21km,n67, σ0§90/63,mb4.1/12,MS3.3/5,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op		ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.09**	**258**	*e*Pn		**Pn**	**20 54 16.7**	**+1.5**
	140nm,0.2s							
DZM				*e*Sn		**Sn**	**20 54 50.4**	**-1.2**
	261nm,0.2s							
DZM				*e*LR	LR	LR	20 54 58.0	
	comp=Z,278nm,23.2s							
DZM	**Mont Dzumac**	**3.09**	**258**	Pn		**Pn**	**20 54 16.6**	**+1.4**
	50nm,0.3s,baz=128,slow=18,SNR=571							
DZM				Sn		**Sn**	**20 54 50.0**	**-1.6**
	58nm,0.3s,baz=24,slow=20,SNR=8.1							
DZM				LR	LR	LR	20 54 59.6	
	comp=Z,89nm,18.6s,baz=206,slow=29							
DZM	**Mont Dzumac**	**3.09**	**258**			**Pn**	**20 54 16.2**	**+0.9**
MSVF	**Nonsavu**	**8.69**	**66**			Pn	20 55 40.5	+8.2
URZ	**Urewera**	**17.94**	**161**	LR	LR	LR	21 03 22.1	
	comp=Z,138nm,18.7s,baz=339,slow=34							
RPZ	**Rata Peaks**	**22.24**	**177**	LR	LR	LR	21 06 24.0	
	comp=Z,152nm,18.4s,baz=357,slow=36							
PMG	**Port Moresby**	**24.76**	**295**	LR		LR	21 06 03.5	
	comp=Z,58nm,19.4s,baz=104,slow=30							
STKA	**Stephens Creek**	**27.11**	**242**	P		**P**	**20 59 08.8**	**-0.4**
	1.1nm,0.7s,baz=69,slow=11,SNR=3.2							
STKA				LR	LR	LR	21 08 52.0	
	comp=Z,79nm,19.8s,baz=37,slow=34							
WRA	**Warramunga Arr**	**33.07**	**266**	P		**P**	**21 00 02.0**	**-0.1**
	0.8nm,0.4s,baz=94,slow=8.4,SNR=12							
WRA	**Warramunga Arr**	**33.07**	**266**	P		**P**	**21 00 01.3**	**-0.7**
AS31	**Alice Springs**	**33.08**	**259**	P		**P**	**21 00 02.2**	**+0.1**
AS31				IAmb		IAmb	21 00 11.9	
	comp=Z,0.8nm,0.9s							
ASAR	**Alice Springs**	**33.08**	**259**	P		**P**	**21 00 02.5**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=92,slow=9.0,SNR=18							
ASAR	**Alice Springs**	**33.08**	**259**	P		**P**	**21 00 01.6**	**-0.5**
PPT2	**Papeete2**	**38.50**	**92**	*e*LR	LR	LR	21 11 32.2	
	comp=Z,59nm,24.0s							
MJAR	**Matsushiro Arr**	**64.89**	**332**	P		**P**	**21 04 05.7**	**+0.4**
	comp=Z,2.0nm,0.5s,baz=150,slow=7.3,SNR=6.7							
MJAR	**Matsushiro Arr**	**64.89**	**332**	P		**P**	**21 04 05.3**	**0.0**
USRK	**Ussuriysk Ar.**	**73.88**	**333**	P		**P**	**21 05 02.1**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=184,slow=6.3,SNR=5.1							
USRK	**Ussuriysk Ar.**	**73.88**	**333**	P		**P**	**21 05 01.2**	**+0.4**
PETK	**Petropavlovsk-**	**74.96**	**353**	P		**P**	**21 05 08.1**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=154,slow=6.9,SNR=4.7							
PETK				LR	LR	LR	21 32 28.9	
	comp=Z,48nm,20.4s,baz=62,slow=31							
PETK	**Petropavlovsk-**	**74.96**	**353**	P		**P**	**21 05 07.7**	**+0.9**
CMAR	**Chiang Mai Arr**	**79.80**	**294**	P		**P**	**21 05 36.5**	**+1.8**
	comp=Z,1.6nm,0.8s,baz=133,slow=4.6,SNR=11							
CMAR	**Chiang Mai Arr**	**79.80**	**294**	P		**P**	**21 05 33.9**	**-0.8**
PMSA	**Palmer Station**	**84.71**	**160**	P		**P**	**21 06 00.7**	**+1.1**
PMSA				IAmb		IAmb	21 07 12.1	
	comp=Z,46nm,1.1s							
SONM	**Songino Array**	**89.23**	**323**	P		**P**	**21 06 22.7**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=135,slow=4.3,SNR=9.5							
SONM	**Songino Array**	**89.23**	**323**	P		**P**		
NVAR	**Mina Array Bea**	**89.93**	**48**	P		**P**	**21 06 22.5**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=229,slow=10.0,SNR=4.5						**21 06 25.2**	**-0.4**
NVAR	**Mina Array Bea**	**89.93**	**48**	P		**P**	**21 06 26.1**	**+0.5**
ILAR	**Eielson Array**	**92.19**	**17**	P		**P**	**21 06 33.5**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=230,slow=5.2,SNR=10							
ILAR	**Eielson Array**	**92.19**	**17**	P		**P**	**21 06 33.1**	**-2.1**
MKAR	**Makanchi Array**	**103.60**	**315**	Pdiff		**Pdif**	**21 07 27.3**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=96,slow=6.3,SNR=2.5							
KURBB	**Kurchatov Arra**	**106.99**	**318**	Pdiff		**Pdif**	**21 07 39.6**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=98,slow=2.8,SNR=2.8							
O49A	**Covington**	**115.46**	**55**			**PKPdf**	**21 12 05.9**	**-2.1**
KMSC	**Kings Mountain**	**117.16**	**61**			**PKiKP**	**21 12 11.4**	**-0.1**
R58B	**Mineral**	**120.23**	**58**			**PKiKP**	**21 12 18.2**	**+0.8**
ARCES	**ARCESS Array B**	**127.29**	**345**	PKP		**PKPdf**	**21 12 29.4**	**-0.5**
	comp=Z,1.9nm,0.5s,baz=108,slow=1.9,SNR=16							
FINES	**FINESS Array B**	**132.77**	**337**	PKP		**PKPdf**	**21 12 39.7**	**-0.8**
	comp=Z,2.1nm,0.9s,baz=126,slow=2.4,SNR=5.5							
FINES	**FINESS Array B**	**132.77**	**337**			**PKPdf**	**21 12 39.3**	**-1.2**
NOA	**NORSAR Array B**	**137.67**	**345**	PKP		**PKPdf**	**21 12 47.9**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=28,slow=2.1,SNR=3.1							
DPC	**Dobruska-Polom**	**144.35**	**330**	*e*PKP	PKPbc		21 13 00.7	+0.3
BRG	**Berggiesshubel**	**145.02**	**333**	*i* PKP		**PKPab**	**21 13 02.7**	**+0.2**
	comp=Z,13nm,0.5s							
CLL	**Collm**	**145.08**	**334**	*i* PKPdf		**PKPbc**	**21 13 02.7**	**+0.1**
	comp=Z,14nm,0.6s							
CLL	**Collm**	**145.08**	**334**			**PKPbc**	**21 13 02.3**	**-0.3**
GOPC	**GO Pecny, Ondr**	**145.35**	**331**	*e*PKP		**PKPbc**	**21 13 03.3**	**-0.3**
TREC	**Trest**	**145.47**	**330**	*e*PKP		**PKPbc**	**21 13 04.0**	**0.0**
CONA	**Conrad Observa**	**146.23**	**328**	*i* PKPab		**PKPab**	**21 13 07.2**	**-0.1**
	comp=Z,4.2nm,0.8s							
KHC	**Kasperske Hory**	**146.47**	**331**	*e*PKP		**PKPbc**	**21 13 07.3**	**+0.2**
KHC	**Kasperske Hory**	**146.47**	**331**			**PKPbc**	**21 13 07.4**	**+0.3**
GEC2	**GERESS Array S**	**146.62**	**331**			**PKPbc**	**21 13 07.7**	**+0.1**
GERES	**GERESS Array B**	**146.62**	**331**	PKPbc		**PKPbc**	**21 13 07.7**	**+0.1**
	comp=Z,5.9nm,0.6s,baz=34,slow=3.0,SNR=56							
GERES	**GERESS Array B**	**146.62**	**331**			**PKPbc**	**21 13 07.8**	**+0.1**
ARSA	**Arzberg**	**146.86**	**327**	*i* PKPab		**PKPab**	**21 13 09.2**	**-0.4**
	comp=Z,2.1nm,0.9s							
MOA	**Molln**	**147.06**	**329**	*i* PKiKP		**PKiKP**	**21 13 11.3**	**0.0**
	comp=Z,4.2nm,1.1s							
SOKA	**Soboth**	**147.49**	**327**	*i* PKPbc		**PKPbc**	**21 13 09.8**	**-0.4**
OBKA	**Obir**	**147.85**	**327**	*i* PKPbc		**PKPdf**	**21 13 09.1**	**+0.9**
KBA	**Koelnbreinsper**	**148.05**	**329**	*i* PKPbc		**PKPbc**	**21 13 11.0**	**-0.8**
	comp=Z,5.2nm,1.1s							
MYKA	**Terra Mystica**	**148.22**	**328**	*i* PKPbc		**PKPbc**	**21 13 11.8**	**-0.3**
ABTA	**Abfaltersbach**	**148.69**	**329**	*i* PKPbc		**PKPbc**	**21 13 12.4**	**-0.9**
WATA	**Walderalm**	**148.69**	**331**	*i* PKiKP		**PKPbc**	**21 13 13.8**	**+0.4**
	comp=Z,2.9nm,0.5s							
MOTA	**Moosalm**	**148.90**	**331**	*i* PKiKP		**PKPbc**	**21 13 13.7**	**-0.3**
	comp=Z,6.8nm,1.0s,SNR=4.8							
STAL	**STALIGIAL**	**148.94**	**328**			**PKPbc**	**21 13 13.5**	**-0.4**
RETA	**Rette**	**148.94**	**332**	*i* PKiKP		**PKPbc**	**21 13 13.7**	**-0.3**
	comp=Z,1.9nm,0.5s							
SQTA	**Sankt Quirin**	**148.95**	**331**	*i* PKiKP		**PKPbc**	**21 13 13.8**	**-0.2**
	comp=Z,5.4nm,0.5s,SNR=6.2							
FETA	**Feichten**	**149.31**	**331**	*i* PKiKP		**PKPbc**	**21 13 15.0**	**0.0**
	comp=Z,4.5nm,0.7s							
DAVA	**Damuels**	**149.48**	**332**	*i* PKiKP		**PKPbc**	**21 13 15.8**	**+0.4**
	comp=Z,3.1nm,0.6s							
FUORN	**Ofenpass-Fuorn**	**149.82**	**331**			**PKPbc**	**21 13 16.6**	**+0.3**
NRCA	**Norcia**	**151.05**	**323**			**PKPbc**	**21 13 18.8**	**-0.4**
ZCCA	**Zocca**	**151.16**	**327**			**PKiKP**	**21 13 20.2**	**+0.3**

*IDC **08** 21:05:17.0±1.6,44°.05N×105°.69W,h0km, mb3.6/1, mb1 3.7/4, mb1mx3.4/46, mbtmp3.6/4, ML3.3/3, MS2.4/1, Ms1 2.4/1, ms1mx2.2/39, Error ellipse: s-maj=55.0km s-min=8.2km az=147.0*
*NEIC **08** 21:05:16.6±2.7,43°.77N±0°.04×105°.24W±0°.06, h0km±2km, ML3.4/62, Error ellipse: s-maj=7.7km s-min=6.7km az=329.0*
ISC 08 21:05:15.7±0.7,43°.79N±0°.04×105°.22W±0°.04,h0km,n50, σ1§98/61,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.91**	**68**		**Pb**	**21 05 35.6**	**+1.1**
RSSD					**Sg**	**21 05 45.9**	**+0.9**
K22A	**Casper**	**1.49**	**220**		**Pn**	**21 05 42.0**	**-1.8**
PHWY	**Pilot Hill**	**2.50**	**184**		**Pn**	**21**	**05**	**59.1 +1.3**
RWWY	**Rawlins**	**2.56**	**216**		**Pn**	**21**	**05**	**59.1 +0.4**
RWWY				IAML		21	06	33.7
	133nm,0.8s							
RWWY				IAML		21	06	34.2
	175nm,1.4s							
N23A	**Red Feather La**	**2.94**	**191**		**Pn**	**21**	**06**	**05.3 +1.4**
N23A					**Sn**	**21**	**06**	**37.2 -2.9**
N23A				IAML		21	06	51.3
	comp=N,96nm,0.7s							
N23A				IAML		21	06	55.5
	comp=E,106nm,0.9s							
LAO	**LASA Array**	**2.98**	**347**		**Pn**	**21**	**06**	**05.7 +1.4**
LAO				Pg	**Pg**	**21**	**06**	**13.2 +0.4**
LAO				IAML		21	07	04.5
	comp=E,192nm,0.9s							
LAO				IAML		21	07	40.5
	comp=E,176nm,1.1s							
RLMT	**Red Lodge**	**3.19**	**296**		**Pn**	**21**	**06**	**08.1 +0.8**
RLMT				IAML		21	07	00.9
	comp=E,61nm,1.1s							
PD31	**Pinedale Array**	**3.33**	**254**		**Pn**	**21**	**06**	**09.8 +0.5**
PDAR	**Pinedale Array**	**3.33**	**254**	Pn	**Pn**	**21**	**06**	**09.4 +0.2**
	comp=E,2.8nm,0.3s,baz=72,slow=16,SNR=66							
PDAR				Lg	Lg	21	06	55.2
	comp=E,17nm,0.3s,baz=64,slow=35,SNR=6.9							
PDAR				LR	LR	21	06	57.5
	comp=E,66nm,21.2s,baz=82,slow=32							
BW06	**Boulder Array**	**3.33**	**254**		**Pn**	**21**	**06**	**09.8 +0.5**
BW06				IAML		21	06	58.1
	comp=N,48nm,0.5s							
YNE	**Yellowstone No**	**3.64**	**291**		**Pn**	**21**	**06**	**14.7 +1.1**
YMP	**Mirror Lake Pl**	**3.67**	**287**		**Pn**	**21**	**06**	**15.2 +1.2**
OGNE	**Ogallala**	**3.69**	**139**		**Pn**	**21**	**06**	**16.3 +2.2**
GCMT	**Greycliff**	**3.75**	**304**	Pn	**Pn**	**21**	**06**	**16.6 +1.8**
LKWY	**Lake**	**3.81**	**284**		**Pn**	**21**	**06**	**16.8 +1.0**
LKWY				IAML		21	07	22.4
	comp=N,56nm,1.2s							
LKWY				IAML		21	07	30.8
	comp=N,40nm,1.4s							
H17A	**Grant Village**	**3.91**	**281**		**Pn**	**21**	**06**	**19.2 +2.1**
H17A				Pg	**Pb**	**21**	**06**	**28.3 +2.7**
H17A					**Sn**	**21**	**06**	**59.1 -4.8**
H17A				IAML		21	07	21.6
	comp=N,35nm,1.3s							
H17A				IAML		21	07	30.3
	comp=E,30nm,2.5s							
FLWY	**Flagg Ranch**	**3.97**	**276**		**Pn**	**21**	**06**	**19.3 +1.3**
FLWY				IAML		21	07	28.4
	comp=E,50nm,1.9s							
ISCO	**Idaho Springs**	**4.00**	**184**		**Pn**	**21**	**06**	**20.2 +1.8**
MOOW	**Moose Ponds**	**4.00**	**271**		**Pn**	**21**	**06**	**20.1 +1.6**
YNR	**Norris Junctio**	**4.03**	**285**		**Pn**	**21**	**06**	**19.5 +0.6**
SNOW	**Snow King Moun**	**4.03**	**267**		**Pn**	**21**	**06**	**21.0 +2.1**
SNOW				IAML		21	07	36.0
	comp=E,48nm,2.1s							
SNOW				IAML		21	07	40.6
	comp=E,65nm,1.4s							
YPP	**Pitchstone Pla**	**4.06**	**279**		**Pn**	**21**	**06**	**20.5 +1.2**
REDW	**Red Top Meadow**	**4.12**	**266**		**Pn**	**21**	**06**	**22.3 +2.3**
REDW

ASAL				*e*S		**Sn**	**21 09 38.0**	**-0.3**
ASAL				IAML			21 09 39.7	
	comp=Z,488nm,0.4s							
RTLS	**Leoncito**	**1.22**	**30**	*i* P		**Pn**	**21 09 23.9**	**+0.7**
RTLS				IAML			21 09 44.6	
	comp=Z,179nm,0.6s							
RTCV	**Cerro Valdivia**	**1.60**	**52**	*i* P		**Pn**	**21 09 27.3**	**+0.1**
RTCV				IAML			21 09 50.7	
	comp=Z,135nm,0.3s							
ZON	**Zonda**	**1.73**	**41**	*i* P		**Pn**	**21 09 29.1**	**+0.4**
ZON				IAML			21 09 55.4	
	comp=Z,127nm,0.5s							
CO02	**Combarbal**	**1.85**	**333**⇑	*e*P		**Pn**	**21 09 30.5**	**+0.3**
CO02				*i* S		**Sn**	**21 09 54.1**	**-0.5**
CFA	**Coronel Fontan**	**1.96**	**51**	*i* P		**Pn**	**21 09 31.3**	**-0.2**
RTLL	**Cerro Villicun**	**2.01**	**41**	*i* P		**Pn**	**21 09 32.3**	**+0.2**
RTLL				IAML			21 10 01.0	
	comp=Z,229nm,0.3s							
AMOG	**MOGNA**	**2.31**	**35**	*i* P		**Pn**	**21 09 36.5**	**+0.6**
AMOG				IAML			21 10 08.9	
	comp=Z,161nm,0.3s							
ACAN	**Cantantal**	**2.46**	**77**	*i* P		**Pn**	**21 09 37.7**	**0.0**
ACAN				IAML			21 10 09.6	
	comp=Z,42nm,0.5s							
AGUA	**GUANDACOL**	**3.61**	**22**	*i* P		**Pn**	**21 09 53.6**	**+0.8**
AGUA				IAML			21 10 37.8	
	comp=Z,10nm,0.3s							
MRA	**San Martin**	**3.66**	**84**	*i* P		**Pn**	**21 09 52.8**	**-0.6**
MRA				IAML			21 10 56.3	
	comp=Z,23nm,0.7s							
VCA	**Vinchina**	**4.40**	**21**	*i* P		**Pn**	**21 10 04.1**	**+0.7**
VCA				IAML			21 10 57.5	
	comp=Z,52nm,0.2s							
TCA	**Tanti**	**4.85**	**73**	*i* P		**Pn**	**21 10 08.1**	**-1.1**
TCA				IAML			21 11 38.3	
	comp=Z,22nm,0.4s							

NNC 08 21:18:07.2±9.5, 37°34'N×71°33'E, h0km, mb3.7, mpv3.4, 4C-1D, Error ellipse: s-maj=94.7km s-min=62.8km az=144.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.79**	**354**	⇑P	Pn	21 19 35.7	+1.4
	2.9nm,0.3s,baz=173,slow=12,SNR=42						
KK31				⇓S	Sn	21 20 43.6	+2.1
	2.6nm,0.4s,baz=190,slow=24,SNR=8.1						
AAK	**Ala-Archa**	**5.82**	**24**	⇑P	Pn	21 19 35.3	+0.4
	0.8nm,0.5s						
AAK				⇑S	Sn	21 20 42.8	+0.3
	2.5nm,0.6s						
AB31	**Akbulak array**	**14.49**	**329**	⇑P	Pn	21 21 29.7	-3.7
	0.3nm,0.3s						

*ATA **08** 21:41:43.3±1.3, 38°.74N×43°.52E, h21km±8km, ML1.5, MW2.7*
*ISK **08** 21:41:43.7, 38°.69N×43°.48E, h20km, ML1.9/5*
*DDA **08** 21:41:44.7, 38°.73N×43°.44E, h7km±4km, ML1.5*
ISC 08 21:41:43.8±1.1, 38°68'N±0°.04×43°55'E±0°.05, h24km±7km, n15, σ0°93/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.15**	**236**	PG	**Pb**	**21 41 48.9**	**-0.1**
TVAN	**Van**	**0.19**	**217**	*e*P	**Pb**	**21 41 49.0**	**-0.6**
TVAN				*e*S	**Sb**	**21 41 55.6**	**+2.2**
TVAN				IAML		21 41 59.0	
	comp=Z,137nm,1.0s						
TVAN	**Van**	**0.19**	**217**	*i* P	**Pb**	**21 41 48.9**	**-0.6**
TVAN				*i* S	**Sb**	**21 41 53.5**	**+0.1**
TVAN				IAML		21 41 57.0	
	comp=N,189nm,0.5s						
TVAN				IAML		21 41 59.0	
	comp=E,221nm,0.8s						
VMUR	**Van-Muradiye**	**0.31**	**3**	*i* P	**Pb**	**21 41 50.2**	**-0.8**
VMUR				*i* S	**Sb**	**21 41 55.3**	**-0.7**
VMUR				IAML		21 41 56.0	
	comp=N,59nm,0.5s						
VMUR				IAML		21 41 59.0	
	comp=E,75nm,0.5s						
GEVA	**Gevas**	**0.54**	**227**	*e*P	**Pb**	**21 41 54.8**	**+0.1**
GEVA				*e*S	**Sn**	**21 42 04.0**	**-0.5**
GEVA				IAML		21 42 06.0	
	comp=Z,14nm,0.9s						
GEVA	**Gevas**	**0.54**	**227**	*i* P	**Pb**	**21 41 54.4**	**-0.3**
GEVA				*i* S	**Sn**	**21 42 03.7**	**-0.7**
CLDR	**Caldiran**	**0.54**	**31**	PG	**Pb**	**21 41 55.2**	**+0.3**
CLDR				SG	**Sn**	**21 42 03.9**	**-0.8**
CLDR	**Caldiran**	**0.54**	**31**	*i* P	**Pb**	**21 41 54.9**	**+0.1**
CLDR				*i* S	**Sn**	**21 42 04.4**	**-0.3**
CLDR				IAML		21 42 05.0	
	comp=N,31nm,0.3s						
CLDR				IAML		21 42 05.0	
	comp=E,31nm,0.5s						
AKDM	**Akdamar-Van**	**0.57**	**232**	PG	**Pb**	**21 41 54.9**	**-0.4**
MLAZ	**Malazgirt-MUS**	**0.91**	**301**	PG	**Pn**	**21 42 00.7**	**-0.5**
MLAZ				SG	**Sn**	**21 42 13.2**	**-0.4**
TUTA	**Tutak**	**0.92**	**322**	*e*P	**Pb**	**21 41 59.9**	**-1.3**
TUTA				*e*S	**Sn**	**21 42 13.6**	**-0.5**
TUTA				IAML		21 42 14.8	
	comp=Z,16nm,0.2s						
TUTA	**Tutak**	**0.92**	**322**	*i* P	**Pb**	**21 42 00.5**	**-0.8**
TUTA				*i* S	**Sn**	**21 42 13.4**	**-0.7**
TUTA				IAML		21 42 18.0	
	comp=N,25nm,0.3s						
AGRB	**Hanur-Agry**	**0.99**	**334**	PG	**Pn**	**21 42 02.7**	**+0.3**
AGRB				SG	**Sn**	**21 42 16.4**	**+0.6**
EATA	**Eleskirt**	**1.44**	**325**	*e*P	**Pb**	**21 42 10.6**	**+0.4**
EATA				*e*S	**Sb**	**21 42 30.8**	**+2.6**
EATA				IAML		21 42 35.6	
	comp=E,2.6nm,0.5s						
MUSM	**Mu-Merkez**	**1.60**	**272**	*e*P	**Pb**	**21 42 12.6**	**-0.1**

SKO 08 21:50:29.3, 41°08N×22°16E, h0km, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STIP	**Stip**	**0.61**	**2**	*e*Pg	Pb	21 50 43.7	+0.7
STIP				*e*Sg	Sb	21 50 51.9	-0.3

*SJA **08** 21:59:10.8±1.1, 23°.45S×66°.72W, h212km±13km, ML3.3, MW3.4*
*GUC **08** 21:59:12.8±0.6, 23°.34S×67°.23W, h238km±7km, ML4.2*
ISC 08 21:59:09.4±2.3, 23°44S±0°.06×66°75W±0°.06, h226km±18km, n30, σ1°62/44, 5C-2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HJA	**Humahuaca**	**1.25**	**80**	*i* P	**Pn**	**21 59 44.5**	**+0.5**
HJA				IAML		21 59 45.6	
	comp=Z,51nm,0.5s						
HJA				*e*S	**S**	**22 00 09.7**	**-1.2**
YJA	**Yavi**	**1.70**	**42**	*i* P	**Pn**	**21 59 48.6**	**+1.0**
YJA				*e*S	**S**	**22 00 16.4**	**-1.0**
SLA	**San Lorenzo**	**1.71**	**138**	*i* P	**Pn**	**21 59 48.8**	**+1.4**
SLA				IAML		21 59 49.3	
	comp=Z,65nm,0.6s						
AZAP	**Zapla**	**1.73**	**117**	*i* P	**Pn**	**21 59 48.0**	**+0.4**
LVC	**Limon Verde**	**2.15**	**292**⇑	*i* P	**Pn**	**21 59 53.2**	**+1.4**
LVC				*i* S	**S**	**22 00 24.1**	**-0.7**
LVC	**Limon Verde**	**2.15**	**292**	*i* P	**Pn**	**21 59 53.5**	**+1.7**
PB15	**IPOC Station P**	**2.51**	**275**⇓	*i* P	**Pn**	**21 59 56.8**	**+1.5**
PB15				*i* S	**S**	**22 00 30.6**	**-0.4**
PB15	**IPOC Station P**	**2.51**	**275**	*i* P	**Pn**	**21 59 56.8**	**+1.5**
PB06	**IPOC Station P**	**2.70**	**285**	*i* P	**Pn**	**21 59 58.6**	**+1.4**
PB06				*i* S	**S**	**22 00 33.6**	**-1.0**
PB06				IAML		22 00 34.2	
	comp=N,621nm,0.5s						
PB06	**IPOC Station P**	**2.70**	**285**	*i* P	**Pn**	**21 59 58.7**	**+1.4**
PB09	**IPOC Station P**	**2.83**	**305**	*i* P	**Pn**	**22 00 00.6**	**+1.9**
PB09				*e*P		22 00 00.6	
PB09				*i* S	**S**	**22 00 38.7**	**+1.6**
PB09	**IPOC Station P**	**2.83**	**305**	*i* P	**Pn**	**22 00 00.7**	**+2.1**
PB09				IAML		22 00 39.8	
	comp=Z,109nm,0.5s						
PB03	**IPOC Station P**	**3.10**	**296**⇑	*i* P	**Pn**	**22 00 03.0**	**+1.3**
PB03				*i* S	**S**	**22 00 41.0**	**-1.6**
PB03				IAML		22 00 41.5	
	comp=N,479nm,0.3s						
PB03	**IPOC Station P**	**3.10**	**296**	*i* P	**Pn**	**22 00 03.0**	**+1.3**
GO02	**Mina Guanaco**	**3.10**	**236**⇑	*i* P	**Pn**	**22 00 03.1**	**+1.2**
GO02				*i* S	**S**	**22 00 42.9**	**-0.1**
GO02				IAML		22 00 45.2	
	comp=N,263nm,0.5s						
PB05	**IPOC Station P**	**3.23**	**280**⇑	*i* P	**Pn**	**22 00 04.3**	**+1.2**
PB05				*i* S	**S**	**22 00 43.2**	**-2.0**
PB05				IAML		22 00 48.0	
	comp=E,165nm,0.2s						
PB05	**IPOC Station P**	**3.23**	**280**	*i* P	**Pn**	**22 00 04.3**	**+1.2**
PB04	**IPOC Station P**	**3.32**	**289**⇑	*i* P	**Pn**	**22 00 05.5**	**+1.2**
PB04				*i* S	**S**	**22 00 45.5**	**-1.7**
PB04				IAML		22 00 51.6	
	comp=N,315nm,0.1s						
PB04	**IPOC Station P**	**3.32**	**289**	*i* P	**Pn**	**22 00 05.8**	**+1.5**
PB04				IAML		22 00 50.4	
	comp=Z,226nm,0.3s						
PB10	**IPOC Station P**	**3.49**	**268**⇓	*i* P	**Pn**	**22 00 07.2**	**+1.2**
PB10				*i* S	**S**	**22 00 48.0**	**-2.5**
PB10				IAML		22 00 51.3	
	comp=E,111nm,0.2s						
PB10	**IPOC Station P**	**3.49**	**268**	*i* P	**Pn**	**22 00 07.7**	**+1.6**
PB14	**IPOC Station P**	**3.54**	**250**	*e*P	**Pn**	**22 00 07.7**	**+0.8**
PB14				*i* S	**S**	**22 00 50.0**	**-2.1**
PB14	**IPOC Station P**	**3.54**	**250**	*i* P	**Pn**	**22 00 08.0**	**+1.1**
PB08	**IPOC Station P**	**3.97**	**325**	*i* P	**Pn**	**22 00 14.6**	**+2.3**
PATCX	**Punta Patache**	**4.09**	**309**	*e*P	**Pn**	**22 00 14.1**	**+0.7**
PATCX				*i* S	**S**	**22 01 00.6**	**-3.1**
TA01	**Diego Aracena**	**4.28**	**311**	*e*P	**Pn**	**22 00 16.6**	**+1.1**
TA01				*i* S	**S**	**22 01 05.2**	**-2.5**
TA01				IAML		22 01 06.6	
	comp=E,135nm,0.3s						
PB11	**IPOC Station P**	**4.55**	**323**	*e*P	Pn	22 00 08.5	-11
PB11				*i* S	**S**	**22 01 12.0**	**-2.1**
PB11	**IPOC Station P**	**4.55**	**323**	*i* P	**Pn**	**22 00 20.9**	**+1.8**
PSGCX	**Pisagua**	**4.95**	**320**	*i* P	**Pn**	**22 00 25.5**	**+1.5**
MNMC	**Minye Minye**	**5.04**	**328**	*e*P	Pn	22 00 18.9	-6.4
MNMC				*i* S	**S**	**22 01 23.4**	**-1.9**

*NIC **08** 22:03:30.2±0.0, 34°.93N×32°.95E, h38km±1km, Md2.7/5, Ml2.2/3*
*ISK **08** 22:03:32.0, 35°.21N×33°.11E, h8km, ML1.9/9*
ISC 08 22:03:30.8±1.0, 34°93N±0°.04×32°96E±0°.04, h34km±6km, n16, σ0°72/21, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.18**	**200**	P	**Pn**	**22 03 36.9**	**+1.1**
SZAC				S	**Sb**	**22 03 42.5**	**+0.6**
SZAC				AML	AML	22 03 42.6	
	1.4nm,0.2s						
SZAC				AML	AML	22 03 42.6	
	1.4nm,0.2s						
SZAC				AML	AML	22 03 43.2	
	0.9nm,0.2s						
SZAC				AML	AML	22 03 43.2	
	0.9nm,0.2s						
SZAC				AMd		22 04 06.6	
SZAC				AMd		22 04 06.6	
LEF	**Lefka**	**0.20**	**344**	PG	**Pn**	**22 03 37.4**	**+1.2**
ASGA	**Asgata**	**0.28**	**120**	P	**Pb**	**22 03 38.0**	**-0.4**
ASGA				AML	AML	22 03 44.2	
	1.6nm,0.1s						
ASGA				AML	AML	22 03 44.2	
	1.6nm,0.1s						
ASGA				S	**Sb**	**22 03 44.3**	**+0.7**
ASGA				AML	AML	22 03 44.4	
	0.8nm,0.2s						
ASGA				AML	AML	22 03 44.4	
	0.8nm,0.2s						
ASGA				AMd		22 04 14.1	
ASGA				AMd		22 04 14.1	
CSS	**Mathiatis**	**0.31**	**83**	PG	**Pb**	**22 03 38.5**	**-0.3**
CSS	**Mathiatis**	**0.31**	**83**	P	**Pb**	**22 03 38.4**	**-0.3**
CSS				S	**Sb**	**22 03 45.0**	**+0.7**
CSS				AMd		22 04 12.5	
CSS				AMd		22 04 12.5	
NATA	**Nata**	**0.35**	**245**	P	**Pb**	**22 03 39.0**	**-0.3**
NATA				AMd		22 04 11.8	
ALFC	**Alefka**	**0.37**	**308**	P	**Pb**	**22 03 39.1**	**-0.6**
ALFC				AML	AML	22 03 45.6	
	1.0nm,0.2s						
ALFC				AML	AML	22 03 45.6	
	1.0nm,0.2s						
ALFC				S	**Sb**	**22 03 45.9**	**+0.2**
ALFC				AML	AML	22 03 46.1	
	0.9nm,0.3s						
ALFC				AML	AML	22 03 46.1	
	0.9nm,0.3s						
AKMS	**Akamas**	**0.52**	**280**	P	**Pn**	**22 03 41.2**	**-0.6**
AKMS				S	**Sn**	**22 03 49.3**	**-0.1**
AKMS				AMd		22 04 16.3	
AKMS				AMd		22 04 16.3	
MVOU	**Mavrovouni**	**0.56**	**81**	P	**Pn**	**22 03 42.1**	**-0.2**
TEKE	**Tekeli-Mersin**	**1.22**	**6**	PG	**Pn**	**22 03 51.1**	**-0.3**
AKKU	**Akkuyu-Mersin**	**1.32**	**21**	PG	**Pn**	**22 03 51.5**	**-1.3**
GAZI	**Gazipasa**	**1.41**	**338**	PN	**Pn**	**22 03 55.0**	**+1.0**
BERE	**Bereket-Mersin**	**1.43**	**9**	PN	**Pn**	**22 03 54.1**	**-0.4**
IKL	**Isikli**	**1.44**	**24**	PN	**Pn**	**22 03 53.9**	**-0.5**
TEVE	**Tevekalti-Mers**	**1.56**	**15**	PN	**Pn**	**22 03 56.6**	**+0.5**
KEBE	**Keben-Mersin**	**1.64**	**22**	PN	**Pn**	**22 03 57.6**	**+0.4**

*IDC **08** 22:05:58.5±0.4, 1°.42N×126°.12E, h0km, mb4.5/29, mb1 4.5/31, mb1mx4.5/51, mbtmp4.4/31, ML4.0/2, MS3.5/6, Ms1 3.5/6, ms1mx3.1/41, Error ellipse: s-maj=19.0km s-min=10.5km az=68.0*
*BJI **08** 22:06:01.5±0.0, 1°.51N×126°.44E, h25km, mB5.1/36, mb4.7/45, Ms4.7/10, Ms7 4.4/5*
*NEIC **08** 22:06:03.3±2.8, 1°.34N±0°.07×126°.33E±0°.05, h35km±1km, mb4.7/50, Error ellipse: s-maj=12.5km s-min=8.2km az=194.0*
*DJA **08** 22:06:05.4±0.2, 1°N±2°×12°6E±°, h45km±3km, M4.5/24, mb4.8/24, mB4.9/9, MLv4.7/14, Mw(mB)4.2/9*
ISC 08 22:06:05.1±0.3, 1°41N±0°.03×126°36E±0°.04, h47km, n157, σ1°57/158, mb4.6/64, MS3.6/7, 2C-2D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.19**	**122**	P	**Pn**	**22 06 23.8**	**-1.6**
TNTI				S	**Sn**	**22 06 40.0**	**-0.5**
TNTI	**Ternate**	**1.19**	**122**		**Pn**	**22 06 24.0**	**-1.4**
TNTI					**Sn**	**22 06 35.6**	**-4.9**
LBMI	**Labuha**	**2.33**	**151**	P	**Pn**	**22 06 40.2**	**-0.9**
LBMI				S	**Sn**	**22 07 09.3**	**+0.7**
KMSI	**Cibinong**	**2.52**	**251**	P	**Pn**	**22 06 43.0**	**-0.6**
SANI	**Sanana**	**3.46**	**186**	P	**Pn**	**22 06 55.4**	**-1.1**
SANI				S	**Sn**	**22 07 35.5**	**-0.7**
LUWI	**Luwuk**	**4.33**	**236**	P	**Pn**	**22 07 09.1**	**+0.6**
LUWI	**Luwuk**	**4.33**	**236**		**Pn**	**22 07 06.9**	**-1.6**
MRSI	**Marisa**	**4.51**	**258**	P	**Pn**	**22 07 12.7**	**+1.7**
NLAI	**Namlea**	**4.68**	**171**	P	**Pn**	**22 07 16.1**	**+2.8**
DDMP	**Don Marcelino,**	**4.71**	**352**	*e*P	**Pn**	**22 07 16.1**	**+2.4**
DDMP				*e*S	**Sn**	**22 08 07.2**	**+0.2**
GSPH	**General Santos**	**4.85**	**343**⇑	*i*P	**Pn**	**22 07 17.2**	**+1.5**
GSPH				*i* S	**Sn**	**22 08 07.5**	**-3.3**
APSI	**Ampana**	**5.24**	**244**	P	**Pn**	**22 07 22.6**	**+1.6**
	1.8nm5μm631nm,1.2s						
AAI	**Ambon**	**5.39**	**160**	P	Pn	22 07 35.2	+12
SKMP	**Bagumbayan, Su**	**5.39**	**340**	*e*P	**Pn**	**22 07 23.0**	**0.0**
SKMP				*e*S	**Sn**	**22 08 21.3**	**-2.5**
SWI	**Sorong**	**5.40**	**115**	P	Pn	22 07 31.2	+8.0
SIJI	**Sorong**	**5.41**	**115**	Pn	**Pn**	**22 07 23.3**	**0.0**
	1.8nm,0.3s,baz=324,slow=19,SNR=3.7						
DAV	**Davao City (W)**	**5.67**	**352**	LR		22 09 52.1	
	comp=Z,409nm,20.9s,baz=204,slow=41						
KCP	**Kidapawan**	**5.70**	**347**⇓	*e*P		**22 07 28.6**	**+1.2**
KCP				*i* S	Sn	22 08 21.4	-10
CTBH	**Cotabato--PC H**	**6.14**	**340**⇑	*i*P	**Pn**	**22 07 34.4**	**+1.0**
KDI	**Kendari**	**6.51**	**215**	P	**Pn**	**22 07 41.4**	**+3.0**
	0.3nm67nm,0.7s						
MPSI	**Mapaga**	**6.54**	**261**	P	**Pn**	**22 07 41.5**	**+2.6**
	0.3nm717nm72nm,1.1s						
FAKI	**Fak Fak**	**7.29**	**126**	Pn	**Pn**	**22 07 48.8**	**-0.4**
BBSI	**Bau Bau**	**7.83**	**209**	P	**Pn**	**22 07 58.0**	**+1.5**
	0.1nm376nm43nm,1.0s						
TTSI	**Tana Toraja**	**7.89**	**236**	P	**Pn**	**22 07 57.7**	**+0.3**
	0.5nm88nm,0.6s						
SPSI	**Sidrap Palu**	**8.48**	**231**	P	**Pn**	**22 08 06.0**	**+0.6**
	733nm76nm,1.1s						
BNSI	**Bone**	**8.51**	**227**	P	**Pn**	**22 08 06.4**	**+0.6**
	796nm53nm,0.7s						
BKSI	**Bulukumba**	**9.14**	**223**	P	**Pn**	**22 08 16.1**	**+1.6**
	503nm40nm,0.7s						
KAPI	**Kappang**	**9.18**	**226**	Pn	**Pn**	**22 08 15.0**	**0.0**
	4.5nm,0.3s,baz=183,slow=7.2,SNR=7.6						
KAPI				Sn	**Sn**	**22 09 56.8**	**-0.3**
	0.4nm,0.3s,baz=88,slow=20,SNR=1.4						
KAPI	**Kappang**	**9.18**	**226**		**Pn**	**22 08 15.6**	**+0.5**
BAKI	**Biak**	**10.09**	**105**	P	Pn	22 08 39.4	+12
KKM	**Kota Kinabalu**	**11.12**	**295**	Pn	**Pn**	**22 08 45.4**	**+3.8**
SOEI	**Soe**	**11.29**	**191**	P	**Pn**	**22 08 46.9**	**+2.9**
	54nm,0.9s						
SOEI	**Soe**	**11.29**	**191**		Pn	22 08 51.2	+7.2
PLAI	**Plampang**	**13.29**	**220**	P	**P**	**22 09 20.3**	**+0.5**
TWSI	**Taliwang, Sumb**	**13.81**	**223**	P	**P**	**22 09 25.2**	**-0.4**
SBUM	**Sibu**	**14.17**	**274**	P	**P**	**22 09 30.7**	**+1.1**
SRBI	**Singaraja**	**14.58**	**230**	P	P	22 09 40.6	+6.5
JAGI	**Jajag, Banyuwa**	**15.63**	**231**	P	**P**	**22 09 49.9**	**+4.0**
JAGI	**Jajag, Banyuwa**	**15.63**	**231**	P	**Pn**	**22 09 42.1**	**-0.4**
JAGI				IAmb	IAmb	22 09 57.3	
	comp=Z,60nm,1.0s						
JAGI					**Sn**	**22 12 31.7**	**-3.1**
KSM	**Kuching**	**16.04**	**270**	P	**P**	**22 09 51.5**	**+1.1**
KSM				IAmb	IAmb	22 09 59.0	
	comp=Z,48nm,0.9s						
KNRA	**Kununurra**	**17.14**	**172**		**Pn**	**22 09 59.0**	**-2.4**
KNRA				IAmb	IAmb	22 10 08.4	
	comp=Z,94nm,1.3s						
FITZ	**Fitzroy Crossi**	**19.40**	**182**	P	**P**	**22 10 26.3**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=339,slow=5.4,SNR=13						
FITZ				LR	LR	22 20 09.9	
	comp=Z,36nm,19.1s,baz=8.0,slow=44						
FITZ	**Fitzroy Crossi**	**19.40**	**182**	P	**P**	**22 10 24.5**	**-2.9**
KPJI	**Karang Pucung**	**19.43**	**243**	P	**Pn**	**22 10 28.9**	**-0.5**
	comp=Z,36nm,1.0s						
YULB	**Yu-li**	**22.39**	**348**	P	**P**	**22 10 55.9**	**-3.9**
YULB				IAmb	IAmb	22 11 03.8	
	comp=Z,44nm,1.3s						
KLSI		**22.44**	**254**	P	P	22 11 10.1	+10
TPUB	**Ta-pu**	**22.46**	**346**	P	**P**	**22 10 57.4**	**-3.0**
TPUB				IAmb	IAmb	22 11 08.6	
	comp=Z,38nm,0.8s						
COEN	**Coen**	**22.60**	**133**	P	**P**	**22 11 01.4**	**-0.6**
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**22 11 01.2**	**-0.9**
	comp=Z,24nm,0.6s,baz=338,slow=11,SNR=100						
WRA				PcP	**PcP**	**22 14 54.3**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=338,slow=2.2,SNR=5.7						
WRA				S	**S**	**22 15 06.2**	**-0.7**
	comp=Z,2.9nm,1.0s,baz=332,slow=14,SNR=5.3						
WRA	**Warramunga Arr**	**22.62**	**160**	IAmb	IAmb	22 11 03.8	
	comp=Z,1.2nm,0.8s						
WR0	**Warramunga Arr**	**22.70**	**160**	P	**P**	**22 11 02.8**	**-0.3**
WR0				IAmb	IAmb	22 11 08.1	
	comp=Z,30nm,0.9s						
SSLB	**Suanglung**	**22.85**	**347**	P	**P**	**22 11 03.0**	**-1.6**
SSLB				IAmb	IAmb	22 11 14.2	
	comp=Z,33nm,1.0s						
MDSI	**Maura Dua**	**22.92**	**255**	P	**P**	**22 11 07.5**	**+2.1**
	comp=Z,9.1nm,0.8s						
PMG	**Port Moresby**	**23.34**	**118**	LR	LR	22 23 03.0	
	comp=Z,212nm,18.1s,baz=324,slow=44						
YHNB	**Yeheng**	**23.62**	**349**	P	**P**	**22 11 11.7**	**-0.4**
PSA00	**Pilbara Seismi**	**23.71**	**195**	P	**P**	**22 11 13.3**	**+0.3**
KULM	**Kulim**	**25.95**	**279**	P	**P**	**22 11 31.9**	**-1.6**
ASAR	**Alice Springs**	**25.99**	**164**	P	**P**	**22 11 33.4**	**-0.3**
	comp=Z,11nm,0.8s,baz=346,slow=8.4,SNR=40						
ASAR				PcP	**PcP**	**22 15 01.8**	**+0.4**
	comp=Z,4.4nm,0.6s,baz=346,slow=2.3,SNR=14						
ASAR				S	**S**	**22 16 03.0**	**+1.7**
	comp=Z,1.6nm,1.0s,baz=347,slow=19,SNR=4.6						
KRVT	**Keravat (AS076**	**26.27**	**103**	LR	LR	22 20 55.3	
	comp=Z,155nm,18.2s,baz=267,slow=34						
RPSI	**Rantau Prapat**	**27.44**	**273**	P	**P**	**22 11 44.9**	**-2.1**
PSI	**Prapat**	**27.45**	**273**	P	**P**	**22 11 44.9**	**-2.3**
	comp=Z,3.0nm,0.3s,baz=84,slow=3.3,SNR=5.2						
GSI	**Gunungsitoli**	**28.77**	**270**	P	**P**	**22 11 56.4**	**-2.4**
GSI				IAmb	IAmb	22 12 08.8	
	comp=Z,18nm,1.0s						
CTA	**Charters Tower**	**28.93**	**139**	P	**P**	**22 12 02.0**	**+1.8**
	comp=Z,1.7nm,0.5s,baz=322,slow=13,SNR=3.2						
JCJ	**Chichijima**	**29.71**	**29**	P	**P**	**22 12 07.9**	**+0.9**
	comp=Z,76nm,0.8s,baz=246,slow=20,SNR=2.8						
NJ2	**Nanjing**	**31.29**	**348**	*e*P	**P**	**22 12 21.8**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**31.78**	**304**	P	**P**	**22 12 24.1**	**-1.3**
	comp=Z,0.6nm,0.3s,baz=106,slow=6.7,SNR=3.4						
CMAR				PcP	**PcP**	**22 15 16.4**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=179,slow=2.4,SNR=5.9						
CMAR				LR	LR	22 25 24.5	
	comp=Z,76nm,20.9s,baz=153,slow=37						
CHTO	**Chiang Mai**	**31.95**	**305**	P	**P**	**22 12 25.9**	**-0.9**
FORT	**Forrest**	**32.05**	**177**	P	**P**	**22 12 27.6**	**0.0**
KMI	**Kunming**	**32.79**	**318**	P	**P**	**22 12 38.2**	**+3.8**
KMI				pP	pP	22 12 44.5	-1.8
KMI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,120nm,4.1s						
KMI				LR	LR		
	comp=Z,250nm,25.6s						
KMI				LR	LR		
	comp=Z,140nm,26.6s						
INU	**Inuyama**	**35.19**	**15**	P	**P**	**22 12 55.8**	**+1.0**
NWAO	**Narrogin (SRO)**	**35.22**	**193**	P	**P**	**22 12 55.8**	**+0.7**
BBOO	**Buckleboo**	**35.25**	**166**	P	**P**	**22 12 55.1**	**-0.2**
KSRS	**Korea Array**	**35.90**

comp=Z,32nm,0.8s
GUN Gumba 46.81 308 *e*P **P 22 14 29.3 -1.7**
comp=Z,18nm,0.5s
PKIN Phulchoki 47.05 307 *e*P **P 22 14 31.5 -1.2**
comp=Z,3.9nm,0.5s
KKN Kakani 47.23 308 *e*P **P 22 14 33.1 -1.0**
comp=Z,5.0nm,0.5s
DMN Daman 47.29 307 *e*P **P 22 14 33.8 -0.8**
HIA Hailar 48.01 354 P **P 22 14 40.4 +0.9**
HIA IAmb IAmb 22 14 41.3
comp=Z,9.7nm,1.1s
DANN Dangsing 48.69 307 *e*P **P 22 14 44.1 -1.3**
comp=Z,25nm,0.7s
ULN Ulaanbaatar 49.20 343 P **P 22 14 49.5 +0.7**
ULN IAmb IAmb 22 14 51.7
comp=Z,3.4nm,0.6s
SONM Songino Array 49.37 342 P **P 22 14 50.0 -0.1**
comp=Z,1.9nm,0.6s,baz=153,slow=8.0,SNR=16
SONM PcP **PcP 22 16 12.6 +0.6**
comp=Z,2.0nm,0.8s,baz=161,slow=3.2,SNR=6.7
SONM LR LR 22 38 10.5
comp=Z,47nm,19.0s,baz=252,slow=39
SONM Songino Array 49.37 342 P **P 22 14 49.0 -1.1**
WMQ Urumqi 54.41 326 *e*P **P 22 15 31.0 +3.3**
WMQ pmax pmax
comp=Z,140nm,5.7s
WMQ LR LR
comp=Z,390nm,29.1s
WMQ LR LR
comp=Z,1μm,28.8s
WMQ Urumqi 54.41 326 P **P 22 15 27.1 -0.6**
WMQ IAmb IAmb 22 15 31.9
comp=Z,8.4nm,0.6s
PETK Petropavlovsk- 57.70 22 P **P 22 15 51.8 +0.8**
comp=Z,6.8nm,0.5s,baz=184,slow=6.7,SNR=51
NIL Nilore 59.06 309 P **P 22 16 00.1 -0.7**
NIL IAmb IAmb 22 16 08.7
comp=Z,11nm,1.4s
MK31 Makanchi Array 59.25 326 P **P 22 16 00.9 -0.9**
MK31 IAmb IAmb 22 16 06.3
comp=Z,3.4nm,0.8s
MKAR Makanchi Array 59.25 326 P **P 22 16 00.9 -0.9**
comp=Z,3.7nm,0.5s,baz=120,slow=8.4,SNR=57
MKAR PcP **PcP 22 16 49.5 -0.2**
comp=Z,2.7nm,0.8s,baz=125,slow=4.3,SNR=4.6
MKAR PKP2bc PKPPKPbc 22 45 44.7
comp=Z,0.4nm,0.9s,baz=333,slow=1.6,SNR=3.7
KSH Kashi 59.43 316 P **P 22 16 05.4 +2.0**
KSH pmax pmax
comp=Z,360nm,6.8s
MAKZ Makanchi 59.43 326 P **P 22 16 02.5 -0.6**
MAKZ IAmb IAmb 22 16 08.1
comp=Z,7.3nm,1.1s
YAK Yakutsk 60.52 2 P **P 22 16 10.9 +0.7**
AAK Ala-Archa 61.83 319 P **P 22 16 17.9 -1.8**
comp=Z,1.0nm,0.7s,baz=99,slow=8.7,SNR=2.2
ARSB Arslanbob 62.27 317 P **P 22 16 21.2 -1.5**
ARSB IAmb IAmb 22 16 38.4
comp=Z,9.8nm,1.2s
ZAA0 Zalesovo Array 62.48 334 P **P 22 16 22.8 -0.8**
ZALV Zalesovo Beam 62.48 334 P **P 22 16 21.7 -1.9**
comp=Z,2.1nm,0.6s,baz=146,slow=9.2,SNR=9.2
ZALV Zalesovo Beam 62.48 334 P **P 22 16 22.5 -1.1**
GAR Garm 63.23 314 P **P 22 16 26.9 -2.2**
BTK Batken 63.27 315 IAmb IAmb 22 16 33.8
comp=Z,6.0nm,1.1s
KURBB Kurchatov Arra 63.49 328 P **P 22 16 29.2 -1.2**
comp=Z,5.3nm,0.5s,baz=127,slow=6.0,SNR=13
KURK Kurchatov 63.49 328 P **P 22 16 29.2 -1.2**
KURK Kurchatov 63.49 328 IAmb IAmb 22 16 37.2
comp=Z,10nm,0.7s
KKAR Karatay Array 64.68 318 P **P 22 16 38.7 +0.3**
HRA Herat 67.99 307 P **P 22 16 59.0 -1.1**
BVAR Borovoye Array 69.06 328 P **P 22 17 05.1 -0.9**
comp=Z,2.1nm,0.6s,baz=128,slow=9.6,SNR=26
TIXI Tiksi 70.15 1 P **P 22 17 12.2 -0.2**
ATKA Atka Island 70.61 34 P **P 22 17 16.6 +1.1**
GEYT Alibeck 72.06 309 P **P 22 17 23.4 -1.3**
comp=Z,2.8nm,0.8s,baz=126,slow=2.5,SNR=4.9
GEYT Alibeck 72.06 309 IAmb IAmb 22 17 29.0
comp=Z,2.3nm,0.8s
ABKAR Akbulak array 73.70 321 P **P 22 17 33.3 -0.9**
ABKAR Akbulak array 73.70 321 P **P 22 17 32.6 -1.5**
ABKAR IAmb IAmb 22 17 45.1
comp=Z,4.0nm,0.8s
AKTO Aktyubinsk 75.24 322 P **P 22 17 42.1 -0.9**
comp=Z,6.2nm,0.7s,baz=107,slow=5.8,SNR=18
ARU Arti 76.69 328 P **P 22 17 50.5 -0.7**
comp=Z,2.8nm,0.6s,baz=133,slow=4.0,SNR=14
ARU Arti 76.69 328 P **P 22 17 50.9 -0.2**
RAYN Ar Rayn 81.05 293 P **P 22 18 14.9 -0.9**
RAYN IAmb IAmb 22 18 19.9
comp=Z,3.5nm,0.7s
VNDA Vanda 81.19 173 P **P 22 18 16.1 +0.7**
comp=Z,1.3nm,0.6s,baz=329,slow=6.2,SNR=7.9
GNI Garni 82.68 310 P **P 22 18 23.5 -0.7**
comp=Z,0.9nm,0.4s,baz=149,slow=12,SNR=2.5
GNI Garni 82.68 310 IAmb IAmb 22 18 42.6
comp=Z,8.4nm,1.1s
SVW2 Sparrevohn 83.00 29 P **P 22 18 27.3 +2.1**
SVW2 IAmb IAmb 22 18 28.8
comp=Z,9.7nm,0.9s
KBZ Khabaz 84.30 314 P **P 22 18 32.0 -0.2**
comp=Z,2.6nm,0.8s,baz=208,slow=5.3,SNR=5.1
ILAR Eielson Array 87.34 25 P **P 22 18 45.8 -1.1**
comp=Z,0.9nm,0.6s,baz=247,slow=4.8,SNR=18
ASF Jabal al Asfar 88.80 302 P **P 22 18 54.3 -0.4**
comp=Z,3.3nm,0.7s,baz=154,slow=4.6,SNR=7.4
MMAI Mount Meron Ar 90.04 303 P **P 22 19 00.6 +0.2**
comp=Z,2.5nm,0.7s,baz=76,slow=6.1,SNR=3.0
BRTR Keskin Array B 91.20 310 P **P 22 19 04.1 -1.6**
comp=Z,1.1nm,0.8s,baz=102,slow=3.2,SNR=5.0
ARCES ARCESS Array B 92.48 340 P **P 22 19 10.0 -0.8**
comp=Z,4.5nm,0.8s,baz=81,slow=5.6,SNR=5.5
AKASG Malin Array Be 93.44 321 P **P 22 19 15.1 -0.6**
comp=Z,0.6nm,0.6s,baz=67,slow=5.2,SNR=2.9
FINES FINESS Array B 93.68 332 P **P 22 19 16.9 +0.4**
comp=Z,2.0nm,0.6s,baz=66,slow=3.5,SNR=2.4
TESR Tescani 95.67 317 ⇓P **P 22 19 30.1 +4.1**
BUR08 Bucovina Ar. S 96.47 318 IAmb IAmb 22 19 34.9
comp=Z,2.9nm,0.8s
VYHS Vyhne 100.48 320 *e*PDIFF **Pdif 22 19 47.7 +0.1**
YKA Yellowknife Ar 101.75 24 P **Pdif 22 19 53.6 +0.8**
comp=Z,0.2nm,0.5s,baz=293,slow=4.3,SNR=4.8
CLL Collm 103.28 324 *e*PP **PKiKP 22 24 14.0 -5.0**
ULM Lac du Bonnet 117.16 29 PKP **PKPdf 22 24 44.9 -0.4**
comp=Z,1.8nm,0.7s,baz=276,slow=2.5,SNR=4.0
TX31 Lajitas Ar. Si 123.29 53 PKPdf 22 24 57.1 -0.7
TX32 Lajitas Array 123.29 53 PKPdf 22 24 57.4 -0.4
TXAR Lajitas Array 123.29 53 PKP **PKiKP 22 24 59.0 +0.9**
comp=Z,0.8nm,0.7s,baz=215,slow=1.6,SNR=11
JCT Junction City 125.80 50 PKiKP 22 25 04.2 +1.2
PLCA Paso Flores 137.97 161 PKP **PKiKP 22 25 26.2 -1.0**
comp=Z,2.1nm,0.7s,baz=280,slow=4.7,SNR=5.3
LPAZ La Paz 159.45 137 PKP **PKPdf 22 26 01.9 +1.6**
comp=Z,1.2nm,0.8s,baz=278,slow=3.3,SNR=6.2

*IDC **08** 22:07:29.8±0.6,6.°59S×30.°87E,h0km,mb4.4/22, mb1 4.4/28,mb1mx4.3/50,mbtmp4.3/28,ML1.9/1,MS3.9/22, Ms1 3.9/22,ms1mx3.8/39,Error ellipse: s-maj=19.0km s-min=12.8km az=91.0*
*NEIC **08** 22:07:31.0±1.8,6.°52S±0.°07×30.°99E±0.°04,h10km±1km, mb4.7/28,Error ellipse: s-maj=11.5km s-min=7.3km az=176.0*
ISC 08 22:07:30.9±0.3,**6.°61S**±0.°04×**30.°93E**±0.°06,**h10**km,**n146,** σ**2s00**/146,**mb4.6**/53,**MS3.9**/19,**14C-5D,Lake Tanganyika region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**5.97**	**358**	Pn		**Pn**	**22 09 00.1**	**+0.5**
	51nm,0.3s,baz=184,slow=15,SNR=73							
MBAR				Sn		**Sn**	**22 10 04.5**	**-3.6**
	354nm,0.3s,baz=215,slow=19,SNR=4.9							
MBAR				Lg		Lg	22 10 29.2	
	396nm,0.3s,baz=170,slow=22,SNR=3.5							
MBAR				LR		LR	22 11 23.1	
	comp=Z,1μm,18.9s,baz=178,slow=39							
MBAR	**Mbarara**	**5.97**	**358**	*e*P		**Pn**	**22 09 00.5**	**+1.0**
MBAR				⇑eS		**Sb**	**22 10 29.5**	**+2.7**
MBAR	**Mbarara**	**5.97**	**358**			**Pn**	**22 08 59.5**	**-0.1**
MBAR				Sn		**Sn**	**22 10 02.1**	**-6.1**
KMBO	**Kilima Mbogo**	**8.33**	**49**	*i*		**Pn**	**22 09 33.0**	**+0.9**
	baz=86,slow=18							
KMBO				*i* P		**Pn**	**22 09 33.0**	**+0.9**
KMBO	**Kilima Mbogo**	**8.33**	**49**	*i* P		Sn	22 10 52.5	-14
KMBO	**Kilima Mbogo**	**8.33**	**49**	*i* P		Pn	**22 09 32.4**	**+0.3**
	8.4nm,0.3s,baz=227,slow=20,SNR=140							
KMBO				Sn		**Sn**	**22 11 01.7**	**-4.7**
	32nm,0.3s,baz=206,slow=13,SNR=8.0							
KMBO				Lg		Lg	22 11 40.9	
	43nm,0.3s,baz=176,slow=15,SNR=5.4							
KMBO				LR		LR	22 13 08.2	
	comp=Z,526nm,18.7s,baz=200,slow=40							
KMBO	**Kilima Mbogo**	**8.33**	**49**	*i* P		**Pn**	**22 09 33.4**	**+1.3**
KMBO				*i* S		**Sn**	**22 11 04.2**	**-2.2**
KMBO	**Kilima Mbogo**	**8.33**	**49**			**Pn**	**22 09 31.7**	**-0.4**
KMBO				Sn		**Sn**	**22 10 59.4**	**-7.1**
LSZ	**Lusaka**	**9.03**	**197**	Pn		**Pn**	**22 09 43.6**	**+2.1**
	4.3nm,0.3s,baz=15,slow=12,SNR=34							
LSZ				Sn		**Sn**	**22 11 18.7**	**-4.6**
	4.7nm,0.3s,baz=123,slow=23,SNR=1.7							
LSZ				Lg		Lg	22 12 13.4	
	22nm,0.3s,baz=287,slow=20,SNR=7.4							
LSZ	**Lusaka**	**9.03**	**197**	*i* P		Pn	22 09 46.5	+5.0
LSZ				*i* S		**Sn**	**22 11 25.7**	**+2.3**
LSZ	**Lusaka**	**9.03**	**197**			**Pn**	**22 09 43.5**	**+2.1**
LSZ				Sn		**Sn**	**22 11 21.2**	**-2.2**
ITZ	**Itezhi-Tezhi**	**10.28**	**208**	*i* P		**Pn**	**22 10 01.3**	**+2.5**
ITZ				*i* S		Sn	22 11 44.8	-9.4
ITZ	**Itezhi-Tezhi**	**10.28**	**208**	*i* P		**Pn**	**22 10 01.3**	**+2.5**
ITZ				*i*			22 10 01.7	
	baz=359,slow=2.9							
ITZ				*i* S		Sn	22 11 44.8	-9.4
MONG	**Mongu**	**11.46**	**222**	*i* P		**Pn**	**22 10 17.7**	**+2.9**
MONG				*i* S		**Sn**	**22 12 15.7**	**-7.3**
MONG	**Mongu**	**11.46**	**222**	*i* P		**Pn**	**22 10 17.7**	**+2.9**
MONG				*i*			22 10 19.0	
	baz=345,slow=1.3							
MONG				*i* S		**Sn**	**22 12 15.7**	**-7.3**
MATP	**Matopo**	**13.94**	**190**	*i*		**Pn**	**22 10 47.6**	**-1.1**
	baz=12,slow=18							
MATP				*i* P		**Pn**	**22 10 47.6**	**-1.1**
MATP				*i* S		Sn	22 13 34.7	+11
MATP	**Matopo**	**13.94**	**190**	*i* P		**Pn**	**22 10 50.6**	**+1.9**
MATP	**Matopo**	**13.94**	**190**	Pn		**Pn**	**22 10 46.8**	**-2.0**
	0.7nm,0.3s,baz=12,slow=14,SNR=15							
MATP				Sn		Sn	22 13 10.9	-13
	baz=63,slow=18,SNR=1.7							
MATP				Lg		Lg	22 14 40.4	
	1.2nm,0.3s,baz=291,slow=23,SNR=3.7							
MATP				LR		LR	22 16 22.2	
	comp=Z,656nm,20.6s,baz=17,slow=38							
MATP	**Matopo**	**13.94**	**190**	*i* P		**Pn**	**22 10 48.3**	**-0.5**
MATP				*i* S		**Sn**	**22 13 20.4**	**-3.4**
MSNA	**Messina**	**15.67**	**183**	*i* P		**Pn**	**22 11 13.8**	**+1.8**
MSNA	**Messina**	**15.67**	**183**	*i* P		**Pn**	**22 11 08.2**	**-3.8**
MSNA				⇓*i*S		**Sn**	**22 14 05.3**	**-0.6**
FURI	**Furi**	**17.23**	**27**	Pn		**Pn**	**22 11 30.7**	**-1.5**
TSUM	**Tsumeb**	**18.04**	**225**	*i* P		**Pn**	**22 11 38.5**	**-3.5**
TSUM	**Tsumeb**	**18.04**	**225**	P		**Pn**	**22 11 41.8**	**-0.2**
	0.2nm,0.3s,baz=55,slow=12,SNR=11							
TSUM				S		Sn	22 14 50.9	-13
	0.9nm,0.3s,baz=245,slow=16,SNR=2.3							
TSUM				Lg		Lg	22 16 54.5	
	0.4nm,0.3s,baz=310,slow=23,SNR=1.8							
TSUM				LR		LR	22 19 05.5	
	comp=Z,1μm,18.3s,baz=40,slow=39							
TSUM	**Tsumeb**	**18.04**	**225**	*i* P		**P**	**22 11 44.1**	**+1.7**
TSUM				*i* S		Sn	22 14 47.4	-16
TSUM	**Tsumeb**	**18.04**	**225**	P		**Pn**	**22 11 42.0**	**0.0**
LBTB	**Lobatse**	**19.00**	**195**	P		**P**	**22 11 52.5**	**-0.5**
	0.7nm,0.3s,baz=15,slow=14,SNR=9.3							
LBTB				S		Sn	22 15 13.0	-14
	0.1nm,0.3s,baz=86,slow=22,SNR=1.6							
LBTB				Lg		Lg	22 17 23.3	
	0.4nm,0.3s,baz=278,slow=18,SNR=3.2							
LBTB	**Lobatse**	**19.00**	**195**	P		**P**	**22 11 52.6**	**-0.5**
OPO	**Ambohidratompo**	**19.80**	**128**	P		**Pn**	**22 12 03.4**	**0.0**
	0.1nm,0.3s,baz=297,slow=14,SNR=2.7							
OPO				LR		LR	22 19 19.7	
	comp=Z,300nm,18.9s,baz=186,slow=36							
ABPO	**Ambohimpanom**	**20.09**	**129**			Pn	22 12 07.3	+0.5
ABPO					IAmb	IAmb	22 12 15.0	
	comp=Z,53nm,1.0s							
ATD	**Arta Tunnel**	**21.57**	**33**	Lg		Lg	22 18 45.1	
	comp=Z,7.5nm,0.9s,baz=306,slow=20,SNR=1.7							
ATD				LR		LR	22 19 40.8	
	comp=Z,98nm,19.1s,baz=141,slow=34							
BOSA	**Boshof**	**22.54**	**193**	P		**P**	**22 12 31.9**	**+0.6**
	comp=Z,17nm,0.9s,baz=14,slow=11,SNR=11							
BOSA				Lg		Lg	22 19 10.6	
	comp=Z,7.5nm,0.7s,baz=99,slow=20,SNR=1.5							
BOSA				LR		LR	22 21 24.7	
	comp=Z,388nm,18.6s,baz=22,slow=37							
BOSA	**Boshof**	**22.54**	**193**	P		**P**	**22 12 32.8**	**+1.5**
BOSA					IAmb	IAmb	22 12 34.9	
	comp=Z,33nm,1.1s							
DAMY	**Dhamar**	**24.92**	**32**	P		**P**	**22 12 48.2**	**-6.6**
DAMY					IAmb	IAmb	22 13 06.6	
	comp=Z,26nm,1.3s							
RAYN	**Ar Rayn**	**33.16**	**25**	P		**P**	**22 14 05.6**	**-2.2**
RAYN					IAmb	IAmb	22 14 14.5	
	comp=Z,5.9nm,0.9s							
EIL	**Elat**	**36.27**	**6**	LR		LR	22 28 00.5	
	comp=Z,71nm,18.5s,baz=189,slow=34							
KIC	**Kosan Boka**	**37.86**	**289**	*e*PKP2		**P**	**22 14 51.3**	**+3.0**
	comp=Z,1.1nm,0.2s							
DBIC	**Dimbokro**	**38.07**	**290**	P		**P**	**22 14 49.5**	**-0.6**
	comp=Z,1.7nm,0.5s,baz=114,slow=8.8,SNR=5.0							
DBIC				LR		LR	22 30 34.3	
	comp=Z,232nm,18.1s,baz=72,slow=36							
DBIC	**Dimbokro**	**38.07**	**290**	P		**P**	**22 14 49.9**	**-0.2**
LIC	**Lamto**	**38.08**	**289**	*e*PKP2		**P**	**22 14 50.0**	**-0.2**
	comp=Z,1.9nm,0.2s							
TIC	**Toumodi**	**38.21**	**289**	*e*PKP2		**P**	**22 14 51.3**	**0.0**
TAM	**Tamanrasset**	**38.36**	**320**	P		**P**	**22 14 52.8**	**+0.2**
MMAI	**Mount Meron Ar**	**39.63**	**6**	LR		LR	22 30 32.9	
	comp=Z,91nm,20.0s,baz=315,slow=35							
WSAR	**Wadi Sarin**	**40.16**	**42**	LR		LR	22 31 30.8	
	comp=Z,152nm,19.2s,baz=216,slow=36							
IDI	**Anoyia**	**42.06**	**353**	LR		LR	22 33 31.9	
	comp=Z,74nm,20.2s,baz=168,slow=37							
BR131	**Keskin Array S**	**46.17**	**3**	P		**P**	**22 15 56.6**	**+0.6**
BR131					IAmb	IAmb	22 16 01.6	
	comp=Z,6.9nm,0.8s							
BRTR	**Keskin Array B**	**46.17**	**3**	P		**P**	**22 15 56.2**	**+0.2**
	comp=Z,7.0nm,0.8s,baz=175,slow=9.2,SNR=24							
BRTR	**Keskin Array B**	**46.17**	**3**	P		**P**	**22 15 56.4**	**+0.4**
ANTO	**Ankara**	**46.28**	**2**	P		**P**	**22 15 56.1**	**-0.6**
ANTO					IAmb	IAmb	22 16 02.5	
	comp=Z,5.3nm,0.8s							
KEST	**Kesra**	**46.75**	**336**	P		**P**	**22 16 01.7**	**+1.1**
	comp=Z,4.6nm,0.8s,baz=138,slow=2.0,SNR=4.0							
KEST				LR		LR	22 36 13.6	
	comp=Z,159nm,19.1s,baz=296,slow=37							
KEST	**Kesra**	**46.75**	**336**	P		**P**	**22 15 59.9**	**-0.7**
KEST					IAmb	IAmb	22 16 07.3	
	comp=Z,10nm,1.1s							
CEL	**Celeste**	**46.78**	**344**	P		**P**	**22 15 59.4**	**-1.3**
AKH	**Akhalkalaki**	**49.15**	**12**	⇓P		**P**	**22 16 20.9**	**+1.7**
ELND	**Elena**	**49.52**	**355**	⇑P		**P**	**22 16 26.3**	**+4.6**
SGRT	**San Giovanni R**	**50.09**	**345**	P		**P**	**22 16 23.7**	**-2.5**
GEYT	**Alibeck**	**51.04**	**28**	LR		LR	22 39 03.3	
	comp=Z,146nm,18.4s,baz=10.0,slow=37							
GEYT	**Alibeck**	**51.04**	**28**	P		**P**	**22 16 32.7**	**-0.7**
KBZ	**Khabaz**	**51.26**	**11**	P		**P**	**22 16 35.6**	**+0.8**
	comp=Z,2.8nm,0.9s,baz=236,slow=18,SNR=3.2							
KBZ				LR		LR	22 39 24.0	
	comp=Z,82nm,18.4s,baz=177,slow=37							
KVAR	**Kislovodsk Arr**	**51.44**	**11**	P		**P**	**22 16 37.5**	**+1.1**
	comp=Z,1.0nm,0.6s,baz=233,slow=20,SNR=2.7							
MDVR	**Moldovita**	**51.82**	**352**	⇓P		**P**	**22 16 39.0**	**-0.1**
MLR	**Muntele Rosu**	**52.05**	**356**	P		**P**	**22 16 41.3**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=129,slow=13,SNR=2.3							
BISRR	**Bisoca**	**52.06**	**356**	⇑P		**P**	**22 16 42.2**	**+1.3**
VOIR		**52.08**	**355**	⇓P		**P**	**22 16 40.2**	**-0.8**
GZR	**Gura Zlata**	**52.28**	**353**	⇑P		**P**	**22 16 43.2**	**+0.6**
PLOR	**Plostina**	**52.36**	**356**	⇑P		**P**	**22 16 43.6**	**+0.4**
BZS	**Buzias**	**52.65**	**352**	⇑P		**P**	**22 16 45.9**	**+0.6**
OZUR		**52.67**	**355**	⇑P		**P**	**22 16 45.2**	**-0.2**
SIRR	**Siria**	**53.29**	**352**	⇑P		**P**	**22 16 51.0**	**+1.0**
BIZ	**Bicaz**	**53.48**	**356**	⇑P		**P**	**22 16 52.1**	**+0.7**
CJR	**Cluj-Napoca**	**53.48**	**354**	⇑P		**P**	**22 16 51.7**	**+0.3**
DRGR		**53.66**	**353**	⇑P		**P**	**22 16 53.6**	**+0.8**
BURAR	**Bucovina Array**	**54.22**	**355**	⇑P		**P**	**22 16 57.7**	**+0.8**
BUR08	**Bucovina Ar. S**	**54.25**	**355**	P		**P**	**22 16 58.6**	**+1.4**
BUR08					IAmb	IAmb	22 17 04.4	
	comp=Z,8.6nm,1.1s							
SORM	**Soroca**	**54.55**	**358**	⇓P		**P**	**22 17 02.7**	**+3.6**
OBKA	**Obir**	**54.86**	**346**	*i* sP		sP	22 17 06.7	+0.3
	comp=Z,6.1nm,1.2s							
SOKA	**Soboth**	**54.90**	**347**	*i* sP		sP	22 17 07.3	+0.6
	comp=Z,7.5nm,1.2s							
PSZ	**Piszkesteto**	**55.16**	**351**	P		**P**	**22 17 03.0**	**-0.7**
PSZ				IAmb		IAmb	22 17 09.4	
	comp=Z,12nm,1.0s							
MYKA	**Terra Mystica**	**55.19**	**346**	*i* sP		sP	22 17 09.6	+0.8
	comp=Z,6.4nm,1.0s							
ARSA	**Arzberg**	**55.34**	**347**	*i* P		**P**	**22 17 06.6**	**+1.7**
	comp=Z,9.4nm,1.2s							
ABTA	**Abfaltersbach**	**55.59**	**345**	*i* sP		sP	22 17 12.0	+0.4
	comp=Z,6.7nm,1.1s							
KBA	**Koelnbreinsper**	**55.68**	**346**	*i* P		**P**	**22 17 08.5**	**+0.9**
	comp=Z,2.4nm,0.8s							
KBA				*i* sP		**sP**	**22 17 13.3**	**+0.9**
	comp=Z,9.6nm,1.1s							
BNI	**Bardonecchia**	**55.85**	**339**	P		**P**	**22 17 09.6**	**+0.8**
BNI					IAmb	IAmb	22 17 15.6	
	comp=Z,9.9nm,1.1s							
BNI				PcP		**PcP**	**22 18 07.9**	**+0.3**
CONA	**Conrad Observa**	**55.91**	**348**	*i* P		**P**	**22 17 10.0**	**+0.9**
	comp=Z,7.2nm,1.2s							
MOA	**Molln**	**56.18**	**347**	*i* P		**P**	**22 17 11.5**	**+0.5**
	comp=Z,11nm,1.0s							
ESDC	**Sonseca Array**	**56.21**	**328**	P		**P**	**22 17 12.2**	**+0.9**
	comp=Z,2.2nm,0.7s,baz=139,slow=6.6,SNR=8.5							
ESDC				LR		LR	22 43 27.3	
	comp=Z,83nm,19.5s,baz=170,slow=38							
FETA	**Feichten**	**56.32**	**344**	*i* P		**P**	**22 17 12.9**	**+0.7**
SQTA	**Sankt Quirin**	**56.37**	**344**	*i* P		**P**	**22 17 13.2**	**+0.8**
	comp=Z,3.1nm,0.6s							
LANS	**Liptovska Anna**	**56.42**	**351**	*e*P		**P**	**22 17 13.8**	**+1.1**
JAVC	**Velka Javorina**	**56.44**	**350**	*e*P		**P**	**22 17 13.6**	**+0.8**
MOTA	**Moosalm**	**56.52**	**344**	*i* P		**P**	**22 17 13.1**	**-0.4**
	comp=Z,3.6nm,0.7s							
RETA	**Reutte**	**56.74**	**344**	*i* P		**P**	**22 17 15.4**	**+0.4**
	comp=Z,3.2nm,0.8s							
DAVA	**Damuels**	**56.81**	**343**	*i* P		**P**	**22 17 16.0**	**+0.4**
	comp=Z,5.1nm,0.6s							
SSB	**Saint Sauveur**	**56.81**	**338**	P		**P**	**22 17 16.4**	**+0.8**
KRUC	**Moravsky**	**56.88**	**349**	*e*P		**P**	**22 17 15.7**	**-0.1**
VRAC	**Vranov**	**57.08**	**349**	P		**P**	**22 17 17.1**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=148,slow=8.9,SNR=2.6							
VRAC	**Vranov**	**57.08**	**349**	*e*P		**P**	**22 17 17.2**	**-0.1**
AKASG	**Malin Array Be**	**57.10**	**359**	P		**P**	**22 17 16.8**	**-0.5**
	comp=Z,4.2nm,0.7s,baz=180,slow=6.2,SNR=10							
AKBB	**Malin Array SI**	**57.10**	**359**	IAmb		IAmb	22 17 22.4	
	comp=Z,12nm,1.1s							
GEC2	**GERESS Array S**	**57.25**	**347**	IAmb		IAmb	22 17 24.5	
	comp=Z,13nm,1.2s							
GERES	**GERESS Array B**	**57.25**	**347**	P		**P**	**22 17 18.8**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=157,slow=6.5,SNR=13							
GERES	**GERESS Array B**	**57.25**	**347**	P		**P**	**22 17 18.5**	**-0.1**
MORC	**Moravsky Berou**	**57.35**	**350**	P		**P**	**22 17 18.2**	**-1.0**
MORC				IAmb		IAmb	22 17 24.9	
	comp=Z,5.7nm,0.9s							
KHC	**Kasperske Hory**	**57.55**	**347**	*e*P		**P**	**22 17 20.2**	**-0.4**
KHC				*e*pP		**sP**	**22 17 25.0**	**-0.5**
KHC	**Kasperske Hory**	**57.55**	**347**	P		**P**	**22 17 19.6**	**-1.0**
SUW	**Suwalki**	**60.75**	**355**	P		**P**	**22 17 42.4**	**-0.2**
KKAR	**Karatay Array**	**61.12**	**32**	P		**P**	**22 17 44.9**	**-0.6**
KSH	**Kashi**	**61.93**	**38**	P		**P**	**22 17 50.9**	**-0.3**
KSH				pmax		pmax		
	comp=Z,220nm,4.6s							
SYO	**Syowa Base**	**62.58**	**176**	⇑*e*P		**P**	**22 17 55.9**	**+1.1**
SYO	**Syowa Base**	**62.58**	**176**	⇑*e*X		**PcP**	**22 18 30.0**	**-3.7**
MAW	**Mawson**	**64.62**	**167**	LR		LR	22 43 33.8	
	comp=Z,77nm,19.6s,baz=246,slow=34							
ARU	**Arti**	**66.80**	**16**	P		**P**	**22 18 22.7**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=196,slow=8.8,SNR=3.9							
KCSI	**Kotacane, Aceh**	**67.48**	**83**	P		**P**	**22 18 28.3**	**+0.5**
	comp=Z,10nm,1.6s							
HFS	**Hagfors**	**67.92**	**351**	P		**P**	**22 18 30.0**	**+0.5**
	comp=Z,2.8nm,0.6s,baz=164,slow=5.9,SNR=12							
FINES	**FINESS Array B**	**67.95**	**357**	P		**P**	**22 18 30.2**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=177,slow=6.9,SNR=6.9							
SNAA	**Sanae**	**68.30**	**191**	P		**P**	**22 18 35.8**	**+3.9**
VNA1	**Neumayer--Stat**	**68.63**	**193**	P		**P**	**22 18 38.1**	**+4.2**
NC602	**NORSAR Array S**	**68.85**	**350**	P		**P**	**22 18 34.6**	**-0.7**
NB2	**NORSAR Subarra**	**69.19**	**350**	P		**P**	**22 18 37.3**	**-0.2**
	comp=Z,27nm,1.4s,baz=160,slow=5.9							
NB2	**NORSAR Subarra**	**69.19**	**350**	P		**P**	**22 18 37.3**	**-0.2**
	baz=160,slow=5.9							
NOA	**NORSAR Array B**	**69.19**	**350**	P		**P**	**22 18 37.6**	**+0.1**
	comp=Z,3.5nm,0.9s,baz=162,slow=5.7,SNR=9.0							
NOA				LR		LR	22 52 41.6	
	comp=Z,38nm,18.1s,baz=355,slow=39							
NBO00

comp=Z,0.9nm,0.9s,baz=270,slow=5.0,SNR=6.3
WRA Warramunga Arr 100.25 112 P **Pdif 22 21 18.2 0.0**
comp=Z,0.6nm,0.8s,baz=265,slow=3.6,SNR=3.7
YKA Yellowknife Ar 118.79 343 PKP **PKiKP 22 26 20.2 +0.9**
comp=Z,0.2nm,0.6s,baz=44,slow=1.9
ILAR Eielson Array 121.92 359 PP PP 22 27 59.5 +1.2
comp=Z,0.4nm,0.9s,baz=356,slow=7.4,SNR=4.4

*TIR **08** 22:19:08.7, 41.92N×20.90E, h5km, Md2.8/7*
*ATH **08** 22:19:09.3, 41.97N×20.96E, h13km±2km, ML2.6/6, Error ellipse: s-maj=3.4km s-min=1.5km az=200.0*
*BEO **08** 22:19:10.8±0.2, 41.90N×20.88E, h10km±3km, ML2.4/11*
*PDG **08** 22:19:10.4±0.4, 41.92N×20.87E, h0km±11km, ML2.8/14, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*SKO **08** 22:19:10.3, 41.84N×20.94E, h10km*
*THE **08** 22:19:11.1, 41.88N×20.84E, h5km±1km, ML2.6/4, Error ellipse: s-maj=2.1km s-min=0.8km az=229.0*

ISC 08 22:19:10.3±1.0, 41.90N±0.01×20.88E±0.01, h5km±9km, n111, σ1§40/157, 6C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.40**	**237**	P	**Pg**	**22 19 17.7**	**-0.3**
PHP				S	**Sg**	**22 19 23.1**	**-0.1**
PHP	**Peshkopia**	**0.40**	**237**	*i* PG	**Pg**	**22 19 17.4**	**-0.6**
PHP				*i* SG	**Sg**	**22 19 23.4**	**+0.2**
SKO	**Skopje**	**0.42**	**80**	*e*Pg	**Pg**	**22 19 18.2**	**-0.3**
SKO				*e*Sg	**Sg**	**22 19 25.1**	**+1.1**
SKO	**Skopje**	**0.42**	**80**	*i* Pg	**Pg**	**22 19 18.4**	**-0.1**
SKO				*i* Sg	**Sg**	**22 19 25.1**	**+1.1**
SKO				eLg	Lg	22 19 26.6	
	comp=E,19nm,0.4s						
SKO				eLg	Lg	22 19 27.0	
	comp=N,45nm,0.3s						
PUK	**Puka**	**0.75**	**281**	*i* PG	**Pg**	**22 19 23.1**	**-1.7**
PUK				*i* SG	**Sg**	**22 19 35.5**	**+1.0**
BCI	**Bajram Curri**	**0.76**	**308**	*i* PG	**Pg**	**22 19 24.2**	**-0.8**
BCI				*i* SG	**Sg**	**22 19 35.5**	**+0.6**
OHR	**Ohrid**	**0.79**	**185**	⇓*i* Pg	**Pg**	**22 19 25.1**	**-0.4**
OHR				*i* Sg	**Sb**	**22 19 37.9**	**+0.2**
OHR				eLg	Lg	22 19 38.1	
	comp=N,404nm,0.4s						
OHR				eLg	Lg	22 19 38.7	
	comp=E,250nm,0.5s						
TIR	**Tirane**	**0.94**	**234**	*i* PG	**Pg**	**22 19 28.4**	**-0.1**
TIR				*i* SG	**Sg**	**22 19 41.1**	**+0.5**
TIR	**Tirane**	**0.94**	**234**	P	**Pb**	**22 19 28.9**	**-0.3**
TIR				AML	AML	22 19 49.6	
	comp=N,371µm,0.4s						
TIR				AML	AML	22 19 53.6	
	comp=E,474µm,0.4s						
TIR	**Tirane**	**0.94**	**234**	⇑P	**Pb**	**22 19 29.4**	**+0.3**
PVY	**Plav**	**0.97**	**316**	*e*Pg	**Pg**	**22 19 27.5**	**-1.6**
PVY				*e*Sg	**Sb**	**22 19 43.9**	**+0.8**
STIP	**Stip**	**1.00**	**102**	*i* Pg	**Pn**	**22 19 31.6**	**+0.6**
STIP				*i* Sg	**Sn**	**22 19 48.0**	**+2.5**
STIP				eLg	Lg	22 19 48.7	
	comp=N,27nm,0.3s						
STIP				eLg	Lg	22 19 48.7	
	comp=E,25nm,0.2s						
BARS	**Barje**	**1.15**	**37**	*e*Pg	**Pg**	**22 19 32.3**	**0.0**
BARS				*e*Sg	**Sg**	**22 19 46.9**	**-0.3**
BARS	**Barje**	**1.15**	**37**	*e*Pg	**Sn**	**22 19 52.3**	**+3.1**
FNA	**Florina**	**1.18**	**161**	P	**Pg**	**22 19 33.0**	**+0.1**
FNA				S	**Sn**	**22 19 50.0**	**0.0**
	comp=E,915nm,0.3s						
FNA	**Florina**	**1.18**	**161**	*i* PN	**Pg**	**22 19 32.0**	**-0.9**
FNA				*i* SN	**Sn**	**22 19 49.8**	**-0.2**
FNA	**Florina**	**1.18**	**161**	P	**Pg**	**22 19 31.9**	**-1.0**
FNA				S	**Sn**	**22 19 50.4**	**+0.4**
FNA				AML	AML	22 19 51.4	
	comp=N,1389µm,0.3s						
FNA				AML	AML	22 19 52.6	
	comp=E,2274µm,0.3s						
IVA	**Berane**	**1.22**	**323**	*e*Pg	**Pg**	**22 19 32.6**	**-1.1**
IVA				*e*Sg	**Sn**	**22 19 51.5**	**+0.5**
ULC	**Ulcinj**	**1.22**	**273**	*e*Pg	**Pg**	**22 19 33.0**	**-0.8**
ULC				*e*Sg	**Sn**	**22 19 51.9**	**+0.8**
DRME	**Dracevica, Mon**	**1.30**	**283**	*e*Pn	**Pn**	**22 19 33.8**	**-1.4**
DRME	**Dracevica, Mon**	**1.30**	**283**	*e*Pg	**Pn**	**22 19 34.2**	**-1.0**
DRME				*e*Sg	**Sn**	**22 19 54.5**	**+1.6**
PDG	**Podgorica**	**1.32**	**294**	*e*Pg	**Pn**	**22 19 35.0**	**-0.5**
PDG				*e*Sg	**Sg**	**22 19 52.1**	**-0.7**
PDG	**Podgorica**	**1.32**	**294**	⇓P	**Pn**	**22 19 33.7**	**-1.8**
PDG	**Podgorica**	**1.32**	**294**	*e*Pn	**Pn**	**22 19 33.6**	**-1.8**
TTG	**Podgorica**	**1.32**	**294**	*e*Pg	**Pn**	**22 19 34.3**	**-1.2**
TTG				*e*Sg	**Sn**	**22 19 54.9**	**+1.4**
BOSS	**Bosilegrad**	**1.33**	**63**	*e*Pg	**Pn**	**22 19 35.6**	**0.0**
BOSS				*e*Sg	**Sb**	**22 19 53.3**	**+0.2**
SELS	**Selova**	**1.33**	**7**	*e*Pg	**Pn**	**22 19 34.5**	**-1.1**
SELS				*e*Sg	**Sg**	**22 19 52.3**	**-0.8**
KOME	**Kolasin**	**1.39**	**314**	*e*Pg	**Pn**	**22 19 35.4**	**-1.1**
KOME				*e*Sg	**Sn**	**22 19 57.3**	**+2.0**
VAY	**Valandovo**	**1.39**	**114**	*e*Pg	**Pn**	**22 19 36.3**	**-0.1**
VAY				*e*Sg	**Sb**	**22 19 54.3**	**-0.6**
VAY	**Valandovo**	**1.39**	**114**	⇓*i* Pg	**Pn**	**22 19 36.3**	**-0.1**
VAY				*i* Sg	**Sb**	**22 19 54.6**	**-0.3**
VAY				eLg	Lg	22 19 54.9	
	comp=E,100nm,0.5s						
VAY				eLg	Lg	22 19 56.5	
	comp=N,91nm,0.5s						
GRG	**Griva**	**1.48**	**129**	P	**Pn**	**22 19 37.9**	**+0.2**
GRG				S	**Sb**	**22 19 57.6**	**+0.1**
	comp=N,120nm,0.5s						
GRG	**Griva**	**1.48**	**129**	P	**Pn**	**22 19 37.9**	**+0.2**
GRG				S	**Sg**	**22 19 57.9**	**0.0**
GRG				AML	AML	22 20 00.9	
	comp=N,272µm,0.5s						
GRG				AML	AML	22 20 03.5	
	comp=E,190µm,0.5s						
NEST	**Nestorio**	**1.49**	**175**	P	**Pn**	**22 19 37.6**	**-0.3**
NEST				S	**Sg**	**22 19 58.1**	**-0.1**
	comp=E,130nm,0.6s						
NEST	**Nestorio**	**1.49**	**175**	P	**Pn**	**22 19 37.6**	**-0.3**
NEST				S	**Sg**	**22 19 59.5**	**+1.2**
NEST				AML	AML	22 20 04.0	
	comp=E,360µm,0.5s						
NEST				AML	AML	22 20 08.0	
	comp=N,292µm,0.4s						
SJES	**Sjenica**	**1.52**	**334**	*e*Pg	**Pg**	**22 19 39.6**	**+0.2**
SJES				*e*Sg	**Sg**	**22 19 59.4**	**+0.3**
BUM	**Brajici-Budva**	**1.53**	**286**	*e*Pg	**Pn**	**22 19 38.2**	**-0.3**
BUM				*e*Sg	**Sg**	**22 20 02.3**	**+2.7**
CEME	**Cevo**	**1.60**	**294**	*e*Pn	**Pn**	**22 19 39.3**	**0.0**
CEME				*e*Sn	**Sg**	**22 20 04.3**	**+2.7**
NKY	**Niksic**	**1.67**	**304**	*e*Pn	**Pn**	**22 19 40.8**	**+0.4**
NKY				*e*Sn	**Sg**	**22 20 06.9**	**+2.9**
NKME	**Niksic**	**1.67**	**302**	*e*Pn	**Pn**	**22 19 40.9**	**+0.5**
NKME				*e*Sn	**Sg**	**22 20 06.6**	**+2.5**
KNT	**Kendrikon**	**1.68**	**115**	P	**Pn**	**22 19 40.5**	**0.0**
KNT	**Kendrikon**	**1.68**	**115**	P	**Pn**	**22 19 40.4**	**0.0**
KNT				S	**Sb**	**22 20 03.1**	**-0.3**
KNT				AML	AML	22 20 07.7	
	comp=E,85µm,0.4s						
KNT				AML	AML	22 20 08.2	
	comp=N,164µm,0.6s						
PENT	**Pentalofos**	**1.71**	**173**	P	**Pb**	**22 19 42.3**	**-0.1**
KZN	**Kozani**	**1.73**	**157**	P	**Pn**	**22 19 41.8**	**+0.6**
KZN				S	**Sb**	**22 20 04.6**	**-0.1**
	comp=N,128nm,0.4s						
KZN	**Kozani**	**1.73**	**157**	P	**Pb**	**22 19 42.2**	**-0.4**
KZN				S	**Sg**	**22 20 05.4**	**-0.4**
KZN				AML	AML	22 20 12.7	
	comp=N,326µm,0.4s						
KZN				AML	AML	22 20 13.4	
	comp=E,446µm,0.5s						
TPE	**Tepelena**	**1.73**	**203**	*i* PN	**Pb**	**22 19 42.5**	**-0.2**
IVAS	**Ivanjica**	**1.76**	**342**	*e*Sg	**Pn**	**22 19 42.6**	**+1.0**
IVAS	**Ivanjica**	**1.76**	**342**	*e*Pg	**Sg**	**22 20 07.8**	**+1.0**
PLE	**Pljevlja**	**1.80**	**323**	*e*Pn	**Pb**	**22 19 43.1**	**-0.9**
PLE				*e*Sn	**Sg**	**22 20 09.3**	**+1.0**
BOVS	**Bovan**	**1.84**	**19**	*e*Pn	**Pn**	**22 19 42.1**	**-0.5**
BOVS				*e*Sg	**Sg**	**22 20 09.0**	**-0.3**
HCY	**Herceg Novi**	**1.86**	**288**	*e*Pn	**Pb**	**22 19 43.9**	**-0.8**
HCY	**Herceg Novi**	**1.86**	**288**	*e*Pn	**Pb**	**22 19 44.0**	**-0.8**
HCY				*e*Sn	**Sg**	**22 20 11.3**	**+1.3**
ZAPS	**Zavoj**	**1.89**	**43**	*e*Pg	**Pb**	**22 19 45.8**	**+0.5**
VTS	**Vitosha**	**1.89**	**67**	P	**Pn**	**22 19 43.4**	**0.0**
VTS	**Vitosha**	**1.89**	**67**	*e*Pg	**Pn**	**22 19 43.8**	**+0.4**
VTS				*e*Sg	**Sb**	**22 20 09.2**	**-0.1**
VTS	**Vitosha**	**1.89**	**67**	⇑P	**Pn**	**22 19 42.6**	**-0.9**
UPM	**Unac-Piva**	**1.96**	**312**	*e*Pn	**Pb**	**22 19 45.8**	**-0.8**
UPM	**Unac-Piva**	**1.96**	**312**	⇓*i* Pn	**Pb**	**22 19 45.7**	**-0.8**
UPM				*e*Sn	**Sg**	**22 20 13.5**	**+0.3**
KPRO	**Kipourio**	**1.98**	**169**	P	**Pb**	**22 19 46.3**	**-0.6**
GRUS	**Gruza**	**1.99**	**357**	*e*Pg	**Pn**	**22 19 45.6**	**+0.9**
GRUS				*e*Sg	**Sg**	**22 20 15.3**	**+1.0**
BRY	**Bratogost**	**2.00**	**301**	*e*Pn	**Pb**	**22 19 47.1**	**-0.3**
BRY	**Bratogost**	**2.00**	**301**	⇓*i* Pn	**Pb**	**22 19 46.8**	**-0.6**
BRY				*e*Sn	**Sg**	**22 20 14.7**	**0.0**
RUDO	**Rudo**	**2.05**	**328**	*e*Pn	**Pn**	**22 19 44.9**	**-0.6**
TREB	**Trebinje**	**2.05**	**294**	*e*Pg	**Pb**	**22 19 48.2**	**+0.2**
TREB	**Trebinje**	**2.05**	**294**	*e*Pn	**Pb**	**22 19 48.1**	**+0.1**
SOH	**Sokhos**	**2.15**	**119**	P	**Pn**	**22 19 46.4**	**-0.5**
SOH				S	**Sn**	**22 20 13.8**	**-0.2**
ZAGS	**Zajecar**	**2.15**	**27**	*e*Pg	**Pb**	**22 19 49.3**	**-0.5**
ZAGS				*e*Sg	**Sg**	**22 20 20.2**	**+0.7**
DBRK	**Dubrovnik**	**2.17**	**292**	*e*Pn	**Pb**	**22 19 49.5**	**-0.6**
DBRK				Sn	**Sg**	**22 20 19.5**	**-0.6**
LIT	**Litokhoron**	**2.17**	**145**	P	**Pn**	**22 19 47.8**	**+0.6**
BBLS	**Lazići**	**2.24**	**332**	*e*Pn	**Pn**	**22 19 48.2**	**-0.1**
BBLS	**Lazići**	**2.24**	**332**	*e*Pn	**Pn**	**22 19 48.0**	**-0.3**
DIVS	**Divibare**	**2.29**	**344**	*e*Pn	**Pn**	**22 19 48.3**	**-0.7**
DIVS	**Divibare**	**2.29**	**344**	*e*Pn	**Pn**	**22 19 48.2**	**-0.7**
KEK	**Kerkira**	**2.34**	**201**	P	**Pb**	**22 19 51.5**	**-1.5**
TRUS	**Trudelj**	**2.35**	**352**	*e*Pg	**Pb**	**22 19 53.8**	**+0.7**
IGT	**Igoumenitsa**	**2.40**	**190**	*i* PN	**Pb**	**22 19 52.9**	**-1.2**
PLG	**Polygyros**	**2.46**	**127**	P	**Pn**	**22 19 51.9**	**+0.7**
THL	**Klokotos Trika**	**2.49**	**159**	P	**Pn**	**22 19 52.8**	**+1.3**
STON	**Ston**	**2.55**	**293**	*e*Pn	**Pb**	**22 19 54.8**	**-1.8**
STON	**Ston**	**2.55**	**293**	*e*Pg	**Pb**	**22 19 55.2**	**-1.4**
STON				*e*Sg	**Sb**	**22 20 30.1**	**+1.9**
STON	**Ston**	**2.55**	**293**	*e*Pn	**Pn**	**22 19 54.6**	**-2.0**
HAPS	**Han Pijesak,Bl**	**2.60**	**328**	*e*Pn	**Pn**	**22 19 54.4**	**+1.2**
HAPS	**Han Pijesak,Bl**	**2.60**	**328**	*e*Pn	**Pn**	**22 19 52.3**	**-0.9**
MDVR	**Moldovita**	**2.94**	**12**	⇑P	**Pb**	**22 20 04.5**	**+1.1**
AGG	**Agios Georgios**	**3.08**	**159**	P	**Pn**	**22 20 01.0**	**+1.3**
PLVB	**Pleven**	**3.13**	**60**	⇑P	**Pb**	**22 20 04.0**	**-2.5**
MAKA	**Makarska**	**3.17**	**297**	*e*Pn	**Pn**	**22 20 02.8**	**+1.9**
FRGS	**Fruska Gora**	**3.35**	**347**	*e*Pn	**Pn**	**22 20 02.5**	**-0.9**
FRGS	**Fruska Gora**	**3.35**	**347**	*e*Pn	**Pn**	**22 20 02.3**	**-1.1**
HVAR	**Hvar**	**3.52**	**293**	*e*Pn	**Pn**	**22 20 07.1**	**+1.4**
GZR	**Gura Zlata**	**3.75**	**21**	⇑P	**Pn**	**22 20 09.3**	**+0.3**
BZS	**Buzias**	**3.75**	**8**	*e*Pn	**Pn**	**22 20 08.0**	**-0.9**
BZS	**Buzias**	**3.75**	**8**	⇑P	**Pn**	**22 20 08.2**	**-0.7**
KIJV	**Kijevo**	**3.90**	**304**	*e*Pn	**Pn**	**22 20 13.5**	**+2.5**
BLY	**Banja Luka**	**3.92**	**318**	⇓P	Pn	22 20 00.4	-11
ZIRJ	**Zirje**	**4.24**	**296**	*i* Pn	**Pn**	**22 20 17.3**	**+1.8**
ZIRJ				Sn	**Sn**	**22 21 02.1**	**-3.3**
ZIRJ	**Zirje**	**4.24**	**296**	*e*Pn	**Sn**	**22 21 02.1**	**-3.3**
ZIRJ	**Zirje**	**4.24**	**296**	Sn	**Sg**	**22 21 31.2**	**+4.8**
MORI	**Morici**	**4.28**	**299**	*e*Pn	**Pn**	**22 20 17.9**	**+1.8**
MORI	**Morici**	**4.28**	**299**	*e*Pn	**Sn**	**22 21 03.1**	**-3.3**
UDBI	**Udbina**	**4.57**	**307**	*i* Pn	**Pn**	**22 20 23.4**	**+3.2**
UDBI	**Udbina**	**4.57**	**307**	*e*Pn	**Sn**	**22 21 07.1**	**-6.7**
MORH	**Mrgy, Hungar**	**4.60**	**340**	*e*Pn	**Pn**	**22 20 19.9**	**-0.7**
DUGI	**Dugi Otok**	**4.76**	**298**	*e*Pn	**Pn**	**22 20 24.4**	**+1.7**
DUGI	**Dugi Otok**	**4.76**	**298**	Sn	**Sn**	**22 21 22.7**	**+4.4**
NVLJ	**Novalja**	**5.13**	**303**	*e*Pn	**Pn**	**22 20 29.6**	**+1.7**
NVLJ	**Novalja**	**5.13**	**303**	Sn	**Sn**	**22 21 25.3**	**-2.2**
NVLJ	**Novalja**	**5.13**	**303**	*e*Pn	Pg	22 20 58.2	+10
CRES	**Cresnjev**	**5.55**	**317**	*e*Pn	**Pn**	**22 20 32.5**	**-1.1**
BRJN	**Brijuni**	**6.00**	**302**	*e*Pn	**Pn**	**22 20 41.0**	**+1.3**
BRJN	**Brijuni**	**6.00**	**302**	*e*Pn	**Pb**	**22 20 54.2**	**-1.2**
CEY	**Cerknica**	**6.04**	**312**	*e*Pn	**Pn**	**22 20 40.2**	**-0.2**

*ROM **08** 22:20:22.6±0.0, 43.384N±0.003×12.511E±0.004, h7km, ML2.7/33, Error ellipse: s-maj=0.3km s-min=0.1km az=222.0*
*LDG **08** 22:20:23.6±0.1, 43.38N×12.53E, h10km, Ml2.1/14, Error ellipse: s-maj=2.6km s-min=1.8km az=15.0*

ISC 08 22:20:22.4±0.8, 43.37N±0.02×12.47E±0.02, h10km±4km, n69, σ1§96/115, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.05**	**285**	*i* P	**Pg**	**22 20 24.8**	**+0.4**
ATVO				S	**Sg**	**22 20 26.3**	**+0.3**
ATVO				AML	AML		
	comp=E,14400µm,0.3s						
ATVO				AML	AML		
	comp=N,21550µm,0.5s						
ATVO				AML	AML		
	comp=N,21550µm,0.5s						
ATFO	**Monte Foce - G**	**0.07**	**92**	*i* P	**Pg**	**22 20 24.5**	**-0.3**
ATFO				S	**Sg**	**22 20 25.4**	**-1.1**
ATFO				AML	AML		
	comp=N,98900µm,0.3s						
ATFO				AML	AML		
	comp=E,76050µm,0.6s						
ATFO				AML	AML		
	comp=N,98900µm,0.3s						
ATFO				AML	AML		
	comp=E,76050µm,0.6s						
ATPI	**Pietralunga -**	**0.10**	**328**	*e*P	**Pg**	**22 20 25.4**	**+0.4**
ATPI				S	**Sg**	**22 20 27.3**	**+0.4**
ATPI				AML	AML		
	comp=E,5030µm,1.0s						
ATPI				AML	AML		
	comp=N,10870µm,0.1s						
ATPI				AML	AML		
	comp=N,10865µm,0.1s						
ATPI				AML	AML		
	comp=N,10895µm,0.1s						
MURB	**Monte Urbino**	**0.11**	**160**	P	**Pg**	**22 20 25.9**	**+0.6**
MURB				S	**Sg**	**22 20 28.4**	**+1.1**
MURB				AML	AML		
	comp=E,40950µm,1.4s						
MURB				AML	AML		
	comp=E,34950µm,0.2s						
MURB				AML	AML		
	comp=N,25800µm,0.2s						
MURB				AML	AML		
	comp=E,34950µm,0.2s						
MURB				AML	AML		
	comp=N,25850µm,0.2s						
MURB				AML	AML		
	comp=N,26250µm,0.2s						
MURB				AML	AML		
	comp=N,25850µm,0.2s						
MURB				AML	AML		
	comp=E,34950µm,0.2s						
MURB				AML	AML		
	comp=E,40950µm,1.4s						
ATMI	**Monte Miggiano**	**0.15**	**257**	P	**Pg**	**22 20 26.9**	**+1.0**
ATMI				AML	AML		
	comp=E,7695µm,0.7s						
ATMI				AML	AML		
	comp=N,5460µm,0.5s						
PIEI	**Pieia**	**0.17**	**16**	P	**Pg**	**22 20 26.4**	**+0.2**
PIEI				S	**Sg**	**22 20 29.4**	**+0.6**
PIEI				AML	AML		
	comp=E,9185µm,0.2s						
PIEI				AML	AML		
	comp=E,9190µm,0.2s						
PIEI				AML	AML		
	comp=N,8775µm,0.6s						
ATTE	**AVT- Monte Tez**	**0.19**	**206**	P	**Pg**	**22 20 27.4**	**+0.9**
ATTE				S	**Sg**	**22 20 31.1**	**+1.8**
ATTE				AML	AML		
	comp=N,3580µm,0.4s						
ATTE				AML	AML		
	comp=E,4400µm,1.0s						
CDCA	**Citt' di Caste**	**0.19**	**297**	P	**Pg**	**22 20 27.8**	**+1.3**
CDCA				S	**Sg**	**22 20 31.2**	**+1.9**
CDCA				AML	AML		
	comp=N,9945µm,0.4s						
CDCA				AML	AML		
	comp=E,2410µm,0.5s						
CDCA				AML	AML		
	comp=N,2540µm,0.5s						
CDCA				AML	AML		
	comp=N,9955µm,0.4s						
CDCA				AML	AML		
	comp=E,2415µm,0.5s						
CDCA				AML	AML		
	comp=E,5720µm,1.0s						
BADI	**Badiali**	**0.22**	**310**	P	**Pg**	**22 20 27.9**	**+1.0**
BADI				S	**Sg**	**22 20 31.9**	**+1.9**
BADI				AML	AML		
	comp=E,6175µm,0.6s						
BADI				AML	AML		
	comp=N,9445µm,0.2s						
BADI				AML	AML		
	comp=E,6180µm,0.6s						
ATCC	**AVT- Casa Cast**	**0.22**	**146**	P	**Pg**	**22 20 27.9**	**+0.9**
ATCC				S	**Sg**	**22 20 31.9**	**+1.8**
ATCC				AML	AML		
	comp=E,6275µm,1.0s						
ATCC				AML	AML		
	comp=N,7370µm,0.3s						
SSFR	**Montelago di S**	**0.24**	**74**	*i* P	**Pg**	**22 20 27.3**	**0.0**
SSFR				AML	AML		
	comp=E,8085µm,0.2s						
SSFR				AML	AML		
	comp=N,6615µm,0.2s						
SSFR				AML	AML		
	comp=N,5700µm,0.2s						
SSFR				AML	AML		
	comp=E,8490µm,0.2s						
SSFR				AML	AML		
	comp=N,6620µm,0.2s						
FRON	**Frontone**	**0.24**	**51**	*i* P	**Pg**	**22 20 27.3**	**0.0**
FRON				S	**Sg**	**22 20 31.0**	**+0.3**
FRON				AML	AML		
	comp=N,3105µm,0.9s						
FRON				AML	AML		
	comp=E,1915µm,0.6s						
NARO	**Abbazia di Nar**	**0.25**	**18**	*i* P	**Pg**	**22 20 27.8**	**+0.1**
NARO				S	**Sg**	**22 20 31.7**	**+0.6**
NARO				AML	AML		
	comp=E,1730µm,0.9s						
NARO				AML	AML		
	comp=N,1081µm,1.1s						
SSP9	**Sansepolcro**	**0.32**	**310**	P	**Pg**	**22 20 29.8**	**+1.0**
SSP9				S	**Sg**	**22 20 35.5**	**+2.4**
SSP9				AML	AML		
	comp=E,706µm,0.7s						
SSP9				AML	AML		
	comp=N,860µm,1.0s						
PARC	**Parchiule**	**0.33**	**329**	P	**Pg**	**22 20 29.8**	**+0.8**
PARC				S	**Sg**	**22 20 35.4**	**+2.0**
PARC				AML	AML		
	comp=E,924µm,0.3s						
PARC				AML	AML		
	comp=N,998µm,0.3s						
PARC				AML	AML		
	comp=E,923µm,0.3s						
PARC				AML	AML		
	comp=N,998µm,0.3s						
PE3	**Peglio**	**0.33**	**3**	*i* P	**Pg**	**22 20 29.7**	**+0.7**
PE3				S	**Sb**	**22 20 35.2**	**-0.5**
PE3				AML	AML		
	comp=N,2820µm,0.3s						
PE3				AML	AML		
	comp=E,2245µm,0.3s						
MPAG	**Monte Paganucc**	**0.33**	**39**	*i* P	**Pg**	**22 20 29.2**	**+0.1**
MPAG				S	**Sg**	**22 20 34.3**	**+0.7**
MPAG				AML	AML		
	comp=E,986µm,1.5s						
MPAG				AML	AML		
	comp=N,1065µm,1.1s						
MPAG				AML	AML		
	comp=E,950µm,1.5s						
MPAG				AML	AML		
	comp=N,1140µm,1.1s						
MPAG				AML	AML		
	comp=E,988µm,1.5s						
MPAG				AML	AML		
	comp=N,1066µm,1.1s						
MPAG				AML	AML		
	comp=N,1139µm,1.1s						
SNTG	**Esanatoglia**	**0.36**	**108**	*i* P	**Pg**	**22 20 29.7**	**+0.1**
SNTG				S	**Sb**	**22 20 35.5**	**-1.2**
SNTG				AML	AML		
	comp=E,344µm,0.5s						
SNTG				AML	AML		
	comp=N,452µm,0.2s						
SNTG				AML	AML		
	comp=E,344µm,0.5s						
SNTG				AML	AML		
	comp=E,2895µm,0.5s						
SNTG				AML	AML		
	comp=N,3775µm,0.2s						
ARVD	**Arcevia**	**0.37**	**69**	*i* P	**Pg**	**22 20 29.7**	**0.0**
ARVD				S	**Sb**	**22 20 35.4**	**-1.4**
ARVD				AML	AML		
	comp=E,832µm,0.7s						
ARVD				AML	AML		
	comp=N,805µm,1.3s						
CAFI	**Castiglion Fio**	**0.37**	**264**	P	**Pg**	**22 20 30.9**	**+1.2**
CAFI				S	**Sg**	**22 20 36.8**	**+2.2**
CAFI				AML	AML		
	comp=N,973µm,0.4s						
CAFI				AML	AML		
	comp=N,4790µm,1.5s						
CAFI				AML	AML		
	comp=E,846µm,0.4s						
CAFI				AML	AML		
	comp=E,864µm,0.4s						
FSSB	**Fossombrone**	**0.39**	**35**	P	**Pg**	**22 20 30.3**	**+0.1**
FSSB				S	**Sb**	**22 20 36.6**	**-1.1**
FSSB				AML	AML		
	comp=E,1855µm,0.4s						
FSSB				AML	AML		
	comp=N,1560µm,0.3s						
CPGN	**Carpegna, Ital**	**0.45**	**346**	P	**Pg**	**22 20 32.4**	**+1.2**
CPGN				AML	AML		
	comp=E,640µm,0.6s						
CPGN				AML	AML		
	comp=N,618µm,0.7s						
CPGN				AML	AML		
	comp=E,580µm,0.6s						
CPGN				AML	AML		
	comp=N,596µm,0.9s						
CPGN				AML	AML		
	comp=N,593µm,0.9s						
CPGN				AML	AML		
	comp=E,578µm,0.6s						
EL6	**Elcito**	**0.46**	**95**	P	**Pg**	**22 20 31.5**	**0.0**
EL6				S	**Sb**	**22 20 38.6**	**-1.1**
EL6				AML	AML		
	comp=E,1288µm,0.8s						
EL6				AML	AML		
	comp=N,2215µm,1.4s						
EL6				AML	AML		
	comp=E,1282µm,0.2s						
EL6				AML	AML		
	comp=N,2210µm,1.4s						
CESI	**CESI - Serrava**	**0.48**	**139**	P	**Pg**	**22 20 32.3**	**+0.4**
CESI				AML	AML		
	comp=E,176µm,0.3s						
CESI				AML	AML		
	comp=N,327µm,0.4s						
MGAB	**Montegabbione**	**0.53**	**210**	*e*P	**Pg**	**22 20 33.7**	**+1.0**
MGAB				AML	AML		
	comp=E,1640µm,0.7s						
MGAB				AML	AML		
	comp=N,2400µm,0.8s						
MGAB				AML	AML		
	comp=N,2430µm,0.8s						
MGAB				AML	AML		
	comp=E,1690µm,0.6s						
CING	**Cingoli**	**0.53**	**89**	*i* P

ASQU AML AML
comp=N,401µm,0.6s
SACS San Casciano d 0.66 218 P Pg 22 20 36.2 +0.9
SACS S Sb 22 20 47.0 +1.5
SACS AML AML
comp=E,696µm,0.8s
SACS AML AML
comp=N,888µm,1.5s
SACS AML AML
comp=E,642µm,0.8s
SACS AML AML
comp=N,886µm,1.5s
SACS AML AML
comp=N,892µm,1.5s
SACS AML AML
comp=E,696µm,0.8s
SACS AML AML
comp=E,642µm,0.8s
SFI Santa Sofia 0.70 320 P Pg 22 20 36.6 +0.6
SFI AML AML
comp=N,222µm,0.7s
SFI AML AML
comp=E,204µm,0.7s
NRCA Norcia 0.71 138 P Pg 22 20 36.3 0.0
NRCA S Sb 22 20 47.2 +0.2
NRCA AML AML
comp=N,862µm,0.5s
NRCA AML AML
comp=E,614µm,0.2s
CESX Cesi 0.76 174 P Pg 22 20 38.0 +0.8
OFFI Offida 0.99 116 P Pb 22 20 41.9 +0.2
OFFI AML AML
comp=N,1210µm,0.4s
OFFI AML AML
comp=E,894µm,0.4s
GUMA Gualdo di Mace 1.11 105 P Pg 22 20 36.2 -7.6
GUMA S Sg 22 20 47.1 -11
GUMA AML AML
comp=N,1257µm,0.4s
GUMA AML AML
comp=E,1255µm,0.7s
GUMA AML AML
comp=N,1360µm,0.9s
GUMA AML AML
comp=E,1170µm,1.6s
TERO Teramo 1.12 132 P Pg 22 20 43.1 -0.8
PTF Prato 1.18 301 P Pn 22 20 47.9 +2.9
T0104 Madonna delle 1.19 147 P Pb 22 20 44.9 -0.3
FIAM Fiamignano 1.20 156 P Pb 22 20 45.6 +0.3
AQU L'Aquila 1.23 146 ePn Pb 22 20 45.5 -0.2
ROM9 Roma 1.54 179 P Pn 22 20 50.4 +0.4
ROM9 AML AML
comp=N,1104µm,0.1s
ROM9 AML AML
comp=E,1175µm,0.1s
PGF Pioggiola 2.68 253 ePn Pn 22 21 05.5 -0.2
PGF Pioggiola 2.68 253 eP Pn 22 21 08.2 +2.5
PGF eSn Sn 22 21 37.5 -0.8
comp=E,1.8nm,0.3s
KIJV Kijevo 2.92 76 ePn Pn 22 21 08.3 -0.7
KIJV Sn Sb 22 21 47.4 -3.1
OZLJ Ozalj 3.10 43 ePn Pn 22 21 12.9 +1.5
ABTA Abfaltersbach 3.38 0 i Pn Pn 22 21 18.1 +2.8
comp=E,0.8nm,0.3s
ABTA i Sn Sn 22 21 59.9 +4.4
comp=E,6.5nm,0.6s
OBKA Obir 3.47 24 i Sg Sg 22 22 19.1 +5.3
comp=E,7.5nm,0.5s
SBF Sospel 3.69 279 ePn Pn 22 21 19.1 -0.5
SBF eSn Sn 22 22 01.4 -1.8
comp=E,3.1nm,0.5s
KBA Koelnbreinsper 3.76 9 ePn Pn 22 21 22.8 +2.1
comp=E,1.3nm,0.3s
KBA i Sn Sn 22 22 07.9 +2.8
comp=E,1.7nm,0.4s
SOKA Soboth 3.77 28 i Pg Pg 22 21 34.1 -0.6
comp=E,1.0nm,0.3s
SOKA i Sg Sg 22 22 25.2 +1.6
comp=E,2.4nm,0.6s
SQTA Sankt Quirin 3.95 347 ePn Pb 22 21 28.5 -3.7
comp=E,1.2nm,0.2s
SQTA i Sn Sb 22 22 16.1 -4.1
comp=E,3.9nm,0.4s
WATA Walderalm 4.02 351 i Pn Pb 22 21 29.5 -3.8
comp=E,1.8nm,0.2s
WATA i Sn Sn 22 22 16.2 +4.9
comp=E,3.6nm,0.5s
MOTA Moosalm 4.09 347 i Pn Pn 22 21 29.6 +4.4
comp=E,1.6nm,0.4s
MOTA i Sn Sn 22 22 13.9 +0.7
comp=E,0.9nm,0.3s
FRF La Foret Royal 4.24 275 ePn Pn 22 21 27.3 +0.2
FRF eSn Sn 22 22 13.9 -2.8
comp=E,0.4nm,0.3s
RETA Reutte 4.29 344 ePn Pn 22 21 32.4 +4.6
comp=E,0.6nm,0.3s
RETA eSn Sn 22 22 23.2 +5.2
comp=E,1.8nm,0.5s
DAVA Damuels 4.32 336 Pn Pn 22 21 33.5 +5.1
comp=E,3.4nm,0.5s
MBDF Montbardon 4.33 290 ePn Pn 22 21 27.9 -0.5
MBDF eSn Sn 22 22 17.4 -1.6
comp=E,0.2nm,0.2s
LMR La Mourre 4.35 272 ePn Pn 22 21 28.9 +0.3
LMR eSn Sn 22 22 16.7 -2.6
comp=E,0.3nm,0.2s
LPG La Plagne 4.62 299 ePn Pn 22 21 32.8 +0.3
LPG eSn Sn 22 22 23.6 -2.7
comp=E,0.2nm,0.3s
LPL La Plagne 4.63 300 ePn Pn 22 21 32.5 -0.2
LPL eSg Sg 22 22 48.9 -2.3
comp=E,0.6nm,0.2s
MOA Molln 4.65 15 i Pn Pn 22 21 34.8 +2.0
comp=E,1.2nm,0.3s
MOA i Sn Sn 22 22 29.6 +2.7
comp=E,1.6nm,0.4s
ORIF Oris-en-Rattie 4.99 290 ePn Pn 22 21 37.3 -0.2
ORIF Oris-en-Rattie 4.99 290 eP Pn 22 21 41.4 +3.9
ORIF eSn Sn 22 22 33.0 -2.2
comp=E,0.3nm,0.2s
SMRF Simiane la Rot 5.04 279 eP Pn 22 21 41.6 +3.5
SMRF eSn Sn 22 22 33.9 -2.5
comp=E,0.9nm,0.4s
CABF La Chapelle 5.57 308 ePn Pn 22 21 45.7 +0.3
CABF eSn Sn 22 22 46.6 -2.9
comp=E,0.5nm,0.2s
KHC Kasperske Hory 5.81 7 eSN Sn 22 22 55.0 -0.5
CDF Champ du Feu 6.21 326 ePn Pn 22 21 53.4 -0.8
CDF eSn Sn 22 23 00.0 -5.3
comp=E,0.4nm,0.2s
LASF Ste Croix 6.28 279 ePn Pn 22 21 54.4 -0.8
LASF eSn Sn 22 23 03.4 -3.6
comp=E,0.1nm,0.2s

*IDC **08** 22:29:03.3±0.4, 1°.42N×126°.18E, h0km, mb4.5/27, mb1 4.5/30, mb1mx4.5/48, mbtmp4.4/30, ML4.3/3, MS3.5/10, Ms1 3.5/10, ms1mx3.2/43, Error ellipse: s-maj=18.3km s-min=10.1km az=79.0*
*BJI **08** 22:29:05.8±0.0, 1°.35N×126°.57E, h31km, mB5.0/31, mb4.6/40, Ms4.7/10, Ms7 4.3/9*
*NEIC **08** 22:29:09.1±1.6, 1°.41N±0°.06×126°.28E±0°.06, h43km±6km, mb4.7/45, Error ellipse: s-maj=9.1km s-min=8.6km az=186.0*
*DJA **08** 22:29:10.5±0.2, 1°N±3°×12°6E±°, h42km±4km, M4.7/19, mb4.8/19, mB5.2/7, MLv4.6/13, Mw(mB)4.6/7*
ISC 08 22:29:09.9±0.8, 1°.41N±0°.04×126°.36E±0°.04, h49km±8km, n140, σ1§67/147, mb4.7/60, MS3.7/10, 3D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.19	122	P	Pn	22 29 28.9	-1.2
TNTI				S	Sn	22 29 45.3	+0.1
TNTI	Ternate	1.19	122		Pn	22 29 29.0	-1.2
LBMI	Labuha	2.33	151	P	Pn	22 29 45.2	-0.6
KMSI	Cibinong	2.52	251	P	Pn	22 29 48.7	+0.2
KMSI				S	Sn	22 30 18.3	+0.3
SANI	Sanana	3.45	186	P	Pn	22 30 00.5	-0.8
SANI				S	Sn	22 30 40.5	-0.4
LUWI	Luwuk	4.34	236	P	Pn	22 30 14.8	+1.4
LUWI				S	Sn	22 30 39.9	-23
LUWI	Luwuk	4.34	236		Pn	22 30 14.6	+1.2
MRSI	Marisa	4.52	258	P	Pn	22 30 17.2	+1.3
MRSI				S	Sn	22 31 09.6	+2.4
NLAI	Namlea	4.67	171	P	Pn	22 30 18.5	+0.5
DDMP	Don Marcelino,	4.71	352	eP	Pn	22 30 20.1	+1.5
DDMP				eS	Sn	22 31 10.8	-1.2
GSPH	General Santos	4.86	343⇓	i P	Pn	22 30 21.4	+0.7
GSPH				i S	Sn	22 31 15.7	0.0
APSI	Ampana	5.25	244	P	Pn	22 30 27.8	+1.9

2.4nm6µm602nm,1.3s
SWI Sorong 5.39 115 P Pn 22 30 35.1 +7.3
SKMP Bagumbayan, Su 5.39 340 eP Pn 22 30 28.5 +0.6
SIJI Sorong 5.40 115 Pn Pn 22 30 28.6 +0.6
4.3nm,0.3s,baz=301,slow=18,SNR=8.7
SIJI LR LR 22 33 07.6
comp=Z,738nm,18.9s,baz=276,slow=44
DAV Davao City (W) 5.68 352 LR LR 22 32 57.1
comp=Z,430nm,21.2s,baz=204,slow=41
KCP Kidapawan 5.71 347⇓ eP Pn 22 30 41.9 +10
KCP i S Sn 22 31 38.8 +2.2
CTBH Cotabato--PC H 6.15 340⇓ i P Pn 22 30 40.8 +2.5
KDI Kendari 6.51 215 P Pn 22 30 45.4 +2.2
0.3nm2µm53nm,0.6s
MPSI Mapaga 6.55 261 P Pn 22 30 45.6 +1.8
0.3nm695nm65nm,0.9s
BUKP Musuan 6.56 349 eP Pn 22 30 46.1 +2.2
BUKP eS Sn 22 31 41.2 -16
FAKI Fak Fak 7.29 126 Pn Pn 22 30 55.0 +1.1
TTSI Tana Toraja 7.90 236 P Pn 22 31 04.7 +2.5
SPSI Sidrap Palu 8.48 231 P Pn 22 31 11.6 +1.4
932nm59nm,0.4s
BNSI Bone 8.51 227 P Pn 22 31 13.5 +2.9
9µm45nm,0.6s
BKSI Bulukumba 9.14 223 P Pn 22 31 22.3 +3.0
769nm39nm,0.5s
KAPI Kappang 9.18 226 Pn Pn 22 31 22.5 +2.6
5.5nm,0.3s,baz=16,slow=7.9,SNR=8.1
KAPI Sn Sn 22 33 03.2 +1.3
baz=253,slow=19,SNR=1.1
KAPI Kappang 9.18 226 Pn 22 31 22.9 +3.0
KKM Kota Kinabalu 11.12 295 Pn Pn 22 31 49.3 +2.8
KKM Sn Sn 22 33 43.6 -6.0
SOEI Soe 11.28 191 P Pn 22 31 51.4 +2.7
68nm,1.0s
BATI Baumata 11.85 193 Pn Pn 22 31 54.2 -2.2
2.1nm,0.3s,baz=76,slow=4.2,SNR=2.0
PLAI Plampang 13.29 220 P P 22 32 22.3 -2.2
TWSI Taliwang, Sumb 13.81 223 P Pn 22 32 24.8 +1.6
SBUM Sibu 14.17 274 Pn 22 32 27.1 -1.0
JAY Jayapura 14.86 105 LR LR 22 38 46.3
comp=Z,153nm,19.4s,baz=264,slow=39
MTN Manton Dam 14.93 162 Pn 22 32 37.7 -0.3
JAGI Jajag, Banyuwa 15.63 231 P Pn 22 32 48.8 +1.6
53nm,1.0s
JAGI Jajag, Banyuwa 15.63 231 P Pn 22 32 47.4 +0.2
JAGI IAmb IAmb 22 32 58.2
comp=Z,52nm,1.0s
KSM Kuching 16.05 270 P Pn 22 32 53.8 +1.3
KSM IAmb IAmb 22 33 04.1
comp=Z,61nm,1.1s
KNRA Kununurra 17.14 172 Pn 22 33 04.3 -1.8
KNRA IAmb IAmb 22 33 15.4
comp=Z,88nm,1.4s
FITZ Fitzroy Crossi 19.39 182 P P 22 33 31.4 -0.6
comp=Z,1.2nm,0.3s,baz=5.3,slow=8.7,SNR=5.6
FITZ Fitzroy Crossi 19.39 182 P P 22 33 31.5 -0.5
TWG Pinlang 21.90 347 P P 22 33 55.2 -3.8
MYKOM Kota Tinggi 22.51 271 P P 22 34 04.0 -1.7
MYKOM IAmb IAmb 22 34 11.2
comp=Z,41nm,1.2s
COEN Coen 22.60 133 P P 22 34 06.7 +0.1
WRA Warramunga Arr 22.61 160 P P 22 34 06.0 -0.8
comp=Z,19nm,0.5s,baz=337,slow=11,SNR=118
WRA PcP PcP 22 37 59.8 +1.2
comp=Z,0.7nm,0.5s,baz=344,slow=2.1,SNR=4.6
WRA Warramunga Arr 22.61 160 P P 22 34 05.5 -1.3
WR0 Warramunga Arr 22.70 160 P P 22 34 07.3 -0.4
WR0 IAmb IAmb 22 34 16.9
comp=Z,23nm,0.8s
SSLB Suanglung 22.86 347 P P 22 34 08.8 -0.5
MDSI Maura Dua 22.93 255 P P 22 34 24.5 +14
PMG Port Moresby 23.33 118 LR LR 22 46 08.3
comp=Z,201nm,18.3s,baz=308,slow=44
YHNB Yeheng 23.62 349 P P 22 34 16.4 -0.4
PSA00 Pilbara Seismi 23.71 195 P P 22 34 17.4 -0.2
AS31 Alice Springs 25.98 164 P P 22 34 38.7 +0.5
AS31 IAmb IAmb 22 34 44.9
comp=Z,6.6nm,0.3s
AS31 PcP PcP 22 38 07.1 +1.3
ASAR Alice Springs 25.98 164 P P 22 34 38.1 -0.1
comp=Z,6.3nm,0.4s,baz=346,slow=10,SNR=45
ASAR PcP PcP 22 38 06.7 +0.8
comp=Z,3.1nm,0.4s,baz=348,slow=2.3,SNR=15
KRVT Keravat (AS076 26.26 103 LR LR 22 44 09.5
comp=Z,149nm,18.7s,baz=274,slow=34
RPSI Rantau Prapat 27.45 273 P P 22 34 50.3 -1.3
PSI Prapat 27.45 273 P P 22 34 50.3 -1.5
comp=Z,3.4nm,0.4s,baz=110,slow=6.8,SNR=5.1
KCSI Kotacane, Aceh 28.64 275 P P 22 35 00.6 -1.7
comp=Z,18nm,0.9s
GSI Gunungsitoli 28.78 270 P P 22 35 02.2 -1.3
GSI IAmb IAmb 22 35 05.2
comp=Z,16nm,1.0s
CTA Charters Tower 28.93 139 P P 22 35 05.1 +0.4
comp=Z,1.2nm,0.5s,baz=336,slow=10,SNR=3.0
NJ2 Nanjing 31.29 348 eP P 22 35 26.0 +0.6
NJ2 pmax pmax
comp=Z,13nm,0.6s
CMAR Chiang Mai Arr 31.79 304 P P 22 35 28.2 -1.8
comp=Z,0.3nm,0.3s,baz=138,slow=8.2,SNR=3.2
CMAR PcP PcP 22 38 21.6 +1.1
comp=Z,0.3nm,0.3s,baz=170,slow=2.7,SNR=4.1
JNU Nakatsue 31.83 7 P P 22 35 30.2 0.0
comp=Z,13nm,0.9s,baz=136,slow=7.3,SNR=3.5
JNU LR LR 22 50 02.2
comp=Z,25nm,19.0s,baz=170,slow=40
FORT Forrest 32.05 177 P P 22 35 32.1 0.0
KMI Kunming 32.80 318 P P 22 35 41.7 +2.6
KMI pP pP 22 35 50.7 -0.7
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI pmax pmax
comp=Z,130nm,7.7s
KMI LR LR
comp=Z,200nm,23.2s
ENH Enshi 32.88 332 P P 22 35 39.5 +0.1
ENH IAmb IAmb 22 35 43.6
comp=Z,8.5nm,0.8s
NWAO Narrogin (SRO) 35.22 193 P P 22 35 59.5 -0.2
comp=Z,3.7nm,0.4s,baz=15,slow=6.1,SNR=6.5
NWAO Narrogin (SRO) 35.22 193 P P 22 35 59.3 -0.4
NWAO Narrogin (SRO) 35.22 193 IAmb IAmb 22 36 03.5
comp=Z,37nm,1.5s
BBOO Buckleboo 35.24 166 P P 22 35 59.3 -0.5
BBOO IAmb IAmb 22 36 01.4
comp=Z,7.9nm,0.7s
BBOO PcP PcP 22 38 31.2 +1.3
KSRS Korea Array 35.90 2 P P 22 36 05.0 -0.4
comp=Z,1.3nm,0.4s,baz=179,slow=10.0,SNR=6.1
STKA Stephens Creek 36.12 158 P P 22 36 07.3 -0.1
comp=Z,9.7nm,0.8s,baz=335,slow=9.2,SNR=24
STKA PcP PcP 22 38 33.3 +0.8
comp=Z,1.1nm,0.5s,baz=322,slow=1.6,SNR=2.9
STKA Stephens Creek 36.12 158 P P 22 36 08.5 +1.1
CD2 Chengdu 36.32 326 P P 22 36 08.4 -0.8
CD2 pmax pmax
comp=Z,20nm,0.5s
XAN Xi'an 36.34 335 P P 22 36 10.0 +0.7
XAN pP pP 22 36 15.5 -6.1
XAN pmax pmax
comp=Z,8.0nm,0.8s
MAT Matsushiro 36.64 16 P P 22 36 09.1 -2.7
MJAR Matsushiro Arr 36.64 16 P P 22 36 11.1 -0.7
comp=Z,3.1nm,0.5s,baz=166,slow=8.1,SNR=10
MJAR LR LR 22 49 25.7
comp=Z,31nm,21.6s,baz=260,slow=33
MJAR Matsushiro Arr 36.64 16 IAmb IAmb 22 36 15.0
comp=Z,2.0nm,0.9s
ARMA Armidale 39.77 145 P P 22 36 40.4 +2.1
ARMA IAmb IAmb 22 36 41.2
comp=Z,13nm,1.1s
LZH Lanzhou 40.33 331 eP P 22 36 43.3 +0.3
LZH pP pP 22 36 54.5 -1.0
LZH sP pwP 22 36 58.6 +0.7
LZH ePP PnPn 22 38 20.4 -0.2
LZH pmax pmax
comp=Z,23nm,1.1s
LZH pmax pmax
comp=Z,110nm,5.4s
LZH LR LR
comp=Z,320nm,13.5s
LZH LR LR
comp=Z,330nm,13.6s
LZH LR LR
comp=Z,460nm,16.7s
SHL Shillong 40.99 309 P P 22 36 47.8 -0.8
SHL IAmb IAmb 22 36 51.0
comp=Z,7.1nm,0.6s
HHC Hu-ho-hao-te 41.49 343 eP P 22 36 53.4 +1.0
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,51nm,4.4s
USA0B Ussuriysk Arra 42.90 6 P P 22 37 05.3 +1.7
USRK Ussuriysk Ar. 42.90 6 P P 22 37 04.5 +0.9
comp=Z,12nm,0.9s,baz=188,slow=7.2,SNR=14
MDJ Mudanjiang 43.12 3 P P 22 37 06.7 +1.2
MDJ IAmb IAmb 22 37 08.3
comp=Z,16nm,0.9s
LSA Lhasa 43.73 313 P P 22 37 11.3 +0.1
TAPN Taplejung 45.12 308 eP P 22 37 22.4 +0.2
comp=Z,5.3nm,0.3s
ODAN Odare 45.15 308 eP P 22 37 21.8 -0.5
comp=Z,9.9nm,0.6s
RAMN Ramite 45.82 307 eP P 22 37 27.3 -0.3
comp=Z,6.5nm,0.4s
JIRN Jiri 46.46 308 eP P 22 37 32.7 -0.1
comp=Z,19nm,0.4s
GUN Gumba 46.82 308 eP P 22 37 34.7 -0.9
comp=Z,16nm,0.4s
PKIN Phulchoki 47.06 307 eP P 22 37 36.4 -0.9
comp=Z,2.8nm,0.3s
KLR Kul'dur 47.87 5 P P 22 37 43.8 +0.9
comp=Z,11nm,0.9s,baz=195,slow=5.5,SNR=25
DANN Dangsing 48.69 307 eP P 22 37 48.6 -1.4
comp=Z,22nm,0.5s
SONM Songino Array 49.38 342 P P 22 37 53.9 -0.9
comp=Z,1.3nm,0.6s,baz=158,slow=7.9,SNR=12
SONM PcP PcP 22 39 17.8 +1.2
comp=Z,1.7nm,0.7s,baz=167,slow=3.5,SNR=6.1
SONM Songino Array 49.38 342 IAmb IAmb 22 38 01.5
comp=Z,4.6nm,1.3s
WMQ Urumqi 54.42 326 eP P 22 38 36.2 +3.9
WMQ sP pwP 22 38 47.5 -0.1
WMQ PP PP 22 40 39.8 +4.9
WMQ S S 22 46 04.1 -3.4
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ pmax pmax
comp=Z,140nm,6.9s
WMQ LR LR
comp=Z,370nm,29.1s
WMQ LR LR
comp=Z,740nm,28.9s
WMQ LR LR
comp=Z,130nm,22.1s
PETK Petropavlovsk- 57.71 22 P P 22 38 57.1 +1.5
comp=Z,5.7nm,0.5s,baz=182,slow=6.4,SNR=81
PETK PcP PcP 22 39 49.0 +1.0
comp=Z,0.9nm,0.7s,baz=213,slow=5.1,SNR=2.5
MK31 Makanchi Array 59.26 326 P P 22 39 06.0 -0.5
MK31 IAmb IAmb 22 39 11.3
comp=Z,3.9nm,0.7s
MKAR Makanchi Array 59.26 326 P P 22 39 05.8 -0.7
comp=Z,3.8nm,0.4s,baz=120,slow=7.8,SNR=18
MKAR PKP2bc 23 08 49.3
comp=Z,0.2nm,0.8s,baz=320,slow=3.4,SNR=2.5
KSH Kashi 59.44 316 P P 22 39 12.4 +4.4
KSH pP pP 22 39 19.8 -1.4
KSH PP PP 22 41 22.2 +2.5
KSH S S 22 47 17.5 +3.6
KSH sS sS 22 47 33.8 -2.1
KSH SS SS 22 51 14.3 +4.6
KSH pmax pmax
comp=Z,10.0nm,0.5s
KSH pmax pmax
comp=Z,120nm,4.6s
KSH LR LR
comp=Z,330nm,4.9s
KSH LR LR
comp=Z,380nm,5.4s
KSH LR LR
comp=Z,340nm,5.1s
MAKZ Makanchi 59.44 326 P P 22 39 07.0 -0.7
MAKZ IAmb IAmb 22 39 12.5
comp=Z,5.9nm,0.6s
RPZ Rata Peaks 60.10 144 LR LR 23 03 43.2
comp=Z,56nm,19.9s,baz=328,slow=34
YAK Yakutsk 60.53 2 P P 22 39 15.9 +1.1
ARSB Arslanbob 62.28 317 IAmb IAmb 22 39 34.9
comp=Z,8.8nm,1.1s
ZAA0 Zalesovo Array 62.49 334 P P 22 39 27.4 -0.8
ZALV Zalesovo Beam 62.49 334 P P 22 39 27.1 -1.1
comp=Z,1.7nm,0.4s,baz=133,slow=5.8,SNR=11
KBL Kabul 62.66 309 P P 22 39 29.5 -0.5
KBL IAmb IAmb 22 39 33.6
comp=Z,4.7nm,0.8s
KBL PP PP 22 41 44.3 -4.1
BTK Batken 63.27 315 IAmb IAmb 22 39 48.2
comp=Z,7.4nm,1.2s
KURK Kurchatov 63.50 328 P P 22 39 34.1 -0.9
CHGR Chuyangaron 63.95 313 P P 22 39 36.5 -1.9
TIXI Tiksi 70.16 1 LR LR 23 11 31.5
comp=Z,31nm,21.4s,baz=340,slow=36
TIXI Tiksi 70.16 1 P P 22 40 15.8 -1.2
GEYT Alibeck 72.07 309 P P 22 40 30.3 +1.0
comp=Z,2.0nm,0.7s,baz=103,slow=6.2,SNR=4.6
GEYT Alibeck 72.07 309 P P 22 40 28.8 -0.5
ARU Arti 76.70 328 P P 22 40 55.3 -0.4
ARU IAmb IAmb 22 41 00.2
comp=Z,9.6nm,0.9s
OPO Ambohidratompo 80.19 251 P P 22 41 15.7 -0.3
comp=Z,1.5nm,0.6s,baz=69,slow=8.6,SNR=2.1
RAYN Ar Rayn 81.09 293 P P 22 41 18.5 -1.9
VNDA Vanda 81.18 173 P P 22 41 21.0 +1.1
comp=Z,2.5nm,0.8s,baz=294,slow=5.5,SNR=9.6
RDOG Red Dog Mine 81.57 21 P P 22 41 22.3 +0.1
RDOG IAmb IAmb 22 41 28.2
comp=Z,10nm,1.2s
KDAK Kodiak Island 84.04 32 LR LR 23 15 01.3
comp=Z,55nm,19.5s,baz=260,slow=33
KBZ Khabaz 84.30 314 P P 22 41 36.4 -0.4
comp=Z,2.2nm,0.7s,baz=74,slow=4.8,SNR=7.9
ILAR Eielson Array 87.34 25 P P 22 41 51.0 -0.5
comp=Z,0.9nm,0.4s,baz=250,slow=4.5,SNR=25
KMBO Kilima Mbogo 89.14 269 P P 22 41 59.8 -1.6
comp=Z,0.6nm,0.6s,baz=56,slow=7.3,SNR=2.6
BRTR Keskin Array B 91.21 310 P P 22 42 09.6 -0.8
comp=Z,0.9nm,0.7s,baz=119,slow=4.8,SNR=6.2
INK Inuvik 92.44 21 P P 22 42 15.0 -0.2
comp=Z,1.1nm,0.7s,baz=257,slow=5.7,SNR=4.3
INK Inuvik 92.44 21 IAmb IAmb 22 42 29.5
comp=Z,6.2nm,1.5s
ARCES ARCESS Array B 92.49 340 P P 22 42 14.9 -0.5
comp=Z,4.3nm,0.9s,baz=90,slow=6.2,SNR=7.2
AKASG Malin Array Be 93.45 321 P P 22 42 18.4 -1.9
comp=Z,0.2nm,0.3s,baz=68,slow=5.0,SNR=3.0
FINES FINESS Array B 93.69 332 P P 22 42 20.2 -0.9
comp=Z,3.6nm,1.1s,baz=70,slow=2.8,SNR=11
BUR08 Bucovina Ar. S 96.48 318 IAmb IAmb 22 42 38.2
comp=Z,1.7nm,0.8s
YKA Yellowknife Ar 101.75 24 P Pdif 22 42 58.2 +0.8
comp=Z,0.2nm,0.5s,baz=294,slow=4.3,SNR=6.1
ULM Lac du Bonnet 117.16 29 PKP PKiKP 22 47 50.1 +0.3
comp=Z,0.9nm,0.5s,baz=337,slow=3.4,SNR=3.8
SCHQ Schefferville 122.90 9 PKP PKiKP 22 48 01.4 +0.5
comp=Z,2.0nm,0.4s,baz=56,slow=2.5,SNR=7.0
TXAR Lajitas Array 123.29 53 PKP PKiKP 22 48 03.7 +1.1
comp=Z,0.5nm,0.7s,baz=299,slow=0.9,SNR=7.2
DBIC Dimbokro 130.66 280 PKP PKiKP 22 48 17.6 +0.1
comp=Z,2.4nm,0.8s,baz=153,slow=6.8,SNR=3.5
PLCA Paso Flores 137.96 161 PKP PKPdf 22 48 30.2 +0.5
comp=Z,1.1nm,0.6s,baz=312,slow=3.6,SNR=4.9
CPUP Villa Florida 154.97 172 PKPbc PKiKP 22 49 08.4 +1.5
comp=Z,0.7nm,0.4s,baz=190,slow=8.7,SNR=2.8
LPAZ La Paz 159.44 137 PKP PKPdf 22 49 04.8 -0.1
comp=Z,0.8nm,0.6s,baz=180,slow=5.1,SNR=3.9

TAP 08 22:33:53.3, 23°.02N×120°.49E, h56km±1km, ML2.1, B, Taiwan

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

SGST	**Jiashian**	**0.10**	**53**	P	Pn	22 34 02.1	+0.2	
	baz=56							
SGST				*e*S	Sn	22 34 08.6	+0.5	
	baz=56							
CHN3	**Shinhua**	**0.13**	**295**	*e*P	Pn	22 34 02.3	+0.3	
	baz=294							
CHN3				*e*S	Sn	22 34 08.9	+0.7	
	baz=294							
SLGT	**Liugui**	**0.14**	**101**	*e*P	Pn	22 34 02.4	+0.4	
	baz=100							
SLGT				*e*S	Sn	22 34 08.9	+0.5	
	baz=100							
CHN1	**Nanshi**	**0.17**	**11**	P	Pn	22 34 02.8	+0.6	
	baz=11							
CHN1				S	Sn	22 34 08.7	+0.1	
	baz=11							
SNST	**Tainan City**	**0.20**	**1**	P	Pn	22 34 02.7	+0.3	
	baz=1.0							
SNST				*e*S	Sn	22 34 09.9	+1.0	
	baz=1.0							
TWK	**Hsinying**	**0.25**	**359**	P	Pn	22 34 02.4	-0.3	
	baz=1.0							
TWK				S	Sn	22 34 10.5	+1.0	
	baz=1.0							
WTP	**Ta-pu**	**0.25**	**26**	P	Pn	22 34 03.6	+0.9	
	baz=28							
WTP				S	Sn	22 34 10.2	+0.7	
	baz=28							
STYT	**Tauyuan**	**0.28**	**60**	P	Pn	22 34 03.8	+0.8	
	baz=60							
STYT				S	Sn	22 34 10.6	+0.7	
	baz=60							
SSD	**Sandimen**	**0.30**	**155**	P	Pn	22 34 03.0	0.0	
	baz=153							
SSD				S	Sn	22 34 10.8	+0.8	
	baz=153							
TPUB	**Ta-pu**	**0.31**	**24**	P	Pn	22 34 03.5	+0.4	
	baz=24							
TPUB				*e*S	Sn	22 34 10.6	+0.4	
	baz=24							
TPUB	**Ta-pu**	**0.31**	**24**	P	Pn	22 34 03.6	+0.4	
SCLT	**Jiali**	**0.32**	**299**	*e*S	Sn	22 34 10.8	+0.6	
	baz=299							
CHN4	**Tsaushan**	**0.34**	**16**	P	Pn	22 34 02.8	-0.6	
	baz=15							
CHN4				S	Sn	22 34 10.4	-0.4	
	baz=15							
KAU	**Kaohsiung**	**0.48**	**201**	*e*S	Sn	22 34 14.0	+1.0	
	baz=199							

*LDG **08** 22:36:45.5±0.1,43°.40N×12°.55E,h10km,Ml2.0/6,Error ellipse: s-maj=3.9km s-min=2.7km az=30.0*
ROM 08 22:36:44.5±0.0,**43°.378N**±0°.003×**12°.511E**±0°.003,
h7km,**ML2.4**/28,**Error ellipse: s-maj=0.3km s-min=0.1km az=213.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
ATFO	**Monte Foce - G**	**0.05**	**105**	*i* P	Pg	22 36 46.4	+0.3	
ATFO				S	Sg	22 36 47.4	+0.2	
ATFO				AML	AML			
	comp=N,31050μm,0.2s							
ATFO				AML	AML			
	comp=E,27500μm,0.5s							
ATVO	**AVT- Monte Val**	**0.08**	**273**	*i* P	Pg	22 36 46.8	+0.3	
ATVO				S	Sg	22 36 48.2	+0.3	
ATVO				AML	AML			
	comp=N,12600μm,0.4s							
ATVO				AML	AML			
	comp=E,8610μm,0.1s							
ATPI	**Pietralunga -**	**0.11**	**312**	*i* P	Pg	22 36 47.4	+0.4	
ATPI				S	Sg	22 36 49.3	+0.7	
ATPI				AML	AML			
	comp=E,2885μm,0.9s							
ATPI				AML	AML			
	comp=N,3305μm,0.3s							
ATPI				AML	AML			
	comp=E,2880μm,0.9s							
ATPI				AML	AML			
	comp=N,3310μm,0.3s							
MURB	**Monte Urbino**	**0.12**	**175**	*e*P	Pg	22 36 47.9	+0.8	
MURB				S	Sg	22 36 50.1	+1.2	
MURB				AML	AML			
	comp=E,10535μm,1.4s							
MURB				AML	AML			
	comp=N,10355μm,0.2s							
MURB				AML	AML			
	comp=E,10495μm,1.4s							
MURB				AML	AML			
	comp=N,10340μm,0.2s							
MURB				AML	AML			
	comp=E,10510μm,1.4s							
MURB				AML	AML			
	comp=N,10385μm,0.2s							
MURB				AML	AML			
	comp=N,10040μm,0.2s							
MURB				AML	AML			
	comp=E,12900μm,1.4s							
MURB				AML	AML			
	comp=N,10385μm,0.2s							
MURB				AML	AML			
	comp=E,10515μm,1.4s							
PIEI	**Pieia**	**0.16**	**6**	*e*P	Pg	22 36 48.5	+0.6	
PIEI				S	Sg	22 36 51.4	+1.4	
PIEI				AML	AML			
	comp=E,8400μm,0.2s							
PIEI				AML	AML			
	comp=N,5045μm,0.2s							
PIEI				AML	AML			
	comp=N,5040μm,0.2s							
ATMI	**Monte Miggiano**	**0.18**	**256**	P	Pg	22 36 48.9	+0.7	
ATMI				S	Sg	22 36 51.9	+1.2	
ATMI				AML	AML			
	comp=E,3310μm,0.7s							
ATMI				AML	AML			
	comp=N,2495μm,0.5s							
SSFR	**Montelago di S**	**0.21**	**74**	*i* P	Pg	22 36 49.4	+0.7	
SSFR				AML	AML			
	comp=E,3885μm,0.2s							
SSFR				AML	AML			
	comp=N,2550μm,0.3s							
SSFR				AML	AML			
	comp=E,3880μm,0.2s							
SSFR				AML	AML			
	comp=N,2545μm,0.3s							
SSFR				AML	AML			
	comp=N,2150μm,1.1s							
SSFR				AML	AML			
	comp=E,4230μm,0.2s							
FRON	**Frontone**	**0.21**	**48**	*i* P	Pg	22 36 49.4	+0.6	
FRON				S	Sg	22 36 53.1	+1.6	
FRON				AML	AML			
	comp=E,883μm,0.5s							
FRON				AML	AML			
	comp=N,1420μm,0.7s							
FRON				AML	AML			
	comp=E,882μm,0.5s							
ATTE	**AVT- Monte Tez**	**0.21**	**213**	P	Pg	22 36 49.4	+0.6	
ATTE				S	Sg	22 36 53.0	+1.3	
ATTE				AML	AML			
	comp=N,1420μm,0.3s							
ATTE				AML	AML			
	comp=E,1800μm,0.3s							
ATTE				AML	AML			
	comp=N,1425μm,0.3s							
ATTE				AML	AML			
	comp=E,1805μm,0.3s							
ATCC	**AVT- Casa Cast**	**0.21**	**154**	P	Pg	22 36 49.8	+1.0	
ATCC				S	Sg	22 36 53.8	+2.2	
ATCC				AML	AML			
	comp=E,2390μm,1.0s							
ATCC				AML	AML			
	comp=N,2880μm,0.3s							
ATCC				AML	AML			
	comp=E,2395μm,1.0s							
CDCA	**Citt' di Caste**	**0.22**	**292**	P	Pg	22 36 49.5	+0.7	
CDCA				S	Sg	22 36 53.2	+1.4	
CDCA				AML	AML			
	comp=E,2920μm,0.6s							
CDCA				AML	AML			
	comp=E,1255μm,1.2s							
CDCA				AML	AML			
	comp=N,1236μm,0.4s							
CDCA				AML	AML			
	comp=N,7155μm,0.9s							
CDCA				AML	AML			
	comp=E,2920μm,0.6s							
BADI	**Badiali**	**0.23**	**304**	P	Pg	22 36 49.9	+0.7	
BADI				S	Sg	22 36 53.9	+1.5	
BADI				AML	AML			
	comp=E,3540μm,0.6s							
BADI				AML	AML			
	comp=N,6870μm,0.2s							
BADI				AML	AML			
	comp=N,6865μm,0.2s							
BADI				AML	AML			
	comp=E,3545μm,0.6s							
MPAG	**Monte Paganucc**	**0.31**	**36**	*i* P	Pg	22 36 51.2	+0.6	
MPAG				S	Sb	22 36 56.4	-1.4	
MPAG				AML	AML			
	comp=E,400μm,1.5s							
MPAG				AML	AML			
	comp=N,435μm,0.8s							
MPAG				AML	AML			
	comp=N,434μm,0.8s							
MPAG				AML	AML			
	comp=N,433μm,0.8s							
MPAG				AML	AML			
	comp=E,396μm,1.5s							
PE3	**Peglio**	**0.32**	**358**	P	Pg	22 36 51.5	+0.8	
PE3				S	Sb	22 36 57.5	-0.5	
PE3				AML	AML			
	comp=E,1280μm,0.3s							
PE3				AML	AML			
	comp=E,1275μm,0.3s							
PE3				AML	AML			
	comp=N,1920μm,0.3s							
PARC	**Parchiule**	**0.34**	**324**	P	Pg	22 36 51.7	+0.6	
PARC				S	Sb	22 36 57.4	-1.1	
PARC				AML	AML			
	comp=E,547μm,0.4s							
PARC				AML	AML			
	comp=N,699μm,1.3s							
PARC				AML	AML			
	comp=E,546μm,0.4s							
ARVD	**Arcevia**	**0.34**	**69**	*i* P	Pg	22 36 51.7	+0.6	
ARVD				S	Sb	22 36 57.6	-0.9	
ARVD				AML	AML			
	comp=N,346μm,0.5s							
ARVD				AML	AML			
	comp=E,284μm,1.3s							
SNTG	**Esanatoglia**	**0.34**	**111**	*i* P	Pg	22 36 51.8	+0.6	
SNTG				S	Sb	22 36 57.5	-1.0	
SNTG				AML	AML			
	comp=E,208μm,1.4s							
SNTG				AML	AML			
	comp=N,1615μm,0.2s							
SNTG				AML	AML			
	comp=N,248μm,0.2s							
SNTG				AML	AML			
	comp=E,964μm,0.7s							
SNTG				AML	AML			
	comp=N,248μm,0.2s							
SNTG				AML	AML			
	comp=E,208μm,1.5s							
SSP9	**Sansepolcro**	**0.34**	**305**	P	Pg	22 36 51.9	+0.7	
SSP9				S	Sb	22 36 57.5	-1.1	
FSSB	**Fossombrone**	**0.37**	**32**	*i* P	Pg	22 36 52.3	+0.6	
FSSB				S	Sb	22 36 58.6	-0.8	
FSSB				AML	AML			
	comp=E,900μm,0.6s							
FSSB				AML	AML			
	comp=N,815μm,0.8s							
FSSB				AML	AML			
	comp=E,900μm,0.6s							
FSSB				AML	AML			
	comp=N,816μm,0.8s							
CAFI	**Castiglion Fio**	**0.40**	**263**	P	Pg	22 36 52.9	+0.6	
CAFI				S	Sb	22 36 59.0	-1.4	
CAFI				AML	AML			
	comp=N,468μm,0.3s							
CAFI				AML	AML			
	comp=E,692μm,0.2s							
EL6	**Elcito**	**0.43**	**96**	P	Pg	22 36 53.5	+0.6	
EL6				S	Sb	22 37 00.8	-0.5	
EL6				AML	AML			
	comp=E,684μm,0.2s							
EL6				AML	AML			
	comp=N,666μm,0.4s							
EL6				AML	AML			
	comp=E,684μm,0.2s							
EL6				AML	AML			
	comp=E,685μm,0.2s							
EL6				AML	AML			
	comp=N,665μm,0.4s							
CPGN	**Carpegna, Ital**	**0.45**	**342**	P	Pb	22 36 54.5	-0.3	
CESI	**CESI - Serrava**	**0.47**	**142**	P	Pg	22 36 54.2	+0.5	
CESI				S	Sb	22 37 01.6	-0.7	
CESI				AML	AML			
	comp=E,66μm,0.3s							
CESI				AML	AML			
	comp=N,132μm,1.3s							
CING	**Cingoli**	**0.50**	**90**	P	Pg	22 36 54.7	+0.5	
CING				S	Sb	22 37 02.8	-0.4	
CING				AML	AML			
	comp=E,182μm,0.9s							
CING				AML	AML			
	comp=N,276μm,1.0s							
FDMO	**Fiordimonte**	**0.54**	**129**	P	Pg	22 36 55.3	+0.4	
FDMO				S	Sb	22 37 04.2	-0.2	
FDMO				AML	AML			
	comp=E,268μm,0.2s							
FDMO				AML	AML			
	comp=N,324μm,0.7s							
FDMO				AML	AML			
	comp=E,268μm,0.2s							
FDMO				AML	AML			
	comp=N,324μm,0.7s							
MGAB	**Montegabbione**	**0.55**	**212**	P	Pg	22 36 55.6	+0.5	
MGAB				S	Sb	22 37 04.4	-0.2	
MGAB				AML	AML			
	comp=E,617μm,0.5s							
MGAB				AML	AML			
	comp=N,964μm,0.2s							
MGAB				AML	AML			
	comp=N,1040μm,0.2s							
MGAB				AML	AML			
	comp=E,514μm,0.5s							
CSP1	**Cessapalombo**	**0.58**	**119**	P	Pg	22 36 56.1	+0.3	
CSP1				S	Sb	22 37 05.6	-0.1	
CSP1				AML	AML			
	comp=E,313μm,1.5s							
CSP1				AML	AML			
	comp=N,325μm,0.4s							
CSP1				AML	AML			
	comp=E,310μm,1.5s							
CSP1				AML	AML			
	comp=N,330μm,0.4s							
PESA	**Pesaro**	**0.61**	**23**	P	Pb	22 36 57.0	-0.6	
PESA				S	Sb	22 37 07.0	+0.6	
PESA				AML	AML			
	comp=E,634μm,1.0s							
PESA				AML	AML			
	comp=N,460μm,0.7s							
ASQU	**Asqua**	**0.67**	**309**	P	Pg	22 36 57.9	+0.4	
ASQU				S	Sb	22 37 08.3	+0.2	
ASQU				AML	AML			
	comp=N,147μm,0.4s							
ASQU				AML	AML			
	comp=E,160μm,0.6s							
SACS	**San Casciano d**	**0.69**	**220**	P	Pg	22 36 58.1	+0.4	
SACS				S	Sb	22 37 08.6	0.0	
NRCA	**Norcia**	**0.70**	**141**	P	Pg	22 36 58.2	+0.2	
NRCA				AML	AML			
	comp=N,292μm,0.1s							
NRCA				AML	AML			
	comp=E,230μm,0.2s							
SFI	**Santa Sofia**	**0.71**	**318**	P	Pg	22 36 58.5	+0.2	
SFI				S	Sb	22 37 09.7	+0.3	
SFI				AML	AML			
	comp=E,85μm,0.6s							
SFI				AML	AML			
	comp=N,89μm,0.5s							
SFI				AML	AML			
	comp=E,85μm,0.6s							
SFI				AML	AML			
	comp=E,85μm,0.6s							
SFI				AML	AML			
	comp=N,89μm,0.5s							
RUFI	**Rufina**	**0.86**	**303**	P	Pb	22 37 01.6	-0.2	
RUFI				S	Sb	22 37 14.0	+0.4	
SMA1	**SAN MARTINO**	**0.96**	**141**	P	Pg	22 37 03.1	+0.1	
SMA1				AML	AML			
	comp=E,124μm,0.9s							
SMA1				AML	AML			
	comp=N,112μm,0.4s							
GUMA	**Gualdo di Mace**	**1.09**	**106**	P	Pg	22 36 58.1	-7.3	
GUMA				S	Sg	22 37 08.5	-11	
GUMA				AML	AML			
	comp=E,447μm,0.4s							
GUMA				AML	AML			
	comp=E,478μm,0.3s							
GUMA				AML	AML			
	comp=E,448μm,0.4s							
GUMA				AML	AML			
	comp=N,478μm,0.8s							
GUMA				AML	AML			
	comp=N,437μm,1.1s							
TERO	**Teramo**	**1.10**	**133**	P	Pg	22 37 05.3	-0.3	
BRJN	**Brijuni**	**1.77**	**30**	*i* Pn	Pb	22 37 16.5	-0.8	
BRJN				Sn	Sg	22 37 41.3	0.0	
DUGI	**Dugi Otok**	**1.95**	**71**	*e*Pn	Pb	22 37 19.7	-0.6	
DUGI				Sn	Sg	22 37 46.6	-0.5	
NVLJ	**Novalja**	**2.08**	**54**	*e*Pn	Pn	22 37 20.6	+0.8	
NVLJ				Sn	Sb	22 37 47.8	-0.7	
ZIRJ	**Zirje**	**2.29**	**82**	*e*Pn	Pn	22 37 24.0	+1.2	
ZIRJ				Sn	Sb	22 37 53.2	-1.6	
MORI	**Morici**	**2.37**	**77**	*e*Pn	Pn	22 37 25.3	+1.5	
UDBI	**Udbina**	**2.62**	**63**	*e*Pn	Pn	22 37 29.0	+1.7	
UDBI				Sn	Sb	22 38 03.5	-0.6	
PGF	**Pioggiola**	**2.71**	**253**	*e*Pn	Pn	22 37 29.1	+0.5	
HVAR	**Hvar**	**2.88**	**93**	*e*Pn	Pn	22 37 32.2	+1.4	
HVAR				Sn	Sn	22 38 07.7	+2.0	
KIJV	**Kijevo**	**2.89**	**76**	*i* Pn	Pn	22 37 33.1	+2.0	
KIJV				Sn	Sb	22 38 09.4	-2.7	
ABTA	**Abfaltersbach**	**3.37**	**0**	*e*Pn	Pb	22 37 41.4	-3.2	
ABTA				*e*Sn	Sn	22 38 21.4	+3.5	
	comp=N,2.0nm,0.6s							
SBF	**Sospel**	**3.72**	**279**	*e*Pn	Pn	22 37 41.4	-1.0	
SBF				*e*Sn	Sn	22 38 24.0	-2.5	
	comp=N,0.8nm,0.2s							
SQTA	**Sankt Quirin**	**3.95**	**347**	*e*Pn	Pb	22 37 51.2	-3.4	
	comp=N,0.8nm,0.2s							
FRF	**La Foret Royal**	**4.27**	**274**	*e*Pn	Pn	22 37 49.8	-0.2	
FRF	**La Foret Royal**	**4.27**	**274**	*e*P	Pn	22 37 53.3	+3.3	
FRF				*e*Sn	Sn	22 38 37.6	-2.5	
	comp=N,0.2nm,0.2s							
LPG	**La Plagne**	**4.64**	**299**	*e*Pn	Pn	22 37 54.1	-1.2	
LPG				*e*Sn	Sn	22 38 46.5	-3.0	
	comp=N,0.4nm,0.2s							
CABF	**La Chapelle**	**5.58**	**308**	*e*Pn	Pn	22 38 07.2	-0.9	
CABF				*e*Sn	Sn	22 39 07.8	-4.8	
	comp=N,0.3nm,0.2s							
CDF	**Champ du Feu**	**6.22**	**326**	*e*Pn	Pn	22 38 16.8	0.0	
CDF				*e*Sn	Sn	22 39 22.8	-5.4	
	comp=N,0.4nm,0.2s							

*ATA **08** 22:37:28.4±2.6,39°.34N×40°.95E,h13km±26km,ML1.5, MW2.7*
*ISK **08** 22:37:28.7,39°.31N×41°.02E,h9km,ML1.7/4*
ISC 08 22:37:28.4±1.0,**39°.30N**±0°.03×**40°.95E**±0°.03,**h6**km±8km,
n16,σ**0°.50/24,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
KARO	**Karliova-Bingo**	**0.08**	**83**	PG	**Pg**	**22 37 30.3**	**-0.1**	
KARO				SG	**Sg**	**22 37 32.0**	**+0.2**	
ECAT	**Cat-ERZURUM**	**0.31**	**4**	*e*P	**Pg**	**22 37 34.6**	**+0.1**	
ECAT				*e*S	**Sg**	**22 37 39.2**	**+0.6**	
ECAT				IAML		22 37 40.4		
	comp=Z,31nm,0.3s							
YEDI	**Yedisu-Bingol**	**0.34**	**294**	PG	**Pb**	**22 37 36.5**	**-0.5**	
YEDI				SG	**Sb**	**22 37 43.1**	**+0.3**	
BNGB	**Bingl**	**0.37**	**214**	PG	**Pb**	**22 37 37.2**	**-0.3**	
BNGL	**BINGOL**	**0.38**	**156**	*e*P	**Pb**	**22 37 37.6**	**-0.1**	
BNGL				*e*S	**Sb**	**22 37 44.5**	**+0.6**	
BNGL				IAML		22 37 46.9		
	comp=Z,155nm,0.3s							
VRTB	**Varto-Mus**	**0.42**	**109**	PG	**Pg**	**22 37 36.4**	**-0.1**	
MUSM	**Mu-Merkez**	**0.72**	**142**	*e*P	**Pg**	**22 37 41.8**	**-0.5**	
KOPT	**Kop Dagi**	**0.80**	**334**	*e*P	**Pb**	**22 37 45.1**	**+0.2**	
KOPT				*e*S	**Sg**	**22 37 54.7**	**+0.5**	
KOPT				IAML		22 38 02.5		
	comp=Z,5.9nm,0.9s							
KRIK	**Erzurum-spir**	**1.04**	**359**	*e*P	**Pn**	**22 37 49.3**	**-0.4**	
KRIK				*e*S	**Sb**	**22 38 02.1**	**-0.8**	
HOMI	**Horasan**	**1.05**	**44**	*e*P	**Pn**	**22 37 49.6**	**-0.3**	
HOMI				IAML		22 38 09.8		
	comp=N,10nm,0.3s							
BAYB	**BAYBURT**	**1.09**	**331**	*e*P	**Pn**	**22 37 50.3**	**-0.2**	
BAYB				*e*S	**Sg**	**22 38 04.1**	**+0.4**	
BAYB				IAML		22 38 26.1		
	comp=Z,5.7nm,1.8s							
TNCL	**Tunceli-Merkez**	**1.11**	**261**	*e*P	**Pg**	**22 37 49.0**	**-0.6**	
TNCL				*e*S	**Sn**	**22 38 07.2**	**+1.0**	
TNCL				IAML		22 38 11.5		
	comp=Z,5.5nm,0.5s							
SVAN	**Silvan-Diyarba**	**1.16**	**170**	PN	**Pn**	**22 37 51.7**	**+0.4**	
EATA	**Eleskirt**	**1.32**	**64**	*e*P	**Pb**	**22 37 53.8**	**0.0**	
EATA				IAML		22 38 17.0		
	comp=N,1.9nm,0.5s							
TUTA	**Tutak**	**1.45**	**85**	*e*P	**Pn**	**22 37 54.8**	**-0.7**	
TUTA				IAML		22 38 20.6		
	comp=N,5.9nm,0.4s							
AGRB	**Hanur-Agry**	**1.61**	**79**	PN	**Pn**	**22 37 57.2**	**-0.3**	

ROM 08 22:37:44.5±0.2,**43°.537N**±0°.006×**12°.16E**±0°.01,**h9**km,
ML1.8/8,**Error ellipse: s-maj=0.8km s-min=0.5km az=251.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h m s		ISC
SSP9	**Sansepolcro**	**0.04**	**328**	P	Pg	22 37 46.5	+0.1	
SSP9				S	Sg	22 37 47.8	+0.1	
SSP9				AML	AML			
	comp=E,1395μm,0.1s							
SSP9				AML	AML			
	comp=N,499μm,0.5s							
SSP9				AML	AML			
	comp=N,501μm,0.6s							
BADI	**Badiali**	**0.07**	**115**	P	Pg	22 37 47.2	+0.6	
BADI				S	Sg	22 37 48.8	+0.7	
CDCA	**Citt' di Caste**	**0.09**	**147**	P	Pg	22 37 47.3	+0.4	
CDCA				S	Sg	22 37 49.4	+0.8	
CDCA				AML	AML			
	comp=N,838μm,1.2s							
CDCA				AML	AML			
	comp=E,2465μm,1.1s							
PARC	**Parchiule**	**0.12**	**26**	P	Pg	22 37 48.0	+0.6	
PARC				S	Sg	22 37 50.3	+0.9	
PARC				AML	AML			
	comp=E,275μm,0.5s							
PARC				AML	AML			
	comp=N,202μm,1.3s							
PARC				AML	AML			
	comp=E,274μm,0.5s							
PARC				AML	AML			
	comp=N,202μm,1.3s							
ATPI	**Pietralunga -**	**0.19**	**116**	P	Pg	22 37 49.4	+0.9	
ATPI				S	Sg	22 37 51.9	+0.6	
ATVO	**AVT- Monte Val**	**0.23**	**131**	AML	AML			
	comp=N,300μm,0.4s							
ATVO				AML	AML			
	comp=E,222μm,0.1s							
CAFI	**Castiglion Fio**	**0.25**	**215**	P	Pg	22 37 50.3	+0.8	
PIEI	**Pieia**	**0.27**	**90**	P	Pb	22 37 50.8	-0.7	
PIEI				S	Sg	22 37 54.6	+1.0	
NARO	**Abbazia di Nar**	**0.31**	**76**	AML	AML			
	comp=N,57μm,0.5s							
NARO				AML	AML			
	comp=E,53μm,0.5s							
ATFO	**Monte Foce - G**	**0.34**	**120**	AML	AML			
	comp=N,951μm,0.3s							
ATFO				AML	AML			
	comp=E,821μm,0.5s							
ATFO				AML	AML			
	comp=N,952μm,0.3s							
ATFO				AML	AML			
	comp=E,822μm,0.5s							
MURB	**Monte Urbino**	**0.38**	**136**	AML	AML			
	comp=N,302μm,0.2s							
MURB				AML	AML			
	comp=E,540μm,0.2s							
SSFR	**Montelago di S**	**0.46**	**102**	AML	AML			

	comp=N,276µm,0.7s					
SSFR			AML	AML		
	comp=E,218µm,1.2s					

*IDC **08** 22:41:45.8±16.0, 55°.30N×166°.49E, h0km, mb3.2/2, mb1 3.2/3, mb1mx3.1/35, mbtmp3.2/3, ML2.2/1, Error ellipse: s-maj=312.7km s-min=70.7km az=126.0*
*KRSC **08** 22:42:04.7±0.8, 55°.75N×163°.16E, h19km±16km, ML3.6*
ISC 08 22:42:06.3±1.5, **55°.75N**±0°.03×**162°.85E**±0°.05, **h3**km±10km, **n40**, σ1°**57**/49, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.46**	**358**	*eP*		**Pg**	**22 42 14.7**	**-0.3**
KBTR				*eS*		**Sg**	**22 42 22.3**	**+1.3**
KBG	**Krutoberegovo**	**0.51**	**351**	*eP*		**Pg**	**22 42 15.8**	**-0.3**
KBG				*eS*		**Sg**	**22 42 24.1**	**+1.4**
SMKR	**Semkarok**	**1.14**	**318**	*eP*		**Pg**	**22 42 27.9**	**-0.1**
ZLN	**Zelenaya**	**1.18**	**284**	*eP*		**Pg**	**22 42 29.2**	**+0.3**
BDR	**Baidarnaya**	**1.23**	**312**	*eP*		**Pg**	**22 42 29.3**	**-0.5**
BDR				*eS*		**Sn**	**22 42 47.9**	**+0.4**
CIRR	**Tsirk**	**1.24**	**288**	*eP*		**Pg**	**22 42 29.9**	**0.0**
LGNR	**Loginova**	**1.26**	**286**	*eS*		**Sn**	**22 42 49.9**	**+1.3**
SRKR	**Sorokina**	**1.30**	**315**	*eP*		**Pg**	**22 42 30.4**	**-0.8**
SRKR				*eS*		**Sn**	**22 42 49.9**	**+0.6**
KLY	**Klyuchi**	**1.35**	**295**	*eP*		**Pg**	**22 42 29.8**	**-2.4**
KLY				*eS*		**Sg**	**22 42 48.3**	**-1.4**
MKZ	**Mys Kozlova**	**1.36**	**209**	*eP*		**Pg**	**22 42 31.3**	**-0.8**
MKZ				*eS*		**Sg**	**22 42 49.8**	**-0.1**
KRSR	**Krestovskiy**	**1.36**	**291**	*eP*		**Pg**	**22 42 31.3**	**-1.1**
KRSR				*eS*		**Sb**	**22 42 50.4**	**+0.1**
KIRR	**Kirishev**	**1.43**	**279**	*eP*		**Pn**	**22 42 32.6**	**-0.6**
KMNR	**Kamenistaya**	**1.48**	**271**	*eP*		**Pn**	**22 42 33.9**	**+0.1**
KPT	**Kopyto**	**1.50**	**279**	*eP*		**Pn**	**22 42 34.1**	**0.0**
KPT				*eS*		**Sn**	**22 42 55.6**	**+1.5**
TUMD	**Tumrok D**	**1.50**	**249**	*eP*		**Pn**	**22 42 34.1**	**+0.1**
TUMD				*eS*		**Sn**	**22 42 55.7**	**+1.6**
KZV	**Kizimen**	**1.59**	**247**	*eP*		**Pn**	**22 42 35.6**	**+0.2**
TUMR	**Tumrok**	**1.61**	**254**	*eP*		**Pn**	**22 42 36.5**	**+0.9**
TUMR				*eS*		**Sg**	**22 42 59.8**	**+2.0**
KOZ	**Kozyrevsk**	**1.70**	**282**	*eP*		**Pn**	**22 42 37.8**	**+1.0**
KOZ				*eS*		**Sg**	**22 43 02.8**	**+1.9**
SRDR	**Sredinnyy**	**1.85**	**289**	*eP*		**Pn**	**22 42 39.2**	**+0.3**
SRDR				*eS*		**Sg**	**22 43 04.9**	**-0.6**
BKI	**Bering**	**1.86**	**106**	*eP*		Pn	22 42 34.7	-4.3
BKI				*eS*		Sn	22 42 57.1	-5.8
ESO	**Esso**	**2.35**	**276**	*eP*		**Pn**	**22 42 46.5**	**+0.8**
SPN	**Mys Shipunski**	**3.13**	**213**	*eP*		**Pn**	**22 42 55.7**	**-0.7**
SPN				*eS*		**Sn**	**22 43 32.3**	**-1.9**
NLC	**Nalytchevo**	**3.30**	**220**	*eS*		**Sn**	**22 43 39.3**	**+1.0**
SDLR	**Sedlovina**	**3.39**	**225**	*eP*		**Pn**	**22 43 01.6**	**+1.5**
KRER	**Koryakskii**	**3.42**	**226**	*eP*		**Pn**	**22 43 02.8**	**+2.1**
SMAR	**Somma**	**3.43**	**225**	*eP*		**Pn**	**22 43 02.3**	**+1.5**
AVH	**Avacha**	**3.46**	**226**	*eP*		**Pn**	**22 43 02.7**	**+1.7**
UGLR	**Uglovaya**	**3.46**	**224**	*eP*		**Pn**	**22 43 02.2**	**+1.1**
KOK	**Koryaka**	**3.48**	**227**	*eP*		**Pn**	**22 43 03.9**	**+2.6**
PETK	**Petropavlovsk-** 3.0nm,0.3s,baz=63,slow=18,SNR=9.3	**4.01**	**231**	Pn		**Pn**	**22 43 10.4**	**+1.9**
PETK					Sn	**Sb**	**22 44 03.5**	**-2.8**
	0.5nm,0.3s,baz=57,slow=5.5,SNR=5.1							
KRMR	**Karymshinskiy**	**4.03**	**225**	*eS*		**Sn**	**22 44 00.2**	**+3.9**
GRL	**Gorelyy**	**4.26**	**223**	*eP*		**Pn**	**22 43 15.6**	**+3.5**
MTVR	**Mutnovka**	**4.27**	**222**	*eP*		**Pn**	**22 43 13.9**	**+1.6**
ASAK	**Asacha**	**4.46**	**223**	*eP*		**Pn**	**22 43 16.9**	**+2.1**
KDTR	**Khodutka, Kamc**	**4.86**	**218**	*eP*		**Pn**	**22 43 22.0**	**+1.9**
SONM	**Songino Array** 0.2nm,0.6s,baz=69,slow=8.0,SNR=2.7	**34.91**	**281**	P		**P**	**22 48 56.9**	**-2.0**
H11N2	**WAKE ISLAND Hy** baz=360,slow=76,SNR=23	**36.09**	**174**	T		T	23 27 36.8	
H11N3	**WAKE ISLAND Hy** baz=360,slow=76,SNR=18	**36.11**	**173**	T		T	23 27 46.0	
H11N1	**WAKE ISLAND Hy** baz=360,slow=76,SNR=16	**36.11**	**174**	T		T	23 27 43.7	
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=53,slow=5.9,SNR=5.3	**48.47**	**295**	P		P	22 50 45.4	-4.3

*IDC **08** 22:55:24.0±7.5, 36°.61N×142°.53E, h0km, mb3.2/2, mb1 3.3/3, mb1mx3.2/45, mbtmp3.3/3, ML2.8/1, Error ellipse: s-maj=139.5km s-min=54.4km az=154.0*
*JMA **08** 22:55:30.9±0.3, 36°.89N×141°.99E, h34km±5km, M3.4*
ISC 08 22:55:31.1±3.6, **36°.94N**±0°.07×**141°.9E**±0°.1, **h16**km±17km, **n22**, σ0°**84**/22, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.93**	**280**	P		**Pb**	**22 55 48.7**	**-0.1**
JFK	**Kawauchi**	**0.95**	**297**	P		**Pb**	**22 55 49.0**	**-0.2**
JFK				*eS*		**Sg**	**22 56 02.1**	**0.0**
JFFD	**Fukushimafurud**	**1.11**	**278**	P		**Pb**	**22 55 51.4**	**-0.5**
JMST	**Minamisoumatoc**	**1.15**	**313**	P		**Pn**	**22 55 51.9**	**-0.5**
JMST				*eS*		**Sb**	**22 56 06.9**	**-0.2**
JHO	**Hitachi**	**1.15**	**254**	P		**Pn**	**22 55 51.2**	**-1.2**
JMM	**Marumori**	**1.30**	**316**	P		**Pn**	**22 55 54.1**	**-0.4**
JFT	**Otama**	**1.40**	**295**	P		**Pn**	**22 55 56.5**	**+0.5**
JIO	**Ouri**	**1.58**	**343**	P		**Pn**	**22 55 57.7**	**-0.7**
JIO				*eS*		**Sn**	**22 56 17.5**	**-1.0**
JOU	**Okura**	**1.75**	**325**	P		**Pn**	**22 56 01.8**	**+1.1**
JOU				*eS*		**Sb**	**22 56 23.0**	**-0.5**
JFY	**Yanaizu**	**1.85**	**285**	P		**Pn**	**22 56 03.2**	**+1.2**
JAG	**Ashikaga**	**2.06**	**256**	P		**Pn**	**22 56 04.9**	**-0.1**
JMK	**Ichinoseki**	**2.09**	**344**	P		**Pn**	**22 56 06.2**	**+0.9**
MJAR	**Matsushiro Arr** 1.0nm,0.3s,baz=86,slow=14,SNR=38	**3.02**	**264**	Pn		**Pn**	**22 56 19.4**	**+1.2**
MJAR					Sn	**Sb**	**22 57 01.1**	**-0.1**
	0.6nm,0.3s,baz=251,slow=31,SNR=5.3							
MAT	**Matsushiro**	**3.03**	**264**	P		**Pn**	**22 56 18.9**	**+0.6**
MAT				*eS*		**Sn**	**22 56 54.0**	**-0.2**
H11N2	**WAKE ISLAND Hy** baz=314	**27.74**	**121**	T		T	23 30 20.9	
H11N1	**WAKE ISLAND Hy** baz=314	**27.75**	**121**	T		T	23 30 21.6	
H11N3	**WAKE ISLAND Hy** baz=314	**27.76**	**121**	T		T	23 30 23.2	
SONM	**Songino Array** 0.3nm,0.8s,baz=108,slow=7.7,SNR=2.5	**28.19**	**304**	P		**P**	**23 01 24.3**	**+1.5**
H11S1	**WAKE ISLAND Hy** baz=316,slow=76,SNR=7.1	**28.45**	**123**	T		T	23 31 11.1	
H11S3	**WAKE ISLAND Hy** baz=316,slow=76,SNR=5.0	**28.46**	**124**	T		T	23 31 14.3	
H11S2	**WAKE ISLAND Hy** baz=316,slow=76,SNR=4.8	**28.47**	**124**	T		T	23 31 16.6	
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=80,slow=8.4,SNR=1.4	**44.53**	**302**	P		**P**	**23 03 40.9**	**-0.8**

IDC 08 23:03:43.7±2.1, **46°.24N**×**154°.18E**, **h0**km, **mb3.4**/4, **mb1 3.7**/5, **mb1mx3.4**/43, **mbtmp3.4**/5, **ML2.5/1**, **Error ellipse: s-maj=63.2km s-min=27.4km az=156.0**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-** 0.4nm,0.3s,baz=195,slow=15,SNR=6.2	**7.24**	**17**	Pn		Pn	23 05 30.2	-0.5
KSRS	**Korea Array** 1.7nm,0.7s,baz=53,slow=11,SNR=2.5	**21.36**	**255**	P		P	23 08 32.2	-0.3
ILAR	**Eielson Array** 0.3nm,0.8s,baz=271,slow=7.8,SNR=2.4	**36.49**	**38**	P		P	23 10 50.0	-0.2
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=70,slow=6.9,SNR=3.1	**47.83**	**298**	P		P	23 12 23.3	+0.4
TXAR	**Lajitas Array** 0.4nm,0.7s,baz=295,slow=2.8,SNR=3.9	**77.10**	**61**	P		P	23 15 39.1	+0.1

*ATH **08** 23:08:28.8, 38°.39N×22°.02E, h11km±1km, ML2.9/12, Error ellipse: s-maj=1.2km s-min=0.6km az=80.0*
*THE **08** 23:08:29.3, 38°.39N×22°.02E, h3km, ML2.8/15, Error ellipse: s-maj=0.8km s-min=0.3km az=294.0*
ISC 08 23:08:29.2±0.8, **38°.39N**±0°.02×**22°.03E**±0°.01, **h8**km±4km, **n100**, σ0°**84**/136, **Greece**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SERG	**Sergoula**	**0.03**	**48**	P		**Pg**	**23 08 30.5**	**-0.4**
SERG				S		**Sg**	**23 08 31.7**	**-0.3**
SERG	**Sergoula**	**0.03**	**48**	P		**Pg**	**23 08 30.7**	**-0.2**
SERG				S		**Sg**	**23 08 31.8**	**-0.3**
SERG				AML	AML		23 08 32.0	
SERG				AML	AML		23 08 32.1	
TRIZ	**Trizonia**	**0.04**	**124**	P		**Pg**	**23 08 30.8**	**-0.1**
TRIZ				S		**Sg**	**23 08 31.7**	**-0.4**
TRIZ	**Trizonia**	**0.04**	**124**	P		**Pg**	**23 08 30.8**	**-0.1**
TRIZ				S		**Sg**	**23 08 32.2**	**+0.1**
KALE	**Kalithea**	**0.09**	**90**	P		**Pg**	**23 08 31.5**	**0.0**
KALE	11µm,0.3s			S		**Sg**	**23 08 33.2**	**0.0**
KALE	**Kalithea**	**0.09**	**90**	P		**Pg**	**23 08 31.6**	**0.0**
KALE				S		**Sg**	**23 08 33.8**	**+0.6**
KALE	comp=E,16904µm,0.5s			AML	AML		23 08 36.5	
KALE	comp=N,23022µm,0.4s			AML	AML		23 08 36.9	
EFP	**Efpalio**	**0.10**	**291**	P		**Pg**	**23 08 31.4**	**-0.2**
EFP				S		**Sg**	**23 08 33.0**	**-0.3**
	comp=N,23µm,0.3s							
EFP	**Efpalio**	**0.10**	**291**	P		**Pg**	**23 08 31.4**	**-0.2**
EFP				S		**Sg**	**23 08 33.1**	**-0.3**
ALIK	**Aliki, Aigiali**	**0.15**	**153**	P		**Pg**	**23 08 32.6**	**+0.3**
LAKA	**Lakka**	**0.15**	**194**	P		**Pg**	**23 08 32.5**	**0.0**
LAKA				S		**Sg**	**23 08 34.7**	**-0.1**
LAKA	**Lakka**	**0.15**	**194**	P		**Pg**	**23 08 32.5**	**0.0**
LAKA				S		**Sg**	**23 08 35.3**	**+0.5**
LAKA	comp=N,6061µm,0.3s			AML	AML		23 08 35.7	
LAKA	comp=E,5598µm,0.3s			AML	AML		23 08 39.0	
UPR	**University Cam**	**0.22**	**240**	P		**Pg**	**23 08 33.6**	**+0.1**
UPR				S		**Sg**	**23 08 36.8**	**+0.3**
UPR	**University Cam**	**0.22**	**240**	P		**Pg**	**23 08 33.7**	**+0.1**
UPR				S		**Sg**	**23 08 36.8**	**+0.3**
KLV	**Kalavryta, Ach**	**0.36**	**164**	P		**Pg**	**23 08 35.9**	**-0.4**
KLV				S		**Sg**	**23 08 41.5**	**+0.4**
KLV	**Kalavryta, Ach**	**0.36**	**164**	P		**Pg**	**23 08 35.9**	**-0.4**
KLV				S		**Sg**	**23 08 41.6**	**+0.6**
KLV				AML	AML		23 08 42.9	
KLV	comp=E,2515µm,0.2s			AML	AML		23 08 43.8	
KLV	comp=N,1526µm,0.2s			AML	AML		23 08 50.2	
DLFA	**Delphi**	**0.38**	**77**	P		**Pg**	**23 08 36.3**	**-0.4**
DLFA				S		**Sg**	**23 08 42.7**	**+1.1**
PVO	**Paravola**	**0.45**	**300**	P		**Pg**	**23 08 37.7**	**-0.3**
PVO				S		**Sg**	**23 08 44.5**	**+0.6**
	comp=N,1µm,0.4s							
PVO	**Paravola**	**0.45**	**300**	P		**Pg**	**23 08 37.7**	**-0.3**
PVO				S		**Sg**	**23 08 44.8**	**+0.8**
PVO				AML	AML		23 08 48.6	
PVO	comp=N,2692µm,0.5s			AML	AML		23 08 50.2	
PVO	comp=E,3147µm,0.3s			AML	AML		23 08 48.3	
DRO	**Drossia**	**0.50**	**210**	P		**Pg**	**23 08 38.6**	**-0.3**
DRO				S		**Sg**	**23 08 45.9**	**+0.3**
	comp=E,3µm,0.2s							
DRO	**Drossia**	**0.50**	**210**	P		**Pg**	**23 08 38.6**	**-0.3**
DRO				S		**Sg**	**23 08 45.7**	**+0.2**
DRO				AML	AML		23 08 48.3	
DRO	comp=E,7663µm,0.2s			AML	AML		23 08 50.1	
DRO	comp=N,4468µm,0.3s			AML	AML		23 08 55.5	
EVR	**Evrytania**	**0.55**	**342**	P		**Pg**	**23 08 39.5**	**-0.4**
EVR				S		**Sg**	**23 08 48.1**	**+0.9**
	comp=N,1µm,0.5s							
EVR	**Evrytania**	**0.55**	**342**	P		**Pg**	**23 08 39.6**	**-0.4**
EVR				S		**Sg**	**23 08 47.6**	**+0.5**
EVR				AML	AML		23 08 51.4	
EVR	comp=N,2584µm,0.3s			AML	AML		23 08 55.5	
EVR	comp=E,3320µm,0.4s			AML	AML		23 08 56.3	
RLS	**Riolos of Patr**	**0.55**	**233**	P		**Pg**	**23 08 39.6**	**-0.2**
RLS				S		**Sg**	**23 08 47.5**	**+0.4**
	comp=E,738nm,0.2s							
RLS	**Riolos of Patr**	**0.55**	**233**	P		**Pg**	**23 08 39.7**	**-0.2**
RLS				S		**Sb**	**23 08 47.8**	**-1.3**
RLS				AML	AML		23 08 49.0	
RLS	comp=E,1258µm,0.3s			AML	AML		23 08 50.6	
RLS	comp=N,1711µm,0.2s			AML	AML		23 08 57.3	
THAL	**Thalero**	**0.61**	**125**	P		**Pg**	**23 08 40.8**	**-0.3**
THAL	**Thalero**	**0.61**	**125**	P		**Pg**	**23 08 40.3**	**-0.7**
THAL				S		**Sg**	**23 08 49.3**	**+0.2**
THAL				AML	AML		23 08 53.6	
THAL	comp=N,2370µm,0.4s			AML	AML		23 08 56.3	
THAL	comp=E,3342µm,0.3s			AML	AML		23 08 57.6	
AXAR	**Agios Charalam**	**0.62**	**53**	P		**Pg**	**23 08 41.0**	**-0.2**
AXAR				S		**Sg**	**23 08 49.1**	**-0.2**
AXAR				AML	AML		23 08 56.0	
AXAR	comp=E,6800µm,0.4s			AML	AML		23 08 57.6	
AXAR	comp=N,7229µm,0.5s			AML	AML		23 08 57.3	
MAKR	**Makrakomi, Fth**	**0.63**	**8**	P		**Pg**	**23 08 41.1**	**-0.2**
MAKR	**Makrakomi, Fth**	**0.63**	**8**	P		**Pg**	**23 08 41.2**	**-0.2**
MAKR				S		**Sb**	**23 08 50.7**	**-0.6**
MAKR				AML	AML		23 08 54.7	
MAKR	comp=E,3423µm,0.3s			AML	AML		23 08 57.3	
MAKR	comp=N,3094µm,0.4s			AML	AML		23 08 57.3	
AGG	**Agios Georgios**	**0.67**	**21**	P		**Pg**	**23 08 41.4**	**-0.8**
AGG				S		**Sb**	**23 08 52.5**	**-0.2**
	comp=N,492nm,0.4s							
AGG	**Agios Georgios**	**0.67**	**21**	P		**Pg**	**23 08 41.4**	**-0.8**
PROD	**Prodromos**	**0.70**	**101**	P		**Pg**	**23 08 42.2**	**-0.5**
PROD				S		**Sb**	**23 08 53.0**	**-0.4**
PROD	**Prodromos**	**0.70**	**101**	P		**Pg**	**23 08 42.3**	**-0.5**
PROD				AML	AML		23 08 55.8	
PROD	comp=N,1159µm,0.3s			AML	AML		23 08 57.8	
PROD	comp=E,1875µm,0.4s			AML	AML		23 08 57.8	
LKR	**Lokris**	**0.81**	**71**	P		**Pg**	**23 08 44.1**	**-0.6**
LKR				S		**Sb**	**23 08 56.6**	**+0.1**
	comp=E,662nm,0.2s							
LKR	**Lokris**	**0.81**	**71**	P		**Pg**	**23 08 43.5**	**-1.2**
LTK	**Loutraki**	**0.83**	**116**	P		**Pg**	**23 08 44.9**	**-0.2**
LTK	**Loutraki**	**0.83**	**116**	P		**Pg**	**23 08 45.2**	**+0.1**
LOUT	**Loutraki**	**0.85**	**118**	P		**Pg**	**23 08 45.5**	**0.0**
AMT	**Artemida-Makis**	**0.89**	**196**	P		**Pg**	**23 08 45.6**	**-0.8**
AMT				S		**Sb**	**23 08 58.8**	**-0.2**
	comp=E,2µm,0.4s							
AMT	**Artemida-Makis**	**0.89**	**196**	P		**Pg**	**23 08 45.6**	**-0.8**
VIL2	**Platees**	**0.99**	**100**	P		**Pn**	**23 08 49.6**	**+0.1**
KFL	**Anninata**	**1.01**	**254**	P		**Pg**	**23 08 48.0**	**-0.7**
KFL	**Anninata**	**1.01**	**254**	P		**Pg**	**23 08 47.9**	**-0.8**
VILL	**Villia**	**1.04**	**102**	P		**Pg**	**23 08 49.1**	**0.0**
VLX	**Vlachokerasia**	**1.06**	**165**	P		**Pg**	**23 08 48.3**	**-1.2**
VLX				S		**Sn**	**23 09 04.6**	**-0.7**
	comp=E,860nm,0.7s							
VLX	**Vlachokerasia**	**1.06**	**165**	P		**Pg**	**23 08 48.3**	**-1.2**
EVGI	**Lefkada island**	**1.10**	**282**	P		**Pg**	**23 08 49.3**	**-1.0**
EVGI	**Lefkada island**	**1.10**	**282**	P		**Pg**	**23 08 49.1**	**-1.2**
LKD2	**Lefkada island**	**1.14**	**291**	P		**Pg**	**23 08 50.7**	**-0.4**
LKD2	**Lefkada island**	**1.14**	**291**	P		**Pg**	**23 08 50.4**	**-0.8**
VLS	**Valsamata**	**1.15**	**260**	P		**Pg**	**23 08 49.7**	**-1.5**
VLS				S		**Sn**	**23 09 07.8**	**+0.3**
	comp=E,225nm,0.2s							
VLS	**Valsamata**	**1.15**	**260**	P		**Pg**	**23 08 49.7**	**-1.5**
FSK	**Fiskardo**	**1.15**	**274**	P		**Pg**	**23 08 50.4**	**-0.9**
FSK				S		**Sn**	**23 09 07.9**	**+0.4**
	comp=E,355nm,0.5s							
FSK	**Fiskardo**	**1.15**	**274**	P		**Pg**	**23 08 49.7**	**-1.6**
THL	**Klokotos Trika**	**1.17**	**360**	P		**Pg**	**23 08 50.6**	**-1.1**
THL	**Klokotos Trika**	**1.17**	**360**	P		**Pg**	**23 08 50.6**	**-1.1**
VLMS	**Volimes, Zakyn**	**1.19**	**245**	P		**Pg**	**23 08 50.5**	**-1.5**
ITM	**Ithomi**	**1.21**	**184**	P		**Pg**	**23 08 51.0**	**-1.5**
ITM				S		**Sn**	**23 09 09.8**	**+0.8**
	comp=E,355nm,0.5s							
ITM	**Ithomi**	**1.21**	**184**	P		**Pg**	**23 08 51.0**	**-1.5**
MRKA	**Markates**	**1.27**	**75**	P		**Pn**	**23 08 52.9**	**-0.3**
MRKA	**Markates**	**1.27**	**75**	P		**Pn**	**23 08 52.6**	**-0.6**
DID	**Didima**	**1.30**	**132**	P		**Pn**	**23 08 53.5**	**-0.2**
DID				S		**Sn**	**23 09 12.5**	**+1.2**
	comp=E,405nm,0.4s							
DID	**Didima**	**1.30**	**132**	P		**Pn**	**23 08 53.2**	**-0.5**
NEO	**Neokhori**	**1.31**	**45**	P		**Pn**	**23 08 53.5**	**-0.3**
NEO	**Neokhori**	**1.31**	**45**	P		**Pn**	**23 08 52.9**	**-0.8**
XOR	**Xorichti**	**1.33**	**43**	P		**Pn**	**23 08 53.7**	**-0.4**
XOR	**Xorichti**	**1.33**	**43**	P		**Pn**	**23 08 53.4**	**-0.7**
KRND	**KRANIDI**	**1.34**	**138**	P		**Pn**	**23 08 54.2**	**0.0**
KRND				S		**Sn**	**23 09 13.8**	**+1.6**
	comp=E,355nm,0.5s							
KRND	**KRANIDI**	**1.34**	**138**	P		**Pb**	**23 08 54.5**	**-0.1**
SKIA	**Skiathos**	**1.37**	**55**	P		**Pn**	**23 08 54.6**	**+0.1**
ATHU	**Athens Univers**	**1.45**	**106**	P		**Pn**	**23 08 56.0**	**+0.3**
ATHU	**Athens Univers**	**1.45**	**106**	P		**Pn**	**23 08 56.0**	**+0.3**
PTL	**Penteli**	**1.49**	**103**	P		**Pb**	**23 08 56.9**	**-0.2**
PTL	**Penteli**	**1.49**	**103**	P		**Pn**	**23 08 56.6**	**+0.4**
VLY	**Voula,Athens**	**1.50**	**111**	P		**Pn**	**23 08 56.2**	**-0.1**
VLY	**Voula,Athens**	**1.50**	**111**	P		**Pn**	**23 08 56.1**	**-0.2**
EREA	**Eretria**	**1.50**	**88**	P		**Pb**	**23 08 57.2**	**-0.1**
PYL	**PYLOS**	**1.51**	**189**	P		**Pn**	**23 08 56.5**	**0.0**
PYL	**PYLOS**	**1.51**	**189**	P		**Pn**	**23 08 56.4**	**-0.1**
JAN	**Janina**	**1.56**	**324**	P		**Pb**	**23 08 58.5**	**+0.2**
DYR	**Agios Nikonas**	**1.64**	**171**	P		**Pn**	**23 08 58.4**	**0.0**
KPRO	**Kipourio**	**1.64**	**342**	P		**Pb**	**23 08 59.1**	**-0.7**
KPRO	**Kipourio**	**1.64**	**342**	P		**Pb**	**23 08 59.2**	**-0.5**
AOS	**Alonnisos**	**1.65**	**61**	P		**Pn**	**23 08 57.6**	**-0.8**
IGT	**Igoumenitsa**	**1.74**	**311**	P		**Pg**	**23 09 02.5**	**-0.1**
IGT	**Igoumenitsa**	**1.74**	**311**	P		**Pg**	**23 09 02.2**	**-0.5**
LIT	**Litokhoron**	**1.75**	**12**	P		**Pn**	**23 09 00.5**	**+0.7**
VLI	**Veliai**	**1.82**	**156**	P		**Pn**	**23 09 01.1**	**+0.4**
VLI	**Veliai**	**1.82**	**156**	P		**Pn**	**23 09 01.2**	**+0.4**
KZN	**Kozani**	**1.92**	**354**	P		**Pn**	**23 09 03.0**	**+0.7**
FNA	**Florina**	**2.44**	**348**	P		**Pn**	**23 09 10.8**	**+1.4**
VAY	**Valandovo**	**2.96**	**8**	*e*Pn		**Pn**	**23 09 13.1**	**-3.3**
VAY	**Valandovo**	**2.96**	**8**	*e*Pn		**Pn**	**23 09 13.2**	**-3.2**
STIP	**Stip**	**3.30**	**2**	*e*Pn		**Pn**	**23 09 23.4**	**+2.3**
STIP	**Stip**	**3.30**	**2**	*e*Pn		**Pn**	**23 09 23.4**	**+2.3**
STON	**Ston**	**5.55**	**325**	*e*Pn		**Pn**	**23 09 52.8**	**+0.7**
KIJV	**Kijevo**	**7.03**	**325**	*e*Pn		**Pn**	**23 10 13.5**	**+1.2**
ZIRJ	**Zirje**	**7.13**	**319**	*i* Pn		**Pn**	**23 10 15.4**	**+1.6**
DUGI	**Dugi Otok**	**7.67**	**319**	*e*Pn		**Pn**	**23 10 22.7**	**+1.5**
UDBI	**Udbina**	**7.72**	**325**	*i* Pn		**Pn**	**23 10 23.8**	**+1.8**

*NEIC **08** 23:15:27.8±3.9, 15°.81N±0°.05×98°.07W±0°.04, h5km±6km, Error ellipse: s-maj=8.2km s-min=3.1km az=218.0*
*IDC **08** 23:15:29.2±8.0, 15°.36N×97°.85W, h34km±46km, mb3.4/7, mb1 3.9/10, mb1mx3.6/41, mbtmp3.7/10, ML3.6/2, MS3.5/1, Ms1 3.5/1, ms1mx2.7/33, Error ellipse: s-maj=76.8km s-min=31.7km az=2.0*
*MEX **08** 23:15:31.2±0.7, 15°.92N×98°.05W, h5km, MD4.1*
ISC 08 23:15:28.9±1.7, **15°.86N**±0°.07×**98°.01W**±0°.04, **h9**km±9km, **n51**, σ1°**69**/68, **mb3.9**/11, **Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.54**	**348**	*eP*		**Pg**	**23 15 39.2**	**-0.2**
PNIG				*eS*		**Sg**	**23 15 46.1**	**-0.4**
PNIG	**Pinotepa**	**0.54**	**348**			**Pg**	**23 15 39.2**	**-0.2**
PNIG						**Sg**	**23 15 46.1**	**-0.4**
VHO	**Vista Hermosa**	**1.72**	**45**	*eP*		**Pn**	**23 15 58.9**	**-0.3**
VHO				*i* S		**Sn**	**23 16 20.0**	**-1.3**
TLIG	**Tlapa**	**1.77**	**342**	*eP*		**Pn**	**23 15 58.4**	**-1.5**
TLIG				*i* S		**Sn**	**23 16 19.0**	**-3.6**
TLIG	**Tlapa**	**1.77**	**342**			**Pn**	**23 15 58.7**	**-1.2**
TLIG						**Sn**	**23 16 23.1**	**+0.4**
TLIG	**Tlapa**	**1.77**	**342**			**Pn**	**23 15 58.4**	**-1.5**
TLIG						**Sn**	**23 16 19.0**	**-3.6**
HUIG	**Huatulco**	**1.83**	**93**	*i* P		**Pn**	**23 16 00.1**	**-0.4**
HUIG				*i* S		**Sn**	**23 16 22.6**	**-1.2**
HUIG	**Huatulco**	**1.83**	**93**			**Pn**	**23 16 00.1**	**-0.4**
HUIG						**Sn**	**23 16 22.6**	**-1.2**
CAIG	**El Cayaco**	**2.47**	**299**	*i* P		**Pn**	**23 16 07.3**	**-2.0**
CAIG				*i* S		**Sn**	**23 16 37.2**	**-2.4**
CAIG	**El Cayaco**	**2.47**	**299**			**Pn**	**23 16 07.3**	**-2.0**
CAIG						**Sn**	**23 16 37.2**	**-2.4**
MEIG	**Mezcala**	**2.57**	**323**	*eP*		**Pn**	**23 16 09.2**	**-1.6**
MEIG				*i* S		**Sn**	**23 16 39.8**	**-2.4**
MEIG				*i* S		**Sn**	**23 16 40.4**	**-1.8**
MEIG	**Mezcala**	**2.57**	**323**			**Pn**	**23 16 09.2**	**-1.6**
MEIG						**Sn**	**23 16 40.4**	**-1.8**
TPIG	**Tehuac#an**	**2.62**	**14**	*i* P		**Pn**	**23 16 11.5**	**0.0**
TPIG				*i*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAO	**LASA Array**	**1.56**	**13**		**Pg**	**23 45 15.0**	**-0.1**
LAO					**Sb**	**23 45 35.6**	**+0.2**
LAO				IAML		23 45 54.4	
	138nm,1.0s						
RLMT	**Red Lodge**	**1.79**	**269**		**Pn**	**23 45 15.8**	**-1.7**
RLMT					**Sn**	**23 45 38.5**	**-2.6**
RLMT				IAML		23 45 42.1	
	81nm,0.6s						
GCMT	**Greycliff**	**2.15**	**288**		**Pn**	**23 45 21.9**	**-0.5**
GCMT					**Sn**	**23 45 48.4**	**-1.6**
RSSD	**Black Hills**	**2.19**	**118**		**Pb**	**23 45 25.1**	**-0.8**
RSSD				IAML		23 46 00.8	
	91nm,0.6s						
YNE	**Yellowstone No**	**2.32**	**267**		**Pn**	**23 45 23.4**	**-1.5**
YNE					**Sn**	**23 45 52.9**	**-1.3**
YMP	**Mirror Lake Pl**	**2.46**	**261**		**Pn**	**23 45 26.0**	**-0.9**
K22A	**Casper**	**2.52**	**176**		**Pn**	**23 45 27.2**	**-0.3**
K22A				IAML		23 46 06.6	
	comp=N,56nm,0.4s						
K22A				IAML		23 46 10.2	
	comp=E,56nm,0.5s						
LKWY	**Lake**	**2.67**	**258**		**Pn**	**23 45 30.8**	**+1.1**
LKWY				IAML		23 46 30.1	
	comp=E,41nm,0.7s						
YUF	**Upper Falls**	**2.72**	**262**		**Pn**	**23 45 31.4**	**+1.0**
YNR	**Norris Junctio**	**2.83**	**262**		**Pn**	**23 45 32.3**	**+0.3**
H17A	**Grant Village**	**2.84**	**256**		**Pn**	**23 45 32.6**	**+0.6**
H17A				IAML		23 46 26.3	
	comp=N,28nm,0.5s						
YNM	**Yellowstone No**	**2.85**	**263**	Pn	**Pn**	**23 45 32.6**	**+0.4**
FLWY	**Flagg Ranch**	**3.03**	**250**		**Pn**	**23 45 35.9**	**+1.3**
FLWY				IAML		23 46 23.3	
	comp=N,25nm,0.7s						
FLWY				IAML		23 46 28.8	
	comp=N,35nm,1.1s						
YPP	**Pitchstone Pla**	**3.03**	**254**		**Pn**	**23 45 36.7**	**+2.0**
YMR	**Madison River**	**3.04**	**262**		**Pn**	**23 45 36.9**	**+2.1**
PD31	**Pinedale Array**	**3.15**	**221**		**Pn**	**23 45 36.5**	**+0.3**
PDAR	**Pinedale Array**	**3.15**	**221**	Pn	**Pn**	**23 45 36.2**	**-0.1**
	comp=N,2.2nm,0.3s,baz=52,slow=16,SNR=39						
PDAR				Lg	Lg	23 46 16.0	
	comp=N,2.4nm,0.3s,baz=49,slow=32,SNR=16						
BW06	**Boulder Array**	**3.15**	**221**		**Pn**	**23 45 36.9**	**+0.7**
YHL	**Hebgen Lake**	**3.17**	**266**		**Pn**	**23 45 37.9**	**+1.3**
YHL					**Sn**	**23 46 13.6**	**-1.6**
YHB	**Horse Butte**	**3.19**	**264**		**Pn**	**23 45 39.0**	**+2.1**
MOOW	**Moose Ponds**	**3.20**	**245**		**Pn**	**23 45 37.4**	**+0.5**
QLMT	**Earthquake Lak**	**3.34**	**266**		**Pn**	**23 45 38.8**	**-0.2**
SNOW	**Snow King Moun**	**3.35**	**241**		**Pn**	**23 45 39.9**	**+0.9**
SNOW				IAML		23 47 09.6	
	comp=N,18nm,3.1s						
SNOW				IAML		23 47 10.9	
	comp=N,19nm,3.0s						
REDW	**Red Top Meadow**	**3.46**	**240**		**Pb**	**23 45 46.3**	**-1.2**
REDW				IAML		23 47 29.6	
	comp=N,17nm,4.8s						
RWWY	**Rawlins**	**3.49**	**186**		**Pn**	**23 45 40.8**	**-0.3**
RWWY				IAML		23 47 00.1	
	comp=N,26nm,3.5s						
RWWY				IAML		23 47 04.5	
	comp=N,27nm,4.0s						
EGMT	**Eagleton**	**3.53**	**325**		**Pn**	**23 45 42.0**	**+0.6**
DGMT	**Dagmar**	**3.74**	**27**		**Pn**	**23 45 45.8**	**+1.6**
AHID	**Auburn Hatcher**	**3.96**	**234**	Pn	**Pn**	**23 45 48.8**	**+1.4**
AHID				IAML		23 47 21.2	
	comp=E,15nm,0.8s						
AHID				IAML		23 47 44.0	
	comp=N,17nm,4.0s						
N23A	**Red Feather La**	**4.31**	**172**		**Pn**	**23 45 51.8**	**-0.5**
N23A					**Pb**	**23 46 03.8**	**+1.8**
MCMT	**McKenzie Canyo**	**4.35**	**268**		**Pb**	**23 46 04.3**	**+1.7**
TCUT	**Toone Canyon**	**5.30**	**222**		**Pn**	**23 46 06.6**	**+0.9**
NEW	**Newport**	**7.78**	**297**	Lg	Lg	23 48 46.9	
	comp=N,0.1nm,0.3s,baz=247,slow=16,SNR=2.2						
I10CA	**LAC DU BONNET**	**8.80**	**51**	*i*		00 42 00.0	
	baz=228,slow=315,SNR=2.3						
ULM	**Lac du Bonnet**	**8.91**	**51**	Pn	**Pn**	**23 46 55.3**	**+0.2**
	comp=N,0.5nm,0.3s,baz=239,slow=11,SNR=8.0						
ULM				Pg	Pg	23 47 29.3	-6.5
	comp=N,0.2nm,0.3s,baz=241,slow=16,SNR=2.4						
ULM				Lg	Lg	23 49 24.8	
	comp=N,0.2nm,0.3s,baz=143,slow=21,SNR=3.1						

IDC ***08*** *23:48:17.8±0.8,27.˚26N×65.˚71E,h0km,mb4.0/27, mb1 4.2/30,mb1mx4.0/49,mbtmp4.0/30,ML3.8/2,MS3.7/23, Ms1 3.7/23,ms1mx3.5/54,Error ellipse: s-maj=18.3km s-min=12.9km az=13.0*

NEIC ***08*** *23:48:18.9±2.2,27.˚30N±0.˚08×65.˚64E±0.˚08,h10km±1km, mb4.5/31,Error ellipse: s-maj=14.2km s-min=10.0km az=141.0*

BJI ***08*** *23:48:19.0±0.0,27.˚40N×65.˚86E,h5km,mB4.8/33, mb4.7/36,Ms4.2/18,Ms7 4.0/18*

MOS ***08*** *23:48:19.0±1.3,27.˚46N×65.˚76E,h12km,mb4.4/13,Error ellipse: s-maj=7.8km s-min=4.9km az=85.0*

ISC 08 23:48:19.4±0.4,27.˚33N±0.˚05×65.74E±0.˚04,h10km,n208, σ1§91/205,**mb4.3**/64,**MS3.8**/27,**16C-7D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BHUJ	**Bhuj**	**5.39**	**138**	*eP*	**Pn**	**23 49 40.9**	**+1.0**
BHUJ				*eS*	**Sn**	**23 50 40.9**	**-1.1**
BHUJ				IAML		23 50 51.5	
	comp=N,115nm,0.2s						
BHUJ				IAML		23 50 52.2	
	comp=E,104nm,0.3s						
THW	**Thamme Wali**	**7.53**	**42**	P	**Pn**	**23 50 09.8**	**+0.5**
SARP	**Sargodha**	**7.57**	**51**	P	**Pn**	**23 50 10.3**	**+0.4**
WSAR	**Wadi Sarin**	**7.61**	**239**	Pn	Pn	23 50 07.2	-3.2
	comp=E,1.2nm,0.3s,baz=80,slow=8.8,SNR=26						
WSAR				Sn	Sn	23 51 23.4	-13
	baz=160,slow=4.9,SNR=2.0						
WSAR				LR	LR	23 54 06.2	
	comp=E,408nm,19.1s,baz=100,slow=46						
WSAR	**Wadi Sarin**	**7.61**	**239**	P	**Pn**	**23 50 08.3**	**-2.1**
	SNR=18						
HRA	**Herat**	**7.64**	**338**		**Pn**	**23 50 10.8**	**-0.3**
KBL	**Kabul**	**7.73**	**21**	P	**Pn**	**23 50 13.5**	**+1.3**
KBL						23 51 35.8	
KBL	**Kabul**	**7.73**	**21**		**Pn**	**23 50 13.5**	**+1.3**
KBL				Sn	**Sn**	**23 51 35.8**	**-4.0**
WBK	**Wadi Bani Khal**	**7.73**	**234**	P	Pn	23 50 09.5	-2.6
	SNR=37						
WBK				S	Sn	23 51 30.9	-8.9
SMDO	**Samad**	**8.16**	**240**	S	Sn	23 51 43.6	-6.7
CEP	**Cherat**	**8.38**	**38**	P	**Pn**	**23 51 21.7**	**+0.7**
JMDO	**Jabal Madar**	**8.51**	**236**	P	**Pn**	**23 50 22.0**	**-0.8**
	SNR=22						
JMDO				S	Sn	23 51 49.2	-10
BANOM	**Banah**	**8.56**	**263**	P	**Pn**	**23 50 21.9**	**-1.6**
	SNR=25						
MDH	**Madha**	**8.71**	**259**	P	**Pn**	**23 50 23.3**	**-2.1**
UOSS	**Minazif**	**8.89**	**257**		**Pn**	**23 50 26.4**	**-1.6**
UOSS					Sn	23 52 00.1	-8.1
UOSS	**Minazif**	**8.89**	**257**	P	**Pn**	**23 50 25.8**	**-2.1**
BSY	**Bisya**	**8.99**	**241**	P	**Pn**	**23 50 28.0**	**-1.3**
	SNR=16						
NIL	**Nilore**	**9.04**	**44**	P	**Pn**	**23 50 31.1**	**+1.1**
NIL	**Nilore**	**9.04**	**44**		**Pn**	**23 50 31.1**	**+1.1**
CHCP	**Chirah Chowk**	**9.05**	**44**	P	**Pn**	**23 50 31.3**	**+1.1**
ASHO	**Ashiyiah**	**9.10**	**255**	P	**Pn**	**23 50 29.4**	**-1.4**
	SNR=16						
KUDL	**Kundal**	**9.56**	**83**	*eP*	Pn	23 50 32.5	-4.6
KUDL				*eS*	Sn	23 52 14.2	-10
KUDL				IAML		23 52 20.4	
	comp=E,87nm,0.3s						
THN	**Thein Dam**	**10.04**	**57**	*eP*	**Pn**	**23 50 47.5**	**+3.8**
THN				*eS*	**Sn**	**23 52 30.0**	**-6.4**
SONA	**Sohna**	**10.09**	**82**	*eP*	**Pn**	**23 50 47.0**	**+2.6**
SONA				*eS*	**Sn**	**23 52 33.9**	**-3.8**
AYAN	**Aya Nagar**	**10.14**	**81**	*eP*	**Pn**	**23 50 45.6**	**+0.6**
AYAN				*eS*	**Sn**	**23 52 35.1**	**-3.9**
BHK	**Bhakra**	**10.17**	**64**	*ex*	**Pn**	**23 50 47.0**	**+1.5**
NDI	**New Delhi**	**10.24**	**80**	*eP*	**Pn**	**23 50 48.0**	**+1.6**
NDI				*ex*	**Sn**	**23 52 40.0**	**-1.3**
DHRM	**DHARAMSHALA**	**10.40**	**59**	*eP*	**Pn**	**23 50 50.6**	**+1.7**
DHRM				*eS*	**Sn**	**23 52 40.0**	**-5.6**
DHRM				IAML		23 52 49.1	
	comp=E,201nm,0.4s						
DHRM				IAML		23 52 49.2	
	comp=N,158nm,0.3s						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMLA	**Simla**	**10.68**	**67**	*eP*	**Pn**	**23 50 53.2**	**+0.8**
SMLA				*eS*	**Sn**	**23 52 44.8**	**-7.2**
SMLA				IAML		23 52 55.1	
	comp=Z,63nm,0.4s						
SMLA				IAML		23 52 55.5	
	comp=N,82nm,0.1s						
BHPL	**Bhopal**	**11.33**	**108**	*eP*	**Pn**	**23 51 02.2**	**+0.7**
BHPL				*ex*	x	23 53 15.4	
BHPL				IAML		23 53 47.0	
	comp=N,13nm,0.7s						
BHPL				IAML		23 53 49.4	
	comp=E,12nm,0.6s						
CHGR	**Chuyangaron**	**11.65**	**13**		**Pn**	**23 51 06.1**	**+0.3**
GAR	**Garm**	**12.25**	**17**		**Pn**	**23 51 13.1**	**-1.0**
GEYT	**Alibeck**	**12.36**	**331**	Pn	**Pn**	**23 51 15.2**	**-0.3**
	baz=161,slow=9.2,SNR=2.3						
GEYT				Lg	Lg	23 54 52.7	
	comp=E,0.2nm,0.3s,baz=160,slow=22,SNR=2.8						
GEYT				LR	LR	23 56 03.2	
	comp=E,198nm,19.2s,baz=20,slow=38						
JOSI	**Joshimath**	**12.52**	**72**	*eP*	**Pn**	**23 51 18.8**	**+0.9**
JOSI				*ex*	x	23 53 32.5	
JOSI				IAML		23 53 44.8	
	comp=N,144nm,0.6s						
JOSI				IAML		23 53 45.0	
	comp=E,108nm,0.5s						
BTK	**Batken**	**13.38**	**17**	P	**Pn**	**23 51 28.8**	**-0.6**
BTK	**Batken**	**13.38**	**17**		**Pn**	**23 51 28.8**	**-0.6**
NGP	**Nagpur**	**13.61**	**114**	*ex*	Pn	23 51 27.9	-4.7
NGP				*ex*	**Sn**	**23 54 04.2**	**+0.2**
TAS	**Tashkent**	**14.26**	**11**	P	**Pn**	**23 51 41.0**	**-0.5**
TAS	**Tashkent**	**14.26**	**11**	Pn	**Pn**	**23 51 41.0**	**-0.5**
KSH	**Kashi**	**14.84**	**32**	P	Pn	23 51 43.5	-6.0
KSH				pP	P	23 51 49.4	-5.9
KSH				PP	**PnPn**	**23 51 56.1**	**-1.4**
KSH				S	Sn	23 54 19.9	-14
KSH				sS	S	23 54 31.7	-21
KSH				SS	**SnSn**	**23 54 42.7**	**-4.1**
KSH				pmax	pmax		
	comp=E,31nm,0.7s						
KSH				pmax	pmax		
	comp=E,320nm,4.4s						
KSH				LR	LR		
	comp=E,380nm,6.4s						
KSH				LR	LR		
	comp=E,580nm,5.8s						
KSH				LR	LR		
	comp=E,870nm,9.0s						
ARSB	**Arslanbob**	**15.18**	**21**		**Pn**	**23 51 51.8**	**-2.2**
ARSB				IAmb	IAmb	23 52 02.6	
	comp=Z,15nm,0.8s						
DANN	**Dangsing**	**15.98**	**82**	*eP*	**Pn**	**23 52 02.7**	**-1.9**
	comp=Z,90nm,0.7s						
AML	**Almayashu**	**16.14**	**22**	P	**Pn**	**23 52 06.5**	**-0.2**
	SNR=10						
KK31	**Karatay Array**	**16.21**	**13**	P	**Pn**	**23 52 05.2**	**-2.0**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KK31	**Karatay Array**	**16.21**	**13**		**Pn**	**23 52 05.2**	**-2.0**
KKAR	**Karatay Array**	**16.21**	**13**	P	**Pn**	**23 52 04.7**	**-2.5**
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KKAR	**Karatay Array**	**16.21**	**13**		**Pn**	**23 52 04.7**	**-2.5**
NRN	**Naryn**	**16.40**	**28**	P	**Pn**	**23 52 06.8**	**-3.2**
NRN					**Sn**	**23 55 17.2**	**+5.0**
NRN				pmax	pmax		
	comp=Z,17nm,0.9s						
NRN	**Naryn**	**16.40**	**28**		**Pn**	**23 52 06.8**	**-3.2**
NRN				IAmb	IAmb	23 52 17.2	
	comp=Z,17nm,0.8s						
NRN					**Sn**	**23 55 17.2**	**+5.0**
UCH	**Uchtor**	**16.50**	**24**	P	**Pn**	**23 52 10.1**	**-1.3**
	SNR=12						
EKS2	**Erkin-Say**	**16.64**	**21**	P	**Pn**	**23 52 12.4**	**-0.4**
	SNR=7.3						
KZA	**Kyzart**	**16.64**	**25**	P	**P**	**23 52 17.6**	**+2.0**
	SNR=24						
AAK	**Ala-Archa**	**16.86**	**23**	*eP*	**Pn**	**23 52 15.6**	**0.0**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
AAK	**Ala-Archa**	**16.86**	**23**	Pn	**Pn**	**23 52 15.5**	**0.0**
	comp=Z,0.5nm,0.3s,baz=185,slow=6.7,SNR=13						
AAK	**Ala-Archa**	**16.86**	**23**		**Pn**	**23 52 15.6**	**0.0**
AAK				S	**Sn**	**23 55 18.9**	**-4.0**
KBK	**Karagaybulak**	**17.03**	**24**	P	**Pn**	**23 52 17.5**	**-0.4**
	SNR=14						
FRU1	**Bishkek**	**17.05**	**23**	P	**Pn**	**23 52 15.6**	**-2.4**
FRU1				pmax	pmax		
	comp=Z,12nm,0.7s						
FRU1	**Bishkek**	**17.05**	**23**	Pn	**Pn**	**23 52 15.6**	**-2.4**
DMN	**Daman**	**17.20**	**85**	*eP*	**Pn**	**23 52 17.7**	**-2.4**
	comp=Z,56nm,0.9s						
CHMS	**Chumysh**	**17.26**	**23**	P	**Pn**	**23 52 22.2**	**+1.6**
	SNR=17						
KKN	**Kakani**	**17.34**	**84**	*eP*	**Pn**	**23 52 19.2**	**-2.6**
	comp=Z,29nm,0.7s						
USP	**Ospenovka**	**17.42**	**22**	P	**Pn**	**23 52 23.9**	**+1.4**
	SNR=8.4						
PKIN	**Phulchoki**	**17.45**	**85**	*eP*	**Pn**	**23 52 20.6**	**-2.7**
	comp=Z,12nm,0.5s						
PKI	**Pulchoki**	**17.47**	**85**	*eP*	**Pn**	**23 52 20.8**	**-2.7**
	comp=Z,2.4nm,0.7s						
KDJ	**Kajisay**	**17.48**	**29**	P	**Pn**	**23 52 21.9**	**-1.5**
KDJ				pmax	pmax		
	comp=Z,44nm,1.1s						
KDJ	**Kajisay**	**17.48**	**29**	P	**Pn**	**23 52 21.9**	**-1.5**
KDJ				IAmb	IAmb	23 52 32.5	
	comp=Z,44nm,1.1s						
TKM2	**Tokmak 2**	**17.50**	**25**	*i* P	**Pn**	**23 52 22.1**	**-1.6**
TKM2				pmax	pmax		
	comp=Z,35nm,1.0s						
TKM2	**Tokmak 2**	**17.50**	**25**	P	**Pn**	**23 52 23.1**	**-0.5**
	SNR=15						
GUN	**Gumba**	**17.86**	**83**	*eP*	**Pn**	**23 52 26.1**	**-2.4**
	comp=Z,322nm,1.1s						
JIRN	**Jiri**	**18.15**	**84**	*eP*	**Pn**	**23 52 31.1**	**-0.9**
BOK	**Bokaro**	**18.52**	**96**	*ex*	P	**23 52 32.5**	**-3.5**
BOK				IAmb	IAmb	23 52 43.2	
	comp=Z,10nm,0.9s						
RAMN	**Ramite**	**18.57**	**86**	*eP*	**P**	**23 52 35.1**	**-1.8**
	comp=Z,49nm,0.7s						
RAYN	**Ar Rayn**	**18.66**	**263**	P	**P**	**23 52 35.1**	**-2.6**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAYN	**Ar Rayn**	**18.66**	**263**	P	**P**	**23 52 35.1**	**-2.6**
ODAN	**Odare**	**19.29**	**86**	*eP*	**P**	**23 52 46.4**	**+1.7**
	comp=Z,77nm,0.7s						
TAPN	**Taplejung**	**19.52**	**85**	*eP*	**P**	**23 52 47.3**	**0.0**
MNCI	**Minicoy**	**20.18**	**159**	P	**P**	**23 52 54.9**	**+0.7**
GTK	**Tadong**	**20.32**	**85**	*eP*	**P**	**23 52 57.7**	**+1.9**
AKT	**Akhty**	**20.43**	**318**	*eP*	**P**	**23 52 56.1**	**-0.9**
AKT				*e*		23 53 13.2	
AKT				pmax	pmax		
	comp=Z,22nm,0.7s						
GNI	**Garni**	**21.57**	**312**	*ceP*	**P**	**23 53 13.2**	**+3.8**
GNI				pmax	pmax		
	comp=Z,54nm,0.9s						
GNI	**Garni**	**21.57**	**312**	P	**P**	**23 53 13.1**	**+3.8**
	comp=Z,17nm,0.9s,baz=206,slow=1.9,SNR=11						
GNI	**Garni**	**21.57**	**312**	P	**P**	**23 53 08.2**	**-1.1**
AB31	**Akbulak array**	**22.34**	**350**	*i* P	**P**	**23 53 17.4**	**+0.1**
AB31				pmax	pmax		
	comp=Z,34nm,1.2s						
ABKAR	**Akbulak array**	**22.34**	**350**	P	**P**	**23 53 17.9**	**+0.6**
ABKAR				IAmb	IAmb	23 53 27.9	
	comp=Z,24nm,1.1s						
TBLG	**Delisi**	**22.40**	**315**	P	**P**	**23 53 17.7**	**-0.4**
TBLG				IAmb	IAmb	23 53 25.5	
	comp=Z,20nm,1.2s						
TBLG				PcP	PcP	23 57 04.5	-8.3
LSA	**Lhasa**	**22.45**	**78**	P	**P**	**23 53 21.6**	**+2.5**
LSA				pmax	pmax		
	comp=Z,26nm,1.2s						
LSA	**Lhasa**	**22.45**	**78**	P	**P**	**23 53 21.6**	**+2.5**
LSA				IAmb	IAmb	23 53 39.4	
	comp=Z,26nm,1.2s						
GROC	**Groznyy**	**22.62**	**320**	*eP*	**P**	**23 53 19.9**	**-0.5**
GROC				*e*		23 53 44.1	
GROC				*eS*	**S**	**23 57 25.2**	**-2.9**
GROC				pmax	pmax		
	comp=Z,32nm,0.8s						
AKH	**Akhalkalaki**	**23.03**	**313**	P	**P**	**23 53 24.6**	**-0.3**
AKH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AKH	**Akhalkalaki**	**23.03**	**313**	P	**P**	**23 53 24.6**	**-0.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKH				IAmb	IAmb	23 53 31.6	
	comp=Z,9.4nm,0.9s						
MAKZ	**Makanchi**	**23.28**	**29**	P	**P**	**23 53 27.4**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,25nm,0.8s						
MAKZ	**Makanchi**	**23.28**	**29**	P	**P**	**23 53 27.4**	**+0.2**
MK31	**Makanchi Array**	**23.40**	**30**	P	**P**	**23 53 28.2**	**-0.2**
MK31				pmax	pmax		
	comp=Z,12nm,0.9s						
MK31	**Makanchi Array**	**23.40**	**30**	P	**P**	**23 53 28.2**	**-0.2**
MK31				IAmb	IAmb	23 53 33.8	
	comp=Z,12nm,0.9s						
MKAR	**Makanchi Array**	**23.40**	**30**	P	**P**	**23 53 28.1**	**-0.3**
	comp=Z,7.5nm,0.7s,baz=211,slow=9.6,SNR=61						
MKAR				PcP	**PcP**	**23 57 14.6**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=207,slow=2.3,SNR=2.5						
MKAR				LR	LR	00 04 12.8	
	comp=Z,425nm,21.3s,baz=218,slow=41						
SHL	**Shillong**	**23.47**	**88**	P	**P**	**23 53 29.0**	**-0.4**
SHL				pmax	pmax		
	comp=Z,17nm,1.1s						
SHL	**Shillong**	**23.47**	**88**	P	**P**	**23 53 29.0**	**-0.4**
SHL				IAmb	IAmb	23 53 36.0	
	comp=Z,17nm,1.1s						
ZEI	**Tsey**	**23.50**	**317**	*eP*	**P**	**23 53 29.8**	**+0.1**
ZEI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKTO	**Aktyubinsk**	**23.81**	**348**	P	**P**	**23 53 33.0**	**+0.6**
AKTO	**Aktyubinsk**	**23.81**	**348**	P	**P**	**23 53 33.0**	**+0.6**
	comp=Z,3.8nm,0.8s,baz=180,slow=6.5,SNR=11						
AKTO				LR	LR	00 03 34.5	
	comp=Z,103nm,20.9s,baz=168,slow=38						
WMQ	**Urumqi**	**24.17**	**41**	*eP*	**P**	**23 53 37.6**	**+1.7**
WMQ				pP	pP	23 53 41.2	+1.8
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,69nm,3.6s						
WMQ				LR	LR		
	comp=Z,240nm,18.9s						
WMQ				LR	LR		
	comp=Z,200nm,20.5s						
WMQ	**Urumqi**	**24.17**	**41**	P	**P**	**23 53 37.7**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,31nm,0.8s						
WMQ	**Urumqi**	**24.17**	**41**	P	**P**	**23 53 37.7**	**+1.8**
NEY	**Neytrino**	**24.48**	**316**	*eP*	**P**	**23 53 40.9**	**+2.0**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PALK	**Pallekele**	**24.49**	**142**	LR	LR	00 03 53.2	
	comp=Z,44nm,18.3s,baz=334,slow=38						
KBZ	**Khabaz**	**24.64**	**318**	*eP*	**P**	**23 53 41.4**	**+1.4**
KBZ	**Khabaz**	**24.64**	**318**	P	**P**	**23 53 40.8**	**+0.8**
	comp=Z,7.7nm,1.0s,baz=110,slow=6.1,SNR=15						
KVAR	**Kislovodsk Arr**	**24.89**	**318**	P	**P**	**23 53 43.8**	**+1.4**
	comp=Z,1.9nm,0.7s,baz=144,slow=12,SNR=7.5						
KIV	**Kislovodsk**	**24.89**	**318**	*eP*	**P**	**23 53 43.9**	**+1.4**
KIV				pmax	pmax		
	comp=Z,33nm,1.0s						
KIV	**Kislovodsk**	**24.89**	**318**	P	**P**	**23 53 41.4**	**-1.1**
KIV				IAmb	IAmb	23 53 57.5	
	comp=Z,12nm,0.8s						
KURBB	**Kurchatov Arra**	**25.22**	**19**	P	**P**	**23 53 45.8**	**+0.6**
	comp=Z,6.8nm,0.6s,baz=211,slow=9.0,SNR=30						
KURK	**Kurchatov**	**25.33**	**19**	*c iP*	**P**	**23 53 47.0**	**+0.8**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KURK	**Kurchatov**	**25.33**	**19**	P	**P**	**23 53 45.5**	**-0.8**
KURK				IAmb	IAmb	23 53 52.3	
	comp=Z,11nm,0.9s						
KOHI	**KOHIMA**	**25.42**	**87**	*eP*	**P**	**23 53 48.6**	**+1.1**
ASF	**Jabal al Asfar**	**25.46**	**288**	P	**P**	**23 53 49.0**	**+1.3**
ASF	**Jabal al Asfar**	**25.46**	**288**	P	**P**	**23 53 49.0**	**+1.3**
	comp=Z,1.7nm,0.9s,baz=135,slow=13,SNR=1.9						
BVAR	**Borovoye Array**	**25.90**	**6**	P	**P**	**23 53 52.5**	**+1.1**
	comp=Z,13nm,0.8s,baz=169,slow=8.5,SNR=46						
GAZ	**Gaziantep**	**25.96**	**299**	IAmb	IAmb	23 54 02.2	
	comp=Z,12nm,0.8s						
ATD	**Arta Tunnel**	**26.63**	**238**	LR	LR	00 05 09.3	
	comp=Z,92nm,18.9s,baz=80,slow=38						
ATD	**Arta Tunnel**	**26.63**	**238**	P	**P**	**23 53 58.5**	**+0.1**
MMAI	**Mount Meron Ar**	**26.77**	**290**	P	**P**	**23 54 00.4**	**+0.8**
	comp=Z,4.4nm,0.9s,baz=86,slow=11,SNR=4.5						
EIL	**Elat**	**27.12**	**282**	LR	LR	00 06 38.3	
	comp=Z,187nm,21.0s,baz=95,slow=41						
BRTR	**Keskin Array B**	**29.31**	**303**	P	**P**	**23 54 22.5**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=125,slow=11,SNR=3.5						
ARU	**Arti**	**29.53**	**352**	*c iP*	**P**	**23 54 25.3**	**+1.5**
ARU						23 55 15.6	
ARU				S	**S**	**23 59 21.7**	**+3.3**
ARU				SS	**SnSn**	**00 00 45.2**	**-0.8**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARU				MLR	MLR		
	comp=Z,258nm,15.0s						
ARU	**Arti**	**29.53**	**352**	P	**P**	**23 54 24.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=124,slow=8.5,SNR=3.5						
ARU	**Arti**	**29.53**	**352**	IAmb	IAmb	23 54 30.4	
	comp=Z,5.8nm,1.1s						
ZALV	**Zalesovo Beam**	**30.08**	**23**	P	**P**	**23 54 29.2**	**+0.5**
	comp=Z,2.6nm,0.4s,baz=232,slow=10,SNR=17						
ZALV				LR	LR	00 07 46.9	
	comp=Z,120nm,21.1s,baz=240,slow=39						
GTA	**Gaotai**	**30.73**	**58**	*eP*	**P**	**23 54 36.9**	**+2.1**
GTA				pP	sP	23 54 44.4	+4.7
GTA				sP	pP	23 54 47.9	+10

MLR	Muntele Rosu	36.34	311	⇓P		P		23 55 23.4	-0.3
DOPR	Dopca	36.85	311	⇑P		P		23 55 27.0	-0.8
VOIR		36.94	310	⇑P		P		23 55 28.2	-0.4
VOIR		36.94	310	⇑P		P		23 55 28.2	-0.4
TLY	Talaya	37.40	39	*e*P		P		23 55 36.0	+3.6
TLY	comp=Z,26nm,1.1s			pmax	pmax				
TLY	comp=Z,349nm,15.0s			MLR	MLR				
BURAR	Bucovina Array	37.45	314	⇑P		P		23 55 33.5	+0.5
BURAR	Bucovina Array	37.45	314	⇑P		P		23 55 33.5	+0.5
XAN	Xi'an	37.52	69	P		P		23 55 34.7	+1.0
XAN				pP		sP		23 55 42.1	+3.4
XAN	comp=Z,8.0nm,0.6s			pmax	pmax				
XAN	Xi'an	37.52	69	P		P		23 55 33.2	-0.5
XAN	comp=Z,14nm,1.2s			pmax	pmax				
XAN	Xi'an	37.52	69	P		P		23 55 33.2	-0.5
XAN	comp=Z,14nm,1.2s			IAmb	IAmb			23 55 38.8	
SONM	Songino Array	37.61	46	P		P		23 55 36.2	+1.8
SONM	comp=Z,3.2nm,0.8s,baz=248,slow=8.2,SNR=16			PP		PnPn		23 57 05.3	+4.3
SONM	comp=Z,1.8nm,1.0s,baz=249,slow=12,SNR=3.7			LR	LR			00 13 46.8	
ULN	Ulaanbaatar	38.04	46	⇓*e*P		P		23 55 39.8	+1.7
ULN	comp=Z,6.0nm,1.1s			pmax	pmax				
DRGR		38.86	312	⇑P		P		23 55 43.8	-1.0
DRGR		38.86	312	⇑P		P		23 55 43.8	-1.0
MDVR	Moldovita	39.09	308	⇑P		P		23 55 50.0	+3.2
BZS	Buzias	39.32	310	⇑P		P		23 55 49.1	+0.4
BZS	Buzias	39.32	310	⇑P		P		23 55 49.1	+0.4
KMBO	Kilima Mbogo	39.39	229	LR		LR		00 12 40.9	
KOLS	Kolonicke sedl	39.72	315	*e*P		P		23 55 56.4	+4.4
KOLS	Kolonicke sedl	39.72	315	*e*P		P		23 55 56.4	+4.4
HHC	Hu-ho-hao-te	39.84	58	*e*P		P		23 55 53.3	+0.1
HHC	comp=Z,3.0nm,0.7s			pmax	pmax				
HHC	comp=Z,38nm,4.6s			pmax	pmax				
GSI	Gunungsitoli	40.02	125	P		P		23 55 56.8	+2.1
WHN	comp=Z,15nm,1.4s Wuhan	42.41	74	⇑P		P		23 56 15.7	+1.4
FINES	FINESS Array B	43.15	333	*i* P		P		23 56 20.8	+1.0
FINES	comp=Z,2.0nm,0.8s			pmax	pmax				
FINES	FINESS Array B	43.15	333	P		P		23 56 19.5	-0.3
FINES	comp=Z,2.1nm,0.8s,baz=174,slow=7.7,SNR=7.5			LR	LR			00 18 26.8	
PDSI	comp=Z,177nm,18.2s,baz=41,slow=42 Padang	43.63	124	P		P		23 56 25.1	+0.8
CHVC	Chvalec	44.04	316	*e*P		P		23 56 27.5	+0.2
MOA	Molln	44.70	311	*i* pP		P		23 56 33.6	+1.1
KBA	comp=Z,1.2nm,0.7s Koelnbreinsper	45.22	310	*i* pP		P		23 56 40.1	+3.2
GERES	comp=Z,2.7nm,0.9s GERESS Array B	45.22	313	P		P		23 56 36.4	-0.4
KHC	comp=Z,1.2nm,0.9s,baz=90,slow=6.7,SNR=7.1 Kasperske Hory	45.34	313	*e*P		P		23 56 39.1	+1.4
KHC	Kasperske Hory	45.34	313	*e*P		P		23 56 39.1	+1.4
MURB	Monte Urbino	45.49	305	P		P		23 56 38.1	-0.9
MURB	comp=Z,8.1nm,1.0s			IAmb	IAmb			23 56 43.0	
ABTA	Abfaltersbach	45.74	310	*i* pP		P		23 56 40.6	-0.4
CLL	comp=Z,2.4nm,0.8s Collm	46.08	316	*e*P		P		23 56 45.0	+1.6
CLL	Collm	46.08	316	*e*P		P		23 56 45.0	+1.6
SQTA	Sankt Quirin	46.68	310	*i* pP		P		23 56 47.9	-0.5
MOTA	comp=Z,2.4nm,0.6s Moosalm	46.76	310	*i* pP		P		23 56 48.3	-0.7
ARCES	comp=Z,4.2nm,0.9s ARCESS Array B	48.21	342	P		P		23 56 59.8	0.0
ARCES	comp=Z,3.1nm,0.8s,baz=127,slow=7.8,SNR=11			LR	LR			00 18 02.3	
KEST	comp=Z,105nm,18.3s,baz=168,slow=37 Kesra	48.23	295	P		P		23 56 59.7	-0.9
KEST	comp=Z,1.6nm,0.8s,baz=54,slow=8.7,SNR=2.0 Kesra	48.23	295	IAmb	IAmb			23 57 16.0	
NB2	comp=Z,3.2nm,0.9s NORSAR Subarra	49.44	329	P		P		23 57 09.3	-0.1
NOA	comp=Z,0.7nm,0.5s,baz=108,slow=7.9 NORSAR Array B	49.44	329	P		P		23 57 09.6	+0.2
KSRS	comp=Z,0.6nm,0.6s,baz=108,slow=7.5,SNR=2.9 Korea Array	52.64	62	P		P		23 57 33.6	-0.1
KSRS	comp=Z,2.0nm,0.6s,baz=264,slow=7.1,SNR=5.6			LR	LR			00 23 29.2	
YAK	comp=Z,55nm,18.5s,baz=315,slow=40 Yakutsk	54.06	32	⇓*e*P		P		23 57 43.8	0.0
YAK	comp=Z,6.0nm,0.6s			pmax	pmax				
KLR	Kul'dur	54.41	47	LR		LR		00 24 40.2	
TIXI	comp=Z,220nm,18.1s,baz=265,slow=40 Tiksi	55.91	20	⇑*e*P		P		23 57 57.0	0.0
TIXI	comp=Z,2.0nm,0.7s			pmax	pmax				
ESDC	Sonseca Array	58.09	301	P		P		23 58 13.2	+0.1
MJAR	comp=Z,0.2nm,0.5s,baz=68,slow=6.3,SNR=2.5 Matsushiro Arr	60.89	62	LR		LR		00 26 14.2	
ASAJ	comp=Z,29nm,19.7s,baz=350,slow=37 Asahikawa	62.45	52	LR		LR		00 29 32.6	
MA2	comp=Z,37nm,18.7s,baz=159,slow=40 Magadan	64.38	34	LR		LR		00 27 15.6	
BOSA	comp=Z,1μm,20.6s,baz=180,slow=36 Boshof	67.83	218	LR		LR		00 27 30.7	
BILL	comp=Z,45nm,20.0s,baz=32,slow=35 Bilibino	68.78	23	*e*P		P		23 59 22.6	-0.7
BILL				*e*				23 59 49.1	
BILL	comp=Z,1.0nm,1.0s			pmax	pmax				
DBIC	Dimbokro	69.74	267	LR		LR		00 34 52.9	
PETK	comp=Z,94nm,19.1s,baz=346,slow=40 Petropavlovsk-	69.76	40	LR		LR		00 31 54.8	
WRA	comp=Z,93nm,20.8s,baz=240,slow=38 Warramunga Arr	81.35	118	P		P		00 00 36.5	0.0
FRB	comp=Z,0.4nm,0.7s,baz=318,slow=4.6,SNR=1.8 Frobisher Bay	82.37	341	P		P		00 00 41.6	+0.4
ASAR	comp=Z,2.9nm,0.8s,baz=356,slow=0.9,SNR=3.6 Alice Springs	83.05	121	P		P		00 00 44.6	-0.8
INK	comp=Z,0.7nm,0.9s,baz=310,slow=5.2,SNR=4.9 Inuvik	83.58	7	P		P		00 00 47.2	-0.2
INK	comp=Z,0.9nm,0.5s,baz=357,slow=5.6,SNR=5.0 Inuvik	83.58	7	IAmb	IAmb			00 00 48.4	
ILAR	comp=Z,9.2nm,1.4s Eielson Array	84.75	13	P		P		00 00 52.6	-0.9
ILAR	comp=Z,0.7nm,0.8s,baz=332,slow=3.7,SNR=8.4			LR	LR			00 44 04.5	
YKA	comp=Z,41nm,19.6s,baz=326,slow=40 Yellowknife Ar	90.49	0	P		P		00 01 21.5	+0.3
STKA	comp=Z,1.1nm,0.9s,baz=350,slow=4.9,SNR=15 Stephens Creek	93.16	124	LR		LR		00 48 55.5	
NVAR	comp=Z,34nm,18.0s,baz=210,slow=39 Mina Array Bea	114.47	3	PKP		PKiKP		00 07 01.1	+0.8
TXAR	comp=Z,0.2nm,0.3s,baz=4.4,slow=0.4,SNR=8.9 Lajitas Array	122.75	349	PKP		PKPdf		00 07 16.5	+0.3
	comp=Z,0.5nm,0.8s,baz=90,slow=0.9,SNR=3.7								

*ATH **09** 00:19:01.8, 35.08N×23.11E, h8km±1km, ML3.2/9, Error ellipse: s-maj=2.0km s-min=0.9km az=50.0*
*IDC **09** 00:19:02.6±3.0, 35.38N×23.32E, h0km, mb3.7/6, mb1 3.7/9, mb1mx3.4/59, mbtmp3.6/9, ML3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.2/45, Error ellipse: s-maj=56.6km s-min=19.3km az=29.0*
*THE **09** 00:19:04.1, 35.15N×23.18E, h0km±2km, ML3.0/9, Error ellipse: s-maj=3.5km s-min=1.1km az=231.0*

ISC 09 00:19:01.5±1.4, 35.10N±0.04×23.09E±0.04, h7km±9km, n73, σ1s20/97, mb3.7/6, 2C, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RODP	Rodopos	0.71	50	P		Pb	00 19 17.2	+0.9
RODP				S		Sb	00 19 26.7	+0.4
ANKY	Antikythira Is	0.78	13	P		Pg	00 19 16.8	+0.2
ANKY				S		Sb	00 19 28.7	+0.3
	1μm,0.5s							
ANKY	Antikythira Is	0.78	13	P		Pg	00 19 17.0	+0.4
ANKY				S		Sb	00 19 28.0	-0.4
ANKY	comp=N,2778μm,0.3s			AML		AML	00 19 34.2	
ANKY	comp=E,2778μm,0.5s			AML		AML	00 19 37.8	
IMMV	Iera Moni Meta	0.81	64	P		Pg	00 19 17.4	+0.2
IMMV	comp=E,2μm,0.7s			S		Sb	00 19 28.7	-0.5
IMMV	Iera Moni Meta	0.81	64	P		Pg	00 19 17.4	+0.2
IMMV				S		Sb	00 19 28.7	-0.5
IMMV	comp=N,5709μm,0.8s			AML		AML	00 19 39.1	
IMMV	comp=E,3551μm,0.4s			AML		AML	00 19 40.8	
GVD	Gavdhos	0.86	107	P		Pg	00 19 18.4	+0.4
GVD	comp=E,2μm,0.4s			S		Sn	00 19 33.0	+0.1
GVD	Gavdhos	0.86	107	P		Pg	00 19 18.0	0.0
GVD				S		Sg	00 19 29.5	+0.3
GVD	comp=E,3864μm,0.5s			AML		AML	00 19 40.0	
GVD	comp=N,4006μm,0.4s			AML		AML	00 19 41.1	
GVDS	Gavdos	0.86	107	P		Pg	00 19 18.2	+0.2
GVDS	comp=N,2μm,0.3s			S		Sb	00 19 30.8	+0.3
CHAN	Chania	0.88	62	P		Pg	00 19 18.7	+0.2
CHAN	comp=N,745nm,0.7s			S		Sb	00 19 30.9	-0.3
VAM	Vamos	0.96	71	P		Pg	00 19 19.6	-0.3
VAM	comp=N,2μm,0.6s			S		Sb	00 19 32.7	-0.7
VAM	Vamos	0.96	71	P		Pg	00 19 19.7	-0.3
VAM				S		Sb	00 19 33.3	-0.1
VAM	comp=E,2129μm,0.4s			AML		AML	00 19 40.7	
VAM	comp=N,4508μm,0.8s			AML		AML	00 19 42.6	
KTHA	Kythira Island	1.15	359	P		Pg	00 19 23.8	+0.1
KTHA				S		Sn	00 19 41.2	+1.0
KTHA	Kythira Island	1.15	359	P		Pg	00 19 24.0	+0.3
KTHA				S		Sn	00 19 40.1	-0.1
KTHA	comp=N,950μm,0.4s			AML		AML	00 19 50.2	
KTHA	comp=E,2296μm,0.6s			AML		AML	00 19 50.9	
KTHR	Kythira	1.16	356	P		Pg	00 19 23.5	-0.3
KTHR				S		Sn	00 19 42.9	+2.5
PRNS	Prines Rethymn	1.18	77	P		Pg	00 19 23.7	-0.5
PRNS				S		Sg	00 19 38.4	-1.2
TMBK	Timbaki Herakl	1.37	91	P		Pb	00 19 27.6	0.0
TMBK	comp=E,338nm,0.7s			S		Sn	00 19 48.7	+3.1
SIVA	Sivas	1.41	93	P		Pn	00 19 28.0	+0.3
SIVA	comp=E,1μm,0.6s			S		Sg	00 19 48.8	+1.9
SIVA	Sivas	1.41	93	P		Pn	00 19 28.0	+0.3
SIVA				S		Sg	00 19 47.1	+0.2
SIVA	comp=E,2880μm,0.8s			AML		AML	00 19 54.0	
SIVA	comp=N,1696μm,0.6s			AML		AML	00 19 55.9	
IDI	Anoyia	1.48	82	Pg		Pn	00 19 28.7	-0.1
IDI	comp=N,8.5nm,0.3s,baz=269,slow=12,SNR=62 Anoyia	1.48	82	P		Pn	00 19 28.9	+0.1
IDI				S		Sg	00 19 49.5	+0.2
IDI	comp=N,460μm,0.5s			AML		AML	00 20 04.3	
IDI	comp=E,493μm,0.8s			AML		AML	00 20 09.8	
VLI	Veliai	1.62	356	P		Pb	00 19 32.0	+0.2
VLI	Veliai	1.62	356	P		Pb	00 19 32.2	+0.5
VLI				S		Sg	00 19 55.3	+1.7
VLI	comp=N,983μm,1.2s			AML		AML	00 20 07.6	
VLI	comp=E,1174μm,0.8s			AML		AML	00 20 10.1	
HRKL	Herakleio	1.66	82	P		Pg	00 19 33.0	-0.3
MHLO	Agia Marina, M	1.91	33	P		Pb	00 19 37.4	+0.7
MHLO	Agia Marina, M	1.91	33	P		Pb	00 19 37.5	+0.7
MHLO				S		Sg	00 20 03.2	+0.3
MHLO	comp=N,1707μm,0.5s			AML		AML	00 20 17.6	
MHLO	comp=E,1767μm,0.6s			AML		AML	00 20 19.2	
LAST	Lasithi	1.96	88	P		Pb	00 19 37.5	-0.1
LAST	comp=E,162nm,1.1s			S		Sb	00 20 02.0	-0.2
LAST	Lasithi	1.96	88	P		Pb	00 19 37.9	+0.4
MHLA	Plaka, Milos I	1.96	33	P		Pb	00 19 38.1	+0.5
MHLA				S		Sg	00 20 03.7	-0.9
NPS	Neapolis	2.07	85	P		Pb	00 19 39.9	+0.4
NPS	Neapolis	2.07	85	P		Pb	00 19 39.7	+0.2
PYL	PYLOS	2.10	329	P		Pb	00 19 40.1	+0.1
SAP1	Santorini-Akro	2.25	56	P		Pn	00 19 40.6	+1.3
THR6	Thira Island,	2.25	56	P		Pn	00 19 41.5	-1.1
THR6	Thira Island,	2.25	56	P		Pb	00 19 41.6	-1.0
THR5	Thira Island,	2.26	54	P		Pb	00 19 41.1	-1.5
THR5	Thira Island,	2.26	54	P		Pb	00 19 41.5	-1.2
SAP3	Santorini-Thir	2.27	53	P		Pn	00 19 41.4	-1.4
KRND	KRANIDI	2.28	1	P		Pb	00 19 42.7	-0.3
KRND				S		Sb	00 20 10.0	-1.4
KRND	KRANIDI	2.28	1	P		Pb	00 19 43.0	0.0
ITM	Ithomi	2.28	336	P		Pb	00 19 43.2	+0.1
THR3	Thira Island,	2.29	55	P		Pb	00 19 41.5	-1.6
THR3	Thira Island,	2.29	55	P		Pb	00 19 41.7	-1.4
SANT	Santorini	2.31	56	P		Pb	00 19 41.9	-1.6
VLX	Vlachokerasia	2.34	346	P		Pg	00 19 45.8	-0.5
THR8	Santorini-Mono	2.34	55	P		Pn	00 19 41.9	+1.5
DID	Didima	2.40	3	P		Pb	00 19 44.3	-0.9
DID	Didima	2.40	3	P		Pb	00 19 44.6	-0.5
IOSP	Ios island	2.41	47	P		Pn	00 19 43.3	+1.9
STIA	Sitia Lasithi	2.46	87	P		Pb	00 19 44.3	-1.8
AMT	Artemida-Makis	2.67	336	P		Pb	00 19 48.1	-1.6
APE	Apeiranthos	2.79	44	P		Pn	00 19 48.4	+1.8
VLY	Voula,Athens	2.80	11	P		Pn	00 19 49.2	+2.4
VLY	Voula,Athens	2.80	11	P		Pn	00 19 49.5	+2.7
DRO	Drossia	3.06	339	P		Pn	00 19 53.5	+3.2
KARP	Karpathos	3.36	81	P		Pn	00 19 55.8	+1.3
KARP	Karpathos	3.36	81	P		Pn	00 19 56.5	+2.0
MAKR	Makrakomi, Fth	3.98	349	P		Pn	00 20 06.7	+3.7
STON	Ston	8.82	333	*e*Pn		Pn	00 21 07.1	-2.3
BRTR	Keskin Array B	9.57	58	Pn		Pn	00 21 21.4	+1.5
KIJV	comp=E,0.0nm,0.3s,baz=244,slow=14,SNR=5.6 Kijevo	10.28	332	*e*Pn		Pn	00 21 28.0	-1.4
MMAI	Mount Meron Ar	10.42	98	Pn		Pn	00 21 30.7	-0.8
MORI	comp=E,0.4nm,0.3s,baz=290,slow=11,SNR=2.8 Morici	10.44	329	*e*Pn		Pn	00 21 30.3	-1.4
MLR	Muntele Rosu	10.60	11	Pn		Pn	00 21 33.1	-0.9
MLR	comp=E,0.2nm,0.3s,baz=17,slow=3.1,SNR=5.7 Muntele Rosu	10.60	11	⇑P		Pn	00 21 33.2	-0.8
MLR	Muntele Rosu	10.60	11	⇑P		Pn	00 21 33.2	-0.8
GERES	GERESS Array B	15.39	336	Pn		P	00 22 43.9	0.0
GERES	comp=E,0.1nm,0.3s,baz=147,slow=12,SNR=4.2			LR		LR	00 30 18.6	
KHC	comp=E,49nm,20.8s,baz=52,slow=44 Kasperske Hory	15.68	336	*e*P		P	00 22 47.5	+0.5
HFS	Hagfors	25.78	349	P		P	00 24 33.0	+0.2
EKA	comp=E,0.9nm,0.6s,baz=152,slow=11,SNR=5.0 Eskdalemuir Ar	27.13	326	P		P	00 24 47.1	+2.1
ARCES	comp=E,1.2nm,0.7s,baz=126,slow=9.8,SNR=3.6 ARCESS Array B	34.51	1	P		P	00 25 49.0	-1.0
KURBB	comp=E,6.5nm,1.0s,baz=182,slow=6.1,SNR=2.7 Kurchatov Arra	42.48	51	P		P	00 26 55.6	-1.5
MKAR	comp=E,0.2nm,0.5s,baz=277,slow=8.5,SNR=3.1 Makanchi Array	45.22	56	P		P	00 27 18.3	-1.0
ZALV	comp=E,0.2nm,0.4s,baz=266,slow=7.7,SNR=8.3 Zalesovo Beam	46.27	46	P		P	00 27 25.7	-1.7
	comp=E,0.4nm,0.3s,baz=258,slow=6.4,SNR=2.6							

BUC 09 00:21:24.9±0.6, 45.47N×26.44E, h30km±4km, ml0.9/1, 7C-2D, Error ellipse: s-maj=3.4km s-min=1.4km az=151.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BISRR	Bisoca	0.20	68	⇑P		Pb	00 21 31.2	-0.1
BISRR				⇓S		Sn	00 21 36.0	-0.3
BISRR	Bisoca	0.20	68	⇓P		Pb	00 21 31.2	-0.1
MLR	Muntele Rosu	0.35	273	⇓S		Sb	00 21 39.4	+0.6
PLOR	Plostina	0.41	21	⇑P		Pb	00 21 34.1	+0.2
PLOR				⇑S		Sb	00 21 40.5	+0.4
PLOR	Plostina	0.41	21	⇑P		Pb	00 21 34.1	+0.2
VRI	Vrincioaia	0.44	27	⇑P		Pn	00 21 35.0	-0.2
VRI				⇑S		Sb	00 21 41.4	+0.5

IDC 09 00:46:52.5±6.0, 7.65S×152.57E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.5/25, mbtmp3.5/3, MS3.8/1, Ms1 3.8/1, ms1mx2.6/18, Error ellipse: s-maj=172.4km s-min=42.2km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	Keravat (AS076	3.36	351	Sn		Sn	00 48 21.1	-5.9
	15nm,0.3s,baz=64,slow=23,SNR=6.7							
WRA	Warramunga Arr	21.48	233	P		P	00 51 44.3	+1.4
	3.2nm,0.8s,baz=57,slow=9.8,SNR=13							
ASAR	Alice Springs	23.96	226	P		P	00 52 07.1	-1.6
	0.3nm,0.6s,baz=58,slow=9.4,SNR=1.8							
BATI	Baumata	28.66	263	LR		LR	01 05 52.2	
	comp=Z,176nm,18.2s,baz=294,slow=40							
MKAR	Makanchi Array	82.31	319	P		P	00 59 16.3	+0.2
	0.3nm,0.7s,baz=104,slow=5.2,SNR=2.6							

IDC 09 01:20:27.2±2.9, 20.23S×179.88E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.8/24, mbtmp3.9/3, Error ellipse: s-maj=310.3km s-min=33.8km az=162.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	Alice Springs	42.64	257	P		P	01 28 24.4	-1.3
	0.4nm,0.4s,baz=88,slow=8.4,SNR=6.7							
WRA	Warramunga Arr	42.66	262	P		P	01 28 26.8	+0.8
	1.4nm,0.3s,baz=95,slow=8.3,SNR=24							
TXAR	Lajitas Array	88.60	58	P		P	01 33 22.5	0.0
	0.3nm,0.7s,baz=206,slow=5.9,SNR=5.0							

*TIR **09** 01:42:02.2, 41.07N×20.23E, h1km, Md2.6/6*
*ATH **09** 01:42:03.2, 41.13N×20.27E, h17km±2km, ML1.7/2, Error ellipse: s-maj=2.7km s-min=1.1km az=28.0*
*SKO **09** 01:42:04.0, 41.10N×20.22E, h12km*

ISC 09 01:42:03.9±1.0, 41.09N±0.02×20.20E±0.03, h14km±9km, n17, σ1s30/30, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	Tirane	0.36	316	*i* PG		Pg	01 42 10.8	-0.5
TIR				*i* SG		Sg	01 42 17.0	+0.7
TIR	Tirane	0.36	316	P		Pg	01 42 10.8	-0.5
TIR				S		Sg	01 42 16.8	+0.5
TIR	comp=N,368μm,0.2s			AML		AML	01 42 19.6	
TIR	comp=E,383μm,0.3s			AML		AML	01 42 20.1	
OHR	Ohrid	0.45	87	*e*Pg		Pg	01 42 12.3	-0.6
OHR				*i* Sg		Sg	01 42 19.4	+0.3
OHR	comp=N,59nm,0.3s			*e*Lg		Lg	01 42 19.9	
OHR	comp=E,50nm,0.4s			*e*Lg		Lg	01 42 20.1	
PHP	Peshkopia	0.62	17	*i* PG		Pg	01 42 15.2	-0.9
PHP				*i* SG		Sb	01 42 25.2	-0.1
NEST	Nestorio	0.93	136	P		Pb	01 42 20.6	-1.3
NEST				S		Sg	01 42 33.9	-0.2
FNA	Florina	0.94	108	*i* PG		Pb	01 42 20.9	-1.2
FNA				*i* SG		Sn	01 42 35.1	-0.9
FNA	Florina	0.94	108	P		Pb	01 42 20.9	-1.2
FNA				S		Sb	01 42 33.7	-0.7
FNA	comp=E,98μm,0.3s			AML		AML	01 42 38.3	
FNA	comp=N,76μm,0.5s			AML		AML	01 42 40.4	
PUK	Puka	0.98	347	*i* PG		Pb	01 42 22.0	-0.7
PUK				*i* SG		Sn	01 42 37.6	+0.5
BCI	Bajram Curri	1.28	356	*i* PN		Pg	01 42 28.3	-0.3
BCI				*i* SN		Sg	01 42 47.6	+2.3
SKO	Skopje	1.28	46	*e*Pg		Pn	01 42 26.4	-1.1
SKO				*e*Sg		Sg	01 42 44.9	-0.5
KEK	Kerkira	1.41	193	P		Pg	01 42 31.1	+0.2
KPRO	Kipourio	1.44	142	P		Pb	01 42 30.5	0.0
KPRO				S		Sg	01 42 49.8	-0.5
IGT	Igoumenitsa	1.56	176	*i* PN		Pg	01 42 33.0	-0.8
IGT				*i* SN		Sg	01 42 55.2	+1.2
IGT	Igoumenitsa	1.56	176	P		Pb	01 42 32.8	+0.3
STIP	Stip	1.61	67	*e*Pg		Pg	01 42 36.2	+1.3
STIP				*e*Sg		Sg	01 43 00.4	+4.6
GRG	Griva	1.67	94	P		Pn	01 42 33.1	+0.3
AGG	Agios Georgios	2.63	141	P		Pn	01 42 47.7	+1.7

IDC 09 02:10:50.9±2.1, 1.88N×127.44E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/34, mbtmp3.6/4, Error ellipse: s-maj=174.4km s-min=25.2km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	22.72	163	P		P	02 15 53.9	-0.6
	1.2nm,0.5s,baz=341,slow=11,SNR=9.9							
ASAR	Alice Springs	26.16	166	P		P	02 16 28.9	+1.7
	0.3nm,0.5s,baz=346,slow=13,SNR=4.4							
STKA	Stephens Creek	36.16	159	P		P	02 17 53.8	-1.3
	0.5nm,0.3s,baz=333,slow=14,SNR=3.4							
MKAR	Makanchi Array	59.47	326	P		P	02 20 55.7	0.0
	0.2nm,0.4s,baz=114,slow=8.4,SNR=5.0							

*IDC **09** 02:12:53.2±4.3, 5.35S×149.46E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.6/29, mbtmp3.6/4, Error ellipse: s-maj=121.3km s-min=31.9km az=106.0*
*NEIC **09** 02:12:55.0±0.6, 5.35S±0.1×149.4E±0.3, h16km±8km, mb4.1/8, Error ellipse: s-maj=42.4km s-min=12.8km az=102.0*

ISC 09 02:12:53.9±1.8, 5.35S±0.1×149.5E±0.3, h10km, n15, σ1s60/16, mb3.8/5, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	Port Moresby	4.72	209	Sn		Sn	02 15 03.0	+2.9
	15nm,0.3s,baz=131,slow=19,SNR=17							
PMG	Port Moresby	4.72	209	Pn		Pn	02 14 05.4	+0.2
PMG						Sn	02 14 59.1	-1.0
MTN	Manton Dam	19.60	246	P		P	02 17 22.1	-0.5
MTN	comp=Z,15nm,1.1s			IAmb		IAmb	02 17 25.1	
WR0	Warramunga Arr	20.61	223	P		P	02 17 29.8	-3.8
WRAB	Tennant Creek	20.72	224	P		P	02 17 32.2	-2.5
WRAB	comp=Z,12nm,1.1s			IAmb		IAmb	02 17 40.1	
WRA	Warramunga Arr	20.74	224	P		P	02 17 35.3	+0.4
	comp=Z,1.9nm,0.5s,baz=50,slow=11,SNR=12							
WRA	Warramunga Arr	20.74	224	P		P	02 17 34.2	-0.7
KNRA	Kununurra	22.82	241	P		P	02 17 57.1	-0.2
KNRA	comp=Z,5.9nm,0.9s			IAmb		IAmb	02 18 14.3	
AS31	Alice Springs	23.67	218

	comp=Z,126nm,20.1s,baz=78,slow=34						
RAO	**Raoul Island**	**12.39**	**137**	LR	LR	02 28 14.5	
	comp=Z,241nm,20.0s,baz=264,slow=32						
STKA	**Stephens Creek**	**29.89**	**241**	P	**P**	**02 27 43.0**	**-0.1**
	2.4nm,0.8s,baz=63,slow=11,SNR=4.9						
STKA				LR	LR	02 38 35.7	
	comp=Z,60nm,18.8s,baz=297,slow=34						
WRA	**Warramunga Arr**	**35.75**	**264**	P	**P**	**02 28 33.4**	**-1.0**
	0.5nm,0.7s,baz=100,slow=8.6,SNR=3.7						
WRA				LR	LR	02 41 53.0	
	comp=Z,68nm,20.6s,baz=15,slow=34						
ASAR	**Alice Springs**	**35.84**	**258**	P	**P**	**02 28 34.6**	**-0.6**
	0.7nm,0.6s,baz=88,slow=9.1,SNR=11						
PPT2	**Papeete2**	**35.94**	**92**	*e*LR	LR	02 38 19.1	
	comp=Z,135nm,29.5s						
GUMO	**Guam**	**43.33**	**319**	LR	LR	02 45 55.0	
	comp=Z,66nm,18.3s,baz=102,slow=34						
FITZ	**Fitzroy Crossi**	**44.17**	**265**	P	**P**	**02 29 44.1**	**-0.2**
	2.1nm,1.0s,baz=117,slow=9.2,SNR=3.8						
FITZ				LR	LR	02 47 17.4	
	comp=Z,67nm,18.4s,baz=94,slow=35						
PETK	**Petropavlovsk-**	**74.31**	**351**	LR	LR	03 03 20.9	
	comp=Z,18nm,18.9s,baz=59,slow=34						
CMAR	**Chiang Mai Arr**	**81.76**	**293**	P	**P**	**02 33 55.7**	**+1.5**
	0.6nm,0.3s,baz=157,slow=2.5,SNR=6.0						
NVAR	**Mina Array Bea**	**87.31**	**47**	P	**P**	**02 34 23.0**	**+0.8**
	0.8nm,0.8s,baz=230,slow=7.6,SNR=5.6						
SONM	**Songino Array**	**89.99**	**322**	P	**P**	**02 34 34.9**	**+0.5**
	0.3nm,0.4s,baz=148,slow=8.4,SNR=3.5						
ILAR	**Eielson Array**	**90.45**	**16**	P	**P**	**02 34 34.9**	**-1.2**
	0.5nm,0.7s,baz=227,slow=5.0,SNR=9.8						
TXAR	**Lajitas Array**	**94.66**	**61**	P	**P**	**02 34 57.3**	**+0.8**
	0.4nm,0.8s,baz=201,slow=6.7,SNR=5.8						
MORC	**Moravsky Berou**	**144.55**	**332**	*e*PKP	**PKPab**	**02 41 10.1**	**+0.3**
CHVC	**Chvalec**	**144.59**	**334**	*e*PKP	**PKPdf**	**02 41 10.4**	**-0.9**
DPC	**Dobruska-Polom**	**144.65**	**333**	*e*PKP	**PKPdf**	**02 41 10.9**	**-0.6**
DPC				*ex*	x	02 41 17.7	
UPC	**Upice**	**144.66**	**334**	*e*PKP	**PKPdf**	**02 41 10.6**	**-0.8**
KRLC	**Kraliky**	**144.66**	**333**	*e*PKP	**PKPdf**	**02 41 10.5**	**-1.0**
VYHS	**Vyhne**	**144.87**	**329**	*e*PKP	**PKPab**	**02 41 11.6**	**+0.6**
JAVC	**Velka Javorina**	**145.16**	**331**	*e*PKP	**PKPab**	**02 41 13.6**	**+1.5**
CLL	**Collm**	**145.20**	**337**	*i* PKPbc	**PKPab**	**02 41 12.2**	**+0.1**
	comp=Z,12nm,0.9s						
CLL	**Collm**	**145.20**	**337**	*e*PKPbc	**PKPab**	**02 41 12.1**	**+0.1**
	baz=22,slow=2.6						
BRG	**Berggiesshubel**	**145.20**	**336**	*e*PKP	**PKPab**	**02 41 12.2**	**+0.1**
	comp=Z,12nm,0.9s						
BRG	**Berggiesshubel**	**145.20**	**336**	*e*PKPbc	**PKPab**	**02 41 12.6**	**+0.5**
	baz=22,slow=2.6						
PVCC	**Panska Ves**	**145.23**	**335**	*e*PKP	**PKPab**	**02 41 13.0**	**+0.8**
PVCC				*ex*	x	02 41 15.6	
VRAC	**Vranov**	**145.32**	**332**	*e*PKP	**PKPab**	**02 41 12.9**	**+0.3**
FBE	**Freiberg**	**145.38**	**337**	*e*PKPbc	**PKPab**	**02 41 13.0**	**+0.2**
	baz=22,slow=2.6						
SMOL	**Smolenice**	**145.52**	**330**	*e*PKP	**PKPab**	**02 41 14.2**	**+0.8**
KRUC	**Moravsky**	**145.59**	**332**	*e*PKP	**PKPab**	**02 41 13.6**	**0.0**
GOPC	**GO Pecny, Ondr**	**145.62**	**334**	*e*PKP	**PKPbc**	**02 41 13.1**	**-0.3**
CLZ	**Clausthal**	**145.64**	**340**	*e*PKPbc	**PKPdf**	**02 41 12.0**	**-1.1**
	baz=22,slow=2.6						
MODS	**Modra-Piesok**	**145.69**	**330**	*e*PKP	**PKPbc**	**02 41 13.5**	**-0.2**
TANN	**Tannenbergstha**	**146.13**	**337**	*e*PKPbc	**PKPab**	**02 41 15.2**	**-0.4**
	baz=22,slow=2.6						
GUNZ	**Gunzen**	**146.22**	**337**	*e*PKPbc	**PKPab**	**02 41 16.0**	**0.0**
	baz=22,slow=2.6						
WERN	**Wernitzgruen**	**146.26**	**337**	*e*PKPbc	**PKPab**	**02 41 15.6**	**-0.5**
	baz=22,slow=2.6						
MANZ	**Manzenberg**	**146.61**	**337**	*e*PKPbc	**PKPab**	**02 41 16.9**	**-0.6**
	baz=22,slow=2.6						
CONA	**Conrad Observa**	**146.66**	**331**	*i* PKPab	**PKPab**	**02 41 17.2**	**-0.7**
	comp=Z,1.7nm,0.6s						
KHC	**Kasperske Hory**	**146.73**	**334**	*e*PKP	**PKPbc**	**02 41 15.9**	**-0.9**
KHC				*ex*	x	02 41 23.9	
ROTZ	**Rotzenmuhle**	**146.75**	**336**	*e*PKPbc	**PKPbc**	**02 41 16.7**	**0.0**
	baz=22,slow=2.6						
GEC2	**GERESS Array S**	**146.90**	**334**	*e*PKPbc	**PKPbc**	**02 41 17.5**	**+0.1**
	baz=22,slow=2.6						
GERES	**GERESS Array B**	**146.90**	**334**	PKPbc	**PKPbc**	**02 41 17.4**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=29,slow=3.0,SNR=24						
WET	**Wettzell**	**147.00**	**335**	*e*PKPbc	**PKPbc**	**02 41 17.1**	**-0.5**
	baz=22,slow=2.6						
GRF	**Grafenberg Arr**	**147.18**	**337**	*e*PKPbc	**PKPbc**	**02 41 16.9**	**-1.1**
	baz=22,slow=2.6						
MOA	**Molln**	**147.43**	**332**	*i* PKiKP	**PKPab**	**02 41 21.1**	**+0.3**
	comp=Z,1.0nm,0.5s						
KBA	**Koelnbreinsper**	**148.43**	**332**	*i* PKPbc	**PKPbc**	**02 41 20.6**	**-1.0**
	comp=Z,1.0nm,0.5s						
WATA	**Walderalm**	**148.97**	**334**	*i* PKPbc	**PKPbc**	**02 41 22.5**	**-0.5**
	comp=Z,1.7nm,0.6s						
ABTA	**Abfaltersbach**	**149.04**	**333**	*i* PKPbc	**PKPbc**	**02 41 22.3**	**-0.9**
	comp=Z,2.1nm,0.6s						
MOTA	**Moosalm**	**149.15**	**335**	*i* PKPbc	**PKPbc**	**02 41 23.0**	**-0.5**
	comp=Z,2.9nm,0.7s,SNR=5.2						
RETA	**Reutte**	**149.17**	**335**	*i* PKPbc	**PKPbc**	**02 41 22.8**	**-0.6**
SQTA	**Sankt Quirin**	**149.21**	**335**	*i* PKPbc	**PKPbc**	**02 41 23.3**	**-0.2**
	comp=Z,4.2nm,0.9s,SNR=5.1						
FETA	**Feichten**	**149.56**	**335**	*i* PKiKP	**PKPbc**	**02 41 24.4**	**-0.1**
	comp=Z,2.6nm,0.8s						

MAN ***09*** *02:35:17.5,5.°11N×125.°71E,h112km,MS3.4*
IDC ***09*** *02:35:22.1±1.5,5.°49N×125.°37E,h133km±18km, mb3.7/5, mb1 3.9/6, mb1mx3.4/35, mbtmp4.3/6, Error ellipse: s-maj=56.0km s-min=15.1km az=75.0*
DJA ***09*** *02:35:22.7±1.4,5.°N±12.°×12.°6E±.°,h153km±16km, M4.4/7, mB4.8/2, mb4.3/4, MLv4.5/7, Mw(mB)4.1/2*

ISC 09 02:35:21.7±0.8,5.°54N±0.°07×125.°67E±0.°09,h132km±8km, n18,σ2°28/26,mb4.1/5,4D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.56**	**4**	*e*P	**Pn**	**02 35 39.3**	**-2.0**
DDMP				*e*S	**Sn**	**02 35 55.4**	**-0.8**
GSPH	**General Santos**	**0.90**	**307**	⇓*i*P	**Pn**	**02 35 42.4**	**-1.6**
GSPH				*i* S	**Sn**	**02 36 00.0**	**-0.9**
SKMP	**Bagumbayan, Su**	**1.48**	**311**	*e*P	**Pn**	**02 35 48.3**	**-1.5**
SKMP				*e*S	**Sn**	**02 36 12.3**	**+1.2**
MATI	**Mati**	**1.51**	**23**	*e*P	**Pn**	**02 35 49.2**	**-0.9**
DAV	**Davao City (W)**	**1.52**	**356**	P	**Pn**	**02 35 51.1**	**+0.9**
	72nm,0.3s,baz=350,slow=3.5,SNR=4.4						
DAV				S	**Sn**	**02 36 13.9**	**+2.0**
	115nm,0.3s,baz=248,slow=23,SNR=6.8						
DMPH	**Davao City--Mi**	**1.54**	**354**	*e*P	**Pn**	**02 35 51.4**	**+1.0**
DMPH				*i* S	**Sn**	**02 36 15.8**	**+3.5**
KCP	**Kidapawan**	**1.57**	**338**	⇓*e*P	**Pn**	**02 35 50.6**	**-0.1**
KCP				*i* S	**Sn**	**02 36 20.2**	**+7.3**
CTBH	**Cotabato--PC H**	**2.19**	**320**	⇓*i*P	**Pn**	**02 35 58.1**	**0.0**
BUKP	**Musuan**	**2.40**	**345**	*e*P	**Pn**	**02 35 59.7**	**-1.1**
BUKP				*e*S	**Sn**	**02 36 31.3**	**+0.5**
CGP	**Cagayan de Oro**	**3.05**	**341**	⇓*e*P	**Sn**	**02 36 41.4**	**-4.2**
MRSI	**Marisa**	**6.26**	**217**	P	**Pn**	**02 36 52.7**	**+0.9**
	0.4nm902nm24nm,0.5s						
SANI	**Sanana**	**7.55**	**178**	P	**Pn**	**02 37 07.0**	**-2.1**
	0.2nm1μm32nm,0.8s						
BATI	**Baumata**	**15.77**	**187**	P	**Pn**	**02 38 55.1**	**-1.7**
	12nm,0.3s,baz=93,slow=9.9,SNR=3.0						
FITZ	**Fitzroy Crossi**	**23.49**	**180**	P	**P**	**02 40 20.7**	**+1.0**
	2.6nm,0.4s,baz=358,slow=9.9,SNR=28						
WRA	**Warramunga Arr**	**26.72**	**162**	P	**P**	**02 40 48.7**	**-0.3**
	0.7nm,0.4s,baz=335,slow=11,SNR=11						
ASAR	**Alice Springs**	**30.12**	**165**	P	**P**	**02 41 19.7**	**+0.5**
	0.8nm,0.4s,baz=342,slow=7.2,SNR=16						
ASAR				ScP	**ScP**	**02 47 47.0**	**-1.0**
	0.3nm,0.4s,baz=342,slow=3.0,SNR=6.7						
STKA	**Stephens Creek**	**40.19**	**159**	P	**P**	**02 42 46.0**	**+0.8**
	3.5nm,0.8s,baz=348,slow=10,SNR=7.0						
MKAR	**Makanchi Array**	**55.48**	**325**	P	**P**	**02 44 42.1**	**-0.7**
	0.9nm,0.3s,baz=119,slow=7.3,SNR=9.5						

MAN 09 02:43:52.4,9.°82N×123.°26E,h0km,mb3.5,ML2.1,MS1.5, 1C,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**1.23**	**176**	⇑*i*P	Sg	02 44 31.4	-0.6
MSLP	**Maasin**	**1.60**	**79**	*e*P	Pn	02 44 21.5	-0.4
MSLP				*e*S	Sg	02 44 46.2	+2.3
PAGZ	**Pagadian**	**1.96**	**177**	*e*P	Pn	02 44 27.2	+0.2
PAGZ				*e*S	Sn	02 44 50.5	-1.8

IDC 09 03:07:10.2±15.0,4.°66S×68.°52E,h0km,mb3.4/3, mb1 3.5/3,mb1mx3.2/28,mbtmp3.4/3,Error ellipse: s-maj=463.7km s-min=40.7km az=67.0,Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	**Diego Garcia H**	**2.97**	**124**	Pn	Pb	03 08 01.2	-2.7
H08N2				Sn	Sn	03 08 34.7	+0.1
H08N2				T	T	03 11 05.8	
	baz=317,slow=74,SNR=3548						
H08N3	**Diego Garcia H**	**2.98**	**124**	Pn	Pb	03 08 01.3	-2.7
H08N3				Sn	Sn	03 08 35.3	+0.6
H08N3				T	T	03 11 06.5	
	baz=317,slow=74,SNR=2581						
H08N1	**Diego Garcia H**	**3.00**	**124**	Pn	Pb	03 08 01.5	-2.7
H08N1				Sn	Sn	03 08 35.2	0.0
H08N1				T	T	03 11 09.5	
	baz=317,slow=74,SNR=3285						
H08S3	**Diego Garcia H**	**4.92**	**127**	Pn	Pn	03 08 29.8	+4.5
H08S3				Sn	Sn	03 09 25.5	+2.6
	SNR=26						
H08S3				T	T	03 13 39.6	
	baz=307,slow=75,SNR=7.9						
H08S1	**Diego Garcia H**	**4.93**	**127**	Pn	Pn	03 08 29.8	+4.5
H08S1				Sn	Sn	03 09 26.0	+3.0
H08S1				T	T	03 13 41.8	
	baz=307,slow=75,SNR=7.8						
H08S2	**Diego Garcia H**	**4.94**	**127**	Pn	Pn	03 08 30.3	+4.8
H08S2				Sn	Sn	03 09 25.7	+2.4
H08S2				T	T	03 13 39.8	
	baz=307,slow=75,SNR=6.7						
MKAR	**Makanchi Array**	**52.66**	**12**	P	P	03 16 25.6	-0.6
	0.2nm,0.7s,baz=187,slow=8.6,SNR=2.1						
SONM	**Songino Array**	**61.93**	**28**	P	P	03 17 32.3	+0.4
	0.9nm,0.8s,baz=218,slow=6.3,SNR=5.5						
WRA	**Warramunga Arr**	**65.70**	**110**	P	P	03 17 57.2	-0.1
	0.3nm,1.0s,baz=286,slow=6.5,SNR=3.2						

TIR 09 03:22:50.9,41.°78N×20.°22E,h10km,Md2.3/4,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.19**	**120**	*i* PG	Pg	03 22 55.2	+0.3
PHP				*i* SG	Sg	03 22 58.6	+0.9
PUK	**Puka**	**0.36**	**317**	*i* PG	Pg	03 22 58.2	+0.2
PUK				*i* SG	Sb	03 23 04.0	-1.1
TIR	**Tirane**	**0.51**	**212**	*i* PG	Pb	03 23 01.3	-0.6
TIR				*i* SG	Sb	03 23 09.1	-0.3
BCI	**Bajram Curri**	**0.60**	**349**	*i* PG	Pg	03 23 02.9	+0.4
BCI				*i* SG	Sb	03 23 11.9	-0.1

ROM 09 03:24:14.2±0.1,42.°715N±0.°004×13.°118E±0.°007, h9km,ML1.3/2,Error ellipse: s-maj=0.6km s-min=0.5km az=260.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.12**	**359**	P	Pg	03 24 17.6	+0.5
NRCA				S	Sg	03 24 19.8	+0.6
NRCA				AML	AML		
	comp=N,192μm,1.2s						
NRCA				AML	AML		
	comp=E,266μm,0.8s						
LNSS	**Leonessa**	**0.13**	**207**	P	Pg	03 24 17.7	+0.5
LNSS				S	Sg	03 24 20.1	+0.7
LNSS				AML	AML		
	comp=E,170μm,0.2s						
LNSS				AML	AML		
	comp=N,206μm,0.4s						
SMA1	**SAN MARTINO**	**0.18**	**118**	P	Pg	03 24 18.7	+0.6
SMA1				S	Sg	03 24 21.8	+1.0
FDMO	**Fiordimonte**	**0.32**	**356**	P	Pg	03 24 21.2	+0.5
FDMO				S	Sb	03 24 26.4	-1.1
CESI	**CESI - Serrava**	**0.33**	**332**	P	Pg	03 24 21.4	+0.6
CESI				S	Sb	03 24 26.9	-0.8
GUMA	**Gualdo di Mace**	**0.69**	**60**	P	Pg	03 24 22.4	-5.2
GUMA				S	Sg	03 24 29.0	-7.7

IDC ***09*** *03:26:52.4±1.0,35.°74N×96.°76W,h0km,mb1 3.6/5, mb1mx3.3/52,mbtmp3.3/5,ML3.2/5,Error ellipse: s-maj=17.3km s-min=12.2km az=148.0*
NEIC ***09*** *03:26:52.6±1.5,35.°56N±0.°04×96.°75W±0.°03,h5km±2km, Error ellipse: s-maj=5.8km s-min=3.9km az=177.0*
ANF ***09*** *03:26:52.9±0.5,35.°52N×96.°77W,h4km±4km,ML4.2/13, Error ellipse: s-maj=7.7km s-min=1.9km az=161.0*
TUL ***09*** *03:26:53.1±1.9,35.°54N±0.°03×96.°77W±0.°04,h3km±2km, ML3.8,Error ellipse: s-maj=5.7km s-min=3.9km az=130.0*

ISC 09 03:26:52.8±1.1,35.°55N±0.°04×96.°76W±0.°03,h9km±9km, n104,σ0°83/136,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.37**	**286**		**Pg**	**03 27 00.6**	**+0.5**
OK005				Sg	**Sg**	**03 27 05.1**	**+0.1**
W35A	**Tecumseh**	**0.41**	**194**		**Pg**	**03 27 00.8**	**0.0**
ADOK	**Arcadia Dam**	**0.51**	**281**		**Pg**	**03 27 02.8**	**+0.1**
OKCSW	**OKLAHOMA CITY**	**0.58**	**256**		**Pg**	**03 27 03.9**	**0.0**
OKCSW				Sg	**Sg**	**03 27 11.6**	**+0.1**
OKCFA	**Oklahoma City**	**0.58**	**257**		**Pg**	**03 27 04.0**	**-0.1**
OKCFA				Sg	**Sg**	**03 27 11.2**	**-0.6**
FNO	**Franklin**	**0.60**	**241**		**Pg**	**03 27 04.4**	**-0.1**
FNO				Sg	**Sg**	**03 27 12.2**	**-0.1**
TUL1	**Leonard**	**0.86**	**65**		**Pg**	**03 27 09.5**	**+0.1**
TUL1				Sg	**Sb**	**03 27 21.4**	**-0.2**
TUL1	**Leonard**	**0.86**	**65**	P	**Pg**	**03 27 09.7**	**+0.3**
	baz=246						
TUL1				S	**Sb**	**03 27 21.9**	**+0.3**
	baz=246						
X34A	**Smith Ranch, M**	**1.30**	**223**		**Pn**	**03 27 17.0**	**-0.1**
X34A				Sg	**Sb**	**03 27 33.8**	**-0.3**
WMOK	**Wichita Mounta**	**1.85**	**245**		**Pn**	**03 27 25.2**	**+0.5**
WMOK				Sn	**Sn**	**03 27 48.9**	**+0.7**
WMOK	**Wichita Mounta**	**1.85**	**245**	P	**Pn**	**03 27 25.5**	**+0.8**
	baz=63						
WMOK				S	**Sn**	**03 27 49.9**	**+1.7**
	baz=63						
U32A	**Winter Ranch,**	**2.00**	**295**		**Pn**	**03 27 27.6**	**+0.8**
U32A				Sn	**Sn**	**03 27 53.1**	**+1.1**
HHAR	**Hobbs**	**2.40**	**72**		**Pn**	**03 27 33.4**	**+1.1**
HHAR				Sn	**Sn**	**03 28 02.5**	**+0.6**
W39A	**Magazine**	**2.45**	**97**		**Pn**	**03 27 34.0**	**+1.0**
W39A				Sn	**Sn**	**03 28 03.5**	**+0.3**
W39A	**Magazine**	**2.45**	**97**	P	**Pn**	**03 27 34.1**	**+1.0**
	baz=279						
W39A				S	**Sn**	**03 28 04.9**	**+1.7**
	baz=279						
MIAR	**Mount Ida**	**2.79**	**110**		**Pn**	**03 27 38.9**	**+1.2**
MIAR				Sn	**Sn**	**03 28 12.3**	**+0.7**
MIAR	**Mount Ida**	**2.79**	**110**	P	**Pn**	**03 27 39.0**	**+1.3**
	baz=292						
MIAR				S	**Sn**	**03 28 13.9**	**+2.3**
	baz=292						
U40A	**Yellville**	**3.27**	**75**		**Pn**	**03 27 45.1**	**+0.9**
U40A				Sn	**Sn**	**03 28 24.6**	**+1.4**
U40A	**Yellville**	**3.27**	**75**	P	**Pn**	**03 27 45.1**	**+0.9**
	baz=257						
U40A				S	**Sn**	**03 28 25.4**	**+2.2**
	baz=257						
X40A	**Basin Creek Fa**	**3.39**	**107**		**Pn**	**03 27 46.9**	**+1.1**
X40A	**Basin Creek Fa**	**3.39**	**107**	P	**Pn**	**03 27 47.0**	**+1.1**
	baz=290						
WHTX	**Lake Whitney,**	**3.60**	**190**		**Pn**	**03 27 49.0**	**+0.3**
WHTX	**Lake Whitney,**	**3.60**	**190**	P	**Pn**	**03 27 49.2**	**+0.4**
	baz=8.9						
WHAR	**Wooly Hollow**	**3.66**	**93**		**Pn**	**03 27 50.5**	**+0.9**
UALR	**University of**	**3.70**	**101**		**Pn**	**03 27 51.2**	**+1.0**
UALR				Sn	**Sn**	**03 28 32.4**	**-1.5**
W41B	**Gary Mavity, V**	**3.70**	**95**	P	**Pn**	**03 27 51.3**	**+1.1**
	baz=277						
W41B				S	**Sn**	**03 28 35.7**	**+1.7**
	baz=277						
ABTX	**Abilene, Hawle**	**3.78**	**220**		**Pn**	**03 27 51.6**	**+0.3**
ABTX	**Abilene, Hawle**	**3.78**	**220**	P	**Pn**	**03 27 51.6**	**+0.3**
	baz=38						
ABTX				S	**Sn**	**03 28 35.8**	**-0.1**
	baz=38						
MGMO	**Mountain Grove**	**3.96**	**65**		**Pn**	**03 27 55.0**	**+1.2**
MGMO				Sn	**Sn**	**03 28 41.4**	**+1.1**
CBKS	**Cedar Bluff**	**4.03**	**325**	Pn	**Pn**	**03 27 55.6**	**+0.8**
AMTX	**Amarillo**	**4.09**	**262**		**Pn**	**03 27 56.4**	**+0.9**
AMTX	**Amarillo**	**4.09**	**262**	P	**Pn**	**03 27 56.6**	**+1.0**
	baz=79						
NATX	**Nacogdoches**	**4.17**	**155**	Pn	**Pn**	**03 27 58.1**	**+1.5**
CCAR	**Cane Creek**	**4.42**	**110**		**Pn**	**03 28 00.6**	**+0.6**
CCAR				Sn	**Sn**	**03 28 50.6**	**-1.0**
LCAR	**Lake Charles**	**4.58**	**82**		**Pn**	**03 28 02.3**	**0.0**
LCAR				Sn	**Sn**	**03 28 55.6**	**-0.1**
435B	**Jarrell**	**4.81**	**189**	Pn	**Pn**	**03 28 05.3**	**0.0**
435B				Sn	**Sn**	**03 29 00.4**	**-0.9**
435B	**Jarrell**	**4.81**	**189**	P	**Pn**	**03 28 05.4**	**0.0**
	baz=7.9						
X43A	**Marvell**	**4.93**	**100**	P	**Pn**	**03 28 08.6**	**+1.6**
	baz=284						
HBAR	**Harrisburg**	**4.97**	**88**	Pn	**Pn**	**03 28 07.7**	**0.0**
CCM	**Cathedral Cave**	**5.08**	**59**	Pn	**Pn**	**03 28 09.6**	**+0.5**
CCM				Sn	**Sn**	**03 29 07.7**	**-0.2**
MSTX	**Muleshoe**	**5.20**	**254**		**Pn**	**03 28 10.9**	**0.0**
MSTX	**Muleshoe**	**5.20**	**254**	P	**Pn**	**03 28 11.0**	**+0.1**
	baz=70						
LPAR	**Lepanto**	**5.26**	**88**	Pn	**Pn**	**03 28 11.9**	**+0.3**
PBMO	**Poplar Bluff**	**5.26**	**75**	Pn	**Pn**	**03 28 12.0**	**+0.4**
PBMO				Sn	**Sn**	**03 29 11.6**	**-0.8**
GNAR	**Gosnell**	**5.49**	**84**	Pn	**Pn**	**03 28 16.5**	**+1.6**
PEBM	**Pemiscott Bayo**	**5.63**	**82**	Pn	**Pn**	**03 28 15.4**	**-1.3**
JCT	**Junction City**	**5.67**	**208**		**Pn**	**03 28 16.8**	**-0.4**
PARMO	**Parma**	**5.78**	**77**	Pn	**Pn**	**03 28 19.0**	**+0.3**
KSCO	**Kaye Shedlock'**	**5.82**	**308**		**Pn**	**03 28 19.4**	**0.0**
PENMO	**Penman**	**5.85**	**79**	Pn	**Pn**	**03 28 20.0**	**+0.4**
LNXT	**Lenox**	**5.93**	**83**	Pn	**Pn**	**03 28 20.4**	**-0.3**
LNXT				Sn	**Sn**	**03 29 28.6**	**-0.2**
BGNE	**Belgrade**	**5.95**	**350**	Pn	**Pn**	**03 28 21.1**	**0.0**
BGNE				Sn	**Sn**	**03 29 28.3**	**-1.1**
BGNE	**Belgrade**	**5.95**	**350**	P	**Pn**	**03 28 21.2**	**+0.1**
	baz=169						
HALT	**Halls**	**6.04**	**84**	Pn	**Pn**	**03 28 21.4**	**-1.0**
SLM	**Saint Louis**	**6.05**	**58**	Pn	**Pn**	**03 28 23.5**	**+1.0**
SLM				Sn	**Sn**	**03 29 31.1**	**-0.7**
OXF	**Oxford**	**6.12**	**98**		**Pn**	**03 28 24.1**	**+0.7**
OXF				Sn	**Sn**	**03 29 33.3**	**-0.1**
OXF	**Oxford**	**6.12**	**98**	P	**Pn**	**03 28 24.3**	**+1.0**
	baz=282						
HICK	**Hickman**	**6.18**	**79**	Pn	**Pn**	**03 28 24.3**	**+0.1**
HICK				Sn	**Sn**	**03 29 34.9**	**-0.1**
T25A	**Trinidad**	**6.38**	**287**		**Pn**	**03 28 27.3**	**+0.1**
T25A				LR	LR	03 30 12.5	
T25A	**Trinidad**	**6.38**	**287**	P	**Pn**	**03 28 27.3**	**+0.1**
	baz=102						
S44A	**Carbondale**	**6.40**	**68**	Pn	**Pn**	**03 28 27.4**	**+0.1**
OGNE	**Ogallala**	**6.80**	**324**	Pn	**Pn**	**03 28 33.2**	**+0.4**
SCIA	**State Center**	**6.92**	**22**		**Pn**	**03 28 35.0**	**+0.5**
N41A	**Harden Midland**	**6.94**	**40**		**Pn**	**03 28 35.3**	**+0.7**
P43A	**Skaggs, Pawnee**	**7.04**	**52**	Pn	**Pn**	**03 28 37.0**	**+0.9**
PLAL	**Pickwick Lake**	**7.12**	**92**		**Pn**	**03 28 37.1**	**-0.1**
WVT	**Waverly**	**7.27**	**83**		**Pn**	**03 28 39.1**	**-0.2**
SDCO	**Great Sand Dun**	**7.36**	**290**		**Pn**	**03 28 41.8**	**+1.0**
SDCO	**Great Sand Dun**	**7.36**	**290**	P	**Pn**	**03 28 41.9**	**+1.1**
	baz=105						
Q24A	**Divide**	**7.51**	**299**		**Pn**	**03 28 42.5**	**-0.2**
833A	**Chaparral WMA,**	**7.55**	**198**	Pn	**Pn**	**03 28 43.9**	**+0.8**
HDIL	**Hopedale**	**7.72**	**47**	Pn	**Pn**	**03 28 46.4**	**+1.1**
L40A	**Anamosa**	**7.80**	**32**		**Pn**	**03 28 46.5**	**0.0**
T47A	**Sharon Grove**	**7.92**	**77**	Pn	**Pn**	**03 28 47.8**	**-0.4**
ANMO	**Albuquerque**	**7.96**	**268**	Pn	**Pn**	**03 28 48.0**	**-0.9**
	0.1nm,0.3s,baz=45,slow=8.6,SNR=3.4						
ANMO				Pg	Pb	03 29 17.8	+6.7
	0.7nm,0.3s,baz=80,slow=18,SNR=20						
ANMO				Lg	Lg	03 31 01.6	
	2.1nm,0.3s,baz=2.2,slow=11,SNR=11						
ANMO	**Albuquerque**	**7.96**	**268**		**Pn**	**03 28 47.5**	**-1.4**
O44A	**Mansfield**	**8.00**	**53**	Pn	**Pn**	**03 28 49.0**	**-0.2**
O44A				Sn	**Sn**	**03 30 18.6**	**-1.3**
X48A	**Hartselle**	**8.04**	**95**	Pn	**Pn**	**03 28 49.6**	**-0.3**
V48A	**Smith Brothers**	**8.09**	**86**	Pn	**Pn**	**03 28 50.0**	**-0.5**
MNTX	**Cornudas Mount**	**8.15**	**244**		**Pn**	**03 28 50.8**	**-0.6**
ECSD	**EROS Data Cent**	**8.17**	**1**		**Pn**	**03 28 51.2**	**-0.3**
ISCO	**Idaho Springs**	**8.20**	**304**		**Pn**	**03 28 52.9**	**+0.6**
ISCO				Sn	**Sn**

mb5.0/69,Ms4.3/37,Ms7 4.0/36
MOS ***09*** *04:31:53.5±1.0, 42.2°10N×142.2°62E, h67km, mb5.2/51, Error ellipse: s-maj=5.4km s-min=4.1km az=98.2*
NEIC ***09*** *04:31:54.5±1.3, 42.2°04N±0.2°06×142.2°69E±0.2°08, h64km±2km, mb5.0/259, Error ellipse: s-maj=9.1km s-min=8.2km az=51.0*
JMA ***09*** *04:31:54.4±0.1, 42.2°06N×142.2°65E, h60km±1km, M4.7 Broadband fault plane solution: P waves. NP1: φs209.00000°, δ28.00000°, λ86.00000°. NP2:φs34.00000°, δ62.00000°, λ92.00000°. Principal axes: T Plg73.0000°, Azm309.0000°; N Plg2.0000°, Azm213.0000°; P Plg17.0000°, Azm122.0000°;*
JMA Felt III J1.
SKHL ***09*** *04:31:54.6±0.6, 42.2°00N×142.2°80E, h81km±4km, mb5.5/12, msha6.2/9*
IDC ***09*** *04:31:55.0±0.4, 42.2°09N×142.2°59E, h64km±3km, mb4.6/30, mb1 4.7/38, mb1mx4.7/47, mbtmp4.9/38, MS3.7/34, Ms1 3.7/34, ms1mx3.6/50, Error ellipse: s-maj=9.7km s-min=6.2km az=96.0*
GCMT ***09*** *04:31:56.5±0.4, 42.2°14N±0.2°03×142.2°62E±0.2°04, h63km±3km, MW4.8/66, Moment Tensor Solution. s35,c41; s66,c79; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.63±.14; Mθθ-0.10±.12; Mφφ-1.53±.11; Mrθ0.57±.07; Mrφ-0.69±.09; Mθφ0.98±.08; Best double couple: M○2.06100×10^16 NP1:φs196.00000°, δ29.00000°, λ81.00000°. NP2: φs27.00000°, δ62.00000°, λ95.00000°. Principal axes: T 1.9780, Plg73.0000°, Azm309.0000°; N 0.1680, Plg4.0000°, Azm205.0000°; P -2.1430, Plg17.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***09*** *04:32:04.2±0.0, 43.2°48N×141.2°63E, h70km, mb4.9*
ISC 09 04:31:54.5±0.3, 42°09N±0.2°03×142°66E±0.2°03, h64km±2km, h64km:pP-P, n984, σ1§18/974, mb4.9/267, 67C-59D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.21**	**19**	⇑	P		**Pn**	**04 32 03.9**	**-0.5**
JNBK					S		**Sn**	**04 32 11.4**	**-0.2**
JSHD	**Hidakashinhida**	**0.36**	**336**	⇓	P		**Pn**	**04 32 05.2**	**-0.2**
JSHD					S		**Sn**	**04 32 13.9**	**+0.6**
ERM	**Erimo**	**0.38**	**101**	*c*	*i*PN		**Pn**	**04 32 05.5**	**0.0**
ERM	**Erimo**	**0.38**	**101**				**Pn**	**04 32 05.2**	**-0.3**
ERM						Sn	**Sn**	**04 32 13.5**	**-0.1**
JEM	**Erimo**	**0.38**	**100**	⇑	P		**Pn**	**04 32 05.4**	**-0.1**
JEM					S		**Sn**	**04 32 13.3**	**-0.3**
JTHR	**Tokachihiroo**	**0.52**	**66**	⇑	P		**Pn**	**04 32 06.9**	**0.0**
JTHR					S		**Sn**	**04 32 16.3**	**+0.4**
JBT2	**Biratori 2**	**0.73**	**342**	⇓	P		**Pn**	**04 32 09.1**	**-0.2**
JBT2					S		**Sn**	**04 32 20.5**	**+0.3**
JCH	**Churui**	**0.74**	**44**	⇑	P		**Pn**	**04 32 09.6**	**+0.2**
JCH					S		**Sn**	**04 32 21.0**	**+0.6**
JIAM	**Iburiatsuma**	**0.77**	**315**	⇓	P		**Pn**	**04 32 10.4**	**+0.6**
JFR	**Furan**	**1.08**	**357**	⇓	P		**Pn**	**04 32 13.7**	**0.0**
JFR					S		**Sn**	**04 32 28.2**	**+0.2**
JEW	**Eniwo**	**1.17**	**310**	⇓	P		**Pn**	**04 32 15.0**	**+0.1**
JEW					S		**Sn**	**04 32 30.6**	**+0.4**
JOB	**Onbets**	**1.19**	**46**	⇑	P		**Pn**	**04 32 16.4**	**+1.2**
JOB					S		**Sn**	**04 32 32.7**	**+2.1**
JKB	**Kayabe**	**1.23**	**261**	⇓	P		**Pn**	**04 32 14.8**	**-0.9**
JKB					S		**Sn**	**04 32 30.4**	**-1.1**
JNB	**Noboribetsu**	**1.27**	**288**	⇓	P		**Pn**	**04 32 15.0**	**-1.1**
JNB					S		**Sn**	**04 32 31.2**	**-1.1**
JOT	**Ohata**	**1.40**	**240**	⇓	P		**Pn**	**04 32 16.9**	**-1.0**
JOT					S		**Sn**	**04 32 34.1**	**-1.3**
JAB	**Ashibetsu**	**1.46**	**347**	⇓	P		**Pn**	**04 32 19.1**	**+0.4**
JAR	**Ashorobuto**	**1.46**	**34**		P		**Pn**	**04 32 19.1**	**+0.4**
JAR					S		**Sn**	**04 32 37.9**	**+0.9**
JISS	**Ishikarishitsu**	**1.50**	**323**	⇓	P		**Pn**	**04 32 19.7**	**+0.4**
JISS					S		**Sn**	**04 32 38.9**	**+0.9**
ASAJ	**Asahikawa**	**2.03**	**359**		P		**Pn**	**04 32 27.6**	**+1.1**
	781nm,0.3s,baz=209,slow=9.9,SNR=805								
ASAJ					S		**Sn**	**04 32 52.4**	**+1.7**
	216nm,0.3s,baz=335,slow=30,SNR=16								
JKA	**Kamikawa-asahi**	**2.03**	**359**	*e*	P		**Pn**	**04 32 27.6**	**+1.2**
JKA	**Kamikawa-asahi**	**2.03**	**359**				**Pn**	**04 32 27.6**	**+1.2**
JKA							**Sn**	**04 32 52.4**	**+1.7**
NMR	**Nemuro--Hokkai**	**2.60**	**59**	*c*	*i*PN		**Pn**	**04 32 33.4**	**-0.7**
NMR					*i* S		**Sn**	**04 33 02.9**	**-1.6**
NMR	**Nemuro--Hokkai**	**2.60**	**59**	⇑	*i*P		**Pn**	**04 32 33.4**	**-0.7**
NMR					*i* S		**Sn**	**04 33 02.9**	**-1.6**
GLVR	**Golovnino**	**2.67**	**51**	*d*	*i*PN		**Pn**	**04 32 37.1**	**+2.0**
GLVR					*i* S		**Sn**	**04 33 08.0**	**+1.7**
GLVR					pmax	pmax			
	comp=E,392nm,0.3s								
GLVR					pmax	pmax			
	comp=E,2μm,0.3s								
GLVR					pmax	pmax			
	comp=N,309nm,0.1s								
GLVR					smax	smax			
	comp=N,11μm,0.3s								
GLVR					smax	smax			
	comp=E,2μm,0.2s								
GLVR	**Golovnino**	**2.67**	**51**	⇓	*i*P		**Pn**	**04 32 37.1**	**+2.0**
GLVR					AMB	AMB	04 32 37.3		
	comp=E,310nm,0.5s								
GLVR					AMB	AMB	04 32 37.3		
	comp=E,390nm,0.5s								
GLVR					AMB	AMB	04 32 37.3		
	comp=E,2μm,0.5s								
GLVR					*i* S		**Sn**	**04 33 07.0**	**+0.7**
GLVR					A	A	04 33 15.2		
	comp=E,11μm,0.5s								
GLVR					A	A	04 33 15.2		
	comp=E,2μm,0.5s								
GRPR	**Tuman**	**2.97**	**49**	*d*	*i*PN		**Pn**	**04 32 41.3**	**+2.1**
GRPR					*i* S		**Sn**	**04 33 15.7**	**+2.0**
GRPR					pmax	pmax			
	comp=Z,1μm,0.3s								
GRPR					pmax	pmax			
	comp=N,428nm,0.2s								
GRPR					pmax	pmax			
	comp=E,551nm,0.3s								
GRPR					smax	smax			
	comp=N,6μm,0.4s								
GRPR					smax	smax			
	comp=E,2μm,0.2s								
GRPR	**Tuman**	**2.97**	**49**	*i*	P		**Pn**	**04 32 40.8**	**+1.6**
GRPR					AMB	AMB	04 32 42.8		
	comp=E,430nm,0.4s								
GRPR					AMB	AMB	04 32 42.8		
	comp=E,550nm,0.4s								
GRPR					AMB	AMB	04 32 42.8		
	comp=E,1μm,0.4s								
GRPR					*i* S		**Sn**	**04 33 14.7**	**+1.0**
GRPR					A	A	04 33 25.3		
	comp=E,6μm,0.4s								
GRPR					A	A	04 33 25.3		
	comp=E,2μm,0.4s								
YUK	**Yuzh-Kuril'sk**	**3.05**	**49**	*d*	*i*PN		**Pn**	**04 32 41.6**	**+1.4**
YUK					*i* S		**Sn**	**04 33 16.7**	**+1.2**
YUK					pmax	pmax			
	comp=N,500nm,0.2s								
YUK					pmax	pmax			
	comp=E,312nm,0.2s								
YUK					pmax	pmax			
	comp=Z,2μm,0.2s								
YUK					smax	smax			
	comp=E,6μm,0.5s								
YUK					smax	smax			
	comp=N,2μm,0.2s								
YUK					MLR	MLR			
	comp=Z,493nm,10.0s								
YUK	**Yuzh-Kuril'sk**	**3.05**	**49**	⇑	*i*P		**Pn**	**04 32 41.4**	**+1.2**
YUK					AMB	AMB	04 32 43.3		
	comp=Z,500nm,0.5s								
YUK					AMB	AMB	04 32 43.3		
	comp=Z,310nm,0.5s								
YUK					AMB	AMB	04 32 43.3		
	comp=Z,2μm,0.5s								
YUK				⇑	*i*S		**Sn**	**04 33 16.6**	**+1.1**
YUK					A	A	04 33 19.1		
	comp=Z,2μm,0.5s								
YUK					A	A	04 33 19.1		
	comp=E,6μm,0.5s								
SHO	**Shikotan**	**3.54**	**58**	*d*	*i*PN		**Pn**	**04 32 46.8**	**-0.2**
SHO					*i* S		**Sn**	**04 33 25.9**	**-1.7**
SHO					pmax	pmax			
	comp=E,121nm,0.2s								
SHO					pmax	pmax			
	comp=Z,685nm,0.2s								
SHO					pmax	pmax			
	comp=N,74nm,0.1s								
SHO					smax	smax			
	comp=N,4μm,0.4s								
SHO					smax	smax			
	comp=E,807nm,0.2s								
SHO	**Shikotan**	**3.54**	**58**	⇑	*i*P		**Pn**	**04 32 46.8**	**-0.2**
SHO					AMB	AMB	04 32 47.7		
	comp=E,70nm,0.3s								
SHO					AMB	AMB	04 32 47.7		
	comp=E,120nm,0.3s								
SHO					AMB	AMB	04 32 47.7		
	comp=E,690nm,0.3s								
SHO				⇓	*i*S		**Sn**	**04 33 26.1**	**-1.5**
SHO					A	A	04 33 28.4		
	comp=E,4μm,0.5s								
SHO					A	A	04 33 28.4		
	comp=E,810nm,0.5s								
YSS	**Yuzh-Sakhalins**	**4.87**	**1**	⇑	*i*PN		**Pn**	**04 33 08.2**	**+3.1**
YSS					eS		**Sn**	**04 34 03.9**	**+3.8**
YSS					pmax	pmax			
	comp=Z,270nm,0.8s								
YSS					smax	smax			
	comp=N,110nm,1.1s								
YSS					MLR	MLR			
	comp=Z,500nm,15.0s								
YSS	**Yuzh-Sakhalins**	**4.87**	**1**	⇓	*i*P		**Pn**	**04 33 07.8**	**+2.7**
YSS					AMB	AMB	04 33 09.0		
	comp=Z,270nm,0.8s								
YSS					eS		**Sn**	**04 34 01.3**	**+1.2**
YSS					A	A	04 34 07.5		
	comp=Z,110nm,1.0s								
YSS	**Yuzh-Sakhalins**	**4.87**	**1**				**Pn**	**04 33 06.6**	**+1.4**
YSS						Sn	**Sn**	**04 34 01.2**	**+1.1**
KUR	**Kuril'sk**	**4.91**	**48**	*d*	*i*PN		**Pn**	**04 33 07.9**	**+2.2**
KUR					eS		**Sn**	**04 34 04.0**	**+2.8**
KUR					pmax	pmax			
	comp=Z,674nm,0.5s								
KUR					pmax	pmax			
	comp=N,214nm,0.6s								
KUR					pmax	pmax			
	comp=E,395nm,0.6s								
KUR					smax	smax			
	comp=N,333nm,0.2s								
KUR					smax	smax			
	comp=E,698nm,0.3s								
KUR	**Kuril'sk**	**4.91**	**48**	⇓	*i*P		**Pn**	**04 33 07.5**	**+1.8**
KUR					AMB	AMB	04 33 19.8		
	comp=E,180nm,0.5s								
KUR					AMB	AMB	04 33 19.8		
	comp=E,320nm,0.5s								
KUR					AMB	AMB	04 33 19.8		
	comp=E,570nm,0.5s								
KUR					eS	Sn	**04 34 02.3**	**+1.1**
KUR					A	A	04 34 08.6		
	comp=E,2μm,2.4s								
KUR					A	A	04 34 08.6		
	comp=E,1μm,2.4s								
KUR					A	A	04 34 25.8		
	comp=E,580nm,0.5s								
KUR					A	A	04 34 25.8		
	comp=E,180nm,0.5s								
TEY	**Ternei**	**5.30**	**306**	⇑	*e*PN		**Pn**	**04 33 10.5**	**-0.5**
TEY					pmax	pmax			
	comp=N,50nm,0.9s								
TEY					pmax	pmax			
	comp=E,100nm,0.9s								
TEY					pmax	pmax			
	comp=Z,90nm,1.0s								
TEY	**Ternei**	**5.30**	**306**	⇑	*e*P		**Pn**	**04 33 11.1**	**+0.1**
TEY					AMB	AMB	04 33 11.4		
	comp=Z,50nm,0.9s								
TEY					AMB	AMB	04 33 11.4		
	comp=Z,100nm,0.9s								
TEY					AMB	AMB	04 33 11.4		
	comp=Z,90nm,0.9s								
MJB9	**Matsu-Tunnel**	**6.52**	**213**				**Pn**	**04 33 26.9**	**-1.0**
MAJO	**Matsushiro**	**6.52**	**213**	⇓	*e*PN		**Pn**	**04 33 29.3**	**+1.4**
MAJO					pmax	pmax			
	comp=Z,19nm,0.7s								
MAJO	**Matsushiro**	**6.52**	**213**				**Pn**	**04 33 28.6**	**+0.7**
MAT	**Matsushiro**	**6.52**	**213**		P		**Pn**	**04 33 29.0**	**+1.1**
MAT					S		**Sn**	**04 34 45.6**	**+4.8**
MJAR	**Matsushiro Arr**	**6.52**	**213**		P		**Pn**	**04 33 29.6**	**+1.8**
	comp=Z,1.1nm,0.3s,baz=32,slow=14,SNR=18								
MJAR					LR	LR	04 36 31.8		
	comp=Z,317nm,21.1s,baz=45,slow=43								
MJAR	**Matsushiro Arr**	**6.52**	**213**				**Pn**	**04 33 28.0**	**+0.1**
UGL	**Uglegorsk**	**7.01**	**357**	*e*	PN		**Pn**	**04 33 30.1**	**-4.2**
UGL					pmax	pmax			
	comp=Z,144nm,0.8s								
UGL	**Uglegorsk**	**7.01**	**357**	⇓	*e*P		**Pn**	**04 33 38.1**	**+3.8**
UGL					AMB	AMB	04 33 39.5		
	comp=Z,140nm,0.5s								
UGL					eS		**Sn**	**04 34 53.7**	**+1.2**
UGL					A	A	04 34 57.3		
	comp=Z,80nm,0.7s								
UGL					A	A	04 34 57.3		
	comp=Z,100nm,0.7s								
VLA	**Vladivostok**	**8.02**	**281**	⇓	*e*PN		**Pn**	**04 33 49.7**	**+1.5**
VLA					pmax	pmax			
	comp=Z,57nm,0.8s								
VLA	**Vladivostok**	**8.02**	**281**	⇓	*e*P		**Pn**	**04 33 49.7**	**+1.5**
INU	**Inuyama**	**8.04**	**215**				**Pn**	**04 33 49.6**	**+1.0**
USA0B	**Ussuriysk Arra**	**8.09**	**289**		PN		**Pn**	**04 33 49.9**	**+0.7**
USA0B	**Ussuriysk Arra**	**8.09**	**289**				**Pn**	**04 33 49.9**	**+0.7**
USRK	**Ussuriysk Ar.**	**8.09**	**289**		PN		**Pn**	**04 33 49.5**	**+0.3**
USRK	**Ussuriysk Ar.**	**8.09**	**289**		P		**Pn**	**04 33 49.4**	**+0.2**
	baz=93,slow=13,SNR=41								
USRK					LR	LR	04 37 11.4		
	comp=Z,199nm,19.4s,baz=143,slow=39								
USRK	**Ussuriysk Ar.**	**8.09**	**289**				**Pn**	**04 33 49.5**	**+0.3**
MSHR	**Mys Shultsa**	**8.54**	**277**	⇓	*e*PN		**Pn**	**04 33 56.5**	**+1.2**
TYV	**Tymovskoe**	**8.78**	**360**	*e*	PN		**Pn**	**04 34 01.4**	**+2.8**
TYV					eS		**Sn**	**04 35 42.4**	**+6.5**
TYV					pmax	pmax			
	comp=Z,44nm,0.7s								
TYV					smax	smax			
	comp=N,13nm,0.7s								
TYV	**Tymovskoe**	**8.78**	**360**	⇑	*i*P		**Pn**	**04 34 01.4**	**+2.8**
TYV					AMB	AMB	04 34 03.0		
	comp=N,40nm,0.5s								
TYV					eS		**Sn**	**04 35 35.6**	**-0.3**
TYV					A	A	04 35 43.7		
	comp=N,30nm,0.5s								
TYV					A	A	04 35 43.7		
	comp=N,50nm,0.5s								
GRNR	**Gornyy**	**9.69**	**336**	⇓	*i*PN		**Pn**	**04 34 14.7**	**+3.6**
GRNR					eS		**Sn**	**04 36 06.2**	**+7.9**
GRNR					pmax	pmax			
	comp=Z,20nm,0.8s								
GRNR					smax	smax			
	comp=N,4.0nm,0.9s								
GRNR					MLR	MLR			
	comp=Z,210nm,18.0s								
GRNR	**Gornyy**	**9.69**	**336**	⇓	*e*P		**Pn**	**04 34 14.7**	**+3.6**
GRNR					AMB	AMB	04 34 16.1		
	comp=Z,20nm,0.8s								
GRNR					AMB	AMB	04 34 16.1		
	comp=Z,20nm,0.8s								
GRNR					AMB	AMB	04 34 16.1		
	comp=Z,20nm,0.8s								
MDJ	**Mudanjiang**	**9.85**	**289**				**Pn**	**04 34 14.3**	**+1.0**
KLR	**Kul'dur**	**10.45**	**317**		P		**Pn**	**04 34 22.9**	**+1.4**
	comp=Z,0.8nm,0.3s,baz=126,slow=14,SNR=20								
KLR					LR	LR	04 38 40.4		
	comp=Z,558nm,20.1s,baz=156,slow=39								
OKH	**Okha**	**11.47**	**1**	⇑	*e*P		**Pn**	**04 34 37.7**	**+2.4**
OKH					AMB	AMB	04 34 39.5		
	comp=Z,50nm,0.5s								
KSRS	**Korea Array**	**12.24**	**253**		P		**Pn**	**04 34 47.6**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=72,slow=13,SNR=15								
KSRS					S		**Sn**	**04 37 08.2**	**+7.5**
	comp=Z,1.2nm,0.3s,baz=67,slow=24,SNR=4.8								
KSRS					LR	LR	04 39 00.3		
	comp=Z,389nm,20.5s,baz=68,slow=35								
KS19	**Wonju Array Si**	**12.26**	**253**				**Pn**	**04 34 45.8**	**-0.5**
SKR	**Severo-Kuril's**	**12.64**	**43**	*e*	PN		**Pn**	**04 34 51.0**	**-0.3**
SKR					pmax	pmax			
	comp=Z,53nm,0.7s								
SKR					MLR	MLR			
	comp=Z,300nm,14.0s								
SKR	**Severo-Kuril's**	**12.64**	**43**	⇓	*e*P		**Pn**	**04 34 50.6**	**-0.7**
SKR					AMB	AMB	04 35 05.0		
	comp=Z,50nm,0.7s								
SKR					*e*S		**Sn**	**04 37 04.6**	**-5.6**
CN2	**Changchun**	**12.73**	**284**	*e*	P		**Pn**	**04 34 52.9**	**+0.3**
CN2					*e*S		**Sn**	**04 37 13.2**	**+0.7**
CN2					pmax	pmax			
	comp=Z,10.0nm,0.7s								
CN2					pmax	pmax			
	comp=Z,200nm,3.0s								
CN2					LR	LR			
	comp=Z,600nm,13.0s								
CN2					LR	LR			
	comp=Z,500nm,13.0s								
CN2					LR	LR			
	comp=Z,500nm,19.0s								
EKMR	**Ekimchan**	**12.78**	**333**	*e*	P		**Pn**	**04 34 53.8**	**+0.6**
EKMR					AMB	AMB	04 34 58.0		
	comp=Z,20nm,0.8s								
JNU	**Nakatsue**	**12.93**	**230**		P		**Pn**	**04 34 54.5**	**-0.8**
	comp=Z,0.5nm,0.3s,baz=5.7,slow=10,SNR=2.8								
JNU					LR	LR	04 40 01.4		
	comp=Z,196nm,18.3s,baz=11,slow=38								
TJN	**Taejon**	**13.15**	**249**	⇓	*e*PN		**Pn**	**04 34 59.1**	**+0.8**
SNY	**Shenyang**	**14.21**	**275**	⇓	P		**Pn**	**04 35 12.0**	**-0.4**
SNY					pmax	pmax			
	comp=Z,18nm,0.6s								
SNY					LR	LR			
	comp=Z,210nm,5.3s								
SNY					LR	LR			
	comp=Z,360nm,4.6s								
SNY					LR	LR			
	comp=Z,240nm,5.3s								
PEA0B	**Petropavlovsk-**	**14.95**	**37**	⇓	*e*P		**Pn**	**04 35 20.8**	**-1.1**
PETK	**Petropavlovsk-**	**14.95**	**37**		P		**Pn**	**04 35 21.4**	**-0.5**
PETK	**Petropavlovsk-**	**14.95**	**37**		P		**Pn**	**04 35 21.1**	**-0.8**
	comp=Z,1.5nm,0.3s,baz=208,slow=12,SNR=25								
PETK					LR	LR	04 42 28.7		
	comp=Z,157nm,18.9s,baz=237,slow=42								
PETK	**Petropavlovsk-**	**14.95**	**37**		P		**Pn**	**04 35 21.4**	**-0.5**
JCJ	**Chichijima**	**14.96**	**182**		P		**Pn**	**04 35 20.9**	**-1.4**
	comp=Z,12nm,0.3s,baz=245,slow=17,SNR=3.3								
JCJ					LR	LR	04 42 12.0		
	comp=Z,65nm,19.5s,baz=260,slow=41								
PET	**Petropavlovsk**	**15.33**	**39**	*e*	P		**Pn**	**04 35 25.3**	**-1.5**
PET					eS		**Sn**	**04 38 15.2**	**-0.3**
PET					MLR	MLR			
	comp=Z,300nm,12.0s								
PET					MLR	MLR			
	comp=Z,400nm,17.0s								
PET	**Petropavlovsk**	**15.33**	**39**	*e*	P		**Pn**	**04 35 25.3**	**-1.5**
ZEA	**Zeya**	**15.54**	**324**	*e*	P		**Pn**	**04 35 29.3**	**-0.2**
ZEA					pmax	pmax			
	comp=N,55nm,0.9s								
ZEA					pmax	pmax			
	comp=E,53nm,1.0s								
ZEA					pmax	pmax			
	comp=Z,58nm,1.0s								
ZEA	**Zeya**	**15.54**	**324**	*e*	P		**Pn**	**04 35 29.1**	**-0.4**
ZEA					AMB	AMB	04 35 33.8		
	comp=Z,60nm,0.9s								
ZEA					AMB	AMB	04 35 33.8		
	comp=Z,50nm,0.9s								
ZEA					AMB	AMB	04 35 33.8		
	comp=Z,60nm,0.9s								
BMKR	**Bomnak**	**15.58**	**329**	*e*	P		**Pn**	**04 35 30.7**	**+0.7**
BMKR					AMB	AMB	04 35 33.0		
	comp=Z,10.0nm,0.7s								
KROS	**Kirovskiy**	**16.13**	**325**	*e*	P		**Pn**	**04 35 36.7**	**-0.3**
KROS					AMB	AMB	04 35 41.3		
	comp=Z,10.0nm,0.4s								
KROS					AMB	AMB	04 35 41.3		
	comp=Z,20nm,0.4s								
DL2	**Dalian**	**16.31**	**266**		P		**Pn**	**04 35 38.9**	**-0.4**
DL2					pP		**pP**	**04 35 51.0**	**-3.3**
DL2					eS		**Sn**	**04 38 36.9**	**-2.5**
DL2					pmax	pmax			
	comp=Z,53nm,0.7s								
DL2					LR	LR			
	comp=Z,470nm,19.8s								
DL2					LR	LR			
	comp=Z,470nm,17.8s								
HIA	**Hailar**	**17.51**	**302**		P		**Pn**	**04 35 52.7**	**-1.5**
HIA					pmax	pmax			
	comp=Z,18nm,0.7s								
HIA	**Hailar**	**17.51**	**302**				**Pn**	**04 35 52.7**	**-1.5**
MA2	**Magadan**	**18.22**	**13**	⇓	*e*P		**P**	**04 36 02.4**	**+0.2**
MA2					pmax	pmax			
	comp=Z,82nm,1.7s								
MA2	**Magadan**	**18.22**	**13**		P		**P**	**04 36 00.8**	**-1.4**
	comp=Z,1.7nm,0.3s,baz=195,slow=8.7,SNR=9.2								
MA2					LR	LR	04 42 51.5		
	comp=Z,55nm,21.7s,baz=139,slow=36								
MA2	**Magadan**	**18.22**	**13**	⇓	*e*P		**P**	**04 36 02.4**	**+0.2**
MA2	**Magadan**	**18.22**	**13**		P		**P**	**04 36 01.2**	**-1.0**
BJI	**Beijing**	**20.05**	**273**		P		**P**	**04 36 20.4**	**-1.9**
BJI					pmax	pmax			
	comp=Z,28nm,1.1s								
BJT	**Baijiatuau**	**20.06**	**273**		P		**P**	**04 36 21.0**	**-1.5**
BJT					pmax	pmax			
	comp=Z,29nm,0.9s								
BJT	**Baijiatuau**	**20.06**	**273**		P		**P**	**04 36 21.0**	**-1.5**
TIA	**Tai'an**	**20.62**	**262**		P		**P**	**04 36 26.0**	**-2.5**
TIA					pmax	pmax			
	comp=Z,53nm,0.6s								
NJ2	**Nanjing**	**21.41**	**250**	*e*	P		**P**	**04 36 34.2**	**-2.8**
NJ2					pmax	pmax			
	comp=Z,27nm,0.7s								
YAK	**Yakutsk**	**21.43**	**343**	*e*	P		**P**	**04 36 33.2**	**-3.8**
YAK					*e*			04 36 55.0	
YAK					eS		**S**	**04 40 26.3**	**-4.7**
YAK					*e**SS		Sn	04 40 40.9	-1.3
YAK					*e*SS		**SnSn**	**04 40 50.2**	**-8.1**
YAK					pmax	pmax			
	comp=Z,34nm,0.9s								
YAK					pmax	pmax			
	comp=N,3.0nm,0.8s								
YAK					pmax	pmax			
	comp=E,6.0nm,0.9s								
YAK					pmax	pmax			
	comp=Z,102nm,1.3s								
YAK					pmax	pmax			
	comp=N,87nm,1.2s								
YAK					pmax	pmax			
	comp=E,41nm,1.5s								
YAK					smax	smax			
	comp=N,247nm,3.7s								
YAK					smax	smax			
	comp=E,118nm,3.3s								
YAK	**Yakutsk**	**21.43**	**343**		P		**P**	**04 36 33.8**	**-3.2**
	comp=E,26nm,0.5s,baz=344,slow=3.0,SNR=9.9								
YAK					S		**S**	**04 40 23.6**	**-7.4**
	comp=E,4.3nm,0.3s,baz=129,slow=18,SNR=5.5								
SEY	**Seymchan**	**21.66**	**12**	⇓	*e*P		**P**	**04 36 37.3**	**-2.0**
SEY	**Seymchan**	**21.66**	**12**		P		**P**	**04 36 37.6**	**-1.7**
	comp=

comp=Z,236nm,19.9s,baz=98,slow=38
TLY Talaya 28.04 304 *e*P **P 04 37 39.9 +0.4**
TLY Talaya 28.04 304 P **P 04 37 39.5 -0.1**
ZAK Zakamensk 28.20 301 *e*P **P 04 37 40.7 -0.4**
ZAK pmax pmax
comp=Z,10.0nm,1.2s
BILL Bilibino 28.92 18⇑*e*P **P 04 37 48.0 +0.8**
BILL pmax pmax
comp=Z,2.0nm,0.6s
BILL Bilibino 28.92 18⇑*e*P **P 04 37 48.0 +0.8**
ENH Enshi 29.08 257 P **P 04 37 47.8 -1.2**
ENH IAmb IAmb 04 37 51.9
comp=Z,24nm,0.5s
MOY Mondy 29.69 303 *e*P **P 04 37 54.5 +0.2**
MOY pmax pmax
comp=Z,41nm,1.8s
MOY Mondy 29.69 303 *e*P **P 04 37 54.5 +0.2**
H11N2 WAKE ISLAND Hy 30.29 130 T T 05 09 40.0
baz=324,slow=75,SNR=551
H11N1 WAKE ISLAND Hy 30.30 130 T T 05 09 40.7
baz=324,slow=75,SNR=630
H11N3 WAKE ISLAND Hy 30.30 130 T T 05 09 41.4
baz=324,slow=75,SNR=787
TIXI Tiksi 30.42 351⇓*i*P **P 04 37 57.2 -3.1**
TIXI pmax pmax
comp=Z,3.0nm,0.7s
TIXI Tiksi 30.42 351 LR LR 04 51 18.4
comp=Z,71nm,19.4s,baz=174,slow=38
LZH Lanzhou 30.53 272 *e*P **P 04 38 01.5 -0.4**
LZH pP pP 04 38 14.8 -2.4
LZH sP sP 04 38 22.6 -1.9
LZH PP **PnPn 04 39 00.2 -2.9**
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,130nm,5.2s
LZH LR LR
comp=Z,250nm,12.5s
LZH LR LR
comp=Z,290nm,12.5s
LZH LR LR
comp=Z,330nm,14.1s
H11S1 WAKE ISLAND Hy 31.15 132 T T 05 10 37.2
baz=325,slow=76,SNR=852
H11S3 WAKE ISLAND Hy 31.16 132 T T 05 10 42.9
baz=325,slow=76,SNR=710
H11S2 WAKE ISLAND Hy 31.17 132 T T 05 10 41.6
baz=325,slow=76,SNR=864
GTA Gaotai 32.33 280 *e*P **P 04 38 17.9 +0.3**
GTA pP pP 04 38 32.3 -0.6
GTA sP sP 04 38 40.2 0.0
GTA PcP **PcP 04 41 05.7 +1.5**
GTA PcS **PcS 04 44 50.3 +1.0**
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA pmax pmax
comp=Z,130nm,6.5s
GTA LR LR
comp=Z,130nm,15.5s
GTA LR LR
comp=Z,160nm,13.7s
GTA LR LR
comp=Z,190nm,17.2s
CD2 Chengdu 32.94 263 P **P 04 38 23.9 +0.9**
CD2 pmax pmax
comp=Z,30nm,0.5s
GYA Guiyang 33.30 254⇑*i*P **P 04 38 26.7 +0.4**
GYA pmax pmax
comp=Z,20nm,0.8s
KMI Kunming 36.92 256 P **P 04 38 56.6 -0.9**
KMI sP sP 04 39 22.9 +2.7
KMI pmax pmax
comp=Z,15nm,0.5s
KMI LR LR
comp=Z,190nm,26.1s
KMI LR LR
comp=Z,170nm,22.2s
KMI LR LR
comp=Z,210nm,24.7s
KMI Kunming 36.92 256 IAmb IAmb 04 39 00.3
comp=Z,36nm,1.1s
KCP Kidapawan 38.25 209⇑*i*P **P 04 39 08.9 +0.4**
KCP *i* S **pP 04 39 29.0 +4.9**
SLVN Son La 38.49 250 IAmb IAmb 04 39 30.6
comp=Z,26nm,0.9s
ZALV Zalesovo Beam 39.40 308 P **P 04 39 18.1 +0.3**
comp=Z,52nm,0.6s,baz=84,slow=7.1,SNR=241
ZALV PcP **PcP 04 41 25.0 +0.3**
comp=Z,8.0nm,0.7s,baz=64,slow=3.4,SNR=3.9
ZALV LR LR 04 56 48.2
comp=Z,138nm,18.2s,baz=66,slow=38
WMQ Urumqi 39.64 292 P **P 04 39 20.5 +0.5**
WMQ pP pP 04 39 38.2 +2.5
WMQ sP sP 04 39 43.9 +0.9
WMQ pmax pmax
comp=Z,18nm,0.7s
WMQ pmax pmax
comp=Z,65nm,5.3s
WMQ LR LR
comp=Z,480nm,29.0s
WMQ LR LR
comp=Z,690nm,29.0s
WMQ LR LR
comp=Z,240nm,22.1s
WMQ Urumqi 39.64 292 P **P 04 39 20.5 +0.5**
WMQ pmax pmax
comp=Z,32nm,0.9s
WMQ Urumqi 39.64 292 P **P 04 39 20.5 +0.5**
WMQ IAmb IAmb 04 39 22.3
comp=Z,32nm,0.9s
MK31 Makanchi Array 42.44 298 *i* P **P 04 39 42.3 -0.6**
MKAR Makanchi Array 42.44 298 P **P 04 39 43.0 +0.1**
comp=Z,26nm,0.8s,baz=82,slow=9.4,SNR=203
MKAR PcP **PcP 04 41 35.2 +0.4**
comp=Z,2.9nm,0.5s,baz=74,slow=5.2,SNR=6.8
MKAR ScP **ScP 04 45 18.9 -1.0**
comp=Z,0.7nm,0.8s,baz=57,slow=5.3,SNR=3.3
MKAR LR LR 04 58 19.0
comp=Z,65nm,20.4s,baz=100,slow=37
MAKZ Makanchi 42.64 298 P **P 04 39 44.6 +0.1**
MAKZ pmax pmax
comp=Z,36nm,0.9s
MAKZ Makanchi 42.64 298 P **P 04 39 44.6 +0.1**
MAKZ IAmb IAmb 04 39 45.4
comp=Z,36nm,0.9s
KDAK Kodiak Island 42.78 46 P **P 04 39 45.8 +0.4**
comp=Z,8.6nm,0.5s,baz=329,slow=1.9,SNR=8.1
KDAK PcP **PcP 04 41 37.4 +1.8**
comp=Z,7.1nm,0.8s,baz=194,slow=4.2,SNR=4.1
KDAK Kodiak Island 42.78 46 P **P 04 39 45.9 +0.5**
KDAK IAmb IAmb 04 39 46.7
comp=Z,10.0nm,0.7s
KOHI KOHIMA 42.89 263 *e*P **P 04 39 44.8 -2.1**
KOHI IAmb IAmb 04 39 50.9
comp=Z,29nm,0.4s
LSA Lhasa 42.93 270 P **P 04 39 48.0 +0.4**
LSA pmax pmax
comp=Z,13nm,0.7s
LSA Lhasa 42.93 270 P **P 04 39 48.0 +0.4**
LSA IAmb IAmb 04 39 50.4
comp=Z,13nm,0.7s
KTH Kantishna Hill 43.08 37 P **P 04 39 48.3 +0.4**
KTH IAmb IAmb 04 39 50.0
comp=Z,22nm,0.8s
TEZP TEZPUR 43.35 266 *e*P **P 04 39 50.4 -0.1**
TEZP IAmb IAmb 04 39 53.6
comp=Z,13nm,0.8s
TOLK Toolik Lake Re 43.57 29 P **P 04 39 51.2 -0.5**
baz=269
CHTO Chiang Mai 43.64 252 P **P 04 39 53.6 +0.7**
CHTO pmax pmax
comp=Z,17nm,0.7s
CHTO Chiang Mai 43.64 252 P **P 04 39 53.5 +0.7**
CHTO IAmb IAmb 04 39 54.4
comp=Z,17nm,0.7s
BWN Browne 43.69 36 IAmb IAmb 04 39 55.2
comp=Z,30nm,0.8s
KURK Kurchatov 43.73 304 P **P 04 39 53.8 +0.6**
KURK *PP **pP 04 40 10.8 +1.6**
KURK 04 41 39.3
KURK Kurchatov 43.73 304 *e*P **P 04 39 53.8 +0.6**
KURK Kurchatov 43.73 304 P **P 04 39 53.2 0.0**
KURK PcP **PcP 04 41 38.4 -0.6**
KURBB Kurchatov Arra 43.81 304 P **P 04 39 53.8 -0.1**
comp=Z,56nm,0.7s,baz=76,slow=8.7,SNR=117
KURBB pP **pP 04 40 10.8 +0.9**
comp=Z,21nm,0.6s,baz=77,slow=8.8,SNR=4.6
KURBB PcP **PcP 04 41 39.2 0.0**
comp=Z,4.0nm,0.6s,baz=86,slow=3.4,SNR=3.7
CMAR Chiang Mai Arr 43.88 251 P **P 04 39 55.6 +0.8**
comp=Z,6.1nm,0.5s,baz=42,slow=7.0,SNR=23
CMAR PcP **PcP 04 41 41.6 +1.6**
comp=Z,2.5nm,0.5s,baz=351,slow=1.6,SNR=6.1
CMAR ScP **ScP 04 45 28.2 +2.2**
comp=Z,1.0nm,0.4s,baz=60,slow=4.3,SNR=4.2
CMAR LR LR 04 59 17.2
comp=Z,98nm,18.2s,baz=42,slow=38
MCK McKinley 43.95 37 P **P 04 39 55.1 +0.2**
MCK 04 41 37.7
MCK pmax pmax
comp=Z,13nm,0.8s
MCK McKinley 43.95 37 P **P 04 39 55.1 +0.2**
MCK IAmb IAmb 04 39 56.1
comp=Z,13nm,0.8s
MCK **PP 04 41 37.7 -0.2**
RND Reindeer 44.01 37 P **P 04 39 55.8 +0.4**
RND pmax pmax
comp=Z,10.0nm,0.6s
RND Reindeer 44.01 37 P **P 04 39 55.8 +0.4**
RND IAmb IAmb 04 39 56.7
comp=Z,10.0nm,0.6s
GHO Glory Hole Cre 44.14 39 IAmb IAmb 04 39 57.8
comp=Z,20nm,0.8s
WRH Wood River Hil 44.27 35 P **P 04 39 57.4 +0.1**
WRH PcP **PcP 04 41 40.5 -0.1**
TCOL CIGO, UAF Yank 44.34 35 P **P 04 39 58.4 +0.6**
baz=274,SNR=7.9
COLA College 44.34 35*c i*P **P 04 39 58.6 +0.7**
COLA pmax pmax
comp=Z,22nm,0.8s
COLA College 44.34 35 P **P 04 39 58.0 +0.2**
COLA IAmb IAmb 04 39 59.9
comp=Z,25nm,0.8s
CCB Clear Creek Bu 44.38 35 P **P 04 39 58.5 +0.3**
KNK Knik Glacier 44.40 40 P **P 04 39 59.0 +0.5**
SML Sawmill 44.41 39 IAmb IAmb 04 40 01.0
comp=Z,18nm,0.6s
JAY Jayapura 44.43 183 LR LR 04 57 46.9
comp=Z,33nm,20.0s,baz=40,slow=35
POKR Poker Plat Res 44.50 35 P **P 04 40 00.3 +1.1**
baz=274,SNR=6.1
SHL Shillong 44.62 265 P **P 04 40 00.6 -0.3**
SHL pmax pmax
comp=Z,14nm,0.8s
SHL Shillong 44.62 265 *e*P **P 04 40 00.6 -0.3**
SHL IAmb IAmb 04 40 09.6
comp=Z,13nm,0.2s
SHL Shillong 44.62 265 P **P 04 40 00.6 -0.3**
SHL IAmb IAmb 04 40 04.2
comp=Z,14nm,0.8s
DHY Denali Highway 44.71 37 P **P 04 40 01.6 +0.5**
DHY IAmb IAmb 04 40 02.2
comp=Z,11nm,0.6s
DHY **PcP 04 41 42.4 0.0**
ILAR Eielson Array 44.76 35 P **P 04 40 01.6 +0.4**
comp=Z,13nm,0.9s,baz=267,slow=6.5,SNR=30
ILAR PcP **PcP 04 41 41.8 -0.5**
comp=Z,2.8nm,0.8s,baz=273,slow=4.4,SNR=3.8
HDA Harding Lake 44.77 36 P **P 04 40 01.3 0.0**
baz=275,SNR=8.6
SCM Sheep Creek Mo 44.88 39 IAmb IAmb 04 40 04.0
comp=Z,18nm,0.9s
AZL Aizawl 45.09 262 *e*P **P 04 40 05.0 +0.5**
AZL IAmb IAmb 04 40 06.5
comp=Z,19nm,0.7s
PRP Porcupine Dome 45.27 34 IAmb IAmb 04 40 07.1
comp=Z,16nm,0.7s
PDGK Podgornoye 45.44 294 P **P 04 40 06.5 -0.6**
PAX Paxson 45.59 37 P **P 04 40 08.7 +0.8**
PAX PcP **PcP 04 41 45.8 +0.4**
SAIH SAIHA 45.62 261 *e*P **P 04 40 08.4 -0.3**
SAIH IAmb IAmb 04 40 12.0
comp=Z,57nm,0.7s
SCRK Sand Creek 46.10 36 IAmb IAmb 04 40 12.8
comp=Z,18nm,0.8s
DOT Dot Lake 46.12 36 IAmb IAmb 04 40 14.2
comp=Z,8.4nm,0.7s
TAPN Taplejung 46.73 270 *e*P **P 04 40 18.2 +0.5**
comp=Z,62nm,0.6s
MCARA McCarthy VSAT 46.99 39 IAmb IAmb 04 40 21.2
comp=Z,13nm,0.6s
CRQM Cirque 47.06 40 P **P 04 40 20.6 +1.0**
CRQM IAmb IAmb 04 40 23.3
comp=Z,19nm,0.8s
ODAN Odare 47.24 270 *e*P **P 04 40 21.9 +0.4**
comp=Z,66nm,0.8s
BALM Baldy 47.38 40 IAmb IAmb 04 40 23.9
comp=Z,11nm,0.8s
JIRN Jiri 47.70 271 *e*P **P 04 40 25.7 +0.5**
comp=Z,57nm,0.4s
BARN Barnard Glacie 47.70 40 IAmb IAmb 04 40 26.3
comp=Z,10nm,0.6s
RAMN Ramite 47.78 270 *e*P **P 04 40 25.7 0.0**
comp=Z,127nm,0.6s
GUN Gumba 47.79 272 *e*P **P 04 40 26.2 +0.2**
comp=Z,269nm,0.4s
CTGM Chitina Glacie 47.88 40 IAmb IAmb 04 40 27.9
comp=Z,12nm,0.6s
BVAR Borovoye Array 48.01 309 P **P 04 40 27.1 +0.2**
comp=Z,13nm,0.3s,baz=80,slow=10,SNR=211
BVAR PcP **PcP 04 41 54.4 +0.4**
comp=Z,6.4nm,0.7s,baz=90,slow=3.6,SNR=5.3
TKM2 Tokmak 2 48.23 295 P **P 04 40 29.1 +0.1**
TKM2 Tokmak 2 48.23 295 P **P 04 40 29.5 +0.6**
SNR=46
KKN Kakani 48.30 272 *e*P **P 04 40 30.0 +0.3**
comp=Z,82nm,0.6s
PKI Pulchoki 48.33 272 *e*P **P 04 40 30.0 -0.1**
comp=Z,7.1nm,0.6s
PKIN Phulchoki 48.33 272 *e*P **P 04 40 29.9 -0.1**
comp=Z,29nm,0.4s
DMN Daman 48.53 272 *e*P **P 04 40 31.8 +0.3**
comp=Z,48nm,0.5s
NRN Naryn 48.55 293 IAmb IAmb 04 40 45.0
comp=Z,7.3nm,0.8s
GKN Gorkha 48.67 273 *e*P **P 04 40 32.6 +0.1**
comp=Z,49nm,0.4s
EPYK Eagle Plains 48.70 32 IAmb IAmb 04 40 34.9
comp=Z,21nm,1.1s
EPYK Eagle Plains 48.70 32 P **P 04 40 32.9 +0.8**
baz=282,SNR=8.8
CHMS Chumysh 48.77 295 P **P 04 40 32.9 0.0**
SNR=7.6
KBK Karagaybulak 48.77 295 P **P 04 40 33.5 +0.3**
SNR=7.0
KZA Kyzart 48.80 294 P **P 04 40 34.6 +1.0**
SNR=13
USP Ospenovka 48.83 296 P **P 04 40 33.5 +0.1**
SNR=26
AAK Ala-Archa 49.09 295⇑*i*P **P 04 40 34.2 -1.3**
AAK pmax pmax
comp=Z,29nm,1.7s
AAK Ala-Archa 49.09 295 LR LR 05 02 08.9
comp=Z,82nm,20.8s,baz=64,slow=37
AAK Ala-Archa 49.09 295 P **P 04 40 35.6 +0.1**
SNR=11
AAK Ala-Archa 49.09 295⇑*i*P **P 04 40 34.2 -1.3**
AAK Ala-Archa 49.09 295 P **P 04 40 35.6 +0.1**
AAK IAmb IAmb 04 40 36.3
comp=Z,14nm,0.8s
DANN Dangsing 49.13 274 *e*P **P 04 40 36.7 +0.5**
comp=Z,252nm,0.8s
KSH Kashi 49.38 291 P **P 04 40 41.8 +4.1**
KSH pP pP 04 40 56.7 +2.7
KSH S S **04 47 44.4 +4.5**
KSH sS sS 04 48 10.2 +2.7
KSH ScS **ScS 04 50 25.1 +1.4**
KSH SS **SS 04 51 14.1 +2.2**
KSH pmax pmax
comp=Z,55nm,0.8s
KSH pmax pmax
comp=Z,230nm,3.6s
KSH LR LR
comp=Z,270nm,5.3s
KSH LR LR
comp=Z,310nm,4.7s
KSH LR LR
comp=Z,490nm,6.4s
EKS2 Erkin-Say 49.56 295 P **P 04 40 39.2 +0.2**
SNR=21
KOLN Koldanda 49.56 273 *e*P **P 04 40 39.7 +0.3**
comp=Z,54nm,0.3s
AML Almayashu 49.83 295 P **P 04 40 42.0 +0.5**
SNR=13
BOK Bokaro 50.10 267 *e*P **P 04 40 43.5 +0.2**
BOK IAmb IAmb 04 40 45.0
comp=Z,14nm,0.6s
KAPI Kappang 51.31 210 P **P 04 40 53.0 +0.7**
KAPI Kappang 51.31 210 P **P 04 40 53.0 +0.7**
comp=Z,3.2nm,0.5s,baz=42,slow=12,SNR=2.8
KAPI LR LR 05 04 30.5
comp=Z,43nm,18.6s,baz=108,slow=38
KAPI Kappang 51.31 210 P **P 04 40 52.8 +0.5**
KAPI IAmb IAmb 04 40 53.9
comp=Z,8.0nm,0.9s
PMG Port Moresby 51.40 174 LR LR 05 02 56.8
comp=Z,71nm,19.4s,baz=228,slow=36
KK31 Karatay Array 51.56 297 *i* P **P 04 40 53.1 -0.9**
KKAR Karatay Array 51.56 297 P **P 04 40 53.8 -0.1**
KKAR pmax pmax
comp=Z,23nm,0.7s
KKAR Karatay Array 51.56 297 P **P 04 40 53.8 -0.1**
DGPR DIGLIPUR 51.69 251 *e*P **P 04 40 56.4 +1.1**
DGPR IAmb IAmb 04 40 58.3
SVE Sverdlovsk 52.08 316*de*P **P 04 40 57.9 +0.3**
SVE pmax pmax
comp=Z,54nm,0.8s
SVE Sverdlovsk 52.08 316 *e*P **P 04 40 57.9 +0.3**
C36M Paulatuk 52.46 27 IAmb IAmb 04 41 01.2
comp=Z,9.8nm,0.8s
C36M Paulatuk 52.46 27 P **P 04 41 00.4 +0.2**
baz=290,SNR=11
SMLA Simla 52.54 281 *i* P **P 04 41 00.0 -1.3**
SMLA *i* pP **P 04 41 04.6 +3.3**
DHRM DHARAMSHALA 52.59 282 *e*P **P 04 41 01.9 -0.2**
DHRM IAmb IAmb 04 41 10.8
comp=Z,58nm,1.0s
BTK Batken 52.69 294 P **P 04 41 02.4 -0.1**
BTK pmax pmax
comp=Z,15nm,0.9s
BTK Batken 52.69 294 P **P 04 41 02.4 -0.1**
BTK IAmb IAmb 04 41 06.1
comp=Z,15nm,0.9s
ARU Arti 53.29 316*d i*P **P 04 41 06.3 -0.3**
ARU *PP **pP 04 41 21.8 -1.2**
ARU 04 43 02.7
ARU S **S 04 48 33.1 0.0**
ARU SS **SS 04 52 10.4 -2.5**
ARU pmax pmax
comp=Z,38nm,0.8s
ARU MLR MLR
comp=Z,219nm,15.0s
ARU Arti 53.29 316 LR LR 05 06 54.8
comp=Z,151nm,18.4s,baz=74,slow=39
ARU Arti 53.29 316⇓*i*P **P 04 41 06.3 -0.3**
HNR Honiara 53.66 159 LR LR 05 00 18.1
comp=Z,54nm,21.5s,baz=310,slow=32
NIL Nilore 54.08 285 P **P 04 41 12.8 +0.1**
NIL pmax pmax
comp=Z,31nm,0.8s
NIL Nilore 54.08 285 P **P 04 41 12.8 +0.1**
HOPEN Hopen 55.39 345 *e*P **P 04 41 21.9 +0.5**
AB31 Akbulak array 55.51 308 *i* P **P 04 41 22.7 -0.1**
SPA0 Spitsbergen Ar 55.77 348 *e*P **P 04 41 24.1 -0.2**
KBS Kingsbay 55.86 350 *e*P **P 04 41 23.5 -1.3**
NOR Nord 56.08 356 *i* P **P 04 41 24.0 -2.4**
comp=Z,10nm,0.9s
AKTO Aktyubinsk 56.10 310 P **P 04 41 26.5 -0.5**
KBL Kabul 56.62 288 P **P 04 41 30.0 -1.2**
KBL pmax pmax
comp=Z,19nm,0.9s
KBL Kabul 56.62 288 P **P 04 41 30.0 -1.2**
KBL IAmb IAmb 04 41 31.0
comp=Z,18nm,0.8s
HSPB Hornsund (broa 56.72 348 *e*P **P 04 41 30.8 -0.2**
PRGR Permogore 57.10 326 *e*P **P 04 41 32.9 -1.0**
PRGR *e*PP **pP 04 41 52.8 +2.3**
PRGR pmax pmax
comp=Z,25nm,0.8s
PVM Polavaram 57.23 264 *e*P **P 04 41 35.9 +0.5**
PVM IAmb IAmb 04 41 36.5
comp=Z,10nm,0.8s
PWJI Pagerwojo 57.30 217 P **P 04 41 35.4 -0.4**
comp=Z,30nm,0.6s
RES Resolute Bay 57.48 15 P **P 04 41 35.9 -0.4**
comp=Z,23nm,0.5s,baz=309,slow=5.8,SNR=162
GGR Gangavaram 57.93 265 *e*P **P 04 41 39.9 -0.5**
GGR IAmb IAmb 04 41 40.9
comp=Z,9.6nm,0.9s
LVZ Lovozero 57.93 335⇓*e*P **P 04 41 41.4 +1.7**
LVZ pmax pmax
comp=Z,76nm,2.2s
KLSI 57.93 226 P **P 04 41 40.1 -0.2**
comp=Z,8.6nm,1.2s
RPR Rampur 57.96 267 *e*P **P 04 41 40.1 -0.4**
RPR IAmb IAmb 04 41 41.3
comp=Z,8.1nm,0.8s
KPJI Karang Pucung 58.03 220 P **P 04 41 40.8 -0.2**
comp=Z,26nm,0.6s
MDSI Maura Dua 58.06 227 P **P 04 41 41.1 -0.1**
comp=Z,4µmcomp=Z,890nmcomp=Z,11nm,0.7s
SRSP Sriramsagar 58.62 268 *e*P **P 04 41 44.5 -0.7**
SRSP IAmb IAmb 04 41 45.6
comp=Z,14nm,0.8s
TMCR Tamitsa 58.81 330 *e*P **P 04 41 43.6 -2.2**
TMCR pmax pmax
comp=Z,33nm,1.3s
KNRA Kununurra 58.89 196 P **P 04 41 46.7 -0.1**
YKA Yellowknife Ar 58.99 32 P **P 04 41 47.3 +0.3**
comp=Z,4.7nm,0.8s,baz=306,slow=6.5,SNR=89
ADKI Addanki 59.35 264 *e*P **P 04 41 50.8 +0.6**
ADKI IAmb IAmb 04 41 51.5
comp=Z,6.2nm,0.7s
HAMF Hammerfest 59.38 340 *e*P **P 04 41 48.6 -1.1**
NJS Nagarjunasagar 59.39 265 *e*P **P 04 41 50.2 -0.3**
NJS IAmb IAmb 04 41 51.0
comp=Z,8.2nm,0.9s
HYBB Hyderabad (bro 59.40 266 *e*P **P 04 41 50.4 -0.2**
HYBB IAmb IAmb 04 41 51.4
comp=Z,14nm,0.9s
HYB Hyderabad 59.41 266 *i* P **P 04 41 50.5 -0.1**
comp=Z,35nm,1.0s
ARCES ARCESS Array B 59.63 339 P **P 04 41 51.1 -0.3**
comp=Z,3.6nm,0.6s,baz=47,slow=8.1,SNR=34
ARCES LR LR 05 12 03.0
comp=Z,99nm,18.1s,baz=22,slow=40
ARE0 ARCESS Array S 59.63 339 *e*P **P 04 41 51.2 -0.2**
SRLM Srisailam 59.98 265 *e*P **P 04 41 54.0 -0.6**
SRLM IAmb IAmb 04 41 54.9
comp=Z,8.2nm,0.8s
KLRI Killari 60.45 268 *e*P **P 04 41 57.4 -0.4**
KLRI IAmb IAmb 04 41 58.0
comp=Z,20nm,0.7s
KTK1 Kautokeino 60.58 339 *e*P **P 04 41 57.5 -0.5**
DAG Danmarks Havn 60.83 355 *i* P **P 04 41 58.8 -0.7**
DAG pmax pmax
comp=Z,19nm,1.0s
DAG Danmarks Havn 60.83 355 *i* P **P 04 41 58.8 -0.7**
comp=Z,19nm,1.0s
SKHT Srikalahasti 60.89 262 *e*P **P 04 42 01.1 +0.4**
SKHT IAmb IAmb 04 42 02.2
comp=Z,13nm,0.9s
TRO Tromso 61.27 341 *e*P **P 04 42 01.4 -1.1**
URV Uravakonda 61.92 265 *e*P **P 04 42 07.3 -0.4**
URV IAmb IAmb 04 42 07.9
comp=Z,11nm,0.5s
WRAB Tennant Creek 62.18 189*ce*P **P 04 42 08.5 -0.7**
WRAB pmax pmax
comp=Z,7.0nm,0.8s
WRA Warramunga Arr 62.19 189 P **P 04 42 08.8 -0.4**
comp=Z,7.3nm,0.8s,baz=3.2,slow=6.9,SNR=39
WRA pP **pP 04 42 25.8 -0.1**
comp=Z,8.8nm,0.5s,baz=5.0,slow=6.7,SNR=13
WRA PKPPKP P'P'df 05 11 23.2 +12
comp=Z,0.9nm,0.8s,baz=199,slow=3.1,SNR=6.5
GEYT Alibeck 62.31 297 P **P 04 42 10.1 -0.1**
comp=Z,12nm,0.8s,baz=29,slow=3.4,SNR=19
GEYT LR LR 05 11 03.8
comp=Z,151nm,18.8s,baz=170,slow=38
A04D Lummi Island 62.58 48 P **P 04 42 12.1 +0.4**
baz=303
D03D Eldon 63.02 49 P **P 04 42 16.6 +2.0**
baz=304
B05A Bryant 63.17 48 P **P 04 42 17.6 +2.0**
baz=304
STEI Steigen 63.43 340 *e*P **P 04 42 16.2 -0.8**
LOF Lofoten 63.70 341 *e*P **P 04 42 17.4 -1.3**
MOS Moscow 63.80 323 *e*P **P 04 42 18.1 -1.5**

MOS pmax pmax
comp=Z,35nm,0.8s
E04D Cinebar 63.86 50 P **P 04 42 22.4 +2.2**
baz=304
C06D Leavenworth 64.03 48 P **P 04 42 23.4 +2.1**
baz=305
VRH Novokhopyorsk 64.52 317 *e*P **P 04 42 23.6 -0.8**
VRH pmax pmax
comp=Z,10.0nm,0.5s
B08A Colville Reser 64.63 47 P **P 04 42 25.5 +0.3**
OBN Obninsk 64.66 322⇑ *e*P **P 04 42 24.9 -0.3**
OBN *e* 04 42 58.9
OBN *e* 04 44 51.0
OBN pmax pmax
comp=Z,13nm,0.5s
OBN MLR MLR
comp=Z,157nm,18.0s
OBN Obninsk 64.66 322 *e*P **P 04 42 24.9 -0.3**
FINES FINESS Array B 64.81 332 P **P 04 42 25.7 -0.4**
comp=Z,35nm,0.6s,baz=48,slow=7.9,SNR=152
FINES LR LR 05 12 52.2
comp=Z,161nm,18.7s,baz=39,slow=38
MOR8 Moi Rana 64.97 339 *e*P **P 04 42 25.4 -1.7**
J01E Myrtle Point 64.99 54 P **P 04 42 30.0 +2.4**
baz=305
I03D Drain, OR 65.03 53 P **P 04 42 29.8 +1.9**
baz=305
KONS Konsvik 65.06 340 *e*P **P 04 42 27.0 -0.6**
LPSR Galich'ya Gora 65.08 319 *e*P **P 04 42 27.1 -0.9**
LPSR pmax pmax
comp=Z,20nm,0.6s
G05D Wamic, OR 65.33 51 P **P 04 42 31.6 +1.7**
baz=306
K02D Willamette Mer 65.42 54 P **P 04 42 32.0 +1.5**
baz=305
I04A Tendick Farm, 65.53 52 P **P 04 42 32.8 +1.6**
baz=306
C09A Chrisman Ranch 65.54 47 IAmb IAmb 04 42 33.2
comp=Z,10nm,0.8s
SUMG Summit 65.64 0 *i* P **P 04 42 32.2 +0.4**
SUMG pmax pmax
comp=Z,87nm,0.7s
SUMG Summit 65.64 0 *i* P **P 04 42 32.2 +0.4**
comp=Z,86nm,0.7s
F07A Phinny Hill Vi 65.74 49 IAmb IAmb 04 42 35.1
comp=Z,14nm,0.6s
L02E Cave Junction 65.77 54 P **P 04 42 34.5 +1.8**
baz=306
VSR Storozhevoye 65.80 318 *e*P **P 04 42 31.8 -0.9**
VSR pmax pmax
comp=Z,20nm,0.5s
I05D Terrebonne, OR 65.84 51 P **P 04 42 34.7 +1.5**
baz=306
E08A Dider Farm, El 65.88 49 IAmb IAmb 04 42 35.6
comp=Z,9.9nm,0.7s
NEW Newport 65.88 46 P **P 04 42 34.8 +1.4**
baz=307
VORD Divnogorie 65.89 318 *e*P **P 04 42 32.7 -0.6**
VORD pmax pmax
comp=Z,20nm,1.0s
AS31 Alice Springs 65.92 189 P **P 04 42 33.2 -0.5**
AS31 **pP 04 42 49.5 -1.0**
ASAR Alice Springs 65.92 189 P **P 04 42 34.0 +0.3**
comp=Z,2.9nm,0.8s,baz=12,slow=6.6,SNR=25
ASAR pP **pP 04 42 51.9 +1.4**
comp=Z,3.0nm,0.8s,baz=3.5,slow=6.5,SNR=7.9
ASAR Alice Springs 65.92 189 P **P 04 42 32.8 -0.9**
ASAR **pP 04 42 49.5 -0.9**
J04D Umpqua Nationa 66.03 53 P **P 04 42 36.1 +1.5**
baz=306
E09A Wood Farm, Sta 66.37 48 IAmb IAmb 04 42 38.9
comp=Z,12nm,0.8s
L04D Klamath Falls 66.51 54 P **P 04 42 39.6 +2.0**
baz=306
J05D Fort Rock, OR 66.52 52 P **P 04 42 39.3 +1.6**
baz=306
YBH Yreka Blue Hor 66.55 54 IAmb IAmb 04 42 40.8
comp=Z,8.0nm,0.8s
VSU Vasula 66.61 329⇑ *e*P **P 04 42 37.5 -0.2**
VSU pmax pmax
comp=Z,68nm,0.7s
M02C Callahan 66.67 55 P **P 04 42 40.5 +1.9**
baz=306
AKT Akhty 66.89 306 *e*P **P 04 42 40.1 +0.1**
AKT *e**PP **pP 04 42 56.5 -0.4**
AKT *e**SP **sP 04 43 04.1 +0.1**
AKT *e* 04 43 08.3
AKT pmax pmax
comp=Z,42nm,0.8s
NSS Namsos 66.91 339 *e*P **P 04 42 39.3 -0.2**
N02D Trinity Center 67.00 55 P **P 04 42 42.7 +2.0**
baz=306,SNR=7.6
M04C Macdoel 67.05 54 P **P 04 42 42.8 +1.7**
baz=307,SNR=5.1
KCPM Cahto Peak 67.23 57 IAmb IAmb 04 42 45.0
comp=Z,9.3nm,0.6s
O02D Mt. Diablo Mer 67.43 56 P **P 04 42 45.4 +2.1**
baz=307,SNR=5.8
GOF Gofitskoye 67.49 311⇑ *e*P **P 04 42 44.1 +0.5**
GOF pmax pmax
comp=Z,93nm,0.6s
DZM Mont Dzumac 67.52 156 *e*LR LR 05 03 12.8
comp=Z,100nm,23.9s
JTMT Jette 67.71 45 IAmb IAmb 04 42 47.6
comp=Z,12nm,0.9s
O03E Paynes Creek 67.96 55 P **P 04 42 47.9 +1.1**
baz=307,SNR=6.9
KIV Kislovodsk 68.36 310 *e*P **P 04 42 49.7 +0.5**
KIV pmax pmax
comp=Z,159nm,1.1s
KIV MLR MLR
comp=Z,137nm,17.0s
KIV Kislovodsk 68.36 310 *e*P **P 04 42 49.7 +0.5**
KIV Kislovodsk 68.36 310 P **P 04 42 48.6 -0.6**
ZEI Tsey 68.38 308 *e*P **P 04 42 48.2 -1.3**
ZEI pmax pmax
comp=Z,12nm,0.6s
KBZ Khabaz 68.38 310 P **P 04 42 50.3 +1.2**
comp=Z,17nm,0.9s,baz=56,slow=4.5,SNR=42
KBZ LR LR 05 15 17.2
comp=Z,78nm,19.5s,baz=26,slow=38
TBLU Trondheim 68.39 339 *e*P **P 04 42 47.2 -1.7**
MSO Missoula 68.47 46 P **P 04 42 50.8 +0.9**
baz=309,SNR=5.1
TBLG Delisi 68.53 307 IAmb IAmb 04 42 52.0
comp=Z,25nm,0.8s
ORV Oroville 68.59 56 IAmb IAmb 04 42 52.4
comp=Z,8.1nm,0.7s
NEY Neytrino 68.78 309⇓ *e*P **P 04 42 53.5 +1.6**
NEY pmax pmax
comp=Z,3.0nm,0.8s
FFC Flin Flon 68.96 34 P **P 04 42 53.1 +0.5**
FFC pmax pmax
comp=Z,9.0nm,1.0s
FFC Flin Flon 68.96 34 P **P 04 42 53.1 +0.5**
NACGM Naroch 69.06 326 *e* **P 04 42 53.0 -0.2**
BEKR Beckworth 69.10 55 IAmb IAmb 04 42 56.6
comp=Z,9.6nm,0.8s
AKH Akhalkalaki 69.47 308 ⇑P **P 04 42 57.6 +1.4**
AKH Akhalkalaki 69.47 308 IAmb IAmb 04 42 57.9
comp=Z,9.2nm,0.7s
GNI Garni 69.50 306 *c i*P **P 04 42 56.4 0.0**
GNI pmax pmax
comp=Z,53nm,0.9s
GNI Garni 69.50 306 P **P 04 42 56.4 0.0**
GNI IAmb IAmb 04 43 06.3
comp=Z,14nm,0.8s
DOMB Dombas 69.69 339 *e*P **P 04 42 56.7 -0.3**
EGMT Eagleton 69.88 43 P **P 04 42 59.4 +0.9**
baz=311,SNR=11
NB2 NORSAR Subarra 69.91 337 P **P 04 42 58.2 -0.2**
comp=Z,9.4nm,0.6s,baz=35,slow=6.5
NB2 NORSAR Subarra 69.91 337 P **P 04 42 58.2 -0.2**
baz=35,slow=6.5
NOA NORSAR Array B 69.91 337 P **P 04 42 58.1 -0.2**
comp=Z,16nm,0.7s,baz=37,slow=6.1,SNR=84
NOA pP **pP 04 43 16.1 +0.5**
comp=Z,3.4nm,0.7s,baz=40,slow=5.8,SNR=2.9
NOA LR LR 05 17 02.8
comp=Z,67nm,20.6s,baz=40,slow=39
PNTR Pine Nut 70.04 55 IAmb IAmb 04 43 04.1
comp=Z,11nm,0.7s
NC602 NORSAR Array S 70.06 337 *e*P **P 04 42 58.4 -0.9**
DLMT Dillon 70.12 46 IAmb IAmb 04 43 02.4
comp=Z,10nm,0.8s
CMB Columbia Colle 70.21 56 IAmb IAmb 04 43 03.1
comp=Z,9.4nm,0.7s
YERR Yerington 70.33 55 IAmb IAmb 04 43 04.1
comp=Z,13nm,0.8s
WAKR Walker 70.50 56 IAmb IAmb 04 43 05.4
comp=Z,8.6nm,0.8s
AGRB Hanur-Agry 70.91 306 *e*P **P 04 43 05.4 +0.3**
AKASG Malin Array Be 70.91 322 P **P 04 43 04.2 -0.5**
comp=Z,9.7nm,0.3s,baz=44,slow=6.5,SNR=64
AKASG pP **pP 04 43 22.6 +0.7**
comp=Z,2.1nm,0.4s,baz=45,slow=7.0,SNR=3.2
AKASG LR LR 05 17 15.0
comp=Z,88nm,20.2s,baz=25,slow=38
OSL Oslo 70.95 337 *e*P **P 04 43 05.3 +0.6**
KVN Kaiserville 70.98 54 IAmb IAmb 04 43 08.1
comp=Z,9.2nm,0.7s
UOSS Minazif 71.23 287 P **P 04 43 05.8 -1.2**
UOSS IAmb IAmb 04 43 07.7
comp=Z,20nm,0.7s
NVAR Mina Array Bea 71.24 55 P **P 04 43 09.2 +2.0**
comp=Z,7.5nm,0.7s,baz=297,slow=5.9,SNR=73
YHB Horse Butte 71.27 46 P **P 04 43 07.5 +0.2**
KOPR Koprukoy-ERZUR 71.33 307 *e*P **P 04 43 08.1 +0.5**
KONO Kongsberg 71.51 337 *e*P **P 04 43 08.4 +0.3**
AKDM Akdamar-Van 71.70 305 *e*P **P 04 43 11.3 +1.4**
PAGB Antelope Grade 71.73 58 IAmb IAmb 04 43 12.6
comp=Z,18nm,0.7s
H17A Grant Village 71.84 46 P **P 04 43 13.6 +2.9**
baz=312
RLMT Red Lodge 72.05 45 P **P 04 43 13.2 +1.3**
baz=312
TIN Tinemaha, Big 72.16 56 P **P 04 43 14.2 +1.7**
baz=310
DGMT Dagmar 72.32 40 IAmb IAmb 04 43 14.9
comp=Z,18nm,0.8s
DGMT Dagmar 72.32 40 P **P 04 43 14.1 +0.9**
baz=314,SNR=6.0
VES Vestal, Richgr 72.39 58 P **P 04 43 14.9 +1.1**
baz=310
SIM Simferopol' 72.42 315 *e*P **P 04 43 14.2 +0.4**
SIM pmax pmax
comp=Z,13nm,1.0s
YEDI Yedisu-Bingol 72.45 307 *e*P **P 04 43 15.1 +0.8**
PKM Mcpherson Peak 72.54 59 P **P 04 43 16.8 +1.9**
baz=310
LAO LASA Array 72.56 42 IAmb IAmb 04 43 17.0
comp=Z,10nm,0.9s
LAO LASA Array 72.56 42 P **P 04 43 15.8 +1.1**
baz=313,SNR=6.5
CWC Cottonwood Cre 72.64 56 P **P 04 43 16.8 +1.3**
baz=310
GRAC Grapevine Rang 72.73 56 P **P 04 43 17.7 +1.8**
baz=310,SNR=9.9
ISA Isabella, Lake 72.89 57 P **P 04 43 17.7 +0.9**
baz=310
SVAN Silvan-Diyarba 72.89 306 *e*P **P 04 43 17.7 +0.9**
R11A Troy Canyon, C 72.94 54 P **P 04 43 18.7 +1.5**
baz=310,SNR=8.4
SORM Soroca 73.11 320⇑P **P 04 43 17.5 -0.3**
MPMC Manual Prospec 73.25 56 P **P 04 43 20.5 +1.3**
baz=310,SNR=10
DUG Dugway, Tooele 73.36 51 IAmb IAmb 04 43 22.3
comp=Z,11nm,0.7s
DUG Dugway, Tooele 73.36 51 P **P 04 43 21.3 +1.6**
baz=311,SNR=14
FURC Furnace Creek, 73.38 56 P **P 04 43 21.4 +1.8**
baz=310,SNR=9.6
TPNV Topopah Spring 73.44 55 IAmb IAmb 04 43 22.8
comp=Z,12nm,0.7s
TPNV Topopah Spring 73.44 55 P **P 04 43 21.7 +1.5**
baz=310,SNR=16
BW06 Boulder Array 73.48 47 IAmb IAmb 04 43 22.3
comp=Z,7.1nm,0.7s
BW06 Boulder Array 73.48 47 P **P 04 43 21.2 +0.8**
baz=312,SNR=12
PDAR Pinedale Array 73.48 47 P **P 04 43 21.7 +1.3**
comp=Z,6.3nm,0.7s,baz=272,slow=2.4,SNR=71
PDAR LR LR 05 18 03.0
comp=Z,18nm,18.0s,baz=350,slow=38
LRMC Laurel Mtn Rad 73.50 57 P **P 04 43 21.7 +1.1**
baz=310
STKA Stephens Creek 73.61 181 P **P 04 43 21.5 +0.8**
comp=Z,1.5nm,0.6s,baz=339,slow=7.5,SNR=4.3
STKA LR LR 05 14 53.1
comp=Z,26nm,21.8s,baz=26,slow=35
STKA Stephens Creek 73.61 181 P **P 04 43 21.0 +0.3**
DYBB Diyarbakir 73.66 306 *e*P **P 04 43 22.6 +1.3**
EDW2 Edwards Air Fo 73.69 58 P **P 04 43 22.9 +1.4**
baz=310
RSDY Resadiye-TOKAT 73.70 310 *e*P **P 04 43 22.4 +0.9**
MILM Milestii Mici 73.75 319⇑P **P 04 43 21.2 -0.4**
BEL Belsk 73.75 327 *e*P **P 04 43 22.4 +0.9**
BEL Belsk 73.75 327 *e*P **P 04 43 22.4 +0.9**
MAZI Mazidag 73.80 306 *e*P **P 04 43 23.0 +0.8**
LVV L'vov 73.88 324 *e*P **P 04 43 22.6 +0.3**
KVT Kavak 73.97 311 *e*P **P 04 43 23.9 +0.8**
DIKM Dikmen 74.02 312⇑P **P 04 43 24.4 +1.1**
DIKM Dikmen 74.02 312 *e*P **P 04 43 24.1 +0.8**
SHOC Shoshone, Teco 74.11 56 P **P 04 43 25.0 +1.0**
baz=311
GSC Goldstone, Bar 74.17 57 P **P 04 43 25.7 +1.3**
baz=311,SNR=5.0
BFSC Mount Baldy Ra 74.32 58 P **P 04 43 26.9 +1.6**
baz=310
MALT Malatya 74.44 308 *e*P **P 04 43 27.5 +1.6**
KWP Kalwaria Pacla 74.59 324 *e*P **P 04 43 27.1 +0.6**
KWP Kalwaria Pacla 74.59 324 *e*P **P 04 43 27.1 +0.6**
TUQ Turquoise Moun 74.62 56 P **P 04 43 28.5 +1.4**
baz=311,SNR=10
HEC Hector,Ludlow 74.77 57 P **P 04 43 29.2 +1.3**
baz=311
BBRC Big Bear Solar 74.77 58 P **P 04 43 29.4 +1.4**
baz=311
ULM Lac du Bonnet 74.78 35 P **P 04 43 27.6 0.0**
comp=Z,6.5nm,0.8s,baz=312,slow=6.3,SNR=14
ULM Lac du Bonnet 74.78 35 IAmb IAmb 04 43 28.7
comp=Z,14nm,1.1s
URFA Urfa 74.78 307 *e*P **P 04 43 29.1 +1.2**
DARE Darende-Malaty 74.82 308 *e*P **P 04 43 29.5 +1.4**
MDND Maddock 74.92 38 P **P 04 43 29.3 +0.9**
baz=317
BURAR Bucovina Array 74.95 322⇑P **P 04 43 28.8 0.0**
TLCR 74.97 318⇓P **P 04 43 29.2 +0.5**
MURC Murrieta 75.02 58 P **P 04 43 30.4 +1.1**
baz=311
BIZ Bicaz 75.03 321⇑P **P 04 43 29.7 +0.6**
TESR Tescani 75.08 320⇑P **P 04 43 29.6 +0.3**
K22A Casper 75.19 46 P **P 04 43 31.1 +0.8**
baz=314,SNR=5.3
GMRC Granite Mounta 75.21 56 P **P 04 43 31.9 +1.4**
baz=311,SNR=8.2
ILGA Ilgaz 75.28 312 IAmb IAmb 04 43 33.2
comp=Z,26nm,1.0s
KOLS Kolonicke sedl 75.31 324 *e*P **P 04 43 31.1 +0.5**
KOLS pmax pmax
comp=Z,5.0nm,0.8s
KOLS Kolonicke sedl 75.31 324 *e*P **P 04 43 31.1 +0.5**
CFR Carcaliu 75.32 318⇑P **P 04 43 30.8 +0.2**
OJC Ojcow 75.39 326 *e*P **P 04 43 31.6 +0.6**
OJC Ojcow 75.39 326 *e*P **P 04 43 31.6 +0.6**
TOPG Topolog 75.41 318⇑P **P 04 43 31.7 +0.4**
ODBI Odobesti 75.43 319⇑P **P 04 43 32.1 +0.8**
RSSD Black Hills 75.45 43 P **P 04 43 32.5 +0.7**
RSSD pmax pmax
comp=Z,8.0nm,0.9s
RSSD Black Hills 75.45 43 P **P 04 43 32.5 +0.7**
RSSD Black Hills 75.45 43 P **P 04 43 32.5 +0.7**
baz=315
PFO Pinyon Flats O 75.48 58 P **P 04 43 33.1 +1.1**
baz=311
RWWY Rawlins 75.49 47 IAmb IAmb 04 43 33.0
comp=Z,16nm,0.8s
VRI Vrincioaia 75.51 320⇑P **P 04 43 32.0 +0.2**
BELC Belle Mtn. Jos 75.52 57 P **P 04 43 33.1 +0.8**
baz=311
PLOR Plostina 75.56 320⇓P **P 04 43 33.1 +0.9**
BNN Bunyan 75.58 309 *e*P **P 04 43 32.5 0.0**
ARCR ARCALIA 75.74 322⇑P **P 04 43 34.4 +1.3**
BISRR Bisoca 75.75 319⇑P **P 04 43 34.6 +1.3**
HARR Harsova 75.77 318⇑P **P 04 43 33.8 +0.5**
TRPA Tarpa 75.79 323⇓ *e*P **P 04 43 34.2 +0.9**
TRPA Tarpa 75.79 323⇓P **P 04 43 34.1 +0.7**
OZUR 75.80 320⇑P **P 04 43 34.7 +1.2**
KMRS Kahramanmaras 75.88 308 *e*P **P 04 43 34.9 +0.8**
GAZ Gaziantep 75.92 307 *e*P **P 04 43 35.1 +0.7**
IRM Iron Mountain 75.95 57 P **P 04 43 35.9 +1.3**
baz=312,SNR=6.2
MONP2 Monument Peak 75.98 58 P **P 04 43 36.2 +1.2**
baz=311
BSEG Bad Segeberg 75.99 333 *e*P **P 04 43 34.6 +0.3**
comp=Z,13nm,0.8s,baz=34,slow=5.5
O20A White River Ci 75.99 48 IAmb IAmb 04 43 36.9
comp=Z,8.9nm,0.8s
O20A White River Ci 75.99 48 P **P 04 43 35.7 +0.7**
baz=314,SNR=11
BC3 Big Chuckawall 76.08 57 P **P 04 43 36.7 +1.2**
baz=312
MLR Muntele Rosu 76.16 320⇑P **P 04 43 35.4 -0.3**
BRTR Keskin Array B 76.23 311 P **P 04 43 36.5 +0.2**
comp=Z,5.8nm,0.7s,baz=76,slow=3.4,SNR=48
BRTR pP **pP 04 43 53.9 +0.3**
comp=Z,1.8nm,0.6s,baz=61,slow=3.5,SNR=3.3
BRTR PP **PP 04 46 27.3 -0.3**
comp=Z,2.2nm,0.8s,baz=57,slow=5.0,SNR=6.8
BRTR LR LR 05 22 01.3
comp=Z,34nm,18.4s,baz=5.5,slow=40
ICOR Ion Corvin 76.24 318⇓P **P 04 43 37.2 +1.2**
KSP Ksiaz 76.32 328 *e*P **P 04 43 36.9 +0.5**
KSP Ksiaz 76.32 328 *e*P **P 04 43 36.9 +0.5**
IKP In-Ko-Pah, Jac 76.33 58 P **P 04 43 38.6 +1.7**
baz=311
LANS Liptovska Anna 76.35 326 *e*P **P 04 43 37.8 +1.2**
LANS pmax pmax
comp=Z,7.0nm,1.0s
LANS Liptovska Anna 76.35 326 *e*P **P 04 43 37.8 +1.2**
CJR Cluj-Napoca 76.37 322⇓P **P 04 43 38.0 +1.3**
KOZT Kozan 76.52 308 *e*P **P 04 43 38.6 +0.9**
Y12C Blythe 76.60 57 P **P 04 43 39.8 +1.6**
baz=312
ANTO Ankara 76.61 312 P **P 04 43 38.2 -0.1**
ANTO pmax pmax
comp=Z,24nm,0.7s
ANTO Ankara 76.61 312⇓P **P 04 43 38.8 +0.5**
ANTO Ankara 76.61 312 P **P 04 43 38.2 -0.1**
CHVC Chvalec 76.61 328 *e*P **P 04 43 38.5 +0.5**
CHVC *ex* x 04 43 43.2
VOIR 76.63 320⇑P **P 04 43 39.4 +1.1**
MORC Moravsky Berou 76.66 327⇑P **P 04 43 39.1 +0.7**
MORC Moravsky Berou 76.66 327 *e*P **P 04 43 38.8 +0.5**
MORC Moravsky Berou 76.66 327 IAmb IAmb 04 43 39.9
comp=Z,12nm,0.8s
UPC Upice 76.69 328 *e*P **P 04 43 39.0 +0.5**
UPC Upice 76.69 328 *e*P **P 04 43 39.0 +0.5**
DPC Dobruska-Polom 76.69 328 *e*P **P 04 43 39.4 +0.9**
DPC *e* 04 43 44.5
DPC *e* 04 43 57.8
DPC Dobruska-Polom 76.69 328 *e*P **P 04 43 39.4 +0.9**
DPC *ex* x 04 43 44.5
DPC *ep*P **pP 04 43 57.8 +1.8**
DRGR 76.71 322⇓P **P 04 43 39.0 +0.2**
N23A Red Feather La 76.72 46 P **P 04 43 40.5 +1.4**
baz=315,SNR=7.1
KRLC Kraliky 76.73 328 *e*P **P 04 43 39.1 +0.4**
KRLC *e* 04 43 58.0
KRLC Kraliky 76.73 328 *e*P **P 04 43 39.1 +0.4**
KRLC *ep*P **pP 04 43 58.0 +1.8**
AFSR Afar-Bala (An 76.75 311 *e*P **P 04 43 38.8 -0.3**
ARR Arges 76.88 320⇓P **P 04 43 41.1 +1.4**
CEYT Ceyhan 76.89 308 *e*P **P 04 43 41.4 +1.6**
KULU Kulu 77.06 311 *e*P **P 04 43 41.0 +0.1**
PSZ Piszkesteto 77.11 325 P **P 04 43 41.1 +0.1**
PSZ *PP **pP 04 43 57.9 -0.5**
PSZ pmax pmax
comp=Z,11nm,1.0s
PSZ Piszkesteto 77.11 325⇑P **P 04 43 41.7 +0.8**
PSZ Piszkesteto 77.11 325 P **P 04 43 41.1 +0.1**
PSZ IAmb IAmb 04 43 42.7
comp=Z,11nm,1.0s
PSZ **pP 04 43 57.9 -0.5**
VYHS Vyhne 77.12 325 *e*P **P 04 43 41.5 +0.6**
VYHS pmax pmax
comp=Z,9.0nm,1.2s
VYHS Vyhne 77.12 325 *e*P **P 04 43 41.5 +0.6**
BRG Berggiesshubel 77.20 330 *e*P **P 04 43 41.2 -0.1**
comp=Z,7.9nm,1.3s
BRG Berggiesshubel 77.20 330 *e*P **P 04 43 41.2 -0.1**
BRG pmax pmax
comp=Z,8.0nm,1.3s
BRG Berggiesshubel 77.20 330 *e*P **P 04 43 41.5 +0.2**
comp=Z,3.5nm,0.7s,baz=34,slow=5.5
CLL Collm 77.20 330⇑ *i*P **P 04 43 41.1 -0.1**
CLL *i* 04 43 46.1
CLL *i* *SP **sP 04 44 06.5 +0.7**
CLL pmax pmax
comp=Z,21nm,1.0s
CLL Collm 77.20 330⇑ *i*P **P 04 43 41.1 -0.1**
comp=Z,21nm,1.0s
CLL *i* 04 43 46.1
CLL *i* sP **sP 04 44 06.5 +0.7**
CLL Collm 77.20 330 *e*P **P 04 43 41.2 -0.1**
comp=Z,13nm,0.8s,baz=34,slow=5.5
CLL Collm 77.20 330 IAmb IAmb 04 43 42.0
comp=Z,17nm,0.8s
PVCC Panska Ves 77.23 329 *e*P **P 04 43 41.9 +0.4**
PVCC *e* 04 43 46.5
PVCC Panska Ves 77.23 329 *e*P **P 04 43 41.9 +0.4**
PVCC *ex* x 04 43 46.5
NRDL Niedersach Rie 77.26 332 *e*P **P 04 43 41.8 +0.4**
comp=Z,7.0nm,0.8s,baz=34,slow=5.5
JAVC Velka Javorina 77.32 326 *e*P **P 04 43 43.5 +1.4**
WUAZ Wupatki 77.34 54 P **P 04 43 44.4 +1.8**
baz=313,SNR=6.5
SMCO Snowmass 77.36 48 IAmb IAmb 04 43 45.2
comp=Z,8.5nm,0.8s
FBE Freiberg 77.38 330 *e*P **P 04 43 42.8 +0.5**
comp=Z,8.4nm,0.9s,baz=34,slow=5.5
VRAC Vranov 77.41 327⇓P **P 04 43 43.5 +1.0**
VRAC Vranov 77.41 327 *e*P **P 04 43 43.3 +0.8**
CHBY Cihanbeyli 77.45 311 *e*P **P 04 43 43.3 +0.3**
SIRR Siria 77.59 322⇑P **P 04 43 44.1 +0.6**
GOPC GO Pecny, Ondr 77.64 329 *e*P **P 04 43 44.1 +0.3**
GOPC *e* 04 43 49.3
GOPC *e* 04 44 01.2
GOPC GO Pecny, Ondr 77.64 329 *e*P **P 04 43 44.1 +0.3**
GOPC *ex* x 04 43 49.3
GOPC *ep*P **pP 04 44 01.2 -0.1**
ISCO Idaho Springs 77.67 47 P **P 04 43 45.9 +1.3**
baz=315,SNR=8.9
PRU Pruhonice 77.68 329 *e*P **P 04 43 44.4 +0.4**
PRU *e* 04 44 03.5
PRU Pruhonice 77.68 329 *e*P **P 04 43 44.4 +0.4**
PRU *ep*P **pP 04 44 03.5 +2.0**
KRUC Moravsky 77.68 327 *e*P **P 04 43 44.6 +0.6**
SMOL Smolenice 77.69 326 *e*P **P 04 43 45.4 +1.3**
SMOL pmax pmax
comp=Z,5.0nm,0.8s
SMOL Smolenice 77.69 326 *e*P **P 04 43 45.4 +1.3**
CLZ Clausthal 77.70 332 *e*P **P 04 43 44.6 +0.4**
comp=Z,14nm,0.7s,baz=34,slow=5.5
NEUB Neuenburg 77.73 331 *e*P **P 04 43 44.9 +0.7**
comp=Z,11nm,0.8s,baz=34,slow=5.5
SUSD Miller 77.73 40 P **P 04 43 45.3 +0.9**
baz=318
TREC Trest 77.86 328 *e*P **P 04 43 45.5 +0.4**
TREC Trest 77.86 328 *e*P **P 04 43 45.5 +0.4**
MODS Modra-Piesok 77.86 326 *e*P **P 04 43 45.1 0.0**
MODS pmax pmax
comp=Z,10.0nm,0.9s
MODS Modra-Piesok 77.86 326 *e*P **P 04 43 45.1 0.0**
MVCO Mesa Verde 77.87 51 P **P 04 43 46.7 +1.2**
baz=314,SNR=7.1
SRO Srobarova 77.87 325 *e*P **P 04 43 46.2 +1.1**
SRO pmax pmax
comp=Z,24nm,0.8s
SRO Srobarova 77.87 325 *e*P **P 04 43 46.2 +1.1**
LADK Ladik-KONYA 78.01 311 *e*P **P 04 43 45.9 -0.3**
X16A Lo Mia Camp, P 78.04 54 IAmb IAmb 04 43 49.5
comp=Z,8.4nm,0.8s
ELND Elena 78.07 318⇑P **P 04 43 46.6 +0.3**
ZST Bratislava 78.08 326 *e*P **P 04 43 46.3 +0.1**
ZST pmax pmax
comp=Z,5.0nm,0.8s
ZST Bratislava 78.08 326 *e*P **P 04 43 46.3 +0.1**
GTTG Gyttingen 78.09 332 *e*P **P 04 43 46.9 +0.6**
comp=Z,20nm,0.7s,baz=34,slow=5.5
BZS Buzias 78.10 322⇓P **P 04 43 46.4 0.0**
TANN Tannenbergstha 78.12 330 *e*P **P 04 43 46.9 +0.3**
comp=Z,5.7nm,0.7s,baz=34,slow=5.5
PBCC Pribram 78.13 329 *e*P **P 04 43 46.8 +0.3**
KIZK Mersin 78.19 309 *e*P **P 04 43 46.5 -0.5**
KONT Konya--Tatoy 78.19 311 *e*P **P 04 43 46.5 -0.6**

IBBN Ibbenburen 78.20 334 eP P 04 43 47.2 +0.3
comp=Z,14nm,0.8s,baz=34,slow=5.5
GUNZ Gunzen 78.21 300 eP P 04 43 47.4 +0.4
comp=Z,5.1nm,0.8s,baz=34,slow=5.5
CSKK Cskako 78.24 325⇓ eP P 04 43 48.4 +1.2
MOX Moxa 78.25 331 eP P 04 43 47.5 +0.3
comp=Z,6.1nm,1.0s,baz=34,slow=5.5
WERN Wernitzgruen 78.26 330 eP P 04 43 47.6 +0.3
comp=Z,7.1nm,0.8s,baz=34,slow=5.5
NKC Novy Kostel 78.28 330 eP P 04 43 47.6 +0.3
NKC Novy Kostel 78.28 330 eP P 04 43 47.6 +0.3
PLVB Pleven 78.35 319 ⇑P P 04 43 48.2 +0.3
EYMN Ely 78.39 34 lAmb lAmb 04 43 49.1
comp=Z,18nm,0.8s
EYMN Ely 78.39 34 P P 04 43 48.0 0.0
baz=322,SNR=8.1
S22A 4UR Ranch, Cre 78.44 49 P P 04 43 50.5 +1.6
baz=315,SNR=7.0
KEBE Keben-Mersin 78.46 309 eP P 04 43 49.1 +0.5
PUNG Punghina 78.50 320 ⇓P P 04 43 48.8 +0.2
Q24A Divide 78.52 47 P P 04 43 50.4 +1.1
baz=315
MANZ Manzenberg 78.60 330 eP P 04 43 49.6 +0.5
comp=Z,5.0nm,0.8s,baz=34,slow=5.5
TEVE Tevekalti-Mers 78.62 309 eP P 04 43 49.8 +0.2
UBBA Unterbreizbach 78.68 332 eP P 04 43 49.6 +0.2
comp=Z,4.6nm,0.6s,baz=34,slow=5.5
MDVR Moldovita 78.69 321 ⇑P P 04 43 49.8 0.0
MPLH Magyarpolny 78.70 325 eP P 04 43 50.9 +1.2
MPLH Magyarpolny 78.70 325⇓ eP P 04 43 41.6 -8.1
SOP Sopron 78.70 326 eP P 04 43 50.2 +0.5
TVSB Tavsanli 78.72 313 eP P 04 43 50.4 +0.3
KHC Kasperske Hory 78.74 329 eP P 04 43 50.2 +0.3
KHC e 04 44 08.4
KHC Kasperske Hory 78.74 329 eP P 04 43 50.2 +0.3
KHC epP pP 04 44 08.4 +0.9
ROTZ Rotzenmuhle 78.75 330 eP P 04 43 50.2 +0.3
comp=Z,6.4nm,0.8s,baz=34,slow=5.5
TIH Tihany 78.76 325 eP P 04 43 50.4 +0.4
OGNE Ogallala 78.76 44 P P 04 43 50.8 +0.5
baz=317,SNR=7.6
SHUT Suhut-Afyon 78.77 312 eP P 04 43 50.5 +0.1
CONA Conrad Observa 78.80 327 i P P 04 43 51.3 +1.0
comp=Z,5.3nm,0.6s
BERE Bereket-Mersin 78.81 309 eP P 04 43 50.7 0.0
214A Organ Pipe Nat 78.87 57 P P 04 43 52.1 +1.2
baz=313
GEC2 GERESS Array S 78.92 328 eP P 04 43 51.0 0.0
comp=Z,4.5nm,0.9s,baz=34,slow=5.5
GERES GERESS Array B 78.92 328 P P 04 43 51.1 +0.1
comp=Z,3.8nm,0.6s,baz=35,slow=6.1,SNR=37
GERES LR LR 05 25 06.0
comp=Z,38nm,18.6s,baz=40,slow=40
MORH Mrgy, Hungar 78.97 324⇓ eP P 04 43 50.9 -0.3
MORH Mrgy, Hungar 78.97 324⇑ iP P 04 43 50.6 -0.6
WET Wettzell 79.00 329 eP P 04 43 51.6 +0.3
comp=Z,7.6nm,0.8s,baz=34,slow=5.5
TEKE Tekeli-Mersin 79.02 309 eP P 04 43 51.3 -0.3
BUG Bochum--Univer 79.10 333 eP P 04 43 51.9 +0.1
comp=Z,10nm,0.8s,baz=34,slow=5.5
GRA1 Grafenberg Arr 79.17 330 lAmb lAmb 04 43 53.8
comp=Z,26nm,0.8s
GRF Grafenberg Arr 79.17 330 eP P 04 43 52.8 +0.6
comp=Z,20nm,0.7s,baz=34,slow=5.5
SDCO Great Sand Dun 79.19 49 P P 04 43 53.9 +0.9
baz=315,SNR=7.6
KRBG Karabiga-Canak 79.19 315 eP P 04 43 53.4 +0.9
PGB Panagyurishte 79.19 319 P P 04 43 53.1 +0.5
FRGS Fruska Gora 79.27 323⇑ iP P 04 43 52.2 -0.7
ECSD EROS Data Cent 79.38 39 lAmb lAmb 04 43 54.8
comp=Z,15nm,0.9s
ECSD EROS Data Cent 79.38 39 P P 04 43 53.8 +0.3
baz=320,SNR=16
E38A The Farm, Brul 79.42 35 lAmb lAmb 04 43 54.5
comp=Z,18nm,0.8s
ALN Alexandroupoli 79.47 316 lAmb lAmb 04 43 55.4
comp=Z,10.0nm,1.0s
ARSA Arzberg 79.48 326 i P P 04 43 54.8 +0.8
comp=Z,6.6nm,1.1s
MOA Molln 79.50 328 i P P 04 43 54.5 +0.4
comp=Z,4.1nm,0.8s
BEHE Becsehely 79.57 325 eP P 04 43 55.3 +0.8
VTS Vitosha 79.60 319 ⇓P P 04 43 55.5 +0.7
VTS Vitosha 79.60 319 P P 04 43 55.4 +0.5
VTS Vitosha 79.60 319 lAmb lAmb 04 43 56.6
comp=Z,21nm,0.7s
RAYN Ar Rayn 79.64 292 P P 04 43 55.1 -0.2
RAYN pmax pmax
comp=Z,9.0nm,0.7s
RAYN Ar Rayn 79.64 292 P P 04 43 55.0 -0.2
RAYN lAmb lAmb 04 43 55.8
comp=Z,8.7nm,0.7s
TNS Taunus Mts 79.73 332 eP P 04 43 55.7 +0.4
comp=Z,5.4nm,0.9s,baz=34,slow=5.5
KSCO Kaye Shedlock' 79.85 46 P P 04 43 57.1 +0.8
baz=317
TUC Tucson 79.89 56 P P 04 43 55.9 -0.6
TUC Tucson 79.89 56 P P 04 43 55.9 -0.6
TUC Tucson 79.89 56 P P 04 43 57.4 +0.9
baz=314
AHRW Bad Neuenahr-A 79.93 333 eP P 04 43 57.2 +0.9
comp=Z,6.5nm,0.8s,baz=34,slow=5.5
SPMN Marine on St. 79.97 36 lAmb lAmb 04 43 57.6
comp=Z,9.7nm,0.9s
SPMN Marine on St. 79.97 36 P P 04 43 56.9 +0.3
baz=322
KALN Kalnik 79.98 325 i P P 04 43 56.6 -0.1
KORT Korkueli 79.99 311 eP P 04 43 57.0 0.0
DIVS Divibare 80.00 322⇑ iP P 04 43 56.8 -0.2
MMB Musomiste 80.13 318 P P 04 43 58.2 +0.6
PERS Pernice 80.14 326 i P P 04 43 58.0 +0.4
SOKA Soboth 80.14 326 i P P 04 43 58.1 +0.5
comp=Z,17nm,0.8s,SNR=12
RJOB Jochberg 80.18 328 eP P 04 43 58.6 +0.8
comp=Z,14nm,0.8s,baz=34,slow=5.5
SCHQ Schefferville 80.22 17 P P 04 43 57.4 -0.5
comp=Z,7.1nm,0.5s,baz=13,slow=6.5,SNR=13
SCHQ LR LR 05 22 14.3
comp=Z,39nm,18.7s,baz=102,slow=38
MEM Membach 80.23 334 P P 04 43 57.4 -0.5
T25A Trinidad 80.23 48 lAmb lAmb 04 44 00.7
comp=Z,12nm,0.8s
T25A Trinidad 80.23 48 P P 04 43 59.5 +1.0
baz=316,SNR=9.4
PTJ Puntijarka 80.36 325 P P 04 43 58.9 0.0
BGNE Belgrade 80.39 42 P P 04 43 59.5 +0.5
baz=319
BSTI Sart Tilman 80.39 334 P P 04 43 59.1 +0.3
FUR Furstenfeldbru 80.41 329 eP P 04 44 00.1 +1.1
comp=Z,22nm,0.7s,baz=34,slow=5.5
BBLS Lazići 80.45 322⇑ iP P 04 43 59.6 +0.2
OBKA Obir 80.47 327 eP P 04 43 59.6 +0.2
comp=Z,11nm,0.6s,SNR=6.5
HAPS Han Pijesak,Bl 80.49 323⇑ iP P 04 43 59.2 -0.4
KBA Koelnbreinsper 80.50 328 i P P 04 43 60.0 +0.3
comp=Z,12nm,0.9s,SNR=7.6
LEGS Legarje 80.60 326 i P P 04 43 60.0 -0.1
BCLA Clavier 80.62 334 ⇓P P 04 44 00.0 0.0
ANMO Albuquerque 80.63 51 P P 04 44 00.0 -0.6
ANMO pmax pmax
comp=Z,5.0nm,0.9s
ANMO Albuquerque 80.63 51 P P 04 44 00.0 -0.6
ANMO Albuquerque 80.63 51 P P 04 44 02.1 +1.4
baz=315
CRES Cresnjev 80.64 326⇑ iP P 04 43 59.8 -0.5
STU Stuttgart 80.68 331 eP P 04 44 01.1 +0.7
comp=Z,16nm,0.8s,baz=34,slow=5.5
MYKA Terra Mystica 80.74 327 i P P 04 44 00.7 -0.1
comp=Z,7.8nm,0.5s
BLY Banja Luka 80.76 324 ⇑P P 04 44 01.1 +0.3
BLY Banja Luka 80.76 324 eP P 04 44 00.2 -0.7
STIP Stip 80.81 319 i P P 04 44 00.6 -0.6
LJU Ljubljana 80.85 326⇑ iP P 04 44 00.9 -0.5
BMRD Maredsous 80.90 334 P P 04 44 01.6 +0.1
VAY Valandovo 80.90 319 i P P 04 44 02.5 +0.8
SKO Skopje 80.96 320 i P P 04 44 02.9 +0.9
WATA Walderalm 80.98 329 i P P 04 44 02.7 +0.5
comp=Z,8.4nm,0.5s
WLF Walferdange 80.99 333 eP P 04 44 03.4 +1.4
comp=Z,7.1nm,0.8s,baz=34,slow=5.5
MGRS Mrkonjic Grad 81.06 324 eP P 04 44 03.2 +0.7
ABTA Abfaltersbach 81.10 328 i P P 04 44 02.1 -0.7
comp=Z,2.3nm,0.6s
DOU Dourbes 81.13 334 ⇓P P 04 44 02.7 -0.1
CEY Cerknica 81.14 326 i P P 04 44 02.6 -0.3
CEY Cerknica 81.14 326⇑ iP P 04 44 02.4 -0.5
MOTA Moosalm 81.16 329 i P P 04 44 03.6 +0.5
comp=Z,26nm,0.9s,SNR=8.8
RETA Reutte 81.17 329 i P P 04 44 03.7 +0.6
comp=Z,15nm,0.8s,SNR=5.1
SQTA Sankt Quirin 81.22 329 i P P 04 44 03.9 +0.4
comp=Z,12nm,0.7s
UBR Ueberruh 81.25 330 eP P 04 44 03.3 -0.3
comp=Z,17nm,0.7s,baz=34,slow=5.5
BFO Black Forest 81.36 331 eP P 04 44 04.4 +0.3
comp=Z,4.4nm,0.7s,baz=34,slow=5.5
STAL STALIGIAL 81.42 327 lAmb lAmb 04 44 04.1
comp=Z,17nm,0.6s
RIY Rijeka 81.45 326 eP P 04 44 03.9 -0.6
319A Douglas 81.45 55 lAmb lAmb 04 44 07.6
comp=Z,10nm,0.8s
CBKS Cedar Bluff 81.52 44 P P 04 44 05.2 +0.1
baz=318
UDBI Udbina 81.55 325 i P P 04 44 04.8 -0.3
121A Cookes Peak, D 81.55 54 lAmb lAmb 04 44 08.4
comp=Z,11nm,0.8s
121A Cookes Peak, D 81.55 54 P P 04 44 07.3 +1.8
baz=315,SNR=8.0
FETA Feichten 81.57 329 i P P 04 44 05.7 +0.4
comp=Z,12nm,0.9s,SNR=7.0
BRY Bratogost 81.60 322⇑ iP P 04 44 05.0 -0.6
PDG Podgorica 81.64 321 ⇑P P 04 44 05.7 +0.1
PDG Podgorica 81.64 321⇑ iP P 04 44 05.5 -0.1
DAVA Damuels 81.67 330 i P P 04 44 06.1 +0.2
comp=Z,25nm,0.9s,SNR=7.9
TREB Trebinje 81.83 322 eP P 04 44 05.7 -0.9
DRME Dracevica, Mon 81.86 321 eP P 04 44 07.0 +0.2
ECH Echery 81.88 332 lAmb lAmb 04 44 07.5
comp=Z,8.6nm,0.8s
FNA Florina 81.90 319 lAmb lAmb 04 44 07.8
comp=Z,9.6nm,0.8s
OHR Ohrid 81.93 320 i P P 04 44 07.2 0.0
MATQ Matagami 81.95 25 P P 04 44 07.3 +0.2
baz=331
DBRK Dubrovnik 81.96 322 i P P 04 44 06.3 -0.9
I40A Norwalk 81.98 36 lAmb lAmb 04 44 08.2
comp=Z,9.9nm,0.9s
STON Ston 82.01 323 i P P 04 44 06.6 -0.9
STON Ston 82.01 323 eP P 04 44 06.3 -1.2
FUORN Ofenpass-Fuorn 82.08 329 P P 04 44 08.0 -0.2
MORI Morici 82.10 324 i P P 04 44 07.5 -0.4
DUGI Dugi Otok 82.28 325 i P P 04 44 08.6 -0.3
ZIRJ Zirje 82.30 324 i P P 04 44 08.1 -0.9
SCIA State Center 82.38 39 lAmb lAmb 04 44 11.2
comp=Z,25nm,0.8s
SCIA State Center 82.38 39 P P 04 44 10.3 +0.9
baz=322
TUE Stuttgart 82.55 330 lAmb lAmb 04 44 12.1
comp=Z,14nm,0.7s
TEOL Teolo 82.57 328 lAmb lAmb 04 44 11.1
comp=Z,23nm,1.0s
I42A Draeger Farm, 82.71 35 lAmb lAmb 04 44 13.8
comp=Z,10nm,0.7s
LSQQ Lebel-sur-Quev 82.77 25 P P 04 44 11.7 +0.3
baz=332
E47A Iron Bridge 82.84 30 P P 04 44 11.8 0.0
baz=328
KSU1 Kansas State U 82.91 42 P P 04 44 12.1 -0.2
baz=320,SNR=5.9
JFWS Jewell Farm 82.92 36 P P 04 44 12.2 -0.1
baz=323
L40A Anamosa 83.17 37 lAmb lAmb 04 44 14.4
comp=Z,12nm,0.7s
AMTX Amarillo 83.39 48 lAmb lAmb 04 44 16.6
comp=Z,7.5nm,0.8s
AMTX Amarillo 83.39 48 P P 04 44 15.7 +0.7
baz=318
SENIN Lac Senin/Sane 83.40 331 lAmb lAmb 04 44 16.9
comp=Z,12nm,0.8s
D50A G1974 Best Tow 83.47 28 P P 04 44 14.9 -0.1
baz=330
MNTX Cornudas Mount 83.57 53 P P 04 44 17.2 +1.3
baz=316,SNR=8.3
ZCCA Zocca 83.68 327 lAmb lAmb 04 44 22.1
comp=Z,11nm,0.6s
D51A Lot 18 Range I 83.70 27 P P 04 44 15.9 -0.2
baz=330
GLMI Grayling 83.70 32 P P 04 44 16.7 +0.5
baz=327
H46A Fife Lake 83.70 32 P P 04 44 16.2 -0.1
baz=326,SNR=5.3
L42A Oliver, Polo 83.91 36 lAmb lAmb 04 44 17.9
comp=Z,15nm,0.8s
K43A Burlington 83.92 35 lAmb lAmb 04 44 19.5
comp=Z,16nm,0.8s
H47A Mio 84.05 32 P P 04 44 18.4 +0.3
baz=327
I46A Reed City 84.11 33 P P 04 44 18.8 +0.5
baz=326
E51A G1948 Merrick 84.14 28 P P 04 44 18.3 -0.1
baz=330
OSSC Osservatorio P 84.26 327 lAmb lAmb 04 44 19.6
comp=Z,11nm,0.6s
H48A Harrisville 84.30 31 P P 04 44 19.7 +0.4
baz=328
AQU L'Aquila 84.32 325⇑ iP P 04 44 19.8 +0.3
INTR Introdacqua 84.38 324 lAmb lAmb 04 44 21.6
comp=Z,15nm,0.6s
N41A Harden Midland 84.41 38 lAmb lAmb 04 44 21.3
comp=Z,14nm,1.1s
F51A Arnstein 84.51 28 P P 04 44 20.3 0.0
baz=330
L44A Lake County Fo 84.53 35 P P 04 44 20.8 +0.3
baz=325
E52A Mattawa 84.64 27 P P 04 44 20.3 -0.7
baz=330
BNI Bardonecchia 84.75 330 lAmb lAmb 04 44 27.1
comp=Z,13nm,1.1s
E53A Dumoine, Ponti 84.90 27 P P 04 44 22.0 -0.3
baz=331
J47A Sunmer 84.94 33 P P 04 44 23.2 +0.7
baz=327,SNR=9.5
E54A Lac Daplat, Po 85.01 26 P P 04 44 22.8 0.0
baz=332
K46A Dorr 85.01 34 P P 04 44 23.3 +0.4
baz=326
D55A Sainte-Anne-du 85.04 25 P P 04 44 23.1 +0.1
baz=333
WMOK Wichita Mounta 85.08 47 P P 04 44 24.1 +0.6
baz=319,SNR=7.1
M44A Midewin, Midew 85.12 36 lAmb lAmb 04 44 24.8
comp=Z,22nm,0.9s
ALGO Algonquin Park 85.14 27 P P 04 44 23.1 -0.4
baz=331
I49A Point Hope 85.14 31 P P 04 44 23.9 +0.4
baz=328
HDIL Hopedale 85.24 37 P P 04 44 24.4 +0.3
baz=324,SNR=5.7
D56A ZEC Mazanza, M 85.24 25 P P 04 44 24.2 +0.2
baz=333
J48A Bridge Port 85.31 32 P P 04 44 25.1 +0.7
baz=327
SSB Saint Sauveur 85.32 332 P P 04 44 24.3 -0.2
SSB pmax pmax
comp=Z,8.0nm,0.8s
SSB Saint Sauveur 85.32 332 P P 04 44 24.3 -0.2
SSB lAmb lAmb 04 44 25.6
comp=Z,8.3nm,0.8s
K47A Vermontville 85.34 33 P P 04 44 24.9 +0.4
baz=327
L46A Eue Claire 85.35 34 P P 04 44 25.0 +0.4
baz=326
E55A Montcerf-Lytto 85.36 26 P P 04 44 24.5 0.0
baz=332
TIP Timpagrande 85.36 321 ⇑P P 04 44 24.8 0.0
TIP Timpagrande 85.36 321 lAmb lAmb 04 44 26.7
comp=Z,13nm,1.0s
D57A Chemin Vers le 85.54 24 P P 04 44 25.7 +0.3
baz=334,SNR=6.1
LATQ La Tuque 85.54 23 P P 04 44 25.2 -0.3
baz=334
K48A Perry 85.59 33 P P 04 44 26.4 +0.7
baz=327,SNR=11
E56A St. Veronique 85.61 25 P P 04 44 25.9 +0.1
baz=333,SNR=6.7
G54A Lake Saint Pet 85.61 27 P P 04 44 25.5 -0.4
baz=331
G53A Haliburton 85.67 28 P P 04 44 25.4 -0.7
baz=331
X34A Smith Ranch, M 85.70 46 lAmb lAmb 04 44 28.8
comp=Z,9.0nm,0.9s
D58A Chemin du LacG 85.77 23 P P 04 44 25.8 -0.9
baz=334
TUL1 Leonard 85.77 44 lAmb lAmb 04 44 28.1
comp=Z,7.9nm,0.5s
TUL1 Leonard 85.77 44 P P 04 44 27.4 +0.6
baz=321
F55A Otter Lake 85.81 26 P P 04 44 26.8 0.0
baz=332
L47A Sherwood 85.84 34 P P 04 44 27.3 +0.3
baz=326,SNR=6.5
K49A Clarkson 85.87 32 P P 04 44 28.0 +0.8
baz=328
I51A Listowel 85.94 30 P P 04 44 27.8 +0.3
baz=329
E57A Chemin Saint G 86.00 25 P P 04 44 27.9 +0.1
baz=334
PPT Papeete 86.08 118 LR LR 05 14 07.5
comp=Z,54nm,21.6s,baz=347,slow=29
PPT2 Papeete2 86.09 118 eLR LR 05 11 35.0
comp=Z,174nm,26.2s,baz=313
PPT2 Papeete2 86.09 118 eT T 06 18 46.9
comp=Z,6.8nm,0.3s
H53A Bobcaygeon 86.16 28 P P 04 44 28.7 +0.1
baz=331
L48A N Adams 86.18 33 P P 04 44 29.4 +0.6
baz=327,SNR=10.0
ABTX Abilene, Hawle 86.20 48 lAmb lAmb 04 44 30.5
comp=Z,8.7nm,0.9s
ABTX Abilene, Hawle 86.20 48 P P 04 44 29.9 +0.8
baz=319
G55A Calabogie 86.20 27 P P 04 44 28.4 -0.4
baz=332
K50A Casco 86.20 32 P P 04 44 29.5 +0.7
baz=328
TXAR Lajitas Array 86.30 53 P P 04 44 31.4 +1.8
comp=Z,7.0nm,0.7s,baz=296,slow=3.5,SNR=101
E58A La Victoria 86.30 24 P P 04 44 29.4 +0.2
baz=334,SNR=5.5
L49A Milan 86.31 33 P P 04 44 30.1 +0.7
baz=327,SNR=5.6
CCM Cathedral Cave 86.35 40 P P 04 44 28.8 -0.8
CCM pmax pmax
comp=Z,20nm,1.0s
CCM Cathedral Cave 86.35 40 P P 04 44 28.8 -0.8
CCM lAmb lAmb 04 44 31.0
comp=Z,20nm,1.0s
CCM Cathedral Cave 86.35 40 P P 04 44 30.4 +0.8
baz=323
SFIN Lafayette 86.36 36 P P 04 44 30.2 +0.6
baz=325
D61A St Aubert, Com 86.44 22 P P 04 44 30.0 +0.1
baz=336
M48A Edgerton 86.45 34 lAmb lAmb 04 44 31.5
comp=Z,18nm,1.1s
M48A Edgerton 86.45 34 P P 04 44 30.7 +0.6
baz=327
D60A Saint Jean D'O 86.50 22 P P 04 44 30.3 +0.1
baz=336
TAOE Nuku Hiva Isla 86.50 105 eT T 06 19 31.0
comp=Z,106nm,0.3s
N47A Urbana 86.54 35 P P 04 44 30.9 +0.4
baz=326
MGMO Mountain Grove 86.57 41 lAmb lAmb 04 44 31.9
comp=Z,7.3nm,0.8s
F58A St-Lin Laurent 86.59 25 P P 04 44 31.3 +0.7
baz=334
J52A Paris 86.62 30 P P 04 44 31.7 +0.8
baz=330
H55A Tweed 86.66 27 P P 04 44 31.4 +0.3
baz=332
L50A Kingsville 86.75 32 P P 04 44 32.1 +0.6
baz=328
M49A Liberty Center 86.76 33 P P 04 44 32.1 +0.5
baz=327
HPIG 86.82 56 lAmb lAmb 04 44 34.7
comp=Z,6.8nm,0.8s
N48A Decatur 86.84 34 P P 04 44 32.5 +0.5
baz=327
D62A Allapoint, All 86.86 21 lAmb lAmb 04 44 33.4
comp=Z,13nm,0.7s
D62A Allapoint, All 86.86 21 P P 04 44 32.5 +0.5
baz=337
G57A Newington 86.90 26 P P 04 44 32.3 +0.1
baz=333
U40A Yellville 86.91 42 lAmb lAmb 04 44 33.6
comp=Z,15nm,0.8s
U40A Yellville 86.91 42 P P 04 44 32.7 +0.2
baz=322,SNR=14
F59A Saint Guilaume 86.92 24 P P 04 44 32.7 +0.4
baz=334
K52A Tillsonburg 86.93 30 P P 04 44 33.0 +0.6
baz=329
H56A Elgin 86.94 27 P P 04 44 32.6 +0.2
baz=332
N49A Columbus Grove 87.14 34 lAmb lAmb 04 44 35.1
comp=Z,15nm,1.1s
N49A Columbus Grove 87.14 34 P P 04 44 34.3 +0.8
baz=327
D63A Stockholm 87.15 21 P P 04 44 33.7 +0.3
baz=338
G58A Ormstown 87.16 25 P P 04 44 33.6 +0.2
baz=334
M50A Fremont 87.20 33 P P 04 44 34.5 +0.8
baz=328
O48A Farmland 87.29 35 P P 04 44 34.7 +0.5
baz=327
F61A St Evariste 87.34 23 P P 04 44 35.3 +1.0
baz=336
H57A Richville 87.34 26 P P 04 44 34.8 +0.4
baz=333
W39A Magazine 87.35 43 P P 04 44 35.4 +0.8
baz=322
G59A Clarenceville 87.49 25 P P 04 44 35.8 +0.8
baz=334
M51A Elyria 87.60 32 P P 04 44 36.3 +0.7
baz=328
E63A Oxbow 87.64 21 P P 04 44 36.2 +0.5
baz=338
N50A Nevada 87.69 33 P P 04 44 36.9 +0.8
baz=328
O49A Covington 87.69 34 P P 04 44 36.4 +0.2
baz=327
H59A Cadyville 87.72 25 P P 04 44 36.0 -0.2
baz=334
M52A Chesterland 87.75 31 P P 04 44 37.0 +0.7
baz=329
PBMO Poplar Bluff 87.75 40 lAmb lAmb 04 44 38.7
comp=Z,22nm,1.1s
ERPA Erie 87.77 30 lAmb lAmb 04 44 38.9
comp=Z,10nm,0.8s
ERPA Erie 87.77 30 P P 04 44 36.9 +0.4
baz=330
H58A Gabriels 87.77 25 P P 04 44 36.7 +0.3
baz=334
E64A Bridgewater 87.80 21 P P 04 44 36.8 +0.3
baz=338
G61A St-Isidore-de- 87.81 23 P P 04 44 37.4 +0.8
baz=335
L53A Girard 87.81 31 P P 04 44 37.3 +0.7
baz=330
K54A Basiliko Farm, 87.83 29 P P 04 44 36.9 +0.2
baz=331
P48A Milroy 87.84 35 P P 04 44 37.1 +0.3
baz=326
N51A Ashland 87.88 32 P P 04 44 37.3 +0.3
baz=328
WHTX Lake Whitney, 87.88 47 P P 04 44 37.7 +0.5
baz=320
L54A Sinclairville 87.92 30 P P 04 44 37.5 +0.3
baz=330
K55A Perry 87.95 29 P P 04 44 37.6 +0.3
baz=331
MIAR Mount Ida 87.97 43 lAmb lAmb 04 44 39.3
comp=Z,9.7nm,0.8s
MIAR Mount Ida 87.97 43 P P 04 44 38.3 +0.8
baz=322,SNR=6.6
O50A Cable 88.02 34 P P 04 44 38.3 +0.6
baz=328,SNR=7.3
WHAR Wooly Hollow 88.03 42 lAmb lAmb 04 44 39.2
comp=Z,12nm,0.8s
M53A WI Miller and 88.10 31 P P 04 44 38.6 +0.6
baz=329
H60A Morristown 88.11 24 P P 04 44 38.6 +0.6
baz=335
F63A Nahmakanta, Br 88.12 22 P P 04 44 38.5 +0.5
baz=337
W41B Gary Mavity, V 88.14 42 P P 04 44 39.0 +0.7
baz=323
Q48A North Vernon 88.15 36 P P 04 44 38.8 +0.5

	baz=326						
G62A	**West of Eustis**	88.16	23	P	P	04 44 38.6	+0.4
	baz=336						
F64A	**Sherman**	88.17	21	P	P	04 44 38.6	+0.3
	baz=338						
ACSO	**Alum Creek Sta**	88.21	33	P	P	04 44 39.1	+0.5
	baz=328,SNR=6.4						
N52A	**McGinn's Farm,**	88.24	32	P	P	04 44 39.5	+0.8
	baz=329						
L55A	**Hinsdale**	88.29	29	P	P	04 44 39.5	+0.5
	baz=331						
J58A	**Remsen**	88.36	27	P	P	04 44 39.7	+0.5
	baz=333						
H61A	**Lyndonville**	88.37	24	P	P	04 44 39.9	+0.6
	baz=335						
X40A	**Basin Creek Fa**	88.39	43	IAmb	IAmb	04 44 41.4	
	comp=Z,4.6nm,0.8s						
X40A	**Basin Creek Fa**	88.39	43	P	P	04 44 40.3	+0.8
	baz=322						
P50A	**Jamestown**	88.40	34	P	P	04 44 40.0	+0.5
	baz=328,SNR=5.7						
M54A	**Oil Creek Stat**	88.42	30	P	P	04 44 40.2	+0.7
	baz=330,SNR=5.6						
I59A	**Olmsteadville**	88.43	26	P	P	04 44 39.6	0.0
	baz=334						
O51A	**Pataskala**	88.44	33	P	P	04 44 40.2	+0.6
	baz=328						
Q49A	**Aurora**	88.44	35	P	P	04 44 40.4	+0.7
	baz=327						
PKME	**Peaks-Kenny Pk**	88.47	22	P	P	04 44 40.0	+0.3
	baz=337						
WCI	**Wyandotte Cave**	88.48	36	P	P	04 44 40.1	+0.2
WCI				pmax	pmax		
	comp=Z,13nm,0.9s						
WCI	**Wyandotte Cave**	88.48	36	P	P	04 44 40.1	+0.2
WCI				IAmb	IAmb	04 44 41.5	
	comp=Z,13nm,0.8s						
WCI	**Wyandotte Cave**	88.48	36	P	P	04 44 40.4	+0.5
	baz=326						
J59A	**Piesco**	88.52	26	P	P	04 44 40.5	+0.5
	baz=333						
H62A	**Milan**	88.56	23	P	P	04 44 40.7	+0.5
	baz=336						
I60A	**Shoreham**	88.57	25	P	P	04 44 40.9	+0.8
	baz=334						
N53A	**Lisbon**	88.58	32	P	P	04 44 40.9	+0.6
	baz=329,SNR=6.9						
G64A	**Maxfield**	88.63	22	P	P	04 44 40.9	+0.5
	baz=337						
L56A	**Greenwood**	88.65	29	P	P	04 44 40.9	+0.2
	baz=331						
K58A	**Earlville**	88.76	27	P	P	04 44 41.5	+0.4
	baz=333						
N54A	**Moraine State**	88.77	31	P	P	04 44 42.0	+0.8
	baz=330						
O52A	**Adamsville**	88.77	33	P	P	04 44 41.8	+0.5
	baz=329,SNR=5.1						
M55A	**Ridgway**	88.79	30	P	P	04 44 42.0	+0.7
	baz=331,SNR=5.9						
P51A	**Williamsport**	88.81	34	P	P	04 44 42.0	+0.6
	baz=328						
I61A	**Oroboro, Fairl**	88.83	24	P	P	04 44 42.2	+0.7
	baz=335						
O53A	**New Philadelph**	88.91	32	P	P	04 44 42.5	+0.6
	baz=329,SNR=7.1						
Q50A	**Georgetown**	88.97	35	P	P	04 44 43.0	+0.8
	baz=327						
M56A	**Emporium**	88.99	29	P	P	04 44 42.9	+0.6
	baz=331						
K59A	**Cooperstown**	89.02	27	P	P	04 44 42.9	+0.5
	baz=333						
H64A	**Troy**	89.06	22	P	P	04 44 43.1	+0.6
	baz=337						
P52A	**Corning**	89.06	33	P	P	04 44 42.8	+0.2
	baz=328						
J60A	**Lant Hill Farm**	89.07	25	P	P	04 44 43.1	+0.5
	baz=334						
H06N1	**SOCORRO T-PHAS**	89.08	65	T	T	06 23 32.3	
	SNR=11						
Q51A	**Peebles**	89.08	34	P	P	04 44 43.5	+0.8
	baz=328,SNR=11						
BINY	**Binghamton**	89.15	28	P	P	04 44 43.2	+0.3
	baz=332						
I63A	**Otisfield**	89.21	23	P	P	04 44 44.2	+1.0
	baz=336						
J61A	**Chester**	89.25	25	P	P	04 44 44.4	+1.0
	baz=335						
S49A	**Springfield**	89.29	36	P	P	04 44 44.3	+0.6
	baz=327,SNR=5.3						
R50A	**Paris**	89.29	35	IAmb	IAmb	04 44 45.9	
	comp=Z,9.7nm,0.9s						
R50A	**Paris**	89.29	35	P	P	04 44 44.7	+1.0
	baz=327						
O54A	**Avella**	89.29	32	P	P	04 44 44.6	+0.9
	baz=330,SNR=12						
N55A	**Marion Center**	89.31	30	P	P	04 44 44.5	+0.8
	baz=330,SNR=8.7						
L58A	**Harry Jones Me**	89.33	28	P	P	04 44 44.4	+0.6
	baz=332						
N56A	**West Decatur**	89.45	30	P	P	04 44 45.4	+1.0
	baz=331,SNR=7.1						
L59A	**Walton**	89.48	27	P	P	04 44 45.1	+0.5
	baz=333,SNR=6.0						
K60A	**Five Rivers En**	89.48	26	P	P	04 44 44.8	+0.3
	baz=334						
P53A	**Whipple**	89.49	33	P	P	04 44 45.2	+0.6
	baz=329						
M57A	**Sunshine Farm,**	89.50	29	P	P	04 44 45.2	+0.6
	baz=332,SNR=8.3						
WVT	**Waverly**	89.51	39	P	P	04 44 45.4	+0.6
	baz=325						
Q52A	**Bidwell**	89.58	33	P	P	04 44 45.0	0.0
	baz=328						
J62A	**Henniker**	89.59	24	P	P	04 44 45.7	+0.7
	baz=335						
R51A	**Hillsboro**	89.59	35	P	P	04 44 46.0	+0.9
	baz=328						
K61A	**Williamstown**	89.63	26	P	P	04 44 46.0	+0.7
	baz=334						
O55A	**Ligonier**	89.69	31	P	P	04 44 46.0	+0.5
	baz=330,SNR=6.1						
M58A	**Price's Panora**	89.71	28	P	P	04 44 46.2	+0.6
	baz=332,SNR=5.9						
T49A	**Edmonton**	89.75	37	IAmb	IAmb	04 44 47.6	
	comp=Z,10.0nm,1.0s						
T49A	**Edmonton**	89.75	37	P	P	04 44 46.4	+0.6
	baz=326						
P54A	**Burton**	89.75	32	P	P	04 44 46.6	+0.8
	baz=330,SNR=6.0						
S50A	**Richmond**	89.76	36	P	P	04 44 46.5	+0.6
	baz=327						
J63A	**Strafford**	89.77	24	P	P	04 44 46.5	+0.7
	baz=336						
SSPA	**Standing Stone**	89.84	30	P	P	04 44 45.8	-0.4
SSPA	**Standing Stone**	89.84	30	P	P	04 44 47.0	+0.8
	baz=331						
N57A	**Milroy**	89.86	29	P	P	04 44 47.2	+0.9
	baz=331,SNR=12						
O56A	**Blue Knob Stat**	89.91	30	P	P	04 44 47.6	+1.0
	baz=331,SNR=10						
M59A	**Waymart**	89.92	28	P	P	04 44 46.6	0.0
	baz=333						
MCWV	**Mont Chateau**	89.95	31	IAmb	IAmb	04 44 49.0	
	comp=Z,8.1nm,0.8s						
MCWV	**Mont Chateau**	89.95	31	P	P	04 44 47.8	+1.0
	baz=330						
R52A	**Catlettsburg**	89.96	34	P	P	04 44 47.5	+0.7
	baz=328						
L61A	**Hillsdale 1, H**	89.97	26	P	P	04 44 47.5	+0.7
	baz=334						
Q53A	**Leroy**	89.97	33	P	P	04 44 47.6	+0.7
	baz=329,SNR=5.2						
L61B	**Northampton**	90.02	25	P	P	04 44 47.7	+0.7
	baz=335						
P55A	**Reedsville**	90.09	32	P	P	04 44 48.4	+1.0
	baz=330						
N58A	**Sunbury**	90.09	29	P	P	04 44 48.2	+0.8
	baz=332,SNR=6.5						
T50A	**Nancy**	90.12	36	P	P	04 44 48.3	+0.7
	baz=327,SNR=5.1						
U49A	**Red Boiling Sp**	90.13	37	P	P	04 44 48.2	+0.6
	baz=326						
Q54A	**Coxs Mills**	90.14	32	P	P	04 44 48.4	+0.8
	baz=329						
S51A	**Beattyville**	90.14	35	P	P	04 44 48.2	+0.5
	baz=328						
K63A	**Dunstable**	90.17	24	P	P	04 44 48.4	+0.8
	baz=335						
O57A	**Amberson**	90.31	30	P	P	04 44 49.6	+1.2
	baz=331						
TBI	**Tubuai**	90.31	122	*e*LR	LR	05 13 32.9	
	comp=Z,87nm,33.5s						
TBI	**Tubuai**	90.31	122	*e*T	T	06 23 59.1	
	comp=Z,13nm,0.3s						
HRV	**Adam Dziewonsk**	90.32	25	P	P	04 44 48.8	+0.4
	baz=335						
N59A	**State Game Lan**	90.36	28	P	P	04 44 49.6	+0.9
	baz=333,SNR=5.8						
M60A	**Port Jervis**	90.39	27	P	P	04 44 49.0	+0.3
	baz=333						
Q55A	**Buckhannon**	90.43	32	P	P	04 44 49.7	+0.6
	baz=330						
P56A	**Dayton Farm, R**	90.47	31	P	P	04 44 49.9	+0.8
	baz=331						
T51A	**Gray**	90.56	36	P	P	04 44 50.3	+0.7
	baz=327						
U50A	**Jamestown**	90.63	36	P	P	04 44 50.8	+0.8
	baz=327						
N60A	**Cedar Hill Far**	90.63	28	P	P	04 44 50.1	+0.2
	baz=333						
O58A	**Lewisberry**	90.64	29	P	P	04 44 51.0	+1.0
	baz=332						
M61A	**Granite Spring**	90.69	27	P	P	04 44 50.5	+0.4
	baz=334						
V49A	**McMinnville**	90.69	38	P	P	04 44 50.8	+0.5
	baz=326						
O59A	**Robesonia**	90.75	29	P	P	04 44 50.8	+0.4
	baz=332						
R54A	**Victor**	90.77	33	P	P	04 44 50.9	+0.2
	baz=329						
T52A	**Hallie**	90.85	35	P	P	04 44 51.1	+0.1
	baz=328						
PAL	**Palisades**	90.92	27	P	P	04 44 51.6	+0.4
	baz=334						
N61A	**South Mountain**	91.01	27	P	P	04 44 52.3	+0.6
	baz=334						
O60A	**Telford**	91.02	28	P	P	04 44 52.1	+0.4
	baz=333						
U51A	**La Follette**	91.02	36	P	P	04 44 52.5	+0.7
	baz=327						
R55A	**Marlinton**	91.03	32	P	P	04 44 52.5	+0.6
	baz=330						
Q57A	**Strasburg**	91.04	31	P	P	04 44 52.4	+0.5
	baz=331						
W49A	**Belvidere**	91.06	38	P	P	04 44 52.4	+0.4
	baz=326						
P58A	**Pank, Wackersv**	91.06	30	P	P	04 44 52.0	+0.1
	baz=332						
TZTN	**Tazewell**	91.09	36	P	P	04 44 52.7	+0.5
	baz=328						
V51A	**Loudon**	91.36	36	P	P	04 44 54.0	+0.7
	baz=327						
P60A	**Greenville**	91.38	29	P	P	04 44 53.5	+0.1
	baz=333						
W50A	**Signal Mountai**	91.43	37	P	P	04 44 54.6	+0.9
	baz=327						
T54A	**Tazewell**	91.48	34	P	P	04 44 54.7	+0.7
	baz=329						
KEST	**Kesra**	91.56	324	P	P	04 44 54.1	-0.3
	comp=Z,3.3nm,0.8s,baz=285,slow=5.2,SNR=5.0						
KEST				LR	LR	05 30 50.4	
	comp=Z,96nm,19.0s,baz=282,slow=39						
R57A	**Stanardsville**	91.64	31	P	P	04 44 55.4	+0.8
	baz=331						
U53A	**Fall Branch**	91.66	35	P	P	04 44 55.7	+1.0
	baz=328						
T55A	**Pulaski**	91.76	33	P	P	04 44 56.1	+0.8
	baz=329						
R58A	**Rapidan**	91.84	31	P	P	04 44 56.4	+0.9
	baz=331						
T56A	**Rocky Mt**	92.14	33	P	P	04 44 57.4	+0.4
	baz=330						
U55A	**TA2, Sparta**	92.18	34	P	P	04 44 57.9	+0.7
	baz=329						
S58A	**Poland Farm, P**	92.42	31	P	P	04 44 58.4	+0.2
	baz=331						
LRAL	**Lakeview Retre**	92.43	40	P	P	04 44 58.5	+0.2
	baz=326						
U56A	**King**	92.59	33	P	P	04 44 59.6	+0.5
	baz=330						
Z50A	**Ashland**	92.76	39	P	P	04 45 00.3	+0.3
	baz=326						
W54A	**Cherokee Point**	92.91	35	P	P	04 45 01.1	+0.5
	baz=328						
X53A	**Estanollee**	92.91	36	P	P	04 45 01.2	+0.7
	baz=328						
U57A	**Blanch**	92.94	33	P	P	04 45 01.3	+0.6
	baz=330						
V56A	**Mocksville**	93.00	34	P	P	04 45 01.6	+0.6
	baz=330						
Y52A	**Lilburn**	93.11	37	P	P	04 45 02.0	+0.6
	baz=327						
ESDC	**Sonseca Array**	93.16	335	P	P	04 45 01.9	+0.2
	comp=Z,1.9nm,0.7s,baz=14,slow=4.2,SNR=14						
ESDC				PP	PP	04 48 45.4	+0.7
	comp=Z,0.2nm,0.4s,baz=10,slow=8.1,SNR=3.7						
ESDC				LR	LR	05 30 51.7	
	comp=Z,45nm,18.9s,baz=240,slow=38						
KMBO	**Kilima Mbogo**	102.17	280	*i* P	Pdif	04 45 44.5	+1.6
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMBO	**Kilima Mbogo**	102.17	280	P	Pdif	04 45 43.8	+0.9
	comp=Z,1.5nm,0.7s,baz=35,slow=9.4,SNR=3.7						
KMBO	**Kilima Mbogo**	102.17	280		Pdif	04 45 41.0	-1.9
TORD	**Torodi Ar. Bea**	114.35	318	PKP	PKiKP	04 50 27.1	-0.3
	comp=Z,0.6nm,0.3s,baz=21,slow=2.2,SNR=21						
TORD				PP	PP	04 51 19.1	-4.0
	comp=Z,3.7nm,1.1s,baz=28,slow=5.2,SNR=9.5						
DBIC	**Dimbokro**	123.14	320	PKP	PKPdf	04 50 44.4	0.0
	comp=Z,2.4nm,0.6s,baz=41,slow=3.6,SNR=6.3						
DBIC	**Dimbokro**	123.14	320		PKPdf	04 50 43.8	-0.6
MAW	**Mawson**	124.49	207	PKP	PKiKP	04 50 45.6	+0.2
	comp=Z,3.8nm,0.2s,baz=72,slow=3.2,SNR=10						
QSPA	**South Pole Qui**	131.82	180	PKP	PKiKP	04 50 59.9	-0.3
	comp=Z,1.5nm,0.9s,baz=279,slow=2.2,SNR=7.1						
QSPA				pPKP	pPKPdf	04 51 19.0	+1.3
	comp=Z,3.4nm,1.0s,baz=318,slow=2.2,SNR=4.7						
QSPA	**South Pole Qui**	131.82	180		PKiKP	04 51 00.0	-0.3
LPAZ	**La Paz**	143.15	55	PKP	PKPdf	04 51 22.0	-0.3
	comp=Z,1.3nm,0.6s,baz=359,slow=4.7,SNR=4.2						
PB11	**IPOC Station P**	144.78	61		PKPdf	04 51 24.3	-0.2
GO01	**Chusmiza**	145.01	60		PKPab	04 51 25.0	+0.2
SNAA	**Sanae**	145.85	199	PKPdf	PKPab	04 51 25.8	-0.1
SNAA	**Sanae**	145.85	199	PKPbc	PKPbc	04 51 25.4	0.0
	comp=Z,4.2nm,0.6s,baz=175,slow=2.7,SNR=40						
SIV	**San Ignacio**	146.95	45	PKPbc	PKPbc	04 51 29.4	-0.8
	comp=Z,13nm,0.7s,baz=318,slow=1.8,SNR=50						
SIV				pPKPbc	pPKPdf	04 51 47.2	+0.6
	comp=Z,15nm,0.9s,baz=330,slow=1.9,SNR=7.9						
LVC	**Limon Verde**	147.28	64	PKPbc	PKPbc	04 51 31.4	+0.1
	comp=Z,3.2nm,0.6s,baz=346,slow=8.3,SNR=3.9						
LVC				pPKPbc	pPKPbc	04 51 49.4	-0.3
	comp=Z,3.1nm,0.5s,baz=221,slow=4.8,SNR=3.4						
LVC	**Limon Verde**	147.28	64		PKPbc	04 51 30.6	-0.8
VNA3	**Neumayer Olymp**	147.68	196	PKPdf	PKPdf	04 51 26.8	-0.9
VNA1	**Neumayer--Stat**	147.82	198	PKPdf	PKPbc	04 51 31.7	+0.8
BDFB	**Brasilia**	152.09	22	PKIKP	PKPdf	04 51 34.3	-2.1
BDFB						04 51 52.7	
BDFB	**Brasilia**	152.09	22	PKPbc	PKiKP	04 51 44.0	+0.6
	comp=Z,12nm,0.8s,baz=341,slow=3.8,SNR=14						
BDFB				PKPab	pPKPdf	04 51 53.9	-1.0
	comp=Z,7.1nm,0.4s,baz=286,slow=1.4,SNR=14						
BDFB	**Brasilia**	152.09	22	PKPdf	PKPdf	04 51 34.3	-2.1
BDFB					PKiKP	04 51 43.7	+0.3
BDFB					PKPab	04 51 52.7	0.0
CFA	**Coronel Fontan**	153.28	77	PKP	PKPdf	04 51 36.9	-0.8
	comp=Z,0.6nm,0.3s,baz=282,slow=6.3,SNR=7.8						
CFA				PKPbc	PKiKP	04 51 45.7	+0.3
	comp=Z,2.7nm,0.4s,baz=277,slow=2.0,SNR=8.6						
PLCA	**Paso Flores**	155.14	98	PKPab	PKPab	04 52 06.5	+1.3
	comp=Z,2.0nm,0.8s,baz=269,slow=4.2,SNR=3.7						
CPUP	**Villa Florida**	157.27	53	PKPab	PKPab	04 52 14.6	+0.1
	comp=Z,2.1nm,1.1s,baz=351,slow=5.8,SNR=4.8						

*SIGU **09** 04:45:57.4±0.1,48°.1N±0°.7×26°.5E±0°.7, h6km, mb1.9/3*
*BUC **09** 04:45:58.2±0.5,48°.05N×26°.53E, h6km,2km, ml2.5/8,*
Error ellipse: s-maj=3.9km s-min=2.1km az=172.0
ISC 09 04:45:58.0±1.1,48°.09N±0°.02×26°.52E±0°.02,h7km±10km,
n39,σ0s47/58,25C-17D,Ukraine-Moldova-Southwestern
Russia region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHRU	**Chernivtsi**	**0.45**	**297**	*e*P	**Pg**	**04 46 06.7**	**+0.1**
CHRU				Pm		04 46 07.3	
CHRU				*i* S	**Sg**	**04 46 12.1**	**-0.4**
CHRU				Sm		04 46 12.2	
KMPD	**K-Podol'skiy**	**0.47**	**356**	*i* P	**Pg**	**04 46 07.7**	**+0.6**
KMPD				*i* S	**Sg**	**04 46 14.0**	**+0.7**
PRAR	**RASCA**	**0.76**	**195**	P	**Pg**	**04 46 12.7**	**+0.2**
PRAR	**RASCA**	**0.76**	**195**	P	**Pg**	**04 46 12.7**	**+0.2**
NDNU	**Novodnistrovsk**	**0.76**	**48**	*i* P	**Pb**	**04 46 13.3**	**-0.2**
NDNU				Pm		04 46 13.6	
NDNU				*i* S	**Sb**	**04 46 23.4**	**-0.6**
NDNU				Sm		04 46 23.6	
KSV	**Kosov**	**0.99**	**283**	*e*P	**Pg**	**04 46 16.9**	**-0.1**
KSV				Pm		04 46 19.5	
KSV				*i* S	**Sg**	**04 46 29.5**	**-0.4**
KSV				Sm		04 46 30.7	
BURAR	**Bucovina Array**	**1.00**	**242**	P	**Pg**	**04 46 17.2**	**+0.1**
BURAR				S	**Sb**	**04 46 30.7**	**-0.3**
BURAR	**Bucovina Array**	**1.00**	**242**	P	**Pg**	**04 46 17.2**	**+0.1**
HORU	**Horodok**	**1.12**	**357**	*i* P	**Pg**	**04 46 19.3**	**-0.2**
HORU				*i* S	**Sg**	**04 46 33.7**	**-0.4**
BIZ	**Bicaz**	**1.19**	**194**	P	**Pb**	**04 46 20.4**	**-0.4**
BIZ				S	**Sg**	**04 46 36.0**	**-0.1**
BIZ	**Bicaz**	**1.19**	**194**	P	**Pb**	**04 46 20.4**	**-0.4**
SORM	**Soroca**	**1.23**	**87**	P	**Pn**	**04 46 21.4**	**-0.2**
SORM				S	**Sb**	**04 46 37.6**	**0.0**
SORM	**Soroca**	**1.23**	**87**	P	**Pn**	**04 46 21.4**	**-0.2**
SORM				S	**Sb**	**04 46 37.6**	**0.0**
SORM	**Soroca**	**1.23**	**87**	P	**Pn**	**04 46 21.4**	**-0.2**
STNU	**Starunia**	**1.48**	**295**	*i* P	**Pn**	**04 46 25.0**	**0.0**
STNU				*i* S	**Sn**	**04 46 44.4**	**-0.2**
RAKU	**Rahkiv**	**1.58**	**268**	*e*S	**Sb**	**04 46 47.1**	**-0.5**
TESR	**Tescani**	**1.58**	**177**	P	**Pn**	**04 46 26.6**	**+0.1**
TESR				S	**Sb**	**04 46 47.9**	**+0.1**
TESR	**Tescani**	**1.58**	**177**	P	**Pn**	**04 46 26.6**	**+0.1**
VASR	**Vaslui**	**1.69**	**149**	P	**Pn**	**04 46 28.0**	**+0.1**
VASR				S	**Sn**	**04 46 49.3**	**-0.5**
VASR	**Vaslui**	**1.69**	**149**	P	**Pn**	**04 46 28.0**	**+0.1**
ARCR	**ARCALIA**	**1.78**	**236**	P	**Pn**	**04 46 29.5**	**+0.4**
ARCR				S	**Sb**	**04 46 53.2**	**-0.1**
ARCR	**ARCALIA**	**1.78**	**236**	P	**Pn**	**04 46 29.5**	**+0.4**
MILM	**Milestii Mici**	**1.95**	**126**	P	**Pn**	**04 46 32.2**	**+0.7**
MILM				S	**Sn**	**04 46 56.6**	**+0.4**
MILM	**Milestii Mici**	**1.95**	**126**	P	**Pn**	**04 46 32.2**	**+0.7**
MILM				S	**Sn**	**04 46 56.6**	**+0.4**
MILM	**Milestii Mici**	**1.95**	**126**	P	**Pn**	**04 46 32.2**	**+0.7**
BIR	**Birlad**	**1.98**	**157**	S	**Sb**	**04 46 59.0**	**-0.2**
BIR	**Birlad**	**1.98**	**157**	S	**Sb**	**04 46 59.0**	**-0.2**
MORS	**Morshin**	**2.03**	**302**	*e*S	**Sn**	**04 46 58.4**	**+0.3**
MEZ	**Mezhgor'ye**	**2.05**	**283**	*e*S	**Sn**	**04 46 59.5**	**+0.8**
VRI	**Vrincioaia**	**2.23**	**176**	P	**Pn**	**04 46 35.9**	**+0.5**
VRI				S	**Sn**	**04 47 04.5**	**+1.3**
VRI	**Vrincioaia**	**2.23**	**176**	P	**Pn**	**04 46 35.9**	**+0.5**
PLOR	**Plostina**	**2.25**	**178**	S	**Sn**	**04 47 02.9**	**-0.7**
PLOR	**Plostina**	**2.25**	**178**	S	**Sn**	**04 47 02.9**	**-0.7**
CJR	**Cluj-Napoca**	**2.42**	**236**	P	**Pn**	**04 46 38.9**	**+0.9**
CJR				S	**Sn**	**04 47 08.5**	**+0.7**
CJR	**Cluj-Napoca**	**2.42**	**236**	P	**Pn**	**04 46 38.9**	**+0.9**
MLR	**Muntele Rosu**	**2.63**	**189**	P	**Pn**	**04 46 40.9**	**-0.1**
MLR				S	**Sn**	**04 47 12.8**	**-0.5**
MLR	**Muntele Rosu**	**2.63**	**189**	P	**Pn**	**04 46 40.9**	**-0.1**
DRGR		**2.89**	**245**	P	**Pn**	**04 46 44.9**	**+0.4**
DRGR				S	**Sn**	**04 47 19.5**	**0.0**
DRGR		**2.89**	**245**	P	**Pn**	**04 46 44.9**	**+0.4**

*IDC **09** 04:47:15.9±0.9, 16°.54N×93°.85E, h0km, mb3.5/7,*
mb1 3.8/8, mb1mx3.5/52, mbtmp3.5/8, ML4.1/1, Error
ellipse: s-maj=41.6km s-min=20.3km az=42.0
ISC 09 04:47:21.2±0.9,16°.6N±0°.2×94°.00E±0°.10,h35km,n12,
σ0s88/10,mb3.8/7,Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**5.05**	**68**	Pn	**Pn**	**04 48 34.3**	**-0.2**
	1.6nm,0.3s,baz=252,slow=14,SNR=9.4						
CMAR				Sn	**Sn**	**04 49 31.5**	**-0.2**
	1.8nm,0.3s,baz=253,slow=28,SNR=4.1						
MKAR	**Makanchi Array**	**31.61**	**345**	P	**P**	**04 53 42.1**	**+1.4**
	0.1nm,0.3s,baz=172,slow=11,SNR=4.1						
H08S3	**Diego Garcia H**	**32.16**	**223**	T	T	05 27 31.0	
	baz=40,slow=76,SNR=16						
H08S2	**Diego Garcia H**	**32.17**	**223**	T	T	05 27 34.8	
	baz=40,slow=76,SNR=27						
H08S1	**Diego Carcia H**	**32.18**	**223**	T	T	05 27 31.5	
	baz=40,slow=76,SNR=17						
WRA	**Warramunga Arr**	**53.77**	**131**	P	**P**	**04 56 40.8**	**+0.3**
	0.9nm,0.5s,baz=310,slow=7.4,SNR=13						
ASAR	**Alice Springs**	**55.89**	**135**	P	**P**	**04 56 56.5**	**+0.7**
	0.4nm,0.5s,baz=314,slow=7.3,SNR=6.2						
AKASG	**Malin Array Be**	**61.36**	**319**	P	**P**	**04 57 32.1**	**-1.4**
	0.6nm,0.5s,baz=81,slow=6.9,SNR=3.3						
GERES	**GERESS Array B**	**71.32**	**317**	P	**P**	**04 58 37.5**	**0.0**
	0.6nm,0.7s,baz=90,slow=5.9,SNR=6.3						
ESDC	**Sonseca Array**	**85.51**	**310**	P	**P**	**04 59 56.0**	**+0.1**
	0.1nm,0.4s,baz=74,slow=4.3,SNR=2.7						
TORD	**Torodi Ar. Bea**	**88.47**	**283**	P	**P**	**05 00 11.0**	**+0.3**
	0.4nm,0.7s,baz=54,slow=3.8,SNR=2.5						
CPUP	**Villa Florida**	**151.69**	**245**	PKPbc	**PKPbc**	**05 07 11.8**	**-0.9**
	1.2nm,0.7s,baz=72,slow=4.2,SNR=3.8						

*MAN **09** 05:02:46.1, 7°.53N×126°.67E, h6km, MS3.3*
*IDC **09** 05:02:50.9±2.6, 6°.72N×126°.27E, h166km±14km, mb3.3/5,*
mb1 3.4/5, mb1mx3.1/31, mbtmp3.7/5, Error ellipse:
s-maj=108.6km s-min=17.1km az=73.0
ISC 09 05:02:50.5±1.3,6°.71N±0°.09×126°.4E±0°.2,h165km±9km,
n11,σ2s22/16,mb3.7/5,2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.86**	**295**	P	**Pn**	**05 03 15.5**	**-0.1**
	79nm,0.3s,baz=229,slow=9.3,SNR=2.5						
DAV				S	**Sn**	**05 03 35.4**	**+0.5**
	105nm,0.3s,baz=303,slow=22

	13nm,0.3s							
AKMS				AML	AML	05 26 10.8		
	13nm,0.3s							
ALFC	**Alefka**	**0.85**	**134**ǁ	*e*P	**Pb**	**05 25 52.3**	**+0.4**	
ALFC				AML	AML	05 26 02.2		
	29nm,0.2s							
ALFC				AML	AML	05 26 02.2		
	29nm,0.2s							
ALFC				AML	AML	05 26 02.3		
	23nm,0.2s							
ALFC				AML	AML	05 26 02.3		
	23nm,0.2s							
ALFC				S	**Sg**	**05 26 02.6**	**-0.6**	
LEF	**Lefka**	**1.05**	**126**	PG	**Pb**	**05 25 54.6**	**-0.8**	
LEF				SG	**Sb**	**05 26 06.9**	**-2.1**	
LEF	**Lefka**	**1.05**	**126**	Pg	**Pb**	**05 25 54.9**	**-0.5**	
LEF	**Lefka**	**1.05**	**126**	*i* P	**Pb**	**05 25 54.9**	**-0.5**	
TEKE	**Tekeli-Mersin**	**1.09**	**69**	PG	**Pb**	**05 25 55.8**	**-0.3**	
TEKE				SG	**Sb**	**05 26 09.9**	**-0.3**	
TEKE	**Tekeli-Mersin**	**1.09**	**69**	Pg	**Pb**	**05 25 56.0**	**-0.2**	
NATA	**Nata**	**1.13**	**149**	P	**Pg**	**05 25 58.3**	**+0.9**	
NATA				S	**Sb**	**05 26 10.5**	**-0.8**	
NATA				AML	AML	05 26 22.1		
	16nm,0.6s							
NATA				AML	AML	05 26 22.1		
	16nm,0.6s							
NATA				AML	AML	05 26 24.5		
	15nm,0.4s							
NATA				AML	AML	05 26 24.5		
	15nm,0.4s							
KEPZ	**Antalya-Kepez**	**1.17**	**350**	*i* P	**Pb**	**05 25 55.8**	**-1.6**	
BERE	**Bereket-Mersin**	**1.26**	**61**	PN	**Pn**	**05 25 58.7**	**0.0**	
BERE	**Bereket-Mersin**	**1.26**	**61**	Pn	**Pn**	**05 25 58.5**	**-0.1**	
SZAC	**Souni**	**1.30**	**139**	P	**Pg**	**05 26 00.5**	**-0.1**	
SZAC				S	**Sb**	**05 26 15.9**	**-0.2**	
SZAC				AML	AML	05 26 23.4		
	7.3nm,0.8s							
SZAC				AML	AML	05 26 23.4		
	7.3nm,0.8s							
SZAC				AML	AML	05 26 26.0		
	5.9nm,0.4s							
SZAC				AML	AML	05 26 26.0		
	5.9nm,0.4s							
AKUM	**Antalya-Kumluc**	**1.35**	**295**	*i* P	**Pb**	**05 25 59.9**	**-0.6**	
OREN	**Orenkoy-Mersin**	**1.38**	**70**	PN	**Pb**	**05 26 00.9**	**-0.1**	
ATHAL	**Athalassa**	**1.40**	**115**ǁ	*e*P	**Pn**	**05 26 00.2**	**-0.2**	
ATHAL				S	**Sn**	**05 26 16.8**	**-1.7**	
ATHAL				AML	AML	05 26 17.9		
	12nm,0.3s							
ATHAL				AML	AML	05 26 17.9		
	12nm,0.3s							
ATHAL				AML	AML	05 26 25.6		
	7.1nm,0.4s							
ATHAL				AML	AML	05 26 25.6		
	7.1nm,0.4s							
AKK1	**Akkuyu-Mersin**	**1.42**	**73**	PN	**Pb**	**05 26 01.6**	**-0.1**	
AKK2	**Akkuyu-Mersin**	**1.43**	**74**	PN	**Pb**	**05 26 01.5**	**-0.3**	
AKKU	**Akkuyu-Mersin**	**1.44**	**73**	PN	**Pb**	**05 26 01.6**	**-0.3**	
GULN	**MERSIN_Gulnar**	**1.44**	**72**	*i* P	**Pn**	**05 26 01.0**	**+0.1**	
CSS	**Mathiatis**	**1.44**	**123**	P	**Pn**	**05 26 00.3**	**-0.7**	
CSS				S	**Sn**	**05 26 16.0**	**-3.6**	
CSS	**Mathiatis**	**1.44**	**123**	PN	**Pn**	**05 26 00.3**	**-0.7**	
CSS	**Mathiatis**	**1.44**	**123**ǁ	*e*P	**Pn**	**05 26 00.1**	**-0.9**	
CSS				S	**Sn**	**05 26 16.3**	**-3.3**	
CSS				AML	AML	05 26 17.0		
	1.8nm,0.2s							
CSS				AML	AML	05 26 17.0		
	1.8nm,0.2s							
CSS				AML	AML	05 26 20.3		
	1.3nm,0.3s							
CSS				AML	AML	05 26 20.3		
	1.3nm,0.3s							
CSS	**Mathiatis**	**1.44**	**123**		**Pn**	**05 26 00.0**	**-0.9**	
CSS				Sn	**Sn**	**05 26 17.3**	**-2.3**	
TEPK	**Tepekoy-MERSIN**	**1.45**	**70**	PN	**Pb**	**05 26 01.9**	**-0.3**	
TEVE	**Tevekalti-Mers**	**1.46**	**62**	PN	**Pb**	**05 26 01.8**	**-0.6**	
ASGA	**Asgata**	**1.49**	**130**	P	**Pn**	**05 26 01.7**	**0.0**	
ASGA				S	**Sn**	**05 26 20.8**	**-0.1**	
ASGA				AML	AML	05 26 27.6		
	3.2nm,0.4s							
ASGA				AML	AML	05 26 27.6		
	3.2nm,0.4s							
ASGA				AML	AML	05 26 28.4		
	3.6nm,0.7s							
ASGA				AML	AML	05 26 28.4		
	3.6nm,0.7s							
AKIN	**Akıncılar- Kıb**	**1.51**	**119**	PN	**Pn**	**05 26 01.3**	**-0.6**	
YESI	**Yesilovacik-Me**	**1.52**	**72**	PN	**Pb**	**05 26 02.8**	**-0.5**	
TISA	**Tisan-Mersin**	**1.54**	**74**	PN	**Pb**	**05 26 03.5**	**-0.1**	
IKL	**Isikli**	**1.56**	**71**	PN	**Pb**	**05 26 03.5**	**-0.6**	
KARG	**Kargicak-Mersi**	**1.57**	**73**	PN	**Pb**	**05 26 03.6**	**-0.6**	
MVOU	**Mavrovouni**	**1.63**	**116**ǁ	*e*P	**Pn**	**05 26 02.6**	**-0.9**	
MVOU				S	**Sn**	**05 26 21.0**	**-3.2**	
MVOU				AML	AML	05 26 21.0		
	8.4nm,0.4s							
MVOU				AML	AML	05 26 21.0		
	8.4nm,0.4s							
MVOU				AML	AML	05 26 21.0		
	4.5nm,0.2s							
MVOU				AML	AML	05 26 21.0		
	4.5nm,0.2s							
KEBE	**Keben-Mersin**	**1.66**	**65**	PN	**Pb**	**05 26 05.2**	**-0.6**	
KORT	**Korkueli**	**1.74**	**316**	*i* P	**Pn**	**05 26 02.8**	**-2.5**	
SILI	**Silifke-Mersin**	**1.79**	**69**	PN	**Pb**	**05 26 07.0**	**-0.9**	
ELL	**Elmali**	**1.86**	**303**	P	**Pb**	**05 26 09.0**	**-0.3**	
ELL				S	**Sg**	**05 26 33.9**	**-1.6**	
ELL	**Elmali**	**1.86**	**303**		**Pb**	**05 26 08.4**	**-0.9**	
AKAS	**Kas**	**1.89**	**285**	*i* P	**Pb**	**05 26 08.8**	**-0.9**	
EREN	**Erenkoy**	**1.90**	**96**	PN	**Pn**	**05 26 07.9**	**+0.6**	
PARAL	**Paralimni**	**1.94**	**112**	P	**Pb**	**05 26 09.6**	**-0.9**	
PARAL				S	**Sn**	**05 26 32.3**	**+0.4**	
PARAL				AML	AML	05 26 43.4		
	4.7nm,0.6s							
PARAL				AML	AML	05 26 43.4		
	4.7nm,0.6s							
PARAL				AML	AML	05 26 44.4		
	3.9nm,0.7s							
PARAL				AML	AML	05 26 44.4		
	3.9nm,0.7s							
KIZK	**Mersin**	**1.99**	**68**	PN	**Pb**	**05 26 10.2**	**-1.2**	
KIZK	**Mersin**	**1.99**	**68**	*i* P	**Pb**	**05 26 10.9**	**-0.5**	
KMER	**Konya-Meram**	**2.06**	**11**	*i* P	**Pb**	**05 26 11.7**	**-0.9**	
KONT	**Konya--Tatoy**	**2.23**	**10**	PN	**Pb**	**05 26 14.2**	**-1.3**	
KONT	**Konya--Tatoy**	**2.23**	**10**	*i* P	**Pb**	**05 26 14.8**	**-0.7**	
DOGA	**KONYA_Doganhis**	**2.36**	**356**	*i* P	**Pn**	**05 26 14.7**	**+1.0**	
GOLH	**Golhisar**	**2.37**	**309**	*i* P	**Pn**	**05 26 17.9**	**-0.1**	
BAGO	**Egridir - ISPA**	**2.39**	**339**	*i* P	**Pn**	**05 26 14.2**	**0.0**	
FETY	**Fethiye**	**2.41**	**292**	P	**Pn**	**05 26 15.6**	**+1.2**	
FETY				S	**Sn**	**05 26 43.9**	**+0.3**	
FETY	**Fethiye**	**2.41**	**292**	*i* P	**Pn**	**05 26 15.6**	**+1.2**	
BRDR	**BURDUR-Merkez**	**2.42**	**324**	*i* P	**Pn**	**05 26 15.4**	**+0.8**	
MERS	**Mersin**	**2.43**	**62**	PN	**Pn**	**05 26 16.1**	**+1.5**	
KERG	**Konya-Eregli**	**2.47**	**47**	*i* P	**Pb**	**05 26 17.8**	**-1.9**	
LADK	**Ladik-KONYA**	**2.48**	**9**	PN	**Pb**	**05 26 18.4**	**-1.4**	
GULE	**Gulek**	**2.81**	**56**	*i* P	**Pb**	**05 26 24.2**	**-1.3**	
KZIL	**AFYON_Kizioren**	**2.85**	**332**	*i* P	**Pn**	**05 26 19.6**	**-1.0**	
TURN	**Turunc**	**2.86**	**294**	*i* P	**Pb**	**05 26 24.2**	**-2.0**	
TAVA	**DENIZLI_Tavas**	**2.92**	**307**	*i* P	**Pn**	**05 26 23.6**	**+2.1**	
KRTS	**Karatas**	**2.96**	**73**	PN	**Pn**	**05 26 23.5**	**+1.6**	
KARA	**Karaisali**	**2.99**	**59**	PN	**Pn**	**05 26 24.8**	**+2.5**	
BOLV	**Bolvadin**	**3.05**	**347**	*i* P	**Pn**	**05 26 24.3**	**+1.0**	
ARG	**Arkhangelos**	**3.06**	**280**	P	**Pn**	**05 26 23.8**	**+0.5**	
ARG				S	**Sn**	**05 26 58.9**	**-0.7**	
	140nm,0.3s							
CMRD	**Camardi-Nigde**	**3.16**	**52**	PN	**Pn**	**05 26 27.1**	**+2.3**	
YER	**Yerkesik**	**3.19**	**297**	P	**Pn**	**05 26 27.0**	**+1.8**	
YER				S	**Sn**	**05 27 03.3**	**+0.3**	
KHAL	**Karahalli**	**3.23**	**325**	*i* P	**Pn**	**05 26 24.6**	**-1.1**	
YURE	**YUREGIR**	**3.23**	**70**	PN	**Pn**	**05 26 27.6**	**+1.9**	
YURE	**YUREGIR**	**3.23**	**70**	*i* P	**Pn**	**05 26 27.8**	**+2.1**	
AKSY	**AKSARAY - Alti**	**3.27**	**27**	*i* P	**Pn**	**05 26 28.2**	**+1.9**	
KKUL	**Konya-Kulu**	**3.52**	**14**	*i* P	**Pn**	**05 26 31.5**	**+1.8**	
CIFT	**Cifteler, Eski**	**3.66**	**350**	*i* P	**Pn**	**05 26 31.9**	**+0.3**	
HWQ	**Hawqa**	**3.67**	**112**	*e*P	**Pn**	**05 26 34.0**	**+2.3**	
AUSIV	**SIVRİHISAR**	**3.69**	**356**	*i* P	**Pn**	**05 26 32.5**	**+0.4**	
AYDN	**Tasoluk**	**3.72**	**302**	*i* P	**Pn**	**05 26 32.8**	**+0.3**	
USAK	**Uak-Merkez**	**3.73**	**323**	*i* P	**Pn**	**05 26 34.4**	**+1.9**	
KIRS	**Kırehir-Merke**	**3.75**	**25**	*i* P	**Pn**	**05 26 34.8**	**+1.8**	
MANT	**Manisa**	**3.80**	**317**		**Pn**	**05 26 35.9**	**+2.3**	
MANT				Sn	**Sn**	**05 27 21.8**	**+3.7**	
MANT	**Manisa**	**3.80**	**317**	*i* P	**Pn**	**05 26 35.0**	**+1.3**	
KARP	**Karpathos**	**3.83**	**268**	Pn	**Pn**	**05 26 34.6**	**+0.7**	
KARP					**Sn**	**05 27 17.9**	**-0.6**	
GDZ	**Gediz**	**3.83**	**331**	*i* P	**Pn**	**05 26 32.8**	**-1.2**	
BODT	**Bodrum**	**3.89**	**291**	P	**Pn**	**05 26 35.4**	**+0.6**	
BODT				S	**Sn**	**05 27 18.7**	**-1.4**	
RCY	**Rachaya**	**3.98**	**123**	*e*P	**Pn**	**05 26 38.6**	**+2.5**	
MMAI	**Mount Meron Ar**	**4.01**	**132**	Pn	**Pn**	**05 26 39.2**	**+2.8**	
	49nm,0.3s,baz=310,slow=13,SNR=59							
MMAI				Sn	**Sn**	**05 27 24.1**	**+1.1**	
	33nm,0.3s,baz=312,slow=30,SNR=9.1							
BR231	**Keskin MP Arra**	**4.15**	**10**	Pn	**Pn**	**05 26 41.2**	**+2.8**	
ANTO	**Ankara**	**4.18**	**10**	Pn	**Pn**	**05 26 39.0**	**+0.3**	
BRTR	**Keskin Array B**	**4.21**	**19**	Pn	**Pn**	**05 26 41.1**	**+1.8**	
	0.9nm,0.3s,baz=198,slow=16,SNR=23							
BRTR				Pg	**Pb**	**05 26 51.7**	**+2.3**	
	1.5nm,0.3s,baz=195,slow=16,SNR=16							
BRTR				Sn	**Sn**	**05 27 29.1**	**+0.9**	
	0.8nm,0.3s,baz=188,slow=24,SNR=6.5							
BRTR	**Keskin Array B**	**4.21**	**19**		**Pn**	**05 26 40.5**	**+1.3**	
BR131	**Keskin Array S**	**4.21**	**19**		**Pn**	**05 26 40.3**	**+1.1**	
BR131				Sn	**Sn**	**05 27 30.1**	**+1.9**	
BORA	**Eskisehir**	**4.27**	**345**	*i* P	**Pn**	**05 26 39.0**	**-1.0**	
AYKD	**Aykdinkavak**	**4.32**	**66**	*i* P	**Pn**	**05 26 41.8**	**+1.2**	
SRCK	**Saricakaya, Es**	**4.39**	**348**	*i* P	**Pn**	**05 26 42.2**	**+0.6**	
SMG	**Samos**	**4.48**	**297**	P	**Pn**	**05 26 43.0**	**+0.2**	
DELI	**KIRIKKALE**	**4.54**	**20**	*i* P	**Pn**	**05 26 45.1**	**+1.4**	
GAZ	**Gaziantep**	**4.54**	**70**		**Pn**	**05 26 44.2**	**+0.5**	
GAZ				Sn	**Sn**	**05 27 36.3**	**0.0**	
SANT	**Santorini**	**5.22**	**279**	Pn	**Pn**	**05 26 53.2**	**+0.2**	
SANT				Sn	**Sn**	**05 27 50.6**	**-2.3**	
HBRG	**Burj al `Arab**	**5.43**	**199**	P	**Pn**	**05 26 58.2**	**+2.4**	
	baz=197							
HBRG				AMP		05 28 00.0		
	baz=197							
ILGA	**Ilgaz**	**5.49**	**15**	Pn	**Pn**	**05 26 57.4**	**+0.5**	
ASF	**Jabal al Asfar**	**5.50**	**129**	Pn	**Pn**	**05 27 00.9**	**+3.9**	
	1.6nm,0.3s,baz=267,slow=6.6,SNR=16							
ASF				Sn	**Sn**	**05 28 02.1**	**+2.2**	
	0.4nm,0.3s,baz=345,slow=20,SNR=1.9							
IDI	**Anoyia**	**5.70**	**267**	Pn	**Pn**	**05 26 59.4**	**-0.2**	
	4.4nm,0.3s,baz=60,slow=13,SNR=24							
IDI				Sn	**Sn**	**05 28 00.2**	**-4.5**	
	2.4nm,0.3s,baz=315,slow=20,SNR=5.2							
KOT	**Kottamia**	**5.81**	**180**	P	**Pn**	**05 27 03.4**	**+2.3**	
	baz=178							
MATC	**Matruh**	**5.85**	**223**	P	**Pn**	**05 27 02.0**	**+0.4**	
	baz=221							
SUZ	**Suez**	**5.95**	**172**	P	**Pn**	**05 27 05.1**	**+2.0**	
	baz=170							
HMYD	**Mayadein**	**6.00**	**189**	P	**Pn**	**05 27 06.2**	**+2.5**	
	baz=188							
HNAT	**Natroun**	**6.19**	**190**	P	**Pn**	**05 27 09.0**	**+2.7**	
	baz=189							
HNAT				AMP		05 28 00.0		
	baz=189							
ZAF	**Zafarana**	**6.48**	**175**	P	**Pn**	**05 27 12.1**	**+1.8**	
	baz=173							
EIL	**Elat**	**6.60**	**156**	Pn	**Pn**	**05 27 14.4**	**+2.4**	
	2.8nm,0.3s,baz=304,slow=2.5,SNR=16							
EIL				Sn	**Sn**	**05 28 27.9**	**+1.0**	
	2.1nm,0.3s,baz=0.0,slow=16,SNR=3.5							
ALN	**Alexandroupoli**	**6.87**	**320**	Pn	**Pn**	**05 27 16.1**	**+0.5**	
HBST	**Basata**	**6.95**	**159**	P	**Pn**	**05 27 19.5**	**+2.7**	
	baz=158							
NBNS	**Bani Suef**	**7.12**	**184**	P	**Pn**	**05 27 20.8**	**+1.7**	
	baz=183							
NBNS				AMP		05 28 00.0		
	baz=183							
NBNS				S	**Sn**	**05 28 36.5**	**-3.3**	
	baz=183							
HDHB	**Dhahab**	**7.39**	**161**	P	**Pn**	**05 27 24.5**	**+1.7**	
	baz=160							
TAMRE	**El Minia**	**8.08**	**186**	P	**Pn**	**05 27 33.5**	**+1.2**	
	baz=185							
ITM	**Ithomi**	**8.13**	**283**	Pn	**Pn**	**05 27 35.5**	**+2.6**	
SWA2		**8.44**	**222**	P	**Pn**	**05 27 36.6**	**-0.7**	
	baz=221							
TIRR	**Tirgusor**	**9.09**	**344**	Pn	**Pn**	**05 27 47.1**	**+1.1**	
GNI	**Garni**	**11.08**	**63**	Pn	**Pn**	**05 28 12.3**	**-1.2**	
TIP	**Timpagrande**	**12.47**	**290**	Pn	**Pn**	**05 28 30.6**	**-1.9**	
VAE	**Valguarnera**	**14.12**	**282**	Pn	**P**	**05 29 00.3**	**-2.2**	
	1.3nm,0.3s,baz=102,slow=5.4,SNR=4.1							
KOLS	**Kolonicke sedl**	**14.94**	**335**	*e*P	**P**	**05 29 14.7**	**+3.2**	
AKASG	**Malin Array Be**	**15.06**	**354**	Pn	**P**	**05 29 11.9**	**-0.9**	
	1.2nm,0.3s,baz=177,slow=9.4,SNR=17							
VYHS	**Vyhne**	**15.95**	**327**	*e*PN	**Pn**	**05 29 17.0**	**-2.3**	
GEC2	**GERESS Array S**	**18.69**	**320**	P	**Pn**	**05 29 56.6**	**+3.1**	
GEC2				IAmb	IAmb	05 30 09.2		
	comp=Z,3.6nm,1.4s							
GERES	**GERESS Array B**	**18.69**	**320**	P	**Pn**	**05 29 54.8**	**+1.3**	
	comp=Z,0.1nm,0.3s,baz=124,slow=12,SNR=3.1							
DAVOX	**Davos/Dischmat**	**19.79**	**311**	P	**P**	**05 30 05.7**	**+0.4**	
	comp=Z,0.2nm,0.3s,baz=108,slow=9.6,SNR=4.1							
SENIN	**Lac Senin/Sane**	**21.25**	**307**	P	**P**	**05 30 21.2**	**0.0**	
SENIN				IAmb	IAmb	05 30 28.2		
	comp=Z,8.0nm,1.4s							
FINES	**FINESS Array B**	**25.98**	**354**	P	**P**	**05 31 06.0**	**-1.2**	
	comp=Z,2.4nm,1.0s,baz=157,slow=10,SNR=3.8							
FINES	**FINESS Array B**	**25.98**	**354**	P	**P**	**05 31 06.6**	**-0.6**	
ESDC	**Sonseca Array**	**28.49**	**289**	P	**P**	**05 31 29.8**	**-0.3**	
	comp=Z,0.4nm,0.6s,baz=87,slow=11,SNR=3.5							
ARCES	**ARCESS Array B**	**34.02**	**356**	P	**P**	**05 32 19.1**	**+0.8**	
	comp=Z,3.9nm,1.0s,baz=153,slow=8.1,SNR=6.5							
TORD	**Torodi Ar. Bea**	**35.26**	**238**	P	**P**	**05 32 30.4**	**+0.7**	
	comp=Z,0.3nm,0.4s,baz=37,slow=6.9,SNR=8.0							
MKAR	**Makanchi Array**	**38.87**	**58**	P	**P**	**05 33 00.0**	**0.0**	
	comp=Z,0.1nm,0.5s,baz=251,slow=9.0,SNR=3.0							
MKAR	**Makanchi Array**	**38.87**	**58**	P	**P**	**05 33 00.5**	**+0.5**	
SPITS	**Spitsbergen Ar**	**43.05**	**355**	P	**P**	**05 33 33.1**	**-1.0**	
	comp=Z,19nm,1.1s,baz=135,slow=14,SNR=3.8							

*IDC **09** 05:55:44.0±0.6, 56.99S×148.27E, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.1/25, mbtmp4.1/9, MS3.9/11, Ms1 3.9/11, ms1mx3.7/26, Error ellipse: s-maj=35.1km s-min=14.6km az=78.0*

*NEIC **09** 05:55:45.5±1.0, 57.0S±0.1×148.1E±0.2, h10km±1km, mb4.5/17, Error ellipse: s-maj=21.0km s-min=16.8km az=104.0*

ISC 09 05:55:45.3±0.5, **57.02S**±0.08×**148.1E**±0.1, **h10km, n58, σ0.8s76/41, mb4.3**/15, **MS3.8**/12, **West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**6.63**	**72**	Pn	**Pn**		**P**	**05 57 22.7**	**0.0**
TOO	**Toolangi**	**19.53**	**354**	P			**P**	**06 00 13.2**	**+0.5**
TOO				IAmb		IAmb	IAmb	06 00 15.9	
	comp=Z,19nm,0.9s								
RPZ	**Rata Peaks**	**19.67**	**57**	LR		LR	LR	06 06 31.2	
	comp=Z,494nm,21.4s,baz=218,slow=33								
CASY	**Casey**	**19.78**	**227**	P			**P**	**06 00 14.5**	**-0.6**
CASY				IAmb		IAmb	IAmb	06 00 26.3	
	comp=Z,52nm,1.5s								
MQZ	**McQueen's Vall**	**20.42**	**60**	P		P	**P**	**06 00 21.9**	**-0.4**
VNDA	**Vanda**	**21.14**	**172**	P		P	**P**	**06 00 29.1**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=345,slow=13,SNR=6.4								
VNDA				LR		LR	LR	06 07 52.6	
	comp=Z,306nm,19.0s,baz=348,slow=34								
STKA	**Stephens Creek**	**25.54**	**347**	P			**P**	**06 01 13.5**	**-0.4**
	comp=Z,8.2nm,1.0s,baz=162,slow=13,SNR=11								
STKA	**Stephens Creek**	**25.54**	**347**	P			**P**	**06 01 13.0**	**-0.9**
BBOO	**Buckleboo**	**25.58**	**336**	P			**P**	**06 01 12.9**	**-1.4**
URZ	**Urewera**	**26.78**	**58**	LR		LR	LR	06 11 39.8	
	comp=Z,174nm,18.1s,baz=212,slow=36								
FORT	**Forrest**	**29.71**	**324**	P			**P**	**06 01 51.0**	**-0.3**
H01W1	**Cape Leeuwin H**	**31.81**	**299**	T			T	06 35 28.5	
	baz=144,slow=75,SNR=103								
H01W2	**Cape Leeuwin H**	**31.82**	**299**	T			T	06 35 28.7	
	baz=144,slow=75,SNR=136								
H01W3	**Cape Leeuwin H**	**31.83**	**299**	T			T	06 35 29.7	
	baz=144,slow=75,SNR=142								
NWAO	**Narrogin (SRO)**	**32.02**	**306**	LR		LR	LR	06 12 11.7	
	comp=Z,136nm,19.9s,baz=134,slow=31								
NWAO	**Narrogin (SRO)**	**32.02**	**306**	P			**P**	**06 02 10.5**	**-1.2**
QSPA	**South Pole Qui**	**33.09**	**180**	P			**P**	**06 02 19.7**	**-1.2**
	comp=Z,1.2nm,0.9s,baz=346,slow=3.6,SNR=4.1								
QSPA				LR		LR	LR	06 16 01.1	
	comp=Z,405nm,19.2s,baz=12,slow=37								
QSPA	**South Pole Qui**	**33.09**	**180**	P			**P**	**06 02 21.4**	**+0.5**
ASAR	**Alice Springs**	**34.88**	**337**	P			**P**	**06 02 37.0**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=160,slow=8.6,SNR=22								
ASAR				PcP			**PcP**	**06 05 09.1**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=161,slow=3.4,SNR=5.0								
ASAR				LR		LR	LR	06 16 34.2	
	comp=Z,86nm,18.3s,baz=166,slow=36								
ASAR	**Alice Springs**	**34.88**	**337**	P			**P**	**06 02 36.3**	**-0.4**
AS31	**Alice Springs**	**34.88**	**337**	P			**P**	**06 02 36.3**	**-0.4**
RAO	**Raoul Island**	**36.56**	**55**	P			**P**	**06 02 49.9**	**-1.0**
	comp=Z,161nm,0.4s,baz=32,slow=19,SNR=3.7								
RAO				LR		LR	LR	06 15 28.7	
	comp=Z,148nm,21.7s,baz=228,slow=32								
DZM	**Mont Dzumac**	**37.41**	**29**	*e*LR		LR	LR	06 13 06.5	
	comp=Z,793nm,25.7s								
DZM	**Mont Dzumac**	**37.41**	**29**	LR		LR	LR	06 15 29.1	
	comp=Z,396nm,19.1s,baz=205,slow=32								
MAW	**Mawson**	**37.75**	**219**	LR		LR	LR	06 17 12.4	
	comp=Z,357nm,20.7s,baz=64,slow=34								
WR0	**Warramunga Arr**	**38.35**	**339**	P			**P**	**06 03 06.7**	**+0.5**
WR0				IAmb		IAmb	IAmb	06 03 16.9	
	comp=Z,16nm,1.5s								
WRA	**Warramunga Arr**	**38.40**	**339**	P			**P**	**06 03 06.4**	**-0.3**
	comp=Z,4.2nm,0.7s,baz=168,slow=7.7,SNR=32								
WRA				LR		LR	LR	06 17 08.2	
	comp=Z,108nm,21.2s,baz=135,slow=33								
WRA	**Warramunga Arr**	**38.40**	**339**	P			**P**	**06 03 06.8**	**0.0**
WRAB	**Tennant Creek**	**38.41**	**339**	P			**P**	**06 03 07.1**	**+0.3**
WRAB				IAmb		IAmb	IAmb	06 03 13.3	
	comp=Z,13nm,1.2s								
PSA00	**Pilbara Seismi**	**41.02**	**318**	P			**P**	**06 03 28.7**	**+0.2**
PSA00				IAmb		IAmb	IAmb	06 03 37.9	
	comp=Z,8.3nm,0.9s								
FITZ	**Fitzroy Crossi**	**42.33**	**327**	P			**P**	**06 03 38.8**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=175,slow=9.1,SNR=3.6								
FITZ				LR		LR	LR	06 19 20.6	
	comp=Z,127nm,19.0s,baz=167,slow=33								
FITZ	**Fitzroy Crossi**	**42.33**	**327**	P			**P**	**06 03 39.5**	**+0.4**
COEN	**Coen**	**43.14**	**353**	P			**P**	**06 03 47.0**	**+1.3**
COEN				IAmb		IAmb	IAmb	06 03 48.0	
	comp=Z,21nm,1.4s								
KNRA	**Kununurra**	**43.78**	**333**	P			**P**	**06 03 51.7**	**+0.8**
KNRA				IAmb		IAmb	IAmb	06 03 52.4	
	comp=Z,11nm,1.1s								
SNAA	**Sanae**	**49.99**	**192**	P			**P**	**06 04 38.9**	**-0.1**
	comp=Z,2.5nm,0.9s,baz=171,slow=17,SNR=11								
SNAA	**Sanae**	**49.99**	**192**	P			**P**	**06 04 38.9**	**-0.1**
SNAA				IAmb		IAmb	IAmb	06 04 39.9	
	comp=Z,6.3nm,1.1s								
TBI	**Tubuai**	**55.78**	**80**	*e*LR		LR	LR	06 21 45.2	
	comp=Z,97nm,23.2s								
PPT2	**Papeete2**	**60.42**	**76**	*e*LR		LR	LR	06 23 49.7	
	comp=Z,91nm,24.8s								
H08S2	**Diego Garcia H**	**75.79**	**278**	T			T	07 30 19.4	
	baz=147,slow=76,SNR=145								
H08S1	**Diego Garcia H**	**75.80**	**278**	T			T	07 30 15.5	
	baz=147,slow=76,SNR=84								
H08S3	**Diego Garcia H**	**75.81**	**278**	T			T	07 30 16.3	
	baz=147,slow=76,SNR=159								
PLCA	**Paso Flores**	**77.32**	**151**	P			**P**	**06 07 41.5**	**+1.7**
	comp=Z,2.4nm,1.1s,baz=356,slow=19,SNR=3.5								
H08N1	**Diego Garcia H**	**77.67**	**277**	T			T	07 32 40.7	
	baz=137,slow=75,SNR=9.8								
H08N3	**Diego Garcia H**	**77.68**	**277**	T			T	07 32 40.0	
	baz=137,slow=75,SNR=11								
H08N2	**Diego Garcia H**	**77.69**	**277**	T			T	07 32 42.4	
	baz=137,slow=75,S

Ms1 3.4/14, ms1mx3.2/57, Error ellipse: s-maj=17.0km s-min=11.7km az=5.0
DSN ***09*** *06:13:02.7±1.3, 26°.91N×53°.77E, h10km, ML4.8/10, Error ellipse: s-maj=17.9km s-min=5.9km az=179.0*
MOS ***09*** *06:13:03.9±1.3, 26°.69N×54°.02E, h26km, mb4.5/20, Error ellipse: s-maj=8.1km s-min=5.0km az=103.9*
TEH ***09*** *06:13:03.5, 26°.75N×53°.93E, h10km, ML4.3*
BJI ***09*** *06:13:04.5±0.0, 26°.79N×54°.33E, h5km, mB4.9/10, mb4.4/10, Ms4.0/1*
GII ***09*** *06:13:05.9±0.0, 26°.78N×54°.10E, h15km*
NEIC ***09*** *06:13:06.6±2.1, 26°.77N±0°.08×53°.90E±0°.07, h35km±3km, Error ellipse: s-maj=11.8km s-min=9.0km az=176.0*
THR ***09*** *06:13:07.0±0.4, 26°.72N×54°.31E, h15km, ML4.4*
OMAN ***09*** *06:13:11.2±0.1, 26°.37N×53°.88E, h35km, Error ellipse: s-maj=3.8km s-min=2.9km az=261.0*

ISC 09 06:13:05.1±0.3, 26°.68N±0°.03×53°.81E±0°.04, h24km, n247, σ1§66/261, mb4.3/61, MS3.5/10, 8C, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHRM	**Jahrom**	**1.83**	**354**	*e*Pn	**Pb**	**06 13 36.6**	**-1.4**
JHRM				*e*		06 14 15.3	
JHRM	**Jahrom**	**1.83**	**354**	Pn	**Pn**	**06 13 35.8**	**+0.6**
UMQ	**Umm Al-Quwin**	**2.02**	**124**	*e*Pn	**Pb**	**06 13 44.3**	**+3.1**
SHME	**Shamm**	**2.19**	**106**	*e*P	**Pn**	**06 13 39.5**	**-0.4**
	SNR=37						
SHME				S	**Sb**	**06 14 10.7**	**+0.1**
SHME	**Shamm**	**2.19**	**106**	*e*Pn	**Pn**	**06 13 39.6**	**-0.4**
BNDS	**Bandar-Abbas**	**2.23**	**71**	*e*Pn	**Pn**	**06 13 39.8**	**-0.9**
BNDS	**Bandar-Abbas**	**2.23**	**71**	*e*Pn	**Pn**	**06 13 39.8**	**-0.9**
GENO	**Geno**	**2.23**	**71**	*e*Pn	**Pn**	**06 13 40.3**	**-0.4**
GENO				*e*		06 14 23.1	
GENO	**Geno**	**2.23**	**71**	Pn	**Pn**	**06 13 39.9**	**-0.8**
AJN	**Ajban**	**2.36**	**153**	P	**Pn**	**06 13 44.4**	**+2.2**
AJN	**Ajban**	**2.36**	**153**	*e*Pn	**Pb**	**06 13 46.1**	**-0.8**
AJN	**Ajban**	**2.36**	**153**	P	**Pb**	**06 13 47.7**	**+0.8**
BANOM	**Banah**	**2.36**	**108**	*e*P	**Pn**	**06 13 42.3**	**-0.1**
	SNR=91						
BANOM	**Banah**	**2.36**	**108**	P	**Pn**	**06 13 42.3**	**-0.1**
	SNR=91						
NAZ	**Nazwa, Dubai**	**2.37**	**135**	*e*P	**Pn**	**06 13 45.0**	**+2.6**
	SNR=17						
NAZ	**Nazwa, Dubai**	**2.37**	**135**	*e*Pn	**Pb**	**06 13 45.3**	**-1.8**
NAZ	**Nazwa, Dubai**	**2.37**	**135**	P	**Pb**	**06 13 45.2**	**-1.9**
	SNR=17						
ASUD	**Al Ashush, Dub**	**2.46**	**146**	*e*P	**Pb**	**06 13 46.9**	**-1.8**
	SNR=39						
ASUD	**Al Ashush, Dub**	**2.46**	**146**	*e*Pn	**Pb**	**06 13 47.2**	**-1.4**
ASUD	**Al Ashush, Dub**	**2.46**	**146**	P	**Pb**	**06 13 47.0**	**-1.6**
	SNR=39						
MSFE	**Esma-Masafi**	**2.49**	**121**	*e*P	**Pn**	**06 13 45.2**	**+1.1**
	SNR=9.4						
MSFE	**Esma-Masafi**	**2.49**	**121**	*e*Pn	**Pn**	**06 13 45.2**	**+1.1**
FAQ	**Al Faqa, Dubai**	**2.51**	**140**	*e*P	**Pn**	**06 13 46.8**	**+2.4**
	SNR=14						
FAQ	**Al Faqa, Dubai**	**2.51**	**140**	*e*Pn	**Pb**	**06 13 49.2**	**-0.2**
FAQ	**Al Faqa, Dubai**	**2.51**	**140**	P	**Pb**	**06 13 47.5**	**-2.0**
MDH	**Madha**	**2.63**	**121**	*e*P	**Pn**	**06 13 46.8**	**+0.8**
	SNR=9.0						
MDH	**Madha**	**2.63**	**121**	*e*Pn	**Pn**	**06 13 47.3**	**+1.3**
MDH	**Madha**	**2.63**	**121**	P	**Pn**	**06 13 47.0**	**+1.0**
	SNR=9.1						
MDH				S	**Sn**	**06 14 19.1**	**+1.9**
UOSS	**Minazif**	**2.76**	**128**	*e*P	**Pn**	**06 13 48.9**	**+1.0**
	SNR=23						
UOSS	**Minazif**	**2.76**	**128**	*e*Pn	**Pn**	**06 13 48.9**	**+1.0**
UOSS	**Minazif**	**2.76**	**128**		**Pn**	**06 13 49.4**	**+1.5**
UOSS	**Minazif**	**2.76**	**128**	P	**Pn**	**06 13 49.1**	**+1.2**
ISRV	**Sarvestan**	**2.77**	**347**	*e*Pn	**Pn**	**06 13 49.8**	**+1.6**
ISRV				*e*		06 14 49.5	
HATD	**Hatta, Dubai**	**2.79**	**131**	*e*P	**Pn**	**06 13 49.9**	**+1.6**
	SNR=12						
HATD	**Hatta, Dubai**	**2.79**	**131**	*e*Pn	**Pn**	**06 13 50.2**	**+1.9**
HATD	**Hatta, Dubai**	**2.79**	**131**	P	**Pn**	**06 13 50.1**	**+1.8**
	SNR=12						
ASHO	**Ashiyiah**	**2.84**	**134**	*i* P	**Pn**	**06 13 50.7**	**+1.7**
	SNR=74						
ASHO	**Ashiyiah**	**2.84**	**134**	*e*Pn	**Pn**	**06 13 51.0**	**+2.0**
ASHO	**Ashiyiah**	**2.84**	**134**	P	**Pn**	**06 13 50.9**	**+1.9**
	SNR=74						
ASHO				S	**Sn**	**06 14 25.4**	**+2.9**
NIAN	**Nian**	**2.84**	**71**	*e*Pn	**Pn**	**06 13 48.2**	**-0.7**
ALNE	**Al Ain**	**3.15**	**146**	*i* P	**Pn**	**06 13 55.8**	**+2.7**
	SNR=10						
ALNE	**Al Ain**	**3.15**	**146**	*e*Pn	**Pn**	**06 13 56.2**	**+3.0**
SHI	**Shiraz**	**3.17**	**339**	*e*Pn	**Pn**	**06 13 56.0**	**+2.4**
IKAZ	**Kazeroun**	**3.55**	**331**	*e*Pn	**Pn**	**06 13 59.8**	**+0.9**
IKAZ				*e*		06 15 17.7	
KHNJ	**Kahnooj**	**3.69**	**69**	*e*Pn	**Pn**	**06 14 00.1**	**-0.6**
JSK1	**Jask**	**3.71**	**105**	*e*Pn	**Pn**	**06 14 02.6**	**+1.7**
NGRK	**Negar Kerman**	**3.93**	**40**	*e*		06 14 08.1	
NGRK				*e*Pn	**Pn**	**06 14 03.9**	**-0.3**
ARQ	**Araqi**	**4.14**	**143**	P	**Pn**	**06 14 08.7**	**+1.9**
	SNR=54						
ARQ				S	**Sn**	**06 14 56.5**	**+2.0**
KRBR	**Kerman**	**4.20**	**38**	*e*Pn	**Pn**	**06 14 08.7**	**+0.8**
KRBR	**Kerman**	**4.20**	**38**	*e*Pn	**Pn**	**06 14 08.7**	**+0.8**
TVBK	**TV Kerman**	**4.20**	**38**	*e*		06 14 12.8	
TVBK				*e*Pn	**Pn**	**06 14 08.6**	**+0.6**
KHGB	**Koh Gabri**	**4.37**	**32**	*e*Pn	**Pn**	**06 14 10.8**	**+0.6**
KHGB				*e*		06 15 06.5	
HOQ	**Hogain**	**4.42**	**133**	P	**Pn**	**06 14 12.2**	**+1.5**
	SNR=11						
HOQ				S	**Sn**	**06 15 02.4**	**+0.9**
CHMN	**Cheshme madani**	**4.57**	**45**	*e*Pn	**Pn**	**06 14 14.5**	**+1.4**
CHMN				*e*		06 14 15.8	
KLNJ	**Kolanjah**	**4.73**	**336**	*e*Pn	**Pn**	**06 14 14.4**	**-0.9**
IMEH	**Mehriz**	**4.75**	**8**	*e*Pn	**Pn**	**06 14 16.4**	**+1.0**
BSY	**Bisya**	**4.98**	**141**	P	**Pn**	**06 14 20.3**	**+1.9**
	SNR=38						
BSY				S	**Sn**	**06 15 16.5**	**+1.1**
BIDO	**Bidbid**	**5.02**	**128**	*e*Pn	**Pn**	**06 14 20.2**	**+1.3**
IBAF	**Bafgh**	**5.13**	**17**	*e*Pn	**Pn**	**06 14 20.4**	**-0.2**
ISAD	**Sadrabad**	**5.22**	**359**	*e*Pn	**Pn**	**06 14 22.8**	**+0.9**
IRAM	**Ramesheh**	**5.26**	**347**	*e*Pn	**Pn**	**06 14 22.6**	**+0.1**
SMDO	**Samad**	**5.27**	**132**	P	**Pn**	**06 14 24.0**	**+1.5**
	SNR=21						
SMDO				S	**Sn**	**06 15 24.9**	**+2.3**
WSAR	**Wadi Sarin**	**5.56**	**127**	Pn	**Pn**	**06 14 27.1**	**+0.8**
	7.0nm,0.3s,baz=313,slow=8.6,SNR=53						
WSAR				Sn	**Sn**	**06 15 26.6**	**-2.8**
	12nm,0.3s,baz=118,slow=7.8,SNR=8.7						
WSAR				LR	LR	06 17 04.0	
	comp=Z,714nm,20.7s,baz=336,slow=45						
WSAR	**Wadi Sarin**	**5.56**	**127**	P	**Pn**	**06 14 26.9**	**+0.6**
	SNR=52						
WSAR				S	**Sn**	**06 15 28.8**	**-0.6**
ICHK	**Chekchek**	**5.57**	**5**	*e*Pn	**Pn**	**06 14 27.5**	**+0.8**
CHBR	**Chabahar**	**6.10**	**99**	*e*Pn	**Pn**	**06 14 32.6**	**-1.1**
CHBR	**Chabahar**	**6.10**	**99**	*e*Pn	**Pn**	**06 14 32.6**	**-1.1**
JHBN	**Jahan bin**	**6.18**	**334**	*e*Pn	**Pn**	**06 14 35.1**	**0.0**
WBK	**Wadi Bani Khal**	**6.20**	**130**	P	**Pn**	**06 14 35.6**	**+0.5**
	SNR=45						
IZEF	**Zefreh**	**6.33**	**349**	*e*Pn	**Pn**	**06 14 36.7**	**-0.4**
ANAR	**Anarak**	**6.49**	**359**	*e*Pn	**Pn**	**06 14 38.2**	**-1.0**
TPRV	**Parvadeh(Tabas**	**6.81**	**21**	*e*Pn	**Pn**	**06 14 43.2**	**-0.3**
MHTO	**MHTO**	**6.83**	**145**	P	**Pn**	**06 14 45.5**	**+1.8**
	SNR=16						
MHTO				S	**Sn**	**06 15 59.5**	**-1.2**
IKLH	**Kolahrood**	**6.90**	**344**	*e*Pn	**Pn**	**06 14 44.1**	**-0.8**
SHGR	**Shooshtar-Gavs**	**6.95**	**322**	IAML		06 17 29.6	
	comp=E,41nm,0.8s						
SHGR				IAML		06 17 45.9	
	comp=N,34nm,0.6s						
NHDN	**Nehbandan**	**7.21**	**48**	*e*Pn	**Pn**	**06 14 48.8**	**-0.3**
IKOO	**Kooshah**	**7.30**	**37**	*e*Pn	**Pn**	**06 14 50.7**	**+0.2**
QAM	**Ghamsar**	**7.35**	**344**	*e*Pn	**Pn**	**06 14 51.1**	**0.0**
KRSH	**Karshahi**	**7.41**	**349**	*e*Pn	**Pn**	**06 14 51.4**	**-0.5**
TKDS	**Koohdasht(Taba**	**7.49**	**22**	*e*Pn	**Pn**	**06 14 52.6**	**-0.3**
ITEG	**Tejag**	**7.54**	**34**	*e*Pn	**Pn**	**06 14 54.2**	**+0.5**
TNSJ	**Nastanj**	**7.66**	**18**	*e*Pn	**Pn**	**06 14 54.3**	**-0.9**
IDAH	**Dahanechah**	**8.02**	**40**	*e*Pn	**Pn**	**06 15 00.8**	**+0.5**
AFRZ	**Afriz**	**8.10**	**33**	*e*Pn	**Pn**	**06 15 02.0**	**+0.7**
RAYN	**Ar Rayn**	**8.15**	**249**	*i* P	**Pn**	**06 15 03.2**	**+1.2**
	SNR=20						
RAYN	**Ar Rayn**	**8.15**	**249**		**Pn**	**06 15 03.9**	**+1.9**
RAYN				Sn	**Sn**	**06 16 35.1**	**+1.7**
BMDN	**Meydan**	**8.20**	**329**	*e*Pn	**Pn**	**06 15 04.1**	**+1.4**
BDRS	**Dareh Seyedi**	**8.41**	**331**	*e*Pn	**Pn**	**06 15 04.5**	**-1.2**
IVRN	**Varamin**	**8.48**	**348**	*e*Pn	**Pn**	**06 15 05.8**	**-0.7**
IDOB	**Doab**	**8.60**	**327**	*e*Pn	**Pn**	**06 15 09.0**	**+0.8**
WHFO	**Wadi Hawf**	**8.71**	**180**	P	**Pn**	**06 15 10.5**	**+0.8**
	SNR=69						
WHFO				S	**Sn**	**06 16 42.4**	**-4.9**
HSAM	**Samen**	**8.75**	**330**	*e*Pn	**Pn**	**06 15 09.3**	**-1.0**
IANJ	**Anjilo**	**8.77**	**1**	*e*Pn	**Pn**	**06 15 10.1**	**-0.4**
SHAO	**Shalim**	**8.77**	**169**	*i* P	**Pn**	**06 15 12.0**	**+1.5**
	SNR=13						
SHAO	**Shalim**	**8.77**	**169**	P	**Pn**	**06 15 11.9**	**+1.5**
	SNR=13						
SHAO				S	**Sn**	**06 16 46.1**	**-2.6**
DMTO	**DMTO**	**8.98**	**173**	P	**Pn**	**06 15 14.0**	**+0.7**
	SNR=22						
DMTO				S	**Sn**	**06 16 48.3**	**-5.4**
IFIR	**Firoozkooh**	**8.98**	**355**	*e*Pn	**Pn**	**06 15 15.9**	**+2.4**
HAGD	**Aghdareh**	**9.06**	**335**	*e*Pn	**Pn**	**06 15 14.3**	**-0.2**
ISHM	**Shahmirzad**	**9.11**	**357**	*e*Pn	**Pn**	**06 15 15.2**	**-0.1**
RBK	**Rabkut**	**9.13**	**178**	P	**Pn**	**06 15 17.7**	**+2.2**
RBK				S	**Sn**	**06 16 51.5**	**-6.1**
IKOM	**Komasi**	**9.24**	**326**	*e*Pn	**Pn**	**06 15 18.7**	**+1.8**
ABTO	**Aybut**	**9.29**	**183**	P	**Pn**	**06 15 19.1**	**+1.5**
	SNR=10						
ABTO				S	**Sn**	**06 16 54.4**	**-7.0**
IALA	**Alasht**	**9.42**	**355**	*e*Pn	**Pn**	**06 15 20.8**	**+1.3**
QABG	**Abgarm-Qazvin**	**9.70**	**339**	*e*Pn	**Pn**	**06 15 23.8**	**+0.4**
HSRG	**Sareghieh**	**9.77**	**332**	*e*Pn	**Pn**	**06 15 24.5**	**+0.2**
IGLO	**Ghaloghah**	**9.80**	**0**	*e*Pn	**Pn**	**06 15 26.7**	**+2.0**
IGHG	**Ghaleghazi**	**9.85**	**322**	*e*Pn	**Pn**	**06 15 29.8**	**+4.4**
QALM	**Alamut, Qazvin**	**10.09**	**345**	*e*Pn	**Pn**	**06 15 28.5**	**-0.2**
JRKH	**Jarkhoshk**	**10.77**	**30**	*e*Pn	**Pn**	**06 15 38.4**	**+0.5**
IMYA	**Miami**	**11.03**	**28**	*e*Pn	**Pn**	**06 15 42.4**	**+0.9**
GEYT	**Alibeck**	**11.80**	**17**	Pn	Pn	06 15 56.9	+5.1
	baz=202,slow=19,SNR=3.6						
GEYT				LR	LR	06 20 35.9	
	comp=N,198nm,19.0s,baz=190,slow=38						
SOCY	**Socotra**	**14.41**	**179**		**P**	**06 16 35.4**	**+1.0**
GNI	**Garni**	**15.41**	**333**	*ce*P	**Pn**	**06 16 42.3**	**+1.3**
GNI				pmax	pmax		
	comp=Z,69nm,1.0s						
GNI	**Garni**	**15.41**	**333**	Pn	**P**	**06 16 44.8**	**-0.6**
	comp=Z,3.4nm,0.3s,baz=189,slow=3.2,SNR=10						
GNI				LR	LR	06 23 28.0	
	comp=Z,177nm,20.7s,baz=142,slow=40						
GNI	**Garni**	**15.41**	**333**		**Pn**	**06 16 38.3**	**-2.7**
GNI				IAmb	IAmb	06 16 51.3	
	comp=Z,20nm,0.8s						
AKT	**Akhty**	**15.59**	**343**	*i* P	**P**	**06 16 45.3**	**-2.2**
ASF	**Jabal al Asfar**	**15.71**	**294**	Pn	**P**	**06 16 49.3**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=74,slow=19,SNR=3.1						
ASF				Sn	Sn	06 19 26.8	-12
	comp=Z,0.2nm,0.3s,baz=105,slow=20,SNR=1.9						
TBLG	**Delisi**	**16.77**	**336**	P	**P**	**06 16 59.7**	**-0.7**
TBLG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TBLG	**Delisi**	**16.77**	**336**	P	**P**	**06 16 59.6**	**-0.7**
EIL	**Elat**	**16.89**	**285**	P	**P**	**06 17 01.9**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=21,slow=17,SNR=3.7						
EIL				LR	LR	06 24 42.2	
	comp=Z,112nm,20.9s,baz=104,slow=41						
MMAI	**Mount Meron Ar**	**17.16**	**296**	P	**P**	**06 17 06.7**	**+1.9**
	comp=Z,0.9nm,0.3s,baz=102,slow=18,SNR=3.5						
MMAI				LR	LR	06 24 18.2	
	comp=Z,40nm,21.2s,baz=85,slow=39						
CEP	**Cherat**	**17.18**	**61**	P	**P**	**06 17 04.2**	**-0.9**
GAZ	**Gaziantep**	**17.52**	**311**	P	**P**	**06 17 08.8**	**0.0**
GAZ				IAmb	IAmb	06 17 16.6	
	comp=Z,14nm,0.9s						
CHGR	**Chuyangaron**	**17.57**	**43**	P	**Pn**	**06 17 06.7**	**-1.8**
GROC	**Groznyy**	**17.73**	**340**	*e*P	**P**	**06 17 13.3**	**+2.3**
GROC				pmax	pmax		
	comp=Z,20nm,0.5s						
ZEI	**Tsey**	**18.00**	**336**	*e*P	**Pn**	**06 17 12.6**	**-1.1**
ZEI				pmax	pmax		
	comp=Z,17nm,1.5s						
NIL	**Nilore**	**18.18**	**63**	P	**Pn**	**06 17 13.6**	**-2.3**
NIL				pmax	pmax		
	comp=Z,15nm,1.1s						
NIL	**Nilore**	**18.18**	**63**	P	**Pn**	**06 17 13.6**	**-2.3**
GAR	**Garm**	**18.50**	**44**	P	**P**	**06 17 16.9**	**-2.7**
GAR				IAmb	IAmb	06 17 22.7	
	comp=Z,9.6nm,0.6s						
NEY	**Neytrino**	**18.84**	**334**	*i* P	**Pn**	**06 17 26.4**	**+2.4**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	**Khabaz**	**19.18**	**335**	P	**Pn**	**06 17 28.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=334,slow=3.3,SNR=6.9						
KBZ				LR	LR	06 26 05.3	
	comp=Z,112nm,21.2s,baz=154,slow=41						
SHA1	**Shidzhatmaz**	**19.28**	**335**	*i* P	**Pn**	**06 17 30.2**	**+0.9**
PYA1	**Pyatigorsk**	**19.39**	**336**	*i* P	**Pn**	**06 17 31.4**	**+0.9**
CSS	**Mathiatis**	**19.40**	**300**	P	**P**	**06 17 29.1**	**-0.4**
CSS				IAmb	IAmb	06 17 32.7	
	comp=Z,23nm,1.0s						
KVAR	**Kislovodsk Arr**	**19.45**	**335**	P	**Pn**	**06 17 30.9**	**-0.4**
	baz=263,slow=19,SNR=3.8						
BTK	**Batken**	**19.45**	**42**	P	**P**	**06 17 28.1**	**-1.9**
BTK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BTK	**Batken**	**19.45**	**42**	P	**P**	**06 17 28.1**	**-1.9**
KIV	**Kislovodsk**	**19.45**	**335**	*e*P	**Pn**	**06 17 32.7**	**+1.4**
KIV				pmax	pmax		
	comp=Z,48nm,0.9s						
KIV				MLR	MLR		
	comp=Z,130nm,14.0s						
KIV	**Kislovodsk**	**19.45**	**335**	P	**Pn**	**06 17 32.3**	**+1.1**
KIV				IAmb	IAmb	06 17 35.6	
	comp=Z,13nm,0.6s						
BR131	**Keskin Array S**	**21.25**	**313**	P	**P**	**06 17 49.4**	**-0.2**
BR131				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BR131	**Keskin Array S**	**21.25**	**313**	P	**P**	**06 17 49.4**	**-0.2**
BR131				IAmb	IAmb	06 17 56.2	
	comp=Z,8.8nm,1.2s						
BRTR	**Keskin Array B**	**21.25**	**313**	P	**P**	**06 17 51.2**	**+1.6**
	comp=Z,7.6nm,1.0s,baz=134,slow=12,SNR=15						
BRTR	**Keskin Array B**	**21.25**	**313**	P	**P**	**06 17 50.7**	**+1.1**
KK31	**Karatay Array**	**21.30**	**35**	P	**P**	**06 17 48.4**	**-1.6**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KK31	**Karatay Array**	**21.30**	**35**	P	**P**	**06 17 48.4**	**-1.6**
KKAR	**Karatay Array**	**21.30**	**35**	P	**P**	**06 17 48.5**	**-1.5**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KKAR	**Karatay Array**	**21.30**	**35**	P	**P**	**06 17 48.5**	**-1.5**
ARSB	**Arslanbob**	**21.52**	**42**	P	**P**	**06 17 50.4**	**-2.1**
BR231	**Keskin MP Arra**	**21.88**	**312**	P	**P**	**06 17 56.4**	**+0.1**
BR231				IAmb	IAmb	06 18 03.0	
	comp=Z,14nm,0.8s						
ANTO	**Ankara**	**21.88**	**312**	P	**P**	**06 17 55.2**	**-1.1**
ANTO				pmax	pmax		
	comp=Z,44nm,1.5s						
ANTO	**Ankara**	**21.88**	**312**	P	**P**	**06 17 55.2**	**-1.1**
ANTO				IAmb	IAmb	06 18 03.7	
	comp=Z,44nm,1.4s						
KSH	**Kashi**	**22.49**	**50**	*e*P	**P**	**06 17 55.7**	**-7.2**
KSH				pmax	pmax		
	comp=Z,260nm,5.4s						
ELL	**Elmali**	**22.62**	**302**	P	**P**	**06 18 07.6**	**+3.3**
ELL				pmax	pmax		
	comp=Z,50nm,1.0s						
ELL	**Elmali**	**22.62**	**302**	P	**P**	**06 18 07.6**	**+3.3**
ABKAR	**Akbulak array**	**23.04**	**10**	P	**P**	**06 18 07.4**	**-1.0**
ABKAR				IAmb	IAmb	06 18 13.9	
	comp=Z,7.8nm,1.1s						
ABKAR	**Akbulak array**	**23.04**	**10**	P	**P**	**06 18 07.7**	**-0.7**
AAK	**Ala-Archa**	**23.21**	**41**	*ce*P	**P**	**06 18 09.1**	**-1.3**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
AAK	**Ala-Archa**	**23.21**	**41**	P	**P**	**06 18 10.4**	**-0.1**
	comp=Z,2.5nm,0.6s,baz=11,slow=23,SNR=7.3						
AAK				LR	LR	06 28 36.7	
	comp=Z,53nm,18.1s,baz=234,slow=40						
AAK	**Ala-Archa**	**23.21**	**41**	P	**P**	**06 18 09.9**	**-0.5**
AAK				IAmb	IAmb	06 18 20.2	
	comp=Z,4.7nm,0.8s						
AKTO	**Aktyubinsk**	**23.94**	**7**	P	**P**	**06 18 17.8**	**+0.5**
	comp=Z,3.4nm,0.5s,baz=154,slow=11,SNR=15						
AKTO				LR	LR	06 29 15.5	
	comp=Z,146nm,19.6s,baz=172,slow=41						
SIM	**Simferopol'**	**24.13**	**324**	*e*P	**P**	**06 18 21.5**	**+2.5**
SIM				pmax	pmax		
	comp=Z,18nm,0.7s						
IDI	**Anoyia**	**26.16**	**296**	P	**P**	**06 18 40.2**	**+2.5**
	comp=Z,6.8nm,0.6s,baz=83,slow=11,SNR=5.8						
BVAR	**Borovoye Array**	**29.09**	**21**	P	**P**	**06 19 03.4**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=205,slow=6.6,SNR=12						
BVAR				PcP	**PcP**	**06 22 11.3**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=171,slow=3.8,SNR=4.0						
MLR	**Muntele Rosu**	**29.09**	**317**	P	**P**	**06 19 06.8**	**+2.9**
	comp=Z,0.8nm,0.4s,baz=28,slow=8.8,SNR=5.1						
ARU	**Arti**	**29.93**	**5**	*i* P	**P**	**06 19 13.0**	**+2.0**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ARU				MLR	MLR		
	comp=Z,80nm,16.0s						
ARU	**Arti**	**29.93**	**5**	LR	LR	06 31 44.0	
	comp=Z,112nm,18.7s,baz=186,slow=38						
MAKZ	**Makanchi**	**29.97**	**40**	P	**P**	**06 19 11.4**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAKZ	**Makanchi**	**29.97**	**40**	P	**P**	**06 19 11.4**	**-0.1**
MAKZ				IAmb	IAmb	06 19 12.4	
	comp=Z,5.1nm,0.9s						
MK31	**Makanchi Array**	**30.14**	**41**	P	**P**	**06 19 12.4**	**-0.6**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	**Makanchi Array**	**30.14**	**41**	P	**P**	**06 19 12.4**	**-0.6**
MKAR	**Makanchi Array**	**30.14**	**41**	P	**P**	**06 19 12.8**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=226,slow=8.8,SNR=20						
MKAR	**Makanchi Array**	**30.14**	**41**	P	**P**	**06 19 12.3**	**-0.8**
AKASG	**Malin Array Be**	**30.45**	**329**	P	**P**	**06 19 15.4**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=135,slow=8.3,SNR=17						
AKASG	**Malin Array Be**	**30.45**	**329**	P	**P**	**06 19 15.1**	**-0.6**
AKBB	**Malin Array Si**	**30.45**	**329**	P	**P**	**06 19 15.4**	**-0.3**
AKBB				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AKBB	**Malin Array Si**	**30.45**	**329**	P	**P**	**06 19 15.4**	**-0.3**
KURBB	**Kurchatov Arra**	**30.47**	**32**	P	**P**	**06 19 15.8**	**0.0**
	comp=Z,2.1nm,0.7s,baz=233,slow=8.8,SNR=13						
KURK	**Kurchatov**	**30.57**	**32**	*ce*P	**P**	**06 19 17.4**	**+0.7**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KURK	**Kurchatov**	**30.57**	**32**	P	**P**	**06 19 14.4**	**-2.3**
KURK				IAmb	IAmb	06 19 17.8	
	comp=Z,4.4nm,1.1s						
BURAR	**Bucovina Array**	**30.64**	**321**	P	**P**	**06 19 17.9**	**+0.3**
BUR08	**Bucovina Ar. S**	**30.67**	**321**	P	**P**	**06 19 16.7**	**-1.0**
BUR08				IAmb	IAmb	06 19 22.0	
	comp=Z,4.3nm,1.1s						
OBN	**Obninsk**	**31.08**	**341**	*e*P	**P**	**06 19 22.0**	**+0.9**
OBN				*e*		06 20 19.4	
OBN				*e*S	**S**	**06 24 18.0**	**-6.9**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,77nm,16.0s						
KIRV	**Kirov**	**32.04**	**356**	LR	LR	06 33 48.1	
	comp=Z,64nm,21.1s,baz=176,slow=39						
KOLS	**Kolonicke sedl**	**33.01**	**321**	*e*P	**P**	**06 19 40.8**	**+2.6**
KOLS	**Kolonicke sedl**	**33.01**	**321**	*e*P	**P**	**06 19 40.8**	**+2.6**
WDD	**Wied Dalam**	**34.61**	**295**	P	**P**	**06 19 52.1**	**-0.1**
LANS	**Liptovska Anna**	**34.72**	**319**	*e*P	**P**	**06 19 54.9**	**+1.7**
LANS	**Liptovska Anna**	**34.72**	**319**	*e*P	**P**	**06 19 54.9**	**+1.7**
OJC	**Ojcow**	**35.05**	**321**	P	**P**	**06 19 55.8**	**-0.1**
OJC				pmax	pmax		
	comp=Z,14nm,1.2s						
OJC	**Ojcow**	**35.05**	**321**	P	**P**	**06 19 55.8**	**-0.1**
ZAA0	**Zalesovo Array**	**35.56**	**32**	P	**P**	**06 19 59.0**	**-1.3**
ZALV	**Zalesovo Beam**	**35.56**	**32**	P	**P**	**06 19 59.8**	**-0.5**
	comp=Z,9.8nm,0.5s,baz=242,slow=9.4,SNR=48						
ZALV				LR	LR	06

comp=Z,4.3nm,1.0s,baz=236,slow=3.6,SNR=4.1
BMAR Burnt Mountain 85.17 7 P **P** **06 25 40.3 +1.2**
IMAR Indian Mountai 85.25 11 P **P** **06 25 39.1 -0.3**
ILAR Eielson Array 87.44 9 P **P** **06 25 49.0 -1.2**
ILAR Eielson Array 87.44 9 P **P** **06 25 49.6 -0.5**
comp=Z,0.6nm,0.8s,baz=316,slow=4.6,SNR=4.8
ILAR Eielson Array 87.44 9 P **P** **06 25 49.0 -1.2**
YKA Yellowknife Ar 90.66 355 P **P** **06 26 05.8 +0.5**
comp=Z,0.9nm,0.6s,baz=4.8,slow=5.1,SNR=31
WRA Warramunga Arr 90.74 112 *ce*P **P** **06 26 05.5 -1.0**
WRA pmax pmax
comp=Z,1.0nm,0.7s
WRA Warramunga Arr 90.74 112 P **P** **06 26 06.0 -0.5**
comp=Z,0.8nm,0.7s,baz=314,slow=3.8,SNR=7.3
ASAR Alice Springs 92.13 115 P **P** **06 26 12.3 -0.5**
comp=Z,3.3nm,1.3s,baz=302,slow=4.5,SNR=6.4
NVAR Mina Array Bea 114.82 353 PKP PKPdf 06 31 44.9 +0.6
comp=Z,0.6nm,0.8s,baz=165,slow=0.5,SNR=4.0
TXAR Lajitas Array 120.27 337 PKP **PKPdf** **06 31 54.8 +0.1**
comp=Z,0.2nm,0.7s,baz=119,slow=3.2,SNR=2.7

*IDC **09** 06:25:26.9±1.0,53.˙16N×108.˙11E,h0km,mb3.5/5, mb1 3.6/9,mb1mx3.4/56,mbtmp3.4/9,ML2.7/4,Error ellipse: s-maj=19.5km s-min=13.8km az=147.0*
*MOS **09** 06:25:26.8±1.2,53.˙14N×108.˙08E,h8km,mb3.6/1,Error ellipse: s-maj=11.9km s-min=7.7km az=59.7*
*BYKL **09** 06:25:28.3±0.2,53.˙18N×107.˙95E,h15km±3km*
ISC 09 06:25:27.0±0.5,53˙20N±0˙02×108˙01E±0˙02,h10km,n62, σ2^{2}**25/114,mb3.5/5,8C-4D,Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KELR	**Kotokel**	**0.44**	**174**	⇑*i*Pg		**Pb**	**06 25 36.4**	**-0.5**
KELR				*e*Sg		**Sb**	**06 25 42.4**	**-1.2**
MXMB	**Maximikha**	**0.45**	**82**	⇑*i*Pg		**Pb**	**06 25 37.0**	**+0.1**
MXMB				*e*			06 25 37.9	
MXMB				*e*			06 25 38.8	
MXMB				*e*Sg		**Sb**	**06 25 43.9**	**+0.2**
OGRR	**Ongureny**	**0.51**	**331**	⇑*i*Pg		**Pn**	**06 25 38.7**	**-1.6**
OGRR				*e*Sg		**Sb**	**06 25 45.5**	**0.0**
OGRR				Pmax				
	115nm,0.2s							
OGRR				Smax				
	944nm,0.2s							
OGRR	**Ongureny**	**0.51**	**331**	⇑*i*PG		**Pn**	**06 25 38.7**	**-1.6**
OGRR				*e*			06 25 45.7	
OGRR				pmax	pmax			
	comp=Z,258nm,0.4s							
OGRR				smax	smax			
	comp=E,964nm,0.5s							
ZRHB	**Zarechye**	**0.83**	**219**	*e*Pg		**Pn**	**06 25 43.8**	**-0.9**
ZRHB				*e*Sg		**Sb**	**06 25 54.1**	**-0.6**
ZRHB				*e*Sb		**Sn**	**06 25 57.8**	**+0.8**
ZRHB				Pmax				
	comp=E,440nm,0.3s							
ZRHB				max				
	comp=E,2μm,0.4s							
TRTB	**Turuntaevo**	**1.00**	**194**	⇓*i*Pg		**Pb**	**06 25 46.0**	**-0.4**
TRTB				*e*Pb		**Pn**	**06 25 48.2**	**+1.1**
TRTB				*e*Sg		**Sb**	**06 25 59.5**	**-0.1**
TRTB				*e*Sb		**Sn**	**06 26 03.3**	**+2.1**
TRG	**Tyrgan**	**1.10**	**247**	⇑*i*Pg		**Pg**	**06 25 47.1**	**-0.9**
TRG				*e*Sg		**Sb**	**06 26 02.2**	**-0.2**
TRG				Pmax				
	comp=E,316nm,0.2s							
TRG				Smax				
	comp=E,2μm,0.1s							
TRG	**Tyrgan**	**1.10**	**247**	⇑*i*PG		**Pg**	**06 25 47.1**	**-0.9**
TRG				*e*			06 26 01.7	
TRG				pmax	pmax			
	comp=Z,158nm,0.1s							
TRG				smax	smax			
	comp=N,2μm,0.2s							
SYVR	**Suvo**	**1.27**	**68**	⇓*i*Pg		**Pg**	**06 25 52.1**	**+0.7**
SYVR				*e*			06 25 59.4	
SYVR				*e*Sg		**Sn**	**06 26 10.0**	**+2.0**
SYVR				max				
	comp=N,341nm,0.5s							
SYVR				Smax				
	comp=N,371nm,0.3s							
SYVR	**Suvo**	**1.27**	**68**	*e*PG		**Pg**	**06 25 51.8**	**+0.4**
SYVR				*e*			06 26 09.8	
SYVR				pmax	pmax			
	comp=Z,343nm,0.5s							
SYVR				smax	smax			
	comp=E,552nm,0.3s							
UUDB	**Ulan-Yde**	**1.35**	**189**	⇑*i*Pg		**Pg**	**06 25 52.4**	**-0.5**
UUDB				*e*Pb		**Pb**	**06 25 53.4**	**+1.0**
UUDB				*e*Sg		**Sg**	**06 26 10.1**	**-0.4**
UUDB				max				
	comp=E,399nm,0.9s							
UUDB				Smax				
	comp=E,1μm,0.4s							
FFNB	**Fofonovo**	**1.38**	**214**	*e*Pg		**Pg**	**06 25 52.7**	**-0.8**
FFNB				*e*Pb		**Pb**	**06 25 54.0**	**+1.1**
FFNB				*e*Sg		**Sg**	**06 26 11.3**	**-0.1**
KAB	**Kabansk**	**1.42**	**216**	*e*Pg		**Pg**	**06 25 53.3**	**-0.9**
KAB				*e*Sg		**Sg**	**06 26 12.5**	**-0.1**
KAB				Pmax				
	comp=E,409nm,0.6s							
KAB				Smax				
	comp=E,2μm,0.6s							
KAB	**Kabansk**	**1.42**	**216**	*e*PG		**Pg**	**06 25 53.6**	**-0.6**
KAB				*e*			06 26 13.1	
KAB				pmax	pmax			
	comp=Z,294nm,0.3s							
KAB				smax	smax			
	comp=N,2μm,0.9s							
HRMR	**Khuramsha**	**1.70**	**203**	*e*Pg		**Pb**	**06 25 57.9**	**-0.5**
HRMR				*e*Sg		**Sg**	**06 26 21.3**	**-0.4**
HRMR				Pmax				
	comp=N,411nm,0.2s							
HRMR				Smax				
	comp=N,4μm,0.2s							
BGT	**Bolshoye Golou**	**1.96**	**235**	*e*Pn		**Pb**	**06 26 01.1**	**-1.7**
BGT				*e*			06 26 09.3	
BGT				*e*Sg		**Sb**	**06 26 28.0**	**+0.7**
BGT				*e*			06 26 32.6	
BGT				max				
	comp=N,70nm,0.3s							
BGT				Smax				
	comp=N,412nm,0.6s							
LSTR	**Listvyanka**	**2.36**	**237**	*e*Pn		**Pn**	**06 26 06.8**	**+1.1**
LSTR				*e*Pg		**Pb**	**06 26 08.9**	**-0.6**
LSTR				*e*Sn		**Sn**	**06 26 35.2**	**+0.6**
LSTR				*e*Sg		**Sg**	**06 26 40.2**	**-2.4**
LSTR				Pmax				
	comp=N,40nm,0.6s							
LSTR				Smax				
	comp=N,245nm,0.3s							
LSTR	**Listvyanka**	**2.36**	**237**	*e*PN		**Pn**	**06 26 06.8**	**+1.1**
LSTR				*e*			06 26 09.2	
LSTR				*e*			06 26 39.0	
LSTR				pmax	pmax			
	comp=Z,29nm,0.4s							
LSTR				smax	smax			
	comp=N,244nm,0.3s							
IRK	**Irkutsk**	**2.47**	**249**	*e*Sn		**Sn**	**06 26 36.5**	**-0.9**
IRK				*e*Sg		**Sg**	**06 26 43.4**	**-2.8**
IRK				Smax				
	comp=N,1μm,0.5s							
IRK	**Irkutsk**	**2.47**	**249**	*e*PN		**Pb**	**06 26 11.8**	**+0.4**
IRK				*e*			06 26 43.2	
IRK				pmax	pmax			
	comp=Z,230nm,0.1s							
IRK				smax	smax			
	comp=N,1μm,0.5s							
YLYR	**Ulyunkhan**	**2.50**	**47**	⇓*i*Pn		**Pb**	**06 26 09.8**	**-2.3**
YLYR				*e*Pg		**Pg**	**06 26 12.8**	**-2.1**
YLYR				*e*			06 26 19.2	
YLYR				*e*Sg		**Sg**	**06 26 47.4**	**0.0**
YLYR				max				
	comp=N,119nm,0.6s							
YLYR				Smax				
	comp=N,354nm,0.9s							
YLYR	**Ulyunkhan**	**2.50**	**47**	⇓*i*PN		**Pb**	**06 26 09.7**	**-2.3**
YLYR				*e*			06 26 13.7	
YLYR				*e*S		**Sb**	**06 26 40.7**	**-2.2**
YLYR				*e*			06 26 46.1	
YLYR				pmax	pmax			
	comp=Z,121nm,0.6s							
YLYR				smax	smax			
	comp=N,357nm,0.7s							

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**2.73**	**18**	*e*Pg		**Pb**	**06 26 16.8**	**+1.0**
NIZ				*e*			06 26 45.4	
NIZ				*e*Sg		**Sg**	**06 26 53.9**	**-0.7**
NIZ				Pmax				
	comp=N,28nm,0.4s							
NIZ				Smax				
	comp=N,180nm,0.7s							
NIZ	**Nizh Angarsk**	**2.73**	**18**	*e*PN		**Pb**	**06 26 13.8**	**-2.0**
NIZ				*e*			06 26 17.0	
NIZ				*e*S		**Sn**	**06 26 44.1**	**+0.2**
TLY	**Talaya**	**3.08**	**242**	*e*Pn		**Pn**	**06 26 16.6**	**+1.0**
TLY				*e*Pg		**Pb**	**06 26 22.3**	**+0.6**
TLY				*e*			06 26 30.0	
TLY				*e*			06 26 57.5	
TLY				*e*Sg		**Sb**	**06 27 01.1**	**+1.8**
TLY				max				
	comp=N,36nm,0.3s							
TLY				Smax				
	comp=N,184nm,0.5s							
TLY	**Talaya**	**3.08**	**242**	*e*PN		**Pn**	**06 26 16.9**	**+1.3**
TLY				*e*			06 26 22.3	
TLY				*e*S		**Sn**	**06 26 52.9**	**+0.5**
TLY				*e*			06 27 00.6	
TLY				pmax	pmax			
	comp=Z,27nm,0.3s							
TLY				smax	smax			
	comp=E,183nm,0.4s							
TLY	**Talaya**	**3.08**	**242**	Pn		**Pn**	**06 26 16.8**	**+1.2**
	comp=E,0.0nm,0.3s,baz=88,slow=9.1,SNR=7.6							
TLY				Pg		**Pb**	**06 26 22.5**	**+0.7**
	comp=E,0.2nm,0.3s,baz=48,slow=13,SNR=35							
TLY				Lg		Lg	06 27 01.2	
	comp=E,0.4nm,0.3s,baz=238,slow=21,SNR=11							
KMO	**Kumora**	**3.27**	**33**	*e*Pn		**Pn**	**06 26 20.6**	**+2.3**
KMO				*e*Pg		**Pg**	**06 26 27.1**	**-2.5**
KMO				*e*			06 26 39.5	
KMO				*e*Sg		**Sg**	**06 27 10.5**	**-1.4**
KMO				max				
	comp=E,54nm,0.9s							
KMO				Smax				
	comp=E,215nm,1.1s							
KMO	**Kumora**	**3.27**	**33**	*e*PN		**Pn**	**06 26 19.9**	**+1.6**
KMO				*e*			06 26 27.0	
KMO				*e*S		**Sn**	**06 26 59.1**	**+1.9**
KMO				*e*			06 27 09.6	
KMO				pmax	pmax			
	comp=Z,16nm,0.3s							
KMO				smax	smax			
	comp=E,226nm,1.0s							
CIT	**Chita**	**3.58**	**107**	*e*		**Pb**	**06 26 28.1**	**-2.2**
CIT				*e*			06 27 10.6	
CIT				*e*Sg		**Sg**	**06 27 20.2**	**-1.6**
CIT				SNPn				
	comp=E,534nm,0.6s							
CIT	**Chita**	**3.58**	**107**	*e*PN		**Pn**	**06 26 24.3**	**+1.8**
CIT				*e*			06 26 34.0	
CIT				*e*S		**Sn**	**06 27 06.1**	**+1.2**
CIT				*e*			06 27 19.9	
CIT				pmax	pmax			
	comp=Z,131nm,0.2s							
CIT				smax	smax			
	comp=N,619nm,0.8s							
ARS	**Arshan**	**3.64**	**252**	*e*Pn		**Pn**	**06 26 24.5**	**+1.1**
ARS				*e*			06 26 26.9	
ARS				*e*Pg		**Pb**	**06 26 30.7**	**-0.7**
ARS				*e*			06 26 34.2	
ARS				*e*Sg		**Sb**	**06 27 17.7**	**+2.0**
ARS				max				
	comp=N,85nm,0.5s							
ARS				Smax				
	comp=N,1μm,0.6s							
ARS	**Arshan**	**3.64**	**252**	*e*PN		**Pn**	**06 26 23.7**	**+0.3**
ARS				*e*			06 26 32.0	
ARS				*e*			06 27 17.6	
ARS				pmax	pmax			
	comp=Z,86nm,0.5s							
ARS				smax	smax			
	comp=E,999nm,0.7s							
YOA	**Uoyan**	**3.64**	**35**	*e*Sg		**Sg**	**06 27 24.5**	**+0.6**
YOA				*e*			06 27 34.6	
YOA				*e*			06 27 49.9	
YOA				max				
	comp=E,424nm,0.6s							
UKT	**Uakit**	**4.01**	**53**	*e*Pn		**Pn**	**06 26 30.5**	**+2.0**
UKT				*e*Pg		**Pb**	**06 26 39.2**	**+1.5**
UKT				*e*Sg		**Sg**	**06 27 32.9**	**-2.6**
UKT				Pmax				
	comp=E,41nm,1.1s							
UKT				Smax				
	comp=E,91nm,1.1s							
ZAK	**Zakamensk**	**4.07**	**228**	*e*Pn		**Pn**	**06 26 29.4**	**0.0**
ZAK				*e*			06 26 42.0	
ZAK				*e*Sn		**Sn**	**06 27 17.3**	**+0.2**
ZAK				*e*Sg		**Sg**	**06 27 32.9**	**-4.8**
ZAK				*e*			06 27 39.3	
ZAK				max				
	comp=E,14nm,0.4s							
ZAK				max				
	comp=E,70nm,0.9s							
SVKR	**Severomuysk**	**4.35**	**46**	*e*Sg		**Sg**	**06 27 45.1**	**-1.4**
SVKR				Smax				
	comp=E,293nm,0.7s							
KPC	**Khapcheranga**	**4.44**	**140**	⇑*i*Pn		**Pn**	**06 26 34.8**	**+0.4**
KPC				*e*Pg		**Pb**	**06 26 47.4**	**+2.3**
KPC				*e*			06 26 50.2	
KPC				*e*Sn		**Sn**	**06 27 23.8**	**-2.4**
KPC				*e*Sg		**Sg**	**06 27 45.6**	**-3.9**
KPC				max				
	comp=E,20nm,0.3s							
KPC				Smax				
	comp=E,171nm,0.6s							
KPC	**Khapcheranga**	**4.44**	**140**	*e*PN		**Pn**	**06 26 34.8**	**+0.4**
KPC				*e*			06 26 48.3	
KPC				*e*S		**Sn**	**06 27 25.8**	**-0.4**
KPC				*e*			06 27 44.8	
KPC				pmax	pmax			
	comp=Z,20nm,0.4s							
KPC				smax	smax			
	comp=E,170nm,0.6s							
MOY	**Mondy**	**4.56**	**253**	*e*Pn		**Pn**	**06 26 39.5**	**+3.5**
MOY				*e*			06 26 46.2	
MOY				*e*			06 27 31.6	
MOY				*e*Sg		**Sg**	**06 27 47.1**	**-6.2**
MOY				*e*			06 27 59.8	
MOY				max				
	comp=E,62nm,1.2s							
MOY				max				
	comp=E,365nm,1.4s							
MOY	**Mondy**	**4.56**	**253**	*e*PN		**Pn**	**06 26 39.6**	**+3.5**
MOY				*e*			06 26 48.1	
MOY				*e*			06 27 47.8	
MOY				pmax	pmax			
	comp=Z,29nm,0.4s							
MOY				smax	smax			
	comp=N,233nm,0.8s							
ORL	**Orlik**	**5.01**	**266**	*e*Pn		**Pn**	**06 26 44.7**	**+2.4**
ORL				*e*			06 26 48.6	
ORL				*e*			06 26 53.1	
ORL				*e*			06 27 42.7	
ORL				*e*Sg		**Sg**	**06 28 02.3**	**-5.5**
ORL				Smax				
	comp=N,121nm,1.0s							
ORL	**Orlik**	**5.01**	**266**	*e*PN		**Pn**	**06 26 44.7**	**+2.4**
ORL				*e*			06 26 56.9	
ORL				*e*			06 27 59.3	
ORL				pmax	pmax			
	comp=Z,48nm,0.4s							
ORL				smax	smax			
	comp=N,121nm,0.9s							
SONM	**Songino Array**	**5.47**	**191**	Pn		**Pn**	**06 26 50.4**	**+1.8**
	comp=N,0.5nm,0.3s,baz=3.8,slow=15,SNR=11							
SONM				Pg		**Pg**	**06 27 07.1**	**-4.5**
	comp=N,3.1nm,0.3s,baz=8.3,slow=18,SNR=14							
SONM				Sn		**Sn**	**06 27 55.2**	**+3.6**
	comp=N,2.3nm,0.3s,baz=18,slow=17,SNR=3.7							
SONM				Lg		Lg	06 28 19.9	
	comp=N,12nm,0.3s,baz=12,slow=30,SNR=13							
NLYR	**Nelyaty**	**5.53**	**50**	*e*Pn		**Pn**	**06 26 51.3**	**+2.0**
NLYR				*e*Pg		**Pb**	**06 27 06.5**	**+2.9**
NLYR				*e*Sg		**Sg**	**06 28 19.1**	**-5.3**
NLYR				Pmax				
	comp=N,9.0nm,0.8s							
NLYR				Smax				
	comp=N,72nm,1.2s							

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BOD	**Bodaibo**	**5.74**	**34**	*e*			06 27 32.1	
BOD				*e*			06 27 40.9	
BOD				*e*Sg		**Sg**	**06 28 26.2**	**-5.0**
BOD				Smax				
	comp=N,75nm,2.1s							
CRS	**Chara**	**6.96**	**54**	*e*Pg		Pg	06 27 34.7	-5.4
CRS				*e*			06 27 36.7	
CRS				*e*			06 27 46.3	
CRS				*e*Sg		**Sg**	**06 29 05.9**	**-4.3**
CRS				*e*			06 29 17.4	
CRS				max				
	comp=N,17nm,1.0s							
CRS				Smax				
	comp=N,40nm,1.0s							
TUP	**Tupik**	**7.18**	**75**	*e*Pn		**Pn**	**06 27 13.0**	**+1.1**
TUP				*e*			06 27 19.7	
TUP				*e*Pg		Pg	06 27 37.9	-6.4
TUP				*e*Sg		**Sg**	**06 29 11.9**	**-5.3**
TUP				Pmax				
	comp=N,5.0nm,0.5s							
TUP				Smax				
	comp=N,202nm,1.1s							
TUP	**Tupik**	**7.18**	**75**	*e*PN		**Pn**	**06 27 12.8**	**+0.9**
TUP				*e*			06 27 36.5	
TUP				*e*S		**Sn**	**06 28 34.6**	**+1.1**
TUP				*e*			06 29 11.6	
TUP				pmax	pmax			
	comp=Z,8.0nm,0.6s							
TUP				smax	smax			
	comp=N,203nm,1.1s							
TDJR	**Todzha**	**7.27**	**268**	*e*Pn		**Pn**	**06 27 16.1**	**+2.9**
TDJR				*e*			06 27 25.1	
TDJR				*e*			06 28 46.7	
TDJR				*e*Sg		**Sg**	**06 29 12.0**	**-8.0**
TDJR				*e*			06 29 26.7	
YKLR	**Yuktali**	**8.56**	**61**	*e*			06 29 23.0	
YKLR				*e*Sg		**Sg**	**06 29 56.7**	**-4.8**
YKLR				*e*			06 30 07.4	
CLNS	**Chul'man**	**10.35**	**63**	*e*			06 29 00.8	
CLNS				*e*			06 29 47.1	
CLNS				*e*			06 30 40.8	
CLNS				*e*Sg			06 30 51.7	
ZALV	**Zalesovo Beam**	**13.79**	**282**	Sn		**Sn**	**06 31 14.7**	**-0.6**
	comp=N,0.4nm,0.3s,baz=95,slow=22,SNR=3.7							
ZALV				Lg		Lg	06 32 33.0	
	comp=N,0.1nm,0.3s,baz=86,slow=23,SNR=1.9							
KLR	**Kul'dur**	**15.37**	**95**	Lg		Lg	06 33 31.5	
	comp=N,0.0nm,0.3s,baz=42,slow=16,SNR=3.6							
MKAR	**Makanchi Array**	**17.68**	**259**	P		**P**	**06 29 35.5**	**+1.5**
	comp=N,0.0nm,0.3s,baz=70,slow=13,SNR=2.3							
KURK	**Kurchatov**	**18.23**	**274**	P		**P**	**06 29 43.0**	**+3.0**
KURBB	**Kurchatov Arra**	**18.31**	**274**	P		**P**	**06 29 43.0**	**+2.1**
	comp=N,0.0nm,0.3s,baz=68,slow=12,SNR=3.2							
BVAR	**Borovoye Array**	**22.42**	**285**	P		**P**	**06 30 27.9**	**+2.4**
	comp=N,0.6nm,0.5s,baz=34,slow=16,SNR=3.7							
ILAR	**Eielson Array**	**49.12**	**33**	P		**P**	**06 34 16.1**	**+2.0**
	comp=N,0.4nm,0.8s,baz=310,slow=5.6,SNR=3.3							
WRA	**Warramunga Arr**	**76.33**	**155**	P		**P**	**06 37 17.0**	**+1.1**
	comp=N,0.4nm,0.7s,baz=345,slow=6.2,SNR=5.0							
ASAR	**Alice Springs**	**79.78**	**156**	P		**P**	**06 37 35.9**	**+0.8**
	comp=N,0.4nm,0.7s,baz=348,slow=5.9,SNR=5.3							
TORD	**Torodi Ar. Bea**	**89.09**	**291**	P		**P**	**06 38 23.7**	**+1.2**
	comp=N,0.2nm,0.5s,baz=23,slow=4.7,SNR=2.8							

*IDC **09** 06:26:06.3±1.1,54.˙89N×160.˙18W,h0km,mb4.1/25, mb1 4.2/26,mb1mx4.1/64,mbtmp4.1/26,ML3.6/1,MS3.2/1, Ms1 3.3/1,ms1mx2.7/45,Error ellipse: s-maj=29.0km s-min=15.3km az=178.0*
*AEIC **09** 06:26:10.3±2.1,54.˙68N±0.˙05×159.˙97W±0.˙05,h21km±5km, ML3.8/33,Error ellipse: s-maj=6.9km s-min=4.1km az=186.0*
ISC 09 06:26:10.8±0.9,54˙82N±0˙05×160˙08W±0˙03,h31km±6km, n124,σ1^{1}**25/133,mb4.2/28,2C-2D,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CNBA	**Chernabura Isl**	**0.28**	**90**	Pg		**Pb**	**06 26 17.5**	**-0.7**
CNBA				Sg		**Sb**	**06 26 22.6**	**-0.5**
SDPT	**Sand Point**	**0.58**	**337**			**Pn**	**06 26 23.3**	**+0.4**
SDPT				Sg		**Sn**	**06 26 31.5**	**+0.1**
PN6	**Pavlof North-6**	**1.23**	**302**			**Pb**	**06 26 33.9**	**+0.4**
VNWF	**Veniaminof 8**	**1.37**	**12**			**Pb**	**06 26 35.9**	**0.0**
BLHA	**Black Hill**	**1.44**	**309**			**Pb**	**06 26 36.5**	**-0.6**
VNSS	**Veniaminof 8**	**1.45**	**14**			**Pb**	**06 26 37.4**	**0.0**
VNSS						**Sb**	**06 26 57.4**	**+1.9**
VNFG	**Fog Glacier, M**	**1.50**	**11**			**Pb**	**06 26 38.4**	**+0.3**
VNNF	**Veniaminof 3**	**1.53**	**16**			**Pb**	**06 26 38.5**	**-0.1**
BALA	**Baldy Mountain**	**1.60**	**285**			**Pb**	**06 26 39.1**	**-0.7**
BALA						**Sb**	**06 27 01.8**	**+2.2**
FALS	**False Pass**	**1.93**	**272**			**Pn**	**06 26 42.5**	**+1.0**
FALS	**False Pass**	**1.93**	**272**			**Sb**	**06 27 08.4**	**-0.6**
FALS	**False Pass**	**1.93**	**272**			**Sb**	**06 27 08.6**	**-0.4**
SSBA	**Shishaldin**	**2.34**	**270**			**Pn**	**06 26 48.9**	**+1.6**
WESE	**West Dahl East**	**2.64**	**264**			**Pn**	**06 26 53.0**	**+1.6**
WEBT	**Westdahl Beart**	**2.72**	**267**			**Pn**	**06 26 54.1**	**+1.7**
CHIR	**Chirikof Islan**	**2.74**	**67**			**Pn**	**06 26 52.8**	**+0.1**
CHIR				Sn		**Sn**	**06 27 25.0**	**+0.4**
AKUT	**Akutan**	**3.39**	**261**	Pn		**Pn**	**06 27 01.9**	**+0.3**
SII	**Sitkinak Islan**	**3.77**	**60**			**Pn**	**06 27 07.8**	**+1.0**
UNV	**Unalaska Valle**	**3.89**	**258**			**Pn**	**06 27 09.2**	**+0.8**
MTBL	**Makushin Table**	**3.95**	**260**			**Pn**	**06 27 10.4**	**+1.0**
MSW	**Makushin Switc**	**4.02**	**260**			**Pn**	**06 27 10.9**	**+0.6**
MREP	**Makushin Rep't**	**4.03**	**258**			**Pn**	**06 27 11.3**	**+0.8**
ANCK	**Angle Creek**	**4.23**	**35**			**Pn**	**06 27 15.1**	**+1.9**
KABU	**Katmai Buttres**	**4.36**	**36**			**Pn**	**06 27 16.6**	**+1.6**
OHAK	**Old Harbor**	**4.51**	**55**			**Pn**	**06 27 16.5**	**-0.4**
KDAK	**Kodiak Island**	**5.12**	**52**	Pn		**Pn**	**06 27 24.8**	**-0.5**
	2.4nm,0.3s,baz=205,slow=6.0,SNR=38							
KDAK				Sn		**Sn**	**06 28 21.5**	**-1.9**
	2.6nm,0.3s,baz=15,slow=19,SNR=3.0							
KDAK				Lg		Lg	06 28 44.7	
	6.5nm,0.3s,baz=345,slow=22,SNR=5.8							
KDAK	**Kodiak Island**	**5.12**	**52**			**Pn**	**06 27 25.6**	**+0.3**
SPIA	**Saint Paul Isl**	**6.17**	**297**			**Pn**	**06 27 35.6**	**-4.2**
HOM	**Homer**	**6.67**	**40**	Pn		**Pn**	**06 27 46.9**	**+0.4**
SVW2	**Sparrevohn**	**6.73**	**19**			**Pn**	**06 27 49.6**	**+2.1**
RSO	**Redoubt South**	**6.89**	**32**	Pn		**Pn**	**06 27 50.8**	**+1.0**
NCT	**North Crescent**	**6.91**	**31**			**Pn**	**06 27 52.9**	**+2.9**
BRLK	**Bradley Lake**	**7.02**	**41**			**Pn**	**06 27 51.4**	**0.0**
BRSE	**Bradley Lake S**	**7.07**	**42**			**Pn**	**06 27 51.5**	**-0.5**
SEW	**Seward**	**7.80**	**43**	Pn		**Pn**	**06 28 03.2**	**+1.2**
SUA	**Susitna One**	**8.28**	**33**			**Pn**	**06 28 09.5**	**+0.7**
RC01	**Rabbit Creek A**	**8.34**	**37**			**Pn**	**06 28 10.9**	**+1.4**
TT01	**Tatalina**	**8.38**	**13**			**Pn**	**06 28 11.6**	**+1.6**
SKT	**Skwentna**	**8.46**	**28**			**Pn**	**06 28 12.9**	**+1.7**
PWL	**Port Wells**	**8.70**	**41**			**Pn**	**06 28 15.2**	**+0.7**
ATKA	**Atka Island**	**8.81**	**258**	Pn		**Pn**	**06 28 16.3**	**+0.4**
PMR	**Palmer**	**8.91**	**36**	Pn		**Pn**	**06 28 18.6**	**+1.4**
KNK	**Knik Glacier**	**9.02**	**38**			**Pn**	**06 28 19.9**	**+1.1**
KNK						**Sn**	**06 30 00.3**	**+1.1**
PPLA	**Purkeypile**	**

ILAR	**Eielson Array**	**11.96**	**28**	Pn		**Pn**	**06 28 56.8**	**-2.2**
	0.2nm,0.3s,baz=217,slow=13,SNR=15							
ILAR				Sn		**Sn**	**06 31 06.9**	**-4.1**
	0.0nm,0.3s,baz=222,slow=8.0,SNR=2.4							
ILAR				LR		LR	06 33 57.7	
	comp=Z,128nm,20.3s,baz=242,slow=40							
ILAR	**Eielson Array**	**11.96**	**28**			**Pn**	**06 28 58.5**	**-0.4**
DOT	**Dot Lake**	**12.03**	**36**			**Pn**	**06 29 00.1**	**+0.1**
SCRK	**Sand Creek**	**12.27**	**35**			**Pn**	**06 29 02.6**	**-0.7**
BCAR	**Beaver Creek A**	**12.51**	**41**	Pn		**Pn**	**06 29 06.1**	**-0.4**
PRP	**Porcupine Dome**	**12.90**	**28**			**Pn**	**06 29 10.9**	**-1.0**
RDOG	**Red Dog Mine**	**13.35**	**355**			**Pn**	**06 29 18.8**	**+0.9**
EGAK	**Eagle**	**13.73**	**36**			**Pn**	**06 29 23.3**	**+0.3**
SKAG	**Skagway**	**14.18**	**61**	Pn		**Pn**	**06 29 31.5**	**+2.3**
BESE	**Bessie Mountai**	**14.32**	**64**	Pn		**Pn**	**06 29 32.5**	**+1.2**
JIS	**Juneau Island**	**14.55**	**66**	Pn		**Pn**	**06 29 34.8**	**+0.5**
BMAR	**Burnt Mountain**	**14.63**	**24**	Pn		**Pn**	**06 29 36.6**	**+1.2**
EPYK	**Eagle Plains**	**16.16**	**35**			**Pn**	**06 29 56.0**	**+0.6**
C36M	**Paulatuk**	**21.79**	**34**	P		**P**	**06 30 59.0**	**-0.7**
PET	**Petropavlovsk**	**24.12**	**283**	P		**P**	**06 31 24.2**	**+0.6**
YKA	**Yellowknife Ar**	**24.40**	**53**	P		**P**	**06 31 26.0**	**0.0**
	0.9nm,0.7s,baz=262,slow=6.6,SNR=15							
PEA0B	**Petropavlovsk-**	**24.63**	**284**	P		**P**	**06 31 29.1**	**+0.8**
PETK	**Petropavlovsk-**	**24.63**	**284**	P		**P**	**06 31 28.2**	**0.0**
	12nm,0.4s,baz=89,slow=13,SNR=40							
PETK	**Petropavlovsk-**	**24.63**	**284**	P		**P**	**06 31 28.8**	**+0.6**
SEY	**Seymchan**	**25.32**	**308**	P		**P**	**06 31 32.7**	**-1.7**
	1.5nm,0.5s,baz=111,slow=17,SNR=3.5							
NVAR	**Mina Array Bea**	**32.46**	**103**	P		**P**	**06 32 38.6**	**+0.1**
	0.4nm,0.9s,baz=308,slow=10,SNR=1.9							
TIXI	**Tiksi**	**33.59**	**327**	P		**P**	**06 32 46.3**	**-1.3**
	1.9nm,0.4s,baz=65,slow=7.6,SNR=4.1							
PDAR	**Pinedale Array**	**34.65**	**89**	P		**P**	**06 33 00.6**	**+3.2**
	0.2nm,0.5s,baz=336,slow=2.0,SNR=3.2							
ANMO	**Albuquerque**	**41.67**	**96**	PcP		**PcP**	**06 35 53.1**	**+0.3**
	0.6nm,0.6s,baz=338,slow=3.1,SNR=3.7							
SPITS	**Spitsbergen Ar**	**47.24**	**1**	P		**P**	**06 34 39.9**	**-0.4**
	1.0nm,0.4s,baz=48,slow=8.8,SNR=17							
TXAR	**Lajitas Array**	**47.39**	**99**	P		**P**	**06 34 42.0**	**-0.2**
	0.2nm,0.6s,baz=310,slow=7.0,SNR=3.1							
KSRS	**Korea Array**	**50.49**	**281**	P		**P**	**06 35 05.3**	**-0.4**
	1.7nm,0.9s,baz=46,slow=8.7,SNR=4.2							
SONM	**Songino Array**	**54.64**	**304**	P		**P**	**06 35 36.4**	**-0.1**
	2.4nm,0.9s,baz=44,slow=8.6,SNR=6.5							
SONM				PcP		**PcP**	**06 36 39.6**	**+0.5**
	0.6nm,0.6s,baz=58,slow=2.1,SNR=3.3							
ARCES	**ARCESS Array B**	**55.89**	**358**	P		**P**	**06 35 44.0**	**-1.0**
	1.8nm,0.7s,baz=353,slow=6.4,SNR=3.9							
FINES	**FINESS Array B**	**63.98**	**357**	P		**P**	**06 36 39.2**	**-1.4**
	2.7nm,0.7s,baz=16,slow=8.7,SNR=5.6							
NB2	**NORSAR Subarra**	**64.28**	**5**	P		**P**	**06 36 42.8**	**+0.2**
	comp=Z,7.8nm,1.1s,baz=359,slow=6.9							
NOA	**NORSAR Array B**	**64.28**	**5**	P		**P**	**06 36 41.7**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=355,slow=6.5,SNR=4.4							
BVAR	**Borovoye Array**	**64.70**	**329**	P		**P**	**06 36 45.4**	**0.0**
	comp=Z,3.9nm,0.7s,baz=38,slow=7.5,SNR=20							
ARU	**Arti**	**64.72**	**337**	P		**P**	**06 36 44.8**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=297,slow=6.4,SNR=4.0							
HFS	**Hagfors**	**65.29**	**3**	P		**P**	**06 36 48.8**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=76,slow=6.3,SNR=6.8							
MKAR	**Makanchi Array**	**65.91**	**318**	P		**P**	**06 36 52.6**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=53,slow=7.1,SNR=4.9							
EKA	**Eskdalemuir Ar**	**68.59**	**14**	P		**P**	**06 37 10.8**	**+0.6**
	comp=Z,4.1nm,0.9s,baz=340,slow=4.9,SNR=7.9							
AKTO	**Aktyubinsk**	**70.39**	**335**	P		**P**	**06 37 21.1**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=36,slow=5.3,SNR=6.3							
AKTO	**Aktyubinsk**	**70.39**	**335**	⇓Pn		**P**	**06 37 22.8**	**+1.4**
	comp=Z,2.4nm,0.8s							
AKTO				⇑Lg		Lg	06 38 07.3	
	comp=Z,2.1nm,1.2s							
AB31	**Akbulak array**	**70.99**	**334**	⇑Pn		**P**	**06 37 24.0**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=36,slow=6.1,SNR=17							
AB31				⇓Lg		Lg	06 37 59.7	
	comp=Z,1.8nm,0.6s,baz=72,slow=7.2,SNR=14							
ABKAR	**Akbulak array**	**70.99**	**334**	P		**P**	**06 37 25.3**	**+0.2**
AAK	**Ala-Archa**	**72.37**	**321**	P		**P**	**06 37 34.0**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=56,slow=6.0,SNR=3.6							
KK31	**Karatay Array**	**73.37**	**324**	P		**P**	**06 37 39.4**	**0.0**
KKAR	**Karatay Array**	**73.37**	**324**	P		**P**	**06 37 39.4**	**0.0**
AKASG	**Malin Array Be**	**74.56**	**354**	P		**P**	**06 37 45.5**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=9.6,slow=5.9,SNR=8.3							
GERES	**GERESS Array B**	**76.58**	**4**	P		**P**	**06 37 57.6**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=332,slow=4.5,SNR=4.8							
KBZ	**Khabaz**	**79.89**	**343**	P		**P**	**06 38 16.4**	**+0.2**
	comp=Z,2.5nm,1.0s,baz=331,slow=4.3,SNR=5.1							
CMAR	**Chiang Mai Arr**	**81.25**	**289**	P		**P**	**06 38 23.4**	**-0.6**
	comp=Z,4.3nm,0.3s,baz=8.9,slow=6.4,SNR=5.7							
DZM	**Mont Dzumac**	**81.77**	**211**	LR		LR	07 10 45.7	
	comp=Z,369nm,18.2s,baz=12,slow=33							
GEYT	**Alibeck**	**81.98**	**330**	P		**P**	**06 38 28.3**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=334,slow=3.8,SNR=3.5							
ESDC	**Sonseca Array**	**83.68**	**18**	P		**P**	**06 38 37.1**	**+0.8**
	comp=Z,2.0nm,0.7s,baz=339,slow=4.5,SNR=12							
BRTR	**Keskin Array B**	**85.09**	**349**	P		**P**	**06 38 43.8**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=56,slow=2.2,SNR=6.1							

*NIED **09** 06:28:00.3±0.7, 36.90N×141.50E, h5km, Mw3.8 Best double couple: M0 6.43000×10^14 NP1:φs 16.00000°, δ49.00000°, λ-104.00000°. NP2:φs 217.00000°, δ43.00000°, λ-74.00000°.*

*JMA **09** 06:28:08.7±0.1, 36.95N×141.44E, h35km±1km, M4.2*

JMA Felt II J1.

*NEIC **09** 06:28:13.4±0.9, 36.93N±0.06×141.28E±0.10, h40km±6km, mb4.6/23, Error ellipse: s-maj=11.8km s-min=8.5km az=114.0*

*IDC **09** 06:28:14.5±2.9, 36.91N×141.20E, h54km±25km, mb3.7/24, mb1 3.9/27, mb1mx3.8/59, mbtmp4.0/27, ML2.8/3, MS2.8/4, Ms1 2.8/4, ms1mx2.6/49, Error ellipse: s-maj=18.3km s-min=13.4km az=72.0*

ISC 09 06:28:09.0±1.7, 36°97N±0°04×141°37E±0°06, h10km±10km, n86, σ1°§04/91, mb4.2/35, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.47**	**286**	Op P		**Pb**	**06 28 19.5**	**0.0**
ONAJ				S		**Sb**	**06 28 27.0**	**+0.5**
JFK	**Kawauchi**	**0.56**	**315**	P		**Pg**	**06 28 20.6**	**+0.7**
JFK				S		**Sb**	**06 28 28.9**	**0.0**
JFFD	**Fukushimafurud**	**0.66**	**281**	P		**Pb**	**06 28 22.2**	**-0.4**
JFFD				S		**Sb**	**06 28 31.6**	**-0.2**
JHO	**Hitachi**	**0.74**	**241**	P		**Pg**	**06 28 23.0**	**-0.2**
JHO				*eS*		**Sb**	**06 28 33.2**	**-0.8**
JFT	**Otama**	**0.99**	**304**	P		**Pg**	**06 28 28.1**	**+0.1**
JFT				S		**Sb**	**06 28 41.8**	**+0.5**
JMM	**Marumori**	**1.00**	**333**	P		**Pg**	**06 28 27.3**	**-1.0**
JMM				S		**Sg**	**06 28 40.7**	**-0.6**
JFY	**Yanaizu**	**1.40**	**289**	P		**Pn**	**06 28 34.5**	**-0.1**
JFY				S		**Sg**	**06 28 53.6**	**-0.4**
JIO	**Ouri**	**1.48**	**359**	P		**Pn**	**06 28 34.0**	**-1.6**
JIO				S		**Sn**	**06 28 52.3**	**-2.7**
JOU	**Okura**	**1.50**	**338**	P		**Pn**	**06 28 35.4**	**-0.6**
JOU				*eS*		**Sn**	**06 28 54.3**	**-1.3**
MJAR	**Matsushiro Arr**	**2.57**	**261**	P		**Pn**	**06 28 51.1**	**+0.4**
	2.7nm,0.3s,baz=89,slow=14,SNR=57							
MJAR				S		**Sb**	**06 29 27.6**	**+0.7**
	3.6nm,0.3s,baz=74,slow=18,SNR=5.1							
MJAR				LR		LR	06 29 52.3	
	comp=Z,53nm,19.9s,baz=85,slow=41							
MJAR	**Matsushiro Arr**	**2.57**	**261**			**Pn**	**06 28 50.6**	**-0.1**
MAJO	**Matsushiro**	**2.58**	**261**			**Pn**	**06 28 51.5**	**+0.7**
MAT	**Matsushiro**	**2.58**	**261**	P		**Pn**	**06 28 51.5**	**+0.7**
MAT				*eS*		**Sb**	**06 29 24.8**	**-2.2**
MJB9	**Matsu-Tunnel**	**2.58**	**261**			**Pn**	**06 28 51.5**	**+0.7**
INU	**Inuyama**	**3.88**	**247**			**Pn**	**06 29 10.0**	**+1.4**
JHJ2	**Mitsune**	**4.06**	**199**	Pn		**Pn**	**06 29 12.4**	**+1.4**
JHJ2				Sn		**Sn**	**06 29 56.9**	**-1.7**
ERM	**Erimo**	**5.22**	**15**	Pn		**Pn**	**06 29 28.2**	**+1.1**
ASAJ	**Asahikawa**	**7.20**	**7**	S		**Sn**	**06 31 17.9**	**+1.9**
	1.1nm,0.3s,baz=126,slow=18,SNR=2.6							
JKA	**Kamikawa-asahi**	**7.20**	**7**			**Sn**	**06 31 17.9**	**+1.9**
USRK	**Ussuriysk Ar.**	**10.14**	**318**	P		**Pn**	**06 30 38.6**	**+4.0**
	baz=131,slow=12,SNR=6.0							
USRK				LR		LR	06 34 11.1	
	comp=Z,82nm,19.3s,baz=130,slow=35							
USRK	**Ussuriysk Ar.**	**10.14**	**318**			**Pn**	**06 30 36.3**	**+1.7**
KSRS	**Korea Array**	**10.74**	**277**	P		**Pn**	**06 30 44.8**	**+2.0**
	0.2nm,0.3s,baz=87,slow=15,SNR=2.9							
KSRS				LR		LR	06 34 53.2	
	comp=Z,52nm,18.3s,baz=84,slow=38							
KLR	**Kul'dur**	**14.11**	**333**	LR		LR	06 35 58.8	
	comp=Z,55nm,19.3s,baz=261,slow=33							

ULN	**Ulaanbaatar**	**27.36**	**304**	P		**P**	**06 33 55.4**	**+1.0**
SONM	**Songino Array**	**27.79**	**304**	P		**P**	**06 33 56.9**	**-1.3**
	1.1nm,0.7s,baz=114,slow=7.1,SNR=4.8							
SONM	**Songino Array**	**27.79**	**304**	P		**P**	**06 33 58.8**	**+0.6**
H11N2	**WAKE ISLAND Hy**	**28.15**	**121**	T		T	07 03 21.5	
	baz=313,slow=75,SNR=614							
H11N1	**WAKE ISLAND Hy**	**28.16**	**121**	T		T	07 03 22.2	
	baz=313,slow=75,SNR=528							
H11N3	**WAKE ISLAND Hy**	**28.16**	**121**	T		T	07 03 25.1	
	baz=313,slow=75,SNR=554							
H11S1	**WAKE ISLAND Hy**	**28.86**	**123**	T		T	07 04 12.8	
	baz=315,slow=76,SNR=278							
H11S3	**WAKE ISLAND Hy**	**28.86**	**123**	T		T	07 04 16.3	
	baz=315,slow=76,SNR=188							
H11S2	**WAKE ISLAND Hy**	**28.87**	**123**	T		T	07 04 13.3	
	baz=315,slow=76,SNR=146							
ZAA0	**Zalesovo Array**	**41.93**	**312**	P		**P**	**06 36 00.1**	**+0.5**
ZALV	**Zalesovo Beam**	**41.93**	**312**	P		**P**	**06 35 59.0**	**-0.5**
	4.5nm,0.6s,baz=84,slow=6.2,SNR=14							
ZALV	**Zalesovo Beam**	**41.93**	**312**	P		**P**	**06 35 59.9**	**+0.4**
MK31	**Makanchi Array**	**44.12**	**302**	P		**P**	**06 36 17.5**	**0.0**
MKAR	**Makanchi Array**	**44.12**	**302**	P		**P**	**06 36 16.9**	**-0.5**
	2.6nm,0.7s,baz=89,slow=9.8,SNR=25							
MKAR	**Makanchi Array**	**44.12**	**302**	P		**P**	**06 36 17.4**	**-0.1**
MAKZ	**Makanchi**	**44.33**	**302**	P		**P**	**06 36 19.2**	**+0.1**
KURK	**Kurchatov**	**45.94**	**308**	P		**P**	**06 36 32.2**	**+0.4**
KURK				IAmb		IAmb	06 36 43.9	
	comp=Z,3.8nm,0.8s							
KURBB	**Kurchatov Arra**	**46.01**	**308**	P		**P**	**06 36 31.7**	**-0.7**
	comp=Z,1.8nm,0.5s,baz=83,slow=8.6,SNR=19							
IMAR	**Indian Mountai**	**46.72**	**31**	P		**P**	**06 36 38.7**	**+0.9**
OHAK	**Old Harbor**	**46.82**	**43**	P		**P**	**06 36 39.3**	**+0.7**
OHAK				IAmb		IAmb	06 36 51.1	
	comp=Z,14nm,1.4s							
KDAK	**Kodiak Island**	**47.17**	**42**	P		**P**	**06 36 41.7**	**+0.4**
MLY	**Manley**	**47.92**	**32**	P		**P**	**06 36 48.7**	**+1.5**
PMR	**Palmer**	**48.70**	**37**	P		**P**	**06 36 53.6**	**+0.5**
PMR				IAmb		IAmb	06 36 54.4	
	comp=Z,9.6nm,1.5s							
GHO	**Glory Hole Cre**	**48.78**	**36**	P		**P**	**06 36 54.7**	**+0.8**
GHO				IAmb		IAmb	06 37 12.9	
	comp=Z,9.1nm,1.1s							
KNK	**Knik Glacier**	**49.03**	**37**	P		**P**	**06 36 56.7**	**+1.0**
KNK				IAmb		IAmb	06 37 12.1	
	comp=Z,13nm,1.3s							
SML	**Sawmill**	**49.06**	**36**	P		**P**	**06 36 56.8**	**+0.8**
SML				IAmb		IAmb	06 37 13.3	
	comp=Z,12nm,1.3s							
SOEI	**Soe**	**49.18**	**203**	P		**P**	**06 36 55.8**	**-1.6**
SCM	**Sheep Creek Mo**	**49.54**	**36**	P		**P**	**06 37 00.7**	**+1.0**
ILAR	**Eielson Array**	**49.56**	**32**	P		**P**	**06 36 59.2**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=269,slow=5.7,SNR=11							
ILAR	**Eielson Array**	**49.56**	**32**	P		**P**	**06 36 59.9**	**+0.2**
BVAR	**Borovoye Array**	**50.59**	**312**	P		**P**	**06 37 07.0**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=93,slow=7.7,SNR=4.2							
SCRK	**Sand Creek**	**50.88**	**33**	P		**P**	**06 37 10.5**	**+0.7**
SCRK				IAmb		IAmb	06 37 25.2	
	comp=Z,6.0nm,1.4s							
EGAK	**Eagle**	**52.01**	**32**	P		**P**	**06 37 18.7**	**+0.6**
EGAK				IAmb		IAmb	06 37 37.1	
	comp=Z,7.1nm,1.4s							
EPYK	**Eagle Plains**	**53.60**	**30**	P		**P**	**06 37 31.6**	**+1.7**
EPYK				IAmb		IAmb	06 37 36.7	
	comp=Z,6.1nm,0.9s							
KNRA	**Kununurra**	**53.70**	**195**	P		**P**	**06 37 31.5**	**+0.5**
ARU	**Arti**	**56.38**	**319**	P		**P**	**06 37 49.1**	**-1.0**
	comp=Z,1.6nm,0.2s,baz=175,slow=1.9,SNR=6.1							
FITZ	**Fitzroy Crossi**	**56.75**	**198**	P		**P**	**06 37 53.5**	**+0.5**
FITZ				IAmb		IAmb	06 38 11.1	
	comp=Z,6.4nm,1.4s							
WRA	**Warramunga Arr**	**57.00**	**188**	P		**P**	**06 37 53.8**	**-1.0**
	comp=Z,2.1nm,0.6s,baz=3.3,slow=7.3,SNR=26							
WRA	**Warramunga Arr**	**57.00**	**188**	P		**P**	**06 37 53.9**	**-0.9**
C36M	**Paulatuk**	**57.50**	**25**	P		**P**	**06 37 58.4**	**+0.6**
C36M				IAmb		IAmb	06 38 00.7	
	comp=Z,2.8nm,1.1s							
ABKAR	**Akbulak array**	**57.95**	**310**	P		**P**	**06 38 01.0**	**-0.3**
AKTO	**Aktyubinsk**	**58.69**	**312**	P		**P**	**06 38 06.0**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=76,slow=14,SNR=3.8							
ASAR	**Alice Springs**	**60.72**	**188**	P		**P**	**06 38 20.2**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=14,slow=8.4,SNR=16							
ASAR	**Alice Springs**	**60.72**	**188**	P		**P**	**06 38 20.4**	**-0.4**
GEYT	**Alibeck**	**63.83**	**299**	P		**P**	**06 38 41.5**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=68,slow=5.5,SNR=4.4							
YKA	**Yellowknife Ar**	**63.88**	**30**	P		**P**	**06 38 41.5**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=303,slow=6.6,SNR=5.5							
ARCES	**ARCESS Array B**	**64.04**	**339**	P		**P**	**06 38 42.5**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=53,slow=8.0,SNR=4.4							
STKA	**Stephens Creek**	**68.49**	**180**	P		**P**	**06 39 10.2**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=6.7,slow=17,SNR=2.6							
FORT	**Forrest**	**68.54**	**192**	P		**P**	**06 39 11.9**	**+0.3**
FINES	**FINESS Array B**	**68.85**	**332**	P		**P**	**06 39 12.4**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=45,slow=8.6,SNR=3.5							
FINES	**FINESS Array B**	**68.85**	**332**	P		**P**	**06 39 12.2**	**-1.0**
KBZ	**Khabaz**	**70.92**	**311**	P		**P**	**06 39 26.3**	**0.0**
	comp=Z,1.8nm,0.7s,baz=313,slow=3.0,SNR=3.8							
HFS	**Hagfors**	**74.13**	**336**	P		**P**	**06 39 45.3**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=60,slow=8.5,SNR=4.8							
NOA	**NORSAR Array B**	**74.23**	**337**	P		**P**	**06 39 45.5**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=38,slow=6.0,SNR=2.9							
AKASG	**Malin Array Be**	**74.32**	**322**	P		**P**	**06 39 45.7**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=44,slow=5.8,SNR=8.8							
NVAR	**Mina Array Bea**	**75.05**	**53**	P		**P**	**06 39 53.2**	**+2.0**
	comp=Z,0.6nm,0.8s,baz=286,slow=9.0,SNR=4.6							
PDAR	**Pinedale Array**	**77.73**	**45**	P		**P**	**06 40 06.8**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=311,slow=1.9,SNR=3.2							
BRTR	**Keskin Array B**	**78.86**	**312**	P		**P**	**06 40 11.4**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=47,slow=15,SNR=3.1							
GERES	**GERESS Array B**	**82.74**	**328**	P		**P**	**06 40 33.0**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=36,slow=8.5,SNR=3.1							
TXAR	**Lajitas Array**	**90.19**	**52**	P		**P**	**06 41 10.2**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=301,slow=3.1,SNR=5.8							
TXAR	**Lajitas Array**	**90.19**	**52**	P		**P**	**06 41 10.4**	**+0.5**
LPAZ	**La Paz**	**146.75**	**60**	PKPbc		**PKPbc**	**06 47 52.4**	**0.0**
	comp=Z,1.3nm,0.8s,baz=30,slow=6.1,SNR=5.7							
LPAZ	**La Paz**	**146.75**	**60**			**PKPbc**	**06 47 52.6**	**+0.2**

*TEH **09** 06:30:05.6, 39.72N×54.66E, h10km, ML3.5*

*NNC **09** 06:30:16.1±4.4, 40.40N×55.75E, h0km, mb3.7, Error ellipse: s-maj=39.5km s-min=21.6km az=44.0*

ISC 09 06:30:08.1±1.1, 39.90N±0.08×54.77E±0.07, h35km, n15, σ2§14/18, 3C-3D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**3.47**	**193**	*e*Pn		**Pn**	**06 30 58.8**	**-1.0**
IGLO				*e*			06 31 39.5	
ISFR	**Sfrayin**	**3.81**	**137**	*e*			06 31 53.4	
ISFR				*e*Pn		**Pn**	**06 31 06.3**	**+1.8**
IEMG	**Emamgholi**	**3.92**	**128**	*e*Pn		**Pn**	**06 31 07.0**	**+0.9**
IALA	**Alasht**	**4.11**	**203**	*e*Pn		**Pn**	**06 31 07.9**	**-0.8**
ISHM	**Shahmirzad**	**4.25**	**196**	*e*Pn		**Pn**	**06 31 09.5**	**-1.1**
ISHM				*e*			06 32 03.4	
IANJ	**Anjilo**	**4.48**	**189**	*e*Pn		**Pn**	**06 31 13.6**	**-0.1**
IFIR	**Firoozkooh**	**4.54**	**201**	*e*Pn		**Pn**	**06 31 15.2**	**+0.6**
IAKL	**Akhelmad**	**4.54**	**135**	*e*Pn		**Pn**	**06 31 16.0**	**+1.3**
QALM	**Alamut, Qazvin**	**4.75**	**225**	*e*Pn		**Pn**	**06 31 16.6**	**-0.8**
QALM				*e*			06 32 10.6	
IMYA	**Miami**	**5.50**	**129**	*e*Pn		**Pn**	**06 31 29.4**	**+1.7**
IMYA				*e*			06 32 37.2	
ISRB	**Sarab**	**5.92**	**252**	*e*Pn		**Pn**	**06 31 34.0**	**+0.5**
ISRB				*e*			06 31 35.0	
IHRS	**Heris**	**6.22**	**258**	*e*Pn		**Pn**	**06 31 38.2**	**+0.6**
IHRS				*e*			06 32 54.9	
AB31	**Akbulak array**	**10.05**	**20**	⇓P		**Pn**	**06 32 32.2**	**+2.4**
	0.4nm,0.3s,baz=203,slow=13,SNR=84							
AB31				⇓S		**Sn**	**06 34 19.5**	**-1.8**
	1.4nm,0.7s,baz=198,slow=25,SNR=9.7							
AKTO	**Aktyubinsk**	**10.78**	**11**	⇑P		**Pn**	**06 32 42.4**	**+2.5**
	1.6nm,0.6s							
AKTO				⇑S		**Sn**	**06 34 38.8**	**-0.4**
	2.5nm,0.8s							
KK31	**Karatay Array**	**12.23**	**70**	⇓P		**Pn**	**06 32 60.0**	**+0.3**
	0.9nm,0.8s,baz=95,slow=9.3,SNR=3.7							
KK31				⇑S		**Sn**	**06 35 08.4**	**-6.3**
	0.4nm,0.4s							

*IDC **09** 06:39:30.7±2.1, 11.60S×166.57E, h33km±14km, mb4.7/26, mb1 4.8/29, mb1mx4.8/35, mbtmp4.9/29, ML3.1/1, MS5.2/35, Ms1 5.2/35, ms1mx5.1/39, Error ellipse: s-maj=13.9km s-min=12.2km az=92.0*

*MOS **09** 06:39:30.7±0.8, 11.58S×166.48E, h47km, mb5.3/53, MS5.3/10, Error ellipse: s-maj=7.4km s-min=6.7km az=118.5*

*BJI **09** 06:39:31.1±0.0, 11.31S×166.80E, h51km, mB5.5/64, mb5.3/62, Ms5.5/74, Ms7 5.4/73*

*NEIC **09** 06:39:33.5±1.5, 11.595±0.06×166.52E±0.07, h58km±3km, mb5.1/178, Mwb5.8/58, Mwc5.9/73, Mww5.8, Mwc5.9(GCMT), Error ellipse: s-maj=9.7km s-min=8.8km az=93.0, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr5.27; Mθθ0.05; Mφφ-5.32; Mrθ0.99; Mrφ0.35; Mθr 1.71; Fault plane solution: Mo 5.67000×10^17 NP1: φs165.68000°, δ37.40000°, λ72.61000°. NP2:φs7.20000°, δ54.58000°, λ102.87000°. Principal axes: T 5.7296, Plg76.0000°, Azm319.0000°; N -0.1305, Plg10.0000°, Azm180.0000°; P -5.5991, Plg9.0000°, Azm88.0000°;*

*NEIC **09** 06:39:35, 11.60S×166.35E, h46km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr7.34; Mθθ-0.29; Mφφ-7.05; Mrθ-0.11; Mθφ1.52; Mφr-1.17; Fault plane solution: Mo 7.45000×10^17 NP1:φs345.00000°, δ41.00000°, λ86.00000°. NP2:φs171.00000°, δ49.00000°, λ93.00000°. Principal axes: T 7.4464, Plg85.0000°, Azm110.0000°; N 0.0161, Plg3.0000°, Azm348.0000°; P -7.4625, Plg4.0000°, Azm258.0000°;*

*NEIC **09** 06:39:38, 11.55S×166.07E, h51km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr7.75; Mθθ0.02; Mφφ-7.77; Mrθ-0.18; Mθφ1.96; Mφr1.44; Fault plane solution: Mo 8.13000×10^17 NP1:φs165.00000°, δ40.00000°, λ88.00000°. NP2:φs348.00000°, δ50.00000°, λ92.00000°. Principal axes: T 7.8825, Plg85.0000°, Azm270.0000°; N 0.4820, Plg1.0000°, Azm167.0000°; P -8.3645, Plg5.0000°, Azm77.0000°;*

*GCMT **09** 06:39:38.5±0.1, 11.56S±0.01×166.03E, h49km, MW5.9/162, Moment Tensor Solution. s162,c325; s155,c448; Duration: 2s1 Moment tensor: Scale 10^18 Nm; Mrr0.78±.01; Mθθ-0.03±.01; Mφφ-0.75±.00; Mrθ-0.01±.01; Mθφ0.18±.00; Mφr0.15±.01; Best double couple: Mo 0.80600×10^18 NP1:φs165.00000°, δ40.00000°, λ87.00000°. NP2:φs348.00000°, δ50.00000°, λ92.00000°. Principal axes: T 0.7970, Plg85.0000°, Azm275.0000°; N 0.0180, Plg2.0000°, Azm167.0000°; P -0.8150, Plg5.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

*NEIC **09** 06:39:58.4, 11.46S×165.94E, h54km, Moment Tensor Solution. Moment tensor: Scale 10^18Nm; Mrr1.07; Mθθ-0.18; Mφφ-0.89; Mrθ-0.18; Mθφ0.17; Mφr0.04; Fault plane solution: Mo 1.01000×10^18 NP1:φs174.20000°, δ43.34000°, λ100.97000°. NP2:φs339.28000°, δ47.64000°,

QIS **Mount Isa** **27.33 248** P **P** **06 45 12.8 -0.6**
baz=27,SNR=8.2
CMSA **Cobar Meteorol** **27.62 221** P **P** **06 45 15.9 +0.1**
baz=28,SNR=17
HAZ **Te Kaha** **27.88 161** P **P** **06 45 20.1 +2.2**
TARZ **Mount Tarawera** **27.93 163** P **P** **06 45 13.9 -4.7**
YNG **Young** **27.98 213** P **P** **06 45 20.0 +1.1**
baz=28,SNR=7.9
RUGZ **Raukumara Rang** **28.03 161** P **P** **06 45 20.8 +1.3**
URZ **Urewera** **28.13 162** P **P** **06 45 20.3 +0.1**
comp=Z,8.0nm,0.4s,baz=312,slow=1.3,SNR=7.8
URZ LR LR 06 55 11.2
comp=Z,6μm,21.8s,baz=352,slow=33
URZ **Urewera** **28.13 162** P **P** **06 45 22.2 +2.0**
URZ **Urewera** **28.13 162** P **P** **06 45 21.5 +1.3**
CNB **Canberra Magne** **28.26 211** P **P** **06 45 22.4 +0.9**
baz=28,SNR=22
PUZ **Puketiti** **28.32 160** P **P** **06 45 23.6 +1.6**
TWGZ **Tauwhareparae** **28.32 161** P **P** **06 45 24.1 +2.1**
MWZ **Matawai** **28.32 162** P **P** **06 45 24.1 +2.1**
RTZ **Ruatahuna** **28.42 163** P **P** 06 45 11.2 -12
CAN **Canberra** **28.45 211** P **P** **06 45 23.5 +0.3**
CAN pmax pmax
comp=Z,29nm,1.0s
CAN **Canberra** **28.45 211** P **P** **06 45 23.5 +0.3**
CAN IAmb IAmb 06 45 26.6
comp=Z,29nm,1.0s
WTVZ **West Tongariro** **28.51 165** P **P** **06 45 26.6 +2.8**
FWVZ **Far West T-bar** **28.63 165** P **P** **06 45 27.7 +2.7**
SNGZ **Shannon Statio** **28.68 162** P **P** **06 45 20.5 -4.6**
BHHZ **Black Hill Sta** **28.98 165** P **P** **06 45 29.1 +1.2**
KRHZ **Kereru** **29.21 164** P **P** **06 45 30.8 +0.9**
SMPI **Sarmi** **29.24 287** P **P** **06 45 30.4 +0.1**
comp=Z,2μmcomp=Z,124nm,1.4s
QRZ **Quartz Range** **29.54 171** P **P** **06 45 34.4 +1.7**
MILA **Mila** **29.75 209** P **P** **06 45 35.5 +0.8**
baz=30,SNR=5.1
H11S2 **WAKE ISLAND Hy** **29.95 0** T T 07 16 14.5
baz=181,slow=76,SNR=216
H11S3 **WAKE ISLAND Hy** **29.95 0** T T 07 16 24.5
baz=181,slow=76,SNR=174
H11S1 **WAKE ISLAND Hy** **29.96 0** T T 07 16 27.1
baz=181,slow=76,SNR=214
BFZ **Birch Farm** **30.16 165** P **P** **06 45 37.4 -0.8**
BFZ IAmb IAmb 06 45 40.1
comp=Z,43nm,0.7s
TUWZ **Tuamarina** **30.37 169** P **P** **06 45 40.3 +0.3**
SNZO **South Karori** **30.40 168** P **P** **06 45 40.9 +0.6**
SNZO IAmb IAmb 06 45 55.3
comp=Z,51nm,0.8s
THZ **Tophouse** **30.51 171** P **P** **06 45 42.2 +0.8**
STKA **Stephens Creek** **30.57 225** *e*P **P** **06 45 42.7 +0.8**
STKA **Stephens Creek** **30.57 225** P **P** **06 45 42.5 +0.5**
comp=Z,60nm,0.8s,baz=41,slow=8.2,SNR=120
STKA PcP **PcP** **06 48 39.6 -0.1**
comp=Z,12nm,1.1s,baz=29,slow=5.6,SNR=3.5
STKA LR LR 06 57 16.7
comp=Z,10μm,20.4s,baz=50,slow=35
STKA **Stephens Creek** **30.57 225** P **P** **06 45 42.2 +0.3**
MSWZ **Moíkau Station** **30.62 167** P **P** **06 45 42.1 -0.2**
BSWZ **Blackbirch Sta** **30.63 169** P **P** **06 45 43.7 +1.3**
PLWZ **Palliser** **30.77 167** P **P** **06 45 43.6 0.0**
H11N1 **WAKE ISLAND Hy** **31.16 1** T T 07 17 57.4
baz=182,slow=76,SNR=124
H11N3 **WAKE ISLAND Hy** **31.17 1** T T 07 17 44.8
baz=182,slow=76,SNR=65
H11N2 **WAKE ISLAND Hy** **31.18 1** T T 07 17 58.7
baz=182,slow=76,SNR=70
KHZ **Kahutara** **31.25 170** P **P** **06 45 47.4 -0.4**
KHZ IAmb IAmb 06 45 53.2
comp=Z,39nm,1.1s
LTZ **Lake Taylor** **31.41 172** P **P** **06 45 50.1 +0.8**
LTZ IAmb IAmb 06 45 55.0
comp=Z,40nm,0.7s
WR0 **Warramunga Arr** **31.85 251** P **P** **06 45 52.4 -1.0**
WR0 IAmb IAmb 06 45 54.6
comp=Z,31nm,0.9s
FOZ **Fox Glacier** **31.89 176** P **P** **06 45 55.2 +1.8**
TOO **Toolangi** **31.99 213** P **P** **06 45 55.3 +0.9**
baz=32,SNR=23
TOO **Toolangi** **31.99 213** P **P** **06 45 55.1 +0.7**
TOO pmax pmax
comp=Z,39nm,0.7s
TOO **Toolangi** **31.99 213** P **P** **06 45 55.1 +0.7**
WRAB **Tennant Creek** **32.02 251** P **P** **06 45 54.0 -0.9**
WRAB pmax pmax
comp=Z,39nm,0.9s
WRAB **Tennant Creek** **32.02 251** P **P** **06 45 54.0 -0.9**
WRAB IAmb IAmb 06 45 56.1
comp=Z,39nm,0.8s
WRA **Warramunga Arr** **32.03 251** P **P** **06 45 54.0 -1.0**
WRA **Warramunga Arr** **32.03 251** P **P** **06 45 54.0 -1.0**
comp=Z,42nm,0.9s,baz=85,slow=9.2,SNR=133
WRA PcP **PcP** **06 48 43.8 0.0**
comp=Z,6.2nm,0.8s,baz=73,slow=3.0,SNR=5.2
WRA ScP **ScP** **06 52 23.3 +0.4**
comp=Z,0.6nm,0.7s,baz=84,slow=3.2,SNR=3.1
WRA LR LR 06 57 30.1
comp=Z,6μm,21.2s,baz=75,slow=34
RPZ **Rata Peaks** **32.19 174** P **P** **06 45 56.6 +0.5**
comp=Z,38nm,0.6s,baz=272,slow=5.2,SNR=20
RPZ LR LR 06 57 54.0
comp=Z,3μm,21.8s,baz=342,slow=34
RPZ **Rata Peaks** **32.19 174** P **P** **06 45 57.2 +1.2**
MQZ **McQueen's Vall** **32.38 172** P **P** **06 45 58.5 +0.9**
LBZ **Lake Benmore** **32.77 175** P **P** **06 46 01.9 +0.8**
LBZ IAmb IAmb 06 46 06.1
comp=Z,55nm,1.3s
AS31 **Alice Springs** **33.24 244** P **P** **06 46 04.6 -1.0**
ASAR **Alice Springs** **33.24 244** P **P** **06 46 03.9 -1.7**
comp=Z,22nm,0.6s,baz=69,slow=9.4,SNR=340
ASAR PcP **PcP** **06 48 46.8 -0.4**
comp=Z,7.4nm,0.8s,baz=82,slow=2.6,SNR=6.9
ASAR ScP **ScP** **06 52 28.8 +1.7**
comp=Z,2.9nm,0.8s,baz=73,slow=3.2,SNR=5.1
ASAR LR LR 06 58 34.0
comp=Z,8μm,20.9s,baz=72,slow=34
ASAR P3KPbc 07 17 23.8
comp=Z,0.2nm,0.6s,baz=255,slow=4.4,SNR=4.7
HTT **Hallett** **33.30 225** P **P** **06 46 06.3 +0.3**
baz=33,SNR=76
KDU **Kakadu** **33.32 265** P **P** **06 46 05.1 -1.2**
baz=33,SNR=15
ODZ **Otahua Downs** **33.46 175** P **P** **06 46 07.1 -0.1**
ODZ IAmb IAmb 06 46 24.4
comp=Z,22nm,1.0s
ARPS **Mount Arapiles** **33.48 218** P **P** **06 46 08.2 +0.8**
baz=34,SNR=6.2
KMPI **Kaimana, Papua** **33.48 281** P **P** **06 46 07.4 -0.3**
comp=Z,310nm,0.9s
RAR **Rarotonga** **33.60 111** LR LR 06 57 15.2
comp=Z,4μm,21.9s,baz=269,slow=32
DCZ **Deep Cove** **33.70 179** P **P** **06 46 10.5 +1.3**
WHZ **Wether Hill Ro** **34.15 178** P **P** **06 46 12.7 -0.4**
WHZ IAmb IAmb 06 46 16.5
comp=Z,32nm,1.2s
MTN **Manton Dam** **34.62 264** P **P** **06 46 16.6 -1.0**
baz=34,SNR=14
MTN **Manton Dam** **34.62 264** P **P** **06 46 17.5 -0.2**
BBOO **Buckleboo** **35.01 228** P **P** **06 46 20.6 -0.1**
baz=35,SNR=22
BBOO **Buckleboo** **35.01 228** P **P** **06 46 20.7 -0.1**
BBOO IAmb IAmb 06 46 23.2
comp=Z,33nm,0.9s
MOO **Moorlands** **35.02 205** P **P** **06 46 21.8 +1.1**
baz=35,SNR=6.7
TAU **Tasmania Unive** **35.35 205** P **P** **06 46 24.2 +0.7**
TAU pmax pmax
comp=Z,35nm,1.1s
TAU **Tasmania Unive** **35.35 205** P **P** **06 46 24.2 +0.7**
TAU IAmb IAmb 06 46 42.2
comp=Z,35nm,1.1s
SIJI **Sorong** **36.62 284** P **P** **06 46 34.0 -0.8**
comp=Z,28nm,0.7s,baz=60,slow=3.8,SNR=6.9
SIJI LR LR 07 02 45.6
comp=Z,6μm,20.8s,baz=120,slow=38
SWI **Sorong** **36.63 284** P **P** **06 46 34.8 -0.1**
comp=Z,6μmcomp=Z,2μmcomp=Z,65nm,0.9s
KNRA **Kununurra** **36.91 259** P **P** **06 46 36.3 -0.9**
baz=37,SNR=16
KNRA **Kununurra** **36.91 259** P **P** **06 46 36.6 -0.6**
WRKA **Warakurna** **38.54 244** P **P** **06 46 49.6 -1.3**
baz=38,SNR=41
NLAI **Namlea** **39.96 279** P **P** **06 47 02.9 0.0**
comp=Z,5μmcomp=Z,120nm,0.9s
FITZ **Fitzroy Crossi** **40.00 256** P **P** **06 47 02.0 -1.1**
baz=40,SNR=54
FITZ **Fitzroy Crossi** **40.00 256** LR LR 07 02 51.3
comp=Z,9μm,20.0s,baz=78,slow=35
FITZ **Fitzroy Crossi** **40.00 256** P **P** **06 47 02.6 -0.5**
FORT **Forrest** **40.36 236** P **P** **06 47 05.8 -0.2**
baz=40,SNR=14
FORT **Forrest** **40.36 236** P **P** **06 47 06.1 +0.1**
SANI **Sanana** **41.34 280** P **P** **06 47 13.2 -1.0**
comp=Z,6μmcomp=Z,4μmcomp=Z,93nm,1.9s
SOEI **Soe** **41.57 268** P **P** **06 47 17.2 +0.9**
comp=Z,9μmcomp=Z,2μmcomp=Z,68nm,1.0s
BATI **Baumata** **42.11 268** P **P** **06 47 21.1 +0.5**
comp=Z,76nm,0.6s,baz=189,slow=3.0,SNR=8.3
BATI LR LR 07 04 41.2
comp=Z,6μm,21.3s,baz=122,slow=36
BATI **Baumata** **42.11 268** P **P** **06 47 20.5 -0.1**
comp=Z,4μmcomp=Z,2μmcomp=Z,65nm,0.7s
PPT2 **Papeete2** **42.78 103** *e*S S 06 54 00.7 +14
comp=Z,2μm,28.0s
PPT2 *e*LQ LQ 06 57 54.2
comp=Z,10μm,32.2s
PPT2 *e*LR LR 06 59 40.2
comp=Z,16μm,30.0s,baz=276
TBI **Tubuai** **43.37 112** *e*S S 06 54 07.8 +13
comp=Z,2μm,28.0s
TBI *e*LQ LQ 06 58 09.0
comp=Z,8μm,30.5s
TBI *e*LR LR 06 59 59.6
comp=Z,14μm,29.8s,baz=280
MMRI **Maumere** **43.70 270** P **P** **06 47 32.7 -0.7**
comp=Z,8μmcomp=Z,4μmcomp=Z,122nm,1.0s
KMSI **Cibinong** **44.00 283** P **P** **06 47 37.7 +1.9**
comp=Z,143nm,0.4s
LUWI **Luwuk** **44.70 280** P **P** **06 47 41.6 +0.2**
comp=Z,8μmcomp=Z,4μmcomp=Z,126nm,1.3s
DAV **Davao City (W)** **44.80 293** LR LR 07 06 46.2
comp=Z,1μm,20.0s,baz=103,slow=36
DAV **Davao City (W)** **44.80 293** ⇓*i*P **P** **06 47 45.9 +3.7**
KCP **Kidapawan** **45.22 292** ⇑*i*P **P** **06 47 46.0 +0.3**
KMBL **Kambalda** **45.59 237** P **P** **06 47 48.0 -0.3**
baz=46,SNR=6.7
PSA00 **Pilbara Seismi** **45.69 251** P **P** **06 47 49.2 +0.1**
APSI **Ampana** **45.82 280** P **P** **06 47 50.6 +0.3**
comp=Z,2μmcomp=Z,109nm,1.2s
BNSI **Bone** **46.51 275** P **P** **06 47 55.5 -0.2**
comp=Z,2μmcomp=Z,92nm,0.9s
KAPI **Kappang** **46.73 274** P **P** **06 47 56.9 -0.5**
KAPI pmax pmax
comp=Z,42nm,1.0s
KAPI **Kappang** **46.73 274** LR LR 07 10 30.9
comp=Z,776nm,19.5s,baz=336,slow=40
KAPI **Kappang** **46.73 274** P **P** **06 47 56.9 -0.5**
SPSI **Sidrap Palu** **46.92 275** P pP 06 48 12.6 -0.4
PCI **Palu** **47.57 280** P **P** **06 48 01.5 -2.5**
comp=Z,130nmcomp=Z,9.7nm,0.8s
MPSI **Mapaga** **47.84 281** P **P** **06 48 04.5 -1.6**
comp=Z,7μmcomp=Z,2μmcomp=Z,68nm,1.4s
PLAI **Plampang** **48.04 269** P **P** **06 48 06.4 -1.3**
comp=Z,6μmcomp=Z,3μmcomp=Z,113nm,2.1s
KLBR **Kellerberrin** **49.06 238** P **P** **06 48 14.7 -0.6**
baz=49,SNR=12
BLDU **Ballidu** **49.74 240** P **P** **06 48 20.0 -0.5**
baz=50,SNR=12
NWAO **Narrogin (SRO)** **49.79 237** P **P** **06 48 20.1 -0.8**
baz=50,SNR=5.6
NWAO **Narrogin (SRO)** **49.79 237** P **P** **06 48 20.6 -0.3**
NWAO pmax pmax
comp=Z,89nm,1.1s
NWAO pmax pmax
comp=Z,72nm,1.1s
NWAO **Narrogin (SRO)** **49.79 237** P **P** **06 48 20.6 -0.3**
NWAO **Narrogin (SRO)** **49.79 237** P **P** **06 48 20.5 -0.3**
NWAO IAmb IAmb 06 48 22.9
comp=Z,72nm,1.1s
MORW **Morawa** **50.04 242** P **P** **06 48 22.5 -0.3**
baz=50,SNR=16
MORW **Morawa** **50.04 242** P **P** **06 48 22.7 -0.1**
RKGY **Rocky Gully** **50.41 235** P **P** **06 48 25.5 0.0**
baz=50,SNR=6.4
MUN **Mundaring** **50.43 238** P **P** **06 48 25.7 0.0**
baz=50,SNR=7.1
GIRL **Giralia** **50.95 250** P **P** **06 48 31.2 +1.5**
JAGI **Jajag, Banyuwa** **51.64 268** P **P** **06 48 32.2 -2.8**
comp=Z,81nm,0.8s
JAGI **Jajag, Banyuwa** **51.64 268** P **P** **06 48 32.7 -2.3**
TAOE **Nuku Hiva Isla** **52.46 92** *e*S S 06 56 16.2 +12
comp=Z,1μm,26.6s
TAOE *e*LQ LQ 07 01 49.8
comp=Z,4μm,36.4s
TAOE *e*LR LR 07 04 08.7
comp=Z,6μm,27.4s
KKM **Kota Kinabalu** **53.07 287** P **P** **06 48 45.0 -0.7**
PWJI **Pagerwojo** **54.01 268** P **P** **06 48 49.9 -2.5**
comp=Z,3μmcomp=Z,87nm,1.2s
NGJI **Ngawi** **54.44 269** P pP 06 49 09.7 -0.2
PCJI **Pacitan** **54.59 268** P **P** **06 48 56.1 -0.6**
comp=Z,3μmcomp=Z,202nm,0.9s
MJAR **Matsushiro Arr** **54.87 332** P **P** **06 48 56.1 -2.2**
comp=Z,3.9nm,0.7s,baz=170,slow=8.7,SNR=6.6
MJAR LR LR 07 10 07.7
comp=Z,1μm,21.7s,baz=155,slow=34
MAJO **Matsushiro** **54.87 332** *i*P **P** **06 48 57.8 -0.5**
MAJO pmax pmax
comp=Z,14nm,1.0s
MAJO **Matsushiro** **54.87 332** P **P** **06 48 57.1 -1.2**
MAJO IAmb IAmb 06 49 15.1
comp=Z,29nm,1.1s
SBUM **Sibu** **55.80 281** P **P** **06 49 05.0 -0.4**
SBUM **Sibu** **55.80 281** P **P** **06 49 08.0 +2.6**
STKI **Sintang** **55.91 278** P **P** **06 49 06.2 0.0**
comp=Z,36nm,0.9s
JNU **Nakatsue** **56.03 324** P **P** **06 49 03.8 -3.0**
comp=Z,23nm,1.0s,baz=80,slow=6.1,SNR=4.0
JNU **Nakatsue** **56.03 324** P **P** **06 49 05.9 -0.8**
NACB **Ninganchiao** **56.54 309** P **P** **06 49 09.7 -0.7**
KPJI **Karang Pucung** **56.92 269** P pP 06 49 24.0 -3.8
KSM **Kuching** **57.39 279** P **P** **06 49 15.9 -0.8**
KSM IAmb IAmb 06 49 17.8
comp=Z,25nm,1.1s
CISI **Cisompet, Garu** **57.98 268** P **P** **06 49 19.3 -1.7**
LEM **Lembang** **58.29 269** LR LR 07 17 08.5
comp=Z,1μm,18.4s,baz=98,slow=39
LEM **Lembang** **58.29 269** P **P** **06 49 22.7 -0.6**
comp=Z,2μmcomp=Z,72nm,0.8s
CNJI **Cibinong** **58.69 268** P pP 06 49 40.8 +0.5
TPI **Tanjungpandan** **59.01 274** P **P** **06 49 27.2 -0.8**
comp=Z,1μmcomp=Z,20nm,2.6s
KUR **Kuril'sk** **59.08 345** P **P** **06 49 29.7 +1.8**
KUR *e* 06 50 16.8
KUR S **S** **06 57 34.5 +3.7**
CBJI **Citeko** **59.11 269** P **P** **06 49 28.4 -0.4**
comp=Z,147nm,0.8s
DBJI **Dramaga** **59.19 269** P pP 06 49 45.9 +2.1
QZH **Quanzhou** **59.25 308** P **P** **06 49 31.6 +2.2**
QZH S **S** **06 57 36.6 +2.9**
QZH LR LR
comp=Z,1μm,26.1s
QZH LR LR
comp=Z,1μm,21.3s
QZH LR LR
comp=Z,2μm,21.3s
JKA **Kamikawa-asahi** **59.62 340** P **P** **06 49 32.0 +0.4**
ASAJ **Asahikawa** **59.62 340** P **P** **06 49 32.0 +0.4**
comp=Z,6.0nm,0.3s,baz=216,slow=12,SNR=4.9
KSRS **Korea Array** **60.82 325** P **P** **06 49 39.5 -0.4**
comp=Z,2.6nm,0.5s,baz=142,slow=7.3,SNR=7.9
KSRS LR LR 07 14 16.8
comp=Z,750nm,20.2s,baz=132,slow=34
KASI **Kota Agung** **61.57 270** P pP 06 50 00.9 +0.8
MDSI **Maura Dua** **62.07 271** P **P** **06 49 47.3 -1.6**
comp=Z,995nmcomp=Z,8.0nm,0.5s
YSS **Yuzh-Sakhalins** **62.10 342** *e*P **P** **06 49 48.3 -0.1**
YSS *e* 06 50 07.7
YSS *e* 06 50 25.7
YSS *e* 06 52 05.8
YSS *e*S **S** **06 58 09.8 +0.5**
YSS *e*SSS SSS 07 04 57.6
YSS pmax pmax
comp=Z,20nm,1.0s
DSRI **Dabo** **62.49 276** P **P** **06 49 51.4 -0.4**
SKR **Severo-Kuril's** **62.73 353** *e*P **P** **06 49 53.6 +1.1**
SKR *e*S **S** **06 58 21.3 +4.2**
SKR pmax pmax
comp=Z,300nm,14.0s
SKR MLR MLR
comp=Z,700nm,16.0s

NJ2 **Nanjing** **63.01 315** *e*P **P** **06 49 54.0 -0.8**
NJ2 pP **pP** **06 50 08.0 -1.5**
NJ2 sP **sP** **06 50 13.3 -2.3**
NJ2 S **S** **06 58 25.9 +4.6**
NJ2 sS **sS** **06 58 46.6 +1.0**
NJ2 pmax pmax
comp=Z,27nm,0.9s
NJ2 pmax pmax
comp=Z,1μm,7.1s
NJ2 LR LR
comp=Z,2μm,20.4s
NJ2 LR LR
comp=Z,2μm,17.5s
NJ2 LR LR
comp=Z,3μm,19.9s
QIZ **Qiongzhong** **63.66 298** P **P** **06 49 59.1 -0.3**
QIZ sP **pP** **06 50 16.3 +2.1**
QIZ S **S** **06 58 34.5 +4.5**
QIZ sS **sS** **06 58 51.9 -1.8**
QIZ SS **SS** **07 02 40.4 +1.7**
QIZ LR LR
comp=Z,1μm,21.2s
QIZ LR LR
comp=Z,2μm,23.7s
QIZ LR LR
comp=Z,3μm,23.1s
MYKOM **Kota Tinggi** **63.72 278** P **P** **06 49 57.6 -2.3**
MYKOM IAmb IAmb 06 50 15.7
comp=Z,36nm,1.2s
USA0B **Ussuriysk Arra** **63.84 333** P **P** **06 49 59.8 -0.3**
USA0B pmax pmax
comp=Z,24nm,1.1s
USA0B **Ussuriysk Arra** **63.84 333** P **P** **06 49 59.8 -0.3**
USA0B IAmb IAmb 06 50 18.2
comp=Z,24nm,1.1s
USRK **Ussuriysk Ar.** **63.84 333** P **P** **06 49 59.7 -0.3**
comp=Z,17nm,1.1s,baz=130,slow=6.0,SNR=7.7
USRK LR LR 07 15 25.4
comp=Z,636nm,20.5s,baz=133,slow=34
PET **Petropavlovsk** **64.77 355** *e*P **P** **06 50 05.0 -0.9**
PET *e*S **S** **06 58 41.9 -0.4**
PET *e*SS **SS** **07 02 54.6 -0.1**
PET pmax pmax
comp=Z,600nm,12.8s
PET pmax pmax
comp=Z,600nm,12.4s
PETK **Petropavlovsk-** **64.94 354** P **P** **06 50 06.8 -0.3**
comp=Z,5.2nm,0.8s,baz=153,slow=9.8,SNR=6.7
PETK LR LR 07 12 52.5
comp=Z,2μm,21.5s,baz=168,slow=31
MDJ **Mudanjiang** **65.25 332** P **P** **06 50 08.6 -0.6**
MDJ IAmb IAmb 06 50 14.6
comp=Z,19nm,1.2s
WHN **Wuhan** **65.39 311** ⇓P **P** **06 50 13.6 +3.2**
WHN S **S** **06 58 47.4 -3.4**
WHN LR LR
comp=Z,9μm,25.7s
DL2 **Dalian** **65.44 323** P **P** **06 50 11.3 +0.7**
DL2 pP **pP** **06 50 25.2 -0.2**
DL2 PP **PP** **06 52 36.2 +0.9**
DL2 S **S** **06 58 53.8 +2.7**
DL2 pmax pmax
comp=Z,53nm,1.4s
DL2 pmax pmax
comp=Z,500nm,6.3s
DL2 LR LR
comp=Z,1μm,18.1s
DL2 LR LR
comp=Z,1μm,19.6s
DL2 LR LR
comp=Z,2μm,22.8s
JRMM **Jerantut** **65.56 280** P **P** **06 50 12.0 +0.1**
VNDA **Vanda** **65.91 181** P **P** **06 50 13.4 +0.3**
VNDA pmax pmax
comp=Z,12nm,0.9s
VNDA **Vanda** **65.91 181** P **P** **06 50 13.3 +0.3**
comp=Z,11nm,0.9s,baz=347,slow=7.2,SNR=28
VNDA LR LR 07 15 22.1
comp=Z,1μm,21.0s,baz=0.5,slow=33
VNDA **Vanda** **65.91 181** P **P** **06 50 13.3 +0.3**
VNDA IAmb IAmb 06 50 16.4
comp=Z,12nm,0.8s
CASY **Casey** **66.11 202** P **P** **06 50 14.9 +0.4**
BKNI **Bangkinang** **66.12 276** P **P** **06 50 15.1 -0.4**
SBA **Scott Base** **66.20 180** P **P** **06 50 15.9 +1.0**
SBA pmax pmax
comp=Z,26nm,1.1s
SBA **Scott Base** **66.20 180** P **P** **06 50 15.9 +1.0**
SBA IAmb IAmb 06 50 31.9
comp=Z,26nm,1.1s
CN2 **Changchun** **66.67 329** *e*P **P** **06 50 17.8 -0.6**
CN2 *e*sP sP 06 50 39.3 0.0
CN2 PcP **PcP** **06 50 48.2 +1.1**
CN2 *e*S **S** **06 59 05.2 -0.7**
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,500nm,6.0s
CN2 LR LR
comp=Z,1μm,20.0s
CN2 LR LR
comp=Z,1μm,20.0s
CN2 LR LR
comp=Z,2μm,22.0s
IPM **Ipoh** **67.11 280** P **P** **06 50 20.7 -1.1**
IPM **Ipoh** **67.11 280** P **P** **06 50 22.0 +0.2**
GRNR **Gornyy** **67.48 340** ⇓*i*P **P** **06 50 24.0 +0.6**
GRNR *e*S **S** **06 59 18.5 +3.1**
GRNR pmax pmax
comp=Z,7.0nm,1.4s
GRNR smax smax
comp=N,4.0nm,1.3s
KLR **Kul'dur** **67.92 336** *i*P **P** **06 50 25.8 -0.4**
KLR pmax pmax
comp=Z,13nm,1.4s
RPSI **Rantau Prapat** **68.72 278** P **P** **06 50 30.3 -1.6**
RPSI IAmb IAmb 06 50 33.3
comp=Z,24nm,0.8s
PSI **Prapat** **68.74 278** P **P** **06 50 30.3 -1.9**
PSI pmax pmax
comp=Z,24nm,0.8s
ENH **Enshi** **68.89 309** P **P** **06 50 31.5 -1.2**
GYA **Guiyang** **69.41 304** ⇑*i*P **P** **06 50 35.7 -0.4**
GYA pP pP 06 50 48.5 -2.6
GYA sP sP 06 50 54.1 -3.0
GYA PP **PP** **06 53 11.6 +1.3**
GYA S **S** **06 59 45.6 +6.0**
GYA sS sS 07 00 01.1 -2.6
GYA SKS **SKSac** **07 00 29.8 -2.5**
GYA SS **SS** **07 04 09.2 +1.2**
GYA pmax pmax
comp=Z,40nm,0.8s
GYA pmax pmax
comp=Z,420nm,10.9s
GYA LR LR
comp=Z,1μm,22.8s
GYA LR LR
comp=Z,890nm,23.8s
GYA LR LR
comp=Z,1μm,22.0s
BJT **Baijiatuao** **69.44 321** P **P** **06 50 35.8 -0.1**
BJT pmax pmax
comp=Z,38nm,1.4s
BJT **Baijiatuao** **69.44 321** P **P** **06 50 35.8 -0.1**
BJT IAmb IAmb 06 50 39.6
comp=Z,38nm,1.4s
BJI **Beijing** **69.45 321** P **P** **06 50 35.8 -0.1**
BJI S **S** **06 59 40.8 +1.6**
BJI pmax pmax
comp=Z,13nm,1.0s
BJI pmax pmax
comp=Z,470nm,10.2s
BJI LR LR
comp=Z,1μm,25.6s
BJI LR LR
comp=Z,890nm,28.9s
BJI LR LR
comp=Z,3μm,29.8s
SLVN **Son La** **69.69 298** P **P** **06 50 37.9 0.0**
SLVN IAmb IAmb 06 50 40.9
comp=Z,35nm,1.3s
GSI **Gunungsitoli** **69.71 276** P **P** **06 50 37.8 -0.3**
comp=Z,60nm,0.6s
GSI **Gunungsitoli** **69.71 276** P **P** **06 50 37.5 -0.6**
KCSI **Kotacane, Aceh** **70.03 278** P **P** **06 50 38.0 -2.0**

comp=Z,881nmcomp=Z,32nm,0.9s
TPTI 70.54 278 P P 06 50 42.5 -0.7
comp=Z,250nmcomp=Z,7.1nm,1.2s
TIY **Taiyuan** 70.54 317 eP P 06 50 44.3 +1.5
TIY S S 06 59 47.8 -4.5
TIY pmax pmax
comp=Z,32nm,1.0s
TIY pmax pmax
comp=Z,400nm,5.0s
TIY LR LR
comp=Z,910nm,17.7s
TIY LR LR
comp=Z,1μm,18.8s
TIY LR LR
comp=Z,3μm,28.5s
PBKT **Sadao Pong** 70.64 292 P P 06 50 43.9 +0.3
PBKT IAmb IAmb 06 50 45.1
comp=Z,25nm,0.8s
XAN **Xi'an** 71.11 312 P P 06 50 46.1 -0.2
XAN S S 07 00 02.5 +3.4
XAN pmax pmax
comp=Z,36nm,0.8s
XAN pmax pmax
comp=Z,520nm,8.2s
XAN LR LR
comp=Z,1μm,16.3s
XAN LR LR
comp=Z,2μm,18.4s
XAN LR LR
comp=Z,3μm,21.6s
XAN **Xi'an** 71.11 312 P P 06 50 45.7 -0.6
XAN pmax pmax
comp=Z,35nm,0.9s
XAN **Xi'an** 71.11 312 P P 06 50 45.7 -0.6
XAN IAmb IAmb 06 50 48.9
comp=Z,35nm,0.9s
MLSI **Meulaboh, Aceh** 71.53 279 P P 06 50 47.1 -2.0
comp=Z,83nm,1.1s
KMI **Kunming** 72.11 301 P P 06 50 53.1 +0.4
KMI pP pP 06 51 06.7 -1.1
KMI sP sP 06 51 13.4 -0.4
KMI S S 07 00 14.0 +2.7
KMI sS sS 07 00 37.4 +1.2
KMI pmax pmax
comp=Z,45nm,1.4s
KMI pmax pmax
comp=Z,570nm,9.2s
KMI LR LR
comp=Z,570nm,21.2s
KMI LR LR
comp=Z,2μm,24.5s
KMI LR LR
comp=Z,3μm,24.8s
HHC **Hu-ho-hao-te** 72.80 319 eP P 06 50 56.1 -0.3
HHC PP PP 06 53 41.1 +1.9
HHC S S 07 00 18.1 -0.2
HHC SS SS 07 05 00.3 +0.7
HHC pmax pmax
comp=Z,100nm,5.3s
HHC LR LR
comp=Z,850nm,18.7s
HHC LR LR
comp=Z,1μm,20.2s
HHC LR LR
comp=Z,3μm,20.7s
CM31 **Chiang Mai Arr** 73.08 293 P P 06 50 59.1 +0.8
CMAR **Chiang Mai Arr** 73.08 293 ceP P 06 50 58.9 +0.6
CMAR pmax pmax
comp=Z,43nm,0.9s
CMAR **Chiang Mai Arr** 73.08 293 P P 06 50 58.9 +0.6
comp=Z,42nm,0.9s,baz=125,slow=4.4,SNR=10.1
CMAR LR LR 07 21 27.6
comp=Z,838nm,22.0s,baz=118,slow=34
CHTO **Chiang Mai** 73.20 294 P P 06 50 59.1 +0.1
CHTO pmax pmax
comp=Z,44nm,1.1s
CHTO **Chiang Mai** 73.20 294 P P 06 50 59.1 +0.1
CHTO IAmb IAmb 06 51 02.3
comp=Z,44nm,1.1s
ZEA **Zeya** 73.20 337 eP P 06 50 58.9 +0.6
ZEA eS SKiKP 07 00 25.0 -0.4
ZEA e 07 00 50.0
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=Z,38nm,1.0s
ZEA pmax pmax
comp=Z,700nm,9.0s
ZEA smax smax
comp=E,500nm,10.0s
HIA **Hailar** 73.28 330 iP P 06 50 58.1 -0.8
HIA pmax pmax
comp=Z,144nm,1.3s
HIA **Hailar** 73.28 330 P P 06 50 58.0 -0.8
HIA IAmb IAmb 06 51 02.1
comp=Z,21nm,1.2s
CD2 **Chengdu** 73.60 307 P P 06 51 01.0 -0.2
CD2 pP PcP 06 51 16.7 -0.2
CD2 sP sP 06 51 22.4 +0.1
CD2 S S 07 00 31.4 +3.8
CD2 sS sS 07 00 49.8 -2.6
CD2 pmax pmax
comp=Z,80nm,1.1s
CD2 pmax pmax
comp=Z,820nm,8.5s
CD2 LR LR
comp=Z,1μm,21.4s
CD2 LR LR
comp=Z,3μm,22.1s
CD2 LR LR
comp=Z,4μm,26.3s
LZH **Lanzhou** 75.75 312 ⇑P P 06 51 14.5 +0.8
LZH pP pP 06 51 29.6 +0.8
LZH sP sP 06 51 34.8 0.0
LZH S S 07 00 50.9 -0.8
LZH sS sS 07 01 18.0 +1.1
LZH SS SS 07 05 48.2 +3.5
LZH pmax pmax
comp=Z,74nm,1.2s
LZH pmax pmax
comp=Z,680nm,6.5s
LZH LR LR
comp=Z,1μm,16.4s
LZH LR LR
comp=Z,2μm,16.2s
LZH LR LR
comp=Z,3μm,18.0s
KDAK **Kodiak Island** 76.85 21 P P 06 51 21.8 +2.6
comp=Z,8.1nm,1.0s,baz=236,slow=11,SNR=3.3
CIT **Chita** 78.08 330 eP P 06 51 26.2 -0.1
CIT e 06 51 38.7
QSPA **South Pole Qui** 78.36 180 P P 06 51 27.4 -0.4
SVW2 **Sparrevohn** 78.44 18 P P 06 51 28.4 +0.4
RSO **Redoubt South** 78.82 19 P P 06 51 30.3 -0.1
YAK **Yakutsk** 78.90 343 eP P 06 51 29.9 -0.5
YAK e*PP pP 06 51 45.3 -0.3
YAK e 06 51 51.8
YAK ePPP PPP 06 56 19.0
YAK eS ScS 07 01 25.8 +1.5
YAK e*SS ScS 07 01 46.1 -1.3
YAK e 07 01 59.9
YAK pmax pmax
comp=Z,16nm,1.2s
YAK pmax pmax
comp=N,8.0nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK pmax pmax
comp=Z,136nm,3.4s
YAK pmax pmax
comp=N,278nm,3.7s
YAK pmax pmax
comp=E,125nm,3.7s
YAK smax smax
comp=N,113nm,3.5s
YAK smax smax
comp=E,79nm,3.5s
YAK MLR MLR
comp=Z,1μm,20.0s
YAK MLR MLR
comp=N,1μm,21.0s
YAK MLR MLR
comp=E,793nm,21.0s
YAK **Yakutsk** 78.90 343 P P 06 51 29.2 -1.2
YAK IAmb IAmb 06 51 46.5
comp=Z,20nm,0.8s

SIMRM **Sittwe** 79.04 293 P P 06 51 31.3 -0.8
ULN **Ulaanbaatar** 79.25 324 ceP P 06 51 32.5 -0.5
ULN pmax pmax
comp=Z,28nm,1.1s
ULN **Ulaanbaatar** 79.25 324 P P 06 51 32.5 -0.5
ULN IAmb IAmb 06 51 37.2
comp=Z,30nm,1.1s
BILL **Bilibino** 79.48 360 eP P 06 51 33.1 -0.4
BILL pmax pmax
comp=Z,14nm,1.0s
BILL MLR MLR
comp=Z,999nm,20.0s
BILL **Bilibino** 79.48 360 P P 06 51 33.2 -0.3
SONM **Songino Array** 79.62 324 P P 06 51 34.6 -0.4
comp=Z,5.5nm,0.5s,baz=139,slow=5.3,SNR=28
SONM LR LR 07 26 47.6
comp=Z,675nm,19.5s,baz=112,slow=36
TTA **Tatalina** 79.77 16 P P 06 51 35.6 +0.3
TTA **Tatalina** 79.77 16 P P 06 51 35.6 +0.3
GTA **Gaotai** 80.05 314 P P 06 51 37.7 +0.3
GTA pP pP 06 51 50.7 -2.0
GTA sP sP 06 51 57.9 -0.8
GTA S S 07 01 42.2 +4.4
GTA pmax pmax
comp=Z,27nm,1.0s
GTA pmax pmax
comp=Z,460nm,9.3s
GTA LR LR
comp=Z,1μm,21.3s
GTA LR LR
comp=Z,2μm,21.3s
GTA LR LR
comp=Z,2μm,22.3s
SUA **Susitna One** 80.22 19 P P 06 51 38.2 +0.3
SUA IAmb IAmb 06 51 55.9
comp=Z,33nm,1.4s
RC01 **Rabbit Creek A** 80.28 20 P P 06 51 37.8 -0.3
PMR **Palmer** 80.85 20 P P 06 51 41.1 +0.1
PMR pmax pmax
comp=Z,10.0nm,1.1s
PMR **Palmer** 80.85 20 P P 06 51 41.1 +0.1
SML **Sawmill** 81.27 20 P P 06 51 42.8 -0.6
SML IAmb IAmb 06 51 51.4
comp=Z,26nm,1.4s
EYAK **Cordova Ski Ar** 81.29 22 P P 06 51 43.9 +0.5
EYAK IAmb IAmb 06 51 53.0
comp=Z,38nm,1.5s
BOD **Bodaibo** 81.41 335 eP P 06 51 43.1 -1.0
BOD pmax pmax
comp=Z,13nm,1.4s
SHL **Shillong** 81.50 298 P P 06 51 45.3 -0.3
SHL pmax pmax
comp=Z,65nm,1.2s
SHL **Shillong** 81.50 298 P P 06 51 45.3 -0.3
SCM **Sheep Creek Mo** 81.62 20 P P 06 51 45.7 +0.5
SCM pmax pmax
comp=Z,27nm,1.1s
SCM **Sheep Creek Mo** 81.62 20 P P 06 51 45.7 +0.5
SCM IAmb IAmb 06 51 49.1
comp=Z,27nm,1.1s
TRF **Thorofare Moun** 81.84 18 P P 06 51 43.8 -2.6
RND **Reindeer** 82.25 19 P P 06 51 48.0 -0.5
RND pmax pmax
comp=Z,16nm,1.3s
RND **Reindeer** 82.25 19 P P 06 51 48.0 -0.5
RND IAmb IAmb 06 52 06.5
comp=Z,16nm,1.3s
KCPM **Cahto Peak** 82.37 47 P P 06 51 51.8 +2.0
KCPM IAmb IAmb 06 52 09.4
comp=Z,19nm,1.1s
MCK **McKinley** 82.46 18 P P 06 51 49.1 -0.5
MCK pmax pmax
comp=Z,11nm,1.2s
MCK **McKinley** 82.46 18 P P 06 51 49.1 -0.5
MESA **MESA** 82.46 23 P P 06 51 49.6 -0.2
DHY **Denali Highway** 82.48 19 P P 06 51 49.7 -0.2
KMRM **Mail Ridge** 82.48 46 P P 06 51 52.3 +2.0
KMRM IAmb IAmb 06 51 55.2
comp=Z,25nm,1.4s
HOPS **Hopland Field** 82.48 48 P P 06 51 49.9 -0.3
HOPS IAmb IAmb 06 51 55.5
comp=Z,33nm,1.5s
TGL **Tana Glacier** 82.50 23 P P 06 51 47.9 -2.0
TGL IAmb IAmb 06 51 51.9
comp=Z,22nm,1.3s
GLB **Gilahina Butte** 82.59 22 P P 06 51 50.0 -0.3
BWN **Browne** 82.62 18 P P 06 51 50.2 -0.2
BWN IAmb IAmb 06 51 57.9
comp=Z,27nm,1.2s
ZAK **Zakamensk** 82.65 325 eP P 06 51 49.9 -1.0
ZAK pmax pmax
comp=Z,14nm,1.1s
KHMM **Horse Mountain** 82.71 46 P P 06 51 50.8 -0.8
KHMM IAmb IAmb 06 51 57.2
comp=Z,7.7nm,0.6s
MLY **Manley** 82.88 17 P P 06 51 51.4 -0.4
TLY **Talaya** 83.06 326 eP P 06 51 51.9 -1.0
TLY eS S 07 02 13.9 +5.7
TLY pmax pmax
comp=Z,43nm,1.0s
TLY MLR MLR
comp=Z,1μm,18.0s
TLY **Talaya** 83.06 326 P P 06 51 51.0 -1.9
TLY IAmb IAmb 06 51 55.0
comp=Z,26nm,1.3s
O02D **Mt. Diablo Mer** 83.12 47 P P 06 51 55.1 +1.5
baz=249
BARN **Barnard Glacie** 83.14 23 P P 06 51 53.4 +0.1
BARN IAmb IAmb 06 52 12.4
comp=Z,39nm,1.6s
CTGM **Chitina Glacie** 83.20 23 P P 06 51 53.0 -0.6
CTGM IAmb IAmb 06 52 10.2
comp=Z,18nm,1.2s
WRH **Wood River Hil** 83.25 18 P P 06 51 52.9 -0.7
LSA **Lhasa** 83.35 302 P P 06 51 53.9 -1.6
LSA pmax pmax
comp=Z,9.0nm,0.7s
LSA **Lhasa** 83.35 302 P P 06 51 53.9 -1.6
LSA IAmb IAmb 06 52 01.5
comp=Z,9.2nm,0.7s
CCB **Clear Creek Bu** 83.46 18 P P 06 51 53.2 -1.5
PAGB **Antelope Grade** 83.46 52 P P 06 51 53.8 -1.5
PAGB IAmb IAmb 06 51 55.8
comp=Z,24nm,1.4s
N02D **Trinity Center** 83.47 46 P P 06 51 57.2 +1.8
baz=249
M02C **Callahan** 83.52 46 P P 06 51 57.6 +2.0
baz=248
HDA **Harding Lake** 83.56 18 P P 06 51 54.8 -0.4
HDA IAmb IAmb 06 51 57.6
comp=Z,15nm,0.9s
HDA **Harding Lake** 83.56 18 P P 06 51 55.0 -0.1
baz=226
MDM **Murphy Dome** 83.56 18 P P 06 51 54.5 -0.7
COLA **College** 83.61 18 P P 06 51 53.8 -1.6
COLA pmax pmax
comp=Z,11nm,0.8s
COLA **College** 83.61 18 P P 06 51 53.8 -1.6
COLA IAmb IAmb 06 52 10.2
comp=Z,11nm,0.8s
MENT **Mentasta** 83.61 21 P P 06 51 55.3 -0.2
YBH **Yreka Blue Hor** 83.75 45 P P 06 51 56.2 -0.6
YBH pmax pmax
comp=Z,10.0nm,1.2s
YBH **Yreka Blue Hor** 83.75 45 P P 06 51 58.3 +1.6
comp=Z,4.7nm,0.9s,baz=67,slow=1.5,SNR=8.2
YBH **Yreka Blue Hor** 83.75 45 P P 06 51 56.2 -0.6
RIDG **Independent Ri** 83.77 20 P P 06 51 56.0 -0.4
RIDG IAmb IAmb 06 52 12.9
comp=Z,20nm,1.1s
ORV **Oroville** 83.83 48 P P 06 51 56.0 -1.1
ORV pmax pmax
comp=Z,6.0nm,1.0s
ORV **Oroville** 83.83 48 P P 06 51 56.0 -1.1
IL31 83.83 18 P P 06 51 55.3 -1.2
IL31 IAmb IAmb 06 52 14.3
comp=Z,20nm,1.5s
ILAR **Eielson Array** 83.83 18 P P 06 51 55.8 -0.8
comp=Z,4.2nm,0.9s,baz=233,slow=5.1,SNR=28
ILAR PKKPbc PKKPdf 07 10 11.3 +4.0
comp=Z,0.2nm,0.5s,baz=3.2,slow=1.3,SNR=5.0
ILAR LR LR 07 22 42.6
comp=Z,688nm,21.9s,baz=230,slow=31
POKR **Poker Plat Res** 83.91 18 P P 06 51 58.4 +1.4
baz=225

DOT **Dot Lake** 83.97 20 P P 06 51 57.2 -0.1
DOT IAmb IAmb 06 52 00.8
comp=Z,22nm,1.2s
AFDM **Forest Hills D** 84.00 48 P P 06 51 58.7 +0.7
AFDM IAmb IAmb 06 52 17.7
comp=Z,13nm,1.1s
CMB **Columbia Colle** 84.12 49 P P 06 51 57.9 -0.8
CMB pmax pmax
comp=Z,4.0nm,0.9s
CMB **Columbia Colle** 84.12 49 P P 06 51 57.9 -0.8
SCRK **Sand Creek** 84.21 20 P P 06 51 58.3 -0.3
SCRK IAmb IAmb 06 52 02.2
comp=Z,19nm,1.2s
MAW **Mawson** 84.47 202 P P 06 51 59.4 -0.4
MAW **Mawson** 84.47 202 P P 06 51 59.6 -0.2
comp=Z,8.3nm,0.8s,baz=123,slow=6.0,SNR=5.5
MAW LR LR 07 24 06.9
comp=Z,1μm,22.0s,baz=90,slow=32
MAW **Mawson** 84.47 202 P P 06 51 59.4 -0.4
MOY **Mondy** 84.52 325 eP P 06 51 59.0 -1.5
MOY pmax pmax
comp=Z,67nm,3.4s
MWC **Mount Wilson** 84.69 54 P P 06 52 00.6 -1.3
MWC pmax pmax
comp=Z,7.0nm,0.7s
MWC **Mount Wilson** 84.69 54 P P 06 52 00.6 -1.3
MWC IAmb IAmb 06 52 10.5
comp=Z,7.3nm,0.7s
I04A **Tendick Farm,** 84.70 43 P P 06 52 03.9 +2.4
baz=248
SKAG **Skagway** 84.73 26 P P 06 52 00.6 -0.6
SKAG IAmb IAmb 06 52 02.1
comp=Z,28nm,1.5s
BEKR **Beckworth** 84.76 48 P P 06 52 01.9 -0.2
BEKR IAmb IAmb 06 52 21.1
comp=Z,22nm,1.5s
PRP **Porcupine Dome** 84.76 18 P P 06 52 01.0 -0.5
ISA **Isabella, Lake** 84.81 52 P P 06 52 00.8 -1.5
ISA pmax pmax
comp=Z,4.0nm,1.0s
ISA **Isabella, Lake** 84.81 52 P P 06 52 00.8 -1.5
MDPB **Devils Postpil** 84.97 50 P P 06 52 02.4 -0.9
MDPB IAmb IAmb 06 52 10.2
comp=Z,13nm,1.0s
WAKR **Walker** 84.98 49 P P 06 52 01.9 -1.4
WAKR IAmb IAmb 06 52 10.1
comp=Z,9.9nm,1.1s
BFSC **Mount Baldy Ra** 85.01 54 P P 06 52 06.1 +2.7
baz=252
OMMB **Old Mammoth Mi** 85.02 50 P P 06 52 03.8 +0.1
OMMB IAmb IAmb 06 52 22.7
comp=Z,20nm,1.5s
PNTR **Pine Nut** 85.05 49 P P 06 52 02.9 -0.8
NLWA **Neilton Lookou** 85.12 40 P P 06 52 01.4 -2.1
YERR **Yerington** 85.28 49 P P 06 52 03.5 -1.3
J05D **Fort Rock, OR** 85.32 44 P P 06 52 07.4 +2.6
baz=249
CWC **Cottonwood Cre** 85.35 52 P P 06 52 06.3 +1.2
baz=252
LRMC **Laurel Mtn Rad** 85.37 53 P P 06 52 07.8 +2.7
baz=252
PAHR **Pah Rah Range** 85.41 48 P P 06 52 06.7 +1.3
PAHR IAmb IAmb 06 52 24.5
comp=Z,17nm,1.2s
MOD **Modoc Plateau** 85.49 46 P P 06 52 05.6 -0.1
MOD IAmb IAmb 06 52 20.9
comp=Z,17nm,1.5s
TAPN **Taplejung** 85.59 299 eP P 06 52 06.4 -0.3
comp=Z,92nm,1.1s
MONP2 **Monument Peak** 85.60 55 P P 06 52 08.0 +1.5
baz=253
I05D **Terrebonne, OR** 85.62 43 P P 06 52 08.9 +2.8
baz=249
EGAK **Eagle** 85.67 20 P P 06 52 06.3 +0.5
EGAK IAmb IAmb 06 52 10.1
comp=Z,12nm,0.7s
MPMC **Manual Prospec** 85.69 52 P P 06 52 08.0 +1.1
baz=252
RYN **Ryan** 85.70 49 P P 06 52 06.0 -0.8
ODAN **Odare** 85.74 298 eP P 06 52 07.0 -0.3
comp=Z,159nm,1.0s
PFO **Pinyon Flats O** 85.78 55 P P 06 52 06.6 -0.6
PFO pmax pmax
comp=Z,9.0nm,1.4s
PFO **Pinyon Flats O** 85.78 55 LR LR 07 21 36.3
comp=Z,2μm,21.5s,baz=274,slow=30
PFO **Pinyon Flats O** 85.78 55 P P 06 52 06.6 -0.6
PFO **Pinyon Flats O** 85.78 55 P P 06 52 09.4 +2.1
baz=253
XPFO **Pion Flat** 85.78 55 P P 06 52 06.8 -0.5
NVAR **Mina Array Bea** 85.80 50 P P 06 52 08.2 +0.8
comp=Z,2.1nm,0.7s,baz=237,slow=8.3,SNR=13
NVAR LR LR 07 22 22.5
comp=Z,4μm,21.6s,baz=268,slow=30
TOLK **Toolik Lake Re** 85.87 15 P P 06 52 09.4 +2.6
baz=223
NV11 **Mina Array Sit** 85.91 50 P P 06 52 08.9 +1.0
NV11 IAmb IAmb 06 52 26.9
comp=Z,16nm,1.4s
GSC **Goldstone, Bar** 86.00 53 P P 06 52 07.4 -0.8
GSC pmax pmax
comp=Z,5.0nm,1.1s
GSC **Goldstone, Bar** 86.00 53 P P 06 52 07.4 -0.8
GRAC **Grapevine Rang** 86.07 51 P P 06 52 10.9 +2.4
baz=252
SWSC **Sam W. Stewart** 86.12 55 P P 06 52 11.7 +2.9
baz=254
KVN **Kaiserville** 86.15 49 P P 06 52 09.2 +0.2
KVN pmax pmax
comp=Z,19nm,1.5s
KVN **Kaiserville** 86.15 49 P P 06 52 09.2 +0.2
KVN IAmb IAmb 06 52 28.0
comp=Z,19nm,1.5s
LON **Longmire** 86.18 41 P P 06 52 08.4 -0.4
LON pmax pmax
comp=Z,25nm,1.6s
LON **Longmire** 86.18 41 P P 06 52 08.4 -0.4
LON IAmb IAmb 06 52 18.3
comp=Z,24nm,1.6s
BELC **Belle Mtn. Jos** 86.26 54 P P 06 52 10.8 +1.2
baz=253
FURC **Furnace Creek,** 86.30 52 P P 06 52 11.9 +2.3
baz=253
RAMN **Ramite** 86.44 298 eP P 06 52 10.3 -0.5
BC3 **Big Chuckawall** 86.59 55 P P 06 52 12.1 +0.8
baz=254
CHLP **Challavanipeta** 86.67 290 eP P 06 52 11.5 -0.2
CHLP IAmb IAmb 06 52 15.9
comp=Z,21nm,1.0s
H06S1 **SOCORRO T** 86.71 70 T T 08 27 49.0
SNR=12
H06E1 **SOCORRO T-PHAS** 86.75 70 T T 08 27 55.8
SNR=5.8
TIXI **Tiksi** 86.83 349 eP P 06 52 08.7 -2.7
TIXI pmax pmax
comp=Z,5.0nm,1.1s
TIXI MLR MLR
comp=Z,575nm,18.0s
TIXI **Tiksi** 86.83 349 P P 06 52 09.9 -1.5
comp=Z,2.8nm,0.8s,baz=360,slow=24,SNR=3.8
WVOR **Wild Horse Val** 86.83 46 P P 06 52 12.8 +0.6
WVOR pmax pmax
comp=Z,6.0nm,1.0s
WVOR **Wild Horse Val** 86.83 46 P P 06 52 12.8 +0.6
TPNV **Topopah Spring** 86.91 51 P P 06 52 12.4 -0.4
TPNV pmax pmax
comp=Z,9.0nm,1.5s
TPNV **Topopah Spring** 86.91 51 P P 06 52 12.4 -0.4
TPNV **Topopah Spring** 86.91 51 P P 06 52 14.5 +1.8
baz=253
GLA **Glamis** 86.93 56 P P 06 52 12.1 -0.7
GLA pmax pmax
comp=Z,7.0nm,0.8s
GLA **Glamis** 86.93 56 P P 06 52 12.1 -0.7
GLA IAmb IAmb 06 52 21.6
comp=Z,6.6nm,0.8s
JIRN **Jiri** 86.98 299 eP P 06 52 13.2 -0.4
IRM **Iron Mountain** 86.98 54 P P 06 52 14.1 +1.1
baz=254
LTY **Liberty** 87.09 41 P P 06 52 14.0 +0.7
LTY IAmb IAmb 06 52 21.9
comp=Z,29nm,1.6s
GUN **Gumba** 87.31 299 eP P 06 52 14.6 -0.5
Y12C **Blythe** 87.36 55 P P 06 52 13.8 -1.0
Y12C IAmb IAmb 06 52 21.7
comp=Z,11nm,1.2s

E07A **Sunnyside** 87.37 42 P **P** 06 52 14.8 +0.2
E07A IAmb IAmb 06 52 17.6
comp=Z,18nm,1.5s
PALK **Pallekele** 87.42 278 P **P** 06 52 15.3 -0.3
PALK pmax pmax
comp=Z,69nm,1.4s
PALK **Pallekele** 87.42 278 P **P** 06 52 15.3 -0.3
HAWA **Hanford** 87.53 42 P **P** 06 52 14.3 -1.0
G08A **Pilot Rock** 87.54 43 P **P** 06 52 15.2 -0.4
G08A IAmb IAmb 06 52 34.5
comp=Z,14nm,1.5s
SHPR **Sheep Range** 87.62 52 P **P** 06 52 15.9 -0.3
SHPR IAmb IAmb 06 52 31.7
comp=Z,9.3nm,1.3s
PKI **Pulchoki** 87.62 299 *e*P **P** 06 52 15.8 -0.8
PKIN **Phulchoki** 87.64 299 *e*P **P** 06 52 15.6 -1.0
113A **Mohawk Valley,** 87.71 56 P **P** 06 52 16.5 0.0
KKN **Kakani** 87.79 299 *e*P **P** 06 52 16.7 -0.6
R11A **Troy Canyon, C** 87.82 50 P **P** 06 52 17.2 0.0
R11A IAmb IAmb 06 52 36.2
comp=Z,16nm,1.6s
E08A **Dider Farm, El** 87.87 42 P **P** 06 52 16.8 -0.1
DMN **Daman** 87.89 299 *e*P **P** 06 52 17.3 -0.5
comp=Z,169nm,1.1s
EPYK **Eagle Plains** 88.10 20 P **P** 06 52 19.5 +1.8
baz=235
W13A **Hualapai Mount** 88.23 54 P **P** 06 52 19.3 +0.1
214A **Organ Pipe Nat** 88.28 57 P **P** 06 52 19.2 -0.1
214A IAmb IAmb 06 52 25.5
comp=Z,14nm,1.4s
214A **Organ Pipe Nat** 88.28 57 P **P** 06 52 21.4 +2.0
baz=255
GKN **Gorkha** 88.39 299 *e*P **P** 06 52 19.1 -1.0
BMO **Blue Mountains** 88.51 44 P **P** 06 52 21.4 +1.2
BMO pmax pmax
comp=Z,11nm,1.7s
BMO **Blue Mountains** 88.51 44 P **P** 06 52 21.4 +1.2
BMO IAmb IAmb 06 52 24.9
comp=Z,11nm,1.6s
PVM **Polavaram** 88.65 288 *e*P **P** 06 52 20.8 -0.5
PVM IAmb IAmb 06 52 22.3
comp=Z,9.3nm,1.1s
F10A **Beach Ranch, E** 88.91 43 P **P** 06 52 22.4 +0.4
F10A IAmb IAmb 06 52 40.5
comp=Z,15nm,1.4s
MFID **Camas Ranch** 89.10 45 P **P** 06 52 22.8 -0.2
HSIG 89.12 60 P **P** 06 52 23.4 +0.1
HSIG IAmb IAmb 06 52 42.5
comp=Z,9.6nm,1.1s
PSUT **Pine Spring** 89.17 50 P **P** 06 52 22.5 -1.1
DANN **Dangsing** 89.23 299 *e*P **P** 06 52 22.7 -1.5
KOLN **Koldanda** 89.23 298 *e*P **P** 06 52 22.6 -1.5
LCMT **Little Creek M** 89.24 52 P **P** 06 52 25.0 +1.2
CCUT **Cedar City** 89.29 52 P **P** 06 52 23.6 -0.6
SZCU **Shurtz Canyon** 89.51 52 P **P** 06 52 28.6 +3.4
KNB **Kanab** 89.57 52 P **P** 06 52 28.5 +3.1
KNB pmax pmax
comp=Z,14nm,1.2s
KNB **Kanab** 89.57 52 P **P** 06 52 28.5 +3.1
NEW **Newport** 89.68 40 P **P** 06 52 25.6 +0.1
NEW pmax pmax
comp=Z,3.0nm,0.7s
NEW **Newport** 89.68 40 P **P** 06 52 25.6 +0.1
SKHT **Srikalahasti** 89.71 284 *e*P **P** 06 52 25.9 -0.4
SKHT IAmb IAmb 06 52 29.5
comp=Z,8.5nm,0.9s
U15A **North Rim** 89.83 53 P **P** 06 52 27.9 +1.1
U15A IAmb IAmb 06 52 30.9
comp=Z,6.6nm,0.8s
ADKI **Addanki** 89.91 286 *e*P **P** 06 52 26.8 -0.4
ADKI IAmb IAmb 06 52 28.5
comp=Z,4.2nm,0.9s
X16A **Lo Mia Camp, P** 90.01 55 P **P** 06 52 26.0 -1.5
TUC **Tucson** 90.04 57 P **P** 06 52 27.2 -0.4
TUC pmax pmax
comp=Z,2.0nm,0.7s
TUC **Tucson** 90.04 57 P **P** 06 52 27.2 -0.4
TUC **Tucson** 90.04 57 P **P** 06 52 29.2 +1.6
baz=256
WMQ **Urumqi** 90.08 315 P **P** 06 52 27.4 -0.1
WMQ pP pP 06 52 43.3 +0.3
WMQ PP **PP** 06 56 03.1 +1.5
WMQ SKS **SKSac** 07 02 55.2 +1.2
WMQ S **S** 07 03 11.7 -5.0
WMQ pmax pmax
comp=Z,17nm,1.9s
WMQ pmax pmax
comp=Z,93nm,5.3s
WMQ LR LR
comp=Z,450nm,23.9s
WMQ LR LR
comp=Z,820nm,20.7s
WMQ LR LR
comp=Z,2µm,22.3s
WMQ **Urumqi** 90.08 315 P **P** 06 52 26.5 -1.0
WMQ pmax pmax
comp=Z,72nm,1.7s
WMQ **Urumqi** 90.08 315 P **P** 06 52 26.5 -1.0
GGR **Gangavaram** 90.10 288 *e*P **P** 06 52 26.5 -1.7
GGR IAmb IAmb 06 52 29.5
comp=Z,23nm,1.2s
INK **Inuvik** 90.21 19 P **P** 06 52 31.3 +3.9
comp=Z,0.5nm,0.5s,baz=276,slow=8.5,SNR=4.1
INK LR LR 07 30 28.7
comp=Z,1µm,18.8s,baz=213,slow=34
MTPU **Mount Pierson** 90.32 51 P **P** 06 52 31.9 +2.8
WUAZ **Wupatki** 90.33 54 P **P** 06 52 29.2 +0.2
WUAZ **Wupatki** 90.33 54 P **P** 06 52 30.5 +1.5
baz=256
DUG **Dugway, Tooele** 90.39 49 P **P** 06 52 28.3 -0.8
DUG pmax pmax
comp=Z,3.0nm,0.7s
DUG **Dugway, Tooele** 90.39 49 P **P** 06 52 28.3 -0.8
BGU **Big Grassy Mou** 90.42 48 P **P** 06 52 29.1 -0.2
MSU **Marysvale** 90.44 51 P **P** 06 52 29.6 +0.1
MSU **Marysvale** 90.44 51 P **P** 06 52 29.6 +0.1
NJS **Nagarjunasagar** 90.67 287 *e*P **P** 06 52 29.8 -1.0
NJS IAmb IAmb 06 52 33.0
comp=Z,22nm,1.1s
SPUT **South Promonto** 90.94 48 P **P** 06 52 30.4 -1.3
SRLM **Srisailam** 90.97 286 *e*P **P** 06 52 31.4 -0.8
SRLM IAmb IAmb 06 52 34.6
comp=Z,24nm,1.1s
RPR **Rampur** 91.16 289 *e*P **P** 06 52 31.7 -1.2
RPR IAmb IAmb 06 52 35.4
comp=Z,23nm,0.8s
X18A **Snowflake** 91.23 55 P **P** 06 52 33.4 +0.1
JTMT **Jette** 91.36 42 P **P** 06 52 30.2 -1.4
JTMT IAmb IAmb 06 52 37.5
comp=Z,14nm,1.5s
SYO **Syowa Base** 91.44 197‖ *e*P **P** 06 52 32.0 -1.3
SYO **Syowa Base** 91.44 197‖ *e*pP pP 06 52 51.2 +2.6
SYO **Syowa Base** 91.44 197‖ *e*sP sP 06 52 55.2 +0.7
HYB **Hyderabad** 91.55 287 *i* P **P** 06 52 34.0 -0.9
HYB *e* 06 52 50.0
HYBB **Hyderabad (bro** 91.56 287 *e*P **P** 06 52 34.6 -0.3
HYBB IAmb IAmb 06 52 36.7
comp=Z,24nm,1.2s
SRSP **Sriramsagar** 92.05 289 *e*P **P** 06 52 35.6 -1.5
SRSP IAmb IAmb 06 52 38.9
comp=Z,28nm,1.1s
URV **Uravakonda** 92.28 285 *e*P **P** 06 52 37.4 -0.9
URV IAmb IAmb 06 52 40.5
comp=Z,21nm,1.0s
DMPR **Damasthipur** 92.36 287 *e*P **P** 06 52 37.5 -1.2
DMPR IAmb IAmb 06 52 40.6
comp=Z,19nm,1.0s
YHL **Hebgen Lake** 92.70 45 P **P** 06 52 39.5 -0.4
PDAR **Pinedale Array** 93.37 47 P **P** 06 52 44.5 +1.4
comp=Z,0.5nm,0.5s,baz=239,slow=4.4,SNR=7.0
PDAR PKKPbc **PKKPdf** 07 09 47.7 -2.4
comp=Z,0.8nm,0.8s,baz=94,slow=5.9,SNR=7.2
PDAR LR LR 07 26 49.6
comp=Z,775nm,21.9s,baz=262,slow=30
ANMO **Albuquerque** 94.13 55 *i* P **P** 06 52 47.8 +1.2
ANMO pmax pmax
comp=Z,24nm,6.2s
S22A **4UR Ranch, Cre** 94.38 53 P **P** 06 52 50.9 +3.1
baz=259
MK31 **Makanchi Array** 94.50 317 P **P** 06 52 46.9 -0.9
MK31 pmax pmax
comp=Z,18nm,1.0s
MK31 **Makanchi Array** 94.50 317 P **P** 06 52 46.9 -0.9
MKAR **Makanchi Array** 94.50 317 P **P** 06 52 47.1 -0.7
comp=Z,16nm,0.8s,baz=96,slow=6.0,SNR=123
MKAR PP **PP** 06 56 35.8 -0.5
comp=Z,1.5nm,0.9s,baz=94,slow=12,SNR=4.3
MKAR PKKPbc **PKKPdf** 07 09 44.9 -3.1
comp=Z,0.5nm,0.6s,baz=267,slow=4.1,SNR=5.7
MKAR LR LR 07 35 14.0
comp=Z,272nm,20.8s,baz=100,slow=35
ZAA0 **Zalesovo Array** 94.51 324 P **P** 06 52 45.4 -2.2
ZAA0 IAmb IAmb 06 52 49.5
comp=Z,6.8nm,0.8s
ZALV **Zalesovo Beam** 94.51 324 P **P** 06 52 45.8 -1.9
comp=Z,5.2nm,0.8s,baz=115,slow=3.7,SNR=12
ZALV LR LR 07 32 43.3
comp=Z,755nm,21.8s,baz=90,slow=34
MAKZ **Makanchi** 94.72 317 P **P** 06 52 47.8 -1.0
MAKZ pmax pmax
comp=Z,22nm,1.1s
MAKZ **Makanchi** 94.72 317 P **P** 06 52 47.8 -1.0
YKA **Yellowknife Ar** 95.14 27 P **P** 06 52 48.1 -2.2
comp=Z,0.5nm,0.5s,baz=258,slow=4.6,SNR=26
YKA PKKPbc **PKKPdf** 07 09 47.7 +0.6
baz=55,slow=2.7
YKA LR LR 07 28 45.9
comp=Z,97nm,21.3s,baz=265,slow=31
TXAR **Lajitas Array** 95.42 61 P **P** 06 52 51.8 -0.7
comp=Z,0.5nm,0.6s,baz=220,slow=7.1,SNR=9.5
TXAR PP **PP** 06 56 46.4 +2.5
comp=Z,0.7nm,1.1s,baz=253,slow=9.3,SNR=3.7
TXAR PKKPbc **PKKPbc** 07 09 44.7 -0.5
comp=Z,0.3nm,0.6s,baz=101,slow=4.4,SNR=4.9
TXAR LR LR 07 28 10.7
comp=Z,1µm,20.8s,baz=0.0,slow=31
SNAA **Sanae** 96.57 183 P **P** 06 52 56.8 -0.1
VNA3 **Neumayer Olymp** 97.26 181 P Pdif 06 53 00.2 +0.2
KURK **Kurchatov** 97.61 320 *ce*P **P** 06 53 01.3 -0.5
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK **Kurchatov** 97.61 320 P **P** 06 53 00.1 -1.7
KURK IAmb IAmb 06 53 19.1
comp=Z,10nm,1.4s
KSH **Kashi** 97.75 309 P Pdif 06 53 06.3 +3.3
KSH pP pP 06 53 19.1 +0.6
KSH PP **PP** 06 57 07.0 +5.3
KSH SKS **SKSac** 07 03 39.6 +3.5
KSH S **S** 07 04 23.1 -1.5
KSH sS sS 07 04 50.4 -0.5
KSH SS **SS** 07 11 11.5 +5.0
KSH LR LR
comp=Z,680nm,11.3s
KSH LR LR
comp=Z,590nm,6.4s
KSH LR LR
comp=Z,1µm,17.3s
AAK **Ala-Archa** 99.29 312 *i* P **Pdif** 06 53 09.8 0.0
AAK pmax pmax
comp=Z,2.0nm,0.9s
AAK **Ala-Archa** 99.29 312 P **Pdif** 06 53 09.1 -0.6
BVAR **Borovoye Array** 102.91 322 P **Pdif** 06 53 23.9 -1.5
comp=Z,1.4nm,0.8s,baz=157,slow=4.2,SNR=6.1
APA **Apatity** 116.25 342 ‖ *i* PKIKP **PKiKP** 06 58 13.6 +3.5
APA pmax pmax
comp=Z,6.0nm,1.0s
APA MLR MLR
comp=Z,2µm,18.0s
ARCES **ARCESS Array B** 117.11 346 PKP **PKPdf** 06 58 10.6 -1.2
comp=Z,2.5nm,0.7s,baz=84,slow=1.7,SNR=11
MAK **Makhachkala** 119.04 313 *e*P **Pdif** 06 54 36.2 -1.1
MAK *i* 06 58 16.8
MAK *e* 06 59 34.3
MAK pmax pmax
comp=Z,127nm,1.0s
LPAZ **La Paz** 119.20 116 PKIKP **PKPdf** 06 58 17.0 -1.1
LPAZ **La Paz** 119.20 116 PKP **PKPdf** 06 58 16.7 -1.3
comp=Z,1.6nm,0.7s,baz=266,slow=4.1,SNR=6.7
LPAZ PKKPbc **PKKPbc** 07 08 28.6 -2.5
comp=Z,0.6nm,0.6s,baz=88,slow=3.5,SNR=3.3
LPAZ **La Paz** 119.20 116 **PKPdf** 06 58 17.0 -1.1
OBN **Obninsk** 121.73 329 *e*PKIKP **PKiKP** 06 58 21.5 +0.4
OBN *e* 06 59 54.8
OBN *e*PPP PPP 07 02 31.8
OBN pmax pmax
comp=Z,10.0nm,1.3s
OBN MLR MLR
comp=Z,1µm,22.0s
KBZ **Khabaz** 122.13 315 PKP **PKPdf** 06 58 22.1 +0.1
comp=Z,1.0nm,0.8s,baz=149,slow=12,SNR=2.5
KIV **Kislovodsk** 122.21 315 *i* PKIKP **PKiKP** 06 58 23.6 +1.0
KIV *e* 06 59 57.7
KIV *e*PS **PS** 07 09 51.6 -1.9
KIV pmax pmax
comp=Z,13nm,1.0s
FINES **FINESS Array B** 122.62 339 PKP **PKPdf** 06 58 21.5 -1.0
comp=Z,3.4nm,0.9s,baz=218,slow=11,SNR=3.9
FINES PKKPbc **PKKPbc** 07 08 18.2 -0.4
comp=Z,2.6nm,0.9s,baz=219,slow=11,SNR=2.4
RAYN **Ar Rayn** 122.92 290 PKIKP **PKPdf** 06 58 22.4 -1.9
RAYN **Ar Rayn** 122.92 290 **PKPdf** 06 58 22.4 -1.9
SOC **Sochi** 124.38 315 *i* PKIKP **PKPdf** 06 58 24.5 -1.9
SOC *e* 07 10 00.9
SOC MLR MLR
comp=Z,865nm,20.0s
BOSA **Boshof** 125.22 222 PKIKP **PKPdf** 06 58 27.2 -1.5
BOSA **Boshof** 125.22 222 PKP **PKPdf** 06 58 28.4 -0.3
comp=Z,5.7nm,0.7s,baz=169,slow=3.3,SNR=7.1
BOSA **Boshof** 125.22 222 **PKPdf** 06 58 27.2 -1.5
SAML **Samuel** 126.48 110 PKIKP **PKPdf** 06 58 29.4 -1.9
SAML **Samuel** 126.48 110 **PKPdf** 06 58 29.4 -1.9
NB2 **NORSAR Subarra** 127.48 345 PKPdf **PKPdf** 06 58 29.9 -2.0
comp=Z,0.4nm,0.6s,baz=31,slow=1.9
NOA **NORSAR Array B** 127.48 345 PKP **PKPdf** 06 58 31.7 -0.3
comp=Z,0.8nm,0.7s,baz=28,slow=1.9,SNR=3.4
AKASG **Malin Array Be** 127.80 327 PKP **PKPdf** 06 58 31.8 -0.9
comp=Z,0.2nm,0.3s,baz=50,slow=1.1,SNR=5.7
KMBO **Kilima Mbogo** 128.06 259 PKIKP **PKPdf** 06 58 33.4 -1.3
KMBO **Kilima Mbogo** 128.06 259 PKP **PKiKP** 06 58 35.4 +0.1
comp=Z,1.2nm,0.5s,baz=45,slow=1.4,SNR=4.2
KMBO **Kilima Mbogo** 128.06 259 **PKPdf** 06 58 33.4 -1.3
BRTR **Keskin Array B** 129.96 313 *i* PKIKP **PKiKP** 06 58 41.0 +2.8
BRTR **Keskin Array B** 129.96 313 PKP **PKPdf** 06 58 36.4 -1.0
comp=Z,0.5nm,0.6s,baz=111,slow=6.3,SNR=4.0
BRTR PP **PP** 07 00 49.7 0.0
comp=Z,1.4nm,0.9s,baz=84,slow=4.5,SNR=3.6
BRTR SKP 07 02 04.8
comp=Z,1.2nm,0.8s,baz=114,slow=2.4,SNR=3.7
KIS **Kishinev** 129.98 323 *e*PP PP 07 00 50.0 +0.8
LSZ **Lusaka** 130.86 238 PKIKP **PKPdf** 06 58 38.5 -1.3
LSZ **Lusaka** 130.86 238 **PKPdf** 06 58 38.5 -1.3
KOLS **Kolonicke sedl** 132.48 329 *e*PKIKP **PKiKP** 06 58 43.0 +0.2
KOLS **Kolonicke sedl** 132.48 329 *e*PKP **PKiKP** 06 58 43.0 +0.2
OKC **Ostrava-Krasne** 133.88 332 AMS AMS 07 52 50.0
comp=Z,2µm,30.2s
CHVC **Chvalec** 134.27 334 AMS AMS 07 56 20.0
comp=Z,2µm,26.1s
KRLC **Kraliky** 134.33 333 AMS AMS 07 58 00.0
comp=Z,2µm,18.7s
DPC **Dobruska-Polom** 134.33 334 *e*PP PP 07 01 08.1 -8.8
DPC AMS AMS 07 56 30.0
comp=Z,2µm,26.3s
UPC **Upice** 134.35 334 *e*PP PP 07 01 18.1 +1.2
UPC AMS AMS 07 56 30.0
comp=Z,2µm,21.2s
PVCC **Panska Ves** 134.95 335 AMS AMS 07 51 50.0
comp=Z,1µm,20.9s
CLL **Collm** 134.97 337 *e*PKIKP **PKPdf** 06 58 45.0 -1.3
CLL *e* 07 01 20.0
CLL MLR MLR
comp=Z,1µm,20.5s
CLL **Collm** 134.97 337 *e*PKPdf **PKPdf** 06 58 45.0 -1.3
CLL *e*PP **PP** 07 01 20.0 -0.7
CLL *e*SKPbc **SKPbc** 07 02 11.0 -1.3
CLL *e*PKSdf **PKSdf** 07 02 21.0 -1.4
CLL *e*PPP PPP 07 04 15.0
CLL *e*PS **PS** 07 11 42.0 -1.6
CLL *e*PPS PPS 07 13 26.0
CLL *e*PPPrev 07 14 33.0
CLL *e* 07 18 36.0
CLL *e*SS **SS** 07 19 06.0 -3.8
CLL *e* 07 20 42.0
CLL *e*SSS SSS 07 24 06.0
CLL *e*SSSS 07 27 48.0
CLL LmV 08 02 00.0
comp=Z,1µm,20.5s
GOPC **GO Pecny, Ondr** 135.32 334 *e*PP PP 07 01 26.1 +3.0
GOPC AMS AMS 07 53 40.0
comp=Z,2µm,20.8s
PRA **Prague** 135.35 335 AMS AMS 07 57 10.0
comp=Z,2µm,18.9s
PRU **Pruhonice** 135.37 334 *e*PP PP 07 01 24.1 +0.8
PRU AMS AMS 07 57 10.0
comp=Z,2µm,28.6s
TREC **Trest** 135.48 333 AMS AMS 07 57 40.0
comp=Z,2µm,23.8s
NKC **Novy Kostel** 136.03 336 AMS AMS 08 03 00.0
comp=Z,2µm,22.8s
BDFB **Brasilia** 136.34 128 PKP **PKPdf** 06 58 48.9 -1.2
comp=Z,1.1nm,0.4s,baz=140,slow=18,SNR=2.4
KHC **Kasperske Hory** 136.43 334 *e*PKIKP **PKPdf** 06 58 47.5 -1.7
KHC *e* 07 01 29.5
KHC MLR MLR
comp=Z,2µm,24.9s
KHC **Kasperske Hory** 136.43 334 *e*PKP **PKPdf** 06 58 47.5 -1.7
KHC *ex* 06 59 16.0
KHC *e*PP **PP** 07 01 29.5 -0.6
KHC AMS AMS 07 58 00.0
comp=Z,2µm,24.9s
GERES **GERESS Array B** 136.59 334 PKP **PKPdf** 06 58 49.5 0.0
comp=Z,0.7nm,0.6s,baz=81,slow=1.8,SNR=5.8
GERES SKP 07 02 23.0
comp=Z,1.0nm,0.7s,baz=30,slow=3.2,SNR=4.3
STAL **STALIGIAL** 138.99 332 **PKPdf** 06 58 53.6 -0.4
CLTB **Caltabellotta** 144.83 322 **PKPab** 06 59 03.7 -0.1
KEST **Kesra** 148.37 323 PKPbc **PKPbc** 06 59 13.8 -0.4
comp=Z,9.0nm,0.9s,baz=218,slow=3.4,SNR=11
KEST **Kesra** 148.37 323 PKPdf **PKPdf** 06 59 09.7 -1.0
KEST **PKPbc** 06 59 14.1 -0.2
PCAB **Cabril** 149.68 352 *e*PKP **PKPbc** 06 59 15.1 -2.2
PCAB *e*P **sPKPab** 06 59 50.6 +6.6
PVRL **Vila Real** 150.06 351 *e*P pPKPab 06 59 40.6 +0.9
MVO **Moncorvo** 150.06 350 *e*LR LR 07 51 46.9
comp=Z,850nm,22.0s
PVIS **Viseu** 150.64 351 *e*PKP **PKPdf** 06 59 15.2 +1.0
PVIS *e*P **sPKPbc** 06 59 41.7 +0.3
ESDC **Sonseca Array** 150.85 345 PKPbc **PKPbc** 06 59 19.8 -0.4
comp=Z,1.9nm,0.7s,baz=8.9,slow=2.3,SNR=10
MTE **Manteigas** 150.89 351 *e*PKP **PKPbc** 06 59 20.5 +0.2
MTE *e*P **sPKPab** 06 59 47.9 -1.1
MTE **Manteigas** 150.89 351 *e*LR LR 07 52 47.3
comp=Z,1µm,20.0s
PCBR **Castelo Branco** 151.43 350 *e*P pPKPab 06 59 49.4 +4.1
PTOM **Tomar** 151.79 352 *e*PKP **PKPbc** 06 59 22.0 -0.3
PMRV **Marv??o** 151.81 350 *e*PKP **PKPbc** 06 59 22.3 -0.1
PMRV *e*P **sPKPbc** 06 59 44.8 +0.6
PMRV **Marv??o** 151.81 350 *e*LR LR 07 52 46.3
comp=Z,891nm,22.0s
PMTG **Montargil** 152.30 351 *e*P pPKPab 06 59 51.4 +2.5
PCVE **Castro Verde** 153.68 350 *e*PKP **PKPbc** 06 59 26.5 0.0
PCVE *e*P **sPKPbc** 06 59 51.3 +3.0
PVAQ **Vaqueiros** 153.84 350 *e*LR LR 07 54 17.0
comp=Z,2µm,22.0s
TOA0 **Torodi Ar. Sit** 165.14 277 **PKPdf** 06 59 32.0 -0.5
TOA0 PKPab **PKPab** 07 00 30.2 +0.3
TORD **Torodi Ar. Bea** 165.14 277 PKP **PKPdf** 06 59 31.9 -0.6
comp=Z,3.0nm,1.0s,baz=76,slow=1.0,SNR=10
TORD PKPab **PKPab** 07 00 29.3 -0.5
comp=Z,10nm,0.9s,baz=80,slow=4.6,SNR=12
KIC **Kosan Boka** 169.93 239 *e*PKP2 **PKPab** 07 00 50.4 -0.5
comp=Z,16nm,0.7s
LIC **Lamto** 170.10 238 *e*PKP2 **PKPab** 07 00 51.1 -0.5
comp=Z,1.8nm,0.1s
DBIC **Dimbokro** 170.19 240 PKIKP **PKPdf** 06 59 34.5 -1.6
DBIC **Dimbokro** 170.19 240 PKP **PKPdf** 06 59 35.6 -0.4
comp=Z,2.4nm,0.8s,baz=243,slow=6.8,SNR=3.0
DBIC PKPab **PKPab** 07 00 51.0 -1.1
comp=Z,11nm,0.9s,baz=104,slow=3.4,SNR=9.0
DBIC **Dimbokro** 170.19 240 **PKPdf** 06 59 34.5 -1.6
DBIC **PKPab** 07 00 52.1 0.0
TIC **Toumodi** 170.31 240 *e*PKP2 **PKPab** 07 00 52.0 -0.7

*ISN **09** 06:57:42.3±0.6, 36.70N×43.40E, h0km±15km, ML3.1*
*DDA **09** 06:57:43.3, 36.60N×43.35E, h7km±2km, ML2.8*
ISC 09 06:57:44.9±1.2, **36.66N**±0.03×**43.30E**±0.04, **h8**km±10km, **n14**, σ1§**23**/28, **Iraq**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSL	**Mosul**	**0.30**	**210**	*e*Pg	**Pg**	**06 57 50.3**	**-0.5**
MSL				AML	AML	06 57 53.0	
	comp=Z,3µm,0.2s						
MSL				*e*Sg	**Sb**	**06 57 55.5**	**-2.1**
CUKT	**Cukurca**	**0.63**	**23**	*i* P	**Pg**	**06 57 56.4**	**-0.7**
CUKT				*i* S	**Sb**	**06 58 06.2**	**-1.1**
CUKT				IAML		06 58 13.0	
	comp=E,526nm,0.4s						
HAKT	**HAKKARI**	**0.95**	**20**	*i* P	**Pg**	**06 58 01.9**	**-1.2**
HAKT				*i* S	**Sb**	**06 58 16.8**	**+0.2**
SIRN	**Sırnak**	**1.09**	**320**	*i* P	**Pn**	**06 58 06.1**	**-0.4**
SIRN				*i* S	**Sn**	**06 58 21.9**	**+0.1**
SIRN				IAML		06 58 26.0	
	comp=N,175nm,0.3s						
BASK	**Baskale_VAN**	**1.50**	**22**	*e*P	**Pn**	**06 58 11.3**	**-0.8**
BASK				*i* S	**Sg**	**06 58 35.0**	**+1.9**
IKRK	**Kirkuk**	**1.52**	**146**	*e*Pn	**Pn**	**06 58 12.0**	**-0.3**
IKRK				*e*Sn	**Sg**	**06 58 34.3**	**+0.6**
GEVA	**Gevas**	**1.66**	**354**	*i* P	**Pg**	**06 58 16.1**	**-0.5**
GEVA				*i* S	**Sg**	**06 58 40.9**	**+2.8**
SRTM	**Siirt_Merkez**	**1.72**	**321**	*i* P	**Pg**	**06 58 17.1**	**-0.8**
SRTM				*i* S	**Sg**	**06 58 42.3**	**+2.2**
MARD	**Mardin**	**2.12**	**289**	*i* P	**Pn**	**06 58 21.7**	**+1.1**
MARD				*i* S	**Sb**	**06 58 51.0**	**+1.1**
MARD				IAML		06 59 02.0	
	comp=N,169nm,0.6s						
SVAN	**Silvan-Diyarba**	**2.23**	**312**	*e*P	**Pb**	**06 58 25.0**	**-0.5**
SVAN				*i* S	**Sg**	**06 58 55.0**	**-1.7**
MUSM	**Mu-Merkez**	**2.50**	**326**	*i* P	**Pn**	**06 58 26.0**	**+0.1**
MUSM				*i* S	**Sb**	**06 59 00.1**	**-0.8**
BHD	**Baghdad**	**3.50**	**165**	*e*Pn	**Pn**	**06 58 40.0**	**+0.5**
BHD				*e*Sn	**Sn**	**06 59 22.5**	**+1.4**
IBDR	**Badra**	**4.15**	**148**	*e*Pn	**Pn**	**06 58 49.0**	**+0.5**
IBDR				AML	AML	06 59 00.4	
	comp=Z,50nm,0.5s						
IBDR				*e*Sn	**Sn**	**06 59 37.5**	**+0.3**
NSR	**Nassriya**	**6.12**	**156**	*e*Pn	**Pn**	**06 59 16.5**	**+1.1**
NSR				*e*Sn	**Sn**	**07 00 25.2**	**-0.3**

*IDC **09** 06:59:51.5±1.9, 1°.36N×126°.14E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/33, mbtmp3.6/3, Error ellipse: s-maj=163.6km s-min=24.4km az=65.0*
*DJA **09** 06:59:55.9±1.1, 1°.N±9°×12°.6E±°, h84km±21km, M4.0/6, MLv4.0/6*
ISC 09 06:59:57.7±1.4, **1°.3N**±0°.2×**126°.25E**±0°.07, **h54**km, **n6**, σ1§**28**/**7**, **mb3.6**/3, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.22**	**114**	P	**Pn**	**07 00 17.4**	**-1.1**
TNTI				S	**Sn**	**07 00 33.8**	**-0.2**
KMSI	**Cibinong**	**2.38**	**253**	P	**Pn**	**07 00 33.4**	**-0.8**
LUWI	**Luwuk**	**4.17**	**236**	P	**Pn**	**07 00 57.8**	**-1.1**
WRA	**Warramunga Arr**	**22.53**	**160**	P	**P**	**07 04 54.5**	**+1.2**
	4.3nm,0.8s,baz=338,slow=11,SNR=16						
ASAR	**Alice Springs**	**25.89**	**164**	P	**P**	**07 05 26.1**	**+1.3**
	0.7nm,0.8s,baz=347,slow=7.5,SNR=9.3						
MKAR	**Makanchi Array**	**59.30**	**326**	P	**P**	**07 09 54.3**	**+0.3**
	0.2nm,0.4s,baz=127,slow=6.0,SNR=2.3						

*BJI **09** 07:15:55.0±0.0, 3°.28S×134°.92E, h11km, mB5.2/34, mb4.7/46, Ms4.8/14, Ms7 4.5/14*
*IDC **09** 07:15:57.1±0.5, 3°.07S×134°.46E, h0km, mb4.6/18, mb1 4.8/23, mb1mx4.6/38, mbtmp4.7/23, ML4.5/4, MS3.9/3, Ms1 3.9/3, ms1mx3.3/31, Error ellipse: s-maj=17.7km s-min=12.0km az=61.0*
*MOS **09** 07:15:57.9±1.0, 3°.17S×134°.40E, h20km, mb5.0/27, Error ellipse: s-maj=11.2km s-min=7.2km az=112.4*
*NEIC **09** 07:15:57.9±1.9, 3°.17S±0°.04×134°.45E±0°.04, h10km±1km, mb5.0/60, Error ellipse: s-maj=9.5km s-min=3.5km az=229.0*
*DJA **09** 07:16:00.1±0.8, 3°.S±2°×13°.4E±°, h17km±7km, M5.0/25, mb5.0/25, mB5.5/13, MLv5.0/13, Mw(mB)4.9/13*
ISC 09 07:16:00.2±0.3, **3°.30S**±0°.04×**134°.52E**±0°.04, **h24**km, **n208**, σ1§**84**/218, **mb4.9**/67, **6C-1D**, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMPI	**Kaimana, Papua**	**0.89**	**246**	P	**Pn**	**07 16 18.0**	**+0.9**

RKPI **Ransiki, Papua** 1.81 349 P **Pb** 07 16 30.2 -2.4
SRPI **Serui, Papua** 2.23 50 P **Pn** 07 16 36.2 +0.5
FAKI **Fak Fak** 2.30 279 P **Pn** 07 16 35.9 -0.7
FAKI **Fak Fak** 2.30 279 **Pn** 07 16 35.7 -0.9
FAKI Sn **Sn** 07 17 02.3 -1.8
BAKI **Biak** 2.63 37 P **Pn** 07 16 42.0 +0.9
SIJI **Sorong** 4.05 307 Pn **Pn** 07 16 59.4 -1.3
44nm,0.3s,baz=241,slow=23,SNR=60
SIJI Sn **Sn** 07 17 43.6 -3.8
42nm,0.3s,baz=139,slow=23,SNR=7.3
SIJI Lg Lg 07 18 05.3
18nm,0.3s,baz=287,slow=19,SNR=2.5
SWI **Sorong** 4.06 307 P **Pn** 07 16 59.4 -1.4
SMPI **Sarmi** 4.39 73 P **Pn** 07 17 07.4 +2.1
BNDI **Bandanaira** 4.76 255 P **Pn** 07 17 12.1 +1.7
MSAI **Masohi** 5.58 269 P **Pn** 07 17 22.3 +0.6
0.5nm1µm82nm,0.8s
SAUI **Saumlaki** 5.65 214 Pn **Pn** 07 17 21.4 -1.2
SAUI Sn **Sn** 07 18 30.9 +4.1
GENI **Genyem** 5.69 83 P **Pn** 07 17 26.0 +2.8
1.1nm8µm253nm,0.7s
JAY **Jayapura** 6.23 83 Pn **Pn** 07 17 31.0 +0.3
8.1nm,0.3s,baz=217,slow=9.1,SNR=21
JAY Sn **Sn** 07 18 43.3 +2.0
4.6nm,0.3s,baz=84,slow=19,SNR=2.5
AAI **Ambon** 6.32 266 P **Pn** 07 17 32.4 +0.4
0.7nm9µm179nm,0.6s
NLAI **Namlea** 7.41 270 P **Pn** 07 17 48.6 +1.8
0.5nm82nm,0.5s
TNTI **Ternate** 8.21 299 Pn **Pn** 07 17 55.4 -2.5
SANI **Sanana** 8.61 278 P **Pn** 07 18 02.2 -1.2
839nm82nm,0.7s
MTN **Manton Dam** 10.05 199 **Pn** 07 18 23.2 0.0
MTN Sn **Sn** 07 20 16.6 +1.2
LUWI **Luwuk** 11.95 281 P Pn 07 19 04.6 +15
LUWI **Luwuk** 11.95 281 Pn **Pn** 07 18 45.0 -4.2
SOEI **Soe** 12.03 237 P **Pn** 07 18 49.5 -0.9
63nm,0.6s
SOEI **Soe** 12.03 237 Pn **Pn** 07 18 49.4 -0.9
BATI **Baumata** 12.77 237 Pn **Pn** 07 19 00.6 +0.1
5.4nm,0.3s,baz=79,slow=3.0,SNR=3.9
BATI Sn **Sn** 07 21 24.5 +2.5
5.4nm,0.3s,baz=90,slow=11,SNR=2.9
APSI **Ampana** 13.08 280 P **Pn** 07 19 04.0 -0.6
654nm81nm,0.9s
KNRA **Kununurra** 13.54 204 **Pn** 07 19 09.0 -1.9
COEN **Coen** 13.61 142 **Pn** 07 19 11.5 -0.4
COEN **Sn** 07 21 36.1 -6.3
PMG **Port Moresby** 13.95 116 P **Pn** 07 19 20.0 +3.6
PMG **Port Moresby** 13.95 116 Pn **Pn** 07 19 16.3 -0.2
1.3nm,0.3s,baz=308,slow=9.3,SNR=2.2
PMG LR LR 07 26 39.3
comp=Z,355nm,19.2s,baz=312,slow=46
PMG **Port Moresby** 13.95 116 Pn **Pn** 07 19 20.0 +3.6
TTSI **Tana Toraja** 14.68 271 P **P** 07 19 36.5 +4.1
SPSI **Sidrap Palu** 14.73 267 P **Pn** 07 19 29.5 +2.3
19nm,1.0s
KAPI **Kappang** 14.82 263 Pn **Pn** 07 19 26.6 -1.9
1.5nm,0.3s,baz=108,slow=19,SNR=3.0
KAPI **Kappang** 14.82 263 **Pn** 07 19 26.2 -2.3
WRAB **Tennant Creek** 16.53 181 *i* P **Pn** 07 19 47.9 -2.7
WRAB pmax pmax
comp=Z,78nm,0.7s
WRAB **Tennant Creek** 16.53 181 **Pn** 07 19 47.8 -2.8
WRAB IAmb IAmb 07 19 57.0
comp=Z,83nm,0.7s
WRA **Warramunga Arr** 16.54 181 Pn **Pn** 07 19 48.2 -2.6
comp=Z,1.2nm,0.3s,baz=2.8,slow=13,SNR=36
WRA Sn Sn 07 22 42.7 -11
comp=Z,0.4nm,0.3s,baz=12,slow=23,SNR=5.0
WR0 **Warramunga Arr** 16.56 180 Pn **Pn** 07 19 48.5 -2.5
WR0 IAmb IAmb 07 19 57.2
comp=Z,67nm,0.7s
FITZ **Fitzroy Crossi** 17.09 210 P **Pn** 07 19 54.2 -3.3
comp=Z,2.8nm,0.3s,baz=28,slow=8.1,SNR=31
FITZ S Sn 07 22 56.3 -11
comp=Z,1.0nm,0.3s,baz=198,slow=16,SNR=6.6
KRVT **Keravat (AS076** 17.50 94 LR LR 07 26 32.3
comp=Z,326nm,18.5s,baz=278,slow=36
SMKI **Samarinda** 17.53 279 P **P** 07 20 03.8 -0.3
comp=Z,157nm,0.4s
SRBI **Singaraja** 19.78 255 P **Pn** 07 20 34.3 +3.8
CTA **Charters Tower** 20.24 146 P Pn 07 20 36.2 +0.4
comp=Z,57nm,0.8s,baz=322,slow=12,SNR=32
AS31 **Alice Springs** 20.25 182 P Pn 07 20 35.9 -0.2
ASAR **Alice Springs** 20.25 182 P Pn 07 20 36.1 +0.1
comp=Z,71nm,0.8s,baz=6.4,slow=10,SNR=211
ASAR S **S** 07 24 14.7 -5.6
comp=Z,2.0nm,0.9s,baz=354,slow=27,SNR=3.7
KKM **Kota Kinabalu** 20.50 297 P **P** 07 20 35.3 -1.5
KKM IAmb IAmb 07 20 41.0
comp=Z,60nm,1.1s
JAGI **Jajag, Banyuwa** 20.89 255 P **P** 07 20 40.8 -0.2
comp=Z,64nm,1.0s
JAGI **Jajag, Banyuwa** 20.89 255 P **P** 07 20 40.5 -0.5
JAGI IAmb IAmb 07 20 54.9
comp=Z,61nm,1.0s
GMJI **Gumukmas** 21.53 256 P **P** 07 20 54.1 +6.2
SBUM **Sibu** 23.01 284 P **P** 07 21 03.8 +0.2
PSA00 **Pilbara Seismi** 23.09 217 P **P** 07 21 03.8 -0.6
SMRI **Semarang** 24.26 260 P **P** 07 21 14.0 -1.7
KSM **Kuching** 24.66 281 P **P** 07 21 18.1 -1.2
KPJI **Karang Pucung** 25.78 260 P **P** 07 21 31.3 +1.8
comp=Z,27nm,0.8s
CISI **Cisompet, Garu** 26.91 260 P **P** 07 21 39.8 0.0
EIDS **Eidsvold** 27.12 146 P **P** 07 21 42.5 +1.1
FORT **Forrest** 28.00 192 P **P** 07 21 50.6 +1.3
FORT IAmb IAmb 07 21 53.0
comp=Z,23nm,0.7s
PPBI **Pangkal Pinang** 28.37 272 P **P** 07 21 53.3 +0.5
STKA **Stephens Creek** 29.20 168 P **P** 07 21 59.8 -0.2
STKA pmax pmax
comp=Z,1.0nm,1.0s
STKA **Stephens Creek** 29.20 168 P **P** 07 21 59.0 -0.9
comp=Z,3.3nm,0.7s,baz=350,slow=9.3,SNR=7.7
STKA **Stephens Creek** 29.20 168 P **P** 07 21 59.8 -0.2
BBOO **Buckleboo** 29.39 177 P **P** 07 22 02.4 +0.7
BBOO IAmb IAmb 07 22 04.5
comp=Z,14nm,0.8s
MDSI **Maura Dua** 30.29 267 P **P** 07 22 10.1 +0.2
comp=Z,1µmcomp=Z,6.6nm,0.5s
JNU **Nakatsue** 36.39 355 P **P** 07 23 00.9 -1.8
comp=Z,23nm,0.8s,baz=197,slow=2.4,SNR=9.1
JNU **Nakatsue** 36.39 355 P **P** 07 23 01.7 -1.0
JNU IAmb IAmb 07 23 02.7
comp=Z,21nm,0.7s
NJ2 **Nanjing** 38.18 338 *e*P **P** 07 23 19.8 +1.9
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
PBKT **Sadao Pong** 38.58 302 P **P** 07 23 20.6 -0.9
WHN **Wuhan** 38.78 332 P **P** 07 23 24.8 +1.8
MJAR **Matsushiro Arr** 39.79 5 P **P** 07 23 29.6 -1.7
comp=Z,3.9nm,0.7s,baz=185,slow=8.5,SNR=6.0
GYA **Guiyang** 40.01 319 *e*P **P** 07 23 34.4 +0.9
GYA pmax pmax
comp=Z,10.0nm,0.8s
KSRS **Korea Array** 41.01 352 P **P** 07 23 40.4 -1.0
comp=Z,2.8nm,0.8s,baz=166,slow=8.8,SNR=5.7
CMAR **Chiang Mai Arr** 41.17 303 *i* P **P** 07 23 45.2 +2.1
CMAR pmax pmax
comp=Z,3.0nm,0.3s
CMAR **Chiang Mai Arr** 41.17 303 P **P** 07 23 42.3 -0.7
comp=Z,4.7nm,0.8s,baz=128,slow=7.4,SNR=25
CHTO **Chiang Mai** 41.34 303 P **P** 07 23 43.4 -1.0
CHTO pmax pmax
comp=Z,10.0nm,1.0s
CHTO **Chiang Mai** 41.34 303 P **P** 07 23 43.4 -1.0
KMI **Kunming** 41.82 314 P **P** 07 23 51.2 +2.6
KMI pmax pmax
comp=Z,8.0nm,1.5s
XAN **Xi'an** 44.29 329 P **P** 07 24 07.8 -0.4
XAN pP pP 07 24 13.7 -2.0
XAN pmax pmax
comp=Z,12nm,1.0s
XAN **Xi'an** 44.29 329 P **P** 07 24 06.1 -2.1
XAN pmax pmax
comp=Z,23nm,1.2s
XAN **Xi'an** 44.29 329 P **P** 07 24 06.1 -2.1
XAN IAmb IAmb 07 24 10.1
comp=Z,23nm,1.2s
BJT **Baijiatuao** 46.28 340 P **P** 07 24 23.2 -0.7
BJT pmax pmax
comp=Z,11nm,0.7s
BJT **Baijiatuao** 46.28 340 P **P** 07 24 23.2 -0.7
BJT IAmb IAmb 07 24 26.2

comp=Z,11nm,0.7s
USRK **Ussuriysk Ar.** 47.34 358 P **P** 07 24 30.9 -1.2
comp=Z,3.2nm,0.6s,baz=174,slow=7.2,SNR=8.4
CN2 **Changchun** 47.59 351 *e*P **P** 07 24 33.6 -0.4
CN2 pmax pmax
comp=Z,10.0nm,0.6s
ASAJ **Asahikawa** 47.76 8 P **P** 07 24 34.3 -1.0
comp=Z,9.0nm,0.5s,baz=199,slow=9.5,SNR=3.8
JKA **Kamikawa-asahi** 47.76 8 P **P** 07 24 34.3 -1.0
LZH **Lanzhou** 48.55 327 *e*P **P** 07 24 43.2 +1.4
LZH sP pP 07 24 49.6 +0.3
LZH pP sP 07 24 51.3 -0.9
LZH pmax pmax
comp=Z,26nm,1.3s
LZH pmax pmax
comp=Z,97nm,6.2s
LZH LR LR
comp=Z,400nm,14.2s
LZH LR LR
comp=Z,400nm,14.5s
LZH LR LR
comp=Z,670nm,17.0s
HHC **Hu-ho-hao-te** 48.69 337 *e*P **P** 07 24 45.5 +2.8
HHC pmax pmax
comp=Z,4.0nm,1.0s
HHC pmax pmax
comp=Z,390nm,5.6s
RAO **Raoul Island** 51.94 125 LR LR 07 44 43.0
comp=Z,235nm,21.7s,baz=204,slow=33
KLR **Kul'dur** 52.37 358 *i* P **P** 07 25 09.7 -0.6
KLR pmax pmax
comp=Z,19nm,2.8s
GTA **Gaotai** 53.15 327 *e*P **P** 07 25 16.6 +0.2
GTA pP pP 07 25 23.9 -0.1
GTA sP sP 07 25 27.2 +0.3
GTA pmax pmax
comp=Z,6.0nm,1.1s
GRNR **Gornyy** 53.88 1 *e*P **P** 07 25 18.9 -2.5
GRNR MLR MLR
comp=Z,140nm,17.0s
SONM **Songino Array** 56.57 338 P **P** 07 25 39.8 -1.2
comp=Z,1.4nm,0.9s,baz=156,slow=10,SNR=7.7
SONM PcP **PcP** 07 26 35.7 -1.6
comp=Z,1.1nm,0.7s,baz=148,slow=4.4,SNR=3.4
PETK **Petropavlovsk-** 59.49 16 P **P** 07 26 00.4 -0.8
comp=Z,1.8nm,0.6s,baz=190,slow=7.9,SNR=8.3
TLY **Talaya** 60.74 339 *i* P **P** 07 26 10.2 +0.4
TLY pmax pmax
comp=Z,5.0nm,0.9s
MOY **Mondy** 61.73 337 *e*P **P** 07 26 17.1 +0.4
WMQ **Urumqi** 62.93 324 P **P** 07 26 25.6 +0.8
WMQ sP sP 07 26 37.0 +1.6
WMQ pmax pmax
comp=Z,12nm,1.1s
WMQ pmax pmax
comp=Z,64nm,8.5s
WMQ LR LR
comp=Z,390nm,22.9s
WMQ LR LR
comp=Z,750nm,28.8s
WMQ LR LR
comp=Z,290nm,22.9s
WMQ **Urumqi** 62.93 324 P **P** 07 26 24.1 -0.7
WMQ pmax pmax
comp=Z,27nm,1.2s
WMQ **Urumqi** 62.93 324 P **P** 07 26 24.1 -0.7
BOD **Bodaibo** 63.12 348 *e*P **P** 07 26 25.2 -0.5
BOD pmax pmax
comp=Z,13nm,1.3s
YAK **Yakutsk** 65.26 357 *e*P **P** 07 26 38.7 -0.8
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=E,1.0nm,0.8s
YAK pmax pmax
comp=N,7.0nm,1.3s
YAK **Yakutsk** 65.26 357 P **P** 07 26 39.0 -0.6
SEY **Seymchan** 67.43 9 *i* P **P** 07 26 55.0 +1.5
MK31 **Makanchi Array** 67.75 324 P **P** 07 26 54.7 -1.2
MK31 pmax pmax
comp=Z,11nm,1.3s
MK31 **Makanchi Array** 67.75 324 P **P** 07 26 54.7 -1.2
MK31 IAmb IAmb 07 27 00.5
comp=Z,11nm,1.2s
MK31 **Makanchi Array** 67.75 324 ⇑Pg **P** 07 26 56.5 +0.6
comp=Z,2.6nm,0.5s,baz=322,slow=14,SNR=13
MKAR **Makanchi Array** 67.75 324 P **P** 07 26 56.1 +0.2
comp=Z,6.7nm,0.6s,baz=113,slow=8.5,SNR=32
MAKZ **Makanchi** 67.94 324 P **P** 07 26 55.9 -1.2
MAKZ pmax pmax
comp=Z,11nm,0.8s
MAKZ **Makanchi** 67.94 324 ⇑Pg **P** 07 26 56.3 -0.8
comp=Z,16nm,1.0s
MAKZ ⇓Lg Lg 07 27 47.0
comp=Z,9.2nm,0.7s
MAKZ **Makanchi** 67.94 324 P **P** 07 26 55.9 -1.2
MAKZ IAmb IAmb 07 27 01.1
comp=Z,11nm,0.8s
NIL **Nilore** 68.36 308 P **P** 07 26 58.2 -1.8
NIL pmax pmax
comp=Z,6.0nm,0.6s
NIL **Nilore** 68.36 308 P **P** 07 26 58.2 -1.8
NIL IAmb IAmb 07 27 03.9
comp=Z,5.9nm,0.6s
KSH **Kashi** 68.48 315 P **P** 07 27 04.6 +3.8
KSH sP sP 07 27 13.3 +1.8
KSH PP **PP** 07 29 36.4 +4.2
KSH S **S** 07 36 08.9 +7.3
KSH sS sS 07 36 12.4 -2.2
KSH ScS **ScS** 07 37 02.0 +2.6
KSH SS **SS** 07 40 31.5 +5.6
KSH LR LR
comp=Z,210nm,5.5s
KSH LR LR
comp=Z,200nm,5.4s
KSH LR LR
comp=Z,370nm,8.2s
ZAA0 **Zalesovo Array** 70.39 331 P **P** 07 27 11.3 -0.8
ZALV **Zalesovo Beam** 70.39 331 P **P** 07 27 11.1 -1.0
comp=Z,4.3nm,0.7s,baz=103,slow=5.3,SNR=16
AAK **Ala-Archa** 70.76 317 *ce*P **P** 07 27 16.2 +1.4
AAK pmax pmax
comp=Z,8.0nm,1.4s
AAK **Ala-Archa** 70.76 317 P **P** 07 27 14.8 0.0
AAK IAmb IAmb 07 27 18.6
comp=Z,12nm,1.4s
ARSB **Arslanbob** 71.29 316 P **P** 07 27 17.3 -0.7
ARSB IAmb IAmb 07 27 22.4
comp=Z,9.2nm,1.1s
KURK **Kurchatov** 71.84 326 *i* P **P** 07 27 22.7 +1.8
KURK pmax pmax
comp=Z,18nm,1.7s
GAR **Garm** 72.38 313 P **P** 07 27 24.5 -0.1
GAR IAmb IAmb 07 27 25.9
comp=Z,22nm,1.4s
CHGR **Chuyangaron** 73.12 312 P **P** 07 27 27.7 -1.3
CHGR IAmb IAmb 07 27 37.8
comp=Z,15nm,1.3s
KK31 **Karatay Array** 73.65 317 P **P** 07 27 31.1 -0.8
KK31 pmax pmax
comp=Z,7.0nm,1.1s
KK31 **Karatay Array** 73.65 317 P **P** 07 27 31.1 -0.8
KKAR **Karatay Array** 73.65 317 P **P** 07 27 31.2 -0.7
KKAR pmax pmax
comp=Z,7.0nm,1.1s
KKAR **Karatay Array** 73.65 317 P **P** 07 27 31.2 -0.7
BILL **Bilibino** 74.55 12 *i* P **P** 07 27 40.1 +3.5
BILL pmax pmax
comp=Z,8.0nm,1.4s
BILL **Bilibino** 74.55 12 P **P** 07 27 36.4 -0.2
TIXI **Tiksi** 74.90 358 *i* P **P** 07 27 38.8 +0.2
TIXI pmax pmax
comp=Z,5.0nm,0.9s
TIXI **Tiksi** 74.90 358 P **P** 07 27 37.7 -0.9
VNDA **Vanda** 75.60 174 P **P** 07 27 43.7 +1.1
comp=Z,2.2nm,0.6s,baz=343,slow=7.1,SNR=12
VNDA **Vanda** 75.60 174 P **P** 07 27 43.1 +0.5
GEYT **Alibeck** 81.34 309 P **P** 07 28 15.6 +0.5
comp=Z,6.2nm,1.0s,baz=143,slow=3.2,SNR=10
GYA0B **ALIBECK ARRAY** 81.34 309 P **P** 07 28 13.9 -1.2
GYA0B IAmb IAmb 07 28 19.5
comp=Z,8.4nm,0.9s
SOCY **Socotra** 81.45 283 P **P** 07 28 16.4 +0.3
ABKAR **Akbulak array** 82.48 320 P **P** 07 28 19.9 -0.9
SVW2 **Sparrevohn** 83.30 27 P **P** 07 28 24.4 -0.3

SVW2 IAmb IAmb 07 28 28.7
comp=Z,11nm,1.1s
TTA **Tatalina** 83.72 26 P **P** 07 28 28.0 +1.0
TTA **Tatalina** 83.72 26 P **P** 07 28 28.0 +1.0
KDAK **Kodiak Island** 83.74 31 P **P** 07 28 27.4 +0.4
comp=Z,6.9nm,0.8s,baz=309,slow=4.3
KDAK **Kodiak Island** 83.74 31 P **P** 07 28 26.5 -0.6
SVE **Sverdlovsk** 84.00 328 *e*P **P** 07 28 26.1 -2.3
SVE pmax pmax
comp=Z,25nm,1.2s
ARU **Arti** 85.01 327 *ce*P **P** 07 28 35.3 +1.8
ARU pmax pmax
comp=Z,6.0nm,0.7s
SUA **Susitna One** 85.64 28 P **P** 07 28 36.6 -0.2
SUA IAmb IAmb 07 28 38.3
comp=Z,8.2nm,0.8s
RC01 **Rabbit Creek A** 86.02 28 P **P** 07 28 37.1 -1.3
RC01 IAmb IAmb 07 28 40.4
comp=Z,9.1nm,0.7s
KTH **Kantishna Hill** 86.11 26 P **P** 07 28 38.3 -0.7
KTH IAmb IAmb 07 28 39.8
comp=Z,12nm,0.9s
TRF **Thorofare Moun** 86.36 26 P **P** 07 28 38.9 -1.4
TRF IAmb IAmb 07 28 43.9
comp=Z,6.9nm,0.9s
PMR **Palmer** 86.42 28 P **P** 07 28 40.3 -0.1
PMR pmax pmax
comp=Z,10.0nm,1.0s
PMR **Palmer** 86.42 28 P **P** 07 28 40.3 -0.1
PMR IAmb IAmb 07 28 41.3
comp=Z,9.9nm,1.0s
QSPA **South Pole Qui** 86.65 180 P **P** 07 28 42.4 +0.7
QSPA IAmb IAmb 07 28 45.1
comp=Z,9.7nm,1.4s
KNK **Knik Glacier** 86.69 28 P **P** 07 28 41.8 -0.1
SML **Sawmill** 86.84 28 P **P** 07 28 42.5 -0.1
BWN **Browne** 86.89 25 P **P** 07 28 42.6 -0.1
RND **Reindeer** 86.97 26 P **P** 07 28 39.8 -3.4
RND pmax pmax
comp=Z,27nm,0.7s
RND **Reindeer** 86.97 26 P **P** 07 28 39.8 -3.4
MCK **McKinley** 87.01 26 P **P** 07 28 41.5 -1.8
MCK pmax pmax
comp=Z,16nm,0.8s
MCK **McKinley** 87.01 26 P **P** 07 28 41.5 -1.8
SCM **Sheep Creek Mo** 87.31 28 P **P** 07 28 45.5 +0.6
SCM pmax pmax
comp=Z,20nm,0.9s
SCM **Sheep Creek Mo** 87.31 28 P **P** 07 28 45.5 +0.6
COLD **Coldfoot** 87.36 22 P **P** 07 28 45.7 +0.8
WRH **Wood River Hil** 87.54 25 P **P** 07 28 45.4 -0.5
WRH IAmb IAmb 07 28 46.6
comp=Z,12nm,0.8s
DHY **Denali Highway** 87.55 26 P **P** 07 28 46.5 +0.3
CCB **Clear Creek Bu** 87.70 25 P **P** 07 28 46.1 -0.5
HDA **Harding Lake** 88.01 25 P **P** 07 28 47.3 -0.8
IL31 88.11 25 P **P** 07 28 47.1 -1.4
IL31 IAmb IAmb 07 28 48.6
comp=Z,6.7nm,0.8s
ILAR **Eielson Array** 88.11 25 P **P** 07 28 47.3 -1.3
comp=Z,6.1nm,0.8s,baz=265,slow=4.4,SNR=59
SYO **Syowa Base** 88.71 201 ⇑*e*PcP **PcP** 07 28 54.0 +1.1
RIDG **Independent Ri** 88.80 26 P **P** 07 28 51.5 -0.4
RIDG IAmb IAmb 07 28 53.2
comp=Z,4.6nm,0.7s
GLB **Gilahina Butte** 88.89 28 P **P** 07 28 51.0 -1.4
GLB IAmb IAmb 07 28 54.4
comp=Z,10nm,0.8s
BALM **Baldy** 89.54 29 P **P** 07 28 55.1 -0.4
BALM IAmb IAmb 07 28 57.3
comp=Z,9.8nm,0.7s
KIV **Kislovodsk** 93.59 314 *e*P **P** 07 29 16.9 +2.2
KIV pmax pmax
comp=Z,11nm,1.0s
INK **Inuvik** 93.77 22 P **P** 07 29 14.0 -0.8
INK pmax pmax
comp=Z,6.0nm,1.2s
INK **Inuvik** 93.77 22 P **P** 07 29 13.6 -1.2
comp=Z,2.0nm,0.7s,baz=294,slow=5.3,SNR=14
INK **Inuvik** 93.77 22 P **P** 07 29 14.0 -0.8
INK IAmb IAmb 07 29 14.8
comp=Z,5.7nm,1.2s
OBN **Obninsk** 97.25 325 ⇑*e*P Pdif 07 29 31.1 +0.1
OBN *e* 07 33 33.4
OBN *e*S **S** 07 40 56.8 +3.7
OBN *e*SS SS 07 47 43.7 +13
OBN pmax pmax
comp=Z,5.0nm,1.2s
ARCES **ARCESS Array B** 99.67 340 P **Pdif** 07 29 40.2 -1.4
comp=Z,3.2nm,0.8s,baz=84,slow=8.3,SNR=5.6
YKA **Yellowknife Ar** 102.47 26 P **Pdif** 07 29 53.5 -0.6
comp=Z,0.2nm,0.7s,baz=293,slow=5.3,SNR=4.7
NVAR **Mina Array Bea** 105.49 51 Pdiff **Pdif** 07 30 11.1 +2.7
comp=Z,0.4nm,0.6s,baz=243,slow=6.1,SNR=5.5
TXAR **Lajitas Array** 119.17 58 PKP **PKiKP** 07 34 48.5 +0.4
comp=Z,0.4nm,0.6s,baz=182,slow=2.3,SNR=9.4
TORD **Torodi Ar. Bea** 132.38 285 PKP **PKPdf** 07 35 13.1 -0.4
comp=Z,0.9nm,0.8s,baz=39,slow=3.6,SNR=5.5
GO02 **Mina Guanaco** 143.28 142 **PKPdf** 07 35 32.2 -1.5
NNA **Nana** 145.32 116 PKPbc **PKPab** 07 35 37.4 +0.3
comp=Z,2.8nm,0.3s,baz=258,slow=3.7,SNR=5.3
NNA **Nana** 145.32 116 **PKPbc** 07 35 36.6 -0.4
LVC **Limon Verde** 145.55 139 PKPbc **PKiKP** 07 35 40.5 -1.3
comp=Z,1.1nm,0.7s,baz=267,slow=3.3,SNR=10
ATAH **Atahualpa** 145.56 108 PKPbc **PKiKP** 07 35 41.2 -0.9
comp=Z,6.7nm,0.6s,baz=5.4,slow=1.3,SNR=8.7
OTAV **Otavalo** 146.91 95 PKP2 **PKPab** 07 35 43.4 -0.3
OTAV **Otavalo** 146.91 95 PKPbc **PKPab** 07 35 43.4 -0.3
PB11 **IPOC Station P** 146.99 135 **PKPab** 07 35 42.8 -0.6
MNMC **Minye Minye** 147.45 134 PKPbc **PKPbc** 07 35 43.2 -0.3
CPUP **Villa Florida** 148.39 159 PKP2 **PKPbc** 07 35 45.8 +0.4
CPUP **Villa Florida** 148.39 159 PKPbc **PKiKP** 07 35 46.3 -0.8
comp=Z,3.0nm,0.7s,baz=191,slow=1.7,SNR=7.8
CPUP **Villa Florida** 148.39 159 **PKPbc** 07 35 45.8 +0.4
CPUP PKPab **pPKPdf** 07 35 50.0 -0.2
SOTA **Rioblanco** 148.89 91 *e*P **PKPdf** 07 35 40.1 -3.7
YOTC **Yotoco, Valle** 149.19 88 *e*P **PKPbc** 07 35 46.5 -1.5
CBOC **Ciudad Bolivar** 149.47 84 *e*P **PKPbc** 07 35 46.6 -2.2
GUY2C **Guyana, Caldas** 150.14 85 *e*P **PKPdf** 07 35 45.5 -0.2
RREF **El Recreo** 150.17 86 *e*P **PKPbc** 07 35 49.8 -1.2
ORTC **Ortega, Tolima** 150.29 88 *e*P **PKPdf** 07 35 47.5 +2.0
LPAZ **La Paz** 150.33 132 PKIKP **PKPbc** 07 35 49.7 -1.6
LPAZ 07 35 55.7
LPAZ **La Paz** 150.33 132 PKPbc **PKiKP** 07 35 52.9 +0.8
comp=Z,3.5nm,0.8s,baz=347,slow=1.7,SNR=12
LPAZ **La Paz** 150.33 132 **PKPbc** 07 35 49.7 -1.6
LPAZ PKPab **sPKPdf** 07 35 55.7 -1.5
ROSC **El Rosal** 151.20 86 PKPbc **PKiKP** 07 35 54.3 +0.6
comp=Z,14nm,0.6s,baz=166,slow=9.1,SNR=11
ROSC **El Rosal** 151.20 86 *e*P **PKPbc** 07 35 52.3 -0.8
SPBC **San Pablo de B** 151.41 84 *e*P **PKPbc** 07 35 52.0 -1.3
MACC **Macarena, Meta** 151.65 92 *e*P **PKPbc** 07 35 53.2 -0.6
CHIC **Chingaza** 151.79 86 *e*P **PKPbc** 07 35 53.7 -0.9
OCAC **Ocana** 151.88 79 *e*P **PKPdf** 07 35 47.5 -0.5
RUSC **La Rusia** 152.37 84 *e*P **PKPbc** 07 35 53.1 -2.9
SDV **Santo Domingo** 154.39 76 PKPbc **PKiKP** 07 36 01.6 +1.5
comp=Z,2.5nm,0.6s,baz=302,slow=8.9,SNR=3.7
SDV PKPab **PKPab** 07 36 15.5 +1.3
comp=Z,5.0nm,0.7s,baz=237,slow=4.1,SNR=4.2
SIV **San Ignacio** 155.40 142 PKPab **PKPab** 07 36 19.7 +1.6
comp=Z,0.5nm,0.5s,baz=297,slow=6.8,SNR=3.3

NNC 09 07:25:46.7±0.6, 50.01N×78.68E, h0km, mb 3.7, mpv 3.3, 5C-1D, Error ellipse: s-maj=6.0km s-min=2.6km az=69.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**0.62**	**351**	⇑P	Pg	07 25 59.2	+0.5
	30nm,0.3s						
KURBB				⇑S	Sg	07 26 07.7	+0.9
	46nm,0.3s						
KURK	**Kurchatov**	**0.71**	**357**	⇑P	Pg	07 26 00.4	+0.1
	12nm,0.3s						
KURK				⇑S	Sg	07 26 10.6	+1.0
	63nm,0.9s						
SEM	**Semipalatinsk**	**1.09**	**68**	P	Pg	07 26 07.4	-0.1
	6.5nm,0.2s						
SEM				S	Sb	07 26 23.0	-0.3
	43nm,0.4s						
BRZS	**Berezniki**	**3.87**	**272**	Pg	Pg	07 26 58.7	-2.2
	14nm,0.3s						
BRZS				Lg	Lg	07 27 50.9	
	7.8nm,0.4s						

MK31	**Makanchi Array**	**4.01**	**142**	⇑Pn		Pn	07 26 51.3	+1.9
	0.3nm,0.3s,baz=109,slow=8.9,SNR=36							
MK31				⇓Lg		Lg	07 27 53.9	
	5.3nm,0.4s,baz=326,slow=27,SNR=7.6							
KAPS	**Kapalarasan**	**4.75**	**174**	Pg		Pb	07 27 13.4	+2.6
	2.4nm,0.4s							
KAPS				Lg		Lg	07 28 15.9	
	9.7nm,0.5s							
ZSN	**Zaisan**	**4.83**	**120**	Pg		Pb	07 27 11.8	-0.3
	4.3nm,0.3s							
ZSN				Lg		Lg	07 28 13.0	
ARXS	**Arharly**	**5.83**	**186**	Pg		Pb	07 27 33.2	+4.0
	2.3nm,0.6s							
ARXS				Lg		Lg	07 28 49.6	
	7.6nm,0.4s							

*IDC **09** 07:28:59.9±10.0, 20.2°20S×178.0°09W, h530km±116km, mb3.1/6, mb1 3.4/6, mb1mx3.1/41, mbtmp4.0/6, Error ellipse: s-maj=88.9km s-min=36.5km az=151.0*
*NEIC **09** 07:29:01.0±1.7, 20.5°S±0.1×178.0°W±0.1, h551km±10km, mb4.3/26, Error ellipse: s-maj=21.2km s-min=17.0km az=194.0*

ISC 09 07:28:59.9±0.8, 20.5°S±0.1×177.9°W±0.1, h534km, n35, σ1♀21/37, mb4.2/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.70**	**305**	P	**P**	**07 30 26.6**	**+0.3**
MSVF				S	**S**	**07 31 40.5**	**+3.6**
RAO	**Raoul Island**	**8.71**	**180**	P	**P**	**07 31 06.5**	**+2.3**
DZM	**Mont Dzumac**	**14.66**	**261**	P	**P**	**07 32 05.8**	**-0.4**
URZ	**Urewera**	**18.21**	**193**	P	**P**	**07 32 39.8**	**-0.5**
QRZ	**Quartz Range**	**21.84**	**200**	P	**P**	**07 33 12.3**	**-0.8**
THZ	**Tophouse**	**22.58**	**198**	P	**P**	**07 33 18.4**	**-1.4**
WHZ	**Wether Hill Ro**	**27.86**	**201**	P	**P**	**07 34 06.5**	**0.0**
EIDS	**Eidsvold**	**28.92**	**254**	P	**P**	**07 34 16.4**	**+0.4**
ARMA	**Armidale**	**29.14**	**244**	P	**P**	**07 34 18.6**	**+0.7**
ARMA				IAmb	IAmb	07 34 20.8	
	comp=Z,14nm,1.3s						
STKA	**Stephens Creek**	**37.86**	**244**	P	**P**	**07 35 31.0**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=88,slow=12,SNR=9.8						
STKA	**Stephens Creek**	**37.86**	**244**	P	**P**	**07 35 30.0**	**-1.3**
BBOO	**Buckleboo**	**42.62**	**244**	P	**P**	**07 36 09.1**	**-0.1**
BBOO				IAmb	IAmb	07 36 10.0	
	comp=Z,15nm,1.4s						
WR0	**Warramunga Arr**	**44.48**	**262**	P	**P**	**07 36 21.9**	**-2.1**
WR0				IAmb	IAmb	07 36 24.9	
	comp=Z,8.4nm,1.2s						
AS31	**Alice Springs**	**44.59**	**257**	P	**P**	**07 36 24.4**	**-0.4**
ASAR	**Alice Springs**	**44.59**	**257**	P	**P**	**07 36 24.5**	**-0.3**
	comp=Z,7.7nm,0.8s,baz=96,slow=7.5,SNR=75						
ASAR				PcP	**PcP**	**07 37 56.0**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=101,slow=3.7,SNR=4.5						
WRAB	**Tennant Creek**	**44.67**	**262**	P	**P**	**07 36 24.1**	**-1.3**
WRAB				IAmb	IAmb	07 36 25.2	
	comp=Z,6.3nm,0.8s						
WRA	**Warramunga Arr**	**44.67**	**262**	P	**P**	**07 36 24.8**	**-0.7**
	comp=Z,2.8nm,0.4s,baz=98,slow=7.9,SNR=57						
MTN	**Manton Dam**	**49.24**	**271**	P	**P**	**07 36 59.1**	**-0.8**
MTN				IAmb	IAmb	07 37 11.8	
	comp=Z,23nm,1.4s						
FORT	**Forrest**	**49.36**	**247**	P	**P**	**07 37 00.2**	**-0.4**
KNRA	**Kununurra**	**50.73**	**266**	P	**P**	**07 37 10.6**	**-0.3**
KNRA				IAmb	IAmb	07 37 29.8	
	comp=Z,16nm,1.4s						
FITZ	**Fitzroy Crossi**	**53.10**	**262**	P	**P**	**07 37 27.9**	**0.0**
PSAD2	**Pilbara Seismi**	**57.63**	**257**	P	**P**	**07 37 58.2**	**-1.2**
PSAD2				IAmb	IAmb	07 38 10.6	
	comp=Z,19nm,1.4s						
PSAB3	**Pilbara Seismi**	**57.73**	**257**	P	**P**	**07 37 57.7**	**-2.4**
PSAB3				IAmb	IAmb	07 38 01.3	
	comp=Z,19nm,1.4s						
PSAB2	**Pilbara Seismi**	**57.73**	**257**	P	**P**	**07 37 58.3**	**-1.7**
PSAB2				IAmb	IAmb	07 38 00.2	
	comp=Z,8.4nm,0.8s						
PSAA3	**Pilbara Seismi**	**57.73**	**257**	P	**P**	**07 38 00.1**	**0.0**
PSAA3				IAmb	IAmb	07 38 00.6	
	comp=Z,12nm,1.1s						
PSAA2	**Pilbara Seismi**	**57.74**	**257**	P	**P**	**07 37 59.0**	**-1.2**
PSAA2				IAmb	IAmb	07 38 00.8	
	comp=Z,27nm,1.4s						
PSAC3	**Pilbara Seismi**	**57.75**	**257**	P	**P**	**07 37 58.8**	**-1.4**
PSAC3				IAmb	IAmb	07 38 00.3	
	comp=Z,28nm,1.4s						
PSAA1	**Pilbara Seismi**	**57.75**	**257**	P	**P**	**07 37 59.4**	**-0.8**
PSAB1	**Pilbara Seismi**	**57.76**	**257**	P	**P**	**07 37 59.5**	**-0.8**
PSAB1				IAmb	IAmb	07 38 00.2	
	comp=Z,12nm,1.2s						
PSAD1	**Pilbara Seismi**	**57.78**	**257**	P	**P**	**07 38 00.1**	**-0.3**
PSAC1	**Pilbara Seismi**	**57.78**	**257**	P	**P**	**07 37 59.7**	**-0.8**
PSAC1				IAmb	IAmb	07 38 14.5	
	comp=Z,29nm,1.4s						
QSPA	**South Pole Qui**	**69.57**	**180**	P	**P**	**07 39 15.2**	**+0.2**
TXAR	**Lajitas Array**	**86.99**	**57**	P	**P**	**07 40 49.9**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=205,slow=5.5,SNR=4.2						
ILAR	**Eielson Array**	**88.30**	**13**	P	**P**	**07 40 53.1**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=219,slow=5.3,SNR=4.3						
PDAR	**Pinedale Array**	**88.91**	**43**	P	**P**	**07 40 56.8**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=256,slow=5.5,SNR=3.5						

*RHSSO **09** 07:43:57.1±0.3, 44.1°11N×19.4°47E, h3km, ML1.5/4*

BEO 09 07:43:58.0±0.4, 44.1°10N×19.4°47E, h0km, ML1.5/6, 1C, Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBLS	**Lazići**	**0.23**	**191**	*e*Pg	Pg	07 44 02.5	0.0
BBLS				*e*Sg	Sg	07 44 05.2	-0.3
BBLS	**Lazići**	**0.23**	**191**	⇑*i*Pg	Pg	07 44 02.0	-0.5
BBLS				*e*Sg	Sg	07 44 05.4	-0.1
DIVS	**Divibare**	**0.38**	**89**	*e*Pg	Pg	07 44 04.3	-0.9
DIVS				*e*Sg	Sg	07 44 08.8	-1.3
DIVS	**Divibare**	**0.38**	**89**	*e*Pg	Pg	07 44 04.1	-1.1
DIVS				*e*Sg	Sg	07 44 09.5	-0.6
TEKS	**Tekeris**	**0.46**	**6**	*e*Pg	Pg	07 44 07.0	+0.3
TEKS				*e*Sg	Sg	07 44 12.8	+0.2
TEKS	**Tekeris**	**0.46**	**6**	*e*Pg	Pg	07 44 05.0	-1.7
TEKS				*e*Sg	Sg	07 44 11.2	-1.4
RUDO	**Rudo**	**0.48**	**188**	*e*Pg	Pg	07 44 05.8	-1.4
RUDO				*e*Sg	Sg	07 44 13.6	+0.1
TRUS	**Trudelj**	**0.69**	**79**	*e*Pg	Pg	07 44 09.9	-1.3
TRUS				*e*Sg	Sg	07 44 20.3	+0.2
IVAS	**Ivanjica**	**0.72**	**136**	*e*Pg	Pg	07 44 10.5	-1.2
IVAS				*e*Sg	Sg	07 44 21.8	+0.8
SJES	**Sjenica**	**0.91**	**156**	*e*Pg	Pg	07 44 14.2	-1.3
SJES				*e*Sg	Sg	07 44 25.9	-1.4
GRUS	**Gruza**	**0.93**	**103**	*e*Pg	Pg	07 44 14.8	-0.9
GRUS				*e*Sg	Sg	07 44 28.1	+0.4
UPM	**Unac-Piva**	**0.98**	**205**	*e*Pg	Pg	07 44 14.4	-2.4
UPM				*e*Sg	Sg	07 44 29.0	-0.5
FRGS	**Fruska Gora**	**1.09**	**13**	*e*Pg	Pg	07 44 17.3	-1.6
FRGS				*e*Sg	Sg	07 44 31.7	-1.3
FRGS	**Fruska Gora**	**1.09**	**13**	*e*Pg	Pg	07 44 16.7	-2.2
FRGS				*e*Sg	Sg	07 44 31.1	-1.9
SELS	**Selova**	**1.48**	**126**	*e*Pg	Pn	07 44 25.8	-0.2
SELS				*e*Sg	Sg	07 44 45.1	-0.6
BOVS	**Bovan**	**1.68**	**105**	*e*Sg	Pg	07 44 28.6	-1.7
BOVS	**Bovan**	**1.68**	**105**	*e*Pg	Sg	07 44 51.3	-0.8

IDC 09 08:06:08.7±2.8, 6.9°99S×129.9°96E, h115km±38km, mb3.3/1, mb1 3.3/5, mb1mx3.1/31, mbtmp3.6/5, Error ellipse: s-maj=70.1km s-min=21.7km az=89.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.21**	**12**	P	Pn	08 07 38.4	+0.3
	0.9nm,0.3s,baz=177,slow=18,SNR=3.2						
SIJI				S	Sn	08 08 43.0	-4.7
	1.3nm,0.3s,baz=214,slow=22,SNR=5.8						
FITZ	**Fitzroy Crossi**	**11.82**	**200**	P	Pn	08 08 53.2	-0.4
	0.2nm,0.3s,baz=34,slow=15,SNR=5.3						
FITZ				S	Sn	08 10 56.4	-7.4
	0.2nm,0.3s,baz=267,slow=17,SNR=3.9						
WRA	**Warramunga Arr**	**13.56**	**162**	P	Pn	08 09 14.9	-1.6
	0.2nm,0.3s,baz=345,slow=13,SNR=7.5						
WRA				S	Sn	08 11 41.1	-4.9
	0.8nm,0.3s,baz=340,slow=22,SNR=8.5						
ASAR	**Alice Springs**	**17.01**	**168**	P	P	08 10 01.4	+1.7
	0.2nm,0.3s,baz=356,slow=10,SNR=20						
ASAR				S	Sn	08 13 07.7	-1.6
	0.1nm,0.3s,baz=359,slow=27,SNR=5.1						

MKAR	**Makanchi Array**	**68.19**	**327**	P		P	08 16 56.6	-0.1
	0.3nm,0.4s,baz=118,slow=7.7,SNR=7.3							

*IDC **09** 08:27:05.2±1.2, 66.7°75N×135.9°1W, h0km, mb3.4/1, mb1 3.3/3, mb1mx3.1/55, mbtmp2.8/3, ML2.5/2, Error ellipse: s-maj=15.6km s-min=9.9km az=135.0*
*PGC **09** 08:27:08.6±0.0, 66.8°83N×135.6°5W, h20km, ML3.0/4, 86km Wsw of Fort McPherson, Nt Northern Yukon Territory, Canada*

ISC 09 08:27:04.6±0.8, 66.8°83N±0.0°05×135.6°0W±0.0°05, h10km, n20, σ2♀94/32, Northern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	**Inuvik**	**1.69**	**27**	Pn	**Pg**	**08 27 36.9**	**0.0**
	4.7nm,0.3s,baz=210,slow=21,SNR=110						
INK				Lg	Lg	08 28 02.1	
	35nm,0.3s,baz=84,slow=30,SNR=36						
INK	**Inuvik**	**1.69**	**27**	Pn	**Pg**	**08 27 36.9**	**0.0**
INK				Sg	**Sg**	**08 28 02.4**	**+3.6**
DAWY	**Dawson**	**3.19**	**211**	Pn	**Pn**	**08 27 56.3**	**+1.5**
DAWY				Sn	**Sn**	**08 28 33.3**	**+0.4**
DOT	**Dot Lake**	**4.78**	**232**	Sn	**Sn**	**08 29 10.7**	**-1.2**
BVCY	**Beaver Creek**	**4.97**	**209**	Pn	**Pn**	**08 28 20.8**	**+1.5**
BVCY				Sn	**Sn**	**08 29 16.1**	**-0.7**
ILAR	**Eielson Array**	**5.08**	**251**	Pn	**Pn**	**08 28 20.6**	**-0.1**
	0.1nm,0.3s,baz=67,slow=12,SNR=7.4						
ILAR				Sn	**Sn**	**08 29 15.7**	**-3.7**
	0.4nm,0.3s,baz=61,slow=27,SNR=6.4						
ILAR				Lg	Lg	08 29 40.0	
	0.8nm,0.3s,baz=65,slow=28,SNR=9.1						
YUK1	**Sand Pete Hill**	**5.15**	**207**	Pn	**Pn**	**08 28 23.5**	**+1.6**
YUK1				Sn	**Sn**	**08 29 19.3**	**-2.0**
YUK3	**Moose Creek**	**5.49**	**205**	Pn	**Pn**	**08 28 27.5**	**+0.9**
YUK3				Sn	**Sn**	**08 29 28.5**	**-1.4**
YUK2	**White River**	**5.55**	**207**	Pn	**Pn**	**08 28 29.1**	**+1.9**
YUK4	**Talbot Arm**	**5.66**	**195**	Pn	**Pn**	**08 28 30.3**	**+1.4**
COLD	**Coldfoot**	**5.73**	**281**	Pn	**Pn**	**08 28 30.6**	**+1.0**
COLD				Sn	**Sn**	**08 29 31.4**	**-3.9**
YUK5	**Granite Creek**	**5.80**	**191**	Pn	**Pn**	**08 28 33.5**	**+2.7**
YUK6	**Outpost Mounta**	**6.03**	**193**	Pn	**Pn**	**08 28 36.3**	**+2.3**
HYT	**Haines Junctio**	**6.09**	**189**	Pn	**Pn**	**08 28 37.0**	**+2.3**
HYT				Sn	**Sn**	**08 29 42.5**	**-1.8**
WHY	**Whitehorse**	**6.20**	**177**	Pn	**Pn**	**08 28 39.0**	**+2.8**
KUKN	**Kugluktuk,NWT**	**7.98**	**73**	Pn	**Pn**	**08 29 02.6**	**+2.2**
KUKN				Sn	**Sn**	**08 30 25.9**	**-4.7**
YKW3	**Yellowknife Ar**	**9.92**	**106**	Pn	**Pn**	**08 29 27.6**	**+0.6**
YKW3				Sn	**Sn**	**08 31 13.2**	**-5.1**
YKA	**Yellowknife Ar**	**9.96**	**106**	Pn	**Pn**	**08 29 27.7**	**+0.1**
	0.1nm,0.3s,baz=303,slow=13,SNR=10						
YKA				Sn	**Sn**	**08 31 12.3**	**-7.0**
	0.2nm,0.3s,baz=303,slow=22,SNR=7.1						
YKA				Lg	Lg	08 32 18.5	
	baz=301,slow=30						
YKW1	**Yellowknife Ar**	**10.00**	**106**	Pn	**Pn**	**08 29 28.7**	**+0.6**
YKW1				Sn	**Sn**	**08 31 13.5**	**-6.7**
NVAR	**Mina Array Bea**	**30.09**	**152**	P	**P**	**08 33 17.2**	**+3.1**
	0.2nm,0.3s,baz=1.3,slow=12,SNR=4.7						

*DSN **09** 08:31:20.4±1.3, 27.4°49N×53.4°44E, h10km, ML5.4/11, Error ellipse: s-maj=17.7km s-min=7.0km az=4.0*
*NEIC **09** 08:31:28.8±1.7, 26.7°73N±0.0°04×53.7°87E±0.0°05, h10km±1km, Error ellipse: s-maj=9.5km s-min=3.9km az=48.0*
*GCMT **09** 08:31:28.8±0.3, 26.5°58N±0.0°01×53.5°55E±0.0°03, h14km, MW5.0/95, Moment Tensor Solution. s34,c38; s95,c140; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=2.76±.12; Mθθ=3.50±.09; Mφφ=0.73±.11; Mrθ=0.12±.23; Mrφ=0.01±.09; Mθφ=3.77±.37; Best double couple: M=4.57900×10^16 NP1:φs=240.00000°, δ54.00000°, λ=41.00000°. NP2: φs=123.00000°, δ=58.00000°, λ=136.00000°. Principal axes: T 5.6530, Plg53.0000°, Azm89.0000°; N -2.1490, Plg37.0000°, Azm274.0000°; P -3.5050, Plg2.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*TEH **09** 08:31:29.2, 26.7°75N×53.9°3E, h10km, ML5.0*
*MOS **09** 08:31:29.4±1.1, 26.7°70N×53.8°8E, h25km, mb5.1/70, MS4.2/9, Error ellipse: s-maj=5.3km s-min=3.4km az=111.3*
*THR **09** 08:31:29.8±0.7, 26.7°75N×53.9°5E, h15km, ML5.2*
*IDC **09** 08:31:31.9±2.6, 26.7°76N×53.9°1E, h27km±17km, mb4.7/32, mb1 4.7/40, mb1mx4.7/49, mbtmp4.8/40, ML4.4/7, MS4.2/30, Ms1 4.2/30, ms1mx4.1/42, Error ellipse: s-maj=11.2km s-min=9.7km az=7.0*
*BJI **09** 08:31:32.0±0.0, 26.9°0N×54.0°0E, h40km, mB5.1/46, mb4.9/58, Ms4.8/36, Ms7 4.4/34*
*OMAN **09** 08:31:33.7±0.1, 26.6°66N×53.7°8E, h34km, ml4.9/18, Mwp5.0/5, Error ellipse: s-maj=1.9km s-min=1.3km az=225.0*
*BGR **09** 08:31:57.2±0.0, 28.0°08N×50.4°8E, h33km, mb4.5*

ISC 09 08:31:31.0±0.5, 26.7°0N±0.0°03×53.8°6E±0.0°03, h23km±3km, n674, σ1♀37/729, mb4.9/173, MS4.3/36, 63C-7D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHRM	**Jahrom**	**1.82**	**352**	*e*Pn	**Pb**	**08 32 02.4**	**-1.3**
JHRM				*e*		08 32 32.6	
UMQ	**Umm Al-Quwin**	**2.00**	**125**	*e*P	**Pb**	**08 32 06.6**	**-0.2**
	SNR=12						
UMQ	**Umm Al-Quwin**	**2.00**	**125**	*e*Pn	**Pb**	**08 32 06.8**	**+0.1**
UMQ	**Umm Al-Quwin**	**2.00**	**125**	P	**Pb**	**08 32 08.1**	**+1.3**
	SNR=15						
UMQ				P	**Pb**	**08 32 08.1**	**+1.3**
	SNR=15						
UMQ				S	**Sn**	**08 32 27.6**	**-0.1**
UMQ				S	**Sn**	**08 32 27.6**	**-0.1**
SHME	**Shamm**	**2.15**	**107**	*e*P	**Pn**	**08 32 05.6**	**+0.1**
	SNR=60						
SHME	**Shamm**	**2.15**	**107**	*e*Pn	**Pn**	**08 32 05.6**	**+0.1**
BNDS	**Bandar-Abbas**	**2.18**	**71**	*e*Pn	**Pn**	**08 32 06.8**	**+0.8**
BNDS	**Bandar-Abbas**	**2.18**	**71**	*e*Pn	**Pn**	**08 32 06.8**	**+0.8**
BNDS	**Bandar-Abbas**	**2.18**	**71**	Pn	**Pn**	**08 32 06.0**	**0.0**
GENO	**Geno**	**2.18**	**71**	*e*		08 32 54.0	
GENO				*e*Pn	**Pn**	**08 32 06.0**	**-0.1**
BANOM	**Banah**	**2.32**	**109**	*e*P	**Pn**	**08 32 08.2**	**+0.3**
	SNR=237						
BANOM				S	**Sb**	**08 32 45.0**	**+4.4**
BANOM	**Banah**	**2.32**	**109**	P	**Pn**	**08 32 08.5**	**+0.6**
	SNR=236						
BANOM				S	**Sb**	**08 32 38.6**	**-2.0**
NAZ	**Nazwa, Dubai**	**2.35**	**136**	*i* P	**Pb**	**08 32 10.8**	**-2.0**
	SNR=126						
NAZ	**Nazwa, Dubai**	**2.35**	**136**	*e*Pn	**Pb**	**08 32 11.1**	**-1.7**
NAZ	**Nazwa, Dubai**	**2.35**	**136**	P	**Pb**	**08 32 11.4**	**-1.4**
	SNR=45						
NAZ				S	**Sb**	**08 32 39.0**	**-2.4**
AJN	**Ajban**	**2.36**	**154**	*i* P	**Pb**	**08 32 11.8**	**-1.1**
	SNR=16						
AJN	**Ajban**	**2.36**	**154**	*e*Pn	**Pb**	**08 32 11.1**	**-1.7**
AJN	**Ajban**	**2.36**	**154**	P	**Pb**	**08 32 11.8**	**-1.1**
	SNR=16						
AJN				S	**Sb**	**08 32 40.9**	**-0.6**
ASUD	**Al Ashush, Dub**	**2.45**	**147**	*i* P	**Pb**	**08 32 12.9**	**-1.6**
	SNR=114						
ASUD	**Al Ashush, Dub**	**2.45**	**147**	*e*Pn	**Pb**	**08 32 12.7**	**-1.8**
ASUD	**Al Ashush, Dub**	**2.45**	**147**	P	**Pb**	**08 32 13.2**	**-1.3**
	SNR=114						
MSFE	**Esma-Masafi**	**2.46**	**122**	*i* P	**Pn**	**08 32 11.2**	**+1.3**
	SNR=31						
MSFE	**Esma-Masafi**	**2.46**	**122**	*e*Pn	**Pn**	**08 32 11.1**	**+1.3**
FAQ	**Al Faqa, Dubai**	**2.50**	**141**	*i* P	**Pb**	**08 32 13.0**	**-2.2**
	SNR=13						
FAQ	**Al Faqa, Dubai**	**2.50**	**141**	*e*Pn	**Pb**	**08 32 13.7**	**-1.6**
FAQ	**Al Faqa, Dubai**	**2.50**	**141**	P	**Pb**	**08 32 13.6**	**-1.6**
	SNR=13						
FAQ				S	**Sb**	**08 32 45.4**	**-0.1**
MDH	**Madha**	**2.60**	**122**	*i* P	**Pn**	**08 32 13.1**	**+1.4**
	SNR=19						
MDH	**Madha**	**2.60**	**122**	*e*Pn	**Pn**	**08 32 13.4**	**+1.7**
MDH	**Madha**	**2.60**	**122**	P	**Pn**	**08 32 13.4**	**+1.7**
	SNR=19						
MDH				P	**Pn**	**08 32 13.4**	**+1.7**
	SNR=19						
MDH				S	**Sb**	**08 32 48.3**	**-0.2**
MDH				S	**Sb**	**08 32 48.3**	**-0.2**
UOSS	**Minazif**	**2.74**	**129**	*i* P	**Pn**	**08 32 15.1**	**+1.4**
	SNR=163						
UOSS	**Minazif**	**2.74**	**129**	*e*Pn	**Pn**	**08 32 14.9**	**+1.3**
UOSS	**Minazif**	**2.74**	**129**	Pn	**Pn**	**08 32 15.2**	**+1.6**
UOSS				Sn	**Sn**	**08 32 43.1**	**-2.9**
ISRV	**Sarvestan**	**2.75**	**346**	*e*Pn	**Pn**	**08 32 16.1**	**+2.0**
ISRV				*e*		08 33 17.9	
HATD	**Hatta, Dubai**	**2.77**	**132**	*i* P	**Pn**	**08 32 15.8**	**+1.7**
	SNR=64						
HATD	**Hatta, Dubai**	**2.77**	**132**	*e*Pn	**Pn**	**08 32 16.3**	**+2.3**
HATD	**Hatta, Dubai**	**2.77**	**132**	P	**Pn**	**08 32 16.2**	**+2.1**
	SNR=55						
HATD				S	**Sb**	**08 32 51.1**	**-2.4**
NIAN	**Nian**	**2.79**	**71**	*e*Pn	**Pn**	**08 32 14.5**	**+0.2**
ASHO	**Ashiyiah**	**2.82**	**135**	*i* P	**Pn**	**08 32 16.6**	**+1.8**
	SNR=155						
ASHO	**Ashiyiah**	**2.82**	**135**	*e*Pn	**Pn**	**08 32 16.7**	**+1.9**
ASHO	**Ashiyiah**	**2.82**	**135**	P	**Pn**	**08 32 16.9**	**+2.1**
	SNR=156						
ASHO				S	**Sb**	**08 32 53.0**	**-2.0**
ALNE	**Al Ain**	**3.14**	**147**	*i* P	**Pn**	**08 32 21.6**	**+2.5**
	SNR=71						
ALNE	**Al Ain**	**3.14**	**147**	*e*Pn	**Pn**	**08 32 22.0**	**+2.9**
SHI	**Shiraz**	**3.16**	**338**	*e*Pn	**Pn**	**08 32 20.1**	**+0.5**
SLWS		**3.46**	**238**	*e*Pn	**Pn**	**08 32 26.5**	**+3.0**
SOHO	**SOHO**	**3.52**	**136**	P	**Pn**	**08 32 26.0**	**+1.7**
	SNR=27						
SOHO				P	**Pn**	**08 32 26.0**	**+1.7**
	SNR=27						
SOHO				S	**Sn**	**08 33 10.0**	**+4.8**
SOHO				S	**Sn**	**08 33 10.0**	**+4.8**
IKAZ	**Kazeroun**	**3.55**	**330**	*e*Pn	**Pn**	**08 32 26.2**	**+1.2**
IKAZ				*e*		08 34 07.8	
KHNJ	**Kahnooj**	**3.64**	**69**	*e*Pn	**Pn**	**08 32 26.2**	**+0.1**
JSK1	**Jask**	**3.67**	**106**	*e*Pn	**Pn**	**08 32 27.7**	**+1.3**
BTHS		**3.79**	**227**	*e*Pn	**Pn**	**08 32 30.5**	**+2.4**
NGRK	**Negar Kerman**	**3.88**	**40**	*e*Pn	**Pn**	**08 32 29.8**	**+0.2**
ARQ	**Araqi**	**4.13**	**144**	P	**Pn**	**08 32 34.9**	**+2.2**
	SNR=158						
ARQ				P	**Pn**	**08 32 34.9**	**+2.2**
	SNR=158						
ARQ				S	**Sn**	**08 33 24.0**	**+3.7**
ARQ				S	**Sn**	**08 33 24.0**	**+3.7**
KRBR	**Kerman**	**4.16**	**37**	*e*Pn	**Pn**	**08 32 34.0**	**+0.7**
KRBR	**Kerman**	**4.16**	**37**	*e*Pn	**Pn**	**08 32 34.0**	**+0.7**
KRBR	**Kerman**	**4.16**	**37**	Pn	**Pn**	**08 32 33.0**	**-0.3**
TVBK	**TV Kerman**	**4.16**	**37**	*e*Pn	**Pn**	**08 32 34.4**	**+1.0**
TVBK				*e*		08 32 38.4	
KHGB	**Koh Gabri**	**4.33**	**32**	*e*Pn	**Pn**	**08 32 36.5**	**+0.8**
HOQ	**Hoqain**	**4.41**	**134**	P	**Pn**	**08 32 37.4**	**+0.8**
	SNR=9.5						
HOQ				S	**Sn**	**08 33 28.4**	**+1.3**
CHMN	**Cheshme madani**	**4.53**	**45**	*e*Pn	**Pn**	**08 32 39.0**	**+0.5**
CHMN				*e*		08 32 42.1	
IMEH	**Mehriz**	**4.72**	**8**	*e*Pn	**Pn**	**08 32 42.4**	**+1.3**
KLNJ	**Kolanjah**	**4.73**	**336**	*e*Pn	**Pn**	**08 32 40.2**	**-1.1**
BSY	**Bisya**	**4.97**	**142**	P	**Pn**	**08 32 46.4**	**+2.0**
	SNR=87						
BSY				S	**Sn**	**08 33 43.0**	**+1.9**
BIDO	**Bidbid**	**5.00**	**128**	*e*Pn	**Pn**	**08 32 46.0**	**+1.3**
BIDO	**Bidbid**	**5.00**	**128**	P	**Pn**	**08 32 45.6**	**+1.0**
	SNR=15						
BIDO				S	**Sn**	**08 33 48.0**	**-0.9**
IBAF	**Bafgh**	**5.10**	**17**	*e*Pn	**Pn**	**08 32 46.3**	**+0.1**
ISAD	**Sadrabad**	**5.20**	**358**	*e*Pn	**Pn**	**08 32 48.9**	**+1.2**
IRAM	**Ramesheh**	**5.25**	**346**	*e*Pn	**Pn**	**08 32 48.4**	**0.0**
SMDO	**Samad**	**5.25**	**133**	P	**Pn**	**08 32 49.9**	**+1.6**
	SNR=61						
SMDO				S	**Sn**	**08 33 50.8**	**+2.6**
WSAR	**Wadi Sarin**	**5.53**	**127**	Pn	**Pn**	**08 32 53.1**	**+1.1**
	18nm,0.3s,baz=323,slow=7.4,SNR=147						
WSAR				Sn	**Sn**	**08 33 53.1**	**-1.9**
	16nm,0.3s,baz=142,slow=20,SNR=9.4						
WSAR				LR	LR	08 35 30.6	
	comp=Z,5μm,20.4s,baz=334,slow=43						
WSAR	**Wadi Sarin**	**5.53**	**127**	P	**Pn**	**08 32 52.9**	**+0.9**
	SNR=207						
WSAR				S	**Sn**	**08 33 53.3**	**-1.6**
ICHK	**Chekchek**	**5.55**	**5**	*e*Pn	**Pn**	**08 32 53.4**	**+1.0**
IBRJ	**Brojen**	**5.67**	**337**	*e*Pn	**Pn**	**08 32 55.1**	**+1.0**
YZKH	**Yazd**	**5.71**	**6**	*e*Pn	**Pn**	**08 32 55.4**	**+0.9**
YZKH	**Yazd**	**5.71**	**6**	*e*Pn	**Pn**	**08 32 55.4**	**+0.9

HSRG **Sareghieh** 9.77 332 *e*Pn **Pn** **08 33 50.1 -0.3**
IGLO **Ghaloghah** 9.78 360 *e*Pn **Pn** **08 33 51.1 +0.7**
IVIS **Veis** 9.86 324 *e*Pn **Pn** **08 33 51.1 -0.4**
IGHG **Ghaleghazi** 9.86 322 *e*Pn **Pn** **08 33 52.2 +0.6**
QALM **Alamut, Qazvin** 10.08 345 *e*Pn **Pn** **08 33 53.9 -0.7**
ILIN **Lien** 10.11 326 *e*Pn **Pn** **08 33 50.8 -4.2**
SBZV **Sabzevar** 10.18 17 *e*Pn **Pn** **08 33 53.2 -2.7**
HRA **Herat** 10.53 41 **Pn** **08 34 00.8 +0.1**
IAKL **Akhelmad** 10.72 22 *e*Pn **Pn** **08 34 04.7 +1.3**
JRKH **Jarkhoshk** 10.73 30 *e*Pn **Pn** **08 34 02.2 -1.1**
ISFR **Sfrayin** 10.91 18 *e*Pn Pn 08 34 10.6 +4.6
IMYA **Miami** 10.99 27 *e*Pn **Pn** **08 34 08.8 +1.8**
GEYT **Alibeck** 11.76 17 Pn **Pn** **08 34 18.2 +0.8**
baz=196,slow=10,SNR=14
GEYT LR LR 08 39 41.3
comp=N,2μm,21.6s,baz=270,slow=42
GYA0B **ALIBECK ARRAY** 11.76 17 **Pn** **08 34 18.0 +0.6**
IMRD **Marand** 13.80 332 *e*Pn **P** **08 34 51.2 -2.5**
SOCY **Socotra** 14.44 179 Pn 08 34 46.6 -7.5
CLDR **Caldiran** 14.94 329 P **Pn** **08 35 00.8 -0.2**
DAMY **Dhamar** 14.96 218 **Pn** **08 34 58.5 -2.9**
DAMY IAmb IAmb 08 35 15.0
comp=Z,83nm,1.0s
KBL **Kabul** 15.22 55 P **Pn** **08 35 04.1 -0.7**
KBL pmax pmax
comp=Z,49nm,1.2s
KBL **Kabul** 15.22 55 **Pn** **08 35 04.1 -0.7**
KBL IAmb IAmb 08 35 11.6
comp=Z,49nm,1.2s
KBL **Kabul** 15.22 55 P **P** **08 35 07.0 -2.6**
SNR=14
GNI **Garni** 15.41 333 *ce*P **P** **08 35 09.9 -1.6**
GNI pmax pmax
comp=Z,249nm,0.8s
GNI **Garni** 15.41 333 Pn **P** **08 35 13.5 +2.0**
comp=Z,11nm,0.3s,baz=24,slow=0.9,SNR=28
GNI **Garni** 15.41 333 P **P** **08 35 10.3 -1.2**
GNI **Garni** 15.41 333 Pn **Pn** **08 35 07.1 -0.1**
GNI IAmb IAmb 08 35 21.3
comp=Z,130nm,1.1s
GURO **Guroymak-BITLI** 15.44 323 P **P** **08 35 13.9 +2.0**
AKT **Akhty** 15.59 343 *e*P **Pn** **08 35 10.9 +1.5**
AKT *e*S **Sn** **08 38 04.8 +3.4**
AKT pmax pmax
comp=Z,79nm,1.5s
AKT smax smax
comp=N,25nm,1.1s
AKT smax smax
comp=E,24nm,1.1s
AGRB **Hanur-Agry** 15.72 327 P **P** **08 35 16.8 +1.8**
ASF **Jabal al Asfar** 15.74 294 Pn **Pn** **08 35 12.8 +1.3**
comp=E,1.0nm,0.3s,baz=241,slow=7.9,SNR=8.1
ASF Sn **Sn** **08 38 00.3 -5.0**
comp=E,0.6nm,0.3s,baz=72,slow=20,SNR=4.1
VRTB **Varto-Mus** 16.19 323 P **P** **08 35 22.0 +1.8**
BNGB **Bingl** 16.50 321 P **P** **08 35 24.9 +1.4**
KOPR **Koprukoy-ERZUR** 16.60 326 P **Pn** **08 35 22.7 +0.3**
URFA **Urfa** 16.62 314 P **P** **08 35 26.6 +1.7**
THW **Thamme Wali** 16.67 64 P **Pn** **08 35 20.7 -2.5**
TBLG **Delisi** 16.77 336 P **Pn** **08 35 23.3 -1.1**
TBLG pmax pmax
comp=Z,37nm,1.1s
TBLG **Delisi** 16.77 336 Pn **Pn** **08 35 23.3 -1.1**
SENK **Senkaya-Erzuru** 16.80 328 P **Pn** **08 35 24.7 -0.3**
YEDI **Yedisu-Bingol** 16.88 322 P **P** **08 35 30.1 +2.2**
EIL **Elat** 16.93 284 Pn **Pn** **08 35 27.0 +0.6**
comp=Z,1.0nm,0.3s,baz=63,slow=3.9,SNR=14
EIL Sn **Sn** **08 38 33.9 -0.1**
comp=Z,0.6nm,0.3s,baz=104,slow=8.3,SNR=2.2
EIL LR LR 08 42 56.0
comp=Z,473nm,20.3s,baz=99,slow=40
AKH **Akhalkalaki** 16.98 332 P **Pn** **08 35 26.9 -0.3**
AKH pmax pmax
comp=Z,18nm,0.9s
AKH **Akhalkalaki** 16.98 332 ⇑P **P** **08 35 31.4 +2.4**
AKH **Akhalkalaki** 16.98 332 Pn **Pn** **08 35 26.9 -0.3**
MAK **Makhachkala** 17.03 344 *e*P **P** **08 35 29.9 +0.6**
MAK *e*S **Sn** **08 38 39.5 +3.2**
MAK pmax pmax
comp=Z,224nm,1.1s
MAK MLR MLR
comp=Z,908nm,15.0s
BTLR **Botlikh** 17.11 341 *i*P **P** **08 35 32.3 +2.1**
CEP **Cherat** 17.12 61 P **Pn** **08 35 29.1 +0.1**
MMAI **Mount Meron Ar** 17.19 296 P **P** **08 35 31.2 -0.1**
comp=Z,1.4nm,0.3s,baz=96,slow=16,SNR=12
MMAI S **Sn** **08 38 34.5 -5.9**
comp=Z,0.9nm,0.3s,baz=254,slow=41,SNR=3.1
MMAI LR LR 08 42 25.2
comp=Z,202nm,19.3s,baz=95,slow=38
MALT **Malatya** 17.39 316 P **P** **08 35 33.3 -0.2**
CHGR **Chuyangaron** 17.52 43 Pn **Pn** **08 35 31.7 -2.2**
GAZ **Gaziantep** 17.54 311 P **P** **08 35 35.4 +0.3**
GAZ **Gaziantep** 17.54 311 **Pn** **08 35 34.2 +0.1**
GROC **Groznyy** 17.73 340 *e*P **P** **08 35 39.2 +2.2**
GROC *e*S **S** **08 38 59.4 -0.5**
GROC pmax pmax
comp=Z,33nm,0.5s
BATM **Batumi** 17.93 329 ⇑P **P** **08 35 42.3 +3.1**
ONI **Oni** 17.99 334 P **P** **08 35 40.8 +0.8**
ZEI **Tsey** 17.99 336 *e*P **Pn** **08 35 39.2 -0.6**
ZEI pmax pmax
comp=Z,34nm,0.9s
NIL **Nilore** 18.13 63 P **P** **08 35 42.1 +0.5**
NIL pmax pmax
comp=Z,36nm,1.0s
NIL **Nilore** 18.13 63 P **P** **08 35 42.1 +0.5**
CHCP **Chirah Chowk** 18.14 63 P **P** **08 35 41.5 -0.2**
ATD **Arta Tunnel** 18.31 217 P **Pn** **08 35 46.8 +3.1**
comp=Z,1.1nm,0.3s,baz=54,slow=10,SNR=4.8
ATD LR LR 08 42 48.1
comp=Z,989nm,21.3s,baz=28,slow=37
ATD **Arta Tunnel** 18.31 217 *i*P **Pn** **08 35 47.4 +3.8**
ATD **Arta Tunnel** 18.31 217 *i*P **Pn** **08 35 47.4 +3.8**
GAR **Garm** 18.45 44 P **P** **08 35 42.5 -2.6**
KBZ **Khabaz** 19.18 335 P **Pn** **08 35 53.9 0.0**
comp=Z,1.0nm,0.3s,baz=147,slow=8.8,SNR=41
KBZ LR LR 08 44 42.1
comp=Z,415nm,19.5s,baz=157,slow=41
SVSK **Karacayir** 19.25 317 P **Pn** **08 35 55.9 +1.1**
SHA1 **Shidzhatmaz** 19.27 335 *i*P **Pn** **08 35 55.8 +0.4**
CMRD **Camardi-Nigde** 19.32 309 P **Pn** **08 35 57.6 +1.8**
BNN **Bunyan** 19.36 313 P **P** **08 35 54.7 -0.4**
RSDY **Resadiye-TOKAT** 19.36 319 P **P** **08 35 54.3 -0.7**
PYA1 **Pyatigorsk** 19.39 336 *i*P **Pn** **08 35 56.8 +0.3**
BTK **Batken** 19.40 42 P **P** **08 35 53.3 -2.3**
BTK pmax pmax
comp=Z,30nm,0.8s
BTK **Batken** 19.40 42 P **P** **08 35 53.3 -2.3**
KVAR **Kislovodsk Arr** 19.45 335 P **Pn** **08 35 56.8 -0.5**
baz=85,slow=22,SNR=21
KIV **Kislovodsk** 19.45 335 *e*P **Pn** **08 35 57.8 +0.5**
KIV *e*S **Sn** **08 39 36.2 +1.3**
KIV pmax pmax
comp=Z,220nm,1.0s
KIV MLR MLR
comp=Z,474nm,14.0s
KIV **Kislovodsk** 19.45 335 ⇑P **Pn** **08 35 58.1 +0.8**
KIV **Kislovodsk** 19.45 335 P **Pn** **08 35 58.8 +1.5**
KIV **Kislovodsk** 19.45 335 P **P** **08 35 54.5 -1.5**
KIV IAmb IAmb 08 36 05.3
comp=Z,74nm,1.0s
TOKT **Tokat** 19.77 318 P **P** **08 35 59.7 +0.1**
LEF **Lefka** 19.82 300 ⇑P Pn 08 36 09.2 +7.5
YOZ **Yozgat** 20.13 315 P **P** **08 36 03.4 -0.2**
GOF **Gofitskoye** 20.27 337⇑ *e*P Pn 08 36 05.9 -1.1
GOF pmax pmax
comp=Z,41nm,0.8s
SOC **Sochi** 20.38 329 *e*P **P** **08 36 05.8 -0.3**
SOC *e**PP **sP** **08 36 14.7 -1.0**
SOC *e* 08 36 21.3
SOC *e*S **S** **08 39 53.5 +0.1**
SOC *e*SS Sn 08 40 13.2 +16
SOC pmax pmax
comp=Z,95nm,1.3s
SOC MLR MLR
comp=Z,625nm,11.0s
KK31 **Karatay Array** 21.25 35 P **P** **08 36 14.4 -1.1**
KK31 pmax pmax
comp=Z,26nm,0.9s
KK31 **Karatay Array** 21.25 35 P **P** **08 36 14.4 -1.1**
KKAR **Karatay Array** 21.25 35 P **P** **08 36 14.5 -1.0**
KKAR pmax pmax
comp=Z,26nm,0.9s
KKAR **Karatay Array** 21.25 35 P **P** **08 36 14.5 -1.0**
BR131 **Keskin Array S** 21.27 313 P **P** **08 36 16.6 +0.7**
BR131 pmax pmax
comp=Z,28nm,0.9s
BR131 **Keskin Array S** 21.27 313 P **P** **08 36 16.6 +0.7**
BR131 **Keskin Array S** 21.27 313 P **P** **08 36 16.9 +1.0**
BRTR **Keskin Array B** 21.27 313 P **P** **08 36 16.6 +0.7**
comp=Z,22nm,0.8s,baz=132,slow=12,SNR=87
BRTR PcP **PcP** **08 40 20.6 +0.4**
comp=Z,1.7nm,0.7s,baz=140,slow=4.3,SNR=5.0
BRTR ScP **ScP** **08 43 56.9 +1.1**
comp=Z,1.7nm,0.8s,baz=118,slow=5.3,SNR=7.1
DIKM **Dikmen** 21.36 319 ⇑P **P** **08 36 20.6 +3.9**
LADK **Ladik-KONYA** 21.41 308 P **P** **08 36 19.3 +2.0**
ARSB **Arslanbob** 21.48 42 P **P** **08 36 17.6 -0.5**
CANT **Cankiri** 21.75 315 P **P** **08 36 21.5 +0.5**
ANTO **Ankara** 21.90 312 P **P** **08 36 22.7 +0.1**
ANTO pmax pmax
comp=Z,121nm,1.3s
ANTO **Ankara** 21.90 312 ⇓P **P** **08 36 28.7 +6.1**
ANTO **Ankara** 21.90 312 P **P** **08 36 22.7 +0.1**
ANTO IAmb IAmb 08 36 30.6
comp=Z,121nm,1.2s
ILGA **Ilgaz** 21.94 316 P **P** **08 36 22.6 -0.6**
ILGA IAmb IAmb 08 36 31.2
comp=Z,86nm,1.4s
BZK **Bozkurt** 22.30 318 ⇑P **P** **08 36 30.2 +3.5**
ANN **Anapa** 22.37 328 *e*P **P** **08 36 29.1 +1.6**
ANN *e* 08 36 53.1
ANN *e*S **S** **08 40 33.8 +1.7**
ANN pmax pmax
comp=N,36nm,0.9s
ANN pmax pmax
comp=Z,87nm,0.9s
ANN pmax pmax
comp=E,20nm,0.9s
AML **Almayashu** 22.39 42 P **P** **08 36 27.6 -0.5**
SNR=39
KSH **Kashi** 22.44 50 P **P** **08 36 22.0 -6.4**
KSH pP pP 08 36 31.9 -3.1
KSH PP **PnPn** **08 36 51.7 0.0**
KSH S S 08 40 10.8 -23
KSH sS pS 08 40 34.1 -7.7
KSH pmax pmax
comp=E,42nm,0.6s
KSH pmax pmax
comp=E,300nm,5.1s
KSH LR LR
comp=E,1μm,8.8s
KSH LR LR
comp=E,510nm,6.5s
KSH LR LR
comp=E,2μm,10.3s
ELL **Elmali** 22.65 302 P **P** **08 36 29.6 -1.1**
ELL pmax pmax
comp=Z,318nm,1.1s
ELL **Elmali** 22.65 302 P **P** **08 36 29.6 -1.1**
AAE **Adis Abeba** 22.65 222 *i*P **P** **08 36 34.0 +2.9**
AAE **Adis Abeba** 22.65 222 *i*P **P** **08 36 34.0 +2.9**
KLRI **Killari** 22.69 108 *e*P **P** **08 36 30.7 -0.4**
KLRI IAmb IAmb 08 36 33.8
comp=Z,33nm,1.3s
EKS2 **Erkin-Say** 22.76 41 P **P** **08 36 32.8 +0.9**
SNR=13
UCH **Uchtor** 22.93 42 P **P** **08 36 32.9 -1.1**
SNR=19
AB31 **Akbulak array** 23.01 10 *i*P **P** **08 36 33.4 -0.8**
ABKAR **Akbulak array** 23.01 10 P **P** **08 36 33.5 -0.7**
ABKAR IAmb IAmb 08 36 39.6
comp=Z,66nm,1.2s
AAK **Ala-Archa** 23.17 41 *ce*P **P** **08 36 36.3 +0.3**
AAK pmax pmax
comp=Z,24nm,1.0s
AAK **Ala-Archa** 23.17 41 P **P** **08 36 36.1 +0.1**
comp=Z,7.9nm,0.6s,baz=213,slow=3.9,SNR=22
AAK **Ala-Archa** 23.17 41 P **P** **08 36 36.8 +0.8**
SNR=13
AAK **Ala-Archa** 23.17 41 P **P** **08 36 35.1 -0.9**
KZA **Kyzart** 23.30 43 P **P** **08 36 38.1 +0.5**
SNR=27
FRU1 **Bishkek** 23.35 41 **S** **08 40 53.4 +4.2**
NRN **Naryn** 23.41 45 P **P** **08 36 37.7 -1.0**
NRN pmax pmax
comp=Z,15nm,0.8s
NRN **Naryn** 23.41 45 P **P** **08 36 37.7 -1.0**
KBK **Karagaybulak** 23.45 42 P **P** **08 36 39.8 +1.0**
SNR=20
CHMS **Chumysh** 23.53 41 P **P** **08 36 39.5 0.0**
SNR=6.5
USP **Ospenovka** 23.55 40 P **P** **08 36 40.8 +1.1**
SNR=17
SRSP **Sriramsagar** 23.83 104 *e*P **P** **08 36 42.9 +0.3**
SRSP IAmb IAmb 08 36 45.6
comp=Z,4.1nm,1.0s
DMPR **Damasthipur** 23.89 108 *e*P **P** **08 36 43.7 +0.6**
DMPR IAmb IAmb 08 36 49.3
comp=Z,7.1nm,1.1s
AKTO **Aktyubinsk** 23.92 7 P **P** **08 36 43.4 +0.3**
comp=Z,15nm,0.8s,baz=196,slow=8.1,SNR=40
AKTO LR LR 08 47 31.4
comp=Z,766nm,20.4s,baz=173,slow=40
BOOM **Boomskoye usch** 23.95 43 P **P** **08 36 44.6 +0.9**
BOOM pmax pmax
comp=Z,13nm,0.8s
BOOM **Boomskoye usch** 23.95 43 P **P** **08 36 44.6 +0.9**
TKM2 **Tokmak 2** 23.99 42 P **P** **08 36 43.9 -0.2**
TKM2 **Tokmak 2** 23.99 42 P **P** **08 36 44.4 +0.3**
SNR=11
SIM **Simferopol'** 24.14 324 *d*/*i*P **P** **08 36 46.4 +1.2**
SIM pmax pmax
comp=Z,82nm,0.7s
MANT **Manisa** 24.26 305 P **P** **08 36 46.8 +0.2**
KARP **Karpathos** 24.44 298 P **P** **08 36 48.7 +0.7**
KDJ **Kajisay** 24.53 45 P **P** **08 36 50.3 +1.3**
KDJ pmax pmax
comp=Z,25nm,1.1s
KDJ **Kajisay** 24.53 45 P **P** **08 36 50.3 +1.3**
KDJ IAmb IAmb 08 37 05.5
comp=Z,25nm,1.1s
HYBB **Hyderabad (bro** 24.64 107 *e*P **P** **08 36 50.2 +0.1**
HYBB IAmb IAmb 08 36 52.9
comp=Z,12nm,1.0s
HYB **Hyderabad** 24.64 107 *i*P **P** **08 36 50.0 -0.1**
SRLM **Srisailam** 25.54 109 *e*P **P** **08 36 59.7 +1.5**
SRLM IAmb IAmb 08 37 03.7
comp=Z,12nm,0.9s
NJS **Nagarjunasagar** 25.68 108 *e*P **P** **08 37 00.5 +1.1**
NJS IAmb IAmb 08 37 04.9
comp=Z,14nm,1.0s
GGR **Gangavaram** 25.89 104 *e*P **P** **08 37 01.8 +0.4**
GGR IAmb IAmb 08 37 04.5
comp=Z,13nm,1.0s
SANT **Santorini** 25.98 299 P **P** **08 36 60.0 -2.0**
APE **Apeiranthos** 26.09 300 *i*P **P** **08 37 04.8 +1.7**
APE pmax pmax
comp=Z,51nm,0.9s
VRH **Novokhopyorsk** 26.16 343 *e*P **P** **08 37 03.1 -0.3**
VRH *e*S **S** **08 41 34.1 +0.4**
VRH pmax pmax
comp=Z,70nm,0.6s
VRH smax smax
comp=N,60nm,0.9s
IDI **Anoyia** 26.20 296 P **P** **08 37 05.5 +1.4**
comp=N,58nm,0.8s,baz=97,slow=9.6,SNR=24
KOLN **Koldanda** 26.44 81 *e*P **P** **08 37 07.2 +0.7**
DANN **Dangsing** 26.54 80 *e*P **P** **08 37 08.8 +1.3**
comp=N,114nm,0.8s
ADKI **Addanki** 26.57 109 *e*P **P** **08 37 08.6 +1.1**
ADKI IAmb IAmb 08 37 14.2
comp=Z,11nm,1.0s
PDGK **Podgornoye** 26.61 45 P **P** **08 37 07.1 -0.7**
VORD **Divnogorie** 26.66 339 *e*P **P** **08 37 08.1 +0.2**
VORD pmax pmax
comp=Z,30nm,0.6s
MYLAV **Mylavaram** 26.72 106 *e*P **P** **08 37 10.1 +1.3**
MYLAV IAmb IAmb 08 37 11.6
comp=Z,4.1nm,0.8s
VSR **Storozhevoye** 26.91 339 *e*P **P** **08 37 09.3 -1.0**
VSR *e*S **S** **08 41 47.1 +1.4**
VSR pmax pmax
comp=Z,40nm,1.3s
VSR smax smax
comp=N,60nm,1.1s
JURR **Jurilovca** 26.96 318 ⇑P **P** **08 37 11.9 +1.1**
ALN **Alexandroupoli** 26.97 309 P **P** **08 37 10.9 0.0**
ALN pmax pmax
comp=Z,21nm,1.1s
ALN **Alexandroupoli** 26.97 309 P **P** **08 37 10.9 0.0**
TIRR **Tirgusor** 27.08 317 ⇑P **P** **08 37 12.8 +1.0**
TIRR **Tirgusor** 27.08 317 ⇑P **P** **08 37 12.8 +1.0**
TOPG **Topolog** 27.32 318 ⇑P **P** **08 37 14.3 +0.3**
GKN **Gorkha** 27.34 80 *e*P **P** **08 37 16.5 +2.0**
comp=Z,11nm,0.3s
HARR **Harsova** 27.49 318 ⇑P **P** **08 37 15.9 +0.4**
HARR **Harsova** 27.49 318 ⇑P **P** **08 37 15.9 +0.4**
CFR **Carcaliu** 27.63 319 ⇑P **P** **08 37 17.7 +1.0**
CFR **Carcaliu** 27.63 319 ⇑P **P** **08 37 17.7 +1.0**
KKN **Kakani** 27.92 81 *e*P **P** **08 37 20.5 +0.7**
ELND **Elena** 27.93 313 ⇑P **P** **08 37 20.7 +1.3**
PKIN **Phulchoki** 28.05 81 *e*P **P** **08 37 21.9 +0.9**
PKI **Pulchoki** 28.06 81 *e*P **P** **08 37 22.1 +0.9**
LPSR **Galich'ya Gora** 28.19 341 *e*P **P** **08 37 21.3 -0.4**
LPSR *e*S **S** **08 42 04.4 -1.4**
LPSR pmax pmax
comp=Z,10.0nm,1.0s
LPSR smax smax
comp=N,90nm,2.9s
GUN **Gumba** 28.44 80 *e*P **P** **08 37 25.8 +1.2**
comp=N,36nm,0.7s
BISRR **Bisoca** 28.68 318 ⇑P **P** **08 37 27.3 +1.1**
JIRN **Jiri** 28.74 81 *e*P **P** **08 37 28.3 +1.0**
comp=N,43nm,0.6s
VRI **Vrincioaia** 28.84 319 ⇑P **P** **08 37 28.6 +1.1**
VRI **Vrincioaia** 28.84 319 ⇑P **P** **08 37 28.6 +1.1**
PLOR **Plostina** 28.87 319 ⇑P **P** **08 37 29.9 +2.0**
PLOR **Plostina** 28.87 319 ⇑P **P** **08 37 29.9 +2.0**
ITM **Ithomi** 28.92 299 P **P** **08 37 27.8 -0.6**
ITM IAmb IAmb 08 37 38.5
comp=Z,18nm,0.7s
PLVB **Pleven** 28.96 313 ⇑P **P** **08 37 31.2 +2.6**
CHLP **Challavanipeta** 28.99 100 *e*P **P** **08 37 29.9 +0.8**
CHLP IAmb IAmb 08 37 32.4
comp=Z,6.2nm,1.0s
BVAR **Borovoye Array** 29.05 21 P **P** **08 37 29.2 -0.2**
comp=Z,21nm,1.1s,baz=208,slow=8.1,SNR=44
BVAR PcP **PcP** **08 40 36.8 -0.3**
comp=Z,4.2nm,0.8s,baz=194,slow=3.1,SNR=6.3
BVAR ScP **ScP** **08 44 17.6 +0.3**
comp=Z,0.8nm,0.6s,baz=251,slow=4.4,SNR=3.3
MLR **Muntele Rosu** 29.11 317 P **P** **08 37 32.1 +2.0**
MLR pmax pmax
comp=Z,21nm,1.0s
MLR **Muntele Rosu** 29.11 317 P **P** **08 37 31.2 +1.1**
comp=Z,14nm,0.7s,baz=172,slow=7.2,SNR=21
MLR **Muntele Rosu** 29.11 317 ⇓P **P** **08 37 32.0 +2.0**
MLR **Muntele Rosu** 29.11 317 P **P** **08 37 32.1 +2.0**
MLR IAmb IAmb 08 37 37.1
comp=Z,21nm,1.0s
RAMN **Ramite** 29.18 82 *e*P **P** **08 37 31.9 +0.8**
comp=Z,13nm,0.7s
TESR **Tescani** 29.23 320 ⇑P **P** **08 37 31.9 +0.9**
SORM **Soroca** 29.23 324 ⇑P **P** **08 37 30.3 -0.7**
SORM **Soroca** 29.23 324 ⇑P **P** **08 37 30.3 -0.7**
OZUR 29.52 318 ⇑P **P** **08 37 34.4 +0.8**
VTS **Vitosha** 29.57 310 ⇑P **P** **08 37 35.9 +1.6**
VTS **Vitosha** 29.57 310 ⇑P **P** **08 37 35.9 +1.6**
VTS **Vitosha** 29.57 310 *e*P **P** **08 37 36.4 +2.1**
VTS **Vitosha** 29.57 310 P **P** **08 37 33.9 -0.3**
VTS IAmb IAmb 08 37 39.9
comp=Z,13nm,0.8s
VOIR 29.63 317 ⇑P **P** **08 37 35.9 +1.2**
VOIR 29.63 317 ⇑P **P** **08 37 35.9 +1.2**
DOPR **Dopca** 29.69 318 ⇓P **P** **08 37 36.2 +1.1**
BIZ **Bicaz** 29.78 320 ⇑P **P** **08 37 36.9 +1.0**
ARR **Arges** 29.85 316 ⇑P **P** **08 37 37.6 +0.9**
ARU **Arti** 29.90 5 *ce*P **P** **08 37 37.7 +0.9**
ARU pmax pmax
comp=Z,11nm,1.0s
ARU **Arti** 29.90 5 P **P** **08 37 37.3 +0.5**
comp=Z,4.0nm,0.2s,baz=177,slow=9.1,SNR=9.3
ARU LR LR 08 51 46.5
comp=Z,509nm,19.0s,baz=202,slow=41
ARU **Arti** 29.90 5 P **P** **08 37 37.6 +0.8**
ARU IAmb IAmb 08 37 52.2
comp=Z,16nm,1.0s
MAKZ **Makanchi** 29.92 40 P **P** **08 37 36.8 -0.4**
MAKZ pmax pmax
comp=Z,24nm,1.1s
MAKZ **Makanchi** 29.92 40 P **P** **08 37 36.8 -0.4**
MAKZ IAmb IAmb 08 37 38.5
comp=Z,24nm,1.1s
PRAR **RASCA** 29.94 321 ⇑P **P** **08 37 37.3 0.0**
MK31 **Makanchi Array** 30.09 41 P **P** **08 37 38.8 +0.1**
MK31 pmax pmax
comp=Z,7.0nm,0.9s
MK31 **Makanchi Array** 30.09 41 P **P** **08 37 38.8 +0.1**
MKAR **Makanchi Array** 30.09 41 P **P** **08 37 38.7 0.0**
comp=Z,6.4nm,0.7s,baz=227,slow=8.5,SNR=68
MKAR PcP **PcP** **08 40 40.0 0.0**
comp=Z,1.4nm,0.7s,baz=248,slow=3.3,SNR=3.8
MKAR LR LR 08 49 54.1
comp=Z,552nm,19.4s,baz=248,slow=37
TAPN **Taplejung** 30.11 81 *e*P **P** **08 37 39.0 -0.4**
FNA **Florina** 30.25 306 P **P** **08 37 40.2 0.0**
FNA pmax pmax
comp=Z,12nm,1.0s
FNA **Florina** 30.25 306 P **P** **08 37 40.2 0.0**
AKASG **Malin Array Be** 30.46 328 P **P** **08 37 41.0 -0.8**
comp=Z,7.0nm,0.4s,baz=135,slow=8.4,SNR=57
AKASG PcP **PcP** **08 40 40.7 -0.1**
comp=Z,2.1nm,0.5s,baz=93,slow=2.0,SNR=8.0
AKASG LR LR 08 52 49.0
comp=Z,254nm,18.0s,baz=140,slow=42
AKBB **Malin Array Si** 30.46 328 P **P** **08 37 41.3 -0.5**
AKBB pmax pmax
comp=Z,25nm,0.5s
AKBB **Malin Array Si** 30.46 328 P **P** **08 37 41.3 -0.5**
SVE **Sverdlovsk** 30.50 7 ⇑*i*P **P** **08 37 43.0 +0.9**
SVE pmax pmax
comp=Z,22nm,1.1s
SVE MLR MLR
comp=Z,435nm,12.0s
KURK **Kurchatov** 30.53 32 *ce*P **P** **08 37 42.9 +0.5**
KURK pmax pmax
comp=Z,17nm,1.3s
KURK **Kurchatov** 30.53 32 P **P** **08 37 42.8 +0.3**
KURK IAmb IAmb 08 37 43.9
comp=Z,24nm,1.4s
BURAR **Bucovina Array** 30.65 321 ⇑P **P** **08 37 44.8 +1.1**
BURAR **Bucovina Array** 30.65 321 ⇑P **P** **08 37 44.8 +1.1**
BUR08 **Bucovina Ar. S** 30.68 321 P **P** **08 37 43.6 -0.3**
BUR08 IAmb IAmb 08 37 49.1
comp=Z,11nm,0.8s
ARCR **ARCALIA** 30.87 319 ⇑P **P** **08 37 46.4 +0.8**
GZR **Gura Zlata** 31.02 315 ⇓P **P** **08 37 47.6 +0.6**
GZR **Gura Zlata** 31.02 315 ⇓P **P** **08 37 47.6 +0.6**
OBN **Obninsk** 31.07 341 ⇑*e*P **P** **08 37 47.3 +0.2**
OBN *e* 08 38 46.9
OBN *e*S **S** **08 42 51.5 +0.6**
OBN pmax pmax
comp=Z,21nm,0.5s
OBN MLR MLR
comp=Z,405nm,19.0s
OBN **Obninsk** 31.07 341 P **P** **08 37 46.6 -0.5**
CJR **Cluj-Napoca** 31.13 318 ⇑P **P** **08 37 48.3 +0.4**
CJR **Cluj-Napoca** 31.13 318 ⇑P **P** **08 37 48.3 +0.4**
MOS **Moscow** 31.32 342 *e*P **P** **08 37 47.6 -1.7**
MOS *e* 08 38 50.1
MDVR **Moldovita** 31.44 313 ⇑P **P** **08 37 51.4 +0.8**
BMR **Baia Mare** 31.67 319 ⇑P **P** **08 37 53.9 +1.3**
BMR **Baia Mare** 31.67 319 ⇑P **P** **08 37 53.9 +1.3**
DRGR 31.71 317 ⇑P **P** **08 37 54.1 +1.1**
DRGR 31.71 317 ⇑P **P** **08 37 54.1 +1.1**
BZS **Buzias** 31.86 315 ⇑P **P** **08 37 54.7 +0.5**
BZS **Buzias** 31.86 315 ⇑P **P** **08 37 54.7 +0.5**
KMBO **Kilima Mbogo** 31.96 213 *ce*P **P** **08 38 00.4 +4.7**
KMBO pmax pmax
comp=Z,5.0nm,0.9s
KMBO **Kilima Mbogo** 31.96 213 P **P** **08 37 57.4 +1.8**
comp=Z,1.9nm,0.5s,baz=30,slow=8.9,SNR=7.6
KMBO **Kilima Mbogo** 31.96 213 P **P** **08 37 55.9 +0.2**
PALK **Pallekele** 32.00 122 P **P** **08 37 56.8 +1.0**
comp=Z,9.7nm,1.0s,baz=334,slow=16,SNR=3.0
PALK **Pallekele** 32.00 122 P **P** **08 37 56.0 +0.2**
PALK IAmb IAmb 08 38 02.7
comp=Z,35nm,1.3s
SIRR **Siria** 32.11 316 ⇑P **P** **08 37 58.2 +1.7**
WMQ **Urumqi** 32.20 49 P **P** **08 37 58.2 +0.8**
WMQ sP sP 08 38 13.3 +6.0

WMQ pmax pmax
comp=Z,17nm,0.9s
WMQ pmax pmax
comp=Z,220nm,4.5s
WMQ LR LR
comp=Z,3µm,22.1s
WMQ LR LR
comp=Z,2µm,26.1s
WMQ LR LR
comp=Z,800nm,23.1s
WMQ Urumqi 32.20 49 P **P 08 37 56.1 -1.3**
WMQ pmax pmax
comp=Z,11nm,0.8s
WMQ Urumqi 32.20 49 P **P 08 37 56.1 -1.3**
WMQ IAmb IAmb 08 37 58.5
comp=Z,11nm,0.8s
UZH Uzhgorod 32.85 320 *e*P **P 08 38 01.4 -1.5**
UZH *e* 08 38 07.2
LSA Lhasa 32.91 76 P **P 08 38 03.7 -0.5**
LSA pmax pmax
comp=Z,7.0nm,0.6s
LSA Lhasa 32.91 76 P **P 08 38 03.7 -0.5**
LSA IAmb IAmb 08 38 06.5
comp=Z,6.7nm,0.6s
KOLS Kolonicke sedl 33.02 321 *e*P **P 08 38 05.9 +1.5**
KOLS pmax pmax
comp=Z,58nm,1.1s
KOLS Kolonicke sedl 33.02 321 *e*P **P 08 38 05.9 +1.5**
KWP Kalwaria Pacla 33.14 322 *e*P **P 08 38 06.1 +0.7**
KWP Kalwaria Pacla 33.14 322 *e*P **P 08 38 06.1 +0.7**
KWP Kalwaria Pacla 33.14 322 P **P 08 38 05.4 0.0**
TIP Timpagrande 33.30 301 P **P 08 38 06.7 -0.4**
TIP IAmb IAmb 08 38 12.9
comp=Z,36nm,1.3s
KECS Kecovo 33.83 319 *e*P **P 08 38 12.5 +1.1**
KECS pmax pmax
comp=Z,14nm,0.9s
KECS Kecovo 33.83 319 *e*P **P 08 38 12.5 +1.1**
BLY Banja Luka 34.43 311 P **P 08 38 16.0 -0.7**
BLY IAmb IAmb 08 38 21.2
comp=Z,20nm,1.0s
KIJV Kijevo 34.73 310 *i*P **P 08 38 18.9 -0.4**
LANS Liptovska Anna 34.74 319 *e*P **P 08 38 20.4 +1.1**
LANS pmax pmax
comp=Z,14nm,0.9s
LANS Liptovska Anna 34.74 319 *e*P **P 08 38 20.4 +1.1**
VYHS Vyhne 34.81 318 *e*P **P 08 38 20.0 0.0**
VYHS Vyhne 34.81 318 *e*P **P 08 38 20.0 0.0**
IIGN Ignalina 34.97 332 *e*P **P 08 38 21.8 +0.7**
IIGN IAML 08 38 23.4
comp=Z,8.4nm,0.6s
OJC Ojcow 35.06 321 *e*P **P 08 38 22.4 +0.4**
OJC Ojcow 35.06 321 *e*P **P 08 38 22.4 +0.4**
OJC Ojcow 35.06 321 P **P 08 38 21.8 -0.2**
MBAR Mbarara 35.11 223 P **P 08 38 23.2 +0.2**
MBAR pmax pmax
comp=Z,11nm,1.0s
MBAR Mbarara 35.11 223 P **P 08 38 23.2 +0.2**
ZIRJ Zirje 35.16 309 *i*P **P 08 38 23.2 +0.3**
ISAL Salakas 35.16 333 *e*P **P 08 38 22.5 -0.3**
MORI Morici 35.17 309 *i*P **P 08 38 23.1 0.0**
IZAR Zarasai 35.24 333 *e*P **P 08 38 23.0 -0.5**
IZAR IAML 08 38 23.9
comp=Z,7.8nm,0.5s
PAOL Paolisi 35.31 304 P **P 08 38 23.7 -0.7**
PAOL IAmb IAmb 08 38 32.4
comp=Z,14nm,1.0s
PRGR Permogore 35.37 353 *e*P **P 08 38 22.3 -2.2**
PRGR pmax pmax
comp=Z,14nm,0.8s
SUW Suwalki 35.43 329 P **P 08 38 24.8 -0.3**
SUW pmax pmax
comp=Z,55nm,1.0s
SUW Suwalki 35.43 329 P **P 08 38 24.8 -0.3**
ZAA0 Zalesovo Array 35.52 32 P **P 08 38 25.7 -0.3**
ZALV Zalesovo Beam 35.52 32 P **P 08 38 25.6 -0.4**
comp=Z,44nm,0.6s,baz=242,slow=9.6,SNR=157
ZALV PcP **PcP 08 40 54.2 -0.6**
comp=Z,2.1nm,0.5s,baz=218,slow=4.6,SNR=2.9
ZALV LR LR 08 54 29.7
comp=Z,439nm,19.1s,baz=230,slow=39
KOGS Kog 35.62 314 *i*P **P 08 38 27.5 +0.6**
DUGI Dugi Otok 35.66 309 *i*P **P 08 38 26.9 -0.4**
JAVC Velka Javorina 35.67 318 *e*P **P 08 38 28.2 +0.8**
SMOL Smolenice 35.67 317 *e*P **P 08 38 30.1 +2.8**
SMOL Smolenice 35.67 317 *e*P **P 08 38 30.1 +2.8**
MODS Modra-Piesok 35.70 317 *e*P **P 08 38 30.1 +2.4**
MODS *e* 08 39 53.8
MODS Modra-Piesok 35.70 317 *e*P **P 08 38 30.1 +2.4**
MODS *e* 08 39 53.8
MODS *e* 08 42 03.2
ZST Bratislava 35.74 317 *e*P **P 08 38 30.9 +3.0**
ZST Bratislava 35.74 317 *e*P **P 08 38 30.9 +3.0**
OKC Ostrava-Krasne 35.82 320 *e*P **P 08 38 28.9 +0.3**
OKC Ostrava-Krasne 35.82 320 *e*P **P 08 38 28.9 +0.3**
CLTB Caltabellotta 35.84 298 P **P 08 38 31.0 +2.0**
CLTB IAmb IAmb 08 38 35.6
comp=Z,26nm,1.1s
NVLJ Novalja 35.95 310 *i*P **P 08 38 29.8 +0.1**
INTR Introdacqua 36.00 305 P **P 08 38 30.4 +0.1**
INTR IAmb IAmb 08 38 39.7
comp=Z,14nm,0.9s
PABE Paberze 36.02 331 *e*P **P 08 38 30.0 -0.2**
PABE IAML 08 38 30.7
comp=Z,9.1nm,0.3s
MORC Moravsky Berou 36.14 319 P **P 08 38 29.7 -1.7**
MORC pmax pmax
comp=Z,13nm,0.9s
MORC Moravsky Berou 36.14 319 *e*P **P 08 38 31.4 0.0**
MORC Moravsky Berou 36.14 319 P **P 08 38 29.7 -1.7**
MORC IAmb IAmb 08 38 35.7
comp=Z,12nm,0.9s
VRAC Vranov 36.50 318 ⇑⇑P **P 08 38 34.2 -0.3**
VRAC Vranov 36.50 318 ⇑⇑P **P 08 38 34.2 -0.3**
VRAC Vranov 36.50 318 *e*P **P 08 38 34.7 +0.3**
KRUC Moravsky 36.52 318 *e*P **P 08 38 34.7 +0.1**
LJU Ljubljana 36.62 312 *i*P **P 08 38 36.4 +1.0**
NRCA Norcia 36.74 307 P **P 08 38 36.0 -0.7**
NRCA IAmb IAmb 08 38 46.0
comp=Z,23nm,0.8s
BRJN Brijuni 36.81 310 *i*P **P 08 38 36.9 -0.2**
VSU Vasula 37.00 337 *ce*P **P 08 38 37.9 -0.6**
VSU pmax pmax
comp=Z,58nm,1.0s
VSU Vasula 37.00 337 *e*P **P 08 38 37.9 -0.6**
DPC Dobruska-Polom 37.10 320 *e*P **P 08 38 39.6 0.0**
DPC Dobruska-Polom 37.10 320 *e*P **P 08 38 39.6 0.0**
CADS Cadrg 37.20 312 *i*P **P 08 38 40.5 +0.1**
MURB Monte Urbino 37.26 307 P **P 08 38 39.0 -2.0**
KSP Ksiaz 37.33 320 *e*P **P 08 38 42.0 +0.6**
KSP Ksiaz 37.33 320 *e*P **P 08 38 42.0 +0.6**
UPC Upice 37.34 320 *e*P **P 08 38 41.7 +0.1**
UPC Upice 37.34 320 *e*P **P 08 38 41.7 +0.1**
CHVC Chvalec 37.35 320 *e*P **P 08 38 41.8 +0.1**
LATE Laterza 37.65 306 P **P 08 38 43.7 -0.6**
LATE IAmb IAmb 08 38 49.3
comp=Z,36nm,1.0s
KBA Koelnbreinsper 37.72 313 *i*P **P 08 38 45.2 +0.2**
SNR=11
STAL STALIGIAL 37.89 312 P **P 08 38 45.9 -0.4**
STAL IAmb IAmb 08 38 50.9
comp=Z,24nm,1.0s
PRU Pruhonice 37.99 318 *e*P **P 08 38 49.2 +2.1**
PRU Pruhonice 37.99 318 *e*P **P 08 38 49.2 +2.1**
GEC2 GERESS Array S 38.08 316 *e*P **P 08 38 47.5 -0.4**
baz=111,slow=8.3
GEC2 GERESS Array S 38.08 316 P **P 08 38 47.6 -0.4**
GERES GERESS Array B 38.08 316 P **P 08 38 47.5 -0.4**
comp=Z,4.6nm,0.8s,baz=106,slow=8.4,SNR=18
GERES PcP **PcP 08 41 03.0 +0.2**
comp=Z,1.2nm,0.5s,baz=145,slow=3.6,SNR=5.8
PBCC Pribram 38.21 318 *e*P **P 08 38 48.6 -0.3**
KHC Kasperske Hory 38.26 317 *i*P **P 08 38 49.5 +0.1**
KHC pmax pmax
comp=Z,30nm,1.2s
KHC Kasperske Hory 38.26 317 *e*P **P 08 38 49.3 -0.1**
KHC Kasperske Hory 38.26 317 P **P 08 38 47.8 -1.5**
RJOB Jochberg 38.28 314 *e*P **P 08 38 48.8 -0.8**
baz=111,slow=8.3
ZCCA Zocca 38.59 308 P **P 08 38 52.0 -0.2**
ZCCA IAmb IAmb 08 39 01.8
comp=Z,36nm,0.9s
WET Wettzell 38.69 316 *e*P **P 08 38 52.3 -0.8**
baz=111,slow=8.3

BRG Berggiesshubel 38.70 319 *e*P **P 08 38 52.7 -0.3**
comp=Z,6.8nm,0.7s
BRG Berggiesshubel 38.70 319 *e*P **P 08 38 52.7 -0.3**
BRG pmax pmax
comp=Z,7.0nm,0.7s
BRG Berggiesshubel 38.70 319 *e*P **P 08 38 52.7 -0.3**
comp=Z,5.2nm,0.8s,baz=111,slow=8.3
KEST Kesra 38.84 295 P **P 08 38 53.9 -0.6**
TMCR Tamitsa 38.85 349 *e*P **P 08 38 53.7 -0.3**
WATA Walderalm 38.94 313 *i*P **P 08 38 55.0 -0.3**
SNR=12
SQTA Sankt Quirin 39.15 313 *i*P **P 08 38 56.8 -0.1**
SNR=14
SALO Salr 39.19 310 P **P 08 38 54.9 -2.4**
SALO IAmb IAmb 08 39 04.3
comp=Z,22nm,0.8s
MOTA Moosalm 39.25 313 *i*P **P 08 38 57.4 -0.5**
SNR=16
ROTZ Rotzenmuhle 39.32 317 *e*P **P 08 38 58.2 0.0**
baz=111,slow=8.3
NKC Novy Kostel 39.34 318 *e*P **P 08 38 58.7 +0.3**
NKC Novy Kostel 39.34 318 *e*P **P 08 38 58.7 +0.3**
FUR Furstenfeldbru 39.38 314 *e*P **P 08 38 58.1 -0.7**
baz=111,slow=8.3
TANN Tannenbergstha 39.39 318 *e*P **P 08 38 59.2 +0.3**
baz=111,slow=8.3
WERN Wernitzgruen 39.40 318 *e*P **P 08 38 59.1 +0.1**
comp=Z,3.1nm,0.7s,baz=111,slow=8.3
FETA Feichten 39.41 313 *i*P **P 08 38 59.3 +0.1**
SNR=16
CLL Collm 39.41 320 *e*P **P 08 38 59.0 +0.1**
CLL *e**PP **sP 08 39 08.0 -1.0**
CLL *e* 08 41 07.0
CLL pmax pmax
comp=Z,16nm,0.9s
CLL Collm 39.41 320 *e*P **P 08 38 59.0 +0.1**
comp=Z,16nm,0.9s
CLL *e*(sP) **sP 08 39 08.0 -1.0**
CLL *e*PcP **PcP 08 41 07.0 +0.2**
CLL *e*S **S 08 45 00.0 +0.8**
CLL LmV 08 56 00.0
comp=Z,200nm,20.1s
CLL Collm 39.41 320 P **P 08 38 57.9 -1.0**
FIA1 FINESS Array S 39.45 339 P **P 08 38 58.4 -0.7**
FIA1 IAmb IAmb 08 39 00.2
comp=Z,20nm,0.8s
FINES FINESS Array B 39.45 339 *ce*P **P 08 38 58.7 -0.4**
FINES pmax pmax
comp=Z,13nm,0.5s
FINES FINESS Array B 39.45 339 P **P 08 38 58.4 -0.7**
comp=Z,13nm,0.5s,baz=143,slow=9.5,SNR=105
FINES LR LR 08 58 10.7
comp=Z,390nm,19.4s,baz=161,slow=41
MANZ Manzenberg 39.45 317 *e*P **P 08 38 59.5 +0.1**
comp=Z,4.9nm,0.9s,baz=111,slow=8.3
RETA Reutte 39.52 313 *i*P **P 08 38 59.3 -0.7**
SNR=6.1
FUORN Ofenpass-Fuorn 39.62 312 P **P 08 38 59.9 -1.2**
GRA1 Grafenberg Arr 39.89 317 P **P 08 39 02.6 -0.4**
GRA1 IAmb IAmb 08 39 07.1
comp=Z,20nm,0.9s
GRF Grafenberg Arr 39.89 317 P **P 08 39 02.6 -0.4**
GRF Grafenberg Arr 39.89 317 *e*P **P 08 39 03.1 0.0**
comp=Z,12nm,0.8s,baz=111,slow=8.3
MOX Moxa 39.98 318 *e*P **P 08 39 04.2 +0.4**
baz=111,slow=8.3
UBR Ueberruh 39.99 313 *e*P **P 08 39 02.6 -1.4**
comp=Z,12nm,0.8s,baz=111,slow=8.3
DAVA Damuels 40.04 313 *i*P **P 08 39 04.2 -0.3**
SNR=17
BSD Bornholm Skovb 40.05 326 *i*P **P 08 39 03.0 -1.2**
BSD pmax pmax
comp=Z,61nm,0.8s
BSD Bornholm Skovb 40.05 326 *i*P **P 08 39 03.0 -1.2**
comp=Z,61nm,0.8s
NEUB Neuenburg 40.09 319 *e*P **P 08 39 04.6 0.0**
comp=Z,14nm,0.7s,baz=111,slow=8.3
GTA Gaotai 40.15 60 *e*P **P 08 39 06.0 +0.6**
GTA pP pP 08 39 10.4 -2.2
GTA pmax pmax
comp=Z,24nm,1.0s
GTA pmax pmax
comp=Z,120nm,6.2s
GTA LR LR
comp=Z,540nm,15.1s
GTA LR LR
comp=Z,270nm,17.2s
GTA LR LR
comp=Z,430nm,18.9s
TUE Stuetta 40.19 311 P **P 08 39 04.8 -0.9**
UBBA Unterbreizbach 41.01 318 *e*P **P 08 39 12.7 +0.6**
baz=111,slow=8.3
ASSE Asse, Remlinge 41.06 320 *e*P **P 08 39 13.7 +1.1**
baz=111,slow=8.3
CLZ Clausthal 41.13 320 *e*P **P 08 39 14.1 +0.8**
comp=Z,20nm,0.8s,baz=111,slow=8.3
GTTG Gvttingen 41.27 319 *e*P **P 08 39 15.0 +0.6**
baz=111,slow=8.3
BFO Black Forest 41.32 314 P **P 08 39 12.7 -2.1**
BFO pmax pmax
comp=Z,7.0nm,0.8s
BFO Black Forest 41.32 314 *e*P **P 08 39 14.0 -0.9**
comp=Z,3.6nm,0.7s,baz=111,slow=8.3
BFO Black Forest 41.32 314 P **P 08 39 12.7 -2.1**
NRDL Niedersach Rie 41.52 320 *e*P **P 08 39 17.3 +1.0**
comp=Z,28nm,0.9s,baz=111,slow=8.3
SENIN Lac Senin/Sane 41.55 311 P **P 08 39 16.4 -0.6**
COP Copenhagen 41.57 326 *e*P **P 08 39 17.6 +0.9**
COP Copenhagen 41.57 326 *i*P **P 08 39 17.6 +0.9**
BNI Bardonecchia 41.73 309 P **P 08 39 17.6 -0.8**
BNI pmax pmax
comp=Z,22nm,1.0s
BNI Bardonecchia 41.73 309 P **P 08 39 17.6 -0.8**
BNI IAmb IAmb 08 39 22.4
comp=Z,22nm,1.0s
TNS Taunus Mts 41.76 317 *e*P **P 08 39 18.8 +0.3**
comp=Z,5.3nm,0.8s,baz=111,slow=8.3
BSEG Bad Segeberg 41.94 322 *e*P **P 08 39 20.6 +0.9**
comp=Z,10nm,0.9s,baz=111,slow=8.3
ECH Echery 42.05 313 P **P 08 39 19.5 -1.3**
ECH pmax pmax
comp=Z,24nm,1.1s
ECH Echery 42.05 313 P **P 08 39 19.5 -1.3**
ECH IAmb IAmb 08 39 24.4
comp=Z,24nm,1.1s
CHTO Chiang Mai 42.14 91 P **P 08 39 21.8 -0.1**
CHTO pmax pmax
comp=Z,16nm,1.2s
CHTO Chiang Mai 42.14 91 P **P 08 39 21.8 -0.1**
CMAR Chiang Mai Arr 42.26 92 P **P 08 39 23.3 +0.5**
comp=Z,4.7nm,0.3s,baz=285,slow=9.3,SNR=16
CMAR PcP **PcP 08 41 16.9 +0.3**
comp=Z,2.5nm,0.6s,baz=288,slow=5.7,SNR=5.3
CMAR LR LR 09 00 05.4
comp=Z,102nm,20.3s,baz=305,slow=41
AHRW Bad Neuenahr-A 42.70 317 *e*P **P 08 39 26.8 +0.8**
baz=111,slow=8.3
APA Apatity 42.75 349 ||*i*P **P 08 39 25.7 -0.5**
APA pmax pmax
comp=Z,3.0nm,0.8s
IBBN Ibbenburen 42.81 319 *e*P **P 08 39 28.1 +1.2**
baz=111,slow=8.3
BUG Bochum--Univer 42.83 318 *e*P **P 08 39 27.9 +0.8**
baz=111,slow=8.3
WLF Walferdange 43.04 315 P **P 08 39 27.2 -1.6**
WLF pmax pmax
comp=Z,28nm,0.9s
WLF Walferdange 43.04 315 *e*P **P 08 39 29.0 +0.2**
baz=111,slow=8.3
WLF Walferdange 43.04 315 P **P 08 39 28.8 0.0**
comp=Z,23nm,0.9s
WLF Walferdange 43.04 315 P **P 08 39 27.2 -1.6**
WLF IAmb IAmb 08 39 33.3
comp=Z,28nm,0.9s
MOY Mondy 43.23 42 *e*P **P 08 39 31.3 +0.8**
MOY pmax pmax
comp=Z,26nm,1.4s
LZH Lanzhou 43.28 65 *e*P **P 08 39 31.6 +0.4**
LZH pP sP 08 39 43.0 +1.8
LZH sP pP 08 39 47.5 +9.1
LZH PP **PP 08 41 13.6 +1.7**
LZH pmax pmax
comp=Z,25nm,1.2s
LZH pmax pmax
comp=Z,130nm,5.6s
LZH LR LR
comp=Z,600nm,14.1s
LZH LR LR
comp=Z,510nm,14.6s
LZH LR LR
comp=Z,650nm,16.3s
MUD Monsted U'grnd 43.55 325 *i*P **P 08 39 33.6 +0.8**
MUD pmax pmax
comp=Z,53nm,0.9s
MUD Monsted U'grnd 43.55 325 *i*P **P 08 39 33.6 +0.8**
comp=Z,52nm,0.9s
KMI Kunming 43.78 81 P **P 08 39 36.1 +0.7**
KMI pP sP 08 39 46.0 +0.5
KMI sP pP 08 39 50.7 +8.1
KMI pmax pmax
comp=Z,19nm,1.1s
KMI pmax pmax
comp=Z,240nm,4.2s
KMI LR LR
comp=Z,350nm,16.4s
KMI LR LR
comp=Z,170nm,17.1s
KMI Kunming 43.78 81 P **P 08 39 35.7 +0.3**
KMI pmax pmax
comp=Z,24nm,1.1s
KMI Kunming 43.78 81 P **P 08 39 35.7 +0.3**
KMI IAmb IAmb 08 39 47.2
comp=Z,24nm,1.1s
TAM Tamanrasset 43.87 276 P **P 08 39 36.2 +0.2**
TAM pmax pmax
comp=Z,21nm,0.9s
TAM Tamanrasset 43.87 276 P **P 08 39 36.2 +0.2**
TAM IAmb IAmb 08 39 41.2
comp=Z,22nm,0.9s
BMRD Maredsous 44.06 316 P **P 08 39 38.0 +1.0**
DOU Dourbes 44.12 315 ⇑P **P 08 39 38.0 +0.5**
comp=Z,27nm,1.1s
ZAK Zakamensk 44.29 44 *e*P **P 08 39 38.9 -0.1**
ZAK *e* 08 41 23.0
ZAK pmax pmax
comp=Z,6.0nm,0.8s
ZAK pmax pmax
comp=Z,4.0nm,1.0s
NC405 NORSAR Array S 44.54 332 P **P 08 39 39.4 -1.4**
HOMB Homborsund 44.63 328 *e*P **P 08 39 41.9 +0.4**
NB201 NORSAR Array S 44.68 332 P **P 08 39 40.3 -1.6**
NB201 IAmb IAmb 08 39 42.3
comp=Z,24nm,0.9s
NB2 NORSAR Subarra 44.71 332 P **P 08 39 41.1 -1.0**
comp=Z,12nm,0.9s,baz=121,slow=8.6
NB2 NORSAR Subarra 44.71 332 P **P 08 39 41.1 -1.0**
baz=121,slow=8.6
NOA NORSAR Array B 44.71 332 P **P 08 39 41.2 -1.0**
comp=Z,8.9nm,0.8s,baz=120,slow=8.1,SNR=33
NOA PcP **PcP 08 41 23.0 -1.2**
comp=Z,2.9nm,0.9s,baz=105,slow=4.0,SNR=2.9
NOA LR LR 09 01 06.7
comp=Z,286nm,18.8s,baz=120,slow=40
PBKT Sadao Pong 44.72 93 P **P 08 39 43.4 +0.6**
PBKT IAmb IAmb 08 39 45.8
comp=Z,25nm,1.0s
NC303 NORSAR Array S 44.74 332 P **P 08 39 40.6 -1.7**
NAO01 NORSAR Array S 44.75 332 P **P 08 39 41.6 -0.8**
TLY Talaya 44.82 42 *i*P **P 08 39 45.8 +2.7**
TLY pmax pmax
comp=Z,4.0nm,1.1s
TLY MLR MLR
comp=Z,343nm,13.0s
TLY Talaya 44.82 42 LR LR 08 58 19.7
comp=Z,289nm,18.0s,baz=258,slow=36
NBO00 NORSAR Array S 44.89 332 P **P 08 39 42.8 -0.7**
NBO00 IAmb IAmb 08 39 46.3
comp=Z,28nm,1.1s
NC204 NORSAR Array S 45.02 332 P **P 08 39 43.5 -1.1**
SKAR Skarslia 45.79 331 *e*P **P 08 39 51.1 +0.5**
SONM Songino Array 45.83 48 P **P 08 39 51.4 +0.1**
comp=Z,4.8nm,0.7s,baz=278,slow=9.6,SNR=38
SONM LR LR 09 00 03.2
comp=Z,679nm,19.1s,baz=241,slow=37
ARCES ARCESS Array B 45.96 347 P **P 08 39 50.9 -0.9**
comp=Z,9.7nm,0.5s,baz=144,slow=9.3,SNR=106
ARCES PcP **PcP 08 41 28.8 +0.5**
comp=Z,8.9nm,0.9s,baz=142,slow=3.1,SNR=4.2
ARCES LR LR 09 02 34.8
comp=Z,312nm,18.6s,baz=163,slow=41
KTK1 Kautokeino 46.03 345 *e*P **P 08 39 52.3 -0.1**
BLS5 Blasjo 46.08 329 *e*P **P 08 39 53.5 +0.5**
DOMB Dombas 46.11 333 *e*P **P 08 39 52.6 -0.5**
ODD1 Odda 46.20 329 *e*P **P 08 39 54.9 +1.0**
ULN Ulaanbaatar 46.27 48 *ce*P **P 08 39 54.8 0.0**
ULN pmax pmax
comp=Z,17nm,1.7s
ULN Ulaanbaatar 46.27 48 P **P 08 39 54.0 -0.8**
ULN IAmb IAmb 08 39 55.5
comp=Z,7.0nm,0.7s
NSS Namsos 46.30 336 *e*P **P 08 39 53.5 -1.1**
MOR8 Moi Rana 46.44 339 *e*P **P 08 39 55.3 -0.3**
KMY Karmoy 46.57 328 *e*P **P 08 39 57.2 +0.5**
HYA Hoyanger 46.93 331 *e*P **P 08 39 59.4 -0.2**
GYA Guiyang 46.94 78 *e*P P 08 39 51.4 -8.9
GYA pmax pmax
comp=Z,10.0nm,0.8s
AKN Aaknes 47.03 332 *e*P **P 08 40 01.7 +1.4**
KONS Konsvik 47.06 339 *e*P **P 08 39 60.0 -0.5**
HAMF Hammerfest 47.22 347 *e*P **P 08 40 02.1 +0.4**
STEI Steigen 47.32 341 *e*P **P 08 40 02.0 -0.5**
TRO Tromso 47.52 344 *e*P **P 08 40 03.2 -0.8**
XAN Xi'an 47.59 67 P **P 08 40 04.6 -0.6**
XAN pmax pmax
comp=Z,10.0nm,0.8s
XAN Xi'an 47.59 67 P **P 08 40 04.7 -0.5**
XAN pmax pmax
comp=Z,28nm,1.4s
XAN Xi'an 47.59 67 P **P 08 40 04.7 -0.5**
XAN IAmb IAmb 08 40 06.9
comp=Z,28nm,1.4s
LOF Lofoten 47.94 341 *e*P **P 08 40 06.0 -1.3**
LSZ Lusaka 48.61 214 P **P 08 40 13.1 -0.1**
LSZ pmax pmax
comp=Z,13nm,1.2s
LSZ Lusaka 48.61 214 P **P 08 40 13.1 -0.1**
LSZ IAmb IAmb 08 40 18.9
comp=Z,13nm,1.1s
ENH Enshi 48.62 72 P **P 08 40 12.8 -0.4**
ENH IAmb IAmb 08 40 15.0
comp=Z,16nm,0.8s
HHC Hu-ho-hao-te 49.18 58 *e*P **P 08 40 17.0 -0.4**
HHC S **S 08 47 19.6 -2.2**
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,140nm,5.5s
HHC LR LR
comp=Z,320nm,20.4s
HHC LR LR
comp=Z,220nm,15.3s
HHC LR LR
comp=Z,130nm,14.5s
ESDC Sonseca Array 49.32 301 P **P 08 40 18.4 0.0**
comp=Z,6.5nm,0.8s,baz=73,slow=7.6,SNR=19
ESDC LR LR 09 03 17.2
comp=Z,96nm,20.1s,baz=55,slow=39
PAB San Pablo 49.62 300 P **P 08 40 20.3 -0.5**
PAB pmax pmax
comp=Z,12nm,1.0s
PAB San Pablo 49.62 300 P **P 08 40 20.3 -0.5**
PAB IAmb IAmb 08 40 25.2
comp=Z,12nm,1.0s
ESK Eskdalemuir 49.85 321 P **P 08 40 22.4 +0.2**
ESK pmax pmax
comp=Z,42nm,1.3s
ESK Eskdalemuir 49.85 321 P **P 08 40 22.4 +0.2**
TOA0 Torodi Ar. Sit 50.54 265 P **P 08 40 27.6 -0.3**
TOA0 Torodi Ar. Sit 50.54 265 P **P 08 40 28.1 +0.2**
SNR=32
TORD Torodi Ar. Bea 50.54 265 P **P 08 40 27.9 -0.1**
comp=Z,32nm,0.8s,baz=61,slow=6.6,SNR=52
TORD LR LR 09 04 14.4
comp=Z,511nm,19.0s,baz=30,slow=39
BJO1 Bjornoya 51.11 349 *e*P **P 08 40 31.4 0.0**
PBRG Braganca 51.31 303 *e*P **P 08 40 34.1 +0.6**
comp=Z,46nm,2.0s
MVO Moncorvo 51.56 303 *e*P **P 08 40 37.0 +1.6**
comp=Z,37nm,0.9s
PMRV Marv??o 51.98 300 *e*P **P 08 40 39.5 +1.0**
comp=Z,28nm,1.6s

BOD	**Bodaibo**	**51.99**	**36**	*e*P		**P**	**08 40 36.8**	**-1.4**
BOD					pmax	pmax			
	comp=Z,30nm,1.1s								
PCBR	**Castelo Branco**	**52.01**	**301**	*e*P		**P**	**08 40 40.3**	**+1.7**
PVRL	**Vila Real**	**52.07**	**303**	*e*P		**P**	**08 40 40.5**	**+1.3**
	comp=Z,44nm,2.3s								
PVIS	**Viseu**	**52.25**	**302**	*e*P		**P**	**08 40 41.5**	**+1.0**
	comp=Z,53nm,1.5s								
PBEJ	**Beja**	**52.49**	**299**	*e*P		**P**	**08 40 45.1**	**+2.8**
	comp=Z,40nm,2.5s								
PCAS	**Casmilo, Conde**	**52.77**	**301**	*e*P		**P**	**08 40 48.2**	**+3.9**
HSPB	**Hornsund (broa**	**53.55**	**350**	*e*P		**P**	**08 40 50.8**	**+1.3**
SPA0	**Spitsbergen Ar**	**54.29**	**351**	*e*P		**P**	**08 40 54.9**	**-0.1**
SPA0	**Spitsbergen Ar**	**54.29**	**351**	P		**P**	**08 40 54.3**	**-0.6**
KBS	**Kingsbay**	**55.45**	**351**	*e*P		**P**	**08 41 03.3**	**+0.1**
NJ2	**Nanjing**	**56.15**	**68**	*e*P		**P**	**08 41 08.5**	**-0.5**
NJ2					pmax	pmax			
	comp=Z,20nm,1.0s								
TSUM	**Tsumeb**	**57.62**	**221**	P		**P**	**08 41 19.7**	**+0.1**
MDSI	**Maura Dua**	**57.67**	**115**	P		**P**	**08 41 18.8**	**-1.2**
	comp=Z,13nm,0.9s								
LBTB	**Lobatse**	**58.20**	**210**	P		**P**	**08 41 24.3**	**+0.8**
LBTB					pmax	pmax			
	comp=Z,36nm,1.3s								
LBTB	**Lobatse**	**58.20**	**210**	P		**P**	**08 41 24.3**	**+0.8**
DBIC	**Dimbokro**	**59.13**	**261**	P		**P**	**08 41 30.4**	**+0.2**
	comp=Z,47nm,0.8s,baz=42,slow=6.5,SNR=33								
DBIC					LR	LR	09 07 35.2		
	comp=Z,205nm,19.6s,baz=40,slow=36								
DBIC	**Dimbokro**	**59.13**	**261**	P		**P**	**08 41 30.3**	**+0.1**
CN2	**Changchun**	**59.15**	**53**	*e*P		**P**	**08 41 29.5**	**-0.4**
CN2					pmax	pmax			
	comp=Z,20nm,0.9s								
KIC	**Kosan Boka**	**59.17**	**261**	*e*P		**P**	**08 41 30.8**	**+0.3**
	comp=Z,26nm,0.7s								
ZEA	**Zeya**	**59.25**	**41**	*e*P		**P**	**08 41 30.8**	**+0.4**
ZEA					pmax	pmax			
	comp=Z,17nm,1.0s								
ZEA					MLR	MLR			
	comp=E,300nm,14.0s								
ZEA					MLR	MLR			
	comp=Z,400nm,14.0s								
TIC	**Toumodi**	**59.29**	**262**	*e*P		**P**	**08 41 31.6**	**+0.3**
LIC	**Lamto**	**59.49**	**261**	*e*P		**P**	**08 41 33.0**	**+0.3**
	comp=Z,91nm,0.7s								
YAK	**Yakutsk**	**60.17**	**32**	*e*P		**P**	**08 41 34.7**	**-1.9**
YAK				*e**PP		**sP**	**08 41 45.2**	**-1.6**
YAK				*e*			08 42 18.7		
YAK				*e*S		**S**	**08 49 42.6**	**-6.0**
YAK				*e**SS		**sS**	**08 50 05.0**	**+4.1**
YAK					pmax	pmax			
	comp=Z,19nm,0.9s								
YAK					pmax	pmax			
	comp=N,3.0nm,1.0s								
YAK					pmax	pmax			
	comp=E,14nm,1.4s								
YAK					pmax	pmax			
	comp=Z,63nm,3.3s								
YAK					pmax	pmax			
	comp=N,162nm,3.8s								
YAK					pmax	pmax			
	comp=E,65nm,3.1s								
YAK					smax	smax			
	comp=N,270nm,4.5s								
YAK					smax	smax			
	comp=E,50nm,3.8s								
YAK	**Yakutsk**	**60.17**	**32**	P		**P**	**08 41 34.9**	**-1.8**
TIXI	**Tiksi**	**60.19**	**21**	*ce*P		**P**	**08 41 36.2**	**-0.4**
TIXI					pmax	pmax			
	comp=Z,13nm,1.7s								
TIXI					MLR	MLR			
	comp=Z,196nm,19.0s								
TIXI	**Tiksi**	**60.19**	**21**	LR		LR	09 10 10.9		
	comp=Z,248nm,20.1s,baz=262,slow=39								
TIXI	**Tiksi**	**60.19**	**21**	P		**P**	**08 41 36.3**	**-0.2**
TIXI					IAmb	IAmb	08 41 39.4		
	comp=Z,7.7nm,1.1s								
DAG	**Danmarks Havn**	**60.21**	**345**	*i* P		**P**	**08 41 36.5**	**-0.2**
DAG	**Danmarks Havn**	**60.21**	**345**	*i* P		**P**	**08 41 36.5**	**-0.2**
NOR	**Nord**	**60.93**	**351**	*i* P		**P**	**08 41 41.1**	**-0.5**
	comp=Z,16nm,1.2s								
BOSA	**Boshof**	**61.47**	**209**	P		**P**	**08 41 46.8**	**+0.8**
	comp=Z,8.2nm,0.8s,baz=29,slow=6.2,SNR=12								
BOSA					LR	LR	09 08 14.8		
	comp=Z,260nm,20.3s,baz=24,slow=36								
BOSA	**Boshof**	**61.47**	**209**	P		**P**	**08 41 46.3**	**+0.4**
BOSA					IAmb	IAmb	08 41 50.4		
	comp=Z,12nm,0.9s								
KSRS	**Korea Array**	**62.22**	**60**	P		**P**	**08 41 49.9**	**-1.1**
	comp=Z,5.3nm,0.6s,baz=280,slow=6.5,SNR=19								
KSRS					LR	LR	09 11 11.9		
	comp=Z,177nm,21.6s,baz=304,slow=38								
KLR	**Kul'dur**	**62.58**	**46**	*i* P		**P**	**08 41 52.1**	**-1.1**
KLR					pmax	pmax			
	comp=Z,14nm,1.2s								
KLR	**Kul'dur**	**62.58**	**46**	LR		LR	09 12 15.8		
	comp=Z,335nm,18.6s,baz=278,slow=39								
USRK	**Ussuriysk Ar.**	**63.72**	**52**	P		**P**	**08 41 59.4**	**-1.4**
	comp=Z,2.8nm,0.7s,baz=261,slow=6.6,SNR=6.6								
USRK					LR	LR	09 11 39.4		
	comp=Z,245nm,19.1s,baz=282,slow=38								
GRNR	**Gornyy**	**65.25**	**44**	*e*P		P	08 42 04.4	-6.3	
GRNR					pmax	pmax			
	comp=Z,7.0nm,1.2s								
GRNR					MLR	MLR			
	comp=Z,220nm,16.0s								
SUMG	**Summit**	**65.47**	**341**	*i* P		**P**	**08 42 13.0**	**+0.8**
SUMG					pmax	pmax			
	comp=Z,140nm,1.0s								
SUMG	**Summit**	**65.47**	**341**	*i* P		**P**	**08 42 13.0**	**+0.8**
	comp=Z,135nm,1.0s								
SUMG	**Summit**	**65.47**	**341**	P		**P**	**08 42 12.9**	**+0.6**
TYV	**Tymovskoe**	**69.05**	**43**	*e*P		**P**	**08 42 33.2**	**-1.6**
TYV					pmax	pmax			
	comp=Z,11nm,0.8s								
TTSI	**Tana Toraja**	**70.10**	**104**	P		**P**	**08 42 40.6**	**-1.3**
	comp=Z,20nm,0.9s								
YSS	**Yuzh-Sakhalins**	**70.29**	**47**	*e*P		**P**	**08 42 42.1**	**-0.4**
YSS				*e*			08 43 09.7		
YSS					MLR	MLR			
	comp=Z,700nm,17.0s								
SEY	**Seymchan**	**70.32**	**29**	P		**P**	**08 42 43.1**	**+0.7**
	comp=Z,19nm,0.6s,baz=280,slow=6.2,SNR=56								
MJAR	**Matsushiro Arr**	**70.38**	**58**	LR		LR	09 15 55.5		
	comp=Z,80nm,18.5s,baz=110,slow=38								
MA2	**Magadan**	**70.74**	**32**	*ce*P		**P**	**08 42 45.7**	**+0.7**
MA2					pmax	pmax			
	comp=Z,76nm,2.5s								
TULEG	**Thule**	**71.26**	**348**	P		**P**	**08 42 47.8**	**-0.1**
LUWI	**Luwuk**	**71.72**	**101**	P		P	08 43 06.1	+14	
BILL	**Bilibino**	**73.40**	**21**	*ce*P		**P**	**08 43 01.5**	**+0.7**
BILL					pmax	pmax			
	comp=Z,13nm,1.0s								
BILL	**Bilibino**	**73.40**	**21**	P		**P**	**08 43 00.4**	**-0.4**
BILL					IAmb	IAmb	08 43 02.7		
	comp=Z,14nm,1.1s								
SANI	**Sanana**	**75.02**	**100**	P		**P**	**08 43 10.7**	**-0.5**
	comp=Z,27nm,1.0s								
PETK	**Petropavlovsk-**	**76.85**	**37**	P		**P**	**08 43 19.3**	**-1.7**
	comp=Z,4.2nm,0.9s,baz=263,slow=12,SNR=8.5								
PETK					LR	LR	09 19 04.4		
	comp=Z,196nm,18.1s,baz=48,slow=37								
FRB	**Frobisher Bay**	**79.22**	**338**	P		**P**	**08 43 33.6**	**-0.3**
	comp=Z,9.4nm,0.8s,baz=84,slow=22,SNR=11								
FITZ	**Fitzroy Crossi**	**82.64**	**114**	P		**P**	**08 43 52.6**	**-0.3**
FITZ					IAmb	IAmb	08 43 53.7		
	comp=Z,11nm,0.6s								
TOLK	**Toolik Lake Re**	**83.39**	**8**	P		**P**	**08 43 57.0**	**+0.9**
KNRA	**Kununurra**	**84.01**	**111**	P		**P**	**08 43 59.6**	**-0.3**
ANM	**Nome**	**84.04**	**16**	P		**P**	**08 43 59.8**	**+0.4**
ANM					pmax	pmax			
	comp=Z,18nm,1.0s								
ANM	**Nome**	**84.04**	**16**	P		**P**	**08 43 59.8**	**+0.4**
C36M	**Paulatuk**	**84.22**	**359**	P		**P**	**08 43 59.8**	**-0.4**
C36M					IAmb	IAmb	08 44 04.1		
	comp=Z,13nm,0.9s								
SCHQ	**Schefferville**	**84.24**	**330**	P		**P**	**08 43 59.8**	**-0.8**
	comp=Z,8.5nm,0.9s,baz=52,slow=3.6,SNR=6.7								
SCHQ	**Schefferville**	**84.24**	**330**	P		**P**	**08 43 59.5**	**-1.1**
SCHQ					IAmb	IAmb	08 44 01.6		
	comp=Z,13nm,1.0s								
COLD	**Coldfoot**	**84.63**	**9**	P		**P**	**08 44 02.9**	**+0.6**
COLD					IAmb	IAmb	08 44 04.1		
	comp=Z,7.0nm,1.1s								
FYU	**Fort Yukon**	**85.90**	**8**	P		**P**	**08 44 09.5**	**+0.9**
PRP	**Porcupine Dome**	**86.87**	**8**	P		**P**	**08 44 12.3**	**-1.4**
PRP					IAmb	IAmb	08 44 19.2		
	comp=Z,10nm,1.0s								
EPYK	**Eagle Plains**	**86.88**	**4**	P		**P**	**08 44 13.5**	**-0.1**
MDM	**Murphy Dome**	**87.04**	**9**	P		**P**	**08 44 14.2**	**-0.2**
MDM					IAmb	IAmb	08 44 16.1		
	comp=Z,13nm,1.0s								
ILAR	**Eielson Array**	**87.41**	**9**	P		**P**	**08 44 15.0**	**-1.1**
ILAR	**Eielson Array**	**87.41**	**9**	P		**P**	**08 44 14.9**	**-1.1**
	comp=Z,2.1nm,0.9s,baz=333,slow=4.1,SNR=18								
ILAR					PP	**PP**	**08 47 44.7**	**+4.8**	
	comp=Z,0.8nm,1.1s,baz=338,slow=6.4,SNR=5.0								
ILAR					PKKPbc	**PKKPbc**	**09 02 05.8**	**-1.1**	
	comp=Z,0.5nm,0.8s,baz=176,slow=1.8,SNR=5.5								
ILAR					LR	LR	09 27 38.7		
	comp=Z,103nm,21.2s,baz=54,slow=38								
BPAW	**Bear Paw Mtn.**	**87.42**	**11**	P		**P**	**08 44 15.2**	**-1.0**
HDA	**Harding Lake**	**87.75**	**9**	P		**P**	**08 44 16.4**	**-1.4**
HDA					IAmb	IAmb	08 44 22.7		
	comp=Z,9.6nm,1.3s								
EGAK	**Eagle**	**88.08**	**6**	P		**P**	**08 44 18.9**	**-0.4**
EGAK					IAmb	IAmb	08 44 24.0		
	comp=Z,11nm,0.9s								
MCK	**McKinley**	**88.10**	**10**	P		**P**	**08 44 19.4**	**-0.1**
MCK					pmax	pmax			
	comp=Z,22nm,1.3s								
MCK	**McKinley**	**88.10**	**10**	P		**P**	**08 44 19.4**	**-0.1**
SCRK	**Sand Creek**	**88.54**	**8**	P		**P**	**08 44 21.5**	**-0.2**
SCRK					IAmb	IAmb	08 44 27.2		
	comp=Z,10nm,1.1s								
DOT	**Dot Lake**	**88.85**	**8**	P		**P**	**08 44 23.1**	**0.0**
DOT					IAmb	IAmb	08 44 28.1		
	comp=Z,7.2nm,1.2s								
SUA	**Susitna One**	**89.92**	**12**	P		**P**	**08 44 27.7**	**-0.5**
SUA					IAmb	IAmb	08 44 32.8		
	comp=Z,9.6nm,0.9s								
YKA	**Yellowknife Ar**	**90.64**	**355**	P		**P**	**08 44 31.6**	**+0.3**
	comp=Z,3.2nm,0.7s,baz=4.6,slow=4.7,SNR=66								
YKA					PP	**PP**	**08 48 04.2**	**-1.4**	
	comp=Z,0.5nm,0.8s,baz=11,slow=7.1,SNR=4.8								
YKA					PKKPbc	**PKKPbc**	**09 01 57.1**	**-1.8**	
	comp=Z,0.3nm,0.8s,baz=187,slow=3.4,SNR=6.7								
WRA	**Warramunga Arr**	**90.71**	**112**	P		**P**	**08 44 31.4**	**-1.0**
	comp=Z,2.3nm,0.5s,baz=310,slow=4.1,SNR=19								
WRAB	**Tennant Creek**	**90.71**	**112**	*ce*P		**P**	**08 44 33.3**	**+0.9**
WRAB					pmax	pmax			
	comp=Z,15nm,2.5s								
ASAR	**Alice Springs**	**92.10**	**115**	P		**P**	**08 44 38.1**	**-0.7**
	comp=Z,3.3nm,0.8s,baz=302,slow=4.6,SNR=32								
MAW	**Mawson**	**94.25**	**177**	LR		LR	09 21 21.6		
	comp=Z,119nm,19.0s,baz=337,slow=32								
ULM	**Lac du Bonnet**	**98.82**	**341**	LR		LR	09 32 07.0		
	comp=Z,110nm,20.4s,baz=80,slow=37								
PDAR	**Pinedale Array**	**109.21**	**347**	PKiKP		**PKiKP**	**08 50 02.9**	**+3.4**
	comp=Z,0.8nm,0.9s,baz=217,slow=0.7,SNR=4.7								
NVAR	**Mina Array Bea**	**114.80**	**353**	PKP		PKPdf	08 50 11.1	+0.8	
	comp=Z,1.2nm,0.8s,baz=0.0,slow=0.9,SNR=5.2								
QSPA	**South Pole Qui**	**116.55**	**180**			**PKiKP**	**08 50 12.3**	**-0.1**
TXAR	**Lajitas Array**	**120.27**	**337**	PKP		**PKPdf**	**08 50 20.2**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=160,slow=3.2,SNR=5.5								
LPAZ	**La Paz**	**125.43**	**268**	PKP		**PKiKP**	**08 50 31.9**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=140,slow=1.2,SNR=4.3								

VIE 09 08:34:59.0±0.6, 46.56N×12.67E, *h*8km, mb1.4/7, ml1.8/8, 2C-3D, Error ellipse: s-maj=4.9km s-min=3.5km az=152.0 9 km E of San Stefano di Cadore, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CLUD	**Cludinico**	**0.18**	**125**	*e*Pg		Pg	08 35 00.5	-2.1
CLUD				*e*Sg		Sg	08 35 03.0	-2.3
ZOU	**Zoufplan**	**0.21**	**91**	*e*Pg		Pg	08 35 02.1	-1.2
ZOU				*e*Sg		Sg	08 35 05.5	-0.8
ABTA	**Abfaltersbach** 12nm,0.2s	**0.21**	**330**	*i* Pg		Pg	08 35 03.9	+0.5
ABTA	27nm,0.3s			*i* Sg		Sg	08 35 08.3	+2.0
FUSE	**Fusea**	**0.27**	**123**	*e*Pg		Pg	08 35 02.2	-2.2
FUSE				*e*Sg		Sg	08 35 05.8	-2.3
CIMO	**Cimolais**	**0.30**	**212**	*e*Pg		Pg	08 35 02.3	-2.5
CIMO				*e*Sg		Sg	08 35 06.4	-2.4
PLRO	**Paularo**	**0.33**	**92**	*e*Pg		Pg	08 35 04.2	-1.3
MPRI	**Monte Prat**	**0.39**	**145**	*e*Pg		Pg	08 35 03.8	-2.8
MPRI				*e*Sg		Sg	08 35 09.0	-2.7
VINO	**Villanova**	**0.52**	**126**	*e*Pg		Pg	08 35 06.7	-2.4
MYKA	**Terra Mystica** 1.2nm,0.2s	**0.67**	**84**	Pg		Pg	08 35 10.9	-1.0
MYKA	2.5nm,0.2s			Sg		Sb	08 35 21.7	-0.9
KBA	**Koelnbreinsper** 1.0nm,0.1s	**0.69**	**42**	*i* Pg		Pg	08 35 12.5	+0.2
KBA	2.8nm,0.2s			*i* Sg		Sg	08 35 21.4	-0.1
FETA	**Feichten** 2.8nm,0.4s,SNR=4.1	**1.41**	**290**	*e*Pg		Pb	08 35 25.4	-0.2
FETA				*i* Sg		Sg	08 35 45.4	+1.1

*IDC **09** 08:54:52.2±1.9, 54.91N×168.18E, h0km, mb3.4/7, mb1 3.7/8, mb1mx3.4/58, mbtmp3.5/8, ML2.9/1, Error ellipse: s-maj=69.3km s-min=17.7km az=167.0*
*KRSC **09** 08:54:54.0±1.5, 54.44N×167.89E, h30km±27km, ML4.0*
ISC 09 08:54:54.1±0.9, 54.49N±0.07×168.26E±0.06, h24km, n43, σ1s50/51, mb3.4/7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BKI	**Bering**	**1.50**	**299**	*e*P		**Pn**	**08 55 17.6**	**-1.9**
BKI				*e*S		**Sn**	**08 55 36.4**	**-1.9**
KBTR	**Krutoberegovo**	**3.55**	**301**	*e*P		**Pn**	**08 55 46.8**	**-0.8**
KBTR				*e*S		**Sn**	**08 56 27.3**	**-1.4**
KBG	**Krutoberegovo**	**3.63**	**301**	*e*P		**Pn**	**08 55 49.3**	**+0.6**
KBG				*e*S		**Sn**	**08 56 30.6**	**0.0**
MKZ	**Mys Kozlova**	**3.80**	**274**	*e*P		**Pn**	**08 55 51.4**	**+0.3**
MKZ				*e*S		**Sn**	**08 56 33.4**	**-1.6**
SMKR	**Semkarok**	**4.39**	**301**	*e*P		**Pn**	**08 56 01.1**	**+1.9**
BDR	**Baidarnaya**	**4.51**	**300**	*e*P		**Pn**	**08 56 02.2**	**+1.3**
ZLN	**Zelenaya**	**4.53**	**293**	*e*P		**Pn**	**08 56 03.0**	**+1.8**
SRKR	**Sorokina**	**4.57**	**301**	*e*P		**Pn**	**08 56 02.5**	**+0.8**
TUMD	**Tumrok D**	**4.60**	**282**	*e*P		**Pn**	**08 56 03.3**	**+1.2**
TUMD				*e*S		**Sn**	**08 56 54.9**	**+0.2**
KZV	**Kizimen**	**4.65**	**281**	*e*P		**Pn**	**08 56 04.2**	**+1.3**
KZV				*e*S		**Sn**	**08 56 56.1**	**0.0**
TUMR	**Tumrok**	**4.75**	**283**	*e*P		**Pn**	**08 56 05.9**	**+1.7**
TUMR				*e*S		**Sn**	**08 56 58.7**	**+0.2**
KMNR	**Kamenistaya**	**4.77**	**289**	*e*P		**Pn**	**08 56 06.4**	**+1.8**
KMNR				*e*S		**Sn**	**08 57 00.2**	**+1.1**
SPN	**Mys Shipunski**	**5.08**	**257**	*e*P		**Pn**	**08 56 09.2**	**+0.6**
SPN				*e*S		**Sn**	**08 57 04.9**	**-1.5**
SRDR	**Sredinnyy**	**5.20**	**294**	*e*P		**Pn**	**08 56 12.1**	**+1.8**
NLC	**Nalytchevo**	**5.44**	**260**	*e*P		**Pn**	**08 56 14.4**	**+0.8**
NLC				*e*S		**Sn**	**08 57 12.6**	**-2.8**
ESO	**Esso**	**5.66**	**289**	*e*P		**Pn**	**08 56 19.3**	**+2.7**
SDLR	**Sedlovina**	**5.68**	**261**	*e*P		**Pn**	**08 56 18.1**	**+1.1**
SMAR	**Somma**	**5.73**	**261**	*e*P		**Pn**	**08 56 18.7**	**+0.9**
UGLR	**Uglovaya**	**5.73**	**261**	*e*P		**Pn**	**08 56 18.8**	**+1.1**
KRER	**Koryakskii**	**5.75**	**262**	*e*P		**Pn**	**08 56 19.2**	**+1.2**
AVH	**Avacha**	**5.76**	**262**	*e*P		**Pn**	**08 56 19.5**	**+1.4**
KRX	**Arik**	**5.79**	**263**	*e*P		**Pn**	**08 56 19.5**	**+0.9**
KOK	**Koryaka**	**5.81**	**262**	*e*P		**Pn**	**08 56 20.2**	**+1.3**
RUS	**Russkaya**	**6.17**	**254**	*e*P		**Pn**	**08 56 25.1**	**+1.4**
RUS				*e*S		**Sn**	**08 57 31.7**	**-1.7**
KRMR	**Karymshinskiy**	**6.25**	**259**	*e*P		**Pn**	**08 56 25.3**	**+0.6**
KRMR				*e*S		**Sn**	**08 57 33.5**	**-1.7**
MTVR	**Mutnovka**	**6.34**	**256**	*e*P		**Pn**	**08 56 27.8**	**+1.7**
GRL	**Gorelyy**	**6.38**	**256**	*e*P		**Pn**	**08 56 28.3**	**+1.7**
PETK	**Petropavlovsk-** 1.3nm,0.3s,baz=81,slow=18,SNR=18	**6.41**	**262**	Pn		**Pn**	**08 56 28.8**	**+1.9**
PETK	0.9nm,0.3s,baz=331,slow=44,SNR=3.8				Sn	**Sn**	**08 57 40.7**	**+1.5**
ASAK	**Asacha**	**6.54**	**255**	*e*P		**Pn**	**08 56 30.6**	**+1.8**
KDTR	**Khodutka, Kamc**	**6.69**	**250**	*e*P		**Pn**	**08 56 31.5**	**+0.8**
KDTR				*e*S		**Sn**	**08 57 43.2**	**-2.9**
KDAK	**Kodiak Island** 8.1nm,1.1s,baz=263,slow=5.1,SNR=5.1	**21.85**	**65**	P		**P**	**08 59 46.1**	**+1.5**
ILAR	**Eielson Array** 0.6nm,0.7s,baz=253,slow=8.1,SNR=9.2	**24.35**	**47**	P		**P**	**09 00 09.1**	**-0.7**
INK	**Inuvik** 0.6nm,0.6s,baz=281,slow=6.1,SNR=3.3	**29.75**	**40**	P		**P**	**09 00 56.5**	**-1.6**
H11N2	**WAKE ISLAND Hy** baz=0.5,slow=76	**34.72**	**182**	T		T	09 38 30.4		
H11N3	**WAKE ISLAND Hy** baz=0.5,slow=76	**34.73**	**182**	T		T	09 38 35.0		
H11N1	**WAKE ISLAND Hy** baz=0.5,slow=76	**34.74**	**182**	T		T	09 38 34.7		
H11S1	**WAKE ISLAND Hy** baz=0.8,slow=76	**35.94**	**183**	T		T	09 40 03.1		
H11S3	**WAKE ISLAND Hy** baz=0.8,slow=76	**35.95**	**183**	T		T	09 40 04.0		
H11S2	**WAKE ISLAND Hy** baz=0.8,slow=76	**35.96**	**183**	T		T	09 40 04.0		
SONM	**Songino Array** 0.3nm,0.4s,baz=70,slow=7.5,SNR=3.2	**38.23**	**286**	P		**P**	**09 02 14.1**	**+2.1**
YKA	**Yellowknife Ar** 0.2nm,0.8s,baz=297,slow=8.1	**38.77**	**46**	P		**P**	**09 02 16.0**	**-0.2**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=62,slow=6.7,SNR=3.0	**51.80**	**299**	P		**P**	**09 03 58.0**	**-1.7**
TXAR	**Lajitas Array** 0.3nm,0.5s,baz=303,slow=5.0,SNR=8.1	**65.61**	**73**	P		**P**	**09 05 36.7**	**+0.7**

*IDC **09** 09:00:57.5±0.9, 35.05N×23.07E, h0km, mb3.8/15, mb1 3.8/20, mb1mx3.7/48, mbtmp3.7/20, ML3.7/4, MS3.2/1, Ms1 3.2/1, ms1mx2.4/53, Error ellipse: s-maj=20.9km s-min=12.1km az=179.0*
*THE **09** 09:01:00.9, 35.09N×23.07E, h0km±3km, ML3.5/8, Error ellipse: s-maj=4.7km s-min=1.3km az=231.0*
*ATH **09** 09:01:04.4, 35.34N×23.39E, h12km±2km, ML3.3/10, Error ellipse: s-maj=4.9km s-min=1.3km az=37.0*
ISC 09 09:00:59.7±1.5, 35.16N±0.05×23.10E±0.04, h7km±8km, n67, σ1s35/79, mb3.8/15, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RODP	**Rodopos**	**0.67**	**53**	P		**Pb**	**09 01 14.5**	**+0.7**
ANKY	**Antikythira Is**	**0.73**	**13**	P		**Pb**	**09 01 15.2**	**+0.5**
ANKY				S		**Sn**	**09 01 28.0**	**+0.2**
	3μm,0.6s							
ANKY	**Antikythira Is**	**0.73**	**13**	P		**Pb**	**09 01 15.1**	**+0.3**
ANKY				S		**Sg**	**09 01 21.8**	**-1.5**
ANKY				AML		AML	09 01 28.9		
	comp=N,6382μm,0.6s								
ANKY				AML		AML	09 01 40.6		
	comp=E,6453μm,0.8s								
IMMV	**Iera Moni Meta**	**0.78**	**67**	P		**Pb**	**09 01 15.5**	**-0.2**
IMMV				S		**Sn**	**09 01 29.6**	**+0.4**
	comp=E,6μm,0.8s								
IMMV	**Iera Moni Meta**	**0.78**	**67**	P		**Pg**	**09 01 14.9**	**0.0**
IMMV				S		**Sg**	**09 01 20.8**	**-4.2**
IMMV				AML		AML	09 01 37.4		
	comp=N,14435μm,0.8s								
IMMV				AML		AML	09 01 41.0		
	comp=E,8171μm,0.8s								
CHAN	**Chania**	**0.85**	**65**	P		**Pb**	**09 01 17.3**	**+0.5**
CHAN				S		**Sn**	**09 01 32.7**	**+1.9**
	comp=E,2μm,0.9s								
GVD	**Gavdhos**	**0.87**	**111**	P		**Pg**	**09 01 16.5**	**0.0**
GVD				S		**Sb**	**09 01 31.2**	**+2.2**
	comp=E,3μm,0.5s								
GVDS	**Gavdos**	**0.87**	**111**	P		**Pg**	**09 01 16.1**	**-0.4**
GVDS				S		**Sb**	**09 01 31.3**	**+2.3**
	comp=E,3μm,0.6s								
VAM	**Vamos**	**0.94**	**74**	P		**Pg**	**09 01 17.9**	**+0.2**
VAM				S		**Sn**	**09 01 32.3**	**-0.6**
	comp=E,3μm,0.7s								
VAM	**Vamos**	**0.94**	**74**	P		**Pg**	**09 01 17.8**	**+0.1**
VAM				AML		AML	09 01 40.8		
	comp=N,8060μm,0.7s								
VAM				AML		AML	09 01 48.1		
	comp=E,5796μm,0.8s								
KTHA	**Kythira Island**	**1.10**	**359**	P		**Pn**	**09 01 21.9**	**+0.4**
KTHA				S		**Sn**	**09 01 40.0**	**+3.0**
	comp=E,2μm,0.5s								
KTHA	**Kythira Island**	**1.10**	**359**	P		**Pn**	**09 01 21.7**	**+0.2**
KTHA				AML		AML	09 01 49.2		
	comp=E,6430μm,0.6s								
KTHA				AML		AML	09 01 51.8		
	comp=N,2672μm,0.5s								
KTHR	**Kythira**	**1.10**	**356**	P		**Pn**	**09 01 21.7**	**+0.1**
KTHR				S		**Sn**	**09 01 40.1**	**+3.0**
	comp=N,2μm,0.4s								
PRNS	**Prines Rethymn**	**1.17**	**79**	P		**Pg**	**09 01 22.0**	**-0.2**
PRNS				S		**Sn**	**09 01 40.0**	**+1.4**
SIVA	**Sivas**	**1.41**	**95**	P		**Pn**	**09 01 26.2**	**+0.5**
SIVA				S		**Sg**	**09 01 48.8**	**+3.7**
SIVA	**Sivas**	**1.41**	**95**	P		**Pn**

ARCES	**ARCESS Array B**	**34.46**	**1**	P		**P**	**09 07 47.1**	**-0.6**
	comp=N,0.8nm,0.5s,baz=196,slow=9.4,SNR=6.8							
MKAR	**Makanchi Array**	**45.19**	**56**	P		**P**	**09 09 16.3**	**-0.8**
	comp=N,0.5nm,0.5s,baz=267,slow=7.4,SNR=7.6							
ZALV	**Zalesovo Beam**	**46.23**	**46**	P		**P**	**09 09 23.9**	**-1.3**
	comp=N,0.9nm,0.3s,baz=266,slow=9.0,SNR=3.8							
SONM	**Songino Array**	**60.79**	**50**	P		**P**	**09 11 11.4**	**-1.0**
	comp=N,0.4nm,0.4s,baz=283,slow=7.9,SNR=4.3							
INK	**Inuvik**	**75.38**	**351**	P		**P**	**09 12 41.8**	**-1.6**
	comp=N,0.7nm,0.8s,baz=358,slow=6.8,SNR=3.3							
YKA	**Yellowknife Ar**	**76.92**	**341**	P		**P**	**09 12 52.3**	**0.0**
	comp=N,0.4nm,0.5s,baz=30,slow=5.2,SNR=16							
USRK	**Ussuriysk Ar.**	**78.03**	**44**	P		**P**	**09 12 58.2**	**-0.6**
	comp=N,1.5nm,0.8s,baz=328,slow=5.1,SNR=2.7							
KSRS	**Korea Array**	**79.62**	**51**	P		**P**	**09 13 07.9**	**+0.2**
	comp=N,0.8nm,0.7s,baz=296,slow=5.0,SNR=3.3							
ILAR	**Eielson Array**	**80.09**	**356**	P		**P**	**09 13 10.4**	**+0.5**
	comp=N,0.3nm,0.9s,baz=356,slow=6.3,SNR=4.0							
WRA	**Warramunga Arr**	**118.27**	**95**	PKP		**PKPdf**	**09 19 46.7**	**-1.4**
	comp=N,0.4nm,0.6s,baz=311,slow=2.1,SNR=3.8							
ASAR	**Alice Springs**	**119.71**	**99**	PKP		**PKPdf**	**09 19 50.0**	**-0.9**
	comp=N,0.6nm,0.6s,baz=322,slow=1.7,SNR=7.8							

*SJA **09** 09:16:09.1±0.6,34.69S×71.58W,h4km±2km, ML3.9, MW4.1*
*GUC **09** 09:16:10.7±0.7,34.78S×71.81W,h56km±3km, ML4.4*
*NEIC **09** 09:16:11.1±1.8,34.74S±0.05×72.0W±0.2,h52km±5km, Error ellipse: s-maj=18.2km s-min=6.6km az=97.0*
*IDC **09** 09:16:11.2±0.8,34.72S×71.62W,h46km±7km, mb3.8/8, mb1 3.9/12,mb1mx3.7/31,mbtmp4.0/12,ML3.9/4,MS2.9/1, Ms1 2.9/1,ms1mx2.5/23,Error ellipse: s-maj=27.0km s-min=13.8km az=91.0*

ISC 09 09:16:11.6±0.6,34.71S±0.04×71.88W±0.06,h52km±5km, n77,σ1s72/91,mb4.1/9,4C-7D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.30**	**187**	↑*i*	P		**Pn**	**09 16 19.7**	**-1.3**
GO05					*i* S		**Sn**	**09 16 26.3**	**-1.3**
GO05	**Huala**	**0.30**	**187**		Pn		**Pn**	**09 16 20.2**	**-0.8**
GO05					Sn		**Sn**	**09 16 26.3**	**-1.3**
GO05	**Huala**	**0.30**	**187**	*i*	P		**Pn**	**09 16 20.1**	**-0.9**
GO05					*i* S		**Sn**	**09 16 30.7**	**+3.1**
RCDM	**Rinconada Maip**	**1.51**	**37**	↑*i*	P		**Pn**	**09 16 37.0**	**+0.7**
RCDM					*i* S		**Sn**	**09 16 56.8**	**+1.9**
ANTU	**Antumapu**	**1.54**	**43**	*e*	P		**Pn**	**09 16 37.7**	**+0.9**
ANTU					*i* S		**Sn**	**09 16 56.0**	**+0.3**
ANTU					IAML			09 17 02.5	
	comp=N,7μm,0.4s								
COCH	**Cobquecura**	**1.60**	**207**	↓*i*	P		**Pn**	**09 16 37.1**	**-0.3**
MT05	**Renca**	**1.62**	**36**	↓*i*	P		**Pn**	**09 16 38.2**	**+0.4**
MT05					*i* S		**Sn**	**09 16 59.3**	**+1.6**
MT05					IAML			09 17 03.2	
	comp=E,6μm,0.3s								
LMEL	**Las Melosas**	**1.64**	**59**	↓*i*	P		**Pn**	**09 16 37.4**	**-0.7**
LMEL					*i* S		**Sn**	**09 16 58.7**	**+0.5**
LMEL					IAML			09 17 02.9	
	comp=N,5μm,0.2s								
MT03	**Universidad Ad**	**1.67**	**44**	↓*i*	P		**Pn**	**09 16 38.2**	**-0.3**
MT03					*i* S		**Sn**	**09 17 00.0**	**+1.2**
MT03					IAML			09 17 06.5	
	comp=N,11μm,0.2s								
VA01	**Torpederas**	**1.70**	**7**	↑*i*	P		**Pn**	**09 16 39.4**	**+0.6**
CLCH	**Cerro Calan**	**1.72**	**41**	↓*i*	P		**Pn**	**09 16 39.3**	**0.0**
CLCH					*i* S		**Sn**	**09 17 01.4**	**+1.2**
CLCH					IAML			09 17 03.7	
	comp=E,5μm,0.2s								
PEL	**Peldehue**	**1.85**	**33**	*e*	P		**Pn**	**09 16 41.3**	**+0.3**
PEL					*i* S		**Sn**	**09 17 05.3**	**+1.9**
PEL					IAML			09 17 12.3	
	comp=N,3μm,0.6s								
PEL	**Peldehue**	**1.85**	**33**				**Pn**	**09 16 41.3**	**+0.3**
PEL						Sn	**Sn**	**09 17 05.8**	**+2.5**
PEL	**Peldehue**	**1.85**	**33**	*i*	P		**Pn**	**09 16 42.2**	**+1.1**
ROC1	**El Roble**	**1.88**	**23**		Pn		**Pn**	**09 16 42.2**	**+0.7**
ROC1					Sn		**Sn**	**09 17 04.9**	**+0.8**
ROC1	**El Roble**	**1.88**	**23**	*i*	P		**Pn**	**09 16 43.3**	**+1.8**
ROC1					*i* S		**Sn**	**09 17 07.3**	**+3.2**
ROC1					*e*S			09 17 08.5	
ROCH	**El Roble**	**1.88**	**23**	↑*e*	P		**Pn**	**09 16 42.1**	**+0.6**
ROCH					*i* S		**Sn**	**09 17 07.1**	**+2.9**
CCHI	**Chillan**	**1.89**	**185**		IAML			09 17 22.2	
	comp=N,4μm,0.3s								
CCHI	**Chillan**	**1.89**	**185**	*i*	P		**Pn**	**09 16 45.4**	**+3.9**
CCHI				↓	*e*S		**Sn**	**09 17 12.2**	**+8.1**
FCH	**Farellones**	**1.91**	**44**	↓*i*	P		**Pn**	**09 16 41.9**	**-0.1**
FCH					*i* S		**Sn**	**09 17 06.3**	**+1.1**
FCH					IAML			09 17 11.3	
	comp=N,4μm,0.2s								
EDS3	**Malargue**	**2.29**	**118**	*i*	P		**Pn**	**09 16 47.4**	**+0.3**
BI03	**Tigo**	**2.32**	**203**	*e*	P		**Pn**	**09 16 46.7**	**-0.6**
RFA	**San Rafael**	**2.81**	**92**	*i*	P		**Pn**	**09 16 53.5**	**-0.7**
RFA					IAML			09 17 11.1	
	comp=Z,423nm,0.7s								
AAGR	**Agrelo**	**3.02**	**58**	*i*	P		**Pn**	**09 16 57.7**	**+0.8**
ARCO	**CERRO ARCO**	**3.09**	**54**	*i*	P		**Pn**	**09 16 58.8**	**+0.9**
ARCO					IAML			09 17 09.7	
	comp=Z,272nm,0.7s								
RTLS	**Leoncito**	**3.62**	**37**	*i*	P		**Pn**	**09 17 07.6**	**+2.1**
RTLS					IAML			09 18 04.1	
	comp=Z,186nm,0.4s								
RTCV	**Cerro Valdivia**	**3.99**	**45**	*i*	P		**Pn**	**09 17 11.2**	**+1.0**
ZON	**Zonda**	**4.15**	**41**	*i*	P		**Pn**	**09 17 14.0**	**+1.6**
ZON					IAML			09 18 17.5	
	comp=Z,70nm,0.6s								
CFA	**Coronel Fontan**	**4.35**	**46**		P		**Pn**	**09 17 15.9**	**+0.6**
	comp=Z,6.0nm,0.3s,baz=233,slow=11,SNR=81								
CFA					S		**Sn**	**09 18 09.5**	**+4.8**
	comp=Z,2.4nm,0.3s,baz=311,slow=20,SNR=2.1								
CFA					LR		LR	09 18 59.7	
	comp=Z,129nm,18.0s,baz=250,slow=40								
CFA	**Coronel Fontan**	**4.35**	**46**	*i*	P		**Pn**	**09 17 16.4**	**+1.1**
RTLL	**Cerro Villicun**	**4.42**	**41**	*i*	P		**Pn**	**09 17 17.1**	**+0.9**
RTLL					IAML			09 18 18.7	
	comp=Z,259nm,0.8s								
ACAN	**Cantantal**	**4.62**	**60**	*i*	P		**Pn**	**09 17 19.8**	**+1.0**
GO04	**Tololo Observa**	**4.62**	**12**				**Pn**	**09 17 18.9**	**-0.2**
GO04						Sn	**Sn**	**09 18 10.4**	**-1.2**
GO04	**Tololo Observa**	**4.62**	**12**	*i*	P		**Pn**	**09 17 19.0**	**-0.1**
GO04					*e*S		**Sn**	**09 18 16.9**	**+5.3**
AMOG	**MOGNA**	**4.72**	**38**	*i*	P		**Pn**	**09 17 20.7**	**+0.4**
GO06	**Curarrehue**	**4.87**	**176**		Pn		**Pn**	**09 17 22.8**	**+0.4**
GO06	**Curarrehue**	**4.87**	**176**	*i*	P		**Pn**	**09 17 23.7**	**+1.3**
AGUA	**GUANDACOL**	**5.95**	**30**	*i*	P		**Pn**	**09 17 38.0**	**+0.8**
PLCA	**Paso Flores**	**6.10**	**170**		P		**Pn**	**09 17 39.9**	**+0.7**
	comp=Z,2.4nm,0.3s,baz=357,slow=11,SNR=70								
PLCA					S		Sn	09 19 01.4	+14
	baz=90,slow=20,SNR=1.5								
PLCA	**Paso Flores**	**6.10**	**170**				**Pn**	**09 17 39.7**	**+0.5**
PLCA	**Paso Flores**	**6.10**	**170**	*i*	P		Pn	09 17 43.4	+4.2
VCA	**Vinchina**	**6.73**	**29**	*i*	P		**Pn**	**09 17 50.0**	**+2.1**
VCA					IAML			09 19 21.6	
	comp=Z,104nm,0.5s								
GO03	**Copiap**	**7.24**	**12**		Pn		**Pn**	**09 17 53.3**	**-1.5**
GO02	**Mina Guanaco**	**9.72**	**12**		Pn		**Pn**	**09 18 28.9**	**-0.2**
PB10	**IPOC Station P**	**11.22**	**6**		Pn		**Pn**	**09 18 49.2**	**0.0**
LVC	**Limon Verde**	**12.34**	**13**		P		**Pn**	**09 19 05.8**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=209,slow=13,SNR=2.6								
LVC					S		**Sn**	**09 21 22.1**	**+1.1**
	baz=25,slow=19,SNR=1.9								
LVC	**Limon Verde**	**12.34**	**13**				**Pn**	**09 19 05.2**	**+0.4**
PB11	**IPOC Station P**	**15.02**	**8**		Pn		**Pn**	**09 19 40.2**	**-0.7**
CPUP	**Villa Florida**	**15.06**	**60**		P		**Pn**	**09 19 40.0**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=219,slow=18,SNR=1.8								
MNMC	**Minye Minye**	**15.65**	**8**		P		**Pn**	**09 19 49.6**	**+0.5**
MNMC					IAmb		IAmb	09 19 55.7	
	comp=Z,13nm,0.9s								
GO09	**Cerro Castillo**	**16.55**	**181**				**P**	**09 20 01.8**	**0.0**
GO09					IAmb		IAmb	09 20 21.0	
	comp=Z,31nm,1.2s								
LPAZ	**La Paz**	**18.66**	**11**		P		**P**	**09 20 26.9**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=187,slow=8.2,SNR=8.9								
LPAZ	**La Paz**	**18.66**	**11**		P		**P**	**09 20 25.8**	**-0.1**
EFI	**East Falkland**	**19.66**	**154**		P		**P**	**09 20 34.4**	**-1.5**
SIV	**San Ignacio**	**21.02**	**30**		P		**P**	**09 20 49.6**	**-1.4**
	comp=Z,7.0nm,0.9s,baz=233,slow=13,SNR=31								
SIV					sP		**pP**	**09 21 06.6**	**+3.7**
	comp=Z,7.2nm,0.8s,baz=200,slow=12,SNR=5.4								
SNAA	**Sanae**	**50.88**	**158**		P		**P**	**09 25 06.3**	**-0.5**
	comp=Z,1.4nm,0.8s,baz=336,slow=15,SNR=3.9								
SNAA	**Sanae**	**50.88**	**158**		P		**P**	**09 25 06.3**	**-0.5**
SNAA					IAmb		IAmb	09 25 13.6	
	comp=Z,1.7nm,0.8s								
QSPA	**South Pole Qui**	**55.52**	**180**		P		**P**	**09 25 41.5**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=328,slow=3.2,SNR=11								
QSPA					pP		**pP**	**09 25 54.2**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=280,slow=3.4,SNR=10								
QSPA	**South Pole Qui**	**55.52**	**180**		P		**P**	**09 25 40.9**	**-0.3**
QSPA					IAmb		IAmb	09 25 43.0	
	comp=Z,5.1nm,1.2s								
TX31	**Lajitas Ar. Si**	**70.42**	**331**		P		**P**	**09 27 20.6**	**+0.3**
TX32	**Lajitas Array**	**70.42**	**331**		P		**P**	**09 27 19.1**	**-1.3**
TX32					IAmb		IAmb	09 27 20.7	
	comp=Z,2.3nm,1.5s								
TXAR	**Lajitas Array**	**70.42**	**331**		P		**P**	**09 27 21.6**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=156,slow=8.0,SNR=11								
TXAR					pP		**pP**	**09 27 34.6**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=156,slow=8.8,SNR=12								
V48A	**Smith Brothers**	**71.47**	**347**		P		**P**	**09 27 26.3**	**-0.1**
DBIC	**Dimbokro**	**75.29**	**71**		P		**P**	**09 27 48.5**	**-0.9**
	comp=Z,3.5nm,0.7s,baz=260,slow=8.3,SNR=4.6								
DBIC	**Dimbokro**	**75.29**	**71**		P		**P**	**09 27 48.2**	**-1.2**
DBIC					IAmb		IAmb	09 27 49.5	
	comp=Z,5.6nm,0.8s								
BOSA	**Boshof**	**79.63**	**118**		P		**P**	**09 28 12.9**	**-0.8**
	comp=Z,5.1nm,0.9s,baz=197,slow=6.1,SNR=5.4								
BOSA	**Boshof**	**79.63**	**118**		P		**P**	**09 28 11.8**	**-2.0**
TORD	**Torodi Ar. Bea**	**84.33**	**70**		P		**P**	**09 28 37.0**	**-1.3**
	comp=Z,1.7nm,0.8s,baz=255,slow=3.9,SNR=8.9								
PDAR	**Pinedale Array**	**84.45**	**333**		P		**P**	**09 28 38.7**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=141,slow=4.4,SNR=2.9								
LRM	**Limekiln Ridge**	**88.14**	**333**				pP	09 29 14.6	+2.8
H11S2	**WAKE ISLAND Hyl**	**25.89**	**269**		T		T	11 53 34.4	
	baz=119,slow=75,SNR=6.5								
H11S1	**WAKE ISLAND Hyl**	**25.90**	**269**		T		T	11 53 45.4	
	baz=119,slow=75,SNR=7.7								
H11S3	**WAKE ISLAND Hyl**	**25.90**	**269**		T		T	11 53 35.4	
	baz=119,slow=75,SNR=8.7								
H11N3	**WAKE ISLAND Hyl**	**26.32**	**270**		T		T	11 54 10.9	
	baz=120								
H11N1	**WAKE ISLAND Hyl**	**26.33**	**270**		T		T	11 54 06.3	
	baz=120,slow=74								
H11N2	**WAKE ISLAND Hyl**	**26.33**	**270**		T		T	11 54 12.5	
	baz=120,slow=74								
MKAR	**Makanchi Array**	**157.13**	**50**		PKPab		**PKPab**	**09 36 31.3**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=268,slow=3.6,SNR=4.0								

ISC 09 09:17:20.2±0.9,49.99N±0.04×18.58E±0.02,h0km,n17, σ0s97/30,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.32**	**242**	*e*	PG		**Pg**	**09 17 27.0**	**+0.7**
OKC					*e*SG		**Sg**	**09 17 29.1**	**-1.3**
	comp=Z,59nm,0.6s								
MORC	**Moravsky Berou**	**0.70**	**253**	*e*	PG		**Pg**	**09 17 34.0**	**+0.3**
OJC	**Ojcow**	**0.82**	**73**	*e*	Pg		**Pg**	**09 17 35.2**	**-0.7**
OJC					*e*Sg		**Sg**	**09 17 44.5**	**-1.9**
LANS	**Liptovska Anna**	**1.01**	**145**	*e*	PG		**Pg**	**09 17 39.5**	**-0.1**
LANS					*e*SG		**Sg**	**09 17 53.3**	**+0.6**
LANS					*e*LG		Lg	09 17 58.1	
KRLC	**Kraliky**	**1.17**	**275**	*e*	PG		**Pg**	**09 17 41.7**	**-0.8**
KRLC					*e*SG		**Sg**	**09 17 58.2**	**+0.6**
	comp=Z,19nm,0.6s								
JAVC	**Velka Javorina**	**1.27**	**208**	*e*	PG		**Pg**	**09 17 45.0**	**+0.4**
VRAC	**Vranov**	**1.46**	**243**	*e*	PG		**Pn**	**09 17 47.6**	**-0.2**
VRAC					*e*SG		**Sg**	**09 18 07.1**	**+0.1**
DPC	**Dobruska-Polom**	**1.50**	**285**	*e*	PG		**Pn**	**09 17 48.4**	**0.0**
DPC					*e*SG		**Sn**	**09 18 09.1**	**+0.4**
	comp=Z,12nm,0.6s								
VYHS	**Vyhne**	**1.50**	**174**	*e*	PG		**Pn**	**09 17 47.4**	**-1.0**
KRUC	**Moravsky**	**1.70**	**238**	*e*	PG		**Pn**	**09 17 51.3**	**+0.2**
KRUC					*e*SG		**Sn**	**09 18 13.1**	**-0.4**
CHVC	**Chvalec**	**1.73**	**291**	*e*	PG		**Pb**	**09 17 53.1**	**+0.3**
CHVC					*e*SG		**Sg**	**09 18 16.3**	**+0.6**
UPC	**Upice**	**1.73**	**289**	*e*	PG		**Pb**	**09 17 52.7**	**-0.1**
UPC					*e*SG		**Sg**	**09 18 16.9**	**+1.1**
	comp=Z,5.2nm,0.4s								
STHS	**Stebnicka Huta**	**1.82**	**107**	*e*	PN		**Pn**	**09 17 53.7**	**+1.0**
STHS					*e*SN		**Sg**	**09 18 20.6**	**+2.0**
MODS	**Modra-Piesok**	**1.83**	**208**	*e*	PG		**Pb**	**09 17 54.0**	**-0.5**
MODS					*e*SG		**Sn**	**09 18 16.8**	**+0.1**
PRU	**Pruhonice**	**2.61**	**272**	*e*	SG		**Sg**	**09 18 42.6**	**-1.3**
	comp=Z,3.9nm,0.4s								
BRG	**Berggiesshubel**	**3.10**	**288**		PG		**Pg**	**09 18 19.2**	**-0.3**
BRG					SG		**Sg**	**09 19 01.1**	**+1.5**
	2.8nm,0.7s								
KHC	**Kasperske Hory**	**3.37**	**257**	*e*	PG		**Pb**	**09 18 21.3**	**+0.5**
KHC					*e*SG		**Sg**	**09 19 06.1**	**-2.2**
	comp=Z,4.9nm,0.8s								

IDC 09 09:42:14.2±2.9,6.42S×130.10E,h75km±39km,mb3.4/1, mb1 3.7/5,mb1mx3.4/29,mbtmp3.9/5,ML3.8/4,Error ellipse: s-maj=71.2km s-min=22.7km az=90.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.63**	**12**		P		Pn	09 43 35.8	+0.3
	4.2nm,0.3s,baz=230,slow=23,SNR=28								
SIJI					S		Sn	09 44 34.8	-4.0
	5.7nm,0.3s,baz=258,slow=21,SNR=8.0								
FITZ	**Fitzroy Crossi**	**12.40**	**200**		P		Pn	09 45 08.2	+0.4
	0.4nm,0.3s,baz=34,slow=8.0,SNR=27								
FITZ					S		Sn	09 47 18.4	-5.8
	0.3nm,0.3s,baz=252,slow=19,SNR=3.0								
WRA	**Warramunga Arr**	**14.06**	**163**		P		Pn	09 45 28.6	-1.4
	0.5nm,0.3s,baz=347,slow=14,SNR=19								
WRA					S		Sn	09 47 54.7	-10
	0.8nm,0.3s,baz=336,slow=20,SNR=9.5								
ASAR	**Alice Springs**	**17.54**	**168**		P		P	09 46 14.6	+0.5
	0.3nm,0.3s,baz=346,slow=9.1,SNR=21								
ASAR					S		Sn	09 49 17.8	-11
	0.1nm,0.3s,baz=348,slow=26,SNR=3.9								
MKAR	**Makanchi Array**	**67.80**	**327**		P		P	09 53 04.1	-0.2
	0.3nm,0.5s,baz=124,slow=7.6,SNR=5.8								

NNC 09 09:58:46.4±2.0,54.26N×86.08E,h0km,mb3.6,mpv2.9, 10C-4D,Error ellipse: s-maj=22.1km s-min=9.1km az=170.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**0.80**	**248**	↑	P		Pg	09 59 01.6	-0.1
	0.3nm,0.3s								
ZAA0				↑	S		Sb	09 59 13.4	-1.2
	2.5nm,0.5s								
KURK	**Kurchatov**	**5.77**	**235**	↓	Pn		Pn	10 00 14.2	+1.0
	1.5nm,0.7s								
KURK				↓	Sn		Sn	10 01 17.8	-2.2
	2.1nm,1.1s								
KURK				↓	Lg		Lg	10 01 48.1	
	3.9nm,0.7s								
KURBB	**Kurchatov Arra**	**5.88**	**235**	↑	Pn		Pn	10 00 16.7	+2.0
	1.2nm,0.3s								
KURBB				↑	Sn		Sn	10 01 21.9	-0.7
	3.0nm,0.7s								
KURBB				↑	Lg		Lg	10 01 50.9	
	5.8nm,0.7s								
MK31	**Makanchi Array**	**7.85**	**199**	↑	Pn		Pn	10 00 44.0	+2.2
	1.4nm,0.7s,baz=24,slow=12,SNR=18								
MK31				↑	Sn		Sn	10 02 12.9	+1.6
	0.3nm,0.5s,baz=22,slow=26,SNR=6.0								
MK31				↓	Lg		Lg	10 02 53.2	
	1.5nm,0.6s,baz=24,slow=30,SNR=5.0								
MAKZ	**Makanchi**	**7.90**	**201**	↑	Pn		Pn	10 00 45.6	+3.2
	0.7nm,0.9s								
MAKZ				↑	Sn		Sn	10 02 13.0	+0.5
	2.2nm,1.1s								
MAKZ				↑	Lg		Lg	10 02 56.2	
	0.9nm,0.7s								

MAN 09 10:11:12.6,9.80N×123.97E,h8km,mb4.3,ML3.2,MS2.9, 2C,Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.52**	**0**	↑	*e*P		Pg	10 11 17.0	-5.6
LLP					*e*S		Sg	10 11 26.6	-2.8
DCPH	**Dipolog City**	**1.35**	**207**	↑	*i*P		Pg	10 11 41.4	+2.9
GUIM	**Jordan**	**1.59**	**301**		*e*P		Pg	10 11 47.2	+4.2
GUIM					*e*S		Sn	10 11 53.6	-8.1

MAN 09 10:17:31.1,9.82N×123.95E,h7km,mb4.6,ML3.4,MS3.3, 4C-4D,Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.49**	**1**	↓	*i*P		Pg	10 17 41.1	+0.5
LLP					*i* S		Sb	10 17 48.3	-1.1
MSLP	**Maasin**	**0.94**	**71**		*e*P		Pg	10 17 48.8	-0.5
MSLP					*e*S		Sb	10 18 03.3	+0.8
DCPH	**Dipolog City**	**1.37**	**206**	↑	*i*P		Pn	10 17 56.0	-0.6
DCPH					*i* S		Sn	10 18 14.9	-0.1
OCLP	**Ormoc**	**1.38**	**28**		*e*P		Pn	10 17 56.0	-0.7
OCLP					*e*S		Sg	10 18 15.9	+0.4
SCPH	**Surigao**	**1.51**	**91**	↓	*e*P		Pn	10 17 58.5	-0.1
SCPH					*e*S		Sn	10 18 18.3	-0.3
CGP	**Cagayan de Oro**	**1.54**	**152**	↓	*e*P		Pn	10 17 57.4	-1.6
CGP					*e*S		Sn	10 18 17.0	-2.4
GUIM	**Jordan**	**1.56**	**301**		*e*P		Pn	10 17 58.0	-1.3
GUIM					*e*S		Sn	10 18 18.9	-0.9
BUTP	**Butuan**	**1.85**	**117**		*e*S		Sb	10 18 28.3	-0.4
PAGZ	**Pagadian**	**2.04**	**196**		*e*P		Pn	10 18 05.0	-0.9
PAGZ					*e*S		Sn	10 18 32.4	+0.7
RCP	**Roxas**	**2.10**	**326**	↑	*e*P		Pn	10 18 07.3	+0.7
RCP					*e*S		Sb	10 18 35.5	-0.2
BUKP	**Musuan**	**2.22**	**150**		*e*P		Pn	10 18 06.1	-2.3
BUKP					*e*S		Sn	10 18 36.8	+0.6
CTBH	**Cotabato--PC H**	**2.60**	**174**	↓	*i*P		Pn	10 18 15.3	+1.7
CTBH					*i* S		Sn	10 18 46.6	+1.1
KCP	**Kidapawan**	**3.01**	**158**	↑	*e*P		Pn	10 18 21.5	+2.2
LQP	**Lukban**	**4.87**	**331**	↑	*e*P		Pn	10 18 45.4	+0.4

*ISK **09** 10:30:24.9,39.68N×29.46E,h1km,ML2.2/6,Suspected Mining explosion.*
*DDA **09** 10:30:25.3,39.67N×29.44E,h7km±1km,MD2.7*

ISC 09 10:30:25.7±0.9,39.68N±0.03×29.46E±0.03,h0km,n24, σ0s48/27,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.23**	**180**			PG	**Pg**	**10 30 30.4**	**+0.3**
TVSB						SG	**Sg**	**10 30 34.7**	**+1.7**
ULDT	**Uludag**	**0.53**	**332**	*i*	P		**Pg**	**10 30 35.9**	**+0.1**
GDZ	**Gediz**	**0.59**	**179**	*i*	P		**Pg**	**10 30 37.0**	**0.0**
CAVI	**Cavuskoy**	**0.60**	**29**		PG		**Pg**	**10 30 37.5**	**+0.3**
SHAP	**Saphane-Kutahy**	**0.68**	**196**		PG		**Pg**	**10 30 39.1**	**+0.4**
DURS	**Dursunbey**	**0.77**	**264**	*i*	P		**Pg**	**10 30 39.9**	**-0.5**
DURS					*i* S		**Sg**	**10 30 51.1**	**+0.8**
BORA	**Eskisehir**	**0.79**	**75**		PG		**Pg**	**10 30 40.9**	**0.0**
BORA	**Eskisehir**	**0.79**	**75**	*i*	P		**Pg**	**10 30 40.8**	**-0.1**
DEMI	**Demirci**	**0.86**	**223**	*i*	P		**Pg**	**10 30 42.3**	**+0.1**
SRCK	**Saricakaya, Es**	**0.97**	**68**		PG		**Pg**	**10 30 44.4**	**+0.3**
SRCK	**Saricakaya, Es**	**0.97**	**68**	*i*	P		**Pg**	**10 30 44.0**	**-0.3**
ARMT	**Armutlu**	**1.00**	**333**		PG		**Pg**	**10 30 45.1**	**+0.2**
USAK	**Uak-Merkez**	**1.02**	**200**	*i*	P		**Pg**	**10 30 45.6**	**+0.3**
KCTX	**Karacabey (Bur**	**1.03**	**305**		PG		**Pg**	**10 30 45.8**	**+0.3**
AFYO	**Afyonkarahisar**	**1.10**	**144**	*i*	P		**Pb**	**10 30 47.1**	**-0.6**
CIFT	**Cifteler, Eski**	**1.28**	**104**		PN		**Pb**	**10 30 50.4**	**-0.3**
CIFT	**Cifteler,

WHVZ	Whangaehu Hut	1.84	6	P		Pb	10 46 57.0	-1.2
DRZ	Dome Shelter	1.85	5	P		Pb	10 46 59.4	+1.0
TUVZ	Tukino	1.86	8	P		Pb	10 46 57.1	-1.4
FWVZ	Far West T-bar	1.87	5	P		Pb	10 46 57.3	-1.3
KHZ	Kahutara	1.87	225	P		Pn	10 46 55.9	+0.6
KHZ	Kahutara	1.87	225			Pn	10 46 56.0	+0.6
KWHZ	Kaweka Forest	1.88	27	P		Pb	10 46 55.7	+0.2
THZ	Tophouse	1.94	250	P		Pb	10 46 57.2	+0.9
THZ	Tophouse	1.94	250			Pn	10 46 57.4	+1.1
NGZ	Ngauruhoe	1.95	6	P		Pn	10 46 58.3	+1.8
MCHZ	McNeill Hill	1.97	32	P		Pn	10 46 56.9	+0.3
CKHZ	Cape Kidnapper	1.97	43	P		Pb	10 47 03.9	+3.6
PREZ	Palmer Road	1.99	333	P		Pb	10 47 00.5	-0.1
WTVZ	West Tongariro	2.01	7	P		Pb	10 46 59.3	+1.9
KRVZ	Karewarewa	2.03	7	P		Pb	10 46 59.7	-1.7
NMEZ	Namu Road	2.04	326	P		Pb	10 47 01.1	-0.3
VRZ	Vera Road	2.04	347	P		Pb	10 47 00.7	-0.8
TWVZ	Taurewa	2.04	2	P		Pn	10 46 59.5	+1.7
KHEZ	Kahui Hut	2.08	330	P		Pb	10 47 01.7	-0.5
DREZ	Durham Road	2.11	335	P		Pb	10 47 02.3	-0.4
QRZ	Quartz Range	2.15	277	P		Pn	10 47 00.8	+1.7
QRZ	Quartz Range	2.15	277			Pn	10 47 01.2	+2.1
KATZ	Kakaramea	2.16	7	P		Pb	10 47 02.0	-1.5
NBEZ	Newall Road No	2.16	328	P		Pb	10 47 03.1	-0.4
RITZ	Rihia Road	2.17	11	P		Pb	10 47 02.8	-1.0
MHEZ	Mangahewa	2.18	339	P		Pb	10 47 03.4	-0.4
PKE	Pukeiti	2.18	331	P		Pb	10 47 03.6	-0.2
ARHZ	Aropaoanui	2.25	35	P		Pn	10 47 01.0	+0.6
RATZ	Rangitukua	2.27	9	P		Pb	10 47 05.7	+0.3
HATZ	Hinemaiaia	2.30	15	P		Pb	10 47 05.1	-0.7
WATZ	Wairara	2.42	7	P		Pn	10 47 05.5	+2.5
MRHZ	Matea Rd	2.43	20	P		Pn	10 47 04.0	+1.0
WHTZ	Whakaora	2.49	11	P		Pn	10 47 11.7	+2.5
GVZ	Greta Valley S	2.52	222	P		Pn	10 47 04.5	+0.2
MTHZ	Maungataniwha	2.54	28	P		Pn	10 47 04.3	-0.3
RAHZ	Arahi	2.58	32	P		Pn	10 47 04.5	-0.5
HIZ	Hauiti	2.63	352	P		Pn	10 47 06.5	+0.8
HIZ	Hauiti	2.63	352	Pn		Pn	10 47 07.4	+1.7
ALRZ	Allen Road	2.67	17	P		Pb	10 47 11.5	-0.6
WPRZ	Whakapapatarin	2.67	14	P		Pb	10 47 11.1	-1.1
DSZ	Denniston Nort	2.73	256	P		Pn	10 47 08.1	+0.9
PRRZ	Plateau Road	2.74	18	P		Pb	10 47 12.5	-0.9
TLZ	Tolley Road	2.79	3	P		Pb	10 47 12.0	-2.2
RTZ	Ruatahuna	2.80	27	P		Pn	10 47 08.2	0.0
HRRZ	Handcock Road	2.82	15	P		Pb	10 47 14.2	-0.5
GRRZ	Galatos Road	2.83	12	P		Pb	10 47 17.6	+2.7
LTZ	Lake Taylor	2.83	233	P		Pn	10 47 08.7	+0.2
LTZ	Lake Taylor	2.83	233			Pn	10 47 08.9	+0.3
MUGZ	Murupara	2.86	23	P		Pb	10 47 17.7	+2.4
HSRZ	Hossack Road	2.89	14	P		Pb	10 47 18.5	+2.6
RRRZ	Republican Roa	2.92	19	P		Pb	10 47 18.7	+2.2
HLRZ	Highlands Stat	2.97	16	P		Pb	10 47 20.2	+2.9
UTU	Utuhina	3.01	13	P		Pb	10 47 21.3	+3.3
TARZ	Mount Tarawera	3.02	18	P		Pn	10 47 11.1	0.0
RIGZ	Rimuhau	3.04	39	P		Pb	10 47 29.7	+11
NGRZ	Ngongotaha	3.08	13	P		Pb	10 47 23.0	+3.8
OKCZ	Okains Bay	3.10	212	P		Pn	10 47 12.0	-0.3
OMRZ	Omania	3.11	15	P		Pb	10 47 24.0	+4.3
URZ	Urewera	3.16	26	P		Pn	10 47 14.0	+0.9
URZ	Urewera	3.16	26	Pn		Pn	10 47 14.0	+0.9
EDRZ	Edgecumbe	3.19	20	P		Pb	10 47 24.5	+3.3
MQZ	McQueen's Vall	3.26	217	P		Pn	10 47 13.4	-1.0
MQZ	McQueen's Vall	3.26	217	Pn		Pn	10 47 14.1	-0.4
MQZ				Sn		Sn	10 47 49.9	-2.4
AKCZ	Akaroa Harbour	3.29	212	P		Pn	10 47 14.4	-0.4
KMRZ	Kaimai	3.30	8	P		Pb	10 47 21.8	-1.1
TKGZ	Te Karaka	3.31	37	P		Pn	10 47 14.9	-0.1
INZ	Inchbonnie	3.32	240	P		Pn	10 47 15.5	+0.3
TOZ	Tahuroa Road	3.38	2	P		Pn	10 47 18.6	+2.5
TGRZ	Tauranga	3.46	12	P		Pb	10 47 24.5	-1.1
TWGZ	Tauwhareparae	3.58	36	P		Pn	10 47 19.8	+1.0
HAZ	Te Kaha	3.85	30	P		Pn	10 47 21.8	-0.7
WVZ	Waitaha Valley	3.94	239	P		Pn	10 47 24.3	+0.6
MKAZ	Moumakai	4.01	358	P		Pn	10 47 25.4	+0.7
WMGZ	Waiomatatini S	4.06	37	P		Pn	10 47 24.5	-1.0
AWAZ	Awhitu Peninsu	4.08	352	P		Pn	10 47 30.9	+5.2
RPZ	Rata Peaks	4.10	229	P		Pn	10 47 25.2	-0.7
RPZ	Rata Peaks	4.10	229	Pn		Pn	10 47 26.0	+0.1
RPZ				Sn		Sn	10 48 11.2	-1.8
WIAZ	Waiheke Island	4.32	358	P		Pb	10 47 35.8	-4.5
MBAZ	Motutapu North	4.36	355	P		Pb	10 47 37.0	-3.9
FOZ	Fox Glacier	4.75	238	P		Pn	10 47 34.7	-0.2
FOZ	Fox Glacier	4.75	238	Pn		Pn	10 47 36.3	+1.4
LBZ	Lake Benmore	5.01	228	P		Pn	10 47 38.9	+0.5
LBZ	Lake Benmore	5.01	228	Pn		Pn	10 47 39.2	+0.8
ODZ	Otahua Downs	5.22	220	P		Pn	10 47 40.8	+0.5
ODZ	Otahua Downs	5.22	220	Pn		Pn	10 47 41.0	-0.3
ODZ				Sn		Sn	10 48 36.1	-4.4
WCZ	Waipu Caves	5.23	351	P		Pn	10 47 46.8	+5.3
JCZ	Jackson Bay	5.67	236	P		Pn	10 47 47.4	-0.1
WKZ	Wanaka	5.94	229	P		Pn	10 47 51.2	0.0
WKZ	Wanaka	5.94	229	Pn		Pn	10 47 51.5	+0.3
OUZ	Omahuta	6.04	346	P		Pn	10 47 57.7	+5.0
OUZ	Omahuta	6.04	346	Pn		Pn	10 47 55.4	+2.7
CTZ	Chatham Island	6.50	116	P		Pn	10 47 59.4	+0.5
MLZ	Mavora Lakes	6.77	229	Pn		Pn	10 48 03.0	+0.3
MLZ				Sn		Sn	10 49 16.1	-2.8
WHZ	Wether Hill Ro	7.18	226	Pn		Pn	10 48 10.0	+1.6
BBOO	Buckleboo	32.24	272	P		P	10 52 51.5	+0.3

*IDC **09** 10:47:09.8±2.6,3°.23S×129°.95E, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.6/36, mbtmp3.9/3, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/33, Error ellipse: s-maj=187.4km s-min=27.4km az=70.0*

*DJA **09** 10:47:14.3±0.4, 4°S±5°×12°.9E±°, h10km, M3.9/9, MLv3.9/9*

ISC 09 10:47:13.8±1.0,**3°.78S**±0°.07×**128°.78E**±0°.05,**h10**km,**n11**, σ**0**°**79**/10,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masobi**	**0.46**	**19**	P	**Pg**	**10 47 22.9**	**+0.1**
AAI	**Ambon**	**0.59**	**279**	P	**Pg**	**10 47 25.8**	**+0.4**
BNDI	**Bandanaira**	**1.34**	**123**	P	**Pn**	**10 47 38.4**	**-0.2**
NLAI	**Namlea**	**1.76**	**288**	P	**Pn**	**10 47 45.4**	**+1.0**
SANI	**Sanana**	**3.28**	**302**	P	**Pn**	**10 48 04.9**	**-0.4**
FAKI	**Fak Fak**	**3.57**	**76**	P	**Pn**	**10 48 10.4**	**+1.1**
SWI	**Sorong**	**3.81**	**41**	P	**Pn**	**10 48 13.0**	**+0.4**
WRA	**Warramunga Arr**	**16.95**	**162**	P	**Pn**	**10 51 11.2**	**-0.2**
	0.3nm,0.3s,baz=349,slow=13,SNR=4.1						
ASAR	**Alice Springs**	**20.38**	**166**	P	**P**	**10 51 51.4**	**+0.5**
	10nm,0.7s,baz=349,slow=11,SNR=185						
KSRS	**Korea Array**	**41.03**	**359**	LR	LR	11 13 17.3	
	comp=Z,20nm,18.8s,baz=115,slow=39						
MKAR	**Makanchi Array**	**64.89**	**327**	P	**P**	**10 57 52.2**	**-1.2**
	0.4nm,0.7s,baz=117,slow=8.2,SNR=3.7						

*NEIC **09** 10:54:57.9±2.4, 3°.20S±0°.09×139°.76E±0°.05, h108km±8km, mb4.1/6, Error ellipse: s-maj=13.2km s-min=6.4km az=167.0*

*DJA **09** 10:54:57.4±0.4, 3°S±7°×14°0E±°, h130km±6km, M4.4/9, mb4.4/9, mB5.0/1, MLv4.5/7, Mw(mB)4.4/1*

*IDC **09** 10:54:58.3±0.9, 3°.17S×139°.88E, h114km±10km, mb3.6/9, mb1 3.8/12, mb1mx3.7/30, mbtmp4.1/12, Error ellipse: s-maj=23.0km s-min=14.2km az=108.0*

ISC 09 10:54:57.2±0.6,**3°.30S**±0°.06×**139°.75E**±0°.06,**h10**km,**n32**, σ**2**s**06**/38,**mb3.9**/9,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.81**	**31**	P	**Pn**	**10 55 16.8**	**+1.1**
GENI				S	**Sn**	**10 55 30.9**	**+1.4**
WAMI	**Wamena**	**1.19**	**241**	P	Pn	10 55 26.8	+7.1
JAY	**Jayapura**	**1.23**	**51**	P	**Pn**	**10 55 20.7**	**+0.5**
	222nm,0.3s,baz=219,slow=12,SNR=457						
JAY				S	**Sn**	**10 55 37.1**	**-0.5**
	89nm,0.3s,baz=141,slow=21,SNR=7.8						
JAY				LR	LR	10 55 55.4	
	comp=Z,230nm,19.6s,baz=342,slow=54						
JAY	**Jayapura**	**1.23**	**51**	P	**Pn**	**10 55 20.7**	**+0.5**
SMPI	**Sarmi**	**1.66**	**321**	P	**Pn**	**10 55 27.4**	**+2.0**
RKPI	**Ransiki, Papua**	**5.84**	**288**	P	**Pn**	**10 56 23.0**	**+1.6**
	0.7nm87nm,1.1s						
FAKI	**Fak Fak**	**7.50**	**273**	P	**Pn**	**10 56 45.3**	**+1.4**
	0.3nm39nm,1.2s						
FAKI	**Fak Fak**	**7.50**	**273**	Pn	**Pn**	**10 56 45.7**	**+1.8**
SIJI	**Sorong**	**8.81**	**286**	P	**Pn**	**10 57 05.4**	**+3.6**
	4.2nm,0.3s,baz=90,slow=9.0,SNR=8.8						
SIJI				S	**Sn**	**10 58 38.1**	**-1.4**
	0.9nm,0.3s,baz=287,slow=19,SNR=2.9						
SWI	**Sorong**	**8.82**	**286**	P	**Pn**	**10 57 03.1**	**+1.2**
	34nm,0.6s						
PMG	**Port Moresby**	**9.54**	**130**	P	**Pn**	**10 57 14.3**	**+2.7**
	1.6nm,0.3s,baz=321,slow=4.7,SNR=9.3						
PMG	**Port Moresby**	**9.54**	**130**		**Pn**	**10 57 13.5**	**+1.8**
COEN	**Coen**	**11.12**	**162**	Pn	**Pn**	**10 57 34.7**	**+1.5**
MTN	**Manton Dam**	**12.75**	**221**		**Pn**	**10 57 55.6**	**+0.7**
KNRA	**Kununurra**	**16.38**	**221**		**Pn**	**10 58 42.5**	**+1.2**
SOEI	**Soe**	**16.66**	**247**	P	**Pn**	**10 58 45.7**	**+0.8**
	47nm,0.8s						
LUWI	**Luwuk**	**17.11**	**277**	P	**Pn**	**10 58 48.3**	**-2.0**
	41nm,0.9s						
WR0	**Warramunga Arr**	**17.33**	**197**	P	**P**	**10 58 54.0**	**+1.3**
WR0				lAmb	lAmb	10 58 56.6	
	comp=Z,5.6nm,0.6s						
WRAB	**Tennant Creek**	**17.36**	**197**	P	**P**	**10 58 54.8**	**+1.7**
WRAB				lAmb	lAmb	10 58 57.3	
	comp=Z,12nm,0.8s						
WRA	**Warramunga Arr**	**17.37**	**197**	P	**P**	**10 58 54.5**	**+1.2**
	comp=Z,1.6nm,0.3s,baz=21,slow=12,SNR=60						
WRA				S	**Sn**	**11 01 59.2**	**-7.6**
	comp=Z,0.6nm,0.3s,baz=157,slow=15,SNR=6.0						
FITZ	**Fitzroy Crossi**	**20.19**	**222**	P	**P**	**10 59 25.6**	**+1.6**
	comp=Z,4.7nm,0.5s,baz=45,slow=11,SNR=14						
FITZ				S	**S**	**11 03 03.0**	**-2.3**
	comp=Z,8.0nm,0.9s,baz=148,slow=19,SNR=6.6						
FITZ	**Fitzroy Crossi**	**20.19**	**222**	P	**P**	**10 59 25.4**	**+1.4**
FITZ				lAmb	lAmb	10 59 26.6	
	comp=Z,7.8nm,0.8s						
FITZ					**S**	**11 03 07.0**	**+1.7**
AS31	**Alice Springs**	**21.02**	**195**	P	**P**	**10 59 35.5**	**+2.5**
ASAR	**Alice Springs**	**21.03**	**195**	P	**P**	**10 59 34.9**	**+1.8**
	comp=Z,2.9nm,0.5s,baz=14,slow=8.3,SNR=74						
ASAR				S	**S**	**11 03 21.1**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=16,slow=24,SNR=4.4						
KSRS	**Korea Array**	**42.01**	**346**	P	**P**	**11 02 38.9**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=154,slow=8.9,SNR=3.9						
CMAR	**Chiang Mai Arr**	**45.63**	**300**	P	**P**	**11 03 08.0**	**0.0**
	comp=Z,0.8nm,0.2s,baz=123,slow=7.6,SNR=5.6						
PETK	**Petropavlovsk-**	**58.19**	**13**	P	**P**	**11 04 40.4**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=157,slow=7.8,SNR=3.2						
SONM	**Songino Array**	**58.69**	**334**	P	**P**	**11 04 43.0**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=114,slow=3.5,SNR=3.5						
MKAR	**Makanchi Array**	**70.88**	**322**	P	**P**	**11 06 03.1**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=94,slow=9.0,SNR=19						
MAKZ	**Makanchi**	**71.08**	**322**	P	**P**	**11 06 02.9**	**-1.8**
MAKZ				lAmb	lAmb	11 06 05.0	
	comp=Z,2.6nm,0.7s						
ZALV	**Zalesovo Beam**	**72.96**	**330**	P	**P**	**11 06 14.2**	**-1.5**
	comp=Z,0.8nm,0.4s,baz=110,slow=6.1,SNR=3.9						
ILAR	**Eielson Array**	**85.93**	**24**	P	**P**	**11 07 23.9**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=256,slow=5.0,SNR=9.1						

*RSNC **09** 11:07:31.8±2.7,2°.98N×75°.95W, h4km±10km, ML4.3, Mw4.4, Fault plane solution: NP1:φs58.00000°, δ18.00000°, λ-167.00000°.*

*IDC **09** 11:07:33.4±3.4,3°.16N×75°.92W, h22km±21km, mb3.9/16, mb1 4.2/20, mb1mx4.0/37, mbtmp4.1/20, ML3.5/4, MS3.6/15, Ms1 3.6/15, ms1mx3.4/32, Error ellipse: s-maj=18.4km s-min=12.4km az=81.0*

*NEIC **09** 11:07:35.7±2.2,2°.99N±0°.04×75°.94W±0°.07, h44km±7km, mb4.7/64, Error ellipse: s-maj=9.8km s-min=6.4km az=97.0*

ISC 09 11:07:30.5±1.1,**3°.03N**±0°.02×**75°.96W**±0°.02,**h4**km±7km, **n132**, σ**1**s**52**/149,**mb4.6**/43,**MS3.7**/11,**10C-3D**,**Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BETC	**Betania**	**0.62**	**124**	⇓iPg	**Pg**	**11 07 42.0**	**-0.4**
BETC				eS	**Sg**	**11 07 49.3**	**-1.2**
PCON	**Cinco Dias**	**0.82**	**212**	⇑iP	**Pg**	**11 07 46.0**	**-0.4**
PCON				eS	**Sg**	**11 07 57.4**	**+0.4**
PCON				i		11 07 59.8	
	comp=Z,8μm,0.2s						
YOTC	**Yotoco, Valle**	**1.03**	**338**	iP	**Pg**	**11 07 48.7**	**-1.5**
YOTC				eS	**Sg**	**11 08 03.2**	**-0.4**
YOTC				i		11 08 04.9	
	comp=Z,4μm,0.4s						
SOTA	**Rioblanco**	**1.10**	**216**	⇑iP	**Pg**	**11 07 50.8**	**-0.9**
SOTA				eS	**Sg**	**11 08 06.8**	**+0.9**
SOTA				i		11 08 14.5	
	comp=Z,3μm,0.6s						
ORTC	**Ortega, Tolima**	**1.13**	**39**	⇑iP	**Pb**	**11 07 51.5**	**-1.2**
ORTC				eS	**Sb**	**11 08 07.4**	**-0.4**
ORTC				i		11 08 11.8	
	comp=Z,13μm,0.5s						
FLOC	**Florencia**	**1.47**	**168**	⇑iP	**Pn**	**11 07 56.6**	**-1.3**
FLOC				eS	**Sn**	**11 08 16.2**	**-1.3**
FLOC				i		11 08 19.5	
	comp=Z,7μm,0.4s						
FLOC	**Florencia**	**1.47**	**168**	Pn	**Pn**	**11 07 56.8**	**-1.0**
FLOC				Sn	**Sb**	**11 08 16.7**	**-0.8**
ANIL	**Santa Ana**	**1.56**	**21**	⇑iP	**Pn**	**11 07 57.8**	**-1.6**
ANIL				eS	**Sn**	**11 08 18.8**	**-1.4**
BBAC	**Balboa, Cauca**	**1.63**	**232**	⇓iP	**Pn**	**11 07 59.5**	**-0.8**
BBAC				eS	**Sn**	**11 08 21.2**	**-0.6**
BBAC				i		11 08 21.7	
	comp=Z,2μm,0.4s						
MALC	**Bahia Malaga**	**1.69**	**306**	⇓eP	**Pn**	**11 08 01.5**	**+0.6**
MALC				eS	**Sb**	**11 08 25.1**	**+1.2**
MALC				i		11 08 39.2	
	comp=Z,2μm,0.5s						
CRUC	**La Cruz**	**1.76**	**214**	eP	**Pn**	**11 08 02.9**	**+0.7**
CRUC				i		11 08 34.9	
	comp=Z,1μm,0.4s						
PLMC	**San Jos del P**	**1.90**	**350**	eP	**Pn**	**11 08 03.2**	**-0.6**
PLMC				eS	**Sb**	**11 08 31.0**	**+1.1**
PLMC				eS	**Sg**	**11 08 31.9**	**+0.3**
PLMC				i		11 08 36.6	
	comp=Z,3μm,0.2s						
RREF	**El Recreo**	**1.96**	**18**	⇑eP	**Pn**	**11 08 05.2**	**0.0**
RREF				eS	**Sb**	**11 08 32.5**	**+0.3**
RREF				eS	**Sb**	**11 08 32.5**	**+0.3**
RREF				i		11 08 36.0	
	comp=Z,2μm,0.5s						
GR1C	**Gorgona, Isla**	**2.21**	**269**	eP	**Pn**	**11 08 07.8**	**-0.2**
GR1C				eS	**Sn**	**11 08 34.9**	**-0.9**
GUY2C	**Guyana, Caldas**	**2.26**	**15**	⇑iP	**Pn**	**11 08 10.2**	**+1.0**
GUY2C				eS	**Sb**	**11 08 41.0**	**+0.1**
GUY2C				i		11 08 43.9	
	comp=Z,2μm,0.6s						
GCUF	**Volcan Galeras**	**2.26**	**218**	eP	**Pb**	**11 08 11.4**	**-0.9**
GCUF				eS	**Sg**	**11 08 43.6**	**+0.2**
GCUF				i		11 08 47.7	
	comp=Z,607nm,0.2s						
MACC	**Macarena, Meta**	**2.28**	**112**	eP	**Pn**	**11 08 09.6**	**+0.5**
MACC				eS	**Sb**	**11 08 39.7**	**-1.3**
MACC				i		11 08 47.1	
	comp=Z,6μm,0.5s						
CVER	**Cruz Verde, Cu**	**2.40**	**52**	eP	**Pn**	**11 08 12.9**	**+1.9**
ROSC	**El Rosal**	**2.43**	**42**	Pn	**Pn**	**11 08 12.4**	**+0.9**
	comp=Z,96nm,0.3s,baz=197,slow=24,SNR=60						
ROSC				Pg	**Pb**	**11 08 15.3**	**+0.1**
	comp=Z,166nm,0.3s,baz=191,slow=10,SNR=88						
ROSC				Lg	Lg	11 08 46.7	
	comp=Z,719nm,0.3s,baz=162,slow=19,SNR=33						
ROSC	**El Rosal**	**2.43**	**42**	eP	**Pn**	**11 08 12.7**	**+1.2**
ROSC				eS	**Sb**	**11 08 47.0**	**+1.3**
ROSC				i		11 08 59.5	
	comp=Z,5μm,1.0s						
ROSC	**El Rosal**	**2.43**	**42**		**Pb**	**11 08 14.1**	**-1.0**
ROSC				Sn	**Sb**	**11 08 46.4**	**+0.7**
VILC	**Villavicencio,**	**2.50**	**64**	eP	**Pn**	**11 08 14.4**	**+2.2**
VILC				eS	**Sb**	**11 08 49.4**	**+1.9**
CHIC	**Chingaza**	**2.73**	**54**	⇑eP	**Pn**	**11 08 17.0**	**+1.4**
CHIC				eS	**Sb**	**11 08 53.6**	**-0.8**
CHIC				i		11 09 06.4	
	comp=Z,2μm,1.2s						
NORC	**Norcasia**	**2.74**	**23**	eP	**Pn**	**11 08 16.4**	**+1.0**
NORC				eS	**Sb**	**11 08 53.4**	**-0.9**
NORC				i		11 08 59.7	
	comp=Z,1μm,0.8s						
CBOC	**Ciudad Bolivar**	**2.82**	**359**	eP	**Pn**	**11 08 19.1**	**+2.4**
CBOC				eS	**Sb**	**11 08 55.7**	**-0.9**
CBOC				i		11 09 04.8	
	comp=Z,1μm,1.7s						
TUMC	**Tumaco**	**3.01**	**247**	eP	**Pn**	**11 08 20.5**	**+1.4**
TUMC				i		11 09 28.8	
	comp=Z,238nm,0.6s						
TUMC	**Tumaco**	**3.01**	**247**	Pn	**Pn**	**11 08 20.9**	**+1.7**
PTLC	**Puerto Leguiza**	**3.06**	**158**	eP	**Pb**	**11 08 24.4**	**-1.3**
PTLC				eS	**Sg**	**11 09 11.9**	**+2.8**
PTLC				i		11 09 21.8	
	comp=Z,2μm,0.4s						
HELC	**Santa Helena**	**3.17**	**8**	⇑iP	**Pn**	**11 08 23.5**	**+1.8**
HELC				eS	**Sb**	**11 09 05.6**	**-1.4**
HELC				i		11 09 21.8	
	comp=Z,563nm,0.8s						
SPBC	**San Pablo de B**	**3.21**	**36**	eP	**Pn**	**11 08 23.6**	**+1.6**
SPBC				eS	**Sn**	**11 09 03.1**	**+2.2**
SPBC				i		11 09 11.1	
	comp=Z,580nm,0.3s						
GUVC	**San Jose del G**	**3.36**	**98**	eP	**Pn**	**11 08 23.9**	**0.0**
GUVC				eS	**Sb**	**11 09 13.3**	**+1.2**
OTAV	**Otavalo**	**3.73**	**222**	eP	**Pn**	**11 08 32.7**	**+3.4**
OTAV				eS	**Sb**	**11 09 23.4**	**+0.4**
OTAV	**Otavalo**	**3.73**	**222**		**Pn**	**11 08 32.7**	**+3.4**
PTBC	**PUERTO BERRIO,**	**3.80**	**23**	eP	**Pn**	**11 08 31.2**	**+1.3**
PTBC				eS	**Sb**	**11 09 23.8**	**-0.9**
PTBC				i		11 09 30.7	
	comp=Z,569nm,0.5s						
PTGC	**Puerto Gaitan,**	**3.99**	**73**	eP	**Pn**	**11 08 33.3**	**+0.8**
PTGC				eS	**Sb**	**11 09 30.5**	**+0.4**
PTGC				i		11 09 38.6	
	comp=Z,1μm,0.4s						
RUSC	**La Rusia**	**4.04**	**45**	eP	**Pn**	**11 08 36.0**	**+2.3**
RUSC				i		11 09 49.6	
	comp=Z,402nm,0.5s						
RUSC	**La Rusia**	**4.04**	**45**	Pn	**Pn**	**11 08 35.9**	**+2.3**
ZARC	**Zaragoza, Cauc**	**4.57**	**14**	eP	**Pn**	**11 08 42.4**	**+1.9**
ZARC				eS	**Sn**	**11 09 40.8**	**+6.6**
ZARC				i		11 09 58.5	
	comp=Z,199nm,0.6s						
UREC	**San Jos de Ur**	**4.71**	**5**	eP	**Pn**	**11 08 45.4**	**+2.8**
UREC				eS	**Sn**	**11 09 41.8**	**+4.0**
UREC				i		11 09 49.8	
	comp=Z,75nm,0.6s						
TAMC	**Tame, Arauca**	**5.36**	**51**	eP	**Pn**	**11 08 54.1**	**+2.6**
TAMC				i		11 10 32.0	
	comp=Z,172nm,0.6s						
SMLC	**San Martn de**	**6.04**	**18**	eP	**Pn**	**11 09 01.2**	**+0.5**
SMLC				i		11 10 45.4	
	comp=Z,143nm,0.6s						
SJCC	**San Jacinto, C**	**6.87**	**6**	eP	**Pn**	**11 09 16.4**	**+4.1**
SJCC				i		11 11 21.5	
	comp=Z,38nm,0.6s						
BCIP	**Isla Barro Col**	**7.22**	**328**	Pn	**Pn**	**11 09 16.7**	**-0.2**
SDV	**Santo Domingo**	**7.87**	**42**	Pn	**Pn**	**11 09 27.1**	**+1.0**
	comp=Z,5.5nm,0.3s,baz=175,slow=11,SNR=13						
SDV				Sn	**Sn**	**11 10 54.8**	**-1.0**
	comp=Z,21nm,0.3s,baz=22,slow=19,SNR=8.5						
SDV	**Santo Domingo**	**7.87**	**42**	eP	**Pn**	**11 09 26.7**	**+0.7**
SDV	**Santo Domingo**	**7.87**	**42**		**Pn**	**11 09 27.3**	**+1.2**
SDV				Sn	**Sn**	**11 10 56.6**	**+0.8**
URIC	**Uribia, Colomb**	**9.47**	**24**	Pn	**Pn**	**11 09 49.2**	**+1.3**
ATAH	**Atahualpa**	**10.38**	**194**	Pn	**Pn**	**11 10 02.6**	**+1.8**
	comp=Z,0.7nm,0.3s,baz=19,slow=15,SNR=11						
ATAH				LR	LR	11 14 47.4	
	comp=Z,400nm,21.2s,baz=355,slow=41						
JTS	**Las Juntas de**	**11.48**	**309**	LR	LR	11 14 27.9	
	comp=Z,265nm,21.2s,baz=192,slow=36						
PCRV	**Puerto La Cruz**	**13.30**	**57**	Pn	**Pn**	**11 10 39.8**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=217,slow=10,SNR=3.0						
PCRV				Sn	**Sn**	**11 13 05.8**	**-3.0**
	comp=Z,1.8nm,0.3s,baz=180,slow=20,SNR=5.0						
PCRV				Lg	Lg	11 14 40.5	
	comp=Z,0.6nm,0.3s,baz=15,slow=18,SNR=2.0						
PLCV	**Puerto La Cruz**	**13.33**	**57**		**Pn**	**11 10 39.8**	**-1.0**
PLCV					**Sn**	**11 13 05.8**	**-3.7**
NNA	**Nana**	**14.94**	**183**

G40A	**Rib Lake**	**43.89**	**345**	P	**P**	**11 15 37.3**	**-1.0**
E43A	**Lone Tree Farm**	**44.24**	**349**	P	**P**	**11 15 40.0**	**-1.0**
ECSD	**EROS Data Cent**	**44.48**	**339**	P	**P**	**11 15 41.1**	**-2.0**
EYMN	**Ely**	**46.71**	**346**	IAmb	IAmb	11 15 59.9	
	comp=Z,7.2nm,0.7s						
RSSD	**Black Hills**	**47.86**	**333**	P	**P**	**11 16 10.1**	**+0.1**
RSSD				IAmb	IAmb	11 16 11.2	
	comp=Z,9.1nm,0.9s						
KNB	**Kanab**	**47.86**	**320**	P	**P**	**11 16 10.5**	**+0.5**
PDAR	**Pinedale Array**	**49.61**	**328**	P	**P**	**11 16 22.8**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=128,slow=8.6,SNR=9.7						
DUG	**Dugway, Tooele**	**49.78**	**323**	P	**P**	**11 16 24.9**	**+0.2**
DUG				IAmb	IAmb	11 16 33.3	
	comp=Z,4.3nm,0.9s						
ULM	**Lac du Bonnet**	**49.99**	**343**	P	**P**	**11 16 23.6**	**-2.2**
	comp=Z,5.8nm,0.7s,baz=148,slow=8.0,SNR=15						
ULM				LR	LR	11 38 58.5	
	comp=Z,76nm,18.8s,baz=92,slow=38						
ULM	**Lac du Bonnet**	**49.99**	**343**	IAmb	IAmb	11 16 25.0	
	comp=Z,7.4nm,0.9s						
SPUT	**South Promonto**	**50.26**	**324**	P	**P**	**11 16 28.5**	**+0.1**
REDW	**Red Top Meadow**	**50.71**	**327**	IAmb	IAmb	11 16 32.9	
	comp=Z,7.7nm,0.9s						
SNOW	**Snow King Moun**	**50.73**	**328**	P	**P**	**11 16 31.6**	**-0.4**
SNOW				IAmb	IAmb	11 16 33.8	
	comp=Z,11nm,1.2s						
SCHQ	**Schefferville**	**52.18**	**7**	P	**P**	**11 16 42.2**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=206,slow=12,SNR=2.4						
NVAR	**Mina Array Bea**	**52.26**	**318**	P	**P**	**11 16 44.2**	**+0.8**
	comp=Z,2.6nm,0.9s,baz=126,slow=7.3,SNR=14						
FCC	**Fort Churchill**	**57.36**	**349**	P	**P**	**11 17 18.8**	**-1.0**
FCC				IAmb	IAmb	11 17 19.0	
	comp=Z,5.8nm,0.8s						
YKA	**Yellowknife Ar**	**65.89**	**341**	P	**P**	**11 18 15.5**	**-1.8**
	comp=Z,3.0nm,0.7s,baz=135,slow=6.3,SNR=71						
DBIC	**Dimbokro**	**70.89**	**84**	P	**P**	**11 18 49.8**	**+0.2**
	comp=Z,3.1nm,0.8s,baz=277,slow=13,SNR=3.6						
DBIC				LR	LR	11 48 43.3	
	comp=Z,37nm,19.2s,baz=247,slow=35						
RES	**Resolute Bay**	**72.45**	**355**	LR	LR	11 51 45.6	
	comp=Z,26nm,21.1s,baz=50,slow=37						
INK	**Inuvik**	**75.65**	**341**	P	**P**	**11 19 15.6**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=87,slow=4.6,SNR=7.8						
INK	**Inuvik**	**75.65**	**341**	IAmb	IAmb	11 19 23.7	
	comp=Z,2.9nm,0.7s						
TORD	**Torodi Ar. Bea**	**77.30**	**77**	P	**P**	**11 19 24.8**	**-2.3**
	comp=Z,0.7nm,0.7s,baz=273,slow=5.3,SNR=2.2						
DOT	**Dot Lake**	**77.69**	**335**	P	**P**	**11 19 28.9**	**+0.5**
ILAR	**Eielson Array**	**79.21**	**336**	P	**P**	**11 19 35.5**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=115,slow=4.2,SNR=6.3						
ILAR				LR	LR	11 58 12.2	
	comp=Z,23nm,19.5s,baz=108,slow=38						
STU	**Stuttgart**	**84.54**	**41**	P	**P**	**11 20 03.7**	**-1.4**
NOA	**NORSAR Array B**	**86.00**	**29**	P	**P**	**11 20 12.1**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=275,slow=4.9,SNR=2.3						
NOA				LR	LR	11 59 00.4	
	comp=Z,26nm,18.6s,baz=5.0,slow=36						
GERES	**GERESS Array B**	**87.52**	**41**	P	**P**	**11 20 18.7**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=298,slow=6.5,SNR=2.8						
GERES				LR	LR	11 51 57.7	
	comp=Z,21nm,21.4s,baz=300,slow=30						
SNAA	**Sanae**	**87.59**	**162**	P	**P**	**11 20 24.1**	**+4.4**
FINES	**FINESS Array B**	**93.10**	**28**	LR	LR	11 58 32.9	
	comp=Z,42nm,20.2s,baz=291,slow=33						
KSH	**Kashi**	**130.42**	**29**	*e*PKP	**PKPdf**	**11 26 43.4**	**+0.2**
LZH	**Lanzhou**	**141.09**	**0**	*e*PKP	**PKPdf**	**11 27 01.8**	**-1.4**
LZH				pPKP	PKiKP	11 27 04.5	-1.3
LZH				sPKP		11 27 05.3	
LZH				LR	LR		
	comp=N,56nm,17.9s						
LZH				LR	LR		
	comp=E,62nm,18.0s						
LZH				LR	LR		
	comp=Z,85nm,20.1s						
ASAR	**Alice Springs**	**144.59**	**232**	PKP	**PKPab**	**11 27 06.3**	**-1.6**
	comp=Z,2.1nm,0.5s,baz=119,slow=3.8,SNR=28						
WRA	**Warramunga Arr**	**145.99**	**238**	PKPbc	**PKPdf**	**11 27 11.3**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=117,slow=2.8,SNR=5.3						

*DRS **09** 11:09:42.5±0.0, 43°.85N×45°.03E, h12km*
*NORS **09** 11:09:50.5±0.0, 43°.64N×45°.44E, h20km, MPVA3.5*
ISC 09 11:09:52.5±1.3, 43°.51N±0°.06×45°.38E±0°.03, h16km±9km, n21, σ0°.88/39, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GROC	**Groznyy**	**0.44**	**135**	*e*Pg		**Pg**	**11 10 00.7**	**-0.6**
GROC				*e*Sg		**Sb**	**11 10 09.6**	**+1.6**
STDR	**Stavd-Durt**	**0.97**	**262**	*e*Pg		**Pb**	**11 10 09.8**	**-1.1**
STDR				*e*Sg		**Sn**	**11 10 26.2**	**+1.4**
KORR	**Kora**	**1.05**	**246**	*e*Pg		**Pg**	**11 10 13.0**	**+0.3**
KORR				*e*Sg		**Sn**	**11 10 27.1**	**+0.3**
LACR	**Lac**	**1.05**	**229**	*e*Pg		**Pb**	**11 10 11.7**	**-0.6**
LACR				*e*Sg		**Sn**	**11 10 27.8**	**+0.9**
BTLR	**Botlikh**	**1.05**	**144**	*e*Pg		**Pb**	**11 10 11.6**	**-0.8**
BTLR				*e*Sg		**Sn**	**11 10 27.2**	**+0.2**
LSNR	**Lesken**	**1.16**	**259**	*e*Pg		**Pn**	**11 10 13.7**	**-0.3**
LSNR				*e*Sg		**Sg**	**11 10 31.7**	**+1.8**
DBC	**Dubki**	**1.17**	**114**	*e*Pg		**Pn**	**11 10 13.5**	**-0.8**
DBC				*e*Sg		**Sg**	**11 10 31.5**	**+1.1**
GUDG	**Gudauri**	**1.24**	**212**	P		**Pn**	**11 10 14.8**	**-0.5**
GUDG				S		**Sb**	**11 10 29.6**	**-1.8**
GUDG	**Gudauri**	**1.24**	**212**	*e*Pg		**Pn**	**11 10 14.9**	**-0.4**
ZEI	**Tsey**	**1.30**	**237**	*i* Pg		**Pn**	**11 10 16.0**	**-0.2**
ZEI				*e*Sg		**Sg**	**11 10 35.1**	**+0.6**
UNCR	**Uncukul**	**1.31**	**127**	*e*Pg		**Pn**	**11 10 16.0**	**-0.1**
UNCR				*e*Sg		**Sg**	**11 10 36.0**	**+1.2**
DIGR	**Digorskoe uzhe**	**1.45**	**246**	*e*Pg		**Pn**	**11 10 16.7**	**-1.5**
DIGR				*e*Sg		**Sb**	**11 10 37.5**	**+0.2**
KBTC	**Kuba-Taba**	**1.46**	**283**	*e*Pg		**Pn**	**11 10 18.0**	**-0.2**
KBTC				*e*Sg		**Sb**	**11 10 38.4**	**+0.8**
GNBR	**Gunib**	**1.62**	**133**	*e*Pg		**Pb**	**11 10 21.8**	**-0.2**
GNBR				*e*Sg		**Sg**	**11 10 43.7**	**-1.0**
ONI	**Oni**	**1.69**	**237**	P		**Pn**	**11 10 21.0**	**-0.3**
ONI				S		**Sg**	**11 10 47.0**	**+0.2**
ONI	**Oni**	**1.69**	**237**	*e*Pg		**Pn**	**11 10 21.7**	**+0.4**
PYA1	**Pyatigorsk**	**1.74**	**289**	*e*Pg		**Pn**	**11 10 21.4**	**-0.7**
PYA1				*e*Sg		**Sn**	**11 10 44.4**	**+0.4**
LGD	**Lagodekhi**	**1.80**	**159**	*e*Pg		**Pb**	**11 10 24.6**	**-0.4**
LGD				*e*Sg		**Sb**	**11 10 48.4**	**+1.2**
NEY	**Neytrino**	**1.95**	**263**	*e*Pg		**Pn**	**11 10 26.0**	**+0.9**
NEY				*e*Sg		**Sb**	**11 10 51.4**	**-0.5**
SHA1	**Shidzhatmaz**	**1.99**	**277**	*e*Pg		**Pn**	**11 10 25.1**	**-0.5**
KIV0	**Kislovodsk Arr**	**1.99**	**284**	*e*Pg		**Pn**	**11 10 25.0**	**-0.6**
KIV0				*e*Sg		**Sn**	**11 10 49.9**	**-0.4**

MAN 09 11:11:12.6, 9°.80N×123°.97E, h8km, mb4.4, ML3.3, MS3.1, 2C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LLP	**Lapu-Lapu**	**0.52**	**0**	*e*P		Pg	11 11 22.8	+0.2
LLP				*i* S		Sg	11 11 30.2	+0.9
MSLP	**Maasin**	**0.94**	**69**	*e*P		Pg	11 11 30.3	-0.3
MSLP				*e*S		Sn	11 11 44.8	-0.9
DCPH	**Dipolog City**	**1.35**	**207**	*i* P		Pn	11 11 37.4	-0.3
DCPH				*i* S		Sg	11 11 56.3	+0.3
OCLP	**Ormoc**	**1.40**	**27**	*e*P		Pn	11 11 38.0	-0.4
OCLP				*e*S		Sg	11 11 58.4	+0.9
GUIM	**Jordan**	**1.59**	**301**	*e*P		Pn	11 11 39.6	-1.4
GUIM				*e*S		Sb	11 12 02.2	-0.1
PAGZ	**Pagadian**	**2.02**	**197**	*e*P		Pn	11 11 46.7	-0.3
PAGZ				*e*S		Sg	11 12 17.4	-0.2
RCP	**Roxas**	**2.12**	**326**	*e*P		Pn	11 11 49.0	+0.7
BUKP	**Musuan**	**2.19**	**150**	*e*P		Pn	11 11 48.0	-1.4
BUKP				*e*S		Sb	11 12 18.9	-1.0

*EAF **09** 11:39:30.2±1.2, 25°.28S×29°.52E, h10km, MD3.8*
ISC 09 11:39:16.7±1.8, 25°.41S±0°.08×29°.6E±0°.2, h10km, n7, σ2°.84/12, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSNA	**Messina**	**3.08**	**8**	*i* P		**Pg**	**11 40 13.6**	**-2.1**
MSNA				*i* S		**Sg**	**11 40 54.6**	**-1.1**
MSNA	**Messina**	**3.08**	**8**	*i* P		**Pg**	**11 40 17.1**	**+1.4**
MSNA				*i* S		**Sb**	**11 40 51.4**	**+2.1**
LBTB	**Lobatse**	**3.60**	**275**	*i* P		**Pb**	**11 40 20.6**	**0.0**
BOSA	**Boshof**	**4.99**	**229**	*i* P		**Pn**	**11 40 32.5**	**+0.7**
BOSA				*i* S		Sn	11 41 22.5	-7.1
BOSA	**Boshof**	**4.99**	**229**	*i* P		**Pb**	**11 40 44.3**	**+0.1**
BOSA				*i* S		**Sb**	**11 41 41.5**	**-2.8**
MATP	**Matopo**	**5.05**	**349**	*i* P		**Pb**	**11 40 42.3**	**-3.0**
MATP				*i* S		**Sb**	**11 41 43.6**	**-2.6**
MATP	**Matopo**	**5.05**	**349**	*i* P		**Pb**	**11 40 43.7**	**-1.6**
MATP				*i* S		**Sn**	**11 41 37.0**	**+5.8**

*NNC **09** 11:42:10.8±6.5, 37°.90N×70°.89E, h268km±68km, mb2.5, mpv3.7, Error ellipse: s-maj=65.1km s-min=41.4km az=21.0*
*KRNET **09** 11:42:17.8±0.1, 39°.05N×69°.78E, mb3.4*
ISC 09 11:42:12.2±2.4, 38°.9N±0°.1×69°.51E±0°.09, h10km, n24, σ2°.86/40, 22C-12D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BTK	**Batken**	**1.56**	**40**	⇑*i* P		**Pn**	**11 42 41.5**	**+1.4**
	baz=38							
BTK				⇑*i* S		**Sn**	**11 42 58.5**	**-2.0**
	baz=38							
ANR	**Andizhan**	**2.89**	**48**	P		**Pn**	**11 42 59.8**	**+1.4**
ANR				S		**Sn**	**11 43 34.9**	**+1.7**
ARK	**Arkit**	**3.47**	**32**	⇑*i* P		**Pn**	**11 43 08.5**	**+2.0**
	baz=31							
ARK				⇑*i* S		**Sn**	**11 43 45.0**	**-2.7**
	baz=31							
ARSB	**Arslanbob**	**3.62**	**46**	⇑*e*P		**Pn**	**11 43 11.2**	**+2.7**
	baz=46							
ARSB				⇑*i* S		**Sn**	**11 43 48.6**	**-2.7**
	baz=46							
KK31	**Karatay Array**	**4.30**	**10**	⇑P		**Pb**	**11 43 25.9**	**-2.0**
	2.6nm,0.3s,baz=179,slow=12,SNR=64							
KK31				⇓S		**Sg**	**11 44 34.9**	**+4.7**
	5.5nm,0.4s,baz=172,slow=30,SNR=10.0							
AML	**Almayashu**	**4.56**	**43**	⇑*i* P		**Pn**	**11 43 23.6**	**+2.0**
	baz=43							
AML				⇑*i* S		**Sn**	**11 44 12.1**	**-2.8**
	baz=43							
AML	**Almayashu**	**4.56**	**43**	P		**Pn**	**11 43 23.8**	**+2.2**
	SNR=13							
ARLS	**Aral**	**4.74**	**49**	⇑*i* P		**Pn**	**11 43 26.6**	**+2.7**
	baz=49							
ARLS				⇑*i* S		**Sn**	**11 44 16.2**	**-2.7**
	baz=49							
EKS2	**Erkin-Say**	**4.98**	**39**	⇑*e*P		**Pn**	**11 43 29.6**	**+2.4**
	baz=39							
EKS2				⇑*i* S		**Sn**	**11 44 22.5**	**-2.5**
	baz=39							
UCH	**Uchtor**	**5.08**	**47**	⇓*i* P		**Pn**	**11 43 30.6**	**+1.8**
	baz=47							
UCH				⇓*i* S		**Sn**	**11 44 24.0**	**-3.7**
	baz=47							
UCH	**Uchtor**	**5.08**	**47**	P		**Pn**	**11 43 30.1**	**+1.3**
	SNR=13							
AAK	**Ala-Archa**	**5.34**	**44**	⇑*i* P		**Pn**	**11 43 34.3**	**+2.2**
	baz=43							
AAK				⇑*i* S		**Sn**	**11 44 30.3**	**-3.4**
	baz=43							
AAK	**Ala-Archa**	**5.34**	**44**	P		**Pn**	**11 43 34.6**	**+2.5**
	SNR=9.7							
AAK	**Ala-Archa**	**5.34**	**44**	⇓P		**Pn**	**11 43 33.7**	**+1.6**
	3.7nm,0.5s							
AAK				⇓S		**Sn**	**11 44 37.6**	**+3.9**
	4.9nm,0.5s							
KZA	**Kyzart**	**5.42**	**52**	⇓*i* P		**Pn**	**11 43 34.9**	**+1.4**
	baz=52							
KZA				⇓*i* S		**Sn**	**11 44 31.8**	**-4.4**
	baz=52							
KBK	**Karagaybulak**	**5.60**	**46**	⇑*e*P		**Pn**	**11 43 37.6**	**+1.9**
	baz=46							
KBK				⇑*i* S		**Sn**	**11 44 36.1**	**-4.1**
	baz=46							
KBK	**Karagaybulak**	**5.60**	**46**	P		**Pn**	**11 43 38.6**	**+2.9**
	SNR=14							
CHMS	**Chumysh**	**5.72**	**42**	⇓*i* P		**Pn**	**11 43 39.5**	**+2.2**
	baz=42							
CHMS				⇓*i* S		**Sn**	**11 44 39.2**	**-3.8**
	baz=42							
USP	**Ospenovka**	**5.79**	**39**	⇑*i* P		**Pn**	**11 43 40.5**	**+2.3**
	baz=39							
USP				⇑*i* S		**Sn**	**11 44 41.2**	**-3.5**
	baz=39							
USP	**Ospenovka**	**5.79**	**39**	P		**Pn**	**11 43 42.3**	**+4.1**
	SNR=16							
TKM2	**Tokmak 2**	**6.13**	**47**	P		**Pn**	**11 43 45.1**	**+2.0**
	SNR=6.0							
TKM2	**Tokmak 2**	**6.13**	**47**	⇑P		**Pn**	**11 43 44.3**	**+1.2**
	4.8nm,0.5s							
TKM2				⇓S		**Sn**	**11 44 54.5**	**+1.1**
	5.3nm,0.9s							
AB31	**Akbulak array**	**12.45**	**330**	⇑P		Pn	11 45 18.7	+9.4
	1.1nm,0.6s,baz=136,slow=13,SNR=30							
AB31				⇓S		Sn	11 47 47.3	+19
	0.9nm,0.5s,baz=149,slow=23,SNR=4.5							
AKTO	**Aktyubinsk**	**14.14**	**329**	⇓P		**Pn**	**11 45 34.4**	**+1.8**
	2.6nm,1.1s							
AKTO				⇑S		**S**	**11 48 25.6**	**-5.0**
	1.9nm,0.9s							

*IDC **09** 12:05:44.2±3.4, 1°.53S×100°.39E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/41, mbtmp3.5/5, ML3.7/1, Error ellipse: s-maj=161.3km s-min=22.7km az=59.0*
*DJA **09** 12:05:47.7±0.3, 1°.5S×100°.1E±, h10km, M4.3/10, mB4.6/1, mb4.3/1, MLv4.3/10, Mw(mB)3.9/1*
ISC 09 12:05:47.0±0.7, 0°.91S±0°.05×100°.68E±0°.03, h10km, n20, σ2°.21/20, mb3.4/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PDSI	**Padang**	**0.22**	**270**	P		**Pg**	**12 05 52.2**	**+0.6**
PDSI				S		**Sg**	**12 05 55.9**	**+1.2**
SDSI	**Sungai Dareh**	**0.74**	**91**	P		**Pg**	**12 06 00.6**	**-0.8**
BKNI	**Bangkinang**	**1.28**	**16**	P		**Pg**	**12 06 11.5**	**-0.1**
BKNI				S		**Sb**	**12 06 27.2**	**-0.6**
KRJI	**Kerinci**	**1.41**	**146**	P		**Pn**	**12 06 13.9**	**+1.1**
SISI	**Saibi**	**1.65**	**256**	P		**Pn**	**12 06 16.0**	**0.0**
SISI				S		**Sb**	**12 06 38.0**	**-0.3**
RGRI	**Rengat**	**1.74**	**71**	P		**Pn**	**12 06 18.4**	**+1.1**
RGRI				S		**Sb**	**12 06 41.9**	**+0.9**
PPSI	**Pulau Pagai**	**1.96**	**200**	P		**Pn**	**12 06 22.0**	**+1.7**
MASI	**Maura Aman, Be**	**2.71**	**145**	P		**Pn**	**12 06 33.4**	**+2.8**
KSI	**Kapahiang**	**3.32**	**145**	P		**Pn**	**12 06 40.1**	**+1.0**
GSI	**Gunungsitoli**	**3.81**	**305**	P		**Pb**	**12 06 51.5**	**-2.9**
MDSI	**Maura Dua**	**4.98**	**136**	P		**Pn**	**12 07 04.5**	**+2.7**
CMAR	**Chiang Mai Arr**	**19.32**	**355**	P		**Pn**	**12 10 18.8**	**+5.2**
	0.1nm,0.3s,baz=188,slow=12,SNR=4.8							
H08S2	**Diego Garcia H**	**28.88**	**256**	T		T	12 40 00.2	
	baz=83,slow=74,SNR=3.6							
H08S3	**Diego Garcia H**	**28.89**	**256**	T		T	12 40 11.5	
	baz=83,slow=74,SNR=3.8							
H08S1	**Diego Carcia H**	**28.90**	**256**	T		T	12 40 00.5	
	baz=83							
WRA	**Warramunga Arr**	**37.97**	**122**	P		**P**	**12 13 02.1**	**-3.2**
	0.3nm,0.7s,baz=302,slow=9.1,SNR=3.2							
ASAR	**Alice Springs**	**39.35**	**128**	P		**P**	**12 13 14.3**	**-2.6**
	0.4nm,0.7s,baz=298,slow=8.1,SNR=7.5							
STKA	**Stephens Creek**	**49.37**	**133**	P		**P**	**12 14 35.2**	**-1.7**
	0.9nm,0.7s,baz=292,slow=11,SNR=2.3							
MKAR	**Makanchi Array**	**50.18**	**344**	P		**P**	**12 14 44.8**	**+1.9**
	0.4nm,0.6s,baz=152,slow=7.8,SNR=5.3							
TXAR	**Lajitas Array**	**143.43**	**37**	PKP		PKPbc	12 25 21.8	+2.0
	0.0nm,0.3s,baz=321,slow=1.3,SNR=2.4							

WEL 09 12:06:12.8, 35°.S±13°.×17°.8E±3°.6, h232km±37km, M3.8/32, MLv3.8/32, MLv3.8/31, Error ellipse: s-maj=0.1km s-min=0.0km az=92.5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MXZ	**Matakaoa Point**	**2.31**	**178**	P		Pn	12 06 56.5	-0.2
MXZ				S		S	12 07 29.1	-2.2
HAZ	**Te Kaha**	**2.53**	**188**	P		Pn	12 06 59.8	+0.9
HAZ				S		S	12 07 33.9	-1.4
WMGZ	**Waiomatatini S**	**2.57**	**177**	P		Pn	12 06 59.8	+0.4
PKGZ	**Pakihiroa**	**2.64**	**183**	P		Pn	12 07 01.2	+0.9
RUGZ	**Raukumara Rang**	**2.75**	**189**	P		Pn	12 07 01.8	+0.3
PUZ	**Puketiti**	**2.82**	**180**	P		Pn	12 07 02.5	+0.3
TWGZ	**Tauwhareparae**	**2.93**	**184**	P		Pn	12 07 04.9	+1.5
TWGZ				S		S	12 07 42.1	-1.1
MWZ	**Matawai**	**3.13**	**190**	P		Pn	12 07 06.6	+1.0
TKGZ	**Te Karaka**	**3.20**	**185**	P		Pn	12 07 06.8	+0.5
TKGZ				S		S	12 07 47.3	-1.2
CNGZ	**Carnagh Statio**	**3.23**	**180**	P		Pn	12 07 07.3	+0.6
MUGZ	**Murupara**	**3.43**	**200**	P		Pn	12 07 10.5	+1.5
MUGZ				S		S	12 07 51.9	-1.5
RIGZ	**Rimuhau**	**3.47**	**186**	P		Pn	12 07 09.8	+0.3
RTZ	**Ruatahuna**	**3.50**	**196**	P		Pn	12 07 10.6	+0.6
TLZ	**Tolley Road**	**3.75**	**214**	P		Pn	12 07 16.8	+3.9
RAHZ	**Arahi**	**3.77**	**194**	P		Pn	12 07 13.8	+0.7
RITZ	**Rihia Road**	**4.17**	**206**	P		Pn	12 07 22.1	+4.2
HIZ	**Hauiti**	**4.23**	**219**	P		Pn	12 07 23.6	+5.0
MCHZ	**McNeill Hill**	**4.36**	**196**	P		Pn	12 07 21.0	+0.9
KWHZ	**Kaweka Forest**	**4.41**	**199**	P		Pn	12 07 20.9	+0.2
NGZ	**Ngauruhoe**	**4.44**	**207**	P		Pn	12 07 22.4	+1.2
FWVZ	**Far West T-bar**	**4.53**	**207**	P		Pn	12 07 23.9	+1.4
BHHZ	**Black Hill Sta**	**4.57**	**202**	P		Pn	12 07 22.8	0.0
MOVZ	**Moawhango**	**4.59**	**205**	P		Pn	12 07 23.2	+0.2
KRHZ	**Kereru**	**4.63**	**198**	P		Pn	12 07 23.1	-0.3
KAHZ	**Kahuranaki**	**4.66**	**193**	P		Pn	12 07 23.7	-0.2
VRZ	**Vera Road**	**4.76**	**215**	P		Pn	12 07 28.4	+3.4
PXZ	**Pawanui**	**4.89**	**192**	P		Pn	12 07 25.8	-0.8
PNHZ	**Pukenui**	**4.93**	**198**	P		Pn	12 07 26.4	-0.7
TSZ	**Takapari Road**	**5.13**	**200**	P		Pn	12 07 28.8	-0.8
PRHZ	**Porangahau**	**5.16**	**194**	P		Pn	12 07 29.1	-0.9
PRWZ	**Pori Road**	**5.59**	**198**	P		Pn	12 07 35.0	-0.3
BFZ	**Birch Farm**	**5.64**	**196**	P		Pn	12 07 35.2	-0.8
MRZ	**Mangatainoka R**	**5.79**	**200**	P		Pn	12 07 36.7	-1.2
MRZ				S		S	12 08 40.7	-4.9
TIWZ	**Tintock**	**5.82**	**198**	P		Pn	12 07 37.3	-1.0
HOWZ	**Holdsworth Sta**	**6.03**	**200**	P		Pn	12 07 39.4	-1.5
OGWZ	**Otaki Gorge**	**6.06**	**203**	P		Pn	12 07 40.2	-1.1
TMWZ	**Te Maipa**	**6.13**	**197**	P		Pn	12 07 40.7	-1.5
KIW	**Kapiti Island**	**6.18**	**204**	P		Pn	12 07 41.6	-1.2
MTW	**Mount Morrison**	**6.28**	**199**	P		Pn	12 07 42.3	-1.7
CAW	**Cannon Point**	**6.36**	**202**	P		Pn	12 07 43.3	-1.7
DUWZ	**D'Urville Isla**	**6.50**	**210**	P		Pn	12 07 46.1	-0.8
TCW	**Tory Channel**	**6.71**	**206**	P		Pn	12 07 48.0	-1.5
TUWZ	**Tuamarina**	**7.03**	**207**	P		Pn	12 07 51.7	-1.8

*INET **09** 12:27:11.3, 13°.11N×89°.82W, h6km, ML4.8*
*SNET **09** 12:27:11.5±1.0, 13°.21N×89°.93W, h29km±4km, ML4.7*
*GCG **09** 12:27:12.6±0.7, 13°.25N×90°.01W, h22km±17km, MD4.6*
*UCR **09** 12:27:12.2±1.3, 13°.24N×89°.94W, h36km±5km, ML4.6, mb4.6(NEIC)*
*NEIC **09** 12:27:13.3±2.3, 13°.32N±0°.04×89°.79W±0°.04, h71km±5km, mb4.6/122, Md4.7(SNET), Error ellipse: s-maj=6.6km s-min=5.6km az=130.0*
*MEX **09** 12:27:14.8±0.5, 13°.39N×89°.98W, h29km±21km, MD4.0*
*IDC **09** 12:27:14.9±1.2, 13°.48N×89°.49W, h84km±8km, mb3.9/14, mb1 4.1/17, mb1mx4.0/36, mbtmp4.2/17, MS3.6/8, Ms1 3.5/8, ms1mx3.1/40, Error ellipse: s-maj=24.7km s-min=8.3km az=46.0*
ISC 09 12:27:12.2±0.8, 13°.24N±0°.06×89°.91W±0°.04, h69km±5km, n432, σ1°.14/427, mb4.5/65, 1C, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FAME	**Alcalda de S**	**0.61**	**350**	*e*P		**Pn**	**12 27 24.5**	**-1.5**
FAME				*e*S		**Sn**	**12 27 33.6**	**-2.6**
FAME				IAML			12 27 34.7	
	comp=Z,20μm,0.5s							
CEVE	**Cerro Verde**	**0.65**	**26**	*e*P		**Pn**	**12 27 25.6**	**-1.0**
CEVE				*e*S		**Sn**	**12 27 36.4**	**-0.9**
CEVE				IAML			12 27 40.4	
	comp=Z,58μm,0.3s							
CEVE	**Cerro Verde**	**0.65**	**26**	*e*P		**Pn**	**12 27 25.6**	**-1.0**
CEVE				*e*S		**Sn**	**12 27 36.4**	**-0.9**
CEVE				IAML			12 27 40.4	
	comp=Z,58μm,0.3s							
SBLS	**San Blas**	**0.66**	**25**	*e*P		**Pn**	**12 27 25.8**	**-1.0**
SBLS	**San Blas**	**0.66**	**25**	*e*P		**Pn**	**12 27 25.8**	**-1.0**
SNJE	**San Jose**	**0.69**	**25**	*i* P		**Pn**	**12 27 26.2**	**-0.9**
SNJE	**San Jose**	**0.69**	**25**	*i* P		**Pn**	**12 27 26.2**	**-0.9**
BOQS	**Boqueron**	**0.79**	**51**	*e

BCIP **Isla Barro Col** 10.68 111 Pn **Pn** 12 29 42.8 +0.4
833A **Chaparral WMA,** 17.41 331 P **P** 12 31 12.6 +1.7
833A IAmb IAmb 12 31 17.4
comp=Z,50nm,1.2s
833A **Chaparral WMA,** 17.41 331 P **P** 12 31 14.5 +3.6
baz=147
FLOC **Florencia** 18.26 128 P **Pn** 12 31 20.8 -0.2
352A **Blakely** 18.72 13 P **Pn** 12 31 27.9 +1.6
baz=195
353A **Camilla** 18.77 15 P **Pn** 12 31 27.7 +0.8
baz=197
435B **Jarrell** 18.84 339 P **Pn** 12 31 28.4 +0.6
baz=156
VBMS **Vicksburg** 18.90 358 P **Pn** 12 31 28.0 -0.4
VBMS **Vicksburg** 18.90 358 P **Pn** 12 31 29.9 +1.5
baz=178,SNR=6.7
NATX **Nacogdoches** 18.94 347 P **P** 12 31 28.2 +0.5
NATX IAmb IAmb 12 31 39.1
comp=Z,33nm,0.7s
NATX **Nacogdoches** 18.94 347 P **Pn** 12 31 29.6 +0.6
baz=165
TIGA **Tifton** 19.02 17 P **Pn** 12 31 30.4 +0.5
baz=199
252A **Lumpkin** 19.26 13 P **Pn** 12 31 32.9 +0.1
baz=195
SDV **Santo Domingo** 19.41 101 P **P** 12 31 32.1 -0.9
comp=Z,1.7nm,0.3s,baz=294,slow=11,SNR=12
SDV **Santo Domingo** 19.41 101 P **P** 12 31 32.1 -0.9
JCT **Junction City** 19.44 334 P **Pn** 12 31 34.1 -0.8
JCT **Junction City** 19.44 334 P **Pn** 12 31 34.2 -0.8
baz=150
BANI **BANI** 19.49 72 P **P** 12 31 33.7 -0.2
254A **Abbeville** 19.58 17 P **Pn** 12 31 36.2 -0.4
baz=199
LRAL **Lakeview Retre** 19.88 7 P **Pn** 12 31 40.1 0.0
baz=188
WHTX **Lake Whitney,** 19.91 341 P **P** 12 31 38.9 +0.7
WHTX IAmb IAmb 12 31 54.0
comp=Z,64nm,1.2s
WHTX **Lake Whitney,** 19.91 341 P **P** 12 31 39.2 +1.1
baz=158
152A **Waverly Hall** 19.91 13 P **Pn** 12 31 39.7 -0.8
152A **Waverly Hall** 19.91 13 P **Pn** 12 31 39.7 -0.8
baz=195
256A **Glennville** 20.05 20 P Pn 12 31 41.3 -0.8
baz=203
HPIG 20.08 315 P Pn 12 31 41.9 -0.9
Z41A **Richland Creek** 20.10 353 P Pn 12 31 44.7 +2.1
baz=172
Z50A **Ashland** 20.25 10 P **P** 12 31 42.8 +0.9
Z50A **Ashland** 20.25 10 P Pn 12 31 43.5 -1.0
baz=191,SNR=5.1
Z51A **Franklin** 20.45 11 P Pn 12 31 45.7 -1.1
Z51A IAmb IAmb 12 31 48.7
comp=Z,34nm,0.7s
155A **Kite** 20.46 18 P **P** 12 31 45.5 +1.3
baz=201
TX32 **Lajitas Array** 20.48 324 P Pn 12 31 47.4 +0.1
TXAR **Lajitas Array** 20.48 324 P Pn 12 31 47.4 +0.2
comp=Z,7.2nm,0.7s,baz=147,slow=11,SNR=79
TXAR PcP **PcP** 12 35 56.2 +2.1
comp=Z,0.8nm,0.9s,baz=147,slow=3.0,SNR=4.5
TXAR ScP **ScP** 12 39 29.9 +5.1
comp=Z,0.5nm,1.0s,baz=152,slow=8.1,SNR=4.8
Z52A **Williamson** 20.48 13 P **P** 12 31 45.4 +1.0
baz=195
CCAR **Cane Creek** 20.65 356 P Pn 12 31 49.3 +0.1
CCAR pP 12 32 02.5 +1.6
Y49A **Blount Mountai** 20.77 8 P **P** 12 31 48.6 +1.1
Y49A IAmb IAmb 12 31 49.9
comp=Z,17nm,0.6s
Z53A **Monticello** 20.77 15 P **P** 12 31 48.1 +0.6
baz=197
GOGA **Godfrey** 20.92 15 P **P** 12 31 49.2 +0.1
baz=197
Z54A **Sparta** 20.92 17 P **P** 12 31 49.6 +0.5
baz=199
157A **Early Branch** 21.00 21 P **P** 12 31 50.7 +0.8
baz=204
Y51A **Rockmart** 21.03 11 P **P** 12 31 51.4 +1.0
baz=193,SNR=13
OXF **Oxford** 21.18 1 P **P** 12 31 52.7 +0.8
baz=181,SNR=14
Y52A **Lilburn** 21.21 14 P **P** 12 31 52.9 +0.7
Y52A **Lilburn** 21.21 14 P **P** 12 31 53.2 +1.0
baz=196
ABTX **Abilene, Hawle** 21.25 337 P **P** 12 31 53.0 +0.3
baz=153
X48A **Hartselle** 21.28 7 P **P** 12 31 54.0 +1.1
Y53A **Monroe** 21.31 15 P **P** 12 31 53.4 +0.1
baz=197
X40A **Basin Creek Fa** 21.32 353 P **P** 12 31 55.8 +2.5
X40A **Basin Creek Fa** 21.32 353 P **P** 12 31 56.6 +3.2
baz=172
Z56A **Williston** 21.46 20 P **P** 12 31 56.7 +1.9
baz=203
MIAR **Mount Ida** 21.47 352 IAmb IAmb 12 31 59.1
comp=Z,16nm,0.7s
MIAR **Mount Ida** 21.47 352 P **P** 12 31 56.8 +1.8
baz=170
UALR **University of** 21.55 355 P **P** 12 31 58.2 +2.4
Y54A **Tignall** 21.55 17 P **P** 12 31 56.6 +0.7
baz=199
Z57A **Bowman** 21.66 21 P **P** 12 31 58.4 +1.4
baz=205
X51A **Calhoun** 21.72 11 P **P** 12 31 58.7 +1.0
X51A **Calhoun** 21.72 11 P **P** 12 31 58.3 +0.7
baz=193
Y55A **Saluda** 21.87 18 P **P** 12 31 59.3 +0.1
baz=201
W41B **Gary Mavity, V** 21.94 355 P **P** 12 32 00.2 +0.2
baz=174
X53A **Estanollee** 22.00 15 P **P** 12 32 00.9 +0.2
baz=197
Z58A **St. Stephen** 22.02 23 P **P** 12 32 01.2 +0.3
baz=207
HODGE **Hodges** 22.02 17 P **P** 12 32 01.9 +1.0
HODGE IAmb IAmb 12 32 02.8
comp=Z,12nm,0.7s
W49A **Belvidere** 22.03 8 P **P** 12 32 01.2 +0.2
baz=189
WHAR **Wooly Hollow** 22.06 355 P **P** 12 32 02.4 +1.1
WHAR IAmb IAmb 12 32 04.5
comp=Z,16nm,0.8s
W39A **Magazine** 22.14 352 P **P** 12 32 02.5 +0.4
baz=170
SWET **Sewanee** 22.17 9 P **P** 12 32 02.3 -0.3
SWET IAmb IAmb 12 32 03.7
comp=Z,17nm,0.7s
W50A **Signal Mountai** 22.25 10 P **P** 12 32 03.8 +0.3
W50A **Signal Mountai** 22.25 10 P **P** 12 32 03.4 -0.1
baz=192
X54A **Belton** 22.29 17 P **P** 12 32 03.2 -0.6
baz=199
W51A **Cleveland** 22.32 11 P **P** 12 32 04.7 +0.6
baz=193,SNR=9.0
W52A **Murphy** 22.42 13 P **P** 12 32 05.4 +0.1
W52A IAmb IAmb 12 32 24.9
comp=Z,16nm,0.6s
Y57A **Sumter** 22.42 21 P **P** 12 32 05.5 +0.3
Y57A **Sumter** 22.42 21 P **P** 12 32 04.7 -0.5
baz=205
X55A **Gracelyn & Ava** 22.43 18 P **P** 12 32 05.1 -0.2
baz=201
X34A **Smith Ranch, M** 22.45 343 P **P** 12 32 05.8 +0.3
X34A IAmb IAmb 12 32 07.3
comp=Z,35nm,1.1s
V48A **Smith Brothers** 22.57 7 IAmb IAmb 12 32 08.9
comp=Z,10.0nm,0.6s
Y58A **Scranton** 22.58 23 P **P** 12 32 06.5 -0.4
Y58A **Scranton** 22.58 23 P **P** 12 32 06.8 -0.1
baz=206
X56A **White Oak** 22.64 19 P **P** 12 32 07.5 0.0
baz=203
CPCT **Cooper Cave** 22.64 11 IAmb IAmb 12 32 08.6
comp=Z,12nm,0.8s
W53A **Cullowhee** 22.67 14 P **P** 12 32 07.7 -0.3
baz=197
W35A **Tecumseh** 22.71 345 P **P** 12 32 07.3 -1.0
V49A **McMinnville** 22.72 8 P **P** 12 32 08.1 -0.2
baz=190,SNR=5.8
V50A **Pikevile** 22.75 10 P **P** 12 32 08.5 -0.2
baz=192,SNR=5.8
W54A **Cherokee Point** 22.84 16 P **P** 12 32 09.8 +0.2
baz=199
WMOK **Wichita Mounta** 22.86 341 P **P** 12 32 08.9 -0.9
WMOK IAmb IAmb 12 32 10.4
comp=Z,20nm,1.1s
WMOK **Wichita Mounta** 22.86 341 P **P** 12 32 08.4 -1.4
baz=157,SNR=20
WVT **Waverly** 22.87 4 P **P** 12 32 09.9 +0.1
WVT IAmb IAmb 12 32 11.4
comp=Z,11nm,0.7s
WVT **Waverly** 22.87 4 P **P** 12 32 09.8 -0.1
baz=185
Y59A **Loris** 22.96 24 P **P** 12 32 10.3 -0.6
baz=208
TKL **Tuckaleechee C** 23.00 13 P **P** 12 32 11.0 -0.2
comp=Z,12nm,0.6s,baz=179,slow=10,SNR=21
TKL LR LR 12 41 29.3
comp=Z,239nm,20.0s,baz=180,slow=38
TKL **Tuckaleechee C** 23.00 13 IAmb IAmb 12 32 13.0
comp=Z,17nm,0.8s
V51A **Loudon** 23.02 12 P **P** 12 32 11.3 -0.1
baz=194
KMSC **Kings Mountain** 23.14 18 P **P** 12 32 12.2 -0.4
baz=201
U40A **Yellville** 23.17 354 P **P** 12 32 13.4 +0.5
U40A **Yellville** 23.17 354 P **P** 12 32 13.1 +0.2
baz=172,SNR=5.8
TUL1 **Leonard** 23.18 348 P **P** 12 32 14.0 +0.9
HICK **Hickman** 23.21 1 P **P** 12 32 13.5 +0.3
V52A **Sevierville** 23.21 13 P **P** 12 32 12.9 -0.4
baz=195
MNTX **Cornudas Mount** 23.23 325 P **P** 12 32 14.3 +0.8
MNTX **Cornudas Mount** 23.23 325 P **P** 12 32 13.5 0.0
baz=139
HHAR **Hobbs** 23.23 352 P **P** 12 32 13.6 +0.1
HHAR IAmb IAmb 12 32 26.9
comp=Z,22nm,1.1s
V53A **Saluda** 23.23 15 P **P** 12 32 13.6 +0.1
V53A **Saluda** 23.23 15 P **P** 12 32 13.2 -0.3
baz=197
Y60A **Bolivia** 23.24 25 P **P** 12 32 12.9 -0.7
baz=210
X58A **Rowland** 23.28 23 P **P** 12 32 13.3 -0.7
X58A **Rowland** 23.28 23 P **P** 12 32 13.4 -0.6
baz=206
PARMO **Parma** 23.32 0 P **P** 12 32 14.4 +0.1
W56A **Indian Trail** 23.37 20 P **P** 12 32 14.5 -0.3
baz=203,SNR=6.0
PBMO **Poplar Bluff** 23.44 359 P **P** 12 32 15.6 +0.2
PBMO IAmb IAmb 12 32 18.0
comp=Z,13nm,0.6s
U49A **Red Boiling Sp** 23.47 8 P **P** 12 32 15.5 -0.2
baz=190,SNR=16
U50A **Jamestown** 23.52 10 P **P** 12 32 15.9 -0.2
baz=192,SNR=9.2
V54A **Nebo** 23.56 16 P **P** 12 32 16.2 -0.3
baz=199
X59A **McDuffie Farm,** 23.58 24 P **P** 12 32 16.5 -0.2
baz=208
W57A **Gilead** 23.59 21 P **P** 12 32 16.5 -0.3
W57A IAmb IAmb 12 32 17.9
comp=Z,22nm,0.6s
W57A **Gilead** 23.59 21 P **P** 12 32 16.0 -0.7
baz=204,SNR=5.3
U51A **La Follette** 23.64 12 P **P** 12 32 16.9 -0.3
baz=194
MSTX **Muleshoe** 23.72 333 P **P** 12 32 17.7 -0.4
baz=147
W58A **Raeford** 23.74 22 P **P** 12 32 17.9 -0.2
baz=206
T47A **Sharon Grove** 23.78 6 P **P** 12 32 17.7 -0.8
T47A IAmb IAmb 12 32 20.0
comp=Z,50nm,1.2s
U52A **Thorn Hill** 23.79 13 P **P** 12 32 18.2 -0.5
baz=196
V55A **Taylorsville** 23.84 18 IAmb IAmb 12 32 20.8
comp=Z,22nm,0.7s
V55A **Taylorsville** 23.84 18 P **P** 12 32 18.8 -0.2
baz=201,SNR=6.8
X60A **Albert Glenn T** 23.84 25 P **P** 12 32 17.7 -1.3
baz=210
TZTN **Tazewell** 23.90 13 P **P** 12 32 18.6 -1.0
baz=195
U53A **Fall Branch** 23.95 15 P **P** 12 32 19.8 -0.2
baz=198,SNR=7.0
V56A **Mocksville** 24.02 19 P **P** 12 32 20.2 -0.4
baz=203,SNR=7.3
AMTX **Amarillo** 24.04 336 P **P** 12 32 21.3 +0.4
AMTX IAmb IAmb 12 32 24.0
comp=Z,22nm,1.1s
AMTX **Amarillo** 24.04 336 P **P** 12 32 20.9 -0.1
baz=151
T49A **Edmonton** 24.09 9 P **P** 12 32 21.3 +0.1
T49A IAmb IAmb 12 32 23.5
comp=Z,24nm,0.9s
T49A **Edmonton** 24.09 9 P **P** 12 32 21.0 -0.2
baz=190,SNR=8.8
T50A **Nancy** 24.11 10 P **P** 12 32 20.9 -0.5
baz=192
T51A **Gray** 24.22 12 P **P** 12 32 21.7 -0.8
baz=194
U54A **Nelsons Funny** 24.29 16 P **P** 12 32 23.1 -0.1
U54A IAmb IAmb 12 32 25.8
comp=Z,24nm,0.6s
U54A **Nelsons Funny** 24.29 16 P **P** 12 32 23.0 -0.1
baz=199,SNR=6.9
V57A **Coltrane Farms** 24.33 20 P **P** 12 32 23.2 -0.2
baz=204,SNR=7.8
W60A **Pink Hill** 24.36 25 P **P** 12 32 23.2 -0.5
baz=210
V58A **Windy Hill, Pi** 24.47 22 IAmb IAmb 12 32 25.3
comp=Z,27nm,0.7s
V58A **Windy Hill, Pi** 24.47 22 P **P** 12 32 24.5 -0.2
baz=206,SNR=8.4
U55A **TA2, Sparta** 24.49 17 P **P** 12 32 24.8 -0.2
baz=201,SNR=7.0
T53A **Wise** 24.55 14 P **P** 12 32 25.1 -0.4
baz=197
U56A **King** 24.55 19 P **P** 12 32 24.9 -0.5
baz=202
CCM **Cathedral Cave** 24.74 357 P **P** 12 32 27.0 -0.2
CCM IAmb IAmb 12 32 29.0
comp=Z,21nm,0.8s
CCM **Cathedral Cave** 24.74 357 P **P** 12 32 27.4 +0.2
baz=177
V59A **Middlesex** 24.77 23 P **P** 12 32 26.9 -0.5
baz=208
S49A **Springfield** 24.79 9 P **P** 12 32 27.3 -0.3
baz=190
S50A **Richmond** 24.83 10 P **P** 12 32 27.6 -0.4
baz=193
S51A **Beattyville** 24.94 12 IAmb IAmb 12 32 29.3
comp=Z,22nm,1.4s
S51A **Beattyville** 24.94 12 P **P** 12 32 28.1 -0.9
baz=194
U57A **Blanch** 24.97 21 P **P** 12 32 29.1 -0.2
baz=205
WCI **Wyandotte Cave** 25.09 7 P **P** 12 32 30.5 +0.1
WCI IAmb IAmb 12 32 31.2
comp=Z,17nm,0.8s
WCI **Wyandotte Cave** 25.09 7 P **P** 12 32 30.3 -0.1
baz=188
V60A **Jim Taylor Roa** 25.16 25 P **P** 12 32 32.6 +1.7
U58A **Oxford** 25.21 22 P **P** 12 32 31.0 -0.5
baz=206
R49A **Shelbyville** 25.30 9 P **P** 12 32 31.5 -0.8
R49A IAmb IAmb 12 32 32.3
comp=Z,8.4nm,0.6s
R49A **Shelbyville** 25.30 9 P **P** 12 32 31.9 -0.3
baz=190
BLA **Blacksburg** 25.34 18 P **P** 12 32 32.4 -0.2
baz=202
R50A **Paris** 25.43 10 P **P** 12 32 33.0 -0.4
baz=192
OLIL **Olney** 25.44 3 P **P** 12 32 34.0 +0.4
U59A **Littleton** 25.46 23 P **P** 12 32 33.1 -0.6
baz=208
V61A **Roper** 25.46 26 P **P** 12 32 33.4 -0.4
baz=211
T57A **Hurt** 25.51 20 IAmb IAmb 12 32 34.9
comp=Z,21nm,1.1s
T57A **Hurt** 25.51 20 P **P** 12 32 34.0 -0.2
baz=204
R51A **Hillsboro** 25.58 12 P **P** 12 32 34.4 -0.4
baz=194
T58A **Grand View Acr** 25.71 21 P **P** 12 32 35.5 -0.5
baz=206
S55A **Lewisburg** 25.83 17 P **P** 12 32 37.5 +0.4
baz=201
Q48A **North Vernon** 25.85 7 P **P** 12 32 36.7 -0.5
baz=189
S56A **Natural Bridge** 26.03 19 P **P** 12 32 38.4 -0.4
baz=203
Q50A **Georgetown** 26.04 11 P **P** 12 32 38.6 -0.3
baz=193
Q49A **Aurora** 26.04 9 P **P** 12 32 38.3 -0.7
baz=191
R54A **Victor** 26.07 16 P **P** 12 32 38.8 -0.5
baz=200
T59A **Double "B" Far** 26.09 23 IAmb IAmb 12 32 39.9
comp=Z,15nm,0.6s
T59A **Double "B" Far** 26.09 23 P **P** 12 32 39.1 -0.3
baz=208,SNR=5.6
ANMO **Albuquerque** 26.29 328 P **P** 12 32 43.5 +2.0
comp=Z,0.7nm,0.5s,baz=130,slow=11,SNR=5.7
ANMO LR LR 12 45 22.3
comp=Z,37nm,18.4s,baz=148,slow=41
ANMO **Albuquerque** 26.29 328 IAmb IAmb 12 32 46.1
comp=Z,1.1nm,0.8s
ANMO **Albuquerque** 26.29 328 P **P** 12 32 42.6 +1.2
baz=141
P43A **Skaggs, Pawnee** 26.30 1 P **P** 12 32 42.2 +0.9
S57A **Dark Hollow, R** 26.30 20 P **P** 12 32 40.8 -0.5
baz=204
Q51A **Peebles** 26.33 12 IAmb IAmb 12 32 42.1
comp=Z,18nm,0.6s
Q51A **Peebles** 26.33 12 P **P** 12 32 41.4 -0.2
baz=194,SNR=5.8
P48A **Milroy** 26.41 8 P **P** 12 32 41.5 -0.9
P48A IAmb IAmb 12 32 42.0
comp=Z,9.5nm,0.8s
P48A **Milroy** 26.41 8 P **P** 12 32 41.0 -1.3
baz=190
R55A **Marlinton** 26.42 18 P **P** 12 32 42.8 +0.4
R55A IAmb IAmb 12 32 43.7
comp=Z,31nm,1.4s
R55A **Marlinton** 26.42 18 P **P** 12 32 42.6 +0.1
baz=202
KSU1 **Kansas State U** 26.43 348 P **P** 12 32 42.1 -0.3
baz=165
S58A **Poland Farm, P** 26.48 21 P **P** 12 32 42.2 -0.7
baz=206
T60A **Surry** 26.56 24 P **P** 12 32 42.5 -1.1
baz=209
Q53A **Leroy** 26.58 15 P **P** 12 32 43.2 -0.6
baz=198
P50A **Jamestown** 26.81 11 P **P** 12 32 45.5 -0.4
baz=193
R58B **Mineral** 26.85 21 P **P** 12 32 45.7 -0.6
baz=206
Q54A **Coxs Mills** 26.87 16 IAmb IAmb 12 32 49.5
comp=Z,22nm,1.2s
Q54A **Coxs Mills** 26.87 16 P **P** 12 32 46.1 -0.3
baz=200
R57A **Stanardsville** 26.93 20 P **P** 12 32 46.6 -0.4
baz=205
Q55A **Buckhannon** 27.09 17 P **P** 12 32 47.9 -0.5
baz=201
T25A **Trinidad** 27.10 334 P **P** 12 32 50.4 +1.5
R58A **Rapidan** 27.11 21 P **P** 12 32 48.1 -0.4
baz=206
SFIN **Lafayette** 27.15 5 P **P** 12 32 49.0 +0.1
SFIN IAmb IAmb 12 32 49.1
comp=Z,8.3nm,0.6s
SFIN **Lafayette** 27.15 5 P **P** 12 32 48.3 -0.6
baz=186
Q48A **Farmland** 27.23 8 P **P** 12 32 48.5 -1.2
baz=190
O49A **Covington** 27.29 9 P **P** 12 32 49.2 -0.9
baz=192
O50A **Cable** 27.37 11 P **P** 12 32 50.4 -0.5
baz=193,SNR=7.2
Q56A **Snyder Ridge,** 27.39 18 P **P** 12 32 51.6 +0.4
Q56A IAmb IAmb 12 32 52.3
comp=Z,7.9nm,0.7s
Q56A **Snyder Ridge,** 27.39 18 P **P** 12 32 50.9 -0.3
baz=203
P54A **Burton** 27.55 16 P **P** 12 32 51.8 -0.7
baz=200
O51A **Pataskala** 27.56 12 P **P** 12 32 52.1 -0.5
baz=195
ACSO **Alum Creek Sta** 27.57 12 IAmb IAmb 12 32 52.9
comp=Z,8.3nm,0.7s
ACSO **Alum Creek Sta** 27.57 12 P **P** 12 32 52.2 -0.5
baz=194
Q57A **Strasburg** 27.64 20 P **P** 12 32 53.0 -0.3
baz=204
P55A **Reedsville** 27.64 17 P **P** 12 32 52.6 -0.7
baz=201
O52A **Adamsville** 27.70 13 P **P** 12 32 53.0 -0.8
baz=197
N47A **Urbana** 27.78 7 P **P** 12 32 53.9 -0.6
N47A IAmb IAmb 12 33 00.2
comp=Z,13nm,1.2s
N47A **Urbana** 27.78 7 P **P** 12 32 53.4 -1.2
baz=189
N49A **Columbus Grove** 28.03 9 P **P** 12 32 55.4 -1.3
baz=192
214A **Organ Pipe Nat** 28.07 315 P **P** 12 32 59.3 +2.0
baz=126
P57A **Homestead Farm** 28.17 20 P **P** 12 32 58.4 +0.3
P57A IAmb IAmb 12 32 59.6
comp=Z,14nm,0.8s
P57A **Homestead Farm** 28.17 20 P **P** 12 32 58.3 +0.3
baz=205
M47A **Cromwell** 28.26 7 P **P** 12 32 57.7 -1.2
baz=189
N51A **Ashland** 28.35 12 P **P** 12 32 58.4 -1.2
baz=195
N52A **McGinn's Farm,** 28.40 13 P **P** 12 32 58.8 -1.2
baz=197
P58A **Pank, Wackersv** 28.42 21 P **P** 12 32 59.6 -0.6
baz=206
N53A **Lisbon** 28.59 14 P **P** 12 33 00.4 -1.4
baz=198
M49A **Liberty Center** 28.60 9 P **P** 12 33 00.2 -1.7
baz=192
L42A **Oliver, Polo** 28.66 0 P **P** 12 33 00.5 -1.8
L42A IAmb IAmb 12 33 05.4
comp=Z,9.1nm,0.8s
M50A **Fremont** 28.69 11 P **P** 12 33 01.9 -0.7
baz=194,SNR=6.2
O56A **Blue Knob Stat** 28.71 18 P **P** 12 33 02.5 -0.4
O56A IAmb IAmb 12 33 06.2
comp=Z,17nm,1.4s
O56A **Blue Knob Stat** 28.71 18 P **P** 12 33 01.1 -1.8
baz=203
L40A **Anamosa** 28.74 358 IAmb IAmb 12 33 03.6
comp=Z,12nm,0.8s
L47A **Sherwood** 28.92 7 P **P** 12 33 03.5 -1.2
baz=189
N54A **Moraine State** 28.95 16 P **P** 12 33 03.4 -1.5
baz=200
L48A **N Adams** 28.99 8 P **P** 12 33 03.4 -1.9
baz=191
N55A **Marion Center** 29.06 17 P **P** 12 33 04.9 -1.0
baz=202
O58A **Lewisberry** 29.11 21 P **P** 12 33 05.7 -0.8
baz=206
SSPA **Standing Stone** 29.26 19 P **P** 12 33 06.2 -1.4
SSPA IAmb IAmb 12 33 08.9
comp=Z,15nm,1.5s
SSPA **Standing Stone** 29.26 19 P **P** 12 33 07.0 -0.7
baz=204
L50A **Kingsville** 29.35 11 P **P** 12 33 07.7 -0.8
baz=194,SNR=5.6
N56A **West Decatur** 29.39 18 P **P** 12 33 08.4 -0.5
baz=203,SNR=5.2
K43A **Burlington** 29.39 2 IAmb IAmb 12 33 10.1
comp=Z,19nm,1.1s
O59A **Robesonia** 29.54 22 P **P** 12 33 09.7 -0.5
baz=208
M54A **Oil Creek Stat** 29.55 16 P **P** 12 33 09.3 -1.0
baz=200
JFWS **Jewell Farm** 29.57 359 P **P** 12 33 09.9 -0.6
baz=179
K47A **Vermontville** 29.63 7 P **P** 12 33 09.4 -1.5
baz=189
K48A **Perry** 29.88 9 P **P** 12 33 11.6 -1.5
baz=191
M56A **Emporium** 29.94 18 P **P** 12 33 13.2 -0.5
baz=203,SNR=7.1
K49A **Clarkson** 29.96 10 P **P** 12 33 12.7 -1.2
baz=192
M57A **Sunshine Farm,** 30.13 19 P **P** 12 33 14.6 -0.8
baz=205
N59A **State Game Lan** 30.22 22 P **P** 12 33 15.9 -0.4
baz=208
L54A **Sinclairville** 30.32 16 P **P** 12 33 16.4 -0.6

baz=200
M58A Price's Panora 30.39 20 P P 12 33 17.0 -0.7
baz=206
J48A Bridge Port 30.41 9 P P 12 33 17.1 -0.7
baz=192
N60A Cedar Hill Far 30.43 23 P P 12 33 17.3 -0.7
baz=209
L55A Hinsdale 30.51 17 P P 12 33 17.4 -1.4
baz=202
J49A Marlette 30.57 10 P P 12 33 17.6 -1.7
baz=193
WVNY West Valley, N 30.67 17 P P 12 33 19.6 -0.6
WVNY IAmb IAmb 12 33 20.3
comp=Z,9.5nm,0.6s
L56A Greenwood 30.73 18 P P 12 33 20.0 -0.7
baz=204
L57A Andrews Acres 30.82 19 P P 12 33 20.9 -0.6
baz=205
M59A Waymart 30.89 21 P P 12 33 21.5 -0.7
baz=208
ECSD EROS Data Cent 30.93 351 P P 12 33 21.7 -0.7
baz=167
M60A Port Jervis 31.00 23 P P 12 33 22.3 -0.8
baz=210
PAL Palisades 31.00 24 P P 12 33 22.1 -1.0
baz=211
K55A Perry 31.12 17 P P 12 33 22.9 -1.3
baz=202
H43A Windswept, Lux 31.18 3 P P 12 33 24.0 -0.6
I49A Point Hope 31.19 10 P P 12 33 23.5 -1.3
I49A Point Hope 31.19 10 P P 12 33 23.9 -0.8
baz=193
L58A Harry Jones Me 31.19 20 P P 12 33 24.1 -0.7
baz=207
BINY Binghamton 31.28 20 P P 12 33 24.7 -0.9
baz=206
K56A Middlesex 31.31 18 P P 12 33 24.9 -1.0
baz=204
M61A Granite Spring 31.32 24 P P 12 33 25.0 -0.9
baz=211
WSPT Westport, CT 31.37 24 P P 12 33 25.3 -1.0
WSPT IAmb IAmb 12 33 26.4
comp=Z,14nm,0.8s
K57A Scipio Center 31.59 19 P P 12 33 27.2 -1.1
baz=205
L59A Walton 31.60 21 P P 12 33 27.9 -0.5
baz=208
L60A Shokan 31.72 23 P P 12 33 28.4 -1.1
baz=210
H48A Harrisville 31.85 9 P P 12 33 29.7 -0.9
baz=192
G45A Suttons Bay 31.90 6 P P 12 33 30.2 -0.7
baz=188
K58A Earlville 31.90 20 P P 12 33 30.7 -0.3
K58A Earlville 31.90 20 P P 12 33 30.0 -1.0
baz=207,SNR=5.2
G40A Rib Lake 31.92 360 P P 12 33 31.0 -0.2
SPMN Marine on St. 31.97 356 P P 12 33 30.8 -0.8
baz=174,SNR=6.3
J56A Wolcott 31.98 18 P P 12 33 30.7 -0.9
baz=204
SUSD Miller 32.04 348 P P 12 33 32.4 +0.1
baz=163
L61A Hillsdale 1, H 32.15 23 P P 12 33 32.6 -0.6
baz=211
J57A Williamstown 32.36 19 P P 12 33 34.1 -0.9
J57A Williamstown 32.36 19 P P 12 33 34.1 -0.9
baz=206
J58A Remsen 32.55 20 P P 12 33 36.1 -0.6
J58A Remsen 32.55 20 P P 12 33 36.0 -0.6
baz=207
I55A Frankford 32.60 16 P P 12 33 36.2 -0.9
baz=202
H53A Bobcaygeon 32.69 15 P P 12 33 37.3 -0.6
baz=200,SNR=5.6
DELO Deloro Mine 32.90 16 P P 12 33 38.6 -1.0
DELO IAmb IAmb 12 33 39.0
comp=Z,11nm,0.7s
J59A Piesco 32.91 21 P P 12 33 38.3 -1.6
J59A IAmb IAmb 12 33 41.1
comp=Z,6.2nm,0.8s
G53A Haliburton 33.20 15 P P 12 33 41.1 -1.2
baz=200
H56A Elgin 33.35 18 P P 12 33 42.8 -0.8
baz=204
E46A Sault Ste Mari 33.36 7 P P 12 33 42.8 -0.9
E46A IAmb IAmb 12 33 46.0
comp=Z,4.8nm,0.8s
NCB Newcomb 33.45 21 P P 12 33 44.4 -0.2
NCB IAmb IAmb 12 33 50.0
comp=Z,19nm,1.5s
H57A Richville 33.50 19 P P 12 33 44.2 -0.7
baz=206
E47A Iron Bridge 33.58 8 P P 12 33 44.9 -0.7
baz=192
G54A Lake Saint Pet 33.59 15 P P 12 33 44.8 -0.9
baz=201
G55A Calabogie 33.82 17 P P 12 33 46.7 -1.0
baz=203
H58A Gabriels 33.86 20 P P 12 33 47.3 -0.8
baz=208
LONY Lake Ozonia 33.90 20 P P 12 33 47.5 -0.9
baz=207
PDAR Pinedale Array 33.97 334 P P 12 33 50.2 +0.8
comp=Z,0.6nm,0.9s,baz=124,slow=9.2,SNR=4.1
PDAR PcP PcP 12 36 26.9 +0.7
comp=Z,0.3nm,0.4s,baz=117,slow=5.2,SNR=4.7
PDAR ScP ScP 12 40 06.0 +0.9
comp=Z,1.1nm,0.9s,baz=112,slow=4.2,SNR=3.2
PDAR LR LR 12 50 48.8
comp=Z,73nm,18.6s,baz=137,slow=42
ALGO Algonquin Park 34.12 15 P P 12 33 49.1 -1.2
baz=201
G57A Newington 34.20 19 P P 12 33 50.1 -1.0
baz=206
E51A G1948 Merrick 34.33 13 P P 12 33 51.1 -1.0
baz=198
SAML Samuel 34.50 128 P P 12 33 53.9 -0.1
SAML IAmb IAmb 12 33 56.4
comp=Z,11nm,0.8s
EYMN Ely 34.62 358 P P 12 33 53.2 -1.4
baz=177,SNR=5.4
E54A Lac Daplat, Po 34.78 15 P P 12 33 54.9 -1.1
baz=202
G59A Clarenceville 34.78 21 P P 12 33 54.8 -1.3
baz=209
D50A G1974 Best Tow 34.86 12 P P 12 33 55.4 -1.2
baz=197
D51A Lot 18 Range I 34.88 13 P P 12 33 55.8 -1.0
baz=198
SNOW Snow King Moun 35.05 333 IAmb IAmb 12 34 01.4
comp=Z,7.9nm,0.6s
E55A Montcerf-Lytto 35.11 17 P P 12 33 57.9 -0.9
baz=204
AGMN Agassiz Nation 35.30 353 P P 12 33 59.6 -0.8
baz=170,SNR=9.2
MDND Maddock 35.44 349 P P 12 34 01.7 +0.1
baz=163,SNR=16
NV11 Mina Array Sit 35.45 320 P P 12 34 04.3 +2.2
NV11 IAmb IAmb 12 34 08.8
comp=Z,5.5nm,0.8s
E56A St. Veronique 35.48 18 P P 12 34 01.1 -1.0
baz=205
NVAR Mina Array Bea 35.54 320 P P 12 34 06.0 +3.1
comp=Z,7.4nm,0.8s,baz=137,slow=8.4,SNR=38
NVAR PcP PcP 12 36 33.0 +2.2
comp=Z,1.6nm,0.7s,baz=125,slow=3.2,SNR=5.6
NVAR ScP ScP 12 40 14.0 +3.1
comp=Z,0.4nm,0.5s,baz=104,slow=3.8,SNR=3.6
NVAR LR LR 12 50 28.7
comp=Z,72nm,21.7s,baz=44,slow=39
F59A Saint Guillaume 35.59 21 P P 12 34 02.6 -0.3
baz=209
E57A Chemin Saint G 35.64 19 P P 12 34 02.5 -0.9
baz=207
D55A Sainte-Anne-du 35.79 17 P P 12 34 03.6 -1.0
baz=204,SNR=5.3
RLMT Red Lodge 35.79 336 P P 12 34 04.2 -0.8
baz=146
G62A West of Eustis 35.88 24 P P 12 34 04.6 -0.9
G62A West of Eustis 35.88 24 P P 12 34 04.3 -1.2
baz=213
E58A La Victoria 35.88 20 P P 12 34 04.2 -1.3
baz=208
F60A Warwick 35.98 21 P P 12 34 04.9 -1.4
baz=210
D56A ZEC Mazanza, M 36.02 18 P P 12 34 05.7 -1.0
baz=205

LAO LASA Array 36.06 341 P P 12 34 07.1 +0.1
baz=152
D57A Chemin Vers le 36.26 19 P P 12 34 07.7 -1.0
baz=207
LPAZ La Paz 36.39 143 P P 12 34 11.5 +0.7
comp=Z,1.4nm,0.6s,baz=333,slow=6.0,SNR=6.1
YERR Yerington 36.46 320 P P 12 34 12.7 +1.9
D58A Chemin du LacG 36.65 20 P P 12 34 10.9 -1.1
baz=208
F63A Nahmakanta, Br 36.85 25 P P 12 34 12.8 -0.9
LATQ La Tuque 36.93 19 P P 12 34 13.6 -0.8
baz=208
MCMT McKenzie Canyo 37.06 333 P P 12 34 17.7 +1.9
DGMT Dagmar 37.07 344 P P 12 34 16.2 +0.6
baz=156,SNR=11
G65A Princeton 37.09 26 P P 12 34 15.5 -0.2
ULM Lac du Bonnet 37.23 354 P P 12 34 15.5 -1.4
comp=Z,14nm,0.6s,baz=169,slow=9.1,SNR=40
ULM LR LR 12 52 07.0
comp=Z,117nm,19.7s,baz=120,slow=40
LSQQ Lebel-sur-Quev 37.28 14 P P 12 34 16.4 -0.9
baz=201
DLMT Dillon 37.36 333 P P 12 34 19.6 +1.3
D61A St Aubert, Com 37.67 22 P P 12 34 19.8 -0.9
baz=212
MATQ Matagami 37.78 13 P P 12 34 20.2 -1.3
baz=200,SNR=6.1
D62A Allapoint, All 38.00 23 P P 12 34 22.8 -0.7
D62A Allapoint, All 38.00 23 P P 12 34 22.5 -0.9
baz=214
D63A Stockholm 38.33 24 P P 12 34 25.1 -1.1
baz=215
EGMT Eagleton 38.41 338 IAmb IAmb 12 34 29.9
comp=Z,11nm,1.2s
EGMT Eagleton 38.41 338 P P 12 34 27.6 +0.6
baz=148
O03E Paynes Creek 38.83 320 P P 12 34 32.0 +1.3
baz=125
SCHQ Schefferville 45.26 19 P P 12 35 21.2 -1.4
comp=Z,26nm,0.4s,baz=218,slow=6.5,SNR=139
SCHQ PcP PcP 12 37 00.3 -1.2
comp=Z,2.1nm,0.4s,baz=231,slow=6.5,SNR=4.7
SCHQ LR LR 12 55 35.2
comp=Z,78nm,18.1s,baz=102,slow=38
SCHQ Schefferville 45.26 19 P P 12 35 21.1 -1.5
FCC Fort Churchill 45.54 357 P P 12 35 24.0 -0.8
FCC IAmb IAmb 12 35 24.7
comp=Z,8.8nm,0.7s
YKA Yellowknife Ar 52.24 346 P P 12 36 15.5 -0.5
comp=Z,1.6nm,0.4s,baz=132,slow=7.6,SNR=116
YKA PcP PcP 12 37 26.8 +0.3
comp=Z,0.5nm,0.7s,baz=147,slow=4.0,SNR=5.6
YKW3 Yellowknife Ar 52.30 346 P P 12 36 16.3 -0.1
YKW3 IAmb IAmb 12 36 17.3
comp=Z,9.3nm,1.2s
C36M Paulatuk 60.09 347 P P 12 37 11.1 -0.6
baz=141
RES Resolute Bay 61.50 358 P P 12 37 20.3 -1.0
ILAR Eielson Array 64.34 337 P P 12 37 39.8 -0.6
comp=Z,2.0nm,1.0s,baz=165,slow=4.9,SNR=14
TOLK Toolik Lake Re 66.92 340 P P 12 37 56.9 -0.1
baz=114
DAG Danmarks Havn 72.93 13 *i* P P 12 38 32.0 -1.6
DAG *i* S pP 12 38 56.4 +4.3
JMIC Jan Mayen 74.77 20 LR LR 13 11 11.9
comp=Z,41nm,18.1s,baz=206,slow=35
ESDC Sonseca Array 78.59 52 P P 12 39 04.8 -1.9
comp=Z,0.7nm,0.6s,baz=288,slow=5.8,SNR=4.1
ESDC Sonseca Array 78.59 52 IAmb IAmb 12 39 06.7
comp=Z,0.8nm,0.8s
DBIC Dimbokro 83.71 85 P P 12 39 33.2 -1.0
comp=Z,2.6nm,0.6s,baz=232,slow=2.7,SNR=4.7
DBIC Dimbokro 83.71 85 IAmb IAmb 12 39 35.9
comp=Z,16nm,1.4s
NOA NORSAR Array B 83.84 29 P P 12 39 33.0 -1.0
comp=Z,0.6nm,0.5s,baz=286,slow=5.1,SNR=3.3
ARCES ARCESS Array B 86.21 19 P P 12 39 44.3 -1.5
comp=Z,2.0nm,0.8s,baz=279,slow=4.6,SNR=16
TORD Torodi Ar. Bea 88.58 77 P P 12 39 55.1 -3.1
comp=Z,0.5nm,0.6s,baz=291,slow=4.5,SNR=3.3
TORD Torodi Ar. Bea 88.58 77 IAmb IAmb 12 39 56.0
comp=Z,0.6nm,0.8s
ZALV Zalesovo Beam 112.93 3 PP PP 12 46 28.0 -1.4
comp=Z,0.5nm,0.4s,baz=335,slow=8.8,SNR=4.1
MKAR Makanchi Array 119.83 6 PKP PKPdf 12 45 54.2 -0.6
comp=Z,0.2nm,0.7s,baz=23,slow=4.7,SNR=3.1
WMQ Urumqi 123.17 2 *eP* PKiKP 12 46 01.9 +0.3
WMQ pmax pmax
comp=Z,70nm,4.1s
WMQ LR LR
comp=N,390nm,29.0s
WMQ LR LR
comp=E,1μm,28.9s
WMQ LR LR
comp=Z,43nm,29.1s
KSH Kashi 125.89 13 PKP PKPdf 12 46 03.8 -3.0
LZH Lanzhou 129.25 346 *e*PKP PKPdf 12 46 13.7 +0.4
LZH pPKP pPKPdf 12 46 33.5 +0.4
LZH sPKP 12 46 41.8
LZH LR LR
comp=N,58nm,17.8s
LZH LR LR
comp=E,65nm,18.1s
LZH LR LR
comp=Z,91nm,20.0s
STKA Stephens Creek 129.44 240 PKP PKiKP 12 46 14.9 +0.6
comp=Z,2.2nm,0.8s,baz=37,slow=5.1,SNR=6.3
WRA Warramunga Arr 137.17 255 PKiKP PKPpre 12 46 22.6
comp=Z,0.5nm,0.8s,baz=93,slow=3.5,SNR=4.3
WRA PKP PKiKP 12 46 30.4 +0.1
comp=Z,1.4nm,0.6s,baz=90,slow=2.4,SNR=16
WRA SKPab SKPab 12 50 05.9 +3.3
comp=Z,0.3nm,0.6s,baz=90,slow=3.7,SNR=4.6
ASAR Alice Springs 137.31 249 PKhKP PKPpre 12 46 19.2
comp=Z,0.2nm,0.7s,baz=104,slow=3.4,SNR=3.7
ASAR SKPab SKPab 12 50 04.5 +1.3
comp=Z,0.5nm,0.8s,baz=89,slow=2.1,SNR=4.5
CMAR Chiang Mai Arr 147.31 344 PKPbc PKPdf 12 46 47.8 +1.3
comp=Z,1.9nm,0.6s,baz=338,slow=3.4,SNR=9.5

*VIE **09** 12:29:41.3±0.1, 46.°90N×9.°56E, h1km, ml1.1/3, Error ellipse: s-maj=0.9km s-min=0.6km az=46.0 8 km NNW of Chur*

ZUR 09 12:29:41.4, 46.°90N×9.°53E, h0km±4km, MLh0.9/11, 2C, Error ellipse: s-maj=9.2km s-min=1.3km az=269.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLONS	**Plons/SG**	**0.18**	**326**	Pg	Pg	12 29 45.1	+0.3
PLONS				Pg	Pg	12 29 45.1	+0.3
	0.1nm,SNR=1.2						
PLONS				Sg	Sg	12 29 48.0	+0.8
DAVOX	**Davos/Dischmat**	**0.27**	**116**	⇑Pg	Pg	12 29 47.0	+0.4
	SNR=1.2						
DAVOX				⇑Pg	Pg	12 29 47.0	+0.4
PANIX	**Pigniu (Panix)**	**0.29**	**255**	Pg	Pg	12 29 47.5	+0.5
PANIX				Pg	Pg	12 29 47.5	+0.5
	SNR=0.7						
PANIX				Sg	Sg	12 29 51.8	+0.9
VDL	**Val di Lei**	**0.42**	**187**	Pg	Pg	12 29 50.0	+0.5
	0.1nm,SNR=1.3						
VDL				Pg	Pg	12 29 50.0	+0.5
FUORN	**Ofenpass-Fuorn**	**0.58**	**119**	Pg	Pg	12 29 52.7	+0.3
FUORN				Pg	Pg	12 29 52.7	+0.3
	SNR=1.1						
FUSIO	**Fusio**	**0.74**	**233**	Pg	Pg	12 29 56.2	+0.6
FUSIO				Pg	Pg	12 29 56.2	+0.6
	SNR=1.2						
FETA	**Feichten**	**0.83**	**81**	*i* Pg	Pg	12 29 57.1	-0.2
	0.1nm,0.1s						
FETA				*i* Sg	Sg	12 30 08.5	+0.5
	3μm,0.0s						
SQTA	**Sankt Quirin**	**1.19**	**74**	*i* Pg	Pg	12 30 03.7	-0.5
	0.3nm,0.1s						
SQTA				*i* Sg	Sg	12 30 20.2	+0.5
	0.8nm,0.2s						

UPP 09 12:31:25.6±0.0, 57.°68N×12.°35E, h0km, ML2.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BORU	**Boraas**	**0.23**	**102**	P	Pg	12 31 30.2	+0.3
BORU				S	Sg	12 31 33.3	+0.4

ONAU Onsala 0.37 219 P Pg 12 31 32.8 +0.1
ONAU S Sg 12 31 37.8 +0.3
TJOU Tjoern 0.52 312 P Pg 12 31 35.6 0.0
FABU Falkenberg 0.71 164 P Pg 12 31 38.9 -0.3
VANU Vaenersborg 0.82 350 P Pg 12 31 41.0 -0.4
GNOU Gnosjoe 0.85 117 P Pg 12 31 41.4 -0.5
FKPU Falk 0.87 56 P Pg 12 31 42.0 -0.3
NASU Vaermlandsnaes 1.32 19 P Pg 12 31 49.8 -1.2
DEL Delary 1.47 145 P Pn 12 31 52.5 -0.9
EKSU Eksjoe 1.59 93 P Pn 12 31 54.8 -0.2
VXJU Vaexsjoe 1.60 117 P Pn 12 31 54.8 -0.3
BJUU Bjuv 1.66 167 P Pn 12 31 55.7 -0.1
FINU Finntorp 1.73 2 P Pn 12 31 56.9 +0.1

*NNC **09** 12:42:03.4±4.4, 36.°82N×69.°77E, h237km±65km, mb2.4, mpv3.6, Error ellipse: s-maj=41.3km s-min=27.0km az=22.0*

ISC 09 12:41:58.4±3.6, 36.°6N±0.°2×69.°3E±0.°1, h48km, n9, σ2.°9 04/13, 4C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**6.47**	**30**	P	Pn	12 43 32.5	+1.1
	SNR=22						
KK31	**Karatay Array**	**6.55**	**8**	⇓P	Pn	12 43 34.9	+2.7
	1.1nm,0.3s,baz=183,slow=13,SNR=26						
KK31				⇑S	Sn	12 44 48.7	+3.1
	1.5nm,0.6s,baz=186,slow=23						
UCH	**Uchtor**	**6.90**	**34**	P	Pn	12 43 38.3	+1.0
	SNR=14						
AAK	**Ala-Archa**	**7.22**	**32**	P	Pn	12 43 42.2	+0.7
	SNR=5.6						
AAK	**Ala-Archa**	**7.22**	**32**	P	Pn	12 43 41.9	+0.4
	2.7nm,0.6s						
AAK				S	Sn	12 45 02.0	-0.1
	2.0nm,0.5s						
CHMS	**Chumysh**	**7.62**	**31**	P	Pn	12 43 47.7	+0.8
	SNR=5.7						
USP	**Ospenovka**	**7.74**	**29**	P	Pn	12 43 48.9	+0.3
	SNR=6.6						
TKM2	**Tokmak 2**	**7.94**	**35**	⇓P	Pn	12 43 50.2	-1.1
	3.7nm,0.8s						
TKM2				⇑S	Sn	12 45 18.9	-1.0
	2.2nm,1.0s						
AB31	**Akbulak array**	**14.38**	**334**	⇑P	Pn	12 45 19.0	+0.1
	0.2nm,0.3s,baz=155,slow=12,SNR=11						
AB31				⇑S	Sn	12 47 52.5	-4.3
	0.3nm,0.5s						

WEL 09 12:45:06.4±3.6, 38.°S±10.°×18.°0W±2.°9, h33km, M3.5/38, ML3.7/21, MLv3.5/38, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.44**	**264**	P	Pn	12 45 30.1	-0.1
MXZ	**Matakaoa Point**	**1.53**	**274**	P	Pn	12 45 31.6	+0.2
PUZ	**Puketiti**	**1.61**	**255**	P	Pn	12 45 32.2	-0.3
PKGZ	**Pakihiroa**	**1.72**	**262**	P	Pn	12 45 33.7	-0.3
CNGZ	**Carnagh Statio**	**1.79**	**242**	P	Pn	12 45 35.2	+0.3
TWGZ	**Tauwhareparae**	**1.84**	**254**	P	Pn	12 45 35.8	0.0
HAZ	**Te Kaha**	**1.94**	**267**	P	Pn	12 45 37.1	+0.1
TKGZ	**Te Karaka**	**2.03**	**247**	P	Pn	12 45 38.3	0.0
RUGZ	**Raukumara Rang**	**2.04**	**261**	P	Pn	12 45 38.3	-0.2
RIGZ	**Rimuhau**	**2.20**	**241**	P	Pn	12 45 40.5	0.0
PRGZ	**Paritu Road**	**2.23**	**235**	P	Pn	12 45 41.2	+0.2
MWZ	**Matawai**	**2.23**	**252**	P	Pn	12 45 40.7	-0.4
MHGZ	**Mahia Peninsul**	**2.34**	**230**	P	Pn	12 45 42.4	-0.2
KNZ	**Kokohu**	**2.42**	**235**	P	Pn	12 45 43.4	-0.2
SNGZ	**Shannon Statio**	**2.53**	**243**	P	Pn	12 45 45.3	+0.1
URZ	**Urewera**	**2.53**	**256**	P	Pn	12 45 45.5	+0.4
RTZ	**Ruatahuna**	**2.73**	**249**	P	Pn	12 45 48.5	+0.5
WHHZ	**Waihua**	**2.74**	**238**	P	Pn	12 45 48.4	+0.4
RAHZ	**Arahi**	**2.76**	**242**	P	Pn	12 45 48.7	+0.3
MUGZ	**Murupara**	**2.84**	**253**	P	Pn	12 45 49.7	+0.2
MTHZ	**Maungataniwha**	**2.91**	**245**	P	Pn	12 45 50.4	-0.1
OPRZ	**Ohinepanea**	**2.91**	**266**	P	Pn	12 45 50.1	-0.3
ARHZ	**Aropaoanui**	**2.99**	**237**	P	Pn	12 45 51.8	+0.3
TARZ	**Mount Tarawera**	**2.99**	**258**	P	Pn	12 45 51.8	+0.2
RRRZ	**Republican Roa**	**3.00**	**256**	P	Pn	12 45 52.5	+0.8
KARZ	**Kaharoa**	**3.17**	**263**	P	Pn	12 45 53.8	-0.2
MCHZ	**McNeill Hill**	**3.28**	**236**	P	Pn	12 45 55.2	-0.4
KAHZ	**Kahuranaki**	**3.37**	**230**	P	Pn	12 45 56.4	-0.3
KWHZ	**Kaweka Forest**	**3.46**	**238**	P	Pn	12 45 57.6	-0.3
PXZ	**Pawanui**	**3.52**	**227**	P	Pn	12 45 57.9	-1.0
KRHZ	**Kereru**	**3.60**	**236**	P	Pn	12 45 59.6	-0.3
KUZ	**Kuaotunu**	**3.71**	**283**	P	Pn	12 46 01.5	+0.1
BHHZ	**Black Hill Sta**	**3.73**	**240**	P	Pn	12 46 01.2	-0.5
PRHZ	**Porangahau**	**3.81**	**226**	P	Pn	12 46 01.2	-1.5
PNHZ	**Pukenui**	**3.86**	**233**	P	Pn	12 46 02.7	-0.8
NGZ	**Ngauruhoe**	**3.93**	**246**	P	Pn	12 46 05.6	+1.1
MKAZ	**Moumakai**	**4.07**	**277**	P	Pn	12 46 06.7	+0.3
TSZ	**Takapari Road**	**4.09**	**233**	P	Pn	12 46 05.1	-1.6
DVHZ	**Dannevirke**	**4.11**	**229**	P	Pn	12 46 05.5	-1.3
ETAZ	**East Tamaki Re**	**4.28**	**278**	P	Pn	12 46 10.1	+0.8
HIZ	**Hauiti**	**4.32**	**257**	P	Pn	12 46 10.4	+0.7
PRWZ	**Pori Road**	**4.38**	**228**	P	Pn	12 46 09.3	-1.4
POWZ	**Post Office Ro**	**4.41**	**231**	P	Pn	12 46 10.2	-0.8
TIWZ	**Tintock**	**4.58**	**226**	P	Pn	12 46 11.5	-1.8
MRZ	**Mangatainoka R**	**4.68**	**229**	P	Pn	12 46 12.7	-2.1
TMWZ	**Te Maipa**	**4.80**	**223**	P	Pn	12 46 13.9	-2.5
OGWZ	**Otaki Gorge**	**5.02**	**230**	P	Pn	12 46 17.9	-1.5
WCZ	**Waipu Caves**	**5.03**	**288**	P	Pn	12 46 19.7	+0.2
OUZ	**Omahuta**	**5.88**	**293**	P	Pn	12 46 33.3	+2.1
CTZ	**Chatham Island**	**6.51**	**159**	P	Pn	12 46 42.5	+2.6

*RSNC **09** 12:50:16.2±3.0, 2.°99N×75.°93W, h0km±11km, ML5.0, Mw5.2, Fault plane solution: NP1:φ57.00000°, δ73.00000°, λ-180.00000°.*
*MOS **09** 12:50:17.1±1.4, 3.°13N×75.°79W, h26km, mb5.1/27, Error ellipse: s-maj=10.7km s-min=6.3km az=106.0*
*IDC **09** 12:50:18.0±2.9, 3.°10N×75.°77W, h23km±18km, mb4.5/22, mb1 4.6/25, mb1mx4.5/39, mbtmp4.6/25, ML4.5/3, MS4.0/30, Ms1 4.0/30, ms1mx4.0/42, Error ellipse: s-maj=15.8km s-min=10.5km az=73.0*
*NEIC **09** 12:50:18.4±1.9, 2.°97N±0.°04×75.°84W±0.°06, h26km±4km, mb5.0/347, Error ellipse: s-maj=8.7km s-min=5.5km az=103.0*
*VAO **09** 12:50:18.6±0.3, 3.°03N×75.°77W, h10km, mb4.8*
*BJI **09** 12:50:19.0±0.0, 3.°10N×75.°80W, h30km, mB5.5/4, Ms5.4/7, Ms7 5.0/5*
*GCMT **09** 12:50:20.4±0.2, 3.°02N±0.°01×75.°92W±0.°01, h25km±1km, MW5.0/104, Moment Tensor Solution. s46,c53; s104,c156; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.57±.15; Mθθ3.78±.10; Mϕϕ-4.35±.13; Mrθ0.61±.22; Mθϕ0.20±.09; Mϕr-0.07±.29; Best double couple: Mo4.12600×10¹⁶ NP1:φ343.00000°, δ82.00000°, λ173.00000°. NP2:φ134.00000°, δ83.00000°, λ8.00000°. Principal axes: T 3.8970, Plg10.0000°, Azm359.0000°; N 0.4620, Plg80.0000°, Azm173.0000°; P -4.3560, Plg1.0000°, Azm269.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 12:50:16.9±0.9, 3.°02N±0.°02×75.°93W±0.°02, h15km±5km, n849, σ1.°33/748, mb5.0/191, MS4.1/30, 15C-7D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BETC	**Betania**	**0.59**	**124**	⇓*eP*	**Pg**	**12 50 27.1**	**-1.5**
BETC				*eS*	**Sg**	**12 50 35.3**	**-1.3**
BETC				*i*		12 50 38.5	
	comp=Z,14μm,0.6s						
PCON	**Cinco Dias**	**0.83**	**214**	⇑*eP*	**Pg**	**12 50 31.2**	**-1.9**
PCON				*eS*	**Sg**	**12 50 43.2**	**-1.0**
PCON				*i*		12 50 49.4	
	comp=Z,16μm,0.4s						
PCON				*i*		12 50 49.6	
	comp=Z,16μm,0.8s						
YOTC	**Yotoco, Valle**	**1.04**	**337**	⇑*iP*	**Pg**	**12 50 33.9**	**-3.3**
YOTC				*eS*	**Sg**	**12 50 48.0**	**-2.9**
YOTC				*i*		12 50 49.6	
	comp=Z,14μm,1.0s						
YOTC				*i*		12 50 49.7	
	comp=Z,12μm,0.3s						
SOTA	**Rioblanco**	**1.11**	**218**	⇑*eP*	**Pg**	**12 50 36.0**	**-2.5**
SOTA				*i*		12 50 53.3	
	comp=Z,6μm,0.7s						
SOTA				*i*		12 51 01.8	

comp=Z,11µm,1.0s
ORTC Ortega, Tolima 1.12 38 eP Pg 12 50 36.6 -2.0
ORTC eS **Sg 12 50 52.5 -0.8**
ORTC i 12 50 59.0
comp=Z,109µm,0.9s
ORTC i 12 51 00.7
comp=Z,66µm,0.9s
FLOC Florencia 1.45 169⇑ eP Pn 12 50 41.8 -0.9
comp=Z,28µm,1.4s
FLOC eS **Sg 12 51 01.4 -2.4**
FLOC i 12 51 05.5
comp=Z,28µm,1.4s
FLOC i 12 51 05.5
comp=Z,28µm,1.4s
FLOC Florencia 1.45 169 Pn Pn 12 50 42.2 -0.4
FLOC Sn **Sg 12 51 02.2 -1.7**
ANIL Santa Ana 1.56 20⇑ eP Pn 12 50 43.0 -1.3
ANIL eS **Sg 12 51 03.2 -4.1**
ANIL i 12 51 06.2
comp=Z,96µm,0.4s
BBAC Balboa, Cauca 1.64 233⇓ eP Pn 12 50 44.8 -0.7
BBAC eS **Sn 12 51 06.9 +0.4**
BBAC i 12 51 12.0
comp=Z,10µm,0.8s
BBAC i 12 51 12.0
comp=Z,10µm,0.8s
TOLC Tolima 1.67 21 eP Pn 12 50 44.9 -1.1
MALC Bahia Malaga 1.71 305⇓ eP Pn 12 50 47.0 +0.7
MALC eS **Sg 12 51 12.6 +0.4**
MALC i 12 51 22.4
comp=Z,8µm,1.4s
CRUC La Cruz 1.76 215 eP Pn 12 50 47.9 +0.6
CRUC i 12 51 26.2
comp=Z,7µm,0.5s
PLMC San Jos del P 1.91 349 eP Pn 12 50 48.4 -0.6
PLMC eS **Sb 12 51 17.0 +1.8**
PLMC i 12 51 22.5
comp=Z,13µm,0.5s
RREF El Recreo 1.96 17 eS Sn 12 51 15.6 +0.7
GR1C Gorgona, Isla 2.23 270⇓ eP Pn 12 50 52.8 -0.6
GR1C eS **Sn 12 51 21.6 +0.9**
GR1C i 12 51 24.8
comp=Z,1µm,0.7s
MACC Macarena, Meta 2.25 113⇓ eP Pn 12 50 55.0 +1.2
MACC eS **Sb 12 51 24.7 -0.4**
MACC i 12 51 28.6
comp=Z,30µm,0.4s
MACC i 12 51 28.8
comp=Z,26µm,0.4s
GUY2C Guyana, Caldas 2.26 14⇑ iP Pn 12 50 55.4 +1.2
GUY2C eS **Sn 12 51 25.7 +3.6**
GUY2C i 12 51 27.7
comp=Z,10µm,0.6s
GUY2C i 12 51 29.3
comp=Z,8µm,0.6s
GCUF Volcan Galeras 2.27 218 eP Pn 12 50 54.5 +0.1
GCUF eS **Sb 12 51 25.6 -0.4**
GCUF i 12 51 36.2
comp=Z,2µm,0.4s
ROSC El Rosal 2.42 42 Pg Pn 12 50 58.0 +1.7
comp=Z,227nm,0.3s,baz=207,slow=7.1,SNR=78
ROSC Lg Lg 12 51 31.9
comp=Z,2µm,0.3s,baz=163,slow=19,SNR=7.1
ROSC El Rosal 2.42 42⇑ eP Pn 12 50 57.8 +1.5
ROSC eS **Sb 12 51 33.4 +3.1**
ROSC i 12 51 40.1
comp=Z,26µm,0.5s
ROSC El Rosal 2.42 42 Pn 12 50 57.9 +1.6
ROSC Sn **Sn 12 51 29.5 +3.6**
VILC Villavicencio, 2.48 64 eP Pn 12 50 59.6 +2.6
VILC eS **Sb 12 51 33.9 +2.0**
VILC i 12 51 37.4
comp=Z,52µm,0.4s
CHIC Chingaza 2.72 54 eP Pn 12 51 02.2 +1.8
CHIC eS **Sb 12 51 38.8 0.0**
CHIC i 12 51 48.9
comp=Z,27µm,0.8s
CHIC i 12 51 49.0
comp=Z,12µm,0.5s
NORC Norcasia 2.74 23⇑ eP Pn 12 51 01.2 +0.7
NORC eS **Sn 12 51 38.4 +5.0**
NORC i 12 51 42.8
comp=Z,6µm,0.5s
NORC i 12 51 42.9
comp=Z,7µm,0.5s
CBOC Ciudad Bolivar 2.83 358⇑ iP Pn 12 51 02.7 +1.0
CBOC eS **Sb 12 51 42.1 +0.3**
CBOC i 12 51 47.5
comp=Z,3µm,0.6s
TUMC Tumaco 3.03 247⇓ eP Pn 12 51 05.9 +1.5
TUMC eS **Sb 12 51 46.2 -1.3**
TUMC i 12 51 50.7
comp=Z,2µm,0.9s
TUMC i 12 51 59.8
comp=Z,985nm,0.7s
TUMC Tumaco 3.03 247 Pn Pn 12 51 06.1 +1.7
PTLC Puerto Leguiza 3.05 158⇑ eP Pb 12 51 10.0 -0.9
PTLC eS **Sg 12 51 57.7 +2.8**
PTLC i 12 52 05.8
comp=Z,7µm,0.5s
PTLC i 12 52 08.5
comp=Z,8µm,1.1s
HELC Santa Helena 3.18 7⇑ iP Pn 12 51 08.6 +1.9
HELC eS **Sn 12 51 50.4 +5.9**
HELC i 12 52 06.0
comp=Z,3µm,1.2s
HELC i 12 52 16.5
comp=Z,2µm,0.3s
GUVC San Jose del G 3.33 98 eP Pn 12 51 09.8 +1.3
GUVC i 12 52 02.6
comp=Z,10µm,0.3s
SOLC Bahia Solano 3.51 335 eP Pn 12 51 12.6 +1.6
SOLC i 12 52 21.8
comp=Z,950nm,1.1s
OTAV Otavalo 3.74 222 P Pn 12 51 18.1 +3.6
OTAV Otavalo 3.74 222⇓ eP Pn 12 51 18.4 +3.9
OTAV eS **Sb 12 52 12.2 +4.0**
OTAV Otavalo 3.74 222 eP Pn 12 51 18.4 +3.9
OTAV Otavalo 3.74 222 Pn 12 51 18.1 +3.6
PTBC PUERTO BERRIO, 3.80 23 eP Pn 12 51 15.6 +0.7
PTBC i 12 52 12.4
comp=Z,3µm,0.3s
PTBC i 12 52 24.6
comp=Z,4µm,0.8s
PTGC Puerto Gaitan, 3.97 73 eS Sb 12 52 19.2 +4.7
DBBC Dabeiba 3.98 356 eP Pn 12 51 19.3 +1.7
DBBC i 12 52 36.7
comp=Z,3µm,1.0s
RUSC La Rusia 4.03 45 eP Pn 12 51 19.5 +0.9
RUSC i 12 52 28.6
comp=Z,3µm,0.6s
RUSC i 12 52 42.8
comp=Z,5µm,1.0s
RUSC La Rusia 4.03 45 Pn Pn 12 51 19.6 +1.1
ZARC Zaragoza, Cauc 4.57 13⇑ eP Pn 12 51 27.4 +1.9
ZARC eS **Sb 12 52 36.0 +4.1**
ZARC i 12 52 41.4
comp=Z,1µm,1.2s
ZARC i 12 52 44.1
comp=Z,975nm,0.6s
BRRC Barranca, Sant 4.63 28 eP Pn 12 51 26.6 +0.2
BRRC i 12 52 45.5
comp=Z,1µm,0.6s
BRRC i 12 52 57.5
comp=Z,2µm,0.7s
UREC San Jos de Ur 4.72 5⇑ eP Pn 12 51 29.8 +2.1
UREC i 12 52 38.4
comp=Z,320nm,0.5s
UREC i 12 53 01.7
comp=Z,1µm,2.0s
TAMC Tame, Arauca 5.34 50 eP Pn 12 51 38.0 +1.7
TAMC i 12 53 15.8
comp=Z,2µm,1.8s
TAMC i 12 53 16.5
comp=Z,909nm,0.7s
PAMC Pamplona, Colo 5.37 37 eP Pn 12 51 38.1 +1.2
PAMC i 12 53 23.5
comp=Z,1µm,0.6s
SJCC San Jacinto, C 6.88 6 eP Pn 12 51 59.0 +1.7
SJCC i 12 54 02.3
comp=Z,304nm,1.2s
SJCC i 12 54 18.9
comp=Z,279nm,0.8s
BCIP Isla Barro Col 7.24 328 Pn 12 52 03.7 +1.5
BCIP Sn **Sn 12 53 26.9 +2.7**

SDV Santo Domingo 7.86 42 Pn Pn 12 52 11.3 +0.3
comp=Z,11nm,0.3s,baz=253,slow=11,SNR=32
SDV Sn **Sn 12 53 40.0 +0.3**
comp=Z,90nm,0.3s,baz=36,slow=17,SNR=9.5
SDV Santo Domingo 7.86 42 eP Pn 12 52 11.2 +0.3
SDV Santo Domingo 7.86 42 Pn 12 52 10.9 -0.1
SDV Sn **Sn 12 53 37.4 -2.3**
URIC Uribia, Colomb 9.47 24 Pn Pn 12 52 33.1 +0.3
ATAH Atahualpa 10.38 194 Pn Pn 12 52 47.9 +2.1
comp=Z,2.3nm,0.3s,baz=13,slow=9.2,SNR=34
ATAH LR LR 12 57 33.0
comp=Z,2µm,20.9s,baz=350,slow=42
HDC Heredia 10.69 311 Pn Pn 12 52 53.4 +3.7
JTS Las Juntas de 11.51 309 iP Pn 12 53 04.5 +3.7
JTS Las Juntas de 11.51 309 Pn Pn 12 53 06.1 +5.3
comp=Z,0.5nm,0.3s,baz=151,slow=10,SNR=5.1
JTS LR LR 12 57 12.6
comp=Z,1µm,21.6s,baz=194,slow=36
JTS Las Juntas de 11.51 309 Pn 12 53 02.9 +2.1
ESPN Las Esperanzas 12.32 318 Pn Pn 12 53 14.1 +2.2
ACON Acoyapa 12.76 315 Pn 12 53 20.2 +2.3
PCRV Puerto La Cruz 13.28 57 Pn Pn 12 53 24.4 -0.7
comp=Z,2.9nm,0.3s,baz=210,slow=14,SNR=6.7
PCRV Sn **Sn 12 55 49.3 -3.3**
comp=Z,3.7nm,0.3s,baz=180,slow=20,SNR=3.8
PCRV Lg Lg 12 57 22.4
comp=Z,5.5nm,0.3s,baz=180,slow=20,SNR=1.9
PLCV Puerto La Cruz 13.31 57 Pn 12 53 24.4 -1.1
PLCV **Sn 12 55 49.3 -4.1**
ESTN Estel 14.38 315 Pn Pn 12 53 43.5 +3.2
NNA Nana 14.93 183 P Pn 12 53 50.8 +3.1
NNA Nana 14.93 183 Pn Pn 12 53 50.0 +2.3
comp=Z,3.0nm,0.3s,baz=16,slow=14,SNR=5.8
NNA LR LR 13 00 51.2
comp=Z,3µm,18.2s,baz=346,slow=42
NNA Nana 14.93 183 P Pn 12 53 50.8 +3.1
MTDJ Mount Denham 15.20 354 P P 12 53 57.0 +0.8
LGNH Logne 15.74 12 P Pn 12 54 00.1 +1.9
SDDR Presa de Saban 16.50 16 P Pn 12 54 09.8 +1.7
SDDR IAmb IAmb 12 54 25.2
comp=Z,90nm,0.8s
GTBY Guantanamo Bay 16.83 3 P Pn 12 54 14.6 +2.5
GTBY IAmb IAmb 12 54 21.1
comp=Z,81nm,0.9s
DR12 Loma Pena Alta 16.93 22 P Pn 12 54 12.8 -0.7
MLPR Magueyes Islan 17.23 30 P Pn 12 54 18.7 +1.6
SAML Samuel 17.40 133 P Pn 12 54 17.6 -1.8
SAML pmax pmax
comp=Z,32nm,0.9s
SAML Samuel 17.40 133 eP Pn 12 54 20.1 +0.7
SAML Samuel 17.40 133 P Pn 12 54 17.6 -1.8
AOPR Arecibo Observ 17.69 30 P P 12 54 25.8 +2.0
AOPR IAmb IAmb 12 54 39.6
comp=Z,78nm,0.7s
PDPR Patillas Dam, 17.79 32 P Pn 12 54 23.4 -0.7
SJG San Juan 17.80 32 P Pn 12 54 23.4 -0.9
SJG pmax pmax
comp=Z,80nm,1.1s
SJG San Juan 17.80 32 P P 12 54 27.4 +2.5
comp=Z,3.3nm,0.3s,baz=193,slow=2.6,SNR=6.3
SJG LR LR 13 01 42.2
comp=Z,1µm,19.9s,baz=201,slow=39
SJG San Juan 17.80 32 P Pn 12 54 23.4 -0.9
HUMP Col San Antoni 17.99 33 P Pn 12 54 27.2 +0.6
GCPR Guaynabo City 18.00 32 P Pn 12 54 27.2 +0.5
CBYP Canovanas 18.09 32 P Pn 12 54 27.7 -0.2
MTP Monte Pirata 18.11 33 P Pn 12 54 27.6 -0.5
MCLT Moule a Chique 18.23 53 P P 12 54 31.3 +1.6
APG El Espaste 18.63 311 LR LR 13 01 39.6
comp=Z,331nm,21.5s,baz=120,slow=36
STVI Saint Thomas 18.65 34 P P 12 54 34.0 -0.3
FDF Fort de France 18.66 51 P P 12 54 33.2 -1.3
FDF pmax pmax
comp=Z,102nm,0.9s
FDF Fort de France 18.66 51 P P 12 54 33.1 -1.3
FDF IAmb IAmb 12 54 48.2
comp=Z,102nm,0.9s
LPAZ La Paz 20.67 158 P P 12 54 55.7 -1.4
comp=Z,8.6nm,1.1s,baz=347,slow=9.5,SNR=9.0
LPAZ La Paz 20.67 158 P P 12 54 55.7 -1.4
TEIG Tepich 20.92 326 P P 12 55 00.0 +0.9
comp=Z,9.1nm,0.5s
TEIG LR LR 13 03 09.0
comp=Z,588nm,18.9s,slow=37
TEIG Tepich 20.92 326 P P 12 55 00.5 +1.4
MNMC Minye Minye 22.88 164 IAmb IAmb 12 55 39.3
comp=Z,29nm,0.8s
MDP Montagnes des 23.32 84 P P 12 55 23.4 -1.3
comp=Z,32nm,0.9s,baz=268,slow=9.2,SNR=5.5
PB11 IPOC Station P 23.46 165 P P 12 55 25.1 -1.1
PB11 IAmb IAmb 12 55 42.8
comp=Z,33nm,0.9s
SIV San Ignacio 23.93 143 P P 12 55 30.1 -0.5
comp=Z,16nm,1.0s,baz=331,slow=12,SNR=38
SIV LR LR 13 04 57.9
comp=Z,708nm,20.0s,baz=330,slow=37
060A Indiantown 24.26 350 P P 12 55 35.4 +1.9
baz=169
PB04 IPOC Station P 25.82 168 P P 12 55 49.7 +1.7
PB04 IAmb IAmb 12 56 06.3
comp=Z,25nm,0.8s
LVC Limon Verde 26.38 165 P P 12 55 54.4 +1.2
comp=Z,18nm,1.0s,baz=348,slow=6.3,SNR=7.1
LVC LR LR 13 08 55.0
comp=Z,798nm,19.6s,baz=316,slow=42
LVC Limon Verde 26.38 165 eP P 12 55 55.2 +2.0
LVC Limon Verde 26.38 165 P P 12 55 53.4 +0.1
SALV Santo Antonio 27.46 134 eP P 12 56 05.9 +3.3
GO02 Mina Guanaco 28.68 168 P P 12 56 13.2 -0.6
353A Camilla 29.24 345 P P 12 56 19.7 +1.4
baz=163
352A Blakely 29.55 344 P P 12 56 22.4 +1.3
baz=161
254A Abbeville 29.60 347 P P 12 56 22.6 +1.1
baz=165
253A Americus 29.90 346 P P 12 56 25.7 +1.5
baz=163
156A Sylvania 29.94 351 P P 12 56 26.3 +1.8
baz=169
252A Lumpkin 29.99 345 P P 12 56 26.5 +1.5
baz=162
155A Kite 30.08 349 P P 12 56 27.6 +1.8
baz=167
NHSC New Hope 30.20 353 P P 12 56 28.5 +1.8
baz=171
Z59A Georgetown, SC 30.23 354 P P 12 56 28.9 +1.9
baz=173
ARAG Araguaiana, MT 30.26 129 eP P 12 56 30.1 +2.5
Z58A St. Stephen 30.38 354 P P 12 56 30.1 +1.8
baz=172
153A Fort Valley 30.40 347 P P 12 56 29.7 +1.1
baz=164
250A Grady 30.41 342 P P 12 56 29.2 +0.5
Z57A Bowman 30.45 352 P P 12 56 30.8 +1.8
baz=170
Z56A Williston 30.58 351 P P 12 56 31.5 +1.3
baz=169
152A Waverly Hall 30.63 345 P P 12 56 31.4 +0.8
baz=162,SNR=5.5
AQDB Aquidauana 30.64 140 eP P 12 56 33.8 +2.9
Z54A Sparta 30.75 349 P P 12 56 32.9 +1.2
baz=166
Y60A Bolivia 30.90 356 P P 12 56 33.7 +0.7
baz=175
Y58A Scranton 30.93 354 P P 12 56 34.2 +1.0
baz=172
Y59A Loris 30.94 355 P P 12 56 34.1 +0.8
baz=174
Z53A Monticello 30.95 347 P P 12 56 34.4 +1.0
baz=165,SNR=5.5
GOGA Godfrey 31.05 348 P P 12 56 34.8 +0.5
GOGA pmax pmax
comp=Z,16nm,0.6s
GOGA Godfrey 31.05 348 P P 12 56 34.8 +0.5
GOGA IAmb IAmb 12 56 36.3
comp=Z,16nm,0.6s
GOGA Godfrey 31.05 348 P P 12 56 35.4 +1.1
baz=165,SNR=6.3
Z52A Williamson 31.05 346 P P 12 56 35.5 +1.2
baz=163,SNR=7.9
Y55A Saluda 31.26 350 P P 12 56 37.2 +1.1
baz=168,SNR=5.4
PEXB Peixe 31.30 119 eP P 12 56 37.8 +1.0
Y54A Tignall 31.33 349 P P 12 56 37.7 +0.9
baz=167,SNR=6.7
Z51A Franklin 31.36 345 P P 12 56 38.0 +0.9

Z51A IAmb IAmb 12 56 39.2
comp=Z,23nm,0.8s
C2SB Chapadao do Su 31.39 134 eP P 12 56 38.2 +0.7
X60A Albert Glenn T 31.46 357 P P 12 56 39.0 +1.2
baz=176
X59A McDuffie Farm, 31.49 356 P P 12 56 38.9 +0.7
baz=175
Z50A Ashland 31.50 344 P P 12 56 39.4 +1.1
baz=160,SNR=14
Y53A Monroe 31.50 348 P P 12 56 39.4 +1.1
baz=165,SNR=12
X58A Rowland 31.54 355 P P 12 56 39.9 +1.3
baz=173
HODGE Hodges 31.61 350 IAmb IAmb 12 56 41.0
comp=Z,18nm,0.7s
LRAL Lakeview Retre 31.61 342 P P 12 56 40.2 +0.9
baz=158,SNR=18
Y52A Lilburn 31.61 347 IAmb IAmb 12 56 42.2
comp=Z,19nm,0.7s
Y52A Lilburn 31.61 347 P P 12 56 40.4 +1.1
baz=164
X56A White Oak 31.67 352 P P 12 56 40.5 +0.7
baz=170,SNR=5.6
X55A Gracelyn & Ava 31.74 351 P P 12 56 41.3 +0.9
baz=169
BIRD Birdtown, Kers 31.75 353 P P 12 56 41.2 +0.8
Y51A Rockmart 31.89 346 P P 12 56 42.4 +0.7
baz=162
W60A Pink Hill 31.92 357 P P 12 56 42.7 +0.8
baz=176
X54A Belton 31.94 350 P P 12 56 43.1 +1.0
baz=168
W58A Raeford 31.99 355 P P 12 56 43.5 +0.9
baz=174,SNR=5.6
W61A Ground Anchor 32.02 358 P P 12 56 43.7 +0.9
baz=178
X53A Estanollee 32.07 348 P P 12 56 44.4 +1.1
baz=166
W57A Gilead 32.20 354 P P 12 56 45.0 +0.6
baz=172
Y49A Blount Mountai 32.21 344 P P 12 56 44.9 +0.4
W56A Indian Trail 32.25 353 P P 12 56 45.8 +1.0
baz=171
KMSC Kings Mountain 32.35 352 P P 12 56 46.5 +0.7
baz=170
V62A Hyde County Ai 32.38 360 P P 12 56 46.9 +0.9
baz=180
W54A Cherokee Point 32.43 350 P P 12 56 47.4 +0.9
baz=168
X51A Calhoun 32.47 346 P P 12 56 47.7 +0.9
baz=163
BG3 Lake Jocassee 32.47 349 P P 12 56 47.9 +1.1
BG3 IAmb IAmb 12 56 49.3
comp=Z,21nm,0.7s
V60A Jim Taylor Roa 32.61 358 P P 12 56 48.4 +0.4
V60A Jim Taylor Roa 32.61 358 P P 12 56 48.8 +0.8
baz=177
V61A Roper 32.62 359 P P 12 56 48.7 +0.7
baz=179
FPAL Fort Paine 32.63 345 IAmb IAmb 12 56 50.0
comp=Z,24nm,0.8s
V59A Middlesex 32.66 357 P P 12 56 49.2 +0.8
baz=176,SNR=8.4
W53A Cullowhee 32.69 349 P P 12 56 50.2 +1.3
baz=166,SNR=13
V58A Windy Hill, Pi 32.75 355 P P 12 56 50.0 +0.8
baz=174,SNR=7.7
HKT Hockley 32.76 327 iP P 12 56 47.4 -1.9
HKT pmax pmax
comp=Z,10.0nm,1.1s
W52A Murphy 32.77 348 P P 12 56 50.1 +0.7
W52A Murphy 32.77 348 P P 12 56 50.5 +1.1
baz=165,SNR=9.2
V57A Coltrane Farms 32.90 354 P P 12 56 51.1 +0.6
baz=173,SNR=8.8
V56A Mocksville 32.90 353 P P 12 56 51.5 +0.9
baz=171,SNR=10.0
W51A Cleveland 33.02 347 P P 12 56 52.7 +1.1
baz=164,SNR=11
V55A Taylorsville 33.04 352 P P 12 56 52.9 +1.2
V55A IAmb IAmb 12 56 54.2
comp=Z,20nm,1.1s
V55A Taylorsville 33.04 352 P P 12 56 52.7 +1.0
baz=170
V54A Nebo 33.07 351 P P 12 56 53.3 +1.2
baz=169,SNR=7.3
V53A Saluda 33.11 350 IAmb IAmb 12 56 54.7
comp=Z,23nm,0.7s
V53A Saluda 33.11 350 P P 12 56 53.6 +1.1
baz=167,SNR=12
U61A Possum Corner 33.16 359 P P 12 56 53.5 +0.8
baz=179
W50A Signal Mountai 33.19 346 IAmb IAmb 12 56 55.1
comp=Z,32nm,1.0s
W50A Signal Mountai 33.19 346 P P 12 56 54.1 +0.9
baz=162,SNR=10
U59A Littleton 33.22 357 IAmb IAmb 12 56 55.2
comp=Z,22nm,1.1s
U59A Littleton 33.22 357 P P 12 56 54.1 +0.8
baz=176
CPCT Cooper Cave 33.24 347 IAmb IAmb 12 56 56.5
comp=Z,20nm,0.8s
BDFB Brasilia 33.27 125 P P 12 56 54.1 0.0
BDFB pmax pmax
comp=Z,17nm,1.0s
BDFB Brasilia 33.27 125 P P 12 56 53.9 -0.3
comp=Z,3.3nm,0.4s,baz=355,slow=11,SNR=3.9
BDFB LR LR 13 09 55.2
comp=Z,633nm,18.3s,baz=303,slow=36
BDFB Brasilia 33.27 125 P P 12 56 54.1 0.0
BDFB IAmb IAmb 12 57 04.8
comp=Z,17nm,1.0s
TKL Tuckaleechee C 33.28 348 P P 12 56 54.2 +0.3
TKL pmax pmax
comp=Z,10.0nm,0.8s
TKL Tuckaleechee C 33.28 348 P P 12 56 54.2 +0.3
TKL IAmb IAmb 12 56 55.3
comp=Z,10nm,0.8s
U58A Oxford 33.30 356 P P 12 56 54.9 +0.8
baz=175,SNR=7.7
U60A Pendleton 33.31 358 P P 12 56 54.6 +0.5
baz=178
W49A Belvidere 33.35 344 P P 12 56 55.0 +0.5
baz=161,SNR=8.2
SWET Sewanee 33.36 345 P P 12 56 54.4 -0.2
SWET IAmb IAmb 12 56 56.2
comp=Z,17nm,0.8s
GO04 Tololo Observa 33.37 172 P P 12 56 54.1 -0.9
GO04 IAmb IAmb 12 57 11.0
comp=Z,13nm,1.0s
U57A Blanch 33.40 355 P P 12 56 55.5 +0.6
baz=174,SNR=14
U56A King 33.42 353 P P 12 56 55.6 +0.5
U56A King 33.42 353 P P 12 56 56.5 +1.4
baz=172,SNR=7.6
V52A Sevierville 33.42 349 P P 12 56 56.0 +0.9
baz=166,SNR=9.8
V51A Loudon 33.54 348 P P 12 56 57.0 +0.9
V51A Loudon 33.54 348 P P 12 56 57.1 +1.0
baz=164,SNR=13
V50A Pikevile 33.58 346 P P 12 56 57.6 +1.1
baz=163,SNR=12
NATX Nacogdoches 33.59 330 P P 12 56 57.0 +0.3
baz=144
U55A TA2, Sparta 33.65 353 P P 12 56 58.2 +1.0
baz=171
833A Chaparral WMA, 33.67 321 IAmb IAmb 12 57 08.8
comp=Z,14nm,0.8s
833A Chaparral WMA, 33.67 321 P P 12 56 58.0 +0.7
baz=134
PLAL Pickwick Lake 33.75 342 IAmb IAmb 12 56 59.5
comp=Z,17nm,0.8s
U53A Fall Branch 33.75 350 P P 12 56 59.0 +1.0
baz=168,SNR=6.7
U54A Nelsons Funny 33.78 351 P P 12 56 59.5 +1.2
baz=169,SNR=11
T59A Double "B" Far 33.82 358 P P 12 56 59.4 +0.8
baz=177,SNR=15
T58A Grand View Acr 33.85 356 P P 12 56 59.7 +0.9
baz=175,SNR=16
V49A McMinnville 33.87 345 P P 12 56 59.6 +0.5
baz=162,SNR=12
U52A Thorn Hill 33.91 349 P P 12 56 59.8 +0.4
baz=166
T57A Hurt 33.95 355 P P 12 57 00.6 +0.9
baz=174,SNR=12
T60A Surry 33.97 359 P P 12 57 00.8 +1.0
baz=178,SNR=7.2

Z41A Richland Creek 33.98 334 P P 12 57 00.8 +0.8
baz=149
U51A La Follette 34.03 348 P P 12 57 01.3 +0.9
baz=165,SNR=8.3
T56A Rocky Mt 34.06 354 P P 12 57 01.8 +1.2
baz=172,SNR=12
TZTN Tazewell 34.09 349 P P 12 57 01.9 +0.9
baz=166,SNR=7.8
T55A Pulaski 34.23 353 P P 12 57 03.5 +1.3
baz=171,SNR=9.2
U50A Jamestown 34.24 347 P P 12 57 03.0 +0.8
baz=164,SNR=18
T54A Tazewell 34.27 352 P P 12 57 03.6 +1.0
baz=170,SNR=9.3
CPUP Villa Florida 34.28 149 LR LR 13 11 08.1
comp=Z,277nm,19.1s,baz=332,slow=36
CPUP Villa Florida 34.28 149 eP P 12 57 05.0 +2.3
BLA Blacksburg 34.28 354 IAmb IAmb 12 57 04.7
comp=Z,26nm,0.9s
BLA Blacksburg 34.28 354 P P 12 57 04.0 +1.4
baz=172,SNR=7.8
TRCB Terra Rica 34.28 140 eP P 12 57 04.6 +1.7
CLTN Cedars of Leba 34.29 345 IAmb IAmb 12 57 04.2
comp=Z,13nm,0.9s
X43A Marvell 34.29 338 P P 12 57 03.5 +0.8
baz=153
T53A Wise 34.34 351 P P 12 57 04.3 +1.1
baz=168,SNR=7.7
435B Jarrell 34.37 326 P P 12 57 04.7 +1.3
baz=139
IPMB Ipameri, GO 34.38 128 eP P 12 57 05.8 +2.0
S58A Poland Farm, P 34.48 357 IAmb IAmb 12 57 06.2
comp=Z,26nm,1.0s
S58A Poland Farm, P 34.48 357 P P 12 57 05.0 +0.7
baz=176,SNR=5.2
S60A Water View 34.53 359 P P 12 57 05.9 +1.2
baz=178
T52A Hallie 34.54 350 P P 12 57 05.9 +1.0
baz=167,SNR=11
U49A Red Boiling Sp 34.55 346 P P 12 57 05.3 +0.4
baz=162,SNR=10
T51A Gray 34.58 349 P P 12 57 06.2 +1.0
baz=166,SNR=11
S56A Natural Bridge 34.66 355 P P 12 57 07.0 +1.1
baz=173
S57A Dark Hollow, R 34.69 356 P P 12 57 07.1 +1.0
baz=174,SNR=6.9
WVT Waverly 34.74 343 P P 12 57 06.1 -0.4
WVT pmax pmax
comp=Z,30nm,0.7s
WVT Waverly 34.74 343 P P 12 57 06.1 -0.4
WVT Waverly 34.74 343 P P 12 57 05.9 -0.7
baz=159
T50A Nancy 34.82 347 P P 12 57 07.8 +0.5
baz=164,SNR=6.4
R58B Mineral 34.83 357 IAmb IAmb 12 57 10.1
comp=Z,22nm,1.1s
R58B Mineral 34.83 357 P P 12 57 07.9 +0.6
baz=176,SNR=7.0
S55A Lewisburg 34.84 354 P P 12 57 08.9 +1.4
baz=172,SNR=9.0
S53A Williamson 34.96 351 P P 12 57 09.2 +0.7
baz=169
S54A Dingess, Beckl 34.97 353 P P 12 57 09.7 +1.1
baz=170
R59A King George, V 35.03 358 P P 12 57 10.3 +1.2
baz=178
X40A Basin Creek Fa 35.04 335 IAmb IAmb 12 57 11.0
comp=Z,17nm,0.8s
X40A Basin Creek Fa 35.04 335 P P 12 57 08.5 -0.7
baz=150,SNR=9.4
CBN Corbin Frederi 35.05 358 P P 12 57 09.7 +0.6
baz=177
T49A Edmonton 35.05 347 IAmb IAmb 12 57 10.7
comp=Z,26nm,0.8s
T49A Edmonton 35.05 347 P P 12 57 09.6 +0.3
baz=163,SNR=12
UALR University of 35.09 336 IAmb IAmb 12 57 11.1
comp=Z,32nm,1.0s
HBAR Harrisburg 35.13 339 P P 12 57 10.2 +0.2
R61A Willards 35.15 1 P P 12 57 11.0 +1.0
baz=181
R58A Rapidan 35.17 357 P P 12 57 11.5 +1.3
baz=176,SNR=16
S51A Beattyville 35.17 349 P P 12 57 11.1 +0.8
baz=166,SNR=7.6
R57A Stanardsville 35.19 356 P P 12 57 11.3 +0.9
baz=175
CFA Coronel Fontan 35.20 169 P P 12 57 11.7 +1.1
comp=Z,5.9nm,0.8s,baz=320,slow=7.1,SNR=7.0
WHTX Lake Whitney, 35.22 327 IAmb IAmb 12 57 12.8
comp=Z,18nm,1.1s
WHTX Lake Whitney, 35.22 327 P P 12 57 10.5 -0.2
baz=140,SNR=5.8
LNXT Lenox 35.23 341 P P 12 57 10.5 -0.3
R54A Victor 35.30 353 P P 12 57 12.8 +1.3
baz=171,SNR=6.9
R55A Marlinton 35.31 354 IAmb IAmb 12 57 22.7
comp=Z,20nm,0.9s
R55A Marlinton 35.31 354 P P 12 57 12.8 +1.3
baz=173,SNR=7.0
S50A Richmond 35.36 348 P P 12 57 12.7 +0.7
baz=165,SNR=18
R56A Bull Pasture M 35.37 355 P P 12 57 13.6 +1.6
baz=174,SNR=8.0
W41B Gary Mavity, V 35.40 337 P P 12 57 13.3 +1.0
baz=151
MIAR Mount Ida 35.41 334 IAmb IAmb 12 57 13.4
comp=Z,12nm,0.9s
MIAR Mount Ida 35.41 334 P P 12 57 11.9 -0.5
baz=148
JCT Junction City 35.44 323 P P 12 57 13.0 +0.3
baz=136
WHAR Wooly Hollow 35.52 337 IAmb IAmb 12 57 14.9
comp=Z,19nm,1.0s
R53A Hurricane 35.58 352 P P 12 57 14.4 +0.6
baz=169
S49A Springfield 35.65 347 P P 12 57 14.7 +0.3
baz=164,SNR=19
R52A Catlettsburg 35.69 351 P P 12 57 15.6 +1.0
baz=168
Q59A Harwood 35.69 359 P P 12 57 15.8 +1.1
baz=178
Q61A Milford 35.70 1 P P 12 57 16.2 +1.4
baz=181
Q58A Fox Den Farm, 35.79 358 P P 12 57 16.9 +1.3
baz=177,SNR=11
R51A Hillsboro 35.81 350 P P 12 57 16.6 +0.9
baz=167,SNR=26
Q60A Greensboro 35.82 0 P P 12 57 17.1 +1.3
baz=180
Q57A Strasburg 35.92 357 P P 12 57 18.0 +1.3
baz=176,SNR=8.3
R50A Paris 35.93 349 P P 12 57 17.4 +0.6
baz=165,SNR=9.4
BB19B Bebedouro 35.97 133 eP P 12 57 19.1 +1.8
Q56A Snyder Ridge, 35.98 356 IAmb IAmb 12 57 21.4
comp=Z,28nm,1.1s
Q55A Buckhannon 36.01 354 P P 12 57 19.3 +1.8
baz=173,SNR=16
PTGB Pitanga 36.02 141 eP P 12 57 19.1 +1.3
Q53A Leroy 36.04 353 P P 12 57 18.9 +1.2
baz=170,SNR=14
W39A Magazine 36.05 335 IAmb IAmb 12 57 18.6
comp=Z,17nm,0.8s
W39A Magazine 36.05 335 P P 12 57 17.4 -0.5
baz=149,SNR=12
Q54A Coxs Mills 36.08 354 IAmb IAmb 12 57 21.0
comp=Z,29nm,1.1s
Q54A Coxs Mills 36.08 354 P P 12 57 19.0 +1.0
baz=172,SNR=7.5
R49A Shelbyville 36.11 348 IAmb IAmb 12 57 20.5
comp=Z,20nm,0.8s
R49A Shelbyville 36.11 348 P P 12 57 18.7 +0.3
baz=164,SNR=6.7
Q52A Bidwell 36.24 352 P P 12 57 20.3 +0.8
baz=169,SNR=11
WCI Wyandotte Cave 36.30 346 P P 12 57 20.1 +0.1
WCI pmax pmax
comp=Z,30nm,1.0s
WCI Wyandotte Cave 36.30 346 P P 12 57 20.1 +0.1
WCI IAmb IAmb 12 57 20.9
comp=Z,30nm,0.9s
WCI Wyandotte Cave 36.30 346 P P 12 57 20.0 0.0
baz=162
P58A Pank, Wackersv 36.33 358 P P 12 57 21.1 +1.0
baz=178,SNR=6.6
P57A Homestead Farm 36.35 357 IAmb IAmb 12 57 24.2
comp=Z,32nm,1.1s
P57A Homestead Farm 36.35 357 P P 12 57 22.2 +1.9
baz=176,SNR=8.6
Q50A Georgetown 36.41 349 P P 12 57 21.4 +0.5
baz=166,SNR=6.2
P56A Dayton Farm, R 36.41 356 P P 12 57 22.6 +1.7
baz=175,SNR=10
NBMO Morinhos-CE 36.42 100 eP P 12 57 21.0 -0.3
P59A Jarrettsville 36.43 359 P P 12 57 22.0 +1.0
baz=179
Q51A Peebles 36.47 350 P P 12 57 22.2 +0.8
baz=167,SNR=16
P55A Reedsville 36.49 355 P P 12 57 23.2 +1.5
baz=173,SNR=5.2
P60A Greenville 36.63 0 P P 12 57 23.7 +1.0
P60A IAmb IAmb 12 57 24.7
comp=Z,18nm,1.0s
P60A Greenville 36.63 0 P P 12 57 23.5 +0.8
baz=180
P53A Whipple 36.64 353 P P 12 57 24.2 +1.4
baz=171,SNR=12
MCWV Mont Chateau 36.65 355 IAmb IAmb 12 57 26.2
comp=Z,16nm,1.1s
MCWV Mont Chateau 36.65 355 P P 12 57 24.2 +1.4
baz=173
P54A Burton 36.65 354 P P 12 57 23.9 +0.9
baz=172,SNR=8.1
U40A Yellville 36.67 337 P P 12 57 22.6 -0.6
baz=151,SNR=52
FRTB Fartura 36.70 137 eP P 12 57 25.4 +1.7
Q49A Aurora 36.74 348 P P 12 57 23.9 +0.2
baz=165,SNR=5.2
MVL Millersville 36.81 359 IAmb IAmb 12 57 26.8
comp=Z,45nm,1.1s
Q48A North Vernon 36.84 347 P P 12 57 24.6 0.0
baz=163
P51A Williamsport 36.87 351 IAmb IAmb 12 57 27.2
comp=Z,20nm,0.7s
P51A Williamsport 36.87 351 P P 12 57 25.2 +0.4
baz=168
P52A Corning 36.88 352 P P 12 57 25.6 +0.7
baz=170,SNR=17
ABTX Abilene, Hawle 36.91 326 IAmb IAmb 12 57 26.0
comp=Z,22nm,0.8s
ABTX Abilene, Hawle 36.91 326 P P 12 57 24.8 -0.4
baz=138,SNR=10.0
O58A Lewisberry 36.95 359 P P 12 57 26.6 +1.2
baz=178,SNR=11
PAGS Pennsylvania G 37.05 359 IAmb IAmb 12 57 28.7
comp=Z,39nm,1.0s
O57A Amberson 37.06 358 P P 12 57 27.7 +1.3
baz=177,SNR=7.5
P50A Jamestown 37.12 350 P P 12 57 27.2 +0.3
baz=167
O59A Robesonia 37.13 360 P P 12 57 28.4 +1.4
baz=179
TX31 Lajitas Ar. Si 37.13 318 P P 12 57 28.4 +1.1
TX32 Lajitas Array 37.13 318 P P 12 57 28.4 +1.1
TXAR Lajitas Array 37.13 318 P P 12 57 28.3 +1.0
comp=Z,4.0nm,0.9s,baz=143,slow=8.7,SNR=28
TXAR PcP PcP 12 59 48.7 +1.1
comp=Z,0.8nm,0.8s,baz=147,slow=5.4,SNR=3.6
TXAR LR LR 13 16 01.7
comp=Z,48nm,18.7s,baz=0.0,slow=42
O60A Telford 37.13 1 P P 12 57 28.2 +1.2
baz=181
MGMO Mountain Grove 37.15 338 IAmb IAmb 12 57 27.5
comp=Z,19nm,0.8s
O55A Ligonier 37.15 356 P P 12 57 28.5 +1.4
baz=174,SNR=7.3
O56A Blue Knob Stat 37.16 357 IAmb IAmb 12 57 30.1
comp=Z,36nm,1.1s
O56A Blue Knob Stat 37.16 357 P P 12 57 28.6 +1.3
baz=175,SNR=9.1
O54A Avella 37.21 354 IAmb IAmb 12 57 30.6
comp=Z,17nm,0.8s
O54A Avella 37.21 354 P P 12 57 28.6 +0.9
baz=172,SNR=5.7
P48A Milroy 37.29 348 IAmb IAmb 12 57 28.9
comp=Z,30nm,0.8s
P48A Milroy 37.29 348 P P 12 57 27.8 -0.5
baz=164,SNR=8.7
O52A Adamsville 37.31 353 P P 12 57 29.2 +0.7
baz=170,SNR=9.1
O53A New Philadelph 37.37 353 P P 12 57 30.0 +1.0
baz=171,SNR=8.7
ITQB Itaqui 37.39 152 eP P 12 57 31.0 +1.6
X34A Smith Ranch, M 37.45 330 IAmb IAmb 12 57 33.9
comp=Z,24nm,1.0s
O51A Pataskala 37.45 352 P P 12 57 30.3 +0.5
baz=169,SNR=11
SSPA Standing Stone 37.49 358 P P 12 57 31.6 +1.6
SSPA IAmb IAmb 12 57 32.7
comp=Z,29nm,1.0s
SSPA Standing Stone 37.49 358 P P 12 57 31.3 +1.2
baz=177
BRNJ Basking Ridge 37.52 2 IAmb IAmb 12 57 32.9
comp=Z,31nm,1.0s
RCLB Rio Claro- Sao 37.53 134 eP P 12 57 32.6 +1.8
TUL1 Leonard 37.53 333 P P 12 57 29.9 -0.6
baz=146,SNR=18
CCM Cathedral Cave 37.59 340 P P 12 57 29.8 -1.1
CCM pmax pmax
comp=Z,41nm,0.7s
CCM Cathedral Cave 37.59 340 P P 12 57 29.8 -1.1
CCM Cathedral Cave 37.59 340 P P 12 57 29.9 -1.1
baz=154
ACSO Alum Creek Sta 37.59 351 IAmb IAmb 12 57 39.4
comp=Z,32nm,1.1s
ACSO Alum Creek Sta 37.59 351 P P 12 57 31.5 +0.6
baz=168
N61A South Mountain 37.59 2 P P 12 57 32.0 +1.1
baz=182
N57A Milroy 37.60 358 P P 12 57 32.0 +1.1
baz=177
O50A Cable 37.61 350 P P 12 57 31.5 +0.4
baz=167,SNR=7.7
N58A Sunbury 37.66 359 IAmb IAmb 12 57 35.2
comp=Z,27nm,0.9s
N58A Sunbury 37.66 359 P P 12 57 32.6 +1.2
baz=178,SNR=8.4
N60A Cedar Hill Far 37.69 1 P P 12 57 32.0 +0.2
baz=181
N55A Marion Center 37.70 356 P P 12 57 33.2 +1.4
baz=175,SNR=14
N59A State Game Lan 37.73 0 IAmb IAmb 12 57 34.8
comp=Z,36nm,1.0s
N59A State Game Lan 37.73 0 P P 12 57 33.4 +1.3
baz=180,SNR=12
O49A Covington 37.78 349 IAmb IAmb 12 57 33.5
comp=Z,24nm,0.8s
O49A Covington 37.78 349 P P 12 57 32.5 0.0
baz=166,SNR=8.8
N56A West Decatur 37.79 357 P P 12 57 33.9 +1.3
baz=176
ITAB Concordia 37.84 144 eP P 12 57 34.5 +1.4
PAL Palisades 37.86 2 IAmb IAmb 12 57 35.1
comp=Z,34nm,0.9s
PAL Palisades 37.86 2 P P 12 57 33.8 +0.7
baz=183
N53A Lisbon 37.88 354 IAmb IAmb 12 57 35.4
comp=Z,31nm,0.9s
N53A Lisbon 37.88 354 P P 12 57 34.1 +0.8
baz=172,SNR=8.0
N54A Moraine State 37.95 355 P P 12 57 35.4 +1.5
baz=173,SNR=12
N52A McGinn's Farm, 37.98 353 P P 12 57 35.0 +0.8
baz=170,SNR=7.2
O48A Farmland 38.00 349 P P 12 57 33.9 -0.4
baz=165,SNR=12
WMOK Wichita Mounta 38.04 329 P P 12 57 33.9 -1.0
baz=141,SNR=19
N50A Nevada 38.15 351 P P 12 57 35.8 +0.2
baz=168,SNR=7.4
M60A Port Jervis 38.16 2 P P 12 57 36.1 +0.4
baz=182
M57A Sunshine Farm, 38.16 359 P P 12 57 37.1 +1.3
baz=178,SNR=17
M61A Granite Spring 38.17 3 P P 12 57 36.6 +0.8
baz=183
N51A Ashland 38.18 352 P P 12 57 36.2 +0.4
baz=169,SNR=9.7
M58A Price's Panora 38.19 359 P P 12 57 37.1 +1.2
baz=179,SNR=8.6
VAO Valinhos 38.30 134 eP P 12 57 39.0 +1.7
SPB Sao Paulo 38.34 135 eP P 12 57 39.7 +2.2
M56A Emporium 38.35 357 P P 12 57 38.5 +1.2
baz=176,SNR=12
M62A Hamden 38.35 4 P P 12 57 38.3 +1.0
baz=185
M59A Waymart 38.36 1 P P 12 57 38.5 +1.1
baz=181,SNR=7.5
M55A Ridgway 38.37 357 IAmb IAmb 12 57 40.5
comp=Z,38nm,1.1s
M55A Ridgway 38.37 357 P P 12 57 38.6 +1.1
baz=175,SNR=5.8
KSPA Keystone Colle 38.37 0 P P 12 57 39.2 +1.8
M63A Gales Ferry 38.38 5 P P 12 57 38.7 +1.2
baz=186
M66A Nantucket 38.43 7 P P 12 57 37.8 -0.1
baz=189
N49A Columbus Grove 38.46 350 P P 12 57 38.3 0.0
baz=166,SNR=19
M54A Oil Creek Stat 38.47 355 IAmb IAmb 12 57 41.9
comp=Z,39nm,0.9s
M54A Oil Creek Stat 38.47 355 P P 12 57 39.5 +1.2
baz=174,SNR=13
P43A Skaggs, Pawnee 38.49 343 IAmb IAmb 12 57 39.2
comp=Z,33nm,1.0s
M53A WI Miller and 38.49 354 P P 12 57 39.5 +1.0
baz=172,SNR=6.9
SFIN Lafayette 38.54 346 P P 12 57 37.9 -1.0
baz=162,SNR=11
M51A Elyria 38.56 352 P P 12 57 39.2 +0.2
baz=170,SNR=5.5
KSCT Kent School, K 38.60 3 IAmb IAmb 12 57 41.3
comp=Z,45nm,1.1s
M52A Chesterland 38.66 353 IAmb IAmb 12 57 41.7
comp=Z,24nm,0.8s
M52A Chesterland 38.66 353 P P 12 57 40.2 +0.2
baz=171
O44A Mansfield 38.67 345 IAmb IAmb 12 57 39.7
comp=Z,26nm,0.6s
N47A Urbana 38.71 348 IAmb IAmb 12 57 40.7
comp=Z,31nm,0.9s
N47A Urbana 38.71 348 P P 12 57 39.8 -0.5
baz=164,SNR=7.0
M50A Fremont 38.75 351 IAmb IAmb 12 57 42.0
comp=Z,47nm,1.1s
M50A Fremont 38.75 351 P P 12 57 40.9 +0.3
baz=168,SNR=6.1
BSCB Bom Sucesso 38.75 129 eP P 12 57 41.1 +0.1
L57A Andrews Acres 38.82 359 P P 12 57 42.5 +1.2
baz=178,SNR=7.4
L60A Shokan 38.83 2 P P 12 57 42.1 +0.8
baz=182
L58A Harry Jones Me 38.86 0 P P 12 57 43.0 +1.4
baz=180,SNR=7.2
L63A North Scituate 38.87 5 P P 12 57 42.5 +0.8
baz=187
L62A Suffield 38.95 4 P P 12 57 43.5 +1.1
baz=185
L53A Girard 38.96 355 P P 12 57 43.3 +0.9
baz=173,SNR=15
M49A Liberty Center 38.96 350 P P 12 57 42.6 +0.1
baz=167,SNR=14
L56A Greenwood 38.98 358 IAmb IAmb 12 57 44.9
comp=Z,26nm,1.1s
L56A Greenwood 38.98 358 P P 12 57 43.7 +1.1
baz=177
L59A Walton 39.01 1 P P 12 57 44.4 +1.5
L59A IAmb IAmb 12 57 45.2
comp=Z,30nm,1.1s
L59A Walton 39.01 1 P P 12 57 43.5 +0.6
baz=181
BINY Binghamton 39.01 360 IAmb IAmb 12 57 46.8
comp=Z,40nm,1.1s
BINY Binghamton 39.01 360 P P 12 57 44.1 +1.3
baz=180,SNR=9.8
L64A Middleborough 39.02 6 P P 12 57 44.1 +1.3
baz=188
L55A Hinsdale 39.06 357 P P 12 57 44.3 +1.0
baz=176,SNR=12
L61A Hillsdale 1, H 39.06 3 P P 12 57 44.3 +1.1
baz=184,SNR=10
ERPA Erie 39.10 355 IAmb IAmb 12 57 45.9
comp=Z,30nm,0.8s
ERPA Erie 39.10 355 P P 12 57 44.4 +0.8
baz=173,SNR=6.6
M48A Edgerton 39.10 350 P P 12 57 43.2 -0.4
baz=166
M47A Cromwell 39.16 348 P P 12 57 43.8 -0.3
baz=164
L54A Sinclairville 39.16 356 P P 12 57 45.4 +1.3
baz=174,SNR=16
HDIL Hopedale 39.27 344 P P 12 57 43.8 -1.3
baz=158
WVNY West Valley, N 39.29 357 IAmb IAmb 12 57 48.3
comp=Z,46nm,0.9s
L50A Kingsville 39.34 352 P P 12 57 45.7 +0.1
baz=169,SNR=9.8
L61B Northampton 39.37 4 P P 12 57 46.5 +0.6
baz=185
BCX Boston College 39.38 6 IAmb IAmb 12 58 02.2
comp=Z,34nm,1.2s
K60A Five Rivers En 39.47 2 P P 12 57 47.9 +1.3
baz=183
K54A Basiliko Farm, 39.50 357 P P 12 57 47.9 +1.0
baz=176
L48A N Adams 39.50 350 P P 12 57 47.0 0.0
baz=166
HRV Adam Dziewonsk 39.51 5 P P 12 57 48.3 +1.3
baz=187
K56A Middlesex 39.53 358 P P 12 57 48.0 +0.8
baz=178
K57A Scipio Center 39.55 359 P P 12 57 48.2 +0.9
baz=179,SNR=8.0
L49A Milan 39.55 351 P P 12 57 47.6 +0.2
baz=168,SNR=7.6
K61A Williamstown 39.55 3 P P 12 57 48.6 +1.2
baz=184
CPSB Cacapava Do Su 39.57 149 eP P 12 57 48.0 +0.3
K58A Earlville 39.58 0 IAmb IAmb 12 57 55.8
comp=Z,18nm,0.8s
K58A Earlville 39.58 0 P P 12 57 48.5 +1.0
baz=180,SNR=7.9
K55A Perry 39.59 358 P P 12 57 48.5 +0.8
baz=176
TRY Troy 39.59 3 IAmb IAmb 12 57 50.8
comp=Z,35nm,1.0s
K62A Royalston 39.61 4 P P 12 57 48.9 +1.0
baz=186,SNR=8.1
L47A Sherwood 39.67 349 P P 12 57 47.9 -0.5
baz=165,SNR=17
MSTX Muleshoe 39.68 324 IAmb IAmb 12 57 50.0
comp=Z,31nm,1.0s
MSTX Muleshoe 39.68 324 P P 12 57 48.3 -0.5
baz=135,SNR=18
K63A Dunstable 39.70 5 P P 12 57 49.5 +1.0
baz=187,SNR=6.0
MNTX Cornudas Mount 39.77 319 P P 12 57 49.9 +0.5
MNTX IAmb IAmb 12 57 51.1
comp=Z,22nm,0.9s
MNTX Cornudas Mount 39.77 319 P P 12 57 50.1 +0.7
baz=130,SNR=42
K52A Tillsonburg 39.82 354 P P 12 57 50.4 +0.8
baz=172
K50A Casco 40.03 352 IAmb IAmb 12 57 52.4
comp=Z,42nm,0.8s
K50A Casco 40.03 352 P P 12 57 51.5 +0.1
baz=169
MEDO Medina 40.04 357 IAmb IAmb 12 57 54.6
comp=Z,45nm,0.9s
J56A Wolcott 40.10 359 P P 12 57 52.7 +0.9
baz=178
J55A Hilton 40.11 358 P P 12 57 52.5 +0.5
baz=177
J60A Lant Hill Farm 40.12 3 P P 12 57 53.4 +1.3
baz=184
J54A Appleton 40.16 357 P P 12 57 53.6 +1.2
baz=176
K49A Clarkson 40.16 351 P P 12 57 52.2 -0.2
baz=168
ESAR Angra dos Reis 40.16 132 eP P 12 57 53.8 +1.1
J58A Remsen 40.18 1 IAmb IAmb 12 57 54.8
comp=Z,55nm,1.1s
J58A Remsen 40.18 1 P P 12 57 53.5 +1.0
baz=181,SNR=8.5
J62A Henniker 40.20 5 P P 12 57 53.7 +0.9
baz=186
J57A Williamstown 40.22 360 P P 12 57 53.8 +0.9
baz=180,SNR=7.8
J52A Paris 40.26 355 P P 12 57 53.6 +0.4
baz=173
J61A Chester 40.27 4 P P 12 57 54.5 +1.2
baz=185,SNR=6.7

K48A Perry 40.28 351 P P 12 57 53.2 -0.2
baz=167,SNR=27
J59A Piesco 40.30 2 P P 12 57 54.6 +1.1
baz=182,SNR=9.9
K47A Vermontville 40.30 350 P P 12 57 53.1 -0.5
baz=166,SNR=11
SJMB Sao Joao De Ma 40.44 124 eP P 12 57 55.0 -0.1
K46A Dorr 40.47 349 P P 12 57 53.9 -1.0
baz=165,SNR=5.9
KSU1 Kansas State U 40.55 335 P P 12 57 54.6 -1.2
baz=147,SNR=15
PLTB Pedras Altas 40.58 150 eP P 12 57 56.1 0.0
J49A Marlette 40.68 352 P P 12 57 56.4 -0.3
baz=169,SNR=9.8
J48A Bridge Port 40.71 351 P P 12 57 56.7 -0.2
baz=168,SNR=12
I60A Shoreham 40.72 3 P P 12 57 58.1 +1.1
baz=184
L42A Oliver, Polo 40.72 344 IAmb IAmb 12 57 56.3
comp=Z,15nm,0.7s
I57A Carthage 40.75 0 P P 12 57 57.6 +0.3
baz=180
BSFB Barra de Sao F 40.78 124 eP P 12 57 59.5 +1.6
NCB Newcomb 40.81 2 IAmb IAmb 12 58 00.1
comp=Z,41nm,0.9s
J47A Sunmer 40.82 350 P P 12 57 57.6 -0.3
baz=166,SNR=5.9
I51A Listowel 40.87 354 P P 12 57 58.6 +0.4
baz=172,SNR=16
I61A Oroboro, Fairl 40.88 4 P P 12 57 59.3 +1.0
baz=186
I62A Tamworth 40.89 5 P P 12 57 59.0 +0.6
baz=187
K43A Burlington 41.04 346 IAmb IAmb 12 57 58.8
comp=Z,19nm,0.6s
I55A Frankford 41.06 358 P P 12 58 00.5 +0.8
baz=177
J46A Howard City 41.08 349 P P 12 57 59.5 -0.5
baz=165
I64A Boothbay 41.11 7 P P 12 58 01.4 +1.2
baz=189
I63A Otisfield 41.13 6 IAmb IAmb 12 58 02.6
comp=Z,35nm,0.9s
I63A Otisfield 41.13 6 P P 12 58 01.4 +1.0
baz=188,SNR=5.4
LBNH Lisbon 41.20 4 IAmb IAmb 12 58 03.4
comp=Z,46nm,1.0s
LBNH Lisbon 41.20 4 P P 12 58 02.2 +1.2
baz=186,SNR=7.2
I49A Point Hope 41.21 352 P P 12 58 01.2 +0.1
baz=169
L40A Anamosa 41.22 343 IAmb IAmb 12 58 01.3
comp=Z,35nm,0.7s
H58A Gabriels 41.26 2 P P 12 58 02.4 +0.9
baz=182,SNR=9.3
H57A Richville 41.28 1 P P 12 58 02.1 +0.5
baz=181
DELO Deloro Mine 41.35 358 IAmb IAmb 12 58 04.8
comp=Z,30nm,1.1s
H55A Tweed 41.38 359 P P 12 58 03.2 +0.8
baz=178,SNR=8.5
H56A Elgin 41.41 360 P P 12 58 03.6 +1.0
baz=179,SNR=7.5
LONY Lake Ozonia 41.45 1 IAmb IAmb 12 58 05.1
comp=Z,50nm,1.1s
LONY Lake Ozonia 41.45 1 P P 12 58 04.0 +1.0
baz=182,SNR=11
H53A Bobcaygeon 41.45 357 P P 12 58 03.7 +0.6
baz=176,SNR=5.8
H60A Morristown 41.47 3 P P 12 58 04.2 +0.9
baz=185
H61A Lyndonville 41.50 4 P P 12 58 04.5 +1.1
baz=186,SNR=5.1
H59A Cadyville 41.50 2 P P 12 58 04.2 +0.7
baz=183,SNR=6.5
I47A Gladwin 41.53 351 IAmb IAmb 12 58 04.4
comp=Z,45nm,0.9s
I47A Gladwin 41.53 351 P P 12 58 03.4 -0.3
baz=167
I48A Sherman Twp 41.57 352 P P 12 58 03.6 -0.4
baz=168,SNR=12
I46A Reed City 41.62 350 P P 12 58 03.6 -0.8
baz=165
SADO Sadowa 41.68 357 IAmb IAmb 12 58 07.3
comp=Z,32nm,0.9s
FRNY Flat Rock 41.70 3 IAmb IAmb 12 58 07.3
comp=Z,33nm,1.0s
SCIA State Center 41.71 341 IAmb IAmb 12 58 04.8
comp=Z,37nm,0.8s
SCIA State Center 41.71 341 P P 12 58 03.9 -1.3
baz=153
CBKS Cedar Bluff 41.72 332 IAmb IAmb 12 58 06.0
comp=Z,35nm,0.8s
CBKS Cedar Bluff 41.72 332 P P 12 58 05.0 -0.3
baz=143,SNR=14
JFWS Jewell Farm 41.73 344 P P 12 58 03.9 -1.4
baz=158,SNR=24
WVL Waterville 41.74 7 IAmb IAmb 12 58 07.7
comp=Z,40nm,1.1s
H63A New Sharon 41.80 6 P P 12 58 06.9 +1.0
baz=189
PLVO Plevna 41.86 359 IAmb IAmb 12 58 09.7
comp=Z,36nm,0.9s
H64A Troy 41.87 7 P P 12 58 07.3 +0.8
baz=190
121A Cookes Peak, D 41.88 318 IAmb IAmb 12 58 10.6
comp=Z,42nm,1.1s
121A Cookes Peak, D 41.88 318 P P 12 58 09.0 +1.9
baz=128,SNR=28
G57A Newington 41.92 1 P P 12 58 07.7 +0.8
baz=181,SNR=7.5
G59A Clarenceville 41.96 3 P P 12 58 08.1 +0.9
baz=184
G58A Ormstown 41.99 2 P P 12 58 08.5 +1.1
baz=183,SNR=9.3
G53A Haliburton 42.00 357 P P 12 58 08.3 +0.7
baz=176
H48A Harrisville 42.02 352 IAmb IAmb 12 58 08.1
comp=Z,27nm,0.6s
H48A Harrisville 42.02 352 P P 12 58 07.3 -0.4
baz=169
G60A Masonville 42.03 4 P P 12 58 08.9 +1.1
baz=185,SNR=6.9
H47A Mio 42.05 351 P P 12 58 07.7 -0.3
baz=167,SNR=10
H65A Eastbrook 42.06 8 P P 12 58 08.4 +0.4
baz=191
G55A Calabogie 42.07 359 P P 12 58 08.7 +0.6
baz=179,SNR=9.9
319A Douglas 42.22 316 IAmb IAmb 12 58 12.4
comp=Z,28nm,1.1s
G54A Lake Saint Pet 42.25 358 P P 12 58 10.3 +0.7
baz=177,SNR=9.3
G61A St-Isidore-de- 42.27 5 P P 12 58 11.1 +1.4
baz=186
H66A Whiting 42.28 9 P P 12 58 10.9 +1.1
baz=193
G63A Kingsbury 42.29 7 P P 12 58 11.0 +1.1
baz=189
G62A West of Eustis 42.30 6 P P 12 58 11.3 +1.3
baz=188,SNR=9.6
PKME Peaks-Kenny Pk 42.48 7 P P 12 58 12.2 +0.8
baz=190
G64A Maxfield 42.53 8 P P 12 58 13.1 +1.2
baz=190
G47A Hillman 42.56 352 P P 12 58 11.8 -0.3
baz=168,SNR=8.0
ANMO Albuquerque 42.57 322 P P 12 58 13.6 +1.0
ANMO pmax pmax
comp=Z,22nm,0.8s
ANMO Albuquerque 42.57 322 P P 12 58 13.6 +1.0
ANMO IAmb IAmb 12 58 14.7
comp=Z,22nm,0.8s
ANMO Albuquerque 42.57 322 P P 12 58 13.4 +0.9
baz=131
G65A Princeton 42.65 9 IAmb IAmb 12 58 15.0
comp=Z,38nm,0.9s
G65A Princeton 42.65 9 P P 12 58 13.7 +0.9
baz=192
G45A Suttons Bay 42.72 350 P P 12 58 12.9 -0.5
baz=165,SNR=8.7
F59A Saint Guilaume 42.75 3 P P 12 58 14.5 +0.9
baz=184
ALGO Algonquin Park 42.80 358 P P 12 58 14.6 +0.5
baz=177,SNR=16
T25A Trinidad 42.87 326 P P 12 58 16.3 +1.3
baz=136,SNR=11
F51A Arnstein 42.88 356 P P 12 58 14.9 +0.2
baz=174
F60A Warwick 42.92 4 P P 12 58 15.9 +0.9
baz=186,SNR=8.1
F63A Nahmakanta, Br 42.93 7 P P 12 58 15.6 +0.5
baz=190
F61A St Evariste 43.00 5 P P 12 58 16.4 +0.7
baz=187,SNR=6.8
F48A Evansville 43.04 353 P P 12 58 15.3 -0.7
baz=170
BGNE Belgrade 43.13 335 P P 12 58 15.4 -1.4
baz=146,SNR=12
E52A Mattawa 43.16 357 P P 12 58 17.1 +0.2
baz=176,SNR=6.7
F64A Sherman 43.19 8 IAmb IAmb 12 58 19.0
comp=Z,31nm,1.0s
F64A Sherman 43.19 8 P P 12 58 17.9 +0.8
baz=191
E53A Dumoine, Ponti 43.22 358 P P 12 58 18.0 +0.6
baz=177
E58A La Victoria 43.24 3 P P 12 58 18.6 +1.0
baz=184,SNR=12
E57A Chemin Saint G 43.25 2 P P 12 58 18.3 +0.6
baz=182
E54A Lac Daplat, Po 43.26 359 P P 12 58 18.0 +0.3
baz=178
E55A Montcerf-Lytto 43.27 360 P P 12 58 18.7 +0.9
baz=180
F45A CMU Biological 43.32 350 P P 12 58 17.7 -0.5
baz=166,SNR=9.8
E60A Ste Agathe de 43.36 5 P P 12 58 19.1 +0.6
baz=186
E56A St. Veronique 43.36 1 P P 12 58 19.1 +0.6
baz=181
E51A G1948 Merrick 43.45 356 P P 12 58 20.0 +0.7
baz=175,SNR=16
E48A Lockeyer 43.63 354 P P 12 58 20.7 0.0
baz=171
E63A Oxbow 43.73 8 IAmb IAmb 12 58 23.5
comp=Z,30nm,0.8s
E63A Oxbow 43.73 8 P P 12 58 22.5 +1.0
baz=191
E47A Iron Bridge 43.74 353 P P 12 58 21.4 -0.2
baz=169,SNR=12
E46A Sault Ste Mari 43.79 352 IAmb IAmb 12 58 22.7
comp=Z,29nm,0.8s
TUC Tucson 43.80 316 P P 12 58 23.9 +1.4
TUC pmax pmax
comp=Z,15nm,1.1s
TUC Tucson 43.80 316 P P 12 58 23.9 +1.4
TUC Tucson 43.80 316 P P 12 58 23.3 +0.9
baz=124
E64A Bridgewater 43.80 8 P P 12 58 23.1 +1.0
baz=192,SNR=8.1
PLCA Paso Flores 43.82 174 P P 12 58 21.9 -0.5
comp=Z,25nm,0.8s,baz=180,slow=20,SNR=4.5
PLCA Paso Flores 43.82 174 eP P 12 58 23.1 +0.7
D55A Sainte-Anne-du 43.83 0 P P 12 58 23.1 +0.8
baz=180,SNR=9.3
D57A Chemin Vers le 43.86 2 P P 12 58 23.4 +0.7
baz=183
D56A ZEC Mazanza, M 43.87 1 P P 12 58 23.3 +0.6
baz=182
F42A Maple Grove Fa 43.89 348 IAmb IAmb 12 58 23.5
comp=Z,19nm,0.6s
SDCO Great Sand Dun 43.91 326 IAmb IAmb 12 58 25.6
comp=Z,15nm,0.7s
SDCO Great Sand Dun 43.91 326 P P 12 58 24.6 +1.1
baz=135,SNR=38
D60A Saint Jean D'O 43.94 5 P P 12 58 24.2 +1.0
baz=187,SNR=7.0
D59A Saint-Raymond 43.96 4 P P 12 58 24.3 +1.0
baz=186
D58A Chemin du LacG 43.99 3 P P 12 58 24.6 +1.0
baz=184,SNR=16
D51A Lot 18 Range I 44.00 357 P P 12 58 23.8 0.0
baz=175,SNR=6.4
PQI Presque Isle 44.02 8 IAmb IAmb 12 58 25.8
comp=Z,37nm,0.9s
D50A G1974 Best Tow 44.11 356 P P 12 58 24.5 -0.1
baz=174,SNR=5.4
LATQ La Tuque 44.28 3 P P 12 58 27.1 +1.2
LATQ La Tuque 44.28 3 P P 12 58 27.0 +1.1
baz=184,SNR=23
E44A Grand Marais A 44.29 350 P P 12 58 25.7 -0.3
baz=166
D61A St Aubert, Com 44.30 6 P P 12 58 27.7 +1.6
baz=188,SNR=19
D62A Allapoint, All 44.30 7 P P 12 58 27.4 +1.3
D62A Allapoint, All 44.30 7 P P 12 58 27.3 +1.3
baz=190,SNR=13
D63A Stockholm 44.37 8 P P 12 58 27.7 +1.1
baz=191,SNR=5.7
COWI Cower 44.44 347 IAmb IAmb 12 58 27.1
comp=Z,19nm,0.8s
OGNE Ogallala 44.48 332 P P 12 58 27.5 -0.3
baz=141
ECSD EROS Data Cent 44.50 339 IAmb IAmb 12 58 26.9
comp=Z,21nm,0.8s
ECSD EROS Data Cent 44.50 339 P P 12 58 25.9 -1.9
baz=150,SNR=26
SPMN Marine on St. 44.57 343 P P 12 58 26.8 -1.6
baz=135,SNR=11
S22A 4UR Ranch, Cre 44.67 325 P P 12 58 30.5 +0.9
S22A 4UR Ranch, Cre 44.67 325 P P 12 58 30.6 +0.9
baz=133,SNR=23
W18A Petrified Fore 44.75 320 P P 12 58 31.3 +1.2
W18A Petrified Fore 44.75 320 P P 12 58 30.9 +0.8
baz=128
BATG Bathurst New B 44.91 10 P P 12 58 30.9 -0.1
VLDQ Val d'Or 44.94 359 IAmb IAmb 12 58 32.7
comp=Z,17nm,0.8s
214A Organ Pipe Nat 45.05 314 IAmb IAmb 12 58 43.3
comp=Z,2nm,1.1s
214A Organ Pipe Nat 45.05 314 P P 12 58 33.7 +1.3
baz=122,SNR=16
MVCO Mesa Verde 45.30 323 P P 12 58 35.2 +0.6
baz=131,SNR=12
ISCO Idaho Springs 45.43 328 P P 12 58 36.2 +0.5
baz=136,SNR=13
X16A Lo Mia Camp, P 45.46 318 IAmb IAmb 12 58 38.7
comp=Z,13nm,1.0s
LSQQ Lebel-sur-Quev 45.88 359 P P 12 58 38.9 +0.2
baz=178
WUAZ Wupatki 46.06 319 IAmb IAmb 12 58 43.2
comp=Z,20nm,0.8s
WUAZ Wupatki 46.06 319 P P 12 58 41.5 +1.0
baz=126,SNR=24
N23A Red Feather La 46.40 328 IAmb IAmb 12 58 46.9
comp=Z,19nm,1.1s
N23A Red Feather La 46.40 328 P P 12 58 43.6 +0.4
baz=136,SNR=6.2
PHWY Pilot Hill 46.44 329 IAmb IAmb 12 58 45.1
comp=Z,12nm,1.1s
MATQ Matagami 46.59 358 P P 12 58 44.5 +0.3
baz=178,SNR=11
EYMN Ely 46.73 346 P P 12 58 44.1 -1.2
baz=158,SNR=25
GLA Glamis 47.07 314 P P 12 58 49.3 +0.9
baz=121
O20A White River Ci 47.11 326 P P 12 58 49.3 +0.6
baz=133,SNR=7.0
Y12C Blythe 47.22 315 P P 12 58 50.8 +1.4
Y12C IAmb IAmb 12 58 52.2
comp=Z,14nm,1.1s
Y12C Blythe 47.22 315 P P 12 58 50.5 +1.1
baz=122,SNR=6.3
RWWY Rawlins 47.63 328 IAmb IAmb 12 58 55.2
comp=Z,10nm,0.9s
SWSC Sam W. Stewart 47.72 313 P P 12 58 54.3 +1.0
baz=120
BC3 Big Chuckawall 47.83 314 P P 12 58 55.1 +0.8
baz=121,SNR=5.2
IRM Iron Mountain 47.87 315 P P 12 58 55.5 +1.0
baz=122,SNR=11
RSSD Black Hills 47.88 333 P P 12 58 54.9 +0.2
RSSD pmax pmax
comp=Z,44nm,0.8s
RSSD Black Hills 47.88 333 P P 12 58 54.9 +0.2
RSSD Black Hills 47.88 333 P P 12 58 54.8 +0.1
baz=141
K22A Casper 47.97 330 IAmb IAmb 12 58 56.5
comp=Z,14nm,0.7s
K22A Casper 47.97 330 P P 12 58 55.4 0.0
baz=137,SNR=7.4
AGMN Agassiz Nation 48.26 342 P P 12 58 56.0 -1.2
baz=153,SNR=18
TMUT Trail Mountain 48.27 323 P P 12 58 58.1 +0.2
BELC Belle Mtn. Jos 48.39 314 P P 12 58 59.7 +1.0
baz=121,SNR=9.1
PFO Pinyon Flats O 48.53 314 P P 12 59 00.6 +0.8
baz=120
GMRC Granite Mounta 48.56 315 P P 12 59 00.8 +0.8
baz=122,SNR=5.2
TCRU Three Creeks R 48.60 322 P P 12 59 01.1 +0.7
HEC Hector,Ludlow 49.06 315 P P 12 59 05.0 +1.2
baz=121
MURC Murrieta 49.06 313 P P 12 59 04.5 +0.8
baz=119
TUQ Turquoise Moun 49.09 316 P P 12 59 04.5 +0.5
baz=122
MDND Maddock 49.10 339 P P 12 59 02.7 -1.1
baz=148
SHPR Sheep Range 49.14 318 P P 12 59 04.5 +0.1
BBRC Big Bear Solar 49.19 314 P P 12 59 06.0 +1.1
baz=120,SNR=5.2
PSUT Pine Spring 49.44 321 P P 12 59 07.5 +0.8
TCUT Toone Canyon 49.56 325 P P 12 59 08.1 +0.4
SHOC Shoshone, Teco 49.57 316 P P 12 59 08.7 +1.1
baz=122
GSC Goldstone, Bar 49.63 315 P P 12 59 09.0 +0.9
baz=121,SNR=5.8
PDAR Pinedale Array 49.63 328 P P 12 59 07.7 -0.5
comp=Z,7.8nm,0.8s,baz=126,slow=9.0,SNR=52
PDAR LR LR 13 24 15.3
comp=Z,53nm,18.9s,baz=136,slow=41
BW06 Boulder Array 49.63 328 IAmb IAmb 12 59 09.8
comp=Z,9.3nm,0.8s
BW06 Boulder Array 49.63 328 P P 12 59 07.7 -0.5
baz=133,SNR=12
DUG Dugway, Tooele 49.80 323 P P 12 59 10.2 +0.8
DUG pmax pmax
comp=Z,17nm,0.8s
DUG Dugway, Tooele 49.80 323 P P 12 59 10.2 +0.8
DUG IAmb IAmb 12 59 11.1
comp=Z,17nm,0.8s
DUG Dugway, Tooele 49.80 323 P P 12 59 10.1 +0.7
baz=128,SNR=20
ULM Lac du Bonnet 50.00 343 P P 12 59 08.9 -1.7
comp=Z,28nm,0.6s,baz=152,slow=8.1,SNR=76
ULM LR LR 13 23 16.8
comp=Z,155nm,18.1s,baz=146,slow=40
TPNV Topopah Spring 50.11 318 P P 12 59 12.8 +0.9
baz=123,SNR=8.0
EDW2 Edwards Air Fo 50.26 314 P P 12 59 13.6 +0.8
baz=120
FURC Furnace Creek, 50.27 317 P P 12 59 13.5 +0.7
baz=122
LRMC Laurel Mtn Rad 50.34 315 P P 12 59 13.9 +0.3
baz=120
BGU Big Grassy Mou 50.38 324 P P 12 59 14.1 +0.2
R11A Troy Canyon, C 50.44 319 P P 12 59 15.3 +0.9
baz=124,SNR=10
AHID Auburn Hatcher 50.47 327 IAmb IAmb 12 59 15.3
comp=Z,16nm,0.8s
MPMC Manual Prospec 50.49 316 P P 12 59 15.5 +0.7
baz=121
REDW Red Top Meadow 50.73 327 P P 12 59 16.4 -0.1
SNOW Snow King Moun 50.75 328 IAmb IAmb 12 59 17.9
comp=Z,21nm,0.8s
HVU Hansel Valley 50.77 325 P P 12 59 17.3 +0.6
HVU pmax pmax
comp=Z,15nm,1.2s
HVU Hansel Valley 50.77 325 P P 12 59 17.3 +0.6
LAO LASA Array 50.84 333 IAmb IAmb 12 59 20.9
comp=Z,15nm,1.1s
LAO LASA Array 50.84 333 P P 12 59 17.1 0.0
baz=139
GRAC Grapevine Rang 50.90 317 P P 12 59 18.7 +1.0
baz=122
MOOW Moose Ponds 50.94 328 IAmb IAmb 12 59 19.0
comp=Z,15nm,0.8s
ARVC Arvin 50.98 314 P P 12 59 19.4 +1.2
baz=119
ISA Isabella, Lake 50.99 315 P P 12 59 19.3 +0.9
ISA pmax pmax
comp=Z,7.0nm,1.2s
ISA Isabella, Lake 50.99 315 P P 12 59 19.3 +0.9
ISA Isabella, Lake 50.99 315 P P 12 59 19.3 +0.9
baz=120
CWC Cottonwood Cre 51.10 316 P P 12 59 20.4 +1.1
baz=120
RLMT Red Lodge 51.13 330 IAmb IAmb 12 59 20.2
comp=Z,11nm,0.8s
RLMT Red Lodge 51.13 330 P P 12 59 19.1 -0.3
baz=135,SNR=5.4
H17A Grant Village 51.29 329 P P 12 59 21.3 +0.6
baz=133
YPP Pitchstone Pla 51.32 328 P P 12 59 22.3 +1.3
DGMT Dagmar 51.36 336 P P 12 59 20.8 -0.1
baz=143,SNR=15
VES Vestal, Richgr 51.51 315 P P 12 59 23.2 +1.1
baz=119,SNR=8.4
YNR Norris Junctio 51.56 329 P P 12 59 22.8 0.0
PKM Mcpherson Peak 51.58 313 P P 12 59 24.2 +1.2
baz=118
ELK Elko 51.60 322 LR LR 13 25 35.7
comp=Z,123nm,18.8s,baz=158,slow=41
SMMC Simmler 51.91 314 P P 12 59 26.3 +1.1
baz=118
NV11 Mina Array Sit 52.18 318 IAmb IAmb 12 59 29.3
comp=Z,16nm,1.0s
SCHQ Schefferville 52.18 7 P P 12 59 26.9 +0.1
comp=Z,16nm,0.9s,baz=198,slow=8.0,SNR=10
SCHQ LR LR 13 23 35.8
comp=Z,90nm,19.3s,baz=145,slow=38
NVAR Mina Array Bea 52.28 318 P P 12 59 29.1 +0.9
comp=Z,12nm,0.8s,baz=130,slow=6.9,SNR=31
NVAR LR LR 13 25 40.9
comp=Z,207nm,18.0s,baz=142,slow=41
EGMT Eagleton 53.44 332 P P 12 59 36.0 -0.4
baz=136,SNR=5.4
MFID Camas Ranch 53.55 324 IAmb IAmb 12 59 38.9
comp=Z,20nm,0.9s
WVOR Wild Horse Val 54.66 322 P P 12 59 46.1 +0.6
WVOR pmax pmax
comp=Z,24nm,0.9s
WVOR Wild Horse Val 54.66 322 P P 12 59 46.0 +0.6
MSO Missoula 54.67 329 IAmb IAmb 12 59 47.8
comp=Z,11nm,0.9s
MSO Missoula 54.67 329 P P 12 59 45.3 -0.2
baz=131,SNR=11
ORV Oroville 54.99 318 IAmb IAmb 12 59 49.7
comp=Z,14nm,1.1s
JTMT Jette 55.45 329 IAmb IAmb 12 59 52.5
comp=Z,18nm,0.9s
O03E Paynes Creek 55.56 318 P P 12 59 52.1 +0.2
baz=120
FFC Flin Flon 55.73 342 P P 12 59 51.7 -1.1
FFC pmax pmax
comp=Z,22nm,1.1s
FFC Flin Flon 55.73 342 P P 12 59 51.7 -1.1
FFC IAmb IAmb 12 59 52.6
comp=Z,22nm,1.1s
F10A Beach Ranch, E 55.90 326 IAmb IAmb 12 59 58.6
comp=Z,13nm,0.9s
O02D Mt. Diablo Mer 56.16 318 P P 12 59 55.5 -0.8
baz=119
G08A Pilot Rock 56.47 325 IAmb IAmb 12 59 59.8
comp=Z,17nm,1.0s
N02D Trinity Center 56.49 319 P P 12 59 57.9 -0.8
baz=119
K04D Chiloquin, OR 56.71 321 P P 13 00 00.6 +0.5
baz=121
J05D Fort Rock, OR 56.73 322 P P 13 00 00.8 +0.4
baz=122
E09A Wood Farm, Sta 56.73 326 IAmb IAmb 13 00 01.2
comp=Z,20nm,0.9s
PINE Pine Mountain 56.81 322 IAmb IAmb 13 00 02.8
comp=Z,20nm,1.1s
L04D Klamath Falls 56.85 320 P P 13 00 01.2 0.0
baz=120
YBH Yreka Blue Hor 56.87 319 P P 13 00 00.3 -1.0
YBH pmax pmax
comp=Z,7.0nm,1.0s
YBH Yreka Blue Hor 56.87 319 LR LR 13 27 38.4
comp=Z,94nm,19.9s,baz=136,slow=39
YBH Yreka Blue Hor 56.87 319 P P 13 00 00.3 -1.0
NEW Newport 57.25 328 LR LR 13 31 13.9
comp=Z,110nm,18.4s,baz=127,slow=43
NEW Newport 57.25 328 IAmb IAmb 13 00 04.4
comp=Z,9.4nm,0.8s
NEW Newport 57.25 328 P P 13 00 03.7 -0.1
baz=128
J04D Umpqua Nationa 57.25 321 P P 13 00 04.4 +0.3
baz=121

I05D	**Terrebonne, OR**	**57.35**	**323**	P		**P**	**13 00 05.8**	**+1.1**
	baz=122							
FCC	**Fort Churchill**	**57.38**	**349**	P		**P**	**13 00 02.2**	**-2.2**
FCC				pmax		pmax		
	comp=Z,30nm,0.9s							
FCC	**Fort Churchill**	**57.38**	**349**	P		**P**	**13 00 02.2**	**-2.2**
C09A	**Chrisman Ranch**	**57.57**	**327**	IAmb		IAmb	13 00 08.8	
	comp=Z,9.6nm,0.8s							
G05D	**Wamic, OR**	**57.82**	**324**	P		**P**	**13 00 08.6**	**+0.7**
	baz=123							
K02D	**Willamette Mer**	**57.96**	**320**	P		**P**	**13 00 09.6**	**+0.6**
	baz=119							
H04D	**Lebanon**	**58.30**	**322**	P		**P**	**13 00 12.4**	**+1.2**
	baz=121							
J01E	**Myrtle Point**	**58.36**	**320**	P		**P**	**13 00 12.6**	**+1.0**
	baz=119							
B08A	**Colville Reser**	**58.48**	**327**	IAmb		IAmb	13 00 13.3	
	comp=Z,14nm,0.8s							
BBB	**Bella Bella**	**65.28**	**328**	LR		LR	13 33 11.9	
	comp=Z,64nm,20.1s,baz=168,slow=39							
YKA	**Yellowknife Ar**	**65.90**	**341**	P		**P**	**13 01 00.4**	**-1.4**
	comp=Z,14nm,0.6s,baz=135,slow=6.1,SNR=396							
YKW3	**Yellowknife Ar**	**65.95**	**342**	P		**P**	**13 01 00.6**	**-1.7**
SFJD	**Kangerlussuaq**	**66.24**	**11**	LR		LR	13 28 06.2	
	comp=Z,169nm,18.5s,baz=198,slow=34							
PMSA	**Palmer Station**	**68.19**	**175**	LR		LR	13 30 30.8	
	comp=Z,153nm,18.1s,baz=290,slow=35							
LIC	**Lamto**	**70.70**	**84**	*e*P		**P**	**13 01 31.0**	**-2.0**
	comp=Z,9.2nm,0.4s							
TIC	**Toumodi**	**70.71**	**84**	*e*P		**P**	**13 01 31.2**	**-1.8**
DBIC	**Dimbokro**	**70.87**	**84**	P		**P**	**13 01 32.5**	**-1.4**
DBIC				pmax		pmax		
	comp=Z,17nm,1.1s							
DBIC	**Dimbokro**	**70.87**	**84**	P		**P**	**13 01 32.3**	**-1.7**
	comp=Z,8.8nm,0.9s,baz=268,slow=7.6,SNR=11							
DBIC	**Dimbokro**	**70.87**	**84**	P		**P**	**13 01 32.5**	**-1.4**
DBIC				IAmb		IAmb	13 01 39.0	
	comp=Z,17nm,1.1s							
KIC	**Kosan Boka**	**70.99**	**84**	*e*P		**P**	**13 01 32.6**	**-2.1**
	comp=Z,31nm,1.0s							
SUMG	**Summit**	**73.22**	**11**	P		**P**	**13 01 46.9**	**-0.6**
SUMG				pmax		pmax		
	comp=Z,17nm,0.8s							
SUMG	**Summit**	**73.22**	**11**	*i* P		**P**	**13 01 46.0**	**-1.4**
	comp=Z,46nm,0.9s							
SUMG	**Summit**	**73.22**	**11**	P		**P**	**13 01 46.9**	**-0.6**
SUMG				IAmb		IAmb	13 01 54.4	
	comp=Z,17nm,0.8s							
C36M	**Paulatuk**	**73.42**	**344**	P		**P**	**13 01 46.1**	**-2.0**
	baz=129							
TULEG	**Thule**	**73.56**	**2**	P		**P**	**13 01 48.6**	**-0.2**
TULEG				IAmb		IAmb	13 01 49.3	
	comp=Z,16nm,0.9s							
ESDC	**Sonseca Array**	**74.23**	**50**	P		**P**	**13 01 52.5**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=266,slow=6.2,SNR=9.3							
PPT2	**Papeete2**	**75.37**	**251**	*e*S		**S**	**13 11 39.9**	**-0.6**
	comp=Z,76nm,24.0s							
PPT2	**Papeete2**	**75.37**	**251**	*e*LR		LR	13 25 20.7	
	comp=Z,133nm,24.5s							
INK	**Inuvik**	**75.67**	**341**	IAmb		IAmb	13 02 01.7	
	comp=Z,13nm,0.9s							
EPYK	**Eagle Plains**	**75.86**	**339**	P		**P**	**13 02 01.9**	**-0.5**
EPYK				IAmb		IAmb	13 02 03.1	
	comp=Z,13nm,0.9s							
TBI	**Tubuai**	**76.14**	**245**	*e*LR		LR	13 25 42.7	
	comp=Z,228nm,28.2s							
EGAK	**Eagle**	**76.91**	**336**	P		**P**	**13 02 08.2**	**-0.2**
EGAK				IAmb		IAmb	13 02 09.8	
	comp=Z,18nm,1.0s							
TORD	**Torodi Ar. Bea**	**77.28**	**77**	P		**P**	**13 02 08.7**	**-2.7**
	comp=Z,2.0nm,0.8s,baz=290,slow=6.0,SNR=6.7							
TORD				LR		LR	13 35 27.9	
	comp=Z,107nm,21.9s,baz=295,slow=35							
DOT	**Dot Lake**	**77.71**	**335**	IAmb		IAmb	13 02 14.0	
	comp=Z,11nm,0.9s							
SCRK	**Sand Creek**	**77.79**	**335**	P		**P**	**13 02 13.4**	**-0.1**
RIDG	**Independent Ri**	**78.07**	**335**	IAmb		IAmb	13 02 32.3	
	comp=Z,12nm,0.9s							
PRP	**Porcupine Dome**	**78.89**	**337**	P		**P**	**13 02 19.3**	**-0.3**
HDA	**Harding Lake**	**79.15**	**335**	IAmb		IAmb	13 02 21.1	
	comp=Z,14nm,0.9s							
HDA	**Harding Lake**	**79.15**	**335**	P		**P**	**13 02 20.3**	**-0.5**
	baz=106							
ILAR	**Eielson Array**	**79.23**	**336**	*e*P		**P**	**13 02 20.6**	**-0.6**
ILAR				pmax		pmax		
	comp=Z,4.0nm,0.9s							
ILAR	**Eielson Array**	**79.23**	**336**	P		**P**	**13 02 20.4**	**-0.9**
	comp=Z,3.5nm,0.9s,baz=109,slow=4.2,SNR=32							
ILAR				LR		LR	13 39 28.7	
	comp=Z,40nm,21.9s,baz=101,slow=37							
GHO	**Glory Hole Cre**	**79.35**	**332**	P		**P**	**13 02 21.0**	**-1.0**
COLA	**College**	**79.65**	**336**	*i* P		**P**	**13 02 22.8**	**-0.7**
COLA				pmax		pmax		
	comp=Z,9.0nm,1.1s							
TCOL	**CIGO, UAF Yank**	**79.66**	**336**	P		**P**	**13 02 23.4**	**-0.1**
	baz=105							
RND	**Reindeer**	**79.71**	**334**	P		**P**	**13 02 24.1**	**+0.1**
RND				pmax		pmax		
	comp=Z,12nm,1.0s							
RND	**Reindeer**	**79.71**	**334**	P		**P**	**13 02 24.1**	**+0.1**
RND				IAmb		IAmb	13 02 24.9	
	comp=Z,12nm,1.0s							
BRLK	**Bradley Lake**	**79.85**	**330**	P		**P**	**13 02 24.5**	**-0.3**
BRLK				IAmb		IAmb	13 02 25.6	
	comp=Z,13nm,1.0s							
DAG	**Danmarks Havn**	**79.91**	**11**	*i* P		**P**	**13 02 23.6**	**-1.1**
DAG	**Danmarks Havn**	**79.91**	**11**	*i* P		**P**	**13 02 23.6**	**-1.1**
SUA	**Susitna One**	**80.13**	**332**	P		**P**	**13 02 26.4**	**+0.1**
TRF	**Thorofare Moun**	**80.35**	**334**	P		**P**	**13 02 27.8**	**+0.3**
TOLK	**Toolik Lake Re**	**81.28**	**339**	P		**P**	**13 02 33.5**	**+1.3**
NOR	**Nord**	**82.72**	**7**	*i* P		**P**	**13 02 39.2**	**-0.4**
	comp=Z,7.3nm,1.2s							
KEST	**Kesra**	**84.42**	**55**	LR		LR	13 42 28.1	
	comp=Z,35nm,18.1s,baz=296,slow=37							
DAVOX	**Davos/Dischmat**	**84.94**	**43**	LR		LR	13 36 38.5	
	comp=Z,141nm,20.0s,baz=294,slow=33							
DAVA	**Damuels**	**84.95**	**43**	*i* P		**P**	**13 02 51.3**	**-0.5**
	comp=Z,16nm,1.1s							
FETA	**Feichten**	**85.53**	**43**	*i* P		**P**	**13 02 54.7**	**-0.1**
	comp=Z,8.6nm,1.2s							
SQTA	**Sankt Quirin**	**85.86**	**43**	*i* PcP		**P**	**13 02 56.7**	**+0.4**
	comp=Z,9.6nm,1.6s							
NB2	**NORSAR Subarra**	**85.99**	**29**	P		**P**	**13 02 57.0**	**+0.4**
	comp=Z,16nm,1.1s,baz=271,slow=5.1							
NB2	**NORSAR Subarra**	**85.99**	**29**	P		**P**	**13 02 57.0**	**+0.4**
	baz=271,slow=5.1							
NOA	**NORSAR Array B**	**85.99**	**29**	*e*P		**P**	**13 02 57.2**	**+0.6**
NOA				pmax		pmax		
	comp=Z,5.0nm,0.9s							
NOA	**NORSAR Array B**	**85.99**	**29**	P		**P**	**13 02 56.7**	**+0.1**
	comp=Z,5.2nm,0.9s,baz=269,slow=4.9,SNR=9.3							
NOA				LR		LR	13 38 25.4	
	comp=Z,74nm,20.1s,baz=255,slow=34							
ABTA	**Abfaltersbach**	**86.75**	**44**	*i* P		**P**	**13 03 00.5**	**-0.2**
	comp=Z,4.9nm,0.7s							
STAL	**STALIGIAL**	**86.90**	**44**	P		**P**	**13 02 59.6**	**-1.8**
CLL	**Collm**	**87.00**	**39**	*e*P		**P**	**13 03 02.0**	**+0.3**
CLL				*e*			13 03 06.0	
CLL				*e**PP		PcP	13 03 15.0	+11
CLL				pmax		pmax		
	comp=Z,6.0nm,1.0s							
CLL	**Collm**	**87.00**	**39**	*e*P		**P**	**13 03 02.0**	**+0.3**
	comp=Z,6.0nm,1.0s							
HFS	**Hagfors**	**87.22**	**30**	P		**P**	**13 03 02.4**	**-0.1**
	comp=Z,5.3nm,0.9s,baz=264,slow=4.3,SNR=4.4							
KBA	**Koelnbreinsper**	**87.32**	**43**	*i* P		**P**	**13 03 03.1**	**-0.5**
	comp=Z,3.5nm,0.7s							
KHC	**Kasperske Hory**	**87.42**	**41**	*e*P		**P**	**13 03 05.5**	**+1.7**
KHC				*e*			13 03 13.2	
KHC	**Kasperske Hory**	**87.42**	**41**	*e*P		**P**	**13 03 05.5**	**+1.7**
KHC				*e*pP		**PcP**	**13 03 13.2**	**+7.4**
KHC	**Kasperske Hory**	**87.42**	**41**	P		**P**	**13 03 04.5**	**+0.7**
GERES	**GERESS Array B**	**87.51**	**41**	*e*P		**P**	**13 03 05.4**	**+1.1**
GERES				pmax		pmax		
	comp=Z,2.0nm,0.7s							
GERES	**GERESS Array B**	**87.51**	**41**	P		**P**	**13 03 04.2**	**-0.1**
	comp=Z,1.7nm,0.7s,baz=222,slow=1.8,SNR=6.5							
GERES				LR		LR	13 37 59.7	
	comp=Z,48nm,18.9s,baz=282,slow=33							
MYKA	**Terra Mystica**	**87.53**	**44**	*i* P		**P**	**13 03 04.0**	**-0.5**
	comp=Z,5.1nm,0.6s							
SPITS	**Spitsbergen Ar**	**87.54**	**12**	P		**P**	**13 03 03.4**	**-0.4**
	comp=Z,6.4nm,0.8s,baz=343,slow=1.5,SNR=6.5							
SPITS				LR		LR	13 41 02.6	
	comp=Z,58nm,18.4s,baz=320,slow=35							
SNAA	**Sanae**	**87.58**	**162**	*i* P		**P**	**13 03 04.4**	**+0.3**
SNAA	**Sanae**	**87.58**	**162**	P		**P**	**13 03 02.6**	**-1.5**
SNAA				IAmb		IAmb	13 03 12.7	
	comp=Z,7.6nm,1.0s							
MOA	**Molln**	**87.92**	**42**	*i* PcP		**P**	**13 03 07.1**	**+0.9**
	comp=Z,12nm,1.2s							
OBKA	**Obir**	**88.17**	**44**	*i* PcP		**P**	**13 03 09.3**	**+1.8**
	comp=Z,6.4nm,1.2s							
SOKA	**Soboth**	**88.49**	**44**	*i* PcP		**P**	**13 03 09.6**	**+0.6**
	comp=Z,3.9nm,1.0s							
CONA	**Conrad Observa**	**88.99**	**42**	*i* PcP		**P**	**13 03 11.2**	**-0.2**
	comp=Z,7.0nm,1.4s							
VYHS	**Vyhne**	**90.93**	**42**	*e*P		P	13 03 27.1	+6.8
VYHS	**Vyhne**	**90.93**	**42**	*e*P		P	13 03 27.1	+6.8
VYHS				*e*			13 39 51.1	
NVL	**N'lazarevskaya**	**92.09**	**161**	*e*P		P	13 03 35.2	+10
NVL				*e*S		**SKSac**	**13 14 02.6**	**+5.2**
NVL				pmax		pmax		
	comp=Z,11nm,0.9s							
FINES	**FINESS Array B**	**93.09**	**28**	LR		LR	13 42 06.4	
	comp=Z,102nm,19.4s,baz=283,slow=33							
LVZ	**Lovozero**	**94.84**	**21**	*i* P		**P**	**13 03 36.4**	**-1.6**
LVZ				pmax		pmax		
	comp=Z,14nm,1.1s							
AKASG	**Malin Array Be**	**97.22**	**38**	LR		LR	13 44 21.0	
	comp=Z,58nm,21.8s,baz=275,slow=33							
BILL	**Bilibino**	**97.28**	**340**	*e*P		**P**	**13 03 47.3**	**-1.7**
BILL				pmax		pmax		
	comp=Z,2.0nm,1.3s							
OBN	**Obninsk**	**100.18**	**33**	*e*P		**Pdif**	**13 04 01.4**	**-0.8**
OBN				*e*			13 08 10.7	
OBN				*e*S		**SKSac**	**13 14 40.0**	**-0.6**
OBN				pmax		pmax		
	comp=Z,3.0nm,0.9s							
OBN				MLR		MLR		
	comp=Z,148nm,19.0s							
SYO	**Syowa Base**	**101.76**	**161**	*e*Pdiff		**Pdif**	**13 04 10.4**	**+1.5**
ANN	**Anapa**	**104.20**	**42**	*e*P		**Pdif**	**13 04 16.9**	**-3.4**
ANN				*e*			13 08 34.0	
ANN				*e*			13 15 39.4	
ANN				pmax		pmax		
	comp=Z,51nm,0.8s							
ZALV	**Zalesovo Beam**	**121.01**	**13**	*e*PKIKP		**PKPdf**	**13 09 08.1**	**-0.8**
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**121.01**	**13**	PKP		**PKPdf**	**13 09 06.4**	**-2.5**
	comp=Z,0.7nm,0.5s,baz=255,slow=2.2,SNR=5.6							
KURK	**Kurchatov**	**122.20**	**19**	PKIKP		**PKPdf**	**13 09 11.0**	**-0.3**
KURBB	**Kurchatov Arra**	**122.25**	**19**	PKP		**PKPdf**	**13 09 11.0**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=325,slow=2.1,SNR=7.2							
MAKZ	**Makanchi**	**126.70**	**19**	PKIKP		**PKPdf**	**13 09 19.0**	**-1.1**
MAKZ	**Makanchi**	**126.70**	**19**			**PKPdf**	**13 09 19.0**	**-1.1**
MKAR	**Makanchi Array**	**126.81**	**19**	*e*PKIKP		**PKPdf**	**13 09 19.7**	**-0.6**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**126.81**	**19**	PKP		**PKPdf**	**13 09 19.5**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=272,slow=3.3,SNR=5.3							
SONM	**Songino Array**	**129.32**	**358**	PKP		**PKPdf**	**13 09 24.8**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=304,slow=1.8,SNR=12							
KSH	**Kashi**	**130.41**	**29**	PKP		**PKPdf**	**13 09 27.7**	**+0.2**
KSH				sPKP			13 09 41.6	
KSH				PP		**PP**	**13 11 42.0**	**+1.5**
KSH				SKS		**SKSdf**	**13 16 32.4**	**-6.5**
KSH				SKKS		**SKKSac**	**13 18 31.5**	**-6.5**
KSH				LR		LR		
	comp=Z,150nm,4.7s							
KSH				LR		LR		
	comp=Z,120nm,4.4s							
KSH				LR		LR		
	comp=Z,370nm,5.7s							
WMQ	**Urumqi**	**131.10**	**16**	*e*PKP		**PKPdf**	**13 09 28.1**	**-0.5**
WMQ				sPKP			13 09 46.4	
WMQ				LR		LR		
	comp=Z,320nm,29.1s							
KSRS	**Korea Array**	**134.04**	**333**	PKP		**PKPdf**	**13 09 34.2**	**0.0**
	comp=Z,1.3nm,0.7s,baz=17,slow=2.7,SNR=3.1							
HHC	**Hu-ho-hao-te**	**135.81**	**352**	*e*PKP		**PKiKP**	**13 09 40.8**	**+1.6**
GTA	**Gaotai**	**137.60**	**5**	*e*PKP		**PKPdf**	**13 09 41.1**	**+0.1**
GTA				sPKP			13 09 48.4	
LZH	**Lanzhou**	**141.10**	**0**	*e*PKP		**PKPdf**	**13 09 46.0**	**-1.5**
LZH				LR		LR		
	comp=Z,160nm,18.2s							
LZH				LR		LR		
	comp=Z,160nm,17.7s							
LZH				LR		LR		
	comp=Z,260nm,20.0s							
NJ2	**Nanjing**	**142.40**	**339**	*e*PKP		**PKPdf**	**13 09 50.0**	**+0.3**
GKN	**Gorkha**	**143.93**	**30**	*e*P		PKPab	13 09 49.9	0.0
KKN	**Kakani**	**144.42**	**29**	*e*P		**PKPab**	**13 09 51.6**	**-0.2**
DMN	**Daman**	**144.49**	**30**	*e*P		**PKPab**	**13 09 51.6**	**-0.5**
	comp=Z,35nm,0.6s							
AS31	**Alice Springs**	**144.60**	**232**			**PKPab**	**13 09 52.4**	**0.0**
ASAR	**Alice Springs**	**144.60**	**232**	PKP		**PKPab**	**13 09 52.0**	**-0.4**
	comp=Z,3.9nm,0.7s,baz=120,slow=3.5,SNR=38							
GUN	**Gumba**	**144.61**	**28**	*e*P		**PKPab**	**13 09 52.1**	**-0.6**
	comp=Z,97nm,0.9s							
PKIN	**Phulchoki**	**144.66**	**29**	*e*P		**PKPab**	**13 09 51.8**	**-1.0**
	comp=Z,20nm,0.7s							
PKI	**Pulchoki**	**144.67**	**29**	*e*P		**PKPab**	**13 09 52.2**	**-0.7**
JIRN	**Jiri**	**144.97**	**28**	*e*P		**PKPab**	**13 09 53.3**	**-0.7**
	comp=Z,48nm,1.0s							
RAMN	**Ramite**	**145.76**	**28**	*e*P		**PKPdf**	**13 09 55.0**	**-1.1**
	comp=Z,20nm,0.8s							
WR0	**Warramunga Arr**	**145.83**	**238**			**PKPdf**	**13 09 56.3**	**+0.3**
TAPN	**Taplejung**	**145.94**	**27**	*e*P		**PKPdf**	**13 09 56.1**	**-0.4**
WRAB	**Tennant Creek**	**146.00**	**238**	PKP2		**PKPdf**	**13 09 57.2**	**+0.8**
WRAB	**Tennant Creek**	**146.00**	**238**			**PKPdf**	**13 09 57.2**	**+0.8**
WRA	**Warramunga Arr**	**146.01**	**238**	PKPbc		**PKPdf**	**13 09 56.8**	**+0.5**
	comp=Z,9.3nm,0.9s,baz=120,slow=2.7,SNR=21							
ODAN	**Odare**	**146.21**	**27**	*e*P		**PKPdf**	**13 09 56.9**	**+0.1**
CD2	**Chengdu**	**146.26**	**0**	PKPbc		**PKPdf**	**13 09 54.7**	**-1.9**
ENH	**Enshi**	**146.50**	**351**			**PKPdf**	**13 09 57.1**	**+0.1**
CMAR	**Chiang Mai Arr**	**158.07**	**13**	PKP		**PKPdf**	**13 10 14.6**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=320,slow=2.7,SNR=5.3							

*IDC **09** 13:01:55.2±12.0, 12.˚37S×169.˚47E, h550km±147km, mb3.1/4, mb1 3.4/4, mb1mx2.9/40, mbtmp4.1/4, Error ellipse: s-maj=86.4km s-min=59.4km az=119.0*
*NEIC **09** 13:02:02.0±2.9, 12.˚6S±0.˚2×169.˚2E±0.˚2, h635km±12km, mb4.2/9, Error ellipse: s-maj=25.8km s-min=22.4km az=170.0*

ISC 09 13:02:02.2±1.0, **12.˚5S**±0.˚2×**169.˚2E**±0.˚1, **h650**km, **n16,**
σ1s**52**/15, **mb4.1/9, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**9.59**	**288**	P	**P**	**13 04 15.7**	**-2.4**
MSVF	**Nonsavu**	**9.99**	**122**	P	**P**	**13 04 20.3**	**-1.7**
EIDS	**Eidsvold**	**21.35**	**231**	P	**P**	**13 06 05.6**	**-0.2**
ARMA	**Armidale**	**24.12**	**220**	P	**P**	**13 06 28.5**	**-2.0**
ARMA				IAmb	IAmb	13 06 44.7	
	comp=Z,10nm,1.1s						
COEN	**Coen**	**25.37**	**264**	P	**P**	**13 06 39.8**	**-1.8**
STKA	**Stephens Creek**	**31.86**	**228**	P	**P**	**13 07 38.1**	**+1.1**
	comp=Z,2.3nm,0.5s,baz=55,slow=8.8,SNR=11						
STKA	**Stephens Creek**	**31.86**	**228**	IAmb	IAmb	13 07 44.7	
	comp=Z,2.2nm,1.5s						
TOO	**Toolangi**	**32.74**	**216**	P	**P**	**13 07 45.3**	**+0.9**
TOO				IAmb	IAmb	13 07 59.0	
	comp=Z,9.0nm,1.1s						
WR0	**Warramunga Arr**	**34.04**	**253**	P	**P**	**13 07 56.8**	**+1.3**
WR0				IAmb	IAmb	13 08 05.4	
	comp=Z,6.8nm,1.2s						
WRAB	**Tennant Creek**	**34.22**	**253**	P	**P**	**13 07 58.2**	**+1.2**
WRAB				IAmb	IAmb	13 08 03.1	
	comp=Z,8.3nm,1.5s						
WRA	**Warramunga Arr**	**34.23**	**253**	P	**P**	**13 07 58.2**	**+1.1**
	comp=Z,1.1nm,0.4s,baz=84,slow=8.7,SNR=20						
AS31	**Alice Springs**	**35.24**	**247**	P	**P**	**13 08 06.6**	**+1.1**
ASAR	**Alice Springs**	**35.24**	**247**	P	**P**	**13 08 06.5**	**+1.1**
	comp=Z,2.8nm,0.5s,baz=76,slow=9.9,SNR=110						
QSPA	**South Pole Qui**	**77.50**	**180**	P	**P**	**13 12 53.0**	**+0.3**
QSPA				IAmb	IAmb	13 12 54.2	
	comp=Z,11nm,1.3s						
ILAR	**Eielson Array**	**83.86**	**17**	P	**P**	**13 13 26.4**	**+1.4**
	comp=Z,0.6nm,0.9s,baz=238,slow=5.3,SNR=6.9						
ARCES	**ARCESS Array B**	**118.58**	**346**	PKP	**PKiKP**	**13 19 38.7**	**+1.3**
	comp=Z,4.7nm,1.1s,baz=46,slow=2.6,SNR=6.6						

*IDC **09** 13:11:21.3±3.6, 11.˚44N×142.˚15E, h67km±35km, mb3.2/6, mb1 3.5/7, mb1mx3.3/47, mbtmp3.5/7, ML4.0/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/18, Error ellipse: s-maj=35.7km s-min=18.6km az=109.0*

ISC 09 13:11:19.7±1.0, **11.˚4N**±0.˚2×**142.˚0E**±0.˚1, **h49**km, **n8,**
σ0s**87**/8, **mb3.4/6, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.50**	**52**	P	**Pn**	**13 12 11.8**	**+0.2**
	15nm,0.3s,baz=251,slow=15,SNR=13						
GUMO				S	**Sn**	**13 12 51.9**	**+0.2**
	8.3nm,0.3s,baz=240,slow=20,SNR=2.2						
KSRS	**Korea Array**	**28.85**	**336**	LR	LR	13 26 49.2	
	comp=Z,17nm,21.5s,baz=35,slow=32						
WRA	**Warramunga Arr**	**32.09**	**194**	P	**P**	**13 17 42.6**	**+0.3**
	0.5nm,0.9s,baz=13,slow=9.8,SNR=2.6						
ASAR	**Alice Springs**	**35.78**	**193**	P	**P**	**13 18 14.4**	**+0.1**
	0.1nm,0.4s,baz=23,slow=11,SNR=4.5						
SONM	**Songino Array**	**46.98**	**328**	P	**P**	**13 19 47.2**	**+1.2**
	0.2nm,0.4s,baz=133,slow=6.1,SNR=3.3						
KURBB	**Kurchatov Arra**	**64.51**	**321**	P	**P**	**13 21 50.6**	**-0.8**
	0.4nm,0.9s,baz=108,slow=7.7,SNR=2.8						
ILAR	**Eielson Array**	**71.69**	**25**	P	**P**	**13 22 35.0**	**-1.2**
	1.0nm,0.6s,baz=247,slow=6.2,SNR=20						
YKA	**Yellowknife Ar**	**86.03**	**27**	P	**P**	**13 23 55.1**	**+0.3**
	0.2nm,0.4s,baz=288,slow=4.9,SNR=4.5						

*IDC **09** 13:11:42.2±5.4, 23.˚89S×179.˚69W, h470km±59km, mb3.2/7, mb1 3.4/8, mb1mx3.1/49, mbtmp4.1/8, Error ellipse: s-maj=30.4km s-min=21.4km az=41.0*

ISC 09 13:11:40.3±0.9, **23.˚9S**±0.˚1×**179.˚6W**±0.˚2, **h450**km, **n10,**
σ0s**95**/11, **mb3.5/7, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.60**	**190**	P	**P**	**13 14 46.3**	**-0.7**
	2.8nm,0.3s,baz=302,slow=2.5,SNR=20						
URZ				S	**S**	**13 17 21.7**	**+0.4**
	0.9nm,0.3s,baz=69,slow=22,SNR=16						
CTA	**Charters Tower**	**31.83**	**270**	P	**P**	**13 17 27.4**	**+0.7**
	2.3nm,0.3s,baz=92,slow=10,SNR=12						
STKA	**Stephens Creek**	**35.05**	**248**	P	**P**	**13 17 54.5**	**+0.6**
	1.1nm,0.5s,baz=105,slow=12,SNR=4.6						
ASAR	**Alice Springs**	**42.38**	**261**	P	**P**	**13 18 53.6**	**-0.3**
	0.6nm,0.8s,baz=95,slow=7.8,SNR=13						
WRA	**Warramunga Arr**	**42.76**	**266**	P	**P**	**13 18 56.2**	**-0.7**
	0.8nm,0.5s,baz=96,slow=8.4,SNR=23						
QSPA	**South Pole Qui**	**66.20**	**180**	P	**P**	**13 21 42.6**	**+0.6**
	2.2nm,0.7s,baz=75,slow=1.6						
TXAR	**Lajitas Array**	**90.12**	**58**	P	**P**	**13 23 52.6**	**+0.9**
	0.5nm,0.8s,baz=213,slow=6.3,SNR=8.9						
PDAR	**Pinedale Array**	**92.44**	**44**	P	**P**	**13 24 02.2**	**0.0**
	0.5nm,0.8s,baz=253,slow=3.3,SNR=4.5						
AKASG	**Malin Array Be**	**145.15**	**328**	PKPbc	**PKPdf**	**13 30 23.5**	**-1.8**
	0.4nm,0.4s,baz=39,slow=4.1,SNR=3.5						
TORD	**Torodi Ar. Bea**	**169.25**	**187**	PKPab	**PKPab**	**13 32 10.0**	**-0.7**
	0.4nm,0.7s,baz=211,slow=1.7,SNR=2.9						

*IDC **09** 13:17:59.9±5.8, 5.˚13S×153.˚75E, h42km±43km, mb3.5/3, mb1 3.8/4, mb1mx3.3/42, mbtmp3.8/4, ML1.9/1, Error ellipse: s-maj=44.6km s-min=21.4km az=79.0*

ISC 09 13:17:58.5±2.1, **5.˚1S**±0.˚1×**153.˚9E**±0.˚2, **h35**km, **n6,** σ1s**04**/8,
New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.98**	**293**	P	**Pn**	**13 18 30.4**	**+0.8**
	38nm,0.3s,baz=108,slow=2.1,SNR=38						
KRVT				S	**Sn**	**13 18 53.0**	**-0.3**
	61nm,0.3s,baz=267,slow=9.4,SNR=7.9						
KRVT				LR	LR	13 19 11.0	
	comp=Z,70nm,21.9s,baz=128,slow=37						
PMG	**Port Moresby**	**7.90**	**237**	P	**Pn**	**13 19 52.5**	**+1.6**
	1.0nm,0.3s,baz=50,slow=7.9,SNR=4.2						
PMG				S	**Sn**	**13 21 18.1**	**-1.1**
	2.8nm,0.3s,baz=15,slow=21,SNR=7.8

PDAR				LR	LR	14 07 42.9	
	comp=Z,103nm,18.7s,baz=175,slow=31						
BOSA	**Boshof**	**94.54**	**146**	LR	LR	14 07 44.7	
	comp=Z,104nm,21.7s,baz=211,slow=30						
H11S2	**WAKE ISLAND Hy**	**96.24**	**291**	T	T	15 20 16.5	
	baz=140,slow=75,SNR=251						
H11S3	**WAKE ISLAND Hy**	**96.25**	**291**	T	T	15 20 13.4	
	baz=140,slow=75,SNR=131						
H11S1	**WAKE ISLAND Hy**	**96.25**	**291**	T	T	15 20 16.7	
	baz=140,slow=75,SNR=105						
H11N3	**WAKE ISLAND Hy**	**97.06**	**292**	T	T	15 21 14.8	
	baz=142,slow=75,SNR=51						
H11N1	**WAKE ISLAND Hy**	**97.06**	**292**	T	T	15 21 15.6	
	baz=142,slow=75,SNR=46						
H11N2	**WAKE ISLAND Hy**	**97.07**	**292**	T	T	15 21 16.1	
	baz=142,slow=75,SNR=45						
DAVA	**Damuels**	**144.51**	**73**	*i* PKPdf	**PKPdf**	**13 39 33.6**	**+0.3**
	4.9nm,1.1s						
FETA	**Feichten**	**144.93**	**73**	*i* PKPbc	**PKPdf**	**13 39 33.9**	**-0.2**
	14nm,1.4s						
RETA	**Reutte**	**145.14**	**73**	*i* PKPbc	**PKPbc**	**13 39 33.7**	**-0.2**
	9.8nm,1.5s						
MOTA	**Moosalm**	**145.29**	**73**	*i* PKPab	**PKiKP**	**13 39 37.4**	**-1.2**
	5.0nm,0.7s						
SQTA	**Sankt Quirin**	**145.31**	**73**	*i* PKPab	**PKiKP**	**13 39 36.6**	**-2.0**
	7.0nm,1.3s						
WATA	**Walderalm**	**145.58**	**73**	*i* PKPab	**PKiKP**	**13 39 37.7**	**-1.5**
	9.7nm,1.4s						
ABTA	**Abfaltersbach**	**145.92**	**75**	*i* PKPdf	**PKPdf**	**13 39 35.3**	**-0.4**
	1.7nm,0.6s						
KBA	**Koelnbreinsper**	**146.58**	**75**	*i* PKPab	**PKiKP**	**13 39 40.9**	**-0.4**
	5.3nm,1.0s						
MYKA	**Terra Mystica**	**146.58**	**76**	*i* PKiKP	**PKiKP**	**13 39 43.5**	**+2.4**
	2.0nm,0.5s						
OBKA	**Obir**	**147.10**	**76**	*i* PKiKP	**PKiKP**	**13 39 43.6**	**+1.3**
	11nm,1.5s						
MOA	**Molln**	**147.46**	**74**	*i* PKPbc	**PKPbc**	**13 39 40.0**	**-0.7**
	4.8nm,0.9s						
SOKA	**Soboth**	**147.47**	**76**	*i* PKPdf	**PKPdf**	**13 39 37.3**	**-1.0**
	3.1nm,1.0s						
GERES	**GERESS Array B**	**147.48**	**72**	PKPbc	**PKPdf**	**13 39 39.3**	**+1.1**
	1.3nm,0.8s,baz=219,slow=1.7,SNR=7.1						
ARSA	**Arzberg**	**148.01**	**75**	*i* PKPbc	**PKPbc**	**13 39 42.1**	**-0.1**
	5.6nm,0.9s						
BRG	**Berggiesshubel**	**148.31**	**68**	*e*PKP	**PKPab**	**13 39 50.6**	**+4.5**
	5.7nm,1.1s						
CONA	**Conrad Observa**	**148.48**	**74**	*i* PKiKP	**PKiKP**	**13 39 45.3**	**+0.2**
	5.0nm,0.9s						
SONM	**Songino Array**	**152.51**	**282**	PKPbc	**PKiKP**	**13 39 53.9**	**+0.5**
	0.2nm,0.4s,baz=140,slow=1.1,SNR=5.0						
BRTR	**Keskin Array B**	**156.13**	**103**	PKPab	**PKPab**	**13 40 18.8**	**-0.6**
	1.1nm,0.8s,baz=222,slow=1.9,SNR=6.3						
MKAR	**Makanchi Array**	**167.69**	**263**	PKPab	**PKPab**	**13 41 11.2**	**+1.6**
	0.8nm,0.9s,baz=116,slow=3.4,SNR=4.8						

*TAP **09** 13:31:48.9,24.˙68N×122.˙49E,h94km,ML3.4,D*
*JMA **09** 13:31:48.9±0.1,24.˙56N×122.˙49E,h88km±2km,M2.0*
ISC 09 13:31:49.9±1.3,24.˙61N±0.˙04×122.˙52E±0.˙02,h81km±7km,
n96,σ0°88/168,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.36**	**261**	P		**Pn**	**13 32 02.9**	**+0.3**
	baz=245							
EOS1				S		**Sn**	**13 32 13.5**	**+1.4**
	baz=245							
JYNG	**Yonagunijimaku**	**0.42**	**111**	P		**Pn**	**13 32 02.7**	**-0.4**
JYNG				*e*S		**Sn**	**13 32 13.5**	**+0.6**
YOJ	**Yonaguni jima**	**0.47**	**108**	P		**Pn**	**13 32 03.4**	**-0.1**
YOJ				*e*S		**Sn**	**13 32 14.3**	**+0.7**
EGS		**0.58**	**294**	*e*P		**Pn**	**13 32 04.2**	**-0.4**
	baz=280							
EGS				*e*S		**Sn**	**13 32 16.1**	**+0.7**
	baz=280							
TWC	**Suao**	**0.61**	**270**	*i* P		**Pn**	**13 32 04.4**	**-0.3**
	baz=261							
TWC				*i* S		**Sn**	**13 32 15.4**	**-0.4**
	baz=261							
TWB1	**Santiao Chiao**	**0.63**	**310**	*e*P		**Pn**	**13 32 04.6**	**-0.3**
	baz=304							
NTC	**Toucheng**	**0.67**	**292**	*e*P		**Pn**	**13 32 04.8**	**-0.6**
	baz=284							
NTC				*e*S		**Sn**	**13 32 16.9**	**0.0**
	baz=284							
ILA	**Ilan**	**0.72**	**283**	*e*S		**Sn**	**13 32 18.2**	**+0.5**
	baz=275							
NANB	**Nanao**	**0.72**	**256**	P		**Pn**	**13 32 05.9**	**0.0**
	baz=250							
NANB				S		**Sn**	**13 32 18.8**	**+1.0**
	baz=250							
TIPB	**Shuangxi**	**0.73**	**300**	P		**Pn**	**13 32 05.7**	**-0.3**
	baz=292							
TIPB				S		**Sn**	**13 32 17.3**	**-0.6**
	baz=292							
ENA	**Nanau**	**0.73**	**256**	*i* P		**Pn**	**13 32 05.8**	**-0.2**
	baz=250							
ENA				S		**Sn**	**13 32 18.8**	**+0.8**
	baz=250							
TWE	**Neicheng**	**0.78**	**279**	P		**Pn**	**13 32 06.4**	**-0.1**
	baz=273							
TWE				S		**Sn**	**13 32 18.9**	**0.0**
	baz=273							
NWF	**Wu-fen Shan**	**0.81**	**305**	*e*P		**Pn**	**13 32 07.1**	**+0.1**
	baz=296							
NWF				*e*S		**Sn**	**13 32 19.6**	**-0.1**
	baz=296							
WFSB	**Wu-fen Shan**	**0.81**	**305**	*e*P		**Pn**	**13 32 06.8**	**-0.1**
	baz=296							
WFSB				*e*S		**Sn**	**13 32 19.6**	**+0.1**
	baz=296							
SLBB	**Yuanshan**	**0.82**	**281**	*e*S		**Sn**	**13 32 19.1**	**-0.6**
	baz=282							
ENTT	**Nioudou**	**0.87**	**272**	*i* P		**Pn**	**13 32 08.0**	**+0.5**
	baz=271							
ENTT				*i* S		**Sn**	**13 32 21.6**	**+1.0**
	baz=271							
NDT	**Datong Townshi**	**0.92**	**270**	*i* P		**Pn**	**13 32 08.3**	**+0.3**
	baz=264							
NDT				S		**Sn**	**13 32 22.6**	**+1.0**
	baz=264							
NWLT	**Wulai**	**0.94**	**281**	P		**Pn**	**13 32 08.1**	**-0.2**
	baz=282							
NWLT				S		**Sn**	**13 32 21.6**	**-0.6**
	baz=282							
NACB	**Ninganchiao**	**0.94**	**243**	P		**Pn**	**13 32 07.9**	**-0.5**
	baz=239							
NACB				*e*S		**Sn**	**13 32 21.4**	**-0.8**
	baz=239							
TWD	**Chiawan**	**0.99**	**238**	P		**Pn**	**13 32 08.4**	**-0.5**
	baz=229							
TWD				S		**Sn**	**13 32 22.5**	**-0.6**
	baz=229							
TATO	**Taipei**	**1.00**	**292**	P		**Pn**	**13 32 08.6**	**-0.5**
	baz=281							
TATO				*e*S		**Sn**	**13 32 22.1**	**-1.4**
	baz=281							
YM01	**YM01**	**1.01**	**302**	*e*P		**Pn**	**13 32 08.7**	**-0.6**
	baz=290							
YM01				*e*S		**Sn**	**13 32 23.8**	**+0.1**
	baz=290							
YM11	**YM11**	**1.02**	**303**	*e*P		**Pn**	**13 32 08.9**	**-0.5**
	baz=292							
YM08	**YM08**	**1.02**	**305**	*e*P		**Pn**	**13 32 08.4**	**-0.9**
	baz=294							
ETLH	**Xiulin Townshi**	**1.02**	**247**	P		**Pn**	**13 32 09.0**	**-0.4**
	baz=238							
ETLH				*e*S		**Sn**	**13 32 24.8**	**+0.8**
	baz=238							
YM10	**YM10**	**1.03**	**302**	*e*P		**Pn**	**13 32 09.2**	**-0.2**
	baz=291							
YM10				*e*S		**Sn**	**13 32 23.7**	**-0.3**
	baz=291							
YM05	**YM05**	**1.03**	**303**	P		**Pn**	**13 32 08.9**	**-0.6**
	baz=291							
YM05				*e*S		**Sn**	**13 32 23.3**	**-0.7**
	baz=291							
YHNB	**Yeheng**	**1.04**	**274**	P		**Pn**	**13 32 09.7**	**0.0**
	baz=263							
YHNB				S		**Sn**	**13 32 24.5**	**+0.1**
	baz=263							
HWA	**Hwalien**	**1.04**	**233**	*e*S		**Sn**	**13 32 25.1**	**+0.9**
	baz=223							
YM04	**YM04**	**1.04**	**302**	P		**Pn**	**13 32 09.2**	**-0.4**
	baz=290							
YM04				S		**Sn**	**13 32 23.3**	**-1.0**
	baz=290							
NNSH	**Datong**	**1.05**	**261**	*e*P		**Pn**	**13 32 09.5**	**-0.3**
	baz=251							
NNSH				*e*S		**Sn**	**13 32 24.2**	**-0.4**
	baz=251							
NNS	**Nan Shan**	**1.05**	**261**	*i* P		**Pn**	**13 32 09.9**	**0.0**
	baz=250							
NNS				*i* S		**Sn**	**13 32 24.7**	**-0.1**
	baz=250							
ANP	**Anpu**	**1.07**	**303**	*e*P		**Pn**	**13 32 09.1**	**-0.9**
	baz=291							
ENLB	**Shoufeng**	**1.09**	**230**	*e*S		**Sn**	**13 32 25.4**	**+0.2**
	baz=223							
TWS1	**Kuangyinshan**	**1.11**	**296**	P		**Pn**	**13 32 10.0**	**-0.4**
	baz=294							
TWS1				S		**Sn**	**13 32 25.4**	**-0.4**
	baz=294							
WLTB	**Daxi**	**1.18**	**282**	*e*P		**Pn**	**13 32 11.6**	**+0.5**
	baz=282							
WLTB				*e*S		**Sn**	**13 32 27.8**	**+0.6**
	baz=282							
WHF	**Hehuan Shan**	**1.23**	**248**	*i* P		**Pn**	**13 32 11.8**	**-0.5**
	baz=239							
WHF				*i* S		**Sn**	**13 32 28.8**	**-0.2**
	baz=239							
NCU	**National Centr**	**1.26**	**287**	*e*P		**Pn**	**13 32 12.2**	**-0.1**
	baz=292							
NCU				*e*S		**Sn**	**13 32 29.1**	**+0.1**
	baz=292							
NCUH	**Zhongli**	**1.26**	**287**	*e*S		**Sn**	**13 32 29.1**	**0.0**
	baz=292							
ESL	**Shilin**	**1.27**	**232**	P		**Pn**	**13 32 11.3**	**-1.0**
	baz=237							
ESL				*i* S		**Sn**	**13 32 28.1**	**-1.1**
	baz=237							
TDCB	**Techi**	**1.29**	**254**	*e*P		**Pn**	**13 32 13.0**	**+0.2**
	baz=244							
TDCB				*e*S		**Sn**	**13 32 29.7**	**-0.2**
	baz=244							
HATJ	**Hateruma jima**	**1.30**	**115**	*e*S		**Sn**	**13 32 30.2**	**+0.4**
CHGB	**Renai**	**1.34**	**246**	P		**Pn**	**13 32 13.5**	**+0.1**
	baz=238							
CHGB				S		**Sn**	**13 32 31.4**	**+0.2**
	baz=238							
EGFH	**Guangfu**	**1.36**	**227**	*e*S		**Sn**	**13 32 30.7**	**-0.7**
	baz=219							
LIOB	**Emei**	**1.37**	**272**	*e*P		**Pn**	**13 32 13.3**	**-0.2**
	baz=269							
LIOB				*e*S		**Sn**	**13 32 31.4**	**0.0**
	baz=269							
NSTT	**Nanjuang**	**1.38**	**271**	*i* P		**Pn**	**13 32 13.8**	**+0.1**
	baz=268							
NSTT				*i* S		**Sn**	**13 32 31.8**	**+0.1**
	baz=268							
OWD	**Renai**	**1.39**	**242**	P		**Pn**	**13 32 13.5**	**-0.4**
	baz=234							
OWD				S		**Sn**	**13 32 31.2**	**-0.8**
	baz=234							
SBCB	**Hsinchu**	**1.41**	**278**	*e*S		**Sn**	**13 32 32.7**	**+0.4**
	baz=275							
JKRS	**Kuro-shima**	**1.41**	**105**	P		**Pn**	**13 32 14.3**	**+0.2**
JKRS				*e*S		**Sn**	**13 32 32.6**	**+0.3**
HSN	**Hsinchu**	**1.42**	**278**	*e*S		**Sn**	**13 32 32.3**	**-0.3**
	baz=277							
WHP	**Taichung City**	**1.47**	**257**	P		**Pn**	**13 32 15.8**	**+0.8**
	baz=255							
WHP				S		**Sn**	**13 32 34.5**	**+0.6**
	baz=255							
HGSD	**Ruisui**	**1.49**	**222**	*e*P		**Pn**	**13 32 15.2**	**0.0**
	baz=220							
HGSD				S		**Sn**	**13 32 34.4**	**+0.1**
	baz=220							
JIJ	**Ishigaki jima**	**1.50**	**99**	P		**Pn**	**13 32 14.9**	**-0.4**
JIJ				*e*S		**Sn**	**13 32 34.4**	**-0.1**
VWDT	**VWDT**	**1.52**	**236**	P		**Pn**	**13 32 15.6**	**+0.1**
	baz=234							
VWDT				*e*S		**Sn**	**13 32 34.4**	**-0.5**
	baz=234							
EHY	**Hungye**	**1.55**	**225**	P		**Pn**	**13 32 14.9**	**-1.0**
	baz=223							
EHY				S		**Sn**	**13 32 34.2**	**-1.4**
	baz=223							
DPDB	**Guoxing**	**1.56**	**249**	P		**Pn**	**13 32 16.8**	**+0.7**
	baz=246							
DPDB				*e*S		**Sn**	**13 32 36.5**	**+0.5**
	baz=246							
NSY	**Sanyi**	**1.61**	**264**	*e*S		**Sn**	**13 32 37.7**	**+0.7**
	baz=261							
JISG	**Ishigakijimahi**	**1.63**	**90**	P		**Pn**	**13 32 16.7**	**-0.3**
JISG				*e*S		**Sn**	**13 32 37.0**	**-0.5**
SSLB	**Suanglung**	**1.64**	**241**	*e*P		**Pn**	**13 32 17.1**	**-0.1**
	baz=235							
SSLB				*e*S		**Sn**	**13 32 37.4**	**-0.5**
	baz=235							
YULB	**Yu-li**	**1.65**	**223**	P		**Pn**	**13 32 16.2**	**-1.0**
	baz=221							
YULB				S		**Sn**	**13 32 36.3**	**-1.6**
	baz=221							
TWF1	**Yuli**	**1.67**	**222**	P		**Pn**	**13 32 17.3**	**-0.3**
	baz=227							
TWF1				S		**Sn**	**13 32 36.9**	**-1.7**
	baz=227							
WHYT	**Xinyi Township**	**1.77**	**240**	P		**Pn**	**13 32 19.7**	**+0.9**
	baz=232							
WHYT				S		**Sn**	**13 32 42.2**	**+1.4**
	baz=232							
FULB	**Fuli**	**1.79**	**219**	*e*P		**Pn**	**13 32 19.0**	**-0.2**
	baz=211							
FULB				*e*S		**Sn**	**13 32 41.3**	**0.0**
	baz=211							
WJS	**Zhushan**	**1.81**	**245**	P		**Pn**	**13 32 20.5**	**+1.2**
	baz=252							
WJS				S		**Sn**	**13 32 43.5**	**+1.8**
	baz=252							
YUS	**Yu-Shan**	**1.81**	**232**	*i* P		**Pn**	**13 32 20.2**	**+0.4**
	baz=225							
YUS				S		**Sn**	**13 32 41.8**	**-0.7**
	baz=225							
WNT	**Mingjian**	**1.82**	**247**	*e*P		**Pn**	**13 32 21.1**	**+1.6**
	baz=245							
WNT				*e*S		**Sn**	**13 32 43.6**	**+1.6**
	baz=245							
CHKT	**Chengkung**	**1.83**	**215**	*e*P		**Pn**	**13 32 19.2**	**-0.5**
	baz=207							
CHKT				*e*S		**Sn**	**13 32 40.6**	**-1.6**
	baz=207							
WCHH	**Zhanghua**	**1.86**	**254**	*e*S		**Sn**	**13 32 43.7**	**+0.8**
	baz=251							
ALS	**Alishan**	**1.91**	**235**	*e*P		**Pn**	**13 32 21.2**	**+0.3**
	baz=227							
ALS				*e*S		**Sn**	**13 32 44.8**	**+0.4**
	baz=227							
CHN5	**Tsauling**	**1.96**	**240**	*e*P		**Pn**	**13 32 22.4**	**+1.1**
	baz=247							
CHN5				S		**Sn**	**13 32 46.5**	**+1.2**
	baz=247							
ELDTW	**Lidau**	**1.97**	**225**	*e*P		**Pn**	**13 32 21.0**	**-0.6**
	baz=220							
ELDTW				S		**Sn**	**13 32 43.9**	**-1.7**
	baz=220							
JTJ	**Tarama**	**1.99**	**89**	P		**Pn**	**13 32 22.2**	**+0.5**
JTJ				*e*S		**Sn**	**13 32 46.5**	**+0.6**
WGK	**Gukeng**	**2.01**	**243**	*e*P		**Pn**	**13 32 23.3**	**+1.4**
	baz=251							
WGK				*i* S		**Sn**	**13 32 48.9**	**+2.5**
	baz=251							
RLNB	**Erlin**	**2.09**	**251**	*e*S		**Sn**	**13 32 48.7**	**+0.3**
	baz=256							
TWH	**Lutao**	**2.11**	**207**	*e*S		**Sn**	**13 32 47.7**	**-1.2**
	baz=210							
CHN4	**Tsaushan**	**2.16**	**235**	*e*P		**Pn**	**13 32 25.0**	**+1.0**
	baz=233							
CHN4				*e*S		**Sn**	**13 32 51.5**	**+1.5**
	baz=233							
STYT	**Tauyuan**	**2.16**	**229**	P		**Pn**	**13 32 23.8**	**-0.2**
	baz=227							
STYT				S		**Sn**	**13 32 51.4**	**+1.3**
	baz=227							
TPUB	**Ta-pu**	**2.16**	**233**	P		**Pn**	**13 32 25.1**	**+1.1**
	baz=225							
TPUB				S		**Sn**	**13 32 51.7**	**+1.6**
	baz=225							
WTP	**Ta-pu**	**2.21**	**233**	P		**Pn**	**13 32 25.4**	**+0.7**
	baz=231							
WTP				*e*S		**Sn**	**13 32 52.2**	**+1.1**
	baz=231							
CHY	**Chiayi**	**2.21**	**240**	*e*S		**Sn**	**13 32 52.0**	**+0.8**
	baz=249							
TWGBT	**Beinan**	**2.21**	**217**	P		**Pn**	**13 32 24.1**	**-0.6**
	baz=220							
TWGBT				S		**Sn**	**13 32 49.5**	**-1.8**
	baz=220							
TWG	**Pinlang**	**2.22**	**217**	P		**Pn**	**13 32 24.7**	**-0.1**
	baz=220							
TWG				*i* S		**Sn**	**13 32 50.1**	**-1.3**
	baz=220							
TWK	**Hsinying**	**2.29**	**235**	*e*P		**Pn**	**13 32 26.2**	**+0.5**
	baz=233							
TWK				*e*S		**Sn**	**13 32 53.9**	**+0.8**
	baz=233							
CHN1	**Nanshi**	**2.31**	**233**	*e*P		**Pn**	**13 32 26.4**	**+0.4**
	baz=231							
CHN1				*e*S		**Sn**	**13 32 54.4**	**+0.8**
	baz=231							
SNST	**Tainan City**	**2.31**	**234**	*e*S		**Sn**	**13 32 56.0**	**+2.5**
	baz=232							
WSF	**Szhu**	**2.31**	**246**	*e*S		**Sn**	**13 32 53.0**	**-0.5**
	baz=244							
SGST	**Jiashian**	**2.33**	**230**	*e*S		**Sn**	**13 32 55.4**	**+1.2**
	baz=228							
SLGT	**Liugui**	**2.35**	**227**	P		**Pn**	**13 32 28.1**	**+1.6**
	baz=226							
SLGT				*e*S		**Sn**	**13 32 55.5**	**+1.0**
	baz=226							
CHN8	**Yiju**	**2.45**	**240**	*e*S		**Sn**	**13 32 59.1**	**+2.1**
	baz=238							
ECL	**Taimali**	**2.46**	**216**	*e*P		**Pn**	**13 32 27.1**	**-0.9**
	baz=208							
ECL				S		**Sn**	**13 32 55.4**	**-1.9**
	baz=208							
SSD	**Sandimen**	**2.53**	**223**	P		**Pn**	**13 32 30.2**	**+1.2**
	baz=222							
SSD				*e*S		**Sn**	**13 33 00.3**	**+1.3**
	baz=222							
JMJ2	**Miyako jima3**	**2.56**	**86**	*e*S		**Sn**	**13 33 00.2**	**+0.6**
MASBT	**Mashibuluo**	**2.63**	**221**	P		**Pn**	**13 32 31.1**	**+0.7**
	baz=220							
MASBT				*e*S		**Sn**	**13 33 02.4**	**+1.1**
	baz=220							
EAST	**Anshuo**	**2.69**	**215**	P		**Pn**	**13 32 30.1**	**-1.1**
	baz=210							
EAST				*e*S		**Sn**	**13 33 01.1**	**-1.8**
	baz=210							
VWUC	**VWUC**	**2.81**	**278**	*e*P		**Pn**	**13 32 32.1**	**-0.6**
	baz=276							
VWUC				*e*S		**Sn**	**13 33 04.0**	**-1.8**
	baz=276							
PHUB	**P'eng-hu**	**2.90**	**249**	*e*S		**Sn**	**13 33 05.8**	**-2.1**
	baz=247							

*IDC **09** 14:03:24.7±1.7,3.˙27N×76.˙17W,h0km,mb3.3/2,mb1 3.8/5,*
mb1mx3.5/29,mbtmp3.7/5,ML3.0/3,Error ellipse:
s-maj=41.7km s-min=16.5km az=144.0
*RSNC **09** 14:03:25.6±1.5,3.˙01N×75.˙99W,h4km±5km,ML3.5,Mw3.7*
*NEIC **09** 14:03:30.1±1.3,2.˙98N±0.˙04×75.˙88W±0.˙09,h59km±11km,*
mb4.6/3,Error ellipse: s-maj=13.1km s-min=5.0km
az=106.0
ISC 09 14:03:23.5±1.1,3.˙02N±0.˙02×75.˙97W±0.˙03,h5km±9km,n37,
σ1°44/53,4C-2D,Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BETC	**Betania**	**0.63**	**122**	*i* Pg		**Pb**	**14 03 36.1**	**-0.9**
BETC				*e*Sg		**Sb**	**14 03 43.9**	**-2.2**
BETC				*i*			14 03 45.1	
	comp=Z,794nm,0.7s							
PCON	**Cinco Dias**	**0.81**	**212**	*e*P		**Pb**	**14 03 40.3**	**0.0**
PCON				*i*			14 03 57.6	
	comp=Z,823nm,0.3s							
POPC	**Popayan, Colom**	**0.85**	**236**	*e*P		**Pb**	**14 03 40.3**	**-0.5**
POPC				*e*S		**Sb**	**14 03 51.7**	**-0.8**
POPC				*i*			14 03 52.9	
	comp=Z,303nm,0.3s							
POPC				*i*			14 03 53.1	
	comp=Z,270nm,0.4s							
YOTC	**Yotoco, Valle**	**1.03**	**339**	*i* P		**Pg**	**14 03 42.8**	**-0.4**
YOTC				*e*S		**Sg**	**14 03 57.0**	**+0.5**
YOTC				*i*			14 03 57.9	
	comp=Z,756nm,0.4s							
YOTC				*i*			14 03 58.0	
	comp=Z,601nm,0.2s							
SOTA	**Rioblanco**	**1.08**	**216**	*e*P		**Pn**	**14 03 45.0**	**-0.7**
SOTA				*i*			14 04 00.9	
	comp=Z,413nm,0.6s							
SOTA				*i*			14 04 11.2	
	comp=Z,372nm,0.7s							
ORTC	**Ortega, Tolima**	**1.14**	**39**	*e*P		**Pb**	**14 03 45.4**	**-0.4**
ORTC				*e*S		**Sn**	**14 04 01.2**	**-1.0**
ORTC				*i*			14 04 06.1	
	comp=Z,4μm,0.3s							
ORTC				*i*			14 04 06.5	
	comp=Z,4μm,0.3s							
FLOC	**Florencia**	**1.46**	**167**	*i* P		**Pg**	**14 03 50.8**	**-0.8**
FLOC				*e*S		**Sg**	**14 04 10.1**	**-0.4**
FLOC				*i*			14 04 14.6	
	comp=Z,1μm,0.4s							
FLOC				*i*			14 04 14.9	
	comp=Z,1μm,0.5s							
FLOC	**Florencia**	**1.46**	**167**			**Pg**	**14 03 51.2**	**-0.4**
FLOC					Sn	**Sg**	**14 04 12.5**	**+2.0**
BBAC	**Balboa, Cauca**	**1.61**	**232**	*e*P		**Pb**	**14 03 53.8**	**0.0**
BBAC				*e*S		**Sg**	**14 04 15.6**	**+0.2**
BBAC				*i*			14 04 16.7	
	comp=Z,349nm,0.5s							
BBAC				*i*			14 04 20.7	
	comp=Z,443nm,0.6s							
MALC	**Bahia Malaga**	**1.68**	**306**	*i* P		**Pg**	**14 03 56.0**	**+0.3**
MALC				*e*S		**Sg**	**14 04 19.7**	**+2.3**
MALC				*i*			14 04 37.1	
	comp=Z,451nm,0.4s							
TOLC	**Tolima**	**1.69**	**23**	*e*P		**Pn**	**14 03 54.0**	**+0.1**
TOLC				*e*S		**Sb**	**14 04 16.3**	**-0.6**
TOLC				*i*			14 04 20.6	
	comp=Z,875nm,0.2s							
PLMC	**San Jos del P**	**1.90**	**351**	*e*P		**Pn**	**14 03 57.2**	**+0.6**
PLMC				*i*			14 04 30.3	
	comp=Z,631nm,0.2s							
RREF	**El Recreo**	**1.97**	**18**	*e*P		**Pb**	**14 03 59.3**	**-0.9**
RREF				*e*S		**Sg**	**14 04 26.0**	**-0.9**
RREF				*i*			14 04 30.9	
	comp=Z,462nm,0.2s							
RREF				*i*			14 04 33.9	
	comp=Z,449nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.27**	**15**	*e*P		**Pb**	**14 04 04.2**	**-1.0**
GUY2C				*e*S		**Sb**	**14 04 32.9**	**-1.0**
GUY2C				*i*			14 04 37.4	
	comp=Z,258nm,0.7s							
GUY2C				*i*			14 04 38.3	
	comp=Z,295nm,0.6s							
MACC	**Macarena, Meta**	**2.29**	**112**	*e*P		**Pb**	**14 04 04.6**	**-0.8**
MACC				*e*S		**Sb**	**14 04 33.5**	**-0.6**
ROSC	**El Rosal**	**2.45**	**42**	Pn		**Pb**	**14 04 06.8**	**-1.4**
	comp=Z,52nm,0.3s,baz=214,slow=8.3,SNR=22							
ROSC				Pg		**Pg**	**14 04 10.2**	**-0.3**
	comp=Z,54nm,0.3s,baz=246,slow=20,SNR=21							
ROSC				Lg		Lg	14 04 40.1	
	comp=Z,197nm,0.3s,baz=230,slow=5.6,SNR=11							
ROSC	**El Rosal**	**2.45**	**42**

comp=Z,1.6nm,0.3s,baz=207,slow=2.3,SNR=5.5

SDV					Sn	**Sn**	**14 06 49.3**	**+0.5**

comp=Z,5.3nm,0.3s,baz=243,slow=20,SNR=6.8

SDV	**Santo Domingo**	**7.88**	**42**			**Pn**	**14 05 21.9**	**+2.9**
ATAH	**Atahualpa**	**10.37**	**193**	Pn		Pn	14 05 58.9	+5.5

comp=Z,0.3nm,0.3s,baz=3.6,slow=16,SNR=3.5

JTS	**Las Juntas de**	**11.47**	**309**	Pn		Pn	14 06 13.5	+5.4
BANI	**BANI**	**16.24**	**19**	P		**P**	**14 07 16.8**	**+1.1**
TOSP	**Speyside**	**17.38**	**61**	P		**P**	**14 07 29.4**	**+1.2**
TOSP				IAmb		IAmb	14 08 21.7	

comp=Z,81nm,1.2s

ICMP	**Isla Caja de M**	**17.44**	**31**	Pn		**Pn**	**14 07 26.0**	**-1.6**
PDPR	**Patillas Dam,**	**17.82**	**33**			**Pn**	**14 07 31.6**	**-0.7**
PDPR				IAmb		IAmb	14 08 01.8	

comp=Z,28nm,1.1s

PDAR	**Pinedale Array**	**49.61**	**328**	P		**P**	**14 12 16.1**	**+0.1**

comp=Z,0.1nm,0.3s,baz=135,slow=7.6,SNR=2.7

YKA	**Yellowknife Ar**	**65.89**	**341**	P		**P**	**14 14 09.9**	**0.0**

comp=Z,0.1nm,0.3s,baz=134,slow=6.2,SNR=5.3

ASAR	**Alice Springs**	**144.57**	**232**	PKP		**PKPdf**	**14 23 01.3**	**-0.8**

comp=Z,0.2nm,0.4s,baz=123,slow=3.5,SNR=4.1

*SJA **09** 14:08:32.6±0.5, 35.˚80S×70.˚97W, h59km±5km, ML3.0, MW3.1*
*GUC **09** 14:08:33.4±0.7, 35.˚685S×71.˚58W, h123km±6km, ML3.5*

ISC 09 14:08:33.1±1.7, 35.˚85S±0.˚05×71.˚12W±0.˚06, h88km±19km, n22, σ1§27/33, 2C-2D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GO05	**Huala**	**1.07**	**322**	*e*P		**Pn**	**14 08 53.3**	**-0.2**
GO05				*e*S		**Sn**	**14 09 07.4**	**-1.4**
GO05				IAML			14 09 09.9	

comp=E,1μm,0.5s

GO05	**Huala**	**1.07**	**322**	*i* P		**Pn**	**14 08 53.5**	**0.0**
GO05				*e*S		**Sn**	**14 09 08.5**	**-0.2**
CCHI	**Chillan**	**1.08**	**226**	⇑*i*P		**Pn**	**14 08 54.8**	**+1.2**
CCHI				*e*S		**Sn**	**14 09 11.2**	**+2.3**
CCHI				IAML			14 09 11.8	

comp=N,525nm,0.6s

CCHI	**Chillan**	**1.08**	**226**	*i* P		**Pn**	**14 08 54.4**	**+0.9**
CCHI				*e*S		**Sn**	**14 09 10.9**	**+2.0**
COCH	**Cobquecura**	**1.38**	**258**	*e*P		**Pn**	**14 08 56.5**	**-0.7**
COCH				*i* S		**Sn**	**14 09 13.4**	**-2.0**
COCH	**Cobquecura**	**1.38**	**258**	*i* P		**Pn**	**14 08 56.5**	**-0.7**
EDS3	**Malargue**	**1.40**	**87**	*i* P		**Pn**	**14 08 55.6**	**-2.0**
COIS	**El Sosneado**	**1.45**	**60**	*i* P		**Pn**	**14 08 56.4**	**-1.7**
BI03	**Tigo**	**1.83**	**237**	*e*P		**Pn**	**14 09 02.5**	**-0.5**
BI03				*i* S		**Sn**	**14 09 24.4**	**-1.3**
BI03				IAML			14 09 27.2	

comp=N,979nm,0.4s

LMEL	**Las Melosas**	**2.14**	**21**⇓	*e*P		**Pn**	**14 09 09.2**	**+2.0**
LMEL				*e*S		**Sn**	**14 09 36.2**	**+3.0**
LMEL				IAML			14 09 40.5	

comp=N,284nm,0.1s

MT05	**Renca**	**2.47**	**7**⇑	*i* P		**Pn**	**14 09 11.4**	**-0.2**
MT05				*e*S		**Sn**	**14 09 40.8**	**-0.3**
MT05				IAML			14 09 43.4	

comp=E,546nm,0.2s

FCH	**Farellones**	**2.61**	**15**⇓	*e*P		**Pn**	**14 09 14.5**	**+0.8**
FCH				*e*S		**Sn**	**14 09 46.0**	**+1.3**
FCH				IAML			14 09 47.4	

comp=N,240nm,0.6s

PEL	**Peldehue**	**2.72**	**8**	*e*P		**Pn**	**14 09 15.0**	**+0.1**
PEL				*i* S		**Sn**	**14 09 46.2**	**-0.9**
PEL	**Peldehue**	**2.72**	**8**	*i* P		**Pn**	**14 09 15.1**	**+0.1**
ROC1	**El Roble**	**2.87**	**2**	*i* P		**Pn**	**14 09 17.5**	**+0.4**
ROCH	**El Roble**	**2.87**	**2**	*e*P		**Pn**	**14 09 16.7**	**-0.4**
ROCH				*e*S		**Sn**	**14 09 49.5**	**-1.5**
CFA	**Coronel Fontan**	**4.87**	**30**	*i* P		**Pn**	**14 09 44.4**	**+0.5**
RTLL	**Cerro Villicun**	**5.02**	**27**	*i* P		**Pn**	**14 09 46.4**	**+0.3**
RTLL				IAML			14 10 44.8	

comp=Z,11nm,0.7s

AMOG	**MOGNA**	**5.37**	**25**	*i* P		**Pn**	**14 09 51.1**	**+0.2**
GO04	**Tololo Observa**	**5.67**	**3**	*i* P		**Pn**	**14 09 54.7**	**-0.4**
APLL	**PUNTA DE LOS L**	**6.67**	**37**	*i* P		**Pn**	**14 10 08.8**	**+0.3**
AGUA	**GUANDACOL**	**6.72**	**20**	*i* P		**Pn**	**14 10 09.4**	**+0.1**

RSNC 09 14:17:07.4±1.5, 3.˚01N×75.˚97W, h4km±7km, ML2.6, Mw2.7, 1C, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BETC	**Betania**	**0.62**	**121**	*e*Pg		Pg	14 17 18.4	-0.9
BETC				*e*Sg		Sg	14 17 26.0	-1.3
PCON	**Cinco Dias**	**0.80**	**213**	*e*P		Pg	14 17 22.3	-0.5
PCON				*e*S		Sg	14 17 33.4	+0.2
POPC	**Popayan, Colom**	**0.84**	**237**	*e*P		Pg	14 17 22.4	-1.2
POPC				*e*S		Sg	14 17 33.5	-1.2
YOTC	**Yotoco, Valle**	**1.04**	**339**	*e*P		Pg	14 17 25.1	-2.3
YOTC				*e*S		Sg	14 17 39.3	-1.7
SOTA	**Rioblanco**	**1.08**	**217**	*e*P		Pg	14 17 27.2	-0.9
SOTA				*e*S		Sg	14 17 40.7	-1.4
ORTC	**Ortega, Tolima**	**1.15**	**39**	*e*P		Pg	14 17 28.0	-1.5
ORTC				*e*S		Sg	14 17 43.2	-1.3
FLOC	**Florencia**	**1.45**	**167**⇑	*e*P		Pn	14 17 32.8	-1.5
FLOC				*e*S		Sb	14 17 52.1	-1.6
BBAC	**Balboa, Cauca**	**1.61**	**233**	*e*P		Pn	14 17 36.0	-0.8
BBAC				*e*S		Sn	14 17 57.2	-0.9
TOLC	**Tolima**	**1.70**	**22**	*e*P		Pn	14 17 36.7	-1.4
TOLC				*e*S		Sn	14 17 59.3	-1.2
TOLC				*i*			14 18 41.4	

comp=Z,48nm,0.5s

PLMC	**San Jos del P**	**1.91**	**351**	*e*P		Pn	14 17 39.4	-1.4
PLMC				*i*			14 18 18.5	

comp=Z,79nm,0.1s

MACC	**Macarena, Meta**	**2.28**	**112**	*e*P		Pn	14 17 47.0	+1.1
MACC				*e*S		Sn	14 18 15.9	+1.4
MACC				*i*			14 18 52.9	

comp=Z,101nm,0.3s

GUY2C	**Guyana, Caldas**	**2.29**	**15**	*e*P		Pn	14 17 47.0	+0.6
GUY2C				*e*S		Sn	14 18 16.6	+1.4
GUY2C				*i*			14 18 22.4	

comp=Z,18nm,0.2s

VILC	**Villavicencio,**	**2.52**	**64**	*e*S		Sb	14 18 25.9	+1.1
CHIC	**Chingaza**	**2.75**	**54**	*e*P		Pn	14 17 54.5	+1.8
CHIC				*e*S		Sb	14 18 30.8	-1.0
CHIC				*i*			14 19 13.2	

comp=Z,42nm,0.7s

NORC	**Norcasia**	**2.77**	**23**	*e*P		Pn	14 17 54.8	+2.2
NORC				*e*S		Sn	14 18 28.7	+2.2
NORC				*i*			14 18 33.5	

comp=Z,18nm,0.3s

CBOC	**Ciudad Bolivar**	**2.84**	**359**	*e*P		Pn	14 17 55.4	+1.7
CBOC				*e*S		Sn	14 18 29.1	+0.6
CBOC				*i*			14 19 14.1	

comp=Z,11nm,0.6s

CBOC	**Ciudad Bolivar**	**2.84**	**359**	*e*P		Pn	14 17 54.2	+0.5
CBOC				*e*S		Sn	14 18 28.0	-0.5
CBOC				*i*			14 18 30.7	

comp=Z,12nm,0.6s

TAP 09 14:17:22.1, 24.˚84N×122.˚02E, h100km, ML2.6, C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.17**	**351**	S		Sn	14 17 46.2	-0.5

baz=354

NTC	**Toucheng**	**0.17**	**274**	*e*S		Sn	14 17 46.6	0.0

baz=282

TIPB	**Shuangxi**	**0.22**	**307**	P		Pn	14 17 36.2	-0.1

baz=298

TIPB				S		Sn	14 17 46.7	-0.3

baz=298

TWC	**Suao**	**0.28**	**214**	*e*P		Pn	14 17 36.9	+0.3

baz=211

TWC				S		Sn	14 17 46.9	-0.5

baz=211

EOS1	**EOS1**	**0.31**	**161**	S		Sn	14 17 48.1	+0.7

baz=160

TWE	**Neicheng**	**0.34**	**250**	P		Pn	14 17 37.0	+0.1

baz=248

TWE				S		Sn	14 17 47.8	-0.1

baz=248

SLBB	**Yuanshan**	**0.36**	**256**	*e*P		Pn	14 17 36.9	-0.1

baz=256

SLBB				*e*S		Sn	14 17 47.7	-0.5

baz=256

ENTT	**Nioudou**	**0.46**	**244**	*e*P		Pn	14 17 38.3	+0.7

baz=243

ENTT				*e*S		Sn	14 17 50.5	+1.3

baz=243

NWLT	**Wulai**	**0.47**	**262**	P		Pn	14 17 37.8	+0.2

baz=268

NWLT				S		Sn	14 17 49.1	-0.2

baz=268

NANB	**Nanao**	**0.48**	**211**	P		Pn	14 17 38.1	+0.4

baz=205

NANB				S		Sn	14 17 50.0	+0.7

baz=205

ENA	**Nanau**	**0.48**	**212**	*i* P		Pn	14 17 38.3	+0.6

baz=205

ENA				*i* S		Sn	14 17 50.4	+1.0

baz=205

YM01	**YM01**	**0.51**	**307**	*e*S		Sn	14 17 48.7	-1.2

baz=307

NDT	**Datong Townshi**	**0.52**	**243**	*e*P		Pn	14 17 38.5	+0.5

baz=251

NDT				S		Sn	14 17 51.1	+1.2

baz=251

YM04	**YM04**	**0.54**	**306**	*e*S		Sn	14 17 48.9	-1.3

baz=303

TWS1	**Kuangyinshan**	**0.60**	**296**	*e*S		Sn	14 17 51.2	+0.2

baz=296

YHNB	**Yeheng**	**0.61**	**254**	*e*P		Pn	14 17 38.9	+0.1

baz=254

YHNB				*e*S		Sn	14 17 51.2	-0.1

baz=254

NSK	**Sanguang**	**0.62**	**255**	*e*P		Pn	14 17 38.9	+0.1

baz=254

NSK				*e*S		Sn	14 17 51.4	-0.1

baz=254

WLTB	**Daxi**	**0.70**	**271**	*e*S		Sn	14 17 53.4	+1.0

baz=263

NNSH	**Datong**	**0.71**	**235**	P		Pn	14 17 40.0	+0.3

baz=239

NNSH				S		Sn	14 17 53.3	+0.4

baz=239

NNS	**Nan Shan**	**0.71**	**236**	P		Pn	14 17 40.0	+0.3

baz=235

NNS				*e*S		Sn	14 17 53.1	+0.2

baz=235

NACB	**Ninganchiao**	**0.77**	**210**	*e*P		Pn	14 17 40.5	+0.4

baz=210

NACB				*e*S		Sn	14 17 54.5	+0.8

baz=210

ETLH	**Xiulin Townshi**	**0.80**	**218**	*e*P		Pn	14 17 41.0	+0.5

baz=225

ETLH				*e*S		Sn	14 17 54.5	+0.2

baz=225

LIOB	**Emei**	**0.93**	**258**	*e*P		Pn	14 17 42.0	+0.2

baz=251

LIOB				*e*S		Sn	14 17 56.7	+0.1

baz=251

NSTT	**Nanjuang**	**0.95**	**257**	P		Pn	14 17 42.0	+0.1

baz=250

NSTT				S		Sn	14 17 56.7	-0.1

baz=250

TWT	**Tachien**	**0.96**	**233**	P		Pn	14 17 43.3	+1.0

baz=227

TWT				*e*S		Sn	14 17 59.0	+1.5

baz=227

WHF	**Hehuan Shan**	**0.97**	**225**	*e*P		Pn	14 17 44.0	+1.3

baz=219

WHF				*e*S		Sn	14 17 59.2	+1.1

baz=219

TDCB	**Techi**	**0.98**	**233**	*e*P		Pn	14 17 43.2	+0.8

baz=228

TDCB				*e*S		Sn	14 17 58.1	+0.5

baz=228

CHGB	**Renai**	**1.09**	**225**	P		Pn	14 17 44.5	+0.7

baz=220

CHGB				*e*S		Sn	14 18 00.8	+0.7

baz=220

WHP	**Taichung City**	**1.13**	**240**	P		Pn	14 17 44.6	+0.7

baz=240

WHP				*e*S		Sn	14 18 01.1	+0.6

baz=240

OWD	**Renai**	**1.17**	**221**	*e*P		Pn	14 17 45.4	+0.8

baz=217

OWD				*e*S		Sn	14 18 01.4	-0.1

baz=217

VWDT	**VWDT**	**1.35**	**217**	*e*P		Pn	14 17 46.6	+0.2

baz=212

VWDT				*e*S		Sn	14 18 04.9	+0.1

baz=212

TYC	**Yuchr**	**1.41**	**229**	*e*P		Pn	14 17 48.3	+1.1

baz=236

SSLB	**Suanglung**	**1.43**	**223**	P		Pn	14 17 48.3	+0.8

baz=220

SSLB				*e*S		Sn	14 18 07.8	+1.0

baz=220

HGSD	**Ruisui**	**1.45**	**202**	*e*P		Pn	14 17 47.9	+0.1

baz=210

HGSD				*e*S		Sn	14 18 07.3	+0.2

baz=210

WHYT	**Xinyi Township**	**1.56**	**223**	*e*P		Pn	14 17 50.6	+1.5

baz=231

WHYT				*e*S		Sn	14 18 10.6	+1.0

baz=231

YULB	**Yu-li**	**1.58**	**205**	*e*P		Pn	14 17 47.7	-1.7

baz=198

ALS	**Alishan**	**1.73**	**220**	*e*P		Pn	14 17 52.6	+1.1

baz=229

ALS				*e*S		Sn	14 18 15.8	+2.1

baz=229

CHN5	**Tsauling**	**1.74**	**225**	*e*P		Pn	14 17 52.6	+1.2

baz=225

CHN5				S		Sn	14 18 15.3	+1.6

baz=225

TPUB	**Ta-pu**	**1.99**	**220**	*e*P		Pn	14 17 55.1	+0.6

baz=219

TPUB				*e*S		Sn	14 18 19.7	+0.3

baz=219

CHN1	**Nanshi**	**2.14**	**220**	*e*S		Sn	14 18 22.9	+0.1

baz=219

RSNC 09 14:17:40.8±1.7, 3.˚03N×75.˚97W, h10km±7km, ML2.5, Mw2.8, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BETC	**Betania**	**0.63**	**123**	*e*Pg		Pg	14 17 51.8	-1.3
BETC				*e*Sg		Sg	14 17 59.1	-2.4
BETC				*i*			14 18 01.6	

comp=Z,55nm,0.2s

PCON	**Cinco Dias**	**0.81**	**211**	*e*P		Pg	14 17 56.0	-0.6
PCON				*e*S		Sg	14 18 07.5	+0.2
PCON				*i*			14 18 11.6	

comp=Z,141nm,0.1s

POPC	**Popayan, Colom**	**0.85**	**235**	*e*P		Pg	14 17 56.1	-1.2
POPC				*e*S		Sg	14 18 07.0	-1.4
POPC				*i*			14 18 07.7	

comp=Z,138nm,0.2s

YOTC	**Yotoco, Valle**	**1.02**	**339**	*e*P		Pg	14 17 58.6	-1.8
YOTC				*e*S		Sg	14 18 12.0	-1.7
YOTC				*i*			14 18 13.4	

comp=Z,133nm,0.3s

SOTA	**Rioblanco**	**1.09**	**216**	*e*P		Pg	14 18 00.9	-1.0
SOTA				*e*S		Sg	14 18 15.9	-0.2
SOTA				*i*			14 18 19.2	

comp=Z,40nm,0.3s

ORTC	**Ortega, Tolima**	**1.14**	**40**	*e*P		Pb	14 18 01.6	-1.1
ORTC				*e*S		Sg	14 18 16.6	-0.9
ORTC				*i*			14 18 22.0	

comp=Z,201nm,0.2s

ORTC				*i*			14 18 22.1	

comp=Z,213nm,0.4s

FLOC	**Florencia**	**1.47**	**167**	*e*P		Pn	14 18 06.6	-0.9
FLOC				*e*S		Sn	14 18 24.5	-2.4
FLOC				*i*			14 18 29.1	

comp=Z,118nm,0.4s

BBAC	**Balboa, Cauca**	**1.62**	**232**	*e*P		Pn	14 18 09.2	-0.5
BBAC				*e*S		Sn	14 18 31.1	+0.4
BBAC				*i*			14 18 31.9	

comp=Z,76nm,0.4s

TOLC	**Tolima**	**1.68**	**23**	*e*S		Sn	14 18 31.1	-1.3
TOLC				*i*			14 18 33.6	

comp=Z,52nm,0.1s

MACC	**Macarena, Meta**	**2.30**	**112**	*e*S		Sn	14 18 49.0	+1.7
ROSC	**El Rosal**	**2.44**	**42**	*e*S		Sb	14 18 56.8	+1.4
VILC	**Villavicencio,**	**2.52**	**65**	*e*S		Sb	14 18 58.1	+0.7
CHIC	**Chingaza**	**2.75**	**55**	*e*S		Sb	14 19 05.2	+1.0
NORC	**Norcasia**	**2.75**	**24**	*e*S		Sb	14 19 03.8	-0.2

TAP 09 14:18:11.2, 23.˚07N×121.˚19E, h16km, ML1.3, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CHKT	**Chengkung**	**0.16**	**78**	*e*S		Sb	14 18 19.2	+0.3

baz=91

FULB	**Fuli**	**0.16**	**35**	P		Pb	14 18 16.0	0.0

baz=31

FULB				*e*S		Sb	14 18 20.2	+1.2

baz=31

ELDTW	**Lidau**	**0.20**	**307**	*i* P		Pg	14 18 16.2	+0.1

baz=308

ELDTW				*i* S		Sg	14 18 19.3	-0.1

baz=308

TWG	**Pinlang**	**0.27**	**205**	S		Sb	14 18 21.8	-0.3

baz=196

TWG	**Pinlang**	**0.27**	**205**	P		Pb	14 18 17.5	-0.2

baz=211

TWG				S		Sb	14 18 21.8	-0.2

baz=211

TWGBT	**Beinan**	**0.27**	**203**	*e*S		Sb	14 18 21.6	-0.5

baz=196

TWGBT	**Beinan**	**0.27**	**203**	P		Pg	14 18 17.0	-0.1

baz=202

TWGBT				S		Sb	14 18 21.6	-0.4

baz=202

TWF1	**Yuli**	**0.30**	**18**	*e*P		Pg	14 18 17.8	+0.1

baz=13

TWF1				S		Sg	14 18 22.2	+0.2

baz=13

YULB	**Yu-li**	**0.34**	**16**	*e*S		Sg	14 18 22.2	-0.9

baz=18

STYT	**Tauyuan**	**0.41**	**284**	*i* P		Pg	14 18 19.9	+0.3

baz=289

STYT				*i* S		Sg	14 18 25.8	+0.4

baz=289

SLGT	**Liugui**	**0.51**	**262**	*e*S		Sb	14 18 29.1	+0.1

baz=261

TPUB	**Ta-pu**	**0.57**	**294**	*e*S		Sb	14 18 31.5	+0.7

baz=301

*CNRM **09** 14:30:29.3±1.9, 36.˚73N×9.˚45W, h32km±12km, Error ellipse: s-maj=31.6km s-min=4.7km az=117.0*
*SFS **09** 14:30:32.0, 36.˚87N×9.˚34W, h30km, ML2.6, SW CABO DE SAN VICENTE*
*IGIL **09** 14:30:32.5, 36.˚83N×9.˚37W, h28km, ML2.5*
*INMG **09** 14:30:32.7±1.2, 36.˚84N×9.˚37W, h27km±5km, MD2.4, ML2.5, Error ellipse: s-maj=4.5km s-min=2.9km az=44.0*
*MDD **09** 14:30:32.3±1.0, 36.˚87N×9.˚38W, h27km±4km, mbLg2.5/37, Error ellipse: s-maj=8.4km s-min=6.3km az=31.0, PRXIMO*

ISC 09 14:30:29.5±1.7, 36.˚81N±0.˚06×9.˚44W±0.˚07, h34km, n78, σ1§55/138, 6C, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**0.59**	**57**⇑	*i*Pg		**Pb**	**14 30 42.8**	**+1.3**
PFVI				*e*Sg		**Sb**	**14 30 50.6**	**+0.8**
PFVI				A		A	14 30 51.6	

149nm,0.3s

PFVI	**Vila Bisbo**	**0.59**	**57**	⇑P		**Pb**	**14 30 42.8**	**+1.3**

43nm,0.2s,SNR=18

PFVI				S		**Sn**	**14 30 49.2**	**-0.6**

74nm,0.3s,SNR=23

PFVI	**Vila Bisbo**	**0.59**	**57**	P		**Pb**	**14 30 42.7**	**+1.1**

SNR=37

PFVI				S		**Sb**	**14 30 50.6**	**+0.8**

SNR=20

MORF	**Marmelete**	**0.80**	**52**	*e*P	

EBAD	**Badajoz**	**2.73**	**44**	P		**Pn**	**14 31 11.9**	**+1.0**
	comp=E,2.3nm,0.7s,SNR=11							
EBAD				S		**Sn**	**14 31 42.0**	**-0.8**
	comp=E,2.3nm,0.3s,SNR=5.4							
PTOM	**Tomar**	**2.92**	**16**	*e*Sn		**Sn**	**14 31 47.1**	**-0.2**
PTOM				A		A	14 31 50.0	
	comp=E,20nm,0.2s							
PTOM	**Tomar**	**2.92**	**16**	S		**Sn**	**14 31 47.1**	**-0.2**
	comp=E,10nm,0.2s							
PMRV	**Marv??o**	**3.07**	**31**	*e*Pn		**Pn**	**14 31 16.8**	**+1.2**
PMRV				*e*Sn		**Sn**	**14 31 50.1**	**-1.1**
PMRV				A		A	14 31 51.9	
	comp=E,27nm,0.2s							
PMRV	**Marv??o**	**3.07**	**31**	P		**Pn**	**14 31 16.8**	**+1.2**
PMRV				S		**Sn**	**14 31 50.1**	**-1.1**
	comp=E,27nm,0.2s							
PCAS	**Casmilo, Conde**	**3.32**	**13**	*e*Pn		**Pn**	**14 31 21.1**	**+2.1**
PCAS				*e*Sn		**Sn**	**14 31 56.9**	**-0.4**
PCAS				A		A	14 32 00.4	
	comp=E,8.3nm,0.3s							
PCAS	**Casmilo, Conde**	**3.32**	**13**	P		**Pn**	**14 31 21.1**	**+2.1**
PCAS				S		**Sn**	**14 31 56.9**	**-0.4**
	comp=E,8.3nm,0.3s							
PCBR	**Castelo Branco**	**3.40**	**26**	*e*Pn		**Pn**	**14 31 21.5**	**+1.4**
PCBR				*e*Sn		**Sn**	**14 31 58.0**	**-1.1**
PCBR				A		A	14 32 00.0	
	comp=E,11nm,0.2s							
PCBR	**Castelo Branco**	**3.40**	**26**	P		**Pn**	**14 31 21.5**	**+1.4**
PCBR				S		**Sn**	**14 31 58.0**	**-1.1**
	comp=E,5.7nm,0.2s							
ECAB	**El Cabril**	**3.44**	**67**	P		**Pn**	**14 31 22.0**	**+1.3**
	comp=E,1.4nm,0.1s,SNR=7.9							
ECAB				S		**Sn**	**14 31 58.1**	**-2.2**
	comp=E,1.7nm,0.1s,SNR=7.9							
HORN	**Hornachuelos**	**3.49**	**72**	P		**Pn**	**14 31 21.1**	**-0.3**
	SNR=13							
MTE	**Manteigas**	**3.88**	**22**	*e*Pn		**Pn**	**14 31 28.2**	**+1.4**
MTE				*e*Sn		**Sn**	**14 32 09.4**	**-1.8**
MTE				A		A	14 32 11.8	
	comp=E,8.1nm,0.4s							
MTE	**Manteigas**	**3.88**	**22**	P		**Pn**	**14 31 28.2**	**+1.4**
MTE				S		**Sn**	**14 32 09.4**	**-1.8**
	comp=E,4.1nm,0.4s							
ZHG	**ZHG**	**4.07**	**145**	P		**Pn**	**14 31 29.1**	**-0.3**
PVIS	**Viseu**	**4.08**	**17**	*e*Pn		**Pn**	**14 31 31.2**	**+1.7**
PVIS				*e*Sn		**Sn**	**14 32 16.2**	**+0.1**
PVIS				A		A	14 32 27.8	
	comp=E,3.9nm,0.3s							
PVIS	**Viseu**	**4.08**	**17**	P		**Pn**	**14 31 31.2**	**+1.7**
PVIS				S		**Sn**	**14 32 16.2**	**+0.1**
	comp=E,1.9nm,0.3s							
EADA	**Adamuz**	**4.10**	**69**	P		**Pn**	**14 31 30.8**	**+1.1**
	comp=E,0.9nm,0.1s,SNR=7.9							
EADA				S		**Sn**	**14 32 14.8**	**-1.7**
	comp=E,1.7nm,0.1s,SNR=7.9							
EPLA	**Plasencia**	**4.18**	**38**	P		**Pn**	**14 31 32.5**	**+1.6**
	comp=E,0.8nm,0.1s,SNR=7.9							
EPLA				S		**Sn**	**14 32 16.1**	**-2.6**
	comp=E,7.7nm,0.3s,SNR=14							
EGOR	**Sierra Gorda,**	**4.28**	**84**	P		**Pn**	**14 31 34.4**	**+2.0**
	comp=E,5.0nm,3.7s,SNR=7.9							
EGOR				S		**Sn**	**14 32 20.2**	**-0.9**
	comp=E,7.5nm,4.4s,SNR=7.9							
PVRL	**Vila Real**	**4.66**	**16**	*e*Sn		**Sn**	**14 32 28.9**	**-1.4**
PVRL				A		A	14 32 32.9	
	comp=E,7.2nm,0.5s							
PVRL	**Vila Real**	**4.66**	**16**	S		**Sn**	**14 32 28.9**	**-1.4**
	comp=E,3.6nm,0.5s							
ELGU	**Los Guajares,**	**4.66**	**88**	P		**Pn**	**14 31 39.0**	**+1.5**
	comp=E,0.5nm,4.4s,SNR=7.9							
ELGU				S		**Sn**	**14 32 28.4**	**-2.1**
	comp=E,4.1nm,0.2s,SNR=4.0							
POLO	**Lamas de Olo**	**4.73**	**15**	*e*Pn		**Pn**	**14 31 39.8**	**+1.3**
POLO				*e*Sn		**Sn**	**14 32 30.4**	**-1.9**
POLO				A		A	14 32 33.5	
	comp=E,4.7nm,0.3s							
POLO	**Lamas de Olo**	**4.73**	**15**	P		**Pn**	**14 31 39.8**	**+1.3**
POLO				S		**Sn**	**14 32 30.4**	**-1.9**
	comp=E,4.7nm,0.3s							
MVO	**Moncorvo**	**4.74**	**23**	*e*Sn		**Sn**	**14 32 31.4**	**-0.9**
MVO	**Moncorvo**	**4.74**	**23**	P		**Pn**	**14 31 40.2**	**+1.7**
	comp=E,4.0nm,0.1s,SNR=7.9							
MVO				S		**Sn**	**14 32 30.1**	**-2.1**
	comp=E,2.6nm,0.1s,SNR=7.9							
PAB	**San Pablo**	**4.85**	**54**	P		**Pn**	**14 31 41.1**	**+1.0**
	comp=E,0.6nm,0.1s,SNR=7.9							
PAB				S		**Sn**	**14 32 32.0**	**-3.2**
	comp=E,1.9nm,0.2s,SNR=7.9							
PCAB	**Cabril**	**5.01**	**12**	*e*Sn		**Sn**	**14 32 36.7**	**-2.4**
PCAB				A		A	14 32 40.5	
	comp=E,3.9nm,0.6s							
PCAB	**Cabril**	**5.01**	**12**	S		**Sn**	**14 32 36.7**	**-2.4**
	comp=E,1.9nm,0.6s							
ELOB	**Lobios**	**5.16**	**12**	P		**Pn**	**14 31 45.9**	**+1.5**
	comp=E,2.7nm,0.2s,SNR=14							
ELOB				S		**Sn**	**14 32 39.7**	**-3.0**
	comp=E,4.1nm,0.3s,SNR=6.8							
ESDC	**Sonseca Array**	**5.17**	**55**	P		**Pn**	**14 31 45.5**	**+1.0**
	comp=E,0.4nm,0.2s,baz=240,slow=13,SNR=8.1							
PBRG	**Braganca**	**5.41**	**22**	*e*Pn		**Pn**	**14 31 48.9**	**+1.1**
PBRG				*e*Sn		**Sn**	**14 32 46.5**	**-2.3**
PBRG				A		A	14 32 49.4	
	comp=E,2.0nm,0.5s							
PBRG	**Braganca**	**5.41**	**22**	P		**Pn**	**14 31 48.9**	**+1.1**
PBRG				S		**Sn**	**14 32 46.5**	**-2.3**
	comp=E,1.0nm,0.5s							
MD31	**MD31**	**5.50**	**134**	P		**Pn**	**14 31 49.0**	**-0.2**
ECAL	**Calabor**	**5.53**	**21**	P		**Pn**	**14 31 51.2**	**+1.7**
	comp=E,2.8nm,0.3s,SNR=7.7							
ECAL				S		**Sn**	**14 32 49.4**	**-2.5**
	comp=E,3.6nm,0.3s,SNR=4.8							
MDT	**Midelt**	**5.63**	**134**	P		**Pn**	**14 31 50.8**	**-0.1**
	SNR=47							
GUD	**Guadarrama**	**5.63**	**46**	P		**Pn**	**14 31 51.8**	**+0.9**
	comp=E,0.9nm,0.7s,SNR=5.5							
GUD				S		**Sn**	**14 32 50.8**	**-3.6**
	comp=E,2.8nm,0.4s,SNR=6.6							
SESP	**Santiago Espad**	**5.64**	**75**	P		**Pn**	**14 31 51.9**	**+0.9**
	comp=E,0.5nm,0.2s,SNR=7.9							
SESP				S		**Sn**	**14 32 51.7**	**-2.9**
	comp=E,0.6nm,0.1s,SNR=7.9							
TISM	**Timmit**	**5.65**	**153**	P		**Pn**	**14 31 48.7**	**-2.4**
OUK	**Oukaimeden**	**5.74**	**166**	P		**Pn**	**14 31 52.1**	**-0.6**
EAGO	**Agolada(Pontev**	**6.07**	**9**	P		**Pn**	**14 31 57.9**	**+1.1**
	comp=E,2.6nm,0.1s,SNR=7.9							
EAGO				S		**Sn**	**14 33 00.8**	**-4.4**
	comp=E,2.5nm,0.1s,SNR=7.9							
EMAZ	**Mazaricos**	**6.14**	**3**	P		**Pn**	**14 31 58.6**	**+0.9**
	comp=E,4.3nm,0.2s,SNR=7.9							
EMAZ				S		**Sn**	**14 33 03.2**	**-3.6**
	comp=E,2.0nm,0.2s,SNR=7.9							
OUZM	**OUZ**	**6.29**	**158**	P		**Pn**	**14 32 00.4**	**+0.3**
ETOB	**Tobarra**	**6.52**	**71**	P		**Pn**	**14 32 04.0**	**+1.0**
	comp=E,0.3nm,0.1s,SNR=7.9							
ETOB				S		**Sn**	**14 33 12.8**	**-3.4**
	comp=E,0.6nm,0.1s,SNR=7.9							
EPON	**Pontenova**	**6.74**	**14**	P		**Pn**	**14 32 07.2**	**+1.2**
	comp=E,0.4nm,0.1s,SNR=7.9							
EPON				S		**Sn**	**14 33 17.0**	**-4.6**
	comp=E,0.6nm,0.1s,SNR=7.9							
EARI	**Arriondas**	**7.25**	**25**	P		**Pn**	**14 32 15.4**	**+2.4**
	comp=E,0.2nm,0.2s,SNR=4.0							
EARI				S		**Sn**	**14 33 29.8**	**-4.3**
	comp=E,0.3nm,0.2s,SNR=4.0							
ZGR	**Zagora**	**7.40**	**153**	P		**Pn**	**14 32 15.3**	**+0.2**

*MDD **09** 14:38:19.9±2.0,37.˚13N×12.˚94W,h45km,mb3.8/5, Error ellipse: s-maj=17.8km s-min=16.5km az=29.0,PRXIMO*
*INMG **09** 14:38:21.8±1.2,37.˚07N×13.˚02W,h10km,ML2.4, Error ellipse: s-maj=8.2km s-min=6.7km az=121.0*
*IGIL **09** 14:38:22.3,37.˚13N×12.˚45W,h0km*
ISC 09 14:38:19.1±3.7,37°28N±0.˚10×12°7W±0.˚2,h10km,n38, σ1ᵖ25/68,Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.05**	**92**	*e*Pn		**Pn**	**14 39 08.5**	**+1.1**
PFVI				*e*Sn		**Sn**	**14 39 43.0**	**-1.0**
PFVI	**Vila Bisbo**	**3.05**	**92**	P		**Pn**	**14 39 07.5**	**+0.1**
	2.9nm,0.2s,SNR=4.0							
PFVI				S		**Sn**	**14 39 43.6**	**-0.4**
	6.1nm,0.2s,SNR=4.0							
PTEO	**Sao Teotonio**	**3.13**	**84**	*e*Pn		**Pn**	**14 39 09.3**	**+0.8**
PTEO				*e*Sn		**Sn**	**14 39 45.5**	**-0.5**
PTEO				A		A	14 39 50.1	
	8.5nm,0.6s							
PTEO	**Sao Teotonio**	**3.13**	**84**	P		**Pn**	**14 39 09.3**	**+0.8**
PTEO				S		**Sn**	**14 39 45.5**	**-0.5**
	4.2nm,0.6s							
PMAFR	**Mafra**	**3.13**	**57**	*e*Pn		**Pn**	**14 39 10.3**	**+1.8**
PMAFR				*e*Sn		**Sn**	**14 39 47.3**	**+1.3**
PMAFR				A		A	14 39 51.2	
	18nm,0.5s							
PMAFR	**Mafra**	**3.13**	**57**	P		**Pn**	**14 39 10.3**	**+1.8**
	3.2nm,0.2s,SNR=7.9							
PMAFR				S		**Sn**	**14 39 46.8**	**+0.8**
	7.6nm,0.2s,SNR=7.9							
MORF	**Marmelete**	**3.19**	**88**	*e*P		**Pn**	**14 39 09.7**	**+0.4**
MORF	**Marmelete**	**3.19**	**88**	*e*Pn		**Pn**	**14 39 10.0**	**+0.7**
MORF				*e*Sn		**Sn**	**14 39 46.1**	**-1.2**
MORF				A		A	14 39 55.3	
	5.1nm,0.1s							
MORF	**Marmelete**	**3.19**	**88**	P		**Pn**	**14 39 10.0**	**+0.7**
MORF				S		**Sn**	**14 39 46.1**	**-1.2**
	5.1nm,0.1s							
PNCL	**Nicolau / Gran**	**3.37**	**75**	*e*Pn		**Pn**	**14 39 13.9**	**+2.2**
PNCL				*e*Sn		**Sn**	**14 39 51.7**	**-0.1**
PNCL				A		A	14 39 52.3	
	5.2nm,0.5s							
PNCL	**Nicolau / Gran**	**3.37**	**75**	P		**Pn**	**14 39 13.9**	**+2.2**
PNCL				S		**Sn**	**14 39 51.7**	**-0.1**
	5.2nm,0.5s							
PCVE	**Castro Verde**	**3.68**	**83**	*e*Pn		**Pn**	**14 39 17.6**	**+1.5**
PCVE				*e*Sn		**Sn**	**14 40 00.3**	**+0.8**
PCVE				A		A	14 40 12.5	
	2.9nm,1.0s							
PCVE	**Castro Verde**	**3.68**	**83**	P		**Pn**	**14 39 17.6**	**+1.5**
PCVE				S		**Sn**	**14 40 00.3**	**+0.8**
	2.9nm,1.0s							
PBDV	**Barranco-do-Ve**	**3.76**	**89**	*e*Pn		**Pn**	**14 39 18.4**	**+1.2**
PBDV				*e*Sn		**Sn**	**14 40 01.6**	**+0.1**
PBDV				A		A	14 40 10.6	
	5.1nm,0.8s							
PBDV	**Barranco-do-Ve**	**3.76**	**89**	P		**Pn**	**14 39 18.4**	**+1.2**
PBDV				S		**Sn**	**14 40 01.6**	**+0.1**
	5.1nm,0.8s							
PBEJ	**Beja**	**3.87**	**77**	*e*Pn		**Pn**	**14 39 20.1**	**+1.5**
PBEJ	**Beja**	**3.87**	**77**	P		**Pn**	**14 39 20.1**	**+1.5**
EVO	**Evora**	**3.87**	**70**	*e*P		**Pg**	**14 39 32.3**	**-0.9**
EVO				*e*S		**Sn**	**14 40 04.2**	**+0.1**
EVO	**Evora**	**3.87**	**70**	S		**Sn**	**14 40 04.2**	**+0.1**
PMTG	**Montargil**	**3.91**	**62**	*e*Pn		**Pn**	**14 39 20.7**	**+1.5**
PMTG				*e*Sn		**Sn**	**14 40 05.1**	**-0.1**
PMTG				A		A	14 40 12.8	
	2.6nm,0.7s							
PMTG	**Montargil**	**3.91**	**62**	P		**Pn**	**14 39 20.7**	**+1.5**
PMTG				S		**Sn**	**14 40 05.1**	**-0.1**
	2.6nm,0.7s							
PVAQ	**Vaqueiros**	**3.93**	**87**	*e*Pn		**Pn**	**14 39 20.6**	**+1.2**
PVAQ				*e*Sn		**Sn**	**14 40 04.8**	**-0.8**
PVAQ				A		A	14 40 10.0	
	4.8nm,0.4s							
PVAQ	**Vaqueiros**	**3.93**	**87**	P		**Pn**	**14 39 20.6**	**+1.2**
PVAQ				S		**Sn**	**14 40 04.8**	**-0.8**
	4.8nm,0.4s							
EGRO	**El Granado**	**4.12**	**85**	P		**Pn**	**14 39 23.0**	**+1.0**
	1.2nm,0.1s,SNR=5.4							
EGRO				S		**Sn**	**14 40 09.7**	**-0.6**
	4.3nm,0.4s,SNR=5.3							
PCAS	**Casmilo, Conde**	**4.26**	**48**	*e*Pn		**Pn**	**14 39 25.2**	**+1.1**
PCAS				*e*Sn		**Sn**	**14 40 13.5**	**-0.4**
PCAS				A		A	14 40 20.3	
	3.0nm,0.3s							
PCAS	**Casmilo, Conde**	**4.26**	**48**	P		**Pn**	**14 39 25.2**	**+1.1**
PCAS				S		**Sn**	**14 40 13.5**	**-0.4**
	3.0nm,0.3s							
PESTR	**Estremoz**	**4.29**	**67**	*e*Sn		**Sn**	**14 40 14.3**	**-0.3**
PMRV	**Marv??o**	**4.65**	**61**	*e*Pn		**Pn**	**14 39 30.9**	**+1.5**
PMRV				*e*Sn		**Sn**	**14 40 23.2**	**-0.3**
PMRV				A		A	14 40 29.4	
	2.3nm,0.6s							
PMRV	**Marv??o**	**4.65**	**61**	P		**Pn**	**14 39 30.9**	**+1.5**
PMRV				S		**Sn**	**14 40 23.2**	**-0.3**
	2.3nm,0.6s							
EBAD	**Badajoz**	**4.69**	**70**	P		**Pn**	**14 39 30.8**	**+1.0**
	0.6nm,0.1s,SNR=7.9							
EBAD				S		**Sn**	**14 40 22.8**	**-1.5**
	2.3nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.77**	**82**	P		**Pn**	**14 39 32.0**	**+1.0**
	0.4nm,0.1s,SNR=7.9							
EMIN				S		**Sn**	**14 40 24.7**	**-1.7**
	0.4nm,0.1s,SNR=5.9							
PCBR	**Castelo Branco**	**4.79**	**56**	*e*Pn		**Pn**	**14 39 33.0**	**+1.8**
PCBR				*e*Sn		**Sn**	**14 40 26.3**	**-0.5**
PCBR				A		A	14 40 31.6	
	2.2nm,0.9s							
PCBR	**Castelo Branco**	**4.79**	**56**	P		**Pn**	**14 39 33.0**	**+1.8**
PCBR				S		**Sn**	**14 40 26.3**	**-0.5**
	1.1nm,0.9s							
ECAB	**El Cabril**	**5.79**	**80**	P		**Pn**	**14 39 46.2**	**+1.2**
	0.4nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**5.79**	**36**	P		**Pn**	**14 39 46.2**	**+1.2**
	2.4nm,2.9s,SNR=7.9							
ELOB				S		**Sn**	**14 40 48.9**	**-2.7**
	11nm,11.2s,SNR=7.9							
EPLA	**Plasencia**	**5.84**	**60**	P		**Pn**	**14 39 46.6**	**+0.8**
	10nm,2.9s,SNR=7.9							
EMAZ	**Mazaricos**	**6.32**	**25**	S		**Sn**	**14 41 01.6**	**-2.9**
	13nm,8.3s,SNR=7.9							
EADA	**Adamuz**	**6.46**	**80**	P		**Pn**	**14 39 55.4**	**+1.2**
	0.8nm,0.2s,SNR=7.9							
EADA				S		**Sn**	**14 41 05.0**	**-2.9**
	0.8nm,0.1s,SNR=7.9							

*IDC **09** 15:09:06.2±0.9,36.˚12S×73.˚33W,h0km,mb3.9/7, mb1 4.1/10,mb1mx4.0/27,mbtmp3.9/10,ML4.0/3,MS3.2/4, Ms1 3.2/4,ms1mx2.9/25,Error ellipse: s-maj=27.7km s-min=16.1km az=85.0*
*SJA **09** 15:09:06.8±0.5,35.˚91S×73.˚55W,h12km±7km,ML3.8, MW3.7*
*GUC **09** 15:09:08.0±0.4,36.˚19S×73.˚52W,h43km±1km,ML4.3*
*NEIC **09** 15:09:10.7±2.6,36.˚09S±0.˚06×73.˚4W±0.˚1,h33km±6km, mb4.6/10,ML4.3(GUC),Error ellipse: s-maj=15.9km s-min=4.6km az=116.0*
ISC 09 15:09:08.0±1.4,36°12S±0.˚03×73°41W±0.˚06,h19km±4km, n54,σ1ᵖ45/61,mb4.2/9,3C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
COCH	**Cobquecura**	**0.50**	**92**	*i* P		**Pn**	**15 09 19.6**	**-0.5**
COCH				*e*S		**Sn**	**15 09 28.5**	**+0.3**
COCH				IAML			15 09 29.4	
	comp=N,15μm,0.4s							
CCSP	**San Pedro de C**	**0.76**	**162**	*i* P		**Pb**	**15 09 21.5**	**-1.1**
CCSP				*i* S		**Sb**	**15 09 31.9**	**-0.7**
CCSP				IAML			15 09 32.9	
	comp=E,17μm,0.5s							
BI03	**Tigo**	**0.79**	**157**	*i* P		**Pb**	**15 09 22.4**	**-0.7**
BI03				*i* S		**Sb**	**15 09 33.0**	**-0.3**
BI03				IAML			15 09 34.4	
	comp=N,37μm,0.3s							
CCHI	**Chillan**	**1.18**	**115**	*i* P		**Pb**	**15 09 29.7**	**0.0**
CCHI				*i* S		**Sg**	**15 09 45.8**	**-0.4**
LAJA	**Laja**	**1.29**	**154**	*i* P		**Pn**	**15 09 29.6**	**-1.4**
LAJA				*i* S		**Sn**	**15 09 45.5**	**-2.2**
GO05	**Huala**	**1.64**	**48**	*i* P		**Pn**	**15 09 36.1**	**+0.4**
GO05				*i* S		**Sb**	**15 09 57.7**	**-0.1**
GO05	**Huala**	**1.64**	**48**			**Pn**	**15 09 35.9**	**+0.2**
GO05	**Huala**	**1.64**	**48**	*i* P		**Pb**	**15 09 36.7**	**-0.9**
GO05				*i* S		**Sg**	**15 09 58.8**	**-2.0**
ROC1	**El Roble**	**3.71**	**33**			**Pn**	**15 10 05.2**	**+0.8**
ROC1	**El Roble**	**3.71**	**33**	*i* P		**Pn**	**15 10 05.4**	**+1.0**
PEL	**Peldehue**	**3.72**	**38**			**Pn**	**15 10 06.1**	**+1.6**
PEL	**Peldehue**	**3.72**	**38**	*i* P		**Pn**	**15 10 06.3**	**+1.9**
GO06	**Curarrehue**	**3.78**	**157**			**Pn**	**15 10 05.8**	**+0.5**
FCH	**Farellones**	**3.79**	**44**	*i* P		**Pn**	**15 10 07.1**	**+1.5**
FCH				*i* S		**Sn**	**15 10 51.2**	**+1.4**
FCH				IAML			15 11 24.2	
	comp=N,296nm,0.5s							
AAGR	**Agrelo**	**4.84**	**53**	*i* P		**Pn**	**15 10 23.1**	**+3.2**
AAGR				IAML			15 12 11.6	
	comp=Z,80nm,1.3s							
PLCA	**Paso Flores**	**5.12**	**155**	Pn		**Pn**	**15 10 25.1**	**+1.4**
	comp=Z,0.7nm,0.3s,baz=350,slow=12,SNR=18							
PLCA				Lg		Lg	15 11 48.6	
	comp=Z,1.6nm,0.3s,baz=72,slow=19,SNR=4.4							
PLCA	**Paso Flores**	**5.12**	**155**			**Pn**	**15 10 25.4**	**+1.6**
ASAL	**Salagasta**	**5.17**	**48**	*i* P		**Pn**	**15 10 27.1**	**+2.8**
ASAL				IAML			15 12 12.4	
	comp=Z,90nm,1.1s							
CFA	**Coronel Fontan**	**6.22**	**45**	Pn		**Pn**	**15 10 40.0**	**+1.2**
	comp=Z,12nm,0.3s,baz=218,slow=13,SNR=36							
CFA				Sn		**Sn**	**15 11 52.0**	**+2.5**
	comp=Z,8.5nm,0.3s,baz=218,slow=22,SNR=4.7							
CFA				Lg		Lg	15 12 27.1	
	baz=292,slow=16,SNR=5.2							
CFA				LR		LR	15 12 55.8	
	comp=Z,84nm,21.7s,baz=264,slow=37							
GO04	**Tololo Observa**	**6.32**	**21**			**Pn**	**15 10 40.5**	**+0.1**
GO04				Sn		**Sn**	**15 11 49.1**	**-3.1**
GO04	**Tololo Observa**	**6.32**	**21**	*i* P		**Pn**	**15 10 40.3**	**0.0**
ACAN	**Cantantal**	**6.42**	**55**	*i* P		**Pn**	**15 10 44.0**	**+2.4**
ACAN				IAML			15 12 46.4	
	comp=Z,17nm,0.8s							
APLL	**PUNTA DE LOS L**	**8.11**	**47**	*i* P		**Pn**	**15 11 04.7**	**-0.1**
VCA	**Vinchina**	**8.57**	**32**	*i* P		**Pn**	**15 11 12.4**	**+1.2**
TCA	**Tanti**	**8.75**	**59**	*i* P		**Pn**	**15 11 14.2**	**+0.6**
GO03	**Copiap**	**8.92**	**18**	Pn		**Pn**	**15 11 17.8**	**+2.0**
CYA	**Choya**	**10.00**	**42**	*i* P		**Pn**	**15 11 29.1**	**-1.6**
GO02	**Mina Guanaco**	**11.40**	**18**	Pn		**Pn**	**15 11 48.3**	**-1.8**
LVC	**Limon Verde**	**14.02**	**17**	LR		LR	15 18 20.5	
	comp=Z,119nm,20.1s,baz=208,slow=40							
PB11	**IPOC Station P**	**16.63**	**12**	P		**Pn**	**15 12 59.3**	**-0.9**
GO01	**Chusmiza**	**16.80**	**14**	P		**P**	**15 13 05.8**	**+0.9**
CPUP	**Villa Florida**	**16.84**	**59**	Pn		**Pn**	**15 13 00.5**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=207,slow=8.5,SNR=3.2							
CPUP				LR		LR	15 19 06.2	
	comp=Z,71nm,21.7s,baz=222,slow=36							
CPUP	**Villa Florida**	**16.84**	**59**			**Pn**	**15 13 01.6**	**-1.1**
LPAZ	**La Paz**	**20.30**	**15**	P		Pn	15 13 46.9	+1.4
	comp=Z,3.1nm,0.7s,baz=174,slow=8.6,SNR=11							
LPAZ	**La Paz**	**20.30**	**15**	P		Pn	15 13 47.4	+2.0
SIV	**San Ignacio**	**22.86**	**32**	P		**P**	**15 14 10.7**	**+0.3**
	comp=Z,5.3nm,1.0s,baz=231,slow=13,SNR=12							
SIV				LR		LR	15 24 56.5	
	comp=Z,180nm,19.9s,baz=272,slow=42							
SAML	**Samuel**	**28.61**	**21**	P		**P**	**15 15 01.5**	**-1.6**
SAML				IAmb		IAmb	15 15 38.3	
	comp=Z,8.2nm,1.6s							
RUSC	**La Rusia**	**41.79**	**0**	P		**P**	**15 16 56.7**	**-0.2**
VNA3	**Neumayer Olymp**	**47.84**	**157**	P		**P**	**15 17 45.4**	**+1.4**
SNAA	**Sanae**	**50.06**	**157**	P		**P**	**15 18 02.1**	**+1.0**
SNAA	**Sanae**	**50.06**	**157**	P		**P**	**15 18 01.8**	**+0.8**
	comp=Z,3.4nm,0.8s,baz=275,slow=5.9,SNR=12							
SNAA	**Sanae**	**50.06**	**157**	P		**P**	**15 18 01.9**	**+0.8**
SNAA				IAmb		IAmb	15 18 03.0	
	comp=Z,6.3nm,1.0s							
QSPA	**South Pole Qui**	**54.12**	**180**	P		**P**	**15 18 32.3**	**+0.8**
	comp=Z,2.1nm,1.0s,baz=215,slow=0.3,SNR=6.7							
QSPA	**South Pole Qui**	**54.12**	**180**	P		**P**	**15 18 32.4**	**+0.9**
QSPA				IAmb		IAmb	15 18 35.1	
	comp=Z,3.9nm,1.1s							
TXAR	**Lajitas Array**	**71.06**	**332**	P		**P**	**15 20 26.2**	**+1.4**
	comp=Z,0.5nm,0.7s,baz=151,slow=8.3,SNR=6.2							
TXAR	**Lajitas Array**	**71.06**	**332**	P		**P**	**15 20 25.6**	**+0.8**
W50A	**Signal Mountai**	**71.82**	**350**	P		**P**	**15 20 28.3**	**-0.8**
W50A				IAmb		IAmb	15 20 37.7	
	comp=Z,8.9nm,0.8s							
DBIC	**Dimbokro**	**76.92**	**72**	P		**P**	**15 21 00.3**	**+1.0**
	comp=Z,2.9nm,0.7s,baz=216,slow=5.4,SNR=3.7							
DBIC	**Dimbokro**	**76.92**	**72**	P		**P**	**15 20 59.8**	**+0.4**
DBIC				IAmb		IAmb	15 21 36.3	
	comp=Z,21nm,1.6s							
PHWY	**Pilot Hill**	**82.46**	**336**	P		**P**	**15 21 31.5**	**+2.3**
NVAR	**Mina Array Bea**	**85.00**	**326**	P		**P**	**15 21 44.3**	**+2.1**
	comp=Z,0.3nm,0.5s,baz=148,slow=5.0,SNR=2.5							
PDAR	**Pinedale Array**	**85.16**	**334**	P		**P**	**15 21 44.5**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=131,slow=4.1,SNR=3.2							
PDAR	**Pinedale Array**	**85.16**	**334**	P		**P**	**15 21 44.1**	**+1.2**
F10A	**Beach Ranch, E

2.7nm,0.3s
PCVE Castro Verde 3.76 84 P **Pn** **15 42 31.0 +0.8**
PCVE S **Sn** **15 43 13.7 -0.9**
2.7nm,0.3s
PBDV Barranco-do-Ve 3.84 90 *e*Pn **Pn** **15 42 32.6 +1.2**
PBDV *e*Sn **Sn** **15 43 16.8 +0.1**
PBDV A A 15 43 24.2
4.0nm,0.3s
PBDV Barranco-do-Ve 3.84 90 P **Pn** **15 42 32.6 +1.2**
PBDV S **Sn** **15 43 16.8 +0.1**
4.0nm,0.3s
EVO Evora 3.94 71 *e*Pn **Pn** **15 42 34.6 +2.0**
EVO *e*Sn **Sn** **15 43 17.9 -0.9**
EVO A A 15 43 22.5
6.3nm,0.3s
EVO Evora 3.94 71 P **Pn** **15 42 34.6 +2.0**
EVO S **Sn** **15 43 17.9 -0.9**
6.3nm,0.3s
PBEJ Beja 3.94 78 *e*Pn **Pn** **15 42 34.4 +1.7**
PBEJ *e*Sn **Sn** **15 43 17.6 -1.3**
PBEJ A A 15 43 23.0
6.9nm,0.4s
PBEJ Beja 3.94 78 P **Pn** **15 42 34.4 +1.7**
PBEJ S **Sn** **15 43 17.6 -1.3**
3.5nm,0.4s
PMTG Montargil 3.97 63 *e*Pn **Pn** **15 42 34.5 +1.4**
PMTG *e*Sn **Sn** **15 43 19.2 -0.4**
PMTG A A 15 43 27.8
5.3nm,0.7s
PMTG Montargil 3.97 63 P **Pn** **15 42 34.5 +1.4**
PMTG S **Sn** **15 43 19.2 -0.4**
5.3nm,0.7s
PVAQ Vaqueiros 4.01 87 *e*Pn **Pn** **15 42 35.1 +1.4**
PVAQ *e*Sn **Sn** **15 43 19.1 -1.6**
PVAQ A A 15 43 22.9
12nm,0.3s
PVAQ Vaqueiros 4.01 87 P **Pn** **15 42 35.1 +1.4**
PVAQ S **Sn** **15 43 19.1 -1.6**
12nm,0.3s
EGRO El Granado 4.20 86 P **Pn** **15 42 37.0 +0.8**
2.6nm,0.1s,SNR=22
EGRO S **Sn** **15 43 23.5 -1.9**
8.4nm,0.5s,SNR=5.7
PCAS Casmilo, Conde 4.30 49 *e*Pn **Pn** **15 42 39.8 +2.2**
PCAS *e*Sn **Sn** **15 43 27.8 0.0**
PCAS A A 15 43 35.9
5.2nm,0.3s
PCAS Casmilo, Conde 4.30 49 P **Pn** **15 42 39.8 +2.2**
PCAS S **Sn** **15 43 27.8 0.0**
5.2nm,0.3s
PESTR Estremoz 4.35 68 *e*Pn **Pn** **15 42 40.3 +1.9**
PESTR *e*Sn **Sn** **15 43 28.4 -0.8**
PESTR A A 15 43 33.5
6.6nm,0.7s
PMRV Marv??o 4.71 62 *e*Pn **Pn** **15 42 44.7 +1.5**
PMRV *e*Sn **Sn** **15 43 37.1 -0.8**
PMRV A A 15 43 43.0
5.3nm,0.3s
PMRV Marv??o 4.71 62 P **Pn** **15 42 44.7 +1.5**
PMRV S **Sn** **15 43 37.1 -0.8**
5.3nm,0.3s
EBAD Badajoz 4.75 71 P **Pn** **15 42 44.6 +0.8**
1.7nm,0.1s,SNR=11
EBAD S **Sn** **15 43 36.5 -2.4**
1.4nm,0.4s,SNR=5.7
PCBR Castelo Branco 4.83 57 *e*Pn **Pn** **15 42 47.2 +2.2**
PCBR *e*Sn **Sn** **15 43 40.6 -0.4**
PCBR A A 15 43 45.4
3.7nm,0.2s
PCBR Castelo Branco 4.83 57 P **Pn** **15 42 47.2 +2.2**
PCBR S **Sn** **15 43 40.6 -0.4**
1.9nm,0.2s
EMIN Mina Concepcio 4.85 83 P **Pn** **15 42 46.2 +0.9**
1.7nm,0.1s,SNR=15
EMIN S **Sn** **15 43 39.6 -1.8**
1.8nm,0.3s,SNR=7.2
MTE Manteigas 5.09 51 *e*Sn **Sn** **15 43 47.5 0.0**
MTE A A 15 43 56.3
7.5nm,0.8s
MTE Manteigas 5.09 51 S **Sn** **15 43 47.5 0.0**
3.8nm,0.8s
EZAM Zamans 5.74 32 P **Pn** **15 42 58.1 +0.6**
2.2nm,2.9s,SNR=7.9
EZAM S **Sn** **15 44 01.0 -2.4**
3.5nm,0.2s,SNR=7.9
ELOB Lobios 5.80 37 P **Pn** **15 43 00.5 +2.1**
0.3nm,0.1s,SNR=7.9
ELOB S **Sn** **15 44 02.9 -2.1**
2.3nm,0.3s,SNR=7.9
ECAB El Cabril 5.86 80 P **Pn** **15 43 00.5 +1.3**
1.0nm,0.1s,SNR=7.9
MVO Moncorvo 5.87 47 P **Pn** **15 43 00.5 +1.3**
1.8nm,0.2s,SNR=7.9
MVO S **Sn** **15 44 03.5 -3.0**
4.5nm,0.3s,SNR=7.9
EPLA Plasencia 5.89 60 P **Pn** **15 43 01.0 +1.5**
1.0nm,0.1s,SNR=7.9
EPLA S **Sn** **15 44 05.5 -1.6**
1.3nm,0.3s,SNR=7.9
EMAZ Mazaricos 6.32 26 P **Pn** **15 43 06.3 +1.0**
0.8nm,0.2s,SNR=7.9
EMAZ S **Sn** **15 44 14.6 -2.9**
1.8nm,0.2s,SNR=7.9
EADA Adamuz 6.53 80 P **Pn** **15 43 09.0 +0.7**
1.2nm,0.1s,SNR=7.9
EADA S **Sn** **15 44 19.7 -3.2**
0.4nm,0.2s,SNR=7.9
EAGO Agolada(Pontev 6.53 32 P **Pn** **15 43 09.5 +1.2**
0.9nm,0.1s,SNR=7.9
EAGO S **Sn** **15 44 19.9 -3.0**
0.6nm,0.1s,SNR=7.9
ECAL Calabor 6.54 43 P **Pn** **15 43 10.1 +1.6**
0.6nm,0.1s,SNR=5.1
ECAL S **Sn** **15 44 20.2 -2.9**
3.2nm,0.3s,SNR=4.6
PAB San Pablo 6.96 69 P **Pn** **15 43 15.2 +1.0**
2.1nm,1.8s,SNR=7.9
ESDC Sonseca Array 7.28 69 P **Pn** **15 43 19.6 +1.0**
1.7nm,0.3s,baz=254,slow=13,SNR=17

*IDC **09** 16:16:45.5±0.6,6.76S×105.41E,h0km,mb4.5/20, mb1 4.6/20,mb1mx4.5/31,mbtmp4.5/20,MS3.8/21, Ms1 3.8/21,ms1mx3.6/38,Error ellipse: s-maj=20.9km s-min=11.7km az=43.0*
*DJA **09** 16:16:48.3±0.4,7.5S×104.5E±°,h10km,M5.1/29, mb5.4/29,mB5.5/21,MLv5.2/23,Mw(mB)5.0/21*
*BJI **09** 16:16:49.0±0.0,7.20S×105.30E,h41km,mB5.0/29, mb4.6/34,Ms4.7/22,Ms7 4.3/21*
*MOS **09** 16:16:49.7±1.1,6.72S×105.53E,h37km,mb5.0/19,Error ellipse: s-maj=12.2km s-min=6.3km az=115.8*
*KLM **09** 16:16:49.0,7.36S×105.22E,h24km,mb4.9*
*NEIC **09** 16:16:51.2±2.1,6.96S±0.08×105.43E±0.07,h43km±5km, mb5.0/74,Error ellipse: s-maj=12.6km s-min=8.1km az=215.0*
*GCMT **09** 16:16:53.2±0.4,7.07S±0.02×105.63E±0.03,h28km±1km, MW4.9/63,Moment Tensor Solution. s21,c23; s63,c82; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.41±.13; Mθθ-2.26±.12; Mφφ2.67±.15; Mrθ0.16±.16; Mφθ0.16±.08; Mφr-0.00±.19; Best double couple: Mo2.47700×10^16^ NP1:ϕs227.00000°,δ87.00000°,λ-3.00000°. Principal axes: T 2.6750, Plg0.0000°, Azm272.0000°; N -0.3950, Plg85.0000°, Azm2.0000°; P -2.2780, Plg5.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 09 16:16:49.7±1.2,7.07S±0.05×105.28E±0.05,h30km±8km, n405,σ1§47/393,mb4.8/84,MS4.0/27,26C-6D,Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SBJI	**Serang**	**1.27**	**42**	P			**Pb**	**16 17 11.8**	**-1.1**
SKJI	**Sukabumi**	**1.27**	**87**	P			**Pn**	**16 17 09.8**	**-1.5**
DBJI	**Dramaga**	**1.54**	**71**	P			**Pn**	**16 17 15.2**	**0.0**
TNG	**Tangerang**	**1.62**	**57**	P			**Pn**	**16 17 17.2**	**+1.0**
CBJI	**Citeko**	**1.69**	**67**	P			**Pn**	**16 17 16.9**	**-0.2**
KASI	**Kota Agung**	**1.73**	**333**	P			**Pb**	**16 17 19.7**	**-1.0**
CNJI	**Cibinong**	**1.85**	**97**	P			**Pn**	**16 17 17.9**	**-1.4**
LEM	**Lembang**	**2.33**	**84**	Pg			**Pn**	**16 17 26.8**	**+0.6**
	960nm,0.3s,baz=282,slow=9.3,SNR=173								
LEM						LR	LR	16 18 01.6	
	comp=Z,1μm,18.3s,baz=40,slow=35								
LWLI	**Liwa**		**2.38**	**329**	P		**Pb**	**16 17 29.5**	**-2.4**
CISI	**Cisompet, Garu**		**2.56**	**101**	P		**Pn**	**16 17 28.3**	**-0.9**
CISI	**Cisompet, Garu**		**2.56**	**101**			**Pn**	**16 17 27.8**	**-1.4**
MDSI	**Maura Dua**		**2.79**	**337**	P		**Pn**	**16 17 33.8**	**+1.4**
CMJI	**Cimerak**		**3.22**	**103**	P		**Pn**	**16 17 37.2**	**-1.0**
MNAI	**Manna**		**3.55**	**319**	P		**Pn**	**16 17 45.0**	**+2.2**
MNAI	**Manna**		**3.55**	**319**			**Pn**	**16 17 44.6**	**+1.8**
KPJI	**Karang Pucung**		**3.63**	**94**	P		**Pn**	**16 17 43.9**	**+0.1**
PMBI	**Palembang**		**4.15**	**353**	P		**Pn**	**16 17 53.8**	**+2.8**
PMBI	**Palembang**		**4.15**	**353**	Pn		**Pn**	**16 17 52.9**	**+1.8**
KSI	**Kapahiang**		**4.33**	**322**	P		**Pn**	**16 17 56.5**	**+3.0**
TPI	**Tanjungpandan**		**4.89**	**29**	P		**Pn**	**16 18 02.6**	**+1.3**
	1.5nm2μm148nm,0.9s								
YOGI	**Yogyakarta**		**5.02**	**99**	P		Pn	16 18 08.5	+5.4
SMRI	**Semarang**		**5.12**	**90**	P		**Pn**	**16 18 05.9**	**+1.5**
	2.9nm7μm482nm,0.7s								
SMRI	**Semarang**		**5.12**	**90**			**Pn**	**16 18 04.2**	**-0.2**
UGM	**Wanagama**		**5.26**	**99**	P		**Pn**	**16 18 07.0**	**+0.6**
	2.9nm9μm602nm,0.7s								
UGM	**Wanagama**		**5.26**	**99**			**Pn**	**16 18 06.4**	**0.0**
WOJI	**Wonogiri, Jawa**		**5.64**	**98**	P		**Pn**	**16 18 12.7**	**+1.1**
	0.8nm132nm,0.6s								
UWJI	**Ujung Watu**		**5.66**	**84**	P		Pn	16 18 16.8	+5.0
PCJI	**Pacitan**		**5.95**	**101**	P		**Pn**	**16 18 16.7**	**+0.9**
	2.3nm5μm303nm,0.5s								
NGJI	**Ngawi**		**6.14**	**93**	P		**Pn**	**16 18 20.6**	**+2.3**
	1.2nm243nm,0.6s								
KRJI	**Kerinci**		**6.24**	**322**	P		Pn	16 18 27.8	+7.9
PWJI	**Pagerwojo**		**6.53**	**99**	P		**Pn**	**16 18 24.7**	**+0.9**
	1.9nm6μm546nm,0.7s								
DSRI	**Dabo**		**6.59**	**354**	P		**Pn**	**16 18 27.4**	**+2.8**
	0.9nm112nm,0.5s								
PPSI	**Pulau Pagai**		**6.78**	**309**	P		**Pn**	**16 18 27.0**	**-0.2**
	2.0nm403nm,0.7s								
GRJI	**Gresik**		**7.14**	**89**	P		**Pn**	**16 18 33.5**	**+1.3**
	1.2nm4μm280nm,0.5s								
PDSI	**Padang**		**7.78**	**322**	P		Pb	16 18 54.1	-10
TPRI	**Tanjung Pinang**		**7.97**	**355**	P		Pb	16 18 58.7	-8.5
GMJI	**Gumukmas**		**8.18**	**99**	P		**Pn**	**16 18 50.7**	**+4.3**
SISI	**Saibi**		**8.41**	**312**	P		Pn	16 18 56.7	+7.1
KMMI	**Kalianget**		**8.62**	**90**	P		Pn	16 18 59.7	+7.3
JAGI	**Jajag, Banyuwa**		**8.90**	**100**	P		**Pn**	**16 18 57.6**	**+1.3**
	6μm342nm,0.8s								
JAGI	**Jajag, Banyuwa**		**8.90**	**100**			**Pn**	**16 18 56.9**	**+0.6**
MYKOM	**Kota Tinggi**		**8.92**	**351**			**Pn**	**16 18 57.7**	**+1.2**
MYKOM	**Kota Tinggi**		**8.92**	**351**	P		**Pn**	**16 19 01.0**	**+4.4**
STKI	**Sintang**		**9.40**	**41**	P		**Pn**	**16 19 05.0**	**+1.8**
	7μm13nm,0.5s								
KSM	**Kuching**		**9.86**	**31**			**Pn**	**16 19 09.5**	**0.0**
SRBI	**Singaraja**		**9.89**	**96**	P		**Pn**	**16 19 11.6**	**+1.6**
	4μm396nm,0.9s								
IGBI	**Denpasar**		**9.92**	**101**	P		**Pn**	**16 19 11.7**	**+1.4**
	3μm256nm,0.7s								
DNP	**Denpasar**		**9.96**	**100**	P		**Pn**	**16 19 10.4**	**-0.5**
	20μm640nm,0.5s								
JRMM	**Jerantut**		**11.24**	**345**	P		**Pn**	**16 19 33.0**	**+4.6**
GSI	**Gunungsitoli**		**11.33**	**317**			**Pn**	**16 19 27.2**	**-2.5**
KBKI	**Kotabaru**		**11.47**	**71**	P		Pn	16 19 36.7	+5.2
TWSI	**Taliwang, Sumb**		**11.61**	**99**	P		**Pn**	**16 19 33.9**	**+0.5**
	2μm148nm,0.6s								
SBUM	**Sibu**		**11.72**	**36**			**Pn**	**16 19 38.5**	**+3.5**
SBUM	**Sibu**		**11.72**	**36**	P		Pn	16 19 40.0	+5.0
PLAI	**Plampang**		**12.50**	**99**	P		**Pn**	**16 19 44.9**	**-0.7**
	2μm272nm,0.7s								
KAPI	**Kappang**		**14.53**	**83**	Pn		**Pn**	**16 20 16.0**	**+2.6**
	2.2nm,0.3s,baz=256,slow=11,SNR=6.6								
KAPI	**Kappang**		**14.53**	**83**			**Pn**	**16 20 15.8**	**+2.4**
SPSI	**Siprap Palu**		**14.74**	**79**	P		**Pn**	**16 20 17.2**	**+0.9**
	29nm,0.8s								
BKSI	**Bulukumba**		**14.85**	**84**	P		**Pn**	**16 20 19.8**	**+2.0**
	801nm84nm,1.1s								
BNSI	**Bone**		**14.98**	**81**	P		**Pn**	**16 20 20.4**	**+0.9**
	52nm,0.8s								
TTSI	**Tana Toraja**		**15.02**	**75**	P		P	16 20 33.2	+8.1
WSI	**Waingapu**		**15.08**	**101**	P		**Pn**	**16 20 21.4**	**+0.7**
	7μm602nm,0.6s								
MPSI	**Mapaga**		**16.33**	**64**	P		**P**	**16 20 43.0**	**+3.4**
MMRI	**Maumere**		**16.87**	**96**	P		**Pn**	**16 20 40.4**	**-3.4**
MMRI	**Maumere**		**16.87**	**96**	P		**Pn**	**16 20 39.0**	**-4.7**
KKM	**Kota Kinabalu**		**16.99**	**40**	P		**Pn**	**16 20 45.5**	**0.0**
BBSI	**Bau Bau**		**17.25**	**86**	P		**P**	**16 20 53.8**	**+3.9**
GIRL	**Giralia**		**17.72**	**152**	P		**P**	**16 20 56.9**	**+2.0**
	baz=18,SNR=6.9								
GIRL	**Giralia**		**17.72**	**152**			**Pn**	**16 20 53.2**	**-1.1**
MRSI	**Marisa**		**18.23**	**66**	P		**P**	**16 21 02.6**	**+1.9**
	590nm50nm,0.8s								
BATI	**Baumata**		**18.43**	**101**	P		**P**	**16 20 59.6**	**-3.4**
	13nm,0.3s,baz=353,slow=1.0,SNR=23								
BATI					S		**S**	**16 24 31.7**	**-0.4**
	4.6nm,0.3s,baz=288,slow=20,SNR=4.6								
LUWI	**Luwuk**		**18.44**	**72**	P		**Pn**	**16 21 04.6**	**+1.4**
	2μm49nm,0.8s								
LUWI	**Luwuk**		**18.44**	**72**	P		**P**	**16 20 58.2**	**-4.7**
SOEI	**Soe**		**18.97**	**99**	P		**Pn**	**16 21 09.5**	**-0.2**
	2μm262nm,1.1s								
SOEI	**Soe**		**18.97**	**99**	P		**P**	**16 21 05.4**	**-3.5**
SOEI					IAmb		IAmb	16 21 24.6	
	comp=Z,198nm,0.8s								
SOEI							**Sn**	**16 24 34.8**	**-6.7**
PSA00	**Pilbara Seismi**		**20.14**	**137**	P		**P**	**16 21 22.0**	**+0.4**
SANI	**Sanana**		**21.23**	**77**	P		**P**	**16 21 33.6**	**+0.2**
	comp=Z,23nm,0.9s								
NLAI	**Namlea**		**22.05**	**81**	P		**P**	**16 21 43.2**	**+0.9**
	comp=Z,80nm,0.6s								
UBPT	**Khong Chiam**		**22.21**	**0**			**P**	**16 21 46.1**	**+2.3**
UBPT					IAmb		IAmb	16 22 24.2	
	comp=Z,81nm,1.8s								
FITZ	**Fitzroy Crossi**		**22.66**	**121**	P		**P**	**16 21 49.2**	**+0.5**
	baz=23,SNR=32								
FITZ	**Fitzroy Crossi**		**22.66**	**121**	P		**P**	**16 21 48.9**	**+0.1**
	comp=Z,36nm,0.8s,baz=277,slow=5.4,SNR=49								
FITZ						LR	LR	16 31 14.7	
	comp=Z,181nm,21.0s,baz=306,slow=38								
FITZ	**Fitzroy Crossi**		**22.66**	**121**	P		**P**	**16 21 48.0**	**-0.7**
FITZ					IAmb		IAmb	16 21 51.0	
	comp=Z,34nm,0.8s								
AAI	**Ambon**		**23.05**	**83**	P		P	16 22 04.3	+11
TNTI	**Ternate**		**23.37**	**71**	P		**P**	**16 21 53.1**	**-2.9**
TNTI					IAmb		IAmb	16 22 07.0	
	comp=Z,52nm,0.9s								
SKMP	**Bagumbayan, Su**		**23.48**	**55**	*e*P		**P**	**16 21 56.7**	**-0.4**
CTBH	**Cotabato--PC H**		**23.65**	**53**	‖ *i*P		**P**	**16 21 57.7**	**-1.0**
PBKT	**Sadao Pong**		**23.88**	**350**	P		**P**	**16 22 01.6**	**+0.9**
MORW	**Morawa**		**24.12**	**156**	P		**P**	**16 22 04.5**	**+1.6**
MORW					IAmb		IAmb	16 22 15.4	
	comp=Z,25nm,1.1s								
KNRA	**Kununurra**		**24.53**	**112**	P		**P**	**16 22 06.9**	**0.0**
	baz=24,SNR=47								
KNRA	**Kununurra**		**24.53**	**112**	P		**P**	**16 22 06.8**	**-0.1**
BUKP	**Musuan**		**24.69**	**53**	*e*P		**P**	**16 22 09.1**	**+0.7**
SAUI	**Saumlaki**		**25.81**	**94**	P		**P**	**16 22 18.2**	**-0.3**
MTN	**Manton Dam**		**26.09**	**105**	P		**P**	**16 22 20.4**	**-0.6**
	baz=26,SNR=29								
MTN	**Manton Dam**		**26.09**	**105**	P		**P**	**16 22 19.7**	**-1.3**
MTN					IAmb		IAmb	16 22 47.5	
	comp=Z,36nm,0.8s								
CMAR	**Chiang Mai Arr**		**26.13**	**346**	P		**P**	**16 22 19.4**	**-1.9**
CMAR	**Chiang Mai Arr**		**26.13**	**346**	P		**P**	**16 22 18.0**	**-3.3**
	comp=Z,1.8nm,0.7s,baz=181,slow=8.7,SNR=13								
CMAR						PcP	**PcP**	**16 25 49.5**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=194,slow=3.3,SNR=3.8								
CMAR						LR	LR	16 34 24.1	
	comp=Z,328nm,19.1s,baz=180,slow=41								
CMAR	**Chiang Mai Arr**		**26.13**	**346**	P		**P**	**16 22 19.4**	**-1.9**
CMAR							**PcP**	**16 25 48.8**	**+0.3**
QIZ	**Qiongzhong**		**26.32**	**10**	P		**P**	**16 22 23.9**	**+0.9**
QIZ					S		**S**	**16 26 56.8**	**+2.6**
QIZ					pmax		pmax		
	comp=Z,340nm,3.8s								
QIZ					LR		LR		
	comp=Z,380nm,4.7s								
QIZ					LR		LR		
	comp=Z,460nm,14.8s								
CHTO	**Chiang Mai**		**26.47**	**346**	P		**P**	**16 22 24.3**	**-0.1**
CHTO					pmax		pmax		
	comp=Z,14nm,1.6s								
CHTO	**Chiang Mai**		**26.47**	**346**	P		**P**	**16 22 24.3**	**-0.1**
SWI	**Sorong**		**26.62**	**78**	P		**P**	**16 22 26.7**	**+0.8**
	comp=Z,568nmcomp=Z,45nm,0.9s								
SIJI	**Sorong**		**26.63**	**78**	P		**P**	**16 22 25.1**	**-0.8**
	comp=Z,27nm,0.8s,baz=285,slow=7.2,SNR=17								
FAKI	**Fak Fak**		**27.17**	**83**	P		**P**	**16 22 29.1**	**-1.8**
FAKI					IAmb		IAmb	16 22 32.4	
	comp=Z,44nm,1.0s								
KDU	**Kakadu**		**27.35**	**104**	P		**P**	**16 22 31.8**	**-0.6**
	baz=27,SNR=25								
NWAO	**Narrogin (SRO)**		**28.02**	**158**	P		**P**	**16 22 37.1**	**-1.1**
NWAO					pmax		pmax		
	comp=Z,99nm,1.9s								
NWAO	**Narrogin (SRO)**		**28.02**	**158**	LR		LR	16 32 12.7	
	comp=Z,262nm,21.7s,baz=293,slow=33								
NWAO	**Narrogin (SRO)**		**28.02**	**158**	P		**P**	**16 22 37.1**	**-1.1**
NWAO					IAmb		IAmb	16 23 31.9	
	comp=Z,99nm,1.9s								
WRKA	**Warakurna**		**28.34**	**132**	P		**P**	**16 22 41.8**	**+0.5**
	baz=28,SNR=4.9								
PALK	**Pallekele**		**28.36**	**300**	*i* P		**P**	**16 22 41.3**	**-0.2**
PALK					pmax		pmax		
	comp=Z,11nm,1.0s								
PALK	**Pallekele**		**28.36**	**300**	LR		LR	16 32 50.2	
	comp=Z,106nm,20.9s,baz=120,slow=34								
H01W3	**Cape Leeuwin H**		**28.85**	**165**	T		T	16 53 04.0	
	baz=345,slow=76,SNR=963								
H01W1	**Cape Leeuwin H**		**28.87**	**165**	T		T	16 53 07.4	
	baz=345,slow=76,SNR=571								
H01W2	**Cape Leeuwin H**		**28.87**	**165**	T		T	16 53 05.0	
	baz=345,slow=76,SNR=852								
WRA	**Warramunga Arr**		**30.95**	**117**	P		**P**	**16 23 03.7**	**-0.6**
WRA					pmax		pmax		
	comp=Z,1.0nm,0.9s								
WRA	**Warramunga Arr**		**30.95**	**117**	P		**P**	**16 23 04.4**	**+0.1**
	comp=Z,5.1nm,0.6s,baz=293,slow=10,SNR=39								
WRA	**Warramunga Arr**		**30.95**	**117**	P		**P**	**16 23 03.7**	**-0.6**
WRAB	**Tennant Creek**		**30.95**	**117**	*ce*P		**P**	**16 23 04.9**	**+0.5**
WRAB					pmax		pmax		
	comp=Z,12nm,0.7s								
WRAB	**Tennant Creek**		**30.95**	**117**	P		**P**	**16 23 05.3**	**+0.9**
WRAB					IAmb		IAmb	16 23 25.8	
	comp=Z,14nm,0.8s								
WR0	**Warramunga Arr**		**31.13**	**117**	P		**P**	**16 23 06.6**	**+0.7**
WR0					IAmb		IAmb	16 23 09.3	
	comp=Z,15nm,0.8s								
FORT	**Forrest**		**31.80**	**141**	P		**P**	**16 23 13.1**	**+1.3**
FORT					IAmb		IAmb	16 23 28.7	
	comp=Z,17nm,0.8s								
ASAR	**Alice Springs**		**32.05**	**124**	P		**P**	**16 23 14.7**	**+0.6**
	comp=Z,6.5nm,0.8s,baz=302,slow=7.9,SNR=97								
ASAR					PcP		**PcP**	**16 26 04.2**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=316,slow=2.6,SNR=3.3								
ASAR					LR		LR	16 37 54.6	
	comp=Z,113nm,21.4s,baz=303,slow=40								
ASAR	**Alice Springs**		**32.05**	**124**	P		**P**	**16 23 13.2**	**-0.9**
ASAR							**PcP**	**16 26 03.6**	**+0.2**
AS31	**Alice Springs**		**32.05**	**124**	P		**P**	**16 23 14.5**	**+0.5**
KMI	**Kunming**		**32.10**	**356**	P		P	16 23 19.8	+5.2
KMI					S		**S**	**16 28 28.4**	**+3.1**
KMI					sS		sS	16 28 47.3	+7.6
KMI					pmax		pmax		
	comp=Z,15nm,0.7s								
KMI					pmax		pmax		
	comp=Z,100nm,4.2s								
KMI					LR		LR		
	comp=Z,390nm,22.7s								
KMI					LR		LR		
	comp=Z,560nm,16.2s								
KMI					LR		LR		
	comp=Z,540nm,14.8s								
H08S2	**Diego Garcia H**		**32.52**	**267**	T		T	16 57 28.7	
	baz=91,slow=76,SNR=782								
H08S3	**Diego Garcia H**		**32.53**	**267**	T		T	16 57 30.3	
	baz=91,slow=76,SNR=830								
H08S1	**Diego Garcia H**		**32.54**	**267**	T		T	16 57 32.0	
	baz=91,slow=76,SNR=812								
H08N1	**Diego Garcia H**		**34.04**	**269**	T		T	16 59 42.5	
	baz=350,slow=14,SNR=61								
H08N2	**Diego Garcia H**		**34.06**	**269**	T		T	16 59 44.1	
	baz=350,slow=14,SNR=54								
H08N3	**Diego Garcia H**		**34.06**	**269**	T		T	16 59 41.2	
	baz=350,slow=14,SNR=71								
HMDM	**Hanimaadhoo**		**34.85**	**293**	P		**P**	**16 23 39.4**	**+0.9**
QIS	**Mount Isa**		**35.83**	**115**	P		**P**	**16 23 47.8**	**+0.9**
	baz=36,SNR=14								
COEN	**Coen**		**37.84**	**104**	P		**P**	**16 24 03.8**	**-0.2**
	baz=38,SNR=9.3								
COEN	**Coen**		**37.84**	**104**	P		**P**	**16 24 03.2**	**-0.9**
COEN					IAmb		IAmb	16 24 06.7	
	comp=Z,11nm,0.8s								
ODAN	**Odare**		**37.93**	**333**	*e*P		**P**	**16 24 03.2**	**-1.7**
	comp=Z,16nm,0.6s								
TAPN	**Taplejung**		**38.21**	**334**	*e*P		**P**	**16 24 06.6**	**-0.8**
	comp=Z,10nm,0.4s								
RAMN	**Ramite**		**38.36**	**333**	*e*P		**P**	**16 24 07.4**	**-1.2**
	comp=Z,8.5nm,0.5s								
BBOO	**Buckleboo**		**38.37**	**136**	P		**P**	**16 24 11.2**	**+2.9**
	baz=38,SNR=6.5								
BBOO	**Buckleboo**		**38.37**	**136**	P		**P**	**16 24 07.3**	**-1.0**
LSA	**Lhasa**		**39.00**	**340**	P		**P**	**16 24 13.6**	**-0.6**
LSA					pmax		pmax		
	comp=Z,5.0nm,0.7s								
LSA	**Lhasa**		**39.00**	**340**	P		**P**	**16 24 13.6**	**-0.6**
JIRN	**Jiri**		**39.16**	**333**	*e*P		**P**	**16 24 14.3**	**-1.1**
GUN	**Gumba**		**39.51**	**332**	*e*P		**P**	**16 24 16.0**	**-2.3**
	comp=Z,26nm,0.7s								
MTSU	**Mount Surprise**		**39.56**	**110**	P		**P**	**16 24 19.5**	**+1.0**
	baz=40,SNR=10								
DMN	**Daman**		**39.62**	**331**	*e*P		**P**	**16 24 18.6**	**-0.5**
KKN	**Kakani**		**39.69**	**332**	*e*P		**P**	**16 24 18.3**	**-1.3**
GKN	**Gorkha**		**40.17**	**331**	*e*P		**P**	**16 24 22.3**	**-1.3**
	comp=Z,13nm,0.3s								
JOW	**Kunigami**		**40.41**	**33**	P		**P**	**16 24 23.4**	**-1.9**
KOLN	**Koldanda**		**40.49**	**330**	*e*P		**P**	**16 24 25.5**	**-0.7**
	comp=Z,50nm,0.9s								
HTT	**Hallett**		**40.71**	**135**	P		**P**	**16 24 30.6**	**+2.7**
	baz=41,SNR=7.6								
DANN	**Dangsing**		**40.89**	**330**	*e*P		**P**	**16 24 28.5**	**-1.1**
NJ2	**Nanjing**		**41.00**	**18**	*e*P		**P**	**16 24 33.2**	**+3.1**
NJ2					pmax		pmax		
	comp=Z

HHC	**Hu-ho-hao-te**	**48.03**	**6**	*e*P		**P**		**16 25 29.0**	**+2.7**
HHC				S		**S**		**16 32 26.0**	**+3.2**
HHC				pmax	pmax				
	comp=Z,10.0nm,0.9s								
HHC				pmax	pmax				
	comp=Z,85nm,5.2s								
HHC				LR	LR				
	comp=Z,200nm,18.7s								
HHC				LR	LR				
	comp=Z,140nm,17.9s								
HHC				LR	LR				
	comp=Z,150nm,17.0s								
CAN	**Canberra**	**48.93**	**131**	P		**P**		**16 25 33.9**	**+0.6**
CAN				pmax	pmax				
	comp=Z,43nm,1.6s								
CAN	**Canberra**	**48.93**	**131**	P		**P**		**16 25 33.9**	**+0.6**
CAN				IAmb	IAmb			16 25 48.6	
	comp=Z,43nm,1.6s								
KSRS	**Korea Array**	**49.09**	**24**	P		**P**		**16 25 32.6**	**-1.8**
	comp=Z,2.2nm,0.6s,baz=217,slow=8.6,SNR=11								
KS19	**Wonju Array Si**	**49.11**	**24**	P		**P**		**16 25 36.1**	**+1.6**
ARMA	**Armidale**	**49.20**	**124**	P		**P**		**16 25 37.8**	**+2.2**
ARMA				IAmb	IAmb			16 26 13.5	
	comp=Z,44nm,1.8s								
NIL	**Nilore**	**50.62**	**325**	P		**P**		**16 25 44.9**	**-1.3**
NIL				pmax	pmax				
	comp=Z,18nm,1.1s								
NIL	**Nilore**	**50.62**	**325**	P		**P**		**16 25 44.9**	**-1.3**
NIL				IAmb	IAmb			16 25 46.9	
	comp=Z,18nm,1.1s								
WMQ	**Urumqi**	**53.10**	**344**	*e*P		**P**		**16 26 07.5**	**+3.0**
WMQ				pP	sP			16 26 18.8	+1.8
WMQ				pmax	pmax				
	comp=Z,6.0nm,1.3s								
WMQ				pmax	pmax				
	comp=Z,57nm,4.3s								
WMQ				LR	LR				
	comp=Z,420nm,29.0s								
WMQ				LR	LR				
	comp=Z,810nm,28.9s								
MJAR	**Matsushiro Arr**	**53.24**	**33**	P		**P**		**16 26 03.8**	**-1.8**
MJAR				pmax	pmax				
	comp=Z,9.0nm,1.8s								
MJAR	**Matsushiro Arr**	**53.24**	**33**	P		**P**		**16 26 03.1**	**-2.6**
	comp=Z,2.2nm,0.8s,baz=211,slow=8.0,SNR=4.3								
MJAR	**Matsushiro Arr**	**53.24**	**33**	P		**P**		**16 26 03.8**	**-1.8**
KSH	**Kashi**	**53.71**	**332**	P		**P**		**16 26 12.1**	**+3.0**
KSH				pP	sP			16 26 23.6	+2.3
KSH				PP	**PP**			**16 28 13.3**	**+3.0**
KSH				S	**S**			**16 33 43.1**	**+1.6**
KSH				ScS	**ScS**			**16 35 56.5**	**-0.2**
KSH				SS	**SS**			**16 37 22.9**	**+0.2**
KSH				pmax	pmax				
	comp=Z,230nm,5.3s								
KSH				LR	LR				
	comp=Z,190nm,4.6s								
KSH				LR	LR				
	comp=Z,200nm,5.3s								
KSH				LR	LR				
	comp=Z,380nm,5.7s								
KBL	**Kabul**	**53.72**	**323**	P		**P**		**16 26 08.0**	**-1.4**
KBL	**Kabul**	**53.72**	**323**	P		**P**		**16 26 08.0**	**-1.4**
CN2	**Changchun**	**53.83**	**18**	*e*P		**P**		**16 26 07.9**	**-1.8**
CN2				pmax	pmax				
	comp=Z,20nm,0.7s								
HNR	**Honiara**	**54.11**	**97**	LR		LR		16 51 48.4	
	comp=Z,134nm,19.0s,baz=173,slow=39								
SONM	**Songino Array**	**54.68**	**1**	P		**P**		**16 26 15.1**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=181,slow=9.0,SNR=11								
SONM				PcP		**PcP**		**16 27 17.8**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=176,slow=3.7,SNR=7.4								
SONM				LR		LR		16 52 38.9	
	comp=Z,256nm,18.9s,baz=183,slow=40								
SONM	**Songino Array**	**54.68**	**1**	P		**P**		**16 26 14.3**	**-1.8**
SONM						**PcP**		**16 27 18.2**	**-0.4**
ULN	**Ulaanbaatar**	**54.72**	**1**	*i* P		**P**		**16 26 15.3**	**-1.1**
ULN				pmax	pmax				
	comp=Z,1.0nm,0.9s								
ULN	**Ulaanbaatar**	**54.72**	**1**	P		**P**		**16 26 18.2**	**+1.9**
NRN	**Naryn**	**55.23**	**333**	P		**P**		**16 26 20.8**	**+0.4**
NRN				pmax	pmax				
	comp=Z,7.0nm,1.1s								
NRN	**Naryn**	**55.23**	**333**	P		**P**		**16 26 20.8**	**+0.4**
GAR	**Garm**	**56.15**	**327**	P		**P**		**16 26 25.5**	**-1.3**
GAR				IAmb	IAmb			16 26 41.8	
	comp=Z,21nm,1.1s								
USA0B	**Ussuriysk Arra**	**56.45**	**23**	P		**P**		**16 26 27.4**	**-1.2**
USA0B				pmax	pmax				
	comp=Z,12nm,0.9s								
USA0B	**Ussuriysk Arra**	**56.45**	**23**	P		**P**		**16 26 27.4**	**-1.2**
USA0B				IAmb	IAmb			16 26 52.9	
	comp=Z,12nm,0.8s								
USRK	**Ussuriysk Ar.**	**56.45**	**23**	P		**P**		**16 26 26.4**	**-2.3**
	comp=Z,2.3nm,0.4s,baz=197,slow=4.1,SNR=14								
USRK	**Ussuriysk Ar.**	**56.45**	**23**	P		**P**		**16 26 26.0**	**-2.6**
CHGR	**Chuyangaron**	**56.52**	**326**	P		**P**		**16 26 27.9**	**-1.6**
ARSB	**Arslanbob**	**56.54**	**331**	P		**P**		**16 26 28.8**	**-0.8**
ARSB				IAmb	IAmb			16 27 14.8	
	comp=Z,11nm,1.1s								
BTK	**Batken**	**56.66**	**329**	P		**P**		**16 26 29.8**	**-0.6**
BTK				pmax	pmax				
	comp=Z,8.0nm,0.9s								
BTK	**Batken**	**56.66**	**329**	P		**P**		**16 26 29.8**	**-0.6**
BTK				IAmb	IAmb			16 26 31.1	
	comp=Z,7.6nm,0.9s								
AAK	**Ala-Archa**	**56.87**	**333**	*ce*P		**P**		**16 26 31.3**	**-0.6**
AAK				pmax	pmax				
	comp=Z,7.0nm,1.7s								
MK31	**Makanchi Array**	**57.39**	**341**	P		**P**		**16 26 33.5**	**-1.9**
MK31				pmax	pmax				
	comp=Z,2.0nm,0.7s								
MK31	**Makanchi Array**	**57.39**	**341**	P		**P**		**16 26 33.5**	**-1.9**
MKAR	**Makanchi Array**	**57.39**	**341**	P		**P**		**16 26 33.6**	**-1.8**
	comp=Z,1.5nm,0.5s,baz=152,slow=8.9,SNR=26								
MKAR				LR		LR		16 55 48.7	
	comp=Z,54nm,18.2s,baz=154,slow=41								
MKAR	**Makanchi Array**	**57.39**	**341**	P		**P**		**16 26 33.4**	**-2.0**
MAKZ	**Makanchi**	**57.51**	**341**	P		**P**		**16 26 33.8**	**-2.3**
MAKZ				pmax	pmax				
	comp=Z,11nm,1.9s								
MAKZ	**Makanchi**	**57.51**	**341**	P		**P**		**16 26 33.8**	**-2.3**
TLY	**Talaya**	**58.53**	**359**	*i* P		**P**		**16 26 44.8**	**+1.5**
TLY				pmax	pmax				
	comp=Z,6.0nm,0.9s								
KURK	**Kurchatov**	**62.00**	**341**	*ce*P		**P**		**16 27 06.4**	**-0.5**
KURK				pmax	pmax				
	comp=Z,5.0nm,1.3s								
KURK	**Kurchatov**	**62.00**	**341**	P		**P**		**16 27 07.1**	**+0.2**
KURK						**P**		**16 27 07.2**	**+0.3**
GEYT	**Alibeck**	**62.70**	**319**	P		**P**		**16 27 11.8**	**-0.2**
	comp=Z,5.0nm,0.8s,baz=147,slow=6.9,SNR=13								
GEYT				LR		LR		16 56 35.0	
	comp=Z,66nm,21.5s,baz=105,slow=38								
GEYT	**Alibeck**	**62.70**	**319**	P		**P**		**16 27 11.4**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**62.70**	**319**	P		**P**		**16 27 12.0**	**0.0**
GYA0B				IAmb	IAmb			16 27 15.7	
	comp=Z,5.8nm,0.7s								
ZAA0	**Zalesovo Array**	**63.19**	**347**	P		**P**		**16 27 12.8**	**-2.0**
ZAA0				IAmb	IAmb			16 27 50.9	
	comp=Z,6.2nm,1.0s								
ZALV	**Zalesovo Beam**	**63.19**	**347**	P		**P**		**16 27 12.5**	**-2.4**
	comp=Z,2.0nm,0.3s,baz=159,slow=5.9,SNR=15								
ZALV				LR		LR		16 58 37.8	
	comp=Z,112nm,18.5s,baz=165,slow=40								
ZALV	**Zalesovo Beam**	**63.19**	**347**	P		**P**		**16 27 11.8**	**-3.0**
YSS	**Yuzh-Sakhalins**	**63.22**	**28**	*e*P		**P**		**16 27 15.0**	**-0.2**
YSS				pmax	pmax				
	comp=Z,20nm,1.2s								
ZEA	**Zeya**	**63.36**	**14**	*e*P		**P**		**16 27 15.0**	**-0.9**
ZEA				pmax	pmax				
	comp=Z,12nm,1.0s								
RAYN	**Ar Rayn**	**65.80**	**300**	P		**P**		**16 27 33.5**	**+0.9**
RAYN				pmax	pmax				
	comp=Z,7.0nm,1.1s								
RAYN	**Ar Rayn**	**65.80**	**300**	P		**P**		**16 27 33.5**	**+0.9**
MLZ	**Mavora Lakes**	**66.03**	**137**	P		**P**		**16 27 35.6**	**+1.8**
MLZ				IAmb	IAmb			16 27 49.9	
	comp=Z,43nm,1.2s								
WKZ	**Wanaka**	**66.52**	**136**	P		**P**		**16 27 38.2**	**+1.4**
MAW	**Mawson**	**66.81**	**196**	LR		LR		16 49 56.7	
	comp=Z,44nm,21.4s,baz=56,slow=30								
RPZ	**Rata Peaks**	**67.69**	**134**	LR		LR		16 57 10.4	
	comp=Z,162nm,19.9s,baz=247,slow=36								
QRZ	**Quartz Range**	**68.22**	**131**	P		**P**		**16 27 49.4**	**+1.7**
ABKAR	**Akbulak array**	**68.61**	**330**	P		**P**		**16 27 49.4**	**-0.4**
NNZ	**Nelson**	**68.92**	**131**	P		**P**		**16 27 51.7**	**-0.3**
YAK	**Yakutsk**	**71.44**	**12**	*e*P		**P**		**16 28 04.2**	**-2.7**
YAK				pmax	pmax				
	comp=Z,8.0nm,0.7s								
YAK				pmax	pmax				
	comp=N,5.0nm,1.0s								
YAK				pmax	pmax				
	comp=E,4.0nm,1.1s								
YAK	**Yakutsk**	**71.44**	**12**	P		**P**		**16 28 05.5**	**-1.4**
YAK				IAmb	IAmb			16 28 08.2	
	comp=Z,15nm,0.8s								
SVE	**Sverdlovsk**	**73.38**	**336**	*e*P		**P**		**16 28 18.7**	**+0.1**
SVE				pmax	pmax				
	comp=Z,33nm,1.5s								
ARU	**Arti**	**73.96**	**335**	*ce*P		**P**		**16 28 21.7**	**-0.3**
ARU				pmax	pmax				
	comp=Z,33nm,1.7s								
ARU	**Arti**	**73.96**	**335**	P		**P**		**16 28 21.1**	**-0.9**
ARU				IAmb	IAmb			16 28 23.0	
	comp=Z,16nm,1.0s								
PEA0B	**Petropavlovsk-**	**74.49**	**30**	P		**P**		**16 28 23.1**	**-2.1**
PEA0B				pmax	pmax				
	comp=Z,65nm,1.5s								
PEA0B	**Petropavlovsk-**	**74.49**	**30**	P		**P**		**16 28 23.1**	**-2.1**
PEA0B				IAmb	IAmb			16 31 03.0	
	comp=Z,65nm,1.5s								
PETK	**Petropavlovsk-**	**74.49**	**30**	P		**P**		**16 28 23.4**	**-1.8**
	comp=Z,2.1nm,0.7s,baz=190,slow=4.8,SNR=5.2								
PETK	**Petropavlovsk-**	**74.49**	**30**	P		**P**		**16 28 22.8**	**-2.4**
ZEI	**Tsey**	**74.50**	**318**	*e*P		**P**		**16 28 25.0**	**-0.8**
ZEI				pmax	pmax				
	comp=Z,8.0nm,1.5s								
SYO	**Syowa Base**	**74.85**	**200**	⇑*e*X		P		16 28 38.0	+11
KBZ	**Khabaz**	**75.57**	**318**	P		**P**		**16 28 31.8**	**+0.2**
	comp=Z,3.2nm,0.9s,baz=147,slow=4.7,SNR=8.0								
MA2	**Magadan**	**75.59**	**22**	P		**P**		**16 28 31.1**	**-0.3**
MA2				pmax	pmax				
	comp=Z,134nm,1.8s								
MA2	**Magadan**	**75.59**	**22**	LR		LR		17 03 53.1	
	comp=Z,47nm,18.6s,baz=278,slow=38								
MA2	**Magadan**	**75.59**	**22**	P		**P**		**16 28 31.1**	**-0.3**
KIV	**Kislovodsk**	**75.80**	**319**	*e*P		**P**		**16 28 33.3**	**+0.2**
KIV				pmax	pmax				
	comp=Z,9.0nm,1.0s								
KIV				MLR	MLR				
	comp=Z,78nm,18.0s								
KIV	**Kislovodsk**	**75.80**	**319**	P		**P**		**16 28 34.7**	**+1.6**
VNDA	**Vanda**	**76.21**	**169**	P		**P**		**16 28 36.4**	**+1.7**
	comp=Z,1.5nm,0.8s,baz=54,slow=7.3,SNR=3.7								
VNDA				LR		LR		17 01 52.2	
	comp=Z,59nm,18.1s,baz=319,slow=35								
VNDA	**Vanda**	**76.21**	**169**	P		**P**		**16 28 36.4**	**+1.7**
SEY	**Seymchan**	**78.44**	**20**	*i* P		**P**		**16 28 48.0**	**+0.6**
TIXI	**Tiksi**	**80.09**	**7**	*ce*P		**P**		**16 28 54.2**	**-2.0**
TIXI				pmax	pmax				
	comp=Z,8.0nm,0.6s								
TIXI	**Tiksi**	**80.09**	**7**	P		**P**		**16 28 53.5**	**-2.7**
TIXI				IAmb	IAmb			16 28 57.4	
	comp=Z,9.2nm,0.7s								
BR131	**Keskin Array S**	**80.61**	**312**	P		**P**		**16 28 59.3**	**-0.6**
BR131				pmax	pmax				
	comp=Z,4.0nm,0.9s								
BR131	**Keskin Array S**	**80.61**	**312**	P		**P**		**16 28 59.3**	**-0.6**
BRTR	**Keskin Array B**	**80.61**	**312**	*ce*P		**P**		**16 29 00.3**	**+0.4**
BRTR				pmax	pmax				
	comp=Z,4.0nm,0.8s								
BRTR	**Keskin Array B**	**80.61**	**312**	P		**P**		**16 29 00.1**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=132,slow=6.9,SNR=25								
BRTR				LR		LR		17 06 24.1	
	comp=Z,27nm,20.3s,baz=109,slow=37								
BRTR	**Keskin Array B**	**80.61**	**312**	P		**P**		**16 28 59.3**	**-0.6**
PRGR	**Permogore**	**82.42**	**335**	*e*P		**P**		**16 29 07.4**	**-1.3**
PRGR				pmax	pmax				
	comp=Z,9.0nm,0.7s								
QSPA	**South Pole Qui**	**82.92**	**180**	P		**P**		**16 29 13.0**	**+1.4**
QSPA				IAmb	IAmb			16 29 28.4	
	comp=Z,27nm,1.8s								
OBN	**Obninsk**	**83.86**	**327**	⇓*e*P		**P**		**16 29 16.2**	**-0.1**
OBN				*e*				16 32 29.5	
OBN				*e*S		**S**		**16 39 33.4**	**-4.3**
OBN				pmax	pmax				
	comp=Z,7.0nm,0.9s								
KARP	**Karpathos**	**84.50**	**307**	P		**P**		**16 29 19.1**	**-1.1**
JURR	**Jurilovca**	**85.39**	**316**	⇑P		**P**		**16 29 24.7**	**+0.4**
TIRR	**Tirgusor**	**85.64**	**316**	⇑P		**P**		**16 29 25.3**	**-0.2**
TIRR	**Tirgusor**	**85.64**	**316**	⇑P		**P**		**16 29 25.3**	**-0.2**
HARR	**Harsova**	**86.03**	**316**	⇑P		**P**		**16 29 28.7**	**+1.2**
HARR	**Harsova**	**86.03**	**316**	⇑P		**P**		**16 29 28.7**	**+1.2**
BILL	**Bilibino**	**86.12**	**19**	*ce*P		**P**		**16 29 25.9**	**-1.5**
BILL				pmax	pmax				
	comp=Z,8.0nm,1.8s								
TMCR	**Tamitsa**	**86.66**	**336**	*e*P		**P**		**16 29 30.0**	**-0.1**
TMCR				pmax	pmax				
	comp=Z,12nm,0.6s								
AKASG	**Malin Array Be**	**86.69**	**322**	P		**P**		**16 29 30.2**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=85,slow=4.9,SNR=5.8								
AKASG	**Malin Array Be**	**86.69**	**322**	P		**P**		**16 29 29.8**	**-0.9**
VRI	**Vrincioaia**	**87.13**	**317**	⇓P		**P**		**16 29 34.5**	**+1.6**
VRI	**Vrincioaia**	**87.13**	**317**	⇓P		**P**		**16 29 34.5**	**+1.6**
PLOR	**Plostina**	**87.18**	**317**	⇓P		**P**		**16 29 34.7**	**+1.5**
PLOR	**Plostina**	**87.18**	**317**	⇓P		**P**		**16 29 34.7**	**+1.5**
TESR	**Tescani**	**87.33**	**317**	⇑P		**P**		**16 29 34.7**	**+0.9**
MLR	**Muntele Rosu**	**87.58**	**316**	P		**P**		**16 29 36.1**	**+0.9**
MLR				pmax	pmax				
	comp=Z,31nm,1.3s								
MLR	**Muntele Rosu**	**87.58**	**316**	⇑P		**P**		**16 29 36.1**	**+0.9**
MLR	**Muntele Rosu**	**87.58**	**316**	P		**P**		**16 29 36.1**	**+0.9**
BIZ	**Bicaz**	**87.79**	**318**	⇑P		**P**		**16 29 37.3**	**+1.3**
DOPR	**Dopca**	**88.06**	**317**	⇑P		**P**		**16 29 38.5**	**+1.1**
VOIR		**88.18**	**316**	⇑P		**P**		**16 29 38.8**	**+0.7**
VOIR		**88.18**	**316**	⇑P		**P**		**16 29 38.8**	**+0.7**
BURAR	**Bucovina Array**	**88.52**	**318**	⇑P		**P**		**16 29 41.5**	**+1.9**
BURAR	**Bucovina Array**	**88.52**	**318**	⇑P		**P**		**16 29 41.5**	**+1.9**
BUR08	**Bucovina Ar. S**	**88.54**	**318**	P		**P**		**16 29 41.0**	**+1.3**
BUR08				IAmb	IAmb			16 29 44.1	
	comp=Z,6.1nm,0.9s								
VTS	**Vitosha**	**88.92**	**313**	P		**P**		**16 29 41.4**	**-0.3**
VTS				pmax	pmax				
	comp=Z,5.0nm,0.4s								
VTS	**Vitosha**	**88.92**	**313**	P		**P**		**16 29 41.4**	**-0.3**
VTS				IAmb	IAmb			16 30 32.1	
	comp=Z,4.7nm,0.4s								
SNAA	**Sanae**	**88.95**	**198**	P		**P**		**16 29 42.6**	**+1.4**
SNAA				pmax	pmax				
	comp=Z,7.0nm,1.3s								
SNAA	**Sanae**	**88.95**	**198**	P		**P**		**16 29 42.6**	**+1.4**
SNAA				IAmb	IAmb			16 30 03.9	
	comp=Z,7.5nm,1.3s								
AGG	**Agios Georgios**	**88.96**	**309**	P		**P**		**16 29 42.0**	**+0.2**
AGG				pmax	pmax				
	comp=Z,12nm,1.2s								
AGG	**Agios Georgios**	**88.96**	**309**	P		**P**		**16 29 42.0**	**+0.2**
AGG				IAmb	IAmb			16 29 43.0	
	comp=Z,12nm,1.2s								
ITM	**Ithomi**	**88.96**	**307**	P		**P**		**16 29 44.0**	**+2.1**
LIT	**Litokhoron**	**89.02**	**310**	P		**P**		**16 29 42.1**	**+0.1**
LIT				pmax	pmax				
	comp=Z,13nm,0.8s								
LIT	**Litokhoron**	**89.02**	**310**	P		**P**		**16 29 42.1**	**+0.1**
LIT				IAmb	IAmb			16 29 43.3	
	comp=Z,13nm,0.8s								
GZR	**Gura Zlata**	**89.75**	**316**	⇑P		**P**		**16 29 45.1**	**-0.3**
GZR	**Gura Zlata**	**89.75**	**316**	⇑P		**P**		**16 29 45.1**	**-0.3**
BZS	**Buzias**	**90.59**	**316**	⇑P		**P**		**16 29 49.9**	**+0.7**
BZS	**Buzias**	**90.59**	**316**	⇑P		**P**		**16 29 49.9**	**+0.7**
KOLS	**Kolonicke sedl**	**90.70**	**319**	*e*P		**P**		**16 29 51.0**	**+1.3**
KOLS	**Kolonicke sedl**	**90.70**	**319**	*e*P		**P**		**16 29 51.0**	**+1.3**
FINES	**FINESS Array B**	**91.03**	**332**	P		**P**		**16 29 51.2**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=107,slow=5.0,SNR=18								
FINES				LR		LR		17 15 28.7	
	comp=Z,69nm,18.4s,baz=108,slow=39								
FINES	**FINESS Array B**	**91.03**	**332**	P		**P**		**16 29 50.8**	**-0.1**
ARCES	**ARCESS Array B**	**93.01**	**340**	P		**P**		**16 29 59.6**	**-0.3**
ARCES	**ARCESS Array B**	**93.01**	**340**	P		**P**		**16 29 59.3**	**-0.6**
	comp=Z,5.3nm,1.0s,baz=78,slow=7.6,SNR=7.1								
ARCES				LR		LR		17 15 16.0	
	comp=Z,74nm,19.6s,baz=171,slow=38								
ARCES	**ARCESS Array B**	**93.01**	**340**	P		**P**		**16 29 59.6**	**-0.3**
NOA	**NORSAR Array B**	**98.11**	**331**	LR		LR		17 20 38.8	
	comp=Z,44nm,18.6s,baz=95,slow=39								
KEST	**Kesra**	**98.90**	**305**	LR		LR		17 15 55.4	
	comp=Z,53nm,21.5s,baz=306,slow=36								
YKA	**Yellowknife Ar**	**117.51**	**20**	PKP		**PKPdf**		**16 35 31.5**	**-0.7**
	comp=Z,0.1nm,0.5s,baz=333,slow=2.1								
NVAR	**Mina Array Bea**	**129.82**	**45**	PKP		**PKPdf**		**16 35 54.7**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=258,slow=3.6,SNR=3.2								
PDAR	**Pinedale Array**	**133.05**	**35**	PKP		**PKPdf**		**16 36 02.4**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=59,slow=0.5,SNR=3.4								
CPUP	**Villa Florida**	**142.75**	**206**	PKP		**PKPdf**		**16 36 21.8**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=14,slow=4.2,SNR=2.7								
WMOK	**Wichita Mounta**	**144.66**	**35**	P		PKPbc		16 36 23.2	+0.4
	baz=316								
L54A	**Sinclairville**	**144.75**	**6**	P		**PKPab**		**16 36 22.6**	**-0.1**
	baz=352								
L55A	**Hinsdale**	**144.88**	**5**	P		**PKPab**		**16 36 22.5**	**-0.7**
	baz=353								
TX31	**Lajitas Ar. Si**	**144.88**	**47**			**PKPab**		**16 36 23.8**	**0.0**
TX32	**Lajitas Array**	**144.88**	**47**			**PKPab**		**16 36 23.8**	**0.0**
TXAR	**Lajitas Array**	**144.88**	**47**	PKP		**PKPdf**		**16 36 24.4**	**-0.3**
	comp=Z,2.6nm,0.6s,baz=290,slow=0.8,SNR=18								
TXAR	**Lajitas Array**	**144.88**	**47**			PKPbc		16 36 23.9	+0.1
L56A	**Greenwood**	**144.99**	**4**			**PKPab**		**16 36 22.7**	**-1.0**
L56A	**Greenwood**	**144.99**	**4**	P		**PKPab**		**16 36 23.2**	**-0.5**
	baz=355								
BINY	**Binghamton**	**145.00**	**2**	P		**PKPab**		**16 36 23.3**	**-0.4**
	baz=358								
L59A	**Walton**	**145.03**	**0**			**PKPab**		**16 36 22.9**	**-1.0**
L59A	**Walton**	**145.03**	**0**	P		**PKPab**		**16 36 23.0**	**-0.8**
	baz=359								
SFIN	**Lafayette**	**145.03**	**17**	P		**PKPbc**		**16 36 23.4**	**-0.4**
	baz=338								
L58A	**Harry Jones Me**	**145.16**	**1**	P		**PKPbc**		**16 36 23.8**	**-0.4**
	baz=358								
L57A	**Andrews Acres**	**145.16**	**3**	P		**PKPbc**		**16 36 23.4**	**-0.8**
	baz=356								
M52A	**Chesterland**	**145.17**	**9**			**PKPbc**		**16 36 23.6**	**-0.7**
M52A	**Chesterland**	**145.17**	**9**	P		**PKPbc**		**16 36 24.1**	**-0.2**
	baz=348								
BDFB	**Brasilia**	**145.23**	**229**	PKPbc		**PKPdf**		**16 36 27.2**	**+1.5**
	comp=Z,3.2nm,0.7s,baz=329,slow=7.8,SNR=3.7								
N49A	**Columbus Grove**	**145.25**	**13**			**PKPbc**		**16 36 24.1**	**-0.4**
M53A	**WI Miller and**	**145.37**	**8**	P		**PKPbc**		**16 36 24.1**	**-0.8**
	baz=349								
M54A	**Oil Creek Stat**	**145.43**	**7**			**PKPbc**		**16 36 23.8**	**-1.2**
M54A	**Oil Creek Stat**	**145.43**	**7**	P		**PKPbc**		**16 36 24.5**	**-0.6**
	baz=351								
KSCT	**Kent School, K**	**145.47**	**358**			**PKPbc**		**16 36 24.4**	**-0.8**
M55A	**Ridgway**	**145.56**	**5**	P		**PKPdf**		**16 36 24.9**	**-0.6**
	baz=353								
M56A	**Emporium**	**145.59**	**5**			**PKPdf**		**16 36 24.6**	**-0.9**
M56A	**Emporium**	**145.59**	**5**	P		**PKPdf**		**16 36 24.3**	**-1.2**
	baz=354								
N50A	**Nevada**	**145.61**	**11**	P		**PKPdf**		**16 36 24.8**	**-0.7**
	baz=345								
KSPA	**Keystone Colle**	**145.65**	**1**			**PKPdf**		**16 36 25.2**	**-0.3**
M59A	**Waymart**	**145.67**	**1**	P		**PKPdf**		**16 36 25.1**	**-0.5**
	baz=359								
P46A	**Rosedale**	**145.71**	**17**			**PKPdf**		**16 36 25.6**	**-0.1**
CCM	**Cathedral Cave**	**145.71**	**23**	PKIKP		**PKPdf**		**16 36 25.1**	**-0.6**
CCM	**Cathedral Cave**	**145.71**	**23**			**PKPdf**		**16 36 25.1**	**-0.6**
CCM	**Cathedral Cave**	**145.71**	**23**	P		**PKPdf**		**16 36 25.1**	**-0.6**
	baz=330								
M58A	**Price's Panora**	**145.81**	**2**	P		**PKPdf**		**16 36 25.8**	**0.0**
	baz=357								
M57A	**Sunshine Farm,**	**145.81**	**3**			**PKPdf**		**16 36 25.6**	**-0.2**
M57A	**Sunshine Farm,**	**145.81**	**3**	P		**PKPdf**		**16 36 25.9**	**0.0**
	baz=356								
N52A	**McGinn's Farm,**	**145.83**	**9**	P		**PKPdf**		**16 36 26.1**	**+0.2**
	baz=348								
O49A	**Covington**	**145.92**	**13**	P		**PKPbc**		**16 36 26.5**	**-0.1**
	baz=343								
N54A	**Moraine State**	**145.93**	**7**	P		**PKPbc**		**16 36 26.6**	**0.0**
	baz=350								
N53A	**Lisbon**	**145.97**	**8**			**PKPdf**		**16 36

comp=Z,0.5nm,0.5s,baz=104,slow=4.2,SNR=1.9

*RSPR **09** 16:17:57.1, 19°.54N × 68°.01W, h11km ± 11km, MD3.6/16*
*OSPL **09** 16:17:58.9 ± 1.2, 19°.29N × 67°.80W, h0km ± 19km, MD3.7, ML3.4*
*NEIC **09** 16:17:59.6 ± 2.0, 19°.37N ± 0°.04 × 67°.82W ± 0°.04, h33km ± 3km, Error ellipse: s-maj=6.7km s-min=4.0km az=213.0*

ISC 09 16:17:53.5 ± 1.4, 19°.50N ± 0°.06 × 67°.91W ± 0.03, h11 km ± 10 km, n60, σ1§02/71, 12C-5D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**1.08**	**205**	‖ *eP*	**Pn**	**16 18 14.8**	**+0.2**
PCDR	**Punta Cana, DR**	**1.08**	**205**	*i* P	**Pn**	**16 18 15.0**	**+0.4**
PCDR				*eS*	**Sg**	**16 18 28.8**	**+0.4**
PCDR				IAML		16 18 37.5	
	comp=Z,1µm,0.7s						
PCDR	**Punta Cana, DR**	**1.08**	**205**		**Pn**	**16 18 14.8**	**+0.2**
PCDR	**Punta Cana, DR**	**1.08**	**205**		**Sg**	**16 18 28.7**	**+0.4**
IDE	**Isla Desecheo**	**1.18**	**160**	‖ *eP*	**Pb**	**16 18 15.8**	**-0.2**
IDE	**Isla Desecheo**	**1.18**	**160**	*eS*	**Sn**	**16 18 32.7**	**+0.6**
IDE	**Isla Desecheo**	**1.18**	**160**		**Pb**	**16 18 15.8**	**-0.2**
IDE					**Sn**	**16 18 32.7**	**+0.6**
AGPR	**Aguadilla, PR**	**1.27**	**144**	‖ *eP*	**Pg**	**16 18 18.1**	**+0.1**
AGPR	**Aguadilla, PR**	**1.27**	**144**	*eS*	**Sg**	**16 18 35.3**	**+0.7**
AGPR	**Aguadilla, PR**	**1.27**	**144**	*i* P	**Pg**	**16 18 18.3**	**+0.2**
AGPR				*eS*	**Sb**	**16 18 31.0**	**-2.9**
AGPR				IAML		16 18 38.2	
	comp=Z,906nm,0.2s						
AGPR	**Aguadilla, PR**	**1.27**	**144**		**Pg**	**16 18 18.3**	**+0.2**
AGPR					**Sb**	**16 18 33.5**	**-0.5**
MPR	**Mayaguez**	**1.47**	**150**	*i* P	**Pb**	**16 18 21.0**	**+0.1**
MPR				*eS*	**Sn**	**16 18 38.1**	**-1.1**
MPR				IAML		16 18 43.0	
	comp=Z,226nm,0.6s						
MPR	**Mayaguez**	**1.47**	**150**		**Pb**	**16 18 21.1**	**+0.1**
MPR					**Sn**	**16 18 37.6**	**-1.7**
LSP	**Las Mesas**	**1.53**	**149**	‖ *eP*	**Pb**	**16 18 21.8**	**-0.2**
LSP	**Las Mesas**	**1.53**	**149**	*eS*	**Sg**	**16 18 42.4**	**-0.4**
LSP	**Las Mesas**	**1.53**	**149**		**Pb**	**16 18 21.8**	**-0.2**
LSP					**Sg**	**16 18 42.4**	**-0.4**
DR12	**Loma Pena Alta**	**1.56**	**243**		**Sg**	**16 18 24.7**	**+1.1**
AOPR	**Arecibo Observ**	**1.58**	**136**	‖ *eP*	**Pg**	**16 18 23.3**	**-0.6**
AOPR	**Arecibo Observ**	**1.58**	**136**		**Pg**	**16 18 23.4**	**-0.6**
EMPR	**Esperanza - Ma**	**1.65**	**128**	‖ *eP*	**Pg**	**16 18 25.5**	**+0.2**
EMPR	**Esperanza - Ma**	**1.65**	**128**	*eS*	**Sg**	**16 18 47.2**	**+0.4**
EMPR	**Esperanza - Ma**	**1.65**	**128**		**Pg**	**16 18 26.1**	**+0.8**
EMPR					**Sg**	**16 18 46.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.67**	**153**	‖ *eP*	**Pb**	**16 18 24.5**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.67**	**153**	*eS*	**Sg**	**16 18 46.0**	**-1.2**
CRPR	**Cabo Rojo, PR**	**1.67**	**153**		**Pb**	**16 18 24.3**	**0.0**
CRPR				Sn	**Sb**	**16 18 44.4**	**-0.8**
MLPR	**Magueyes Islan**	**1.73**	**152**	‖ *eP*	**Pb**	**16 18 24.5**	**-0.8**
MLPR	**Magueyes Islan**	**1.73**	**152**	*eS*	**Sb**	**16 18 46.5**	**-0.5**
MLPR	**Magueyes Islan**	**1.73**	**152**		**Pb**	**16 18 24.4**	**-0.9**
MLPR				Sn	**Sb**	**16 18 46.4**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.80**	**147**	‖ *eP*	**Pb**	**16 18 26.8**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.80**	**147**	*eS*	**Sb**	**16 18 49.5**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.80**	**147**		**Pb**	**16 18 26.8**	**+0.2**
GBPR					**Sb**	**16 18 49.5**	**+0.3**
CELP	**Cerrillos**	**1.90**	**138**	‖ *eP*	**Pb**	**16 18 27.5**	**-0.7**
CELP	**Cerrillos**	**1.90**	**138**		**Pb**	**16 18 27.5**	**-0.7**
OBIP	**Obispado Ponce**	**1.90**	**139**	‖ *eP*	**Pb**	**16 18 28.9**	**+0.7**
OBIP	**Obispado Ponce**	**1.90**	**139**	*eS*	**Sb**	**16 18 51.9**	**-0.2**
OBIP	**Obispado Ponce**	**1.90**	**139**		**Pb**	**16 18 28.6**	**+0.3**
OBIP	**Obispado Ponce**	**1.90**	**139**		**Sb**	**16 18 51.9**	**-0.2**
ICMP	**Isla Caja de M**	**2.07**	**141**		**Pb**	**16 18 31.7**	**+0.5**
GCPR	**Guaynabo City**	**2.09**	**124**		**Pb**	**16 18 30.9**	**-0.6**
SJG	**San Juan**	**2.16**	**129**		**Pb**	**16 18 31.8**	**-0.9**
SDD	**Santo Domingo**	**2.17**	**242**	*i* P	**Pg**	**16 18 34.2**	**-0.9**
SDD				IAML		16 19 07.4	
	comp=Z,82nm,0.7s						
SDD	**Santo Domingo**	**2.17**	**242**		**Pb**	**16 18 33.8**	**+1.0**
IGPR	**InterUniversit**	**2.29**	**132**	‖ *eP*	**Pb**	**16 18 33.4**	**-1.5**
IGPR	**InterUniversit**	**2.29**	**132**		**Pb**	**16 18 34.2**	**-0.6**
CBYP	**Canovanas**	**2.29**	**122**	‖ *eP*	**Pb**	**16 18 33.5**	**-1.5**
CBYP	**Canovanas**	**2.29**	**122**		**Pb**	**16 18 32.9**	**-2.0**
PDPR	**Patillas Dam,**	**2.31**	**129**		**Pb**	**16 18 33.8**	**-1.6**
HUMP	**Col San Antoni**	**2.37**	**124**	‖ *eP*	**Pb**	**16 18 35.1**	**-1.1**
HUMP	**Col San Antoni**	**2.37**	**124**		**Pb**	**16 18 34.5**	**-1.8**
BANI	**BANI**	**2.57**	**245**		**Pb**	**16 18 40.5**	**+0.8**
MTP	**Monte Pirata**	**2.63**	**122**	‖ *eP*	**Pn**	**16 18 37.8**	**+1.9**
MTP	**Monte Pirata**	**2.63**	**122**		**Pn**	**16 18 37.9**	**+2.0**
SC01	**Santiago de lo**	**2.66**	**269**	*i* P	**Pg**	**16 18 43.3**	**-1.3**
SC01				IAML		16 19 38.4	
	comp=Z,244nm,0.5s						
SC01	**Santiago de lo**	**2.66**	**269**		**Pb**	**16 18 41.5**	**+0.2**
STVI	**Saint Thomas**	**3.02**	**112**	‖ *eP*	**Pn**	**16 18 42.6**	**+1.4**
STVI	**Saint Thomas**	**3.02**	**112**		**Pn**	**16 18 43.3**	**+2.0**
SDDR	**Presa de Saban**	**3.24**	**261**	*i* P	**Pb**	**16 18 50.2**	**-0.8**
SDDR				IAML		16 19 50.0	
	comp=Z,102nm,0.5s						
SDDR	**Presa de Saban**	**3.24**	**261**		**Pb**	**16 18 49.9**	**-1.2**
TBVI	**Tortola**	**3.29**	**109**	‖ *eP*	**Pn**	**16 18 47.2**	**+2.1**
TBVI	**Tortola**	**3.29**	**109**		**Pn**	**16 18 47.2**	**+2.1**

KRSC 09 16:28:30.7 ± 1.3, 48°.84N × 156°.49E, h46km ± 25km, ML4.0, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.86**	**353**	*eP*	Pn	16 29 01.5	+1.5
SKR				*eS*	Sn	16 29 24.0	+1.7
PAU	**Pauzhetka**	**2.64**	**4**	*eS*	Sn	16 29 46.3	+4.9
KDTR	**Khodutka, Kamc**	**3.14**	**18**	*eP*	Pn	16 29 21.2	+3.6
KDTR				*eS*	Sn	16 29 58.8	+5.0
ASAK	**Asacha**	**3.66**	**14**	*eP*	Pn	16 29 29.1	+4.3
MTVR	**Mutnovka**	**3.80**	**16**	*eP*	Pn	16 29 31.0	+4.2
RUS	**Russkaya**	**3.82**	**19**	*eP*	Pn	16 29 30.3	+3.4
RUS				S	Sn	16 30 13.8	+3.3
GRL	**Gorelyy**	**3.85**	**15**	*eP*	Pn	16 29 31.7	+4.3
SPN	**Mys Shipunski**	**4.81**	**26**	P	Pn	16 29 45.1	+4.6
SPN				S	Sn	16 30 40.0	+5.1
MKZ	**Mys Kozlova**	**6.58**	**28**	P	Pn	16 30 09.4	+4.6

*PAS **09** 16:31:22.4 ± 1.3, 33°.899N ± 0°.008 × 117°.78W ± 0°.01, h7km ± 3km, ML2.3/128, Error ellipse: s-maj=1.3km s-min=1.1km az=56.0*
*NEIC **09** 16:31:21.8 ± 0.7, 33°.909N ± 0°.010 × 117°.77W ± 0°.01, h18km ± 1km, Error ellipse: s-maj=1.5km s-min=1.2km az=223.0, Southern California*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNC	**Chino**	**0.11**	**38**		Pb	16 31 25.4	+0.2
FULC	**Fullerton**	**0.14**	**254**		Pb	16 31 25.6	+0.1
PSRC	**Puddingstone R**	**0.18**	**349**		Pg	16 31 26.3	-0.3
PSRC					Sg	16 31 29.4	-0.3
MLSC	**Mira Loma**	**0.19**	**61**		Pg	16 31 26.5	-0.2
MLSC					Sg	16 31 29.7	-0.3
SANC	**Santa Ana**	**0.23**	**206**		Pb	16 31 27.2	-0.1
SANC					Sb	16 31 31.4	+0.3
PEM	**Pine Mountain**	**0.27**	**341**		Pg	16 31 27.9	0.0
SSK	**Sunset Peak**	**0.31**	**11**		Pg	16 31 28.7	+0.1
GVRC	**Garvey Reservo**	**0.33**	**296**		Pg	16 31 28.9	+0.1
RVR	**Riverside**	**0.34**	**75**		Pg	16 31 28.9	-0.1
RVR					Sg	16 31 33.7	-0.1
BFSC	**Mount Baldy Ra**	**0.34**	**15**		Pg	16 31 29.1	0.0
BFSC					Sg	16 31 34.2	+0.1
SME	**Santa Rosa Min**	**0.35**	**104**		Pg	16 31 29.2	-0.1
SME					Sg	16 31 34.2	-0.1
RSBC	**Riverside Bore**	**0.37**	**80**		Pg	16 31 29.6	+0.1
RSBC					Sg	16 31 35.0	+0.2
SS2	**San Sevaine**	**0.37**	**36**		Pb	16 31 29.7	-0.2
XTL	**Crystal Lake,**	**0.39**	**348**		Pg	16 31 29.9	-0.1
MWC	**Mount Wilson**	**0.40**	**322**	Pg	Pg	16 31 29.5	-0.6
MWC				Sg	Sg	16 31 35.4	-0.3
PASC	**Pasadena Art C**	**0.44**	**307**		Pg	16 31 30.1	-0.7
PASC	**Pasadena Art C**	**0.44**	**307**		Sg	16 31 36.7	0.0
PASC	**Pasadena Art C**	**0.44**	**307**	Pg	Pg	16 31 29.9	-0.8
CHFC	**Chilao Flat St**	**0.47**	**333**		Pg	16 31 31.0	-0.5
CHFC					Sg	16 31 37.8	-0.3
PEC	**Perris**	**0.50**	**92**		Pg	16 31 31.9	0.0
PEC					Sb	16 31 39.1	-0.1
CSP	**Cedar Springs**	**0.51**	**41**		Pg	16 31 32.2	0.0
HOLC	**Holcomb Ridge**	**0.55**	**353**		Pg	16 31 32.6	-0.3
CFT	**Crafton Hills**	**0.56**	**77**		Pb	16 31 33.1	0.0
MURC	**Murrieta**	**0.57**	**123**		Pg	16 31 33.0	-0.1
MURC					Sb	16 31 41.4	+0.4
SVD	**Seven Oaks Dam**	**0.59**	**70**		Pb	16 31 33.7	+0.1
LRRC	**Littlerock Res**	**0.65**	**341**		Pb	16 31 34.5	-0.2
HMTC	**Hemet**	**0.67**	**107**		Pb	16 31 34.7	-0.2
HMTC					Sg	16 31 43.4	-0.4
BACC	**Bachelor Mtn.**	**0.67**	**116**		Pb	16 31 34.8	-0.2
BACC					Sb	16 31 44.2	+0.1
DGR	**Domenigoni Val**	**0.68**	**112**		Pb	16 31 35.0	-0.2
DGR					Sg	16 31 44.3	0.0
IR2C	**Iron Canyon**	**0.71**	**312**		Pn	16 31 36.5	-0.5
BTL	**Butler Peak**	**0.72**	**61**		Pg	16 31 36.2	+0.1
POB	**Polly Butte**	**0.74**	**107**		Pb	16 31 36.0	-0.2
CIAC	**Catalina I. Ai**	**0.74**	**227**		Pb	16 31 36.1	-0.1
CIAC					Sb	16 31 46.1	0.0
SBB	**Saddle Back Bu**	**0.78**	**356**		Pb	16 31 36.8	-0.2
SBB					Sb	16 31 47.2	0.0
BBRC	**Big Bear Solar**	**0.79**	**63**		Pg	16 31 37.3	0.0
LEOC	**Leona Valley**	**0.85**	**328**		Pb	16 31 37.9	-0.2
GORC	**Green Oak Ranc**	**0.88**	**149**		Pb	16 31 37.8	-0.7
GORC					Sb	16 31 49.8	-0.1
CRY	**Cary Ranch**	**0.92**	**112**		Pb	16 31 39.4	0.0
CRY					Sb	16 31 51.3	-0.1
PLM	**Palomar**	**0.94**	**126**		Pb	16 31 39.6	0.0
PLM					Sg	16 31 52.5	+0.1
HYS	**Haystack Butte**	**0.97**	**10**		Pn	16 31 40.5	-0.1
EDW2	**Edwards Air Fo**	**0.99**	**349**		Pn	16 31 41.0	+0.1
BZNA	**Buzz No.'s Pla**	**1.01**	**114**		Pb	16 31 40.9	+0.1
BZNA					Sb	16 31 54.2	+0.4
DNR	**Dunn Ranch,Anz**	**1.01**	**110**		Sb	16 31 51.9	-1.8
SNDA	**J Saunders Pla**	**1.02**	**110**		Pb	16 31 41.5	+0.1
SNDA					Sn	16 31 55.5	0.0
FRD	**Ford Ranch, An**	**1.05**	**113**		Pb	16 31 41.7	+0.1
FRD					Sb	16 31 55.5	+0.4
FRD	**Ford Ranch, An**	**1.05**	**113**		Pn	16 31 41.7	-0.1
FRD					Sn	16 31 55.8	-0.3
OSI	**Osito Audit: C**	**1.06**	**312**	Pg	Pg	16 31 42.2	-0.1
OSI					Sn	16 31 56.0	-0.2
HWB	**Hans Werner Br**	**1.11**	**142**		Pb	16 31 41.9	-0.6
HWB					Sn	16 31 57.3	-0.1
PFO	**Pinyon Flats O**	**1.13**	**105**		Pb	16 31 43.0	+0.2
PFO				Sg	Sb	16 31 57.5	+0.3
PFO	**Pinyon Flats O**	**1.13**	**105**		Pb	16 31 43.0	+0.1
PFO					Sn	16 31 57.8	-0.2
EW2	**E Wide Canyon**	**1.13**	**88**		Pg	16 31 43.3	-0.4
EW2					Sg	16 31 58.3	-0.2
XPFO	**Pion Flat**	**1.13**	**105**		Pb	16 31 43.0	+0.1
XPFO				Sg	Sb	16 31 57.5	+0.1
XPFO	**Pion Flat**	**1.13**	**105**		Pb	16 31 43.0	+0.1
XPFO					Sb	16 31 57.7	+0.3
DPP	**Dos Picos Cty**	**1.14**	**143**		Pn	16 31 42.4	-0.5
BLAC	**Blackrock camp**	**1.16**	**82**		Pg	16 31 43.8	-0.4
109C	**Camp Elliot, M**	**1.16**	**151**	Pg	Pn	16 31 42.8	-0.4
109C					Sb	16 31 58.1	+0.1
EML	**El Monte Cty P**	**1.27**	**143**		Pn	16 31 44.7	0.0
DTP	**Desert Tortois**	**1.36**	**357**		Pb	16 31 47.2	+0.4
TPC	**Twentynine Pal**	**1.44**	**82**		Pb	16 31 48.8	+0.6
BELC	**Belle Mtn. Jos**	**1.47**	**86**		Sg	16 32 09.1	-0.3
BAR	**Barrett**	**1.53**	**143**		Sn	16 32 08.2	+0.4
BAR	**Barrett**	**1.53**	**143**		Pb	16 31 49.4	-0.3
BAR	**Barrett**	**1.53**	**143**		Pn	16 31 48.7	+0.4
GSC	**Goldstone, Bar**	**1.60**	**29**		Pb	16 31 50.9	0.0
GSC				Sn	Sb	16 32 11.1	+0.3
ISA	**Isabella, Lake**	**1.84**	**342**	Pn	Pb	16 31 54.5	-0.6
TPNV	**Topopah Spring**	**3.28**	**22**	Pn	Pn	16 32 12.6	+0.2
W13A	**Hualapai Mount**	**3.42**	**69**	Pn	Pn	16 32 16.4	+2.0

*IDC **09** 16:45:21.2 ± 12.0, 23°.19S × 176°.73W, h105km ± 107km, mb3.9/7, mb1 4.0/8, mb1mx3.7/40, mbtmp4.2/8, ML3.7/1, Error ellipse: s-maj=68.4km s-min=46.7km az=177.0*
*NEIC **09** 16:45:26.2 ± 1.4, 23°.45S ± 0°.2 × 176°.7W ± 0°.1, h159km ± 7km, mb4.6/14, Error ellipse: s-maj=25.6km s-min=16.5km az=144.0*

ISC 09 16:45:25.3 ± 0.7, 23°.57S ± 0°.08 × 176°.7W ± 0°.1, h150 km, n28, σ1§79/31, mb4.3/12, 1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.62**	**319**	Pn	**Pn**	**16 47 13.1**	**-0.7**
NIUE	**Niue**	**7.71**	**56**	Pn	**Pn**	**16 47 14.9**	**+0.1**
NIUE				Sn	Sn	16 48 30.0	-11
URZ	**Urewera**	**15.58**	**199**	P	**Pn**	**16 48 59.8**	**+3.0**
	0.3nm,0.3s,baz=312,slow=12,SNR=3.3						
URZ				S	**Sn**	**16 51 46.2**	**-3.9**
	0.5nm,0.3s,baz=63,slow=2.9,SNR=3.8						
URZ	**Urewera**	**15.58**	**199**	P	**P**	**16 49 02.9**	**+5.1**
URZ				IAmb	IAmb	16 49 20.4	
	comp=Z,52nm,1.7s						
URZ					**Sn**	**16 51 45.6**	**-4.5**
CMWZ	**Cape Campbell**	**19.67**	**201**	P	**P**	**16 49 42.1**	**-0.4**
CTA	**Charters Tower**	**34.53**	**268**	P	**P**	**16 52 00.3**	**+0.8**
	comp=Z,6.0nm,0.3s,baz=94,slow=10,SNR=14						
STKA	**Stephens Creek**	**37.68**	**248**	P	**P**	**16 52 26.5**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=84,slow=12,SNR=4.1						
STKA	**Stephens Creek**	**37.68**	**248**	P	**P**	**16 52 27.0**	**+0.8**
COEN	**Coen**	**39.09**	**277**	P	**P**	**16 52 37.9**	**-0.2**
COEN				IAmb	IAmb	16 52 48.7	
	comp=Z,18nm,1.4s						
BBOO	**Buckleboo**	**42.38**	**247**	P	**P**	**16 53 05.5**	**+0.6**
BBOO				IAmb	IAmb	16 53 07.0	
	comp=Z,38nm,1.6s						
AS31	**Alice Springs**	**45.10**	**259**	P	**P**	**16 53 27.0**	**+0.2**
ASAR	**Alice Springs**	**45.10**	**259**	P	**P**	**16 53 27.0**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=87,slow=6.8,SNR=20						
ASAR				PcP	**PcP**	**16 55 06.3**	**+1.4**
	comp=Z,0.4nm,0.6s,baz=120,slow=4.2,SNR=5.2						
WR0	**Warramunga Arr**	**45.29**	**265**	P	**P**	**16 53 27.3**	**-1.0**
WRAB	**Tennant Creek**	**45.47**	**265**	P	**P**	**16 53 28.9**	**-0.8**
WRAB				IAmb	IAmb	16 53 30.6	
	comp=Z,3.0nm,0.7s						
WRA	**Warramunga Arr**	**45.47**	**265**	P	**P**	**16 53 29.2**	**-0.5**
	comp=Z,3.3nm,0.5s,baz=103,slow=8.4,SNR=33						
WRA	**Warramunga Arr**	**45.47**	**265**	P	**P**	**16 53 29.3**	**-0.5**
HLK	**Haleakala**	**48.34**	**26**	P	**P**	**16 53 51.0**	**-1.2**
FORT	**Forrest**	**49.28**	**249**	P	**P**	**16 53 58.5**	**-0.6**
FORT				IAmb	IAmb	16 54 01.8	
	comp=Z,31nm,1.4s						
MTN	**Manton Dam**	**50.48**	**273**	P	**P**	**16 54 07.0**	**-1.3**
KNRA	**Kununurra**	**51.74**	**268**	P	**P**	**16 54 17.4**	**-0.3**
KNRA				IAmb	IAmb	16 54 45.5	
	comp=Z,14nm,1.2s						
FITZ	**Fitzroy Crossi**	**53.90**	**264**	P	**P**	**16 54 33.5**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=88,slow=8.1,SNR=3.9						
FITZ	**Fitzroy Crossi**	**53.90**	**264**	P	**P**	**16 54 32.9**	**-0.6**
FITZ				IAmb	IAmb	16 54 59.6	
	comp=Z,20nm,1.8s						
PSAA3	**Pilbara Seismi**	**58.21**	**258**	P	**P**	**16 55 04.2**	**0.0**
SYO	**Syowa Base**	**84.02**	**192**	‖ *eP*	**P**	**16 57 36.6**	**-1.8**
SEY	**Seymchan**	**89.63**	**346**	P	**P**	**16 58 04.4**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=180,slow=20,SNR=3.8						
CMAR	**Chiang Mai Arr**	**92.29**	**289**	P	**P**	**16 58 20.6**	**+1.7**
	comp=Z,0.2nm,0.7s,baz=146,slow=3.8,SNR=4.0						
AKASG	**Malin Array Be**	**146.28**	**330**	PKPbc	**PKPdf**	**17 04 47.3**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=41,slow=4.3,SNR=7.3						
BRTR	**Keskin Array B**	**149.77**	**309**	PKPbc	**PKPbc**	**17 04 57.9**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=134,slow=4.5,SNR=4.5						

*IDC **09** 16:45:45.8 ± 5.8, 1°.98N × 127°.24E, h62km ± 60km, mb3.4/5, mb1 3.6/6, mb1mx3.3/42, mbtmp3.7/6, ML3.3/1, Error ellipse: s-maj=54.1km s-min=21.9km az=85.0*
*DJA **09** 16:45:49.7 ± 0.8, 2°.N ± 3° × 12°.7E ± °, h82km ± 10km, M4.0/7, MLv4.0/7*

ISC 09 16:45:49.2 ± 1.1, 1°.94N ± 0°.09 × 127°.36E ± 0°.08, h100 km, n9, σ1§54/12, mb3.9/4, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.16**	**180**	P	**Pn**	**16 46 12.6**	**+1.2**
TNTI				S	**Sn**	**16 46 29.6**	**+1.5**
KMSI	**Cibinong**	**3.64**	**248**	P	**Pn**	**16 46 43.0**	**-0.5**
KMSI				S	**Sn**	**16 47 24.3**	**-1.3**
SANI	**Sanana**	**4.19**	**199**	P	**Pn**	**16 46 51.5**	**+0.5**
SANI				S	**Sn**	**16 47 35.7**	**-3.3**
SIJI	**Sorong**	**4.80**	**126**	P	**Pn**	**16 46 57.3**	**-1.9**
	1.3nm,0.3s,baz=287,slow=19,SNR=5.3						
FITZ	**Fitzroy Crossi**	**19.98**	**185**	P	**P**	**16 50 14.4**	**+0.7**
	0.9nm,0.7s,baz=18,slow=13,SNR=3.9						
WRA	**Warramunga Arr**	**22.80**	**163**	P	**P**	**16 50 44.1**	**+0.4**
	2.6nm,0.6s,baz=339,slow=11,SNR=16						
ASAR	**Alice Springs**	**26.24**	**166**	P	**P**	**16 51 15.8**	**+0.7**
	0.5nm,0.5s,baz=346,slow=12,SNR=11						
PETK	**Petropavlovsk-**	**56.85**	**21**	P	**P**	**16 55 23.7**	**+0.4**
	1.8nm,0.9s,baz=234,slow=8.8,SNR=3.2						
MKAR	**Makanchi Array**	**59.38**	**326**	P	**P**	**16 55 41.2**	**+0.1**
	0.6nm,0.4s,baz=116,slow=8.0,SNR=21						

*IDC **09** 16:54:34.7 ± 1.9, 36°.03N × 143°.20E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/35, mbtmp3.4/7, ML3.1/2, Error ellipse: s-maj=54.9km s-min=22.4km az=70.0*
*JMA **09** 16:54:40.0 ± 0.1, 36°.15N × 142°.77E, h59km, M3.1*

ISC 09 16:54:40.4 ± 1.3, 36°.11N ± 0°.07 × 142°.9E ± 0°.1, h35 km, n16, σ1§38/20, mb3.5/5, Off east of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.69**	**257**	P	**Pn**	**16 55 06.8**	**-0.6**
JHYU	**Hitachinakayam**	**1.87**	**278**	P	**Pn**	**16 55 09.1**	**-0.8**
JHYU				*eS*	**Sn**	**16 55 30.5**	**-1.7**
JHO	**Hitachi**	**1.93**	**286**	P	**Pn**	**16 55 09.8**	**-0.9**
JFT	**Otama**	**2.48**	**305**	P	**Pn**	**16 55 18.4**	**+0.1**
JAG	**Ashikaga**	**2.79**	**277**	P	**Pn**	**16 55 22.1**	**-0.4**
JMK	**Ichinoseki**	**3.13**	**336**	*eS*	**Sn**	**16 56 02.8**	**-0.5**
JOD2	**Odawara 2**	**3.20**	**256**	P	**Pn**	**16 55 28.1**	**-0.1**
JOD2				*eS*	**Sn**	**16 56 04.0**	**-1.2**
JRY	**Ryogami san**	**3.23**	**269**	P	**Pn**	**16 55 27.9**	**-0.7**
JOM	**Ohasama**	**3.58**	**340**	P	**Pn**	**16 55 33.3**	**-0.1**
JOM				*eS*	**Sn**	**16 56 14.2**	**-0.3**
MJAR	**Matsushiro Arr**	**3.80**	**278**	Pn	**Pn**	**16 55 37.0**	**+0.5**
	0.2nm,0.3s,baz=100,slow=9.8,SNR=13						
ASAJ	**Asahikawa**	**8.00**	**359**	Pn	**Pn**	**16 56 32.5**	**-1.5**
	0.6nm,0.3s,baz=216,slow=18,SNR=8.3						
ASAJ					Sn	**16 57 59.7**	**-3.5**
	0.2nm,0.3s,baz=96,slow=18,SNR=2.2						
SONM	**Songino Array**	**29.28**	**305**	P	**P**	**17 00 41.2**	**+1.9**
	0.4nm,0.8s,baz=95,slow=7.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**43.41**	**313**	P	**P**	**17 02 41.2**	**+1.8**
	0.3nm,0.3s,baz=111,slow=7.9,SNR=2.6						
MKAR	**Makanchi Array**	**45.61**	**303**	P	**P**	**17 02 58.5**	**+1.4**
	0.4nm,0.8s,baz=97,slow=9.2,SNR=2.8						
WRA	**Warramunga Arr**	**56.33**	**190**	P	**P**	**17 04 16.8**	**-1.1**
	0.2nm,0.4s,baz=8.3,slow=7.1,SNR=5.2						
ASAR	**Alice Springs**	**60.06**	**190**	P	**P**	**17 04 43.5**	**-0.4**
	0.4nm,1.0s,baz=1.5,slow=7.0,SNR=4.3						

*IDC **09** 17:11:59.4 ± 4.8, 31°.34N × 138°.16E, h419km ± 56km, mb2.6/6, mb1 2.8/7, mb1mx2.7/31, mbtmp3.4/7, Error ellipse: s-maj=28.0km s-min=18.8km az=99.0*
*JMA **09** 17:11:59.5 ± 0.5, 31°.46N × 138°.27E, h411km, M3.4*

ISC 09 17:11:58.0 ± 1.0, 31°.4N ± 0°.1 × 138°.3E ± 0°.1, h400 km, n14, σ2§17/15, mb2.8/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.16**	**36**	P	**Pn**	**17 12 57.4**	**+2.5**
JIE	**Ise**	**3.29**	**336**	P	**Pn**	**17 13 06.4**	**+2.9**
**JOD

LOF					*e*S	**Sn**	**18 04 11.5**	**+2.1**
LOF					IAML		18 04 16.8	
	comp=Z,16nm,0.9s							
KONS	**Konsvik**	**3.17**	**263**		Pn	**Pn**	**18 03 35.4**	**+1.3**
KONS					Sn	**Sb**	**18 04 17.1**	**-2.2**
KONS	**Konsvik**	**3.17**	**263**		*e*P	**Pn**	**18 03 36.4**	**+2.2**
KONS					IAML		18 04 38.5	
	comp=Z,6.0nm,0.5s							
KEV	**Kevo**	**3.49**	**37**		Pn	**Pn**	**18 03 39.4**	**+0.9**
KEV					Sn	**Sn**	**18 04 21.7**	**+1.2**
KEV	**Kevo**	**3.49**	**37**		*e*P	**Pn**	**18 03 38.9**	**+0.4**
KEV					*e*S	**Sn**	**18 04 20.5**	**+0.1**
HAMF	**Hammerfest**	**3.71**	**14**		*e*P	**Pn**	**18 03 43.4**	**+1.9**
HAMF					*e*S	**Sn**	**18 04 25.8**	**-0.1**
HAMF					IAML		18 04 34.1	
	comp=Z,4.1nm,0.5s							
APA0	**Apatity Array**	**4.67**	**78**		Pn	**Pn**	**18 03 54.0**	**-0.8**
APA0					Sn	**Sn**	**18 04 48.5**	**-1.1**
	baz=270,slow=28							
APA0					Lg	Lg	18 05 06.2	
	baz=274,slow=37							
APA0	**Apatity Array**	**4.67**	**78**		Pn	**Pn**	**18 03 54.0**	**-0.8**
APA0					Sn	**Sn**	**18 04 48.5**	**-1.1**
	baz=270,slow=28							
APA0					Sg	**Sb**	**18 05 06.2**	**+3.7**
	baz=274,slow=37							
FIA0	**FINESS Array S**	**6.07**	**156**		Pn	**Pn**	**18 04 14.9**	**+1.0**
	baz=345,slow=16							
FIA0					Sn	**Sn**	**18 05 22.0**	**-2.1**
	baz=354,slow=28							
FIA0	**FINESS Array S**	**6.07**	**156**		Pn	**Pn**	**18 04 14.9**	**+1.0**
	baz=345,slow=16							
FINES	**FINESS Array B**	**6.07**	**156**		Pn	**Pn**	**18 04 14.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=347,slow=13,SNR=3.6							
FINES					Sn	**Sn**	**18 05 23.3**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=345,slow=21,SNR=3.7							
NB2	**NORSAR Subarra**	**7.42**	**220**		Pn	**Pn**	**18 04 32.8**	**+0.4**
	baz=24,slow=14							
NB2	**NORSAR Subarra**	**7.42**	**220**		Pn	**Pn**	**18 04 32.8**	**+0.4**
	baz=24,slow=14							
NOA	**NORSAR Array B**	**7.42**	**220**		Pn	**Pn**	**18 04 33.6**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=44,slow=17,SNR=2.6							
NRA0	**NORESS Array S**	**7.60**	**218**		Pn	**Pn**	**18 04 37.4**	**+2.4**
	baz=27,slow=12							
NRA0	**NORESS Array S**	**7.60**	**218**		Pn	**Pn**	**18 04 37.4**	**+2.4**
	baz=27,slow=12							
HFS	**Hagfors**	**7.69**	**208**		Pn	**Pn**	**18 04 35.6**	**-0.5**
	baz=21,slow=18							
HFS	**Hagfors**	**7.69**	**208**		Pn	**Pn**	**18 04 35.3**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=27,slow=14,SNR=2.5							
HFS					Sn	**Sn**	**18 06 04.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=19,slow=23,SNR=2.8							
HFS	**Hagfors**	**7.69**	**208**		Pn	**Pn**	**18 04 35.6**	**-0.5**
	baz=21,slow=18							

IDC ***09*** *18:07:31.5±1.1,3.˚05S×139.˚78E,h0km,mb3.5/4, mb1 3.8/5,mb1mx3.5/35,mbtmp3.6/5,ML3.7/1,Error ellipse: s-maj=28.1km s-min=11.1km az=149.0*

ISC 09 18:07:31.9±1.0,**3.˚3S**±0.˚1×**139.˚9E**±0.˚2,**h10km,n6,**σ**3**§**32/6, mb3.4/3,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.09**	**48**	Pg			**Pb**	**18 07 52.2**	**-0.6**
	28nm,0.3s,baz=255,slow=20,SNR=207								
JAY				Lg			Lg	18 08 06.5	
	45nm,0.3s,baz=80,slow=19,SNR=14								
WRA	**Warramunga Arr**	**17.46**	**198**	P			**Pn**	**18 11 37.2**	**+1.6**
	0.3nm,0.3s,baz=18,slow=13,SNR=11								
WRA				S			**Sn**	**18 14 45.6**	**-4.6**
	0.1nm,0.3s,baz=6.3,slow=24,SNR=3.6								
FITZ	**Fitzroy Crossi**	**20.32**	**222**	P			Pn	18 12 10.4	0.0
	4.9nm,1.0s,baz=41,slow=9.3,SNR=4.6								
ASAR	**Alice Springs**	**21.11**	**195**	P			**P**	**18 12 19.9**	**+3.0**
	1.0nm,0.6s,baz=25,slow=9.6,SNR=16								
CMAR	**Chiang Mai Arr**	**45.73**	**300**	P			**P**	**18 15 53.2**	**-0.6**
	0.6nm,0.8s,baz=113,slow=6.7,SNR=5.5								
MKAR	**Makanchi Array**	**70.94**	**322**	P			**P**	**18 18 49.6**	**0.0**
	0.2nm,0.7s,baz=126,slow=7.3,SNR=3.1								

BGR ***09*** *18:38:25.7±0.0,21.˚38S×173.˚06E,h33km*

IDC ***09*** *18:38:26.8±0.6,20.˚48S×172.˚55E,h0km,mb4.6/22, mb1 4.7/25,mb1mx4.6/41,mbtmp4.6/25,ML4.3/3,MS4.6/28, Ms1 4.6/28,ms1mx4.6/29,Error ellipse: s-maj=17.8km s-min=14.6km az=142.0*

NEIC ***09*** *18:38:28.7±1.7,20.˚45S±0.˚09×172.˚49E±0.˚09,h15km±3km, mb5.1/82,Mwb5.4/13,Mwc5.4(GCMT),Error ellipse: s-maj=14.5km s-min=11.3km az=150.0,Moment Tensor Solution. Moment tensor: Scale 10*^{17}*Nm; Mrr=0.10; Mθθ=0.30; Mφφ=0.20; Mrθ=0.04; Mθφ=1.49; Mφr=0.12; Fault plane solution: M0=1.52000×10*^{17} *NP1:*φ*s=355.19000°,* δ*87.57000°,*λ*175.47000°. NP2:*φ*s=85.38000°,*δ*85.47000°,* λ*2.44000°. Principal axes: T 1.4690, Plg5.0000°, Azm310.0000°; N 0.0914, Plg85.0000°, Azm147.0000°; P -1.5604, Plg1.0000°, Azm40.0000°;*

MOS ***09*** *18:38:29.5±1.2,20.˚49S×172.˚47E,h25km,mb5.0/12, MS4.8/5 Error ellipse: s-maj=10.1km s-min=9.0km az=144.4*

BJI ***09*** *18:38:30.5±0.0,20.˚50S×172.˚60E,h35km,mB5.3/33, mb4.8/40,Ms5.1/26,Ms7 4.8/26*

GCMT ***09*** *18:38:31.7±0.1,20.˚54S±0.˚01×172.˚53E±0.˚01,h16km, MW5.4/146,Moment Tensor Solution. s109,c174; s146,c267; Duration: 1§2 Moment tensor: Scale 10*^{17} *Nm; Mrr=0.38±.02; Mθθ=0.26±.02; Mφφ=0.63±.02; Mrθ=0.15±.05; Mθφ=1.32±.02; Mφr=0.09±.05; Best double couple: M0=1.41200×10*^{17} *NP1:*φ*s=171.00000°,*δ*82.00000°,* λ*-172.00000°. NP2:*φ*s=80.00000°,*δ*82.00000°,*λ*-9.00000°. Principal axes: T 1.5850, Plg0.0000°, Azm126.0000°; N -0.3460, Plg78.0000°, Azm218.0000°; P -1.2390, Plg12.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***09*** *18:38:32.20.˚56S×172.˚50E,h17km,Moment Tensor Solution. Moment tensor: Scale 10*^{17}*Nm; Mrr=0.43; Mθθ=0.24; Mφφ=0.66; Mrθ=0.06; Mθφ=1.42; Mφr=0.11; Fault plane solution: M0=1.54000×10*^{17} *NP1:*φ*s=81.00000°,* δ*87.00000°,*λ*2.00000°. NP2:*φ*s=351.00000°,*δ*88.00000°,* λ*177.00000°. Principal axes: T 1.7101, Plg3.0000°, Azm306.0000°; N -0.4335, Plg86.0000°, Azm143.0000°; P -1.2766, Plg1.0000°, Azm36.0000°;*

ISC 09 18:38:32.1±0.3,**20.˚55S**±0.˚05×**172.˚49E**±0.˚05,**h35km,n415,** σ**1**§**00/402,mb5.0/87,MS4.7/38,26C-8D,Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.84**	**254**	*e*Pn			**Pn**	**18 39 56.8**	**+0.5**
	285nm,1.4s								
DZM				*e*LR			LR	18 41 15.8	
	comp=Z,3μm,21.9s								
DZM	**Mont Dzumac**	**5.84**	**254**	Pn			**Pn**	**18 39 57.1**	**+0.8**
	4.9nm,0.3s,baz=135,slow=9.9,SNR=45								
DZM				LR			LR	18 41 58.6	
	comp=Z,3μm,21.0s,baz=100,slow=36								
DZM	**Mont Dzumac**	**5.84**	**254**				**Pn**	**18 39 56.4**	**+0.1**
MSVF	**Nonsavu**	**5.95**	**63**	*i* P			**Pn**	**18 39 58.1**	**+0.3**
MSVF	**Nonsavu**	**5.95**	**63**				**Pn**	**18 39 56.9**	**-1.0**
NFK	**Norfolk Island**	**9.42**	**205**	P			**Pn**	**18 40 46.2**	**+0.9**
	baz=9.4,SNR=3.4								
RAO	**Raoul Island**	**12.28**	**137**	LR			LR	18 45 06.8	
	comp=Z,7μm,19.6s,baz=300,slow=33								
OUZ	**Omahuta**	**14.65**	**176**				**Pn**	**18 41 58.4**	**+1.5**
LHI	**Lord Howe Isla**	**16.27**	**225**	P			**P**	**18 42 21.1**	**+0.5**
	baz=16,SNR=4.2								
LHI	**Lord Howe Isla**	**16.27**	**225**	P			**Pn**	**18 42 16.1**	**-1.8**
LHI					IAmb		IAmb	18 42 25.5	
	comp=Z,254nm,1.4s								
HNR	**Honiara**	**16.39**	**311**	P			**Pn**	**18 42 17.6**	**-1.9**
HNR					pmax		pmax		
	comp=Z,422nm,1.1s								
HNR	**Honiara**	**16.39**	**311**	Pn			**Pn**	**18 42 20.3**	**+0.8**
	comp=Z,2.3nm,0.3s,baz=162,slow=4.5,SNR=12								
HNR					LR		LR	18 47 42.8	
	comp=Z,3μm,19.1s,baz=135,slow=34								
HNR	**Honiara**	**16.39**	**311**	P			**P**	**18 42 21.0**	**-1.0**
HNR	**Honiara**	**16.39**	**311**	P			**Pn**	**18 42 17.6**	**-1.9**
URZ	**Urewera**	**18.10**	**168**	P			**P**	**18 42 41.7**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=356,slow=7.6,SNR=20								
URZ					LR		LR	18 47 59.3	
	comp=Z,3μm,21.0s,baz=351,slow=32								
URZ	**Urewera**	**18.10**	**168**	P			**Pn**	**18 42 39.8**	**-0.9**
QRZ	**Quartz Range**	**20.22**	**180**	P			**P**	**18 43 04.2**	**+0.2**
QRZ					IAmb		IAmb	18 43 14.8	
	comp=Z,165nm,1.1s								
EIDS	**Eidsvold**	**20.29**	**252**	P			Pn	18 43 07.1	+0.1
	baz=20,SNR=7.5								
EIDS	**Eidsvold**	**20.29**	**252**	P			Pn	18 43 06.5	-0.6
BFZ	**Birch Farm**	**20.33**	**172**	P			**P**	**18 43 04.2**	**-1.0**
BFZ					IAmb		IAmb	18 43 15.8	
	comp=Z,131nm,1.0s								
SNZO	**South Karori**	**20.79**	**175**	P			**P**	**18 43 10.1**	**0.0**
TUWZ	**Tuamarina**	**20.86**	**177**	P			**P**	**18 43 11.0**	**+0.1**
MSWZ	**Moikau Station**	**20.94**	**174**	P			**P**	**18 43 11.3**	**-0.5**
BSWZ	**Blackbirch Sta**	**21.14**	**177**	P			**P**	**18 43 13.9**	**0.0**
THZ	**Tophouse**	**21.16**	**179**	P			**P**	**18 43 14.7**	**+0.5**
THZ					IAmb		IAmb	18 43 23.9	
	comp=Z,89nm,1.0s								
ARMA	**Armidale**	**21.21**	**238**	P			**P**	**18 43 17.0**	**+2.0**
	baz=21,SNR=14								
ARMA	**Armidale**	**21.21**	**238**	P			**P**	**18 43 15.7**	**+0.7**
ARMA					IAmb		IAmb	18 43 29.3	
	comp=Z,140nm,1.4s								
KHZ	**Kahutara**	**21.82**	**178**	P			**P**	**18 43 21.4**	**+0.2**
KHZ					IAmb		IAmb	18 43 28.9	
	comp=Z,194nm,1.6s								
LTZ	**Lake Taylor**	**22.17**	**180**	P			**P**	**18 43 25.3**	**+0.2**
LTZ					IAmb		IAmb	18 43 36.3	
	comp=Z,148nm,1.3s								
RMQ	**Roma**	**22.54**	**250**	P			**P**	**18 43 30.6**	**+1.5**
	baz=22,SNR=8.4								
MGCD	**Mangrove Creek**	**22.81**	**232**	P			**P**	**18 43 33.5**	**+1.6**
	baz=23,SNR=4.3								
FOZ	**Fox Glacier**	**23.03**	**185**	P			**P**	**18 43 34.5**	**+0.5**
RIV	**Riverview**	**23.08**	**231**	P			**P**	**18 43 36.4**	**+1.7**
	baz=23,SNR=4.7								
RPZ	**Rata Peaks**	**23.14**	**183**	P			**P**	**18 43 36.3**	**+1.1**
	comp=Z,17nm,0.9s,baz=63,slow=3.3,SNR=3.4								
RPZ					LR		LR	18 50 52.8	
	comp=Z,1μm,19.4s,baz=16,slow=32								
RPZ	**Rata Peaks**	**23.14**	**183**	P			**P**	**18 43 35.1**	**0.0**
LBZ	**Lake Benmore**	**23.85**	**184**	P			**P**	**18 43 41.9**	**-0.2**
CTA	**Charters Tower**	**24.60**	**266**	P			**P**	**18 43 50.4**	**+1.1**
	comp=Z,16nm,1.0s,baz=99,slow=11,SNR=9.1								
CTA					LR		LR	18 53 03.0	
	comp=Z,2μm,18.9s,baz=87,slow=36								
MLZ	**Mavora Lakes**	**25.02**	**187**	P			**P**	**18 43 52.9**	**+0.2**
CNB	**Canberra Magne**	**25.10**	**229**	P			**P**	**18 43 54.0**	**+0.4**
	baz=25,SNR=7.7								
DCZ	**Deep Cove**	**25.24**	**189**	P			**P**	**18 43 55.5**	**+0.8**
YNG	**Young**	**25.32**	**232**	P			**P**	**18 43 56.8**	**+1.2**
	baz=25,SNR=7.3								
CAN	**Canberra**	**25.36**	**230**	P			**P**	**18 43 57.3**	**+1.3**
CAN					pmax		pmax		
	comp=Z,64nm,1.4s								
CAN	**Canberra**	**25.36**	**230**	P			**P**	**18 43 57.3**	**+1.3**
CAN					IAmb		IAmb	18 44 36.4	
	comp=Z,64nm,1.4s								
WHZ	**Wether Hill Ro**	**25.56**	**187**	P			**P**	**18 43 57.5**	**-0.1**
KRVT	**Keravat (AS076**	**25.63**	**306**	P			**P**	**18 43 59.1**	**+0.6**
	comp=Z,89nm,1.1s,baz=301,slow=2.4,SNR=14								
RAR	**Rarotonga**	**25.91**	**96**	LR			LR	18 51 55.2	
	comp=Z,1μm,21.2s,baz=294,slow=31								
CMSA	**Cobar Meteorol**	**26.38**	**240**	P			**P**	**18 44 05.3**	**+0.1**
	baz=26,SNR=39								
MTSU	**Mount Surprise**	**26.68**	**270**	P			**P**	**18 44 09.0**	**+0.9**
	baz=27,SNR=14								
PMG	**Port Moresby**	**26.82**	**291**	*i* P			**P**	**18 44 09.9**	**+0.6**
PMG					pmax		pmax		
	comp=Z,29nm,0.9s								
PMG	**Port Moresby**	**26.82**	**291**	P			**P**	**18 44 09.6**	**+0.3**
	comp=Z,15nm,1.0s,baz=74,slow=9.8,SNR=5.2								
PMG					LR		LR	18 53 06.9	
	comp=Z,2μm,19.8s,baz=112,slow=33								
PMG	**Port Moresby**	**26.82**	**291**	P			**P**	**18 44 07.9**	**-1.4**
PMG					IAmb		IAmb	18 45 02.1	
	comp=Z,79nm,1.5s								
COEN	**Coen**	**28.73**	**278**	P			**P**	**18 44 27.5**	**+1.1**
	baz=29,SNR=5.9								
COEN	**Coen**	**28.73**	**278**	P			**P**	**18 44 25.8**	**-0.6**
TOO	**Toolangi**	**28.92**	**228**	P			**P**	**18 44 28.2**	**+0.3**
TOO					pmax		pmax		
	comp=Z,66nm,1.7s								
TOO	**Toolangi**	**28.92**	**228**	P			**P**	**18 44 28.2**	**+0.3**
TOO					IAmb		IAmb	18 44 56.6	
	comp=Z,66nm,1.6s								
STKA	**Stephens Creek**	**29.83**	**241**	P			**P**	**18 44 36.4**	**+0.3**
	comp=Z,20nm,0.8s,baz=83,slow=9.8,SNR=45								
STKA					LR		LR	18 56 17.4	
	comp=Z,1μm,18.0s,baz=69,slow=36								
STKA	**Stephens Creek**	**29.83**	**241**	P			**P**	**18 44 35.7**	**-0.3**
MOO	**Moorlands**	**30.49**	**219**	P			**P**	**18 44 42.5**	**+0.8**
	baz=33,SNR=3.0								
HTT	**Hallett**	**32.40**	**240**	P			**P**	**18 44 59.0**	**+0.2**
	baz=32,SNR=12								
BBOO	**Buckleboo**	**34.60**	**242**	P			**P**	**18 45 17.7**	**-0.2**
	baz=35,SNR=12								
BBOO	**Buckleboo**	**34.60**	**242**	P			**P**	**18 45 17.7**	**-0.2**
WR0	**Warramunga Arr**	**35.56**	**264**	P			**P**	**18 45 25.2**	**-1.0**
WR0					IAmb		IAmb	18 45 32.7	
	comp=Z,33nm,1.4s								
WRAB	**Tennant Creek**	**35.74**	**264**	*i* P			**P**	**18 45 27.9**	**+0.1**
WRAB					pmax		pmax		
	comp=Z,18nm,1.2s								
WRAB	**Tennant Creek**	**35.74**	**264**	P			**P**	**18 45 26.8**	**-1.0**
WRAB					IAmb		IAmb	18 45 37.7	
	comp=Z,32nm,1.5s								
WRA	**Warramunga Arr**	**35.75**	**264**	*e*P			**P**	**18 45 27.5**	**-0.4**
WRA					pmax		pmax		
	comp=Z,10.0nm,1.2s								
WRA	**Warramunga Arr**	**35.75**	**264**	P			**P**	**18 45 26.7**	**-1.2**
	comp=Z,10nm,1.2s,baz=97,slow=8.4,SNR=13								
WRA					LR		LR	19 00 02.3	
	comp=Z,1μm,19.5s,baz=100,slow=36								
WRA	**Warramunga Arr**	**35.75**	**264**	P			**P**	**18 45 26.5**	**-1.4**
JAY	**Jayapura**	**35.80**	**296**	LR			LR	18 59 28.3	
	comp=Z,1μm,20.4s,baz=122,slow=35								
AS31	**Alice Springs**	**35.81**	**258**	P			**P**	**18 45 27.4**	**-1.1**
ASAR	**Alice Springs**	**35.82**	**258**	P			**P**	**18 45 27.6**	**-0.9**
ASAR	**Alice Springs**	**35.82**	**258**	P			**P**	**18 45 27.8**	**-0.7**
	comp=Z,7.7nm,0.9s,baz=89,slow=8.9,SNR=61								
ASAR					LR		LR	18 59 24.4	
	comp=Z,2μm,18.0s,baz=98,slow=35								
ASAR	**Alice Springs**	**35.82**	**258**	P			**P**	**18 45 27.6**	**-0.9**
PPT2	**Papeete2**	**35.92**	**92**	*e*S			**S**	**18 51 08.7**	**+3.1**
	comp=Z,338nm,25.0s								
PPT2					*e*LQ		LQ	18 53 08.6	
	comp=Z,3μm,31.0s								
PPT2					*e*LR		LR	18 55 07.7	
	comp=Z,4μm,26.5s,baz=257								
PPT	**Papeete**	**35.92**	**92**	LR			LR	18 56 22.2	
	comp=Z,786nm,21.6s,baz=232,slow=30								
GENI	**Genyem**	**36.21**	**295**	P			**P**	**18 45 33.5**	**+1.6**
	comp=Z,111nm,1.4s								
H11S2	**WAKE ISLAND Hy**	**39.21**	**351**	T			T	19 27 42.3	
	baz=171,slow=76,SNR=6.2								
H11S3	**WAKE ISLAND Hy**	**39.21**	**351**	T			T	19 27 37.8	
	baz=171,slow=76,SNR=4.6								
H11S1	**WAKE ISLAND Hy**	**39.23**	**351**	T			T	19 27 43.3	
	baz=171,slow=76,SNR=5.8								
WRKA	**Warakurna**	**40.86**	**255**	P			**P**	**18 46 10.7**	**-0.2**
	baz=41,SNR=10								
FORT	**Forrest**	**41.10**	**246**	P			**P**	**18 46 12.2**	**-0.5**
	baz=41,SNR=11								
FORT	**Forrest**	**41.10**	**246**	P			**P**	**18 46 12.2**	**-0.5**
KNRA	**Kununurra**	**41.75**	**269**	P			**P**	**18 46 20.7**	**+2.5**
	baz=42,SNR=4.3								
KNRA	**Kununurra**	**41.75**	**269**	P			**P**	**18 46 17.2**	**-1.0**
KNRA					IAmb		IAmb	18 46 21.2	
	comp=Z,43nm,1.2s								
GUMO	**Guam**	**43.45**	**319**	LR			LR	19 02 38.9	
	comp=Z,1μm,22.0s,baz=125,slow=33								
FITZ	**Fitzroy Crossi**	**44.17**	**265**	P			**P**	**18 46 37.9**	**+0.1**
	baz=44,SNR=13								
FITZ	**Fitzroy Crossi**	**44.17**	**265**	P			**P**	**18 46 37.6**	**-0.2**
	comp=Z,20nm,1.0s,baz=89,slow=10,SNR=7.7								
FITZ	**Fitzroy Crossi**	**44.17**	**265**	P			**P**	**18 46 37.8**	**+0.1**
SIJI	**Sorong**	**44.76**	**291**	P			**P**	**18 46 42.4**	**-0.2**
	comp=Z,29nm,1.3s,baz=141,slow=5.7,SNR=10								
SWI	**Sorong**	**44.77**	**291**	P			**P**	**18 46 42.5**	**-0.1**
	comp=Z,34nm,1.7s								
AAI	**Ambon**	**46.24**	**285**	P			**P**	**18 46 55.7**	**+1.4**
	comp=Z,38nm,1.2s								
TAOE	**Nuku Hiva Isla**	**47.10**	**83**	*e*S			**S**	**18 53 56.6**	**+5.2**
	comp=Z,246nm,25.9s								
TAOE					*e*LR		LR	19 00 20.8	
	comp=Z,2μm,27.7s								
SOEI	**Soe**	**47.61**	**276**	P			sP	18 47 19.4	+1.2
BATI	**Baumata**	**48.03**	**275**	P			**P**	**18 47 08.8**	**+0.5**
	comp=Z,8.5nm,0.6s,baz=224,slow=5.6,SNR=3.9								
SANI	**Sanana**	**48.93**	**286**	P			**P**	**18 47 15.2**	**0.0**
	comp=Z,604nmcomp=Z,30nm,1.6s								
PSA00	**Pilbara Seismi**	**48.95**	**259**	P			**P**	**18 47 14.8**	**-0.5**
KLBR	**Kellerberrin**	**49.94**	**246**	P			**P**	**18 47 22.1**	**-0.7**
	baz=50,SNR=8.8								
NWAO	**Narrogin (SRO)**	**50.36**	**244**	P			**P**	**18 47 25.4**	**-0.5**
NWAO					pmax		pmax		
	comp=Z,97nm,1.9s								
NWAO	**Narrogin (SRO)**	**50.36**	**244**	P			**P**	**18 47 25.2**	**-0.7**
	comp=Z,16nm,0.9s,baz=121,slow=5.8,SNR=6.5								
NWAO	**Narrogin (SRO)**	**50.36**	**244**	P			**P**	**18 47 25.4**	**-0.5**
LUWI	**Luwuk**	**52.26**	**285**	P			sP	18 47 53.6	0.0
BNSI	**Bone**	**53.35**	**280**	P			**P**	**18 47 47.8**	**-0.6**
	comp=Z,25nm,1.4s								
SPSI	**Sidrap Palu**	**53.83**	**280**	P			P	18 47 58.0	+6.1
KCP	**Kidapawan**	**54.03**	**295**⇑	*e*P			**P**	**18 47 52.4**	**-1.0**
MPSI	**Mapaga**	**55.44**	**285**	P			**P**	**18 48 03.4**	**-0.2**
	comp=Z,463nmcomp=Z,20nm,1.1s								
JCJ	**Chichijima**	**55.72**	**327**	LR			LR	19 07 31.6	
	comp=Z,520nm,21.2s,baz=150,slow=31								
VNDA	**Vanda**	**57.26**	**183**	P			**P**	**18 48 15.8**	**+0.2**
VNDA	**Vanda**	**57.26**	**183**	P			**P**	**18 48 16.5**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=350,slow=6.9,SNR=4.6								
VNDA					LR		LR	19 08 23.1	
	comp=Z,437nm,21.8s,baz=14,slow=31								
VNDA	**Vanda**	**57.26**	**183**	P			**P**	**18 48 15.8**	**+0.2**
SBA	**Scott Base**	**57.42**	**181**	P			**P**	**18 48 17.1**	**+0.4**
SBA					pmax		pmax		
	comp=Z,139nm,1.8s								
SBA	**Scott Base**	**57.42**	**181**	P			**P**	**18 48 17.1**	**+0.4**
STKI	**Sintang**	**63.02**	**281**	P			**P**	**18 48 56.6**	**+0.5**
	comp=Z,15nm,1.3s								
SBUM	**Sibu**	**63.29**	**284**	P			**P**	**18 48 56.9**	**-1.0**
KSM	**Kuching**	**64.64**	**282**	P			**P**	**18 49 05.9**	**-0.9**
KSM					IAmb		IAmb	18 49 19.0	
	comp=Z,24nm,1.1s								
DBJI	**Dramaga**	**65.03**	**272**	P			**P**	**18 49 10.1**	**+0.8**
	comp=Z,35nm,0.9s								
MJAR	**Matsushiro Arr**	**65.37**	**330**	LR			LR	19 12 23.0	
	comp=Z,320nm,21.6s,baz=140,slow=31								
MAJO	**Matsushiro**	**65.37**	**330**	*i* P			**P**	**18 49 11.9**	**+0.9**
MAJO					pmax		pmax		
	comp=Z,9.0nm,1.0s								
KASI	**Kota Agung**	**67.49**	**273**	P			**P**	**18 49 24.3**	**-0.8**
	comp=Z,38nm,1.0s								
MDSI	**Maura Dua**	**68.14**	**273**	P			**P**	**18 49 27.7**	**-1.5**
	comp=Z,17nm,1.0s								
YUK	**Yuzh-Kuril'sk**	**68.74**	**340**	*e*P			**P**	**18 49 31.2**	**-1.0**
YUK				*e*				18 49 56.8	
YUK				*e*				18 52 04.0	
YUK				*e*PPP			PPP	18 53 43.8	
YUK				*e*S			**S**	**18 58 32.3**	**-0.7**
YUK				*e*				18 59 27.6	
YUK				*e*SS			**SS**	**19 02 58.9**	**+0.1**
YUK					pmax		pmax		
	comp=N,248nm,1.3s								
YUK					pmax		pmax		
	comp=Z,319nm,1.3s								
YUK					pmax		pmax		
	comp=E,172nm,1.2s								
YUK					pmax		pmax		
	comp=Z,473nm,1.7s								
QSPA	**South Pole Qui**	**69.52**	**180**	P			**P**	**18 49 35.8**	**-1.3**
QSPA					IAmb		IAmb	18 50 06.6	
	comp=Z,16nm,1.2s								
KSI	**Kapahiang**	**69.91**	**274**	P			**P**	**18 49 41.3**	**+1.0**
	comp=Z,35nm,1.3s								
KSRS	**Korea Array**	**71.33**	**324**	*e*P			**P**	**18 49 50.4**	**+2.1**
KSRS					pmax		pmax		
	comp=Z,2.0nm,1.0s								
KSRS	**Korea Array**	**71.33**	**324**	P			**P**	**18 49 49.3**	**+1.1**
	comp=Z,1.7nm,0.9s,baz=166,slow=6.4,SNR=4.1								
KSRS					LR		LR	19 20 13.4	
	comp=Z,216nm,18.7s,baz=144,slow=35								
SKR	**Severo-Kuril's**	**72.37**	**

HHC LR LR
comp=Z,300nm,23.0s
HHC LR LR
comp=Z,580nm,20.5s
ZEA Zeya 83.61 335 *e*P **P 18 50 57.1 +0.6**
ZEA pmax pmax
comp=Z,24nm,1.6s
SYO Syowa Base 84.52 195⇓ *e*P **P 18 51 00.4 -0.7**
SYO Syowa Base 84.52 195⇓ *e*sP sP 18 51 10.2 -4.6
SEY Seymchan 84.70 351 P **P 18 51 01.4 -0.4**
comp=Z,5.3nm,0.9s,baz=112,slow=5.4,SNR=7.0
O02D Mt. Diablo Mer 85.27 44 P **P 18 51 03.5 -1.9**
baz=238
WDC Whiskeytown Da 85.64 44 P **P 18 51 07.7 +0.6**
WDC pmax pmax
comp=Z,48nm,2.0s
WDC Whiskeytown Da 85.64 44 P **P 18 51 07.7 +0.6**
N02D Trinity Center 85.74 43 P **P 18 51 08.6 +0.9**
baz=238
CMB Columbia Colle 85.78 47 P **P 18 51 07.0 -0.9**
CMB pmax pmax
comp=Z,14nm,1.3s
CMB Columbia Colle 85.78 47 P **P 18 51 07.0 -0.9**
CMB IAmb IAmb 18 51 20.2
comp=Z,14nm,1.2s
ORV Oroville 85.79 45 P **P 18 51 07.7 -0.2**
ORV pmax pmax
comp=Z,40nm,1.9s
ORV Oroville 85.79 45 P **P 18 51 07.7 -0.2**
ORV IAmb IAmb 18 51 14.6
comp=Z,40nm,1.9s
AFDM Forest Hills D 85.84 46 P **P 18 51 07.8 -0.4**
AFDM IAmb IAmb 18 51 16.9
comp=Z,12nm,1.1s
M02C Callahan 85.87 43 P **P 18 51 09.0 +0.6**
baz=238
LZH Lanzhou 85.88 311 *e*P **P 18 51 08.8 +0.1**
LZH pP sP 18 51 20.6 -1.7
LZH PP **PP 18 54 31.5 +2.6**
LZH *e*S **S 19 01 39.3 -0.5**
LZH SS **SS 19 07 20.3 +2.1**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,120nm,6.5s
LZH LR LR
comp=Z,340nm,17.9s
LZH LR LR
comp=Z,300nm,17.3s
LZH LR LR
comp=Z,510nm,18.4s
EDW2 Edwards Air Fo 85.93 51 P **P 18 51 08.9 +0.1**
baz=242
ISA Isabella, Lake 85.95 50 P **P 18 51 08.8 -0.1**
ISA pmax pmax
comp=Z,22nm,1.1s
ISA Isabella, Lake 85.95 50 P **P 18 51 08.8 -0.1**
ISA IAmb IAmb 18 51 21.4
comp=Z,22nm,1.1s
ISA Isabella, Lake 85.95 50 P **P 18 51 09.4 +0.5**
baz=241
O03E Paynes Creek 85.98 44 P **P 18 51 09.0 +0.1**
baz=239
YBH Yreka Blue Hor 86.14 43 P **P 18 51 10.2 +0.5**
YBH pmax pmax
comp=Z,47nm,1.7s
YBH Yreka Blue Hor 86.14 43 P **P 18 51 10.2 +0.5**
MONP2 Monument Peak 86.16 53 P **P 18 51 10.0 -0.1**
baz=243
LRMC Laurel Mtn Rad 86.43 50 P **P 18 51 11.7 +0.4**
baz=242
MDPB Devils Postpil 86.48 48 P **P 18 51 10.6 -1.1**
MDPB IAmb IAmb 18 51 13.0
comp=Z,14nm,1.3s
OMMB Old Mammoth Mi 86.52 48 P **P 18 51 10.8 -1.2**
CWC Cottonwood Cre 86.60 49 P **P 18 51 12.5 +0.3**
baz=242
L04D Klamath Falls 86.65 42 P **P 18 51 12.9 +0.6**
baz=238
WAKR Walker 86.66 47 P **P 18 51 12.8 +0.3**
WAKR IAmb IAmb 18 51 21.6
comp=Z,17nm,1.3s
M04C Macdoel 86.72 43 P **P 18 51 12.8 +0.2**
baz=239
TIN Tinemaha, Big 86.79 49 P **P 18 51 14.0 +1.0**
baz=241
PNTR Pine Nut 86.83 46 P **P 18 51 13.3 -0.1**
PNTR IAmb IAmb 18 51 22.3
comp=Z,14nm,1.1s
MPMC Manual Prospec 86.84 50 P **P 18 51 14.1 +0.7**
baz=242
BELC Belle Mtn. Jos 86.98 52 P **P 18 51 14.1 +0.1**
baz=243
YERR Yerington 87.03 46 P **P 18 51 13.6 -0.7**
HEC Hector,Ludlow 87.11 51 P **P 18 51 15.1 +0.5**
baz=243
BC3 Big Chuckawall 87.22 53 P **P 18 51 15.8 +0.6**
baz=243
PAHR Pah Rah Range 87.28 46 P **P 18 51 15.2 -0.2**
J04D Umpqua Nationa 87.31 42 P **P 18 51 16.4 +0.8**
baz=238
NVAR Mina Array Bea 87.40 47 P **P 18 51 16.2 +0.1**
comp=Z,1.7nm,0.8s,baz=227,slow=7.6,SNR=6.8
NVAR LR LR 19 22 34.0
comp=Z,421nm,20.4s,baz=242,slow=30
GLA Glamis 87.42 53 P **P 18 51 16.5 +0.4**
GLA pmax pmax
comp=Z,13nm,1.0s
GLA Glamis 87.42 53 P **P 18 51 16.4 +0.4**
GLA IAmb IAmb 18 51 28.9
comp=Z,13nm,1.0s
GLA Glamis 87.42 53 P **P 18 51 16.7 +0.6**
baz=244
NV11 Mina Array Sit 87.50 47 P **P 18 51 16.0 -0.5**
NV11 IAmb IAmb 18 51 25.3
comp=Z,17nm,1.4s
IRM Iron Mountain 87.68 52 P **P 18 51 18.0 +0.7**
baz=243
TUQ Turquoise Moun 87.69 51 P **P 18 51 16.9 -0.6**
baz=243
MOD Modoc Plateau 87.77 44 P **P 18 51 17.6 -0.1**
MOD IAmb IAmb 18 51 26.4
comp=Z,14nm,1.2s
KVN Kaiserville 87.84 47 P **P 18 51 18.2 +0.1**
KVN pmax pmax
comp=Z,16nm,1.4s
KVN Kaiserville 87.84 47 P **P 18 51 18.2 +0.1**
KVN IAmb IAmb 18 51 26.8
comp=Z,16nm,1.4s
J05D Fort Rock, OR 87.88 42 P **P 18 51 18.5 +0.3**
baz=239
SNAA Sanae 87.97 181 P **P 18 51 16.5 -1.6**
SNAA Sanae 87.97 181 P **P 18 51 17.0 -1.1**
SNAA pmax pmax
comp=Z,22nm,1.3s
SNAA Sanae 87.97 181 P **P 18 51 17.0 -1.1**
TPNV Topopah Spring 88.14 49 P **P 18 51 19.1 -0.5**
TPNV pmax pmax
comp=Z,8.0nm,1.0s
TPNV Topopah Spring 88.14 49 P **P 18 51 19.1 -0.5**
TPNV IAmb IAmb 18 51 27.9
comp=Z,8.2nm,0.9s
TPNV Topopah Spring 88.14 49 P **P 18 51 20.1 +0.5**
baz=243
BILL Bilibino 88.44 358 *i* P **P 18 51 19.1 -1.0**
BILL pmax pmax
comp=Z,12nm,1.5s
VNA3 Neumayer Olymp 88.44 179 P **P 18 51 18.7 -1.6**
214A Organ Pipe Nat 88.48 55 P **P 18 51 21.4 +0.3**
214A IAmb IAmb 18 51 30.3
comp=Z,20nm,1.7s
SHPR Sheep Range 88.72 50 P **P 18 51 22.3 -0.1**
RND Reindeer 88.98 16 P **P 18 51 20.7 -2.1**
RND pmax pmax
comp=Z,36nm,1.8s
RND Reindeer 88.98 16 P **P 18 51 20.7 -2.1**
W13A Hualapai Mount 89.03 52 P **P 18 51 24.2 +0.4**
W13A IAmb IAmb 18 51 32.9
comp=Z,17nm,1.8s
VNA1 Neumayer--Stat 89.05 180 P **P 18 51 23.7 +0.5**
YAK Yakutsk 89.06 341 *i* P **P 18 51 21.4 -1.6**
YAK pmax pmax
comp=Z,18nm,2.2s
R11A Troy Canyon, C 89.25 48 P **P 18 51 23.4 -1.5**
R11A Troy Canyon, C 89.25 48 P **P 18 51 24.4 -0.4**
baz=243

SONM Songino Array 90.11 322 *e*P **P 18 51 28.5 -0.1**
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 90.11 322 P **P 18 51 28.3 -0.3**
comp=Z,1.6nm,1.0s,baz=136,slow=6.4,SNR=8.1
SONM LR LR 19 30 34.8
comp=Z,134nm,20.0s,baz=108,slow=35
SONM Songino Array 90.11 322 P **P 18 51 28.1 -0.5**
TUC Tucson 90.19 56 P **P 18 51 29.7 +0.5**
TUC pmax pmax
comp=Z,10.0nm,1.3s
TUC Tucson 90.19 56 P **P 18 51 29.7 +0.5**
TUC Tucson 90.19 56 P **P 18 51 30.2 +1.0**
baz=246
GTA Gaotai 90.25 312 *e*P **P 18 51 30.2 +0.8**
GTA pmax pmax
comp=Z,5.0nm,1.0s
GTA pmax pmax
comp=Z,63nm,4.5s
GTA LR LR
comp=Z,230nm,15.8s
GTA LR LR
comp=Z,330nm,20.6s
GTA LR LR
comp=Z,470nm,21.0s
G08A Pilot Rock 90.30 41 P **P 18 51 29.1 -0.3**
LCMT Little Creek M 90.32 50 P **P 18 51 29.8 0.0**
CCUT Cedar City 90.47 50 P **P 18 51 30.8 +0.1**
HAWA Hanford 90.49 40 P **P 18 51 29.6 -0.5**
HAWA IAmb IAmb 18 51 31.4
comp=Z,18nm,1.1s
PSUT Pine Spring 90.55 49 P **P 18 51 30.7 -0.2**
X16A Lo Mia Camp, P 90.56 53 P **P 18 51 31.3 +0.3**
ELK Elko 90.57 46 P **P 18 51 30.7 -0.3**
ELK pmax pmax
comp=Z,5.0nm,1.0s
ELK Elko 90.57 46 P **P 18 51 30.7 -0.3**
IL31 90.59 16 P **P 18 51 29.6 -0.5**
IL31 IAmb IAmb 18 51 30.8
comp=Z,18nm,1.9s
ILAR Eielson Array 90.59 16 P **P 18 51 28.4 -1.8**
comp=Z,1.6nm,0.8s,baz=231,slow=4.9,SNR=16
ILAR LR LR 19 26 01.2
comp=Z,568nm,20.2s,baz=222,slow=32
KNB Kanab 90.63 51 P **P 18 51 31.8 +0.5**
KNB pmax pmax
comp=Z,29nm,1.5s
KNB Kanab 90.63 51 P **P 18 51 31.8 +0.5**
SZCU Shurtz Canyon 90.69 50 P **P 18 51 32.0 +0.4**
U15A North Rim 90.77 51 P **P 18 51 32.4 +0.3**
U15A IAmb IAmb 18 51 41.3
comp=Z,12nm,0.9s
WUAZ Wupatki 91.06 52 P **P 18 51 33.5 +0.2**
WUAZ IAmb IAmb 18 51 43.0
comp=Z,11nm,0.9s
WUAZ Wupatki 91.06 52 P **P 18 51 34.1 +0.8**
baz=246
MFID Camas Ranch 91.39 44 P **P 18 51 34.6 0.0**
F10A Beach Ranch, E 91.69 41 P **P 18 51 35.3 -0.6**
F10A IAmb IAmb 18 51 52.1
comp=Z,6.8nm,0.9s
EGAK Eagle 92.18 18 P **P 18 51 36.9 -0.7**
LSA Lhasa 92.82 301 P **P 18 51 41.6 -0.4**
LSA pmax pmax
comp=Z,21nm,1.9s
LSA Lhasa 92.82 301 P **P 18 51 41.6 -0.4**
LSA IAmb IAmb 18 51 45.6
comp=Z,21nm,1.9s
TLY Talaya 93.58 324 *i* P **P 18 51 44.6 +0.2**
TLY pmax pmax
comp=Z,8.0nm,0.9s
MNTX Cornudas Mount 94.19 58 P **P 18 51 46.8 -0.8**
TX31 Lajitas Ar. Si 94.72 61 P **P 18 51 48.9 -1.4**
TX31 IAmb IAmb 18 53 46.6
comp=Z,17nm,1.9s
TX32 Lajitas Array 94.72 61 P **P 18 51 49.2 -1.1**
TX32 IAmb IAmb 18 53 46.6
comp=Z,16nm,1.9s
TXAR Lajitas Array 94.72 61 P **P 18 51 49.6 -0.7**
TXAR Lajitas Array 94.72 61 P **P 18 51 50.4 +0.1**
comp=Z,0.8nm,0.8s,baz=230,slow=6.2,SNR=9.3
TXAR LR LR 19 25 46.5
comp=Z,304nm,21.7s,baz=0.0,slow=30
TXAR Lajitas Array 94.72 61 P **P 18 51 49.6 -0.7**
PDAR Pinedale Array 95.28 46 P **P 18 51 51.2 -1.5**
comp=Z,0.2nm,0.4s,baz=204,slow=2.0,SNR=4.6
PDAR LR LR 19 26 44.2
comp=Z,197nm,21.8s,baz=253,slow=30
S22A 4UR Ranch, Cre 95.30 52 P **P 18 51 52.2 -0.7**
PLCA Paso Flores 95.51 137 LR LR 19 25 28.8
comp=Z,427nm,21.6s,baz=276,slow=30
TIXI Tiksi 96.66 347 *i* P **P 18 51 56.1 -1.9**
TIXI pmax pmax
comp=Z,2.0nm,1.2s
WMQ Urumqi 100.32 313 *e*P **Pdif 18 52 16.1 +0.9**
WMQ pP sPdif 18 52 28.8 -0.1
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ LR LR
comp=Z,190nm,27.1s
WMQ LR LR
comp=Z,610nm,29.0s
WMQ LR LR
comp=Z,240nm,25.5s
YKA Yellowknife Ar 100.43 27 P **Pdif 18 52 15.9 +0.8**
comp=Z,0.4nm,1.0s,baz=249,slow=4.5,SNR=3.7
YKA PP PP 18 56 34.7 +13
comp=Z,0.2nm,0.7s,baz=277,slow=6.7,SNR=3.6
MKAR Makanchi Array 104.82 315 Pdiff **Pdif 18 52 35.8 +0.8**
comp=Z,0.5nm,0.9s,baz=120,slow=3.9,SNR=2.9
MKAR PP **PP 18 56 55.8 +0.3**
comp=Z,0.4nm,0.8s,baz=100,slow=6.3,SNR=3.9
ARU Arti 120.08 324 *i* PKIKP **PKiKP 18 57 19.3 +0.4**
ARU 18 58 43.1
ARU 19 04 28.5
ARU SP SP 19 08 29.2 0.0
ARU MLR MLR
comp=Z,244nm,19.0s
OBN Obninsk 132.25 327⇑ *e*PKIKP **PKiKP 18 57 44.4 +1.3**
OBN *e*SS SS 19 17 42.4 +2.4
OBN pmax pmax
comp=Z,4.0nm,0.9s
OBN MLR MLR
comp=Z,217nm,18.0s
KIV Kislovodsk 132.42 311 *i* PKIKP **PKiKP 18 57 43.4 -0.6**
KIV pmax pmax
comp=Z,19nm,0.9s
KIV MLR MLR
comp=Z,361nm,23.0s
AKASG Malin Array Be 138.32 325 PKP **PKPdf 18 57 51.4 -2.1**
comp=Z,0.1nm,0.3s,baz=35,slow=2.3,SNR=4.2
MLR Muntele Rosu 142.94 320⇑ PKIKP **PKPdf 18 58 00.7 -1.5**
MLR Muntele Rosu 142.94 320⇑ P **PKPdf 18 58 00.7 -1.5**
KOLS Kolonicke sedl 143.00 327 *e*PKIKP **PKPdf 18 58 03.0 +0.9**
KOLS Kolonicke sedl 143.00 327 *e*PKP **PKPdf 18 58 03.0 +0.9**
DOPR Dopca 143.02 321⇓ P PKPbc 18 57 59.9 +0.8
UZH Uzhgorod 143.18 327 *e*PKIKP PKPbc 18 58 00.0 +0.6
TRPA Tarpa 143.37 326⇓ P PKPbc 18 57 59.6 -0.2
VOIR 143.50 320⇑ PKIKP PKPbc 18 58 01.0 +0.5
VOIR 143.50 320⇑ P PKPbc 18 58 01.0 +0.5
ARR Arges 143.79 321⇓ P **PKPdf 18 58 02.6 -1.1**
HUMR Humele 144.02 319⇑ P **PKPab 18 58 01.3 -0.1**
ELND Elena 144.25 316⇑ P PKPbc 18 58 03.0 +0.3
LANS Liptovska Anna 144.25 329 *e*PKIKP **PKPdf 18 58 03.5 -0.8**
LANS Liptovska Anna 144.25 329 *e*PKP **PKPdf 18 58 03.5 -0.8**
OSTC Ostas 144.68 334 *e*PKP PKPbc 18 58 03.8 -0.1
MORC Moravsky Berou 144.69 332⇑ PKIKP PKPbc 18 58 04.0 +0.1
MORC Moravsky Berou 144.69 332⇑ P PKPbc 18 58 04.0 0.0
MORC Moravsky Berou 144.69 332 *e*PKP **PKPab 18 58 03.3 -0.5**
MORC Moravsky Berou 144.69 332 **PKPab 18 58 02.3 -1.5**
CHVC Chvalec 144.72 334 *e*PKP PKPbc 18 58 04.2 +0.2
DPC Dobruska-Polom 144.79 333 *e*PKIKP **PKPab 18 58 04.1 -0.1**
DPC Dobruska-Polom 144.79 333 *e*PKP **PKPab 18 58 04.1 -0.1**
KRLC Kraliky 144.80 333 *e*PKIKP **PKPab 18 58 03.9 -0.3**
KRLC Kraliky 144.80 333 *e*PKP **PKPab 18 58 03.9 -0.3**
UPC Upice 144.80 334 *e*PKIKP **PKPab 18 58 04.1 0.0**
UPC Upice 144.80 334 *e*PKP **PKPab 18 58 04.1 0.0**
PLVB Pleven 144.82 318⇑ P **PKPdf 18 58 05.1 -0.3**
GZR Gura Zlata 144.86 322⇑ PKIKP **PKPab 18 58 04.5 -0.1**
GZR Gura Zlata 144.86 322⇑ P **PKPab 18 58 04.5 -0.1**
PSZ Piszkesteto 144.87 327⇑ PKIKP **PKPdf 18 58 05.0 -0.5**
PSZ Piszkesteto 144.87 327⇑ P **PKPdf 18 58 05.0 -0.5**
PSZ Piszkesteto 144.87 327 **PKPab 18 58 03.3 -1.2**
SIRR Siria 144.98 324⇑ P **PKPdf 18 58 05.4 -0.2**

VYHS Vyhne 145.00 329 *e*PKIKP **PKPab 18 58 05.1 +0.1**
VYHS Vyhne 145.00 329 *e*PKP **PKPab 18 58 05.1 +0.1**
ALN Alexandroupoli 145.04 313 PKIKP **PKPbc 18 58 03.9 -1.4**
ALN Alexandroupoli 145.04 313 **PKPbc 18 58 03.9 -1.4**
JAVC Velka Javorina 145.29 330 *e*PKP **PKPdf 18 58 06.7 +0.6**
NRDL Niedersach Rie 145.31 341 *e*PKPbc **PKPab 18 58 05.6 -0.2**
baz=32,slow=2.8
CLL Collm 145.34 337⇓ *i*PKIKP **PKPbc 18 58 05.6 -0.3**
CLL *e* 18 58 11.0
CLL pmax pmax
comp=Z,38nm,1.1s
CLL MLR MLR
comp=Z,300nm,18.5s
CLL Collm 145.34 337⇓ *i*PKPdf **PKPbc 18 58 05.6 -0.3**
comp=Z,38nm,1.1s
CLL *e*pPKPdf **PKiKP 18 58 11.0 +1.0**
CLL *e*(SSS) 19 25 18.0
CLL Lm MLR 20 10 00.0
comp=Z,300nm,18.5s
CLL Collm 145.34 337 *e*PKPbc **PKPbc 18 58 05.5 -0.4**
baz=32,slow=2.8
CLL Collm 145.34 337 **PKPbc 18 58 04.6 -1.3**
BRG Berggiesshubel 145.34 336 *i* PKP **PKPbc 18 58 05.7 -0.2**
comp=Z,43nm,1.1s
BRG *i* 18 58 13.5
comp=Z,67nm,1.3s
BRG Berggiesshubel 145.34 336 *i* PKIKP **PKPbc 18 58 05.7 -0.2**
BRG *i* 18 58 13.5
BRG pmax pmax
comp=Z,43nm,1.1s
BRG pmax pmax
comp=Z,67nm,1.3s
BRG Berggiesshubel 145.34 336 *e*PKPbc **PKPbc 18 58 05.9 0.0**
baz=32,slow=2.8
PVCC Panska Ves 145.37 335 *e*PKIKP **PKPdf 18 58 06.0 -0.1**
PVCC Panska Ves 145.37 335 *e*PKP **PKPdf 18 58 06.0 -0.1**
BZS Buzias 145.40 323⇑ PKIKP **PKPbc 18 58 06.2 -0.1**
BZS Buzias 145.40 323⇑ P **PKPbc 18 58 06.2 -0.1**
ASSE Asse, Remlinge 145.44 340 *e*PKPbc **PKPdf 18 58 06.0 -0.1**
baz=32,slow=2.8
VRAC Vranov 145.46 332⇑ PKIKP **PKPab 18 58 06.8 +0.2**
VRAC Vranov 145.46 332⇑ P **PKPab 18 58 06.8 +0.2**
VRAC Vranov 145.46 332 *e*PKP **PKPdf 18 58 06.2 -0.1**
FBE Freiberg 145.53 337 *e*PKPbc **PKPbc 18 58 06.5 0.0**
baz=32,slow=2.8
SMOL Smolenice 145.65 330 *e*PKP2 **PKPab 18 58 07.7 +0.4**
SMOL Smolenice 145.65 330 *e*PKP **PKPab 18 58 07.7 +0.4**
KRUC Moravsky 145.72 332 *e*PKP **PKPdf 18 58 06.8 0.0**
GOPC GO Pecny, Ondr 145.76 334 *e*PKP2 **PKPbc 18 58 07.1 -0.2**
GOPC GO Pecny, Ondr 145.76 334 *e*PKP **PKPbc 18 58 07.1 -0.2**
PRU Pruhonice 145.81 334 *e*PKP2 **PKPdf 18 58 06.8 -0.1**
PRU Pruhonice 145.81 334 *e*PKP **PKPdf 18 58 06.8 -0.1**
MODS Modra-Piesok 145.82 330 *e*PKP2 **PKPdf 18 58 07.1 +0.1**
MODS Modra-Piesok 145.82 330 *e*PKP **PKPdf 18 58 07.1 +0.1**
MDVR Moldovita 145.83 322⇑ P **PKPdf 18 58 07.1 -0.1**
ZST Bratislava 146.03 330 *e*PKP2 **PKPbc 18 58 08.0 -0.2**
ZST Bratislava 146.03 330 *e*PKP **PKPbc 18 58 08.0 -0.2**
VTS Vitosha 146.09 317⇑ PKP2 **PKPbc 18 58 08.4 -0.4**
VTS Vitosha 146.09 317⇑ P **PKPbc 18 58 08.4 -0.4**
VTS Vitosha 146.09 317 **PKPdf 18 58 06.9 -0.9**
GTTG Guttingen 146.17 340 *e*PKPbc **PKPbc 18 58 08.4 -0.1**
baz=32,slow=2.8
TANN Tannenbergstha 146.27 337 *e*PKPbc **PKPbc 18 58 08.7 -0.2**
baz=32,slow=2.8
GUNZ Gunzen 146.36 337 *e*PKPbc **PKPbc 18 58 08.9 -0.3**
baz=32,slow=2.8
MOX Moxa 146.38 338 *e*PKPbc **PKPbc 18 58 09.0 -0.2**
baz=32,slow=2.8
WERN Wernitzgruen 146.41 337 *e*PKPbc **PKPbc 18 58 09.1 -0.2**
baz=32,slow=2.8
MORH Mrgy, Hungar 146.64 326 *e*P **PKPbc 18 58 09.3 -0.7**
FRGS Fruska Gora 146.69 324 *e*P **PKPbc 18 58 09.4 -0.9**
MANZ Manzenberg 146.75 337 *e*PKPbc **PKPbc 18 58 10.4 +0.1**
baz=32,slow=2.8
UBBA Unterbreizbach 146.79 340 *e*PKPbc **PKPbc 18 58 09.8 -0.3**
baz=32,slow=2.8
CONA Conrad Observa 146.80 331 *i* PKPab **PKPbc 18 58 10.1 -0.5**
comp=Z,19nm,1.5s,SNR=7.5
KHC Kasperske Hory 146.87 334 PKP2 **PKPbc 18 58 10.2 -0.5**
KHC Kasperske Hory 146.87 334 *e*PKP **PKPbc 18 58 09.7 -1.0**
KHC epPKP **PKiKP 18 58 16.0 +2.7**
KHC Kasperske Hory 146.87 334 **PKPbc 18 58 10.2 -0.5**
ROTZ Rotzenmuhle 146.89 336 *e*PKPbc **PKPbc 18 58 10.5 -0.2**
baz=32,slow=2.8
GEC2 GERESS Array S 147.04 334 *e*PKPbc **PKPbc 18 58 10.7 -0.5**
baz=32,slow=2.8
GEC2 GERESS Array S 147.04 334 **PKPbc 18 58 10.4 -0.8**
GERES GERESS Array B 147.04 334 PKPbc **PKPbc 18 58 10.8 -0.5**
comp=Z,6.4nm,0.9s,baz=33,slow=3.2,SNR=28
WET Wettzell 147.14 335 *e*PKPbc **PKPbc 18 58 11.3 -0.1**
baz=32,slow=2.8
VAY Valandovo 147.17 316 *e*P **PKPdf 18 58 10.3 +0.8**
DIVS Divibare 147.23 322 *e*P **PKPbc 18 58 11.3 -0.6**
STIP Stip 147.23 317 *i* P **PKPdf 18 58 10.2 +0.6**
GRF Grafenberg Arr 147.32 337 *e*PKPbc **PKPbc 18 58 11.7 -0.2**
baz=32,slow=2.8
ARSA Arzberg 147.45 330 *i* PKPbc **PKPbc 18 58 11.1 -1.2**
comp=Z,13nm,1.5s
SKO Skopje 147.56 318 *i* P **PKPbc 18 58 12.6 -0.2**
MOA Molln 147.57 332 *i* PKPab **PKPbc 18 58 12.4 -0.3**
comp=Z,20nm,1.8s
BBLS Lazići 147.71 322 *e*P **PKPbc 18 58 12.7 -0.5**
TNS Taunus Mts 147.80 341 *e*PKPbc **PKPbc 18 58 13.2 -0.1**
baz=32,slow=2.8
LIT Litokhoron 147.82 314 PKP2 **PKPbc 18 58 12.2 -1.4**
LIT Litokhoron 147.82 314 **PKPbc 18 58 12.2 -1.4**
SOKA Soboth 148.10 330 *i* pPKPdf **PKPbc 18 58 13.3 -0.9**
comp=Z,5.5nm,0.9s
FNA Florina 148.22 316 PKP2 **PKPbc 18 58 13.5 -1.2**
FNA Florina 148.22 316 **PKPbc 18 58 13.5 -1.2**
RJOB Jochberg 148.29 334 *e*PKPbc **PKPbc 18 58 14.3 -0.3**
baz=32,slow=2.8
BSTI Sart Tilman 148.29 344 x **PKPbc 18 58 14.2 -0.2**
BSTI pPKP **pPKPdf 18 58 19.5 -1.9**
BLY Banja Luka 148.38 325⇑ P **PKPbc 18 58 14.4 -0.5**
BLY Banja Luka 148.38 325 *e*P **PKPbc 18 58 14.0 -0.9**
BLY Banja Luka 148.38 325 **PKPbc 18 58 14.1 -0.7**
OHR Ohrid 148.43 317 *e*P **PKPbc 18 58 14.6 -0.6**
AGG Agios Georgios 148.43 312 PKP2 **PKPbc 18 58 13.9 -1.3**
AGG Agios Georgios 148.43 312 **PKPbc 18 58 13.9 -1.3**
OBKA Obir 148.45 330 *i* PKPbc **PKPbc 18 58 13.8 -1.3**
comp=Z,5.2nm,1.1s
CRES Cresnjev 148.51 329 *e*P **PKPbc 18 58 14.3 -0.9**
KBA Koelnbreinsper 148.56 332 *i* PKPbc **PKPbc 18 58 14.0 -1.5**
comp=Z,6.1nm,1.0s
MGRS Mrkonjic Grad 148.65 325 *e*P **PKPab 18 58 20.0 +0.8**
PDG Podgorica 148.65 320⇑ P **PKPbc 18 58 14.5 -1.2**
PDG Podgorica 148.65 320 *e*P **PKPbc 18 58 14.1 -1.5**
MYKA Terra Mystica 148.78 331 *i* pPKPdf **PKPbc 18 58 14.9 -1.0**
comp=Z,22nm,1.5s
LJU Ljubljana 148.81 330 *e*P **PKPbc 18 58 14.9 -1.0**
DRME Dracevica, Mon 148.84 320 *e*P **PKPbc 18 58 15.4 -0.7**
BOJS Bojanci 148.85 328 *e*PKPdf **PKPbc 18 58 15.7 -0.3**
WLF Walferdange 148.97 343 PKP2 **PKPbc 18 58 15.7 -0.5**
WLF Walferdange 148.97 343 *e*PKPbc **PKPbc 18 58 16.3 +0.1**
baz=32,slow=2.8
WLF Walferdange 148.97 343 PKPdf **PKPdf 18 58 10.8 -1.4**
WLF Walferdange 148.97 343 **PKPbc 18 58 15.7 -0.5**
DOU Dourbes 148.99 345 pPKP **PKPab 18 58 21.1 +0.8**
CEY Cerknica 149.08 329 *e*P **PKPbc 18 58 15.5 -1.2**
HCY Herceg Novi 149.10 321 *e*P **PKPbc 18 58 14.8 -2.0**
WATA Walderalm 149.11 334 *i* pPKPdf **PKPbc 18 58 16.1 -0.8**
comp=Z,22nm,0.9s
JAVS Javornik 149.13 330 *e*PKPdf **PKPbc 18 58 15.9 -1.0**
ABTA Abfaltersbach 149.18 333 *i* pPKPdf **PKPbc 18 58 15.9 -1.0**
comp=Z,13nm,1.3s
MOTA Moosalm 149.29 335 *i* pPKPdf **PKPbc 18 58 16.4 -0.9**
comp=Z,15nm,1.0s
STON Ston 149.30 322 *e*P **PKiKP 18 58 18.1 -0.3**
RETA Reutte 149.31 335 *i* PKiKP **PKPbc 18 58 16.7 -0.6**
comp=Z,9.6nm,1.3s
SQTA Sankt Quirin 149.35 335 *i* pPKPdf **PKPbc 18 58 16.5 -1.0**
comp=Z,11nm,1.0s
UBR Ueberruh 149.40 336 *e*PKPbc **PKPbc 18 58 16.7 -0.7**
baz=32,slow=2.8
STAL STALIGIAL 149.47 332 **PKPbc 18 58 16.2 -1.5**
BFO Black Forest 149.48 339 PKP2 **PKPbc 18 58 16.5 -1.1**
BFO Black Forest 149.48 339 *e*PKPbc **PKPbc 18 58 16.7 -0.9**
baz=32,slow=2.8
BFO Black Forest 149.48 339 **PKPbc 18 58 16.5 -1.1**
FETA Feichten 149.70 335 *i* PKiKP **PKPbc 18 58 17.8 -0.6**
comp=Z,13nm,1.1s,SNR=7.6
DAVA Damuels 149.81 336 *i* PKiKP **PKPbc 18 58 18.2 -0.4**
comp=Z,16nm,1.4s

ECH	**Echery**	**149.97**	**340**	PKHKP	**PKPbc**	**18 58 17.5**	**-1.3**
ECH	**Echery**	**149.97**	**340**		**PKPbc**	**18 58 17.5**	**-1.3**
CTI	**Castel Tesino**	**150.10**	**333**	PKIKP	**PKPbc**	**18 58 18.5**	**-0.8**
CTI	**Castel Tesino**	**150.10**	**333**		**PKPbc**	**18 58 18.5**	**-0.8**
FUORN	**Ofenpass-Fuorn**	**150.22**	**335**		**PKPbc**	**18 58 19.0**	**-0.8**
TEOL	**Teolo**	**150.63**	**332**		**PKPbc**	**18 58 18.7**	**-1.8**
TUE	**Stuetta**	**150.69**	**336**		**PKPbc**	**18 58 19.2**	**-1.6**
SGRT	**San Giovanni R**	**151.13**	**322**		**PKPbc**	**18 58 19.8**	**-2.0**
SENIN	**Lac Senin/Sane**	**151.54**	**338**		**PKPbc**	**18 58 22.4**	**-0.3**
ZCCA	**Zocca**	**151.73**	**331**		**PKPbc**	**18 58 23.1**	**+0.1**
MURB	**Monte Urbino**	**151.82**	**328**		**PKPbc**	**18 58 22.6**	**-0.7**
INTR	**Introdacqua**	**151.99**	**325**		**PKPbc**	**18 58 22.2**	**-1.5**
TIP	**Timpagrande**	**152.08**	**317**	⇓P	**PKPbc**	**18 58 23.7**	**-0.4**
TIP	**Timpagrande**	**152.08**	**317**		**PKPbc**	**18 58 22.9**	**-1.2**
ESDC	**Sonseca Array**	**160.69**	**352**	PKPab	**PKPab**	**18 59 09.8**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=14,slow=3.0,SNR=4.7						
TORD	**Torodi Ar. Bea**	**168.53**	**232**	PKP	**PKPdf**	**18 58 37.0**	**+0.9**
	comp=Z,1.4nm,1.0s,baz=310,slow=0.9,SNR=4.7						
TORD				PKPab	**PKPab**	**18 59 44.6**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=116,slow=1.9,SNR=2.4						

*IDC **09** 18:53:07.1±0.8, 33°.56S×72°.12W, h0km, mb4.1/6, mb1 4.2/10, mb1mx4.0/29, mbtmp4.1/10, ML4.2/4, MS3.4/4, Ms1 3.4/4, ms1mx3.2/20, Error ellipse: s-maj=31.9km s-min=18.6km az=104.0*
*GUC **09** 18:53:11.1±0.7, 33°.63S×71°.96W, h48km±5km, ML4.3*
*NEIC **09** 18:53:12.2±1.6, 33°.62S±0°.04×71°.9W±0°.2, h40km±7km, Error ellipse: s-maj=22.8km s-min=3.1km az=102.0*

ISC 09 18:53:07.4±1.7, 33°.58S±0°.04×72°.09W±0°.06, h5km±10km, n52, σ1ᵗ10/61, mb4.4/8, 4C-5D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.67**	**34**	⇑*iP*		**Pn**		**18 53 23.7**	**+0.2**
VA01				*eS*		**Sn**		**18 53 34.0**	**-0.4**
VA01				IAML				18 53 35.1	
	comp=E,14μm,0.4s								
ROC1	**El Roble**	**1.08**	**56**			**Pn**		**18 53 29.7**	**+0.2**
ROCH	**El Roble**	**1.09**	**56**	⇓*iP*		**Pn**		**18 53 29.9**	**+0.4**
ROCH				*eS*		**Sb**		**18 53 44.3**	**+0.9**
ROCH				IAML				18 53 52.0	
	comp=N,15μm,0.5s								
MT05	**Renca**	**1.14**	**81**	⇓*iP*		**Pb**		**18 53 30.1**	**+0.4**
MT05				*eS*		**Sb**		**18 53 46.0**	**+1.1**
MT05				IAML				18 53 47.4	
	comp=E,11μm,0.3s								
ANTU	**Antumapu**	**1.21**	**90**	*eP*		**Pb**		**18 53 31.4**	**+0.5**
ANTU				*eS*		**Sg**		**18 53 45.7**	**-0.8**
PEL	**Peldehue**	**1.25**	**70**	⇓*eP*		**Pn**		**18 53 32.2**	**+0.6**
PEL				*eS*		**Sg**		**18 53 47.9**	**+0.2**
PEL				IAML				18 53 55.2	
	comp=N,12μm,0.5s								
PEL	**Peldehue**	**1.25**	**70**			**Pn**		**18 53 32.5**	**+0.9**
FSR	**Penalolen**	**1.31**	**86**	*eP*		**Pn**		**18 53 33.8**	**+1.4**
FSR				*iS*		**Sg**		**18 53 50.1**	**+0.7**
CLCH	**Cerro Calan**	**1.31**	**82**	⇑*iP*		**Pg**		**18 53 32.7**	**+0.1**
CLCH				*eS*		**Sg**		**18 53 48.4**	**-1.1**
CLCH				IAML				18 53 56.1	
	comp=E,11μm,0.6s								
MT03	**Universidad Ad**	**1.32**	**87**	⇑*iP*		**Pg**		**18 53 32.6**	**-0.1**
MT03				*eS*		**Sg**		**18 53 49.2**	**-0.7**
MT03				IAML				18 53 57.5	
	comp=E,14μm,0.4s								
GO05	**Huala**	**1.43**	**175**	⇓*eP*		**Pg**		**18 53 34.8**	**0.0**
GO05				*eS*		**Sg**		**18 53 52.1**	**-1.3**
GO05				*eS*		**Sb**		**18 53 52.5**	**-0.6**
GO05	**Huala**	**1.43**	**175**	Pn		**Pb**		**18 53 35.0**	**+0.4**
FCH	**Farellones**	**1.52**	**81**	⇓*eP*		**Pg**		**18 53 36.5**	**-0.1**
FCH				*eS*		**Sg**		**18 53 55.6**	**-0.8**
FCH				IAML				18 54 00.8	
	comp=E,7μm,0.2s								
LMEL	**Las Melosas**	**1.59**	**100**	⇑*iP*		**Pn**		**18 53 36.8**	**+0.4**
LMEL				*eS*		**Sn**		**18 53 55.5**	**-1.9**
LMEL				IAML				18 54 04.7	
	comp=N,7μm,0.3s								
GO04	**Tololo Observa**	**3.57**	**18**			**Pn**		**18 54 05.0**	**+1.3**
CFA	**Coronel Fontan**	**3.80**	**60**	Pn		**Pn**		**18 54 09.0**	**+2.4**
	comp=N,63nm,0.3s,baz=233,slow=11,SNR=87								
CFA				Pg		**Pb**		**18 54 13.1**	**-1.9**
	comp=N,73nm,0.3s,baz=235,slow=13,SNR=116								
CFA				Lg		Lg		18 54 59.8	
	comp=N,45nm,0.3s,baz=20,slow=17,SNR=5.7								
CFA				LR		LR		18 55 49.6	
	comp=N,693nm,19.0s,baz=257,slow=43								
GO06	**Curarrehue**	**6.01**	**175**	Pn		**Pn**		**18 54 35.9**	**-1.2**
GO03	**Copiap**	**6.18**	**15**			**Pn**		**18 54 39.6**	**+0.2**
PLCA	**Paso Flores**	**7.24**	**171**	Pn		**Pn**		**18 54 56.6**	**+2.6**
	comp=N,0.8nm,0.3s,baz=356,slow=11,SNR=18								
PLCA				Lg		Lg		18 56 48.5	
	comp=N,0.2nm,0.3s,baz=110,slow=15,SNR=2.0								
PLCA				LR		LR		18 57 54.1	
	comp=N,184nm,19.5s,baz=1.0,slow=40								
PLCA	**Paso Flores**	**7.24**	**171**			**Pn**		**18 54 56.4**	**+2.4**
GO02	**Mina Guanaco**	**8.67**	**15**			**Pn**		**18 55 13.7**	**-0.1**
LVC	**Limon Verde**	**11.28**	**15**	LR		LR		19 00 19.7	
	comp=N,177nm,20.2s,baz=198,slow=38								
CPUP	**Villa Florida**	**14.68**	**64**	Pn		**Pn**		**18 56 37.6**	**+1.8**
	comp=N,0.2nm,0.3s,baz=235,slow=11,SNR=5.8								
CPUP				LR		LR		19 02 36.8	
	comp=N,210nm,19.5s,baz=238,slow=39								
CPUP	**Villa Florida**	**14.68**	**64**	P		**P**		**18 56 40.4**	**-1.8**
LPAZ	**La Paz**	**17.59**	**13**	P		**P**		**18 57 15.3**	**+0.2**
	comp=N,0.2nm,0.3s,baz=188,slow=8.4,SNR=12								
LPAZ	**La Paz**	**17.59**	**13**	P		**P**		**18 57 15.3**	**+0.2**
SIV	**San Ignacio**	**20.14**	**32**	P		**P**		**18 57 42.2**	**-0.3**
	comp=N,3.3nm,0.6s,baz=219,slow=13,SNR=7.4								
SPB	**Sao Paulo**	**23.77**	**72**	P		**P**		**18 58 20.9**	**-0.1**
SPB				IAmb		IAmb		18 58 21.7	
	comp=Z,21nm,0.9s								
SAML	**Samuel**	**25.85**	**21**	P		**P**		**18 58 40.0**	**0.0**
SAML				IAmb		IAmb		18 58 43.3	
	comp=Z,6.0nm,0.8s								
VNA3	**Neumayer Olymp**	**49.76**	**158**	P		**P**		**19 02 02.1**	**+1.7**
SNAA	**Sanae**	**51.99**	**158**	P		**P**		**19 02 18.5**	**+1.3**
SNAA	**Sanae**	**51.99**	**158**	P		**P**		**19 02 18.0**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=282,slow=8.8,SNR=11								
SNAA	**Sanae**	**51.99**	**158**	P		**P**		**19 02 14.9**	**-2.3**
QSPA	**South Pole Qui**	**56.65**	**180**	P		**P**		**19 02 52.6**	**+1.2**
	comp=Z,1.1nm,0.4s,baz=173,slow=3.1,SNR=5.2								
QSPA	**South Pole Qui**	**56.65**	**180**	P		**P**		**19 02 51.4**	**0.0**
QSPA				IAmb		IAmb		19 02 54.5	
	comp=Z,4.6nm,1.1s								
TXAR	**Lajitas Array**	**69.35**	**331**	P		**P**		**19 04 17.5**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=148,slow=9.7,SNR=4.5								
WVT	**Waverly**	**70.90**	**347**	P		**P**		**19 04 25.4**	**+0.1**
WVT				IAmb		IAmb		19 04 27.0	
	comp=Z,7.5nm,0.9s								
DBIC	**Dimbokro**	**75.08**	**71**	P		**P**		**19 04 50.4**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=161,slow=4.8,SNR=4.4								
TORD	**Torodi Ar. Bea**	**84.11**	**70**	P		**P**		**19 05 39.7**	**-0.1**
	comp=Z,3.4nm,0.7s,baz=265,slow=4.4,SNR=15								
SCHQ	**Schefferville**	**88.17**	**3**	LR		LR		19 44 02.3	
	comp=Z,482nm,21.2s,baz=274,slow=35								
ASAR	**Alice Springs**	**117.92**	**207**	PKP		**PKPdf**		**19 11 55.0**	**-0.7**
	comp=Z,0.4nm,0.9s,baz=129,slow=1.3,SNR=3.8								
ASAR	**Alice Springs**	**117.92**	**207**	PKPdf		**PKPdf**		**19 11 55.2**	**-0.4**
WRA	**Warramunga Arr**	**121.11**	**209**	PKP		**PKPdf**		**19 12 01.5**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=154,slow=2.2,SNR=4.5								
H11S2	**WAKE ISLAND Hyd**	**25.74**	**269**	T		T		21 31 01.2	
	baz=118,slow=75,SNR=12								
H11S1	**WAKE ISLAND Hyd**	**25.75**	**269**	T		T		21 31 02.2	
	baz=118,slow=75,SNR=23								
H11S3	**WAKE ISLAND Hyd**	**25.75**	**269**	T		T		21 31 02.7	
	baz=118,slow=75,SNR=14								
CHGR	**Chuyangaron**	**148.45**	**70**			**PKPdf**		**19 12 49.0**	**-2.6**
GAR	**Garm**	**149.37**	**69**			**PKPbc**		**19 12 57.4**	**-0.2**
NIL	**Nilore**	**151.21**	**80**			**PKPbc**		**19 13 01.1**	**-0.9**
ZALV	**Zalesovo Beam**	**153.89**	**32**	PKPbc		**PKPbc**		**19 13 07.7**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=307,slow=3.7,SNR=11								
ZALV				PKPab		**PKPab**		**19 13 21.1**	**+0.7**
	comp=Z,3.1nm,0.8s,baz=297,slow=5.3,SNR=7.5								
ZALV	**Zalesovo Beam**	**153.89**	**32**			**PKPbc**		**19 13 07.0**	**-0.3**
MKAR	**Makanchi Array**	**156.52**	**48**	PKPab		**PKPab**		**19 13 32.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=294,slow=3.3,SNR=8.0								

*IDC **09** 18:59:42.5±1.8, 43°.78N×105°.53W, h0km, mb3.6/1, mb1 3.6/4, mb1mx3.3/39, mbtmp3.4/4, ML3.5/2, Error ellipse: s-maj=46.3km s-min=8.5km az=149.0*
*NEIC **09** 18:59:43.0±1.0, 43°.77N±0°.05×105°.28W±0°.04, h0km±2km, ML3.1/53, Error ellipse: s-maj=9.3km s-min=3.1km az=147.0*

ISC 09 18:59:42.7±0.9, 43°.79N±0°.06×105°.29W±0°.06, h0km, n39, σ0ᵗ76/37, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.96**	**70**			**Pg**		**19 00 01.5**	**+0.3**
K22A	**Casper**	**1.45**	**219**			**Pn**		**19 00 08.5**	**-1.9**
K22A				IAML				19 00 36.6	
	comp=E,231nm,0.3s								
K22A				IAML				19 00 41.6	
	comp=N,289nm,0.3s								
PHWY	**Pilot Hill**	**2.49**	**183**			**Pn**		**19 00 23.9**	**-0.8**
RWWY	**Rawlins**	**2.53**	**215**			**Pn**		**19 00 25.3**	**0.0**
RWWY				IAML				19 01 05.4	
	comp=N,94nm,0.6s								
RWWY				IAML				19 01 07.6	
	comp=N,86nm,1.0s								
N23A	**Red Feather La**	**2.93**	**190**			**Pn**		**19 00 31.4**	**+0.5**
N23A				IAML				19 01 14.6	
	comp=N,54nm,0.5s								
N23A				IAML				19 01 18.2	
	comp=E,56nm,0.6s								
LAO	**LASA Array**	**2.97**	**348**			**Pn**		**19 00 31.9**	**+0.7**
LAO				IAML				19 01 30.8	
	comp=E,91nm,0.7s								
RLMT	**Red Lodge**	**3.14**	**296**			**Pn**		**19 00 32.5**	**-1.1**
RLMT				IAML				19 01 26.8	
	comp=E,45nm,0.9s								
RLMT				IAML				19 01 33.6	
	comp=E,35nm,0.3s								
BW06	**Boulder Array**	**3.28**	**253**			**Pn**		**19 00 35.8**	**+0.2**
BW06				IAML				19 01 36.1	
	comp=N,27nm,1.5s								
PD31	**Pinedale Array**	**3.28**	**253**			**Pn**		**19 00 35.8**	**+0.2**
PDAR	**Pinedale Array**	**3.28**	**253**	Pn		**Pn**		**19 00 36.1**	**+0.6**
	comp=N,4.5nm,0.3s,baz=72,slow=18,SNR=73								
PDAR				Lg		Lg		19 01 19.9	
	comp=N,12nm,0.3s,baz=75,slow=30,SNR=12								
PDAR	**Pinedale Array**	**3.28**	**253**			**Pn**		**19 00 35.8**	**+0.2**
YNE	**Yellowstone No**	**3.59**	**291**			**Pn**		**19 00 40.2**	**+0.4**
YMP	**Mirror Lake Pl**	**3.62**	**287**			**Pn**		**19 00 40.6**	**+0.3**
OGNE	**Ogallala**	**3.73**	**139**			**Pn**		**19 00 41.4**	**-0.2**
LKWY	**Lake**	**3.75**	**284**			**Pn**		**19 00 42.9**	**+0.8**
LKWY				IAML				19 01 07.6	
	comp=N,45nm,0.6s								
LKWY				IAML				19 01 54.4	
	comp=N,21nm,1.2s								
H17A	**Grant Village**	**3.85**	**281**			**Pn**		**19 00 44.9**	**+1.4**
H17A				IAML				19 01 46.3	
	comp=N,20nm,0.8s								
FLWY	**Flagg Ranch**	**3.92**	**276**			**Pn**		**19 00 44.6**	**+0.3**
FLWY				IAML				19 01 54.5	
	comp=N,47nm,1.9s								
FLWY				IAML				19 01 59.5	
	comp=N,29nm,1.7s								
MOOW	**Moose Ponds**	**3.95**	**271**			**Pn**		**19 00 45.8**	**+1.1**
SNOW	**Snow King Moun**	**3.98**	**267**	Pn		**Pn**		**19 00 45.8**	**+0.6**
SNOW				IAML				19 02 01.0	
	comp=N,24nm,0.8s								
SNOW				IAML				19 02 05.2	
	comp=N,39nm,1.9s								
ISCO	**Idaho Springs**	**4.00**	**184**			**Pn**		**19 00 45.9**	**+0.4**
REDW	**Red Top Meadow**	**4.06**	**266**			**Pn**		**19 00 47.3**	**+1.0**
REDW				IAML				19 01 59.3	
	comp=N,37nm,1.8s								
REDW				IAML				19 02 05.8	
	comp=N,39nm,1.9s								
YMR	**Madison River**	**4.17**	**284**			**Pb**		**19 00 57.4**	**+0.4**
O20A	**White River Ci**	**4.26**	**212**			**Pn**		**19 00 49.8**	**+0.7**
O20A				IAML				19 02 00.6	
	comp=E,30nm,1.3s								
O20A				IAML				19 02 46.4	
	comp=N,36nm,2.0s								
YHB	**Horse Butte**	**4.35**	**285**			**Pn**		**19 00 50.5**	**+0.3**
YHL	**Hebgen Lake**	**4.36**	**286**			**Pn**		**19 00 51.7**	**+1.3**
RDMU	**Red Mountain**	**4.52**	**226**			**Pn**		**19 00 52.8**	**+0.2**
DGMT	**Dagmar**	**4.74**	**9**			**Pn**		**19 00 57.2**	**+1.8**
KSCO	**Kaye Shedlock'**	**5.18**	**156**			**Pn**		**19 01 01.7**	**+0.2**
TCUT	**Toone Canyon**	**5.25**	**242**			**Pn**		**19 01 03.1**	**+0.5**
EGMT	**Eagleton**	**5.25**	**325**			**Pn**		**19 01 02.4**	**-0.1**
LRM	**Limekiln Ridge**	**5.48**	**294**	Pn		**Pn**		19 01 11.1	+5.3
P17A	**Butcher Ranch,**	**5.94**	**225**			**Pn**		**19 01 11.7**	**-0.3**
SRU	**San Rafael Swe**	**6.11**	**222**			**Pn**		**19 01 14.3**	**0.0**
ECSD	**EROS Data Cent**	**6.29**	**88**			**Pn**		**19 01 16.9**	**+0.3**
I10CA	**LAC DU BONNET**	**9.01**	**41**	*i*				19 54 00.0	
	baz=218,slow=323,SNR=3.2								
ULM	**Lac du Bonnet**	**9.11**	**42**	Pn		**Pn**		**19 01 55.0**	**-0.3**
	comp=N,1.5nm,0.3s,baz=226,slow=14,SNR=17								
ULM				Pg				19 02 28.4	
	comp=N,0.9nm,0.3s,baz=225,slow=17,SNR=5.3								
ULM				Lg		Lg		19 04 25.6	
	comp=N,0.6nm,0.3s,baz=135,slow=20,SNR=2.5								
ULM	**Lac du Bonnet**	**9.11**	**42**			**Pn**		**19 01 55.0**	**-0.3**
YKA	**Yellowknife Ar**	**19.51**	**347**	P		**P**		**19 04 10.8**	**-0.4**
	baz=161,slow=12								
MKAR	**Makanchi Array**	**89.55**	**355**	P		**P**		**19 12 40.8**	**-1.0**
	comp=N,0.2nm,0.6s,baz=13,slow=2.9,SNR=3.7								

IDC 09 19:23:06.9±2.4, 6°.49S×128°.96E, h0km, mb3.5/1, mb1 3.6/3, mb1mx3.4/22, mbtmp3.5/3, ML3.8/2, Error ellipse: s-maj=182.4km s-min=31.8km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.36**	**159**	Pn		Pn		19 26 30.3	-1.4
	0.6nm,0.3s,baz=341,slow=13,SNR=21								
WRA				Sn		Sn		19 28 59.2	-13
	0.5nm,0.3s,baz=344,slow=21,SNR=7.4								
ASAR	**Alice Springs**	**17.73**	**165**	P		P		19 27 16.4	0.0
	0.2nm,0.3s,baz=346,slow=8.5,SNR=12								
ASAR				S		Sn		19 30 24.4	-9.4
	0.1nm,0.3s,baz=189,slow=22,SNR=5.1								
MKAR	**Makanchi Array**	**67.24**	**327**	P		P		19 34 03.2	0.0
	0.4nm,0.8s,baz=111,slow=8.2,SNR=4.5								

*JMA **09** 19:47:25.9±0.2, 24°.68N×121°.70E, h91km±2km, M2.9*
*TAP **09** 19:47:26.8, 24°.71N×121°.75E, h87km, ML3.7, B*
ISC 09 19:47:26.8±1.2, 24°.74N±0°.03×121°.74E±0°.02, h89km±5km, n123, σ0ᵗ61/205, 35C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ILA	**Ilan**	**0.03**	**18**	P		**Pn**		**19 47 40.0**	**+0.7**
	baz=347								
ILA				S		**Sn**		**19 47 49.4**	**+0.8**
	baz=347								
TWE	**Neicheng**	**0.07**	**257**	⇑*iP*		**Pn**		**19 47 39.5**	**+0.2**
	baz=277								
TWE				*eS*		**Sn**		**19 47 48.9**	**+0.3**
	baz=277								
SLBB	**Yuanshan**	**0.09**	**281**	P		**Pn**		**19 47 38.5**	**-0.9**
	baz=292								
SLBB				*eS*		**Sn**		**19 47 48.1**	**-0.7**
	baz=292								
NTC	**Toucheng**	**0.14**	**36**	*eP*		**Pn**		**19 47 39.8**	**+0.3**
	baz=14								
NTC				*eS*		**Sn**		**19 47 49.1**	**+0.2**
	baz=14								
TWC	**Suao**	**0.16**	**141**	⇑*iP*		**Pn**		**19 47 40.1**	**+0.5**
	baz=136								
TWC				S		**Sn**		**19 47 49.9**	**+1.0**
	baz=136								
ENTT	**Nioudou**	**0.18**	**238**	⇑*iP*		**Pn**		**19 47 39.8**	**+0.2**
	baz=256								
ENTT				S		**Sn**		**19 47 49.0**	**-0.2**
	baz=256								
NWLT	**Wulai**	**0.22**	**281**	⇑*iP*		**Pn**		**19 47 39.5**	**-0.2**
	baz=292								
NWLT				S		**Sn**		**19 47 48.4**	**-1.0**
	baz=292								
NDT	**Datong Townshi**	**0.24**	**237**	⇑*iP*		**Pn**		**19 47 40.0**	**+0.1**
	baz=253								
NDT				S		**Sn**		**19 47 49.0**	**-0.5**
	baz=253								
TIPB	**Shuangxi**	**0.25**	**19**	⇓*iP*		**Pn**		**19 47 40.3**	**+0.4**
	baz=1.0								
TIPB				S		**Sn**		**19 47 49.7**	**+0.1**
	baz=1.0								
TWA	**Mucha**	**0.28**	**330**	⇓*iP*		**Pn**		**19 47 40.1**	**+0.1**
	baz=324								
TWA				S		**Sn**		**19 47 49.4**	**-0.5**
	baz=324								
ENA	**Nanau**	**0.31**	**179**	⇑P		**Pn**		**19 47 39.9**	**-0.2**
	baz=192								
ENA				*eS*		**Sn**		**19 47 51.1**	**+1.1**
	baz=192								
NANB	**Nanao**	**0.31**	**178**	⇑*iP*		**Pn**		**19 47 39.9**	**-0.2**
	baz=191								
NANB				*eS*		**Sn**		**19 47 50.9**	**+0.8**
	baz=191								
YHNB	**Yeheng**	**0.34**	**259**	⇑P		**Pn**		**19 47 40.1**	**-0.3**
	baz=264								
YHNB				S		**Sn**		**19 47 49.4**	**-1.1**
	baz=264								
NWF	**Wu-fen Shan**	**0.34**	**7**	⇓P		**Pn**		**19 47 40.6**	**+0.2**
	baz=356								
NWF				S		**Sn**		**19 47 50.3**	**-0.2**
	baz=356								
WFSB	**Wu-fen Shan**	**0.34**	**7**	⇓P		**Pn**		**19 47 40.6**	**+0.3**
	baz=356								
WFSB				S		**Sn**		**19 47 50.3**	**-0.1**
	baz=356								
NSK	**Sanguang**	**0.35**	**260**	⇑*iP*		**Pn**		**19 47 40.2**	**-0.3**
	baz=264								
NSK				S		**Sn**		**19 47 49.6**	**-1.0**
	baz=264								
TWB1	**Santiao Chiao**	**0.35**	**40**	P		**Pn**		**19 47 40.7**	**+0.3**
	baz=46								
TWB1				S		**Sn**		**19 47 51.0**	**+0.5**
	baz=46								
TAP	**Taipei**	**0.37**	**325**	P		**Pn**		**19 47 40.4**	**-0.1**
	baz=318								
TAP				S		**Sn**		**19 47 50.2**	**-0.4**
	baz=318								
EOS1	**EOS1**	**0.40**	**117**	*eP*		**Pn**		**19 47 41.2**	**+0.6**
	baz=103								
YM01	**YM01**	**0.44**	**340**	⇓*iP*		**Pn**		**19 47 41.0**	**0.0**
	baz=330								
YM01				S		**Sn**		**19 47 51.1**	**-0.5**
	baz=330								
NNS	**Nan Shan**	**0.44**	**228**	⇑*iP*		**Pn**		**19 47 41.3**	**+0.1**
	baz=233								
NNS				S		**Sn**		**19 47 51.8**	**0.0**
	baz=233								
NNSH	**Datong**	**0.45**	**227**	⇑P		**Pn**		**19 47 41.2**	**+0.1**
	baz=234								
NNSH				S		**Sn**		**19 47 51.7**	**-0.1**
	baz=234								
YM10	**YM10**	**0.45**	**339**	P		**Pn**		**19 47 41.1**	**-0.1**
	baz=331								
YM10				S		**Sn**		**19 47 51.2**	**-0.6**
	baz=331								
YM11	**YM11**	**0.45**	**341**	P		**Pn**		**19 47 41.1**	**0.0**
	baz=332								
YM11				S		**Sn**		**19 47 51.4**	**-0.5**
	baz=332								
WLTB	**Daxi**	**0.46**	**285**	⇑*iP*		**Pn**		**19 47 41.4**	**+0.4**
	baz=287								
WLTB				S		**Sn**		**19 47 52.0**	**+0.3**
	baz=287								
TWS1	**Kuangyinshan**	**0.47**	**321**	⇓*iP*		**Pn**		**19 47 41.4**	**+0.2**
	baz=311								
TWS1				S		**Sn**		**19 47 52.0**	**+0.2**
	baz=311								
YM08	**YM08**	**0.47**	**343**	*eP*		**Pn**		**19 47 41.0**	**-0.2**
	baz=334								
YM08				S		**Sn**		**19 47 50.9**	**-1.1**
	baz=334								
ANP	**Anpu**	**0.49**	**336**	*eP*		**Pn**		**19 47 41.1**	**-0.3**
	baz=331								
ANP				*eS*		**Sn**		**19 47 51.5**	**-0.8**
	baz=331								
NTST	**Danshui**	**0.50**	**329**	*eP*		**Pn**		**19 47 41.6**	**+0.2**
	baz=317								
NTST				*eS*		**Sn**		**19 47 52.6**	**+0.3**
	baz=317								
NCU	**National Centr**	**0.55**	**295**	⇑P		**Pn**		**19 47 42.1**	**+0.3**
	baz=290								
NCU				S		**Sn**		**19 47 53.3**	**+0.3**
	baz=290								
NCUH	**Zhongli**	**0.55**	**295**	P		**Pn**		**19 47 42.0**	**+0.2**
	baz=290								
NCUH				S		**Sn**		**19 47 53.3**	**+0.3**
	baz=290								
TWY	**Chenhua**	**0.55**	**347**	*eP*		**Pn**		**19 47 42.2**	**+0.4**
	baz=338								
TWY				*eS*		**Sn**		**19 47 53.6**	**+0.5**
	baz=338								
NACB	**Ninganchiao**	**0.57**	**193**	⇑P		**Pn**		**19 47 41.1**	**-1.0**
	baz=204								
NACB				*eS*		**Sn**		**19 47 52.7**	**-0.7**
	baz=204								
ETLH	**Xiulin Townshi**	**0.58**	**204**	⇑P		**Pn**		**19 47 41.9**	**-0

EGFH	**Guangfu**	**1.10**	**195**	*e*P		**Pn**	**19 47 46.5**	**-1.1**
	baz=200								
EGFH				*e*S		**Sn**	**19 48 01.9**	**-1.2**
	baz=200								
VWDT	**VWDT**	**1.12**	**209**	P		**Pn**	**19 47 48.3**	**+0.5**
	baz=221								
VWDT				*e*S		**Sn**	**19 48 04.6**	**+1.0**
	baz=221								
TCU	**Taichung**	**1.13**	**239**	P		**Pn**	**19 47 48.3**	**+0.4**
	baz=242								
TCU				*e*S		**Sn**	**19 48 04.0**	**+0.2**
	baz=242								
JYNG	**Yonagunijimaku**	**1.14**	**104**	P		**Pn**	**19 47 47.8**	**-0.2**
JYNG				S		**Sn**	**19 48 03.1**	**-0.8**
TYC	**Yuchr**	**1.15**	**224**⇑	*i*P		**Pn**	**19 47 48.6**	**+0.4**
	baz=228								
TYC				*e*S		**Sn**	**19 48 04.7**	**+0.4**
	baz=228								
SSLB	**Suanglung**	**1.18**	**217**	⇑P		**Pn**	**19 47 49.0**	**+0.4**
	baz=231								
SSLB				S		**Sn**	**19 48 05.4**	**+0.4**
	baz=231								
YOJ	**Yonaguni jima**	**1.19**	**103**	P		**Pn**	**19 47 48.4**	**-0.2**
YOJ				*e*S		**Sn**	**19 48 04.7**	**-0.4**
WCHH	**Zhanghua**	**1.26**	**239**	⇑P		**Pn**	**19 47 49.7**	**+0.3**
	baz=243								
WCHH				*e*S		**Sn**	**19 48 06.8**	**+0.2**
	baz=243								
HGSD	**Ruisui**	**1.27**	**193**	*e*P		**Pn**	**19 47 49.2**	**-0.5**
	baz=203								
HGSD				*e*S		**Sn**	**19 48 07.3**	**+0.5**
	baz=203								
EHY	**Hungye**	**1.28**	**197**	*e*P		**Pn**	**19 47 48.5**	**-1.3**
	baz=192								
WNT	**Mingjian**	**1.29**	**229**	⇓P		**Pn**	**19 47 50.4**	**+0.6**
	baz=240								
WNT				*e*S		**Sn**	**19 48 07.8**	**+0.6**
	baz=240								
WJS	**Zhushan**	**1.29**	**226**	*e*P		**Pn**	**19 47 50.3**	**+0.3**
	baz=238								
WJS				*e*S		**Sn**	**19 48 07.8**	**+0.5**
	baz=238								
WHYT	**Xinyi Township**	**1.31**	**218**	*e*P		**Pn**	**19 47 50.7**	**+0.5**
	baz=230								
WHYT				*e*S		**Sn**	**19 48 08.8**	**+0.9**
	baz=230								
YULB	**Yu-li**	**1.40**	**197**	*e*P		**Pn**	**19 47 49.5**	**-1.7**
	baz=193								
YUS	**Yu-Shan**	**1.43**	**210**	*e*P		**Pn**	**19 47 52.6**	**+0.5**
	baz=225								
YUS				*e*S		**Sn**	**19 48 11.6**	**+0.4**
	baz=225								
TWF1	**Yuli**	**1.44**	**196**	*e*P		**Pn**	**19 47 50.6**	**-1.1**
	baz=195								
ALS	**Alishan**	**1.49**	**215**	*e*P		**Pn**	**19 47 53.0**	**+0.4**
	baz=228								
ALS				*e*S		**Sn**	**19 48 12.8**	**+0.7**
	baz=228								
CHN5	**Tsauling**	**1.49**	**221**	⇑P		**Pn**	**19 47 52.7**	**+0.2**
	baz=225								
CHN5				*e*S		**Sn**	**19 48 12.2**	**+0.4**
	baz=225								
WGK	**Gukeng**	**1.50**	**226**⇑	*i*P		**Pn**	**19 47 53.0**	**+0.6**
	baz=239								
WGK				*e*S		**Sn**	**19 48 12.7**	**+0.8**
	baz=239								
RLNB	**Erlin**	**1.51**	**236**	*e*P		**Pn**	**19 47 52.7**	**+0.1**
	baz=245								
FULB	**Fuli**	**1.58**	**195**	*e*P		**Pn**	**19 47 53.8**	**+0.2**
	baz=200								
FULB				*e*S		**Sn**	**19 48 14.2**	**+0.4**
	baz=200								
CHN2	**Minshiung**	**1.66**	**224**	*e*P		**Pn**	**19 47 54.8**	**+0.2**
	baz=234								
CHKT	**Chengkung**	**1.67**	**192**	*e*P		**Pn**	**19 47 54.5**	**-0.1**
	baz=183								
CHKT				*e*S		**Sn**	**19 48 15.6**	**0.0**
	baz=183								
ELDTW	**Lidau**	**1.68**	**203**	*e*P		**Pn**	**19 47 54.7**	**-0.2**
	baz=201								
ELDTW				*e*S		**Sn**	**19 48 16.4**	**+0.2**
	baz=201								
CHY	**Chiayi**	**1.72**	**224**	*e*P		**Pn**	**19 47 55.6**	**+0.3**
	baz=226								
CHN4	**Tsaushan**	**1.73**	**217**	*e*P		**Pn**	**19 47 55.9**	**+0.5**
	baz=219								
TPUB	**Ta-pu**	**1.75**	**216**	*e*P		**Pn**	**19 47 56.1**	**+0.3**
	baz=221								
TPUB				*e*S		**Sn**	**19 48 19.3**	**+1.5**
	baz=221								
WSF	**Szhu**	**1.76**	**232**	*e*P		**Pn**	**19 47 55.7**	**-0.1**
	baz=234								
WTP	**Ta-pu**	**1.80**	**215**	P		**Pn**	**19 47 56.8**	**+0.4**
	baz=226								
STYT	**Tauyuan**	**1.81**	**210**	*e*P		**Pn**	**19 47 57.0**	**+0.6**
	baz=212								
WLGB	**Puzi**	**1.81**	**227**	*e*P		**Pn**	**19 47 56.7**	**+0.2**
	baz=235								
TWK	**Hsinying**	**1.86**	**218**	*e*P		**Pn**	**19 47 57.4**	**+0.2**
	baz=223								
TWK				*e*S		**Sn**	**19 48 21.3**	**+1.1**
	baz=223								
SNST	**Tainan City**	**1.89**	**217**	*e*P		**Pn**	**19 47 58.0**	**+0.5**
	baz=219								
CHN1	**Nanshi**	**1.90**	**216**	⇑P		**Pn**	**19 47 57.9**	**+0.2**
	baz=221								
CHN1				*e*S		**Sn**	**19 48 21.3**	**+0.1**
	baz=221								
PTTC	**Pingtan**	**1.94**	**294**	*e*P		**Pn**	**19 47 57.6**	**-0.6**
	baz=293								
SGST	**Jiashian**	**1.96**	**213**	⇓P		**Pn**	**19 47 58.0**	**-0.4**
	baz=226								
SGST				*e*S		**Sn**	**19 48 21.2**	**-1.3**
	baz=226								
CHN8	**Yiju**	**1.96**	**226**	*e*P		**Pn**	**19 47 58.5**	**0.0**
	baz=239								
CHN8				*e*S		**Sn**	**19 48 23.4**	**+0.7**
	baz=239								
SLGT	**Liugui**	**2.00**	**210**	*e*P		**Pn**	**19 47 59.9**	**+0.9**
	baz=212								
TWG	**Pinlang**	**2.00**	**198**	*e*P		**Pn**	**19 47 58.4**	**-0.6**
	baz=192								
TWG				*e*S		**Sn**	**19 48 22.0**	**-1.6**
	baz=192								
HATJ	**Hateruma jima**	**2.00**	**109**	*e*S		**Sn**	**19 48 23.6**	**+0.1**
TWGBT	**Beinan**	**2.00**	**198**	*e*P		**Pn**	**19 47 58.2**	**-0.8**
	baz=190								
VWUC	**VWUC**	**2.09**	**277**	*e*P		**Pn**	**19 47 59.5**	**-0.6**
	baz=277								
SCLT	**Jiali**	**2.10**	**223**	*e*P		**Pn**	**19 48 00.6**	**+0.3**
	baz=235								
JKRS	**Kuro-shima**	**2.13**	**103**	P		**Pn**	**19 48 00.9**	**+0.3**
JKRS				S		**Sn**	**19 48 26.4**	**-0.1**
MATB	**Ma-tsu**	**2.15**	**311**	*e*P		**Pn**	**19 48 00.1**	**-0.8**
	baz=310								
JIJ	**Ishigaki jima**	**2.22**	**99**	P		**Pn**	**19 48 01.6**	**-0.3**
JIJ				S		**Sn**	**19 48 27.2**	**-1.5**
SSD	**Sandimen**	**2.23**	**207**	*e*P		**Pn**	**19 48 02.5**	**+0.6**
	baz=209								
ECL	**Taimali**	**2.25**	**199**	*e*P		**Pn**	**19 48 01.5**	**-0.8**
	baz=194								
ECL				*e*S		**Sn**	**19 48 28.5**	**-0.9**
	baz=194								
PNG	**Penghu**	**2.31**	**240**	*e*P		**Pn**	**19 48 02.1**	**-0.9**
	baz=242								
PHUB	**P'eng-hu**	**2.32**	**239**	*e*P		**Pn**	**19 48 02.3**	**-0.9**
	baz=240								
MASBT	**Mashibuluo**	**2.34**	**206**	*e*P		**Pn**	**19 48 04.1**	**+0.6**
	baz=207								
JISG	**Ishigakijimahi**	**2.35**	**93**	P		**Pn**	**19 48 03.5**	**0.0**
JISG				*e*S		**Sn**	**19 48 30.6**	**-1.1**
PTMZ	**Houxiangcun**	**2.40**	**278**⇑	*e*P		**Pn**	**19 48 03.6**	**-0.6**
	baz=277								
EAST	**Anshuo**	**2.48**	**199**	*e*P		**Pn**	**19 48 05.3**	**-0.1**
	baz=191								
WSSB	**Gushan**	**2.48**	**213**	*e*P		**Pn**	**19 48 06.0**	**+0.5**
	baz=215								
LYJJ	**Jianjiangzhen**	**2.54**	**316**	*e*P		**Pn**	**19 48 07.3**	**+1.2**
	baz=315								
SCZT	**Fangliau**	**2.57**	**204**	*e*P		**Pn**	**19 48 07.0**	**+0.5**
	baz=205								
XPSS	**Dashiqiu**	**2.59**	**328**⇓	*e*P		**Pn**	**19 48 06.0**	**-0.8**
	baz=326								
VCHM	**Qimei**	**2.60**	**235**	*e*P		**Pn**	**19 48 06.3**	**-0.7**
	baz=236								
JTJ	**Tarama**	**2.70**	**91**	P		**Pn**	**19 48 08.7**	**+0.5**
JTJ				*e*S		**Sn**	**19 48 40.0**	**-0.1**
MHZQ	**Yeshan**	**2.80**	**300**	*e*P		**Pn**	**19 48 08.8**	**-0.8**
	baz=299								
KNM	**Kinmen**	**3.02**	**265**	*e*P		**Pn**	**19 48 13.5**	**+0.9**
	baz=264								
KNMB	**Chin-men Tao**	**3.06**	**266**	*e*P		**Pn**	**19 48 12.1**	**-1.0**
	baz=265								
JIRB	**Irabujima**	**3.12**	**88**	S		**Sn**	**19 48 50.6**	**+0.3**
JIKM	**Ikemajima**	**3.19**	**86**	S		**Sn**	**19 48 53.2**	**+1.2**
JMJ	**Miyako jima 2**	**3.23**	**88**	*e*P		**Pn**	**19 48 16.4**	**+1.0**
	baz=91								
JMJ2	**Miyako jima3**	**3.27**	**89**	P		**Pn**	**19 48 17.2**	**+1.4**
JMJ2				*e*S		**Sn**	**19 48 54.2**	**+0.5**
AXDP	**Jialang**	**3.43**	**274**⇑	*e*P		**Pn**	**19 48 17.6**	**-0.4**
	baz=272								
ZPLA	**Ao Xicun**	**3.72**	**258**	*e*P		**Pn**	**19 48 21.9**	**-0.2**
	baz=258								

*IDC **09** 20:15:59.8±4.2,21.˚46S×70.˚09W,h0km,mb3.4/1, mb1 3.4/2,mb1mx3.3/23,mbtmp3.3/2,ML3.1/1,Error ellipse: s-maj=148.1km s-min=63.3km az=95.0*
*GUC **09** 20:16:04.9±0.7,20.˚57S×70.˚54W,h35km±1km,ML2.9*

ISC 09 20:16:04.7±1.6,**20.˚59S**±0.˚03×**70.˚55W**±0.˚09,**h31**km±10km, **n19**,σ0**s82**/22,**5C-3D**,**Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.34**	**87**	*e*P		**Pb**	**20 16 12.8**	**0.0**
TA01				*e*S		**Sn**	**20 16 18.8**	**-0.6**
TA01				IAML			20 16 19.9	
	comp=N,1μm,0.6s							
PATCX	**Punta Patache**	**0.44**	**122**⇓	*e*P		**Pb**	**20 16 14.0**	**-0.2**
PATCX				*e*S		**Sn**	**20 16 21.2**	**-0.7**
PATCX				IAML			20 16 21.8	
	comp=E,1μm,0.2s							
PSGC	**Pisagua**	**1.06**	**22**⇓	*e*P		**Pn**	**20 16 23.7**	**+0.2**
PSGC				*e*S		**Sb**	**20 16 37.9**	**-0.3**
PSGC				IAML			20 16 40.9	
	comp=E,463nm,0.2s							
PB11	**IPOC Station P**	**1.17**	**46**⇑	*i*P		**Pn**	**20 16 25.8**	**+0.7**
PB11				*e*S		**Sb**	**20 16 41.2**	**-0.2**
PB11				IAML			20 16 44.4	
	comp=N,601nm,0.4s							
PB08	**IPOC Station P**	**1.38**	**72**⇑	*i*P		**Pb**	**20 16 29.5**	**-0.7**
PB08				*e*S		**Sb**	**20 16 48.0**	**+0.4**
PB08				IAML			20 16 52.4	
	comp=N,306nm,0.6s							
GO01	**Chusmiza**	**1.56**	**55**⇓	*e*P		**Pb**	**20 16 32.5**	**-0.8**
GO01				*e*S		**Sb**	**20 16 53.3**	**+0.4**
PB03	**IPOC Station P**	**1.63**	**153**⇑	*i*P		**Pb**	**20 16 33.2**	**-1.1**
PB03				*e*S		**Sb**	**20 16 55.5**	**+1.0**
PB03				IAML			20 17 02.1	
	comp=E,220nm,0.2s							
MNMC	**Minye Minye**	**1.70**	**32**⇑	*i*P		**Pn**	**20 16 34.1**	**+1.6**
MNMC				*e*S		**Sb**	**20 16 56.2**	**-0.4**
PB09	**IPOC Station P**	**1.71**	**135**⇑	*i*P		**Pb**	**20 16 34.9**	**-0.8**
PB09				*e*S		**Sb**	**20 16 57.1**	**+0.2**
PB09				IAML			20 17 09.9	
	comp=E,256nm,0.6s							
PB04	**IPOC Station P**	**1.78**	**168**	*e*P		**Pn**	**20 16 34.5**	**+1.1**
PB04				*i* S		**Sb**	**20 16 58.0**	**-0.8**
PB04				IAML			20 17 03.3	
	comp=N,441nm,0.7s							
LPAZ	**La Paz**	**4.85**	**29**	Pn		Pn	20 17 23.1	+6.9
	comp=N,0.3nm,0.3s,baz=200,slow=6.3,SNR=12							
TORD	**Torodi Ar. Bea**	**78.50**	**71**	P		**P**	**20 28 02.8**	**-0.6**
	comp=N,0.2nm,0.5s,baz=246,slow=7.0,SNR=2.9							
H11S2	**WAKE ISLAND Hyd**	**26.24**	**278**	T		T	22 54 06.9	
	baz=103,slow=75,SNR=21							
H11S1	**WAKE ISLAND Hyd**	**26.25**	**278**	T		T	22 54 07.7	
	baz=103,slow=75,SNR=13							
H11S3	**WAKE ISLAND Hyd**	**26.26**	**278**	T		T	22 53 51.0	
	baz=103,slow=75,SNR=13							
H11N3	**WAKE ISLAND Hyd**	**26.30**	**280**	T		T	22 54 11.7	
	baz=102,slow=75,SNR=9.0							
H11N2	**WAKE ISLAND Hyd**	**26.32**	**280**	T		T	22 54 11.3	
	baz=102,slow=75,SNR=7.1							
H11N1	**WAKE ISLAND Hyd**	**26.32**	**280**	T		T	22 53 57.9	
	baz=102,slow=75,SNR=8.3							
MKAR	**Makanchi Array**	**145.76**	**34**	PKPbc		**PKPdf**	**20 35 41.4**	**+1.2**
	comp=N,0.2nm,0.5s,baz=282,slow=4.4,SNR=5.0							

*IDC **09** 20:35:33.2±0.7,17.˚55N×147.˚77E,h0km,mb3.9/12, mb1 4.1/13,mb1mx3.9/43,mbtmp3.9/13,ML4.3/1,Error ellipse: s-maj=24.6km s-min=16.0km az=98.0*
*NEIC **09** 20:35:40.1±1.1,17.˚4N±0.˚1×147.˚7E±0.˚2,h52km±8km, mb4.6/15,Error ellipse: s-maj=24.3km s-min=10.7km az=121.0*

ISC 09 20:35:37.1±0.7,**17.˚48N**±0.˚09×**147.˚7E**±0.˚1,**h26**km,**n36**, σ0**s89**/39,**mb4.2**/17,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.72**	**215**	Pn		**Pn**	**20 36 48.5**	**+1.9**
	13nm,0.3s,baz=194,slow=4.2,SNR=4.8							
GUMO					Sn	**Sn**	**20 37 38.9**	**-1.6**
	19nm,0.3s,baz=180,slow=20,SNR=3.3							
GUMO	**Guam**	**4.72**	**215**			**Pn**	**20 36 48.1**	**+1.5**
GUMO						**Sn**	**20 37 38.4**	**-2.2**
MJAR	**Matsushiro Arr**	**20.76**	**338**	P		**P**	**20 40 16.2**	**+0.2**
	5.5nm,0.9s,baz=167,slow=11,SNR=5.7							
MJAR	**Matsushiro Arr**	**20.76**	**338**	P		Pn	20 40 16.7	-1.8
KSRS	**Korea Array**	**26.42**	**323**	P		**P**	**20 41 11.7**	**+0.1**
	0.9nm,0.6s,baz=150,slow=9.2,SNR=4.7							
WRA	**Warramunga Arr**	**39.42**	**200**	P		**P**	**20 43 05.6**	**+0.4**
	0.8nm,0.9s,baz=33,slow=9.0,SNR=9.0							
WRA					PcP	**PcP**	**20 45 13.8**	**+0.7**
	0.5nm,0.7s,baz=15,slow=3.6,SNR=4.1							
WRA	**Warramunga Arr**	**39.42**	**200**	P		**P**	**20 43 05.1**	**0.0**
ASAR	**Alice Springs**	**43.05**	**199**	P		**P**	**20 43 34.8**	**-0.1**
	0.4nm,0.8s,baz=24,slow=9.2,SNR=3.9							
ASAR					PcP	**PcP**	**20 45 26.0**	**+1.1**
	0.3nm,0.6s,baz=21,slow=2.4,SNR=3.9							
SONM	**Songino Array**	**45.27**	**321**	P		**P**	**20 43 53.5**	**+0.9**
	0.6nm,0.7s,baz=123,slow=7.3,SNR=5.6							
SONM	**Songino Array**	**45.27**	**321**	P		**P**	**20 43 53.1**	**+0.4**
CM31	**Chiang Mai Arr**	**46.26**	**279**	P		**P**	**20 44 00.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**46.26**	**279**	P		**P**	**20 44 01.1**	**+0.4**
	1.3nm,0.8s,baz=69,slow=6.6,SNR=9.4							
CMAR	**Chiang Mai Arr**	**46.26**	**279**	P		**P**	**20 44 00.6**	**-0.1**
ZAA0	**Zalesovo Array**	**60.12**	**323**	P		**P**	**20 45 42.3**	**+0.1**
ZAA0					IAmb	IAmb	20 45 43.7	
	comp=Z,2.6nm,0.7s							
ZALV	**Zalesovo Beam**	**60.12**	**323**	P		**P**	**20 45 41.9**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=106,slow=7.5,SNR=15							
MKAR	**Makanchi Array**	**60.66**	**314**	P		**P**	**20 45 46.2**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=90,slow=8.6,SNR=5.4							
MKAR	**Makanchi Array**	**60.66**	**314**	P		**P**	**20 45 45.9**	**-0.2**
MAKZ	**Makanchi**	**60.88**	**314**	P		**P**	**20 45 47.4**	**-0.1**
MAKZ					IAmb	IAmb	20 46 19.3	
	comp=Z,9.2nm,1.9s							
IMAR	**Indian Mountai**	**61.57**	**23**	P		**P**	**20 45 52.5**	**+0.6**
KTH	**Kantishna Hill**	**61.87**	**26**	P		**P**	**20 45 54.5**	**+0.5**
MLY	**Manley**	**62.42**	**25**	P		**P**	**20 45 58.1**	**+0.5**
MLY					IAmb	IAmb	20 45 59.4	
	comp=Z,4.0nm,0.8s							
BWN	**Browne**	**62.67**	**26**	P		**P**	**20 45 59.7**	**+0.4**
WRH	**Wood River Hil**	**63.33**	**26**	P		**P**	**20 46 02.6**	**-1.1**
WRH					IAmb	IAmb	20 46 04.6	
	comp=Z,3.7nm,0.9s							
IL31		**63.91**	**26**	P		**P**	**20 46 06.7**	**-0.8**
ILAR	**Eielson Array**	**63.91**	**26**	P		**P**	**20 46 06.8**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=247,slow=6.1,SNR=14							
ILAR	**Eielson Array**	**63.91**	**26**	P		**P**	**20 46 06.5**	**-1.0**
DOT	**Dot Lake**	**64.86**	**27**	P		**P**	**20 46 14.4**	**+0.6**
BMAR	**Burnt Mountain**	**65.49**	**23**	P		**P**	**20 46 19.2**	**+1.5**
BCAR	**Beaver Creek A**	**65.76**	**28**	P		**P**	**20 46 19.1**	**-0.6**
INK	**Inuvik**	**69.75**	**23**	P		**P**	**20 46 43.5**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=262,slow=9.5,SNR=3.7							
ARU	**Arti**	**75.14**	**325**	P		**P**	**20 47 16.3**	**-0.6**
ARU					IAmb	IAmb	20 47 18.3	
	comp=Z,6.8nm,0.6s							
ABKAR	**Akbulak array**	**75.51**	**317**	P		**P**	**20 47 19.2**	**0.0**
ABKAR					IAmb	IAmb	20 47 35.8	
	comp=Z,12nm,2.0s							
YKA	**Yellowknife Ar**	**78.18**	**28**	P		**P**	**20 47 33.9**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=286,slow=5.5,SNR=13							
SAO	**San Andreas Ge**	**80.44**	**55**	P		**P**	**20 47 45.8**	**-1.0**
FINES	**FINESS Array B**	**88.77**	**336**	P		**P**	**20 48 27.3**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=84,slow=7.9,SNR=5.5							
LPAZ	**La Paz**	**145.75**	**93**	PKPbc		**PKPab**	**20 55 16.4**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=251,slow=4.5,SNR=6.6							

*IDC **09** 20:56:01.4±1.8,9.˚70S×116.˚40E,h0km,mb3.3/4, mb1 3.7/6,mb1mx3.5/29,mbtmp3.6/6,ML3.9/2,MS2.7/2, Ms1 2.7/2,ms1mx2.5/17,Error ellipse: s-maj=59.0km s-min=21.8km az=55.0*
*DJA **09** 20:56:13.6±0.6,9.˚S±8.˚×11.˚7E±.˚,h40km±20km,M4.3/7, mb4.7/1,MLv4.1/7*

ISC 09 20:56:09.8±0.9,**9.˚55S**±0.˚08×**117.˚08E**±0.˚04,**h33**km,**n16**, σ2**s26**/19,**mb3.8**/3,**Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**0.83**	**346**	P		**Pb**	**20 56 27.2**	**+1.4**
PLAI	**Plampang**	**0.99**	**44**	P		**Pb**	**20 56 29.2**	**+0.7**
PLAI				S		**Sb**	**20 56 41.7**	**+0.4**
DNP	**Denpasar**	**2.04**	**295**	P		**Pn**	**20 56 44.1**	**+2.3**
DNP				S		**Sn**	**20 57 07.8**	**+1.6**
IGBI	**Denpasar**	**2.04**	**291**	P		**Pn**	**20 56 44.2**	**+2.3**
IGBI				S		**Sn**	**20 57 07.8**	**+1.5**
SRBI	**Singaraja**	**2.35**	**308**	P		**Pn**	**20 56 48.1**	**+2.0**
SRBI				S		**Sn**	**20 57 15.0**	**+1.2**
JAGI	**Jajag, Banyuwa**	**3.08**	**290**	P		**Pn**	**20 56 58.4**	**+2.2**
JAGI				S		**Sn**	**20 57 33.6**	**+1.6**
MMRI	**Maumere**	**5.17**	**80**	P		**Pn**	**20 57 29.0**	**+4.0**
KAPI	**Kappang**	**5.22**	**31**	Pn		**Pn**	**20 57 28.0**	**+2.4**
	4.1nm,0.3s,baz=198,slow=5.9,SNR=7.9							
KAPI					Sn	**Sn**	**20 58 24.5**	**-0.3**
	4.5nm,0.3s,baz=304,slow=19,SNR=9.1							
KAPI					LR	LR	21 00 21.4	
	comp=Z,42nm,19.8s,baz=237,slow=46							
FITZ	**Fitzroy Crossi**	**11.88**	**137**	Pn		**Pn**	**20 58 56.7**	**-0.4**
	0.6nm,0.3s,baz=334,slow=9.4,SNR=6.2							
FITZ					Sn	Sn	21 00 58.4	-10
	0.2nm,0.3s,baz=0.0,slow=6.1,SNR=2.2							
FITZ					LR	LR	21 03 31.8	
	comp=Z,60nm,18.7s,baz=332,slow=37							
WRA	**Warramunga Arr**	**19.61**	**124**	P		**Pn**	**21 00 36.6**	**-0.5**
	0.2nm,0.4s,baz=297,slow=14,SNR=3.9							
ASAR	**Alice Springs**	**21.34**	**133**	P		**P**	**21 00 55.0**	**+0.7**
	0.4nm,0.4s,baz=308,slow=9.1,SNR=7.6							
H08S2	**Diego Garcia H**	**44.10**	**269**	T		T	21 51 13.9	
	baz=95,slow=76,SNR=4.6							
H08S3	**Diego Garcia H**	**44.12**	**269**	T		T	21 51 14.7	
	baz=95,slow=76,SNR=4.6							
H08S1	**Diego Garcia H**	**44.12**	**269**	T		T	21 51 15.4	
	baz=95,slow=76,SNR=4.9							
SONM	**Songino Array**	**57.91**	**352**	P		**P**	**21 05 55.3**	**-3.4**
	0.5nm,0.6s,baz=171,slow=9.2,SNR=4.7							
MKAR	**Makanchi Array**	**64.10**	**334**	P		**P**	**21 06 36.7**	**-4.0**
	0.6nm,0.7s,baz=150,slow=7.7,SNR=5.5							

*IDC **09** 20:57:42.4±0.4,23.˚12N×80.˚66W,h0km,mb4.7/36, mb1 4.8/43,mb1mx4.8/49,mbtmp4.7/43,ML4.0/6,MS4.3/42, Ms1 4.3/42,ms1mx4.3/46,Error ellipse: s-maj=11.8km s-min=9.0km az=59.0*
*BGR **09** 20:57:43.6±0.0,24.˚19N×83.˚47W,h33km,mb4.8*
*BJI **09** 20:57:43.5±0.0,23.˚30N×80.˚80W,h15km,mB5.8/6, Ms5.4/8,Ms7 5.2/8*
*NEIC **09** 20:57:43.3±1.7,23.˚18N±0.˚05×80.˚73W±0.˚06,h10km±1km, mb5.1/377,Mwr5.0/19,Error ellipse: s-maj=9.9km s-min=7.7km az=94.0,Moment Tensor Solution. Moment tensor: Scale 10^16^Nm; Mrr=3.84; Mθθ2.98; Mφφ0.86; Mrθ2.80; Mθφ-1.02; Mφr-1.04; Fault plane solution: Mo4.70000×10^16^ NP1,φs112.65000°,δ25.24000°, λ-88.46000°. NP2:φs290.95000°,δ64.77000°, λ-90.73000°. Principal axes: T 4.4641, Plg20.0000°, Azm21.0000°; N 0.4476, Plg1.0000°, Azm291.0000°; P -4.9117, Plg70.0000°, Azm199.0000°;*
*SSNC **09** 20:57:44.0±2.0,23.˚18N×80.˚66W,h10km±9km,MD4.8, MS4.7,MW4.9*
*GCMT **09** 20:57:45.3±0.1,23.˚38N±0.˚01×80.˚64W±0.˚02,h12km, MW5.0/128,Moment Tensor Solution. s72,c103; s128,c205; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-3.54±.06; Mθθ3.44±.05; Mφφ0.09±.07; Mrθ2.54±.18; Mθφ-0.67±.05; Mφr-0.38±.22; Best double couple: Mo4.38500×10^16^ NP1,φs102.00000°,δ27.00000°, λ-87.00000°. NP2:φs279.00000°,δ63.00000°, λ-91.00000°. Principal axes: T 4.3990, Plg18.0000°, Azm10.0000°; N -0.0350, Plg1.0000°; Azm280.0000°; P -4.3710, Plg72.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **09** 20:57:45.5±1.2,23.˚65N×80.˚92W,h11km,mb5.4/21 Error ellipse: s-maj=7.0km s-min=4.1km az=108.8*

ISC 09 20:57:43.1±0.6,**23.˚20N**±0.˚03×**80.˚72W**±0.˚03,**h7**km±3km, **n1351**,σ1**s96**/1319,**mb5.1**/199,**MS4.4**/38,**17C-12D**,**Cuba region**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MGV	**Manicaragua**	**1.28**	**148**	*i* P		**Pn**	**20 58 05.4**	**-2.0**
MGV				*e*S		**Sb**	**20 58 22.9**	**-1.2**
SOR	**Soroa

TEIG Sn Sn 21 00 58.5 -2.9
TEIG LR LR 21 02 32.5
comp=E,2µm,21.2s,slow=38
TEIG Tepich 7.62 249 Pn 20 59 33.4 -1.2
TEIG Sn 21 00 58.6 -2.7
553A Crawfordville 7.71 335 Pn 20 59 34.7 -1.2
TIGA Tifton 8.60 343 Pn 20 59 47.1 -0.9
TIGA Tifton 8.60 343 P Pn 20 59 46.3 -1.7
baz=162,SNR=8.8
353A Camilla 8.70 340 P Pn 20 59 47.6 -1.7
baz=158,SNR=15
257A Skidaway Islan 8.75 358 Pn Pn 20 59 49.2 -0.8
257A Skidaway Islan 8.75 358 P Pn 20 59 48.3 -1.8
baz=178
256A Glennville 8.81 353 P Pn 20 59 51.0 0.0
baz=173
255A Hazlehurst 8.84 350 Pn 20 59 50.2 -1.1
255A Hazlehurst 8.84 350 P Pn 20 59 50.9 -0.3
baz=170
254A Abbeville 9.01 346 P Pn 20 59 53.5 -0.1
baz=165
352A Blakely 9.06 337 Pn 20 59 52.4 -1.9
352A Blakely 9.06 337 P Pn 20 59 52.8 -1.5
baz=155
253A Americus 9.33 342 Pn 20 59 56.6 -1.4
253A Americus 9.33 342 P Pn 20 59 56.7 -1.4
baz=160
156A Sylvania 9.45 356 P Pn 20 59 58.3 -1.3
baz=176
157A Early Branch 9.45 359 P Pn 20 59 57.9 -1.7
baz=178
252A Lumpkin 9.46 339 P Pn 20 59 57.1 -2.7
baz=157,SNR=12
158A Hollywood 9.52 3 P Pn 20 59 59.0 -1.6
baz=183
155A Kite 9.52 351 P Pn 20 59 58.6 -1.9
baz=170
154A Montrose 9.62 348 Pn Pn 21 00 00.7 -1.2
154A Montrose 9.62 348 P Pn 20 59 59.7 -2.2
baz=167
RGRS Roger Stewart 9.69 3 Pn Pn 21 00 00.6 -2.3
BRAL Brewton 9.74 326 Pn 21 00 02.6 -1.0
BRAL Brewton 9.74 326 P Pn 21 00 02.6 -1.0
baz=143
SDDR Presa de Saban 9.75 114 Pn 21 00 02.6 -1.2
153A Fort Valley 9.81 344 P Pn 21 00 02.2 -2.5
baz=163
NHSC New Hope 9.88 3 Pn 21 00 03.2 -2.4
NHSC New Hope 9.88 3 P Pn 21 00 02.7 -2.9
baz=183
250A Grady 10.04 332 Pn 21 00 05.1 -2.6
Z57A Bowman 10.06 0 P Pn 21 00 05.4 -2.7
baz=180
Z55A Blythe 10.06 353 P Pn 21 00 05.3 -2.8
baz=173,SNR=6.1
152A Waverly Hall 10.08 340 Pn 21 00 06.5 -1.8
152A Waverly Hall 10.08 340 P Pn 21 00 05.3 -3.0
baz=159,SNR=30
Z56A Williston 10.11 357 Pn Pn 21 00 06.2 -2.5
Z56A Williston 10.11 357 P Pn 21 00 06.1 -2.6
baz=177
Z58A St. Stephen 10.13 4 P Pn 21 00 07.0 -2.0
baz=185
Z54A Sparta 10.18 350 P Pn 21 00 07.3 -2.3
baz=169,SNR=6.7
Z53A Monticello 10.36 347 P Pn 21 00 09.2 -2.8
baz=165,SNR=9.6
GOGA Godfrey 10.46 347 P Pn 21 00 11.9 -1.6
GOGA Godfrey 10.46 347 Pn 21 00 11.9 -1.6
GOGA Godfrey 10.46 347 P Pn 21 00 10.6 -3.0
baz=166,SNR=5.6
Z52A Williamson 10.48 343 P Pn 21 00 10.9 -2.9
baz=161,SNR=16
Y56A Pelion 10.57 357 P Pn 21 00 12.4 -2.6
baz=177
Y58A Scranton 10.71 5 Pn 21 00 14.6 -2.3
Y58A Scranton 10.71 5 P Pn 21 00 14.2 -2.7
baz=185
Y55A Saluda 10.75 355 P Pn 21 00 14.0 -3.5
baz=174,SNR=9.8
Y54A Tignall 10.77 351 P Pn 21 00 15.1 -2.6
baz=170,SNR=6.4
Y57A Sumter 10.79 1 Pn 21 00 15.5 -2.5
Y57A Sumter 10.79 1 P Pn 21 00 14.8 -3.1
baz=182
BANI BANI 10.80 114 Pn Pn 21 00 16.6 -1.8
Z51A Franklin 10.82 340 Pn 21 00 16.3 -2.2
Y59A Loris 10.88 8 P Pn 21 00 16.2 -3.0
baz=189
Y53A Monroe 10.91 347 P Pn 21 00 17.1 -2.6
baz=166
Y60A Bolivia 10.99 11 Pn Pn 21 00 18.0 -2.8
Y60A Bolivia 10.99 11 P Pn 21 00 16.9 -3.8
baz=192
TGUH Tegucigalpa,Un 11.01 215 Pn 21 00 19.9 -1.3
Z50A Ashland 11.02 337 Pn 21 00 19.0 -2.2
Z50A Ashland 11.02 337 P Pn 21 00 18.2 -3.0
baz=154,SNR=11
Y52A Lilburn 11.03 345 Pn 21 00 19.1 -2.2
Y52A Lilburn 11.03 345 P Pn 21 00 18.9 -2.4
baz=164
JSC Jenkinsville 11.06 358 P Pn 21 00 18.6 -3.1
JSC Jenkinsville 11.06 358 Pn 21 00 18.6 -3.1
HODGE Hodges 11.08 353 Pn 21 00 19.4 -2.5
X57A Johnson Farm, 11.24 3 P Pn 21 00 21.5 -2.7
baz=183
LRAL Lakeview Retre 11.26 332 Pn 21 00 21.8 -2.7
LRAL Lakeview Retre 11.26 332 P Pn 21 00 21.0 -3.4
baz=149,SNR=25
X56A White Oak 11.26 359 P Pn 21 00 21.4 -3.0
baz=178
X55A Gracelyn & Ava 11.26 356 P Pn 21 00 21.1 -3.3
baz=176
Y51A Rockmart 11.32 341 P Pn 21 00 22.0 -3.4
baz=159,SNR=14
X58A Rowland 11.38 6 Pn 21 00 24.8 -1.4
X58A Rowland 11.38 6 P Pn 21 00 24.2 -1.9
baz=186
X54A Belton 11.40 353 P Pn 21 00 23.7 -2.7
baz=172
BIRD Birdtown, Kers 11.41 1 Pn 21 00 23.4 -3.1
DR12 Loma Pena Alta 11.46 110 Pn Pn 21 00 25.0 -2.3
ESPN Las Esperanzas 11.46 198 Pn 21 00 27.7 +0.4
X59A McDuffie Farm, 11.48 9 P Pn 21 00 24.8 -2.8
baz=190
X53A Estanollee 11.49 349 P Pn 21 00 25.7 -2.0
baz=168
X60A Albert Glenn T 11.59 11 P Pn 21 00 25.5 -3.5
baz=193
PAULI Pauline 11.62 356 Pn 21 00 27.1 -2.3
Y49A Blount Mountai 11.74 336 Pn 21 00 28.5 -2.6
W58A Raeford 11.85 6 P Pn 21 00 30.1 -2.5
baz=187,SNR=13
X51A Calhoun 11.89 343 Pn 21 00 31.3 -1.8
X51A Calhoun 11.89 343 P Pn 21 00 30.6 -2.5
baz=161
W56A Indian Trail 11.90 1 P Pn 21 00 30.1 -3.1
baz=181
BG3 Lake Jocassee 11.91 351 Pn 21 00 31.9 -1.5
KMSC Kings Mountain 11.92 358 Pn 21 00 31.3 -2.1
KMSC Kings Mountain 11.92 358 P Pn 21 00 30.8 -2.7
baz=177
W54A Cherokee Point 11.92 354 P Pn 21 00 31.1 -2.4
baz=174
W57A Gilead 11.93 3 Pn 21 00 32.6 -1.0
W57A Gilead 11.93 3 P Pn 21 00 30.5 -3.1
baz=183
ACON Acoyapa 11.95 202 Pn 21 00 33.5 -0.4
FPAL Fort Paine 12.09 340 Pn Pn 21 00 35.0 -0.8
W59A Clinton 12.09 9 P Pn 21 00 32.4 -3.4
baz=190
W60A Pink Hill 12.10 12 P Pn 21 00 32.6 -3.4
baz=193
W53A Cullowhee 12.12 350 P Pn 21 00 33.8 -2.5
baz=169,SNR=15
W52A Murphy 12.18 347 Pn 21 00 35.7 -1.4
W52A Murphy 12.18 347 P Pn 21 00 34.5 -2.6
baz=166
CNNC Cliffs of the 12.25 11 P Pn 21 00 35.0 -3.0
baz=192
APG El Apazote 12.29 230 Pn Pn 21 00 39.1 +0.2
comp=E,8.7nm,0.3s,baz=22,slow=11,SNR=12
APG Sn Sn 21 02 56.9 +0.4
comp=E,2.6nm,0.3s,baz=340,slow=18,SNR=3.9
APG LR LR 21 05 06.0
comp=E,2µm,19.8s,baz=60,slow=36

W61A Ground Anchor 12.37 14 P Pn 21 00 36.7 -3.0
baz=196
W51A Cleveland 12.43 344 P Pn 21 00 38.4 -2.1
baz=163
VBMS Vicksburg 12.49 318 Pn 21 00 42.0 +0.7
VBMS Vicksburg 12.49 318 P Pn 21 00 39.8 -1.4
baz=134
X48A Hartselle 12.51 335 Pn 21 00 39.8 -1.8
V53A Saluda 12.56 352 Pn 21 00 33.9 -8.4
V53A Saluda 12.56 352 P Pn 21 00 40.2 -2.2
baz=171
V56A Mocksville 12.57 1 P Pn 21 00 38.8 -3.6
baz=181,SNR=7.8
V54A Nebo 12.58 355 P Pn 21 00 38.4 -4.2
baz=175,SNR=7.7
W50A Signal Mountai 12.61 343 Pn 21 00 41.1 -1.9
W50A Signal Mountai 12.61 343 P Pn 21 00 39.4 -3.7
baz=160
V55A Taylorsville 12.62 358 Pn 21 00 40.5 -2.5
V55A Taylorsville 12.62 358 P Pn 21 00 39.1 -3.9
baz=178
V58A Windy Hill, Pi 12.63 6 Pn 21 00 39.4 -3.8
V58A Windy Hill, Pi 12.63 6 P Pn 21 00 39.2 -4.1
baz=187
CPCT Cooper Cave 12.65 346 Pn 21 00 41.7 -1.8
V57A Coltrane Farms 12.67 3 P Pn 21 00 39.7 -4.1
baz=184
TKL Tuckaleechee C 12.70 349 Pn Pn 21 00 41.8 -2.4
comp=E,4.2nm,0.3s,baz=164,slow=14,SNR=12
TKL Lg Lg 21 04 25.7
comp=E,18nm,0.3s,baz=276,slow=23,SNR=6.7
TKL Tuckaleechee C 12.70 349 Pn 21 00 41.7 -2.5
V59A Middlesex 12.71 9 P Pn 21 00 39.7 -4.6
baz=190,SNR=8.7
SWET Sewanee 12.81 340 Pn 21 00 42.7 -3.0
W49A Belvidere 12.83 339 P Pn 21 00 42.7 -3.2
baz=156,SNR=13
V52A Sevierville 12.85 349 Pn 21 00 43.3 -2.9
V52A Sevierville 12.85 349 P Pn 21 00 43.3 -2.9
baz=168,SNR=6.3
V60A Jim Taylor Roa 12.88 13 Pn 21 00 44.9 -1.7
V60A Jim Taylor Roa 12.88 13 P Pn 21 00 42.9 -3.7
baz=194,SNR=5.9
V51A Loudon 12.95 347 Pn 21 00 45.2 -2.4
V51A Loudon 12.95 347 P Pn 21 00 45.0 -2.7
baz=165,SNR=6.0
V50A Pikevile 13.00 344 P Pn 21 00 45.8 -2.5
baz=162
U56A King 13.11 1 Pn 21 00 47.8 -2.0
U56A King 13.11 1 P Pn 21 00 46.0 -3.8
baz=181,SNR=11
U53A Fall Branch 13.22 353 P Pn 21 00 47.0 -4.3
baz=173,SNR=8.4
U57A Blanch 13.24 5 P Pn 21 00 46.4 -5.2
baz=186
U55A TA2, Sparta 13.26 359 P Pn 21 00 47.7 -4.2
baz=179
U58A Oxford 13.29 8 P Pn 21 00 47.3 -4.9
baz=189
V49A McMinnville 13.31 341 P Pn 21 00 48.0 -4.5
baz=159
U54A Nelsons Funny 13.31 356 P Pn 21 00 47.8 -4.8
baz=176
U52A Thorn Hill 13.35 351 P Pn 21 00 47.6 -5.5
baz=170
U59A Littleton 13.35 10 Pn 21 00 49.1 -4.0
U59A Littleton 13.35 10 P Pn 21 00 47.7 -5.4
baz=192
U51A La Follette 13.44 348 P Pn 21 00 50.0 -4.3
baz=167
JTS Las Juntas de 13.46 198 P Pn 21 00 54.4 -0.2
JTS Las Juntas de 13.46 198 Pn Pn 21 00 54.8 +0.2
comp=E,0.3nm,0.3s,baz=180,slow=20,SNR=1.9
JTS LR LR 21 05 34.3
comp=E,2µm,20.8s,baz=62,slow=35
JTS Las Juntas de 13.46 198 Pn 21 00 54.4 -0.2
TZTN Tazewell 13.53 350 P Pn 21 00 51.2 -4.2
baz=169
V48A Smith Brothers 13.58 338 Pn 21 00 54.1 -2.0
U60A Pendleton 13.58 12 P Pn 21 00 50.9 -5.3
baz=194
OXF Oxford 13.60 328 P Pn 21 00 53.0 -3.4
OXF Oxford 13.60 328 Pn 21 00 53.0 -3.4
OXF Oxford 13.60 328 P Pn 21 00 52.6 -3.8
baz=144,SNR=23
U61A Possum Corner 13.60 15 P Pn 21 00 50.8 -5.7
baz=197
U50A Jamestown 13.65 346 P Pn 21 00 53.7 -3.4
baz=164
T56A Rocky Mt 13.80 2 P Pn 21 00 55.1 -4.1
baz=183
T57A Hurt 13.81 5 Pn Pn 21 00 54.6 -4.8
T57A Hurt 13.81 5 P Pn 21 00 54.6 -4.8
baz=186
T53A Wise 13.83 354 P Pn 21 00 54.3 -5.3
baz=173
T58A Grand View Acr 13.83 7 P Pn 21 00 54.4 -5.2
baz=188,SNR=6.8
T54A Tazewell 13.84 357 P Pn 21 00 55.5 -4.3
baz=177
T55A Pulaski 13.88 360 P Pn 21 00 55.6 -4.6
baz=180
BLA Blacksburg 13.97 1 P Pn 21 00 58.9 -2.6
BLA Blacksburg 13.97 1 Pn 21 00 58.9 -2.6
BLA Blacksburg 13.97 1 P Pn 21 00 56.9 -4.7
baz=181
U49A Red Boiling Sp 13.97 343 P Pn 21 00 57.3 -4.3
baz=160
T59A Double "B" Far 14.00 11 Pn 21 00 57.9 -4.0
T59A Double "B" Far 14.00 11 P Pn 21 00 56.4 -5.5
baz=192
T52A Hallie 14.00 352 Pn 21 00 58.3 -3.7
T52A Hallie 14.00 352 P Pn 21 00 57.3 -4.7
baz=171
T51A Gray 14.00 349 P Pn 21 00 57.4 -4.5
baz=168
T50A Nancy 14.23 346 P Pn 21 01 00.8 -4.3
baz=164
SJCC San Jacinto, C 14.25 157 eP Pn 21 01 06.5 +1.0
WVT Waverly 14.29 336 P Pn 21 01 03.6 -2.2
WVT Waverly 14.29 336 Pn 21 01 03.6 -2.2
WVT Waverly 14.29 336 P Pn 21 01 00.3 -5.5
baz=153
T60A Surry 14.31 13 Pn 21 01 03.5 -2.7
T60A Surry 14.31 13 P Pn 21 01 01.0 -5.2
baz=195,SNR=6.4
X43A Marvell 14.36 324 P Pn 21 01 01.5 -5.3
baz=139
CCAR Cane Creek 14.43 320 P Pn 21 01 05.2 -2.5
T49A Edmonton 14.47 344 P Pn 21 01 05.9 -2.4
T49A Edmonton 14.47 344 P Pn 21 01 02.8 -5.6
baz=162
S53A Williamson 14.49 356 P Pn 21 01 02.6 -6.1
baz=175
S55A Lewisburg 14.53 1 P Pn 21 01 04.0 -5.3
baz=181
SJG San Juan 14.54 108 LR LR 21 06 49.6
comp=E,695nm,21.6s,baz=282,slow=38
S58A Poland Farm, P 14.55 8 P Pn 21 01 03.6 -5.8
baz=190
S54A Dingess, Beckl 14.56 358 Pn Pn 21 01 06.7 -3.0
S54A Dingess, Beckl 14.56 358 P Pn 21 01 04.5 -5.2
baz=178
S52A Salyersville 14.58 353 P Pn 21 01 05.3 -4.5
baz=171
S57A Dark Hollow, R 14.60 6 Pn Pn 21 01 06.2 -3.9
S57A Dark Hollow, R 14.60 6 P Pn 21 01 05.1 -5.0
baz=186
S51A Beattyville 14.61 351 P Pn 21 01 05.5 -4.7
baz=170
Z41A Richland Creek 14.61 316 P Pn 21 01 07.8 -2.6
baz=130,SNR=6.1
CMIG Matias Romero 14.62 248 Pn Pn 21 01 09.7 -0.8
comp=E,1.4nm,0.3s,baz=55,slow=13,SNR=6.2
CMIG Sn Sn 21 03 41.9 -11
comp=E,1.0nm,0.3s,baz=305,slow=8.8,SNR=3.8
CMIG LR LR 21 07 40.4
comp=E,1µm,18.0s,baz=63,slow=41
S50A Richmond 14.78 348 P Pn 21 01 08.0 -4.5
baz=167
T47A Sharon Grove 14.81 340 Pn Pn 21 01 10.0 -2.9
S59A Mechanicsville 14.81 11 P Pn 21 01 07.3 -5.7
baz=192
S60A Water View 14.88 13 P Pn 21 01 08.4 -5.5
baz=195
LPAR Lepanto 14.91 328 Pn 21 01 10.3 -4.0

CODC Agustn Codazz 14.91 151 eP Pn 21 01 13.8 -0.7
R58B Mineral 14.92 9 Pn Pn 21 01 10.2 -4.3
R58B Mineral 14.92 9 P Pn 21 01 08.7 -5.8
baz=190,SNR=15
R54A Victor 14.94 359 P Pn 21 01 09.8 -4.9
baz=179
GLAT Glass 14.99 332 Pn Pn 21 01 11.3 -4.1
GLAT P P 21 01 13.2 -7.8
NATX Nacogdoches 15.02 308 Pn Pn 21 01 11.8 -4.0
NATX Nacogdoches 15.02 308 P Pn 21 01 11.5 -4.3
baz=121
HBAR Harrisburg 15.04 327 Pn Pn 21 01 11.6 -4.6
R55A Marlinton 15.05 2 Pn Pn 21 01 12.3 -4.0
R55A Marlinton 15.05 2 P Pn 21 01 10.7 -5.6
baz=182
S49A Springfield 15.06 346 P Pn 21 01 10.7 -5.7
baz=164
S61A Accomac 15.07 16 P Pn 21 01 11.2 -5.3
baz=198
HKT Hockley 15.10 300 P Pn 21 01 12.8 -4.0
HKT pmax pmax
comp=Z,65nm,1.1s
HKT Hockley 15.10 300 Pn 21 01 12.8 -4.0
HKT IAmb IAmb 21 01 40.8
comp=Z,65nm,1.1s
PEBM Pemiscott Bayo 15.12 330 Pn Pn 21 01 13.5 -3.6
R53A Hurricane 15.12 356 Pn Pn 21 01 16.1 -1.1
R53A IAmb IAmb 21 02 04.0
comp=Z,97nm,1.1s
R53A Hurricane 15.12 356 P Pn 21 01 11.7 -5.5
baz=176
R57A Stanardsville 15.17 7 P Pn 21 01 12.3 -5.5
baz=188,SNR=9.4
R52A Catlettsburg 15.18 354 P Pn 21 01 12.9 -5.0
baz=173
HICK Hickman 15.20 333 P Pn 21 01 16.2 -2.0
R56A Bull Pasture M 15.20 4 P Pn 21 01 13.1 -5.3
baz=185
CBN Corbin Frederi 15.23 10 P Pn 21 01 15.6 -3.0
CBN Corbin Frederi 15.23 10 P Pn 21 01 14.1 -4.5
baz=192
R58A Rapidan 15.23 8 P Pn 21 01 13.8 -4.8
baz=190,SNR=9.6
R51A Hillsboro 15.25 351 P Pn 21 01 14.1 -4.9
baz=170
R59A King George, V 15.27 11 P Pn 21 01 14.6 -4.5
baz=193
R50A Paris 15.35 349 P Pn 21 01 15.5 -4.7
baz=167
UALR University of 15.37 321 Pn 21 01 17.9 -2.5
UALR IAmb IAmb 21 01 28.4
comp=Z,269nm,1.7s
R60A Leonardtown, M 15.44 12 P Pn 21 01 16.2 -5.1
baz=194
X40A Basin Creek Fa 15.45 319 Pn 21 01 18.7 -2.9
X40A IAmb IAmb 21 01 28.6
comp=Z,99nm,1.1s
X40A Basin Creek Fa 15.45 319 P Pn 21 01 18.1 -3.4
baz=134,SNR=11
R49A Shelbyville 15.52 347 Pn 21 01 19.4 -3.1
R49A IAmb IAmb 21 01 32.0
comp=Z,62nm,0.8s
R49A Shelbyville 15.52 347 P Pn 21 01 18.7 -3.8
baz=165
PARMO Parma 15.53 332 Pn Pn 21 01 19.4 -3.1
W41B Gary Mavity, V 15.60 322 P Pn 21 01 20.5 -2.9
baz=137,SNR=6.7
Q53A Leroy 15.63 358 P Pn 21 01 19.5 -4.3
baz=177
SMLC San Martn de 15.67 155 eP P 21 01 27.7 -0.9
WCI Wyandotte Cave 15.73 344 P Pn 21 01 23.2 -1.9
WCI pmax pmax
comp=Z,91nm,0.7s
WCI Wyandotte Cave 15.73 344 Pn 21 01 23.2 -1.9
WCI IAmb IAmb 21 01 33.9
comp=Z,91nm,0.7s
WCI Wyandotte Cave 15.73 344 P Pn 21 01 21.6 -3.5
baz=161
Q54A Coxs Mills 15.74 360 Pn Pn 21 01 22.7 -2.6
Q54A IAmb IAmb 21 01 33.0
comp=Z,286nm,1.6s
Q54A Coxs Mills 15.74 360 P Pn 21 01 22.1 -3.2
baz=180,SNR=5.1
Q55A Buckhannon 15.76 2 P Pn 21 01 21.4 -4.2
baz=182
Q52A Bidwell 15.77 356 P Pn 21 01 22.0 -3.7
baz=175,SNR=5.3
R61A Willards 15.77 16 Pn Pn 21 01 21.4 -4.3
R61A Willards 15.77 16 P Pn 21 01 21.7 -3.9
baz=198
Q50A Georgetown 15.85 351 P Pn 21 01 23.5 -3.2
baz=183,SNR=10.0
Q56A Snyder Ridge, 15.85 4 Pn 21 01 26.9 +0.2
USIN University of 15.88 340 Pn 21 01 22.7 -4.4
USIN IAmb IAmb 21 02 10.3
comp=Z,178nm,1.1s
Q58A Fox Den Farm, 15.91 9 P Pn 21 01 23.3 -4.2
baz=190,SNR=7.4
Q57A Strasburg 15.91 7 P Pn 21 01 23.0 -4.5
baz=188
PBMO Poplar Bluff 15.92 330 Pn 21 01 23.3 -4.3
Q51A Peebles 15.94 353 Pn 21 01 24.0 -3.9
Q51A Peebles 15.94 353 P Pn 21 01 23.2 -4.7
baz=171
MIAR Mount Ida 15.94 318 P Pn 21 01 24.9 -3.0
MIAR pmax pmax
comp=Z,125nm,1.2s
MIAR Mount Ida 15.94 318 Pn 21 01 24.9 -3.0
MIAR IAmb IAmb 21 01 34.6
comp=Z,125nm,1.2s
MIAR Mount Ida 15.94 318 P Pn 21 01 25.2 -2.8
baz=132,SNR=9.8
Q59A Harwood 16.00 12 P Pn 21 01 23.5 -5.1
baz=194
Q49A Aurora 16.16 348 P Pn 21 01 27.1 -3.6
baz=166
S44A Carbondale 16.20 335 Pn 21 01 27.3 -4.0
S44A IAmb IAmb 21 01 37.0
comp=Z,322nm,1.5s
P53A Whipple 16.25 358 Pn 21 01 27.7 -4.1
P53A Whipple 16.25 358 P Pn 21 01 28.1 -3.7
baz=178,SNR=11
Q48A North Vernon 16.26 346 P Pn 21 01 28.3 -3.6
baz=163,SNR=9.3
P55A Reedsville 16.28 2 P Pn 21 01 28.3 -4.0
baz=183,SNR=9.6
Q60A Greensboro 16.29 14 P Pn 21 01 28.3 -4.1
Q60A Greensboro 16.29 14 P Pn 21 01 28.4 -4.0
baz=196
Q61A Milford 16.30 15 P Pn 21 01 28.3 -4.1
baz=198
P56A Dayton Farm, R 16.34 5 P Pn 21 01 29.2 -3.7
baz=186
P51A Williamsport 16.36 354 P Pn 21 01 29.6 -3.6
P51A IAmb IAmb 21 01 39.3
comp=Z,382nm,1.6s
P51A Williamsport 16.36 354 P Pn 21 01 30.4 -2.8
baz=172
P54A Burton 16.36 1 P Pn 21 01 29.9 -3.3
baz=181
P57A Homestead Farm 16.40 7 Pn 21 01 30.7 -3.1
P57A Homestead Farm 16.40 7 P Pn 21 01 29.7 -4.0
baz=189,SNR=11
MCWV Mont Chateau 16.43 2 Pn 21 01 32.0 -2.1
MCWV IAmb IAmb 21 01 41.4
comp=Z,357nm,1.7s
MCWV Mont Chateau 16.43 2 P Pn 21 01 31.7 -2.4
baz=183,SNR=9.5
P52A Corning 16.43 356 P Pn 21 01 30.7 -3.5
baz=175
OCAC Ocana 16.48 153 eP Pn 21 01 34.4 -0.7
SDMD Soldier's Deli 16.50 11 Pn Pn 21 01 32.2 -2.8
P58A Pank, Wackersv 16.50 9 P Pn 21 01 31.2 -3.8
baz=191
W39A Magazine 16.51 319 Pn 21 01 33.1 -2.0
W39A IAmb IAmb 21 01 41.4
comp=Z,258nm,1.7s
W39A Magazine 16.51 319 P Pn 21 01 34.0 -1.2
baz=133,SNR=10
P50A Jamestown 16.57 352 P Pn 21 01 33.8 -2.1
baz=170
BLO Bloomington 16.68 344 P Pn 21 01 34.9 -2.4
BLO pmax pmax
comp=Z,57nm,0.8s
BLO Bloomington 16.68 344 P Pn 21 01 34.9 -2.4
P48A Milroy 16.70 347 P Pn 21 01 34.7 -2.9

P48A IAmb IAmb 21 01 42.7
comp=Z,526nm,2.0s
P48A Milroy 16.70 347 P **Pn 21 01 34.5 -3.1**
baz=165,SNR=11
OLIL Olney 16.72 340 P **Pn 21 01 35.1 -2.7**
OLIL IAmb IAmb 21 01 43.0
comp=Z,177nm,1.1s
P59A Jarrettsville 16.76 12 P **Pn 21 01 35.1 -3.3**
baz=194,SNR=5.5
U40A Yellville 16.80 324 P **Pn 21 01 36.3 -2.6**
U40A Yellville 16.80 324 P **Pn 21 01 36.8 -2.1**
baz=138,SNR=10
435B Jarrell 16.82 300 P **Pn 21 01 37.2 -1.9**
435B Jarrell 16.82 300 P **Pn 21 01 36.8 -2.3**
baz=113
O52A Adamsville 16.90 357 P **Pn 21 01 38.2 -1.8**
O52A Adamsville 16.90 357 P **Pn 21 01 37.0 -3.0**
baz=176
O54A Avella 16.94 1 P **Pn 21 01 39.3 -1.3**
O54A IAmb IAmb 21 01 46.5
comp=Z,402nm,2.0s
O54A Avella 16.94 1 P **Pn 21 01 37.6 -3.0**
baz=181
O51A Pataskala 16.98 355 P **Pn 21 01 38.1 -3.0**
baz=174
O55A Ligonier 17.00 4 P **Pn 21 01 38.9 -2.5**
baz=184,SNR=8.2
O53A New Philadelph 17.01 359 P **Pn 21 01 38.2 -3.3**
baz=178
O50A Cable 17.08 352 P **Pn 21 01 38.9 -3.4**
baz=171
ACSO Alum Creek Sta 17.09 354 P **Pn 21 01 40.4 -2.1**
ACSO IAmb IAmb 21 01 47.0
comp=Z,254nm,1.7s
ACSO Alum Creek Sta 17.09 354 P **Pn 21 01 39.3 -3.2**
baz=173
MGMO Mountain Grove 17.10 327 P **Pn 21 01 41.4 -1.3**
X37A Clayton 17.11 315 P **Pn 21 01 41.9 -0.9**
X37A IAmb IAmb 21 01 48.9
comp=Z,308nm,1.6s
P60A Greenville 17.12 13 **Pn 21 01 38.9 -3.9**
P60A Greenville 17.12 13 P **Pn 21 01 39.5 -3.3**
baz=196,SNR=5.2
O56A Blue Knob Stat 17.12 6 P **Pn 21 01 43.0 +0.1**
O56A IAmb IAmb 21 01 49.0
comp=Z,146nm,1.2s
O56A Blue Knob Stat 17.12 6 P **Pn 21 01 39.2 -3.7**
baz=187,SNR=9.5
MVL Millersville 17.16 11 P **Pn 21 01 41.1 -2.2**
O57A Amberson 17.16 8 P **Pn 21 01 40.6 -2.8**
baz=190,SNR=13
O58A Lewisberry 17.18 10 P **Pn 21 01 41.2 -2.5**
baz=192,SNR=7.9
P61A Hammonton 17.18 16 Pn **Pn 21 01 41.1 -2.5**
P61A IAmb IAmb 21 01 49.1
comp=Z,151nm,0.9s
P61A Hammonton 17.18 16 P **Pn 21 01 40.4 -3.2**
baz=199
SDV Santo Domingo 17.20 144 P **Pn 21 01 44.6 +0.4**
comp=Z,2.4nm,0.3s,baz=357,slow=4.7,SNR=29
SDV LR LR 21 09 16.2
comp=Z,794nm,18.4s,baz=297,slow=40
SDV Santo Domingo 17.20 144 *eP* **Pn 21 01 43.8 -0.5**
SDV Santo Domingo 17.20 144 **Pn 21 01 42.8 -1.4**
SDV IAmb IAmb 21 01 48.9
comp=Z,99nm,0.8s
O49A Covington 17.21 351 P **Pn 21 01 42.3 -1.8**
O49A IAmb IAmb 21 01 48.8
comp=Z,300nm,1.8s
O49A Covington 17.21 351 P **Pn 21 01 40.8 -3.3**
baz=169
WHTX Lake Whitney, 17.21 304 P **Pn 21 01 40.6 -3.6**
WHTX IAmb IAmb 21 02 08.3
comp=Z,141nm,0.8s
WHTX Lake Whitney, 17.21 304 P **Pn 21 01 41.0 -3.1**
baz=117,SNR=26
PSUB Penn St. - Bra 17.27 14 **Pn 21 01 41.1 -3.6**
PSUB IAmb IAmb 21 01 49.9
comp=Z,213nm,1.8s
P46A Rosedale 17.27 343 **Pn 21 01 42.4 -2.4**
PAGS Pennsylvania G 17.31 10 P **Pn 21 01 41.7 -3.5**
PAGS IAmb IAmb 21 01 50.7
comp=Z,296nm,1.6s
CCM Cathedral Cave 17.34 331 P **Pn 21 01 43.8 -1.9**
CCM pmax pmax
comp=Z,75nm,1.0s
CCM Cathedral Cave 17.34 331 **Pn 21 01 43.8 -1.9**
CCM Cathedral Cave 17.34 331 P **Pn 21 01 42.9 -2.7**
baz=146
HHAR Hobbs 17.35 322 P **Pn 21 01 46.0 +0.2**
HHAR IAmb IAmb 21 01 51.5
comp=Z,226nm,1.4s
BRRC Barranca, Sant 17.36 156 *eP* **Pn 21 01 44.3 -1.7**
SLM Saint Louis 17.41 334 P **Pn 21 01 45.4 -1.1**
SLM pmax pmax
comp=Z,185nm,1.5s
SLM Saint Louis 17.41 334 P **Pn 21 01 45.4 -1.1**
SLM IAmb IAmb 21 02 05.1
comp=Z,185nm,1.5s
O48A Farmland 17.42 349 P **Pn 21 01 44.0 -2.7**
baz=166,SNR=8.0
O59A Robesonia 17.49 12 P **Pn 21 01 44.8 -2.7**
baz=194,SNR=34
PAMC Pamplona, Colo 17.55 153 *eP* **P 21 01 51.0 +1.0**
SSPA Standing Stone 17.55 7 P **Pn 21 01 46.3 -1.9**
SSPA Standing Stone 17.55 7 P **Pn 21 01 44.8 -3.4**
baz=189
N53A Lisbon 17.56 360 P **Pn 21 01 48.4 0.0**
N53A Lisbon 17.56 360 P **Pn 21 01 45.4 -3.0**
baz=180
833A Chaparral WMA, 17.58 291 **Pn 21 01 46.8 -1.9**
833A IAmb IAmb 21 01 55.8
comp=Z,136nm,1.1s
833A Chaparral WMA, 17.58 291 P **Pn 21 01 46.0 -2.7**
baz=103,SNR=11
N52A McGinn's Farm, 17.58 358 P **Pn 21 01 45.9 -2.8**
baz=177
N55A Marion Center 17.59 4 P **Pn 21 01 46.8 -2.1**
baz=185,SNR=13
PTBC PUERTO BERRIO, 17.62 159 *eP* **P 21 01 49.6 -0.7**
HELC Santa Helena 17.63 163 *eP* **Pn 21 01 47.6 -2.1**
O61A Allentown 17.64 16 P **Pn 21 01 46.7 -2.5**
baz=199
TLIG Tlapa 17.64 255 P **Pn 21 01 47.8 -1.9**
N50A Nevada 17.64 354 P **Pn 21 01 47.3 -2.1**
baz=173
O60A Telford 17.65 14 P **Pn 21 01 46.6 -2.8**
baz=196
N57A Milroy 17.71 8 P **Pn 21 01 47.8 -2.4**
baz=190
N54A Moraine State 17.73 2 **Pn 21 01 48.9 -1.6**
N54A IAmb IAmb 21 01 57.4
comp=Z,501nm,1.9s
N54A Moraine State 17.73 2 P **Pn 21 01 46.3 -4.1**
baz=182
N51A Ashland 17.73 356 P **Pn 21 01 48.3 -2.1**
N51A IAmb IAmb 21 02 05.0
comp=Z,180nm,1.4s
N51A Ashland 17.73 356 P **Pn 21 01 47.5 -2.9**
baz=175
N56A West Decatur 17.79 6 P **Pn 21 01 47.6 -3.6**
baz=187,SNR=8.5
CBOC Ciudad Bolivar 17.82 165 *eP* **Pn 21 01 51.6 -0.3**
N58A Sunbury 17.91 10 P **Pn 21 01 50.7 -2.0**
N58A Sunbury 17.91 10 P **Pn 21 01 49.7 -3.0**
baz=192,SNR=5.8
N49A Columbus Grove 17.91 351 P **Pn 21 01 50.2 -2.5**
N49A IAmb IAmb 21 01 58.5
comp=Z,405nm,2.0s
N49A Columbus Grove 17.91 351 P **Pn 21 01 50.0 -2.7**
baz=170
LUPA Lehigh Univers 17.93 13 P **Pn 21 01 49.8 -3.1**
SFIN Lafayette 17.96 344 **Pn 21 01 51.0 -2.3**
SFIN IAmb IAmb 21 01 57.1
comp=Z,101nm,0.9s
SFIN Lafayette 17.96 344 P **Pn 21 01 50.7 -2.6**
baz=161,SNR=7.9
N48A Decatur 17.98 349 P **Pn 21 01 51.9 -1.6**
baz=167,SNR=7.4
P43A Skaggs, Pawnee 18.02 338 **Pn 21 01 51.8 -2.2**
BARC Barichara 18.03 155 *eP* **Pn 21 01 53.6 -1.0**
N47A Urbana 18.12 348 **Pn 21 01 52.8 -2.5**
N47A Urbana 18.12 348 P **Pn 21 01 53.6 -1.7**
baz=165,SNR=6.3
M51A Elyria 18.13 356 P **Pn 21 01 53.6 -1.7**
baz=176

O44A Mansfield 18.13 341 P **Pn 21 01 52.7 -2.8**
O44A IAmb IAmb 21 01 59.2
comp=Z,108nm,0.8s
N59A State Game Lan 18.15 12 P **Pn 21 01 53.7 -2.0**
N59A State Game Lan 18.15 12 P **Pn 21 01 54.2 -1.5**
baz=195,SNR=7.1
BRNJ Basking Ridge 18.19 15 **Pn 21 01 53.9 -2.2**
M53A WI Miller and 18.19 0 P **Pn 21 01 54.0 -2.2**
baz=180
TUL1 Leonard 18.20 317 P **Pn 21 01 55.0 -1.4**
TUL1 IAmb IAmb 21 02 11.4
comp=Z,145nm,1.1s
TUL1 Leonard 18.20 317 P **Pn 21 01 55.0 -1.4**
baz=130,SNR=7.1
N60A Cedar Hill Far 18.25 14 P **Pn 21 01 54.5 -2.3**
baz=197,SNR=10
M50A Fremont 18.26 354 P **Pn 21 01 55.2 -1.8**
M50A IAmb IAmb 21 02 00.9
comp=Z,83nm,0.8s
M50A Fremont 18.26 354 P **Pn 21 01 54.9 -2.0**
baz=173,SNR=7.9
M54A Oil Creek Stat 18.28 3 P **Pn 21 01 55.5 -1.7**
M54A Oil Creek Stat 18.28 3 P **Pn 21 01 55.4 -1.9**
baz=183
M55A Ridgway 18.29 5 P **Pn 21 01 56.2 -1.3**
M55A IAmb IAmb 21 02 02.8
comp=Z,186nm,1.4s
M55A Ridgway 18.29 5 P **Pn 21 01 55.7 -1.7**
baz=186,SNR=16
M52A Chesterland 18.30 358 **Pn 21 01 55.5 -2.0**
M52A Chesterland 18.30 358 P **Pn 21 01 55.5 -2.0**
baz=178
N61A South Mountain 18.32 16 P **Pn 21 01 55.3 -2.4**
baz=199
M57A Sunshine Farm, 18.34 9 P **Pn 21 01 56.8 -1.2**
M57A Sunshine Farm, 18.34 9 P **Pn 21 01 57.1 -0.8**
baz=190
M56A Emporium 18.36 6 P **Pn 21 01 57.2 -1.0**
M56A IAmb IAmb 21 02 03.5
comp=Z,165nm,1.4s
M56A Emporium 18.36 6 P **Pn 21 01 57.1 -1.1**
baz=187,SNR=8.9
ALLY Alegheny Colle 18.41 1 P **P 21 01 56.8 -2.1**
ALLY IAmb IAmb 21 02 40.0
comp=Z,119nm,1.1s
NORC Norcasia 18.42 161 *eP* **Pn 21 02 00.9 +1.8**
M49A Liberty Center 18.43 352 P **P 21 01 57.7 -1.4**
baz=170
W35A Tecumseh 18.44 314 P **P 21 01 57.2 -2.0**
M58A Price's Panora 18.47 10 P **P 21 01 57.8 -1.8**
baz=192
JCT Junction City 18.50 297 P **P 21 01 58.0 -1.9**
JCT pmax pmax
comp=Z,168nm,1.5s
JCT Junction City 18.50 297 P **P 21 01 58.0 -1.9**
JCT IAmb IAmb 21 02 34.5
comp=Z,168nm,1.4s
JCT Junction City 18.50 297 P **P 21 01 59.0 -1.0**
baz=109,SNR=12
M48A Edgerton 18.54 351 P **P 21 01 58.6 -1.7**
baz=168
ODNJ Ogdensburg 18.56 15 P **P 21 01 59.1 -1.4**
M47A Cromwell 18.57 348 P **P 21 01 59.1 -1.5**
baz=166
SPBC San Pablo de B 18.58 159 *eP* **P 21 01 56.3 -4.7**
GUY2C Guyana, Caldas 18.60 163 *eP* **P 21 01 59.6 -2.0**
PAL Palisades 18.66 16 P **P 21 02 00.0 -1.5**
PAL pmax pmax
comp=Z,51nm,1.3s
PAL Palisades 18.66 16 P **P 21 02 00.0 -1.5**
PAL Palisades 18.66 16 P **P 21 01 59.0 -2.5**
baz=200
N62A Caumsett State 18.71 17 P **P 21 01 59.9 -2.2**
baz=201
L53A Girard 18.71 1 P **P 21 02 00.3 -1.9**
baz=181
RUSC La Rusia 18.71 156 *eP* **P 21 02 01.6 -1.2**
RUSC La Rusia 18.71 156 P **P 21 02 01.7 -1.1**
HDIL Hopedale 18.76 339 P **P 21 02 01.3 -1.4**
HDIL IAmb IAmb 21 02 07.0
comp=Z,88nm,0.7s
HDIL Hopedale 18.76 339 P **P 21 02 00.9 -1.8**
baz=155,SNR=11
KSPA Keystone Colle 18.77 12 P **P 21 02 02.4 -0.5**
X34A Smith Ranch, M 18.78 311 P **P 21 02 02.5 -0.5**
X34A IAmb IAmb 21 02 20.1
comp=Z,205nm,1.4s
M60A Port Jervis 18.79 14 P **P 21 02 00.6 -2.4**
baz=198,SNR=8.0
M59A Waymart 18.82 12 P **P 21 02 01.1 -2.3**
baz=195
FNO Franklin 18.85 313 P **P 21 02 03.6 -0.1**
L50A Kingsville 18.88 355 P **P 21 02 01.9 -2.1**
baz=174,SNR=7.6
ERPA Erie 18.88 2 P **P 21 02 03.5 -0.5**
ERPA Erie 18.88 2 P **P 21 02 02.4 -1.6**
baz=182
RREF El Recreo 18.91 163 *eP* **Pn 21 02 05.6 -0.2**
L48A N Adams 18.95 351 P **P 21 02 03.2 -1.6**
baz=170,SNR=7.4
WSPT Westport, CT 18.97 17 P **P 21 02 04.8 -0.1**
OKCFA Oklahoma City 18.97 314 P **P 21 02 04.2 -0.9**
OKCFA IAmb IAmb 21 02 51.4
comp=Z,71nm,0.8s
M61A Granite Spring 18.98 16 P **P 21 02 04.0 -1.1**
baz=200
L54A Sinclairville 19.02 3 P **P 21 02 04.9 -0.6**
baz=184,SNR=8.3
L57A Andrews Acres 19.03 9 P **P 21 02 05.5 -0.2**
baz=191,SNR=10
L55A Hinsdale 19.03 5 P **P 21 02 05.1 -0.6**
baz=186,SNR=7.8
L49A Milan 19.03 353 P **P 21 02 05.5 -0.1**
baz=171
L56A Greenwood 19.07 7 P **P 21 02 05.5 -0.7**
L56A Greenwood 19.07 7 P **P 21 02 06.0 -0.2**
baz=189,SNR=9.6
L47A Sherwood 19.10 350 P **P 21 02 06.1 -0.3**
baz=167
M44A Midewin, Midew 19.15 343 P **P 21 02 06.6 -0.4**
M44A IAmb IAmb 21 02 45.9
comp=Z,104nm,1.1s
ABTX Abilene, Hawle 19.16 303 P **P 21 02 07.2 0.0**
ABTX IAmb IAmb 21 02 53.2
comp=Z,278nm,1.8s
ABTX Abilene, Hawle 19.16 303 P **P 21 02 07.1 0.0**
baz=115,SNR=8.0
YLE Yale 19.21 18 P **P 21 02 07.7 +0.1**
L58A Harry Jones Me 19.23 11 P **P 21 02 08.1 +0.3**
baz=194,SNR=12
WVNY West Valley, N 19.24 5 P **P 21 02 07.9 -0.1**
WVNY IAmb IAmb 21 02 11.7
comp=Z,327nm,1.7s
ROSC El Rosal 19.27 160 P **P 21 02 08.0 -0.8**
comp=Z,2.0nm,0.3s,baz=5.0,slow=8.7,SNR=1.6
ROSC LR LR 21 09 35.9
comp=Z,1µm,20.8s,baz=354,slow=37
ROSC El Rosal 19.27 160 P **P 21 02 07.7 -1.1**
L46A Eue Claire 19.33 347 P **P 21 02 08.6 -0.4**
L46A IAmb IAmb 21 02 55.9
comp=Z,67nm,0.8s
L46A Eue Claire 19.33 347 P **P 21 02 08.4 -0.6**
baz=164
M62A Hamden 19.34 18 P **P 21 02 08.8 -0.3**
baz=202
BINY Binghamton 19.36 11 P **P 21 02 09.2 0.0**
BINY IAmb IAmb 21 02 17.6
comp=Z,157nm,1.4s
BINY Binghamton 19.36 11 P **P 21 02 09.7 +0.5**
baz=193,SNR=12
MOIG Morelia 19.37 263 P **P 21 02 09.8 0.0**
MOIG IAmb IAmb 21 02 22.9
comp=Z,207nm,1.1s
K54A Basiliko Farm, 19.43 4 P **P 21 02 10.6 +0.5**
baz=186,SNR=5.7
N41A Harden Midland 19.44 336 P **P 21 02 09.4 -0.7**
N41A IAmb IAmb 21 02 18.1
comp=Z,188nm,1.4s
K51A Iona Station 19.48 358 P **Pn 21 02 11.2 -0.6**
baz=178
L60A Shokan 19.51 15 P **P 21 02 11.0 +0.1**
baz=198
WMOK Wichita Mounta 19.51 310 P **P 21 02 11.2 +0.2**
WMOK pmax pmax
comp=Z,114nm,1.4s
WMOK Wichita Mounta 19.51 310 P **P 21 02 11.2 +0.2**
WMOK IAmb IAmb 21 02 16.1
comp=Z,114nm,1.4s
WMOK Wichita Mounta 19.51 310 P **P 21 02 11.2 +0.2**
baz=122,SNR=48
L59A Walton 19.52 13 P **P 21 02 10.2 -0.9**
L59A Walton 19.52 13 P **P 21 02 11.1 0.0**
baz=196,SNR=8.9
K52A Tillsonburg 19.53 0 P **P 21 02 11.3 +0.1**
baz=180
M63A Gales Ferry 19.56 20 P **P 21 02 11.5 0.0**
baz=204
YOTC Yotoco, Valle 19.56 167 *eP* **P 21 02 09.6 -2.2**
K50A Casco 19.59 356 P **P 21 02 11.5 -0.3**
K50A Casco 19.59 356 P **P 21 02 12.3 +0.5**
baz=175
K55A Perry 19.60 6 P **P 21 02 11.8 -0.1**
baz=187,SNR=6.7
MMNY Mt. Morris Dam 19.62 6 P **P 21 02 12.8 +0.7**
MMNY IAmb IAmb 21 02 38.7
comp=Z,122nm,1.5s
CHIC Chingaza 19.65 159 *eP* **Pn 21 02 14.9 +0.5**
K56A Middlesex 19.65 7 P **P 21 02 12.6 +0.1**
baz=189,SNR=11
K49A Clarkson 19.67 354 P **P 21 02 12.7 +0.1**
baz=172
K47A Vermontville 19.75 351 P **P 21 02 13.0 -0.4**
baz=168,SNR=9.8
K48A Perry 19.76 353 P **P 21 02 13.6 0.0**
baz=171
K57A Scipio Center 19.79 9 P **P 21 02 13.5 -0.5**
baz=191,SNR=8.2
L44A Lake County Fo 19.86 344 P **P 21 02 14.5 -0.2**
L44A IAmb IAmb 21 02 23.9
comp=Z,93nm,0.6s
L44A Lake County Fo 19.86 344 P **P 21 02 14.3 -0.4**
baz=160
L61A Hillsdale 1, H 19.86 16 P **P 21 02 14.8 0.0**
baz=200
K46A Dorr 19.89 349 P **P 21 02 14.3 -0.7**
baz=166
ORTC Ortega, Tolima 19.89 164 *eP* **P 21 02 15.6 +0.3**
L62A Suffield 19.95 18 P **P 21 02 14.1 -1.6**
baz=202
M64A Tiverton 19.96 21 P **P 21 02 14.0 -1.8**
baz=206
K58A Earlville 19.96 11 P **P 21 02 15.5 -0.4**
K58A IAmb IAmb 21 02 23.1
comp=Z,236nm,1.9s
K58A Earlville 19.96 11 P **P 21 02 15.5 -0.4**
baz=194
J52A Paris 19.99 1 P **P 21 02 16.6 +0.5**
baz=181
MEDO Medina 20.00 5 P **P 21 02 15.6 -0.6**
MEDO IAmb IAmb 21 02 21.5
comp=Z,132nm,1.5s
PCRV Puerto La Cruz 20.09 127 P **P 21 02 17.4 -0.1**
comp=Z,12nm,0.8s,baz=219,slow=6.5,SNR=2.0
J54A Appleton 20.10 4 P **P 21 02 16.9 -0.4**
J54A IAmb IAmb 21 02 22.5
comp=Z,141nm,1.6s
J54A Appleton 20.10 4 P Pn 21 02 18.3 -0.8
baz=186
L63A North Scituate 20.11 20 P **P 21 02 17.8 +0.4**
baz=205
ZAIG Zacatecas 20.12 273 P Pn 21 02 19.6 -0.2
K59A Cooperstown 20.12 13 P **P 21 02 17.1 -0.6**
baz=196,SNR=11
PLCV Puerto La Cruz 20.14 127 P **P 21 02 17.4 -0.6**
J55A Hilton 20.16 6 P **P 21 02 17.5 -0.4**
J55A Hilton 20.16 6 P **P 21 02 18.6 +0.6**
baz=188
M65A Busby, Falmout 20.16 22 P **P 21 02 18.7 +0.7**
baz=208
BRYW Bryant College 20.18 20 P **P 21 02 17.9 -0.4**
BRYW IAmb IAmb 21 02 45.7
comp=Z,139nm,1.8s
K60A Five Rivers En 20.18 15 P **P 21 02 18.0 -0.2**
baz=198
L42A Oliver, Polo 20.19 340 P **P 21 02 18.3 0.0**
L42A IAmb IAmb 21 02 23.1
comp=Z,89nm,0.8s
J48A Bridge Port 20.21 354 P **P 21 02 18.8 +0.2**
J48A Bridge Port 20.21 354 P **P 21 02 18.4 -0.1**
baz=172,SNR=9.5
J49A Marlette 20.21 355 P **P 21 02 18.3 -0.2**
baz=174,SNR=12
QUA2 Belchertown 20.27 18 P **P 21 02 19.4 +0.2**
J47A Sunmer 20.28 351 P **P 21 02 19.4 +0.2**
J47A IAmb IAmb 21 02 28.2
comp=Z,73nm,0.8s
J47A Sunmer 20.28 351 P **P 21 02 19.2 -0.1**
baz=169
J56A Wolcott 20.28 8 P **P 21 02 19.3 +0.1**
J56A Wolcott 20.28 8 P **P 21 02 19.1 -0.2**
baz=190
L61B Northampton 20.33 17 P **P 21 02 19.7 -0.2**
baz=202
K61A Williamstown 20.38 16 P **P 21 02 20.3 -0.1**
baz=200
L64A Middleborough 20.43 22 P **P 21 02 20.2 -0.7**
baz=207
K43A Burlington 20.46 344 P **P 21 02 20.9 -0.3**
K43A IAmb IAmb 21 02 25.6
comp=Z,167nm,1.1s
J46A Howard City 20.51 350 P **P 21 02 21.6 -0.2**
baz=167
J57A Williamstown 20.54 10 P **P 21 02 22.2 +0.2**
J57A Williamstown 20.54 10 P **P 21 02 21.6 -0.5**
baz=192,SNR=12
U32A Winter Ranch, 20.55 314 P **P 21 02 22.6 +0.3**
U32A IAmb IAmb 21 02 32.8
comp=Z,58nm,0.7s
I51A Listowel 20.56 359 P **P 21 02 21.6 -0.7**
baz=179,SNR=6.1
I53A Kortright Cn E 20.59 2 P **P 21 02 23.3 +0.6**
baz=183
J58A Remsen 20.61 11 P **P 21 02 23.4 +0.5**
J58A Remsen 20.61 11 P **P 21 02 22.9 0.0**
baz=194,SNR=6.9
K62A Royalston 20.66 18 P **P 21 02 24.0 +0.7**
K62A IAmb IAmb 21 02 28.6
comp=Z,199nm,1.7s
K62A Royalston 20.66 18 P **P 21 02 24.1 +0.7**
baz=203
WES Weston 20.68 20 P **P 21 02 23.2 -0.4**
WES pmax pmax
comp=Z,168nm,1.8s
WES Weston 20.68 20 P **P 21 02 23.2 -0.4**
WES IAmb IAmb 21 02 38.1
comp=Z,168nm,1.8s
BCX Boston College 20.68 20 P **P 21 02 23.6 0.0**
HRV Adam Dziewonsk 20.71 19 P Pn 21 02 25.2 -1.1
baz=204
L40A Anamosa 20.76 337 P **P 21 02 24.6 +0.1**
I49A Point Hope 20.76 356 P **P 21 02 24.6 +0.1**
I49A Point Hope 20.76 356 P **P 21 02 24.8 +0.3**
baz=175,SNR=11
L65A Cape Cod Natio 20.79 23 P **P 21 02 24.6 -0.1**
baz=209
I52A Shelburne 20.82 1 P **P 21 02 25.9 +0.7**
baz=181
KSU1 Kansas State U 20.84 323 P **P 21 02 25.1 -0.3**
baz=135,SNR=12
J59A Piesco 20.86 13 P **P 21 02 25.4 -0.2**
J59A Piesco 20.86 13 P **P 21 02 26.4 +0.8**
baz=196
J60A Lant Hill Farm 20.89 15 P **P 21 02 26.2 +0.3**
baz=199,SNR=8.1
K63A Dunstable 20.89 19 P **P 21 02 26.5 +0.6**
baz=204
SVB Belmont 20.93 115 P **P 21 02 26.1 -0.5**
SVB IAmb IAmb 21 02 28.6
comp=Z,165nm,1.1s
ACCN Adirondack Com 20.96 14 P **P 21 02 26.5 -0.2**
ACCN IAmb IAmb 21 02 30.5
comp=Z,173nm,1.8s
I47A Gladwin 21.00 352 P **P 21 02 26.9 -0.2**
I47A Gladwin 21.00 352 P **P 21 02 26.7 -0.4**
baz=170,SNR=11
I46A Reed City 21.06 350 P **P 21 02 28.0 +0.3**
baz=168
I48A Sherman Twp 21.08 354 P **P 21 02 27.7 -0.2**
baz=172,SNR=10
I57A Carthage 21.10 10 P **P 21 02 28.4 +0.2**
baz=193
I55A Frankford 21.11 6 P **P 21 02 28.5 +0.2**
baz=188,SNR=14

PCON Cinco Dias 21.16 168 eP P 21 02 30.8 +1.2
JFWS Jewell Farm 21.20 340 P P 21 02 29.1 -0.1
JFWS pmax pmax
comp=Z,212nm,0.7s
JFWS Jewell Farm 21.20 340 P P 21 02 29.1 -0.1
JFWS Jewell Farm 21.20 340 P P 21 02 29.3 0.0
baz=155,SNR=45
J61A Chester 21.20 17 P P 21 02 29.7 +0.4
baz=201
I45A Fountain 21.28 349 P P 21 02 30.7 +0.6
I45A Fountain 21.28 349 P P 21 02 30.3 +0.2
baz=166
J62A Henniker 21.30 18 P P 21 02 30.7 +0.4
baz=203
I59A Olmsteadville 21.31 14 P P 21 02 30.8 +0.4
baz=198
BBAC Balboa, Cauca 21.32 170 eP P 21 02 32.8 +1.9
SCIA State Center 21.38 334 P P 21 02 30.8 -0.4
SCIA IAmb IAmb 21 02 38.7
comp=Z,86nm,0.7s
SCIA State Center 21.38 334 P P 21 02 31.1 -0.1
baz=147,SNR=12
H53A Bobcaygeon 21.40 4 P P 21 02 31.7 +0.3
baz=185,SNR=22
NCB Newcomb 21.40 13 P P 21 02 31.1 -0.3
H52A Wyevale 21.40 2 P P 21 02 31.6 +0.1
baz=182,SNR=6.8
DELO Deloro Mine 21.42 6 P P 21 02 31.8 +0.2
DELO IAmb IAmb 21 02 36.1
comp=Z,199nm,1.6s
TX31 Lajitas Ar. Si 21.45 291 P P 21 02 33.0 +0.8
TX31 IAmb IAmb 21 02 46.5
comp=Z,85nm,1.2s
TX32 Lajitas Array 21.45 291 P P 21 02 32.8 +0.5
TX32 IAmb IAmb 21 02 46.5
comp=Z,87nm,1.2s
TXAR Lajitas Array 21.45 291 eP P 21 02 33.4 +1.2
TXAR pmax pmax
comp=Z,36nm,1.0s
TXAR Lajitas Array 21.45 291 P P 21 02 33.4 +1.2
comp=Z,40nm,1.0s,baz=114,slow=5.7,SNR=82
TXAR S S 21 06 20.5 -10
comp=Z,4.5nm,0.5s,baz=112,slow=24,SNR=6.9
TXAR Lajitas Array 21.45 291 P P 21 02 32.7 +0.5
TXAR S 21 06 20.3 -10
I60A Shoreham 21.48 15 P P 21 02 32.9 +0.6
baz=199
H55A Tweed 21.50 7 P P 21 02 32.6 +0.2
baz=189,SNR=15
H47A Mio 21.54 353 P P 21 02 33.3 +0.4
baz=171,SNR=6.4
H48A Harrisville 21.56 355 P P 21 02 32.7 -0.4
H48A Harrisville 21.56 355 P P 21 02 32.7 -0.4
baz=174,SNR=7.4
SADO Sadowa 21.56 3 P P 21 02 33.5 +0.4
comp=Z,52nm,0.8s,baz=232,slow=5.4,SNR=31
SADO LR LR 21 11 19.1
comp=Z,2µm,20.0s,baz=184,slow=38
SADO Sadowa 21.56 3 P P 21 02 32.8 -0.3
SADO IAmb IAmb 21 02 35.7
comp=Z,111nm,1.0s
J63A Strafford 21.56 19 P P 21 02 33.2 +0.1
baz=205
FFD Franklin Falls 21.56 18 P P 21 02 33.3 +0.2
FFD IAmb IAmb 21 02 44.3
comp=Z,184nm,1.9s
H46A Fife Lake 21.61 351 P P 21 02 33.7 +0.1
baz=169,SNR=8.1
HNH Hanover 21.61 17 P P 21 02 32.5 -1.1
HNH IAmb IAmb 21 02 39.6
comp=Z,96nm,1.1s
H56A Elgin 21.65 9 P P 21 02 34.4 +0.3
baz=191,SNR=7.9
H57A Richville 21.66 10 P P 21 02 34.8 +0.7
baz=193,SNR=16
AMTX Amarillo 21.67 307 P P 21 02 33.9 -0.6
AMTX IAmb IAmb 21 02 42.0
comp=Z,84nm,0.8s
AMTX Amarillo 21.67 307 P P 21 02 35.4 +0.9
baz=117
I42A Draeger Farm, 21.72 344 P P 21 02 34.8 0.0
GLMI Grayling 21.81 353 P P 21 02 35.0 -0.7
GLMI Grayling 21.81 353 P P 21 02 36.5 +0.7
baz=170,SNR=7.2
H45A Beulah 21.82 350 P P 21 02 35.7 -0.1
baz=167
H58A Gabriels 21.84 13 P P 21 02 36.2 0.0
baz=196,SNR=8.8
I61A Oroboro, Fairl 21.84 17 P P 21 02 37.3 +1.2
baz=201,SNR=5.6
G53A Haliburton 21.94 4 P P 21 02 37.3 +0.1
baz=185,SNR=13
LONY Lake Ozonia 21.95 12 P P 21 02 37.1 -0.3
LONY IAmb IAmb 21 02 42.4
comp=Z,206nm,1.6s
LONY Lake Ozonia 21.95 12 P P 21 02 37.6 +0.3
baz=195,SNR=15
MACC Macarena, Meta 21.96 161 eP P 21 02 37.5 -0.2
PLVO Plevna 21.99 7 P P 21 02 37.0 -0.7
PLVO IAmb IAmb 21 02 42.3
comp=Z,70nm,1.1s
H43A Windswept, Lux 22.00 346 P P 21 02 37.9 +0.1
I62A Tamworth 22.03 18 P P 21 02 37.3 -0.8
I62A IAmb IAmb 21 02 45.5
comp=Z,218nm,1.7s
I62A Tamworth 22.03 18 P P 21 02 39.2 +1.1
baz=204
FLOC Florencia 22.04 166 eP P 21 02 39.5 +1.0
FLOC Florencia 22.04 166 P P 21 02 39.1 +0.6
G47A Hillman 22.07 354 P P 21 02 38.8 +0.2
baz=172,SNR=24
VT1 Waterbury 22.07 15 P P 21 02 38.6 0.0
MSTX Muleshoe 22.10 304 P P 21 02 39.3 +0.1
MSTX Muleshoe 22.10 304 P P 21 02 40.1 +0.9
baz=113,SNR=20
H59A Cadyville 22.16 13 P P 21 02 39.8 +0.3
baz=197,SNR=11
G45A Suttons Bay 22.16 351 P P 21 02 39.2 -0.3
G45A Suttons Bay 22.16 351 P P 21 02 39.7 +0.2
baz=168
I40A Norwalk 22.20 341 P P 21 02 39.6 -0.4
LBNH Lisbon 22.20 17 P P 21 02 40.4 +0.4
LBNH pmax pmax
comp=Z,297nm,2.0s
LBNH Lisbon 22.20 17 P P 21 02 40.4 +0.4
LBNH Lisbon 22.20 17 P P 21 02 40.4 +0.4
baz=202
G55A Calabogie 22.24 7 P P 21 02 40.5 0.0
baz=190,SNR=14
G54A Lake Saint Pet 22.25 5 P P 21 02 40.5 -0.1
baz=186,SNR=9.2
H60A Morristown 22.30 15 P P 21 02 40.8 -0.3
baz=200,SNR=9.3
G46A Petoskey 22.32 352 P P 21 02 41.2 -0.1
baz=170
G57A Newington 22.35 11 P P 21 02 41.4 -0.1
baz=194,SNR=13
FRNY Flat Rock 22.36 13 P P 21 02 41.9 +0.2
FRNY IAmb IAmb 21 02 46.6
comp=Z,66nm,1.3s
CLNB Carlsbad 22.37 299 P P 21 02 41.8 -0.3
I63A Otisfield 22.41 19 P P 21 02 42.3 0.0
I63A IAmb IAmb 21 02 45.7
comp=Z,159nm,1.6s
I63A Otisfield 22.41 19 P P 21 02 42.2 0.0
baz=205
CBKS Cedar Bluff 22.47 318 P P 21 02 43.6 +0.6
CBKS pmax pmax
comp=Z,261nm,1.1s
CBKS Cedar Bluff 22.47 318 P P 21 02 43.6 +0.6
CBKS Cedar Bluff 22.47 318 P P 21 02 43.7 +0.7
baz=128,SNR=24
H61A Lyndonville 22.47 17 P P 21 02 43.2 +0.3
baz=202,SNR=5.8
F49A Sandfield 22.54 358 P P 21 02 43.5 -0.1
baz=177
G58A Ormstown 22.57 12 P P 21 02 44.4 +0.5
baz=196,SNR=5.6
F52A Sundridge 22.57 3 P P 21 02 43.9 0.0
baz=183,SNR=10.0
I64A Boothbay 22.60 21 P P 21 02 43.8 -0.4
baz=207
F48A Evansville 22.63 357 P P 21 02 44.4 -0.2
baz=176
G59A Clarenceville 22.68 14 P P 21 02 45.3 +0.2
baz=198
F51A Arnstein 22.69 1 P P 21 02 45.6 +0.5
baz=182,SNR=13
H62A Milan 22.72 18 P P 21 02 44.9 -0.6
baz=203
GDL2 Guadalupe Moun 22.74 298 P P 21 02 46.0 0.0
F45A CMU Biological 22.77 351 P P 21 02 45.9 -0.2
baz=169
F55A Otter Lake 22.86 8 P P 21 02 46.8 -0.2
baz=190
HPIG 22.89 285 P P 21 02 47.9 +0.2
HPIG IAmb IAmb 21 03 00.6
comp=Z,87nm,1.1s
G60A Masonville 22.90 15 P P 21 02 47.6 +0.2
baz=200
OTAV Otavalo 22.93 174 P P 21 02 48.2 -0.2
OTAV pmax pmax
comp=Z,183nm,1.4s
OTAV Otavalo 22.93 174 eP P 21 02 49.3 +0.9
OTAV Otavalo 22.93 174 P P 21 02 48.2 -0.2
F57A Harrington 23.09 11 P P 21 02 49.5 +0.1
baz=194
E52A Mattawa 23.10 4 P P 21 02 49.6 +0.1
baz=185,SNR=7.4
H63A New Sharon 23.13 20 P P 21 02 49.7 -0.1
baz=206
E53A Dumoine, Ponti 23.26 5 P P 21 02 52.2 +1.1
baz=187,SNR=5.8
E48A Lockeyer 23.26 357 P P 21 02 51.2 0.0
baz=177,SNR=9.5
E47A Iron Bridge 23.30 356 P P 21 02 51.5 0.0
baz=174,SNR=10
E46A Sault Ste Mari 23.30 354 P P 21 02 50.4 -1.1
F58A St-Lin Laurent 23.30 12 P P 21 02 51.9 +0.4
baz=196
F42A Maple Grove Fa 23.30 347 P P 21 02 51.8 +0.2
F42A IAmb IAmb 21 03 31.5
comp=Z,38nm,0.8s
E51A G1948 Merrick 23.30 2 P P 21 02 51.8 +0.2
baz=183
BGNE Belgrade 23.31 325 P P 21 02 51.3 -0.4
BGNE Belgrade 23.31 325 P P 21 02 52.0 +0.3
baz=136,SNR=9.6
G40A Rib Lake 23.34 343 P P 21 02 51.1 -0.9
E54A Lac Daplat, Po 23.36 6 P P 21 02 52.5 +0.4
baz=188,SNR=22
H64A Troy 23.37 21 P P 21 02 52.0 -0.3
baz=207
MNTX Cornudas Mount 23.43 297 P P 21 02 53.6 +0.6
MNTX IAmb IAmb 21 02 60.0
comp=Z,114nm,1.5s
MNTX Cornudas Mount 23.43 297 P P 21 02 54.3 +1.2
baz=105,SNR=40
G62A West of Eustis 23.49 18 P P 21 02 52.7 -0.8
G62A West of Eustis 23.49 18 P P 21 02 53.5 0.0
baz=204,SNR=5.6
F59A Saint Guilaume 23.50 14 P P 21 02 54.0 +0.5
baz=198,SNR=6.6
E55A Montcerf-Lytto 23.51 8 P P 21 02 53.8 +0.2
baz=191
TRQ Mont Tremblant 23.51 11 P P 21 02 53.5 -0.2
G63A Kingsbury 23.67 20 P P 21 02 56.1 +0.9
baz=206
E43A Lone Tree Farm 23.68 349 P P 21 02 55.3 0.0
E56A St. Veronique 23.74 10 P P 21 02 56.8 +0.9
baz=193,SNR=15
E44A Grand Marais A 23.75 351 P P 21 02 56.7 +0.7
E44A Grand Marais A 23.75 351 P P 21 02 56.2 +0.3
baz=168
H65A Eastbrook 23.75 22 P P 21 02 56.3 +0.3
baz=210
E57A Chemin Saint G 23.76 11 P P 21 02 56.9 +0.7
baz=195,SNR=8.4
F60A Warwick 23.81 15 P P 21 02 57.6 +1.1
baz=200,SNR=6.4
COWI Conover 23.85 345 P P 21 02 56.8 -0.2
COWI IAmb IAmb 21 03 01.0
comp=Z,58nm,0.7s
D51A Lot 18 Range I 23.87 2 P P 21 02 57.4 +0.3
baz=183
E58A La Victoria 23.89 13 P P 21 02 57.5 +0.1
baz=197,SNR=8.9
PKME Peaks-Kenny Pk 23.91 20 P P 21 02 57.3 -0.1
PKME IAmb IAmb 21 03 02.6
comp=Z,106nm,1.4s
PKME Peaks-Kenny Pk 23.91 20 P P 21 02 57.7 +0.3
baz=207
D50A G1974 Best Tow 23.93 1 P P 21 02 58.1 +0.4
baz=182,SNR=9.1
F61A St Evariste 24.05 17 P P 21 02 58.6 -0.3
baz=202
G64A Maxfield 24.07 21 P P 21 02 58.3 -0.7
baz=208
SPMN Marine on St. 24.09 339 P P 21 02 59.1 -0.1
SPMN Marine on St. 24.09 339 P P 21 02 59.4 +0.2
baz=152
D55A Sainte-Anne-du 24.14 9 P P 21 02 59.9 +0.2
baz=192,SNR=21
E59A St. Maurice 24.16 14 P P 21 03 00.9 +1.1
baz=99
H66A Whiting 24.17 24 P P 21 03 00.9 +0.9
baz=211
D56A ZEC Mazanza, M 24.28 10 P P 21 03 01.6 +0.7
baz=193,SNR=12
E60A Ste Agathe de 24.30 16 P P 21 03 02.3 +1.2
baz=201
ECSD EROS Data Cent 24.32 331 P P 21 03 01.2 -0.2
ECSD IAmb IAmb 21 03 48.5
comp=Z,67nm,0.9s
ECSD EROS Data Cent 24.32 331 P P 21 03 01.9 +0.5
baz=142,SNR=50
F63A Nahmakanta, Br 24.36 20 P P 21 02 02.2 +0.5
F63A IAmb IAmb 21 03 07.6
comp=Z,40nm,1.1s
F63A Nahmakanta, Br 24.36 20 P P 21 03 02.8 +1.1
baz=207
D57A Chemin Vers le 24.39 11 P P 21 03 03.0 +1.0
baz=195
KSCO Kaye Shedlock' 24.41 315 P P 21 03 03.7 +1.3
KSCO Kaye Shedlock' 24.41 315 P P 21 03 03.9 +1.4
baz=124,SNR=18
G65A Princeton 24.43 23 P P 21 03 04.1 +1.7
baz=210
D58A Chemin du LacG 24.66 13 P P 21 03 05.2 +0.7
baz=197
T25A Trinidad 24.67 310 P P 21 03 05.6 +0.7
T25A Trinidad 24.67 310 P P 21 03 06.5 +1.6
baz=118,SNR=42
F64A Sherman 24.74 21 P P 21 03 05.5 +0.3
baz=208
D59A Saint-Raymond 24.81 15 P P 21 03 07.5 +1.8
baz=200
E38A The Farm, Brul 24.94 342 P P 21 03 06.8 -0.2
D60A Saint Jean D'O 24.94 16 P P 21 03 07.8 +0.9
baz=202
LATQ La Tuque 24.96 13 P P 21 03 06.5 -0.6
VLDQ Val d'Or 25.00 5 P P 21 03 08.2 +0.7
BNM Barren Site 25.15 301 P P 21 03 10.2 +0.9
OGNE Ogallala 25.18 320 P P 21 03 09.2 -0.1
OGNE Ogallala 25.18 320 P P 21 03 10.2 +0.9
baz=128,SNR=10
LPM Los Pinos Moun 25.20 302 P P 21 03 10.9 +1.2
E63A Oxbow 25.21 20 P P 21 03 09.7 +0.3
baz=207
ANMO Albuquerque 25.29 303 P P 21 03 11.8 +1.4
ANMO pmax pmax
comp=Z,31nm,1.2s
ANMO Albuquerque 25.29 303 P P 21 03 12.4 +1.9
comp=Z,12nm,0.9s,baz=130,slow=12,SNR=14
ANMO LR LR 21 15 31.6
comp=Z,314nm,18.2s,baz=108,slow=42
ANMO Albuquerque 25.29 303 P P 21 03 11.8 +1.4
ANMO Albuquerque 25.29 303 P P 21 03 11.9 +1.5
baz=111
Y22D IRIS PASSCAL I 25.36 301 P P 21 03 12.9 +1.9
baz=108
D61A St Aubert, Com 25.40 17 P P 21 03 12.7 +1.6
baz=203,SNR=8.8
E64A Bridgewater 25.40 21 P P 21 03 12.4 +1.2
baz=208
LENM Lemitar 25.43 301 P P 21 03 12.5 +0.7
D62A Allapoint, All 25.61 19 P P 21 03 14.2 +1.2
D62A IAmb IAmb 21 03 18.6
comp=Z,132nm,1.9s
D62A Allapoint, All 25.61 19 P P 21 03 13.5 +0.5
baz=205
121A Cookes Peak, D 25.61 297 P P 21 03 15.2 +1.8
121A Cookes Peak, D 25.61 297 P P 21 03 14.6 +1.1
baz=104,SNR=45
SDCO Great Sand Dun 25.72 310 P P 21 03 16.1 +1.7
SDCO Great Sand Dun 25.72 310 P P 21 03 16.0 +1.5
baz=117,SNR=46
D63A Stockholm 25.86 20 P P 21 03 16.2 +0.9
baz=207
SUSD Miller 25.94 329 P P 21 03 16.3 +0.2
SUSD Miller 25.94 329 P P 21 03 16.4 +0.2
baz=139,SNR=8.0
Q24A Divide 26.06 313 P P 21 03 18.6 +1.1
Q24A IAmb IAmb 21 03 23.1
comp=Z,33nm,1.1s
EYMN Ely 26.15 343 P P 21 03 17.8 -0.1
EYMN Ely 26.15 343 P P 21 03 18.1 +0.1
baz=157,SNR=50
319A Douglas 26.61 294 P P 21 03 20.8 -1.6
319A IAmb IAmb 21 03 56.0
comp=Z,58nm,1.1s
MATQ Matagami 26.62 4 P P 21 03 22.5 +0.4
baz=186
S22A 4UR Ranch, Cre 26.66 309 P P 21 03 23.6 +0.6
S22A 4UR Ranch, Cre 26.66 309 P P 21 03 23.6 +0.6
baz=116
ISCO Idaho Springs 26.79 314 P P 21 03 25.8 +1.6
ISCO pmax pmax
comp=Z,40nm,1.2s
ISCO Idaho Springs 26.79 314 P P 21 03 25.8 +1.6
ISCO IAmb IAmb 21 04 21.2
comp=Z,40nm,1.1s
ISCO Idaho Springs 26.79 314 P P 21 03 25.3 +1.1
baz=121,SNR=20
LPIG La Paz 27.10 278 P P 21 03 28.5 +1.8
comp=Z,31nm,0.3s,baz=32,slow=5.1,SNR=7.5
LPIG LR LR 21 16 45.4
comp=Z,241nm,19.1s,baz=106,slow=42
D32A Dogwood Acres, 27.24 335 P P 21 03 26.2 -1.5
D32A IAmb IAmb 21 03 46.2
comp=Z,67nm,1.2s
PHWY Pilot Hill 27.48 317 P P 21 03 28.9 -1.4
PHWY IAmb IAmb 21 03 36.8
comp=Z,69nm,1.5s
N23A Red Feather La 27.57 316 P P 21 03 30.1 -1.0
N23A IAmb IAmb 21 04 24.5
comp=Z,38nm,1.1s
N23A Red Feather La 27.57 316 P P 21 03 31.3 +0.1
baz=122,SNR=11
MVCO Mesa Verde 27.66 307 P P 21 03 30.8 -1.1
MVCO IAmb IAmb 21 04 18.7
comp=Z,82nm,1.9s
MVCO Mesa Verde 27.66 307 P P 21 03 32.6 +0.7
baz=113
HSIG 27.71 289 P P 21 03 31.8 -0.4
HSIG IAmb IAmb 21 03 39.0
comp=Z,27nm,1.0s
AGMN Agassiz Nation 27.80 338 P P 21 03 32.7 -0.1
AGMN Agassiz Nation 27.80 338 P P 21 03 32.9 +0.1
baz=149,SNR=28
W18A Petrified Fore 27.89 302 P P 21 03 34.2 +0.3
W18A IAmb IAmb 21 03 42.1
comp=Z,60nm,1.4s
W18A Petrified Fore 27.89 302 P P 21 03 34.3 +0.4
baz=108
X18A Snowflake 27.89 300 P P 21 03 34.7 +0.8
TUC Tucson 28.04 296 P P 21 03 35.5 +0.3
TUC pmax pmax
comp=Z,25nm,1.3s
TUC Tucson 28.04 296 P P 21 03 35.5 +0.3
TUC Tucson 28.04 296 P P 21 03 35.9 +0.7
baz=101
RSSD Black Hills 28.33 323 P P 21 03 37.9 +0.2
baz=130
O20A White River Ci 28.71 312 P P 21 03 40.6 -0.7
O20A IAmb IAmb 21 04 35.4
comp=Z,46nm,1.3s
O20A White River Ci 28.71 312 P P 21 03 41.5 +0.2
baz=118
RWWY Rawlins 28.80 316 P P 21 03 41.1 -1.0
RWWY IAmb IAmb 21 04 44.4
comp=Z,43nm,1.1s
MDND Maddock 28.85 333 P P 21 03 41.1 -1.1
MDND Maddock 28.85 333 P P 21 03 42.5 +0.4
baz=142
K22A Casper 28.89 318 P P 21 03 42.9 +0.1
baz=124
X16A Lo Mia Camp, P 29.04 300 P P 21 03 43.2 -1.0
WUAZ Wupatki 29.28 302 P P 21 03 45.9 -0.4
WUAZ Wupatki 29.28 302 P P 21 03 47.7 +1.3
baz=106,SNR=10
ULM Lac du Bonnet 29.49 340 P P 21 03 47.4 -0.4
ULM pmax pmax
comp=Z,133nm,1.9s
ULM Lac du Bonnet 29.49 340 P P 21 03 48.2 +0.5
comp=Z,10nm,0.7s,baz=159,slow=7.9,SNR=19
ULM LR LR 21 15 29.7
comp=Z,1µm,21.6s,baz=147,slow=36
ULM Lac du Bonnet 29.49 340 P P 21 03 47.4 -0.4
214A Organ Pipe Nat 29.67 294 P P 21 03 49.9 +0.3
214A IAmb IAmb 21 03 57.0
comp=Z,33nm,1.2s
214A Organ Pipe Nat 29.67 294 P P 21 03 51.1 +1.4
baz=99,SNR=14
SRU San Rafael Swe 29.86 309 P P 21 03 52.0 +0.5
SRU pmax pmax
comp=Z,14nm,0.9s
SRU San Rafael Swe 29.86 309 P P 21 03 52.0 +0.5
P17A Butcher Ranch, 30.16 310 P P 21 03 53.2 -0.8
Y14A Wickenburg 30.20 298 P P 21 03 55.4 +1.1
Y14A IAmb IAmb 21 04 01.0
comp=Z,44nm,1.3s
ATAH Atahualpa 30.23 175 P P 21 03 56.6 +1.5
comp=Z,17nm,0.8s,baz=337,slow=7.6,SNR=13
ATAH LR LR 21 16 22.7
comp=Z,543nm,19.1s,baz=23,slow=37
Q16A Castle Valley 30.25 308 P P 21 03 55.2 +0.3
U15A North Rim 30.26 303 P P 21 03 54.2 -0.9
TMUT Trail Mountain 30.43 309 P P 21 03 56.4 -0.2
113A Mohawk Valley, 30.60 295 P P 21 03 57.1 -0.7
MTPU Mount Pierson 30.68 306 P P 21 03 58.7 -0.3
KNB Kanab 30.84 304 P P 21 04 00.7 +0.6
KNB pmax pmax
comp=Z,29nm,1.2s
KNB Kanab 30.84 304 P P 21 04 00.7 +0.6
MSU Marysvale 30.84 307 P P 21 03 59.1 -1.0
MSU Marysvale 30.84 307 P P 21 03 59.1 -1.0
BW06 Boulder Array 30.85 316 P P 21 03 59.9 -0.3
BW06 IAmb IAmb 21 04 06.4
comp=Z,37nm,1.6s
BW06 Boulder Array 30.85 316 P P 21 04 00.3 +0.1
baz=120
PD31 Pinedale Array 30.85 316 P P 21 04 00.2 0.0
PD31 IAmb IAmb 21 04 06.3
comp=Z,35nm,1.6s
PDAR Pinedale Array 30.85 316 P P 21 04 01.1 +0.8
comp=Z,3.1nm,0.6s,baz=122,slow=12,SNR=12
PDAR LR LR 21 16 46.6
comp=Z,555nm,19.7s,baz=116,slow=37
TCRU Three Creeks R 31.07 307 P P 21 04 00.4 -1.8
JLU Jordanelle 31.12 311 P P 21 04 04.1 +1.5
LAO LASA Array 31.16 325 P P 21 04 01.9 -0.8
LAO IAmb IAmb 21 05 09.8
comp=Z,26nm,1.0s
LAO LASA Array 31.16 325 P P 21 04 03.5 +0.9
baz=130
LCMT Little Creek M 31.16 304 P P 21 04 03.1 +0.2
W13A Hualapai Mount 31.16 300 P P 21 04 04.2 +1.2
NLU North Lily Min 31.30 310 P P 21 04 04.2 0.0
TCUT Toone Canyon 31.31 312 P P 21 04 04.3 0.0
DGMT Dagmar 31.35 329 P P 21 04 03.7 -0.7
DGMT IAmb IAmb 21 05 08.7
comp=Z,28nm,0.8s
DGMT Dagmar 31.35 329 P P 21 04 04.9 +0.5
baz=135,SNR=7.9
CTU Camp Tracy 31.37 311 P P 21 04 04.4 -0.3
Y12C Blythe 31.40 297 P P 21 04 06.4 +1.5
Y12C IAmb IAmb 21 04 11.5
comp=Z,22nm,1.0s
Y12C Blythe 31.40 297 P P 21 04 05.9 +1.1
baz=101
GLA Glamis 31.52 296 P P 21 04 05.4 -0.7
GLA pmax pmax
comp=Z,42nm,1.3s
GLA Glamis 31.52 296 P P 21 04 05.4 -0.7
GLA IAmb IAmb 21 04 12.8
comp=Z,42nm,1.3s
GLA Glamis 31.52 296 P P 21 04 07.2 +1.1

baz=99
DUG Dugway, Tooele 31.91 310 P **P** **21 04 10.4 +0.9**
DUG pmax pmax
comp=Z,17nm,1.1s
DUG Dugway, Tooele 31.91 310 P **P** **21 04 10.4 +0.9**
DUG Dugway, Tooele 31.91 310 P **P** **21 04 11.0 +1.5**
baz=112,SNR=7.6
RLMT Red Lodge 31.92 320 P **P** **21 04 09.5 0.0**
RLMT Red Lodge 31.92 320 P **P** **21 04 10.8 +1.2**
baz=124,SNR=8.6
SNOW Snow King Moun 31.96 316 P **P** **21 04 10.6 +0.6**
REDW Red Top Meadow 31.97 316 P **P** **21 04 11.1 +1.1**
IRM Iron Mountain 31.98 298 P **P** **21 04 12.0 +2.0**
baz=101,SNR=34
PSUT Pine Spring 32.09 306 P **P** **21 04 13.0 +1.9**
MOOW Moose Ponds 32.09 317 P **P** **21 04 12.2 +1.1**
MOOW IAmb IAmb 21 04 13.5
comp=Z,19nm,1.1s
SPUT South Promonto 32.10 312 P **P** **21 04 12.7 +1.5**
BC3 Big Chuckawall 32.14 297 P **P** **21 04 13.1 +1.6**
baz=100,SNR=11
FLWY Flagg Ranch 32.23 318 P **P** **21 04 14.1 +1.8**
YMP Mirror Lake Pl 32.24 319 P **P** **21 04 13.7 +1.2**
YNE Yellowstone No 32.30 319 P **P** **21 04 13.7 +0.8**
LKWY Lake 32.30 319 P **P** **21 04 12.5 -0.4**
LKWY pmax pmax
comp=Z,14nm,0.9s
LKWY Lake 32.30 319 P **P** **21 04 12.5 -0.4**
H17A Grant Village 32.32 318 P **P** **21 04 12.5 -0.6**
H17A IAmb IAmb 21 04 28.0
comp=Z,18nm,1.1s
H17A Grant Village 32.32 318 P **P** **21 04 13.6 +0.5**
baz=121
SWSC Sam W. Stewart 32.32 295 P **P** **21 04 15.0 +2.1**
baz=98,SNR=8.7
BGU Big Grassy Mou 32.35 311 P **P** **21 04 12.9 -0.4**
YPP Pitchstone Pla 32.39 318 P **P** **21 04 13.0 -0.8**
YUF Upper Falls 32.44 319 P **P** **21 04 12.9 -1.4**
SHPR Sheep Range 32.50 302 P **P** **21 04 15.4 +0.7**
SHPR IAmb IAmb 21 04 22.6
comp=Z,43nm,1.5s
GMRC Granite Mounta 32.52 299 P **P** **21 04 16.7 +1.9**
baz=102,SNR=16
HVU Hansel Valley 32.52 312 P **P** **21 04 15.0 +0.2**
HVU pmax pmax
comp=Z,23nm,1.2s
HVU Hansel Valley 32.52 312 P **P** **21 04 15.0 +0.2**
IKP In-Ko-Pah, Jac 32.53 295 P **P** **21 04 16.7 +1.7**
baz=98,SNR=12
YNR Norris Junctio 32.55 319 P **P** **21 04 13.8 -1.3**
BELC Belle Mtn. Jos 32.65 297 P **P** **21 04 17.8 +1.8**
baz=100,SNR=15
YMR Madison River 32.70 318 P **P** **21 04 16.0 -0.4**
MONP2 Monument Peak 32.83 295 P **P** **21 04 19.7 +2.0**
baz=98,SNR=19
TUQ Turquoise Moun 32.86 300 P **P** **21 04 19.5 +1.6**
baz=102,SNR=21
YHB Horse Butte 32.88 318 P **P** **21 04 17.6 -0.4**
YHL Hebgen Lake 32.92 318 P **P** **21 04 19.3 +0.8**
XPFO Pion Flat 32.96 296 P **P** **21 04 18.5 -0.2**
XPFO IAmb IAmb 21 04 26.5
comp=Z,39nm,1.2s
PFO Pinyon Flats O 32.96 296*ce*P **P** **21 04 21.6 +2.9**
PFO pmax pmax
comp=Z,43nm,1.3s
PFO Pinyon Flats O 32.96 296 P **P** **21 04 21.6 +2.9**
comp=Z,16nm,1.1s,baz=88,slow=10,SNR=13
PFO Pinyon Flats O 32.96 296 P **P** **21 04 18.3 -0.4**
PFO IAmb IAmb 21 04 26.5
comp=Z,39nm,1.2s
PFO Pinyon Flats O 32.96 296 P **P** **21 04 20.4 +1.7**
baz=99,SNR=11
HEC Hector,Ludlow 33.07 299 P **P** **21 04 20.3 +0.7**
baz=101
SHOC Shoshone, Teco 33.24 301 P **P** **21 04 22.4 +1.4**
baz=103
SCHQ Schefferville 33.26 15 P **P** **21 04 22.2 +1.3**
comp=Z,13nm,1.1s,baz=186,slow=7.5,SNR=5.6
SCHQ PcP **PcP** **21 07 06.0 +2.9**
comp=Z,7.5nm,0.8s,baz=166,slow=1.3,SNR=4.3
SCHQ LR LR 21 17 56.5
comp=Z,864nm,18.6s,baz=212,slow=36
SCHQ Schefferville 33.26 15 P **P** **21 04 20.8 -0.1**
SCHQ **PcP** **21 07 06.1 +2.9**
R11A Troy Canyon, C 33.33 305 P **P** **21 04 22.1 +0.2**
R11A Troy Canyon, C 33.33 305 P **P** **21 04 23.4 +1.5**
baz=107,SNR=11
109C Camp Elliot, M 33.40 295 P **P** **21 04 22.2 -0.2**
109C IAmb IAmb 21 04 29.7
comp=Z,34nm,1.1s
109C Camp Elliot, M 33.40 295 P **P** **21 04 24.0 +1.6**
baz=98
BBRC Big Bear Solar 33.45 297 P **P** **21 04 24.5 +1.4**
baz=100
TPNV Topopah Spring 33.46 302 P **P** **21 04 22.0 -1.1**
TPNV pmax pmax
comp=Z,30nm,1.3s
TPNV Topopah Spring 33.46 302 P **P** **21 04 22.0 -1.1**
TPNV IAmb IAmb 21 04 58.2
comp=Z,30nm,1.2s
TPNV Topopah Spring 33.46 302 P **P** **21 04 24.5 +1.4**
baz=104,SNR=8.3
GSC Goldstone, Bar 33.54 299 P **P** **21 04 22.9 -0.8**
GSC pmax pmax
comp=Z,40nm,1.5s
GSC Goldstone, Bar 33.54 299 P **P** **21 04 22.9 -0.8**
GSC IAmb IAmb 21 04 42.1
comp=Z,40nm,1.5s
GSC Goldstone, Bar 33.54 299 P **P** **21 04 24.9 +1.2**
baz=101,SNR=7.3
MURC Murrieta 33.57 296 P **P** **21 04 25.2 +1.3**
baz=98
RRX Edison Barstow 33.61 298 P **P** **21 04 26.5 +2.2**
baz=100
FURC Furnace Creek, 33.83 301 P **P** **21 04 28.4 +2.3**
baz=103
ELK Elko 33.84 309 P **P** **21 04 26.7 +0.3**
ELK pmax pmax
comp=Z,12nm,0.9s
ELK Elko 33.84 309 P **P** **21 04 27.7 +1.3**
comp=Z,11nm,0.9s,baz=105,slow=5.5,SNR=33
ELK Elko 33.84 309 P **P** **21 04 26.7 +0.3**
EGMT Eagleton 33.87 324 P **P** **21 04 28.0 +1.5**
baz=127
MCMT McKenzie Canyo 33.94 317 P **P** **21 04 28.9 +1.6**
DLMT Dillon 34.05 318 P **P** **21 04 29.1 +1.0**
BFSC Mount Baldy Ra 34.05 297 P **P** **21 04 29.7 +1.5**
baz=99,SNR=6.6
LRM Limekiln Ridge 34.19 319 P **P** **21 04 31.4 +2.0**
MPMC Manual Prospec 34.24 300 P **P** **21 04 31.5 +1.6**
baz=102,SNR=13
LRMC Laurel Mtn Rad 34.28 299 P **P** **21 04 31.7 +1.6**
baz=101,SNR=11
EDW2 Edwards Air Fo 34.42 298 P **P** **21 04 33.4 +2.0**
baz=100,SNR=12
FMP Fort Macarthur 34.49 296 P **P** **21 04 33.2 +1.3**
baz=98
CIS Catalina Islan 34.55 296 P **P** **21 04 34.0 +1.5**
baz=97
DECC Green Verdugo 34.60 297 P **P** **21 04 34.4 +1.5**
baz=99
SCI2 San Clemente I 34.61 295 P **P** **21 04 34.8 +1.9**
baz=97
CWC Cottonwood Cre 34.78 301 P **P** **21 04 36.1 +1.5**
baz=102
ISA Isabella, Lake 34.95 299 P **P** **21 04 38.2 +2.3**
baz=100
ARVC Arvin 35.14 298 P **P** **21 04 38.9 +1.4**
baz=99
BLG Laguna Peak, P 35.18 297 P **P** **21 04 39.0 +1.1**
baz=98
MFID Camas Ranch 35.24 313 P **P** **21 04 36.8 -1.6**
MFID IAmb IAmb 21 04 44.6
comp=Z,53nm,1.6s
FFC Flin Flon 35.27 339*ce*P **P** **21 04 39.3 +1.0**
FFC pmax pmax
comp=Z,107nm,2.5s
FFC Flin Flon 35.27 339 P **P** **21 04 38.0 -0.4**
FFC IAmb IAmb 21 04 41.8
comp=Z,73nm,1.9s
NV11 Mina Array Sit 35.29 304 P **P** **21 04 39.1 +0.2**
NV11 IAmb IAmb 21 04 45.4
comp=Z,44nm,1.6s
NVAR Mina Array Bea 35.40 304 P **P** **21 04 42.0 +2.0**
comp=Z,4.1nm,0.8s,baz=118,slow=8.1,SNR=5.7
NVAR PcP **PcP** **21 07 13.8 +3.8**
comp=Z,1.6nm,0.6s,baz=129,slow=2.4,SNR=3.3
NVAR LR LR 21 20 18.7
comp=Z,242nm,18.8s,baz=112,slow=38
NVAR Mina Array Bea 35.40 304 P **P** **21 04 40.7 +0.7**
KVN Kaiserville 35.41 305 P **P** **21 04 39.2 -0.8**
KVN pmax pmax
comp=Z,19nm,1.1s
KVN Kaiserville 35.41 305 P **P** **21 04 39.2 -0.8**
SNCC San Nicolas Is 35.46 295 P **P** **21 04 40.9 +0.7**
baz=96
VES Vestal, Richgr 35.47 300 P **P** **21 04 42.2 +1.9**
baz=100
MSO Missoula 35.59 320 P **P** **21 04 41.3 -0.1**
MSO IAmb IAmb 21 04 46.0
comp=Z,52nm,1.8s
MSO Missoula 35.59 320 P **P** **21 04 42.5 +1.2**
baz=120
RYN Ryan 35.62 304 P **P** **21 04 42.6 +0.8**
SCZ2 Santa Cruz Isl 35.63 296 P **P** **21 04 42.6 +0.8**
baz=97
OMMB Old Mammoth Mi 35.75 303 P **P** **21 04 44.3 +1.2**
SBC Santa Barbara 35.76 297 P **P** **21 04 43.7 +0.9**
baz=98
MDPB Devils Postpil 35.81 303 P **P** **21 04 45.0 +1.4**
PKM Mcpherson Peak 35.90 298 P **P** **21 04 45.7 +1.5**
baz=98
JTMT Jette 36.25 321 P **P** **21 04 48.2 +1.2**
JTMT IAmb IAmb 21 04 49.3
comp=Z,20nm,0.8s
YERR Yerington 36.25 305 P **P** **21 04 49.0 +1.8**
YERR IAmb IAmb 21 04 54.4
comp=Z,62nm,1.4s
SAML Samuel 36.26 150 P **P** **21 04 46.5 -0.7**
SAML pmax pmax
comp=Z,27nm,1.0s
SAML Samuel 36.26 150 *eP* **P** **21 04 46.6 -0.6**
SAML Samuel 36.26 150 P **P** **21 04 46.5 -0.7**
SAML IAmb IAmb 21 04 48.7
comp=Z,27nm,0.9s
WAKR Walker 36.29 304 P **P** **21 04 47.3 -0.2**
PAGB Antelope Grade 36.38 299 P **P** **21 04 48.6 +0.4**
PAGB IAmb IAmb 21 04 55.2
comp=Z,50nm,1.5s
PNTR Pine Nut 36.55 305 P **P** **21 04 49.7 -0.1**
WALA Waterton Lakes 36.73 323 P **P** **21 04 50.0 -1.1**
WALA IAmb IAmb 21 04 56.8
comp=Z,58nm,2.0s
BMO Blue Mountains 36.80 315 P **P** **21 04 51.5 -0.2**
BMO pmax pmax
comp=Z,64nm,1.9s
BMO Blue Mountains 36.80 315 P **P** **21 04 51.5 -0.2**
BMO IAmb IAmb 21 04 56.9
comp=Z,64nm,1.9s
FCC Fort Churchill 36.80 348 P **P** **21 04 51.2 -0.1**
FCC pmax pmax
comp=Z,163nm,2.0s
FCC Fort Churchill 36.80 348 P **P** **21 04 51.2 -0.1**
WVOR Wild Horse Val 36.81 311 P **P** **21 04 51.6 -0.3**
WVOR pmax pmax
comp=Z,109nm,1.9s
WVOR Wild Horse Val 36.81 311 P **P** **21 04 51.6 -0.3**
WVOR IAmb IAmb 21 04 58.4
comp=Z,109nm,1.9s
F10A Beach Ranch, E 37.21 317 P **P** **21 04 54.9 -0.3**
F10A IAmb IAmb 21 05 01.5
comp=Z,87nm,1.9s
AFDM Forest Hills D 37.56 304 P **P** **21 04 57.8 -0.3**
MOD Modoc Plateau 37.82 309 P **P** **21 05 00.4 -0.1**
E09A Wood Farm, Sta 38.01 317 P **P** **21 05 01.8 -0.1**
G08A Pilot Rock 38.05 315 P **P** **21 05 02.4 +0.1**
NEW Newport 38.17 320 P **P** **21 05 03.8 +0.6**
NEW pmax pmax
comp=Z,109nm,2.0s
NEW Newport 38.17 320 P **P** **21 05 04.1 +0.9**
comp=Z,10nm,0.8s,baz=127,slow=9.6,SNR=15
NEW Newport 38.17 320 P **P** **21 05 03.8 +0.6**
NEW IAmb IAmb 21 05 09.1
comp=Z,108nm,1.9s
O03E Paynes Creek 38.49 306 P **P** **21 05 06.8 +0.8**
baz=104
E08A Dider Farm, El 38.58 317 P **P** **21 05 06.5 -0.1**
E08A IAmb IAmb 21 05 12.2
comp=Z,69nm,1.7s
C09A Chrisman Ranch 38.65 319 P **P** **21 05 07.3 +0.1**
D08A Wollman Farm, 38.73 317 P **P** **21 05 08.2 +0.4**
HAWA Hanford 38.84 316 P **P** **21 05 09.3 +0.5**
M04C Macdoel 38.89 308 P **P** **21 05 09.2 -0.2**
baz=96
J05D Fort Rock, OR 38.89 311 P **P** **21 05 10.0 +0.5**
baz=108
F07A Phinny Hill Vi 38.90 315 P **P** **21 05 09.6 +0.3**
E07A Sunnyside 39.11 316 P **P** **21 05 11.1 -0.1**
L04D Klamath Falls 39.34 309 P **P** **21 05 13.5 +0.3**
baz=106
J04D Umpqua Nationa 39.49 311 P **P** **21 05 14.2 -0.3**
baz=107
YBH Yreka Blue Hor 39.51 308 P **P** **21 05 14.0 -0.6**
YBH pmax pmax
comp=Z,45nm,2.0s
YBH Yreka Blue Hor 39.51 308 P **P** **21 05 14.0 -0.6**
comp=Z,1.2nm,0.5s,baz=82,slow=5.3,SNR=5.0
M02C Callahan 39.52 308 P **P** **21 05 14.5 -0.2**
baz=104
B08A Colville Reser 39.53 319 P **P** **21 05 15.2 +0.6**
B08A IAmb IAmb 21 05 20.3
comp=Z,56nm,1.4s
G05D Wamic, OR 39.58 314 P **P** **21 05 15.5 +0.4**
baz=110
I04A Tendick Farm, 39.86 311 P **P** **21 05 18.2 +0.7**
baz=107
F05D White Salmon 39.90 315 P **P** **21 05 18.6 +0.9**
baz=111
LTY Liberty 39.90 317 P **P** **21 05 17.7 0.0**
LTY IAmb IAmb 21 05 23.7
comp=Z,107nm,1.6s
H04A Detroit Lake 39.98 313 P **P** **21 05 18.8 +0.4**
H04A IAmb IAmb 21 05 35.7
comp=Z,85nm,1.8s
L02E Cave Junction 40.26 308 P **P** **21 05 21.6 +0.9**
baz=104
H04D Lebanon 40.30 312 P **P** **21 05 21.6 +0.6**
baz=108
LON Longmire 40.43 316 P **P** **21 05 22.5 +0.3**
LON pmax pmax
comp=Z,20nm,1.1s
LON Longmire 40.43 316 P **P** **21 05 22.5 +0.3**
K02D Willamette Mer 40.44 309 P **P** **21 05 21.9 -0.3**
baz=105
I03D Drain, OR 40.48 311 P **P** **21 05 22.6 +0.1**
baz=106
J01E Myrtle Point 40.74 310 P **P** **21 05 24.9 +0.2**
baz=105
E04D Cinebar 40.85 315 P **P** **21 05 26.5 +1.0**
baz=110
G03D McMinnville, O 40.87 313 P **P** **21 05 26.7 +1.0**
baz=108
I02D Swisshome 40.94 311 P **P** **21 05 27.2 +0.9**
baz=106
LPAZ La Paz 41.13 161 P **P** **21 05 28.2 -0.5**
comp=Z,14nm,0.9s,baz=340,slow=8.3,SNR=36
LPAZ LR LR 21 23 49.5
comp=Z,434nm,21.5s,baz=346,slow=38
LPAZ La Paz 41.13 161 *eP* **P** **21 05 28.4 -0.4**
LPAZ La Paz 41.13 161 P **P** **21 05 27.4 -1.4**
LPAZ IAmb IAmb 21 05 33.4
comp=Z,50nm,1.3s
B05A Bryant 41.17 318 P **P** **21 05 28.7 +0.6**
baz=113
D04E Lakebay 41.20 316 P **P** **21 05 29.4 +1.0**
baz=111
FRB Frobisher Bay 41.34 8 P **P** **21 05 29.3 0.0**
comp=Z,10nm,0.8s,baz=194,slow=7.8,SNR=11
D03D Eldon 41.53 316 P **P** **21 05 32.1 +1.0**
baz=111
CLDB Colider 41.73 142 *eP* **P** **21 05 31.6 -1.5**
MNMC Minye Minye 43.45 165 P **P** **21 05 46.5 -0.7**
PB11 IPOC Station P 44.04 165 P **P** **21 05 50.9 -1.0**
GO01 Chusmiza 44.06 164 P **P** **21 05 51.6 -0.8**
SMTB Santa Maria do 45.45 131 *eP* **P** **21 06 03.3 +0.2**
YKA Yellowknife Ar 45.45 339 P **P** **21 06 02.4 0.0**
comp=Z,7.7nm,0.7s,baz=129,slow=8.4,SNR=59
YKA PcP **PcP** **21 07 41.9 +0.5**
comp=Z,3.8nm,1.0s,baz=130,slow=3.7,SNR=5.9
YKA LR LR 21 24 59.5
comp=Z,58nm,20.6s,baz=130,slow=36
YKW3 Yellowknife Ar 45.50 339 P **P** **21 06 02.7 -0.2**
SALV Santo Antonio 45.92 145 *eP* **P** **21 06 06.5 -0.2**
PB04 IPOC Station P 46.41 166 P **P** **21 06 09.9 -0.7**
PB04 IAmb IAmb 21 06 18.0
comp=Z,15nm,0.9s
LVC Limon Verde 46.96 165 P **P** **21 06 14.6 -0.6**
LVC pmax pmax
comp=Z,18nm,0.9s
LVC Limon Verde 46.96 165 *eP* **P** **21 06 15.7 +0.5**
LVC Limon Verde 46.96 165 P **P** **21 06 14.6 -0.6**
LVC IAmb IAmb 21 06 17.0
comp=Z,18nm,0.9s
NBPS Pedro II - PI 47.12 121 *eP* **P** **21 06 17.4 +1.0**
PEXB Peixe 47.31 134 *eP* **P** **21 06 18.5 +0.8**
NBMO Morrinhos-CE 47.61 118 *eP* **P** **21 06 21.2 +1.1**
SFJD Kangerlussuaq 47.70 15 P **P** **21 06 20.4 +0.3**
SFJD pmax pmax
comp=Z,79nm,1.5s
SFJD Kangerlussuaq 47.70 15 P **P** **21 06 20.3 +0.3**
comp=Z,16nm,1.0s,baz=254,slow=7.4,SNR=3.5
SFJD Kangerlussuaq 47.70 15 IAmb IAmb 21 06 28.2
comp=Z,79nm,1.4s
PP1B Ponte de Pedra 47.77 146 *eP* **P** **21 06 22.2 +1.0**
ARAG Araguaiana, MT 47.90 141 *eP* **P** **21 06 22.3 0.0**
GO02 Mina Guanaco 49.27 167 P **P** **21 06 33.3 +0.3**
NBPB Pedra_Branca-C 49.29 120 *eP* **P** **21 06 33.9 +0.9**
NBCL Cascavel-CE 49.56 118 *eP* **P** **21 06 36.4 +1.3**
DLBC Dease Lake 49.56 328 P **P** **21 06 36.3 +1.7**
comp=Z,8.1nm,0.7s,baz=128,slow=4.8,SNR=6.2
DLBC Dease Lake 49.56 328 P **P** **21 06 36.1 +1.5**
AQDB Aquidauana 49.79 149 *eP* **P** **21 06 36.1 -0.6**
C2SB Chapadao do Su 49.81 145 *eP* **P** **21 06 37.9 +1.1**
BDFB Brasilia 50.13 137 P **P** **21 06 38.7 -0.8**
BDFB pmax pmax
comp=Z,14nm,0.9s
BDFB Brasilia 50.13 137 P **P** **21 06 38.8 -0.8**
comp=Z,12nm,0.9s,baz=340,slow=7.8,SNR=15
BDFB LR LR 21 28 53.8
comp=Z,510nm,19.7s,baz=312,slow=37
BDFB Brasilia 50.13 137 P **P** **21 06 38.7 -0.8**
NBMA Muriti-CE 51.04 121 *eP* **P** **21 06 47.4 +1.1**
NBPA Parau_RN 51.39 119 *eP* **P** **21 06 49.8 +0.8**
IPMB Ipameri, GO 51.80 139 *eP* **P** **21 06 51.4 -0.6**
ITRB Iturama 51.92 143 *eP* **P** **21 06 52.8 0.0**
RES Resolute Bay 52.07 355 P **P** **21 06 52.6 -0.6**
RES pmax pmax
comp=Z,20nm,0.8s
RES Resolute Bay 52.07 355 P **P** **21 06 53.0 -0.2**
comp=Z,18nm,0.8s,baz=188,slow=12,SNR=28
RES Resolute Bay 52.07 355 P **P** **21 06 52.6 -0.6**
RES IAmb IAmb 21 06 56.5
comp=Z,20nm,0.8s
JANB Januaria 52.10 133 *eP* **P** **21 06 53.5 -0.7**
NBPN Ponto Novo - B 52.13 126 *eP* **P** **21 06 54.3 -0.2**
RCBR Riachuelo 52.42 118 *eP* **P** **21 06 57.7 +1.0**
NBLI Livramento-PB 52.47 120 *eP* **P** **21 06 58.1 +1.1**
NBTA Tacaratu-PE 52.66 123 *eP* **P** **21 06 58.6 +0.2**
C36M Paulatuk 52.88 342 P **P** **21 06 59.0 -0.2**
C36M Paulatuk 52.88 342 P **P** **21 07 00.3 +1.1**
baz=128
PCMB Pacaembu 52.98 145 *eP* **P** **21 07 00.9 +0.3**
NBPV Pedro Velho 53.25 118 *eP* **P** **21 07 04.0 +1.2**
TRCB Terra Rica 53.26 147 *eP* **P** **21 07 02.6 -0.1**
PMNB Patos De Minas 53.30 138 *eP* **P** **21 07 03.3 +0.2**
TULEG Thule 53.72 3 P **P** **21 07 04.8 -0.6**
TULEG IAmb IAmb 21 07 09.3
comp=Z,26nm,1.1s
BB19B Bebedouro 54.03 142 *eP* **P** **21 07 08.4 0.0**
NBLA Lagarto - SE 54.03 124 *eP* **P** **21 07 08.8 +0.3**
CPUP Villa Florida 54.19 154 P **P** **21 07 07.8 -1.6**
CPUP pmax pmax
comp=Z,25nm,1.7s
CPUP Villa Florida 54.19 154 P **P** **21 07 07.7 -1.6**
comp=Z,1.5nm,0.4s,baz=328,slow=6.7,SNR=7.0
CPUP LR LR 21 32 28.5
comp=Z,445nm,18.8s,baz=337,slow=39
CPUP Villa Florida 54.19 154 *eP* **P** **21 07 07.9 -1.6**
CPUP Villa Florida 54.19 154 P **P** **21 07 07.8 -1.6**
CPUP IAmb IAmb 21 07 11.4
comp=Z,25nm,1.7s
NBAN Anadia - AL 54.38 122 *eP* **P** **21 07 11.7 +0.6**
SUMG Summit 54.65 14 *i* P **P** **21 07 13.3 +0.6**
SUMG pmax pmax
comp=Z,120nm,1.4s
SUMG Summit 54.65 14 *i* P **P** **21 07 13.3 +0.6**
comp=Z,116nm,1.4s
SUMG Summit 54.65 14 P **P** **21 07 12.1 -0.6**
NBRF Rio Formoso - 54.70 120 *eP* **P** **21 07 14.5 +1.2**
PTGB Pitanga 55.15 148 *eP* **P** **21 07 16.1 -0.4**
INK Inuvik 55.22 339 P **P** **21 07 17.0 +0.6**
INK pmax pmax
comp=Z,54nm,1.4s
INK Inuvik 55.22 339 P **P** **21 07 17.2 +0.8**
comp=Z,13nm,1.1s,baz=110,slow=9.1,SNR=14
INK PcP **PcP** **21 08 18.6 +1.3**
comp=Z,6.0nm,0.9s,baz=128,slow=4.2,SNR=2.3
INK LR LR 21 30 08.3
comp=Z,863nm,19.9s,baz=109,slow=35
INK Inuvik 55.22 339 P **P** **21 07 17.0 +0.6**
FRTB Fartura 55.29 145 *eP* **P** **21 07 18.1 +0.6**
NBIT Itapeh - BA 55.38 129 *eP* **P** **21 07 18.5 +0.3**
RCLB Rio Claro- Sao 55.67 142 *eP* **P** **21 07 20.5 +0.2**
CTGM Chitina Glacie 55.80 329 P **P** **21 07 21.0 +0.1**
BARN Barnard Glacie 55.98 329 P **P** **21 07 21.6 -0.5**
BARN IAmb IAmb 21 07 28.8
comp=Z,26nm,1.4s
BSCB Bom Sucesso 56.18 139 *eP* **P** **21 07 24.9 +0.9**
VAO Valinhos 56.44 142 *eP* **P** **21 07 26.5 +0.7**
SPB Sao Paulo 56.65 143 *eP* **P** **21 07 27.8 +0.6**
EGAK Eagle 56.74 334 P **P** **21 07 27.5 +0.1**
EGAK IAmb IAmb 21 07 32.4
comp=Z,40nm,1.7s
SJMB Sao Joao De Ma 56.78 134 *eP* **P** **21 07 29.3 +1.1**
BSFB Barra de Sao F 57.10 134 *eP* **P** **21 07 30.7 +0.3**
ITAB Concordia 57.24 150 *eP* **P** **21 07 31.1 -0.2**
MENT Mentasta 57.36 331 P **P** **21 07 31.9 0.0**
MENT IAmb IAmb 21 07 43.3
comp=Z,14nm,1.0s
ITQB Itaqui 57.44 155 *eP* **P** **21 07 32.1 -0.5**
DOT Dot Lake 57.68 332 P **P** **21 07 34.5 +0.5**
SCRK Sand Creek 57.72 332 P **P** **21 07 34.8 +0.4**
ESAR Angra dos Reis 57.92 140 *eP* **P** **21 07 37.4 +1.2**
VAS01 Vassouras-RJ 57.96 139 *eP* **P** **21 07 36.9 +0.4**
RIDG Independent Ri 58.04 332 P **P** **21 07 36.9 +0.3**
RIDG IAmb IAmb 21 07 43.2
comp=Z,30nm,1.3s
PAX Paxson 58.15 331 P **P** **21 07 37.7 +0.3**
PAX pmax pmax
comp=Z,13nm,1.0s
PAX Paxson 58.15 331 P **P** **21 07 37.7 +0.3**
PRP Porcupine Dome 58.72 334 P **P** **21 07 41.7 +0.3**
PRP IAmb IAmb 21 07 45.5
comp=Z,44nm,2.0s
FYU Fort Yukon 58.85 335 P **P** **21 07 42.4 +0.3**
DHY Denali Highway 59.02 331 P **P** **21 07 44.2 +0.6**
HDA Harding Lake 59.08 332 P **P** **21 07 44.6 +0.9**
HDA Harding Lake 59.08 332 P **P** **21 07 44.5 +0.7**
baz=101,SNR=12
IL31 59.12 333 P **P** **21 07 44.0 0.0**
ILAR Eielson Array 59.12 333 P **P** **21 07 44.8 +0.7**
comp=Z,5.8nm,0.7s,baz=107,slow=5.4,SNR=46
ILAR LR LR 21 33 36.4
comp=Z,131nm,20.1s,baz=105,slow=36
ILAR Eielson Array 59.12 333 P **P** **21 07 44.4 +0.4**
CPSB Cacapava Do Su 59.38 153 *eP* **P** **21 07 45.3 -0.9**
POKR Poker Plat Res 59.42 333 P **P** **21 07 46.7 +0.6**
baz=101
CCB Clear Creek Bu 59.49 333 P **P** **21 07 46.4 -0.1**
GHO Glory Hole Cre 59.54 329 P **P** **21 07 46.9 -0.1**
GHO IAmb IAmb 21 07 53.2
comp=Z,45nm,1.8s
COLA College 59.55 333 *i* P **P** **21 07 48.3 +1.4**
COLA pmax pmax
comp=Z,8.0nm,0.8s
TCOL CIGO, UAF Yank 59.55 333 P **P** **21 07 47.8 +0.8**
baz=100
WRH Wood River Hil 59.58 332 P **P** **21 07 47.5 +0.4**
WRH IAmb IAmb 21 07 52.9
comp=Z,12nm,1.1s
CNLB Canela 59.60 150 *eP* **P** **21 07 47.8 -0.1**
RND Reindeer 59.74 331 P **P** **21 07 49.9 +1.5**
RND pmax pmax
comp=Z,36nm,1.0s
RND Reindeer 59.74 331 P **P** **21 07 49.9 +1.5**
MCK McKinley 59.82 331 P **P** **21 07 49.5 +0.5**

MCK pmax pmax
comp=Z,59nm,1.6s
MCK McKinley 59.82 331 P **P** **21 07 49.5 +0.5**
RC01 Rabbit Creek A 59.84 328 P **P** **21 07 49.3 +0.2**
RC01 IAmb IAmb 21 08 49.2
comp=Z,18nm,1.2s
BRLK Bradley Lake 60.28 327 P **P** **21 07 52.3 +0.2**
BRLK IAmb IAmb 21 08 41.7
comp=Z,17nm,0.9s
SUA Susitna One 60.37 329 P **P** **21 07 52.5 -0.4**
SUA IAmb IAmb 21 08 42.6
comp=Z,13nm,0.8s
TRF Thorofare Moun 60.38 331 P **P** **21 07 53.6 +0.6**
PLTB Pedras Altas 60.50 154 *eP* **P** **21 07 53.8 -0.1**
KTH Kantishna Hill 60.68 331 P **P** **21 07 55.3 +0.5**
BPAW Bear Paw Mtn. 60.77 332 P **P** **21 07 55.6 +0.2**
MLY Manley 60.79 333 P **P** **21 07 55.5 0.0**
MLY IAmb IAmb 21 08 00.9
comp=Z,11nm,0.9s
SKT Skwentna 60.79 329 P **P** **21 07 55.8 +0.2**
COLD Coldfoot 60.90 335 P **P** **21 07 56.3 +0.1**
COLD IAmb IAmb 21 08 21.6
comp=Z,31nm,2.0s
TOLK Toolik Lake Re 60.92 337 P **P** **21 07 56.8 +0.4**
TOLK IAmb IAmb 21 09 07.3
comp=Z,14nm,1.1s
TOLK Toolik Lake Re 60.92 337 P **P** **21 07 56.7 +0.3**
baz=101
PPLA Purkeypile 61.18 330 P **P** **21 07 58.3 0.0**
DAG Danmarks Havn 61.29 13 *i* P **P** **21 07 58.1 -0.6**
DAG pmax pmax
comp=Z,34nm,1.3s
DAG Danmarks Havn 61.29 13 *i* P **P** **21 07 58.1 -0.6**
comp=Z,34nm,1.3s
OHAK Old Harbor 61.41 324 P **P** **21 07 59.9 +0.1**
OGAUY Aigu 62.33 156 *eP* **P** **21 08 06.7 +0.6**
JMIC Jan Mayen 62.47 21 LR LR 21 34 27.8
comp=Z,182nm,21.7s,baz=260,slow=35
PVIS Viseu 62.55 55 *eP* **P** **21 08 10.5 +2.7**
comp=Z,51nm,1.9s
SVW2 Sparrevohn 62.67 328 P **P** **21 08 08.3 0.0**
SVW2 IAmb IAmb 21 08 11.7
comp=Z,10nm,0.7s
MTE Manteigas 62.85 55 *eP* **P** **21 08 14.1 +4.2**
MTE Manteigas 62.85 55 *e*SS SS 21 20 51.7 +7.0
MTE *e*LQ LQ 21 24 22.6
MTE *e*LR LR 21 27 53.7
comp=Z,371nm,18.0s
PCVE Castro Verde 62.89 58 *eP* P 21 08 15.6 +5.4
TTA Tatalina 62.93 330 P **P** **21 08 10.2 +0.2**
TTA Tatalina 62.93 330 P **P** **21 08 10.2 +0.2**
PCBR Castelo Branco 62.99 56 *eP* **P** **21 08 15.1 +4.4**
comp=Z,32nm,1.9s
GO06 Curarrehue 63.05 172 P **P** **21 08 10.2 -0.8**
GO06 IAmb IAmb 21 08 11.4
comp=Z,14nm,0.9s
PMRV Marv??o 63.11 56 *eP* **P** **21 08 13.4 +1.8**
PMRV Marv??o 63.11 56 *e*LR LR 21 26 39.8
comp=Z,339nm,18.0s
MVO Moncorvo 63.13 54 *e*LR LR 21 27 06.5
comp=Z,304nm,18.0s
PVAQ Vaqueiros 63.18 59 *eP* **P** **21 08 16.1 +4.0**
PVAQ Vaqueiros 63.18 59 *e*LQ LQ 21 24 22.9
PVAQ *e*LR LR 21 27 13.5
comp=Z,274nm,18.0s
NOR Nord 63.47 8 *i* P **P** **21 08 13.2 -0.1**
comp=Z,25nm,1.3s
PLCA Paso Flores 64.30 171 *eP* **P** **21 08 18.5 -0.7**
PLCA pmax pmax
comp=Z,13nm,0.8s
PLCA Paso Flores 64.30 171 P **P** **21 08 17.9 -1.3**
comp=Z,13nm,0.8s,baz=1.9,slow=7.4,SNR=25
PLCA Paso Flores 64.30 171 *eP* **P** **21 08 18.5 -0.7**
PLCA Paso Flores 64.30 171 P **P** **21 08 18.1 -1.2**
ESDC Sonseca Array 65.69 56 P **P** **21 08 28.0 -0.5**
comp=Z,2.7nm,0.8s,baz=280,slow=5.1,SNR=15
ESDC LR LR 21 32 26.5
comp=Z,242nm,19.6s,baz=225,slow=32
ESDC Sonseca Array 65.69 56 P **P** **21 08 27.9 -0.5**
RDOG Red Dog Mine 65.80 336 P **P** **21 08 27.8 -0.9**
RDOG IAmb IAmb 21 08 47.7
comp=Z,32nm,1.8s
CLF Chambon-Foret 68.54 46 P **P** **21 08 45.6 -0.8**
SPITS Spitsbergen Ar 68.91 13 LR LR 21 39 40.0
comp=Z,1µm,20.4s,baz=260,slow=36
DOU Dourbes 69.63 43 sP **P** **21 08 55.8 +2.7**
DOU PcP **PcP** **21 09 17.4 +1.3**
BCLA Clavier 70.01 43 P **P** **21 08 53.3 -2.2**
BCLA pP **pP** **21 08 56.6 -1.0**
BCLA sP **sP** **21 08 58.2 -0.3**
BCLA PcP **PcP** **21 09 15.6 -2.1**
MEM Membach 70.41 42 pP **P** **21 08 59.5 +1.7**
MEM sP **pP** **21 09 00.7 +0.6**
SSB Saint Sauveur 70.67 48 P **P** **21 08 56.9 -2.7**
SSB pmax pmax
comp=Z,17nm,1.2s
SSB Saint Sauveur 70.67 48 P **P** **21 08 56.9 -2.7**
SSB IAmb IAmb 21 09 04.8
comp=Z,17nm,1.2s
NB2 NORSAR Subarra 70.91 31 P **P** **21 09 01.8 +1.0**
comp=Z,96nm,2.5s,baz=283,slow=6.5
NB2 NORSAR Subarra 70.91 31 P **P** **21 09 01.8 +1.0**
baz=283,slow=6.5
NOA NORSAR Array B 70.91 31 *eP* **P** **21 09 03.6 +2.8**
NOA pmax pmax
comp=Z,5.0nm,0.9s
NOA NORSAR Array B 70.91 31 P **P** **21 09 01.5 +0.6**
comp=Z,5.3nm,0.9s,baz=284,slow=6.0,SNR=6.5
NOA LR LR 21 37 50.0
comp=Z,289nm,19.9s,baz=280,slow=34
ECH Echery 71.70 45 P **P** **21 09 05.5 -0.3**
ECH pmax pmax
comp=Z,30nm,1.5s
ECH Echery 71.70 45 P **P** **21 09 05.5 -0.3**
ECH IAmb IAmb 21 09 18.2
comp=Z,30nm,1.5s
TNS Taunus Mts 72.01 42 *eP* **P** **21 09 10.7 +3.0**
comp=Z,14nm,1.1s,baz=289,slow=5.7
BSEG Bad Segeberg 72.18 38 *eP* **P** **21 09 10.7 +2.2**
baz=289,slow=5.7
SENIN Lac Senin/Sane 72.27 47 P **P** **21 09 10.2 +0.7**
SENIN IAmb IAmb 21 09 15.0
comp=Z,29nm,1.2s
HFS Hagfors 72.32 32 LR LR 21 38 21.7
comp=Z,306nm,20.1s,baz=286,slow=34
BFO Black Forest 72.43 44*ce*P **P** **21 09 14.4 +4.2**
BFO pmax pmax
comp=Z,3.0nm,2.5s
BFO Black Forest 72.43 44 *eP* **P** **21 09 13.4 +3.2**
comp=Z,5.6nm,0.9s,baz=289,slow=5.7
NRDL Niedersach Rie 72.43 40 *eP* **P** **21 09 12.3 +2.3**
baz=289,slow=5.7
GTTG Gvttingen 72.60 41 *eP* **P** **21 09 13.6 +2.5**
baz=289,slow=5.7
ASSE Asse, Remlinge 72.86 40 *eP* **P** **21 09 14.9 +2.3**
baz=289,slow=5.7
DAVA Damuels 73.72 45 *i* pP **P** **21 09 18.9 +0.9**
comp=Z,9.3nm,1.0s
MOX Moxa 73.85 41 *eP* **P** **21 09 21.1 +2.5**
comp=Z,5.9nm,1.0s,baz=289,slow=5.7
DAVOX Davos/Dischmat 73.86 46 LR LR 21 38 20.6
comp=Z,185nm,18.8s,baz=265,slow=33
GRF Grafenberg Arr 73.88 43 *eP* **P** **21 09 22.0 +3.3**
baz=289,slow=5.7
ARCES ARCESS Array B 73.97 21 *eP* **P** **21 09 19.8 +0.9**
ARCES pmax pmax
comp=Z,8.0nm,0.8s
ARCES ARCESS Array B 73.97 21 P **P** **21 09 19.0 +0.2**
comp=Z,7.8nm,0.8s,baz=318,slow=3.3,SNR=9.1
ARCES LR LR 21 42 40.0
comp=Z,160nm,18.8s,baz=333,slow=36
FUORN Ofenpass-Fuorn 74.16 46 P **P** **21 09 20.6 -0.1**
FUORN IAmb IAmb 21 09 26.3
comp=Z,23nm,0.9s
RETA Reutte 74.23 45 *i* pP **P** **21 09 22.7 +1.7**
comp=Z,26nm,1.3s,SNR=6.7
TIC Toumodi 74.29 89 *eP* **P** **21 09 20.8 -0.9**
MANZ Manzenberg 74.34 42 *eP* **P** **21 09 24.3 +2.9**
baz=289,slow=5.7
FETA Feichten 74.35 45 *i* sP **P** **21 09 25.3 +3.5**
comp=Z,20nm,1.3s,SNR=9.1
GUNZ Gunzen 74.37 42 *eP* **P** **21 09 24.4 +2.8**
comp=Z,5.5nm,0.9s,baz=289,slow=5.7
WERN Wernitzgruen 74.42 42 *eP* **P** **21 09 25.0 +3.1**
comp=Z,6.7nm,1.0s,baz=289,slow=5.7

DBIC Dimbokro 74.43 89 P **P** **21 09 23.5 +1.0**
DBIC pmax pmax
comp=Z,22nm,1.2s
DBIC Dimbokro 74.43 89 P **P** **21 09 23.5 +1.0**
comp=Z,9.9nm,0.9s,baz=260,slow=7.1,SNR=6.4
DBIC LR LR 21 38 11.8
comp=Z,196nm,19.0s,baz=271,slow=33
DBIC Dimbokro 74.43 89 IAmb IAmb 21 09 27.1
comp=Z,22nm,1.2s
TANN Tannenbergstha 74.43 42 *eP* **P** **21 09 24.6 +2.6**
comp=Z,27nm,1.2s,baz=289,slow=5.7
LIC Lamto 74.44 90 *eP* **P** **21 09 22.9 +0.3**
comp=Z,63nm,0.9s
ROTZ Rotzenmuhle 74.47 42 *eP* **P** **21 09 25.0 +2.8**
comp=Z,9.8nm,1.2s,baz=289,slow=5.7
CLL Collm 74.49 41 *i* P **P** **21 09 25.1 +2.9**
CLL pmax pmax
comp=Z,27nm,1.5s
CLL Collm 74.49 41 *i* (P) **P** **21 09 25.1 +2.9**
comp=Z,27nm,1.5s
MOTA Moosalm 74.50 45 *i* pP **P** **21 09 24.7 +2.1**
comp=Z,45nm,1.5s,SNR=9.4
SQTA Sankt Quirin 74.60 45 *i* pP **P** **21 09 24.6 +1.4**
comp=Z,29nm,1.2s,SNR=10.0
KIC Kosan Boka 74.65 90 *eP* **P** **21 09 24.3 +0.5**
comp=Z,52nm,1.1s
WATA Walderalm 74.81 45 *i* sP **P** **21 09 27.3 +2.9**
comp=Z,23nm,1.3s,SNR=7.5
FBE Freiberg 74.82 41 *eP* **P** **21 09 26.7 +2.5**
comp=Z,14nm,1.1s,baz=289,slow=5.7
WET Wettzell 75.08 43 *eP* **P** **21 09 28.3 +2.6**
baz=289,slow=5.7
BRG Berggiesshubel 75.19 41 *eP* **P** **21 09 29.7 +3.4**
comp=Z,40nm,1.7s
BRG Berggiesshubel 75.19 41 *eP* **P** **21 09 29.7 +3.4**
BRG pmax pmax
comp=Z,40nm,1.7s
BRG Berggiesshubel 75.19 41 *eP* **P** **21 09 28.1 +1.9**
baz=289,slow=5.7
CTI Castel Tesino 75.25 46 P **P** **21 09 27.6 +0.7**
CTI pmax pmax
comp=Z,7.0nm,0.9s
CTI Castel Tesino 75.25 46 P **P** **21 09 27.6 +0.7**
ZCCA Zocca 75.33 48 P **P** **21 09 26.6 -0.7**
ZCCA IAmb IAmb 21 09 32.4
comp=Z,23nm,1.1s
RJOB Jochberg 75.47 44 *eP* **P** **21 09 30.7 +2.6**
comp=Z,6.4nm,0.9s,baz=289,slow=5.7
TEOL Teolo 75.48 47 P **P** **21 09 28.3 +0.2**
TEOL IAmb IAmb 21 09 32.6
comp=Z,29nm,1.1s
KHC Kasperske Hory 75.52 43 *eP* **P** **21 09 29.4 +1.1**
KHC *e* 21 09 32.7
KHC *e* 21 09 39.0
KHC Kasperske Hory 75.52 43 *eP* **P**
KHC *ep*P **sP** **21 09 32.7 +1.4**
KHC *e*PCP **PcP** **21 09 39.0 -2.3**
ABTA Abfaltersbach 75.60 45 *i* pP **P** **21 09 30.9 +2.0**
comp=Z,19nm,1.4s,SNR=7.3
ADK Adak 75.64 320 P **P** **21 09 28.8 0.0**
ADK pmax pmax
comp=Z,112nm,1.3s
ADK Adak 75.64 320 P **P** **21 09 28.8 0.0**
GEC2 GERESS Array S 75.69 43 *eP* **P** **21 09 32.2 +2.9**
comp=Z,12nm,1.2s,baz=289,slow=5.7
GEC2 GERESS Array S 75.69 43 P **P** **21 09 30.8 +1.4**
GEC2 IAmb IAmb 21 09 34.5
comp=Z,37nm,1.4s
GERES GERESS Array B 75.69 43 *eP* **P** **21 09 32.8 +3.5**
GERES pmax pmax
comp=Z,3.0nm,1.0s
GERES GERESS Array B 75.69 43 P **P** **21 09 31.1 +1.8**
comp=Z,3.3nm,1.0s,baz=276,slow=4.8,SNR=20
GERES LR LR 21 38 57.2
comp=Z,300nm,20.9s,baz=283,slow=33
GERES GERESS Array B 75.69 43 P **P** **21 09 30.0 +0.7**
OSSC Osservatorio P 75.77 49 P **P** **21 09 28.9 -0.9**
OSSC IAmb IAmb 21 09 35.7
comp=Z,20nm,1.4s
PRU Pruhonice 75.84 42 *eP* **P** **21 09 32.6 +2.6**
PRU Pruhonice 75.84 42 *eP* **P** **21 09 32.6 +2.6**
STAL STALIGIAL 75.88 46 P **P** **21 09 29.0 -1.5**
STAL IAmb IAmb 21 09 34.7
comp=Z,19nm,1.3s
KBA Koelnbreinsper 76.03 45 *i* sP **P** **21 09 33.7 +2.2**
comp=Z,25nm,1.9s,SNR=6.5
MOA Molln 76.37 44 *i* pP **P** **21 09 34.3 +1.2**
comp=Z,14nm,1.2s
MYKA Terra Mystica 76.37 45 *i* pP **P** **21 09 34.9 +1.7**
comp=Z,22nm,1.9s,SNR=6.3
UPC Upice 76.55 41 *eP* **P** **21 09 36.8 +2.7**
UPC Upice 76.55 41 *eP* **P** **21 09 36.8 +2.7**
CADS Cadrg 76.57 45 *i* P **P** **21 09 35.4 +1.1**
KSP Ksiaz 76.60 40 *eP* P 21 09 26.6 -7.8
KSP Ksiaz 76.60 40 *eP* P 21 09 26.6 -7.8
MURB Monte Urbino 76.73 49 P **P** **21 09 34.5 -0.8**
DPC Dobruska-Polom 76.79 41 *eP* **P** **21 09 37.4 +1.9**
DPC *e* 21 09 45.8
DPC Dobruska-Polom 76.79 41 *eP* **P** **21 09 37.4 +1.9**
DPC *e*PCP **PcP** **21 09 45.8 -1.0**
BILL Bilibino 76.84 339 *eP* **P** **21 09 36.2 +0.8**
BILL pmax pmax
comp=Z,34nm,2.0s
BILL Bilibino 76.84 339 P **P** **21 09 35.2 -0.2**
BILL IAmb IAmb 21 09 37.7
comp=Z,44nm,1.9s
KEST Kesra 76.89 57 P **P** **21 09 38.4 +2.0**
comp=Z,9.7nm,1.0s,baz=257,slow=5.3,SNR=9.3
KEST Kesra 76.89 57 P **P** **21 09 35.9 -0.5**
KEST IAmb IAmb 21 09 49.5
comp=Z,27nm,1.2s
OBKA Obir 77.00 45 *i* P **P** **21 09 36.1 -0.8**
comp=Z,21nm,1.1s,SNR=7.8
CEY Cerknica 77.19 46 *eP* **P** **21 09 39.9 +2.1**
CEY Cerknica 77.19 46 *eP* **P** **21 09 39.3 +1.5**
SOKA Soboth 77.26 45 *i* pP **P** **21 09 38.7 +0.4**
comp=Z,19nm,1.1s,SNR=9.7
KRUC Moravsky 77.29 42 *eP* **P** **21 09 40.8 +2.5**
VRAC Vranov 77.32 42 LR LR 21 40 29.6
comp=Z,143nm,19.3s,baz=286,slow=33
VRAC Vranov 77.32 42 *eP* **P** **21 09 41.3 +2.8**
CONA Conrad Observa 77.35 43 *i* pP **P** **21 09 40.3 +1.6**
comp=Z,13nm,1.2s,SNR=5.1
ARSA Arzberg 77.38 44 *i* sP **P** **21 09 42.0 +3.1**
comp=Z,6.7nm,1.1s
FINES FINESS Array B 77.54 28 *eP* **P** **21 09 43.5 +4.1**
FINES pmax pmax
comp=Z,7.0nm,1.1s
FINES FINESS Array B 77.54 28 P **P** **21 09 40.3 +0.9**
comp=Z,6.9nm,1.1s,baz=318,slow=10,SNR=6.4
FINES LR LR 21 41 01.1
comp=Z,204nm,21.5s,baz=294,slow=34
AQU L'Aquila 77.65 49 *eP* **P** **21 09 42.4 +1.9**
MORC Moravsky Berou 77.73 41 *eP* **P** **21 09 44.0 +3.2**
CRES Cresnjev 77.83 45 *eP* **P** **21 09 43.6 +2.2**
ZST Bratislava 78.03 43 *eP* **P** **21 09 45.1 +2.6**
ZST pmax pmax
comp=Z,100nm,2.0s
ZST Bratislava 78.03 43 *eP* **P** **21 09 45.1 +2.6**
TORD Torodi Ar. Bea 78.06 81 P **P** **21 09 43.2 0.0**
comp=Z,1.0nm,0.9s,baz=298,slow=4.9,SNR=5.3
TORD LR LR 21 42 46.1
comp=Z,324nm,19.0s,baz=305,slow=35
OKC Ostrava-Krasne 78.07 41 *eP* **P** **21 09 46.8 +4.2**
OKC *e* 21 09 53.6
OKC Ostrava-Krasne 78.07 41 *eP* **P** **21 09 46.8 +4.2**
OKC *e*PCP **PcP** **21 09 53.6 +1.3**
MODS Modra-Piesok 78.08 42 *eP* **P** **21 09 45.8 +3.1**
MODS pmax pmax
comp=Z,143nm,2.2s
MODS Modra-Piesok 78.08 42 *eP* **P** **21 09 45.8 +3.1**
SMOL Smolenice 78.12 42 *eP* **P** **21 09 46.4 +3.4**
SMOL pmax pmax
comp=Z,12nm,1.2s
SMOL Smolenice 78.12 42 *eP* **P** **21 09 46.4 +3.4**
JAVC Velka Javorina 78.14 42 *eP* **P** **21 09 47.3 +4.2**
PPT Papeete 78.52 245 LR LR 21 37 13.5
comp=Z,134nm,18.7s,baz=168,slow=30
BEL Belsk 78.86 38 *eP* **P** **21 09 49.6 +2.7**
BEL Belsk 78.86 38 *eP* **P** **21 09 49.6 +2.7**
OJC Ojcow 78.91 40 *eP* **P** **21 09 48.8 +1.5**
OJC Ojcow 78.91 40 *eP* **P** **21 09 48.8 +1.5**
OJC Ojcow 78.91 40 P **P** **21 09 47.1 -0.2**
OJC IAmb IAmb 21 09 52.5
comp=Z,21nm,1.2s

VYHS Vyhne 79.00 42 *eP* **P** **21 09 51.0 +3.2**
VYHS pmax pmax
comp=Z,87nm,2.1s
VYHS Vyhne 79.00 42 *eP* **P** **21 09 51.0 +3.2**
LANS Liptovska Anna 79.13 41 *eP* **P** **21 09 50.4 +1.8**
LANS pmax pmax
comp=Z,8.0nm,1.2s
LANS Liptovska Anna 79.13 41 *eP* **P** **21 09 50.4 +1.8**
SUW Suwalki 79.30 36 *eP* **P** **21 09 51.5 +2.2**
SUW Suwalki 79.30 36 *eP* **P** **21 09 51.5 +2.2**
SUW Suwalki 79.30 36 P **P** **21 09 48.9 -0.3**
BLY Banja Luka 79.36 46 ⇑P **P** **21 09 51.5 +1.6**
BLY Banja Luka 79.36 46 *eP* **P** **21 09 52.5 +2.7**
BLY Banja Luka 79.36 46 P **P** **21 09 49.1 -0.7**
BLY IAmb IAmb 21 09 55.2
comp=Z,20nm,1.2s
BUD Budapest 79.50 43 *eP* **P** **21 09 54.7 +4.2**
MORH Mrgy, Hungar 79.75 44 ⇑*i*P **P** **21 09 53.0 +1.1**
PSZ Piszkesteto 79.87 42 P **P** **21 09 53.1 +0.4**
PSZ pmax pmax
comp=Z,47nm,1.3s
PSZ Piszkesteto 79.87 42 P **P** **21 09 53.1 +0.4**
PSZ IAmb IAmb 21 09 58.8
comp=Z,47nm,1.3s
STON Ston 80.42 48 *eP* **P** **21 09 57.9 +2.3**
HAPS Han Pijesak,Bl 80.78 46 *eP* **P** **21 09 57.5 -0.2**
KWP Kalwaria Pacla 80.87 40 *eP* **P** **21 10 01.8 +3.9**
KWP Kalwaria Pacla 80.87 40 *eP* **P** **21 10 01.8 +3.9**
TMCR Tamitsa 80.90 23 *eP* **P** **21 10 01.0 +3.3**
TMCR pmax pmax
comp=Z,34nm,1.3s
KOLS Kolonicke sedl 80.91 41 *eP* **P** **21 10 02.0 +3.9**
KOLS pmax pmax
comp=Z,44nm,2.0s
KOLS Kolonicke sedl 80.91 41 *eP* **P** **21 10 02.0 +3.9**
TREB Trebinje 80.92 47 *eP* **P** **21 10 01.2 +2.9**
FRGS Fruska Gora 80.92 45 *eP* **P** **21 09 59.9 +1.6**
BRY Bratogost 80.97 47 *eP* **P** **21 10 01.4 +2.6**
UZH Uzhgorod 81.05 41 *eP* **P** **21 10 02.5 +3.7**
UPM Unac-Piva 81.10 47 *eP* **P** **21 10 00.7 +1.2**
BBLS Lazi?i 81.17 46 ⇑*i*P **P** **21 10 02.8 +3.1**
TIP Timpagrande 81.18 51 P **P** **21 09 58.9 -1.0**
LTVH Ltavrtes, Hu 81.33 42 *eP* P 21 09 50.6 -10
TRPA Tarpa 81.41 41 ⇑P **P** **21 10 03.0 +2.3**
DIVS Divibare 81.47 46 ⇑*i*P **P** **21 10 03.6 +2.3**
LVV L'vov 81.57 39 *eP* **P** **21 10 04.8 +3.2**
PDG Podgorica 81.64 47 ⇑P **P** **21 10 02.9 +0.8**
PDG Podgorica 81.64 47 *eP* **P** **21 10 04.4 +2.3**
DRME Dracevica, Mon 81.69 48 *eP* **P** **21 10 04.0 +1.6**
BZS Buzias 81.89 44 ⇓P **P** **21 10 06.0 +2.6**
DRGR 82.08 42 ⇓P **P** **21 10 05.7 +1.3**
GZR Gura Zlata 82.72 44 ⇑P **P** **21 10 09.1 +1.2**
ARCR ARCALIA 82.97 42 ⇓P **P** **21 10 12.3 +3.3**
TIXI Tiksi 83.22 351 *eP* **P** **21 10 09.6 -0.2**
TIXI pmax pmax
comp=Z,8.0nm,0.8s
TIXI Tiksi 83.22 351 P **P** **21 10 09.6 -0.2**
TIXI IAmb IAmb 21 10 13.5
comp=Z,8.0nm,0.8s
BURAR Bucovina Array 83.25 41 ⇑P **P** **21 10 12.0 +1.4**
FNA Florina 83.77 48 P **P** **21 10 14.3 +0.9**
FNA pmax pmax
comp=Z,18nm,1.3s
FNA Florina 83.77 48 P **P** **21 10 14.3 +0.9**
FNA IAmb IAmb 21 10 18.8
comp=Z,18nm,1.3s
ARR Arges 83.91 43 ⇓P **P** **21 10 16.5 +2.5**
BIZ Bicaz 84.10 41 ⇓P **P** **21 10 18.3 +3.5**
AKASG Malin Array Be 84.11 37 *eP* **P** **21 10 16.6 +1.9**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 84.11 37 P **P** **21 10 15.8 +1.1**
comp=Z,2.5nm,0.8s,baz=298,slow=3.7,SNR=16
AKASG LR LR 21 45 10.5
comp=Z,61nm,20.1s,baz=305,slow=34
AKASG Malin Array Be 84.11 37 IAmb IAmb 21 10 18.6
comp=Z,4.7nm,1.1s
AKBB Malin Array Si 84.11 37 P **P** **21 10 15.5 +0.8**
AKBB pmax pmax
comp=Z,30nm,2.0s
AKBB Malin Array Si 84.11 37 P **P** **21 10 15.5 +0.8**
AKBB IAmb IAmb 21 11 04.6
comp=Z,30nm,1.9s
DOPR Dopca 84.11 42 ⇓P **P** **21 10 16.7 +1.8**
VTS Vitosha 84.23 46 P **P** **21 10 16.7 +0.9**
VTS pmax pmax
comp=Z,5.0nm,1.0s
VTS Vitosha 84.23 46 ⇑P **P** **21 10 17.3 +1.5**
VTS Vitosha 84.23 46 P **P** **21 10 18.2 +2.4**
VTS Vitosha 84.23 46 P **P** **21 10 16.7 +0.9**
MPEP Malo Peshtene 84.24 45 P **P** **21 10 18.1 +2.5**
KKB Krupnik 84.46 47 P **P** **21 10 21.5 +4.7**
HUMR Humele 84.51 44 ⇓P **P** **21 10 18.0 +1.1**
SEY Seymchan 84.52 338 *i* P **P** **21 10 18.0 +1.4**
MLR Muntele Rosu 84.67 43 P **P** **21 10 19.1 +1.2**
MLR pmax pmax
comp=Z,153nm,1.9s
MLR Muntele Rosu 84.67 43 LR LR 21 45 37.8
comp=Z,186nm,20.1s,baz=296,slow=34
MLR Muntele Rosu 84.67 43 ⇑P **P** **21 10 20.8 +2.8**
MLR Muntele Rosu 84.67 43 P **P** **21 10 19.1 +1.2**
PLVB Pleven 84.80 45 ⇓P **P** **21 10 20.7 +2.3**
LIT Litokhoron 84.83 49 P **P** **21 10 19.6 +0.9**
LIT pmax pmax
comp=Z,14nm,1.0s
LIT Litokhoron 84.83 49 P **P** **21 10 19.6 +0.9**
LIT IAmb IAmb 21 10 23.8
comp=Z,14nm,1.0s
SORM Soroca 84.87 39 ⇑P **P** **21 10 19.8 +1.1**
MMB Musomiste 85.02 47 P **P** **21 10 24.1 +4.5**
AGG Agios Georgios 85.19 50 P **P** **21 10 21.2 +0.6**
AGG pmax pmax
comp=Z,39nm,1.2s
AGG Agios Georgios 85.19 50 P **P** **21 10 21.2 +0.6**
PRGR Permogore 85.20 23 *eP* **P** **21 10 20.2 +0.2**
PRGR pmax pmax
comp=Z,48nm,1.1s
OBN Obninsk 85.51 31 ⇑*eP* **P** **21 10 23.9 +2.2**
OBN *e* 21 13 44.6
OBN *i*S **S** **21 20 44.6 -9.0**
OBN pmax pmax
comp=Z,52nm,1.5s
OBN Obninsk 85.51 31 LR LR 21 46 12.9
comp=Z,66nm,20.9s,baz=1.0,slow=34
RZN Rozhen 85.64 46 P **P** **21 10 26.4 +3.5**
MOS Moscow 85.64 30 *eP* **P** **21 10 22.4 0.0**
MOS *e* 21 13 43.1
MOS pmax pmax
comp=Z,44nm,1.2s
KIS Kishinev 85.70 40 ⇓*i*P **P** **21 10 25.0 +2.1**
comp=Z,170nm,2.0s
KIS *e*L L 21 46 12.0
KIS Kishinev 85.70 40 ⇓*i*P **P** **21 10 25.0 +2.1**
KIS *e* 21 10 31.0
KIS pmax pmax
comp=Z,170nm,2.0s
MILM Milestii Mici 85.74 40 ⇓P **P** **21 10 25.6 +2.5**
DIM Dimitrovgrad 86.01 46 P **P** **21 10 27.6 +3.1**
KDZ Kurdzhali 86.12 46 P **P** **21 10 27.9 +2.8**
CFR Carcaliu 86.18 42 ⇑P **P** **21 10 26.9 +1.6**
PURM Purcari 86.56 40 ⇑P **P** **21 10 29.3 +2.2**
TIRR Tirgusor 86.71 43 P **P** **21 10 27.6 -0.3**
TIRR pmax pmax
comp=Z,48nm,1.3s
TIRR Tirgusor 86.71 43 P **P** **21 10 27.6 -0.3**
JURR Jurilovca 86.84 42 ⇓P **P** **21 10 30.8 +2.3**
ALN Alexandroupoli 86.89 47 P **P** **21 10 28.5 -0.3**
ALN pmax pmax
comp=Z,10.0nm,1.0s
ALN Alexandroupoli 86.89 47 P **P** **21 10 28.5 -0.3**
ALN IAmb IAmb 21 10 34.0
comp=Z,9.9nm,1.0s
PSN Preselentsi 86.94 43 P **P** **21 10 32.5 +3.5**
PMSA Palmer Station 88.63 173 P **P** **21 10 34.9 -1.5**
KIRV Kirov 88.68 24 LR LR 21 49 28.4
comp=Z,72nm,19.6s,baz=331,slow=35
PETK Petropavlovsk- 88.74 329 P **P** **21 10 38.4 +0.9**
PETK Petropavlovsk- 88.74 329 P **P** **21 10 38.8 +1.3**
comp=Z,9.6nm,1.0s,baz=93,slow=5.9,SNR=9.7
PETK LR LR 21 52 27.3
comp=Z,145nm,19.5s,baz=60,slow=37
PETK Petropavlovsk- 88.74 329 P **P** **21 10 38.4 +0.9**
YAK Yakutsk 91.65 346 *i* P **P** **21 10 53.1 +2.3**

YAK					pmax	pmax		
	comp=Z,33nm,2.1s							
BR131	**Keskin Array S**	**92.48**	**45**		P	**P**	**21 10 55.0**	**-0.4**
BR131					pmax	pmax		
	comp=Z,6.0nm,1.5s							
BR131	**Keskin Array S**	**92.48**	**45**		P	**P**	**21 10 55.0**	**-0.4**
BRTR	**Keskin Array B**	**92.48**	**45**	*eP*		**P**	**21 10 57.0**	**+1.6**
BRTR					pmax	pmax		
	comp=Z,1.0nm,0.9s							
BRTR	**Keskin Array B**	**92.48**	**45**		P	**P**	**21 10 55.9**	**+0.6**
	comp=Z,0.9nm,0.9s,baz=302,slow=2.8,SNR=6.1							
BRTR					LR	LR	21 48 59.9	
	comp=Z,81nm,21.1s,baz=275,slow=33							
BRTR	**Keskin Array B**	**92.48**	**45**		P	**P**	**21 10 54.7**	**-0.7**
ARU	**Arti**	**93.54**	**21**	*eP*		**P**	**21 11 02.0**	**+2.3**
ARU					pmax	pmax		
	comp=Z,21nm,1.6s							
SVE	**Sverdlovsk**	**93.89**	**20**	*eP*		**P**	**21 11 03.7**	**+2.4**
KBZ	**Khabaz**	**95.71**	**37**		LR	LR	21 51 20.1	
	comp=Z,99nm,21.3s,baz=325,slow=34							
AKTO	**Aktyubinsk**	**98.12**	**25**		LR	LR	21 56 27.2	
	comp=Z,185nm,18.5s,baz=338,slow=36							
SONM	**Songino Array**	**109.01**	**355**		PKKPbc	PKKPbc	21 27 18.5	-3.6
	comp=Z,0.6nm,0.7s,baz=165,slow=5.6,SNR=5.0							
WMQ	**Urumqi**	**112.47**	**9**	*e*	PKP	**PKiKP**	**21 16 21.4**	**+1.1**
WMQ					LR	LR		
	comp=Z,260nm,20.9s							
WMQ					LR	LR		
	comp=Z,220nm,20.9s							
WMQ					LR	LR		
	comp=Z,770nm,29.1s							
KSH	**Kashi**	**113.92**	**20**		PKP	**PKiKP**	**21 16 22.6**	**-0.7**
KSH					PP	**PP**	**21 17 21.2**	**+5.7**
KSH					SKS	**SKSdf**	**21 23 34.9**	**-1.3**
KSH					SKKS	**SKKSac**	**21 24 16.5**	**-3.0**
KSH					SS	**SS**	**21 33 08.7**	**+4.1**
KSH					AMB	AMB		
	comp=Z,230nm,5.8s							
KSH					LR	LR		
	comp=Z,150nm,5.1s							
KSH					LR	LR		
	comp=Z,240nm,4.4s							
KSH					LR	LR		
	comp=Z,380nm,6.7s							
LZH	**Lanzhou**	**120.88**	**356**	*e*	PKP	**PKiKP**	**21 16 37.4**	**+0.4**
LZH					sPKP		21 16 42.0	
LZH					LR	LR		
	comp=Z,200nm,17.8s							
LZH					LR	LR		
	comp=Z,220nm,18.1s							
LZH					LR	LR		
	comp=Z,270nm,20.0s							
NJ2	**Nanjing**	**121.96**	**340**	*e*	PKP	**PKPdf**	**21 16 36.8**	**-2.0**
CD2	**Chengdu**	**126.03**	**355**		PKP	**PKPdf**	**21 16 44.5**	**-2.2**
KMI	**Kunming**	**131.85**	**356**		PKP	**PKPdf**	**21 16 53.9**	**-4.3**
KMI					sPKP		21 17 02.3	
KMI					LR	LR		
	comp=Z,340nm,19.3s							
KMI					LR	LR		
	comp=Z,240nm,23.4s							
KMI					LR	LR		
	comp=Z,350nm,16.9s							
CMAR	**Chiang Mai Arr**	**138.60**	**0**	*e*	PKiKP	**PKiKP**	**21 17 12.8**	**+0.1**
CMAR					pmax	pmax		
	comp=Z,2.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**138.60**	**0**		PKP	**PKiKP**	**21 17 12.8**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=321,slow=2.8,SNR=12							
CMAR	**Chiang Mai Arr**	**138.60**	**0**			**PKiKP**	**21 17 12.1**	**-0.6**
STKA	**Stephens Creek**	**141.69**	**248**		PKhKP	PKPpre	21 17 11.7	
	comp=Z,2.6nm,0.6s,baz=191,slow=4.0,SNR=5.8							
STKA					PKP	**PKPdf**	**21 17 16.7**	**+0.9**
	comp=Z,3.8nm,0.5s,baz=2.9,slow=2.1,SNR=6.2							
BBOO	**Buckleboo**	**146.29**	**245**			**PKPdf**	**21 17 23.2**	**-0.6**
WR0	**Warramunga Arr**	**147.10**	**269**			**PKPdf**	**21 17 26.0**	**+0.5**
WRAB	**Tennant Creek**	**147.27**	**269**		PKHKP	**PKPdf**	**21 17 25.1**	**-0.7**
WRAB	**Tennant Creek**	**147.27**	**269**			**PKPdf**	**21 17 25.1**	**-0.7**
WRA	**Warramunga Arr**	**147.29**	**269**		PKHKP	**PKPdf**	**21 17 25.0**	**-0.8**
WRA	**Warramunga Arr**	**147.29**	**269**		PKPbc	**PKPdf**	**21 17 26.4**	**+0.6**
	comp=Z,19nm,0.6s,baz=80,slow=3.5,SNR=40							
WRA	**Warramunga Arr**	**147.29**	**269**			**PKPdf**	**21 17 25.0**	**-0.8**
MTN	**Manton Dam**	**148.08**	**283**			**PKPab**	**21 17 33.4**	**+0.2**
AS31	**Alice Springs**	**148.27**	**262**			**PKPbc**	**21 17 29.3**	**-1.5**
ASAR	**Alice Springs**	**148.28**	**262**		PKIKP	**PKPbc**	**21 17 29.5**	**-1.3**
ASAR	**Alice Springs**	**148.28**	**262**		PKPbc	**PKPbc**	**21 17 30.5**	**-0.3**
	comp=Z,24nm,0.7s,baz=80,slow=2.2,SNR=59							
ASAR	**Alice Springs**	**148.28**	**262**			**PKPbc**	**21 17 29.5**	**-1.3**
LUWI	**Luwuk**	**148.30**	**311**		PKPab	**PKPab**	**21 17 33.2**	**-0.8**

*KRSC **09** 21:19:24.7±1.9,50°.37N×157°.24E,h50km±22km, ML4.5, FELT [II] at Severo-Kurilsk.*
*MOS **09** 21:19:25.7±1.1,50°.35N×156°.89E,h63km,mb4.0/4, Error ellipse: s-maj=16.0km s-min=3.7km az=77.4*
MOS Felt (II) at Severo-Kuril'sk.
*NEIC **09** 21:19:26.8±1.5,50°.4N±0°.1×156°.9E±0°.2,h52km±8km, mb4.2/25, Error ellipse: s-maj=19.7km s-min=12.5km az=132.0*
*IDC **09** 21:19:27.0±0.7,50°.40N×156°.93E,h52km±6km,mb3.5/9, mb1 3.9/11,mb1mx3.5/37,mbtmp3.9/11,MS2.9/3, Ms1 2.9/3,ms1mx2.6/36,Error ellipse: s-maj=21.7km s-min=14.0km az=138.0*

ISC 09 21:19:26.6±0.7,50°.31N±0°.06×157°.09E±0°.05,h53km±6km, n123,σ1s27/151,mb4.0/22,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.72**	**301**	*d i*	PN	**Pn**	**21 19 39.8**	**-0.9**
SKR				*i*	S	**Sn**	**21 19 49.6**	**-1.3**
SKR	**Severo-Kuril's**	**0.72**	**301**	*eP*		**Pn**	**21 19 39.9**	**-0.8**
SKR				*eS*		**Sn**	**21 19 49.9**	**-1.0**
PAU	**Pauzhetka**	**1.17**	**352**		PN	**Pn**	**21 19 46.4**	**-0.2**
PAU					S	**Sn**	**21 20 00.8**	**-0.7**
PAU	**Pauzhetka**	**1.17**	**352**	*eP*		**Pn**	**21 19 46.4**	**-0.2**
PAU				*eS*		**Sn**	**21 20 00.8**	**-0.7**
KDTR	**Khodutka, Kamc**	**1.62**	**22**		PN	**Pn**	**21 19 51.9**	**-0.8**
KDTR					S	**Sn**	**21 20 10.7**	**-1.8**
KDTR	**Khodutka, Kamc**	**1.62**	**22**	*eP*		**Pn**	**21 19 51.9**	**-0.8**
KDTR				*eS*		**Sn**	**21 20 10.7**	**-1.8**
ASAK	**Asacha**	**2.13**	**14**		PN	**Pn**	**21 20 00.3**	**+0.5**
ASAK					S	**Sn**	**21 20 25.7**	**+0.6**
ASAK	**Asacha**	**2.13**	**14**	*eP*		**Pn**	**21 20 00.3**	**+0.5**
ASAK				*eS*		**Sn**	**21 20 25.7**	**+0.6**
MTVR	**Mutnovka**	**2.28**	**17**		PN	**Pn**	**21 20 02.2**	**+0.4**
MTVR					S	**Sn**	**21 20 28.7**	**-0.1**
MTVR	**Mutnovka**	**2.28**	**17**	*eP*		**Pn**	**21 20 02.2**	**+0.4**
MTVR				*eS*		**Sn**	**21 20 28.7**	**-0.1**
RUS	**Russkaya**	**2.30**	**22**		PN	**Pn**	**21 20 01.5**	**-0.5**
RUS					S	**Sn**	**21 20 27.4**	**-1.7**
RUS	**Russkaya**	**2.30**	**22**	*eP*		**Pn**	**21 20 01.5**	**-0.5**
RUS				*eS*		**Sn**	**21 20 27.4**	**-1.7**
GRL	**Gorelyy**	**2.33**	**15**		PN	**Pn**	**21 20 03.2**	**+0.8**
GRL					S	**Sn**	**21 20 30.2**	**+0.3**
GRL	**Gorelyy**	**2.33**	**15**	*eP*		**Pn**	**21 20 03.2**	**+0.8**
GRL				*eS*		**Sn**	**21 20 30.2**	**+0.3**
KRMR	**Karymshinskiy**	**2.60**	**14**		PN	**Pn**	**21 20 06.3**	**+0.2**
KRMR					S	**Sn**	**21 20 36.1**	**-0.4**
KRMR	**Karymshinskiy**	**2.60**	**14**	*eP*		**Pn**	**21 20 06.3**	**+0.2**
KRMR				*eS*		**Sn**	**21 20 36.1**	**-0.4**
APC	**Apacha**	**2.62**	**1**		PN	**Pn**	**21 20 06.6**	**+0.3**
APC					S	**Sn**	**21 20 36.4**	**-0.4**
APC	**Apacha**	**2.62**	**1**	*eP*		**Pn**	**21 20 06.6**	**+0.3**
APC				*eS*		**Sn**	**21 20 36.4**	**-0.4**
PEA0B	**Petropavlovsk-**	**2.82**	**8**		PN	**Pn**	**21 20 10.5**	**+1.3**
PEA0B	**Petropavlovsk-**	**2.82**	**8**			**Pn**	**21 20 10.5**	**+1.3**
PETK	**Petropavlovsk-**	**2.82**	**8**		P	**Pn**	**21 20 10.1**	**+0.9**
	6.4nm,0.3s,baz=178,slow=15,SNR=38							
PETK					LR	LR	21 21 26.6	
	comp=Z,138nm,21.6s,baz=240,slow=43							
PET	**Petropavlovsk**	**2.88**	**19**	*eP*		**Pn**	**21 20 11.1**	**+1.1**
PET				*eS*		**Sn**	**21 20 43.1**	**-0.3**
PET					pmax	pmax		
	comp=Z,39nm,0.3s							
PET					smax	smax		
	comp=N,428nm,0.4s							
PET					smax	smax		
	comp=E,519nm,0.4s							
PET	**Petropavlovsk**	**2.88**	**19**			**Pn**	**21 20 10.4**	**+0.4**
UGLR	**Uglovaya**	**3.09**	**20**		PN	**Pn**	**21 20 14.0**	**+1.0**
UGLR	**Uglovaya**	**3.09**	**20**	*eP*		**Pn**	**21 20 14.0**	**+1.0**
AVH	**Avacha**	**3.13**	**19**		PN	**Pn**	**21 20 14.8**	**+1.4**
AVH					S	**Sn**	**21 20 50.5**	**+1.0**
AVH	**Avacha**	**3.13**	**19**	*eP*		**Pn**	**21 20 14.8**	**+1.4**
AVH				*eS*		**Sn**	**21 20 50.5**	**+1.0**
KOK	**Koryaka**	**3.13**	**17**		PN	**Pn**	**21 20 15.5**	**+2.0**
KOK	**Koryaka**	**3.13**	**17**	*eP*		**Pn**	**21 20 15.5**	**+2.0**
SMAR	**Somma**	**3.14**	**19**		PN	**Pn**	**21 20 15.2**	**+1.5**
SMAR					S	**Sn**	**21 20 50.3**	**+0.3**
SMAR	**Somma**	**3.14**	**19**	*eP*		**Pn**	**21 20 15.2**	**+1.5**
SMAR				*eS*		**Sn**	**21 20 50.3**	**+0.3**
KRER	**Koryakskii**	**3.17**	**18**		PN	**Pn**	**21 20 15.4**	**+1.4**
KRER	**Koryakskii**	**3.17**	**18**	*eP*		**Pn**	**21 20 15.4**	**+1.4**
SDLR	**Sedlovina**	**3.17**	**20**		PN	**Pn**	**21 20 14.3**	**+0.3**
SDLR					S	**Sn**	**21 20 49.6**	**-1.0**
SDLR	**Sedlovina**	**3.17**	**20**	*eP*		**Pn**	**21 20 14.3**	**+0.3**
SDLR				*eS*		**Sn**	**21 20 49.6**	**-1.0**
NLC	**Nalytchevo**	**3.19**	**25**		PN	**Pn**	**21 20 13.3**	**-0.8**
NLC					S	**Sn**	**21 20 48.5**	**-2.3**
NLC	**Nalytchevo**	**3.19**	**25**	*eP*		**Pn**	**21 20 13.3**	**-0.8**
NLC				*eS*		**Sn**	**21 20 48.5**	**-2.3**
KRX	**Arik**	**3.20**	**17**		PN	**Pn**	**21 20 16.0**	**+1.6**
KRX					S	**Sn**	**21 20 53.0**	**+1.6**
KRX	**Arik**	**3.20**	**17**	*eP*		**Pn**	**21 20 16.0**	**+1.6**
KRX				*eS*		**Sn**	**21 20 53.0**	**+1.6**
SPN	**Mys Shipunski**	**3.33**	**32**		PN	**Pn**	**21 20 16.4**	**+0.3**
SPN					S	**Sn**	**21 20 53.1**	**-1.3**
SPN	**Mys Shipunski**	**3.33**	**32**	*eP*		**Pn**	**21 20 16.4**	**+0.3**
SPN				*eS*		**Sn**	**21 20 53.1**	**-1.3**
MKZ	**Mys Kozlova**	**5.11**	**32**		PN	**Pn**	**21 20 40.0**	**-0.4**
MKZ	**Mys Kozlova**	**5.11**	**32**	*eP*		**Pn**	**21 20 40.0**	**-0.4**
KZV	**Kizimen**	**5.19**	**21**		PN	**Pn**	**21 20 43.4**	**+1.7**
KZV	**Kizimen**	**5.19**	**21**	*eP*		**Pn**	**21 20 43.4**	**+1.7**
TUMD	**Tumrok D**	**5.29**	**21**	*eP*		**Pn**	**21 20 44.2**	**+1.2**
TUMD				*eS*		**Sn**	**21 21 42.4**	**-0.2**
TUMR	**Tumrok**	**5.31**	**19**		PN	**Pn**	**21 20 44.2**	**+0.9**
TUMR					S	**Sn**	**21 21 42.4**	**-0.8**
TUMR	**Tumrok**	**5.31**	**19**	*eP*		**Pn**	**21 20 45.3**	**+2.0**
KMNR	**Kamenistaya**	**5.77**	**18**		PN	**Pn**	**21 20 51.8**	**+2.2**
KMNR	**Kamenistaya**	**5.77**	**18**	*eP*		**Pn**	**21 20 51.8**	**+2.2**
KPT	**Kopyto**	**5.97**	**17**		PN	**Pn**	**21 20 54.6**	**+2.3**
KPT	**Kopyto**	**5.97**	**17**	*eP*		**Pn**	**21 20 54.6**	**+2.3**
ZLN	**Zelenaya**	**6.13**	**20**		PN	**Pn**	**21 20 57.0**	**+2.4**
ZLN	**Zelenaya**	**6.13**	**20**	*eP*		**Pn**	**21 20 57.0**	**+2.4**
CIRR	**Tsirk**	**6.21**	**19**		PN	**Pn**	**21 20 57.7**	**+2.0**
CIRR	**Tsirk**	**6.21**	**19**	*eP*		**Pn**	**21 20 57.7**	**+2.0**
SRDR	**Sredinnyy**	**6.22**	**14**		PN	**Pn**	**21 20 58.0**	**+2.3**
SRDR	**Sredinnyy**	**6.22**	**14**	*eP*		**Pn**	**21 20 58.0**	**+2.3**
KBTR	**Krutoberegovo**	**6.83**	**28**		PN	**Pn**	**21 21 04.1**	**+0.1**
KBTR	**Krutoberegovo**	**6.83**	**28**	*eP*		**Pn**	**21 21 04.1**	**+0.1**
KBG	**Krutoberegovo**	**6.84**	**27**		PN	**Pn**	**21 21 06.0**	**+1.9**
KBG	**Krutoberegovo**	**6.84**	**27**	*eP*		**Pn**	**21 21 06.0**	**+1.9**
BKI	**Bering**	**7.28**	**44**		PN	**Pn**	**21 21 10.0**	**-0.2**
BKI	**Bering**	**7.28**	**44**	*eP*		**Pn**	**21 21 10.0**	**-0.2**
BKI				*eS*		**Sn**	**21 22 26.5**	**-4.8**
MA2	**Magadan**	**9.96**	**341**		PN	**Pn**	**21 21 46.8**	**0.0**
MA2	**Magadan**	**9.96**	**341**		LR	LR	21 25 37.0	
	comp=E,49nm,18.2s,baz=312,slow=38							
MA2	**Magadan**	**9.96**	**341**		Pn	**Pn**	**21 21 46.8**	**0.0**
TILK	**Tilichiki**	**11.37**	**23**		PN	**Pn**	**21 22 07.5**	**+1.5**
TILK	**Tilichiki**	**11.37**	**23**	*eP*		**Pn**	**21 22 07.5**	**+1.5**
ERM	**Erimo**	**12.71**	**235**		PN	**Pn**	**21 22 24.1**	**-0.4**
ERM	**Erimo**	**12.71**	**235**		Pn	**Pn**	**21 22 24.1**	**-0.4**
BILL	**Bilibino**	**18.35**	**11**	*i*	P	**Pn**	**21 23 37.3**	**+0.5**
BILL					pmax	pmax		
	comp=Z,6.0nm,1.8s							
YAK	**Yakutsk**	**19.07**	**318**	*eP*		**P**	**21 23 43.8**	**-0.4**
YAK					pmax	pmax		
	comp=Z,26nm,1.3s							
YAK					pmax	pmax		
	comp=E,7.0nm,1.3s							
YAK					pmax	pmax		
	comp=N,4.0nm,1.4s							
YAK	**Yakutsk**	**19.07**	**318**		P	**P**	**21 23 43.6**	**-0.5**
	comp=N,0.1nm,0.3s,baz=264,slow=1.0,SNR=9.5							
YAK					pP	**pP**	**21 23 55.5**	**-0.6**
	comp=N,0.1nm,0.3s,baz=158,slow=0.7,SNR=3.1							
YAK	**Yakutsk**	**19.07**	**318**		P	**Pn**	**21 23 44.0**	**-1.4**
MAJO	**Matsushiro**	**19.35**	**232**		P	**P**	**21 23 48.4**	**+0.8**
MAJO					pmax	pmax		
	comp=Z,7.0nm,1.0s							
MAJO	**Matsushiro**	**19.35**	**232**		P	**P**	**21 23 48.4**	**+0.8**
TIXI	**Tiksi**	**24.92**	**339**	*i*	P	**P**	**21 24 43.3**	**-0.9**
TIXI					pmax	pmax		
	comp=Z,12nm,3.8s							
SII	**Sitkinak Islan**	**29.16**	**59**		P	**P**	**21 25 24.6**	**+2.1**
IMAR	**Indian Mountai**	**29.33**	**39**		P	**P**	**21 25 23.4**	**-0.4**
SKT	**Skwentna**	**30.07**	**47**		P	**P**	**21 25 30.9**	**+0.5**
SUA	**Susitna One**	**30.46**	**48**		P	**P**	**21 25 34.0**	**+0.1**
SUA					IAmb	IAmb	21 25 51.3	
	comp=Z,3.7nm,1.1s							
BRLK	**Bradley Lake**	**30.51**	**52**		P	**P**	**21 25 32.7**	**-1.6**
TRF	**Thorofare Moun**	**30.63**	**45**		P	**P**	**21 25 35.7**	**+0.2**
TRF					IAmb	IAmb	21 25 38.0	
	comp=Z,2.9nm,1.1s							
BWN	**Browne**	**31.00**	**43**		P	**P**	**21 25 40.5**	**+1.9**
BWN					IAmb	IAmb	21 25 48.8	
	comp=Z,6.7nm,0.9s							
GHO	**Glory Hole Cre**	**31.31**	**48**		P	**P**	**21 25 41.8**	**+0.4**
GHO					IAmb	IAmb	21 25 49.6	
	comp=Z,4.6nm,1.1s							
H11N2	**WAKE ISLAND Hy**	**31.50**	**162**		T	T	21 59 20.4	
	baz=348,slow=76,SNR=56							
H11N1	**WAKE ISLAND Hy**	**31.51**	**162**		T	T	21 59 24.4	
	baz=348,slow=76,SNR=51							
H11N3	**WAKE ISLAND Hy**	**31.51**	**162**		T	T	21 59 21.6	
	baz=348,slow=76,SNR=112							
KNK	**Knik Glacier**	**31.56**	**48**		P	**P**	**21 25 44.3**	**+0.8**
KNK					IAmb	IAmb	21 25 50.8	
	comp=Z,6.5nm,1.2s							
SML	**Sawmill**	**31.59**	**48**		P	**P**	**21 25 44.1**	**+0.3**
SML					IAmb	IAmb	21 25 57.0	
	comp=Z,4.1nm,0.9s							
WRH	**Wood River Hil**	**31.60**	**43**		P	**P**	**21 25 44.8**	**+1.0**
WRH					IAmb	IAmb	21 25 58.3	
	comp=Z,3.5nm,1.2s							
CCB	**Clear Creek Bu**	**31.73**	**42**		P	**P**	**21 25 45.5**	**+0.7**
HDA	**Harding Lake**	**32.10**	**43**		P	**P**	**21 25 48.3**	**+0.1**
ILAR	**Eielson Array**	**32.12**	**42**		P	**P**	**21 25 48.4**	**0.0**
	comp=Z,0.7nm,0.8s,baz=270,slow=6.2,SNR=7.9							
ILAR					pP	**pP**	**21 26 00.5**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=259,slow=8.7,SNR=4.6							
H11S1	**WAKE ISLAND Hy**	**32.65**	**163**		T	T	22 00 44.6	
	baz=348,slow=76,SNR=103							
H11S3	**WAKE ISLAND Hy**	**32.66**	**163**		T	T	22 00 50.8	
	baz=348,slow=76,SNR=133							
H11S2	**WAKE ISLAND Hy**	**32.67**	**163**		T	T	22 00 49.9	
	baz=348,slow=76,SNR=76							
PRP	**Porcupine Dome**	**32.69**	**41**		P	**P**	**21 25 53.8**	**+0.3**
PRP					IAmb	IAmb	21 25 54.8	
	comp=Z,3.1nm,0.9s							
TLY	**Talaya**	**33.04**	**293**	*i*	P	**P**	**21 25 53.3**	**-3.3**
TLY					pmax	pmax		
	comp=Z,5.0nm,0.8s							
BMAR	**Burnt Mountain**	**33.08**	**37**		P	**P**	**21 25 56.9**	**+0.1**
SCRK	**Sand Creek**	**33.41**	**43**		P	**P**	**21 25 60.0**	**+0.1**
VRDI	**Verde Repeater**	**33.98**	**48**		P	**P**	**21 26 04.8**	**0.0**
VRDI					IAmb	IAmb	21 26 06.7	
	comp=Z,4.2nm,1.0s							
CRQM	**Cirque**	**34.21**	**49**		P	**P**	**21 26 07.9**	**+1.1**
BCAR	**Beaver Creek A**	**34.49**	**45**		P	**P**	**21 26 10.0**	**+0.9**
EGAK	**Eagle**	**34.57**	**42**		P	**P**	**21 26 09.0**	**-0.6**
EGAK					IAmb	IAmb	21 26 10.8	
	comp=Z,2.5nm,0.7s							
BARN	**Barnard Glacie**	**34.86**	**48**		P	**P**	**21 26 12.8**	**+0.4**
CTGM	**Chitina Glacie**	**35.04**	**48**		P	**P**	**21 26 14.2**	**+0.3**
CTGM					IAmb	IAmb	21 26 19.9	
	comp=Z,5.5nm,1.2s							
INK	**Inuvik**	**37.22**	**35**		P	**P**	**21 26 33.1**	**+0.9**
	comp=Z,1.2nm,0.4s,baz=293,slow=6.5,SNR=7.6							
INK	**Inuvik**	**37.22**	**35**		IAmb	IAmb	21 26 45.7	
	comp=Z,3.2nm,1.0s							
MOBC	**Moresby Island**	**42.38**	**58**		P	**P**	**21 27 16.6**	**+1.3**
YKA	**Yellowknife Ar**	**46.49**	**40**		P	**P**	**21 27 47.7**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=299,slow=7.7,SNR=9.3							
MK31	**Makanchi Array**	**47.69**	**296**		P	**P**	**21 27 56.0**	**-1.6**
MK31					pmax	pmax		
	comp=Z,1.0nm,1.0s							
MK31	**Makanchi Array**	**47.69**	**296**		P	**P**	**21 27 56.0**	**-1.6**
MKAR	**Makanchi Array**	**47.69**	**296**		P	**P**	**21 27 55.8**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=60,slow=6.2,SNR=7.4							
CMAR	**Chiang Mai Arr**	**55.76**	**257**		P	**P**	**21 28 58.6**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=32,slow=7.4,SNR=8.7							
MCMT	**McKenzie Canyo**	**57.41**	**58**			pP	21 29 20.7	-3.4
PDAR	**Pinedale Array**	**60.56**	**58**		P	**P**	**21 29 33.0**	**+1.5**
	comp=Z,1.3nm,0.9s,baz=311,slow=3.4,SNR=9.1							
PDAR					pP	**pP**	**21 29 46.5**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=337,slow=2.8,SNR=4.7							
TMUT	**Trail Mountain**	**62.01**	**61**		P	P	21 29 46.9	+5.4
NOA	**NORSAR Array B**	**65.66**	**343**		LR	LR	22 01 48.4	
	comp=Z,15nm,19.3s,baz=285,slow=39							
WRA	**Warramunga Arr**	**72.78**	**202**		P	**P**	**21 30 49.2**	**0.0**
	comp=Z,1.5nm,1.0s,baz=19,slow=6.2,SNR=4.0							
TXAR	**Lajitas Array**	**73.50**	**64**		P	**P**	**21 30 55.0**	**+1.4**
	comp=Z,1.2nm,0.8s,baz=303,slow=4.6,SNR=9.9							
TXAR					pP	**pP**	**21 31 09.2**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=299,slow=4.2,SNR=6.6							
ASAR	**Alice Springs**	**76.47**	**202**		P	**P**	**21 31 11.4**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=12,slow=5.2,SNR=6.3							
ASAR					pP	**pP**	**21 31 27.1**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=12,slow=5.1,SNR=1.7							

*IDC **09** 21:33:09.2±1.1,68°.00N×10°.36E,h0km,mb3.5/2, mb1 3.5/8,mb1mx3.2/44,mbtmp3.5/8,ML3.0/6,Error ellipse: s-maj=16.3km s-min=10.2km az=104.0*
*NAO **09** 21:33:10.3±3.7,68°.02N×10°.50E,h10km±27km,ML3.1*
*UPP **09** 21:33:11.7±2.8,68°.18N×10°.93E,h0km, ML2.7, Suspected explosion*
*HEL **09** 21:33:12.9,68°.04N×11°.13E,h10km, ML2.4, Confirmed Earthquake*
*BER **09** 21:33:12.1±2.2,68°.01N×10°.49E,h12km, ML2.7, MW3.2, ML3.1(NAO), Confirmed Earthquake*

ISC 09 21:33:10.1±1.7,68°.00N±0°.04×10°.61E±0°.05,h17km±9km, n96,σ2s02/144,3C,Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LOF	**Lofoten**	**1.11**	**82**		Pg	**Pg**	**21 33 30.8**	**-0.7**
LOF					Lg	Lg	21 33 48.8	
LOF	**Lofoten**	**1.11**	**82**	*eP*		**Pg**	**21 33 30.9**	**-0.6**
LOF				*e*			21 33 33.7	
LOF				*eSg*		**Sb**	**21 33 49.0**	**+4.1**
LOF				IAML			21 33 55.2	
	comp=Z,699nm,0.4s							
STEI	**Steigen**	**1.75**	**90**		Pn	**Pn**	**21 33 40.4**	**+0.8**
STEI					Sn	**Sn**	**21 34 01.7**	**+0.3**
STEI	**Steigen**	**1.75**	**90**	*eP*		**Pn**	**21 33 40.5**	**+0.9**
STEI				*eS*		**Sn**	**21 34 01.7**	**+0.3**
STEI				IAML			21 34 14.0	
	comp=Z,182nm,0.5s							
KONS	**Konsvik**	**1.79**	**146**		Pn	**Pn**	**21 33 41.6**	**+1.4**
KONS					Sn	**Sn**	**21 34 03.4**	**+0.9**
KONS	**Konsvik**	**1.79**	**146**	*eP*		**Pn**	**21 33 41.5**	**+1.2**
KONS				*eS*		**Sn**	**21 34 03.9**	**+1.3**
KONS				IAML			21 34 04.2	
	comp=Z,130nm,0.5s							
STOK	**Stokkvaagen**	**1.92**	**150**		Pn	**Pn**	**21 33 43.3**	**+1.4**
STOK	**Stokkvaagen**	**1.92**	**150**	*eP*		**Pn**	**21 33 43.6**	**+1.7**
STOK				*eS*		**Sn**	**21 34 06.2**	**+0.6**
MOR8	**Moi Rana**	**2.37**	**139**		Pn	**Pn**	**21 33 50.1**	**+1.9**
MOR8					Sn	**Sn**	**21 34 19.2**	**+2.4**
MOR8	**Moi Rana**	**2.37**	**139**	*i*	P	**Pn**	**21 33 50.1**	**+1.9**
MOR8				*eS*		**Sn**	**21 34 17.0**	**+0.2**
MOR8				IAML			21 34 20.8	
	comp=Z,131nm,0.3s							
RATU	**Laukkuluspa**	**3.40**	**89**	*eP*		**Pn**	**21 34 04.1**	**+1.8**
RATU	**Laukkuluspa**	**3.40**	**89**		P	**Pn**	**21 34 04.1**	**+1.8**
RATU					S	**Sn**	**21 34 43.9**	**+1.7**
**TR

RNF					eS		Sn	21 35 45.9	-3.2
KEV	**Kevo**	**6.18**	**66**		Pn		**Pn**	**21 34 41.8**	**+1.4**
KEV					Sn		**Sn**	**21 35 50.0**	**-0.5**
KEV	**Kevo**	**6.18**	**66**		*eP*		**Pn**	**21 34 42.5**	**+2.1**
OBF0	**Syolatti, Pyha**	**6.52**	**116**		*eP*		**Pn**	**21 34 46.2**	**+1.1**
OBF0					eS		**Sn**	**21 35 56.1**	**-2.9**
OBF0	**Syolatti, Pyha**	**6.52**	**116**		*eP*		**Pn**	**21 34 46.2**	**+1.1**
OBF0					eS		**Sn**	**21 35 56.1**	**-2.9**
NC204	**NORSAR Array S**	**6.75**	**179**		*eP*		**Pn**	**21 34 49.5**	**+1.1**
NC204	comp=Z,7.0nm,0.5s				IAML			21 36 41.0	
OUL	**Oulu**	**6.76**	**108**		*eP*		**Pn**	**21 34 49.4**	**+1.0**
OUL					eS		**Sn**	**21 36 01.0**	**-3.8**
OUL	**Oulu**	**6.76**	**108**		*eP*		**Pn**	**21 34 49.4**	**+1.0**
OUL					eS		**Sn**	**21 36 01.0**	**-3.8**
OUF	**Merijarvi**	**6.77**	**116**		*eP*		**Pn**	**21 34 49.7**	**+1.1**
OUF					eS		**Sn**	**21 36 01.5**	**-3.7**
OUF	**Merijarvi**	**6.77**	**116**		*eP*		**Pn**	**21 34 49.7**	**+1.1**
OUF					eS		**Sn**	**21 36 01.5**	**-3.7**
NC303	**NORSAR Array S**	**6.81**	**177**		*eP*		**Pn**	**21 34 50.1**	**+1.0**
NC303	comp=Z,7.6nm,0.5s				IAML			21 36 26.3	
NB201	**NORSAR Array S**	**6.98**	**177**		*eP*		**Pn**	**21 34 52.8**	**+1.2**
NB201					eS		**Sn**	**21 36 05.4**	**-5.1**
NB201	comp=Z,11nm,0.6s				IAML			21 36 40.8	
NB2	**NORSAR Subarra** baz=358,slow=14	**6.99**	**178**		Pn		**Pn**	**21 34 52.5**	**+0.8**
NB2	**NORSAR Subarra** baz=358,slow=14	**6.99**	**178**		Pn		**Pn**	**21 34 52.5**	**+0.8**
NOA	**NORSAR Array B** comp=Z,0.1nm,0.3s,baz=356,slow=12,SNR=21	**6.99**	**178**		Pn		**Pn**	**21 34 52.1**	**+0.5**
NOA	comp=Z,0.1nm,0.3s,baz=86,slow=5.8,SNR=3.8				Sn		**Sn**	**21 36 08.1**	**-2.6**
NBO00	**NORSAR Array S**	**7.00**	**179**		*eP*		**Pn**	**21 34 53.0**	**+1.3**
NBO00					eS		**Sn**	**21 36 07.2**	**-3.6**
NBO00	comp=Z,8.1nm,0.6s				IAML			21 36 35.1	
NAO01	**NORSAR Array S**	**7.18**	**179**		*eP*		**Pn**	**21 34 55.3**	**+1.0**
NAO01	comp=Z,15nm,1.0s				IAML			21 36 39.7	
JNE	**Jan Mayen East**	**7.27**	**303**		*eP*		**Pn**	**21 34 54.1**	**-1.3**
JNE	comp=Z,93nm,0.2s				IAML			21 34 57.1	
NC602	**NORSAR Array S**	**7.30**	**176**		*eP*		**Pn**	**21 34 57.3**	**+1.5**
NRA0	**NORESS Array S** baz=351,slow=16	**7.30**	**176**		Pn		**Pn**	**21 34 56.1**	**+0.2**
NRA0	baz=354,slow=18				Sn		Sn	21 36 11.4	-6.9
NRA0	**NORESS Array S** baz=351,slow=16	**7.30**	**176**		Pn		**Pn**	**21 34 56.1**	**+0.2**
NRA0	baz=354,slow=18				Sn		Sn	21 36 11.4	-6.9
JNW	**Jan Mayen West**	**7.32**	**303**		*eP*		**Pn**	**21 34 54.6**	**-1.4**
JNW	comp=Z,72nm,0.2s				IAML			21 34 57.3	
JMIC	**Jan Mayen**	**7.34**	**303**		Pn		**Pn**	**21 34 55.0**	**-1.3**
JMIC	**Jan Mayen**	**7.34**	**303**		Pn		**Pn**	**21 34 55.0**	**-1.3**
JMIC	**Jan Mayen**	**7.34**	**303**		*eP*		**Pn**	**21 34 54.8**	**-1.5**
JMIC	comp=Z,61nm,0.2s				IAML			21 34 57.5	
JMI	**Jan Mayen**	**7.39**	**302**		*eP*		**Pn**	**21 34 55.9**	**-1.1**
JMI	comp=Z,40nm,0.4s				IAML			21 35 03.0	
HFS	**Hagfors** baz=351,slow=14	**8.01**	**169**		Pn		**Pn**	**21 35 06.1**	**+0.5**
HFS	baz=343,slow=28				Sn		**Sn**	**21 36 31.2**	**-4.4**
HFS	**Hagfors** comp=Z,0.7nm,0.3s,baz=356,slow=12,SNR=26	**8.01**	**169**		Pn		**Pn**	**21 35 06.1**	**+0.5**
HFS	comp=Z,0.3nm,0.3s,baz=350,slow=16,SNR=3.8				Sn		Sn	21 36 28.0	-7.6
HFS	**Hagfors** baz=351,slow=14	**8.01**	**169**		Pn		**Pn**	**21 35 06.1**	**+0.5**
HFS	baz=343,slow=28				Sn		**Sn**	**21 36 31.2**	**-4.4**
FIA0	**FINESS Array S** baz=327,slow=14	**9.30**	**128**		Pn		**Pn**	**21 35 24.0**	**+0.8**
FIA0	**FINESS Array S** baz=327,slow=14	**9.30**	**128**		Pn		**Pn**	**21 35 24.0**	**+0.8**
FINES	**FINESS Array B** comp=Z,0.6nm,0.3s,baz=328,slow=14,SNR=29	**9.30**	**128**		Pn		**Pn**	**21 35 24.7**	**+1.5**
FINES	comp=Z,0.6nm,0.3s,baz=328,slow=23,SNR=5.1				Sn		**Sn**	**21 37 04.8**	**-2.5**
FINES	comp=Z,0.9nm,0.3s,baz=326,slow=23,SNR=8.3				Lg		Lg	21 37 54.6	
SPA0	**Spitsbergen Ar** baz=180,slow=16	**10.36**	**7**		Pn		**Pn**	**21 35 37.5**	**-0.2**
SPA0	**Spitsbergen Ar**	**10.36**	**7**		*eP*		**Pn**	**21 35 37.6**	**-0.1**
SPITS	**Spitsbergen Ar** baz=173,slow=16,SNR=12	**10.36**	**7**		Pn		**Pn**	**21 35 37.8**	**+0.2**
PRGR	**Permogore** comp=Z,7.4nm,1.0s	**16.01**	**97**		*eP*		**Pn**	**21 36 50.9**	**-3.2**
PRGR					eS		Sn	21 39 41.6	-9.3
AKASG	**Malin Array Be** comp=Z,0.2nm,0.3s,baz=338,slow=11,SNR=2.8	**19.62**	**143**		P		**P**	**21 37 38.0**	**+0.7**
ARU	**Arti** comp=Z,0.3nm,0.4s,baz=311,slow=11,SNR=4.2	**24.44**	**94**		P		**P**	**21 38 30.9**	**+3.4**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.6s,baz=4.4,slow=8.3,SNR=4.7	**55.11**	**191**		P		**P**	**21 42 42.1**	**+1.1**

*NEIC **09** 22:10:33.9±1.4,36.44S±0.06×97.9W±0.2,h10km±1km, mb4.4/11,Error ellipse: s-maj=24.7km s-min=10.9km az=86.0*

*IDC **09** 22:10:35.7±3.8,36.16S×97.58W,h0km,mb3.8/3, mb1 4.2/3,mb1mx3.8/30,mbtmp3.9/3,MS3.4/3,Ms1 3.4/3, ms1mx3.0/25,Error ellipse: s-maj=101.1km s-min=38.3km az=33.0*

ISC 09 22:10:34.0±0.9,36.5S±0.2×98.0W±0.1,h12km,n17, σ1s01/16,mb4.3/7,MS3.3/3,Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**13.38**	**311**	Pn	**Pn**	**22 13 42.7**	**-1.0**
GO06	**Curarrehue**	**21.12**	**107**	P	**P**	**22 15 17.7**	**-1.0**
GO05	**Huala**	**21.21**	**94**	P	**P**	**22 15 18.3**	**-1.3**
GO05	comp=Z,16nm,1.1s			IAmb	IAmb	22 15 19.2	
PLCA	**Paso Flores** comp=Z,1.6nm,0.7s,baz=299,slow=12,SNR=4.5	**21.85**	**110**	P	**P**	**22 15 27.4**	**+1.0**
PLCA	comp=Z,69nm,20.4s,baz=266,slow=30			LR	LR	22 21 27.8	
PLCA	**Paso Flores**	**21.85**	**110**	P	**P**	**22 15 26.3**	**-0.1**
GO10	**Punta Arenas**	**25.16**	**140**	P	**P**	**22 15 59.2**	**+0.2**
LPAZ	**La Paz** comp=Z,3.3nm,0.9s,baz=249,slow=6.7,SNR=7.4	**33.27**	**61**	P	**P**	**22 17 11.6**	**-0.5**
LPAZ	comp=Z,58nm,19.7s,baz=15,slow=31			LR	LR	22 27 20.7	
LPAZ	**La Paz**	**33.27**	**61**	P	**P**	**22 17 11.4**	**-0.7**
LPAZ	comp=Z,2.7nm,0.8s			IAmb	IAmb	22 17 14.5	
TEIG	**Tepich**	**57.14**	**11**	P	**P**	**22 20 21.6**	**+1.1**
BANI	**BANI**	**60.51**	**30**	P	**P**	**22 20 44.3**	**+0.2**
MSWZ	**Moikau Station**	**64.87**	**236**	P	**P**	**22 21 12.8**	**-0.2**
URZ	**Urewera** comp=Z,43nm,21.0s,baz=238,slow=30	**65.05**	**240**	LR	LR	22 43 19.9	
HKT	**Hockley**	**66.11**	**2**	P	**P**	**22 21 20.8**	**0.0**
HKT	comp=Z,3.7nm,0.9s			IAmb	IAmb	22 21 33.3	
121A	**Cookes Peak, D**	**69.25**	**351**	P	**P**	**22 21 41.0**	**+0.1**
121A	comp=Z,2.1nm,0.8s			IAmb	IAmb	22 21 52.0	
RDMU	**Red Mountain**	**77.40**	**351**	P	**P**	**22 22 29.4**	**+0.6**
PDAR	**Pinedale Array** comp=Z,0.5nm,0.6s,baz=144,slow=7.8,SNR=6.2	**79.56**	**351**	P	**P**	**22 22 43.1**	**+2.4**
F64A	**Sherman**	**86.22**	**20**	P	**P**	**22 23 14.2**	**-0.6**
F64A	comp=Z,5.5nm,0.9s			IAmb	IAmb	22 23 16.7	

*IDC **09** 22:16:43.9±3.2,20.84N×147.26E,h0km,mb3.8/4, mb1 3.9/4,mb1mx3.5/31,mbtmp3.8/4,Error ellipse: s-maj=129.3km s-min=30.3km az=83.0*

*NEIC **09** 22:16:47.6±2.4,20.66N±0.06×147.2E±0.1,h35km±3km, mb4.6/16,Error ellipse: s-maj=17.1km s-min=5.7km az=69.0*

ISC 09 22:16:47.9±0.7,20.7N±0.1×147.2E±0.1,h40km,n27, σ1s40/26,mb4.5/12,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**19.07**	**314**	P	**Pn**	**22 21 08.0**	**-0.1**
JNU				IAmb	IAmb	22 21 14.9	
	comp=Z,17nm,1.1s						
ERM	**Erimo**	**21.51**	**352**	P	**P**	**22 21 33.9**	**+0.5**
INCN	**Inchon**	**24.46**	**318**	P	**P**	**22 22 03.2**	**0.0**
INCN	comp=Z,18nm,0.7s			IAmb	IAmb	22 22 03.7	
SSLB	**Suanglung**	**24.48**	**282**	P	**P**	**22 22 04.9**	**+1.4**
SSLB	comp=Z,7.5nm,1.1s			IAmb	IAmb	22 22 09.4	
SSE	**Sheshan**	**25.54**	**299**	P	**P**	**22 22 10.3**	**-2.7**
SSE	comp=Z,20nm,0.7s			IAmb	IAmb	22 22 17.1	
COEN	**Coen**	**34.68**	**187**	P	**P**	**22 23 33.5**	**-0.4**
COEN	comp=Z,9.7nm,1.1s			IAmb	IAmb	22 23 51.9	
SLVN	**Son La**	**40.34**	**279**	P	**P**	**22 24 20.4**	**-1.6**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.7s,baz=23,slow=8.7,SNR=4.1	**42.32**	**198**	P	**P**	**22 24 40.7**	**+2.6**
WRA	**Warramunga Arr**	**42.32**	**198**	P	**P**	**22 24 38.1**	**0.0**
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.4s,baz=111,slow=9.1,SNR=3.8	**57.31**	**322**	P	**P**	**22 26 32.7**	**+1.1**
ZALV	**Zalesovo Beam**	**57.31**	**322**	P	**P**	**22 26 32.2**	**+0.6**
TOO	**Toolangi**	**57.99**	**182**	P	**P**	**22 26 37.9**	**+1.3**
TOO	comp=Z,6.7nm,1.1s			IAmb	IAmb	22 26 50.0	
MKAR	**Makanchi Array** comp=Z,0.2nm,0.4s,baz=85,slow=8.9,SNR=3.8	**58.12**	**313**	P	**P**	**22 26 38.8**	**+1.2**
MKAR	**Makanchi Array**	**58.12**	**313**	P	**P**	**22 26 38.5**	**+0.9**
MAKZ	**Makanchi**	**58.34**	**313**	P	**P**	**22 26 40.2**	**+1.2**
PALK	**Pallekele**	**65.52**	**269**	P	**P**	**22 27 26.0**	**-1.9**
RAR	**Rarotonga**	**66.48**	**126**	P	**P**	**22 27 32.7**	**-1.1**
THZ	**Tophouse**	**66.56**	**159**	P	**P**	**22 27 33.5**	**-0.4**
BHW	**Baring Head**	**66.92**	**158**	P	**P**	**22 27 35.7**	**-0.4**
CHGR	**Chuyangaron**	**68.26**	**304**	P	**P**	**22 27 43.3**	**-1.7**
CHGR	comp=Z,3.7nm,0.9s			IAmb	IAmb	22 27 48.8	
ABKAR	**Akbulak array**	**72.85**	**317**	P	**P**	**22 28 14.1**	**+1.5**
ABKAR	**Akbulak array**	**72.85**	**317**	P	**P**	**22 28 13.9**	**+1.3**
F04A	**Amboy**	**75.66**	**46**	P	**P**	**22 28 27.9**	**-1.2**
F04A	comp=Z,13nm,1.0s			IAmb	IAmb	22 28 36.4	
JLU	**Jordanelle**	**84.96**	**49**		pP	22 29 30.3	+0.4
FIA1	**FINESS Array S**	**85.65**	**336**	P	**P**	**22 29 22.9**	**+0.7**
FIA1	comp=Z,8.5nm,1.1s			IAmb	IAmb	22 29 31.1	
FINES	**FINESS Array B** comp=Z,1.9nm,0.6s,baz=58,slow=4.7,SNR=11	**85.66**	**336**	P	**P**	**22 29 24.1**	**+2.0**
FINES	**FINESS Array B**	**85.66**	**336**	P	**P**	**22 29 23.6**	**+1.5**

*NEIC **09** 22:37:45.5±1.7,21.11S±0.07×178.5W±0.2,h559km±13km, mb4.2/12,Error ellipse: s-maj=24.4km s-min=6.5km az=108.0*

*IDC **09** 22:37:55.8±10.0,21.05S×178.97W,h682km±144km, mb3.0/5,mb1 3.2/5,mb1mx2.9/23,mbtmp4.0/5,Error ellipse: s-maj=111.2km s-min=55.1km az=156.0*

ISC 09 22:37:45.2±0.9,21.2S±0.2×178.5W±0.1,h550km,n21, σ0s90/18,mb4.0/12,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.99**	**264**	P	**P**	**22 40 45.7**	**+1.2**
QRZ	**Quartz Range**	**20.97**	**199**	P	**P**	**22 41 49.4**	**-0.5**
NNZ	**Nelson**	**21.09**	**197**	P	**P**	**22 41 50.2**	**-0.7**
EIDS	**Eidsvold**	**28.18**	**256**	P	**P**	**22 42 54.4**	**+0.4**
EIDS	comp=Z,8.3nm,1.1s			IAmb	IAmb	22 43 08.7	
ARMA	**Armidale**	**28.30**	**245**	P	**P**	**22 42 54.4**	**-0.7**
ARMA	comp=Z,7.8nm,1.1s			IAmb	IAmb	22 42 57.5	
TOO	**Toolangi**	**35.07**	**234**	P	**P**	**22 43 52.9**	**+0.3**
TOO	comp=Z,4.0nm,0.8s			IAmb	IAmb	22 44 03.8	
STKA	**Stephens Creek** comp=Z,2.6nm,0.8s,baz=92,slow=12,SNR=5.4	**37.03**	**245**	P	**P**	**22 44 09.6**	**+0.7**
STKA	**Stephens Creek**	**37.03**	**245**	P	**P**	**22 44 09.7**	**+0.9**
COEN	**Coen**	**37.13**	**275**	P	**P**	**22 44 09.7**	**-0.2**
COEN	comp=Z,4.8nm,1.1s			IAmb	IAmb	22 44 11.6	
BBOO	**Buckleboo**	**41.78**	**244**	P	**P**	**22 44 47.2**	**+0.2**
BBOO	comp=Z,6.1nm,1.1s			IAmb	IAmb	22 44 55.9	
WR0	**Warramunga Arr**	**43.82**	**263**	P	**P**	**22 45 02.2**	**-1.0**
ASAR	**Alice Springs** comp=Z,2.7nm,0.5s,baz=96,slow=7.6,SNR=31	**43.87**	**258**	P	**P**	**22 45 03.4**	**-0.1**
ASAR	**Alice Springs**	**43.87**	**258**	P	**P**	**22 45 02.0**	**-1.5**
WRA	**Warramunga Arr** comp=Z,1.0nm,0.3s,baz=97,slow=7.7,SNR=33	**44.01**	**263**	P	**P**	**22 45 04.0**	**-0.6**
WRA	**Warramunga Arr** comp=Z,0.3nm,0.8s	**44.01**	**263**	IAmb	IAmb	22 45 04.5	
GLA	**Glamis**	**81.27**	**50**	P	**P**	**22 49 06.1**	**+1.6**
GLA	comp=Z,12nm,0.8s			IAmb	IAmb	22 49 10.8	
UBPT	**Khong Chiam**	**82.89**	**289**	P	**P**	**22 49 12.5**	**-0.5**
UBPT	comp=Z,9.1nm,1.2s			IAmb	IAmb	22 49 17.7	
ILAR	**Eielson Array** comp=Z,0.5nm,0.9s,baz=216,slow=5.4,SNR=5.0	**89.12**	**13**	P	**P**	**22 49 40.5**	**-1.2**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.5s,baz=202,slow=6.4,SNR=3.1	**89.83**	**43**	P	**P**	**22 49 45.7**	**-0.1**
ESTN	**Estel**	**96.63**	**79**		pP	22 52 19.0	+1.2
AKASG	**Malin Array Be** comp=Z,0.2nm,0.4s,baz=44,slow=4.2,SNR=4.2	**143.38**	**330**	PKP	PKPab	22 56 13.7	-1.7

*TUL **09** 23:07:37.2±3.3,35.82N±0.04×96.93W±0.03,h3km±6km, ML3.0,Error ellipse: s-maj=0.0km s-min=0.0km az=90.0*

*ANF **09** 23:07:37.5±0.7,35.76N×96.91W,h0km±5km,ML3.7/10, Error ellipse: s-maj=5.8km s-min=2.7km az=172.0*

*NEIC **09** 23:07:39.1±1.9,35.70N±0.05×96.99W±0.02,h5km±1km, Error ellipse: s-maj=7.3km s-min=2.3km az=172.0*

ISC 09 23:07:38.2±0.8,35.80N±0.03×96.93W±0.03,h4km,n41, σ1s57/51,Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADOK	**Arcadia Dam**	**0.39**	**248**		**Pg**	**23 07 45.1**	**-0.5**
OKCSW	**OKLAHOMA CITY**	**0.57**	**227**		**Pg**	**23 07 47.8**	**-1.3**
OKCFA	**Oklahoma City**	**0.57**	**228**		**Pg**	**23 07 48.1**	**-1.0**
W35A	**Tecumseh**	**0.65**	**176**	Pg	**Pg**	**23 07 49.9**	**-0.7**
FNO	**Franklin**	**0.66**	**215**		**Pb**	**23 07 50.5**	**-1.7**
TUL1	**Leonard**	**0.93**	**83**	Pg	**Pg**	**23 07 54.7**	**-1.4**
TUL1	**Leonard** baz=257	**0.93**	**83**	P	**Pg**	**23 07 54.7**	**-1.4**
TUL1	baz=257			S	**Sg**	**23 08 07.6**	**-0.7**
X34A	**Smith Ranch, M**	**1.40**	**212**		**Pn**	**23 08 03.0**	**-1.5**
U32A	**Winter Ranch,**	**1.77**	**290**		**Pn**	**23 08 09.6**	**-0.1**
U32A					**Sb**	**23 08 33.3**	**-0.7**
WMOK	**Wichita Mounta**	**1.84**	**236**		**Pn**	**23 08 10.0**	**-0.7**
WMOK	**Wichita Mounta** baz=56	**1.84**	**236**	P	**Pn**	**23 08 10.0**	**-0.7**
WMOK	baz=56			S	**Sb**	**23 08 35.5**	**-0.4**
HHAR	**Hobbs**	**2.47**	**78**	Pn	**Pn**	**23 08 20.2**	**+0.9**
W39A	**Magazine**	**2.64**	**102**	Pn	**Pn**	**23 08 22.0**	**+0.5**
W39A	**Magazine** baz=282	**2.64**	**102**	P	**Pn**	**23 08 21.6**	**0.0**
W39A	baz=282			S	**Sn**	**23 08 55.0**	**+1.0**
MIAR	**Mount Ida**	**3.02**	**113**	Pn	**Pn**	**23 08 27.5**	**+0.7**
MIAR	**Mount Ida** baz=293	**3.02**	**113**	P	**Pn**	**23 08 27.0**	**+0.2**
MIAR	baz=293			S	**Sn**	**23 09 04.0**	**+0.6**
KSU1	**Kansas State U** baz=185	**3.31**	**4**	Sb	**Sb**	**23 09 20.6**	**+2.5**
U40A	**Yellville**	**3.35**	**79**	Pn	**Pb**	**23 08 35.1**	**-3.1**
X40A	**Basin Creek Fa**	**3.60**	**110**	Pn	**Pn**	**23 08 35.4**	**+0.6**
X40A					**Pb**	**23 08 43.7**	**+1.2**
X40A	**Basin Creek Fa** baz=290	**3.60**	**110**	P	**Pn**	**23 08 35.1**	**+0.2**
CBKS	**Cedar Bluff**	**3.75**	**324**		**Pn**	**23 08 37.6**	**+0.7**
WHAR	**Wooly Hollow**	**3.82**	**96**	Pn	**Pn**	**23 08 37.1**	**-0.7**
WHTX	**Lake Whitney,**	**3.82**	**187**	Pn	**Pn**	**23 08 37.5**	**-0.3**
WHTX					**Pb**	**23 08 45.5**	**-0.6**
WHTX	**Lake Whitney,** baz=5.7	**3.82**	**187**	Sb	**Sb**	**23 09 34.3**	**+1.4**
W41B	**Gary Mavity, V** baz=279	**3.87**	**98**	P	**Pn**	**23 08 38.1**	**-0.4**
W41B	baz=279			S	**Sn**	**23 09 24.1**	**-0.4**
ABTX	**Abilene, Hawle**	**3.88**	**216**	Pn	**Pn**	**23 08 37.9**	**-0.7**
ABTX					**Pb**	**23 08 47.8**	**+0.6**
UALR	**University of**	**3.89**	**104**	Pn	**Pn**	**23 08 39.4**	**+0.6**
AMTX	**Amarillo**	**3.99**	**258**		**Pn**	**23 08 40.5**	**+0.3**
AMTX	**Amarillo** baz=77	**3.99**	**258**	P	**Pn**	**23 08 40.3**	**+0.2**
MGMO	**Mountain Grove**	**4.00**	**69**	Pn	**Pn**	**23 08 43.0**	**+2.8**
Z41A	**Richland Creek** baz=306	**4.25**	**125**	S	**Sn**	**23 09 32.6**	**-1.1**
CCAR	**Cane Creek**	**4.64**	**112**	Pn	**Pn**	**23 08 49.6**	**+0.6**
435B	**Jarrell**	**5.03**	**186**	Pn	**Pn**	**23 08 54.4**	**-0.1**
CCM	**Cathedral Cave**	**5.08**	**62**		**Pb**	**23 09 09.6**	**+1.9**
MSTX	**Muleshoe**	**5.13**	**251**	Pn	**Pn**	**23 08 55.2**	**-0.8**
MSTX					**Pb**	**23 09 09.9**	**+1.3**
KSCO	**Kaye Shedlock'**	**5.55**	**307**		**Pb**	**23 09 19.1**	**+3.3**
JCT	**Junction City**	**5.82**	**205**		**Pb**	**23 09 23.6**	**+3.3**
T25A	**Trinidad**	**6.17**	**285**		**Pb**	**23 09 30.7**	**+4.3**
OGNE	**Ogallala**	**6.52**	**324**		**Pg**	**23 09 38.5**	**-4.5**
SCIA	**State Center**	**6.75**	**24**		**Pg**	**23 09 46.8**	**-0.8**
Q24A	**Divide**	**7.26**	**298**		**Pn**	**23 09 26.9**	**+1.5**

*JMA **09** 23:11:07.7±0.1,23.78N×122.49E,h20km*

*TAP **09** 23:11:08.6,23.76N×122.55E,h36km±1km,ML3.0,D*

ISC 09 23:11:07.5±1.4,23.73N±0.03×122.52E±0.04,h20km±5km, n56,σ0s64/99,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.82**	**29**	P	**Pb**	**23 11 22.4**	**-0.6**
JYNG				*eS*	**Sb**	**23 11 32.7**	**-0.9**
EOS1	**EOS1** baz=324	**0.89**	**337**	P	**Pb**	**23 11 24.9**	**+0.7**
EOS1	baz=324			S	**Sn**	**23 11 37.8**	**+0.8**
TWD	**Chiawan** baz=280	**0.91**	**293**	*eP*	**Pn**	**23 11 24.2**	**-0.9**
TWD	baz=280			*eS*	**Sb**	**23 11 36.4**	**+0.2**
NACB	**Ninganchiao** baz=285	**0.95**	**298**	P	**Pn**	**23 11 24.8**	**-0.9**
NACB	baz=285			S	**Sb**	**23 11 37.3**	**-0.1**
NANB	**Nanao** baz=312	**0.99**	**315**	P	**Pn**	**23 11 26.0**	**-0.2**
NANB	baz=312			S	**Sb**	**23 11 40.0**	**+1.5**
ENA	**Nanau** baz=312	**0.99**	**315**	P	**Pb**	**23 11 26.1**	**+0.2**
ENA	baz=312			S	**Sb**	**23 11 39.4**	**+0.8**
ESL	**Shilin** baz=263	**1.00**	**275**	*eP*	**Pn**	**23 11 25.1**	**-1.2**
ESL	baz=263			*eS*	**Sn**	**23 11 38.0**	**-1.8**
EGFH	**Guangfu** baz=265	**1.00**	**267**	P	**Pn**	**23 11 25.7**	**-0.6**
EGFH	baz=265			S	**Sn**	**23 11 38.9**	**-0.9**
HGSD	**Ruisui** baz=255	**1.03**	**257**	P	**Pn**	**23 11 26.1**	**-0.6**
HGSD	baz=255			S	**Sn**	**23 11 39.4**	**-1.2**
ETLH	**Xiulin Townshi** baz=294	**1.06**	**297**	P	**Pn**	**23 11 26.9**	**-0.4**
ETLH	baz=294			S	**Sn**	**23 11 40.7**	**-0.7**
TWC	**Suao** baz=323	**1.07**	**325**	P	**Pb**	**23 11 27.2**	**0.0**
TWC	baz=323			S	**Sb**	**23 11 40.9**	**+0.2**
EHY	**Hungye** baz=257	**1.12**	**259**	P	**Pn**	**23 11 27.9**	**0.0**
EHY	baz=257			S	**Sn**	**23 11 42.5**	**-0.2**
YULB	**Yu-li** baz=252	**1.17**	**253**	P	**Pn**	**23 11 28.9**	**+0.2**
YULB	baz=252			S	**Sn**	**23 11 44.0**	**0.0**
TWF1	**Yuli** baz=241	**1.18**	**252**	*i* P	**Pn**	**23 11 28.9**	**+0.1**
TWF1	baz=241			S	**Sn**	**23 11 44.2**	**-0.1**
WHF	**Hehuan Shan** baz=278	**1.22**	**290**	*i* P	**Pn**	**23 11 29.1**	**-0.6**
WHF	baz=278			*eS*	**Sn**	**23 11 45.1**	**-0.7**
HATJ	**Hateruma jima**	**1.22**	**74**	S	**Sb**	**23 11 45.8**	**+0.6**
FULB	**Fuli** baz=235	**1.24**	**245**	*eP*	**Pn**	**23 11 29.8**	**+0.1**
FULB	baz=235			S	**Sn**	**23 11 45.4**	**-0.4**
NNSH	**Datong** baz=301	**1.25**	**304**	*eP*	**Pb**	**23 11 30.2**	**-0.1**
NNSH	baz=301			S	**Sb**	**23 11 46.1**	**0.0**
OWD	**Renai** baz=278	**1.25**	**281**	P	**Pn**	**23 11 29.7**	**-0.1**
OWD	baz=278			S	**Sn**	**23 11 45.3**	**-0.8**
ENTT	**Nioudou** baz=314	**1.25**	**316**	P	**Pb**	**23 11 30.9**	**+0.5**
ENTT	baz=314			*eS*	**Sb**	**23 11 47.3**	**+1.1**
TWE	**Neicheng** baz=320	**1.25**	**322**	P	**Pb**	**23 11 30.3**	**-0.1**
TWE	baz=320			*eS*	**Sb**	**23 11 46.2**	**+0.1**
NNS	**Nan Shan** baz=302	**1.26**	**304**	*eS*	**Sb**	**23 11 46.6**	**+0.1**
VWDT	**VWDT** baz=269	**1.26**	**271**	P	**Pn**	**23 11 30.1**	**+0.2**
VWDT	baz=269			S	**Sn**	**23 11 46.0**	**-0.2**
NDT	**Datong Townshi** baz=311	**1.26**	**314**	*eS*	**Sb**	**23 11 46.8**	**+0.4**
CHGB	**Renai** baz=276	**1.27**	**285**	P	**Pn**	**23 11 30.0**	**-0.2**
CHGB	baz=276			*eS*	**Sn**	**23 11 46.6**	**-0.3**
NTC	**Toucheng** baz=329	**1.28**	**331**	*eS*	**Sb**	**23 11 47.6**	**+0.7**
SLBB	**Yuanshan** baz=320	**1.30**	**322**	*eP*	**Pn**	**23 11 30.6**	**+0.2**
TWT	**Tachien** baz=283	**1.33**	**293**	*eP*	**Pb**	**23 11 31.9**	**+0.1**
TIPB	**Shuangxi** baz=331	**1.39**	**333**	P	**Pb**	**23 11 33.0**	**+0.3**
TIPB	baz=331			S	**Sn**	**23 11 49.0**	**-0.5**
NWLT	**Wulai** baz=316	**1.39**	**319**	P	**Pb**	**23 11 33.0**	**+0.2**
NWLT	baz=316			*eS*	**Sb**	**23 11 50.2**	**+0.1**
YHNB	**Yeheng** baz=310	**1.40**	**312**	P	**Pn**	**23 11 32.3**	**+0.4**
YHNB	baz=310			*eS*	**Sn**	**23 11 49.7**	**-0.1**
SSLB	**Suanglung** baz=270	**1.43**	**273**	P	**Pn**	**23 11 32.8**	**+0.5**
SSLB	baz=270			*eS*	**Sn**	**23 11 50.0**	**-0.6**
ELDTW	**Lidau** baz=247	**1.48**	**249**	P	**Pn**	**23 11 33.1**	**+0.1**
SMLT	**Sun Moon Lake** baz=274	**1.49**	**276**	P	**Pn**	**23 11 33.1**	**-0.1**
SMLT	baz=274			S	**Sn**	**23 11 52.7**	**+0.7**
NWF	**Wu-fen Shan** baz=332	**1.49**	**333**	*eP*	**Pb**	**23 11 34.0

baz=260
TWGBT **Beinan** **1.60 236** *e*P Pn **23 11 34.2 -0.4**
baz=227
TWG **Pinlang** **1.61 236** *e*P Pn **23 11 34.6 -0.1**
baz=227
LIOB **Emei** **1.65 304** P Pb **23 11 37.0 -0.1**
baz=292
LIOB *e*S **Sb** **23 11 57.1 -0.3**
baz=292
NSTT **Nanjuang** **1.65 303** *e*S Sb **23 11 57.0 -0.5**
baz=291
YM01 **YM01** **1.65 329** *e*P Pb **23 11 36.6 -0.7**
baz=341
YM01 *e*S **Sn** **23 11 55.9 -0.1**
baz=341
CHN5 **Tsauling** **1.69 266** P Pb **23 11 38.2 +0.2**
baz=264
CHN5 S **Sb** **23 11 58.7 -0.1**
baz=264
TWQ1 **Liyutan** **1.71 291** *e*P Pb **23 11 38.5 +0.3**
baz=289
TWQ1 S **Sb** **23 11 59.6 +0.4**
baz=289
TPUB **Ta-pu** **1.79 256** P Pb **23 11 39.0 -0.5**
baz=249
TPUB *e*S **Sn** **23 12 00.2 +0.9**
baz=249
CHN4 **Tsaushan** **1.81 258** P Pb **23 11 39.3 -0.5**
baz=256
CHN4 S **Sb** **23 12 02.5 +0.4**
baz=256
WTP **Ta-pu** **1.81 255** *e*P Pb **23 11 39.3 -0.6**
baz=253
WTP S **Sb** **23 12 01.9 -0.4**
baz=253
SLGT **Liugui** **1.87 247** *e*P Pn **23 11 40.1 +1.8**
baz=241
SLGT *e*S **Sn** **23 12 02.3 +1.0**
baz=241
CHN1 **Nanshi** **1.91 254** P Pb **23 11 41.0 -0.6**
baz=252
CHN1 S **Sb** **23 12 04.5 -0.4**
baz=252
TWK **Hsinying** **1.92 256** *e*P Pn **23 11 41.0 +1.9**
baz=254
TWK S **Sb** **23 12 04.7 -0.7**
baz=254
SNST **Tainan City** **1.92 255** *e*S Sb **23 12 05.2 -0.2**
baz=253
MASBT **Mashibuluo** **2.06 238** *e*P Pn **23 11 42.0 +1.1**
baz=232
MASBT *e*S **Sn** **23 12 06.1 +0.1**
baz=232
SCZT **Fangliau** **2.21 233** *e*S Sn **23 12 09.4 -0.3**
baz=226

IDC 09 23:19:29.5±1.6, 2°85S×126°94E, h0km, mb3.3/2, mb1 3.6/4, mb1mx3.4/37, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=45.0km s-min=27.8km az=69.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.75**	**66**	Pn	Pn	23 20 42.9	+0.5
	3.7nm,0.3s,baz=234,slow=19,SNR=10						
SIJI				Sn	Sn	23 21 35.4	-2.7
	2.7nm,0.3s,baz=298,slow=24,SNR=6.5						
WRA	**Warramunga Arr**	**18.46**	**158**	P	P	23 23 47.3	+0.3
	0.2nm,0.3s,baz=342,slow=12,SNR=6.2						
ASAR	**Alice Springs**	**21.76**	**163**	P	P	23 24 22.7	-0.3
	0.6nm,0.5s,baz=338,slow=11,SNR=6.0						
MKAR	**Makanchi Array**	**63.11**	**327**	P	P	23 29 58.8	-0.2
	0.4nm,0.8s,baz=127,slow=8.1,SNR=4.2						

IDC 09 23:20:20.9±2.3, 49°76N×114°40W, h0km, mb1 3.4/2, mb1mx3.1/45, mbtmp3.1/2, ML3.1/2, Error ellipse: s-maj=36.6km s-min=8.8km az=121.0, British Columbia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEW	**Newport**	**2.33**	**231**	Pn	Pb	23 21 02.8	-1.1
	1.8nm,0.3s,baz=50,slow=16,SNR=14						
NEW				Lg	Lg	23 21 33.0	
	5.4nm,0.3s,baz=239,slow=4.5,SNR=14						
I56US	**NEWPORT INFRAS**	**2.34**	**231**	*i*		23 35 00.0	
	baz=52,slow=322,SNR=0.8						
I10CA	**LAC DU BONNET**	**11.84**	**81**	*i*		00 32 20.0	
	baz=267,slow=319,SNR=0.7						
YKA	**Yellowknife Ar**	**12.77**	**360**	Pn	Pn	23 23 19.5	-4.0
	0.1nm,0.3s,baz=180,slow=13,SNR=9.2						
YKA				Sn	Sn	23 25 34.7	-12
	0.1nm,0.3s,baz=174,slow=23,SNR=4.7						
YKA				Lg	Lg	23 26 54.0	
	baz=168,slow=28						

IDC 09 23:30:00.5±5.9, 3°04S×141°63E, h0km, mb3.5/2, mb1 3.7/3, mb1mx3.4/25, mbtmp3.5/3, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/24, Error ellipse: s-maj=104.3km s-min=13.3km az=48.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.06**	**299**	Pg	Pb	23 30 21.9	+0.1
	9.1nm,0.3s,baz=163,slow=11,SNR=54						
JAY				Lg	Lg	23 30 34.5	
	50nm,0.3s,baz=270,slow=17,SNR=24						
WRA	**Warramunga Arr**	**18.24**	**202**	P	P	23 34 16.7	+1.1
	0.1nm,0.3s,baz=26,slow=12,SNR=6.1						
DAV	**Davao City (W)**	**18.91**	**302**	LR	LR	23 41 26.0	
	comp=Z,34nm,20.6s,baz=303,slow=36						
ASAR	**Alice Springs**	**21.82**	**199**	P	P	23 34 54.1	-0.4
	0.2nm,0.4s,baz=28,slow=9.9,SNR=5.1						
STKA	**Stephens Creek**	**28.68**	**180**	P	P	23 35 58.6	-0.7
	0.7nm,0.3s,baz=333,slow=6.8,SNR=3.4						

*NEIC **09** 23:59:39.8±1.9, 11°07S±0°05×162°5E±0°1, h44km±8km, mb4.3/26, Error ellipse: s-maj=17.6km s-min=4.4km az=73.0*
*IDC **09** 23:59:42.8±2.6, 11°13S×162°46E, h71km±22km, mb3.7/11, mb1 3.9/13, mb1mx3.8/41, mbtmp4.0/13, MS3.5/14, Ms1 3.5/14, ms1mx3.3/34, Error ellipse: s-maj=21.1km s-min=15.6km az=84.0*
ISC 09 23:59:40.2±0.6, 11°07S±0°08×162°58E±0°10, h46km, n63, σ1§17/43, mb4.2/21, MS3.5/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.06**	**302**	P	**Pn**	**00 00 26.2**	**+0.2**
	230nm,0.3s,baz=153,slow=8.3,SNR=15						
HNR				S	**Sn**	**00 01 04.3**	**+2.9**
	95nm,0.3s,baz=130,slow=7.4,SNR=4.5						
HNR				LR	LR	00 01 39.8	
	comp=Z,878nm,19.4s,baz=150,slow=39						
HNR	**Honiara**	**3.06**	**302**		**Pn**	**00 00 25.1**	**-0.9**
DZM	**Mont Dzumac**	**11.55**	**162**	*e*Pn	**Pn**	**00 02 23.4**	**+0.7**
	4.2nm,0.2s						
DZM				*e*LR	LR	00 04 57.7	
	comp=Z,517nm,24.2s						
DZM	**Mont Dzumac**	**11.55**	**162**	P	**Pn**	**00 02 23.3**	**+0.7**
	1.5nm,0.3s,baz=143,slow=23,SNR=10						
DZM				LR	LR	00 06 12.9	
	comp=Z,341nm,19.4s,baz=28,slow=34						
DZM	**Mont Dzumac**	**11.55**	**162**		**Pn**	**00 02 22.9**	**+0.3**
KRVT	**Keravat (AS076**	**12.42**	**302**	LR	LR	00 08 17.3	
	comp=Z,482nm,18.1s,baz=120,slow=42						
PMG	**Port Moresby**	**15.27**	**275**	LR	LR	00 08 52.1	
	comp=Z,243nm,19.5s,baz=91,slow=36						
CTA	**Charters Tower**	**18.09**	**238**	P	**P**	**00 03 49.8**	**+1.6**
	0.7nm,0.3s,baz=68,slow=12,SNR=7.0						
RAO	**Raoul Island**	**25.67**	**138**	LR	LR	00 13 42.1	
	comp=Z,414nm,21.6s,baz=138,slow=33						
STKA	**Stephens Creek**	**28.36**	**220**	P	**P**	**00 00 30.4**	**+0.4**
	1.0nm,0.7s,baz=8.2,slow=14,SNR=3.1						
STKA				LR	LR	00 16 28.2	
	comp=Z,213nm,18.1s,baz=27,slow=36						
WR0	**Warramunga Arr**	**28.39**	**248**	P	**P**	**00 05 28.7**	**-1.7**
WRAB	**Tennant Creek**	**28.56**	**249**	P	**P**	**00 05 30.6**	**-1.4**
WRAB				IAmb	IAmb	00 05 45.2	
	comp=Z,8.8nm,1.1s						
WRA	**Warramunga Arr**	**28.57**	**249**	P	**P**	**00 05 30.5**	**-1.6**
	comp=Z,2.0nm,0.7s,baz=80,slow=9.4,SNR=13						
WRA	**Warramunga Arr**	**28.57**	**249**	IAmb	IAmb	00 05 32.3	
	comp=Z,0.2nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.65**	**8**	T	T	00 36 36.4	
	baz=188,slow=76,SNR=371						
H11S3	**WAKE ISLAND Hy**	**29.65**	**8**	T	T	00 36 35.0	
	baz=188,slow=76,SNR=274						
H11S1	**WAKE ISLAND Hy**	**29.67**	**8**	T	T	00 36 34.7	
	baz=188,slow=76,SNR=252						
ASAR	**Alice Springs**	**30.03**	**242**	P	**P**	**00 05 43.4**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=66,slow=10,SNR=15						
URZ	**Urewera**	**30.04**	**157**	LR	LR	00 15 31.5	
	comp=Z,70nm,19.4s,baz=338,slow=32						
TOO	**Toolangi**	**30.53**	**207**	P	**P**	**00 05 49.1**	**-0.2**
TOO				IAmb	IAmb	00 05 51.4	
	comp=Z,8.2nm,1.0s						
H11N1	**WAKE ISLAND Hy**	**30.88**	**8**	T	T	00 38 12.9	
	baz=188,slow=76,SNR=139						
H11N3	**WAKE ISLAND Hy**	**30.89**	**8**	T	T	00 38 09.1	
	baz=188,slow=76,SNR=164						
H11N2	**WAKE ISLAND Hy**	**30.90**	**8**	T	T	00 38 04.4	
	baz=188,slow=76,SNR=164						
QRZ	**Quartz Range**	**30.92**	**165**	P	**P**	**00 05 53.4**	**+0.8**
BBOO	**Buckleboo**	**32.59**	**224**	P	**P**	**00 06 06.6**	**-0.8**
BBOO				IAmb	IAmb	00 06 08.6	
	comp=Z,6.3nm,0.9s						
KNRA	**Kununurra**	**33.19**	**258**	P	**P**	**00 06 12.3**	**-0.6**
TAU	**Tasmania Unive**	**34.40**	**200**	P	**P**	**00 06 21.5**	**-1.4**
FITZ	**Fitzroy Crossi**	**36.38**	**255**	P	**P**	**00 06 38.9**	**-1.4**
	comp=Z,3.3nm,0.6s,baz=100,slow=10.0,SNR=10						
FITZ	**Fitzroy Crossi**	**36.38**	**255**	IAmb	IAmb	00 06 40.3	
	comp=Z,3.5nm,0.8s						
FORT	**Forrest**	**37.52**	**233**	P	**P**	**00 06 49.4**	**-0.5**
PPT	**Papeete**	**46.71**	**104**	LR	LR	00 23 24.1	
	comp=Z,22nm,19.4s,baz=302,slow=30						
PPT2	**Papeete2**	**46.71**	**104**	*e*LR	LR	00 21 45.3	
	comp=Z,68nm,27.8s						
MJAR	**Matsushiro Arr**	**52.62**	**335**	LR	LR	00 30 12.3	
	comp=Z,23nm,20.7s,baz=125,slow=35						
JNU	**Nakatsue**	**53.33**	**327**	LR	LR	00 28 09.7	
	comp=Z,44nm,21.1s,baz=161,slow=32						
ASAJ	**Asahikawa**	**57.85**	**343**	LR	LR	00 33 08.8	
	comp=Z,55nm,19.0s,baz=164,slow=35						
KSRS	**Korea Array**	**58.19**	**328**	LR	LR	00 31 20.2	
	comp=Z,20nm,21.3s,baz=122,slow=33						
USRK	**Ussuriysk Ar.**	**61.62**	**335**	P	**P**	**00 09 54.0**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=134,slow=6.2,SNR=3.7						
USRK	**Ussuriysk Ar.**	**61.62**	**335**	P	**P**	**00 09 53.1**	**+0.1**
VNDA	**Vanda**	**66.44**	**180**	P	**P**	**00 10 25.4**	**+1.1**
	comp=Z,1.3nm,0.7s,baz=311,slow=7.1,SNR=4.7						
VNDA				LR	LR	00 35 41.7	
	comp=Z,34nm,18.6s,baz=344,slow=32						
VNDA	**Vanda**	**66.44**	**180**	P	**P**	**00 10 25.6**	**+1.3**
VNDA				IAmb	IAmb	00 10 27.1	
	comp=Z,2.1nm,0.8s						
ULN	**Ulaanbaatar**	**76.52**	**325**	P	**P**	**00 11 24.9**	**-0.7**
ULN				IAmb	IAmb	00 11 35.3	
	comp=Z,2.1nm,0.8s						
SONM	**Songino Array**	**76.87**	**325**	P	**P**	**00 11 26.7**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=144,slow=5.5,SNR=5.9						
SONM	**Songino Array**	**76.87**	**325**	IAmb	IAmb	00 11 35.5	
	comp=Z,1.8nm,0.8s						
SVW2	**Sparrevohn**	**79.13**	**19**	P	**P**	**00 11 40.2**	**+0.6**
SVW2				IAmb	IAmb	00 11 52.3	
	comp=Z,4.8nm,1.0s						
GHO	**Glory Hole Cre**	**81.86**	**21**	P	**P**	**00 11 51.8**	**-2.6**
GHO				IAmb	IAmb	00 12 00.8	
	comp=Z,2.2nm,0.8s						
KTH	**Kantishna Hill**	**82.41**	**19**	P	**P**	**00 11 57.8**	**+0.6**
TRF	**Thorofare Moun**	**82.54**	**19**	P	**P**	**00 11 57.4**	**-0.6**
TRF				IAmb	IAmb	00 12 06.4	
	comp=Z,4.0nm,1.2s						
RND	**Reindeer**	**82.99**	**20**	P	**P**	**00 12 00.1**	**-0.1**
IMAR	**Indian Mountai**	**83.30**	**17**	P	**P**	**00 12 01.9**	**+0.2**
BWN	**Browne**	**83.31**	**19**	P	**P**	**00 11 59.1**	**-2.6**
PALK	**Pallekele**	**83.48**	**279**	LR	LR	00 52 41.6	
	comp=Z,21nm,21.6s,baz=130,slow=38						
MLY	**Manley**	**83.50**	**18**	P	**P**	**00 12 02.8**	**+0.1**
GLB	**Gilahina Butte**	**83.53**	**23**	P	**P**	**00 12 03.8**	**+0.7**
GLB				IAmb	IAmb	00 12 22.1	
	comp=Z,4.5nm,1.0s						
VRDI	**Verde Repeater**	**83.54**	**23**	P	**P**	**00 12 03.4**	**+0.1**
WRH	**Wood River Hil**	**83.95**	**19**	P	**P**	**00 12 04.5**	**-0.6**
HDA	**Harding Lake**	**84.28**	**20**	P	**P**	**00 12 07.4**	**+0.7**
HDA				IAmb	IAmb	00 12 08.1	
	comp=Z,3.2nm,0.8s						
H02S1	**DAWSON INLET T**	**84.39**	**33**	T	T	01 45 15.2	
	SNR=6.9						
ILAR	**Eielson Array**	**84.54**	**19**	P	**P**	**00 12 07.7**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=244,slow=5.8,SNR=8.7						
SCRK	**Sand Creek**	**85.02**	**21**	P	**P**	**00 12 11.4**	**+0.8**
SCRK				IAmb	IAmb	00 12 23.5	
	comp=Z,2.3nm,1.1s						
BCAR	**Beaver Creek A**	**85.26**	**22**	P	**P**	**00 12 12.1**	**+0.3**
NVAR	**Mina Array Bea**	**88.42**	**50**	P	**P**	**00 12 29.2**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=234,slow=7.7,SNR=3.3						
MKAR	**Makanchi Array**	**91.42**	**317**	P	**P**	**00 12 40.3**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=89,slow=6.1,SNR=5.4						
YKA	**Yellowknife Ar**	**96.42**	**28**	P	**P**	**00 13 03.3**	**-0.8**
	comp=Z,0.2nm,0.7s,baz=260,slow=4.6						

IDC 10 00:07:17.4±3.8, 8°79S×119°80E, h178km±23km, mb3.6/2, mb1 3.4/5, mb1mx3.1/33, mbtmp3.9/5, MS3.5/1, Ms1 3.5/1, ms1mx2.5/27, Error ellipse: s-maj=55.7km s-min=32.4km az=24.0, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**4.07**	**111**	P	Pn	00 08 19.1	-0.3
	4.7nm,0.3s,baz=293,slow=12,SNR=2.4						
BATI				S	Sn	00 09 08.4	+0.6
	5.4nm,0.3s,baz=87,slow=1.5,SNR=2.8						
FITZ	**Fitzroy Crossi**	**10.86**	**149**	P	Pn	00 09 49.2	+1.0
	0.2nm,0.3s,baz=323,slow=10,SNR=5.8						
FITZ				S	Sn	00 11 48.2	-0.8
	0.4nm,0.3s,baz=197,slow=21,SNR=7.1						
WRA	**Warramunga Arr**	**17.91**	**130**	P	P	00 11 13.0	-0.9
	0.3nm,0.3s,baz=306,slow=12,SNR=18						
WRA				S	S	00 14 31.2	+0.8
	0.1nm,0.3s,baz=76,slow=23,SNR=1.7						
ASAR	**Alice Springs**	**20.03**	**139**	P	P	00 11 36.9	+0.1
	2.7nm,0.4s,baz=312,slow=8.7,SNR=31						
STKA	**Stephens Creek**	**30.62**	**142**	P	P	00 13 15.0	+0.1
	2.8nm,0.6s,baz=310,slow=9.6,SNR=6.9						
SONM	**Songino Array**	**57.61**	**349**	LR	LR	00 43 35.1	
	comp=Z,41nm,18.4s,baz=125,slow=38						

PGC 10 00:16:04.3±0.1, 47°55N×128°92W, h0km, MLSn3.4/31, Mw4.0/31, 284km Wsw of Tofino, Bc Off Coast Of Washington, Off coast of Washington

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEMF	**NEPTUNE Canada**	**0.42**	**343**	P	Pg	00 16 11.2	-1.2
KEMF				S	Sg	00 16 16.4	-1.4
NC27	**ODP1027**	**0.81**	**74**	P	Pg	00 16 16.7	-3.2
NC27				S	Sg	00 16 27.8	-2.6
NC89	**ODP889**	**1.78**	**50**	P	Pn	00 16 35.0	-1.2
NC89				S	Sn	00 16 56.5	-3.0
NCBC	**Barkley Canyon**	**2.04**	**63**	S	Sn	00 17 02.5	-3.5
TOFB	**Tofino**	**2.57**	**50**	Pn	Pn	00 16 45.5	-1.7
TOFB				S	Sn	00 17 15.3	-3.8
EDB	**Eliza Dome**	**2.61**	**26**	Pn	Pn	00 16 45.7	-2.1
OZB	**Mount Ozzard**	**2.69**	**57**	Pn	Pn	00 16 47.2	-1.6
OZB				S	Sn	00 17 18.6	-3.5
BFSB	**Bamfield**	**2.84**	**62**	Pn	Pn	00 16 49.1	-1.7
BFSB				S	Sn	00 17 22.8	-2.9
B928	**Bamfield**	**2.84**	**62**	Pn	Pn	00 16 49.0	-1.8
B928				S	Sn	00 17 22.7	-3.0
GDR	**Gold River**	**2.94**	**39**	Pn	Pn	00 16 50.7	-1.6
BTB	**Buttle Lake**	**2.96**	**48**	Pn	Pn	00 16 51.1	-1.7
BTB				S	Sn	00 17 26.4	-2.7
OCP	**Olym-Cheeka Pk**	**2.98**	**74**	Pn	Pn	00 16 52.0	-0.9
PACB	**Port Alice, BC**	**3.04**	**17**	Pn	Pn	00 16 52.5	-1.1
WOSB	**Woss**	**3.04**	**30**	Pn	Pn	00 16 52.5	-1.2
MAYB	**Maynard**	**3.08**	**21**	Pn	Pn	00 16 52.6	-1.7
HOLB	**Holberg**	**3.14**	**9**	Pn	Pn	00 16 54.7	-0.3
MGB	**Mount Grey**	**3.17**	**61**	Pn	Pn	00 16 53.6	-2.0
MGB				S	Sn	00 17 31.2	-3.0
SPLB	**Strathcona Par**	**3.19**	**41**	Pn	Pn	00 16 54.8	-0.9
SPLB				S	Sn	00 17 31.8	-2.6
B927	**Port Alberni**	**3.21**	**57**	Pn	Pn	00 16 54.1	-1.8
OBC	**Olympics--Boni**	**3.30**	**80**	Pn	Pn	00 16 56.4	-0.9
TLCB	**Telegraph Cove**	**3.30**	**24**	Pn	Pn	00 16 56.0	-1.2
PHC	**Port Hardy**	**3.31**	**17**	Pn	Pn	00 16 56.5	-0.8
YOUB	**Youbou, Lake C**	**3.39**	**65**	Pn	Pn	00 16 57.2	-1.4
YOUB				Sn	Sn	00 17 36.5	-3.1
CBB	**Campbell River**	**3.42**	**42**	Pn	Pn	00 16 57.9	-1.0
CBB				Sn	Sn	00 17 38.1	-2.1
NCRB	**Newcastle Ridg**	**3.42**	**32**	Pn	Pn	00 16 58.3	-0.7
B926	**Mesachie Lake**	**3.44**	**67**	Pn	Pn	00 16 57.8	-1.4
B926				Sn	Sn	00 17 38.1	-2.6
WISH	**Wishkah**	**3.53**	**95**	Pn	Pn	00 16 59.5	-0.8
LZB	**Mount Lazard**	**3.58**	**71**	Pn	Pn	00 16 59.5	-1.6
LZB				Sn	Sn	00 17 40.7	-3.3
SOKB	**Sooke**	**3.62**	**75**	Pn	Pn	00 17 00.6	-1.1
SOKB				Sn	Sn	00 17 42.1	-3.0
TXB	**Texada**	**3.67**	**52**	Pn	Pn	00 17 01.6	-0.8
NLLB	**Nanaimo Lost L**	**3.69**	**61**	Pn	Pn	00 17 01.8	-0.8
NLLB				Sn	Sn	00 17 44.2	-2.6
BPCB	**Bare Point**	**3.75**	**67**	Pn	Pn	00 17 02.8	-0.6
BPCB				Sn	Sn	00 17 46.0	-2.1
B009	**North Saanich**	**3.83**	**71**	Pn	Pn	00 17 03.8	-0.6
B009				Sn	Sn	00 17 46.8	-3.3
B010	**North Saanich**	**3.83**	**71**	Pn	Pn	00 17 03.1	-1.3
B010				Sn	Sn	00 17 47.0	-3.0
PA12	**PA12 Sannich**	**3.83**	**71**	Pn	Pn	00 17 03.1	-1.3
PA12				Sn	Sn	00 17 47.9	-2.1
PGC	**Sidney**	**3.83**	**71**	Pn	Pn	00 17 03.1	-1.3
PGC				Sn	Sn	00 17 47.2	-2.8
B011	**North Saanich**	**3.83**	**71**	Pn	Pn	00 17 03.1	-1.4
B011				Sn	Sn	00 17 47.5	-2.6
PA01	**PA01 North**	**3.83**	**71**	Sn	Sn	00 17 47.7	-2.4
VGZ	**Gonzales**	**3.85**	**75**	Pn	Pn	00 17 03.1	-1.8
GOBB	**Galiano Island**	**3.88**	**67**	Pn	Pn	00 17 03.4	-1.8
SHB	**Sechelt**	**3.92**	**57**	Pn	Pn	00 17 05.5	-0.5
HDW	**Hoodsport**	**3.97**	**86**	Pn	Pn	00 17 05.6	-0.9
SNB	**Saturna Island**	**4.04**	**70**	Pn	Pn	00 17 06.9	-0.5
BIB	**Bowen Island**	**4.17**	**61**	Pn	Pn	00 17 08.6	-0.5
MCW	**Mount Constitu**	**4.23**	**72**	Pn	Pn	00 17 09.3	-0.8
HNBB	**Haney**	**4.57**	**65**	Pn	Pn	00 17 13.8	-0.9
HNBB				Sn	Sn	00 18 03.6	-4.9
BBB	**Bella Bella**	**4.67**	**6**	Pn	Pn	00 17 15.5	-0.5
JCW	**Jim Creek**	**4.75**	**80**	Pn	Pn	00 17 15.6	-1.5
VDB	**Vedder Mountai**	**4.78**	**69**	Pn	Pn	00 17 16.9	-0.7
MBW	**Mount Baker**	**4.86**	**73**	Pn	Pn	00 17 18.6	-0.2
LON	**Longmire**	**4.91**	**97**	Pn	Pn	00 17 17.4	-2.1
LLLB	**Lillooet**	**5.54**	**54**	Pn	Pn	00 17 28.1	0.0
LTY	**Liberty**	**5.61**	**90**	Pn	Pn	00 17 28.6	-0.4
MNB	**Mounoet Dainar**	**8.24**	**52**	Pn	Pn	00 18 06.0	+0.7

*KRNET **10** 00:36:45.8±0.1, 39°09N×71°63E, mb2.8*
*NNC **10** 00:36:47.6±6.4, 39°21N×71°74E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=58.2km s-min=33.0km az=28.0*
*SOME **10** 00:36:47.5, 39°58N×71°92E, h5km*
ISC 10 00:36:48.1±2.8, 39°2N±0°1×71°70E±0°05, h10km, n17, σ2§72/31, 13C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**1.10**	**322**	⇓*i*P	**Pg**	**00 37 07.4**	**-1.9**
	baz=27						
BTK				⇓*i*S	**Sg**	**00 37 23.2**	**-0.4**
	baz=27						
ARSB	**Arslanbob**	**2.34**	**24**	⇑*i*P	**Pb**	**00 37 28.4**	**-2.1**
	baz=24						
ARSB				⇑*i*S	**Sb**	**00 37 59.2**	**-0.3**
	baz=24						
ARK	**Arkit**	**2.61**	**4**	⇑*i*P	**Pn**	**00 37 31.6**	**+1.2**
	baz=6.0						
ARK				⇑*i*S	**Sb**	**00 38 05.2**	**-2.0**
	baz=6.0						
IUG	**luzhnay**	**3.21**	**337**	*e*P	**Pb**	**00 37 42.1**	**-3.2**
	1.4nm,0.2s						
IUG				*e*S	**Sb**	**00 38 21.1**	**-3.4**
	95nm,0.3s						
IUG	**luzhnay**	**3.21**	**337**	Pg	**Pb**	**00 37 42.3**	**-3.0**
	1.4nm,0.2s						
IUG				Lg	Lg	00 38 21.1	
	95nm,0.3s						
AML	**Almayashu**	**3.30**	**27**	⇑*i*P	**Pn**	**00 37 41.3**	**+1.1**
	baz=27						
AML				⇑*i*S	**Sb**	**00 38 22.7**	**-4.7**
	baz=27						
ARLS	**Aral**	**3.33**	**36**	⇓*i*P	**Pn**	**00 37 41.6**	**+1.2**
	baz=36						
ARLS				⇓*i*S	**Sb**	**00 38 23.2**	**-4.7**
	baz=36						
UCH	**Uchtor**	**3.71**	**34**	⇑*i*P	**Pn**	**00 37 46.7**	**+0.9**
	baz=34						
UCH				⇑*i*S	**Sn**	**00 38 32.9**	**+3.1**
	baz=34						
MRKS	**Merke**	**3.73**	**18**	*e*P	**Pn**	**00 37 48.4**	**+2.5**
	3.0nm,0.3s						
MRKS				*e*S	**Sn**	**00 38 32.4**	**+2.6**
	8.3nm,0.6s						
MRKS	**Merke**	**3.73**	**18**	Pg	**Pn**	**00 37 48.4**	**+2.5**
	3.0nm,0.3s						
MRKS				Lg	Lg	00 38 31.9	
	7.9nm,0.6s						
EKS2	**Erkin-Say**	**3.80**	**24**	⇑*e*P	**Pn**	**00 37 48.3**	**+1.4**
	baz=24						
EKS2				⇑*i*S	**Sn**	**00 38 35.1**	**+3.4**
	baz=24						
KK31	**Karatay Array**	**4.01**	**347**	Pn	**Pn**	**00 37 52.1**	**+2.6**
	1.2nm,0.3s,baz=166,slow=13,SNR=24						
KK31				Pg	**Pb**	**00 38 00.5**	**+1.7**
	2.6nm,0.6s,baz=162,slow=14,SNR=13						
KK31				⇓Sn	**Sn**	**00 38 39.9**	**+3.3**
	2.4nm,0.4s,baz=170,slow=23						
KK31				⇓Lg	Lg	00 38 52.7	
	4.0nm,0.4s						
AAK	**Ala-Archa**	**4.04**	**31**	⇑Pn	**Pn**	**00 37 49.7**	**-0.4**
	6.0nm,1.6s						
AAK				⇑Pg	**Pb**	**00 38 01.4**	**+2.0**
	2.6nm,0.5s						
AAK				⇑Lg	Lg	00 38 41.6	
	5.6nm,0.5s						
BRLS	**Borolday**	**4.08**	**340**	*e*P	**Pn**	**00 37 54.4**	**+3.7**
	0.6nm,0.2s						
BRLS				*e*S	**Sn**	**00 38 42.4**	**+4.0**
	3.5nm,0.3s						
BRLS	**Borolday**	**4.08**	**340**	Pg	**Pb**	**00 37 58.8**	**-1.3**
	0.5nm,0.2s						
SGDS	**Sogindy**	**4.79**	**26**	Pg	**Pn**	**

BRG				SG		Sg	00 39 35.5	+1.1
	107nm,0.4s							
BRG	**Berggiesshubel**	**1.54 247**	*e*Pn			**Pn**	**00 39 13.8**	**+0.1**
BRG			*e*Pg			**Pg**	**00 39 15.5**	**+1.0**
BRG			*e*Sg			**Sg**	**00 39 35.1**	**+0.7**
PRA	**Prague**	**1.81 218**‖	*e*PG			**Pg**	**00 39 19.7**	**0.0**
PRA			*e*SG			**Sg**	**00 39 43.2**	**0.0**
GOPC	**GO Pecny, Ondr**	**1.82 209**‖	*e*PG			**Pb**	**00 39 18.9**	**-0.3**
PRU	**Pruhonice**	**1.84 215**‖	*e*PN			**Pn**	**00 39 17.5**	**-0.3**
PRU			*e*PG			**Pb**	**00 39 19.7**	**+0.2**
PRU			*e*SG			**Sb**	**00 39 43.0**	**0.0**
	comp=Z,59nm,0.5s							
FBE	**Freiberg**	**1.86 253**	*e*Pg			**Pg**	**00 39 21.8**	**+1.1**
FBE			*e*Sg			**Sg**	**00 39 45.2**	**+0.3**
MORC	**Moravsky Berou**	**1.94 153**	*e*Pn			**Pn**	**00 39 19.1**	**-0.2**
MORC			*e*Sg			**Sn**	**00 39 44.8**	**+0.5**
MORC	**Moravsky Berou**	**1.94 153**	*e*PN			**Pn**	**00 39 18.8**	**-0.5**
MORC			*e*SG			**Sn**	**00 39 42.6**	**-1.8**
CLL	**Collm**	**1.99 266**	*e*Pg			**Pg**	**00 39 23.0**	**-0.2**
CLL			*e*Sg			**Sg**	**00 39 50.0**	**+1.0**
	comp=Z,34nm,0.6s							
CLL	**Collm**	**1.99 266**	*e*Pn			**Pn**	**00 39 20.4**	**+0.5**
CLL			*e*Sg			**Sg**	**00 39 50.0**	**+1.0**
OKC	**Ostrava-Krasne**	**2.09 142**	*e*Pn			**Pn**	**00 39 21.0**	**-0.3**
OKC			*e*Pg			**Pg**	**00 39 24.8**	**-0.3**
OKC			*e*Sg			**Sb**	**00 39 50.1**	**-0.2**
OKC	**Ostrava-Krasne**	**2.09 142**‖	*e*PG			**Pb**	**00 39 24.2**	**+0.4**
OKC			*e*SG			**Sb**	**00 39 49.8**	**-0.5**
	comp=Z,72nm,0.7s							
VRAC	**Vranov**	**2.22 173**	Pn			**Pn**	**00 39 22.9**	**-0.2**
	comp=Z,4.4nm,0.3s,baz=346,slow=14,SNR=30							
VRAC				Lg		Lg	00 39 53.6	
	comp=Z,11nm,0.3s,baz=72,slow=20,SNR=10							
VRAC	**Vranov**	**2.22 173**	*e*PN			**Pn**	**00 39 22.8**	**-0.2**
VRAC			*e*SG			**Sb**	**00 39 52.9**	**-1.1**
PBCC	**Pribram**	**2.29 218**‖	*e*PG			**Pb**	**00 39 28.0**	**+0.8**
KRUC	**Moravsky**	**2.45 177**	*e*PN			**Pn**	**00 39 26.4**	**+0.1**
KRUC			*e*SG			**Sb**	**00 40 01.4**	**+0.7**
TANN	**Tannenbergstha**	**2.59 246**	*e*Pn			**Pn**	**00 39 29.3**	**+1.1**
TANN			*e*Pg			**Pg**	**00 39 35.3**	**+0.8**
TANN			*e*Sg			**Sg**	**00 40 06.8**	**-1.3**
OJC	**Ojcow**	**2.64 118**	*e*Pn			**Pn**	**00 39 28.1**	**-0.7**
OJC			*e*Pg			**Pg**	**00 39 36.4**	**+0.9**
OJC			*e*Sg			**Sg**	**00 40 09.5**	**-0.1**
OJC	**Ojcow**	**2.64 118**	*e*Pn			**Pn**	**00 39 27.9**	**-0.9**
OJC			*e*Pg			**Pg**	**00 39 36.3**	**+0.8**
OJC			*e*Sg			**Sg**	**00 40 10.4**	**+0.8**
NKC	**Novy Kostel**	**2.68 243**‖	*e*PN			**Pn**	**00 39 30.4**	**+1.0**
NKC			*e*PG			**Pg**	**00 39 36.7**	**+0.3**
NKC			*e*SG			**Sg**	**00 40 12.4**	**+1.3**
	comp=Z,50nm,0.4s							
JAVC	**Velka Javorina**	**2.82 159**	*e*PN			**Pn**	**00 39 32.9**	**+1.5**
KHC	**Kasperske Hory**	**2.90 216**‖	*e*PN			**Pn**	**00 39 32.2**	**-0.3**
KHC			*e*PG			**Pb**	**00 39 38.9**	**+1.3**
KHC			*e*SG			**Sg**	**00 40 16.9**	**-1.3**
	comp=Z,26nm,0.3s							
MANZ	**Manzenberg**	**3.00 241**	*e*Pn			**Pn**	**00 39 34.8**	**+1.0**
MANZ			*e*Pg			**Pg**	**00 39 43.4**	**+1.0**
MANZ			*e*Sg			**Sg**	**00 40 21.5**	**+0.3**
MOX	**Moxa**	**3.00 255**	*e*Pn			**Pn**	**00 39 34.6**	**+0.8**
MOX			*e*Pg			**Pg**	**00 39 43.4**	**+0.9**
MOX			*e*Sg			**Sg**	**00 40 22.9**	**+1.6**
ROTZ	**Rotzenmuhle**	**3.07 237**	*e*Pn			**Pn**	**00 39 35.6**	**+0.9**
GERES	**GERESS Array B**	**3.10 212**	Pn			**Pn**	**00 39 36.2**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=32,slow=13,SNR=23							
GERES				Pg		**Pb**	**00 39 42.1**	**+1.1**
	comp=Z,11nm,0.3s,baz=31,slow=19,SNR=83							
GERES				Sn		**Sn**	**00 40 13.8**	**+0.7**
	comp=Z,3.8nm,0.3s,baz=41,slow=27,SNR=4.5							
GERES				Lg		Lg	00 40 21.8	
	comp=Z,8.9nm,0.3s,baz=35,slow=26,SNR=12							
SMOL	**Smolenice**	**3.10 164**	*e*PG			**Pg**	**00 39 44.4**	**-0.1**
SMOL			*e*SG			**Sg**	**00 40 24.6**	**-0.1**
SMOL			*e*LG			Lg	00 40 29.6	
LANS	**Liptovska Anna**	**3.17 137**	*e*PN			**Pn**	**00 39 38.3**	**+2.2**
LANS			*e*PG			**Pg**	**00 39 46.5**	**+0.8**
LANS			*e*SG			**Sb**	**00 40 23.5**	**+2.2**
LANS			*e*LG			Lg	00 40 36.0	
WET	**Wettzell**	**3.17 223**	*e*Pn			**Pn**	**00 39 37.0**	**+0.8**
WET			*e*Sg			**Sg**	**00 40 25.4**	**-1.4**
MODS	**Modra-Piesok**	**3.22 167**	*e*PN			**Pn**	**00 39 37.9**	**+1.1**
MODS			*e*PG			**Pg**	**00 39 45.0**	**-1.7**
MODS			*e*SG			**Sg**	**00 40 27.3**	**-1.0**
MODS			*e*LG			Lg	00 40 31.9	
ZST	**Bratislava**	**3.37 169**	*e*PG			**Pg**	**00 39 48.8**	**-0.8**
ZST			*e*SG			**Sg**	**00 40 30.9**	**-2.3**
VYHS	**Vyhne**	**3.47 149**	*e*PN			**Pn**	**00 39 40.4**	**+0.1**
VYHS			*e*PG			**Pg**	**00 39 51.6**	**+0.1**
VYHS			*e*SG			**Sg**	**00 40 34.6**	**-1.9**
CONA	**Conrad Observa**	**3.59 183**	Pn			**Pn**	**00 39 42.4**	**+0.5**
	comp=Z,1.8nm,0.3s,SNR=5.9							
CONA			*i* Sn			**Sn**	**00 40 26.3**	**+1.2**
	comp=Z,12nm,0.3s							
BSD	**Bornholm Skovb**	**3.69 349**	*i* P			**Pn**	**00 39 43.7**	**+0.4**
BSD			*i* S			**Sn**	**00 40 25.5**	**-1.9**
STHS	**Stebnicka Huta**	**3.86 121**	*e*SG			**Sg**	**00 40 53.6**	**+4.7**
MOA	**Molln**	**3.86 199**	Pn			**Pn**	**00 39 46.1**	**+0.4**
	comp=Z,2.4nm,0.2s,SNR=9.1							
MOA			*i* Sn			**Sn**	**00 40 33.1**	**+1.3**
	comp=Z,5.9nm,0.3s							
ARSA	**Arzberg**	**4.28 186**	*i* Pn			**Pn**	**00 39 52.4**	**+0.9**
	comp=Z,0.9nm,0.3s							
ARSA			*i* Sn			**Sn**	**00 40 41.8**	**-0.3**
	comp=Z,5.1nm,0.3s							
LUNU	**Lund**	**4.44 340**	P			**Pn**	**00 39 54.6**	**+1.0**
KOLS	**Kolonicke sedl**	**4.69 121**	*e*PN			**Pn**	**00 39 57.4**	**+0.4**
KOLS			*e*PG			**Pg**	**00 40 17.3**	**+2.5**
KOLS			*e*SG			**Sg**	**00 41 23.6**	**+8.0**
KBA	**Koelnbreinsper**	**4.80 204**	Pn			**Pn**	**00 39 59.7**	**+0.9**
	comp=Z,1.7nm,0.3s,SNR=4.5							
KBA			*i* Sn			**Sn**	**00 40 55.4**	**+0.3**
	comp=Z,14nm,0.6s							
BJUU	**Bjuv**	**4.94 339**	P			**Pn**	**00 40 00.3**	**-0.1**
OBKA	**Obir**	**5.11 193**	*i* Pn			**Pn**	**00 40 05.1**	**+2.1**
	comp=Z,0.2nm,0.1s							
OBKA			*i* Sn			**Sb**	**00 41 20.5**	**+3.1**
	comp=Z,3.1nm,0.4s							
WATA	**Walderalm**	**5.14 217**	Pn			**Pn**	**00 40 04.9**	**+1.6**
	comp=Z,2.9nm,0.3s,SNR=6.6							
WATA			*i* Sn			**Sn**	**00 41 03.3**	**-0.1**
	comp=Z,4.3nm,0.3s							
DEL	**Delary**	**5.16 346**	P			**Pn**	**00 40 03.6**	**+0.2**
MYKA	**Terra Mystica**	**5.16 200**	*i* Pn			**Pn**	**00 40 06.6**	**+3.1**
	comp=Z,0.5nm,0.2s							
MYKA			*i* Sn			**Sb**	**00 41 20.2**	**+1.6**
	comp=Z,5.5nm,0.5s							
MOTA	**Moosalm**	**5.32 220**	*i* Pn			**Pn**	**00 40 07.0**	**+1.2**
	comp=Z,1.5nm,0.3s							
MOTA			*i* Sn			**Sn**	**00 41 07.4**	**-0.3**
	comp=Z,7.6nm,0.6s							
ABTA	**Abfaltersbach**	**5.33 208**	*i* Pn			**Pn**	**00 40 06.5**	**+0.5**
	comp=Z,1.3nm,0.4s							
ABTA			*i* Sn			**Sb**	**00 41 25.3**	**+1.6**
	comp=Z,14nm,0.7s							
RETA	**Reutte**	**5.35 223**	Pn			**Pn**	**00 40 06.6**	**+0.5**
	comp=Z,1.9nm,0.3s,SNR=5.3							
RETA			*i* Sn			**Sn**	**00 41 07.8**	**-0.6**
	comp=Z,3.6nm,0.3s							
SQTA	**Sankt Quirin**	**5.38 219**	*i* Pn			**Pn**	**00 40 06.8**	**+0.2**
	comp=Z,3.1nm,0.2s,SNR=7.8							
SQTA			*i* Sn			**Sn**	**00 41 09.8**	**+0.6**
	comp=Z,3.6nm,0.3s							
VXJU	**Vaexsjoe**	**5.47 353**	P			**Pn**	**00 40 08.5**	**+0.8**
VXJU			S			**Sn**	**00 41 08.2**	**-3.2**
OSKU	**Oskarshamn**	**5.70 360**	P			**Pn**	**00 40 11.7**	**+0.8**
OSKU			S			**Sn**	**00 41 13.3**	**-3.6**
FETA	**Feichten**	**5.73 221**	*i* Pn			**Pn**	**00 40 11.9**	**+0.5**
FETA			*i* Sn			**Sn**	**00 41 20.6**	**+2.6**
	comp=Z,4.0nm,0.8s							
BYXU	**Byxelkrok**	**5.82 4**	P			**Pn**	**00 40 14.2**	**+1.8**
DAVA	**Damuels**	**5.89 227**	*i* Pn			**Pn**	**00 40 13.6**	**0.0**
	comp=Z,1.1nm,0.3s							
DAVA			*i* Sn			**Sb**	**00 41 44.5**	**+4.8**
	comp=Z,6.6nm,0.6s							
GNOU	**Gnosjoe**	**5.96 347**	P			**Pn**	**00 40 15.1**	**+0.6**
EKSU	**Eksjoe**	**6.10 356**	P			**Pn**	**00 40 17.2**	**+0.9**
VSTU	**Vaestervik**	**6.17 2**	P			**Pn**	**00 40 18.3**	**+1.0**
DAVOX	**Davos/Dischmat**	**6.28 224**	Pn			**Pn**	**00 40 19.7**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=45,slow=7.1,SNR=6.7							
DAVOX				Lg		Lg	00 42 03.9	
	comp=Z,0.4nm,0.3s,baz=21,slow=19,SNR=3.4							
LNKU	**Linkoeping**	**6.74 357**	P			**Pn**	**00 40 25.9**	**+0.8**
AKASG	**Malin Array Be**	**8.26 90**	Pn			**Pn**	**00 40 45.1**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=277,slow=13,SNR=3.3							
HFS	**Hagfors**	**8.76 352**	Pn			**Pn**	**00 40 53.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=164,slow=14,SNR=8.7							
NOA	**NORSAR Array B**	**9.94 346**	Pn			**Pn**	**00 41 09.0**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=157,slow=12,SNR=4.9							
FINES	**FINESS Array B**	**11.35 25**	Pn			**Pn**	**00 41 27.7**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=207,slow=12,SNR=8.9							
FINES				Sn		**Sn**	**00 43 30.2**	**-5.4**
	comp=Z,0.3nm,0.3s,baz=208,slow=19,SNR=4.0							
EKA	**Eskdalemuir Ar**	**12.14 296**	Pn			**Pn**	**00 41 38.0**	**-1.1**
	baz=103,slow=14,SNR=3.9							
ARCES	**ARCESS Array B**	**18.62 10**	Pn			**P**	**00 43 01.6**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=193,slow=12,SNR=11							

THR **10** *00:45:27.5±0.4,41°.70N×49°.48E,h15km,ML5.0*
BJI **10** *00:45:28.9±0.0,42°.06N×49°.26E,h65km,mB4.8/33, mb4.8/42,Ms4.4/11,Ms7 4.2/8*
DRS **10** *00:45:29.2±0.0,41°.90N×49°.78E,h20km,FELT I=II-III MSK at Derbent*
NEIC **10** *00:45:30.8±2.6,41°.91N±0°.06×49°.50E±0°.07,h66km±4km, mb4.7/155,Mwr4.3/11,Error ellipse: s-maj=8.9km s-min=7.1km az=186.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr3.06; Mθθ-2.76; Mφφ-0.30; Mrθ1.68; Mrφ1.25; Mθφ-1.20; Fault plane solution: M₀3.79000×10¹⁵ NP1:φs119.98000°,δ61.59000°, λ97.27000°. NP2:φs284.98000°,δ29.25000°,λ76.83000°. Principal axes: T 3.6978, Plg72.0000°, Azm47.0000°; N 0.1745, Plg6.0000°, Azm297.0000°; P -3.8724, Plg16.0000°, Azm205.0000°;*
IDC **10** *00:45:31.4±1.4,41°.89N×49°.34E,h70km±13km,mb4.3/35, mb1 4.5/48,mb1mx4.4/55,mbtmp4.7/48,MS3.3/23, Ms1 3.3/23,ms1mx3.2/42 Error ellipse: s-maj=9.7km s-min=8.0km az=167.0*
MOS **10** *00:45:31.3±1.2,41°.94N×49°.41E,h84km,mb4.6/34,Error ellipse: s-maj=4.8km s-min=2.9km az=34.1*
MOS Felt (II-III) at Derbent.
AZER **10** *00:45:31.2,41°.70N×49°.44E,h59km,ML5.0*
NNC **10** *00:45:36.3±5.6,42°.06N×50°.28E,h45km±36km,mb4.6, Error ellipse: s-maj=53.7km s-min=22.3km az=78.0*
ISC 10 00:45:31.3±0.3,41°.84N±0°.02×49°.40E±0°.02,h74km±3km, h74km:pP-P,n719,σ1s85/808,mb4.7/173,61C-47D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DRN	**Derbent**	**0.82**	**284**‖	*e*P		**Pn**	**ISC**	**00 45 48.6**	**+0.7**
DRN				*e*				00 46 00.0	
DRN				pmax		pmax			
	comp=Z,5μm,0.3s								
DRN	**Derbent**	**0.82**	**284**	*e*Pg		**Pn**		**00 45 48.5**	**+0.7**
	comp=Z,5μm,0.3s								
DRN				*e*Sg		**Sn**		**00 46 01.3**	**+1.2**
	comp=Z,56μm,0.4s								
QUBA	**Quba, Azerbaij**	**0.84**	**235**	P		**Pn**		**00 45 49.2**	**+1.0**
	SNR=1310								
QUBA				S		**Sn**		**00 46 02.3**	**+1.7**
SIZA	**Siyzn**	**0.85**	**206**	P		**Pn**		**00 45 49.0**	**+0.6**
	SNR=1599								
SIZA				S		**Sn**		**00 46 03.1**	**+2.1**
QSAR	**Qusar**	**0.91**	**249**	P		**Pn**		**00 45 49.9**	**+0.9**
	SNR=3146								
QSAR				S		**Sn**		**00 46 03.7**	**+1.5**
KSMR	**Kasumkent**	**0.98**	**256**↑	*i* P		**Pn**		**00 45 50.5**	**+0.6**
KSMR				*e*S		**Sn**		**00 46 05.5**	**+1.8**
KSMR	**Kasumkent**	**0.98**	**256**	*i* Pg		**Pn**		**00 45 50.5**	**+0.6**
KSMR				*e*Sg		**Sn**		**00 46 05.5**	**+1.8**
ATGJ	**Altiaghaj**	**1.04**	**200**	P		**Pn**		**00 45 51.8**	**+1.2**
	SNR=2118								
ATGJ				S		**Sn**		**00 46 07.2**	**+2.2**
XNQ	**Khinaliq**	**1.16**	**235**	P		**Pn**		**00 45 52.5**	**+0.3**
	SNR=8398								
XNQ				S		**Sn**		**00 46 10.5**	**+2.6**
PQL	**Pirkuli**	**1.22**	**210**	P		**Pn**		**00 45 53.8**	**+0.9**
	SNR=1848								
PQL				S		**Sn**		**00 46 09.9**	**+0.9**
AKT	**Akhty**	**1.30**	**254**‖	*e*P		**Pn**		**00 45 56.8**	**+2.8**
AKT				*e*				00 46 14.3	
NDR	**Nardaran**	**1.33**	**160**	P		**Pn**		**00 45 55.8**	**+1.5**
	SNR=21								
NDR				S		**Sn**		**00 46 13.1**	**+1.6**
GBS	**Qobustan**	**1.35**	**195**	P		**Pn**		**00 45 56.6**	**+2.0**
	SNR=786								
GBS				S		**Sn**		**00 46 14.0**	**+2.0**
URKR	**Urkarakh**	**1.36**	**284**↑	*e*P		**Pn**		**00 45 56.2**	**+1.5**
URKR				*e*				00 46 14.5	
URKR	**Urkarakh**	**1.36**	**284**	*i* Pg		**Pn**		**00 45 56.1**	**+1.4**
URKR				*e*Sg		**Sn**		**00 46 14.6**	**+2.4**
IML	**Ismayilli**	**1.39**	**222**	Pn		**Pn**		**00 45 55.5**	**+0.4**
	SNR=342								
IML				Sg		**Sn**		**00 46 15.2**	**+2.3**
SGKR	**Sergokala**	**1.44**	**296**‖	*i* P		**Pn**		**00 45 56.5**	**+0.9**
SGKR				*e*S		**Sn**		**00 46 14.0**	**+0.1**
SGKR				pmax		pmax			
	comp=Z,2μm,0.2s								
SGKR	**Sergokala**	**1.44**	**296**	*i* Pg		**Pn**		**00 45 56.5**	**+0.9**
	comp=Z,2μm,0.2s								
SGKR				*e*Sg		**Sn**		**00 46 14.0**	**+0.1**
GOBA	**Gobu**	**1.46**	**170**	Pg		**Pn**		**00 45 58.3**	**+2.4**
	SNR=85								
GOBA				Sg		**Sn**		**00 46 18.6**	**+4.2**
QBL	**Gabala**	**1.48**	**233**	Pn		**Pn**		**00 45 56.5**	**+0.4**
	SNR=192								
QBL				Sn		**Sn**		**00 46 15.1**	**+1.6**
KDMR	**Kurdemir**	**1.73**	**213**	Pn		**Pn**		**00 45 59.6**	**+0.2**
	SNR=53								
KDMR				Sn		**Sn**		**00 46 21.8**	**+1.1**
KMKR	**Kumukh**	**1.74**	**280**	*e*P		**Pn**		**00 46 02.0**	**+2.2**
KMKR				*e*S		**Sn**		**00 46 26.0**	**+4.7**
KMKR	**Kumukh**	**1.74**	**280**	*e*Pg		**Pn**		**00 46 02.0**	**+2.2**
KMKR				*e*Sg		**Sn**		**00 46 26.0**	**+4.7**
SEKA	**Sheki**	**1.77**	**250**	Pn		**Pn**		**00 46 00.5**	**+0.4**
	SNR=846								
SEKA				Sn		**Sn**		**00 46 23.1**	**+1.2**
MAK	**Makhachkala**	**1.79**	**309**	*e*P		**Pn**		**00 46 02.0**	**+1.7**
MAK				*e*S		**Sn**		**00 46 25.1**	**+2.8**
GNBR	**Gunib**	**1.89**	**288**	*e*P		**Pn**		**00 46 04.4**	**+2.7**
GNBR				*e*S		**Sn**		**00 46 29.9**	**+5.1**
GNBR	**Gunib**	**1.89**	**288**	*i* Pg		**Pn**		**00 46 04.3**	**+2.6**
	comp=Z,2μm,0.6s								
GNBR				*e*Sg		**Sn**		**00 46 28.9**	**+4.1**
	comp=Z,12μm,0.7s								
ALIB	**Äli-Bayra**	**1.91**	**189**	Pg		**Pn**		**00 46 04.1**	**+2.3**
	SNR=106								
ALIB				Sg		**Sn**		**00 46 30.1**	**+5.2**
ARKR	**Arakani**	**1.94**	**294**‖	*i* P		**Pn**		**00 46 05.0**	**+2.7**
ARKR				*e*S		**Sn**		**00 46 30.0**	**+4.1**
ARKR	**Arakani**	**1.94**	**294**	*i* Pg		**Pn**		**00 46 05.0**	**+2.7**
ARKR				*e*Sg		**Sn**		**00 46 30.0**	**+4.1**
BUJR	**Buynaksk**	**1.96**	**301**‖	*e*P		**Pn**		**00 46 05.3**	**+2.7**
BUJR				*e*				00 46 30.0	
ZRD	**Zardab**	**2.03**	**220**	Pn		**Pn**		**00 46 03.7**	**+0.3**
	SNR=734								
ZRD				Sn		**Sn**		**00 46 29.3**	**+1.4**
MNGR	**Mingechevir, A**	**2.04**	**239**	Pn		**Pn**		**00 46 04.5**	**+0.9**
	SNR=42								
MNGR				Sn		**Sn**		**00 46 29.3**	**+1.0**
ZKTA	**Zakatala**	**2.09**	**265**	Pn		**Pn**		**00 46 05.8**	**+1.5**
	SNR=282								
ZKTA				Sn		**Sn**		**00 46 31.6**	**+2.3**
KRNR	**Karanay**	**2.09**	**299**‖	*i* P		**Pn**		**00 46 07.0**	**+2.6**
KRNR				*e*S		**Sn**		**00 46 33.0**	**+3.4**
KRNR				pmax		pmax			
	comp=Z,517nm,0.2s								
KRNR	**Karanay**	**2.09**	**299**	*i* Pn		**Pn**		**00 46 07.0**	**+2.6**
	comp=Z,517nm,0.2s								
KRNR				*e*Sn		**Sn**		**00 46 33.0**	**+3.4**
	comp=Z,1μm,0.3s								
SAAT	**Saatly**	**2.11**	**201**	Pn		**Pn**		**00 46 05.2**	**+0.7**
	SNR=46								
SAAT				Sn		**Sn**		**00 46 31.3**	**+1.5**
UNCR	**Uncukul**	**2.12**	**295**	*e*P		**Pn**		**00 46 07.3**	**+2.6**
UNCR				*e*S		**Sn**		**00 46 34.0**	**+3.8**
UNCR				pmax		pmax			
	comp=Z,1μm,0.2s								
UNCR	**Uncukul**	**2.12**	**295**	*e*Pn		**Pn**		**00 46 07.3**	**+2.6**
	comp=Z,1μm,0.2s								
UNCR				*e*Sn		**Sn**		**00 46 34.0**	**+3.8**
	comp=Z,3μm,0.4s								
XNZR	**Khunzakh**	**2.12**	**290**↑	*e*P		**Pn**		**00 46 08.8**	**+4.0**
XNZR				*e*				00 46 34.3	
DBC	**Dubki**	**2.24**	**303**↑	*i* P		**Pn**		**00 46 10.2**	**+3.9**
DBC				*e*S		**Sn**		**00 46 36.6**	**+3.6**
DBC				pmax		pmax			
	comp=Z,415nm,0.2s								
DBC	**Dubki**	**2.24**	**303**	*i* Pn		**Pn**		**00 46 10.2**	**+3.9**
	comp=Z,415nm,0.2s								
DBC				*e*Sn		**Sn**		**00 46 36.6**	**+3.6**
	comp=Z,6μm,0.6s								
BRDA	**Brd**	**2.30**	**228**			**Pn**		**00 46 07.4**	**+0.3**
	SNR=33								
BRDA				Sn		**Sn**		**00 46 34.6**	**+0.1**
LGD	**Lagodekhi**	**2.36**	**271**	P		**Pn**		**00 46 10.5**	**+2.6**
LGD				S		Sn		00 46 47.8	+12
AGDM	**Agdam**	**2.45**	**226**	Pn		**Pn**		**00 46 08.7**	**-0.4**
	SNR=498								
AGDM				Sn		**Sn**		**00 46 37.8**	**-0.3**
DDFL	**Dedoflistskaro**	**2.49**	**262**	P		Pn		00 46 18.3	+8.6
DDFL				S		Sn		00 46 56.2	+17
BTLR	**Botlikh**	**2.50**	**290**	*e*P		**Pn**		**00 46 12.5**	**+2.7**
BTLR				*e*S		**Sn**		**00 46 42.8**	**+3.5**
BLQ	**Beylaqan**	**2.54**	**214**	Pn		**Pn**		**00 46 09.7**	**-0.6**
	SNR=30								
BLQ				Sn		**Sn**		**00 46 38.5**	**-1.7**
GANJ	**Ganja**	**2.61**	**244**	Pn		**Pn**		**00 46 10.7**	**-0.6**
	SNR=791								
GANJ				Sn		**Sn**		**00 46 40.0**	**-2.0**
GLBA	**Clilabad**	**2.71**	**197**	Pn		**Pn**		**00 46 12.3**	**-0.3**
	SNR=41								
GLBA				Sn		**Sn**		**00 46 42.8**	**-1.5**
QRD	**Qoradiz**	**2.86**	**214**	Pn		**Pn**		**00 46 13.7**	**-0.9**
	SNR=42								
QRD				Sn		**Sn**		**00 46 45.5**	**-2.4**
GDB	**GEDABAY**	**2.97**	**249**	Pn		**Pn**		**00 46 15.4**	**-0.9**
	SNR=213								
GDB				Sn		**Sn**		**00 46 48.6**	**-2.2**
GROC	**Groznyy**	**2.99**	**298**	*e*P		**Pn**		**00 46 19.5**	**+3.1**
GROC				*e*S		**Sn**		**00 46 56.2**	**+5.0**
YRD	**Yardimli**	**3.05**	**197**	Pn		**Pn**		**00 46 16.4**	**-1.1**
	SNR=99								
YRD				Sn		**Sn**		**00 46 49.5**	**-3.5**
QZX	**Qazax, Azerbai**	**3.13**	**257**	Pn		**Pn**		**00 46 17.9**	**-0.4**
	SNR=20								
QZX				Sn		**Sn**		**00 46 52.8**	**-1.8**
LKRN	**Lenkeran, Azer**	**3.16**	**189**	Pn		**Pn**		**00 46 17.6**	**-1.2**
	SNR=21								
LKRN				Sn		**Sn**		**00 46 53.4**	**-2.0**
GRMI	**Germi**	**3.24**	**201**	*e*Pn		**Pn**		**00 46 18.1**	**-1.9**
GRMI				IAML				00 46 56.5	
	comp=N,2μm,0.6s								
GRMI				IAML				00 46 58.8	
	comp=E,3μm,0.4s								
LRK	**Lerik**	**3.30**	**195**	Pn		**Pn**		**00 46 19.6**	**-1.1**
	SNR=25								
LRK				Sn		**Sn**		**00 46 56.6**	**-2.3**
ASTR	**Astara**	**3.31**	**188**	Pn		**Pn**		**00 46 19.5**	**-1.3**
	SNR=450								
ASTR				Sn		**Sn**		**00 46 55.9**	**-3.1**
SEAG	**Tbilisi Sea**	**3.44**	**270**	P		**Pn**		**00 46 23.6**	**+1.1**
SEAG				S		**Sn**		**00 47 01.4**	**-0.7**
BTNK	**Botanikuri**	**3.44**	**269**	P		**Pn**		**00 46 22.9**	**+0.3**
BTNK				S		**Sn**		**00 47 00.7**	**-1.6**
TBLG	**Delisi**	**3.49**	**270**	P		**Pn**		**00 46 23.5**	**+0.3**
TBLG				S		**Sn**		**00 47 02.3**	**-1.1**
TBLG	**Delisi**	**3.49**	**270**	P		**Pn**		**00 46 23.6**	**+0.3**
TBLG	**Delisi**	**3.49**	**270**			**Pn**		**00 46 23.6**	**+0.4**
KMGR	**Komgaron**	**3.57**	**291**	*i* P		**Pn**		**00 46 26.3**	**+2.0**
KMGR				S		**Sn**		**00 47 04

ARXR eS Sn 00 48 08.1 -2.4
RPOR Krasnaya Polya 6.97 288 eP Pn 00 47 13.7 +2.9
RPOR eS Sn 00 48 28.8 +0.2
ASAO Ashtian 7.30 176 ePn Pn 00 47 14.0 -1.5
SOC Sochi 7.34 287 eP Pn 00 47 14.3 -1.5
SOC e 00 48 39.0
SOC MLR MLR
comp=Z,88nm,8.0s
BJRD Bojnurd 7.42 121 ePn Pn 00 47 15.9 -1.2
GEYT Alibeck 7.76 117 P Pn 00 47 19.6 -2.0
comp=Z,8.5nm,0.3s,baz=301,slow=15,SNR=43
GEYT S Sn 00 48 45.6 -2.3
comp=Z,11nm,0.3s,baz=348,slow=41,SNR=1.9
GEYT LR LR 00 50 52.3
comp=Z,65nm,20.2s,baz=245,slow=41
GYA0B ALIBECK ARRAY 7.76 117 ⇑P Pn 00 47 19.6 -2.0
baz=305,slow=15
GYA0B ⇓S Sn 00 48 41.7 -6.1
GYA0B ALIBECK ARRAY 7.76 117 Pn 00 47 19.5 -2.0
ANN Anapa 9.21 293 eP Pn 00 47 42.1 +0.9
ANN eS Sn 00 49 25.4 +2.2
ANN pmax pmax
comp=Z,48nm,0.9s
AKTO Aktyubinsk 10.46 32 P Pn 00 47 56.7 -1.6
comp=Z,23nm,0.3s,baz=213,slow=8.3,SNR=294
AKTO S Sn 00 49 46.4 -7.3
comp=Z,41nm,0.3s,baz=27,slow=19,SNR=9.5
AKTO LR LR 00 53 20.2
comp=Z,114nm,19.3s,baz=231,slow=45
AKTO Aktyubinsk 10.46 32 ⇓P Pn 00 47 56.1 -2.2
comp=Z,90nm,0.7s
AKTO ⇑S Sn 00 49 45.9 -7.8
comp=Z,162nm,0.5s
AB31 Akbulak array 10.46 41 P Pn 00 47 56.0 -2.3
comp=Z,17nm,0.3s,baz=224,slow=12,SNR=1283
AB31 ⇑S Sn 00 49 46.0 -7.8
comp=Z,75nm,0.4s
ABKAR Akbulak array 10.46 41 Pn 00 47 55.9 -2.4
GAZ Gaziantep 10.51 248 Pn Pn 00 47 60.0 +0.9
VRH Novokhopyorsk 10.75 333 eP Pn 00 48 00.9 -1.3
VRH eS Sn 00 49 52.7 -7.9
VRH pmax pmax
comp=Z,90nm,0.6s
VRH pmax pmax
comp=Z,100nm,0.7s
VRH smax smax
comp=N,630nm,1.0s
SIM Simferopol' 11.55 291 eP Pn 00 48 13.8 +0.7
SIM S Sn 00 50 31.5 +11
VSR Storozhevoye 11.72 327 eP Pn 00 48 13.2 -2.2
VSR eS Sn 00 50 17.8 -6.5
VSR pmax pmax
comp=Z,80nm,0.6s
VSR pmax pmax
comp=Z,80nm,0.6s
VSR smax smax
comp=N,230nm,1.1s
ILGA Ilgaz 11.80 271 Pn 00 48 15.6 -1.2
VORR Voronezh 12.05 328 P Pn 00 48 20.0 +0.1
VORR pmax pmax
comp=Z,250nm,0.8s
BR131 Keskin Array S 12.13 265 P Pn 00 48 22.7 +1.4
BR131 Keskin Array S 12.13 265 Pn 00 48 22.6 +1.4
BRTR Keskin Array B 12.13 265 eP Pn 00 48 24.7 +3.4
BRTR pmax pmax
comp=Z,1.0nm,0.3s
BRTR Keskin Array B 12.13 265 P Pn 00 48 22.8 +1.4
comp=Z,0.6nm,0.3s,baz=83,slow=12,SNR=71
HRA Herat 12.55 122 Pn 00 48 26.6 -0.5
LPSR Galich'ya Gora 12.89 330 eP Pn 00 48 28.7 -2.6
LPSR eS Sn 00 50 45.1 -7.6
LPSR pmax pmax
comp=Z,80nm,0.8s
LPSR pmax pmax
comp=Z,80nm,0.8s
LPSR smax smax
comp=E,430nm,1.4s
ASF Jabal al Asfar 13.88 230 P Pn 00 48 45.0 +0.4
ASF Jabal al Asfar 13.88 230 P Pn 00 48 45.0 +0.4
comp=E,0.1nm,0.3s,baz=344,slow=15,SNR=4.8
MMAI Mount Meron Ar 14.17 236 P Pn 00 48 51.4 +2.9
comp=E,0.4nm,0.3s,baz=40,slow=11,SNR=3.8
MMAI LR LR 00 54 43.9
comp=E,201nm,20.1s,baz=345,slow=39
CSS Mathiatis 14.34 247 Pn 00 48 51.4 +0.8
TLCR 15.30 290 ⇑P Pn 00 49 01.9 -0.9
MANR Mangalia 15.40 284 ⇓P Pn 00 49 02.7 -1.4
MFTR Murfatlar 15.52 286 ⇑P Pn 00 49 05.5 -0.1
TIRR Tirgusor 15.54 287 P Pn 00 49 04.2 -1.7
TIRR pmax pmax
comp=Z,71nm,0.7s
TIRR Tirgusor 15.54 287 ⇓P Pn 00 49 04.4 -1.4
TIRR Tirgusor 15.54 287 Pn 00 49 04.2 -1.7
MILM Milestii Mici 15.56 296 ⇓P Pn 00 49 05.8 -0.3
KIS Kishinev 15.57 296 ⇓*i*P P 00 49 08.0 -1.0
KIS *i* S Sn 00 52 02.0 +4.2
KIS Kishinev 15.57 296 ⇓*i*P P 00 49 08.0 -1.0
KIS *i* S Sn 00 52 02.0 +4.2
TOPG Topolog 15.58 288 ⇑P Pn 00 49 05.0 -1.4
KK31 Karatay Array 15.63 78 P Pn 00 49 05.4 -1.7
KK31 pmax pmax
comp=Z,46nm,0.8s
KK31 Karatay Array 15.63 78 ⇓P Pn 00 49 04.8 -2.3
comp=Z,14nm,0.5s,baz=283,slow=15,SNR=257
KK31 ⇓S Sn 00 51 46.8 -13
comp=Z,104nm,1.0s,baz=281,slow=25
KK31 Karatay Array 15.63 78 Pn 00 49 05.4 -1.7
KK31 IAmb IAmb 00 49 07.2
comp=Z,46nm,0.8s
KKAR Karatay Array 15.63 78 P Pn 00 49 05.4 -1.7
KKAR pmax pmax
comp=Z,46nm,0.8s
KKAR Karatay Array 15.63 78 Pn 00 49 05.4 -1.7
KKAR IAmb IAmb 00 49 07.2
comp=Z,46nm,0.8s
PSN Preselentsi 15.69 284 P P 00 49 11.5 +1.1
OBN Obninsk 15.73 332*d* *i*P Pn 00 49 06.4 -1.8
OBN *i* S Sn 00 51 53.6 -8.0
OBN pmax pmax
comp=Z,58nm,0.9s
OBN MLR MLR
comp=Z,156nm,20.0s
OBN Obninsk 15.73 332 P Pn 00 49 06.4 -1.8
comp=Z,5.5nm,0.3s,baz=180,slow=4.0,SNR=13
OBN S Sn 00 51 53.2 -8.5
comp=Z,1.9nm,0.3s,baz=65,slow=22,SNR=2.8
OBN LR LR 00 56 09.7
comp=Z,46nm,21.2s,baz=178,slow=41
OBN Obninsk 15.73 332 ⇑P Pn 00 49 06.9 -1.3
OBN Obninsk 15.73 332 Pn 00 49 06.1 -2.2
ARU Arti 15.76 19*c* *i*P Pn 00 49 04.7 -3.9
ARU S Sn 00 51 53.1 -9.2
ARU pmax pmax
comp=Z,153nm,0.7s
ARU Arti 15.76 19 P Pn 00 49 04.8 -3.9
comp=Z,0.2nm,0.3s,baz=209,slow=8.7,SNR=261
ARU S Sn 00 51 50.1 -12
comp=Z,0.2nm,0.3s,baz=81,slow=21,SNR=10
ARU LR LR 00 56 38.5
comp=Z,126nm,18.2s,baz=210,slow=42
ARU Arti 15.76 19 Pn 00 49 04.3 -4.3
CFR Carcaliu 15.78 289 ⇑P Pn 00 49 07.1 -1.8
LEOM Leova 15.86 294 ⇓P Pn 00 49 09.3 -0.6
HARR Harsova 15.89 288 ⇑P Pn 00 49 08.9 -1.4
MOS Moscow 15.89 335 eP Pn 00 49 06.8 -3.4
MOS eS Sn 00 51 56.6 -8.8
MOS pmax pmax
comp=Z,28nm,0.6s
ICOR Ion Corvin 15.97 285 ⇓P Pn 00 49 11.3 0.0
SORM Soroca 16.14 300 ⇑P Pn 00 49 10.6 -2.8
VASR Vaslui 16.20 295 ⇑P Pn 00 49 14.1 -0.1
PRD Provadia 16.27 282 P P 00 49 17.4 +0.5
BTK Batken 16.28 89 IAmb IAmb 00 49 16.9
comp=Z,47nm,0.7s
NEF NEVSHA 16.36 282 P P 00 49 17.8 -0.1
GHRR 16.38 292 ⇑P Pn 00 49 15.5 -0.9
IAS Iasi 16.45 296 ⇑P Pn 00 49 16.6 -0.6
AKASG Malin Array Be 16.48 309 eP Pn 00 49 17.5 -0.2
AKASG pmax pmax
comp=Z,19nm,0.3s
AKASG Malin Array Be 16.48 309 P Pn 00 49 15.7 -2.0
comp=Z,19nm,0.3s,baz=117,slow=12,SNR=52
AKASG S Sn 00 52 12.8 -7.0
comp=Z,1.3nm,0.3s,baz=112,slow=24,SNR=3.1
SVE Sverdlovsk 16.66 22*de*P Pn 00 49 16.8 -3.0
SVE eS Sn 00 52 12.1 -12
SVE pmax pmax
comp=Z,79nm,0.4s
SHME Shamm 16.71 158 P P 00 49 22.4 +0.6
KIRV Kirov 16.76 0 P Pn 00 49 18.8 -2.3
comp=Z,15nm,0.3s,baz=170,slow=9.0,SNR=39
KIRV S Sn 00 52 14.2 -12
comp=Z,7.9nm,0.3s,baz=294,slow=22,SNR=3.9
KIRV LR LR 00 56 59.5
comp=Z,140nm,21.2s,baz=249,slow=41
VRI Vrincioaia 16.83 291 ⇓P Pn 00 49 21.5 -0.5
EIL Elat 16.85 229 P P 00 49 24.0 +0.6
comp=Z,0.3nm,0.3s,baz=17,slow=7.9,SNR=6.5
EIL LR LR 00 57 05.4
comp=Z,43nm,19.3s,baz=50,slow=41
BANOM Banah 16.87 158 *i*P P 00 49 24.7 +1.0
SNR=13
BANOM Banah 16.87 158 P P 00 49 24.7 +1.0
SNR=13
PLOR Plostina 16.88 291 ⇓P Pn 00 49 22.5 -0.2
RAZG Razgrad 16.91 284 ⇑P Pn 00 49 22.6 -0.4
TESR Tescani 16.96 294 ⇑P Pn 00 49 22.1 -1.5
KBL Kabul 17.06 109 P P 00 49 26.1 +0.2
KBL pmax pmax
comp=Z,18nm,1.1s
KBL Kabul 17.06 109 P P 00 49 26.1 +0.2
SGRR Singureni 17.28 286 ⇓P Pn 00 49 27.2 -0.4
MLR Muntele Rosu 17.34 290 P P 00 49 29.0 +0.2
MLR Muntele Rosu 17.34 290 P P 00 49 29.0 +0.2
comp=Z,1.2nm,0.3s,baz=137,slow=13,SNR=41
MLR LR LR 00 57 56.5
comp=Z,105nm,18.8s,baz=119,slow=43
MLR Muntele Rosu 17.34 290 P Pn 00 49 28.4 0.0
SZH Strazhica 17.34 283 P P 00 49 29.1 +0.4
MSFE Esma-Masafi 17.37 159 *i*P P 00 49 30.0 +0.9
SNR=11
PRAR RASCA 17.37 296 ⇓P Pn 00 49 27.9 -0.8
BIZ Bicaz 17.39 295 ⇓P Pn 00 49 28.4 -0.5
ELND Elena 17.41 281 ⇑P P 00 49 29.5 +0.1
MDH Madha 17.46 159 P Pn 00 49 30.1 +0.2
OZUR 17.50 292 ⇓P Pn 00 49 29.5 -0.8
NAZ Nazwa, Dubai 17.59 161 *i*P P 00 49 32.9 +1.3
SNR=15
NAZ Nazwa, Dubai 17.59 161 P P 00 49 33.5 +1.9
DOPR Dopca 17.77 292 ⇑P P 00 49 32.9 -0.5
UOSS Minazif 17.77 159 P Pn 00 49 34.6 +0.9
UOSS Minazif 17.77 159 P Pn 00 49 34.9 +1.2
UOSS IAmb IAmb 00 49 36.3
comp=Z,18nm,0.6s
UOSS Minazif 17.77 159 P P 00 49 33.5 -0.1
COPA Copaceanca 17.83 286 ⇑P Pn 00 49 34.6 +0.3
AJN Ajban 17.85 163 *i*P Pn 00 49 35.4 +0.8
SNR=6.3
AJN Ajban 17.85 163 P Pn 00 49 35.8 +1.2
SNR=5.9
ASUD Al Ashush, Dub 17.86 162 *i*P Pn 00 49 35.6 +0.8
SNR=16
ASUD Al Ashush, Dub 17.86 162 P Pn 00 49 35.8 +1.0
SNR=16
HATD Hatta, Dubai 17.87 160 *i*P Pn 00 49 35.8 +0.9
SNR=6.2
RDO Rodhopi 17.88 276 P P 00 49 34.5 -0.1
MTUR Matau 17.95 289 ⇓P P 00 49 35.3 -0.2
VOIR 17.97 290 ⇑P Pn 00 49 36.5 +0.4
ASHO Ashiyiah 17.98 160 *i*P P 00 49 36.0 0.0
SNR=9.7
ASHO Ashiyiah 17.98 160 P P 00 49 35.1 -0.9
SNR=9.8
HUMR Humele 17.99 287 ⇓P Pn 00 49 36.4 +0.1
BVAR Borovoye Array 18.00 44 P P 00 49 35.0 -0.9
BVAR Borovoye Array 18.00 44 P P 00 49 35.0 -0.9
comp=Z,11nm,0.3s,baz=233,slow=12,SNR=147
BVAR S Sn 00 52 44.2 -12
comp=Z,4.4nm,0.3s,baz=235,slow=23,SNR=9.2
AML Almayashu 18.05 81 P Pn 00 49 38.1 +0.6
SNR=15
EKS2 Erkin-Say 18.05 79 P Pn 00 49 39.1 +1.9
SNR=14
BURAR Bucovina Array 18.09 297 ⇑P P 00 49 36.5 -0.6
BUR08 Bucovina Ar. S 18.11 297 P P 00 49 36.2 -1.0
BUR08 IAmb IAmb 00 49 37.7
comp=Z,25nm,0.4s
ARR Arges 18.26 289 ⇑P Pn 00 49 39.6 +0.1
PLVB Pleven 18.29 283 ⇑P Pn 00 49 39.7 -0.1
RZN Rozhen 18.40 278 P Pn 00 49 41.9 +0.5
VLAD Vladila 18.42 285 ⇓P Pn 00 49 41.3 0.0
KARP Karpathos 18.44 257 P P 00 49 40.6 -0.3
ALNE Al Ain 18.51 161 *i*P P 00 49 41.7 0.0
SNR=6.0
USP Ospenovka 18.53 77 P Pn 00 49 43.1 +0.3
SNR=29
RAYN Ar Rayn 18.56 191 P P 00 49 41.4 -0.8
RAYN pmax pmax
comp=Z,31nm,0.9s
RAYN Ar Rayn 18.56 191 *i*P P 00 49 42.8 +0.6
SNR=32
RAYN Ar Rayn 18.56 191 P P 00 49 41.4 -0.8
RAYN IAmb IAmb 00 49 45.6
comp=Z,31nm,0.9s
AAK Ala-Archa 18.58 79*c* *i*P Pn 00 49 43.9 +0.3
AAK pmax pmax
comp=Z,47nm,1.0s
AAK Ala-Archa 18.58 79 P Pn 00 49 44.4 +0.8
comp=Z,1.2nm,0.3s,baz=255,slow=7.5,SNR=64
AAK S S 00 53 07.8 -2.3
comp=Z,0.9nm,0.3s,baz=174,slow=16,SNR=2.2
AAK LR LR 00 58 15.9
comp=Z,120nm,19.1s,baz=274,slow=41
AAK Ala-Archa 18.58 79 P Pn 00 49 44.5 +0.8
SNR=29
AAK Ala-Archa 18.58 79 *i*P Pn 00 49 44.1 +0.5
SNR=31
AAK Ala-Archa 18.58 79 ⇑P Pn 00 49 44.3 +0.7
comp=Z,39nm,0.9s
AAK Ala-Archa 18.58 79 P Pn 00 49 44.3 +0.8
AAK IAmb IAmb 00 49 46.5
comp=Z,42nm,1.0s
ARCR ARCALIA 18.59 295 ⇑P P 00 49 43.0 +0.5
SOHO SOHO 18.63 159 P P 00 49 43.6 +0.7
UCH Uchtor 18.65 80 P Pn 00 49 48.9 +4.3
SNR=27
FRU1 Bishkek 18.67 79 P Pn 00 49 44.5 0.0
FRU1 pmax pmax
comp=Z,29nm,0.8s
FRU1 Bishkek 18.67 79 P Pn 00 49 44.5 0.0
FRU1 IAmb IAmb 00 49 50.9
comp=Z,29nm,0.8s
CHMS Chumysh 18.74 78 P Pn 00 49 46.0 +0.7
SNR=13
KBK Karagaybulak 18.91 79 P Pn 00 49 48.5 +0.9
SNR=21
MPEP Malo Peshtene 18.93 283 P P 00 49 46.8 +0.6
APE Apeiranthos 19.02 263*c* *i*P P 00 49 48.1 +0.9
APE pmax pmax
comp=Z,19nm,0.8s
MICGM Minsk 19.04 319 *e*P P 00 49 45.0 -2.2
MICGM *e*pP pP 00 50 03.0 +0.8
MICGM *e*S S 00 53 11.0 -8.2
MICGM *e*sS sS 00 53 38.0 -5.4
MNK Minsk 19.04 319 *e*P P 00 49 45.0 -2.2
MNK *e*S S 00 53 11.0 -8.2
CJR Cluj-Napoca 19.07 294 ⇑P P 00 49 48.0 +0.4
NVR Nevrokopi 19.09 277 P Pn 00 49 49.6 +0.1
MMB Musomiste 19.15 278 P Pn 00 49 49.9 -0.3
KZA Kyzart 19.21 81 P Pn 00 49 53.1 +1.8
SNR=7.7
SRE Strehaia 19.26 287 ⇑P P 00 49 50.0 +0.2
LVV L'vov 19.33 303 *e*P P 00 49 49.5 -0.9
LVV *e*S S 00 53 14.5 -11
LVV pmax pmax
comp=Z,30nm,1.0s
IOSP Ios island 19.33 263 P P 00 49 50.6 +0.1
SANT Santorini 19.34 261 ⇓P P 00 49 50.4 -0.3
SANT Santorini 19.34 261 IAmb IAmb 00 49 51.2
comp=Z,28nm,0.7s
TKM2 Tokmak 2 19.36 78 P Pn 00 49 52.4 -0.5
TKM2 Tokmak 2 19.36 78 P Pn 00 49 52.7 -0.2
SNR=6.3
THR3 Thira Island, 19.37 262 P P 00 49 50.4 -0.5
VTS Vitosha 19.37 281 P P 00 49 52.1 +1.0
VTS Vitosha 19.37 281 ⇑P P 00 49 51.9 +0.8
VTS Vitosha 19.37 281 P P 00 49 52.1 +1.0
ARQ Araqi 19.39 160 P P 00 49 51.8 +0.5
THR6 Thira Island, 19.39 262 P P 00 49 50.8 -0.4
CEP Cherat 19.46 107 P Pn 00 49 53.1 -0.9
PUNG Punghina 19.46 286 ⇑P P 00 49 52.3 +0.4
DEV Deva 19.49 291 ⇑P P 00 49 53.1 +0.8
GZR Gura Zlata 19.57 289 ⇓P P 00 49 52.8 -0.3
PLG Polygyros 19.59 274 P P 00 49 54.6 +1.2
DRGR 19.68 294 ⇓P P 00 49 54.7 +0.3
NPS Neapolis 19.70 258 P P 00 49 54.0 -0.6
NACGM Naroch 19.80 319 *e*P P 00 49 55.0 -0.4
NACGM *e*S S 00 53 30.0 -4.3
LAST Lasithi 19.84 258 P P 00 49 55.5 -0.7
NRN Naryn 19.86 82 P Pn 00 49 57.4 -1.5
NRN pmax pmax
comp=Z,11nm,0.6s
NRN Naryn 19.86 82 P Pn 00 49 57.4 -1.5
THW Thamme Wali 19.89 110 P P 00 49 56.8 +0.1
PTL Penteli 19.92 268 P P 00 49 57.4 +0.5
TRPA Tarpa 19.95 298 ⇓P P 00 49 57.1 -0.1
PRGR Permogore 19.95 355 ⇓*i*P P 00 49 57.2 +0.1
PRGR *i* S S 00 53 28.1 -9.2
PRGR pmax pmax
comp=Z,83nm,0.6s
VLY Voula,Athens 20.03 267 P P 00 49 58.3 +0.1
VAY Valandovo 20.05 278 *i*P P 00 49 58.4 +0.1
SMDO Samad 20.08 156 P Pn 00 50 01.3 0.0
SMDO P Pn 00 50 01.3 0.0
WSAR Wadi Sarin 20.09 155 P P 00 50 00.4 +1.5
comp=Z,13nm,0.7s,baz=340,slow=8.2,SNR=11
KWP Kalwaria Pacla 20.12 302 *e*P P 00 49 59.3 +0.3
KWP Kalwaria Pacla 20.12 302 eP P 00 49 59.3 +0.3
BSY Bisya 20.13 159 P P 00 50 00.7 +1.3
UZH Uzhgorod 20.19 299 *i*P Pn 00 50 04.0 +1.7
UZH *i* 00 50 17.5
IDI Anoyia 20.21 259 P P 00 49 58.8 -1.4
comp=Z,20nm,0.3s,baz=45,slow=4.2,SNR=142
IDI S S 00 53 35.5 -7.4
comp=Z,7.6nm,0.4s,baz=297,slow=18,SNR=9.0
IDI LR LR 00 59 24.9
comp=Z,27nm,18.9s,baz=52,slow=41
KOLS Kolonicke sedl 20.26 300 *e*P Pn 00 50 02.0 -1.1
KOLS pmax pmax
comp=Z,14nm,0.6s
KOLS Kolonicke sedl 20.26 300 eP Pn 00 50 02.0 -1.1
KSH Kashi 20.26 88 P P 00 50 00.3 -0.5
KSH pP pP 00 50 13.1 -2.6
KSH PP **sP** 00 50 22.3 -2.7
KSH S S 00 53 31.9 -12
KSH sS Sn 00 53 54.7 +3.5
KSH SS **SnSn** 00 54 09.4 +2.6
KSH pmax pmax
comp=Z,21nm,0.5s
KSH pmax pmax
comp=Z,320nm,4.6s
KSH LR LR
comp=Z,320nm,4.5s
KSH LR LR
comp=Z,350nm,5.4s
KSH LR LR
comp=Z,370nm,6.7s
STIP Stip 20.27 279 *i*P P 00 49 59.0 -1.8
IIGN Ignalina 20.31 320 *e*P P 00 50 00.9 -0.1
IIGN IAmb IAmb 00 50 04.6
comp=Z,23nm,0.4s
LIT Litokhoron 20.37 274 P P 00 50 02.1 +0.3
LIT pmax pmax
comp=Z,4.0nm,0.7s
LIT Litokhoron 20.37 274 P P 00 50 02.1 +0.3
SIRR Siria 20.37 292 ⇑P P 00 50 02.2 +0.4
BZS Buzias 20.39 290 ⇑P P 00 50 01.3 -0.6
MDOK Medeo 20.40 77 ⇑P P 00 50 02.4 +0.1
comp=Z,15nm,1.1s
ISAL Salakas 20.47 320 *e*P P 00 50 02.1 -0.7
ISAL IAmb IAmb 00 50 05.7
comp=Z,15nm,0.8s
IZAR Zarasai 20.51 321 *e*P P 00 50 02.9 -0.3
IZAR IAmb IAmb 00 50 06.8
comp=Z,11nm,0.6s
NIL Nilore 20.51 106 P P 00 50 04.6 +1.2
NIL pmax pmax
comp=Z,30nm,0.8s
NIL Nilore 20.51 106 P P 00 50 04.6 +1.2
NIL IAmb IAmb 00 50 09.1
comp=Z,30nm,0.8s
CHCP Chirah Chowk 20.52 106 P P 00 50 04.6 +1.1
DID Didima 20.57 267 P P 00 50 03.6 -0.4
LTK Loutraki 20.59 268 P P 00 50 05.0 +0.7
JMDO Jabal Madar 20.75 157 P P 00 50 07.0 +1.0
SNR=18
AGG Agios Georgios 20.77 271 P P 00 50 06.2 +0.1
AGG Agios Georgios 20.77 271 IAmb IAmb 00 50 07.5
comp=Z,30nm,0.8s
WBK Wadi Bani Khal 20.79 154 P P 00 50 07.4 +0.9
SNR=6.0
IMMV Iera Moni Meta 20.81 261 P P 00 50 05.2 -1.4
THAL Thalero 20.82 268 P P 00 50 06.7 +0.1
MAKR Makrakomi, Fth 20.92 271 P P 00 50 08.1 +0.3
FNA Florina 21.04 277 P P 00 50 09.2 +0.1
FNA pmax pmax
comp=Z,7.0nm,0.8s
FNA Florina 21.04 277 P P 00 50 09.2 +0.1
VLI Veliai 21.07 265 P P 00 50 07.5 -1.9
KALE Kalithea 21.10 270 P P 00 50 10.4 +0.7
SERG Sergoula 21.15 270 P P 00 50 10.6 +0.3
ALIK Aliki, Aigiali 21.16 269 P P 00 50 11.4 +1.1
KTHA Kythira Island 21.16 263 P P 00 50 08.0 -2.4
EVR Evrytania 21.19 271 P P 00 50 11.2 +0.5
KLV Kalavryta, Ach 21.20 269 P P 00 50 10.6 -0.2
KTHR Kythira 21.20 263 P P 00 50 08.8 -2.0
SUW Suwalki 21.23 314 *e*P P 00 50 10.0 -0.9
SUW Suwalki 21.23 314 eP P 00 50 10.0 -0.9
VLX Vlachokerasia 21.25 267 P P 00 50 10.3 -1.1
EFP Efpalio 21.26 270 P P 00 50 12.0 +0.6
LAKA Lakka 21.26 269 P P 00 50 11.3 -0.2
KECS Kecovo 21.36 298 *e*P P 00 50 12.5 +0.2
KECS pmax pmax
comp=Z,15nm,0.7s
KECS Kecovo 21.36 298 eP P 00 50 12.5 +0.2
PVO Paravola 21.49 271 P P 00 50 15.1 +1.3
PABE Paberze 21.49 318 eP P 00 50 13.3 -0.3
DRO Drossia 21.56 269 P P 00 50 14.5 -0.1
DIVS Divibare 21.59 286 ⇓*i*P P 00 50 14.1 -0.8
ITM Ithomi 21.66 267 P P 00 50 13.8 -1.9
ITM Ithomi 21.66 267 IAmb IAmb 00 50 16.5
comp=Z,28nm,0.5s
FRGS Fruska Gora 21.66 289 ⇓*i*P P 00 50 14.6 -1.0
PSZ Piszkesteto 21.69 296 P P 00 50 15.9 -0.1
PSZ pmax pmax
comp=Z,17nm,1.0s
PSZ Piszkesteto 21.69 296 ⇑P P 00 50 15.5 -0.5
PSZ Piszkesteto 21.69 296 P P 00 50 15.9 -0.1
AMT Artemida-Makis 21.70 268 P P 00 50 14.9 -1.2
RLS Riolos of Patr 21.70 269 P P 00 50 15.4 -0.7
BEL Belsk 21.84 307 *e*P P 00 50 16.9 -0.5
BEL Belsk 21.84 307 eP P 00 50 16.9 -0.5
KURBB Kurchatov Arra 21.86 56 P P 00 50 18.9 +1.2
comp=Z,29nm,0.8s,baz=262,slow=11,SNR=174
KURBB S S 00 54 13.5 -1.5
comp=Z,1.5nm,0.6s,baz=262,slow=20,SNR=2.2
KURBB Kurchatov Arra 21.86 56 ⇓P P 00 50 18.3 +0.6
comp=Z,51nm,0.8s,baz=253,slow=9.5
PYL PYLOS 21.90 266 P P 00 50 15.3 -2.9
VSU Vasula 21.91 327 *i*P P 00 50 18.1 +0.1
VSU pmax pmax
comp=Z,79nm,0.7s
VSU Vasula 21.91 327 *e*P P 00 50 18.4 +0.3
KURK Kurchatov 21.94 56*c* *i*P P 00 50 19.1 +0.6
KURK pmax pmax
comp=Z,123nm,1.0s
KURK Kurchatov 21.94 56 ⇑P P 00 50 20.0 +1.5
comp=Z,100nm,0.9s
KURK Kurchatov 21.94 56 P P 00 50 19.8 +1.3
KURK Kurchatov 21.94 56 S S 00 54 13.5 -2.9
MHTO MHTO 22.02 158 P P 00 50 20.1 +0.5
SNR=7.0
BBLS Lazići ⇓*i*P P 00 50 18.9 -0.7
OJC Ojcow 22.08 302 *e*P P 00 50 21.0 +1.0
OJC Ojcow 22.08 302 eP P 00 50 21.0 +1.0
OJC Ojcow 22.08 302 IAmb IAmb 00 50 21.9
comp=Z,33nm,0.6s
RUDO Rudo 22.08 285 *e*P P 00 50 18.6 -1.5
LKD2 Lefkada island 22.08 272 P P 00 50 18.9 -1.3
LANS Liptovska Anna 22.11 300 *e*P P 00 50 21.2 +0.7
LANS Liptovska Anna 22.11 300 eP P 00 50 21.2 +0.7
IGT Igoumenitsa 22.12 274 P P 00 50 19.4 -1.2
EVGI Lefkada island 22.14 271 P P 00 50 19.2 -1.5

PDGK Podgornoye 22.15 76 P P 00 50 22.3 +1.2
PDGK Podgornoye 22.15 76 ⇑P P 00 50 16.4 -4.6
comp=Z,4.0nm,0.5s
KFL Anninata 22.20 270 P P 00 50 20.0 -1.4
FSK Fiskardo 22.25 271 P P 00 50 20.9 -1.1
SRN Sarande 22.28 275 P P 00 50 20.9 -1.3
PDG Podgorica 22.31 282 ⇑P P 00 50 22.2 -0.4
PDG Podgorica 22.31 282 eP P 00 50 22.1 -0.5
PDG Podgorica 22.31 282 IAmb IAmb 00 50 24.7
comp=Z,19nm,0.8s
VLS Valsamata 22.32 270 P P 00 50 21.1 -1.7
HAPS Han Pijesak,Bl 22.34 286 eP P 00 50 20.8 -2.2
DRME Dracevica, Mon 22.40 281 ⇑iP P 00 50 22.8 -0.8
VYHS Vyhne 22.45 298 eP P 00 50 24.0 -0.1
VYHS Vyhne 22.45 298 eP P 00 50 24.0 -0.1
UPM Unac-Piva 22.46 284 eP P 00 50 23.8 -0.6
MORH Mrgy, Hungar 22.46 292 eP P 00 50 23.4 -0.8
SRO Srobarova 22.74 296 eP P 00 50 28.6 +1.5
SRO pmax pmax
comp=Z,54nm,0.9s
SRO Srobarova 22.74 296 eP P 00 50 28.6 +1.5
BRY Bratogost 22.77 283 ⇑iP P 00 50 27.2 -0.4
HCY Herceg Novi 22.87 282 eP P 00 50 28.1 -0.4
DOB Doboj 22.89 288 eP P 00 50 27.4 -1.3
TREB Trebinje 22.93 283 eP P 00 50 28.2 -0.9
KLNR Kaliningrad 23.07 314 iP P 00 50 29.5 -0.8
KLNR pmax pmax
comp=Z,93nm,1.0s
DBRK Dubrovnik 23.09 283 iP P 00 50 29.1 -1.6
JAVC Velka Javorina 23.25 298 eP P 00 50 32.2 -0.1
TMCR Tamitsa 23.31 347 eP P 00 50 33.2 +0.7
TMCR eS S 00 54 38.0 -0.9
TMCR pmax pmax
comp=Z,133nm,0.6s
SCTE Santa Cesarea 23.37 276 IAmb IAmb 00 50 33.6
comp=Z,37nm,0.7s
STON Ston 23.38 283 iP P 00 50 31.8 -1.6
STON Ston 23.38 283 ⇓iP P 00 50 31.7 -1.6
SMOL Smolenice 23.38 297 eP P 00 50 33.8 +0.4
SMOL pmax pmax
comp=Z,9.0nm,1.1s
SMOL Smolenice 23.38 297 eP P 00 50 33.8 +0.4
MORC Moravsky Berou 23.44 301 ⇑P P 00 50 33.2 -0.8
MORC Moravsky Berou 23.44 301 eP P 00 50 33.5 -0.5
MODS Modra-Piesok 23.47 297 eP P 00 50 33.7 -0.5
MODS pmax pmax
comp=Z,40nm,1.2s
MODS Modra-Piesok 23.47 297 eP P 00 50 33.7 -0.5
BLY Banja Luka 23.55 288 ⇑P P 00 50 34.8 0.0
BLY Banja Luka 23.55 288 ⇓iP P 00 50 34.2 -0.7
ZST Bratislava 23.58 297 eP P 00 50 34.5 -0.6
ZST pmax pmax
comp=Z,40nm,1.1s
ZST Bratislava 23.58 297 eP P 00 50 34.5 -0.6
MGRS Mrkonjic Grad 23.64 287 eP P 00 50 35.8 0.0
MAKZ Makanchi 23.72 67 P P 00 50 37.9 +1.4
MAKZ pmax pmax
comp=Z,24nm,1.0s
MAKZ Makanchi 23.72 67 P P 00 50 37.9 +1.4
MAKZ IAmb IAmb 00 50 57.1
comp=Z,24nm,1.0s
MOSL Moslavina 23.80 290 iP P 00 50 36.9 -0.3
MAKA Makarska 23.82 284 iP P 00 50 36.2 -1.1
SOP Sopron 23.92 295 ⇑eP P 00 50 38.3 +0.1
MK31 Makanchi Array 23.94 67 P P 00 50 39.7 +1.2
MK31 Makanchi Array 23.94 67 P P 00 50 39.6 +1.2
comp=Z,6.2nm,0.5s,baz=262,slow=9.4,SNR=215
MK31 ⇑Pg pP 00 50 55.3 +0.2
comp=Z,19nm,0.6s,baz=264,slow=10.0,SNR=17
MK31 Makanchi Array 23.94 67 IAmb IAmb 00 50 59.0
comp=Z,21nm,0.7s
MKAR Makanchi Array 23.94 67 P P 00 50 39.6 +1.2
comp=Z,9.5nm,0.5s,baz=269,slow=8.7,SNR=176
MKAR LR LR 01 01 35.5
comp=Z,88nm,19.8s,baz=254,slow=40
KRLC Kraliky 23.97 301 eP P 00 50 38.1 -0.6
KRLC Kraliky 23.97 301 eP P 00 50 38.1 -0.6
KALN Kalnik 23.99 292 iP P 00 50 38.9 0.0
VRAC Vranov 24.00 299 P P 00 50 39.0 +0.1
comp=Z,9.6nm,0.7s,baz=97,slow=10,SNR=16
VRAC LR LR 01 02 12.5
comp=Z,50nm,18.4s,baz=84,slow=42
VRAC Vranov 24.00 299 ⇑P P 00 50 39.2 +0.3
VRAC Vranov 24.00 299 eP P 00 50 38.8 -0.2
KRUC Moravsky 24.11 299 eP P 00 50 40.0 +0.1
KOGS Kog 24.12 292 iP P 00 50 40.0 0.0
WHFO Wadi Hawf 24.14 170 P P 00 50 40.3 -0.1
SNR=63
FIA1 FINESS Array S 24.14 332 P P 00 50 41.0 +0.9
FINES FINESS Array B 24.14 332 P P 00 50 39.8 -0.3
comp=Z,20nm,0.5s,baz=130,slow=9.0,SNR=121
FINES S S 00 54 49.0 -3.5
comp=Z,3.7nm,0.5s,baz=116,slow=17,SNR=2.3
FINES LR LR 01 01 00.7
comp=Z,109nm,22.0s,baz=176,slow=39
KIJV Kijevo 24.17 286 iP P 00 50 40.3 -0.2
HVAR Hvar 24.24 284 iP P 00 50 40.8 -0.4
DPC Dobruska-Polom 24.30 302 eP P 00 50 42.3 +0.6
DPC Dobruska-Polom 24.30 302 eP P 00 50 42.3 +0.6
SHAO Shalim 24.33 165 iP P 00 50 42.2 +0.1
SNR=19
SHAO Shalim 24.33 165 P P 00 50 42.4 +0.3
SNR=19
CONA Conrad Observa 24.40 296 iP P 00 50 42.7 +0.1
comp=Z,2.2nm,0.5s,SNR=6.1
CONA iS S 00 55 05.2 +8.2
comp=Z,5.0nm,1.5s
DMTO DMTO 24.51 167 P P 00 50 44.0 +0.3
SNR=24
MATE Matera 24.54 278 ⇓P P 00 50 42.1 -1.7
GCIS Gornji Cirnik 24.57 291 eP P 00 50 43.8 -0.4
UDBI Udbina 24.57 288 iP P 00 50 44.2 0.0
RBK Rabkut 24.60 169 P P 00 50 45.3 +0.6
SNR=13
RBK P P 00 50 45.3 +0.6
SNR=13
ARSA Arzberg 24.61 294 iP P 00 50 44.6 +0.1
comp=Z,8.6nm,0.5s,SNR=10
ABTO Aybut 24.63 171 P P 00 50 45.1 +0.2
SNR=204
ABTO P P 00 50 45.1 +0.2
SNR=204
MORI Morici 24.69 286 iP P 00 50 44.5 -0.6
CRES Cresnjev 24.69 291 ⇓iP P 00 50 45.0 -0.3
OZLJ Ozalj 24.70 290 iP P 00 50 45.4 +0.2
ZIRJ Zirje 24.76 286 iP P 00 50 45.2 -0.7
TIP Timpagrande 24.88 275 ⇑P P 00 50 46.1 -0.9
PERS Pernice 24.90 293 eP P 00 50 47.2 0.0
SOKA Soboth 24.96 293 iP P 00 50 47.9 +0.2
comp=Z,28nm,0.7s,SNR=25
SGRT San Giovanni R 25.00 281 IAmb IAmb 00 50 49.9
comp=Z,19nm,1.0s
ACER Acerenza 25.07 279 IAmb IAmb 00 50 50.7
comp=Z,28nm,0.7s
DUGI Dugi Otok 25.14 287 iP P 00 50 47.6 -1.7
NVLJ Novalja 25.21 288 iP P 00 50 49.1 -0.8
GOPC GO Pecny, Ondr 25.23 301 eP P 00 50 51.8 +1.7
GOPC GO Pecny, Ondr 25.23 301 eP P 00 50 51.8 +1.7
OBKA Obir 25.30 293 iP P 00 50 50.8 0.0
comp=Z,6.8nm,0.5s
LJU Ljubljana 25.33 291 ⇓iP P 00 50 51.3 +0.3
PRU Pruhonice 25.40 301 eP P 00 50 51.5 -0.1
PRU Pruhonice 25.40 301 eP P 00 50 51.5 -0.1
RIY Rijeka 25.41 290 P P 00 50 51.4 -0.3
RIY Rijeka 25.41 290 eP P 00 50 51.4 -0.3
CEY Cerknica 25.42 291 eP P 00 50 51.8 -0.1
MOA Molln 25.47 296 iP P 00 50 51.9 -0.4
comp=Z,4.2nm,0.5s
VOJS Vojsko 25.78 291 iP P 00 50 54.7 -0.5
CEL Celeste 25.80 273 P P 00 50 55.0 -0.4
CEL IAmb IAmb 00 50 57.5
comp=Z,14nm,0.7s
BRG Berggiesshubel 25.87 303 eP P 00 50 50.9 -4.9
comp=Z,6.4nm,1.1s
BRG e 00 50 56.5
comp=Z,12nm,1.2s
BRG esP pP 00 51 15.3 +2.3
comp=Z,8.0nm,0.9s
BRG eSCS 01 01 34.6
comp=Z,8.2nm,1.4s
BRG Berggiesshubel 25.87 303 eP P 00 50 50.9 -4.9
BRG e*SP pP 00 51 15.3 +2.3
BRG pmax pmax
comp=Z,6.0nm,1.1s
GERES GERESS Array B 25.87 298 P P 00 50 55.8 -0.2
comp=Z,6.9nm,0.6s,baz=90,slow=8.6,SNR=46
GERES LR LR 01 02 45.8
comp=Z,88nm,19.4s,baz=306,slow=40
MYKA Terra Mystica 25.91 293 iP P 00 50 56.3 -0.1
comp=Z,7.0nm,0.8s
KHC Kasperske Hory 25.96 299 iP P 00 50 56.3 -0.5
KHC pmax pmax
comp=Z,14nm,0.8s
KHC Kasperske Hory 25.96 299 eP P 00 50 55.8 -1.0
KHC ex x 00 50 58.5
BRJN Brijuni 25.96 289 iP P 00 50 55.9 -0.8
PAOL Paolisi 26.02 280 P P 00 50 57.4 0.0
KBA Koelnbreinsper 26.10 294 iP P 00 50 58.0 -0.2
comp=Z,9.6nm,0.3s,SNR=6.6
BSD Bornholm Skovb 26.13 312 iP P 00 50 56.8 -1.3
BSD Bornholm Skovb 26.13 312 iP P 00 50 56.8 -1.3
INTR Introdacqua 26.30 282 IAmb IAmb 00 51 16.0
comp=Z,13nm,0.8s
ZAA0 Zalesovo Array 26.36 50 ⇑P P 00 51 00.8 +0.5
comp=Z,1.7nm,0.8s
ZAA0 Zalesovo Array 26.36 50 P P 00 51 00.9 +0.7
ZAA0 IAmb IAmb 00 51 06.3
comp=Z,11nm,0.8s
ZALV Zalesovo Beam 26.36 50 eP P 00 51 00.9 +0.6
ZALV pmax pmax
comp=Z,7.0nm,0.4s
ZALV Zalesovo Beam 26.36 50 P P 00 51 00.7 +0.4
comp=Z,6.6nm,0.4s,baz=261,slow=12,SNR=41
ZALV LR LR 01 03 08.9
comp=Z,113nm,20.7s,baz=264,slow=40
CLL Collm 26.51 303 ⇓iP P 00 51 01.8 +0.2
CLL pmax pmax
comp=Z,36nm,1.5s
CLL Collm 26.51 303 ⇓iP P 00 51 01.8 +0.2
comp=Z,36nm,1.5s
CLL i 00 51 04.7
CLL Collm 26.51 303 IAmb IAmb 00 51 02.8
comp=Z,12nm,0.7s
ABTA Abfaltersbach 26.69 293 iP P 00 51 01.7 -1.7
comp=Z,4.0nm,0.7s
ABTA iS S 00 55 29.6 -3.7
comp=Z,3.5nm,1.3s
NRCA Norcia 26.71 284 IAmb IAmb 00 51 13.5
comp=Z,12nm,0.8s
VAE Valguarnera 27.17 272 P P 00 51 09.9 +2.2
comp=Z,13nm,0.8s,baz=74,slow=15,SNR=11
WATA Walderalm 27.30 295 iP P 00 51 08.0 -1.0
comp=Z,4.4nm,0.2s
WATA iPcP PcP 00 54 26.9 +0.3
comp=Z,3.5nm,0.6s
WATA iS S 00 55 47.4 +4.4
LVZ Lovozero 27.30 348 P P 00 51 10.1 +1.5
LVZ pmax pmax
comp=Z,43nm,0.7s
LVZ Lovozero 27.30 348 P P 00 51 10.1 +1.5
CTI Castel Tesino 27.33 292 P P 00 51 08.6 -0.6
CTI pmax pmax
comp=Z,8.0nm,0.6s
CTI Castel Tesino 27.33 292 P P 00 51 08.6 -0.6
CTI IAmb IAmb 00 51 10.0
comp=Z,8.0nm,0.6s
TEOL Teolo 27.38 290 IAmb IAmb 00 51 10.3
comp=Z,24nm,0.8s
DAMY Dhamar 27.52 191 P P 00 51 12.2 +0.9
DAMY IAmb IAmb 00 51 30.9
comp=Z,18nm,0.9s
SQTA Sankt Quirin 27.55 294 iP P 00 51 09.8 -1.3
comp=Z,2.5nm,0.2s
SQTA iPcP PcP 00 54 27.9 +0.7
comp=Z,4.2nm,0.5s
MOTA Moosalm 27.62 295 iP P 00 51 10.5 -1.3
comp=Z,3.8nm,0.3s
MOTA iPcP PcP 00 54 27.3 -0.1
comp=Z,4.1nm,0.9s
RETA Reutte 27.84 295 iP P 00 51 12.5 -1.2
comp=Z,3.8nm,0.3s
RETA iPcP PcP 00 54 28.3 +0.4
comp=Z,1.8nm,0.5s
RETA iS S 00 55 55.3 +3.8
CORL Corleone 27.85 274 P P 00 51 13.5 -0.3
CORL IAmb IAmb 00 51 20.7
comp=Z,12nm,0.9s
FETA Feichten 27.89 294 iP P 00 51 13.0 -1.3
comp=Z,3.3nm,0.4s
FETA iPcP PcP 00 54 28.5 +0.4
comp=Z,3.0nm,0.7s
FETA iS S 00 55 53.7 +1.3
OSSC Osservatorio P 27.94 286 IAmb IAmb 00 51 16.0
comp=Z,9.1nm,0.8s
WMQ Urumqi 27.99 73 eP P 00 51 17.2 +2.2
WMQ pP pP 00 51 33.9 +1.7
WMQ pmax pmax
comp=Z,8.0nm,1.1s
WMQ pmax pmax
comp=Z,98nm,4.5s
WMQ LR LR
comp=Z,390nm,29.1s
WMQ LR LR
comp=Z,500nm,29.0s
ZCCA Zocca 28.00 288 IAmb IAmb 00 51 17.2
comp=Z,18nm,0.8s
CLTB Caltabellotta 28.02 273 P P 00 51 16.0 +0.6
CLTB IAmb IAmb 00 51 29.7
comp=Z,9.6nm,0.6s
SALO Salr 28.16 291 P P 00 51 16.6 +0.2
SALO IAmb IAmb 00 51 32.5
comp=Z,9.1nm,0.6s
FUORN Ofenpass-Fuorn 28.24 293 IAmb IAmb 00 51 17.7
comp=Z,6.2nm,0.5s
DAVA Damuels 28.45 295 iP P 00 51 17.9 -1.3
comp=Z,2.4nm,0.2s
DAVA iPcP PcP 00 54 29.6 +0.2
comp=Z,3.5nm,0.5s
DAVA iS S 00 56 02.7 +1.5
HFS Hagfors 28.47 322 P P 00 51 19.0 0.0
comp=Z,9.6nm,0.3s,baz=112,slow=9.2,SNR=146
HFS LR LR 01 02 57.7
comp=Z,65nm,20.5s,baz=165,slow=37
DAVOX Davos/Dischmat 28.49 294 P P 00 51 18.6 -1.0
comp=Z,6.5nm,0.4s,baz=58,slow=5.3,SNR=40
DAVOX PcP PcP 00 54 30.4 +0.8
comp=Z,3.3nm,0.6s,baz=56,slow=2.1,SNR=5.5
DAVOX LR LR 01 04 47.0
comp=Z,62nm,19.4s,baz=72,slow=41
STU Stuttgart 28.85 298 IAmb IAmb 00 51 23.2
comp=Z,18nm,0.7s
MSSA Maissana 29.04 289 P P 00 51 23.7 -0.7
MSSA IAmb IAmb 00 51 26.3
comp=Z,29nm,1.1s
BFO Black Forest 29.44 297 P P 00 51 27.4 -0.4
BFO pmax pmax
comp=Z,3.0nm,0.9s
BFO Black Forest 29.44 297 P P 00 51 27.4 -0.4
NC602 NORSAR Array S 29.69 322 P P 00 51 29.7 -0.1
SOCY Socotra 29.81 171 P P 00 51 28.5 -2.9
SOCY IAmb IAmb 00 51 39.1
comp=Z,14nm,0.9s
NB201 NORSAR Array S 29.92 323 P P 00 51 31.5 -0.4
NB201 IAmb IAmb 00 51 50.9
comp=Z,9.4nm,0.5s
NB2 NORSAR Subarra 29.96 323 P P 00 51 31.6 -0.6
comp=Z,2.6nm,0.5s,baz=115,slow=8.6
NOA NORSAR Array B 29.96 323 P P 00 51 31.2 -1.0
comp=Z,1.9nm,0.7s,baz=123,slow=7.4,SNR=36
NOA LR LR 01 04 32.9
comp=Z,47nm,19.8s,baz=265,slow=38
NC303 NORSAR Array S 29.96 323 P P 00 51 32.6 +0.4
NC303 pP 00 51 49.9 +0.4
NAO01 NORSAR Array S 30.03 322 P P 00 51 32.4 -0.4
NAO01 IAmb IAmb 00 51 41.0
comp=Z,15nm,1.0s
ECH Echery 30.23 297 P P 00 51 33.9 -0.9
ECH pmax pmax
comp=Z,9.0nm,1.1s
ECH Echery 30.23 297 P P 00 51 33.9 -0.9
KONO Kongsberg 30.23 320 P P 00 51 34.9 +0.3
KONO pmax pmax
comp=Z,15nm,0.7s
KONO Kongsberg 30.23 320 P P 00 51 34.9 +0.3
KONO IAmb IAmb 00 51 35.8
comp=Z,15nm,0.7s
NC204 NORSAR Array S 30.25 323 P P 00 51 34.6 -0.2
NC204 IAmb IAmb 00 51 36.2
comp=Z,12nm,0.9s
KEV Kevo 30.29 345 P P 00 51 34.6 -0.4
KEV pmax pmax
comp=Z,10.0nm,0.7s
KEV Kevo 30.29 345 P P 00 51 34.6 -0.4
KEV IAmb IAmb 00 51 54.1
comp=Z,10nm,0.7s
SENIN Lac Senin/Sane 30.30 293 IAmb IAmb 00 51 35.0
comp=Z,13nm,0.6s
ARCES ARCESS Array B 30.41 344 P P 00 51 36.1 0.0
comp=Z,1.9nm,0.5s,baz=147,slow=8.5,SNR=29
ARCES LR LR 01 05 26.9
comp=Z,104nm,18.1s,baz=34,slow=39
ARE0 ARCESS Array S 30.41 344 P P 00 51 37.0 +0.9
ATD Arta Tunnel 30.74 193 P P 00 51 38.9 -0.6
ATD IAmb IAmb 00 51 39.5
comp=Z,12nm,1.0s
BNI Bardonecchia 30.92 291 IAmb IAmb 00 51 42.2
comp=Z,13nm,0.5s
DANN Dangsing 30.95 105 eP P 00 51 43.0 +1.3
comp=Z,5.9nm,0.7s
KOLN Koldanda 31.17 106 eP P 00 51 44.6 +1.1
comp=Z,13nm,0.6s
KEST Kesra 31.60 272 P P 00 51 47.3 +0.2
comp=Z,22nm,0.8s,baz=74,slow=3.5,SNR=50
KEST PcP PcP 00 54 39.1 +1.4
comp=Z,2.6nm,0.6s,baz=163,slow=2.3,SNR=4.9
KEST Kesra 31.60 272 P P 00 51 48.1 +1.1
KEST PcP 00 54 37.9 +0.2
GKN Gorkha 31.78 104 eP P 00 51 49.9 +1.1
comp=Z,19nm,0.2s
DMN Daman 32.35 105 eP P 00 51 55.0 +1.1
comp=Z,13nm,0.5s
SSB Saint Sauveur 32.37 292 IAmb IAmb 00 51 54.0
comp=Z,14nm,0.9s
KKN Kakani 32.37 104 eP P 00 51 54.9 +0.9
comp=Z,9.0nm,0.5s
PKIN Phulchoki 32.58 104 eP P 00 51 56.7 +0.8
comp=Z,13nm,0.5s
PKI Pulchoki 32.59 104 eP P 00 51 56.8 +0.7
comp=Z,2.0nm,0.6s
GUN Gumba 32.74 103 eP P 00 51 58.2 +0.8
comp=Z,8.9nm,0.4s
JIRN Jiri 33.11 103 eP P 00 52 01.9 +1.3
comp=Z,41nm,0.5s
CLF Chambon-Foret 33.51 297 P P 00 52 03.4 -0.1
RAMN Ramite 33.81 104 eP P 00 52 07.2 +0.6
comp=Z,12nm,0.6s
ODAN Odare 34.44 104 eP P 00 52 13.2 +1.2
comp=Z,36nm,0.7s
CWF Charnwood Fore 35.38 306 eP P 00 52 19.0 -0.5
HPK Haverah Park 35.52 308 eP P 00 52 21.1 +0.3
HPK IAmb IAmb 00 52 21.6
comp=Z,81nm,0.6s
LBWR Ladybower, Pea 35.60 307 ⇑eP P 00 52 21.5 +0.1
LSA Lhasa 35.65 96 P P 00 52 24.3 +1.6
LSA pmax pmax
comp=Z,62nm,0.6s
LSA Lhasa 35.65 96 P P 00 52 23.5 +0.8
LSA pmax pmax
comp=Z,13nm,0.5s
LSA Lhasa 35.65 96 P P 00 52 23.5 +0.8
EDMD Edmundbyers 35.71 309 eP P 00 52 22.5 +0.2
SWN1 Swindon 35.76 304 eP P 00 52 23.4 +0.5
STRD Stroud 35.97 304 eP P 00 52 25.5 +0.9
DRUM Mains of Drumt 36.03 313 eP P 00 52 25.2 +0.1
HLM1 Long Mynd 36.35 305 eP P 00 52 27.7 -0.2
KESW Keswick, Cumbr 36.38 309 ⇑eP P 00 52 28.5 +0.4
EKA Eskdalemuir Ar 36.39 310 P P 00 52 27.8 -0.4
comp=Z,4.3nm,0.3s,baz=96,slow=9.0,SNR=64
EKA PcP PcP 00 54 51.7 +0.7
comp=Z,1.5nm,0.4s,baz=98,slow=1.8,SNR=4.7
ESK Eskdalemuir 36.42 310 eP P 00 52 28.5 +0.1
ESK Eskdalemuir 36.42 310 P P 00 52 28.7 +0.3
ESK pmax pmax
comp=Z,25nm,1.0s
ESK Eskdalemuir 36.42 310 P P 00 52 28.7 +0.3
MCH1 Michaelchurch 36.46 304 ⇑eP P 00 52 28.6 -0.2
MCH1 IAmb IAmb 00 52 29.5
comp=Z,32nm,0.6s
FOEL Foel Wylfa 36.52 306 ⇑eP P 00 52 29.7 +0.4
INVG Invergeldie, C 36.89 312 eP P 00 52 32.6 +0.2
WLF1 Llynfaes 37.21 307 eP P 00 52 35.5 +0.4
WLF1 IAmb IAmb 00 52 36.7
comp=Z,72nm,1.1s
GAL1 Galloway 37.30 309 eP P 00 52 36.4 +0.5
KAC Achnashellach 37.58 314 ⇑eP P 00 52 38.1 -0.1
GTA Gaotai 37.90 76 eP P 00 52 43.0 +1.7
GTA pmax pmax
comp=Z,4.0nm,0.6s
DSB Dublin 38.40 307 P P 00 52 45.1 0.0
DSB IAmb IAmb 00 52 52.3
comp=Z,13nm,1.0s
SHL Shillong 38.47 101 P P 00 52 46.7 +0.4
SHL pmax pmax
comp=Z,18nm,0.4s
SHL Shillong 38.47 101 P P 00 52 46.7 +0.4
SPA0 Spitsbergen Ar 38.79 350 sP 00 53 08.2 -6.1
SPITS Spitsbergen Ar 38.79 350 P P 00 52 48.1 0.0
comp=Z,4.2nm,0.3s,baz=137,slow=11,SNR=37
ESBB Sonseca Array 39.94 285 IAmb IAmb 00 52 58.9
comp=Z,14nm,1.1s
ESDC Sonseca Array 39.94 285 P P 00 52 57.6 -0.7
comp=Z,3.7nm,0.5s,baz=64,slow=8.3,SNR=59
ESDC PcP PcP 00 55 03.1 +0.8
comp=Z,0.9nm,0.5s,baz=36,slow=2.5,SNR=5.5
ESDC Sonseca Array 39.94 285 IAmb IAmb 00 52 58.4
comp=Z,3.9nm,0.8s
SONM Songino Array 40.06 61 P P 00 53 00.2 +0.9
comp=Z,1.0nm,0.4s,baz=279,slow=9.7,SNR=12
SONM PcP PcP 00 55 02.7 0.0
comp=Z,1.6nm,0.8s,baz=266,slow=2.9,SNR=5.5
SONM pPcP 00 55 21.0
comp=Z,1.3nm,0.5s,baz=276,slow=3.8,SNR=6.8
SONM ScP ScP 00 58 45.5 +0.5
comp=Z,0.6nm,0.7s,baz=279,slow=4.3,SNR=3.9
SONM LR LR 01 11 10.1
comp=Z,86nm,20.9s,baz=244,slow=38
SONM Songino Array 40.06 61 IAmb IAmb 00 53 05.3
comp=Z,1.0nm,0.9s
PAB San Pablo 40.26 285 P P 00 53 00.3 -0.7
PAB pmax pmax
comp=Z,6.0nm,0.7s
PAB San Pablo 40.26 285 P P 00 53 00.3 -0.7
PAB IAmb IAmb 00 53 01.1
comp=Z,6.3nm,0.7s
ULN Ulaanbaatar 40.49 61 P P 00 53 04.6 +1.8
ULN pmax pmax
comp=Z,6.0nm,0.6s
ULN Ulaanbaatar 40.49 61 P P 00 53 04.6 +1.8
ULN IAmb IAmb 00 53 07.0
comp=Z,5.5nm,0.6s
FIGM Figuig 41.09 273 P P 00 53 08.0 0.0
SNR=12
TAM Tamanrasset 41.15 256 P P 00 53 09.3 +0.8
TAM pmax pmax
comp=Z,9.0nm,0.8s
TAM Tamanrasset 41.15 256 P P 00 53 09.3 +0.8
TAM IAmb IAmb 00 53 10.4
comp=Z,9.1nm,0.8s
HORN Hornachuelos 41.56 283 P P 00 53 11.1 -0.5
SNR=14
PVRL Vila Real 42.05 289 eP P 00 53 15.6 0.0
PCAB Cabril 42.12 290 eP P 00 53 15.5 -0.6
comp=Z,54nm,1.6s
LZH Lanzhou 42.13 79 eP P 00 53 16.8 +0.4
LZH pP pP 00 53 34.2 -0.1
LZH sP sP 00 53 42.7 0.0
LZH ePP PP 00 54 59.0 +4.0
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,78nm,6.0s
LZH LR LR
comp=Z,240nm,14.0s
LZH LR LR
comp=Z,250nm,13.7s
LZH LR LR
comp=Z,310nm,16.9s
MTE Manteigas 42.24 288 eP P 00 53 17.4 +0.2
PVIS Viseu 42.38 288 eP P 00 53 18.5 +0.3
comp=Z,50nm,1.8s
PCBR Castelo Branco 42.40 287 eP P 00 53 18.5 +0.1
PMRV Marv??o 42.49 286 eP P 00 53 19.2 0.0
SMIR Smir Dam 42.55 280 P P 00 53 19.1 -0.5
SNR=10
PESTR Estremoz 42.85 286 P P 00 53 22.3 +0.2
SNR=8.3

BOD	**Bodaibo**	**42.87**	**45**	*eP*	**P**	**00 53 22.4**	**+0.5**
BOD				pmax	pmax		
	comp=Z,14nm,1.2s						
COI	**Coimbra**	**42.93**	**288**	*eP*	**P**	**00 53 23.5**	**+0.9**
	comp=Z,65nm,1.9s						
COI	**Coimbra**	**42.93**	**288**	P	**P**	**00 53 23.3**	**+0.7**
COI				pmax	pmax		
	comp=Z,44nm,0.8s						
COI	**Coimbra**	**42.93**	**288**	P	**P**	**00 53 23.3**	**+0.7**
PCAS	**Casmilo, Conde**	**43.05**	**288**	*eP*	**P**	**00 53 24.1**	**+0.5**
PTOM	**Tomar**	**43.15**	**287**	*eP*	**P**	**00 53 25.1**	**+0.7**
PMTG	**Montargil**	**43.23**	**286**	*eP*	**P**	**00 53 25.1**	**0.0**
	comp=Z,28nm,2.0s						
MDT	**Midelt**	**43.26**	**276**	P	**P**	**00 53 25.6**	**0.0**
	comp=Z,3.0nm,0.9s,baz=63,slow=4.3,SNR=7.4						
EVO	**Evora**	**43.29**	**285**	*eP*	**P**	**00 53 25.6**	**0.0**
	comp=Z,28nm,1.9s						
PBEJ	**Beja**	**43.38**	**285**	*eP*	**P**	**00 53 26.4**	**+0.1**
	comp=Z,25nm,1.9s						
PVAQ	**Vaqueiros**	**43.53**	**284**	*eP*	**P**	**00 53 27.3**	**-0.2**
	comp=Z,36nm,1.9s						
PBDV	**Barranco-do-Ve**	**43.75**	**284**	*eP*	**P**	**00 53 29.7**	**+0.4**
	comp=Z,51nm,1.6s						
PNCL	**Nicolau / Gran**	**43.83**	**285**	*eP*	**P**	**00 53 30.5**	**+0.6**
KMBO	**Kilima Mbogo**	**44.16**	**198**	P	**P**	**00 53 33.7**	**+0.7**
	comp=Z,3.4nm,1.0s,baz=18,slow=10,SNR=5.2						
KMBO	**Kilima Mbogo**	**44.16**	**198**	IAmb	IAmb	00 53 35.7	
	comp=Z,5.8nm,1.1s						
PALK	**Pallekele**	**44.20**	**132**	P	**P**	**00 53 34.2**	**+1.1**
PALK				pmax	pmax		
	comp=Z,27nm,1.1s						
PALK	**Pallekele**	**44.20**	**132**	P	**P**	**00 53 33.8**	**+0.7**
	comp=Z,6.9nm,0.9s,baz=342,slow=5.0,SNR=4.1						
PALK	**Pallekele**	**44.20**	**132**	P	**P**	**00 53 34.2**	**+1.1**
PTEO	**Sao Teotonio**	**44.20**	**284**	*eP*	**P**	**00 53 33.2**	**+0.3**
CD2	**Chengdu**	**44.44**	**86**	P	**P**	**00 53 33.7**	**-1.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.3s						
PFVI	**Vila Bisbo**	**44.45**	**284**	P	**P**	**00 53 35.2**	**+0.3**
DAG	**Danmarks Havn**	**44.68**	**342**	*i* P	**P**	**00 53 36.6**	**+0.4**
DAG	**Danmarks Havn**	**44.68**	**342**	*i* P	**P**	**00 53 36.6**	**+0.4**
TZRR	**Tazzarine**	**44.96**	**274**	P	**P**	**00 53 40.0**	**+0.8**
	SNR=7.1						
SCO	**Scoresbysund**	**45.07**	**333**	*i* P	pP	00 53 56.7	-0.7
NOR	**Nord**	**45.42**	**349**	*i* P	**P**	**00 53 43.0**	**+1.0**
MBAR	**Mbarara**	**45.50**	**207**	P	**P**	**00 53 43.6**	**+0.1**
	comp=Z,2.4nm,0.2s,baz=25,slow=12,SNR=5.1						
MBAR	**Mbarara**	**45.50**	**207**	IAmb	IAmb	00 53 45.7	
	comp=Z,3.2nm,0.7s						
HHC	**Hu-ho-hao-te**	**45.76**	**69**	*eP*	P	00 53 49.9	+4.5
HHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,40nm,4.1s						
KMI	**Kunming**	**46.76**	**93**	P	**P**	**00 53 54.6**	**+1.1**
KMI				pP	pP	00 54 12.1	+0.4
KMI				sP	sP	00 54 20.4	+0.4
KMI				pmax	pmax		
	comp=Z,19nm,0.7s						
XAN	**Xi'an**	**46.76**	**79**	P	**P**	**00 53 54.2**	**+0.9**
XAN				pmax	pmax		
	comp=Z,13nm,0.8s						
TIXI	**Tiksi**	**47.65**	**25**	P	**P**	**00 54 01.3**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TIXI	**Tiksi**	**47.65**	**25**	P	**P**	**00 54 01.3**	**+1.7**
CHTO	**Chiang Mai**	**47.76**	**103**	P	**P**	**00 54 01.8**	**+0.7**
CHTO					**pP**	**00 54 17.4**	**-1.9**
CHTO				IAmb	IAmb	00 54 20.8	
	comp=Z,5.7nm,0.7s						
CMAR	**Chiang Mai Arr**	**47.98**	**104**	*eP*	**P**	**00 54 03.5**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**47.98**	**104**	P	**P**	**00 54 03.0**	**+0.2**
	comp=Z,3.8nm,0.6s,baz=305,slow=8.7,SNR=21						
SUMG	**Summit**	**50.05**	**337**	P	**P**	**00 54 19.3**	**+0.9**
SUMG				*PP	**pP**	**00 54 38.3**	**+1.6**
SUMG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SUMG	**Summit**	**50.05**	**337**	*i* P	pP	00 54 37.0	+0.3
	comp=Z,68nm,1.0s						
SUMG	**Summit**	**50.05**	**337**	P	**P**	**00 54 19.3**	**+0.9**
SUMG				IAmb	IAmb	00 54 21.3	
	comp=Z,3.4nm,0.7s						
SUMG					**pP**	**00 54 38.3**	**+1.6**
TOA0	**Torodi Ar. Sit**	**50.21**	**250**	P	**P**	**00 54 19.1**	**-0.7**
TOA0				IAmb	IAmb	00 54 19.5	
	comp=Z,7.4nm,0.7s						
TORD	**Torodi Ar. Bea**	**50.21**	**250**	P	**P**	**00 54 19.1**	**-0.7**
	comp=Z,6.5nm,0.5s,baz=35,slow=7.3,SNR=125						
TORD				PcP	**PcP**	**00 55 38.2**	**+0.1**
	comp=Z,3.3nm,0.7s,baz=23,slow=3.6,SNR=5.2						
TORD	**Torodi Ar. Bea**	**50.21**	**250**	IAmb	IAmb	00 54 19.6	
	comp=Z,5.3nm,0.7s						
PBKT	**Sadao Pong**	**50.67**	**104**	P	**P**	**00 54 24.1**	**+0.9**
PBKT					**pP**	**00 54 40.6**	**-1.0**
NJ2	**Nanjing**	**54.99**	**76**	*eP*	**P**	**00 54 54.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GRNR	**Gornyy**	**57.45**	**49**	*eP*	**P**	**00 55 13.7**	**+1.5**
GRNR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
IVI	**Ivigtut**	**57.73**	**325**	P	**P**	**00 55 14.9**	**+0.9**
USA0B	**Ussuriysk Arra**	**57.92**	**57**	P	**P**	**00 55 16.0**	**+0.4**
USA0B				pmax	pmax		
	comp=Z,6.0nm,1.1s						
USA0B	**Ussuriysk Arra**	**57.92**	**57**	P	**P**	**00 55 16.0**	**+0.4**
USA0B				IAmb	IAmb	00 55 19.3	
	comp=Z,5.9nm,1.1s						
USRK	**Ussuriysk Ar.**	**57.92**	**57**	P	**P**	**00 55 16.0**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=290,slow=7.3,SNR=7.9						
KSRS	**Korea Array**	**58.62**	**66**	*eP*	**P**	**00 55 21.0**	**+0.5**
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSRS	**Korea Array**	**58.62**	**66**	P	**P**	**00 55 20.9**	**+0.3**
	comp=Z,2.8nm,0.5s,baz=301,slow=6.5,SNR=9.5						
KSRS				LR	LR	01 23 15.4	
	comp=Z,30nm,18.8s,baz=5.0,slow=39						
PSI	**Prapat**	**58.89**	**117**	P	**P**	**00 55 22.1**	**-0.7**
PSI				pmax	pmax		
	comp=Z,18nm,0.8s						
RPSI	**Rantau Prapat**	**58.97**	**118**	P	**P**	**00 55 22.1**	**-1.1**
SEY	**Seymchan**	**59.06**	**31**	*i* P	**P**	**00 55 23.7**	**+0.5**
DBIC	**Dimbokro**	**59.32**	**250**	P	**P**	**00 55 25.2**	**-0.5**
DBIC				pmax	pmax		
	comp=Z,10.0nm,0.7s						
DBIC	**Dimbokro**	**59.32**	**250**	P	**P**	**00 55 25.1**	**-0.6**
	comp=Z,9.7nm,0.6s,baz=40,slow=6.0,SNR=26						
DBIC	**Dimbokro**	**59.32**	**250**	P	**P**	**00 55 25.1**	**-0.5**
TIC	**Toumodi**	**59.45**	**250**	*eP*	**P**	**00 55 25.8**	**-0.8**
	comp=Z,3.3nm,0.2s						
KIC	**Kosan Boka**	**59.46**	**249**	*eP*	**P**	**00 55 26.1**	**-0.5**
	comp=Z,21nm,0.6s						
LIC	**Lamto**	**59.75**	**249**	*eP*	**P**	**00 55 28.0**	**-0.7**
	comp=Z,59nm,0.5s						
OPO	**Ambohidratompo**	**60.14**	**182**	P	**P**	**00 55 32.7**	**+1.5**
	comp=Z,12nm,0.9s,baz=353,slow=7.3,SNR=6.8						
ABPO	**Ambohimpanom**	**60.58**	**182**	P	**P**	**00 55 35.3**	**+1.0**
ABPO				pmax	pmax		
	comp=Z,18nm,1.0s						
ABPO	**Ambohimpanom**	**60.58**	**182**	P	**P**	**00 55 35.3**	**+1.0**
BILL	**Bilibino**	**60.74**	**23**	*i* P	**P**	**00 55 35.3**	**+0.6**
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,76nm,17.0s						
RES	**Resolute Bay**	**61.35**	**350**	P	**P**	**00 55 40.8**	**+2.1**
RES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
RES	**Resolute Bay**	**61.35**	**350**	P	**P**	**00 55 40.8**	**+2.1**
MJAR	**Matsushiro Arr**	**66.02**	**62**	LR	LR	01 27 03.1	
	comp=Z,51nm,19.6s,baz=15,slow=38						
PETK	**Petropavlovsk-**	**67.12**	**38**	LR	LR	01 27 23.5	
	comp=Z,51nm,18.8s,baz=243,slow=37						
RDOG	**Red Dog Mine**	**67.76**	**13**	P	**P**	**00 56 22.0**	**+1.4**
RDOG				IAmb	IAmb	00 56 41.0	
	comp=Z,6.7nm,1.1s						
SBUM	**Sibu**	**68.33**	**107**	P	**P**	**00 56 25.1**	**+0.2**
TOLK	**Toolik Lake Re**	**68.93**	**7**	IAmb	IAmb	00 56 31.8	
	comp=Z,10nm,1.1s						
C36M	**Paulatuk**	**69.02**	**358**	IAmb	IAmb	00 56 31.1	
	comp=Z,4.5nm,0.7s						
SCHQ	**Schefferville**	**69.45**	**326**	P	**P**	**00 56 31.7**	**+0.4**
	comp=Z,5.6nm,0.6s,baz=39,slow=5.7,SNR=9.8						
SCHQ	**Schefferville**	**69.45**	**326**	P	**P**	**00 56 31.9**	**+0.6**
SCHQ				IAmb	IAmb	00 56 32.4	
	comp=Z,5.7nm,0.6s						
LBTB	**Lobatse**	**70.07**	**203**	P	**P**	**00 56 37.1**	**+1.6**
LBTB				pmax	pmax		
	comp=Z,18nm,0.8s						
LBTB	**Lobatse**	**70.07**	**203**	P	**P**	**00 56 37.1**	**+1.6**
INK	**Inuvik**	**70.15**	**1**	P	**P**	**00 56 35.5**	**+0.2**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	**Inuvik**	**70.15**	**1**	P	**P**	**00 56 35.5**	**+0.2**
ANM	**Nome**	**70.47**	**15**	P	**P**	**00 56 39.0**	**+1.7**
ANM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ANM	**Nome**	**70.47**	**15**	P	**P**	**00 56 39.0**	**+1.7**
IL31		**72.96**	**7**	P	**P**	**00 56 54.1**	**+1.9**
ILAR	**Eielson Array**	**72.96**	**7**	*eP*	**P**	**00 56 53.7**	**+1.4**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ILAR	**Eielson Array**	**72.96**	**7**	P	**P**	**00 56 53.6**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=328,slow=4.7,SNR=8.6						
WRH	**Wood River Hil**	**73.13**	**8**	P	**P**	**00 56 54.6**	**+1.3**
GBN	**Guysborough**	**73.51**	**317**	P	**P**	**00 56 56.3**	**+0.5**
BOSA	**Boshof**	**73.57**	**202**	P	**P**	**00 56 56.9**	**+0.5**
	comp=Z,18nm,0.7s,baz=19,slow=5.4,SNR=34						
KTH	**Kantishna Hill**	**73.71**	**9**	IAmb	IAmb	00 57 00.5	
	comp=Z,6.4nm,0.8s						
TRF	**Thorofare Moun**	**73.89**	**9**	P	**P**	**00 56 59.2**	**+1.2**
TRF				IAmb	IAmb	00 57 13.1	
	comp=Z,7.0nm,1.1s						
SCRK	**Sand Creek**	**73.99**	**6**	P	**P**	**00 56 59.6**	**+1.0**
RND	**Reindeer**	**74.09**	**8**	IAmb	IAmb	00 57 01.6	
	comp=Z,4.0nm,0.7s						
RIDG	**Independent Ri**	**74.16**	**7**	P	**P**	**00 57 00.4**	**+1.0**
PPLA	**Purkeypile**	**74.19**	**10**	P	**P**	**00 57 00.1**	**+0.4**
PPLA				IAmb	IAmb	00 57 02.6	
	comp=Z,5.0nm,0.6s						
DAWY	**Dawson**	**74.21**	**4**	IAmb	IAmb	00 57 03.0	
	comp=Z,5.4nm,0.7s						
DOT	**Dot Lake**	**74.31**	**6**	IAmb	IAmb	00 57 04.0	
	comp=Z,4.9nm,0.6s						
LMN	**Caledonia Moun**	**74.86**	**319**	P	**P**	**00 57 04.0**	**+0.2**
LMN				IAmb	IAmb	00 57 05.3	
	comp=Z,10nm,0.8s						
MENT	**Mentasta**	**75.04**	**6**	IAmb	IAmb	00 57 08.4	
	comp=Z,6.7nm,0.7s						
HAL	**Halifax**	**75.11**	**317**	P	**P**	**00 57 05.8**	**+0.7**
HAL				pmax	pmax		
	comp=Z,27nm,0.7s						
HAL	**Halifax**	**75.11**	**317**	P	**P**	**00 57 05.8**	**+0.7**
SKT	**Skwentna**	**75.15**	**10**	IAmb	IAmb	00 57 08.9	
	comp=Z,5.4nm,0.5s						
YKA	**Yellowknife Ar**	**75.22**	**352**	P	**P**	**00 57 05.7**	**+0.3**
	comp=Z,2.6nm,0.5s,baz=8.2,slow=5.7,SNR=54						
FCC	**Fort Churchill**	**75.27**	**341**	P	**P**	**00 57 06.4**	**+0.6**
FCC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FCC	**Fort Churchill**	**75.27**	**341**	P	**P**	**00 57 06.4**	**+0.6**
SVW2	**Sparrevohn**	**75.41**	**12**	P	**P**	**00 57 07.9**	**+1.3**
SML	**Sawmill**	**75.71**	**9**	IAmb	IAmb	00 57 11.2	
	comp=Z,8.2nm,0.8s						
SUA	**Susitna One**	**75.75**	**10**	IAmb	IAmb	00 57 12.1	
	comp=Z,9.3nm,0.7s						
PMR	**Palmer**	**75.83**	**9**	IAmb	IAmb	00 57 12.4	
	comp=Z,6.6nm,0.6s						
RC01	**Rabbit Creek A**	**76.24**	**9**	IAmb	IAmb	00 57 15.6	
	comp=Z,8.8nm,0.5s						
KIWB	**Kanaga Island**	**78.31**	**27**	P	**P**	**00 57 20.5**	**-2.6**
FFC	**Flin Flon**	**80.74**	**344**	P	**P**	**00 57 36.6**	**+0.4**
FFC				IAmb	IAmb	00 57 37.3	
	comp=Z,5.8nm,0.6s						
FFC					**pP**	**00 57 55.4**	**-0.5**
ULM	**Lac du Bonnet**	**83.38**	**338**	*eP*	**P**	**00 57 50.4**	**+0.3**
ULM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ULM	**Lac du Bonnet**	**83.38**	**338**	P	**P**	**00 57 50.2**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=24,slow=8.1,SNR=7.6						
ULM	**Lac du Bonnet**	**83.38**	**338**	IAmb	IAmb	00 57 50.7	
	comp=Z,5.1nm,0.8s						
L56A	**Greenwood**	**83.68**	**323**		pP	00 58 12.5	+0.8
EGMT	**Eagleton**	**88.64**	**346**	IAmb	IAmb	00 58 18.8	
	comp=Z,5.5nm,0.8s						
NEW	**Newport**	**89.49**	**351**	IAmb	IAmb	00 58 22.7	
	comp=Z,6.1nm,0.8s						
RSSD	**Black Hills**	**91.16**	**341**	P	**P**	**00 58 29.7**	**+1.5**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
RSSD	**Black Hills**	**91.16**	**341**	P	**P**	**00 58 29.7**	**+1.5**
RSSD				IAmb	IAmb	00 58 30.2	
	comp=Z,4.0nm,0.7s						
WMOK	**Wichita Mounta**	**98.39**	**334**	IAmb	IAmb	00 59 02.7	
	comp=Z,1.8nm,0.8s						
NVAR	**Mina Array Bea**	**99.33**	**350**	P	**Pdif**	**00 59 06.6**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=5.7,slow=3.0,SNR=2.6						
WRA	**Warramunga Arr**	**99.40**	**108**	*i* P	**Pdif**	**00 59 05.4**	**-0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**99.40**	**108**	P	**Pdif**	**00 59 05.0**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=321,slow=3.7,SNR=7.7						
ASAR	**Alice Springs**	**101.52**	**111**	P	**Pdif**	**00 59 14.3**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=304,slow=4.3,SNR=5.3						
ASAR				PKKPbc	**PKKPbc**	**01 15 23.4**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=125,slow=3.9,SNR=5.8						
SNAA	**Sanae**	**119.06**	**197**	PKPdf	**PKPdf**	**01 04 10.4**	**+0.2**
CPUP	**Villa Florida**	**119.09**	**260**	PKP	**PKPdf**	**01 04 10.7**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=18,slow=2.4,SNR=6.1						
VNA3	**Neumayer Olymp**	**120.31**	**199**	PKPdf	**PKPdf**	**01 04 12.5**	**-0.1**
PLCA	**Paso Flores**	**135.68**	**250**	*e*PKIKP	**PKiKP**	**01 04 44.7**	**+0.2**
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PLCA	**Paso Flores**	**135.68**	**250**	PKP	**PKPdf**	**01 04 43.8**	**+0.9**
	comp=Z,2.0nm,0.6s,baz=65,slow=2.6,SNR=4.4						

PRU 10 00:50:11.9±0.0, 51.44N×16.18E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.60**	**173**	*e*P	Sg	00 50 31.9	+0.7
KSP	**Ksiaz**	**0.60**	**173**	*e*P	Sg	00 50 31.9	+0.7
KSP	**Ksiaz**	**0.60**	**173**	*e*Pg	Pg	00 50 23.1	-0.3
KSP				*e*Sg	Sg	00 50 31.1	-0.1
UPC	**Upice**	**0.94**	**187**	*e*PG	Pg	00 50 29.7	-0.2
UPC				*e*SG	Sg	00 50 42.2	+0.2
	comp=Z,12nm,0.4s						
DPC	**Dobruska-Polom**	**1.09**	**175**	*e*PG	Pg	00 50 32.1	-0.8
DPC				*e*SG	Sg	00 50 47.3	+0.3
PVCC	**Panska Ves**	**1.37**	**229**	*e*PG	Pg	00 50 37.6	-0.5
PVCC				*e*SG	Sb	00 50 56.1	-0.3
	comp=Z,23nm,0.4s						
KRLC	**Kraliky**	**1.42**	**164**	*e*SG	Sg	00 50 56.9	-0.5
PRU	**Pruhonice**	**1.79**	**216**	*e*PG	Pb	00 50 45.0	-0.5
PRU				*e*SG	Sb	00 51 08.2	-0.3
NKC	**Novy Kostel**	**2.66**	**244**	*e*SG	Sg	00 51 37.5	+0.3

*UPA **10** 01:28:39.4±1.0, 8.85N×82.91W, h23km±10km, MW3.8*
*UCR **10** 01:28:40.1±1.6, 8.81N×82.95W, h18km±5km, MD3.6*

ISC 10 01:28:39.8±1.1, 8.87N±0.05×82.90W±0.03, h28km±9km, n18, σ0°87/32, 2C, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.22**	**110**	*e*P	**Pb**	**01 28 45.9**	**-0.3**
BRU2				*e*S	**Sb**	**01 28 50.6**	**+0.1**
BRU2	**Volcan**	**0.22**	**110**	*i* P	**Pb**	**01 28 45.9**	**-0.3**
BRU2				*e*S	**Sb**	**01 28 50.6**	**+0.1**
BCO2	**Palmira**	**0.39**	**112**	*i* P	**Pb**	**01 28 48.4**	**-0.3**
BCO2				*e*S	**Sb**	**01 28 54.7**	**+0.1**
PTAR3	**Potrerillos Ar**	**0.43**	**114**	*e*P	**Pb**	**01 28 48.8**	**-0.4**
PTAR3				*e*S	**Sb**	**01 28 56.0**	**+0.5**
EDBA	**Buenos Aires**	**0.47**	**308**	*e*P	**Pb**	**01 28 50.1**	**+0.2**
DRK0	**Durika**	**0.52**	**319**	*e*P	**Pb**	**01 28 50.0**	**-0.7**
DRK0				*e*S	**Sb**	**01 28 57.3**	**-0.7**
BAGA3	**Bagala, Chiriq**	**0.54**	**138**	*e*P	**Pb**	**01 28 50.7**	**-0.2**
BAGA3				*e*S	**Sb**	**01 28 57.6**	**-0.8**
EDPN	**Palmar Norte**	**0.56**	**279**	*e*P	**Pb**	**01 28 50.3**	**-0.9**
EDPN				*i* S	**Sb**	**01 28 58.4**	**-0.5**
DVD	**David**	**0.62**	**134**	*e*P	**Pb**	**01 28 51.5**	**-0.7**
DVD				*e*S	**Sb**	**01 29 00.0**	**-0.5**
CNI2	**El Empalme, Bo**	**0.69**	**37**	*e*P	**Pb**	**01 28 52.6**	**-0.8**
CNI2				*e*S	**Sb**	**01 29 02.3**	**-0.3**
CHGR2	**Aguacate**	**0.75**	**85**	*e*P	**Pb**	**01 28 52.8**	**-1.5**
CHGR2				*e*S	**Sb**	**01 29 03.8**	**-0.4**
EDLM	**Las Mercedes**	**0.80**	**301**	*i* P	**Pb**	**01 28 54.6**	**-0.6**
EDLM				*e*S	**Sb**	**01 29 05.9**	**+0.2**
EDDO	**Dominical**	**1.03**	**292**	*e*P	**Pb**	**01 28 57.7**	**-1.3**
EDDO				*e*S	**Sb**	**01 29 11.5**	**-0.7**
LCR2	**La Lucha 2**	**1.40**	**309**	*e*P	**Pn**	**01 29 03.8**	**+0.2**
CVTR	**Volcan Turrial**	**1.43**	**323**	*e*P	**Pn**	**01 29 05.3**	**+1.1**
CVTR				*e*S	**Sb**	**01 29 25.3**	**+1.3**
HDC	**Heredia**	**1.65**	**313**	*e*P	**Pn**	**01 29 06.2**	**-0.8**
HDC				*e*S	**Sb**	**01 29 29.4**	**-0.7**
ARE1	**Arenal 1**	**2.39**	**311**	*e*P	**Pn**	**01 29 19.1**	**+1.9**
JTS	**Las Juntas de**	**2.47**	**305**	*e*P	**Pn**	**01 29 20.2**	**+1.9**

NNC 10 01:30:29.6±3.6, 43.15N×87.55E, h0km, mb3.7, mpv3.6, 6C-4D, Error ellipse: s-maj=27.8km s-min=22.1km az=119.0, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**4.70**	**337**	Pg	Pn	01 31 44.6	+2.8
	6.3nm,0.1s						
ZSN				Lg	Lg	01 32 44.7	
	9.4nm,0.5s						
MK31	**Makanchi Array**	**5.22**	**316**	Pn	Pn	01 31 49.8	+0.9
	0.8nm,0.2s,baz=132,slow=14,SNR=110						
MK31				⇓Sn	Sn	01 32 53.0	+3.2
	3.4nm,0.6s,baz=132,slow=26						
MK31				⇑Lg	Lg	01 33 12.7	
	14nm,0.7s,baz=134,slow=28						
MAKZ	**Makanchi**	**5.39**	**315**	⇑Pn	Pn	01 31 51.9	+0.6
	1.1nm,0.2s						
MAKZ				⇓Sn	Sn	01 32 53.4	-0.6
	2.4nm,0.7s						
MAKZ				⇑Lg	Lg	01 33 16.4	
	8.3nm,0.8s						
DJR	**Jarkent**	**5.75**	**285**	Pg	Pn	01 31 57.2	+1.0
	0.5nm,0.1s						
DJR				Lg	Lg	01 33 06.3	
	3.4nm,0.3s						
PDGK	**Podgornoye**	**5.89**	**275**	Pg	Pn	01 31 59.0	+0.8
	1.8nm,0.3s						
PDGK				Lg	Lg	01 33 10.3	
	3.5nm,0.6s						
PDGK	**Podgornoye**	**5.89**	**275**	⇑Pn	Pn	01 31 57.8	-0.5
	1.5nm,0.4s						
PDGK				⇓Sn	Sn	01 33 07.6	+1.0
	8.4nm,0.8s						
PDGK				⇑Lg	Lg	01 33 29.4	
	16nm,0.8s						
KURBB	**Kurchatov Arra**	**9.69**	**324**	⇓Pn	Pn	01 32 49.3	-0.9
	0.7nm,0.5s,baz=134,slow=28						
KURK	**Kurchatov**	**9.72**	**324**	⇑Pn	Pn	01 32 49.6	-1.0
	1.0nm,0.6s						

*BJI **10** 01:32:26.7±0.0, 20.55S×177.44W, h385km, mB5.2/29, mb5.1/48*
*IDC **10** 01:32:31.5±0.5, 20.73S×177.70W, h410km±5km, mb4.4/30, mb1 4.5/33, mb1mx4.4/45, mbtmp5.2/33, Error ellipse: s-maj=9.7km s-min=8.5km az=142.0*
*MOS **10** 01:32:31.2±1.4, 20.65S×177.73W, h414km, mb5.0/28, Error ellipse: s-maj=9.7km s-min=8.5km az=134.8*
*NEIC **10** 01:32:31.4±1.2, 20.71S±0.08×177.66W±0.09, h413km±5km, mb4.8/236, Error ellipse: s-maj=13.2km s-min=11.9km az=118.0*
*BGR **10** 01:32:32.8±0.0, 20.35S×177.63W, h400km*
*GCMT **10** 01:32:33.4±0.2, 20.68S±0.03×177.77W±0.02, h408km±1km, MW5.3/99, Moment Tensor Solution. s99,c149; Duration: 1§1 Moment tensor: Scale 10¹⁷Nm; Mrr-0.78±.03; Mθθ-0.34±.05; Mϕϕ1.12±.04; Mrθ-0.52±.04; Mθϕ-0.11±.04; Mϕr-0.46±.04; Best double couple: M₀1.21600×10¹⁷ NP1:ϕs147.00000°, δ42.00000°, λ-140.00000°. NP2:ϕs24.00000°, δ64.00000°, λ-56.00000°. Principal axes: T 1.2240, Plg13.0000°, Azm90.0000°; N -0.0140, Plg30.0000°, Azm188.0000°; P -1.2080, Plg56.0000°, Azm340.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

ISC 10 01:32:30.3±0.4, 20.72S±0.04×177.62W±0.04, h405km±3km, h406km; pP-P, n927, σ1§17/945, mb4.8/187, 91C-34D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.06**	**305**	P	**P**	**01 33 53.8**	**+0.7**
MSVF	**Nonsavu**	**5.06**	**305**	P	**P**	**01 33 53.8**	**+0.7**
NIUE	**Niue**	**7.42**	**79**	P	**P**	**01 34 17.6**	**-1.7**
	baz=7.3,SNR=25						
NIUE	**Niue**	**7.42**	**79**	P	**P**	**01 34 17.0**	**-2.3**
RAO	**Raoul Island**	**8.50**	**182**	P	**P**	**01 34 28.7**	**-2.4**
	115nm,0.3s,baz=60,slow=20,SNR=3.7						
RAO				S	**S**	**01 36 05.1**	**-4.8**
	212nm,0.3s,baz=268,slow=23,SNR=9.3						
GLKZ	**Green Lake**	**8.51**	**182**	P	**P**	**01 34 29.7**	**-

NNZ IAmb IAmb 01 36 56.9
comp=Z,29nm,0.6s
TUWZ Tuamarina 21.85 197 P **P** **01 36 50.3 -0.8**
BSWZ Blackbirch Sta 22.13 197 P **P** **01 36 54.3 +0.6**
THZ Tophouse 22.46 199 P **P** **01 36 56.6 -0.1**
THZ IAmb IAmb 01 37 00.5
comp=Z,21nm,0.8s
KHZ Kahutara 22.88 197 P **P** **01 37 00.0 -0.4**
KHZ IAmb IAmb 01 37 07.3
comp=Z,23nm,0.5s
TARA Tarawa 23.81 336 P **P** **01 37 09.0 -0.1**
MQZ McQueen's Vall 24.32 197 P **P** **01 37 14.2 +0.9**
MQZ IAmb IAmb 01 37 20.8
comp=Z,32nm,1.2s
RPZ Rata Peaks 24.80 200 P **P** **01 37 18.9 +1.2**
comp=Z,14nm,0.6s,baz=62,slow=1.4,SNR=6.1
RPZ Rata Peaks 24.80 200 P **P** **01 37 16.6 -1.1**
RPZ IAmb IAmb 01 37 22.8
comp=Z,22nm,0.8s
FOZ Fox Glacier 25.05 202 P **P** **01 37 19.2 -0.7**
FOZ IAmb IAmb 01 37 23.9
comp=Z,40nm,0.9s
WKZ Wanaka 26.46 202 P **P** **01 37 32.9 +0.4**
WKZ IAmb IAmb 01 37 41.3
comp=Z,32nm,1.0s
PAE Paea 26.64 88 *e*P **P** **01 37 35.3 +1.0**
comp=Z,18nm,1.0s
PPT2 Papeete2 26.66 88 *e*P **P** **01 37 35.9 +1.3**
comp=Z,153nm,1.2s
PPT Papeete 26.66 88 P **P** **01 37 35.0 +0.5**
PPT Papeete 26.66 88 P **P** **01 37 35.7 +1.1**
comp=Z,130nm,1.1s,baz=265,slow=12,SNR=7.6
PPT Papeete 26.66 88 P **P** **01 37 35.0 +0.5**
PPTF Pamatai, Papee 26.67 88 P **P** **01 37 34.8 +0.1**
TVO Taravao 26.93 89 *e*P **P** **01 37 38.1 +1.2**
comp=Z,15nm,0.9s
MLZ Mavora Lakes 27.25 202 P **P** **01 37 39.8 +0.4**
DCZ Deep Cove 27.68 203 P **P** **01 37 43.1 -0.1**
WHZ Wether Hill Ro 27.76 202 P **P** **01 37 44.7 +0.8**
WHZ IAmb IAmb 01 37 47.9
comp=Z,42nm,0.7s
EIDS Eidsvold 29.13 255 P **P** **01 37 56.2 0.0**
baz=29,SNR=13
EIDS Eidsvold 29.13 255 P **P** **01 37 56.8 +0.5**
EIDS IAmb IAmb 01 37 57.4
comp=Z,28nm,0.8s
ARMA Armidale 29.29 245 P **P** **01 37 59.1 +1.4**
baz=29,SNR=6.9
ARMA Armidale 29.29 245 P **P** **01 37 58.6 +0.9**
ARMA IAmb IAmb 01 38 00.6
comp=Z,20nm,0.6s
MGCD Mangrove Creek 30.40 239 P **P** **01 38 08.9 +1.7**
baz=30,SNR=6.5
RMQ Roma 31.28 253 P **P** **01 38 15.8 +0.8**
baz=31,SNR=10
CNB Canberra Magne 32.40 236 P **P** **01 38 26.1 +1.5**
baz=32,SNR=21
CAN Canberra 32.68 236 P **P** **01 38 27.4 +0.4**
CAN pmax pmax
comp=Z,73nm,1.0s
CAN Canberra 32.68 236 P **P** **01 38 27.4 +0.4**
CAN IAmb IAmb 01 38 29.8
comp=Z,73nm,1.0s
YNG Young 32.87 238 P **P** **01 38 28.7 +0.1**
baz=33,SNR=10
MILA Mila 33.12 233 P **P** **01 38 31.4 +0.7**
baz=33,SNR=6.5
KRVT Keravat (AS076 33.72 295 P **P** **01 38 35.1 -0.9**
comp=Z,136nm,0.8s,baz=150,slow=8.1,SNR=6.0
CTA Charters Tower 33.82 265 P **P** **01 38 37.1 +0.3**
baz=91,slow=12
CTA PP **PP** **01 40 11.1 +7.0**
comp=Z,16nm,1.0s,baz=112,slow=12,SNR=3.1
CTA S **S** **01 43 31.0 +0.2**
comp=Z,8.5nm,1.0s,baz=258,slow=17,SNR=4.1
CMSA Cobar Meteorol 34.51 244 P **P** **01 38 42.4 -0.1**
baz=35,SNR=28
QLP Quilpie 35.33 253 P **P** **01 38 49.5 -0.1**
baz=35,SNR=14
PMG Port Moresby 35.74 283 *de*P **P** **01 38 53.2 +0.1**
PMG pmax pmax
comp=Z,652nm,1.0s
PMG Port Moresby 35.74 283 P **P** **01 38 53.4 +0.3**
comp=Z,125nm,0.9s,baz=89,slow=5.7,SNR=28
PMG Port Moresby 35.74 283 P **P** **01 38 53.4 +0.3**
MTSU Mount Surprise 35.94 267 P **P** **01 38 54.5 -0.2**
baz=36,SNR=122
TOO Toolangi 36.05 234 P **P** **01 38 55.7 +0.2**
baz=36,SNR=22
TOO Toolangi 36.05 234 P **P** **01 38 55.9 +0.4**
TOO pmax pmax
comp=Z,73nm,1.0s
TOO Toolangi 36.05 234 P **P** **01 38 55.9 +0.4**
TOO IAmb IAmb 01 38 57.9
comp=Z,73nm,1.0s
PATS Pohnpei 36.18 317 P **P** **01 38 57.3 +0.6**
baz=36,SNR=3.0
COEN Coen 37.95 274 P **P** **01 39 11.9 +0.4**
baz=38,SNR=34
COEN Coen 37.95 274 P **P** **01 39 11.7 +0.2**
STKA Stephens Creek 38.01 244 *e*P **P** **01 39 12.3 +0.5**
STKA pmax pmax
comp=Z,24nm,0.7s
STKA Stephens Creek 38.01 244 P **P** **01 39 12.0 +0.2**
comp=Z,24nm,0.7s,baz=89,slow=9.8,SNR=45
STKA S **S** **01 44 31.2 -2.5**
comp=Z,0.6nm,0.4s,baz=296,slow=9.9,SNR=1.5
STKA Stephens Creek 38.01 244 P **P** **01 39 11.9 +0.1**
ARPS Mount Arapiles 38.66 237 P **P** **01 39 17.4 +0.3**
baz=39,SNR=16
MANU Manus Island 38.86 294 P **P** **01 39 19.5 +0.5**
MANU IAmb IAmb 01 39 20.3
comp=Z,34nm,0.7s
QIS Mount Isa 39.94 262 P **P** **01 39 26.8 -1.0**
baz=40,SNR=5.5
HTT Hallett 40.44 242 P **P** **01 39 31.8 +0.2**
baz=40,SNR=31
BBOO Buckleboo 42.77 244 P **P** **01 39 49.3 -0.9**
baz=43,SNR=98
BBOO Buckleboo 42.77 244 P **P** **01 39 49.5 -0.7**
BBOO IAmb IAmb 01 39 51.4
comp=Z,45nm,0.6s
JAY Jayapura 44.45 288 P **P** **01 40 04.1 +0.5**
comp=Z,121nm,0.7s,baz=137,slow=3.8,SNR=36
JAY Jayapura 44.45 288 P **P** **01 40 04.2 +0.5**
comp=Z,778nmcomp=Z,97nm,0.9s
WR0 Warramunga Arr 44.73 262 IAmb IAmb 01 40 06.7
comp=Z,32nm,0.6s
AS31 Alice Springs 44.81 257 P **P** **01 40 06.0 -0.4**
ASAR Alice Springs 44.81 257 P **P** **01 40 05.8 -0.6**
comp=Z,89nm,0.8s,baz=86,slow=8.3,SNR=345
ASAR S **S** **01 46 10.8 -2.3**
comp=Z,7.6nm,1.1s,baz=90,slow=15,SNR=16
ASAR ScS **ScS** **01 49 20.9 +1.8**
comp=Z,0.8nm,1.0s,baz=88,slow=4.2,SNR=4.2
GENI Genyem 44.89 288 P **P** **01 40 08.3 +1.2**
comp=Z,5μmcomp=Z,223nm,1.3s
WRAB Tennant Creek 44.91 262 *de*P **P** **01 40 06.4 -0.8**
WRAB pmax pmax
comp=Z,46nm,0.7s
WRAB Tennant Creek 44.91 262 P **P** **01 40 06.0 -1.2**
WRAB IAmb IAmb 01 40 07.3
comp=Z,47nm,0.8s
WRA Warramunga Arr 44.92 262 P **P** **01 40 05.8 -1.5**
comp=Z,33nm,0.5s,baz=94,slow=5.1,SNR=340
WRA pP **pwP** **01 41 27.9 -2.3**
comp=Z,3.7nm,0.7s,baz=99,slow=7.1,SNR=2.6
WRA S **S** **01 46 11.6 -3.0**
comp=Z,5.2nm,1.1s,baz=97,slow=15,SNR=6.9
WRA Warramunga Arr 44.92 262 IAmb IAmb 01 40 07.3
comp=Z,4.8nm,0.7s
KHLU Kahalu`u 45.36 29 P **P** **01 40 10.9 +0.2**
HMH Humu'ula Sheep 45.56 30 P **P** **01 40 12.8 +0.3**
POHA Pohakuloa 45.67 30 P **P** **01 40 12.7 -0.5**
SMPI Sarmi 46.46 288 P **P** **01 40 19.5 +0.3**
comp=Z,4μmcomp=Z,94nm,1.3s
KDU Kakadu 48.31 271 P **P** **01 40 32.6 -0.6**
baz=48,SNR=62
MTN Manton Dam 49.52 271 P **P** **01 40 41.4 -0.9**
baz=50,SNR=20
FORT Forrest 49.53 247 P **P** **01 40 41.2 -1.0**
baz=50,SNR=50
FORT Forrest 49.53 247 P **P** **01 40 42.1 -0.1**
WRKA Warakurna 49.75 254 P **P** **01 40 43.3 -0.7**
baz=50,SNR=112
GUMO Guam 50.22 310 P **P** **01 40 47.5 +0.1**
GUMO pmax pmax
comp=Z,305nm,0.8s
GUMO Guam 50.22 310 P **P** **01 40 47.5 +0.1**
KNRA Kununurra 51.00 266 P **P** **01 40 52.6 -0.6**
baz=51,SNR=41
KNRA Kununurra 51.00 266 P **P** **01 40 52.6 -0.6**
FITZ Fitzroy Crossi 53.35 262 P **P** **01 41 10.2 0.0**
baz=53,SNR=47
FITZ Fitzroy Crossi 53.35 262 P **P** **01 41 10.3 0.0**
SWI Sorong 53.65 285 P **P** **01 41 12.6 +0.2**
comp=Z,3μmcomp=Z,411nm,0.9s
MSAI Masohi 54.77 281 P **P** **01 41 18.8 -1.6**
comp=Z,35nm,0.6s
AAI Ambon 55.31 280 P **P** **01 41 21.9 -2.4**
comp=Z,2μmcomp=Z,128nm,1.1s
NLAI Namlea 56.49 280 P **P** **01 41 32.8 +0.3**
comp=Z,91nm,1.2s
SOEI Soe 56.86 272 P **P** **01 41 36.9 +1.7**
comp=Z,2μmcomp=Z,216nm,0.7s
SOEI Soe 56.86 272 P **P** **01 41 36.4 +1.1**
BATI Baumata 57.29 271 S **S** **01 49 03.7 +1.2**
comp=Z,12nm,0.5s,baz=85,slow=23,SNR=1.1
VNDA Vanda 57.72 185 P **P** **01 41 41.5 +1.5**
VNDA pmax pmax
comp=Z,5.0nm,0.9s
VNDA Vanda 57.72 185 P **P** **01 41 42.1 +2.1**
comp=Z,3.3nm,0.7s,baz=20,slow=6.3,SNR=8.0
VNDA Vanda 57.72 185 P **P** **01 41 41.5 +1.5**
TNTI Ternate 57.86 285 P **P** **01 41 44.4 +2.4**
comp=Z,137nm,1.3s
PSA00 Pilbara Seismi 57.97 257 IAmb IAmb 01 41 44.3
comp=Z,55nm,0.9s
SANI Sanana 57.97 281 P **P** **01 41 42.0 -0.7**
comp=Z,1μmcomp=Z,110nm,1.1s
KLBR Kellerberrin 58.28 245 P **P** **01 41 44.3 -0.3**
baz=58,SNR=26
NWAO Narrogin (SRO) 58.59 243 P **P** **01 41 46.5 -0.2**
baz=59,SNR=4.8
NWAO Narrogin (SRO) 58.59 243 P **P** **01 41 46.5 -0.2**
NWAO pmax pmax
comp=Z,23nm,1.0s
NWAO Narrogin (SRO) 58.59 243 P **P** **01 41 46.5 -0.2**
NWAO IAmb IAmb 01 41 48.6
comp=Z,23nm,0.9s
MMRI Maumere 59.12 272 P **P** **01 41 50.2 -0.3**
comp=Z,3μmcomp=Z,92nm,0.9s
BLDU Ballidu 59.29 246 P **P** **01 41 51.2 -0.3**
baz=59,SNR=17
MUN Mundaring 59.55 244 P **P** **01 41 53.4 +0.1**
baz=60,SNR=3.4
MORW Morawa 60.07 248 P **P** **01 41 56.5 -0.3**
baz=60,SNR=6.3
MORW Morawa 60.07 248 P **P** **01 41 56.6 -0.2**
MORW IAmb IAmb 01 41 57.9
comp=Z,30nm,1.1s
LUWI Luwuk 61.32 281 P **P** **01 42 05.5 +0.2**
comp=Z,13μmcomp=Z,146nm,1.2s
LUWI Luwuk 61.32 281 P **P** **01 42 05.5 +0.2**
BKSI Bukumba 62.20 275 P **P** **01 42 10.1 -1.0**
comp=Z,23nm,0.9s
APSI Ampana 62.41 280 P **P** **01 42 13.1 +0.7**
comp=Z,799nmcomp=Z,60nm,1.0s
BNSI Bone 62.54 276 P **P** **01 42 12.6 -0.7**
comp=Z,42nm,1.2s
KCP Kidapawan 62.65 290 *i*P **P** **01 42 14.4 +0.3**
MRSI Marisa 62.68 282 P **P** **01 42 13.4 -0.8**
comp=Z,55nm,1.1s
GIRL Giralia 62.84 255 P **P** **01 42 16.1 +1.0**
baz=63,SNR=5.7
SPSI Sidrap Palu 63.01 276 P **P** **01 42 16.0 -0.4**
comp=Z,29nm,1.0s
PLAI Plampang 63.23 270 P **P** **01 42 18.2 +0.4**
comp=Z,1μmcomp=Z,129nm,0.9s
TTSI Tana Toraja 63.30 277 P **P** **01 42 18.1 -0.2**
comp=Z,29nm,1.1s
MPSI Mapaga 64.50 281 P **P** **01 42 26.6 +0.6**
comp=Z,97nm,1.0s
SRBI Singaraja 65.87 270 P **P** **01 42 35.2 +0.5**
comp=Z,85nm,0.9s
JAGI Jajag, Banyuwa 66.74 270 P **P** **01 42 40.7 +0.6**
comp=Z,85nm,1.0s
QSPA South Pole Qui 69.35 180 P **P** **01 42 56.5 +1.1**
comp=Z,18nm,0.8s,baz=42,slow=2.6
QSPA pP **pP** **01 44 23.6 +0.9**
comp=Z,14nm,1.0s,baz=48,slow=3.8,SNR=6.5
QSPA South Pole Qui 69.35 180 IAmb IAmb 01 42 58.3
PCJI Pancitan 69.61 269 P **P** **01 42 58.9 +1.2**
comp=Z,187nm,0.7s
NGJI Ngawi 69.61 270 P P 01 43 12.1 +14
KKM Kota Kinabalu 70.16 285 P **P** **01 43 01.4 +0.3**
MJA0 Matsu Arr-Jizo 70.58 324 *e*P **P** **01 43 03.4 +0.3**
MJA0 pmax pmax
comp=Z,27nm,0.7s
MJAR Matsushiro Arr 70.60 323 P **P** **01 43 03.3 +0.1**
MJAR pmax pmax
comp=Z,7.0nm,0.8s
MJAR Matsushiro Arr 70.60 323 P **P** **01 43 03.3 +0.1**
comp=Z,35nm,0.8s,baz=145,slow=5.7,SNR=41
MJAR Matsushiro Arr 70.60 323 IAmb IAmb 01 43 03.4
comp=Z,6.5nm,0.8s
MAJO Matsushiro 70.60 323 *i* P **P** **01 43 03.6 +0.4**
MAJO pmax pmax
comp=Z,43nm,0.8s
MAJO Matsushiro 70.60 323 P **P** **01 43 03.3 +0.1**
MAT Matsushiro 70.60 323 P **P** **01 43 03.5 +0.3**
MJB9 Matsu-Tunnel 70.60 323 P **P** **01 43 02.8 -0.4**
KPJI Karang Pucung 71.99 269 P **P** **01 43 13.1 +1.2**
comp=Z,53nm,0.8s
SBUM Sibu 72.39 280 P **P** **01 43 14.7 +0.4**
SBUM Sibu 72.39 280 P **P** **01 43 15.0 +0.7**
KSM Kuching 73.80 278 P **P** **01 43 22.8 +0.4**
KSM Kuching 73.80 278 P **P** **01 43 24.0 +1.6**
ASAJ Asahikawa 74.09 331 P **P** **01 43 25.0 +1.6**
comp=Z,74nm,0.9s,baz=166,slow=5.1,SNR=16
DBJI Dramaga 74.29 269 P **P** **01 43 27.9 +2.6**
SSLB Suanglung 74.39 303 P **P** **01 43 25.1 -0.5**
SSLB IAmb IAmb 01 43 25.6
comp=Z,25nm,0.8s
SKR Severo-Kuril's 74.77 343 *ce*P **P** **01 43 26.8 -0.2**
YSS Yuzh-Sakhalins 76.25 333 ||*e*P **P** **01 43 36.8 +1.4**
YSS *e* 01 43 50.9
YSS pmax pmax
comp=Z,120nm,0.8s
YSS Yuzh-Sakhalins 76.25 333 P **P** **01 43 36.4 +1.0**
PET Petropavlovsk 76.27 346 *i* P **P** **01 43 35.1 -0.3**
PET pmax pmax
comp=Z,91nm,1.6s
PEA0B Petropavlovsk- 76.57 345 P **P** **01 43 37.5 +0.4**
PEA0B pmax pmax
comp=Z,100nm,1.1s
PEA0B Petropavlovsk- 76.57 345 P **P** **01 43 37.5 +0.4**
PETK Petropavlovsk- 76.57 345 P **P** **01 43 37.4 +0.3**
comp=Z,46nm,0.9s,baz=135,slow=8.8,SNR=51
KASI Kota Agung 76.75 269 P **P** **01 43 39.4 +0.4**
comp=Z,110nm,1.0s
KSRS Korea Array 77.29 318 P **P** **01 43 42.7 +1.4**
comp=Z,6.8nm,0.7s,baz=144,slow=6.2,SNR=17
LWLI Liwa 77.33 269 P **P** **01 43 45.9 +3.5**
comp=Z,50nm,0.6s
MDSI Maura Dua 77.40 270 P **P** **01 43 41.6 -1.0**
comp=Z,784nmcomp=Z,66nm,0.8s
SMMC Simmler 78.02 45 P **P** **01 43 47.2 +1.7**
baz=234
MNAI Manna 78.59 270 P **P** **01 43 49.5 +0.4**
109C Camp Elliot, M 78.61 48 P **P** **01 43 50.3 +1.6**
baz=236
ARVC Arvin 78.69 46 P **P** **01 43 50.8 +1.7**
baz=235
MWC Mount Wilson 78.69 47 IAmb IAmb 01 43 51.7
comp=Z,21nm,1.0s
KMRM Mail Ridge 78.70 39 P **P** **01 43 49.8 +0.7**
KMRM IAmb IAmb 01 43 52.1
comp=Z,30nm,0.9s
VES Vestal, Richgr 78.93 45 P **P** **01 43 51.5 +1.1**
baz=234
MURC Murrieta 78.94 48 P **P** **01 43 52.1 +1.5**
baz=236
BFSC Mount Baldy Ra 78.98 47 P **P** **01 43 51.8 +1.0**
baz=236,SNR=5.2
VOG Valley Oaks Go 79.02 44 P **P** **01 43 51.8 +1.0**
baz=234
MONP2 Monument Peak 79.08 49 P **P** **01 43 53.0 +1.5**
baz=237,SNR=14
EDW2 Edwards Air Fo 79.11 46 P **P** **01 43 52.8 +1.4**
baz=235,SNR=11
KSI Kapahiang 79.17 270 P **P** **01 43 52.1 -0.2**
comp=Z,184nm,0.8s
IKP In-Ko-Pah, Jac 79.17 49 P **P** **01 43 53.4 +1.5**
baz=237,SNR=5.7
O02D Mt. Diablo Mer 79.22 40 P **P** **01 43 53.7 +1.8**
baz=231,SNR=10.0
ISA Isabella, Lake 79.23 45 IAmb IAmb 01 43 54.8
comp=Z,18nm,1.1s
ISA Isabella, Lake 79.23 45 P **P** **01 43 53.5 +1.4**
baz=235,SNR=6.6
USA0B Ussuriysk Arra 79.34 326 P **P** **01 43 53.1 +0.7**
USA0B pmax pmax
comp=Z,63nm,1.1s
USA0B Ussuriysk Arra 79.34 326 P **P** **01 43 53.1 +0.7**
USRK Ussuriysk Ar. 79.34 326 P **P** **01 43 53.8 +1.4**
comp=Z,35nm,0.9s,baz=137,slow=3.5,SNR=62
TYV Tymovskoe 79.39 336 *e*P **P** **01 43 53.5 +1.1**
TYV pmax pmax
comp=Z,400nm,2.2s
TYV pmax pmax
comp=Z,70nm,1.4s
PFO Pinyon Flats O 79.45 48 P **P** **01 43 54.1 +0.7**
PFO pmax pmax
comp=Z,12nm,1.1s
PFO Pinyon Flats O 79.45 48 P **P** **01 43 54.7 +1.4**
comp=Z,7.3nm,1.0s,baz=270,slow=7.9,SNR=7.7
PFO Pinyon Flats O 79.45 48 P **P** **01 43 54.1 +0.7**
PFO Pinyon Flats O 79.45 48 P **P** **01 43 54.8 +1.4**
baz=236,SNR=7.7
XPFO Pion Flat 79.46 48 P **P** **01 43 54.0 +0.5**
BBRC Big Bear Solar 79.50 47 P **P** **01 43 54.9 +1.2**
baz=236
SWSC Sam W. Stewart 79.55 49 P **P** **01 43 55.2 +1.4**
baz=237
AFDM Forest Hills D 79.56 41 IAmb IAmb 01 43 55.9
comp=Z,14nm,1.1s
ORV Oroville 79.61 41 IAmb IAmb 01 43 56.2
comp=Z,12nm,1.0s
WDC Whiskeytown Da 79.62 39 IAmb IAmb 01 43 56.6
comp=Z,14nm,1.1s
LRMC Laurel Mtn Rad 79.66 46 P **P** **01 43 55.7 +1.3**
baz=235,SNR=5.1
N02D Trinity Center 79.77 39 P **P** **01 43 56.4 +1.6**
baz=231
RRX Edison Barstow 79.78 47 P **P** **01 43 56.2 +1.3**
baz=236
O03E Paynes Creek 79.88 40 P **P** **01 43 56.3 +0.9**
baz=232,SNR=7.9
MYKOM Kota Tinggi 79.91 276 P **P** **01 43 55.4 -0.7**
MYKOM Kota Tinggi 79.91 276 P **P** **01 43 58.0 +1.9**
CWC Cottonwood Cre 79.94 45 P **P** **01 43 57.0 +1.0**
baz=235
M02C Callahan 79.94 39 P **P** **01 43 57.4 +1.7**
baz=231
MDPB Devils Postpil 79.98 43 P **P** **01 43 55.7 -0.6**
MDPB IAmb IAmb 01 43 58.7
comp=Z,12nm,0.9s
BELC Belle Mtn. Jos 79.99 48 P **P** **01 43 57.8 +1.5**
baz=237,SNR=6.3
MPMC Manual Prospec 80.12 46 P **P** **01 43 58.1 +1.1**
baz=235,SNR=8.5
MLAC Mammoth, Mammo 80.13 44 P **P** **01 43 58.5 +1.4**
baz=234
GSC Goldstone, Bar 80.15 46 P **P** **01 43 58.4 +1.4**
baz=236,SNR=6.7
BC3 Big Chuckawall 80.18 48 P **P** **01 43 58.8 +1.5**
baz=237,SNR=7.0
HEC Hector Ludlow 80.21 47 P **P** **01 43 58.5 +1.1**
baz=236,SNR=13
YBH Yreka Blue Hor 80.24 38 P **P** **01 43 58.1 +0.8**
YBH pmax pmax
comp=Z,12nm,0.9s
YBH Yreka Blue Hor 80.24 38 P **P** **01 43 58.1 +0.8**
YBH IAmb IAmb 01 44 07.2
comp=Z,12nm,0.8s
WAKR Walker 80.26 43 IAmb IAmb 01 44 00.4
comp=Z,27nm,1.1s
GLA Glamis 80.30 49 IAmb IAmb 01 44 01.0
comp=Z,22nm,1.0s
GLA Glamis 80.30 49 P **P** **01 43 59.7 +1.9**
baz=238
PNTR Pine Nut 80.50 42 IAmb IAmb 01 44 01.5
comp=Z,31nm,1.0s
GMRC Granite Mounta 80.65 47 P **P** **01 44 01.2 +1.4**
baz=237,SNR=6.7
IRM Iron Mountain 80.67 48 P **P** **01 44 01.3 +1.6**
baz=237,SNR=13
YERR Yerington 80.67 42 IAmb IAmb 01 44 02.1
comp=Z,24nm,1.1s
GRAC Grapevine Rang 80.73 45 P **P** **01 44 01.8 +1.8**
baz=235
FURC Furnace Creek, 80.77 45 P **P** **01 44 01.6 +1.6**
baz=236
L04D Klamath Falls 80.78 38 P **P** **01 44 01.5 +1.3**
baz=231
M04C Macdoel 80.78 39 P **P** **01 44 01.5 +1.3**
baz=232
TUQ Turquoise Moun 80.83 47 P **P** **01 44 01.7 +1.1**
baz=236,SNR=8.3
SHOC Shoshone, Teco 80.84 46 P **P** **01 44 01.8 +1.3**
baz=236
Y12C Blythe 80.89 49 P **P** **01 44 01.7 +0.9**
Y12C IAmb IAmb 01 44 03.7
comp=Z,13nm,0.8s
Y12C Blythe 80.89 49 P **P** **01 44 02.5 +1.8**
baz=238
MDJ Mudanjiang 80.90 325 P **P** **01 43 60.0 -0.6**
113A Mohawk Valley, 80.90 50 IAmb IAmb 01 44 03.9
comp=Z,17nm,0.9s
NVAR Mina Array Bea 80.94 43 P **P** **01 44 02.6 +1.4**
comp=Z,10nm,1.0s,baz=225,slow=8.6,SNR=40
NVAR pP **pwP** **01 45 34.6 -0.1**
comp=Z,1.6nm,1.0s,baz=222,slow=5.8,SNR=2.7
PMSA Palmer Station 80.94 157 P **P** **01 44 01.8 +1.2**
KDAK Kodiak Island 80.95 13 P **P** **01 44 01.9 +1.4**
KDAK pmax pmax
comp=Z,22nm,1.2s
KDAK Kodiak Island 80.95 13 P **P** **01 44 01.9 +1.4**
comp=Z,15nm,1.1s,baz=160,slow=7.0,SNR=2.8
KDAK Kodiak Island 80.95 13 IAmb IAmb 01 44 02.7
comp=Z,22nm,1.1s
PAHR Pah Rah Range 81.00 42 IAmb IAmb 01 44 03.9
comp=Z,16nm,1.1s
NV11 Mina Array Sit 81.04 43 IAmb IAmb 01 44 04.1
comp=Z,23nm,1.1s
HSIG 81.09 54 P **P** **01 44 02.2 +0.3**
214A Organ Pipe Nat 81.17 51 P **P** **01 44 04.2 +1.9**
baz=239
KVN Kaiserville 81.43 43 IAmb IAmb 01 44 06.0
comp=Z,16nm,1.0s
TPNV Topopah Spring 81.44 45 P **P** **01 44 05.0 +1.2**
baz=236,SNR=7.9
MAW Mawson 81.48 200 P **P** **01 44 03.9 +0.6**
MAW *PP **pwP** **01 45 36.8 -0.3**
MAW pmax pmax
comp=Z,2.0nm,1.0s
MAW Mawson 81.48 200 P **P** **01 44 03.9 +0.6**
comp=Z,7.7nm,0.9s,baz=117,slow=8.9,SNR=5.4
MAW pP **pwP** **01 45 36.8 -0.3**
comp=Z,8.9nm,1.0s,baz=130,slow=7.9,SNR=4.2
MAW Mawson 81.48 200 IAmb IAmb 01 44 05.0
comp=Z,1.7nm,0.9s
J04D Umpqua Nationa 81.53 38 P **P** **01 44 05.6 +1.4**
baz=231
I04A Tendick Farm, 81.71 37 P **P** **01 44 06.5 +1.7**
baz=231
MOD Modoc Plateau 81.76 39 IAmb IAmb 01 44 07.6
comp=Z,18nm,1.0s
GRNR Gornyy 81.86 333 ||*i*P **P** **01 44 06.3 +0.8**
GRNR *e*S **S** **01 53 41.6 -2.6**
GRNR pmax pmax
comp=Z,40nm,1.1s
GRNR smax smax
comp=N,6.0nm,1.0s
GRNR MLR MLR
comp=Z,90nm,14.0s
JRMM Jerantut 81.95 277 P **P** **01 44 08.0 +1.2**
H04D Lebanon 81.99 36 P **P** **01 44 08.2 +2.0**
baz=231
BKNI Bangkinang 82.01 273 P **P** **01 44 07.2 +0.1**
Y14A Wickenburg 82.06 49 IAmb IAmb 01 44 09.7
comp=Z,15nm,0.9s
J05D Fort Rock, OR 82.06 38 P **P** **01 44 08.4 +1.6**
baz=232
PDSI Padang 82.12 272 P **P** **01 44 08.0 +0.3**
PINE Pine Mountain 82.54 38 P **P** **01 44 10.1 +0.7**
I05D Terrebonne, OR 82.65 37 P **P** **01 44 11.1 +1.4**

baz=232
R11A Troy Canyon, C 82.66 44 P P 01 44 11.0 +0.9
baz=236,SNR=10
CN2 Changchun 82.69 322 eP P 01 44 10.1 +0.3
CN2 pmax pmax
comp=Z,50nm,1.3s
TUC Tucson 82.83 52 P P 01 44 12.2 +1.2
TUC pmax pmax
comp=Z,18nm,1.0s
TUC Tucson 82.83 52 P P 01 44 12.2 +1.2
TUC IAmb IAmb 01 44 14.4
comp=Z,18nm,1.0s
TUC Tucson 82.83 52 P P 01 44 13.2 +2.2
baz=240
WHN Wuhan 82.86 306 ⇓P P 01 44 11.8 +0.8
WHN pmax pmax
comp=Z,120nm,1.4s
WVOR Wild Horse Val 83.07 40 IAmb IAmb 01 44 14.4
comp=Z,26nm,1.1s
BRLK Bradley Lake 83.12 13 IAmb IAmb 01 44 12.5
comp=Z,20nm,1.0s
X16A Lo Mia Camp, P 83.42 50 P P 01 44 15.3 +1.4
X16A IAmb IAmb 01 44 17.1
comp=Z,20nm,1.1s
319A Douglas 83.49 53 IAmb IAmb 01 44 17.8
comp=Z,29nm,1.1s
IPM Ipoh 83.51 277 P P 01 44 13.8 -1.0
IPM Ipoh 83.51 277 P P 01 44 16.0 +1.3
TIA Tai'an 83.69 312 P P 01 44 16.2 +1.1
TIA pmax pmax
comp=Z,26nm,1.6s
CCUT Cedar City 83.70 46 P P 01 44 15.4 0.0
U15A North Rim 83.85 47 IAmb IAmb 01 44 19.2
comp=Z,20nm,0.8s
WUAZ Wupatki 84.02 49 IAmb IAmb 01 44 19.8
comp=Z,13nm,1.1s
WUAZ Wupatki 84.02 49 P P 01 44 18.7 +1.7
baz=239
MA2 Magadan 84.09 344 ceP P 01 44 16.5 0.0
MA2 pmax pmax
comp=Z,83nm,1.7s
KULM Kulim 84.15 278 P P 01 44 17.2 -0.6
KULM Kulim 84.15 278 P P 01 44 19.0 +1.1
ELK Elko 84.20 43 P P 01 44 17.3 -0.5
ELK pmax pmax
comp=Z,10.0nm,1.1s
ELK Elko 84.20 43 P P 01 44 17.3 -0.5
HPIG 84.24 59 P P 01 44 18.6 +0.3
GAMB Gambell 84.34 3 IAmb IAmb 01 44 20.0
comp=Z,25nm,0.9s
RC01 Rabbit Creek A 84.57 13 IAmb IAmb 01 44 20.9
comp=Z,24nm,1.0s
G08A Pilot Rock 84.57 37 IAmb IAmb 01 44 21.6
comp=Z,14nm,0.9s
RPSI Rantau Prapat 84.83 275 P P 01 44 19.0 -2.2
E07A Sunnyside 84.84 36 P P 01 44 20.0 -0.6
PSI Prapat 84.87 275 P P 01 44 19.0 -2.6
PSI pmax pmax
comp=Z,48nm,1.0s
HAWA Hanford 84.91 36 IAmb IAmb 01 44 24.8
comp=Z,11nm,0.9s
ZAIG Zacatecas 84.98 64 P P 01 44 22.5 +0.3
W18A Petrified Fore 84.98 50 P P 01 44 23.2 +1.4
baz=240
KNK Knik Glacier 85.14 14 IAmb IAmb 01 44 24.0
comp=Z,13nm,1.0s
PMR Palmer 85.15 13 IAmb IAmb 01 44 24.1
comp=Z,23nm,1.2s
121A Cookes Peak, D 85.16 53 IAmb IAmb 01 44 25.9
comp=Z,10nm,0.9s
121A Cookes Peak, D 85.16 53 P P 01 44 24.7 +2.0
baz=242
E08A Dider Farm, El 85.23 36 IAmb IAmb 01 44 24.7
comp=Z,13nm,1.1s
GHO Glory Hole Cre 85.36 13 IAmb IAmb 01 44 25.1
comp=Z,25nm,1.0s
DUG Dugway, Tooele 85.46 44 P P 01 44 24.9 +1.0
baz=238
GSI Gunungsitoli 85.60 273 P P 01 44 27.1 +2.1
comp=Z,190nm,1.4s
GSI Gunungsitoli 85.60 273 P P 01 44 25.8 +0.8
D08A Wollman Farm, 85.65 36 P P 01 44 24.4 0.0
E09A Wood Farm, Sta 85.76 37 IAmb IAmb 01 44 27.6
comp=Z,12nm,1.1s
SCM Sheep Creek Mo 85.76 14 IAmb IAmb 01 44 25.7
comp=Z,22nm,0.9s
CRQM Cirque 85.84 16 IAmb IAmb 01 44 27.5
comp=Z,19nm,1.0s
TGL Tana Glacier 85.92 16 IAmb IAmb 01 44 27.9
comp=Z,22nm,1.1s
VRDI Verde Repeater 86.16 16 IAmb IAmb 01 44 29.0
comp=Z,16nm,1.3s
B08A Colville Reser 86.21 35 IAmb IAmb 01 44 28.7
comp=Z,12nm,1.1s
BALM Baldy 86.29 16 IAmb IAmb 01 44 28.6
comp=Z,11nm,1.0s
BJT Baijiatuau 86.29 315 P P 01 44 26.6 -1.1
BJT pmax pmax
comp=Z,20nm,0.9s
BJT Baijiatuau 86.29 315 P P 01 44 26.6 -1.1
BJT IAmb IAmb 01 44 29.1
comp=Z,20nm,0.9s
MCARA McCarthy VSAT 86.41 16 IAmb IAmb 01 44 30.2
comp=Z,17nm,1.1s
SRU San Rafael Swe 86.42 46 P P 01 44 28.7 +0.1
SRU pmax pmax
comp=Z,13nm,1.0s
SRU San Rafael Swe 86.42 46 P P 01 44 28.7 +0.1
C09A Chrisman Ranch 86.44 36 IAmb IAmb 01 44 30.2
comp=Z,17nm,1.1s
ENH Enshi 86.46 304 P P 01 44 29.2 +0.4
BARN Barnard Glacie 86.49 17 P P 01 44 28.4 0.0
BARN IAmb IAmb 01 44 31.0
comp=Z,25nm,1.2s
CTGM Chitina Glacie 86.50 17 IAmb IAmb 01 44 30.7
comp=Z,14nm,1.0s
KTH Kantishna Hill 86.56 12 IAmb IAmb 01 44 29.3
comp=Z,20nm,1.0s
MNTX Cornudas Mount 86.59 54 IAmb IAmb 01 44 32.2
comp=Z,12nm,1.0s
MNTX Cornudas Mount 86.59 54 P P 01 44 31.1 +1.7
baz=243
TRF Thorofare Moun 86.59 12 IAmb IAmb 01 44 30.4
comp=Z,29nm,1.0s
SYO Syowa Base 86.59 193 ⇓iP P 01 44 27.4 -1.3
SYO Syowa Base 86.59 193 ⇑ePcP PcP 01 44 30.4 -0.1
SYO Syowa Base 86.59 193 ⇓epP pP 01 46 02.0 +1.4
SYO Syowa Base 86.59 193 ⇑esP sP 01 46 44.6 +2.3
SEY Seymchan 86.67 347 iP P 01 44 29.2 +0.2
SEY Seymchan 86.67 347 P P 01 44 28.7 -0.3
comp=Z,38nm,0.9s,baz=148,slow=5.2,SNR=33
BNM Barren Site 86.77 52 P P 01 44 29.9 -0.6
MVCO Mesa Verde 86.87 48 P P 01 44 32.7 +1.8
baz=241
TXAR Lajitas Array 86.88 57 P P 01 44 32.9 +2.0
comp=Z,4.4nm,0.8s,baz=219,slow=6.4,SNR=44
TXAR pP pwP 01 46 05.8 -0.4
comp=Z,3.3nm,1.0s,baz=205,slow=5.5,SNR=5.8
TXAR PKKPbc PKKPbc 02 02 22.9 +0.3
comp=Z,0.6nm,0.8s,baz=104,slow=4.1,SNR=6.8
GYA Guiyang 87.07 300 ⇑iP P 01 44 33.2 +1.3
GYA pmax pmax
comp=Z,10.0nm,0.7s
ANMO Albuquerque 87.26 51 P P 01 44 33.3 +0.5
ANMO pmax pmax
comp=Z,6.0nm,0.9s
ANMO Albuquerque 87.26 51 P P 01 44 33.3 +0.5
ANMO Albuquerque 87.26 51 P P 01 44 33.6 +0.9
baz=242
SLVN Son La 87.30 294 IAmb IAmb 01 44 38.0
comp=Z,14nm,1.1s
NEW Newport 87.34 36 P P 01 44 33.0 +0.4
baz=235
BWN Browne 87.40 12 IAmb IAmb 01 44 34.4
comp=Z,17nm,1.0s
LHMI Lhok Sumawe 87.57 276 P P 01 44 37.1 +2.7
comp=Z,142nm,1.3s
LHMI Lhok Sumawe 87.57 276 P P 01 44 34.0 -0.3
MLSI Meulaboh, Aceh 87.73 275 P P 01 44 36.9 +1.7
comp=Z,136nm,1.4s
SNAA Sanae 87.78 178 P P 01 44 34.1 -0.3
SNAA Sanae 87.78 178 iP P 01 44 34.5 +0.1
SNAA Sanae 87.78 178 P P 01 44 34.1 -0.3
comp=Z,2.0nm,0.7s,baz=226,slow=7.5,SNR=22
RDMU Red Mountain 87.78 45 P P 01 44 35.1 0.0
VNA3 Neumayer Olymp 87.90 176 P P 01 44 35.0 0.0

WRH Wood River Hil 87.94 12 IAmb IAmb 01 44 36.4
comp=Z,24nm,1.1s
MLY Manley 87.94 11 IAmb IAmb 01 44 36.0
comp=Z,11nm,1.0s
RIDG Independent Ri 87.99 14 IAmb IAmb 01 44 37.3
comp=Z,10nm,1.1s
ZEA Zeya 87.99 331 eP P 01 44 36.6 +1.2
ZEA pmax pmax
comp=N,29nm,1.2s
ZEA pmax pmax
comp=Z,140nm,1.8s
PBKT Sadao Pong 88.03 288 P P 01 44 36.2 -0.2
DOT Dot Lake 88.09 14 P P 01 44 34.4 -1.3
DOT IAmb IAmb 01 44 37.8
comp=Z,16nm,1.2s
HDA Harding Lake 88.12 13 IAmb IAmb 01 44 36.3
comp=Z,7.1nm,0.7s
HDA Harding Lake 88.12 13 P P 01 44 35.9 +0.1
baz=209
CCB Clear Creek Bu 88.15 12 IAmb IAmb 01 44 37.2
comp=Z,22nm,1.2s
S22A 4UR Ranch, Cre 88.30 48 P P 01 44 38.6 +0.9
baz=242
MSO Missoula 88.32 38 P P 01 44 38.0 +0.7
baz=237
DLMT Dillon 88.33 40 IAmb IAmb 01 44 39.8
comp=Z,18nm,1.1s
TCOL CIGO, UAF Yank 88.34 12 P P 01 44 36.5 -0.3
baz=208
COLA College 88.34 12 P P 01 44 37.0 +0.2
COLA pmax pmax
comp=Z,15nm,0.7s
COLA College 88.34 12 P P 01 44 37.0 +0.2
COLA IAmb IAmb 01 44 37.1
comp=Z,15nm,0.7s
MDM Murphy Dome 88.35 12 IAmb IAmb 01 44 38.5
comp=Z,18nm,1.0s
IL31 88.45 13 IAmb IAmb 01 44 38.7
comp=Z,11nm,0.9s
ILAR Eielson Array 88.45 13 P P 01 44 36.9 -0.4
comp=Z,8.9nm,1.0s,baz=226,slow=5.4,SNR=34
O20A White River Ci 88.46 46 P P 01 44 39.1 +0.9
baz=241
SNOW Snow King Moun 88.47 42 IAmb IAmb 01 44 40.6
comp=Z,17nm,1.1s
NVL N'lazarevskaya 88.52 183 eP P 01 44 37.3 -0.5
NVL e*PP pwP 01 46 13.0 -0.6
NVL eS SKSac 01 54 26.0 -1.1
NVL pmax pmax
comp=Z,15nm,1.0s
XAN Xi'an 88.55 307 P P 01 44 39.6 +1.0
XAN pmax pmax
comp=Z,53nm,1.4s
XAN Xi'an 88.55 307 P P 01 44 38.3 -0.3
XAN pmax pmax
comp=Z,30nm,1.0s
XAN Xi'an 88.55 307 P P 01 44 38.3 -0.3
VNA1 Neumayer--Stat 88.57 176 P P 01 44 38.3 +0.3
MOOW Moose Ponds 88.62 42 P P 01 44 38.0 -0.9
POKR Poker Flat Res 88.64 12 P P 01 44 37.5 -0.7
baz=208
FLWY Flagg Ranch 88.82 42 IAmb IAmb 01 44 42.5
comp=Z,17nm,1.0s
BW06 Boulder Array 88.88 43 P P 01 44 40.7 +0.5
baz=240
PDAR Pinedale Array 88.88 43 P P 01 44 40.9 +0.7
comp=Z,6.3nm,1.0s,baz=213,slow=3.1,SNR=32
PDAR PKKPbc PKKPdf 02 02 16.1 +2.4
comp=Z,0.1nm,0.4s,baz=80,slow=1.7,SNR=4.3
H17A Grant Village 89.05 41 IAmb IAmb 01 44 44.4
comp=Z,10.0nm,1.0s
H17A Grant Village 89.05 41 P P 01 44 43.1 +2.1
baz=240
HIA Hailar 89.08 324 P P 01 44 39.8 -0.9
HIA pmax pmax
comp=Z,19nm,1.0s
HIA Hailar 89.08 324 P P 01 44 39.8 -0.9
HIA IAmb IAmb 01 44 42.2
comp=Z,19nm,1.0s
RDOG Red Dog Mine 89.17 5 P P 01 44 41.9 +1.3
SDCO Great Sand Dun 89.23 49 P P 01 44 42.8 +0.8
baz=243
LKWY Lake 89.25 41 IAmb IAmb 01 44 45.5
comp=Z,11nm,1.0s
BILL Bilibino 89.29 354 iP P 01 44 41.8 +0.6
BILL pmax pmax
comp=Z,12nm,1.0s
BILL Bilibino 89.29 354 P P 01 44 41.6 +0.4
BILL IAmb IAmb 01 44 43.9
comp=Z,9.3nm,0.9s
PRP Porcupine Dome 89.38 13 IAmb IAmb 01 44 44.1
comp=Z,14nm,1.2s
WALA Waterton Lakes 89.55 36 IAmb IAmb 01 44 44.9
comp=Z,11nm,1.1s
MSTX Muleshoe 89.56 53 IAmb IAmb 01 44 45.3
comp=Z,11nm,0.9s
MSTX Muleshoe 89.56 53 P P 01 44 43.9 +0.5
baz=245
DAWY Dawson 89.57 16 IAmb IAmb 01 44 44.5
comp=Z,11nm,0.9s
EGAK Eagle 89.73 15 IAmb IAmb 01 44 46.0
comp=Z,19nm,1.0s
HHC Hu-ho-hao-te 89.76 314 eP P 01 44 45.1 +0.9
HHC pmax pmax
comp=Z,14nm,1.0s
HHC pmax pmax
comp=Z,45nm,4.0s
KMI Kunming 89.77 297 P P 01 44 44.4 -0.3
KMI pmax pmax
comp=Z,17nm,0.5s
KMI Kunming 89.77 297 P P 01 44 44.4 -0.3
833A Chaparral WMA, 89.86 60 P P 01 44 46.3 +1.5
baz=246
Q24A Divide 90.03 48 P P 01 44 47.1 +1.4
baz=243
ISCO Idaho Springs 90.08 47 P P 01 44 48.0 +2.1
baz=243
RLMT Red Lodge 90.22 41 IAmb IAmb 01 44 48.7
comp=Z,9.6nm,1.0s
RLMT Red Lodge 90.22 41 P P 01 44 48.3 +1.9
baz=240
N23A Red Feather La 90.36 46 P P 01 44 48.4 +1.3
baz=243
CM31 Chiang Mai Arr 90.52 289 P P 01 44 49.2 +1.1
CMAR Chiang Mai Arr 90.52 289 eP P 01 44 50.2 +2.1
CMAR pmax pmax
comp=Z,21nm,0.9s
CMAR Chiang Mai Arr 90.52 289 P P 01 44 50.1 +2.0
comp=Z,21nm,0.9s,baz=118,slow=3.0,SNR=78
CMAR pP pwP 01 46 23.6 +0.2
comp=Z,3.9nm,0.8s,baz=107,slow=3.0,SNR=3.6
CHTO Chiang Mai 90.65 290 P P 01 44 49.5 +0.8
CHTO pmax pmax
comp=Z,31nm,0.8s
CHTO Chiang Mai 90.65 290 P P 01 44 49.5 +0.8
AMTX Amarillo 90.76 53 P P 01 44 49.8 +0.9
baz=245
K22A Casper 90.78 44 P P 01 44 49.7 +0.8
baz=242
CD2 Chengdu 91.21 303 P P 01 44 52.6 +1.6
CD2 pmax pmax
comp=Z,20nm,1.4s
EGMT Eagleton 91.37 38 P P 01 44 52.5 +1.0
baz=240
ABTX Abilene, Hawle 91.39 56 IAmb IAmb 01 44 53.6
comp=Z,12nm,1.1s
ABTX Abilene, Hawle 91.39 56 P P 01 44 52.2 +0.4
baz=246
TOLK Toolik Lake Re 91.41 10 P P 01 44 52.3 +1.3
baz=206
KSCO Kaye Shedlock' 91.81 49 P P 01 44 54.5 +0.7
baz=245
EPYK Eagle Plains 92.10 15 IAmb IAmb 01 44 56.9
comp=Z,17nm,1.1s
EPYK Eagle Plains 92.10 15 P P 01 44 54.3 0.0
baz=218
435B Jarrell 92.28 58 P P 01 44 56.8 +0.9
435B IAmb IAmb 01 44 58.4
comp=Z,8.5nm,1.0s
YAK Yakutsk 92.45 338 eP P 01 44 53.7 -2.2
YAK e*PP pP 01 46 25.8 -3.4
YAK e 01 48 40.0
YAK eS SKSac 01 54 46.6 -2.6
YAK e 01 55 27.1
YAK eSS SS 02 01 45.5 -1.2
YAK pmax pmax
comp=Z,38nm,1.1s

YAK pmax pmax
comp=E,19nm,1.4s
YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=Z,171nm,3.3s
YAK pmax pmax
comp=E,142nm,3.3s
YAK pmax pmax
comp=N,104nm,3.5s
YAK smax smax
comp=E,162nm,3.7s
YAK Yakutsk 92.45 338 P P 01 44 54.9 -1.0
comp=E,4.2nm,0.3s,baz=137,slow=1.1,SNR=11
YAK Yakutsk 92.45 338 P P 01 44 55.4 -0.5
LAO LASA Array 92.84 41 P P 01 44 59.5 +1.3
baz=243
RSSD Black Hills 93.07 44 P P 01 44 59.3 -0.2
RSSD pmax pmax
comp=Z,11nm,1.1s
RSSD Black Hills 93.07 44 P P 01 44 59.3 -0.2
RSSD IAmb IAmb 01 45 01.6
comp=Z,11nm,1.1s
RSSD Black Hills 93.07 44 P P 01 45 00.5 +1.0
baz=244
LZH Lanzhou 93.19 307 ⇑P P 01 45 00.8 +0.6
LZH pP pP 01 46 31.2 -2.1
LZH sP sP 01 47 10.5 -4.4
LZH PP PP 01 48 53.1 +2.7
LZH pmax pmax
comp=Z,25nm,1.4s
LZH pmax pmax
comp=Z,92nm,5.3s
CBKS Cedar Bluff 93.79 50 P P 01 45 04.4 +1.7
baz=246
INK Inuvik 94.39 15 P P 01 45 04.2 -0.4
INK pmax pmax
comp=Z,9.0nm,1.1s
INK Inuvik 94.39 15 P P 01 45 04.2 -0.4
comp=Z,8.0nm,1.1s,baz=211,slow=3.1,SNR=6.6
INK Inuvik 94.39 15 IAmb IAmb 01 45 06.1
comp=Z,9.0nm,1.1s
ULN Ulaanbaatar 95.76 319 ceP P 01 45 12.3 +0.7
ULN pmax pmax
comp=Z,8.0nm,1.3s
ULN Ulaanbaatar 95.76 319 P P 01 45 12.0 +0.4
ULN IAmb IAmb 01 45 16.9
comp=Z,5.0nm,1.1s
SONM Songino Array 96.15 319 eP P 01 45 13.4 +0.1
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 96.15 319 P P 01 45 13.1 -0.2
comp=Z,1.5nm,0.9s,baz=116,slow=3.4,SNR=13
SONM PP PP 01 49 02.6 -10
comp=Z,1.9nm,0.9s,baz=124,slow=5.5,SNR=4.0
SONM Songino Array 96.15 319 IAmb IAmb 01 45 17.4
comp=Z,1.3nm,0.9s
YKA Yellowknife Ar 96.56 25 P P 01 45 14.6 0.0
comp=Z,1.4nm,1.0s,baz=240,slow=4.2,SNR=13
GTA Gaotai 97.39 309 eP Pdif 01 45 19.9 +0.8
GTA pmax pmax
comp=Z,8.0nm,1.3s
TIXI Tiksi 99.05 345 P Pdif 01 45 25.2 -0.3
TIXI pmax pmax
comp=Z,5.0nm,1.1s
TIXI Tiksi 99.05 345 P Pdif 01 45 25.0 -0.6
comp=Z,2.7nm,0.8s,baz=105,slow=3.9,SNR=4.7
TIXI Tiksi 99.05 345 Pdif 01 45 25.2 -0.3
TIXI IAmb IAmb 01 45 26.0
comp=Z,4.8nm,1.1s
TLY Talaya 99.29 322 iP Pdif 01 45 27.2 +0.1
TLY pmax pmax
comp=Z,5.0nm,0.8s
SIV San Ignacio 107.83 115 PKKPbc PKKPbc 02 01 24.7 -0.2
comp=Z,1.3nm,0.8s,baz=90,slow=5.9,SNR=7.1
SIV PKKPab PKKPab 02 01 41.0 -0.7
comp=Z,0.6nm,0.9s,baz=300,slow=23,SNR=3.5
ZALV Zalesovo Beam 110.89 321 PKiKP PKiKP 01 50 15.3 -0.5
comp=Z,3.8nm,0.6s,baz=58,slow=3.6,SNR=18
ZALV PP PP 01 50 57.2 -4.0
comp=Z,3.1nm,1.0s,baz=120,slow=5.3,SNR=5.5
MKAR Makanchi Array 111.61 313 iPKiKP PKiKP 01 50 17.0 -0.4
MKAR Makanchi Array 111.61 313 Pdiff Pdif 01 46 24.5 +2.5
comp=Z,0.6nm,0.9s,baz=86,slow=6.2,SNR=4.2
MKAR PKiKP PKiKP 01 50 17.0 -0.4
comp=Z,4.9nm,0.7s,baz=67,slow=1.8,SNR=54
MKAR PP PP 01 51 02.9 -3.8
comp=Z,2.1nm,1.0s,baz=100,slow=6.6,SNR=9.1
KURK Kurchatov 114.40 317 ciPKiKP PKiKP 01 50 22.7 +0.1
KURK pmax pmax
comp=Z,12nm,0.8s
KURK Kurchatov 114.40 317 PKiKP PKiKP 01 50 22.6 0.0
KURBB Kurchatov Arra 114.45 317 PKiKP PKPdf 01 50 22.4 -0.3
comp=Z,6.8nm,0.7s,baz=97,slow=1.9,SNR=71
KURBB PP PP 01 51 18.5 -7.9
comp=Z,5.0nm,1.1s,baz=96,slow=7.1,SNR=6.8
KSH Kashi 115.31 305 PKP PKiKP 01 50 25.8 +0.9
KSH PP PP 01 51 33.5 +0.5
KSH SKS SKSdf 01 56 52.2 -5.7
KSH SKKS SKKSac 01 57 45.6 -5.8
KSH SS SS 02 06 59.4 +0.2
KSH AMB AMB
comp=Z,210nm,6.8s
AAK Ala-Archa 116.71 308 ciPKiKP PKiKP 01 50 29.1 +1.5
AAK pmax pmax
comp=Z,4.0nm,1.7s
AAK Ala-Archa 116.71 308 PKiKP 01 50 27.7 +0.1
BDFB Brasilia 118.73 122 PKKPbc PKKPbc 02 00 49.0 +0.1
comp=Z,1.6nm,0.6s,baz=61,slow=5.9,SNR=3.5
BVAR Borovoye Array 119.47 320 PKP PKiKP 01 50 32.3 0.0
comp=Z,12nm,0.7s,baz=90,slow=1.5,SNR=63
BVAR PP PP 01 51 51.4 -10
comp=Z,1.9nm,0.9s,baz=79,slow=7.9,SNR=3.8
KK31 Karatay Array 119.66 309 PKiKP PKiKP 01 50 33.3 +0.2
KK31 Karatay Array 119.66 309 PKiKP 01 50 33.3 +0.2
KKAR Karatay Array 119.66 309 PKiKP PKiKP 01 50 33.3 +0.2
KKAR Karatay Array 119.66 309 PKiKP 01 50 33.3 +0.2
KBL Kabul 120.31 299 PKiKP PKiKP 01 50 35.3 +0.4
KBL Kabul 120.31 299 PKiKP 01 50 35.3 +0.4
DAG Danmarks Havn 122.92 6 iPKiKP PKPdf 01 50 37.2 -1.1
DAG pmax pmax
comp=Z,5.0nm,1.0s
DAG Danmarks Havn 122.92 6 iP PKPdf 01 50 37.2 -1.1
comp=Z,5.4nm,1.0s
SVE Sverdlovsk 124.37 326 ePKiKP PKiKP 01 50 42.6 +0.7
SVE pmax pmax
comp=Z,30nm,1.3s
ARU Arti 125.58 325 iPKiKP PKiKP 01 50 44.7 +0.4
ARU 01 52 39.2
ARU 01 57 17.0
ARU Arti 125.58 325 PKiKP 01 50 44.3 -0.1
BOSA Boshof 126.21 205 PKiKP PKiKP 01 50 47.0 +0.3
BOSA Boshof 126.21 205 PKP PKiKP 01 50 47.0 +0.3
comp=Z,2.7nm,0.8s,baz=198,slow=3.2,SNR=4.4
ABKAR Akbulak array 126.49 317 PKiKP 01 50 46.7 +0.4
ARCES ARCESS Array B 129.20 350 PKP PKiKP 01 50 51.5 +0.3
comp=Z,6.7nm,0.9s,baz=2.8,slow=2.1,SNR=8.7
GEYT Alibeck 129.20 303 PKP PKiKP 01 50 52.2 0.0
comp=Z,8.3nm,0.7s,baz=149,slow=1.2,SNR=20
GEYT PP PP 01 53 03.0 -3.1
comp=Z,8.8nm,1.2s,baz=357,slow=3.0,SNR=9.7
GYA0B ALIBECK ARRAY 129.20 303 PKiKP 01 50 51.9 -0.3
PRGR Permogore 129.39 335 ePKiKP PKPdf 01 50 50.8 -0.2
PRGR pmax pmax
comp=Z,16nm,1.2s
FINES FINESS Array B 136.08 344 ePKiKP PKiKP 01 51 05.0 -0.3
FINES pmax pmax
comp=Z,8.0nm,0.9s
FINES FINESS Array B 136.08 344 PKhKP PKPpre 01 50 58.2
comp=Z,5.9nm,1.1s,baz=106,slow=3.0,SNR=7.0
FINES PKP PKPdf 01 51 04.3 +0.7
comp=Z,8.0nm,0.9s,baz=84,slow=1.9,SNR=8.2
MOS Moscow 136.26 332 ePKiKP PKPdf 01 51 03.5 -0.6
MOS e 01 53 57.6
MOS e 01 57 27.9
OBN Obninsk 137.12 332 ⇓iPKiKP PKiKP 01 51 06.7 -0.9
OBN e 01 52 47.2
OBN i 01 54 01.2
OBN pmax pmax
comp=Z,26nm,1.1s
ZEI Tsey 138.94 312 iPKHKP PKPpre 01 51 03.4
ZEI pmax pmax
comp=Z,7.0nm,0.9s
GNI Garni 139.12 308 ciPKiKP PKiKP 01 51 12.3 -0.2
GNI pmax pmax
comp=Z,72nm,1.7s

GNI	Garni	139.12 308			PKPdf	01 51 10.0	-0.1
NB2	NORSAR Subarra	139.24 353	PKP		PKPpre	01 51 01.4	
	comp=Z,24nm,2.0s,baz=16,slow=3.2						
NOA	NORSAR Array B	139.24 353	PKhKP		PKPpre	01 50 58.5	
	comp=Z,5.2nm,0.9s,baz=16,slow=4.8,SNR=10						
KBZ	Khabaz	139.30 314	PKhKP		PKPpre	01 51 03.0	
	comp=Z,2.1nm,0.8s,baz=230,slow=1.2,SNR=6.2						
KBZ			PKP		PKPdf	01 51 10.5	+0.4
	comp=Z,4.5nm,0.8s,baz=127,slow=2.2,SNR=5.8						
KIV	Kislovodsk	139.36 314	ePKIKP		PKiKP	01 51 12.6	-0.1
KIV			pmax	pmax			
	comp=Z,25nm,1.0s						
KIV	Kislovodsk	139.36 314			PKPdf	01 51 10.4	+0.1
KMBO	Kilima Mbogo	139.55 242	PKIKP		PKPdf	01 51 10.9	-0.9
KMBO	Kilima Mbogo	139.55 242	PKhKP		PKPpre	01 51 06.0	
	comp=Z,0.7nm,0.5s,baz=40,slow=6.6,SNR=3.7						
KMBO			PKP		PKiKP	01 51 13.9	-0.4
	comp=Z,4.4nm,0.8s,baz=88,slow=3.5,SNR=9.8						
KMBO	Kilima Mbogo	139.55 242			PKPdf	01 51 10.8	-0.9
AKH	Akhalkalaki	139.66 310	⇓P		PKiKP	01 51 13.1	-0.5
AGRB	Hanur-Agry	140.57 308	eP		PKPdf	01 51 02.9	-10
SENK	Senkaya-Erzuru	140.75 309	eP		PKPdf	01 51 07.2	-5.9
BATM	Batumi	140.88 311	⇑P		PKPdf	01 51 07.7	-5.3
KOPR	Koprukoy-ERZUR	141.29 309	eP		PKPdf	01 51 10.0	-4.0
SOC	Sochi	141.49 315	ePKIKP		PKiKP	01 51 13.5	-0.5
SOC			e			01 54 20.6	
SOC			eSS		SS	02 12 13.2	-6.0
SOC			pmax	pmax			
	comp=Z,11nm,0.8s						
SIRT	Sirnak	141.54 305	eP		PKPdf	01 51 09.7	-4.8
GURO	Guroymak-BITLI	141.57 306	eP		PKPdf	01 51 11.3	-3.2
SVAN	Silvan-Diyarba	142.31 306	eP		PKPdf	01 51 12.3	-3.4
YEDI	Yedisu-Bingol	142.42 308	eP		PKPdf	01 51 12.9	-3.1
ANN	Anapa	142.43 318	ePKHKP		PKPdf	01 51 12.5	-3.1
ANN			pmax	pmax			
	comp=Z,51nm,1.2s						
BNGB	Bingl	142.46 308	eP		PKPdf	01 51 12.7	-3.4
ERZN	Erzincan	142.97 309	eP		PKPdf	01 51 14.9	-2.1
MAZI	Mazidag	143.08 305	eP		PKPab	01 51 14.5	+0.2
SUW	Suwalki	143.17 340	PKIKP		PKPbc	01 51 14.5	+0.2
SUW	Suwalki	143.17 340	ePKP		PKPab	01 51 13.7	-0.2
SUW	Suwalki	143.17 340			PKPbc	01 51 14.5	+0.3
DYBB	Diyarbakir	143.17 306	eP		PKPbc	01 51 14.9	0.0
AKASG	Malin Array Be	143.38 331	ePKHKP		PKPab	01 51 14.2	-0.6
AKASG			pmax	pmax			
	comp=Z,46nm,0.7s						
AKASG	Malin Array Be	143.38 331	PKhKP		PKPab	01 51 14.1	-0.7
	comp=Z,46nm,0.7s,baz=42,slow=4.6,SNR=180						
MUD	Monsted U'grnd	143.96 354	i PKIKP		PKPbc	01 51 17.2	+0.5
MUD			pmax	pmax			
	comp=Z,95nm,1.1s						
MUD	Monsted U'grnd	143.96 354	i P		PKPbc	01 51 17.2	+0.5
	comp=Z,94nm,1.1s						
COP	Copenhagen	144.28 350	i PKIKP		PKPdf	01 51 18.6	+0.1
COP			pmax	pmax			
	comp=Z,84nm,0.8s						
COP	Copenhagen	144.28 350	i P		PKPdf	01 51 18.6	+0.1
	comp=Z,84nm,0.8s						
URFA	Urfa	144.32 306	eP		PKPdf	01 51 19.4	+0.1
MALT	Malatya	144.34 307	eP		PKPdf	01 51 19.6	+0.2
BSD	Bornholm Skovb	144.38 348	i PKHKP		PKPbc	01 51 16.0	-2.1
BSD			pmax	pmax			
	comp=Z,120nm,1.0s						
BSD	Bornholm Skovb	144.38 348	i P		PKPbc	01 51 16.0	-2.1
	comp=Z,116nm,1.0s						
SIM	Simferopol'	144.39 320	c iPKIKP		PKPdf	01 51 19.7	+0.6
SIM			pmax	pmax			
	comp=Z,187nm,1.0s						
RSDY	Resadiye-TOKAT	144.40 311	eP		PKPdf	01 51 19.8	+0.5
SVSK	Karacayir	144.81 311	eP		PKPab	01 51 21.3	+0.9
SEVA	Sevastopol	144.88 320	⇓P		PKPdf	01 51 19.5	-0.4
DARE	Darende-Malaty	144.96 308	eP		PKPab	01 51 21.8	+0.6
TOKT	Tokat	144.97 312	eP		PKPab	01 51 21.2	0.0
KVT	Kavak	145.01 313	eP		PKPab	01 51 21.7	+0.5
MBAR	Mbarara	145.09 236	PKP2		PKPab	01 51 22.3	-0.2
MBAR	Mbarara	145.09 236			PKPab	01 51 22.3	-0.2
DIKM	Dikmen	145.29 314	⇓P		PKPab	01 51 23.2	+1.0
DIKM	Dikmen	145.29 314	eP		PKPab	01 51 22.4	+0.2
GKP	Gorka Klasztor	145.56 344	ePKP2		PKPab	01 51 23.0	+0.2
GKP	Gorka Klasztor	145.56 344	ePKP		PKPab	01 51 23.0	+0.2
SORM	Soroca	145.58 329	⇑PKIKP		PKPbc	01 51 21.8	-0.3
SORM	Soroca	145.58 329	⇑P		PKPbc	01 51 21.8	-0.3
GAZ	Gaziantep	145.63 306	eP		PKPab	01 51 23.5	-0.3
KMRS	Kahramanmaras	145.75 307	eP		PKPbc	01 51 23.4	+0.4
BEL	Belsk	145.79 340	ePKP2		PKPab	01 51 23.2	-0.6
BEL	Belsk	145.79 340	ePKP		PKPab	01 51 23.2	-0.6
PURM	Purcari	145.87 325	⇑P		PKPbc	01 51 22.9	-0.1
BZK	Bozkurt	145.98 316	⇑P		PKPdf	01 51 22.0	+0.1
BZK	Bozkurt	145.98 316	eP		PKPbc	01 51 24.1	+0.7
BNN	Bunyan	146.05 310	eP		PKPbc	01 51 23.4	-0.6
YOZ	Yozgat	146.11 311	eP		PKPbc	01 51 24.5	+0.4
KIS	Kishinev	146.11 327	⇑ iPKP		PKPbc	01 51 24.0	+0.3
	comp=Z,360nm,1.3s						
KIS	Kishinev	146.11 327	⇑ i PKP2		PKPbc	01 51 24.0	+0.3
KIS			pmax	pmax			
	comp=Z,360nm,1.3s						
KIS	Kishinev	146.11 327	⇓P		PKPab	01 51 24.6	-0.7
MILM	Milestii Mici	146.17 327	⇑P		PKPbc	01 51 24.0	+0.1
LVV	L'vov	146.26 335	ePKP2		PKPbc	01 51 24.1	+0.1
BSEG	Bad Segeberg	146.29 352	ePKPbc		PKPab	01 51 25.7	0.0
	baz=15,slow=2.4						
CORM	Corum	146.37 312	eP		PKPab	01 51 25.8	-0.9
KOZT	Kozan	146.56 307	eP		PKPbc	01 51 25.7	+0.4
ILGA	Ilgaz	146.60 314			PKPbc	01 51 24.6	-0.9
LEOM	Leova	146.76 327	⇓PKIKP		PKPdf	01 51 24.2	+1.2
LEOM	Leova	146.76 327	⇓P		PKPdf	01 51 24.2	+1.2
KURC	Kurucasile-Bar	146.85 316	eP		PKPbc	01 51 26.5	+0.6
CANT	Cankiri	146.87 314	eP		PKPbc	01 51 26.8	+0.7
VASR	Vaslui	146.88 327	⇑P		PKiKP	01 51 27.2	-0.7
KWP	Kalwaria Pacla	146.93 336	PKP2		PKPbc	01 51 26.7	+0.8
KWP	Kalwaria Pacla	146.93 336	ePKP		PKPbc	01 51 26.4	+0.5
KWP	Kalwaria Pacla	146.93 336			PKPbc	01 51 26.7	+0.8
YURE	YUREGIR	146.93 306	eP		PKiKP	01 51 27.5	-0.9
RUE	Ruedersdorf	147.09 347	ePKPbc		PKiKP	01 51 27.9	-0.3
	baz=15,slow=2.4						
KARA	Karaisali	147.22 307	eP		PKPbc	01 51 27.2	+0.1
BR131	Keskin Array S	147.25 312	PKIKP		PKPdf	01 51 25.5	+1.2
BR131	Keskin Array S	147.25 312			PKPdf	01 51 25.4	+1.2
BRTR	Keskin Array B	147.25 312	ePKIKP		PKPdf	01 51 24.7	+0.4
BRTR	Keskin Array B	147.25 312	PKPbc		PKPbc	01 51 27.4	+0.2
	comp=Z,25nm,0.7s,baz=127,slow=2.4,SNR=135						
BRTR			pPKPbc		pPKPab	01 53 06.7	+1.5
	comp=Z,5.6nm,1.0s,baz=52,slow=3.3,SNR=4.1						
TLCR		147.29 324	⇑PKP2		PKPbc	01 51 27.7	+0.7
TLCR		147.29 324	⇑P		PKPbc	01 51 27.7	+0.7
BURAR	Bucovina Array	147.43 331	⇑PKIKP		PKPbc	01 51 26.4	-1.0
BURAR	Bucovina Array	147.43 331	⇑P		PKPbc	01 51 26.4	-1.0
GHRR		147.47 327	⇓P		PKiKP	01 51 28.8	-0.4
YAYX	Yaylak	147.47 311	eP		PKPbc	01 51 27.8	0.0
OJC	Ojcow	147.49 339	ePKIKP		PKPbc	01 51 27.0	-0.3
OJC	Ojcow	147.49 339	ePKP		PKPbc	01 51 27.0	-0.3
BIZ	Bicaz	147.50 329	⇑P		PKiKP	01 51 28.8	-0.4
JURR	Jurilovca	147.53 324	⇑P		PKPbc	01 51 26.9	-0.7
TESR	Tescani	147.54 328	⇑P		PKPbc	01 51 27.6	0.0
RETH	Rethem/Aller,	147.59 352	ePKPbc		PKiKP	01 51 29.3	+0.1
	baz=15,slow=2.4						
SERE	Sereflikochisa	147.64 311	eP		PKPbc	01 51 28.3	0.0
KOLS	Kolonicke sedl	147.66 335	ePKP2		PKiKP	01 51 29.3	-0.2
KOLS	Kolonicke sedl	147.66 335	ePKP		PKiKP	01 51 29.3	-0.2
CFR	Carcaliu	147.67 325	⇑PKIKP		PKPdf	01 51 25.5	+0.9
CFR	Carcaliu	147.67 325	⇑P		PKPdf	01 51 25.5	+0.9
NRDL	Niedersach Rie	147.72 351	ePKPbc		PKiKP	01 51 29.6	+0.2
	baz=15,slow=2.4						
TOPG	Topolog	147.73 324	⇑P		PKiKP	01 51 29.1	-0.6
MERS	Mersin	147.75 307	eP		PKPbc	01 51 29.0	+0.4
AFSR	Afar-Bala (An	147.77 312	eP		PKPbc	01 51 28.5	-0.1
ANTO	Ankara	147.77 313	⇓PKP2		PKiKP	01 51 29.8	-0.3
ANTO	Ankara	147.77 313	⇓P		PKiKP	01 51 29.8	-0.3
ANTO	Ankara	147.77 313			PKPbc	01 51 28.3	-0.2
PETR	Petresti	147.78 326	⇓P		PKiKP	01 51 29.7	-0.2
BR231	Keskin MP Arra	147.79 313			PKPbc	01 51 29.1	+0.5
BHL	Bhannes	147.80 301	eP		PKPbc	01 51 29.1	+0.2
ODBI	Odobesti	147.85 327	⇓P		PKPbc	01 51 28.5	+0.1
QRWL	Qaraoun	147.87 300	eP		PKiKP	01 51 30.2	-0.3
UZH	Uzhgorod	147.89 335	ePKIKP		PKPbc	01 51 27.3	-1.1
UZH			i			01 51 30.1	
UZH			e			01 53 09.6	
VRI	Vrincioaia	147.94 327	⇑PKP2		PKPbc	01 51 29.2	+0.5
VRI	Vrincioaia	147.94 327	⇑P		PKPbc	01 51 29.2	+0.5
TIRR	Tirgusor	147.98 324	⇑PKP2		PKPbc	01 51 28.9	+0.2
TIRR	Tirgusor	147.98 324	⇑P		PKPbc	01 51 28.9	+0.2
ASSE	Asse, Remlinge	147.99 350	ePKPbc		PKiKP	01 51 30.4	+0.4
	baz=15,slow=2.4						
KULU	Kulu	147.99 312	eP		PKPbc	01 51 29.8	+0.6
PLOR	Plostina	147.99 327	⇑PKP2		PKPbc	01 51 29.5	+0.6
PLOR	Plostina	147.99 327	⇑P		PKPbc	01 51 29.5	+0.6
KSP	Ksiaz	148.00 343	ePKP2		PKiKP	01 51 29.6	-0.6
KSP	Ksiaz	148.00 343	ePKP		PKiKP	01 51 29.6	-0.6
HARR	Harsova	148.09 324	⇑PKIKP		PKPdf	01 51 27.0	+1.7
HARR	Harsova	148.09 324	⇑P		PKPdf	01 51 27.0	+1.7
BMR	Baia Mare	148.15 333	⇓PKP2		PKiKP	01 51 30.5	0.0
BMR	Baia Mare	148.15 333	⇓P		PKiKP	01 51 30.5	0.0
MFTR	Murfatlar	148.15 323	⇑P		PKPbc	01 51 29.6	+0.4
BISRR	Bisoca	148.17 327	⇑P		PKiKP	01 51 30.6	-0.2
TRPA	Tarpa	148.19 334	⇑P		PKPdf	01 51 26.7	+1.4
IBBN	Ibbenburen	148.20 354	ePKPbc		PKiKP	01 51 30.8	+0.3
	baz=15,slow=2.4						
IBBN			ePKPab		PKPab	01 51 34.3	+0.9
	baz=15,slow=4.2						
ARCR	ARCALIA	148.21 331	⇑P		PKiKP	01 51 31.0	+0.3
OZUR		148.25 328	⇑P		PKiKP	01 51 30.4	-0.5
CHBY	Cihanbeyli	148.27 311	eP		PKPbc	01 51 29.7	-0.2
MANR	Mangalia	148.28 323	⇑P		PKiKP	01 51 30.4	-0.5
CLZ	Clausthal	148.32 351	ePKPbc		PKiKP	01 51 31.5	+0.6
	baz=15,slow=2.4						
CLL	Collm	148.36 347	ePKHKP		PKPdf	01 51 27.0	+1.5
CLL			i			01 51 34.7	
CLL			pmax	pmax			
	comp=Z,106nm,0.9s						
CLL			pmax	pmax			
	comp=Z,38nm,0.9s						
CLL	Collm	148.36 347	ePKPdf		PKPdf	01 51 27.0	+1.5
CLL			i PKPbc		PKiKP	01 51 30.4	-0.4
	comp=Z,106nm,0.9s						
CLL			i PKPab		PKPab	01 51 34.7	+0.6
	comp=Z,38nm,0.9s						
CLL			epPKPab		pPKPab	01 53 13.0	+4.7
CLL	Collm	148.36 347	ePKPbc		PKiKP	01 51 31.2	+0.4
	baz=15,slow=2.4						
CLL	Collm	148.36 347			PKPbc	01 51 30.1	+0.6
OKC	Ostrava-Krasne	148.36 340	ePKHKP		PKPdf	01 51 25.6	0.0
OKC			e			01 51 35.1	
OKC	Ostrava-Krasne	148.36 340	ePKPDF		PKPdf	01 51 25.6	0.0
OKC			⇑ePKP		PKiKP	01 51 30.8	-0.1
OKC			ePKPAB		PKPab	01 51 35.1	+0.9
UPC	Upice	148.38 343	ePKP2		PKiKP	01 51 31.0	+0.1
UPC	Upice	148.38 343	⇑ePKP		PKiKP	01 51 31.0	+0.1
DPC	Dobruska-Polom	148.44 343	ePKP2		PKiKP	01 51 30.8	-0.3
DPC	Dobruska-Polom	148.44 343	⇑ePKP		PKiKP	01 51 30.8	-0.3
DPC			ePKPAB		PKPab	01 51 35.6	+1.0
AMRR	Amara	148.47 325	⇓PKP2		PKPab	01 51 33.5	-1.3
AMRR	Amara	148.47 325	⇓P		PKPab	01 51 33.5	-1.3
KEBE	Keben-Mersin	148.51 307	eP		PKPab	01 51 30.8	+0.3
LANS	Liptovska Anna	148.52 338	ePKP2		PKiKP	01 51 32.2	+0.9
LANS	Liptovska Anna	148.52 338	ePKP		PKiKP	01 51 32.2	+0.9
DOPR	Dopca	148.54 329	⇑P		PKPbc	01 51 28.2	-2.0
ISR	Istrita	148.55 326	⇓PKP2		PKiKP	01 51 32.0	+0.5
ISR	Istrita	148.55 326	⇓P		PKiKP	01 51 32.0	+0.5
KRLC	Kraliky	148.56 342	ePKP2		PKiKP	01 51 31.6	+0.2
KRLC	Kraliky	148.56 342	⇑ePKP		PKiKP	01 51 31.6	+0.2
BRG	Berggiesshubel	148.56 346	ePKP		PKPdf	01 51 27.4	+1.5
	comp=Z,17nm,1.5s						
BRG	Berggiesshubel	148.56 346	i PKP		PKiKP	01 51 31.5	+0.2
	comp=Z,76nm,1.0s						
BRG	Berggiesshubel	148.56 346	i PKP		PKPab	01 51 35.2	+0.3
	comp=Z,58nm,1.2s						
BRG			epPKP		pPKPdf	01 53 03.7	-0.3
	comp=Z,31nm,1.8s						
BRG	Berggiesshubel	148.56 346	ePKHKP		PKPdf	01 51 27.4	+1.5
BRG			i			01 51 35.2	
BRG			pmax	pmax			
	comp=Z,17nm,1.5s						
BRG			pmax	pmax			
	comp=Z,76nm,1.0s						
BRG			pmax	pmax			
	comp=Z,58nm,1.2s						
BRG			pmax	pmax			
	comp=Z,31nm,1.8s						
BRG	Berggiesshubel	148.56 346	ePKPbc		PKiKP	01 51 31.9	+0.6
	baz=15,slow=2.4						
BRG			ePKPab		PKPab	01 51 35.9	+0.9
	baz=15,slow=4.2						
PSN	Preselentsi	148.59 323	P		PKiKP	01 51 31.2	-0.4
MORC	Moravsky Berou	148.60 341	PKP2		PKiKP	01 51 31.3	-0.2
MORC	Moravsky Berou	148.60 341	⇑P		PKPdf	01 51 27.9	+1.8
MORC	Moravsky Berou	148.60 341	ePKP		PKiKP	01 51 31.3	-0.2
MORC	Moravsky Berou	148.60 341			PKPdf	01 51 26.4	+0.4
MORC			PKPbc		PKiKP	01 51 31.3	-0.2
MLR	Muntele Rosu	148.60 327	⇓PKP2		PKiKP	01 51 31.7	0.0
MLR	Muntele Rosu	148.60 327	⇓P		PKiKP	01 51 31.7	0.0
IKL	Isikli	148.61 306	eP		PKPbc	01 51 30.8	+0.2
FBE	Freiberg	148.65 347	ePKPbc		PKiKP	01 51 32.5	+1.0
	baz=15,slow=2.4						
FBE			ePKPab		PKPab	01 51 36.4	+1.1
	baz=15,slow=4.2						
GTTG	Gvttingen	148.67 351	ePKPbc		PKiKP	01 51 32.2	+0.7
	baz=15,slow=2.4						
GTTG			ePKPab		PKPab	01 51 36.4	+1.0
	baz=15,slow=4.2						
NEUB	Neuenburg	148.69 349	ePKPbc		PKiKP	01 51 32.2	+0.7
	baz=15,slow=2.4						
KECS	Kecovo	148.71 337	ePKP2		PKiKP	01 51 32.1	+0.4
KECS	Kecovo	148.71 337	ePKP		PKiKP	01 51 32.1	+0.4
TEVE	Tevekalti-Mers	148.72 307	eP		PKPbc	01 51 31.6	+0.6
PVCC	Panska Ves	148.73 345	ePKP2		PKiKP	01 51 31.2	-0.5
PVCC	Panska Ves	148.73 345	⇑ePKP		PKiKP	01 51 31.2	-0.5
AKKU	Akkuyu-Mersin	148.74 306	eP		PKPbc	01 51 31.2	+0.2
LADK	Ladik-KONYA	148.81 311	eP		PKPbc	01 51 30.7	-0.6
CJR	Cluj-Napoca	148.84 331	⇓PKP2		PKPbc	01 51 31.5	+0.5
CJR	Cluj-Napoca	148.84 331	⇓P		PKPbc	01 51 31.5	+0.5
LEHL	Lehliu	148.84 325	⇑P		PKiKP	01 51 31.6	-0.4
SECR		148.85 327	⇓P		PKiKP	01 51 31.8	-0.3
MDB	Medias	148.90 330	⇑PKP2		PKiKP	01 51 32.1	0.0
MDB	Medias	148.90 330	⇑P		PKiKP	01 51 32.1	0.0
BERE	Bereket-Mersin	148.92 307	eP		PKPbc	01 51 32.0	+0.4
KONT	Konya--Tatoy	148.92 310	eP		PKPbc	01 51 31.1	-0.3
SAUV	Serdivan-Sakar	148.98 316	eP		PKPbc	01 51 31.9	+0.5
SULR		149.00 326	⇑P		PKiKP	01 51 31.9	-0.4
GULT	Gulveren	149.02 316	eP		PKiKP	01 51 32.2	-0.5
TEKE	Tekeli-Mersin	149.07 306	eP		PKPbc	01 51 32.0	+0.2
VOIR		149.09 328	⇑PKHKP		PKPbc	01 51 28.1	-3.6
VOIR		149.09 328	⇑P		PKPbc	01 51 28.1	-3.6
BUG	Bochum--Univer	149.10 354	ePKPbc		PKiKP	01 51 33.0	+0.7
	baz=15,slow=2.4						
SRCK	Saricakaya, Es	149.14 315	eP		PKPbc	01 51 32.1	+0.2
DRGR		149.17 332	⇑PKHKP		PKPbc	01 51 28.5	-3.3
DRGR		149.17 332	⇑P		PKPbc	01 51 28.5	-3.3
PRA	Prague	149.19 345	ePKP2		PKiKP	01 51 32.9	+0.3
PRA	Prague	149.19 345	ePKP		PKiKP	01 51 32.9	+0.3
PRU	Pruhonice	149.24 345	ePKP2		PKiKP	01 51 32.4	-0.3
PRU	Pruhonice	149.24 345	⇑ePKP		PKiKP	01 51 32.4	-0.3
PRU			ePKPAB		PKPab	01 51 38.5	+0.7
GOPC	GO Pecny, Ondr	149.25 344	ePKHKP		PKPbc	01 51 32.2	+0.4
GOPC			e			01 51 38.3	
GOPC	GO Pecny, Ondr	149.25 344	⇑ePKP		PKPbc	01 51 32.2	+0.4
GOPC			ePKPAB		PKPab	01 51 38.3	+0.5
MOX	Moxa	149.26 348	ePKPbc		PKiKP	01 51 33.6	+0.8
	baz=15,slow=2.4						
VYHS	Vyhne	149.29 338	ePKP2		PKiKP	01 51 33.2	+0.3
VYHS	Vyhne	149.29 338	ePKP		PKiKP	01 51 33.2	+0.3
VRAC	Vranov	149.30 342	⇓PKP2		PKiKP	01 51 33.3	+0.4
VRAC	Vranov	149.30 342	⇓P		PKiKP	01 51 33.3	+0.4
VRAC	Vranov	149.30 342	ePKP		PKiKP	01 51 33.3	+0.4
PLN	Plauen	149.31 348	ePKPbc		PKiKP	01 51 33.8	+0.9
	baz=15,slow=2.4						
TANN	Tannenbergstha	149.31 347	ePKPbc		PKiKP	01 51 33.8	+0.9
	baz=15,slow=2.4						
TANN			ePKPab		PKPab	01 51 39.1	+1.0
	baz=15,slow=4.2						
CSS	Mathiatis	149.32 304	P		PKPbc	01 51 32.7	+0.2
CSS	Mathiatis	149.32 304			PKPbc	01 51 32.7	+0.2
PRD	Provadia	149.34 323	P		PKiKP	01 51 33.3	+0.2
ARR	Arges	149.34 328	⇑P		PKPdf	01 51 28.8	+1.4
HRT	Hereke	149.36 317	eP		PKPbc	01 51 32.7	+0.3
JAVC	Velka Javorina	149.37 340	ePKP		PKiKP	01 51 34.5	+1.4
UBBA	Unterbreizbach	149.37 350	ePKPbc		PKiKP	01 51 33.5	+0.7
	baz=15,slow=2.4						
NEF	NEVSHA	149.37 323	P		PKiKP	01 51 33.3	+0.1
GUNZ	Gunzen	149.39 347	ePKPbc		PKiKP	01 51 34.2	+1.1
	baz=15,slow=2.4						
GUNZ			ePKPab		PKPab	01 51 39.5	+1.1
	baz=15,slow=4.2						
PSZ	Piszkesteto	149.40 337	PKHKP		PKPbc	01 51 32.5	+0.1
PSZ	Piszkesteto	149.40 337	⇑P		PKPbc	01 51 32.0	-0.4
PSZ	Piszkesteto	149.40 337			PKPbc	01 51 32.5	+0.1
WERN	Wernitzgruen	149.45 347	ePKPbc		PKiKP	01 51 34.4	+1.2
	baz=15,slow=2.4						
WERN			ePKPab		PKPab	01 51 39.8	+1.1
	baz=15,slow=4.2						
NKC	Novy Kostel	149.49 347	ePKHKP		PKPbc	01 51 33.1	+0.7
NKC			e			01 51 39.6	
NKC	Novy Kostel	149.49 347	⇑ePKP		PKPbc	01 51 33.1	+0.7
NKC			ePKPAB		PKPab	01 51 39.6	+0.8
KLYT	Kilyos	149.52 318	eP		PKPbc	01 51 32.9	+0.2
KRUC	Moravsky	149.58 342	ePKP		PKiKP	01 51 33.8	+0.4
RAZG	Razgrad	149.60 324	⇑P		PKiKP	01 51 33.7	0.0
LEF	Lefka	149.61 305	⇑P		PKPbc	01 51 31.6	-1.5
LEF	Lefka	149.61 305	eP		PKPbc	01 51 33.4	+0.3
ISK	Istanbul-Kandi	149.61 318	P		PKPbc	01 51 32.4	-0.5
ISK	Istanbul-Kandi	149.61 318	eP		PKPbc	01 51 33.1	+0.2
KAVV	Kandilli-Istan	149.62 318	eP		PKPbc	01 51 32.8	-0.1
TREC	Trest	149.63 343	ePKP2		PKiKP	01 51 34.0	+0.4
TREC	Trest	149.63 343	⇑ePKP		PKiKP	01 51 34.0	+0.4
GAZI	Gazipasa	149.64 307	eP		PKPbc	01 51 32.8	-0.4
PBCC	Pribram	149.65 345	⇑ePKP		PKiKP	01 51 33.9	+0.3
YLV	Yalova	149.69 317	⇑PKP2		PKPab	01 51 40.6	+0.5
YLV	Yalova	149.69 317	⇑P		PKPab	01 51 40.6	+0.5
SMOL	Smolenice	149.75 340	ePKP2		PKiKP	01 51 34.7	+0.9
SMOL	Smolenice	149.75 340	ePKP		PKiKP	01 51 34.7	+0.9
HUMR	Humele	149.76 327	⇑P		PKiKP	01 51 33.9	0.0
DEV	Deva	149.78 331	⇑PKP2		PKiKP	01 51 34.4	+0.4
DEV	Deva	149.78 331	⇑P		PKiKP	01 51 34.4	+0.4
MANZ	Manzenberg	149.79 347	ePKPbc		PKiKP	01 51 35.1	+1.2
	baz=15,slow=2.4						
BEBN	Eben Emael	149.87 356	PKPbc		PKiKP	01 51 33.6	-0.3
BEBN			PKiKP		PKPbc	01 51 34.6	+1.4
COPA	Copaceanca	149.91 326	⇑P		PKiKP	01 51 34.2	-0.1
MODS	Modra-Piesok	149.92 340	ePKHKP		PKiKP	01 51 34.3	0.0
MODS	Modra-Piesok	149.92 340	ePKP		PKiKP	01 51 34.2	0.0
SHUT	Suhut-Afyon	149.92 312	eP		PKiKP	01 51 34.4	-0.3
UCC	Uccle	149.94 357	PKiKP		PKiKP	01 51 34.7	+0.6
ROTZ	Rotzenmuhle	149.98 347	ePKPbc		PKiKP	01 51 35.4	+1.1
	baz=15,slow=2.4						
AHRW	Bad Neuenahr-A	150.01 354	ePKPbc		PKiKP	01 51 35.3	+1.1
	baz=15,slow=2.4						
AHRW			ePKPab		PKPab	01 51 42.0	+1.1
	baz=15,slow=4.2						
ARMT	Armutlu	150.01 317	eP		PKPbc	01 51 34.2	+0.2
SIRR	Siria	150.03 333	⇑P		PKiKP	01 51 35.3	+0.8
MEM	Membach	150.03 355	PKPbc		PKPbc	01 51 33.4	-0.3
MEM	Membach

RJOB ePKPab **PKPab 01 51 49.8 +1.4**
baz=15,slow=4.2
RZN Rozhen 151.83 323 P **PKiKP 01 51 38.7 +0.1**
FETY Fethiye 151.84 310 P **PKiKP 01 51 38.5 -0.1**
FETY Fethiye 151.84 310 eP **PKiKP 01 51 38.4 -0.1**
VTS Vitosha 152.01 326 P **PKiKP 01 51 39.3 +0.4**
VTS Vitosha 152.01 326 ⇑PKIKP **PKPdf 01 51 31.8 +0.1**
VTS Vitosha 152.01 326 ⇑P **PKPdf 01 51 31.8 +0.1**
VTS Vitosha 152.01 326 P **PKiKP 01 51 38.9 0.0**
EZN Ezine 152.03 318 P **PKiKP 01 51 38.9 +0.1**
EZN Ezine 152.03 318 eP **PKPbc 01 51 38.3 -0.2**
BFO Black Forest 152.04 352 PKIKP **PKiKP 01 51 38.8 +0.2**
BFO 01 51 50.1
BFO Black Forest 152.04 352 ePKPbc **PKiKP 01 51 39.9 +1.3**
baz=15,slow=2.4
BFO ePKPab **PKPab 01 51 50.1 +0.6**
baz=15,slow=4.2
BFO Black Forest 152.04 352 **PKiKP 01 51 38.8 +0.2**
BFO **PKPab 01 51 50.1 +0.6**
AYDB Zeytinkoy-Aydi 152.04 313 eP **PKiKP 01 51 39.3 +0.2**
TURN Turunc 152.07 311 eP **PKiKP 01 51 40.1 +1.1**
GADA Gvkgeada 152.08 319 P **PKPbc 01 51 37.8 -0.9**
SOKA Soboth 152.12 341 *i* PKiKP **PKPbc 01 51 38.5 -0.2**
comp=Z,19nm,1.0s,SNR=7.5
SOKA *i* PKPab **PKPab 01 51 50.1 0.0**
comp=Z,37nm,1.2s
SMTH Samothraki Isl 152.13 320 P **PKPbc 01 51 38.7 -0.1**
PERS Pernice 152.14 341 *i* PKPbc **PKiKP 01 51 39.0 +0.1**
PERS *i* PKPab **PKPab 01 51 50.3 +0.2**
GROS Grobnik 152.17 340 ePKPdf **PKPdf 01 51 32.4 +0.7**
GROS ePKPbc **PKiKP 01 51 38.9 -0.1**
GROS ePKPab **PKPab 01 51 50.4 +0.1**
KBA Koelnbreinsper 152.23 344 *i* PKPab **PKPab 01 51 51.9 +1.3**
comp=Z,25nm,0.9s
ECH Echery 152.30 353 **PKPab 01 51 50.7 +0.1**
UBR Ueberruh 152.38 349 ePKPbc **PKiKP 01 51 40.5 +1.2**
baz=15,slow=2.4
KAVA Kavala 152.40 322 P **PKiKP 01 51 39.6 +0.1**
WATA Walderalm 152.42 346 *i* PKPdf **PKPdf 01 51 32.0 -0.1**
comp=Z,2.4nm,0.7s
WATA *i* PKiKP **PKiKP 01 51 39.8 +0.3**
comp=Z,29nm,1.4s,SNR=7.8
WATA *i* PKPab **PKPab 01 51 52.4 +1.0**
comp=Z,44nm,1.4s
OBKA Obir 152.42 342 *i* PKiKP **PKiKP 01 51 39.7 +0.2**
comp=Z,8.1nm,0.8s
OBKA *i* PKPab **PKPab 01 51 51.2 -0.1**
comp=Z,13nm,0.9s
RETA Reutte 152.44 348 *i* PKiKP **PKiKP 01 51 39.6 +0.1**
comp=Z,12nm,1.3s
RETA *i* PKPab **PKPab 01 51 51.9 +0.6**
comp=Z,32nm,1.3s
MLSB Milas 152.45 312 eP **PKiKP 01 51 40.3 +0.5**
MMB Musomiste 152.45 324 P **PKiKP 01 51 40.2 +0.5**
DIVS Divibare 152.47 332 eP **PKPbc 01 51 38.3 -1.2**
MOTA Moosalm 152.51 347 *i* PKPdf **PKPdf 01 51 33.0 +0.7**
comp=Z,7.2nm,1.0s,SNR=5.7
MOTA *i* PKiKP **PKiKP 01 51 40.0 +0.2**
comp=Z,22nm,1.0s
MOTA *i* PKPab **PKPab 01 51 52.6 +0.8**
comp=Z,31nm,1.2s
NVR Nevrokopi 152.54 323 P **PKiKP 01 51 40.6 +0.7**
MYKA Terra Mystica 152.57 343 *i* PKiKP **PKPbc 01 51 39.7 +0.1**
comp=Z,8.7nm,0.8s,SNR=5.3
MYKA *i* PKPab **PKPab 01 51 51.6 -0.3**
comp=Z,51nm,1.6s
SQTA Sankt Quirin 152.61 347 *i* PKPdf **PKPdf 01 51 33.5 +1.1**
comp=Z,2.1nm,0.5s
SQTA *i* PKiKP **PKiKP 01 51 40.6 +0.7**
comp=Z,16nm,0.9s
SQTA *i* PKPab **PKPab 01 51 53.3 +1.2**
comp=Z,27nm,1.4s
KKB Krupnik 152.61 325 P **PKiKP 01 51 40.9 +0.9**
GCAM G?zelcaml? 152.62 314 eP **PKiKP 01 51 40.1 +0.1**
CRES Cresnjev 152.75 340 eP **PKPbc 01 51 39.8 -0.2**
ABTA Abfaltersbach 152.75 345 *i* PKPdf **PKPdf 01 51 32.0 -0.5**
comp=Z,8.3nm,0.8s,SNR=5.8
ABTA *i* PKiKP **PKiKP 01 51 40.3 +0.1**
comp=Z,27nm,0.9s
ABTA *i* PKPab **PKPab 01 51 53.1 +0.4**
comp=Z,28nm,1.1s
CLF Chambon-Foret 152.76 0 **PKPab 01 51 53.1 +0.6**
DAVA Damuels 152.81 349 *i* PKiKP **PKiKP 01 51 40.7 +0.3**
comp=Z,29nm,1.2s,SNR=6.5
DAVA *i* PKPab **PKPab 01 51 53.9 +0.9**
comp=Z,13nm,0.9s
LJU Ljubljana 152.85 341 eP **PKPbc 01 51 39.6 -0.6**
DAT Datca 152.86 311 eP **PKPbc 01 51 40.1 -0.6**
BODT Bodrum 152.89 312 P **PKPbc 01 51 40.6 0.0**
BODT Bodrum 152.89 312 eP **PKPbc 01 51 40.5 0.0**
FETA Feichten 152.90 347 *i* PKPdf **PKPdf 01 51 33.3 +0.4**
comp=Z,9.6nm,0.8s
FETA *i* PKiKP **PKiKP 01 51 41.6 +1.0**
comp=Z,16nm,1.0s
FETA *i* PKPab **PKPab 01 51 54.3 +0.9**
comp=Z,19nm,1.2s
BBLS Lazići 152.91 332 eP **PKiKP 01 51 41.2 +0.6**
HAPS Han Pijesak,BI 152.93 333 eP **PKPbc 01 51 40.5 -0.1**
CHOS Chios island 153.03 316 P **PKPbc 01 51 40.4 -0.5**
VOJS Vojsko 153.05 342 ⇑PKPdf **PKPdf 01 51 33.5 +0.6**
VOJS ePKPbc **PKiKP 01 51 41.0 +0.1**
VOJS ePKPab **PKPab 01 51 53.3 -0.7**
BLY Banja Luka 153.08 336 eP **PKPbc 01 51 40.1 -0.6**
RUDO Rudo 153.12 332 eP **PKPbc 01 51 40.5 -0.4**
OUR Ouranopolis 153.14 321 P **PKPab 01 51 54.7 +0.3**
CEY Cerknica 153.15 341 eP **PKiKP 01 51 41.5 +0.5**
KNT Kendrikon 153.20 324 P **PKPab 01 51 55.3 +0.6**
STIP Stip 153.21 326 ePKP **PKPbc 01 51 41.0 -0.1**
VAY Valandovo 153.27 325 *i* PKP **PKiKP 01 51 41.3 0.0**
VAY *i* PKP **PKPab 01 51 55.0 +0.1**
FUORN Ofenpass-Fuorn 153.37 348 **PKPdf 01 51 33.4 -0.3**
FUORN PKPbc **PKiKP 01 51 42.3 +0.6**
FUORN PKPab **PKPab 01 51 56.4 +0.8**
SKO Skopje 153.40 327 ePKP **PKiKP 01 51 41.9 +0.3**
SKO *i* PKP **PKPab 01 51 55.2 -0.3**
PLG Polygyros 153.42 322 P **PKPab 01 51 55.6 -0.1**
PAIG Paliouri 153.57 321 P **PKPab 01 51 56.4 +0.1**
SENIN Lac Senin/Sane 154.11 352 **PKPab 01 51 59.6 +1.0**
PDG Podgorica 154.11 331 eP **PKiKP 01 51 43.3 +0.3**
LIT Litokhoron 154.15 323 P **PKPab 01 51 58.8 0.0**
TEOL Teolo 154.26 345 **PKPdf 01 51 34.7 0.0**
TEOL PKPbc **PKiKP 01 51 43.7 +0.5**
TEOL **PKPab 01 51 59.3 +0.3**
FNA Florina 154.29 325 P **PKPbc 01 51 43.4 -0.1**
DRME Dracevica, Mon 154.33 330 eP **PKPbc 01 51 42.6 -0.9**
STON Ston 154.44 333 eP **PKiKP 01 51 43.0 -0.6**
IOSP Ios island 154.45 314 P **PKiKP 01 51 43.1 -0.8**
SANT Santorini 154.52 313 **PKiKP 01 51 43.5 -0.6**
SANT **PKPab 01 51 59.7 -0.9**
PTL Penteli 154.63 318 P **PKiKP 01 51 44.1 -0.2**
AGG Agios Georgios 154.96 321 P **PKPab 01 52 00.7 -1.6**
MAKR Makrakomi, Fth 155.08 321 P PKPdf 01 51 45.9 +10
BNI Bardonecchia 155.47 353 PKP2 **PKPab 01 52 05.3 +0.9**
BNI 02 51 36.5
BNI Bardonecchia 155.47 353 **PKPdf 01 51 36.5 0.0**
BNI **PKPab 01 52 05.3 +0.9**
IMMV Iera Moni Meta 156.02 312 P **PKPab 01 52 06.2 -0.8**
SGRT San Giovanni R 156.18 335 **PKPab 01 52 07.8 +0.3**
EVGI Lefkada island 156.19 323 P **PKPab 01 52 08.0 +0.4**
ITM Ithomi 156.38 318 P **PKPab 01 52 07.6 -0.9**
AQU L'Aquila 156.52 339 eP **PKPab 01 52 09.0 +0.1**
INTR Introdacqua 156.65 338 **PKPdf 01 51 38.0 0.0**
INTR **PKPab 01 52 09.6 +0.1**
MATE Matera 156.69 332 ⇓P **PKPab 01 52 09.9 +0.3**
LATE Laterza 156.78 342 **PKPab 01 52 10.2 +0.2**
ACER Acerenza 156.90 333 PKPdf **PKPdf 01 51 38.5 +0.2**
ACER **PKPab 01 52 10.4 -0.2**
PBRG Braganca 157.61 18 ePKPab **PKPab 01 52 13.9 +0.3**
TIP Timpagrande 157.84 329 P **PKPab 01 52 14.9 +0.1**
TIP Timpagrande 157.84 329 **PKPab 01 52 14.8 +0.1**
PVIS Viseu 158.23 21 ePKPab **PKPab 01 52 16.8 +0.4**
PTOM Tomar 159.01 24 ePKPab **PKPab 01 52 20.0 +0.3**
PCBR Castelo Branco 159.16 22 ePKPdf **PKPdf 01 51 43.0 +2.0**
PMRV Marv??o 159.55 22 ePKPdf **PKPdf 01 51 42.9 +1.4**
ESDC Sonseca Array 160.34 15 PKP **PKPdf 01 51 43.0 +0.6**
comp=Z,0.8nm,0.8s,baz=316,slow=2.8,SNR=5.8
ESDC PKPab **PKPab 01 52 25.2 -0.4**
comp=Z,1.4nm,0.9s,baz=351,slow=4.2,SNR=7.3
KEST Kesra 163.84 339 PKP **PKPdf 01 51 47.4 +1.3**
comp=Z,1.9nm,0.9s,baz=249,slow=3.3,SNR=3.5
KEST PKPab **PKPab 01 52 41.5 +0.4**
comp=Z,11nm,1.1s,baz=277,slow=1.4,SNR=8.0
TOA0 Torodi Ar. Sit 172.44 175 **PKPdf 01 51 52.1 -0.2**
TOA0 PKPab **PKPab 01 53 19.1 -0.3**
TORD Torodi Ar. Bea 172.44 175 PKP **PKPdf 01 51 51.5 -0.8**
comp=Z,4.1nm,0.9s,baz=217,slow=0.6,SNR=14
TORD PKPab **PKPab 01 53 19.8 +0.4**
comp=Z,1.6nm,0.9s,baz=200,slow=4.3,SNR=5.3
TAM Tamanrasset 176.42 306 PKP2 **PKPab 01 53 37.2 -0.3**
TAM 02 51 53.7
TAM Tamanrasset 176.42 306 **PKPdf 01 51 53.7 +0.2**
TAM **PKPab 01 53 37.2 -0.3**

NEIC ***10*** *01:36:16.6±1.5, 60°.56N±0°.01×142°.66W±0°.02, h17km±4km, Error ellipse: s-maj=2.1km s-min=0.9km az=135.0*
AEIC ***10*** *01:36:16.4±1.8, 60°.57N±0°.02×142°.67W±0°.03, h18km±4km, ML2.5/52, Error ellipse: s-maj=3.4km s-min=2.1km az=208.0*
PGC ***10*** *01:36:17.3±0.2, 60°.57N×142°.60W, h16km, ML2.6/12, ML2.5, 211km east of Valdez, Ak Southern Alaska*

ISC 10 01:36:16.5±0.8, 60°.57N±0°.02×142°.67W±0°.02, h17km±7km, n75, σ1s88/107, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TGL	**Tana Glacier**	**0.20**	**337**			Pg	**Pb**	**01 36 21.8**	**0.0**
CRQM	**Cirque**	**0.30**	**309**				**Pg**	**01 36 23.0**	**+0.1**
CRQM							**Sg**	**01 36 28.0**	**+0.6**
KHIT	**Khitrov Hills**	**0.32**	**246**				**Pg**	**01 36 23.2**	**0.0**
KHIT							**Sg**	**01 36 28.1**	**+0.3**
KULT	**Kultieth River**	**0.33**	**185**				**Pg**	**01 36 23.0**	**-0.3**
KULT							**Sg**	**01 36 28.2**	**+0.1**
KIAG	**Kiagna River**	**0.39**	**23**	P			**Pg**	**01 36 24.8**	**+0.3**
KIAG				S			**Sg**	**01 36 29.3**	**-0.5**
KIAG	**Kiagna River**	**0.39**	**23**				**Pg**	**01 36 24.7**	**-0.3**
KIAG							**Sb**	**01 36 30.8**	**+0.1**
GRIN	**Grindle Hills**	**0.43**	**228**				**Pg**	**01 36 25.2**	**-0.1**
GRNC	**Granite Creek**	**0.48**	**70**	P			**Pg**	**01 36 25.8**	**-0.3**
GRNC				S			**Sg**	**01 36 32.0**	**-0.7**
GRNC	**Granite Creek**	**0.48**	**70**				**Pg**	**01 36 25.8**	**-0.3**
BALM	**Baldy**	**0.49**	**19**	P			**Pg**	**01 36 26.4**	**0.0**
BALM				S			**Sb**	**01 36 33.9**	**+0.1**
BALM	**Baldy**	**0.49**	**19**				**Pg**	**01 36 26.4**	**0.0**
BALM							**Sb**	**01 36 33.7**	**-0.1**
MESA	**MESA**	**0.53**	**138**	P			**Pg**	**01 36 26.8**	**-0.3**
MESA				S			**Sg**	**01 36 33.7**	**-0.6**
MESA	**MESA**	**0.53**	**138**				**Pg**	**01 36 26.8**	**-0.3**
MESA							**Sb**	**01 36 35.0**	**+0.1**
BERG	**Berg Lake**	**0.54**	**251**				**Pg**	**01 36 27.1**	**-0.1**
BERG							**Sb**	**01 36 35.4**	**+0.4**
BGLC	**Bering Glacier**	**0.55**	**214**				**Pb**	**01 36 27.6**	**0.0**
PTPK	**Patty Peak**	**0.63**	**9**	P			**Pg**	**01 36 28.9**	**0.0**
PTPK				S			**Sg**	**01 36 36.9**	**-0.3**
PTPK	**Patty Peak**	**0.63**	**9**				**Pg**	**01 36 28.9**	**0.0**
PTPK							**Sb**	**01 36 37.6**	**0.0**
BARN	**Barnard Glacie**	**0.70**	**45**				**Pg**	**01 36 29.5**	**-0.6**
BARN							**Sg**	**01 36 39.0**	**-0.5**
RKAV	**Rock Avalanche**	**0.71**	**112**	P			**Pg**	**01 36 30.1**	**-0.2**
RKAV				S			**Sg**	**01 36 38.8**	**-1.0**
RKAV	**Rock Avalanche**	**0.71**	**112**				**Pg**	**01 36 29.7**	**-0.7**
NICHA	**Nichawak Mount**	**0.73**	**243**				**Pb**	**01 36 30.5**	**-0.2**
SUCK	**Suckling Hills**	**0.74**	**228**				**Pb**	**01 36 31.0**	**0.0**
VRDI	**Verde Repeater**	**0.76**	**330**				**Pb**	**01 36 30.8**	**-0.6**
VRDI							**Sg**	**01 36 41.1**	**-0.4**
CTGM	**Chitina Glacie**	**0.77**	**58**	P			**Pb**	**01 36 30.4**	**-1.0**
CTGM	**Chitina Glacie**	**0.77**	**58**				**Pb**	**01 36 30.5**	**-1.0**
HMT	**Hamilton**	**0.82**	**254**				**Pb**	**01 36 31.9**	**-0.5**
MCARA	**McCarthy VSAT**	**0.83**	**348**				**Pb**	**01 36 31.8**	**-0.7**
MCARA							**Sb**	**01 36 43.4**	**0.0**
RAGM	**Ragged Mountai**	**1.01**	**260**				**Pb**	**01 36 34.8**	**-0.7**
GOAT	**Goat Mountain**	**1.02**	**271**				**Pb**	**01 36 34.8**	**-0.8**
GLB	**Gilahina Butte**	**1.04**	**328**				**Pb**	**01 36 35.0**	**-1.0**
GLB							**Sb**	**01 36 48.7**	**-0.6**
SAMH	**Samovar Hills**	**1.04**	**114**	P			**Pb**	**01 36 35.7**	**-0.3**
SAMH	**Samovar Hills**	**1.04**	**114**				**Pb**	**01 36 35.5**	**-0.5**
YUK2	**White River**	**1.51**	**35**	P			**Pn**	**01 36 43.4**	**+0.6**
YUK2				S			**Sn**	**01 37 01.7**	**-0.4**
YUK2	**White River**	**1.51**	**35**				**Pn**	**01 36 43.4**	**+0.6**
EYAK	**Cordova Ski Ar**	**1.52**	**270**				**Pn**	**01 36 43.0**	**+0.1**
YUK3	**Moose Creek**	**1.61**	**41**	P			**Pb**	**01 36 45.3**	**-0.6**
YUK3				S			**Sb**	**01 37 05.8**	**-0.3**
YUK3	**Moose Creek**	**1.61**	**41**				**Pb**	**01 36 45.6**	**-0.3**
YKU2	**Yakutat**	**1.84**	**124**	Pn			**Pn**	**01 36 48.2**	**+0.9**
PNL	**Peninsula**	**1.87**	**118**	Pn			**Pn**	**01 36 47.3**	**-0.4**
PNL				Sn			**Sn**	**01 37 10.8**	**-0.1**
PNL	**Peninsula**	**1.87**	**118**				**Pn**	**01 36 46.4**	**-1.3**
YUK1	**Sand Pete Hill**	**1.89**	**32**	Pn			**Pn**	**01 36 48.0**	**-0.1**
YUK1				Pg			**Pg**	**01 36 50.4**	**-0.3**
YUK1				Sg			**Sg**	**01 37 15.8**	**-1.5**
PS11	**TAPS Pump St11**	**2.03**	**319**				**Pn**	**01 36 50.8**	**+0.9**
BVCY	**Beaver Creek**	**2.04**	**24**	Pg			**Pb**	**01 36 52.6**	**-0.6**
BVCY				Sg			**Sb**	**01 37 19.7**	**+1.5**
BVCY	**Beaver Creek**	**2.04**	**24**				**Pb**	**01 36 52.1**	**-1.0**
YUK4	**Talbot Arm**	**2.11**	**67**	Pg			**Pb**	**01 36 54.1**	**-0.2**
YUK4				Sg			**Sg**	**01 37 24.6**	**+0.3**
YUK4	**Talbot Arm**	**2.11**	**67**				**Pb**	**01 36 54.1**	**-0.2**
YUK6	**Outpost Mounta**	**2.15**	**78**	Pn			**Pn**	**01 36 52.8**	**+1.1**
YUK6				Sg			**Sg**	**01 37 23.9**	**-1.5**
YUK6	**Outpost Mounta**	**2.15**	**78**				**Pn**	**01 36 52.9**	**+1.2**
YUK7	**Dusty Glacier**	**2.24**	**89**	Pn			**Pn**	**01 36 53.3**	**+0.3**
YUK7				Sg			**Sb**	**01 37 25.6**	**+1.6**
YUK7	**Dusty Glacier**	**2.24**	**89**				**Pn**	**01 36 53.8**	**+0.8**
YUK5	**Granite Creek**	**2.42**	**74**	Pn			**Pn**	**01 36 56.9**	**+1.5**
YUK5				Pg			**Pn**	**01 36 59.6**	**0.0**
YUK5				Sg			**Sb**	**01 37 31.9**	**+2.1**
YUK5	**Granite Creek**	**2.42**	**74**				**Pn**	**01 36 57.0**	**+1.6**
BC03		**2.54**	**9**				**Pn**	**01 36 58.4**	**+1.5**
BCAR	**Beaver Creek A**	**2.54**	**9**	Pn			**Pn**	**01 36 57.9**	**+0.9**
HYT	**Haines Junctio**	**2.55**	**82**	Pn			**Pn**	**01 36 57.8**	**+0.6**
HYT				Sg			**Sb**	**01 37 35.4**	**+2.4**
HYT	**Haines Junctio**	**2.55**	**82**	Pn			**Pn**	**01 36 57.4**	**+0.2**
SCM	**Sheep Creek Mo**	**2.59**	**301**				**Pn**	**01 36 58.3**	**+0.7**
DHAK	**Deception Hill**	**2.69**	**121**				**Pn**	**01 36 58.8**	**-0.3**
PAX	**Paxson**	**2.75**	**332**	Pn			**Pn**	**01 36 59.9**	**0.0**
PAX	**Paxson**	**2.75**	**332**				**Pn**	**01 37 00.5**	**+0.6**
SML	**Sawmill**	**3.01**	**297**	Pn			**Pn**	**01 37 03.4**	**0.0**
DOT	**Dot Lake**	**3.16**	**349**	Pn			**Pn**	**01 37 06.2**	**+0.8**
DOT	**Dot Lake**	**3.16**	**349**	Pn			**Pn**	**01 37 06.5**	**+1.1**
RIDG	**Independent Ri**	**3.34**	**343**	Pn			**Pn**	**01 37 09.2**	**+1.2**
PLBC	**Pleasant Camp**	**3.36**	**107**	Pn			**Pn**	**01 37 07.0**	**-1.0**
DHY	**Denali Highway**	**3.36**	**320**	Pn			**Pn**	**01 37 09.2**	**+0.8**
SCRK	**Sand Creek**	**3.47**	**350**	Pn			**Pn**	**01 37 09.8**	**-0.1**
DAWY	**Dawson**	**3.83**	**22**	Pn			**Pn**	**01 37 16.2**	**+1.6**
DAWY	**Dawson**	**3.83**	**22**	Pn			**Pn**	**01 37 14.8**	**+0.2**
WHY	**Whitehorse**	**3.84**	**85**	Pn			**Pn**	**01 37 15.1**	**+0.3**
WHY				Sn			**Sn**	**01 37 59.0**	**-0.6**
WHY				Sg			**Sb**	**01 38 14.4**	**+4.4**
WHY	**Whitehorse**	**3.84**	**85**	Pn			**Pn**	**01 37 14.6**	**-0.2**
RND	**Reindeer**	**4.07**	**317**	Pn			**Pn**	**01 37 18.7**	**+0.6**
EGAK	**Eagle**	**4.28**	**9**				**Pn**	**01 37 22.1**	**+1.3**
TRF	**Thorofare Moun**	**4.61**	**312**	Pn			**Pn**	**01 37 25.5**	**+0.1**
IL31		**4.64**	**337**				**Pn**	**01 37 25.2**	**-0.5**

IDC ***10*** *01:42:15.3±1.0, 60°.22S×47°.20W, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.9/23, mbtmp4.1/7, ML4.1/1, MS3.5/5, Ms1 3.5/5, ms1mx3.2/36, Error ellipse: s-maj=34.5km s-min=23.2km az=81.0*
NEIC ***10*** *01:42:16.5±1.7, 60°.2S±0°.1×47°.2W±0°.2, h10km±2km, mb4.5/9, Error ellipse: s-maj=21.2km s-min=7.1km az=136.0*

ISC 10 01:42:16.6±0.8, 60°.2S±0°.1×47°.2W±0°.1, h10km, n21, σ1s01/16, mb4.1/7, MS3.7/5, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.32**	**49**	Pn		Pn	**Pn**	**01 44 16.7**	**-0.5**
PMSA	**Palmer Station**	**9.00**	**232**	Pn		Pn	**Pn**	**01 44 25.6**	**-0.8**
	2.1nm,0.3s,baz=73,slow=10,SNR=7.7								
PMSA				LR		LR	01	48 16.3	
	comp=Z,133nm,18.7s,baz=88,slow=40								
PMSA	**Palmer Station**	**9.00**	**232**	Pn			**Pn**	**01 44 25.4**	**-1.1**
PLCA	**Paso Flores**	**24.27**	**313**	P			**P**	**01 47 33.9**	**0.0**
	4.5nm,0.8s,baz=180,slow=10,SNR=12								
QSPA	**South Pole Qui**	**30.02**	**180**	P			**P**	**01 48 26.7**	**+1.4**
	1.2nm,0.5s,baz=156,slow=7.5,SNR=4.2								
CPUP	**Villa Florida**	**34.58**	**344**	LR		LR		02 02 08.8	
	comp=Z,54nm,21.2s,baz=157,slow=34								
MAW	**Mawson**	**42.73**	**148**	LR		LR		02 06 43.0	
	comp=Z,93nm,18.6s,baz=241,slow=34								
MNMC	**Minye Minye**	**44.05**	**329**	P			**P**	**01 50 25.9**	**+1.1**
BDFB	**Brasilia**	**44.52**	**359**	P			**P**	**01 50 28.5**	**+0.2**
	2.7nm,0.6s,baz=166,slow=6.8,SNR=5.2								
BDFB	**Brasilia**	**44.52**	**359**	IAmb		IAmb		01 50 30.1	
	comp=Z,7.6nm,1.0s								
SIV	**San Ignacio**	**45.30**	**341**	P			**P**	**01 50 34.4**	**0.0**
	comp=Z,1.0nm,0.7s,baz=163,slow=10,SNR=5.7								
LPAZ	**La Paz**	**46.42**	**332**	P			**P**	**01 50 45.6**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=160,slow=8.0,SNR=3.8								
LPAZ				LR		LR		02 12 27.2	
	comp=Z,56nm,18.2s,baz=82,slow=39								
LPAZ	**La Paz**	**46.42**	**332**	P			**P**	**01 50 44.5**	**+0.6**
SUR	**Sutherland**	**51.71**	**89**	LR		LR		02 07 53.6	
	comp=Z,84nm,18.7s,baz=211,slow=30								
SAML	**Samuel**	**52.55**	**340**	P			**P**	**01 51 28.4**	**-1.6**
SAML				IAmb		IAmb		01 51 31.3	
	comp=Z,3.5nm,0.7s								
OTAV	**Otavalo**	**64.95**	**325**	P			**P**	**01 52 57.4**	**+0.5**
TOA0	**Torodi Ar. Sit**	**82.90**	**48**	P			**P**	**01 54 40.9**	**-0.4**
TORD	**Torodi Ar. Bea**	**82.90**	**48**	P			**P**	**01 54 41.7**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=208,slow=5.2,SNR=4.1								
DZM	**Mont Dzumac**	**93.53**	**211**	LR		LR		02 34 56.9	
	comp=Z,1µm,19.4s,baz=132,slow=34								
ILAR	**Eielson Array**	**144.96**	**313**	PKP			**PKPbc**	**02 01 50.9**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=163,slow=1.8,SNR=8.5								
MKAR	**Makanchi Array**	**147.98**	**92**	PKPbc			**PKPbc**	**02 02 00.1**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=224,slow=1.8,SNR=11								

INET ***10*** *02:14:18.1, 14°.19N×92°.68W, h15km, ML4.7*
NEIC ***10*** *02:14:24.1±2.4, 14°.40N±0°.06×92°.18W±0°.07, h67km±5km, mb4.4/117, Error ellipse: s-maj=11.8km s-min=6.9km az=47.0*
MEX ***10*** *02:14:24.2±0.6, 14°.48N×92°.16W, h79km±8km, MD5.0*
SNET ***10*** *02:14:25.2±1.0, 14°.34N×92°.03W, h56km±7km, ML4.5*
UCR ***10*** *02:14:25.3±1.0, 14°.34N×92°.03W, h55km±7km, ML4.2, mb4.4(NEIC)*
GCG ***10*** *02:14:28.7±0.4, 14°.34N×91°.81W, h50km±29km, MD4.5*
IDC ***10*** *02:14:30.9±1.5, 14°.78N×91°.47W, h119km±11km, mb3.9/18, mb1 4.1/21, mb1mx3.9/46, mbtmp4.3/21, MS3.6/7, Ms1 3.5/7, ms1mx3.1/44, Error ellipse: s-maj=28.4km s-min=9.6km az=51.0*

ISC 10 02:14:23.2±0.9, 14°.36N±0°.07×92°.19W±0°.05, h62km±7km, n181, σ1s35/159, mb4.4/49, 1C-6D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THIG		**0.55**	**352**	*i*	P		**Pn**	**02 14 35.9**	**+0.1**
THIG				*e*	S		**Sn**	**02 14 45.5**	**+0.5**
THIG		**0.55**	**352**				**Pn**	**02 14 35.9**	**+0.1**
THIG							**Sn**	**02 14 45.5**	**+0.5**
ERG	**Entre ros, C**	**0.61**	**82**	‖ *i*	P		Pn	02 14 37.3	+0.9
STG3	**Santiaguito 3,**	**0.69**	**60**	‖ *i*	P		**Pn**	**02 14 37.8**	**+0.2**
FUG	**Fuego 3**	**1.31**	**86**	‖ *e*	P		**Pn**	**02 14 46.0**	**+0.5**
PCG	**Pacaya**	**1.53**	**89**	‖ *e*	P		**Pn**	**02 14 49.5**	**+1.0**
PCIG		**1.67**	**323**	*i*	P		**Pn**	**02 14 49.1**	**-1.0**
PCIG				*i*	S		**Sn**	**02 15 09.1**	**-1.4**
PCIG		**1.67**	**323**				**Pn**	**02 14 50.9**	**+0.8**
PCIG							**Sn**	**02 15 05.7**	**-4.8**
IXG	**Ixpaco**	**1.71**	**96**	*e*	P		**Pn**	**02 14 50.6**	**-0.2**
IXG	**Ixpaco**	**1.71**	**96**	*e*	P		**Pn**	**02 14 50.6**	**-0.2**
IXG	**Ixpaco**	**1.71**	**96**	‖ *e*	P		**Pn**	**02 14 51.7**	**+0.8**
APG	**El Apazote**	**1.79**	**69**	P			**Pn**	**02 14 52.9**	**+0.9**
	375nm,0.3s,baz=190,slow=14,SNR=424								
APG				LR		LR		02 15 11.3	
	comp=Z,198nm,18.3s,baz=100,slow=41								
APG				S			**Sn**	**02 15 17.4**	**+3.5**
	269nm,0.3s,baz=340,slow=23,SNR=15								
NBG	**Las Nubes**	**1.80**	**83**	‖ *e*	P		Pn	02 14 54.3	+2.1
FAME	**Alcalda de S**	**2.17**	**103**	*e*	P		**Pn**	**02 14 56.5**	**-0.5**
FAME				*e*	S		**Sn**	**02 15 21.2**	**-1.7**
FAME				IAML				02 15 25.0	
	comp=Z,2µm,0.3s								
RTR	**El Retiro**	**2.51**	**100**	*e*	P		**Pn**	**02 15 02.3**	**+0.6**
RTR	**El Retiro**	**2.51**	**100**	*e*	P		**Pn**	**02 15 02.3**	**+0.6**
MRL	**Marmol**	**2.53**	**73**	*e*	P		**Pn**	**02 15 02.7**	**+0.6**
MRL	**Marmol**	**2.53**	**73**	*e*	P		**Pn**	**02 15 02.7**	**+0.6**
MRL	**Marmol**	**2.53**	**73**	⇑ *e*	P		Pn	02 15 03.5	+1.5
SBLS	**San Blas**	**2.54**	**101**	*e*	P		**Pn**	**02 15 03.1**	**+0.8**
SBLS	**San Blas**	**2.54**	**101**	*e*	P		**Pn**	**02 15 03.1**	**+0.8**
CEVE	**Cerro Verde**	**2.54**	**102**	*e*	P

VBMS IAmb IAmb 02 18 41.8
comp=Z,36nm,1.1s
WHTX Lake Whitney, 18.20 346 P **Pn** **02 18 31.1 -0.4**
TX31 Lajitas Ar. Sí 18.30 326 P **P** **02 18 30.3 -2.0**
TX32 Lajitas Array 18.30 326 P **P** **02 18 30.6 -1.7**
TXAR Lajitas Array 18.30 326 P **Pn** **02 18 35.8 +3.0**
comp=Z,0.3nm,0.3s,baz=152,slow=11,SNR=32
TXAR PcP **PcP** **02 23 02.6 +0.5**
comp=Z,0.0nm,0.3s,baz=147,slow=4.9,SNR=3.8
ABTX Abilene, Hawle 19.41 341 **Pn** **02 18 46.0 0.0**
152A Waverly Hall 19.46 19 P **P** **02 18 45.4 +0.5**
152A IAmb IAmb 02 18 50.4
comp=Z,11nm,0.6s
CCAR Cane Creek 19.48 1 P **P** **02 18 45.3 +0.3**
CCAR IAmb IAmb 02 18 47.0
comp=Z,15nm,0.8s
OTAV Otavalo 19.54 135 P **Pn** **02 18 47.8 -0.3**
255A Hazlehurst 19.61 25 P **P** **02 18 47.8 +1.3**
255A IAmb IAmb 02 19 04.6
comp=Z,19nm,0.7s
Z50A Ashland 19.65 16 IAmb IAmb 02 18 59.6
comp=Z,12nm,0.7s
URIC Uribia, Colomb 19.85 95 P **P** **02 18 50.3 +1.0**
Z51A Franklin 19.92 17 P **P** **02 18 51.0 +1.1**
Z51A IAmb IAmb 02 19 01.2
comp=Z,12nm,0.4s
154A Montrose 19.97 23 P **P** **02 18 51.7 +1.3**
154A IAmb IAmb 02 19 01.1
comp=Z,30nm,0.9s
Y49A Blount Mountai 20.11 14 P **P** **02 18 53.2 +1.3**
MIAR Mount Ida 20.14 357 P Pn 02 18 53.8 -0.8
OXF Oxford 20.22 7 P **P** **02 18 53.9 +0.8**
OXF IAmb IAmb 02 19 05.0
comp=Z,14nm,0.9s
257A Skidaway Islan 20.29 28 P **P** **02 18 54.7 +0.8**
X48A Hartselle 20.54 12 IAmb IAmb 02 19 03.4
comp=Z,17nm,0.8s
GOGA Godfrey 20.55 21 P **P** **02 18 57.7 +0.9**
GOGA IAmb IAmb 02 19 14.9
comp=Z,12nm,1.1s
RUSC La Rusia 20.59 112 P **P** **02 18 57.6 -0.2**
Y52A Lilburn 20.77 19 IAmb IAmb 02 19 13.3
comp=Z,12nm,0.8s
X34A Smith Ranch, M 20.79 347 IAmb IAmb 02 19 20.4
comp=Z,18nm,1.1s
FPAL Fort Paine 20.95 15 P **P** **02 18 59.5 -1.6**
FPAL IAmb IAmb 02 19 08.4
comp=Z,10nm,0.8s
MNTX Cornudas Mount 21.07 327 IAmb IAmb 02 19 07.6
comp=Z,11nm,0.7s
W35A Tecumseh 21.13 349 P **P** **02 19 01.9 -1.0**
SWET Sewanee 21.52 14 P **P** **02 19 07.2 +0.1**
SWET IAmb IAmb 02 19 07.9
comp=Z,13nm,0.6s
HALT Halls 21.61 6 P **P** **02 19 07.0 -1.0**
TUL1 Leonard 21.70 352 P **P** **02 19 07.1 -2.0**
TUL1 IAmb IAmb 02 19 18.5
comp=Z,9.8nm,0.8s
SDV Santo Domingo 21.80 102 P **P** **02 19 07.6 -2.9**
comp=Z,3.8nm,0.4s,baz=283,slow=3.9,SNR=12
SDV LR LR 02 26 46.8
comp=Z,83nm,20.6s,baz=248,slow=35
SDV Santo Domingo 21.80 102 P **P** **02 19 10.7 +0.2**
V48A Smith Brothers 21.83 12 IAmb IAmb 02 19 11.6
comp=Z,10nm,0.8s
WVT Waverly 22.03 9 P **P** **02 19 12.4 -0.1**
CPCT Cooper Cave 22.10 17 IAmb IAmb 02 19 30.0
comp=Z,9.5nm,0.7s
AMTX Amarillo 22.16 339 IAmb IAmb 02 19 16.3
comp=Z,14nm,0.5s
V51A Loudon 22.48 17 P **P** **02 19 17.1 -0.3**
V51A IAmb IAmb 02 19 35.3
comp=Z,10nm,0.8s
TKL Tuckaleechee C 22.52 18 P **P** **02 19 17.0 -0.8**
comp=Z,3.9nm,0.6s,baz=183,slow=9.9,SNR=8.1
TKL LR LR 02 29 00.0
comp=Z,109nm,20.1s,baz=172,slow=40
TKL Tuckaleechee C 22.52 18 IAmb IAmb 02 19 26.5
comp=Z,9.2nm,0.8s
T47A Sharon Grove 22.99 10 IAmb IAmb 02 19 22.8
comp=Z,14nm,0.8s
121A Cookes Peak, D 23.01 324 IAmb IAmb 02 19 27.7
comp=Z,15nm,0.8s
319A Douglas 23.07 320 P **P** **02 19 23.8 +0.1**
TZTN Tazewell 23.40 18 IAmb IAmb 02 19 39.3
comp=Z,16nm,1.0s
LPM Los Pinos Moun 23.77 329 P **P** **02 19 31.9 +1.5**
U54A Nelsons Funny 23.94 21 P **P** **02 19 31.0 -0.7**
U54A IAmb IAmb 02 19 32.8
comp=Z,8.9nm,0.8s
ANMO Albuquerque 24.20 330 P **P** **02 19 36.8 +2.6**
comp=Z,9.1nm,0.6s,baz=144,slow=12,SNR=50
ANMO Albuquerque 24.20 330 P **P** **02 19 35.6 +1.4**
ANMO IAmb IAmb 02 19 37.4
comp=Z,8.3nm,0.7s
WCI Wyandotte Cave 24.34 11 P **P** **02 19 34.3 -0.9**
WCI IAmb IAmb 02 19 35.6
comp=Z,21nm,0.8s
TUC Tucson 24.64 320 P **P** **02 19 40.6 +2.4**
BLO Bloomington 25.21 10 IAmb IAmb 02 19 44.5
comp=Z,11nm,0.8s
SJG San Juan 25.27 78 LR LR 02 28 36.3
comp=Z,56nm,20.6s,baz=232,slow=34
P48A Milroy 25.70 12 IAmb IAmb 02 19 46.6
comp=Z,8.3nm,0.7s
SFIN Lafayette 26.30 9 IAmb IAmb 02 19 52.4
comp=Z,9.3nm,0.8s
X16A Lo Mia Camp, P 26.48 322 P **P** **02 19 56.5 +1.5**
S22A 4UR Ranch, Cre 26.68 333 P **P** **02 19 58.6 +1.9**
MVCO Mesa Verde 27.00 330 IAmb IAmb 02 20 03.0
comp=Z,8.3nm,0.8s
PDAR Pinedale Array 32.02 336 P **P** **02 20 45.9 +1.8**
comp=Z,0.5nm,0.6s,baz=146,slow=8.7,SNR=6.3
PDAR PcP **PcP** **02 23 33.0 +0.3**
comp=Z,0.8nm,0.5s,baz=134,slow=5.5,SNR=13
SADO Sadowa 32.27 18 P **P** **02 20 43.6 -2.3**
comp=Z,4.9nm,0.8s,baz=254,slow=8.2,SNR=5.1
SADO LR LR 02 35 20.4
comp=Z,84nm,19.0s,baz=215,slow=39
SADO Sadowa 32.27 18 IAmb IAmb 02 20 45.9
comp=Z,9.3nm,0.9s
AHID Auburn Hatcher 32.66 334 P **P** **02 20 47.9 -1.7**
SNOW Snow King Moun 33.08 335 IAmb IAmb 02 20 56.2
comp=Z,7.9nm,0.8s
ELK Elko 33.09 327 P **P** **02 20 56.3 +2.8**
comp=Z,4.0nm,0.7s,baz=127,slow=8.3,SNR=19
ELK Elko 33.09 327 IAmb IAmb 02 20 57.3
comp=Z,4.0nm,0.7s
NV11 Mina Array Sit 33.19 321 IAmb IAmb 02 20 58.8
comp=Z,6.7nm,0.9s
NVAR Mina Array Bea 33.28 321 P P 02 20 59.0 +3.9
comp=Z,4.9nm,0.7s,baz=133,slow=8.6,SNR=35
NVAR PcP **PcP** **02 23 37.7 +1.5**
comp=Z,1.2nm,0.6s,baz=129,slow=3.2,SNR=7.2
KVN Kaiserville 33.55 322 IAmb IAmb 02 21 01.6
comp=Z,4.0nm,0.9s
MFID Camas Ranch 35.34 330 IAmb IAmb 02 21 17.3
comp=Z,4.6nm,0.5s
BEKR Beckworth 35.42 321 IAmb IAmb 02 21 17.7
comp=Z,2.2nm,0.7s
WVOR Wild Horse Val 36.09 326 IAmb IAmb 02 21 24.9
comp=Z,2.7nm,0.8s
SAML Samuel 36.93 127 P **P** **02 21 25.8 -0.7**
SAML IAmb IAmb 02 21 26.4
comp=Z,7.8nm,0.8s
LPAZ La Paz 38.63 141 P **P** **02 21 42.5 +1.0**
comp=Z,1.4nm,0.7s,baz=325,slow=9.5,SNR=5.7
LPAZ PcP **PcP** **02 23 52.9 0.0**
comp=Z,0.6nm,0.5s,baz=2.3,slow=3.6,SNR=4.6
LPAZ La Paz 38.63 141 IAmb IAmb 02 21 43.0
comp=Z,1.9nm,0.8s
NEW Newport 39.59 334 P **P** **02 21 49.7 +1.1**
comp=Z,1.5nm,0.7s,baz=124,slow=12,SNR=3.4
NEW PcP **PcP** **02 23 55.2 +0.4**
comp=Z,1.0nm,0.3s,baz=86,slow=6.1,SNR=5.4
NEW Newport 39.59 334 IAmb IAmb 02 21 56.3
comp=Z,2.0nm,1.1s
C09A Chrisman Ranch 39.75 332 IAmb IAmb 02 21 52.2
comp=Z,4.9nm,0.6s
LON Longmire 40.69 329 P **P** **02 22 00.2 +2.5**
LON IAmb IAmb 02 22 00.5
comp=Z,10nm,1.0s
SIV San Ignacio 43.07 133 P **P** **02 22 17.6 +0.2**
comp=Z,6.0nm,0.6s,baz=315,slow=8.3,SNR=37
SIV PcP **PcP** **02 24 06.9 +0.3**
comp=Z,1.3nm,0.6s,baz=315,slow=7.1,SNR=5.2

SCHQ Schefferville 44.95 21 LR LR 02 42 06.5
comp=Z,108nm,19.5s,baz=76,slow=37
YKA Yellowknife Ar 50.63 347 P **P** **02 23 15.1 -0.6**
comp=Z,1.9nm,0.4s,baz=151,slow=7.3,SNR=95
YKA PcP **PcP** **02 24 32.4 0.0**
comp=Z,0.9nm,0.8s,baz=151,slow=3.8,SNR=7.3
BDFB Brasilia 52.87 123 P **P** **02 23 32.0 -1.2**
comp=Z,2.0nm,0.5s,baz=278,slow=9.6,SNR=5.3
BDFB Brasília 52.87 123 IAmb IAmb 02 23 33.7
comp=Z,3.1nm,0.7s
INK Inuvik 60.04 344 P **P** **02 24 23.1 -0.1**
comp=Z,4.2nm,0.5s,baz=134,slow=6.9,SNR=35
INK Inuvik 60.04 344 P **P** **02 24 23.2 -0.1**
EGAK Eagle 60.31 338 IAmb IAmb 02 24 26.9
comp=Z,3.4nm,0.8s
RES Resolute Bay 60.34 359 P **P** **02 24 23.4 -1.8**
comp=Z,1.1nm,0.7s,baz=188,slow=9.9,SNR=4.9
DOT Dot Lake 60.82 336 P **P** **02 24 30.5 +1.8**
PAX Paxson 61.05 335 P **P** **02 24 31.9 +1.4**
HDA Harding Lake 62.30 336 IAmb IAmb 02 24 40.3
comp=Z,3.4nm,0.7s
KDAK Kodiak Island 62.32 328 P **P** **02 24 40.2 +1.3**
comp=Z,6.0nm,0.6s,baz=126,slow=3.1,SNR=9.4
KDAK Kodiak Island 62.32 328 IAmb IAmb 02 24 44.4
comp=Z,13nm,1.1s
IL31 62.44 337 P **P** **02 24 40.3 +0.8**
ILAR Eielson Array 62.44 337 P **P** **02 24 40.1 +0.6**
comp=Z,4.4nm,0.8s,baz=124,slow=5.3,SNR=42
KTH Kantishna Hill 63.54 335 IAmb IAmb 02 24 48.5
comp=Z,5.7nm,0.8s
BPAW Bear Paw Mtn. 63.77 335 IAmb IAmb 02 24 49.6
comp=Z,7.2nm,1.0s
MLY Manley 64.04 336 P **P** **02 24 51.2 +1.0**
COLD Coldfoot 64.73 339 P **P** **02 24 56.1 +1.4**
COLD IAmb IAmb 02 24 57.4
comp=Z,2.8nm,1.0s
TOLK Toolik Lake Re 65.12 340 P **P** **02 24 58.6 +1.3**
ATKA Atka Island 73.91 321 P **P** **02 25 52.3 +0.7**
ESDC Sonseca Array 79.64 52 P P 02 26 20.1 -4.1
comp=Z,0.2nm,0.5s,baz=280,slow=4.2,SNR=3.6
BILL Bilibino 81.06 338 P **P** **02 26 32.5 +1.3**
ARCES ARCESS Array B 85.85 18 P **P** **02 26 54.3 -1.5**
comp=Z,3.0nm,0.9s,baz=289,slow=3.7,SNR=6.1
PETK Petropavlovsk- 90.25 326 LR LR 03 10 46.6
comp=Z,178nm,18.8s,baz=216,slow=37
TORD Torodi Ar. Bea 90.47 76 P **P** **02 27 16.6 -2.3**
comp=Z,0.3nm,0.5s,baz=296,slow=4.3,SNR=7.8
TORD Torodi Ar. Bea 90.47 76 IAmb IAmb 02 27 22.3
comp=Z,0.7nm,0.9s
MKAR Makanchi Array 118.93 4 PKP **PKPdf** **02 33 04.2 -0.7**
comp=Z,0.2nm,0.4s,baz=336,slow=2.6,SNR=5.8
BOSA Boshof 120.67 115 PKP **PKPdf** **02 33 08.4 -0.5**
comp=Z,3.1nm,0.9s,baz=314,slow=5.8,SNR=3.8
GEYT Alibeck 120.99 27 PKP **PKPdf** **02 33 08.3 -0.9**
comp=Z,1.7nm,0.6s,baz=278,slow=4.3,SNR=5.3
KSH Kashi 125.28 11 PKP **PKPdf** **02 33 14.1 -3.4**
KSH PP **PP** **02 35 09.2 +2.6**
KSH AMB AMB
comp=Z,370nm,4.9s
LZH Lanzhou 127.59 344 *e*PKP **PKPdf** **02 33 22.0 -0.1**
LZH pPKP sPKPdf 02 33 41.3 -5.4
LZH sPKP 02 33 50.2
CD2 Chengdu 132.45 341 PKP **PKPdf** **02 33 30.6 -0.7**
CMAR Chiang Mai Arr 145.59 341 PKPbc **PKPbc** **02 33 56.2 +0.6**
comp=Z,8.0nm,0.7s,baz=335,slow=4.0,SNR=13

WEL ***10*** *02:22:51.4±0.3,31°S±4′×17°9E±°, h33km, M5.7/21, mB5.9/21, ML6.7/7, MLv6.3/9, Mw(mB)5.5/21*
BGR ***10*** *02:22:52.6±0.0, 31°.70S×178°.15W, h200km*
BJI ***10*** *02:22:53.6±0.0, 31°.30S×179°.40W, h200km, mB5.5/45, mb5.3/50*
MOS ***10*** *02:22:55.3±0.8, 31°.29S×179°.64W, h209km, mb5.8/34, Error ellipse: s-maj=9.3km s-min=7.2km az=100.4*
NEIC ***10*** *02:22:55.9±2.0, 31°.31S±0°.07×179°.57W±0°.09, h211km±1km, mb5.5/289, Mwb5.7/32, Mww5.6, Mwc5.7(GCMT), Error ellipse: s-maj=14.4km s-min=10.7km az=128.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=3.72; Mθθ=0.03; Mφφ=3.69; Mrθ=1.90; Mθφ=0.20; Mφr=1.84; Fault plane solution: Mo=4.56000×10¹⁷ NP1:φs=21.11000°, δ35.41000°, λ=54.66000°. NP2:φs=160.08000°, δ61.79000°, λ=112.35000°. Principal axes: T 4.1362, Plg14.0000°, Azm266.0000°; N 0.7457, Plg20.0000°, Azm171.0000°; P -4.8819, Plg66.0000°, Azm30.0000°;*
GCMT ***10*** *02:22:57.9±0.1, 31°.27S±0°.01×179°.49W±0°.01, h217km, MW5.7/165, Moment Tensor Solution. s150,c270; s165,c320; Duration: 1ˢ7 Moment tensor: Scale 10¹⁷Nm; Mrr=2.46±.03; Mθθ=1.14±.04; Mφφ=3.60±.04; Mrθ=1.64±.03; Mθφ=0.66±.03; Mφr=1.56±.03; Best double couple: Mo=3.96300×10¹⁷ NP1:φs=38.00000°, δ43.00000°, λ=39.00000°. NP2:φs=158.00000°, δ65.00000°, λ=126.00000°. Principal axes: T 3.9910, Plg13.0000°, Azm273.0000°; N -0.0570, Plg32.0000°, Azm175.0000°; P -3.9350, Plg55.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
IDC ***10*** *02:22:58.4±0.4, 31°.24S×179°.61W, h229km±3km, mb5.2/34, mb1 5.3/35, mb1mx5.2/42, mbtmpb5.7/35 Error ellipse: s-maj=8.9km s-min=7.9km az=19.0*
NEIC ***10*** *02:22:59, 31°.26S×179°.50W, h218km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=2.28; Mθθ=1.36; Mφφ=3.64; Mrθ=1.54; Mθφ=0.67; Mφr=1.45; Fault plane solution: Mo=3.88000×10¹⁷ NP1:φs=39.00000°, δ45.00000°, λ=36.00000°. NP2:φs=157.00000°, δ66.00000°, λ=129.00000°. Principal axes: T 3.9948, Plg12.0000°, Azm274.0000°; N -0.2362, Plg35.0000°, Azm175.0000°; P -3.7586, Plg53.0000°, Azm20.0000°;*
NEIC ***10*** *02:23:00, 31°.51S×179°.48W, h220km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=2.63; Mθθ=0.51; Mφφ=3.14; Mrθ=1.41; Mθφ=0.40; Mφr=1.71; Fault plane solution: Mo=3.69000×10¹⁷ NP1:φs=30.00000°, δ36.00000°, λ=47.00000°. NP2:φs=161.00000°, δ64.00000°, λ=116.00000°. Principal axes: T 3.6074, Plg15.0000°, Azm270.0000°; N 0.1507, Plg23.0000°, Azm173.0000°; P -3.7581, Plg62.0000°, Azm31.0000°;*

ISC 10 02:22:56.1±0.3, **31°.46S**±0°.03×**179°.51W**±0°.04, **h216**km±2km, **h217**km; **pP-P, n1520,** σ**1ˢ45**/1591, **mb5.5**/242, **45C-67D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.59**	**32**	P	**Pn**	**02 23 38.6**		**-3.4**
GLKZ				S	**S**	**02 24 12.4**		**-5.3**
RAO	**Raoul Island**	**2.60**	**32**	P	**Pn**	**02 23 40.2**		**-2.0**
	2μm,0.3s,baz=150,slow=2.4,SNR=65							
RAO				S	**S**	**02 24 14.1**		**-3.8**
	3μm,0.3s,baz=71,slow=20,SNR=31							
RAO	**Raoul Island**	**2.60**	**32**		**Pn**	**02 23 40.0**		**-2.2**
RIZ	**Raoul Island**	**2.60**	**32**	P	**Pn**	**02 23 39.9**		**-2.2**
RIZ				S	**S**	**02 24 11.4**		**-6.5**
MXZ	**Matakaoa Point**	**6.35**	**196**	P	**Pn**	**02 24 25.1**		**-2.8**
MXZ				S	**S**	**02 25 37.0**		**-4.0**
MXZ	**Matakaoa Point**	**6.35**	**196**		**Pn**	**02 24 24.5**		**-3.5**
WMGZ	**Waiomatatini S**	**6.57**	**195**	P	**Pn**	**02 24 29.2**		**-1.6**
WMGZ				S	**S**	**02 25 41.9**		**-4.2**
KUZ	**Kuaotunu**	**6.59**	**216**	P	**Pn**	**02 24 33.0**		**+1.9**
HAZ	**Te Kaha**	**6.66**	**199**	P	**Pn**	**02 24 29.2**		**-2.8**
OUZ	**Omahuta**	**6.88**	**235**	P	**Pn**	**02 24 36.0**		**+1.1**
OUZ				S	S	02 25 27.1		-26
OUZ	**Omahuta**	**6.88**	**235**		**Pn**	**02 24 37.5**		**+2.7**
MWZ	**Matawai**	**7.28**	**199**	P	**Pn**	**02 24 35.6**		**-4.4**
MWZ				S	**S**	**02 25 56.6**		**-6.1**
URZ	**Urewera**	**7.33**	**201**	P	**Pn**	**02 24 38.4**		**-2.2**
	16nm,0.3s,baz=271,slow=4.5,SNR=46							
URZ				S	**S**	**02 25 58.3**		**-5.6**
	915nm,0.3s,baz=274,slow=21,SNR=15							
URZ	**Urewera**	**7.33**	**201**		**Pn**	**02 24 36.6**		**-4.0**
RAHZ	**Arahi**	**7.94**	**200**	P	**Pn**	**02 24 45.1**		**-3.5**
HIZ	**Hauiti**	**8.42**	**212**	P	**Pn**	**02 24 55.6**		**+1.0**
HIZ	**Hauiti**	**8.42**	**212**		**Pn**	**02 24 54.4**		**-0.3**
WAZ	**Wanganui**	**9.41**	**207**	P	**Pn**	**02 25 07.6**		**+0.1**
WAZ				S	**S**	**02 26 51.1**		**-2.0**
OHWZ	**Ohakea**	**9.68**	**204**	P	**Pn**	**02 25 11.7**		**+0.8**
OHWZ				S	**S**	**02 26 52.7**		**-6.8**
POWZ	**Post Office Ro**	**9.70**	**202**	P	**Pn**	**02 25 07.1**		**-4.0**
BFZ	**Birch Farm**	**9.82**	**199**		Pn	02 25 07.2		-5.5

MRZ Mangatainoka R 10.00 202 P **Pn** **02 25 13.4 -1.6**
HOWZ Holdsworth Sta 10.24 202 P Pn 02 25 11.2 -6.8
OGWZ Otaki Gorge 10.28 203 P Pn 02 25 11.9 -6.6
KIW Kapiti Island 10.40 204 P Pn 02 25 13.5 -6.7
MTW Mount Morrison 10.48 201 P Pn 02 25 13.7 -7.4
CAW Cannon Point 10.57 203 P Pn 02 25 15.8 -6.5
PAWZ Paruwai Farm 10.70 201 P **Pn** **02 25 19.9 -4.2**
DUWZ D'Urville Isla 10.72 208 P Pn 02 25 19.0 -5.3
MSWZ Moikau Station 10.79 202 P Pn 02 25 18.0 -7.1
MSWZ Moikau Station 10.79 202 Pn 02 25 19.5 -5.6
WEL Wellington 10.83 204 P **Pn** **02 25 21.4 -4.2**
SNZO South Karori 10.88 204 **Pn** **02 25 21.9 -4.2**
BHW Baring Head 10.91 203 P Pn 02 25 20.1 -6.5
BHW Baring Head 10.91 203 Pn 02 25 20.9 -5.6
PLWZ Palliser 10.93 201 **Pn** **02 25 22.3 -4.6**
TUWZ Tuamarina 11.25 206 P Pn 02 25 25.2 -5.8
TUWZ Tuamarina 11.25 206 P Pn 02 25 25.1 -5.9
TUWZ Tuamarina 11.25 206 Pn 02 25 24.7 -6.3
NNZ Nelson 11.29 208 P **Pn** **02 25 26.8 -4.7**
NNZ Nelson 11.29 208 P Pn 02 25 26.5 -5.0
NNZ Nelson 11.29 208 **Pn** **02 25 27.5 -4.0**
QRZ Quartz Range 11.34 212 **Pn** **02 25 29.1 -3.0**
CMWZ Cape Campbell 11.43 204 P **Pn** **02 25 30.8 -2.5**
CMWZ Cape Campbell 11.43 204 P **Pn** **02 25 29.3 -4.0**
BSWZ Blackbirch Sta 11.53 206 P Pn 02 25 28.4 -6.0
BSWZ Blackbirch Sta 11.53 206 Pn 02 25 29.5 -5.0
THZ Tophouse 11.94 209 P Pn 02 25 34.6 -5.1
KHZ Kahutara 12.26 205 P Pn 02 25 37.0 -6.7
DSZ Denniston Nort 12.40 212 P **Pn** **02 25 42.5 -3.1**
GVZ Greta Valley S 12.92 205 P Pn 02 25 45.9 -6.1
LTZ Lake Taylor 13.05 208 P Pn 02 25 48.2 -5.5
AMCZ Amberley 13.24 206 P **Pn** **02 25 52.1 -3.8**
MQZ McQueen's Vall 13.70 205 P Pn 02 25 54.4 -7.2
AKCZ Akaroa Harbour 13.76 204 P **Pn** **02 25 58.1 -4.2**
MSVF Nonsavu 13.85 350 P **Pn** **02 26 03.6 -0.1**
MSVF Nonsavu 13.85 350 **Pn** **02 26 03.6 -0.1**
WVZ Waitaha Valley 13.94 211 P **Pn** **02 26 02.6 -1.9**
RPZ Rata Peaks 14.32 209 P **Pn** **02 26 04.6 -4.7**
11nm,0.3s,baz=41,slow=2.9,SNR=25
RPZ S S 02 28 32.9 -15
21nm,0.3s,baz=310,slow=21,SNR=19
NIUE Niue 15.06 37 Pn **Pn** **02 26 15.8 -2.7**
ODZ Otahua Downs 15.59 207 P P **02 26 22.7 -1.7**
ODZ IAmb IAmb 02 26 26.1
comp=Z,111nm,0.8s
DZM Mont Dzumac 15.63 303 *e*P **Pn** **02 26 27.4 +1.9**
comp=Z,2μm,1.3s
DZM Mont Dzumac 15.63 303 P **Pn** **02 26 27.1 +1.7**
comp=Z,4.4nm,0.3s,baz=119,slow=14,SNR=80
DZM Mont Dzumac 15.63 303 **P** **02 26 25.1 -0.1**
MLZ Mavora Lakes 16.90 211 P **P** **02 26 36.8 -2.0**
DCZ Deep Cove 17.42 213 P **P** **02 26 43.1 -1.2**
LHI Lord Howe Isla 18.28 264 P **Pn** **02 26 55.8 -0.7**
AFI Afiamalu 18.86 24 P **P** **02 26 58.5 -1.8**
AFI pmax pmax
comp=Z,584nm,1.1s
AFI Afiamalu 18.86 24 P **P** **02 26 58.0 -2.3**
comp=Z,27nm,0.3s,baz=278,slow=4.6,SNR=14
AFI S S 02 30 07.3 -16
comp=Z,5.6nm,0.3s,baz=205,slow=22,SNR=1.9
AFI Afiamalu 18.86 24 P **P** **02 26 58.5 -1.8**
RAR Rarotonga 20.39 65 P **P** **02 27 17.3 +0.7**
comp=Z,133nm,0.9s,baz=220,slow=6.0,SNR=19
RAR S **S** **02 30 56.7 +3.9**
comp=Z,21nm,0.7s,baz=47,slow=19,SNR=1.7
RAR Rarotonga 20.39 65 P **P** **02 27 16.7 +0.1**
FUNA Funafuti 22.85 357 P **P** **02 27 37.6 -3.2**
ARMA Armidale 24.75 265 IAmb IAmb 02 28 02.1
comp=Z,76nm,1.0s
CAN Canberra 26.52 253 P **P** **02 28 16.0 +2.2**
CAN pmax pmax
comp=Z,167nm,1.1s
CAN Canberra 26.52 253 P **P** **02 28 16.0 +2.2**
CAN IAmb IAmb 02 28 17.9
comp=Z,167nm,1.1s
EIDS Eidsvold 26.52 276 P **P** **02 28 15.0 +1.1**
EIDS IAmb IAmb 02 28 21.8
comp=Z,118nm,0.9s
TBI Tubuai 27.81 81 *e*T T 02 57 04.9
comp=Z,80nm,0.4s
TAU Tasmania Unive 28.61 237 P **P** **02 28 32.2 -0.1**
TAU pmax pmax
comp=Z,37nm,1.1s
TAU Tasmania Unive 28.61 237 P **P** **02 28 32.2 -0.1**
HNR Honiara 29.07 315 P **P** **02 28 36.9 +0.4**
HNR pmax pmax
comp=Z,414nm,1.0s
HNR Honiara 29.07 315 P **P** **02 28 35.6 -0.9**
comp=Z,288nm,0.9s,baz=233,slow=5.6,SNR=7.0
HNR Honiara 29.07 315 **P** **02 28 36.9 +0.4**
TOO Toolangi 29.36 248 P **P** **02 28 41.4 +2.4**
TOO pmax pmax
comp=Z,108nm,1.1s
TOO Toolangi 29.36 248 P **P** **02 28 41.4 +2.4**
TOO IAmb IAmb 02 28 43.4
comp=Z,108nm,1.1s
KNTN Kanton 29.47 16 P **P** **02 28 39.3 -0.7**
KNTN IAmb IAmb 02 28 45.0
comp=Z,181nm,1.1s
PAE Paea 30.38 70 *e*P **P** **02 28 48.3 +0.3**
comp=Z,35nm,1.1s
PAE Paea 30.38 70 *e*T T 02 59 18.1
comp=Z,15nm,0.2s
PPT2 Papeete2 30.42 70 *e*P **P** **02 28 49.0 +0.5**
comp=Z,221nm,1.2s
PPT2 *e*S **S** **02 33 28.8 -4.5**
comp=Z,442nm,23.5s
PPT2 *e*LQ LQ 02 35 35.9
comp=Z,4μm,27.5s
PPT2 *e*LR LR 02 36 44.2
comp=Z,1μm,24.5s
PPT2 Papeete2 30.42 70 *e*T T 02 59 23.2
comp=Z,24nm,0.4s
PPTF Pamatai, Papee 30.43 70 P **P** **02 28 49.8 +1.2**
PPT Papeete 30.43 70 P **P** **02 28 49.3 +0.8**
comp=Z,180nm,1.1s,baz=68,slow=22,SNR=10
PPT Papeete 30.43 70 P **P** **02 28 48.4 -0.2**
TVO Taravao 30.57 71 *e*P **P** **02 28 50.2 +0.3**
comp=Z,26nm,1.1s
TVO Taravao 30.57 71 *e*T T 02 59 41.0
comp=Z,3.2nm,0.3s
CTA Charters Tower 32.72 282 ScP **ScP** **02 35 10.9 -1.2**
comp=Z,36nm,0.9s,baz=91,slow=2.3,SNR=9.2
STKA Stephens Creek 32.99 259 P **P** **02 29 12.7 +1.9**
comp=Z,235nm,0.9s,baz=97,slow=9.9,SNR=364
STKA S **S** **02 34 13.8 +0.9**
comp=Z,6.4nm,0.9s,baz=187,slow=23,SNR=5.7
STKA ScP **ScP** **02 35 12.2 -0.6**
comp=Z,22nm,0.9s,baz=102,slow=4.6,SNR=6.9
STKA Stephens Creek 32.99 259 P **P** **02 29 12.1 +1.3**
STKA IAmb IAmb 02 29 14.2
comp=Z,70nm,1.0s
TARA Tarawa 33.42 346 P **P** **02 29 13.5 -1.1**
BBOO Buckleboo 37.44 256 P **P** **02 29 48.1 -0.7**
PMG Port Moresby 37.92 298 *de*P **P** **02 29 53.5 +0.6**
PMG pmax pmax
comp=Z,297nm,1.0s
PMG Port Moresby 37.92 298 P **P** **02 29 51.4 -1.5**
KRVT Keravat (AS076 38.01 309 P **P** **02 29 52.4 -1.2**
comp=Z,673nm,0.7s,baz=49,slow=0.6,SNR=27
COEN Coen 38.34 288 P **P** **02 29 57.5 +1.1**
AS31 Alice Springs 41.77 269 P **P** **02 30 24.9 +0.4**
AS31 ScP **ScP** **02 35 45.9 -0.2**
ASAR Alice Springs 41.77 269 P **P** **02 30 25.0 +0.4**
comp=Z,107nm,0.7s,baz=105,slow=7.3,SNR=563
ASAR pP **pwP** **02 31 12.7 -0.7**
comp=Z,23nm,0.8s,baz=106,slow=7.2,SNR=1.9
ASAR ScP **ScP** **02 35 43.7 -2.4**
comp=Z,54nm,1.0s,baz=119,slow=4.3,SNR=25
ASAR S **S** **02 36 24.6 -0.9**
comp=Z,24nm,1.0s,baz=108,slow=16,SNR=12
ASAR PKiKP **PKiKP** **02 39 22.0 -0.6**
comp=Z,1.4nm,0.7s,baz=107,slow=1.2,SNR=4.3
ASAR ScS **ScS** **02 40 00.8 -3.2**
comp=Z,1.3nm,0.8s,baz=118,slow=7.4,SNR=3.3
KWAJ Kwajalein Atol 41.89 341 P **P** **02 30 25.5 +0.1**
KWAJ pmax pmax
comp=Z,849nm,1.1s
KWAJ Kwajalein Atol 41.89 341 P **P** **02 30 25.5 +0.1**
WR0 Warramunga Arr 42.68 274 P **P** **02 30 32.0 +0.2**
WR0 IAmb IAmb 02 30 33.2
comp=Z,110nm,0.8s
WR0 ScP **ScP** **02 35 47.9 -1.8**
WR0 **S** **02 36 37.3 -1.5**

MANU Manus Island 42.81 307 P **P** **02 30 32.4 -0.5**
MANU IAmb IAmb 02 30 38.1
comp=Z,106nm,1.1s
WRAB Tennant Creek 42.85 274 *ce*P **P** **02 30 33.4 +0.1**
WRAB pmax pmax
comp=Z,165nm,0.8s
WRAB Tennant Creek 42.85 274 P **P** **02 30 32.6 -0.7**
WRAB IAmb IAmb 02 30 34.5
comp=Z,154nm,0.8s
WRAB ScP **ScP** **02 35 49.3 -1.2**
WRAB **S** **02 36 40.0 -1.4**
WRA Warramunga Arr 42.86 274 P **P** **02 30 33.5 +0.1**
comp=Z,94nm,0.5s,baz=112,slow=7.8,SNR=636
WRA pP **pwP** **02 31 21.2 -1.3**
comp=Z,49nm,0.8s,baz=114,slow=8.0,SNR=2.2
WRA ScP **ScP** **02 35 49.6 -0.8**
comp=Z,35nm,0.9s,baz=117,slow=4.0,SNR=17
WRA S **S** **02 36 39.4 -2.1**
comp=Z,85nm,1.1s,baz=114,slow=14,SNR=18
WRA PKiKP **PKiKP** **02 39 22.8 -0.8**
comp=Z,2.3nm,0.7s,baz=118,slow=0.3,SNR=7.9
WRA P4KPbc 03 08 28.2
comp=Z,1.6nm,0.9s,baz=123,slow=3.8,SNR=6.7
WRA Warramunga Arr 42.86 274 IAmb IAmb 02 30 34.6
comp=Z,13nm,0.8s
TAOE Nuku Hiva Isla 42.91 67 *e*P **P** **02 30 34.0 +0.1**
comp=Z,541nm,1.4s
TAOE *e*S **S** **02 36 37.1 -5.3**
comp=Z,664nm,26.4s
TAOE *e*LQ LQ 02 40 28.0
comp=Z,4μm,25.5s
TAOE *e*LR LR 02 42 40.4
comp=Z,864nm,24.5s
TAOE Nuku Hiva Isla 42.91 67 P **P** **02 30 35.1 +1.2**
TAOE IAmb IAmb 02 30 36.9
comp=Z,169nm,1.0s
FORT Forrest 44.53 257 P **P** **02 30 45.7 -0.8**
SBA Scott Base 46.89 184 P **P** **02 31 07.0 +2.8**
SBA pmax pmax
comp=Z,52nm,1.1s
SBA Scott Base 46.89 184 P **P** **02 31 07.0 +2.8**
SBA ScP **ScP** **02 36 05.0 -1.0**
VNDA Vanda 46.91 185 P **P** **02 31 05.9 +1.5**
VNDA 02 32 32.6
VNDA pmax pmax
comp=Z,10.0nm,1.0s
VNDA Vanda 46.91 185 P **P** **02 31 06.5 +2.1**
comp=Z,2.3nm,0.6s,baz=7.0,slow=7.2,SNR=8.4
VNDA PcP **PcP** **02 32 34.8 +1.5**
comp=Z,22nm,0.9s,baz=307,slow=3.0,SNR=8.2
VNDA ScP **ScP** **02 36 05.8 -0.4**
comp=Z,22nm,0.9s,baz=335,slow=4.7,SNR=14
VNDA Vanda 46.91 185 P **P** **02 31 05.9 +1.5**
VNDA PcP **PcP** **02 32 32.6 -0.7**
VNDA ScP **ScP** **02 36 05.2 -0.9**
GENI Genyem 47.61 299 P **P** **02 31 09.9 -0.7**
comp=Z,3μmcomp=Z,82nm,0.8s
MTN Manton Dam 48.89 281 P **P** **02 31 20.7 +0.4**
SMPI Sarmi 49.10 298 P **P** **02 31 23.3 +1.3**
comp=Z,3μmcomp=Z,37nm,1.1s
KNRA Kununurra 49.51 276 P **P** **02 31 25.3 +0.3**
KNRA IAmb IAmb 02 31 30.0
comp=Z,70nm,0.7s
FITZ Fitzroy Crossi 51.08 272 ScP **ScP** **02 36 24.3 -0.6**
comp=Z,30nm,0.9s,baz=96,slow=4.3,SNR=7.6
FITZ Fitzroy Crossi 51.08 272 P **P** **02 31 37.8 +1.0**
FITZ ScP **ScP** **02 36 24.4 -0.6**
FAKI Fak Fak 53.51 292 P **P** **02 31 54.2 -0.5**
comp=Z,103nm,1.0s
FAKI Fak Fak 53.51 292 P **P** **02 31 53.7 -1.1**
FAKI IAmb IAmb 02 31 58.2
comp=Z,89nm,1.0s
PSA00 Pilbara Seismi 54.57 265 P **P** **02 32 02.0 -0.3**
MORW Morawa 54.99 255 P **P** **02 32 05.0 -0.2**
KHU Kahuku 55.39 28 IAmb IAmb 02 32 09.2
comp=Z,121nm,1.2s
SWI Sorong 55.55 293 P **P** **02 32 09.2 -0.1**
comp=Z,45nm,1.2s
HLP Hilina Pali 55.56 28 P **P** **02 32 09.5 +0.2**
KKH Kailua Kona 55.60 27 P **P** **02 32 08.2 -1.3**
KKH Kailua Kona 55.60 27 P **P** **02 32 08.2 -1.3**
MWH Moku'aweowe 55.61 28 IAmb IAmb 02 32 11.5
comp=Z,135nm,1.0s
MLH Mauna Loa 55.70 28 P **P** **02 32 11.5 +1.0**
POHA Pohakuloa 55.88 28 P **P** **02 32 12.2 +0.4**
MSAI Masohi 55.91 289 P **P** **02 32 15.9 +4.0**
comp=Z,13nm,1.0s
SOEI Soe 56.24 280 P **P** **02 32 15.7 +1.3**
comp=Z,2μmcomp=Z,250nm,1.0s
SOEI Soe 56.24 280 P **P** **02 32 16.2 +1.8**
KIP Kipapa 56.48 24 P **P** **02 32 16.5 +0.8**
KIP pmax pmax
comp=Z,89nm,1.0s
KIP Kipapa 56.48 24 P **P** **02 32 16.5 +0.8**
KIP IAmb IAmb 02 32 19.0
comp=Z,89nm,0.9s
NLAI Namlea 57.46 288 P **P** **02 32 22.1 -0.7**
comp=Z,73nm,1.2s
MMRI Maumere 58.53 280 P **P** **02 32 30.3 +0.1**
comp=Z,4μmcomp=Z,270nm,1.0s
MMRI Maumere 58.53 280 P **P** **02 32 29.6 -0.7**
QSPA South Pole Qui 58.65 180 P **P** **02 32 33.2 +2.7**
comp=Z,344nm,1.0s,baz=32,slow=2.1,SNR=476
QSPA ScP **ScP** **02 36 57.7 +0.2**
comp=Z,23nm,1.0s,baz=14,slow=2.0,SNR=4.3
QSPA South Pole Qui 58.65 180 P **P** **02 32 32.3 +1.8**
SANI Sanana 59.05 288 P **P** **02 32 32.5 -1.3**
comp=Z,1μmcomp=Z,75nm,1.2s
MIDW Midway 59.38 2 P **P** **02 32 35.5 -0.2**
BBSI Bau Bau 59.93 283 P **P** **02 32 42.9 +3.1**
comp=Z,266nmcomp=Z,22nm,1.0s
BKSI Bulukumba 62.06 282 P **P** **02 32 53.6 -0.5**
comp=Z,1μmcomp=Z,122nm,1.0s
PLAI Plampang 62.20 277 P **P** **02 32 55.5 +0.4**
comp=Z,3μmcomp=Z,302nm,1.1s
LUWI Luwuk 62.25 287 P **P** **02 32 55.1 -0.3**
comp=Z,5μmcomp=Z,193nm,1.0s
LUWI Luwuk 62.25 287 P **P** **02 32 55.0 -0.3**
KAPI Kappang 62.54 282 P **P** **02 32 58.0 +0.7**
KAPI pmax pmax
comp=Z,64nm,0.7s
KAPI Kappang 62.54 282 P **P** **02 32 58.0 +0.7**
KAPI IAmb IAmb 02 33 00.5
comp=Z,64nm,0.7s
BNSI Bone 62.57 282 P **P** **02 32 57.0 -0.5**
comp=Z,1μmcomp=Z,118nm,1.2s
SPSI Sidrap Palu 63.09 283 P **P** **02 33 00.0 -0.9**
comp=Z,1μmcomp=Z,108nm,0.9s
APSI Ampana 63.24 287 P **P** **02 33 00.9 -1.0**
comp=Z,707nmcomp=Z,62nm,1.2s
TTSI Tana Toraja 63.55 283 P **P** **02 33 03.4 -0.6**
comp=Z,1μmcomp=Z,75nm,0.9s
IGBI Denpasar 64.44 275 P **P** **02 33 12.6 +2.8**
comp=Z,399nm,0.8s
SRBI Singaraja 64.76 276 P **P** **02 33 12.1 +0.3**
comp=Z,3μmcomp=Z,314nm,1.0s
KCP Kidapawan 65.25 296 ǁ *e*P P 02 33 08.2 -6.8
MPSI Mapaga 65.38 287 P **P** **02 33 14.7 -1.1**
comp=Z,74nm,0.9s
JAGI Jajag, Banyuwa 65.47 275 P **P** **02 33 15.6 -0.8**
comp=Z,2μmcomp=Z,233nm,1.1s
GMJI Gumukmas 66.17 275 P **P** **02 33 21.0 +0.2**
comp=Z,3μmcomp=Z,320nm,1.0s
KMMI Kalianget 66.35 276 P **P** **02 33 24.7 +2.7**
comp=Z,4μmcomp=Z,272nm,1.1s
KBKI Kotabaru 66.46 281 P **P** **02 33 24.0 +1.3**
comp=Z,1μmcomp=Z,76nm,0.9s
SMKI Samarinda 67.16 284 P **P** **02 33 31.2 +4.1**
comp=Z,14μmcomp=Z,174nm,1.2s
GRJI Gresik 67.68 276 P **P** **02 33 32.6 +2.2**
comp=Z,2μmcomp=Z,190nm,0.8s
PCJI Pacitan 68.14 274 P **P** **02 33 33.6 +0.4**
comp=Z,5μmcomp=Z,514nm,1.0s
TBJI Tambak Boyo 68.27 275 P **P** **02 33 37.3 +3.3**
comp=Z,74nm,1.0s
NGJI Ngawi 68.32 275 P **P** **02 33 38.0 +3.7**
comp=Z,112nm,1.4s
WOJI Wonogiri, Jawa 68.54 274 P **P** **02 33 36.0 +0.3**
comp=Z,199nm,1.5s
KPJI Karang Pucung 70.49 273 P **P** **02 33 49.1 +1.5**
comp=Z,105nm,1.4s
KPJI pP **pwP** **02 34 40.4 +0.4**
comp=Z,105nm,1.4s
MAW Mawson 70.86 201 P **P** **02 33 49.3 +0.3**
comp=Z,7.2nm,0.8s,baz=136,slow=6.1,SNR=5.2
CISI Cisompet, Garu 71.33 273 P **P** **02 33 53.5 +0.7**
comp=Z,140nm,1.3s
CISI pP **pP** **02 34 42.7 -0.3**
comp=Z,140nm,1.3s
PMSA Palmer Station 71.83 156 P **P** **02 33 57.2 +2.4**
comp=Z,39nm,0.9s,baz=238,slow=4.8,SNR=7.4
PMSA Palmer Station 71.83 156 *e*P **P** **02 33 57.5 +2.7**
PMSA Palmer Station 71.83 156 P **P** **02 33 56.4 +1.6**
CNJI Cibinong 72.04 272 P **P** **02 33 57.8 +0.9**
comp=Z,147nm,1.2s
DBJI Dramaga 72.75 273 P **P** **02 34 02.9 +1.8**
comp=Z,198nm,1.4s
SBUM Sibu 72.90 284 P **P** **02 34 02.1 +0.1**
TPI Tanjungpandan 73.94 277 P **P** **02 34 08.6 +0.5**
comp=Z,751nmcomp=Z,43nm,1.4s
KSM Kuching 73.96 282 P **P** **02 34 08.3 +0.1**
KSM IAmb IAmb 02 34 10.4
comp=Z,62nm,0.8s
KSM Kuching 73.96 282 P **P** **02 34 08.0 -0.2**
KASI Kota Agung 75.20 273 P **P** **02 34 15.5 +0.2**
comp=Z,1μmcomp=Z,103nm,1.1s
GO10 Punta Arenas 75.42 144 P **P** **02 34 17.1 +1.2**
USHA Ushuaia 75.77 146 P **P** **02 34 20.1 +2.3**
comp=Z,14nm,0.9s,baz=248,slow=7.3,SNR=4.9
GO09 Cerro Castillo 75.78 142 IAmb IAmb 02 34 21.1
comp=Z,52nm,0.9s
SYO Syowa Base 75.79 194 ǁ *e*X **P** **02 34 15.0 -2.7**
SYO Syowa Base 75.79 194 ǁ *i*PcP **PcP** **02 34 27.0 -2.3**
LWLI Liwa 75.83 273 P **P** **02 34 19.7 +0.7**
comp=Z,49nm,1.1s
MDSI Maura Dua 76.00 273 P **P** **02 34 18.1 -1.7**
comp=Z,15μmcomp=Z,1μmcomp=Z,156nm,0.9s
SNAA Sanae 77.13 179 P **P** **02 34 26.8 +1.5**
SNAA S **S** **02 43 55.8 0.0**
SNAA x x 02 43 56.3
SNAA Sanae 77.13 179 P **P** **02 34 26.9 +1.6**
SNAA pmax pmax
comp=Z,72nm,1.1s
SNAA Sanae 77.13 179 PKKPbc PKKPbc 02 53 29.1 -2.2
comp=Z,1.1nm,0.8s,baz=349,slow=5.2,SNR=5.4
SNAA Sanae 77.13 179 P **P** **02 34 26.9 +1.6**
SNAA IAmb IAmb 02 34 28.9
comp=Z,72nm,1.1s
VNA3 Neumayer Olymp 77.33 177 P **P** **02 34 27.6 +1.2**
VNA3 S **S** **02 43 57.1 -0.7**
VNA3 x x 02 43 57.2
NVL N'lazarevskaya 77.74 184 ǁ *i*P **P** **02 34 28.5 -0.1**
NVL *e**PP **pP** **02 35 18.7 -0.5**
NVL *e*S **S** **02 43 59.3 -2.9**
NVL pmax pmax
comp=Z,67nm,1.0s
DSRI Dabo 77.74 277 P **P** **02 34 31.4 +1.8**
comp=Z,87μmcomp=Z,59μmcomp=Z,2μm,0.7s
KSI Kapahiang 77.78 273 P **P** **02 34 30.0 +0.1**
comp=Z,69nm,0.7s
VNA1 Neumayer--Stat 77.98 177 P **P** **02 34 32.0 +2.1**
VNA1 S **S** **02 44 07.9 +3.1**
INU Inuyama 78.01 325 IAmb IAmb 02 34 32.4
comp=Z,117nm,1.0s
MJA0 Matsu Arr-Jizo 78.37 326 *e*P **P** **02 34 30.8 -1.7**
MJA0 pmax pmax
comp=Z,59nm,1.0s
MJAR Matsushiro Arr 78.39 326 P **P** **02 34 31.3 -1.3**
comp=Z,59nm,1.0s,baz=153,slow=5.2,SNR=44
MJAR Matsushiro Arr 78.39 326 IAmb IAmb 02 34 34.1
comp=Z,27nm,0.9s
MAJO Matsushiro 78.39 326 P **P** **02 34 31.8 -0.8**
MAJO pmax pmax
comp=Z,133nm,1.1s
MAJO Matsushiro 78.39 326 P **P** **02 34 31.8 -0.8**
MAJO IAmb IAmb 02 34 33.7
comp=Z,133nm,1.1s
MAT Matsushiro 78.39 326 P **P** **02 34 31.5 -1.1**
MAT S **S** **02 44 11.8 +1.8**
MJB9 Matsu-Tunnel 78.40 326 IAmb IAmb 02 34 33.7
comp=Z,129nm,1.1s
JNU Nakatsue 79.50 319 P **P** **02 34 37.8 -0.9**
comp=Z,133nm,0.9s,baz=93,slow=3.8,SNR=23
KRJI Kerinci 79.55 274 P **P** **02 34 39.9 +0.3**
comp=Z,219nm,0.9s
MYKOM **Kota Tinggi 79.56 279** P **P** **02 34 39.8 +0.3**
MYKOM **Kota Tinggi 79.56 279** P **P** **02 34 41.0 +1.5**
ERM Erimo 80.79 333 P **P** **02 34 45.1 -0.2**
ERM pmax pmax
comp=Z,176nm,1.0s
ERM Erimo 80.79 333 P **P** **02 34 45.1 -0.2**
PDSI Padang 81.02 274 P **P** **02 34 45.6 -1.7**
comp=Z,42nm,1.4s
BKNI Bangkinang 81.17 276 P **P** **02 34 48.2 +0.1**
comp=Z,3μmcomp=Z,189nm,1.1s
DLV T Lat 81.28 290 IAmb IAmb 02 34 51.7
comp=Z,96nm,0.9s
YUK Yuzh-Kuril'sk 81.53 336 *e*P **P** **02 34 45.9 -3.2**
YUK *e**PP **pP** **02 35 38.3 -2.2**
YUK *e* 02 37 58.9
YUK *e*PPP PPP 02 39 48.4
YUK *e*S **S** **02 44 45.2 +3.0**
YUK *e*SS **SS** **02 50 06.1 +1.0**
YUK *e*SSS SSS 02 53 34.6
YUK pmax pmax
comp=Z,771nm,1.9s
YUK pmax pmax
comp=Z,371nm,1.2s
YUK pmax pmax
comp=N,332nm,1.5s
YUK pmax pmax
comp=E,429nm,1.3s
JRMM Jerantut 81.83 280 P **P** **02 34 52.0 +0.5**
PLCA Paso Flores 82.72 134 P **P** **02 34 58.5 +2.6**
comp=E,70nm,0.9s,baz=245,slow=5.5,SNR=104
PLCA PKKPbc **PKKPbc** **02 53 18.9 +0.8**
comp=E,5.3nm,1.1s,baz=36,slow=4.8,SNR=4.9
PLCA Paso Flores 82.72 134 *e*P **P** **02 34 58.7 +2.9**
PLCA Paso Flores 82.72 134 P **P** **02 34 58.5 +2.6**
PLCA IAmb IAmb 02 34 59.8
comp=Z,140nm,1.1s
GO06 Curarrehue 82.81 132 P **P** **02 34 58.8 +2.5**
GO06 IAmb IAmb 02 35 00.1
comp=Z,102nm,1.1s
KIWB Kanaga Island 82.98 1 P **P** **02 34 57.1 +0.6**
ADK Adak 83.03 2 P **P** **02 34 56.9 +0.2**
ADK pmax pmax
comp=Z,375nm,1.0s
ADK Adak 83.03 2 P **P** **02 34 56.9 +0.2**
IPM Ipoh 83.37 279 P **P** **02 35 00.3 +0.8**
IPM IAmb IAmb 02 35 00.9
comp=Z,57nm,0.9s
IPM Ipoh 83.37 279 P **P** **02 35 00.0 +0.5**
ATKA Atka Island 83.44 3 IAmb IAmb 02 35 01.7
comp=Z,91nm,1.0s
TJN Taejon 83.85 320 *ce*P **P** **02 35 01.4 +0.1**
KULM Kulim 84.12 280 P **P** **02 35 03.9 +0.7**
KULM IAmb IAmb 02 35 04.9
comp=Z,84nm,1.0s
RPSI Rantau Prapat 84.21 277 P **P** **02 35 01.5 -2.2**
RPSI IAmb IAmb 02 35 04.4
comp=Z,74nm,1.1s
PSI Prapat 84.26 277 P **P** **02 35 03.5 -0.6**
comp=Z,26nm,0.7s,baz=185,slow=5.5,SNR=21
KSRS Korea Array 84.33 321 *e*P **P** **02 35 04.2 +0.6**
KSRS pmax pmax
comp=Z,41nm,0.9s
KSRS Korea Array 84.33 321 P **P** **02 35 03.9 +0.2**
comp=Z,41nm,0.9s,baz=142,slow=5.6,SNR=62
KS19 Wonju Array Si 84.39 321 P **P** **02 35 04.2 +0.2**
KS19 IAmb IAmb 02 35 05.7
comp=Z,61nm,1.1s
SKR Severo-Kuril's 84.58 345 *e*P P 02 34 58.3 -6.3
SKR *e*S **S** **02 45 17.7 +5.0**
SKR *e**SS sS 02 46 34.9 -8.7
SKR pmax pmax
comp=Z,500nm,4.1s
SKR pmax pmax
comp=Z,300nm,5.8s
SKR pmax pmax
comp=Z,167nm,1.1s
GSI Gunungsitoli 84.63 275 P **P** **02 35 06.4 +0.6**
comp=Z,14μmcomp=Z,319nm,1.0s
GSI Gunungsitoli 84.63 275 P **P** **02 35 06.1 +0.3**
GO05 Huala 85.14 128 P **P** **02 35 10.5 +2.4**
GO05 IAmb IAmb 02 35 10.7
comp=Z,67nm,1.1s
YSS Yuzh-Sakhalins 85.15 335 *d*iP **P** **02 35 07.7 +0.2**
YSS *e**PP **pwP** **02 36 00.8 -1.7**
YSS *e**SP **sP** **02 36 23.5 +1.8**
YSS *e*S **S** **02 45 23.3 +4.8**
YSS *e* 02 46 41.0
YSS pmax pmax
comp=Z,440nm,1.0s
YSS pmax pmax
comp=Z,700nm,3.3s
YSS Yuzh-Sakhalins 85.15 335 P **P** **02 35 08.3 +0.8**
UBPT Khong Chiam 85.58 291 IAmb IAmb 02 35 13.2
comp=Z,46nm,1.0s
UNV Unalaska Valle 85.70 8 IAmb IAmb 02 35 11.3
comp=Z,36nm,1.1s
SNCC San Nicolas Is 85.71 47 P **P** **02 35 12.4 +1.7**
baz=228
NJ2 Nanjing 85.96 311 *e*P **P** **02 35 13.5 +1.6**
NJ2 pmax pmax
comp=Z,33nm,0.8s
TEY Ternei 85.96 330 ǁ *i*P **P** **02 35 12.7 +1.1**
TEY pmax pmax
comp=E,20nm,1.1s
TEY pmax pmax
comp=N,20nm,1.2s
TEY pmax pmax
comp=Z,60nm,1.2s
SCZ2 Santa Cruz Isl 86.14 46 P **P** **02 35 14.5 +1.7**
baz=228
SCI2 San Clemente I 86.14 47 P **P** **02 35 14.4 +1.6**
baz=228,SNR=6.6
LPIG La Paz 86.19 59 P **P** **02 35 14.9 +1.7**
comp=Z,29nm,0.4s,baz=358,slow=1.1,SNR=10.0
PET Petropavlovsk 86.26 347 P **P** **02 35 12.1 -0.7**
PET pmax pmax
comp=Z,155nm,0.9s
PET Petropavlovsk 86.26 347 P **P** **02 35 12.1 -0.7**
SBC Santa Barbara 86.39 46 P **P** **02 35 16.1 +2.1**
baz=228
CIS Catalina Islan 86.50 47 P **P** **02 35 16.0 +1.4**
baz=229,SNR=6.0
PEA0B Petropavlovsk- 86.53 346 P **P** **02 35 14.8 +0.7**
PEA0B pmax pmax
comp=Z,277nm,1.1s
PEA0B Petropavlovsk- 86.53 346 P **P** **02 35 14.8 +0.7**
PETK Petropavlovsk- 86.53 346 P **P** **02 35 14.7 +0.6**
comp=Z,262nm,1.0s,baz=120,slow=6.4,SNR=195
VLA Vladivostok 86.56 327 *i* P **P** **02 35 15.3 +0.8**
VLA pmax pmax
comp=Z,95nm,0.9s
BLG Laguna Peak, P 86.57 46 P **P** **02 35 16.4 +1.5**
baz=228,SNR=5.9
PKM Mcpherson Peak 86.63 45 P **P** **02 35 17.5 +2.1**
baz=228,SNR=19
FMP Fort Macarthur 86.79 47 P **P** **02 35 17.5 +1.6**
baz=229
SMMC Simmler 86.81 45 P **P** **02 35 18.1 +2.1**
baz=228,SNR=12
ROC1 El Roble 86.93 127 P **P** **02 35 20.0 +2.8**
SAO San Andreas Ge 86.93 43 IAmb IAmb 02 35 19.5
comp=Z,93nm,1.1s
PAGB Antelope Grade 86.94 44 IAmb IAmb 02 35 19.3
comp=Z,99nm,1.0s
PMPB Monarch Peak 86.94 44 IAmb IAmb 02 35 19.3
comp=Z,100nm,1.0s
109C Camp Elliot, M 87.00 48 P **P** **02 35 18.6 +1.7**
baz=229,SNR=10
PEL Peldehue 87.06 127 P **P** **02 35 19.7 +2.2**
PEL pmax pmax
comp=Z,130nm,1.0s
PEL Peldehue 87.06 127 P **P** **02 35 19.7 +2.2**
MCCM Marconi Confer 87.07 41 P **P** **02 35 19.5 +2.4**
MCCM IAmb IAmb 02 35 19.9
comp=Z,121nm,1.1s
OSI Osito Audit: C 87.12 46 P **P** **02 35 19.2 +1.7**
baz=228
DECC Green Verdugo 87.12 47 P **P** **02 35 18.7 +1.2**
baz=229
PASC Pasadena Art C 87.16 47 IAmb IAmb 02 35 20.4
comp=Z,94nm,1.1s
MLSI Meulaboh, Aceh 87.17 277 P **P** **02 35 18.6 +0.4**
comp=Z,152nm,1.2s
LHMI Lhok Sumawe 87.21 278 P **P** **02 35 19.4 +1.0**
comp=Z,70nm,0.9s
LHMI Lhok Sumawe 87.21 278 P **P** **02 35 18.7 +0.3**
LHMI IAmb IAmb 02 35 20.4
comp=Z,118nm,1.1s
MWC Mount Wilson 87.27 47 IAmb IAmb 02 35 20.7
comp=Z,72nm,0.9s
USA0B Ussuriysk Arra 87.34 327 P **P** **02 35 18.6 +0.3**
USA0B pmax pmax
comp=Z,67nm,0.9s
USA0B Ussuriysk Arra 87.34 327 P **P** **02 35 18.6 +0.3**
USA0B IAmb IAmb 02 35 20.3
comp=Z,67nm,0.8s
USRK Ussuriysk Ar. 87.34 327 P **P** **02 35 18.8 +0.5**
comp=Z,95nm,1.0s,baz=135,slow=3.3,SNR=93
ARVC Arvin 87.39 46 P **P** **02 35 20.5 +1.7**
baz=228,SNR=27
MURC Murrieta 87.40 48 P **P** **02 35 20.7 +1.8**
baz=229,SNR=42
MONP2 Monument Peak 87.44 49 P **P** **02 35 21.5 +2.2**
baz=230,SNR=76
IKP In-Ko-Pah, Jac 87.48 49 P **P** **02 35 21.6 +2.2**
baz=230,SNR=66
BFSC Mount Baldy Ra 87.53 47 P **P** **02 35 21.2 +1.6**
baz=229,SNR=62
HOPS Hopland Field 87.55 41 IAmb IAmb 02 35 21.8
comp=Z,79nm,1.1s
GDXM Geysers 87.58 41 IAmb IAmb 02 35 22.9
comp=Z,68nm,1.2s
VES Vestal, Richgr 87.71 45 P **P** **02 35 21.7 +1.5**
baz=228,SNR=44
EDW2 Edwards Air Fo 87.74 46 P **P** **02 35 22.3 +1.8**
baz=229,SNR=76
KCPM Cahto Peak 87.76 40 IAmb IAmb 02 35 23.0
comp=Z,87nm,1.1s
VOG Valley Oaks Go 87.85 44 P **P** **02 35 22.0 +1.2**
baz=228
SWSC Sam W. Stewart 87.87 49 P **P** **02 35 23.2 +2.2**
baz=230,SNR=49
PFO Pinyon Flats O 87.88 48 *d*iP **P** **02 35 22.8 +1.5**
PFO pmax pmax
comp=Z,144nm,1.1s
PFO Pinyon Flats O 87.88 48 P **P** **02 35 23.2 +2.0**
PFO IAmb IAmb 02 35 24.0
comp=Z,93nm,1.1s
PFO Pinyon Flats O 87.88 48 P **P** **02 35 23.3 +2.0**
baz=230,SNR=50
XPFO Pion Flat 87.88 48 P **P** **02 35 23.2 +1.9**
XPFO IAmb IAmb 02 35 24.6
comp=Z,134nm,1.1s
WHN Wuhan 87.96 308 ǁ P **P** **02 35 22.2 +0.7**
ISA Isabella, Lake 87.96 45 P **P** **02 35 23.5 +1.9**
baz=228,SNR=91
BBRC Big Bear Solar 88.01 47 P **P** **02 35 23.8 +1.8**
baz=229,SNR=8.5
KMRM Mail Ridge 88.07 39 IAmb IAmb 02 35 24.6
comp=Z,88nm,1.0s
LRMC Laurel Mtn Rad 88.33 46 P **P** **02 35 25.1 +1.8**
baz=229,SNR=117
RRX Edison Barstow 88.36 47 P **P** **02 35 25.2 +1.8**
baz=229,SNR=5.8
CMB Columbia Colle 88.42 43 IAmb IAmb 02 35 26.1
comp=Z,88nm,1.0s
BELC Belle Mtn. Jos 88.42 48 P **P** **02 35 26.0 +2.2**
baz=230,SNR=94
TYV Tymovskoe 88.51 337 *e*P **P** **02 35 25.5 +1.9**
TYV pmax pmax
comp=Z,1μm,1.5s
TYV pmax pmax
comp=Z,400nm,0.9s
KHMM Horse Mountain 88.52 39 IAmb IAmb 02 35 26.7
comp=Z,75nm,1.0s
O02D Mt. Diablo Mer 88.54 40 P **P** **02 35 26.4 +2.3**
baz=226,SNR=75
BC3 Big Chuckawall 88.55 49 P **P** **02 35 26.9 +2.5**
baz=230,SNR=113
GLA Glamis 88.57 49 P **P** **02 35 27.1 +2.7**
baz=231,SNR=38
HSIG 88.69 55 IAmb IAmb 02 35 27.5
comp=Z,82nm,1.0s
AFDM Forest Hills D 88.70 42 IAmb IAmb 02 35 28.1
comp=Z,71nm,1.2s
CWC Cottonwood Cre 88.72 45 P **P** **02 35 26.6 +1.4**
baz=229
GO04 Tololo Observa 88.72 125 P **P** **02 35 26.9 +1.2**
GO04 IAmb IAmb 02 35 28.0
comp=Z,52nm,1.0s
HEC Hector,Ludlow 88.74 47 P **P** **02 35 27.1 +1.9**
baz=230,SNR=78
GSC Goldstone, Bar 88.75 47 P **P** **02 35 26.9 +1.6**

GSC pmax pmax
comp=Z,153nm,1.1s
GSC Goldstone, Bar 88.75 47 P P 02 35 26.9 +1.6
GSC Goldstone, Bar 88.75 47 P P 02 35 27.2 +1.9
baz=229,SNR=78
MDJ Mudanjiang 88.78 326 P P 02 35 25.8 +0.8
MDJ IAmb IAmb 02 35 27.5
comp=Z,106nm,1.1s
MPMC Manual Prospec 88.83 46 P P 02 35 27.5 +1.8
baz=229,SNR=66
HOPE Hope Point 88.83 159 P P 02 35 27.9 +2.6
HOPE pmax pmax
comp=Z,162nm,1.1s
HOPE Hope Point 88.83 159 P P 02 35 27.9 +2.6
DL2 Dalian 88.86 318 P P 02 35 25.7 +0.2
DL2 pP **pP 02 36 17.4 -0.2**
DL2 S **S 02 45 54.0 -0.3**
DL2 pmax pmax
comp=Z,68nm,0.9s
DL2 pmax pmax
comp=Z,470nm,4.1s
KRMB Red Mountain 88.88 38 IAmb IAmb 02 35 28.5
comp=Z,55nm,1.0s
MDPB Devils Postpil 88.91 44 IAmb IAmb 02 35 29.0
comp=Z,78nm,1.1s
OMMB Old Mammoth Mi 88.94 44 IAmb IAmb 02 35 30.7
comp=Z,47nm,1.2s
WDC Whiskeytown Da 88.95 40 IAmb IAmb 02 35 28.2
comp=Z,79nm,1.1s
TIN Tinemaha, Big 89.03 45 P P 02 35 28.2 +1.7
baz=229,SNR=8.1
MLAC Mammoth, Mammo 89.05 44 P P 02 35 28.7 +1.9
baz=228,SNR=20
IRM Iron Mountain 89.06 48 P P 02 35 29.2 +2.5
baz=230,SNR=146
GMRC Granite Mounta 89.14 48 P P 02 35 29.3 +2.1
baz=230,SNR=51
N02D Trinity Center 89.14 39 P P 02 35 28.8 +1.9
baz=226,SNR=36
O03E Paynes Creek 89.16 40 P P 02 35 28.0 +0.9
baz=226,SNR=47
Y12C Blythe 89.21 49 P P 02 35 29.7 +2.4
baz=231,SNR=99
214A Organ Pipe Nat 89.21 51 P P 02 35 29.9 +2.4
baz=232
M02C Callahan 89.35 39 P P 02 35 30.0 +2.1
baz=226,SNR=38
TUQ Turquoise Moun 89.39 47 P P 02 35 30.2 +1.9
baz=230,SNR=30
SHOC Shoshone, Teco 89.47 46 P P 02 35 30.3 +1.7
baz=230,SNR=18
FURC Furnace Creek, 89.47 46 P P 02 35 30.1 +1.6
baz=229,SNR=20
L02E Cave Junction 89.49 38 P P 02 35 30.6 +2.2
baz=225,SNR=7.8
GRAC Grapevine Rang 89.51 45 P P 02 35 30.5 +1.7
baz=229,SNR=69
KEBM Edson Butte 89.62 37 P P 02 35 31.1 +2.0
CFA Coronel Fontan 89.64 127 P P 02 35 31.5 +1.8
comp=Z,68nm,0.9s,baz=246,slow=3.9,SNR=78
YBH Yreka Blue Hor 89.67 39 IAmb IAmb 02 35 32.4
comp=Z,98nm,1.1s
BEKR Beckworth 89.67 41 IAmb IAmb 02 35 32.0
comp=Z,68nm,1.1s
VCNR Virginia City 89.69 42 IAmb IAmb 02 35 39.3
comp=Z,46nm,1.0s
YERR Yerington 89.72 43 IAmb IAmb 02 35 32.4
comp=Z,101nm,1.1s
TIA Tai'an 89.75 314 P P 02 35 30.2 +0.4
TIA pmax pmax
comp=Z,51nm,1.0s
NEE2 Needles Airpor 89.79 48 P P 02 35 32.3 +2.3
baz=231
SNY Shenyang 89.80 321 ⇓P **P 02 35 28.0 -1.8**
SNY pP **pP 02 36 18.8 -3.4**
SNY S **S 02 45 59.5 -3.3**
SNY pmax pmax
comp=Z,27nm,1.3s
SNY pmax pmax
comp=Z,310nm,4.9s
SNY LR LR
comp=Z,260nm,4.2s
SNY LR LR
comp=Z,280nm,4.2s
SNY LR LR
comp=Z,330nm,21.8s
K02D Willamette Mer 89.84 38 P P 02 35 32.0 +1.8
baz=225,SNR=18
NVAR Mina Array Bea 89.90 43 P P 02 35 31.9 +1.2
comp=Z,70nm,1.0s,baz=220,slow=7.4,SNR=212
NVAR PKKPbc **PKKPbc 02 53 03.8 +1.4**
comp=Z,1.6nm,0.9s,baz=100,slow=2.6,SNR=8.0
NVAR PKPPKP 03 01 11.8
comp=Z,0.6nm,0.7s,baz=66,slow=3.6,SNR=4.3
RYN Ryan 89.90 43 IAmb IAmb 02 35 32.6
comp=Z,49nm,1.1s
NV11 Mina Array Sit 89.99 44 IAmb IAmb 02 35 34.2
comp=Z,62nm,1.1s
J01E Myrtle Point 90.03 37 P P 02 35 32.6 +1.7
baz=225,SNR=7.6
PAHR Pah Rah Range 90.12 42 IAmb IAmb 02 35 34.1
comp=Z,78nm,1.1s
HUMO Hull Mountain 90.15 38 P P 02 35 32.7 +1.1
HUMO IAmb IAmb 02 35 34.2
comp=Z,71nm,1.1s
TPNV Topopah Spring 90.16 46 IAmb IAmb 02 35 34.9
comp=Z,74nm,0.9s
TPNV Topopah Spring 90.16 46 P P 02 35 33.6 +1.7
baz=230,SNR=67
M04C Macdoel 90.17 39 P P 02 35 33.1 +1.3
baz=226,SNR=23
SLVN Son La 90.17 295 P P 02 35 32.8 +0.6
CN2 Changchun 90.21 324 *eP* **P 02 35 30.6 -1.2**
CN2 pmax pmax
comp=Z,140nm,1.1s
L04D Klamath Falls 90.22 39 P P 02 35 33.4 +1.4
baz=226,SNR=21
KVN Kaiserville 90.43 43 IAmb IAmb 02 35 35.0
comp=Z,47nm,1.0s
W13A Hualapai Mount 90.46 48 IAmb IAmb 02 35 36.8
comp=Z,62nm,1.1s
SHPR Sheep Range 90.55 47 IAmb IAmb 02 35 37.1
comp=Z,61nm,1.2s
MOIG Morelia 90.62 67 P P 02 35 35.5 +1.0
GO03 Copiap 90.63 123 P P 02 35 36.7 +2.3
GO03 IAmb IAmb 02 35 37.9
comp=Z,68nm,1.0s
GRNR Gornyy 90.65 334 ⇑*iP* **P 02 35 34.9 +1.3**
GRNR *eS* **S 02 46 12.3 +2.0**
GRNR pmax pmax
comp=Z,110nm,1.3s
GRNR smax smax
comp=N,3.0nm,1.4s
GRNR MLR MLR
comp=Z,90nm,14.0s
I03D Drain, OR 90.71 37 P P 02 35 35.7 +1.7
baz=225,SNR=11
TUC Tucson 90.78 52 P P 02 35 36.1 +1.3
TUC pmax pmax
comp=Z,147nm,1.1s
TUC Tucson 90.78 52 P P 02 35 36.1 +1.3
TUC Tucson 90.78 52 P P 02 35 37.3 +2.5
baz=233
K04D Chiloquin, OR 90.80 39 P P 02 35 36.1 +1.4
baz=226,SNR=5.3
GYA Guiyang 90.96 301 ⇑*iP* **P 02 35 36.2 +0.4**
GYA pP pP 02 36 28.8 +0.8
GYA PP **PP 02 39 15.0 -0.6**
GYA S **SKKSac 02 46 07.1 +4.2**
GYA SS **SS 02 52 25.1 +1.2**
GYA pmax pmax
comp=Z,30nm,1.1s
GYA pmax pmax
comp=Z,130nm,4.1s
J04D Umpqua Nationa 91.04 38 P P 02 35 37.4 +1.6
baz=226,SNR=21
ENH Enshi 91.14 305 P P 02 35 36.1 -0.4
ENH IAmb IAmb 02 35 48.5
comp=Z,41nm,1.0s
ZAIG Zacatecas 91.24 64 IAmb IAmb 02 35 41.1
comp=Z,33nm,1.0s
HPIG 91.25 59 IAmb IAmb 02 35 39.9
comp=Z,42nm,0.9s
319A Douglas 91.25 54 P P 02 35 36.4 -0.6
I04A Tendick Farm, 91.26 37 P P 02 35 37.8 +1.1
baz=226,SNR=20
KLR Kul'dur 91.31 330 *diP* **P 02 35 37.6 +0.9**
KLR pmax pmax
comp=Z,103nm,1.0s
R11A Troy Canyon, C 91.47 45 P P 02 35 39.1 +1.1
baz=230,SNR=25
J05D Fort Rock, OR 91.53 38 P P 02 35 39.5 +1.4
baz=227,SNR=14
TLIG Tlapa 91.57 70 P P 02 35 41.9 +3.1
TLIG IAmb IAmb 02 35 42.5
comp=Z,66nm,1.1s
H04D Lebanon 91.60 37 P P 02 35 39.7 +1.5
baz=226,SNR=6.0
X16A Lo Mia Camp, P 91.62 50 IAmb IAmb 02 35 42.5
comp=Z,76nm,1.1s
KDAK Kodiak Island 91.74 14 P P 02 35 39.1 +0.6
comp=Z,34nm,0.7s,baz=214,slow=4.0,SNR=22
KDAK Kodiak Island 91.74 14 P P 02 35 38.0 -0.5
KDAK IAmb IAmb 02 35 41.2
comp=Z,54nm,0.9s
G03D McMinnville, O 91.82 36 P P 02 35 40.8 +1.7
baz=225
I05D Terrebonne, OR 92.20 38 P P 02 35 42.6 +1.6
baz=227
WUAZ Wupatki 92.34 49 IAmb IAmb 02 35 45.3
comp=Z,73nm,1.1s
WUAZ Wupatki 92.34 49 P P 02 35 43.9 +1.9
baz=233
WVOR Wild Horse Val 92.36 40 IAmb IAmb 02 35 44.5
comp=Z,56nm,1.1s
GO02 Mina Guanaco 92.53 121 P P 02 35 45.2 +1.7
GO02 IAmb IAmb 02 35 46.9
comp=Z,59nm,0.9s
CMAR Chiang Mai Arr 92.54 290 P P 02 35 43.1 0.0
comp=Z,12nm,1.1s,baz=140,slow=3.7,SNR=17
CMAR pP **pwP 02 36 39.8 +1.0**
comp=Z,2.7nm,0.8s,baz=123,slow=3.3,SNR=1.8
CMAR PP **PP 02 39 28.1 +0.3**
comp=Z,5.7nm,1.0s,baz=140,slow=5.5,SNR=6.9
CMAR PKiKP **PKiKP 02 40 31.1 +0.4**
comp=Z,1.8nm,0.3s,baz=167,slow=1.0,SNR=7.2
CMAR PKKPbc **PKKPbc 02 52 57.1 +2.7**
comp=Z,4.7nm,0.6s,baz=297,slow=6.0,SNR=19
F04D Rainier, OR 92.56 36 P P 02 35 43.9 +1.4
baz=226
X18A Snowflake 92.67 51 IAmb IAmb 02 35 46.5
comp=Z,42nm,1.1s
CHTO Chiang Mai 92.72 290 P P 02 35 44.5 +0.5
CHTO pmax pmax
comp=Z,14nm,1.1s
CHTO Chiang Mai 92.72 290 P P 02 35 44.5 +0.5
F04A Amboy 92.75 36 IAmb IAmb 02 35 45.6
comp=Z,58nm,0.9s
BJT Baijiatuan 92.77 316 P P 02 35 42.7 -1.0
BJT pmax pmax
comp=Z,15nm,0.8s
BJT Baijiatuan 92.77 316 P P 02 35 42.6 -1.0
BJI Beijing 92.78 316 P P 02 35 44.2 +0.5
BJI S **S 02 46 31.7 +1.9**
BJI pmax pmax
comp=Z,15nm,1.0s
G05D Wamic, OR 92.83 37 P P 02 35 45.2 +1.3
baz=227
121A Cookes Peak, D 92.96 53 P P 02 35 47.0 +2.0
baz=234
NLWA Neilton Lookou 93.06 34 IAmb IAmb 02 35 47.6
comp=Z,56nm,1.1s
E04D Cinebar 93.11 35 P P 02 35 46.7 +1.7
baz=226
KMI Kunming 93.15 297 P P 02 35 47.8 +1.7
KMI pP pP 02 36 38.1 -0.3
KMI S **S 02 46 31.9 -2.3**
KMI sS sS 02 48 03.0 -3.1
KMI pmax pmax
comp=Z,26nm,1.3s
KMI pmax pmax
comp=Z,170nm,4.9s
KMI LR LR
comp=Z,150nm,8.3s
KMI LR LR
comp=Z,160nm,11.2s
KMI LR LR
comp=Z,170nm,15.4s
W18A Petrified Fore 93.17 50 IAmb IAmb 02 35 49.0
comp=Z,54nm,1.1s
W18A Petrified Fore 93.17 50 P P 02 35 47.7 +1.8
baz=233
G06A Carlson Farm, 93.18 37 IAmb IAmb 02 35 47.9
comp=Z,56nm,1.0s
F05D White Salmon 93.20 36 P P 02 35 46.7 +1.1
baz=227
ELK Elko 93.20 43 IAmb IAmb 02 35 48.3
comp=Z,35nm,0.9s
D03D Eldon 93.54 34 P P 02 35 48.5 +1.5
baz=226
MSU Marysvale 93.65 46 P P 02 35 50.1 +2.0
MSU Marysvale 93.65 46 P P 02 35 50.1 +2.0
XAN Xi'an 93.73 308 P P 02 35 48.1 -0.2
XAN pmax pmax
comp=Z,15nm,1.1s
XAN Xi'an 93.73 308 P P 02 35 47.6 -0.7
XAN pmax pmax
comp=Z,17nm,1.2s
XAN Xi'an 93.73 308 P P 02 35 47.6 -0.7
BRLK Bradley Lake 93.92 14 IAmb IAmb 02 35 57.8
comp=Z,26nm,1.0s
MA2 Magadan 93.98 345 *ceP* **P 02 35 48.6 -0.2**
MA2 pmax pmax
comp=Z,83nm,1.1s
MA2 Magadan 93.98 345 P P 02 35 48.4 -0.4
comp=Z,43nm,0.9s,baz=140,slow=5.4,SNR=8.9
MA2 Magadan 93.98 345 P P 02 35 48.0 -0.7
TX31 Lajitas Ar. Si 94.05 58 IAmb IAmb 02 35 52.3
comp=Z,30nm,1.1s
TX32 Lajitas Array 94.05 58 IAmb IAmb 02 35 52.3
comp=Z,30nm,1.1s
TXAR Lajitas Array 94.05 58 P P 02 35 51.4 +1.4
comp=Z,18nm,1.0s,baz=215,slow=6.1,SNR=92
TXAR PP **PP 02 39 39.7 0.0**
comp=Z,1.0nm,1.0s,baz=225,slow=10,SNR=3.4
TXAR PKKPbc **PKKPbc 02 52 51.2 +0.2**
comp=Z,1.2nm,1.1s,baz=98,slow=6.4,SNR=4.0
G08A Pilot Rock 94.09 38 IAmb IAmb 02 35 52.8
comp=Z,44nm,1.0s
MNTX Cornudas Mount 94.15 55 P P 02 35 51.5 +1.2
MNTX Cornudas Mount 94.15 55 P P 02 35 51.4 +1.2
baz=236
RSO Redoubt South 94.19 13 P P 02 35 48.3 -1.6
DUG Dugway, Tooele 94.30 45 P P 02 35 52.1 +1.2
baz=232
CMIG Matias Romero 94.31 73 P P 02 35 52.2 +1.0
comp=Z,11nm,1.1s,baz=224,slow=6.2,SNR=7.5
CMIG PP **PP 02 39 42.7 +1.0**
comp=Z,2.7nm,0.7s,baz=204,slow=17,SNR=3.7
NNA Nana 94.37 107 P P 02 35 53.5 +1.7
comp=Z,26nm,1.0s,baz=252,slow=8.1,SNR=8.5
NNA Nana 94.37 107 P P 02 35 52.3 +0.5
NNA IAmb IAmb 02 35 55.0
comp=Z,41nm,1.1s
Y22D IRIS PASSCAL I 94.44 53 P P 02 35 53.4 +1.7
baz=235
E07A Sunnyside 94.47 37 IAmb IAmb 02 35 53.8
comp=Z,32nm,0.8s
B05A Bryant 94.53 34 P P 02 35 52.8 +1.3
baz=226
HAWA Hanford 94.53 37 IAmb IAmb 02 35 54.0
comp=Z,33nm,0.9s
SEW Seward 94.53 15 IAmb IAmb 02 35 57.2
comp=Z,25nm,1.2s
LVC Limon Verde 94.55 120 P P 02 35 55.7 +2.8
comp=Z,20nm,0.9s,baz=256,slow=3.5,SNR=16
LVC Limon Verde 94.55 120 *eP* **P 02 35 55.5 +2.7**
LVC Limon Verde 94.55 120 P P 02 35 54.2 +1.3
LVC IAmb IAmb 02 35 56.9
comp=Z,45nm,1.1s
A04D Lummi Island 94.55 34 P P 02 35 52.8 +1.2
baz=226
MFID Camas Ranch 94.57 41 IAmb IAmb 02 35 54.3
comp=Z,50nm,0.9s
E08A Dider Farm, El 94.84 37 IAmb IAmb 02 35 55.1
comp=Z,18nm,0.9s
C06D Leavenworth 94.88 35 P P 02 35 54.1 +0.9
baz=227
GAMB Gambell 95.12 3 P P 02 35 55.0 +1.2
MVCO Mesa Verde 95.21 49 P P 02 35 56.1 +0.9
baz=234
ANMO Albuquerque 95.25 52 *diP* **P 02 35 56.5 +1.0**
ANMO pmax pmax
comp=Z,29nm,1.5s
ANMO Albuquerque 95.25 52 P P 02 35 56.3 +0.9
comp=Z,6.7nm,1.1s,baz=234,slow=5.3,SNR=22
ANMO PP **PP 02 39 48.6 -0.5**
comp=Z,1.6nm,1.0s,baz=216,slow=11,SNR=4.1
ANMO Albuquerque 95.25 52 P P 02 35 56.5 +1.0
baz=235
D08A Wollman Farm, 95.28 37 P P 02 35 56.1 +1.1
E09A Wood Farm, Sta 95.32 37 IAmb IAmb 02 35 57.0
comp=Z,31nm,0.9s
RC01 Rabbit Creek A 95.36 14 IAmb IAmb 02 35 58.2
comp=Z,19nm,0.9s
F10A Beach Ranch, E 95.45 38 IAmb IAmb 02 35 57.4
comp=Z,26nm,0.9s
SUA Susitna One 95.50 13 IAmb IAmb 02 35 58.5
comp=Z,26nm,0.7s
CD2 Chengdu 95.56 303 P P 02 35 57.8 +1.0
CD2 pP pP 02 36 47.5 -1.6
CD2 S **S 02 46 53.4 -1.2**
CD2 sS sS 02 48 19.5 -7.2
CD2 SS **SS 02 53 32.5 +3.3**
CD2 pmax pmax
comp=Z,140nm,7.8s
ATAH Atahualpa 95.70 102 P P 02 35 59.9 +1.6
comp=Z,16nm,1.1s,baz=256,slow=5.9,SNR=12
EYAK Cordova Ski Ar 95.76 16 IAmb IAmb 02 35 59.7
comp=Z,29nm,1.0s
KNK Knik Glacier 95.93 14 P P 02 35 58.6 +0.9
KNK IAmb IAmb 02 36 01.5
comp=Z,21nm,0.8s
PMR Palmer 95.95 14 IAmb IAmb 02 35 59.7
comp=Z,15nm,0.8s
HHC Hu-ho-hao-te 96.05 315 *eP* **P 02 36 00.4 +1.6**
HHC SKS **SKSac 02 46 12.7 -1.5**
HHC S **S 02 46 56.9 -1.5**
HHC SS **SS 02 53 34.1 -1.7**
HHC pmax pmax
comp=Z,94nm,4.9s
GO01 Chusmiza 96.07 117 P P 02 36 02.3 +2.3
C09A Chrisman Ranch 96.11 36 IAmb IAmb 02 36 01.7
comp=Z,27nm,1.1s
GHO Glory Hole Cre 96.15 14 IAmb IAmb 02 36 00.9
comp=Z,27nm,0.8s
LLLB Lillooet 96.25 33 P P 02 36 00.2 +0.9
ANM Nome 96.35 6 P P 02 36 00.2 +0.7
ANM pmax pmax
comp=Z,10.0nm,1.2s
ANM Nome 96.35 6 P P 02 36 00.2 +0.7
OGAUY Aigu 96.43 137 *eP* **P 02 36 03.1 +2.3**
SCM Sheep Creek Mo 96.55 15 IAmb IAmb 02 36 03.0
comp=Z,29nm,0.8s
ZEA Zeya 96.55 331 *eP* **P 02 36 00.5 -0.1**
ZEA pmax pmax
comp=N,29nm,1.2s
ZEA pmax pmax
comp=Z,57nm,1.2s
CRQM Cirque 96.58 17 IAmb IAmb 02 36 07.0
comp=Z,17nm,0.8s
S22A 4UR Ranch, Cre 96.60 50 P P 02 36 02.4 +0.7
baz=235
833A Chaparral WMA, 96.65 61 IAmb IAmb 02 36 04.9
comp=Z,25nm,1.1s
833A Chaparral WMA, 96.65 61 P P 02 36 01.6 -0.1
baz=238
TGL Tana Glacier 96.66 17 P P 02 36 01.1 +0.1
TGL IAmb IAmb 02 36 04.4
comp=Z,24nm,1.2s
SEY Seymchan 96.72 347 ⇓*iP* **P 02 36 00.9 -0.2**
SEY Seymchan 96.72 347 P P 02 36 01.1 0.0
comp=Z,50nm,0.9s,baz=148,slow=5.2,SNR=48
HIA Hailar 96.83 325 *i* **P P 02 36 02.4 +0.4**
HIA pmax pmax
comp=Z,23nm,0.9s
AHID Auburn Hatcher 96.88 44 IAmb IAmb 02 36 05.1
comp=Z,34nm,1.0s
VRDI Verde Repeater 96.91 17 IAmb IAmb 02 36 05.5
comp=Z,25nm,1.2s
NEW Newport 96.99 37 P P 02 36 03.1 +0.2
comp=Z,3.4nm,0.9s,baz=163,slow=2.1,SNR=5.6
NEW PP **PP 02 40 01.9 -0.1**
comp=Z,6.6nm,1.2s,baz=273,slow=6.2,SNR=4.0
NEW Newport 96.99 37 P P 02 36 03.4 +0.6
baz=230
GLB Gilahina Butte 97.01 16 IAmb IAmb 02 36 05.1
comp=Z,22nm,1.2s
BALM Baldy 97.02 17 IAmb IAmb 02 36 05.9
comp=Z,27nm,1.1s
O20A White River Ci 97.07 47 IAmb IAmb 02 36 05.5
comp=Z,16nm,1.0s
O20A White River Ci 97.07 47 P Pdif 02 36 04.2 +0.6
baz=235
MCARA McCarthy VSAT 97.15 17 P Pdif 02 36 03.2 0.0
MCARA IAmb IAmb 02 36 07.1
comp=Z,35nm,1.0s
BARN Barnard Glacie 97.22 18 IAmb IAmb 02 36 07.7
comp=Z,30nm,1.1s
CTGM Chitina Glacie 97.22 18 IAmb IAmb 02 36 08.1
comp=Z,20nm,1.0s
MSTX Muleshoe 97.23 55 P Pdif 02 36 05.1 +0.7
baz=237
SMCO Snowmass 97.32 48 IAmb IAmb 02 36 12.3
comp=Z,20nm,1.1s
KTH Kantishna Hill 97.38 12 P P 02 36 03.5 -0.7
KTH IAmb IAmb 02 36 05.3
comp=Z,17nm,0.9s
REDW Red Top Meadow 97.38 43 IAmb IAmb 02 36 07.3
comp=Z,32nm,1.1s
SDCO Great Sand Dun 97.47 50 P Pdif 02 36 06.1 +0.5
baz=236
JCT Junction City 97.49 59 IAmb IAmb 02 36 06.6
comp=Z,20nm,1.1s
JCT Junction City 97.49 59 P Pdif 02 36 05.9 +0.4
baz=238
SNOW Snow King Moun 97.50 43 IAmb IAmb 02 36 08.0
comp=Z,30nm,0.9s
DLMT Dillon 97.59 41 IAmb IAmb 02 36 08.4
comp=Z,13nm,0.9s
RND Reindeer 97.64 13 P Pdif 02 36 05.6 +0.2
RND Reindeer 97.64 13 P Pdif 02 36 05.6 +0.2
RND IAmb IAmb 02 36 07.5
comp=Z,25nm,0.9s
BW06 Boulder Array 97.80 44 P Pdif 02 36 07.3 +0.5
baz=234
PDAR Pinedale Array 97.80 44 P Pdif 02 36 07.2 +0.3
comp=Z,7.1nm,0.9s,baz=209,slow=3.4,SNR=41
PDAR PP **PP 02 40 07.3 -1.2**
comp=Z,4.3nm,1.1s,baz=228,slow=5.8,SNR=3.8
PDAR PKKPbc **PKKPbc 02 52 41.2 -0.5**
comp=Z,1.3nm,0.8s,baz=92,slow=4.9,SNR=9.2
PDAR PKPPKP **P'P'df 03 00 52.5 -2.2**
comp=Z,1.6nm,1.2s,baz=86,slow=3.7,SNR=4.0
T25A Trinidad 97.85 51 P Pdif 02 36 07.9 +0.7
baz=236
BPAW Bear Paw Mtn. 97.87 12 P P 02 36 05.1 -1.2
FLWY Flagg Ranch 97.90 43 IAmb IAmb 02 36 10.0
comp=Z,20nm,0.9s
MCK McKinley 97.92 13 IAmb IAmb 02 36 11.4
comp=Z,30nm,1.0s
YHB Horse Butte 98.01 42 P P 02 36 07.6 -0.2
H17A Grant Village 98.16 43 P Pdif 02 36 10.2 +1.8
baz=234
LZH Lanzhou 98.32 307 ⇓P Pdif 02 36 15.6 +6.3
LZH sP sP 02 37 25.9 +2.1
LZH SKS **SKSac 02 46 26.5 +0.3**
LZH S **ScS 02 47 21.8 +3.6**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,230nm,6.5s
MENT Mentasta 98.33 16 IAmb IAmb 02 36 10.6
comp=Z,11nm,0.8s
Q24A Divide 98.38 49 P Pdif 02 36 11.0 +1.3
baz=236
AMTX Amarillo 98.49 54 P Pdif 02 36 10.8 +0.9
AMTX Amarillo 98.49 54 P Pdif 02 36 10.4 +0.5
baz=238
ITQB Itaqui 98.51 132 *eP* Pdif 02 36 13.2 +3.0
ISCO Idaho Springs 98.54 48 P P 02 36 10.7 +0.3
baz=236
ABTX Abilene, Hawle 98.73 57 IAmb IAmb 02 36 19.9
comp=Z,13nm,1.1s
ABTX Abilene, Hawle 98.73 57 P P 02 36 11.6 +0.6
baz=238
WRH Wood River Hil 98.75 13 IAmb IAmb 02 36 11.4
comp=Z,15nm,0.9s
RIDG Independent Ri 98.77 15 IAmb IAmb 02 36 24.1
comp=Z,17nm,1.2s
DOT Dot Lake 98.87 15 IAmb IAmb 02 36 13.1

comp=Z,12nm,0.8s
LPAZ La Paz 98.88 115 P **P** 02 36 14.4 +1.6
comp=Z,7.3nm,0.9s,baz=215,slow=3.1,SNR=20
LPAZ La Paz 98.88 115 *e*P **P** 02 36 15.3 +2.4
HDA Harding Lake 98.92 14 P Pdif 02 36 10.7 -0.3
baz=208
N23A Red Feather La 98.94 47 P Pdif 02 36 12.0 0.0
baz=236
CCB Clear Creek Bu 98.96 13 IAmb IAmb 02 36 16.2
comp=Z,14nm,1.0s
TCOL CIGO, UAF Yank 99.15 13 P **Pdif** 02 36 13.3 +1.3
baz=207
COLA College 99.16 13 P **Pdif** 02 36 12.8 +0.8
COLA pmax pmax
comp=Z,20nm,1.1s
COLA College 99.16 13 **Pdif** 02 36 12.8 +0.8
COLA IAmb IAmb 02 36 13.9
comp=Z,20nm,1.1s
ILAR Eielson Array 99.25 14 P **Pdif** 02 36 12.1 -0.4
comp=Z,6.5nm,1.0s,baz=233,slow=6.3,SNR=25
ILAR PP **PP** 02 40 19.7 +0.9
comp=Z,3.7nm,1.0s,baz=224,slow=7.4,SNR=4.5
ILAR PKiKP **PKiKP** 02 40 41.0 -0.1
comp=Z,0.9nm,0.5s,baz=243,slow=1.4,SNR=9.9
ILAR PKKPbc **PKKPbc** 02 52 32.8 -5.5
comp=Z,1.4nm,0.7s,baz=340,slow=3.7,SNR=6.3
ILAR PKPPKP **P'P'df** 03 00 51.3 +1.2
comp=Z,0.5nm,1.0s,baz=330,slow=3.1,SNR=4.0
RLMT Red Lodge 99.34 42 P **Pdif** 02 36 15.0 +1.4
baz=235
POKR Poker Plat Res 99.45 13 P **Pdif** 02 36 12.9 -0.5
baz=207
OTAV Otavalo 99.56 96 *e*P **Pdif** 02 36 17.6 +1.9
K22A Casper 99.56 46 P **Pdif** 02 36 14.6 0.0
baz=236
BILL Bilibino 99.77 355 *d i*P **Pdif** 02 36 15.0 +0.3
BILL *i* *PP **pP** 02 37 03.7 -3.6
BILL *i* 02 40 18.3
BILL pmax pmax
comp=Z,31nm,1.0s
CPSB Cacapava Do Su 99.97 135 *e*P **Pdif** 02 36 17.9 +1.2
WHTX Lake Whitney, 99.99 59 P **Pdif** 02 36 17.0 +0.4
baz=239
KSCO Kaye Shedlock' 100.05 50 P **Pdif** 02 36 18.2 +1.4
baz=238
CPUP Villa Florida 100.33 129 P **Pdif** 02 36 20.1 +1.8
CPUP Villa Florida 100.33 129 PKKPbc PKKPbc 02 52 33.4 +0.1
comp=Z,6.6nm,0.8s,baz=44,slow=3.6,SNR=18
CPUP PKPPKP **P'P'df** 03 00 47.5 -5.3
comp=Z,1.2nm,0.8s,baz=26,slow=2.7,SNR=3.7
CPUP Villa Florida 100.33 129 **Pdif** 02 36 20.1 +1.8
WMOK Wichita Mounta 100.44 56 P **Pdif** 02 36 18.2 -0.4
baz=239
TEZP TEZPUR 101.58 294 *e*P **PKiKP** 02 40 47.6 +1.2
YAK Yakutsk 101.74 338 *e*P **Pdif** 02 36 22.4 -1.1
YAK *e* 02 40 36.6
YAK *e*SS SS 02 54 58.0 +3.9
YAK pmax pmax
comp=Z,34nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.1s
YAK pmax pmax
comp=Z,351nm,4.3s
YAK pmax pmax
comp=N,198nm,3.8s
YAK pmax pmax
comp=E,249nm,4.2s
YAK Yakutsk 101.74 338 P **Pdif** 02 36 22.5 -1.0
comp=E,5.4nm,0.4s,baz=69,slow=1.7,SNR=7.7
YAK Yakutsk 101.74 338 **Pdif** 02 36 24.0 +0.4
RSSD Black Hills 101.89 45 P **Pdif** 02 36 25.9 +0.9
baz=238
TOLK Toolik Lake Re 102.24 11 P **Pdif** 02 36 26.4 +0.6
baz=206
GTA Gaotai 102.78 308 *e*P **Pdif** 02 36 30.4 +1.4
GTA pmax pmax
comp=E,3.0nm,0.8s
EPYK Eagle Plains 102.86 16 P **Pdif** 02 36 27.3 -1.3
baz=217
SONM Songino Array 103.06 318 P **Pdif** 02 36 29.9 -0.1
comp=E,1.3nm,0.8s,baz=154,slow=3.7,SNR=6.7
SONM PKKPbc **PKKPbc** 02 52 26.9 +0.2
comp=E,4.7nm,0.9s,baz=273,slow=3.4,SNR=18
SONM PKPPKP **P'P'df** 03 00 44.4 +0.1
comp=E,0.7nm,1.0s,baz=270,slow=0.4,SNR=3.7
INK Inuvik 105.15 16 Pdiff **Pdif** 02 36 38.0 -0.5
comp=E,1.2nm,0.9s,baz=214,slow=3.9,SNR=2.7
INK PKiKP **PKiKP** 02 40 52.2 +0.5
comp=E,13nm,1.2s,baz=200,slow=1.7,SNR=6.6
W41B Gary Mavity, V 105.33 58 P **PKiKP** 02 40 53.2 +0.1
baz=242
U40A Yellville 105.44 57 P **PKiKP** 02 40 53.4 +0.1
baz=242
TAPN Taplejung 105.92 293 *e*P **PKiKP** 02 40 55.2 +0.4
comp=E,16nm,0.8s
ODAN Odare 105.94 292 *e*P **PKiKP** 02 40 55.1 +0.4
comp=E,26nm,0.7s
X43A Marvell 106.03 59 P **PKiKP** 02 40 54.4 +0.1
baz=243
ECSD EROS Data Cent 106.33 49 P **PKiKP** 02 40 55.0 +0.4
baz=242
RAMN Ramite 106.61 292 *e*P **PKiKP** 02 40 56.1 +0.1
comp=E,14nm,0.6s
YKA Yellowknife Ar 106.96 26 Pdiff **Pdif** 02 36 47.3 +0.5
comp=E,0.7nm,0.9s,baz=238,slow=4.2,SNR=12
YKA PKiKP **PKiKP** 02 40 55.2 0.0
comp=E,1.4nm,0.4s,baz=248,slow=1.6,SNR=51
YKA PKKPbc **PKKPbc** 02 52 13.6 -1.5
comp=E,2.5nm,0.8s,baz=43,slow=3.2,SNR=18
YKA PKPPKP **P'P'df** 03 00 38.0 +2.2
comp=E,0.9nm,0.8s,baz=40,slow=2.1,SNR=11
JIRN Jiri 107.26 292 *e*P **PKiKP** 02 40 57.1 -0.2
comp=E,26nm,0.7s
GUN Gumba 107.62 292 *e*P **PKiKP** 02 40 57.5 -0.5
comp=E,22nm,0.8s
PKI Pulchoki 107.84 292 *e*P **PKiKP** 02 40 57.8 -0.6
comp=E,4.0nm,0.9s
PKIN Phulchoki 107.85 292 *e*P **PKiKP** 02 40 57.7 -0.6
comp=E,14nm,0.7s
KKN Kakani 108.04 292 *e*P **PKiKP** 02 40 58.1 -0.5
DMN Daman 108.10 292 *e*P **PKiKP** 02 40 58.3 -0.5
comp=E,19nm,0.8s
LRAL Lakeview Retre 108.25 62 P **PKiKP** 02 40 58.4 -0.2
baz=244
C36M Paulatuk 108.28 18 P **PKiKP** 02 40 57.4 -0.1
baz=228
AGMN Agassiz Nation 108.87 45 P **PKiKP** 02 40 58.5 -0.7
baz=244
TIXI Tiksi 108.94 345 Pdiff **Pdif** 02 36 55.0 -0.4
comp=E,1.5nm,0.5s,baz=180,slow=24,SNR=4.6
TIXI PKiKP **PKiKP** 02 40 57.8 -0.9
comp=E,9.2nm,0.9s,baz=0.0,slow=24,SNR=13
TIXI PP **PP** 02 41 27.4 -2.9
comp=E,8.5nm,1.0s,baz=180,slow=24,SNR=8.5
WVT Waverly 108.97 59 P **PKiKP** 02 40 57.8 -2.0
baz=245
Z50A Ashland 109.16 62 P **PKiKP** 02 41 00.3 0.0
baz=245
KOLN Koldanda 109.36 291 *e*P **PKiKP** 02 41 00.3 -0.8
comp=E,13nm,0.5s
DANN Dangsing 109.49 292 *e*P **PKiKP** 02 41 00.8 -0.6
comp=E,40nm,0.8s
W49A Belvidere 109.70 60 P **PKiKP** 02 41 00.9 -0.3
baz=245
ULM Lac du Bonnet 109.72 43 PKiKP **PKiKP** 02 41 00.2 -0.6
comp=E,2.2nm,0.5s,baz=282,slow=3.4,SNR=6.2
ULM PP **PP** 02 41 35.2 -1.2
comp=E,8.0nm,1.0s,baz=256,slow=7.9,SNR=5.4
152A Waverly Hall 109.83 63 P **PKiKP** 02 41 00.2 -1.3
baz=245
Y51A Rockmart 110.08 62 P **PKiKP** 02 41 01.4 -0.6
baz=245
JFWS Jewell Farm 110.14 51 P **PKiKP** 02 41 01.1 -0.7
baz=246
Z52A Williamson 110.28 63 P **PKiKP** 02 41 02.8 +0.5
baz=245
W50A Signal Mountai 110.44 61 P **PKiKP** 02 41 01.6 -1.0
baz=246
U49A Red Boiling Sp 110.64 59 P **PKiKP** 02 41 01.6 -1.4
baz=246
SDV Santo Domingo 110.66 92 PP **PP** 02 41 45.3 +1.3
comp=E,0.9nm,0.2s,baz=256,slow=5.7,SNR=5.6
V50A Pikevile 110.79 60 P **PKiKP** 02 41 02.3 -1.0
baz=246
Z53A Monticello 110.96 63 P **PKiKP** 02 41 03.9 +0.3
baz=246
WCI Wyandotte Cave 110.97 57 P **PKiKP** 02 41 03.3 -0.2
baz=246
154A Montrose 111.04 64 P **PKiKP** 02 41 03.6 -0.2
baz=246
GOGA Godfrey 111.09 63 P **PKiKP** 02 41 04.1 +0.3
baz=246
Y53A Monroe 111.19 63 P **PKiKP** 02 41 04.1 +0.1
baz=246
U50A Jamestown 111.29 60 P **PKiKP** 02 41 02.8 -1.4
baz=246
EYMN Ely 111.38 46 P **PKiKP** 02 41 03.6 -0.3
baz=247
S49A Springfield 111.51 58 P **PKiKP** 02 41 03.9 -0.7
baz=246
155A Kite 111.53 64 P **PKiKP** 02 41 04.5 -0.2
baz=246
T50A Nancy 111.53 59 P **PKiKP** 02 41 03.7 -0.9
baz=246
Q48A North Vernon 111.65 57 P **PKiKP** 02 41 04.4 -0.4
baz=247
X53A Estanollee 111.66 62 P **PKiKP** 02 41 04.2 -0.8
baz=246
256A Glennville 111.72 65 P **PKiKP** 02 41 04.5 -0.6
baz=246
R49A Shelbyville 111.80 58 P **PKiKP** 02 41 04.4 -0.6
baz=247
Y54A Tignall 111.87 63 P **PKiKP** 02 41 05.2 -0.1
baz=246
U51A La Follette 111.88 60 P **PKiKP** 02 41 04.8 -0.5
baz=246
V52A Sevierville 111.98 61 P **PKiKP** 02 41 06.1 +0.5
baz=246
W53A Cullowhee 112.04 61 P **PKiKP** 02 41 06.4 +0.6
baz=246
P48A Milroy 112.08 56 P **PKiKP** 02 41 05.0 -0.6
baz=247
S50A Richmond 112.12 59 P **PKiKP** 02 41 03.9 -1.8
baz=247
T51A Gray 112.17 59 P **PKiKP** 02 41 04.5 -1.4
baz=247
U52A Thorn Hill 112.37 60 P **PKiKP** 02 41 06.6 +0.3
baz=247
X54A Belton 112.38 62 P **PKiKP** 02 41 06.2 -0.1
baz=247
R50A Paris 112.41 58 P **PKiKP** 02 41 06.0 -0.2
baz=247,SNR=6.3
N47A Urbana 112.44 55 P **PKiKP** 02 41 05.0 -1.2
baz=247
L46A Eue Claire 112.46 54 P **PKiKP** 02 41 05.9 -0.3
baz=248
V53A Saluda 112.50 61 P **PKiKP** 02 41 06.2 -0.4
baz=247
O48A Farmland 112.58 56 P **PKiKP** 02 41 05.9 -0.6
baz=247
Z56A Williston 112.66 64 P **PKiKP** 02 41 05.8 -1.0
baz=246
S51A Beattyville 112.69 59 P **PKiKP** 02 41 05.7 -1.1
baz=247
W54A Cherokee Point 112.74 62 P **PKiKP** 02 41 06.6 -0.3
baz=247
WMQ Urumqi 112.86 308 PKP **PKiKP** 02 41 06.8 -0.2
WMQ PP **PP** 02 42 00.7 +1.5
WMQ AMB AMB
comp=E,130nm,6.1s
WMQ LR LR
comp=E,340nm,29.3s
WMQ LR LR
comp=E,740nm,29.0s
WMQ LR LR
comp=E,180nm,29.2s
Q50A Georgetown 112.88 58 P **PKiKP** 02 41 06.9 -0.2
baz=248
N48A Decatur 112.90 55 P **PKiKP** 02 41 07.4 +0.3
baz=248
X55A Gracelyn & Ava 112.91 63 P **PKiKP** 02 41 07.4 +0.1
baz=247
T52A Hallie 112.93 60 P **PKiKP** 02 41 07.0 -0.3
baz=247
U53A Fall Branch 112.94 60 P **PKiKP** 02 41 07.2 -0.1
baz=247
R51A Hillsboro 112.95 58 P **PKiKP** 02 41 07.3 0.0
baz=248
OPO Arhbidratompo 113.05 229 PKiKP **PKiKP** 02 41 09.3 +0.9
comp=E,4.8nm,0.7s,baz=123,slow=1.1,SNR=9.4
K46A Dorr 113.07 53 P **PKiKP** 02 41 06.4 -0.9
baz=248
O49A Covington 113.13 56 P **PKiKP** 02 41 07.0 -0.6
baz=248
V54A Nebo 113.19 61 P **PKiKP** 02 41 07.9 +0.1
baz=247
L47A Sherwood 113.20 54 P **PKiKP** 02 41 08.0 +0.3
baz=248
T53A Wise 113.22 60 P **PKiKP** 02 41 07.3 -0.6
baz=247
P50A Jamestown 113.30 57 P **PKiKP** 02 41 07.7 -0.2
baz=248
Q51A Peebles 113.40 58 P **PKiKP** 02 41 07.5 -0.6
baz=248
KMSC Kings Mountain 113.40 62 P **PKiKP** 02 41 07.7 -0.5
baz=247
N49A Columbus Grove 113.52 55 P **PKiKP** 02 41 07.7 -0.6
baz=248,SNR=5.7
U54A Nelsons Funny 113.57 61 P **PKiKP** 02 41 08.4 -0.2
baz=248
K47A Vermontville 113.60 53 P **PKiKP** 02 41 08.7 +0.4
baz=248
O50A Cable 113.62 56 P **PKiKP** 02 41 08.0 -0.5
baz=248,SNR=6.1
SUR Sutherland 113.66 199 PKiKP **PKiKP** 02 41 09.9 +0.7
comp=E,14nm,0.7s,baz=112,slow=2.8,SNR=13
SUR PKKPbc **PKKPbc** 02 51 51.7 -1.2
comp=E,10nm,0.9s,baz=323,slow=10,SNR=5.2
L48A N Adams 113.72 54 P **PKiKP** 02 41 07.9 -0.8
baz=248
I46A Reed City 113.76 52 P **PKiKP** 02 41 08.8 +0.2
baz=249
P51A Williamsport 113.78 57 P **PKiKP** 02 41 07.8 -1.0
baz=248
M49A Liberty Center 113.87 55 P **PKiKP** 02 41 08.4 -0.5
baz=248
J47A Sunmer 113.93 53 P **PKiKP** 02 41 08.5 -0.5
baz=249
T54A Tazewell 113.95 60 P **PKiKP** 02 41 08.5 -0.8
baz=248
W56A Indian Trail 113.97 62 P **PKiKP** 02 41 08.5 -0.8
baz=248
BDFB Brasilia 113.97 128 *i* PKiKP **PKiKP** 02 41 11.4 +1.3
BDFB Brasilia 113.97 128 PKiKP **PKiKP** 02 41 10.7 +0.6
comp=E,5.5nm,0.8s,baz=182,slow=2.4,SNR=7.8
BDFB PKKPbc **PKKPbc** 02 51 49.7 -1.5
comp=E,4.8nm,0.9s,baz=93,slow=4.6,SNR=6.9
BDFB Brasilia 113.97 128 **PKiKP** 02 41 11.4 +1.3
ACSO Alum Creek Sta 114.11 56 P PKPdf 02 41 08.8 -0.6
baz=249,SNR=5.6
H46A Fife Lake 114.14 51 P PKPdf 02 41 08.9 -0.4
baz=249
U55A TA2, Sparta 114.14 61 P PKPdf 02 41 08.7 -1.0
baz=248
Q52A Bidwell 114.16 58 P PKPdf 02 41 09.1 -0.4
baz=248
N50A Nevada 114.19 56 P PKPdf 02 41 09.4 -0.1
baz=249
K48A Perry 114.25 53 P PKPdf 02 41 09.3 -0.3
baz=249
V56A Mocksville 114.29 62 P PKPdf 02 41 09.2 -0.7
baz=248
F45A CMU Biological 114.34 50 P PKPdf 02 41 09.5 -0.2
baz=249
O51A Pataskala 114.35 57 P PKPdf 02 41 09.7 -0.2
baz=249
W57A Gilead 114.42 63 P PKPdf 02 41 09.6 -0.5
baz=248
S54A Dingess, Beckl 114.42 59 P PKPdf 02 41 08.8 -1.4
baz=248
M50A Fremont 114.49 55 P PKPdf 02 41 08.5 -1.6
baz=249
P52A Corning 114.50 57 P PKPdf 02 41 10.0 -0.2
baz=249
U56A King 114.58 61 P PKPdf 02 41 10.4 -0.1
baz=248
G46A Petoskey 114.64 51 P PKPdf 02 41 09.6 -0.6
baz=250
J48A Bridge Port 114.65 53 P PKPdf 02 41 10.1 -0.3
baz=249
Q53A Leroy 114.66 58 P PKPdf 02 41 09.7 -0.9
baz=249
X58A Rowland 114.69 63 P PKPdf 02 41 09.9 -0.8
baz=248
K49A Clarkson 114.70 54 P PKPdf 02 41 10.2 -0.3
baz=249
N51A Ashland 114.79 56 P PKPdf 02 41 09.7 -1.0
baz=249
Y59A Loris 114.84 64 P PKPdf 02 41 10.0 -1.0
baz=248
V57A Coltrane Farms 114.86 62 P PKPdf 02 41 10.5 -0.5
baz=248
BLA Blacksburg 114.87 60 P PKPdf 02 41 10.3 -0.8
baz=248
L50A Kingsville 114.88 55 P PKPdf 02 41 10.7 -0.1
baz=249
O52A Adamsville 114.89 57 P PKPdf 02 41 10.3 -0.6
baz=249
W58A Raeford 114.95 63 P PKPdf 02 41 10.2 -1.0
baz=248
P53A Whipple 114.98 58 P **PKiKP** 02 41 11.4 +0.2
baz=249
I48A Sherman Twp 115.02 52 P **PKPdf** 02 41 09.9 -1.1
baz=250
M51A Elyria 115.07 56 P **PKPdf** 02 41 10.2 -1.0
baz=249,SNR=5.8
T56A Rocky Mt 115.09 61 P **PKPdf** 02 41 10.7 -0.7
baz=249
Q54A Coxs Mills 115.20 58 P **PKPdf** 02 41 11.1 -0.4
baz=249
N52A McGinn's Farm, 115.24 56 P **PKPdf** 02 41 10.8 -0.8
baz=250
G47A Hillman 115.26 51 P **PKPdf** 02 41 11.5 0.0
baz=250
V58A Windy Hill, Pi 115.33 62 P **PKPdf** 02 41 11.8 -0.1
baz=248
O53A New Philadelph 115.38 57 P **PKiKP** 02 41 12.3 +0.5
baz=250
U57A Blanch 115.39 61 P **PKPdf** 02 41 11.3 -0.7
baz=249
R55A Marlinton 115.48 59 P **PKiKP** 02 41 12.3 +0.1
baz=249
I49A Point Hope 115.53 53 P **PKPdf** 02 41 11.8 -0.3
baz=250
T57A Hurt 115.66 61 P **PKPdf** 02 41 12.1 -0.4
baz=249,SNR=5.1
S56A Natural Bridge 115.67 60 P **PKPdf** 02 41 12.2 -0.3
baz=249
P54A Burton 115.68 58 P **PKPdf** 02 41 11.8 -0.7
baz=250
M52A Chesterland 115.73 56 **PKiKP** 02 41 12.7 +0.2
M52A Chesterland 115.73 56 P **PKPdf** 02 41 11.9 -0.6
baz=250,SNR=5.1
X60A Albert Glenn T 115.75 64 P **PKPdf** 02 41 11.3 -1.4
baz=248
Q55A Buckhannon 115.76 59 P **PKPdf** 02 41 12.2 -0.5
baz=250
BOSA Boshof 115.77 204 PKP **PKiKP** 02 41 14.1 +0.8
comp=E,9.8nm,0.7s,baz=151,slow=2.6,SNR=9.3
BOSA PKKPbc **PKKPbc** 02 51 46.1 +0.6
comp=E,2.7nm,0.6s,baz=341,slow=3.7,SNR=7.9
BOSA Boshof 115.77 204 **PKiKP** 02 41 14.3 +1.0
N53A Lisbon 115.84 56 P **PKPdf** 02 41 12.6 -0.2
baz=250,SNR=6.5
SMLA Simla 115.85 292 *e*P **PKPdf** 02 41 12.0 -1.0
SMLA IAmb IAmb 02 41 14.4
comp=Z,46nm,0.9s
O54A Avella 115.96 57 P **PKPdf** 02 41 13.0 0.0
baz=250,SNR=8.2
U58A Oxford 115.97 62 P **PKPdf** 02 41 12.8 -0.3
baz=249
V59A Middlesex 115.98 63 P **PKiKP** 02 41 13.3 +0.1
baz=249
K51A Iona Station 116.02 54 P **PKPdf** 02 41 12.9 -0.1
baz=250
R56A Bull Pasture M 116.05 59 P **PKPdf** 02 41 12.5 -0.8
baz=250
E47A Iron Bridge 116.06 50 P **PKPdf** 02 41 12.4 -0.6
baz=251
W60A Pink Hill 116.12 63 P **PKPdf** 02 41 12.4 -1.0
baz=249
P55A Reedsville 116.12 58 P **PKPdf** 02 41 12.2 -1.1
baz=250
S57A Dark Hollow, R 116.15 60 P **PKPdf** 02 41 11.9 -1.6
baz=250
MCWV Mont Chateau 116.16 58 P **PKPdf** 02 41 12.5 -0.9
baz=250
M53A WI Miller and 116.17 56 P **PKPdf** 02 41 13.2 -0.2
baz=250
T58A Grand View Acr 116.18 61 P **PKPdf** 02 41 12.3 -1.1
baz=249
N54A Moraine State 116.50 57 P **PKPdf** 02 41 13.0 -1.1
baz=250,SNR=6.4
U59A Littleton 116.53 62 P **PKPdf** 02 41 12.8 -1.4
baz=249
K52A Tillsonburg 116.59 54 P **PKPdf** 02 41 12.9 -1.2
baz=251
L53A Girard 116.64 55 P **PKPdf** 02 41 13.0 -1.2
baz=251,SNR=6.7
R57A Stanardsville 116.66 60 P **PKPdf** 02 41 13.5 -0.9
baz=250
I51A Listowel 116.71 53 P **PKPdf** 02 41 12.9 -1.4
baz=251
W61A Ground Anchor 116.72 64 P **PKPdf** 02 41 13.4 -1.2
baz=249
O55A Ligonier 116.74 58 P **PKPdf** 02 41 13.4 -1.1
baz=250,SNR=5.4
S58A Poland Farm, P 116.77 61 P **PKPdf** 02 41 13.9 -0.7
baz=250,SNR=6.3
E48A Lockeyer 116.80 50 P **PKPdf** 02 41 14.4 0.0
baz=252
P56A Dayton Farm, R 116.84 58 P **PKPdf** 02 41 14.5 -0.2
baz=250
ERPA Erie 116.88 55 P **PKiKP** 02 41 14.8 +0.1
baz=251
J52A Paris 116.91 54 P **PKPdf** 02 41 14.0 -0.7
baz=251
M54A Oil Creek Stat 116.91 56 P **PKPdf** 02 41 14.4 -0.4
baz=251,SNR=6.7
T59A Double "B" Far 116.92 61 P **PKPdf** 02 41 14.6 -0.3
baz=250
DHRM DHARAMSHALA 116.96 293 *e*P **PKPdf** 02 41 14.8 -0.6
DHRM IAmb IAmb 02 41 17.8
comp=Z,53nm,0.9s
Q57A Strasburg 116.99 59 P **PKPdf** 02 41 14.3 -0.7
baz=250
R58B Mineral 117.02 60 P **PKPdf** 02 41 14.4 -0.7
baz=250
R58A Rapidan 117.04 60 P **PKPdf** 02 41 14.0 -1.1
baz=250
U60A Pendleton 117.05 62 P **PKPdf** 02 41 14.9 -0.3
baz=250
N55A Marion Center 117.16 57 P **PKPdf** 02 41 14.9 -0.4
baz=251
V61A Roper 117.25 63 P **PKPdf** 02 41 15.5 -0.1
baz=250
O56A Blue Knob Stat 117.29 58 **PKiKP** 02 41 15.9 +0.3
O56A Blue Knob Stat 117.29 58 P **PKPdf** 02 41 15.3 -0.3
baz=251,SNR=8.0
I52A Shelburne 117.38 53 P **PKPdf** 02 41 15.3 -0.3
baz=252
S59A Mechanicsville 117.39 61 P **PKPdf** 02 41 15.1 -0.7
baz=250
L54A Sinclairville 117.39 55 P **PKPdf** 02 41 15.3 -0.4
baz=251
P57A Homestead Farm 117.43 59 P **PKPdf** 02 41 15.4 -0.4
baz=251
MK31 Makanchi Array 117.46 310 *i* PKiKP **PKPdf** 02 41 14.7 -1.0
MK31 Makanchi Array 117.46 310 **PKPdf** 02 41 14.5 -1.2
MKAR Makanchi Array 117.46 310 PKP **PKPdf** 02 41 15.0 -0.7
comp=Z,37nm,0.9s,baz=345,slow=9.2,SNR=4.3
MKAR pPKP **pPKPdf** 02 42 13.9 +3.5
comp=Z,8.8nm,0.9s,baz=135,slow=1.0,SNR=3.7
MKAR SKP 02 44 29.8
comp=Z,15nm,1.1s,baz=90,slow=3.6,SNR=8.6
MKAR PKKPbc **PKKPab** 02 51 40.8 -0.5
comp=Z,4.8nm,0.8s,baz=288,slow=3.9,SNR=29
Q58A Fox Den Farm, 117.50 59 P **PKPdf** 02 41 15.5 -0.5
baz=251
M55A Ridgway 117.54 56 P **PKPdf** 02 41 15.7 -0.3
baz=251,SNR=6.6
T60A Surry 117.59 62 P **PKiKP** 02 41 16.3 +0.1
baz=250
R59A King George, V 117.67 60 P **PKPdf** 02 41 15.4 -0.9
baz=251
MAKZ Makanchi 117.67 310 PKiKP **PKPdf** 02 41 15.0 -1.1
MAKZ Makanchi 117.67 310 **PKPdf** 02 41 15.0 -1.1
N56A West Decatur 117.70 57 P **PKPdf** 02 41 16.0 -0.3
baz=251,SNR=5.2
I53A Kortright Cn E 117.70 54 P **PKPdf** 02 41 15.9 -0.3
baz=252
H52A Wyevale 117.75 53 P **PKPdf** 02 41 16.0 -0.3

baz=252,SNR=6.0
S60A Water View 117.85 61 P PKPdf 02 41 15.7 -0.9
baz=250
SSPA Standing Stone 117.90 58 PKPdf 02 41 16.6 -0.1
SSPA Standing Stone 117.90 58 P PKPdf 02 41 16.3 -0.4
baz=251
O57A Amberson 117.95 58 P PKPdf 02 41 15.9 -0.9
baz=251
K54A Basiliko Farm, 117.95 55 P PKPdf 02 41 16.5 -0.3
baz=252,SNR=7.6
P58A Pank, Wackersv 117.96 59 P PKPdf 02 41 16.0 -0.9
baz=251,SNR=5.2
M56A Emporium 117.96 57 PKiKP 02 41 16.9 +0.1
M56A Emporium 117.96 57 P PKPdf 02 41 16.2 -0.6
baz=252,SNR=6.4
ZALV Zalesovo Beam 117.96 318 *e*PKIKP PKPdf 02 41 15.6 -0.8
ZALV pmax pmax
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 117.96 318 PKP PKPdf 02 41 15.3 -1.0
comp=Z,12nm,0.7s,baz=171,slow=1.4,SNR=40
ZALV SKP 02 44 29.0
comp=Z,4.2nm,0.8s,baz=132,slow=2.1,SNR=4.6
L55A Hinsdale 118.00 56 P PKPdf 02 41 16.0 -0.9
baz=252,SNR=6.7
F51A Arnstein 118.12 51 P PKPdf 02 41 16.3 -0.7
baz=253
N57A Milroy 118.18 57 P PKPdf 02 41 17.1 -0.2
baz=252,SNR=9.9
SADO Sadowa 118.30 53 PKP PKPdf 02 41 16.9 -0.5
comp=Z,21nm,0.8s,baz=262,slow=2.8,SNR=15
PDGK Podgornoye 118.30 306 PKIKP PKPdf 02 41 17.0 -0.6
K55A Perry 118.42 55 P PKPdf 02 41 16.6 -1.0
baz=252
O58A Lewisberry 118.44 58 P PKPdf 02 41 16.7 -1.1
baz=252,SNR=8.5
F52A Sundridge 118.48 52 P PKPdf 02 41 17.2 -0.5
baz=253
D50A G1974 Best Tow 118.53 50 P PKPdf 02 41 17.1 -0.6
baz=254
E51A G1948 Merrick 118.58 51 P PKPdf 02 41 16.9 -0.9
baz=254
L56A Greenwood 118.60 56 P PKPdf 02 41 17.9 -0.2
baz=252,SNR=6.1
H53A Bobcaygeon 118.62 53 P PKPdf 02 41 17.8 -0.2
baz=253,SNR=5.1
P59A Jarrettsville 118.63 59 P PKPdf 02 41 17.7 -0.4
baz=252
RES Resolute Bay 118.64 18 PKIKP PKPdf 02 41 16.8 -0.3
RES Resolute Bay 118.64 18 PKKPbc PKKPbc 02 51 38.0 +2.0
comp=Z,1.6nm,0.9s,baz=98,slow=1.8,SNR=3.6
RES Resolute Bay 118.64 18 PKPdf 02 41 16.8 -0.3
M57A Sunshine Farm, 118.67 57 P PKPdf 02 41 18.2 0.0
baz=252,SNR=9.8
G53A Haliburton 118.75 52 P PKPdf 02 41 17.8 -0.4
baz=253,SNR=5.6
J55A Hilton 118.76 55 P PKPdf 02 41 17.9 -0.3
baz=253
N58A Sunbury 118.81 58 P PKPdf 02 41 18.2 -0.3
baz=252,SNR=6.2
PRZ Przheval'sk 118.81 304 PKIKP PKiKP 02 41 19.6 +0.9
PRZ Przheval'sk 118.81 304 PKiKP 02 41 19.6 +0.9
D51A Lot 18 Range I 118.81 50 P PKPdf 02 41 17.9 -0.4
baz=254,SNR=5.6
SJG San Juan 118.86 86 PKIKP PKPdf 02 41 19.2 0.0
SJG San Juan 118.86 86 PKPdf 02 41 19.2 0.0
Q60A Greensboro 118.87 60 P PKPdf 02 41 18.4 -0.2
baz=252
LBTB Lobatse 118.92 206 PKIKP PKiKP 02 41 20.1 +0.6
LBTB Lobatse 118.92 206 PKP PKiKP 02 41 19.9 +0.5
comp=Z,9.3nm,0.7s,baz=147,slow=2.1,SNR=21
LBTB PKKPbc PKKPbc 02 51 33.4 -0.9
comp=Z,6.7nm,0.9s,baz=276,slow=5.2,SNR=7.8
LBTB Lobatse 118.92 206 PKiKP 02 41 20.1 +0.6
PDPR Patillas Dam, 118.93 86 PKiKP 02 41 19.5 +0.2
K56A Middlesex 118.94 55 P PKPdf 02 41 18.3 -0.4
baz=253
GCPR Guaynabo City 119.01 85 PKiKP 02 41 19.8 +0.3
O59A Robesonia 119.03 58 P PKPdf 02 41 18.6 -0.3
baz=252,SNR=6.3
E52A Mattawa 119.06 51 P PKPdf 02 41 18.2 -0.5
baz=254,SNR=10
L57A Andrews Acres 119.07 56 P PKPdf 02 41 18.9 -0.1
baz=253,SNR=7.3
I55A Frankford 119.14 54 P PKPdf 02 41 18.2 -0.7
baz=253
M58A Price's Panora 119.16 57 P PKPdf 02 41 19.1 -0.1
baz=252,SNR=6.7
G54A Lake Saint Pet 119.19 52 P PKPdf 02 41 18.3 -0.7
baz=254
P60A Greenville 119.28 59 P PKPdf 02 41 19.0 -0.4
baz=252,SNR=5.1
ALGO Algonquin Park 119.38 52 P PKPdf 02 41 18.8 -0.6
baz=254,SNR=9.2
J56A Wolcott 119.44 55 P PKPdf 02 41 19.0 -0.5
baz=253
N59A State Game Lan 119.52 58 P PKiKP 02 41 20.0 +0.1
baz=253,SNR=5.2
K57A Scipio Center 119.52 56 P PKPdf 02 41 19.5 -0.3
baz=253,SNR=8.1
H55A Tweed 119.57 53 P PKPdf 02 41 19.5 -0.3
baz=254
O60A Telford 119.60 59 P PKPdf 02 41 19.5 -0.4
baz=252
KSH Kashi 119.66 300 ⇓*i* PKP PKiKP 02 41 20.4 0.0
KSH PP PP 02 42 51.7 +4.9
KSH SKS SKSdf 02 48 09.0 -2.7
KSH SKKS SKKSac 02 49 17.1 -7.0
KSH SS SS 02 58 52.1 -2.0
KSH AMB AMB
comp=Z,290nm,4.9s
KSH LR LR
comp=Z,200nm,4.9s
KSH LR LR
comp=Z,220nm,5.8s
KSH LR LR
comp=Z,360nm,6.3s
BINY Binghamton 119.74 56 P PKPdf 02 41 19.6 -0.6
baz=253,SNR=7.0
E53A Dumoine, Ponti 119.75 51 P PKPdf 02 41 19.7 -0.4
baz=255,SNR=6.3
L58A Harry Jones Me 119.79 57 P PKPdf 02 41 20.3 0.0
baz=253,SNR=14
NIL Nilore 119.85 293 PKIKP PKPdf 02 41 20.3 -0.4
NIL Nilore 119.85 293 PKPdf 02 41 20.3 -0.4
M59A Waymart 119.94 57 P PKiKP 02 41 20.8 +0.1
baz=253,SNR=13
N60A Cedar Hill Far 119.99 58 P PKPdf 02 41 20.5 -0.2
baz=253,SNR=7.0
NBIT Itapeh - BA 120.03 134 *e*P PKiKP 02 41 25.0 +3.3
J57A Williamstown 120.08 55 P PKPdf 02 41 20.5 -0.3
baz=254,SNR=6.4
E54A Lac Daplat, Po 120.08 51 P PKPdf 02 41 20.1 -0.6
baz=255,SNR=13
G55A Calabogie 120.08 53 P PKPdf 02 41 20.0 -0.7
baz=254
K58A Earlville 120.14 56 P PKPdf 02 41 20.7 -0.3
baz=254,SNR=7.0
O61A Allentown 120.16 59 P PKPdf 02 41 20.2 -0.9
baz=253
NRN Naryn 120.21 303 PKIKP PKiKP 02 41 21.7 0.0
NRN Naryn 120.21 303 PKiKP 02 41 21.6 0.0
H56A Elgin 120.22 54 P PKPdf 02 41 20.3 -0.7
baz=254
ULHL Ulahol 120.27 304 P PKiKP 02 41 22.1 +0.4
SNR=6.0
BRNJ Basking Ridge 120.32 58 PKPdf 02 41 21.3 0.0
L59A Walton 120.41 57 P PKPdf 02 41 20.9 -0.7
baz=254
I57A Carthage 120.46 54 P PKPdf 02 41 21.5 0.0
baz=254,SNR=8.4
M60A Port Jervis 120.46 58 P PKPdf 02 41 21.6 0.0
baz=254,SNR=13
F55A Otter Lake 120.49 52 P PKPdf 02 41 20.8 -0.7
baz=255,SNR=5.2
N61A South Mountain 120.54 58 P PKPdf 02 41 21.5 -0.2
baz=253
J58A Remsen 120.56 55 P PKPdf 02 41 21.1 -0.6
baz=254,SNR=6.6
MATQ Matagami 120.62 48 P PKPdf 02 41 20.6 -1.0
baz=256,SNR=5.0
K59A Cooperstown 120.71 56 P PKPdf 02 41 21.4 -0.7
baz=254
H57A Richville 120.78 54 P PKPdf 02 41 21.4 -0.7
baz=255
KURK Kurchatov 120.84 314 PKIKP PKPdf 02 41 21.5 -0.5
KURK Kurchatov 120.84 314 PKPdf 02 41 21.3 -0.7
KURK PKKPbc 02 51 29.1 +1.7

E55A Montcerf-Lytto 120.84 52 P PKPdf 02 41 21.7 -0.5
baz=256,SNR=11
LSQQ Lebel-sur-Quev 120.87 48 P PKPdf 02 41 21.5 -0.6
baz=256
KURBB Kurchatov Arra 120.88 313 PKP PKPdf 02 41 21.5 -0.6
comp=Z,500nm,0.7s,baz=104,slow=2.0,SNR=328
KURBB pPKP pPKPdf 02 42 20.6 +3.6
comp=Z,20nm,1.1s,baz=113,slow=1.6,SNR=3.6
KURBB PP PP 02 42 54.1 -0.4
comp=Z,4.7nm,0.7s,baz=106,slow=2.0,SNR=4.2
KURBB SKP 02 44 35.5
comp=Z,0.9nm,0.6s,baz=95,slow=2.4,SNR=4.2
KURBB PKKPbc PKKPbc 02 51 28.2 +1.0
comp=Z,9.2nm,1.1s,baz=285,slow=4.6,SNR=24
PAL Palisades 120.89 58 P PKPdf 02 41 22.3 -0.1
baz=254,SNR=8.1
TKM2 Tokmak 2 120.92 304 PKIKP PKPdf 02 41 21.9 -0.8
TKM2 Tokmak 2 120.92 304 P PKPdf 02 41 22.1 -0.6
SNR=85
KZA Kyzart 120.93 303 P PKPdf 02 41 23.1 0.0
SNR=45
L60A Shokan 120.94 57 P PKPdf 02 41 21.9 -0.7
baz=254
M61A Granite Spring 121.08 58 P PKPdf 02 41 22.8 +0.1
baz=254,SNR=9.6
J59A Piesco 121.14 55 P PKPdf 02 41 22.9 0.0
baz=255,SNR=5.3
N62A Dartmouth State 121.19 58 P PKPdf 02 41 22.8 -0.2
baz=254
G57A Newington 121.23 53 P PKPdf 02 41 22.4 -0.5
baz=256
KBK Karagaybulak 121.30 304 P PKiKP 02 41 23.7 +0.1
SNR=50
K60A Five Rivers En 121.35 56 P PKPdf 02 41 22.6 -0.6
baz=255
D55A Sainte-Anne-du 121.37 51 P PKPdf 02 41 22.8 -0.4
baz=256,SNR=12
LONY Lake Ozonia 121.38 54 P PKPdf 02 41 23.1 -0.2
baz=255,SNR=5.4
L61A Hillsdale 1, H 121.47 57 P PKPdf 02 41 23.5 0.0
baz=255,SNR=6.6
UCH Uchtor 121.50 303 P PKiKP 02 41 24.9 +0.6
SNR=92
CHMS Chumysh 121.53 304 P PKPdf 02 41 23.1 -0.6
SNR=64
E56A St. Veronique 121.55 52 P PKPdf 02 41 23.0 -0.5
baz=256,SNR=6.8
H58A Gabriels 121.61 54 P PKPdf 02 41 23.4 -0.4
baz=256
AAK Ala-Archa 121.62 304 PKIKP PKPdf 02 41 24.0 0.0
AAK Ala-Archa 121.62 304 PKP PKPdf 02 41 24.0 0.0
comp=Z,47nm,0.9s,baz=142,slow=2.3,SNR=80
AAK pPKP pPKPdf 02 42 22.6 +3.9
comp=Z,14nm,1.0s,baz=138,slow=2.5,SNR=2.2
AAK SKP 02 44 37.9
comp=Z,7.5nm,1.0s,baz=246,slow=4.9,SNR=4.1
AAK PKKPbc PKKPbc 02 51 26.5 +2.1
comp=Z,9.6nm,0.8s,baz=233,slow=2.0,SNR=22
AAK Ala-Archa 121.62 304 P PKPdf 02 41 23.8 -0.2
SNR=36
AAK Ala-Archa 121.62 304 *i* PKPdf PKPdf 02 41 23.8 -0.2
SNR=46
AAK Ala-Archa 121.62 304 PKPdf 02 41 23.8 -0.2
M62A Hamden 121.75 58 P PKPdf 02 41 23.8 -0.3
baz=254,SNR=6.9
USP Ospenovka 121.78 304 P PKPdf 02 41 23.6 -0.5
SNR=69
K61A Williamstown 121.80 56 P PKPdf 02 41 24.2 0.0
baz=255
MATP Matopo 121.83 211 PKP PKiKP 02 41 25.3 0.0
comp=Z,37nm,0.8s,baz=175,slow=1.5,SNR=96
MATP PKKPbc PKKPbc 02 51 23.7 +0.1
comp=Z,7.9nm,0.9s,baz=334,slow=4.3,SNR=11
J60A Lant Hill Farm 121.84 56 P PKPdf 02 41 24.2 0.0
baz=255,SNR=7.3
D56A ZEC Mazanza, M 121.85 51 P PKPdf 02 41 23.6 -0.5
baz=257,SNR=12
G58A Ormstown 121.88 53 P PKPdf 02 41 23.9 -0.3
baz=256,SNR=9.6
H59A Cadyville 122.01 54 P PKPdf 02 41 24.3 -0.1
baz=256
AML Almayashu 122.06 303 P PKiKP 02 41 25.4 0.0
SNR=47
I60A Shoreham 122.09 55 P PKPdf 02 41 24.7 +0.1
baz=256,SNR=6.1
E57A Chemin Saint G 122.11 52 P PKPdf 02 41 24.3 -0.3
baz=257,SNR=8.6
EKS2 Erkin-Say 122.14 303 P PKPdf 02 41 24.9 0.0
SNR=43
L61B Northampton 122.17 57 P PKiKP 02 41 25.0 0.0
baz=255,SNR=8.0
M63A Gales Ferry 122.35 58 P PKPdf 02 41 25.0 -0.2
baz=255
ARSB Arslanbob 122.36 302 PKiKP 02 41 25.9 +0.2
D57A Chemin Vers le 122.43 51 P PKiKP 02 41 25.3 -0.1
baz=257
G59A Clarenceville 122.46 54 P PKPdf 02 41 24.9 -0.4
baz=256,SNR=5.3
J61A Chester 122.48 56 P PKiKP 02 41 25.8 +0.1
baz=256,SNR=6.1
K62A Royalston 122.54 57 P PKPdf 02 41 25.6 0.0
baz=256
VT1 Waterbury 122.58 55 PKiKP 02 41 26.3 +0.5
NBPN Ponto Novo - B 122.64 130 *e*P PKiKP 02 41 28.5 +1.6
H60A Morristown 122.67 54 P PKPdf 02 41 25.6 -0.2
baz=256
E58A La Victoria 122.69 52 P PKPdf 02 41 25.6 -0.1
baz=257,SNR=8.6
L63A North Scituate 122.78 58 P PKPdf 02 41 25.8 -0.2
baz=255
I61A Oroboro, Fairl 122.87 55 P PKPdf 02 41 25.7 -0.4
baz=256
F59A Saint Guilaume 122.91 53 P PKPdf 02 41 26.0 -0.1
baz=257
J62A Henniker 122.98 56 P PKiKP 02 41 27.1 +0.4
baz=256,SNR=5.1
HRV Adam Dziewonsk 122.98 57 P PKiKP 02 41 26.6 0.0
baz=256
M64A Tiverton 123.00 58 P PKPdf 02 41 26.4 0.0
baz=255
K63A Dunstable 123.05 57 P PKPdf 02 41 26.3 -0.2
baz=256,SNR=6.9
G60A Masonville 123.05 54 P PKPdf 02 41 25.9 -0.6
baz=257
D58A Chemin du LacG 123.11 51 P PKPdf 02 41 26.2 -0.3
baz=258,SNR=18
LBNH Lisbon 123.14 55 P PKPdf 02 41 26.5 -0.2
baz=257,SNR=5.4
H61A Lyndonville 123.20 55 P PKiKP 02 41 27.0 0.0
baz=257
LATQ La Tuque 123.24 51 P PKPdf 02 41 26.3 -0.4
baz=258,SNR=7.3
L64A Middleborough 123.36 58 P PKPdf 02 41 26.5 -0.6
baz=256
KBL Kabul 123.44 293 PKIKP PKPdf 02 41 27.9 +0.1
KBL Kabul 123.44 293 PKPdf 02 41 27.9 +0.1
KBL SKPdf SKPdf 02 44 42.1 -0.4
I62A Tamworth 123.47 55 P PKPdf 02 41 27.3 0.0
baz=257,SNR=5.3
F60A Warwick 123.50 53 P PKPdf 02 41 27.2 -0.1
baz=258,SNR=10
J63A Strafford 123.51 56 P PKPdf 02 41 27.2 -0.2
baz=257
BTK Batken 123.62 300 PKIKP PKPdf 02 41 27.7 -0.2
BTK Batken 123.62 300 PKPdf 02 41 27.6 -0.2
G61A St-Isidore-de- 123.65 54 P PKPdf 02 41 27.4 -0.2
baz=258,SNR=9.5
GAR Garm 123.72 298 PKPdf 02 41 28.1 -0.1
H62A Milan 123.75 55 P PKiKP 02 41 28.5 +0.3
baz=257,SNR=9.8
E60A Ste Agathe de 123.93 53 P PKPdf 02 41 28.1 0.0
baz=258,SNR=11
I63A Otisfield 124.04 55 P PKiKP 02 41 28.6 0.0
baz=257,SNR=11
NBLA Lagarto - SE 124.07 133 *e*P PKiKP 02 41 32.5 +2.8
F61A St Évariste 124.16 53 P PKiKP 02 41 28.9 +0.1
baz=258,SNR=9.0
G62A West of Eustis 124.32 54 P PKPdf 02 41 29.0 0.0
baz=258,SNR=12
D60A Saint Jean D'O 124.39 52 P PKPdf 02 41 28.8 -0.1
baz=259,SNR=7.7
CHGR Chuyangaron 124.51 298 PKPdf 02 41 29.6 +0.1
H63A New Sharon 124.55 55 P PKPdf 02 41 29.4 +0.1
baz=258
KK31 Karatay Array 124.58 303 *i* PKIKP PKPdf 02 41 29.3 -0.2
KKAR Karatay Array 124.58 303 PKIKP PKPdf 02 41 29.0 -0.5
KKAR Karatay Array 124.58 303 PKPdf 02 41 29.0 -0.5

I64A Boothbay 124.68 56 P PKiKP 02 41 30.0 +0.1
baz=258,SNR=6.6
G63A Kingsbury 124.93 54 P PKPdf 02 41 30.4 0.0
baz=259,SNR=7.0
D61A St Aubert, Com 124.94 52 P PKPdf 02 41 30.1 +0.1
baz=260,SNR=34
H64A Troy 125.12 55 P PKPdf 02 41 30.5 +0.1
baz=259,SNR=11
PKME Peaks-Kenny Pk 125.19 54 P PKiKP 02 41 30.9 0.0
baz=259,SNR=15
NBTA Tacaratu-PE 125.32 131 *e*P PKiKP 02 41 34.0 +1.7
F63A Nahmakanta, Br 125.40 54 P PKiKP 02 41 31.4 +0.1
baz=259,SNR=12
G64A Maxfield 125.56 54 P PKiKP 02 41 31.6 0.0
baz=259,SNR=24
D62A Allapoint, All 125.68 52 P PKPdf 02 41 30.9 -0.5
baz=260,SNR=16
H65A Eastbrook 125.81 55 P PKPdf 02 41 31.9 +0.2
baz=259,SNR=7.5
F64A Sherman 125.95 54 P PKPdf 02 41 32.1 +0.1
baz=260,SNR=8.3
E63A Oxbow 126.00 53 P PKPdf 02 41 31.9 -0.2
baz=260,SNR=11
NBAN Anadia - AL 126.04 133 *e*P PKiKP 02 41 34.9 +1.3
NBMA Muriti-CE 126.17 129 *e*P PKiKP 02 41 35.1 +1.1
BVAR Borovoye Array 126.25 315 PKP PKPdf 02 41 32.3 0.0
comp=Z,66nm,0.8s,baz=96,slow=3.0,SNR=201
BVAR pPKP pPKPdf 02 42 31.2 +4.0
comp=Z,25nm,1.1s,baz=93,slow=3.0,SNR=3.2
D63A Stockholm 126.31 52 P PKPdf 02 41 32.2 -0.4
baz=261,SNR=13
G65A Princeton 126.38 55 P PKiKP 02 41 33.1 -0.1
baz=260,SNR=14
E64A Bridgewater 126.40 53 P PKPdf 02 41 32.9 +0.1
baz=261,SNR=12
LSZ Lusaka 126.46 214 PKP PKiKP 02 41 34.9 +0.3
comp=Z,38nm,0.8s,baz=156,slow=1.9,SNR=75
NBPS Pedro II - PI 126.46 124 *e*P PKiKP 02 41 36.9 +2.3
H66A Whiting 126.48 55 P PKPdf 02 41 32.8 -0.2
baz=260
NBPB Pedra_Branca-C 126.94 127 *e*P PKiKP 02 41 37.0 +1.5
TSUM Tsumeb 127.02 200 PKP PKiKP 02 41 36.1 +0.4
comp=Z,26nm,1.0s,baz=149,slow=3.3,SNR=22
TSUM SKPbc SKPbc 02 44 31.3
comp=Z,4.3nm,0.8s,baz=156,slow=3.7,SNR=4.3
TSUM PKKP PKKPdf 02 51 47.1 -0.4
comp=Z,1.5nm,0.7s,baz=333,slow=2.3,SNR=2.8
TSUM Tsumeb 127.02 200 PKiKP 02 41 35.9 +0.3
SOCY Socotra 127.30 261 PKiKP 02 41 36.4 +0.2
NBRF Rio Formoso - 127.51 133 *e*P PKiKP 02 41 38.8 +2.2
SCHQ Schefferville 127.89 43 PKP PKPdf 02 41 35.2 -0.2
comp=Z,22nm,0.9s,baz=308,slow=2.7,SNR=18
SCHQ SKPbc SKPbc 02 44 33.3
comp=Z,7.6nm,0.8s,baz=307,slow=5.1,SNR=5.5
LMN Caledonia Moun 128.39 54 PKPdf 02 41 36.5 -0.2
NBPA Parau_RN 128.46 129 *e*P PKiKP 02 41 41.2 +2.8
SHAO Shalim 128.65 269 PKPdf PKPdf 02 41 37.8 -0.2
HRA Herat 128.79 291 PKPdf 02 41 38.1 +0.1
NBPV Pedro Velho 129.15 131 *e*P PKiKP 02 41 41.2 +1.4
RCBR Riachuelo 129.20 130 PKIKP PKPdf 02 41 39.2 -0.1
RCBR Riachuelo 129.20 130 *e*P PKiKP 02 41 41.0 +1.0
RCBR Riachuelo 129.20 130 PKPdf 02 41 39.2 -0.1
NOR Nord 129.33 3 *i* P PKPdf 02 41 37.0 -0.5
comp=Z,85nm,1.6s
UOSS Minazif 130.91 277 PKPdf PKPdf 02 41 41.8 -0.3
HATD Hatta, Dubai 130.93 277 *i* PKPdf PKPdf 02 41 41.7 -0.4
SNR=12
ASHO Ashiyiah 130.94 277 *i* PKPdf PKPdf 02 41 41.7 -0.5
SNR=12
ALNE Al Ain 130.97 276 PKPdf PKPdf 02 41 42.2 -0.1
MSFE Esma-Masafi 131.09 278 PKPdf PKPdf 02 41 41.6 -0.9
BANOM Banah 131.17 278 PKPdf PKPdf 02 41 41.6 -1.0
FAQ Al Faqa, Dubai 131.36 277 PKPdf PKPdf 02 41 42.8 -0.2
NAZ Nazwa, Dubai 131.38 277 *i* PKPdf PKPdf 02 41 42.7 -0.2
SNR=5.6
ASUD Al Ashush, Dub 131.54 276 *i* PKPdf PKPdf 02 41 42.6 -0.7
SNR=6.4
SVE Sverdlovsk 131.89 320 *e*PKIKP PKPdf 02 41 43.1 +0.2
SVE pmax pmax
comp=Z,96nm,1.5s
KBS Kingsbay 132.18 357 *c i*PKIKP PKiKP 02 41 44.3 +0.3
KBS pmax pmax
comp=Z,500nm,2.5s
KMBO Kilima Mbogo 132.40 234 PKP PKiKP 02 41 46.5 -0.2
comp=Z,9.9nm,0.9s,baz=58,slow=4.8,SNR=17
KMBO SKPbc SKPbc 02 44 49.8 -2.2
comp=Z,48nm,0.9s,baz=83,slow=2.4,SNR=42
KMBO Kilima Mbogo 132.40 234 *i* PKiKP PKiKP 02 41 46.5 -0.2
SNR=8.8
KMBO Kilima Mbogo 132.40 234 PKPdf 02 41 45.5 -0.1
KMBO SKPbc SKPbc 02 44 50.1 -1.9
AB31 Akbulak array 132.61 310 *i* PKIKP PKPdf 02 41 44.1 -0.4
ABKAR Akbulak array 132.61 310 SKPbc 02 44 51.2 0.0
SPA0 Spitsbergen Ar 132.66 356 *e*PKPdf PKPdf 02 41 43.9 0.0
SPA0 Spitsbergen Ar 132.66 356 PKiKP 02 41 44.7 -0.4
SPITS Spitsbergen Ar 132.66 356 SKPbc SKPbc 02 44 49.0 -1.6
comp=Z,7.7nm,0.5s,baz=71,slow=8.0,SNR=8.9
GEYT Alibeck 132.82 294 PKP PKPdf 02 41 45.7 +0.3
comp=Z,39nm,0.8s,baz=229,slow=1.6,SNR=40
GEYT pPKP pPKPdf 02 42 44.1 +3.9
comp=Z,16nm,0.8s,baz=187,slow=1.2,SNR=5.0
GEYT SKPbc SKPbc 02 44 50.2 -2.1
comp=Z,83nm,1.1s,baz=63,slow=0.3,SNR=29
GYA0B ALIBECK ARRAY 132.82 294 PKPdf 02 41 45.8 +0.4
ARU Arti 133.07 320 *d i*PKIKP PKPdf 02 41 44.6 -0.6
ARU pmax pmax
comp=Z,158nm,1.7s
ARU Arti 133.07 320 PKP PKPdf 02 41 44.8 -0.4
comp=Z,19nm,0.7s,baz=103,slow=0.5,SNR=43
ARU SKPbc SKPbc 02 44 51.6 -0.9
comp=Z,5.6nm,0.6s,baz=119,slow=2.3,SNR=7.1
DAG Danmarks Havn 133.74 6 *e*PKHKP PKPpre 02 41 34.8
DAG *i* 02 41 44.5
DAG Danmarks Havn 133.74 6 *i* P PKPpre 02 41 34.8
DAG *i* 02 41 44.5
HSPB Hornsund (broa 133.84 355 *e*pPKPdf PKPdf 02 41 46.4 +0.3
AKTO Aktyubinsk 133.85 312 PKHKP PKPpre 02 41 34.4
comp=Z,3.7nm,0.7s,baz=22,slow=1.1,SNR=16
AKTO PKP PKPdf 02 41 47.1 +0.2
comp=Z,48nm,0.8s,baz=96,slow=2.8,SNR=74
AKTO SKPbc SKPbc 02 44 53.0 -2.3
comp=Z,12nm,0.8s,baz=88,slow=4.3,SNR=10.0
SUMG Summit 134.06 15 *i* PKIKP PKiKP 02 41 48.0 -0.5
SUMG Summit 134.06 15 *i* P PKiKP 02 41 48.0 -0.5
SUMG *i* 02 41 48.8
SUMG Summit 134.06 15 PKPdf 02 41 45.3 -1.9
ATD Arta Tunnel 136.22 253 SKPbc SKPbc 02 45 03.2 -0.8
comp=Z,53nm,0.9s,baz=258,slow=2.7,SNR=13
MBAR Mbarara 137.12 228 SKPbc SKPbc 02 45 05.0 -1.9
comp=Z,15nm,0.7s,baz=95,slow=3.7,SNR=18
KIRV Kirov 137.44 324 PKhKP PKPpre 02 41 40.5
comp=Z,7.2nm,0.5s,baz=38,slow=1.5,SNR=2.8
KIRV PKP PKPdf 02 41 52.9 -0.3
comp=Z,45nm,0.7s,baz=264,slow=13,SNR=22
KIRV SKPbc SKPbc 02 45 03.2 -2.8
comp=Z,18nm,0.7s,baz=76,slow=7.4,SNR=4.8
PRGR Permogore 138.09 330 *e*PKHKP PKPpre 02 41 42.7
PRGR pmax pmax
comp=Z,60nm,0.8s
LVZ Lovozero 138.45 341 *c i*PKIKP PKPdf 02 41 55.9 +1.0
LVZ pmax pmax
comp=Z,37nm,1.3s
HAMF Hammerfest 138.73 349 *e*pPKPdf PKiKP 02 41 57.1 -0.4
HAMF Hammerfest 138.73 349 *e*PKPdf PKPdf 02 41 48.2 -7.1
SCO Scoresbysund 138.99 11 *e*PKHKP PKPdf 02 41 47.0 -8.7
SCO Scoresbysund 138.99 11 *i* P PKPdf 02 41 47.0 -8.7
SCO *i* 02 41 58.7
APA Apatity 139.02 341 ⇓*i* PKHKP PKPdf 02 41 49.3 -6.6
APA pmax pmax
comp=Z,12nm,0.8s
ARCES ARCESS Array B 139.34 347 PKhKP PKPdf 02 41 48.2 -8.2
comp=Z,26nm,0.8s,baz=29,slow=2.8,SNR=35
ARCES PKP PKiKP 02 41 56.2 -2.6
comp=Z,46nm,0.8s,baz=48,slow=1.5,SNR=21
ARCES SKPbc SKPbc 02 45 08.7 -2.5
comp=Z,19nm,1.0s,baz=28,slow=2.9,SNR=4.8
ARE0 ARCESS Array S 139.34 347 *e*PKPdf PKPdf 02 41 49.7 -6.8
RAYN Ar Rayn 139.52 270 PKiKP PKPdf 02 41 56.4 -1.9
RAYN Ar Rayn 139.52 270 *i* PKPdf PKPdf 02 41 58.6 +0.3
SNR=8.9
RAYN Ar Rayn 139.52 270 PKPdf PKPdf 02 41 56.4 -1.9
TMCR Tamitsa 139.80 336 *e*PKiKP PKiKP 02 41 58.9 -0.9
TMCR pmax pmax
comp=Z,106nm,1.3s
JMIC Jan Mayen 140.11 5 *e*pPKPdf PKiKP 02 42 03.7 +3.4

KTK1 Kautokeino 140.21 347 *e*PKPdf **PKPdf 02 41 52.3 -5.7**
TRO Tromso 140.38 350 *e*PKPdf **PKPdf 02 41 51.5 -6.8**
AKT Akhty 141.14 298 *e*PKHKP **PKPdf 02 41 54.5 -6.2**
AKT *e* 02 45 01.0
AKT pmax pmax
comp=Z,97nm,0.9s
MAK Makhachkala 141.30 301 *e*P **Pdif 02 39 17.3 -2.6**
MAK *e* 02 45 07.0
MAK pmax pmax
comp=Z,152nm,0.9s
STEI Steigen 142.48 351 *ep*PKPdf **PKPdf 02 41 58.8 -3.3**
STEI Steigen 142.48 351 *e*PKPdf **PKPdf 02 41 58.7 -3.3**
LOF Lofoten 142.51 352 *ep*PKPdf **PKiKP 02 42 07.6 +2.3**
GROC Groznyy 142.54 301 *e*PKHKP **PKPdf 02 41 58.6 -4.4**
GROC pmax pmax
comp=Z,56nm,1.0s
GNI Garni 143.39 296 PKIKP PKPbc 02 42 03.0 +0.3
GNI Garni 143.39 296 PKP PKPbc 02 42 03.0 +0.3
comp=Z,85nm,1.1s,baz=346,slow=2.0,SNR=26
GNI Garni 143.39 296 *i* PKPdf PKPbc 02 42 03.0 +0.3
SNR=36
TASB TASBURUN-IGDIR 143.78 296 *e*P PKPab 02 42 03.3 +0.4
VRH Novokhopyorsk 143.91 315 *e*PKIKP PKPbc 02 42 03.3 -0.2
VRH pmax pmax
comp=Z,120nm,0.8s
ZEI Tsey 143.95 301 *i* PKHKP PKPab 02 42 00.4 -3.3
ZEI pmax pmax
comp=Z,105nm,1.0s
CLDR Caldiran 144.01 295 *e*P PKPbc 02 42 04.4 -0.2
KONS Konsvik 144.11 351 *ep*PKPdf **PKPab 02 42 03.4 +0.2**
KONS Konsvik 144.11 351 *e*PKPdf **PKPab 02 42 03.2 -0.1**
CUKT Cukurca 144.17 291 *e*P **PKPab 02 42 04.7 +0.1**
MOR8 Moi Rana 144.25 350 *e*PKPdf **PKPab 02 42 02.6 -1.2**
AKH Akhalkalaki 144.32 298 ⇑P PKPbc 02 42 05.7 +0.3
GOF Gofitskoye 144.35 305⇑ *e*PKIKP PKPbc 02 42 05.1 0.0
GOF pmax pmax
comp=Z,289nm,0.8s
MOS Moscow 144.45 324 *e*PKHKP **PKPab 02 42 01.4 -3.5**
MOS *e* 02 45 22.5
MOS pmax pmax
comp=Z,597nm,1.2s
MOS pmax pmax
comp=N,212nm,1.1s
MOS pmax pmax
comp=E,110nm,1.0s
KBZ Khabaz 144.60 302 PKP **PKPab 02 42 05.8 0.0**
comp=E,169nm,1.0s,baz=109,slow=1.7,SNR=185
AKDM Akdamar-Van 144.72 293 *e*P **PKPdf 02 42 07.0 -0.2**
KIV Kislovodsk 144.73 303 *i* PKIKP PKPbc 02 42 04.5 -1.9
KIV *e* 02 45 24.8
KIV *e*SS SS 03 03 49.2 -8.2
KIV pmax pmax
comp=Z,440nm,1.1s
KIV Kislovodsk 144.73 303 ⇓P PKPbc 02 42 06.1 -0.4
KIV Kislovodsk 144.73 303 *i* PKPbc PKPbc 02 42 05.9 -0.5
SNR=41
AGRB Hanur-Agry 144.74 295 *e*P PKPbc 02 42 06.2 -0.5
SHA1 Shidzhatmaz 144.78 302 *d i*PKIKP PKPbc 02 42 06.6 -0.2
LPSR Galich'ya Gora 145.07 319 *e*PKIKP **PKPbc 02 42 07.0 0.0**
LPSR pmax pmax
comp=Z,860nm,0.8s
SIRT Sirnak 145.12 292 *e*P **PKPdf 02 42 07.0 -0.8**
SENK Senkaya-Erzuru 145.22 297 *e*P **PKPdf 02 42 07.8 -0.2**
VORR Voronezh 145.25 317⇑ *i*PKP2 **PKPdf 02 42 06.0 -1.4**
VORR pmax pmax
comp=Z,2μm,1.6s
OBN Obninsk 145.28 324 *d i*PKP2 **PKPdf 02 42 06.9 -0.4**
OBN *i* 02 45 27.3
OBN *i* SS SS 03 04 04.2 +2.0
OBN pmax pmax
comp=Z,812nm,0.8s
OBN Obninsk 145.28 324 PKPbc **PKPdf 02 42 07.0 -0.4**
comp=Z,138nm,0.7s,baz=60,slow=1.2,SNR=163
PUL Pulkovo 145.39 334 *d i*PKP2 **PKPdf 02 42 07.6 +0.2**
VSR Storozhevoye 145.43 316 *e*PKIKP **PKPdf 02 42 07.6 -0.1**
VSR pmax pmax
comp=Z,660nm,0.7s
VORD Divnogorie 145.43 316 *e*PKIKP **PKPdf 02 42 07.6 -0.1**
VORD pmax pmax
comp=Z,510nm,0.8s
GURO Guroymak-BITLI 145.47 293 *e*P **PKPab 02 42 09.6 +0.1**
KOPR Koprukoy-ERZUR 145.61 296 *e*P **PKPdf 02 42 08.8 +0.1**
FINES FINESS Array B 145.67 338 PKPbc **PKPbc 02 42 08.3 -0.4**
comp=Z,443nm,0.6s,baz=47,slow=3.9,SNR=1964
VRTB Varto-Mus 145.93 295 *e*P **PKPbc 02 42 10.8 +0.5**
SVAN Silvan-Diyarba 146.12 293 *e*P **PKPdf 02 42 09.4 0.0**
NSS Namsos 146.14 351 *e*PKPdf **PKPdf 02 42 08.7 +0.2**
KARO Karliova-Bingo 146.24 295 *e*P **PKPdf 02 42 10.4 +0.6**
CHOM Cayeli-Rize 146.40 298 *e*P **PKPbc 02 42 11.6 +0.1**
BNGB Bingl 146.53 294 *e*P **PKPdf 02 42 10.8 +0.6**
YEDI Yedisu-Bingol 146.63 295 *e*P **PKPdf 02 42 11.2 +0.8**
MAZI Mazidag 146.70 291 *e*P **PKPdf 02 42 10.4 -0.1**
BAYT Aydıntepe-Bayb 146.91 297 *e*P **PKPab 02 42 14.3 -0.8**
SOC Sochi 146.91 303 *e*PKIKP **PKPdf 02 42 09.6 -0.9**
SOC *e* 02 45 38.6
SOC *i* PPP PPP 02 48 55.3
SOC *e*SSS SSS 03 09 52.8
SOC pmax pmax
comp=Z,203nm,1.0s
DYBB Diyarbakir 146.96 292 *e*P **PKPbc 02 42 12.7 -0.5**
ERZN Erzincan 147.26 295 *e*P **PKPbc 02 42 14.3 +0.2**
TBLU Trondheim 147.59 352 *e*PKPbc **PKPbc 02 42 13.4 -0.6**
VSU Vasula 147.64 334 *d i*PKP2 **PKPbc 02 42 14.0 -0.3**
VSU pmax pmax
comp=Z,2μm,1.0s
VSU Vasula 147.64 334 *e*P **PKPbc 02 42 13.7 -0.6**
URFA Urfa 147.99 291 *e*P **PKPbc 02 42 15.5 -0.5**
MALT Malatya 148.31 293 *e*P **PKPbc 02 42 16.7 -0.1**
ANN Anapa 148.32 305 *i* PKHKP **PKPdf 02 42 12.0 -0.8**
ANN pmax pmax
comp=Z,41nm,1.0s
ANN pmax pmax
comp=Z,456nm,1.0s
MOL Molde 148.55 354 *e*PKPbc **PKPdf 02 42 13.8 +1.2**
DOMB Dombas 148.91 352 *e*PKPbc **PKPbc 02 42 16.9 -0.6**
AKN Aaknes 148.98 354 *ep*PKPdf **PKiKP 02 42 18.3 -0.5**
AKN Aaknes 148.98 354 *e*PKPdf **PKPdf 02 42 13.9 +0.6**
DARE Darende-Malaty 149.04 294 *e*P **PKPbc 02 42 18.7 0.0**
RSDY Resadiye-TOKAT 149.05 297 *e*P **PKiKP 02 42 19.2 -0.5**
ASF Jabal al Asfar 149.15 281 PKPbc **PKPbc 02 42 19.7 +0.6**
comp=Z,123nm,0.8s,baz=76,slow=1.5,SNR=30
GAZ Gaziantep 149.27 291 *e*P **PKPbc 02 42 19.8 +0.5**
SVSK Karacayir 149.34 296 *e*P **PKiKP 02 42 20.4 +0.2**
NB2 NORSAR Subarra 149.58 350 PKP **PKPbc 02 42 18.9 -0.3**
comp=Z,372nm,0.9s,baz=17,slow=2.6
NOA NORSAR Array B 149.58 350 PKPbc **PKPbc 02 42 18.9 -0.3**
comp=Z,205nm,0.9s,baz=15,slow=4.2,SNR=143
TOKT Tokat 149.65 297 *e*P **PKPbc 02 42 19.2 -0.9**
FOO Floro 149.71 356 *ep*PKPdf **PKPbc 02 42 19.3 -0.1**
FOO Floro 149.71 356 *e*PKPdf **PKPdf 02 42 15.2 +0.8**
IZAR Zarasai 149.72 331 *e*P **PKPbc 02 42 19.4 -0.2**
IZAR IAmb IAmb 02 42 21.6
comp=Z,237nm,1.1s
MICGM Minsk 149.82 328⇑ *i*P **PKPbc 02 42 20.0 +0.1**
MICGM PM 02 42 21.0
comp=Z,2.3nm,1.0s
MICGM 02 42 22.0
comp=N,0.4nm,1.0s
MICGM PM 02 42 22.0
comp=E,0.9nm,1.0s
MNK Minsk 149.82 328⇑ *i*PKP2 **PKPbc 02 42 20.0 +0.1**
MNK pmax pmax
comp=Z,2μm,1.0s
MNK pmax pmax
comp=N,350nm,1.0s
MNK pmax pmax
comp=E,940nm,1.0s
NAO01 NORSAR Array S 149.82 350 *e*PKPbc **PKPbc 02 42 19.8 +0.1**
NC602 NORSAR Array S 149.82 349 *ep*PKPdf **PKPbc 02 42 19.0 -0.7**
SLIT Slitere, Latvi 149.84 337 *e*P **PKPbc 02 42 18.2 -1.6**
ISAL Salakas 149.89 331 *e*P **PKPbc 02 42 19.8 -0.3**
ISAL IAmb IAmb 02 42 22.0
comp=Z,180nm,1.1s
KVT Kavak 149.95 299 *e*P **PKPbc 02 42 20.4 -0.3**
IIGN Ignalina 150.00 330 *e*P **PKPbc 02 42 20.3 0.0**
IIGN IAmb IAmb 02 42 22.3
comp=Z,227nm,1.1s
HFS Hagfors 150.00 347 PKPbc **PKPbc 02 42 19.6 -0.5**
comp=Z,222nm,0.9s,baz=53,slow=0.7,SNR=250
HYA Hoyanger 150.05 354 *ep*PKPdf **PKPbc 02 42 20.2 -0.1**
HYA Hoyanger 150.05 354 *e*PKPdf **PKPdf 02 42 15.0 -0.1**
NACGM Naroch 150.05 329 *e*P **PKPdf 02 42 15.0 -0.2**
NACGM PM 02 42 21.0
comp=Z,3.1nm,1.0s
RCY Rachaya 150.20 283 *e*P **PKiKP 02 42 22.5 +0.1**
SUE Sulen 150.26 356 *ep*PKPdf **PKPbc 02 42 21.0 +0.3**
SUE Sulen 150.26 356 *e*PKPbc **PKPbc 02 42 21.0 +0.3**
BNN Bunyan 150.31 294 *e*P **PKPbc 02 42 21.4 -0.4**
SKAR Skarslia 150.32 352 *ep*PKPdf **PKPbc 02 42 21.0 0.0**
SKAR Skarslia 150.32 352 *e*PKPbc **PKPbc 02 42 21.2 +0.2**
QRWL Qaraoun 150.33 284 *e*P **PKiKP 02 42 23.0 +0.4**
EIL Elat 150.34 276 PKPbc **PKiKP 02 42 22.9 +0.2**
comp=Z,312nm,0.9s,baz=134,slow=1.0,SNR=116
EIL pPKPbc **pPKPab 02 43 20.7 -1.3**
comp=Z,87nm,1.1s,baz=96,slow=2.8,SNR=3.0
KOZT Kozan 150.38 291 *e*P **PKPbc 02 42 21.7 -0.1**
BHL Bhannes 150.39 284 *e*P **PKiKP 02 42 22.8 +0.1**
CEYT Ceyhan 150.44 290 *e*P **PKPbc 02 42 22.2 +0.2**
DIKM Dikmen 150.46 300 ⇑P **PKPdf 02 42 18.1 +1.8**
DIKM Dikmen 150.46 300 *e*P **PKPbc 02 42 21.9 0.0**
MMAI Mount Meron Ar 150.51 282 PKPbc **PKiKP 02 42 23.4 +0.4**
comp=Z,288nm,0.6s,baz=83,slow=6.8,SNR=461
MMAI pPKPbc **pPKPab 02 43 21.7 -0.9**
comp=Z,115nm,0.9s,baz=66,slow=3.6,SNR=4.9
YURE YUREGIR 150.54 290 *e*P **PKiKP 02 42 23.2 +0.3**
SIM Simferopol' 150.57 307 *ce*PKIKP **PKPdf 02 42 15.0 -1.4**
SIM pmax pmax
comp=Z,337nm,0.9s
YOZ Yozgat 150.65 296 *e*P **PKPbc 02 42 20.4 -2.2**
OSL Oslo 150.71 349 *ep*PKPdf **PKiKP 02 42 22.2 -0.2**
OSL Oslo 150.71 349 *e*PKPbc **PKPbc 02 42 21.9 0.0**
KRTS Karatas 150.74 290 *e*P **PKPbc 02 42 22.3 -0.4**
ASK Askoy 150.81 355 *ep*PKPdf **PKPbc 02 42 22.2 +0.1**
ASK Askoy 150.81 355 *e*PKPbc **PKPbc 02 42 22.0 -0.1**
PABE Paberze 150.82 332 *e*P **PKPbc 02 42 21.9 -0.3**
BER Bergen 150.89 355 *ep*PKPdf **PKPbc 02 42 22.4 +0.2**
BER Bergen 150.89 355 *e*PKPbc **PKPbc 02 42 22.4 +0.2**
CORM Corum 151.13 297 *e*P **PKPbc 02 42 23.9 +0.3**
KONO Kongsberg 151.15 350 PKIKP **PKPbc 02 42 22.7 -0.2**
KONO Kongsberg 151.15 350 *ep*PKPdf **PKPbc 02 42 22.6 -0.3**
KONO Kongsberg 151.15 350 *e*PKPdf **PKPbc 02 42 22.9 0.0**
KONO Kongsberg 151.15 350 **PKPbc 02 42 22.7 -0.2**
PBUR Paburg 151.21 335 *e*P **PKPbc 02 42 22.8 -0.3**
ODD1 Odda 151.25 354 *ep*PKPdf **PKPbc 02 42 22.3 -0.9**
ODD1 Odda 151.25 354 *e*PKPbc **PKiKP 02 42 23.4 -0.2**
AKASG Malin Array Be 151.32 320 PKPbc **PKPbc 02 42 23.4 -0.1**
comp=Z,166nm,0.8s,baz=56,slow=2.6,SNR=242
BZK Bozkurt 151.33 301 ⇑P **PKiKP 02 42 24.5 +0.2**
BZK Bozkurt 151.33 301 *e*P **PKPbc 02 42 23.8 0.0**
EREN Erenkoy 151.70 287 *e*P **PKiKP 02 42 25.4 +0.1**
KIZK Mersin 151.74 289 *e*P **PKiKP 02 42 25.2 -0.1**
BLS5 Blasjo 151.75 354 *ep*PKPdf **PKPbc 02 42 24.3 0.0**
BLS5 Blasjo 151.75 354 *e*PKPbc **PKPbc 02 42 23.9 -0.4**
YAYX Yaylak 151.88 295 *e*P **PKPbc 02 42 24.8 -0.6**
SILI Silifke-Mersin 151.91 289 *e*P **PKiKP 02 42 25.9 +0.2**
BRTR Keskin Array B 151.94 296 PKP **PKPdf 02 42 18.6 -0.3**
comp=Z,12nm,1.1s,baz=130,slow=1.9,SNR=53
BRTR PKPbc **PKiKP 02 42 25.8 0.0**
comp=Z,123nm,0.8s,baz=132,slow=3.3,SNR=254
BRTR pPKPbc **pPKPbc 02 43 23.8 +3.8**
comp=Z,48nm,1.0s,baz=103,slow=3.5,SNR=6.0
KMY Karmoy 152.06 355 *ep*PKPdf **PKiKP 02 42 25.5 +0.3**
KMY Karmoy 152.06 355 *e*PKPbc **PKiKP 02 42 25.1 -0.1**
SERE Sereflikochisa 152.07 295 *e*P **PKPbc 02 42 25.2 -0.6**
KEBE Keben-Mersin 152.08 289 *e*P **PKiKP 02 42 26.2 +0.1**
IKL Isikli 152.11 289 *e*P **PKPbc 02 42 25.2 -0.6**
SUW Suwalki 152.20 331 *e*PKIKP **PKPdf 02 42 17.8 -0.7**
SUW Suwalki 152.20 331 *e*PKPdf **PKPdf 02 42 17.8 -0.7**
SUW *e*PKPab **PKPab 02 42 25.4 0.0**
SUW *ep*PKPab **PKPab 02 42 35.8 -0.3**
SUW Suwalki 152.20 331 **PKPdf 02 42 18.5 0.0**
SUW **PKPbc 02 42 25.4 0.0**
SUW PKPab **PKPab 02 42 35.3 -0.8**
AKKU Akkuyu-Mersin 152.22 289 *e*P **PKPbc 02 42 25.0 -1.1**
KURC Kurucasile-Bar 152.27 301 *e*P **PKPbc 02 42 25.4 -0.6**
TEVE Tevekalti-Mers 152.30 289 *e*P **PKPbc 02 42 25.3 -1.1**
CSS Mathiatis 152.37 286 P **PKiKP 02 42 27.1 +0.4**
AFSR Afar-Bala (An 152.40 296 *e*P **PKPbc 02 42 25.9 -0.6**
BERE Bereket-Mersin 152.48 289 *e*P **PKPbc 02 42 26.6 -0.2**
KULU Kulu 152.50 295 *e*P **PKPbc 02 42 26.5 -0.3**
SACV Santiago Islan 152.53 121 **PKPbc 02 42 26.3 -1.1**
ANTO Ankara 152.56 297 ⇑PKIKP **PKPdf 02 42 19.9 +0.3**
ANTO Ankara 152.56 297 ⇑P **PKPdf 02 42 19.9 +0.3**
TEKE Tekeli-Mersin 152.57 289 *e*P **PKPbc 02 42 25.9 -0.9**
CHBY Cihanbeyli 152.63 294 *e*P **PKPbc 02 42 26.2 -0.9**
HOMB Homborsund 152.64 351 *ep*PKPdf **PKPbc 02 42 26.1 -0.2**
HOMB Homborsund 152.64 351 *e*PKPbc **PKPbc 02 42 26.2 0.0**
SNART Snartemo 152.74 352 *ep*PKPdf **PKiKP 02 42 26.9 +0.3**
SNART Snartemo 152.74 352 *e*PKPbc **PKPbc 02 42 26.5 +0.1**
LEF Lefka 152.74 286 *e*P **PKPbc 02 42 26.6 -0.7**
PURM Purcari 152.85 312 ⇑P **PKPdf 02 42 19.7 -0.1**
LADK Ladik-KONYA 153.08 293 *e*P **PKPbc 02 42 26.8 -1.3**
SORM Soroca 153.09 316 ⇓PKIKP **PKPdf 02 42 18.6 -1.4**
SORM Soroca 153.09 316 ⇓P **PKPdf 02 42 18.6 -1.4**
KONT Konya--Tatoy 153.10 293 *e*P **PKPbc 02 42 27.4 -0.6**
GAZI Gazipasa 153.21 289 *e*P **PKPbc 02 42 26.7 -1.6**
KIS Kishinev 153.32 314 *e*PKP **PKPdf 02 42 19.0 -1.4**
comp=Z,250nm,1.4s
KIS *ep*PKP **pPKPbc 02 43 25.0 +2.3**
KIS Kishinev 153.32 314⇑ *e*PKIKP **PKPdf 02 42 19.0 -1.4**
KIS *e* 02 42 41.0
KIS pmax pmax
comp=Z,250nm,1.4s
KIS Kishinev 153.32 314 ⇑P **PKiKP 02 42 28.2 0.0**
MILM Milestii Mici 153.36 314 ⇓P **PKPdf 02 42 19.8 -0.6**
SVRH Sivrihisar-ESK 153.59 296 *e*P **PKPbc 02 42 28.3 -0.8**
LEOM Leova 153.90 313 ⇑PKIKP **PKiKP 02 42 30.0 +0.6**
LEOM Leova 153.90 313 ⇑P **PKiKP 02 42 30.0 +0.6**
TLCR 154.05 310 ⇓PKIKP **PKPdf 02 42 21.0 -0.5**
TLCR 154.05 310 ⇓P **PKPdf 02 42 21.0 -0.5**
SRCK Saricakaya, Es 154.18 298 *e*P **PKPbc 02 42 29.6 -0.6**
GULT Gulveren 154.20 299 *e*P **PKPdf 02 42 16.0 -6.0**
BSD Bornholm Skovb 154.24 341 *i* PKIKP **PKiKP 02 42 30.0 +0.2**
BSD *i* 02 42 44.3
BSD pmax pmax
comp=Z,240nm,1.3s
BSD Bornholm Skovb 154.24 341 *i* P **PKiKP 02 42 30.0 +0.2**
comp=Z,235nm,1.3s
BSD *i* 02 42 44.3
SAUV Serdivan-Sakar 154.28 299 *e*P **PKPbc 02 42 30.3 -0.1**
MUD Monsted U'grnd 154.29 349 *i* PKIKP **PKiKP 02 42 29.9 0.0**
MUD *i* 02 42 44.4
MUD pmax pmax
comp=Z,270nm,1.5s
MUD Monsted U'grnd 154.29 349 *i* P **PKiKP 02 42 29.9 0.0**
comp=Z,270nm,1.5s
MUD *i* 02 42 44.4
MUD *i* 02 42 45.0
LIC Lamto 154.37 167 *e*PKIKP **PKPdf 02 42 23.2 +0.3**
comp=Z,98nm,1.1s
VARL Varlezi 154.39 312 ⇓P **PKiKP 02 42 31.7 +1.2**
SHUT Suhut-Afyon 154.46 294 *e*P **PKPdf 02 42 22.2 -0.3**
CFR Carcaliu 154.50 310 ⇑PKIKP **PKPdf 02 42 21.7 -0.4**
CFR Carcaliu 154.50 310 ⇑P **PKPdf 02 42 21.7 -0.4**
KIC Kosan Boka 154.55 168 *e*PKIKP **PKPdf 02 42 23.1 -0.1**
comp=Z,58nm,0.9s
LVV L'vov 154.58 323 *e*PKIKP **PKPdf 02 42 21.4 -0.7**
LVV *e* 02 42 46.3
MANR Mangalia 154.69 307 ⇑P **PKiKP 02 42 31.7 +0.6**
CAVI Cavuskoy 154.75 298 *e*P **PKiKP 02 42 32.2 +0.7**
BEL Belsk 154.77 330 *e*PKIKP **PKPdf 02 42 22.9 +0.6**
BEL Belsk 154.77 330 *e*PKPdf **PKPdf 02 42 22.9 +0.6**
BEL *e*PKPab **PKiKP 02 42 31.5 +0.5**
BEL *ep*PKPab **PKPab 02 42 47.7 +0.6**
TIC Toumodi 154.78 167 *e*PKIKP **PKPdf 02 42 23.6 +0.1**
comp=Z,59nm,0.8s
ADVT Abdulvahap 154.78 299 *e*P **PKPbc 02 42 31.1 -0.4**
HARR Harsova 154.82 309 ⇓PKIKP **PKPdf 02 42 24.3 +1.7**
HARR Harsova 154.82 309 ⇓P **PKPdf 02 42 24.3 +1.7**
DBIC Dimbokro 154.83 167 PKP **PKPdf 02 42 24.4 +0.9**
comp=Z,23nm,0.8s,baz=179,slow=1.9,SNR=20
DBIC PKPab **PKPab 02 42 49.8 +1.6**
comp=Z,39nm,0.9s,baz=167,slow=5.8,SNR=9.9
DBIC Dimbokro 154.83 167 **PKPdf 02 42 23.3 -0.2**
DBIC **PKPab 02 42 47.7 -0.5**
PETR Petresti 154.86 312 ⇑P **PKiKP 02 42 33.9 +2.5**
TESR Tescani 154.87 314 ⇓P **PKPdf 02 42 20.3 -2.3**
ODBI Odobesti 154.95 312 ⇑P **PKiKP 02 42 33.0 +1.3**
GKP Gorka Klasztor 155.06 336 *e*PKIKP **PKPdf 02 42 22.2 -0.4**
GKP Gorka Klasztor 155.06 336 *e*PKPdf **PKPdf 02 42 22.2 -0.4**
GKP *e*PKPab PKPab 02 42 32.0 -16
GKP *ep*PKPab **PKPab 02 42 48.5 +0.2**
VRI Vrincioaia 155.11 313 ⇑PKIKP **PKPdf 02 42 22.3 -0.7**
VRI Vrincioaia 155.11 313 ⇑P **PKPdf 02 42 22.3 -0.7**
ELL Elmali 155.13 290 *e*P **PKPdf 02 42 22.7 -0.8**
ISK Istanbul-Kandi 155.15 301 *e*P **PKPdf 02 42 21.9 -1.2**
KAVV Kandilli-Istan 155.15 301 *e*P PKPdf 02 42 31.7 +8.6
PLOR Plostina 155.17 313 ⇓PKIKP **PKPdf 02 42 22.7 -0.4**
PLOR Plostina 155.17 313 ⇓P **PKPdf 02 42 22.7 -0.4**
TVSB Tavsanli 155.17 297 *e*P **PKPdf 02 42 30.2 +6.8**
BUR08 Bucovina Ar. S 155.17 318 **PKPdf 02 42 24.1 +1.0**
KWP Kalwaria Pacla 155.37 324 *e*PKP2 **PKPab 02 42 50.0 +0.3**
KWP Kalwaria Pacla 155.37 324 *e*PKPdf PKPdf 02 42 32.7 +10
KWP *e*PKPab **PKPab 02 42 50.0 +0.3**
AKAS Kas 155.40 289 *e*P PKPdf 02 42 32.4 +8.5
ARMT Armutlu 155.41 300 *e*P **PKPdf 02 42 31.0 +7.4**
CTKS Kestanelik-??a 155.51 301 *e*P PKPdf 02 42 31.5 +7.9
OZUR 155.59 314 ⇑P **PKPdf 02 42 24.0 +0.4**
SB02 Marmara Sea 155.62 301 *e*P PKPdf 02 42 33.0 +9.3
PRD Provadia 155.71 306 P **PKPdf 02 42 23.4 -0.4**
MLR Muntele Rosu 155.77 313 ⇑PKIKP **PKPdf 02 42 23.0 -1.1**
MLR Muntele Rosu 155.77 313 PKP **PKPdf 02 42 22.9 -1.1**
comp=Z,18nm,1.0s,baz=6.8,slow=3.8,SNR=14
MLR PKPab **PKPab 02 42 50.9 -0.9**
comp=Z,15nm,0.8s,baz=279,slow=6.5,SNR=7.3
MLR Muntele Rosu 155.77 313 ⇑P **PKPdf 02 42 23.0 -1.1**
NEF NEVSHA 155.78 307 P **PKPdf 02 42 22.6 -1.4**
SECR 155.89 311 ⇓P PKPdf 02 42 34.7 +11
DOPR Dopca 155.90 314 ⇓P **PKPdf 02 42 24.2 +0.1**
EKA Eskdalemuir Ar 156.00 5 PKP **PKPdf 02 42 24.1 +0.3**
comp=Z,2.1nm,0.6s,baz=325,slow=1.0,SNR=12
EKA PKPab **PKPab 02 42 51.7 -0.4**
comp=Z,12nm,0.7s,baz=353,slow=3.4,SNR=12
EKA PP **PP 02 46 27.9 -2.1**
comp=Z,18nm,1.2s,baz=10,slow=6.0,SNR=6.4
ESK Eskdalemuir 156.01 5 PKP2 **PKPab 02 42 51.8 -0.4**
ESK Eskdalemuir 156.01 5 **PKPab 02 42 51.8 -0.4**
KOLS Kolonicke sedl 156.03 323 *e*PKIKP **PKPdf 02 42 24.3 +0.2**
KOLS Kolonicke sedl 156.03 323 *e*PKP **PKPdf 02 42 24.3 +0.2**
UZH Uzhgorod 156.21 322 *e*PKIKP **PKPdf 02 42 23.1 -1.2**
UZH *i* 02 42 50.9
VOIR 156.36 313 ⇓PKIKP **PKPdf 02 42 25.6 +0.8**
VOIR 156.36 313 ⇓P **PKPdf 02 42 25.6 +0.8**
OJC Ojcow 156.37 328 *e*PKP2 **PKPab 02 42 54.2 +0.2**
OJC Ojcow 156.37 328 *e*PKPdf **PKPdf 02 42 23.8 -0.7**
OJC *e*PKPbc PKPbc 02 42 34.6
OJC *e*PKPab **PKPab 02 42 54.2 +0.2**
TRPA Tarpa 156.38 321⇓ *e*P **PKPdf 02 42 22.5 -2.0**
BSEG Bad Segeberg 156.45 345 *e*PKPdf **PKPdf 02 42 25.4 +1.0**
baz=29,slow=1.1
BSEG *e*PKPab **PKPab 02 42 54.9 +0.7**
baz=23,slow=4.3
JMB Yambol 156.53 305 P **PKPdf 02 42 23.6 -1.3**
CJR Cluj-Napoca 156.59 317 ⇑PKIKP **PKPdf 02 42 23.8 -1.2**
CJR Cluj-Napoca 156.59 317 ⇑P **PKPdf 02 42 23.8 -1.2**
ARG Arkhangelos 156.60 289 P **PKPdf 02 42 24.4 -0.6**
EDRB Edirne 156.61 304 P **PKPdf 02 42 23.4 -1.7**
ARR Arges 156.65 313 ⇓P **PKPdf 02 42 24.6 -0.6**
SZH Strazhica 156.69 308 P **PKPdf 02 42 24.1 -1.0**
HUMR Humele 156.81 311 ⇑P **PKPdf 02 42 25.0 -0.2**
RUE Ruedersdorf 156.86 339 *e*PKPdf **PKPdf 02 42 26.0 +1.0**
baz=29,slow=1.1
RUE *e*PKPab **PKPab 02 42 56.9 +1.0**
baz=23,slow=4.3
DRGR 157.06 318 ⇑PKIKP **PKPdf 02 42 25.1 -0.5**
DRGR 157.06 318 ⇑P **PKPdf 02 42 25.1 -0.5**
PVL Pavlikeni 157.12 308 P **PKPdf 02 42 24.9 -0.7**
LTVH Ltavrtes, Hu 157.17 320 *e*P **PKPdf 02 42 25.6 0.0**
KECS Kecovo 157.22 324 *e*PKP2 **PKPab 02 42 58.1 +0.3**
KECS Kecovo 157.22 324 *e*PKP **PKPab 02 42 58.1 +0.3**
LANS Liptovska Anna 157.27 326 *e*PKP2 **PKPab 02 42 59.1 +1.1**
LANS Liptovska Anna 157.27 326 *e*PKP **PKPdf 02 42 59.1 +1.1**
KSP Ksiaz 157.36 333 *e*PKIKP **PKPdf 02 42 25.5 -0.3**
KSP Ksiaz 157.36 333 *e*PKPdf **PKPdf 02 42 25.5 -0.3**
KSP *e*PKPab **PKPab 02 42 58.9 +0.7**
OKC Ostrava-Krasne 157.38 329 *e*PKIKP **PKPdf 02 42 25.3 -0.5**
OKC Ostrava-Krasne 157.38 329 *e*PKPDF **PKPdf 02 42 25.3 -0.5**
OKC *e*PKPAB **PKPab 02 42 58.6 +0.3**
ALN Alexandroupoli 157.39 302 P **PKPdf 02 42 23.7 -2.4**
DIM Dimitrovgrad 157.40 305 P **PKPdf 02 42 24.7 -1.4**
DEV Deva 157.44 316 ⇓PKIKP **PKPdf 02 42 25.4 -0.6**
DEV Deva 157.44 316 ⇓P **PKPdf 02 42 25.4 -0.6**
PLVB Pleven 157.53 309 ⇓P **PKPdf 02 42 25.5 -0.7**
KDZ Kurdzhali 157.62 304 P **PKPdf 02 42 24.9 -1.5**
MORC Moravsky Berou 157.68 330 ⇓PKIKP **PKPdf 02 42 26.1 -0.1**
MORC Moravsky Berou 157.68 330 ⇓P **PKPdf 02 42 26.1 -0.1**
MORC Moravsky Berou 157.68 330 *e*PKP **PKPdf 02 42 25.8 -0.4**
MORC *e* 02 43 00.1
RDO Rodhopi 157.69 303 P **PKPdf 02 42 24.7 -1.7**
UPC Upice 157.74 333 *e*PKIKP **PKPdf 02 42 24.9 -1.3**
UPC Upice 157.74 333 *e*PKPDF **PKPdf 02 42 24.9 -1.3**
UPC *e*PKPAB **PKPab 02 43 00.1 +0.2**
DPC Dobruska-Polom 157.74 333 *e*PKIKP **PKPdf 02 42 25.7 -0.6**
DPC Dobruska-Polom 157.74 333 *e*PKPDF **PKPdf 02 42 25.7 -0.6**
DPC *e*PKPAB **PKPab 02 43 00.0 0.0**
RETH Rethem/Aller, 157.78 346 *e*PKPdf **PKPdf 02 42 27.0 +0.9**
baz=29,slow=1.1
RETH *e*PKPab **PKPab 02 43 00.5 +0.6**
baz=23,slow=4.3
NRDL Niedersach Rie 157.84 344 *e*PKPdf **PKPdf 02 42 27.1 +1.0**
baz=29,slow=1.1
NRDL *e*PKPab **PKPab 02 43 00.7 +0.6**
baz=23,slow=4.3
SMTH Samothraki Isl 157.89 301 P **PKPdf 02 42 24.1 -2.6**
VYHS Vyhne 158.03 326 *e*PKIKP **PKPdf 02 42 26.1 -0.6**
VYHS *e* 02 43 01.1
VYHS Vyhne 158.03 326 *e*PKP **PKPdf 02 42 26.1 -0.6**
VYHS *e* 02 43 01.1
ASSE Asse, Remlinge 158.04 343 *e*PKPdf **PKPdf 02 42 27.3 +0.9**
baz=29,slow=1.1
ASSE *e*PKPab **PKPab 02 43 01.8 +0.8**
baz=23,slow=4.3
BSZH Besenyszg 158.10 322 *e*P **PKPdf 02 42 25.8 -0.9**
CLL Collm 158.12 339⇑ *e*PKIKP **PKPdf 02 42 26.0 -0.6**
CLL *i* 02 43 01.7
CLL pmax pmax
comp=Z,44nm,1.6s
CLL pmax pmax
comp=Z,48nm,1.3s
CLL pmax pmax
comp=Z,191nm,0.8s
CLL Collm 158.12 339 *e*PKPdf **PKPdf 02 42 26.0 -0.6**
comp=Z,44nm,1.6s
CLL *e*PKPdiff PKPab 02 42 39.0 -22
CLL comp=Z,48nm,1.3s ⇑ *i*PKPab **PKPab 02 43 01.7 +0.2**
comp=Z,191nm,0.8s
CLL *e*PP **PP 02 46 39.0 -2.8**
CLL *e* 02 46 50.0
CLL *e*PPP PPP 02 50 22.0
CLL Collm 158.12 339 *e*PKPdf **PKPdf 02 42 27.2 +0.5**
baz=29,slow=1.1
CLL *e*PKPab **PKPab 02 43 02.1 +0.6**
baz=23,slow=4.3
MPEP Malo Peshtene 158.12 309 P **PKPdf 02 42 26.4 -0.5**
BRG Berggiesshubel 158.19 337 *e*PKP **PKPdf 02 42 26.6 -0.1**
comp=Z,60nm,1.7s
BRG *i* 02 42 38.8
comp=Z,54nm,1.5s
BRG *i* 02 43 02.3
comp=Z,282nm,1.4s
BRG *e*PP **PP 02 46 42.0 -0.2**
comp=Z,19nm,1.2s
BRG Berggiesshubel 158.19 337 *e*PKIKP **PKPdf 02 42 26.6 -0.1**
BRG *i* 02 43 02.3
BRG *e* 02 46 42.0
BRG pmax pmax
comp=Z,60nm,1.7s
BRG pmax pmax
comp=Z,54nm,1.5s
BRG pmax pmax

baz=23,slow=4.3
BZS Buzias 158.34 317 ⇓PKIKP **PKPdf 02 42 25.9 -1.2**
BZS Buzias 158.34 317 ⇓P **PKPdf 02 42 25.9 -1.2**
CLZ Clausthal 158.38 343 *e*PKPdf **PKPdf 02 42 27.9 +0.9**
baz=29,slow=1.1
CLZ *e*PKPab **PKPab 02 43 03.5 +0.8**
baz=23,slow=4.3
VRAC Vranov 158.44 330 PKP **PKPdf 02 42 27.1 0.0**
comp=Z,17nm,1.1s,baz=71,slow=1.2,SNR=16
VRAC PKPab **PKPab 02 43 03.0 0.0**
comp=Z,33nm,0.6s,baz=46,slow=3.9,SNR=35
VRAC Vranov 158.44 330 ⇑P **PKPdf 02 42 27.1 0.0**
VRAC Vranov 158.44 330 *e*PKP **PKPdf 02 42 26.7 -0.4**
VRAC *e* 02 43 03.5
IBBN Ibbenburen 158.50 348 *e*PKPdf **PKPdf 02 42 27.9 +0.8**
baz=29,slow=1.1
IBBN *e*PKPab **PKPab 02 43 03.6 +0.6**
baz=23,slow=4.3
NEUB Neuenburg 158.58 340 *e*PKPdf **PKPdf 02 42 27.8 +0.7**
baz=29,slow=1.1
NEUB *e*PKPab **PKPab 02 43 04.2 +0.8**
baz=23,slow=4.3
BUD Budapest 158.62 324 ⇓*e*P **PKPdf 02 42 27.4 0.0**
SMOL Smolenice 158.67 328 *e*PKIKP **PKPdf 02 42 27.5 +0.1**
SMOL *e* 02 43 04.9
SMOL Smolenice 158.67 328 *e*PKP **PKPdf 02 42 27.5 +0.1**
SMOL *e* 02 43 04.9
GOPC GO Pecny, Ondr 158.68 334 *e*PKP2 **PKPab 02 43 03.8 -0.2**
GOPC GO Pecny, Ondr 158.68 334 *e*PKPAB **PKPab 02 43 03.8 -0.2**
GOPC *e*PKPAB **PKPab 02 43 04.1 +0.1**
PRA Prague 158.69 335 *e*PKP2 **PKPab 02 43 04.5 +0.5**
PRA Prague 158.69 335 *e*PKPAB **PKPab 02 43 04.5 +0.5**
KRUC Moravsky 158.71 330 *e*PKP **PKPdf 02 42 26.8 -0.6**
KRUC *e* 02 43 04.8
PRU Pruhonice 158.71 334 *e*PKIKP **PKPdf 02 42 26.8 -0.6**
PRU *e* 02 43 04.0
PRU Pruhonice 158.71 334 *e*PKPDF **PKPdf 02 42 26.8 -0.6**
PRU *e*PKPAB **PKPab 02 43 04.0 -0.1**
SANT Santorini 158.73 290 ⇑P **PKPdf 02 42 26.6 -1.3**
MDVR Moldovita 158.74 315 ⇑P **PKPdf 02 42 26.9 -0.7**
GTTG Gyttingen 158.75 344 *e*PKPab **PKPab 02 43 04.9 +0.7**
baz=23,slow=4.3
VTS Vitosha 158.77 308 P **PKPdf 02 42 26.6 -1.3**
VTS Vitosha 158.77 308 ⇑PKIKP **PKPdf 02 42 27.4 -0.5**
VTS Vitosha 158.77 308 ⇑P **PKPdf 02 42 27.4 -0.5**
VTS Vitosha 158.77 308 P **PKPdf 02 42 26.7 -1.2**
NVR Nevrokopi 158.82 304 P **PKPdf 02 42 25.5 -2.4**
MMB Musomiste 158.83 305 P **PKPdf 02 42 25.7 -2.2**
IOSP Ios island 158.83 291 P **PKPdf 02 42 26.6 -1.4**
MODS Modra-Piesok 158.84 328 *e*PKIKP **PKPdf 02 42 26.9 -0.7**
MODS *e* 02 43 04.6
MODS Modra-Piesok 158.84 328 *e*PKP **PKPdf 02 42 26.9 -0.7**
MODS *e* 02 43 04.6
ZST Bratislava 159.05 328 *e*PKIKP **PKPdf 02 42 26.9 -0.9**
ZST *e* 02 43 05.7
ZST Bratislava 159.05 328 *e*PKP **PKPdf 02 42 26.9 -0.9**
ZST *e* 02 43 05.7
TANN Tannenbergstha 159.07 338 *e*PKPdf **PKPdf 02 42 28.5 +0.6**
baz=29,slow=1.1
TANN *e*PKPab **PKPab 02 43 06.8 +1.1**
baz=23,slow=4.3
CSKK Cskako 159.09 324 *e*P **PKPdf 02 42 26.0 -1.9**
PLN Plauen 159.10 339 *e*PKPdf **PKPdf 02 42 28.4 +0.5**
baz=29,slow=1.1
PLN *e*PKPab **PKPab 02 43 06.9 +1.1**
baz=23,slow=4.3
MOX Moxa 159.12 340 *e*PKPdf **PKPdf 02 42 28.4 +0.5**
baz=29,slow=1.1
MOX *e*PKPab **PKPab 02 43 06.7 +0.8**
baz=23,slow=4.3
GUNZ Gunzen 159.15 338 *e*PKPab **PKPab 02 43 07.2 +1.2**
baz=23,slow=4.3
PBCC Pribram 159.16 335 *e*PKPAB **PKPab 02 43 06.3 +0.2**
WERN Wernitzgruen 159.21 338 *e*PKPdf **PKPdf 02 42 28.7 +0.7**
baz=29,slow=1.1
WERN *e*PKPab **PKPab 02 43 07.5 +1.2**
baz=23,slow=4.3
NKC Novy Kostel 159.23 338 *e*PKIKP **PKPdf 02 42 27.5 -0.5**
NKC *e* 02 43 07.0
NKC Novy Kostel 159.23 338 *e*PKPDF **PKPdf 02 42 27.5 -0.5**
NKC *e*PKPAB **PKPab 02 43 07.0 +0.6**
IDI Anoyia 159.28 287 PKP **PKPdf 02 42 28.9 +0.3**
comp=Z,31nm,1.0s,baz=166,slow=3.8,SNR=11
IDI PKPab **PKPab 02 43 08.1 +0.8**
comp=Z,40nm,1.0s,baz=200,slow=17,SNR=6.7
UBBA Unterbreizbach 159.41 343 *e*PKPdf **PKPdf 02 42 28.8 +0.7**
baz=29,slow=1.1
UBBA *e*PKPab **PKPab 02 43 07.7 +0.7**
baz=23,slow=4.3
BUG Bochum--Univer 159.42 348 *e*PKPdf **PKPdf 02 42 28.7 +0.5**
baz=29,slow=1.1
BUG *e*PKPab **PKPab 02 43 07.2 +0.2**
baz=23,slow=4.3
AOS Alonnisos 159.46 298 P **PKPdf 02 42 26.1 -2.5**
MANZ Manzenberg 159.55 338 *e*PKPdf **PKPdf 02 42 28.9 +0.4**
baz=29,slow=1.1
MANZ *e*PKPab **PKPab 02 43 08.9 +1.1**
baz=23,slow=4.3
KNT Kendrikon 159.56 304 P **PKPdf 02 42 26.8 -1.9**
MPLH Magyarpolny 159.58 325 ⇓*e*P **PKPdf 02 42 27.5 -1.0**
MPLH Magyarpolny 159.58 325 ⇓*e*P **PKPdf 02 42 25.5 -3.0**
TIH Tihany 159.59 324 ⇓*e*P **PKPdf 02 42 27.2 -1.3**
MORH Mrgy, Hungar 159.65 322 ⇓*e*P **PKPdf 02 42 27.5 -1.1**
MORH Mrgy, Hungar 159.65 322 ⇓*i*P **PKPdf 02 42 27.3 -1.3**
FRGS Fruska Gora 159.65 318 ⇓*i*P **PKPdf 02 42 26.7 -2.0**
ROTZ Rotzenmuhle 159.71 338 *e*PKPdf **PKPdf 02 42 28.8 +0.2**
baz=29,slow=1.1
ROTZ *e*PKPab **PKPab 02 43 09.9 +1.4**
baz=23,slow=4.3
KHC Kasperske Hory 159.78 335 *e*PKIKP **PKPdf 02 42 28.1 -0.6**
KHC *e* 02 43 09.1
KHC *e* 02 43 19.5
KHC Kasperske Hory 159.78 335 *e*PKPDF **PKPdf 02 42 28.1 -0.6**
KHC *e*PKPAB **PKPab 02 43 09.1 +0.3**
KHC *ep*PKP **pPKPdf 02 43 19.5 -4.5**
CONA Conrad Observa 159.81 329 *i* PKPdf **PKPdf 02 42 28.2 -0.7**
comp=Z,27nm,1.2s,SNR=11
CONA *i* PKPab **PKPab 02 43 09.6 +0.5**
comp=Z,86nm,0.9s,SNR=9.5
CONA *i* PP **PP 02 46 52.0 +0.7**
comp=Z,35nm,1.6s
VAM Vamos 159.84 288 P **PKPdf 02 42 28.1 -1.1**
HKB Herkenbosch 159.85 350 PKPab **PKPab 02 43 09.0 0.0**
NEO Neokhori 159.91 299 P **PKPdf 02 42 27.6 -1.6**
XOR Xorichti 159.92 299 P **PKPdf 02 42 25.1 -4.1**
GEC2 GERESS Array S 159.97 334 *e*PKPdf **PKPdf 02 42 29.4 +0.4**
baz=29,slow=1.1
GEC2 *e*PKPab **PKPab 02 43 10.4 +0.7**
baz=23,slow=4.3
GEC2 GERESS Array S 159.97 334 **PKPdf 02 42 28.5 -0.5**
GEC2 PKPab **PKPab 02 43 07.3 -2.4**
GERES GERESS Array B 159.97 334 PKP **PKPdf 02 42 28.5 -0.5**
comp=Z,8.7nm,1.1s,baz=48,slow=2.0,SNR=24
GERES PKPab **PKPab 02 43 09.6 -0.1**
comp=Z,34nm,0.9s,baz=35,slow=4.9,SNR=34
BDSL Dessel 159.97 352 PKPab **PKPab 02 43 09.6 +0.2**
GRG Griva 159.99 304 P **PKPdf 02 42 26.6 -2.6**
BOPT Opiter 160.00 350 PKPab **PKPab 02 43 09.7 0.0**
WET Wettzell 160.02 336 *e*PKPdf **PKPdf 02 42 29.6 +0.6**
baz=29,slow=1.1
WET *e*PKPab **PKPab 02 43 11.1 +1.3**
baz=23,slow=4.3
GRF Grafenberg Arr 160.09 339 *e*PKPdf **PKPdf 02 42 29.4 +0.4**
baz=29,slow=1.1
GRF *e*PKPab **PKPab 02 43 11.5 +1.4**
baz=23,slow=4.3
DIVS Divibare 160.14 315 ⇓*i*P **PKPdf 02 42 28.2 -1.2**
BEBN Eben Emael 160.30 350 PKPab **PKPab 02 43 10.7 -0.2**
AHRW Bad Neuenahr-A 160.32 347 *e*PKPdf **PKPdf 02 42 29.9 +0.8**
baz=29,slow=1.1
AHRW *e*PKPab **PKPab 02 43 11.6 +0.6**
baz=23,slow=4.3
DID Didima 160.32 294 P **PKPdf 02 42 26.6 -3.1**
TNS Taunus Mts 160.34 345 *e*PKPdf **PKPdf 02 42 30.0 +0.7**
baz=29,slow=1.1
TNS *e*PKPab **PKPab 02 43 11.7 +0.5**
baz=23,slow=4.3
MEM Membach 160.44 349 PKPdf **PKPdf 02 42 29.2 -0.1**
MEM PKPdf **PKPdf 02 42 29.2 -0.1**
MEM PKPab **PKPab 02 43 11.3 -0.2**
MEM PKPab **PKPab 02 43 11.3 -0.2**
BTNL Ternell 160.44 349 PKPdf **PKPdf 02 42 29.4 0.0**
BTNL PKPab **PKPab 02 43 11.2 -0.4**
BEHE Becsehely 160.44 325 *e*P **PKPdf 02 42 29.3 -0.2**

ARSA Arzberg 160.47 328 *i* PKPdf **PKPdf 02 42 28.0 -1.6**
comp=Z,20nm,1.3s,SNR=10
ARSA *i* PKPab **PKPab 02 43 12.8 +0.9**
comp=Z,65nm,1.4s,SNR=9.8
ARSA *i* PP **PP 02 46 53.9 -0.9**
comp=Z,19nm,2.1s
BLCH La Chartreuse 160.47 350 PKPab **PKPab 02 43 11.7 0.0**
UCC Uccle 160.47 353 PKIKP **PKPdf 02 42 29.6 +0.3**
UCC 02 43 10.0
UCC Uccle 160.47 353 PKPdf **PKPdf 02 42 29.6 +0.3**
UCC PKPab **PKPab 02 43 11.3 -0.3**
UCC Uccle 160.47 353 **PKPdf 02 42 29.6 +0.3**
UCC **PKPab 02 43 10.0 -1.7**
ANKY Antikythira Is 160.52 289 P **PKPdf 02 42 29.1 -0.8**
BSTI Sart Tilman 160.53 350 PKPab **PKPab 02 43 11.8 -0.1**
MOA Molln 160.55 331 *i* PKPdf **PKPdf 02 42 28.7 -0.9**
comp=Z,28nm,1.9s,SNR=8.3
MOA *i* PKPab **PKPab 02 43 13.1 +0.9**
comp=Z,84nm,1.6s,SNR=9.2
MOA *i* PP **PP 02 46 54.4 -0.8**
comp=Z,15nm,1.5s
BBLS Lazići 160.62 315 ⇓*i*P **PKPdf 02 42 29.0 -0.9**
BCES Court-Saint-Et 160.63 352 PKPab **PKPab 02 43 12.4 0.0**
BSKQ Steenkerk 160.65 353 PKPab **PKPab 02 43 12.2 -0.2**
AGG Agios Georgios 160.66 299 P **PKPdf 02 42 28.1 -1.9**
BRQR Ronquire 160.67 353 PKPdf **PKPdf 02 42 29.9 +0.4**
BRQR PKPab **PKPab 02 43 12.5 -0.1**
BHOU Houvegnez 160.68 349 PKPdf **PKPdf 02 42 29.5 -0.1**
BHOU PKPab **PKPab 02 43 12.9 +0.2**
BCLA Clavier 160.72 351 PKPdf **PKPdf 02 42 27.3 -2.3**
BCLA PKPab **PKPab 02 43 12.5 -0.3**
THL Klokotos Trika 160.74 301 P **PKPdf 02 42 28.1 -1.9**
SNF Seneffe 160.76 353 PKPab **PKPab 02 43 12.9 0.0**
FNA Florina 160.77 305 P **PKPdf 02 42 27.1 -3.0**
HAPS Han Pijesak,BI 160.77 316 *e*P **PKPdf 02 42 28.6 -1.5**
RUDO Rudo 160.78 314 *e*P **PKPdf 02 42 28.7 -1.3**
BGES Gesves 160.79 351 PKPab **PKPab 02 43 12.6 -0.5**
BMRD Maredsous 160.91 352 PKPdf **PKPdf 02 42 29.4 -0.5**
BMRD PKPab **PKPab 02 43 13.3 -0.3**
LKLB Kalborn 160.91 349 PKPdf **PKPdf 02 42 30.3 +0.4**
LKLB PKPab **PKPab 02 43 13.8 +0.1**
BBOU Bougnies 160.92 353 PKPdf **PKPdf 02 42 31.2 +1.4**
BBOU PKPab **PKPab 02 43 13.7 +0.1**
RCHB Rochefort 160.99 351 PKPdf **PKPdf 02 42 29.7 -0.3**
RCHB PKPab **PKPab 02 43 12.6 -1.4**
PHP Peshkopia 161.05 308 P **PKPdf 02 42 28.6 -1.8**
LVIA Vianden 161.06 349 PKPdf **PKPdf 02 42 30.6 +0.6**
LVIA PKPab **PKPab 02 43 14.3 +0.1**
KPRO Kipourio 161.08 302 P **PKPdf 02 42 29.6 -0.9**
PERS Pernice 161.11 327 *e*PKPdf **PKPdf 02 42 29.0 -1.3**
PERS *e*PKPab **PKPab 02 43 14.7 -0.1**
SOKA Soboth 161.12 328 **PKPdf 02 42 29.4 -0.9**
comp=Z,40nm,1.5s,SNR=17
SOKA *i* PKPab **PKPab 02 43 15.0 +0.2**
comp=Z,74nm,1.2s,SNR=14
SOKA *i* PP **PP 02 46 59.1 +0.8**
comp=Z,14nm,1.4s
DOU Dourbes 161.13 352 PKPdf **PKPdf 02 42 29.5 -0.6**
DOU PKPab **PKPab 02 43 14.2 -0.4**
DYR Agios Nikonas 161.17 292 P **PKPdf 02 42 29.6 -1.0**
RJOB Jochberg 161.22 333 *e*PKPdf **PKPdf 02 42 30.4 0.0**
baz=29,slow=1.1
RJOB *e*PKPab **PKPab 02 43 16.4 +1.2**
baz=23,slow=4.3
ZAG Zagreb 161.28 324 ⇓*i*P **PKPdf 02 42 29.9 -0.5**
WLF Walferdange 161.32 348 *e*PKPdf **PKPdf 02 42 31.7 +1.3**
baz=29,slow=1.1
WLF *e*PKPab **PKPab 02 43 16.3 +0.9**
baz=23,slow=4.3
WLF Walferdange 161.32 348 PKPdf **PKPdf 02 42 31.0 +0.7**
WLF PKPab **PKPab 02 43 15.7 +0.3**
BLY Banja Luka 161.38 320 ⇓*i*P **PKPdf 02 42 29.5 -1.0**
BLY Banja Luka 161.38 320 **PKPdf 02 42 30.2 -0.3**
FUR Furstenfeldbru 161.41 337 *e*PKPdf **PKPdf 02 42 30.8 +0.3**
baz=29,slow=1.1
FUR *e*PKPab **PKPab 02 43 17.2 +1.2**
baz=23,slow=4.3
DRO Drossia 161.41 296 P **PKPdf 02 42 28.1 -2.7**
OBKA Obir 161.47 328 *i* PKPdf **PKPdf 02 42 29.7 -1.0**
comp=Z,14nm,1.3s,SNR=5.2
OBKA *i* PKPab **PKPab 02 43 16.0 -0.3**
comp=Z,14nm,0.8s
OBKA *i* PP **PP 02 47 02.5 +2.2**
comp=Z,12nm,1.2s
PDG Podgorica 161.47 311 ⇓P **PKPdf 02 42 29.7 -1.0**
PDG Podgorica 161.47 311 ⇓*i*P **PKPdf 02 42 29.2 -1.5**
STU Stuttgart 161.50 342 *e*PKPdf **PKPdf 02 42 30.9 +0.3**
baz=29,slow=1.1
STU *e*PKPab **PKPab 02 43 17.0 +0.7**
baz=23,slow=4.3
KBA Koelnbreinsper 161.54 331 *i* PKPdf **PKPdf 02 42 30.0 -0.9**
comp=Z,43nm,1.5s
KBA *i* PKPab **PKPab 02 43 17.1 +0.3**
comp=Z,24nm,0.9s
KBA *i* PP **PP 02 46 59.2 -1.5**
comp=Z,33nm,1.2s
CRES Cresnjev 161.54 325 ⇓*i*P **PKPdf 02 42 29.5 -1.2**
DRME Dracevica, Mon 161.64 311 ⇓*i*P **PKPdf 02 42 29.5 -1.4**
MGRS Mrkonjic Grad 161.65 319 *e*P **PKPdf 02 42 30.6 -0.3**
BRY Bratogost 161.68 314 *e*P **PKPdf 02 42 30.0 -1.1**
TOA0 Torodi Ar. Sit 161.74 184 **PKPdf 02 42 32.0 +0.3**
TOA0 PKPab **PKPab 02 43 16.9 -1.2**
TORD Torodi Ar. Bea 161.74 184 PKP **PKPdf 02 42 31.9 +0.1**
comp=Z,22nm,1.0s,baz=307,slow=0.5,SNR=71
TORD PKPab **PKPab 02 43 18.8 +0.7**
comp=Z,20nm,0.9s,baz=176,slow=4.1,SNR=13
MYKA Terra Mystica 161.77 330 *i* PKPdf **PKPdf 02 42 29.9 -1.1**
comp=Z,24nm,1.5s,SNR=6.3
MYKA *i* PKPab **PKPab 02 43 17.3 -0.4**
comp=Z,57nm,1.2s,SNR=8.5
LJU Ljubljana 161.83 327 *i* PKPdf **PKPdf 02 42 30.2 -0.7**
LJU Ljubljana 161.83 327 ⇓*i*P **PKPdf 02 42 30.1 -0.9**
BOJS Bojanci 161.87 325 *e*PKPdf **PKPdf 02 42 30.2 -0.8**
BOJS *e*PKPab **PKPab 02 43 18.1 +0.1**
HCY Herceg Novi 161.95 312 *e*P **PKPdf 02 42 30.2 -1.0**
IGT Igoumenitsa 161.97 302 P **PKPdf 02 42 29.1 -2.2**
WATA Walderalm 162.01 335 *i* PKPdf **PKPdf 02 42 30.7 -0.6**
comp=Z,34nm,1.2s,SNR=15
WATA *i* PKPab **PKPab 02 43 19.2 +0.4**
comp=Z,74nm,1.2s,SNR=11
WATA *i* PP **PP 02 47 01.9 -1.1**
comp=Z,24nm,1.3s
CEY Cerknica 162.10 327 ⇓*i*P **PKPdf 02 42 30.1 -1.2**
BFO Black Forest 162.13 343 *e*PKPab **PKPab 02 43 19.6 +0.5**
baz=23,slow=4.3
ROBS Robic 162.13 329 *i* PKPdf **PKPdf 02 42 30.0 -1.2**
ROBS *i* PKPab **PKPab 02 43 18.1 -1.0**
ABTA Abfaltersbach 162.15 332 *i* PKPdf **PKPdf 02 42 30.3 -1.1**
comp=Z,52nm,1.3s,SNR=21
ABTA *i* PKPab **PKPab 02 43 18.4 -0.9**
comp=Z,98nm,1.2s,SNR=10
RETA Reutte 162.17 337 *i* PKPdf **PKPdf 02 42 30.8 -0.6**
comp=Z,15nm,1.3s,SNR=5.8
RETA *i* PKPab **PKPab 02 43 20.1 +0.8**
comp=Z,150nm,1.0s,SNR=25
RETA *i* PP **PP 02 47 02.2 -1.5**
comp=Z,15nm,1.5s
MOTA Moosalm 162.17 336 *i* PKPdf **PKPdf 02 42 30.3 -1.2**
comp=Z,46nm,1.3s,SNR=19
MOTA *i* PKPab **PKPab 02 43 19.7 +0.2**
comp=Z,162nm,1.3s,SNR=15
MOTA *i* PP **PP 02 47 04.7 +0.9**
comp=Z,30nm,1.3s
STON Ston 162.21 315 ⇓*i*P **PKPdf 02 42 29.6 -1.8**
UBR Ueberruh 162.21 338 *e*PKPdf **PKPdf 02 42 31.6 +0.2**
baz=29,slow=1.1
UBR *e*PKPab **PKPab 02 43 20.2 +0.6**
baz=23,slow=4.3
SQTA Sankt Quirin 162.24 335 *i* PKPdf **PKPdf 02 42 30.7 -0.8**
comp=Z,37nm,1.2s,SNR=13
SQTA *i* PKPab **PKPab 02 43 19.9 +0.1**
comp=Z,72nm,0.8s,SNR=12
SQTA *i* PP **PP 02 47 06.1 +1.9**
comp=Z,14nm,1.3s
RIY Rijeka 162.38 326 ⇓*i*P **PKPdf 02 42 30.2 -1.3**
ECH Echery 162.51 345 PKP2 **PKPab 02 43 20.3 -0.5**
ECH 03 42 30.9
ECH Echery 162.51 345 **PKPdf 02 42 30.9 -0.7**
ECH **PKPab 02 43 20.3 -0.5**
FETA Feichten 162.58 336 *i* PKPdf **PKPdf 02 42 31.4 -0.5**
comp=Z,56nm,1.3s,SNR=20
FETA *i* PKPab **PKPab 02 43 21.6 +0.3**
comp=Z,131nm,1.1s,SNR=15
FETA *i* PP **PP 02 47 06.1 +0.1**
comp=Z,18nm,1.2s
DAVA Damuels 162.63 338 *i* PKPdf **PKPdf 02 42 31.4 -0.5**
comp=Z,21nm,1.2s,SNR=5.2
DAVA *i* PKPab **PKPab 02 43 21.8 +0.3**
comp=Z,206nm,1.1s,SNR=23
DAVA *i* PP **PP 02 47 04.6 -1.6**
comp=Z,13nm,1.1s
DAVOX Davos/Dischmat 163.08 337 PKP **PKPdf 02 42 33.1 +0.6**
comp=Z,21nm,1.2s
DAVOX PKPab **PKPab 02 43 24.3 +0.8**
TUE Stuetta 163.52 338 **PKPdf 02 42 32.4 -0.5**
TUE **PKPab 02 43 26.4 +0.9**
TEOL Teolo 163.61 331 PKPdf **PKPdf 02 42 30.7 -2.1**
TEOL **PKPab 02 43 25.6 -0.1**
SALO Salr 163.85 334 PKPdf **PKPdf 02 42 30.9 -2.1**
SALO **PKPab 02 43 25.9 -0.9**
MATE Matera 164.02 309 ⇓P **PKPdf 02 42 33.2 0.0**
ACER Acerenza 164.45 311 **PKPdf 02 42 33.0 -0.7**
ACER **PKPab 02 43 30.1 +0.4**
TIP Timpagrande 164.66 305 P **PKPdf 02 42 32.0 -2.0**
TIP Timpagrande 164.66 305 **PKPdf 02 42 33.5 -0.5**
TIP **PKPab 02 43 30.6 -0.1**
ZCCA Zocca 164.72 330 **PKPdf 02 42 34.0 +0.2**
ZCCA **PKPab 02 43 31.7 +1.1**
INTR Introdacqua 164.97 318 **PKPdf 02 42 32.9 -1.2**
INTR **PKPab 02 43 32.4 +0.5**
AQU L'Aquila 165.03 320 PKIKP **PKPdf 02 42 33.3 -0.9**
AQU 02 43 33.3
AQU L'Aquila 165.03 320 ⇓*i*P **PKPdf 02 42 33.2 -0.9**
AQU L'Aquila 165.03 320 **PKPdf 02 42 33.3 -0.9**
AQU **PKPab 02 43 33.3 +1.2**
VLC Villacollemand 165.12 331 **PKPab 02 43 30.8 -1.6**
PAOL Paolisi 165.18 314 PKPdf **PKPdf 02 42 32.6 -1.7**
PAOL **PKPab 02 43 32.6 -0.3**
OSSC Osservatorio P 165.26 328 **PKPdf 02 42 33.2 -1.1**
OSSC **PKPab 02 43 32.5 -0.5**
BNI Bardonecchia 165.59 342 PKP2 **PKPab 02 43 34.4 -0.2**
BNI 03 42 34.4
BNI Bardonecchia 165.59 342 **PKPdf 02 42 34.4 -0.3**
BNI **PKPab 02 43 34.4 -0.2**
CEL Celeste 165.66 302 PKPdf **PKPdf 02 42 34.0 -0.8**
CEL **PKPab 02 43 36.5 +1.4**
LATE Laterza 165.68 324 **PKPdf 02 42 33.3 -1.3**
LATE **PKPab 02 43 35.0 0.0**
SSB Saint Sauveur 165.85 348 PKIKP **PKPdf 02 42 35.2 +0.5**
SSB 02 43 35.1
SSB Saint Sauveur 165.85 348 **PKPdf 02 42 35.2 +0.5**
SSB **PKPab 02 43 35.1 -0.4**
VAE Valguarnera 167.05 301 PKP **PKPdf 02 42 36.8 +0.8**
comp=Z,7.2nm,1.0s,baz=218,slow=20,SNR=3.6
VAE PKPab **PKPab 02 43 41.5 +0.2**
comp=Z,16nm,1.0s,baz=105,slow=1.7,SNR=3.6
CORL Corleone 167.66 305 **PKPdf 02 42 37.0 +0.7**
PCAB Cabril 167.70 31 *e*PKPdf **PKPdf 02 42 37.6 +1.4**
PCAB Cabril 167.70 31 *e*PKPab **PKPab 02 43 44.3 +0.4**
PBRG Braganca 168.16 27 *e*PKPdf **PKPdf 02 42 37.5 +0.9**
PBRG Braganca 168.16 27 *e*PKPab **PKPab 02 43 46.2 +0.3**
PVRL Vila Real 168.19 32 *e*PKPdf **PKPdf 02 42 37.8 +1.2**
PVRL Vila Real 168.19 32 *e*PKPab **PKPab 02 43 46.7 +0.6**
PVIS Viseu 168.55 34 *e*PKPdf **PKPdf 02 42 37.9 +1.0**
PVIS Viseu 168.55 34 *e*PKPab **PKPab 02 43 47.4 -0.3**
MVO Moncorvo 168.58 30 *e*PKPdf **PKPdf 02 42 38.5 +1.6**
MVO *eP* **pPKPdf 02 43 38.6 +6.3**
MVO Moncorvo 168.58 30 *e*PKPab **PKPab 02 43 48.4 +0.6**
PCAS Casmilo, Conde 168.75 38 *e*PKPdf **PKPdf 02 42 37.6 +0.7**
PCAS Casmilo, Conde 168.75 38 *e*PKPab **PKPab 02 43 48.8 +0.2**
MTE Manteigas 168.96 34 *e*PKPdf **PKPdf 02 42 38.1 +1.0**
MTE Manteigas 168.96 34 *e*PKPab **PKPab 02 43 49.8 +0.2**
PMAFR Mafra 169.06 44 *e*PKPab **PKPab 02 43 50.1 +0.1**
PTOM Tomar 169.11 39 *e*PKPdf **PKPdf 02 42 38.5 +1.3**
PTOM Tomar 169.11 39 *e*PKPab **PKPab 02 43 50.1 0.0**
PCBR Castelo Branco 169.43 36 *e*PKPdf **PKPdf 02 42 38.7 +1.4**
PCBR Castelo Branco 169.43 36 *e*PKPab **PKPab 02 43 51.6 +0.1**
PMTG Montargil 169.59 41 *e*PKPdf **PKPdf 02 42 38.4 +0.9**
PMTG Montargil 169.59 41 *e*PKPab **PKPab 02 43 52.4 +0.1**
PMRV Marv??o 169.78 37 *e*PKPdf **PKPdf 02 42 38.9 +1.3**
PMRV Marv??o 169.78 37 *e*PKPab **PKPab 02 43 52.9 -0.3**
PNCL Nicolau / Gran 170.05 46 *e*PKPdf **PKPdf 02 42 39.4 +1.6**
PNCL Nicolau / Gran 170.05 46 *e*PKPab **PKPab 02 43 54.5 +0.1**
EVO Evora 170.08 42 *e*PKPdf **PKPdf 02 42 39.2 +1.4**
EVO *ep*PKPdf **pPKPdf 02 43 34.5 +1.3**
EVO Evora 170.08 42 *e*PKPab **PKPab 02 43 54.2 -0.3**
PESTR Estremoz 170.09 40 **PKPdf 02 42 38.7 +0.9**
PESTR **PKPab 02 43 53.5 -1.1**
TAM Tamanrasset 170.27 209 PKIKP **PKPdf 02 42 39.1 +0.6**
TAM Tamanrasset 170.27 209 **PKPdf 02 42 39.1 +0.6**
PTEO Sao Teotonio 170.27 49 *e*PKPdf **PKPdf 02 42 40.0 +2.1**
PTEO Sao Teotonio 170.27 49 *e*PKPab **PKPab 02 43 55.6 +0.2**
PFVI Vila Bisbo 170.44 51 *e*PKPdf **PKPdf 02 42 39.9 +1.9**
PFVI Vila Bisbo 170.44 51 **PKPab 02 43 57.3 -0.2**
MORF Marmelete 170.46 50 *e*PKPdf **PKPdf 02 42 39.0 +1.0**
MORF Marmelete 170.46 50 *e*PKPab **PKPdf 02 42 39.1 +1.0**
PBEJ Beja 170.51 44 *e*PKPdf **PKPdf 02 42 39.6 +1.6**
PCVE Castro Verde 170.66 46 *e*PKPdf **PKPdf 02 42 39.9 +1.8**
PCVE Castro Verde 170.66 46 *e*PKPab **PKPab 02 43 57.7 +0.6**
PBDV Barranco-do-Ve 170.96 48 *e*PKPdf **PKPdf 02 42 40.5 +2.2**
PBDV Barranco-do-Ve 170.96 48 *e*PKPab **PKPab 02 43 59.1 +0.6**
PVAQ Vaqueiros 171.00 47 *e*PKPdf **PKPdf 02 42 40.1 +1.8**
PVAQ Vaqueiros 171.00 47 *e*PKPab **PKPab 02 43 59.3 +0.7**
ESBB Sonseca Array 171.04 23 **PKPab 02 43 59.7 +1.0**
ESDC Sonseca Array 171.04 23 PKP **PKPdf 02 42 39.2 +0.9**
comp=Z,7.8nm,0.7s,baz=354,slow=2.6,SNR=60
ESDC pPKP **pPKPdf 02 43 37.6 +3.8**
comp=Z,10nm,1.1s,baz=356,slow=2.9,SNR=5.1
ESDC PKPab **PKPab 02 43 58.6 -0.1**
comp=Z,14nm,1.0s,baz=324,slow=3.4,SNR=12
ESDC PP **PP 02 47 49.9 +0.8**
comp=Z,4.0nm,1.1s,baz=340,slow=3.2,SNR=5.4
KEST Kesra 171.48 302 PKP **PKPdf 02 42 39.6 +0.9**
comp=Z,24nm,1.1s,baz=143,slow=1.5,SNR=18
KEST PKPab **PKPab 02 44 01.8 +0.8**
comp=Z,24nm,1.1s,baz=190,slow=4.5,SNR=4.6
HORN Hornachuelos 172.06 35 P **PKPdf 02 42 40.5 +1.7**
SNR=7.1
OUK Oukaimeden 172.84 90 P **PKPdf 02 42 42.1 +2.3**
SNR=9.1
SESP Santiago Espad 172.90 20 P **PKPdf 02 42 40.9 +1.5**
SNR=21
CHEFC Chefchaouen 173.91 52 P **PKPdf 02 42 42.1 +2.4**
SNR=7.1
ZGR Zagora 174.57 103 P **PKPdf 02 42 42.1 +2.0**
SNR=7.8
TZRR Tazzarine 174.76 96 P **PKPdf 02 42 42.0 +1.8**
SNR=12
GOLM Goulmima 175.35 86 P **PKPdf 02 42 43.0 +2.6**
SNR=21
MDT Midelt 175.47 71 PKP **PKPdf 02 42 41.0 +0.7**
baz=227,slow=15
MDT PKPab **PKPab 02 44 20.0 +1.1**
comp=Z,15nm,1.1s,baz=192,slow=1.5,SNR=4.1
MDT Midelt 175.47 71 P **PKPdf 02 42 42.5 +2.1**
SNR=19
TDRA Tendrara 177.35 53 P **PKPdf 02 42 43.1 +2.3**
SNR=11
FIGM Figuig 178.36 65 P **PKPdf 02 42 43.0 +2.1**
SNR=20

*IDC **10** 02:25:29.0±1.1,23°27N×80°60W,h0km,mb3.4/5, mb1 3.9/8,mb1mx3.6/51,mbtmp3.7/8,ML3.2/2,Error ellipse: s-maj=37.6km s-min=19.9km az=61.0*
*NEIC **10** 02:25:30.6±2.6,23°20N±0°06×80°7W±0°1,h14km±5km, mb4.1/5,Error ellipse: s-maj=14.1km s-min=8.2km az=79.0.*
*SSNC **10** 02:25:30.3±1.8,23°42N×80°58W,h4km±12km,MD3.9, ML3.2,MW4.0*

ISC 10 02:25:32.5±0.6,23°27N±0°06×80°64W±0°05,h35km,n34, σ2s17/41,mb3.6/8,Cuba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGV	**Manicaragua**	**1.30**	**152**	*e*P	**Pn**	**02 25 53.2**	**-1.0**
MGV				*e*S	**Sn**	**02 26 11.4**	**+0.9**
MGV				IAML		02 26 16.5	
	comp=N,356nm,0.4s						
MGV				IAML		02 26 16.6	
	comp=E,319nm,0.4s						
SOR	**Soroa**	**2.23**	**258**	*e*P	**Pn**	**02 26 07.1**	**+0.1**
SOR				*e*S	**Sn**	**02 26 33.5**	**+0.2**
SOR				IAML		02 26 41.0	
	comp=E,152nm,0.8s						
SOR				IAML		02 26 46.6	

comp=N,90nm,0.5s
061Z Ochoppi 2.60 355 Pn **Pn** 02 26 14.9 +2.9
CCCC Cccc 3.37 127 *eP* **Pn** 02 26 25.9 +3.3
CCCC *eS* **Sn** 02 27 07.2 +5.8
CCCC IAML 02 27 31.9
comp=E,33nm,0.4s
CCCC IAML 02 27 33.1
comp=N,40nm,0.4s
CBCY The Bluff, Cay 3.61 167 Pn **Pn** 02 26 26.6 +0.7
060A Indiantown 3.76 4 Pn **Pn** 02 26 29.6 +1.5
FSCY Frank Sound, G 3.97 187 Pn **Pn** 02 26 30.5 -0.4
LMGC Las Mercedes 4.65 133 *eP* **Pn** 02 26 40.0 -0.2
LMGC *eS* **Sn** 02 27 29.4 -3.6
RCC Rio Carpintero 5.64 124 *eP* **Pn** 02 26 53.2 -0.7
RCC *eS* **Sn** 02 27 56.2 -1.2
RCC IAML 02 28 04.3
comp=N,6.0nm,0.2s
RCC IAML 02 28 11.4
comp=E,6.0nm,0.4s
MTDJ Mount Denham 5.80 149 Pn **Pn** 02 26 57.4 +1.2
MOAC Moa 5.88 115 *eS* **Sn** 02 27 58.8 -4.6
MOAC IAML 02 28 06.7
comp=E,16nm,0.8s
MOAC IAML 02 28 06.9
comp=N,15nm,0.5s
656A Willston 6.31 345 **Pn** 02 27 03.7 +0.7
MASC Masc 6.71 116 *eS* **Sn** 02 28 24.6 +0.8
553A Crawfordville 7.68 335 Pn **Pn** 02 27 22.3 +0.5
TEIG Tepich 7.71 248 Pn **Pn** 02 27 22.6 +0.2
TEIG Sn **Sn** 02 28 44.0 -4.6
GOGA Godfrey 10.41 347 Pn **Pn** 02 27 59.4 +0.2
Z50A Ashland 10.98 336 Pn **Pn** 02 28 08.0 +0.9
JSC Jenkinsville 10.99 357 Pn **Pn** 02 28 07.1 -0.1
HODGE Hodges 11.02 353 Pn **Pn** 02 28 07.5 -0.1
V55A Taylorsville 12.55 358 Pn **Pn** 02 28 28.8 +0.2
TKL Tuckaleechee C 12.64 348 Pn **Pn** 02 28 25.6 -4.2
comp=N,0.1nm,0.3s,baz=162,slow=16,SNR=2.3
TKL Sn **Sn** 02 30 44.0 -5.4
comp=N,0.4nm,0.3s,baz=108,slow=21,SNR=2.5
TKL Lg Lg 02 32 06.8
comp=N,0.3nm,0.3s,baz=241,slow=16,SNR=2.3
SDV Santo Domingo 17.22 145 P **Pn** 02 29 31.3 +0.7
comp=N,1.6nm,0.3s,baz=315,slow=8.6,SNR=3.7
ABTX Abilene, Hawle 19.18 303 P **P** 02 29 53.5 +0.4
TXAR Lajitas Array 21.49 291 P **P** 02 30 19.6 +1.2
comp=N,0.7nm,0.6s,baz=112,slow=11,SNR=9.0
TX31 Lajitas Ar. Si 21.49 291 P **P** 02 30 18.7 +0.3
TX31 IAmb IAmb 02 30 30.8
comp=Z,9.8nm,1.9s
TX32 Lajitas Array 21.49 291 P **P** 02 30 18.2 -0.1
TX32 IAmb IAmb 02 30 30.8
comp=Z,10nm,1.9s
H48A Harrisville 21.49 355 P **P** 02 30 17.3 -0.9
H48A IAmb IAmb 02 30 33.3
comp=Z,17nm,0.8s
COWI Conover 23.80 345 P **P** 02 30 42.4 +0.4
PDAR Pinedale Array 30.85 316 P **P** 02 31 47.2 +1.6
comp=Z,0.2nm,0.6s,baz=117,slow=11,SNR=2.6
SIV San Ignacio 43.46 152 P **P** 02 33 33.3 +0.9
comp=Z,1.4nm,0.9s,baz=318,slow=10,SNR=7.6
YKA Yellowknife Ar 45.41 339 P **P** 02 33 48.3 +0.8
comp=Z,0.3nm,0.8s,baz=129,slow=8.6,SNR=4.6
ILAR Eielson Array 59.09 333 P **P** 02 35 31.9 +2.8
comp=Z,0.3nm,0.6s,baz=97,slow=4.6,SNR=4.4
WRA Warramunga Arr 147.35 269 PKPbc **PKPab** 02 45 15.3 +0.1
comp=Z,1.6nm,0.6s,baz=78,slow=3.8,SNR=14
ASAR Alice Springs 148.35 262 PKPbc **PKiKP** 02 45 17.7 +0.2
comp=Z,2.0nm,0.6s,baz=79,slow=2.2,SNR=19

WEL 10 02:33:14.8,40˚S±3˚×17˚4E±˚, h214km±12km, M2.9/26, MLv2.9/26, Error ellipse: s-maj=0.0km s-min=0.0km az=92.6, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	**Wanganui**	**0.74**	**100**	P	Pn	02 33 45.4	+0.9
VRZ	**Vera Road**	**0.76**	**48**	P	Pn	02 33 44.4	-0.2
PKVZ	**Pokaka**	**1.07**	**72**	P	Pn	02 33 46.5	0.0
MTVZ	**Mangateitei**	**1.14**	**78**	P	Pn	02 33 47.1	+0.1
DUWZ	**D'Urville Isla**	**1.17**	**184**	P	Pn	02 33 47.5	+0.4
TRVZ	**Turoa**	**1.22**	**74**	P	Pn	02 33 47.8	+0.1
TWVZ	**Taurewa**	**1.22**	**63**	P	Pn	02 33 47.5	-0.2
FWVZ	**Far West T-bar**	**1.23**	**73**	P	Pn	02 33 47.9	0.0
NGZ	**Ngauruhoe**	**1.30**	**70**	P	Pn	02 33 48.5	+0.3
TUVZ	**Tukino**	**1.30**	**74**	P	Pn	02 33 48.7	+0.4
WTVZ	**West Tongariro**	**1.31**	**67**	P	Pn	02 33 48.5	+0.2
MOVZ	**Moawhango**	**1.35**	**81**	P	Pn	02 33 48.4	-0.2
KIW	**Kapiti Island**	**1.39**	**152**	P	Pn	02 33 48.9	+0.1
OGWZ	**Otaki Gorge**	**1.47**	**144**	P	Pn	02 33 49.7	+0.3
BHHZ	**Black Hill Sta**	**1.57**	**85**	P	Pn	02 33 50.1	-0.3
TCW	**Tory Channel**	**1.58**	**179**	P	Pn	02 33 51.1	+0.8
QRZ	**Quartz Range**	**1.66**	**224**	P	Pn	02 33 51.3	+0.2
NNZ	**Nelson**	**1.66**	**197**	P	Pn	02 33 51.6	+0.6
CAW	**Cannon Point**	**1.67**	**152**	P	Pn	02 33 51.3	+0.1
PNHZ	**Pukenui**	**1.69**	**100**	P	Pn	02 33 51.7	+0.3
HOWZ	**Holdsworth Sta**	**1.69**	**139**	P	Pn	02 33 51.3	-0.1
DVHZ	**Dannevirke**	**1.77**	**113**	P	Pn	02 33 52.1	0.0
TUWZ	**Tuamarina**	**1.79**	**182**	P	Pn	02 33 52.7	+0.4
KRHZ	**Kereru**	**1.80**	**91**	P	Pn	02 33 52.6	+0.2
MTW	**Mount Morrison**	**1.89**	**144**	P	Pn	02 33 53.0	-0.2
MCHZ	**McNeill Hill**	**2.06**	**86**	P	Pn	02 33 55.8	+0.8
BSWZ	**Blackbirch Sta**	**2.08**	**183**	P	Pn	02 33 50.1	-5.0
KAHZ	**Kahuranaki**	**2.20**	**95**	P	Pn	02 33 57.0	+0.6
THZ	**Tophouse**	**2.29**	**202**	P	Pn	02 33 57.8	+0.4
RTZ	**Ruatahuna**	**2.51**	**67**	P	Pn	02 33 59.4	-0.3
DSZ	**Denniston Nort**	**2.71**	**218**	P	Pn	02 34 08.2	+6.4
KHZ	**Kahutara**	**2.80**	**188**	P	Pn	02 34 03.6	+0.8
WIAZ	**Waiheke Island**	**2.97**	**17**	P	Pn	02 34 10.8	+6.0
RIGZ	**Rimuhau**	**3.04**	**73**	P	Pn	02 34 05.6	0.0

*IDC **10** 02:33:53.8±2.1, 43˚.46S×172˚.46E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.7/41, mbtmp3.6/3, ML3.3/1, Error ellipse: s-maj=56.8km s-min=14.6km az=158.0*
*WEL **10** 02:33:54.2, 43˚.6S±0˚.9×172˚.4E±0˚.9, h8km±1km, ML4.3/12, MLv4.2/41, Error ellipse: s-maj=0.0km s-min=0.0km az=137.5*
*NEIC **10** 02:33:55.1±1.8, 43˚.74S±0˚.08×172˚.7E±0˚.1, h28km±7km, Error ellipse: s-maj=15.9km s-min=6.1km az=135.0*
ISC 10 02:33:54.7±1.3, 43˚.57S±0˚.03×172˚.48E±0˚.03, h16km±10km, n76, σ1§35/82, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MQZ	**McQueen's Vall**	**0.19**	**137**	P	**Pb**	02 34 00.5	+0.7
MQZ				S	**Sb**	02 34 04.5	+1.3
MQZ	**McQueen's Vall**	**0.19**	**137**		**Pb**	02 34 00.4	+0.6
AKCZ	**Akaroa Harbour**	**0.44**	**134**	P	**Pb**	02 34 05.3	+1.2
OKCZ	**Okains Bay**	**0.45**	**110**	P	**Pn**	02 34 05.9	-0.7
GVZ	**Greta Valley S**	**0.73**	**34**	P	**Pn**	02 34 10.7	+0.3
LTZ	**Lake Taylor**	**0.80**	**349**	P	**Pn**	02 34 10.9	-0.5
LTZ	**Lake Taylor**	**0.80**	**349**	P	**Pn**	02 34 11.0	-0.4
LTZ				S	**Sn**	02 34 22.3	-0.8
LTZ	**Lake Taylor**	**0.80**	**349**		**Pg**	02 34 10.9	+0.5
RPZ	**Rata Peaks**	**1.04**	**261**	Pg	**Pb**	02 34 14.4	-0.1
	320nm,0.3s,baz=82,slow=2.0,SNR=96						
RPZ				Lg	Lg	02 34 28.2	
	794nm,0.3s,baz=117,slow=2.3,SNR=17						
RPZ	**Rata Peaks**	**1.04**	**261**	P	**Pb**	02 34 14.4	-0.1
RPZ				S	**Sg**	02 34 28.2	-0.4
RPZ	**Rata Peaks**	**1.04**	**261**		**Pb**	02 34 14.5	0.0
INZ	**Inchbonnie**	**1.13**	**318**	P	**Pg**	02 34 16.5	0.0
INZ				S	**Sn**	02 34 31.0	-0.2
WVZ	**Waitaha Valley**	**1.36**	**291**	P	**Pn**	02 34 19.2	+0.1
KHZ	**Kahutara**	**1.39**	**34**	P	**Pb**	02 34 20.2	-0.1
KHZ	**Kahutara**	**1.39**	**34**		**Pn**	02 34 20.0	+0.5
THZ	**Tophouse**	**1.83**	**10**	P	**Pn**	02 34 26.3	+0.7
THZ	**Tophouse**	**1.83**	**10**		**Pn**	02 34 26.2	+0.5
LBZ	**Lake Benmore**	**1.85**	**243**	P	**Pn**	02 34 25.7	-0.1
LBZ	**Lake Benmore**	**1.85**	**243**		**Pn**	02 34 25.4	-0.4
DSZ	**Denniston Nort**	**1.89**	**345**	P	**Pn**	02 34 27.2	+0.8
FOZ	**Fox Glacier**	**1.94**	**270**		**Pn**	02 34 28.2	+1.2
ODZ	**Otahua Downs**	**1.98**	**221**	P	**Pn**	02 34 27.4	-0.2
ODZ	**Otahua Downs**	**1.98**	**221**		**Pn**	02 34 27.1	-0.5
BSWZ	**Blackbirch Sta**	**2.12**	**30**	P	**Pn**	02 34 31.1	+1.6
BSWZ	**Blackbirch Sta**	**2.12**	**30**		**Pn**	02 34 30.4	+0.9
CMWZ	**Cape Campbell**	**2.22**	**36**	P	**Pg**	02 34 36.2	-1.1
CMWZ	**Cape Campbell**	**2.22**	**36**	Pn	**Pn**	02 34 30.7	-0.2
TUWZ	**Tuamarina**	**2.40**	**27**	P	**Pb**	02 34 36.1	-1.4
TUWZ	**Tuamarina**	**2.40**	**27**	Pn	**Pn**	02 34 33.2	-0.1
NNZ	**Nelson**	**2.44**	**16**	P	**Pn**	02 34 35.3	+1.4
NNZ	**Nelson**	**2.44**	**16**		**Pn**	02 34 34.9	+0.9
HHSZ	**Highcliff Hill**	**2.67**	**209**	P	**Pn**	02 34 36.9	-0.3
TCW	**Tory Channel**	**2.71**	**30**	P	**Pb**	02 34 40.7	-2.0
JCZ	**Jackson Bay**	**2.72**	**258**	P	**Pn**	02 34 38.2	+0.3
QRZ	**Quartz Range**	**2.74**	**1**	P	**Pn**	02 34 39.9	+1.8
QRZ	**Quartz Range**	**2.74**	**1**		**Pn**	02 34 39.8	+1.7
WKZ	**Wanaka**	**2.79**	**242**	P	**Pn**	02 34 38.5	-0.3
WKZ	**Wanaka**	**2.79**	**242**	Pn	**Pn**	02 34 38.4	-0.3
BHW	**Baring Head**	**2.79**	**40**	Pn	**Pn**	02 34 38.0	-0.7
SNZO	**South Karori**	**2.79**	**37**	Pn	**Pn**	02 34 38.8	+0.1
EAZ	**Earnscleugh**	**2.81**	**233**	P	**Pn**	02 34 38.8	-0.3
PLWZ	**Palliser**	**2.86**	**47**	P	**Pn**	02 34 40.0	+0.2
PLWZ	**Palliser**	**2.86**	**47**	Pn	**Pn**	02 34 39.4	-0.4
DUWZ	**D'Urville Isla**	**2.97**	**22**	P	**Pn**	02 34 43.8	+2.6
MSWZ	**Moikau Station**	**2.97**	**45**	Pn	**Pn**	02 34 41.8	+0.5
MSWZ					**Sn**	02 35 16.5	-0.1
CAW	**Cannon Point**	**3.12**	**39**	P	**Pn**	02 34 43.4	+0.1
TUZ	**Tuapeka**	**3.13**	**219**	P	**Pn**	02 34 43.2	-0.2
TRWZ	**Traveller**	**3.22**	**49**	P	**Pn**	02 34 45.5	+0.9
OGWZ	**Otaki Gorge**	**3.40**	**37**	P	**Pn**	02 34 47.9	+0.7
MLZ	**Mavora Lakes**	**3.60**	**239**	P	**Pn**	02 34 49.4	-0.6
MLZ	**Mavora Lakes**	**3.60**	**239**	Pn	**Pn**	02 34 48.7	-1.3
MRZ	**Mangatainoka R**	**3.71**	**39**	P	**Pn**	02 34 51.7	+0.3
SYZ	**Scrubby Hill**	**3.80**	**217**	P	**Pn**	02 34 52.4	-0.2
WHZ	**Wether Hill Ro**	**3.98**	**233**	P	**Pn**	02 34 53.7	-1.3
WHZ	**Wether Hill Ro**	**3.98**	**233**	Pn	**Pn**	02 34 53.4	-1.7
BFZ	**Birch Farm**	**4.02**	**45**	P	**Pn**	02 34 56.2	+0.5
BFZ	**Birch Farm**	**4.02**	**45**	Pn	**Pn**	02 34 55.9	+0.2
DCZ	**Deep Cove**	**4.25**	**242**	P	**Pn**	02 34 58.3	-0.5
DCZ	**Deep Cove**	**4.25**	**242**	Pn	**Pn**	02 34 57.9	-0.9
PREZ	**Palmer Road**	**4.41**	**17**	P	**Pn**	02 35 04.0	+3.0
NBEZ	**Newall Road No**	**4.42**	**14**	P	**Pn**	02 35 04.0	+2.6
KHEZ	**Kahui Hut**	**4.42**	**16**	P	**Pn**	02 35 03.9	+2.6
PKE	**Pukeiti**	**4.52**	**15**	P	**Pn**	02 35 04.8	+2.3
APZ	**The Paps**	**4.55**	**223**	P	**Pn**	02 35 02.2	-0.8
VRZ	**Vera Road**	**4.76**	**22**	P	**Pn**	02 35 07.8	+2.0
PYZ	**Puysegur Point**	**4.87**	**236**	P	**Pn**	02 35 06.0	-1.4
PYZ	**Puysegur Point**	**4.87**	**236**	Pn	**Pn**	02 35 05.8	-1.5
FWVZ	**Far West T-bar**	**4.89**	**29**	P	**Pn**	02 35 11.8	+3.9
WTVZ	**West Tongariro**	**5.03**	**29**	P	**Pn**	02 35 13.0	+3.3
HIZ	**Hauiti**	**5.36**	**20**	P	**Pn**	02 35 15.8	+1.7
HIZ	**Hauiti**	**5.36**	**20**	Pn	**Pn**	02 35 15.4	+1.3
TLZ	**Tolley Road**	**5.72**	**25**	P	**Pn**	02 35 21.5	+2.4
URZ	**Urewera**	**6.36**	**35**	Pn	**Pn**	02 35 27.7	-0.1
	0.7nm,0.3s,baz=198,slow=20,SNR=2.7						
URZ				Sn	**Sn**	02 36 35.7	-4.4
	1.7nm,0.3s,baz=45,slow=16,SNR=4.6						
ASAR	**Alice Springs**	**37.33**	**289**	P	**P**	02 41 07.4	+0.9
	0.7nm,0.9s,baz=127,slow=6.2,SNR=1.3						
WRA	**Warramunga Arr**	**39.59**	**294**	P	**P**	02 41 26.3	+0.9
	0.9nm,1.0s,baz=136,slow=7.2,SNR=1.4						
TORD	**Torodi Ar. Bea**	**148.66**	**197**	PKPbc	**PKiKP**	02 53 42.6	-0.3
	1.2nm,0.8s,baz=139,slow=2.8,SNR=1.5						

ROM 10 02:40:07.1±0.2, 43˚.353N±0˚.004×12˚.504E±0˚.009, h9km±1km, ML0.7/4, Error ellipse: s-maj=0.6km s-min=0.5km az=249.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.08**	**293**	P	Pg	02 40 09.5	+0.2
ATVO				S	Sg	02 40 11.3	+0.4
ATVO				AML	AML		
	comp=N,65μm,0.2s						
ATVO				AML	AML		
	comp=E,55μm,0.1s						
MURB	**Monte Urbino**	**0.09**	**170**	P	Pg	02 40 09.9	+0.4
MURB				S	Sg	02 40 11.7	+0.4
MURB				AML	AML		
	comp=E,116μm,0.4s						
MURB				AML	AML		
	comp=N,132μm,0.3s						
ATPI	**Pietralunga -**	**0.12**	**323**	P	Pg	02 40 10.4	+0.4
ATPI				S	Sg	02 40 12.9	+0.9
ATPI				AML	AML		
	comp=E,19μm,1.6s						
ATPI				AML	AML		
	comp=N,21μm,1.4s						
ATMI	**Monte Miggiano**	**0.17**	**264**	S	Sg	02 40 16.0	+2.7
PIEI	**Pieia**	**0.18**	**7**	P	Pg	02 40 11.5	+0.5
PIEI				S	Sg	02 40 14.8	+1.1
PIEI				AML	AML		
	comp=E,52μm,0.3s						
PIEI				AML	AML		
	comp=N,37μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.20**	**149**	P	Pg	02 40 11.6	+0.4
ATCC				S	Sg	02 40 15.4	+1.5
PE3	**Peglio**	**0.34**	**359**	P	Pg	02 40 13.4	-0.5

*OSPL **10** 03:13:55.4±2.1, 16˚.26N×61˚.37W, h0km±335km, ML4.9*
*TRN **10** 03:14:02.4, 16˚.19N×61˚.93W, h179km, MD4.1*
*NEIC **10** 03:14:02.9±1.2, 16˚.15N±0˚.05×62˚.00W±0˚.05, h176km±5km, Error ellipse: s-maj=8.5km s-min=5.9km az=222.0*
*IDC **10** 03:14:03.6±1.3, 16˚.03N×62˚.14W, h177km±13km, mb3.9/22, mb1 4.0/27, mb1mx3.9/38, mbtmp4.4/27, Error ellipse: s-maj=12.7km s-min=9.3km az=21.0*
ISC 10 03:14:03.2±0.5, 16˚.11N±0˚.03×62˚.06W±0˚.04, h174km±4km, n385, σ1§12/407, mb4.3/69, 26C-8D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBE	**Ff. Capester**	**0.44**	**95**	*eP*	**Pn**	03 14 28.0	+0.9
TDBA	**Terre de Bas,**	**0.49**	**122**	*eP*	**Pn**	03 14 27.8	+0.6
MLYT	**Lee's Yard**	**0.62**	**349**	*eP*	**Pn**	03 14 28.6	+0.7
MLYT				*eS*	**Sn**	03 14 47.6	+0.6
ABD	**La Joyeuse, An**	**0.66**	**57**	*eP*	**Pn**	03 14 28.1	+0.1
MDPO	**Dominica; Chan**	**0.79**	**132**	*eP*	**Pn**	03 14 29.4	+0.6
MDPO				*eS*	**Sn**	03 14 48.8	+0.1
BBL	**Barber's Block**	**0.81**	**135**	*eP*	**Pn**	03 14 29.6	+0.5
BBL	**Barber's Block**	**0.81**	**135**		**Pn**	03 14 29.6	+0.5
DWS	**Wesley**	**0.90**	**127**	*iP*	**Pn**	03 14 29.9	+0.3
DWS				*eS*	**Sn**	03 14 49.4	-0.5
DWS	**Wesley**	**0.90**	**127**		**Pn**	03 14 29.9	+0.3
DWS					**Sn**	03 14 49.4	-0.5
BPA	**Boggy Peak**	**0.95**	**12**	*eP*	**Pn**	03 14 29.9	-0.1
BPA				*eS*	**Sn**	03 14 50.2	-0.6
BPA	**Boggy Peak**	**0.95**	**12**		**Pn**	03 14 29.9	-0.1
BPA					**Sn**	03 14 50.2	-0.6
DEG	**La Desirade**	**0.98**	**78**	*eP*	**Pn**	03 14 30.1	-0.1
DEG				*eS*	**Sn**	03 14 49.6	-1.5
DEG	**La Desirade**	**0.98**	**78**		**Pn**	03 14 30.1	-0.1
DEG					**Sn**	03 14 49.6	-1.5
MDN	**Morne-Daniel**	**1.02**	**141**	*iP*	**Pn**	03 14 33.2	+2.7
MDN				*eS*	**Sn**	03 14 52.9	+1.4
DPMT	**Pointe Michel**	**1.07**	**142**	*eP*	**Pn**	03 14 33.4	+2.5
DBCT	**Belle View Cho**	**1.08**	**140**	*eP*	**Pn**	03 14 33.8	+2.7
DBCT				*eS*	**Sn**	03 14 53.3	+0.8
DSHT	**Scott's Head**	**1.11**	**143**	*eP*	**Pn**	03 14 32.8	+1.5
DSHT	**Scott's Head**	**1.11**	**143**		**Pn**	03 14 30.8	-0.4
DSTT	**Stowe**	**1.13**	**140**	*eP*	**Pn**	03 14 33.0	+1.6
DSTT	**Stowe**	**1.13**	**140**		**Pn**	03 14 31.7	+0.3
NEV	**Hard Times**	**1.13**	**335**	*eP*	**Pn**	03 14 32.4	+1.0
NEV				*eS*	**Sn**	03 14 52.8	-0.5
NEV	**Hard Times**	**1.13**	**335**		**Pn**	03 14 32.4	+1.0
NEV					**Sn**	03 14 52.8	-0.5
NVDO	**Nevis, Disaste**	**1.13**	**332**	*eP*	**Pn**	03 14 32.4	+1.1
NVDO				*eS*	**Sn**	03 14 53.7	+0.5
SKOC	**St. Kitts, UWI**	**1.34**	**331**	*eP*	**Pn**	03 14 33.6	+0.5
SKOC				*eS*	**Sn**	03 14 57.1	+0.8
SKI	**Saint Kitts**	**1.38**	**332**	*iP*	**Pn**	03 14 34.4	+0.9
SKI				*eS*	**Sn**	03 14 57.7	+0.7
SKI	**Saint Kitts**	**1.38**	**332**		**Pn**	03 14 34.0	+0.5
SKI	**Saint Kitts**	**1.38**	**332**		**Sn**	03 14 57.7	+0.7
PCM	**Pelee Case Pet**	**1.53**	**147**	*eP*	**Pn**	03 14 35.1	0.0
SVN	**Savane Anatole**	**1.53**	**146**	*eP*	**Pn**	03 14 35.1	+0.1
CXM	**Morne La Croix**	**1.55**	**146**	*eP*	**Pn**	03 14 35.5	+0.2
BAMF	**Morne Balai**	**1.56**	**145**	*eP*	**Pn**	03 14 35.6	+0.2
GBMF	**Grand Be**	**1.57**	**146**	*eP*	**Pn**	03 14 35.4	0.0
ANWB	**Willy Bob**	**1.57**	**10**	*eP*	**Pn**	03 14 35.2	-0.1
ANWB				*eS*	**Sn**	03 14 58.8	-1.5
ANWB	**Willy Bob**	**1.57**	**10**		**Pn**	03 14 34.9	-0.5
ANWB	**Willy Bob**	**1.57**	**10**		**Sn**	03 14 58.8	-1.5
PML	**Morne Lenard**	**1.57**	**147**	*eP*	**Pn**	03 14 35.4	0.0
FDF	**Fort de France**	**1.63**	**147**	*eP*	**Pn**	03 14 36.1	0.0
FDF				*eS*	**Sn**	03 15 01.9	+0.5
FDF	**Fort de France**	**1.63**	**147**		**Pn**	03 14 35.7	-0.3
FDF	**Fort de France**	**1.63**	**147**		**Sn**	03 15 01.9	+0.5
SEUS	**St. Eustatius**	**1.63**	**327**	*eP*	**Pn**	03 14 36.6	+0.6
SEUS				*eS*	**Sn**	03 15 01.5	+0.1
SEUS	**St. Eustatius**	**1.63**	**327**		**Pn**	03 14 36.2	+0.2
SEUS	**St. Eustatius**	**1.63**	**327**		**Sn**	03 15 01.5	+0.1
ILAM	**Ilet Lapin Mar**	**1.76**	**139**	*iP*	**Pn**	03 14 37.0	-0.2
ZAM	**Aeronautique**	**1.83**	**147**	*eP*	**Pn**	03 14 38.1	+0.1
TRMF	**Trois Ilets**	**1.84**	**148**	*eP*	**Pn**	03 14 38.4	+0.2
BIM	**Bigot**	**1.85**	**149**	*eP*	**Pn**	03 14 38.6	+0.2
LPMF	**Morne Lapointe**	**1.86**	**145**	*eP*	**Pn**	03 14 38.0	-0.3
SABA	**Saba**	**1.88**	**323**	*eP*	**Pn**	03 14 39.2	+0.6
SABA				*eS*	**Sn**	03 15 06.4	+0.4
SABA	**Saba**	**1.88**	**323**		**Pn**	03 14 38.8	+0.2
SABA	**Saba**	**1.88**	**323**		**Sn**	03 15 06.4	+0.4
MVM	**Montagne Vaucl**	**1.91**	**144**	*eP*	**Pn**	03 14 38.9	-0.1
MPOM	**Morne Pois Mar**	**2.02**	**145**	*eP*	**Pn**	03 14 40.1	0.0
SMRT	**St. Maarten**	**2.16**	**334**	*eP*	**Pn**	03 14 41.5	-0.1
SMRT				*eS*	**Sn**	03 15 10.7	-0.9
SMRT	**St. Maarten**	**2.16**	**334**		**Pn**	03 14 41.1	-0.5
SMRT	**St. Maarten**	**2.16**	**334**		**Sn**	03 15 10.7	-0.9
SLBI	**Saint Lucia, B**	**2.33**	**153**	*iP*	**Pn**	03 14 43.4	-0.2
SLBI				*eS*	**Sn**	03 15 14.8	-0.2
SLBI	**Saint Lucia, B**	**2.33**	**153**		**Pn**	03 14 43.4	-0.2
SLBI					**Sn**	03 15 14.8	-0.2
SLB	**Belfond**	**2.48**	**156**	*iP*	**Pn**	03 14 46.4	+1.0
SLB				*eS*	**Sn**	03 15 17.6	-0.5
SLB	**Belfond**	**2.48**	**156**		**Pn**	03 14 46.4	+1.0
SLB					**Sn**	03 15 17.6	-0.5
SFAN	**Fancy Village**	**2.84**	**162**	*eP*	**Pn**	03 14 50.4	+0.6
SFAN				*eS*	**Sn**	03 15 25.7	-0.3
SFAN	**Fancy Village**	**2.84**	**162**		**Pn**	03 14 50.4	+0.6
SFAN					**Sn**	03 15 25.7	-0.3
SVV	**Soufriere Volc**	**2.90**	**163**	*iP*	**Pn**	03 14 51.9	+1.6
SVV	**Soufriere Volc**	**2.90**	**163**		**Pn**	03 14 52.0	+1.6
SVB	**Belmont**	**2.93**	**164**	*iP*	**Pn**	03 14 51.2	+0.4
SVB				*eS*	**Sn**	03 15 27.5	-0.4
SVB	**Belmont**	**2.93**	**164**		**Pn**	03 14 51.0	+0.2
SVB	**Belmont**	**2.93**	**164**		**Sn**	03 15 27.5	-0.4
SVCV	**St. Vincent, C**	**2.96**	**162**	*eP*	**Pn**	03 14 51.2	+0.1
SVCV	**St. Vincent, C**	**2.96**	**162**		**Pn**	03 14 51.2	+0.1
FCV	**Fort Charlotte**	**3.04**	**165**	*eP*	**Pn**	03 14 52.8	+0.7
FCV				*eS*	**Sn**	03 15 29.6	-0.7
FCV	**Fort Charlotte**	**3.04**	**165**		**Pn**	03 14 52.8	+0.7
FCV					**Sn**	03 15 29.6	-0.7
STVI	**Saint Thomas**	**3.55**	**309**		**Pn**	03 14 58.2	-0.2
BCHC	**Barbados, Cave**	**3.78**	**141**	*eP*	**Pn**	03 15 02.1	+0.7
BCHC				*eS*	**Sn**	03 15 44.1	-2.7
GRSS	**Sisters**	**3.82**	**173**	*eP*	**Pn**	03 15 03.1	+1.3
GRSS				*eS*	**Sn**	03 15 48.0	+0.4
GRSS	**Sisters**	**3.82**	**173**		**Pn**	03 15 04.0	+2.1
GRSS					**Sn**	03 15 49.0	+1.3
GRSS	**Sisters**	**3.82**	**173**		**Pn**	03 15 03.1	+1.3
GRSS					**Sn**	03 15 48.0	+0.4
BBGH	**Gun Hill**	**3.82**	**140**	*eP*	**Pn**	03 15 02.3	+0.4
BBGH				*eS*	**Sn**	03 15 45.2	-2.4
BBGH	**Gun Hill**	**3.82**	**140**		**Pn**	03 15 01.7	-0.2
BBGH	**Gun Hill**	**3.82**	**140**		**Sn**	03 15 45.2	-2.4
MTP	**Monte Pirata**	**3.88**	**301**		**Pn**	03 15 02.7	+0.2
GRHS	**Sauteurs**	**3.89**	**174**	*eP*	**Pn**	03 15 04.0	+1.2
GRHS				*eS*	**Sn**	03 15 49.0	-0.3
BBSP	**Saint Philip**	**3.91**	**140**	*eP*	**Pn**	03 15 04.0	+1.0
BB

baz=130
U59A **Littleton** 24.54 328 P P 03 19 08.0 +1.2
baz=141
155A **Kite** 24.74 315 P P 03 19 09.5 +0.9
baz=127
V58A **Windy Hill, Pi** 24.81 325 P P 03 19 10.9 +1.7
baz=138
W57A **Gilead** 24.84 323 P P 03 19 10.8 +1.3
baz=135
TIGA **Tifton** 24.85 312 P P 03 19 09.9 +0.3
baz=123
Z55A **Blythe** 24.88 317 P P 03 19 10.5 +0.6
baz=128
254A **Abbeville** 24.91 313 P P 03 19 11.2 +1.0
baz=124
U58A **Oxford** 24.96 327 P P 03 19 11.9 +1.4
baz=140
X56A **White Oak** 25.00 321 P P 03 19 11.9 +0.9
baz=132
Y55A **Saluda** 25.15 319 P P 03 19 12.9 +0.5
baz=130
W56A **Indian Trail** 25.17 322 P P 03 19 13.1 +0.6
baz=134
TEIG **Tepich** 25.23 283 P P 03 19 13.3 +0.1
comp=Z,13nm,0.5s
TEIG **Tepich** 25.23 283 IAmb IAmb 03 19 17.0
comp=Z,17nm,0.8s
V57A **Coltrane Farms** 25.25 325 P P 03 19 13.5 +0.4
baz=136
X55A **Gracelyn & Ava** 25.36 320 P P 03 19 14.7 +0.5
baz=131
Z54A **Sparta** 25.36 316 P P 03 19 14.7 +0.5
baz=127
S59A **Mechanicsville** 25.41 331 P P 03 19 15.4 +0.7
baz=144
Q61A **Milford** 25.49 335 P P 03 19 16.1 +0.8
baz=149
KMSC **Kings Mountain** 25.62 321 P P 03 19 17.2 +0.6
baz=133
Y54A **Tignall** 25.64 317 P P 03 19 17.2 +0.5
baz=128
S58A **Poland Farm, P** 25.66 330 P P 03 19 18.0 +1.1
baz=142
352A **Blakely** 25.84 310 P P 03 19 18.8 +0.3
baz=121
X54A **Belton** 25.87 319 P P 03 19 19.2 +0.4
baz=130
U56A **King** 25.92 325 P P 03 19 19.8 +0.6
baz=136
252A **Lumpkin** 25.97 312 P P 03 19 20.2 +0.5
baz=122
V55A **Taylorsville** 26.04 323 P P 03 19 20.8 +0.4
baz=134
W54A **Cherokee Point** 26.11 320 P P 03 19 21.3 +0.4
baz=131
R58A **Rapidan** 26.18 331 P P 03 19 22.2 +0.7
baz=143
Y53A **Monroe** 26.23 316 P P 03 19 22.3 +0.3
baz=127
Z52A **Williamson** 26.40 314 P P 03 19 23.8 +0.2
baz=124
U55A **TA2, Sparta** 26.40 324 P P 03 19 24.4 +0.7
baz=135
X53A **Estanollee** 26.44 318 P P 03 19 24.6 +0.7
baz=128
Y52A **Lilburn** 26.55 316 P P 03 19 24.8 -0.2
baz=126
W53A **Cullowhee** 26.77 319 P P 03 19 27.7 +0.7
baz=130
V53A **Saluda** 26.87 320 P P 03 19 28.6 +0.7
baz=131
T54A **Tazewell** 27.09 324 P P 03 19 30.5 +0.6
baz=135
W52A **Murphy** 27.21 318 P P 03 19 30.5 -0.4
baz=128
APG **El Apazote** 27.38 272 P P 03 19 32.6 -0.1
comp=Z,3.1nm,0.6s,baz=94,slow=23,SNR=3.7
V52A **Sevierville** 27.47 320 P P 03 19 33.6 +0.5
baz=130
W51A **Cleveland** 27.79 317 P P 03 19 36.8 +0.9
baz=127
L61A **Hillsdale 1, H** 27.81 341 P P 03 19 37.0 +1.0
baz=156
V51A **Loudon** 27.92 319 P P 03 19 38.1 +1.0
baz=129
Q54A **Coxs Mills** 28.10 328 P P 03 19 39.7 +1.1
baz=139
LRAL **Lakeview Retre** 28.14 311 P P 03 19 39.9 +0.8
baz=121
W50A **Signal Mountai** 28.17 317 P P 03 19 40.2 +0.8
baz=126
R53A **Hurricane** 28.21 326 P P 03 19 40.8 +1.2
baz=136
V50A **Pikevile** 28.32 318 P P 03 19 41.6 +0.9
baz=127
U50A **Jamestown** 28.61 319 P P 03 19 44.2 +0.9
baz=129
S51A **Beattyville** 28.65 323 P P 03 19 44.4 +0.8
baz=132
T50A **Nancy** 28.99 320 P P 03 19 47.1 +0.5
baz=130
R51A **Hillsboro** 29.10 324 P P 03 19 48.6 +1.0
baz=133
S50A **Richmond** 29.16 322 P P 03 19 49.0 +1.0
baz=131
P50A **Jamestown** 30.13 325 P P 03 19 56.6 0.0
baz=135
ACSO **Alum Creek Sta** 30.14 327 P P 03 19 57.4 +0.7
baz=137
WVT **Waverly** 30.38 316 P P 03 19 58.2 -0.7
WVT IAmb IAmb 03 19 60.0
comp=Z,6.4nm,0.7s
WVT **Waverly** 30.38 316 P P 03 19 59.5 +0.6
baz=124
O50A **Cable** 30.41 326 P P 03 19 59.9 +0.8
baz=136
OXF **Oxford** 30.62 312 P P 03 20 01.5 +0.6
baz=120
F61A **St Evariste** 30.70 348 P P 03 20 02.0 +0.4
baz=163
Q48A **North Vernon** 30.77 322 P P 03 20 03.4 +1.2
baz=131
O49A **Covington** 30.83 325 P P 03 20 03.4 +0.6
baz=134
P48A **Milroy** 30.94 323 P P 03 20 04.3 +0.5
baz=132
O48A **Farmland** 31.33 325 P P 03 20 07.9 +0.8
baz=133
D60A **Saint Jean D'O** 31.58 348 P P 03 20 10.7 +1.5
baz=163
N48A **Decatur** 31.68 326 P P 03 20 11.0 +0.8
baz=134
X43A **Marvell** 31.68 311 P P 03 20 11.2 +0.9
baz=118
SIV **San Ignacio** 31.91 178 P P 03 20 12.6 +0.1
comp=Z,0.7nm,0.4s,baz=312,slow=8.5,SNR=7.6
N47A **Urbana** 32.06 325 P P 03 20 12.9 -0.6
N47A **Urbana** 32.06 325 P P 03 20 14.0 +0.6
baz=133
PBMO **Poplar Bluff** 32.49 315 IAmb IAmb 03 20 18.6
comp=Z,6.3nm,0.7s
SFIN **Lafayette** 32.51 323 P P 03 20 18.2 +0.7
baz=131
K48A **Perry** 32.61 329 P P 03 20 19.9 +1.6
baz=138
K47A **Vermontville** 32.95 328 P P 03 20 22.5 +1.2
baz=136
W41B **Gary Mavity, V** 32.98 311 P P 03 20 22.5 +0.9
baz=117
WHAR **Wooly Hollow** 33.06 311 P P 03 20 21.4 -1.0
WHAR IAmb IAmb 03 20 23.6
comp=Z,11nm,0.9s
X40A **Basin Creek Fa** 33.11 309 P P 03 20 23.4 +0.7
baz=116
O44A **Mansfield** 33.17 321 P P 03 20 23.0 -0.2
K46A **Dorr** 33.37 327 P P 03 20 25.6 +0.8
baz=135
NATX **Nacogdoches** 33.46 304 P P 03 20 26.6 +0.8
baz=110
MIAR **Mount Ida** 33.69 309 P P 03 20 28.0 +0.2
baz=115
CCM **Cathedral Cave** 33.72 316 P P 03 20 27.7 -0.3
CCM IAmb IAmb 03 20 28.8
comp=Z,8.6nm,0.6s
CCM **Cathedral Cave** 33.72 316 P P 03 20 28.1 +0.2
baz=122
U40A **Yellville** 33.97 312 IAmb IAmb 03 20 31.1
comp=Z,8.0nm,1.0s
U40A **Yellville** 33.97 312 P P 03 20 30.8 +0.7
baz=118
F49A **Sandfield** 33.97 335 P P 03 20 30.7 +0.7
baz=144
W39A **Magazine** 34.12 310 IAmb IAmb 03 20 33.1
comp=Z,7.5nm,0.8s
W39A **Magazine** 34.12 310 P P 03 20 33.1 +1.7
baz=116
F48A **Evansville** 34.26 334 P P 03 20 34.2 +1.7
baz=143
HHAR **Hobbs** 34.71 311 IAmb IAmb 03 20 37.6
comp=Z,8.6nm,0.8s
N41A **Harden Midland** 34.96 320 IAmb IAmb 03 20 39.9
comp=Z,13nm,0.8s
L42A **Oliver, Polo** 35.04 323 P P 03 20 39.2 -0.1
WHTX **Lake Whitney,** 35.78 303 P P 03 20 46.4 +0.7
baz=108
TUL1 **Leonard** 35.90 310 IAmb IAmb 03 20 47.8
comp=Z,13nm,0.8s
TUL1 **Leonard** 35.90 310 P P 03 20 47.1 +0.4
baz=114
X34A **Smith Ranch, M** 36.94 307 IAmb IAmb 03 20 58.2
comp=Z,9.6nm,0.6s
JCT **Junction City** 37.31 299 P P 03 20 58.5 -0.3
baz=104
WMOK **Wichita Mounta** 37.72 306 P P 03 21 01.8 -0.4
baz=110
ABTX **Abilene, Hawle** 37.74 303 P P 03 21 01.9 -0.4
baz=107
KSU1 **Kansas State U** 37.88 314 P P 03 21 02.6 -0.8
baz=117
SCHQ **Schefferville** 38.82 356 P P 03 21 12.3 +1.3
comp=Z,8.3nm,0.5s,baz=178,slow=7.2,SNR=27
SCHQ **Schefferville** 38.82 356 IAmb IAmb 03 21 13.0
comp=Z,8.8nm,0.6s
SPMN **Marine on St.** 38.83 325 P P 03 21 11.3 0.0
baz=128
CBKS **Cedar Bluff** 39.96 312 IAmb IAmb 03 21 21.4
comp=Z,10nm,0.7s
CBKS **Cedar Bluff** 39.96 312 P P 03 21 20.6 -0.1
baz=114
BGNE **Belgrade** 40.00 316 P P 03 21 21.0 0.0
baz=118
AMTX **Amarillo** 40.03 305 P P 03 21 20.2 -1.2
baz=108
ECSD **EROS Data Cent** 40.20 320 P P 03 21 21.9 -0.7
ECSD IAmb IAmb 03 21 23.3
comp=Z,7.3nm,0.9s
ECSD **EROS Data Cent** 40.20 320 P P 03 21 22.6 +0.1
baz=122
TXAR **Lajitas Array** 40.36 296 P P 03 21 23.9 -0.3
comp=Z,1.6nm,0.5s,baz=120,slow=7.9,SNR=61
TXAR ScP ScP 03 26 57.1 0.0
comp=Z,0.2nm,0.6s,baz=106,slow=6.7,SNR=2.9
MSTX **Muleshoe** 40.63 304 P P 03 21 26.4 0.0
baz=106
HPIG 41.78 292 IAmb IAmb 03 21 36.9
comp=Z,7.4nm,0.6s
KSCO **Kaye Shedlock'** 42.12 311 P P 03 21 38.3 -0.2
baz=111
MNTX **Cornudas Mount** 42.24 300 P P 03 21 39.7 +0.3
baz=101
AGMN **Agassiz Nation** 42.38 327 P P 03 21 39.2 -1.1
AGMN IAmb IAmb 03 21 40.8
comp=Z,7.4nm,0.7s
AGMN **Agassiz Nation** 42.38 327 P P 03 21 40.1 -0.2
baz=127
OGNE **Ogallala** 42.43 314 P P 03 21 40.8 -0.1
baz=114
T25A **Trinidad** 42.82 308 IAmb IAmb 03 21 44.8
comp=Z,4.6nm,0.6s
T25A **Trinidad** 42.82 308 P P 03 21 44.4 +0.2
baz=108
ULM **Lac du Bonnet** 43.60 329 P P 03 21 49.8 -0.3
comp=Z,3.5nm,0.5s,baz=129,slow=8.4,SNR=17
ULM **Lac du Bonnet** 43.60 329 IAmb IAmb 03 21 50.2
comp=Z,4.7nm,0.5s
ANMO **Albuquerque** 43.82 304 P P 03 21 52.2 -0.1
ANMO **Albuquerque** 43.82 304 P P 03 21 52.6 +0.3
baz=104
SDCO **Great Sand Dun** 43.83 308 P P 03 21 52.7 +0.3
baz=107
121A **Cookes Peak, D** 44.40 300 IAmb IAmb 03 21 59.0
comp=Z,12nm,0.8s
121A **Cookes Peak, D** 44.40 300 P P 03 21 58.0 +1.1
baz=100
ISCO **Idaho Springs** 44.56 311 P P 03 21 58.7 +0.5
baz=109
S22A **4UR Ranch, Cre** 44.84 308 P P 03 22 00.9 +0.4
baz=106
RSSD **Black Hills** 45.09 317 P P 03 22 03.1 +0.9
baz=115
319A **Douglas** 45.47 298 IAmb IAmb 03 22 07.3
comp=Z,15nm,0.7s
MVCO **Mesa Verde** 45.98 306 P P 03 22 10.5 +1.1
baz=104
K22A **Casper** 46.19 314 P P 03 22 11.9 +1.1
baz=111
X18A **Snowflake** 46.55 302 IAmb IAmb 03 22 15.6
comp=Z,11nm,0.7s
O20A **White River Ci** 46.58 310 P P 03 22 14.9 +1.0
baz=107
TUC **Tucson** 46.87 299 P P 03 22 16.0 -0.2
TUC **Tucson** 46.87 299 P P 03 22 17.1 +0.9
baz=98
DGMT **Dagmar** 47.14 322 P P 03 22 18.7 +0.8
baz=118
LAO **LASA Array** 47.57 319 P P 03 22 22.0 +0.7
baz=115
WUAZ **Wupatki** 47.88 303 IAmb IAmb 03 22 25.9
comp=Z,12nm,0.7s
WUAZ **Wupatki** 47.88 303 P P 03 22 25.1 +1.2
baz=100
BW06 **Boulder Array** 48.33 313 P P 03 22 27.8 +0.4
baz=108
PDAR **Pinedale Array** 48.33 313 P P 03 22 27.6 +0.2
comp=Z,4.9nm,0.7s,baz=120,slow=10,SNR=49
PDAR PcP PcP 03 23 51.7 +0.3
comp=Z,0.3nm,0.6s,baz=99,slow=5.8,SNR=2.0
214A **Organ Pipe Nat** 48.53 299 P P 03 22 29.6 +0.8
baz=96
RLMT **Red Lodge** 48.92 316 P P 03 22 31.1 -0.7
RLMT IAmb IAmb 03 22 33.3
comp=Z,9.6nm,1.1s
RLMT **Red Lodge** 48.92 316 P P 03 22 32.5 +0.6
baz=110
Y14A **Wickenburg** 48.94 301 IAmb IAmb 03 22 33.8
comp=Z,7.0nm,0.8s
DUG **Dugway, Tooele** 49.97 309 P P 03 22 39.3 -0.5
DUG **Dugway, Tooele** 49.97 309 P P 03 22 40.4 +0.6
baz=103
Y12C **Blythe** 50.17 301 P P 03 22 41.8 +0.5
baz=97
EGMT **Eagleton** 50.30 320 P P 03 22 43.2 +1.1
baz=112
IRM **Iron Mountain** 50.73 301 P P 03 22 46.5 +1.0
baz=97
BC3 **Big Chuckawall** 50.93 300 P P 03 22 47.8 +0.7
baz=96
GMRC **Granite Mounta** 51.23 302 P P 03 22 50.0 +0.7
baz=97
TUQ **Turquoise Moun** 51.53 303 P P 03 22 52.4 +0.9
baz=97
MONP2 **Monument Peak** 51.66 299 P P 03 22 53.8 +1.1
baz=95
R11A **Troy Canyon, C** 51.70 306 P P 03 22 53.5 +0.7
baz=100
HEC **Hector,Ludlow** 51.79 302 P P 03 22 54.5 +1.1
baz=97
TPNV **Topopah Spring** 52.00 304 P P 03 22 56.1 +1.1
baz=98
109C **Camp Elliot, M** 52.23 299 P P 03 22 57.6 +1.0
baz=95
MURC **Murrieta** 52.37 300 P P 03 22 58.4 +0.8
baz=95
MPMC **Manual Prospec** 52.87 303 P P 03 23 01.9 +0.4
baz=97
DAC **Darwin (Calif)** 52.98 303 IAmb IAmb 03 23 06.6
comp=Z,5.7nm,0.9s
NV11 **Mina Array Sit** 53.71 306 IAmb IAmb 03 23 08.9
comp=Z,6.7nm,1.1s
NVAR **Mina Array Bea** 53.83 306 P P 03 23 08.5 +0.1
comp=Z,2.7nm,0.7s,baz=95,slow=6.5,SNR=13
ARVC **Arvin** 53.86 302 P P 03 23 09.5 +1.0
baz=95
NEW **Newport** 55.04 318 P P 03 23 16.6 -0.2
baz=106
ESDC **Sonseca Array** 55.43 53 P P 03 23 21.1 +1.4
comp=Z,1.7nm,0.6s,baz=272,slow=7.2,SNR=30
ESDC **Sonseca Array** 55.43 53 IAmb IAmb 03 23 21.8
comp=Z,1.3nm,0.9s
DBIC **Dimbokro** 56.70 93 P P 03 23 29.5 +0.4
comp=Z,1.7nm,0.4s,baz=277,slow=7.8,SNR=9.3
DBIC **Dimbokro** 56.70 93 IAmb IAmb 03 23 38.2
comp=Z,6.0nm,0.9s
O03E **Paynes Creek** 56.76 308 P P 03 23 29.2 0.0
baz=97
M02C **Callahan** 57.68 309 P P 03 23 35.1 -0.6
baz=97
SUMG **Summit** 58.11 8 *i* P P 03 23 39.5 +1.1
comp=Z,22nm,0.7s
SUMG **Summit** 58.11 8 P P 03 23 35.8 -2.7
SUMG IAmb IAmb 03 23 40.6
comp=Z,9.6nm,0.8s
YKA **Yellowknife Ar** 58.96 335 P P 03 23 43.7 -0.2
comp=Z,2.3nm,0.5s,baz=107,slow=7.4,SNR=62
TOA0 **Torodi Ar. Sit** 61.55 84 P P 03 24 00.8 -1.6
TOA0 IAmb IAmb 03 24 19.3
comp=Z,6.2nm,1.4s
TORD **Torodi Ar. Bea** 61.55 84 P P 03 24 02.5 +0.1
comp=Z,2.0nm,0.5s,baz=267,slow=6.0,SNR=27
TORD **Torodi Ar. Bea** 61.55 84 P P 03 24 00.5 -1.9
DOU **Dourbes** 62.85 42 P P 03 24 10.8 +0.3
BMRD **Maredsous** 62.99 41 P P 03 24 12.2 +0.8
TAM **Tamanrasset** 63.61 72 P P 03 24 17.4 +1.2
TAM IAmb IAmb 03 24 18.8
comp=Z,2.6nm,0.6s
DAG **Danmarks Havn** 64.58 10 *i* P P 03 24 21.8 +0.5
comp=Z,4.3nm,0.8s
KEST **Kesra** 65.82 58 P P 03 24 31.7 +1.6
comp=Z,9.2nm,0.7s,baz=126,slow=1.7,SNR=14
KEST **Kesra** 65.82 58 P P 03 24 27.4 -2.7
KEST IAmb IAmb 03 24 32.6
comp=Z,9.5nm,0.8s
DAVA **Damuels** 66.12 45 *i* P P 03 24 32.7 +0.8
comp=Z,8.4nm,0.9s
FUORN **Ofenpass-Fuorn** 66.36 46 P P 03 24 31.7 -1.9
FUORN IAmb IAmb 03 24 35.7
comp=Z,8.0nm,0.9s
FETA **Feichten** 66.69 45 *i* P P 03 24 36.2 +0.6
comp=Z,7.5nm,0.8s
RETA **Reutte** 66.72 45 *i* P P 03 24 36.6 +0.9
comp=Z,2.9nm,0.7s
MOTA **Moosalm** 66.95 45 *i* P P 03 24 37.7 +0.5
comp=Z,2.8nm,1.0s
SQTA **Sankt Quirin** 67.02 45 *i* P P 03 24 38.2 +0.6
comp=Z,5.8nm,0.7s
CTI **Castel Tesino** 67.32 46 P P 03 24 36.0 -3.5
CTI IAmb IAmb 03 24 40.5
comp=Z,5.1nm,0.9s
ABTA **Abfaltersbach** 67.91 46 *i* P P 03 24 43.7 +0.5
comp=Z,3.4nm,0.9s
NB2 **NORSAR Subarra** 67.94 30 P P 03 24 44.6 +1.6
comp=Z,1.8nm,0.7s,baz=263,slow=6.5
NOA **NORSAR Array B** 67.94 30 P P 03 24 44.2 +1.2
comp=Z,3.7nm,0.8s,baz=263,slow=6.4,SNR=13
NOR **Nord** 68.16 6 *i* P P 03 24 44.1 +0.1
INK **Inuvik** 68.31 338 P P 03 24 43.5 -1.6
INK IAmb IAmb 03 24 45.7
comp=Z,4.0nm,0.7s
KBA **Koelnbreinsper** 68.48 45 *i* P P 03 24 47.2 +0.3
comp=Z,4.8nm,0.9s
MYKA **Terra Mystica** 68.69 46 *i* P P 03 24 48.6 +0.6
comp=Z,4.3nm,0.5s
GERES **GERESS Array B** 68.70 43 P P 03 24 48.4 +0.3
comp=Z,1.2nm,0.7s,baz=273,slow=5.2,SNR=8.4
GERES **GERESS Array B** 68.70 43 P P 03 24 47.0 -1.0
MOA **Molln** 69.09 44 *i* P P 03 24 50.3 -0.1
comp=Z,2.3nm,0.9s
OBKA **Obir** 69.32 46 *i* P P 03 24 52.5 +0.6
comp=Z,6.8nm,0.8s
SOKA **Soboth** 69.65 46 *i* P P 03 24 53.8 -0.1
comp=Z,3.4nm,1.0s
ARSA **Arzberg** 69.96 45 *i* P P 03 24 55.2 -0.5
comp=Z,5.2nm,1.1s
ZST **Bratislava** 70.98 44 *e* P P 03 25 02.4 +0.5
MODS **Modra-Piesok** 71.09 44 *e* P P 03 25 02.7 +0.2
TIP **Timpagrande** 71.44 54 ⇑P P 03 25 04.7 -0.2
VYHS **Vyhne** 72.12 44 *e* P P 03 25 09.7 +1.0
ILAR **Eielson Array** 73.36 334 P P 03 25 15.6 -0.1
comp=Z,0.8nm,0.8s,baz=104,slow=4.1,SNR=13
ARCES **ARCESS Array B** 74.19 21 P P 03 25 21.3 +0.9
comp=Z,7.1nm,0.7s,baz=291,slow=3.8,SNR=18
ARCES **ARCESS Array B** 74.19 21 P P 03 25 19.9 -0.5
BZS **Buzias** 74.29 46 ⇑P P 03 25 23.1 +1.7
NEA **Nenana** 74.31 333 P P 03 25 20.3 -0.9
NEA IAmb IAmb 03 25 22.5
comp=Z,7.6nm,1.1s
DRGR 74.90 45 ⇓P P 03 25 26.1 +1.1
TRF **Thorofare Moun** 74.94 332 P P 03 25 24.8 -0.3
TRF IAmb IAmb 03 25 26.8
comp=Z,7.6nm,0.8s
FINES **FINESS Array B** 75.12 30 P P 03 25 26.6 +0.7
comp=Z,2.9nm,0.5s,baz=264,slow=5.0,SNR=31
GZR **Gura Zlata** 75.13 47 ⇑P P 03 25 27.8 +1.4
BPAW **Bear Paw Mtn.** 75.19 333 P P 03 25 24.9 -1.4
BPAW IAmb IAmb 03 25 27.1
comp=Z,5.3nm,0.8s
VTS **Vitosha** 75.86 49 ⇓P P 03 25 32.0 +1.3
VTS **Vitosha** 75.86 49 ⇓P P 03 25 28.1 -2.6
ARCR **ARCALIA** 75.97 45 ⇑P P 03 25 32.2 +1.2
ARR **Arges** 76.43 46 ⇑P P 03 25 35.1 +1.3
BUR08 **Bucovina Ar. S** 76.45 44 P P 03 25 31.9 -2.0
BUR08 IAmb IAmb 03 25 36.6
comp=Z,8.8nm,1.1s
BURAR **Bucovina Array** 76.47 44 ⇑P P 03 25 35.9 +1.9
VOIR 76.71 46 ⇓P P 03 25 36.3 +1.0
BIZ **Bicaz** 77.18 45 ⇑P P 03 25 39.3 +1.5
MLR **Muntele Rosu** 77.32 46 ⇑P P 03 25 40.7 +1.9
MLR **Muntele Rosu** 77.32 46 P P 03 25 37.7 -1.1
MLR IAmb IAmb 03 25 41.2
comp=Z,6.1nm,0.7s
TESR **Tescani** 77.62 45 ⇑P P 03 25 40.4 +0.1
BISRR **Bisoca** 77.84 46 ⇑P P 03 25 42.7 +1.1
SORM **Soroca** 78.46 43 ⇓P P 03 25 45.2 +0.4
AKASG **Malin Array Be** 78.52 40 P P 03 25 44.8 -0.3
comp=Z,1.2nm,0.6s,baz=264,slow=5.4,SNR=5.4
MILM **Milestii Mici** 79.00 44 ⇑P P 03 25 48.2 +0.3
PURM **Purcari** 79.80 45 ⇑P P 03 25 53.8 +1.7
BR131 **Keskin Array S** 84.15 50 P P 03 26 14.2 -1.0
BRTR **Keskin Array B** 84.15 50 P P 03 26 15.7 +0.5
comp=Z,2.9nm,0.7s,baz=261,slow=4.4,SNR=22
KBZ **Khabaz** 89.42 44 P P 03 26 41.9 +1.6
comp=Z,3.0nm,1.1s,baz=184,slow=1.9,SNR=4.2
SONM **Songino Array** 115.51 9 PKP **PKiKP** 03 32 24.5 -0.3
comp=Z,0.3nm,0.5s,baz=307,slow=1.4,SNR=3.6
LZH **Lanzhou** 126.40 14 ⇓PKP **PKPdf** 03 32 45.3 -0.7
LZH pPKP pPKPdf 03 33 28.6 -2.6
LZH sPKP 03 33 47.5

ANF ***10*** *03:39:50.1±0.1,33.70N×116.74W,h22km±1km, ML2.4/23, Error ellipse: s-maj=1.2km s-min=1.1km az=166.0*
NEIC ***10*** *03:39:50.9±1.7,33.64N±0.04×116.73W±0.04,h24km±7km, Error ellipse: s-maj=6.0km s-min=4.6km az=143.0*
PAS ***10*** *03:39:51.6±0.8,33.70N±0.02×116.73W±0.01,h20km±2km, ML2.6/103, Error ellipse: s-maj=3.6km s-min=1.3km az=185.0*
SCEDC ***10*** *03:39:51.7,33.70N×116.74W,h20km*

ISC 10 03:39:50.7±0.9,33.67N±0.02×116.74W±0.02,h23km±4km, n89,σ0959/121, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVDA	**Garner Valley**	0.06	96		**Pb**	**03 39 54.8**	**-0.3**
GVDA					**Sb**	**03 39 57.2**	**-0.8**
CRY	**Cary Ranch**	0.11	178		**Sb**	**03 39 58.8**	**+0.3**
DNR	**Dunn Ranch,Anz**	0.14	139		**Pb**	**03 39 56.1**	**+0.4**
POB	**Polly Butte**	0.15	275		**Pb**	**03 39 55.9**	**+0.1**
SNDA	**J Saunders Pla**	0.16	139		**Sb**	**03 39 59.5**	**+0.1**
BZNA	**Buzz No.'s Pla**	0.19	161		**Pb**	**03 39 56.8**	**+0.5**
BZNA					**Sb**	**03 40 00.3**	**+0.3**
FRD	**Ford Ranch, An**	0.21	147		**Sb**	**03 40 00.9**	**+0.5**
FRD	**Ford Ranch, An**	0.21	147		**Sb**	**03 40 00.8**	**+0.5**
DGR	**Domenigoni Val**	0.23	264		**Pb**	**03 39 56.9**	**+0.3**
DGR					**Sb**	**03 40 00.7**	**+0.1**
PFO	**Pinyon Flats O**	0.24	105		**Pb**	**03 39 57.0**	**+0.1**
PFO				Sg	**Sb**	**03 40 00.8**	**-0.3**
PFO	**Pinyon Flats O** baz=291,SNR=248	0.24	105	P	**Pb**	**03 39 56.8**	**-0.1**
PFO	baz=291			S	**Sb**	**03 40 00.6**	**-0.5**

XPFO	Pion Flat	0.25	105			Pb	03 39 57.0	0.0	
XPFO	Pion Flat	0.25	105			Pn	03 40 00.6	+1.5	
BACC	Bachelor Mtn.	0.26	256			Pb	03 39 57.3	+0.3	
BACC						Sb	03 40 01.5	+0.3	
DEVC	Devers	0.29	28			Pb	03 39 57.5	-0.1	
DEVC						Sb	03 40 01.6	-0.6	
BBSC	Beaumont Base	0.32	321			Pb	03 39 57.9	0.0	
BBSC						Sb	03 40 02.8	0.0	
PLM	Palomar	0.34	197			Sb	03 40 04.1	+0.7	
EW2	E Wide Canyon	0.38	46			Pb	03 39 58.8	-0.2	
EW2						Sb	03 40 04.1	-0.6	
MURC	Murrieta	0.39	259			Pb	03 39 59.3	+0.2	
MURC						Sb	03 40 05.0	+0.4	
MURC	Murrieta baz=75	0.39	259	P		Pb	03 39 59.2	+0.2	
MURC	baz=75			S		Sb	03 40 04.1	-0.5	
PEC	Perris	0.41	302			Pb	03 39 59.2	-0.2	
PEC						Sb	03 40 05.0	-0.4	
BORC	Borrego Spring	0.49	146			Sn	03 40 08.1	-2.0	
BLAC	Blackrock camp	0.49	37			Sb	03 40 07.1	-0.6	
SVD	Seven Oaks Dam	0.52	326			Pb	03 40 01.2	-0.1	
SME	Santa Rosa Min	0.53	286			Pb	03 40 01.3	-0.2	
RSBC	Riverside Bore	0.57	302			Pb	03 40 02.3	+0.1	
BBRC	Big Bear Solar	0.60	346			Pb	03 40 02.7	-0.2	
BBRC	Big Bear Solar baz=165,SNR=37	0.60	346	P		Pb	03 40 02.6	-0.2	
BBRC	baz=165			S		Sb	03 40 10.1	-1.0	
RVR	Riverside	0.62	301			Pb	03 40 02.6	-0.2	
RVR						Sb	03 40 10.6	-0.6	
BTL	Butler Peak	0.62	340			Pb	03 40 03.0	-0.1	
CTCC	Cactus City	0.63	92			Sb	03 40 11.9	+0.4	
GORC	Green Oak Ranc	0.66	218			Pb	03 40 03.8	+0.2	
GORC						Sb	03 40 12.9	+0.5	
HWB	Hans Werner Br	0.67	196			Pb	03 40 04.1	+0.2	
HWB						Sn	03 40 13.1	-1.6	
DPP	Dos Picos Cty	0.69	194			Pn	03 40 04.4	-0.8	
BELC	Belle Mtn. Jos	0.70	62			Pb	03 40 04.3	-0.1	
BELC	Belle Mtn. Jos baz=244,SNR=85	0.70	62	P		Pb	03 40 04.3	-0.1	
BELC	baz=244			S		Sb	03 40 13.3	-0.4	
SALN	Salton City	0.74	122			Pn	03 40 06.0	+0.2	
SALN						Sn	03 40 15.4	-1.0	
MLSC	Mira Loma	0.76	296			Sb	03 40 15.0	-0.2	
BATC	Bat Cave Butte	0.78	106			Pn	03 40 06.2	-0.2	
EML	El Monte Cty P	0.79	186			Pn	03 40 06.0	-0.4	
EML						Sn	03 40 16.5	-0.9	
CSP	Cedar Springs	0.81	321			Pb	03 40 06.2	0.0	
MONP2	Monument Peak baz=342,SNR=18	0.82	161	P		Pn	03 40 07.2	0.0	
109C	Camp Elliot, M	0.84	201			Pn	03 40 07.0	-0.2	
109C					Sg	Sn	03 40 18.2	-0.7	
109C	Camp Elliot, M baz=21,SNR=10	0.84	201	P		Pn	03 40 06.8	-0.3	
109C	baz=21			S		Sn	03 40 18.1	-0.7	
CBKC	Canebrake	0.88	152			Pn	03 40 07.6	-0.1	
HAY	Hayfield	0.88	88			Pn	03 40 07.9	+0.1	
BFSC	Mount Baldy Ra	0.95	307			Pn	03 40 08.3	-0.5	
BFSC	Mount Baldy Ra baz=125,SNR=11	0.95	307	P		Pn	03 40 08.1	-0.7	
BFSC	baz=125			S		Sb	03 40 20.5	-0.2	
SDRC	San Diego Road	0.95	190			Pn	03 40 08.8	+0.1	
SDRC						Sn	03 40 21.2	-0.3	
SSK	Sunset Peak	0.95	304			Pn	03 40 08.4	-0.5	
PSRC	Puddingstone R	0.98	295			Pn	03 40 09.0	-0.1	
PSRC						Sb	03 40 21.9	+0.4	
BAR	Barrett	0.99	177			Pb	03 40 09.5	+0.2	
BAR						Sn	03 40 22.7	+0.1	
BAR	Barrett	0.99	177			Pb	03 40 09.2	-0.1	
VTV	Victorville	1.01	331			Sb	03 40 21.7	-0.8	
PEM	Pine Mountain	1.06	298			Pn	03 40 10.1	0.0	
SWSC	Sam W. Stewart baz=314	1.07	132	P		Pn	03 40 09.6	-0.8	
BC3	Big Chuckawall baz=273,SNR=12	1.07	91	P		Pn	03 40 10.0	-0.5	
BC3	baz=273			S		Sn	03 40 24.5	-0.2	
OLP	Otay Lakes Par	1.08	189			Pb	03 40 11.1	+0.4	
OLP						Sn	03 40 25.1	+0.4	
XTL	Crystal Lake,	1.12	304			Pn	03 40 11.2	0.0	
IKP	In-Ko-Pah, Jac baz=334,SNR=8.0	1.15	152	P		Pn	03 40 11.2	-0.4	
HEC	Hector,Ludlow baz=196,SNR=8.4	1.20	16	P		Pn	03 40 11.5	-0.7	
HEC	baz=196			S		Sn	03 40 27.8	-0.1	
HOLC	Holcomb Ridge	1.20	311			Pn	03 40 13.1	+0.8	
RRX	Edison Barstow baz=170	1.22	350	P		Pn	03 40 11.3	-1.1	
RRX	baz=170			S		Sn	03 40 28.4	+0.2	
MWC	Mount Wilson	1.22	297			Pn	03 40 13.1	+0.5	
FMP	Fort Macarthur baz=90	1.29	272	P		Pn	03 40 12.5	-0.9	
PASC	Pasadena Art C	1.30	293	Pn		Pn	03 40 13.8	+0.3	
IRM	Iron Mountain baz=251,SNR=22	1.41	70	P		Pn	03 40 14.6	-0.5	
CIS	Catalina Islan baz=78	1.42	259	P		Pn	03 40 15.0	-0.2	
CIS	baz=78				Sb	Sb	03 40 34.9	+0.6	
GMRC	Granite Mounta baz=220,SNR=10	1.43	39	P		Pn	03 40 14.9	-0.4	
GMRC	baz=220				Sb	Sn	03 40 34.5	+1.0	
DECC	Green Verdugo baz=112	1.44	294	Sb		Sb	03 40 35.2	+0.3	
EDW2	Edwards Air Fo	1.59	320			Pb	03 40 20.5	+1.0	
EDW2	Edwards Air Fo baz=138	1.59	320		Sb	Sb	03 40 39.7	+0.6	
GSC	Goldstone, Bar	1.62	358			Pb	03 40 20.2	+0.1	
GSC	Goldstone, Bar baz=178,SNR=24	1.62	358	P		Pn	03 40 17.9	-0.1	
GSC	baz=178			S		Sn	03 40 38.0	-0.3	
GLA	Glamis	1.72	111			Pn	03 40 19.5	+0.2	
GLA	Glamis baz=293	1.72	111	P		Pn	03 40 19.2	-0.1	
Y12C	Blythe	1.85	87			Pn	03 40 20.8	-0.3	
Y12C	Blythe baz=269,SNR=6.0	1.85	87	P		Pn	03 40 20.6	-0.5	
TUQ	Turquoise Moun baz=201	1.88	21	S		Sn	03 40 44.6	-0.2	
OSI	Osito Audit: C baz=118	1.89	300	Sb		Sb	03 40 48.5	+0.6	
QSM	Queen of Sheba	2.29	357			Pb	03 40 33.0	+1.6	
ISA	Isabella, Lake	2.44	325			Pb	03 40 35.5	+1.5	
DAC	Darwin (Calif)	2.69	345	Pn		Pn	03 40 33.6	+0.8	
W13A	Hualapai Mount	2.76	58			Pn	03 40 33.8	0.0	
SHPR	Sheep Range	3.11	24	Pn		Pn	03 40 40.0	+1.4	
Y14A	Wickenburg	3.12	84	Pn		Pn	03 40 39.1	+0.5	
GATR	Gnd/Air Tx Cnt	3.24	287			Pb	03 40 46.5	-1.1	
TPNV	Topopah Spring	3.29	7	Pn		Pn	03 40 41.7	+0.6	
X16A	Lo Mía Camp, P	4.46	79	Pn		Pn	03 40 57.8	+0.7	

NCEDC ***10*** *04:12:42.8±1.2,36°.85N±0°.02×121°.58W±0°.02,h4km±2km, Md2.4/67, Error ellipse: s-maj=2.7km s-min=1.4km az=221.0*

NEIC 10 04:12:43.0±1.3, 36°.85N±0°.01×121°.63W±0°.02, h7km±3km, Error ellipse: s-maj=2.1km s-min=1.3km az=56.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANZ	Anzar Road	0.05	41		Pg	04 12 43.7	-0.8
HBTM	San Juan Bauti	0.07	86		Pg	04 12 43.7	-1.1
HERM	Elkhorn Road	0.08	233		Pg	04 12 46.0	+1.1
CSR	Chase Ranch	0.12	20		Pg	04 12 45.7	+0.1
OCR	O'Connell Ranc	0.12	55		Pg	04 12 45.4	-0.3
FRP	Fremont Peak	0.15	128		Pg	04 12 45.5	-0.6
SAO	San Andreas Ge	0.17	118	Pg	Pg	04 12 45.4	-1.0
HLPM	Lions Peak	0.20	0		Pg	04 12 47.3	+0.3
BSRM	Salinas Radio	0.20	153		Pg	04 12 46.8	-0.2
BVYM	Vineyard	0.20	118		Pg	04 12 46.5	-0.6
CDC	Canada Road	0.22	34		Pg	04 12 47.3	0.0
HFEM	San Felipe	0.23	54		Pg	04 12 47.6	0.0
BSLM	Silva Ranch	0.24	107		Pg	04 12 48.0	+0.3
HLTM	Lone Tree Road	0.26	81		Pg	04 12 48.2	0.0
JTGM	Trout Gulch Ro	0.27	313		Pg	04 12 49.1	+0.8
BCGM	Cienega Road	0.27	120		Pg	04 12 47.8	-0.6
HSPM	Sheep	0.28	19		Pg	04 12 49.0	+0.3
GHS	Gilroy Hot Spr	0.29	31		Pg	04 12 49.0	+0.3
JHLM	Holstrom Ranch	0.31	329		Pg	04 12 49.4	+0.3
SCZ	Santa Cruz	0.31	143		Pg	04 12 48.5	-0.6
SCZ					Sg	04 12 52.2	-0.9
CADM	Anderson Res.	0.32	1		Pg	04 12 49.5	+0.3
BHRM	Hodges Ranch	0.32	111		Pg	04 12 49.5	+0.3
JLAB	Laurel Hill	0.32	345		Pg	04 12 49.7	+0.5
PACP	Pacheco Peak	0.32	60		Pg	04 12 49.4	0.0
BJOM	Mount Johnson	0.34	130		Pg	04 12 49.1	-0.5
BLRM	Lewis Ranch	0.34	122		Pg	04 12 49.2	-0.5
AMC	Almaden	0.36	331		Pg	04 12 50.4	+0.4
BJCM	Johnson Can.	0.36	147		Pg	04 12 49.5	-0.9
HPCM	Pacheco Lake	0.36	53		Pg	04 12 49.9	-0.1
JUMM	Mount Umunhum	0.38	326		Pg	04 12 50.7	+0.3
JSTM	Santa Teresa H	0.38	340		Pg	04 12 50.8	+0.4
SLD	San Luis Dam	0.40	55		Pg	04 12 50.8	-0.1
BEHM	Elkhorn Ranch	0.41	116		Pg	04 12 51.2	+0.2
CCOB	Coe Ranch Numb	0.41	356		Pb	04 12 52.1	-0.5
SFJWR	San Luis Fatjo	0.42	61		Pg	04 12 51.1	-0.1
HAST	Hastings Reser	0.46	172		Pg	04 12 51.9	0.0
BEMM	Emmet	0.47	113		Pg	04 12 52.1	0.0
BSMM	Soledad Missio	0.49	160		Pg	04 12 52.5	0.0
MHC	Mount Hamilton	0.49	359		Pg	04 12 53.3	+0.7
ARN	Arnold Ranch	0.51	9		Pg	04 12 53.3	+0.5
BPIM	Pinnacles	0.52	133		Pg	04 12 52.0	-0.9
BAVM	Antelope Valle	0.52	112		Pg	04 12 53.1	0.0
BSGM	Shirttail Gulc	0.53	145		Pg	04 12 52.4	-0.8
BBGB	Big Mountain B	0.55	119		Pg	04 12 54.0	+0.5
JSGM	Saratoga Golf	0.55	323		Pb	04 12 55.0	+0.1
BBNM	San Benito	0.56	127		Pg	04 12 53.6	-0.1
JHUM	Huhtala Lane,	0.57	311		Pg	04 12 54.5	+0.6
BPOM	Post Ranch	0.62	190		Pg	04 12 55.2	+0.2
BRMM	Rolling Bench	0.65	91		Pg	04 12 56.0	+0.5
LRV	Little Rabbit	0.65	130		Pg	04 12 55.1	-0.4
BAPM	Anderson Peak	0.67	181		Pg	04 12 55.9	0.0
BMSM	Mercy Hot Spri	0.70	105		Pg	04 12 56.5	0.0
CVLM	Vallecito	0.80	348		Pb	04 12 59.6	+0.4
CNIC	Niles Canyon	0.81	341		Pb	04 12 59.1	-0.2
PCCM	Crazy Canyon	0.84	153		Pg	04 12 58.9	-0.3
OXMT	Ox Mountain	0.91	316		Pb	04 13 01.6	+0.5
PMPB	Monarch Peak	0.92	133	Pg	Pg	04 12 59.3	-1.3
PAPM	Alder Peak	0.96	167		Pg	04 13 01.0	-0.4
SAC	San Andreas	0.97	320		Pn	04 13 03.1	+0.1
PSAM	San Ardo	1.02	143		Pg	04 13 01.9	-0.6
MYLM	Yosemite Lake	1.11	61		Pg	04 13 03.0	-1.3
CMB	Columbia Colle	1.55	40		Pn	04 13 10.6	-0.5
PAGB	Antelope Grade	1.58	134	Pn	Pb	04 13 12.0	-0.5
MDPB	Devils Postpil	2.19	68	Pn	Pn	04 13 19.0	-1.0
OMMB	Old Mammoth Mi	2.24	69	Pn	Pn	04 13 19.4	-1.3
MLKM	Mammoth Lakes	2.27	68		Pn	04 13 22.2	+0.9
ISA	Isabella, Lake	2.81	114	Pn	Pn	04 13 28.7	+0.2

IDC ***10*** *04:13:04.8±2.0,7°.46S×128°.60E,h160km±22km, mb3.5/3, mb1 3.6/8,mb1mx3.4/35,mbtmp4.1/8,Error ellipse: s-maj=24.1km s-min=19.3km az=115.0*

NEIC ***10*** *04:13:04.9±0.9,7°.47S±0°.09×128°.60E±0°.07,h163km±11km, mb4.0/4, Error ellipse: s-maj=14.0km s-min=9.6km az=154.0*

ISC 10 04:13:03.3±0.7, 7°.51S±0°.06×128°.66E±0°.08, h151km, n18, σ2s44/22, mb3.9/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.66	100	Pn	Pn	04 13 49.1	+2.6
SOEI	Soe	4.88	242		Pn	04 14 16.9	+1.6
BATI	Baumata 54nm,0.3s,baz=110,slow=2.6,SNR=28	5.61	241	P	Pn	04 14 26.6	+1.6
BATI	16nm,0.3s,baz=298,slow=21,SNR=5.6			S	Sn	04 15 30.3	+1.5
FAKI	Fak Fak	5.80	38	Pn	Pn	04 14 28.1	+0.6
MTN	Manton Dam	5.83	155		Pn	04 14 31.5	+3.6
SIJI	Sorong 3.4nm,0.3s,baz=195,slow=20,SNR=6.7	7.09	22	P	Pn	04 14 46.2	+1.5
SIJI	0.9nm,0.3s,baz=132,slow=24,SNR=1.7			S	Sn	04 16 00.2	-4.1
KNRA	Kununurra	8.12	179		Pn	04 14 59.9	+1.6
FITZ	Fitzroy Crossi 0.9nm,0.3s,baz=22,slow=8.8,SNR=23	10.93	195	P	Pn	04 15 36.1	+0.5
FITZ	1.6nm,0.3s,baz=96,slow=18,SNR=5.8			S	Sn	04 17 30.4	-6.0
WRAB	Tennant Creek	13.53	156	Pn	Pn	04 16 11.3	+2.0
WRA	Warramunga Arr 0.5nm,0.3s,baz=338,slow=12,SNR=10	13.53	157	P	Pn	04 16 11.2	+1.9
WRA	0.2nm,0.3s,baz=336,slow=20,SNR=3.0			S	Sn	04 18 28.6	-11
ASAR	Alice Springs 0.5nm,0.3s,baz=343,slow=11,SNR=13	16.84	163	P	Pn	04 16 53.0	+2.7
ASAR	0.3nm,0.3s,baz=345,slow=25,SNR=5.8			S	S	04 19 54.4	-3.1
SONM	Songino Array 0.4nm,0.5s,baz=172,slow=5.6,SNR=4.5	58.51	343	P	P	04 22 43.6	-0.2
MK31	Makanchi Array	67.93	328	P	P	04 23 45.6	-0.2
MKAR	Makanchi Array 0.8nm,0.4s,baz=118,slow=8.1,SNR=20	67.93	328	P	P	04 23 46.2	+0.4
ZAA0	Zalesovo Array	71.46	334	P	P	04 24 05.7	-1.5
ZAA0	comp=Z,1.8nm,0.8s			IAmb	IAmb	04 24 13.9	
ZALV	Zalesovo Beam comp=Z,1.0nm,0.4s,baz=138,slow=5.7,SNR=4.9	71.46	334	P	P	04 24 06.6	-0.5
KURK	Kurchatov	72.26	329	P	P	04 24 12.0	0.0
KURK	comp=Z,6.0nm,1.4s			IAmb	IAmb	04 24 13.9	
KKAR	Karatay Array	72.85	319	P	P	04 24 15.9	+0.2

MAN 10 04:13:54.6, 9°.85N×123°.86E, h1km, mb3.8, ML2.6, MS2.1, 2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.16	179	eP	Pg	04 13 57.9	+0.3
TBP				eS	Sg	04 14 00.1	+0.4
LLP	Lapu-Lapu	0.48	13	eP	Pg	04 14 04.2	+0.4
LLP				eS	Sb	04 14 12.0	-1.3
MSLP	Maasin	1.02	74	eP	Pb	04 14 15.0	-0.1
MSLP				eS	Sn	04 14 30.9	-0.3

TRN ***10*** *04:14:18.8, 10°.77N×62°.35W, h61km, MD3.5*

FUNV ***10*** *04:14:18.9, 10°.74N×62°.24W, h28km, MW3.1*

ISC 10 04:14:17.2±1.2, 10°.71N±0°.03×62°.28W±0°.03, h89km±10km, n27, σ1s36/53, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUNV	Guanoco	0.85	230	eP	Pn	04 14 36.5	+1.4
GUNV				eS	Sn	04 14 48.5	-0.1
TRN	Trinidad (W)	0.86	94	eP	Pn	04 14 36.9	+1.6
TRN				eS	Sn	04 14 48.3	-0.5
TRN	Trinidad (W)	0.86	94	eP	Pn	04 14 35.3	+0.1
TRN				eS	Sn	04 14 47.2	-1.7
CRUV	Carupano	0.94	268	eP	Pn	04 14 36.2	0.0
CRUV				eS	Sn	04 14 49.4	-1.0
GRGR	Grenville	1.54	23	eP	Pn	04 14 43.1	-0.3
GRGR				eS	Sn	04 15 02.0	-1.4
GRGR	Grenville	1.54	23	eP	Pn	04 14 42.9	-0.6
GRGR				eS	Sn	04 15 01.2	-2.1
GRHS	Sauteurs	1.63	22	eP	Pn	04 14 45.9	+1.3
GRHS				eS	Sn	04 15 04.3	-1.0
GRSS	Sisters	1.71	22	eP	Pn	04 14 46.9	+1.3
GRSS				eS	Sn	04 15 06.8	-0.3
TOSP	Speyside	1.81	71	eP	Pn	04 14 49.0	+2.1
TOSP				eS	Sn	04 15 09.8	+0.4
TOSP	Speyside	1.81	71	eP	Pn	04 14 46.9	0.0
TOSP				eS	Sn	04 15 08.0	-1.4
ORIV	Oritupano	1.97	214	eP	Pn	04 14 50.7	+1.7
ORIV				eS	Sn	04 15 13.8	+0.5
PCRV	Puerto La Cruz	2.38	257	eP	Pn	04 14 55.2	+0.8
PCRV				eS	Sn	04 15 22.7	-0.3
RIOV	Rio Grande	2.66	170	eP	Pn	04 14 59.6	+1.4
RIOV				eS	Sn	04 15 29.3	-0.4
SVB	Belmont	2.74	21	eP	Pn	04 15 00.6	+1.4
SVB				eS	Sn	04 15 31.2	-0.3
SVCV	St. Vincent, C	2.78	23	eP	Pn	04 15 00.6	+0.9
SVCV				eS	Sn	04 15 31.4	-1.1
SVV	Soufriere Volc	2.79	22	eP	Pn	04 15 01.1	+1.1
SVV				eS	Sn	04 15 32.4	-0.4
PRGV	PARIAGUAN	3.03	231	eP	Pn	04 15 04.0	+0.9
PRGV				eS	Sn	04 15 38.8	+0.2
SLB	Belfond	3.33	21	eP	Pn	04 15 09.0	+1.9
SLB				eS	Sn	04 15 45.1	-0.7
CUPV	Cpira	3.51	260	eP	Pn	04 15 11.3	+1.6
CUPV				eS	Sn	04 15 50.5	+0.2
SLBI	Saint Lucia, B	3.53	21	eP	Pn	04 15 11.6	+1.7
SLBI				eS	Sn	04 15 49.3	-1.3
BIRV	Birongo	3.93	267	eP	Pn	04 15 17.3	+2.0
BIRV				eS	Sn	04 16 00.2	-0.1
MERV	Las Mercedes	4.21	250	eP	Pn	04 15 20.0	+0.8
MERV				eS	Sn	04 16 06.4	-0.9
LUEV	Luepa	4.90	170	eP	Pn	04 15 28.7	+0.1
LUEV				eS	Sn	04 16 21.4	-2.9
TURV	Turiamo	5.47	268	eP	Pn	04 15 38.0	+1.7
TURV				eS	Sn	04 16 35.7	-2.3
BAUV	El Baul	5.94	253	eP	Pn	04 15 43.6	+0.9
BAUV	El Baul	5.94	253	eP	Pn	04 15 42.4	-0.3
BAUV				eS	Sn	04 16 46.2	-3.2
MAPV	Macapo	6.14	262	eP	Pn	04 15 46.0	+0.6
MAPV				eS	Sn	04 16 51.6	-2.8

IDC ***10*** *04:17:35.7±2.0,62°.36N×149°.61W,h56km±17km, mb3.6/14, mb1 3.9/19,mb1mx3.7/39,mbtmp3.9/19,ML3.6/5,MS2.8/2, Ms1 2.8/2,ms1mx2.4/28,Error ellipse: s-maj=15.9km s-min=10.8km az=67.0*

NEIC ***10*** *04:17:36.4±1.4,62°.24N±0°.02×149°.34W±0°.06,h55km±4km, Error ellipse: s-maj=4.7km s-min=2.9km az=65.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=1.27; $M_{\theta\theta}$=0.10; $M_{\phi\phi}$=1.17; $M_{r\theta}$=0.58; $M_{\theta\phi}$=0.30; $M_{r\phi}$=0.50; Fault plane solution: $M_0$1.47000×10^{15} NP1: ϕ_s=210.86000°, δ60.31000°, λ=-73.99000°. NP2:ϕ_s=0.77000°, δ33.38000°, λ=-115.82000°. Principal axes: T 1.4006, Plg14.0000°, Azm289.0000°; N 0.1346, Plg14.0000°, Azm23.0000°; P -1.5352, Plg70.0000°, Azm156.0000°;*

AEIC ***10*** *04:17:37.4±1.1,62°.24N±0°.02×149°.34W±0°.09,h43km±6km, ML3.8/123,mb4.3/26(NEIC),Mwr4.0/50(NEIC) Error ellipse: s-maj=5.9km s-min=2.9km az=93.0*

ISC 10 04:17:36.2±0.8, 62°.26N±0°.03×149°.32W±0°.03, h57km±7km, n149, σ1s11/162, mb4.1/23, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHO	Glory Hole Cre	0.52	159		Pn	04 17 47.8	-0.4
GHO					Sn	04 17 56.5	-0.3
SML	Sawmill	0.65	134		Pn	04 17 49.2	-0.4
SML					Sn	04 17 59.4	-0.1
PMR	Palmer	0.67	172		Pn	04 17 49.2	-0.6
PMR					Sn	04 17 59.2	-0.5
WAT1	Susitna Watana	0.68	32		Pn	04 17 49.7	-0.2
WAT1					Sn	04 18 00.2	+0.2
HUR	Hurricane	0.74	349		Pn	04 17 50.9	+0.2
HUR					Sn	04 18 02.1	+0.8
WAT2	Susitna Watana	0.79	25		Pn	04 17 51.4	-0.1
WAT2					Sn	04 18 03.0	+0.4
WAT6	Susitna Watana	0.81	66		Pn	04 17 51.4	-0.3
KNK	Knik Glacier	0.94	154		Pn	04 17 53.1	-0.2
SCM	Sheep Creek Mo	1.03	113		Pn	04 17 54.4	-0.2
SUA	Susitna One	1.04	221		Pn	04 17 54.7	0.0
SUA					Sn	04 18 08.8	+0.4
SKT	Skwentna	1.07	256		Pn	04 17 54.6	-0.4
SKT					Sn	04 18 09.6	+0.5
RND	Reindeer	1.17	10		Pn	04 17 56.8	+0.3
RND					Sn	04 18 11.7	+0.2
RC01	Rabbit Creek A	1.19	190		Pn	04 17 56.8	+0.3
RC01					Sn	04 18 13.3	+1.6
FIS	Fire Island	1.20	201		Pn	04 17 57.6	+1.0
DHY	Denali Highway	1.22	47		Pn	04 17 57.1	0.0
TRF	Thorofare Moun	1.28	340		Pn	04 17 58.4	+0.5
TRF					Sn	04 18 14.9	+0.7
PPLA	Purkeypile	1.47	297		Pn	04 18 00.7	+0.2
PWL	Port Wells	1.48	161		Pn	04 18 00.5	0.0
MCK	McKinley	1.49	7		Pn	04 18 01.5	+0.8
KTH	Kantishna Hill	1.49	331		Pn	04 18 01.2	+0.5
KTH					Sn	04 18 20.1	+1.0
SPCG	Spurr Capps Gl	1.61	234		Pn	04 18 02.5	+0.2
SPCG					Sn	04 18 23.9	+1.9
CKN	Chakachatna No	1.71	234		Pn	04 18 04.0	+0.4
CAST	Castle Rocks	1.72	314		Pn	04 18 04.5	+0.7
CAPN	Captain Cook N	1.73	211		Pn	04 18 06.0	+2.1
SPCR	Spurr Chakacha	1.74	234		Pn	04 18 04.5	+0.5
SPCR					Sn	04 18 26.3	+1.3
SPBG	Spurr Blockage	1.76	237		Pn	04 18 05.4	+1.0
SLKM	Skilak Lake	1.81	194		Pn	04 18 04.6	-0.3
PS11	TAPS Pump St11	1.82	94		Pn	04 18 06.6	+1.6
VMT	TAPS Tl Valdez	1.84	129		Pn	04 18 05.2	-0.1
PAX	Paxson	1.92	66		Pn	04 18 07.8	+1.3
PAX					Sn	04 18 32.7	+3.1
BWN	Browne	1.92	358		Pn	04 18 07.2	+0.7
BPAW	Bear Paw Mtn.	2.00	339		Pn	04 18 07.7	+0.2
PS10	TAPS Pump St10	2.01	53		Pn	04 18 09.7	+2.0
CHUM	Lake Minchumin	2.12	321		Pn	04 18 09.7	+0.5
PS12	TAPS Pump St12	2.13	110		Pn	04 18 09.7	+0.4
SEW	Seward	2.16	182		Pn	04 18 09.2	-0.5
WRH	Wood River Hil	2.29	13		Pn	04 18 11.9	+0.4
DFR	Drift River	2.33	226		Pn	04 18 12.4	+0.3
DFR					Sn	04 18 40.5	+1.0
NEA	Nenana	2.33	3		Pn	04 18 12.5	+0.4
HDA	Harding Lake	2.41	25		Pn	04 18 13.7	+0.5
EYAK	Cordova Ski Ar	2.43	133		Pn	04 18 13.7	+0.3
NCT	North

KAHC	Katmai Hardscr	4.58	220			Pn	04 18 43.5	+0.5
KDAK	Kodiak Island	4.78	201	P		Pn	04 18 44.2	-1.2
	4.0nm,0.3s,baz=48,slow=8.4,SNR=305							
KDAK				S		Sn	04 19 32.5	-6.9
	2.4nm,0.3s,baz=346,slow=21,SNR=2.1							
KDAK				LR		LR	04 20 56.6	
	comp=Z,199nm,21.4s,baz=60,slow=42							
DAWY	Dawson	4.85	64			Pn	04 18 47.6	+1.0
KABU	Katmai Buttres	4.98	219			Pn	04 18 48.4	+0.1
COLD	Coldfoot	5.01	356			Pn	04 18 49.5	+0.9
OHAK	Old Harbor	5.43	203			Pn	04 18 52.7	-1.8
PNL	Peninsula	5.49	114			Pn	04 18 54.4	-0.8
BM03	Burnt Mountain	5.56	19			Pn	04 18 57.2	+1.0
BMAR	Burnt Mountain	5.57	19	Pn		Pn	04 18 57.0	+0.6
YUK7	Dusty Glacier	5.65	103			Pn	04 18 58.2	+0.7
HYT	Haines Junctio	5.83	99			Pn	04 19 00.5	+0.5
DHAK	Deception Hill	6.31	115	Pn		Pn	04 19 07.5	+1.0
TOLK	Toolik Lake Re	6.41	359			Pn	04 19 10.0	+2.1
WHY	Whitehorse	7.10	97			Pn	04 19 17.2	-0.2
SKAG	Skagway	7.38	106	Pn		Pn	04 19 21.8	+0.6
ANM	Nome	7.56	295			Pn	04 19 24.4	+0.9
BESE	Bessie Mountai	8.05	111	Pn		Pn	04 19 30.7	+0.4
RDOG	Red Dog Mine	8.14	321			Pn	04 19 32.6	+1.1
JIS	Juneau Island	8.42	112			Pn	04 19 35.0	-0.4
INK	Inuvik	8.96	41	P		Pn	04 19 42.0	-0.5
	0.3nm,0.3s,baz=217,slow=15,SNR=16							
INK				S		Sn	04 21 21.6	-0.2
	0.8nm,0.3s,baz=156,slow=20,SNR=2.9							
DLBC	Dease Lake	10.28	103	P		Pn	04 20 02.0	+1.1
	0.3nm,0.3s,baz=269,slow=6.2,SNR=2.1							
C36M	Paulatuk	12.47	45			Pn	04 20 31.4	+0.9
YKA	Yellowknife Ar	15.99	74	P		Pn	04 21 16.6	-0.5
	0.2nm,0.3s,baz=283,slow=10,SNR=26							
RES	Resolute Bay	22.43	34	P		P	04 22 28.9	-0.7
	1.5nm,0.7s,baz=257,slow=14,SNR=4.0							
RES	Resolute Bay	22.43	34	IAmb		IAmb	04 22 40.7	
	comp=Z,24nm,1.8s							
NEW	Newport	22.77	113	P		P	04 22 34.2	+0.7
	comp=Z,4.1nm,0.6s,baz=318,slow=8.3,SNR=10							
WALA	Waterton Lakes	23.58	108			pP	04 22 54.5	-0.9
MSO	Missoula	25.25	111	P		P	04 22 57.7	+1.0
SEY	Seymchan	26.06	298	P		P	04 23 02.5	-1.2
	comp=Z,1.8nm,0.5s,baz=69,slow=17,SNR=3.2							
EGMT	Eagleton	26.21	104	IAmb		IAmb	04 23 06.9	
	comp=Z,6.2nm,0.8s							
BEKR	Beckworth	28.43	128	IAmb		IAmb	04 23 27.5	
	comp=Z,2.9nm,0.6s							
ELK	Elko	29.65	121	P		P	04 23 38.2	+2.0
	comp=Z,2.0nm,0.9s,baz=312,slow=9.7,SNR=7.8							
PDAR	Pinedale Array	30.37	111	P		P	04 23 43.8	+1.2
	comp=Z,0.6nm,0.7s,baz=297,slow=3.3,SNR=7.0							
NVAR	Mina Array Bea	30.46	127	P		P	04 23 44.8	+1.4
	comp=Z,3.5nm,0.7s,baz=313,slow=8.8,SNR=22							
NV11	Mina Array Sit	30.51	127	IAmb		IAmb	04 23 46.4	
	comp=Z,4.6nm,0.8s							
DUG	Dugway, Tooele	31.10	118	P		P	04 23 50.6	+1.6
RSSD	Black Hills	31.76	104	P		P	04 23 56.3	+1.4
RSSD				IAmb		IAmb	04 23 56.8	
	comp=Z,4.0nm,0.7s							
RWWY	Rawlins	32.27	110			PcP	04 26 48.1	+1.8
KNB	Kanab	33.81	121	P		P	04 24 15.0	+2.2
U15A	North Rim	34.53	121	IAmb		IAmb	04 24 21.9	
	comp=Z,2.9nm,0.9s							
WUAZ	Wupatki	35.69	121	P		P	04 24 30.9	+1.9
X16A	Lo Mia Camp, P	36.62	122	IAmb		IAmb	04 24 39.6	
	comp=Z,2.8nm,0.8s							
MSTX	Muleshoe	40.63	112			sP	04 25 27.4	-4.8
TX31	Lajitas Ar. Si	44.25	116	P		P	04 25 41.2	+1.4
TX31				IAmb		IAmb	04 25 56.9	
	comp=Z,13nm,1.9s							
TX32	Lajitas Array	44.25	116	P		P	04 25 41.2	+1.4
TX32				IAmb		IAmb	04 25 56.9	
	comp=Z,14nm,2.0s							
TXAR	Lajitas Array	44.25	116	P		P	04 25 40.8	+1.0
	comp=Z,1.2nm,0.7s,baz=330,slow=7.2,SNR=15							
TXAR				PcP		PcP	04 27 22.6	-0.8
	comp=Z,0.2nm,0.6s,baz=347,slow=3.7,SNR=2.5							
ARCES	ARCESS Array B	48.44	2	P		P	04 26 10.8	-1.3
	comp=Z,2.6nm,0.9s,baz=3.0,slow=8.6,SNR=3.1							
SONM	Songino Array	54.88	307	P		P	04 27 00.1	-0.5
	comp=Z,0.6nm,0.7s,baz=35,slow=5.5,SNR=4.8							
SONM	Songino Array	54.88	307	IAmb		IAmb	04 27 08.4	
	comp=Z,0.9nm,0.9s							
FINES	FINESS Array B	56.57	3	P		P	04 27 10.6	-1.6
	comp=Z,2.7nm,1.0s,baz=12,slow=7.1,SNR=3.1							
ZALV	Zalesovo Beam	56.58	325	P		P	04 27 10.0	-2.4
	comp=Z,0.4nm,0.3s,baz=26,slow=7.0,SNR=2.4							
MKAR	Makanchi Array	63.74	323	P		P	04 27 59.5	-2.0
	comp=Z,0.3nm,0.4s,baz=29,slow=6.5,SNR=5.9							
ABKAR	Akbulak array	66.41	340	P		P	04 28 17.9	-0.9
ABKAR				IAmb		IAmb	04 28 33.7	
	comp=Z,1.9nm,0.7s							
AKASG	Malin Array Be	67.38	1	P		P	04 28 23.4	-1.4
	comp=Z,0.2nm,0.3s,baz=0.7,slow=6.3,SNR=3.4							
ESDC	Sonseca Array	74.64	27	P		P	04 29 09.0	-0.1
	comp=Z,0.6nm,0.5s,baz=341,slow=6.0,SNR=8.5							
ESDC	Sonseca Array	74.64	27	P		P	04 29 09.0	-0.1
CHGR	Chuyangaron	74.75	330	P		P	04 29 11.9	+2.1

ASRS 10 04:35:16.2±0.6,48°N±3°×9°5E±°, h5km, MLh3.5/10, smi:org.gfz-potsdam.de/geofon/LOCSAT eventModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZLR	Kyzyl	3.27	352	Pg	Pg	04 36 21.0	+2.1
KZLR				Sg	Sg	04 37 07.4	+6.0
TDJR	Todzha	3.97	8	Pg	Pg	04 36 35.0	+2.7
TDJR				Sg	Sg	04 37 30.4	+6.6
TEL	Teeli	4.13	310	Pg	Pg	04 36 36.8	+1.4
TEL				Sg	Sg	04 37 35.3	+6.4
CUR	Chagan-Uzun	4.78	293	Pg	Pg	04 36 49.5	+1.7
CUR				Sg	Sg	04 37 53.9	+4.2
MOY	Mondy	4.91	47	Pg	Pg	04 36 47.3	-2.9
MOY				Sg	Sg	04 37 54.3	+0.7
ORL	Orlik	5.02	34	Sg	Sg	04 38 01.2	+3.9
ULGR	Ulagan, Altay	5.19	297	Pg	Pg	04 36 56.5	+0.9
ULGR				Sg	Sg	04 38 05.6	+2.8
DGZ	Jazzator, Alta	5.26	286	Sg	Sg	04 38 09.0	+3.9
AKAR	Aktash	5.29	293	Sg	Sg	04 38 09.2	+3.1
CHBI	Chibit, Altay	5.36	293	Pg	Pg	04 36 59.1	+0.1
CHBI				Sg	Sg	04 38 11.6	+3.2
VEH	Verkhnyaya Baz	5.70	329	Pg	Pg	04 37 06.9	+1.5
VEH				Sg	Sg	04 38 25.9	+6.6
TUNR	Tungur	6.05	290	Pg	Pg	04 37 14.8	+2.7
TUNR				Sg	Sg	04 38 35.5	+5.0
ARTR	Artybash	6.09	306	Sg	Sg	04 38 36.8	+5.0
MINR	Mina	6.47	355	Pg	Pg	04 37 21.2	+1.1
MINR				Sg	Sg	04 38 50.3	+6.5
ELDR	Elanda	6.51	298	Pg	Pg	04 37 22.6	+1.7
ELDR				Sg	Sg	04 38 48.5	+3.4
LUZB	Luzhba, Kemero	6.54	325	Pg	Pg	04 37 22.9	+1.4
LUZB				Sg	Sg	04 38 49.0	+2.8
UKR	Ust'-Kan	7.21	294	Sg	Sg	04 39 12.1	+4.6
ULN	Ulaanbaatar	7.94	90	Sg	Sg	04 39 22.4	-8.5

*NEIC **10** 04:36:00.0±1.7, 61°.60N±0°.02×141°.11W±0°.04, h1km±9km, Error ellipse: s-maj=4.2km s-min=1.6km az=144.0*

AEIC 10 04:35:59.5±1.6, 61°.59N±0°.03×141°.07W±0°.06, h7km±6km, ML2.8/69, Error ellipse: s-maj=5.3km s-min=2.1km az=132.0, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK2	White River	0.23	28	Pg	Pg	04 36 04.7	+0.6
YUK2				Sg	Sg	04 36 08.1	+0.9
YUK3	Moose Creek	0.35	57	Pg	Pg	04 36 07.0	+0.6
YUK3				Sg	Sg	04 36 11.9	+1.0
BARN	Barnard Glacie	0.60	209	Pg	Pg	04 36 11.2	+0.2
BARN				Sb	Sb	04 36 20.4	-0.7
YUK1	Sand Pete Hill	0.62	24	Pg	Pg	04 36 11.7	+0.2
YUK1				Sg	Sg	04 36 20.1	+0.4
CTGM	Chitina Glacie	0.64	192	Pg	Pg	04 36 12.1	+0.3
PTPK	Patty Peak	0.78	240	Pg	Pg	04 36 14.9	+0.4
PTPK				Sb	Sb	04 36 25.6	-0.7
BALM	Baldy	0.83	229	Pg	Pg	04 36 15.3	0.0
BALM				Sb	Sb	04 36 27.3	-0.3
BVCY	Beaver Creek	0.84	7	Pg	Pg	04 36 15.8	+0.3
KIAG	Kiagna River	0.91	224	Pg	Pg	04 36 16.7	-0.2
GRNC	Granite Creek	0.92	201	Pg	Pg	04 36 17.1	0.0
MCARA	McCarthy VSAT	0.96	259		Pb	04 36 18.1	-0.3
MCARA					Sb	04 36 31.5	+0.3
YUK4	Talbot Arm	1.19	101		Pn	04 36 22.6	-0.1
TGL	Tana Glacier	1.19	226		Pg	04 36 21.9	-0.5
VRDI	Verde Repeater	1.20	254		Pg	04 36 22.2	-0.3
RKAV	Rock Avalanche	1.30	186		Pn	04 36 24.1	0.0
CRQM	Cirque	1.30	231		Pn	04 36 23.4	-0.8
GLB	Gilahina Butte	1.32	265		Pn	04 36 24.3	-0.1
GLB					Sn	04 36 42.2	0.0
YUK6	Outpost Mounta	1.46	115		Pb	04 36 27.0	-0.1
YUK6					Sg	04 36 47.5	+1.1
SAMH	Samovar Hills	1.47	174		Pg	04 36 28.0	+0.4
MESA	MESA	1.48	197		Pg	04 36 28.0	+0.2
BC03		1.52	348		Pb	04 36 27.6	-0.4
KHIT	Khitrov Hills	1.56	224		Pb	04 36 28.6	-0.1
KULT	Kultieth River	1.57	212		Pb	04 36 29.1	+0.3
YUK5	Granite Creek	1.61	105		Pb	04 36 29.2	-0.4
GRIN	Grindle Hills	1.71	221		Pg	04 36 31.8	-0.4
YUK7	Dusty Glacier	1.77	125		Pg	04 36 33.0	-0.4
BGLC	Bering Glacier	1.83	217		Pg	04 36 35.5	+1.0
MENT	Mentasta	1.84	319		Pn	04 36 32.4	+0.9
HYT	Haines Junctio	1.89	112		Pb	04 36 33.6	-0.6
PS12	TAPS Pump St12	1.96	269		Pb	04 36 35.6	+0.3
NICHA	Nichawak Mount	1.96	228		Pg	04 36 36.6	-0.3
HMT	Hamilton	2.00	233		Pb	04 36 36.8	+0.7
GOAT	Goat Mountain	2.04	242		Pb	04 36 36.1	-0.8
PNL	Peninsula	2.09	156		Pb	04 36 37.6	-0.1
RAGM	Ragged Mountai	2.13	237		Pg	04 36 39.7	-0.5
PS11	TAPS Pump St11	2.15	285		Pg	04 36 40.3	-0.3
PAX	Paxson	2.48	306		Pb	04 36 44.9	+0.5
DOT	Dot Lake	2.49	328		Pn	04 36 41.1	+0.7
EYAK	Cordova Ski Ar	2.50	247		Pn	04 36 44.1	-0.2
DAWY	Dawson	2.61	16		Pn	04 36 43.2	+1.2
SCRK	Sand Creek	2.75	332		Pn	04 36 44.8	+0.8
RIDG	Independent Ri	2.78	323		Pn	04 36 45.5	+1.1
SCM	Sheep Creek Mo	2.99	278		Pb	04 36 51.0	-2.1
WHY	Whitehorse	3.14	104		Pn	04 36 50.6	+1.2
EGAK	Eagle	3.20	359		Pn	04 36 51.8	+1.7
WAT6	Susitna Watana	3.29	291		Pb	04 36 55.0	-3.2
DHY	Denali Highway	3.30	300		Pb	04 36 55.2	-3.1
SML	Sawmill	3.47	277		Pb	04 37 00.3	-0.8
KNK	Knik Glacier	3.55	270		Pn	04 36 58.6	+3.7
WAT1	Susitna Watana	3.72	293		Pn	04 37 01.3	+4.1
GHO	Glory Hole Cre	3.75	276		Pb	04 37 06.0	+0.1
GHO	Glory Hole Cre	3.75	276		Pn	04 37 00.8	+3.1
WAT2	Susitna Watana	3.77	295		Pn	04 37 01.8	+3.7
RND	Reindeer	4.04	300		Pb	04 37 06.5	-4.4
IL31		4.14	323		Pn	04 37 03.0	+0.1
WRH	Wood River Hil	4.31	315		Pb	04 37 13.6	-1.8
PRP	Porcupine Dome	4.42	335		Pn	04 37 08.3	+1.3
SLKM	Skilak Lake	4.58	260		Pn	04 37 12.2	+3.2
SUA	Susitna One	4.63	273	Pn	Pn	04 37 09.1	-0.8
TRF	Thorofare Moun	4.66	298		Pn	04 37 14.6	+4.3
MDM	Murphy Dome	4.68	319	Pn	Pn	04 37 10.7	+0.2
NEA	Nenana	4.72	313	Pn	Pn	04 37 11.4	+0.5
KTH	Kantishna Hill	4.96	298		Pn	04 37 18.5	+4.1
FYU	Fort Yukon	5.32	342	Pn	Pn	04 37 20.6	+1.4
RSO	Redoubt South	5.79	264	Pn	Pn	04 37 26.1	+0.3
BM03	Burnt Mountain	6.05	347		Pn	04 37 31.2	+2.0
IM03		7.13	314		Pn	04 37 49.0	+5.0

*TRN **10** 04:48:07.9, 10°.77N×61°.46W, h43km, MD3.1*
*FUNV **10** 04:48:07.7, 10°.74N×61°.29W, h46km, MW3.0*

ISC 10 04:48:06.4±1.2, 10°.71N±0°.03×61°.39W±0°.04, h60km±7km, n27, σ1°61/51, 1C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRN	Trinidad (W)	0.06	190	⇑iP	Pn	04 48 15.5	+0.1
TRN				eS	Sn	04 48 20.5	-1.2
TRN	Trinidad (W)	0.06	190	eP	Pn	04 48 15.1	-0.2
TRN				eS	Sn	04 48 20.6	-1.2
TBH	Brigand Hill	0.39	125	eP	Pn	04 48 19.3	+2.0
TBH				eS	Sn	04 48 26.2	+1.0
TOSP	Speyside	1.02	55	eP	Pn	04 48 25.9	+1.1
TOSP				eS	Sn	04 48 39.2	+0.8
TOSP	Speyside	1.02	55	eP	Pn	04 48 24.6	-0.2
TOSP				eS	Sn	04 48 37.5	-0.9
GRGR	Grenville	1.44	350	eP	Pn	04 48 30.4	+0.1
GRGR				eS	Sn	04 48 47.1	-1.2
GRGR	Grenville	1.44	350	eP	Pn	04 48 30.1	-0.2
GRGR				eS	Sn	04 48 46.9	-1.4
GRHS	Sauteurs	1.53	351	eP	Pn	04 48 32.0	+0.5
GRHS				eS	Sn	04 48 49.3	-1.0
GRSS	Sisters	1.59	352	eP	Pn	04 48 33.5	+1.0
GRSS				eS	Sn	04 48 50.9	-1.1
GUNV	Guanoco	1.62	251	eP	Pn	04 48 34.9	+2.2
GUNV				eS	Sn	04 48 55.3	+2.7
CRUV	Carupano	1.81	269	eP	Pn	04 48 36.5	+1.2
CRUV				eS	Sn	04 48 58.6	+1.3
SVB	Belmont	2.55	3	eP	Pn	04 48 47.3	+1.8
SVB				eS	Sn	04 49 15.2	-0.2
SVCV	St. Vincent, C	2.56	5	eP	Pn	04 48 47.3	+1.7
SVCV				eS	Sn	04 49 15.6	+0.1
ORIV	Oritupano	2.57	231	eP	Pn	04 48 47.9	+2.3
ORIV				eS	Sn	04 49 17.5	+1.7
SVV	Soufriere Volc	2.60	4	eP	Pn	04 48 47.1	+1.6
SVV				eS	Sn	04 49 15.8	-0.7
RIOV	Rio Grande	2.66	189	eP	Pn	04 48 47.4	+0.6
RIOV				eS	Sn	04 49 17.6	-0.3
PCRV	Puerto La Cruz	3.23	261	eP	Pn	04 48 55.5	+0.7
SLBI	Saint Lucia, B	3.32	7	eP	Pn	04 48 57.2	+1.3
SLBI				eS	Sn	04 49 33.2	-1.0
PRGV	PARIAGUAN	3.75	239	eP	Pn	04 49 02.9	+1.1
PRGV				eS	Sn	04 49 44.6	0.0
CUPV	Cpira	4.37	262	eP	Pn	04 49 11.7	+1.3
CUPV				eS	Sn	04 49 59.4	-0.8
BIRV	Birongo	4.80	268	eP	Pn	04 49 16.7	+0.5
BIRV				eS	Sn	04 50 09.0	-1.6
LUEV	Luepa	4.83	181	eP	Pn	04 49 16.6	-0.3
LUEV				eS	Sn	04 50 07.8	-3.9
MERV	Las Mercedes	5.04	254	eP	Pn	04 49 20.8	+1.2
MERV				eS	Sn	04 50 15.3	-1.3
BAUV	El Baul	6.78	256	eP	Pn	04 49 44.8	+1.6
BAUV	El Baul	6.78	256	eS	Sn	04 50 56.7	-2.6
BAUV	El Baul	6.78	256	eP	Pn	04 49 43.8	+0.4
BAUV				eS	Sn	04 50 55.0	-4.3
MAPV	Macapo	7.01	263	eP	Pn	04 49 47.7	+1.2
MAPV				eS	Sn	04 51 01.1	-3.8

IDC 10 05:10:10.8±2.8, 6°.65S×129°.64E, h138km±39km, mb3.5/1, mb1 3.4/5, mb1mx3.2/30, mbtmp3.8/5, MS3.4/1, Ms1 3.4/1, ms1mx2.5/28, Error ellipse: s-maj=72.1km s-min=16.3km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	Sorong	5.96	16	P	Pn	05 11 38.6	+1.7
	2.5nm,0.3s,baz=98,slow=23,SNR=5.0						
SIJI				S	Sn	05 12 43.5	-0.8
	1.8nm,0.3s,baz=237,slow=22,SNR=6.9						
FITZ	Fitzroy Crossi	12.03	199	P	Pn	05 12 57.6	-0.2
	0.2nm,0.3s,baz=25,slow=6.9,SNR=6.6						
FITZ				S	Sn	05 15 00.7	-10
	0.4nm,0.3s,baz=216,slow=19,SNR=5.0						
WRA	Warramunga Arr	13.98	161	P	Pn	05 13 23.0	0.0
	0.4nm,0.3s,baz=333,slow=13,SNR=12						
WRA				S	Sn	05 15 48.0	-10
	0.5nm,0.3s,baz=332,slow=23,SNR=8.1						
ASAR	Alice Springs	17.41	167	P	P	05 14 04.0	-0.5
	0.3nm,0.3s,baz=344,slow=9.3,SNR=21						
ASAR				S	S	05 17 09.2	-10
	0.1nm,0.3s,baz=349,slow=27,SNR=3.9						
PSI	Prapat	32.07	286	LR	LR	05 31 03.6	
	comp=Z,66nm,18.2s,baz=138,slow=39						
MKAR	Makanchi Array	67.74	327	P	P	05 20 53.5	+0.1
	0.5nm,0.4s,baz=114,slow=8.1,SNR=12						

*IDC **10** 05:26:49.0±0.8, 27°.19N×65°.74E, h0km, mb4.0/19, mb1 4.1/21, mb1mx4.0/47, mbtmp4.0/21, ML3.9/2, MS3.4/15, Ms1 3.4/15, ms1mx3.2/46, Error ellipse: s-maj=19.0km s-min=15.0km az=146.0*
*BJI **10** 05:26:51.0±0.0, 27°.40N×65°.69E, h5km, mB4.8/18, mb4.5/22, Ms4.3/9, Ms7 4.1/5*
*NEIC **10** 05:26:53.0±1.7, 27°.23N±0°.09×65°.66E±0°.09, h26km±4km, mb4.3/23, Error ellipse: s-maj=14.6km s-min=9.0km az=143.0*

*DSN **10** 05:26:58.0±2.7, 27°.91N×64°.92E, h10km, ML4.3/7, Error ellipse: s-maj=101.8km s-min=19.4km az=173.0*

ISC 10 05:26:54.0±0.4, 27°.22N±0°.06×65°.71E±0°.04, h35km, n110, σ2s08/114, mb4.3/37, MS3.5/13, 1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JASL	Jaisalmer	4.64	92	eP	Pn	05 28 03.1	+1.5
BHUJ	Bhuj	5.32	137	eP	Pn	05 28 13.5	+2.6
BHUJ				eS	Sn	05 29 13.1	+2.1
WSAR	Wadi Sarin	7.54	240	Pn	Pn	05 28 38.8	-2.7
	3.2nm,0.3s,baz=101,slow=8.2,SNR=37						
WSAR				Sn	Sn	05 29 58.4	-7.3
	10nm,0.3s,baz=297,slow=18,SNR=9.5						
WSAR				LR	LR	05 32 31.9	
	comp=Z,261nm,20.1s,baz=97,slow=46						
THW	Thamme Wali	7.63	42	P	Pn	05 28 40.3	-2.4
WBK	Wadi Bani Khal	7.65	235	P	Pn	05 28 42.1	-0.8
WBK				S	Sn	05 30 03.3	-5.2
SARP	Sargodha	7.66	51	P	Pn	05 28 40.0	-3.1
HRA	Herat	7.74	338		Pn	05 28 44.1	-0.3
KBL	Kabul	7.84	21		Pn	05 28 45.1	-0.6
SMDO	Samad	8.08	241	P	Pn	05 28 49.3	+0.3
SMDO				S	Sn	05 30 14.2	-5.0
HOQ	Hoqain	8.41	246	P	Pn	05 28 52.0	-1.4
JMDO	Jabal Madar	8.43	237	P	Pn	05 28 53.7	0.0
JMDO				S	Sn	05 30 23.4	-4.2
CEP	Cherat	8.48	38	P	Pn	05 28 51.1	-3.3
BANOM	Banah	8.53	263	P	Pn	05 28 54.0	-1.0
BANOM				S	Sn	05 30 24.6	-5.5
BANOM	Banah	8.53	263	P	Pn	05 28 54.0	-1.0
	SNR=28						
SHME	Shamm	8.64	264	*i* P	Pn	05 28 55.4	-1.2
	SNR=12						
MDH	Madha	8.66	259	P	Pn	05 28 54.4	-2.5
MDH	Madha	8.66	259	P	Pn	05 28 55.5	-1.3
MSFE	Esma-Masafi	8.77	260	P	Pn	05 28 56.9	-1.5
SOHO	SOHO	8.83	252	P	Pn	05 28 56.3	-2.9
UOSS	Minazif	8.84	257	P	Pn	05 28 58.1	-1.2
UOSS	Minazif	8.84	257		Pn	05 28 57.8	-1.5
UOSS	Minazif	8.84	257	P	Pn	05 28 58.0	-1.3
UOSS				S	Sn	05 30 35.9	-1.8
BSY	Bisya	8.91	242	P	Pn	05 29 00.5	+0.1
HATD	Hatta, Dubai	8.94	257	P	Pn	05 28 60.0	-0.7
HATD	Hatta, Dubai	8.94	257	P	Pn	05 28 58.7	-2.0
HATD				S	Sn	05 30 41.6	+1.5
ASHO	Ashiyiah	9.05	256	*i* P	Pn	05 29 02.5	+0.3
	SNR=8.1						
ASHO	Ashiyiah	9.05	256	P	Pn	05 29 03.2	+1.0
	SNR=22						
NIL	Nilore	9.13	44		Pn	05 29 02.8	-0.5
ARQ	Araqi	9.17	247	P	Pn	05 29 05.4	+1.5
	SNR=15						
NAZ	Nazwa, Dubai	9.30	258	P	Pn	05 29 06.3	+0.7
ALNE	Al Ain	9.52	253	*i* P	Pn	05 29 10.1	+1.4
	SNR=6.3						
KUDL	Kundal	9.60	82	eP	Pn	05 29 03.8	-5.8
KUDL				eS	Sn	05 30 44.9	-11
ASUD	Al Ashush, Dub	9.70	257	P	Pn	05 29 12.3	+1.3
DHRM	DHARAMSHALA	10.48	59	eP	Pn	05 29 20.9	+1.1
DHRM				eP	Pn	05 29 22.6	+0.7
DHRM				eS	Sn	05 31 14.1	-4.1
DHRM				IAML		05 31 26.2	
	comp=E,160nm,0.8s						
DHRM				IAML		05 31 26.4	
	comp=N,82nm,0.6s						
SMLA	Simla	10.74	66	eS	Sn	05 31 20.9	-3.4
SMLA				IAML		05 31 27.8	
	comp=N,56nm,0.8s						
SMLA				IAML		05 31 28.7	
	comp=E,59nm,0.6s						
BHPL	Bhopal	11.32	108	eP	Pn	05 29 33.5	+0.3
BHPL				eS	Sn	05 31 36.7	-1.8
CHGR	Chuyangaron	11.77	13		Pn	05 29 39.0	-0.4
GAR	Garm	12.37	17		Pn	05 29 47.5	-0.1
GEYT	Alibeck	12.45	331	LR	LR	05 34 32.6	
	comp=E,61nm,21.4s,baz=25,slow=37						
JOSI	Joshimath	12.58	71	eP	Pn	05 29 51.7	+1.1
JOSI				eS	Sn	05 32 01.4	-8.2
KSH	Kashi	14.95	32	P	Pn	05 30 16.4	-6.4
KSH				pP	P	05 30 20.4	-7.6
KSH				S	Sn	05 32 56.8	-10
KSH				sS	S	05 33 06.4	-18
KSH				PcP	PcP	05 35 31.7	+0.9
KSH				pmax	pmax		
	comp=E,17nm,0.6s						
KSH				pmax	pmax		
	comp=E,260nm,3.6s

comp=Z,4.2nm,0.8s
BVAR Borovoye Array 26.02 6 P **P** 05 32 23.7 +0.2
comp=Z,7.6nm,0.8s,baz=170,slow=9.9,SNR=29
MMAI Mount Meron Ar 26.79 290 P **P** 05 32 35.4 +4.5
comp=Z,4.3nm,0.8s,baz=116,slow=5.3,SNR=2.9
MMAI LR LR 05 43 39.5
comp=Z,35nm,21.7s,baz=90,slow=38
EIL Elat 27.12 282 LR LR 05 45 10.6
comp=Z,132nm,19.4s,baz=102,slow=41
BRTR Keskin Array B 29.36 303 LR LR 05 45 01.8
comp=Z,25nm,19.3s,baz=88,slow=37
ZALV Zalesovo Beam 30.19 23 P **P** 05 33 00.9 +0.1
comp=Z,2.8nm,0.6s,baz=222,slow=8.4,SNR=12
ZALV LR LR 05 46 15.4
comp=Z,67nm,20.1s,baz=38,slow=39
GTA Gaotai 30.80 58 *eP* **P** 05 33 09.9 +3.3
GTA pP pP 05 33 14.5 -2.6
GTA sP sP 05 33 17.7 -3.8
GTA pmax pmax
comp=Z,3.0nm,0.8s
LZH Lanzhou 33.47 65 *eP* **P** 05 33 31.0 +0.9
LZH pP pP 05 33 39.6 -1.0
LZH sP sP 05 33 43.2 -1.8
LZH *e*PP **PnPn** 05 34 43.5 +1.8
LZH pmax pmax
comp=Z,18nm,1.1s
LZH pmax pmax
comp=Z,52nm,4.9s
AKASG Malin Array Be 36.26 320 P **P** 05 33 53.8 +0.1
comp=Z,0.3nm,0.4s,baz=118,slow=7.4,SNR=5.5
AKBB Malin Array Si 36.26 320 P **P** 05 33 54.7 +1.0
AKBB IAmb IAmb 05 34 01.6
comp=Z,5.9nm,1.2s
MLR Muntele Rosu 36.41 311 P **P** 05 33 56.0 +0.8
MLR IAmb IAmb 05 33 59.9
comp=Z,4.5nm,0.9s
BUR08 Bucovina Ar. S 37.54 314 P **P** 05 34 04.5 -0.2
BUR08 IAmb IAmb 05 34 14.1
comp=Z,7.5nm,1.2s
SONM Songino Array 37.71 46 P **P** 05 34 07.7 +1.5
comp=Z,0.8nm,0.7s,baz=253,slow=8.7,SNR=6.5
HHC Hu-ho-hao-te 39.92 58 *eP* **P** 05 34 25.3 +0.4
HHC pmax pmax
comp=Z,5.0nm,0.8s
HHC pmax pmax
comp=Z,62nm,4.5s
WHN Wuhan 42.46 74 ⇓P P 05 34 50.7 +5.0
FINES FINESS Array B 43.24 333 P **P** 05 34 52.5 +1.0
comp=Z,0.7nm,0.3s,baz=142,slow=9.6,SNR=4.5
GERES GERESS Array B 45.28 313 P **P** 05 35 10.4 +2.1
comp=Z,0.2nm,0.3s,baz=111,slow=7.3,SNR=4.5
ABTA Abfaltersbach 45.80 310 *i* P **P** 05 35 11.9 -0.6
comp=Z,4.5nm,1.3s
MOTA Moosalm 46.82 311 *i* P **P** 05 35 20.5 0.0
comp=Z,2.1nm,0.6s
RETA Reutte 47.06 311 *i* P **P** 05 35 22.5 +0.2
comp=Z,3.6nm,0.8s
DAVA Damuels 47.65 310 *i* P **P** 05 35 26.8 -0.1
comp=Z,5.4nm,0.7s
ARCES ARCESS Array B 48.31 342 P **P** 05 35 30.5 -1.1
comp=Z,2.5nm,0.8s,baz=134,slow=6.9,SNR=9.0
KSRS Korea Array 52.71 62 P **P** 05 36 05.7 +0.5
comp=Z,3.0nm,0.7s,baz=273,slow=7.1,SNR=9.0
KLR Kul'dur 54.51 47 LR LR 06 02 50.9
comp=Z,64nm,19.0s,baz=326,slow=40
ESDC Sonseca Array 58.13 302 P **P** 05 36 44.4 +0.1
comp=Z,0.2nm,0.4s,baz=85,slow=8.7,SNR=4.5
TOA0 Torodi Ar. Sit 61.13 270 P **P** 05 37 05.5 +0.3
TORD Torodi Ar. Bea 61.13 270 P **P** 05 37 05.7 +0.5
comp=Z,6.0nm,0.8s,baz=59,slow=6.9,SNR=27
MA2 Magadan 64.49 34 LR LR 06 07 50.2
comp=Z,88nm,19.0s,baz=118,slow=38
SEY Seymchan 64.65 30 LR LR 06 09 19.8
comp=Z,195nm,18.0s,baz=328,slow=40
LBTB Lobatse 64.75 220 P **P** 05 37 30.9 +1.8
BOSA Boshof 67.73 218 P **P** 05 37 48.8 +0.7
comp=Z,1.7nm,0.6s,baz=50,slow=5.6,SNR=6.3
BOSA LR LR 06 06 42.3
comp=Z,40nm,18.1s,baz=134,slow=35
BOSA Boshof 67.73 218 P **P** 05 37 49.5 +1.3
BOSA IAmb IAmb 05 38 04.8
comp=Z,5.0nm,1.3s
GAMB Gambell 78.78 22 P **P** 05 38 53.5 +0.8
WR0 Warramunga Arr 81.48 118 P **P** 05 39 08.6 +0.5
WR0 IAmb IAmb 05 39 20.0
comp=Z,11nm,1.5s
ASAR Alice Springs 83.01 121 P **P** 05 39 16.2 +0.3
comp=Z,0.5nm,0.5s,baz=305,slow=5.3,SNR=9.8
INK Inuvik 83.70 7 P **P** 05 39 18.4 -0.3
INK IAmb IAmb 05 39 31.6
comp=Z,1.5nm,1.1s
BWN Browne 84.83 15 P **P** 05 39 23.6 -1.0
ILAR Eielson Array 84.87 13 P **P** 05 39 24.6 -0.2
comp=Z,0.3nm,0.6s,baz=316,slow=4.1,SNR=4.7
YKA Yellowknife Ar 90.60 0 P **P** 05 39 52.4 +0.1
comp=Z,0.4nm,0.8s,baz=351,slow=5.4,SNR=6.9
TXAR Lajitas Array 122.86 349 PKP **PKiKP** 05 45 48.4 +1.2
comp=Z,0.7nm,1.1s,baz=22,slow=1.3,SNR=3.9
LPAZ La Paz 135.99 274 P **PKPdf** 05 46 12.7 -0.1
comp=Z,0.5nm,0.3s,baz=0,slow=1.0,SNR=6.9
PLCA Paso Flores 141.69 238 PKP **PKiKP** 05 46 23.2 -1.5
comp=Z,1.1nm,0.7s,baz=145,slow=4.8,SNR=3.3

*BJI **10** 05:35:04.2±0.0, 32.°52N×95.°95E, h26km, ML3.4/5, Ms3.3/2, Ms7 3.2/1*
*IDC **10** 05:35:08.9±10.0, 32.°76N×95.°76E, h0km, mb3.7/3, mb1 3.7/6, mb1mx3.4/53, mbtmp3.7/6, ML3.3/3, MS3.3/2, Ms1 3.3/2, ms1mx2.7/42, Error ellipse: s-maj=146.5km s-min=52.5km az=155.0*
ISC 10 05:35:13.5±2.8, 32.°9N±0.°4×95.°9E±0.°1, h35km, n11, σ1s19/8, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**7.21**	**25**	*eP*		Pn		05 37 00.0	+6.4
GTA				pP				05 37 07.5	
GTA				sP				05 37 10.7	
GTA				pmax	pmax				
	comp=Z,2.0nm,1.1s								
XAN	**Xi'an**	**10.96**	**81**	P		**Pn**		**05 37 47.4**	**-0.5**
WMQ	**Urumqi**	**12.61**	**332**	*eP*		**Pn**		**05 38 08.9**	**-1.5**
SONM	**Songino Array**	**16.89**	**25**	P		**P**		**05 39 10.2**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=222,slow=10.0,SNR=8.8								
MKAR	**Makanchi Array**	**17.29**	**327**	P		**P**		**05 39 13.1**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=140,slow=13,SNR=8.3								
AAK	**Ala-Archa**	**19.43**	**306**	P		**Pn**		**05 39 39.2**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=112,slow=6.6,SNR=12								
KURBB	**Kurchatov Arra**	**21.80**	**329**	P		**P**		**05 40 02.9**	**+0.5**
	comp=Z,1.6nm,0.2s,baz=134,slow=12,SNR=6.9								
ZALV	**Zalesovo Beam**	**22.43**	**343**	P		**P**		**05 40 10.4**	**+1.3**
	comp=Z,0.4nm,0.3s,baz=144,slow=10.0,SNR=3.0								
GEYT	**Alibeck**	**31.01**	**290**	LR		LR		05 55 58.7	
	comp=Z,33nm,21.8s,baz=70,slow=40								
AKTO	**Aktyubinsk**	**32.79**	**314**	P		**P**		**05 41 43.2**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=86,slow=15,SNR=4.4								
OBN	**Obninsk**	**46.40**	**317**	LR		LR		06 03 55.8	
	comp=Z,78nm,21.7s,baz=1.0,slow=37								

*GUC **10** 05:47:01.4±0.6, 28.°38S×70.°54W, h65km±24km, ML3.8*
*IDC **10** 05:47:04.8±3.0, 28.°27S×70.°26W, h76km±19km, mb3.5/2, mb1 3.5/7, mb1mx3.3/31, mbtmp3.6/7, MS2.8/1, Ms1 2.8/1, ms1mx2.4/16, Error ellipse: s-maj=48.2km s-min=11.3km az=83.0*
ISC 10 05:47:02.5±1.0, 28.°35S±0.°04×70.°6W±0.°1, h88km, n15, σ1s61/21, 1D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GO03	**Copiap**	**0.83**	**25**	⇓*iP*		**Pn**		**05 47 18.6**	**-1.6**
GO03				*i* S		**Sn**		**05 47 30.6**	**-2.8**
GO03				IAML				05 47 32.2	
	comp=E,4μm,0.2s								
LSCH	**La Serena**	**1.64**	**199**	*eP*		**Pn**		**05 47 28.9**	**-1.0**
LSCH				*i* S		**Sn**		**05 47 50.0**	**-0.8**
GO04	**Tololo Observa**	**1.82**	**185**	*eP*		**Pn**		**05 47 31.7**	**-0.8**
GO04				*i* S		**Sn**		**05 47 55.1**	**-0.2**
GO04				IAML				05 48 00.7	
	comp=N,2μm,0.3s								
CO02	**Combarbal**	**2.86**	**186**	*eP*		**Pn**		**05 47 45.1**	**-1.1**
CO02				*i* S		**Sn**		**05 48 18.6**	**-1.2**
GO02	**Mina Guanaco**	**3.31**	**17**	*eP*		**Pn**		**05 47 52.5**	**+0.1**
GO02				*i* S		**Sn**		**05 48 32.2**	**+1.2**
CFA	**Coronel Fontan**	**3.85**	**148**	P		**Pn**		**05 48 00.3**	**+0.8**
	comp=N,14nm,0.3s,baz=330,slow=9.9,SNR=111								
CFA				S		**Sn**		**05 48 44.0**	**+0.4**
	comp=N,24nm,0.3s,baz=268,slow=21,SNR=12								
AHML	**Horco Molle**	**4.95**	**73**	IAML				05 49 19.0	
	comp=N,22nm,0.7s								
LVC	**Limon Verde**	**5.92**	**16**	P		**Pn**		**05 48 26.8**	**-1.2**
	comp=N,0.9nm,0.3s,baz=150,slow=8.5,SNR=14								
LVC				S		**Sn**		**05 49 34.4**	**-0.3**
	comp=N,3.0nm,0.3s,baz=235,slow=7.7,SNR=3.8								
LVC				LR		LR		05 50 41.7	
	comp=N,92nm,19.4s,baz=330,slow=38								
CPUP	**Villa Florida**	**12.00**	**83**	P		**Pn**		**05 49 48.2**	**-2.1**
	comp=N,0.1nm,0.3s,baz=292,slow=5.4,SNR=2.6								
LPAZ	**La Paz**	**12.23**	**11**	P		**Pn**		**05 49 56.2**	**+2.1**
	comp=N,0.1nm,0.3s,baz=180,slow=5.1,SNR=4.1								
SIV	**San Ignacio**	**15.14**	**38**	P		**Pn**		**05 50 29.4**	**-2.3**
	comp=N,0.1nm,0.3s,baz=256,slow=17,SNR=3.2								
BDFB	**Brasilia**	**24.43**	**64**	P		**P**		**05 52 13.9**	**+0.7**
	comp=N,1.0nm,0.4s,baz=241,slow=10,SNR=3.1								
TORD	**Torodi Ar. Bea**	**81.15**	**70**	P		**P**		**05 59 10.8**	**+2.1**
	comp=N,0.6nm,0.6s,baz=275,slow=5.9,SNR=5.2								
ZALV	**Zalesovo Beam**	**148.75**	**28**	PKPbc		**PKiKP**		**06 06 42.4**	**+1.8**
	comp=N,1.6nm,0.5s,baz=274,slow=3.0,SNR=5.3								
MKAR	**Makanchi Array**	**151.94**	**42**	PKPbc		**PKiKP**		**06 06 49.7**	**+2.2**
	comp=N,0.6nm,0.7s,baz=343,slow=1.9,SNR=4.5								

*IDC **10** 05:55:52.9±1.7, 53.°79N×90.°92E, h0km, mb3.4/1, mb1 3.7/4, mb1mx3.3/53, mbtmp3.6/4, ML2.9/3, Error ellipse: s-maj=27.5km s-min=16.2km az=154.0*
*NNC **10** 05:56:00.3±3.2, 53.°46N×90.°37E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=25.7km s-min=22.6km az=65.0*
ASRS 10 05:55:48.1, 53.°73N×91.°06E, M2.4, 5C-7D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.71**	**276**	⇓Pn		Pb		05 56 55.1	+0.7
	3.4nm,0.7s								
ZAA0				⇓Lg		Lg		05 57 43.0	
	28nm,1.2s								
ZALV	**Zalesovo Beam**	**3.71**	**276**	Pn		Pb		05 56 52.0	-2.4
	0.6nm,0.3s,baz=98,slow=10,SNR=4.3								
ZALV				Lg		Lg		05 57 47.0	
	1.6nm,0.3s,baz=93,slow=29,SNR=4.3								
TLY	**Talaya**	**7.91**	**100**	Lg		Lg		05 59 57.3	
	0.0nm,0.3s,baz=40,slow=14,SNR=7.5								
KURK	**Kurchatov**	**8.21**	**253**	⇓Pn		Pn		05 57 52.4	+3.9
	6.2nm,0.7s								
KURK				⇑Sn		Sn		05 59 26.4	+4.6
	5.0nm,0.5s								
KURK				⇑Lg		Lg		06 00 06.6	
	6.5nm,0.5s								
KURBB	**Kurchatov Arra**	**8.31**	**253**	Pn		Pn		05 57 54.0	+4.3
	0.3nm,0.3s,baz=65,slow=15,SNR=11								
KURBB				Sn		Sn		05 59 24.7	+0.6
	0.1nm,0.3s,baz=66,slow=25,SNR=5.8								
KURBB				Lg		Lg		06 00 12.1	
	0.2nm,0.3s,baz=70,slow=30,SNR=6.4								
KURBB	**Kurchatov Arra**	**8.31**	**253**	⇓Pn		Pn		05 57 54.0	+4.4
	11nm,0.7s,baz=64,slow=15								
KURBB				⇓Sn		Sn		05 59 23.8	-0.3
	64nm,0.8s								
KURBB				⇓Lg		Lg		06 00 10.8	
	140nm,1.4s								
MK31	**Makanchi Array**	**8.92**	**222**	Pn		Pn		05 58 03.5	+5.3
	1.8nm,0.6s,baz=37,slow=13,SNR=31								
MK31				⇑Lg		Lg		06 00 33.0	
	17nm,1.0s								
MKAR	**Makanchi Array**	**8.92**	**222**	Pn		Pn		05 58 03.5	+5.3
	0.7nm,0.3s,baz=40,slow=14,SNR=38								
MKAR				Sn		Sn		05 59 34.8	-4.5
	baz=38,slow=26,SNR=2.2								
MKAR				Lg		Lg		06 00 31.1	
	0.1nm,0.3s,baz=55,slow=28,SNR=7.3								
MAKZ	**Makanchi**	**9.04**	**224**	⇑Pn		Pn		05 58 04.7	+4.9
	2.1nm,0.7s								
MAKZ				⇑Sn		Sn		05 59 44.2	+2.0
	7.0nm,0.8s								
MAKZ				⇓Lg		Lg		06 00 35.3	
	13nm,1.1s								
SONM	**Songino Array**	**11.35**	**115**	Sn		Sn		06 00 39.9	+1.0
	0.1nm,0.3s,baz=300,slow=18,SNR=3.5								
SONM				Lg		Lg		06 01 52.3	
	0.1nm,0.3s,baz=296,slow=25,SNR=9.2								
ILAR	**Eielson Array**	**53.73**	**27**	P		P		06 05 15.1	+3.7
	0.4nm,0.9s,baz=317,slow=5.1,SNR=4.2								

*IDC **10** 06:02:02.1±7.5, 36.°44N×71.°32E, h191km±58km, mb3.1/4, mb1 3.3/5, mb1mx2.8/43, mbtmp3.6/5, MS3.1/1, Ms1 3.1/1, ms1mx2.2/22, Error ellipse: s-maj=78.8km s-min=23.8km az=54.0*
ISC 10 06:02:03.0±1.3, 36.°7N±0.°1×70.°9E±0.°2, h200km, n7, σ2s27/9, mb3.2/4, 1C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.45**	**357**	P		**Pn**		**06 03 36.0**	**0.0**
	2.1nm,0.5s,baz=178,slow=14,SNR=32								
KK31				⇑S		**Sn**		**06 04 45.7**	**-4.0**
	15nm,0.8s,baz=184,slow=22								
AAK	**Ala-Archa**	**6.58**	**24**	P		**Pn**		**06 03 38.4**	**+0.6**
	1.0nm,0.3s,baz=175,slow=3.1,SNR=11								
AAK				S		**Sn**		**06 04 53.7**	**+0.8**
	0.3nm,0.3s,baz=134,slow=11,SNR=4.5								
OBN	**Obninsk**	**29.78**	**319**	LR		LR		06 21 15.1	
	comp=Z,35nm,18.1s,baz=196,slow=38								
ARCES	**ARCESS Array B**	**40.98**	**338**	P		**P**		**06 09 27.9**	**+2.0**
	2.0nm,1.0s,baz=120,slow=8.6,SNR=2.9								
YKA	**Yellowknife Ar**	**81.09**	**3**	P		**P**		**06 13 56.9**	**+1.5**
	0.1nm,0.3s,baz=350,slow=5.4,SNR=12								
YKA				pP		**pP**		**06 14 44.6**	**-0.1**
	0.1nm,0.9s,baz=5.5,slow=3.8,SNR=4.0								
WRA	**Warramunga Arr**	**82.12**	**122**	P		**P**		**06 13 59.0**	**-2.4**
	0.4nm,0.6s,baz=324,slow=4.6,SNR=2.8								
ASAR	**Alice Springs**	**84.39**	**125**	P		**P**		**06 14 11.8**	**-1.3**
	0.2nm,0.6s,baz=308,slow=4.6,SNR=5.2								

*NEIC **10** 06:14:01.0±2.2, 37.°20N±0.°03×115.°57W±0.°03, h1km±7km, Error ellipse: s-maj=5.3km s-min=2.5km az=151.0*
*ANF **10** 06:14:00.1±0.2, 37.°18N×115.°52W, h0km±2km, ML2.8/15, Error ellipse: s-maj=2.4km s-min=1.4km az=97.0*
*REN **10** 06:14:01.0±1.9, 37.°16N±0.°02×115.°58W±0.°03, h8km±5km, ML2.5, Error ellipse: s-maj=4.4km s-min=2.1km az=222.0*
ISC 10 06:14:00.5±1.2, 37.°18N±0.°02×115.°55W±0.°02, h4km±12km, n49, σ0s89/60, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TPNV	**Topopah Spring**	**0.61**	**248**				**Pg**	**06 14 12.3**	**+0.2**
TPNV	**Topopah Spring**	**0.61**	**248**	P		**Pg**		**06 14 12.2**	**0.0**
	baz=68,SNR=45								
TPNV				S		**Sg**		**06 14 20.6**	**+0.6**
	baz=68								
SHPR	**Sheep Range**	**0.74**	**155**				**Pg**	**06 14 14.9**	**+0.3**
R11A	**Troy Canyon, C**	**1.17**	**359**				**Pb**	**06 14 22.8**	**-0.6**
R11A	**Troy Canyon, C**	**1.17**	**359**	P		**Pb**		**06 14 22.7**	**-0.7**
	baz=180								
R11A				S		**Sb**		**06 14 38.9**	**-0.1**
	baz=180								
FURC	**Furnace Creek,**	**1.27**	**237**	P		**Pg**		**06 14 25.1**	**+0.2**
	baz=56,SNR=82								
FURC				S		**Sn**		**06 14 42.3**	**-0.2**
	baz=56								
SHOC	**Shoshone, Teco**	**1.40**	**205**	P		**Pb**		**06 14 27.4**	**+0.1**
	baz=24,SNR=23								
SHOC				S		**Sg**		**06 14 46.2**	**+0.7**
	baz=24								
GRAC	**Grapevine Rang**	**1.47**	**264**	P		**Pb**		**06 14 28.3**	**0.0**
	baz=83,SNR=24								
GRAC				S		**Sg**		**06 14 48.0**	**+0.4**
	baz=83								
QSM	**Queen of Sheba**	**1.61**	**222**				**Pb**	**06 14 30.1**	**-0.7**
TUQ	**Turquoise Moun**	**1.76**	**190**	S		**Sb**		**06 14 56.5**	**+0.5**
	baz=9.1								
CCUT	**Cedar City**	**1.78**	**77**				**Pg**	**06 14 35.3**	**+0.7**
LCMT	**Little Creek M**	**1.85**	**94**				**Pb**	**06 14 34.2**	**-0.7**
DAC	**Darwin (Calif)**	**1.87**	**242**				**Pg**	**06 14 38.1**	**+1.7**
PSUT	**Pine Spring**	**1.91**	**44**				**Pn**	**06 14 34.8**	**+0.8**
CGO	**Cerro Gordo**	**1.91**	**252**				**Pg**	**06 14 37.2**	**0.0**
CGO							**Sg**	**06 15 01.6**	**-0.5**
MPMC	**Manual Prospec**	**1.92**	**235**				**Pn**	**06 14 34.6**	**+0.5**
MPMC	**Manual Prospec**	**1.92**	**235**	P			**Pn**	**06 14 34.4**	**+0.2**
	baz=54,SNR=29								
MPMC				Sb			**Sg**	**06 15 02.6**	**+0.4**
	baz=54								
SZCU	**Shurtz Canyon**	**2.00**	**77**				**Pb**	**06 14 37.0**	**-0.6**
GSC	**Goldstone, Bar**	**2.13**	**209**				**Pn**	**06 14 36.0**	**-0.9**
GSC	**Goldstone, Bar**	**2.13**	**209**	S			**Sb**	**06 15 05.5**	**-1.0**
	baz=28								
TIN	**Tinemaha, Big**	**2.15**	**268**	Sb			**Sg**	**06 15 09.8**	**+0.3**
	baz=86								
KNB	**Kanab**	**2.18**	**93**				**Pn**	**06 14 39.0**	**+1.2**
GMRC	**Granite Mounta**	**2.39**	**182**	P			**Pn**	**06 14 40.7**	**+0.2**
	baz=1.6,SNR=7.9								
NV11	**Mina Array Sit**	**2.42**	**302**				**Pn**	**06 14 40.4**	**-0.6**
HEC	**Hector,Ludlow**	**2.43**	**196**	Pg			**Pg**	**06 14 46.8**	**-0.2**
	baz=14								
HEC				Sb			**Sg**	**06 15 17.6**	**-0.8**
	baz=14								
W13A	**Hualapai Mount**	**2.47**	**147**				**Pn**	**06 14 42.0**	**+0.3**
NEE2	**Needles Airpor**	**2.52**	**162**	Pg			**Pg**	**06 14 48.3**	**-0.5**
	baz=342								
NEE2				Sb			**Sg**	**06 15 20.2**	**-1.2**
	baz=342								
MLAC	**Mammoth, Mammo**	**2.66**	**281**	Sg			**Sg**	**06 15 28.5**	**+2.6**
	baz=99								
U15A	**North Rim**	**2.72**	**105**				**Pn**	**06 14 47.2**	**+2.0**
KVN	**Kaiserville**	**2.75**	**314**				**Pn**	**06 14 45.0**	**-0.6**
RYN	**Ryan**	**2.77**	**303**				**Pn**	**06 14 45.8**	**+0.1**
OMMB	**Old Mammoth Mi**	**2.79**	**280**				**Pn**	**06 14 46.1**	**-0.1**
ISA	**Isabella, Lake**	**2.80**	**238**	Pn			**Pn**	**06 14 46.5**	**+0.3**
ISA				Lg			**Pg**	**06 14 54.3**	**+0.1**
ISA	**Isabella, Lake**	**2.80**	**238**	Pg			**Pg**	**06 14 54.4**	**+0.2**
	baz=56								
MTPU	**Mount Pierson**	**2.81**	**71**	Pn			**Pn**	**06 14 47.2**	**+0.7**
TCRU	**Three Creeks R**	**2.84**	**59**				**Pn**	**06 14 47.4**	**+0.6**
MSU	**Marysvale**	**2.98**	**62**	Pn			**Pn**	**06 14 50.1**	**+1.3**
MSU							**Pg**	**06 14 56.8**	**-0.9**
IRM	**Iron Mountain**	**3.03**	**174**	Pg			**Pg**	**06 14 58.3**	**-0.3**
	baz=353								
BELC	**Belle Mtn. Jos**	**3.19**	**187**	Sb			**Sg**	**06 15 41.1**	**-1.9**
	baz=6.1								
WAKR	**Walker**	**3.35**	**294**				**Pg**	**06 15 04.6**	**-0.2**
YERR	**Yerington**	**3.43**	**303**				**Pn**	**06 14 54.1**	**-0.8**
YERR							LR	06 15 50.5	
Y12C	**Blythe**	**3.52**	**166**				**Pg**	**06 15 06.6**	**-1.3**
Y12C							LR	06 15 53.6	
ELK	**Elko**	**3.57**	**4**	Pn			**Pn**	**06 14 57.6**	**+0.7**
PFO	**Pinyon Flats O**	**3.63**	**192**	Pn			**Pn**	**06 14 58.4**	**+0.8**
XPFO	**Pion Flat**	**3.63**	**192**	Pn			**Pn**	**06 14 58.6**	**+0.9**
DUG	**Dugway, Tooele**	**3.70**	**35**				**Pg**	**06 15 10.2**	**-1.2**
WUAZ	**Wupatki**	**3.75**	**115**				**Pb**	**06 15 09.5**	**+2.1**
BGU	**Big Grassy Mou**	**4.22**	**27**	Pn			**Pn**	**06 15 06.5**	**+0.7**
X16A	**Lo Mia Camp, P**	**4.33**	**128**				**Pg**	**06 15 22.5**	**-0.9**

*IDC **10** 06:21:20.9±5.4, 30.°58S×178.°21W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.9/24, mbtmp4.1/3, Error ellipse: s-maj=205.0km s-min=51.4km az=151.0*
*NEIC **10** 06:21:39.0±0.8, 30.°5S±0.°1×178.°7W±0.°1, h136km±8km, mb4.2/7, Error ellipse: s-maj=21.9km s-min=17.4km az=165.0*
ISC 10 06:21:37.8±1.0, 30.°4S±0.°1×178.°7W±0.°2, h124km, n21, σ0s89/21, mb4.2/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.54**	**203**			**Pn**		**06 23 39.8**	**+1.4**
TUWZ	**Tuamarina**	**12.48**	**206**			**Pn**		**06 24 28.9**	**-2.2**
THZ	**Tophouse**	**13.18**	**209**			**Pn**		**06 24 40.6**	**+0.5**
KHZ	**Kahutara**	**13.48**	**205**			**Pn**		**06 24 42.9**	**-1.1**
LTZ	**Lake Taylor**	**14.29**	**208**			**P**		**06 24 57.2**	**-0.6**
STKA	**Stephens Creek**	**33.88**	**257**	P		**P**		**06 28 09.7**	**+0.9**
	2.7nm,0.4s,baz=100,slow=11,SNR=9.0								
STKA	**Stephens Creek**	**33.88**	**257**	P		**P**		**06 28 09.9**	**+1.2**
STKA				IAmb	IAmb			06 28 10.3	
	comp=Z,0.7nm,0.7s								
AS31	**Alice Springs**	**42.51**	**267**			**P**		**06 29 20.6**	**-0.6**
ASAR	**Alice Springs**	**42.51**	**267**	P		**P**		**06 29 20.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=106,slow=7.3,SNR=9.7								
WR0	**Warramunga Arr**	**43.32**	**273**	P		**P**		**06 29 27.8**	**+0.2**
WRAB	**Tennant Creek**	**43.49**	**273**	P		**P**		**06 29 28.8**	**-0.3**
WRAB				IAmb	IAmb			06 29 45.3	
	comp=Z,11nm,1.5s								
WRA	**Warramunga Ar**	**43.50**	**273**	P		**P**		**06 29 29.1**	**0.0**
	comp=Z,1.4nm,0.3s,baz=111,slow=8.1,SNR=26								
FITZ	**Fitzroy Crossi**	**51.76**	**270**	P		**P**		**06 30 31.4**	**-1.4**
FITZ				IAmb	IAmb			06 30 37.8	
	comp=Z,4.3nm,1.1s								
QSPA	**South Pole Qui**	**59.67**	**180**	P		**P**		**06 31 29.8**	**+0.9**
QSPA				IAmb	IAmb			06 31 43.8	
	comp=Z,4.2nm,1.5s								
SNAA	**Sanae**	**78.14**	**179**	P		**P**		**06 33 22.8**	**-0.1**
SNAA				IAmb	IAmb			06 33 40.8	
	comp=Z,6.9nm,1.5s								
SSPA	**Standing Stone**	**116.76**	**57**	PKPdf		**PKiKP**		**06 40 07.2**	**-0.2**
FIA1	**FINESS Array S**	**144.97**	**339**	PKPbc		**PKPbc**		**06 40 59.0**	**-0.1**
FINES	**FINESS Array B**	**144.97**	**339**	PKPbc		**PKPbc**		**06 40 59.2**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=46,slow=4.0,SNR=6.3								
NC204	**NORSAR Array S**	**148.53**	**351**	PKPab		**PKPab**		**06 41 13.1**	**-0.1**
NBO00	**NORSAR Array S**	**148.76**	**351**	PKPdf		**PKPdf**		**06 41 05.8**	**-0.2**
CSS	**Mathiatis**	**152.74**	**288**	PKPbc		**PKPbc**		**06 41

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSFR	**Montelago di S**	**0.06**	**39**	P	Pg	06 51 36.4	+0.3
SSFR				S	Sg	06 51 38.3	+0.2
SSFR				AML	AML		
	comp=E,152μm,1.1s						
SSFR				AML	AML		
	comp=N,124μm,0.5s						
ATFO	**Monte Foce - G**	**0.12**	**259**	P	Pg	06 51 37.1	+0.2
ATFO				S	Sg	06 51 39.6	+0.4
ATFO				AML	AML		
	comp=E,61μm,0.3s						
ATFO				AML	AML		
	comp=N,64μm,0.3s						
FRON	**Frontone**	**0.13**	**358**	P	Pb	06 51 37.4	-0.4
FRON				S	Sg	06 51 39.9	+0.6
FRON				AML	AML		
	comp=E,90μm,0.8s						
FRON				AML	AML		
	comp=N,119μm,0.7s						
MURB	**Monte Urbino**	**0.20**	**230**	P	Pg	06 51 38.5	+0.5
MURB				S	Sb	06 51 41.9	-0.8
MURB				AML	AML		
	comp=E,248μm,0.3s						
MURB				AML	AML		
	comp=N,272μm,0.2s						
PIEI	**Pieia**	**0.20**	**316**	P	Pg	06 51 38.3	+0.3
PIEI				S	Sg	06 51 41.9	+0.7
PIEI				AML	AML		
	comp=E,122μm,0.2s						
PIEI				AML	AML		
	comp=N,99μm,0.2s						
PIEI				AML	AML		
	comp=N,99μm,0.2s						
SNTG	**Esanatoglia**	**0.20**	**131**	P	Pg	06 51 38.3	+0.3
SNTG				S	Sb	06 51 42.0	-0.8
SNTG				AML	AML		
	comp=E,21μm,1.4s						
SNTG				AML	AML		
	comp=N,48μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.21**	**198**	P	Pg	06 51 38.5	+0.3
ATCC				S	Sb	06 51 42.4	-0.7
ATCC				AML	AML		
	comp=E,94μm,0.5s						
ATCC				AML	AML		
	comp=N,92μm,0.2s						
ATCC				AML	AML		
	comp=E,94μm,0.5s						
ATCC				AML	AML		
	comp=N,92μm,0.2s						
ATVO	**AVT- Monte Val**	**0.24**	**268**	P	Pg	06 51 38.9	+0.3
ATVO				AML	AML		
	comp=E,129μm,0.5s						
ATVO				AML	AML		
	comp=N,104μm,0.1s						
ATVO				AML	AML		
	comp=N,104μm,0.1s						
NARO	**Abbazia di Nar**	**0.25**	**334**	P	Pg	06 51 39.1	+0.4
NARO				S	Sb	06 51 43.4	-0.7
NARO				AML	AML		
	comp=E,47μm,0.2s						
NARO				AML	AML		
	comp=N,29μm,0.3s						
FDMO	**Fiordimonte**	**0.44**	**144**	P	Pg	06 51 42.1	-0.1
FDMO				S	Sb	06 51 49.1	-0.4
CPGN	**Carpegna, Ital**	**0.51**	**324**	S	Sg	06 51 49.0	-1.3

*BEO **10** 06:53:02.5±0.3,46.19°N×16.93°E,h18km±4km,ML2.4/10*
*BUD **10** 06:53:04.9,45.98°N×16.96°E,h12km±3km,ML2.5/1*
*RHSSO **10** 06:53:05.9±0.3,45.98°N×16.97°E,h9km±2km,ML2.5/14*

ISC 10 06:53:04.9±1.0,46°01'N±0'02×16°97'E±0'02,h11km±8km, n76,σ1°22/129,8C-9D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KALN	**Kalnik**	**0.38**	**289**	*i* Pg	**Pg**	**06 53 12.3**	**-0.1**
KALN				S	**Sg**	**06 53 17.4**	**-0.1**
MOSL	**Moslavina**	**0.42**	**201**	*i* Pg	**Pg**	**06 53 12.9**	**-0.3**
MOSL				S	**Sg**	**06 53 17.9**	**-1.0**
BEHE	**Becsehely**	**0.48**	**344**⇓	*e*Pg	**Pb**	**06 53 15.5**	**+0.1**
BEHE				⇓*e*Sg	**Sb**	**06 53 26.1**	**+3.7**
BEHE	**Becsehely**	**0.48**	**344**⇓	*i*Pg	**Pg**	**06 53 15.0**	**+0.7**
BEHE				*e*Sg	**Sb**	**06 53 23.4**	**+1.0**
KOGS	**Kog**	**0.67**	**312**	*i* Pg	**Pg**	**06 53 18.1**	**+0.3**
KOGS				*i* Sg	**Sb**	**06 53 27.9**	**+0.2**
KOGS	**Kog**	**0.67**	**312**	*i* Pg	**Pg**	**06 53 18.1**	**+0.3**
KOGS				*i* Sg	**Sb**	**06 53 27.9**	**+0.2**
	comp=Z,221nm,0.2s						
PTJ	**Puntijarka**	**0.70**	**262**	*e*Pg	**Pg**	**06 53 18.4**	**-0.1**
PTJ				Sg	**Sg**	**06 53 28.2**	**+0.4**
ZAG	**Zagreb**	**0.71**	**256**	*e*Pg	**Pb**	**06 53 19.0**	**-0.9**
ZAG				Sg	**Sb**	**06 53 28.6**	**-0.3**
ZAG	**Zagreb**	**0.71**	**256**	*e*Pg	**Pb**	**06 53 19.1**	**-0.1**
ZAG				*e*Sg	**Sb**	**06 53 29.3**	**+0.4**
CRES	**Cresnjev**	**1.07**	**261**	*i* Pn	**Pb**	**06 53 24.7**	**-0.6**
CRES				*e*Sn	**Sn**	**06 53 39.9**	**-0.7**
CRES	**Cresnjev**	**1.07**	**261**	*i* Pg	**Pb**	**06 53 24.8**	**-0.6**
CRES				*e*Sg	**Sn**	**06 53 39.9**	**-0.7**
	comp=Z,49nm,0.2s						
CRES	**Cresnjev**	**1.07**	**261**⇑	*i*Pg	**Pb**	**06 53 24.5**	**-0.9**
CRES				*e*Sg	**Sg**	**06 53 39.6**	**+0.2**
TIH	**Tihany**	**1.10**	**35**	*e*Pn	**Pb**	**06 53 24.7**	**-1.2**
TIH				*e*Sn	**Sg**	**06 53 40.7**	**+0.4**
OZLJ	**Ozalj**	**1.12**	**250**	*i* Pg	**Pb**	**06 53 25.8**	**-0.4**
OZLJ				Sg	**Sb**	**06 53 40.3**	**-0.5**
MORH	**Mrgy, Hungar**	**1.18**	**79**⇑	*e*Pn	**Pn**	**06 53 25.9**	**-1.4**
MORH			⇑	*e*Sn	**Sb**	**06 53 42.2**	**-0.4**
MORH	**Mrgy, Hungar**	**1.18**	**79**⇑	*i*Pg	**Pn**	**06 53 27.1**	**-0.2**
MORH				*e*Sg	**Sn**	**06 53 44.0**	**+0.6**
MPLH	**Magyarpolny**	**1.23**	**19**⇓	*e*Pn	**Pg**	**06 53 28.6**	**+0.1**
MPLH			⇓	*e*Sn	**Sg**	**06 53 46.3**	**+1.8**
BLY	**Banja Luka**	**1.27**	**173**	*e*Pg	**Pb**	**06 53 28.5**	**-0.3**
BLY				*e*Sg	**Sg**	**06 53 47.2**	**+1.5**
BLY	**Banja Luka**	**1.27**	**173**	*i* Pn	**Pb**	**06 53 28.5**	**-0.3**
BLY	**Banja Luka**	**1.27**	**173**	⇑P	**Pb**	**06 53 28.5**	**-0.3**
BLY				⇑S	**Sb**	**06 53 44.4**	**-0.6**
BLY	**Banja Luka**	**1.27**	**173**	*e*Pg	**Pb**	**06 53 28.4**	**-0.3**
BLY				*e*Sg	**Sn**	**06 53 45.3**	**-0.2**
SOKA	**Soboth**	**1.50**	**297**	Pn	**Pn**	**06 53 31.2**	**-0.5**
SOKA				Sn	**Sn**	**06 53 51.0**	**-0.3**
SOKA	**Soboth**	**1.50**	**297**	*i* Pn	**Pn**	**06 53 31.2**	**-0.5**
	comp=Z,1.4nm,0.2s						
SOKA				*i* Sn	**Sn**	**06 53 51.0**	**-0.3**
	comp=Z,4.1nm,0.3s						
DOB	**Doboj**	**1.50**	**148**	*e*Sg	**Sg**	**06 53 52.5**	**-0.8**
ARSA	**Arzberg**	**1.59**	**322**	Pn	**Pn**	**06 53 33.0**	**+0.1**
ARSA				Sn	**Sn**	**06 53 52.5**	**-1.1**
ARSA	**Arzberg**	**1.59**	**322**	*i* Pn	**Pn**	**06 53 33.1**	**+0.1**
	comp=Z,2.0nm,0.2s						
ARSA				*i* Sn	**Sn**	**06 53 52.5**	**-1.1**
	comp=Z,12nm,0.3s						
MGRS	**Mrkonjic Grad**	**1.59**	**177**	*e*Pn	**Pn**	**06 53 33.1**	**+0.1**
MGRS				*e*Sn	**Sb**	**06 53 53.9**	**-0.5**
CSKK	**Cskako**	**1.62**	**33**⇓	*e*Pn	**Pg**	**06 53 36.2**	**+0.2**
CSKK			⇓	*e*Sn	**Sg**	**06 53 58.1**	**+1.0**
LJU	**Ljubljana**	**1.70**	**272**	*e*Sn	**Sb**	**06 53 57.7**	**+0.2**
UDBI	**Udbina**	**1.71**	**210**	*e*Pn	**Pb**	**06 53 35.5**	**-0.7**
UDBI				Sn	**Sn**	**06 53 56.5**	**+0.1**
OBKA	**Obir**	**1.75**	**288**	Pn	**Pn**	**06 53 35.6**	**+0.4**
OBKA				Sn	**Sg**	**06 54 00.6**	**-0.6**
OBKA	**Obir**	**1.75**	**288**	*i* Pn	**Pn**	**06 53 35.7**	**+0.4**
	comp=Z,0.5nm,0.1s						
OBKA				*i* Sn	**Sg**	**06 54 00.6**	**-0.6**
	comp=Z,9.8nm,0.3s						
CEY	**Cerknica**	**1.79**	**262**	*e*Pn	**Pn**	**06 53 31.9**	**-3.9**
CEY				*e*Sg	**Sb**	**06 53 58.2**	**-0.3**
CEY	**Cerknica**	**1.79**	**262**	*e*Pn	**Pb**	**06 53 37.3**	**-0.5**
CEY				*e*Sn	**Sb**	**06 54 00.2**	**0.0**
RIY	**Rijeka**	**1.87**	**249**	*e*Sg	**Pn**	**06 53 35.2**	**-1.6**
RIY	**Rijeka**	**1.87**	**249**	*e*Pn	**Sg**	**06 54 04.1**	**-0.9**
RIY	**Rijeka**	**1.87**	**249**	*e*Sn	**Sb**	**06 54 01.7**	**-0.7**
KIJV	**Kijevo**	**2.04**	**191**	*e*Pn	**Pn**	**06 53 39.6**	**+0.4**
CONA	**Conrad Observa**	**2.06**	**339**	Pn	**Pn**	**06 53 39.5**	**0.0**
CONA				Sn	**Sg**	**06 54 11.7**	**+0.4**
CONA	**Conrad Observa**	**2.06**	**339**	*i* Pn	**Pn**	**06 53 39.6**	**0.0**
	comp=Z,0.9nm,0.2s						
CONA				*i* Sg	**Sg**	**06 54 11.7**	**+0.4**
NVLJ	**Novalja**	**2.07**	**226**	*e*Pn	**Pn**	**06 53 40.0**	**+0.6**
NVLJ				Sn	**Sn**	**06 54 06.2**	**+1.1**
FRGS	**Fruska Gora**	**2.17**	**112**	*e*Pn	**Pn**	**06 53 38.2**	**-2.7**
FRGS				*e*Sg	**Sg**	**06 54 14.9**	**+0.3**
FRGS	**Fruska Gora**	**2.17**	**112**	*e*Sn	**Sn**	**06 54 09.1**	**+1.3**
MORI	**Morici**	**2.32**	**203**	*e*Pn	**Pn**	**06 53 44.3**	**+1.4**
MORI				Sn	**Sn**	**06 54 13.0**	**+1.6**
TEKS	**Tekeris**	**2.32**	**128**	*e*Sn	**Sn**	**06 54 12.2**	**+0.7**
MODS	**Modra-Piesok**	**2.38**	**5**	*e*Pn	**Pn**	**06 53 44.5**	**+0.7**
MODS	**Modra-Piesok**	**2.38**	**5**	*e*PN	**Pn**	**06 53 44.5**	**+0.7**
HAPS	**Han Pijesak,Bl**	**2.38**	**143**	*e*Pn	**Pn**	**06 53 42.2**	**-1.7**
HAPS				*e*Sn	**Sn**	**06 54 13.3**	**+0.2**
HAPS	**Han Pijesak,Bl**	**2.38**	**143**	*e*Pn	**Pn**	**06 53 44.6**	**+0.7**
HAPS				*e*Sn	**Sn**	**06 54 13.4**	**+0.3**
MYKA	**Terra Mystica**	**2.39**	**286**	*i* Sg	**Sg**	**06 54 23.1**	**+1.5**
	comp=Z,1.7nm,0.4s						
DUGI	**Dugi Otok**	**2.43**	**215**	*i* Pn	**Pn**	**06 53 45.0**	**+0.5**
DUGI				Sn	**Sn**	**06 54 15.5**	**+1.4**
BRJN	**Brijuni**	**2.52**	**245**	*e*Pn	**Pn**	**06 53 44.6**	**-1.1**
ZIRJ	**Zirje**	**2.54**	**202**	*e*Pn	**Pn**	**06 53 47.5**	**+1.6**
ZIRJ				Sn	**Sn**	**06 54 18.3**	**+1.7**
MOA	**Molln**	**2.61**	**316**	*e*Pg	**Pn**	**06 53 47.8**	**+0.8**
MOA				*e*Sg	**Sn**	**06 54 21.0**	**+2.3**
MOA	**Molln**	**2.61**	**316**	Pn	**Pn**	**06 53 46.7**	**-0.3**
MOA				Sn	**Sn**	**06 54 20.3**	**+1.6**
MOA	**Molln**	**2.61**	**316**	*i* Pn	**Pn**	**06 53 46.7**	**-0.3**
	comp=Z,1.0nm,0.2s						
MOA				*i* Sn	**Sn**	**06 54 20.3**	**+1.6**
	comp=Z,2.0nm,0.2s						
MAKA	**Makarska**	**2.72**	**179**	*e*Pn	**Pn**	**06 53 50.4**	**+1.9**
MAKA				Sn	**Sb**	**06 54 23.8**	**-3.0**
KOLL	**Kolacno**	**2.75**	**20**	*e*PN	**Pn**	**06 53 48.7**	**-0.2**
KOLL				*e*SN	**Sn**	**06 54 19.6**	**-2.5**
BBLS	**Lazići**	**2.75**	**140**	*e*Pn	**Pn**	**06 53 49.0**	**+0.1**
BBLS				*e*Sg	**Sg**	**06 54 35.7**	**+2.4**
BBLS	**Lazići**	**2.75**	**140**	*e*Pn	**Pn**	**06 53 49.1**	**+0.1**
BBLS				*e*Sn	**Sn**	**06 54 23.3**	**+1.1**
PSZ	**Piszkesteto**	**2.77**	**45**	*i* Pn	**Pn**	**06 53 44.9**	**-4.3**
PSZ	**Piszkesteto**	**2.77**	**45**	⇑P	**Pn**	**06 53 44.9**	**-4.3**
VYHS	**Vyhne**	**2.79**	**26**	*e*Pn	**Pn**	**06 53 49.6**	**+0.1**
VYHS				*e*Sn	**Sn**	**06 54 20.9**	**-2.3**
VYHS	**Vyhne**	**2.79**	**26**	*e*PN	**Pn**	**06 53 49.6**	**+0.1**
VYHS				*e*PG	**Pg**	**06 53 59.7**	**+1.3**
VYHS				*e*SN	**Sn**	**06 54 20.9**	**-2.3**
HVAR	**Hvar**	**2.85**	**188**	*e*Pn	**Pn**	**06 53 51.5**	**+1.2**
DIVS	**Divibare**	**2.87**	**131**	*e*Pn	**Pn**	**06 53 50.2**	**-0.4**
DIVS				*e*Sg	**Sg**	**06 54 38.4**	**+1.3**
DIVS	**Divibare**	**2.87**	**131**	*e*Pn	**Pn**	**06 53 52.1**	**+1.5**
DIVS				*e*Sn	**Sn**	**06 54 25.8**	**+0.7**
KRUC	**Moravsky**	**3.08**	**353**	*e*PN	**Pn**	**06 53 53.3**	**-0.1**
STON	**Ston**	**3.18**	**170**	*e*Pn	**Pn**	**06 53 56.4**	**+1.6**
STON	**Ston**	**3.18**	**170**	*e*Pn	**Pn**	**06 53 55.6**	**+0.9**
STON				*e*Sn	**Sn**	**06 54 32.9**	**+0.3**
VRAC	**Vranov**	**3.31**	**356**	*e*PN	**Pn**	**06 53 55.9**	**-0.7**
IVAS	**Ivanjica**	**3.32**	**136**	*e*Pn	**Pn**	**06 53 55.6**	**-1.2**
IVAS				*e*Sg	**Sg**	**06 54 52.0**	**+0.4**
GRUS	**Gruza**	**3.40**	**127**	*e*Pn	**Pn**	**06 53 57.8**	**0.0**
GRUS				*e*Sg	**Sg**	**06 54 55.0**	**+0.9**
MDVR	**Moldovita**	**3.56**	**108**⇓	*i*Pn	Pn	06 53 53.9	-6.2
MDVR	**Moldovita**	**3.56**	**108**	⇓P	Pn	06 53 53.9	-6.1
BLKB	**Belogradchik**	**4.71**	**118**	⇑S	**Pn**	**06 54 15.1**	**-0.8**

*NIED **10** 07:14:00,32.90°N×131.30°E,h122km,Mw3.9 Best double couple: M0 7.03000×10^14 NP1:ϕs190.00000°, δ55.00000°,λ92.00000°. NP2:ϕs6.00000°,δ36.00000°, λ87.00000°.*
*JMA **10** 07:14:28.8±0.1,32.93°N×131.36°E,h14km±1km,M3.7 Broadband fault plane solution: P waves. NP1: ϕs329.00000°,δ36.00000°,λ45.00000°. NP2: ϕs200.00000°,δ65.00000°,λ118.00000°. Principal axes: T Plg60.0000°, Azm151.0000°; N Plg25.0000°, Azm8.0000°; P Plg16.0000°, Azm270.0000°;*
JMA Felt I J1.
*IDC **10** 07:14:28.6±0.7,32.87°N×131.31°E,h119km±7km,mb3.3/7, mb1 3.5/10,mb1mx3.2/54,mbtmp3.7/10 Error ellipse: s-maj=24.3km s-min=12.7km az=85.0*

ISC 10 07:14:28.7±0.7,32°88N±0'05×131°41E±0'05,h117km±5km, n20,σ0°70/31,mb3.8/7,4C-3D,Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKIT	**Kitakata**	**0.26**	**171**	⇑P	**Pn**	**07 14 45.2**	**+0.1**
JKIT				S	**Sn**	**07 14 57.6**	**+0.2**
JUS	**Usuki**	**0.34**	**57**	⇑P	**Pn**	**07 14 45.5**	**+0.1**
JUS				S	**Sn**	**07 14 57.7**	**-0.3**
JNU	**Nakatsue**	**0.51**	**299**	P	Pn	**07 14 46.0**	**-0.4**
	baz=92,slow=3.8						
JNU				S	**Sn**	**07 14 58.9**	**-0.8**
	92nm,0.3s,baz=135,slow=20,SNR=27						
JIU3	**Izumi3**	**0.60**	**237**	⇑P	**Pn**	**07 14 46.9**	**-0.1**
JIU3				S	**Sn**	**07 15 00.1**	**-0.6**
JTZ	**Takazaki**	**1.01**	**196**	⇑P	**Pn**	**07 14 51.0**	**+0.4**
JTZ				S	**Sn**	**07 15 07.6**	**+0.5**
UWA2	**Uwa jima 2**	**1.07**	**72**	⇓P	**Pn**	**07 14 50.9**	**-0.3**
UWA2				S	**Sn**	**07 15 07.8**	**-0.5**
JNA	**Nagahama**	**1.12**	**53**	S	**Sn**	**07 15 08.5**	**-0.6**
JTO	**Tosashimizu**	**1.18**	**91**	⇓P	**Pn**	**07 14 51.8**	**-0.4**
JTO				S	**Sn**	**07 15 09.5**	**-0.6**
JSJ	**Shimokoshiki**	**1.87**	**231**	⇓P	**Pn**	**07 14 59.8**	**-0.6**
JHT	**Toyohira**	**1.97**	**25**	P	**Pn**	**07 15 01.8**	**+0.2**
JHT				S	**Sn**	**07 15 25.0**	**-1.8**
KSRS	**Korea Array**	**5.38**	**329**	P	**Pn**	**07 15 47.6**	**+1.0**
	0.8nm,0.3s,baz=148,slow=14,SNR=28						
MJAR	**Matsushiro Arr**	**6.69**	**55**	P	**Pn**	**07 16 05.8**	**+1.4**
	0.3nm,0.3s,baz=245,slow=13,SNR=9.5						
KLR	**Kul'dur**	**16.34**	**1**	P	**P**	**07 18 12.7**	**+0.8**
	0.2nm,0.3s,baz=176,slow=8.4,SNR=4.8						
SONM	**Songino Array**	**24.07**	**316**	P	**P**	**07 19 32.6**	**-0.7**
	0.3nm,0.4s,baz=132,slow=9.6,SNR=3.3						
SONM				pP	**pP**	**07 19 58.3**	**+0.7**
	0.4nm,0.6s,baz=129,slow=11,SNR=2.6						
WRA	**Warramunga Arr**	**52.60**	**177**	P	**P**	**07 23 29.9**	**-0.7**
	1.3nm,0.7s,baz=355,slow=8.1,SNR=7.2						
ASAR	**Alice Springs**	**56.28**	**177**	P	**P**	**07 23 56.7**	**-0.5**
	0.7nm,0.6s,baz=9.5,slow=12,SNR=19						
ASAR				pP	**pP**	**07 24 25.5**	**+0.3**
	0.4nm,0.6s,baz=9.6,slow=12,SNR=2.8						
ILAR	**Eielson Array**	**57.30**	**30**	P	**P**	**07 24 04.0**	**0.0**
	0.6nm,0.7s,baz=267,slow=6.5,SNR=11						
INK	**Inuvik**	**61.71**	**25**	P	**P**	**07 24 34.1**	**0.0**
	1.2nm,0.8s,baz=300,slow=6.9,SNR=5.3						
STKA	**Stephens Creek**	**65.13**	**170**	P	**P**	**07 24 57.2**	**+0.2**
	1.3nm,0.7s,baz=4.5,slow=5.1,SNR=3.4						
STKA				pP	**pP**	**07 25 26.6**	**+1.0**
	0.6nm,0.2s,baz=356,slow=15,SNR=2.1						
YKA	**Yellowknife Ar**	**71.35**	**27**	P	**P**	**07 25 35.0**	**-0.5**
	0.2nm,0.7s,baz=303,slow=6.2						

IDC 10 07:15:08.2±7.8,17°06S×168°49E,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.6/36,mbtmp3.6/3,Error ellipse: s-maj=428.8km s-min=38.8km az=145.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**33.02**	**253**	P	P	07 21 45.4	-0.1
	0.3nm,0.6s,baz=80,slow=8.5,SNR=6.1						
ILAR	**Eielson Array**	**88.38**	**18**	P	P	07 28 01.4	-0.2
	0.4nm,0.8s,baz=235,slow=5.1,SNR=4.2						
YKA	**Yellowknife Ar**	**99.07**	**27**	P	Pdif	07 28 50.7	0.0
	0.1nm,0.5s,baz=255,slow=4.5,SNR=4.6						

*SOF **10** 07:20:42.2,39.32°N×28.09°E,h2km,MD3.9*
*ATH **10** 07:20:45.7,39.42°N×27.97°E,h22km±4km,ML3.7/5,Error ellipse: s-maj=5.3km s-min=1.6km az=248.0*
*ISK **10** 07:20:46.6,39.46°N×27.96°E,h12km,ML4.0/53*
*DDA **10** 07:20:46.5,39.45°N×27.96°E,h15km±1km,MW4.0*
*THE **10** 07:20:48.7,39.43°N×28.02°E,h23km±3km,ML3.7/9,Error ellipse: s-maj=3.0km s-min=0.7km az=99.0*
*NEIC **10** 07:20:49.5±1.9,39.44°N±0.05°×28.00°E±0.08,h23km±13km, Error ellipse: s-maj=9.3km s-min=6.6km az=58.0*

ISC 10 07:20:46.9±0.8,39°44N±0'01×27°96E±0'01,h16km±6km, n178,σ0°96/224,23C-12D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STEP	**BALIKESIR_Sava**	**0.20**	**251**⇑	*i*P	**Pg**	**07 20 51.6**	**-0.1**
STEP				IAML		07 20 55.0	
	comp=N,28μm,0.6s						
STEP				IAML		07 20 55.0	
	comp=E,40μm,0.7s						
STEP				*i* S	**Sb**	**07 20 55.1**	**-0.8**
BALB	**Balikesir**	**0.21**	**342**	PG	**Pg**	**07 20 51.7**	**-0.1**
BALB				SG	**Sg**	**07 20 54.9**	**-0.1**
BALB	**Balikesir**	**0.21**	**342**	Pg	**Pb**	**07 20 55.2**	**+2.8**
BALY	**Balya**	**0.40**	**318**⇓	*i*P	**Pg**	**07 20 54.7**	**-0.3**
BALY				*i* S	**Sg**	**07 21 00.8**	**+0.2**
BALY				IAML		07 21 09.0	
	comp=N,5μm,0.5s						
DURS	**Dursunbey**	**0.42**	**68**⇑	*i*P	**Pg**	**07 20 55.0**	**-0.5**
DURS				IAML		07 21 01.0	
	comp=N,12μm,0.2s						
DURS				IAML		07 21 01.0	
	comp=E,23μm,0.2s						
DURS				*i* S	**Sg**	**07 21 01.4**	**0.0**
AKHS	**Akhisar**	**0.58**	**192**⇑	*i*P	**Pb**	**07 20 58.3**	**-0.4**
AKHS				*i* S	**Sb**	**07 21 07.2**	**+0.6**
AKS	**Akhisar**	**0.58**	**192**	PG	**Pb**	**07 20 58.5**	**-0.2**
AKS				SG	**Sb**	**07 21 07.4**	**+0.8**
GONE	**Gonen-Balikesi**	**0.64**	**340**	PG	**Pg**	**07 20 59.1**	**-0.4**
GONE				SG	**Sg**	**07 21 08.1**	**+0.1**
GOMA	**Golmarmara-Man**	**0.74**	**183**	PG	**Pn**	**07 21 02.6**	**-0.1**
GOMA				SG	**Sn**	**07 21 12.7**	**-0.8**
ZEDA	**zmir-Bergama**	**0.84**	**236**⇑	*i*P	**Pg**	**07 21 03.0**	**-0.2**
ZEDA				*i* S	**Sn**	**07 21 16.6**	**+0.6**
ZEDA				IAML		07 21 17.0	
	comp=E,2μm,0.4s						
ZEDA				IAML		07 21 19.0	
	comp=N,2μm,0.6s						
SMAA	**Simav-Kutahya**	**0.86**	**113**	PG	**Pn**	**07 21 04.2**	**-0.3**
SMAA				SG	**Sn**	**07 21 16.5**	**-0.2**
KNL	**Balıkesir**	**0.89**	**338**⇓	*i*P	**Pb**	**07 21 03.5**	**-0.5**
KNL				*i* S	**Sb**	**07 21 15.5**	**-0.1**
DKL	**Dikili**	**0.90**	**246**	PG	**Pn**	**07 21 04.4**	**-0.5**
EDC	**Edincik**	**0.91**	**355**	PG	**Pb**	**07 21 03.9**	**-0.4**
MANT	**Manisa**	**1.06**	**154**		**Pg**	**07 21 07.5**	**+0.1**
MANT	**Manisa**	**1.06**	**154**⇓	*i*P	**Pg**	**07 21 07.5**	**+0.1**
MANT				*i* S	**Sg**	**07 21 21.0**	**-0.3**
MANT				IAML		07 21 23.0	
	comp=N,2μm,0.4s						
MANT				IAML		07 21 23.0	
	comp=E,3μm,0.4s						
SHAP	**Saphane-Kutahy**	**1.06**	**113**	PG	**Pg**	**07 21 07.9**	**+0.4**
KRBG	**Karabiga-Canak**	**1.08**	**332**	PG	**Pb**	**07 21 06.6**	**-0.6**
USAK	**Uak-Merkez**	**1.10**	**131**⇓	*i*P	**Pg**	**07 21 08.0**	**-0.1**
USAK				*i* S	**Sn**	**07 21 22.7**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**1.13**	**286**⇓	*i*P	**Pn**	**07 21 08.0**	**-0.2**
BAYC				*i* S	**Sn**	**07 21 23.2**	**-0.2**
BAYC				IAML		07 21 25.0	
	comp=N,3μm,0.4s						
BAYC				IAML		07 21 26.0	
	comp=E,3μm,0.4s						
ULDT	**Uludag**	**1.14**	**52**⇑	*i*P	**Pb**	**07 21 08.0**	**-0.4**
ULDT				*i* S	**Sg**	**07 21 24.1**	**+0.2**
ULDT				IAML		07 21 25.0	
	comp=N,4μm,0.3s						
ULDT				IAML		07 21 27.0	
	comp=E,3μm,0.4s						
TVSB	**Tavsanli**	**1.16**	**89**	PN	**Pb**	**07 21 08.8**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.16**	**37**	PN	**Pn**	**07 21 08.6**	**+0.1**
MDNY				SN	**Sg**	**07 21 24.7**	**+0.1**
MRMT	**Marmara Adasi**	**1.19**	**346**	PN	**Pb**	**07 21 09.2**	**0.0**
GEDZ	**Gediz**	**1.19**	**109**	PN	**Pg**	**07 21 10.0**	**+0.1**
FOCM	**Foa**	**1.21**	**233**	PN	**Pg**	**07 21 09.6**	**-0.6**
GDZ	**Gediz**	**1.23**	**106**⇓	*i*P	**Pg**	**07 21 10.3**	**-0.3**
GDZ				*i* S	**Sg**	**07 21 26.9**	**+0.1**
GDZ				IAML		07 21 28.0	
	comp=E,1μm,0.3s						
GDZ				IAML		07 21 29.0	
	comp=N,977nm,0.7s						
IGD	**Bursa**	**1.26**	**49**⇑	*i*P	**Pb**	**07 21 10.1**	**-0.1**
IGD				*i* S	**Sn**	**07 21 27.1**	**+0.7**
IGD				IAML		07 21 29.0	
	comp=E,1μm,0.2s						
IGD				IAML		07 21 30.0	
	comp=N,1μm,0.2s						
BLCB	**Balcova**	**1.28**	**215**	PN	**Pg**	**07 21 11.5**	**-0.1**
LPK	**Lapseki**	**1.31**	**315**	PN	**Pb**	**07 21 11.0**	**-0.2**
ARMT	**Armutlu**	**1.31**	**31**	PN	**Pn**	**07 21 10.9**	**+0.2**
EZN	**Ezine**	**1.32**	**287**	P	**Pb**	**07 21 11.2**	**-0.1**
EZN				S	**Sg**	**07 21 28.7**	**-0.9**
	comp=N,5μm,0.5s						
EZN	**Ezine**	**1.32**	**287**	PN	**Pb**	**07 21 11.6**	**+0.3**
PRK	**Paraskevi**	**1.33**	**262**	P	**Pg**	**07 21 12.1**	**-0.4**
PRK				S	**Sg**	**07 21 29.8**	**0.0**
	comp=N,8μm,0.7s						
PRK	**Paraskevi**	**1.33**	**262**	P	**Pb**	**07 21 11.4**	**-0.1**
PRK				S

	comp=E,1888μm,0.9s							
CHOS	**Chios island**	**1.82**	**235**		PN	**Pn**	**07 21 17.9**	**+0.2**
GCAM	**G?zelcaml?**	**1.83**	**198**		PN	**Pn**	**07 21 17.9**	**+0.2**
GCAM	**G?zelcaml?**	**1.83**	**198**	*i*	P	**Pn**	**07 21 18.0**	**+0.3**
GCAM				*i*	S	**Sg**	**07 21 47.3**	**+1.3**
CTKS	**Kestanelik-??a**	**1.84**	**13**		PN	**Pn**	**07 21 17.9**	**+0.1**
BGKT	**Bogazkoy**	**1.84**	**19**		PN	**Pn**	**07 21 18.4**	**+0.5**
HRT	**Hereke**	**1.90**	**43**		PN	**Pn**	**07 21 18.6**	**-0.1**
AFYO	**Afyonkarahisar**	**1.93**	**109**	*i*	P	**Pb**	**07 21 20.9**	**-0.9**
AFYO				*i*	S	**Sg**	**07 21 50.2**	**+1.1**
AFYO					IAML		07 21 54.0	
	comp=N,839nm,0.7s							
AFYO					IAML		07 21 55.0	
	comp=E,1μm,0.6s							
SMG	**Samos**	**1.94**	**207**		P	**Pn**	**07 21 19.6**	**+0.3**
SMG					S	**Sn**	**07 21 43.4**	**0.0**
	comp=E,848nm,0.5s							
SMG	**Samos**	**1.94**	**207**		P	**Pn**	**07 21 19.7**	**+0.3**
BORA	**Eskisehir**	**1.97**	**76**		PN	**Pn**	**07 21 20.7**	**+0.9**
BORA	**Eskisehir**	**1.97**	**76**	*i*	P	**Pn**	**07 21 20.6**	**+0.9**
BORA				*i*	S	**Sn**	**07 21 45.2**	**+1.1**
KLYT	**Kilyos**	**1.99**	**24**	⇑	P	**Pb**	**07 21 22.0**	**-0.6**
KLYT	**Kilyos**	**1.99**	**24**	⇑	S	**Sn**	**07 21 39.6**	**-4.8**
KLYT	**Kilyos**	**1.99**	**24**		PN	**Pn**	**07 21 20.4**	**+0.6**
ALN	**Alexandroupoli**	**2.06**	**315**		P	**Pn**	**07 21 21.4**	**+0.5**
ALN					S	**Sn**	**07 21 47.1**	**+0.7**
	comp=E,398nm,0.4s							
ALN	**Alexandroupoli**	**2.06**	**315**		P	**Pn**	**07 21 21.5**	**+0.5**
ALN					S	**Sb**	**07 21 48.9**	**-0.6**
ALN					AML	AML	07 21 55.1	
	comp=E,596μm,0.5s							
ALN					AML	AML	07 21 56.3	
	comp=N,917μm,0.5s							
ALN	**Alexandroupoli**	**2.06**	**315**		PN	**Pn**	**07 21 21.5**	**+0.5**
ALN	**Alexandroupoli**	**2.06**	**315**			**Pn**	**07 21 21.5**	**+0.5**
GEYV	**SAKARYA_Geyve**	**2.07**	**59**	*i*	P	**Pn**	**07 21 21.6**	**+0.5**
GEYV				*i*	S	**Sg**	**07 21 54.4**	**+0.8**
KZIL	**AFYON_Kizioren**	**2.07**	**124**	*i*	P	**Pb**	**07 21 22.9**	**-1.3**
KZIL				*i*	S	**Sg**	**07 21 55.9**	**+2.3**
TAVA	**DENIZLI_Tavas**	**2.11**	**159**	*i*	P	**Pn**	**07 21 22.5**	**+0.8**
TAVA				*i*	S	**Sn**	**07 21 48.8**	**+1.1**
SMTH	**Samothraki Isl**	**2.13**	**300**		P	**Pn**	**07 21 22.5**	**+0.6**
SMTH					S	**Sn**	**07 21 49.2**	**+1.1**
	comp=N,640nm,0.4s							
SMTH	**Samothraki Isl**	**2.13**	**300**		P	**Pn**	**07 21 22.9**	**+1.0**
SMTH					AML	AML	07 21 55.0	
	comp=N,1357μm,0.4s							
SMTH					AML	AML	07 21 55.4	
	comp=E,1206μm,0.5s							
SILT	**Sile**	**2.14**	**36**		PN	**Pn**	**07 21 22.5**	**+0.6**
SRCK	**Saricakaya, Es**	**2.14**	**73**		PN	**Pn**	**07 21 22.9**	**+1.0**
SRCK	**Saricakaya, Es**	**2.14**	**73**	*i*	P	**Pn**	**07 21 22.9**	**+1.0**
SRCK				*i*	S	**Sg**	**07 21 56.0**	**+0.4**
SPNC	**Sapanca-Adapaz**	**2.19**	**55**		PN	**Pn**	**07 21 23.2**	**+0.6**
GULT	**Gulveren**	**2.20**	**62**		PN	**Pb**	**07 21 25.9**	**-0.4**
SHUT	**Suhut-Afyon**	**2.20**	**113**		PN	**Pn**	**07 21 24.6**	**+1.6**
SAUV	**Serdivan-Sakar**	**2.23**	**54**		PN	**Pn**	**07 21 24.0**	**+0.8**
BASM	**Basmaki-Afyon**	**2.23**	**132**		PN	**Pn**	**07 21 24.4**	**+1.1**
YER	**Yerkesik**	**2.32**	**174**		P	**Pn**	**07 21 25.1**	**+0.6**
YER					S	**Sn**	**07 21 52.1**	**-0.6**
YER	**Yerkesik**	**2.32**	**174**		PN	**Pn**	**07 21 26.0**	**+1.5**
KAND	**Kocaeli-Kandir**	**2.37**	**45**	*i*	P	**Pn**	**07 21 25.5**	**+0.3**
CIFT	**Cifteler, Eski**	**2.40**	**91**		PN	**Pn**	**07 21 26.7**	**+1.0**
CIFT	**Cifteler, Eski**	**2.40**	**91**	*i*	P	**Pn**	**07 21 26.9**	**+1.2**
CIFT					IAML		07 22 08.0	
	comp=N,930nm,0.4s							
CIFT					IAML		07 22 14.0	
	comp=E,698nm,0.6s							
KIRK	**Kirklareli**	**2.43**	**345**	*i*	P	**Pn**	**07 21 26.2**	**+0.2**
BODT	**Bodrum**	**2.43**	**192**		P	**Pn**	**07 21 25.9**	**-0.1**
BODT	**Bodrum**	**2.43**	**192**		PN	**Pn**	**07 21 27.3**	**+1.3**
RDO	**Rodhopi**	**2.52**	**313**		P	**Pn**	**07 21 28.2**	**+1.1**
RDO	**Rodhopi**	**2.52**	**313**		P	**Pn**	**07 21 28.2**	**+1.1**
RDO	**Rodhopi**	**2.52**	**313**		PN	**Pn**	**07 21 27.9**	**+0.8**
GOLH	**Golhisar**	**2.54**	**150**	*i*	P	**Pn**	**07 21 29.4**	**+1.8**
EDRB	**Edirne**	**2.57**	**339**		P	**Pn**	**07 21 28.0**	**+0.1**
EDRB					S	**Sn**	**07 22 00.1**	**+1.2**
	comp=E,458nm,0.5s							
EDRB	**Edirne**	**2.57**	**339**		PN	**Pn**	**07 21 28.8**	**+0.9**
BTAS	**Taskesti**	**2.59**	**63**	*i*	P	**Pg**	**07 21 34.9**	**-1.7**
SAHE	**Sakarya_HENDEK**	**2.62**	**57**	*i*	P	**Pn**	**07 21 29.2**	**+0.5**
THAS	**Thassos island**	**2.75**	**296**		P	**Pn**	**07 21 30.6**	**+0.2**
KDZ	**Kurdzhali**	**2.94**	**319**		P	**Pn**	**07 21 33.8**	**+0.9**
APE	**Apeiranthos**	**3.05**	**220**		P	**Pn**	**07 21 34.4**	**-0.1**
APE	**Apeiranthos**	**3.05**	**220**		P	**Pn**	**07 21 34.7**	**+0.2**
APE	**Apeiranthos**	**3.05**	**220**	⇓	P	**Pn**	**07 21 34.7**	**+0.2**
KAVA	**Kavala**	**3.06**	**302**		P	**Pn**	**07 21 35.4**	**+0.7**
AMGA	**Amorgos Island**	**3.08**	**213**		P	**Pn**	**07 21 34.7**	**-0.2**
AMGA	**Amorgos Island**	**3.08**	**213**		P	**Pn**	**07 21 34.6**	**-0.3**
KARY	**Karystos**	**3.10**	**244**		P	**Pn**	**07 21 36.7**	**+1.6**
ELL	**Elmali**	**3.10**	**150**			**Pn**	**07 21 37.6**	**+2.4**
KIBS	**BOLU**	**3.14**	**71**	*i*	P	**Pn**	**07 21 37.4**	**+1.5**
KIBS					IAML		07 22 38.0	
	comp=N,241nm,1.2s							
KIBS					IAML		07 22 38.0	
	comp=E,240nm,1.2s							
AOS	**Alonnisos**	**3.18**	**266**		P	**Pn**	**07 21 37.5**	**+1.2**
AOS	**Alonnisos**	**3.18**	**266**		P	**Pn**	**07 21 37.0**	**+0.7**
OUR	**Ouranopolis**	**3.19**	**287**		P	**Pn**	**07 21 37.0**	**+0.6**
DIM	**Dimitrovgrad**	**3.19**	**325**		P	**Pb**	**07 21 42.6**	**-0.6**
ARG	**Arkhangelos**	**3.23**	**178**		P	**Pn**	**07 21 37.9**	**+1.0**
KDZE	**Karadeniz Ereo**	**3.25**	**54**	⇑	P	**Pn**	**07 21 38.1**	**+0.9**
RZN	**Rozhen**	**3.34**	**313**		P	**Pn**	**07 21 39.5**	**+0.9**
PAIG	**Paliouri**	**3.34**	**280**		P	**Pn**	**07 21 39.3**	**+0.8**
BCAM	**Yenicaga**	**3.43**	**65**	*i*	P	**Pn**	**07 21 39.7**	**-0.1**
SKIA	**Skiathos**	**3.50**	**267**		P	**Pn**	**07 21 41.6**	**+0.9**
KSL	**Kastellorizon**	**3.53**	**158**		P	**Pn**	**07 21 43.3**	**+2.2**
SERI	**Serifos**	**3.56**	**231**		P	**Pn**	**07 21 41.7**	**+0.2**
PLG	**Polygyros**	**3.60**	**286**		P	**Pn**	**07 21 42.3**	**+0.3**
PLD	**Plovdiv**	**3.63**	**318**		P	**Pn**	**07 21 43.4**	**+0.9**
SANT	**Santorini**	**3.65**	**214**	⇑	P	**Pg**	**07 21 55.9**	**-1.0**
SANT	**Santorini**	**3.65**	**214**		Pg	**Pg**	**07 21 56.2**	**-0.7**
NVR	**Nevrokopi**	**3.67**	**303**		P	**Pn**	**07 21 44.7**	**+1.7**
XOR	**Xorichti**	**3.70**	**270**		P	**Pn**	**07 21 44.4**	**+1.0**
BR231	**Keskin MP Arra**	**3.74**	**82**			**Pg**	**07 21 58.2**	**-0.3**
ANTO	**Ankara**	**3.75**	**82**	⇑	P	**Pg**	**07 21 56.7**	**-2.1**
ANTO	**Ankara**	**3.75**	**82**			**Pg**	**07 21 57.9**	**-0.9**
PRD	**Provadia**	**3.78**	**354**		P	**Pn**	**07 21 44.0**	**-0.4**
ELND	**Elena**	**3.82**	**336**	⇑	P	**Pn**	**07 21 46.4**	**+1.3**
ELND	**Elena**	**3.82**	**336**	⇑	S	**Sn**	**07 22 28.5**	**-1.1**
KARP	**Karpathos**	**3.94**	**190**		P	**Pn**	**07 21 47.8**	**+1.0**
KARP	**Karpathos**	**3.94**	**190**		Pn	**Pn**	**07 21 48.5**	**+1.7**
SZH	**Strazhica**	**4.11**	**339**		P	**Pn**	**07 21 50.4**	**+1.3**
KNT	**Kendrikon**	**4.24**	**296**		P	**Pn**	**07 21 52.3**	**+1.5**
LIT	**Litokhoron**	**4.27**	**281**		P	**Pn**	**07 21 53.0**	**+1.8**
LIT	**Litokhoron**	**4.27**	**281**		Pn	**Pn**	**07 21 53.4**	**+2.1**
BR131	**Keskin Array S**	**4.39**	**85**			**Pg**	**07 21 54.5**	**+1.4**
AGG	**Agios Georgios**	**4.39**	**266**		P	**Pn**	**07 21 54.5**	**+1.5**
AGG	**Agios Georgios**	**4.39**	**266**		Pn	**Pn**	**07 21 55.2**	**+2.1**
ICOR	**Ion Corvin**	**4.67**	**359**	⇑	P	**Pn**	**07 21 56.3**	**-0.4**
PLVB	**Pleven**	**4.67**	**329**	⇑	P	**Pn**	**07 21 57.7**	**+0.9**
ILGA	**Ilgaz**	**4.69**	**68**		Pn	**Pn**	**07 21 58.8**	**+1.6**
ILGA						**Pg**	**07 22 14.9**	**-1.7**
VTS	**Vitosha**	**4.78**	**313**			**Pn**	**07 22 00.7**	**+2.3**
TIRR	**Tirgusor**	**5.02**	**4**			**Pn**	**07 22 02.8**	**+1.2**
MPEP	**Malo Peshtene**	**5.04**	**322**		P	**Pn**	**07 22 02.8**	**+1.0**
FNA	**Florina**	**5.22**	**287**			**Pn**	**07 22 05.5**	**+1.0**
BZK	**Bozkurt**	**5.23**	**59**	⇑	P	**Pn**	**07 22 06.1**	**+1.6**
HARR	**Harsova**	**5.24**	**360**	⇑	P	**Pn**	**07 22 05.1**	**+0.5**
CFR	**Carcaliu**	**5.73**	**1**	⇑	P	**Pn**	**07 22 11.8**	**+0.5**
MLR	**Muntele Rosu**	**6.22**	**347**	⇑	P	**Pn**	**07 22 20.0**	**+1.8**
MLR	**Muntele Rosu**	**6.22**	**347**			**Pn**	**07 22 20.8**	**+2.6**
VOIR		**6.36**	**341**	⇓	P	**Pn**	**07 22 21.0**	**+0.9**
VRI	**Vrincioaia**	**6.48**	**352**	⇑	P	**Pn**	**07 22 22.4**	**+0.7**
SEVA	**Sevastopol**	**6.63**	**38**	⇑	P	**Pn**	**07 22 23.0**	**-0.6**
OZUR		**6.84**	**347**	⇑	P	**Pn**	**07 22 28.6**	**+2.0**
GZR	**Gura Zlata**	**7.07**	**329**	⇑	P	**Pn**	**07 22 31.4**	**+1.5**
TESR	**Tescani**	**7.13**	**353**	⇑	P	**Pn**	**07 22 30.1**	**-0.4**
BURAR	**Bucovina Array**	**8.41**	**347**	⇓	P	**Pn**	**07 22 49.1**	**+1.0**
BUR08	**Bucovina Ar. S**	**8.44**	**347**			**Pn**	**07 22 50.4**	**+1.8**

*SOF **10** 07:22:21.5,41.64N×24.00E,h20km,MD2.7*
*ATH **10** 07:22:23.0,41.55N×23.99E,h26km±1km,ML2.6/9,Error ellipse: s-maj=2.9km s-min=1.4km az=10.0*
*THE **10** 07:22:22.6,41.63N×24.01E,h8km±1km,ML2.6/9,Error ellipse: s-maj=1.2km s-min=0.8km az=229.0*
*SKO **10** 07:22:23.7,41.63N×23.98E,h1km*
ISC 10 07:22:21.8±1.1,41.64N±0.03×23.98E±0.03,h17km±9km, n28,σ0§89/50,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
MMB	**Musomiste**	**0.20**	**255**	*i*	Pg	**Pb**	**07 22 27.1**	**+0.1**
NVR	**Nevrokopi**	**0.30**	**197**		P	**Pb**	**07 22 29.1**	**+0.3**
NVR					S	**Sb**	**07 22 33.4**	**-0.1**
	2μm,0.2s							
NVR	**Nevrokopi**	**0.30**	**197**		P	**Pb**	**07 22 29.2**	**+0.4**
NVR					S	**Sb**	**07 22 33.3**	**-0.3**
NVR					AML	AML	07 22 34.0	
	comp=E,5549μm,0.1s							
NVR					AML	AML	07 22 34.1	
	comp=N,3176μm,0.1s							
RZN	**Rozhen**	**0.55**	**85**		Pg	**Pb**	**07 22 33.2**	**+0.1**
KKB	**Krupnik**	**0.71**	**289**		Pg	**Pn**	**07 22 35.7**	**-1.4**
KAVA	**Kavala**	**0.76**	**148**		P	**Pn**	**07 22 36.9**	**-0.8**
KAVA					S	**Sg**	**07 22 46.5**	**-0.1**
	comp=N,328nm,0.2s							
KAVA	**Kavala**	**0.76**	**148**		P	**Pb**	**07 22 36.6**	**0.0**
KAVA					S	**Sg**	**07 22 46.1**	**-0.5**
KAVA					AML	AML	07 22 52.5	
	comp=N,758μm,0.2s							
KAVA					AML	AML	07 22 53.6	
	comp=E,625μm,0.4s							
PGB	**Panagyurishte**	**0.92**	**9**	*i*	Pg	**Pn**	**07 22 39.5**	**-0.5**
KNT	**Kendrikon**	**0.95**	**240**		P	**Pn**	**07 22 40.8**	**+0.5**
KNT					S	**Sn**	**07 22 54.6**	**+1.2**
	comp=E,328nm,0.2s							
KNT	**Kendrikon**	**0.95**	**240**		P	**Pn**	**07 22 40.1**	**-0.2**
KNT					S	**Sn**	**07 22 52.8**	**-0.6**
KNT					AML	AML	07 22 56.2	
	comp=E,617μm,0.4s							
KNT					AML	AML	07 22 57.1	
	comp=N,683μm,0.2s							
SOH	**Sokhos**	**0.95**	**210**		P	**Pn**	**07 22 40.2**	**-0.2**
SOH					S	**Sn**	**07 22 53.5**	**0.0**
	comp=N,345nm,0.3s							
SOH	**Sokhos**	**0.95**	**210**		P	**Pn**	**07 22 40.2**	**-0.2**
SOH					S	**Sg**	**07 22 52.4**	**-0.2**
SOH					AML	AML	07 22 54.3	
	comp=E,582μm,0.3s							
SOH					AML	AML	07 22 55.9	
	comp=N,792μm,0.5s							
VAY	**Valandovo**	**1.11**	**254**	*i*	Pg	**Pg**	**07 22 44.6**	**+1.4**
VAY				*i*	Sg	**Sn**	**07 22 59.2**	**+1.8**
VAY				*e*	Lg	Lg	07 23 00.6	
	comp=N,77nm,0.6s							
VAY				*e*	Lg	Lg	07 23 01.4	
	comp=E,57nm,0.3s							
VTS	**Vitosha**	**1.12**	**331**		P	**Pg**	**07 22 43.3**	**-0.3**
VTS					S	**Sn**	**07 23 00.5**	**+2.5**
VTS	**Vitosha**	**1.12**	**331**		Pg	**Pg**	**07 22 43.5**	**-0.1**
THAS	**Thassos island**	**1.17**	**151**		P	**Pg**	**07 22 44.1**	**-0.4**
THAS					S	**Sg**	**07 23 01.4**	**+1.6**
	comp=E,458nm,0.4s							
THAS	**Thassos island**	**1.17**	**151**		P	**Pg**	**07 22 43.9**	**-0.5**
THAS					S	**Sb**	**07 22 58.8**	**+0.2**
THAS					AML	AML	07 23 02.1	
	comp=E,1078μm,0.4s							
THAS					AML	AML	07 23 02.4	
	comp=N,764μm,0.4s							
HORT	**Hortiatis**	**1.24**	**213**		P	**Pg**	**07 22 45.8**	**+0.1**
HORT					S	**Sg**	**07 23 02.8**	**+0.9**
	comp=N,132nm,0.2s							
HORT	**Hortiatis**	**1.24**	**213**		P	**Pg**	**07 22 45.9**	**+0.1**
HORT					S	**Sg**	**07 23 02.1**	**+0.2**
THE	**Thessaloniki**	**1.27**	**218**		P	**Pg**	**07 22 46.1**	**-0.2**
THE					S	**Sg**	**07 23 02.3**	**-0.5**
THE					AML	AML	07 23 04.1	
	comp=E,308μm,0.4s							
THE					AML	AML	07 23 04.4	
	comp=N,263μm,0.4s							
OUR	**Ouranopolis**	**1.31**	**180**		P	**Pb**	**07 22 46.0**	**+0.2**
OUR					S	**Sg**	**07 23 04.7**	**+0.7**
	comp=N,540nm,0.4s							
OUR	**Ouranopolis**	**1.31**	**180**		P	**Pb**	**07 22 45.3**	**-0.5**
OUR					S	**Sg**	**07 23 03.4**	**-0.6**
OUR					AML	AML	07 23 05.7	
	comp=E,789μm,0.4s							
OUR					AML	AML	07 23 09.0	
	comp=N,1372μm,0.5s							
PLG	**Polygyros**	**1.33**	**198**		P	**Pg**	**07 22 46.7**	**-0.7**
PLG					S	**Sg**	**07 23 05.0**	**+0.2**
	comp=N,350nm,0.4s							
PLG	**Polygyros**	**1.33**	**198**		P	**Pg**	**07 22 47.1**	**-0.3**
PLG					S	**Sn**	**07 23 03.2**	**+0.3**
PLG					AML	AML	07 23 07.4	
	comp=N,738μm,0.3s							
PLG					AML	AML	07 23 07.4	
	comp=E,666μm,0.5s							
STIP	**Stip**	**1.35**	**273**	*i*	Pg	**Pb**	**07 22 45.5**	**-1.0**
STIP				*i*	Sg	**Sn**	**07 23 00.1**	**-3.2**
GRG	**Griva**	**1.37**	**241**		P	**Pb**	**07 22 46.6**	**-0.4**
GRG					S	**Sg**	**07 23 06.7**	**+0.5**
	comp=E,90nm,0.3s							
MPEP	**Malo Peshtene**	**1.72**	**354**		P	**Pg**	**07 22 55.5**	**+0.6**
PAIG	**Paliouri**	**1.73**	**188**		P	**Pn**	**07 22 51.5**	**+0.5**
PAIG					S	**Sn**	**07 23 13.3**	**+0.7**
PAIG					AML	AML	07 23 18.0	
	comp=E,349μm,0.4s							
PAIG					AML	AML	07 23 21.0	
	comp=N,203μm,0.6s							

IDC 10 07:42:14.1±3.7,12.97S×98.79W,h0km,mb3.6/4, mb1 4.1/4,mb1mx3.7/22,mbtmp3.6/4,MS3.3/4,Ms1 3.3/4, ms1mx2.9/20,Error ellipse: s-maj=235.6km s-min=90.4km az=77.0,Southwest of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ATAH	**Atahualpa**	**20.89**	**76**		LR	LR	07 53 10.7	
	comp=Z,99nm,20.3s,baz=220,slow=31							
NNA	**Nana**	**21.45**	**90**		LR	LR	07 52 57.3	
	comp=Z,51nm,20.6s,baz=289,slow=30							
LVC	**Limon Verde**	**29.97**	**113**		LR	LR	07 56 59.1	
	comp=Z,44nm,19.5s,baz=318,slow=30							
CPUP	**Villa Florida**	**41.06**	**115**		LR	LR	08 03 25.9	
	comp=Z,53nm,21.3s,baz=35,slow=31							
TXAR	**Lajitas Array**	**42.31**	**354**		P	P	07 50 10.4	+0.5
	0.7nm,0.9s,baz=163,slow=9.0,SNR=5.0							
NVAR	**Mina Array Bea**	**54.29**	**341**		P	P	07 51 42.2	-0.3
	0.2nm,0.3s,baz=188,slow=5.5,SNR=3.7							
YKA	**Yellowknife Ar**	**76.23**	**353**		P	P	07 54 03.2	-0.9
	0.3nm,0.9s,baz=164,slow=5.6,SNR=4.7							
ILAR	**Eielson Array**	**85.55**	**341**		P	P	07 54 54.0	+0.1
	1.5nm,1.1s,baz=160,slow=5.9,SNR=7.9							
MKAR	**Makanchi Array**	**146.27**	**359**		PKPbc	PKPbc	08 01 56.5	-0.4
	0.8nm,0.8s,baz=358,slow=2.8,SNR=6.0							

*IDC **10** 08:09:59.4±2.8,2.63N×128.46E,h123km±27km,mb3.5/8, mb1 3.7/10,mb1mx3.4/43,mbtmp3.9/10,Error ellipse: s-maj=31.2km s-min=14.5km az=75.0*
*NEIC **10** 08:10:00.7±2.8,2.55N±0.09×128.48E±0.07,h140km±7km, mb4.6/7,Error ellipse: s-maj=14.7km s-min=8.7km az=208.0*
ISC 10 08:10:01.2±0.6,2.45N±0.09×128.43E±0.09,h150km,n33, σ1§82/30,mb4.1/12,1D,Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
TNTI	**Ternate**	**1.97**	**212**			**Pn**	**08 10 37.4**	**+1.4**
SIJI	**Sorong**	**4.35**	**139**		P	**Pn**	**08 11 04.2**	**-1.9**
	0.9nm,0.3s,baz=197,slow=19,SNR=2.2							
LUWI	**Luwuk**	**6.63**	**239**		Pn	**Pn**	**08 11 36.5**	**+0.2**
LUWI					Sn	**Sn**	**08 12 49.7**	**-1.2**
KAPI	**Kappang**	**11.40**	**229**		P	**Pn**	**08 12 41.5**	**+1.7**
	2.2nm,0.3s,baz=336,slow=8.6,SNR=4.7							
KAPI					S	**Sn**	**08 14 41.0**	**-4.9**
	1.1nm,0.3s,baz=216,slow=19,SNR=4.4							
KAPI	**Kappang**	**11.40**	**229**			**Pn**	**08 12 40.1**	**+0.3**
JAGI	**Jajag, Banyuwa**	**17.89**	**233**		P	**Pn**	**08 14 01.5**	**+0.7**
JAGI					IAmb	IAmb	08 14 03.5	
	comp=Z,41nm,1.0s							
WRA	**Warramunga Arr**	**23.00**	**166**		P	**P**	**08 14 55.5**	**+2.4**
	comp=Z,0.8nm,0.6s,baz=342,slow=10,SNR=6.8							
ASAR	**Alice Springs**	**26.50**	**169**		P	**P**	**08 15 26.9**	**+2.1**
	comp=Z,0.2nm,0.8s,baz=346,slow=7.0,SNR=4.6							
ASAR					PcP	**PcP**	**08 18 47.5**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=345,slow=1.9,SNR=6.1							
INU	**Inuyama**	**33.69**	**13**		P	**P**	**08 16 28.9**	**+0.9**
MJAR	**Matsushiro Arr**	**35.11**	**14**		P	**P**	**08 16 39.6**	**-0.6**
	comp=Z,2.4nm,0.4s,baz=178,slow=7.8,SNR=7.9							
MAJO	**Matsushiro**	**35.11**	**14**		P	**P**	**08 16 39.8**	**-0.5**
MAJO					IAmb	IAmb	08 16 46.7	
	comp=Z,26nm,1.4s							
MJB9	**Matsu-Tunnel**	**35.11**	**14**		P	**P**	**08 16 40.0**	**-0.3**
MJB9					IAmb	IAmb	08 16 46.7	
	comp=Z,27nm,1.4s							
STKA	**Stephens Creek**	**36.36**	**161**		P	**P**	**08 16 53.3**	**+2.4**
	comp=Z,2.1nm,0.5s,baz=344,slow=8.9,SNR=10							
STKA	**Stephens Creek**	**36.36**	**161**		P	**P**	**08 16 53.6**	**+2.7**
H11S3	**WAKE ISLAND Hy**	**40.73**	**64**		T	T	09 01 20.8	
	baz=252,SNR=4.0							
H11S2	**WAKE ISLAND Hy**	**40.74**	**64**		T	T	09 01 27.5	
	baz=252							
H11S1	**WAKE ISLAND Hy**	**40.74**	**64**		T	T	09 01 26.1	
	baz=252							
H11N1	**WAKE ISLAND Hy**	**41.30**	**63**		T	T	09 02 00.0	
	baz=250,slow=75,SNR=6.9							
H11N2	**WAKE ISLAND Hy**	**41.32**	**63**		T	T	09 02 03.7	
	baz=250,slow=75,SNR=5.6							
H11N3	**WAKE ISLAND Hy**	**41.32**	**63**		T	T	09 02 02.4	
	baz=250,slow=75,SNR=5.5							
SONM	**Songino Array**	**49.05**	**340**		P	**P**	**08 18 33.5**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=145,slow=7.8,SNR=7.1							
MK31	**Makanchi Array**	**59.57**	**325**		P	**P**	**08 19 49.3**	**+0.2**
MK31					IAmb	IAmb	08 19 49.8	
	comp=Z,1.4nm,0.8s							
MKAR	**Makanchi Array**	**59.57**	**325**		P	**P**	**08 19 49.0**	**0.0**
	comp=Z,1.0nm,0.4s,baz=116,slow=7.7,SNR=5.8							
KURBB	**Kurchatov Arra**	**63.73**	**327**		P	**P**	**08 20 16.6**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=125,slow=6.2,SNR=12							
KURK	**Kurchatov**	**63.73**	**327**		P	**P**	**08 20 16.1**	**-0.7**
KURK					IAmb	IAmb	08 20 17.2	
	comp=Z,2.5nm,0.7s							
ILAR	**Eielson Array**	**85.53**	**25**		P	**P**	**08 22 22.9**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=236,slow=4.9,SNR=4.7							
SYO	**Syowa Base**	**91.85**	**201**	⇓	*e*X	**P**	**08 22 49.0**	**-2.8**
OKCFA	**Oklahoma City**	**122.93**	**44**		PKPdf	**PKiKP**	**08 28 39.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**124.92**	**288**		PKP	**PKiKP**	**08 28 44.9**	**0.0**
	comp=Z,0.3nm,0.6s,baz=43,slow=2.7,SNR=2.1							
HDIL	**Hopedale**	**125.08**	**35**		PKPdf	**PKPdf**	**08 28 42.2**	**-1.9**
GO02	**Mina Guanaco**	**151.51**	**144**		PKPbc	**PKiKP**	**08 29 41.7**	**+2.6**
BANI	**BANI**	**152.24**	**41**		PKPbc	**PKPbc**	**08 29 38.5**	**-1.8**
NNA	**Nana**	**153.23**	**112**		PKPbc	**PKPbc**	**08 29 40.6**	**-1.9**

*UPP **10** 08:11:21.9±2.8,67.81N×34.15E,h0km,ML2.0,Suspected explosion*
*HEL **10** 08:11:21.0±0.4,67.86N×34.30E,h0km,ML2.5,Suspected explosion*
*IDC **10** 08:11:26.4±2.6,67.60N×33.37E,h0km,mb1 3.3/3, mb1mx3.0/51,mbtmp3.2/3,ML2.5/3,Error ellipse: s-maj=28.3km s-min=9.7km az=76.0*
*NAO **10** 08:11:26.1±0.7,67.67N×33.19E,ML2.7*
ISC 10 08:11:20.1±1.7,67.62N±0.05×34.20E±0.09,h0km,n40, σ1§40/66,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
APZ9	**Apatity**	**0.31**	**261**		Pg	**Pb**	**08 11 27.8**	**-0.7**
APZ9					Lg	Lg	08 11 31.2	
APZ9	**Apatity**	**0.31

NRA0 **NORESS Array S** 11.98 246 Pn Pn 08 14 11.2 -0.7
baz=46,slow=14

IDC ***10*** *08:11:28.6s±1.8, 18°.86N×62°.53W, h0km, mb3.2/3, mb1 3.7/3, mb1mx3.4/38, mbtmp3.2/3, MS2.9/1, Ms1 2.9/1, ms1mx2.6/11, Error ellipse: s-maj=86.5km s-min=23.4km az=55.0*

TRN ***10*** *08:11:33.3, 18°.49N×62°.75W, h13km, MD3.8*

ISC 10 08:11:30.5±1.8, 18.72N±0.06×62.70W±0.05, h10km±10km, n27, σ1§29/38, mb3.3/3, 1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMRT	**St. Maarten**	**0.76**	**208**	⇓*i* P	**Pb**	**08 11 46.1**	**+0.3**
SMRT				*e*S	**Sg**	**08 11 56.0**	**+0.9**
SABA	**Saba**	**1.21**	**205**	*e*P	**Pg**	**08 11 53.9**	**+0.1**
SABA				*e*S	**Sn**	**08 12 11.0**	**+1.0**
SEUS	**St. Eustatius**	**1.25**	**192**	*e*P	**Pb**	**08 11 54.5**	**+0.3**
SEUS				*e*S	**Sb**	**08 12 10.8**	**+0.4**
ANWB	**Willy Bob**	**1.36**	**140**	*e*P	**Pg**	**08 11 57.9**	**+1.2**
ANWB				*e*S	**Sn**	**08 12 16.4**	**+2.7**
SKI	**Saint Kitts**	**1.38**	**182**	*e*P	**Pg**	**08 11 57.1**	**+0.1**
SKI				*e*S	**Sg**	**08 12 14.1**	**-1.0**
SKOC	**St. Kitts, UWI**	**1.42**	**181**	*e*P	**Pg**	**08 11 57.9**	**0.0**
SKOC				*e*S	**Sg**	**08 12 15.6**	**-0.7**
NEV	**Hard Times**	**1.58**	**176**	*e*P	**Pb**	**08 11 59.9**	**0.0**
NEV				*e*S	**Sg**	**08 12 20.0**	**-1.4**
NVDO	**Nevis, Disaste**	**1.60**	**177**	*e*P	**Pn**	**08 11 59.5**	**+0.6**
NVDO				*e*S	**Sn**	**08 12 19.7**	**+0.2**
BPA	**Boggy Peak**	**1.85**	**154**	*e*P	**Pg**	**08 12 04.9**	**-1.1**
BPA				*e*S	**Sb**	**08 12 26.6**	**-1.1**
MLYT	**Lee's Yard**	**2.05**	**166**	*e*P	**Pb**	**08 12 07.2**	**-0.6**
MLYT				*e*S	**Sn**	**08 12 30.7**	**0.0**
H05N1	**Guadeloupe/Mar**	**2.86**	**146**	Pn	**Pn**	**08 12 16.2**	**-0.1**
H05N1				Sn	**Sn**	**08 12 52.4**	**+1.6**
	SNR=7.2						
MDPO	**Dominica; Chan**	**3.35**	**159**	*e*P	**Pn**	**08 12 25.9**	**+3.0**
MDPO				*e*S	**Sn**	**08 13 02.9**	**+0.1**
BBL	**Barber's Block**	**3.39**	**159**	*e*P	**Pn**	**08 12 25.1**	**+1.6**
BBL				*e*S	**Sn**	**08 13 04.1**	**+0.3**
OCAC	**Ocana**	**14.66**	**226**	*e*P	**P**	**08 15 02.9**	**-1.7**
SMLC	**San Martn de**	**14.80**	**230**	*e*P	**Pn**	**08 15 02.9**	**+2.9**
RUSC	**La Rusia**	**16.28**	**220**	*e*P	**Pn**	**08 15 18.4**	**-1.5**
PTBC	**PUERTO BERRIO,**	**16.66**	**225**	*e*P	**Pn**	**08 15 22.4**	**-2.0**
HELC	**Santa Helena**	**17.65**	**227**	*e*P	**Pn**	**08 15 36.6**	**-0.4**
NORC	**Norcasia**	**17.66**	**224**	*e*P	**Pn**	**08 15 36.6**	**-0.3**
CBOC	**Ciudad Bolivar**	**18.21**	**227**	*e*P	**Pn**	**08 15 44.3**	**+0.5**
GUY2C	**Guyana, Caldas**	**18.24**	**224**	*e*P	**Pn**	**08 15 42.2**	**-2.3**
RREF	**El Recreo**	**18.47**	**224**	*e*P	**Pn**	**08 15 48.5**	**+1.1**
TXAR	**Lajitas Array**	**38.70**	**294**	P	**P**	**08 18 55.4**	**+0.4**
	0.1nm,0.6s,baz=129,slow=7.1,SNR=3.2						
PDAR	**Pinedale Array**	**46.12**	**312**	P	**P**	**08 19 54.9**	**-0.5**
	0.3nm,0.7s,baz=102,slow=8.4,SNR=4.1						
PDAR				LR	LR	08 39 28.3	
	comp=Z,15nm,21.0s,baz=66,slow=36						
H10S3	**ASCENSION HYDR**	**54.78**	**116**	T	T	09 19 49.2	
	baz=293,slow=74,SNR=8.8						
H10S2	**ASCENSION HYDR**	**54.80**	**116**	T	T	09 19 53.6	
	baz=287,slow=74,SNR=5.5						
YKA	**Yellowknife Ar**	**56.35**	**334**	P	**P**	**08 21 10.9**	**-0.6**
	0.2nm,0.6s,baz=106,slow=7.3,SNR=5.6						

THR ***10*** *08:12:42.9±1.0, 26°.55N×53°.83E, h17km, ML4.7*

BJI ***10*** *08:12:42.5±0.0, 26°.70N×54°.00E, h5km, mB4.9/21, mb4.7/30, Ms4.5/8, Ms7 4.3/6*

TEH ***10*** *08:12:44.4, 26°.75N×53°.90E, h10km, ML4.4*

DSN ***10*** *08:12:44.8±1.6, 26°.90N×53°.90E, h10km, ML4.7/12, Error ellipse: s-maj=21.9km s-min=7.2km az=177.0*

NEIC ***10*** *08:12:44.8±2.1, 26°.69N±0°.05×53°.97E±0°.06, h11km±3km, Error ellipse: s-maj=8.3km s-min=7.4km az=67.0*

MOS ***10*** *08:12:45.1±1.1, 26°.72N×53°.96E, h24km, mb4.6/33, Error ellipse: s-maj=6.9km s-min=4.4km az=105.7*

IDC ***10*** *08:12:46.2±2.7, 26°.69N×53°.94E, h20km±16km, mb4.2/27, mb1 4.2/32, mb1mx4.1/56, mbtmp4.3/32, ML3.7/4, MS3.5/15, Ms1 3.5/15, ms1mx3.3/46, Error ellipse: s-maj=14.7km s-min=11.2km az=5.0*

OMAN ***10*** *08:12:49.6±1.4, 26°.52N×53°.83E, h122km±22km, ml4.5/16, Error ellipse: s-maj=17.1km s-min=12.5km az=104.0*

ISC 10 08:12:47.1±1.0, 26°.67N±0°.03×53°.85E±0°.04, h27km±7km, n318, σ1§40/338, mb4.4/89, MS3.5/16, 20C-8D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**1.84**	**352**	*e*Pn	**Pn**	**08 13 17.7**	**+0.6**
JHRM				*e*		08 13 25.2	
JHRM	**Jahrom**	**1.84**	**352**		**Pn**	**08 13 18.0**	**+0.9**
JHRM				Sg	**Sb**	**08 13 44.1**	**+1.2**
UMQ	**Umm Al-Quwin**	**1.99**	**125**	*e*P	**Pb**	**08 13 21.8**	**-0.7**
	SNR=5.8						
UMQ	**Umm Al-Quwin**	**1.99**	**125**	*e*Pn	**Pb**	**08 13 21.5**	**-1.0**
UMQ	**Umm Al-Quwin**	**1.99**	**125**	P	**Pb**	**08 13 21.6**	**-1.0**
UMQ				S	**Sb**	**08 13 53.3**	**+6.5**
SHME	**Shamm**	**2.15**	**106**	*e*P	**Pn**	**08 13 20.7**	**-0.5**
	SNR=173						
SHME				S	**Sn**	**08 13 47.9**	**+1.0**
SHME	**Shamm**	**2.15**	**106**	*e*Pn	**Pn**	**08 13 20.9**	**-0.2**
BNDS	**Bandar-Abbas**	**2.19**	**70**	*e*Pn	**Pn**	**08 13 20.2**	**-1.7**
BNDS	**Bandar-Abbas**	**2.19**	**70**	*e*Pn	**Pn**	**08 13 21.7**	**-0.2**
BNDS	**Bandar-Abbas**	**2.19**	**70**	Pn	**Pn**	**08 13 20.0**	**-1.9**
GENO	**Geno**	**2.19**	**70**	*e*Pn	**Pn**	**08 13 21.6**	**-0.3**
GENO				*e*		08 14 04.9	
GENO	**Geno**	**2.19**	**70**	Pn	**Pn**	**08 13 21.2**	**-0.7**
BANOM	**Banah**	**2.32**	**108**	*e*P	**Pn**	**08 13 23.5**	**-0.1**
	SNR=64						
BANOM	**Banah**	**2.32**	**108**	P	**Pn**	**08 13 23.5**	**-0.1**
	SNR=64						
AJN	**Ajban**	**2.33**	**154**	*e*P	**Pb**	**08 13 27.0**	**-1.6**
	SNR=12						
AJN	**Ajban**	**2.33**	**154**	*e*Pn	**Pb**	**08 13 26.9**	**-1.6**
AJN	**Ajban**	**2.33**	**154**	P	**Pb**	**08 13 26.9**	**-1.6**
	SNR=13						
AJN				S	**Sb**	**08 13 57.1**	**+0.2**
NAZ	**Nazwa, Dubai**	**2.34**	**135**	*e*P	**Pn**	**08 13 26.2**	**+2.4**
	SNR=19						
NAZ	**Nazwa, Dubai**	**2.34**	**135**	*e*Pn	**Pn**	**08 13 26.0**	**+2.2**
NAZ	**Nazwa, Dubai**	**2.34**	**135**	P	**Pn**	**08 13 26.3**	**+2.5**
	SNR=8.8						
ASUD	**Al Ashush, Dub**	**2.43**	**146**	*e*P	**Pn**	**08 13 27.5**	**+2.4**
	SNR=42						
ASUD	**Al Ashush, Dub**	**2.43**	**146**	*e*Pn	**Pb**	**08 13 28.4**	**-1.7**
ASUD	**Al Ashush, Dub**	**2.43**	**146**	P	**Pb**	**08 13 28.2**	**-2.0**
	SNR=41						
MSFE	**Esma-Masafi**	**2.45**	**122**	*e*P	**Pn**	**08 13 26.8**	**+1.4**
	SNR=12						
MSFE	**Esma-Masafi**	**2.45**	**122**	*e*Pn	**Pn**	**08 13 26.1**	**+0.7**
FAQ	**Al Faqa, Dubai**	**2.48**	**140**	*e*P	**Pn**	**08 13 28.5**	**+2.8**
	SNR=8.0						
FAQ	**Al Faqa, Dubai**	**2.48**	**140**	*e*Pn	**Pn**	**08 13 28.0**	**+2.3**
MDH	**Madha**	**2.59**	**121**	P	**Pn**	**08 13 28.5**	**+1.3**
MDH	**Madha**	**2.59**	**121**	*e*Pn	**Pn**	**08 13 28.1**	**+0.9**
MDH	**Madha**	**2.59**	**121**	P	**Pn**	**08 13 28.6**	**+1.3**
UOSS	**Minazif**	**2.73**	**129**	*e*P	**Pn**	**08 13 30.2**	**+1.0**
	SNR=74						
UOSS	**Minazif**	**2.73**	**129**	*e*Pn	**Pn**	**08 13 30.0**	**+0.8**
UOSS	**Minazif**	**2.73**	**129**		**Pn**	**08 13 30.4**	**+1.3**
UOSS	**Minazif**	**2.73**	**129**	P	**Pn**	**08 13 30.4**	**+1.3**
HATD	**Hatta, Dubai**	**2.76**	**131**	*e*P	**Pn**	**08 13 31.1**	**+1.5**
	SNR=14						
HATD	**Hatta, Dubai**	**2.76**	**131**	*e*Pn	**Pn**	**08 13 30.8**	**+1.2**
HATD	**Hatta, Dubai**	**2.76**	**131**	P	**Pn**	**08 13 31.3**	**+1.7**
	SNR=14						
NIAN	**Nian**	**2.80**	**71**	*e*Pn	**Pn**	**08 13 29.7**	**-0.5**
NIAN				*e*		08 14 25.9	
NIAN	**Nian**	**2.80**	**71**	Pn	**Pn**	**08 13 29.6**	**-0.6**
ASHO	**Ashiyiah**	**2.81**	**134**	*e*P	**Pn**	**08 13 32.0**	**+1.7**
	SNR=25						
ASHO	**Ashiyiah**	**2.81**	**134**	*e*Pn	**Pn**	**08 13 31.6**	**+1.3**
ASHO	**Ashiyiah**	**2.81**	**134**	P	**Pn**	**08 13 32.0**	**+1.7**
	SNR=22						
ASHO				S	**Sn**	**08 14 06.2**	**+2.9**
ALNE	**Al Ain**	**3.12**	**146**	*i* P	**Pn**	**08 13 37.0**	**+2.5**
	SNR=54						
ALNE	**Al Ain**	**3.12**	**146**	*e*Pn	**Pn**	**08 13 36.8**	**+2.3**
SHI	**Shiraz**	**3.19**	**339**	*e*Pn	**Pn**	**08 13 35.9**	**+0.3**
SOHO	**SOHO**	**3.50**	**136**	P	**Pn**	**08 13 41.1**	**+1.3**
	SNR=9.6						
KHNJ	**Kahnooj**	**3.66**	**69**	*e*Pn	**Pn**	**08 13 40.9**	**-1.0**
KHNJ	**Kahnooj**	**3.66**	**69**	Pn	**Pn**	**08 13 41.3**	**-0.6**
JSK1	**Jask**	**3.67**	**105**	*e*Pn	**Pn**	**08 13 43.7**	**+1.7**
MZR	**Muzera**	**3.67**	**185**	*i* P	**Pn**	**08 13 44.6**	**+2.5**
	SNR=27						
MZR	**Muzera**	**3.67**	**185**	*e*Pn	**Pn**	**08 13 44.4**	**+2.3**
NGRK	**Negar Kerman**	**3.90**	**40**	*e*Pn	**Pn**	**08 13 45.2**	**-0.4**
NGRK				*e*		08 14 39.1	
NGRK	**Negar Kerman**	**3.90**	**40**	Pn	**Pn**	**08 13 44.8**	**-0.8**
ARQ	**Araqi**	**4.11**	**143**	P	**Pn**	**08 13 50.0**	**+1.8**
	SNR=86						
KRBR	**Kerman**	**4.18**	**37**	*e*Pn	**Pn**	**08 13 49.4**	**0.0**
KRBR	**Kerman**	**4.18**	**37**	*e*Pn	**Pn**	**08 13 50.6**	**+1.2**
KRBR	**Kerman**	**4.18**	**37**	Pn	**Pn**	**08 13 49.0**	**-0.4**
TVBK	**TV Kerman**	**4.18**	**37**	*e*Pn	**Pn**	**08 13 49.9**	**+0.5**
TVBK				*e*		08 15 06.4	
TVBK	**TV Kerman**	**4.18**	**37**	Pn	**Pn**	**08 13 49.9**	**+0.5**
KHGB	**Koh Gabri**	**4.35**	**31**	*e*Pn	**Pn**	**08 13 52.0**	**+0.3**
KHGB				*e*		08 14 47.6	
KHGB	**Koh Gabri**	**4.35**	**31**	Pn	**Pn**	**08 13 52.2**	**+0.5**
HOQ	**Hoqain**	**4.39**	**134**	P	**Pn**	**08 13 53.0**	**+0.9**
	SNR=15						
HOQ				S	**Sn**	**08 14 42.7**	**+0.4**
CHMN	**Cheshme madani**	**4.55**	**45**	*e*Pn	**Pn**	**08 13 54.7**	**+0.2**
CHMN				*e*		08 13 56.9	
IMEH	**Mehriz**	**4.75**	**8**	*e*Pn	**Pn**	**08 13 57.3**	**+0.1**
KLNJ	**Kolanjah**	**4.75**	**336**	*e*Pn	**Pn**	**08 13 55.8**	**-1.5**
BSY	**Bisya**	**4.95**	**141**	P	**Pn**	**08 14 01.5**	**+1.7**
	SNR=36						
BSY				S	**Sn**	**08 14 59.2**	**+3.0**
ISAD	**Sadrabad**	**5.23**	**358**	*e*Pn	**Pn**	**08 14 04.3**	**+0.5**
ISAD	**Sadrabad**	**5.23**	**358**	Pn	**Pn**	**08 14 04.3**	**+0.5**
SMDO	**Samad**	**5.24**	**132**	P	**Pn**	**08 14 05.1**	**+1.4**
	SNR=13						
SMDO				S	**Sn**	**08 15 06.4**	**+3.0**
WSAR	**Wadi Sarin**	**5.52**	**127**	Pn	**Pn**	**08 14 08.1**	**+0.5**
	5.3nm,0.3s,baz=307,slow=7.3,SNR=84						
WSAR				Sn	**Sn**	**08 15 07.8**	**-2.3**
	9.8nm,0.3s,baz=111,slow=20,SNR=8.4						
WSAR				LR	LR	08 16 44.9	
	comp=Z,628nm,20.9s,baz=334,slow=44						
WSAR	**Wadi Sarin**	**5.52**	**127**	P	**Pn**	**08 14 08.1**	**+0.5**
	SNR=93						
ICHK	**Chekchek**	**5.58**	**5**	*e*Pn	**Pn**	**08 14 08.5**	**0.0**
JMDO	**Jabal Madar**	**5.77**	**137**	P	**Pn**	**08 14 12.0**	**+1.0**
	SNR=27						
CHBR	**Chabahar**	**6.05**	**99**	*e*Pn	**Pn**	**08 14 13.8**	**-1.1**
CHBR	**Chabahar**	**6.05**	**99**	*e*Pn	**Pn**	**08 14 13.8**	**-1.1**
CHBR	**Chabahar**	**6.05**	**99**	Pn	**Pn**	**08 14 13.0**	**-1.9**
WBK	**Wadi Bani Khal**	**6.17**	**130**	P	**Pn**	**08 14 17.0**	**+0.5**
	SNR=11						
WBK				S	**Sn**	**08 15 27.2**	**+1.1**
ANAR	**Anarak**	**6.50**	**359**	*e*Pn	**Pn**	**08 14 21.1**	**0.0**
ZHSF	**Zahedan**	**6.78**	**63**	*e*Pn	**Pn**	**08 14 23.7**	**-1.3**
ZHSF	**Zahedan**	**6.78**	**63**	*e*Pn	**Pn**	**08 14 25.0**	**+0.1**
ZHSF	**Zahedan**	**6.78**	**63**	Pn	**Pn**	**08 14 23.0**	**-2.0**
MHTO	**MHTO**	**6.80**	**145**	P	**Pn**	**08 14 26.4**	**+1.3**
	SNR=36						
MHTO				S	**Sn**	**08 15 40.4**	**-1.2**
TPRV	**Parvadeh(Tabas**	**6.80**	**21**	*e*Pn	**Pn**	**08 14 25.2**	**+0.1**
SHGR	**Shooshtar-Gavs**	**6.98**	**322**	IAML		08 15 48.0	
	comp=N,86nm,0.5s						
SHGR				IAML		08 15 48.6	
	comp=E,90nm,0.6s						
NHDN	**Nehbandan**	**7.18**	**48**	*e*Pn	**Pn**	**08 14 30.0**	**-0.5**
IKOO	**Kooshah**	**7.28**	**37**	*e*Pn	**Pn**	**08 14 32.0**	**+0.1**
QAM	**Ghamsar**	**7.37**	**344**	*e*Pn	**Pn**	**08 14 33.3**	**+0.2**
KRSH	**Karshahi**	**7.42**	**349**	*e*Pn	**Pn**	**08 14 32.6**	**-1.2**
TKDS	**Koohdasht(Taba**	**7.48**	**21**	*e*Pn	**Pn**	**08 14 34.4**	**-0.1**
TABS	**Tabas**	**7.51**	**21**	*e*Pn	**Pn**	**08 14 34.1**	**-0.8**
DQM	**DQM**	**7.52**	**152**	P	**Pn**	**08 14 35.7**	**+0.8**
	SNR=5.1						
DQM				S	**Sn**	**08 15 56.2**	**-3.2**
ITEG	**Tejag**	**7.52**	**33**	*e*Pn	**Pn**	**08 14 35.6**	**+0.4**
TNSJ	**Nastanj**	**7.65**	**17**	*e*Pn	**Pn**	**08 14 35.8**	**-1.0**
KHMZ	**Khomeyn**	**7.81**	**335**	IAML		08 16 16.9	
	comp=N,28nm,0.6s						
IDAH	**Dahanechah**	**8.00**	**39**	*e*Pn	**Pn**	**08 14 42.1**	**+0.4**
AFRZ	**Afriz**	**8.08**	**32**	*e*Pn	**Pn**	**08 14 43.0**	**+0.2**
RAYN	**Ar Rayn**	**8.19**	**249**	P	**Pn**	**08 14 44.8**	**+0.5**
RAYN	**Ar Rayn**	**8.19**	**249**	*i* P	**Pn**	**08 14 44.5**	**+0.2**
	SNR=17						
RAYN	**Ar Rayn**	**8.19**	**249**		**Pn**	**08 14 44.8**	**+0.5**
BMDN	**Meydan**	**8.22**	**329**	*e*Pn	**Pn**	**08 14 46.2**	**+1.4**
BDRS	**Dareh Seyedi**	**8.43**	**331**	*e*Pn	**Pn**	**08 14 45.8**	**-2.0**
IVRN	**Varamin**	**8.50**	**348**	*e*Pn	**Pn**	**08 14 46.7**	**-1.7**
IKFM	**Kafar-mosalman**	**8.58**	**324**	*e*Pn	**Pn**	**08 14 51.3**	**+1.8**
WHFO	**Wadi Hawf**	**8.71**	**181**	P	**Pn**	**08 14 51.6**	**+0.2**
	SNR=95						
WHFO				S	**Sn**	**08 16 23.6**	**-5.2**
SHAO	**Shalim**	**8.76**	**169**	*i* P	**Pn**	**08 14 52.5**	**+0.5**
	SNR=26						
SHAO	**Shalim**	**8.76**	**169**	P	**Pn**	**08 14 52.2**	**+0.1**
	SNR=26						
IANJ	**Anjilo**	**8.77**	**0**	*e*Pn	**Pn**	**08 14 51.8**	**-0.5**
HSAM	**Samen**	**8.78**	**330**	*e*Pn	**Pn**	**08 14 50.1**	**-2.3**
SHRT	**Shahrakht**	**8.91**	**37**	*e*Pn	**Pn**	**08 14 54.1**	**0.0**
SHRT	**Shahrakht**	**8.91**	**37**	*e*Pn	**Pn**	**08 14 54.5**	**+0.4**
SHRT	**Shahrakht**	**8.91**	**37**	Pn	**Pn**	**08 14 54.0**	**0.0**
DMTO	**DMTO**	**8.97**	**173**	P	**Pn**	**08 14 54.8**	**-0.1**
	SNR=17						
DMTO				S	**Sn**	**08 16 29.4**	**-5.7**
ISHM	**Shahmirzad**	**9.12**	**357**	*e*Pn	**Pn**	**08 14 57.6**	**+0.4**
RBK	**Rabkut**	**9.13**	**178**	P	**Pn**	**08 14 57.8**	**+0.6**
	SNR=8.3						
IKOM	**Komasi**	**9.27**	**325**	*e*Pn	**Pn**	**08 14 57.3**	**-1.8**
ABTO	**Aybut**	**9.29**	**183**	P	**Pn**	**08 14 59.1**	**-0.3**
	SNR=34						
ABTO				S	**Sn**	**08 16 39.6**	**-3.4**
	SNR=13						
IRAZ	**Razeghan**	**9.33**	**340**	*e*Pn	**Pn**	**08 14 58.0**	**-2.0**
IALA	**Alasht**	**9.43**	**355**	*e*Pn	**Pn**	**08 15 00.9**	**-0.5**
QABG	**Abgarm-Qazvin**	**9.72**	**339**	*e*Pn	**Pn**	**08 15 04.7**	**-0.7**
HSRG	**Sareqhieh**	**9.79**	**332**	*e*Pn	**Pn**	**08 15 06.4**	**0.0**
IGLO	**Ghaloghah**	**9.80**	**360**	*e*Pn	**Pn**	**08 15 08.1**	**+1.6**
QALM	**Alamut, Qazvin**	**10.11**	**345**	*e*Pn	**Pn**	**08 15 09.5**	**-1.2**
IDHR	**Dehrash**	**10.26**	**323**	*e*Pn	**Pn**	**08 15 11.0**	**-1.7**
HRA	**Herat**	**10.55**	**41**		**Pn**	**08 15 16.5**	**-0.3**
GEYT	**Alibeck**	**11.79**	**17**	Pn	**Pn**	**08 15 35.2**	**+1.7**
	comp=N,0.4nm,0.3s,baz=228,slow=3.8,SNR=3.9						
SOCY	**Socotra**	**14.41**	**179**	Pn	**Pn**	**08 16 06.3**	**-3.2**
KBL	**Kabul**	**15.24**	**55**	P	**Pn**	**08 16 21.6**	**+0.9**
KBL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBL	**Kabul**	**15.24**	**55**	P	**Pn**	**08 16 21.6**	**+0.9**
GNI	**Garni**	**15.43**	**333**	P	**P**	**08 16 28.8**	**+1.4**
GNI				pmax	pmax		
	comp=Z,33nm,0.9s						
GNI	**Garni**	**15.43**	**333**	Pn	**P**	**08 16 29.1**	**+1.7**
	comp=Z,3.1nm,0.3s,baz=214,slow=2.6,SNR=15						
GNI				LR	LR	08 23 08.8	
	comp=Z,174nm,20.4s,baz=143,slow=40						
GNI	**Garni**	**15.43**	**333**	P	**P**	**08 16 28.8**	**+1.4**
GNI				IAmb	IAmb	08 16 29.9	
	comp=Z,33nm,0.8s						
ASF	**Jabal al Asfar**	**15.75**	**294**	Pn	**Pn**	**08 16 28.7**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=89,slow=9.2,SNR=4.8						
GNBR	**Gunib**	**16.66**	**342**	*e*P	**Pn**	**08 16 38.9**	**+0.1**
TBLG	**Delisi**	**16.79**	**336**	P	**P**	**08 16 42.8**	**+0.5**
TBLG				pmax	pmax		
	comp=Z,21nm,1.2s						
TBLG	**Delisi**	**16.79**	**336**		**P**	**08 16 42.8**	**+0.5**
EIL	**Elat**	**16.93**	**285**	P	**Pn**	**08 16 41.0**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=90,slow=11,SNR=1.9						
AKH	**Akhalkalaki**	**17.00**	**332**	P	**P**	**08 16 46.0**	**+1.1**
AKH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKH	**Akhalkalaki**	**17.00**	**332**	⇑P	**P**	**08 16 46.9**	**+2.1**
AKH	**Akhalkalaki**	**17.00**	**332**	P	**P**	**08 16 46.0**	**+1.1**
BTLR	**Botlikh**	**17.13**	**341**	⇑*e*P	**Pn**	**08 16 45.0**	**+0.4**
MMAI	**Mount Meron Ar**	**17.20**	**296**	P	**Pn**	**08 16 45.2**	**-0.4**
	baz=97,slow=10,SNR=3.5						
CHGR	**Chuyangaron**	**17.55**	**43**	P	**Pn**	**08 16 46.5**	**-3.4**
GROC	**Groznyy**	**17.75**	**340**	⇑*e*P	**Pn**	**08 16 51.7**	**-0.5**
ZEI	**Tsey**	**18.02**	**336**	*e*P	**Pn**	**08 16 55.2**	**-0.5**
ZEI				pmax	pmax		
	comp=Z,20nm,1.3s						
NIL	**Nilore**	**18.15**	**63**	P	**Pn**	**08 16 56.6**	**-0.6**
NIL				pmax	pmax		
	comp=Z,20nm,1.1s						
NIL	**Nilore**	**18.15**	**63**	P	**Pn**	**08 16 56.6**	**-0.6**
GAR	**Garm**	**18.47**	**44**	P	**P**	**08 16 57.5**	**-3.5**
NEY	**Neytrino**	**18.86**	**334**	*i* P	**Pn**	**08 17 07.9**	**+2.0**
KBZ	**Khabaz**	**19.20**	**335**	P	**Pn**	**08 17 10.4**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=150,slow=9.5,SNR=17						
KBZ				LR	LR	08 26 06.5	
	comp=Z,94nm,19.2s,baz=155,slow=42						
SHA1	**Shidzhatmaz**	**19.30**	**335**	*ce*P	**Pn**	**08 17 11.1**	**-0.2**
PYA1	**Pyatigorsk**	**19.41**	**336**	⇓*e*P	**Pn**	**08 17 12.2**	**-0.3**
BTK	**Batken**	**19.43**	**42**	P	**P**	**08 17 09.8**	**-1.6**
BTK				pmax	pmax		
	comp=Z,11nm,0.7s						
BTK	**Batken**	**19.43**	**42**	P	**P**	**08 17 09.8**	**-1.6**
BTK				IAmb	IAmb	08 17 13.0	
	comp=Z,11nm,0.7s						
KVAR	**Kislovodsk Arr**	**19.47**	**335**	P	**Pn**	**08 17 14.7**	**+1.5**
	baz=73,slow=20,SNR=8.9						
KIV	**Kislovodsk**	**19.47**	**335**	*e*P	**Pn**	**08 17 12.7**	**-0.5**
KIV				pmax	pmax		
	comp=Z,71nm,0.9s						
KIV				MLR	MLR		
	comp=Z,133nm,14.0s						
KIV	**Kislovodsk**	**19.47**	**335**	⇑P	**Pn**	**08 17 14.5**	**+1.2**
KIV	**Kislovodsk**	**19.47**	**335**	P	**Pn**	**08 17 12.9**	**-0.3**
KIV				IAmb	IAmb	08 17 16.6	
	comp=Z,23nm,0.9s						
ARXR	**Arkhyz**	**19.70**	**332**	⇑*e*P	**P**	**08 17 14.0**	**-0.5**
SOC	**Sochi**	**20.41**	**329**	*e*P	**P**	**08 17 21.3**	**-0.6**
SOC				*e*		08 17 38.5	
SOC				*e*S	Sn	08 21 13.1	-0.2
SOC				*e*SSS	SSS	08 21 39.9	
SOC				pmax	pmax		
	comp=Z,14nm,0.4s						
SOC				MLR	MLR		
	comp=Z,110nm,13.0s						
KK31	**Karatay Array**	**21.28**	**35**	P	**P**	**08 17 29.5**	**-1.9**
KK31				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KK31	**Karatay Array**	**21.28**	**35**	P	**P**	**08 17 29.5**	**-1.9**
KKAR	**Karatay Array**	**21.28**	**35**	P	**P**	**08 17 29.5**	**-1.9**
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KKAR	**Karatay Array**	**21.28**	**35**	P	**P**	**08 17 29.5**	**-1.9**
BR131	**Keskin Array S**	**21.28**	**313**	P	**P**	**08 17 32.0**	**+0.4**
BR131				pmax	pmax		
	comp=Z,12nm,0.9s						
BR131	**Keskin Array S**	**21.28**	**313**	P	**P**	**08 17 32.0**	**+0.4**
BR131				IAmb	IAmb	08 17 36.9	
	comp=Z,12nm,0.8s						
BRTR	**Keskin Array B**	**21.28**	**313**	P	**P**	**08 17 32.2**	**+0.6**
	comp=Z,11nm,0.8s,baz=132,slow=14,SNR=36						
BRTR				ScP	**ScP**	**08 25 12.2**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=155,slow=4.7,SNR=5.3						
BRTR				LR	LR	08 28 31.0	
	comp=Z,64nm,21.2s,baz=118,slow=44						
ARSB	**Arslanbob**	**21.50**	**42**	P	**P**	**08 17 33.0**	**-1.0**
BR231	**Keskin MP Arra**	**21.91**	**312**	P	**P**	**08 17 39.8**	**+1.4**
BR231				IAmb	IAmb	08 17 45.6	
	comp=Z,24nm,1.1s						
ANTO	**Ankara**	**21.92**	**312**	P	**P**	**08 17 39.0**	**+0.6**
ANTO				pmax	pmax		
	comp=Z,29nm,1.1s						
ANTO	**Ankara**	**21.92**	**312**	P	**P**	**08 17 39.0**	**+0.6**
ANTO				IAmb	IAmb	08 17 44.3	
	comp=Z,29nm,1.1s

comp=Z,17nm,1.4s
MAKZ Makanchi 29.94 40 P P 08 18 52.4 -0.5
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
MAKZ Makanchi 29.94 40 P P 08 18 52.4 -0.5
MAKZ lAmb lAmb 08 18 53.5
comp=Z,7.8nm,0.9s
MK31 Makanchi Array 30.12 41 P P 08 18 53.0 -1.5
MK31 pmax pmax
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 30.12 41 P P 08 18 53.0 -1.5
MKAR Makanchi Array 30.12 41 P P 08 18 53.9 -0.6
comp=Z,2.7nm,0.7s,baz=225,slow=8.7,SNR=28
MKAR PcP **PcP 08 21 55.1 -0.4**
comp=Z,0.4nm,0.5s,baz=248,slow=6.1,SNR=3.2
MKAR ScP **ScP 08 25 36.4 +0.3**
comp=Z,0.4nm,0.6s,baz=227,slow=3.0,SNR=4.2
MKAR LR LR 08 31 07.6
comp=Z,78nm,20.9s,baz=250,slow=37
KURBB Kurchatov Arra 30.45 32 P P 08 18 57.0 -0.3
comp=Z,3.8nm,0.8s,baz=232,slow=8.9,SNR=25
AKASG Malin Array Be 30.48 329 P P 08 18 56.8 -0.8
comp=Z,1.1nm,0.3s,baz=136,slow=8.3,SNR=10
AKASG PcP **PcP 08 21 56.3 -0.1**
comp=Z,0.6nm,0.5s,baz=101,slow=2.0,SNR=5.2
AKBB Malin Array Si 30.48 329 P P 08 18 57.0 -0.6
AKBB pmax pmax
comp=Z,17nm,1.4s
AKBB Malin Array Si 30.48 329 P P 08 18 57.0 -0.6
AKBB lAmb lAmb 08 18 57.6
comp=Z,17nm,1.4s
KURK Kurchatov 30.55 32⇓ *e*P **P 08 18 58.2 0.0**
KURK pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 30.55 32 P P 08 18 57.8 -0.4
KURK lAmb lAmb 08 18 58.4
comp=Z,3.7nm,0.8s
BURAR Bucovina Array 30.67 321 ⇓P **P 08 18 58.9 -0.5**
BUR08 Bucovina Ar. S 30.70 321 P **P 08 19 00.5 +0.8**
BUR08 lAmb lAmb 08 19 03.5
comp=Z,4.4nm,1.1s
GZR Gura Zlata 31.04 315 ⇑P **P 08 19 02.5 -0.2**
OBN Obninsk 31.10 341⇓ *e*P **P 08 19 03.9 +1.0**
OBN *e* 08 20 04.6
OBN pmax pmax
comp=Z,6.0nm,0.5s
OBN MLR MLR
comp=Z,50nm,19.0s
MDVR Moldovita 31.46 313 ⇑P **P 08 19 06.9 +0.5**
DRGR 31.72 317 ⇑P **P 08 19 08.1 -0.6**
DRGR 31.72 317 ⇑P **P 08 19 08.1 -0.6**
WMQ Urumqi 32.22 49 *e*P **P 08 19 13.2 +0.1**
WMQ pP pP 08 19 21.5 +0.4
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,76nm,3.9s
WMQ LR LR
comp=Z,480nm,22.3s
WMQ LR LR
comp=Z,970nm,29.1s
KOLS Kolonicke sedl 33.04 321 *e*P **P 08 19 21.6 +1.5**
KOLS pmax pmax
comp=Z,11nm,0.9s
KOLS Kolonicke sedl 33.04 321 *e*P **P 08 19 21.6 +1.5**
KECS Kecovo 33.85 319 *e*P **P 08 19 28.4 +1.2**
KECS pmax pmax
comp=Z,5.0nm,0.9s
KECS Kecovo 33.85 319 *e*P **P 08 19 28.4 +1.2**
LANS Liptovska Anna 34.76 319 *e*P **P 08 19 36.2 +1.1**
LANS pmax pmax
comp=Z,5.0nm,0.7s
LANS Liptovska Anna 34.76 319 *e*P **P 08 19 36.2 +1.1**
VYHS Vyhne 34.83 318 *e*P **P 08 19 38.5 +2.8**
VYHS pmax pmax
comp=Z,6.0nm,1.4s
VYHS Vyhne 34.83 318 *e*P **P 08 19 38.5 +2.8**
OJC Ojcow 35.08 321 P **P 08 19 38.6 +0.8**
OJC pmax pmax
comp=Z,9.0nm,0.7s
OJC Ojcow 35.08 321 P **P 08 19 38.5 +0.8**
ZAA0 Zalesovo Array 35.55 32 P **P 08 19 40.1 -1.6**
ZALV Zalesovo Beam 35.55 32 P **P 08 19 40.9 -0.8**
comp=Z,19nm,0.6s,baz=238,slow=9.3,SNR=44
CONA Conrad Observa 36.42 316 *i*pP **P 08 19 50.4 +1.0**
comp=Z,3.5nm,1.0s
SOKA Soboth 36.51 313 *i*pP **P 08 19 51.8 +1.6**
comp=Z,4.6nm,1.3s
NRCA Norcia 36.76 307 P **P 08 19 54.2 +1.8**
NRCA lAmb lAmb 08 19 58.1
comp=Z,5.6nm,0.9s
OBKA Obir 36.77 313 *i*pP **P 08 19 53.7 +1.3**
comp=Z,5.3nm,1.1s
MOA Moln 37.40 315 *i*pP **P 08 20 00.9 +3.3**
comp=Z,5.6nm,1.4s
MYKA Terra Mystica 37.40 313 *i*pP **P 08 20 00.3 +2.5**
comp=Z,4.0nm,0.9s
GERES GERESS Array B 38.09 316 P **P 08 20 04.7 +1.0**
comp=Z,0.4nm,0.5s,baz=94,slow=8.0,SNR=2.8
GERES PcP **PcP 08 22 18.6 +0.3**
comp=Z,0.4nm,0.4s,baz=141,slow=6.8,SNR=3.6
ABTA Abfaltersbach 38.17 313 *i*pP **P 08 20 04.9 +0.6**
comp=Z,3.8nm,0.6s
KHC Kasperske Hory 38.27 317 P **P 08 20 05.7 +0.6**
KHC pmax pmax
comp=Z,3.0nm,1.2s
KHC Kasperske Hory 38.27 317 *e*P **P 08 20 05.0 -0.1**
KHC Kasperske Hory 38.27 317 P **P 08 20 05.7 +0.6**
CTI Castel Tesino 38.55 311 P **P 08 20 08.3 +0.7**
CTI pmax pmax
comp=Z,18nm,1.4s
CTI Castel Tesino 38.55 311 P **P 08 20 08.3 +0.7**
CTI lAmb lAmb 08 20 09.9
comp=Z,18nm,1.4s
WATA Walderalm 38.96 313 *i*pP **P 08 20 10.2 -0.8**
comp=Z,8.9nm,0.7s
SQTA Sankt Quirin 39.17 313 *i*pP **P 08 20 12.2 -0.5**
comp=Z,7.6nm,0.4s
MOTA Moosalm 39.27 313 *i*pP **P 08 20 13.3 -0.3**
comp=Z,6.0nm,0.6s
FETA Feichten 39.43 313 *i*pP **P 08 20 14.4 -0.5**
comp=Z,8.1nm,0.6s
FINES FINESS Array B 39.47 339 P **P 08 20 14.5 -0.3**
comp=Z,2.9nm,0.4s,baz=141,slow=9.0,SNR=21
FINES LR LR 08 40 23.8
comp=Z,90nm,18.5s,baz=169,slow=42
RETA Reutte 39.53 313 *i*pP **P 08 20 14.9 -0.7**
comp=Z,2.6nm,0.4s
DAVA Damuels 40.05 313 *i*pP **P 08 20 19.3 -0.9**
comp=Z,14nm,0.5s
GTA Gaotai 40.17 60 *e*P **P 08 20 21.2 +0.1**
GTA pP pP 08 20 25.2 -4.0
GTA sP sP 08 20 28.3 -4.1
GTA pmax pmax
comp=Z,11nm,0.8s
BNI Bardonecchia 41.75 309 P **P 08 20 35.2 +1.1**
BNI pmax pmax
comp=Z,7.0nm,0.9s
BNI Bardonecchia 41.75 309 P **P 08 20 35.2 +1.1**
BNI lAmb lAmb 08 20 36.3
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Ar 42.26 91 *c*P **P 08 20 39.0 +0.6**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 42.26 91 P **P 08 20 38.4 -0.1**
comp=Z,1.7nm,0.7s,baz=288,slow=9.7,SNR=7.4
CMAR LR LR 08 42 44.9
comp=Z,21nm,20.2s,baz=290,slow=43
HFS Hagfors 43.22 332 P **P 08 20 44.9 -0.7**
comp=Z,3.1nm,0.6s,baz=126,slow=8.3,SNR=8.7
MOY Mondy 43.25 42 *e*P **P 08 20 46.4 +0.2**
LZH Lanzhou 43.30 65 *e*P **P 08 20 46.7 -0.2**
LZH pP pP 08 20 50.0 -5.0
LZH sP sP 08 20 51.5 -6.7
LZH *e*PP **PP 08 22 29.8 +2.2**
LZH pmax pmax
comp=Z,20nm,1.2s
LZH pmax pmax
comp=Z,100nm,5.4s
LZH LR LR
comp=Z,220nm,12.8s
LZH LR LR
comp=Z,220nm,13.2s
LZH LR LR
comp=Z,320nm,16.9s
TAM Tamanrasset 43.87 276 P **P 08 20 54.4 +2.8**
TAM pmax pmax
comp=Z,2.0nm,0.7s
TAM Tamanrasset 43.87 276 P **P 08 20 54.4 +2.8**
NC405 NORSAR Array S 44.56 332 P **P 08 20 56.1 -0.3**
PBKT Sadao Pong 44.73 93 P **P 08 20 59.1 +0.8**
PBKT lAmb lAmb 08 20 59.7
comp=Z,9.0nm,0.8s
NB2 NORSAR Subarra 44.73 332 P **P 08 20 57.4 -0.5**
comp=Z,1.6nm,0.7s,baz=120,slow=8.6
NOA NORSAR Array B 44.73 332 P **P 08 20 56.9 -1.0**
comp=Z,1.5nm,0.6s,baz=120,slow=8.0,SNR=9.3
NOA LR LR 08 41 21.4
comp=Z,51nm,19.0s,baz=345,slow=38
SONM Songino Array 45.85 48 P **P 08 21 07.0 0.0**
comp=Z,3.7nm,0.9s,baz=273,slow=8.9,SNR=16
SONM LR LR 08 41 26.6
comp=Z,90nm,19.8s,baz=348,slow=38
ARCES ARCESS Array B 45.98 347 P **P 08 21 07.5 -0.1**
comp=Z,3.3nm,0.6s,baz=141,slow=8.4,SNR=39
ARCES LR LR 08 42 34.3
comp=Z,35nm,18.9s,baz=76,slow=39
ARE0 ARCESS Array S 45.98 347 P **P 08 21 07.6 0.0**
ULN Ulaanbaatar 46.29 48⇑ *e*P **P 08 21 08.5 -2.0**
ULN pmax pmax
comp=Z,7.0nm,1.7s
HHC Hu-ho-hao-te 49.20 58 *e*P **P 08 21 30.1 -3.0**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,74nm,3.8s
ESDC Sonseca Array 49.33 301 P **P 08 21 34.2 +0.1**
comp=Z,0.1nm,0.3s,baz=73,slow=7.4,SNR=6.3
EKA Eskdalemuir Ar 49.85 321 P **P 08 21 39.9 +2.1**
comp=Z,1.3nm,0.4s,baz=102,slow=8.4,SNR=12
TOA0 Torodi Ar. Sit 50.53 265 P **P 08 21 43.2 -0.2**
TOA0 lAmb lAmb 08 21 46.2
comp=Z,7.9nm,1.1s
TORD Torodi Ar. Bea 50.53 265 P **P 08 21 43.5 +0.1**
comp=Z,4.5nm,0.8s,baz=63,slow=7.4,SNR=18
TORD LR LR 08 45 30.7
comp=Z,92nm,20.0s,baz=275,slow=39
BOD Bodaibo 52.01 36 *e*P **P 08 21 52.4 -1.5**
BOD pmax pmax
comp=Z,9.0nm,1.2s
SPA0 Spitsbergen Ar 54.32 351 P **P 08 22 11.5 +0.8**
NJ2 Nanjing 56.16 68 *e*P **P 08 22 23.8 -0.8**
NJ2 pmax pmax
comp=Z,14nm,0.5s
LBTB Lobatse 58.17 210 P **P 08 22 40.8 +1.9**
LBTB pmax pmax
comp=Z,8.0nm,1.2s
LBTB Lobatse 58.17 210 P **P 08 22 40.8 +1.9**
LBTB lAmb lAmb 08 22 42.8
comp=Z,7.8nm,1.1s
DBIC Dimbokro 59.12 261 P **P 08 22 46.2 +0.5**
comp=Z,6.5nm,0.8s,baz=43,slow=7.0,SNR=8.1
DBIC LR LR 08 50 20.6
comp=Z,49nm,19.3s,baz=88,slow=38
DBIC Dimbokro 59.12 261 P **P 08 22 46.1 +0.4**
KIC Iosan Boka 59.16 261 *e*P **P 08 22 45.7 -0.3**
comp=Z,30nm,1.2s
TIC Toumodi 59.28 262 *e*P **P 08 22 46.9 +0.1**
comp=Z,5.7nm,0.2s
LIC Lamto 59.48 261 *e*P **P 08 22 48.3 +0.1**
comp=Z,1.4nm,0.2s
YAK Yakutsk 60.20 32 *e*P **P 08 22 50.8 -1.5**
YAK pmax pmax
comp=Z,8.0nm,0.5s
TIXI Tiksi 60.22 21 P **P 08 22 52.2 -0.1**
TIXI pmax pmax
comp=Z,2.0nm,0.6s
TIXI Tiksi 60.22 21 LR LR 08 51 23.2
comp=Z,78nm,18.1s,baz=350,slow=38
TIXI Tiksi 60.22 21 P **P 08 22 52.2 -0.1**
TIXI lAmb lAmb 08 23 05.7
comp=Z,1.6nm,0.6s
BOSA Boshof 61.44 209 P **P 08 23 03.1 +1.8**
comp=Z,2.4nm,0.6s,baz=27,slow=5.7,SNR=4.5
BOSA Boshof 61.44 209 lAmb lAmb 08 23 15.7
comp=Z,7.5nm,1.4s
KSRS Korea Array 62.24 60 P **P 08 23 04.8 -1.8**
comp=Z,1.9nm,0.5s,baz=280,slow=6.3,SNR=9.3
SUMG Summit 65.49 341 P **P 08 23 28.5 +0.6**
SUMG Summit 65.49 341 *i*P **P 08 23 28.3 +0.4**
comp=Z,1.3nm,0.4s
SUMG Summit 65.49 341 P **P 08 23 28.5 +0.6**
SEY Seymchan 70.35 29⇓ *i*P **P 08 23 58.3 +0.2**
BILL Bilibino 73.42 21⇓ *i*P **P 08 24 15.9 -0.6**
BILL pmax pmax
comp=Z,3.0nm,0.9s
FITZ Fitzroy Crossi 82.64 114 P **P 08 25 08.5 +0.1**
ANM Nome 84.07 16 P **P 08 25 15.4 +0.3**
ANM pmax pmax
comp=Z,7.0nm,1.0s
ANM Nome 84.07 16 P **P 08 25 15.4 +0.3**
C36M Paulatuk 84.25 359 P **P 08 25 15.4 -0.4**
C36M lAmb lAmb 08 25 15.9
comp=Z,3.3nm,0.6s
SCHQ Schefferville 84.26 330 P **P 08 25 15.9 -0.4**
ILAR Eielson Array 87.44 9 P **P 08 25 30.8 -1.0**
comp=Z,0.6nm,0.8s,baz=328,slow=4.0,SNR=10.0
YKA Yellowknife Ar 90.67 355 P **P 08 25 47.0 0.0**
YKA Yellowknife Ar 90.67 355 P **P 08 25 47.0 0.0**
comp=Z,0.9nm,0.6s,baz=5.0,slow=5.0,SNR=40
WRA Warramunga Arr 90.70 112 P **P 08 25 47.0 -0.9**
comp=Z,0.8nm,0.7s,baz=310,slow=4.1,SNR=7.1
ASAR Alice Springs 92.09 115 P **P 08 25 53.6 -0.6**
comp=Z,1.2nm,0.8s,baz=296,slow=4.4,SNR=10
ULM Lac du Bonnet 98.85 341 LR LR 09 13 36.3
comp=Z,42nm,18.3s,baz=50,slow=37
NVAR Mina Array Bea 114.83 353 PKP PKPdf 08 31 26.6 +0.8
comp=Z,0.6nm,0.7s,baz=332,slow=1.0,SNR=4.3
TXAR Lajitas Array 120.29 337 PKP **PKPdf 08 31 35.1 -1.3**
comp=Z,0.2nm,0.7s,baz=157,slow=2.7,SNR=3.2

IDC 10 08:20:55.2±4.1, 5.°17S×151.°08E, h239km±36km, mb2.9/2, mb1 3.3/3, mb1mx2.8/37, mbtmp3.7/3, Error ellipse: s-maj=156.7km s-min=34.7km az=130.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.73**	**222**	P	Pn	08 22 18.9	-0.9
	3.2nm,0.3s,baz=25,slow=8.2,SNR=10						
PMG				S	S	08 23 28.8	+1.7
	1.2nm,0.3s,baz=60,slow=20,SNR=1.9						
WRA	**Warramunga Arr**	**21.93**	**227**	P	P	08 25 29.4	-0.3
	0.8nm,0.7s,baz=51,slow=9.2,SNR=5.3						
ILAR	**Eielson Array**	**83.15**	**22**	P	P	08 32 54.2	+0.1
	0.3nm,0.7s,baz=254,slow=5.0,SNR=6.0						
TORD	**Torodi Ar. Bea**	**148.78**	**287**	PKPbc	PKPbc	08 40 15.2	-0.4
	0.6nm,0.8s,baz=65,slow=1.5,SNR=2.9						

*JMA **10** 08:29:30.9±0.2, 35.°59N×140.°17E, h69km±2km, M2.7*
*IDC **10** 08:29:32.0±5.5, 35.°40N×140.°09E, h69km±38km, mb3.0/3, mb1 3.2/3, mb1mx2.9/44, mbtmp3.3/3, Error ellipse: s-maj=45.4km s-min=27.0km az=154.0*
ISC 10 08:29:31.9±1.0, 35.°56N±0.°05×140.°14E±0.°06, h65km±8km, n17, σ1°00/26, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.14**	**161**	P	Pn	08 29 41.8	+0.1
JCN				S	Sn	08 29 50.0	+1.3
JSMT	**Sammumatsuo**	**0.26**	**71**	P	Pn	08 29 41.9	-0.4
JKUC	**kamogawauchiur**	**0.40**	**173**	P	Pn	08 29 43.1	-0.2
JKUC				S	Sn	08 29 52.2	+0.6
BSO3	**Boso 3**	**0.81**	**158**	P	Pn	08 29 47.0	-0.5
JOD2	**Odawara 2**	**0.91**	**252**	P	Pn	08 29 48.7	-0.4
JOD2				S	Sn	08 30 01.3	-0.4
JIM2	**Oshima 3**	**1.02**	**215**	P	Pn	08 29 49.5	-1.0
JIM2				S	Sn	08 30 03.6	-0.6
JAG	**Ashikaga**	**1.03**	**327**	P	Pn	08 29 50.0	-0.6
JAG				S	Sn	08 30 00.8	-3.7
JRY	**Ryogami san**	**1.11**	**295**	P	Pn	08 29 51.8	+0.2
JFNN	**Fujinakano**	**1.25**	**254**	P	Pn	08 29 53.2	-0.2
JFNN				*e*S	Sn	08 30 09.6	+0.2
JYN	**Shimob**	**1.31**	**268**	P	Pn	08 29 54.1	-0.1
JIZS	**Izushimoda**	**1.33**	**232**	P	Pn	08 29 54.1	-0.4
JIZS				S	Sn	08 30 10.9	-0.5
JKT	**Katashina**	**1.41**	**329**	P	Pn	08 29 55.3	-0.3
MJAR	**Matsushiro Arr**	**1.85**	**303**	P	Pn	08 30 02.1	+0.6
	1.4nm,0.3s,baz=138,slow=15,SNR=38						
MJAR				S	Sn	08 30 24.9	+0.9
	0.9nm,0.3s,baz=124,slow=30,SNR=5.4						
MAT	**Matsushiro**	**1.85**	**303**	P	Pn	08 30 02.2	+0.7
MAT				S	Sn	08 30 25.1	+1.1
MKAR	**Makanchi Array**	**44.05**	**303**	P	P	08 37 33.4	+0.1
	0.2nm,0.5s,baz=78,slow=8.7,SNR=3.6						
KURBB	**Kurchatov Arra**	**46.12**	**309**	P	P	08 37 49.4	-0.1
	0.5nm,0.6s,baz=82,slow=7.9,SNR=4.4						
ILAR	**Eielson Array**	**51.29**	**32**	P	P	08 38 29.6	+0.5
	0.3nm,0.8s,baz=264,slow=8.1,SNR=3.7						

IDC 10 08:30:53.8±3.2, 31.°32S×176.°87W, h0km, mb3.9/2, mb1 4.1/4, mb1mx3.9/30, mbtmp4.0/4, ML3.6/2, MS3.3/3, Ms1 3.3/3, ms1mx2.8/38, Error ellipse: s-maj=67.8km s-min=33.1km az=104.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.25**	**336**	Pn	Pn	08 31 32.1	-0.1
	39nm,0.3s,baz=319,slow=19,SNR=4.6						
RAO				Sn	Sn	08 31 56.6	-4.1
	51nm,0.3s,baz=102,slow=22,SNR=3.7						
URZ	**Urewera**	**8.51**	**214**	Pn	Pn	08 32 57.6	-0.7
	0.3nm,0.3s,baz=282,slow=9.3,SNR=4.4						
URZ				Sn	Sn	08 34 29.9	-5.1
	0.6nm,0.3s,baz=196,slow=6.6,SNR=4.3						
DZM	**Mont Dzumac**	**17.51**	**298**	LR	LR	08 40 44.3	
	comp=Z,105nm,18.6s,baz=47,slow=34						
PPT	**Papeete**	**28.27**	**67**	LR	LR	08 47 45.2	
	comp=Z,33nm,18.5s,baz=234,slow=36						
ASAR	**Alice Springs**	**44.03**	**267**	P	P	08 39 03.8	+0.2
	1.5nm,0.9s,baz=104,slow=7.7,SNR=12						
WRA	**Warramunga Arr**	**45.10**	**272**	P	P	08 39 11.7	-0.3
	2.0nm,0.8s,baz=111,slow=8.1,SNR=8.6						
WRA				LR	LR	08 56 29.4	
	comp=Z,39nm,20.7s,baz=195,slow=34						
H10S3	**ASCENSION HYDR**	**36.48**	**154**	T	T	11 23 44.2	
	baz=205,slow=74,SNR=6.0						
H10S2	**ASCENSION HYDR**	**36.48**	**154**	T	T	11 23 54.0	
	baz=15,slow=74,SNR=5.4						
FINES	**FINESS Array B**	**146.34**	**340**	PKPbc	PKPdf	08 50 34.9	+0.3
	3.1nm,0.8s,baz=48,slow=2.8,SNR=5.3						

*NNC **10** 08:50:45.8±0.4, 43.°25N×78.°29E, h0km, mb3.9, mpv3.0, Error ellipse: s-maj=3.3km s-min=1.8km az=56.0*
*SOME **10** 08:50:45.7, 43.°23N×78.°25E, h10km*
ISC 10 08:50:45.0±1.1, 43.°22N±0.°04×78.°24E±0.°03, h14km±8km, n11, σ0°20/22, 6C-4D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZHN	**Zhinishke**	**0.16**	**110**	⇑*i*P	Pg	08 50 48.9	-0.1
	16nm,0.1s						
ZHN				*e*S	Sg	08 50 51.4	-0.3
	5.5nm,0.1s						
SATY	**Saty**	**0.21**	**142**	⇑*i*P	Pg	08 50 49.8	0.0
	52nm,0.1s						
SATY				⇓*i*S	Sg	08 50 52.9	0.0
	100nm,0.1s						
SATY	**Saty**	**0.21**	**142**	P	Pg	08 50 49.7	0.0
	39nm,0.1s						
SATY				S	Sg	08 50 52.9	0.0
	100nm,0.1s						
KURS	**Kuram**	**0.27**	**350**	⇑*i*P	Pg	08 50 51.0	+0.2
	4.1nm,0.1s						
KURS				⇓*e*S	Sg	08 50 54.7	+0.1
	8.7nm,0.2s						
KURS	**Kuram**	**0.27**	**350**	P	Pg	08 50 50.9	+0.2
	4.1nm,0.1s						
KURS				S	Sg	08 50 54.7	+0.1
	8.7nm,0.2s						
UZB	**Uzynbulak**	**0.58**	**97**	⇑*i*P	Pg	08 50 56.7	+0.2
	4.5nm,0.1s						
UZB				⇑*i*S	Sg	08 51 04.3	+0.1
	9.9nm,0.1s						
UZB	**Uzynbulak**	**0.58**	**97**	P	Pg	08 50 56.7	+0.2
	4.5nm,0.1s						
UZB				S	Sg	08 51 04.5	+0.3
	9.9nm,0.1s						
KOTS	**Kotyrbulak**	**0.82**	**271**	⇓*i*P	Pg	08 51 00.9	-0.1
	3.6nm,0.2s						
KOTS				*e*S	Sg	08 51 11.7	-0.1
	4.0nm,0.2s						
PDGK	**Podgornoye**	**0.92**	**83**	P	Pg	08 51 02.5	-0.4
	0.3nm,0.1s						
PDGK				S	Sg	08 51 14.7	-0.3
	0.9nm,0.2s						
ARXS	**Arharly**	**1.03**	**344**	*e*P	Pg	08 51 04.7	-0.3
	0.2nm,0.1s						
ARXS				⇓*i*S	Sg	08 51 18.3	-0.2
	2.1nm,0.1s						
KTBS	**Karatobe**	**1.23**	**294**	*e*P	Pn	08 51 08.0	+0.1
	1.2nm,0.2s						
KTBS				⇑*i*S	Sb	08 51 24.1	+0.1
	2.8nm,0.2s						

KRNET 10 08:51:45.1±0.1, 40.°64N×69.°25E, mb2.6, 8C-2D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**1.33**	**115**	⇑*i*P	Pg	08 52 09.4	-1.1
	baz=15						
BTK				⇑*i*S	Sg	08 52 27.3	-0.5
	baz=15						
ARK	**Arkit**	**2.35**	**60**	⇓*i*P	Pn	08 52 24.8	-0.2
	baz=60						
ARK				⇓*i*S	Sn	08 52 54.0	-0.6
	baz=60						
KK31	**Karatay Array**	**2.63**	**20**	⇑Pn	Pn	08 52 25.1	-3.8
	1.4nm,0.2s,baz=192,slow=17						
KK31				⇑Sn	Sn	08 53 02.0	+0.5
	2.0nm,0.2s,baz=190,slow=30						
ARSB	**Arslanbob**	**2.90**	**75**	⇑*i*P	Pn	08 52 32.7	0.0
	baz=75						
ARSB				⇑*i*S	Sn	08 53 07.3	-1.1
	baz=75						
AML	**Almayashu**	**3.66**	**65**	⇑*i*P	Pn	08 52 43.4	+0.1
	baz=65						
AML				⇑*i*S	Sn	08 53 26.2	-1.1
	baz=65						

IDC 10 08:59:23.7±2.0, 0.°47N×125.°77E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/47, mbtmp3.6/3, Error ellipse: s-maj=186.5km s-min=26.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.96**	**158**	P	P	09 04 18.1	-1.2
	1.7nm,0.7s,baz=336,slow=12,SNR=8.6						
ASAR	**Alice Springs**	**25.26**	**162**	P	P	09 04 52.6	+0.8
	0.6nm,0.3s,baz=345,slow=11,SNR=20						
MKAR	**Makanchi Array**	**59.70**	**327**	P	P	09 09 30.1	-0.1
	0.2nm,0.5s,baz=121,slow=7.4,SNR=4.4						

*BJI **10** 09:04:35.2±0.0, 19.°20N×145.°40E, h179km, mB4.9/22, mb4.6/32*
*MOS **10** 09:04:35.3±0.9, 19.°17N×145.°33E, h189km, mb4.8/47, Error ellipse: s-maj=10.1km s-min=5.2km az=88.3*
*IDC **10** 09:04:37.4±1.5, 19.°13N×145.°46E, h198km±15km, mb4.1/30, mb1 4.2/34, mb1mx4.0/53, mbtmp4.6/34, Error ellipse: s-maj=13.7km s-min=7.2km az=84.0*
*NEIC **10** 09:04:37.2±1.2, 19.°15N±0.°06×145.°4E±0.°1, h190km±7km, mb4.8/209, Error ellipse: s-maj=14.8km s-min=8.9km az=82.0*
ISC 10 09:04:37.9±0.3, 19.°17N±0.°04×145.°42E±0.°06, h200km, n334, σ1°09/342, mb4.7/154, 7C-4D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.58**	**185**	P	Pn	09 05 58.0	-1.9
GUMO						09 07 03.3	
GUMO	**Guam**	**5.58**	**185**	P	Pn	09 05 58.5	-1.4
	28nm,0.3s,baz=143,slow=6.2,SNR=19						
GUMO				S	Sn	09 07 02.9	-1.7
	33nm,0.3s,baz=352,slow=22,SNR=4.8						
GUMO	**Guam**	**5.58**	**185**	Pn	Pn	09 05 58.0	-1.9
GUMO				Sn	Sn	09 07 03.3	-1.3
JCJ	**Chichijima**	**8.43**	**340**	P	Pn	09 06 36.2	-0.5

17nm,0.3s,baz=90,slow=20,SNR=3.3
JCJ S **Sn** **09 08 05.4 -6.1**

28nm,0.3s,baz=294,slow=23,SNR=8.9
PATS Pohnpei 17.54 133 P **Pn** **09 08 29.9 -0.9**
PATS S **S** **09 11 40.5 -0.3**
INU Inuyama 17.74 337 P **Pn** **09 08 31.3 -1.6**
INU IAmb IAmb 09 08 33.4

comp=Z,41nm,1.3s
MJAR Matsushiro Arr 18.43 341 P **P** **09 08 37.8 -0.6**
comp=Z,0.4nm,0.3s,baz=152,slow=9.2,SNR=19
MAJO Matsushiro 18.43 341 P **P** **09 08 38.3 -0.1**
MAJO pmax pmax

comp=Z,51nm,1.4s
MAJO Matsushiro 18.43 341 P **P** **09 08 38.3 -0.1**
MAJO IAmb IAmb 09 08 39.0

comp=Z,51nm,1.4s
MAT Matsushiro 18.43 341 P **P** **09 08 38.2 -0.2**
MAT S **S** **09 11 57.6 -0.6**
MJB9 Matsu-Tunnel 18.43 341 P **P** **09 08 37.9 -0.6**
MJB9 IAmb IAmb 09 08 49.3

comp=Z,20nm,0.8s
JNU Nakatsue 19.03 320 P **P** **09 08 45.3 +0.3**
comp=Z,0.2nm,0.3s,baz=34,slow=3.6,SNR=2.2
JNU Nakatsue 19.03 320 P **P** **09 08 44.5 -0.4**
JNU IAmb IAmb 09 09 02.2

comp=Z,36nm,1.3s
H11S3 WAKE ISLAND Hy 20.14 88 T T 09 30 13.3
baz=274,slow=75
H11S1 WAKE ISLAND Hy 20.16 88 T T 09 30 08.8
baz=274,slow=75
H11S2 WAKE ISLAND Hy 20.16 88 T T 09 30 04.8
baz=274,slow=75
MANU Manus Island 21.17 175 P **P** **09 09 06.9 -1.0**
SMPI Sarmi 22.04 198 P **P** **09 09 17.4 +0.7**
comp=Z,2µmcomp=Z,90nm,1.3s
JAY Jayapura 22.05 193 P **P** **09 09 15.8 -1.0**
comp=Z,61nm,0.9s,baz=1.9,slow=6.1,SNR=9.0
JAY Jayapura 22.05 193 P **P** **09 09 16.4 -0.4**
comp=Z,48nm,1.1s
GENI Genyem 22.24 194 P **P** **09 09 18.3 -0.2**
comp=Z,4µmcomp=Z,162nm,0.5s
ERM Erimo 22.85 356 P **P** **09 09 22.8 -1.0**
ERM pmax pmax

comp=Z,85nm,1.2s
ERM Erimo 22.85 356 P **P** **09 09 22.8 -1.0**
YULB Yu-li 22.85 285 P **P** **09 09 25.7 +1.6**
YULB IAmb IAmb 09 09 31.9

comp=Z,17nm,0.9s
YHNB Yeheng 22.95 288 P **P** **09 09 26.9 +1.9**
SSLB Suanglung 23.21 286 P **P** **09 09 28.5 +1.2**
SSLB IAmb IAmb 09 09 34.2

comp=Z,26nm,0.9s
TJN Taejon 23.36 321⇑*e*P **P** **09 09 26.5 -2.0**
KSRS Korea Array 23.78 324 P **P** **09 09 32.8 +0.5**
comp=Z,11nm,0.8s,baz=146,slow=9.2,SNR=39
KS19 Wonju Array Si 23.84 324 P **P** **09 09 33.6 +0.7**
KS19 IAmb IAmb 09 09 50.5

comp=Z,21nm,0.9s
YUK Yuzh-Kuril'sk 24.79 1⇑*e*P **P** **09 09 39.6 -1.8**
JKA Kamikawa-asahi 24.98 355 P **P** **09 09 44.4 +1.2**
ASAJ Asahikawa 24.98 355 P **P** **09 09 44.4 +1.2**
comp=Z,23nm,0.8s,baz=226,slow=14,SNR=9.1
NJ2 Nanjing 27.08 303 *e*P **P** **09 10 02.8 +0.7**
NJ2 pmax pmax

comp=Z,7.0nm,0.5s
USRK Ussuriysk Ar. 27.37 339 P **P** **09 10 04.5 0.0**
comp=Z,4.2nm,0.8s,baz=152,slow=8.8,SNR=7.7
YSS Yuzh-Sakhalins 27.79 356 *e*P **P** **09 10 09.0 +0.8**
YSS pmax pmax

comp=Z,90nm,0.5s
PMG Port Moresby 28.45 176 P **P** **09 10 13.1 -1.3**
PMG pmax pmax

comp=Z,20nm,0.9s
PMG Port Moresby 28.45 176 P **P** **09 10 12.5 -1.9**
comp=Z,6.5nm,0.6s,baz=2.7,slow=9.5,SNR=3.8
PMG Port Moresby 28.45 176 P **P** **09 10 13.1 -1.3**
PMG IAmb IAmb 09 10 20.3

comp=Z,20nm,0.8s
WHN Wuhan 30.28 298 P P 09 10 36.7 +6.3
KLR Kul'dur 31.94 343 P **P** **09 10 44.9 +0.2**
comp=Z,6.8nm,0.3s,baz=147,slow=9.0,SNR=55
GRNR Gornyy 32.33 349 *e*P **P** **09 10 47.4 -0.7**
GRNR pmax pmax

comp=Z,10.0nm,0.7s
COEN Coen 33.00 184 P **P** **09 10 53.6 -0.7**
TTSI Tana Toraja 33.49 231 P **P** **09 11 00.7 +2.1**
comp=Z,26nm,1.0s
MTN Manton Dam 34.79 205 P **P** **09 11 10.1 +0.4**
MTN IAmb IAmb 09 11 11.5

comp=Z,29nm,0.8s
KAPI Kappang 34.88 229 P **P** **09 11 12.6 +2.0**
KAPI pmax pmax

comp=Z,31nm,1.3s
KAPI Kappang 34.88 229 P **P** **09 11 12.6 +2.0**
KAPI IAmb IAmb 09 11 20.8

comp=Z,31nm,1.3s
PEA0B Petropavlovsk- 35.19 13 P **P** **09 11 13.5 +0.8**
PEA0B pmax pmax

comp=Z,29nm,1.0s
PEA0B Petropavlovsk- 35.19 13 P **P** **09 11 13.5 +0.8**
PEA0B IAmb IAmb 09 11 14.9

comp=Z,29nm,1.0s
PETK Petropavlovsk- 35.19 13 P **P** **09 11 13.4 +0.6**
comp=Z,11nm,0.7s,baz=187,slow=10,SNR=16
PET Petropavlovsk 35.32 14 P **P** **09 11 13.8 0.0**
PET pmax pmax

comp=Z,57nm,1.5s
PET Petropavlovsk 35.32 14 P **P** **09 11 13.8 0.0**
PET IAmb IAmb 09 11 23.6

comp=Z,57nm,1.5s
SOEI Soe 35.51 218 P **P** **09 11 14.1 -2.0**
comp=Z,30nm,1.4s
SOEI Soe 35.51 218 P **P** **09 11 15.3 -0.8**
SOEI IAmb IAmb 09 11 19.1

comp=Z,19nm,0.8s
HHC Hu-ho-hao-te 36.08 314 *e*P **P** **09 11 23.4 +2.7**
HHC pmax pmax

comp=Z,3.0nm,0.8s
HHC pmax pmax

comp=Z,67nm,4.7s
SBUM Sibu 36.48 247 P **P** **09 11 23.7 -0.5**
KNRA Kununurra 38.31 206 P **P** **09 11 40.4 +0.9**
KNRA IAmb IAmb 09 11 42.0

comp=Z,24nm,0.8s
CTA Charters Tower 39.03 179 P **P** **09 11 44.2 -1.2**
comp=Z,3.0nm,0.5s,baz=338,slow=7.9,SNR=6.9
LZH Lanzhou 40.16 304 ⇓P **P** **09 11 55.8 +0.9**
LZH pP pP 09 12 36.0 +0.1
LZH sP sP 09 12 55.7 -2.4
LZH PP **PnPn** **09 13 35.2 -2.0**
LZH pmax pmax

comp=Z,26nm,1.1s
LZH pmax pmax

comp=Z,97nm,5.6s
WR0 Warramunga Arr 40.33 196 P **P** **09 11 56.2 +0.1**
WR0 IAmb IAmb 09 11 57.3

comp=Z,34nm,0.9s
WRAB Tennant Creek 40.35 196 P **P** **09 11 57.0 +0.7**
WRAB pmax pmax

comp=Z,52nm,0.8s
WRAB Tennant Creek 40.35 196 P **P** **09 11 57.0 +0.7**
WRA Warramunga Arr 40.36 196 P **P** **09 11 56.6 +0.1**
comp=Z,36nm,0.7s,baz=18,slow=9.0,SNR=160
MA2 Magadan 40.54 4⇑*e*P **P** **09 11 58.3 +0.9**
MA2 pmax pmax

comp=Z,51nm,1.2s
MA2 Magadan 40.54 4 P **P** **09 11 57.6 +0.3**
MA2 IAmb IAmb 09 11 59.6

comp=Z,44nm,1.1s
FITZ Fitzroy Crossi 41.82 209 P **P** **09 12 09.1 +0.8**
FITZ IAmb IAmb 09 12 09.8

comp=Z,18nm,0.8s
ULN Ulaanbaatar 42.23 322 P **P** **09 12 13.2 +1.7**
ULN pmax pmax

comp=Z,4.0nm,0.7s
ULN Ulaanbaatar 42.23 322 P **P** **09 12 13.2 +1.7**
SONM Songino Array 42.61 321 P **P** **09 12 15.0 +0.5**
SONM Songino Array 42.61 321 P **P** **09 12 15.0 +0.5**
comp=Z,3.0nm,0.7s,baz=137,slow=8.2,SNR=15
CMAR Chiang Mai Arr 43.89 277 *i* P **P** **09 12 27.3 +2.2**
CMAR pmax pmax

comp=Z,5.0nm,0.8s
CMAR Chiang Mai Arr 43.89 277 P **P** **09 12 26.5 +1.4**
comp=Z,5.4nm,0.8s,baz=68,slow=6.6,SNR=22
SEY Seymchan 43.98 5⇑*e*P **P** **09 12 25.0 -0.1**

AS31 Alice Springs 44.03 195 P **P** **09 12 26.0 -0.1**
ASAR Alice Springs 44.04 195 P **P** **09 12 25.9 -0.2**
comp=Z,5.1nm,0.7s,baz=14,slow=7.6,SNR=73
ADK Adak 44.07 33 P **P** **09 12 26.7 +0.8**
ADK pmax pmax

comp=Z,43nm,1.0s
ADK Adak 44.07 33 P **P** **09 12 26.7 +0.8**
ADK IAmb IAmb 09 12 34.0

comp=Z,43nm,0.9s
YAK Yakutsk 44.21 349 *e*P **P** **09 12 25.9 -1.0**
YAK *e**PP **pP** **09 13 07.1 -2.3**
YAK *e* 09 14 05.5
YAK *e* 09 14 19.8
YAK *e*S **S** **09 18 45.6 +1.0**
YAK *e* 09 22 03.8
YAK pmax pmax

comp=E,3.0nm,1.0s
YAK pmax pmax

comp=Z,21nm,0.9s
YAK pmax pmax

comp=N,8.0nm,1.1s
YAK pmax pmax

comp=Z,144nm,3.5s
YAK pmax pmax

comp=N,102nm,3.6s
YAK pmax pmax

comp=E,120nm,3.3s
YAK smax smax

comp=E,210nm,4.9s
YAK smax smax

comp=N,142nm,4.3s
YAK Yakutsk 44.21 349 P **P** **09 12 26.6 -0.3**
comp=N,16nm,0.7s,baz=82,slow=2.7,SNR=9.5
YAK Yakutsk 44.21 349 P **P** **09 12 27.4 +0.6**
YAK IAmb IAmb 09 12 27.6

comp=Z,27nm,0.7s
EIDS Eidsvold 44.62 173 P **P** **09 12 31.4 +0.8**
ATKA Atka Island 45.54 34 P **P** **09 12 38.0 +0.5**
ZAK Zakamensk 45.61 323 *e*P **P** **09 12 34.8 -3.5**
ZAK pmax pmax

comp=Z,3.0nm,1.1s
DZM Mont Dzumac 45.86 152 P **P** **09 12 40.6 +0.1**
DZM IAmb IAmb 09 12 42.5

comp=Z,38nm,1.3s
PSA00 Pilbara Seismi 47.60 213 P **P** **09 12 54.6 +0.6**
NIKH Nikolski High 48.77 35 P **P** **09 13 02.9 +0.4**
ARMA Armidale 49.67 173 P **P** **09 13 10.2 +0.5**
UNV Unalaska Valle 50.42 35 P **P** **09 13 15.2 +0.4**
UNV IAmb IAmb 09 13 20.1

comp=Z,32nm,0.8s
BILL Bilibino 50.60 10 P **P** **09 13 16.9 +0.9**
BILL pmax pmax

comp=Z,38nm,0.8s
BILL Bilibino 50.60 10 P **P** **09 13 16.9 +0.9**
BILL IAmb IAmb 09 13 18.0

comp=Z,38nm,0.8s
STKA Stephens Creek 50.89 184 P **P** **09 13 16.8 -1.8**
STKA pmax pmax

comp=Z,2.0nm,1.4s
STKA Stephens Creek 50.89 184 P **P** **09 13 17.1 -1.5**
comp=Z,2.2nm,0.5s,baz=1.7,slow=7.6,SNR=12
STKA Stephens Creek 50.89 184 P **P** **09 13 16.8 -1.8**
AKUT Akutan 50.93 35 P **P** **09 13 18.3 -0.4**
FORT Forrest 52.40 199 P **P** **09 13 29.3 -0.5**
FORT IAmb IAmb 09 13 32.1

comp=Z,24nm,0.6s
BBOO Buckleboo 52.46 190 P **P** **09 13 28.9 -1.3**
FALS False Pass 52.48 35 P **P** **09 13 30.9 +0.8**
GAMB Gambell 53.12 22 P **P** **09 13 34.8 +0.1**
GAMB IAmb IAmb 09 13 36.9

comp=Z,19nm,0.9s
TIXI Tiksi 53.37 354⇓*e*P **P** **09 13 35.7 -0.7**
TIXI pmax pmax

comp=Z,10.0nm,2.3s
WMQ Urumqi 53.80 311 *e*P **P** **09 13 42.9 +2.8**
WMQ pP pP 09 14 24.3 +0.6
WMQ pmax pmax

comp=Z,8.0nm,1.1s
WMQ pmax pmax

comp=Z,68nm,5.7s
WMQ LR LR

comp=Z,320nm,24.5s
WMQ LR LR

comp=Z,580nm,29.2s
WMQ LR LR

comp=Z,98nm,28.9s
SDPT Sand Point 54.23 35 P **P** **09 13 43.5 +0.6**
HPAH Hawaii Prepara 55.22 79 P **P** **09 13 50.0 -0.7**
POHA Pohakuloa 55.42 79 P **P** **09 13 53.7 +1.4**
KHU Kahuku 55.44 79 P **P** **09 13 53.6 +1.2**
KHU pmax pmax

comp=Z,127nm,1.2s
KHU Kahuku 55.44 79 P **P** **09 13 53.6 +1.2**
MORW Morawa 55.72 211 P **P** **09 13 53.7 -0.1**
MORW IAmb IAmb 09 13 54.7

comp=Z,27nm,1.4s
ANM Nome 55.87 23 P **P** **09 13 55.7 +1.2**
ANM pmax pmax

comp=Z,16nm,0.9s
ANM Nome 55.87 23 P **P** **09 13 55.7 +1.2**
ANM IAmb IAmb 09 13 56.7

comp=Z,16nm,0.9s
TOO Toolangi 56.44 180 P **P** **09 13 58.4 -0.5**
TOO pmax pmax

comp=Z,18nm,1.5s
TOO Toolangi 56.44 180 P **P** **09 13 58.4 -0.5**
TOO IAmb IAmb 09 14 14.5

comp=Z,18nm,1.4s
CHIR Chirikof Islan 57.01 35 P **P** **09 14 03.5 +0.9**
ZALV Zalesovo Beam 57.48 322 P **P** **09 14 05.5 -0.4**
comp=Z,1.7nm,0.5s,baz=105,slow=7.4,SNR=9.2
MK31 Makanchi Array 57.94 314 P **P** **09 14 09.9 +0.5**
MK31 pmax pmax

comp=Z,1.0nm,0.9s
MK31 Makanchi Array 57.94 314 P **P** **09 14 09.9 +0.5**
MKAR Makanchi Array 57.94 314 P **P** **09 14 09.6 +0.2**
comp=Z,1.9nm,0.7s,baz=91,slow=9.3,SNR=18
SII Sitkinak Islan 57.97 35 P **P** **09 14 10.6 +1.2**
MAKZ Makanchi 58.16 314 P **P** **09 14 11.9 +1.0**
MAKZ pmax pmax

comp=Z,2.0nm,0.7s
MAKZ Makanchi 58.16 314 P **P** **09 14 11.9 +1.0**
NWAO Narrogin (SRO) 58.39 208 P **P** **09 14 13.5 +1.0**
NWAO Narrogin (SRO) 58.39 208 P **P** **09 14 13.3 +0.8**
NWAO IAmb IAmb 09 14 14.2

comp=Z,10nm,0.9s
NWAO Narrogin (SRO) 58.39 208 P **P** **09 14 13.5 +1.0**
RDOG Red Dog Mine 58.48 20 P **P** **09 14 14.4 +1.8**
RDOG IAmb IAmb 09 14 14.9

comp=Z,21nm,1.0s
SVW2 Sparrevohn 58.54 29 P **P** **09 14 14.7 +1.4**
OHAK Old Harbor 58.61 34 P **P** **09 14 14.8 +1.1**
KDAK Kodiak Island 59.11 33 P **P** **09 14 17.8 +0.6**
KDAK pmax pmax

comp=Z,26nm,0.9s
KDAK Kodiak Island 59.11 33 P **P** **09 14 17.8 +0.6**
KDAK IAmb IAmb 09 14 20.1

comp=Z,26nm,0.8s
RSO Redoubt South 59.69 30 P **P** **09 14 20.7 -0.7**
HOM Homer 60.03 31 P **P** **09 14 24.1 +0.7**
BRLK Bradley Lake 60.43 31 P **P** **09 14 26.3 +0.1**
PPLA Purkeypile 60.60 28 P **P** **09 14 28.5 +1.0**
PPLA IAmb IAmb 09 14 33.9

comp=Z,44nm,1.5s
SKT Skwentna 60.66 29 P **P** **09 14 27.9 +0.2**
SKT IAmb IAmb 09 14 28.6

comp=Z,20nm,0.8s
KURK Kurchatov 60.74 318⇓*e*P **P** **09 14 27.9 -0.5**
KURK *i* *PP **PcP** **09 15 09.0 -1.3**
KURK pmax pmax

comp=Z,4.0nm,1.0s
KURK Kurchatov 60.74 318 P **P** **09 14 28.1 -0.3**
KURBB Kurchatov Arra 60.79 318 P **P** **09 14 28.2 -0.5**
comp=Z,1.8nm,0.4s,baz=93,slow=7.7,SNR=24
SUA Susitna One 60.89 30 P **P** **09 14 29.8 +0.4**
SUA IAmb IAmb 09 14 31.1

comp=Z,18nm,0.6s
SEW Seward 61.20 31 P **P** **09 14 31.3 0.0**
RC01 Rabbit Creek A 61.28 30 P **P** **09 14 32.6 +0.8**
KTH Kantishna Hill 61.33 27 P **P** **09 14 32.6 +0.3**
BPAW Bear Paw Mtn. 61.45 27 P **P** **09 14 33.9 +0.9**
TRF Thorofare Moun 61.58 27 P **P** **09 14 34.3 +0.2**
PMR Palmer 61.67 30 P **P** **09 14 34.4 0.0**
PMR pmax pmax

comp=Z,28nm,0.9s
PMR Palmer 61.67 30 P **P** **09 14 34.4 0.0**
MLY Manley 61.81 26 P **P** **09 14 36.4 +1.0**
MLY IAmb IAmb 09 14 37.3

comp=Z,24nm,0.9s
GHO Glory Hole Cre 61.81 29 P **P** **09 14 36.2 +0.8**
KNK Knik Glacier 61.95 30 P **P** **09 14 36.8 +0.4**
SML Sawmill 62.09 29 P **P** **09 14 37.6 +0.2**
RND Reindeer 62.20 28 P **P** **09 14 38.0 0.0**
RND pmax pmax

comp=Z,17nm,0.8s
RND Reindeer 62.20 28 P **P** **09 14 38.0 0.0**
RND IAmb IAmb 09 14 39.5

comp=Z,17nm,0.8s
MCK McKinley 62.24 27 P **P** **09 14 38.5 +0.2**
MCK pmax pmax

comp=Z,17nm,1.0s
MCK McKinley 62.24 27 P **P** **09 14 38.5 +0.2**
MCK IAmb IAmb 09 14 39.3

comp=Z,17nm,1.0s
NEA Nenana 62.38 26 P **P** **09 14 39.2 +0.1**
NEA IAmb IAmb 09 14 41.4

comp=Z,23nm,1.0s
KSH Kashi 62.38 305 P **P** **09 14 41.4 +1.6**
KSH sP sP 09 15 41.2 -4.8
KSH PP **PP** **09 17 01.7 +2.3**
KSH S **S** **09 22 51.2 +0.6**
KSH SS **SS** **09 27 03.8 +6.1**
KSH pmax pmax

comp=Z,8.0nm,0.8s
KSH pmax pmax

comp=Z,330nm,5.0s
KSH LR LR

comp=Z,160nm,5.1s
KSH LR LR

comp=Z,170nm,4.0s
KSH LR LR

comp=Z,460nm,5.4s
SCM Sheep Creek Mo 62.56 30 P **P** **09 14 41.2 +0.7**
SCM pmax pmax

comp=Z,61nm,0.8s
SCM Sheep Creek Mo 62.56 30 P **P** **09 14 41.2 +0.7**
COLD Coldfoot 62.62 23 P **P** **09 14 40.5 -0.2**
WRH Wood River Hil 62.77 27 P **P** **09 14 41.6 -0.1**
WRH IAmb IAmb 09 14 42.5

comp=Z,14nm,0.7s
DHY Denali Highway 62.78 28 P **P** **09 14 42.8 +0.8**
DHY IAmb IAmb 09 14 47.0

comp=Z,7.8nm,0.7s
MDM Murphy Dome 62.82 26 P **P** **09 14 43.5 +1.4**
CCB Clear Creek Bu 62.93 26 P **P** **09 14 42.6 -0.1**
CCB IAmb IAmb 09 14 44.0

comp=Z,14nm,1.3s
COLA College 62.96 26*de*P **P** **09 14 43.8 +0.9**
COLA pmax pmax

comp=Z,15nm,0.9s
EYAK Cordova Ski Ar 63.10 31 P **P** **09 14 44.5 +0.6**
HDA Harding Lake 63.24 27 P **P** **09 14 44.6 -0.2**
HDA IAmb IAmb 09 14 45.1

comp=Z,16nm,0.8s
TOLK Toolik Lake Re 63.25 22 P **P** **09 14 46.3 +1.5**
IL31 63.34 26 P **P** **09 14 44.0 -1.4**
IL31 IAmb IAmb 09 14 45.7

comp=Z,24nm,0.9s
ILAR Eielson Array 63.34 26 P **P** **09 14 44.5 -1.0**
comp=Z,15nm,0.8s,baz=255,slow=5.0,SNR=136
RAGM Ragged Mountai 63.60 31 P **P** **09 14 48.8 +1.5**
PAX Paxson 63.62 28 P **P** **09 14 48.0 +0.6**
PAX pmax pmax

comp=Z,18nm,0.6s
PAX Paxson 63.62 28 P **P** **09 14 48.0 +0.6**
SUCK Suckling Hills 64.01 32 P **P** **09 14 51.6 +1.7**
RIDG Independent Ri 64.02 28 P **P** **09 14 50.2 +0.2**
PRP Porcupine Dome 64.05 26 P **P** **09 14 49.1 -1.2**
GLB Gilahina Butte 64.16 30 P **P** **09 14 51.9 +0.9**
VRDI Verde Repeater 64.30 31 P **P** **09 14 52.9 +0.8**
VRDI IAmb IAmb 09 14 53.7

comp=Z,22nm,0.9s
DOT Dot Lake 64.35 28 P **P** **09 14 52.5 +0.4**
FYU Fort Yukon 64.37 25 P **P** **09 14 52.9 +0.8**
CRQM Cirque 64.40 31 P **P** **09 14 53.3 +0.7**
MENT Mentasta 64.40 29 P **P** **09 14 53.4 +0.9**
SCRK Sand Creek 64.44 27 P **P** **09 14 53.3 +0.5**
MCARA McCarthy VSAT 64.53 30 P **P** **09 14 53.4 +0.2**
TGL Tana Glacier 64.55 31 P **P** **09 14 54.5 +1.0**
QRZ Quartz Range 64.80 158 P **P** **09 14 56.9 +1.7**
BALM Baldy 64.81 31 P **P** **09 14 56.1 +0.8**
MESA MESA 64.93 32 P **P** **09 14 57.6 +1.5**
BARN Barnard Glacie 65.15 31 P **P** **09 14 58.7 +1.1**
BARN IAmb IAmb 09 14 59.3

comp=Z,11nm,0.7s
CTGM Chitina Glacie 65.30 31 P **P** **09 14 59.4 +1.0**
CTGM IAmb IAmb 09 15 00.9

comp=Z,20nm,0.8s
NNZ Nelson 65.45 157 P **P** **09 14 58.2 -1.1**
THZ Tophouse 65.75 158 P **P** **09 15 04.0 +2.6**
THZ IAmb IAmb 09 15 22.3

comp=Z,20nm,1.2s
EGAK Eagle 65.76 27 P **P** **09 15 01.6 +0.5**
TUWZ Tuamarina 65.84 157 P **P** **09 15 01.3 -0.6**
BVAR Borovoye Array 65.94 320 P **P** **09 15 02.1 -0.4**
comp=Z,3.6nm,0.6s,baz=93,slow=7.4,SNR=19
SNZO South Karori 66.03 156 P **P** **09 15 04.3 +1.3**
KK31 Karatay Array 66.26 309 P **P** **09 15 05.2 +0.4**
KK31 pmax pmax

comp=Z,3.0nm,0.8s
KK31 Karatay Array 66.26 309 P **P** **09 15 05.2 +0.4**
KKAR Karatay Array 66.26 309 P **P** **09 15 05.4 +0.6**
KKAR pmax pmax

comp=Z,3.0nm,0.8s
KKAR Karatay Array 66.26 309 P **P** **09 15 05.4 +0.6**
MSWZ Moikau Station 66.33 156 P **P** **09 15 06.7 +1.7**
LTZ Lake Taylor 66.43 159 P **P** **09 15 07.2 +1.5**
LTZ IAmb IAmb 09 15 17.5

comp=Z,34nm,1.4s
DAWY Dawson 66.46 28 P **P** **09 15 06.3 +0.7**
DAWY IAmb IAmb 09 15 07.6

comp=Z,10nm,0.8s
PLWZ Palliser 66.46 156 P **P** **09 15 07.0 +1.1**
KHZ Kahutara 66.55 158 P **P** **09 15 05.8 -0.5**
KHZ IAmb IAmb 09 15 16.8

comp=Z,22nm,1.2s
HYT Haines Junctio 67.16 31 P **P** **09 15 12.0 +1.8**
HYT IAmb IAmb 09 15 12.9

comp=Z,26nm,0.9s
EPYK Eagle Plains 67.74 25 P **P** **09 15 14.6 +1.0**
EPYK IAmb IAmb 09 15 15.3

comp=Z,13nm,0.8s
KBL Kabul 68.40 300 P **P** **09 15 18.4 -0.2**
KBL pmax pmax

comp=Z,6.0nm,0.9s
KBL Kabul 68.40 300 P **P** **09 15 18.4 -0.2**
WHY Whitehorse 68.45 31 P **P** **09 15 19.4 +1.1**
WHY IAmb IAmb 09 15 20.1

comp=Z,13nm,1.1s
JIS Juneau Island 68.77 34 P **P** **09 15 21.2 +1.1**
JIS IAmb IAmb 09 15 22.4

comp=Z,19nm,0.9s
INK Inuvik 69.04 23 P **P** **09 15 22.1 +0.5**
INK pmax pmax

comp=Z,14nm,0.9s
INK Inuvik 69.04 23 P **P** **09 15 22.1 +0.5**
INK IAmb IAmb 09 15 22.8

comp=Z,14nm,0.8s
DLBC Dease Lake 71.05 34 P **P** **09 15 35.1 +1.1**
C36M Paulatuk 72.41 22 P **P** **09 15 41.8 0.0**
C36M IAmb IAmb 09 15 42.9

comp=Z,16nm,0.9s
ARU Arti 72.53 324*c i*P **P** **09 15 40.2 -2.6**
ARU S **S** **09 24 48.6 -1.9**
ARU SS **SS** **09 29 31.4 -1.8**
ARU pmax pmax

comp=Z,5.0nm,0.9s
ARU Arti 72.53 324 P **P** **09 15 42.5 -0.3**
comp=Z,0.7nm,0.3s,baz=96,slow=4.3,SNR=4.8
ABKAR Akbulak array 72.81 317 P **P** **09 15 45.3 +0.6**
AKTO Aktyubinsk 73.83 318 P **P** **09 15 49.8 -0.8**
comp=Z,1.5nm,0.6s,baz=72,slow=14,SNR=6.8
NLWA Neilton Lookou 76.61 44 P **P** **09 16 09.0 +2.4**
NLWA IAmb IAmb 09 16 24.2

comp=Z,31nm,1.2s
LLLB Lillooet 77.10 41 P **P** **09 16 10.8 +1.6**
YKW3 Yellowknife Ar 77.67 28 P **P** **09 16 12.3 +0.3**
YKW3 IAmb IAmb 09 16 13.0

comp=Z,8.5nm,0.6s
YKA Yellowknife Ar 77.69 28 P **P 09 16 12.2 0.0**
comp=Z,7.8nm,0.6s,baz=290,slow=5.4,SNR=231
D05A Enumclaw 77.90 44 P **P 09 16 15.5 +1.8**
D05A IAmb IAmb 09 16 22.8
comp=Z,35nm,1.2s
LON Longmire 78.14 45 P **P 09 16 16.3 +1.2**
LON pmax pmax
comp=Z,14nm,1.1s
LON Longmire 78.14 45 P **P 09 16 16.3 +1.2**
LON IAmb IAmb 09 16 17.4
comp=Z,14nm,1.1s
KHMM Horse Mountain 78.34 51 P **P 09 16 17.4 +1.0**
KHMM IAmb IAmb 09 16 36.4
comp=Z,22nm,1.2s
HUMO Hull Mountain 78.44 49 P **P 09 16 17.9 +1.1**
HUMO IAmb IAmb 09 16 20.5
comp=Z,9.1nm,0.8s
LTY Liberty 78.75 44 P **P 09 16 18.7 +0.3**
LTY IAmb IAmb 09 16 20.0
comp=Z,34nm,1.5s
KCPM Cahto Peak 78.76 52 P **P 09 16 20.1 +1.3**
KCPM IAmb IAmb 09 16 21.2
comp=Z,26nm,1.1s
YBH Yreka Blue Hor 78.85 50 P **P 09 16 20.0 +0.9**
YBH pmax pmax
comp=Z,10.0nm,1.0s
YBH Yreka Blue Hor 78.85 50 P **P 09 16 20.0 +0.9**
RES Resolute Bay 79.03 14 P **P 09 16 18.9 -0.4**
RES pmax pmax
comp=Z,6.0nm,0.8s
RES Resolute Bay 79.03 14 P **P 09 16 18.9 -0.4**
B08A Colville Reser 79.31 43 P **P 09 16 21.3 -0.1**
B08A IAmb IAmb 09 16 23.0
comp=Z,12nm,0.9s
E07A Sunnyside 79.48 44 P **P 09 16 23.6 +1.2**
E07A IAmb IAmb 09 16 24.0
comp=Z,12nm,0.8s
PINE Pine Mountain 79.53 47 P **P 09 16 24.2 +1.3**
PINE IAmb IAmb 09 16 25.2
comp=Z,27nm,0.8s
HAWA Hanford 79.74 44 P **P 09 16 24.7 +0.9**
HAWA IAmb IAmb 09 16 25.7
comp=Z,10nm,0.8s
D08A Wollman Farm, 79.95 44 P **P 09 16 25.7 +0.9**
D08A IAmb IAmb 09 16 26.5
comp=Z,12nm,1.0s
C09A Chrisman Ranch 80.15 43 P **P 09 16 26.8 +0.9**
TMCR Tamitsa 80.23 335 *eP* **P 09 16 25.1 -0.8**
TMCR pmax pmax
comp=Z,23nm,0.9s
ORV Oroville 80.34 52 P **P 09 16 27.0 -0.1**
ORV pmax pmax
comp=Z,17nm,1.3s
ORV Oroville 80.34 52 P **P 09 16 27.0 -0.1**
ORV IAmb IAmb 09 16 28.6
comp=Z,17nm,1.2s
MOD Modoc Plateau 80.53 49 P **P 09 16 28.8 +0.5**
MOD IAmb IAmb 09 16 30.0
comp=Z,15nm,1.2s
E09A Wood Farm, Sta 80.62 44 P **P 09 16 29.9 +1.5**
E09A IAmb IAmb 09 16 30.2
comp=Z,10.0nm,0.7s
NEW Newport 80.74 42 P **P 09 16 30.1 +1.0**
NEW pmax pmax
comp=Z,9.0nm,0.9s
NEW Newport 80.74 42 P **P 09 16 30.1 +1.0**
AFDM Forest Hills D 80.91 52 P **P 09 16 31.3 +1.2**
BEKR Beckworth 81.09 51 P **P 09 16 32.1 +0.8**
BEKR IAmb IAmb 09 16 32.8
comp=Z,13nm,0.8s
CMB Columbia Colle 81.62 53 P **P 09 16 34.7 +0.8**
CMB pmax pmax
comp=Z,10.0nm,0.8s
CMB Columbia Colle 81.62 53 P **P 09 16 34.7 +0.8**
CMB IAmb IAmb 09 16 35.6
comp=Z,10.0nm,0.8s
BMO Blue Mountains 81.70 45 P **P 09 16 34.8 +0.5**
BMO pmax pmax
comp=Z,12nm,1.2s
BMO Blue Mountains 81.70 45 P **P 09 16 34.8 +0.5**
VCNR Virginia City 81.79 51 P **P 09 16 35.5 +0.5**
PAHR Pah Rah Range 81.86 51 P **P 09 16 36.1 +0.9**
PNTR Pine Nut 81.89 52 P **P 09 16 36.9 +1.3**
PNTR IAmb IAmb 09 16 37.5
comp=Z,16nm,0.8s
ARCES ARCESS Array B 81.96 342 P **P 09 16 34.9 -0.1**
comp=Z,7.4nm,0.7s,baz=67,slow=5.5,SNR=21
ARE0 ARCESS Array S 81.96 342 P **P 09 16 35.1 +0.1**
YERR Yerington 82.19 52 P **P 09 16 37.3 +0.2**
YERR IAmb IAmb 09 16 38.8
comp=Z,16nm,1.1s
WAKR Walker 82.19 52 P **P 09 16 37.6 +0.6**
WAKR IAmb IAmb 09 16 39.1
comp=Z,8.8nm,0.7s
JTMT Jette 82.71 42 P **P 09 16 39.9 +0.3**
MDPB Devils Postpil 82.73 53 P **P 09 16 40.7 +0.7**
OMMB Old Mammoth Mi 82.80 53 P **P 09 16 40.7 +0.3**
RYN Ryan 82.83 52 P **P 09 16 40.6 +0.3**
RYN IAmb IAmb 09 16 42.2
comp=Z,12nm,0.9s
KVN Kaiserville 83.01 51 P **P 09 16 41.9 +0.6**
KVN pmax pmax
comp=Z,10.0nm,0.7s
KVN Kaiserville 83.01 51 P **P 09 16 41.9 +0.6**
KVN IAmb IAmb 09 16 43.0
comp=Z,9.8nm,0.7s
NVAR Mina Array Bea 83.06 52 P **P 09 16 42.5 +0.9**
comp=Z,12nm,0.7s,baz=270,slow=5.7,SNR=112
NV11 Mina Array Sit 83.17 52 P **P 09 16 42.5 +0.4**
NV11 IAmb IAmb 09 16 43.8
comp=Z,8.6nm,0.8s
MFID Camas Ranch 83.18 46 P **P 09 16 42.6 +0.7**
MFID IAmb IAmb 09 16 43.7
comp=Z,10.0nm,0.8s
ELK Elko 84.51 49 P **P 09 16 49.3 +0.4**
ELK pmax pmax
comp=Z,10.0nm,0.8s
ELK Elko 84.51 49 P **P 09 16 49.3 +0.4**
ELK IAmb IAmb 09 16 50.7
comp=Z,9.7nm,0.8s
LRM Limekiln Ridge 84.58 43 P **P 09 16 47.6 -1.6**
OBN Obninsk 84.73 327 *eP* **P 09 16 48.1 -1.3**
OBN pmax pmax
comp=Z,5.0nm,1.1s
TPNV Topopah Spring 85.09 53 P **P 09 16 52.0 +0.2**
TPNV pmax pmax
comp=Z,12nm,0.7s
TPNV Topopah Spring 85.09 53 P **P 09 16 52.0 +0.2**
TPNV IAmb IAmb 09 16 53.3
comp=Z,12nm,0.7s
R11A Troy Canyon, C 85.10 51 P **P 09 16 52.5 +0.6**
GSC Goldstone, Bar 85.23 54 P **P 09 16 51.8 -0.6**
GSC pmax pmax
comp=Z,9.0nm,1.3s
GSC Goldstone, Bar 85.23 54 P **P 09 16 51.8 -0.6**
KIV Kislovodsk 85.68 315 *eP* **P 09 16 53.3 -1.2**
KIV pmax pmax
comp=Z,12nm,0.9s
YHL Hebgen Lake 85.78 44 P **P 09 16 55.5 +0.3**
YHB Horse Butte 85.81 44 P **P 09 16 56.1 +0.9**
YMR Madison River 85.99 44 P **P 09 16 56.5 +0.3**
BGU Big Grassy Mou 86.01 48 P **P 09 16 56.7 +0.5**
SHPR Sheep Range 86.06 53 P **P 09 16 57.1 +0.5**
PFO Pinyon Flats O 86.08 56‖ *eP* **P 09 16 55.6 -1.1**
PFO pmax pmax
comp=Z,5.0nm,1.0s
YNR Norris Junctio 86.16 44 P **P 09 16 57.9 +0.9**
SPUT South Promonto 86.27 48 P **P 09 16 57.8 +0.3**
PSUT Pine Spring 86.30 51 P **P 09 16 58.5 +0.7**
FINES FINESS Array B 86.34 335 P **P 09 16 55.5 -1.7**
comp=Z,2.2nm,0.3s,baz=66,slow=5.1,SNR=23
H17A Grant Village 86.35 44 P **P 09 16 58.8 +0.8**
H17A IAmb IAmb 09 17 01.6
comp=Z,8.5nm,0.9s
FLWY Flagg Ranch 86.39 45 P **P 09 16 58.0 -0.1**
FLWY IAmb IAmb 09 17 00.6
comp=Z,12nm,0.8s
LKWY Lake 86.40 44 P **P 09 16 59.2 +0.9**
LKWY pmax pmax
comp=Z,6.0nm,0.9s
LKWY Lake 86.40 44 P **P 09 16 59.2 +0.9**
DUG Dugway, Tooele 86.44 49 P **P 09 16 58.6 +0.3**
DUG pmax pmax
comp=Z,8.0nm,0.8s
DUG Dugway, Tooele 86.44 49 P **P 09 16 58.6 +0.3**
DUG IAmb IAmb 09 16 59.9
comp=Z,8.5nm,0.8s
MOOW Moose Ponds 86.50 45 P **P 09 16 58.9 +0.3**
REDW Red Top Meadow 86.58 45 P **P 09 16 59.3 +0.3**
HWUT Hardware Ranch 86.77 47 P **P 09 17 00.3 +0.3**
HWUT IAmb IAmb 09 17 01.5
comp=Z,12nm,0.8s
FFC Flin Flon 86.84 32 P **P 09 16 59.7 0.0**
FFC pmax pmax
comp=Z,16nm,1.1s
FFC Flin Flon 86.84 32 P **P 09 16 59.7 0.0**
FFC IAmb IAmb 09 17 01.1
comp=Z,16nm,1.1s
CTU Camp Tracy 87.00 48 P **P 09 17 01.6 +0.6**
CCUT Cedar City 87.02 51 P **P 09 17 02.2 +0.8**
NLU North Lily Min 87.05 49 P **P 09 17 02.2 +0.8**
TCUT Toone Canyon 87.07 47 P **P 09 17 02.1 +0.6**
SZCU Shurtz Canyon 87.21 51 P **P 09 17 02.8 +0.6**
JLU Jordanelle 87.24 48 P **P 09 17 03.1 +0.7**
LCMT Little Creek M 87.31 52 P **P 09 17 03.1 +0.5**
W13A Hualapai Mount 87.53 54 P **P 09 17 04.2 +0.4**
Y12C Blythe 87.54 55 P **P 09 17 02.9 -0.7**
KNB Kanab 87.62 52 P **P 09 17 05.3 +1.2**
KNB pmax pmax
comp=Z,15nm,0.9s
KNB Kanab 87.62 52 P **P 09 17 05.3 +1.2**
PD31 Pinedale Array 87.68 45 P **P 09 17 03.8 -0.6**
PDAR Pinedale Array 87.68 45 P **P 09 17 04.0 -0.4**
comp=Z,1.1nm,0.6s,baz=207,slow=1.3,SNR=16
MTPU Mount Pierson 87.70 51 P **P 09 17 05.7 +0.9**
Q16A Castle Valley 88.10 49 P **P 09 17 07.1 +0.8**
P17A Butcher Ranch, 88.19 49 P **P 09 17 07.4 +0.7**
U15A North Rim 88.24 52 P **P 09 17 07.5 +0.3**
U15A IAmb IAmb 09 17 09.2
comp=Z,8.0nm,0.9s
FCC Fort Churchill 88.36 27 P **P 09 17 07.1 +0.2**
FCC pmax pmax
comp=Z,9.0nm,1.1s
FCC Fort Churchill 88.36 27 P **P 09 17 07.1 +0.2**
FCC IAmb IAmb 09 17 07.9
comp=Z,9.0nm,1.1s
SRU San Rafael Swe 88.48 49 P **P 09 17 08.5 +0.4**
SRU pmax pmax
comp=Z,10.0nm,1.1s
SRU San Rafael Swe 88.48 49 P **P 09 17 08.5 +0.4**
Y14A Wickenburg 88.64 55 P **P 09 17 09.4 +0.6**
Y14A IAmb IAmb 09 17 10.6
comp=Z,15nm,0.8s
WUAZ Wupatki 89.28 53 P **P 09 17 12.8 +0.9**
WUAZ IAmb IAmb 09 17 14.6
comp=Z,13nm,0.8s
214A Organ Pipe Nat 89.54 56 P **P 09 17 13.6 +0.6**
214A IAmb IAmb 09 17 15.0
comp=Z,11nm,0.9s
O20A White River Ci 89.67 47 P **P 09 17 14.0 +0.2**
AKASG Malin Array Be 90.76 325 P **P 09 17 19.1 +0.9**
comp=Z,0.3nm,0.3s,baz=51,slow=6.1,SNR=5.4
N23A Red Feather La 90.92 46 P **P 09 17 20.4 +0.8**
N23A IAmb IAmb 09 17 21.8
comp=Z,11nm,0.9s
SMCO Snowmass 90.97 48 P **P 09 17 20.2 +0.2**
TUC Tucson 90.99 55 P **P 09 17 20.2 +0.4**
TUC pmax pmax
comp=Z,6.0nm,1.2s
TUC Tucson 90.99 55 P **P 09 17 20.2 +0.4**
S22A 4UR Ranch, Cre 91.69 49 P **P 09 17 23.6 +0.3**
ULM Lac du Bonnet 92.36 34 P **P 09 17 25.6 -0.1**
ULM pmax pmax
comp=Z,10.0nm,1.5s
ULM Lac du Bonnet 92.36 34 P **P 09 17 25.1 -0.6**
comp=Z,4.1nm,0.8s,baz=281,slow=4.4,SNR=7.5
ULM Lac du Bonnet 92.36 34 P **P 09 17 25.6 -0.1**
ULM IAmb IAmb 09 17 37.2
comp=Z,10nm,1.5s
ANMO Albuquerque 93.18 51*c i P* **P 09 17 31.0 +1.0**
ANMO pmax pmax
comp=Z,4.0nm,1.1s
ANMO Albuquerque 93.18 51 P **P 09 17 30.7 +0.7**
ANMO IAmb IAmb 09 17 32.4
comp=Z,5.8nm,1.2s
BRTR Keskin Array B 93.59 314 *i P* **P 09 17 31.2 -0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 93.59 314 P **P 09 17 30.6 -1.1**
comp=Z,0.7nm,0.8s,baz=60,slow=3.8,SNR=4.6
TXAR Lajitas Array 97.79 55 P Pdif 09 17 51.0 0.0
TXAR Lajitas Array 97.79 55 P Pdif 09 17 51.0 0.0
comp=Z,0.2nm,0.6s,baz=258,slow=4.2,SNR=3.7

*NNC **10** 09:09:42.2±10.0, 45.05N×80.64E, h0km, mb2.1, mpv2.9,*
Error ellipse: s-maj=122.5km s-min=44.6km az=156.0
SOME 10 09:09:46.8, 46.05N×79.58E, h5km, 3C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
KAPS	**Kapalarasan**	**0.78**	**192**	*i* P		Pg	09 10 01.7	-0.1
	2.5nm,0.1s							
KAPS				⇓*i* S		Sg	09 10 12.6	+0.7
	3.3nm,0.1s							
KAPS	**Kapalarasan**	**0.78**	**192**	P		Pg	09 10 01.7	-0.1
	2.5nm,0.1s							
KAPS				S		Sg	09 10 12.6	+0.7
	2.2nm,0.1s							
DJR	**Jarkent**	**1.72**	**175**	*e* P		Pb	09 10 18.7	-0.3
	0.2nm,0.1s							
DJR				⇑*i* S		Sg	09 10 42.2	0.0
	1.9nm,0.2s							
MK31	**Makanchi Array**	**2.02**	**67**	⇓P		Pn	09 10 21.1	-0.4
	0.1nm,0.2s							
MK31				⇑S		Sn	09 10 45.0	-2.1
	0.8nm,0.5s							
SATY	**Saty**	**3.11**	**196**	Pg		Pn	09 10 26.2	-10
	7.4nm,0.1s							
SATY				Lg		Lg	09 10 55.5	
	4.6nm,0.1s							

*FUNV **10** 09:12:21.5, 6.97N×72.13W, h2km, MW2.9*
*RSNC **10** 09:12:22.3±1.1, 7.03N×72.14W, h0km±6km, ML2.8*
ISC 10 09:12:20.1±1.3, 7.03N±0.02×72.07W±0.02, h1km±11km, n35, σ1s54/68, 2C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TAMC	**Tame, Arauca**	**0.65**	**155**	*e* P		**Pb**	**09 12 35.0**	**+0.7**
TAMC				*e* S		**Sb**	**09 12 44.8**	**+0.9**
TAMC				*i*			09 12 45.9	
	comp=Z,362nm,0.2s							
PAMC	**Pamplona, Colo**	**0.70**	**297**	⇓*i* P		**Pg**	**09 12 33.8**	**+0.3**
PAMC				*e* S		**Sg**	**09 12 41.8**	**-0.7**
PAMC				*i*			09 12 42.7	
	comp=Z,686nm,0.1s							
BARC	**Barichara**	**1.19**	**249**	⇑*i* P		**Pg**	**09 12 42.4**	**-0.5**
BARC				*e* S		**Sg**	**09 12 55.7**	**-2.5**
BARC				*i*			09 13 02.7	
	comp=Z,460nm,0.5s							
RUSC	**La Rusia**	**1.51**	**222**	*e* P		**Pn**	**09 12 48.4**	**-0.4**
RUSC				*e* S		**Sn**	**09 13 06.6**	**-2.7**
RUSC				*i*			09 13 11.1	
	comp=Z,83nm,0.2s							
RUSC	**La Rusia**	**1.51**	**222**	*e* P		**Pn**	**09 12 48.4**	**-0.4**
RUSC				*e* S		**Sn**	**09 13 07.0**	**-2.3**
OCAC	**Ocana**	**1.73**	**314**	⇑*i* P		**Pb**	**09 12 52.7**	**-0.1**
OCAC				*e* S		**Sn**	**09 13 14.8**	**+0.6**
OCAC				*i*			09 13 18.2	
	comp=Z,396nm,0.3s							
SOCV	**Socops**	**1.73**	**44**	*e* P		**Pb**	**09 12 52.8**	**0.0**
SOCV				*e* S		**Sg**	**09 13 17.3**	**+1.4**
VIGV	**El Vigia**	**1.93**	**21**	*e* P		**Pb**	**09 12 56.5**	**+0.3**
VIGV				*e* S		**Sg**	**09 13 22.5**	**+0.2**
SDV	**Santo Domingo**	**2.33**	**38**	*e* P		**Pb**	**09 13 02.0**	**-1.1**
SDV				*e* S		**Sb**	**09 13 31.1**	**-1.4**
SPBC	**San Pablo de B**	**2.41**	**236**	*e* P		**Pn**	**09 13 01.5**	**+0.7**
SPBC				*e* S		**Sn**	**09 13 31.4**	**+0.3**
SPBC				*i*			09 13 37.5	
	comp=Z,62nm,0.4s							
PTBC	**PUERTO BERRIO,**	**2.42**	**259**	*e* P		**Pn**	**09 13 00.8**	**-0.1**
PTBC				*e* S		**Sn**	**09 13 31.7**	**+0.6**
PTBC				*i*			09 13 36.0	
	comp=Z,125nm,0.5s							
ELOV	**Elorza**	**2.57**	**90**	*e* P		**Pn**	**09 13 03.9**	**+1.0**
ELOV				*e* S		**Sn**	**09 13 34.6**	**-0.2**
SMLC	**San Martn de**	**2.65**	**312**	*e* P		**Pn**	**09 13 03.9**	**-0.2**
SMLC				*e* S		**Sb**	**09 13 41.4**	**-0.1**
SMLC				*i*			09 13 46.1	
	comp=Z,50nm,0.3s							
ZARC	**Zaragoza, Cauc**	**2.80**	**280**	*e* P		**Pn**	**09 13 06.8**	**+0.7**
ZARC				*e* S		**Sn**	**09 13 39.5**	**-1.1**
ZARC				*i*			09 13 48.9	
	comp=Z,26nm,0.3s							
PTGC	**Puerto Gaitan,**	**2.81**	**181**	*e* P		**Pn**	**09 13 06.2**	**0.0**
PTGC				*e* S		**Sb**	**09 13 48.0**	**+1.9**
PTGC				*i*			09 13 51.7	
	comp=Z,66nm,0.3s							
CHIC	**Chingaza**	**2.90**	**215**	*e* P		**Pn**	**09 13 08.1**	**+0.3**
CHIC				*e* S		**Sb**	**09 13 49.3**	**+0.2**
CHIC				*i*			09 14 03.3	
	comp=Z,14nm,0.3s							
ROSC	**El Rosal**	**3.12**	**226**	*e* P		**Pn**	**09 13 14.0**	**+3.2**
ROSC				*e* S		**Sn**	**09 13 52.4**	**+3.5**
NORC	**Norcasia**	**3.14**	**243**	*e* P		**Pn**	**09 13 11.6**	**+0.8**
NORC				*e* S		**Sn**	**09 13 49.8**	**+0.8**
NORC				*i*			09 13 58.1	
	comp=Z,16nm,0.5s							
CODC	**Agustn Codazz**	**3.19**	**335**	*e* P		**Pn**	**09 13 12.2**	**+0.7**
CODC				*e* S		**Sb**	**09 13 59.1**	**+2.0**
CODC				*i*			09 14 02.7	
	comp=Z,11nm,0.6s							
UREC	**San Jos de Ur**	**3.51**	**282**	*e* P		**Pn**	**09 13 17.8**	**+1.9**
UREC				*e* S		**Sn**	**09 13 57.7**	**-0.3**
UREC				*i*			09 14 07.2	
	comp=Z,12nm,0.4s							
QARV	**Quebrada Arrib**	**3.51**	**26**	*e* P		**Pn**	**09 13 16.9**	**+1.0**
QARV				*e* S		**Sn**	**09 13 58.1**	**-0.1**
HELC	**Santa Helena**	**3.53**	**257**	*e* P		**Pn**	**09 13 16.5**	**0.0**
HELC				*e* S		**Sn**	**09 13 56.5**	**-2.6**
HELC				*i*			09 14 17.9	
	comp=Z,12nm,0.8s							
HELC	**Santa Helena**	**3.53**	**257**	*e* P		**Pn**	**09 13 16.3**	**-0.2**
HELC				*e* S		**Sn**	**09 13 56.6**	**-2.6**
CURV	**Curarigua**	**3.63**	**35**	*e* P		**Pn**	**09 13 18.9**	**+1.3**
CURV				*e* S		**Sn**	**09 14 01.2**	**+0.2**
GUY2C	**Guyana, Caldas**	**3.73**	**242**	*e* P		**Pn**	**09 13 20.3**	**+1.0**
GUY2C				*e* S		**Sn**	**09 14 06.0**	**+1.8**
GUY2C				*i*			09 14 19.4	
	comp=Z,15nm,0.6s							
RREF	**El Recreo**	**3.88**	**237**	*e* P		Pn	09 13 13.6	-8.0
RREF				*e* S		**Sn**	**09 14 08.2**	**0.0**
RREF				*i*			09 14 23.8	
	comp=Z,12nm,0.6s							
CBOC	**Ciudad Bolivar**	**4.08**	**254**	*e* P		**Pn**	**09 13 27.0**	**+3.1**
CBOC				*e* S		**Sn**	**09 14 15.6**	**+3.1**
CBOC				*i*			09 14 29.7	
	comp=Z,14nm,0.5s							
DABV	**Dabajuro**	**4.12**	**20**	*e* P		**Pn**	**09 13 25.6**	**+1.3**
DABV				*e* S		**Sn**	**09 14 12.8**	**-0.4**
SJCC	**San Jacinto, C**	**4.19**	**313**	*e* P		**Pn**	**09 13 26.9**	**+1.6**
SJCC				*e* S		**Sn**	**09 14 12.5**	**-2.5**
SJCC				*i*			09 14 38.4	
	comp=Z,5.3nm,0.5s							
BAUV	**El Baul**	**4.42**	**64**	*e* P		**Pn**	**09 13 28.7**	**+0.3**
BAUV				*e* S		**Sn**	**09 14 18.6**	**-2.0**
MAPV	**Macapo**	**4.53**	**52**	*e* P		**Pn**	**09 13 30.7**	**+0.8**
MAPV				*e* S		**Sn**	**09 14 22.1**	**-1.3**
PAYV	**Puerto Ayacuch**	**4.67**	**110**⇓	*e* P		**Pn**	**09 13 32.5**	**+0.7**
PAYV				*e* S		**Sn**	**09 14 24.2**	**-2.5**
MONV	**Montecano**	**5.32**	**23**	*e* P		**Pn**	**09 13 41.1**	**+0.3**
MONV				*e* S		**Sn**	**09 14 40.3**	**-2.3**
TURV	**Turiamo**	**5.39**	**51**	*e* P		**Pn**	**09 13 42.6**	**+0.9**
MERV	**Las Mercedes**	**6.13**	**68**	*e* P		**Pn**	**09 13 52.0**	**+0.1**
MERV				*e* S		**Sn**	**09 14 58.9**	**-3.8**

*ISN **10** 09:32:27.7±0.3, 34.35N×45.51E, h14km±11km, ML2.7*
*TEH **10** 09:32:28.0, 34.35N×45.54E, h16km, ML2.6*
ISC 10 09:32:29.0±1.0, 34.39N±0.05×45.57E±0.04, h18km, n10, σ0s52/15, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.74**	**65**	*e* Pg		**Pb**	**09 32 42.6**	**-1.0**
IDHR				*e*			09 32 45.2	
IGHG	**Ghaleghazi**	**0.83**	**94**	*e* Pg		**Pb**	**09 32 44.6**	**-0.5**
IVIS	**Veis**	**1.07**	**82**	*e* Pg		**Pb**	**09 32 48.9**	**-0.2**
IVIS				*e*			09 32 51.7	
KCHF	**Cheshme Sefid,**	**1.23**	**95**	*e* Pg		**Pb**	**09 32 52.2**	**+0.4**
KCHF				*e*			09 32 54.0	
ILIN	**Lien**	**1.27**	**65**	*e* Pg		**Pg**	**09 32 53.3**	**-0.2**
ILIN				*e*			09 32 57.0	
IBDR	**Badra**	**1.31**	**167**	*e* Pg		**Pn**	**09 32 52.6**	**+0.2**
IBDR					AML	AML	09 32 58.6	
	comp=Z,99nm,0.7s							
IBDR				*e* Sg		**Sg**	**09 33 10.5**	**-1.0**
IKRK	**Kirkuk**	**1.42**	**315**	*e* Pn		**Pb**	**09 32 55.0**	**0.0**
IKRK					AML	AML	09 32 58.2	
	comp=Z,307nm,0.2s							
IKRK				*e* Sn		**Sg**	**09 33 15.0**	**-0.1**
BHD	**Baghdad**	**1.49**	**222**	*e* Pn		**Pn**	**09 32 55.0**	**+0.1**
BHD				*e* Sn		**Sb**	**09 33 15.0**	**+0.3**
IKOM	**Komasi**	**1.62**	**97**	*e* Pg		**Pb**	**09 32 58.5**	**-0.1**
IKOM				*e* Sg		**Sg**	**09 33 22.1**	**+0.6**
IKOM				*e*			09 33 28.2	
IBZA	**Bozab**	**1.90**	**87**	*e*		**Pg**	**09 33 06.1**	**+0.5**
IBZA				*e* Pg		**Pb**	**09 33 03.1**	**-0.2**

*IDC **10** 10:01:24.4±0.6, 20.83N×146.69E, h0km, mb4.4/26,*
mb1 4.4/28, mb1mx4.3/63, mbtmp4.3/28, ML3.6/2, MS3.3/8,
Ms1 3.3/8, ms1mx3.0/34, Error ellipse: s-maj=19.5km
s-min=14.8km az=80.0
*NEIC **10** 10:01:25.7±1.8, 20.82N±0.08×146.7E±0.1, h10km±1km,*
mb4.8/18, Error ellipse: s-maj=18.2km s-min=11.0km
az=90.0
ISC 10 10:01:29.8±0.5, 20.82N±0.06×146.7E±0.1, h37km, n70, σ0s95/67, mb4.6/42, MS3.6/7, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
GUMO	**Guam**	**7.41**	**194**	Pn		**Pn**	**10 03 17.9**	**+2.5**
	6.0nm,0.3s,baz=13,slow=14,SNR=3.7							
GUMO				Sn		**Sn**	**10 04 37.3**	**-0.8**
	4.1nm,0.3s,baz=22,slow=19,SNR=1.6							
GUMO				LR		LR	10 05 41.7	
	comp=Z,111nm,20.1s,baz=321,slow=35							
GUMO	**Guam**	**7.41**	**194**			**Pn**	**10 03 14.4**	**-0.9**
GUMO						**Sn**	**10 04 37.8**	**-0.3**
INU	**Inuyama**	**16.79**	**332**	Pn		**Pn**	**10 05 20.5**	**-1.6**
INU				IAmb		IAmb	10 05 27.5	
	comp=Z,72nm,1.0s							
MJAR	**Matsushiro Arr**	**17.33**	**336**	P		**Pn**	**10 05 25.9**	**-2.9**
	comp=Z,0.0nm,0.3s,baz=162,slow=10,SNR=3.1							
PATS	**Pohnpei**	**17.88**	**139**	P		**Pn**	**10 05 34.3**	**-1.3**
JNU	**Nakatsue**	**18.66**	**314**	P		**P**	**10 05 44.0**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=113,slow=7.7,SNR=3.7							
JNU	**Nakatsue**	**18.66**	**314**	P		**P**	**10 05 42.9**	**-1.6**
H11S3	**WAKE ISLAND Hy**	**18.96**	**94**	T		T	10 25 20.5	
	baz=280,slow=75,SNR=5.2							
H11N1	**WAKE ISLAND Hy**	**18.97**	**90**	T		T	10 25 18.5	
	baz=276,slow=74,SNR=8.6							
H11S1	**WAKE ISLAND Hy**	**18.97**	**94**	T		T	10 25 19.4	
	baz=280,slow=75,SNR=5.4							
H11N2	**WAKE ISLAND Hy**	**18.97**	**90**	T		T	10 25 18.8	
	baz=276,slow=74,SNR=8.2							
H11S2	**WAKE ISLAND Hy**	**18.97**	**94**	T		T	10 25 21.7	
	baz=280,slow=75,SNR=4.4							
H11N3	**WAKE ISLAND Hy**	**18.98**	**90**	T		T	10 25 19.9	
	baz=276,slow=74,SNR=9.6							
KSRS	**Korea Array**	**23.25**	**320**	P		**P**	**10 06 33.8**	**0.0**
	comp=Z,4.0nm,0.9s,baz=146,slow=8.6,SNR=14							
KSRS				LR		LR	10 16 16.6	
	comp=Z,56nm,18.5s,baz=129,slow=38							
SSLB	**Suanglung**	**24.00**	**282**	P		**P**	**10 06 42.1**	**+0.9**
SSLB				IAmb		IAmb	10 06 42.8	
	comp=Z,28nm,1.2s							
USRK	**Ussurisyk Ar.**	**26.33**	**336**	P		**P**	**10 07 02.1**	**+0.1**
	comp=Z,13nm,0.9s,baz=134,slow=9.5,SNR=13							
USRK				LR		LR	10 18 58.8	
	comp=Z,36nm,18.5s,baz=91,slow=40							
KLR	**Kul'dur**	**30.76**	**341**	P		**P**	**10 07 42.0**	**+0.6**
	comp=Z,3.1nm,0.6s,baz=174,slow=6.5,SNR=13							
KNRA	**Kununurra**	**40.33**	**207**	P		**P**	**10 09 02.0**	**-1.8**
KNRA				IAmb		IAmb	10 09 18.6	
	comp=Z,23nm,1.2s							
SONM	**Songino Array**	**42.12**	**319**	P		**P**	**10 09 18.8**	**+0.3**

comp=Z,1.5nm,0.7s,baz=129,slow=9.1,SNR=7.9
SEY Seymchan 42.26 4 P **P** **10 09 20.0 +0.8**
comp=Z,2.4nm,0.5s,baz=181,slow=6.9,SNR=10
WRAB Tennant Creek 42.27 197 P **P** **10 09 17.6 -2.2**
WRA Warramunga Arr 42.29 197 P **P** **10 09 19.4 -0.5**
comp=Z,1.0nm,0.5s,baz=16,slow=8.5,SNR=8.8
WRA PcP **PcP** **10 11 14.4 +1.1**
comp=Z,1.4nm,0.9s,baz=13,slow=3.4,SNR=4.6
FITZ Fitzroy Crossi 43.85 210 P **P** **10 09 33.1 +0.6**
CMAR Chiang Mai Arr 44.92 276 P **P** **10 09 42.0 +0.7**
comp=Z,0.9nm,0.5s,baz=93,slow=4.5,SNR=3.3
CMAR LR LR 10 29 26.2
comp=Z,9.4nm,18.3s,baz=190,slow=38
ASAR Alice Springs 45.95 196 P **P** **10 09 48.7 -0.5**
comp=Z,0.5nm,0.4s,baz=12,slow=6.6,SNR=9.6
ASAR PcP **PcP** **10 11 26.8 +1.0**
comp=Z,0.4nm,0.7s,baz=9.4,slow=3.0,SNR=5.1
TAPN Taplejung 53.84 289 *e*P **P** **10 10 50.8 +1.1**
RAMN Ramite 54.87 289 *e*P **P** **10 10 57.9 +0.8**
comp=Z,9.6nm,0.6s
JIRN Jiri 55.14 290 *e*P **P** **10 11 00.3 +1.1**
comp=Z,42nm,0.8s
GUN Gumba 55.38 290 *e*P **P** **10 11 02.0 +1.1**
comp=Z,18nm,0.6s
PKI Pulchoki 55.84 290 *e*P **P** **10 11 04.8 +0.6**
PKIN Phulchoki 55.85 290 *e*P **P** **10 11 04.6 +0.4**
comp=Z,9.2nm,0.5s
KKN Kakani 55.93 290 *e*P **P** **10 11 05.7 +1.0**
DMN Daman 56.10 290 *e*P **P** **10 11 07.0 +1.0**
comp=Z,18nm,0.7s
ZAA0 Zalesovo Array 56.94 322 P **P** **10 11 10.6 -0.6**
ZAA0 IAmb IAmb 10 11 11.9
comp=Z,7.8nm,0.8s
ZALV Zalesovo Beam 56.94 322 P **P** **10 11 11.2 +0.1**
comp=Z,6.0nm,0.5s,baz=102,slow=7.2,SNR=24
ZALV PcP **PcP** **10 12 05.7 -0.4**
comp=Z,1.4nm,0.5s,baz=45,slow=2.4,SNR=2.4
DANN Dangsing 57.19 291 *e*P **P** **10 11 14.8 +1.1**
comp=Z,106nm,0.8s
KOLN Koldanda 57.41 290 *e*P **P** **10 11 15.8 +0.6**
comp=Z,28nm,0.9s
MK31 Makanchi Array 57.70 313 P **P** **10 11 16.0 -0.8**
MKAR Makanchi Array 57.70 313 P **P** **10 11 16.9 +0.2**
comp=Z,3.2nm,0.9s,baz=93,slow=8.4,SNR=14
MKAR PcP **PcP** **10 12 09.8 +0.5**
comp=Z,0.7nm,0.6s,baz=79,slow=7.9,SNR=2.6
MAKZ Makanchi 57.92 313 P **P** **10 11 18.0 -0.2**
MAKZ IAmb IAmb 10 11 19.8
comp=Z,6.4nm,1.0s
KURK Kurchatov 60.35 317 P **P** **10 11 35.0 +0.1**
KURK IAmb IAmb 10 11 36.1
comp=Z,9.1nm,0.8s
KURBB Kurchatov Arra 60.40 317 P **P** **10 11 35.6 +0.3**
comp=Z,9.6nm,0.7s,baz=93,slow=7.8,SNR=36
ILAR Eielson Array 61.33 27 P **P** **10 11 40.5 -0.8**
comp=Z,1.3nm,1.0s,baz=252,slow=7.2,SNR=5.8
NRN Naryn 62.27 307 P **P** **10 11 48.5 0.0**
NRN IAmb IAmb 10 11 51.7
comp=Z,6.0nm,1.2s
AAK Ala-Archa 63.30 308 P **P** **10 11 55.5 +0.4**
comp=Z,1.5nm,0.7s,baz=86,slow=14,SNR=5.9
BVAR Borovoye Array 65.46 320 P **P** **10 12 09.6 +0.7**
comp=Z,11nm,0.4s,baz=90,slow=7.1,SNR=65
KK31 Karatay Array 66.17 309 P **P** **10 12 13.3 -0.4**
KKAR Karatay Array 66.17 309 P **P** **10 12 13.3 -0.3**
GAR Garm 66.86 305 P **P** **10 12 19.1 +0.8**
GAR IAmb IAmb 10 12 19.3
comp=Z,5.4nm,0.6s
INK Inuvik 67.05 23 P **P** **10 12 19.2 +0.4**
comp=Z,2.0nm,0.9s,baz=232,slow=12,SNR=5.4
CHGR Chuyangaron 67.81 304 P **P** **10 12 25.0 +0.7**
KBL Kabul 68.63 300 P **P** **10 12 29.0 -0.7**
KBL IAmb IAmb 10 12 31.5
comp=Z,11nm,1.1s
ARU Arti 71.90 324 P **P** **10 12 49.1 +0.1**
comp=Z,2.4nm,0.2s,baz=93,slow=0.5,SNR=12
ABKAR Akbulak array 72.45 317 P **P** **10 12 52.2 -0.2**
ABKAR IAmb IAmb 10 12 53.4
comp=Z,6.0nm,0.7s
PPT Papeete 73.19 117 LR LR 10 38 20.0
comp=Z,36nm,19.6s,baz=147,slow=30
AKTO Aktyubinsk 73.42 318 P **P** **10 12 58.3 +0.2**
comp=Z,1.8nm,0.6s,baz=96,slow=8.8,SNR=10
YKA Yellowknife Ar 75.67 28 P **P** **10 13 11.0 +0.1**
comp=Z,1.3nm,0.8s,baz=290,slow=5.5,SNR=10
KIRV Kirov 76.18 328 P **P** **10 13 14.5 +0.6**
comp=Z,14nm,0.7s,baz=324,slow=2.9,SNR=4.5
GEYT Alibeck 76.44 306 LR LR 10 48 59.1
comp=Z,28nm,20.1s,baz=85,slow=37
NEW Newport 78.71 43 LR LR 10 40 11.3
comp=Z,44nm,20.9s,baz=316,slow=30
ARCES ARCESS Array B 80.77 342 P **P** **10 13 39.7 +0.6**
comp=Z,3.0nm,0.8s,baz=57,slow=6.6,SNR=7.7
NVAR Mina Array Bea 81.09 52 P **P** **10 13 43.1 +1.4**
comp=Z,1.2nm,0.7s,baz=262,slow=5.2,SNR=7.3
NVAR LR LR 10 42 55.2
comp=Z,28nm,19.5s,baz=340,slow=31
KBZ Khabaz 85.32 315 P **P** **10 14 03.2 +0.2**
comp=Z,3.0nm,0.8s,baz=67,slow=3.4,SNR=7.4
FINES FINESS Array B 85.36 335 P **P** **10 14 02.6 -0.3**
comp=Z,9.7nm,0.5s,baz=70,slow=5.0,SNR=53
AKASG Malin Array Be 90.10 326 P **P** **10 14 25.0 -0.8**
comp=Z,1.2nm,0.7s,baz=44,slow=5.1,SNR=7.4
HFS Hagfors 90.77 339 P **P** **10 14 27.5 -1.3**
comp=Z,1.4nm,0.6s,baz=64,slow=3.4,SNR=7.0
BRTR Keskin Array B 93.31 315 P **P** **10 14 40.1 -1.1**
comp=Z,0.7nm,0.8s,baz=104,slow=6.1,SNR=4.1
TORD Torodi Ar. Bea 131.81 311 PKP **PKPdf** **10 20 39.8 -0.1**
comp=Z,0.3nm,0.7s,baz=45,slow=2.2,SNR=2.6
LPAZ La Paz 146.71 88 PKPbc **PKPab** **10 21 10.9 +0.5**
comp=Z,1.4nm,0.5s,baz=328,slow=3.7,SNR=7.8
SAML Samuel 148.86 72 PKPbc **PKPbc** **10 21 14.2 -0.1**

ISC 10 10:43:08.3±1.2, 51°53N±0.05×16°04E±0.03, h0km, n23, σ1§14/47, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.71**	**167**	*e*Pg		**Pg**	**10 43 22.0**	**+0.2**
KSP				*e*Sg		**Sg**	**10 43 31.6**	**+0.6**
UPC	**Upice**	**1.03**	**181**	*e*PG		**Pg**	**10 43 27.9**	**0.0**
UPC				*e*SG		**Sg**	**10 43 41.6**	**+0.4**
	comp=Z,86nm,0.3s							
DPC	**Dobruska-Polom**	**1.20**	**171**	*e*PG		**Pg**	**10 43 30.9**	**-0.3**
DPC				*e*SG		**Sg**	**10 43 46.5**	**-0.2**
PVCC	**Panska Ves**	**1.37**	**223**	*e*PG		**Pg**	**10 43 34.6**	**+0.1**
PVCC				*e*SG		**Sb**	**10 43 52.9**	**+0.1**
	comp=Z,156nm,0.4s							
BRG	**Berggiesshubel**	**1.47**	**244**	PG		**Pb**	**10 43 36.6**	**+0.1**
BRG				SG		**Sn**	**10 43 56.6**	**+0.5**
	59nm,0.5s							
KRLC	**Kraliky**	**1.54**	**162**	*e*PG		**Pn**	**10 43 36.4**	**-0.6**
KRLC				*e*SG		**Sb**	**10 43 57.2**	**-0.4**
	comp=Z,120nm,0.2s							
PRA	**Prague**	**1.78**	**215**	*e*SG		**Sg**	**10 44 05.4**	**-0.1**
GOPC	**GO Pecny, Ondr**	**1.81**	**207**	*e*PG		**Pb**	**10 43 42.0**	**-0.2**
GOPC				*e*SG		**Sb**	**10 44 05.5**	**+0.1**
PRU	**Pruhonice**	**1.82**	**212**	*e*PG		**Pb**	**10 43 42.2**	**-0.2**
PRU				*e*SG		**Sb**	**10 44 05.8**	**+0.2**
	comp=Z,33nm,0.3s							
CLL	**Collm**	**1.91**	**264**	*e*Pn		**Pn**	**10 43 41.0**	**-1.1**
CLL				*e*Pg		**Pb**	**10 43 44.0**	**0.0**
CLL				*i* Sg		**Sb**	**10 44 09.4**	**+1.0**
	comp=Z,23nm,0.9s							
MORC	**Moravsky Berou**	**2.00**	**151**	*e*PN		**Pn**	**10 43 42.5**	**-0.9**
MORC				*e*SG		**Sg**	**10 44 11.5**	**-1.1**
OKC	**Ostrava-Krasne**	**2.16**	**141**	*e*PG		**Pb**	**10 43 47.7**	**-0.6**
OKC				*e*SG		**Sg**	**10 44 17.0**	**-0.8**
	comp=Z,25nm,0.5s							
VRAC	**Vranov**	**2.26**	**171**	*e*PN		**Pn**	**10 43 46.6**	**-0.2**
VRAC				*e*SG		**Sg**	**10 44 20.1**	**-0.6**
KRUC	**Moravsky**	**2.48**	**175**	*e*PN		**Pn**	**10 43 50.5**	**+0.5**
KRUC				*e*SG		**Sg**	**10 44 27.7**	**-0.4**
NKC	**Novy Kostel**	**2.62**	**242**	*e*PG		**Pg**	**10 43 58.1**	**-0.4**
NKC				*e*SG		**Sg**	**10 44 33.6**	**+1.2**
	comp=Z,33nm,0.5s							
OJC	**Ojcow**	**2.72**	**117**	*e*Pg		**Pg**	**10 43 59.0**	**-1.4**
OJC				*e*Sg		**Sg**	**10 44 34.8**	**-0.9**
KHC	**Kasperske Hory**	**2.88**	**214**	*e*PN		**Pn**	**10 43 54.5**	**-0.9**
KHC				*e*PG		**Pb**	**10 44 01.1**	**+0.6**
KHC				*e*SN		**Sn**	**10 44 29.7**	**-1.0**
KHC				*e*SG		**Sg**	**10 44 39.0**	**-1.6**
	comp=Z,8.3nm,0.4s							
MODS	**Modra-Piesok**	**3.26**	**165**	*e*PN		Pn	10 43 54.2	-6.5
MODS				*e*PG		**Pg**	**10 44 09.7**	**-1.1**
MODS				*e*SG		**Sg**	**10 44 51.4**	**-1.7**
VYHS	**Vyhne**	**3.54**	**148**	*e*PG		**Pg**	**10 44 17.1**	**+1.1**
VYHS				*e*SG		**Sg**	**10 45 03.5**	**+1.6**
CONA	**Conrad Observa**	**3.61**	**182**	*i* Pn		**Pn**	**10 44 06.1**	**+0.5**
	comp=Z,0.7nm,0.2s							
CONA				*i* Sg		**Sb**	**10 44 58.4**	**+1.0**
	comp=Z,1.6nm,0.2s							
MOA	**Molln**	**3.86**	**198**	*i* Pn		**Pn**	**10 44 08.9**	**0.0**
	comp=Z,1.2nm,0.2s							
MOA				*i* Sg		**Sb**	**10 45 05.1**	**+0.5**
	comp=Z,1.0nm,0.1s							
STHS	**Stebnicka Huta**	**3.94**	**120**	*e*SG		**Sg**	**10 45 19.2**	**+4.3**
ARSA	**Arzberg**	**4.30**	**185**	*i* Pn		**Pn**	**10 44 18.4**	**+3.5**
	comp=Z,0.8nm,0.2s							
ARSA				*i* Sg		**Sb**	**10 45 16.8**	**-0.3**
	comp=Z,5.6nm,0.5s							

IDC 10 10:52:50.4±2.6, 6°58S×130°28E, h0km, mb3.2/1, mb1 3.4/3, mb1mx3.2/20, mbtmp3.2/3, ML3.2/2, Error ellipse: s-maj=156.0km s-min=33.7km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.86**	**164**	Pn		Pn	10 56 08.5	+0.2
	0.1nm,0.3s,baz=347,slow=12,SNR=3.8							
WRA				Sn		Sn	10 58 31.4	-12
	0.4nm,0.3s,baz=335,slow=21,SNR=7.9							
ASAR	**Alice Springs**	**17.34**	**169**	P		Pn	10 56 54.0	-0.1
	0.1nm,0.3s,baz=338,slow=9.0,SNR=9.2							
ASAR				S		Sn	10 59 51.1	-17
	0.1nm,0.3s,baz=352,slow=25,SNR=4.2							
MKAR	**Makanchi Array**	**68.03**	**327**	P		P	11 03 51.8	0.0
	0.1nm,0.4s,baz=131,slow=4.4,SNR=2.8							

*IDC **10** 11:02:44.8±2.2, 9°87N×124°37E, h640km±31km, mb3.0/13, mb1 3.1/14, mb1mx2.9/53, mbtmp4.0/14, Error ellipse: s-maj=39.0km s-min=9.5km az=68.0*

ISC 10 11:02:41.9±0.6, 9°9N±0°1×124°3E±0°3, h600km, n14, σ1§06/16, mb3.6/12, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIJI	**Sorong**	**12.77**	**147**	P		**P**	**11 05 30.3**	**+1.8**
	1.8nm,0.3s,baz=337,slow=16,SNR=6.8							
FITZ	**Fitzroy Crossi**	**27.86**	**177**	P		**P**	**11 07 45.2**	**-0.1**
	0.7nm,0.5s,baz=6.2,slow=12,SNR=3.9							
WRA	**Warramunga Arr**	**31.28**	**162**	P		**P**	**11 08 14.7**	**0.0**
	1.6nm,0.3s,baz=344,slow=9.0,SNR=25							
ASAR	**Alice Springs**	**34.67**	**164**	P		**P**	**11 08 43.7**	**+0.5**
	0.8nm,0.3s,baz=339,slow=8.1,SNR=36							
ASAR				PcP		**PcP**	**11 10 59.1**	**-0.6**
	0.3nm,0.6s,baz=344,slow=2.9,SNR=4.0							
ASAR				S		**S**	**11 13 30.3**	**-1.6**
	0.4nm,0.7s,baz=342,slow=24,SNR=4.2							
SONM	**Songino Array**	**40.70**	**342**	P		**P**	**11 09 32.9**	**+1.1**
	0.4nm,0.4s,baz=170,slow=7.5,SNR=5.7							
STKA	**Stephens Creek**	**44.74**	**159**	P		**P**	**11 10 03.3**	**0.0**
	1.8nm,0.7s,baz=330,slow=7.0,SNR=4.6							
MKAR	**Makanchi Array**	**51.14**	**324**	P		**P**	**11 10 51.9**	**+1.2**
	2.9nm,0.5s,baz=117,slow=7.4,SNR=33							
BVAR	**Borovoye Array**	**60.85**	**326**	P		**P**	**11 11 58.1**	**+0.8**
	1.1nm,0.5s,baz=98,slow=6.0,SNR=5.6							
AKTO	**Aktyubinsk**	**67.35**	**321**	P		**P**	**11 12 38.5**	**+0.1**
	1.0nm,0.5s,baz=86,slow=9.1,SNR=4.9							
ILAR	**Eielson Array**	**80.61**	**26**	P		**P**	**11 13 51.4**	**-1.5**
	0.2nm,0.6s,baz=240,slow=5.7,SNR=4.6							
FINES	**FINESS Array B**	**85.27**	**331**	P		**P**	**11 14 15.3**	**-0.8**
	3.2nm,1.0s,baz=73,slow=4.8,SNR=5.8							
AKASG	**Malin Array Be**	**85.60**	**321**	P		**P**	**11 14 16.8**	**-1.1**
	0.1nm,0.3s,baz=64,slow=5.6,SNR=1.6							
YKA	**Yellowknife Ar**	**94.87**	**24**	P		**P**	**11 15 00.7**	**+0.2**
	0.1nm,0.7s,baz=290,slow=3.9							
TORD	**Torodi Ar. Bea**	**118.57**	**291**	PKP		**PKPdf**	**11 20 22.5**	**-1.1**
	0.5nm,0.6s,baz=148,slow=1.9,SNR=3.4							

*BJI **10** 11:07:41.5±0.0, 11°34S×167°21E, h16km, mB5.0/17, mb4.7/19, Ms5.0/6, Ms7 4.7/6*
*IDC **10** 11:07:41.5±0.9, 11°27S×166°87E, h0km, mb4.3/12, mb1 4.5/14, mb1mx4.2/38, mbtmp4.4/14, ML2.5/1, MS3.9/18, Ms1 4.0/18, ms1mx3.8/28, Error ellipse: s-maj=25.5km s-min=19.0km az=133.0*
*NEIC **10** 11:07:43.6±1.5, 11°18S±0°09×166°74E±0°08, h10km±1km, mb4.8/50, Error ellipse: s-maj=16.4km s-min=12.6km az=22.0*

ISC 10 11:07:44.0±0.4, 11°22S±0°07×166°77E±0°06, h10km, n83, σ1§71/79, mb4.7/42, MS3.9/18, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**6.94**	**284**	Pn		**Pn**	**11 09 27.2**	**+1.4**
	26nm,0.3s,baz=23,slow=1.9,SNR=19							
HNR				Sn		**Sn**	**11 10 48.4**	**+3.6**
	baz=258,slow=19,SNR=1.8							
HNR				LR		LR	11 12 23.3	
	comp=Z,3μm,18.6s,baz=132,slow=40							
HNR	**Honiara**	**6.94**	**284**	*e*P		**Pn**	**11 09 27.0**	**+1.2**
HNR	**Honiara**	**6.94**	**284**			**Pn**	**11 09 26.1**	**+0.3**
HNR				Sn		**Sn**	**11 10 46.6**	**+1.7**
DZM	**Mont Dzumac**	**10.80**	**182**	*e*Pn		Pn	11 10 24.4	+5.6
	2.4nm,0.3s							
DZM				*e*LR		LR	11 12 50.9	
	comp=Z,2μm,24.9s							
DZM	**Mont Dzumac**	**10.80**	**182**	Pn		**Pn**	**11 10 20.1**	**+1.2**
	0.2nm,0.3s,baz=62,slow=18,SNR=3.4							
DZM	**Mont Dzumac**	**10.80**	**182**	Pn		**Pn**	**11 10 20.3**	**+1.5**
MSVF	**Nonsavu**	**12.70**	**122**	Pn		**Pn**	**11 10 46.8**	**+1.9**
KRVT	**Keravat (AS076**	**16.13**	**294**	LR		LR	11 18 05.9	
	comp=Z,1μm,19.0s,baz=116,slow=38							
PMG	**Port Moresby**	**19.37**	**274**	P		**Pn**	**11 12 11.7**	**+0.5**
	0.4nm,0.3s,baz=129,slow=4.2,SNR=4.0							
PMG				LR		LR	11 19 06.6	
	comp=Z,756nm,18.7s,baz=118,slow=35							
PMG	**Port Moresby**	**19.37**	**274**	P		**P**	**11 12 09.4**	**-0.8**
EIDS	**Eidsvold**	**20.46**	**224**	P		**P**	**11 12 21.5**	**-0.4**
AFI	**Afiamalu**	**21.11**	**100**	LR		LR	11 19 19.4	
	comp=Z,370nm,18.8s,baz=352,slow=33							
CTA	**Charters Tower**	**21.61**	**243**	P		**P**	**11 12 35.2**	**+0.8**
	3.9nm,0.7s,baz=60,slow=14,SNR=3.9							
COEN	**Coen**	**23.18**	**261**	P		**P**	**11 12 51.6**	**+0.5**
ARMA	**Armidale**	**23.72**	**214**	P		**P**	**11 12 56.0**	**-0.5**
ARMA						IAmb	IAmb	11 13 12.9
	comp=Z,17nm,0.9s							
OUZ	**Omahuta**	**24.69**	**167**	P		**P**	**11 13 04.7**	**-0.5**
OUZ						IAmb	IAmb	11 13 06.2
	comp=Z,43nm,1.4s							
JAY	**Jayapura**	**27.25**	**287**	LR		LR	11 25 22.9	
	comp=Z,385nm,18.9s,baz=20,slow=39							
STKA	**Stephens Creek**	**31.01**	**225**	P		**P**	**11 14 01.4**	**-0.6**
	comp=Z,4.3nm,0.8s,baz=12,slow=10.0,SNR=11							
STKA				LR		LR	11 26 04.7	
	comp=Z,495nm,18.8s,baz=39,slow=36							
STKA	**Stephens Creek**	**31.01**	**225**	P		**P**	**11 14 01.8**	**-0.2**
LTZ	**Lake Taylor**	**31.81**	**172**	P		**P**	**11 14 08.8**	**-0.1**
LTZ						IAmb	IAmb	11 14 21.3
	comp=Z,11nm,0.9s							
WRA	**Warramunga Arr**	**32.37**	**250**	P		**P**	**11 14 13.3**	**-0.8**
	comp=Z,2.4nm,0.8s,baz=80,slow=9.1,SNR=10.0							
WRA				LR		LR	11 26 40.4	
	comp=Z,206nm,18.9s,baz=70,slow=35							
TOO	**Toolangi**	**32.45**	**212**	P		**P**	**11 14 14.4**	**-0.2**
TOO						IAmb	IAmb	11 14 18.9
	comp=Z,20nm,1.5s							
RPZ	**Rata Peaks**	**32.59**	**174**	P		**P**	**11 14 15.5**	**-0.2**
	comp=Z,20nm,0.8s,baz=78,slow=4.1,SNR=4.6							
RPZ	**Rata Peaks**	**32.59**	**174**	P		**P**	**11 14 16.1**	**+0.4**
AS31	**Alice Springs**	**33.61**	**244**	P		**P**	**11 14 24.4**	**-0.5**
ASAR	**Alice Springs**	**33.61**	**244**	P		**P**	**11 14 22.7**	**-2.2**
	comp=Z,3.7nm,0.8s,baz=74,slow=9.5,SNR=29							
ASAR				PcP		**PcP**	**11 17 04.2**	**-1.1**
	comp=Z,0.8nm,0.8s,baz=76,slow=3.9,SNR=5.3							
ASAR				LR		LR	11 27 32.0	
	comp=Z,230nm,19.1s,baz=77,slow=35							
MTN	**Manton Dam**	**34.87**	**264**	P		**P**	**11 14 35.5**	**-0.4**
MTN						IAmb	IAmb	11 14 51.6
	comp=Z,9.2nm,0.9s							
FAKI	**Fak Fak**	**35.20**	**281**	P		**P**	**11 14 36.6**	**-2.1**
BBOO	**Buckleboo**	**35.45**	**228**	P		**P**	**11 14 38.2**	**-2.5**
BBOO						IAmb	IAmb	11 14 48.1
	comp=Z,18nm,1.2s							
KNRA	**Kununurra**	**37.19**	**259**	P		**P**	**11 14 54.3**	**-1.5**
KNRA						IAmb	IAmb	11 15 12.3
FITZ	**Fitzroy Crossi**	**40.30**	**255**	P		**P**	**11 15 20.7**	**-1.2**
PPT2	**Papeete2**	**42.69**	**104**	*e*S		**S**	**11 22 10.5**	**+5.2**
	comp=Z,46nm,21.5s							
PPT2				*e*LQ		LQ	11 25 46.8	
	comp=Z,447nm,27.0s							
PPT2				*e*LR		LR	11 27 46.6	
	comp=Z,208nm,22.2s,baz=269							
PSAD2	**Pilbara Seismi**	**45.91**	**251**	P		**P**	**11 16 06.6**	**-0.7**
PSAD2				IAmb		IAmb	11 16 17.4	
	comp=Z,13nm,1.2s							
MORW	**Morawa**	**50.42**	**242**	P		**P**	**11 16 41.4**	**-0.6**
NJ2	**Nanjing**	**62.85**	**315**	*e*P		**P**	**11 18 10.4**	**+0.1**
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
PETK	**Petropavlovsk-**	**64.54**	**354**	LR		LR	11 39 59.3	
	comp=Z,61nm,21.0s,baz=68,slow=30							
GSTR	**Great Sitkin T**	**64.77**	**12**	P		**P**	**11 18 23.3**	**+0.6**
WHN	**Wuhan**	**65.26**	**311**	P		P	11 18 35.9	+10
VNDA	**Vanda**	**66.34**	**181**	LR		LR	11 43 24.2	
	comp=Z,88nm,20.2s,baz=352,slow=32							
VNDA	**Vanda**	**66.34**	**181**	P		**P**	**11 18 32.7**	**+0.3**
KLR	**Kul'dur**	**67.62**	**336**	P		**P**	**11 18 42.1**	**+1.2**
	comp=Z,1.1nm,0.5s,baz=89,slow=1.0,SNR=3.6							
KMI	**Kunming**	**72.06**	**301**	P		**P**	**11 19 08.5**	**-0.6**
HHC	**Hu-ho-hao-te**	**72.61**	**319**	*e*P		**P**	**11 19 09.4**	**-2.5**
HHC				pmax		pmax		
	comp=Z,5.0nm,1.0s							
HHC				pmax		pmax		
	comp=Z,62nm,3.7s							
CM31	**Chiang Mai Arr**	**73.10**	**293**	P		**P**	**11 19 14.5**	**-0.6**
CM31				IAmb		IAmb	11 19 17.9	
	comp=Z,5.2nm,0.6s							
CMAR	**Chiang Mai Arr**	**73.10**	**293**	P		**P**	**11 19 15.5**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=119,slow=4.6,SNR=13							
CMAR				LR		LR	11 53 12.0	
	comp=Z,21nm,18.0s,baz=166,slow=37							
LZH	**Lanzhou**	**75.61**	**312**	*e*P		**P**	**11 19 33.8**	**+4.1**
LZH				pP		sP	11 19 36.1	+2.6
LZH				sP		PcP	11 19 38.6	-3.9
LZH				*e*PP		**PP**	**11 22 25.0**	**+5.6**
LZH				pmax		pmax		
	comp=Z,23nm,1.3s							
LZH				pmax		pmax		
	comp=Z,92nm,6.8s							
LZH				LR		LR		
	comp=Z,210nm,15.2s							
LZH				LR		LR		
	comp=Z,210nm,15.5s							
LZH				LR		LR		
	comp=Z,330nm,18.7s							
ANM	**Nome**	**78.45**	**12**	P		**P**	**11 19 44.8**	**+0.1**
ANM				IAmb		IAmb	11 19 51.2	
	comp=Z,12nm,1.4s							
YAK	**Yakutsk**	**78.55**	**343**	P		**P**	**11 19 45.5**	**+0.2**
YAK				IAmb		IAmb	11 19 51.0	
	comp=Z,13nm,1.1s							
QSPA	**South Pole Qui**	**78.79**	**180**	P		**P**	**11 19 46.0**	**-0.9**
QSPA				IAmb		IAmb	11 19 50.0	
	comp=Z,16nm,1.1s							
ULN	**Ulaanbaatar**	**79.03**	**324**	P		**P**	**11 19 47.4**	**-1.1**
BILL	**Bilibino**	**79.05**	**360**	P		**P**	**11 19 47.4**	**-0.6**
BILL				IAmb		IAmb	11 19 56.4	
	comp=Z,7.7nm,1.0s							
SONM	**Songino Array**	**79.40**	**323**	P		**P**	**11 19 51.5**	**+1.0**
	comp=Z,2.3nm,1.2s,baz=128,slow=7.1,SNR=4.4							
SONM				LR		LR	11 53 19.2	
	comp=Z,31nm,21.2s,baz=128,slow=34							
RC01	**Rabbit Creek A**	**79.81**	**20**	P		**P**	**11 19 51.7**	**-0.6**
RC01				IAmb		IAmb	11 19 57.3	
	comp=Z,21nm,1.4s							
SHL	**Shillong**	**81.48**	**298**	P		**P**	**11 20 01.0**	**-1.3**
SHL				IAmb		IAmb	11 20 04.0	
	comp=Z,14nm,1.2s							
RND	**Reindeer**	**81.78**	**19**	P		**P**	**11 20 02.9**	**0.0**
RND				IAmb		IAmb	11 20 08.1	
	comp=Z,11nm,1.2s							
MCK	**McKinley**	**81.99**	**18**	P		**P**	**11 20 03.9**	**0.0**
MCK				IAmb		IAmb	11 20 09.0	
	comp=Z,15nm,1.2s							
MLY	**Manley**	**82.41**	**17**	P		**P**	**11 20 05.7**	**-0.4**
MLY				IAmb		IAmb	11 20 15.9	
	comp=Z,8.7nm,1.4s							
NEA	**Nenana**	**82.56**	**18**	IAmb		IAmb	11 20 16.6	
	comp=Z,6.9nm,1.2s							
BARN	**Barnard Glacie**	**82.66**	**23**	P		**P**	**11 20 07.7**	**0.0**
HDA	**Harding Lake**	**83.09**	**18**	P		**P**	**11 20 07.6**	**-2.0**
MENT	**Mentasta**	**83.14**	**21**	P		**P**	**11 20 09.5**	**-0.4**
COLA	**College**	**83.14**	**18**	P		**P**	**11 20 09.1**	**-0.7**
IL31		**83.36**	**18**	P		**P**	**11 20 10.3**	**-0.6**
IL31				IAmb		IAmb	11 20 21.5	
	comp=Z,7.8nm,1.1s							
ILAR	**Eielson Array**	**83.36**	**18**	P		**P**	**11 20 09.2**	**-1.8**
	comp=Z,1.8nm,0.7s,baz=238,slow=4.6,SNR=18							
ILAR				LR		LR	11 52 04.5	
	comp=Z,70nm,19.1s,baz=184,slow=32							
ORV	**Oroville**	**83.39**	**48**	P		**P**	**11 20 11.3**	**-0.5**
ORV				IAmb		IAmb	11 20 16.6	
	comp=Z,6.6nm,1.4s							
AFDM	**Forest Hills D**	**83.56**	**48**	P		**P**	**11 20 12.4**	**-0.3**
AFDM				IAmb		IAmb	11 20 17.7	
	comp=Z,4.7nm,1.2s							
MAW	**Mawson**	**84.94**	**202**	LR

ISC 10 11:09:45.2±0.9, 50°05'N±0°03'×88°28E±0°02, h10km±6km, n31, σ2s25/62, 9C-4D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
CUR	**Chagan-Uzun**	**0.07**	**44**	Pg		**Pg**		**11 09 47.2**	**-0.4**
CUR				Sg		**Sg**		**11 09 50.2**	**+0.9**
AKAR	**Aktash**	**0.50**	**302**	Pg		**Pg**		**11 09 53.9**	**-1.1**
AKAR				Sg		**Sg**		**11 10 01.7**	**+0.1**
CHBI	**Chibit, Altay**	**0.56**	**298**	Pg		**Pg**		**11 09 54.9**	**-1.2**
CHBI				Sg		**Sg**		**11 10 03.0**	**-0.5**
ULGR	**Ulagan, Altay**	**0.61**	**340**	Pg		**Pg**		**11 09 56.8**	**-0.2**
ULGR				Sg		**Sb**		**11 10 07.0**	**+0.5**
DGZ	**Jazzator, Alta**	**0.65**	**238**	Pg		**Pg**		**11 09 53.6**	**-4.2**
DGZ				Sg		**Sg**		**11 10 00.9**	**-5.5**
TUNR	**Tungur**	**1.26**	**276**	Pg		**Pn**		**11 10 06.1**	**-2.7**
TUNR				Sg		**Sb**		**11 10 23.3**	**-2.0**
TEL	**Teeli**	**1.56**	**51**	Pg		**Pb**		**11 10 14.2**	**0.0**
TEL				Sg		**Sg**		**11 10 36.6**	**+1.2**
ELDR	**Elanda**	**1.82**	**311**	Pg		**Pb**		**11 10 17.9**	**-0.6**
ELDR				Sg		**Sg**		**11 10 43.8**	**+0.3**
ARTR	**Artybash**	**1.86**	**341**	Pg		**Pb**		**11 10 19.1**	**-0.1**
ARTR				Sg		**Sg**		**11 10 45.3**	**+0.4**
UKR	**Ust'-Kan**	**2.41**	**293**	Pg		**Pb**		**11 10 28.0**	**-0.6**
UKR				Sg		**Sg**		**11 11 00.9**	**-1.6**
GALT	**Gorno-Altaysk,**	**2.41**	**323**	Pg		**Pb**		**11 10 29.2**	**+0.6**
GALT				Sg		**Sg**		**11 11 03.8**	**+1.2**
TASR	**Tashtagol**	**2.72**	**355**	Pg		**Pg**		**11 10 36.0**	**-1.3**
TASR				Sg		**Sg**		**11 11 13.4**	**+0.8**
DJOS	**Djoyskaya Sosn**	**3.37**	**34**	Pg		**Pb**		**11 10 45.0**	**+0.1**
DJOS				Sg		**Sg**		**11 11 32.7**	**-0.6**
CERR	**Cheremushki**	**3.42**	**34**	Sg		**Sg**		**11 11 35.5**	**+0.5**
VEH	**Verkhnyaya Baz**	**3.45**	**21**	Pg		**Pg**		**11 10 48.4**	**-2.7**
VEH				Sg		**Sg**		**11 11 36.1**	**+0.3**
ELT	**Eltsovka**	**3.46**	**339**	Pg		**Pb**		**11 10 46.4**	**+0.1**
ELT				Sg		**Sg**		**11 11 33.6**	**-2.5**
LUZB	**Luzhba, Kemero**	**3.63**	**6**	Pg		**Pb**		**11 10 51.1**	**+1.6**
LUZB				Sg		**Sg**		**11 11 42.2**	**+0.4**
KZLR	**Kyzyl**	**4.25**	**65**	Pg		**Pg**		**11 11 04.0**	**-2.4**
KZLR				Sg		**Sg**		**11 12 00.1**	**-1.3**
SALR	**Pechorkino, Sa**	**4.65**	**341**	Pg		**Pg**		**11 11 09.9**	**-4.2**
SALR				Sg		**Sg**		**11 12 12.8**	**-1.5**
MK31	**Makanchi Array**	**5.15**	**233**	Pn		**Pn**		**11 11 02.9**	**+0.6**
	0.5nm,0.2s,baz=56,slow=14,SNR=49								
MK31				⇑Pg		**Pb**		**11 11 16.9**	**+1.6**
	0.6nm,0.3s,baz=54,slow=16,SNR=5.2								
MK31				⇑Sn		**Sn**		**11 12 01.4**	**-0.4**
	3.7nm,0.5s								
MK31				⇑Lg		Lg		11 12 19.7	
	4.3nm,0.5s								
MKAR	**Makanchi Array**	**5.15**	**233**	Pn		**Pn**		**11 11 02.5**	**+0.2**
MKAR				Pg		**Pb**		**11 11 17.6**	**+2.3**
MKAR				Sg		**Sb**		**11 12 23.4**	**+6.3**
MAKZ	**Makanchi**	**5.30**	**235**	Pn		**Pn**		**11 11 04.5**	**+0.1**
MAKZ				Pg		**Pb**		**11 11 19.8**	**+1.9**
MAKZ				Sg		**Sb**		**11 12 28.4**	**+6.8**
MAKZ	**Makanchi**	**5.30**	**235**	⇑Pn		**Pn**		**11 11 04.6**	**+0.2**
	1.1nm,0.5s								
MAKZ				⇑Pg		**Pb**		**11 11 18.9**	**+1.0**
	0.9nm,0.3s								
MAKZ				⇑Sn		**Sn**		**11 12 05.1**	**-0.4**
	2.3nm,0.4s								
MAKZ				⇑Lg		Lg		11 12 27.3	
	7.0nm,0.6s								
TDJR	**Todzha**	**5.45**	**61**	Pg		**Pg**		**11 11 25.7**	**-3.7**
TDJR				Sg		**Sg**		**11 12 37.7**	**-2.2**
NVS	**Novosibirsk**	**5.70**	**329**	Sg		**Sg**		**11 12 50.0**	**+2.0**
NVSII	**Novosibirsk**	**5.70**	**329**	Sg		**Sg**		**11 12 46.8**	**-1.2**
MINR	**Mina**	**6.05**	**34**	Pg		**Pg**		**11 11 37.2**	**-3.7**
MINR				Sg		**Sg**		**11 13 02.0**	**+2.7**
KURK	**Kurchatov**	**6.21**	**280**	Pg		**Pb**		**11 11 36.7**	**+3.4**
KURK				Sg		**Sg**		**11 13 01.4**	**-3.1**
KURK	**Kurchatov**	**6.21**	**280**	⇑Pn		**Pn**		**11 11 17.3**	**+0.5**
	5.9nm,1.1s								
KURK				⇓Sn		**Sn**		**11 12 28.1**	**+0.3**
	2.1nm,0.6s								
KURK				⇓Lg		Lg		11 12 59.0	
	7.8nm,0.8s								
KURBB	**Kurchatov Arra**	**6.27**	**279**	P		**Pn**		**11 11 19.9**	**+2.4**
	2.0nm,0.6s,baz=123,slow=6.2,SNR=7.0								
KURBB	**Kurchatov Arra**	**6.27**	**279**	⇑Pn		**Pn**		**11 11 19.4**	**+1.9**
	3.0nm,0.6s,baz=93,slow=15								
KURBB				⇓Sn		**Sn**		**11 12 29.7**	**+0.6**
	5.2nm,0.5s								
KURBB				⇓Lg		Lg		11 13 04.6	
	10nm,0.6s								

*IDC **10** 11:20:27.9±4.2, 17°.37S×178°.89E, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.9/30, mbtmp4.0/4, MS3.5/7, Ms1 3.5/7, ms1mx3.3/23, Error ellipse: s-maj=351.1km s-min=26.5km az=154.0*

*NEIC **10** 11:20:30.1±1.2, 16°.21S±0°.06×178°.1E±0°.1, h7km±5km, mb4.4/10, Error ellipse: s-maj=19.3km s-min=8.2km az=89.0*

ISC 10 11:20:30.4±0.8, 16°22S±0°07'×178°2E±0°.1, h10km, n27, σ0s97/21, mb4.2/9, MS3.5/6, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MSVF	**Nonsavu**	**1.50**	**184**			**Pn**		**11 20 56.9**	**-0.7**
MSVF				Sn		**Sn**		**11 21 19.4**	**+0.6**
FUNA	**Funafuti**	**7.72**	**8**	Pn		**Pn**		**11 22 22.9**	**0.0**
FUNA				Pg				11 23 06.2	+8.0
DZM	**Mont Dzumac**	**12.49**	**240**	e	LR	LR		11 26 26.2	
	comp=Z,283nm,25.1s								
HNR	**Honiara**	**18.98**	**289**		LR	LR		11 31 32.2	
	comp=Z,143nm,18.4s,baz=85,slow=33								
HNR	**Honiara**	**18.98**	**289**	P		**Pn**		**11 24 52.4**	**-0.4**
RAR	**Rarotonga**	**21.48**	**107**	LR		LR		11 31 28.3	
	comp=Z,216nm,19.0s,baz=256,slow=32								
LTZ	**Lake Taylor**	**26.94**	**190**	P		**P**		**11 26 12.0**	**0.0**
ARMA	**Armidale**	**28.07**	**235**	P		**P**		**11 26 21.6**	**-0.7**
ARMA				IAmb		IAmb		11 26 40.5	
	comp=Z,11nm,1.3s								
KRVT	**Keravat (AS076**	**28.25**	**292**	LR		LR		11 38 19.3	
	comp=Z,42nm,19.3s,baz=104,slow=36								
CTAO	**Charters Tower**	**30.52**	**258**	P		**P**		**11 26 43.3**	**-0.9**
STKA	**Stephens Creek**	**36.63**	**238**	LR		LR		11 41 42.2	
	comp=Z,70nm,19.2s,baz=27,slow=35								
STKA	**Stephens Creek**	**36.63**	**238**	P		**P**		**11 27 36.8**	**-0.4**
BBOO	**Buckleboo**	**41.40**	**239**	P		**P**		**11 28 17.5**	**+0.4**
BBOO				IAmb		IAmb		11 28 28.6	
	comp=Z,9.0nm,1.1s								
WRA	**Warramunga Arr**	**41.73**	**258**	P		**P**		**11 28 23.0**	**+3.0**
	comp=Z,1.8nm,1.1s,baz=93,slow=8.6,SNR=3.7								
WRA	**Warramunga Arr**	**41.73**	**258**	P		**P**		**11 28 20.4**	**+0.4**
ASAR	**Alice Springs**	**42.11**	**253**	P		**P**		**11 28 24.7**	**+1.6**
	comp=Z,1.8nm,0.8s,baz=84,slow=8.6,SNR=17								
ASAR				LR		LR		11 44 31.4	
	comp=Z,98nm,20.1s,baz=74,slow=34								
ASAR	**Alice Springs**	**42.11**	**253**	P		**P**		**11 28 23.3**	**+0.1**
KSRS	**Korea Array**	**71.28**	**320**	LR		LR		11 59 02.4	
	comp=Z,29nm,21.2s,baz=114,slow=32								
NVAR	**Mina Array Bea**	**80.55**	**45**	P		**P**		**11 32 44.3**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=229,slow=5.5,SNR=7.7								
NVAR	**Mina Array Bea**	**80.55**	**45**	P		**P**		**11 32 43.1**	**-0.2**
NV11	**Mina Array Sit**	**80.65**	**46**	P		**P**		**11 32 44.2**	**+0.4**
NV11				IAmb		IAmb		11 32 46.8	
	comp=Z,3.7nm,1.2s								
IL31		**85.03**	**14**	P		**P**		**11 33 06.2**	**+0.4**
IL31				IAmb		IAmb		11 33 07.4	
	comp=Z,2.5nm,0.8s								
ILAR	**Eielson Array**	**85.03**	**14**	P		**P**		**11 33 05.9**	**+0.1**
SCRK	**Sand Creek**	**85.10**	**16**	P		**P**		**11 33 05.7**	**-0.7**
SCRK				IAmb		IAmb		11 33 23.9	
	comp=Z,3.1nm,1.2s								
CMAR	**Chiang Mai Arr**	**85.22**	**291**	LR		LR		12 12 48.8	
	comp=Z,12nm,18.6s,baz=120,slow=36								
PDAR	**Pinedale Array**	**88.43**	**45**	P		**P**		**11 33 23.7**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=216,slow=4.5,SNR=3.9								
PDAR	**Pinedale Array**	**88.43**	**45**	P		**P**		**11 33 22.6**	**-0.7**

*SJA **10** 11:22:11.6±0.4, 21°.72S×66°.74W, h238km±4km, ML3.1, MW3.3*

*IDC **10** 11:22:13.2±3.5, 21°.60S×66°.43W, h211km±50km, mb3.8/1, mb1 3.3/3, mb1mx3.0/32, mbtmp3.9/3, Error ellipse: s-maj=77.0km s-min=18.4km az=101.0*

ISC 10 11:22:12.3±1.0, 21°.76S±0°.07'×66°.80W±0°.07, h250km, n10, σ2s09/13, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
YJA	**Yavi**	**1.27**	**110**	*i* P		**Pn**		**11 22 47.9**	**-1.6**
YJA					IAML			11 23 14.8	
	comp=Z,105nm,0.4s								
YJA				*i* S		**S**		**11 23 15.0**	**-3.6**
HJA	**Humahuaca**	**1.94**	**139**	*i* P		**Pn**		**11 22 53.8**	**-0.9**
HJA					IAML			11 23 33.0	
	comp=Z,34nm,0.4s								
LVC	**Limon Verde**	**2.13**	**246**	*i* P		**Pn**		**11 22 55.7**	**-0.7**
LVC					IAML			11 23 39.4	
	comp=Z,9.1nm,0.6s								
PB08	**IPOC Station P**	**2.72**	**306**	*i* P		**Pn**		**11 23 01.6**	**-0.7**
PB08					IAML			11 23 43.4	
	comp=Z,59nm,0.3s								
PB06	**IPOC Station P**	**2.74**	**249**	*i* P		**Pn**		**11 23 01.6**	**-0.5**
PB06					IAML			11 23 43.2	
	comp=Z,60nm,0.4s								
PB03	**IPOC Station P**	**2.76**	**263**	*i* P		**Pn**		**11 23 01.9**	**-0.5**
PB03				*i* S		**S**		**11 23 39.2**	**-2.7**
PB03					IAML			11 23 39.4	
	comp=Z,153nm,0.2s								
LPAZ	**La Paz**	**5.58**	**347**	P		**Pn**		**11 23 35.8**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=141,slow=9.6,SNR=18								
LPAZ					S	**S**		**11 24 40.1**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=284,slow=19,SNR=4.2								
PLCA	**Paso Flores**	**19.18**	**189**	P		**Pn**		**11 26 23.2**	**+1.5**
	comp=Z,0.2nm,0.3s,baz=19,slow=9.8,SNR=6.0								
TORD	**Torodi Ar. Bea**	**75.60**	**69**	P		**P**		**11 33 33.4**	**+3.1**
	comp=Z,1.2nm,0.4s,baz=261,slow=5.1,SNR=22								
MKAR	**Makanchi Array**	**144.66**	**38**	PKP		**PKiKP**		**11 41 23.3**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=309,slow=3.7,SNR=8.5								

*NEIC **10** 11:23:30.5±2.1, 23°.08N±0°.04×80°.76W±0°.09, h10km±1km, mb4.0/5, Error ellipse: s-maj=14.1km s-min=5.9km az=75.0*

*IDC **10** 11:23:31.1±1.0, 22°.99N×80°.76W, h0km, mb3.6/5, mb1 4.0/9, mb1mx3.7/32, mbtmp3.7/9, ML3.2/3, MS3.2/2, Ms1 3.2/2, ms1mx2.5/35, Error ellipse: s-maj=33.8km s-min=18.6km az=68.0*

*SSNC **10** 11:23:34.9±2.1, 23°.13N×80°.67W, h13km±44km, MD4.0, ML3.3, MW3.8*

ISC 10 11:23:30.7±0.5, 23°09N±0°.05×80°74W±0°.04, h10km, n44, σ1s74/50, mb3.8/6, 1D, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
MGV	**Manicaragua**	**1.20**	**144**	*i* P		**Pg**		**11 23 55.8**	**+2.1**
MGV				*e* S		**Sn**		**11 24 13.4**	**+3.6**
MGV					IAML			11 24 17.9	
	comp=N,1μm,0.9s								
MGV					IAML			11 24 18.9	
	comp=E,542nm,0.8s								
SOR	**Soroa**	**2.12**	**262**	*i* P		**Pb**		**11 24 08.6**	**-0.5**
SOR				*e* S		**Sb**		**11 24 33.3**	**-2.2**
SOR					IAML			11 24 43.2	
	comp=N,159nm,0.3s								
SOR					IAML			11 24 57.7	
	comp=E,173nm,0.5s								
061Z	**Ochoppi**	**2.77**	**357**			**Pn**		**11 24 15.9**	**+0.7**
061Z	**Ochoppi**	**2.77**	**357**	*e* P		**Pn**		**11 24 15.9**	**+0.7**
061Z				*e* S		Sn		**11 24 47.4**	**-1.2**
CCCC	**Cccc**	**3.33**	**124**	*e* P		**Pb**		**11 24 28.1**	**-1.8**
CCCC				*e* S		**Sb**		**11 25 07.0**	**-3.5**
CBCY	**The Bluff, Cay**	**3.46**	**165**	Pn		**Pn**		**11 24 25.3**	**+0.7**
FSCY	**Frank Sound, G**	**3.78**	**186**	Pn		**Pn**		**11 24 29.8**	**+0.7**
060A	**Indiantown**	**3.95**	**5**	Pn		**Pn**		**11 24 32.2**	**+0.9**
LMGC	**Las Mercedes**	**4.59**	**130**	*e* P		**Pn**		**11 24 42.3**	**+2.1**
LMGC				*e* S		**Sn**		**11 25 30.4**	**-3.3**
DWPF	**Disney Wildern**	**5.04**	**353**			**Pn**		**11 24 46.5**	**+0.2**
RCC	**Rio Carpintero**	**5.61**	**122**	*e* P		**Pn**		**11 24 54.0**	**-0.2**
RCC				*e* S		Sn		11 25 48.0	-11
MTDJ	**Mount Denham**	**5.69**	**148**	Pn		**Pn**		**11 24 55.7**	**+0.2**
656A	**Willston**	**6.46**	**346**			**Pn**		**11 25 05.8**	**-0.1**
TEIG	**Tepich**	**7.57**	**249**	Pn		**Pn**		**11 25 21.3**	**+0.2**
TEIG				Sn		**Sn**		**11 26 44.3**	**-2.8**
TEIG	**Tepich**	**7.57**	**249**			**Pn**		**11 25 21.4**	**+0.2**
TEIG						**Sn**		**11 26 46.4**	**-0.6**
456A	**Hilliard**	**7.69**	**352**	Pn		**Pn**		**11 25 23.0**	**+0.1**
352A	**Blakely**	**9.15**	**337**	Pn		**Pn**		**11 25 42.0**	**-0.8**
250A	**Grady**	**10.12**	**332**	Pn		**Pn**		**11 25 56.0**	**-0.2**
152A	**Waverly Hall**	**10.17**	**341**			**Pn**		**11 25 56.1**	**-0.7**
Z50A	**Ashland**	**11.11**	**337**	Pn		**Pn**		**11 26 08.3**	**-1.4**
LRAL	**Lakeview Retre**	**11.34**	**332**	Pn		**Pn**		**11 26 10.6**	**-2.3**
BIRD	**Birdtown, Kers**	**11.52**	**1**	Pn		**Pn**		**11 26 12.1**	**-3.2**
APG	**El Apazote**	**12.21**	**231**	Pn		**Pn**		11 26 29.9	+4.8
	comp=E,0.6nm,0.3s,baz=357,slow=13,SNR=6.0								
APG					LR	LR		11 30 01.7	
	comp=E,55nm,21.7s,baz=100,slow=32								
V58A	**Windy Hill, Pi**	**12.74**	**6**	Pn		**Pn**		**11 26 29.5**	**-2.5**
TKL	**Tuckaleechee C**	**12.80**	**349**	Pn		**Pn**		**11 26 30.7**	**-2.1**
	comp=E,0.4nm,0.3s,baz=174,slow=13,SNR=5.5								
TKL	**Tuckaleechee C**	**12.80**	**349**			**Pn**		**11 26 30.9**	**-1.9**
T57A	**Hurt**	**13.92**	**5**	Pn		**Pn**		**11 26 47.0**	**-1.1**
T59A	**Double "B" Far**	**14.11**	**11**	Pn		**Pn**		**11 26 47.5**	**-3.1**
CMIG	**Matias Romero**	**14.56**	**248**	Pn		**Pn**		**11 26 56.1**	**-0.9**
	comp=E,0.3nm,0.3s,baz=335,slow=10,SNR=4.1								
SDV	**Santo Domingo**	**17.12**	**144**	P		**P**		**11 27 32.1**	**-0.1**
	comp=E,0.1nm,0.3s,baz=325,slow=12,SNR=1.4								
P46A	**Rosedale**	**17.37**	**343**			**Pn**		**11 27 32.5**	**-0.7**
P46A					IAmb	IAmb		11 27 39.6	
	comp=Z,11nm,0.8s								
TXAR	**Lajitas Array**	**21.48**	**292**	P		**P**		**11 28 22.6**	**+3.0**
	comp=Z,0.4nm,0.6s,baz=118,slow=9.4,SNR=8.0								
TXAR	**Lajitas Array**	**21.48**	**292**	P		**P**		**11 28 20.4**	**+0.7**
HPIG		**22.90**	**285**	P		**P**		**11 28 34.3**	**-0.8**
HPIG					IAmb	IAmb		11 28 39.8	
	comp=Z,4.2nm,0.8s								
ECSD	**EROS Data Cent**	**24.41**	**331**	P		**P**		**11 28 49.6**	**+0.3**
BNM	**Barren Site**	**25.19**	**302**			**P**		**11 28 56.2**	**-0.6**
LPAZ	**La Paz**	**41.03**	**161**	P		**P**		**11 31 15.7**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=346,slow=3.5,SNR=3.9								
LPAZ	**La Paz**	**41.03**	**161**	P		**P**		**11 31 14.7**	**-0.4**
LPAZ					IAmb	IAmb		11 31 20.9	
	comp=Z,3.7nm,1.2s								
YKA	**Yellowknife Ar**	**45.55**	**339**	P		**P**		**11 31 51.5**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=130,slow=8.3,SNR=13								
ILAR	**Eielson Array**	**59.21**	**333**	P		**P**		**11 33 35.8**	**+4.0**
	comp=Z,0.5nm,0.7s,baz=116,slow=4.7,SNR=6.0								
PLCA	**Paso Flores**	**64.20**	**171**	P		**P**		**11 34 07.2**	**+1.5**
	comp=Z,1.4nm,0.9s,baz=344,slow=6.1,SNR=3.9								
PLCA					LR	LR		12 01 34.6	
	comp=Z,35nm,18.4s,baz=231,slow=36								
PLCA	**Paso Flores**	**64.20**	**171**	P		**P**		**11 34 06.1**	**+0.5**
WRA	**Warramunga Arr**	**147.27**	**269**	PKPbc		**PKPab**		**11 43 16.8**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=77,slow=3.9,SNR=18								
ASAR	**Alice Springs**	**148.24**	**262**	PKPbc		**PKiKP**		**11 43 18.9**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=81,slow=2.0,SNR=14								

*MEX **10** 11:59:52.4±1.0, 31°.07N×115°.91W, h8km±23km, MD3.9*

*ECX **10** 11:59:52.7±0.7, 31°.22N×115°.88W, h5km, MD3.2, ML3.4*

*ANF **10** 11:59:52.7±0.7, 31°.37N×115°.92W, h0km, ML3.1/14, Error ellipse: s-maj=7.8km s-min=5.1km az=75.0*

ISC 10 11:59:51.1±1.1, 31°25N±0°.04×115°88W±0°.03, h4km±11km, n30, σ0s61/49, 8C-4D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
SPIG	**San Pedro Mart**	**0.41**	**120**	*e* P		**Pg**		**12 00 00.0**	**+0.9**
SPIG				*e* S		**Sg**		**12 00 05.5**	**+0.9**
SPIG	**San Pedro Mart**	**0.41**	**120**	⇑*e* P		**Pg**		**11 59 59.5**	**+0.3**
SPIG				*e* S		**Sg**		**12 00 05.5**	**+0.9**
SPX	**San Pedro Mart**	**0.42**	**121**	*e* P		**Pg**		**11 59 58.8**	**-0.4**
SPX				*e* S		**Sg**		**12 00 04.4**	**-0.4**
SPX	**San Pedro Mart**	**0.42**	**121**	⇑*e* P		**Pg**		**11 59 59.0**	**-0.2**
SPX				*e* S		**Sg**		**12 00 04.5**	**-0.2**
SPX				⇓*e*				12 00 05.0	
SPX					IAML			12 00 05.0	
	comp=N,5μm,0.1s								
SQX	**San Quintin**	**0.67**	**179**	⇑*e* P		**Pg**		**12 00 04.0**	**-0.1**
SQX				*e* S		**Sg**		**12 00 12.6**	**-0.2**
ECBX	**El Chinero**	**0.74**	**73**	⇑*i* P		**Pb**		**12 00 06.6**	**-0.1**
ECBX				*e* S		**Sb**		**12 00 16.4**	**-0.8**
ESJX	**Sierra Juarez**	**0.75**	**356**	⇑*e* P		**Pb**		**12 00 06.3**	**-0.6**
CCX	**Cicese**	**0.91**	**313**	⇓*e* P		**Pg**		**12 00 07.8**	**-0.7**
CCX				*e* S		**Sg**		**12 00 20.3**	**0.0**
SFX	**San Felipe**	**0.91**	**103**	⇑*e* P		**Pg**		**12 00 08.2**	**-0.4**
SFX				*e* S		**Sg**		**12 00 20.6**	**+0.2**
CBX	**Cerro Bola**	**1.25**	**328**	*e* P		**Pg**		**12 00 14.5**	**-0.6**
CBX				*i* S		**Sn**		**12 00 32.4**	**-0.4**
CBX	**Cerro Bola**	**1.25**	**328**	⇓*e* P		**Pg**		**12 00 14.8**	**-0.3**
MBIG	**Mexicali**	**1.29**	**27**	*i* P		**Pn**		**12 00 15.7**	**-0.3**
MBIG				*i* S		**Sn**		**12 00 33.4**	**-0.3**
ERMX	**Rumorosa**	**1.30**	**355**	⇑*e* P		**Pb**		**12 00 16.2**	**0.0**
ERMX					IAML			12 00 36.4	
	comp=N,385nm,0.3s								
ERMX					IAML			12 00 40.1	
	comp=E,473nm,0.5s								
ERMX				⇓*e*				12 00 40.1	
TJIG	**Tijuana**	**1.36**	**330**	*e* P		**Pn**		**12 00 16.0**	**-0.8**
TJIG				*i* S		**Sg**		**12 00 33.7**	**-1.0**
IKP	**In-Ko-Pah, Jac**	**1.41**	**352**	⇑*e* P		**Pb**		**12 00 17.8**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**1.41**	**352**	P		**Pn**		**12 00 17.7**	**0.0**
	baz=173,SNR=92								
IKP					S	**Sb**		**12 00 35.8**	**-0.5**
	baz=173								
SWSC	**Sam W. Stewart**	**1.69**	**2**	P		**Pb**		**12 00 22.6**	**-0.2**
	baz=184,SNR=45								
SWSC					S	**Sb**		**12 00 44.9**	**+0.5**
	baz=184								
MONP2	**Monument Peak**	**1.70**	**345**	P		**Pn**		**12 00 22.3**	**+0.6**
	baz=164,SNR=78								
MONP2					S	**Sn**		**12 00 44.3**	**+0.2**
	baz=164								
109C	**Gamma Elliot, M**	**1.93**	**328**	P		**Pn**		**12 00 25.2**	**+0.4**
	baz=146,SNR=14								
109C					S	**Sn**		**12 00 50.1**	**+0.6**
	baz=146								
GLA	**Glamis**	**2.01**	**26**	P		**Pn**		**12 00 25.5**	**-0.3**
	baz=209,SNR=14								
GLA					Sg	**Sg**		**12 00 56.1**	**+0.5**
	baz=209								
TPFO	**Pinon Flats**	**2.40**	**349**	Sb		**Sb**		**12 01 05.9**	**+1.0**
	baz=168								
PFO	**Pinyon Flats O**	**2.40**	**348**	P		**Pn**		**12 00 31.5**	**+0.2**
	baz=168								
PFO					Sb	**Sb**		**12 01 05.8**	**+0.8**
	baz=168								
MURC	**Murrieta**	**2.59**	**335**	P		**Pn**		**12 00 34.5**	**+0.7**
	baz=154								
MURC					Sb	**Sb**		**12 01 10.6**	**+0.3**
	baz=154								
214A	**Organ Pipe Nat**	**2.71**	**74**	*e* P		**Pn**		**12 00 35.1**	**-0.4**
214A				*i* S		**Sn**		**12 01 07.9**	**-0.9**
214A	**Organ Pipe Nat**	**2.71**	**74**	P		**Pn**		**12 00 35.2**	**-0.4**
	baz=258,SNR=14								
BELC	**Belle Mtn. Jos**	**2.74**	**358**	Sg		**Sg**		**12 01 19.8**	**+0.5**
	baz=178								
Y12C	**Blythe**	**2.74**	**24**	P		**Pn**		**12 00 36.2**	**+0.3**
	baz=207								
IRM	**Iron Mountain**	**2.96**	**12**	P		**Pn**		**12 00 40.0**	**+1.0**
	baz=193								
BBRC	**Big Bear Solar**	**3.13**	**344**	Sb		**Sb**		**12 01 27.6**	**+1.6**
	baz=164								
BFSC	**Mount Baldy Ra**	**3.33**	**334**	Sb		**Sb**		**12 01 32.8**	**+1.0**
	baz=152								

*NEIC **10** 12:09:07.0±1.1, 20°.80N±0°.04×146°.6E±0°.1, h10km±1km, mb4.7/30, Error ellipse: s-maj=18.8km s-min=3.6km az=72.0*

*IDC **10** 12:09:14.1±2.8, 20°.81N×146°.60E, h65km±25km, mb3.8/18, mb1 4.0/21, mb1mx3.8/53, mbtmp4.1/21, ML3.9/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/36, Error ellipse: s-maj=19.7km s-min=11.0km az=85.0*

ISC 10 12:09:11.0±0.4, 20°.83N±0°.05×146°.65E±0°.10, h37km, n69, σ0s82/76, mb4.7/41, Mariana Islands region

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

BPAW	**Bear Paw Mtn.**	**59.46**	**27**	P	**P**		**12 19 10.2**	**+0.4**
BPAW				IAmb	IAmb		12 19 12.4	
	comp=Z,3.0nm,0.9s							
KURK	**Kurchatov**	**60.30**	**317**	P	**P**		**12 19 15.7**	**-0.2**
KURK				IAmb	IAmb		12 19 16.5	
	comp=Z,5.9nm,0.7s							
BOOM	**Boomskoye usch**	**62.19**	**308**	P	**P**		**12 19 29.2**	**+0.2**
BOOM				IAmb	IAmb		12 19 30.6	
	comp=Z,4.0nm,0.7s							
NIL	**Nilore**	**65.29**	**298**	P	**P**		**12 19 49.2**	**-0.3**
KK31	**Karatay Array**	**66.11**	**309**	P	**P**		**12 19 54.8**	**+0.2**
KK31				IAmb	IAmb		12 19 55.7	
	comp=Z,6.5nm,0.7s							
KKAR	**Karatay Array**	**66.11**	**309**	P	**P**		**12 19 54.8**	**+0.2**
KKAR				IAmb	IAmb		12 19 55.7	
	comp=Z,6.5nm,0.7s							
SKAG	**Skagway**	**66.23**	**33**	P	**P**		**12 19 55.2**	**+0.3**
GAR	**Garm**	**66.81**	**305**	P	**P**		**12 19 58.8**	**-0.4**
GAR				IAmb	IAmb		12 19 59.8	
	comp=Z,4.2nm,0.5s							
INK	**Inuvik**	**67.07**	**23**	P	**P**		**12 20 00.3**	**+0.2**
CHGR	**Chuyangaron**	**67.75**	**304**	P	**P**		**12 20 05.2**	**0.0**
KBL	**Kabul**	**68.57**	**300**	P	**P**		**12 20 10.3**	**-0.2**
KBL				IAmb	IAmb		12 20 11.4	
	comp=Z,6.7nm,0.7s							
ARU	**Arti**	**71.86**	**324**	P	**P**		**12 20 29.6**	**-0.4**
ARU				IAmb	IAmb		12 20 30.3	
	comp=Z,7.9nm,0.6s							
ABKAR	**Akbulak array**	**72.40**	**317**	P	**P**		**12 20 33.0**	**-0.3**
ABKAR				IAmb	IAmb		12 20 33.8	
	comp=Z,5.2nm,0.7s							
YKA	**Yellowknife Ar**	**75.69**	**28**	P	**P**		**12 20 51.7**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=291,slow=5.7,SNR=11							
ARCES	**ARCESS Array B**	**80.74**	**342**	P	**P**		**12 21 20.0**	**-0.2**
	comp=Z,2.6nm,0.7s,baz=56,slow=5.6,SNR=7.6							
NVAR	**Mina Array Bea**	**81.13**	**52**	P	**P**		**12 21 23.4**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=270,slow=6.2,SNR=8.2							
ELK	**Elko**	**82.56**	**49**	P	**P**		**12 21 30.6**	**0.0**
	comp=Z,0.5nm,0.5s,baz=231,slow=9.4,SNR=3.7							
KBZ	**Khabaz**	**85.28**	**315**	P	**P**		**12 21 44.1**	**+0.1**
	comp=Z,2.3nm,0.8s,baz=158,slow=3.8,SNR=6.9							
FIA1	**FINESS Array S**	**85.32**	**335**	P	**P**		**12 21 43.2**	**-0.7**
FINES	**FINESS Array B**	**85.33**	**335**	P	**P**		**12 21 43.0**	**-0.9**
	comp=Z,10nm,0.5s,baz=70,slow=4.7,SNR=74							
PDAR	**Pinedale Array**	**85.70**	**46**	P	**P**		**12 21 45.7**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=65,slow=11,SNR=3.8							
AKASG	**Malin Array Be**	**90.06**	**326**	P	**P**		**12 22 05.6**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=47,slow=5.1,SNR=4.3							
TORD	**Torodi Ar. Bea**	**131.76**	**311**	PKP		**PKPdf**	**12 28 20.8**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=119,slow=1.9,SNR=2.9							
LPAZ	**La Paz**	**146.76**	**88**	PKPbc		**PKPab**	**12 28 51.6**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=350,slow=2.6,SNR=9.0							
LPAZ	**La Paz**	**146.76**	**88**			**PKPab**	**12 28 51.4**	**-0.6**

*NEIC **10** 12:14:11.8±1.4,59.45N±0.03×153.4W±0.1,h117km±6km, Error ellipse: s-maj=8.4km s-min=1.4km az=117.0*
AEIC 10 12:14:13.4±1.4,59.45N±0.04×153.4W±0.1,h109km±5km, ML3.3/125,Error ellipse: s-maj=8.1km s-min=5.9km az=111.0,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUL	**Augustine Lava**	**0.07**	**207**		Pn	12 14 28.2	-0.2
AU22	**Augustine Moun**	**0.08**	**176**		Pn	12 14 28.0	-0.3
AU22					Sn	12 14 39.4	-0.1
AUP	**Augustine Pinn**	**0.09**	**197**		Pn	12 14 28.2	-0.3
AUW	**Augustine West**	**0.10**	**214**		Pn	12 14 28.2	-0.1
ILS	**Iliamna Low So**	**0.53**	**16**		Pn	12 14 29.5	-0.9
IVE	**Iliamna Volcan**	**0.60**	**17**		Pn	12 14 30.0	-0.9
IVE					Sn	12 14 42.8	-1.3
ILIM	**Iliamna**	**0.67**	**18**		Pn	12 14 30.5	-0.8
HOM	**Homer**	**0.90**	**76**		Pn	12 14 33.0	-0.4
HOM					Sn	12 14 48.6	0.0
RED	**Redoubt Volcan**	**1.02**	**17**		Pn	12 14 33.8	-0.9
RED					Sn	12 14 49.3	-1.5
RSO	**Redoubt South**	**1.06**	**17**		Pn	12 14 33.2	-2.1
RSO				Sn	Sn	12 14 49.6	-2.2
NCT	**North Crescent**	**1.14**	**11**		Pn	12 14 35.2	-0.8
NCT					Sn	12 14 51.6	-1.5
KAHC	**Katmai Hardscr**	**1.17**	**227**		Pn	12 14 36.1	-0.3
DFR	**Drift River**	**1.20**	**16**		Pn	12 14 35.8	-0.8
DFR					Sn	12 14 52.8	-1.4
BRLK	**Bradley Lake**	**1.30**	**75**		Pn	12 14 36.7	-1.1
BRLK				Sn	Sn	12 14 54.0	-2.3
BRSE	**Bradley Lake S**	**1.37**	**76**		Pn	12 14 37.4	-1.1
BRSE					Sn	12 14 55.7	-1.9
KABU	**Katmai Buttres**	**1.54**	**221**		Pn	12 14 40.6	-0.1
KABU					Sn	12 15 01.8	+0.4
KDAK	**Kodiak Island**	**1.72**	**166**		Pn	12 14 41.4	-1.4
KDAK					Sn	12 15 03.1	-2.0
CAPN	**Captain Cook N**	**1.73**	**39**		Pn	12 14 43.6	+0.9
CAPN					Sn	12 15 06.6	+1.5
SPCR	**Spurr Chakacha**	**1.85**	**18**		Pn	12 14 43.5	-0.9
SPBG	**Spurr Blockage**	**1.88**	**15**		Pn	12 14 44.3	-0.6
SLKM	**Skilak Lake**	**1.91**	**55**		Pn	12 14 43.8	-1.3
SLKM					Sn	12 15 06.6	-2.7
SPCP	**Crater Peak Br**	**1.92**	**18**		Pn	12 14 44.7	-0.7
SPCG	**Spurr Capps Gl**	**1.97**	**19**		Pn	12 14 45.2	-0.8
SVW2	**Sparrevohn**	**1.99**	**327**		Pn	12 14 45.1	-0.9
SEW	**Seward**	**2.09**	**70**		Pn	12 14 46.2	-1.1
SEW	**Seward**	**2.09**	**70**		Sn	12 15 10.0	-3.2
OHAK	**Old Harbor**	**2.23**	**179**		Pn	12 14 47.5	-1.7
OHAK					Sn	12 15 14.1	-2.6
FIS	**Fire Island**	**2.31**	**41**		Pn	12 14 50.6	+0.4
PLK3	**Peulik 3**	**2.33**	**222**		Pn	12 14 50.4	-0.1
SUA	**Susitna One**	**2.40**	**32**		Pn	12 14 50.8	-0.7
SUA				Sn	Sn	12 15 19.5	-1.3
RC01	**Rabbit Creek A**	**2.45**	**46**		Pn	12 14 51.3	-0.7
RC01				Sn	Sn	12 15 19.2	-2.4
SKT	**Skwentna**	**2.69**	**19**		Pn	12 14 54.3	-1.0
SKT				Sn	Sn	12 15 26.6	-0.8
PWL	**Port Wells**	**2.89**	**58**		Pn	12 14 56.0	-1.7
SII	**Sitkinak Islan**	**2.93**	**189**		Pn	12 14 56.6	-1.8
SII				Sn	Sn	12 15 30.2	-2.8
PMR	**Palmer**	**3.00**	**42**		Pn	12 14 58.0	-1.2
PMR				Sn	Sn	12 15 30.2	-4.4
KNK	**Knik Glacier**	**3.13**	**49**		Pn	12 14 59.2	-1.8
KNK				Sn	Sn	12 15 34.0	-3.8
GHO	**Glory Hole Cre**	**3.20**	**41**		Pn	12 15 00.1	-1.8
GHO				Sn	Sn	12 15 35.3	-4.1
SML	**Sawmill**	**3.43**	**44**		Pn	12 15 03.0	-2.0
SML				Sn	Sn	12 15 40.3	-4.6
PPLA	**Purkeypile**	**3.51**	**9**		Pn	12 15 06.0	-0.1
HIN	**Hinchinbrook I**	**3.58**	**72**		Pn	12 15 05.5	-1.6
HIN				Sn	Sn	12 15 45.0	-3.6
TT01	**Tatalina**	**3.70**	**341**		Pn	12 15 07.5	-1.1
TTA	**Tatalina**	**3.72**	**341**		Pn	12 15 07.6	-1.3
SCM	**Sheep Creek Mo**	**3.82**	**49**		Pn	12 15 08.6	-1.6
SCM				Sn	Sn	12 15 50.2	-4.0
CHIR	**Chirikof Islan**	**3.83**	**199**		Pn	12 15 08.5	-1.9
CHIR				Sn	Sn	12 15 50.3	-4.2
HUR	**Hurricane**	**3.97**	**25**		Pn	12 15 11.4	-0.8
EYAK	**Cordova Ski Ar**	**3.98**	**71**		Pn	12 15 10.8	-1.5
EYAK				Sn	Sn	12 15 53.9	-4.1
WAT1	**Susitna Watana**	**4.12**	**32**		Pn	12 15 12.3	-1.9
WAT6	**Susitna Watana**	**4.17**	**39**		Pn	12 15 13.0	-2.0
WAT2	**Susitna Watana**	**4.22**	**31**		Pn	12 15 13.8	-1.8
TRF	**Thorofare Moun**	**4.28**	**19**		Pn	12 15 14.8	-1.7
KTH	**Kantishna Hill**	**4.28**	**15**		Pn	12 15 15.1	-1.4
RAGM	**Ragged Mountai**	**4.48**	**74**		Pn	12 15 18.1	-1.0
GOAT	**Goat Mountain**	**4.48**	**72**		Pn	12 15 17.4	-1.7
RND	**Reindeer**	**4.52**	**27**		Pn	12 15 18.1	-1.6
DHY	**Denali Highway**	**4.65**	**36**		Pn	12 15 19.7	-1.7
HMT	**Hamilton**	**4.67**	**75**		Pn	12 15 20.5	-1.2
PS11	**TAPS Pump St11**	**4.68**	**52**		Pn	12 15 20.8	-1.0
MCK	**McKinley**	**4.79**	**24**		Pn	12 15 22.0	-1.3
BPAW	**Bear Paw Mtn.**	**4.80**	**13**		Pn	12 15 22.1	-1.2
NICHA	**Nichawak Mount**	**4.81**	**77**		Pn	12 15 22.0	-1.5
SUCK	**Suckling Hills**	**4.89**	**79**		Pn	12 15 23.1	-1.4
BERG	**Berg Lake**	**4.96**	**75**		Pn	12 15 23.9	-1.5
BWN	**Browne**	**5.09**	**20**		Pn	12 15 25.9	-1.3
GRIN	**Grindle Hills**	**5.13**	**76**		Pn	12 15 26.6	-1.3
GLB	**Gilahina Butte**	**5.14**	**63**		Pn	12 15 26.3	-1.6
KHIT	**Khitrov Hills**	**5.18**	**75**		Pn	12 15 26.7	-1.9
PAX	**Paxson**	**5.20**	**44**		Pn	12 15 27.9	-0.9
VRDI	**Verde Repeater**	**5.24**	**66**		Pn	12 15 28.1	-1.3
CRQM	**Cirque**	**5.28**	**71**	Pn	Pn	12 15 28.7	-1.3
KULT	**Kultieth River**	**5.43**	**77**		Pn	12 15 30.6	-1.3
TGL	**Tana Glacier**	**5.43**	**72**	Pn	Pn	12 15 30.6	-1.4
MCARA	**McCarthy VSAT**	**5.48**	**65**		Pn	12 15 31.6	-0.9
NEA	**Nenana**	**5.53**	**20**		Pn	12 15 31.0	-2.1
WRH	**Wood River Hil**	**5.62**	**24**		Pn	12 15 32.1	-2.3
SDPT	**Sand Point**	**5.62**	**226**	Pn	Pn	12 15 33.1	-1.4
KIAG	**Kiagna River**	**5.69**	**70**		Pn	12 15 34.2	-1.3
PTPK	**Patty Peak**	**5.69**	**67**		Pn	12 15 34.5	-1.1
BALM	**Baldy**	**5.72**	**69**		Pn	12 15 34.5	-1.4
MLY	**Manley**	**5.74**	**11**		Pn	12 15 33.8	-2.2
HDA	**Harding Lake**	**5.83**	**29**		Pn	12 15 35.2	-2.0
RIDG	**Independent Ri**	**5.92**	**40**		Pn	12 15 37.1	-1.4
GRNC	**Granite Creek**	**5.95**	**73**		Pn	12 15 37.8	-1.3
PS08	**TAPS Pump Stn8**	**5.97**	**28**		Pn	12 15 37.0	-2.0
TCOL	**CIGO, UAF Yank**	**6.02**	**23**		Pn	12 15 38.0	-1.9
COLA	**College**	**6.03**	**23**		Pn	12 15 38.0	-1.9
MDM	**Murphy Dome**	**6.03**	**21**		Pn	12 15 38.0	-2.0
BARN	**Barnard Glacie**	**6.05**	**69**		Pn	12 15 39.3	-1.1
RKAV	**Rock Avalanche**	**6.12**	**77**		Pn	12 15 40.8	-0.5
DOT	**Dot Lake**	**6.12**	**43**		Pn	12 15 40.3	-1.0
IL31		**6.14**	**27**		Pn	12 15 39.1	-2.3
CTGM	**Chitina Glacie**	**6.19**	**71**		Pn	12 15 41.1	-1.2
POKR	**Poker Plat Res**	**6.32**	**23**		Pn	12 15 42.3	-1.6
IM03		**6.56**	**359**		Pn	12 15 46.2	-0.8
IMAR	**Indian Mountai**	**6.56**	**359**	Pn	Pn	12 15 45.9	-1.3
YUK2	**White River**	**6.59**	**64**		Pn	12 15 47.4	-0.3
BC03		**6.66**	**52**		Pn	12 15 47.6	-0.8
YUK3	**Moose Creek**	**6.77**	**64**		Pn	12 15 49.4	-0.8
YUK1	**Sand Pete Hill**	**6.84**	**61**		Pn	12 15 50.9	-0.2
PRP	**Porcupine Dome**	**7.09**	**27**		Pn	12 15 52.7	-1.7
PNL	**Peninsula**	**7.10**	**82**		Pn	12 15 53.0	-1.5
YUK4	**Talbot Arm**	**7.54**	**69**		Pn	12 16 00.2	-0.3
ANM	**Nome**	**7.62**	**317**		Pn	12 16 01.9	+0.4
YUK6	**Outpost Mounta**	**7.63**	**72**		Pn	12 16 01.1	-0.8
DHAK	**Deception Hill**	**7.77**	**86**		Pn	12 16 03.0	-0.7
EGAK	**Eagle**	**7.82**	**42**		Pn	12 16 02.2	-2.1
YUK5	**Granite Creek**	**7.89**	**71**		Pn	12 16 04.8	-0.4
COLD	**Coldfoot**	**7.94**	**9**		Pn	12 16 04.1	-1.7
DAWY	**Dawson**	**8.08**	**49**		Pn	12 16 07.3	-0.5
BM03	**Burnt Mountain**	**8.90**	**22**		Pn	12 16 16.6	-2.3
UNV	**Unalaska Valle**	**9.15**	**238**		Pn	12 16 21.5	-0.7
SKAG	**Skagway**	**9.19**	**82**	Pn	Pn	12 16 23.3	+0.6
TOLK	**Toolik Lake Re**	**9.38**	**9**		Pn	12 16 24.2	-1.1
BESE	**Bessie Mountai**	**9.59**	**87**	Pn	Pn	12 16 27.8	-0.5
JIS	**Juneau Island**	**9.90**	**89**	Pn	Pn	12 16 33.4	+1.0
WRAK	**Wrangell Islan**	**11.56**	**96**	Pn	Pn	12 16 55.4	+0.6
CRAG	**Craig**	**11.59**	**101**	Pn	Pn	12 16 53.8	-1.3
ATKA	**Atka Island**	**13.73**	**247**		P	12 17 25.9	-2.2
ADK	**Adak**	**15.12**	**250**		Pn	12 17 41.4	+0.6

*PDG **10** 12:32:45.3±0.7,43.17N×16.05E,h7km±1km,ML3.6/13, Error ellipse: s-maj=1.0km s-min=1.1km az=0.0*
*ROM **10** 12:32:46.0,43.20N×16.00E,h2km,ML3.5*
*PRU **10** 12:32:47.1±0.0,43.26N×16.00E,h0km*
*BEO **10** 12:32:47.7±0.4,43.25N×16.14E,h0km,ML3.5/13*
*RHSSO **10** 12:32:47.6±0.4,43.20N×16.15E,h16km±3km,ML3.6/18*
*LDG **10** 12:32:47.2±0.2,43.19N×16.00E,h5km,Ml3.8/15, Error ellipse: s-maj=5.6km s-min=2.7km az=15.0*
ISC 10 12:32:45.9±1.0,43.19N±0.02×16.01E±0.02,h13km±8km, n133,n2s03/222,14C-7D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HVAR	**Hvar**	**0.32**	**93**	*e*Pg	**Pg**	**12 32 51.7**	**-0.8**
HVAR				Sg	**Sg**	**12 32 56.9**	**-0.1**
ZIRJ	**Zirje**	**0.53**	**330**	*i* Pg	**Pg**	**12 32 56.0**	**-0.3**
ZIRJ				Sg	**Sg**	**12 33 03.8**	**+0.4**
MORI	**Morici**	**0.71**	**342**	*e*Pg	**Pg**	**12 32 59.5**	**-0.1**
MORI				Sg	**Sb**	**12 33 10.7**	**+1.0**
MAKA	**Makarska**	**0.75**	**82**	*i* Pg	**Pg**	**12 32 59.6**	**-0.7**
MAKA				Sg	**Sg**	**12 33 09.8**	**-0.3**
KIJV	**Kijevo**	**0.86**	**20**	*i* Pg	**Pg**	**12 33 01.6**	**-1.0**
KIJV				Sg	**Sb**	**12 33 14.7**	**+0.5**
DUGI	**Dugi Otok**	**1.05**	**320**	*i* Pg	**Pb**	**12 33 05.3**	**-0.7**
DUGI				Sg	**Sn**	**12 33 20.7**	**-0.3**
STON	**Ston**	**1.28**	**104**	*i* Pg	**Pn**	**12 33 08.4**	**-1.1**
STON				Sg	**Sb**	**12 33 25.5**	**-0.8**
STON	**Ston**	**1.28**	**104**	*e*Pg	**Pn**	**12 33 08.3**	**-1.1**
STON				*e*Sg	**Sb**	**12 33 25.5**	**-0.8**
STON	**Ston**	**1.28**	**104**	⇑*i*Pg	**Pn**	**12 33 08.2**	**-1.3**
STON				*e*Sg	**Sb**	**12 33 25.2**	**-1.0**
UDBI	**Udbina**	**1.34**	**353**	*i* Pn	**Pb**	**12 33 11.0**	**0.0**
UDBI				Sn	**Sg**	**12 33 30.1**	**+0.8**
MGRS	**Mrkonjic Grad**	**1.45**	**32**	⇑*i*Pg	**Pb**	**12 33 13.3**	**+0.5**
MGRS				*e*Sg	**Sb**	**12 33 31.5**	**+0.3**
NVLJ	**Novalja**	**1.60**	**329**	*i* Pn	**Pb**	**12 33 15.2**	**0.0**
NVLJ				Sn	**Sg**	**12 33 36.8**	**-0.5**
DBRK	**Dubrovnik**	**1.66**	**108**	*e*Pn	**Pn**	**12 33 14.9**	**+0.2**
DBRK				Sn	**Sn**	**12 33 35.2**	**-0.6**
BLY	**Banja Luka**	**1.77**	**28**	*e*Pg	**Pb**	**12 33 18.0**	**-0.2**
BLY				*e*Sg	**Sg**	**12 33 42.4**	**-0.5**
BLY	**Banja Luka**	**1.77**	**28**	⇓P	**Pb**	**12 33 18.0**	**-0.2**
BLY	**Banja Luka**	**1.77**	**28**	⇓S	**Sn**	**12 33 38.8**	**+0.1**
BLY	**Banja Luka**	**1.77**	**28**	⇑*i*Pn	**Pn**	**12 33 17.4**	**+1.2**
BLY				*e*Sn	**Sn**	**12 33 39.1**	**+0.5**
TREB	**Trebinje**	**1.79**	**105**	*e*Pn	**Pn**	**12 33 16.3**	**-0.1**
TREB	**Trebinje**	**1.79**	**105**	*e*Pn	**Pn**	**12 33 16.1**	**-0.3**
TREB				*e*Sn	**Sn**	**12 33 37.4**	**-1.6**
BRY	**Bratogost**	**1.88**	**98**	*e*Pn	**Pn**	**12 33 17.7**	**-0.1**
BRY				*e*Sn	**Sn**	**12 33 40.2**	**-1.3**
BRY	**Bratogost**	**1.88**	**98**	*e*Pn	**Pn**	**12 33 17.7**	**-0.1**
BRY				*e*Sn	**Sb**	**12 33 44.1**	**+0.5**
HCY	**Herceg Novi**	**1.98**	**111**	⇓*i*Pn	**Pn**	**12 33 19.2**	**+0.1**
HCY				*e*Sn	**Sn**	**12 33 42.5**	**-1.2**
HCY	**Herceg Novi**	**1.98**	**111**	*e*Pn	**Pn**	**12 33 19.3**	**+0.2**
HCY				*e*Sn	**Sb**	**12 33 46.4**	**+0.2**
AQU	**L'Aquila**	**2.09**	**247**	*e*Pn	**Pb**	**12 33 23.8**	**+0.1**
UPM	**Unac-Piva**	**2.12**	**89**	*e*Sn	**Sn**	**12 33 45.8**	**-1.7**
UPM	**Unac-Piva**	**2.12**	**89**	*e*Pn	**Pn**	**12 33 22.0**	**+0.8**
UPM				*e*Sn	**Sb**	**12 33 50.2**	**-0.4**
DOB	**Doboj**	**2.16**	**44**	*e*Pn	**Pn**	**12 33 21.8**	**+0.3**
DOB				*e*Sn	**Sn**	**12 33 46.8**	**-1.3**
NKME	**Niksic**	**2.20**	**100**	*e*Pn	**Pn**	**12 33 22.6**	**+0.4**
NKME				*e*Sn	**Sb**	**12 33 52.2**	**-0.6**
NKY	**Niksic**	**2.22**	**99**	*e*Pn	**Pn**	**12 33 23.0**	**+0.4**
NKY				*e*Sn	**Sb**	**12 33 53.0**	**-0.5**
CEME	**Cevo**	**2.24**	**106**	*e*Pn	**Pn**	**12 33 23.1**	**+0.4**
CEME				*e*Sn	**Sb**	**12 33 52.9**	**-0.9**
BUM	**Brajici-Budva**	**2.31**	**112**	*e*Pn	**Pn**	**12 33 24.6**	**+1.0**
BUM				*e*Sn	**Sb**	**12 33 54.8**	**-1.0**
HAPS	**Han Pijesak,Bl**	**2.32**	**66**	*e*Pn	**Pn**	**12 33 24.5**	**+0.7**
HAPS	**Han Pijesak,Bl**	**2.32**	**66**	*e*Pn	**Pn**	**12 33 23.6**	**-0.2**
HAPS				*e*Sn	**Sn**	**12 33 50.8**	**-1.4**
BRJN	**Brijuni**	**2.36**	**317**	*e*Pn	**Pn**	**12 33 25.6**	**+1.3**
BRJN				Sn	**Sn**	**12 33 55.0**	**+1.9**
RIY	**Rijeka**	**2.40**	**333**	*e*Pn	**Pb**	**12 33 28.7**	**-0.1**
RIY	**Rijeka**	**2.40**	**333**	*e*Pn	**Pn**	**12 33 26.4**	**+1.6**
RIY				*e*Sn	**Sn**	**12 33 56.0**	**+2.0**
OZLJ	**Ozalj**	**2.45**	**351**	*e*Pn	**Pn**	**12 33 27.8**	**+2.3**
PLE	**Pljevlja**	**2.48**	**86**	*e*Pn	**Pn**	**12 33 26.9**	**+0.9**
PLE				*e*Sn	**Sb**	**12 33 59.0**	**-1.7**
MOSL	**Moslavina**	**2.48**	**12**	*e*Pn	**Pn**	**12 33 26.7**	**+0.7**
RUDO	**Rudo**	**2.49**	**79**	*e*Pn	**Pn**	**12 33 26.7**	**+0.6**
RUDO				*e*Sn	**Sn**	**12 33 55.2**	**-1.1**
PDG	**Podgorica**	**2.51**	**107**	*e*Pn	**Pb**	**12 33 29.2**	**-1.6**
PDG				*e*Sn	**Sn**	**12 33 59.5**	**+2.7**
PDG	**Podgorica**	**2.51**	**107**	⇑P	**Pb**	**12 33 30.8**	**0.0**
PDG	**Podgorica**	**2.51**	**107**	⇓S	**Sg**	**12 34 05.1**	**-1.4**
PDG	**Podgorica**	**2.51**	**107**	*e*Pn	**Pn**	**12 33 26.9**	**+0.5**
PDG				*e*Sn	**Sn**	**12 33 56.1**	**-0.7**
TTG	**Podgorica**	**2.51**	**107**	*e*Pn	**Pn**	**12 33 26.9**	**+0.5**
TTG				*e*Sn	**Sb**	**12 33 59.9**	**-1.7**
DRME	**Dracevica, Mon**	**2.55**	**112**	⇑*i*Pn	**Pn**	**12 33 26.9**	**0.0**
DRME				*e*Sn	**Sn**	**12 33 57.1**	**-0.7**
DRME	**Dracevica, Mon**	**2.55**	**112**	*e*Pn	**Pn**	**12 33 27.5**	**+0.6**
DRME				*e*Sn	**Sb**	**12 34 01.0**	**-1.7**
BBLS	**Lazići**	**2.56**	**74**	*e*Pn	**Pn**	**12 33 28.1**	**+0.9**
BBLS				*e*Sn	**Sn**	**12 33 58.7**	**+0.5**
BBLS	**Lazići**	**2.56**	**74**	⇑*i*Pn	**Pn**	**12 33 27.6**	**+0.4**
BBLS				*e*Sn	**Sn**	**12 33 56.8**	**-1.4**
MATE	**Matera**	**2.59**	**168**	⇓P	**Pb**	**12 33 33.8**	**+1.6**
MATE	**Matera**	**2.59**	**168**	⇑S	**Sg**	**12 34 10.7**	**+1.4**
KOME	**Kolasin**	**2.60**	**96**	*e*Pn	**Pn**	**12 33 28.7**	**+1.0**
KOME				*e*Sn	**Sn**	**12 34 02.0**	**+2.9**
ZAG	**Zagreb**	**2.63**	**360**	*e*Pn	**Pn**	**12 33 29.6**	**+1.5**
ZAG				*e*Sn	**Sn**	**12 34 01.1**	**+1.2**
CRES	**Cresnjev**	**2.66**	**352**	*e*Pn	**Pn**	**12 33 29.6**	**+1.1**
CRES				*e*Sn	**Sn**	**12 34 02.2**	**+1.6**
ULC	**Ulcinj**	**2.69**	**116**	*e*Pn	**Pn**	**12 33 28.9**	**0.0**
ULC				*e*Sn	**Sn**	**12 34 03.6**	**+2.3**
SKDS	**Skadanscina**	**2.75**	**329**	*i* Pn	**Pn**	**12 33 30.6**	**+0.9**
SKDS				*e*Sn	**Sn**	**12 34 04.8**	**+1.9**
	comp=Z,66nm,0.1s						
CEY	**Cerknica**	**2.79**	**337**	*e*Pn	**Pn**	**12 33 31.6**	**+1.4**
CEY				*e*Sn	**Sn**	**12 34 05.8**	**+2.1**
IVA	**Berane**	**2.87**	**95**	*e*Pn	**Pn**	**12 33 32.6**	**+1.2**
IVA				*e*Sn	**Sn**	**12 34 08.4**	**+2.6**
TEKS	**Tekeris**	**2.88**	**61**	*e*Pn	**Pn**	**12 33 32.9**	**+1.3**
TEKS				*e*Sn	**Sn**	**12 34 07.1**	**+1.0**
TEKS	**Tekeris**	**2.88**	**61**	*e*Pn	**Pn**	**12 33 31.8**	**+0.2**
TEKS				*e*Sn	**Sn**	**12 34 04.5**	**-1.6**
SJES	**Sjenica**	**2.90**	**87**	*e*Pn	**Pn**	**12 33 34.9**	**+3.0**
SJES				*e*Sn	**Sn**	**12 34 08.2**	**+1.6**
KALN	**Kalnik**	**2.96**	**6**	*e*Pn	**Pn**	**12 33 33.3**	**+0.8**
PVY	**Plav**	**2.97**	**100**	*e*Pn	**Pn**	**12 33 34.0**	**+1.2**
PVY				*e*Sn	**Sn**	**12 34 10.5**	**+2.2**
DIVS	**Divibare**	**3.03**	**71**	*e*Pn	**Pn**	**12 33 35.1**	**+1.5**
DIVS				*e*Sn	**Sn**	**12 34 10.5**	**+0.7**
DIVS	**Divibare**	**3.03**	**71**	*e*Pn	**Pn**	**12 33 33.3**	**-0.3**
DIVS				*e*Sn	**Sn**	**12 34 08.4**	**-1.4**
LJU	**Ljubljana**	**3.04**	**340**	*e*Pn	**Pn**	**12 33 35.7**	**+2.0**
LJU				*e*Sn	**Sn**	**12 34 13.3**	**+3.4**
LJU	**Ljubljana**	**3.04**	**340**	*e*Pn	**Pn**	**12 33 35.7**	**+2.0**
LJU				*e*Sn	**Sn**	**12 34 11.4**	**+1.5**
IVAS	**Ivanjica**	**3.05**	**81**	*e*Pn	**Pn**	**12 33 35.6**	**+1.8**
IVAS				*e*Sn	**Sn**	**12 34 12.2**	**+2.0**
BEHE	**Becsehely**	**3.32**	**9**	*e*Pn	**Pn**	**12 33 38.9**	**+1.4**
BEHE				*e*Sn	**Sn**	**12 34 16.7**	**-0.2**
TRUS	**Trudelj**	**3.35**	**71**	*e*Pn	**Pn**	**12 33 39.9**	**+1.9**
FRGS	**Fruska Gora**	**3.37**	**53**	*e*Pn	**Pn**	**12 33 39.0**	**+0.8**
FRGS				*e*Sn	**Sn**	**12 34 19.1**	**+1.1**
FRGS	**Fruska Gora**	**3.37**	**53**	*e*Pn	**Pn**	**12 33 37.5**	**-0.7**
FRGS				*e*Sn

LOR				*e*Sn		**Sn**	**12 36 41.8**	**-6.8**
	comp=Z,9.8nm,0.3s							
AVF	**Avril sur Loir**	**9.66**	**296**	*e*Pn		**Pn**	**12 35 04.4**	**-0.1**
BGF	**Bois d'Agland**	**9.93**	**294**	*e*Pn		**Pn**	**12 35 07.5**	**-0.7**
BGF				*e*Sn		**Sn**	**12 36 52.8**	**-6.6**
	comp=Z,6.5nm,0.3s							
TCF	**Toulx Ste Croi**	**10.29**	**292**	*e*Sn		**Sn**	**12 37 02.2**	**-6.2**
	comp=Z,2.2nm,0.2s							
BAIF	**Baives**	**10.62**	**314**	*e*P		Pn	12 35 23.3	+5.6

*IDC **10** 12:34:21.4±1.0, 10°.31S×66°.26E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.6/65, mbtmp3.9/7, MS3.3/6, Ms1 3.3/6, ms1mx3.0/35, Error ellipse: s-maj=34.2km s-min=25.8km az=36.0*
*NEIC **10** 12:34:21.6±0.9, 10°.3S±0°.1×66°.20E±0°.04, h10km±1km, mb4.3/11, Error ellipse: s-maj=24.6km s-min=6.2km az=179.0*

ISC 10 12:34:22.4±0.9, 10°.3S±0°.2×66°.19E±0°.10, h10km, n41, σ0§89/27, mb4.1/10, MS3.2/6, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N3	**Diego Garcia H**	**6.14**	**51**	T	T	12 42 10.1	
	baz=228,slow=76,SNR=450						
H08N1	**Diego Garcia H**	**6.16**	**51**	T	T	12 42 11.9	
	baz=228,slow=76,SNR=462						
H08N2	**Diego Garcia H**	**6.16**	**51**	T	T	12 42 11.7	
	baz=228,slow=76,SNR=480						
H08S1	**Diego Garcia H**	**6.73**	**68**	T	T	12 42 51.8	
	baz=245,slow=76,SNR=28						
H08S3	**Diego Garcia H**	**6.75**	**68**	T	T	12 42 53.0	
	baz=245,slow=76,SNR=29						
H08S2	**Diego Garcia H**	**6.75**	**68**	T	T	12 42 54.0	
	baz=245,slow=76,SNR=34						
DGAR	**Diego Garcia**	**6.80**	**66**	Pn	**Pn**	**12 36 03.2**	**+0.8**
MSEV	**Mahe Island**	**11.97**	**297**	Pn	**Pn**	**12 37 13.5**	**+0.1**
KAAM	**Kaadhehdhoo**	**12.64**	**33**	Pn	**Pn**	**12 37 22.6**	**+0.1**
PALK	**Pallekele**	**22.63**	**40**	LR	LR	12 46 02.5	
	comp=Z,50nm,19.1s,baz=206,slow=31						
KMBO	**Kilima Mbogo**	**30.15**	**286**	LR	LR	12 51 18.0	
	comp=Z,47nm,18.7s,baz=91,slow=34						
LSZ	**Lusaka**	**37.36**	**258**	P	**P**	**12 41 36.6**	**+0.8**
	1.5nm,0.2s,baz=90,slow=7.1,SNR=1.6						
LSZ	**Lusaka**	**37.36**	**258**	P	**P**	**12 41 35.3**	**-0.5**
LSZ				IAmb	IAmb	12 41 47.3	
	comp=Z,14nm,1.5s						
CMAR	**Chiang Mai Arr**	**43.11**	**49**	LR	LR	12 57 35.9	
	comp=Z,19nm,20.6s,baz=165,slow=32						
SHL	**Shillong**	**43.52**	**35**	P	**P**	**12 42 25.6**	**-1.0**
SHL				IAmb	IAmb	12 42 36.7	
	comp=Z,8.9nm,1.1s						
H01W3	**Cape Leeuwin H**	**50.01**	**127**	T	T	13 36 55.8	
	baz=281						
H01W2	**Cape Leeuwin H**	**50.02**	**127**	T	T	13 36 57.1	
	baz=281						
H01W1	**Cape Leeuwin H**	**50.03**	**127**	T	T	13 37 00.8	
	baz=281						
MAW	**Mawson**	**57.33**	**182**	LR	LR	13 03 11.9	
	comp=Z,47nm,18.6s,baz=122,slow=30						
MK31	**Makanchi Array**	**58.58**	**13**	P	**P**	**12 44 17.9**	**-1.5**
MKAR	**Makanchi Array**	**58.58**	**13**	P	**P**	**12 44 19.8**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=200,slow=7.2,SNR=2.9						
MKAR	**Makanchi Array**	**58.58**	**13**	P	**P**	**12 44 19.0**	**-0.5**
ABKAR	**Akbulak array**	**59.50**	**355**	P	**P**	**12 44 25.1**	**-0.6**
ABKAR	**Akbulak array**	**59.50**	**355**	P	**P**	**12 44 25.5**	**-0.2**
ABKAR				IAmb	IAmb	12 44 43.6	
	comp=Z,1.7nm,1.1s						
ASAR	**Alice Springs**	**65.62**	**111**	P	**P**	**12 45 07.2**	**0.0**
	comp=Z,1.1nm,0.9s,baz=273,slow=5.7,SNR=10						
ASAR	**Alice Springs**	**65.62**	**111**	P	**P**	**12 45 06.8**	**-0.5**
AS31	**Alice Springs**	**65.62**	**111**	P	**P**	**12 45 06.2**	**-1.1**
ZAA0	**Zalesovo Array**	**65.88**	**12**	P	**P**	**12 45 07.7**	**-0.4**
ZAA0				IAmb	IAmb	12 45 10.8	
	comp=Z,3.4nm,1.3s						
ZALV	**Zalesovo Beam**	**65.88**	**12**	P	**P**	**12 45 08.0**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=202,slow=7.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**65.88**	**12**	P	**P**	**12 45 07.8**	**-0.4**
WRA	**Warramunga Arr**	**66.14**	**107**	P	**P**	**12 45 10.4**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=276,slow=5.4,SNR=8.2						
WRA	**Warramunga Arr**	**66.14**	**107**	P	**P**	**12 45 09.3**	**-1.4**
WRAB	**Tennant Creek**	**66.15**	**107**	P	**P**	**12 45 09.3**	**-1.4**
TAM	**Tamanrasset**	**67.86**	**300**	P	**P**	**12 45 21.2**	**-0.4**
SONM	**Songino Array**	**67.93**	**28**	P	**P**	**12 45 23.2**	**+1.7**
	comp=Z,1.2nm,0.9s,baz=203,slow=4.7,SNR=7.3						
SONM				LR	LR	13 14 13.8	
	comp=Z,66nm,19.0s,baz=156,slow=35						
SONM	**Songino Array**	**67.93**	**28**	P	**P**	**12 45 22.1**	**+0.6**
AKASG	**Malin Array Be**	**68.67**	**336**	P	**P**	**12 45 26.5**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=128,slow=5.3,SNR=2.9						
AKASG	**Malin Array Be**	**68.67**	**336**	P	**P**	**12 45 25.8**	**-0.2**
KSRS	**Korea Array**	**74.70**	**47**	LR	LR	13 17 15.6	
	comp=Z,14nm,21.2s,baz=350,slow=34						
YKA	**Yellowknife Ar**	**127.84**	**0**	PKP	**PKPdf**	**12 53 28.0**	**-0.1**
	comp=Z,0.4nm,1.0s,baz=349,slow=1.7,SNR=4.2						
NVAR	**Mina Array Bea**	**151.65**	**7**	PKPbc	**PKiKP**	**12 54 20.3**	**+2.0**
	comp=Z,1.2nm,0.8s,baz=284,slow=1.8,SNR=3.8						

THE 10 12:42:18.6, 40°.51N×23°.40E, h2km±12km, ML1.0/3, Error ellipse: s-maj=12.7km s-min=0.3km az=221.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLG	**Polygyros**	**0.14**	**166**	P	Pg	12 42 21.4	+0.2
PLG				S	Sg	12 42 23.3	+0.3
	198nm,0.2s						
HORT	**Hortiatis**	**0.25**	**292**	P	Pg	12 42 23.4	0.0
HORT				S	Sg	12 42 27.1	+0.5
	35nm,0.1s						
SOH	**Sokhos**	**0.32**	**354**	P	Pg	12 42 24.7	0.0
SOH				S	Sg	12 42 29.3	+0.4
	52nm,0.2s						
PAIG	**Paliouri**	**0.62**	**160**	P	Pg	12 42 30.1	-0.3
THAS	**Thassos island**	**1.01**	**84**	P	Pg	12 42 37.5	-0.4

IDC 10 12:42:23.4±1.4, 8°.24S×159°.77E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/30, mbtmp3.5/4, MS3.4/2, Ms1 3.4/2, ms1mx2.8/18, Error ellipse: s-maj=36.9km s-min=20.0km az=84.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.20**	**172**	Pn	Pn	12 42 48.7	+1.2
	94nm,0.3s,baz=169,slow=0.7,SNR=43						
HNR				Sn	Sb	12 43 03.5	+0.4
	747nm,0.3s,baz=221,slow=19,SNR=85						
HNR	**Honiara**	**1.20**	**172**	*i* P	Pn	12 42 48.0	+0.5
HNR				*i* S	Sg	12 43 02.0	0.0
JAY	**Jayapura**	**19.81**	**286**	LR	LR	12 55 16.0	
	comp=Z,95nm,19.1s,baz=132,slow=39						
GUMO	**Guam**	**26.25**	**326**	LR	LR	12 58 27.2	
	comp=Z,77nm,19.8s,baz=115,slow=37						
WRA	**Warramunga Arr**	**27.23**	**242**	P	P	12 48 09.8	+0.4
	0.4nm,0.5s,baz=73,slow=9.7,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**27.43**	**14**	T	T	13 17 00.2	
	baz=194,slow=76,SNR=66						
H11S3	**WAKE ISLAND Hy**	**27.43**	**14**	T	T	13 16 56.0	
	baz=194,slow=76,SNR=46						
H11S1	**WAKE ISLAND Hy**	**27.44**	**14**	T	T	13 16 59.8	
	baz=194,slow=76,SNR=34						
H11N1	**WAKE ISLAND Hy**	**28.65**	**14**	T	T	13 18 29.8	
	baz=194,slow=76,SNR=36						
H11N3	**WAKE ISLAND Hy**	**28.66**	**14**	T	T	13 18 29.4	
	baz=194,slow=76,SNR=40						
H11N2	**WAKE ISLAND Hy**	**28.67**	**14**	T	T	13 18 29.6	
	baz=194,slow=76,SNR=50						
ASAR	**Alice Springs**	**29.14**	**235**	P	P	12 48 25.7	-0.8
	0.3nm,0.8s,baz=68,slow=10,SNR=6.6						
ILAR	**Eielson Array**	**82.84**	**20**	P	P	12 54 49.0	-0.4
	0.5nm,0.9s,baz=243,slow=5.1,SNR=4.8						
MKAR	**Makanchi Array**	**87.48**	**318**	P	P	12 55 13.3	+0.2
	0.2nm,0.7s,baz=116,slow=4.7,SNR=2.4						

SKO 10 12:42:52.7, 41°.76N×22°.63E, h15km, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STIP	**Stip**	**0.34**	**259**	*i* Pg	Pg	12 42 56.2	-3.4
STIP				*i* Sg	Sg	12 42 58.9	-5.5
STIP				*e*Lg	Lg	12 42 59.3	
	comp=E,14nm,0.2s						
VAY	**Valandovo**	**0.44**	**186**	*i* Pg	Pb	12 43 02.0	-0.1
VAY				*i* Sg	Sb	12 43 08.1	-0.5
VAY				*e*Lg	Lg	12 43 08.4	
	comp=E,8.0nm,0.2s						

*IDC **10** 12:45:51.7±3.1, 31°.57S×176°.62W, h0km, mb4.0/4, mb1 4.2/6, mb1mx3.9/30, mbtmp4.1/6, ML4.1/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/27, Error ellipse: s-maj=65.1km s-min=33.9km az=114.0*
*NEIC **10** 12:45:54.5±1.7, 31°.33S±0°.06×177°.2W±0°.2, h10km±2km, mb4.3/8, Error ellipse: s-maj=23.1km s-min=9.3km az=94.0*

ISC 10 12:45:54.9±1.5, 31°.37S±0°.07×177°.2W±0°.2, h10km, n27, σ1§50/29, mb4.1/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.20**	**343**	Pn	**Pn**	**12 46 30.9**	**-0.7**
RAO				Sn	**Sn**	**12 46 56.9**	**-2.1**
MXZ	**Matakaoa Point**	**7.21**	**210**	Pn	**Pn**	**12 47 39.6**	**-0.8**
URZ	**Urewera**	**8.32**	**213**	Pn	**Pn**	**12 47 55.5**	**-0.1**
	0.8nm,0.3s,baz=280,slow=4.7,SNR=7.1						
URZ				Sn	**Sn**	**12 49 29.8**	**+0.1**
	2.2nm,0.3s,baz=93,slow=17,SNR=7.4						
URZ	**Urewera**	**8.32**	**213**		**Pn**	**12 47 55.4**	**-0.2**
URZ					**Sn**	**12 49 29.5**	**-0.2**
HIZ	**Hauiti**	**9.67**	**220**	Pn	**Pn**	**12 48 14.5**	**+0.4**
BFZ	**Birch Farm**	**10.71**	**208**	Pn	**Pn**	**12 48 27.7**	**-0.6**
BFZ				Sn	**Sn**	**12 50 25.6**	**-2.6**
SNZO	**South Karori**	**11.88**	**211**	Pn	**Pn**	**12 48 44.2**	**-0.1**
TUWZ	**Tuamarina**	**12.32**	**213**	Pn	**Pn**	**12 48 48.5**	**-1.9**
KHZ	**Kahutara**	**13.28**	**211**	Pn	**Pn**	**12 49 02.0**	**-1.5**
LTZ	**Lake Taylor**	**14.15**	**213**	Pn	**Pn**	**12 49 14.1**	**-1.3**
RPZ	**Rata Peaks**	**15.44**	**214**	Pn	**Pn**	**12 49 30.7**	**-2.0**
	2.4nm,0.3s,baz=69,slow=2.3,SNR=12						
RPZ	**Rata Peaks**	**15.44**	**214**		**Pn**	**12 49 30.8**	**-2.0**
DZM	**Mont Dzumac**	**17.30**	**298**	LR	LR	12 54 32.5	
	comp=Z,44nm,19.2s,baz=30,slow=29						
DZM	**Mont Dzumac**	**17.30**	**298**	Pn	**Pn**	**12 49 55.6**	**-1.1**
DZM				IAmb	IAmb	12 50 05.5	
	comp=Z,22nm,1.1s						
ARMA	**Armidale**	**26.74**	**264**	P	**P**	**12 51 35.2**	**+0.3**
ARMA				IAmb	IAmb	12 51 47.5	
	comp=Z,13nm,1.4s						
CTA	**Charters Tower**	**34.65**	**280**	P	**P**	**12 52 48.1**	**+3.3**
	comp=Z,1.6nm,0.6s,baz=151,slow=5.9,SNR=3.5						
STKA	**Stephens Creek**	**34.96**	**258**	P	**P**	**12 52 50.5**	**+3.3**
	comp=Z,1.9nm,0.7s,baz=90,slow=9.8,SNR=5.6						
STKA	**Stephens Creek**	**34.96**	**258**	P	**P**	**12 52 46.5**	**-0.8**
BBOO	**Buckleboo**	**39.39**	**255**	P	**P**	**12 53 24.3**	**-0.7**
BBOO				IAmb	IAmb	12 53 27.8	
	comp=Z,10nm,1.1s						
AS31	**Alice Springs**	**43.77**	**268**	P	**P**	**12 54 00.1**	**-0.8**
AS31				IAmb	IAmb	12 54 06.2	
	comp=Z,1.7nm,1.4s						
ASAR	**Alice Springs**	**43.77**	**268**	P	**P**	**12 54 02.2**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=109,slow=8.0,SNR=17						
ASAR	**Alice Springs**	**43.77**	**268**	P	**P**	**12 54 01.3**	**+0.3**
WRA	**Warramunga Arr**	**44.84**	**273**	P	**P**	**12 54 11.0**	**+1.4**
	comp=Z,0.8nm,0.4s,baz=112,slow=7.9,SNR=16						
WRA	**Warramunga Arr**	**44.84**	**273**	P	**P**	**12 54 10.0**	**+0.5**
QSPA	**South Pole Qui**	**58.74**	**180**	P	**P**	**12 55 53.6**	**+0.8**
QSPA				IAmb	IAmb	12 55 55.5	
	comp=Z,5.7nm,1.2s						
MAW	**Mawson**	**71.65**	**200**	LR	LR	13 26 38.0	
	comp=Z,30nm,20.7s,baz=237,slow=34						
FINES	**FINESS Array B**	**146.29**	**340**	PKPbc	**PKPdf**	**13 05 33.6**	**-0.3**
	comp=Z,2.4nm,0.8s,baz=90,slow=4.2,SNR=4.6						

IDC 10 12:48:00.7±2.9, 27°.99N×51°.71E, h0km, mb3.8/3, mb1 3.8/5, mb1mx3.4/31, mbtmp3.7/5, ML3.2/2, Error ellipse: s-maj=70.8km s-min=29.0km az=35.0, Persian Gulf

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**7.83**	**126**	Pn	Pn	12 49 56.1	0.0
	0.3nm,0.3s,baz=172,slow=17,SNR=3.1						
WSAR				Sn	Sn	12 51 17.5	-7.9
	0.0nm,0.3s,baz=340,slow=12,SNR=1.9						
BRTR	**Keskin Array B**	**18.99**	**313**	P	Pn	12 52 24.8	+0.1
	0.1nm,0.3s,baz=140,slow=13,SNR=2.2						
MKAR	**Makanchi Array**	**30.43**	**44**	P	P	12 54 14.9	+0.1
	0.4nm,0.8s,baz=237,slow=8.3,SNR=4.3						
FINES	**FINESS Array B**	**37.58**	**340**	P	P	12 55 15.7	-0.9
	2.2nm,0.8s,baz=151,slow=8.8,SNR=3.8						
ARCES	**ARCESS Array B**	**44.27**	**347**	P	P	12 56 11.8	+0.1
	1.5nm,1.0s,baz=149,slow=9.0,SNR=3.3						

IDC 10 12:51:23.5±3.1, 26°.43N×54°.02E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/27, mbtmp3.6/5, MS3.3/1, Ms1 3.3/1, ms1mx2.5/31, Error ellipse: s-maj=74.0km s-min=30.7km az=158.0, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRTR	**Keskin Array B**	**21.56**	**313**	P	P	12 56 15.7	+1.0
	0.3nm,0.5s,baz=125,slow=14,SNR=2.6						
MKAR	**Makanchi Array**	**30.20**	**40**	P	P	12 57 36.0	+0.4
	0.4nm,0.8s,baz=240,slow=8.1,SNR=3.1						
ZALV	**Zalesovo Beam**	**35.67**	**31**	P	P	12 58 23.2	0.0
	1.3nm,0.4s,baz=235,slow=9.9,SNR=4.7						
KEST	**Kesra**	**39.09**	**295**	LR	LR	13 19 14.4	
	comp=Z,42nm,19.1s,baz=294,slow=43						
ARCES	**ARCESS Array B**	**46.25**	**347**	P	P	12 59 49.0	-1.2
	1.7nm,1.0s,baz=131,slow=8.9,SNR=2.7						
TORD	**Torodi Ar. Bea**	**50.66**	**265**	P	P	13 00 24.8	-0.2
	0.2nm,0.4s,baz=64,slow=8.5,SNR=2.9						

NNC 10 12:59:56.3±10.0, 37°.07N×70°.82E, h0km, mb4.1, mpv3.9, 2C-1D, Error ellipse: s-maj=80.4km s-min=78.1km az=172.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**5.11**	**353**	Pg	Pn	13 01 15.4	+1.1
	5.0nm,0.1s						
IUG				Lg	Lg	13 02 16.7	
	39nm,0.7s						
AML	**Almayashu**	**5.52**	**23**	P	Pn	13 01 20.3	+0.2
	SNR=53						
UCH	**Uchtor**	**5.89**	**28**	P	Pn	13 01 25.1	-0.1
	SNR=11						
BRLS	**Borolday**	**6.00**	**353**	Pg	Pn	13 01 23.6	-2.8
	3.1nm,0.4s						
EKS2	**Erkin-Say**	**6.03**	**21**	P	Pn	13 01 26.8	-0.1
	SNR=9.0						
KK31	**Karatau Array**	**6.03**	**358**	P	Pn	13 01 26.8	0.0
	3.0nm,0.5s,baz=174,slow=13,SNR=45						
KK31				⇑S	Sn	13 02 37.4	+0.8
	2.0nm,0.3s						
AAK	**Ala-Archa**	**6.24**	**26**	P	Pn	13 01 29.6	-0.2
	SNR=8.2						
AAK	**Ala-Archa**	**6.24**	**26**	⇑P	Pn	13 01 29.6	-0.2
	2.3nm,0.4s						
AAK				⇓S	Sn	13 02 43.6	+1.7
	3.9nm,0.8s						
KBK	**Karagaybulak**	**6.42**	**28**	P	Pn	13 01 32.0	-0.3
	SNR=6.9						
USP	**Ospenovka**	**6.80**	**23**	P	Pn	13 01 36.5	-0.9
	SNR=5.9						
TKM2	**Tokmak 2**	**6.90**	**31**	P	Pn	13 01 37.9	-1.0
	SNR=11						
SGDS	**Sogindy**	**7.01**	**23**	Pg	Pn	13 01 38.4	-1.9
	6.9nm,0.4s						
SGDS				Lg	Lg	13 02 58.2	
	2.0nm,0.8s						
KST	**Kastek**	**7.16**	**32**	Pg	Pn	13 01 41.2	-1.1
	4.0nm,0.5s						
KST				Lg	Lg	13 03 03.0	
	1.8nm,0.6s						

BER 10 13:06:39.8±2.2, 67°.86N×16°.14E, h0km±23km, ML0.9, Confirmed Earthquake, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STEI	**Steigen**	**0.35**	**282**	*e*P	Pg	13 06 45.1	-1.3
STEI				*e*S	Sg	13 06 49.6	-1.4
STEI				IAML		13 06 50.6	
	comp=Z,5.6nm,0.5s						
STEI	**Steigen**	**0.35**	**282**	*e*P	Pg	13 06 45.1	-1.3
STEI				*e*S	Sg	13 06 49.4	-1.6
STEI				IAML		13 06 50.6	
	comp=Z,5.6nm,0.5s						
KONS	**Konsvik**	**1.80**	**222**	*e*Pg	Pn	13 07 11.4	-0.6
KONS				*e*Sg	Sg	13 07 37.5	-0.1
KONS	**Konsvik**	**1.80**	**222**	*e*P	Pn	13 07 11.4	-0.6
KONS				*e*Sg	Sn	13 07 35.8	+0.2
KONS				IAML		13 07 38.3	
	comp=Z,4.8nm,0.8s						
MOR8	**Moi Rana**	**1.82**	**202**	*e*Pg	Pn	13 07 08.7	-3.6
MOR8				*e*Sg	Sn	13 07 32.0	-4.1
MOR8	**Moi Rana**	**1.82**	**202**	*e*P	Pn	13 07 08.5	-3.9
MOR8				*e*S	Sn	13 07 31.1	-4.9
MOR8				IAML		13 07 34.3	
	comp=Z,3.1nm,0.6s						

*IDC **10** 13:20:46.8±0.7, 37°.30N×36°.18E, h0km, mb3.9/16, mb1 3.8/22, mb1mx3.7/44, mbtmp3.7/22, ML3.3/6, MS2.8/4, Ms1 2.8/4, ms1mx2.5/51, Error ellipse: s-maj=12.2km s-min=10.7km az=56.0*
*ISK **10** 13:20:46.4, 37°.31N×36°.20E, h5km, ML4.0/41*
*DDA **10** 13:20:47.7, 37°.26N×36°.25E, h8km±3km, MW4.0*
*NEIC **10** 13:20:48.9±1.9, 37°.29N±0°.03×36°.33E±0°.05, h14km±4km, Error ellipse: s-maj=5.8km s-min=4.1km az=62.0*

ISC 10 13:20:47.7±1.1, 37°.29N±0°.02×36°.22E±0°.02, h5km±7km, n122, σ1§18/149, mb3.9/20, 12C-3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.31**	**19**	⇑*i* P	**Pg**	**13 20 54.1**	**+0.4**
ANDN				*i* S	**Sb**	**13 20 59.7**	**-1.4**
ANDN				IAML		13 21 01.0	
	comp=N,16μm,0.3s						
ANDN				IAML		13 21 03.0	
	comp=E,18μm,0.4s						
KOZT	**Kozan**	**0.36**	**302**	PG	**Pg**	**13 20 55.8**	**+1.0**
KAMA	**Osmaniye**	**0.37**	**106**	⇑*i* P	**Pg**	**13 20 55.0**	**0.0**
AYKD	**Aykdinkavak**	**0.48**	**75**	⇑*i* P	**Pg**	**13 20 57.0**	**0.0**
AYKD				*i* S	**Sg**	**13 21 03.3**	**-0.1**
AYKD				IAML		13 21 04.0	
	comp=E,19μm,0.2s						
AYKD				IAML		13 21 06.0	
	comp=N,13μm,0.2s						
HCB	**Kahramanmara**	**0.55**	**84**	⇑*i* P	**Pg**	**13 20 58.2**	**-0.2**
HCB				*i* S	**Sg**	**13 21 05.7**	**+0.2**
HCB				IAML		13 21 06.0	
	comp=E,5μm,0.5s						
HCB				IAML		13 21 08.0	
	comp=N,5μm,0.2s						
KMRS	**Kahramanmaras**	**0.58**	**68**	PG	**Pg**	**13 20 58.9**	**0.0**
YURE	**YUREGIR**	**0.66**	**225**	PG	**Pg**	**13 21 00.5**	**+0.1**
YURE	**YUREGIR**	**0.66**	**225**	⇑*i* P	**Pg**	**13 21 00.4**	**+0.1**
YURE				*i* S	**Sb**	**13 21 11.2**	**+0.2**
SAIM	**ADANA**	**0.69**	**351**	⇑*i* P	**Pg**	**13 21 00.6**	**-0.5**
SAIM				*i* S	**Sb**	**13 21 12.7**	**+0.5**
SAIM				IAML		13 21 18.0	
	comp=N,6μm,0.2s						
SAIM				IAML		13 21 18.0	
	comp=E,13μm,0.3s						
KHMN	**Narli-Kahraman**	**0.76**	**82**	PG	**Pg**	**13 21 02.3**	**+0.1**
KHMN				SG	**Sb**	**13 21 13.7**	**-0.2**
GAZ	**Gaziantep**	**0.80**	**98**	PG	**Pg**	**13 21 03.3**	**+0.2**
GAZ				SG	**Sn**	**13 21 16.2**	**-1.8**
GAZ	**Gaziantep**	**0.80**	**98**		**Pg**	**13 21 02.8**	**-0.2**
KUZU	**Kuzuini**	**0.86**	**127**	⇑*i* P	**Pg**	**13 21 04.6**	**+0.5**
KUZU				*i* S	**Sb**	**13 21 17.6**	**+0.7**
KUZU				IAML		13 21 18.0	
	comp=E,8μm,0.6s						
KUZU				IAML		13 21 20.0	
	comp=N,6μm,0.6s						
KARA	**Karaisali**	**0.93**	**269**	PG	**Pg**	**13 21 05.1**	**-0.4**
KRTS	**Karatas**	**0.98**	**224**	PG	**Pg**	**13 21 06.1**	**-0.4**
CMRD	**Camardi-Nigde**	**1.04**	**291**	PG	**Pg**	**13 21 06.7**	**-1.0**
CMRD				SG	**Sb**	**13 21 22.6**	**+0.3**
YAHY	**KAYSERI_Yahyal**	**1.05**	**320**	⇑*i* P	**Pg**	**13 21 06.9**	**-0.9**
YAHY				*i* S	**Sn**	**13 21 25.0**	**+0.8**
YAHY				IAML		13 21 26.0	
	comp=N,3μm,0.5s						
YAHY				IAML		13 21 26.0	
	comp=E,3μm,0.5s						
GZT	**Gaziantep**	**1.07**	**86**	⇑*i* P	**Pg**	**13 21 08.1**	**-0.2**
GZT				*i* S	**Sn**	**13 21 23.5**	**-1.4**
GZT				IAML		13 21 24.0	
	comp=N,6μm,0.4s						
GZT				IAML		13 21 24.0	
	comp=E,9μm,0.4s						
GULE	**Gulek**	**1.15**	**270**	⇑*i* P	**Pg**	**13 21 08.7**	**-1.1**
GULE				*i* S	**Sn**	**13 21 26.5**	**-0.2**
GULE				IAML		13 21 29.0	
	comp=E,2μm,0.6s						
GULE				IAML		13 21 30.0	
	comp=N,3μm,0.6s						
DED	**Mersin**	**1.18**	**254**	*i* P	**Pb**	**13 21 08.2**	**-2.4**
DED				*i* S	**Sb**	**13 21 25.7**	**-0.4**
DED				IAML		13 21 29.0	
	comp=E,1μm,0.6s						
ELBS	**KAHRAMANMARAS1**	**1.26**	**35**	*i* P	**Pg**	**13 21 11.8**	**0.0**
ELBS				*i* S	**Sn**	**13 21 28.4**	**-1.0**
ELBS				IAML		13 21 35.0	
	comp=N,4μm,0.6s						
ELBS				IAML		13 21 36.0	
	comp=E,5μm,0.5s						
MERS	**Mersin**	**1.42**	**253**	PN	**Pn**	**13 21 13.1**	**-1.1**
NIG	**Nigde**	**1.52**	**303**	PN	**Pn**	**13 21 15.5**	**-0.2**
BNN	**Bunyan**	**1.59**	**349**	PN	**Pb**	**13 21 17.1**	**-0.5**
DARE	**Darende-Malaty**	**1.62**	**38**	PN	**Pn

CUKAN				IAML		13 22 06.0	
	comp=N,491nm,0.9s						
IKL	**Isikli**	**2.29**	**243**	PN	**Pn**	**13 21 26.3**	**+0.3**
KARG	**Kargicak-Mersi**	**2.29**	**242**	PN	**Pn**	**13 21 26.6**	**+0.6**
TISA	**Tisan-Mersin**	**2.33**	**242**	PN	**Pn**	**13 21 27.9**	**+1.3**
YESI	**Yesilovacik-Me**	**2.34**	**243**	PN	**Pn**	**13 21 27.6**	**+0.9**
TEVE	**Tevekalti-Mers**	**2.38**	**250**	PN	**Pn**	**13 21 28.1**	**+0.7**
EREN	**Erenkoy**	**2.41**	**224**	PN	**Pn**	**13 21 29.1**	**+1.4**
AKKU	**Akkuyu-Mersin**	**2.42**	**243**	PN	**Pn**	**13 21 28.7**	**+0.8**
YOZ	**Yozgat**	**2.45**	**344**	PN	**Pn**	**13 21 28.8**	**+0.4**
ARPR	**Arapgir-MALATY**	**2.45**	**42**	PN	**Pn**	**13 21 29.3**	**+0.8**
ELZG	**Elazig**	**2.50**	**60**	*i* P	**Pn**	**13 21 29.7**	**+0.6**
ELZG				*i* S	**Sb**	**13 22 05.1**	**+0.9**
ELZG				IAML		13 22 12.0	
	comp=N,798nm,0.4s						
ELZG				IAML		13 22 12.0	
	comp=E,895nm,0.6s						
YAYX	**Yaylak**	**2.51**	**312**	PN	**Pn**	**13 21 29.7**	**+0.5**
BERE	**Bereket-Mersin**	**2.58**	**250**	PN	**Pn**	**13 21 31.0**	**+0.8**
KEMA	**Kemaliye**	**2.67**	**41**	*i* P	**Pn**	**13 21 31.2**	**-0.1**
KEMA				*i* S	**Sn**	**13 22 04.6**	**+0.6**
KEMA				IAML		13 22 19.0	
	comp=E,448nm,1.2s						
KEMA				IAML		13 22 20.0	
	comp=N,546nm,0.8s						
SERE	**Sereflikochisa**	**2.67**	**309**	PN	**Pn**	**13 21 32.1**	**+0.7**
SVSK	**Karacayir**	**2.69**	**13**	PN	**Pn**	**13 21 32.3**	**+0.7**
CDAG	**Cicekdag**	**2.74**	**329**	*i* P	**Pn**	**13 21 34.0**	**+1.6**
CDAG				*i* S	**Sb**	**13 22 10.3**	**-0.9**
CDAG				IAML		13 22 25.0	
	comp=E,237nm,0.6s						
TEKE	**Tekeli-Mersin**	**2.74**	**246**	PN	**Pn**	**13 21 32.9**	**+0.6**
CHBY	**Cihanbeyli**	**2.93**	**297**	PN	**Pn**	**13 21 35.9**	**+0.9**
HWQ	**Hawqa**	**3.01**	**184**	*eP*	**Pn**	**13 21 37.9**	**+1.7**
TOKT	**Tokat**	**3.04**	**5**	PN	**Pn**	**13 21 37.0**	**+0.6**
KULU	**Kulu**	**3.08**	**306**	PN	**Pn**	**13 21 37.8**	**+0.8**
KONT	**Konya--Tatoy**	**3.13**	**283**	PN	**Pn**	**13 21 38.9**	**+1.2**
CORM	**Corum**	**3.14**	**337**	PN	**Pn**	**13 21 38.6**	**+0.7**
BR131	**Keskin Array S**	**3.16**	**321**		**Pn**	**13 21 39.6**	**+1.4**
BRTR	**Keskin Array B**	**3.16**	**321**	Pn	**Pn**	**13 21 39.3**	**+1.1**
	comp=E,2.2nm,0.3s,baz=152,slow=14,SNR=36						
BRTR				Pg	**Pb**	**13 21 46.0**	**+1.5**
	comp=E,3.3nm,0.3s,baz=147,slow=19,SNR=38						
BRTR				Lg	Lg	13 22 30.6	
	comp=E,3.4nm,0.3s,baz=138,slow=27,SNR=4.0						
DYBB	**Diyarbakir**	**3.18**	**77**	PN	**Pn**	**13 21 39.7**	**+1.3**
LADK	**Ladik-KONYA**	**3.19**	**288**	PN	**Pn**	**13 21 39.4**	**+0.9**
RSDY	**Resadiye-TOKAT**	**3.22**	**15**	PN	**Pn**	**13 21 39.8**	**+0.9**
DELI	**KIRIKKALE**	**3.25**	**327**	*i* P	**Pn**	**13 21 39.4**	**0.0**
CSS	**Mathiatis**	**3.29**	**226**	PN	**Pn**	**13 21 41.5**	**+1.6**
CSS	**Mathiatis**	**3.29**	**226**	Pn	**Pn**	**13 21 42.5**	**+2.6**
GAZI	**Gazipasa**	**3.31**	**253**	PN	**Pn**	**13 21 41.3**	**+1.3**
GAZI	**Gazipasa**	**3.31**	**253**	*i* P	**Pn**	**13 21 42.1**	**+2.1**
GAZI				IAML		13 22 43.0	
	comp=E,188nm,1.1s						
GAZI				IAML		13 22 48.0	
	comp=N,194nm,1.0s						
MAZI	**Mazidag**	**3.37**	**86**	PN	**Pn**	**13 21 42.6**	**+1.5**
LEF	**Lefka**	**3.45**	**232**	PN	**Pn**	**13 21 43.9**	**+1.8**
ERZN	**Erzincan**	**3.58**	**49**	PN	**Pn**	**13 21 45.4**	**+1.5**
DQRL	**Deir Qamar**	**3.62**	**189**	*eP*	**Pn**	**13 21 46.6**	**+2.2**
KVT	**Kavak**	**3.79**	**358**	PN	**Pn**	**13 21 47.7**	**+1.0**
BNGB	**Bingl**	**3.91**	**63**	PN	**Pn**	**13 21 50.1**	**+1.7**
SVAN	**Silvan-Diyarba**	**4.04**	**76**	PN	**Pn**	**13 21 52.1**	**+1.9**
ILGA	**Ilgaz**	**4.23**	**333**	Pn	**Pn**	**13 21 53.3**	**+0.3**
ILGA	**Ilgaz**	**4.23**	**333**	*i* P	**Pn**	**13 21 54.9**	**+1.9**
ILGA				IAML		13 23 19.0	
	comp=N,62nm,1.0s						
ILGA				IAML		13 23 20.0	
	comp=E,66nm,0.8s						
MMAI	**Mount Meron Ar**	**4.32**	**189**	Pn	**Pn**	**13 21 54.5**	**+0.4**
	comp=E,5.1nm,0.3s,baz=3.9,slow=13,SNR=19						
MMAI				Sn	**Sn**	**13 22 44.7**	**-0.1**
	comp=E,12nm,0.3s,baz=7.4,slow=27,SNR=4.2						
ELL	**Elmali**	**5.08**	**266**		**Pn**	**13 22 04.4**	**-0.1**
ASF	**Jabal al Asfar**	**5.14**	**174**	Pn	**Pn**	**13 22 07.0**	**+1.7**
	comp=E,0.4nm,0.3s,baz=309,slow=19,SNR=3.8						
ASF				Lg	Lg	13 23 30.9	
	comp=E,4.3nm,0.3s,baz=322,slow=23,SNR=3.5						
ASF				LR	LR	13 23 54.9	
	comp=E,242nm,21.2s,baz=193,slow=36						
KARP	**Karpathos**	**7.51**	**259**	Pn	**Pn**	**13 22 37.3**	**-0.5**
EIL	**Elat**	**7.67**	**188**	Pn	Pn	13 22 47.3	+7.2
	comp=E,0.6nm,0.3s,baz=324,slow=6.9,SNR=5.3						
EIL				LR	LR	13 25 54.3	
	comp=E,62nm,21.3s,baz=330,slow=40						
KBZ	**Khabaz**	**8.20**	**36**	Pn	Pn	13 22 51.7	+4.5
	comp=E,0.1nm,0.3s,baz=209,slow=10,SNR=2.8						
IDI	**Anoyia**	**9.36**	**261**	LR	LR	13 27 51.4	
	comp=E,24nm,20.7s,baz=53,slow=46						
GZR	**Gura Zlata**	**12.93**	**313**	||S	**Sn**	**13 26 23.5**	**+7.2**
BZS	**Buzias**	**13.74**	**312**	||S	Sn	13 26 24.6	-11
AKASG	**Malin Array Be**	**14.31**	**342**	Pn	**Pn**	**13 24 09.4**	**-1.4**
	comp=E,0.3nm,0.3s,baz=167,slow=13,SNR=3.0						
GEYT	**Ailbeck**	**17.36**	**81**		**P**	**13 24 55.2**	**+3.1**
	comp=E,0.2nm,0.3s,baz=286,slow=10,SNR=5.7						
GERES	**GERESS Array B**	**20.02**	**312**	P	**P**	**13 25 21.7**	**+0.5**
	comp=E,0.1nm,0.3s,baz=123,slow=12,SNR=3.6						
AKTO	**Aktyubinsk**	**20.39**	**43**	P	**P**	**13 25 25.0**	**-0.2**
ABKAR	comp=E,2.2nm,0.7s,baz=223,slow=7.8,SNR=7.2 **Akbulak array**	**20.91**	**48**	P	**P**	**13 25 30.7**	**-0.1**
DAVOX	**Davos/Dischmat**	**21.65**	**304**	P	**P**	**13 25 39.1**	**+0.1**
	comp=E,0.8nm,0.5s						
KIRV	**Kirov**	**22.99**	**18**	P	**P**	**13 25 51.5**	**-1.4**
	comp=E,4.4nm,0.5s,baz=47,slow=2.7,SNR=4.6						
ARU	**Arti**	**24.30**	**31**	P	**P**	**13 26 05.2**	**-0.6**
	comp=E,1.2nm,0.7s,baz=222,slow=12,SNR=6.2						
FINES	**FINESS Array B**	**25.00**	**348**	P	**P**	**13 26 11.8**	**-0.2**
	comp=E,1.6nm,0.5s,baz=138,slow=12,SNR=8.8						
FIA1	**FINESS Array S**	**25.00**	**348**	P	**P**	**13 26 09.1**	**-3.0**
HFS	**Hagfors**	**27.00**	**335**	P	**P**	**13 26 29.9**	**-0.3**
	comp=E,3.2nm,0.8s,baz=171,slow=10,SNR=4.0						
BVAR	**Borovoye Array**	**28.43**	**45**	P	**P**	**13 26 42.4**	**-0.7**
	comp=E,0.5nm,0.5s,baz=248,slow=7.0,SNR=5.3						
NOA	**NORSAR Array B**	**28.50**	**344**	P	**P**	**13 26 41.8**	**-1.9**
	comp=E,0.5nm,0.6s,baz=109,slow=8.9,SNR=3.8						
NOA				LR	LR	13 38 20.1	
	comp=E,19nm,19.4s,baz=335,slow=37						
ARCES	**ARCESS Array B**	**32.82**	**353**	P	**P**	**13 27 21.6**	**-0.1**
	comp=E,1.3nm,0.5s,baz=163,slow=8.8,SNR=18						
ARE0	**ARCESS Array S**	**32.82**	**353**	P	**P**	**13 27 20.9**	**-0.7**
ARE0				IAmb	IAmb	13 28 19.9	
	comp=E,3.0nm,1.9s						
KURK	**Kurchatov**	**32.85**	**52**	P	**P**	**13 27 20.0**	**-2.1**
KURK				IAmb	IAmb	13 27 23.3	
	comp=E,2.5nm,0.9s						
MK31	**Makanchi Array**	**35.07**	**59**	P	**P**	**13 27 39.4**	**-2.1**
MK31				IAmb	IAmb	13 27 53.1	
	comp=E,6.8nm,1.7s						
MKAR	**Makanchi Array**	**35.07**	**59**	P	**P**	**13 27 42.2**	**+0.7**
	comp=E,1.1nm,0.8s,baz=282,slow=6.1,SNR=11						
MKAR				PcP	**PcP**	**13 30 12.6**	**-0.6**
	comp=E,0.2nm,0.7s,baz=329,slow=1.7,SNR=3.6						
ZAA0	**Zalesovo Array**	**37.03**	**47**	P	**P**	**13 27 57.9**	**-0.2**
ZAA0				IAmb	IAmb	13 27 59.2	
	comp=E,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**37.03**	**47**	P	**P**	**13 27 58.2**	**+0.1**
	comp=E,1.8nm,0.7s,baz=262,slow=9.7,SNR=8.1						
TORD	**Torodi Ar. Bea**	**39.06**	**241**	P	**P**	**13 28 15.9**	**+0.3**
	comp=E,2.9nm,1.0s,baz=33,slow=10,SNR=8.2						
DBIC	**Dimbokro**	**48.18**	**241**	P	**P**	**13 29 28.2**	**-0.9**
	comp=E,1.5nm,0.5s,baz=18,slow=8.1,SNR=4.6						
TIC	**Toumodi**	**48.31**	**241**	*eP*	**P**	**13 29 31.0**	**+0.8**
TIC	**Toumodi**	**48.31**	**241**	P	**P**	**13 29 31.0**	**+0.8**
KIC	**Kosan Boka**	**48.32**	**241**	*eP*	**P**	**13 29 29.6**	**-0.6**
	comp=E,4.7nm,0.5s						
KIC	**Kosan Boka**	**48.32**	**241**	P	**P**	**13 29 29.6**	**-0.6**
LIC	**Lamto**	**48.61**	**241**	*eP*	**P**	**13 29 31.4**	**-1.1**
LIC	**Lamto**	**48.61**	**241**	P	**P**	**13 29 31.4**	**-1.1**
SONM	**Songino Array**	**51.10**	**55**	P	**P**	**13 29 51.2**	**+0.1**
	comp=E,0.3nm,0.7s,baz=306,slow=3.2,SNR=3.1						
SONM				PcP	**PcP**	**13 31 06.2**	**-0.6**
	comp=E,0.4nm,0.7s,baz=266,slow=4.3,SNR=2.3						
CMAR	**Chiang Mai Arr**	**57.54**	**91**	P	**P**	**13 30 37.6**	**-0.7**
	comp=E,0.3nm,0.3s,baz=311,slow=7.0,SNR=3.6						
YKA	**Yellowknife Ar**	**77.82**	**347**	P	**P**	**13 32 45.6**	**+0.1**
	comp=E,0.7nm,0.8s,baz=26,slow=5.6,SNR=12						

FUNV ***10*** *13:34:36.3,9.86N×62.19W,h19km,MW3.0*
TRN ***10*** *13:34:37.4,9.94N×62.40W,h54km,MD3.2*
ISC 10 13:34:37.4±1.3,9.90N±0.04×62.30W±0.04,h58km±15km,
n15,σ1s14/30,1C-1D,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUNV	**Guanoco**	**0.68**	**292**	||*eP*		**Pn**	**13 34 50.9**	**-0.4**
GUNV					*eS*		**Sn**	**13 35 01.9**	**+0.4**
GUIV	**Guiria**	**0.74**	**6**		*eP*		**Pn**	**13 34 51.5**	**-0.5**
GUIV					*eS*		**Sn**	**13 35 02.0**	**-0.9**
GUIV	**Guiria**	**0.74**	**6**	||*eP*		**Pn**	**13 34 51.6**	**-0.5**
GUIV					*eS*		**Sn**	**13 35 01.9**	**-1.0**
TRN	**Trinidad (W)**	**1.15**	**50**		*eP*		**Pn**	**13 34 58.9**	**+1.5**
TRN					*eS*		**Sn**	**13 35 13.8**	**+1.5**
CRUV	**Carupano**	**1.20**	**310**		*eP*		**Pn**	**13 34 57.7**	**-0.2**
CRUV					*eS*		**Sn**	**13 35 14.0**	**+0.7**
ORIV	**Oritupano**	**1.37**	**233**		*eP*		**Pn**	**13 35 01.0**	**+0.7**
ORIV					*eS*		**Sn**	**13 35 19.8**	**+2.4**
RIOV	**Rio Grande**	**1.89**	**165**		*eP*		**Pn**	**13 35 06.3**	**-0.9**
RIOV					*eS*		**Sn**	**13 35 28.6**	**-1.4**
TOSP	**Speyside**	**2.22**	**51**		*eP*		**Pn**	**13 35 12.1**	**+0.2**
TOSP					*eS*		**Sn**	**13 35 38.5**	**+0.3**
GRGR	**Grenville**	**2.31**	**16**		*eP*		**Pn**	**13 35 13.6**	**+0.5**
GRGR					*eS*		**Sn**	**13 35 39.6**	**-0.6**
GRGR	**Grenville**	**2.31**	**16**		*eP*		**Pn**	**13 35 13.0**	**0.0**
GRGR					*eS*		**Sn**	**13 35 39.9**	**-0.4**
PCRV	**Puerto La Cruz**	**2.31**	**277**		*eP*		**Pn**	**13 35 13.5**	**+0.4**
PCRV					*eS*		**Sn**	**13 35 42.6**	**+2.1**
PRGV	**PARIAGUAN**	**2.58**	**244**		*eP*		**Pn**	**13 35 16.7**	**0.0**
PRGV					*eS*		**Sn**	**13 35 48.4**	**+1.5**
MERV	**Las Mercedes**	**3.99**	**261**		*eP*		**Pn**	**13 35 36.1**	**+0.1**
MERV					*eS*		**Sn**	**13 36 21.7**	**0.0**
TURV	**Turiamo**	**5.48**	**276**		*eP*		**Pn**	**13 35 56.9**	**+0.4**
TURV					*eS*		**Sn**	**13 36 56.5**	**-1.7**
BAUV	**El Baul**	**5.74**	**261**		*eP*		**Pn**	**13 35 59.5**	**-0.6**
BAUV					*eS*		**Sn**	**13 37 02.1**	**-2.6**

IDC ***10*** *13:50:37.8±1.2,56.09S×26.33W,h0km,mb4.5/1,*
mb1 4.1/2,mb1mx3.7/26,mbtmp4.0/2,ML3.6/1,Error
ellipse: s-maj=144.4km s-min=34.2km az=60.0
NEIC ***10*** *13:50:38.7±1.4,56.0S±0.1×26.1W±0.2,h10km±1km,*
mb4.2/6,Error ellipse: s-maj=26.9km s-min=19.0km
az=209.0
ISC 10 13:50:37.7±0.8,56.0S±0.1×26.1W±0.1,h10km,n14,
σ1s32/12,mb4.3/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**6.21**	**282**		Pn		**Pn**	**13 52 08.1**	**-1.3**
SNAA	**Sanae**	**18.55**	**157**		P		**P**	**13 54 55.0**	**+0.7**
	0.2nm,0.3s,baz=296,slow=14,SNR=7.9								
SNAA	**Sanae**	**18.55**	**157**		IAmb		IAmb	13 55 02.8	
	comp=Z,5.1nm,1.4s								
PMSA	**Palmer Station**	**20.42**	**229**				**P**	**13 55 16.4**	**+1.8**
QSPA	**South Pole Qui**	**34.27**	**180**		P		**P**	**13 57 21.7**	**-2.0**
CPUP	**Villa Florida**	**37.25**	**310**		P		**P**	**13 57 49.2**	**-0.2**
CPUP					IAmb		IAmb	13 57 51.9	
	comp=Z,9.8nm,1.4s								
MAW	**Mawson**	**39.83**	**143**		P		**P**	**13 58 11.5**	**+0.9**
MAW					IAmb		IAmb	13 58 18.8	
	comp=Z,2.8nm,1.4s								
BDFB	**Brasilia**	**43.63**	**329**		P		**P**	**13 58 43.6**	**+1.3**
	comp=Z,4.3nm,0.6s,baz=176,slow=15,SNR=2.4								
BDFB	**Brasilia**	**43.63**	**329**		IAmb		IAmb	13 58 49.1	
	comp=Z,4.3nm,0.6s								
BOSA	**Boshof**	**45.34**	**75**		P		**P**	**13 58 54.8**	**-1.3**
BOSA					IAmb		IAmb	13 59 07.7	
	comp=Z,3.6nm,1.2s								
YKA	**Yellowknife Ar**	**136.54**	**318**		PKP		**PKiKP**	**14 09 59.4**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=128,slow=2.4,SNR=6.0								
INK	**Inuvik**	**146.15**	**320**		PKPbc		**PKPab**	**14 10 17.8**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=71,slow=2.3,SNR=7.9								
SONM	**Songino Array**	**150.10**	**86**		PKPbc		**PKiKP**	**14 10 29.4**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=231,slow=5.0,SNR=2.7								
ILAR	**Eielson Array**	**150.54**	**312**		PKPbc		**PKiKP**	**14 10 29.4**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=116,slow=2.1,SNR=6.7								

IDC 10 13:58:18.1±3.2,10.17S×66.61E,h0km,mb3.7/5,
mb1 3.8/5,mb1mx3.5/42,mbtmp3.7/5,MS3.0/1,Ms1 3.0/1,
ms1mx2.5/52,Error ellipse: s-maj=110.4km
s-min=31.0km az=61.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**5.76**	**49**		T		T	14 06 08.1	
	baz=228,slow=76,SNR=258								
H08N1	**Diego Garcia H**	**5.78**	**49**		T		T	14 06 03.2	
	baz=228,slow=76,SNR=271								
H08N2	**Diego Garcia H**	**5.79**	**49**		T		T	14 06 07.1	
	baz=228,slow=76,SNR=270								
H08S1	**Diego Garcia H**	**6.31**	**67**		T		T	14 06 46.8	
	baz=245,slow=76,SNR=42								
H08S3	**Diego Garcia H**	**6.33**	**67**		T		T	14 06 47.2	
	baz=245,slow=76,SNR=40								
H08S2	**Diego Garcia H**	**6.33**	**67**		T		T	14 06 46.6	
	baz=245,slow=76,SNR=51								
PALK	**Pallekele**	**22.30**	**40**		LR		LR	14 09 48.2	
	comp=Z,43nm,21.6s,baz=174,slow=31								
MKAR	**Makanchi Array**	**58.42**	**13**		P		P	14 08 15.6	0.0
	0.4nm,0.6s,baz=175,slow=5.9,SNR=4.9								
ASAR	**Alice Springs**	**65.26**	**111**		P		P	14 09 02.0	-0.2
	0.7nm,0.8s,baz=268,slow=6.8,SNR=6.7								
ZALV	**Zalesovo Beam**	**65.72**	**12**		P		P	14 09 02.9	-1.5
	0.4nm,0.4s,baz=231,slow=9.1,SNR=3.1								
WRA	**Warramunga Arr**	**65.76**	**107**		P		P	14 09 05.5	0.0
	0.4nm,0.7s,baz=276,slow=5.3,SNR=6.3								
SONM	**Songino Array**	**67.66**	**28**		P		P	14 09 18.4	+1.2
	0.3nm,0.3s,baz=224,slow=7.0,SNR=3.4								
NVAR	**Mina Array Bea**	**151.52**	**8**		PKPbc		PKPbc	14 18 15.2	+0.2
	1.0nm,0.8s,baz=279,slow=1.7,SNR=7.5								

IDC ***10*** *14:12:25.5±0.6,18.92N×121.23E,h0km,mb4.2/27,*
mb1 4.3/29,mb1mx4.2/53,mbtmp4.2/29,ML4.1/2,MS3.4/9,
Ms1 3.5/9,ms1mx3.2/45,Error ellipse: s-maj=17.7km
s-min=13.2km az=88.0
BJI ***10*** *14:12:30.8±0.0,19.15N×121.16E,h30km,mB4.8/26,*
mb4.4/35,Ms4.3/9,Ms7 4.1/5
NEIC ***10*** *14:12:31.6±2.5,18.97N±0.06×121.13E±0.09,h41km±6km,*
mb4.5/31,Error ellipse: s-maj=13.0km s-min=9.1km
az=96.0
MAN ***10*** *14:12:32.7,19.06N×121.23E,h19km,MS3.8*
ISC 10 14:12:32.9±0.9,19.04N±0.03×121.17E±0.06,h49km±8km,
n91,σ1s99/94,mb4.4/44,MS3.4/9,1C-3D,Philippine
Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
APYP	**Conner**	**1.17**	**177**		*eP*		**Pn**	**14 12 53.0**	**0.0**
APYP					*eS*		**Sn**	**14 13 09.8**	**+1.9**
SIPP	**Brgy, Tapao**	**1.30**	**212**		*eP*		**Pn**	**14 12 54.0**	**-0.8**
SIPP					*eS*		**Sn**	**14 13 17.1**	**+6.2**
ABRA	**Dolores**	**1.45**	**198**		*eP*		**Pn**	**14 12 56.5**	**-0.3**
ABRA					*eS*		**Sn**	**14 13 17.2**	**+2.6**
BBP	**Basco**	**1.58**	**28**		*eP*		**Pn**	**14 12 58.8**	**+0.2**
BBP					*eS*		**Sn**	**14 13 19.3**	**+1.4**
TWG	**Pinlang**	**3.77**	**359**				**Pn**	**14 13 26.5**	**-2.0**
TPUB	**Ta-pu**	**4.27**	**353**				**Pn**	**14 13 34.2**	**-1.3**
YULB	**Yu-li**	**4.33**	**2**				**Pn**	**14 13 35.1**	**-1.2**
POLP	**Polilio Island**	**4.35**	**170**		*eP*		**Pn**	**14 13 35.1**	**-1.4**
POLP					*eS*		**Sn**	**14 14 31.5**	**+5.5**
SSLB	**Suanglung**	**4.73**	**358**				**Pn**	**14 13 40.9**	**-0.9**
LQP	**Lukban**	**4.91**	**176**		*eP*		Pn	14 13 49.2	+4.7
TGY	**Tagaytay City**	**4.91**	**183**		Pn		**Pn**	**14 13 45.0**	**+0.7**
	15nm,0.3s,baz=153,slow=11,SNR=1.9								
TGY					LR		LR	14 16 02.4	
	comp=Z,539nm,21.4s,baz=116,slow=45								
NACB	**Ninganchiao**	**5.12**	**4**				**Pn**	**14 13 46.5**	**-0.7**
GQP	**Guinayangan**	**5.25**	**166**		*eP*		**Pn**	**14 13 52.1**	**+3.2**
GQP					*eS*		**Sn**	**14 14 46.7**	**-1.4**
YHNB	**Yeheng**	**5.61**	**2**				**Pn**	**14 13 54.8**	**+0.9**
TATO	**Taipei**	**5.92**	**3**				**Pn**	**14 13 59.0**	**+1.0**
KNMB	**Chin-men Tao**	**5.99**	**335**		Pn		**Pn**	**14 13 56.0**	**-3.0**
QZH	**Quanzhou**	**6.34**	**338**		Pn		**Pn**	**14 14 01.1**	**-2.8**
QIZ	**Qiongzhong**	**10.72**	**272**				**Pn**	**14 15 00.9**	**-2.9**
NJ2	**Nanjing**	**13.13**	**351**		*eP*		**Pn**	**14 15 37.2**	**+0.5**
NJ2					pmax		pmax		
	comp=Z,9.0nm,0.5s								
JNU	**Nakatsue**	**16.50**	**30**		Pn		**Pn**	**14 16 21.0**	**0.0**
	0.3nm,0.3s,baz=148,slow=9.5,SNR=5.2								
JNU	**Nakatsue**	**16.50**	**30**		IAmb		IAmb	14 16 31.9	
	comp=Z,24nm,1.0s								
KSRS	**Korea Array**	**19.28**	**16**		P		**P**	**14 16 53.1**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=199,slow=11,SNR=32								
KSRS					LR		LR	14 25 05.1	
	comp=Z,83nm,19.1s,baz=188,slow=39								
KS19	**Wonju Array Si**	**19.31**	**16**		P		**P**	**14 16 52.1**	**-1.7**
KS19					IAmb		IAmb	14 16 56.1	
	comp=Z,25nm,1.5s								
LUWI	**Luwuk**	**20.02**	**175**		P		**P**	**14 17 01.5**	**-0.2**
LUWI					IAmb		IAmb	14 17 02.5	
	comp=Z,20nm,0.8s								
CHTO	**Chiang Mai**	**21.03**	**273**		P		**P**	**14 17 07.8**	**-4.9**
CMAR	**Chiang Mai Arr**	**21.06**	**272**		P		**P**	**14 17 13.7**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=88,slow=8.6,SNR=9.6								
CMAR					PcP		**PcP**	**14 21 19.6**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=6.5,slow=1.2,SNR=8.9								
CMAR					LR		LR	14 26 12.5	
	comp=Z,71nm,18.4s,baz=90,slow=39								
INU	**Inuyama**	**21.46**	**38**		P		**P**	**14 17 18.5**	**+1.4**
INU					IAmb		IAmb	14 17 20.9	
	comp=Z,24nm,1.1s								
LZH	**Lanzhou**	**22.84**	**322**		*eP*		**P**	**14 17 31.1**	**-1.0**
LZH					pP		pP	14 17 38.4	-4.5
LZH					sP		pwP	14 17 43.3	-3.2
LZH					*e*PP		**PnPn**	**14 18 01.3**	**+3.3**
LZH					pmax		pmax		
	comp=Z,20nm,1.0s								
LZH					pmax		pmax		
	comp=Z,65nm,4.8s								
LZH					LR		LR		
	comp=Z,170nm,10.8s								
LZH					LR		LR		
	comp=Z,210nm,12.0s								
LZH					LR		LR		
	comp=Z,250nm,14.1s								
MAJO	**Matsushiro**	**22.98**	**37**		P		**P**	**14 17 31.5**	**-2.0**
MAJO					IAmb		IAmb	14 17 44.2	
	comp=Z,12nm,1.1s								
MJAR	**Matsushiro Arr**	**22.98**	**37**		P		**P**	**14 17 33.8**	**+0.3**
	comp=Z,2.0nm,0.7s,baz=223,slow=7.1,SNR=7.3								
MJAR					LR		LR	14 25 44.3	
	comp=Z,44nm,21.7s,baz=250,slow=35								
HHC	**Hu-ho-hao-te**	**23.25**	**341**		*eP*		**P**	**14 17 38.6**	**+2.5**
HHC					sP		sP	14 17 52.2	-0.9
HHC					pmax		pmax		
	comp=Z,8.0nm,1.1s								
HHC					pmax		pmax		
	comp=Z,63nm,4.3s								
CN2	**Changchun**	**24.95**	**7**		*eP*		**P**	**14 17 49.7**	**-1.9**
CN2					*e*pP		pP	14 17 59.2	-4.6
CN2					pmax		pmax		
	comp=Z,10.0nm,0.7s								
USRK	**Ussuriysk Ar.**	**26.67**	**17**		P		**P**	**14 18 07.8**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=193,slow=7.8,SNR=5.7								
ASAJ	**Asahikawa**	**30.77**	**31**		P		**P**	**14 18 44.0**	**+0.3**
	comp=Z,5.9nm,0.8s,baz=229,slow=12,SNR=4.8								
SONM	**Songino Array**	**31.14**	**341**		P		**P**	**14 18 48.3**	**+1.2**
	comp=Z,2.1nm,0.5s,baz=159,slow=9.1,SNR=13								
SONM					LR		LR	14 32 31.0	
	comp=Z,78nm,20.1s,baz=182,slow=38								
**KL

NEA					IAmb	IAmb	14 23 58.2		
	comp=Z,6.4nm,0.8s								
RND	**Reindeer**	**73.16**	**28**	P	**P**		**14 23 57.6**	**-0.6**	
RND					IAmb	IAmb	14 23 58.7		
	comp=Z,8.0nm,0.8s								
WRH	**Wood River Hil**	**73.33**	**27**	P	**P**		**14 23 59.3**	**+0.2**	
WRH					IAmb	IAmb	14 24 00.8		
	comp=Z,5.2nm,0.8s								
ILAR	**Eielson Array**	**73.79**	**26**	P	**P**		**14 24 00.6**	**-1.2**	
	comp=Z,1.1nm,0.8s,baz=276,slow=6.1,SNR=11								
ARCES	**ARCESS Array B**	**74.30**	**339**	P	**P**		**14 24 05.0**	**+0.2**	
	comp=Z,3.5nm,0.6s,baz=73,slow=8.1,SNR=28								
SPITS	**Spitsbergen Ar**	**74.49**	**348**	P	**P**		**14 24 06.3**	**+0.6**	
	comp=Z,15nm,1.1s,baz=84,slow=7.9,SNR=4.0								
FINES	**FINESS Array B**	**75.88**	**330**	P	**P**		**14 24 13.1**	**-0.9**	
	comp=Z,2.4nm,0.9s,baz=84,slow=4.3,SNR=4.8								
BRTR	**Keskin Array B**	**76.24**	**308**	P	**P**		**14 24 15.2**	**-1.5**	
	comp=Z,0.5nm,0.5s,baz=55,slow=3.7,SNR=3.6								
AKASG	**Malin Array Be**	**76.72**	**319**	P	**P**		**14 24 18.1**	**-0.8**	
	comp=Z,0.4nm,0.4s,baz=61,slow=6.0,SNR=4.8								
INK	**Inuvik**	**77.98**	**22**	P	**P**		**14 24 24.3**	**-1.4**	
	comp=Z,1.7nm,0.7s,baz=302,slow=6.3,SNR=7.5								
INK	**Inuvik**	**77.98**	**22**	P	**P**		**14 24 25.4**	**-0.2**	
INK					IAmb	IAmb	14 24 26.4		
	comp=Z,8.2nm,1.4s								
NOA	**NORSAR Array B**	**82.75**	**333**	P	**P**		**14 24 50.5**	**-1.0**	
	comp=Z,0.5nm,0.8s,baz=61,slow=4.6,SNR=2.6								
GERES	**GERESS Array B**	**86.80**	**321**	P	**P**		**14 25 11.5**	**-0.7**	
	comp=Z,0.6nm,0.7s,baz=40,slow=7.7,SNR=2.9								
GERES					LR	LR	15 08 05.7		
	comp=Z,60nm,19.9s,baz=98,slow=38								
YKW3	**Yellowknife Ar**	**87.65**	**23**	P	**P**		**14 25 15.1**	**-0.8**	
YKA	**Yellowknife Ar**	**87.70**	**23**	P	**P**		**14 25 16.2**	**+0.2**	
	comp=Z,3.1nm,0.7s,baz=311,slow=4.6,SNR=75								
TXAR	**Lajitas Array**	**115.32**	**43**	PKP	**PKPdf**		**14 31 10.3**	**+0.4**	
	comp=Z,0.2nm,0.5s,baz=182,slow=3.2,SNR=4.2								

*IDC **10** 14:19:21.0±1.2, 52.°35N×171.°75W, h0km, mb3.5/5, mb1 3.8/7, mb1mx3.4/66, mbtmp3.5/7, ML3.0/2, Error ellipse: s-maj=44.3km s-min=24.3km az=165.0*
*AEIC **10** 14:19:28.4±3.3, 52.°14N±0.°05×171.°70W±0.°08, h42km±7km, ML3.1/16, Error ellipse: s-maj=9.0km s-min=4.6km az=135.0*
*NEIC **10** 14:19:29.8±2.8, 52.°5N±0.°1×171.°80W±0.°08, h63km±8km, Error ellipse: s-maj=16.7km s-min=4.3km az=161.0*
ISC 10 14:19:28.0±0.7, 52.°4N±0.°1×171.°75W±0.°05, h47km, n35, σ2s20/36, mb3.2/5, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**1.45**	**265**		**Pn**	**14 19 53.2**	**+1.4**
KOKL	**Mount Kliuchef**	**1.50**	**267**		**Pn**	**14 19 54.6**	**+2.0**
ATKA	**Atka Island**	**1.52**	**262**		**Pn**	**14 19 53.2**	**+0.6**
ATKA					**Sn**	**14 20 12.3**	**+1.1**
NIKH	**Nikolski High**	**1.84**	**72**		**Pn**	**14 19 57.8**	**+0.7**
NIKH					**Sn**	**14 20 21.6**	**+2.5**
OKWE	**Okmok W'ng Wal**	**2.36**	**63**		**Pn**	**14 20 07.5**	**+3.2**
OKER	**Okmok East Rim**	**2.46**	**64**		**Pn**	**14 20 08.9**	**+3.3**
OKFG	**Magazine Ridge**	**2.52**	**66**		**Pn**	**14 20 09.6**	**+3.2**
GSMY	**Great Sitkin M**	**2.68**	**263**		**Pn**	**14 20 11.0**	**+2.5**
GSMY					**Sn**	**14 20 43.9**	**+4.2**
GSTD	**Great Sitkin T**	**2.73**	**264**		**Pn**	**14 20 11.2**	**+1.8**
ADK	**Adak**	**3.09**	**262**		**Pn**	**14 20 14.9**	**+0.7**
ADK	**Adak**	**3.09**	**262**		**Sn**	**14 20 51.4**	**+1.6**
MSW	**Makushin Switc**	**3.34**	**62**		**Pn**	**14 20 20.1**	**+2.5**
KIWB	**Kanaga Island**	**3.38**	**262**	Pn	**Pn**	**14 20 20.4**	**+2.2**
UNV	**Unalaska Valle**	**3.46**	**64**		**Pn**	**14 20 21.5**	**+2.3**
SPIA	**Saint Paul Isl**	**4.83**	**10**	Pn	**Pn**	**14 20 38.2**	**+0.2**
KDAK	**Kodiak Island**	**12.19**	**56**	Pn	**Pn**	**14 22 18.2**	**-0.5**
	0.1nm,0.3s,baz=248,slow=16,SNR=3.8						
BRLK	**Bradley Lake**	**13.72**	**49**	P	**P**	**14 22 47.4**	**+0.3**
ILAR	**Eielson Array**	**17.74**	**36**	P	**Pn**	**14 23 29.8**	**-1.4**
	0.0nm,0.3s,baz=228,slow=11,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**36.63**	**215**	T	T	15 04 58.1	
	baz=21						
H11N3	**WAKE ISLAND Hy**	**36.64**	**215**	T	T	15 05 00.5	
	baz=21						
H11N1	**WAKE ISLAND Hy**	**36.65**	**215**	T	T	15 05 00.6	
	baz=21						
NVAR	**Mina Array Bea**	**39.12**	**89**	P	**P**	**14 26 50.4**	**-0.5**
	0.2nm,0.5s,baz=298,slow=10,SNR=3.0						
PDAR	**Pinedale Array**	**41.82**	**78**	P	**P**	**14 27 13.3**	**+0.2**
	0.3nm,0.6s,baz=284,slow=4.4,SNR=3.0						
TXAR	**Lajitas Array**	**54.20**	**87**	P	**P**	**14 28 48.3**	**-0.5**
	0.3nm,0.5s,baz=282,slow=4.5,SNR=4.1						
MKAR	**Makanchi Array**	**62.69**	**312**	P	**P**	**14 29 48.2**	**+0.7**
	0.1nm,0.6s,baz=56,slow=3.8,SNR=2.7						
PTBC	**PUERTO BERRIO,**	**89.30**	**80**	*eP*	**P**	**14 32 18.4**	**-0.9**
ASAR	**Alice Springs**	**89.33**	**228**	P	**P**	**14 32 18.1**	**-1.0**
	0.6nm,0.8s,baz=23,slow=4.7,SNR=8.6						
PAMC	**Pamplona, Colo**	**89.72**	**78**	*eP*	**P**	**14 32 20.2**	**-1.7**
SDV	**Santo Domingo**	**89.73**	**76**	*eP*	**P**	**14 32 18.1**	**-3.4**
GUY2C	**Guyana, Caldas**	**89.79**	**82**	*eP*	**P**	**14 32 21.1**	**-1.1**
GUY2C				*eP*	**P**	**14 32 22.8**	**+0.7**
BARC	**Barichara**	**90.03**	**79**	*eP*	**P**	**14 32 20.7**	**-2.3**
ANIL	**Santa Ana**	**90.34**	**82**	*eP*	**P**	**14 32 23.2**	**-1.3**
RUSC	**La Rusia**	**90.64**	**80**	*eP*	**P**	**14 32 23.7**	**-2.4**
CHIC	**Chingaza**	**91.25**	**81**	*eP*	**P**	**14 32 24.6**	**-4.2**
SOTA	**Rioblanco**	**91.47**	**85**	*eP*	**P**	**14 32 25.8**	**-4.2**

*UPA **10** 14:21:03.2±1.2, 7.°47N×78.°12W, h18km±5km, MW4.3*
*RSNC **10** 14:21:05.1±0.9, 7.°52N×78.°10W, h38km±22km, ML2.8*
ISC 10 14:21:04.3±2.1, 7.°53N±0.°05×78.°09W±0.°04, h31km±19km, n28, σ0s72/46, 2D, Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UPD2	**Meteti**	**1.02**	**4**	*eP*	**Pn**	**14 21 22.0**	**-0.5**
UPD2				*eS*	**Sb**	**14 21 35.8**	**-0.7**
UPD2	**Meteti**	**1.02**	**4**	*iP*	**Pn**	**14 21 22.0**	**-0.5**
UPD2				*i S*	**Sb**	**14 21 37.2**	**+0.7**
SOLC	**Bahia Solano**	**1.46**	**152**	*eP*	**Pn**	**14 21 28.3**	**-0.2**
SOLC				*eS*	**Sn**	**14 21 46.9**	**+0.4**
SOLC				*i*		14 21 52.3	
	comp=Z,299nm,0.3s						
TABO3	**Taboga, Panama**	**1.92**	**311**	*eP*	**Pn**	**14 21 34.4**	**-0.5**
CHPO	**Chepo, Panama**	**1.92**	**328**	*eP*	**Pn**	**14 21 34.3**	**-0.6**
CHPO				*i S*	**Sn**	**14 21 58.0**	**0.0**
DBBC	**Dabeiba**	**1.93**	**105**	*eP*	**Pn**	**14 21 35.6**	**+0.5**
DBBC				*eS*	**Sn**	**14 21 58.4**	**0.0**
DBBC				*i*		14 22 05.7	
	comp=Z,101nm,0.6s						
FLAM	**Flamenco Islan**	**1.99**	**314**	*i P*	**Pn**	**14 21 35.0**	**-0.8**
UPA	**Univ. de Panam**	**2.04**	**315**	*eP*	**Pn**	**14 21 36.1**	**-0.4**
UPA				*eS*	**Sn**	**14 22 00.8**	**0.0**
UPA	**Univ. de Panam**	**2.04**	**315**	*eP*	**Pn**	**14 21 35.9**	**-0.6**
CHOR3	**La Chorrera**	**2.15**	**309**	*i P*	**Pn**	**14 21 38.2**	**+0.2**
CHOR3				*i S*	**Sn**	**14 22 04.5**	**+0.9**
AZU	**Azuero**	**2.18**	**277**	*eP*	**Pn**	**14 21 38.1**	**-0.4**
AZU				*eS*	**Sn**	**14 22 03.6**	**-0.8**
AZU				*i*		14 22 11.1	
	comp=Z,168nm,0.3s						
AZU	**Azuero**	**2.18**	**277**	*iEjP*	**Pn**	**14 21 38.3**	**-0.2**
ZANG	**Zanguenga, Cho**	**2.26**	**309**	*i P*	**Pn**	**14 21 39.5**	**-0.1**
ZANG				*eS*	**Sn**	**14 22 07.9**	**+1.5**
VTON	**El Valle, Cocl**	**2.28**	**298**	*eP*	**Pn**	**14 21 39.9**	**0.0**
VTON				*eS*	**Sn**	**14 22 08.1**	**+1.2**
FRIJ	**El Hiral**	**2.34**	**316**	*i P*	**Pn**	**14 21 40.1**	**-0.5**
FRIJ				*eS*	**Sn**	**14 22 08.7**	**+0.4**
CHIT3	**Chitre**	**2.35**	**281**	*eP*	**Pn**	**14 21 41.1**	**+0.3**
BCIP	**Isla Barro Col**	**2.38**	**313**	*eP*	**Pn**	**14 21 40.5**	**-0.6**
BCIP				*eS*	**Sn**	**14 22 09.6**	**+0.3**
BCIP	**Isla Barro Col**	**2.38**	**313**	*i P*	**Pn**	**14 21 40.8**	**-0.4**
BCIP				*eS*	**Sn**	**14 22 09.8**	**+0.5**
MLIR	**Monte Lirio**	**2.44**	**314**	*i P*	**Pn**	**14 21 41.6**	**-0.4**
PINA	**Piqa, Costa Ab**	**2.60**	**311**	*eP*	**Pn**	**14 21 44.4**	**+0.1**
CRIS3	**El Cristo, Coc**	**2.61**	**286**	*eP*	**Pn**	**14 21 46.7**	**+2.4**
CRIS3				*eS*	**Sn**	**14 22 14.0**	**-0.9**
CBOC	**Ciudad Bolivar**	**2.64**	**129**	*eP*	**Pn**	**14 21 44.3**	**-0.7**
CBOC				*i*		14 21 54.4	
	comp=Z,20nm,0.3s						
CACAO	**El Cacao, Vera**	**2.76**	**266**	*eP*	**Pn**	**14 21 45.4**	**-1.0**
HELC	**Santa Helena**	**2.87**	**117**	*eP*	**Pn**	**14 21 48.9**	**+0.7**
HELC				*eS*	**Sn**	**14 22 21.7**	**-0.1**
HELC				*i*		14 22 23.1	
	comp=Z,20nm,0.3s						
HELC	**Santa Helena**	**2.87**	**117**	*eP*	**Pn**	**14 21 47.9**	**-0.4**
HELC				*eS*	**Sn**	**14 22 22.2**	**+0.3**
GMAL	**Guarumal, Vera**	**3.13**	**275**	*eP*	**Pn**	**14 21 51.8**	**+0.3**
GMAL				*eS*	**Sn**	**14 22 26.9**	**-0.9**
RREF	**El Recreo**	**3.77**	**134**	*eP*	**Pn**	**14 22 01.6**	**+0.7**
RREF				*i*		14 22 07.2	
	comp=Z,11nm,0.3s						
RREF				*eS*	**Sn**	**14 22 43.3**	**-1.2**
BCO2	**Palmira**	**4.55**	**285**	*eP*	**Pn**	**14 22 11.4**	**+0.1**

*IDC **10** 14:26:00.8±2.4, 26.°81N×53.°93E, h0km, mb3.6/7, mb1 3.7/8, mb1mx3.4/55, mbtmp3.6/8, ML3.4/1, Error ellipse: s-maj=49.0km s-min=24.8km az=24.0*
*TEH **10** 14:26:01.7, 26.°76N×53.°88E, h10km, ML3.4*
*OMAN **10** 14:26:02.2±0.5, 26.°81N×53.°63E, h35km, ml3.5/7, Error ellipse: s-maj=9.5km s-min=4.0km az=350.0*
ISC 10 14:26:03.3±0.8, 26.°72N±0.°06×53.°85E±0.°08, h19km, n31, σ1s20/36, mb3.5/7, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**1.80**	**352**	*ePn*	**Pn**	**14 26 34.2**	**+0.8**
JHRM				*e*		14 27 04.3	
GENO	**Geno**	**2.18**	**71**	*ePn*	**Pn**	**14 26 39.5**	**+0.8**
BANOM	**Banah**	**2.34**	**109**	P	**Pn**	**14 26 40.6**	**-0.2**
	SNR=9.5						
BANOM				S	**Sn**	**14 27 10.3**	**+1.4**
AJN	**Ajban**	**2.38**	**154**	S	**Sn**	**14 27 12.3**	**+2.3**
UOSS	**Minazif**	**2.76**	**129**	P	**Pn**	**14 26 47.3**	**+0.7**
UOSS				S	**Sn**	**14 27 20.4**	**+1.0**
NIAN	**Nian**	**2.79**	**72**	*ePn*	**Pn**	**14 26 48.0**	**+1.0**
NIAN				*e*		14 27 47.4	
HATD	**Hatta, Dubai**	**2.79**	**132**	P	**Pn**	**14 26 48.4**	**+1.4**
ASHO	**Ashiyiah**	**2.84**	**135**	P	**Pn**	**14 26 48.9**	**+1.2**
	SNR=24						
KHNJ	**Kahnooj**	**3.64**	**69**	*ePn*	**Pn**	**14 26 58.4**	**-0.3**
NGRK	**Negar Kerman**	**3.87**	**40**	*ePn*	**Pn**	**14 27 02.6**	**+0.4**
NGRK				*e*		14 27 54.1	
TVBK	**TV Kerman**	**4.14**	**38**	*ePn*	**Pn**	**14 27 06.6**	**+0.7**
ARQ	**Araqi**	**4.15**	**144**	P	**Pn**	**14 27 06.5**	**+0.8**
ARQ				S	**Sn**	**14 27 55.5**	**+1.8**
KHGB	**Koh Gabri**	**4.32**	**32**	*ePn*	**Pn**	**14 27 09.2**	**+1.0**
KHGB				*e*		14 28 14.4	
CHMN	**Cheshme madani**	**4.51**	**45**	*ePn*	**Pn**	**14 27 13.2**	**+2.2**
CHMN				*e*		14 28 09.7	
BSY	**Bisya**	**4.99**	**142**	P	**Pn**	**14 27 18.2**	**+0.9**
	SNR=5.9						
IBAF	**Baghsh**	**5.08**	**17**	*ePn*	**Pn**	**14 27 19.5**	**+0.9**
ISAD	**Sadrabad**	**5.18**	**358**	*ePn*	**Pn**	**14 27 21.1**	**+1.0**
IRAM	**Ramesheh**	**5.23**	**346**	*ePn*	**Pn**	**14 27 21.8**	**+1.0**
SMDO	**Samad**	**5.27**	**133**	P	**Pn**	**14 27 22.3**	**+1.1**
WSAR	**Wadi Sarin**	**5.55**	**128**	Pn	**Pn**	**14 27 24.7**	**-0.2**
	1.2nm,0.3s,baz=299,slow=14,SNR=14						
WSAR					**Sn**	**14 28 26.7**	**-1.6**
	0.6nm,0.3s,baz=177,slow=17,SNR=3.5						
WSAR	**Wadi Sarin**	**5.55**	**128**	P	**Pn**	**14 27 25.0**	**0.0**
	SNR=11						
IZEF	**Zefreh**	**6.30**	**348**	*ePn*	**Pn**	**14 27 34.7**	**-0.7**
MHTO	**MHTO**	**6.84**	**146**	P	**Pn**	**14 27 42.9**	**+0.3**
MHTO				S	**Sn**	**14 28 56.6**	**-3.4**
WHFO	**Wadi Hawf**	**8.76**	**181**	P	**Pn**	**14 28 08.0**	**-1.0**
	SNR=7.0						
BRTR	**Keskin Array B**	**21.25**	**313**	P	**P**	**14 30 48.2**	**-0.3**
	0.4nm,0.6s,baz=135,slow=14,SNR=3.1						
MKAR	**Makanchi Array**	**30.08**	**41**	P	**P**	**14 32 10.9**	**-0.5**
	0.2nm,0.6s,baz=238,slow=8.3,SNR=2.3						
KURBB	**Kurchatov Arra**	**30.41**	**32**	P	**P**	**14 32 14.0**	**-0.3**
	0.3nm,0.8s,baz=230,slow=8.5,SNR=3.2						
AKASG	**Malin Array Be**	**30.44**	**328**	P	**P**	**14 32 15.1**	**+0.6**
	0.3nm,0.4s,baz=137,slow=8.6,SNR=3.6						
ZALV	**Zalesovo Beam**	**35.51**	**32**	P	**P**	**14 32 57.6**	**-1.1**
	1.3nm,0.5s,baz=236,slow=9.5,SNR=5.5						
FINES	**FINESS Array B**	**39.43**	**339**	P	**P**	**14 33 31.5**	**-0.3**
	4.2nm,1.0s,baz=128,slow=12,SNR=6.1						
ARCES	**ARCESS Array B**	**45.94**	**347**	P	**P**	**14 34 24.1**	**-0.5**
	1.5nm,0.8s,baz=141,slow=12,SNR=7.0						

*IDC **10** 14:30:38.5±0.7, 26.°57N×53.°89E, h0km, mb3.9/20, mb1 4.0/23, mb1mx3.9/53, mbtmp3.9/23, ML3.7/3, Error ellipse: s-maj=17.1km s-min=14.1km az=25.0*
*THR **10** 14:30:39.3±0.3, 26.°58N×54.°12E, h15km±9km, ML4.0*
*DSN **10** 14:30:41.5±1.1, 26.°94N×53.°98E, h10km, ML4.0/7, Error ellipse: s-maj=14.2km s-min=5.4km az=175.0*
*TEH **10** 14:30:41.3, 26.°76N×53.°98E, h10km, ML3.9*
*OMAN **10** 14:30:42.3±0.2, 26.°85N×53.°68E, h35km, ml4.0/11, Error ellipse: s-maj=6.6km s-min=5.3km az=9.0*
*NEIC **10** 14:30:44.0±1.8, 26.°7N±0.°1×53.°83E±0.°09, h36km±7km, Error ellipse: s-maj=20.0km s-min=10.1km az=196.0*
ISC 10 14:30:41.2±2.6, 26.°75N±0.°03×53.°96E±0.°04, h11km±17km, n91, σ1s58/101, mb4.1/28, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**1.78**	**349**	*ePn*	**Pb**	**14 31 14.3**	**+0.4**
JHRM				*e*		14 31 50.1	
BNDS	**Bandar-Abbas**	**2.07**	**71**	*ePg*	**Pn**	**14 31 15.9**	**-0.2**
BNDS	**Bandar-Abbas**	**2.07**	**71**	*ePg*	**Pn**	**14 31 15.9**	**-0.2**
BNDS				*eSg*	**Sn**	**14 31 42.6**	**+0.6**
GENO	**Geno**	**2.07**	**71**	*ePn*	**Pb**	**14 31 18.2**	**-0.8**
GENO				*e*		14 32 06.9	
SHME	**Shamm**	**2.08**	**109**	*eP*	**Pn**	**14 31 16.8**	**+0.7**
	SNR=9.1						
SHME				S	**Sb**	**14 31 44.7**	**0.0**
SHME	**Shamm**	**2.08**	**109**	*ePn*	**Pn**	**14 31 16.9**	**+0.9**
BANOM	**Banah**	**2.25**	**111**	*eP*	**Pn**	**14 31 19.8**	**+1.4**
	SNR=28						
BANOM	**Banah**	**2.25**	**111**	P	**Pn**	**14 31 20.0**	**+1.5**
	SNR=28						
BANOM				S	**Sb**	**14 31 49.9**	**+0.1**
NAZ	**Nazwa, Dubai**	**2.33**	**139**	*eP*	**Pb**	**14 31 22.4**	**-0.8**
	SNR=8.1						
NAZ	**Nazwa, Dubai**	**2.33**	**139**	*ePn*	**Pb**	**14 31 22.6**	**-0.6**
NAZ	**Nazwa, Dubai**	**2.33**	**139**	P	**Pb**	**14 31 23.0**	**-0.2**
	SNR=8.1						
AJN	**Ajban**	**2.37**	**157**	*ePn*	**Pb**	**14 31 23.0**	**-0.8**
AJN	**Ajban**	**2.37**	**157**	P	**Pb**	**14 31 22.6**	**-1.3**
AJN				S	**Sb**	**14 31 52.5**	**-0.6**
MSFE	**Esma-Masafi**	**2.41**	**125**	*eP*	**Pn**	**14 31 22.6**	**+1.9**
	SNR=13						
MSFE	**Esma-Masafi**	**2.41**	**125**	*ePn*	**Pb**	**14 31 22.8**	**-1.9**
ASUD	**Al Ashush, Dub**	**2.45**	**149**	*eP*	**Pb**	**14 31 23.9**	**-1.4**
	SNR=8.6						
ASUD	**Al Ashush, Dub**	**2.45**	**149**	*ePn*	**Pb**	**14 31 24.1**	**-1.1**
ASUD	**Al Ashush, Dub**	**2.45**	**149**	P	**Pb**	**14 31 24.2**	**-1.1**
	SNR=8.6						
ASUD				S	**Sb**	**14 31 55.6**	**+0.1**
FAQ	**Al Faqa, Dubai**	**2.48**	**143**	*ePn*	**Pn**	**14 31 21.4**	**-0.1**
MDH	**Madha**	**2.55**	**124**	P	**Pn**	**14 31 24.7**	**+2.2**
MDH	**Madha**	**2.55**	**124**	*ePn*	**Pb**	**14 31 25.0**	**-2.0**
NIAN	**Nian**	**2.68**	**72**	*ePn*	**Pn**	**14 31 26.5**	**+2.2**
NIAN				*e*		14 32 23.1	
UOSS	**Minazif**	**2.71**	**131**	*eP*	**Pn**	**14 31 26.7**	**+2.1**
	SNR=28						
UOSS	**Minazif**	**2.71**	**131**	*ePn*	**Pn**	**14 31 26.8**	**+2.2**
UOSS	**Minazif**	**2.71**	**131**		**Pn**	**14 31 26.8**	**+2.1**
UOSS	**Minazif**	**2.71**	**131**	P	**Pn**	**14 31 26.7**	**+2.1**
HATD	**Hatta, Dubai**	**2.74**	**134**	*ePn*	**Pn**	**14 31 27.6**	**+2.5**
ASHO	**Ashiyiah**	**2.79**	**137**	*eP*	**Pn**	**14 31 28.3**	**+2.4**
	SNR=17						
ASHO	**Ashiyiah**	**2.79**	**137**	*ePn*	**Pn**	**14 31 28.3**	**+2.4**
ASHO	**Ashiyiah**	**2.79**	**137**	P	**Pn**	**14 31 28.0**	**+2.1**
	SNR=8.6						
ALNE	**Al Ain**	**3.13**	**149**	*i P*	**Pn**	**14 31 32.7**	**+2.1**
	SNR=10						
ALNE	**Al Ain**	**3.13**	**149**	*ePn*	**Pn**	**14 31 33.0**	**+2.5**
SOHO	**SOHO**	**3.49**	**138**	P	**Pn**	**14 31 37.4**	**+2.0**
	SNR=11						
KHNJ	**Kahnooj**	**3.54**	**69**	*ePn*	**Pn**	**14 31 37.9**	**+1.8**
MZR	**Muzera**	**3.76**	**187**	*ePn*	**Pn**	**14 31 40.1**	**+1.0**
KRBR	**Kerman**	**4.05**	**37**	*ePn*	**Pn**	**14 31 44.0**	**+0.5**
KRBR	**Kerman**	**4.05**	**37**	*ePn*	**Pn**	**14 31 44.0**	**+0.5**
KRBR				IAML		14 32 47.7	
	comp=E,66nm,0.5s						
TVBK	**TV Kerman**	**4.06**	**37**	*e*	**Sb**	**14 32 41.0**	**-1.1**
ARQ	**Araqi**	**4.12**	**145**	P	**Pn**	**14 31 45.9**	**+1.8**
	SNR=28						
ARQ				S	**Sn**	**14 32 36.2**	**+3.9**
CHMN	**Cheshme madani**	**4.42**	**45**	*e*	**Sb**	**14 32 49.4**	**-3.1**
BSY	**Bisya**	**4.96**	**143**	P	**Pn**	**14 31 57.8**	**+2.2**
	SNR=9.1						
SMDO	**Samad**	**5.22**	**134**	P	**Pn**	**14 32 01.7**	**+2.3**
	SNR=14						
SMDO				S	**Sn**	**14 33 03.8**	**+4.1**
IRAM	**Ramesheh**	**5.22**	**345**	*ePn*	**Pn**	**14 32 00.8**	**+1.3**
WSAR	**Wadi Sarin**	**5.49**	**129**	Pn	**Pn**	**14 32 04.4**	**+1.4**
	comp=E,3.2nm,0.3s,baz=316,slow=8.3,SNR=25						
WSAR				Sn	**Sn**	**14 33 05.1**	**-1.1**
	comp=E,1.2nm,0.3s,baz=270,slow=20,SNR=3.0						
WSAR	**Wadi Sarin**	**5.49**	**129**	P	**Pn**	**14 32 04.5**	**+1.4**
	SNR=33						
JMDO	**Jabal Madar**	**5.76**	**138**	P	**Pn**	**14 32 07.9**	**+1.2**
	SNR=12						
JMDO				S	**Sn**	**14 33 13.7**	**+0.8**
WBK	**Wadi Bani Khal**	**6.14**	**131**	P	**Pn**	**14 32 13.2**	**+1.3**
	SNR=11						
WBK				S	**Sn**	**14 33 24.6**	**+2.4**
MHTO	**MHTO**	**6.81**	**147**	P	**Pn**	**14 32 22.4**	**+1.3**
	SNR=6.7						
SHGR	**Shooshtar-Gavs**	**6.98**	**321**	IAML		14 33 44.2	
	comp=E,17nm,0.6s						
SHGR				IAML		14 33 53.0	
	comp=N,24nm,0.4s						
KHMZ	**Khomeyn**	**7.78**	**335**	*ePn*	**Pn**	**14 32 37.4**	**+2.9**
KHMZ	**Khomeyn**	**7.78**	**335**	*ePn*	**Pn**	**14 32 37.4**	**+2.9**
RAYN	**Ar Rayn**	**8.31**	**249**	Pn	**Pn**	**14 32 40.2**	**-1.5**
WHFO	**Wadi Hawf**	**8.79**	**181**	P	**Pn**	**14 32 47.7**	**-0.6**
	SNR=29						
GNI	**Garni**	**15.41**	**332**	Pn	**P**	**14 34 25.1**	**+1.8**
	comp=N,1.5nm,0.3s,baz=203,slow=1.4,SNR=8.4						
GNI	**Garni**	**15.41**	**332**	P	**Pn**	**14 34 20.6**	**+2.0**
GNI				IAmb	IAmb	14 34 27.9	
	comp=Z,18nm,1.1s						
ASF	**Jabal al Asfar**	**15.81**	**294**	Pn	**Pn**	**14 34 24.2**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=98,slow=19,SNR=2.2						
MMAI	**Mount Meron Ar**	**17.25**	**296**	P	**Pn**	**14 34 43.2**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=104,slow=15,SNR=2.2						
GAR	**Garm**	**18.35**	**44**	P	**Pn**	**14 34 55.2**	**-0.5**
GAR				IAmb	IAmb	14 34 57.0	
	comp=Z,28nm,1.9s						
KBZ	**Khabaz**	**19.17**	**335**	P	**Pn**	**14 35 06.8**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=139,slow=11,SNR=5.2						
BR131	**Keskin Array S**	**21.30**	**312**	P	**P**	**14 35 25.0**	**-3.0**
BRTR	**Keskin Array B**	**21.30**	**312**	P	**P**	**14 35 28.7**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=133,slow=12,SNR=10						
ARSB	**Arslanbob**	**21.37**	**42**	P	**P**	**14 35 29.0**	**+0.2**
ARSB				IAmb	IAmb	14 35 30.1	
	comp=Z,6.6nm,0.6s						
ABKAR	**Akbulak array**	**22.94**	**10**	P	**P**	**14 35 45.9**	**+0.6**
AKTO	**Aktyubinsk**	**23.85**	**6**	P	**P**	**14 35 55.4**	**+1.0**
	comp=Z,2.0nm,0.5s,baz=210,slow=9.5,SNR=6.6						
KARP	**Karpathos**	**24.50**	**298**	P	**P**	**14 35 58.6**	**-1.9**
IDI	**Anoyia**	**26.26**	**296**	P	**P**	**14 36 15.1**	**-1.4**
	comp=Z,5.4nm,0.5s,baz=94,slow=9.1,SNR=9.1						
BVAR	**Borovoye Array**	**28.97**	**21**	P	**P**	**14 36 41.0**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=222,slow=2.0,SNR=4.2						
ITM	**Ithomi**	**28.98**	**299**	P	**P**	**14 36 39.3**	**-1.6**
ITM				IAmb	IAmb	14 36 44.0	
	comp=Z,17nm,1.1s						
MKAR	**Makanchi Array**	**29.99**	**41**	P	**P**	**14 36 50.5**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=224,slow=6.8,

comp=Z,0.5nm,0.3s,baz=132,slow=4.3,SNR=3.1
KURBB **Kurchatov Arra 61.57 327** P **P 14 41 15.3 -1.3**
comp=Z,0.4nm,0.6s,baz=128,slow=6.6,SNR=7.6
KURK **Kurchatov 61.58 328** P **P 14 41 16.3 -0.4**
KURK IAmb IAmb 14 41 31.8
comp=Z,1.3nm,0.7s
ILAR **Eielson Array 85.16 25** P **P 14 43 35.4 +0.1**
comp=Z,0.2nm,0.5s,baz=243,slow=4.0,SNR=3.8

*IDC **10** 14:36:26.9±1.0,27.°52N×65.°49E, h0km, mb4.1/28, mb1 4.2/30, mb1mx4.1/57, mbtmp4.1/30, ML3.6/2, MS3.9/18, Ms1 3.9/18, ms1mx3.6/43, Error ellipse: s-maj=22.9km s-min=13.3km az=5.0*
*BJI **10** 14:36:27.9±0.0,27.°54N×65.°68E, h9km, mB4.8/31, mb4.6/35, Ms4.3/22, Ms7 4.1/21*
*NEIC **10** 14:36:28.3±2.9,27.°28N±0.°09×65.°46E±0.°04, h25km±5km, mb4.4/17, Error ellipse: s-maj=14.4km s-min=10.3km az=153.0*
*MOS **10** 14:36:29.2±1.5,27.°50N×65.°57E, h28km, mb4.5/11, Error ellipse: s-maj=8.5km s-min=5.3km az=85.2*
*THR **10** 14:36:37.6±0.4,26.°88N×64.°26E, h14km±7km, ML4.1*
ISC 10 14:36:26.4±0.4, 27.°23N±0.°05×65.°52E±0.°04, h10km, n170, σ2s 27/178, mb4.3/55, MS3.9/18, 7C-4D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHBR	**Chabahar**	**4.80**	**251**	*e*Pn		**Pn**	**14 37 35.4**	**-3.4**
CHBR				*e*Sg		**Sn**	**14 38 30.1**	**-4.5**
CHBR				IAML			14 38 38.5	
	comp=E,226nm,0.6s							
CHBR				IAML			14 38 45.1	
	comp=N,269nm,0.6s							
JASL	**Jaisalmer**	**4.80**	**92**	*e*P		**Pn**	**14 37 41.3**	**+2.4**
ZHSF	**Zahedan**	**4.81**	**301**	*e*Pn		**Pn**	**14 37 42.0**	**+2.9**
ZHSF				*e*S		**Sn**	**14 38 29.3**	**-5.7**
BHUJ	**Bhuj**	**5.45**	**136**	*e*S		**Sn**	**14 38 50.3**	**-0.1**
WSAR	**Wadi Sarin**	**7.40**	**239**	Pn		**Pn**	**14 38 12.7**	**-1.8**
	comp=N,2.8nm,0.3s,baz=11,slow=2.7,SNR=21							
WSAR				Sn		**Sn**	**14 39 31.2**	**-7.3**
	comp=N,5.3nm,0.3s,baz=270,slow=8.1,SNR=5.5							
WSAR	**Wadi Sarin**	**7.40**	**239**	P		**Pn**	**14 38 12.9**	**-1.6**
WSAR				S		**Sn**	**14 39 31.8**	**-6.7**
WBK	**Wadi Bani Khal**	**7.52**	**234**	P		**Pn**	**14 38 15.5**	**-0.7**
	SNR=8.5							
HRA	**Herat**	**7.67**	**339**			**Pn**	**14 38 18.4**	**0.0**
THW	**Thamme Wali**	**7.73**	**43**	P		**Pn**	**14 38 17.1**	**-2.0**
SARP	**Sargodha**	**7.78**	**51**	P		**Pn**	**14 38 16.9**	**-2.9**
KBL	**Kabul**	**7.89**	**22**	P		**Pn**	**14 38 20.9**	**-0.6**
KBL	**Kabul**	**7.89**	**22**			**Pn**	**14 38 20.9**	**-0.6**
KBL	**Kabul**	**7.89**	**22**	P		**Pn**	**14 38 21.1**	**-0.4**
	SNR=7.5							
SMDO	**Samad**	**7.94**	**240**	P		**Pn**	**14 38 21.0**	**-1.1**
SMDO				S		**Sn**	**14 39 46.2**	**-6.0**
KRBR	**Kerman**	**8.18**	**292**	*e*Pn		**Pn**	**14 38 26.2**	**+0.7**
HOQ	**Hoqain**	**8.27**	**246**	P		**Pn**	**14 38 26.4**	**0.0**
JMDO	**Jabal Madar**	**8.30**	**236**	P		**Pn**	**14 38 27.0**	**+0.1**
	SNR=13							
JMDO				S		**Sn**	**14 39 54.5**	**-6.2**
BNDS	**Bandar-Abbas**	**8.32**	**273**	*e*Pn		**Pn**	**14 38 25.3**	**-2.0**
BANOM	**Banah**	**8.36**	**263**	P		**Pn**	**14 38 27.7**	**-0.1**
	SNR=8.8							
MDH	**Madha**	**8.50**	**259**	P		**Pn**	**14 38 30.9**	**+1.2**
CEP	**Cherat**	**8.57**	**38**	P		**Pn**	**14 38 29.1**	**-1.6**
CEP				S		**Sn**	**14 40 03.0**	**-4.6**
SOHO	**SOHO**	**8.68**	**251**	P		**Pn**	**14 38 30.0**	**-2.0**
SOHO				S		**Sn**	**14 40 07.8**	**-2.1**
UOSS	**Minazif**	**8.68**	**257**	Pn		**Pn**	**14 38 31.6**	**-0.5**
UOSS	**Minazif**	**8.68**	**257**	P		**Pn**	**14 38 31.6**	**-0.5**
BSY	**Bisya**	**8.77**	**241**	P		**Pn**	**14 38 33.6**	**+0.2**
BSY				S		**Sn**	**14 40 08.5**	**-3.9**
ASHO	**Ashiyiah**	**8.89**	**256**	P		**Pn**	**14 38 36.6**	**+1.6**
ASHO				S		**Sn**	**14 40 11.7**	**-3.6**
ARQ	**Araqi**	**9.02**	**247**	P		**Pn**	**14 38 38.1**	**+1.3**
ARQ				S		**Sn**	**14 40 17.9**	**-0.6**
NIL	**Nilore**	**9.24**	**44**	P		**Pn**	**14 38 38.7**	**-1.1**
NIL	**Nilore**	**9.24**	**44**			**Pn**	**14 38 38.7**	**-1.1**
CHCP	**Chirah Chowk**	**9.25**	**44**	P		**Pn**	**14 38 38.3**	**-1.7**
KUDL	**Kundal**	**9.76**	**82**	*e*P		**Pn**	**14 38 44.1**	**-2.8**
KUDL				*e*S		Sn	14 40 26.1	-11
DHRM	**DHARAMSHALA**	**10.62**	**59**	*e*P		**Pn**	**14 38 58.8**	**0.0**
DHRM				*e*S		**Sn**	**14 40 51.5**	**-6.4**
DHRM				IAML			14 40 58.3	
	comp=N,314nm,0.6s							
DHRM				IAML			14 41 00.1	
	comp=E,304nm,0.9s							
SMLA	**Simla**	**10.89**	**66**	*e*P		**Pn**	**14 39 01.6**	**-0.8**
SMLA				*e*S		**Sn**	**14 40 57.8**	**-6.5**
SMLA				IAML			14 41 03.6	
	comp=N,157nm,0.6s							
SMLA				IAML			14 41 04.2	
	comp=E,207nm,0.2s							
BHPL	**Bhopal**	**11.48**	**108**	*e*P		**Pn**	**14 39 10.8**	**+0.2**
POO	**Poona**	**11.56**	**137**	*ex*		**Pn**	**14 39 12.0**	**+0.3**
CHGR	**Chuyangaron**	**11.80**	**14**			**Pn**	**14 39 14.4**	**-0.5**
GEYT	**Alibeck**	**12.36**	**332**	Pn		**Pn**	**14 39 19.7**	**-2.7**
	comp=E,0.3nm,0.3s,baz=65,slow=35,SNR=3.4							
GEYT				LR		LR	14 44 43.9	
	comp=E,364nm,19.3s,baz=140,slow=41							
GAR	**Garm**	**12.40**	**18**			**Pn**	**14 39 22.1**	**-1.1**
JOSI	**Joshimath**	**12.73**	**72**	*e*P		**Pn**	**14 39 27.6**	**-0.3**
JOSI				*e*S		Sn	14 41 40.1	-10
JOSI				IAML			14 41 53.2	
	comp=E,126nm,0.3s							
JOSI				IAML			14 41 54.7	
	comp=N,107nm,0.9s							
WHFO	**Wadi Hawf**	**14.26**	**232**	P		**Pn**	**14 39 48.3**	**-0.3**
	SNR=5.9							
KSH	**Kashi**	**15.03**	**33**	P		**Pn**	**14 39 54.1**	**-4.9**
KSH				PP		**P**	**14 40 01.3**	**-3.2**
KSH				S		Sn	14 42 28.9	-17
KSH				PcP		**PcP**	**14 45 11.0**	**+3.6**
KSH				pmax		pmax		
	comp=N,13nm,0.6s							
KSH				pmax		pmax		
	comp=N,340nm,4.5s							
KSH				LR		LR		
	comp=N,970nm,10.8s							
KSH				LR		LR		
	comp=N,1μm,8.0s							
KSH				LR		LR		
	comp=N,1μm,12.5s							
ARSB	**Arslanbob**	**15.34**	**22**			**Pn**	**14 39 59.8**	**-3.3**
ARSB				IAmb		IAmb	14 40 08.5	
	comp=Z,29nm,1.0s							
HYB	**Hyderabad**	**15.50**	**126**	*i* P		**P**	**14 40 11.5**	**+1.8**
HYB				*e*			14 42 50.0	
KOLN	**Koldanda**	**16.05**	**84**	*e*P		**Pn**	**14 40 10.8**	**-1.7**
KOLN	**Koldanda**	**16.05**	**84**	*e*P		**Pn**	**14 40 11.2**	**-1.3**
	comp=Z,67nm,1.1s							
DANN	**Dangsing**	**16.18**	**82**	*e*P		**Pn**	**14 40 11.4**	**-2.8**
	comp=Z,182nm,1.2s							
DANN	**Dangsing**	**16.18**	**82**	*e*P		**Pn**	**14 40 11.9**	**-2.3**
	comp=Z,64nm,0.8s							
AML	**Almayashu**	**16.30**	**22**	P		**Pn**	**14 40 13.3**	**-2.5**
	SNR=14							
KK31	**Karatay Array**	**16.35**	**13**	*i* P		**Pn**	**14 40 17.8**	**+1.8**
KK31	**Karatay Array**	**16.35**	**13**			**Pn**	**14 40 14.3**	**-1.7**
KKAR	**Karatay Array**	**16.35**	**13**	P		**Pn**	**14 40 14.4**	**-1.7**
KKAR				pmax		pmax		
	comp=Z,12nm,0.8s							
KKAR	**Karatay Array**	**16.35**	**13**			**Pn**	**14 40 14.4**	**-1.7**
NRN	**Naryn**	**16.58**	**29**	P		**Pn**	**14 40 15.9**	**-3.4**
NRN				pmax		pmax		
	comp=Z,19nm,1.0s							
NRN	**Naryn**	**16.58**	**29**			**Pn**	**14 40 15.9**	**-3.4**
NRN				IAmb		IAmb	14 40 25.9	
	comp=Z,19nm,0.9s							
UCH	**Uchtor**	**16.67**	**24**	P		**Pn**	**14 40 17.5**	**-3.1**
	SNR=15							
EKS2	**Erkin-Say**	**16.80**	**21**	P		**Pn**	**14 40 18.3**	**-3.6**
	SNR=12							
KZA	**Kyzart**	**16.82**	**26**	P		**P**	**14 40 25.0**	**+0.4**
	SNR=34							
GKN	**Gorkha**	**16.96**	**83**	*e*P		**Pn**	**14 40 22.8**	**-1.2**
GKN	**Gorkha**	**16.96**	**83**	*e*P		**Pn**	**14 40 23.0**	**-1.0**
	comp=Z,49nm,0.8s							
AAK	**Ala-Archa**	**17.02**	**23**	P		**Pn**	**14 40 22.0**	**-2.7**
AAK	**Ala-Archa**	**17.02**	**23**	Pn		**Pn**	**14 40 22.6**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=211,slow=5.2,SNR=15							
AAK				LR		LR	14 48 48.7	
	comp=Z,444nm,20.7s,baz=204,slow=44							
AAK	**Ala-Archa**	**17.02**	**23**	P		**Pn**	**14 40 23.1**	**-1.7**
	SNR=15							
AAK	**Ala-Archa**	**17.02**	**23**			**Pn**	**14 40 22.7**	**-2.0**
KBK	**Karagaybulak**	**17.20**	**24**	P		**Pn**	**14 40 26.4**	**-0.5**
	SNR=13							
CHMS	**Chumysh**	**17.43**	**23**	P		**Pn**	**14 40 28.0**	**-1.7**
	SNR=5.2							
BOOM	**Boomskoye usch**	**17.44**	**27**	P		**Pn**	**14 40 28.2**	**-1.8**
BOOM	**Boomskoye usch**	**17.44**	**27**			**Pn**	**14 40 28.1**	**-1.8**
KKN	**Kakani**	**17.54**	**84**	*e*P		**Pn**	**14 40 29.1**	**-2.2**
	comp=Z,27nm,0.7s							
USP	**Ospenovka**	**17.58**	**22**	P		**Pn**	**14 40 29.7**	**-1.9**
	SNR=6.8							
PKIN	**Phulchoki**	**17.65**	**84**	*e*P		**Pn**	**14 40 29.7**	**-3.1**
	comp=Z,11nm,0.6s							
PKIN	**Phulchoki**	**17.65**	**84**	*e*P		**Pn**	**14 40 30.7**	**-2.1**
	comp=Z,11nm,0.6s							
KDJ	**Kajisay**	**17.66**	**30**	P		**Pn**	**14 40 30.0**	**-2.7**
KDJ				pmax		pmax		
	comp=Z,64nm,1.5s							
KDJ	**Kajisay**	**17.66**	**30**			**Pn**	**14 40 30.0**	**-2.7**
KDJ				IAmb		IAmb	14 40 37.7	
	comp=Z,64nm,1.4s							
PKI	**Pulchoki**	**17.66**	**84**	*e*P		**Pn**	**14 40 29.7**	**-3.3**
	comp=Z,2.2nm,0.6s							
TKM2	**Tokmak 2**	**17.67**	**25**	P		**Pn**	**14 40 31.1**	**-1.8**
TKM2	**Tokmak 2**	**17.67**	**25**	P		**Pn**	**14 40 30.6**	**-2.2**
	SNR=8.7							
GUN	**Gumba**	**18.06**	**83**	*e*P		**Pn**	**14 40 36.2**	**-1.7**
	comp=Z,250nm,1.0s							
GUN	**Gumba**	**18.06**	**83**	*e*P		**Pn**	**14 40 36.3**	**-1.7**
	comp=Z,250nm,1.0s							
JIRN	**Jiri**	**18.35**	**84**	*e*P		**Pn**	**14 40 40.5**	**-1.0**
	comp=Z,98nm,0.8s							
JIRN	**Jiri**	**18.35**	**84**	*e*P		**Pn**	**14 40 40.5**	**-1.0**
	comp=Z,98nm,0.8s							
RAYN	**Ar Rayn**	**18.46**	**263**	P		**P**	**14 40 42.6**	**+0.1**
RAYN				pmax		pmax		
	comp=Z,19nm,1.4s							
RAYN	**Ar Rayn**	**18.46**	**263**	P		**P**	**14 40 42.6**	**+0.1**
RAMN	**Ramite**	**18.77**	**86**	*e*P		**P**	**14 40 44.3**	**-1.8**
	comp=Z,26nm,0.7s							
RAMN	**Ramite**	**18.77**	**86**	*e*P		**P**	**14 40 45.0**	**-1.1**
ODAN	**Odare**	**19.48**	**86**	*e*P		**P**	**14 40 54.1**	**+0.2**
	comp=Z,50nm,0.8s							
ODAN	**Odare**	**19.48**	**86**	*e*P		**Pn**	**14 40 55.9**	**+0.8**
	comp=Z,50nm,0.8s							
PDGK	**Podgornoye**	**19.65**	**32**	P		**P**	**14 40 54.4**	**-1.1**
TAPN	**Taplejung**	**19.72**	**85**	*e*P		**P**	**14 40 57.6**	**+1.1**
	comp=Z,20nm,0.8s							
TAPN	**Taplejung**	**19.72**	**85**	*e*P		**P**	**14 40 57.8**	**+1.3**
	comp=Z,19nm,0.8s							
GNBR	**Gunib**	**21.40**	**320**	*e*P		**P**	**14 41 13.2**	**-1.2**
GNBR				pmax		pmax		
	comp=Z,29nm,1.0s							
GNI	**Garni**	**21.50**	**312**	P		**P**	**14 41 15.0**	**-0.6**
	comp=Z,10.0nm,0.8s,baz=92,slow=0.6,SNR=8.4							
GNI				LR		LR	14 50 06.1	
	comp=Z,154nm,19.1s,baz=112,slow=38							
AB31	**Akbulak array**	**22.41**	**350**	P		**P**	**14 41 25.4**	**+0.3**
ABKAR	**Akbulak array**	**22.41**	**350**	P		**P**	**14 41 24.7**	**-0.4**
ABKAR				IAmb		IAmb	14 41 44.1	
	comp=Z,9.3nm,0.9s							
GROC	**Groznyy**	**22.58**	**320**	*e*P		**P**	**14 41 29.0**	**+2.1**
GROC				*e*			14 41 54.1	
GROC				*e*S		**S**	**14 45 35.5**	**+1.1**
GROC				pmax		pmax		
	comp=Z,48nm,0.8s							
ZEI	**Tsey**	**23.45**	**317**	*e*P		**P**	**14 41 34.3**	**-1.9**
ZEI				pmax		pmax		
	comp=Z,7.0nm,0.9s							
MAKZ	**Makanchi**	**23.46**	**29**	P		**P**	**14 41 35.9**	**-0.1**
MAKZ				pmax		pmax		
	comp=Z,35nm,1.1s							
MAKZ	**Makanchi**	**23.46**	**29**	P		**P**	**14 41 35.9**	**-0.1**
MK31	**Makanchi Array**	**23.59**	**30**	P		**P**	**14 41 36.3**	**-0.9**
MK31				pmax		pmax		
	comp=Z,7.0nm,0.8s							
MK31	**Makanchi Array**	**23.59**	**30**	P		**P**	**14 41 36.3**	**-0.9**
MK31				IAmb		IAmb	14 41 38.9	
	comp=Z,7.4nm,0.8s							
MKAR	**Makanchi Array**	**23.59**	**30**	P		**P**	**14 41 37.3**	**0.0**
	comp=Z,6.1nm,0.7s,baz=207,slow=10,SNR=49							
MKAR				LR		LR	14 52 50.2	
	comp=Z,737nm,21.9s,baz=224,slow=42							
AKTO	**Aktyubinsk**	**23.87**	**348**	P		**P**	**14 41 41.0**	**+1.0**
AKTO	**Aktyubinsk**	**23.87**	**348**	P		**P**	**14 41 41.0**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=154,slow=10.0,SNR=6.9							
AKTO				LR		LR	14 51 50.2	
	comp=Z,103nm,18.1s,baz=156,slow=39							
WMQ	**Urumqi**	**24.37**	**41**	*e*P		**P**	**14 41 46.0**	**+1.2**
WMQ				pP		sP	14 41 52.1	+2.3
WMQ				S		S	14 45 51.0	-13
WMQ				PcS		**PcS**	**14 49 00.1**	**-3.7**
WMQ				pmax		pmax		
	comp=Z,23nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,60nm,4.1s							
WMQ				LR		LR		
	comp=Z,330nm,12.9s							
WMQ				LR		LR		
	comp=Z,330nm,17.1s							
WMQ				LR		LR		
	comp=Z,450nm,17.9s							
NEY	**Neytrino**	**24.43**	**317**	*e*P		**P**	**14 41 46.5**	**+1.1**
NEY				pmax		pmax		
	comp=Z,1.0nm,0.8s							
PALK	**Pallekele**	**24.52**	**141**	LR		LR	14 53 03.5	
	comp=Z,207nm,19.4s,baz=307,slow=40							
KBZ	**Khabaz**	**24.59**	**318**	P		**P**	**14 41 46.7**	**+0.1**
	comp=Z,6.3nm,1.1s,baz=148,slow=8.6,SNR=10							
PYA1	**Pyatigorsk**	**24.66**	**319**	*e*P		**P**	**14 41 48.1**	**+0.7**
PYA1				pmax		pmax		
	comp=Z,1.0nm,0.9s							
SHA1	**Shidzhatmaz**	**24.74**	**318**	*de*P		**P**	**14 41 49.2**	**+0.9**
KVAR	**Kislovodsk Arr**	**24.84**	**318**	P		**P**	**14 41 49.9**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=270,slow=20,SNR=4.6							
KIV	**Kislovodsk**	**24.84**	**318**	*e*P		**P**	**14 41 50.8**	**+1.7**
KIV				*e*S		**S**	**14 46 13.7**	**+1.8**
KIV				pmax		pmax		
	comp=Z,70nm,1.1s							
ASF	**Jabal al Asfar**	**25.31**	**288**	P		**P**	**14 41 55.7**	**+2.2**
	comp=Z,0.8nm,0.3s,baz=120,slow=8.1,SNR=2.5							
KURBB	**Kurchatov Arra**	**25.38**	**20**	P		**P**	**14 41 54.1**	**+0.4**
	comp=Z,6.2nm,0.8s,baz=211,slow=9.1,SNR=28							
KURK	**Kurchatov**	**25.49**	**20**	*de*P		**P**	**14 41 56.5**	**+1.8**
KURK				pmax		pmax		
	comp=Z,8.0nm,1.0s							
KURK	**Kurchatov**	**25.49**	**20**	P		**P**	**14 41 55.5**	**+0.8**
KURK				IAmb		IAmb	14 41 58.7	
	comp=Z,6.5nm,0.9s							
BVAR	**Borovoye Array**	**26.02**	**7**	P		**P**	**14 41 59.5**	**-0.1**
	comp=Z,10nm,0.8s,baz=176,slow=14,SNR=20							
ATD	**Arta Tunnel**	**26.41**	**238**	LR		LR	14 53 38.5	
	comp=Z,139nm,20.8s,baz=66,slow=39							
MMAI	**Mount Meron Ar**	**26.63**	**290**	P		**P**	**14 42 07.5**	**+2.1**
	comp=Z,3.8nm,0.9s,baz=91,slow=6.1,SNR=3.2							
MMAI				LR		LR	14 55 41.7	
	comp=Z,269nm,18.5s,baz=180,slow=44							
EIL	**Elat**	**26.95**	**282**	P		**P**	**14 42 10.4**	**+2.1**
	comp=Z,1.6nm,0.7s,baz=42,slow=14,SNR=2.1							
EIL				LR		LR	14 55 24.6	
	comp=Z,361nm,18.1s,baz=107,slow=42							
BRTR	**Keskin Array B**	**29.21**	**303**	P		**P**	**14 42 27.3**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=137,slow=11,SNR=4.7							
ARU	**Arti**	**29.61**	**352**	P		P	14 42 41.5	+10
ARU							14 43 35.1	
ARU				SS		SS	14 49 20.2	-12
ARU				MLR		MLR		
	comp=Z,202nm,15.0s							
ARU	**Arti**	**29.61**	**352**	P		**P**	**14 42 30.7**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=6.0,slow=19,SNR=2.3							
ARU				LR		LR	14 55 30.7	
	comp=Z,133nm,21.4s,baz=163,slow=39							
PBA	**Port Blair**	**29.88**	**116**	P		P	14 42 32.8	-1.6
ZALV	**Zalesovo Beam**	**30.25**	**23**	P		**P**	**14 42 36.6**	**-0.6**
	comp=Z,1.0nm,0.4s,baz=222,slow=9.7,SNR=5.1							
ZALV				LR		LR	14 56 49.9	
	comp=Z,268nm,18.7s,baz=142,slow=41							
GTA	**Gaotai**	**30.94**	**58**	*e*P		**P**	**14 42 45.4**	**+1.7**
GTA				pP		sP	14 42 49.7	+1.0
GTA				sP		pP	14 42 52.7	+5.4
GTA				pmax		pmax		
	comp=Z,6.0nm,1.4s							
CM31	**Chiang Mai Arr**	**31.93**	**99**	P		**P**	**14 42 52.3**	**-0.2**
CM31				IAmb		IAmb	14 42 57.4	
	comp=Z,10nm,1.4s							
CMAR	**Chiang Mai Arr**	**31.93**	**99**	*ce*P		**P**	**14 42 56.0**	**+3.5**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**31.93**	**99**	P		**P**	**14 42 55.7**	**+3.2**
	comp=Z,1.9nm,0.9s,baz=306,slow=8.2,SNR=12							
LZH	**Lanzhou**	**33.62**	**65**	*e*P		**P**	**14 43 07.6**	**+0.3**
LZH				pP		sP	14 43 15.5	+3.2
LZH				sP		pP	14 43 19.2	+8.4
LZH				*e*PP		**PnPn**	**14 44 19.8**	**+1.0**
LZH				pmax		pmax		
	comp=Z,19nm,1.0s							
LZH				pmax		pmax		
	comp=Z,56nm,5.4s							
LZH				LR		LR		
	comp=Z,170nm,12.8s							
LZH				LR		LR		
	comp=Z,170nm,13.0s							
LZH				LR		LR		
	comp=Z,250nm,16.3s							
PBKT	**Sadao Pong**	**34.45**	**101**	P		**P**	**14 43 16.1**	**+1.7**
OBN	**Obninsk**	**34.90**	**331**	*e*P		**P**	**14 43 19.1**	**+1.2**
OBN				pmax		pmax		
	comp=Z,8.0nm,1.4s							
IDI	**Anoyia**	**35.46**	**293**	P		**P**	**14 43 23.0**	**-0.2**
	comp=Z,2.2nm,0.6s,baz=8.1,slow=14,SNR=3.9							
AKASG	**Malin Array Be**	**36.14**	**320**	P		**P**	**14 43 27.8**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=115,slow=7.6,SNR=9.4							
AKBB	**Malin Array Si**	**36.14**	**320**	*e*P		**P**	**14 43 28.4**	**-0.3**
BUR08	**Bucovina Ar. S**	**37.41**	**314**	P		**P**	**14 43 37.7**	**-1.9**
BUR08				IAmb		IAmb	14 43 56.6	
	comp=Z,5.2nm,1.0s							
TLY	**Talaya**	**37.60**	**39**	LR		LR	15 02 16.5	
	comp=Z,408nm,19.8s,baz=241,slow=41							
SONM	**Songino Array**	**37.82**	**46**	P		**P**	**14 43 44.3**	**+1.2**
	comp=Z,1.1nm,0.7s,baz=268,slow=8.2,SNR=6.1							
KOLS	**Kolonicke sedl**	**39.66**	**315**	*e*P		**P**	**14 44 00.6**	**+2.1**
KOLS	**Kolonicke sedl**	**39.66**	**315**	*e*P		**P**	**14 44 00.6**	**+2.1**
HHC	**Hu-ho-hao-te**	**40.05**	**58**	*e*P		**P**	**14 44 01.6**	**-0.4**
HHC				pmax		pmax		
	comp=Z,5.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,59nm,4.9s							
VSU	**Vasula**	**41.24**	**330**	*e*P		**P**	**14 44 10.7**	**-0.6**
VSU				pmax		pmax		
	comp=Z,163nm,1.7s							
VYHS	**Vyhne**	**41.74**	**313**	*e*P		**P**	**14 44 19.8**	**+4.1**
VYHS	**Vyhne**	**41.74**	**313**	*e*P		**P**	**14 44 19.8**	**+4.1**
VYHS				*e*			15 09 50.5	
FINES	**FINESS Array B**	**43.15**	**333**	*i* P		**P**	**14 44 26.3**	**-0.6**
FINES				pmax		pmax		
	comp=Z,7.0nm,0.9s							
FINES	**FINESS Array B**	**43.15**	**333**	P		**P**	**14 44 26.1**	**-0.9**
	comp=Z,6.9nm,0.9s,baz=127,slow=9.0,SNR=13							
FINES				LR		LR	15 05 01.4	
	comp=Z,128nm,19.2s,baz=192,slow=40							
GERES	**GERESS Array B**	**45.15**	**313**	P		**P**	**14 44 42.6**	**-0.6**
	comp=Z,2.3nm,0.9s,baz=96,slow=6.0,SNR=9.1							
BRG	**Berggiesshubel**	**45.36**	**316**	*e*P		**P**	**14 44 48.9**	**+4.1**
	comp=Z,5.9nm,0.9s							
BRG				*e*			14 44 58.7	
	comp=Z,5.2nm,0.9s							
BRG	**Berggiesshubel**	**45.36**	**316**	*e*P		**P**	**14 44 48.9**	**+4.1**
BRG				*e*			14 44 58.7	
BRG				pmax		pmax		
	comp=Z,6.0nm,0.9s							
BRG				pmax		pmax		
	comp=Z,5.0nm,1.0s							
ABTA	**Abfaltersbach**	**45.67**	**310**	*e*pP		**P**	**14 44 49.3**	**+1.9**
	comp=Z,7.1nm,1.1s							
WATA	**Walderalm**	**46.37**	**311**	*i* pP		**P**	**14 44 54.8**	**+1.9**
	comp=Z,3.5nm,0.5s							
SQTA	**Sankt Quirin**	**46.60**	**310**	*e*P		**P**	**14 44 55.9**	**+1.1**
	comp=Z,2.4nm,0.5s							
MOTA	**Moosalm**	**46.69**	**311**	*e*P		**P**	**14 44 55.9**	**+0.4**
	comp=Z,7.7nm,0.9s							
RETA	**Reutte**	**46.93**	**311**	*e*P		**P**	**14 44 56.7**	**-0.6**
	comp=Z,1.2nm,0.4s							
DAVA	**Damuels**	**47.51**	**310**	*e*P		**P**	**14 45 01.4**	**-0.5**
	comp=Z,4.5nm,0.8s							
ARCES	**ARCESS Array B**	**48.25**	**342**	P		**P**	**14 45 06.3**	**-0.8**
	comp=Z,4.0nm,0.9s,baz=99,slow=7.5,SNR=6.9							
ARCES				LR		LR	15 07 12.9	
	comp=Z,118nm,18.9s,baz=151,slow=38							
NOA	**NORSAR Array B**	**49.43**	**329**	P		**P**	**14 45 15.5**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=108,slow=7.5,SNR=3.7							
KSRS	**Korea Array**	**52.85**	**62**	P		**P**	**14 45 43.6**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=277,slow=7.2,SNR=3.3							
YAK	**Yakutsk**	**54.24**	**32**	*e*P		**P**	**14 45 52.2**	**0.0**
YAK				pmax

mb1 4.2/4, mb1mx3.6/44, mbtmp4.1/4, ML4.1/3, Error ellipse: s-maj=92.9km s-min=26.5km az=76.0
*NEIC **10** 14:43:56.4±2.8, 6.°47S±0.°06×129.°9E±0.°1, h165km±14km, mb4.4/7, Error ellipse: s-maj=15.6km s-min=8.4km az=71.0*

ISC 10 14:43:55.9±0.7, **6.°60S**±0.°07×**130.°10E**±0.°09, **h146**km, **n19, σ2°34/22, mb4.3/5, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.82**	**139**		**Pn**	**14 44 33.5**	**+4.8**
FAKI	**Fak Fak**	**4.23**	**30**		**Pn**	**14 44 59.9**	**+0.7**
FAKI					**Sn**	**14 45 48.5**	**+0.2**
MTN	**Manton Dam**	**6.29**	**171**		**Pn**	**14 45 28.2**	**+1.7**
SOEI	**Soe**	**6.57**	**241**	Pn	**Pn**	**14 45 31.2**	**+0.8**
SOEI					**Sn**	**14 46 47.9**	**+3.5**
KNRA	**Kununurra**	**9.12**	**188**		**Pn**	**14 46 04.1**	**-0.2**
FITZ	**Fitzroy Crossi**	**12.23**	**200**	Pn	**Pn**	**14 46 43.5**	**-1.9**
	1.0nm,0.3s,baz=18,slow=8.6,SNR=38						
FITZ	**Fitzroy Crossi**	**12.23**	**200**		**Pn**	**14 46 44.0**	**-1.4**
WRAB	**Tennant Creek**	**13.88**	**163**	Pn	**Pn**	**14 47 05.5**	**-1.1**
WRA	**Warramunga Arr**	**13.89**	**163**	Pn	**Pn**	**14 47 05.9**	**-0.8**
	0.8nm,0.3s,baz=342,slow=13,SNR=17						
WRA				Sn	Sn	14 49 33.0	-7.6
	1.5nm,0.3s,baz=330,slow=23,SNR=10						
WR0	**Warramunga Arr**	**13.96**	**162**		**Pn**	**14 47 07.5**	**-0.1**
AS31	**Alice Springs**	**17.36**	**168**		**Pn**	**14 47 50.7**	**+1.3**
ASAR	**Alice Springs**	**17.36**	**168**	P	**Pn**	**14 47 51.4**	**+1.9**
	0.6nm,0.3s,baz=346,slow=9.4,SNR=89						
ASAR				S	**S**	**14 50 56.0**	**-6.1**
	0.2nm,0.3s,baz=352,slow=26,SNR=4.5						
PSA00	**Pilbara Seismi**	**17.89**	**213**	P	**P**	**14 47 51.4**	**-2.9**
PSA00				IAmb	IAmb	14 47 55.0	
	comp=Z,24nm,1.4s						
FORT	**Forrest**	**24.13**	**184**	P	**P**	**14 48 58.4**	**0.0**
FORT				IAmb	IAmb	14 49 06.5	
	comp=Z,12nm,0.9s						
MORW	**Morawa**	**26.00**	**209**	P	**P**	**14 49 15.5**	**+0.2**
MORW				IAmb	IAmb	14 49 32.6	
	comp=Z,12nm,1.4s						
BBOO	**Buckleboo**	**26.66**	**169**	P	**P**	**14 49 22.1**	**+0.8**
BBOO				IAmb	IAmb	14 49 37.6	
	comp=Z,8.5nm,1.1s						
NACB	**Ninganchiao**	**31.69**	**345**	P	**P**	**14 50 03.7**	**-2.1**
CAN	**Canberra**	**33.46**	**151**	P	**P**	**14 50 21.8**	**+0.6**
CAN				IAmb	IAmb	14 50 35.3	
	comp=Z,17nm,1.4s						
MKAR	**Makanchi Array**	**67.95**	**327**	P	**P**	**14 54 39.4**	**+0.4**
	comp=Z,1.0nm,0.4s,baz=127,slow=7.1,SNR=27						

*IDC **10** 14:50:14.3±0.9, 20.°16S×172.°34E, h0km, mb4.0/8, mb1 4.3/10, mb1mx4.0/45, mbtmp4.0/10, ML3.6/2, MS4.0/19, Ms1 4.0/19, ms1mx3.9/31, Error ellipse: s-maj=31.5km s-min=20.0km az=153.0*
*NEIC **10** 14:50:18.2±2.5, 20.°5S±0.°2×172.°52E±0.°10, h32km±7km, mb4.5/9, Error ellipse: s-maj=22.4km s-min=11.9km az=166.0*
*GCMT **10** 14:50:18.2±0.2, 20.°53S±0.°01×172.°51E±0.°01, h15km±1km, MW4.9/109, Moment Tensor Solution. s35,c38; s109,c153; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=0.28±.10; Mθθ=1.96±.09; Mφφ2.24±.09; Mrθ-0.05±.26; Mθφ2.17±.07; Mφr1.19±.26; Best double couple: M₀3.22800×10¹⁶ NP1:φs69.00000°, δ70.00000°, λ3.00000°. NP2:φs338.00000°, δ87.00000°, λ160.00000°. Principal axes: T 3.4720, Plg16.0000°, Azm292.0000°; N -0.4890, Plg70.0000°, Azm149.0000°; P -2.9830, Plg11.0000°, Azm25.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 10 14:50:18.7±0.5, **20.°36S**±0.°10×**172.°58E**±0.°07, **h35**km, **n47, σ1°92/37, mb4.1**/12, **MS4.1**/18, **Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.80**	**64**		**Pn**	**14 51 43.9**	**+1.6**
DZM	**Mont Dzumac**	**5.97**	**252**	*e*Pn	**Pn**	**14 51 43.5**	**-1.3**
	105nm,1.3s						
DZM				*e*LR	LR	14 53 07.8	
	comp=Z,3μm,25.1s						
DZM	**Mont Dzumac**	**5.97**	**252**	Pn	**Pn**	**14 51 44.1**	**-0.7**
	1.4nm,0.3s,baz=124,slow=20,SNR=15						
DZM				LR	LR	14 53 37.9	
	comp=Z,1μm,21.9s,baz=85,slow=35						
DZM	**Mont Dzumac**	**5.97**	**252**		**Pn**	**14 51 44.4**	**-0.4**
RAO	**Raoul Island**	**12.35**	**138**	LR	LR	14 56 54.0	
	comp=Z,936nm,19.5s,baz=152,slow=32						
OUZ	**Omahuta**	**14.83**	**177**	P	**Pn**	**14 53 45.6**	**-0.2**
HNR	**Honiara**	**16.33**	**310**	Pn	**P**	**14 54 06.8**	**-1.3**
	1.2nm,0.3s,baz=254,slow=3.3,SNR=5.6						
HNR				LR	LR	14 59 29.0	
	comp=Z,522nm,19.1s,baz=152,slow=35						
URZ	**Urewera**	**18.26**	**169**	P	**P**	**14 54 30.2**	**+0.9**
	0.3nm,0.3s,baz=349,slow=5.9,SNR=6.3						
URZ	**Urewera**	**18.26**	**169**	P	**P**	**14 54 30.0**	**+0.8**
URZ				IAmb	IAmb	14 54 36.4	
	comp=Z,30nm,0.8s						
RPZ	**Rata Peaks**	**23.32**	**183**	LR	LR	15 02 41.6	
	comp=Z,622nm,21.7s,baz=12,slow=32						
CTA	**Charters Tower**	**24.70**	**266**	P	**P**	**14 55 36.1**	**-0.7**
	comp=Z,10nm,1.1s,baz=104,slow=10,SNR=3.1						
STKA	**Stephens Creek**	**29.99**	**241**	P	**P**	**14 56 23.4**	**-0.7**
	comp=Z,2.2nm,0.8s,baz=68,slow=9.4,SNR=4.3						
STKA				LR	LR	15 06 27.0	
	comp=Z,196nm,21.8s,baz=68,slow=32						
STKA	**Stephens Creek**	**29.99**	**241**	P	**P**	**14 56 24.9**	**+0.8**
TBI	**Tubuai**	**35.29**	**102**	*e*S	**S**	**15 02 38.2**	**-4.1**
	comp=Z,103nm,29.5s						
TBI				*e*LR	LR	15 06 28.8	
	comp=Z,860nm,31.0s						
WR0	**Warramunga Arr**	**35.66**	**264**	P	**P**	**14 57 12.2**	**-1.5**
WR0				IAmb	IAmb	14 57 14.4	
	comp=Z,6.6nm,1.1s						
PPT2	**Papeete2**	**35.84**	**92**	*e*S	**S**	**15 02 43.5**	**-7.6**
	comp=Z,93nm,25.0s						
PPT2				*e*LR	LR	15 06 39.2	
	comp=Z,973nm,26.5s						
WRAB	**Tennant Creek**	**35.84**	**264**	P	**P**	**14 57 13.8**	**-1.5**
WRAB				IAmb	IAmb	14 57 21.5	
	comp=Z,8.0nm,1.2s						
PPT	**Papeete**	**35.85**	**92**	LR	LR	15 07 57.0	
	comp=Z,372nm,21.4s,baz=248,slow=30						
WRA	**Warramunga Arr**	**35.85**	**264**	P	**P**	**14 57 13.6**	**-1.9**
	comp=Z,1.7nm,1.1s,baz=93,slow=9.1,SNR=5.0						
WRA				LR	LR	15 11 49.4	
	comp=Z,450nm,18.8s,baz=120,slow=36						
AS31	**Alice Springs**	**35.94**	**258**	P	**P**	**14 57 15.0**	**-1.2**
ASAR	**Alice Springs**	**35.94**	**258**	P	**P**	**14 57 14.7**	**-1.4**
	comp=Z,1.2nm,1.0s,baz=92,slow=8.0,SNR=8.3						
ASAR				LR	LR	15 10 54.3	
	comp=Z,388nm,20.6s,baz=98,slow=35						
MTN	**Manton Dam**	**40.33**	**274**	P	**P**	**14 57 53.4**	**+0.1**
KNRA	**Kununurra**	**41.84**	**269**	P	**P**	**14 58 05.1**	**-0.5**
KNRA				IAmb	IAmb	14 58 17.1	
	comp=Z,12nm,1.0s						
GUMO	**Guam**	**43.37**	**319**	LR	LR	15 14 25.2	
	comp=Z,295nm,20.8s,baz=136,slow=34						
FITZ	**Fitzroy Crossi**	**44.27**	**265**	P	**P**	**14 58 24.4**	**-0.8**
FITZ				IAmb	IAmb	14 58 41.1	
	comp=Z,16nm,1.3s						
VNDA	**Vanda**	**57.44**	**183**	P	**P**	**15 00 06.7**	**+3.1**
	comp=Z,1.5nm,0.8s,baz=17,slow=2.5,SNR=3.8						
MJAR	**Matsushiro Arr**	**65.25**	**330**	LR	LR	15 25 44.2	
	comp=Z,40nm,21.9s,baz=180,slow=33						
QSPA	**South Pole Qui**	**69.70**	**180**	LR	LR	15 28 54.9	
	comp=Z,75nm,21.3s,baz=36,slow=33						
MAW	**Mawson**	**78.56**	**202**	LR	LR	15 31 47.3	
	comp=Z,57nm,20.8s,baz=61,slow=32						
CMAR	**Chiang Mai Arr**	**81.84**	**293**	LR	LR	15 39 12.1	
	comp=Z,25nm,19.9s,baz=105,slow=36						
NVAR	**Mina Array Bea**	**87.22**	**47**	P	**P**	**15 03 03.4**	**+1.5**
	comp=Z,0.9nm,0.8s,baz=228,slow=9.5,SNR=5.9						
NVAR				LR	LR	15 34 19.2	
	comp=Z,113nm,19.8s,baz=210,slow=30						
SONM	**Songino Array**	**90.02**	**322**	LR	LR	15 44 11.8	
	comp=Z,30nm,18.0s,baz=25,slow=36						
ILAR	**Eielson Array**	**90.40**	**16**	P	**P**	**15 03 15.5**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=233,slow=4.9,SNR=4.4						
ILAR				LR	LR	15 37 56.3	
	comp=Z,159nm,19.3s,baz=212,slow=32						
TXAR	**Lajitas Array**	**94.56**	**61**	P	**P**	**15 03 38.1**	**+2.0**
	comp=Z,0.2nm,0.5s,baz=297,slow=5.9,SNR=3.4						
TXAR				LR	LR	15 37 34.7	
	comp=Z,64nm,21.6s,baz=0.0,slow=30						
PDAR	**Pinedale Array**	**95.09**	**46**	LR	LR	15 42 47.3	
	comp=Z,53nm,18.2s,baz=307,slow=33						
PLCA	**Paso Flores**	**95.59**	**137**	LR	LR	15 37 04.4	
	comp=Z,117nm,20.7s,baz=259,slow=29						
MORC	**Moravsky Berou**	**144.57**	**332**	*e*PKP	**PKPdf**	**15 09 51.5**	**0.0**
CHVC	**Chvalec**	**144.60**	**334**	*e*PKP	**PKPab**	**15 09 49.1**	**-1.0**
DPC	**Dobruska-Polom**	**144.67**	**334**	*e*PKP	**PKPdf**	**15 09 51.6**	**-0.1**
UPC	**Upice**	**144.68**	**334**	*e*PKP	PKPbc	15 09 51.2	+0.7
UPC				*e*pPKP	**PKiKP**	**15 09 57.4**	**+2.1**
JAVC	**Velka Javorina**	**145.18**	**331**	*e*PKP	**PKPdf**	**15 09 53.1**	**+0.5**
BRG	**Berggiesshubel**	**145.21**	**336**	*e*PKP	**PKPdf**	**15 09 52.9**	**+0.4**
	comp=Z,17nm,1.4s						
PVCC	**Panska Ves**	**145.24**	**335**	*e*PKP	**PKPdf**	**15 09 53.8**	**+1.2**
VRAC	**Vranov**	**145.34**	**332**	*e*PKP	**PKPab**	**15 09 53.2**	**+0.4**
KRUC	**Moravsky**	**145.61**	**332**	*e*PKP	**PKPdf**	**15 09 53.7**	**+0.5**
KHC	**Kasperske Hory**	**146.74**	**335**	*e*PKP	**PKPbc**	**15 09 57.6**	**+0.6**
KHC				*e*pPKP	**pPKPdf**	**15 10 03.6**	**-2.0**
GERES	**GERESS Array B**	**146.92**	**334**	PKPbc	**PKPbc**	**15 09 57.8**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=48,slow=2.0,SNR=7.6						

*IDC **10** 14:54:42.4±1.2, 18.°73N×145.°61E, h219km±11km, mb3.9/30, mb1 4.0/32, mb1mx3.9/49, mbtmp4.4/32, Error ellipse: s-maj=12.8km s-min=6.6km az=92.0*
*NEIC **10** 14:54:42.5±1.8, 18.°71N±0.°08×145.°6E±0.°1, h223km±5km, mb4.6/87, Error ellipse: s-maj=17.4km s-min=11.3km az=92.0*

ISC 10 14:54:40.4±0.4, **18.°73N**±0.°05×**145.°71E**±0.°08, **h200**km, **n137, σ1°12/140, mb4.5**/79, **1D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**5.18**	**189**	P	**Pn**	**14 55 59.0**	**+1.8**
	26nm,0.3s,baz=109,slow=2.9,SNR=15						
GUMO				S	**Sn**	**14 56 59.0**	**+1.3**
	34nm,0.3s,baz=343,slow=19,SNR=4.7						
JOW	**Kunigami**	**17.97**	**300**	P	**P**	**14 58 32.3**	**-3.6**
JOW				IAmb	IAmb	14 58 32.7	
	comp=Z,20nm,1.0s						
MJAR	**Matsushiro Arr**	**18.93**	**341**	P	**P**	**14 58 45.8**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=86,slow=31,SNR=4.3						
MAJO	**Matsushiro**	**18.93**	**341**	P	**P**	**14 58 46.0**	**-0.3**
MAJO				IAmb	IAmb	14 58 51.7	
	comp=Z,19nm,1.2s						
MAT	**Matsushiro**	**18.93**	**341**	P	**P**	**14 58 46.5**	**+0.2**
MJB9	**Matsu-Tunnel**	**18.93**	**341**	P	**P**	**14 58 46.1**	**-0.3**
MJB9				IAmb	IAmb	14 58 51.7	
	comp=Z,19nm,1.2s						
JNU	**Nakatsue**	**19.54**	**320**	P	**P**	**14 58 52.4**	**-0.5**
MANU	**Manus Island**	**20.71**	**175**	P	**P**	**14 59 05.2**	**-0.3**
JAY	**Jayapura**	**21.68**	**194**	P	**P**	**14 59 15.7**	**0.0**
	comp=Z,24nm,0.8s,baz=344,slow=5.2,SNR=4.4						
SWI	**Sorong**	**24.10**	**218**	P	**P**	**14 59 38.2**	**+0.3**
	comp=Z,28nm,0.8s						
SIJI	**Sorong**	**24.10**	**218**	P	**P**	**14 59 38.8**	**+0.9**
	comp=Z,16nm,0.8s,baz=29,slow=13,SNR=7.0						
KSRS	**Korea Array**	**24.30**	**324**	P	**P**	**14 59 39.0**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=147,slow=9.8,SNR=5.0						
ASAJ	**Asahikawa**	**25.44**	**355**	P	**P**	**14 59 50.5**	**+0.7**
	comp=Z,8.2nm,0.8s,baz=118,slow=18,SNR=3.2						
JKA	**Kamikawa-asahi**	**25.44**	**355**	P	**P**	**14 59 50.5**	**+0.7**
NJ2	**Nanjing**	**27.56**	**304**	*e*P	**P**	**15 00 08.3**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
PMG	**Port Moresby**	**28.00**	**177**	P	**P**	**15 00 12.6**	**-0.2**
	comp=Z,17nm,1.0s,baz=39,slow=6.5,SNR=4.9						
PMG	**Port Moresby**	**28.00**	**177**	P	**P**	**15 00 12.6**	**-0.2**
MRSI	**Marisa**	**29.55**	**235**	P	**P**	**15 00 27.7**	**+1.1**
	comp=Z,1μmcomp=Z,30nm,1.0s						
KLR	**Kul'dur**	**32.44**	**343**	P	**P**	**15 00 51.2**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=156,slow=6.9,SNR=13						
COEN	**Coen**	**32.58**	**185**	P	**P**	**15 00 52.4**	**-0.7**
TTSI	**Tana Toraja**	**33.43**	**232**	P	**P**	**15 01 01.4**	**+0.8**
	comp=Z,749nmcomp=Z,53nm,0.9s						
SPSI	**Sidrap Palu**	**34.08**	**231**	P	**P**	**15 01 05.7**	**-0.4**
	comp=Z,39nm,1.1s						
BNSI	**Bone**	**34.12**	**230**	P	**P**	**15 01 07.1**	**+0.6**
	comp=Z,43nm,1.3s						
MTN	**Manton Dam**	**34.51**	**206**	P	**P**	**15 01 09.6**	**-0.2**
SOEI	**Soe**	**35.34**	**219**	P	**P**	**15 01 15.8**	**-1.2**
SOEI				IAmb	IAmb	15 01 20.8	
	comp=Z,16nm,0.7s						
PETK	**Petropavlovsk-**	**35.55**	**12**	P	**P**	**15 01 19.5**	**+1.2**
	comp=Z,4.7nm,0.7s,baz=207,slow=12,SNR=8.6						
SBUM	**Sibu**	**36.56**	**248**	P	**P**	**15 01 27.0**	**-0.4**
HHC	**Hu-ho-hao-te**	**36.58**	**314**	*e*P	**P**	**15 01 28.9**	**+1.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,85nm,4.4s						
KNRA	**Kununurra**	**38.05**	**207**	P	**P**	**15 01 40.2**	**+0.5**
CTA	**Charters Tower**	**38.59**	**179**	P	**P**	**15 01 44.1**	**-0.1**
	comp=Z,5.8nm,0.9s,baz=50,slow=16,SNR=5.1						
WR0	**Warramunga Arr**	**39.98**	**196**	P	**P**	**15 01 56.0**	**+0.3**
WR0				IAmb	IAmb	15 01 58.2	
	comp=Z,18nm,1.1s						
WRAB	**Tennant Creek**	**40.01**	**197**	P	**P**	**15 01 56.5**	**+0.6**
WRAB				IAmb	IAmb	15 01 58.0	
	comp=Z,21nm,0.7s						
WRA	**Warramunga Arr**	**40.02**	**197**	P	**P**	**15 01 56.5**	**+0.4**
	comp=Z,18nm,0.6s,baz=20,slow=8.9,SNR=106						
WRA				ScP	**ScP**	**15 07 24.0**	**-3.2**
	comp=Z,2.1nm,0.7s,baz=14,slow=4.1,SNR=10						
LZH	**Lanzhou**	**40.63**	**304**	||P	**P**	**15 02 01.3**	**+0.1**
LZH				PP	**PP**	**15 03 41.5**	**+2.4**
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				pmax	pmax		
	comp=Z,75nm,5.5s						
FITZ	**Fitzroy Crossi**	**41.58**	**209**	P	**P**	**15 02 09.1**	**+0.3**
SONM	**Songino Array**	**43.12**	**321**	P	**P**	**15 02 20.8**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=138,slow=9.5,SNR=4.6						
SONM				PcP	**PP**	**15 04 06.3**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=132,slow=5.1,SNR=2.7						
SONM				ScP	**ScP**	**15 07 34.6**	**-4.7**
	comp=Z,0.6nm,0.7s,baz=147,slow=4.8,SNR=3.6						
AS31	**Alice Springs**	**43.69**	**196**	P	**P**	**15 02 26.0**	**+0.2**
ASAR	**Alice Springs**	**43.69**	**196**	P	**P**	**15 02 25.9**	**+0.2**
	comp=Z,3.7nm,0.7s,baz=18,slow=6.7,SNR=52						
ASAR				PcP	**PcP**	**15 04 08.8**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=37,slow=4.2,SNR=5.2						
ASAR				ScP	**ScP**	**15 07 39.0**	**-2.8**
	comp=Z,0.8nm,0.7s,baz=13,slow=3.9,SNR=7.3						
ASAR				S	**S**	**15 08 40.1**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=19,slow=18,SNR=5.3						
CMAR	**Chiang Mai Arr**	**44.22**	**277**	P	**P**	**15 02 31.1**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=68,slow=7.1,SNR=10						
CMAR				PcP	**PcP**	**15 04 11.0**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=102,slow=2.2,SNR=4.8						
SEY	**Seymchan**	**44.40**	**4**	P	**P**	**15 02 32.1**	**+1.2**
	comp=Z,5.7nm,0.9s,baz=194,slow=6.7,SNR=6.4						
YAK	**Yakutsk**	**44.69**	**349**	P	**P**	**15 02 32.6**	**-0.5**
	comp=Z,4.0nm,0.4s,baz=187,slow=1.9,SNR=9.4						
YAK	**Yakutsk**	**44.69**	**349**	IAmb	IAmb	15 02 34.5	
	comp=Z,9.9nm,0.7s						
DZM	**Mont Dzumac**	**45.34**	**153**	P	**P**	**15 02 39.2**	**+0.2**
	comp=Z,8.2nm,0.6s,baz=311,slow=5.0,SNR=9.3						
DZM	**Mont Dzumac**	**45.34**	**153**	IAmb	IAmb	15 02 44.8	
	comp=Z,32nm,1.2s						
STKA	**Stephens Creek**	**50.48**	**185**	P	**P**	**15 03 17.2**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=343,slow=14,SNR=6.2						
STKA	**Stephens Creek**	**50.48**	**185**	IAmb	IAmb	15 03 21.2	
	comp=Z,1.5nm,1.1s						
BILL	**Bilibino**	**50.98**	**10**	P	**P**	**15 03 21.6**	**+0.3**
BILL				IAmb	IAmb	15 03 23.6	
	comp=Z,21nm,1.0s						
WMQ	**Urumqi**	**54.29**	**311**	*e*P	**P**	**15 03 46.7**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,95nm,3.7s						
MORW	**Morawa**	**55.49**	**212**	P	**P**	**15 03 54.9**	**+0.2**
ANM	**Nome**	**56.16**	**23**	P	**P**	**15 03 59.8**	**+0.8**
ANM				IAmb	IAmb	15 04 01.2	
	comp=Z,11nm,1.0s						
ZALV	**Zalesovo Beam**	**57.99**	**322**	P	**P**	**15 04 10.9**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=104,slow=6.1,SNR=3.6						
ZALV				PcP	**pP**	**15 04 59.0**	**+2.7**
	comp=Z,1.6nm,0.7s,baz=117,slow=5.6,SNR=4.7						
MK31	**Makanchi Array**	**58.44**	**314**	P	**P**	**15 04 14.4**	**-0.9**
MKAR	**Makanchi Array**	**58.44**	**314**	P	**P**	**15 04 14.8**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=91,slow=8.8,SNR=18						
MAKZ	**Makanchi**	**58.66**	**314**	P	**P**	**15 04 15.9**	**-0.9**
SVW2	**Sparrevohn**	**58.79**	**29**	P	**P**	**15 04 18.5**	**+1.0**
SVW2				IAmb	IAmb	15 04 19.8	
	comp=Z,12nm,0.9s						
OHAK	**Old Harbor**	**58.82**	**34**	P	**P**	**15 04 17.7**	**+0.1**
KDAK	**Kodiak Island**	**59.32**	**33**	P	**P**	**15 04 22.0**	**+0.9**
	comp=Z,13nm,0.8s,baz=176,slow=1.7,SNR=13						
KDAK	**Kodiak Island**	**59.32**	**33**	IAmb	IAmb	15 04 22.6	
	comp=Z,22nm,0.9s						
BRLK	**Bradley Lake**	**60.66**	**31**	P	**P**	**15 04 30.4**	**+0.2**
PPLA	**Purkeypile**	**60.86**	**28**	P	**P**	**15 04 32.5**	**+0.9**
PPLA				IAmb	IAmb	15 04 50.8	
	comp=Z,18nm,1.4s						
SKT	**Skwentna**	**60.91**	**29**	P	**P**	**15 04 31.2**	**-0.6**
SKT				IAmb	IAmb	15 04 33.3	
	comp=Z,9.3nm,0.8s						
SUA	**Susitna One**	**61.13**	**29**	P	**P**	**15 04 34.0**	**+0.5**
KURK	**Kurchatov**	**61.25**	**318**	P	**P**	**15 04 32.9**	**-1.4**
SEW	**Seward**	**61.44**	**31**	P	**P**	**15 04 35.8**	**+0.5**
RC01	**Rabbit Creek A**	**61.52**	**30**	P	**P**	**15 04 36.1**	**+0.2**
KTH	**Kantishna Hill**	**61.60**	**27**	P	**P**	**15 04 37.5**	**+1.0**
BPAW	**Bear Paw Mtn.**	**61.72**	**26**	P	**P**	**15 04 38.2**	**+0.9**
TRF	**Thorofare Moun**	**61.84**	**27**	P	**P**	**15 04 37.2**	**-1.1**
PMR	**Palmer**	**61.92**	**29**	P	**P**	**15 04 38.7**	**+0.2**
PMR				IAmb	IAmb	15 04 39.5	
	comp=Z,15nm,1.0s						
GHO	**Glory Hole Cre**	**62.05**	**29**	P	**P**	**15 04 39.8**	**+0.2**
GHO				IAmb	IAmb	15 04 40.7	
	comp=Z,13nm,0.8s						
MLY	**Manley**	**62.08**	**25**	P	**P**	**15 04 40.3**	**+0.7**
MLY				IAmb	IAmb	15 04 41.5	
	comp=Z,10nm,0.8s						
KNK	**Knik Glacier**	**62.19**	**30**	P	**P**	**15 04 41.3**	**+0.9**
SML	**Sawmill**	**62.34**	**29**	P	**P**	**15 04 42.1**	**+0.6**
RND	**Reindeer**	**62.46**	**27**	P	**P**	**15 04 41.4**	**-0.8**
NEA	**Nenana**	**62.65**	**26**	P	**P**	**15 04 43.2**	**-0.1**
SCM	**Sheep Creek Mo**	**62.81**	**29**	P	**P**	**15 04 43.9**	**-0.7**
KSH	**Kashi**	**62.86**	**305**	P	**P**	**15 04 56.1**	**+11**
KSH				PP	**PP**	**15 07 09.2**	**+3.2**
KSH				S	S	15 13 25.2	+26
KSH				sS	sS	15 13 33.3	-44
KSH	**Kashi**	**62.86**	**305**	SS	SS	15 17 21.4	+14
KSH				pmax	pmax		
	comp=Z,38nm,0.9s						
KSH				pmax	pmax		
	comp=Z,190nm,4.3s						
KSH				LR	LR		
	comp=N,140nm,6.0s						
KSH				LR	LR		
	comp=E,110nm,3.8s						
KSH				LR	LR		
	comp=Z,260nm,5.5s						
WRH	**Wood River Hil**	**63.04**	**26**	P	**P**	**15 04 44.7**	**-1.2**
WRH				IAmb	IAmb	15 04 46.6	
	comp=Z,6.1nm,0.7s						
HDA	**Harding Lake**	**63.51**	**27**	P	**P**	**15 04 48.3**	**-0.7**
TOLK	**Toolik Lake Re**	**63.56**	**22**	P	**P**	**15 04 50.6**	**+1.3**
TOLK				IAmb	IAmb	15 04 51.5	
	comp=Z,13nm,1.0s						
IL31		**63.61**	**26**	P	**P**	**15 04 47.9**	**-1.8**
IL31				IAmb	IAmb	15 04 49.9	
	comp=Z,9.1nm,0.9s						
ILAR	**Eielson Array**	**63.61**	**26**	P	**P**	**15 04 48.8**	**-0.9**
	comp=Z,5.7nm,0.8s,baz=254,slow=4.6,SNR=39						
URZ	**Urewera**	**63.90**	**153**	P	**P**	**15 04 51.3**	**-0.6**
	comp=Z,5.4nm,0.7s,baz=173,slow=16,SNR=4.4						
RIDG	**Independent Ri**	**64.28**	**28**	P	**P**	**15 04 54.2**	**+0.1**
RIDG				IAmb	IAmb	15 04 55.5	
	comp=Z,9.5nm,0.8s						
GLB	**Gilahina Butte**	**64.40**	**30**	P	**P**	**15 04 55.9**	**+0.9**
GLB				IAmb	IAmb	15 04 57.5	
	comp=Z,14nm,1.0s						
VRDI	**Verde Repeater**	**64.54**	**30**	P	**P**	**15 04 56.7**	**+0.6**
VRDI				IAmb	IAmb	15 04 57.7	
	comp=Z,8.6nm,0.9s						
DOT	**Dot Lake**	**64.61**	**28**	P	**P**	**15 04 54.5**	**-1.8**
DOT				IAmb	IAmb	15 04 57.5	
	comp=Z,9.8nm,0.8s						
CRQM	**Cirque**	**64.63**	**31**	P	**P**	**15 04 56.3**	**-0.4**
FYU	**Fort Yukon**	**64.66**	**24**	P	**P**	**15 04 57.5**	**+1.1**
FYU				IAmb	I

U15A					IAmb	IAmb	15 07 12.6	
	comp=Z,7.8nm,0.9s							
ULM	**Lac du Bonnet**	**92.56**	**34**	P		**P**	**15 07 29.0**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=314,slow=4.8,SNR=4.7							
BRTR	**Keskin Array B**	**94.09**	**314**	P		**P**	**15 07 34.3**	**-2.2**
	comp=Z,0.4nm,0.5s,baz=75,slow=4.4,SNR=3.4							
SNAA	**Sanae**	**123.96**	**191**	PKP		**PKPdf**	**15 13 12.2**	**-1.9**
	comp=Z,1.1nm,0.7s,baz=185,slow=14,SNR=3.6							
GO04	**Tololo Observa**	**145.01**	**116**			**PKPbc**	**15 13 55.3**	**+0.9**
PB11	**IPOC Station P**	**146.63**	**98**			**PKPbc**	**15 14 00.6**	**+1.1**
MNMC	**Minye Minye**	**146.64**	**97**			**PKPbc**	**15 14 00.9**	**+1.2**
LPAZ	**La Paz**	**147.66**	**91**	PKPbc		**PKPbc**	**15 14 03.8**	**+0.8**
	comp=Z,3.1nm,0.7s,baz=299,slow=3.1,SNR=8.5							
SAML	**Samuel**	**150.35**	**75**			**PKPbc**	**15 14 08.9**	**0.0**

*VAO **10** 14:59:27.4±0.7,27°.05S×66°.88W,h10km,mb5.2*
*SJA **10** 14:59:38.4±0.6,27°.96S×66°.68W,h200km±4km,ML4.5, MW4.2*
*NEIC **10** 14:59:38.8±2.1,27°.95S±0°.04×66°.56W±0°.09,h151km±5km, mb4.8/26,Error ellipse: s-maj=11.4km s-min=5.9km az=80.0*
*IDC **10** 14:59:40.8±0.6,27°.90S×66°.51W,h165km±5km,mb4.2/13, mb1 4.4/19,mb1mx4.3/28,mbtmp4.8/19,MS2.9/1, Ms1 2.9/1,ms1mx2.6/18,Error ellipse: s-maj=14.5km s-min=10.3km az=93.0*
*BJI **10** 14:59:41.6±0.0,27°.90S×66°.60W,h158km,mB5.4/3*

ISC 10 14:59:39.9±0.3,27°.94S±0°.04×66°.69W±0°.04,h167km, n147,σ1s42/166,mb4.7/28,5C,Catamarca Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CYA	**Choya**	**0.93**	**123**	⇑*iP*		**Pn**	**15 00 07.5**	**+1.7**
CYA				*i*	S	**Sn**	**15 00 26.2**	**+0.4**
CYA					IAML		15 00 27.9	
	comp=E,3μm,0.5s							
CYA	**Choya**	**0.93**	**123**	*i*	P	**Pn**	**15 00 07.6**	**+1.7**
CYA					IAML		15 00 29.6	
	comp=Z,1μm,0.5s							
CYA				*i*	S	**Sn**	**15 00 29.9**	**+4.1**
ACLC	**CERRO LA CRUZ**	**1.50**	**189**	*i*	P	**Pn**	**15 00 12.3**	**+1.3**
AHML	**Horco Molle**	**1.67**	**47**	*i*	P	**Pn**	**15 00 13.9**	**+1.3**
AHML				*i*	S	**Sn**	**15 00 38.0**	**+0.2**
AHML					IAML		15 00 39.3	
	comp=E,2μm,0.5s							
AHML	**Horco Molle**	**1.67**	**47**	*i*	P	**Pn**	**15 00 13.9**	**+1.3**
AHML					IAML		15 00 14.0	
	comp=Z,2μm,0.3s							
AGUA	**GUANDACOL**	**2.21**	**225**	*i*	P	**Pn**	**15 00 19.9**	**+1.3**
AGUA				*i*	S	**Sn**	**15 00 50.2**	**+1.7**
APLL	**PUNTA DE LOS L**	**2.45**	**177**	*i*	P	**Pn**	**15 00 22.1**	**+0.8**
GO03	**Copiap**	**3.16**	**275**	⇑*iP*		**Pn**	**15 00 30.8**	**+0.8**
GO03	**Copiap**	**3.16**	**275**			**Pn**	**15 00 30.8**	**+0.8**
GO03	**Copiap**	**3.16**	**275**	*i*	P	**Pn**	**15 00 30.5**	**+0.5**
GO03				*i*	S	**Sn**	**15 01 09.4**	**+0.4**
AMOG	**MOGNA**	**3.38**	**207**	*i*	P	**Pn**	**15 00 32.9**	**+0.2**
AMOG				*i*	S	**Sn**	**15 01 13.1**	**-0.8**
SLA	**San Lorenzo**	**3.38**	**19**	*i*	S	**Sn**	**15 01 14.9**	**+0.8**
RTLL	**Cerro Villicun**	**3.72**	**204**	*i*	P	**Pn**	**15 00 37.1**	**+0.1**
RTLL				*i*	S	**Sn**	**15 01 20.9**	**-0.7**
GO02	**Mina Guanaco**	**3.79**	**316**	⇑*iP*		**Pn**	**15 00 40.1**	**+1.7**
GO02					IAML		15 01 26.4	
	comp=N,821nm,0.8s							
GO02	**Mina Guanaco**	**3.79**	**316**			**Pn**	**15 00 40.3**	**+1.9**
TCA	**Tanti**	**3.84**	**152**	*i*	P	**Pn**	**15 00 39.2**	**+0.5**
TCA					IAML		15 00 39.9	
	comp=Z,1μm,0.3s							
TCA				*i*	S	**Sn**	**15 01 23.3**	**-1.3**
CFA	**Coronel Fontan**	**3.89**	**200**	P		**Pn**	**15 00 39.3**	**+0.1**
	comp=Z,416nm,0.3s,baz=38,slow=15,SNR=4846							
CFA					S	**Sn**	**15 01 23.4**	**-2.2**
	comp=Z,1μm,0.3s,baz=248,slow=21,SNR=47							
CFA	**Coronel Fontan**	**3.89**	**200**	*i*	P	**Pn**	**15 00 39.3**	**+0.1**
ZON	**Zonda**	**3.99**	**205**	*i*	P	**Pn**	**15 00 40.5**	**+0.1**
ZON				*i*	S	**Sn**	**15 01 26.5**	**-1.3**
GO04	**Tololo Observa**	**4.23**	**237**			**Pn**	**15 00 43.7**	**0.0**
LSCH	**La Serena**	**4.45**	**243**	*i*	P	**Pn**	**15 00 45.4**	**-0.9**
PB15	**IPOC Station P**	**5.34**	**331**	*i*	P	**Pn**	**15 00 59.0**	**+0.7**
PB10	**IPOC Station P**	**5.62**	**321**			**Pn**	**15 01 02.1**	**+0.3**
LVC	**Limon Verde**	**5.67**	**339**	P		**Pn**	**15 01 03.7**	**+0.8**
	comp=Z,89nm,0.3s,baz=158,slow=11,SNR=336							
LVC					S	**Sn**	**15 02 07.0**	**-0.9**
	comp=Z,45nm,0.3s,baz=270,slow=22,SNR=23							
PEL	**Peldehue**	**6.22**	**213**			**Pn**	**15 01 08.6**	**-1.2**
ROC1	**El Roble**	**6.25**	**216**			**Pn**	**15 01 08.3**	**-2.0**
PB04	**IPOC Station P**	**6.40**	**330**			**Pn**	**15 01 11.8**	**-0.5**
GO05	**Huala**	**8.35**	**211**			**Pn**	**15 01 33.8**	**-4.0**
CPUP	**Villa Florida**	**8.49**	**81**	P		**Pn**	**15 01 38.5**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=265,slow=12,SNR=50							
CPUP					LR	LR	15 05 13.9	
	comp=Z,82nm,19.0s,baz=214,slow=40							
CPUP	**Villa Florida**	**8.49**	**81**			**Pn**	**15 01 38.1**	**-1.7**
GO01	**Chusmiza**	**8.55**	**344**			**Pn**	**15 01 39.7**	**-1.4**
PB11	**IPOC Station P**	**8.58**	**341**			**Pn**	**15 01 38.7**	**-2.5**
MNMC	**Minye Minye**	**9.16**	**343**			**Pn**	**15 01 48.6**	**-0.4**
LPAZ	**La Paz**	**11.67**	**353**	P		**Pn**	**15 02 21.9**	**-0.3**
	comp=Z,11nm,0.3s,baz=159,slow=5.9,SNR=142							
CPSB	**Cacapava Do Su**	**11.84**	**105**	*eP*		**Pn**	**15 02 22.2**	**-1.5**
PLTB	**Pedras Altas**	**11.98**	**112**	*eP*		**Pn**	**15 02 24.2**	**-1.3**
GO06	**Curarrehue**	**12.27**	**198**			**Pn**	**15 02 27.9**	**-1.3**
ITAB	**Concordia**	**12.94**	**90**	*eP*		**Pn**	**15 02 34.5**	**-3.3**
SIV	**San Ignacio**	**12.98**	**25**	P		**Pn**	**15 02 37.6**	**-0.8**
	comp=Z,2.9nm,0.3s,baz=223,slow=14,SNR=122							
PLCA	**Paso Flores**	**13.15**	**193**	P		**Pn**	**15 02 40.5**	**+0.1**
	comp=Z,2.0nm,0.3s,baz=40,slow=16,SNR=30							
PLCA	**Paso Flores**	**13.15**	**193**	P		**Pn**	**15 02 40.9**	**+0.5**
PTGB	**Pitanga**	**13.51**	**80**	*eP*		**Pn**	**15 02 40.4**	**-4.6**
CNLB	**Canela**	**13.98**	**99**	*eP*		**Pn**	**15 02 51.1**	**+0.1**
SPB	**Sao Paulo**	**17.88**	**80**	*eP*		**P**	**15 03 37.2**	**+0.5**
SPB	**Sao Paulo**	**17.88**	**80**			**P**	**15 03 37.0**	**+0.4**
SPB					IAmb	IAmb	15 03 43.3	
	comp=Z,48nm,0.9s							
BB19B	**Bebedouro**	**17.88**	**71**	*eP*		**P**	**15 03 36.6**	**-0.2**
RCLB	**Rio Claro- Sao**	**18.19**	**77**	*eP*		**P**	**15 03 40.4**	**+0.2**
VAO	**Valinhos**	**18.47**	**79**	*eP*		**P**	**15 03 43.6**	**+0.3**
SAML	**Samuel**	**19.18**	**11**	P		**P**	**15 03 50.7**	**-0.2**
IPMB	**Ipameri, GO**	**19.67**	**64**	*eP*		**P**	**15 03 55.0**	**-1.2**
ESAR	**Angra dos Reis**	**20.67**	**81**	*eP*		**P**	**15 04 06.8**	**0.0**
PMNB	**Patos De Minas**	**20.81**	**68**	*eP*		**P**	**15 04 07.7**	**-0.8**
BSCB	**Bom Sucesso**	**21.10**	**76**	*eP*		**P**	**15 04 11.0**	**-0.5**
BDFB	**Brasilia**	**21.19**	**59**	P		**P**	**15 04 11.3**	**-1.3**
	comp=Z,28nm,0.4s,baz=235,slow=11,SNR=50							
BDFB	**Brasilia**	**21.19**	**59**	P		**P**	**15 04 09.9**	**-2.7**
BDFB					IAmb	IAmb	15 04 13.0	
	comp=Z,60nm,1.0s							
VAS01	**Vassouras-RJ**	**21.78**	**80**	*eP*		**P**	**15 04 18.6**	**-0.1**
PEXB	**Peixe**	**23.33**	**51**	*eP*		**P**	**15 04 31.2**	**-2.2**
EFI	**East Falkland**	**24.58**	**167**	P		**P**	**15 04 44.8**	**+0.5**
GO10	**Punta Arenas**	**25.39**	**186**	P		**P**	**15 04 53.0**	**+1.3**
SMTB	**Santa Maria do**	**26.17**	**47**	*eP*		**P**	**15 04 58.8**	**-0.3**
USHA	**Ushuaia**	**26.90**	**182**	P		**P**	**15 05 06.0**	**+0.9**
	comp=Z,7.5nm,0.7s,baz=36,slow=14,SNR=5.2							
FLOC	**Florencia**	**30.59**	**342**	P		**P**	**15 05 40.2**	**+2.0**
SOTA	**Rioblanco**	**31.39**	**341**	*eP*		**P**	**15 05 49.1**	**+3.3**
BBAC	**Balboa, Cauca**	**31.47**	**339**	*eP*		**P**	**15 05 48.0**	**+1.8**
PCON	**Cinco Dias**	**31.51**	**341**	*eP*		**P**	**15 05 48.0**	**+1.1**
POPC	**Popayan, Colom**	**31.79**	**341**	*eP*		**P**	**15 05 51.6**	**+2.6**
ORTC	**Ortega, Tolima**	**32.72**	**344**	*eP*		**P**	**15 05 56.9**	**0.0**
CHIC	**Chingaza**	**33.09**	**347**	*eP*		**P**	**15 05 59.6**	**-0.9**
NBPS	**Pedro II - PI**	**33.55**	**50**	*eP*		**P**	**15 06 03.1**	**-1.1**
RREF	**El Recreo**	**33.70**	**344**	*eP*		**P**	**15 06 07.8**	**+1.7**
GUY2C	**Guyana, Caldas**	**34.02**	**344**	*eP*		**P**	**15 06 10.2**	**+1.6**
RUSC	**La Rusia**	**34.20**	**349**	*eP*		**P**	**15 06 08.5**	**-1.7**
RUSC	**La Rusia**	**34.20**	**349**	P		**P**	**15 06 10.6**	**+0.4**
NORC	**Norcasia**	**34.23**	**345**	*eP*		**P**	**15 06 09.4**	**-0.6**
CBOC	**Ciudad Bolivar**	**34.79**	**344**	*eP*		**P**	**15 06 15.6**	**+0.7**
PTBC	**PUERTO BERRIO,**	**35.09**	**346**	*eP*		**P**	**15 06 14.7**	**-2.6**
PAMC	**Pamplona, Colo**	**35.55**	**350**	*eP*		**P**	**15 06 20.9**	**-0.8**
ZARC	**Zaragoza, Cauc**	**36.10**	**346**	*eP*		**P**	**15 06 23.7**	**-2.2**
SOCV	**Socops**	**36.24**	**353**	*eP*		**P**	**15 06 26.1**	**-1.0**
SDV	**Santo Domingo**	**36.81**	**353**	*eP*		**P**	**15 06 30.8**	**-1.2**
SDV	**Santo Domingo**	**36.81**	**353**	P		**P**	**15 06 31.0**	**-1.1**
SDV					IAmb	IAmb	15 06 32.7	
	comp=Z,9.9nm,0.8s							
SMLC	**San Martn de**	**37.22**	**348**	*eP*		**P**	**15 06 32.5**	**-2.9**
ARGC	**Ariguani, Magd**	**38.28**	**348**	*eP*		**P**	**15 06 43.5**	**-0.8**
SJCC	**San Jacinto, C**	**38.50**	**346**	*eP*		**P**	**15 06 45.8**	**-0.4**
VNA3	**Neumayer Olymp**	**53.36**	**160**	P		**P**	**15 08 42.8**	**+1.1**
VNA1	**Neumayer--Stat**	**53.57**	**159**	P		**P**	**15 08 41.5**	**-1.6**
SNAA	**Sanae**	**55.56**	**160**	P		**P**	**15 08 58.5**	**+1.0**
SNAA	**Sanae**	**55.56**	**160**	P		**P**	**15 08 58.5**	**+1.0**
	comp=Z,12nm,0.6s,baz=280,slow=8.0,SNR=100							
SNAA	**Sanae**	**55.56**	**160**	P		**P**	**15 08 58.6**	**+1.0**
QSPA	**South Pole Qui**	**62.28**	**180**	P		**P**	**15 09 45.7**	**+1.7**
833A	**Chaparral WMA,**	**64.13**	**328**	P		**P**	**15 09 55.6**	**-0.8**
833A					IAmb	IAmb	15 09 58.9	
	comp=Z,13nm,0.7s							
X48A	**Hartselle**	**64.98**	**342**	P		**P**	**15 10 01.7**	**-0.1**
X48A					IAmb	IAmb	15 10 03.0	
	comp=Z,16nm,1.2s							
JCT	**Junction City**	**66.14**	**329**	P		**P**	**15 10 10.5**	**+1.1**
JCT					IAmb	IAmb	15 10 11.5	
	comp=Z,9.4nm,0.8s							
WVT	**Waverly**	**66.77**	**341**	P		**P**	**15 10 12.4**	**-0.8**
WVT					IAmb	IAmb	15 10 13.9	
	comp=Z,14nm,0.7s							
TXAR	**Lajitas Array**	**67.05**	**325**	P		**P**	**15 10 16.8**	**+1.5**
	comp=Z,0.7nm,0.6s,baz=144,slow=9.0,SNR=8.2							
P57A	**Homestead Farm**	**67.90**	**351**	P		**P**	**15 10 21.5**	**+1.2**
P57A					IAmb	IAmb	15 10 22.5	
	comp=Z,8.7nm,0.5s							
PBMO	**Poplar Bluff**	**68.14**	**340**	P		**P**	**15 10 22.4**	**+0.6**
PBMO					IAmb	IAmb	15 10 23.1	
	comp=Z,14nm,0.8s							
LIC	**Lamto**	**68.45**	**70**	*eP*		**P**	**15 10 23.0**	**-1.3**
	comp=Z,8.1nm,0.4s							
TIC	**Toumodi**	**68.69**	**70**	*eP*		**P**	**15 10 24.6**	**-1.2**
	comp=Z,11nm,0.5s							
KIC	**Kosan Boka**	**68.77**	**70**	*eP*		**P**	**15 10 25.3**	**-0.9**
	comp=Z,21nm,0.6s							
DBIC	**Dimbokro**	**68.84**	**70**	P		**P**	**15 10 25.9**	**-0.8**
	comp=Z,7.2nm,0.3s,baz=206,slow=4.2,SNR=35							
DBIC	**Dimbokro**	**68.84**	**70**	P		**P**	**15 10 25.8**	**-0.9**
DBIC					IAmb	IAmb	15 10 26.6	
	comp=Z,14nm,0.8s							
CCM	**Cathedral Cave**	**69.56**	**340**	P		**P**	**15 10 30.2**	**-0.3**
CCM					IAmb	IAmb	15 10 31.9	
	comp=Z,11nm,0.7s							
SYO	**Syowa Base**	**69.79**	**158**	⇑*eP*		**P**	**15 10 31.4**	**-0.2**
VNDA	**Vanda**	**70.88**	**190**	P		**P**	**15 10 40.3**	**+2.2**
	comp=Z,4.4nm,0.8s,baz=141,slow=4.8,SNR=12							
L40A	**Anamosa**	**73.25**	**341**	P		**P**	**15 10 52.9**	**+0.3**
L40A					IAmb	IAmb	15 10 53.7	
	comp=Z,12nm,0.8s							
ECSD	**EROS Data Cent**	**76.42**	**338**	P		**P**	**15 11 10.7**	**-0.1**
MAW	**Mawson**	**77.61**	**162**	P		**P**	**15 11 18.6**	**+1.5**
	comp=Z,4.3nm,0.4s,baz=218,slow=8.9,SNR=9.6							
MAW	**Mawson**	**77.61**	**162**	P		**P**	**15 11 17.9**	**+0.8**
TORD	**Torodi Ar. Bea**	**77.75**	**68**	P		**P**	**15 11 18.4**	**-0.4**
	comp=Z,15nm,0.7s,baz=259,slow=5.4,SNR=82							
TORD					pP	**pP**	**15 11 60.0**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=220,slow=8.1,SNR=1.2							
BOSA	**Boshof**	**78.72**	**116**	P		**P**	**15 11 24.8**	**+0.6**
	comp=Z,14nm,1.1s,baz=253,slow=3.5,SNR=13							
BOSA	**Boshof**	**78.72**	**116**	P		**P**	**15 11 24.9**	**+0.6**
BOSA					IAmb	IAmb	15 11 25.9	
	comp=Z,24nm,1.4s							
LBTB	**Lobatse**	**80.56**	**113**	P		**P**	**15 11 34.7**	**+0.5**
PD31	**Pinedale Array**	**80.67**	**329**	P		**P**	**15 11 34.0**	**-0.3**
PDAR	**Pinedale Array**	**80.67**	**329**	P		**P**	**15 11 35.5**	**+1.2**
	comp=Z,1.2nm,0.6s,baz=125,slow=7.9,SNR=8.5							
NVAR	**Mina Array Bea**	**81.78**	**322**	P		**P**	**15 11 41.9**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=145,slow=4.9,SNR=3.0							
ULM	**Lac du Bonnet**	**82.04**	**342**	P		**P**	**15 11 41.6**	**+0.5**
	comp=Z,2.0nm,0.5s,baz=147,slow=2.7,SNR=5.7							
ULM	**Lac du Bonnet**	**82.04**	**342**	P		**P**	**15 11 41.0**	**0.0**
PBEJ	**Beja**	**85.66**	**43**	*eP*		**P**	**15 12 01.2**	**+1.5**
PMTG	**Montargil**	**86.12**	**42**	*eP*		**P**	**15 12 03.1**	**+1.1**
	comp=Z,25nm,3.0s							
PCAS	**Casmilo, Conde**	**86.61**	**41**	*eP*		**P**	**15 12 06.0**	**+1.7**
PMRV	**Marv??o**	**86.85**	**42**	*eP*		**P**	**15 12 06.8**	**+1.3**
	comp=Z,19nm,1.9s							
PCBR	**Castelo Branco**	**87.06**	**41**	*eP*		**P**	**15 12 08.1**	**+1.6**
MTE	**Mateigas**	**87.39**	**41**	*eP*		**P**	**15 12 09.8**	**+1.6**
PVRL	**Vila Real**	**87.86**	**40**	*eP*		**P**	**15 12 12.7**	**+2.4**
POLO	**Lamas de Olo**	**87.88**	**40**	*eP*		**P**	**15 12 12.2**	**+1.7**
	comp=Z,13nm,1.6s							
ESDC	**Sonseca Array**	**89.06**	**43**	P		**P**	**15 12 17.1**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=237,slow=4.7,SNR=7.4							
YKA	**Yellowknife Ar**	**97.90**	**340**	P		Pdif	15 12 56.5	+0.5
	comp=Z,0.4nm,0.6s,baz=134,slow=4.3,SNR=11							
ARCES	**ARCESS Array B**	**116.63**	**23**	PKP		**PKiKP**	**15 18 03.9**	**+0.7**
	comp=Z,1.5nm,0.9s,baz=246,slow=4.5,SNR=3.1							
ASAR	**Alice Springs**	**124.98**	**203**	PKP		**PKiKP**	**15 18 21.1**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=133,slow=1.7,SNR=72							
ASAR					pPKP	**pPKPdf**	**15 19 03.9**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=134,slow=1.9,SNR=3.3							
AS31	**Alice Springs**	**124.98**	**203**			**PKiKP**	**15 18 21.3**	**+0.1**
WRA	**Warramunga Arr**	**128.23**	**205**	PKP		**PKiKP**	**15 18 27.7**	**0.0**
	comp=Z,1.6nm,0.3s,baz=154,slow=2.0,SNR=40							
WRA					pPKP	**pPKPdf**	**15 19 10.3**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=169,slow=1.7,SNR=5.3							
FITZ	**Fitzroy Crossi**	**132.70**	**196**	PKP		**PKiKP**	**15 18 36.5**	**-0.2**
	comp=Z,1.3nm,0.4s,baz=252,slow=3.7,SNR=7.1							
YAK	**Yakutsk**	**144.22**	**347**			**PKPdf**	**15 18 54.9**	**-0.2**
KURK	**Kurchatov**	**145.31**	**39**			**PKPab**	**15 18 59.5**	**+1.6**
AAK	**Ala-Archa**	**145.41**	**55**			**PKiKP**	**15 19 00.6**	**-1.5**
FRU1	**Bishkek**	**145.47**	**54**			**PKPab**	**15 19 00.4**	**+1.5**
SIJI	**Sorong**	**146.56**	**214**	PKPbc		**PKPab**	**15 19 03.8**	**+0.1**
	comp=Z,11nm,0.5s,baz=15,slow=10,SNR=6.1							
ZAA0	**Zalesovo Array**	**146.68**	**31**			**PKPab**	**15 19 03.3**	**+0.2**
ZALV	**Zalesovo Beam**	**146.68**	**31**	PKPbc		**PKPbc**	**15 19 01.7**	**+0.2**
	comp=Z,7.9nm,0.3s,baz=300,slow=3.5,SNR=38							
ZALV					pPKPbc	pPKPbc	15 19 45.5	+0.1
	comp=Z,7.7nm,0.9s,baz=300,slow=3.2,SNR=2.0							
KSH	**Kashi**	**147.09**	**60**	PKPbc		**PKPbc**	**15 19 04.2**	**+0.8**
KSH					pPKP	pPKPdf	15 19 42.1	-3.1
KSH					PP	**PP**	**15 22 31.9**	**+1.8**
KSH					SKS	**SKSdf**	**15 25 52.5**	**-1.6**
KSH					SKKS	**SKKSac**	**15 29 02.1**	**-3.1**
KSH					SS	**SS**	**15 41 13.7**	**-4.2**
KSH					AMB	AMB		
	comp=Z,230nm,6.5s							
MKAR	**Makanchi Array**	**149.27**	**44**	PKPbc		**PKiKP**	**15 19 09.8**	**0.0**
	comp=Z,7.7nm,0.8s,baz=296,slow=2.8,SNR=57							
MKAR					pPKPbc	**pPKPbc**	**15 19 53.0**	**+0.4**
	comp=Z,2.5nm,0.7s,baz=291,slow=4.5,SNR=2.1							
WMQ	**Urumqi**	**154.04**	**46**	*eP*	PKPbc	**PKPdf**	**15 19 10.7**	**-0.8**
SONM	**Songino Array**	**159.42**	**13**	PKP		**PKPdf**	**15 19 19.7**	**+1.4**
	comp=Z,1.0nm,1.1s,baz=297,slow=0.7,SNR=3.8							
SONM					PKPab	**PKPab**	**15 19 57.7**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=334,slow=4.7,SNR=5.8							
LZH	**Lanzhou**	**168.58**	**42**	⇑PKP		**PKPdf**	**15 19 24.6**	**-2.5**
LZH					pPKP	pPKPdf	15 20 07.5	-4.1
LZH					sPKP		15 20 24.2	
CD2	**Chengdu**	**171.16**	**68**	PKP		**PKPdf**	**15 19 26.3**	**-2.3**
NJ2	**Nanjing**	**173.68**	**312**	*ePKP*		**PKPdf**	**15 19 29.1**	**-0.4**

*IDC **10** 15:15:39.3±1.5,5°.39S×152°.63E,h0km,mb3.8/3, mb1 4.1/4,mb1mx3.6/34,mbtmp3.8/4,ML2.1/1,Error ellipse: s-maj=30.5km s-min=13.9km az=81.0*

ISC 10 15:15:45.4±1.6,5°.3S±0°.1×152°.5E±0°.2,h40km,n6,σ0s84/7, mb3.7/3,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.08**	**336**	Pg		**Pn**	**15 16 04.5**	**+0.4**
	206nm,0.3s,baz=163,slow=1.0,SNR=209							
KRVT				Lg		Lg	15 16 18.4	
	308nm,0.3s,baz=357,slow=22,SNR=53							
PMG	**Port Moresby**	**6.67**	**232**	Pn		**Pn**	**15 17 21.8**	**+1.0**
	2.0nm,0.3s,baz=44,slow=13,SNR=12							
PMG					Sn	**Sn**	**15 18 35.3**	**-0.3**
	1.1nm,0.3s,baz=331,slow=19,SNR=3.0							
WRA	**Warramunga Arr**	**22.87**	**229**	P		**P**	**15 20 44.5**	**-1.2**
	1.3nm,0.6s,baz=54,slow=10,SNR=9.8							
ASAR	**Alice Springs**	**25.57**	**223**	P		**P**	**15 21 10.3**	**-0.5**
	1.3nm,0.6s,baz=58,slow=8.7,SNR=27							
ILAR	**Eielson Array**	**82.74**	**22**	P		**P**	**15 28 05.0**	**+0.2**
	0.8nm,0.7s,baz=248,slow=5.3,SNR=7.3							
TORD	**Torodi Ar. Bea**	**150.15**	**287**	PKPbc		**PKPbc**	**15 35 32.9**	**-0.2**
	0.6nm,0.8s,baz=105,slow=3.2,SNR=2.7							

*GCG **10** 15:29:58.6±0.4,14°.19N×91°.71W,h54km±69km,MD3.8*
*SNET **10** 15:29:59.4±1.5,14°.10N×91°.47W,h15km±12km,ML3.4*

ISC 10 15:29:56.4±4.0,14°.0N±0°.2×91°.8W±0°.2,h54km,n9, σ0s96/12,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
STG3	**Santiaguito 3,**	**0.77**	**19**	*eP*		**Pn**	**15 30 11.3**	**-0.1**
FUG	**Fuego 3**	**1.06**	**64**	*eP*		**Pn**	**15 30 15.3**	**+0.1**
PCG	**Pacaya**	**1.25**	**71**	*eP*		**Pn**	**15 30 18.7**	**+0.9**
PCG					*eS*	**Sn**	**15 30 34.2**	**+0.4**
IXG	**Ixpaco**	**1.35**	**82**	*eP*		**Pn**	**15 30 18.5**	**-0.6**
IXG	**Ixpaco**	**1.35**	**82**	*eP*		**Pn**	**15 30 20.3**	**+1.1**
FAME	**Alcalda de S**	**1.76**	**94**	*eP*		**Pn**	**15 30 23.5**	**-1.0**
CEVE	**Cerro Verde**	**2.14**	**94**	*eP*		**Pn**	**15 30 31.0**	**+1.1**
CEVE					*eS*	**Sn**	**15 30 54.8**	**-0.7**
CEVE					IAML		15 31 06.2	
	comp=Z,320nm,0.2s							
SBLS	**San Blas**	**2.14**	**93**	*eP*		**Pn**	**15 30 31.3**	**+1.3**
SBLS					*eS*	**Sn**	**15 30 54.5**	**-1.0**
MTO3	**Montecristo**	**2.42**	**80**	*eP*		**Pn**	**15 30 33.7**	**-0.1**

*JMA **10** 15:43:26.6±0.2,34°.39N×136°.07E,h389km±2km,M3.3*
*IDC **10** 15:43:27.4±1.0,34°.46N×135°.95E,h382km±19km,mb2.7/4, mb1 3.0/8,mb1mx2.7/43,mbtmp3.6/8,Error ellipse: s-maj=29.8km s-min=17.7km az=49.0*

ISC 10 15:43:26.9±0.8,34°.43N±0°.09×136°.07E±0°.07,h385km±7km, n28,σ0s71/36,mb3.0/4,Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JNTK	**Naratenkawa**	**0.22**	**224**	P		**Pn**	**15 44 15.0**	**+0.1**
JWY	**Kouya**	**0.45**	**242**	P		**Pn**	**15 44 15.5**	**+0.4**
JWY					*eS*	**S**	**15 44 53.4**	**-0.6**
JIE	**Ise**	**0.53**	**94**	P		**Pn**	**15 44 15.8**	**+0.7**
JIE					*eS*	**S**	**15 44 53.9**	**-0.1**
JTNC	**Tanabenakahech**	**0.72**	**212**	P		**Pn**	**15 44 15.8**	**+0.1**
JTNC					*eS*	**S**	**15 44 54.0**	**-0.9**
JEG	**Eigenji**	**0.75**	**21**	P		**Pn**	**15 44 16.4**	**+0.8**
JWT	**Wachi**	**1.01**	**327**	P		**Pn**	**15 44 16.7**	**+0.3**
JYTA	**Yamagatataniai**	**1.28**	**25**	P		**Pn**	**15 44 18.2**	**+0.7**
JAO	**Obara**	**1.28**	**49**	P		**Pn**	**15 44 18.3**	**+0.7**
HMMJ	**Hamamatsu 2**	**1.43**	**72**	P		**Pn**	**15 44 18.9**	**+0.7**
JAI	**Aioi**	**1.49**	**245**	P		**Pn**	**15 44 18.6**	**0.0**
JAI					S	**S**	**15 44 59.7**	**-0.5**

comp=Z,0.5nm,0.6s,baz=147,slow=7.8,SNR=6.6
DBIC Dimbokro 70.14 70 P **P** 15 55 11.5 **+0.7**
comp=Z,1.7nm,0.5s,baz=195,slow=5.6,SNR=5.3
TORD Torodi Ar. Bea 79.09 68 P **P** 15 56 04.0 **+1.5**
comp=Z,1.7nm,0.6s,baz=261,slow=5.3,SNR=9.0
PDAR Pinedale Array 81.37 330 P **P** 15 56 15.4 **+1.0**
comp=Z,0.8nm,0.5s,baz=126,slow=7.2,SNR=12
ULM Lac du Bonnet 83.03 342 P **P** 15 56 22.2 **-0.2**
comp=Z,1.2nm,0.4s,baz=230,slow=7.9,SNR=4.1
SCHQ Schefferville 83.77 1 P **P** 15 56 26.4 **+0.2**
comp=Z,3.1nm,0.9s,baz=225,slow=7.1,SNR=2.9
YKA Yellowknife Ar 98.84 340 P Pdif 15 57 37.3 +0.6
comp=Z,0.2nm,0.5s,baz=137,slow=4.3,SNR=6.7
ASAR Alice Springs 123.39 204 PKP **PKPdf** 16 02 54.5 **0.0**
comp=Z,0.2nm,0.4s,baz=136,slow=1.7,SNR=10
WRA Warramunga Arr 126.64 206 PKP **PKPdf** 16 03 01.1 **+0.3**
comp=Z,0.5nm,0.4s,baz=165,slow=1.7,SNR=25
ZALV Zalesovo Beam 148.29 31 PKPbc **PKiKP** 16 03 44.1 **0.0**
comp=Z,3.9nm,0.3s,baz=298,slow=3.3,SNR=17
MKAR Makanchi Array 150.86 45 PKPbc **PKiKP** 16 03 50.4 **+0.6**
comp=Z,2.3nm,0.6s,baz=295,slow=2.1,SNR=30

*ANF **10** 16:08:31.9±0.3,36.57N×113.87W,h0km, ML3.6/22, Error ellipse: s-maj=2.8km s-min=2.3km az=48.0*
*NEIC **10** 16:08:33.3±1.6,36.57N±0.02×113.87W±0.03, h5km±2km, Mwr3.3(REN), Error ellipse: s-maj=4.3km s-min=3.1km az=327.0*
*REN **10** 16:08:33.2±1.9,36.61N±0.03×113.91W±0.02, h0km±7km, Error ellipse: s-maj=3.9km s-min=2.6km az=161.0*
ISC 10 16:08:31.9±1.1,**36.58N**±0.02×**113.91W**±0.02,**h3**km±11km, **n74**,σ1**3**0/94,**Western Arizona**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LCMT	**Little Creek M**	**0.69**	**51**				**Pb**	**16 08 46.2**	**-0.4**
LCMT				Sg			**Sg**	**16 08 54.8**	**+0.8**
KNB	**Kanab**	**0.98**	**63**				**Pb**	**16 08 51.4**	**-0.1**
KNB				Sg			**Sg**	**16 09 03.5**	**+0.2**
SHPR	**Sheep Range**	**1.01**	**266**				**Pn**	**16 08 52.5**	**-0.5**
SHPR				Sg			**Sn**	**16 09 06.5**	**-1.3**
CCUT	**Cedar City**	**1.07**	**24**				**Pb**	**16 08 53.2**	**+0.1**
CCUT				Sg			**Sb**	**16 09 07.3**	**-0.2**
SZCU	**Shurtz Canyon**	**1.21**	**33**				**Pg**	**16 08 55.7**	**+0.6**
SZCU				Sg			**Sn**	**16 09 11.9**	**-1.0**
U15A	**North Rim**	**1.31**	**96**				**Pg**	**16 08 57.6**	**+0.6**
U15A				Sg			**Sb**	**16 09 12.6**	**-2.0**
W13A	**Hualapai Mount**	**1.47**	**179**				**Pb**	**16 09 00.1**	**+0.1**
PKCU	**Pink Cliffs**	**1.55**	**55**				**Pg**	**16 09 01.8**	**+0.3**
NEE2	**Needles Airpor**	**1.89**	**198**	P			**Pn**	**16 09 05.1**	**+0.1**
NEE2	baz=19,SNR=18						**Sg**	**16 09 33.5**	**+0.9**
TPNV	**Topopah Spring**	**1.92**	**282**				**Pb**	**16 09 07.2**	**-0.3**
TPNV	**Topopah Spring**	**1.92**	**282**	P			**Pb**	**16 09 06.7**	**-0.8**
TPNV	baz=101,SNR=204						**Sg**	**16 09 34.7**	**+1.2**
PSUT	**Pine Spring**	**1.96**	**1**				**Pb**	**16 09 07.9**	**-0.3**
TUQ	**Turquoise Moun**	**1.99**	**236**	P			**Pn**	**16 09 07.2**	**+0.7**
TUQ	baz=56,SNR=118						**Sg**	**16 09 36.9**	**+1.1**
MTPU	**Mount Pierson**	**2.01**	**43**				**Pb**	**16 09 09.7**	**+0.5**
SHOC	**Shoshone, Teco**	**2.03**	**251**	Pg			**Pg**	**16 09 11.1**	**+0.4**
SHOC	baz=71,SNR=24						**Sb**	**16 09 34.7**	**-0.2**
R11A	**Troy Canyon, C**	**2.22**	**324**	Pn			**Pn**	**16 09 10.5**	**+0.9**
R11A	**Troy Canyon, C**	**2.22**	**324**	P			**Pn**	**16 09 10.6**	**+0.9**
R11A	baz=142						**Sg**	**16 09 43.2**	**+0.1**
GMRC	**Granite Mounta**	**2.29**	**219**	P			**Pn**	**16 09 11.0**	**+0.5**
GMRC	baz=39,SNR=54						**Sg**	**16 09 45.7**	**+0.5**
WUAZ	**Wupatki**	**2.31**	**116**				**Pb**	**16 09 13.0**	**-1.2**
WUAZ	**Wupatki**	**2.31**	**116**	Pb			**Pb**	**16 09 14.9**	**+0.7**
WUAZ	baz=298,SNR=174						**Sb**	**16 09 44.0**	**+0.8**
TCRU	**Three Creeks R**	**2.34**	**29**				**Pb**	**16 09 13.9**	**-0.9**
MSU	**Marysvale**	**2.37**	**35**				**Pb**	**16 09 14.5**	**-0.8**
FURC	**Furnace Creek,**	**2.38**	**268**	Pb			**Pg**	**16 09 17.1**	**-0.4**
FURC	baz=87						**Sg**	**16 09 48.7**	**+0.3**
IRM	**Iron Mountain**	**2.62**	**203**	P			**Pn**	**16 09 15.3**	**+0.3**
IRM	baz=23,SNR=40						**Sg**	**16 09 55.4**	**-0.4**
HEC	**Hector,Ludlow**	**2.63**	**229**	P			**Pn**	**16 09 15.8**	**+0.6**
GSC	**Goldstone, Bar**	**2.67**	**242**				**Pn**	**16 09 17.1**	**+1.3**
GSC	**Goldstone, Bar**	**2.67**	**242**	P			**Pn**	**16 09 17.1**	**+1.3**
GSC	baz=61,SNR=23						**Sg**	**16 09 57.9**	**+0.2**
Y14A	**Wickenburg**	**2.73**	**164**				**Pn**	**16 09 17.8**	**+1.1**
Y12C	**Blythe**	**2.86**	**190**				**Pn**	**16 09 20.7**	**+2.4**
Y12C	**Blythe**	**2.86**	**190**	Pg			**Pg**	**16 09 26.6**	**-0.1**
Y12C	baz=11						**Sb**	**16 10 02.6**	**-1.2**
MPMC	**Manual Prospec**	**2.94**	**261**	P			**Pn**	**16 09 21.0**	**+1.4**
MPMC	baz=79						**Sb**	**16 10 05.0**	**-1.2**
X16A	**Lo Mia Camp, P**	**2.95**	**136**				**Pn**	**16 09 21.8**	**+2.1**
DAC	**Darwin (Calif)**	**2.99**	**265**	Pg			**Pg**	**16 09 31.3**	**+2.2**
BELC	**Belle Mtn. Jos**	**3.08**	**214**	P			**Pn**	**16 09 22.4**	**+0.8**
BC3	**Big Chuckawall**	**3.18**	**204**	P			**Pn**	**16 09 23.8**	**+1.1**
Q16A	**Castle Valley**	**3.19**	**42**	Pg			**Pg**	**16 09 32.0**	**-1.0**
TMUT	**Trail Mountain**	**3.46**	**37**	Pg			**Pg**	**16 09 37.0**	**-1.1**
GLA	**Glamis**	**3.59**	**192**				**Pn**	**16 09 29.7**	**+1.2**
GLA	**Glamis**	**3.59**	**192**	P			**Pn**	**16 09 29.4**	**+0.9**
GLA	baz=12						**Sb**	**16 10 24.7**	**-2.7**
XPFO	**Pion Flat**	**3.62**	**216**				**Pn**	**16 09 29.6**	**+0.7**
PFO	**Pinyon Flats O**	**3.62**	**216**				**Pn**	**16 09 29.6**	**+0.7**
PFO	**Pinyon Flats O**	**3.62**	**216**	P			**Pn**	**16 09 29.5**	**+0.6**
PFO	baz=35						**Sb**	**16 10 25.8**	**-2.4**
NLU	**North Lily Min**	**3.67**	**23**				**Pn**	**16 09 30.7**	**+1.0**
SRU	**San Rafael Swe**	**3.69**	**46**				**Pb**	**16 09 34.1**	**-3.6**
W18A	**Petrified Fore**	**3.69**	**112**	Pg			**Pg**	**16 09 43.1**	**+0.5**
W18A	**Petrified Fore**	**3.69**	**112**	Sb			**Sb**	**16 10 25.6**	**+2.7**
DUG	**Dugway, Tooele**	**3.72**	**13**				**Pg**	**16 09 43.8**	**+0.7**
DUG	**Dugway, Tooele**	**3.72**	**13**	Pg			**Pg**	**16 09 42.8**	**-0.3**
EDW2	**Edwards Air Fo**	**3.73**	**244**	P			**Pn**	**16 09 31.7**	**+1.4**
113A	**Mohawk Valley,**	**3.80**	**178**				**Pn**	**16 09 33.3**	**+2.1**
NV11	**Mina Array Sit**	**3.85**	**300**				**Pn**	**16 09 33.5**	**+1.4**
KVN	**Kaiserville**	**4.14**	**308**				**Pn**	**16 09 38.0**	**+2.0**
RYN	**Ryan**	**4.20**	**301**				**Pn**	**16 09 38.1**	**+1.3**
MONP2	**Monument Peak**	**4.22**	**210**	P			**Pn**	**16 09 38.1**	**+0.9**
MDPB	**Devils Postpil**	**4.27**	**286**	Pn			**Pn**	**16 09 38.7**	**+0.8**
ELK	**Elko**	**4.29**	**346**				**Pn**	**16 09 39.7**	**+1.5**
MVCO	**Mesa Verde**	**4.38**	**80**				**Pn**	**16 09 55.1**	**-0.8**
BGU	**Big Grassy Mou**	**4.40**	**9**				**Pn**	**16 09 40.5**	**+0.8**
JLU	**Jordanelle**	**4.46**	**25**	Pg			**Pg**	**16 09 57.0**	**-0.3**
BAR	**Barrett**	**4.50**	**211**				**Pn**	**16 09 42.4**	**+1.5**
214A	**Organ Pipe Nat**	**4.70**	**169**	Pg			**Pg**	**16 10 01.2**	**-0.7**
WAKR	**Walker**	**4.80**	**295**	Pn			**Pn**	**16 09 47.4**	**+2.3**
TCUT	**Toone Canyon**	**4.94**	**23**				**Pg**	**16 10 05.7**	**-0.8**
TUC	**Tucson**	**4.98**	**148**				**Pn**	**16 09 48.6**	**+1.1**
TUC	**Tucson**	**4.98**	**148**	P			**Pn**	**16 09 49.2**	**+1.7**
O20A	**White River Ci**	**5.70**	**50**	Pn			**Pn**	**16 09 60.0**	**+2.5**
LENM	**Lemitar**	**6.15**	**111**	Pg			**Pg**	**16 10 28.1**	**-1.7**
ANMO	**Albuquerque**	**6.27**	**103**	Pn			**Pn**	**16 10 08.2**	**+2.7**
BNM	**Barren Site**	**6.42**	**110**	Pg			**Pg**	**16 10 32.3**	**-2.6**
319A	**Douglas**	**6.45**	**142**	Pn			**Pn**	**16 10 09.2**	**+1.3**
WVOR	**Wild Horse Val**	**6.90**	**329**				**Pg**	**16 10 45.6**	**+1.7**
BW06	**Boulder Array**	**7.04**	**27**				**Pn**	**16 10 14.7**	**-1.2**
PD31	**Pinedale Array**	**7.04**	**27**				**Pn**	**16 10 17.6**	**+1.7**
RWWY	**Rawlins**	**7.29**	**44**	Pn			**Pn**	**16 10 19.7**	**+0.2**

*NEIC **10** 16:44:59.9±3.0,20.24S±0.04×69.73W±0.09, h73km±4km, Error ellipse: s-maj=12.9km s-min=5.9km az=82.0*
*SJA **10** 16:44:59.8±0.9,20.23S×69.70W, h69km±5km, ML3.8, MW3.8*
*GUC **10** 16:45:00.4±0.7,20.24S×69.66W, h67km±3km, ML4.0*
*IDC **10** 16:45:02.1±2.0,20.29S×69.56W, h97km±19km, mb3.4/6, mb1 3.7/10, mb1mx3.6/35, mbtmp3.9/10, MS2.8/2, Ms1 2.9/2, ms1mx2.5/12, Error ellipse: s-maj=25.7km s-min=19.2km az=92.0*
ISC 10 16:44:59.6±0.7,**20.25S**±0.02×**69.74W**±0.05,**h72**km±5km, **n66**,σ1**84**/85,**mb3.9**/8,**7C-4D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB11	**IPOC Station P**	**0.49**		**9**	↓*eP*		**Pn**	**16 45 13.4**	**+0.6**
PB11					*eS*		**Sn**	**16 45 22.6**	**+0.3**
PB11					IAML			16 45 24.2	
	comp=E,16μm,0.3s								
PB11	**IPOC Station P**	**0.49**		**9**			**Pn**	**16 45 13.3**	**+0.6**
PB11							**Sn**	**16 45 23.5**	**+1.1**
PB11	**IPOC Station P**	**0.49**		**9**	*i* P		**Pn**	**16 45 13.4**	**+0.6**
PB11					*eS*		**Sn**	**16 45 23.6**	**+1.3**
PB11					IAML			16 45 24.5	
	comp=Z,12μm,0.2s								
TA01	**Diego Aracena**	**0.52**	**233**	↑	*iP*		**Pn**	**16 45 14.2**	**+1.4**
TA01					*eS*		**Sn**	**16 45 24.5**	**+2.0**
TA01					IAML			16 45 25.3	
	comp=E,23μm,0.3s								
PB08	**IPOC Station P**	**0.56**	**79**	↓	*eP*		**Pn**	**16 45 14.1**	**+0.6**
PB08					*eS*		**Sn**	**16 45 23.8**	**-0.1**
PB08					IAML			16 45 24.7	
	comp=N,13μm,0.3s								
PB08	**IPOC Station P**	**0.56**	**79**		*i* P		**Pn**	**16 45 14.1**	**+0.6**
PB08					*eS*		**Sn**	**16 45 24.1**	**+0.3**
PB08					IAML			16 45 24.7	
	comp=Z,5μm,0.2s								
PATCX	**Punta Patache**	**0.69**	**214**	↑	*iP*		**Pn**	**16 45 16.0**	**+1.4**
PATCX					*eS*		**Sn**	**16 45 27.5**	**+1.9**
PATCX					IAML			16 45 28.5	
	comp=E,7μm,0.2s								
PATCX	**Punta Patache**	**0.69**	**214**		*eP*		**Pn**	**16 45 16.0**	**+1.4**
PATCX					*i* S		**Sn**	**16 45 27.6**	**+1.9**
PATCX					IAML			16 45 29.0	
	comp=Z,4μm,0.5s								
PSGC	**Pisagua**	**0.74**	**331**	↑	*iP*		**Pn**	**16 45 16.2**	**+1.0**
PSGC					*eS*		**Sn**	**16 45 28.2**	**+1.3**
PSGC					IAML			16 45 29.7	
	comp=N,9μm,0.5s								
PSGCX	**Pisagua**	**0.74**	**331**		*i* P		**Pn**	**16 45 16.3**	**+1.0**
PSGCX					*eS*		**Sn**	**16 45 28.2**	**+1.4**
PSGCX					IAML			16 45 29.6	
	comp=Z,6μm,0.4s								
GO01	**Chusmiza**	**0.77**	**41**	↑	*iP*		**Pn**	**16 45 16.0**	**+0.1**
GO01					*eS*		**Sn**	**16 45 27.8**	**-0.2**
GO01					IAML			16 45 32.4	
	comp=N,15μm,0.2s								
GO01	**Chusmiza**	**0.77**	**41**				**Pn**	**16 45 16.2**	**+0.2**
GO01						Sn	**Sn**	**16 45 28.6**	**+0.6**
MNMC	**Minye Minye**	**1.12**		**7**	↓*eP*		**Pn**	**16 45 21.0**	**+1.0**
MNMC					*eS*		**Sn**	**16 45 36.4**	**+1.2**
MNMC					IAML			16 45 38.4	
	comp=N,9μm,0.2s								
MNMC	**Minye Minye**	**1.12**		**7**			**Pn**	**16 45 20.8**	**+0.7**
MNMC						Sn	**Sn**	**16 45 36.4**	**+1.2**
MNMCX	**Minye Minye**	**1.12**		**7**	*eP*		**Pn**	**16 45 20.9**	**+0.9**
MNMCX					*i* S		**Sn**	**16 45 36.4**	**+1.2**
MNMCX					IAML			16 45 40.5	
	comp=Z,4μm,0.2s								
PB09	**IPOC Station P**	**1.61**	**163**	↑	*iP*		**Pn**	**16 45 27.6**	**+1.4**
PB09					*eS*		**Sn**	**16 45 48.3**	**+2.1**
PB09					IAML			16 45 53.2	
	comp=E,2μm,0.5s								
PB09	**IPOC Station P**	**1.61**	**163**		*i* P		**Pn**	**16 45 28.1**	**+1.9**
PB09					*eS*		**Sn**	**16 45 49.8**	**+3.5**
PB09					IAML			16 45 57.1	
	comp=Z,2μm,0.7s								
PB03	**IPOC Station P**	**1.79**	**180**	↑	*iP*		**Pn**	**16 45 29.8**	**+1.1**
PB03					*eS*		**Sn**	**16 45 53.1**	**+2.5**
PB03					IAML			16 45 58.6	
	comp=E,3μm,0.5s								
PB03	**IPOC Station P**	**1.79**	**180**		*i* P		**Pn**	**16 45 29.8**	**+1.1**
PB03					*eS*		**Sn**	**16 45 53.9**	**+3.3**
PB03					IAML			16 45 58.1	
	comp=Z,3μm,0.2s								
PB16	**IPOC Station P**	**1.92**		**7**	↓*eP*		**Pn**	**16 45 32.5**	**+1.8**
PB16					*eS*		**Sn**	**16 45 57.0**	**+2.7**
PB16					IAML			16 46 02.5	
	comp=E,863nm,0.3s								
PB16	**IPOC Station P**	**1.92**		**7**	*i* P		**Pn**	**16 45 32.5**	**+1.8**
PB16					*eS*		**Sn**	**16 45 58.7**	**+4.4**
PB16					IAML			16 46 03.6	
	comp=Z,655nm,0.6s								
PB04	**IPOC Station P**	**2.11**	**190**		*eP*		**Pn**	**16 45 33.6**	**+0.7**
PB04					*i* S		**Sn**	**16 45 57.2**	**-1.1**
PB04					IAML			16 46 09.8	
	comp=E,2μm,0.3s								
PB04	**IPOC Station P**	**2.11**	**190**				**Pn**	**16 45 34.5**	**+1.6**
PB04	**IPOC Station P**	**2.11**	**190**		*eP*		**Pn**	**16 45 34.1**	**+1.2**
PB06	**IPOC Station P**	**2.45**	**176**		*eP*		**Pn**	**16 45 37.9**	**+0.4**
PB06					IAML			16 46 20.9	
	comp=Z,590nm,0.3s								
LVC	**Limon Verde**	**2.47**	**162**	↑	*iP*		**Pn**	**16 45 40.2**	**+2.2**
LVC					*eS*		**Sn**	**16 46 09.2**	**+1.9**
LVC	**Limon Verde**	**2.47**	**162**		P		**Pn**	**16 45 40.2**	**+2.2**
	comp=Z,47nm,0.3s,baz=351,slow=11,SNR=156								
LVC						S	**Sn**	**16 46 10.7**	**+3.3**
	comp=Z,103nm,0.3s,baz=189,slow=22,SNR=18								
LVC	**Limon Verde**	**2.47**	**162**				**Pn**	**16 45 39.8**	**+1.8**
LVC	**Limon Verde**	**2.47**	**162**		*i* P		**Pn**	**16 45 40.2**	**+2.2**
LVC					*i* S		**Sn**	**16 46 10.5**	**+3.2**
LVC					IAML			16 46 17.3	
	comp=Z,372nm,0.2s								
PB05	**IPOC Station P**	**2.62**	**189**		*i* P		**Pn**	**16 45 40.3**	**+0.4**
PB05					IAML			16 46 27.1	
	comp=Z,551nm,0.4s								
PB15	**IPOC Station P**	**2.95**	**175**		*i* P		**Pn**	**16 45 45.4**	**+1.0**
PB10	**IPOC Station P**	**3.33**	**193**				**Pn**	**16 45 49.8**	**+0.4**
PB10	**IPOC Station P**	**3.33**	**193**		*i* P		**Pn**	**16 45 49.1**	**-0.3**
PB10					IAML			16 46 48.7	
	comp=Z,183nm,0.6s								
LPAZ	**La Paz**	**4.23**	**21**		P		**Pn**	**16 46 05.6**	**+3.5**
	comp=Z,6.6nm,0.3s,baz=175,slow=4.5,SNR=94								
LPAZ						LR	LR	16 48 21.5	
	comp=Z,95nm,21.5s,baz=136,slow=47								
LPAZ	**La Paz**	**4.23**	**21**		Pn		**Pn**	**16 46 06.0**	**+3.9**
LPAZ	**La Paz**	**4.23**	**21**		*i* P		**Pn**	**16 46 06.0**	**+3.9**
YJA	**Yavi**	**4.38**	**117**		*i* P		**Pn**	**16 46 07.6**	**+3.6**
YJA					IAML			16 47 27.9	
	comp=Z,5.4nm,1.3s								
PB14	**IPOC Station P**	**4.40**	**188**		*i* P		**Pn**	**16 46 04.8**	**+0.6**
PB14					IAML			16 47 25.1	
	comp=Z,185nm,0.5s								
GO02	**Mina Guanaco**	**4.89**	**178**				**Pn**	**16 46 10.6**	**-0.3**
AZAP	**Zapla**	**5.86**	**133**		*i* P		**Pn**	**16 46 27.6**	**+3.5**
AZAP					IAML			16 48 17.0	
	comp=Z,5.8nm,1.9s								
ASTB	**Santa Barbara**	**6.13**	**128**		*i* P		**Pn**	**16 46 29.9**	**+2.2**
ASTB					IAML			16 48 24.4	
	comp=Z,4.3nm,3.4s								
SIV	**San Ignacio**	**9.26**	**64**		P		**Pn**	**16 47 09.2**	**-1.3**
	comp=Z,11nm,0.3s,baz=268,slow=10.0,SNR=191								
CFA	**Coronel Fontan**	**11.39**	**174**		P		**Pn**	**16 47 37.0**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=18,slow=9.6,SNR=4.5								
CFA						S	**Sn**	**16 49 40.8**	**-4.1**
	comp=Z,0.3nm,0.3s,baz=191,slow=16,SNR=1.9								
CFA						LR	LR	16 52 39.9	
	comp=Z,62nm,19.4s,baz=82,slow=40								
CPUP	**Villa Florida**	**12.90**	**120**		P		**Pn**	**16 47 59.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=313,slow=17,SNR=4.8								
GO06	**Curarrehue**	**19.33**	**184**		P		**P**	**16 49 20.0**	**+0.9**
GO06					IAmb		IAmb	16 49 22.2	
	comp=Z,3.0nm,0.7s								
PLCA	**Paso Flores**	**20.43**	**182**		P		**P**	**16 49 31.7**	**+0.6**
	comp=Z,3.6nm,0.7s,baz=17,slow=16,SNR=5.0								
PLCA	**Paso Flores**	**20.43**	**182**		P		Pn	16 49 33.4	-0.4
BDFB	**Brasilia**	**21.16**	**81**		P		**P**	**16 49 39.6**	**+0.4**
	comp=Z,2.4nm,0.5s,baz=275,slow=9.9,SNR=3.7								
BDFB	**Brasilia**	**21.16**	**81**		P		**P**	**16 49 39.8**	**+0.6**
BDFB					IAmb		IAmb	16 49 51.9	
	comp=Z,8.4nm,1.5s								
OTAV	**Otavalo**	**22.08**	**336**		P		**P**	**16 49 48.4**	**-0.9**
OTAV					IAmb		IAmb	16 49 50.4	
	comp=Z,2.6nm,0.5s								
BCIP	**Isla Barro Col**	**30.88**	**340**		P		**P**	**16 51 07.5**	**-1.8**
BCIP					IAmb		IAmb	16 51 20.6	
	comp=Z,114nm,1.5s								
GO09	**Cerro Castillo**	**31.02**	**183**		P		**P**	**16 51 09.1**	**-1.2**
GO09					IAmb		IAmb	16 51 26.3	
	comp=Z,52nm,1.4s								
URIC	**Uribia, Colomb**	**31.83**	**356**		P		**P**	**16 51 17.5**	**-0.2**
GO10	**Punta Arenas**	**32.86**	**181**		P		**P**	**16 51 24.9**	**-1.5**
TXAR	**Lajitas Array**	**59.17**	**325**		P		**P**	**16 54 52.8**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=139,slow=8.4,SNR=3.3								
PDAR	**Pinedale Array**	**72.65**	**330**		P		**P**	**16 56 20.5**	**+0.7**
	comp=Z,0.1nm,0.5s,baz=168,slow=9.0,SNR=2.1								
TORD	**Torodi Ar. Bea**	**77.67**	**71**		P		**P**	**16 56 47.2**	**-1.7**
	comp=Z,0.9nm,0.4s,baz=269,slow=5.0,SNR=11								
YKA	**Yellowknife Ar**	**89.76**	**341**		P		**P**	**16 57 49.8**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=133,slow=4.6,SNR=14								
H11S2	**WAKE ISLAND Hyl**	**26.94**	**278**		T		T	19 23 31.7	
	baz=102,slow=74,SNR=169								
H11S1	**WAKE ISLAND Hyl**	**26.95**	**278**		T		T	19 23 35.6	
	baz=102,slow=74,SNR=108								
H11S3	**WAKE ISLAND Hyl**	**26.96**	**278**		T		T	19 23 33.3	
	baz=102,slow=74,SNR=106								
H11N3	**WAKE ISLAND Hyl**	**26.99**	**280**		T		T	19 23 38.9	
	baz=101,slow=74,SNR=40								
H11N2	**WAKE ISLAND Hyl**	**27.01**	**280**		T		T	19 23 40.0	
	baz=101,slow=74,SNR=32								
H11N1	**WAKE ISLAND Hyl**	**27.01**	**280**		T		T	19 23 40.2	
	baz=101,slow=74,SNR=24								
ASAR	**Alice Springs**	**130.64**	**209**		PKP		**PKPdf**	**17 04 01.2**	**-1.9**
	comp=Z,0.3nm,0.8s,baz=144,slow=1.0,SNR=3.1								
MKAR	**Makanchi Array**	**145.06**	**34**		PKPbc		**PKPbc**	**17 04 28.5**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=330,slow=3.5,SNR=4.0								

*ECX **10** 16:47:42.3±0.6,32.22N×115.26W, h5km, MD2.8, ML3.0*
*MEX **10** 16:47:43.9±0.6,32.16N×115.23W, h11km±9km, MD3.3*
ISC 10 16:47:40.3±1.0,**32.16N**±0.02×**115.30W**±0.03,**h15**km±8km, **n20**,σ0**73**/32,**2C-10D**,**California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.26**	**359**	↓	*eP*		**Pg**	**16 47 45.9**	**0.0**
CPBX					*eS*		**Sg**	**16 47 49.5**	**-0.2**
CPBX				↓	*e*			16 47 50.6	
CPBX					IAML			16 47 50.6	
	comp=N,9μm,0.2s								
MBIG	**Mexicali**	**0.26**		**19**	*i* P		**Pb**	**16 47 48.9**	**+2.1**
MBIG					*i* S		**Sb**	**16 47 52.6**	**+1.5**
MBIG	**Mexicali**	**0.26**		**19**	↑*eP*		**Pg**	**16 47 46.0**	**0.0**
MBIG					*eS*		**Sb**	**16 47 50.3**	**-0.8**
UABX	**UABC, Campus M**	**0.49**	**346**		*eP*		**Pb**	**16 47 50.3**	**-0.3**
UABX					*eS*		**Sb**	**16 47 57.6**	**0.0**
ESJX	**Sierra Juarez**	**0.57**	**255**		*i* P		**Pn**	**16 47 53.8**	**-0.3**
ESJX					IAML			16 48 04.5	
	comp=N,842nm,0.1s								
ESJX				↑	*e*			16 48 04.5	
SGL	**Mount Signal**	**0.61**	**324**	↓	*iP*		**Pg**	**16 47 52.4**	**+0.2**
ECBX	**El Chinero**	**0.71**	**163**	↓	*eP*		**Pn**	**16 47 55.4**	**-0.4**
ECBX					*eS*		**Sn**	**16 48 05.8**	**-0.8**
YUH	**Yuha Desert**	**0.72**	**313**	↓	*iP*		**Pg**	**16 47 54.4**	**0.0**
ERMX	**Rumorosa**	**0.73**	**303**		*eP*		**Pg**	**16 47 55.0**	**+0.4**
COK2	**Cook Ranch 2**	**0.78**	**332**		*eP*		**Pb**	**16 47 54.9**	**-0.7**
IKP	**In-Ko-Pah, Jac**	**0.84**	**306**		*i* P		**Pb**	**16 47 56.8**	**+0.1**
IKP					*eS*		**Sb**	**16 48 08.0**	**0.0**
CRR	**Carrizo Plain**	**0.92**	**322**	↓	*iP*		**Pb**	**16 47 57.7**	**-0.3**
CBKC	**Canebrake**	**1.09**	**313**	↓	*iP*		**Pg**	**16 48 01.6**	**+0.2**
SPIG	**San Pedro Mart**	**1.12**	**187**		*eP*		**Pg**	**16 48 02.5**	**+0.6**
SPIG					*eS*		**Sb**	**16 48 16.3**	**+0.3**
SPIG	**San Pedro Mart**	**1.12**	**187**	↓	*eP*		**Pg**	**16 48 02.5**	**+0.6**
SPIG					*eS*		**Sn**	**16 48 18.2**	**+1.2**
SPX	**San Pedro Mart**	**1.13**	**187**		*eP*		**Pb**	**16 48 01.4**	**-0.2**
SPX					*eS*		**Sb**	**16 48 16.1**	**-0.2**
SPX	**San Pedro Mart**	**1.13**	**187**	↓	*eP*		**Pb**	**16 48 01.5**	**-0.2**
SPX					*eS*		**Sn**	**16 48 17.3**	**+0.1**
SP

SKR	**Severo-Kuril's**	**2.82**	**27**⇑	*e*P		**Pn**	**18 03 42.4**	**-0.9**
SKR					AMB	AMB	18 03 44.0	
	4µm,0.5s							
SKR				*e*S		**Sn**	**18 04 15.1**	**-1.3**
SKR				A		A	18 04 18.7	
	6µm,0.6s							
SKR				A		A	18 04 18.7	
	4µm,0.6s							
SKR				AMS		AMS	18 04 58.8	
	5µm,13.0s							
SKR				AMS		AMS	18 04 58.8	
	6µm,13.0s							
SKR				AMS		AMS	18 04 58.8	
	4µm,13.0s							
PAU	**Pauzhetka**	**3.72**	**27**	PN		**Pn**	**18 03 54.7**	**-0.8**
PAU				S		**Sn**	**18 04 37.6**	**-0.6**
PAU	**Pauzhetka**	**3.72**	**27**	*e*P		**Pn**	**18 03 54.7**	**-0.8**
PAU				*e*S		**Sn**	**18 04 37.6**	**-0.6**
PAU	**Pauzhetka**	**3.72**	**27**	*e*P		**Pn**	**18 03 54.9**	**-0.6**
PAU				*e*S		**Sn**	**18 04 37.6**	**-0.6**
KDTR	**Khodutka, Kamc**	**4.44**	**34**	PN		**Pn**	**18 04 03.0**	**-2.3**
KDTR				S		**Sn**	**18 04 51.0**	**-4.6**
KDTR	**Khodutka, Kamc**	**4.44**	**34**	*e*P		**Pn**	**18 04 03.0**	**-2.3**
KDTR				*e*S		**Sn**	**18 04 51.0**	**-4.6**
ASAK	**Asacha**	**4.86**	**29**	PN		**Pn**	**18 04 10.1**	**-0.9**
ASAK	**Asacha**	**4.86**	**29**	*e*P		**Pn**	**18 04 10.1**	**-0.9**
MTVR	**Mutnovka**	**5.03**	**30**	PN		**Pn**	**18 04 12.3**	**-1.2**
MTVR	**Mutnovka**	**5.03**	**30**	*e*P		**Pn**	**18 04 12.3**	**-1.2**
GRL	**Gorelyy**	**5.05**	**29**	PN		**Pn**	**18 04 13.4**	**-0.4**
GRL	**Gorelyy**	**5.05**	**29**	*e*P		**Pn**	**18 04 13.4**	**-0.4**
RUS	**Russkaya**	**5.10**	**32**	PN		**Pn**	**18 04 12.1**	**-2.2**
RUS				S		**Sn**	**18 05 06.6**	**-5.2**
RUS	**Russkaya**	**5.10**	**32**	*e*P		**Pn**	**18 04 12.1**	**-2.2**
RUS				*e*S		**Sn**	**18 05 06.6**	**-5.2**
RUS	**Russkaya**	**5.10**	**32**	*e*P		**Pn**	**18 04 12.1**	**-2.2**
APC	**Apacha**	**5.13**	**21**	PN		**Pn**	**18 04 14.8**	**+0.2**
APC	**Apacha**	**5.13**	**21**	*e*P		**Pn**	**18 04 14.8**	**+0.2**
KUR	**Kuril'sk**	**5.21**	**238**	*d i*PN		**Pn**	**18 04 17.0**	**+1.2**
KUR				*e*S		**Sn**	**18 05 17.1**	**+2.7**
KUR				pmax		pmax		
	comp=Z,2µm,1.0s							
KUR				pmax		pmax		
	comp=E,636nm,0.6s							
KUR				pmax		pmax		
	comp=Z,1µm,0.6s							
KUR				smax		smax		
	comp=E,4µm,2.1s							
KUR				smax		smax		
	comp=N,5µm,1.7s							
KUR				smax		smax		
	comp=E,1µm,0.6s							
KUR				smax		smax		
	comp=N,635nm,0.5s							
KUR				MLR		MLR		
	comp=Z,2µm,6.0s							
KUR	**Kuril'sk**	**5.21**	**238**⇓	*i*P		**Pn**	**18 04 17.0**	**+1.2**
KUR				AMB		AMB	18 04 30.3	
	comp=Z,2µm,1.0s							
KUR				AMB		AMB	18 04 36.0	
	comp=Z,640nm,0.6s							
KUR				AMB		AMB	18 04 36.0	
	comp=Z,1µm,0.6s							
KUR				*e*S		**Sn**	**18 05 16.7**	**+2.3**
KUR				A		A	18 05 18.0	
	comp=Z,5µm,2.0s							
KUR				A		A	18 05 18.0	
	comp=Z,4µm,2.0s							
KUR				A		A	18 05 32.0	
	comp=Z,640nm,0.7s							
KUR				A		A	18 05 32.0	
	comp=Z,1µm,0.7s							
KUR				AMS		AMS	18 06 13.2	
	comp=Z,6µm,11.0s							
KUR				AMS		AMS	18 06 13.2	
	comp=Z,6µm,11.0s							
KRMR	**Karymshinskiy**	**5.31**	**27**	PN		**Pn**	**18 04 15.7**	**-1.4**
KRMR	**Karymshinskiy**	**5.31**	**27**	*e*P		**Pn**	**18 04 15.7**	**-1.4**
PEA0B	**Petropavlovsk-**	**5.43**	**24**	PN		**Pn**	**18 04 18.8**	**0.0**
PEA0B	**Petropavlovsk-**	**5.43**	**24**			**Pn**	**18 04 18.8**	**0.0**
PETK	**Petropavlovsk-**	**5.43**	**24**	P		**Pn**	**18 04 19.3**	**+0.5**
	comp=Z,118nm,0.3s,baz=174,slow=11,SNR=1937							
PETK				S		**Sn**	**18 05 22.1**	**+2.2**
	baz=200,slow=12,SNR=2.0							
PETK				LR		LR	18 06 41.4	
	comp=Z,3µm,19.0s,baz=205,slow=41							
PETK	**Petropavlovsk-**	**5.43**	**24**			**Pn**	**18 04 19.1**	**+0.2**
PETK						**Sn**	**18 05 20.7**	**+0.8**
PET	**Petropavlovsk**	**5.64**	**29**	*e*PN		**Pn**	**18 04 20.2**	**-1.4**
PET				*e*S		**Sn**	**18 05 22.2**	**-2.8**
PET				pmax		pmax		
	comp=Z,671nm,0.5s							
PET				smax		smax		
	comp=E,2µm,0.6s							
PET				smax		smax		
	comp=N,2µm,0.5s							
PET				MLR		MLR		
	comp=Z,2µm,18.0s							
PET				MLR		MLR		
	comp=Z,3µm,16.0s							
PET	**Petropavlovsk**	**5.64**	**29**	*e*P		**Pn**	**18 04 20.4**	**-1.2**
PET				*e*S		**Sn**	**18 05 22.8**	**-2.2**
PET	**Petropavlovsk**	**5.64**	**29**⇓	*i*P		**Pn**	**18 04 20.5**	**-1.2**
PET				AMB		AMB	18 04 24.7	
	comp=Z,670nm,0.5s							
PET				*e*S		**Sn**	**18 05 22.6**	**-2.4**
PET				A		A	18 05 24.2	
	comp=Z,1µm,0.8s							
PET				A		A	18 05 24.2	
	comp=Z,2µm,0.8s							
PET				AMS		AMS	18 06 26.6	
	comp=Z,4µm,18.0s							
PET				AMS		AMS	18 06 26.6	
	comp=Z,3µm,18.0s							
PET				AMS		AMS	18 06 26.6	
	comp=Z,3µm,18.0s							
PET	**Petropavlovsk**	**5.64**	**29**			**Pn**	**18 04 20.4**	**-1.2**
PET				Sn		**Sn**	**18 05 21.9**	**-3.0**
UGLR	**Uglovaya**	**5.85**	**29**	PN		**Pn**	**18 04 24.2**	**-0.4**
UGLR	**Uglovaya**	**5.85**	**29**	*e*P		**Pn**	**18 04 24.2**	**-0.4**
KOK	**Koryaka**	**5.87**	**28**	PN		**Pn**	**18 04 24.8**	**0.0**
KOK	**Koryaka**	**5.87**	**28**	*e*P		**Pn**	**18 04 24.8**	**0.0**
KOK	**Koryaka**	**5.87**	**28**	*e*P		**Pn**	**18 04 24.8**	**0.0**
AVH	**Avacha**	**5.87**	**28**	PN		**Pn**	**18 04 24.9**	**0.0**
AVH	**Avacha**	**5.87**	**28**	*e*P		**Pn**	**18 04 24.9**	**0.0**
SMAR	**Somma**	**5.89**	**29**	PN		**Pn**	**18 04 24.7**	**-0.6**
SMAR	**Somma**	**5.89**	**29**	*e*P		**Pn**	**18 04 24.7**	**-0.6**
KRER	**Koryakskii**	**5.91**	**28**	PN		**Pn**	**18 04 25.4**	**-0.1**
KRER	**Koryakskii**	**5.91**	**28**	*e*P		**Pn**	**18 04 25.4**	**-0.1**
KRX	**Arik**	**5.93**	**27**	PN		**Pn**	**18 04 25.6**	**-0.1**
KRX	**Arik**	**5.93**	**27**	*e*P		**Pn**	**18 04 25.6**	**-0.1**
SDLR	**Sedlovina**	**5.93**	**29**	PN		**Pn**	**18 04 24.7**	**-1.0**
SDLR	**Sedlovina**	**5.93**	**29**	*e*P		**Pn**	**18 04 24.7**	**-1.0**
NLC	**Nalytchevo**	**6.00**	**32**	PN		**Pn**	**18 04 23.3**	**-3.2**
NLC	**Nalytchevo**	**6.00**	**32**	*e*P		**Pn**	**18 04 23.3**	**-3.2**
NLC				*e*S		**Sn**	**18 05 27.1**	**-6.6**
NLC	**Nalytchevo**	**6.00**	**32**	*e*P		**Pn**	**18 04 23.3**	**-3.2**
SPN	**Mys Shipunski**	**6.19**	**35**	PN		**Pn**	**18 04 26.9**	**-2.2**
SPN	**Mys Shipunski**	**6.19**	**35**	*e*P		**Pn**	**18 04 26.9**	**-2.2**
SPN				*e*S		**Sn**	**18 05 31.2**	**-7.2**
SPN	**Mys Shipunski**	**6.19**	**35**	*e*P		**Pn**	**18 04 26.9**	**-2.2**
SHO	**Shikotan**	**6.65**	**232**	*c i*PN		**Pn**	**18 04 33.1**	**-2.4**
SHO				pmax		pmax		
	comp=N,176nm,0.4s							
SHO				pmax		pmax		
	comp=Z,252nm,0.4s							
SHO				pmax		pmax		
	comp=E,139nm,0.2s							
SHO				MLR		MLR		
	comp=Z,743nm,19.0s							
SHO				MLR		MLR		
	comp=E,530nm,15.0s							
SHO	**Shikotan**	**6.65**	**232**⇑	*i*P		**Pn**	**18 04 33.2**	**-2.3**
SHO				AMB		AMB	18 04 44.0	
	comp=E,180nm,0.4s							
SHO				AMB		AMB	18 04 44.0	
	comp=E,140nm,0.4s							
SHO				AMB		AMB	18 04 44.0	
	comp=E,250nm,0.4s							
SHO				*e*S		**Sn**	**18 05 46.5**	**-3.2**
SHO				AMS		AMS	18 07 06.1	
	comp=E,3µm,16.0s							
SHO				AMS		AMS	18 07 06.1	
	comp=E,2µm,16.0s							
YUK	**Yuzh-Kuril'sk**	**7.07**	**237**	*e*PN		**Pn**	**18 04 41.8**	**+0.6**
YUK				*e*S		**Sn**	**18 06 01.3**	**+1.3**
YUK				pmax		pmax		
	comp=N,428nm,0.5s							
YUK				pmax		pmax		
	comp=E,626nm,0.5s							
YUK				pmax		pmax		
	comp=Z,1µm,0.5s							
YUK				MLR		MLR		
	comp=Z,1µm,12.0s							
YUK	**Yuzh-Kuril'sk**	**7.07**	**237**⇑	*e*P		**Pn**	**18 04 41.8**	**+0.6**
YUK				AMB		AMB	18 04 45.0	
	comp=Z,430nm,0.5s							
YUK				AMB		AMB	18 04 45.0	
	comp=Z,630nm,0.5s							
YUK				AMB		AMB	18 04 45.0	
	comp=Z,1µm,0.5s							
YUK				*i* S		**Sn**	**18 06 00.1**	**+0.1**
YUK				AMS		AMS	18 07 12.0	
	comp=Z,4µm,13.0s							
YUK				AMS		AMS	18 07 12.0	
	comp=Z,5µm,13.0s							
YUK				AMS		AMS	18 07 12.0	
	comp=Z,4µm,13.0s							
GRPR	**Tuman**	**7.15**	**237**	*e*PN		**Pn**	**18 04 42.4**	**+0.1**
GRPR				*e*S		**Sn**	**18 06 00.4**	**-1.5**
GRPR				pmax		pmax		
	comp=E,241nm,0.3s							
GRPR				pmax		pmax		
	comp=Z,708nm,0.3s							
GRPR				pmax		pmax		
	comp=N,420nm,0.2s							
GRPR	**Tuman**	**7.15**	**237**	*e*P		**Pn**	**18 04 42.0**	**-0.3**
GRPR				AMB		AMB	18 04 50.0	
	comp=N,420nm,0.3s							
GRPR				AMB		AMB	18 04 50.0	
	comp=N,240nm,0.3s							
GRPR				AMB		AMB	18 04 50.0	
	comp=N,710nm,0.3s							
GRPR				*e*S		**Sn**	**18 06 00.0**	**-1.9**
GLVR	**Golovnino**	**7.45**	**237**⇑	*i*PN		**Pn**	**18 04 46.1**	**-0.3**
GLVR				pmax		pmax		
	comp=Z,844nm,0.5s							
GLVR				pmax		pmax		
	comp=N,344nm,0.3s							
GLVR				pmax		pmax		
	comp=E,280nm,0.3s							
GLVR	**Golovnino**	**7.45**	**237**⇑	*i*P		**Pn**	**18 04 46.0**	**-0.3**
GLVR				AMB		AMB	18 05 00.0	
	comp=E,340nm,0.3s							
GLVR				AMB		AMB	18 05 00.0	
	comp=E,280nm,0.3s							
GLVR				AMB		AMB	18 05 00.0	
	comp=E,840nm,0.5s							
JRA	**Rausu**	**7.55**	**239**	P		**Pn**	**18 04 47.4**	**-0.3**
NEM2	**Nemuro 2**	**7.58**	**234**	P		**Pn**	**18 04 45.6**	**-2.4**
NEM2				*e*S		**Sn**	**18 06 05.6**	**-6.7**
NMR	**Nemuro--Hokkai**	**7.58**	**234**	*e*PN		**Pn**	**18 04 45.4**	**-2.7**
NMR	**Nemuro--Hokkai**	**7.58**	**234**⇓	*i*P		**Pn**	**18 04 45.9**	**-2.2**
YSS	**Yuzh-Sakhalins**	**7.78**	**265**⇑	*e*PN		**Pn**	**18 04 54.0**	**+3.2**
YSS				*e*S		**Sn**	**18 06 17.1**	**-0.1**
YSS				pmax		pmax		
	comp=E,410nm,0.8s							
YSS				pmax		pmax		
	comp=E,260nm,0.9s							
YSS				smax		smax		
	comp=E,200nm,0.5s							
YSS				MLR		MLR		
	comp=Z,1µm,12.0s							
YSS	**Yuzh-Sakhalins**	**7.78**	**265**⇑	*i*P		**Pn**	**18 04 54.0**	**+3.2**
YSS				AMB		AMB	18 04 55.6	
	comp=Z,260nm,0.9s							
YSS				AMB		AMB	18 04 55.6	
	comp=Z,410nm,0.9s							
YSS				*i* S		**Sn**	**18 06 19.6**	**+2.4**
YSS				A		A	18 06 20.6	
	comp=Z,200nm,0.5s							
YSS				AMS		AMS	18 07 23.5	
	comp=Z,2µm,18.0s							
YSS				AMS		AMS	18 07 23.5	
	comp=Z,1µm,18.0s							
YSS				AMS		AMS	18 07 23.5	
	comp=Z,1µm,18.0s							
YSS	**Yuzh-Sakhalins**	**7.78**	**265**			**Pn**	**18 04 54.0**	**+3.2**
TYV	**Tymovskoe**	**7.92**	**294**	*e*PN		**Pn**	**18 04 56.8**	**+4.1**
TYV				pmax		pmax		
	comp=Z,1µm,1.3s							
TYV				pmax		pmax		
	comp=Z,451nm,0.7s							
TYV	**Tymovskoe**	**7.92**	**294**⇓	*i*P		**Pn**	**18 04 56.7**	**+4.1**
TYV				AMB		AMB	18 04 57.6	
	comp=Z,450nm,0.7s							
TYV				AMB		AMB	18 04 57.6	
	comp=Z,1µm,1.5s							
TYV				*e*S		**Sn**	**18 06 25.5**	**+4.9**
TYV				A		A	18 06 29.9	
	comp=Z,250nm,0.8s							
TYV				A		A	18 06 29.9	
	comp=Z,350nm,0.8s							
TYV				A		A	18 06 34.0	
	comp=Z,600nm,2.0s							
TYV				AMS		AMS	18 07 53.5	
	comp=Z,4µm,21.0s							
TYV				AMS		AMS	18 07 53.5	
	comp=Z,4µm,21.0s							
TYV				AMS		AMS	18 07 53.5	
	comp=Z,2µm,21.0s							
KZV	**Kizimen**	**7.93**	**27**	PN		**Pn**	**18 04 52.0**	**-1.0**
KZV	**Kizimen**	**7.93**	**27**	*e*P		**Pn**	**18 04 52.0**	**-1.0**
MKZ	**Mys Kozlova**	**7.96**	**34**	PN		**Pn**	**18 04 49.6**	**-3.6**
MKZ	**Mys Kozlova**	**7.96**	**34**	*e*P		**Pn**	**18 04 49.6**	**-3.6**
MKZ				*e*S		**Sn**	**18 06 13.0**	**-8.6**
JNK	**Nakash**	**8.00**	**238**	P		**Pn**	**18 04 53.9**	**0.0**
JNK				*e*S		**Sn**	**18 06 22.0**	**-0.7**
UGL	**Uglegorsk**	**8.03**	**281**	*e*PN		**Pn**	**18 04 58.2**	**+4.6**
UGL				*e*S		**Sn**	**18 06 25.5**	**+2.2**
UGL				pmax		pmax		
	comp=Z,731nm,0.5s							
UGL				smax		smax		
	comp=N,356nm,1.2s							
UGL				smax		smax		
	comp=E,269nm,0.6s							
UGL	**Uglegorsk**	**8.03**	**281**⇓	*i*P		**Pn**	**18 04 58.4**	**+4.2**
UGL				AMB		AMB	18 05 10.0	
	comp=E,730nm,0.5s							
UGL				*e*S		**Sn**	**18 06 28.5**	**+5.2**
UGL				A		A	18 06 30.0	
	comp=E,360nm,1.0s							
UGL				A		A	18 06 30.0	
	comp=E,270nm,1.0s							
UGL				AMS		AMS	18 07 56.4	
	comp=E,3µm,12.0s							
UGL				AMS		AMS	18 07 56.4	
	comp=E,2µm,12.0s							
UGL				AMS		AMS	18 07 56.4	
	comp=E,2µm,12.0s							
TUMR	**Tumrok**	**8.03**	**26**	PN		**Pn**	**18 04 54.4**	**+0.1**
TUMR	**Tumrok**	**8.03**	**26**	*e*P		**Pn**	**18 04 54.4**	**+0.1**
TUMD	**Tumrok D**	**8.04**	**27**	*e*P		**Pn**	**18 04 53.0**	**-1.3**
JTKR	**Abashiri--Toko**	**8.24**	**243**	P		**Pn**	**18 04 58.2**	**+1.0**
ESO	**Esso**	**8.25**	**18**	PN		**Pn**	**18 04 57.9**	**+0.7**
ESO	**Esso**	**8.25**	**18**	*e*P		**Pn**	**18 04 57.9**	**+0.7**
ESO	**Esso**	**8.25**	**18**	*e*P		**Pn**	**18 04 57.9**	**+0.7**
JAK	**Akkeshi**	**8.39**	**235**	P		**Pn**	**18 04 56.6**	**-2.6**
JAK				*e*S		**Sn**	**18 06 26.7**	**-5.5**
KMNR	**Kamenistaya**	**8.47**	**24**	PN		**Pn**	**18 05 00.0**	**-0.3**
KMNR	**Kamenistaya**	**8.47**	**24**	*e*P		**Pn**	**18 05 00.0**	**-0.3**
JMP	**Maruseppu**	**8.55**	**245**	P		**Pn**	**18 05 02.8**	**+1.3**
JSE	**Soyaes**	**8.57**	**252**	P		**Pn**	**18 05 05.3**	**+3.7**
KOZ	**Kozyrevsk**	**8.64**	**22**	PN		**Pn**	**18 05 02.1**	**-0.5**
KOZ	**Kozyrevsk**	**8.64**	**22**	*e*P		**Pn**	**18 05 02.1**	**-0.5**
KOZ	**Kozyrevsk**	**8.64**	**22**	*e*P		**Pn**	**18 05 02.1**	**-0.5**
KPT	**Kopyto**	**8.65**	**23**	PN		**Pn**	**18 05 02.1**	**-0.6**
KPT	**Kopyto**	**8.65**	**23**	*e*P		**Pn**	**18 05 02.1**	**-0.6**
KIRR	**Kirishev**	**8.67**	**24**	PN		**Pn**	**18 05 02.2**	**-0.9**
KIRR	**Kirishev**	**8.67**	**24**	*e*P		**Pn**	**18 05 02.2**	**-0.9**
BZMR	**Bezymyannaya**	**8.70**	**24**	PN		**Pn**	**18 05 03.1**	**-0.3**
BZMR	**Bezymyannaya**	**8.70**	**24**	*e*P		**Pn**	**18 05 03.1**	**-0.3**
JAR	**Ashorobuto**	**8.72**	**240**	P		**Pn**	**18 05 03.5**	**-0.2**
JAR				*e*S		**Sn**	**18 06 38.2**	**-2.1**
SRDR	**Sredinnyy**	**8.84**	**21**	PN		**Pn**	**18 05 05.5**	**+0.2**
SRDR	**Sredinnyy**	**8.84**	**21**	*e*P		**Pn**	**18 05 05.5**	**+0.2**
JWK2	**Keihoku**	**8.86**	**256**	P		Pn	18 05 10.8	+5.3
OKH	**Okha**	**8.87**	**311**	*de*PN		**Pn**	**18 05 02.6**	**-3.0**
OKH				pmax		pmax		
	comp=Z,200nm,9.2s							
OKH	**Okha**	**8.87**	**311**⇓	*e*P		**Pn**	**18 05 10.1**	**+4.5**
OKH				AMB		AMB	18 05 10.5	
	comp=Z,800nm,5.0s							
OKH				AMB		AMB	18 05 10.7	
	comp=Z,270nm,1.0s							
OKH				AMS		AMS	18 08 06.6	
	comp=Z,3µm,15.0s							
OKH				AMS		AMS	18 08 06.6	
	comp=Z,1µm,15.0s							
CIRR	**Tsirk**	**8.93**	**25**	PN		**Pn**	**18 05 06.3**	**-0.2**
CIRR	**Tsirk**	**8.93**	**25**	*e*P		**Pn**	**18 05 06.3**	**-0.2**
JOB	**Onbets**	**8.93**	**238**	P		**Pn**	**18 05 05.0**	**-1.6**
JOB				*e*S		**Sn**	**18 06 40.5**	**-4.9**
JKA	**Kamikawa-asahi**	**8.96**	**247**	*e*P		**Pn**	**18 05 09.9**	**+2.9**
JKA	**Kamikawa-asahi**	**8.96**	**247**			**Pn**	**18 05 09.9**	**+2.9**
ASAJ	**Asahikawa**	**8.96**	**247**	P		**Pn**	**18 05 09.8**	**+2.8**
ASAJ	**Asahikawa**	**8.96**	**247**	P		**Pn**	**18 05 09.9**	**+2.8**
	comp=Z,17nm,0.3s,baz=69,slow=11,SNR=104							
ASAJ				LR		LR	18 08 53.8	
	comp=Z,581nm,18.7s,baz=70,slow=40							
KRSR	**Krestovskiy**	**8.96**	**24**	PN		**Pn**	**18 05 05.5**	**-1.5**
KRSR	**Krestovskiy**	**8.96**	**24**	*e*P		**Pn**	**18 05 05.5**	**-1.5**
JKK2	**Kamakawa 2**	**9.00**	**246**	P		**Pn**	**18 05 09.2**	**+1.7**
KLY	**Klyuchi**	**9.07**	**24**	PN		**Pn**	**18 05 08.1**	**-0.3**
KLY	**Klyuchi**	**9.07**	**24**	*e*P		**Pn**	**18 05 08.1**	**-0.3**
KLY	**Klyuchi**	**9.07**	**24**	*e*P		**Pn**	**18 05 08.1**	**-0.3**
JSS	**Shosan**	**9.29**	**250**	P		Pn	18 05 16.3	+4.9
JCH	**Churui**	**9.38**	**238**	P		**Pn**	**18 05 10.4**	**-2.3**
JCH				*e*S		**Sn**	**18 06 50.4**	**-6.1**
BDR	**Baidarnaya**	**9.45**	**25**	PN		**Pn**	**18 05 12.6**	**-1.0**
BDR	**Baidarnaya**	**9.45**	**25**	*e*P		**Pn**	**18 05 12.6**	**-1.0**
SRKR	**Sorokina**	**9.51**	**24**	PN		**Pn**	**18 05 13.3**	**-1.1**
SRKR	**Sorokina**	**9.51**	**24**	*e*P		**Pn**	**18 05 13.3**	**-1.1**
JAB	**Ashibetsu**	**9.52**	**245**	P		**Pn**	**18 05 15.8**	**+1.2**
KBG	**Krutoberegovo**	**9.64**	**30**	PN		**Pn**	**18 05 13.2**	**-3.0**
KBG	**Krutoberegovo**	**9.64**	**30**	*e*P		**Pn**	**18 05 13.2**	**-3.0**
KBTR	**Krutoberegovo**	**9.64**	**30**	PN		**Pn**	**18 05 14.4**	**-1.8**
KBTR	**Krutoberegovo**	**9.64**	**30**	*e*P		**Pn**	**18 05 14.4**	**-1.8**
JBT2	**Biratori 2**	**9.86**	**241**	P		**Pn**	**18 05 18.3**	**-0.9**
NKL	**Nikolayevsk**	**9.86**	**305**	*e*PN		**Pn**	**18 05 17.1**	**-2.0**
NKL				pmax		pmax		
	comp=Z,619nm,1.4s							
NKL				pmax		pmax		
	comp=N,7.0nm,1.0s							
NKL				pmax		pmax		
	comp=E,396nm,1.3s							
NKL	**Nikolayevsk**	**9.86**	**305**⇑	*i*P		**Pn**	**18 05 22.6**	**+3.5**
NKL				AMB		AMB	18 05 24.0	
	comp=E,760nm,0.9s							
NKL				AMB		AMB	18 05 26.0	
	comp=E,400nm,1.7s							
NKL				AMB		AMB	18 05 26.0	
	comp=E,1µm,1.7s							
NKL				AMS		AMS	18 08 26.4	
	comp=E,800nm,17.0s							
NKL				AMS		AMS	18 08 26.4	
	comp=E,2µm,24.0s							
ERM	**Erimo**	**9.89**	**235**	*d i*PN		**Pn**	**18 05 19.2**	**-0.5**
ERM	**Erimo**	**9.89**	**235**			**Pn**	**18 05 19.4**	**-0.2**
JNBK	**Urakawa-nobuka**	**9.94**	**238**	P		**Pn**	**18 05 16.8**	**-3.6**
JNBK				*e*S		**Sn**	**18 07 03.1**	**-7.0**
BKI	**Bering**	**10.17**	**42**	PN		**Pn**	**18 05 19.7**	**-3.6**
BKI	**Bering**	**10.17**	**42**	*e*P		**Pn**	**18 05 19.7**	**-3.6**
BKI				*e*S		Sn	18 07 02.2	-13
JEW	**Eniwo**	**10.36**	**244**	P		**Pn**	**18 05 28.4**	**+2.3**
JNB	**Noboribetsu**	**10.82**	**243**	P		**Pn**	**18 05 31.4**	**-1.0**
JNB				*e*S		**Sn**	**18 07 26.5**	**-5.1**
JKB	**Kayabe**	**11.18**	**241**	P		**Pn**	**18 05 34.3**	**-2.9**
JKB				*e*S		Sn	18 07 30.2	-10
JSH	**Shimam**	**11.32**	**246**	P		**Pn**	**18 05 39.9**	**+0.8**
JYM2	**Yakumo 2**	**11.43**	**243**	P		**Pn**	**18 05 39.0**	**-1.6**
MA2	**Magadan**	**11.58**	**352**	PN		**Pn**	**18 05 43.5**	**+1.0**
MA2	**Magadan**	**11.58**	**352**	P		**Pn**	**18 05 42.8**	**+0.3**
	comp=E,34nm,0.3s,baz=163,slow=9.6,SNR=116							
MA2				LR		LR	18 09 56.3	
	comp=E,1µm,21.6s,baz=142,slow=36							
MA2	**Magadan**	**11.58**	**352**	*e*P		**Pn**	**18 05 43.5**	**+1.0**
MA2	**Magadan**	**11.58**	**352**			**Pn**	**18 05 43.3**	**+0.8**
GRNR	**Gornyy**	**11.79**	**289**⇓	*i*PN		**Pn**	**18 05 48.4**	**+3.0**
GRNR				*e*S		**Sn**	**18 08 01.1**	**+6.1**
GRNR				pmax		pmax		
	comp=Z,30nm,0.9s							
GRNR				smax		smax		
	comp=N,10.0nm,0.9s							
GRNR				MLR		MLR		
	comp=Z,570nm,16.0s							
GRNR	**Gornyy**	**11.79**	**289**⇓	*i*P		**Pn**	**18 05 48.4**	**+3.0**
GRNR				AMB		AMB	18 05 49.6	
	comp=Z,30nm,0.9s							
GRNR				A		A	18 08 02.6	
	comp=Z,100nm,0.9s							
GRNR				AMS		AMS	18 10 28.3	
	comp=Z,600nm,15.0s							
GRNR				AMS		AMS	18 10 28.3	
	comp=Z,400nm,15.0s							
GRNR				AMS		AMS	18 10 28.3	
	comp=Z,600nm,15.0s							
JTM	**Tenmabayashi**	**11.88**	**236**	P		Pn	18 05 41.8	-4.9
JTM				*e*S		Sn	18 07 46.0	-11
JANG	**Nango**	**11.92**	**234**	P		Pn	18 05 41.3	-6.0
JANG				*e*S		Sn	18 07 45.6	-13
TEY	**Ternei**	**12.44**	**262**⇑	*e*PN		**Pn**	**18 05 57.4**	**+3.2**
TEY				pmax		pmax		
	comp=N,10.0nm,1.1s							
TEY				pmax		pmax		

MSHR Mys Shultsa 17.04 259 ⇓*e*P Pn 18 06 52.5 -0.8
MDJ Mudanjiang 17.26 267 P Pn 18 06 55.9 -0.1
ZEA Zeya 17.74 298 *e*P P 18 07 00.5 -1.1
ZEA pmax pmax
comp=Z,71nm,1.2s
ZEA pmax pmax
comp=Z,500nm,8.0s
ZEA pmax pmax
comp=E,400nm,5.0s
ZEA MLR MLR
comp=Z,1µm,18.0s
ZEA MLR MLR
comp=N,500nm,18.0s
ZEA Zeya 17.74 298 ⇓*e*P Pn 18 07 03.7 +1.8
ZEA AMB AMB 18 07 07.3
comp=N,60nm,1.0s
ZEA AMS AMS 18 14 01.0
comp=N,500nm,18.0s
ZEA AMS AMS 18 14 01.0
comp=N,1µm,18.0s
ZEA AMS AMS 18 14 01.0
comp=N,1µm,18.0s
KROS Kirovskiy 18.01 300 ⇑*i*P Pn 18 07 06.4 +1.4
KROS AMB AMB 18 07 10.2
comp=N,60nm,0.8s
INU Inuyama 18.03 231 P P 18 07 04.2 -0.7
JHJ2 Mitsune 18.51 221 P Pn 18 07 11.3 +0.1
JHJ2 IAmb IAmb 18 07 13.2
comp=Z,248nm,0.8s
KIWB Kanaga Island 18.77 68 P P 18 07 12.0 -0.9
ADK Adak 19.06 68 P P 18 07 14.4 -1.6
ADK pmax pmax
comp=Z,154nm,1.4s
ADK Adak 19.06 68 P P 18 07 14.4 -1.6
ADK IAmb IAmb 18 07 46.4
comp=Z,154nm,1.4s
GSTR Great Sitkin T 19.45 67 P P 18 07 19.5 -0.8
YAK Yakutsk 19.51 324 *e*P P 18 07 21.0 +0.2
YAK *e*S S 18 10 53.4 -3.2
YAK pmax pmax
comp=N,118nm,1.1s
YAK pmax pmax
comp=Z,358nm,1.0s
YAK pmax pmax
comp=E,157nm,1.3s
YAK smax smax
comp=N,291nm,2.8s
YAK smax smax
comp=E,208nm,2.7s
YAK Yakutsk 19.51 324 P P 18 07 19.4 -1.4
comp=E,0.7nm,0.3s,baz=306,slow=0.6,SNR=27
YAK Yakutsk 19.51 324 P P 18 07 19.8 -1.0
YAK Sn 18 11 01.4 +0.1
CN2 Changchun 20.33 268 *e*P P 18 07 26.8 -3.0
CN2 *e*pP pP 18 07 46.4 +1.2
CN2 *e*S S 18 11 05.2 -7.8
CN2 *e*SS SnSn 18 11 41.3 +4.2
CN2 pmax pmax
comp=E,90nm,0.8s
CN2 pmax pmax
comp=E,190nm,4.0s
CN2 LR LR
comp=E,740nm,15.0s
CN2 LR LR
comp=E,550nm,15.0s
CN2 LR LR
comp=E,710nm,15.0s
ATKA Atka Island 20.59 67 P P 18 07 31.5 -1.1
BILL Bilibino 20.84 13 P P 18 07 32.6 -2.6
BILL pmax pmax
comp=Z,46nm,1.0s
BILL Bilibino 20.84 13 P P 18 07 32.6 -2.6
KSRS Korea Array 21.89 250 P P 18 07 46.6 +0.1
comp=Z,39nm,0.8s,baz=46,slow=10,SNR=74
KSRS PcP PcP 18 11 44.5 +1.7
comp=Z,3.4nm,0.8s,baz=50,slow=1.1,SNR=6.3
KSRS ScP ScP 18 15 10.8 -1.7
comp=Z,2.5nm,0.9s,baz=22,slow=1.3,SNR=6.7
KSRS LR LR 18 15 42.9
comp=Z,461nm,20.6s,baz=52,slow=35
KS19 Wonju Array Si 21.90 251 P P 18 07 46.7 0.0
KSAR Wonju Array Be 21.92 250 P P 18 07 47.1 +0.2
KSAR Wonju Array Be 21.92 250 P P 18 07 47.1 +0.2
SNY Shenyang 22.40 265 ⇑P P 18 07 50.7 -1.4
SNY S S 18 11 54.1 +1.6
SNY pmax pmax
comp=Z,27nm,0.9s
SNY pmax pmax
comp=Z,340nm,6.0s
SNY LR LR
comp=Z,690nm,14.6s
SNY LR LR
comp=Z,570nm,13.2s
HIA Hailar 22.58 286 P P 18 07 51.8 -2.2
HIA pmax pmax
comp=Z,18nm,0.9s
HIA Hailar 22.58 286 P P 18 07 51.8 -2.2
INCN Inchon 22.69 252 P P 18 07 55.7 +0.5
INCN pmax pmax
comp=Z,46nm,0.9s
INCN Inchon 22.69 252 P P 18 07 55.6 +0.5
TJN Taejon 22.91 249 *ce*P P 18 07 58.6 +1.2
JNU Nakatsue 23.05 238 P P 18 07 59.3 +0.5
comp=Z,22nm,0.7s,baz=0.8,slow=8.1,SNR=15
JNU Nakatsue 23.05 238 P P 18 07 58.3 -0.5
SPIA Saint Paul Isl 23.16 54 P P 18 07 54.5 -5.2
NIKH Nikolski High 23.82 64 P P 18 08 03.7 -1.9
NIKH IAmb IAmb 18 08 27.7
comp=Z,124nm,1.2s
GAMB Gambell 24.27 37 P P 18 08 10.3 +0.8
GAMB IAmb IAmb 18 08 11.6
comp=Z,131nm,0.7s
DL2 Dalian 25.14 260 P P 18 08 16.6 -1.1
DL2 S S 18 12 37.9 +1.3
DL2 pmax pmax
comp=Z,93nm,0.9s
DL2 pmax pmax
comp=Z,240nm,5.1s
DL2 LR LR
comp=Z,430nm,13.6s
DL2 LR LR
comp=Z,340nm,12.8s
UNV Unalaska Valle 25.17 62 P P 18 08 19.6 +1.7
UNV IAmb IAmb 18 08 23.1
comp=Z,129nm,1.6s
AKUT Akutan 25.59 61 P P 18 08 20.5 -1.2
BOD Bodaibo 25.62 307 *e*P P 18 08 19.9 -2.0
BOD pmax pmax
comp=Z,25nm,1.8s
TIXI Tiksi 26.29 342 *d i*P P 18 08 25.4 -2.4
TIXI *i* *PP sP 18 08 53.1 -2.7
TIXI pmax pmax
comp=Z,18nm,1.0s
TIXI Tiksi 26.29 342 P P 18 08 25.9 -1.9
comp=Z,12nm,0.6s,baz=0.0,slow=24,SNR=40
TIXI Tiksi 26.29 342 P P 18 08 25.6 -2.2
ANM Nome 27.14 38 P P 18 08 36.1 +0.6
ANM pmax pmax
comp=Z,44nm,0.8s
ANM Nome 27.14 38 P P 18 08 36.1 +0.6
ANM IAmb IAmb 18 08 38.0
comp=Z,44nm,0.8s
BJT Baijiatuau 28.20 267 P P 18 08 45.9 +0.6
BJT pmax pmax
comp=Z,10.0nm,0.6s
BJT Baijiatuau 28.20 267 P P 18 08 45.9 +0.6
CNBA Chernabura Isl 29.13 59 P P 18 08 55.8 +2.5
CNBA IAmb IAmb 18 09 54.2
comp=Z,74nm,1.2s
RDOG Red Dog Mine 29.24 32 P P 18 08 55.1 +1.0
JOW Kunigami 29.33 233 P P 18 08 55.6 +0.3
TIA Tai'an 29.61 260 P P 18 08 58.0 +0.2
TIA pmax pmax
comp=Z,9.0nm,0.5s
H11N2 WAKE ISLAND Hy 30.22 156 T T 18 41 14.9
baz=342,slow=76,SNR=1691
H11N1 WAKE ISLAND Hy 30.23 156 T T 18 41 13.6
baz=342,slow=76,SNR=2735
H11N3 WAKE ISLAND Hy 30.23 156 T T 18 41 10.2
baz=342,slow=76,SNR=1401
SVW2 Sparrevohn 31.01 47 P P 18 09 11.5 +1.7
NJ2 Nanjing 31.07 252 *e*P P 18 09 10.5 -0.2
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=Z,600nm,17.8s
NJ2 LR LR
comp=Z,630nm,16.5s
NJ2 LR LR
comp=Z,620nm,22.7s
ULN Ulaanbaatar 31.09 287 P P 18 09 09.2 -1.7
ULN pmax pmax
comp=Z,13nm,1.2s
ULN Ulaanbaatar 31.09 287 P P 18 09 09.2 -1.7
ULN P P 18 09 10.3 -0.6
CHIR Chirikof Islan 31.26 57 P P 18 09 12.1 0.0
CHIR IAmb IAmb 18 09 28.0
comp=Z,104nm,1.2s
H11S1 WAKE ISLAND Hy 31.33 157 T T 18 42 43.3
baz=342,slow=76,SNR=3578
H11S3 WAKE ISLAND Hy 31.34 157 T T 18 42 35.1
baz=342,slow=76,SNR=2803
H11S2 WAKE ISLAND Hy 31.35 157 T T 18 42 30.7
baz=342,slow=76,SNR=3333
SONM Songino Array 31.52 288 P P 18 09 13.3 -1.3
comp=Z,4.0nm,0.8s,baz=72,slow=7.8,SNR=26
SONM PcP PcP 18 12 06.0 +0.5
comp=Z,1.7nm,0.6s,baz=104,slow=2.1,SNR=5.2
SONM ScP ScP 18 15 41.3 +0.2
comp=Z,7.5nm,0.8s,baz=89,slow=2.4,SNR=24
SONM LR LR 18 22 46.0
comp=Z,565nm,19.5s,baz=66,slow=38
SONM Songino Array 31.52 288 P P 18 09 13.0 -1.6
SONM PcP 18 12 05.2 -0.3
SONM ScP 18 15 40.7 -0.4
SII Sitkinak Islan 31.96 55 P P 18 09 18.8 +0.5
SII IAmb IAmb 18 09 23.1
comp=Z,68nm,1.1s
TLY Talaya 32.14 296 *e*P P 18 09 19.0 -0.9
TLY *e*S S 18 14 28.5 +2.1
TLY pmax pmax
comp=Z,53nm,1.0s
TLY MLR MLR
comp=Z,1µm,15.0s
TLY Talaya 32.14 296 P P 18 09 18.2 -1.8
IMAR Indian Mountai 32.21 37 P P 18 09 21.4 +1.0
OHAK Old Harbor 32.37 54 P P 18 09 20.4 -1.4
OHAK IAmb IAmb 18 09 23.1
comp=Z,58nm,1.1s
RSO Redoubt South 32.40 48 P P 18 09 22.1 -0.2
PPLA Purkeypile 32.65 43 P P 18 09 26.3 +1.9
PPLA IAmb IAmb 18 09 29.8
comp=Z,92nm,1.3s
KDAK Kodiak Island 32.69 53 P P 18 09 24.1 -0.4
KDAK pmax pmax
comp=Z,48nm,0.9s
KDAK Kodiak Island 32.69 53 P P 18 09 24.1 -0.4
KDAK IAmb IAmb 18 09 25.2
comp=Z,48nm,0.9s
ZAK Zakamensk 32.70 293 *e*P P 18 09 23.9 -1.0
ZAK pmax pmax
comp=Z,11nm,1.1s
SKT Skwentna 32.95 45 P P 18 09 28.1 +1.2
SKT IAmb IAmb 18 09 32.2
comp=Z,38nm,0.9s
HOM Homer 33.00 49 P P 18 09 28.6 +1.4
BPAW Bear Paw Mtn. 33.22 41 P P 18 09 30.3 +1.1
BPAW IAmb IAmb 18 09 34.4
comp=Z,53nm,0.8s
KTH Kantishna Hill 33.24 42 P P 18 09 30.6 +1.2
SUA Susitna One 33.34 46 P P 18 09 30.9 +0.5
SUA IAmb IAmb 18 09 34.1
comp=Z,36nm,0.9s
BRLK Bradley Lake 33.37 49 P P 18 09 30.8 +0.2
BRLK IAmb IAmb 18 09 35.2
comp=Z,24nm,0.8s
MLY Manley 33.37 39 P P 18 09 31.5 +1.0
MLY IAmb IAmb 18 09 35.2
comp=Z,36nm,0.8s
MLY PcP PcP 18 12 11.2 +1.0
TRF Thorofare Moun 33.52 42 P P 18 09 32.9 +0.9
TRF IAmb IAmb 18 09 36.4
comp=Z,46nm,1.0s
MOY Mondy 33.74 296 *e*P P 18 09 34.7 +0.7
COLD Coldfoot 33.77 35 P P 18 09 35.0 +1.1
COLD IAmb IAmb 18 09 40.6
comp=Z,20nm,0.6s
RC01 Rabbit Creek A 33.84 46 P P 18 09 35.9 +1.2
RC01 IAmb IAmb 18 09 39.3
comp=Z,40nm,0.9s
RC01 PcP PcP 18 12 12.8 +1.3
BWN Browne 33.89 41 P P 18 09 37.2 +2.2
SEW Seward 34.06 48 P P 18 09 36.9 +0.4
SEW IAmb IAmb 18 09 42.6
comp=Z,57nm,1.0s
NEA Nenana 34.07 40 P P 18 09 37.7 +1.2
PMR Palmer 34.11 46 P P 18 09 37.8 +1.0
PMR pmax pmax
comp=Z,19nm,0.8s
PMR Palmer 34.11 46 P P 18 09 37.8 +1.0
MCK McKinley 34.12 42 P P 18 09 38.1 +1.0
MCK pmax pmax
comp=Z,57nm,1.0s
MCK McKinley 34.12 42 P P 18 09 38.0 +1.0
MCK IAmb IAmb 18 09 41.7
comp=Z,57nm,1.0s
RND Reindeer 34.16 42 P P 18 09 37.9 +0.4
RND pmax pmax
comp=Z,67nm,0.9s
RND Reindeer 34.16 42 P P 18 09 37.9 +0.4
TOLK Toolik Lake Re 34.17 33 P P 18 09 38.7 +1.2
TOLK Toolik Lake Re 34.17 33 P P 18 09 38.5 +1.1
baz=263,SNR=166
GHO Glory Hole Cre 34.19 45 P P 18 09 38.7 +1.0
GHO IAmb IAmb 18 09 47.8
comp=Z,20nm,0.8s
MDM Murphy Dome 34.44 39 P P 18 09 41.2 +1.5
KNK Knik Glacier 34.44 46 P P 18 09 41.1 +1.3
SML Sawmill 34.47 45 P P 18 09 41.2 +1.1
WRH Wood River Hil 34.49 40 P P 18 09 41.2 +1.0
WRH IAmb IAmb 18 09 44.7
comp=Z,44nm,0.9s
TCOL CIGO, UAF Yank 34.59 40 P P 18 09 42.4 +1.4
baz=270,SNR=26
COLA College 34.60 40 P P 18 09 42.5 +1.5
COLA pmax pmax
comp=Z,144nm,0.7s
COLA College 34.60 40 P P 18 09 42.5 +1.5
CCB Clear Creek Bu 34.62 40 P P 18 09 42.2 +1.0
CCB IAmb IAmb 18 09 45.7
comp=Z,54nm,1.0s
POKR Poker Plat Res 34.77 39 P P 18 09 44.2 +1.6
baz=270,SNR=73
DHY Denali Highway 34.84 43 P P 18 09 44.2 +0.8
DHY IAmb IAmb 18 09 47.4
comp=Z,50nm,1.1s
YHNB Yeheng 34.85 239 P P 18 09 43.7 -0.1
SCM Sheep Creek Mo 34.95 45 P P 18 09 45.5 +1.3
SCM pmax pmax
comp=Z,76nm,1.1s
SCM Sheep Creek Mo 34.95 45 P P 18 09 45.5 +1.3
WHN Wuhan 34.95 254 ⇑P P 18 09 44.6 +0.1
WHN pmax pmax
comp=Z,46nm,0.6s
HDA Harding Lake 34.99 40 P P 18 09 44.8 +0.4
HDA IAmb IAmb 18 09 48.9
comp=Z,39nm,0.7s
HDA Harding Lake 34.99 40 P P 18 09 44.6 +0.2
baz=271,SNR=41
IL31 35.01 40 P P 18 09 45.1 +0.6
IL31 IAmb IAmb 18 09 48.5
comp=Z,33nm,0.7s
ILAR Eielson Array 35.01 40 P P 18 09 45.5 +0.9
comp=Z,21nm,0.7s,baz=268,slow=8.8,SNR=87
ILAR LR LR 18 25 59.3
comp=Z,160nm,18.7s,baz=266,slow=39
ILAR Eielson Array 35.01 40 P P 18 09 44.6 0.0
PRP Porcupine Dome 35.58 39 P P 18 09 50.0 +0.4
FYU Fort Yukon 35.69 37 P P 18 09 52.1 +1.7
PAX Paxson 35.72 43 P P 18 09 52.2 +1.4
PAX pmax pmax
comp=Z,19nm,0.9s
PAX Paxson 35.72 43 P P 18 09 52.2 +1.4
SSLB Suanglung 35.78 239 P P 18 09 51.6 0.0
SSLB IAmb IAmb 18 10 17.1
comp=Z,113nm,1.9s
EYAK Cordova Ski Ar 35.84 47 P P 18 09 51.2 -0.6
EYAK IAmb IAmb 18 09 56.3
comp=Z,29nm,1.0s
YULB Yu-li 35.89 238 P P 18 09 53.8 +1.2
YULB IAmb IAmb 18 10 05.4
comp=Z,48nm,1.3s
RIDG Independent Ri 35.94 42 P P 18 09 52.6 -0.1
RIDG IAmb IAmb 18 09 56.9
comp=Z,77nm,1.2s
BMAR Burnt Mountain 35.95 35 P P 18 09 54.7 +1.9
DOT Dot Lake 36.30 42 P P 18 09 55.7 0.0
DOT IAmb IAmb 18 09 58.7
comp=Z,20nm,0.7s
SCRK Sand Creek 36.30 41 P P 18 09 56.2 +0.4
SCRK IAmb IAmb 18 10 00.2
comp=Z,37nm,0.9s
XAN Xi'an 36.32 264 P P 18 09 56.2 0.0
XAN S S 18 15 28.8 -2.4
XAN pmax pmax
comp=Z,18nm,1.0s
XAN pmax pmax
comp=Z,77nm,4.1s
XAN LR LR
comp=Z,290nm,16.7s
XAN LR LR
comp=Z,340nm,18.6s
XAN LR LR
comp=Z,350nm,16.3s
XAN Xi'an 36.32 264 P P 18 09 55.9 -0.3
XAN pmax pmax
comp=Z,14nm,0.8s
XAN Xi'an 36.32 264 P P 18 09 55.9 -0.3
TPUB Ta-pu 36.34 239 P P 18 09 57.1 +0.6
RAGM Ragged Mountai 36.39 47 P P 18 09 57.9 +1.3
TWG Pinlang 36.47 238 P P 18 09 56.7 -0.8
MENT Mentasta 36.52 43 P P 18 09 58.8 +1.2
MENT IAmb IAmb 18 10 06.1
comp=Z,24nm,0.8s
HMT Hamilton 36.60 47 P P 18 09 59.4 +1.1
HMT IAmb IAmb 18 10 05.5
comp=Z,47nm,1.0s
GLB Gilahina Butte 36.66 45 P P 18 10 00.1 +1.3
GLB IAmb IAmb 18 10 04.4
comp=Z,42nm,1.4s
VRDI Verde Repeater 36.86 46 P P 18 10 02.3 +1.7
VRDI IAmb IAmb 18 10 05.4
comp=Z,31nm,0.8s
SUCK Suckling Hills 36.89 48 P P 18 10 02.3 +1.6
MCARA **McCarthy VSAT 37.04 45** P P 18 10 03.8 +1.8
MCARA IAmb IAmb 18 10 16.1
comp=Z,21nm,0.7s
CRQM Cirque 37.08 46 P P 18 10 04.7 +2.1
TGL Tana Glacier 37.23 46 P P 18 10 05.7 +2.0
TGL IAmb IAmb 18 10 08.7
comp=Z,57nm,1.0s
BCAR Beaver Creek A 37.38 42 P P 18 10 06.9 +2.0
BALM Baldy 37.42 46 P P 18 10 06.8 +1.5
BALM IAmb IAmb 18 10 10.2
comp=Z,34nm,0.9s
EGAK Eagle 37.46 40 P P 18 10 06.1 +0.6
BARN Barnard Glacie 37.74 46 P P 18 10 09.8 +1.7
MESA MESA 37.77 47 P P 18 10 09.9 +1.5
CTGM Chitina Glacie 37.92 46 P P 18 10 11.6 +2.0
ENH Enshi 38.30 259 P P 18 10 13.0 0.0
ENH IAmb IAmb 18 10 15.2
comp=Z,46nm,1.0s
DAWY Dawson 38.31 41 P P 18 10 13.9 +1.2
LZH Lanzhou 38.53 271 *e*P P 18 10 15.0 0.0
LZH pP pP 18 10 32.9 -1.1
LZH sP sP 18 10 41.6 -1.6
LZH PP PP 18 11 47.1 +2.6
LZH pmax pmax
comp=Z,68nm,1.3s
LZH pmax pmax
comp=Z,170nm,5.4s
LZH LR LR
comp=Z,430nm,13.0s
LZH LR LR
comp=Z,340nm,13.6s
LZH LR LR
comp=Z,450nm,16.8s
EPYK Eagle Plains 39.11 37 P P 18 10 21.0 +1.6
EPYK Eagle Plains 39.11 37 P P 18 10 21.0 +1.6
baz=278,SNR=38
GTA Gaotai 39.42 278 *e*P P 18 10 22.1 -0.3
GTA pP pP 18 10 40.6 -0.8
GTA sP sP 18 10 48.8 -1.8
GTA ScP ScP 18 16 10.3 +0.3
GTA ScS ScS 18 20 21.6 -0.8
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,140nm,7.2s
GTA LR LR
comp=Z,190nm,17.2s
GTA LR LR
comp=Z,330nm,16.5s
GTA LR LR
comp=Z,510nm,17.5s
HYT Haines Junctio 39.78 45 P P 18 10 26.9 +1.8
HYT IAmb IAmb 18 10 30.8
comp=Z,54nm,0.9s
INK Inuvik 40.08 33 P P 18 10 28.9 +1.6
comp=Z,49nm,0.6s,baz=290,slow=6.7,SNR=202
INK Inuvik 40.08 33 P P 18 10 28.7 +1.5
WHY Whitehorse 41.07 45 P P 18 10 38.6 +3.0
WHY IAmb IAmb 18 10 41.5
comp=Z,31nm,0.8s
SKAG Skagway 41.19 47 P P 18 10 39.5 +3.0
PATS Pohnpei 41.36 174 P P 18 10 41.7 +3.3
CD2 Chengdu 41.68 264 P P 18 10 40.6 -0.4
CD2 pP pP 18 10 57.2 -3.2
CD2 S S 18 16 49.0 -2.7
CD2 pmax pmax
comp=Z,70nm,0.5s
CD2 LR LR
comp=Z,360nm,7.8s
CD2 LR LR
comp=Z,610nm,14.2s
BESE Bessie Mountai 41.68 48 P P 18 10 43.1 +2.5
BESE IAmb IAmb 18 10 46.4
comp=Z,62nm,1.6s
JIS Juneau Island 42.01 48 P P 18 10 45.4 +2.2
JIS IAmb IAmb 18 10 48.7
comp=Z,28nm,0.8s
ZAA0 Zalesovo Array 42.33 305 P P 18 10 44.2 -1.7
ZALV Zalesovo Beam 42.33 305 P P 18 10 44.7 -1.2
comp=Z,3.3nm,0.4s,baz=56,slow=6.6,SNR=17
ZALV PcP PcP 18 12 38.4 +0.4
comp=Z,8.6nm,0.7s,baz=73,slow=3.9,SNR=6.6
ZALV ScP ScP 18 16 21.1 0.0
comp=Z,1.9nm,0.7s,baz=66,slow=4.5,SNR=4.6
ZALV LR LR 18 29 16.4
comp=Z,314nm,21.3s,baz=78,slow=37
ZALV Zalesovo Beam 42.33 305 P P 18 10 44.4 -1.5
ZALV PcP 18 12 37.9 0.0
GYA Guiyang 42.69 257 ⇑*i*P P 18 10 49.7 +0.4
GYA S S 18 17 05.0 -1.8
GYA sS sS 18 17 36.3 -3.1
GYA SS SS 18 20 13.3 -6.5
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=Z,140nm,10.5s
GYA LR LR
comp=Z,140nm,11.0s
GYA LR LR
comp=Z,210nm,11.0s
C36M Paulatuk 43.24 31 P P 18 10 54.5 +1.5
C36M Paulatuk 43.24 31 P P 18 10 54.3 +1.3
baz=285,SNR=78
DLBC Dease Lake 44.12 47 P P 18 11 02.4 +2.1
comp=Z,25nm,0.8s,baz=293,slow=8.8,SNR=8.6
DLBC ScP ScP 18 16 30.0 +1.7
comp=Z,13nm,1.0s,baz=0.0,slow=3.0,SNR=3.0
DLBC Dease Lake 44.12 47 P P 18 11 03.0 +2.7
DLBC IAmb IAmb 18 11 04.8
comp=Z,28nm,0.8s
DLBC ScP 18 16 29.2 +0.9
DIB Dawson Inlet, 44.89 55 P P 18 11 08.0 +1.5
DIB IAmb IAmb 18 11 10.0
comp=Z,61nm,1.2s
KEKH Kekaha 45.04 109 P P 18 11 08.6 +0.6
WMQ Urumqi 45.04 290 *e*P P 18 11 09.5 +1.6
WMQ pP pP 18 11 24.8 -2.3
WMQ sP pwP 18 11 32.7 +3.1
WMQ pmax pmax

comp=Z,21nm,0.9s
WMQ pmax pmax
comp=Z,140nm,4.9s
WMQ LR LR
comp=Z,430nm,12.7s
WMQ LR LR
comp=Z,240nm,15.3s
WMQ LR LR
comp=Z,320nm,23.1s
WMQ Urumqi 45.04 290 P **P 18 11 08.3 +0.4**
WMQ pmax pmax
comp=Z,19nm,0.8s
WMQ Urumqi 45.04 290 P **P 18 11 08.2 +0.4**
MOBC Moresby Island 45.19 55 P **P 18 11 08.7 -0.2**
KMI Kunming 46.17 259 P **P 18 11 17.6 +0.4**
KMI pP pP 18 11 36.7 +0.1
KMI sP sP 18 11 46.0 +0.3
KMI pmax pmax
comp=Z,39nm,1.2s
KMI LR LR
comp=Z,240nm,17.0s
KMI LR LR
comp=Z,190nm,19.3s
KMI LR LR
comp=Z,240nm,21.7s
KMI Kunming 46.17 259 P **P 18 11 16.9 -0.3**
KMI pmax pmax
comp=Z,35nm,0.9s
KMI Kunming 46.17 259 P **P 18 11 16.9 -0.3**
KMI IAmb IAmb 18 11 20.2
comp=Z,35nm,0.9s
OPA Opana 46.34 108 P **P 18 11 19.5 +1.2**
OPA pmax pmax
comp=Z,153nm,1.0s
OPA Opana 46.34 108 P **P 18 11 19.5 +1.2**
KIP Kipapa 46.53 108 P **P 18 11 20.7 +1.0**
KIP pmax pmax
comp=Z,139nm,0.9s
KIP Kipapa 46.53 108 P **P 18 11 20.7 +1.0**
HON Honolulu 46.61 108 P **P 18 11 21.0 +0.6**
HON pmax pmax
comp=Z,97nm,0.8s
HON Honolulu 46.61 108 P **P 18 11 20.9 +0.6**
MK31 Makanchi Array 46.89 297 P **P 18 11 21.0 -1.3**
MK31 pmax pmax
comp=Z,14nm,0.7s
MK31 Makanchi Array 46.89 297 P **P 18 11 21.0 -1.3**
MKAR Makanchi Array 46.89 297 P **P 18 11 21.1 -1.3**
comp=Z,15nm,0.7s,baz=67,slow=6.9,SNR=57
MKAR pP **pP 18 11 40.4 -1.3**
comp=Z,15nm,0.9s,baz=66,slow=9.4,SNR=8.5
MKAR PcP **PcP 18 12 54.4 +0.6**
comp=Z,3.4nm,0.7s,baz=72,slow=5.9,SNR=3.0
MKAR ScP **ScP 18 16 38.7 -1.3**
comp=Z,1.4nm,0.8s,baz=61,slow=4.1,SNR=4.4
MKAR LR LR 18 32 39.7
comp=Z,399nm,18.2s,baz=46,slow=38
MKAR Makanchi Array 46.89 297 P **P 18 11 20.9 -1.4**
MKAR **PcP 18 12 54.9 +1.1**
MAKZ Makanchi 47.07 297 P **P 18 11 22.2 -1.5**
MAKZ pmax pmax
comp=Z,12nm,0.9s
MAKZ Makanchi 47.07 297 P **P 18 11 22.2 -1.5**
KURK Kurchatov 47.14 303 *ce*P **P 18 11 21.9 -2.2**
KURK pmax pmax
comp=Z,57nm,1.1s
KURK Kurchatov 47.14 303 P **P 18 11 22.7 -1.4**
KURK IAmb IAmb 18 11 25.6
comp=Z,61nm,1.1s
BBB Bella Bella 47.72 54 P **P 18 11 29.1 +0.5**
KHLH Kahului Airpor 47.92 107 P **P 18 11 30.0 -0.6**
CTBH Cotabato--PC H 48.04 222 *j*/P **P 18 11 33.6 +2.1**
SLVN Son La 48.08 254 P **P 18 11 32.6 +0.7**
SLVN IAmb IAmb 18 11 52.2
comp=Z,29nm,1.1s
HPAH Hawaii Prepara 49.02 107 P **P 18 11 39.4 +0.3**
KKH Kailua Kona 49.09 108 P **P 18 11 40.4 +0.9**
KKH Kailua Kona 49.09 108 P **P 18 11 40.4 +0.9**
KHLU Kahalu`u 49.22 107 P **P 18 11 41.2 +0.6**
RES Resolute Bay 49.26 19 P **P 18 11 41.1 +1.0**
RES pmax pmax
comp=Z,70nm,0.7s
RES Resolute Bay 49.26 19 P **P 18 11 40.9 +0.8**
comp=Z,66nm,0.6s,baz=317,slow=6.2,SNR=293
RES Resolute Bay 49.26 19 P **P 18 11 41.1 +1.0**
POHA Pohakuloa 49.33 107 P **P 18 11 42.4 +0.8**
YKA Yellowknife Ar 49.37 38 P **P 18 11 42.4 +1.3**
comp=Z,24nm,0.9s,baz=298,slow=7.3,SNR=174
YKA PcP **PcP 18 13 03.6 +1.2**
comp=Z,2.5nm,0.7s,baz=309,slow=3.4,SNR=4.5
YKA Yellowknife Ar 49.37 38 **PcP 18 13 02.8 +0.4**
MLOA Mauna Loa Obse 49.46 107 P **P 18 11 44.0 +1.1**
HMH Humu'ula Sheep 49.47 107 P **P 18 11 44.3 +1.5**
MWH Moku'aweowe 49.48 107 P **P 18 11 44.1 +1.0**
MLH Mauna Loa 49.61 107 P **P 18 11 45.2 +1.4**
KHU Kahuku 49.65 108 P **P 18 11 44.8 +0.7**
KHU pmax pmax
comp=Z,192nm,1.0s
KHU Kahuku 49.65 108 P **P 18 11 44.8 +0.7**
AIN Ainahou 49.65 107 P **P 18 11 45.5 +1.4**
PUH Pauahi 49.81 107 P **P 18 11 45.9 +0.8**
NOR Nord 50.37 358 *i* P **P 18 11 47.8 -0.7**
PDGK Podgornoye 50.38 294 P **P 18 11 47.9 -1.4**
LSA Lhasa 50.87 273 P **P 18 11 54.7 +1.2**
LSA pmax pmax
comp=Z,18nm,0.7s
LSA Lhasa 50.87 273 *i* P **P 18 11 55.0 +1.5**
SNR=20
LSA Lhasa 50.87 273 P **P 18 11 54.7 +1.2**
LSA IAmb IAmb 18 11 58.6
comp=Z,18nm,0.7s
KBS Kingsbay 51.18 351 P **P 18 11 53.3 -1.3**
KBS pmax pmax
comp=Z,41nm,1.3s
KBS Kingsbay 51.18 351 *e*P **P 18 11 53.5 -1.1**
KBS Kingsbay 51.18 351 P **P 18 11 53.3 -1.3**
KBS IAmb IAmb 18 11 55.4
comp=Z,41nm,1.2s
SPA0 Spitsbergen Ar 51.32 350 *e*P **P 18 11 54.3 -1.3**
SPA0 Spitsbergen Ar 51.32 350 P **P 18 11 54.4 -1.3**
SPA0 IAmb IAmb 18 13 10.5
comp=Z,69nm,1.4s
UBPT Khong Chiam 51.58 248 P **P 18 11 59.3 +0.9**
UBPT IAmb IAmb 18 12 19.7
comp=Z,72nm,1.5s
SMPI Sarmi 51.74 200 P **P 18 12 00.7 +1.2**
comp=Z,136nm,0.9s
TEZP TEZPUR 51.77 268 *e*P **P 18 12 00.2 +0.5**
TEZP IAmb IAmb 18 12 03.5
comp=Z,25nm,0.5s
JAY Jayapura 51.83 197 P **P 18 12 00.5 +0.3**
comp=Z,28nm,0.9s,baz=330,slow=5.5,SNR=5.0
LLLB Lillooet 51.89 54 P **P 18 12 00.9 +0.5**
LLLB IAmb IAmb 18 12 05.3
comp=Z,18nm,0.9s
GENI Genyem 52.02 198 P **P 18 12 02.4 +0.9**
comp=Z,155nm,0.8s
PGC Sidney 52.08 56 P **P 18 12 03.1 +1.4**
KRVT Keravat (AS076 52.30 183 P **P 18 12 04.3 +0.6**
comp=Z,95nm,0.8s,baz=271,slow=23,SNR=6.5
DLV T Lat 52.35 242 P **P 18 12 05.1 +0.8**
KDJ Kajisay 52.47 294 P **P 18 12 04.9 0.0**
KDJ pmax pmax
comp=Z,15nm,1.0s
KDJ Kajisay 52.47 294 P **P 18 12 04.9 0.0**
NLWA Neilton Lookou 52.53 58 P **P 18 12 07.2 +2.1**
TULEG Thule 52.58 12 P **P 18 12 04.5 -0.5**
TNTI Ternate 52.59 214 P **P 18 12 05.8 0.0**
SWI Sorong 52.73 209 P **P 18 12 06.4 -0.4**
comp=Z,54nm,1.4s
D03D Eldon 52.90 57 P **P 18 12 09.3 +1.6**
baz=304
KKM Kota Kinabalu 52.92 230 P **P 18 12 07.6 -0.8**
KKM IAmb IAmb 18 12 30.0
comp=Z,37nm,1.1s
BOOM Boomskoye usch 53.01 295 P **P 18 12 08.7 -0.2**
BOOM Boomskoye usch 53.01 295 P **P 18 12 08.7 -0.2**
B05A Bryant 53.05 56 P **P 18 12 10.2 +1.4**
baz=304
SHL Shillong 53.08 268 P **P 18 12 08.5 -1.1**
SHL pmax pmax
comp=Z,59nm,0.5s
SHL Shillong 53.08 268 *e*P **P 18 12 09.8 +0.1**
SHL IAmb IAmb 18 12 14.8
comp=Z,46nm,0.5s
SHL Shillong 53.08 268 P **P 18 12 08.5 -1.1**
CHTO Chiang Mai 53.11 256 P **P 18 12 10.8 +1.1**
CHTO pmax pmax
comp=Z,29nm,1.1s
CHTO Chiang Mai 53.11 256 P **P 18 12 10.8 +1.1**
CHTO IAmb IAmb 18 12 30.8
comp=Z,30nm,1.1s
SVE Sverdlovsk 53.24 317 *e*P **P 18 12 08.9 -1.2**
SVE pmax pmax
comp=Z,11nm,0.5s
B06A Marblemount 53.25 56 P **P 18 12 09.9 -0.3**
B06A IAmb IAmb 18 12 12.3
comp=Z,45nm,1.4s
CM31 Chiang Mai Arr 53.37 256 P **P 18 12 12.9 +1.4**
CM31 IAmb IAmb 18 12 32.3
comp=Z,40nm,1.1s
CMAR Chiang Mai Arr 53.37 256 P **P 18 12 12.8 +1.2**
comp=Z,13nm,0.8s,baz=36,slow=7.3,SNR=78
CMAR pP **pP 18 12 31.1 -0.1**
comp=Z,16nm,1.0s,baz=34,slow=6.9,SNR=6.3
CMAR ScP **ScP 18 17 08.2 +0.1**
comp=Z,3.1nm,0.9s,baz=16,slow=3.8,SNR=11
CMAR LR LR 18 36 10.0
comp=Z,233nm,19.6s,baz=48,slow=37
CMAR Chiang Mai Arr 53.37 256 P **P 18 12 12.5 +0.9**
CMAR PcP **PcP 18 13 18.8 +0.9**
CMAR **ScP 18 17 08.7 +0.6**
USP Ospenovka 53.44 297 P **P 18 12 10.8 -1.1**
SNR=19
CHMS Chumysh 53.44 296 P **P 18 12 11.3 -0.6**
SNR=7.6
PBKT Sadao Pong 53.44 253 P **P 18 12 12.6 +0.5**
PBKT IAmb IAmb 18 12 32.0
comp=Z,16nm,0.5s
KBK Karagaybulak 53.52 296 P **P 18 12 12.0 -0.6**
SNR=8.8
NRN Naryn 53.59 294 P **P 18 12 12.5 -0.8**
NRN 18 13 19.9
NRN Naryn 53.59 294 P **P 18 12 12.5 -0.8**
NRN PcP **PcP 18 13 19.9 +1.0**
FRU1 Bishkek 53.62 296 P **P 18 12 12.4 -0.9**
FRU1 pmax pmax
comp=Z,22nm,1.1s
FRU1 Bishkek 53.62 296 P **P 18 12 12.3 -0.9**
FRU1 IAmb IAmb 18 13 40.4
comp=Z,22nm,1.1s
D05A Enumclaw 53.71 57 P **P 18 12 14.3 +0.6**
E04D Cinebar 53.74 58 P **P 18 12 15.5 +1.6**
baz=305
AAK Ala-Archa 53.80 296 P **P 18 12 13.4 -1.3**
AAK Ala-Archa 53.80 296 P **P 18 12 13.7 -1.0**
SNR=6.4
AAK Ala-Archa 53.80 296 *i* P **P 18 12 14.1 -0.6**
SNR=12
AAK Ala-Archa 53.80 296 P **P 18 12 13.9 -0.8**
LON Longmire 54.06 58 P **P 18 12 15.8 -0.6**
LON pmax pmax
comp=Z,69nm,2.0s
LON Longmire 54.06 58 P **P 18 12 15.8 -0.6**
LON IAmb IAmb 18 12 50.6
comp=Z,69nm,1.9s
EKS2 Erkin-Say 54.22 296 P **P 18 12 16.7 -1.0**
SNR=9.7
FAKI Fak Fak 54.36 207 P **P 18 12 18.7 -0.1**
FAKI IAmb IAmb 18 12 19.9
comp=Z,42nm,0.9s
LTY Liberty 54.41 57 P **P 18 12 19.4 +0.4**
ARU Arti 54.41 317 *d i* P **P 18 12 16.4 -2.2**
ARU *PP **pP 18 12 40.4 +1.5**
ARU 18 13 20.4
ARU 18 14 16.1
ARU S **S 18 19 46.6 -4.0**
ARU SS **SS 18 23 27.4 -5.7**
ARU pmax pmax
comp=Z,14nm,0.6s
ARU Arti 54.41 317 P **P 18 12 16.5 -2.2**
ARU IAmb IAmb 18 13 22.3
comp=Z,24nm,0.8s
COR Corvallis 54.44 61 P **P 18 12 20.0 +0.9**
COR Corvallis 54.44 61 P **P 18 12 20.0 +0.9**
B08A Colville Reser 54.52 55 P **P 18 12 19.2 -0.5**
B08A IAmb IAmb 18 12 40.8
comp=Z,20nm,0.8s
AML Almayashu 54.58 296 P **P 18 12 21.1 +0.4**
SNR=6.2
TAPN Taplejung 54.69 273 *e*P **P 18 12 22.0 +0.5**
comp=Z,18nm,0.4s
KSH Kashi 54.73 292 P P 18 12 27.5 +6.1
KSH sP sP 18 12 52.0 +1.8
KSH PcP **PcP 18 13 27.5 +4.4**
KSH PP **PP 18 14 29.4 +4.9**
KSH S **S 18 20 00.0 +4.3**
KSH sS sS 18 20 31.5 +1.7
KSH SS **SS 18 23 44.8 +5.6**
KSH pmax pmax
comp=Z,28nm,1.0s
KSH pmax pmax
comp=Z,410nm,5.6s
KSH LR LR
comp=Z,280nm,5.7s
KSH LR LR
comp=Z,490nm,5.5s
KSH LR LR
comp=Z,820nm,8.3s
H04D Lebanon 54.81 60 P **P 18 12 23.3 +1.5**
baz=306
KEBM Edson Butte 54.84 63 P **P 18 12 23.4 +1.4**
J01E Myrtle Point 54.90 62 P **P 18 12 23.9 +1.5**
baz=306
I03D Drain, OR 54.93 61 P **P 18 12 23.9 +1.2**
baz=306
G05D Wamic, OR 55.21 59 P **P 18 12 26.2 +1.6**
baz=306
ODAN Odare 55.23 273 *e*P **P 18 12 25.9 +0.6**
comp=Z,16nm,0.5s
DAG Danmarks Havn 55.23 358 *i* P **P 18 12 23.2 -1.1**
DAG pmax pmax
comp=Z,7.0nm,0.6s
DAG Danmarks Havn 55.23 358 *i* P **P 18 12 23.2 -1.1**
comp=Z,7.2nm,0.6s
E07A Sunnyside 55.27 57 P **P 18 12 25.4 +0.3**
E07A IAmb IAmb 18 12 46.7
comp=Z,18nm,0.7s
KBO Bosley Butte 55.29 63 P **P 18 12 25.0 -0.3**
K02D Willamette Mer 55.34 63 P **P 18 12 27.4 +1.8**
baz=306,SNR=8.7
C09A Chrisman Ranch 55.42 55 P **P 18 12 26.7 +0.6**
I04A Tendick Farm, 55.43 61 P **P 18 12 27.7 +1.4**
baz=306,SNR=8.3
ARSB Arslanbob 55.49 295 P **P 18 12 26.3 -0.6**
ARSB IAmb IAmb 18 12 31.1
comp=Z,14nm,0.8s
JIRN Jiri 55.51 274 *e*P **P 18 12 27.7 +0.3**
comp=Z,37nm,0.4s
HAWA Hanford 55.55 57 P **P 18 12 27.1 +0.1**
GUN Gumba 55.55 275 *e*P **P 18 12 27.7 0.0**
comp=Z,24nm,0.4s
G06A Carlson Farm, 55.60 59 P **P 18 12 27.8 +0.3**
F07A Phinny Hill Vi 55.62 58 P **P 18 12 27.7 +0.2**
F07A IAmb IAmb 18 12 49.5
comp=Z,35nm,0.7s
L02E Cave Junction 55.69 63 P **P 18 12 29.8 +1.7**
baz=307
RAMN Ramite 55.70 273 *e*P **P 18 12 28.9 +0.2**
comp=Z,41nm,0.3s
SANI Sanana 55.70 215 P **P 18 12 27.8 -0.6**
comp=Z,57nm,0.9s
I05D Terrebonne, OR 55.73 60 P **P 18 12 30.1 +1.6**
baz=306,SNR=6.3
KULLO Kullorsuaq 55.73 10 *i* P **P 18 12 27.4 -0.5**
KULLO pmax pmax
comp=Z,130nm,0.7s
KULLO Kullorsuaq 55.73 10 *i* P **P 18 12 27.4 -0.5**
comp=Z,126nm,0.7s
E08A Dider Farm, El 55.76 57 P **P 18 12 28.8 +0.3**
NEW Newport 55.78 54 P **P 18 12 29.3 +0.6**
comp=Z,5.5nm,0.9s,baz=299,slow=8.9,SNR=5.5
NEW PcP **PcP 18 13 28.3 +1.4**
comp=Z,4.3nm,0.6s,baz=5.7,slow=4.3,SNR=3.6
NEW Newport 55.78 54 P **P 18 12 29.1 +0.4**
NEW IAmb IAmb 18 12 48.7
comp=Z,76nm,2.0s
NEW **PcP 18 13 27.7 +0.8**
NEW Newport 55.78 54 P **P 18 12 29.9 +1.2**
baz=306
HUMO Hull Mountain 55.81 62 P **P 18 12 29.8 +0.8**
HUMO IAmb IAmb 18 12 32.3
comp=Z,32nm,1.2s
KRMB Red Mountain 55.89 64 P **P 18 12 31.9 +2.2**
KRMB IAmb IAmb 18 12 33.0
comp=Z,38nm,1.0s
KK31 Karatay Array 55.90 298 *i* P **P 18 12 28.2 -1.4**
KK31 Karatay Array 55.90 298 P **P 18 12 28.1 -1.6**
KKAR Karatay Array 55.90 298 P **P 18 12 28.3 -1.4**
KKAR pmax pmax
comp=Z,9.0nm,0.9s
KKAR Karatay Array 55.90 298 P **P 18 12 28.2 -1.4**
KKAR Karatay Array 55.90 298 P **P 18 12 29.0 -0.7**
J04D Umpqua Nationa 55.93 61 P **P 18 12 32.0 +1.9**
baz=307,SNR=7.6
KKN Kakani 56.03 275 *e*P **P 18 12 31.5 +0.5**
comp=Z,26nm,0.5s
PKI Pulchoki 56.09 275 *e*P **P 18 12 31.8 +0.3**
comp=Z,1.9nm,0.4s
PKIN Phulchoki 56.09 275 *e*P **P 18 12 31.7 +0.2**
comp=Z,16nm,0.5s
SIMRM Sittwe 56.15 263 P **P 18 12 33.0 +1.4**
SIMRM IAmb IAmb 18 13 39.1
comp=Z,18nm,0.4s
HAMF Hammerfest 56.23 342 *e*P **P 18 12 29.2 -2.3**
JCC Jacoby Creek, 56.24 65 P **P 18 12 34.6 +2.6**
E09A Wood Farm, Sta 56.25 56 P **P 18 12 32.8 +0.7**
E09A IAmb IAmb 18 12 53.5
comp=Z,24nm,0.8s
DMN Daman 56.26 275 *e*P **P 18 12 33.4 +0.7**
comp=Z,24nm,0.4s
APA Apatity 56.28 337 *j i*/P **P 18 12 32.5 +0.6**
APA pmax pmax
comp=Z,5.0nm,1.4s
APA Apatity 56.28 337 *j i*/P **P 18 12 32.5 +0.6**
PINE Pine Mountain 56.28 60 P **P 18 12 33.7 +1.1**
GKN Gorkha 56.32 276 *e*P **P 18 12 33.1 +0.1**
comp=Z,47nm,0.4s
KHMM Horse Mountain 56.39 64 P **P 18 12 35.5 +2.3**
J05D Fort Rock, OR 56.42 61 P **P 18 12 35.6 +2.1**
baz=307,SNR=18
L04D Klamath Falls 56.43 62 P **P 18 12 35.2 +1.6**
baz=307,SNR=18
YBH Yreka Blue Hor 56.48 63 P **P 18 12 35.8 +1.9**
YBH pmax pmax
comp=Z,39nm,1.1s
YBH Yreka Blue Hor 56.48 63 P **P 18 12 36.2 +2.3**
comp=Z,26nm,1.0s,baz=326,slow=3.8,SNR=30
YBH pP **pP 18 12 55.5 +1.2**
comp=Z,24nm,1.0s,baz=326,slow=4.3,SNR=6.5
YBH Yreka Blue Hor 56.48 63 P **P 18 12 35.8 +1.9**
YBH IAmb IAmb 18 12 37.3
comp=Z,39nm,1.1s
K04D Chiloquin, OR 56.51 62 P **P 18 12 35.6 +1.5**
baz=307
PRGR Permogore 56.52 327 *e*P **P 18 12 30.2 -3.5**
PRGR *e* 18 12 51.5
PRGR pmax pmax
comp=Z,17nm,0.6s
M02C Callahan 56.60 63 P **P 18 12 36.9 +2.2**
baz=308,SNR=16
DANN Dangsing 56.67 277 *e*P **P 18 12 36.2 +0.5**
comp=Z,57nm,0.4s
ARCES ARCESS Array B 56.72 341 P **P 18 12 33.9 -1.1**
comp=Z,4.7nm,0.6s,baz=35,slow=7.6,SNR=32
ARCES PcP **PcP 18 13 31.4 +1.3**
comp=Z,1.8nm,0.5s,baz=32,slow=5.7,SNR=4.1
ARCES LR LR 18 40 16.7
comp=Z,415nm,21.9s,baz=352,slow=40
ARCES ARCESS Array B 56.72 341 P **P 18 12 34.5 -0.5**
ARCES PcP **PcP 18 13 31.5 +1.4**
ARE0 ARCESS Array S 56.72 341 P **P 18 12 34.1 -0.9**
ARE0 PcP **PcP 18 13 31.2 +1.1**
KMRM Mail Ridge 56.80 65 P **P 18 12 38.9 +2.8**
KMRM IAmb IAmb 18 12 39.6
comp=Z,50nm,1.1s
N02D Trinity Center 56.94 64 P **P 18 12 39.3 +2.2**
baz=308,SNR=12
M04C Macdoel 56.97 63 P **P 18 12 39.3 +1.9**
baz=308,SNR=14
WALA Waterton Lakes 57.01 52 P **P 18 12 39.1 +1.5**
WALA IAmb IAmb 18 12 58.7
comp=Z,24nm,0.7s
F10A Beach Ranch, E 57.08 56 P **P 18 12 39.4 +1.4**
KOLN Koldanda 57.16 276 *e*P **P 18 12 39.4 +0.4**
comp=Z,32nm,0.5s
KCPM Cahto Peak 57.20 65 P **P 18 12 41.3 +2.2**
WDC Whiskeytown Da 57.28 64 P **P 18 12 41.0 +1.6**
WDC pmax pmax
comp=Z,30nm,1.0s
WDC Whiskeytown Da 57.28 64 P **P 18 12 41.0 +1.6**
WDC IAmb IAmb 18 12 42.3
comp=Z,30nm,1.0s
TMCR Tamitsa 57.38 332 *e*P **P 18 12 38.5 -1.2**
TMCR pmax pmax
comp=Z,21nm,0.5s
O02D Mt. Diablo Mer 57.38 65 P **P 18 12 42.4 +2.1**
baz=308,SNR=12
HNR Honiara 57.60 173 P **P 18 12 41.3 -0.5**
HNR pmax pmax
comp=Z,76nm,0.9s
HNR Honiara 57.60 173 P **P 18 12 41.3 -0.5**
JTMT Jette 57.61 53 P **P 18 12 43.3 +1.5**
JTMT IAmb IAmb 18 13 03.4
comp=Z,15nm,0.7s
KTK1 Kautokeino 57.63 341 *e*P **P 18 12 39.8 -1.6**
PMG Port Moresby 57.67 188 *j e*P **P 18 12 42.0 -0.3**
PMG *i *PP **sP 18 13 08.2 -2.9**
PMG pmax pmax
comp=Z,63nm,0.8s
PMG Port Moresby 57.67 188 P **P 18 12 42.9 +0.6**
TAS Tashkent 57.70 297 P **P 18 12 41.7 -0.7**
TAS pmax pmax
comp=Z,36nm,0.8s
TAS Tashkent 57.70 297 P **P 18 12 41.7 -0.7**
BMO Blue Mountains 57.72 57 P **P 18 12 43.4 +0.8**
BMO pmax pmax
comp=Z,15nm,1.0s
BMO Blue Mountains 57.72 57 P **P 18 12 43.4 +0.8**
BMO IAmb IAmb 18 12 45.4
comp=Z,15nm,0.9s
MOD Modoc Plateau 57.80 62 P **P 18 12 44.3 +1.0**
MOD IAmb IAmb 18 12 46.1
comp=Z,49nm,1.2s
O03E Paynes Creek 57.90 64 P **P 18 12 44.8 +0.8**
baz=308,SNR=20
HOPS Hopland Field 57.94 66 P **P 18 12 44.8 +0.8**
HOPS IAmb IAmb 18 12 46.8
comp=Z,45nm,1.1s
TRO Tromso 58.00 343 *e*P **P 18 12 42.7 -1.3**
AB31 Akbulak array 58.02 310 *i* P **P 18 12 42.8 -1.7**
ABKAR Akbulak array 58.02 310 P **P 18 12 42.4 -2.1**
ABKAR Akbulak array 58.02 310 P **P 18 12 43.1 -1.4**
SBUM Sibu 58.04 232 P **P 18 12 46.0 +1.0**
GDXM Geysers 58.22 66 P **P 18 12 47.5 +1.3**
GDXM IAmb IAmb 18 12 49.3
comp=Z,32nm,1.0s
BOK Bokaro 58.29 271 *e*P **P 18 12 47.5 +0.7**
BOK IAmb IAmb 18 12 49.5
comp=Z,7.9nm,0.5s
MSO Missoula 58.36 54 P **P 18 12 47.4 +0.4**
MSO IAmb IAmb 18 13 08.6
comp=Z,28nm,1.1s
MSO Missoula 58.36 54 P **P 18 12 47.9 +0.8**
baz=308,SNR=8.8
WVOR Wild Horse Val 58.45 60 P **P 18 12 48.2 +0.5**
WVOR pmax pmax
comp=Z,29nm,1.0s
WVOR Wild Horse Val 58.45 60 P **P 18 12 48.2 +0.5**
WVOR IAmb IAmb 18 13 10.2
comp=Z,29nm,1.0s
GAR Garm 58.52 295 P **P 18 12 47.1 -1.2**
GAR IAmb IAmb 18 13 58.7
comp=Z,30nm,0.8s
ORV Oroville 58.54 64 P **P 18 12 49.0 +0.7**
ORV pmax pmax
comp=Z,24nm,1.0s
ORV Oroville 58.54 64 P **P 18 12 49.0 +0.7**
ORV IAmb IAmb 18 12 50.2
comp=Z,24nm,0.9s
MCCM Marconi Confer 58.59 66 P **P 18 12 48.2 -0.3**
KNTN Kanton 58.85 139 P **P 18 12 51.3 +0.7**
BEKR Beckworth 59.03 63 P **P 18 12 52.8 +0.9**
BEKR IAmb IAmb 18 12 54.3
comp=Z,34nm,1.0s

DHRM	DHARAMSHALA	59.04	285	eP		P	18 12 50.7	-1.4
DHRM				IAmb		IAmb	18 12 55.3	
	comp=Z,21nm,0.6s							
SMLA	Simla	59.21	283	eP		P	18 12 51.8	-1.1
SMLA				IAmb		IAmb	18 12 55.2	
	comp=Z,37nm,0.4s							
SMLA				i	pP	pP	18 13 12.5	-0.5
FFC	Flin Flon	59.21	41	P		P	18 12 54.1	+1.5
FFC				pmax		pmax		
	comp=Z,21nm,0.7s							
FFC	Flin Flon	59.21	41	P		P	18 12 54.1	+1.5
FFC				IAmb		IAmb	18 13 13.5	
	comp=Z,21nm,0.7s							
SUMG	Summit	59.22	4	P		P	18 12 53.5	+0.6
SUMG				pmax		pmax		
	comp=Z,113nm,0.9s							
SUMG	Summit	59.22	4	i P		P	18 12 53.9	+1.0
	comp=Z,276nm,0.9s baz=312							
SUMG	Summit	59.22	4	P		P	18 12 53.5	+0.6
AFDM	Forest Hills D	59.24	65	P		P	18 12 54.2	+1.0
AFDM				IAmb		IAmb	18 12 55.5	
	comp=Z,22nm,1.1s							
CHGR	Chuyangaron	59.44	295	P		P	18 12 53.9	-0.7
MFID	Camas Ranch	59.45	58	P		P	18 12 55.4	+0.8
RUBR	Rubicon Trail	59.67	64	P		P	18 12 57.4	+1.0
RUBR				IAmb		IAmb	18 12 58.9	
	comp=Z,24nm,1.0s							
FCC	Fort Churchill	59.69	34	P		P	18 12 56.5	+0.6
FCC				pmax		pmax		
	comp=Z,28nm,1.0s							
FCC	Fort Churchill	59.69	34	P		P	18 12 56.5	+0.6
FCC				IAmb		IAmb	18 13 16.3	
	comp=Z,28nm,1.0s							
PAHR	Pah Rah Range	59.72	63	P		P	18 12 57.9	+1.4
PAHR				IAmb		IAmb	18 12 59.1	
	comp=Z,40nm,1.1s							
PAHR				PcP		PcP	18 13 42.6	0.0
LRM	Limekiln Ridge	59.80	54			P	18 12 59.2	+2.1
VCNR	Virginia City	59.82	64	P		P	18 12 59.2	+1.9
VCNR				IAmb		IAmb	18 13 00.0	
	comp=Z,31nm,0.8s							
EGMT	Eagleton	59.82	51	P		P	18 12 58.0	+0.9
	baz=310							
KSM	Kuching	59.88	233	P		P	18 12 59.0	+1.3
PNTR	Pine Nut	59.98	64	P		P	18 12 59.9	+1.4
NIL	Nilore	60.09	288	P		P	18 12 58.6	-0.5
NIL				pmax		pmax		
	comp=Z,50nm,1.2s							
NIL	Nilore	60.09	288	P		P	18 12 58.6	-0.5
STEI	Steigen	60.16	343	eP		P	18 12 57.0	-1.9
CMB	Columbia Colle	60.18	65	P		P	18 13 00.7	+1.1
CMB				pmax		pmax		
	comp=Z,22nm,1.0s							
CMB	Columbia Colle	60.18	65	P		P	18 13 00.7	+1.1
CMB				IAmb		IAmb	18 13 02.2	
	comp=Z,22nm,0.9s							
MCMT	McKenzie Canyo	60.21	55	P		P	18 13 00.9	+0.9
YERR	Yerington	60.26	64	P		P	18 13 01.4	+1.1
LOF	Lofoten	60.31	344	eP		P	18 12 58.5	-1.4
SAO	San Andreas Ge	60.34	67	P		P	18 13 01.9	+1.2
SAO				pmax		pmax		
	comp=Z,52nm,1.6s							
SAO	San Andreas Ge	60.34	67	P		P	18 13 01.9	+1.2
SAO				IAmb		IAmb	18 13 03.5	
	comp=Z,52nm,1.6s							
WAKR	Walker	60.45	64	P		P	18 13 03.1	+1.4
WAKR				IAmb		IAmb	18 13 04.5	
	comp=Z,32nm,0.9s							
KVN	Kaiserville	60.90	63	P		P	18 13 05.9	+1.2
KVN				pmax		pmax		
	comp=Z,49nm,1.0s							
KVN	Kaiserville	60.90	63	P		P	18 13 05.9	+1.2
RYN	Ryan	60.92	64	P		P	18 13 05.8	+1.0
RYN				IAmb		IAmb	18 13 07.4	
	comp=Z,34nm,0.9s							
KAPI	Kappang	60.93	220	P		P	18 13 04.5	-0.3
KAPI				pmax		pmax		
	comp=Z,47nm,1.3s							
KAPI	Kappang	60.93	220	P		P	18 13 04.5	-0.3
KAPI				IAmb		IAmb	18 13 18.1	
	comp=Z,47nm,1.3s							
QLMT	Earthquake Lak	60.98	54	P		P	18 13 06.8	+1.6
YHL	Hebgen Lake	61.11	54	P		P	18 13 07.2	+1.1
DGPR	DIGLIPUR	61.15	257	eP		P	18 13 06.9	+0.6
DGPR				IAmb		IAmb	18 13 13.9	
	comp=Z,74nm,0.9s							
YHB	Horse Butte	61.16	54	P		P	18 13 07.9	+1.5
NVAR	Mina Array Bea	61.18	64	P		P	18 13 08.3	+1.6
	comp=Z,24nm,0.8s,baz=291,slow=7.2,SNR=114							
NVAR				PcP		PcP	18 13 50.3	+1.6
	comp=Z,4.3nm,0.6s,baz=295,slow=3.7,SNR=3.7							
NVAR				LR		LR	18 35 27.7	
	comp=Z,60nm,21.6s,baz=330,slow=32							
NVAR	Mina Array Bea	61.18	64	P		P	18 13 07.7	+1.0
NVAR						PcP	18 13 49.8	+1.1
MDPB	Devils Postpil	61.23	65	P		P	18 13 08.4	+1.4
MDPB				IAmb		IAmb	18 13 09.7	
	comp=Z,27nm,1.0s							
NV11	Mina Array Sit	61.27	64	P		P	18 13 08.2	+1.1
NV11				IAmb		IAmb	18 13 09.8	
	comp=Z,27nm,1.1s							
OMMB	Old Mammoth Mi	61.29	65	P		P	18 13 08.8	+1.3
OMMB				IAmb		IAmb	18 13 10.2	
	comp=Z,15nm,1.0s							
YMR	Madison River	61.34	54	P		P	18 13 08.7	+1.1
MLAC	Mammoth, Mammo	61.38	65	P		P	18 13 09.6	+1.6
	baz=311							
ILULI	Ilulissat	61.45	10	P		P	18 13 07.6	0.0
ILULI				pmax		pmax		
	comp=Z,148nm,0.8s							
ILULI	Ilulissat	61.45	10	i P		P	18 13 07.6	0.0
	comp=Z,142nm,0.8s							
ILULI	Ilulissat	61.45	10	P		P	18 13 07.6	0.0
YNR	Norris Junctio	61.47	54	P		P	18 13 10.1	+1.6
ELK	Elko	61.49	60	P		P	18 13 09.6	+0.9
ELK				pmax		pmax		
	comp=Z,13nm,0.9s							
ELK	Elko	61.49	60	P		P	18 13 10.5	+1.8
	comp=Z,11nm,0.9s,baz=315,slow=8.2,SNR=25							
ELK	Elko	61.49	60	P		P	18 13 09.6	+0.9
YUF	Upper Falls	61.56	54	P		P	18 13 10.8	+1.7
SCO	Scoresbysund	61.61	358	i P		P	18 13 09.0	+0.3
SCO				pmax		pmax		
	comp=Z,11nm,0.6s							
SCO	Scoresbysund	61.61	358	i P		P	18 13 09.0	+0.3
	comp=Z,11nm,0.6s							
SCO	Scoresbysund	61.61	358	P		P	18 13 08.8	+0.1
YNE	Yellowstone No	61.64	53	P		P	18 13 11.1	+1.5
LKWY	Lake	61.72	54	P		P	18 13 13.0	+2.8
LKWY				pmax		pmax		
	comp=Z,20nm,0.8s							
LKWY	Lake	61.72	54	P		P	18 13 13.0	+2.8
LKWY				IAmb		IAmb	18 13 33.8	
	comp=Z,20nm,0.8s							
H17A	Grant Village	61.73	54	P		P	18 13 13.1	+2.8
H17A				IAmb		IAmb	18 13 34.1	
	comp=Z,34nm,0.9s							
H17A	Grant Village	61.73	54	P		P	18 13 11.3	+1.0
	baz=311							
PAGB	Antelope Grade	61.75	67	P		P	18 13 11.6	+1.4
MOR8	Moi Rana	61.85	343	eP		P	18 13 08.1	-2.3
FLWY	Flagg Ranch	61.87	54	P		P	18 13 13.6	+2.4
FLWY				IAmb		IAmb	18 13 34.2	
	comp=Z,16nm,0.9s							
RLMT	Red Lodge	61.96	53	P		P	18 13 13.4	+1.6
RLMT	Red Lodge	61.96	53	P		P	18 13 13.7	+2.0
	baz=311							
XMAS	Kiritimati	61.97	122	P		P	18 13 12.3	+0.4
MOOW	Moose Ponds	62.06	55	P		P	18 13 13.7	+1.2
MOOW				IAmb		IAmb	18 13 15.9	
	comp=Z,27nm,1.4s							
TIN	Tinemaha, Big	62.12	65	P		P	18 13 14.3	+1.5
	baz=311,SNR=9.4							
KBL	Kabul	62.16	292	P		P	18 13 10.9	-2.4
KBL				pmax		pmax		
	comp=Z,16nm,1.3s							
KBL	Kabul	62.16	292	P		P	18 13 10.9	-2.4
SMMC	Simmler	62.18	67	P		P	18 13 14.4	+1.2
	baz=311							
HVU	Hansel Valley	62.23	58	P		P	18 13 14.8	+1.3
HVU				pmax		pmax		
	comp=Z,12nm,0.9s							
HVU	Hansel Valley	62.23	58	P		P	18 13 14.8	+1.3
SNOW	Snow King Moun	62.25	55	P		P	18 13 15.6	+1.8
SNOW				IAmb		IAmb	18 13 36.8	
	comp=Z,23nm,0.9s							
REDW	Red Top Meadow	62.26	55	P		P	18 13 16.0	+2.1
REDW				IAmb		IAmb	18 13 17.2	
	comp=Z,40nm,1.1s							
KULM	Kulim	62.30	245	P		P	18 13 15.2	+1.1
KULM				IAmb		IAmb	18 13 35.8	
	comp=Z,38nm,1.0s							
KULM	Kulim	62.30	245	P		P	18 13 32.0	+18
JRMM	Jerrut	62.32	242	P		P	18 13 33.0	+19
DGMT	Dagmar	62.33	47	P		P	18 13 13.3	-0.7
DGMT	Dagmar	62.33	47	P		P	18 13 14.6	+0.6
	baz=312							
VES	Vestal, Richgr	62.39	66	P		P	18 13 15.2	+0.7
	baz=311							
PBA	Port Blair	62.40	256	P		P	18 13 15.9	+1.2
LAO	LASA Array	62.51	50	P		P	18 13 16.3	+1.1
	baz=312							
AHID	Auburn Hatcher	62.51	56	P		P	18 13 16.9	+1.4
AHID				IAmb		IAmb	18 13 18.4	
	comp=Z,20nm,1.1s							
PKM	Mcpherson Peak	62.57	68	P		P	18 13 17.4	+1.5
	baz=311,SNR=7.7							
CWC	Cottonwood Cre	62.61	65	P		P	18 13 17.1	+0.9
	baz=311							
COEN	Coen	62.63	192	P		P	18 13 16.5	+0.3
BGU	Big Grassy Mou	62.64	58	P		P	18 13 17.2	+0.9
IPM	Ipoh	62.71	244	P		P	18 13 17.3	+0.4
IPM				IAmb		IAmb	18 13 37.9	
	comp=Z,28nm,1.1s							
IPM	Ipoh	62.71	244	P		P	18 13 37.0	+20
SPUT	South Promonto	62.72	58	P		P	18 13 18.0	+1.1
R11A	Troy Canyon, C	62.85	62	P		P	18 13 18.4	+0.7
R11A				IAmb		IAmb	18 13 20.2	
	comp=Z,26nm,0.9s							
R11A	Troy Canyon, C	62.85	62	P		P	18 13 19.0	+1.2
	baz=311,SNR=45							
ISA	Isabella, Lake	62.88	66	P		P	18 13 17.7	-0.2
ISA				pmax		pmax		
	comp=Z,16nm,1.0s							
ISA	Isabella, Lake	62.88	66	P		P	18 13 17.7	-0.2
ISA	Isabella, Lake	62.88	66	P		P	18 13 18.1	+0.2
	baz=312,SNR=9.1							
DAC	Darwin (Calif)	63.01	65	P		P	18 13 20.6	+1.7
DAC				pmax		pmax		
	comp=Z,9.0nm,0.8s							
DAC	Darwin (Calif)	63.01	65	P		P	18 13 20.6	+1.7
ARVC	Arvin	63.02	67	P		P	18 13 19.5	+0.8
	baz=312							
HWUT	Hardware Ranch	63.02	57	P		P	18 13 19.4	+0.6
HWUT				IAmb		IAmb	18 13 41.9	
	comp=Z,34nm,1.1s							
FIA1	FINESS Array S	63.02	335	P		P	18 13 17.6	-0.7
FIA1				IAmb		IAmb	18 13 19.1	
	comp=Z,36nm,0.7s							
FINES	FINESS Array B	63.02	335	P		P	18 13 17.3	-1.0
FINES	FINESS Array B	63.02	335	P		P	18 13 17.0	-1.3
	comp=Z,36nm,0.6s,baz=35,slow=6.7,SNR=154							
FINES				LR		LR	18 42 44.8	
	comp=Z,368nm,21.7s,baz=32,slow=38							
FINES	FINESS Array B	63.02	335	P		P	18 13 17.3	-1.0
CHLP	Challavanipeta	63.18	268	eP		P	18 13 20.4	+0.5
CHLP				IAmb		IAmb	18 13 22.8	
	comp=Z,14nm,1.1s							
MYKOM	Kota Tinggi	63.21	239	P		P	18 13 21.9	+1.7
MYKOM				IAmb		IAmb	18 13 41.7	
	comp=Z,49nm,1.1s							
MPMC	Manual Prospec	63.22	65	P		P	18 13 21.0	+0.7
	baz=312,SNR=22							
DUG	Dugway, Tooele	63.25	59	P		P	18 13 21.9	+1.6
DUG	Dugway, Tooele	63.25	59	P		P	18 13 21.9	+1.6
DUG				IAmb		IAmb	18 13 23.2	
	comp=Z,32nm,1.0s							
DUG	Dugway, Tooele	63.25	59	P		P	18 13 21.5	+1.2
	baz=312,SNR=11							
SCZ2	Santa Cruz Isl	63.27	68	P		P	18 13 21.8	+1.4
	baz=312							
FURC	Furnace Creek,	63.33	64	P		P	18 13 21.7	+1.0
	baz=312,SNR=14							
BW06	Boulder Array	63.36	55	P		P	18 13 22.4	+1.2
BW06				IAmb		IAmb	18 13 43.1	
	comp=Z,31nm,0.9s							
BW06	Boulder Array	63.36	55	P		P	18 13 22.1	+0.9
	baz=312,SNR=7.6							
PD31	Pinedale Array	63.36	55	P		P	18 13 22.3	+1.2
PD31				IAmb		IAmb	18 13 43.1	
	comp=Z,28nm,0.9s							
PDAR	Pinedale Array	63.36	55	P		P	18 13 22.5	+1.3
	comp=Z,20nm,1.0s,baz=318,slow=2.0,SNR=18							
PDAR				pP		pP	18 13 42.4	+0.6
	comp=Z,27nm,0.9s,baz=323,slow=2.2,SNR=13							
PDAR				LR		LR	18 42 18.7	
	comp=Z,62nm,18.1s,baz=338,slow=37							
PDAR	Pinedale Array	63.36	55	P		P	18 13 22.3	+1.2
TPNV	Topopah Spring	63.38	64	P		P	18 13 22.1	+0.8
TPNV	Topopah Spring	63.38	64	P		P	18 13 22.1	+0.8
TPNV	Topopah Spring	63.38	64	P		P	18 13 22.0	+0.8
	baz=312,SNR=32							
SOEI	Soe	63.44	213	P		P	18 13 21.2	-0.5
SOEI				IAmb		IAmb	18 13 41.1	
	comp=Z,40nm,0.8s							
FRB	Frobisher Bay	63.47	20	P		P	18 13 21.0	-0.2
FRB	Frobisher Bay	63.47	20	P		P	18 13 21.0	-0.2
	comp=Z,77nm,0.7s,baz=331,slow=7.6,SNR=150							
LRMC	Laurel Mtn Rad	63.49	66	P		P	18 13 22.7	+0.7
	baz=312,SNR=11							
CTU	Camp Tracy	63.52	58	P		P	18 13 23.7	+1.5
BLG	Laguna Peak, P	63.55	68	P		P	18 13 23.0	+0.7
	baz=312							
SFJD	Kangerlussuaq	63.62	11	⇓ i P		P	18 13 22.0	-0.1
SFJD				pmax		pmax		
	comp=Z,63nm,0.7s							
SFJD	Kangerlussuaq	63.62	11	P		P	18 13 22.1	-0.1
	comp=Z,56nm,0.6s,baz=340,slow=5.2,SNR=37							
SFJD	Kangerlussuaq	63.62	11	⇓ i P		P	18 13 22.0	-0.1
	comp=Z,63nm,0.7s							
SFJD	Kangerlussuaq	63.62	11	P		P	18 13 21.8	-0.3
EDW2	Edwards Air Fo	63.69	66	P		P	18 13 24.1	+0.8
	baz=312,SNR=33							
PSUT	Pine Spring	63.75	61	P		P	18 13 24.6	+0.9
JLU	Jordanelle	63.75	58	P		P	18 13 25.3	+1.5
NSS	Namsos	63.80	343	eP		P	18 13 22.5	-0.8
NLU	North Lily Min	63.83	59	P		P	18 13 25.4	+1.2
DECC	Green Verdugo	63.90	67	P		P	18 13 25.5	+0.9
	baz=312,SNR=5.3							
PASC	Pasadena Art C	64.05	67	P		P	18 13 25.8	+0.3
PASC				IAmb		IAmb	18 13 27.5	
	comp=Z,34nm,1.0s							
SHOC	Shoshone, Teco	64.06	65	P		P	18 13 26.5	+0.9
	baz=312							
MWC	Mount Wilson	64.09	67	P		P	18 13 27.1	+1.1
MWC				pmax		pmax		
	comp=Z,58nm,1.2s							
MWC	Mount Wilson	64.09	67	P		P	18 13 27.1	+1.1
MWC				IAmb		IAmb	18 13 28.2	
	comp=Z,58nm,1.1s							
MTN	Manton Dam	64.10	205	P		P	18 13 26.3	+0.5
GSC	Goldstone, Bar	64.14	65	P		P	18 13 27.2	+1.0
GSC				pmax		pmax		
	comp=Z,24nm,1.0s							
GSC	Goldstone, Bar	64.14	65	P		P	18 13 27.2	+1.0
GSC				IAmb		IAmb	18 13 28.4	
	comp=Z,24nm,0.9s							
GSC	Goldstone, Bar	64.14	65	P		P	18 13 27.4	+1.2
	baz=312,SNR=17							
FMP	Fort Macarthur	64.29	68	P		P	18 13 27.8	+0.8
	baz=312							
BFSC	Mount Baldy Ra	64.33	67	P		P	18 13 28.4	+0.9
	baz=312,SNR=13							
SHPR	Sheep Range	64.33	63	P		P	18 13 28.6	+1.1
CIS	Catalina Islan	64.42	68	P		P	18 13 28.7	+0.7
	baz=312,SNR=5.5							
OBN	Obninsk	64.50	326	⇑ eP		P	18 13 28.5	+0.4
OBN				e			18 14 00.8	
OBN				pmax		pmax		
	comp=Z,7.0nm,1.1s							
OBN				MLR		MLR		
	comp=Z,219nm,22.0s							
OBN	Obninsk	64.50	326	⇑ eP		P	18 13 28.5	+0.4
TCRU	Three Creeks R	64.52	60	P		P	18 13 30.4	+1.5
TUQ	Turquoise Moun	64.58	65	P		P	18 13 30.2	+1.0
	baz=312,SNR=28							
SCI2	San Clemente I	64.62	68	P		P	18 13 29.8	+0.6
	baz=312							
NGP	Nagpur	64.68	274	eP		P	18 13 29.6	-0.2
NGP				IAmb		IAmb	18 13 33.7	
	comp=Z,20nm,0.8s							
CCUT	Cedar City	64.69	61	P		P	18 13 31.4	+1.4
MSU	Marysvale	64.74	60	P		P	18 13 30.9	+0.7
MSU	Marysvale	64.74	60	P		P	18 13 30.9	+0.7
HEC	Hector,Ludlow	64.74	65	P		P	18 13 31.3	+1.2
	baz=312,SNR=40							
BBRC	Big Bear Solar	64.77	66	P		P	18 13 31.4	+0.9
	baz=312							
TMUT	Trail Mountain	64.77	59	P		P	18 13 31.6	+1.1
SZCU	Shurtz Canyon	64.83	61	P		P	18 13 32.2	+1.4
RDMU	Red Mountain	64.83	57	P		P	18 13 31.7	+0.9
P17A	Butcher Ranch,	64.92	58	P		P	18 13 32.8	+1.5
MDND	Maddock	64.99	46	P		P	18 13 32.3	+0.9
MDND				IAmb		IAmb	18 13 53.4	
	comp=Z,59nm,1.0s							
ULM	Lac du Bonnet	65.00	42	P		P	18 13 32.5	+1.1
	comp=Z,13nm,0.8s,baz=315,slow=6.9,SNR=14							
ULM				LR		LR	18 42 10.4	
	comp=Z,61nm,21.7s,baz=302,slow=36							
ULM	Lac du Bonnet	65.00	42	P		P	18 13 32.0	+0.6
MURC	Murrieta	65.04	67	P		P	18 13 32.9	+0.9
	baz=313,SNR=11							
Q16A	Castle Valley	65.05	59	P		P	18 13 32.0	-0.2
MTPU	Mount Pierson	65.05	60	P		P	18 13 34.1	+1.7
K22A	Casper	65.09	53	P		P	18 13 33.5	+1.1
K22A				IAmb		IAmb	18 15 08.6	
	comp=Z,28nm,0.7s							
K22A	Casper	65.09	53	P		P	18 13 33.5	+1.1
	baz=314							
LCMT	Little Creek M	65.13	62	P		P	18 13 34.2	+1.5
GMRC	Granite Mounta	65.18	65	P		P	18 13 33.9	+0.8
	baz=313,SNR=24							
VSU	Vasula	65.25	333	⇑ eP		P	18 13 32.8	-0.1
VSU				pmax		pmax		
	comp=Z,42nm,0.8s							
SRU	San Rafael Swe	65.28	59	P		P	18 13 34.7	+1.0
SRU				pmax		pmax		
	comp=Z,37nm,0.9s							
SRU	San Rafael Swe	65.28	59	P		P	18 13 34.7	+1.0
PSI	Prapat	65.31	244	P		P	18 13 34.5	+0.5
PSI				pmax		pmax		
	comp=Z,40nm,1.2s							
VRH	Novokhopyorsk	65.34	320	eP		P	18 13 32.2	-1.4
VRH				pmax		pmax		
	comp=Z,10.0nm,0.7s							
KNB	Kanab	65.37	62	P		P	18 13 35.8	+1.5
KNB				pmax		pmax		
	comp=Z,46nm,1.0s							
KNB	Kanab	65.37	62	P		P	18 13 35.8	+1.5
RWWY	Rawlins	65.38	55	P		P	18 13 32.8	-1.5
RWWY				IAmb		IAmb	18 13 43.4	
	comp=Z,28nm,1.1s							
PKCU	Pink Cliffs	65.38	61	P		P	18 13 36.3	+1.8
RSSD	Black Hills	65.39	51	P		P	18 13 35.6	+1.3
RSSD				pmax		pmax		
	comp=Z,34nm,0.7s							
RSSD	Black Hills	65.39	51	P		P	18 13 35.6	+1.3
RSSD				IAmb		IAmb	18 13 55.8	
	comp=Z,34nm,0.7s							
RSSD	Black Hills	65.39	51	P		P	18 13 35.2	+0.8
	baz=314							
RPSI	Rantau Prapat	65.39	244	P		P	18 13 34.5	+0.1
RPSI				IAmb		IAmb	18 13 54.6	
	comp=Z,40nm,1.2s							
LPSR	Galich'ya Gora	65.47	323	eP		P	18 13 32.6	-1.8
LPSR				pmax		pmax		
	comp=Z,10.0nm,0.7s							
PFO	Pinyon Flats O	65.49	67	P		P	18 13 35.8	+0.8
	comp=Z,8.5nm,1.0s,baz=346,slow=3.7,SNR=9.4							
PFO	Pinyon Flats O	65.49	67	P		P	18 13 35.7	+0.7
PFO				IAmb		IAmb	18 13 37.0	
	comp=Z,33nm,1.4s							
PFO				PcP		PcP	18 14 07.0	+0.8
PFO	Pinyon Flats O	65.49	67	P		P	18 13 35.7	+0.7
	baz=313,SNR=7.0							
XPFO	Pion Flat	65.49	67	P		P	18 13 35.4	+0.4
XPFO				IAmb		IAmb	18 13 37.0	
	comp=Z,34nm,1.4s							
XPFO				PcP		PcP	18 14 07.3	+1.0
BELC	Belle Mtn. Jos	65.50	66	P		P	18 13 35.8	+0.7
	baz=313,SNR=13							
109C	Camp Elliot, M	65.58	67	P		P	18 13 36.0	+0.5
109C				IAmb		IAmb	18 13 37.5	
	comp=Z,42nm,0.9s							
109C	Camp Elliot, M	65.58	67	P		P	18 13 36.1	+0.7
	baz=313							
PVM	Polavaram	65.70	269	eP		P	18 13 36.6	+0.2
PVM				IAmb		IAmb	18 13 37.6	
	comp=Z,7.2nm,0.7s							
NEE2	Needles Airpor	65.82	64	P		P	18 13 37.6	+0.6
	baz=313							
IRM	Iron Mountain	65.92	65	P		P	18 13 38.9	+1.3
	baz=313,SNR=37							
BAR	Barrett	65.99	67	P		P	18 13 38.8	+0.7
BAR				IAmb		IAmb	18 13 40.1	
	comp=Z,25nm,0.8s							
MONP2	Monument Peak	66.00	67	P		P	18 13 39.2	+0.8
	baz=313,SNR=11							
W13A	Hualapai Mount	66.04	64	P		P	18 13 39.6	+0.9
BC3	Big Chuckawall	66.07	66	P		P	18 13 39.5	+0.7
	baz=313,SNR=18							
U15A	North Rim	66.08	62	P		P	18 13 40.7	+1.7
U15A				IAmb		IAmb	18 13 41.9	
	comp=Z,29nm,1.0s							
RPR	Rampur	66.12	272	eP		P	18 13 38.7	-0.4
RPR				IAmb		IAmb	18 13 40.0	
	comp=Z,12nm,0.7s							
ANGG	Ammassalik, Gr	66.17	5	P		P	18 13 38.3	-0.4
GGR	Gangavaram	66.25	270	eP		P	18 13 40.0	+0.1
GGR				IAmb		IAmb	18 13 40.7	
	comp=Z,17nm,0.5s							
SWSC	Sam W. Stewart	66.34	67	P		P	18 13 41.1	+0.8
	baz=313,SNR=5.5							
IKP	In-Ko-Pah, Jac	66.35	67	P		P	18 13 41.4	+0.9
	baz=313,SNR=8.0							
VSR	Storozhevoye	66.41	322	eP		P	18 13 38.1	-2.3
VSR				pmax		pmax		
	comp=Z,10.0nm,1.5s							
AGMN	Agassiz Nation	66.42	43	P		P	18 13 40.9	+0.3
	baz=317							
MOL	Molde	66.42	344	eP		P	18 13 41.5	+1.2
HRA	Herat	66.44	296	P		P	18 13 42.0	+0.8
G

SMRI IAmb IAmb 18 14 08.3
comp=Z,60nm,1.0s
NB201 NORSAR Array S 67.06 341 P P 18 13 43.6 -0.9
NB2 NORSAR Subarra 67.08 341 P P 18 13 43.7 -0.9
comp=Z,5.5nm,0.5s,baz=28,slow=6.2
NB2 NORSAR Subarra 67.08 341 P P 18 13 43.7 -0.9
baz=28,slow=6.2
NOA NORSAR Array B 67.08 341 P P 18 13 43.7 -0.9
comp=Z,12nm,0.8s,baz=26,slow=6.5,SNR=46
NOA LR LR 18 45 24.7
comp=Z,129nm,21.6s,baz=20,slow=38
NBO00 NORSAR Array S 67.18 342 P P 18 13 45.0 -0.3
WUAZ Wupatki 67.25 62 P P 18 13 48.1 +1.8
WUAZ IAmb IAmb 18 13 49.2
comp=Z,31nm,1.1s
WUAZ Wupatki 67.25 62 P P 18 13 47.9 +1.6
baz=314,SNR=10
NC602 NORSAR Array S 67.29 341 P P 18 13 45.6 -0.3
GSI Gunungsitoli 67.31 245 P P 18 13 47.4 +0.7
GSI IAmb IAmb 18 14 08.3
comp=Z,72nm,1.2s
NAO01 NORSAR Array S 67.33 341 P P 18 13 45.6 -0.5
NAO01 IAmb IAmb 18 15 30.1
comp=Z,70nm,1.4s
BORG Borgarnes 67.35 358 P P 18 13 47.5 +1.3
comp=Z,19nm,0.6s,baz=346,slow=2.8,SNR=12
BORG Borgarnes 67.35 358 P P 18 13 47.3 +1.2
Y14A Wickenburg 67.36 64 P P 18 13 47.9 +1.0
Y14A IAmb IAmb 18 13 49.3
comp=Z,30nm,1.1s
KNRA Kununurra 67.48 207 P P 18 13 47.8 +0.2
ISCO Idaho Springs 67.56 55 P P 18 13 49.6 +1.3
ISCO Idaho Springs 67.56 55 P P 18 13 49.6 +1.3
ISCO Idaho Springs 67.56 55 P P 18 13 49.8 +1.5
baz=315,SNR=7.2
HYBB Hyderabad (bro 67.64 271 *e*P **P 18 13 48.7 -0.1**
HYBB IAmb IAmb 18 13 49.3
comp=Z,16nm,0.6s
HYBB *e* 18 14 07.7
HYB Hyderabad 67.64 271 *i* P **P 18 13 49.0 +0.2**
comp=Z,30nm,0.6s
HYB *e* 18 14 07.5
113A Mohawk Valley, 67.71 65 P P 18 13 49.5 +0.5
SUSD Miller 67.74 48 P P 18 13 49.9 +0.9
SUSD IAmb IAmb 18 14 09.7
comp=Z,38nm,0.7s
SUSD Miller 67.74 48 P P 18 13 49.5 +0.5
baz=316
NJS Nagarjunasagar 67.75 270 *e*P **P 18 13 49.2 -0.2**
NJS IAmb IAmb 18 13 50.1
comp=Z,9.0nm,0.8s
MVCO Mesa Verde 67.75 59 P P 18 13 50.1 +0.6
MVCO IAmb IAmb 18 13 51.9
comp=Z,24nm,0.9s
MVCO Mesa Verde 67.75 59 P P 18 13 50.7 +1.2
baz=314,SNR=8.6
ADKI Addanki 67.81 269 *e*P **P 18 13 50.8 +1.0**
ADKI IAmb IAmb 18 13 51.1
comp=Z,5.7nm,0.7s
X16A Lo Mia Camp, P 67.97 63 P P 18 13 52.2 +1.4
X16A IAmb IAmb 18 13 53.7
comp=Z,26nm,0.9s
HYA Hoyanger 67.97 344 *e*P **P 18 13 50.0 -0.1**
SKAR Skarslia 68.01 343 *e*P **P 18 13 50.8 +0.3**
DMPR Damasthipur 68.14 272 *e*P **P 18 13 51.7 -0.2**
DMPR IAmb IAmb 18 13 52.3
comp=Z,14nm,0.6s
OSL Oslo 68.19 341 *e*P **P 18 13 52.4 +0.9**
S22A 4UR Ranch, Cre 68.32 57 P P 18 13 55.0 +1.8
S22A 4UR Ranch, Cre 68.32 57 P P 18 13 55.0 +1.8
baz=315,SNR=11
SRLM Srisailam 68.35 270 *e*P **P 18 13 52.8 -0.4**
SRLM IAmb IAmb 18 13 53.7
comp=Z,10nm,0.7s
Q24A Divide 68.40 55 P P 18 13 54.9 +1.3
Q24A Divide 68.40 55 P P 18 13 54.7 +1.1
baz=315
KLRI Killari 68.48 273 *e*P **P 18 13 53.5 -0.5**
KLRI IAmb IAmb 18 13 54.6
comp=Z,41nm,0.6s
W18A Petrified Fore 68.49 61 P P 18 13 54.9 +0.8
W18A IAmb IAmb 18 13 56.8
comp=Z,34nm,1.3s
W18A Petrified Fore 68.49 61 P P 18 13 55.3 +1.2
baz=315
MAK Makhachkala 68.64 311 *e*P **P 18 13 51.5 -3.1**
MAK *e**PP **PcP 18 14 18.0 -1.0**
MAK *e* 18 16 23.4
MAK *e*S **S 18 22 45.2 -5.6**
MAK *e**SS **sS 18 23 30.9 +5.8**
MAK pmax pmax
comp=Z,62nm,1.1s
MAK MLR MLR
comp=Z,219nm,19.0s
EYMN Ely 68.64 41 P P 18 13 55.1 +0.5
EYMN Ely 68.64 41 P P 18 13 55.5 +0.9
baz=319
OGNE Ogallala 68.68 52 P P 18 13 54.8 -0.2
OGNE Ogallala 68.68 52 P P 18 13 56.4 +1.3
baz=316,SNR=5.8
KONO Kongsberg 68.69 342 P P 18 13 54.7 0.0
KONO pmax pmax
comp=Z,35nm,1.0s
KONO Kongsberg 68.69 342 *e*P **P 18 13 55.0 +0.3**
KONO Kongsberg 68.69 342 P P 18 13 54.7 0.0
KONO IAmb IAmb 18 13 56.3
comp=Z,35nm,1.0s
X18A Snowflake 68.77 62 P P 18 13 56.8 +1.0
X18A IAmb IAmb 18 13 58.6
comp=Z,29nm,1.1s
ASK Askoy 68.79 344 *e*P **P 18 13 55.8 +0.5**
214A Organ Pipe Nat 68.85 66 P P 18 13 56.9 +0.7
214A IAmb IAmb 18 13 58.7
comp=Z,51nm,1.4s
214A Organ Pipe Nat 68.85 66 P P 18 13 57.5 +1.3
baz=314,SNR=19
BER Bergen 68.86 344 *e*P **P 18 13 56.0 +0.4**
MSVF Nonsavu 69.03 156‖ *e*P **P 18 13 59.0 +1.7**
MSVF pmax pmax
comp=Z,83nm,1.1s
MSVF Nonsavu 69.03 156 P P 18 13 58.5 +1.2
ODD1 Odda 69.05 343 *e*P **P 18 13 57.5 +0.5**
SDCO Great Sand Dun 69.07 57 P P 18 13 58.8 +1.0
SDCO Great Sand Dun 69.07 57 P P 18 13 59.1 +1.4
baz=315,SNR=5.5
ECSD EROS Data Cent 69.41 47 P P 18 13 59.8 +0.3
ECSD EROS Data Cent 69.41 47 P P 18 13 59.9 +0.5
baz=318
IVI Ivigtut 69.49 11 P P 18 14 00.0 +0.4
SKHT Srikalahasti 69.49 268 *e*P **P 18 14 01.1 +0.8**
SKHT IAmb IAmb 18 14 04.6
comp=Z,11nm,0.7s
BLS5 Blasjo 69.53 343 *e*P **P 18 14 01.0 +1.0**
E38A The Farm, Brul 69.63 42 P P 18 14 01.1 +0.4
KSCO Kaye Shedlock' 69.75 54 P P 18 14 02.7 +0.9
KSCO IAmb IAmb 18 14 03.8
comp=Z,47nm,1.4s
TUC Tucson 69.83 64 P P 18 14 03.1 +0.8
TUC pmax pmax
comp=Z,17nm,1.0s
TUC Tucson 69.83 64 P P 18 14 03.1 +0.8
TUC Tucson 69.83 64 P P 18 14 03.5 +1.2
baz=315
KMY Karmoy 69.96 344 *e*P **P 18 14 03.1 +0.6**
WR0 Warramunga Arr 70.06 200 P P 18 14 03.7 +0.2
WRAB Tennant Creek 70.08 200 *c i*P **P 18 14 03.9 +0.2**
WRAB pmax pmax
comp=Z,120nm,0.9s
WRAB Tennant Creek 70.08 200 P P 18 14 03.5 -0.1
WRA Warramunga Arr 70.09 200 P P 18 14 03.5 -0.2
WRA pmax pmax
comp=Z,7.0nm,0.7s
WRA Warramunga Arr 70.09 200 P P 18 14 04.1 +0.4
comp=Z,92nm,0.6s,baz=15,slow=6.2,SNR=367
WRA LR LR 18 43 40.8
comp=Z,25nm,21.8s,baz=90,slow=35
WRA Warramunga Arr 70.09 200 P P 18 14 03.5 -0.2
SPMN Marine on St. 70.11 44 P P 18 14 03.9 +0.2
T25A Trinidad 70.11 56 P P 18 14 05.2 +1.1
baz=316
URV Uravakonda 70.26 270 *e*P **P 18 14 05.0 -0.1**
URV IAmb IAmb 18 14 08.4
comp=Z,16nm,0.7s
KIV Kislovodsk 70.28 314 *e*P **P 18 14 04.0 -0.8**
KIV pmax pmax
comp=Z,37nm,1.0s
KIV MLR MLR
comp=Z,450nm,17.0s
KIV Kislovodsk 70.28 314 ⇑P **P 18 14 05.2 +0.3**
KIV Kislovodsk 70.28 314 P P 18 14 05.1 +0.3
KIV Kislovodsk 70.28 314 P P 18 14 04.8 0.0
KBZ Khabaz 70.34 314‖ *e*P **P 18 14 04.1 -1.0**
KBZ Khabaz 70.34 314 P P 18 14 04.8 -0.4
comp=Z,8.5nm,0.7s,baz=66,slow=5.9,SNR=29
KBZ LR LR 18 47 36.4
comp=Z,271nm,21.9s,baz=32,slow=38
SNART Snartemo 70.39 342 *e*P **P 18 14 05.5 +0.4**
ANMO Albuquerque 70.51 59 P P 18 14 07.9 +1.4
comp=Z,12nm,0.9s,baz=310,slow=7.5,SNR=19
ANMO LR LR 18 42 29.1
comp=Z,53nm,21.4s,baz=328,slow=34
ANMO Albuquerque 70.51 59 P P 18 14 07.4 +0.8
ANMO Albuquerque 70.51 59 P P 18 14 07.8 +1.2
baz=316
ZEI Tsey 70.56 313 *e*P **P 18 14 06.2 -0.5**
ZEI pmax pmax
comp=Z,5.0nm,0.6s
D41A Chassel 70.59 40 P P 18 14 08.0 +1.4
D41A IAmb IAmb 18 14 19.1
comp=Z,89nm,1.6s
AKASG Malin Array Be 70.72 326 P P 18 14 07.0 -0.3
AKASG pmax pmax
comp=Z,3.0nm,1.2s
AKASG Malin Array Be 70.72 326 P P 18 14 05.9 -1.4
comp=Z,5.4nm,0.4s,baz=34,slow=6.2,SNR=43
AKASG LR LR 18 47 01.2
comp=Z,137nm,20.2s,baz=20,slow=37
AKASG Malin Array Be 70.72 326 P P 18 14 07.0 -0.3
AKBB Malin Array Si 70.72 326 P P 18 14 05.4 -1.9
AKBB pmax pmax
comp=Z,12nm,0.7s
AKBB Malin Array Si 70.72 326 P P 18 14 05.4 -1.9
FITZ Fitzroy Crossi 70.72 209 P P 18 14 08.0 +0.4
FITZ IAmb IAmb 18 14 09.8
comp=Z,52nm,1.4s
LENM Lemitar 70.77 60 P P 18 14 08.2 0.0
DZM Mont Dzumac 70.81 168 *e*P **P 18 14 09.1 +1.0**
comp=Z,112nm,1.1s
DZM Mont Dzumac 70.81 168 *e*LR LR 18 35 30.6
comp=Z,435nm,26.3s
DZM Mont Dzumac 70.81 168 P P 18 14 09.6 +1.4
DZM IAmb IAmb 18 14 10.4
comp=Z,36nm,0.8s
LPM Los Pinos Moun 70.87 60 P P 18 14 09.3 +0.6
Y22D IRIS PASSCAL I 70.87 60 P P 18 14 10.0 +1.3
Y22D IAmb IAmb 18 14 11.4
comp=Z,38nm,0.8s
TBLG Delisi 70.93 312 P P 18 14 09.7 +0.9
TBLG Delisi 70.93 312 P P 18 14 09.7 +0.9
BNM Barren Site 70.98 60 P P 18 14 10.9 +1.4
GOET G??ttrup 71.16 341 *i* P **P 18 14 11.6 +1.8**
comp=Z,268nm,0.8s
G40A Rib Lake 71.26 42 P P 18 14 12.6 +1.8
319A Douglas 71.39 64 P P 18 14 13.2 +1.3
CBKS Cedar Bluff 71.44 52 P P 18 14 12.4 +0.5
CBKS pmax pmax
comp=Z,31nm,1.3s
CBKS Cedar Bluff 71.44 52 P P 18 14 12.4 +0.5
CBKS IAmb IAmb 18 14 14.3
comp=Z,31nm,1.2s
CBKS Cedar Bluff 71.44 52 P P 18 14 12.6 +0.7
baz=318
121A Cookes Peak, D 71.46 62 P P 18 14 14.1 +1.8
121A IAmb IAmb 18 14 15.3
comp=Z,35nm,1.2s
121A Cookes Peak, D 71.46 62 P P 18 14 13.6 +1.3
baz=316,SNR=8.3
MUD Monsted U'grnd 71.70 340 *e*P **P 18 14 13.9 +0.8**
MUD pmax pmax
comp=Z,35nm,0.9s
MUD Monsted U'grnd 71.70 340 *i* P **P 18 14 13.9 +0.8**
comp=Z,35nm,0.9s
SCHQ Schefferville 71.72 24 P P 18 14 14.2 +0.9
comp=Z,11nm,0.4s,baz=343,slow=5.4,SNR=70
SCHQ LR LR 18 48 54.6
comp=Z,88nm,20.3s,baz=352,slow=38
SCHQ Schefferville 71.72 24 P P 18 14 13.8 +0.5
SCHQ IAmb IAmb 18 14 15.3
comp=Z,28nm,1.1s
AKH Akhalkalaki 71.79 312 P P 18 14 14.3 +0.1
AKH pmax pmax
comp=Z,9.0nm,0.7s
AKH Akhalkalaki 71.79 312 ⇑P **P 18 14 14.5 +0.4**
AKH Akhalkalaki 71.79 312 P P 18 14 14.3 +0.1
E43A Lone Tree Farm 71.80 40 P P 18 14 16.5 +2.6
E43A IAmb IAmb 18 16 34.5
comp=Z,32nm,1.3s
HSIG 72.06 67 P P 18 14 16.5 +0.7
E44A Grand Marais A 72.07 39 P P 18 14 16.4 +0.9
baz=323
GNI Garni 72.11 311 *c e*P **P 18 14 17.5 +1.4**
GNI pmax pmax
comp=Z,19nm,0.9s
GNI Garni 72.11 311 *i* P **P 18 14 17.1 +1.0**
SNR=5.4
GNI Garni 72.11 311 P P 18 14 16.9 +0.8
I40A Norwalk 72.13 43 P P 18 14 15.3 -0.6
BIGH Upper Bighouse 72.15 348 *e*P **P 18 14 15.6 -0.1**
SCIA State Center 72.43 46 P P 18 14 18.4 +0.6
SCIA IAmb IAmb 18 14 38.6
comp=Z,38nm,0.6s
SCIA State Center 72.43 46 P P 18 14 18.6 +0.8
baz=320,SNR=7.6
SRIG Santa Rosalia 72.47 69 P P 18 14 18.1 -0.1
SRIG IAmb IAmb 18 14 20.1
comp=Z,53nm,1.1s
BATM Batumi 72.53 313 ⇑P **P 18 14 18.4 0.0**
MATQ Matagami 72.73 32 P P 18 14 19.9 +0.5
baz=327
I42A Draeger Farm, 72.91 42 P P 18 14 21.7 +1.2
I42A IAmb IAmb 18 14 22.9
comp=Z,44nm,1.6s
E46A Sault Ste Mari 72.94 38 P P 18 14 22.3 +1.6
SORM Soroca 73.15 325 ⇑P **P 18 14 21.5 -0.4**
MDO Dochfour 73.23 348 *e*P **P 18 14 22.2 0.0**
AMTX Amarillo 73.26 56 P P 18 14 24.1 +1.2
AMTX IAmb IAmb 18 14 25.2
comp=Z,37nm,0.9s
AMTX Amarillo 73.26 56 P P 18 14 24.1 +1.2
baz=318
L40A Anamosa 73.26 45 P P 18 14 24.1 +1.4
EIDS Eidsvold 73.27 183 P P 18 14 23.4 +0.8
EIDS IAmb IAmb 18 14 24.9
comp=Z,52nm,1.0s
E47A Iron Bridge 73.29 37 P P 18 14 23.4 +0.7
baz=324
KAC Achnashellach 73.30 349 *e*P **P 18 14 22.6 0.0**
LVV L'vov 73.32 329 *e*P **P 18 14 22.9 +0.1**
MSTX Muleshoe 73.32 58 P P 18 14 24.2 +0.9
MSTX IAmb IAmb 18 14 25.3
comp=Z,35nm,0.9s
MSTX Muleshoe 73.32 58 P P 18 14 24.4 +1.1
baz=317,SNR=5.4
DRUM Mains of Drumt 73.47 347 *e*P **P 18 14 23.6 0.0**
DRUM IAmb IAmb 18 14 24.4
comp=Z,54nm,0.7s
MNTX Cornudas Mount 73.47 61 P P 18 14 25.0 +0.9
MNTX Cornudas Mount 73.47 61 P P 18 14 25.3 +1.2
baz=317,SNR=12
KPL Plockton 73.51 349 *e*P **P 18 14 23.9 +0.2**
KPL IAmb IAmb 18 14 27.4
comp=Z,102nm,1.4s
LSQQ Lebel-sur-Quev 73.55 32 P P 18 14 24.6 +0.4
baz=327
U32A Winter Ranch, 73.63 54 P P 18 14 25.9 +0.9
U32A IAmb IAmb 18 14 46.8
comp=Z,40nm,1.1s
GDL2 Guadalupe Moun 73.70 60 P P 18 14 26.4 +0.9
AS31 Alice Springs 73.78 199 P P 18 14 26.7 +0.9
ASAR Alice Springs 73.79 199 P P 18 14 27.0 +1.2
ASAR Alice Springs 73.79 199 P P 18 14 26.9 +1.2
comp=Z,30nm,0.6s,baz=16,slow=5.7,SNR=742
ASAR Alice Springs 73.79 199 P P 18 14 27.0 +1.2
KIS Kishinev 73.91 324 *e*P P 18 14 32.0 +5.7
KIS *e*S S 18 24 06.0 +14
KIS LRM MLR 18 55 00.0
comp=Z,200nm,17.0s
KIS Kishinev 73.91 324 *e*P P 18 14 32.0 +5.7
KIS *e* 18 23 40.0
KWP Kalwaria Pacla 73.93 329 *e*P **P 18 14 27.1 +0.6**
KWP Kalwaria Pacla 73.93 329 P P 18 14 26.7 +0.3
MILM Milestii Mici 73.98 324 ⇑P **P 18 14 26.3 -0.4**
H46A Fife Lake 74.03 40 P P 18 14 27.9 +0.8
baz=323
INVG Invergeldie, C 74.17 348 *e*P **P 18 14 26.9 -0.8**
VLDQ Val d'Or 74.17 33 P P 18 14 27.5 -0.3
D51A Lot 18 Range I 74.31 35 P P 18 14 29.6 +0.9
baz=326
F49A Sandfield 74.36 37 P P 18 14 29.7 +0.7
baz=325
OJC Ojcow 74.38 331 *e*P **P 18 14 29.2 +0.2**
OJC Ojcow 74.38 331 P P 18 14 29.2 +0.2
OJC Ojcow 74.38 331 P P 18 14 28.8 -0.3
OJC IAmb IAmb 18 14 30.0
comp=Z,26nm,0.6s
EAB Aberfoyle 74.44 348‖ *e*P **P 18 14 29.0 -0.2**
ESY Stoneypath 74.45 347‖ *e*P **P 18 14 29.1 -0.2**
N41A Harden Midland 74.49 46 P P 18 14 30.2 +0.3
N41A IAmb IAmb 18 14 51.2
comp=Z,38nm,0.8s
LAWE Loch Awe, Argy 74.52 348 *e*P **P 18 14 29.6 -0.1**
LAWE IAmb IAmb 18 14 30.4
comp=Z,74nm,0.6s
EAU Auchinoon 74.65 347 *e*P **P 18 14 30.6 +0.2**
KOLS Kolonicke sedl 74.67 329 *e*P **P 18 14 31.2 +0.4**
KOLS pmax pmax
comp=Z,14nm,0.8s
KOLS Kolonicke sedl 74.67 329 *e*P **P 18 14 31.2 +0.4**
E51A G1948 Merrick 74.73 35 P P 18 14 32.0 +0.9
baz=326
BUR08 Bucovina Ar. S 74.74 327 P P 18 14 31.1 -0.2
BUR08 IAmb IAmb 18 14 32.4
comp=Z,17nm,0.7s
BURAR Bucovina Array 74.75 327‖ **P P 18 14 30.9 -0.5**
PGBU Glenifferbraes 74.83 348 *e*P **P 18 14 31.9 +0.3**
PGBU IAmb IAmb 18 14 32.5
comp=Z,96nm,0.7s
KSP Ksiaz 74.91 334 *e*P **P 18 14 32.6 +0.5**
KSP Ksiaz 74.91 334 *e*P **P 18 14 32.6 +0.5**
NIE Niedzica 74.92 331 *e*P **P 18 14 33.0 +0.8**
NIE Niedzica 74.92 331 *e*P **P 18 14 33.0 +0.8**
UZH Uzhgorod 74.93 329⇑ *i*P **P 18 14 31.8 -0.4**
UZH *e* 18 14 42.6
I48A Sherman Twp 74.95 39 P P 18 14 33.4 +1.0
baz=324
WMOK Wichita Mounta 74.97 55 P P 18 14 33.1 +0.4
WMOK Wichita Mounta 74.97 55 P P 18 14 33.1 +0.4
WMOK Wichita Mounta 74.97 55 P P 18 14 33.5 +0.8
baz=319,SNR=14
BIR Birlad 74.98 325‖ **P P 18 14 33.6 +1.1**
BIZ Bicaz 75.00 326‖ **P P 18 14 32.9 +0.2**
RETH Rethem/Aller, 75.07 339 *e*P **P 18 14 33.6 +0.7**
comp=Z,33nm,1.0s,baz=24,slow=5.7
NRDL Niedersach Rie 75.11 338 *e*P **P 18 14 33.8 +0.7**
comp=Z,25nm,0.9s,baz=24,slow=5.7
ESK Eskdalemuir 75.12 347 *e*P **P 18 14 33.2 0.0**
ESK IAmb IAmb 18 14 33.9
comp=Z,54nm,0.5s
ESK Eskdalemuir 75.12 347 P P 18 14 33.2 0.0
ESK pmax pmax
comp=Z,57nm,0.5s
ESK Eskdalemuir 75.12 347 P P 18 14 33.2 0.0
TESR Tescani 75.15 325‖ **P P 18 14 34.0 +0.4**
OKCFA Oklahoma City 75.18 53 P P 18 14 35.0 +1.1
OKCFA IAmb IAmb 18 14 36.0
comp=Z,43nm,0.7s
OSTC Ostas 75.19 334 *e*P **P 18 14 34.2 +0.5**
CHVC Chvalec 75.21 334 *e*P **P 18 14 34.3 +0.4**
OKC Ostrava-Krasne 75.24 332 *e*P **P 18 14 34.4 +0.4**
OKC Ostrava-Krasne 75.24 332 *e*P **P 18 14 34.4 +0.4**
J47A Sunmer 75.24 40 P P 18 14 35.0 +0.9
J47A IAmb IAmb 18 14 37.7
comp=Z,29nm,0.8s
J47A Sunmer 75.24 40 P P 18 14 35.2 +1.1
baz=324
E52A Mattawa 75.25 35 P P 18 14 34.8 +0.7
baz=327
K46A Dorr 75.26 41 P P 18 14 35.2 +1.0
baz=323
M44A Midewin, Midew 75.28 43 P P 18 14 35.5 +1.2
UPC Upice 75.29 334 *e*P **P 18 14 34.8 +0.5**
UPC Upice 75.29 334 *e*P **P 18 14 34.8 +0.5**
ASSE Asse, Remlinge 75.30 338 *e*P **P 18 14 34.9 +0.8**
comp=Z,19nm,1.0s,baz=24,slow=5.7
BMR Baia Mare 75.33 328 ⇑P **P 18 14 34.4 -0.1**
DPC Dobruska-Polom 75.34 334 *e*P **P 18 14 35.2 +0.6**
DPC Dobruska-Polom 75.34 334 *e*P **P 18 14 35.2 +0.6**
HDIL Hopedale 75.35 45 P P 18 14 35.2 +0.5
HDIL IAmb IAmb 18 14 56.2
comp=Z,31nm,0.8s
HDIL Hopedale 75.35 45 P P 18 14 35.9 +1.2
baz=322
EDMD Edmundbyers 75.39 346‖ *e*P **P 18 14 34.7 -0.1**
F52A Sundridge 75.41 35 P P 18 14 36.2 +1.1
baz=326
LANS Liptovska Anna 75.42 331 *e*P **P 18 14 36.5 +1.4**
LANS pmax pmax
comp=Z,20nm,0.8s
LANS Liptovska Anna 75.42 331 *e*P **P 18 14 36.5 +1.4**
CLL Collm 75.43 336‖ *i*P **P 18 14 34.7 -0.3**
CLL pmax pmax
comp=Z,76nm,0.7s
CLL Collm 75.43 336‖ *i*P **P 18 14 34.7 -0.3**
comp=Z,76nm,0.7s
CLL Collm 75.43 336 *e*P **P 18 14 35.2 +0.1**
comp=Z,76nm,0.7s,baz=24,slow=5.7
CLL Collm 75.43 336 P **P 18 14 34.4 -0.6**
KRLC Kraliky 75.45 333 *e*P **P 18 14 35.7 +0.5**
KRLC Kraliky 75.45 333 *e*P **P 18 14 35.7 +0.5**
MORC Moravsky Berou 75.48 333 P **P 18 14 35.5 +0.1**
MORC pmax pmax
comp=Z,33nm,0.8s
MORC Moravsky Berou 75.48 333 ⇑P **P 18 14 36.1 +0.7**
MORC Moravsky Berou 75.48 333 *e*P **P 18 14 35.7 +0.3**
MORC Moravsky Berou 75.48 333 P **P 18 14 35.5 +0.1**
MORC IAmb IAmb 18 14 36.7
comp=Z,33nm,0.8s
ARCR ARCALIA 75.52 327‖ **P P 18 14 36.7 +1.0**
I49A Point Hope 75.52 39 P P 18 14 37.2 +1.5
I49A IAmb IAmb 18 14 38.5
comp=Z,36nm,1.0s
I49A Point Hope 75.52 39 P P 18 14 36.1 +0.4
baz=325
E53A Dumoine, Ponti 75.55 34 P P 18 14 36.1 +0.2
baz=327
BRG Berggiesshubel 75.56 335 *i* P **P 18 14 35.8 0.0**
comp=Z,28nm,1.0s
BRG Berggiesshubel 75.56 335 *i* P **P 18 14 35.8 0.0**
BRG pmax pmax
comp=Z,28nm,1.0s
BRG Berggiesshubel 75.56 335 *e*P **P 18 14 35.9 +0.1**
comp=Z,28nm,1.0s,baz=24,slow=5.7
PETR Petresti 75.58 325 ⇑P **P 18 14 37.6 +1.6**
X34A Smith Ranch, M 75.59 54 P P 18 14 37.5 +1.2
X34A IAmb IAmb 18 14 38.7
comp=Z,32nm,1.0s
CLZ Clausthal 75.64 338 *e*P **P 18 14 37.2 +0.9**
comp=Z,46nm,1.0s,baz=24,slow=5.7
KECS Kecovo 75.67 330 *e*P **P 18 14 36.8 +0.3**
KECS pmax pmax
comp=Z,12nm,1.0s
KECS Kecovo 75.67 330 *e*P **P 18 14 36.8 +0.3**
CFR Carcaliu 75.68 324‖ **P P 18 14 36.6 +0.1**
FBE Freiberg 75.68 336 *e*P **P 18 14 37.1 +0.6**
comp=Z,46nm,0.8s,baz=24,slow=5.7
E54A Lac Daplat, Po 75.68 34 P P 18 14 36.8 +0.2
baz=328
W35A Tecumseh 75.69 53 P P 18 14 37.1 +0.3
TUL1 Leonard 75.69 52 P P 18 14 37.4 +0.6
TUL1 IAmb IAmb 18 16 58.6
comp=Z,39nm,1.1s
TUL1 Leonard 75.69 52 P P 18 14 37.4 +0.6
baz=320,SNR=6.1
PVCC Panska Ves 75.69 335 *e*P **P 18 14 36.9 +0.3**
PVCC Panska Ves 75.69 335 *e*P **P 18 14 36.9 +0.3**
JURR Jurilovca 75.73 323 ⇑P **P 18 14 37.0 +0.2**
ALGO Algonquin Park 75.76 35 P **P 18 14 37.1 0.0**
baz=327
CLGH Cloghs, Cushen 75.76 348 *e*P **P 18 14 36.6 -0.3**
CLGH IAmb IAmb 18 14 37.8
comp=Z,70nm,0.7s
GAL1 Galloway 75.78 348 *e*P **P 18 14 36.9 -0.1**
KESW Keswick, Cumbr 75.81 347 *e*P **P 18 14 37.0 -0.2**

KESW IAmb IAmb 18 14 38.1
comp=Z,38nm,0.6s
D55A Sainte-Anne-du 75.82 32 P **P 18 14 37.9 +0.5**
baz=328
PSAD1 Pilbara Seismi 75.82 213 P **P 18 14 37.7 +0.2**
PSAD1 IAmb IAmb 18 14 39.0
comp=Z,29nm,0.9s
TOPG Topolog 75.83 323 ⇓P **P 18 14 38.0 +0.6**
IBBN Ibbenburen 75.85 339 *e*P **P 18 14 38.0 +0.6**
comp=Z,49nm,0.7s,baz=24,slow=5.7
NEUB Neuenburg 75.85 337 *e*P **P 18 14 37.8 +0.3**
comp=Z,38nm,0.8s,baz=24,slow=5.7
K48A Perry 75.89 40 P **P 18 14 39.1 +1.3**
baz=324,SNR=5.8
PSAC2 Pilbara Seismi 75.90 213 P **P 18 14 38.4 +0.4**
PSAC2 IAmb IAmb 18 14 39.5
comp=Z,31nm,0.9s
PSAC1 Pilbara Seismi 75.90 213 P **P 18 14 38.0 0.0**
PSAC1 IAmb IAmb 18 14 39.5
comp=Z,35nm,1.0s
PSAB2 Pilbara Seismi 75.90 213 P **P 18 14 38.0 0.0**
PSAB2 IAmb IAmb 18 14 39.5
comp=Z,26nm,0.9s
PSAA2 Pilbara Seismi 75.92 213 P **P 18 14 38.1 +0.1**
PSAA2 IAmb IAmb 18 14 39.5
comp=Z,25nm,0.9s
PSAD2 Pilbara Seismi 75.92 213 P **P 18 14 38.0 -0.1**
PSAD2 IAmb IAmb 18 14 42.8
comp=Z,46nm,1.1s
PSA00 Pilbara Seismi 75.92 213 P **P 18 14 38.4 +0.3**
PSA00 IAmb IAmb 18 14 39.6
comp=Z,38nm,1.1s
PSAA3 Pilbara Seismi 75.93 213 P **P 18 14 38.7 +0.6**
PSAA3 IAmb IAmb 18 14 39.7
comp=Z,44nm,1.1s
PSAB1 Pilbara Seismi 75.93 213 P **P 18 14 38.2 0.0**
PSAB1 IAmb IAmb 18 14 39.6
comp=Z,24nm,0.9s
PSAA1 Pilbara Seismi 75.93 213 P **P 18 14 38.4 +0.2**
PSAA1 IAmb IAmb 18 14 39.6
comp=Z,30nm,0.9s
PSAB3 Pilbara Seismi 75.94 213 P **P 18 14 38.4 +0.2**
PSAB3 IAmb IAmb 18 14 39.8
comp=Z,42nm,1.1s
P43A Skaggs, Pawnee 75.96 45 P **P 18 14 39.3 +1.0**
PSAC3 Pilbara Seismi 75.98 213 P **P 18 14 38.6 +0.2**
PSAC3 IAmb IAmb 18 14 40.0
comp=Z,24nm,0.9s
LPIG La Paz 75.98 70 P **P 18 14 40.6 +1.9**
comp=Z,40nm,0.3s,baz=309,slow=4.2,SNR=5.2
GTTG Gvttingen 76.01 338 *e*P **P 18 14 39.1 +0.8**
comp=Z,42nm,1.0s,baz=24,slow=5.7
PSAD3 Pilbara Seismi 76.01 213 P **P 18 14 38.5 -0.1**
PSAD3 IAmb IAmb 18 14 40.1
comp=Z,30nm,1.0s
BANOM Banah 76.04 293 P **P 18 14 39.0 0.0**
D56A ZEC Mazanza, M 76.05 32 P **P 18 14 39.0 +0.3**
baz=329
O44A Mansfield 76.05 45 P **P 18 14 39.7 +0.9**
O44A IAmb IAmb 18 17 06.2
comp=Z,16nm,0.5s
ABTX Abilene, Hawle 76.08 57 P **P 18 14 39.6 +0.5**
ABTX IAmb IAmb 18 14 41.2
comp=Z,36nm,1.4s
ABTX Abilene, Hawle 76.08 57 P **P 18 14 40.1 +1.0**
baz=319
DOPR Dopca 76.08 326 ⇑P **P 18 14 39.8 +0.9**
L47A Sherwood 76.09 41 P **P 18 14 39.3 +0.3**
baz=324
CJR Cluj-Napoca 76.11 327 ⇑P **P 18 14 39.8 +0.8**
PRA Prague 76.14 335 *e*P **P 18 14 39.8 +0.7**
PRA Prague 76.14 335 *e*P **P 18 14 39.8 +0.7**
HARR Harsova 76.17 324 ⇑P **P 18 14 39.6 +0.2**
TIRR Tirgusor 76.17 323 P **P 18 14 40.3 +0.9**
TIRR pmax pmax
comp=Z,99nm,1.0s
TIRR Tirgusor 76.17 323 ⇑P **P 18 14 40.3 +0.9**
TIRR Tirgusor 76.17 323 P **P 18 14 40.3 +0.9**
HPK Haverah Park 76.18 346 *e*P **P 18 14 39.3 +0.1**
HPK IAmb IAmb 18 14 40.3
comp=Z,133nm,0.9s
GOPC GO Pecny, Ondr 76.18 334 *e*P **P 18 14 39.6 +0.2**
GOPC GO Pecny, Ondr 76.18 334 *e*P **P 18 14 39.6 +0.2**
VRAC Vranov 76.18 333 ⇑P **P 18 14 40.4 +1.0**
VRAC Vranov 76.18 333 *e*P **P 18 14 40.1 +0.7**
PRU Pruhonice 76.19 334 *e*P **P 18 14 40.0 +0.6**
PRU MLR MLR
comp=Z,300nm,18.7s
PRU Pruhonice 76.19 334 *e*P **P 18 14 40.0 +0.6**
PRU AMS AMS 18 47 30.0
comp=Z,300nm,18.7s
VYHS Vyhne 76.20 331 *e*P **P 18 14 40.2 +0.7**
VYHS pmax pmax
comp=Z,21nm,0.8s
VYHS Vyhne 76.20 331 *e*P **P 18 14 40.2 +0.7**
TX31 Lajitas Ar. Si 76.21 61 P **P 18 14 40.8 +0.8**
TX31 IAmb IAmb 18 14 42.3
comp=Z,35nm,0.8s
TX32 Lajitas Array 76.21 61 P **P 18 14 40.8 +0.8**
TX32 IAmb IAmb 18 14 42.3
comp=Z,36nm,0.8s
TXAR Lajitas Array 76.21 61 P **P 18 14 41.2 +1.3**
comp=Z,23nm,0.7s,baz=301,slow=4.3,SNR=180
G54A Lake Saint Pet 76.21 35 P **P 18 14 39.3 -0.4**
baz=327
G53A Haliburton 76.24 35 P **P 18 14 40.5 +0.7**
baz=327,SNR=8.3
JAVC Velka Javorina 76.25 332 *e*P **P 18 14 41.3 +1.5**
MLR Muntele Rosu 76.27 325 P **P 18 14 40.3 +0.2**
MLR pmax pmax
comp=Z,36nm,0.6s
MLR Muntele Rosu 76.27 325 ⇓P **P 18 14 40.7 +0.6**
MLR Muntele Rosu 76.27 325 P **P 18 14 40.3 +0.2**
MLR IAmb IAmb 18 14 42.0
comp=Z,36nm,0.6s
SADO Sadowa 76.33 36 LR LR 18 51 30.3
comp=Z,94nm,18.1s,baz=346,slow=38
SADO Sadowa 76.33 36 P **P 18 14 41.4 +1.1**
IOMK Kirk Michael 76.35 347 *e*P **P 18 14 40.1 -0.1**
IOMK IAmb IAmb 18 14 42.7
comp=Z,172nm,1.1s
PSZ Piszkesteto 76.35 330 P **P 18 14 40.4 -0.1**
PSZ pmax pmax
comp=Z,17nm,0.8s
PSZ Piszkesteto 76.35 330 ⇓P **P 18 14 41.6 +1.1**
PSZ Piszkesteto 76.35 330 P **P 18 14 40.4 -0.1**
ISR Istrita 76.35 325 ⇑P **P 18 14 41.6 +1.1**
DRGR 76.36 328 ⇑P **P 18 14 40.7 +0.2**
CCM Cathedral Cave 76.36 48 P **P 18 14 40.9 +0.3**
CCM pmax pmax
comp=Z,25nm,1.2s
CCM Cathedral Cave 76.36 48 P **P 18 14 40.9 +0.3**
CCM Cathedral Cave 76.36 48 P **P 18 14 41.0 +0.4**
baz=321
HHAR Hobbs 76.37 50 P **P 18 14 40.7 0.0**
E56A St. Veronique 76.38 32 P **P 18 14 40.6 +0.1**
baz=329
D57A Chemin Vers le 76.38 32 P **P 18 14 41.4 +0.9**
baz=329,SNR=10
TANN Tannenbergstha 76.39 336 *e*P **P 18 14 41.0 +0.4**
comp=Z,32nm,0.7s,baz=24,slow=5.7
SLM Saint Louis 76.40 47 P **P 18 14 41.8 +1.0**
SLM pmax pmax
comp=Z,76nm,1.5s
SLM Saint Louis 76.40 47 P **P 18 14 41.8 +1.0**
SLM IAmb IAmb 18 14 42.6
comp=Z,76nm,1.5s
PLN Plauen 76.40 336 *e*P **P 18 14 41.3 +0.7**
comp=Z,30nm,1.1s,baz=24,slow=5.7
MOX Moxa 76.41 336 *e*P **P 18 14 41.2 +0.5**
comp=Z,39nm,1.1s,baz=24,slow=5.7
MOX *e*L L 18 51 20.5
comp=Z,163nm,21.5s
LATQ La Tuque 76.45 31 P **P 18 14 41.3 +0.4**
KRUC Moravsky 76.46 333 *e*P **P 18 14 41.4 +0.4**
GUNZ Gunzen 76.47 336 *e*P **P 18 14 41.7 +0.7**
comp=Z,39nm,0.8s,baz=24,slow=5.7
WIM Isle of Man 76.47 347⇓*e*P **P 18 14 41.0 +0.1**
SFIN Lafayette 76.51 44 P **P 18 14 42.1 +0.8**
SFIN Lafayette 76.51 44 P **P 18 14 41.9 +0.5**
baz=323
WERN Wernitzgruen 76.52 336 *e*P **P 18 14 42.1 +0.7**
comp=Z,54nm,0.7s,baz=24,slow=5.7
TREC Trest 76.53 334 *e*P **P 18 14 41.8 +0.4**
TREC Trest 76.53 334 *e*P **P 18 14 41.8 +0.4**

MGMO Mountain Grove 76.55 49 P **P 18 14 41.6 -0.2**
NKC Novy Kostel 76.55 336 *e*P **P 18 14 42.0 +0.5**
NKC Novy Kostel 76.55 336 *e*P **P 18 14 42.0 +0.5**
PBCC Pribram 76.61 335 *e*P **P 18 14 42.4 +0.6**
SMOL Smolenice 76.63 332 *e*P **P 18 14 43.2 +1.3**
SMOL pmax pmax
comp=Z,14nm,0.8s
SMOL Smolenice 76.63 332 *e*P **P 18 14 43.2 +1.3**
VOIR 76.66 326 ⇑P **P 18 14 43.0 +0.8**
D58A Chemin du LacG 76.66 31 P **P 18 14 41.9 -0.3**
baz=330
UBBA Unterbreizbach 76.67 338 *e*P **P 18 14 42.5 +0.6**
comp=Z,112nm,1.8s,baz=24,slow=5.7
ILGA Ilgaz 76.69 318 P **P 18 14 42.6 -0.2**
ILGA IAmb IAmb 18 14 45.6
comp=Z,44nm,1.0s
ICOR Ion Corvin 76.70 323 ⇑P **P 18 14 43.6 +1.2**
M48A Edgerton 76.70 41 P **P 18 14 43.2 +0.8**
M48A IAmb IAmb 18 14 44.8
comp=Z,31nm,1.2s
H53A Bobcaygeon 76.71 36 P **P 18 14 42.2 -0.3**
baz=327
LBWR Ladybower, Pea 76.73 345⇓*e*P **P 18 14 42.7 +0.3**
LBWR IAmb IAmb 18 14 43.4
comp=Z,96nm,1.1s
N47A Urbana 76.75 42 P **P 18 14 43.6 +0.9**
N47A Urbana 76.75 42 P **P 18 14 42.5 -0.2**
baz=324
BUG Bochum--Univer 76.77 339 *e*P **P 18 14 43.0 +0.4**
comp=Z,43nm,1.1s,baz=24,slow=5.7
HPIG 76.78 64 P **P 18 14 44.4 +1.0**
HPIG IAmb IAmb 18 14 45.4
comp=Z,28nm,0.8s
MODS Modra-Piesok 76.80 332 *e*P **P 18 14 43.1 +0.2**
MODS pmax pmax
comp=Z,29nm,1.0s
MODS Modra-Piesok 76.80 332 *e*P **P 18 14 43.1 +0.2**
E57A Chemin Saint G 76.81 32 P **P 18 14 44.0 +0.9**
baz=329,SNR=12
UOSS Minazif 76.81 293 P **P 18 14 43.1 -0.3**
UOSS Minazif 76.81 293 P **P 18 14 44.0 +0.7**
UOSS IAmb IAmb 18 14 46.6
comp=Z,34nm,1.1s
TRQ Mont Tremblant 76.83 32 P **P 18 14 43.8 +0.6**
G55A Calabogie 76.86 34 P **P 18 14 43.7 +0.5**
baz=328
ARR Arges 76.87 326 ⇑P **P 18 14 44.8 +1.4**
MANZ Manzenberg 76.87 336 *e*P **P 18 14 43.9 +0.6**
comp=Z,27nm,0.8s,baz=24,slow=5.7
U40A Yellville 76.87 50 P **P 18 14 43.5 0.0**
U40A IAmb IAmb 18 14 45.5
comp=Z,55nm,1.1s
U40A Yellville 76.87 50 P **P 18 14 43.6 0.0**
baz=321,SNR=27
PLVO Plevna 76.90 35 P **P 18 14 44.2 +0.6**
X37A Clayton 76.92 52 P **P 18 14 44.0 +0.2**
X37A IAmb IAmb 18 16 37.5
comp=Z,32nm,1.3s
HATD Hatta, Dubai 76.94 293 P **P 18 14 44.4 +0.3**
WACR West Acre 76.96 344 *e*P **P 18 14 43.9 +0.3**
SRO Srobarova 76.96 331 *e*P **P 18 14 44.9 +1.1**
SRO pmax pmax
comp=Z,50nm,0.8s
SRO Srobarova 76.96 331 *e*P **P 18 14 44.9 +1.1**
ZST Bratislava 77.01 332 *e*P **P 18 14 44.3 +0.2**
ZST pmax pmax
comp=Z,26nm,1.0s
ZST Bratislava 77.01 332 *e*P **P 18 14 44.3 +0.2**
M49A Liberty Center 77.03 41 P **P 18 14 45.0 +0.7**
baz=324
ROTZ Rotzenmuhle 77.04 336 *e*P **P 18 14 45.2 +0.9**
comp=Z,41nm,1.0s,baz=24,slow=5.7
DEV Deva 77.07 327 ⇓P **P 18 14 45.1 +0.7**
N48A Decatur 77.07 42 P **P 18 14 45.1 +0.6**
baz=324
P46A Rosedale 77.07 44 P **P 18 14 45.1 +0.6**
P46A IAmb IAmb 18 14 46.9
comp=Z,27nm,0.9s
L50A Kingsville 77.08 40 P **P 18 14 44.6 +0.1**
baz=325
DELO Deloro Mine 77.14 35 P **P 18 14 45.8 +1.0**
DELO IAmb IAmb 18 15 03.5
comp=Z,57nm,1.9s
WME Myndd Eilian 77.14 347⇓*e*P **P 18 14 44.4 -0.3**
E58A La Victoria 77.15 32 P **P 18 14 45.6 +0.7**
baz=330,SNR=8.5
KHC Kasperske Hory 77.23 335 P **P 18 14 45.9 +0.5**
KHC pmax pmax
comp=Z,22nm,0.7s
KHC Kasperske Hory 77.23 335 *e*P **P 18 14 45.9 +0.5**
KHC *e*pP **pP 18 15 08.0 +1.2**
KHC Kasperske Hory 77.23 335 P **P 18 14 45.9 +0.5**
KHC IAmb IAmb 18 14 46.9
comp=Z,22nm,0.7s
WLF1 Llynfaes 77.26 347⇓*e*P **P 18 14 45.4 0.0**
WLF1 IAmb IAmb 18 14 46.2
comp=Z,64nm,0.8s
H55A Tweed 77.27 35 P **P 18 14 46.0 +0.4**
baz=328
W39A Magazine 77.29 51 P **P 18 14 45.5 -0.3**
W39A IAmb IAmb 18 14 48.1
comp=Z,38nm,1.4s
W39A Magazine 77.29 51 P **P 18 14 46.4 +0.5**
baz=321,SNR=6.6
CWF Charnwood Fore 77.29 345 *e*P **P 18 14 45.7 +0.1**
CWF IAmb IAmb 18 14 47.2
comp=Z,37nm,0.8s
OLIL Olney 77.35 45 P **P 18 14 46.3 +0.2**
OLIL IAmb IAmb 18 15 17.2
comp=Z,14nm,0.6s
GRA1 Grafenberg Arr 77.38 336 P **P 18 14 46.6 +0.5**
GRF Grafenberg Arr 77.38 336 P **P 18 14 46.6 +0.5**
GRF pmax pmax
comp=Z,92nm,0.7s
GRF Grafenberg Arr 77.38 336 *e*P **P 18 14 47.1 +1.0**
comp=Z,97nm,0.7s,baz=24,slow=5.7
GRF *e*L L 18 51 59.8
comp=Z,178nm,20.5s
N49A Columbus Grove 77.39 41 P **P 18 14 46.4 0.0**
N49A Columbus Grove 77.39 41 P **P 18 14 46.3 0.0**
baz=324
WET Wettzell 77.42 335 *e*P **P 18 14 47.4 +1.0**
comp=Z,54nm,0.8s,baz=24,slow=5.7
GEC2 GERESS Array S 77.45 334 *e*P **P 18 14 47.1 +0.5**
comp=Z,29nm,0.8s,baz=24,slow=5.7
GEC2 GERESS Array S 77.45 334 P **P 18 14 46.3 -0.3**
GEC2 IAmb IAmb 18 14 47.6
comp=Z,26nm,0.7s
GERES GERESS Array B 77.45 334 P **P 18 14 46.8 +0.2**
comp=Z,19nm,0.6s,baz=32,slow=5.4,SNR=148
GERES LR LR 18 51 23.0
comp=Z,284nm,21.2s,baz=42,slow=38
FOEL Foel Wylfa 77.46 346 *e*P **P 18 14 46.5 0.0**
FOEL IAmb IAmb 18 14 47.9
comp=Z,41nm,0.6s
D61A St Aubert, Com 77.47 29 P **P 18 14 47.2 +0.6**
baz=332
D60A Saint Jean D'O 77.48 30 P **P 18 14 47.3 +0.6**
baz=331
O48A Farmland 77.49 42 P **P 18 14 47.4 +0.5**
baz=324
M50A Fremont 77.50 40 P **P 18 14 47.5 +0.6**
GZR Gura Zlata 77.53 327 ⇑P **P 18 14 47.0 -0.1**
ASUD Al Ashush, Dub 77.58 293 P **P 18 14 47.6 0.0**
H56A Elgin 77.59 34 P **P 18 14 47.7 +0.4**
baz=328
JCT Junction City 77.59 58 P **P 18 14 48.2 +0.5**
JCT pmax pmax
comp=Z,43nm,1.2s
JCT Junction City 77.59 58 P **P 18 14 48.2 +0.5**
JCT IAmb IAmb 18 14 49.5
comp=Z,43nm,1.1s
JCT Junction City 77.59 58 P **P 18 14 48.1 +0.4**
baz=319,SNR=9.1
DSB Dublin 77.59 348 P **P 18 14 47.0 -0.2**
DSB IAmb IAmb 18 14 48.4
comp=Z,48nm,0.8s
TNS Taunus Mts 77.61 338 *e*P **P 18 14 48.1 +0.7**
comp=Z,47nm,0.7s,baz=24,slow=5.7
NEF NEVSHA 77.62 323 *i*P **P 18 14 47.9 +0.3**
S44A Carbondale 77.62 47 P **P 18 14 47.7 0.0**
S44A IAmb IAmb 18 14 50.1
comp=Z,35nm,1.2s
G57A Newington 77.63 33 P **P 18 14 47.9 +0.4**
baz=329

CONA Conrad Observa 77.63 333 *i*P **P 18 14 48.4 +0.7**
comp=Z,26nm,0.7s,SNR=15
AHRW Bad Neuenahr-A 77.65 339 *e*P **P 18 14 48.3 +0.7**
comp=Z,42nm,1.1s,baz=24,slow=5.7
COPA Copaceanca 77.69 325 ⇑P **P 18 14 47.5 -0.4**
BEBN Eben Emael 77.73 340 ⇓P **P 18 14 48.4 +0.4**
comp=Z,107nm,0.7s
BZS Buzias 77.75 328 ⇑P **P 18 14 48.3 0.0**
PBMO Poplar Bluff 77.76 48 P **P 18 14 48.8 +0.3**
PBMO IAmb IAmb 18 14 51.1
comp=Z,47nm,1.3s
WHTX Lake Whitney, 77.77 56 P **P 18 14 48.9 +0.3**
WHTX IAmb IAmb 18 14 50.6
comp=Z,39nm,1.0s
WHTX Lake Whitney, 77.77 56 P **P 18 14 49.5 +0.9**
baz=320,SNR=6.7
HLM1 Long Mynd 77.77 346⇓*e*P **P 18 14 48.0 -0.3**
HLM1 IAmb IAmb 18 14 49.5
comp=Z,24nm,0.7s
F59A Saint Guilaume 77.77 31 P **P 18 14 48.7 +0.4**
baz=330
J54A Appleton 77.78 36 P **P 18 14 49.4 +1.0**
J54A IAmb IAmb 18 15 09.8
comp=Z,104nm,1.8s
J54A Appleton 77.78 36 P **P 18 14 48.4 0.0**
baz=327
E60A Ste Agathe de 77.78 30 P **P 18 14 48.7 +0.3**
baz=331
BR131 Keskin Array S 77.80 317 P **P 18 14 48.4 -0.4**
BR131 pmax pmax
comp=Z,22nm,1.1s
BR131 Keskin Array S 77.80 317 P **P 18 14 48.4 -0.4**
BRTR Keskin Array B 77.80 317 P **P 18 14 49.3 +0.5**
BRTR Keskin Array B 77.80 317 P **P 18 14 49.0 +0.1**
comp=Z,11nm,0.6s,baz=72,slow=1.4,SNR=66
BRTR LR LR 18 54 29.1
comp=Z,48nm,18.3s,baz=35,slow=40
BRTR Keskin Array B 77.80 317 P **P 18 14 49.3 +0.5**
MEM Membach 77.83 340 ⇓P **P 18 14 48.9 +0.3**
comp=Z,61nm,0.9s
MIAR Mount Ida 77.90 51 P **P 18 14 49.8 +0.5**
MIAR pmax pmax
comp=Z,21nm,0.9s
MIAR Mount Ida 77.90 51 P **P 18 14 49.8 +0.5**
MIAR Mount Ida 77.90 51 P **P 18 14 49.8 +0.5**
baz=321,SNR=14
D62A Allapoint, All 77.94 29 P **P 18 14 49.9 +0.6**
D62A Allapoint, All 77.94 29 P **P 18 14 49.9 +0.6**
baz=332
MEDO Medina 77.94 36 P **P 18 14 50.6 +1.2**
BSTI Sart Tilman 77.96 340 P **P 18 14 49.9 +0.6**
comp=Z,20nm,0.5s
F60A Warwick 77.96 31 P **P 18 14 50.2 +0.8**
baz=331
N50A Nevada 77.97 41 P **P 18 14 50.9 +1.4**
baz=325
WHAR Wooly Hollow 77.99 50 P **P 18 14 50.3 +0.5**
WHAR IAmb IAmb 18 14 51.3
comp=Z,56nm,1.2s
P48A Milroy 78.01 43 P **P 18 14 50.0 +0.2**
P48A Milroy 78.01 43 P **P 18 14 50.9 +1.0**
baz=324
H57A Richville 78.03 34 P **P 18 14 50.4 +0.6**
baz=329
UCC Uccle 78.03 341 P **P 18 14 49.8 +0.1**
UCC pmax pmax
comp=Z,19nm,0.7s
UCC Uccle 78.03 341 P **P 18 14 49.8 +0.1**
UCC IAmb IAmb 18 14 50.4
comp=Z,20nm,0.7s
ANTO Ankara 78.06 318 P **P 18 14 50.3 +0.1**
ANTO pmax pmax
comp=Z,34nm,0.6s
ANTO Ankara 78.06 318 ⇑P **P 18 14 50.5 +0.3**
ANTO Ankara 78.06 318 P **P 18 14 50.3 +0.1**
ANTO IAmb IAmb 18 14 52.3
comp=Z,34nm,0.6s
BHOU Houvegnez 78.07 340 ⇓P **P 18 14 50.5 +0.5**
comp=Z,30nm,0.7s
BR231 Keskin MP Arra 78.09 318 P **P 18 14 51.0 +0.6**
BR231 IAmb IAmb 18 14 52.1
comp=Z,69nm,1.3s
W41B Gary Mavity, V 78.10 50 P **P 18 14 50.6 +0.2**
baz=321,SNR=14
M52A Chesterland 78.11 39 P **P 18 14 51.2 +0.9**
M52A IAmb IAmb 18 15 09.8
comp=Z,81nm,1.8s
M52A Chesterland 78.11 39 P **P 18 14 51.4 +1.1**
baz=326
J55A Hilton 78.11 36 P **P 18 14 51.2 +1.0**
J55A Hilton 78.11 36 P **P 18 14 51.4 +1.1**
baz=328
SZH Strazhica 78.15 324 *i*P **P 18 14 49.9 -0.6**
GAZ Gaziantep 78.15 313 P **P 18 14 51.8 +1.0**
GAZ IAmb IAmb 18 15 01.2
comp=Z,37nm,1.5s
USIN University of 78.17 45 P **P 18 14 51.3 +0.6**
USIN IAmb IAmb 18 14 53.3
comp=Z,32nm,0.8s
BCLA Clavier 78.17 340 ⇓P **P 18 14 50.7 +0.3**
comp=Z,37nm,0.7s
N51A Ashland 78.18 40 P **P 18 14 52.0 +1.3**
N51A Ashland 78.18 40 P **P 18 14 51.6 +0.9**
baz=325
MOA Molln 78.18 334 *i*P **P 18 14 50.9 +0.2**
comp=Z,29nm,0.9s,SNR=16
PARMO Parma 78.19 48 P **P 18 14 50.8 0.0**
LONY Lake Ozonia 78.19 33 P **P 18 14 52.3 +1.6**
LONY Lake Ozonia 78.19 33 P **P 18 14 51.4 +0.7**
baz=329
ERPA Erie 78.20 38 P **P 18 14 51.2 +0.4**
ERPA IAmb IAmb 18 14 54.2
comp=Z,36nm,1.3s
ERPA Erie 78.20 38 P **P 18 14 51.4 +0.6**
baz=326
L53A Girard 78.22 38 P **P 18 14 52.0 +1.1**
baz=326
BGES Gesves 78.25 340 ⇓P **P 18 14 50.4 -0.5**
comp=Z,29nm,0.8s
MORH Mrgy, Hungar 78.26 330⇓*i*P **P 18 14 50.0 -1.0**
ARMA Armidale 78.28 182 P **P 18 14 52.4 +1.2**
ARMA IAmb IAmb 18 14 53.9
comp=Z,75nm,1.2s
F61A St Evariste 78.28 30 P **P 18 14 52.2 +1.0**
baz=331
D63A Stockholm 78.28 28 P **P 18 14 52.2 +1.0**
baz=333
MCH1 Michaelchurch 78.29 346⇓*e*P **P 18 14 50.9 -0.2**
MCH1 IAmb IAmb 18 14 52.3
comp=Z,78nm,1.1s
Q48A North Vernon 78.30 44 P **P 18 14 52.9 +1.5**
baz=324
K54A Basiliko Farm, 78.32 37 P **P 18 14 52.9 +1.4**
baz=327
X40A Basin Creek Fa 78.33 51 P **P 18 14 52.2 +0.5**
X40A Basin Creek Fa 78.33 51 P **P 18 14 51.9 +0.2**
baz=321,SNR=7.6
ARSA Arzberg 78.34 333 *i*P **P 18 14 51.8 +0.3**
comp=Z,19nm,0.8s,SNR=9.9
UALR University of 78.36 50 P **P 18 14 51.8 0.0**
UALR IAmb IAmb 18 17 20.6
comp=Z,45nm,1.6s
STRD Stroud 78.37 345⇓*e*P **P 18 14 51.8 +0.3**
STRD IAmb IAmb 18 14 54.1
comp=Z,81nm,0.7s
L54A Sinclairville 78.38 38 P **P 18 14 53.1 +1.3**
baz=327
BMRD Maredsous 78.40 340 ⇓P **P 18 14 51.6 -0.1**
comp=Z,36nm,1.0s
RCHB Rochefort 78.44 340 ⇓P **P 18 14 52.0 +0.1**
comp=Z,23nm,0.8s
MDVR Moldovita 78.44 328 ⇑P **P 18 14 51.9 -0.2**
ORH Orhaniye 78.45 320 P **P 18 14 53.0 +0.8**
ELND Elena 78.45 324 ⇑P **P 18 14 51.5 -0.7**
K55A Perry 78.47 36 P **P 18 14 53.4 +1.2**
baz=328
M53A WI Miller and 78.48 39 P **P 18 14 53.2 +0.9**
baz=326
ACSO Alum Creek Sta 78.48 41 P **P 18 14 53.0 +0.6**
ACSO IAmb IAmb 18 15 13.7
comp=Z,55nm,1.7s
H59A Cadyville 78.49 33 P **P 18 14 53.2 +0.8**
baz=330
H58A Gabriels 78.51 33 P **P 18 14 53.4 +0.9**
baz=330
WVNY West Valley, N 78.52 37 P **P 18 14 53.1 +0.5**

WVNY IAmb IAmb 18 15 32.0
comp=Z,39nm,1.4s
ALLY Alegheny Colle 78.52 38 P **P 18 14 53.0 +0.3**
ALLY IAmb IAmb 18 14 56.1
comp=Z,31nm,0.9s
MMNY Mt. Morris Dam 78.53 36 P **P 18 14 53.2 +0.7**
OLDB Oldbury-Upon-S 78.54 345 *eP* **P 18 14 52.3 -0.2**
PLVB Pleven 78.56 325 ⇑P **P 18 14 52.7 0.0**
SWN1 Swindon 78.56 345⇓*eP* **P 18 14 53.1 +0.6**
SWN1 IAmb IAmb 18 14 53.9
comp=Z,193nm,0.8s
PEBM Pemiscott Bayo 78.57 48 P **P 18 14 52.9 0.0**
G60A Masonville 78.58 32 P **P 18 14 54.4 +1.5**
baz=330
WCI Wyandotte Cave 78.60 44 P **P 18 14 53.8 +0.7**
WCI Wyandotte Cave 78.60 44 P **P 18 14 53.8 +0.7**
WCI IAmb IAmb 18 14 55.7
comp=Z,37nm,1.1s
WCI Wyandotte Cave 78.60 44 P **P 18 14 54.3 +1.2**
baz=324
GNAR Gosnell 78.61 48 P **P 18 14 53.7 +0.6**
HBAR Harrisburg 78.61 49 P **P 18 14 53.2 0.0**
P50A Jamestown 78.63 42 P **P 18 14 54.5 +1.3**
baz=325
DOU Dourbes 78.63 341 ⇓P **P 18 14 53.0 0.0**
PQI Presque Isle 78.64 28 P **P 18 14 53.7 +0.6**
BEHE Becsehely 78.64 331 *eP* **P 18 14 53.4 +0.2**
WOL Wolverton 78.65 345 *eP* **P 18 14 53.4 +0.3**
WOL IAmb IAmb 18 14 53.9
comp=Z,129nm,0.6s
WLF Walferdange 78.68 339 P **P 18 14 53.5 +0.2**
WLF pmax pmax
comp=Z,26nm,1.2s
WLF Walferdange 78.68 339 P **P 18 14 53.6 +0.3**
WLF Walferdange 78.68 339 P **P 18 14 53.5 +0.2**
J57A Williamstown 78.69 35 P **P 18 14 54.2 +0.7**
BATG Bathurst New B 78.70 27 P **P 18 14 54.6 +1.1**
G61A St-Isidore-de-78.70 31 P **P 18 14 54.3 +0.8**
baz=331
BATH Bath 78.72 345 *eP* **P 18 14 53.4 0.0**
GLAT Glass 78.73 47 P **P 18 14 54.4 +0.6**
E63A Oxbow 78.73 28 P **P 18 14 55.2 +1.6**
E63A IAmb IAmb 18 16 41.0
comp=Z,53nm,1.6s
E63A Oxbow 78.73 28 P **P 18 14 54.6 +1.0**
baz=333
LPAR Lepanto 78.75 49 P **P 18 14 55.4 +1.5**
FUR Furstenfeldbru 78.75 336 *eP* **P 18 14 54.5 +0.7**
comp=Z,68nm,0.9s,baz=24,slow=5.7
STU Stuttgart 78.76 337 P **P 18 14 53.8 0.0**
STU pmax pmax
comp=Z,30nm,0.7s
STU Stuttgart 78.76 337 P **P 18 14 53.8 0.0**
STU IAmb IAmb 18 14 54.9
comp=Z,30nm,0.7s
LNXT Lenox 78.76 48 P **P 18 14 54.5 +0.6**
LNXT IAmb IAmb 18 14 56.4
comp=Z,49nm,0.8s
FRGS Fruska Gora 78.79 329⇓*iP* **P 18 14 52.9 -1.1**
HMNX Herstmonceux 78.79 343 *eP* **P 18 14 54.4 +0.6**
HMNX IAmb IAmb 18 14 55.5
comp=Z,124nm,0.6s
M54A Oil Creek Stat 78.84 38 P **P 18 14 55.4 +1.0**
M54A IAmb IAmb 18 15 23.5
comp=Z,52nm,1.7s
M54A Oil Creek Stat 78.84 38 P **P 18 14 55.4 +1.0**
baz=327
NCB Newcomb 78.88 33 P **P 18 14 55.3 +0.8**
E64A Bridgewater 78.92 28 P **P 18 14 56.2 +1.5**
baz=333
H60A Morristown 78.92 32 P **P 18 14 56.3 +1.5**
baz=330
N53A Lisbon 78.93 39 P **P 18 14 55.6 +0.7**
N53A Lisbon 78.93 39 P **P 18 14 56.0 +1.1**
baz=326
SOKA Soboth 79.00 333 *i*P **P 18 14 55.5 +0.2**
comp=Z,37nm,0.8s,SNR=31
J58A Remsen 79.01 34 P **P 18 14 56.0 +0.7**
J58A Remsen 79.01 34 P **P 18 14 56.2 +0.9**
baz=329
PERS Pernice 79.01 333 *eP* **P 18 14 55.4 +0.1**
EDRB Edirne 79.02 323 P **P 18 14 55.1 -0.2**
KALN Kalnik 79.04 331 *i*P **P 18 14 55.3 -0.1**
P51A Williamsport 79.06 41 P **P 18 14 56.4 +0.8**
R49A Shelbyville 79.08 44 P **P 18 14 57.2 +1.5**
R49A Shelbyville 79.08 44 P **P 18 14 56.7 +1.1**
baz=324
O52A Adamsville 79.08 40 P **P 18 14 56.5 +0.8**
O52A Adamsville 79.08 40 P **P 18 14 56.8 +1.1**
baz=326
G62A West of Eustis 79.10 30 P **P 18 14 56.6 +0.9**
baz=332
VT1 Waterbury 79.10 32 P **P 18 14 56.6 +0.9**
F63A Nahmakanta, Br 79.15 29 P **P 18 14 56.6 +0.6**
KBA Koelnbreinsper 79.15 334 *i*P **P 18 14 56.8 +0.6**
comp=Z,131nm,0.9s,SNR=80
I59A Olmsteadville 79.16 33 P **P 18 14 56.2 +0.1**
baz=330
N54A Moraine State 79.16 39 P **P 18 14 56.3 +0.1**
N54A Moraine State 79.16 39 P **P 18 14 56.9 +0.8**
baz=327
L56A Greenwood 79.17 36 P **P 18 14 56.7 +0.5**
L56A Greenwood 79.17 36 P **P 18 14 56.9 +0.7**
baz=328
Q50A Georgetown 79.17 42 P **P 18 14 57.3 +1.1**
baz=325
J59A Piesco 79.21 34 P **P 18 14 57.1 +0.7**
J59A Piesco 79.21 34 P **P 18 14 56.8 +0.4**
baz=329
T47A Sharon Grove 79.22 46 P **P 18 14 57.0 +0.5**
T47A IAmb IAmb 18 14 58.6
comp=Z,24nm,0.9s
O53A New Philadelph 79.23 40 P **P 18 14 57.9 +1.4**
baz=326
M55A Ridgway 79.24 38 P **P 18 14 57.7 +1.1**
M55A IAmb IAmb 18 15 17.2
comp=Z,16nm,0.6s
M55A Ridgway 79.24 38 P **P 18 14 57.3 +0.7**
baz=327
F64A Sherman 79.25 29 P **P 18 14 56.7 +0.3**
F64A IAmb IAmb 18 15 56.0
comp=Z,53nm,1.6s
F64A Sherman 79.25 29 P **P 18 14 57.4 +1.0**
baz=333
Z41A Richland Creek 79.30 52 P **P 18 14 58.0 +1.0**
baz=321
OBKA Obir 79.30 333 *i*P **P 18 14 56.9 0.0**
comp=Z,17nm,0.7s,SNR=8.3
Q51A Peebles 79.31 42 P **P 18 14 57.5 +0.5**
MET Memphis--Engin 79.31 49 P **P 18 14 58.2 +1.2**
CCAR Cane Creek 79.32 51 P **P 18 14 58.5 +1.5**
CCAR IAmb IAmb 18 17 52.0
comp=Z,40nm,0.6s
DIM Dimitrovgrad 79.33 324 *i*P **P 18 14 57.7 +0.7**
K58A Earlville 79.38 35 P **P 18 14 57.6 +0.3**
K58A Earlville 79.38 35 P **P 18 14 57.7 +0.4**
baz=329
BFO Black Forest 79.39 338 P **P 18 14 57.1 -0.1**
BFO pmax pmax
comp=Z,30nm,0.9s
BFO Black Forest 79.39 338 *eP* **P 18 14 57.7 +0.5**
comp=Z,42nm,1.1s,baz=24,slow=5.7
BFO Black Forest 79.39 338 P **P 18 14 57.1 -0.1**
BFO IAmb IAmb 18 14 58.3
comp=Z,30nm,0.9s
PTJ Puntijarka 79.40 332 P **P 18 14 57.4 0.0**
MOSL Moslavina 79.41 331 *i*P **P 18 14 56.6 -0.8**
TEKS Tekeris 79.42 329 *eP* **P 18 14 57.4 0.0**
WATA Walderalm 79.43 335 *i*P **P 18 14 58.2 +0.6**
comp=Z,51nm,0.6s,SNR=32
S49A Springfield 79.43 44 P **P 18 14 58.4 +0.8**
baz=324,SNR=5.7
833A Chaparral WMA, 79.45 59 P **P 18 14 58.7 +0.8**
833A IAmb IAmb 18 15 00.5
comp=Z,42nm,1.4s
833A Chaparral WMA, 79.45 59 P **P 18 14 59.0 +1.2**
baz=320
H62A Milan 79.45 31 P **P 18 14 58.9 +1.3**
H62A IAmb IAmb 18 17 19.6
comp=Z,37nm,1.4s
ZAG Zagreb 79.46 332 P **P 18 14 58.0 +0.3**
M56A Emporium 79.47 37 P **P 18 14 58.9 +1.1**
M56A Emporium 79.47 37 P **P 18 14 57.9 +0.2**
baz=328
MYKA Terra Mystica 79.47 333 *i*P **P 18 14 57.6 -0.2**
comp=Z,27nm,0.9s,SNR=12
LHI Lord Howe Isla 79.47 176 P **P 18 14 59.0 +1.5**
LHI IAmb IAmb 18 16 16.0
comp=Z,60nm,1.0s
NATX Nacogdoches 79.47 54 P **P 18 14 59.2 +1.3**
NATX Nacogdoches 79.47 54 P **P 18 14 58.7 +0.8**
baz=321
R50A Paris 79.47 43 P **P 18 14 57.8 0.0**
R50A Paris 79.47 43 P **P 18 14 58.4 +0.6**
baz=325
RETA Reutte 79.52 336 *i*P **P 18 14 58.4 +0.4**
comp=Z,37nm,0.7s,SNR=15
UBR Ueberruh 79.52 336 *e*P **P 18 14 58.6 +0.6**
baz=24,slow=5.7
MOTA Moosalm 79.55 335 *i*P **P 18 14 58.7 +0.4**
comp=Z,115nm,1.0s,SNR=40
WVT Waverly 79.55 47 P **P 18 14 58.4 +0.1**
WVT pmax pmax
comp=Z,17nm,1.0s
WVT Waverly 79.55 47 P **P 18 14 58.4 +0.1**
WVT Waverly 79.55 47 P **P 18 14 58.7 +0.4**
baz=323
LEGS Legarje 79.57 332 *i*P **P 18 14 57.8 -0.4**
CRES Cresnjev 79.63 332⇓*iP* **P 18 14 58.0 -0.6**
SQTA Sankt Quirin 79.64 335 *i*P **P 18 14 59.3 +0.6**
comp=Z,77nm,0.9s,SNR=41
DIVS Divibare 79.65 328⇓*iP* **P 18 14 58.1 -0.7**
K59A Cooperstown 79.67 34 P **P 18 14 59.6 +0.7**
baz=329
ABTA Abfaltersbach 79.69 334 *i*P **P 18 14 58.7 -0.3**
comp=Z,23nm,0.8s,SNR=13
LJU Ljubljana 79.73 333⇓*iP* **P 18 14 58.6 -0.5**
N55A Marion Center 79.73 38 P **P 18 15 00.3 +1.0**
baz=327
VTS Vitosha 79.74 325 P **P 18 14 59.1 -0.3**
VTS pmax pmax
comp=Z,65nm,0.9s
VTS Vitosha 79.74 325⇓P **P 18 14 59.7 +0.3**
VTS Vitosha 79.74 325 *i*P **P 18 14 59.3 -0.1**
VTS Vitosha 79.74 325 P **P 18 14 59.0 -0.3**
ECH Echery 79.79 338 P **P 18 14 59.0 -0.4**
ECH pmax pmax
comp=Z,40nm,1.0s
ECH Echery 79.79 338 P **P 18 14 59.0 -0.4**
ECH IAmb IAmb 18 15 00.5
comp=Z,40nm,1.0s
R51A Hillsboro 79.79 43 P **P 18 15 01.3 +1.7**
baz=325
OZLJ Ozalj 79.82 332 *i*P **P 18 14 59.3 -0.3**
Q52A Bidwell 79.84 41 P **P 18 15 00.9 +1.1**
baz=326
T49A Edmonton 79.87 44 P **P 18 15 00.8 +0.8**
T49A Edmonton 79.87 44 P **P 18 15 00.9 +0.8**
baz=324
L58A Harry Jones Me 79.92 35 P **P 18 15 00.3 +0.1**
baz=329
VOJS Vojsko 79.93 333 *i*P **P 18 14 59.1 -1.2**
DAVA Damuels 79.94 336 *i*P **P 18 15 00.8 +0.4**
comp=Z,62nm,0.9s,SNR=19
FETA Feichten 79.95 336 *i*P **P 18 15 01.0 +0.5**
comp=Z,40nm,0.9s,SNR=19
SBD Saint Breward 79.95 346 *eP* **P 18 15 00.1 -0.1**
SBD IAmb IAmb 18 15 01.0
comp=Z,56nm,0.8s
RZN Rozhen 79.96 324 *i*P **P 18 15 00.6 -0.1**
WVL Waterville 79.97 30 P **P 18 15 02.0 +1.6**
WVL IAmb IAmb 18 16 11.1
comp=Z,59nm,1.6s
M57A Sunshine Farm, 80.01 37 P **P 18 15 01.4 +0.7**
M57A Sunshine Farm, 80.01 37 P **P 18 15 01.5 +0.7**
baz=328
HAPS Han Pijesak,Bl 80.02 329 *eP* **P 18 14 59.9 -0.9**
CEY Cerknica 80.03 333⇓*iP* **P 18 15 00.1 -0.7**
BLY Banja Luka 80.03 330⇓P **P 18 15 00.5 -0.3**
BLY Banja Luka 80.03 330⇓*iP* **P 18 15 00.1 -0.7**
BLY Banja Luka 80.03 330 P **P 18 15 00.2 -0.6**
BBLS Lazići 80.06 329⇓*iP* **P 18 15 00.9 -0.1**
OXF Oxford 80.06 49 P **P 18 15 02.0 +0.9**
OXF Oxford 80.06 49 P **P 18 15 02.0 +0.9**
OXF Oxford 80.06 49 P **P 18 15 02.0 +0.9**
baz=323
O55A Ligonier 80.08 39 P **P 18 15 02.4 +1.3**
baz=327
G65A Princeton 80.09 28 P **P 18 15 02.3 +1.3**
baz=333
RDO Rodhopi 80.10 323 P **P 18 15 01.0 -0.1**
ALN Alexandroupoli 80.10 323 P **P 18 15 00.6 -0.6**
ALN Alexandroupoli 80.10 323 P **P 18 15 01.0 -0.2**
ALN pmax pmax
comp=Z,23nm,1.0s
ALN Alexandroupoli 80.10 323 P **P 18 15 01.0 -0.2**
L59A Walton 80.10 35 P **P 18 15 01.6 +0.4**
I63A Otisfield 80.11 31 P **P 18 15 03.0 +1.9**
baz=332
R52A Catlettsburg 80.19 42 P **P 18 15 02.5 +0.8**
baz=326
HKT Hockley 80.22 56 P **P 18 15 02.8 +0.9**
HKT pmax pmax
comp=Z,34nm,1.8s
HKT Hockley 80.22 56 P **P 18 15 02.8 +0.9**
U49A Red Boiling Sp 80.23 45 P **P 18 15 02.5 +0.5**
baz=324,SNR=6.9
M58A Price's Panora 80.25 36 P **P 18 15 02.2 +0.1**
baz=328
Q53A Leroy 80.25 41 P **P 18 15 03.1 +1.1**
baz=326
T50A Nancy 80.26 44 P **P 18 15 02.7 +0.6**
baz=325,SNR=5.5
RUDO Rudo 80.28 328 *eP* P 18 15 07.5 +5.3
SSPA Standing Stone 80.30 37 P **P 18 15 02.8 +0.6**
SSPA Standing Stone 80.30 37 P **P 18 15 02.5 +0.2**
baz=328
CLTN Cedars of Leba 80.31 46 P **P 18 15 03.2 +0.8**
MCWV Mont Chateau 80.31 39 P **P 18 15 03.3 +1.0**
MCWV IAmb IAmb 18 15 06.1
comp=Z,50nm,1.9s
S51A Beattyville 80.33 43 P **P 18 15 03.5 +1.1**
S51A IAmb IAmb 18 16 01.1
comp=Z,29nm,0.9s
O56A Blue Knob Stat 80.33 38 P **P 18 15 02.9 +0.4**
O56A Blue Knob Stat 80.33 38 P **P 18 15 03.8 +1.3**
baz=328
N57A Milroy 80.34 37 P **P 18 15 03.8 +1.3**
baz=328
PLAL Pickwick Lake 80.35 47 P **P 18 15 03.1 +0.5**
PLAL IAmb IAmb 18 15 04.2
comp=Z,35nm,1.2s
V48A Smith Brothers 80.35 46 P **P 18 15 03.1 +0.5**
LMN Caledonia Moun 80.36 26 P **P 18 15 03.0 +0.5**
LMN IAmb IAmb 18 15 04.3
comp=Z,52nm,1.3s
MGRS Mrkonjic Grad 80.36 330⇑*iP* **P 18 15 03.2 +0.6**
RIY Rijeka 80.39 332 *eP* **P 18 15 02.1 -0.5**
MMB Musomiste 80.43 325 *i*P **P 18 15 03.1 +0.1**
P55A Reedsville 80.44 39 P **P 18 15 04.4 +1.3**
baz=327
FUORN Ofenpass-Fuorn 80.45 336 P **P 18 15 03.8 +0.5**
FUORN IAmb IAmb 18 15 05.0
comp=Z,43nm,0.8s
RAR Rarotonga 80.47 137 LR LR 18 41 58.0
comp=Z,121nm,21.4s,baz=314,slow=29
STKA Stephens Creek 80.49 191 P **P 18 15 03.8 +0.7**
comp=Z,9.7nm,0.5s,baz=2.0,slow=6.8,SNR=47
STKA LR LR 18 50 50.0
comp=Z,61nm,20.4s,baz=25,slow=36
STKA Stephens Creek 80.49 191 P **P 18 15 03.6 +0.5**
H66A Whiting 80.54 29 P **P 18 15 05.3 +1.9**
baz=334
CTI Castel Tesino 80.58 335 P **P 18 15 03.0 -0.8**
CTI pmax pmax
comp=Z,27nm,0.8s
CTI Castel Tesino 80.58 335 P **P 18 15 03.0 -0.8**
CTI IAmb IAmb 18 15 04.0
comp=Z,27nm,0.8s
NVR Nevrokopi 80.58 324 P **P 18 15 03.5 -0.3**
L60A Shokan 80.59 34 P **P 18 15 04.2 +0.4**
baz=330
N58A Sunbury 80.60 37 P **P 18 15 05.8 +1.9**
baz=328
UDBI Udbina 80.69 331 *i*P **P 18 15 03.7 -0.7**
U50A Jamestown 80.75 44 P **P 18 15 05.6 +0.8**
baz=325
O57A Amberson 80.76 38 P **P 18 15 04.4 -0.4**
baz=328
V49A McMinnville 80.77 46 P **P 18 15 05.8 +0.9**
baz=324
JLP Les Platons 80.80 344⇓*eP* **P 18 15 05.2 +0.5**
UPM Unac-Piva 80.81 329 *eP* **P 18 15 04.3 -0.9**
TUE Stuetta 80.83 336 P **P 18 15 05.7 +0.5**
JSA Saint Aubin 80.86 344 *eP* **P 18 15 05.4 +0.3**
JSA IAmb IAmb 18 15 06.2
comp=Z,61nm,0.8s
P56A Dayton Farm, R 80.86 39 P **P 18 15 05.6 +0.3**
baz=327,SNR=6.1
THAS Thassos island 80.88 323 P **P 18 15 04.7 -0.6**
N59A State Game Lan 80.91 36 P **P 18 15 05.1 -0.4**
baz=329
STIP Stip 80.93 326 *i*P **P 18 15 04.8 -0.9**
NVLJ Novalja 80.95 332 *i*P **P 18 15 04.7 -0.9**
KIJV Kijevo 80.95 331 *i*P **P 18 15 05.3 -0.4**
SKO Skopje 80.97 326 *i*P **P 18 15 06.3 +0.4**
BRJN Brijuni 80.99 333 *i*P **P 18 15 03.5 -2.3**
MANT Manisa 81.07 320 P **P 18 15 06.6 -0.1**
CLF Chambon-Foret 81.10 341 P **P 18 15 07.2 +0.9**
CLF IAmb IAmb 18 15 07.8
comp=Z,39nm,0.9s
VAY Valandovo 81.11 325 *i*P **P 18 15 06.6 +0.1**
KNT Kendrikon 81.12 325 P **P 18 15 05.7 -0.9**
W49A Belvidere 81.12 46 P **P 18 15 07.2 +0.5**
baz=324,SNR=5.4
O58A Lewisberry 81.13 37 P **P 18 15 07.2 +0.5**
baz=328
TEOL Teolo 81.20 334 P **P 18 15 06.8 -0.2**
BRY Bratogost 81.20 329⇓*iP* **P 18 15 06.0 -1.2**
SWET Sewanee 81.20 46 P **P 18 15 07.3 +0.1**
SWET IAmb IAmb 18 15 08.7
comp=Z,30nm,0.9s
N60A Cedar Hill Far 81.21 36 P **P 18 15 07.3 +0.2**
baz=329
V50A Pikevile 81.23 45 P **P 18 15 07.4 0.0**
baz=325
O59A Robesonia 81.26 37 P **P 18 15 07.9 +0.5**
baz=329
X48A Hartselle 81.28 47 P **P 18 15 07.9 +0.3**
SALO Salr 81.29 335 P **P 18 15 07.1 -0.4**
MORI Morici 81.30 331 *i*P **P 18 15 06.7 -0.8**
R55A Marlinton 81.34 40 P **P 18 15 09.0 +1.0**
baz=327
PDG Podgorica 81.37 328⇓P **P 18 15 07.5 -0.3**
PDG Podgorica 81.37 328⇓*iP* **P 18 15 07.1 -0.7**
PDG Podgorica 81.37 328 P **P 18 15 07.2 -0.7**
PDG IAmb IAmb 18 15 08.1
comp=Z,62nm,0.9s
MAKA Makarska 81.38 330 *i*P **P 18 15 06.9 -1.1**
DUGI Dugi Otok 81.40 331 *i*P **P 18 15 07.1 -1.0**
PRK Paraskevi 81.40 322 P **P 18 15 08.1 0.0**
OUR Ouranopolis 81.41 324 P **P 18 15 07.6 -0.5**
TREB Trebinje 81.43 329 *eP* **P 18 15 07.0 -1.3**
Q57A Strasburg 81.44 39 P **P 18 15 06.6 -1.8**
baz=328
U52A Thorn Hill 81.45 43 P **P 18 15 09.3 +0.8**
baz=325,SNR=5.3
SENIN Lac Senin/Sane 81.47 337 P **P 18 15 08.7 0.0**
V51A Loudon 81.48 44 P **P 18 15 09.2 +0.6**
baz=325
GRG Griva 81.49 325 P **P 18 15 08.2 -0.4**
P58A Pank, Wackersv 81.51 38 P **P 18 15 10.1 +1.4**
baz=328
ZIRJ Zirje 81.51 331 *i*P **P 18 15 07.6 -1.0**
W50A Signal Mountai 81.51 45 P **P 18 15 09.2 +0.3**
W50A IAmb IAmb 18 15 10.6
comp=Z,22nm,0.9s
W50A Signal Mountai 81.51 45 P **P 18 15 09.6 +0.7**
baz=325,SNR=5.3
STON Ston 81.52 329 *i*P **P 18 15 07.0 -1.7**
STON Ston 81.52 329 *eP* **P 18 15 07.1 -1.6**
HORT Hortiatis 81.53 324 P **P 18 15 07.9 -1.0**
DBRK Dubrovnik 81.55 329 *i*P **P 18 15 07.5 -1.3**
PLG Polygyros 81.58 324 P **P 18 15 08.0 -1.1**
PHP Peshkopia 81.59 327 P **P 18 15 08.0 -1.2**
DRME Dracevica, Mon 81.61 328⇓*iP* **P 18 15 08.5 -0.7**
HCY Herceg Novi 81.62 328 *eP* **P 18 15 08.0 -1.3**
HVAR Hvar 81.67 330 *i*P **P 18 15 08.2 -1.2**
CPCT Cooper Cave 81.69 45 P **P 18 15 10.6 +0.8**
CPCT IAmb IAmb 18 15 11.4
comp=Z,27nm,1.1s
ZAIG Zacatecas 81.75 65 P **P 18 15 11.6 +1.0**
P59A Jarrettsville 81.76 37 P **P 18 15 09.4 -0.6**
baz=329
CSS Mathiatis 81.80 315 P **P 18 15 10.2 -0.2**
CSS IAmb IAmb 18 15 13.6
comp=Z,32nm,0.7s
V52A Sevierville 81.80 44 P **P 18 15 11.3 +1.0**
V52A Sevierville 81.80 44 P **P 18 15 10.6 +0.3**
baz=325
W51A Cleveland 81.81 45 P **P 18 15 10.1 -0.2**
baz=325
Q58A Fox Den Farm, 81.82 38 P **P 18 15 10.6 +0.2**
baz=328
U53A Fall Branch 81.84 43 P **P 18 15 11.4 +0.8**
baz=326
TKL Tuckaleechee C 81.87 44 P **P 18 15 11.8 +1.1**
TKL pmax pmax
comp=Z,23nm,1.1s
TKL Tuckaleechee C 81.87 44 P **P 18 15 11.6 +0.9**
comp=Z,11nm,0.9s,baz=40,slow=2.6,SNR=6.1
TKL LR LR 18 56 08.0
comp=Z,60nm,18.1s,baz=336,slow=39
TKL Tuckaleechee C 81.87 44 P **P 18 15 11.8 +1.1**
L64A Middleborough 81.87 32 P **P 18 15 09.6 -1.0**
baz=332
PAIG Paliouri 81.87 324 P **P 18 15 09.8 -0.8**
FPAL Fort Paine 81.91 46 P **P 18 15 11.6 +0.7**
ELL Elmali 81.92 318 P **P 18 15 11.0 -0.1**
ELL pmax pmax
comp=Z,87nm,0.8s
ELL Elmali 81.92 318 P **P 18 15 11.0 -0.1**
OHR Ohrid 81.96 326 *i*P **P 18 15 10.5 -0.6**
FORT Forrest 82.00 202 P **P 18 15 12.1 +1.0**
FNA Florina 82.03 326 P **P 18 15 10.6 -0.9**
FNA Florina 82.03 326 P **P 18 15 10.8 -0.7**
FNA pmax pmax
comp=Z,36nm,1.0s
FNA Florina 82.03 326 P **P 18 15 10.8 -0.7**
FNA IAmb IAmb 18 15 12.2
comp=Z,36nm,1.0s
Y49A Blount Mountai 82.07 47 P **P 18 15 12.1 +0.3**
TIR Tirane 82.09 327 P **P 18 15 11.4 -0.4**
TIR pmax pmax
comp=Z,67nm,0.7s
TIR Tirane 82.09 327⇑P **P 18 15 11.8 +0.1**
TIR Tirane 82.09 327 P **P 18 15 11.4 -0.4**
LIT Litokhoron 82.19 325 P **P 18 15 11.1 -1.2**
LIT Litokhoron 82.19 325 P **P 18 15 11.1 -1.2**
LIT pmax pmax
comp=Z,23nm,1.0s
LIT Litokhoron 82.19 325 P **P 18 15 11.1 -1.2**
CHOS Chios island 82.22 321 P **P 18 15 11.5 -1.1**
R58A Rapidan 82.23 39 P **P 18 15 13.6 +1.1**
baz=328
BBOO Buckleboo 82.24 195 P **P 18 15 12.6 +0.3**
BBOO IAmb IAmb 18 15 13.9
comp=Z,37nm,0.8s
W52A Murphy 82.26 45 P **P 18 15 13.3 +0.6**
baz=325
V53A Saluda 82.30 44 P **P 18 15 13.8 +0.8**
baz=326
ZCCA Zocca 82.32 334 P **P 18 15 14.0 +1.1**
ZCCA IAmb IAmb 18 15 26.3
comp=Z,46nm,0.9s
AOS Alonnisos 82.44 323 P **P 18 15 13.0 -0.6**
LRAL Lakeview Retre 82.44 48 P **P 18 15 13.7 0.0**
LRAL Lakeview Retre 82.44 48 P **P 18 15 14.4 +0.7**
baz=324
PPT Papeete 82.47 127 LR LR 18 44 39.1
comp=Z,122nm,21.2s,baz=360,slow=30
NEST Nestorio 82.47 326 P **P 18 15 13.1 -0.8**
PPT2 Papeete2 82.48 127 *e*LR LR 18 41 04.0
comp=Z,363nm,23.0s,baz=321
XOR Xorichti 82.55 324 P **P 18 15 13.0 -1.2**
W53A Cullowhee 82.55 44 P **P 18 15 14.0 -0.4**
baz=326
R58B Mineral 82.56 39 P **P 18 15 15.1 +0.8**
baz=328
NEO Neokhori 82.59 324 P **P 18 15 13.2 -1.2**
SKIA Skiathos 82.61 323 P **P 18 15 13.6 -0.9**
VLC Villacollemand 82.67 335 P **P 18 15 15.0 +0.2**
VLC IAmb IAmb 18 15 17.0
comp=Z,40nm,1.0s

Y51A	**Rockmart**	**82.69**	**46**	P		**P**	**18 15 15.4**	**+0.4**	
	baz=325,SNR=8.9								
KPRO	**Kipourio**	**82.75**	**325**	P		**P**	**18 15 14.1**	**-1.2**	
MSSA	**Maissana**	**82.77**	**335**	P		**P**	**18 15 14.7**	**-0.7**	
MSSA				IAmb		IAmb	18 15 15.8		
	comp=Z,40nm,1.1s								
Z50A	**Ashland**	**82.80**	**47**	P		**P**	**18 15 15.8**	**+0.3**	
Z50A				IAmb		IAmb	18 15 17.2		
	comp=Z,50nm,0.8s								
Z50A	**Ashland**	**82.80**	**47**	P		**P**	**18 15 16.1**	**+0.6**	
	baz=324,SNR=19								
BG3	**Lake Jocassee**	**82.80**	**44**	P		**P**	**18 15 16.1**	**+0.5**	
MURB	**Monte Urbino**	**82.85**	**333**	P		**P**	**18 15 16.0**	**+0.3**	
MURB				IAmb		IAmb	18 15 18.4		
	comp=Z,58nm,0.9s								
BNI	**Bardonecchia**	**82.85**	**337**	P		**P**	**18 15 16.3**	**+0.5**	
BNI				pmax		pmax			
	comp=Z,30nm,0.8s								
BNI	**Bardonecchia**	**82.85**	**337**	P		**P**	**18 15 16.3**	**+0.5**	
BNI				IAmb		IAmb	18 15 17.8		
	comp=Z,30nm,0.8s								
MRKA	**Markates**	**82.96**	**323**	P		**P**	**18 15 15.0**	**-1.3**	
S59A	**Mechanicsville**	**82.98**	**39**	P		**P**	**18 15 16.9**	**+0.6**	
	baz=328								
OSSC	**Osservatorio P**	**83.00**	**334**	P		**P**	**18 15 16.4**	**-0.1**	
OSSC				IAmb		IAmb	18 15 18.1		
	comp=Z,33nm,1.0s								
X53A	**Estanollee**	**83.03**	**45**	P		**P**	**18 15 17.8**	**+1.0**	
	baz=326,SNR=7.4								
NRCA	**Norcia**	**83.06**	**332**	P		**P**	**18 15 16.9**	**+0.1**	
W54A	**Cherokee Point**	**83.07**	**43**	P		**P**	**18 15 17.6**	**+0.6**	
	baz=326								
Z51A	**Franklin**	**83.11**	**46**	P		**P**	**18 15 17.2**	**+0.1**	
Z51A				IAmb		IAmb	18 15 18.7		
	comp=Z,40nm,1.1s								
SSB	**Saint Sauveur**	**83.17**	**339**	P		**P**	**18 15 17.6**	**+0.3**	
SSB				pmax		pmax			
	comp=Z,41nm,0.9s								
SSB	**Saint Sauveur**	**83.17**	**339**	P		**P**	**18 15 17.6**	**+0.3**	
SSB				IAmb		IAmb	18 15 19.1		
	comp=Z,41nm,0.9s								
SGRT	**San Giovanni R**	**83.18**	**330**	P		**P**	**18 15 16.8**	**-0.7**	
SGRT				IAmb		IAmb	18 15 17.7		
	comp=Z,39nm,0.9s								
KARY	**Karystos**	**83.19**	**322**	P		**P**	**18 15 16.9**	**-0.6**	
Y52A	**Lilburn**	**83.20**	**45**	P		**P**	**18 15 18.0**	**+0.4**	
Y52A				IAmb		IAmb	18 15 19.8		
	comp=Z,26nm,1.1s								
Y52A	**Lilburn**	**83.20**	**45**	P		**P**	**18 15 18.5**	**+0.9**	
	baz=325								
CAN	**Canberra**	**83.26**	**184**	P		**P**	**18 15 18.5**	**+0.9**	
CAN				pmax		pmax			
	comp=Z,17nm,0.9s								
CAN	**Canberra**	**83.26**	**184**	P		**P**	**18 15 18.5**	**+0.9**	
MAKR	**Makrakomi, Fth**	**83.27**	**324**	P		**P**	**18 15 16.3**	**-1.6**	
SRN	**Sarande**	**83.33**	**326**	P		**P**	**18 15 17.1**	**-1.0**	
AQU	**L'Aquila**	**83.40**	**332**	P		**P**	**18 15 19.1**	**+0.5**	
AQU				pmax		pmax			
	comp=Z,33nm,0.8s								
AQU	**L'Aquila**	**83.40**	**332**	*eP*		**P**	**18 15 19.4**	**+0.8**	
AQU	**L'Aquila**	**83.40**	**332**	P		**P**	**18 15 19.1**	**+0.5**	
AQU				IAmb		IAmb	18 15 20.5		
	comp=Z,33nm,0.8s								
KMSC	**Kings Mountain**	**83.42**	**43**	P		**P**	**18 15 19.6**	**+0.9**	
	baz=326								
X54A	**Belton**	**83.43**	**44**	P		**P**	**18 15 19.7**	**+0.9**	
	baz=326								
Y53A	**Monroe**	**83.43**	**45**	P		**P**	**18 15 19.7**	**+0.9**	
	baz=326								
V57A	**Coltrane Farms**	**83.49**	**41**	P		**P**	**18 15 19.7**	**+0.6**	
	baz=327								
IGT	**Igoumenitsa**	**83.51**	**326**	P		**P**	**18 15 18.0**	**-1.1**	
T59A	**Double "B" Far**	**83.54**	**39**	P		**P**	**18 15 20.4**	**+1.1**	
	baz=328								
KEK	**Kerkira**	**83.55**	**326**	P		**P**	**18 15 18.4**	**-0.9**	
INTR	**Introdacqua**	**83.55**	**331**	P		**P**	**18 15 18.7**	**-0.7**	
INTR				IAmb		IAmb	18 15 20.6		
	comp=Z,42nm,0.8s								
Z52A	**Williamson**	**83.58**	**46**	P		**P**	**18 15 20.2**	**+0.7**	
	baz=325								
U58A	**Oxford**	**83.60**	**40**	P		**P**	**18 15 20.8**	**+1.1**	
	baz=328								
VLY	**Voula,Athens**	**83.61**	**323**	P		**P**	**18 15 17.7**	**-1.9**	
250A	**Grady**	**83.66**	**48**	P		**P**	**18 15 20.5**	**+0.5**	
LATE	**Laterza**	**83.66**	**333**	P		**P**	**18 15 19.5**	**-0.4**	
LATE				IAmb		IAmb	18 15 21.1		
	comp=Z,31nm,1.0s								
SCTE	**Santa Cesarea**	**83.72**	**327**	P		**P**	**18 15 19.6**	**-0.6**	
HODGE	**Hodges**	**83.74**	**44**	P		**P**	**18 15 20.9**	**+0.5**	
W56A	**Indian Trail**	**83.76**	**42**	P		**P**	**18 15 21.1**	**+0.6**	
	baz=327								
MATE	**Matera**	**83.83**	**329**	⇓P		**P**	**18 15 20.6**	**-0.1**	
X55A	**Gracelyn & Ava**	**83.83**	**43**	P		**P**	**18 15 21.8**	**+0.9**	
	baz=326								
Y54A	**Tignall**	**83.85**	**44**	P		**P**	**18 15 22.1**	**+1.1**	
	baz=326,SNR=12								
GOGA	**Godfrey**	**83.85**	**45**	P		**P**	**18 15 21.5**	**+0.6**	
GOGA				pmax		pmax			
	comp=Z,71nm,1.8s								
GOGA	**Godfrey**	**83.85**	**45**	P		**P**	**18 15 21.5**	**+0.6**	
GOGA				IAmb		IAmb	18 15 24.6		
	comp=Z,71nm,1.8s								
GOGA	**Godfrey**	**83.85**	**45**	P		**P**	**18 15 21.6**	**+0.7**	
	baz=326								
152A	**Waverly Hall**	**83.86**	**47**	P		**P**	**18 15 21.4**	**+0.3**	
Z53A	**Monticello**	**83.91**	**45**	P		**P**	**18 15 21.8**	**+0.6**	
	baz=326,SNR=5.5								
ACER	**Acerenza**	**83.97**	**329**	P		**P**	**18 15 21.2**	**-0.3**	
TSLK	**Tsoukalades, L**	**84.00**	**325**	P		**P**	**18 15 20.7**	**-0.9**	
W57A	**Gilead**	**84.01**	**42**	P		**P**	**18 15 22.3**	**+0.6**	
	baz=327								
LKD2	**Lefkada island**	**84.03**	**325**	P		**P**	**18 15 20.9**	**-0.9**	
X56A	**White Oak**	**84.09**	**43**	P		**P**	**18 15 22.8**	**+0.6**	
	baz=327								
KARP	**Karpathos**	**84.14**	**319**	P		**P**	**18 15 21.4**	**-1.0**	
MORW	**Morawa**	**84.14**	**213**	P		**P**	**18 15 22.9**	**+0.7**	
MORW				IAmb		IAmb	18 15 23.8		
	comp=Z,26nm,0.9s								
Y55A	**Saluda**	**84.17**	**44**	P		**P**	**18 15 23.2**	**+0.6**	
	baz=326								
EVGl	**Lefkada island**	**84.18**	**325**	P		**P**	**18 15 21.3**	**-1.2**	
PAOL	**Paolisi**	**84.22**	**330**	P		**P**	**18 15 21.7**	**-1.0**	
V59A	**Middlesex**	**84.27**	**40**	P		**P**	**18 15 23.6**	**+0.6**	
	baz=328								
RAYN	**Ar Rayn**	**84.32**	**299**	P		**P**	**18 15 23.8**	**+0.2**	
RAYN				pmax		pmax			
	comp=Z,35nm,0.8s								
RAYN	**Ar Rayn**	**84.32**	**299**	*i* P		**P**	**18 15 23.6**	**0.0**	
	SNR=31								
RAYN	**Ar Rayn**	**84.32**	**299**	P		**P**	**18 15 23.8**	**+0.2**	
RAYN				IAmb		IAmb	18 15 25.0		
	comp=Z,35nm,0.8s								
DRO	**Drossia**	**84.35**	**324**	P		**P**	**18 15 22.8**	**-0.7**	
FSK	**Fiskardo**	**84.36**	**325**	P		**P**	**18 15 22.1**	**-1.3**	
RLS	**Riolos of Patr**	**84.36**	**324**	P		**P**	**18 15 22.9**	**-0.5**	
W58A	**Raeford**	**84.46**	**41**	P		**P**	**18 15 24.3**	**+0.3**	
	baz=328								
KFL	**Anninata**	**84.57**	**325**	P		**P**	**18 15 23.5**	**-1.1**	
VLS	**Valsamata**	**84.59**	**325**	P		**P**	**18 15 23.7**	**-1.0**	
Z55A	**Blythe**	**84.64**	**44**	P		**P**	**18 15 25.3**	**+0.4**	
	baz=326								
253A	**Americus**	**84.64**	**46**	P		**P**	**18 15 25.6**	**+0.7**	
253A	**Americus**	**84.64**	**46**	P		**P**	**18 15 25.7**	**+0.7**	
	baz=325								
154A	**Montrose**	**84.68**	**45**	P		**P**	**18 15 27.0**	**+1.8**	
	baz=326								
352A	**Blakely**	**84.72**	**47**	P		**P**	**18 15 26.1**	**+0.7**	
352A	**Blakely**	**84.72**	**47**	P		**P**	**18 15 26.1**	**+0.7**	
	baz=325								
OUZ	**Omahuta**	**84.84**	**164**	P		**P**	**18 15 27.3**	**+1.8**	
OUZ				IAmb		IAmb	18 15 28.9		
	comp=Z,54nm,1.0s								
ZKR	**Zakros**	**84.92**	**319**	P		**P**	**18 15 25.9**	**-0.4**	
ITM	**Ithomi**	**84.94**	**324**	P		**P**	**18 15 25.0**	**-1.4**	
ITM	**Ithomi**	**84.94**	**324**	P		**P**	**18 15 25.3**	**-1.1**	
V61A	**Roper**	**84.96**	**39**	P		**P**	**18 15 26.2**	**-0.3**	
	baz=329								
155A	**Kite**	**84.98**	**45**	P		**P**	**18 15 28.5**	**+1.8**	
	baz=326								
TIP	**Timpagrande**	**85.12**	**328**	⇓P		**P**	**18 15 27.5**	**+0.2**	
TIP	**Timpagrande**	**85.12**	**328**	P		**P**	**18 15 26.9**	**-0.5**	
254A	**Abbeville**	**85.14**	**46**	P		**P**	**18 15 29.0**	**+1.6**	
	baz=326								
353A	**Camilla**	**85.18**	**47**	P		**P**	**18 15 29.6**	**+1.9**	
	baz=325								
LAST	**Lasithi**	**85.20**	**320**	P		**P**	**18 15 26.5**	**-1.3**	
FRMA	**Ierapetra Chan**	**85.21**	**320**	P		**P**	**18 15 27.0**	**-0.8**	
TIGA	**Tifton**	**85.41**	**46**	P		**P**	**18 15 29.9**	**+1.1**	
TIGA	**Tifton**	**85.41**	**46**	P		**P**	**18 15 29.5**	**+0.7**	
	baz=326								
255A	**Hazlehurst**	**85.55**	**45**	P		**P**	**18 15 30.8**	**+1.3**	
	baz=326								
SIVA	**Sivas**	**85.61**	**320**	P		**P**	**18 15 29.3**	**-0.4**	
TOO	**Toolangi**	**85.72**	**187**	P		**P**	**18 15 31.7**	**+1.7**	
TOO				pmax		pmax			
	comp=Z,61nm,1.4s								
TOO	**Toolangi**	**85.72**	**187**	P		**P**	**18 15 31.7**	**+1.7**	
TOO				IAmb		IAmb	18 15 32.6		
	comp=Z,61nm,1.4s								
NWAO	**Narrogin (SRO)**	**87.23**	**210**	P		**P**	**18 15 37.8**	**+0.4**	
NWAO				pmax		pmax			
	comp=Z,36nm,0.9s								
NWAO	**Narrogin (SRO)**	**87.23**	**210**	P		**P**	**18 15 37.8**	**+0.4**	
NWAO	**Narrogin (SRO)**	**87.23**	**210**	P		**P**	**18 15 37.8**	**+0.4**	
NWAO				IAmb		IAmb	18 15 38.8		
	comp=Z,36nm,0.8s								
TBI	**Tubuai**	**87.29**	**130**	*e*LR		LR	18 42 56.2		
	comp=Z,533nm,30.5s,baz=327								
TBI	**Tubuai**	**87.29**	**130**	*e*T		T	19 51 40.0		
	comp=Z,7.8nm,0.2s								
656A	**Willston**	**87.63**	**47**	P		**P**	**18 15 41.0**	**+1.3**	
SOCY	**Socotra**	**87.65**	**286**	P		**P**	**18 15 38.8**	**-1.3**	
SOCY				IAmb		IAmb	18 15 39.6		
	comp=Z,28nm,0.8s								
HIZ	**Hauiti**	**88.27**	**164**	P		**P**	**18 15 44.0**	**+1.8**	
URZ	**Urewera**	**88.47**	**162**	P		**P**	**18 15 42.1**	**-1.0**	
PBRG	**Braganca**	**88.80**	**346**	*eP*		**P**	**18 15 44.1**	**-1.0**	
PVRL	**Vila Real**	**89.48**	**346**	*eP*		**P**	**18 15 47.8**	**-0.5**	
PVIS	**Viseu**	**90.05**	**346**	*eP*		**P**	**18 15 51.0**	**0.0**	
MTE	**Manteigas**	**90.31**	**346**	*eP*		**P**	**18 15 51.4**	**-0.8**	
ESBB	**Sonseca Array**	**90.38**	**343**	P		**P**	**18 15 51.8**	**-0.7**	
ESDC	**Sonseca Array**	**90.38**	**343**	P		**P**	**18 15 51.6**	**-0.9**	
	comp=Z,2.3nm,0.6s,baz=6.9,slow=4.3,SNR=19								
ESDC				LR		LR	19 03 32.5		
	comp=Z,127nm,18.7s,baz=325,slow=40								
ESDC	**Sonseca Array**	**90.38**	**343**	P		**P**	**18 15 51.9**	**-0.7**	
PAB	**San Pablo**	**90.58**	**344**	P		**P**	**18 15 52.4**	**-1.1**	
PAB				pmax		pmax			
	comp=Z,8.0nm,1.0s								
PAB	**San Pablo**	**90.58**	**344**	P		**P**	**18 15 52.4**	**-1.1**	
CMIG	**Matias Romero**	**90.71**	**63**	LR		LR	18 52 36.6		
	comp=Z,38nm,21.9s,baz=332,slow=33								
KEST	**Kesra**	**90.72**	**332**	P		**P**	**18 15 54.5**	**+0.2**	
	comp=Z,13nm,0.8s,baz=217,slow=1.6,SNR=18								
KEST				LR		LR	19 02 44.1		
	comp=Z,126nm,19.4s,baz=314,slow=40								
KEST	**Kesra**	**90.72**	**332**	P		**P**	**18 15 54.3**	**0.0**	
KEST				IAmb		IAmb	18 15 55.4		
	comp=Z,24nm,1.1s								
PCAS	**Casmilo, Conde**	**90.80**	**347**	*eP*		**P**	**18 15 55.3**	**+0.9**	
PCBR	**Castelo Branco**	**90.84**	**346**	*eP*		**P**	**18 15 53.7**	**-0.9**	
TUWZ	**Tuamarina**	**90.94**	**165**	P		**P**	**18 15 53.9**	**-0.7**	
RPZ	**Rata Peaks**	**92.73**	**168**	LR		LR	18 52 45.6		
	comp=Z,122nm,20.9s,baz=9.5,slow=32								
PCVE	**Castro Verde**	**93.09**	**346**	*eP*		**P**	**18 16 04.5**	**-0.5**	
TORD	**Torodi Ar. Bea**	**114.19**	**330**	PKiKP		**PKiKP**	**18 21 30.5**	**-0.1**	
	comp=Z,2.0nm,0.4s,baz=26,slow=1.7,SNR=31								
TORD	**Torodi Ar. Bea**	**114.19**	**330**			**PKiKP**	**18 21 29.9**	**-0.7**	
DBIC	**Dimbokro**	**122.32**	**335**	PKP		**PKiKP**	**18 21 46.4**	**-0.1**	
	comp=Z,5.1nm,0.4s,baz=356,slow=1.7,SNR=15								
DBIC	**Dimbokro**	**122.32**	**335**			**PKPdf**	**18 21 45.9**	**-0.4**	
TIC	**Toumodi**	**122.39**	**335**	*e*PKiKP		**PKPdf**	**18 21 46.3**	**-0.2**	
KIC	**Kosan Boka**	**122.58**	**335**	*e*PKiKP		**PKPdf**	**18 21 46.8**	**0.0**	
	comp=Z,11nm,0.6s								
LIC	**Lamto**	**122.79**	**335**	*e*PKiKP		**PKPdf**	**18 21 46.6**	**-0.6**	
	comp=Z,20nm,0.5s								
VNDA	**Vanda**	**125.52**	**178**	PKP		**PKPdf**	**18 21 50.5**	**+0.1**	
	comp=Z,3.3nm,0.8s,baz=325,slow=4.0,SNR=10								
LPAZ	**La Paz**	**133.07**	**62**	PKiKP		**PKiKP**	**18 22 08.1**	**-0.5**	
LPAZ	**La Paz**	**133.07**	**62**	PKP		**PKPdf**	**18 22 08.0**	**+0.6**	
	comp=Z,1.1nm,0.6s,baz=231,slow=3.7,SNR=4.1								
LPAZ	**La Paz**	**133.07**	**62**			**PKiKP**	**18 22 08.1**	**-0.5**	
BOSA	**Boshof**	**136.31**	**278**	PKP		**PKPdf**	**18 22 13.2**	**+0.7**	
	comp=Z,2.4nm,0.8s,baz=297,slow=6.8,SNR=3.2								
QSPA	**South Pole Qui**	**137.92**	**180**	PKPdf		**PKiKP**	**18 22 15.5**	**-0.7**	
SYO	**Syowa Base**	**142.49**	**213**	⇓*e*X		**PKPdf**	**18 22 16.9**	**-5.4**	
SYO	**Syowa Base**	**142.49**	**213**	⇑*e*X		PKiKP	18 22 40.0	+15	
BDFB	**Brasilia**	**142.79**	**37**	PKIKP		**PKPdf**	**18 22 21.2**	**-3.4**	
BDFB	**Brasilia**	**142.79**	**37**	PKhKP		**PKPdf**	**18 22 21.4**	**-3.2**	
	comp=Z,8.3nm,0.6s,baz=292,slow=3.9,SNR=8.6								
BDFB	**Brasilia**	**142.79**	**37**			**PKPdf**	**18 22 21.2**	**-3.4**	
ACLC	**CERRO LA CRUZ**	**143.46**	**74**	*eP*		PKPbc	18 22 23.4	+0.4	
CFA	**Coronel Fontan**	**144.05**	**78**	*eP*		**PKPab**	**18 22 24.0**	**0.0**	
ACAN	**Cantantal**	**145.17**	**78**	*eP*		**PKPdf**	**18 22 28.4**	**+0.2**	
ACAN				*i* S		**pPKPdf**	**18 22 49.2**	**-1.4**	
MRA	**San Martin**	**146.22**	**77**	*eP*		**PKPbc**	**18 22 31.2**	**-0.1**	
MRA				IAML			18 22 33.1		
	comp=Z,17nm,0.5s								
MRA				*i* S		pPKPbc	18 22 56.0	+2.5	
TCA	**Tanti**	**146.25**	**74**	*i* P		**PKPbc**	**18 22 31.7**	**+0.3**	
TCA				IAML			18 22 32.6		
	comp=Z,20nm,0.7s								
GO06	**Curarrehue**	**146.47**	**92**			**PKPbc**	**18 22 31.6**	**-0.3**	
CPUP	**Villa Florida**	**147.17**	**60**	PKP2		**PKPbc**	**18 22 34.6**	**+0.6**	
CPUP	**Villa Florida**	**147.17**	**60**	PKPbc		**PKPbc**	**18 22 34.4**	**+0.4**	
	comp=Z,22nm,1.0s,baz=334,slow=2.6,SNR=25								
CPUP	**Villa Florida**	**147.17**	**60**			**PKPdf**	**18 22 32.0**	**+0.3**	
CPUP				PKPbc		**PKPbc**	**18 22 34.6**	**+0.6**	
PLCA	**Paso Flores**	**147.65**	**94**	PKPbc		**PKPbc**	**18 22 35.9**	**+0.8**	
	comp=Z,30nm,0.9s,baz=310,slow=3.0,SNR=44								
PLCA	**Paso Flores**	**147.65**	**94**			**PKPdf**	**18 22 32.3**	**+0.1**	
PLCA				PKPbc		**PKPbc**	**18 22 35.9**	**+0.8**	
SPB	**Sao Paulo**	**150.09**	**42**			**PKPbc**	**18 22 41.7**	**+0.1**	
GO09	**Cerro Castillo**	**150.21**	**114**			**PKiKP**	**18 22 41.8**	**0.0**	
SNAA	**Sanae**	**154.12**	**196**	PKiKP		**PKPbc**	**18 22 49.1**	**-0.3**	
SNAA	**Sanae**	**154.12**	**196**			**PKPbc**	**18 22 48.5**	**-0.9**	
SNAA				PKPab		**PKPab**	**18 23 03.2**	**-0.2**	
VNA3	**Neumayer Olymp**	**155.64**	**193**	PKPab		**PKPab**	**18 23 10.0**	**+0.1**	
VNA1	**Neumayer--Stat**	**155.95**	**194**	PKPab		**PKPab**	**18 23 11.7**	**+0.5**	

*NEIC **10** 18:40:55.0±2.2, 31°.67S±0°.09×178°.4W±0°.2, h91km±13km, mb4.6/13, Error ellipse: s-maj=26.2km s-min=9.8km az=108.0*
*IDC **10** 18:40:56.4±2.0, 31°.72S×178°.49W, h100km±15km, mb3.9/3, mb1 4.0/5, mb1mx3.7/28, mbtmp4.2/5, MS3.9/1, Ms1 3.9/1, ms1mx2.8/22, Error ellipse: s-maj=47.7km s-min=12.9km az=113.0*

ISC 10 18:40:55.9±0.9, 31°.69S±0°.08×178°.4W±0°.1, h100km, n36, σ1§69/39, mb4.5/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.47**	**10**	P		P	**Pn**	**18 41 34.7**	**+0.1**
	33nm,0.3s,baz=107,slow=19,SNR=1.2								
RAO				S		S	**Sn**	**18 42 06.4**	**+2.2**
	329nm,0.3s,baz=50,slow=20,SNR=8.3								
RAO	**Raoul Island**	**2.47**	**10**				**Pn**	**18 41 33.8**	**-0.8**
RAO							**Sn**	**18 42 01.2**	**-3.0**
MXZ	**Matakaoa Point**	**6.45**	**204**	Pn		Pn	**Pn**	**18 42 28.2**	**0.0**
URZ	**Urewera**	**7.51**	**208**	P		Pn	**Pn**	**18 42 41.9**	**-0.7**
	0.3nm,0.3s,baz=180,slow=19,SNR=1.6								
URZ				S			**Sn**	**18 44 06.3**	**+0.2**
	3.3nm,0.3s,baz=341,slow=23,SNR=9.0								
URZ	**Urewera**	**7.51**	**208**				**Pn**	**18 42 42.0**	**-0.6**
URZ							**Sn**	**18 44 05.9**	**-0.2**
OUZ	**Omahuta**	**7.54**	**240**	Pn		Pn	**Pn**	**18 42 41.1**	**-1.9**
BFZ	**Birch Farm**	**9.95**	**204**	Pn		Pn	**Pn**	**18 43 16.1**	**+0.2**
MSWZ	**Moikau Station**	**10.96**	**206**	Pn		Pn	**Pn**	**18 43 30.1**	**+0.5**
SNZO	**South Karori**	**11.07**	**208**	Pn		Pn	**Pn**	**18 43 31.6**	**+0.5**
TUWZ	**Tuamarina**	**11.49**	**210**	Pn		Pn	**Pn**	**18 43 33.1**	**-3.5**
NNZ	**Nelson**	**11.57**	**212**	Pn		Pn	**Pn**	**18 43 33.0**	**-4.7**
BSWZ	**Blackbirch Sta**	**11.75**	**209**	Pn		Pn	**Pn**	**18 43 36.2**	**-4.0**
THZ	**Tophouse**	**12.22**	**212**	Pn		Pn	**Pn**	**18 43 45.4**	**-1.0**
KHZ	**Kahutara**	**12.48**	**209**	Pn		Pn	**Pn**	**18 43 46.5**	**-3.2**
NIUE	**Niue**	**14.71**	**33**	Pn		Pn	**Pn**	**18 44 18.5**	**-0.5**
ODZ	**Otahua Downs**	**15.83**	**210**			P		**18 44 34.6**	**-0.1**
ODZ				IAmb		IAmb		18 45 08.5	
	comp=Z,75nm,1.6s								
MLZ	**Mavora Lakes**	**17.21**	**214**				**Pn**	**18 44 48.6**	**-1.3**
MLZ				IAmb		IAmb		18 44 54.0	
	comp=Z,104nm,1.7s								
ARMA	**Armidale**	**25.65**	**265**	P		P	**P**	**18 46 19.0**	**+2.6**
STKA	**Stephens Creek**	**33.85**	**259**	P		P	**P**	**18 47 29.9**	**+1.1**
	comp=Z,2.3nm,1.0s,baz=101,slow=13,SNR=3.6								
STKA	**Stephens Creek**	**33.85**	**259**	P		P	**P**	**18 47 29.7**	**+0.9**
BBOO	**Buckleboo**	**38.28**	**256**	P		P	**P**	**18 48 06.1**	**-0.5**
COEN	**Coen**	**39.29**	**288**	P		P	**P**	**18 48 15.6**	**+0.4**
COEN				IAmb		IAmb		18 48 51.5	
	comp=Z,13nm,1.1s								
AS31	**Alice Springs**	**42.69**	**269**	P		P	**P**	**18 48 42.7**	**-0.4**
ASAR	**Alice Springs**	**42.69**	**269**	P		P	**P**	**18 48 42.7**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=106,slow=7.2,SNR=54								
ASAR	**Alice Springs**	**42.69**	**269**	P		P	**P**	**18 48 42.3**	**-0.8**
WR0	**Warramunga Arr**	**43.62**	**274**	P		P	**P**	**18 48 50.3**	**-0.2**
WR0				IAmb		IAmb		18 48 50.8	
	comp=Z,5.7nm,0.8s								
WRAB	**Tennant Creek**	**43.79**	**274**	P		P	**P**	**18 48 51.4**	**-0.5**
WRAB				IAmb		IAmb		18 48 52.1	
	comp=Z,5.9nm,0.7s								
WRA	**Warramunga Arr**	**43.80**	**274**	P		P	**P**	**18 48 51.6**	**-0.3**
	comp=Z,4.6nm,0.6s,baz=114,slow=7.5,SNR=41								
WRA	**Warramunga Arr**	**43.80**	**274**	P		P	**P**	**18 48 51.3**	**-0.7**
FORT	**Forrest**	**45.37**	**256**	P		P	**P**	**18 49 05.5**	**+1.1**
VNDA	**Vanda**	**46.78**	**186**	LR		LR		19 04 42.6	
	comp=Z,136nm,21.8s,baz=350,slow=30								
KNRA	**Kununurra**	**50.45**	**276**	P		P	**P**	**18 49 43.7**	**0.0**
FITZ	**Fitzroy Crossi**	**52.00**	**271**	P		P	**P**	**18 49 57.4**	**+2.1**
FITZ				IAmb		IAmb		18 50 02.4	
	comp=Z,14nm,1.4s								
FINES	**FINESS Array B**	**146.22**	**339**	PKPbc		**PKPbc**		**19 00 23.1**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=48,slow=4.3,SNR=10								
FINES	**FINESS Array B**	**146.22**	**339**			**PKPbc**		**19 00 23.0**	**-0.9**
BRTR	**Keskin Array B**	**152.86**	**296**	PKPbc		**PKiKP**		**19 00 42.6**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=59,slow=3.7,SNR=2.0								

*NEIC **10** 19:43:30.6±0.6, 20°.8N±0°.2×147°.0E±0°.3, h1km±5km, mb4.3/5, Error ellipse: s-maj=46.0km s-min=23.7km az=70.0*
*IDC **10** 19:43:31.3±1.5, 20°.77N×146°.87E, h0km, mb4.0/10, mb1 4.1/10, mb1mx3.7/50, mbtmp4.0/10, Error ellipse: s-maj=41.3km s-min=30.0km az=90.0*

ISC 10 19:43:37.2±1.3, 20°.8N±0°.1×146°.8E±0°.3, h40km, n20, σ0§60/20, mb4.0/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MAJO	**Matsushiro**	**17.39**	**336**	P		P	**Pn**	**19 47 35.2**	**-1.7**
SONM	**Songino Array**	**42.19**	**319**	P		P	**P**	**19 51 26.4**	**+0.2**
	0.3nm,0.6s,baz=120,slow=8.5,SNR=2.2								
WRA	**Warramunga Arr**	**42.28**	**198**	P		P	**P**	**19 51 26.5**	**-0.5**
	0.8nm,0.8s,baz=14,slow=8.7,SNR=3.7								
WRA	**Warramunga Arr**	**42.28**	**198**	P		P	**P**	**19 51 26.2**	**-0.8**
CMAR	**Chiang Mai Arr**	**45.00**	**276**	P		P	**P**	**19 51 49.7**	**+0.6**
	0.2nm,0.3s,baz=72,slow=6.2,SNR=1.8								
ZALV	**Zalesovo Beam**	**57.01**	**322**	P		P	**P**	**19 53 18.9**	**+0.1**
	1.8nm,0.4s,baz=108,slow=

0.3nm,0.3s,baz=210,slow=10,SNR=4.8

ATH ***10*** *20:43:05.8,41.57N×24.33E,h24km±1km, ML2.2/14, Error ellipse: s-maj=2.2km s-min=1.0km az=187.0*
ISK ***10*** *20:43:05.0,41.57N×24.35E,h7km, ML2.5/15*
THE ***10*** *20:43:06.4,41.57N×24.35E,h6km, ML2.2/7, Error ellipse: s-maj=0.7km s-min=0.3km az=182.0*
SKO ***10*** *20:43:07.2,41.64N×24.27E,h5km*
BEO ***10*** *20:43:08.8±1.0,41.68N×24.24E,h3km±5km, ML2.4/8*

ISC 10 20:43:05.6±1.0,41.61N±0.02×24.35E±0.02,h13km±8km, n84,σ1°14/121,7C-4D,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NVR	**Nevrokopi**	**0.45**	**235**	P		**Pg**	**20 43 14.7**	**+0.2**
NVR				S		**Sg**	**20 43 20.8**	**+0.3**
	240nm,0.1s							
NVR	**Nevrokopi**	**0.45**	**235**	P		**Pg**	**20 43 14.7**	**+0.2**
NVR				S		**Sg**	**20 43 20.9**	**+0.3**
NVR				AML		AML	20 43 30.5	
	comp=N,431μm,0.1s							
NVR				AML		AML	20 43 30.7	
	comp=E,510μm,0.1s							
PLD	**Plovdiv**	**0.56**	**28**	PG		**Pb**	**20 43 17.1**	**-0.1**
PLD				SG		**Sb**	**20 43 25.8**	**+0.7**
KAVA	**Kavala**	**0.63**	**169**	P		**Pg**	**20 43 17.6**	**-0.2**
KAVA				S		**Sg**	**20 43 26.1**	**0.0**
	comp=E,500nm,0.1s							
KAVA	**Kavala**	**0.63**	**169**	P		**Pg**	**20 43 17.5**	**-0.2**
KAVA				S		**Sg**	**20 43 26.3**	**+0.3**
KAVA				AML		AML	20 43 26.7	
	comp=E,1176μm,0.2s							
KAVA				AML		AML	20 43 27.7	
	comp=N,815μm,0.1s							
KVLA	**Kavala**	**0.67**	**178**	P		**Pg**	**20 43 18.3**	**-0.4**
KVLA				S		**Sb**	**20 43 28.4**	**0.0**
KDZ	**Kurdzhali**	**0.80**	**87**	PG		**Pg**	**20 43 19.9**	**-1.2**
RDO	**Rodhopi**	**1.01**	**117**	P		**Pg**	**20 43 24.8**	**-0.2**
RDO				S		**Sn**	**20 43 39.2**	**-0.1**
	comp=N,355nm,0.3s							
RDO	**Rodhopi**	**1.01**	**117**	P		**Pg**	**20 43 24.7**	**-0.2**
RDO				S		**Sn**	**20 43 38.5**	**-0.8**
RDO				AML		AML	20 43 41.4	
	comp=E,884μm,0.2s							
RDO				AML		AML	20 43 44.4	
	comp=N,506μm,0.1s							
RDO	**Rodhopi**	**1.01**	**117**	PG		**Pg**	**20 43 24.8**	**-0.2**
RDO				SG		**Sg**	**20 43 38.4**	**+0.3**
THAS	**Thassos island**	**1.04**	**164**	P		**Pb**	**20 43 25.2**	**-0.2**
THAS				S		**Sn**	**20 43 39.8**	**-0.4**
THAS	**Thassos island**	**1.04**	**164**	P		**Pb**	**20 43 25.2**	**-0.2**
THAS				S		**Sn**	**20 43 39.7**	**-0.4**
THAS				AML		AML	20 43 41.7	
	comp=E,651μm,0.3s							
THAS				AML		AML	20 43 42.0	
	comp=N,629μm,0.4s							
SOH	**Sokhos**	**1.09**	**224**	P		**Pb**	**20 43 26.3**	**+0.1**
SOH	**Sokhos**	**1.09**	**224**	P		**Pb**	**20 43 25.9**	**-0.3**
SOH				S		**Sb**	**20 43 40.3**	**-0.1**
SOH				AML		AML	20 43 43.9	
	comp=E,326μm,0.4s							
SOH				AML		AML	20 43 44.1	
	comp=N,418μm,0.4s							
KNT	**Kendrikon**	**1.18**	**248**	P		**Pg**	**20 43 28.2**	**-0.1**
KNT				S		**Sn**	**20 43 44.0**	**+0.4**
	comp=N,185nm,0.2s							
KNT	**Kendrikon**	**1.18**	**248**	P		**Pg**	**20 43 28.3**	**0.0**
KNT				S		**Sg**	**20 43 43.6**	**0.0**
KNT				AML		AML	20 43 46.7	
	comp=N,338μm,0.2s							
KNT				AML		AML	20 43 47.5	
	comp=E,388μm,0.3s							
KNT	**Kendrikon**	**1.18**	**248**	PN		**Pn**	**20 43 27.5**	**-0.2**
KNT				SN		**Sn**	**20 43 44.3**	**+0.7**
VTS	**Vitosha**	**1.30**	**321**	*e*Pg		**Pn**	**20 43 29.7**	**+0.1**
VTS				*e*Sg		**Sb**	**20 43 46.2**	**-0.5**
VTS	**Vitosha**	**1.30**	**321**	⇑P		**Pn**	**20 43 29.4**	**-0.1**
VTS	**Vitosha**	**1.30**	**321**	⇑S		**Sg**	**20 43 48.6**	**+1.0**
OUR	**Ouranopolis**	**1.30**	**192**	P		**Pn**	**20 43 29.5**	**+0.1**
OUR	**Ouranopolis**	**1.30**	**192**	P		**Pn**	**20 43 29.6**	**+0.1**
OUR				AML		AML	20 43 50.3	
	comp=N,308μm,0.4s							
OUR				AML		AML	20 43 50.5	
	comp=E,331μm,0.2s							
OUR	**Ouranopolis**	**1.30**	**192**	PN		**Pb**	**20 43 29.8**	**-0.1**
VAY	**Valandovo**	**1.37**	**258**	*e*Pg		**Pg**	**20 43 32.3**	**+0.4**
VAY				*e*Sg		**Sg**	**20 43 50.4**	**+0.8**
VAY	**Valandovo**	**1.37**	**258**	*i*Pg		**Pg**	**20 43 32.2**	**+0.3**
VAY				*i*Sg		**Sg**	**20 43 51.3**	**+1.7**
VAY				*e*Lg		Lg	20 43 51.9	
	comp=E,74nm,0.6s							
HORT	**Hortiatis**	**1.39**	**223**	P		**Pn**	**20 43 31.0**	**+0.4**
HORT				S		**Sg**	**20 43 50.1**	**-0.1**
	comp=E,85nm,0.3s							
HORT	**Hortiatis**	**1.39**	**223**	P		**Pg**	**20 43 31.9**	**-0.3**
HORT				S		**Sg**	**20 43 50.1**	**-0.1**
HORT				AML		AML	20 43 52.6	
	comp=N,155μm,0.4s							
HORT				AML		AML	20 43 53.5	
	comp=E,189μm,0.2s							
HORT	**Hortiatis**	**1.39**	**223**	PN		**Pn**	**20 43 31.1**	**+0.4**
HORT				SN		**Sg**	**20 43 49.8**	**-0.4**
PLG	**Polygyros**	**1.41**	**209**	P		**Pn**	**20 43 31.3**	**+0.3**
PLG	**Polygyros**	**1.41**	**209**	P		**Pb**	**20 43 31.7**	**0.0**
PLG				S		**Sb**	**20 43 50.0**	**+0.3**
PLG				AML		AML	20 43 53.7	
	comp=E,175μm,0.3s							
PLG				AML		AML	20 43 55.2	
	comp=N,151μm,0.4s							
THE	**Thessaloniki**	**1.43**	**227**	P		**Pb**	**20 43 31.8**	**-0.2**
THE	**Thessaloniki**	**1.43**	**227**	P		**Pn**	**20 43 31.7**	**+0.5**
THE				S		**Sb**	**20 43 50.5**	**+0.3**
THE				AML		AML	20 43 53.7	
	comp=E,130μm,0.4s							
THE				AML		AML	20 43 55.8	
	comp=N,69μm,0.2s							
SMTH	**Samothraki Isl**	**1.45**	**142**	P		**Pg**	**20 43 32.9**	**-0.5**
SMTH				S		**Sg**	**20 43 51.7**	**-0.5**
SMTH				AML		AML	20 43 56.4	
	comp=N,111μm,0.6s							
SMTH				AML		AML	20 43 56.6	
	comp=E,119μm,0.3s							
ALN	**Alexandroupoli**	**1.46**	**119**	P		**Pb**	**20 43 32.7**	**+0.1**
ALN				S		**Sg**	**20 43 52.6**	**-0.1**
	comp=E,38nm,0.4s							
ALN	**Alexandroupoli**	**1.46**	**119**	P		**Pg**	**20 43 33.0**	**-0.7**
ALN				S		**Sg**	**20 43 52.7**	**-0.1**
ALN				AML		AML	20 43 57.1	
	comp=N,77μm,0.6s							
ALN				AML		AML	20 44 01.0	
	comp=E,59μm,0.4s							
ALN	**Alexandroupoli**	**1.46**	**119**	PN		**Pb**	**20 43 32.5**	**-0.1**
ALN				SN		**Sg**	**20 43 52.6**	**-0.1**
GRG	**Griva**	**1.61**	**247**	P		**Pn**	**20 43 34.2**	**+0.6**
GRG				S		**Sb**	**20 43 55.8**	**+0.5**
	comp=E,55nm,0.3s							
GRG	**Griva**	**1.61**	**247**	P		**Pb**	**20 43 34.9**	**-0.2**
GRG				S		**Sb**	**20 43 55.2**	**0.0**
GRG				AML		AML	20 44 00.2	
	comp=N,109μm,0.4s							
GRG				AML		AML	20 44 02.8	
	comp=E,107μm,0.4s							
GRG	**Griva**	**1.61**	**247**	PN		**Pb**	**20 43 34.5**	**-0.6**
GRG				SN		**Sg**	**20 43 56.6**	**-0.7**
ENEZ	**Enez**	**1.62**	**122**	PN		**Pb**	**20 43 34.5**	**-0.7**
STIP	**Stip**	**1.62**	**274**	*i*Pg		**Pn**	**20 43 31.8**	**-2.0**
STIP				*i*Sg		**Sn**	**20 43 52.4**	**-2.2**
STIP				*e*Lg		Lg	20 43 54.2	
	comp=N,27nm,0.3s							
BOSS	**Bosilegrad**	**1.65**	**303**	*e*Pn		**Pg**	**20 43 36.7**	**-0.5**
BOSS				*e*Sg		**Sg**	**20 43 58.0**	**-0.6**
ELND	**Elena**	**1.74**	**40**	⇑P		**Pb**	**20 43 37.5**	**+0.2**
ELND	**Elena**	**1.74**	**40**	⇓S		**Sg**	**20 44 02.8**	**+1.4**
PAIG	**Paliouri**	**1.76**	**197**	P		**Pn**	**20 43 35.8**	**+0.2**
PAIG	**Paliouri**	**1.76**	**197**	P		**Pn**	**20 43 35.8**	**+0.2**
PAIG				AML		AML	20 44 05.1	
	comp=E,47μm,0.2s							
PAIG				AML		AML	20 44 06.3	
	comp=N,42μm,0.3s							
UKOP	**Uzunkopru-Edir**	**1.78**	**105**	PN		**Pn**	**20 43 36.8**	**+0.8**
PLVB	**Pleven**	**1.79**	**6**	⇓P		**Pg**	**20 43 39.2**	**-0.6**
PLVB	**Pleven**	**1.79**	**6**	⇑S		**Sg**	**20 44 04.0**	**+1.0**
EDRB	**Edirne**	**1.81**	**82**	P		**Pn**	**20 43 37.2**	**+0.9**
EDRB	**Edirne**	**1.81**	**82**	PN		**Pn**	**20 43 37.0**	**+0.7**
GADA	**Gvkgeada**	**1.84**	**140**	PN		**Pn**	**20 43 37.0**	**+0.2**
ERIK	**Erikli-Kesan**	**1.89**	**119**	PN		**Pn**	**20 43 38.4**	**+1.0**
GELI	**Tayfur-Gelibol**	**2.01**	**126**	PN		**Pn**	**20 43 39.8**	**+0.6**
LIT	**Litokhoron**	**2.06**	**224**	P		**Pn**	**20 43 40.5**	**+0.6**
LIT	**Litokhoron**	**2.06**	**224**	P		**Pn**	**20 43 40.6**	**+0.6**
ZAPS	**Zavoj**	**2.09**	**323**	*e*Pn		**Pb**	**20 43 43.5**	**+0.2**
ZAPS				*e*Sg		**Sg**	**20 44 11.5**	**-1.3**
BOZC	**Bozcaada**	**2.19**	**143**	PN		**Pn**	**20 43 42.1**	**+0.5**
LPK	**Lapseki**	**2.21**	**123**	PN		**Pn**	**20 43 42.6**	**+0.8**
BARS	**Barje**	**2.23**	**303**	*e*Pn		**Pb**	**20 43 45.1**	**-0.7**
BARS				*e*Sg		Sn	20 43 54.7	-15
BARS				*e*Sg		**Sg**	**20 44 15.9**	**-1.5**
RKY	**Sarkoy-Tekirda**	**2.33**	**112**	PN		**Pn**	**20 43 44.8**	**+1.3**
EZN	**Ezine**	**2.33**	**139**	PN		**Pn**	**20 43 44.4**	**+0.9**
BLKB	**Belogradchik**	**2.36**	**329**	⇓S		**Sb**	**20 44 15.8**	**-1.2**
FNA	**Florina**	**2.39**	**251**	PN		**Pn**	**20 43 45.1**	**+0.7**
XOR	**Xorichti**	**2.41**	**202**	P		**Pn**	**20 43 45.0**	**+0.4**
XOR	**Xorichti**	**2.41**	**202**	P		**Pn**	**20 43 45.0**	**+0.4**
AOS	**Alonnisos**	**2.46**	**189**	P		**Pn**	**20 43 45.4**	**0.0**
AOS	**Alonnisos**	**2.46**	**189**	PN		**Pn**	**20 43 46.8**	**+1.4**
SKIA	**Skiathos**	**2.53**	**196**	P		**Pn**	**20 43 46.4**	**0.0**
KRBG	**Karabiga-Canak**	**2.54**	**118**	PN		**Pn**	**20 43 47.6**	**+1.2**
MRMT	**Marmara Adasi**	**2.65**	**111**	PN		**Pn**	**20 43 49.0**	**+1.0**
ZAGS	**Zajecar**	**2.70**	**325**	*e*Sg		**Pn**	**20 43 51.6**	**+3.0**
ZAGS	**Zajecar**	**2.70**	**325**	*e*Pn		**Sg**	**20 44 32.5**	**+0.3**
BOVS	**Bovan**	**2.81**	**317**	*e*Pn		**Pb**	**20 43 53.7**	**-1.9**
BOVS				*e*Sn		**Sn**	**20 44 26.5**	**+2.7**
SELS	**Selova**	**2.88**	**305**	*e*Pn		**Pn**	**20 43 54.0**	**+2.9**
SELS				*e*Sg		**Sg**	**20 44 37.2**	**-0.9**
AGG	**Agios Georgios**	**3.01**	**211**	P		**Pn**	**20 43 53.8**	**+0.9**
GRUS	**Gruza**	**3.51**	**312**	*e*Pn		**Pn**	**20 44 02.8**	**+3.0**
GRUS				*e*Sg		**Sg**	**20 44 56.1**	**-2.3**
IVAS	**Ivanjica**	**3.67**	**304**	*e*Pn		**Pn**	**20 44 04.6**	**+2.6**
MDVR	**Moldovita**	**3.71**	**330**	⇑P		**Pn**	**20 44 03.1**	**+0.5**
GZR	**Gura Zlata**	**3.95**	**344**	⇑P		**Pn**	**20 44 07.2**	**+1.3**
DIVS	**Divibare**	**4.05**	**309**	*e*Pn		**Pn**	**20 44 11.0**	**+3.7**
BZS	**Buzias**	**4.47**	**335**	*e*Pn		**Pn**	**20 44 15.9**	**+3.0**
BZS	**Buzias**	**4.47**	**335**	⇓P		**Pn**	**20 44 15.0**	**+2.0**
BZS	**Buzias**	**4.47**	**335**	⇑S		**Sb**	**20 45 12.3**	**-5.3**

TAP ***10*** *20:47:17.4,24.42N×121.90E,h19km, ML3.6,B*
JMA ***10*** *20:47:17.0±0.1,24.36N×121.89E,h29km±5km,M3.1*

ISC 10 20:47:17.6±0.8,24.41N±0.01×121.94E±0.02,h18km±3km, n124,σ0°80/198,9C-15D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NANB	**Nanao**	**0.17**	**276**	⇓*i*P		**Pb**	**20 47 21.7**	**-0.3**
NANB				S		**Sb**	**20 47 24.4**	**-0.4**
	baz=276							
ENA	**Nanau**	**0.18**	**276**	⇓*i*P		**Pb**	**20 47 21.7**	**-0.4**
ENA				*i* S		**Sb**	**20 47 24.6**	**-0.5**
	baz=276							
TWC	**Suao**	**0.22**	**338**	⇑*i*P		**Pb**	**20 47 22.6**	**-0.3**
TWC				*i* S		**Sb**	**20 47 25.5**	**-0.9**
	baz=352							
EOS1	**EOS1**	**0.22**	**51**	⇑P		**Pg**	**20 47 23.4**	**+0.5**
EOS1				S		**Sg**	**20 47 28.1**	**+1.7**
	baz=51							
NACB	**Ninganchiao**	**0.39**	**234**	⇓P		**Pg**	**20 47 24.6**	**-1.2**
NACB				S		**Sg**	**20 47 30.6**	**-0.6**
	baz=232							
ILA	**Ilan**	**0.40**	**334**	⇑*i*P		**Pg**	**20 47 25.9**	**+0.1**
ILA				*i* S		**Sg**	**20 47 31.7**	**+0.3**
	baz=334							
TWE	**Neicheng**	**0.40**	**322**	⇓*i*P		**Pg**	**20 47 25.6**	**-0.3**
TWE				S		**Sg**	**20 47 30.5**	**-1.0**
	baz=326							
ENTT	**Nioudou**	**0.41**	**304**	⇓*i*P		**Pg**	**20 47 25.7**	**-0.4**
ENTT				S		**Sg**	**20 47 30.9**	**-0.9**
	baz=306							
NDT	**Datong Townshi**	**0.43**	**297**	⇓*i*P		**Pg**	**20 47 26.2**	**-0.4**
NDT				*e*S		**Sg**	**20 47 31.6**	**-1.0**
	baz=299							
SLBB	**Yuanshan**	**0.44**	**321**	⇓*i*P		**Pg**	**20 47 25.7**	**-1.0**
SLBB				*e*S		**Sg**	**20 47 31.8**	**-1.0**
	baz=323							
TWD	**Chiawan**	**0.45**	**224**	P		**Pg**	**20 47 25.9**	**-0.9**
TWD				*e*S		**Sb**	**20 47 34.5**	**+1.0**
	baz=225							
NTC	**Toucheng**	**0.46**	**347**	⇑*e*P		**Pg**	**20 47 26.7**	**-0.2**
NTC				*e*S		**Sg**	**20 47 32.9**	**-0.2**
	baz=349							
ETLH	**Xiulin Townshi**	**0.46**	**244**	⇓P		**Pg**	**20 47 26.0**	**-1.0**
ETLH				*e*S		**Sg**	**20 47 32.7**	**-0.7**
	baz=250							
NNSH	**Datong**	**0.51**	**272**	⇓*i*P		**Pg**	**20 47 27.2**	**-0.7**
NNSH				*e*S		**Sg**	**20 47 33.3**	**-1.5**
	baz=277							
NNS	**Nan Shan**	**0.52**	**274**	⇓*i*P		**Pg**	**20 47 27.3**	**-0.8**
NNS				S		**Sg**	**20 47 33.5**	**-1.6**
	baz=281							
HWA	**Hwalien**	**0.53**	**216**	*e*P		**Pb**	**20 47 28.5**	**+0.2**
	baz=218							
NWLT	**Wulai**	**0.54**	**313**	⇓*e*P		**Pb**	**20 47 28.0**	**-0.6**
NWLT				S		**Sg**	**20 47 34.8**	**-1.0**
	baz=312							
TIPB	**Shuangxi**	**0.57**	**350**	⇑*i*P		**Pb**	**20 47 28.8**	**-0.3**
TIPB				S		**Sb**	**20 47 36.1**	**-0.8**
	baz=359							
YHNB	**Yeheng**	**0.58**	**297**	⇓P		**Pb**	**20 47 28.6**	**-0.6**
YHNB				*e*S		**Sb**	**20 47 35.5**	**-1.6**
	baz=299							
ENLB	**Shoufeng**	**0.59**	**212**	*e*P		**Pb**	**20 47 29.2**	**-0.2**
ENLB				*e*S		**Sn**	**20 47 40.1**	**-0.2**
	baz=210							
TWB1	**Santiao Chiao**	**0.60**	**4**	⇑P		**Pb**	**20 47 29.3**	**-0.2**
TWB1				*e*S		**Sb**	**20 47 36.7**	**-1.0**
	baz=359							
TWA	**Mucha**	**0.66**	**330**	*e*P		**Pb**	**20 47 30.6**	**0.0**
TWA				S		**Sb**	**20 47 38.6**	**-0.7**
	baz=322							
NHDH	**Xindian Distri**	**0.67**	**326**	*e*P		**Pb**	**20 47 30.6**	**-0.2**
NHDH				S		**Sb**	**20 47 39.5**	**-0.2**
	baz=318							
WHF	**Hehuan Shan**	**0.67**	**247**	⇓*i*P		**Pb**	**20 47 29.9**	**-1.1**
WHF				*e*S		**Sb**	**20 47 39.5**	**-0.5**
	baz=254							
NWF	**Wu-fen Shan**	**0.68**	**348**	P		**Pb**	**20 47 31.0**	**+0.1**
NWF				S		**Sb**	**20 47 39.6**	**-0.4**
	baz=340							
WFSB	**Wu-fen Shan**	**0.68**	**348**	*e*P		**Pb**	**20 47 30.9**	**0.0**
WFSB				S		**Sb**	**20 47 39.5**	**-0.4**
	baz=340							
TWT	**Tachien**	**0.71**	**258**	*e*P		**Pb**	**20 47 31.2**	**-0.4**
TWT				*e*S		**Sb**	**20 47 39.8**	**-1.4**
	baz=258							
TDCB	**Techi**	**0.73**	**258**	*e*P		**Pb**	**20 47 30.9**	**-1.0**
TDCB				*e*S		**Sb**	**20 47 42.0**	**+0.4**
	baz=259							
TAP	**Taipei**	**0.74**	**328**	*e*P		**Pg**	**20 47 32.7**	**+0.5**
TAP				*e*S		**Sb**	**20 47 41.4**	**-0.4**
	baz=321							
ESL	**Shilin**	**0.75**	**218**	*e*P		**Pb**	**20 47 31.4**	**-0.8**
	baz=224							
WLTB	**Daxi**	**0.77**	**305**	*e*P		**Pb**	**20 47 32.9**	**+0.5**
	baz=307							
WLTB				*e*S		**Sg**	**20 47 43.1**	**+0.3**
	baz=307							
CHGB	**Renai**	**0.78**	**244**	⇓P		**Pb**	**20 47 32.1**	**-0.7**
	baz=250							
CHGB				*e*S		**Sb**	**20 47 43.4**	**+0.2**
	baz=250							
YM01	**YM01**	**0.81**	**336**	*e*P		**Pb**	**20 47 33.4**	**+0.2**
	baz=329							
YM01				*e*S		**Sb**	**20 47 43.9**	**+0.1**
	baz=329							
YM10	**YM10**	**0.82**	**335**	*e*P		**Pb**	**20 47 33.8**	**+0.4**
	baz=329							
YM10				*e*S		**Sg**	**20 47 44.7**	**+0.1**
	baz=329							
YM11	**YM11**	**0.82**	**336**	⇑P		**Pb**	**20 47 33.6**	**+0.2**
	baz=330							
YM11				S		**Sg**	**20 47 44.8**	**+0.1**
	baz=330							
OWD	**Renai**	**0.83**	**237**	⇓*e*P		**Pb**	**20 47 32.8**	**-0.8**
	baz=238							
OWD				*e*S		**Sb**	**20 47 44.6**	**+0.1**
	baz=238							
TWS1	**Kuangyinshan**	**0.84**	**326**	*e*P		**Pg**	**20 47 34.5**	**+0.6**
	baz=321							
TWS1				*e*S		**Sg**	**20 47 45.5**	**+0.4**
	baz=321							
YM08	**YM08**	**0.84**	**338**	*e*P		**Pb**	**20 47 33.9**	**+0.2**
	baz=330							
ANP	**Anpu**	**0.86**	**334**	*e*P		**Pb**	**20 47 34.1**	**-0.1**
	baz=326							
ANP				*e*S		**Sb**	**20 47 45.7**	**+0.3**
	baz=326							
EGFH	**Guangfu**	**0.87**	**213**	*e*P		**Pb**	**20 47 33.9**	**-0.3**
	baz=227							
EGFH				*e*S		**Sb**	**20 47 46.3**	**+0.7**
	baz=227							
LIOB	**Emei**	**0.87**	**286**	P		**Pb**	**20 47 34.6**	**+0.3**
	baz=292							
NTST	**Danshui**	**0.88**	**329**	*e*P		**Pg**	**20 47 35.0**	**+0.3**
	baz=330							
NSTT	**Nanjuang**	**0.88**	**285**	⇑P		**Pb**	**20 47 34.4**	**0.0**
	baz=279							
NSTT				*e*S		**Sb**	**20 47 46.0**	**+0.1**
	baz=279							
NCU	**National Centr**	**0.88**	**309**	*e*P		**Pn**	**20 47 35.5**	**+0.4**
	baz=310							
NCUH	**Zhongli**	**0.88**	**309**	*e*P		**Pb**	**20 47 35.1**	**+0.7**
	baz=317							
NCUH				*e*S		**Sn**	**20 47 47.5**	**-0.1**
	baz=317							
WHP	**Taichung City**	**0.92**	**262**	*e*P		**Pb**	**20 47 35.1**	**+0.1**
	baz=262							
TWY	**Chenhua**	**0.92**	**340**	⇑P		**Pg**	**20 47 35.7**	**+0.2**
	baz=341							
TWY				*e*S		**Sb**	**20 47 47.1**	**+0.2**
	baz=341							
JYNG	**Yonaguni jima**	**0.92**	**87**	P		**Pb**	**20 47 34.7**	**-0.3**
JYNG				S		**Sb**	**20 47 46.9**	**0.0**
SBCB	**Hsinchu**	**0.95**	**294**	*e*P		**Pn**	**20 47 36.3**	**+0.3**
	baz=296							
SBCB				*e*S		**Sn**	**20 47 50.8**	**+1.6**
	baz=296							
HSN	**Hsinchu**	**0.97**	**294**	*e*P		**Pb**	**20 47 35.4**	**-0.4**
	baz=298							
HSN				*e*S		**Sn**	**20 47 50.0**	**+0.4**
	baz=298							
VWDT	**VWDT**	**0.98**	**228**	*e*P		**Pb**	**20 47 35.5**	**-0.5**
	baz=229							
VWDT				*e*S		**Sb**	**20 47 49.6**	**+1.0**
	baz=229							
YOJ	**Yonaguni jima**	**0.98**	**87**	P		**Pb**	**20 47 35.5**	**-0.5**
YOJ				*e*S		**Sb**	**20 47 48.5**	**-0.1**
DPDB	**Guoxing**	**1.00**	**248**	P		**Pb**	**20 47 36.4**	**-0.1**
	baz=256							
HGSD	**Ruisui**	**1.03**	**207**	*e*P		**Pb**	**20 47 36.7**	**-0.2**
	baz=223							
NMLH	**Miaoli**	**1.05**	**277**	*e*P		**Pn**	**20 47 38.1**	**+0.6**
	baz=278							
EHY	**Hungye**	**1.06**	**212**	*e*P		**Pb**	**20 47 36.3**	**-1.1**
	baz=211							
TWQ1	**Liyutan**	**1.06**	**267**	*e*P		**Pn**	**20 47 38.2**	**+0.6**
	baz=268							
TWQ1				*e*S		**Sg**	**20 47 52.8**	**+0.6**
	baz=268							
NSY	**Sanyi**	**1.07**	**271**	*e*P		**Pb**	**20 47 38.1**	**+0.4**
	baz=284							
SSLB	**Suanglung**	**1.09**	**236**	P		**Pn**	**20 47 37.6**	**-0.4**
	baz=237							
SSLB				*e*S		**Sb**	**20 47 52.6**	**+0.6**
	baz=237							
TYC	**Yuchr**	**1.11**	**243**	*e*P		**Pn**	**20 47 38.0**	**-0.3**
	baz=254							
TYC				*e*S		**Sn**	**20 47 53.6**	**+0.5**
	baz=254							
PTSB	**Yuanli**	**1.13**	**272**	*e*P		**Pn**	**20 47 37.6**	**-0.9**
	baz=285							
YULB	**Yu-li**	**1.17**	**210**	*e*P		**Pn**	**20 47 37.5**	**-1.7**
	baz=210							
TCU	**Taichung**	**1.18**	**258**	*e*P		**Pb**	**20 47 40.6**	**+1.1**
	baz=259							
WDJ	**Dajia District**	**1.19**	**267**	*e*P		**Pg**	**20 47 40.8**	**+0.2**
	baz=275							
TWF1	**Yuli**	**1.20**	**209**	*e*P		**Pn**	**20 47 38.0**	**-1.6**
	baz=222							
WHYT	**Xinyi Township**	**1.22**	**235**	*e*P		**Pn**	**20 47 40.1**	**+0.3**
	baz=235							
WJS	**Zhushan**	**1.25**	**242**	*e*P		**Pb**	**20 47 41.6**	**+0.9**
	baz=228							
WNT	**Mingjian**	**1.26**	**246**	*e*P		**Pb**	**20 47 41.9**	**+1.0**
	baz=247							
YUS	**Yu-Shan**	**1.29**	**225**	*e*P		**Pn**	**20 47 40.7**	**-0.4**
	baz=226							
YUS				*e*S		**Sb**	**20 47 58.6**	**+0.7**
	baz=226							
WCHH	**Zhanghua**	**1.30**	**256**	*e*P		**Pb**	**20 47 42.0**	**+0.4**
	baz=257							
FULB	**Fuli**	**1.34**	**206**	*e*P		**Pn**	**20 47 41.0**	**-0.5**
	baz=222							
ALS	**Alishan**	**1.37**	**229**	*e*P		**Pn**	**20 47 42.4**	**+0.3**
	baz=218							
ALS				*e*S		**Sg**	**20 48 02.1**	**+0.1**
	baz=218							
CHKT	**Chengkung**	**1.41**	**202**	*e*P		**Pn**	**20 47 41.0**	**-1.3**
	baz=185							
CHN5	**Tsauling**	**1.41**	**235**	*e*P		**Pb**	**20 47 43.7**	**+0.3**
	baz=238							
CHN5				*e*S		**Sg**	**20 48 03.4**	**+0.2**
	baz=238							
WGK	**Gukeng**	**1.45**	**241**	*e*P		**P

TWK	**Hsinying**	**1.75**	**230**	*eP*	**Pn**	**20 47 48.5 +1.4**
	baz=232					
TWK				*eS*	**Sb**	**20 48 11.9 +1.0**
	baz=232					
WLGB	**Puzi**	**1.76**	**239**	*eP*	**Pn**	**20 47 48.8 +1.5**
	baz=240					
TWG	**Pinlang**	**1.77**	**207**	*eP*	**Pn**	**20 47 46.2 -1.2**
	baz=207					
TWGBT	**Beinan**	**1.77**	**207**	*eP*	**Pn**	**20 47 46.1 -1.2**
	baz=207					
SNST	**Tainan City**	**1.77**	**228**	*eP*	**Pn**	**20 47 48.7 +1.3**
	baz=230					
CHN1	**Nanshi**	**1.78**	**227**	*eP*	**Pn**	**20 47 49.2 +1.7**
	baz=230					
CHN1				*eS*	**Sb**	**20 48 12.3 +0.7**
	baz=230					
SGST	**Jiashian**	**1.81**	**224**	*eP*	**Pn**	**20 47 48.5 +0.5**
	baz=212					
SGST				*eS*	**Sb**	**20 48 13.2 +0.5**
	baz=212					
SLGT	**Liugui**	**1.84**	**220**	*eP*	**Pn**	**20 47 49.2 +0.9**
	baz=221					
JKRS	**Kuro-shima**	**1.90**	**95**	P	**Pn**	**20 47 49.2 +0.1**
JKRS				S	**Sn**	**20 48 12.0 -0.5**
CHN8	**Yiju**	**1.90**	**237**	*eP*	**Pn**	**20 47 51.0 +1.8**
	baz=224					
CHN8				*eS*	**Sb**	**20 48 16.6 +1.4**
	baz=224					
JIJ	**Ishigaki jima**	**2.01**	**91**	P	**Pn**	**20 47 50.1 -0.6**
JIJ				S	**Sn**	**20 48 13.2 -2.1**
ECL	**Taimali**	**2.02**	**207**	*eP*	**Pn**	**20 47 50.1 -0.7**
	baz=195					
SSD	**Sandimen**	**2.04**	**216**	*eP*	**Pn**	**20 47 52.3 +1.1**
	baz=229					
SSD				*eS*	**Sb**	**20 48 19.6 +0.3**
	baz=229					
TWM1	**Shoushan**	**2.10**	**222**	*eP*	**Pn**	**20 47 53.6 +1.6**
	baz=222					
MASBT	**Mashibuluo**	**2.15**	**214**	*eP*	**Pn**	**20 47 53.3 +0.7**
	baz=217					
MASBT				*eS*	**Sb**	**20 48 21.5 -0.9**
	baz=217					
JISG	**Ishigakijimahi**	**2.17**	**85**	P	**Pn**	**20 47 52.0 -0.8**
JISG				S	**Sn**	**20 48 19.5 +0.3**
PTTC	**Pingtan**	**2.25**	**299**	*eP*	**Pn**	**20 47 53.7 -0.3**
	baz=300					
EAST	**Anshuo**	**2.25**	**207**	*eP*	**Pn**	**20 47 54.1 +0.1**
	baz=196					
SSPT	**Xinbi**	**2.29**	**214**	*eP*	**Pn**	**20 47 56.2 +1.7**
	baz=199					
PNG	**Penghu**	**2.34**	**249**	*eP*	**Pn**	**20 47 55.3 +0.1**
	baz=252					
VWUC	**VWUC**	**2.34**	**285**	*eP*	**Pn**	**20 47 54.8 -0.3**
	baz=287					
PHUB	**P'eng-hu**	**2.34**	**248**	*eP*	**Pn**	**20 47 55.2 0.0**
	baz=251					
PHUB				*eS*	**Sn**	**20 48 23.4 -0.2**
	baz=251					
SCZT	**Fangliau**	**2.36**	**211**	*eP*	**Pn**	**20 47 56.6 +1.1**
	baz=196					
WDGT	**Dungji**	**2.38**	**242**	*eP*	**Pn**	**20 47 56.3 +0.6**
	baz=244					
MATB	**Ma-tsu**	**2.50**	**314**	*eP*	**Pn**	**20 47 57.7 +0.3**
	baz=313					
JTJ	**Tarama**	**2.53**	**84**	P	**Pn**	**20 47 58.2 +0.4**
JTJ				S	**Sn**	**20 48 27.9 -0.2**
VCHM	**Qimei**	**2.59**	**243**	*eP*	**Pn**	**20 47 59.0 +0.3**
	baz=246					
VCHM				*eS*	**Sn**	**20 48 30.5 +0.8**
	baz=246					
PTMZ	**Houxiangcun**	**2.64**	**284**	*eP*	**Pn**	**20 47 59.5 +0.2**
	baz=287					
PTMZ				*eS*	**Sn**	**20 48 30.6 -0.3**
	baz=287					
LYJJ	**Jianjiangzhen**	**2.90**	**318**	*eP*	**Pn**	**20 48 02.8 -0.2**
	baz=317					
XPSS	**Dashiqiu**	**2.97**	**328**	*eP*	**Pn**	**20 48 03.6 -0.2**
	baz=327					
JIRB	**Irabujima**	**2.97**	**81**	P	**Pn**	**20 48 04.6 +0.7**
JIRB				S	**Sn**	**20 48 38.8 -0.3**
JMJ2	**Miyako jima3**	**3.10**	**83**	P	**Pn**	**20 48 06.5 +0.8**
JMJ2				S	**Sn**	**20 48 43.3 +1.0**
MHZQ	**Yeshan**	**3.13**	**303**	*eP*	**Pn**	**20 48 05.6 -0.4**
	baz=302					
JOGS	**Gusukube**	**3.18**	**83**	P	**Pn**	**20 48 07.8 +1.1**
KNM	**Kinmen**	**3.20**	**271**	*eP*	**Pn**	**20 48 08.7 +1.7**
	baz=273					
KNMB	**Chin-men Tao**	**3.24**	**272**	*eP*	**Pn**	**20 48 07.4 -0.1**
	baz=274					
AXDP	**Jialang**	**3.65**	**279**	*eP*	**Pn**	**20 48 13.3 +0.2**
	baz=280					
ZPLA	**Ao Xicun**	**3.86**	**264**	*eP*	**Pn**	**20 48 16.2 +0.2**
	baz=266					

SJA ***10*** *20:52:06.3±1.2, 33°.97S×68°.06W, h2km±5km, ML4.0, MW3.7*
IDC ***10*** *20:52:07.7±1.4, 33°.95S×68°.16W, h0km, mb3.5/1, mb1 3.7/7, mb1mx3.6/45, mbtmp3.6/7, ML3.8/6, MS2.5/2, Ms1 2.5/2, ms1mx2.4/19, Error ellipse: s-maj=38.6km s-min=14.9km az=90.0*

ISC 10 20:52:11.9±1.3, 33°.88S±0°.04×68°.14W±0°.04, h23km±12km, n31, σ1°35/49, 6C-1D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAGR	**Agrelo**	**0.98**	**324**	*i* P	**Pb**	**20 52 28.1**	**-2.2**
AAGR				*i* S	**Sn**	**20 52 44.6**	**+1.1**
ARCO	**CERRO ARCO**	**1.23**	**327**	*i* P	**Pn**	**20 52 32.9**	**-0.9**
ARCO				*i* S	**Sn**	**20 52 51.7**	**+1.9**
ARCO				IAML		20 52 54.5	
	comp=Z,2μm,0.4s						
ASAL	**Salagasta**	**1.41**	**335**	*i* P	**Pn**	**20 52 36.2**	**0.0**
ASAL				*i* S	**Sb**	**20 52 58.0**	**+2.8**
LMEL	**Las Melosas**	**1.72**	**270**	⇑*i* P	**Pn**	**20 52 39.4**	**-1.1**
LMEL				*eS*	**Sn**	**20 53 00.9**	**-1.0**
LMEL				IAML		20 53 04.8	
	comp=N,866nm,0.4s						
ACAN	**Cantantal**	**1.79**	**27**	*i* P	**Pn**	**20 52 41.7**	**+0.4**
ACAN				*i* S	**Sb**	**20 53 05.5**	**-0.5**
MT03	**Universidad Ad**	**2.01**	**280**	⇑*i* P	**Pn**	**20 52 44.9**	**+0.3**
MT03				*eS*	**Sb**	**20 53 12.4**	**-0.2**
MT03				IAML		20 53 13.2	
	comp=N,2μm,0.3s						
RTCV	**Cerro Valdivia**	**2.04**	**350**	*i* P	**Pn**	**20 52 44.8**	**0.0**
RTCV				*i* S	**Sb**	**20 53 15.2**	**+2.0**
CLCH	**Cerro Calan**	**2.06**	**283**	⇑*i* P	**Pn**	**20 52 45.8**	**+0.6**
CLCH				*eS*	**Sb**	**20 53 13.5**	**-0.3**
ANTU	**Antumapu**	**2.10**	**278**	⇑*i* P	**Pn**	**20 52 45.8**	**0.0**
ANTU				*eS*	**Sn**	**20 53 13.1**	**+1.9**
ANTU				IAML		20 53 17.7	
	comp=E,718nm,0.7s						
MT05	**Renca**	**2.22**	**282**	⇑*i* P	**Pn**	**20 52 48.8**	**+1.4**
MT05				*eS*	**Sb**	**20 53 18.5**	**0.0**
MT05				IAML		20 53 20.3	
	comp=E,1μm,0.2s						
PEL	**Peldehue**	**2.25**	**288**	*i* P	**Pn**	**20 52 49.0**	**+1.2**
PEL				*i* S	**Sb**	**20 53 17.5**	**-1.8**
CFA	**Coronel Fontan**	**2.27**	**358**	Pn	**Pn**	**20 52 47.5**	**-0.5**
	comp=E,80nm,0.3s,baz=176,slow=17,SNR=286						
CFA				Pg	**Pb**	**20 52 50.4**	**-1.8**
	comp=E,83nm,0.3s,baz=177,slow=17,SNR=284						
CFA				Lg	Lg	20 53 21.4	
	comp=E,98nm,0.3s,baz=234,slow=19,SNR=25						
CFA				LR	LR	20 54 08.6	
	comp=E,70nm,21.3s,baz=221,slow=52						
CFA	**Coronel Fontan**	**2.27**	**358**	*i* P	**Pn**	**20 52 48.6**	**+0.6**
CFA				*i* S	**Sb**	**20 53 19.6**	**-0.2**
RTLS	**Leoncito**	**2.29**	**334**	*i* P	**Pn**	**20 52 49.3**	**+0.7**
RTLS				*i* S	**Sb**	**20 53 21.9**	**+1.2**
ZON	**Zonda**	**2.37**	**349**	*i* P	**Pb**	**20 52 52.0**	**-1.9**
ZON				*i* S	**Sb**	**20 53 24.1**	**+1.4**
ZON				IAML		20 53 26.4	
	comp=Z,698nm,0.5s						
ROCH	**El Roble**	**2.57**	**290**	⇑*i* P	**Pn**	**20 52 54.3**	**+2.1**
ROCH				*eS*	**Sb**	**20 53 30.1**	**+1.5**
ROCH				IAML		20 53 32.6	
	comp=N,388nm,0.6s						
ROC1	**El Roble**	**2.57**	**290**	*i* P	**Pn**	**20 52 53.1**	**+0.8**
ROC1				*i* S	**Sb**	**20 53 28.1**	**-0.6**
AMOG	**MOGNA**	**2.94**	**354**	*i* P	**Pn**	**20 52 58.4**	**+1.0**
ACCO	**Cerro Coronel**	**3.37**	**346**	*i* P	**Pn**	**20 53 04.5**	**+1.1**
APLL	**PUNTA DE LOS L**	**3.73**	**22**	⇓*i* P	**Pn**	**20 53 08.7**	**+0.6**
APLL				IAML		20 54 12.5	
	comp=Z,132nm,0.3s						

AROD	**Rodeo**	**3.87**	**343**	*i* P	**Pn**	**20 53 11.9 +1.6**
ACLC	**CERRO LA CRUZ**	**4.55**	**13**	*i* P	**Pn**	**20 53 21.2 +1.7**
CYA	**Choya**	**5.78**	**21**	*i* P	**Pn**	**20 53 36.1 -0.1**
CYA				IAML		20 55 24.9
	comp=Z,56nm,0.4s					
PLCA	**Paso Flores**	**7.11**	**195**	Pn	**Pn**	**20 53 51.5 -3.0**
	comp=Z,0.3nm,0.3s,baz=35,slow=13,SNR=9.3					
PLCA				Pg	**Pb**	**20 54 16.8 +2.1**
	comp=Z,0.6nm,0.3s,baz=39,slow=12,SNR=3.3					
PLCA				Lg	Lg	20 55 44.2
	comp=Z,2.0nm,0.3s,baz=76,slow=20,SNR=5.2					
PLCA				LR	LR	20 56 52.8
	comp=Z,69nm,21.1s,baz=97,slow=40					
AHML	**Horco Molle**	**7.47**	**20**	*i* P	**Pn**	**20 53 59.4 -0.1**
AHML				IAML		20 56 16.5
	comp=Z,23nm,0.5s					
LVC	**Limon Verde**	**11.24**	**356**	Pn	**Pn**	**20 54 51.7 +0.1**
	comp=Z,0.7nm,0.3s,baz=173,slow=10,SNR=4.4					
CPUP	**Villa Florida**	**12.00**	**54**	Pn	**Pn**	**20 54 60.0 -1.6**
	comp=Z,0.2nm,0.3s,baz=222,slow=14,SNR=2.4					
CPUP				Lg	Lg	20 58 31.4
	comp=Z,0.3nm,0.3s,baz=150,slow=20,SNR=3.3					
LPAZ	**La Paz**	**17.51**	**0**	P	**P**	**20 56 16.2 0.0**
	comp=Z,0.1nm,0.3s,baz=180,slow=18,SNR=3.5					
SIV	**San Ignacio**	**18.91**	**21**	P	**P**	**20 56 30.6 -0.6**
	comp=Z,0.2nm,0.3s,baz=220,slow=16,SNR=3.0					
TORD	**Torodi Ar. Bea**	**81.14**	**68**	P	**P**	**21 04 26.7 +0.8**
	comp=Z,0.5nm,0.9s,baz=227,slow=5.0,SNR=2.9					
ZALV	**Zalesovo Beam**	**152.32**	**35**	PKPbc	**PKPbc**	**21 12 03.8 -1.4**
	comp=Z,0.7nm,0.5s,baz=299,slow=2.5,SNR=2.8					

NEIC ***10*** *20:56:09.6±1.7, 19°.8S±0°.2×177°.4W±0°.3, h562km±17km, mb4.4/12, Error ellipse: s-maj=37.8km s-min=22.6km az=89.0*
IDC ***10*** *20:56:12.4±20.0, 19°.43S×177°.78W, h570km±197km, mb3.0/3, mb1 3.2/3, mb1mx2.8/44, mbtmp4.0/3, Error ellipse: s-maj=170.6km s-min=90.9km az=118.0*

ISC 10 20:56:08.8±2.1, 19°.8S±0°.2×177°.4W±0°.3, h550km, n19, σ0°76/20, mb4.3/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.78**	**295**		**P**	**20 57 37.8**	**+0.8**
URZ	**Urewera**	**18.99**	**193**	P	**P**	**20 59 55.2**	**-0.3**
URZ				IAmb	IAmb	21 00 21.9	
	comp=Z,22nm,1.5s						
THZ	**Tophouse**	**23.38**	**199**	P	**P**	**21 00 35.7**	**+0.7**
STKA	**Stephens Creek**	**38.59**	**243**	P	**P**	**21 02 46.0**	**+0.9**
	comp=Z,0.5nm,0.2s,baz=68,slow=10,SNR=3.0						
STKA	**Stephens Creek**	**38.59**	**243**	P	**P**	**21 02 45.2**	**+0.1**
BBOO	**Buckleboo**	**43.36**	**243**	P	**P**	**21 03 23.5**	**+0.6**
BBOO				IAmb	IAmb	21 03 24.0	
	comp=Z,31nm,1.6s						
WR0	**Warramunga Arr**	**45.07**	**261**	P	**P**	**21 03 36.6**	**+0.3**
WR0				IAmb	IAmb	21 03 37.8	
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	**45.23**	**256**	P	**P**	**21 03 38.0**	**+0.5**
ASAR	**Alice Springs**	**45.23**	**256**	P	**P**	**21 03 37.7**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=89,slow=7.4,SNR=28						
ASAR				PcP	**PcP**	**21 05 06.4**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=101,slow=4.8,SNR=3.0						
ASAR	**Alice Springs**	**45.23**	**256**	P	**P**	**21 03 37.4**	**-0.1**
WRAB	**Tennant Creek**	**45.25**	**261**	P	**P**	**21 03 37.4**	**-0.2**
WRAB				IAmb	IAmb	21 04 00.9	
	comp=Z,24nm,1.6s						
WRA	**Warramunga Arr**	**45.26**	**261**	P	**P**	**21 03 37.6**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=97,slow=8.5,SNR=6.5						
WRA	**Warramunga Arr**	**45.26**	**261**	P	**P**	**21 03 37.4**	**-0.4**
MTN	**Manton Dam**	**49.72**	**270**	P	**P**	**21 04 11.7**	**+0.5**
FITZ	**Fitzroy Crossi**	**53.68**	**262**	P	**P**	**21 04 40.2**	**+0.5**
FITZ				IAmb	IAmb	21 04 43.9	
	comp=Z,23nm,1.6s						
PSAA3	**Pilbara Seismi**	**58.36**	**256**	P	**P**	**21 05 10.2**	**-1.9**
PSAA3				IAmb	IAmb	21 05 13.9	
	comp=Z,22nm,1.4s						
PSAA2	**Pilbara Seismi**	**58.37**	**256**	P	**P**	**21 05 10.5**	**-1.6**
TPUB	**Ta-pu**	**74.08**	**302**	P	**P**	**21 06 49.0**	**-0.4**
GERES	**GERESS Array B**	**149.69**	**345**	PKPbc	**PKPbc**	**21 14 56.8**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=20,slow=3.1,SNR=2.6						

IDC ***10*** *21:01:58.3±1.5, 43°.86N×105°.51W, h0km, mb3.9/2, mb1 3.8/6, mb1mx3.5/47, mbtmp3.6/6, ML3.1/3, Error ellipse: s-maj=44.2km s-min=7.8km az=148.0*
NEIC ***10*** *21:01:58.7±1.4, 43°.78N±0°.04×105°.15W±0°.05, h0km±2km, ML3.5/67, Error ellipse: s-maj=8.6km s-min=4.0km az=31.0*

ISC 10 21:01:58.2±0.7, 43°.76N±0°.04×105°.15W±0°.06, h0km, n79, σ0°84/82, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.88**	**66**		**Pg**	**21 02 16.2**	**+1.2**
K22A	**Casper**	**1.50**	**223**		**Pn**	**21 02 25.4**	**-1.1**
K22A				IAML		21 02 49.3	
	comp=N,1μm,0.3s						
K22A				IAML		21 02 50.9	
	comp=E,998nm,0.3s						
PHWY	**Pilot Hill**	**2.47**	**185**		**Pn**	**21 02 41.1**	**+1.2**
PHWY				Pg	**Pb**	**21 02 43.3**	**-0.3**
RWWY	**Rawlins**	**2.57**	**217**		**Pn**	**21 02 42.0**	**+0.7**
RWWY				IAML		21 03 18.0	
	comp=E,284nm,0.7s						
RWWY				IAML		21 03 18.9	
	comp=E,290nm,0.8s						
N23A	**Red Feather La**	**2.93**	**192**		**Pn**	**21 02 47.9**	**+1.7**
N23A				IAML		21 03 34.0	
	comp=E,95nm,0.7s						
N23A				IAML		21 03 34.2	
	comp=N,155nm,0.7s						
LAO	**LASA Array**	**3.02**	**346**		**Pn**	**21 02 48.5**	**+1.2**
LAO				IAML		21 03 33.5	
	comp=N,197nm,0.8s						
RLMT	**Red Lodge**	**3.25**	**296**	Pn	**Pn**	**21 02 50.8**	**+0.2**
RLMT					**Pb**	**21 02 57.8**	**+1.0**
RLMT				IAML		21 03 39.4	
	comp=N,73nm,0.4s						
RLMT				IAML		21 03 46.8	
	comp=N,98nm,0.7s						
BW06	**Boulder Array**	**3.37**	**254**		**Pn**	**21 02 53.0**	**+0.7**
BW06				IAML		21 03 42.4	
	comp=N,68nm,0.6s						
PD31	**Pinedale Array**	**3.37**	**254**		**Pn**	**21 02 52.8**	**+0.5**
PDAR	**Pinedale Array**	**3.37**	**254**	Pn	**Pn**	**21 02 52.4**	**+0.1**
	comp=N,9.7nm,0.3s,baz=73,slow=15,SNR=92						
PDAR				Lg	Lg	21 03 35.7	
	comp=N,6.8nm,0.3s,baz=75,slow=35,SNR=8.2						
OGNE	**Ogallala**	**3.64**	**140**		**Pn**	**21 02 56.8**	**+1.0**
OGNE				IAML		21 04 02.6	
	comp=N,125nm,0.9s						
OGNE				IAML		21 04 04.0	
	comp=N,140nm,0.7s						
YNE	**Yellowstone No**	**3.70**	**291**		**Pn**	**21 02 56.8**	**0.0**
YMP	**Mirror Lake PI**	**3.73**	**287**		**Pn**	**21 02 58.1**	**+0.8**
LKWY	**Lake**	**3.86**	**284**		**Pn**	**21 02 60.0**	**+0.9**
LKWY				IAML		21 03 30.2	
	comp=N,44nm,0.7s						
H17A	**Grant Village**	**3.96**	**281**		**Pn**	**21 03 01.6**	**+1.2**
H17A				IAML		21 04 08.5	
	comp=N,41nm,1.0s						
YUF	**Upper Falls**	**3.97**	**286**		Lg	21 04 09.9	
ISCO	**Idaho Springs**	**3.97**	**185**		**Pn**	**21 03 02.7**	**+2.1**
FLWY	**Flagg Ranch**	**4.02**	**276**		**Pn**	**21 03 01.8**	**+0.6**
FLWY				IAML		21 04 14.0	
	comp=N,44nm,0.9s						
FLWY				IAML		21 04 41.0	
	comp=N,38nm,0.9s						
MOOW	**Moose Ponds**	**4.06**	**272**		**Pn**	**21 03 02.8**	**+1.1**
SNOW	**Snow King Moun**	**4.08**	**268**	Pn	**Pn**	**21 03 01.4**	**-0.7**
SNOW				IAML		21 04 08.8	
	comp=N,58nm,0.8s						
SNOW				IAML		21 04 13.9	
	comp=N,45nm,0.8s						
YNR	**Norris Junctio**	**4.09**	**285**	Pn	**Pn**	**21 03 01.6**	**-0.6**
YNM	**Yellowstone No**	**4.11**	**285**	Pn	**Pn**	**21 03 02.0**	**-0.4**
YPP	**Pitchstone Pla**	**4.11**	**279**	Pn	**Pn**	**21 03 02.4**	**-0.1**
YPP					**Pb**	**21 03 13.6**	**+2.0**
REDW	**Red Top Meadow**	**4.17**	**266**		**Pn**	**21 03 03.9**	**+0.7**
REDW				IAML		21 04 18.7	
	comp=N,61nm,0.7s						
REDW				IAML		21 04 24.8	
	comp=N,86nm,0.8s						
YMR	**Madison River**	**4.28**	**284**	Pn	**Pn**	**21 03 05.2**	**+0.5**

O20A	**White River Ci**	**4.30**	**214**	IAML		21 04 15.0
	comp=N,50nm,0.8s					
O20A				IAML		21 04 17.3
	comp=E,63nm,0.8s					
YHB	**Horse Butte**	**4.46**	**285**	Pn	**Pn**	**21 03 07.2 0.0**
AHID	**Auburn Hatcher**	**4.46**	**259**	Pn	**Pn**	**21 03 07.6 +0.4**
AHID				IAML		21 04 33.3
	comp=E,47nm,0.8s					
YHL	**Hebgen Lake**	**4.47**	**286**		**Pn**	**21 03 07.0 -0.5**
SUSD	**Miller**	**4.51**	**79**	Pn	**Pn**	**21 03 07.8 +0.1**
RDMU	**Red Mountain**	**4.58**	**227**		**Pn**	**21 03 10.4 +1.5**
QLMT	**Earthquake Lak**	**4.63**	**286**	Pn	**Pn**	**21 03 10.1 +0.5**
DGMT	**Dagmar**	**4.76**	**8**		**Pn**	**21 03 11.2 +0.1**
Q24A	**Divide**	**4.79**	**180**	Pn	**Pn**	**21 03 12.9 +1.0**
Q24A					**Pb**	**21 03 24.3 +1.1**
Q24A				IAML		21 04 35.7
	comp=E,41nm,0.7s					
KSCO	**Kaye Shedlock'**	**5.11**	**157**	Pn	**Pn**	**21 03 16.4 +0.3**
KSCO					**Pg**	**21 03 35.9 -0.2**
HWUT	**Hardware Ranch**	**5.20**	**248**		**Pn**	**21 03 17.9 +0.6**
HWUT				IAML		21 04 60.0
	comp=E,36nm,0.8s					
TCUT	**Toone Canyon**	**5.33**	**242**		**Pn**	**21 03 19.1 -0.1**
EGMT	**Eagleton**	**5.34**	**325**		**Pn**	**21 03 19.0 -0.2**
MCMT	**McKenzie Canyo**	**5.63**	**284**	Pn	**Pn**	**21 03 24.1 +0.7**
JLU	**Jordanelle**	**5.65**	**238**	Pn	**Pn**	**21 03 23.5 -0.1**
BGNE	**Belgrade**	**5.67**	**112**	Pn	**Pn**	**21 03 24.7 +1.0**
CTU	**Camp Tracy**	**5.78**	**240**	Pn	**Pn**	**21 03 25.5 +0.1**
HVU	**Hansel Valley**	**5.95**	**253**	Pn	**Pn**	**21 03 28.4 +0.7**
P17A	**Butcher Ranch,**	**5.99**	**226**	Pn	**Pn**	**21 03 29.7 +1.4**
SDCO	**Great Sand Dun**	**6.02**	**183**	Pn	**Pn**	**21 03 30.0 +1.3**
S22A	**4UR Ranch, Cre**	**6.14**	**193**	Pn	**Pn**	**21 03 31.6 +1.1**
SRU	**San Rafael Swe**	**6.16**	**223**		**Pn**	**21 03 30.5 0.0**
ECSD	**EROS Data Cent**	**6.18**	**87**		**Pn**	**21 03 32.5 +1.8**
TMUT	**Trail Mountain**	**6.37**	**228**	Pn	**Pn**	**21 03 33.9 +0.3**
NLU	**North Lily Min**	**6.42**	**236**		**Pn**	**21 03 34.2 +0.1**
BGU	**Big Grassy Mou**	**6.49**	**247**	Pn	**Pn**	**21 03 34.9 -0.2**
Q16A	**Castle Valley**	**6.63**	**225**	Pn	**Pn**	**21 03 37.6 +0.6**
T25A	**Trinidad**	**6.64**	**175**	Pn	**Pn**	**21 03 39.0 +1.9**
DUG	**Dugway, Tooele**	**6.73**	**241**	Pn	**Pn**	**21 03 38.4 0.0**
MSO	**Missoula**	**6.92**	**299**	Pn	**Pn**	**21 03 40.7 -0.2**
MVCO	**Mesa Verde**	**7.02**	**202**	Pn	**Pn**	**21 03 43.6 +1.1**
MSU	**Marysvale**	**7.46**	**228**	Pn	**Pn**	**21 03 48.5 +0.1**
MSU					Pb	21 04 14.4 ±5.8
JTMT	**Jette**	**7.53**	**305**	Pn	**Pn**	**21 03 48.9 -0.4**
TCRU	**Three Creeks R**	**7.54**	**229**	Pn	**Pn**	**21 03 50.1 +0.6**
MFID	**Camas Ranch**	**7.76**	**271**	Pn	**Pn**	**21 03 52.2 -0.3**
MTPU	**Mount Pierson**	**7.81**	**225**	Pn	**Pn**	**21 03 54.2 +0.8**
AGMN	**Agassiz Nation**	**7.89**	**52**	Pn	**Pn**	**21 03 54.4 +0.2**
WALA	**Waterton Lakes**	**8.04**	**314**	Pn	**Pn**	**21 03 55.2 -1.1**
ELK	**Elko**	**8.07**	**252**	Pn	**Pn**	**21 03 57.8 +1.0**
	comp=E,0.6nm,0.3s,baz=65,slow=11,SNR=5.1					
ELK				Lg	Lg	21 06 02.9
	comp=E,0.1nm,0.3s,baz=81,slow=19,SNR=2.6					
PSUT	**Pine Spring**	**8.39**	**234**	Pn	**Pn**	**21 04 01.6 +0.4**
U32A	**Winter Ranch,**	**8.75**	**145**	Pn	**Pn**	**21 04 07.0 +1.0**
BMO	**Blue Mountains**	**8.79**	**281**	Pn	**Pn**	**21 04 06.9 +0.3**
CCUT	**Cedar City**	**8.80**	**228**		**Pn**	**21 04 07.2 +0.4**
KNB	**Kanab**	**8.92**	**224**	Pn	**Pn**	**21 04 07.4 -1.1**
SPMN	**Marine on St.**	**8.95**	**76**	Pn	**Pn**	**21 04 09.0 +0.4**
ULM	**Lac du Bonnet**	**9.06**	**41**	Pn	**Pn**	**21 04 09.3 -0.9**
	comp=E,1.6nm,0.3s,baz=233,slow=14,SNR=17					
ULM				Lg	Lg	21 06 40.4
	comp=E,0.5nm,0.3s,baz=307,slow=20,SNR=5.4					
ULM	**Lac du Bonnet**	**9.06**	**41**		**Pn**	**21 04 09.8 -0.4**
LCMT	**Little Creek M**	**9.14**	**225**	Pn	**Pn**	**21 04 11.4 -0.1**
U15A	**North Rim**	**9.14**	**219**		**Pn**	**21 04 11.7 +0.1**
R11A	**Troy Canyon, C**	**9.56**	**239**	Pn	**Pn**	**21 04 17.1 0.0**
FFC	**Flin Flon**	**11.17**	**10**		**Pn**	**21 04 38.0 -0.9**
YKA	**Yellowknife Ar**	**19.56**	**347**	P	**P**	**21 06 26.7 -0.6**
	comp=E,0.1nm,0.3s,baz=157,slow=11,SNR=4.5					
ARCES	**ARCESS Array B**	**61.37**	**18**	P	**P**	**21 12 14.3 -1.0**
	comp=E,3.1nm,1.1s,baz=331,slow=5.2,SNR=5.3					
MKAR	**Makanchi Array**	**89.59**	**355**	P	**P**	**21 14 57.0 -0.5**
	comp=E,0.4nm,0.8s,baz=20,slow=4.6,SNR=3.3					

DJA 10 21:13:57.6±0.4, 10°S±3°×11°8E±°, h10km, M3.9/8, mb4.0/2, MLv3.9/8, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.36**	**330**	P	Pn	21 14 22.6	-0.1
PLAI				S	Sb	21 14 39.3	-1.4
WSI	**Waingapu**	**1.84**	**79**	P	Pn	21 14 29.9	+0.6
TWSI	**Taliwang, Sumb**	**2.01**	**309**	P	Pn	21 14 31.9	+0.3
DNP	**Denpasar**	**3.47**	**292**	P	Pn	21 14 52.2	+0.4
IGBI	**Denpasar**	**3.48**	**290**	P	Pn	21 14 51.8	-0.1
SRBI	**Singaraja**	**3.74**	**301**	P	Pn	21 14 55.7	+0.3
JAGI	**Jajag, Banyuwa**	**4.52**	**290**	P	Pn	21 15 06.2	0.0
**BKSI

KHAL	**Karahalli**	**1.37**	**108**	*i* P	**Pb**	**21 33 39.3**	**-0.1**
KHAL				*i* S	**Sg**	**21 33 58.2**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**1.37**	**313**	*i* P	**Pn**	**21 33 38.8**	**-0.1**
BAYC				*i* S	**Sn**	**21 33 57.2**	**+0.1**
KHL	**Karahalli**	**1.41**	**110**	PN	**Pb**	**21 33 39.6**	**-0.5**
TVSB	**Tavsanli**	**1.41**	**63**	PN	**Pb**	**21 33 39.6**	**-0.6**
DENT	**Denizli**	**1.41**	**138**	PN	**Pn**	**21 33 39.5**	**-0.1**
CHOS	**Chios island**	**1.46**	**254**	P	**Pn**	**21 33 40.2**	**-0.1**
CHOS	comp=E,1μm,0.6s			S	**Sb**	**21 34 00.8**	**+1.0**
CHOS	**Chios island**	**1.46**	**254**	P	**Pn**	**21 33 40.2**	**-0.1**
CHOS	comp=E,3002μm,0.3s			AML	AML	21 34 08.0	
CHOS	comp=N,1815μm,0.6s			AML	AML	21 34 09.2	
CHOS	**Chios island**	**1.46**	**254**	PN	**Pn**	**21 33 40.1**	**-0.1**
GPNR	**Gulpinar-Canak**	**1.48**	**296**	PN	**Pn**	**21 33 40.1**	**-0.3**
KCTX	**Karacabey (Bur**	**1.50**	**15**	PN	**Pn**	**21 33 40.8**	**0.0**
MLSB	**Milas**	**1.52**	**182**	PN	**Pn**	**21 33 40.3**	**-0.7**
EDC	**Edincik**	**1.53**	**1**	PN	**Pn**	**21 33 41.1**	**-0.1**
EZN	**Ezine**	**1.55**	**311**	P	**Pn**	**21 33 41.4**	**0.0**
EZN	**Ezine**	**1.55**	**311**	⇑P	**Pb**	**21 33 43.0**	**+0.4**
EZN	**Ezine**	**1.55**	**311**	⇑S	**Sg**	**21 34 06.6**	**+2.9**
EZN	**Ezine**	**1.55**	**311**	PN	**Pn**	**21 33 41.2**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.59**	**148**	*i* S	**Sg**	**21 34 05.9**	**+1.1**
SIGR	**SIGRI**	**1.60**	**285**	P	**Pn**	**21 33 41.9**	**-0.2**
SIGR	comp=N,2μm,0.5s			S	**Sb**	**21 34 04.4**	**+0.8**
SIGR	**SIGRI**	**1.60**	**285**	P	**Pn**	**21 33 41.7**	**-0.4**
SIGR				S	**Sb**	**21 34 04.3**	**+0.7**
SIGR	comp=N,4961μm,0.5s			AML	AML	21 34 07.2	
SIGR	comp=E,3802μm,0.5s			AML	AML	21 34 08.4	
SIGR	**SIGRI**	**1.60**	**285**	PN	**Pn**	**21 33 41.1**	**-1.0**
KRBG	**Karabiga-Canak**	**1.63**	**345**	PN	**Pn**	**21 33 41.8**	**-0.7**
ULDT	**Uludag**	**1.66**	**37**	*i* P	**Pn**	**21 33 42.9**	**-0.2**
ULDT				*i* S	**Sg**	**21 34 08.0**	**+0.8**
YER	**Yerkesik**	**1.71**	**168**	P	**Pn**	**21 33 43.5**	**-0.2**
YER	**Yerkesik**	**1.71**	**168**	PN	**Pn**	**21 33 43.4**	**-0.2**
BOZC	**Bozcaada**	**1.73**	**307**	PN	**Pn**	**21 33 43.2**	**-0.6**
BOZC	**Bozcaada**	**1.73**	**307**	*i* P	**Pn**	**21 33 43.7**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.75**	**27**	PN	**Pn**	**21 33 44.5**	**+0.4**
LPK	**Lapseki**	**1.77**	**332**	PN	**Pn**	**21 33 44.3**	**-0.1**
BODT	**Bodrum**	**1.80**	**194**	P	**Pn**	**21 33 44.2**	**-0.6**
BODT	**Bodrum**	**1.80**	**194**	PN	**Pn**	**21 33 44.1**	**-0.7**
MRMT	**Marmara Adasi**	**1.80**	**354**	PN	**Pn**	**21 33 44.5**	**-0.4**
PSRA	**Psara**	**1.80**	**262**	P	**Pn**	**21 33 44.9**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.90**	**327**	PN	**Pn**	**21 33 46.2**	**-0.1**
ARMT	**Armutlu**	**1.92**	**24**	PN	**Pn**	**21 33 46.4**	**-0.1**
GEMT	**Gemlik**	**1.92**	**32**	PN	**Pn**	**21 33 46.9**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.94**	**345**	PN	**Pn**	**21 33 46.9**	**+0.1**
BASM	**Basmaki-Afyon**	**1.95**	**117**	PN	**Pn**	**21 33 47.4**	**+0.4**
IZI	**Iznik**	**1.98**	**39**	PN	**Pn**	**21 33 47.7**	**+0.4**
TURN	**Turunc**	**2.03**	**163**	PN	**Pn**	**21 33 48.1**	**+0.1**
GADA	**Gvkgeada**	**2.04**	**313**	P	**Pn**	**21 33 48.3**	**+0.2**
GADA	**Gvkgeada**	**2.04**	**313**	PN	**Pn**	**21 33 48.0**	**-0.1**
DATC	**Datca-Mugla**	**2.06**	**184**	PN	**Pn**	**21 33 48.3**	**0.0**
CAVI	**Cavuskoy**	**2.08**	**47**	PN	**Pn**	**21 33 49.3**	**+0.6**
DAT	**Datca**	**2.09**	**186**	PN	**Pn**	**21 33 48.9**	**-0.1**
YLV	**Yalova**	**2.11**	**34**	⇑P	**Pn**	**21 33 50.2**	**+1.0**
YLV	**Yalova**	**2.11**	**34**	⇑S	**Sg**	**21 34 20.7**	**-0.9**
YLV	**Yalova**	**2.11**	**34**	PN	**Pn**	**21 33 49.6**	**+0.4**
ERIK	**Erikli-Kesan**	**2.12**	**331**	PN	**Pn**	**21 33 48.9**	**-0.3**
SHUT	**Suhut-Afyon**	**2.13**	**96**	PN	**Pn**	**21 33 50.0**	**+0.4**
KOSK	**Kos Island**	**2.17**	**199**	PN	**Pn**	**21 33 50.1**	**+0.2**
ADVT	**Abdulvahap**	**2.18**	**42**	PN	**Pn**	**21 33 50.6**	**+0.5**
TKR	**Tekirdag**	**2.19**	**354**	PN	**Pn**	**21 33 50.6**	**+0.4**
KESN	**Edirne-Kesan**	**2.20**	**336**	*i* P	**Pn**	**21 33 50.7**	**0.0**
SB02	**Marmara Sea**	**2.20**	**12**	PN	**Pn**	**21 33 50.5**	**+0.2**
YLVH	**Yalova**	**2.22**	**32**	PN	**Pn**	**21 33 51.1**	**+0.5**
ENZZ	**Sultanice-Enez**	**2.22**	**324**	PN	**Pn**	**21 33 50.8**	**+0.2**
NISR	**Nisiros**	**2.27**	**195**	P	**Pn**	**21 33 50.3**	**-1.0**
CRLT	**Corlu**	**2.31**	**358**	PN	**Pn**	**21 33 51.9**	**0.0**
ENEZ	**Enez**	**2.32**	**326**	PN	**Pn**	**21 33 51.9**	**-0.1**
FETY	**Fethiye**	**2.39**	**155**	P	**Pn**	**21 33 54.1**	**+1.2**
FETY	**Fethiye**	**2.39**	**155**	*i* P	**Pn**	**21 33 53.9**	**+0.9**
SLVT	**Silivri**	**2.43**	**7**	PN	**Pn**	**21 33 53.9**	**+0.4**
KAVV	**Kandilli-Istan**	**2.44**	**22**	PN	**Pn**	**21 33 53.8**	**+0.2**
SMTH	**Samothraki Isl**	**2.44**	**314**	P	**Pn**	**21 33 53.5**	**-0.1**
SMTH	**Samothraki Isl**	**2.44**	**314**	P	**Pn**	**21 33 53.5**	**-0.1**
ISK	**Istanbul-Kandi**	**2.44**	**22**	PN	**Pn**	**21 33 53.8**	**+0.2**
HRT	**Hereke**	**2.45**	**34**	PN	**Pn**	**21 33 54.2**	**+0.4**
CTKS	**Kestanelik-??a**	**2.47**	**12**	PN	**Pn**	**21 33 53.7**	**-0.4**
UKOP	**Uzunkopru-Edir**	**2.49**	**338**	PN	**Pn**	**21 33 54.6**	**+0.2**
ALN	**Alexandroupoli**	**2.50**	**327**	P	**Pn**	**21 33 54.7**	**+0.3**
ALN	**Alexandroupoli**	**2.50**	**327**	P	**Pn**	**21 33 54.8**	**+0.4**
ALN	comp=E,526μm,0.3s			AML	AML	21 34 34.0	
ALN	comp=N,876μm,0.5s			AML	AML	21 34 34.7	
ALN	**Alexandroupoli**	**2.50**	**327**	PN	**Pn**	**21 33 54.6**	**+0.2**
APE	**Apeiranthos**	**2.52**	**227**	P	**Pn**	**21 33 54.0**	**-0.9**
APE	**Apeiranthos**	**2.52**	**227**	⇓P	**Pn**	**21 33 53.1**	**-1.8**
ARG	**Arkhangelos**	**2.60**	**175**	P	**Pn**	**21 33 55.4**	**-0.5**
ARG	comp=E,640μm,0.8s			AML	AML	21 34 46.2	
ARG	comp=N,459μm,1.0s			AML	AML	21 34 51.7	
KLYT	**Kilyos**	**2.60**	**20**	⇓P	**Pn**	**21 33 57.7**	**+1.8**
KLYT	**Kilyos**	**2.60**	**20**	⇓S	**Sg**	**21 34 36.5**	**-0.9**
CTYL	**Yalikoy Yolu**	**2.68**	**7**	⇑P	**Pn**	**21 33 58.2**	**+1.2**
CTYL	**Yalikoy Yolu**	**2.68**	**7**	⇑S	**Sn**	**21 34 30.7**	**+1.2**
KORT	**Korkueli**	**2.69**	**132**	*i* P	**Pn**	**21 33 57.5**	**+0.3**
SILT	**Sile**	**2.71**	**30**	⇑P	**Pn**	**21 33 59.6**	**+2.2**
SILT	**Sile**	**2.71**	**30**	⇓S	**Sg**	**21 34 42.7**	**+1.7**
KARY	**Karystos**	**2.79**	**255**	P	**Pn**	**21 33 57.9**	**-0.6**
IOSP	**Ios island**	**2.91**	**225**	P	**Pn**	**21 33 58.7**	**-1.3**
RDO	**Rodhopi**	**2.93**	**323**	P	**Pn**	**21 34 00.8**	**+0.5**
RDO	**Rodhopi**	**2.93**	**323**	P	**Pn**	**21 34 00.9**	**+0.6**
RDO	comp=N,416μm,0.4s			AML	AML	21 34 50.6	
RDO	comp=E,354μm,0.5s			AML	AML	21 34 52.2	
THAS	**Thassos island**	**3.00**	**308**	P	**Pn**	**21 34 01.1**	**-0.2**
THAS	**Thassos island**	**3.00**	**308**	P	**Pn**	**21 34 01.1**	**-0.2**
SAHE	**Sakarya_HENDEK**	**3.08**	**48**	*i* P	**Pg**	**21 34 12.3**	**-0.6**
EREA	**Eretria**	**3.09**	**264**	P	**Pn**	**21 34 02.4**	**-0.2**
AOS	**Alonnisos**	**3.11**	**278**	P	**Pn**	**21 34 03.6**	**+0.7**
SERI	**Serifos**	**3.12**	**239**	P	**Pn**	**21 34 02.7**	**-0.4**
KARP	**Karpathos**	**3.31**	**190**	P	**Pn**	**21 34 05.3**	**-0.3**
KARP	comp=N,168μm,0.7s			AML	AML	21 35 11.8	
KARP	comp=E,157μm,1.0s			AML	AML	21 35 18.9	
MRKA	**Markates**	**3.33**	**269**	P	**Pn**	**21 34 05.8**	**-0.1**
OUR	**Ouranopolis**	**3.35**	**298**	P	**Pn**	**21 34 06.4**	**+0.3**
KAVA	**Kavala**	**3.36**	**311**	P	**Pn**	**21 34 06.5**	**+0.1**
KDZ	**Kurdzhali**	**3.39**	**328**	*i* P	**Pn**	**21 34 07.4**	**+0.7**
PAIG	**Paliouri**	**3.41**	**290**	P	**Pn**	**21 34 07.1**	**+0.1**
PAIG	**Paliouri**	**3.41**	**290**	P	**Pn**	**21 34 07.0**	**0.0**
NEO	**Neokhori**	**3.63**	**279**	P	**Pn**	**21 34 10.6**	**+0.6**
DIM	**Dimitrovgrad**	**3.68**	**332**	*i* P	**Pn**	**21 34 11.0**	**+0.3**
RZN	**Rozhen**	**3.74**	**321**	*i* P	**Pn**	**21 34 11.9**	**+0.2**
PLG	**Polygyros**	**3.74**	**296**	P	**Pn**	**21 34 12.6**	**+1.0**
ZKR	**Zakros**	**3.92**	**200**	P	**Pn**	**21 34 13.6**	**-0.3**
NPS	**Neapolis**	**3.97**	**207**	P	**Pn**	**21 34 14.0**	**-0.7**
NVR	**Nevrokopi**	**3.97**	**311**	P	**Pn**	**21 34 15.9**	**+1.2**
NVR	**Nevrokopi**	**3.97**	**311**	P	**Pn**	**21 34 15.9**	**+1.2**
PLD	**Plovdiv**	**4.07**	**325**	*i* P	**Pn**	**21 34 16.7**	**+0.7**
LAST	**Lasithi**	**4.11**	**208**	P	**Pn**	**21 34 16.7**	**+0.1**
MMB	**Musomiste**	**4.20**	**313**	*i* P	**Pn**	**21 34 17.9**	**+0.1**
IDI	**Anoyia**	**4.24**	**215**	P	**Pn**	**21 34 17.8**	**-0.6**
ELND	**Elena**	**4.37**	**341**	⇑P	**Pn**	**21 34 20.6**	**+0.4**
ELND	**Elena**	**4.37**	**341**	⇑S	**Sg**	**21 35 32.6**	**-1.5**
VAY	**Valandovo**	**4.76**	**303**	*i* Pn	**Pn**	**21 34 27.3**	**+1.8**
VTS	**Vitosha**	**5.17**	**319**	⇑P	**Pn**	**21 34 32.3**	**+1.0**
VTS	**Vitosha**	**5.17**	**319**	⇑S	**Sg**	**21 35 58.1**	**-1.5**
VTS	**Vitosha**	**5.17**	**319**	*i* P	**Pn**	**21 34 32.2**	**+0.9**
PLVB	**Pleven**	**5.18**	**333**	⇑P	**Pn**	**21 34 32.6**	**+1.4**
PLVB	**Pleven**	**5.18**	**333**	⇑S	**Sg**	**21 35 59.6**	**-0.3**
STIP	**Stip**	**5.20**	**305**	⇑*i* Pn	**Pn**	**21 34 31.2**	**-0.4**
BLKB	**Belogradchik**	**6.18**	**323**	⇑S	**Sg**	**21 36 28.5**	**-3.7**
CFR	**Carcaliu**	**6.36**	**2**	⇑P	**Pn**	**21 34 43.8**	**-3.7**
PDG	**Podgorica**	**7.46**	**302**	⇓P	Pn	21 34 56.0	-6.6
MDVR	**Moldovita**	**7.52**	**324**	⇑P	**Pn**	**21 35 03.8**	**+0.4**
GZR	**Gura Zlata**	**7.58**	**332**	⇑P	**Pn**	**21 35 04.2**	**0.0**
TESR	**Tescani**	**7.74**	**354**	⇑P	**Pn**	**21 35 07.4**	**+0.9**
BZS	**Buzias**	**8.22**	**328**	⇑P	**Pn**	**21 35 12.5**	**-0.4**

*NNC **10** 21:35:14.9±1.4, 43°.04N×78°.37E, h0km, mb3.1, mpv2.2, Error ellipse: s-maj=30.2km s-min=6.0km az=170.0*
*SOME **10** 21:35:16.5, 43°.13N×78°.45E, h20km*

ISC 10 21:35:16.2±1.1, 43°.2N±0°.2×78°.43E±0°.08, h16km±17km, n6, σ0s51/11, 3C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**0.14**	**186**	⇑*e*P	**Pg**	**21 35 20.4**	**+0.1**
	6.4nm,0.1s						
SATY				⇓*i*S	**Sg**	**21 35 23.2**	**+0.3**
	59nm,0.2s						
KPKS	**Kokpek**	**0.33**	**34**	*e*P	**Pb**	**21 35 23.8**	**-0.1**
	0.4nm,0.1s						
KPKS				*e*S	**Sb**	**21 35 29.0**	**+0.1**
	2.6nm,0.1s						
UZB	**Uzynbulak**	**0.44**	**96**	*e*P	**Pg**	**21 35 25.0**	**-0.1**
	0.4nm,0.1s						
UZB				⇓*i*S	**Sg**	**21 35 31.2**	**0.0**
	4.1nm,0.1s						
UZB	**Uzynbulak**	**0.44**	**96**	P	**Pg**	**21 35 25.0**	**-0.1**
	0.5nm,0.1s						
UZB				S	**Sg**	**21 35 31.2**	**0.0**
	3.3nm,0.1s						
MDOK	**Medeo**	**1.01**	**269**	Pg	**Pb**	**21 35 34.7**	**-0.7**
	1.4nm,0.3s						
MDOK				Lg	Lg	21 35 47.8	
	3.3nm,0.8s						
TKM2	**Tokmak 2**	**2.09**	**263**	⇑P	**Pb**	**21 35 53.4**	**-0.5**
	3.6nm,0.7s						
TKM2				⇑S	**Sn**	**21 36 17.5**	**+1.0**
	0.6nm,0.1s						

*IDC **10** 21:40:34.0±1.0, 28°.26N×93°.19E, h0km, mb3.4/7, mb1 3.6/8, mb1mx3.3/53, mbtmp3.4/8, ML3.8/1, MS2.7/2, Ms1 2.8/2, ms1mx2.4/32, Error ellipse: s-maj=43.8km s-min=17.9km az=61.0*
*NDI **10** 21:40:36.3±2.2, 28°.30N×93°.25E, h10km, ML3.9, mb4.1(NEIC)*
*NEIC **10** 21:40:36±2.4, 28°.25N±0°.06×93°.37E±0°.09, h15km±4km, mb4.1/19, Error ellipse: s-maj=13.0km s-min=6.3km az=63.0*
*BJI **10** 21:40:40.7±0.0, 28°.28N×93°.40E, h8km, mb3.5/2, ML3.4/2*

ISC 10 21:40:36.0±2.0, 28°.34N±0°.05×93°.26E±0°.05, h14km±13km, n39, σ1s30/41, mb3.8/14, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEZP	**TEZPUR**	**1.76**	**193**	*e*P	**Pn**	**21 41 06.7**	**+0.6**
TEZP				*e*S	**Sb**	**21 41 30.1**	**+0.1**
JORH	**JORHAT**	**1.81**	**151**	*e*P	**Pn**	**21 41 07.9**	**+1.0**
JORH				*e*S	**Sb**	**21 41 31.7**	**+0.1**
JORH				IAML		21 41 34.1	
	comp=N,5μm,0.8s						
JORH				IAML		21 41 34.7	
	comp=N,3μm,0.3s						
JORH				IAML		21 41 35.0	
	comp=E,4μm,0.4s						
LSA	**Lhasa**	**2.29**	**307**		**Pg**	**21 41 20.0**	**0.0**
LKP	**Lekhapani**	**2.50**	**113**	*e*P	**Pn**	**21 41 17.6**	**+1.3**
LKP				*ex*	**Sb**	**21 41 52.2**	**+0.8**
LKP				IAML		21 41 53.4	
	comp=E,606nm,0.2s						
LKP				IAML		21 41 54.9	
	comp=N,840nm,0.6s						
KOHI	**KOHIMA**	**2.71**	**164**	*e*P	**Pn**	**21 41 19.3**	**0.0**
KOHI				*e*S	**Sn**	**21 41 52.8**	**+0.7**
KOHI				IAML		21 42 00.0	
	comp=E,328nm,0.4s						
KOHI				IAML		21 42 01.4	
	comp=N,784nm,0.4s						
SHL	**Shillong**	**3.02**	**204**	*e*P	**Pn**	**21 41 23.3**	**-0.3**
SHL				*ex*	**Sb**	**21 42 07.7**	**+1.2**
SHL				IAML		21 42 13.7	
	comp=E,371nm,0.3s						
SHL				IAML		21 42 13.8	
	comp=N,323nm,0.6s						
SHL	**Shillong**	**3.02**	**204**	Pn	**Pn**	**21 41 23.7**	**+0.1**
SIMRM	**Sittwe**	**8.17**	**182**		**Sn**	**21 44 07.4**	**+0.9**
CHTO	**Chiang Mai**	**10.81**	**150**	Pn	**Pn**	**21 43 07.0**	**-3.5**
CMAR	**Chiang Mai Arr**	**11.13**	**151**	Pn	**Pn**	**21 43 14.2**	**-0.7**
CMAR	comp=N,0.2nm,0.3s,baz=321,slow=13,SNR=14			LR	LR	21 48 14.7	
	comp=N,28nm,18.2s,baz=310,slow=42						
UBPT	**Khong Chiam**	**17.23**	**136**		**Pn**	**21 44 36.2**	**-0.2**
UBPT				IAmb	IAmb	21 44 46.4	
	comp=Z,8.1nm,1.2s						
MK31	**Makanchi Array**	**20.34**	**338**	P	**P**	**21 45 13.2**	**+1.3**
MKAR	**Makanchi Array**	**20.34**	**338**	P	**P**	**21 45 13.3**	**+1.4**
	comp=Z,0.4nm,0.5s,baz=145,slow=12,SNR=9.5						
MKAR	**Makanchi Array**	**20.34**	**338**	P	**P**	**21 45 13.0**	**+1.2**
MAKZ	**Makanchi**	**20.45**	**337**	P	**P**	**21 45 14.4**	**+1.3**
KBL	**Kabul**	**21.54**	**293**	P	**P**	**21 45 26.2**	**+1.1**
KBL				IAmb	IAmb	21 45 36.2	
	comp=Z,2.6nm,0.7s						
SONM	**Songino Array**	**21.99**	**24**	P	**P**	**21 45 30.1**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=212,slow=12,SNR=5.7						
SONM				LR	LR	21 54 01.5	
	comp=Z,22nm,18.9s,baz=333,slow=37						
SONM	**Songino Array**	**21.99**	**24**	P	**P**	**21 45 28.0**	**-1.7**
ULN	**Ulaanbaatar**	**22.25**	**25**	P	**P**	**21 45 32.6**	**0.0**
ULN				IAmb	IAmb	21 45 34.2	
	comp=Z,2.3nm,1.1s						
PALK	**Pallekele**	**24.08**	**212**	P	**P**	**21 45 51.2**	**-0.1**
PALK				IAmb	IAmb	21 46 02.1	
	comp=Z,12nm,1.1s						
KURBB	**Kurchatov Arra**	**24.90**	**337**	P	**P**	**21 45 59.8**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=149,slow=10,SNR=6.7						
BVAR	**Borovoye Array**	**29.90**	**332**	P	**P**	**21 46 42.7**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=135,slow=10.0,SNR=2.6						
KS19	**Wonju Array Si**	**30.32**	**63**	P	P	21 46 59.1	+12
KSAR	**Wonju Array Be**	**30.32**	**64**	P	P	21 46 59.5	+12
JNU	**Nakatsue**	**32.57**	**72**	P	**P**	**21 47 06.7**	**-0.4**
JNU				IAmb	IAmb	21 47 12.9	
	comp=Z,6.8nm,1.1s						
TBLG	**Delisi**	**41.40**	**302**	P	**P**	**21 48 23.2**	**+1.2**
TBLG				IAmb	IAmb	21 48 38.1	
	comp=Z,3.0nm,0.8s						
RAYN	**Ar Rayn**	**43.00**	**275**	P	**P**	**21 48 34.8**	**-0.5**
ARCES	**ARCESS Array B**	**55.99**	**337**	P	**P**	**21 50 13.9**	**+0.2**
ARE0	**ARCESS Array S**	**55.99**	**337**	P	**P**	**21 50 14.0**	**+0.3**
ITM	**Ithomi**	**59.37**	**298**	P	**P**	**21 50 34.6**	**-3.4**
WRA	**Warramunga Arr**	**62.29**	**136**	P	**P**	**21 50 59.4**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=320,slow=7.7,SNR=2.4						
ASAR	**Alice Springs**	**64.86**	**139**	P	**P**	**21 51 13.7**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=326,slow=6.5,SNR=4.5						
BNI	**Bardonecchia**	**68.26**	**310**	P	**P**	**21 51 39.3**	**+2.6**
BNI				IAmb	IAmb	21 51 41.7	
	comp=Z,2.9nm,1.1s						
SFJD	**Kangerlussuaq**	**81.12**	**346**	P	**P**	**21 52 51.4**	**+0.8**
WHY	**Whitehorse**	**83.04**	**22**	P	P	21 52 54.8	-6.2
WHY				IAmb	IAmb	21 53 13.0	
	comp=Z,1.8nm,1.0s						
LBTB	**Lobatse**	**83.95**	**238**	P	**P**	**21 53 05.6**	**-0.5**
LBTB				IAmb	IAmb	21 53 24.2	
	comp=Z,4.4nm,1.1s						
TORD	**Torodi Ar. Bea**	**85.22**	**282**	P	**P**	**21 53 12.7**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=68,slow=4.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	**85.22**	**282**	P	**P**	**21 53 11.7**	**-1.0**
SUR	**Sutherland**	**91.53**	**234**	P	**P**	**21 53 40.6**	**-2.0**

*IDC **10** 21:45:48.9±0.8, 20°.50S×172°.58E, h0km, mb4.3/12, mb1 4.6/14, mb1mx4.4/33, mbtmp4.4/14, ML3.9/2, MS3.8/24, Ms1 3.8/24, ms1mx3.7/33, Error ellipse: s-maj=30.2km s-min=16.9km az=146.0*
*NEIC **10** 21:45:55.8±1.8, 20°.40S±0°.08×172°.36E±0°.06, h51km±5km, mb4.6/59, Error ellipse: s-maj=13.1km s-min=4.7km az=146.0*

ISC 10 21:45:54.2±0.4, 20°.41S±0°.07×172°.45E±0°.07, h35km, n166, σ1s10/143, mb4.5/40, MS3.9/24, 16C-2D, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.84**	**253**	*e*Pn	**Pn**	**21 47 19.7**	**+1.2**
	112nm,1.2s						
DZM				*e*LQ	LQ	21 48 29.6	
	3μm,24.3s						
DZM				*e*LR	LR	21 48 47.0	
	comp=Z,661nm,23.6s						
DZM	**Mont Dzumac**	**5.84**	**253**	Pn	**Pn**	**21 47 19.8**	**+1.2**
	4.7nm,0.3s,baz=82,slow=18,SNR=49						
DZM				LR	LR	21 49 19.1	
	comp=Z,529nm,21.3s,baz=46,slow=36						
MSVF	**Nonsavu**	**5.93**	**64**		**Pn**	**21 47 21.7**	**+2.1**
FUNA	**Funafuti**	**13.50**	**30**	Pn	**Pn**	**21 49 01.7**	**-1.7**
OUZ	**Omahuta**	**14.78**	**176**	Pn	**Pn**	**21 49 22.3**	**+1.6**
HNR	**Honiara**	**16.27**	**310**	LR	LR	21 55 05.8	
	comp=Z,372nm,19.3s,baz=144,slow=34						
URZ	**Urewera**	**18.23**	**168**	P	**P**	**21 50 03.6**	**-0.8**
	0.2nm,0.3s,baz=19,slow=9.3,SNR=10						
URZ				LR	LR	21 55 21.3	
	comp=Z,733nm,21.1s,baz=352,slow=32						
URZ	**Urewera**	**18.23**	**168**	P	**Pn**	**21 50 05.3**	**+0.8**
URZ				IAmb	IAmb	21 50 06.0	
	comp=Z,31nm,1.0s						
EIDS	**Eidsvold**	**20.29**	**252**		Pn	21 50 28.6	-0.6
EIDS				IAmb	IAmb	21 50 34.0	
	comp=Z,19nm,0.8s						
QRZ	**Quartz Range**	**20.35**	**180**	P	**P**	**21 50 27.9**	**+0.3**
BFZ	**Birch Farm**	**20.46**	**172**	P	**P**	**21 50 29.9**	**+1.1**
BFZ				IAmb	IAmb	21 50 40.5	
	comp=Z,29nm,0.9s						
NNZ	**Nelson**	**20.75**	**178**	P	**P**	**21 50 31.3**	**-0.6**
NNZ				IAmb	IAmb	21 50 37.4	
	comp=Z,31nm,1.2s						
SNZO	**South Karori**	**20.92**	**175**	P	**P**	**21 50 34.3**	**+0.6**
SNZO				IAmb	IAmb	21 50 50.6	
	comp=Z,24nm,0.9s						
TUWZ	**Tuamarina**	**20.99**	**177**	P	**P**	**21 50 34.9**	**+0.5**
MSWZ	**Moikau Station**	**21.07**	**174**	P	**P**	**21 50 36.4**	**+1.0**
PLWZ	**Palliser**	**21.22**	**174**	P	**P**	**21 50 35.7**	**-1.4**
ARMA	**Armidale**	**21.25**	**238**	P	**P**	**21 50 38.1**	**+0.6**
THZ	**Tophouse**	**21.29**	**179**	P	**P**	**21 50 38.0**	**+0.2**
THZ				IAmb	IAmb	21 50 57.0	
	comp=Z,21nm,1.0s						
KHZ	**Kahutara**	**21.95**	**178**	P	**P**	**21 50 46.1**	**+1.3**
LTZ	**Lake Taylor**	**22.30**	**180**	P	**P**	**21 50 49.0**	**+0.3**
LTZ				IAmb	IAmb	21 50 59.2	
	comp=Z,19nm,1.1s						
RPZ	**Rata Peaks**	**23.26**	**183**	LR	LR	21 58 41.5	
	comp=Z,337nm,19.4s,baz=12,slow=33						
LBZ	**Lake Benmore**	**23.98**	**184**	P	**P**	**21 51 05.9**	**+0.4**
LBZ				IAmb	IAmb	21 51 17.9	
	comp=Z,18nm,1.1s						
WKZ	**Wanaka**	**24.51**	**186**	P	**P**	**21 51 09.6**	**-0.8**
WKZ				IAmb	IAmb	21 51 22.7	
	comp=Z,26nm,1.2s						
CTA	**Charters Tower**	**24.57**	**266**	P	**P**	**21 51 13.0**	**+1.8**
	comp=Z,8.9nm,0.9s,baz=93,slow=11,SNR=4.2						
ODZ	**Otahua Downs**	**24.61**	**183**	P	**P**	**21 51 12.5**	**+1.4**
ODZ				IAmb	IAmb	21 51 15.1	
	comp=Z,13nm,1.0s						
MLZ	**Mavora Lakes**	**25.14**	**187**	P	**P**	**21 51 17.4**	**+1.3**
MLZ				IAmb	IAmb	21 51 23.4	
	comp=Z,14nm,1.0s						
DCZ	**Deep Cove**	**25.36**	**189**	P	**P**	**21 51 19.4**	**+1.4**
DCZ				IAmb	IAmb	21 51 36.1	
	comp=Z,26nm,1.1s						
WHZ	**Wether Hill Ro**	**25.68**	**187**	P	**P**	**21 51 21.6**	**+0.7**
WHZ				IAmb	IAmb	21 51 36.2	
	comp=Z,16nm,1.1s						
PMG	**Port Moresby**	**26.74**	**290**	LR	LR	22 00 29.0	
	comp=Z,339nm,18.2s,baz=48,slow=33						
COEN	**Coen**	**28.67**	**278**	P	**P**	**21 51 49.0**	**+0.9**
STKA	**Stephens Creek**	**29.86**	**241**	P	**P**	**21 51 58.8**	**+0.4**
	comp=Z,9.6nm,0.9s,baz=76

LZH					LR	LR		
	comp=Z,180nm,19.2s							
ISA	**Isabella, Lake**	**85.90**	**50**		P	**P**	**21 58 31.8**	**+1.0**
ISA					IAmb	IAmb	21 58 32.4	
	comp=Z,6.1nm,0.8s							
HUMO	**Hull Mountain**	**86.37**	**42**		P	**P**	**21 58 33.2**	**+0.2**
WAKR	**Walker**	**86.60**	**47**		P	**P**	**21 58 34.2**	**-0.1**
WAKR					IAmb	IAmb	21 58 48.4	
	comp=Z,3.7nm,1.2s							
BEKR	**Beckworth**	**86.65**	**45**		P	**P**	**21 58 35.4**	**+0.8**
BEKR					IAmb	IAmb	21 58 35.9	
	comp=Z,3.5nm,0.8s							
SUA	**Susitna One**	**86.76**	**17**		P	**P**	**21 58 34.2**	**-0.3**
NVAR	**Mina Array Bea**	**87.34**	**47**		P	**P**	**21 58 38.6**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=229,slow=8.8,SNR=4.9							
NVAR					LR	LR	22 33 31.2	
	comp=Z,36nm,18.8s,baz=50,slow=33							
KNK	**Knik Glacier**	**87.36**	**18**		P	**P**	**21 58 37.6**	**+0.4**
KNK					IAmb	IAmb	21 58 38.5	
	comp=Z,6.1nm,1.0s							
DIB	**Dawson Inlet,**	**87.36**	**30**		P	**P**	**21 58 35.2**	**-2.2**
KVN	**Kaiserville**	**87.78**	**47**		P	**P**	**21 58 39.4**	**-0.7**
KVN					IAmb	IAmb	21 58 48.3	
	comp=Z,3.1nm,1.1s							
SNAA	**Sanae**	**88.10**	**181**		P	**P**	**21 58 38.0**	**-2.9**
SNAA	**Sanae**	**88.10**	**181**		P	**P**	**21 58 38.7**	**-2.2**
TRF	**Thorofare Moun**	**88.53**	**16**		P	**P**	**21 58 41.7**	**-1.2**
TRF					IAmb	IAmb	21 58 43.0	
	comp=Z,3.5nm,1.0s							
VNA3	**Neumayer Olymp**	**88.57**	**179**		P	**P**	**21 58 40.7**	**-2.4**
RND	**Reindeer**	**88.86**	**16**		P	**P**	**21 58 43.8**	**-0.7**
YAK	**Yakutsk**	**88.92**	**341**		LR	LR	22 31 11.9	
	comp=Z,82nm,21.6s,baz=133,slow=31							
BALM	**Baldy**	**88.92**	**20**		P	**P**	**21 58 44.7**	**-0.1**
R11A	**Troy Canyon, C**	**89.19**	**48**		P	**P**	**21 58 46.5**	**-0.2**
WRH	**Wood River Hil**	**89.92**	**16**		P	**P**	**21 58 48.4**	**-0.9**
SONM	**Songino Array**	**89.99**	**322**		P	**P**	**21 58 51.3**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=130,slow=6.7,SNR=4.5							
SONM					LR	LR	22 37 56.7	
	comp=Z,42nm,19.2s,baz=158,slow=35							
SONM	**Songino Array**	**89.99**	**322**		IAmb	IAmb	21 59 00.0	
	comp=Z,1.3nm,1.1s							
GTA	**Gaotai**	**90.14**	**312**	*eP*		**P**	**21 58 52.0**	**+0.9**
GTA					pP	PcP	21 58 56.6	+4.3
GTA					sP	pP	21 58 59.7	-1.5
GTA					pmax	pmax		
	comp=Z,3.0nm,0.9s							
CCB	**Clear Creek Bu**	**90.14**	**16**		P	**P**	**21 58 49.2**	**-1.1**
CCB					IAmb	IAmb	21 58 49.7	
	comp=Z,2.0nm,0.9s							
LTY	**Liberty**	**90.17**	**39**		P	**P**	**21 58 50.6**	**-0.3**
LTY					IAmb	IAmb	21 58 51.9	
	comp=Z,3.8nm,0.8s							
RIDG	**Independent Ri**	**90.22**	**18**		P	**P**	**21 58 50.4**	**-0.3**
RIDG					IAmb	IAmb	21 58 59.3	
	comp=Z,4.6nm,1.1s							
DOT	**Dot Lake**	**90.38**	**18**		P	**P**	**21 58 51.3**	**-0.2**
DOT					IAmb	IAmb	21 58 51.8	
	comp=Z,1.9nm,0.8s							
CCUT	**Cedar City**	**90.42**	**50**		P	**P**	**21 58 53.1**	**+0.6**
IL31		**90.48**	**16**		P	**P**	**21 58 51.1**	**-0.7**
IL31					IAmb	IAmb	21 58 52.1	
	comp=Z,3.2nm,0.8s							
ILAR	**Eielson Array**	**90.48**	**16**		P	**P**	**21 58 50.6**	**-1.2**
	comp=Z,1.3nm,0.7s,baz=232,slow=4.9,SNR=21							
ILAR					LR	LR	22 32 02.6	
	comp=Z,71nm,19.9s,baz=203,slow=31							
PSUT	**Pine Spring**	**90.49**	**49**		P	**P**	**21 58 52.1**	**-0.8**
BCAR	**Beaver Creek A**	**90.61**	**19**		P	**P**	**21 58 52.5**	**-0.1**
SCRK	**Sand Creek**	**90.65**	**18**		P	**P**	**21 58 52.5**	**-0.3**
DLBC	**Dease Lake**	**91.72**	**26**		P	**P**	**21 58 55.6**	**-2.3**
Q16A	**Castle Valley**	**92.56**	**49**		P	**P**	**21 59 02.5**	**+0.1**
TXAR	**Lajitas Array**	**94.69**	**61**		P	**P**	**21 59 12.8**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=215,slow=5.4,SNR=9.9							
TXAR					LR	LR	22 35 28.7	
	comp=Z,28nm,18.3s,baz=0.0,slow=32							
PDAR	**Pinedale Array**	**95.21**	**46**		P	**P**	**21 59 12.0**	**-2.6**
	comp=Z,0.3nm,0.7s,baz=214,slow=4.4,SNR=4.0							
PLCA	**Paso Flores**	**95.63**	**137**		LR	LR	22 32 40.6	
	comp=Z,60nm,21.2s,baz=296,slow=29							
WMQ	**Urumqi**	**100.21**	**313**	*eP*		**Pdif**	**21 59 38.5**	**+1.7**
WMQ					pmax	pmax		
	comp=Z,8.0nm,0.8s							
WMQ					pmax	pmax		
	comp=Z,160nm,4.9s							
MKAR	**Makanchi Array**	**104.70**	**315**		Pdiff	**Pdif**	**21 59 57.8**	**+1.1**
	comp=Z,0.2nm,0.7s,baz=102,slow=4.7,SNR=2.7							
BVAR	**Borovoye Array**	**113.25**	**320**		PKiKP	**PKiKP**	**22 04 27.2**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=58,slow=2.6,SNR=5.4							
ARU	**Arti**	**119.96**	**324**		PKP	**PKPdf**	**22 04 40.1**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=45,slow=8.6,SNR=7.0							
AKTO	**Aktyubinsk**	**120.98**	**317**		PKP	**PKPdf**	**22 04 42.1**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=98,slow=4.4,SNR=5.3							
TOPG	**Topolog**	**141.62**	**318**	⇑P		**PKPdf**	**22 05 20.6**	**-1.2**
DOPR	**Dopca**	**142.90**	**321**	⇑P		**PKPdf**	**22 05 24.6**	**+0.4**
VOIR		**143.38**	**321**	⇑P		**PKPdf**	**22 05 24.6**	**-0.6**
HUMR	**Humele**	**143.90**	**319**	⇑P		PKPab	22 05 22.6	-0.5
DRGR		**143.96**	**324**	⇑P		PKPbc	22 05 24.7	+0.7
LANS	**Liptovska Anna**	**144.11**	**329**	*e*PKP		**PKPdf**	**22 05 26.0**	**-0.2**
VLAD	**Vladila**	**144.53**	**319**	⇑P		**PKPdf**	**22 05 26.5**	**-0.5**
OSTC	**Ostas**	**144.55**	**334**	*e*PKP		**PKPdf**	**22 05 26.5**	**-0.4**
MORC	**Moravsky Berou**	**144.56**	**332**	⇑P		PKPbc	22 05 26.2	+0.5
MORC	**Moravsky Berou**	**144.56**	**332**	*e*PKP		PKPbc	22 05 26.1	+0.4
CHVC	**Chvalec**	**144.59**	**334**	*e*PKP		**PKPdf**	**22 05 26.7**	**-0.3**
DPC	**Dobruska-Polom**	**144.66**	**333**	*e*PKP		**PKPdf**	**22 05 26.7**	**-0.5**
UPC	**Upice**	**144.67**	**334**	*e*PKP		**PKPdf**	**22 05 26.7**	**-0.4**
KRLC	**Kraliky**	**144.67**	**333**	*e*PKP		PKPbc	22 05 26.5	+0.4
PLVB	**Pleven**	**144.70**	**318**	⇓P		**PKPdf**	**22 05 27.7**	**+0.3**
GZR	**Gura Zlata**	**144.74**	**322**	⇑P		PKPbc	22 05 27.0	+0.5
SIRR	**Siria**	**144.85**	**324**	⇑P		**PKPdf**	**22 05 27.8**	**+0.2**
VYHS	**Vyhne**	**144.87**	**329**	*e*PKP		**PKPdf**	**22 05 27.6**	**+0.1**
EKA	**Eskdalemuir Ar**	**144.98**	**356**		PKPbc	**PKPab**	**22 05 26.1**	**-0.7**
	comp=Z,3.1nm,0.6s,baz=3.7,slow=2.8,SNR=12							
JAVC	**Velka Javorina**	**145.16**	**330**	*e*PKP		**PKPdf**	**22 05 29.3**	**+1.2**
CLL	**Collm**	**145.21**	**337**	⇓*i*PKPdf		**PKPdf**	**22 05 27.9**	**-0.1**
	comp=Z,14nm,0.7s							
CLL				*e*			22 05 34.0	
CLL				*e*			22 05 39.0	
CLL				*e*SKPdf		**SKPdf**	**22 08 58.0**	**-1.7**
BRG	**Berggiesshubel**	**145.21**	**336**	*i* PKP		**PKPdf**	**22 05 28.3**	**+0.3**
	comp=Z,14nm,0.8s							
PVCC	**Panska Ves**	**145.24**	**335**	*e*PKP		**PKPdf**	**22 05 28.3**	**+0.2**
BZS	**Buzias**	**145.27**	**323**	⇑P		**PKPbc**	**22 05 26.5**	**-1.5**
VRAC	**Vranov**	**145.32**	**332**	PKPbc		**PKPdf**	**22 05 29.0**	**+0.7**
	comp=Z,4.0nm,0.7s,baz=96,slow=4.4,SNR=7.9							
VRAC	**Vranov**	**145.32**	**332**	⇑P		**PKPdf**	**22 05 29.1**	**+0.7**
VRAC	**Vranov**	**145.32**	**332**	*e*PKP		**PKPdf**	**22 05 28.7**	**+0.4**
SMOL	**Smolenice**	**145.52**	**330**	*e*PKP		**PKPab**	**22 05 30.1**	**+1.1**
KRUC	**Moravsky**	**145.59**	**332**	*e*PKP		**PKPab**	**22 05 29.3**	**0.0**
SRO	**Srobarova**	**145.59**	**329**	*e*PKP		**PKPab**	**22 05 29.8**	**+0.5**
GOPC	**GO Pecny, Ondr**	**145.63**	**334**	*e*PKP		**PKPbc**	**22 05 29.0**	**-0.1**
PRU	**Pruhonice**	**145.67**	**335**	*e*PKP		**PKPbc**	**22 05 29.2**	**0.0**
MODS	**Modra-Piesok**	**145.69**	**330**	*e*PKP		**PKPab**	**22 05 29.7**	**0.0**
MDVR	**Moldovita**	**145.71**	**322**	⇑P		**PKPab**	**22 05 29.8**	**-0.1**
ZST	**Bratislava**	**145.90**	**330**	*e*PKP		**PKPbc**	**22 05 29.9**	**0.0**
VTS	**Vitosha**	**145.97**	**318**	⇑P		**PKPab**	**22 05 31.2**	**+0.1**
PBCC	**Pribram**	**146.13**	**335**	*e*PKP		**PKPab**	**22 05 31.1**	**-0.2**
CONA	**Conrad Observa**	**146.67**	**331**	PKiKP		**PKPab**	**22 05 33.2**	**-0.3**
	comp=Z,6.6nm,0.8s,SNR=8.0							
KHC	**Kasperske Hory**	**146.74**	**334**	*e*PKP		**PKPbc**	**22 05 32.7**	**+0.2**
GERES	**GERESS Array B**	**146.91**	**334**	PKPbc		**PKPbc**	**22 05 33.1**	**+0.1**
	comp=Z,4.3nm,0.6s,baz=32,slow=3.0,SNR=49							
MOA	**Molln**	**147.44**	**332**	*e*PKPab		**PKPbc**	**22 05 34.7**	**+0.2**
	comp=Z,4.4nm,1.0s							
SOKA	**Soboth**	**147.97**	**330**	*e*PKiKP		**PKPbc**	**22 05 35.9**	**-0.1**
	comp=Z,1.8nm,0.6s							
BLY	**Banja Luka**	**148.25**	**325**	⇑P		**PKPbc**	**22 05 36.3**	**-0.4**
KBA	**Koelnbreinsper**	**148.43**	**332**	*i* PKiKP		**PKPbc**	**22 05 36.8**	**-0.6**
	comp=Z,2.8nm,0.6s							
PDG	**Podgorica**	**148.53**	**320**	⇑P		**PKPbc**	**22 05 37.0**	**-0.5**
MYKA	**Terra Mystica**	**148.64**	**331**	*e*PKiKP		**PKPbc**	**22 05 37.1**	**-0.6**
	comp=Z,3.4nm,0.6s							
WATA	**Walderalm**	**148.97**	**334**	*e*PKiKP		**PKPbc**	**22 05 38.5**	**-0.2**
	comp=Z,3.2nm,0.6s							
ABTA	**Abfaltersbach**	**149.05**	**333**	*e*PKiKP		**PKPbc**	**22 05 38.3**	**-0.5**
	comp=Z,3.7nm,0.6s							
MOTA	**Moosalm**	**149.16**	**335**	*i* PKiKP		**PKPbc**	**22 05 39.1**	**-0.1**
	comp=Z,4.6nm,0.7s,SNR=6.3							
RETA	**Reutte**	**149.18**	**335**	*e*PKiKP		**PKPbc**	**22 05 39.1**	**0.0**
	comp=Z,2.4nm,0.6s							
SQTA	**Sankt Quirin**	**149.22**	**335**	*e*PKiKP		**PKPbc**	**22 05 39.4**	**+0.1**
	comp=Z,6.9nm,0.6s,SNR=7.0							
FETA	**Feichten**	**149.57**	**335**	*e*PKiKP		**PKPbc**	**22 05 40.5**	**+0.3**
	comp=Z,3.6nm,0.7s,SNR=7.1							
DAVA	**Damuels**	**149.68**	**336**	PKiKP		**PKPbc**	**22 05 40.4**	**-0.1**
	comp=Z,9.5nm,1.4s							
DAVOX	**Davos/Dischmat**	**150.10**	**336**	PKPbc		**PKPbc**	**22 05 41.7**	**+0.2**
	baz=0.0,slow=5.1							
ESDC	**Sonseca Array**	**160.56**	**352**	PKPab		**PKPab**	**22 06 32.3**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=1.8,slow=3.2,SNR=5.7							
TORD	**Torodi Ar. Bea**	**168.58**	**232**	PKP		**PKPdf**	**22 06 00.2**	**+1.9**
	comp=Z,0.5nm,0.9s,baz=108,slow=0.6,SNR=2.7							
TORD				PKPab		**PKPab**	**22 07 06.1**	**-1.8**
	comp=Z,0.5nm,0.8s,baz=121,slow=3.4,SNR=2.8							

*IDC **10** 21:58:20.0±2.5, 7.°99N×83.°49W, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.9/37, mbtmp3.9/7, ML4.3/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/35, Error ellipse: s-maj=85.0km s-min=26.9km az=33.0*
*UCR **10** 21:58:23.9±1.9, 8.°07N×83.°40W, h19km±5km, MD4.3, mb4.3(NEIC)*
*UPA **10** 21:58:24.0±2.0, 8.°19N×83.°31W, h3km±12km, MW4.6*
*NEIC **10** 21:58:24.6±1.5, 8.°2N±0.°2×83.°09W±0.°09, h27km±10km, mb4.3/3, Error ellipse: s-maj=29.9km s-min=10.8km az=193.0*

ISC 10 21:58:22.0±1.7, 8.°10N±0.°05×83.°32W±0.°04, h8km±10km, n74, σ1°30/87, mb4.0/8, 3C-9D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SBAR3	**San Bartolo, C**	**0.48**	**63**	⇓*i*P		**Pn**	**21 58 34.7**	**-0.6**
EDSV	**San Vito**	**0.80**	**25**	*e*P		**Pn**	**21 58 39.4**	**-0.2**
EDSV				*e*S		**Sn**	**21 58 52.4**	**+0.6**
BAGA3	**Bagala, Chiriq**	**0.86**	**65**	⇑*i*P		**Pn**	**21 58 40.8**	**+0.3**
EDPN	**Palmar Norte**	**0.87**	**351**	*e*P		**Pb**	**21 58 39.9**	**+0.6**
EDPN				*e*S		**Sn**	**21 58 52.9**	**-0.6**
DVD	**David**	**0.92**	**69**	⇑*i*P		**Pn**	**21 58 41.2**	**-0.1**
DVD				*i* S		**Sn**	**21 58 55.1**	**+0.4**
BRU2	**Volcan**	**0.93**	**42**	⇓*i*P		**Pn**	**21 58 41.5**	**0.0**
BRU2				*e*S		**Sn**	**21 58 56.0**	**+0.9**
BRU2	**Volcan**	**0.93**	**42**	⇓*i*P		**Pn**	**21 58 41.5**	**0.0**
BRU2				*i* S		**Sb**	**21 58 54.0**	**+1.0**
PEDE3	**Pedregal, Chir**	**0.93**	**72**	*e*P		**Pn**	**21 58 41.2**	**-0.2**
LOCO3	**Loma Colorada,**	**0.94**	**71**	⇓*e*P		**Pn**	**21 58 41.6**	**0.0**
LOCO3				*i* S		**Sn**	**21 58 54.9**	**-0.3**
BCO2	**Palmira**	**0.99**	**52**	⇓*i*P		**Pn**	**21 58 42.7**	**+0.2**
BCO2				*i* S		**Sn**	**21 58 57.7**	**+0.9**
EDBA	**Buenos Aires**	**1.06**	**2**	*e*P		**Pn**	**21 58 43.2**	**0.0**
EDBA				*e*S		**Sn**	**21 58 59.1**	**+0.9**
GUAL3	**Gualaca, Chiri**	**1.10**	**67**	*e*P		**Pn**	**21 58 43.7**	**0.0**
DRK0	**Durika**	**1.16**	**4**	*e*P		**Pb**	**21 58 44.6**	**+0.2**
DRK0				*e*S		**Sn**	**21 59 01.0**	**+0.1**
DRK0	**Durika**	**1.16**	**4**	⇓*i*P		**Pb**	**21 58 44.7**	**+0.2**
DRK0				*i* S		**Sn**	**21 59 00.9**	**+0.1**
EDLM	**Las Mercedes**	**1.20**	**347**	*e*P		**Pn**	**21 58 45.3**	**+0.1**
EDLM				*e*S		**Sn**	**21 59 02.2**	**+0.4**
EDDO	**Dominical**	**1.27**	**335**	*e*P		**Pg**	**21 58 45.3**	**-1.1**
EDDO				*e*S		**Sb**	**21 59 03.0**	**+0.3**
CHGR2	**Aguacate**	**1.43**	**54**	⇓*e*P		**Pb**	**21 58 48.9**	**-0.1**
CHGR2				*i* S		**Sg**	**21 59 08.6**	**+0.6**
CNI2	**El Empalme, Bo**	**1.56**	**32**	*e*P		**Pn**	**21 58 48.1**	**-1.9**
CNI2				*e*S		**Sn**	**21 59 10.3**	**-0.2**
NANC3	**Nancito, Chiri**	**1.58**	**85**	*i* P		**Pb**	**21 58 51.2**	**-0.3**
PVID3	**Puerto Vidal,**	**1.69**	**92**	*e*P		**Pn**	**21 58 50.1**	**-1.8**
LCR2	**La Lucha 2**	**1.77**	**338**	*e*P		**Pn**	**21 58 53.1**	**0.0**
CVTR	**Volcan Turrial**	**1.96**	**347**	*e*P		**Pn**	**21 58 56.9**	**+0.9**
HDC	**Heredia**	**2.05**	**337**	*e*P		**Pn**	**21 58 57.6**	**+0.7**
HDC				*i* S		**Sn**	**21 59 23.2**	**+0.5**
HDC	**Heredia**	**2.05**	**337**	⇓*i*P		**Pn**	**21 58 57.8**	**+0.8**
HDC	**Heredia**	**2.05**	**337**			**Pn**	**21 58 57.5**	**+0.6**
GMAL	**Guarumal, Vera**	**2.09**	**99**	*e*P		**Pn**	**21 58 57.7**	**+0.4**
CNAZ3	**Canazas, Verag**	**2.10**	**83**	*e*P		**Pn**	**21 58 58.9**	**+1.4**
MESA3	**La Mesa, Verag**	**2.11**	**88**	*e*P		**Pn**	**21 58 59.5**	**-1.1**
STIA3	**Santiago, Vera**	**2.32**	**90**	*e*P		**Pb**	**21 59 03.7**	**-0.4**
PONU3	**Ponuga, Veragu**	**2.33**	**95**	*e*P		**Pb**	**21 59 03.7**	**-0.5**
SFRA3	**San Francisco,**	**2.33**	**86**	*e*P		**Pb**	**21 59 02.8**	**-1.5**
CALO3	**Calobre, Verag**	**2.46**	**85**	*e*P		**Pb**	**21 59 06.2**	**-0.3**
OCU3	**Ocu, Herrera**	**2.52**	**93**	*e*P		**Pb**	**21 59 07.3**	**-0.3**
CACAO	**El Cacao, Vera**	**2.55**	**107**	⇓*e*P		**Pn**	**21 59 04.3**	**+0.7**
CRIS3	**El Cristo, Coc**	**2.68**	**86**	*e*P		**Pn**	**21 59 07.9**	**+2.4**
JTS	**Las Juntas de**	**2.71**	**324**	Pn		**Pn**	**21 59 05.3**	**-0.6**
	48nm,0.3s,baz=231,slow=3.4,SNR=100							
JTS					Sn	**Sn**	**21 59 37.1**	**-1.9**
	26nm,0.3s,baz=9.0,slow=19,SNR=9.3							
JTS					LR	LR	22 00 04.5	
	comp=Z,72nm,19.4s,baz=206,slow=39							
JTS	**Las Juntas de**	**2.71**	**324**	*e*P		**Pn**	**21 59 06.7**	**+0.8**
JTS	**Las Juntas de**	**2.71**	**324**	⇑*i*P		**Pn**	**21 59 07.0**	**+1.1**
JTS	**Las Juntas de**	**2.71**	**324**	Pn		**Pn**	**21 59 06.9**	**+0.9**
AMAS	**Alto Masis**	**3.00**	**327**	*i* P		**Pn**	**21 59 11.6**	**+1.6**
AZU	**Azuero**	**3.03**	**96**	*e*P		**Pn**	**21 59 13.2**	**+3.0**
AZU	**Azuero**	**3.03**	**96**	*e*P		**Pn**	**21 59 12.1**	**+1.8**
ACAL	**Aguas Claras**	**3.04**	**326**	*i* P		**Pn**	**21 59 11.7**	**+1.2**
CUI	**Cuipilapa**	**3.13**	**325**	*e*P		**Pn**	**21 59 13.3**	**+1.6**
CUI				*e*S		**Sn**	**21 59 49.8**	**+0.4**
VTON	**El Valle, Cocl**	**3.21**	**81**	*e*P		**Pn**	**21 59 16.1**	**+3.2**
BUEV	**Buena Vista**	**3.38**	**323**	*e*P		**Pn**	**21 59 16.7**	**+1.5**
GB1A	**Borinquen Arri**	**3.40**	**323**	*e*P		**Pn**	**21 59 17.1**	**+1.7**
GB1A				*e*S		**Sn**	**21 59 55.4**	**-0.5**
ZANG	**Zanguenga, Cho**	**3.52**	**76**	*e*P		**Pn**	**21 59 19.7**	**+2.7**
BCIP	**Isla Barro Col**	**3.60**	**73**	*e*P		**Pn**	**21 59 20.7**	**+2.5**
BCIP	**Isla Barro Col**	**3.60**	**73**	Pn		**Pn**	**21 59 14.9**	**-3.2**
CHOR3	**La Chorrera**	**3.60**	**77**	*e*P		**Pn**	**21 59 21.0**	**+2.8**
MLIR	**Monte Lirio**	**3.61**	**71**	*e*P		**Pn**	**21 59 20.0**	**+1.7**
FRIJ	**El Hiral**	**3.72**	**72**	*e*P		**Pn**	**21 59 22.4**	**+2.6**
UPA	**Univ. de Panam**	**3.84**	**77**	*e*P		**Pn**	**21 59 23.8**	**+2.3**
ESPN	**Las Esperanzas**	**4.18**	**347**	Pn		**Pn**	**21 59 27.2**	**+1.0**
ACON	**Acoyapa**	**4.26**	**335**	Pn		**Pn**	**21 59 28.6**	**+1.4**
CMIG	**Matías Romero**	**14.39**	**310**	Pn		**Pn**	**22 01 48.2**	**+2.0**
	0.6nm,0.3s,baz=78,slow=7.6,SNR=6.3							
H06E1	**SOCORRO T-PHAS**	**28.83**	**294**	T		T	22 34 24.5	
	SNR=57							
ULM	**Lac du Bonnet**	**43.30**	**348**	P		**P**	**22 06 23.0**	**-1.2**
	3.6nm,0.9s,baz=168,slow=6.0,SNR=6.8							
ULM	**Lac du Bonnet**	**43.30**	**348**	P		**P**	**22 06 21.3**	**-2.9**
ULM				IAmb		IAmb	22 06 23.8	
	comp=Z,4.0nm,0.8s							
NVAR	**Mina Array Bea**	**43.63**	**319**	P		**P**	**22 06 26.4**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=130,slow=8.4,SNR=7.5							
YKA	**Yellowknife Ar**	**58.88**	**344**	P		**P**	**22 08 20.5**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=140,slow=6.6,SNR=14							
BCAR	**Beaver Creek A**	**68.88**	**335**	P		**P**	**22 09 27.7**	**+0.6**
IL31		**71.62**	**336**	P		**P**	**22 09 42.8**	**-0.9**
IL31				IAmb		IAmb	22 09 45.6	
	comp=Z,2.8nm,1.1s							
ILAR	**Eielson Array**	**71.62**	**336**	P		**P**	**22 09 44.2**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=116,slow=4.2,SNR=13							
ILAR	**Eielson Array**	**71.62**	**336**	P		**P**	**22 09 43.9**	**+0.1**
RND	**Reindeer**	**71.97**	**334**	P		**P**	**22 09 46.2**	**+0.2**
RND				IAmb		IAmb	22 09 48.3	
	comp=Z,6.7nm,1.0s							
ESDC	**Sonseca Array**	**76.69**	**51**	P		**P**	**22 10 14.7**	**+0.7**
	comp=Z,0.4nm,0.7s,baz=266,slow=4.6,SNR=4.0							
TORD	**Torodi Ar. Bea**	**83.37**	**78**	P		**P**	**22 10 51.2**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=272,slow=4.7,SNR=2.2							
H11S1	**WAKE ISLAND Hyl**	**106.08**	**292**	T		T	00 11 02.7	
	baz=77,slow=74							
H11S2	**WAKE ISLAND Hyl**	**106.08**	**292**	T		T	00 11 01.0	
	baz=77							
H11S3	**WAKE ISLAND Hyl**	**106.09**	**292**	T		T	00 11 04.1	
	baz=77,slow=74							
WRA	**Warramunga Arr**	**141.71**	**248**	PKhKP		PKPpre	22 17 47.7	
	comp=Z,0.5nm,0.9s,baz=90,slow=2.6,SNR=3.0							
CMAR	**Chiang Mai Arr**	**153.52**	**355**	PKPbc		**PKPbc**	**22 18 20.7**	**-1.5**
	comp=Z,0.3nm,0.3s,baz=352,slow=3.6,SNR=4.5							

IDC 10 22:11:58.8±4.7, 19.°15S×177.°29W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/41, mbtmp3.6/2, Error ellipse: s-maj=264.2km s-min=48.2km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.46**	**261**	P		P	22 20 20.2	+0.1
	0.2nm,0.2s,baz=96,slow=7.8,SNR=9.5							
ASAR	**Alice Springs**	**45.49**	**255**	P		P	22 20 19.9	-0.4
	0.5nm,0.5s,baz=98,slow=7.8,SNR=6.6							
BVAR	**Borovoye Array**	**118.47**	**321**	PKP		PKPdf	22 30 47.9	-0.4
	0.2nm,0.4s,baz=92,slow=3.4,SNR=3.6							
AKASG	**Malin Array Be**	**142.14**	**332**	PKP		PKPdf	22 31 30.8	-2.1
	0.5nm,0.4s,baz=41,slow=4.0,SNR=4.5							
BRTR	**Keskin Array B**	**146.40**	**314**	PKPbc		PKPbc	22 31 41.8	-0.4
	0.5nm,0.6s,baz=59,slow=2.2,SNR=2.7							

*MEX **10** 22:12:20.6±1.1, 16.°87N×95.°12W, h114km±9km, MD3.9*
*NEIC **10** 22:12:20.8±2.8, 17.°1N±0.°1×95.°02W±0.°08, h106km±4km, Error ellipse: s-maj=17.2km s-min=9.1km az=201.0*
*IDC **10** 22:12:21.9±1.1, 17.°08N×94.°89W, h98km±5km, mb3.3/5, mb1 3.6/8, mb1mx3.3/43, mbtmp3.8/8, Error ellipse: s-maj=31.8km s-min=1.2km az=33.0*

ISC 10 22:12:20.4±0.8, 16.°85N±0.°07×95.°10W±0.°04, h103km±7km, n25, σ1°26/30, mb3.9/6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.32**	**41**	P		**Pn**	**22 12 35.6**	**+0.2**
	62nm,0.3s,baz=215,slow=10,SNR=626							
CMIG				S		**Sn**	**22 12 46.2**	**-0.4**
	171nm,0.3s,baz=139,slow=19,SNR=260							
CMIG	**Matias Romero**	**0.32**	**41**	*e*P		**Pn**	**22 12 35.9**	**+0.4**
CMIG				*e*S		**Sn**	**22 12 46.5**	**-0.2**
HUIG	**Huatulco**	**1.45**	**222**	*e*P		**Pn**	**22 12 45.6**	**-0.6**
HUIG				*e*S		**Sn**	**22 13 05.8**	**+0.1**
OXBJ	**Oaxaca**	**1.57**	**278**	*e*P		**Pn**	**22 12 47.6**	**-0.2**
OXBJ				*e*S		**Sn**	**22 13 08.5**	**-0.1**
VHO	**Vista Hermosa**	**1.58**	**278**	*e*P		**Pn**	**22 12 48.0**	**+0.1**
VHO				*e*S		**Sn**	**22 13 08.6**	**-0.2**
PCIG		**2.14**	**122**	*i* P		**Pn**	**22 12 55.2**	**+0.3**
PCIG				*i* S		**Sn**	**22 13 20.9**	**-0.4**
PNIG	**Pinotepa**

MTO3	**Montecristo**	**1.29**	**354**	*e*P		**Pn**	**22 14 13.1**	**-0.4**
MTO3	**Montecristo**	**1.29**	**354**	*e*P		**Pn**	**22 14 13.1**	**-0.4**
LCND	**La Caada**	**1.32**	**81**	*e*P		**Pn**	**22 14 13.6**	**-0.1**
LCND				IAML			22 14 33.5	
	comp=Z,665nm,0.3s							
LCND	**La Caada**	**1.32**	**81**	*e*P		**Pn**	**22 14 13.6**	**-0.1**
LCND				IAML			22 14 33.5	
	comp=Z,665nm,0.3s							
CNCH	**Conchagua**	**1.37**	**83**	*e*P		**Pn**	**22 14 13.9**	**-0.5**
CNCH				*e*S		**Sb**	**22 14 32.8**	**+0.4**
CNCH	**Conchagua**	**1.37**	**83**	*e*P		**Pn**	**22 14 13.9**	**-0.5**
CNCH				*e*S		**Sb**	**22 14 32.8**	**+0.4**

DDA 10 22:15:40.1, 38°85N×27°87E, h7km, ML1.2, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
AKHS	**Akhisar**	**0.05**	**303**	*i* P		Pg	22 15 42.1		+0.3
AKHS				IAML			22 15 43.0		
	comp=E,167nm,0.4s								
AKHS				*i* S		Sg	22 15 43.5		+0.5
ZEDA	**zmir-Bergama**	**0.63**	**281**	*i* P		Pg	22 15 52.5		+0.2
ZEDA				IAML			22 16 01.0		
	comp=N,12nm,0.8s								
ZEDA				*i* S		Sb	22 16 01.9		-0.5

*KRNET **10** 22:40:17.2±0.1, 41°.60N×79°.38E, h14km, mb2.6*
*SOME **10** 22:40:17.5, 41°.55N×79°.37E, h15km*
*NNC **10** 22:40:19.3±1.2, 41°.64N×79°.37E, h0km, mb3.4, mpv3.1,*
Error ellipse: s-maj=8.3km s-min=5.3km az=149.0
ISC 10 22:40:15.7±2.2, 41°.45N±0°.07×79°.26E±0°.06, h2km±12km, n36, σ0s85/61, 13C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
PRZ	**Przheval'sk**	**1.21**	**328**	⇑*i* P		**Pn**	**22 40 38.8**		**-1.0**
	baz=21								
PRZ				⇑*i* S		**Sb**	**22 40 54.9**		**-0.7**
	baz=21								
KDJ	**Kajisay**	**1.69**	**294**	⇓*i* P		**Pg**	**22 40 49.3**		**+1.1**
	baz=89								
KDJ				⇓*i* S		**Sg**	**22 41 12.8**		**+2.7**
	baz=89								
UZB	**Uzynbulak**	**1.70**	**354**	*e*P		**Pn**	**22 40 47.1**		**+0.6**
	6.9nm,0.3s								
UZB				*e*S		**Sn**	**22 41 08.7**		**-0.3**
	8.5nm,0.3s								
UZB	**Uzynbulak**	**1.70**	**354**	P		**Pn**	**22 40 47.1**		**+0.6**
	4.1nm,0.2s								
UZB				S		**Sn**	**22 41 08.7**		**-0.3**
	8.5nm,0.3s								
SHLS	**Shalkode**	**1.71**	**5**	*e*P		**Pb**	**22 40 48.1**		**+0.2**
	7.7nm,0.2s								
SHLS				*e*S		**Sb**	**22 41 10.4**		**+0.5**
	75nm,0.4s								
SHLS	**Shalkode**	**1.71**	**5**	P		**Pb**	**22 40 48.1**		**+0.2**
	7.7nm,0.2s								
SHLS				S		**Sb**	**22 41 10.4**		**+0.5**
	75nm,0.4s								
SATY	**Saty**	**1.72**	**339**	*e*P		**Pb**	**22 40 48.1**		**-0.1**
	8.4nm,0.2s								
SATY				*e*S		**Sb**	**22 41 10.2**		**-0.2**
	34nm,0.1s								
SATY	**Saty**	**1.72**	**339**	P		**Pb**	**22 40 48.1**		**-0.1**
	8.4nm,0.2s								
SATY				S		**Sb**	**22 41 10.2**		**-0.2**
	34nm,0.1s								
ANVS	**Anan'yevo**	**1.78**	**319**	⇑*i* P		**Pg**	**22 40 50.0**		**+0.2**
	baz=14								
ANVS				⇑*i* S		**Sg**	**22 41 13.4**		**+0.5**
	baz=14								
PDGK	**Podgornoye**	**1.88**	**5**	P		**Pn**	**22 40 49.6**		**+0.6**
	2.8nm,0.4s								
PDGK				S		**Sn**	**22 41 13.0**		**-0.4**
	25nm,0.7s								
PDGK	**Podgornoye**	**1.88**	**5**	⇑P		**Pn**	**22 40 49.4**		**+0.3**
	2.4nm,0.3s								
PDGK				⇑S		**Sn**	**22 41 12.9**		**-0.5**
	37nm,0.5s								
KPKS	**Kokpek**	**2.06**	**348**	*e*P		**Pb**	**22 40 53.8**		**0.0**
	18nm,0.2s								
KPKS				*e*S		**Sb**	**22 41 20.3**		**+0.5**
	111nm,0.4s								
TNSS	**Tian-Shan**	**2.33**	**313**	*e*P		**Pg**	**22 41 00.8**		**+0.4**
	4.0nm,0.3s								
TNSS				*e*S		**Sg**	**22 41 31.8**		**+1.1**
	8.4nm,0.2s								
TNSS	**Tian-Shan**	**2.33**	**313**	Pg		**Pg**	**22 41 00.8**		**+0.4**
	4.0nm,0.3s								
TNSS				Lg		Lg	22 41 31.8		
	8.4nm,0.2s								
MDOK	**Medeo**	**2.37**	**317**	*e*P		**Pg**	**22 41 00.7**		**-0.4**
	3.1nm,0.2s								
MDOK				*e*S		**Sg**	**22 41 31.6**		**-0.1**
	9.0nm,0.3s								
MDOK	**Medeo**	**2.37**	**317**	Pn		**Pg**	**22 41 00.8**		**-0.3**
	4.5nm,0.5s								
MDOK				⇑Sn		**Sb**	**22 41 29.6**		**+0.7**
	8.2nm,0.4s								
MDOK	**Medeo**	**2.37**	**317**	Pg		**Pg**	**22 41 00.6**		**-0.4**
	3.1nm,0.2s								
MDOK				Lg		Lg	22 41 31.6		
	9.0nm,0.3s								
KOTS	**Kotyrbulak**	**2.39**	**319**	*e*P		**Pg**	**22 41 01.0**		**-0.4**
	8.6nm,0.3s								
KOTS				*e*S		**Sg**	**22 41 32.3**		**-0.1**
	23nm,0.4s								
KOTS	**Kotyrbulak**	**2.39**	**319**	Pg		**Pg**	**22 41 01.0**		**-0.4**
	8.6nm,0.3s								
KOTS				Lg		Lg	22 41 32.3		
	23nm,0.4s								
ULHL	**Ulahol**	**2.39**	**290**	⇑*i* P		**Pb**	**22 41 00.3**		**+0.8**
	baz=86								
ULHL				⇑*i* S		**Sg**	**22 41 31.8**		**-0.6**
	baz=86								
NRN	**Naryn**	**2.45**	**271**	⇓*i* P		**Pg**	**22 41 02.3**		**-0.3**
	baz=67								
NRN				⇓*i* S		**Sg**	**22 41 34.4**		**+0.1**
	baz=67								
IZV	**Izvestkoviy**	**2.52**	**310**	*e*P		**Pg**	**22 41 03.8**		**-0.2**
	4.4nm,0.5s								
IZV				*e*S		**Sg**	**22 41 37.5**		**+0.8**
	14nm,0.2s								
IZV	**Izvestkoviy**	**2.52**	**310**	Pg		**Pg**	**22 41 03.8**		**-0.2**
	4.4nm,0.5s								
IZV				Lg		Lg	22 41 37.5		
	14nm,0.2s								
BOOM	**Boomskoye usch**	**2.68**	**294**	⇑*i* P		**Pb**	**22 41 04.2**		**-0.3**
	baz=90								
BOOM				⇑*e*S		**Sb**	**22 41 38.2**		**+0.3**
	baz=90								
MTBS	**Maitube**	**2.68**	**310**	*e*P		**Pg**	**22 41 06.1**		**-1.1**
	3.7nm,0.2s								
MTBS				*e*S		**Sg**	**22 41 40.9**		**-1.1**
	413nm,0.3s								
DJR	**Jarkent**	**2.90**	**8**	*e*P		**Pb**	**22 41 08.0**		**-0.3**
	0.9nm,0.3s								
DJR				*e*S		**Sb**	**22 41 44.0**		**-0.2**
	8.9nm,0.3s								
DJR	**Jarkent**	**2.90**	**8**	Pg		**Pb**	**22 41 07.0**		**-1.3**
	0.9nm,0.3s								
DJR				Lg		Lg	22 41 44.0		
	8.9nm,0.3s								
KST	**Kastek**	**2.92**	**304**	*e*P		**Pb**	**22 41 09.6**		**+1.2**
	2.3nm,0.3s								
KST				*e*S		**Sg**	**22 41 46.9**		**-2.4**
	7.5nm,0.8s								
KST	**Kastek**	**2.92**	**304**	Pg		**Pb**	**22 41 09.6**		**+1.2**
	2.3nm,0.3s								
KST				Lg		Lg	22 41 46.9		
	7.5nm,0.8s								
KTBS	**Karatobe**	**2.95**	**321**	*e*P		**Pg**	**22 41 11.1**		**-1.2**
	1.7nm,0.3s								
KTBS				*e*S		**Sg**	**22 41 49.5**		**-1.0**
	29nm,0.4s								
KTBS	**Karatobe**	**2.95**	**321**	Pg		**Pg**	**22 41 11.1**		**-1.2**
	1.7nm,0.3s								
KTBS				Lg		Lg	22 41 49.4		
	29nm,0.4s								
ARXS	**Arharly**	**2.95**	**340**	*e*P		**Pb**	**22 41 09.5**		**+0.4**
	5.1nm,0.6s								
ARXS				*e*S		**Sb**	**22 41 47.0**		**+1.4**
	18nm,0.7s								
ARXS	**Arharly**	**2.95**	**340**	Lg		Lg	22 41 47.0		

	18nm,0.7s								
KZA	**Kyzart**	**3.06**	**283**	⇑*i* P		**Pb**	**22 41 10.0**		**-1.1**
	baz=80								
KZA				⇑*i* S		**Sb**	**22 41 48.7**		**-0.4**
	baz=80								
KAPS	**Kapalarasan**	**3.83**	**1**	*e*P		**Pb**	**22 41 24.7**		**+0.7**
	1.1nm,0.2s								
KAPS				*e*S		**Sb**	**22 42 12.5**		**+1.6**
	4.4nm,0.2s								
KAPS	**Kapalarasan**	**3.83**	**1**	Lg		Lg	22 42 12.8		
	4.4nm,0.2s								

*NEIC **10** 22:49:22.4±2.4, 21°.37S±0°.05×68°.45W±0°.09, h118km±9km,*
Error ellipse: s-maj=12.7km s-min=6.9km az=74.0
*IDC **10** 22:49:23.9±1.1, 21°.42S×68°.41W, h114km±13km, mb3.5/3,*
mb1 3.6/6, mb1mx3.4/29, mbtmp3.9/6, Error ellipse:
s-maj=33.5km s-min=16.7km az=114.0
*GUC **10** 22°49:23.9±0.7, 21°.41S×68°.66W, h122km±4km, ML3.5*
ISC 10 22:49:23.0±0.7, 21°.42S±0°.04×68°.64W±0°.07, h125km±7km, n39, σ1s71/55, mb3.7/4, 8C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
PB09	**IPOC Station P**	**0.67**	**236**	⇑*i* P		**Pn**	**22 49 43.4**		**+0.6**
PB09				*i* S		**Sn**	**22 49 58.1**		**+0.2**
PB09				IAML			22 50 00.5		
	comp=E,1μm,0.3s								
PB03	**IPOC Station P**	**1.21**	**239**	⇑*i* P		**Pn**	**22 49 48.0**		**+0.3**
PB03				*i* S		**Sn**	**22 50 06.2**		**-0.3**
PB03				IAML			22 50 07.6		
	comp=E,2μm,0.4s								
LVC	**Limon Verde**	**1.21**	**192**	⇓*i* P		**Pn**	**22 49 48.8**		**+0.8**
LVC				*i* S		**Sn**	**22 50 07.6**		**+0.7**
LVC	**Limon Verde**	**1.21**	**192**	P		**Pn**	**22 49 48.6**		**+0.7**
	comp=E,66nm,0.3s,baz=8.8,slow=9.5,SNR=615								
LVC				S		**Sn**	**22 50 07.3**		**+0.4**
	comp=E,87nm,0.3s,baz=260,slow=22,SNR=104								
LVC	**Limon Verde**	**1.21**	**192**			**Pn**	**22 49 48.5**		**+0.5**
LVC						**Sn**	**22 50 06.4**		**-0.6**
PB08	**IPOC Station P**	**1.36**	**339**	⇓*i* P		**Pn**	**22 49 50.2**		**+0.6**
PB08				*i* S		**Sn**	**22 50 09.8**		**+0.1**
PB08				IAML			22 50 11.6		
	comp=E,567nm,0.2s								
PATCX	**Punta Patache**	**1.53**	**293**	⇑*i* P		**Pn**	**22 49 51.3**		**+0.1**
PATCX				*i* S		**Sn**	**22 50 11.7**		**-1.0**
PB06	**IPOC Station P**	**1.54**	**214**	⇑*i* P		**Pn**	**22 49 52.1**		**+0.7**
PB06				*i* S		**Sn**	**22 50 13.4**		**+0.3**
PB06				IAML			22 50 14.3		
	comp=N,1μm,0.2s								
PB04	**IPOC Station P**	**1.67**	**237**	⇑*i* P		**Pn**	**22 49 52.9**		**0.0**
PB04				*i* S		**Sn**	**22 50 15.8**		**+0.1**
PB04				IAML			22 50 19.5		
	comp=N,640nm,0.2s								
PB04	**IPOC Station P**	**1.67**	**237**			**Pn**	**22 49 53.3**		**+0.4**
TA01	**Diego Aracena**	**1.67**	**300**	⇑*i* P		**Pn**	**22 49 52.4**		**-0.4**
TA01				*i* S		**Sn**	**22 50 13.9**		**-1.4**
GO01	**Chusmiza**	**1.82**	**343**			**Pn**	**22 49 54.7**		**-0.4**
PB11	**IPOC Station P**	**1.91**	**330**	⇓*i* P		**Pn**	**22 49 55.4**		**-0.3**
PB11				*i* S		**Sn**	**22 50 19.9**		**-0.8**
PB11	**IPOC Station P**	**1.91**	**330**			**Pn**	**22 49 55.4**		**-0.3**
PB15	**IPOC Station P**	**1.94**	**203**	⇑*i* P		**Pn**	**22 49 56.9**		**+0.7**
PB15				*i* S		**Sn**	**22 50 22.6**		**+1.0**
PB05	**IPOC Station P**	**2.03**	**225**	⇑*i* P		**Pn**	**22 49 57.3**		**+0.1**
PB05				*i* S		**Sn**	**22 50 22.2**		**-1.2**
PB05				IAML			22 50 27.6		
	comp=E,275nm,0.5s								
PSGC	**Pisagua**	**2.29**	**322**	⇓*i* P		**Pn**	**22 49 59.4**		**-1.0**
PSGC				*i* S		**Sn**	**22 50 27.9**		**-1.1**
PSGC				IAML			22 50 28.5		
	comp=E,249nm,0.3s								
MNMC	**Minye Minye**	**2.45**	**338**	⇓*i* P		**Pn**	**22 50 02.5**		**-0.1**
MNMC				*i* S		**Sn**	**22 50 33.1**		**+0.1**
MNMC				IAML			22 50 43.0		
	comp=E,439nm,0.1s								
MNMC	**Minye Minye**	**2.45**	**338**			**Pn**	**22 50 02.1**		**-0.6**
PB10	**IPOC Station P**	**2.73**	**220**	*e*P		**Pn**	**22 50 06.0**		**0.0**
PB10				*i* S		**Sn**	**22 50 36.1**		**-3.0**
PB10				IAML			22 50 54.4		
	comp=E,101nm,0.4s								
PB10	**IPOC Station P**	**2.73**	**220**			**Pn**	**22 50 07.1**		**+1.1**
PB14	**IPOC Station P**	**3.58**	**207**	*e*P		**Pn**	**22 50 17.7**		**+0.3**
GO02	**Mina Guanaco**	**3.83**	**193**			**Pn**	**22 50 21.1**		**+0.5**
LPAZ	**La Paz**	**5.13**	**5**	P		**Pn**	**22 50 40.7**		**+2.3**
	comp=E,1.4nm,0.3s,baz=206,slow=6.2,SNR=22								
LPAZ	**La Paz**	**5.13**	**5**			**Pn**	**22 50 39.9**		**+1.6**
SIV	**San Ignacio**	**8.97**	**54**	P		**Pn**	**22 51 26.7**		**-3.0**
	comp=E,1.7nm,0.3s,baz=251,slow=13,SNR=55								
CFA	**Coronel Fontan**	**10.15**	**178**	P		**Pn**	**22 51 43.2**		**-2.2**
	comp=E,0.2nm,0.3s,baz=0.7,slow=15,SNR=4.1								
CFA				S		**Sn**	**22 53 30.9**		**-6.6**
	comp=E,0.5nm,0.3s,baz=180,slow=18,SNR=4.2								
ROC1	**El Roble**	**11.70**	**190**	Pn		**Pn**	**22 52 04.4**		**-2.0**
GO06	**Curarrehue**	**18.27**	**187**			**P**	**22 53 28.5**		**+1.4**
PLCA	**Paso Flores**	**19.32**	**184**	P		**Pn**	**22 53 41.8**		**+1.0**
	comp=E,0.1nm,0.3s,baz=30,slow=8.1,SNR=4.6								
PLCA	**Paso Flores**	**19.32**	**184**	P		**P**	**22 53 41.3**		**+2.8**
PLCA				IAmb		IAmb	22 53 57.1		
	comp=Z,6.9nm,1.4s								
BDFB	**Brasilia**	**20.38**	**77**	P		**P**	**22 53 50.3**		**+0.2**
	comp=Z,3.2nm,0.4s,baz=235,slow=10.0,SNR=7.9								
BDFB	**Brasilia**	**20.38**	**77**	IAmb		IAmb	22 54 02.5		
	comp=Z,3.7nm,0.9s								
OTAV	**Otavalo**	**23.56**	**335**	P		**P**	**22 54 27.9**		**+5.0**
OTAV				IAmb		IAmb	22 54 34.0		
	comp=Z,5.4nm,1.4s								
RUSC	**La Rusia**	**27.49**	**350**	P		**P**	**22 54 55.3**		**-3.1**
RCBR	**Riachuelo**	**35.28**	**69**	P		**P**	**22 56 04.1**		**-2.1**
RCBR				IAmb		IAmb	22 56 05.8		
	comp=Z,52nm,1.4s								
ANWB	**Willy Bob**	**39.42**	**10**	P		**P**	**22 56 39.7**		**-1.2**
TORD	**Torodi Ar. Bea**	**77.09**	**70**	P		**P**	**23 01 03.8**		**+0.7**
	comp=Z,0.8nm,0.7s,baz=259,slow=6.1,SNR=7.9								
YKA	**Yellowknife Ar**	**91.19**	**340**	P		**P**	**23 02 15.3**		**+1.8**
	comp=Z,0.1nm,0.4s,baz=130,slow=4.5,SNR=5.1								

*UPP **10** 23:02:51.5±2.2, 63°.48N×26°.55E, h0km, ML2.2, Suspected explosion*
*NAO **10** 23:02:53.5±0.9, 63°.67N×26°.19E, ML2.2*
*IDC **10** 23:02:54.2±1.0, 63°.57N×26°.49E, h0km, mb1 3.4/5,*
mb1mx3.0/51, mbtmp3.4/5, ML2.6/5, Error ellipse:
s-maj=15.0km s-min=6.8km az=91.0
*HEL **10** 23:02:54.8±0.0, 63°.66N×26°.09E, h1km, ML2.0,*
ML2.2(UPP), Confirmed Induced event
*BER **10** 23:02:56.8±4.2, 63°.73N×26°.06E, h0km, ML1.8,*
ML2.2(NAO), Suspected explosion
ISC 10 23:02:53.1±0.7, 63°.65N±0°.02×26°.06E±0°.03, h0km, n52, σ1s71/82, Finland

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
OUF	**Merijarvi**	**0.93**	**321**	*e*P		**Pg**	**23 03 11.0**		**+0.2**
OUF				*e*S		**Sg**	**23 03 23.1**		**+0.4**
SUF	**Sumiainen**	**0.94**	**177**	*e*P		**Pg**	**23 03 11.7**		**+0.7**
SUF				*e*S		**Sg**	**23 03 23.6**		**+0.4**
OBF0	**Syolatti, Pyha**	**1.17**	**317**	*e*P		**Pg**	**23 03 15.5**		**+0.1**
OBF0				*e*S		**Sg**	**23 03 30.7**		**+0.2**
OUL	**Oulu**	**1.44**	**357**	*e*P		**Pn**	**23 03 20.4**		**0.0**
OUL				*e*S		**Sg**	**23 03 38.8**		**-0.5**
KAF	**Kangasniemi**	**1.55**	**176**	*e*P		**Pb**	**23 03 22.6**		**0.0**
KAF				*e*S		**Sn**	**23 03 42.5**		**-0.2**
KAF				MSG			23 03 44.2		
	comp=Z,14nm,0.1s								
KEF	**Keuruu**	**1.59**	**201**	*e*P		**Pn**	**23 03 23.0**		**+0.6**
KEF				*e*S		**Sn**	**23 03 43.7**		**0.0**
VAF	**Ylistaro**	**1.65**	**250**	*e*P		**Pn**	**23 03 24.4**		**+1.1**
VAF				*e*S		**Sn**	**23 03 45.5**		**+0.5**
FIA1	**FINESS Array S**	**2.22**	**180**	*e*PB		**Pb**	**23 03 33.7**		**-0.3**
FIA1				*e*SB		**Sb**	**23 04 02.5**		**+0.6**
FIA1				MSG			23 04 05.7		
	comp=Z,8.3nm,0.1s								
FIA0	**FINESS Array S**	**2.22**	**180**	Pn		**Pb**	**23 03 33.6**		**-0.4**
	baz=0.5,slow=16								
FIA0				Lg		Lg	23 04 03.0		
	baz=6.0,slow=28								
FIA0	**FINESS Array S**	**2.22**	**180**	Pn		**Pb**	**23 03 33.6**		**-0.4**
	baz=0.5,slow=16								
FIA0				Sn		**Sb**	**23 04 03.0**		**+1.0**
	baz=6.0,slow=28								
FINES	**FINESS Array B**	**2.22**	**180**	Pn		**Pb**	**23 03 33.4**		**-0.6**

	comp=Z,5.0nm,0.3s,baz=1.1,slow=14,SNR=174								
FINES				Lg		Lg	23 04 01.4		
	comp=Z,6.3nm,0.3s,baz=1.9,slow=28,SNR=24								
BURU	**Burvik**	**2.26**	**297**	*e*PB		**Pb**	**23 03 34.4**		**-0.3**
BURU				*e*SG		**Sb**	**23 04 04.1**		**+1.1**
BURU	**Burvik**	**2.26**	**297**	P		**Pb**	**23 03 34.4**		**-0.3**
BURU				S		**Sb**	**23 04 04.2**		**+1.1**
UMAU	**Umeaa**	**2.40**	**278**	*e*P		**Pn**	**23 03 35.4**		**+1.8**
UMAU				*e*SB		**Sb**	**23 04 07.5**		**+0.3**
UMAU	**Umeaa**	**2.40**	**278**	P		**Pn**	**23 03 35.1**		**+1.5**
JOF	**Joensuu**	**2.49**	**105**	*e*PB		**Pb**	**23 03 37.6**		**-0.9**
JOF				*e*SB		**Sb**	**23 04 09.3**		**-0.4**
KALU	**Kalix**	**2.50**	**334**	*e*P		**Pn**	**23 03 36.3**		**+1.3**
KALU	**Kalix**	**2.50**	**334**	P		**Pn**	**23 03 36.3**		**+1.3**
TOF	**Tornio**	**2.55**	**344**	*e*P		**Pn**	**23 03 37.3**		**+1.7**
TOF				*e*S		**Sn**	**23 04 09.3**		**+2.0**
MSF	**Maaselka**	**2.60**	**28**	*e*PB		**Pb**	**23 03 39.3**		**-1.3**
MSF				*e*SB		**Sb**	**23 04 12.8**		**-0.3**
SJUU	**Sjulsmark**	**2.67**	**316**	P		**Pb**	**23 03 40.9**		**-0.9**
SJUU				S		**Sb**	**23 04 16.2**		**+1.1**
KU6	**Riekki**	**2.89**	**33**	MSG			23 04 22.4		
	comp=Z,4.6nm,0.1s								
SVAU	**Svanoeiden**	**2.97**	**289**	*e*P		**Pn**	**23 03 42.1**		**+0.7**
SVAU	**Svanoeiden**	**2.97**	**289**	P		**Pn**	**23 03 42.1**		**+0.7**
HUSU	**Husum**	**3.08**	**267**	*e*P		**Pn**	**23 03 44.8**		**+1.8**
HUSU	**Husum**	**3.08**	**267**	P		**Pn**	**23 03 44.8**		**+1.8**
PVF	**Pernaja**	**3.12**	**182**	MSG			23 04 33.3		
	comp=Z,3.4nm,0.2s								
VJF	**Virojoki**	**3.21**	**167**	*e*PB		**Pb**	**23 03 49.4**		**-1.4**
VJF				*e*SB		**Sb**	**23 04 30.8**		**+0.5**
NUR	**Nurmijrvi**	**3.23**	**192**	*e*P		**Pn**	**23 03 47.7**		**+2.8**
HARU	**Harads**	**3.32**	**322**	*e*P		**Pn**	**23 03 48.2**		**+1.9**
HARU	**Harads**	**3.32**	**322**	P		**Pn**	**23 03 48.2**		**+1.9**
SGF	**Sodankyl**	**3.81**	**3**	*e*P		**Pn**	**23 03 54.1**		**+1.2**
VRF	**Varrio**	**4.37**	**18**	*e*P		**Pn**	**23 04 01.9**		**+1.3**
HEF	**Hetta**	**4.87**	**349**	*e*P		**Pn**	**23 04 08.8**		**+1.2**
HEF				*e*S		**Sn**	**23 05 03.5**		**-1.2**
SALU	**Saltoluokta**	**4.88**	**323**	*e*P		**Pn**	**23 04 12.2**		**+4.4**
SALU				*e*S		**Sn**	**23 05 07.1**		**+2.2**
KTK1	**Kautokeino**	**5.50**	**349**	*e*P		**Pn**	**23 04 17.4**		**+1.3**
KTK1				*e*S		**Sn**	**23 05 19.1**		**-0.9**
KTK1				IAML			23 05 20.7		
	comp=Z,1.4nm,0.7s								
MOR8	**Moi Rana**	**5.55**	**302**	*e*P		**Pn**	**23 04 17.7**		**+0.8**
MOR8				*e*S		**Sn**	**23 05 18.5**		**-2.8**
MOR8				IAML			23 05 35.6		
	comp=Z,2.5nm,0.7s								
ARA0	**ARCESS Array S**	**5.91**	**358**	Pn		**Pn**	**23 04 22.3**		**+0.5**
	baz=172,slow=16								
ARA0				Sn		**Sn**	**23 05 26.7**		**-3.5**
	baz=176,slow=28								
ARA0				Lg		Lg	23 05 52.9		
	baz=166,slow=37								
ARA0	**ARCESS Array S**	**5.91**	**358**	Pn		**Pn**	**23 04 22.3**		**+0.5**
	baz=172,slow=16								
ARA0				Sn		**Sn**	**23 05 26.7**		**-3.5**
	baz=176,slow=28								
ARA0				Sg		**Sb**	**23 05 52.9**		**+4.7**
	baz=166,slow=37								
ARCES	**ARCESS Array B**	**5.91**	**358**	Pn		**Pn**	**23 04 22.6**		**+0.8**
	comp=Z,0.7nm,0.3s,baz=175,slow=14,SNR=44								
ARCES				Sn		**Sn**	**23 05 26.6**		**-3.6**
	comp=Z,0.4nm,0.3s,baz=174,slow=24,SNR=3.8								
ARCES				Lg		Lg	23 05 52.4		
	comp=Z,0.5nm,0.3s,baz=173,slow=32,SNR=3.9								
NSS	**Namsos**	**6.24**	**284**	*e*P		**Pn**	**23 04 26.4**		**+0.1**
NSS				*e*S		**Sn**	**23 05 33.1**		**-5.1**
NSS				IAML			23 05 51.1		
	comp=Z,5.1nm,1.0s								
TRO	**Tromso**	**6.63**	**338**	*e*P		**Pn**	**23 04 32.1**		**+0.4**
TRO				IAML			23 05 46.2		
	comp=Z,1.4nm,0.7s								
HFS	**Hagfors**	**6.82**	**244**	Pn		**Pn**	**23 04 35.8**		**+1.5**
	baz=44,slow=14								
HFS				Sn		**Sn**	**23 05 51.7**		**-0.9**
	baz=46,slow=28								
HFS				Lg		Lg	23 06 22.9		
	baz=59,slow=37								
HFS	**Hagfors**	**6.82**	**244**	Pn		**Pn**	**23 04 35.6**		**+1.3**
	comp=Z,0.2nm,0.3s,baz=54,slow=13,SNR=11								
HFS				Sn		**Sn**	**23 05 51.8**		**-0.7**
	comp=Z,0.2nm,0.3s,baz=61,slow=27,SNR=3.6								
HFS				Lg		Lg	23 06 23.2		
	comp=Z,0.6nm,0.3s,baz=57,slow=29,SNR=7.1								
HFS	**Hagfors**	**6.82**	**244**	Pn		**

ILAS	**Lasjerd**	**3.55**	**209**	*e*Pn	**Pn**	**23 08 31.1**	**+1.9**
IDMV	**Damavand**	**3.81**	**221**	*e*Pn	**Pn**	**23 08 34.3**	**+1.5**
IDMV				*e*		23 09 02.6	
THKV	**Tehran--Karaj**	**4.24**	**234**	IAML		23 09 37.6	
	comp=E,76nm,0.6s						
IVRN	**Varamin**	**4.42**	**219**	*e*Pn	**Pn**	**23 08 41.8**	**+0.8**
TNSJ	**Nastanj**	**4.69**	**164**	*e*Pn	**Pn**	**23 08 45.3**	**+0.6**
JRKH	**Jarkhoshk**	**4.93**	**120**	*e*Pn	**Pn**	**23 08 48.5**	**+0.5**
TABS	**Tabas**	**5.11**	**161**	*e*Pn	**Pn**	**23 08 51.3**	**+0.9**
KRSH	**Karshahi**	**5.11**	**209**	*e*Pn	**Pn**	**23 08 51.8**	**+1.2**
TKDS	**Koohdasht(Taba**	**5.14**	**161**	*e*Pn	**Pn**	**23 08 51.9**	**+0.9**
ZNJK	**Zanjan**	**5.41**	**252**	*e*Pn	**Pn**	**23 08 53.8**	**-0.9**
ZNJK				IAML		23 10 06.8	
	comp=N,31nm,0.5s						
ANAR	**Anarak**	**5.41**	**192**	*e*Pn	**Pn**	**23 08 55.0**	**+0.3**
GRMI	**Germi**	**5.64**	**275**	*e*Pn	**Pn**	**23 08 56.7**	**-1.2**
GRMI				*e*S	**Sn**	**23 09 58.3**	**-4.5**
AFRZ	**Afriz**	**5.97**	**147**	*e*Pn	**Pn**	**23 09 03.7**	**+1.2**
YZKH	**Yazd**	**6.11**	**184**	*e*Pn	**Pn**	**23 09 04.8**	**+0.6**
YZKH				IAML		23 10 15.1	
	comp=E,19nm,0.5s						
YZKH				IAML		23 10 22.8	
	comp=N,17nm,0.5s						
IHSH	**Hashtrud**	**6.15**	**271**	*e*Pn	**Pn**	**23 09 08.5**	**+3.4**
ICHK	**Chekchek**	**6.26**	**185**	*e*Pn	**Pn**	**23 09 07.8**	**+1.3**
IKOO	**Kooshah**	**6.84**	**151**	*e*Pn	**Pn**	**23 09 15.3**	**+0.8**
IBAF	**Bafgh**	**6.90**	**177**	*e*Pn	**Pn**	**23 09 16.2**	**+1.0**
IDAH	**Dahanechah**	**6.93**	**144**	*e*Pn	**Pn**	**23 09 19.0**	**+3.3**
ITBZ	**Tabriz**	**7.04**	**271**	*e*Pn	**Pn**	**23 09 18.7**	**+1.7**
HRA	**Herat**	**7.07**	**123**		**Pn**	**23 09 17.9**	**+0.3**
GNI	**Garni**	**8.19**	**285**	Pn	**Pn**	**23 09 34.9**	**+2.0**
	comp=N,0.3nm,0.3s,baz=135,slow=4.3,SNR=4.1						
GNI	**Garni**	**8.19**	**285**		**Pn**	**23 09 34.6**	**+1.7**
KBZ	**Khabaz**	**10.58**	**303**	Pn	**Pn**	**23 10 04.6**	**-0.8**
	comp=N,0.5nm,0.3s,baz=127,slow=5.0,SNR=13						
KBZ				Sn	**Sn**	**23 12 00.3**	**-3.6**
	comp=N,0.1nm,0.3s,baz=292,slow=19,SNR=2.0						
KVAR	**Kislovodsk Arr**	**10.81**	**304**	Pn	**Pn**	**23 10 08.3**	**-0.4**
	baz=107,slow=19,SNR=9.7						
KVAR				Sn	**Sn**	**23 12 05.1**	**-4.7**
	baz=358,slow=15,SNR=3.2						
KIV	**Kislovodsk**	**10.82**	**304**		**Pn**	**23 10 08.4**	**-0.4**
AB31	**Akbulak array**	**11.31**	**16**	P	**Pn**	**23 10 16.1**	**+0.7**
	comp=N,1.1nm,0.3s,baz=202,slow=14,SNR=57						
AB31				⇑S	**Sn**	**23 12 15.6**	**-6.1**
	comp=N,11nm,0.9s,baz=201,slow=20						
ABKAR	**Akbulak array**	**11.31**	**16**		**Pn**	**23 10 16.7**	**+1.4**
KBL	**Kabul**	**11.89**	**105**		**Pn**	**23 10 23.3**	**-0.4**
GAR	**Garm**	**11.90**	**83**		**Pn**	**23 10 23.1**	**-0.6**
AKTO	**Aktyubinsk**	**12.12**	**9**	Pn	**Pn**	**23 10 28.6**	**+2.2**
	comp=N,1.6nm,0.3s,baz=189,slow=12,SNR=25						
AKTO				Sn	**Sn**	**23 12 40.5**	**-1.1**
	comp=N,0.4nm,0.3s,baz=217,slow=20,SNR=4.9						
AKTO				LR	LR	23 16 24.7	
	comp=N,142nm,18.4s,baz=177,slow=43						
AKTO	**Aktyubinsk**	**12.12**	**9**	⇑P	**Pn**	**23 10 28.0**	**+1.5**
	comp=N,3.5nm,0.5s						
AKTO				⇓S	**Sn**	**23 12 41.7**	**+0.1**
	comp=N,22nm,1.6s						
KK31	**Karatay Array**	**12.55**	**64**	⇑P	**Pn**	**23 10 34.9**	**+2.4**
	comp=N,1.5nm,0.7s,baz=242,slow=16,SNR=6.4						
KK31				S	**Sn**	**23 12 47.7**	**-4.6**
	comp=N,4.4nm,0.9s,baz=244,slow=25,SNR=3.7						
AAK	**Ala-Archa**	**15.31**	**68**	Pn	**Pn**	**23 11 10.8**	**+0.7**
WSAR	**Wadi Sarin**	**15.51**	**168**	LR	LR	23 18 13.7	
	comp=N,47nm,19.3s,baz=360,slow=42						
RAYN	**Ar Rayn**	**17.02**	**211**	Pn	**P**	**23 11 32.8**	**-1.1**
RAYN				IAmb	IAmb	23 11 37.8	
	comp=Z,28nm,2.0s						
BVAR	**Borovoye Array**	**17.97**	**31**	Pn	**Pn**	**23 11 44.2**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=230,slow=11,SNR=17						
BVAR				Sn	Sn	23 14 54.4	-10
	comp=Z,0.1nm,0.3s,baz=217,slow=24,SNR=3.3						
ARU	**Arti**	**18.09**	**6**	P	**P**	**23 11 46.2**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=173,slow=9.5,SNR=9.0						
ARU				LR	LR	23 20 15.1	
	comp=Z,99nm,19.6s,baz=182,slow=42						
ARU	**Arti**	**18.09**	**6**	P	**P**	**23 11 46.2**	**+0.8**
ARU				IAmb	IAmb	23 12 03.8	
	comp=Z,13nm,1.4s						
EIL	**Elat**	**18.84**	**248**	LR	LR	23 20 05.5	
	comp=Z,42nm,19.7s,baz=116,slow=40						
KIRV	**Kirov**	**20.44**	**351**	LR	LR	23 22 21.4	
	comp=Z,99nm,18.4s,baz=149,slow=43						
KURBB	**Kurchatov Arra**	**20.54**	**46**	P	Pn	23 12 14.7	+0.2
	comp=Z,1.5nm,0.9s,baz=247,slow=11,SNR=7.4						
KURK	**Kurchatov**	**20.63**	**46**	P	**P**	**23 12 14.7**	**+1.4**
KURK	**Kurchatov**	**20.63**	**46**	IAmb	IAmb	23 12 21.1	
	comp=Z,3.2nm,1.0s						
MAKZ	**Makanchi**	**21.37**	**58**	P	**P**	**23 12 23.4**	**+2.1**
MAKZ				IAmb	IAmb	23 12 29.8	
	comp=Z,5.6nm,1.2s						
MK31	**Makanchi Array**	**21.57**	**59**	P	**P**	**23 12 25.9**	**+2.3**
MKAR	**Makanchi Array**	**21.57**	**59**	P	**P**	**23 12 24.8**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=249,slow=12,SNR=8.8						
AKASG	**Malin Array Be**	**21.97**	**312**	P	**P**	**23 12 28.8**	**+1.2**
	comp=Z,1.7nm,0.3s,baz=109,slow=9.6,SNR=15						
AKBB	**Malin Array Si**	**21.97**	**312**	P	**P**	**23 12 29.4**	**+1.8**
ALN	**Alexandroupoli**	**22.44**	**285**	P	**P**	**23 12 34.5**	**+1.8**
ALN				IAmb	IAmb	23 12 48.3	
	comp=Z,7.0nm,1.3s						
KARP	**Karpathos**	**22.46**	**271**	P	**P**	**23 12 33.7**	**+0.5**
BUR08	**Bucovina Ar. S**	**23.55**	**302**	P	**P**	**23 12 47.2**	**+2.8**
BUR08				IAmb	IAmb	23 12 49.2	
	comp=Z,16nm,1.6s						
VTS	**Vitosha**	**24.47**	**290**	P	**P**	**23 12 55.7**	**+2.6**
VTS				IAmb	IAmb	23 13 03.8	
	comp=Z,15nm,1.9s						
ZALV	**Zalesovo Beam**	**25.47**	**43**	P	**P**	**23 13 03.2**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=255,slow=11,SNR=5.7						
ITM	**Ithomi**	**26.15**	**278**	P	**P**	**23 13 06.5**	**-1.7**
FINES	**FINESS Array B**	**29.15**	**331**	LR	LR	23 27 25.0	
	comp=Z,63nm,19.3s,baz=214,slow=41						
GERES	**GERESS Array B**	**31.32**	**303**	P	**P**	**23 13 54.5**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=101,slow=10,SNR=3.1						
NOA	**NORSAR Array B**	**35.23**	**324**	LR	LR	23 30 11.8	
	comp=Z,20nm,20.9s,baz=275,slow=38						
EKA	**Eskdalemuir Ar**	**41.87**	**312**	P	**P**	**23 15 25.6**	**+1.7**
	comp=Z,1.9nm,0.8s,baz=104,slow=8.5,SNR=5.2						
CMAR	**Chiang Mai Arr**	**42.93**	**105**	LR	LR	23 36 35.7	
	comp=Z,27nm,19.4s,baz=170,slow=41						
ESDC	**Sonseca Array**	**45.12**	**291**	P	**P**	**23 15 51.8**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=69,slow=7.6,SNR=3.0						

IDC ***10*** *23:18:14.1±2.0, 36.74N×141.96E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/40, mbtmp3.6/5, ML3.0/1, MS2.7/2, Ms1 2.7/2, ms1mx2.3/50, Error ellipse: s-maj=45.7km s-min=27.2km az=59.0*

JMA ***10*** *23:18:19.0±0.2, 36.77N×141.70E, h52km±3km, M3.4*

ISC 10 23:18:15.2±2.4, 36.76N±0.06×141.88E±0.09, h5km±12km, n26, σ1§10/26, mb3.6/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.93**	**292**	P		**Pg**	**23 18 34.0**		**+0.8**
ONAJ				*e*S		**Sg**	**23 18 44.9**		**-0.4**
JFK	**Kawauchi**	**1.01**	**308**	P		**Pg**	**23 18 35.2**		**+0.6**
JFK				*e*S		**Sg**	**23 18 47.5**		**-0.2**
JHO	**Hitachi**	**1.06**	**263**	P		**Pg**	**23 18 35.5**		**-0.1**
JFFD	**Fukushimafurud**	**1.11**	**288**	P		**Pg**	**23 18 36.4**		**-0.1**
JHYU	**Hitachinakayam**	**1.12**	**249**	P		**Pb**	**23 18 36.9**		**-0.1**
JHYU				*e*S		**Sg**	**23 18 49.7**		**-1.6**
JMM	**Marumori**	**1.41**	**322**	P		**Pn**	**23 18 41.4**		**-0.1**
JFT	**Otama**	**1.45**	**302**	P		**Pn**	**23 18 42.6**		**+0.5**
JFT				*e*S		**Sn**	**23 18 58.7**		**-2.8**
JIO	**Ouri**	**1.75**	**346**	P		**Pn**	**23 18 46.7**		**+0.5**
JIO				*e*S		**Sn**	**23 19 06.9**		**-1.9**
JFY	**Yanaizu**	**1.86**	**291**	P		**Pn**	**23 18 48.2**		**+0.5**
JOU	**Okura**	**1.88**	**329**	P		**Pn**	**23 18 49.1**		**+1.1**
JAG	**Ashikaga**	**1.98**	**261**	P		**Pn**	**23 18 49.2**		**-0.2**
JYS	**Shirataka**	**2.06**	**316**	P		**Pn**	**23 18 52.1**		**+1.7**
JKT	**Katashina**	**2.11**	**271**	P		**Pn**	**23 18 51.9**		**+0.6**
MJAR	**Matsushiro Arr**	**2.96**	**267**	Pn		**Pn**	**23 19 03.4**		**+0.6**
	2.2nm,0.3s,baz=83,slow=17,SNR=41								
MJAR				Sn		**Sn**	**23 19 39.5**		**+0.7**
	0.4nm,0.3s,baz=71,slow=24,SNR=7.6								
MJAR				LR		LR	23 20 26.3		
	comp=Z,98nm,19.0s,baz=85,slow=44								
MAT	**Matsushiro**	**2.96**	**267**	P		**Pn**	**23 19 04.4**		**+1.5**
MAT				S		**Sn**	**23 19 40.3**		**+1.5**
KSRS	**Korea Array**	**11.17**	**278**	LR		LR	23 24 34.2		
	comp=Z,43nm,19.3s,baz=54,slow=34								
H11N2	**WAKE ISLAND Hy**	**27.68**	**121**	T		T	23 53 22.9		
	baz=313,slow=75,SNR=20								
H11N1	**WAKE ISLAND Hy**	**27.69**	**121**	T		T	23 53 22.6		
	baz=313,slow=75,SNR=16								
H11N3	**WAKE ISLAND Hy**	**27.70**	**121**	T		T	23 53 22.3		
	baz=313,slow=75,SNR=16								
SONM	**Songino Array**	**28.25**	**304**	P		**P**	**23 24 09.9**		**+0.7**
	1.1nm,0.8s,baz=104,slow=9.4,SNR=4.4								
H11S1	**WAKE ISLAND Hy**	**28.39**	**123**	T		T	23 54 14.5		
	baz=314,slow=75,SNR=8.9								
H11S3	**WAKE ISLAND Hy**	**28.39**	**123**	T		T	23 54 17.4		
	baz=314,slow=75,SNR=10								
H11S2	**WAKE ISLAND Hy**	**28.41**	**123**	T		T	23 54 22.1		
	baz=314,slow=75,SNR=7.6								
ZALV	**Zalesovo Beam**	**42.38**	**313**	P		**P**	**23 26 10.2**		**0.0**
	0.4nm,0.3s,baz=96,slow=6.6,SNR=3.2								
MKAR	**Makanchi Array**	**44.58**	**302**	P		**P**	**23 26 28.0**		**-0.1**
	0.7nm,0.9s,baz=93,slow=8.0,SNR=5.5								
WRA	**Warramunga Arr**	**56.84**	**188**	P		**P**	**23 28 00.2**		**-0.5**
	0.2nm,0.3s,baz=5.0,slow=7.3,SNR=3.5								

BJI ***10*** *23:27:32.8±0.0, 5.77N×126.11E, h140km, mB4.9/13, mb4.5/17*

MAN ***10*** *23:27:35.8, 6.06N×125.95E, h127km, MS3.8*

IDC ***10*** *23:27:36.7±0.8, 6.27N×125.98E, h143km±7km, mb3.9/17, mb1 4.1/21, mb1mx3.9/40, mbtmp4.4/21, Error ellipse: s-maj=19.6km s-min=9.1km az=65.0*

DJA ***10*** *23:27:36.4±0.4, 6.1N±4.4×12.6E±*, h127km±5km, M4.8/16, mb4.8/16, mB5.3/6, MLv4.9/9, Mw(mB)4.7/6*

NEIC ***10*** *23:27:37.0±1.5, 6.18N±0.07×125.99E±0.07, h144km±5km, mb4.4/59, Error ellipse: s-maj=11.9km s-min=7.1km az=223.0*

ISC 10 23:27:36.5±0.6, 6.15N±0.04×125.97E±0.05, h140km±5km, n121, σ1§48/136, mb4.4/50, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.27**	**259**	*e*P		**Pn**	**23 27 55.5**		**-0.2**
DDMP				*e*S		**Sn**	**23 28 08.2**		**-2.0**
MATI	**Mati**	**0.83**	**20**	*e*P		**Pn**	**23 27 58.7**		**-0.3**
MATI				*e*S		**Sn**	**23 28 15.7**		**-0.4**
DAV	**Davao City (W)**	**0.99**	**337**	P		**Pn**	**23 28 00.1**		**-0.1**
	116nm,0.3s,baz=125,slow=1.8,SNR=23								
DAV				S		**Sn**	**23 28 17.1**		**-1.2**
	408nm,0.3s,baz=115,slow=19,SNR=8.1								
DAV	**Davao City (W)**	**0.99**	**337**	Pn		**Pn**	**23 28 00.6**		**+0.3**
DMPH	**Davao City--Mi**	**1.03**	**333**	*e*P		**Pn**	**23 27 58.2**		**-2.5**
KCP	**Kidapawan**	**1.22**	**314**	*i*P		**Pn**	**23 28 02.6**		**+0.1**
KCP				*e*S		**Sn**	**23 28 22.2**		**-0.1**
SKMP	**Bagumbayan, Su**	**1.47**	**284**	*e*P		**Pn**	**23 28 04.1**		**-0.8**
SKMP				*e*S		**Sn**	**23 28 25.9**		**-0.8**
BUKP	**Musuan**	**1.94**	**332**	*e*P		**Pn**	**23 28 10.6**		**+0.2**
BUKP				*e*S		**Sn**	**23 28 37.0**		**+0.7**
CTBH	**Cotabato--PC H**	**2.02**	**302**	*i*P		**Pn**	**23 28 10.6**		**-0.6**
CGP	**Cagayan de Oro**	**2.62**	**331**	*e*P		**Pn**	**23 28 18.3**		**-0.3**
CGP				*e*S		**Sn**	**23 28 51.9**		**+0.8**
BUTP	**Butuan**	**2.82**	**353**	*e*P		**Pn**	**23 28 23.0**		**+1.8**
BUTP				*e*S		**Sn**	**23 29 00.2**		**+4.5**
MSLP	**Maasin**	**4.11**	**344**	*e*S		**Sn**	**23 29 18.1**		**-7.6**
SNPH	**Sibulan**	**4.17**	**320**	*i*S		**Sn**	**23 29 26.7**		**-0.6**
TNTI	**Ternate**	**5.52**	**165**	P		**Pn**	**23 28 56.0**		**-0.8**
	1.2nm4µm252nm,0.7s								
TNTI	**Ternate**	**5.52**	**165**			**Pn**	**23 28 56.8**		**0.0**
MRSI	**Marisa**	**6.93**	**216**	P		**Pn**	**23 29 16.8**		**+1.2**
	1.0nm882nm58nm,0.5s								
LUWI	**Luwuk**	**7.83**	**204**	P		**Pn**	**23 29 28.9**		**+1.2**
	0.8nm14µm55nm,0.7s								
LUWI	**Luwuk**	**7.83**	**204**	Pn		**Pn**	**23 29 25.2**		**-2.5**
SANI	**Sanana**	**8.15**	**180**	P		**Pn**	**23 29 29.1**		**-2.9**
	3µm118nm,0.7s								
SWI	**Sorong**	**8.74**	**143**	P		**Pn**	**23 29 40.9**		**+1.0**
	0.2nm43nm,0.6s								
SIJI	**Sorong**	**8.75**	**143**	P		**Pn**	**23 29 40.1**		**0.0**
	9.0nm,0.3s,baz=343,slow=14,SNR=16								
SIJI				S		**Sn**	**23 31 12.8**		**-4.4**
	1.0nm,0.3s,baz=270,slow=20,SNR=3.0								
NLAI	**Namlea**	**9.40**	**173**	P		**Pn**	**23 29 47.1**		**-1.6**
	2µm90nm,0.7s								
FAKI	**Fak Fak**	**10.98**	**145**	Pn		**Pn**	**23 30 10.2**		**+0.4**
TTSI	**Tana Toraja**	**11.01**	**214**	P		**Pn**	**23 30 14.2**		**+4.0**
	31nm,1.3s								
BNSI	**Bone**	**12.01**	**209**	P		**P**	**23 30 27.1**		**-3.2**
	44nm,0.8s								
KAPI	**Kappang**	**12.71**	**209**	P		**Pn**	**23 30 34.7**		**+2.2**
	1.0nm,0.3s,baz=11,slow=16,SNR=4.0								
KBKI	**Kotabaru**	**13.57**	**226**	P		P	23 30 54.6		+7.0
SBUM	**Sibu**	**14.20**	**256**	P		**P**	**23 30 54.5**		**-0.1**
SOEI	**Soe**	**15.90**	**186**	P		**P**	**23 31 14.3**		**+0.8**
SOEI				IAmb		IAmb	23 31 32.5		
	comp=Z,21nm,0.8s								
BATI	**Baumata**	**16.41**	**188**	P		**P**	**23 31 20.6**		**+1.4**
	comp=Z,17nm,0.3s,baz=324,slow=2.2,SNR=11								
PLAI	**Plampang**	**16.98**	**209**	P		**Pn**	**23 31 27.6**		**+1.8**
	comp=Z,46nm,0.8s								
JAY	**Jayapura**	**17.05**	**120**	P		**Pn**	**23 31 26.8**		**+0.2**
	comp=Z,1.0nm,0.3s,baz=288,slow=20,SNR=2.9								
YULB	**Yu-li**	**17.72**	**346**	P		**Pn**	**23 31 34.6**		**0.0**
YULB				IAmb		IAmb	23 31 37.0		
	comp=Z,9.4nm,0.9s								
DLV	**T Lat**	**18.20**	**290**	P		**P**	**23 31 39.2**		**+0.2**
DLV				IAmb		IAmb	23 31 42.3		
	comp=Z,18nm,0.6s								
MTN	**Manton Dam**	**19.56**	**165**	P		**P**	**23 31 54.7**		**+1.2**
MTN				IAmb		IAmb	23 32 09.8		
	comp=Z,14nm,0.5s								
UGM	**Wanagama**	**20.80**	**228**	P		Pn	23 32 09.8		-1.3
KNRA	**Kununurra**	**21.86**	**173**	P		**P**	**23 32 19.1**		**+0.8**
KNRA				IAmb		IAmb	23 32 24.3		
	comp=Z,19nm,0.7s								
LEM	**Lembang**	**22.40**	**235**	P		**P**	**23 32 25.7**		**+1.9**
	comp=Z,28nm,0.6s,baz=62,slow=4.0,SNR=5.4								
MYKOM	**Kota Tinggi**	**22.49**	**260**	P		**P**	**23 32 25.5**		**+1.0**
MYKOM				IAmb		IAmb	23 32 37.0		
	comp=Z,18nm,1.1s								
FITZ	**Fitzroy Crossi**	**24.10**	**181**	P		**P**	**23 32 40.0**		**+0.8**
	comp=Z,5.4nm,0.4s,baz=356,slow=8.5,SNR=29								
FITZ	**Fitzroy Crossi**	**24.10**	**181**	P		**P**	**23 32 40.3**		**+1.0**
FITZ				IAmb		IAmb	23 32 40.6		
	comp=Z,14nm,1.1s								
MDSI	**Maura Dua**	**24.19**	**245**	P		**P**	**23 32 43.7**		**+3.5**
	comp=Z,15nm,1.0s								
KULM	**Kulim**	**25.21**	**269**	P		**P**	**23 32 50.2**		**+0.7**
KULM				IAmb		IAmb	23 33 05.6		
	comp=Z,17nm,1.1s								
BKNI	**Bangkinang**	**25.55**	**258**	P		**P**	**23 32 52.7**		**+0.2**
PMG	**Port Moresby**	**26.17**	**126**	P		**P**	**23 32 58.6**		**+0.6**
	comp=Z,8.7nm,0.4s,baz=291,slow=4.7,SNR=6.1								
PMG	**Port Moresby**	**26.17**	**126**	P		**P**	**23 32 57.8**		**-0.2**
COEN	**Coen**	**26.28**	**140**	P		**P**	**23 32 59.5**		**+0.3**
COEN				IAmb		IAmb	23 33 04.3		
	comp=Z,17nm,0.8s								
PDSI	**Padang**	**26.42**	**255**	P		**P**	**23 33 01.2**		**+0.8**
	comp=Z,13nm,0.5s								
PBKT	**Sadao Pong**	**26.57**	**295**	P		**P**	**23 33 02.8**		**+1.1**
NJ2	**Nanjing**	**26.61**	**346**	*e*P		**P**	**23 33 02.6**		**+0.7**
NJ2				pmax		pmax			
	comp=Z,8.0nm,0.5s								
WRAB	**Tennant Creek**	**27.20**	**163**	P		**P**	**23 33 08.3**		**+1.0**
WRAB				IAmb		IAmb	23 33 19.2		
	comp=Z,5.9nm,0.6s								
WRA	**Warramunga Arr**	**27.21**	**163**	P		**P**	**23 33 07.4**		**0.0**
	comp=Z,1.3nm,0.4s,baz=344,slow=10,SNR=6.3								
WRA				PcP		**PcP**	**23 36 24.6**		**+0.4**
	comp=Z,0.5nm,0.5s,baz=344,slow=2.2,SNR=2.7								
MBWA	**Marble Bar**	**27.83**	**193**	P		**P**	**23 33 13.2**		**+0.3**
MBWA				IAmb		IAmb	23 33 20.7		
	comp=Z,11nm,1.0s								
SISI	**Saibi**	**27.85**	**255**	P		**P**	**23 33 12.8**		**-0.4**
	comp=Z,64nm,0.5s								
PSA00	**Pilbara Seismi**	**28.20**	**192**	P		**P**	**23 33 16.1**		**0.0**
GSI	**Gunungsitoli**	**28.74**	**261**	P		**P**	**23 33 20.1**		**-1.0**
GSI				IAmb		IAmb	23 33 20.6		
	comp=Z,18nm,1.0s								
CMAR	**Chiang Mai Arr**	**29.05**	**297**	P		**P**	**23 33 24.1**		**+0.3**
	comp=Z,0.9nm,0.3s,baz=103,slow=6.7,SNR=5.4								
CMAR				PcP		**PcP**	**23 36 29.8**		**+1.0**
	comp=Z,0.7nm,0.3s,baz=132,slow=1.3,SNR=4.8								
CMAR				ScP		**ScP**	**23 39 57.7**		**+0.2**
	comp=Z,0.6nm,0.3s,baz=104,slow=3.0,SNR=5.1								
AS31	**Alice Springs**	**30.63**	**166**	P		**P**	**23 33 38.0**		**+0.3**
ASAR	**Alice Springs**	**30.63**	**166**	P		**P**	**23 33 38.2**		**+0.5**
	comp=Z,2.4nm,0.4s,baz=340,slow=6.8,SNR=58								
ASAR				PcP		**PcP**	**23 36 32.9**		**+0.1**
	comp=Z,1.3nm,0.5s,baz=345,slow=2.6,SNR=9.1								
CTA	**Charters Tower**	**32.83**	**143**	P		**P**	**23 33 58.7**		**+1.7**
	comp=Z,8.1nm,1.0s,baz=310,slow=11,SNR=3.5								
LZH	**Lanzhou**	**36.05**	**329**	⇑P		**P**	**23 34 26.5**		**+1.8**
LZH				pP		pP	23 34 58.3		+3.0
LZH				sP		sP	23 35 15.4		+4.0
LZH				PP		**PnPn**	**23 35 53.6**		**+3.0**
LZH				pmax		pmax			
	comp=Z,21nm,1.0s								
LZH				pmax		pmax			
	comp=Z,67nm,4.9s								
MORW	**Morawa**	**36.30**	**195**	P		**P**	**23 34 26.9**		**+0.2**
MORW				IAmb		IAmb	23 34 35.7		
	comp=Z,12nm,1.1s								
FORT	**Forrest**	**36.78**	**177**	P		**P**	**23 34 31.2**		**+0.5**
HHC	**Hu-ho-hao-te**	**36.88**	**342**	*e*P		**P**	**23 34 36.1**		**+4.5**
HHC				pmax		pmax			
	comp=Z,5.0nm,1.0s								
HHC				pmax		pmax			
	comp=Z,58nm,4.3s								
SHL	**Shillong**	**37.87**	**304**	P		**P**	**23 34 40.6**		**+0.4**
SHL				IAmb		IAmb	23 34 41.0		
	comp=Z,8.6nm,0.6s								
EIDS	**Eidsvold**	**39.72**	**143**	P		**P**	**23 34 55.8**		**+0.3**
NWAO	**Narrogin (SRO)**	**39.74**	**192**	P		**P**	**23 34 55.9**		**+0.4**
NWAO	**Narrogin (SRO)**	**39.74**	**192**	IAmb		IAmb	23 34 58.0		
	comp=Z,14nm,0.8s								
BBOO	**Buckleboo**	**39.92**	**167**	P		**P**	**23 34 58.0**		**+1.1**
STKA	**Stephens Creek**	**40.65**	**159**	P		**P**	**23 35 04.1**		**+1.1**
	comp=Z,2.7nm,0.5s,baz=326,slow=8.4,SNR=4.4								
STKA	**Stephens Creek**	**40.65**	**159**	IAmb		IAmb	23 35 13.8		
	comp=Z,0.8nm,0.9s								
ARMA	**Armidale**	**43.90**	**147**	P		**P**	**23 35 30.5**		**+1.0**
ARMA				IAmb		IAmb	23 35 47.9		
	comp=Z,7.3nm,1.1s								
SONM	**Songino Array**	**44.77**	**341**	P		**P**	**23 35 36.0**		**-0.2**
	comp=Z,0.3nm,0.4s,baz=134,slow=4.2,SNR=3.2								
SONM				PcP		**PcP**	**23 37 16.1**		**+0.2**
	comp=Z,0.4nm,0.6s,baz=160,slow=4.4,SNR=5.2								
DZM	**Mont Dzumac**	**48.56**	**127**	P		**P**	**23 36 06.3**		**+0.3**
DZM				IAmb		IAmb	23 36 16.5		
	comp=Z,19nm,1.1s								
WMQ	**Urumqi**	**50.32**	**324**	*e*P		**P**	**23 36 20.5**		**+1.4**
WMQ				pmax		pmax			
	comp=Z,5.0nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,88nm,4.1s								
MK31	**Makanchi Array**	**55.15**	**325**	P		**P**	**23 36 53.8**		**-0.7**
MK31				PcP		**PcP**	**23 37 53.7**		**-0.3**
MKAR	**Makanchi Array**	**55.15**	**325**	P		**P**	**23 36 53.5**		**-1.0**
	comp=Z,1.3nm,0.5s,baz=116,slow=8.1,SNR=21								
MKAR				PcP		**PcP**	**

baz=299
NDT Datong Townshi 0.36 291 P Pb 23 31 45.9 +0.7
baz=290
NDT S Sb 23 31 51.2 +0.4
baz=290
NACB Ninganchiao 0.40 221 *e*P Pg 23 31 44.9 -0.3
baz=221
NACB *e*S Sg 23 31 50.9 +0.2
baz=221
ETLH Xiulin Townshi 0.45 234 *e*S Sg 23 31 52.6 +0.2
baz=233
NNSH Datong 0.46 264 *e*S Sb 23 31 53.5 -0.1
baz=264
NWLT Wulai 0.46 311 *e*S Sb 23 31 53.7 +0.1
baz=310
TIPB Shuangxi 0.50 354 *e*S Sb 23 31 55.1 +0.4
baz=353
YHNB Yeheng 0.50 293 *e*P Pb 23 31 48.6 +0.9
baz=292
YHNB *e*S Sb 23 31 55.1 +0.2
baz=292
YHNB Yeheng 0.50 293 P Pb 23 31 48.2 +0.5
YHNB IAmb IAmb 23 32 03.6
comp=Z,22nm,1.1s
NSK Sanguang 0.52 293 S Sb 23 31 55.6 +0.3
baz=292

*IDC **11** 00:02:01.8±0.7,20°.82N×146°.79E,h0km,mb3.9/16, mb1 4.1/16,mb1mx4.0/41,mbtmp3.9/16,Error ellipse: s-maj=23.8km s-min=16.9km az=84.0*
*NEIC **11** 00:02:05.1±1.7,20°.8N±0°.1×146°.8E±0°.2,h23km±6km, mb4.6/16,Error ellipse: s-maj=22.5km s-min=17.6km az=63.0*
ISC 11 00:02:07.7±0.7,**20°.8N**±0°.1×**146°.8E**±0°.1,**h40**km,**n44,** σ0s**70**/45,**mb4.3**/28,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**23.31**	**319**	P		**P**	**00 07 11.2**	**-0.9**
	1.7nm,0.6s,baz=149,slow=8.7,SNR=5.8							
USA0B	**Ussuriysk Arra**	**26.37**	**336**	P		**P**	**00 07 39.8**	**-0.2**
USRK	**Ussuriysk Ar.**	**26.37**	**336**	P		**P**	**00 07 41.4**	**+1.3**
	2.5nm,0.6s,baz=147,slow=8.5,SNR=5.6							
SONM	**Songino Array**	**42.18**	**319**	P		**P**	**00 09 56.3**	**-0.3**
	0.6nm,0.7s,baz=140,slow=9.1,SNR=3.4							
WRA	**Warramunga Arr**	**42.31**	**198**	P		**P**	**00 09 57.3**	**-0.4**
	1.5nm,0.7s,baz=14,slow=8.5,SNR=16							
WRA				PcP		**PcP**	**00 11 52.0**	**+1.0**
	2.2nm,1.0s,baz=11,slow=3.5,SNR=6.6							
ASAR	**Alice Springs**	**45.97**	**197**	P		**P**	**00 10 26.0**	**-1.1**
	0.6nm,0.7s,baz=19,slow=8.1,SNR=7.8							
ASAR				PcP		**PcP**	**00 12 04.3**	**+0.9**
	0.4nm,0.5s,baz=30,slow=2.5,SNR=5.3							
TAPN	**Taplejung**	**53.93**	**289**	*e*P		**P**	**00 11 28.5**	**+0.6**
ODAN	**Odare**	**54.27**	**289**	*e*P		**P**	**00 11 30.4**	**+0.1**
RAMN	**Ramite**	**54.96**	**289**	*e*P		**P**	**00 11 35.7**	**+0.4**
JIRN	**Jiri**	**55.23**	**290**	*e*P		**P**	**00 11 37.9**	**+0.4**
GUN	**Gumba**	**55.47**	**290**	*e*P		**P**	**00 11 39.7**	**+0.5**
	6.7nm,0.5s							
PKI	**Pulchoki**	**55.93**	**290**	*e*P		**P**	**00 11 42.5**	**+0.1**
	0.7nm,0.4s							
PKIN	**Phulchoki**	**55.94**	**290**	*e*P		**P**	**00 11 42.3**	**-0.1**
	4.3nm,0.5s							
KKN	**Kakani**	**56.01**	**290**	*e*P		**P**	**00 11 43.0**	**+0.1**
DMN	**Daman**	**56.19**	**290**	*e*P		**P**	**00 11 44.4**	**+0.2**
ZAA0	**Zalesovo Array**	**56.99**	**322**	P		**P**	**00 11 48.8**	**-0.4**
ZALV	**Zalesovo Beam**	**56.99**	**322**	P		**P**	**00 11 48.8**	**-0.4**
	2.8nm,0.5s,baz=107,slow=6.7,SNR=17							
ZALV				PcP		**PcP**	**00 12 43.9**	**-0.1**
	1.6nm,0.9s,baz=108,slow=4.8,SNR=3.8							
DANN	**Dangsing**	**57.27**	**291**	*e*P		**P**	**00 11 52.4**	**+0.5**
	61nm,0.7s							
MK31	**Makanchi Array**	**57.77**	**313**	P		**P**	**00 11 55.1**	**+0.2**
MKAR	**Makanchi Array**	**57.77**	**313**	P		**P**	**00 11 54.3**	**-0.5**
	0.5nm,0.5s,baz=94,slow=8.3,SNR=11							
MKAR				PcP		**PcP**	**00 12 47.4**	**+0.1**
	0.3nm,0.5s,baz=85,slow=4.8,SNR=2.6							
MAKZ	**Makanchi**	**57.99**	**313**	P		**P**	**00 11 56.7**	**+0.4**
KURK	**Kurchatov**	**60.41**	**317**	P		**P**	**00 12 12.9**	**-0.1**
KURK				IAmb		IAmb	00 12 13.7	
	comp=Z,4.2nm,0.7s							
SCM	**Sheep Creek Mo**	**60.49**	**30**	P		**P**	**00 12 14.1**	**+0.6**
ILAR	**Eielson Array**	**61.29**	**27**	P		**P**	**00 12 17.8**	**-1.0**
	comp=Z,0.2nm,0.6s,baz=260,slow=5.1,SNR=3.8							
BALM	**Baldy**	**62.74**	**31**	P		**P**	**00 12 29.2**	**+0.5**
BALM				IAmb		IAmb	00 12 30.5	
	comp=Z,4.1nm,1.0s							
BARN	**Barnard Glacie**	**63.07**	**31**	P		**P**	**00 12 29.0**	**-2.0**
BARN				IAmb		IAmb	00 12 36.6	
	comp=Z,5.9nm,1.2s							
NIL	**Nilore**	**65.43**	**298**	P		**P**	**00 12 47.6**	**+0.9**
KK31	**Karatay Array**	**66.24**	**309**	IAmb		IAmb	00 12 52.9	
	comp=Z,4.8nm,0.8s							
KKAR	**Karatay Array**	**66.24**	**309**	IAmb		IAmb	00 12 52.9	
	comp=Z,4.8nm,0.8s							
KBL	**Kabul**	**68.71**	**300**	P		**P**	**00 13 08.1**	**+0.3**
ARU	**Arti**	**71.96**	**324**	P		**P**	**00 13 26.6**	**-0.3**
	comp=Z,1.3nm,0.4s,baz=61,slow=3.5,SNR=11							
ARU	**Arti**	**71.96**	**324**	P		**P**	**00 13 26.0**	**-0.9**
ARU				IAmb		IAmb	00 13 27.8	
	comp=Z,7.0nm,0.9s							
ABKAR	**Akbulak array**	**72.51**	**317**	IAmb		IAmb	00 13 31.0	
	comp=Z,3.0nm,0.7s							
YKA	**Yellowknife Ar**	**75.64**	**28**	P		**P**	**00 13 48.8**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=289,slow=5.5,SNR=8.4							
PNTR	**Pine Nut**	**79.85**	**52**	P		**P**	**00 14 12.9**	**+0.4**
PNTR				IAmb		IAmb	00 14 26.4	
	comp=Z,5.2nm,1.2s							
ARCES	**ARCESS Array B**	**80.80**	**342**	P		**P**	**00 14 17.0**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=54,slow=6.3,SNR=7.3							
NVAR	**Mina Array Bea**	**81.02**	**52**	P		**P**	**00 14 20.1**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=267,slow=5.3,SNR=7.2							
RLMT	**Red Lodge**	**84.83**	**44**	P		**P**	**00 14 37.5**	**-1.0**
KBZ	**Khabaz**	**85.39**	**315**	P		**P**	**00 14 41.8**	**+0.9**
	comp=Z,2.5nm,0.9s,baz=68,slow=8.8,SNR=5.0							
FIA1	**FINESS Array S**	**85.40**	**336**	P		**P**	**00 14 40.2**	**-0.5**
FINES	**FINESS Array B**	**85.40**	**336**	P		**P**	**00 14 40.2**	**-0.5**
	comp=Z,6.1nm,0.5s,baz=68,slow=4.7,SNR=50							
PDAR	**Pinedale Array**	**85.60**	**46**	P		**P**	**00 14 41.4**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=302,slow=5.2,SNR=3.0							
AKASG	**Malin Array Be**	**90.16**	**326**	P		**P**	**00 15 03.3**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=39,slow=5.3,SNR=5.0							
TXAR	**Lajitas Array**	**95.79**	**56**	P		**P**	**00 15 30.8**	**+0.6**
	comp=Z,0.1nm,0.6s,baz=293,slow=4.7,SNR=2.7							

HEL 11 00:36:19.0,67°.89N×19°.94E,h0km,ML1.4,Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RATU	**Laukkuluspa**	**0.15**	**242**	*i* P		Pg	00 36 25.0	+3.1
RATU				*i* S		Sg	00 36 27.6	+3.9
KUA	**Kurravaara**	**0.16**	**67**	*i* P		Pg	00 36 23.0	+0.9
KUA				*i* S		Sg	00 36 24.8	+0.6
KOVU	**Salmi**	**0.34**	**14**	*i* P		Pb	00 36 27.8	-0.2
KOVU				*i* S		Sb	00 36 32.8	-1.2
LANU	**Lannavaara**	**0.79**	**78**	*e*P		Pg	00 36 33.7	-0.4
	baz=265							
LANU				*e*S		Sg	00 36 43.0	-1.2
DUNU	**Dundret**	**0.81**	**162**	*i* P		Pg	00 36 34.1	-0.4
DUNU				*i* S		Sg	00 36 43.9	-1.1
KIF	**Kilpisjarvi**	**1.16**	**15**	MSG			00 36 55.3	
	comp=Z,3.3nm,0.2s							
KIF				*e*S		Sn	00 36 58.8	-0.2
HEF	**Hetta**	**1.48**	**68**	*e*P		Pn	00 36 46.4	-0.5
	baz=251							
HEF				MSG			00 37 03.6	
	comp=Z,1.9nm,0.2s							
HEF				*e*S		Sg	00 37 04.7	-2.0
PAJU	**Pajala**	**1.50**	**124**	*e*P		Pn	00 36 46.0	-1.2
PAJU				*e*S		Sg	00 37 04.6	-2.6
ERTU	**Ertsjaerv**	**1.60**	**146**	*e*P		Pn	00 36 48.0	-0.6
	baz=313							
ERTU				*e*SN		Sn	00 37 08.7	-1.2
HARU	**Harads**	**1.78**	**166**	*e*P		Pn	00 36 51.5	+0.5
TOF	**Tornio**	**2.51**	**135**	MSG			00 37 33.1	
	comp=Z,1.3nm,0.2s							
TOF				*e*SG		Sb	00 37 34.6	-1.5
SGF	**Sodankyl**	**2.56**	**97**	*e*SG		Sb	00 37 36.5	-1.0
VRF	**Varrio**	**3.67**	**88**	*e*		Pn	00 37 13.6	-3.3
OBF0	**Syolatti, Pyha**	**3.83**	**151**	*e*S		Sn	00 38 01.3	-3.3
UMAU	**Umeaa**	**4.04**	**175**	*e*PB		Pb	00 37 30.6	-0.3
	baz=10.0							

KRNET 11 00:36:47.5±0.1,**42°.49N**×**74°.08E,h21**km,**mb1.5,11C-1D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**0.28**	**308**	⇑*i* P		Pb	00 36 53.6	-0.5
	baz=8.0							
EKS2				⇑*i* S		Sb	00 36 58.3	-0.4
	baz=8.0							
AAK	**Ala-Archa**	**0.34**	**64**	⇑*i* P		Pb	00 36 54.5	-0.4
	baz=64							
AAK				⇑*i* S		Sb	00 36 59.6	-0.5
	baz=64							
UCH	**Uchtor**	**0.41**	**129**	⇑*i* P		Pb	00 36 56.0	-0.3
	baz=29							
UCH				⇑*i* S		Sb	00 37 02.1	-0.2
	baz=29							
AML	**Almayashu**	**0.46**	**219**	⇑*i* P		Pb	00 36 56.5	-0.5
	baz=19							
AML				⇑*i* S		Sb	00 37 02.9	-0.5
	baz=19							
ARLS	**Aral**	**0.65**	**164**	⇑*i* P		Pb	00 36 59.7	-0.7
	baz=63							
KBK	**Karagaybulak**	**0.67**	**75**	⇓*i* P		Pb	00 37 00.3	-0.3
	baz=75							
USP	**Ospenovka**	**0.84**	**22**	⇑*i* P		Pb	00 37 03.4	0.0
	baz=22							
USP				⇑*i* S		Sb	00 37 14.8	+0.5
	baz=22							

KRNET 11 00:36:56.4±0.1,**42°.48N**×**74°.06E,h27**km,**mb1.5,19C-1D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EKS2	**Erkin-Say**	**0.28**	**311**	⇑*i* P		Pb	00 37 03.1	-0.4
	baz=11							
EKS2				⇑*i* S		Sb	00 37 07.8	-0.5
	baz=11							
AAK	**Ala-Archa**	**0.36**	**63**	⇑*i* P		Pb	00 37 04.3	-0.3
	baz=63							
AAK				⇑*i* S		Sb	00 37 09.2	-1.0
	baz=63							
UCH	**Uchtor**	**0.42**	**127**	⇑*i* P		Pb	00 37 05.7	0.0
	baz=27							
UCH				⇑*i* S		Sb	00 37 11.8	-0.3
	baz=27							
AML	**Almayashu**	**0.44**	**218**	⇑*i* P		Pb	00 37 06.3	+0.2
	baz=18							
AML				⇑*i* S		Sb	00 37 12.6	0.0
	baz=18							
ARLS	**Aral**	**0.65**	**162**	⇑*i* P		Pb	00 37 08.8	-0.5
	baz=62							
ARLS				⇑*i* S		Sb	00 37 17.8	-0.2
	baz=62							
ARLS	**Aral**	**0.65**	**162**	⇑*i* S		Pb	00 37 09.0	-0.3
	baz=63							
KBK	**Karagaybulak**	**0.68**	**74**	⇑*i* P		Pb	00 37 09.8	0.0
	baz=74							
KBK				⇑*i* S		Sb	00 37 19.0	0.0
	baz=74							
KBK	**Karagaybulak**	**0.68**	**74**	⇓*i* S		Pb	00 37 09.5	-0.3
	baz=75							
USP	**Ospenovka**	**0.85**	**22**	⇑*i* P		Pn	00 37 13.2	+0.5
	baz=22							
USP				⇑*i* S		Sn	00 37 24.6	+0.2
	baz=22							
ARSB	**Arslanbob**	**1.41**	**215**	⇑*i* P		Pb	00 37 22.1	0.0
	baz=15							
ARSB				⇑*i* S		Sb	00 37 40.4	+0.7
	baz=15							
ARK	**Arkit**	**1.70**	**247**	⇑*e*P		Pb	00 37 26.6	-0.5
	baz=46							
ARK				⇑*i* S		Sb	00 37 48.4	+0.2
	baz=46							

UPP 11 00:37:07.3±0.2,**67°.82N**×**20°.18E,h1**km,**ML1.6, Explosion,Sweden**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KOVU	**Salmi**	**0.41**	**359**	P		Pg	00 37 15.0	-0.1
	baz=150							
KOVU				S		Sg	00 37 20.4	0.0
LANU	**Lannavaara**	**0.72**	**70**	P		Pg	00 37 20.7	-0.4
KIF	**Kilpisjarvi**	**1.22**	**11**	*e*P		Pb	00 37 31.1	0.0
PAJU	**Pajala**	**1.38**	**124**	P		Pn	00 37 32.7	-1.1
PAJU				S		Sg	00 37 50.9	-0.8
HEF	**Hetta**	**1.43**	**64**	*e*P		Pn	00 37 33.4	-0.9
ERTU	**Ertsjaerv**	**1.49**	**147**	S		Sg	00 37 54.9	-0.2
HARU	**Harads**	**1.69**	**169**	P		Pn	00 37 38.2	+0.3

MAN 11 00:54:33.8,11°.24N×124°.22E,h1km,**mb4.1,ML2.9,MS2.5, 1D,Leyte**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.42**	**116**	*e*P		Pg	00 54 40.7	-1.1
OCLP				*e*S		Sg	00 54 42.8	-4.5
LLP	**Lapu-Lapu**	**0.95**	**196**	⇓*i* P		Pg	00 54 52.1	+0.1
LLP				*e*S		Sg	00 54 58.2	-6.2
MSLP	**Maasin**	**1.26**	**150**	*e*P		Pn	00 54 58.5	-0.1
MSLP				*e*S		Sg	00 55 08.6	-5.7

*SNET **11** 00:58:24.7±1.3,13°.41N×90°.75W,h19km±14km,ML3.4*
*GCG **11** 00:58:28.1±0.4,13°.80N×90°.69W,h65km±11km,MD3.8*
ISC 11 00:58:26.9±2.4,**13°.5N**±0°.2×**90°.77W**±0°.09,**h38**km,**n13,** σ0s**78**/17,**1C-1D,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.71**	**27**	*e*P		**Pn**	**00 58 39.6**	**-0.9**
IXG	**Ixpaco**	**0.71**	**27**	*e*P		**Pn**	**00 58 40.4**	**-0.1**
FAME	**Alcalda de S**	**0.79**	**67**	⇓*i* P		**Pn**	**00 58 41.1**	**-0.4**
FAME				*e*S		**Sn**	**00 58 52.5**	**+0.2**
FUG	**Fuego 3**	**0.91**	**355**	*e*P		**Pn**	**00 58 43.0**	**-0.3**
NBG	**Las Nubes**	**1.12**	**21**	*e*P		**Pn**	**00 58 45.4**	**-0.9**
RTR	**El Retiro**	**1.15**	**72**	*e*P		**Pn**	**00 58 46.4**	**-0.2**
CEVE	**Cerro Verde**	**1.15**	**75**	*e*P		**Pn**	**00 58 46.1**	**-0.5**
CEVE				*e*S		**Sn**	**00 59 02.6**	**+1.4**
CEVE				IAML			00 59 04.9	
	comp=Z,841nm,0.4s							
SBLS	**San Blas**	**1.15**	**75**	⇑*e*P		**Pn**	**00 58 46.1**	**-0.6**
SBLS				*e*S		**Sn**	**00 59 02.7**	**+1.3**
SNJE	**San Jose**	**1.18**	**74**	*e*P		**Pn**	**00 58 46.1**	**-0.9**
STG3	**Santiaguito 3,**	**1.40**	**326**	*e*P		**Pn**	**00 58 50.2**	**+0.1**
STG3				*e*S		**Sn**	**00 59 07.5**	**+0.1**
LFU	**La Fuente**	**1.62**	**82**	*e*P		**Pn**	**00 58 52.0**	**-1.0**
PAVA	**Las Pavas**	**1.79**	**84**	*e*P		**Pn**	**00 58 55.0**	**-0.3**
COEG	**Centro de Oper**	**1.84**	**87**	*e*P		**Pn**	**00 58 55.5**	**-0.5**

*JMA **11** 01:06:37.9,22°.65N×121°.38E,h37km±3km,M3.5*
*TAP **11** 01:06:39.2,22°.65N×121°.34E,h31km,ML3.5,A*
ISC 11 01:06:38.7±1.1,**22°.65N**±0°.02×**121°.37E**±0°.02,**h34**km±2km, **n80,**σ0s**79**/119,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TWH	**Lutao**	**0.12**	**61**	*i* P		**Pb**	**01 06 44.9**	**+0.2**
	baz=79							
TWH				*i* S		**Sb**	**01 06 49.2**	**+0.4**
	baz=79							
TTN	**Taitung**	**0.23**	**296**	P		**Pb**	**01 06 46.5**	**+0.8**
	baz=301							
TWGBT	**Beinan**	**0.31**	**302**	*e*P		**Pb**	**01 06 46.5**	**-0.2**
	baz=305							
TWGBT				*e*S		**Sb**	**01 06 51.7**	**-0.4**
	baz=305							
TWG	**Pinlang**	**0.32**	**301**	*i* P		**Pb**	**01 06 46.5**	**-0.3**
	baz=305							
TWG				S		**Sb**	**01 06 51.8**	**-0.5**
	baz=305							
ECL	**Taimali**	**0.39**	**262**	P		**Pb**	**01 06 47.1**	**-0.6**
	baz=261							
ECL				S		**Sb**	**01 06 52.9**	**-0.9**
	baz=261							
CHKT	**Chengkung**	**0.44**	**360**	P		**Pn**	**01 06 48.4**	**-0.4**
	baz=4.0							
CHKT				S		**Sn**	**01 06 55.2**	**-0.4**
	baz=4.0							
TAW	**Tawu**	**0.53**	**236**	*e*P		**Pn**	**01 06 49.3**	**-0.6**
	baz=233							
TAW				*e*S		**Sb**	**01 06 56.6**	**-0.7**
	baz=233							
FULB	**Fuli**	**0.55**	**353**	P		**Pb**	**01 06 49.9**	**-0.3**
	baz=355							
FULB				S		**Sn**	**01 06 58.4**	**+0.2**
	baz=355							
EAST	**Anshuo**	**0.55**	**241**	P		**Pn**	**01 06 49.7**	**-0.5**
	baz=239							
EAST				*e*S		**Sb**	**01 06 57.4**	**-0.6**
	baz=239							
ELDTW	**Lidau**	**0.62**	**329**	*e*P		**Pn**	**01 06 50.3**	**-0.9**
	baz=331							
LAY	**Lan-yu**	**0.64**	**164**	P		**Pn**	**01 06 51.1**	**-0.2**
	baz=161							
LAY				*e*S		**Sb**	**01 07 01.1**	**+0.8**
	baz=161							
MASBT	**Mashibuluo**	**0.68**	**267**	*e*P		**Pb**	**01 06 51.9**	**-0.4**
	baz=266							
SSD	**Sandimen**	**0.69**	**278**	P		**Pn**	**01 06 51.7**	**-0.3**
	baz=278							
SSD				*e*S		**Sb**	**01 07 01.5**	**-0.1**
	baz=278							
TWF1	**Yuli**	**0.70**	**355**	*e*P		**Pn**	**01 06 51.3**	**-0.9**
	baz=357							
YULB	**Yu-li**	**0.74**	**355**	*e*P		**Pn**	**01 06 51.7**	**-1.1**
	baz=357							
SCZT	**Fangliau**	**0.75**	**248**	P		**Pb**	**01 06 53.0**	**-0.4**
	baz=247							
SCZT				S		**Sn**	**01 07 02.6**	**-0.5**
	baz=247							
SLGT	**Liugui**	**0.75**	**297**	*e*P		**Pb**	**01 06 53.0**	**-0.3**
	baz=298							
STYT	**Tauyuan**	**0.76**	**312**	P		**Pb**	**01 06 53.1**	**-0.5**
	baz=314							
STYT				*e*S		**Sn**	**01 07 03.0**	**-0.4**
	baz=314							
SSPT	**Xinbi**	**0.76**	**257**	*e*P		**Pb**	**01 06 53.7**	**+0.1**
	baz=256							
SSPT				*e*S		**Sb**	**01 07 04.7**	**+1.0**
	baz=256							
SGST	**Jiashian**	**0.84**	**301**	P		**Pb**	**01 06 54.4**	**-0.5**
	baz=302							
SGST				*e*S		**Sb**	**01 07 06.8**	**+0.9**
	baz=302							
EHY	**Hungye**	**0.85**	**357**	*e*P		**Pn**	**01 06 53.5**	**-0.9**
	baz=359							
TSEB	**Hengchuen, Pin**	**0.87**	**210**	*e*P		**Pb**	**01 06 55.0**	**-0.4**
	baz=210							
TSEB				*e*S		**Sb**	**01 07 07.2**	**+0.6**
	baz=210							
HEN	**Hengchun**	**0.87**	**222**	*e*S		**Sb**	**01 07 06.5**	**-0.3**
	baz=220							
TWKBT	**Hengchun**	**0.88**	**216**	*e*P		**Pn**	**01 06 54.6**	**-0.1**
	baz=214							
TWKBT				*e*S		**Sn**	**01 07 06.2**	**0.0**
	baz=214							
TWK1	**Hengchun**	**0.88**	**216**	P		**Pn**	**01 06 54.6**	**-0.1**
	baz=214							
TWK1				*e*S		**Sn**	**01 07 06.4**	**+0.1**
	baz=214							
WTP	**Ta-pu**	**0.91**	**310**	*e*P		**Pb**	**01 06 56.5**	**+0.3**
	baz=311							
YUS	**Yu-Shan**	**0.92**	**335**	*e*P		**Pn**	**01 06 55.5**	**-0.2**
	baz=336							
TPUB	**Ta-pu**	**0.94**	**314**	*e*P		**Pb**	**01 06 56.7**	**+0.2**
	baz=314							
TPUB				*e*S		**Sb**	**01 07 10.0**	**+1.2**
	baz=314							
CHN1	**Nanshi**	**0.94**	**305**	*e*P		**Pb**	**01 06 57.3**	**+0.7**
	baz=305							
CHN4	**Tsaushan**	**0.99**	**314**	*e*P		**Pb**	**01 06 58.0**	**+0.4**
	baz=315							
ALS	**Alishan**	**1.00**	**329**	*e*P		**Pb**	**01 06 57.4**	**-0.3**
	baz=330							
ALS				*e*S		**Sb**	**01 07 11.5**	**+0.8**
	baz=330							
TWK	**Hsinying**	**1.01**	**307**	*e*P		**Pb**	**01 06 58.1**	**+0.3**
	baz=308							
VWDT	**VWDT**	**1.11**	**349**	*e*P		**Pn**	**01 06 58.2**	**+0.3**
	baz=350							
CHN5	**Tsauling**	**1.13**	**326**	*e*P		**Pb**	**01 07 00.1**	**+0.2**
	baz=327							
WHYT	**Xinyi Township**	**1.14**	**336**	*e*P		**Pb**	**01 07 00.1**	**+0.1**
	baz=336							
WHYT				*e*S		**Sb**	**01 07 14.4**	**-0.2**
	baz=336							
ESL	**Shilin**	**1.16**	**3**	*e*P		**Pb**	**01 06 59.3**	**-1.0**
	baz=4.0							
SSLB	**Suanglung**	**1.19**	**341**	*e*P		**Pb**	**01 06 59.8**	**-1.0**
	baz=342							
ENLB	**Shoufeng**	**1.26**	**10**	*e*P		**Pn**	**01 06 59.6**	**-0.4**
	baz=11							
ENLB				*e*S		**Sb**	**01 07 17.4**	**-0.6**
	baz=11							
SMLT	**Sun Moon Lake**	**1.30**	**341**	*e*P		**Pb**	**01 07 02.0**	**-0.7**
	baz=342							
SMLT				*e*S		**Sb**	**01 07 18.5**	**-0.6**
	baz=342							
OWD	**Renai**	**1.31**	**352**	*e*P		**Pb**	**01 07 01.5**	**-1.3**
	baz=353							
TYC	**Yuchr**	**1.33**	**339**	*e*P		**Pb**	**01 07 03.1**	**-0.1**
	baz=341							
WNT	**Mingjian**	**1.37**	**333**	*e*P		**Pb**	**01 07 04.3**	**+0.5**
	baz=334							
CHGB	**Renai**	**1.41**	**353**	*e*P		**Pn**	**01 07 02.7**	**+0.5**
	baz=353							
DPDB	**Guoxing**	**1.43**	**344**	*e*P		**Pb**	**01 07 04.2**	**-0.7**
	baz=344							
TWD	**Chiawan**	**1.44**	**8**	*e*P		**Pn**	**01 07 02.9**	**+0.5**
	baz=9.0							
NACB	**Ninganchiao**	**1.53**	**8**	*e*P		**Pn**	**01 07 02.9**	**-0.8**
	baz=8.0							
NACB				*e*S		**Sn**	**01 07 23.5**	**+1.1**
	baz=8.0							
ETLH	**Xiulin Townshi**	**1.55**	**4**	*e*P		**Pn**	**01 07 04.6**	**+0.6**
	baz=4.0							
TWT	**Tachien**	**1.60**	**354**	*e*P		**Pb**	**01 07 07.8**	**-0.1**
	baz=354							
TDCB	**Techi**	**1.60**	**353**	*e*P		**Pb**	**01 07 08.0**	**+0.1**
	baz=354							
WHP	**Taichung City**	**1.66**	**347**	*e*P		**Pb**	**01 07 08.1**	**-0.7**
	baz=347							
WDGT	**Dungji**	**1.69**	**291**	*e*P		**Pn**	**01 07 06.7**	**+0.9**
	baz=291							
WDGT				*e*S		**Sn**	**01 07 26.9**	**+0.6**
	baz=291							
TWQ1	**Liyutan**	**1.77**	**342**	*e*P		**Pb**	**01 07 10.1**	**-0.6**
	baz=342							
NANB	**Nanao**	**1.80**	**11**	*e*P		**Pn**	**01 07 07.3**	**-0.1**
	baz=12							
NSY	**Sanyi**	**1.84**	**343**	*e*P		**Pb**	**01 07 11.1**	**-0.

JKRS	**Kuro-shima**	**2.89**	**56**	P	**Pn**	**01 07 23.4**	**+1.0**
JKRS				eS	**Sn**	**01 07 56.1**	**0.0**
VWUC	**VWUC**	**2.92**	**323**	eP	**Pn**	**01 07 23.6**	**+0.8**
	baz=323						
VWUC				eS	**Sn**	**01 07 56.0**	**-0.6**
	baz=323						
JIJ	**Ishigaki jima**	**3.06**	**56**	P	**Pn**	**01 07 25.5**	**+0.7**
JIJ				eS	**Sn**	**01 07 59.8**	**-0.5**
PTMZ	**Houxiangcun**	**3.14**	**320**	eP	**Pn**	**01 07 26.6**	**+0.8**
	baz=319						
PTMZ				eS	**Sn**	**01 08 01.4**	**-0.8**
	baz=319						
KNMB	**Chin-men Tao**	**3.27**	**304**	eS	**Sn**	**01 08 06.2**	**+0.7**
	baz=303						
JISG	**Ishigakijimahi**	**3.31**	**54**	P	**Pn**	**01 07 28.7**	**+0.4**
JISG				S	**Sn**	**01 08 05.5**	**-1.0**
JTJ	**Tarama**	**3.64**	**56**	P	**Pn**	**01 07 33.6**	**+0.9**
JTJ				eS	**Sn**	**01 08 14.8**	**+0.2**
MATB	**Ma-tsu**	**3.71**	**340**	eP	**Pn**	**01 07 34.4**	**+0.6**
	baz=339						
MATB				eS	**Sn**	**01 08 14.9**	**-1.5**
	baz=339						
AXDP	**Jialang**	**3.83**	**306**	eP	**Pn**	**01 07 36.3**	**+0.9**
	baz=306						
AXDP				eS	**Sn**	**01 08 18.3**	**-1.0**
	baz=306						
MHZQ	**Yeshan**	**4.04**	**329**	eP	**Pn**	**01 07 39.1**	**+0.9**
	baz=328						
MHZQ				eS	**Sn**	**01 08 23.5**	**-0.8**
	baz=328						
LYJJ	**Jianjiangzhen**	**4.14**	**340**	eP	**Pn**	**01 07 41.0**	**+1.3**
	baz=339						
LYJJ				eS	**Sn**	**01 08 27.8**	**+0.9**
	baz=339						

NEIC ***11*** *01:31:00.6±1.4,59.°78N±0.°02×152.°85W±0.°07,h13km±6km, Error ellipse: s-maj=5.2km s-min=2.5km az=102.0*
AEIC ***11*** *01:31:00.6±1.6,59.°77N±0.°02×152.°87W±0.°06,h15km±3km, ML2.7/64, Error ellipse: s-maj=4.8km s-min=2.3km az=104.0*
IDC ***11*** *01:31:01.4±3.1,59.°81N×153.°61W,h66km±32km,mb3.2/1, mb1 3.2/4,mb1mx2.9/35,mbtmp3.3/4,ML3.0/3,Error ellipse: s-maj=51.3km s-min=13.1km az=99.0*

ISC 11 01:31:00.5±1.0,59.78N±0.°02×152.87W±0.°04,h14km±8km, n58,σ1§05/70,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ILS	**Iliamna Low So**	**0.21**	**331**		**Pg**	**01 31 05.7**	**+0.4**
IVE	**Iliamna Volcan**	**0.25**	**342**		**Pg**	**01 31 06.3**	**+0.3**
AU2	**Augustine Isla**	**0.48**	**213**		**Pg**	**01 31 09.9**	**-0.1**
AUP	**Augustine Pinn**	**0.50**	**214**		**Pg**	**01 31 10.3**	**-0.1**
AUP					**Sg**	**01 31 17.4**	**+0.3**
AUQ	**Augustine Qik'**	**0.51**	**214**		**Pg**	**01 31 10.3**	**-0.2**
AUQ					**Sg**	**01 31 17.4**	**+0.2**
AUW	**Augustine West**	**0.51**	**217**		**Pg**	**01 31 10.5**	**-0.1**
HOM	**Homer**	**0.63**	**100**		**Pg**	**01 31 12.8**	**0.0**
HOM					**Sb**	**01 31 22.2**	**+0.3**
RED	**Redoubt Volcan**	**0.65**	**4**		**Pg**	**01 31 12.7**	**-0.4**
RED					**Sg**	**01 31 21.7**	**0.0**
NCT	**North Crescent**	**0.79**	**358**		**Pg**	**01 31 15.0**	**-0.8**
NCT					**Sg**	**01 31 25.6**	**-0.6**
DFR	**Drift River**	**0.82**	**6**		**Pg**	**01 31 15.6**	**-0.8**
BRLK	**Bradley Lake**	**1.00**	**90**		**Pb**	**01 31 18.2**	**-1.3**
BRLK					**Sb**	**01 31 32.2**	**-0.4**
BRSE	**Bradley Lake S**	**1.07**	**91**		**Pb**	**01 31 19.6**	**-1.1**
BRSE					**Sb**	**01 31 33.9**	**-0.8**
CAPN	**Captain Cook N**	**1.31**	**40**		**Pg**	**01 31 25.4**	**-0.3**
SPCR	**Spurr Chakacha**	**1.46**	**13**		**Pn**	**01 31 26.0**	**-0.5**
SPCR					**Sn**	**01 31 45.1**	**-0.3**
SPBG	**Spurr Blockage**	**1.51**	**9**		**Pn**	**01 31 27.3**	**+0.3**
SPBG					**Sn**	**01 31 46.7**	**+0.2**
SLKM	**Skilak Lake**	**1.51**	**60**		**Pn**	**01 31 26.1**	**-1.0**
SLKM					**Sn**	**01 31 46.0**	**-0.5**
SPCG	**Spurr Capps Gl**	**1.58**	**15**		**Pn**	**01 31 27.4**	**-0.6**
SEW	**Seward**	**1.75**	**78**		**Pn**	**01 31 30.5**	**+0.3**
SEW					**Sb**	**01 31 54.0**	**+0.1**
SVW2	**Sparrevohn**	**1.89**	**316**		**Pn**	**01 31 31.8**	**-0.4**
FIS	**Fire Island**	**1.90**	**43**		**Pn**	**01 31 32.8**	**+0.5**
KABU	**Katmai Buttres**	**1.96**	**221**		**Pn**	**01 31 32.6**	**-0.7**
SUA	**Susitna One**	**1.99**	**31**		**Pn**	**01 31 34.4**	**+0.7**
KDAK	**Kodiak Island**	**2.01**	**176**	P	**Pn**	**01 31 34.4**	**+0.7**
	11nm,0.3s,baz=7,slow=12,SNR=94						
KDAK				S	**Sn**	**01 31 59.8**	**+1.2**
	5.1nm,0.3s,baz=11,slow=9.4,SNR=4.4						
KDAK	**Kodiak Island**	**2.01**	**176**		**Pn**	**01 31 34.1**	**+0.4**
RC01	**Rabbit Creek A**	**2.03**	**48**		**Pn**	**01 31 34.6**	**+0.4**
SKT	**Skwentna**	**2.31**	**16**		**Pn**	**01 31 39.1**	**+1.2**
PWL	**Port Wells**	**2.50**	**62**		**Pn**	**01 31 41.4**	**+0.7**
OHAK	**Old Harbor**	**2.57**	**185**		**Pn**	**01 31 41.9**	**+0.4**
PMR	**Palmer**	**2.59**	**44**		**Pn**	**01 31 42.2**	**+0.5**
KNK	**Knik Glacier**	**2.72**	**51**		**Pn**	**01 31 44.7**	**+1.0**
GHO	**Glory Hole Cre**	**2.78**	**42**		**Pn**	**01 31 46.1**	**+1.5**
SML	**Sawmill**	**3.01**	**46**		**Pn**	**01 31 48.9**	**+1.2**
PPLA	**Purkeypile**	**3.15**	**6**		**Pn**	**01 31 51.2**	**+1.6**
SCM	**Sheep Creek Mo**	**3.41**	**50**		**Pn**	**01 31 54.4**	**+1.3**
TT01	**Tatalina**	**3.49**	**336**		**Pn**	**01 31 55.1**	**+0.9**
TTA	**Tatalina**	**3.51**	**336**		**Pn**	**01 31 55.2**	**+0.7**
WAT1	**Susitna Watana**	**3.70**	**32**		**Pn**	**01 31 59.5**	**+2.3**
WAT2	**Susitna Watana**	**3.80**	**31**		**Pn**	**01 32 00.4**	**+1.8**
TRF	**Thorofare Moun**	**3.89**	**17**		**Pn**	**01 32 01.2**	**+1.4**
KTH	**Kantishna Hill**	**3.90**	**13**		**Pn**	**01 32 01.1**	**+1.2**
RND	**Reindeer**	**4.12**	**26**		**Pn**	**01 32 04.0**	**+1.2**
CHUM	**Lake Minchumin**	**4.13**	**3**		**Pn**	**01 32 04.1**	**+1.2**
GOAT	**Goat Mountain**	**4.14**	**75**		**Pn**	**01 32 03.8**	**+0.6**
DHY	**Denali Highway**	**4.23**	**36**		**Pn**	**01 32 06.6**	**+2.1**
BPAW	**Bear Paw Mtn.**	**4.43**	**11**	Pn	**Pn**	**01 32 09.1**	**+2.0**
BWN	**Browne**	**4.69**	**19**	Pn	**Pn**	**01 32 09.7**	**-1.0**
GLB	**Gilahina Butte**	**4.76**	**66**		**Pn**	**01 32 12.6**	**+0.9**
PAX	**Paxson**	**4.79**	**45**		**Pn**	**01 32 13.8**	**+1.8**
CCB	**Clear Creek Bu**	**5.43**	**24**		**Pn**	**01 32 23.2**	**+2.4**
RIDG	**Independent Ri**	**5.50**	**40**		**Pn**	**01 32 23.8**	**+2.0**
IL31		**5.74**	**27**		**Pn**	**01 32 27.0**	**+2.1**
ILAR	**Eielson Array**	**5.74**	**27**	P	**Pn**	**01 32 26.8**	**+1.8**
	0.3nm,0.3s,baz=218,slow=14,SNR=13						
ILAR				S	**Sn**	**01 33 31.3**	**+0.8**
	0.0nm,0.3s,baz=216,slow=20,SNR=2.9						
SCRK	**Sand Creek**	**5.95**	**41**		**Pn**	**01 32 28.6**	**+0.6**
IM03		**6.24**	**357**		**Pn**	**01 32 32.7**	**+0.8**
BCAR	**Beaver Creek A**	**6.25**	**53**	Pn	**Pn**	**01 32 32.3**	**+0.1**
PCA	**Pinnacle**	**6.35**	**82**		**Pn**	**01 32 34.4**	**+1.0**
YKA	**Yellowknife Ar**	**18.48**	**65**	P	**Pn**	**01 35 16.0**	**+0.4**
	0.1nm,0.3s,baz=276,slow=9.8,SNR=15						
BRTR	**Keskin Array B**	**80.71**	**355**	P	P	01 43 06.5	-6.4
	0.6nm,0.8s,baz=347,slow=5.0,SNR=2.3						

IDC ***11*** *01:44:12.6±8.0,19.°39S×175.°66W,h221km±76km,mb3.5/6, mb1 3.8/8,mb1mx3.4/51,mbtmp4.1/8,Error ellipse: s-maj=43.9km s-min=21.1km az=175.0*

ISC 11 01:44:12.5±0.9,19.4S±0.°2×175.6W±0.°2,h223km,n11, σ0§62/11,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**16.98**	**258**	P	**P**	**01 47 56.0**	**+0.2**
	0.1nm,0.3s,baz=75,slow=18,SNR=1.7						
URZ	**Urewera**	**19.86**	**197**	P	**P**	**01 48 26.8**	**+0.1**
	1.3nm,0.3s,baz=11,slow=18,SNR=6.0						
CTA	**Charters Tower**	**35.83**	**262**	P	**P**	**01 50 51.3**	**+0.3**
	6.4nm,0.5s,baz=85,slow=9.3,SNR=11						
ASAR	**Alice Springs**	**46.95**	**255**	P	**P**	**01 52 21.6**	**+0.3**
	12nm,0.6s,baz=90,slow=8.5,SNR=149						
WRA	**Warramunga Arr**	**46.97**	**260**	P	**P**	**01 52 21.0**	**-0.5**
	1.4nm,0.3s,baz=96,slow=8.3,SNR=36						
NVAR	**Mina Array Bea**	**78.68**	**42**	P	**P**	**01 55 51.4**	**+1.1**
	0.9nm,0.8s,baz=230,slow=7.7,SNR=6.3						
TXAR	**Lajitas Array**	**84.58**	**57**	P	**P**	**01 56 20.8**	**-0.3**
	0.1nm,0.6s,baz=212,slow=8.2,SNR=3.0						
PDAR	**Pinedale Array**	**86.62**	**42**	P	**P**	**01 56 31.2**	**+0.1**
	0.2nm,0.6s,baz=235,slow=3.2,SNR=2.6						
MKAR	**Makanchi Array**	**112.03**	**314**	PKiKP	**PKiKP**	**02 02 20.2**	**-1.0**
	0.4nm,1.0s,baz=76,slow=1.0,SNR=2.7						
ARCES	**ARCESS Array B**	**128.18**	**351**	PKP	**PKPdf**	**02 02 51.0**	**-0.5**
	3.5nm,1.1s,baz=66,slow=2.2,SNR=4.7						
MMAI	**Mount Meron Ar**	**149.13**	**302**	PKPbc	**PKiKP**	**02 03 36.3**	**+0.2**
	0.6nm,0.4s,baz=76,slow=7.0,SNR=6.3						

IDC ***11*** *01:48:10.3±0.6,0.°00N×123.°27E,h136km±6km,mb3.8/19, mb1 3.9/21,mb1mx3.7/52,mbtmp4.2/21,MS2.6/1,*

Ms1 2.6/1,ms1mx2.2/41,Error ellipse: s-maj=17.1km s-min=8.4km az=76.0
NEIC ***11*** *01:48:10.9±2.1,0.°02S±0.°08×123.°21E±0.°07,h143km±6km, mb4.3/16,Error ellipse: s-maj=13.1km s-min=9.2km az=142.0*
BJI ***11*** *01:48:12.0±0.0,0.°00N×123.°30E,h146km,mB4.9/5, mb4.4/9*
DJA ***11*** *01:48:13.1±0.4,0.°S±3.°×12.°3E±.°,h118km±7km,M4.4/14, mb4.5/6,MLv4.3/14*

ISC 11 01:48:11.5±0.4,0.04S±0.°05×123.°28E±0.°06,h150km,n64, σ1§44/67,mb4.2/28,1C,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.93**	**49**	P	**Pn**	**01 48 34.7**	**-0.9**
LUWI	**Luwuk**	**1.12**	**207**	P	**Pn**	**01 48 36.1**	**-1.2**
LUWI				S	**Sn**	**01 48 54.6**	**-2.5**
LUWI	**Luwuk**	**1.12**	**207**	Pn	**Pn**	**01 48 36.1**	**-1.2**
MRSI	**Marisa**	**1.44**	**291**	P	**Pn**	**01 48 39.1**	**-1.3**
APSI	**Ampana**	**1.85**	**242**	P	**Pn**	**01 48 44.9**	**+0.1**
SANI	**Sanana**	**3.36**	**126**	P	**Pn**	**01 49 00.6**	**-2.9**
MPSI	**Mapaga**	**3.41**	**276**	P	**Pn**	**01 49 05.0**	**+1.0**
TNTI	**Ternate**	**4.16**	**79**	Pn	**Pn**	**01 49 14.8**	**+0.9**
TNTI					**Sn**	**01 50 03.0**	**+0.6**
TTSI	**Tana Toraja**	**4.57**	**229**	P	**Pn**	**01 49 20.3**	**+1.1**
NLAI	**Namlea**	**4.97**	**130**	P	**Pn**	**01 49 24.1**	**-0.3**
SPSI	**Sidrap Palu**	**5.25**	**222**	P	**Pn**	**01 49 29.6**	**+1.4**
	0.2nm68nm,0.7s						
BNSI	**Bone**	**5.37**	**216**	P	**Pn**	**01 49 31.8**	**+2.0**
	0.2nm66nm,0.8s						
BBSI	**Bau Bau**	**5.46**	**187**	P	Pn	01 49 44.9	+14
KAPI	**Kappang**	**6.07**	**215**	P	**Pn**	**01 49 36.4**	**-2.7**
	1.0nm,0.3s,baz=22,slow=19,SNR=2.5						
KAPI				S	**Sn**	**01 50 46.5**	**-1.3**
	baz=202,slow=17,SNR=2.7						
BKSI	**Bulukumba**	**6.12**	**211**	P	**Pn**	**01 49 41.5**	**+1.6**
	0.1nm26nm,0.6s						
MSAI	**Masohi**	**6.53**	**120**	P	**Pn**	**01 49 48.6**	**+3.3**
	0.2nm13nm,0.5s						
KCP	**Kidapawan**	**7.23**	**14**	eP	Pn	01 49 57.9	+3.2
FAKI	**Fak Fak**	**9.41**	**108**	Pn	**Pn**	**01 50 22.9**	**-0.8**
MTN	**Manton Dam**	**14.91**	**149**	Pn	**Pn**	**01 51 34.1**	**-0.8**
KNRA	**Kununurra**	**16.45**	**161**	P	**Pn**	**01 51 54.9**	**+1.1**
FITZ	**Fitzroy Crossi**	**18.09**	**173**	P	**Pn**	**01 52 12.0**	**-1.5**
	1.7nm,0.3s,baz=358,slow=7.4,SNR=35						
FITZ	**Fitzroy Crossi**	**18.09**	**173**	P	**Pn**	**01 52 13.2**	**-0.2**
WRAB	**Tennant Creek**	**22.55**	**152**	P	**P**	**01 52 59.3**	**+0.1**
WRA	**Warramunga Arr**	**22.55**	**152**	P	**P**	**01 52 59.4**	**+0.2**
	12nm,0.5s,baz=332,slow=10,SNR=75						
WRA				pP	**pP**	**01 53 24.5**	**-2.2**
	4.0nm,0.6s,baz=327,slow=11,SNR=5.2						
WR0	**Warramunga Arr**	**22.66**	**152**	P	**P**	**01 53 00.3**	**+0.1**
WR0				IAmb	IAmb	01 53 45.1	
	comp=Z,13nm,1.2s						
AS31	**Alice Springs**	**25.65**	**157**	P	**P**	**01 53 28.4**	**+1.0**
ASAR	**Alice Springs**	**25.65**	**157**	P	**P**	**01 53 28.3**	**+0.9**
	comp=Z,2.8nm,0.7s,baz=348,slow=17,SNR=14						
ASAR				pP	**pP**	**01 53 55.5**	**-2.9**
	comp=Z,2.8nm,0.8s,baz=337,slow=8.9,SNR=5.9						
ASAR				PcP	**PcP**	**01 56 54.6**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=348,slow=2.1,SNR=8.4						
ASAR				ScP	**ScP**	**02 00 20.3**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=337,slow=2.2,SNR=4.3						
CMAR	**Chiang Mai Arr**	**30.16**	**309**	P	**P**	**01 54 09.2**	**+1.6**
	comp=Z,1.4nm,0.3s,baz=141,slow=7.4,SNR=4.3						
NWAO	**Narrogin (SRO)**	**33.21**	**189**	P	**P**	**01 54 34.0**	**-0.1**
	comp=Z,3.0nm,0.4s,baz=45,slow=8.6,SNR=4.6						
STKA	**Stephens Creek**	**36.09**	**153**	P	**P**	**01 54 59.8**	**+0.8**
	comp=Z,8.1nm,0.7s,baz=319,slow=8.6,SNR=17						
STKA				PcP	**PcP**	**01 57 21.5**	**-0.3**
	comp=Z,1.2nm,0.5s,baz=326,slow=4.4,SNR=3.3						
STKA	**Stephens Creek**	**36.09**	**153**	P	**P**	**01 55 00.2**	**+1.3**
KSRS	**Korea Array**	**37.55**	**6**	LR	LR	02 11 57.1	
	comp=Z,7.5nm,18.1s,baz=186,slow=38						
MJAR	**Matsushiro Arr**	**38.94**	**19**	P	**P**	**01 55 21.5**	**-1.3**
	comp=Z,3.0nm,0.7s,baz=188,slow=8.6,SNR=7.9						
ARMA	**Armidale**	**40.48**	**141**	P	**P**	**01 55 37.3**	**+1.5**
CAN	**Canberra**	**42.51**	**148**	P	**P**	**01 55 53.8**	**+1.6**
TAPN	**Taplejung**	**43.68**	**311**	eP	**P**	**01 56 03.8**	**+1.8**
	comp=Z,8.1nm,0.6s						
RAMN	**Ramite**	**44.31**	**310**	eP	**P**	**01 56 08.9**	**+1.9**
	comp=Z,16nm,0.5s						
USRK	**Ussuriysk Ar.**	**44.73**	**9**	P	**P**	**01 56 09.9**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=183,slow=5.8,SNR=5.4						
GTA	**Gaotai**	**44.75**	**334**	eP	**P**	**01 56 12.1**	**+2.0**
GTA				pP	pP	01 56 41.8	-1.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JIRN	**Jiri**	**44.99**	**311**	eP	**P**	**01 56 14.3**	**+1.8**
	comp=Z,14nm,0.4s						
GUN	**Gumba**	**45.36**	**311**	eP	**P**	**01 56 16.6**	**+1.2**
	comp=Z,20nm,0.6s						
PKI	**Pulchoki**	**45.54**	**310**	eP	**P**	**01 56 17.9**	**+1.1**
	comp=Z,7.7nm,0.4s						
DANN	**Dangsing**	**47.19**	**310**	eP	**P**	**01 56 30.8**	**+1.2**
	comp=Z,24nm,0.7s						
DZM	**Mont Dzumac**	**47.40**	**120**	P	**P**	**01 56 32.7**	**+1.6**
	comp=Z,6.5nm,0.8s,baz=263,slow=8.1,SNR=3.7						
SONM	**Songino Array**	**49.90**	**345**	P	**P**	**01 56 49.2**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=161,slow=8.1,SNR=13						
SONM				pP	**pP**	**01 57 20.5**	**-3.6**
	comp=Z,0.6nm,0.7s,baz=159,slow=6.9,SNR=2.5						
SONM	**Songino Array**	**49.90**	**345**	IAmb	IAmb	01 56 51.5	
	comp=Z,1.4nm,0.8s						
KSH	**Kashi**	**58.40**	**318**	P	P	01 57 58.1	+6.6
KSH				pP	pP	01 58 32.3	+5.6
KSH				pmax	pmax		
	comp=Z,200nm,6.0s						
MKAR	**Makanchi Array**	**58.80**	**328**	P	**P**	**01 57 54.0**	**0.0**
	comp=Z,0.4nm,0.4s,baz=122,slow=8.4,SNR=19						
MKAR				pP	**pP**	**01 58 27.5**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=128,slow=9.3,SNR=4.3						
PETK	**Petropavlovsk-**	**60.21**	**23**	P	**P**	**01 58 03.2**	**-0.3**
	comp=Z,4.1nm,0.8s,baz=172,slow=4.2,SNR=5.0						
RPZ	**Rata Peaks**	**60.80**	**142**	P	**P**	**01 58 09.3**	**+1.5**
	comp=Z,11nm,0.8s,baz=37,slow=23,SNR=3.9						
AAK	**Ala-Archa**	**60.94**	**321**	P	**P**	**01 58 09.7**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=91,slow=16,SNR=3.0						
AAK	**Ala-Archa**	**60.94**	**321**	IAmb	IAmb	02 00 20.4	
	comp=Z,7.1nm,1.6s						
KURBB	**Kurchatov Arra**	**63.14**	**330**	P	**P**	**01 58 23.0**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=120,slow=5.9,SNR=8.5						
KURBB				pP	**pP**	**01 58 56.8**	**-2.1**
	comp=Z,0.8nm,0.8s,baz=127,slow=6.2,SNR=4.2						
KURK	**Kurchatov**	**63.15**	**330**	P	**P**	**01 58 23.0**	**-0.2**
KURK	**Kurchatov**	**63.15**	**330**	IAmb	IAmb	01 58 58.8	
	comp=Z,2.9nm,0.8s						
TIXI	**Tiksi**	**71.66**	**2**	P	**P**	**01 59 15.6**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=195,slow=5.9,SNR=2.6						
TIXI	**Tiksi**	**71.66**	**2**	IAmb	IAmb	01 59 18.7	
	comp=Z,11nm,1.7s						
AKTO	**Aktyubinsk**	**74.51**	**323**	P	**P**	**01 59 32.7**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=104,slow=4.2,SNR=3.3						
VNDA	**Vanda**	**80.17**	**172**	P	**P**	**02 00 05.3**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=315,slow=7.3,SNR=5.7						
MMAI	**Mount Meron Ar**	**88.24**	**303**	P	**P**	**02 00 47.4**	**+1.2**
	comp=Z,1.8nm,0.9s,baz=86,slow=8.8,SNR=3.6						
ILAR	**Eielson Array**	**89.96**	**25**	P	**P**	**02 00 52.4**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=251,slow=4.2,SNR=4.1						
PDAR	**Pinedale Array**	**116.44**	**41**	PKP	**PKiKP**	**02 06 38.6**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=294,slow=0.9,SNR=2.4						
TORD	**Torodi Ar. Bea**	**120.69**	**285**	PKP	**PKiKP**	**02 06 46.1**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=107,slow=1.5,SNR=5.3						
TKL	**Tuckaleechee C**	**136.52**	**33**	PKP	**PKiKP**	**02 07 17.4**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=57,slow=1.8,SNR=2.9						

IDC ***11*** *01:51:21.1±1.1,5.°08N×92.°92E,h0km,mb3.8/11, mb1 3.9/13,mb1mx3.7/50,mbtmp3.8/13,ML4.2/2,MS2.7/1, Ms1 2.7/1,ms1mx2.3/50,Error ellipse: s-maj=35.9km s-min=20.1km az=47.0*
NEIC ***11*** *01:51:25.4±1.8,5.°10N±0.°08×92.°9E±0.°1,h29km±7km, mb4.3/8,Error ellipse: s-maj=19.6km s-min=10.7km az=78.0*

ISC 11 01:51:24.9±1.1,5.1N±0.°1×92.9E±0.°1,h25km,n29, σ0§77/21,mb3.9/13,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**12.34**	**281**	Pn	**Pn**	**01 54 18.9**	**-0.2**
	0.5nm,0.3s,baz=1.4,slow=3.0,SNR=3.0						
PALK				Sn	Sn	01 56 22.4	-14
	0.4nm,0.3s,baz=29,slow=17,SNR=4.8						
PALK				LR	LR	01 58 04.3	
	comp=Z,37nm,19.7s,baz=109,slow=33						
CMAR	**Chiang Mai Arr**	**14.52**	**23**	Pn	**Pn**	**01 54 49.2**	**+0.2**
	0.6nm,0.3s,baz=218,slow=14,SNR=10						
SHL	**Shillong**	**20.37**	**357**	P	**P**	**01 55 59.0**	**-1.1**
H08S3	**Diego Garcia H**	**23.99**	**238**	T	T	02 21 40.9	
	baz=58,slow=75,SNR=43						
H08S2	**Diego Garcia H**	**23.99**	**238**	T	T	02 21 40.3	
	baz=58,slow=75,SNR=50						
H08S1	**Diego Garcia H**	**24.01**	**238**	T	T	02 21 38.3	
	baz=58,slow=75,SNR=48						
NIL	**Nilore**	**33.78**	**330**	P	**P**	**01 58 04.3**	**-0.7**
MK31	**Makanchi Array**	**42.54**	**349**	P	**P**	**01 59 18.6**	**0.0**
MK31				IAmb	IAmb	02 00 11.7	
	comp=Z,2.8nm,1.5s						
MKAR	**Makanchi Array**	**42.54**	**349**	P	**P**	**01 59 18.0**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=167,slow=7.3,SNR=4.3						
KKAR	**Karatay Array**	**42.73**	**336**	P	**P**	**01 59 20.8**	**+0.7**
SONM	**Songino Array**	**44.12**	**13**	P	**P**	**01 59 30.7**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=187,slow=5.7,SNR=2.6						
SONM	**Songino Array**	**44.12**	**13**	IAmb	IAmb	01 59 35.3	
	comp=Z,1.5nm,1.4s						
H01W3	**Cape Leeuwin H**	**44.51**	**155**	T	T	02 47 06.7	
	baz=334						
H01W2	**Cape Leeuwin H**	**44.53**	**155**	T	T	02 47 05.5	
	baz=334						
H01W1	**Cape Leeuwin H**	**44.53**	**155**	T	T	02 47 05.8	
	baz=334						
GEYT	**Alibeck**	**45.50**	**321**	P	**P**	**01 59 43.1**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=119,slow=12,SNR=4.9						
GEYT	**Alibeck**	**45.50**	**321**	IAmb	IAmb	01 59 45.1	
	comp=Z,1.7nm,0.8s						
KURBB	**Kurchatov Arra**	**46.95**	**347**	P	**P**	**01 59 54.6**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=170,slow=7.2,SNR=5.6						
KURK	**Kurchatov**	**47.01**	**348**	P	**P**	**01 59 54.6**	**+0.5**
WRA	**Warramunga Arr**	**47.72**	**123**	P	**P**	**01 59 60.0**	**-0.1**
	comp=Z,1.1nm,0.9s,baz=302,slow=9.3,SNR=5.9						
ZAA0	**Zalesovo Array**	**49.14**	**354**	P	**P**	**02 00 11.6**	**+1.1**
ZAA0				IAmb	IAmb	02 00 12.9	
	comp=Z,5.0nm,1.2s						
ZALV	**Zalesovo Beam**	**49.14**	**354**	P	**P**	**02 00 11.3**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=165,slow=6.0,SNR=6.3						
ASAR	**Alice Springs**	**49.14**	**127**	P	**P**	**02 00 10.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=146,slow=36,SNR=3.8						
BVAR	**Borovoye Array**	**51.23**	**343**	P	**P**	**02 00 25.2**	**-1.2**
	comp=Z,0.7nm,0.8s,baz=160,slow=4.6,SNR=3.2						
ABKAR	**Akbulak array**	**52.10**	**333**	P	**P**	**02 00 33.4**	**+0.5**
BRTR	**Keskin Array B**	**53.34**	**312**	P	**P**	**02 01 51.5**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=116,slow=5.6,SNR=4.7						
TIXI	**Tiksi**	**70.17**	**11**	P	**P**	**02 02 35.5**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=245,slow=4.0,SNR=5.6						
TIXI	**Tiksi**	**70.17**	**11**	P	**P**	**02 02 34.9**	**-0.2**
TIXI				IAmb	IAmb	02 03 50.8	
	comp=Z,2.8nm,0.8s						
GERES	**GERESS Array B**	**79.08**	**319**	P	**P**	**02 03 28.5**	**+1.1**
	comp=Z,1.0nm,0.9s,baz=90,slow=4.9,SNR=7.4						

NDI ***11*** *02:04:02.2±2.2,21.°21N×93.°99E,h83km±45km,ML4.0, mb4.1(NEIC)*
IDC ***11*** *02:04:03.9±1.4,21.°32N×93.°85E,h56km±14km,mb3.6/13, mb1 3.7/14,mb1mx3.4/62,mbtmp3.8/14,MS2.1/1, Ms

OFUJ				eS		Sn	02 06 08.8	+2.4
JMK	**Ichinoseki**	**2.52**	**301**	P		Pn	02 05 44.2	+1.8
JMK				eS		Sn	02 06 13.5	+1.6
JOM	**Ohasama**	**2.76**	**311**	P		Pn	02 05 48.0	+2.1
JOM				eS		Sn	02 06 20.5	+2.5
JFT	**Otama**	**2.90**	**268**	P		Pn	02 05 49.4	+1.7
JFT				eS		Sn	02 06 22.8	+1.4
JYK	**Kaneyama**	**3.10**	**295**	P		Pn	02 05 53.0	+2.4
JYK				eS		Sn	02 06 29.6	+3.2
JANG	**Nango**	**3.30**	**325**	eS		Sn	02 06 33.6	+2.3
BSO1	**Boso 1**	**3.88**	**220**	P		Pn	02 05 59.2	-1.5
BSO1				eS		Sn	02 06 43.0	-1.6
JRY	**Ryogami san**	**4.40**	**249**	P		Pn	02 06 08.4	0.0
JRY				eS		Sn	02 06 55.6	-2.8
JOD2	**Odawara 2**	**4.62**	**240**	P		Pn	02 06 11.2	-0.2
JOD2				eS		Sn	02 07 00.0	-3.8
MAT	**Matsushiro**	**4.75**	**258**	P		Pn	02 06 15.8	+2.6
MAT				eS		Sn	02 07 12.3	+5.3
JCH	**Churui**	**4.95**	**355**	P		Pn	02 06 17.1	+1.2
JCH				eS		Sn	02 07 11.3	-0.6
NEM2	**Nemuro 2**	**5.83**	**13**	P		Pn	02 06 26.9	-1.1
NEM2				eS		Sn	02 07 31.2	-2.4
JTKR	**Abashiri--Toko**	**6.29**	**360**	P		Pn	02 06 35.0	+0.8
JTKR				eS		Sn	02 07 44.1	-0.6

IDC ***11*** *02:09:03.1±0.5, 0.°73S×97.°30E, h0km, mb4.1/29, mb1 4.2/30, mb1mx4.1/61, mbtmp4.1/30, ML4.7/1, MS3.4/11, Ms1 3.4/11, ms1mx3.1/41, Error ellipse: s-maj=17.0km s-min=12.4km az=45.0*

BJI ***11*** *02:09:03.1±0.0, 0.°90S×97.°45E, h18km, mB5.0/28, mb4.6/42, Ms4.6/9, Ms7 4.3/5*

DJA ***11*** *02:09:03.4±0.3, 1.°S±2.°×9.°7E±.°, h10km, M5.0/19, mB5.8/7, mb4.8/18, MLv4.9/19, Mw(mB)5.3/7*

KLM ***11*** *02:09:05.0, 0.°65S×97.°33E, h10km, mb4.9*

NEIC ***11*** *02:09:07.5±1.9, 0.°60S±0.°06×97.°42E±0.°09, h28km±4km, mb4.5/38, Error ellipse: s-maj=14.2km s-min=6.3km az=57.0*

ISC 11 02:09:08.1±0.4, **0.°69S**±0.°05×**97.°42E**±0.°06, **h35**km, **n121**, σ1§**31**/112, **mb4.3**/47, **MS3.4**/9, **1C, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PBSI	**Pulau Batu**	**1.07**	**54**	P		**Pn**	**02 09 25.6**	**-1.0**
PBSI				S		**Sn**	**02 09 39.9**	**-0.4**
SISI	**Saibi**	**1.79**	**111**	P		**Pn**	**02 09 35.4**	**-1.0**
SISI				S		**Sn**	**02 09 58.6**	**+0.7**
GSI	**Gunungsitoli**	**1.99**	**5**	P		**Pn**	**02 09 37.4**	**-1.9**
GSI				S		**Sn**	**02 10 03.2**	**+0.2**
GSI	**Gunungsitoli**	**1.99**	**5**			**Pn**	**02 09 36.9**	**-2.4**
PDSI	**Padang**	**3.05**	**94**	P		**Pn**	**02 09 52.4**	**-1.5**
SNSI	**Sinabang, Aceh**	**3.27**	**341**	P		**Pn**	**02 09 55.0**	**-1.8**
PPSI	**Pulau Pagai**	**3.31**	**128**	P		**Pn**	**02 09 56.0**	**-1.4**
RPSI	**Rantau Prapat**	**3.69**	**24**			**Pn**	**02 10 00.6**	**-2.0**
BKNI	**Bangkinang**	**3.76**	**74**	P		**Pn**	**02 10 02.7**	**-0.9**
BKNI	**Bangkinang**	**3.76**	**74**			**Pn**	**02 10 03.0**	**-0.6**
TPTI		**3.93**	**357**	P		**Pn**	**02 10 02.8**	**-3.2**
SDSI	**Sungai Dareh**	**4.02**	**93**	P		**Pn**	**02 10 06.6**	**-0.6**
KRJI	**Kerinci**	**4.28**	**109**	P		**Pn**	**02 10 09.8**	**-1.0**
MLSI	**Meulaboh, Aceh** 1.4nm5μm92nm, 0.6s	**5.03**	**348**	P		**Pn**	**02 10 19.4**	**-1.7**
LHMI	**Lhok Sumawe** 0.6nm114nm, 0.9s	**5.90**	**355**	P		**Pn**	**02 10 31.5**	**-1.6**
KSI	**Kapahiang** 2.3nm9μm303nm, 0.8s	**5.95**	**120**	P		**Pn**	**02 10 32.4**	**-1.4**
IPM	**Ipoh**	**6.28**	**35**			**Pn**	**02 10 37.6**	**-0.7**
IPM	**Ipoh**	**6.28**	**35**	P		**Pn**	**02 10 39.0**	**+0.7**
MNAI	**Manna** 2.2nm13μm443nm, 0.8s	**6.62**	**123**	P		**Pn**	**02 10 41.6**	**-1.4**
MNAI	**Manna**	**6.62**	**123**			**Pn**	**02 10 41.7**	**-1.4**
KULM	**Kulim**	**6.76**	**28**			**Pn**	**02 10 43.6**	**-1.3**
KULM	**Kulim**	**6.76**	**28**	P		**Pn**	**02 10 44.0**	**-0.9**
JRMM	**Jerantut**	**6.80**	**48**	P		**Pn**	**02 10 46.0**	**+0.5**
MYKOM	**Kota Tinggi**	**6.89**	**69**	Pn		**Pn**	**02 10 45.4**	**-1.2**
DSRI	**Dabo**	**7.17**	**88**	P		Pn	02 11 06.0	+16
MDSI	**Maura Dua** 0.2nm591nm46nm, 0.9s	**7.73**	**119**	P		**Pn**	**02 10 56.9**	**-1.3**
LWLI	**Liwa** 0.7nm8μm116nm, 0.8s	**7.90**	**123**	P		**Pn**	**02 10 59.2**	**-1.5**
KASI	**Kota Agung** 74nm, 0.9s	**8.54**	**124**	P		**Pn**	**02 11 08.0**	**-1.3**
LEM	**Lembang** comp=Z,176nm,19.6s,baz=222,slow=41	**11.86**	**121**	LR		LR	02 17 10.9	
KPJI	**Karang Pucung** 14nm, 1.0s	**13.24**	**120**	P		**Pn**	**02 12 12.4**	**-1.3**
SBUM	**Sibu**	**15.13**	**78**			**Pn**	**02 12 39.0**	**-0.3**
PBKT	**Sadao Pong**	**17.51**	**11**	P		**Pn**	**02 13 08.5**	**-1.1**
PBKT	comp=Z,27nm,0.8s			IAmb		IAmb	02 13 12.7	
UBPT	**Khong Chiam**	**17.76**	**26**			**Pn**	**02 13 10.6**	**-2.1**
UBPT	comp=Z,35nm,1.1s			IAmb		IAmb	02 13 12.0	
JAGI	**Jajag, Banyuwa**	**18.37**	**115**	P		**Pn**	**02 13 21.3**	**+1.0**
PALK	**Pallekele** comp=Z,85nm,18.6s,baz=114,slow=33	**18.45**	**296**	LR		LR	02 19 14.6	
CM31	**Chiang Mai Arr**	**19.09**	**4**	P		**P**	**02 13 25.7**	**-2.1**
CM31	comp=Z,13nm,0.7s			IAmb		IAmb	02 13 30.4	
CMAR	**Chiang Mai Arr** comp=Z,1.0nm,0.3s,baz=194,slow=10,SNR=32	**19.09**	**4**	P		**Pn**	**02 13 28.2**	**-0.7**
CMAR	comp=Z,97nm,18.2s,baz=187,slow=39			LR		LR	02 21 32.2	
CHTO	**Chiang Mai**	**19.44**	**4**	P		**P**	**02 13 30.8**	**-1.0**
KKM	**Kota Kinabalu**	**19.93**	**70**	P		**P**	**02 13 36.4**	**-0.8**
SLVN	**Son La**	**22.79**	**16**	P		**P**	**02 14 06.1**	**-1.8**
BNSI	**Bone** comp=Z,47nm,1.2s	**22.96**	**100**	P		**P**	**02 14 09.1**	**-0.6**
BKSI	**Bulukumba** comp=Z,13nm,1.1s	**23.13**	**102**	P		**P**	**02 14 10.5**	**-0.9**
WSI	**Waingapu**	**24.45**	**112**	P		**P**	**02 14 19.7**	**-4.2**
MRSI	**Marisa** comp=Z,28nm,1.0s	**24.55**	**87**	P		**P**	**02 14 23.4**	**-1.4**
BBSI	**Bau Bau**	**25.56**	**101**	P		**P**	**02 14 32.0**	**-2.0**
H08S2	**Diego Garcia H** baz=74,slow=75,SNR=62	**25.78**	**254**	T		T	02 41 55.4	
H08S3	**Diego Garcia H** baz=74,slow=75,SNR=171	**25.79**	**254**	T		T	02 41 47.7	
H08S1	**Diego Carcia H** baz=74,slow=75,SNR=71	**25.80**	**254**	T		T	02 41 51.0	
SHL	**Shillong**	**26.65**	**349**	P		**P**	**02 14 43.5**	**-0.4**
LSA	**Lhasa**	**30.81**	**349**	P		**P**	**02 15 21.8**	**+0.5**
LSA	comp=Z,6.5nm,0.6s			IAmb		IAmb	02 15 35.2	
FITZ	**Fitzroy Crossi** comp=Z,3.0nm,0.8s,baz=316,slow=5.5,SNR=5.1	**32.68**	**124**	P		**P**	**02 15 37.9**	**+0.6**
FITZ	comp=Z,3.1nm,1.0s,baz=264,slow=2.8,SNR=2.4			PcP		**PcP**	**02 18 22.7**	**-0.1**
ENH	**Enshi**	**32.87**	**19**	P		**P**	**02 15 38.6**	**-0.3**
WHN	**Wuhan**	**35.00**	**26**	⇑P		**P**	**02 16 00.6**	**+3.4**
WHN	comp=Z,44nm,1.1s			pmax		pmax		
XAN	**Xi'an**	**36.20**	**16**	P		**P**	**02 16 07.4**	**-0.2**
XAN				pP		sP	02 16 18.9	-1.0
XAN	comp=Z,7.0nm,0.7s			pmax		pmax		
XAN	comp=Z,140nm,4.9s			pmax		pmax		
XAN	**Xi'an**	**36.20**	**16**	P		**P**	**02 16 07.1**	**-0.5**
LZH	**Lanzhou**	**37.08**	**9**	*eP*		**P**	**02 16 16.2**	**+1.0**
LZH				pP		pP	02 16 24.0	+0.1
LZH				sP		sP	02 16 27.5	0.0
LZH				PP		**PnPn**	**02 17 46.0**	**+5.3**
LZH	comp=Z,11nm,1.2s			pmax		pmax		
LZH	comp=Z,120nm,4.8s			pmax		pmax		
H01W3	**Cape Leeuwin H** baz=334,slow=76,SNR=18	**37.42**	**157**	T		T	02 56 18.7	
H01W2	**Cape Leeuwin H** baz=334,slow=76,SNR=20	**37.44**	**157**	T		T	02 56 15.5	
H01W1	**Cape Leeuwin H** baz=334,slow=76,SNR=26	**37.44**	**157**	T		T	02 56 15.3	
NJ2	**Nanjing**	**38.37**	**30**	*eP*		**P**	**02 16 27.0**	**+1.0**
NJ2	comp=Z,17nm,0.6s			pmax		pmax		
GTA	**Gaotai**	**39.97**	**3**	*eP*		**P**	**02 16 39.9**	**+0.5**
GTA				pP		pP	02 16 47.2	-1.0
GTA				sP		sP	02 16 50.6	-1.2
GTA	comp=Z,3.0nm,1.0s			pmax		pmax		
WRA	**Warramunga Arr**	**40.88**	**120**	P		**P**	**02 16 47.6**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=302,slow=9.1,SNR=14							
WRA				PcP		**PcP**	**02 18 47.6**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=294,slow=3.2,SNR=4.7							
WRA				LR		LR	02 36 22.8	
	comp=Z,30nm,19.2s,baz=335,slow=40							
NIL	**Nilore**	**41.03**	**329**	P		**P**	**02 16 47.8**	**-0.4**
NIL	comp=Z,6.4nm,0.6s			IAmb		IAmb	02 16 60.0	
ASAR	**Alice Springs** comp=Z,1.5nm,0.8s,baz=301,slow=8.1,SNR=12	**42.11**	**126**	P		**P**	**02 16 57.8**	**+0.6**
ASAR	comp=Z,1.4nm,0.8s,baz=310,slow=3.6,SNR=6.4			PcP		**PcP**	**02 18 52.3**	**+0.8**
AS31	**Alice Springs**	**42.11**	**126**	P		**P**	**02 16 56.8**	**-0.4**
HHC	**Hu-ho-hao-te**	**43.31**	**16**	*eP*		**P**	**02 17 08.3**	**+1.6**
HHC	comp=Z,6.0nm,0.9s			pmax		pmax		
HHC	comp=Z,53nm,5.7s			pmax		pmax		
JAY	**Jayapura** comp=Z,43nm,18.9s,baz=8.5,slow=40	**43.31**	**93**	LR		LR	02 38 03.5	
BJT	**Baijiatuan**	**43.99**	**21**	P		**P**	**02 17 12.2**	**+0.1**
BJT	comp=Z,9.2nm,0.8s			IAmb		IAmb	02 17 18.0	
KSH	**Kashi**	**44.58**	**336**	P		**P**	**02 17 20.0**	**+3.1**
KSH	comp=Z,310nm,5.1s			pmax		pmax		
WMQ	**Urumqi**	**45.16**	**350**	*eP*		**P**	**02 17 23.0**	**+1.5**
WMQ	comp=Z,5.0nm,0.9s			pmax		pmax		
WMQ	comp=Z,71nm,4.5s			pmax		pmax		
WMQ	comp=Z,410nm,29.1s			LR		LR		
WMQ	comp=Z,710nm,29.3s			LR		LR		
WMQ	**Urumqi**	**45.16**	**350**	P		**P**	**02 17 20.8**	**-0.7**
WMQ	comp=Z,7.9nm,0.9s			IAmb		IAmb	02 17 35.6	
KSRS	**Korea Array** comp=Z,5.4nm,0.8s,baz=223,slow=8.8,SNR=14	**47.29**	**33**	P		**P**	**02 17 38.5**	**+0.4**
KSRS	comp=Z,62nm,18.0s,baz=212,slow=37			LR		LR	02 38 08.6	
AAK	**Ala-Archa** comp=Z,0.3nm,0.4s,baz=213,slow=19,SNR=2.5	**47.82**	**337**	P		**P**	**02 17 43.0**	**+0.6**
AAK	**Ala-Archa** comp=Z,4.1nm,1.1s	**47.82**	**337**	IAmb		IAmb	02 18 01.3	
SONM	**Songino Array** comp=Z,1.6nm,0.7s,baz=190,slow=9.1,SNR=10	**48.96**	**8**	P		**P**	**02 17 52.2**	**+1.1**
SONM	comp=Z,0.6nm,0.7s,baz=164,slow=5.7,SNR=1.6			PcP		**PcP**	**02 19 15.5**	**+0.6**
ULN	**Ulaanbaatar** comp=Z,3.1nm,0.7s	**49.09**	**9**	P		**P**	**02 17 51.6**	**-0.5**
ULN	comp=Z,4.7nm,0.7s			IAmb		IAmb	02 18 03.7	
MK31	**Makanchi Array**	**49.12**	**346**	P		**P**	**02 17 52.5**	**+0.3**
MKAR	**Makanchi Array** comp=Z,1.3nm,0.5s,baz=157,slow=8.1,SNR=24	**49.12**	**346**	P		**P**	**02 17 53.0**	**+0.8**
MAKZ	**Makanchi**	**49.21**	**346**	P		**P**	**02 17 53.5**	**+0.6**
MAKZ	comp=Z,4.7nm,0.7s			IAmb		IAmb	02 18 05.5	
KK31	**Karatay Array**	**49.84**	**334**	P		**P**	**02 17 57.9**	**+0.1**
KK31	comp=Z,2.9nm,0.9s			IAmb		IAmb	02 18 10.7	
KKAR	**Karatay Array**	**49.84**	**334**	P		**P**	**02 17 58.8**	**+1.0**
PMG	**Port Moresby** comp=Z,36nm,18.2s,baz=102,slow=41	**50.24**	**102**	LR		LR	02 43 24.1	
STKA	**Stephens Creek** comp=Z,1.9nm,0.7s,baz=327,slow=7.8,SNR=5.3	**51.95**	**131**	P		**P**	**02 18 14.4**	**+0.6**
TLY	**Talaya** comp=Z,104nm,18.3s,baz=166,slow=39	**52.45**	**5**	LR		LR	02 43 04.5	
GEYT	**Alibeck** comp=Z,1.3nm,0.7s,baz=158,slow=13,SNR=4.0	**52.80**	**321**	P		**P**	**02 18 19.9**	**-0.3**
MJAR	**Matsushiro Arr** comp=Z,22nm,19.2s,baz=185,slow=37	**52.95**	**41**	LR		LR	02 42 04.1	
KURK	**Kurchatov**	**53.67**	**345**	P		**P**	**02 18 26.0**	**-0.2**
KURK	comp=Z,2.5nm,0.7s			IAmb		IAmb	02 18 39.2	
USA0B	**Ussuriysk Arra**	**54.28**	**30**	P		**P**	**02 18 30.1**	**-0.6**
USRK	**Ussuriysk Ar.** comp=Z,12nm,0.8s,baz=230,slow=7.1,SNR=24	**54.28**	**30**	P		**P**	**02 18 31.8**	**+1.1**
ZAA0	**Zalesovo Array**	**55.45**	**351**	P		**P**	**02 18 39.6**	**+0.6**
ZALV	**Zalesovo Beam** comp=Z,2.9nm,0.6s,baz=192,slow=6.8,SNR=13	**55.45**	**351**	P		**P**	**02 18 39.5**	**+0.5**
ZALV	comp=Z,14nm,19.4s,baz=74,slow=39			LR		LR	02 45 26.7	
KLR	**Kul'dur** comp=Z,3.6nm,0.8s,baz=240,slow=8.1	**57.85**	**26**	P		**P**	**02 18 56.8**	**+0.7**
ABKAR	**Akbulak array**	**59.28**	**332**	P		**P**	**02 19 05.2**	**-1.0**
ABKAR	comp=Z,5.4nm,0.8s			IAmb		IAmb	02 19 18.1	
KMBO	**Kilima Mbogo** comp=Z,0.6nm,0.4s,baz=51,slow=13,SNR=4.9	**60.16**	**269**	P		**P**	**02 19 13.9**	**+0.7**
KMBO	**Kilima Mbogo** comp=Z,4.6nm,1.1s	**60.16**	**269**	IAmb		IAmb	02 19 15.3	
AKTO	**Aktyubinsk** comp=Z,0.7nm,0.6s,baz=139,slow=9.3,SNR=3.6	**60.99**	**332**	P		**P**	**02 19 17.4**	**-0.5**
GNI	**Garni** comp=Z,1.5nm,0.6s,baz=143,slow=10,SNR=2.2	**62.81**	**317**	P		**P**	**02 19 30.4**	**-0.1**
GNI	comp=Z,16nm,18.6s,baz=210,slow=37			LR		LR	02 47 32.3	
GNI	**Garni** comp=Z,4.2nm,0.8s	**62.81**	**317**	IAmb		IAmb	02 19 48.5	
TBLG	**Delisi**	**63.52**	**318**	P		**P**	**02 19 35.5**	**+0.5**
ARU	**Arti** comp=Z,0.3nm,0.3s,baz=170,slow=6.1,SNR=2.2	**65.00**	**337**	P		**P**	**02 19 44.6**	**+0.2**
ARU	**Arti** comp=Z,4.0nm,0.7s	**65.00**	**337**	P		**P**	**02 19 44.3**	**-0.1**
ARU				IAmb		IAmb	02 19 55.5	
KBZ	**Khabaz** comp=Z,2.9nm,0.8s,baz=122,slow=6.1,SNR=7.6	**65.64**	**320**	P		**P**	**02 19 48.6**	**-0.1**
ASF	**Jabal al Asfar** comp=Z,1.3nm,0.6s,baz=60,slow=20,SNR=3.3	**65.73**	**306**	P		**P**	**02 19 50.1**	**+0.3**
MMAI	**Mount Meron Ar** comp=Z,1.4nm,0.7s,baz=295,slow=34,SNR=3.6	**67.19**	**306**	P		**P**	**02 19 59.8**	**+0.8**
LSZ	**Lusaka** comp=Z,1.1nm,0.6s,baz=161,slow=12,SNR=5.5	**69.79**	**254**	P		**P**	**02 20 16.3**	**+0.7**
BRTR	**Keskin Array B** comp=Z,1.2nm,0.8s,baz=126,slow=6.3,SNR=5.8	**70.54**	**313**	P		**P**	**02 20 18.9**	**-1.0**
BOSA	**Bosnof** comp=Z,4.0nm,1.0s,baz=65,slow=3.9,SNR=4.4	**74.03**	**241**	P		**P**	**02 20 40.7**	**-0.2**
TIXI	**Tiksi** comp=Z,0.8nm,0.3s,baz=192,slow=2.5,SNR=3.3	**75.00**	**10**	P		**P**	**02 20 46.2**	**+0.7**
TIXI	**Tiksi** comp=Z,6.3nm,0.8s	**75.00**	**10**	P		**P**	**02 20 46.0**	**+0.6**
TIXI				IAmb		IAmb	02 20 57.9	
SEY	**Seymchan** comp=Z,0.7nm,0.3s,baz=6.3,slow=19,SNR=3.8	**75.41**	**23**	P		**P**	**02 20 49.9**	**+1.9**
AKASG	**Malin Array Be** comp=Z,0.6nm,0.6s,baz=91,slow=4.0,SNR=4.3	**76.88**	**323**	P		**P**	**02 20 55.2**	**-1.4**
KOLS	**Kolonicke sedl**	**80.79**	**320**	*eP*		**P**	**02 21 19.0**	**+0.8**
FINES	**FINESS Array B** comp=Z,5.0nm,1.1s,baz=180,slow=1.1,SNR=4.2	**81.77**	**333**	P		**P**	**02 21 21.8**	**-1.2**
ARCES	**ARCESS Array B** comp=Z,1.7nm,0.9s,baz=112,slow=4.2,SNR=4.4	**84.38**	**340**	P		**P**	**02 21 36.5**	**0.0**
GERES	**GERESS Array B** comp=Z,0.6nm,0.7s,baz=104,slow=4.1,SNR=6.3	**86.37**	**319**	P		**P**	**02 21 45.9**	**-1.0**
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.9s,baz=89,slow=4.9,SNR=4.3	**95.73**	**283**	P		**P**	**02 22 31.8**	**+0.5**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.9s	**95.73**	**283**	IAmb		IAmb	02 22 38.6	
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.8s,baz=270,slow=4.5,SNR=3.7	**130.17**	**37**	PKP		**PKiKP**	**02 28 17.5**	**+1.4**
PDAR	**Pinedale Array** comp=Z,0.2nm,0.6s,baz=323,slow=1.4,SNR=3.1	**131.63**	**27**	PKP		**PKiKP**	**02 28 18.4**	**-0.6**
CPUP	**Villa Florida** comp=Z,4.1nm,0.6s,baz=132,slow=3.5,SNR=11	**143.73**	**220**	PKP		**PKPdf**	**02 28 38.5**	**-1.8**
TXAR	**Lajitas Array** comp=Z,2.6nm,0.7s,baz=276,slow=1.5,SNR=37	**145.14**	**33**	PKPbc		**PKPdf**	**02 28 43.4**	**+0.6**

IDC ***11*** *02:22:01.7±3.9, 36.°23N×71.°22E, h183km±27km, mb3.2/9, mb1 3.2/15, mb1mx3.0/64, mbtmp3.7/15, MS3.4/1, Ms1 3.4/1, ms1mx2.3/25, Error ellipse: s-maj=41.6km s-min=18.6km az=161.0*

NNC ***11*** *02:22:11.9±2.4, 37.°14N×71.°08E, h232km±29km, mb2.8, mpv3.9, Error ellipse: s-maj=25.0km s-min=16.4km az=174.0*

ISC 11 02:22:04.6±1.2, **36.°6N**±0.°1×**71.°01E**±0.°08, **h188**km, **n27**, σ1§**56**/32, **mb3.3**/8, **4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AML	**Almayashu** SNR=76	**5.88**	**20**	P		**Pn**	**02 23 32.1**	**+1.7**
UCH	**Uchtor** SNR=35	**6.21**	**25**	P		**Pn**	**02 23 36.5**	**+1.7**
EKS2	**Erkin-Say** SNR=6.5	**6.39**	**19**	P		**Pn**	**02 23 39.1**	**+2.3**
KK31	**Karatay Array** 2.0nm,0.3s,baz=181,slow=13,SNR=112	**6.48**	**357**	P		**Pn**	**02 23 39.3**	**+1.4**
KK31	14nm,0.6s,baz=175,slow=24,SNR=3.5			⇑S		**Sn**	**02 24 48.5**	**-3.1**
AAK	**Ala-Archa** 1.7nm,0.3s,baz=183,slow=6.5,SNR=25	**6.58**	**23**	P		**Pn**	**02 23 41.0**	**+1.7**
AAK	1.0nm,0.3s,baz=147,slow=23,SNR=13			S		**Sn**	**02 24 53.9**	**-0.3**
AAK	**Ala-Archa** SNR=5.5	**6.58**	**23**	P		**Pn**	**02 23 41.7**	**+2.4**
AAK	**Ala-Archa** 2.4nm, 0.3s	**6.58**	**23**	⇑P		**Pn**	**02 23 41.2**	**+2.0**
AAK	18nm, 0.8s			⇑S		**Sn**	**02 24 52.9**	**-1.2**
KBK	**Karagaybulak** SNR=14	**6.74**	**26**	P		**Pn**	**02 23 43.7**	**+2.2**
TKM2	**Tokmak 2** SNR=16	**7.21**	**28**	P		**Pn**	**02 23 49.0**	**+1.4**
TKM2	**Tokmak 2** 21nm, 0.7s	**7.21**	**28**	⇓P		**Pn**	**02 23 48.6**	**+1.0**
TKM2	16nm, 0.9s			⇑S		**Sn**	**02 25 06.7**	**-2.5**
GEYT	**Alibeck** 0.2nm, 0.3s, baz=91, slow=10, SNR=3.3	**10.36**	**281**	P		**Pn**	**02 24 29.5**	**+0.9**
GEYT	0.3nm, 0.3s, baz=99, slow=18, SNR=3.3			S		**Sn**	**02 26 21.7**	**-2.3**
MK31	**Makanchi Array** 1.6nm, 0.7s, baz=208, slow=9.4, SNR=18	**13.18**	**36**	P		**Pn**	**02 25 04.7**	**+0.1**
MKAR	**Makanchi Array** 0.3nm, 0.3s, baz=212, slow=11, SNR=16	**13.18**	**36**	P		**Pn**	**02 25 04.8**	**+0.2**
AB31	**Akbulak array** 2.1nm, 0.6s, baz=142, slow=11, SNR=44	**14.97**	**331**	P		**Pn**	**02 25 26.9**	**+0.2**
KURBB	**Kurchatov Arra** 0.1nm, 0.3s, baz=207, slow=8.7, SNR=5.7	**15.00**	**19**	P		**P**	**02 25 27.1**	**-0.9**
BVAR	**Borovoye Array** 0.4nm, 0.3s, baz=157, slow=10, SNR=10	**16.40**	**359**	P		**Pn**	**02 25 45.2**	**+1.2**
AKTO	**Aktyubinsk** 0.4nm, 0.3s, baz=136, slow=10, SNR=12	**16.67**	**330**	P		**Pn**	**02 25 48.5**	**+1.1**
AKTO	**Aktyubinsk** 2.1nm, 0.6s	**16.67**	**330**	⇓P		**P**	**02 25 47.2**	**+0.8**
ZALV	**Zalesovo Beam** 1.7nm, 0.6s, baz=214, slow=12, SNR=7.4	**19.80**	**25**	P		**P**	**02 26 20.6**	**+0.3**
SONM	**Songino Array** 0.2nm, 0.6s, baz=235, slow=5.1, SNR=2.8	**28.26**	**56**	P		**P**	**02 27 38.3**	**-1.9**
SONM	comp=Z,72nm,20.2s,baz=158,slow=40			LR		LR	02 41 07.7	
FINES	**FINESS Array B** 4.7nm, 1.1s, baz=125, slow=8.9, SNR=2.4	**37.38**	**326**	P		**P**	**02 29 00.0**	**+1.2**
ARCES	**ARCESS Array B** 3.4nm, 1.2s, baz=122, slow=8.6, SNR=4.2	**41.03**	**338**	P		**P**	**02 29 30.1**	**+1.1**
HFS	**Hagfors** 0.6nm, 1.1s, baz=93, slow=10, SNR=4.1	**42.97**	**322**	P		**P**	**02 29 45.5**	**+0.8**
NOA	**NORSAR Array B** 0.2nm, 0.5s, baz=97, slow=7.7, SNR=2.8	**44.28**	**323**	P		**P**	**02 29 55.7**	**+0.4**
TORD	**Torodi Ar. Bea** 0.2nm, 0.4s, baz=49, slow=5.7, SNR=5.5	**65.73**	**269**	P		**P**	**02 32 27.9**	**-1.5**
INK	**Inuvik** 0.3nm, 0.5s, baz=339, slow=5.1, SNR=4.0	**73.78**	**9**	P		**P**	**02 33 18.1**	**+0.5**
YKA	**Yellowknife Ar** 0.1nm, 0.4s, baz=351, slow=5.4, SNR=7.4	**81.12**	**3**	P		**P**	**02 33 58.4**	**0.0**

IDC ***11*** *02:30:05.4±1.8, 11.°71S×120.°84E, h0km, mb3.5/2, mb1 3.7/7, mb1mx3.5/39, mbtmp3.6/7, ML3.4/5, Error ellipse: s-maj=49.7km s-min=23.0km az=54.0*

ISC 11 02:30:10.2±1.1, **11.°74S**±0.°07×**121.°1E**±0.°1, **h35**km, **n7**, σ3§**80**/11, **South of Timor**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BATI	**Baumata** 18nm, 0.3s, baz=319, slow=19, SNR=5.4	**2.95**	**59**	Pn		**Pn**	**02 30 56.8**	**+2.2**
BATI	25nm, 0.3s, baz=6.7, slow=19, SNR=4.1			Sn		**Sn**	**02 31 32.3**	**+3.5**
KAPI	**Kappang** 0.5nm, 0.3s, baz=153, slow=9.0, SNR=3.6	**6.81**	**349**	Pn		**Pn**	**02 31 46.1**	**-1.6**
FITZ	**Fitzroy Crossi** 0.4nm, 0.3s, baz=335, slow=12, SNR=16	**7.70**	**146**	Pn		**Pn**	**02 32 03.1**	**+3.3**
FITZ	1.2nm, 0.3s, baz=182, slow=20, SNR=12			Sn		**Sn**	**02 33 27.8**	**+1.9**
WRA	**Warramunga Arr** 0.1nm, 0.3s, baz=300, slow=12, SNR=5.7	**15.12**	**124**	Pn		**Pn**	**02 33 41.9**	**+0.5**
WRA	0.1nm, 0.3s, baz=291, slow=25, SNR=3.6			Sn		**Sn**	**02 36 20.0**	**-7.8**
ASAR	**Alice Springs** 0.2nm, 0.3s, baz=312, slow=12, SNR=28	**17.00**	**136**	P		**Pn**	**02 34 05.7**	**+0.3**
ASAR	0.1nm, 0.3s, baz=303, slow=22, SNR=3.4			S		**Sn**	**02 37 09.0**	**-4.5**
SONM	**Songino Array** 0.5nm, 0.7s, baz=164, slow=5.7, SNR=2.7	**60.73**	**349**	P		**P**	**02 40 17.9**	**-0.5**
MKAR	**Makanchi Array** 0.3nm, 0.6s, baz=149, slow=7.1, SNR=5.3	**67.82**	**332**	P		**P**	**02 41 04.7**	**0.0**

CRAAG ***11*** *02:34:26.8, 36.°29N×2.°18E, Ml2.5*

MDD ***11*** *02:34:28.4±0.8, 36.°33N×2.°21E, h7km±11km, mb3.6/4, Error ellipse: s-maj=14.8km s-min=5.8km az=142.0, PRXIMO*

ISC 11 02:34:28.1±1.3, **36.°32N**±0.°06×**2.°20E**±0.°05, **h20**km, **n20**, σ0§**93**/28, **Northern Algeria**

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

3.3nm,0.7s
AB31 Akbulak array 14.57 330 P Pn 02 48 02.3 -3.3
0.2nm,0.5s,baz=144,slow=13,SNR=8.4

*PAS **11** 02:59:32.9±1.4, 32°.76N±0°.02×117°.40W±0°.03, h16km±2km, ML2.5/42, Error ellipse: s-maj=4.5km s-min=2.1km az=225.0*

NEIC 11 02:59:32±1.0, 32°.76N±0°.02×117°.42W±0°.03, h18km±2km, Error ellipse: s-maj=4.4km s-min=1.6km az=225.0, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
109C	**Camp Elliot, M**	**0.29**	**64**	Pg	Pb	02 59 38.7	0.0
109C				Sg	Sg	02 59 42.6	-0.1
TJX	**Tijuana**	**0.40**	**130**		Pb	02 59 40.7	+0.2
TJX					Sb	02 59 46.7	+0.5
SDRC	**San Diego Road**	**0.40**	**94**		Pg	02 59 40.2	-0.1
SDRC					Sg	02 59 45.8	-0.1
GORC	**Green Oak Ranc**	**0.42**	**22**		Pb	02 59 40.9	-0.1
GORC					Sb	02 59 46.8	-0.1
OLP	**Otay Lakes Par**	**0.44**	**111**		Pg	02 59 40.9	0.0
OLP					Sg	02 59 46.8	-0.1
DPP	**Dos Picos Cty**	**0.46**	**59**		Pb	02 59 41.5	-0.1
DPP					Sg	02 59 47.6	-0.2
HWB	**Hans Werner Br**	**0.46**	**55**		Pg	02 59 41.6	+0.1
HWB					Sg	02 59 47.9	+0.1
EML	**El Monte Cty P**	**0.50**	**75**		Pg	02 59 42.0	+0.1
EML					Sg	02 59 48.6	-0.1
BAR	**Barrett**	**0.63**	**97**		Pg	02 59 44.2	-0.3
BAR				Sg	Sg	02 59 51.9	-1.0
TKX	**Tecate**	**0.71**	**106**		Pb	02 59 45.7	-0.1
PLM	**Palomar**	**0.75**	**38**		Pb	02 59 46.6	-0.1
PLM					Sb	02 59 56.3	-0.4
CBX	**Cerro Bola**	**0.78**	**125**		Pb	02 59 46.9	-0.2
CBX					Sg	02 59 57.7	+0.1
MONP2	**Monument Peak**	**0.84**	**81**		Pb	02 59 48.1	-0.2
MONP2					Sb	02 59 59.2	-0.2
MURC	**Murrieta**	**0.85**	**12**		Pb	02 59 48.3	-0.1
MURC					Sg	02 59 59.8	-0.2
BACC	**Bachelor Mtn.**	**0.90**	**20**		Pb	02 59 48.8	-0.4
DGR	**Domenigoni Val**	**0.95**	**21**		Pb	02 59 49.6	-0.4
DGR					Sn	03 00 03.4	-0.2
BZNA	**Buzz No.'s Pla**	**0.96**	**41**		Pb	02 59 50.3	+0.1
BZNA					Sb	03 00 02.9	+0.2
BORC	**Borrego Spring**	**0.98**	**59**		Pn	02 59 50.8	0.0
BORC					Sg	03 00 03.6	-0.3
CRY	**Cary Ranch**	**0.98**	**35**		Pb	02 59 50.6	0.0
CRY					Sg	03 00 04.0	-0.1
CBKC	**Canebrake**	**0.99**	**82**		Pb	02 59 50.8	+0.2
FRD	**Ford Ranch, An**	**1.00**	**43**		Pb	02 59 51.0	+0.2
FRD					Sb	03 00 04.0	+0.3
FRD	**Ford Ranch, An**	**1.00**	**43**		Pb	02 59 51.0	+0.2
FRD					Sb	03 00 03.8	0.0
HMTC	**Hemet**	**1.00**	**20**		Pb	02 59 50.6	-0.4
POB	**Polly Butte**	**1.01**	**24**		Pb	02 59 50.8	-0.2
SNDA	**J Saunders Pla**	**1.03**	**40**		Pn	02 59 51.8	0.0
SNDA					Sg	03 00 05.5	-0.2
DNR	**Dunn Ranch,Anz**	**1.04**	**39**		Pn	02 59 51.9	+0.1
DNR					Sn	03 00 05.9	0.0
CIAC	**Catalina I. Ai**	**1.05**	**307**		Pb	02 59 50.8	-1.0
CIAC					Sb	03 00 04.8	-0.5
SME	**Santa Rosa Min**	**1.06**	**3**		Pb	02 59 51.6	-0.2
IKP	**In-Ko-Pah, Jac**	**1.11**	**96**		Pb	02 59 52.6	-0.1
IKP					Sb	03 00 06.9	+0.1
RMX	**La Rumorosa**	**1.14**	**98**		Sg	03 00 09.6	+0.6
PEC	**Perris**	**1.15**	**11**		Pn	02 59 53.1	-0.1
PFO	**Pinyon Flats O**	**1.17**	**43**		Pb	02 59 53.9	+0.1
PFO				Sn	Sb	03 00 08.7	+0.1
PFO	**Pinyon Flats O**	**1.17**	**43**		Pb	02 59 54.1	+0.4
PFO					Sn	03 00 09.1	0.0
XPFO	**Pion Flat**	**1.17**	**43**		Pb	02 59 54.1	+0.3
XPFO				Sn	Sb	03 00 08.8	+0.2
XPFO	**Pion Flat**	**1.17**	**43**		Pb	02 59 54.1	+0.4
XPFO					Sn	03 00 09.1	0.0
CRR	**Carrizo Plain**	**1.22**	**84**		Pg	02 59 55.1	-0.5
CFSC	**Central Fire S**	**1.34**	**5**		Pg	02 59 57.5	-0.4
SWSC	**Sam W. Stewart**	**1.37**	**82**		Sg	03 00 15.8	-0.6
EW2	**E Wide Canyon**	**1.45**	**35**		Pb	02 59 59.0	+0.5
SSK	**Sunset Peak**	**1.46**	**351**		Pg	02 59 59.6	-0.6
BBRC	**Big Bear Solar**	**1.55**	**15**		Sg	03 00 21.6	-0.6
MWC	**Mount Wilson**	**1.55**	**340**	Pn	Pb	03 00 00.1	-0.3
MWC					Sn	03 00 18.0	-0.8
BLAC	**Blackrock camp**	**1.56**	**33**		Pb	03 00 01.0	+0.5
BLAC					Sg	03 00 21.5	-0.9
TPC	**Twentynine Pal**	**1.76**	**40**		Pg	03 00 04.9	-1.0
GLA	**Glamis**	**2.20**	**82**	Pn	Pn	03 00 07.7	0.0
GSC	**Goldstone, Bar**	**2.58**	**11**	Pn	Pn	03 00 14.2	+1.1
DSCC	**Desert Studies**	**2.61**	**24**		Pb	03 00 18.2	-0.1
Y12C	**Blythe**	**2.62**	**67**	Pn	Pn	03 00 13.1	-0.3

MAN 11 03:07:42.8, 12°.88N×122°.81E, h28km, mb4.2, ML3.0, MS2.7, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OTRP	**Odiongan**	**0.93**	**236**	*e*P	Pn	03 07 59.6	-0.4
OTRP				*e*S	Sn	03 08 12.8	+0.3
GQP	**Guinayangan**	**1.08**	**341**	*e*P	Pn	03 08 01.2	-0.8
GQP				*e*S	Sn	03 08 15.9	-0.2
BOAC	**Boac**	**1.10**	**301**	*e*P	Pn	03 08 01.6	-0.8
BOAC				*e*S	Sb	03 08 17.5	+0.2
ROP	**Roxas**	**1.32**	**183**	*e*P	Pn	03 08 05.1	-0.3
LQP	**Lukban**	**1.74**	**315**	*e*P	Pn	03 08 12.5	+1.2
LQP				*e*S	Sb	03 08 35.6	-0.2

ROM 11 03:09:09.5±0.0, 43°.390N±0°.002×12°.504E±0°.004, h9km, ML2.1/19, Error ellipse: s-maj=0.2km s-min=0.2km az=24.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**115**	P	Pg	03 09 11.4	0.0
ATFO				S	Sg	03 09 12.7	-0.2
ATFO					AML	AML	
	comp=N,13070μm,0.3s						
ATFO					AML	AML	
	comp=E,11250μm,0.5s						
ATPI	**Pietralunga -**	**0.10**	**309**	*i* P	Pg	03 09 12.2	+0.3
ATPI				S	Sg	03 09 14.2	+0.5
ATPI					AML	AML	
	comp=E,326μm,0.4s						
ATPI					AML	AML	
	comp=N,509μm,0.3s						
ATPI					AML	AML	
	comp=N,2575μm,0.1s						
ATPI					AML	AML	
	comp=N,2570μm,0.1s						
ATPI					AML	AML	
	comp=E,1630μm,0.3s						
ATPI					AML	AML	
	comp=E,1625μm,0.3s						
MURB	**Monte Urbino**	**0.13**	**173**	*i* P	Pg	03 09 12.9	+0.5
MURB				S	Sg	03 09 15.6	+1.2
MURB					AML	AML	
	comp=E,854μm,0.3s						
MURB					AML	AML	
	comp=N,610μm,1.6s						
MURB					AML	AML	
	comp=E,886μm,0.3s						
MURB					AML	AML	
	comp=N,594μm,0.6s						
MURB					AML	AML	
	comp=N,1940μm,1.0s						
MURB					AML	AML	
	comp=N,1865μm,1.0s						
MURB					AML	AML	
	comp=E,2960μm,0.3s						
MURB					AML	AML	
	comp=E,3125μm,1.1s						
MURB					AML	AML	
	comp=N,1945μm,0.9s						
PIEI	**Pieia**	**0.15**	**9**	*e*P	Pg	03 09 13.3	+0.6
PIEI				S	Sg	03 09 16.3	+1.3
PIEI					AML	AML	
	comp=E,488μm,0.3s						
PIEI					AML	AML	
	comp=N,474μm,0.2s						
PIEI					AML	AML	
	comp=N,2240μm,0.6s						
PIEI					AML	AML	
	comp=E,2090μm,0.2s						
FRON	**Frontone**	**0.21**	**52**	*i* P	Pg	03 09 14.2	+0.5
FRON				S	Sg	03 09 18.1	+1.4
FRON					AML	AML	
	comp=N,1540μm,0.7s						
FRON					AML	AML	
	comp=E,838μm,0.1s						
FRON					AML	AML	
	comp=N,1545μm,0.7s						
FRON					AML	AML	
	comp=E,839μm,0.1s						
CDCA	**Citt' di Caste**	**0.21**	**289**	P	Pg	03 09 14.5	+0.7
CDCA				S	Sg	03 09 18.1	+1.5
CDCA					AML	AML	
	comp=N,610μm,0.9s						
CDCA					AML	AML	
	comp=E,851μm,0.9s						
SSFR	**Montelago di S**	**0.21**	**77**	*i* P	Pg	03 09 14.3	+0.5
SSFR				S	Sg	03 09 18.1	+1.5
SSFR					AML	AML	
	comp=E,1930μm,0.2s						
SSFR					AML	AML	
	comp=N,1155μm,0.2s						
SSFR					AML	AML	
	comp=N,1410μm,0.2s						
SSFR					AML	AML	
	comp=E,1825μm,0.2s						
ATTE	**AVT- Monte Tez**	**0.22**	**210**	P	Pg	03 09 14.6	+0.6
ATTE				S	Sg	03 09 18.4	+1.3
ATTE					AML	AML	
	comp=E,162μm,0.9s						
ATTE					AML	AML	
	comp=N,109μm,0.4s						
ATTE					AML	AML	
	comp=E,557μm,1.0s						
ATTE					AML	AML	
	comp=N,368μm,0.3s						
ATTE					AML	AML	
	comp=E,558μm,1.0s						
BADI	**Badiali**	**0.22**	**302**	*e*P	Pg	03 09 14.7	+0.7
BADI				S	Sg	03 09 18.8	+1.6
BADI					AML	AML	
	comp=E,414μm,0.2s						
BADI					AML	AML	
	comp=N,430μm,0.2s						
BADI					AML	AML	
	comp=N,1795μm,0.3s						
BADI					AML	AML	
	comp=N,1800μm,0.3s						
BADI					AML	AML	
	comp=E,2485μm,0.2s						
ATCC	**AVT- Casa Cast**	**0.23**	**154**	P	Pg	03 09 14.9	+0.8
ATCC				S	Sg	03 09 19.4	+2.2
ATCC					AML	AML	
	comp=E,232μm,0.6s						
ATCC					AML	AML	
	comp=N,320μm,0.2s						
ATCC					AML	AML	
	comp=E,1007μm,1.0s						
ATCC					AML	AML	
	comp=N,1240μm,0.3s						
ATCC					AML	AML	
	comp=E,1010μm,1.0s						
ATCC					AML	AML	
	comp=N,1245μm,0.3s						
NARO	**Abbazia di Nar**	**0.23**	**14**	*e*P	Pg	03 09 14.6	+0.5
NARO				S	Sg	03 09 18.7	+1.4
NARO					AML	AML	
	comp=N,412μm,0.4s						
NARO					AML	AML	
	comp=E,558μm,0.2s						
MPAG	**Monte Paganucc**	**0.30**	**38**	*i* P	Pg	03 09 16.1	+0.6
MPAG				S	Sb	03 09 21.4	-0.8
MPAG					AML	AML	
	comp=E,228μm,1.1s						
MPAG					AML	AML	
	comp=E,228μm,1.1s						
MPAG					AML	AML	
	comp=N,210μm,0.8s						
PE3	**Peglio**	**0.31**	**359**		AML	AML	
	comp=N,152μm,0.3s						
PE3					AML	AML	
	comp=E,114μm,0.4s						
PE3					AML	AML	
	comp=E,486μm,0.4s						
PE3					AML	AML	
	comp=N,577μm,0.3s						
PARC	**Parchiule**	**0.32**	**323**	P	Pb	03 09 16.7	-0.8
PARC				S	Sb	03 09 22.4	-0.4
PARC					AML	AML	
	comp=N,336μm,0.3s						
PARC					AML	AML	
	comp=N,335μm,0.3s						
PARC					AML	AML	
	comp=E,620μm,0.2s						
ARVD	**Arcevia**	**0.34**	**71**	*i* P	Pg	03 09 16.7	+0.6
ARVD				S	Sb	03 09 22.8	-0.4
ARVD					AML	AML	
	comp=N,126μm,1.3s						
ARVD					AML	AML	
	comp=E,136μm,0.7s						
ARVD					AML	AML	
	comp=N,126μm,1.3s						
SNTG	**Esanatoglia**	**0.35**	**113**	*i* P	Pg	03 09 16.8	+0.4
SNTG				S	Sb	03 09 22.7	-0.8
SNTG					AML	AML	
	comp=E,355μm,0.2s						
SNTG					AML	AML	
	comp=N,710μm,0.3s						
SNTG					AML	AML	
	comp=N,710μm,0.3s						
FSSB	**Fossombrone**	**0.36**	**33**	*i* P	Pg	03 09 17.2	+0.6
FSSB				S	Sb	03 09 23.5	-0.4
FSSB					AML	AML	
	comp=E,644μm,1.4s						
FSSB					AML	AML	
	comp=N,552μm,1.2s						
ASSB	**Assisi San Ben**	**0.36**	**162**	P	Pg	03 09 17.2	+0.5
ASSB				S	Sb	03 09 23.2	-0.8
ASSB					AML	AML	
	comp=E,202μm,0.2s						
ASSB					AML	AML	
	comp=N,234μm,0.4s						
EL6	**Elcito**	**0.44**	**98**	*e*P	Pg	03 09 18.5	+0.4
EL6				S	Sb	03 09 25.9	-0.3
EL6					AML	AML	
	comp=E,225μm,0.4s						
EL6					AML	AML	
	comp=N,230μm,1.4s						
CING	**Cingoli**	**0.51**	**91**	P	Pg	03 09 19.8	+0.5
CING					AML	AML	
	comp=N,106μm,1.5s						
CING					AML	AML	
	comp=E,69μm,1.2s						
CING					AML	AML	
	comp=N,106μm,1.5s						
FDMO	**Fiordimonte**	**0.55**	**129**		AML	AML	
	comp=E,108μm,0.2s						
FDMO					AML	AML	
	comp=N,158μm,1.4s						
FDMO					AML	AML	
	comp=E,108μm,0.2s						
MGAB	**Montegabbione**	**0.56**	**211**		AML	AML	
	comp=E,273μm,0.3s						
MGAB					AML	AML	
	comp=E,272μm,0.3s						
MGAB					AML	AML	
	comp=N,325μm,0.3s						

*IDC **11** 03:09:24.2±12.0, 0°.61N×123°.58E, h262km±141km, mb3.2/5, mb1 3.3/6, mb1mx3.0/42, mbtmp3.8/6, MS2.8/1, Ms1 2.8/1, ms1mx2.2/20, Error ellipse: s-maj=83.4km s-min=25.7km az=61.0*

*DJA **11** 03:09:25.1±0.6, 0°.N±5°×12°.4E±°, h239km±5km, M3.5/9, MLv3.5/9*

ISC 11 03:09:23.6±0.9, 0°.46N±0°.10×123°.56E±0°.07, h264km, n15, σ1°.49/16, mb3.5/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**0.43**	**75**	P	**Pn**	**03 09 57.1**	**-0.8**
KMSI				S	**S**	**03 10 22.8**	**-2.1**
MRSI	**Marisa**	**1.62**	**270**	P	**Pn**	**03 10 04.3**	**+0.1**
LUWI	**Luwuk**	**1.69**	**208**	P	**Pn**	**03 10 03.6**	**-1.2**
LUWI					S	**S**	**03 10 34.6**	**-2.7**
APSI	**Ampana**	**2.35**	**235**	P	**Pn**	**03 10 10.4**	**-0.1**
SANI	**Sanana**	**3.48**	**136**	P	**Pn**	**03 10 20.7**	**-1.5**
MPSI	**Mapaga**	**3.67**	**268**	P	**Pn**	**03 10 24.8**	**+0.5**
LBMI	**Labuha**	**4.09**	**106**	P	**Pn**	**03 10 29.7**	**+0.6**
NLAI	**Namlea**	**5.10**	**136**	P	**Pn**	**03 10 41.2**	**+0.1**
DAV	**Davao City (W)**	**6.86**	**17**	LR	LR	03 14 34.7	
	comp=Z,69nm,19.5s,baz=312,slow=46						
FITZ	**Fitzroy Crossi**	**18.56**	**174**	P	**P**	**03 13 23.5**	**+2.0**
	0.4nm,0.3s,baz=4.3,slow=7.8,SNR=7.9						
WRA	**Warramunga Ar**	**22.86**	**153**	P	**P**	**03 14 06.2**	**+1.7**
	4.0nm,0.6s,baz=333,slow=10,SNR=35						
ASAR	**Alice Springs**	**26.00**	**158**	P	**P**	**03 14 35.1**	**+2.2**
	0.4nm,0.7s,baz=344,slow=15,SNR=8.3						
SONM	**Songino Array**	**49.49**	**345**	P	**P**	**03 17 47.3**	**-0.3**
	0.8nm,0.8s,baz=142,slow=7.3,SNR=7.4						
MKAR	**Makanchi Array**	**58.52**	**328**	P	**P**	**03 18 52.7**	**+0.1**
	1.3nm,0.5s,baz=126,slow=5.7,SNR=18						
KURBB	**Kurchatov Arra**	**62.85**	**330**	P	**P**	**03 19 21.1**	**-0.4**
	0.8nm,0.7s,baz=130,slow=6.0,SNR=9.5						

ROM 11 03:09:59.9±0.1, 43°.385N±0°.003×12°.504E±0°.004, h8km, ML2.1/24, Error ellipse: s-maj=0.3km s-min=0.2km az=42.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.05**	**110**	*e*P	Pg	03 10 01.9	+0.2
ATFO				S	Sg	03 10 03.0	+0.1
ATFO					AML	AML	
	comp=E,11250μm,0.5s						
ATFO					AML	AML	
	comp=N,13070μm,0.3s						
ATVO	**AVT- Monte Val**	**0.07**	**268**	*i* P	Pg	03 10 02.2	+0.3
ATVO				S	Sg	03 10 03.6	+0.3
ATVO					AML	AML	
	comp=N,4715μm,0.2s						
ATVO					AML	AML	
	comp=E,5680μm,0.4s						
ATVO					AML	AML	
	comp=N,4710μm,0.2s						
ATPI	**Pietralunga -**	**0.10**	**312**	*i* P	Pg	03 10 02.7	+0.4
ATPI				S	Sg	03 10 04.6	+0.6
ATPI					AML	AML	
	comp=N,2570μm,0.1s						
ATPI					AML	AML	
	comp=E,1625μm,0.3s						
ATPI					AML	AML	
	comp=N,2575μm,0.1s						
ATPI					AML	AML	
	comp=E,1630μm,0.3s						
MURB	**Monte Urbino**	**0.12**	**173**	*i* P	Pg	03 10 03.4	+0.7
MURB					AML	AML	
	comp=E,3125μm,1.1s						
MURB					AML	AML	
	comp=N,1940μm,1.0s						
MURB					AML	AML	
	comp=E,2960μm,0.3s						
MURB					AML	AML	
	comp=N,1945μm,0.9s						
MURB					AML	AML	
	comp=N,1865μm,1.0s						
PIEI	**Pieia**	**0.15**	**8**	*e*P	Pg	03 10 03.7	+0.6
PIEI				S	Sg	03 10 06.6	+1.2
PIEI					AML	AML	
	comp=N,2240μm,0.6s						
PIEI					AML	AML	
	comp=E,2090μm,0.2s						
FRON	**Frontone**	**0.21**	**50**	*i* P	Pg	03 10 04.7	+0.6
FRON				S	Sg	03 10 08.6	+1.5
FRON					AML	AML	
	comp=E,839μm,0.1s						
FRON					AML	AML	
	comp=N,1540μm,0.7s						
FRON					AML	AML	
	comp=E,838μm,0.1s						
FRON					AML	AML	
	comp=N,1545μm,0.7s						
SSFR	**Montelago di S**	**0.21**	**76**	*i* P	Pg	03 10 04.7	+0.6
SSFR					AML	AML	
	comp=N,1410μm,0.2s						
SSFR					AML	AML	
	comp=E,1930μm,0.2s						
SSFR					AML	AML	
	comp=E,1825μm,0.2s						
SSFR					AML	AML	
	comp=N,1155μm,0.2s						
CDCA	**Citt' di Caste**	**0.21**	**291**	P	Pg	03 10 04.8	+0.6
CDCA					AML	AML	
	comp=N,3865μm,0.5s						
CDCA					AML	AML	
	comp=E,11899μm,1.6s						
ATTE	**AVT- Monte Tez**	**0.22**	**211**	P	Pg	03 10 04.9	+0.6
ATTE				S	Sg	03 10 08.3	+1.0
ATTE					AML	AML	
	comp=N,368μm,0.3s						
ATTE					AML	AML	
	comp=E,557μm,1.0s						
ATTE					AML	AML	
	comp=E,558μm,1.0s						
ATCC	**AVT- Casa Cast**	**0.22**	**154**	*e*P	Pg	03 10 05.3	+0.9
ATCC				S	Sg	03 10 09.8	+2.4
ATCC					AML	AML	
	comp=E,1005μm,1.0s						
ATCC					AML	AML	
	comp=N,1240μm,0.3s						
ATCC					AML	AML	
	comp=E,1010μm,1.0s						
ATCC					AML	AML	
	comp=N,1245μm,0.3s						
ATCC					AML	AML	
	comp=E,1007μm,1.0s						
BADI	**Badiali**	**0.23**	**304**	P	Pg	03 10 05.1	+0.7
BADI				S	Sg	03 10 09.2	+1.7
BADI					AML	AML	
	comp=N,1795μm,0.3s						
BADI					AML	AML	
	comp=N,1800μm,0.3s						
BADI					AML	AML	
	comp=E,2485μm,0.2s						
NARO	**Abbazia di Nar**	**0.23**	**14**	*i* P	Pg	03 10 05.0	+0.5
NARO				S	Sg	03 10 09.0	+1.2
NARO					AML	AML	
	comp=N,412μm,0.4s						
NARO					AML	AML	
	comp=E,558μm,0.2s						
MPAG	**Monte Paganucc**	**0.31**	**37**	*i* P	Pg	03 10 06.6	+0.6
MPAG				S	Sb	03 10 11.7	-1.2
MPAG					AML	AML	
	comp=E,228μm,1.1s						
MPAG					AML	AML	
	comp=N,210μm,0.8s						
MPAG					AML	AML	
	comp=E,228μm,1.1s						
PE3	**Peglio**	**0.31**	**359**	P	Pg	03 10 06.8	+0.7
PE3				S	Sb	03 10 13.0	-0.1
PE3					AML	AML	
	comp=E,486μm,0.4s						
PE3					AML	AML	
	comp=N,577μm,0.3s						
PARC	**Parchiule**	**0.33**	**324**	*e*P	Pg	03 10 07.0	+0.6
PARC				S	Sb	03 10 13.0	-0.5
PARC					AML	AML	
	comp=N,336μm,0.3s						
PARC					AML	AML	
	comp=N,335μm,0.3s						
PARC					AML	AML	
	comp=E,620μm,0.2s						
ARVD	**Arcevia**	**0.34**	**70**	*i* P	Pg	03 10 07.2	+0.6
ARVD				S	Sb	03 10 13.2	-0.6
ARVD					AML	AML	
	comp=N,126μm,1.3s						
ARVD					AML	AML	
	comp=N,126μm,1.3s						
ARVD					AML	AML	
	comp=E,136μm,0.7s						
SNTG	**Esanatoglia**	**0.34**	**112**	*i* P	Pg	03 10 07.2	+0.6
SNTG				S	Sb	03 10 13.2	-0.8
SNTG					AML	AML	
	comp=E,355μm,0.2s						
SNTG					AML	AML	
	comp=N,710μm,0.3s						
SNTG					AML	AML	
	comp=N,710μm,0.3s						
ASSB	**Assisi San Ben**	**0.36**	**162**	P	Pg	03 10 07.5	+0.6

ASSB					S	Sb	03 10 13.5	-0.9		
ASSB					AML	AML				
	comp=N,234μm,0.4s									
ASSB					AML	AML				
	comp=E,202μm,0.2s									
FSSB	**Fossombrone**	**0.37**	**33**	*i* P		Pg	03 10 07.7	+0.6		
FSSB					S	Sb	03 10 13.8	-0.8		
FSSB					AML	AML				
	comp=E,644μm,1.4s									
FSSB					AML	AML				
	comp=N,552μm,1.2s									
CAFI	**Castiglion Fio**	**0.40**	**262**	P		Pg	03 10 08.2	+0.6		
CAFI					S	Sb	03 10 14.4	-1.0		
CAFI					AML	AML				
	comp=E,276μm,0.2s									
CAFI					AML	AML				
	comp=N,3797μm,1.6s									
CAFI					AML	AML				
	comp=E,288μm,0.2s									
CAFI					AML	AML				
	comp=N,156μm,0.5s									
EL6	**Elcito**	**0.44**	**97**	*i* P		Pg	03 10 09.0	+0.5		
EL6					S	Sb	03 10 16.5	-0.3		
CING	**Cingoli**	**0.50**	**91**	P		Pg	03 10 10.2	+0.5		
CING					S	Sb	03 10 18.9	+0.4		
CING					AML	AML				
	comp=E,69μm,1.2s									
CING					AML	AML				
	comp=N,106μm,1.5s									
CING					AML	AML				
	comp=N,106μm,1.5s									
FDMO	**Fiordimonte**	**0.55**	**129**	P		Pg	03 10 10.8	+0.3		
FDMO					S	Sb	03 10 20.0	+0.1		
FDMO					AML	AML				
	comp=E,108μm,0.2s									
FDMO					AML	AML				
	comp=N,158μm,1.4s									
FDMO					AML	AML				
	comp=E,108μm,0.2s									
MGAB	**Montegabbione**	**0.55**	**211**	P		Pg	03 10 11.2	+0.6		
MGAB					AML	AML				
	comp=N,325μm,0.3s									
MGAB					AML	AML				
	comp=E,272μm,0.3s									
MGAB					AML	AML				
	comp=E,273μm,0.3s									
PESA	**Pesaro**	**0.61**	**24**	*i* P		Pb	03 10 12.4	-0.4		
PESA					AML	AML				
	comp=N,318μm,1.0s									
PESA					AML	AML				
	comp=E,333μm,1.0s									
ASQU	**Asqua**	**0.66**	**309**	P		Pg	03 10 13.1	+0.4		
ASQU					AML	AML				
	comp=N,128μm,0.3s									
ASQU					AML	AML				
	comp=E,85μm,0.6s									
NRCA	**Norcia**	**0.71**	**141**	P		Pg	03 10 13.7	+0.1		
NRCA					S	Sb	03 10 24.9	+0.4		
NRCA					AML	AML				
	comp=E,70μm,1.6s									
NRCA					AML	AML				
	comp=N,86μm,0.2s									
RUFI	**Rufina**	**0.85**	**303**	P		Pb	03 10 16.9	-0.1		
RUFI					S	Sb	03 10 29.4	+0.8		
BRJN	**Brijuni**	**1.77**	**30**	*i* Pn		Pn	03 10 31.5	+0.8		
BRJN					Sn	Sg	03 10 55.7	-0.9		
DUGI	**Dugi Otok**	**1.95**	**71**	*e*Pn		Pn	03 10 34.2	+0.8		
DUGI					Sn	Sb	03 10 59.3	-0.8		
NVLJ	**Novalja**	**2.08**	**55**	*e*Pn		Pn	03 10 35.2	+0.2		
NVLJ					Sn	Sb	03 11 03.2	-0.5		
ZIRJ	**Zirje**	**2.30**	**82**	*e*Pn		Pn	03 10 39.1	+1.0		
ZIRJ					Sn	Sb	03 11 09.0	-1.2		
MORI	**Morici**	**2.38**	**77**	*i* Pn		Pn	03 10 38.9	-0.2		
MORI					Sn	Sb	03 11 11.1	-1.3		
UDBI	**Udbina**	**2.62**	**63**	*i* Pn		Pn	03 10 44.2	+1.7		
KIJV	**Kijevo**	**2.90**	**76**	*e*Pn		Pn	03 10 48.2	+1.9		
KIJV					Sn	Sb	03 11 24.7	-2.7		
MAKA	**Makarska**	**3.30**	**90**	*e*Pn		Pn	03 10 53.4	+1.6		
MAKA					Sn	Sn	03 11 34.0	+2.9		

NEIC ***11*** *03:20:58.1±1.1, 15°.39N±0°.09×94°.07W±0°.04, h13km±12km, Error ellipse: s-maj=14.0km s-min=3.0km az=159.0*
MEX ***11*** *03:20:59.9±0.3, 15°.30N×94°.14W, h16km±5km, MD3.9*
GCG ***11*** *03:20:59.8±0.6, 16°.09N×93°.75W, h36km, MD4.1*

ISC 11 03:20:57.6±1.5, 15°.4N±0°.1×94°.06W±0°.06, h10km, n8, σ1s32/14, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.86**	**71**	*e*P	**Pg**	**03 21 15.1**	**+0.9**
PCIG				*e*S	**Sb**	**03 21 27.0**	**+0.8**
PCIG		**0.86**	**71**		**Pg**	**03 21 15.1**	**+0.9**
PCIG					**Sb**	**03 21 27.0**	**+0.8**
THIG		**1.81**	**106**	*i* P	**Pn**	**03 21 26.8**	**-2.0**
THIG				*i* S	**Sn**	**03 21 49.3**	**-2.5**
CMIG	**Matias Romero**	**1.84**	**335**	*e*P	**Pn**	**03 21 28.7**	**-0.6**
CMIG				*i* S	**Sn**	**03 21 50.6**	**-2.0**
STG3	**Santiaguito 3,**	**2.51**	**106**	*e*P	**Pn**	**03 21 38.6**	**0.0**
STG3				*e*S	**Sn**	**03 22 09.6**	**+0.2**
FUG	**Fuego 3**	**3.26**	**107**	*e*S	**Sn**	**03 22 27.4**	**-0.6**
IXG	**Ixpaco**	**3.72**	**109**	*e*P	**Pn**	**03 21 56.1**	**+0.9**
TLIG	**Tlapa**	**4.82**	**297**	Pn	**Pn**	**03 22 10.2**	**-0.1**
TLIG					**Sn**	**03 23 07.0**	**+0.7**

GUC ***11*** *03:24:34.4±0.8, 22°.43S×68°.51W, h113km±5km, ML2.8*
SJA ***11*** *03:24:34.7±1.1, 22°.38S×68°.51W, h113km±7km, ML2.7, MW2.8*

ISC 11 03:24:36.7±1.8, 22°.37S±0°.05×68°.56W±0°.06, h106km±12km, n17, σ0s82/30, 4C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.41**	**233**	*e*P	**Pn**	**03 24 52.0**	**-1.0**
LVC				*i* S	**Sn**	**03 25 04.7**	**-0.5**
LVC	**Limon Verde**	**0.41**	**233**	*i* P	**Pn**	**03 24 52.0**	**-1.0**
LVC				IAML		03 24 53.0	
	comp=Z,171nm,0.1s						
LVC				*e*S	**Sn**	**03 25 05.2**	**0.0**
PB09	**IPOC Station P**	**0.85**	**312**	⇑*i* P	**Pn**	**03 24 56.0**	**-0.2**
PB09				*i* S	**Sn**	**03 25 12.3**	**+1.2**
PB09				IAML		03 25 15.5	
	comp=E,153nm,0.4s						
PB09	**IPOC Station P**	**0.85**	**312**	*i* P	**Pn**	**03 24 56.1**	**-0.2**
PB09				*e*S	**Sn**	**03 25 12.2**	**+1.2**
PB06	**IPOC Station P**	**1.00**	**250**	⇑*i* P	**Pn**	**03 24 57.1**	**-0.6**
PB06				*i* S	**Sn**	**03 25 14.6**	**+1.1**
PB06				IAML		03 25 16.1	
	comp=N,295nm,0.2s						
PB06	**IPOC Station P**	**1.00**	**250**	*i* P	**Pn**	**03 24 57.1**	**-0.6**
PB06				*e*S	**Sn**	**03 25 14.8**	**+1.2**
PB03	**IPOC Station P**	**1.15**	**286**	⇑*i* P	**Pn**	**03 24 58.8**	**-0.6**
PB03				*i* S	**Sn**	**03 25 17.3**	**+0.8**
PB03				IAML		03 25 18.3	
	comp=N,240nm,0.1s						
PB15	**IPOC Station P**	**1.19**	**225**	⇑*i* P	**Pn**	**03 24 59.3**	**-0.6**
PB15				*i* S	**Sn**	**03 25 18.4**	**+1.0**
PB15	**IPOC Station P**	**1.19**	**225**	*i* P	**Pn**	**03 24 59.4**	**-0.4**
PB15				*e*S	**Sn**	**03 25 18.4**	**+1.0**
PB04	**IPOC Station P**	**1.47**	**271**	*e*P	**Pn**	**03 25 02.3**	**-0.8**
PB04				*i* S	**Sn**	**03 25 23.9**	**+0.7**
PB04				IAML		03 25 29.1	
	comp=N,224nm,0.2s						
PB04	**IPOC Station P**	**1.47**	**271**	*i* P	**Pn**	**03 25 02.5**	**-0.6**
PB04				*e*S	**Sn**	**03 25 24.4**	**+1.2**
PB05	**IPOC Station P**	**1.59**	**252**	⇓*i* P	**Pn**	**03 25 03.9**	**-0.7**
PB05				*i* S	**Sn**	**03 25 25.6**	**-0.2**
PB05				IAML		03 25 31.8	
	comp=N,56nm,0.3s						
PB05	**IPOC Station P**	**1.59**	**252**	*i* P	**Pn**	**03 25 03.9**	**-0.7**
PATCX	**Punta Patache**	**2.14**	**316**	*e*P	**Pn**	**03 25 10.5**	**-0.9**
PATCX				*i* S	**Sn**	**03 25 37.2**	**-0.7**
PATCX				IAML		03 25 45.8	
	comp=N,62nm,0.5s						
PB10	**IPOC Station P**	**2.17**	**238**	*i* P	**Pn**	**03 25 11.3**	**-0.3**
GO01	**Chusmiza**	**2.75**	**347**	*e*P	**Pn**	**03 25 19.4**	**-0.3**
GO01				IAML		03 25 57.4	
	comp=N,38nm,0.1s						
HJA	**Humahuaca**	**3.02**	**107**	*i* P	**Pn**	**03 25 23.1**	**-0.1**

IDC ***11*** *03:43:06.5±1.7, 35°.65N×23°.44E, h0km, mb3.6/2,*
mb1 3.4/3, mb1mx3.1/38, mbtmp3.4/3, ML2.4/1, Error ellipse: s-maj=33.8km s-min=16.5km az=6.0
ISK ***11*** *03:43:07.9, 35°.58N×23°.45E, h12km, ML3.4/11*
THE ***11*** *03:43:08.7, 35°.60N×23°.47E, h8km±1km, ML2.8/9, Error ellipse: s-maj=1.7km s-min=0.5km az=169.0*
ATH ***11*** *03:43:08.8, 35°.67N×23°.56E, h23km±1km, ML3.0/18, Error ellipse: s-maj=2.5km s-min=0.7km az=224.0*

ISC 11 03:43:08.2±1.0, 35°.58N±0°.03×23°.43E±0°.03, h13km±8km, n74, σ0s82/92, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RODP	**Rodopos**	**0.27**	**95**	P	**Pg**	**03 43 14.2**	**+0.4**
RODP				S	**Sg**	**03 43 17.2**	**-0.4**
	3μm,0.4s						
RODP	**Rodopos**	**0.27**	**95**	PG	**Pg**	**03 43 14.5**	**+0.7**
RODP				SG	**Sg**	**03 43 18.2**	**+0.6**
ANKY	**Antikythira Is**	**0.30**	**340**	P	**Pb**	**03 43 15.1**	**-0.4**
ANKY				S	**Sb**	**03 43 19.5**	**-1.0**
	2μm,0.3s						
ANKY	**Antikythira Is**	**0.30**	**340**	P	**Pb**	**03 43 15.2**	**-0.4**
ANKY				S	**Sb**	**03 43 20.6**	**+0.1**
ANKY				AML	AML	03 43 21.4	
	comp=E,4253μm,0.2s						
ANKY				AML	AML	03 43 22.4	
	comp=N,3381μm,0.2s						
KNDR	**Palaiochora Ch**	**0.41**	**149**	P	**Pg**	**03 43 15.7**	**-0.6**
KNDR				S	**Sg**	**03 43 21.3**	**-0.4**
	comp=N,1μm,0.2s						
KNDR	**Palaiochora Ch**	**0.41**	**149**	PG	**Pg**	**03 43 15.9**	**-0.4**
KNDR				SG	**Sg**	**03 43 21.5**	**-0.2**
IMMV	**Iera Moni Meta**	**0.47**	**105**	P	**Pg**	**03 43 17.2**	**-0.1**
IMMV				S	**Sg**	**03 43 23.3**	**-0.3**
	comp=N,7μm,0.6s						
IMMV	**Iera Moni Meta**	**0.47**	**105**	P	**Pg**	**03 43 17.3**	**-0.1**
IMMV				S	**Sg**	**03 43 23.5**	**-0.1**
IMMV				AML	AML	03 43 25.5	
	comp=E,13191μm,0.3s						
IMMV				AML	AML	03 43 25.7	
	comp=N,11654μm,0.3s						
IMMV	**Iera Moni Meta**	**0.47**	**105**	PG	**Pg**	**03 43 17.3**	**-0.1**
IMMV				SG	**Sg**	**03 43 23.5**	**-0.1**
CHAN	**Chania**	**0.50**	**97**	P	**Pg**	**03 43 18.0**	**-0.1**
CHAN				S	**Sg**	**03 43 24.5**	**-0.3**
	comp=N,1μm,0.4s						
VAM	**Vamos**	**0.65**	**105**	P	**Pg**	**03 43 20.7**	**-0.2**
VAM				S	**Sg**	**03 43 29.0**	**-0.5**
	comp=N,3μm,0.3s						
VAM	**Vamos**	**0.65**	**105**	P	**Pg**	**03 43 20.7**	**-0.2**
VAM				S	**Sg**	**03 43 29.2**	**-0.3**
VAM				AML	AML	03 43 32.0	
	comp=E,6116μm,0.4s						
VAM				AML	AML	03 43 32.3	
	comp=N,6336μm,0.2s						
KTHA	**Kythira Island**	**0.74**	**336**	P	**Pb**	**03 43 22.9**	**-0.1**
KTHA				S	**Sb**	**03 43 32.8**	**-0.2**
	comp=N,1μm,0.2s						
KTHA	**Kythira Island**	**0.74**	**336**	P	**Pb**	**03 43 22.9**	**-0.1**
KTHA				S	**Sb**	**03 43 33.2**	**+0.2**
KTHA				AML	AML	03 43 37.1	
	comp=N,1868μm,0.1s						
KTHA				AML	AML	03 43 37.2	
	comp=E,2621μm,0.2s						
KTHA	**Kythira Island**	**0.74**	**336**	PG	**Pb**	**03 43 22.9**	**-0.1**
KTHA				SG	**Sb**	**03 43 33.4**	**+0.4**
KTHR	**Kythira**	**0.76**	**333**	P	**Pb**	**03 43 23.3**	**-0.1**
KTHR				S	**Sb**	**03 43 33.3**	**-0.4**
	comp=E,1μm,0.3s						
PRNS	**Prines Rethymn**	**0.90**	**104**	P	**Pg**	**03 43 24.8**	**-0.8**
GVDS	**Gavdos**	**0.91**	**144**	PG	**Pg**	**03 43 25.8**	**-0.1**
GVD	**Gavdhos**	**0.92**	**144**	P	**Pg**	**03 43 26.0**	**0.0**
GVD	**Gavdhos**	**0.92**	**144**	P	**Pg**	**03 43 26.4**	**+0.5**
GVD				AML	AML	03 43 47.2	
	comp=N,1636μm,0.4s						
GVD				AML	AML	03 43 51.2	
	comp=E,1843μm,0.4s						
GVD	**Gavdhos**	**0.92**	**144**	PG	**Pg**	**03 43 25.9**	**0.0**
MNVA	**Monemvasia**	**1.15**	**344**	P	**Pg**	**03 43 30.2**	**-0.1**
VLI	**Veliai**	**1.20**	**341**	P	**Pg**	**03 43 31.1**	**-0.3**
VLI				S	**Sn**	**03 43 47.1**	**+0.1**
	comp=E,302nm,0.7s						
VLI	**Veliai**	**1.20**	**341**	P	**Pg**	**03 43 31.1**	**-0.3**
VLI				S	**Sn**	**03 43 46.3**	**-0.7**
VLI				AML	AML	03 43 58.2	
	comp=E,606μm,0.5s						
VLI				AML	AML	03 44 00.4	
	comp=N,587μm,0.6s						
IDI	**Anoyia**	**1.23**	**103**	Pg	**Pn**	**03 43 31.0**	**-0.2**
	comp=N,28nm,0.3s,baz=240,slow=10,SNR=122						
IDI				Lg	Lg	03 43 46.2	
	comp=N,59nm,0.3s,baz=34,slow=20,SNR=18						
IDI	**Anoyia**	**1.23**	**103**	P	**Pn**	**03 43 30.6**	**-0.5**
IDI				AML	AML	03 43 49.3	
	comp=N,1483μm,0.5s						
IDI				AML	AML	03 43 52.6	
	comp=E,874μm,0.5s						
IDI	**Anoyia**	**1.23**	**103**	PN	**Pn**	**03 43 31.1**	**-0.1**
SIVA	**Sivas**	**1.26**	**116**	P	**Pn**	**03 43 30.4**	**-1.2**
SIVA	**Sivas**	**1.26**	**116**	P	**Pn**	**03 43 30.7**	**-0.8**
SIVA				AML	AML	03 43 52.6	
	comp=E,1965μm,0.5s						
SIVA				AML	AML	03 43 52.8	
	comp=N,1420μm,0.4s						
MHLO	**Agia Marina, M**	**1.36**	**35**	P	**Pb**	**03 43 32.9**	**-0.6**
MHLO	**Agia Marina, M**	**1.36**	**35**	P	**Pn**	**03 43 32.3**	**-0.6**
MHLO				AML	AML	03 43 57.8	
	comp=N,2960μm,0.7s						
MHLO				AML	AML	03 43 59.7	
	comp=E,3295μm,0.7s						
IACM	**Heraklion**	**1.37**	**101**	P	**Pb**	**03 43 34.1**	**+0.4**
IACM				AML	AML	03 43 60.0	
	comp=N,5420μm,0.4s						
IACM				AML	AML	03 44 06.1	
	comp=E,4619μm,0.5s						
HRKL	**Herakleio**	**1.39**	**101**	PN	**Pn**	**03 43 33.6**	**+0.3**
MHLA	**Plaka, Milos I**	**1.41**	**34**	P	**Pn**	**03 43 33.2**	**-0.5**
MHLA				AML	AML	03 44 01.1	
	comp=N,3249μm,1.0s						
MHLA				AML	AML	03 44 01.3	
	comp=E,2646μm,0.9s						
DYR	**Agios Nikonas**	**1.48**	**323**	P	**Pg**	**03 43 36.1**	**-0.5**
DYR				AML	AML	03 44 08.1	
	comp=N,140μm,0.9s						
DYR				AML	AML	03 44 10.5	
	comp=E,124μm,1.3s						
LAST	**Lasithi**	**1.73**	**103**	P	**Pn**	**03 43 39.1**	**+1.0**
LAST				AML	AML	03 44 04.5	
	comp=N,611μm,0.5s						
LAST				AML	AML	03 44 18.2	
	comp=E,462μm,0.9s						
SERI	**Serifos**	**1.79**	**28**	P	**Pn**	**03 43 38.1**	**-0.8**
SERI				AML	AML	03 44 08.2	
	comp=E,212μm,0.5s						
SERI				AML	AML	03 44 10.9	
	comp=N,202μm,0.4s						
NPS	**Neapolis**	**1.81**	**100**	P	**Pn**	**03 43 39.6**	**+0.5**
NPS				AML	AML	03 44 11.9	
	comp=E,665μm,0.5s						
NPS				AML	AML	03 44 13.3	
	comp=N,502μm,0.3s						
KRND	**KRANIDI**	**1.81**	**353**	P	**Pb**	**03 43 39.9**	**-1.3**
SANT	**Santorini**	**1.82**	**64**	PN	**Pn**	**03 43 39.6**	**+0.2**
THT2	**Imerovigli**	**1.82**	**62**	PN	**Pn**	**03 43 39.9**	**+0.5**
IOSP	**Ios island**	**1.89**	**52**	P	**Pn**	**03 43 40.0**	**-0.2**
IOSP	**Ios island**	**1.89**	**52**	P	**Pn**	**03 43 40.0**	**-0.2**
IOSP				AML	AML	03 44 11.0	
	comp=E,1294μm,0.4s						
IOSP				AML	AML	03 44 11.4	
	comp=N,1126μm,0.6s						
PYL	**PYLOS**	**1.89**	**314**	P	**Pb**	**03 43 42.0**	**-0.6**
DID	**Didima**	**1.93**	**355**	P	**Pn**	**03 43 41.2**	**+0.4**
DID	**Didima**	**1.93**	**355**	P	**Pn**	**03 43 41.3**	**+0.4**
DID				AML	AML	03 44 22.9	
	comp=N,219μm,0.4s						
DID				AML	AML	03 44 24.6	
	comp=E,276μm,0.5s						
ITM	**Ithomi**	**2.00**	**323**	P	**Pb**	**03 43 43.8**	**-0.8**
ITM	**Ithomi**	**2.00**	**323**	PN	**Pn**	**03 43 42.8**	**+1.0**
STIA	**Sitia Lasithi**	**2.21**	**99**	P	**Pn**	**03 43 44.4**	**-0.2**
APE	**Apeiranthos**	**2.25**	**48**	P	**Pn**	**03 43 44.7**	**-0.6**
APE				AML	AML	03 44 22.6	
	comp=N,277μm,0.5s						
APE				AML	AML	03 44 23.2	
	comp=E,348μm,0.4s						
APE	**Apeiranthos**	**2.25**	**48**	PN	**Pn**	**03 43 45.8**	**+0.5**
ZKR	**Zakros**	**2.33**	**101**	PN	**Pn**	**03 43 46.8**	**+0.6**
AMGA	**Amorgos Island**	**2.35**	**57**	P	**Pn**	**03 43 46.2**	**-0.4**
ATHU	**Athens Univers**	**2.40**	**7**	P	**Pn**	**03 43 47.0**	**-0.2**
LTK	**Loutraki**	**2.46**	**351**	P	**Pn**	**03 43 49.4**	**+1.3**
VIL2	**Platees**	**2.63**	**357**	P	**Pn**	**03 43 50.2**	**-0.2**
KLV	**Kalavryta, Ach**	**2.66**	**338**	P	**Pn**	**03 43 52.9**	**+2.0**
DRO	**Drossia**	**2.74**	**330**	P	**Pn**	**03 43 54.1**	**+2.1**
KARP	**Karpathos**	**3.04**	**90**	P	**Pn**	**03 43 56.1**	**0.0**
KARP	**Karpathos**	**3.04**	**90**	PN	**Pn**	**03 43 56.8**	**+0.7**
BODT	**Bodrum**	**3.46**	**64**	PN	**Pn**	**03 44 03.1**	**+1.2**
CHOS	**Chios island**	**3.50**	**36**	PN	**Pn**	**03 44 03.6**	**+1.2**
AGG	**Agios Georgios**	**3.54**	**346**	PN	**Pn**	**03 44 04.7**	**+1.7**
DAT	**Datca**	**3.54**	**70**	PN	**Pn**	**03 44 04.2**	**+1.1**
AOS	**Alonnisos**	**3.60**	**6**	PN	**Pn**	**03 44 05.1**	**+1.4**
GCAM	**G?zelcaml?**	**3.72**	**54**	PN	**Pn**	**03 44 07.0**	**+1.7**
ARG	**Arkhangelos**	**3.86**	**79**	PN	**Pn**	**03 44 08.8**	**+1.4**
AYDB	**Zeytinkoy-Aydi**	**4.29**	**55**	PN	**Pn**	**03 44 14.9**	**+1.6**
TURN	**Turunc**	**4.38**	**71**	PN	**Pn**	**03 44 11.7**	**-2.7**
FETY	**Fethiye**	**4.70**	**75**	PN	**Pn**	**03 44 20.7**	**+1.9**
AKAS	**Kas**	**5.05**	**81**	PN	**Pn**	**03 44 25.7**	**+1.8**
BRTR	**Keskin Array B**	**9.09**	**60**	Pn	**Pn**	**03 45 20.0**	**+0.7**
	comp=E,0.0nm,0.3s,baz=238,slow=15,SNR=2.5						
TORD	**Torodi Ar. Bea**	**29.71**	**227**	P	**P**	**03 49 14.7**	**+0.5**
	comp=E,0.7nm,0.6s,baz=31,slow=8.3,SNR=5.0						
MKAR	**Makanchi Array**	**44.72**	**57**	P	**P**	**03 51 21.0**	**-0.1**
	comp=E,0.3nm,0.5s,baz=273,slow=7.8,SNR=7.6						

PRU 11 03:56:45.6±0.0, 50°.07N×19°.01E, h0km, M4.9, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LANS	**Liptovska Anna**	**0.97**	**162**	*e*PG	Pg	03 57 03.2	-0.9
LANS				*e*SG	Sg	03 57 17.0	+0.4
LANS				*e*LG	Lg	03 57 19.8	
MORC	**Moravsky Berou**	**0.99**	**253**	*e*PG	Pg	03 57 04.6	0.0
MORC				*e*SG	Sg	03 57 17.2	-0.3
VYHS	**Vyhne**	**1.58**	**184**	*e*PN	Pn	03 57 13.3	-1.6
VYHS				*e*SN	Sn	03 57 34.8	-1.2
VRAC	**Vranov**	**1.75**	**245**	*e*PN	Pn	03 57 17.3	+0.2
VRAC				*e*SG	Sb	03 57 40.7	-0.2

NIED ***11*** *03:56:00, 43°.60N×139°.20E, h270km, Mw4.9 Best double couple: M0 2.83000×10^16 NP1:φs115.00000°, δ79.00000°, λ-141.00000°. NP2:φs17.00000°, δ52.00000°, λ-13.00000°.*
BGR ***11*** *03:56:27.0±0.0, 43°.72N×140°.19E, h33km, mb5.5, Ms5.5*
MOS ***11*** *03:56:46.7±0.9, 43°.73N×139°.19E, h221km, mb5.1/70, Error ellipse: s-maj=5.3km s-min=4.0km az=109.9*
BJI ***11*** *03:56:46.0±0.0, 43°.56N×139°.33E, h236km, mB4.8/49, mb4.9/67*
SKHL ***11*** *03:56:47.7±0.3, 43°.60N×139°.30E, h219km±9km, mb5.7/16, mbv5.5/4, msh5.7/7, msha6.0/14*
NEIC ***11*** *03:56:48.4±1.2, 43°.66N±0°.02×139°.18E±0°.09, h228km±4km, mb4.9/404, Error ellipse: s-maj=9.4km s-min=2.6km az=76.0*
IDC ***11*** *03:56:48.5±0.8, 43°.74N×139°.17E, h227km±6km, mb4.7/39, mb1 4.8/48, mb1mx4.6/66, mbtmp5.3/48, Error ellipse: s-maj=6.6km s-min=5.7km az=117.0*
GCMT ***11*** *03:56:48.4±0.4, 43°.69N±0°.02×139°.31E±0°.04, h241km±4km, MW5.0/73, Moment Tensor Solution. s11,c15; s73,c94; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.44±.17; Mθθ-2.46±.19; Mφφ 2.91±.17; Mrθ-1.39±.17; Mθφ-1.92±.15; Mφr0.01±.16; Best double couple: M0 3.60200×10^16 NP1:φs25.00000°, δ69.00000°, λ-12.00000°. NP2:φs119.00000°, δ79.00000°, λ-159.00000°. Principal axes: T 3.5750, Plg7.0000°, Azm251.0000°; N 0.0600, Plg66.0000°, Azm146.0000°; P -3.6290, Plg23.0000°, Azm344.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
JMA ***11*** *03:56:49.0±0.1, 43°.62N×139°.24E, h236km±2km, M4.7*

ISC 11 03:56:48.5±0.4, 43°.66N±0°.03×139°.24E±0°.03, h230km±3km, h230km:pP-P,n1210, σ1s06/1173, mb4.9/354, 91C-78D, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**0.95**	**109**	⇓P	**Pn**	**03 57 22.3**	**+1.2**
JSK				*e*S	**S**	**03 57 48.1**	**+1.5**
JSH	**Shimam**	**1.18**	**150**	⇓P	**Pn**	**03 57 23.3**	**+0.7**
JSH				*e*S	**S**	**03 57 50.2**	**+1.0**
JHST	**Hiyamasetana**	**1.33**	**159**	⇓P	**Pn**	**03 57 24.5**	**+0.9**
JOSM	**Okushiri--Mats**	**1.59**	**174**	⇓P	**Pn**	**03 57 26.7**	**+1.0**
JYG	**Yagishiri**	**1.75**	**63**	⇑P	**Pn**	**03 57 28.1**	**+1.1**
JYG				*e*S	**S**	**03 57 58.4**	**+1.3**
JHR	**Hokuryu**	**1.81**	**87**	⇑P	**Pn**	**03 57 29.0**	**+1.5**
JHR				*e*S	**S**	**03 58 00.9**	**+2.9**
JEW	**Eniwo**	**1.81**	**116**	⇓P	**Pn**	**03 57 29.0**	**+1.4**
JEW				*e*S	**S**	**03 58 00.4**	**+2.3**
JRBN	**Rebuntou**	**2.19**	**36**	⇑P	**Pn**	**03 57 32.3**	**+1.2**
JRBN				*e*S	**S**	**03 58 05.3**	**+0.8**
JOMM	**Oshimamatsumae**	**2.21**	**165**	⇓P	**Pn**	**03 57 32.1**	**+0.7**
JKB	**Kayabe**	**2.21**	**143**	⇓P	**Pn**	**03 57 31.6**	**+0.2**
TEY	**Ternei**	**2.33**	**307**	⇓*i* PN	**Pn**	**03 57 33.5**	**+0.9**
TEY				*i* S	**S**	**03 58 07.5**	**+0.4**
TEY				pmax	pmax		
	comp=N,300nm,0.7s						
TEY				pmax	pmax		
	comp=E,600nm,0.7s						
TEY				pmax	pmax		
	comp=Z,700nm,0.6s						
TEY				pmax	pmax		
	comp=E,610nm,0.9s						
TEY				pmax	pmax		
	comp=Z,820nm,0.7s						
TEY				pmax	pmax		
	comp=N,300nm,0.5s						
TEY				smax	smax		
	comp=N,620nm,1.3s						
TEY				smax	smax		
	comp=E,920nm,1.1s						
TEY	**Ternei**	**2.33**	**307**	*i* P	**Pn**	**03 57 33.4**	**+0.9**
TEY				AMB	AMB	03 57 33.9	
	comp=E,300nm,0.7s						
TEY				AMB	AMB	03 57 33.9	
	comp=E,600nm,0.7s						
TEY				AMB	AMB	03

YSS pmax pmax
comp=Z,2μm,2.0s
YSS smax smax
comp=N,6μm,3.1s
YSS smax smax
comp=E,4μm,3.0s
YSS smax smax
comp=N,58nm,0.9s
YSS smax smax
comp=E,400nm,0.9s
YSS MLR MLR
comp=Z,900nm,12.0s
YSS MLR MLR
comp=N,800nm,9.0s
YSS MLR MLR
comp=E,1μm,12.0s
YSS Yuzh-Sakhalins 4.12 36 *i* P **Pn 03 57 54.2 +1.5**
YSS AMB AMB 03 57 55.0
comp=E,2μm,0.9s
YSS AMB AMB 03 57 55.0
comp=E,1μm,0.9s
YSS AMB AMB 03 57 55.0
comp=E,4μm,0.9s
YSS AMB AMB 03 57 55.4
comp=E,2μm,2.0s
YSS *e*S **S 03 58 44.2 +0.6**
YSS A A 03 58 45.2
comp=E,6μm,3.0s
YSS A A 03 58 45.2
comp=E,4μm,3.0s
YSS A A 03 58 46.0
comp=E,580nm,0.9s
YSS A A 03 58 46.0
comp=E,400nm,0.9s
YSS AMS AMS 03 59 15.9
comp=E,800nm,10.0s
YSS AMS AMS 03 59 15.9
comp=E,1μm,10.0s
YSS AMS AMS 03 59 15.9
comp=E,1μm,10.0s
YSS Yuzh-Sakhalins 4.12 36 Pn 03 57 53.6 +0.9
JRA Rausu 4.27 84 ⇑P **Pn 03 57 55.4 +0.8**
GLVR Golovnino 4.56 87*d i*PN **Pn 03 57 58.0 -0.1**
GLVR *i* S **S 03 58 52.6 -0.6**
GLVR pmax pmax
comp=Z,4μm,0.3s
GLVR pmax pmax
comp=E,503nm,0.4s
GLVR pmax pmax
comp=N,181nm,0.3s
GLVR smax smax
comp=N,2μm,0.3s
GLVR smax smax
comp=E,1μm,0.2s
GLVR Golovnino 4.56 87 *i* P **Pn 03 57 58.0 -0.1**
GLVR AMB AMB 03 57 59.0
comp=E,4μm,0.3s
GLVR *i* S **S 03 58 52.0 -1.2**
GLVR A A 03 59 02.0
comp=E,2μm,0.5s
GLVR A A 03 59 02.0
comp=E,1μm,0.5s
NMR Nemuro--Hokkai 4.73 91*c i*PN **Pn 03 57 58.8 -1.4**
NMR *i* S **S 03 58 52.3 -4.7**
NMR Nemuro--Hokkai 4.73 91 *i* P **Pn 03 57 58.9 -1.3**
GRPR Tuman 4.74 84⇑*i*PN **Pn 03 58 00.7 +0.3**
GRPR *e*S **S 03 58 57.2 -0.1**
GRPR pmax pmax
comp=Z,816nm,0.4s
GRPR pmax pmax
comp=N,365nm,0.3s
GRPR pmax pmax
comp=E,668nm,0.6s
GRPR smax smax
comp=N,2μm,0.4s
GRPR smax smax
comp=E,1μm,0.4s
GRPR Tuman 4.74 84 *i* P **Pn 03 58 00.0 -0.4**
GRPR AMB AMB 03 58 04.0
comp=E,820nm,0.4s
GRPR *e*S **S 03 58 57.0 -0.3**
GRPR A A 03 59 08.0
comp=E,2μm,0.4s
GRPR A A 03 59 08.0
comp=E,1μm,0.4s
YUK Yuzh-Kuril'sk 4.81 83*d i*PN **Pn 03 58 01.1 -0.1**
YUK *e*S **S 03 58 58.5 -0.2**
YUK pmax pmax
comp=Z,1μm,0.6s
YUK pmax pmax
comp=E,386nm,0.3s
YUK pmax pmax
comp=N,503nm,0.4s
YUK smax smax
comp=E,734nm,0.3s
YUK smax smax
comp=N,1μm,0.5s
YUK MLR MLR
comp=Z,257nm,12.0s
YUK MLR MLR
comp=N,363nm,11.0s
YUK Yuzh-Kuril'sk 4.81 83 *i* P **Pn 03 58 01.0 -0.1**
YUK AMB AMB 03 58 03.0
comp=N,500nm,0.6s
YUK AMB AMB 03 58 03.0
comp=N,1μm,0.6s
YUK *e*S **S 03 58 58.6 -0.2**
YUK A A 03 59 06.0
comp=N,1μm,0.5s
YUK A A 03 59 06.0
comp=N,730nm,0.5s
YUK AMS AMS 04 00 28.2
comp=N,4μm,12.0s
YUK AMS AMS 04 00 28.2
comp=N,3μm,12.0s
USA0B Ussuriysk Arra 5.26 278 PN **Pn 03 58 06.5 -0.3**
USA0B Ussuriysk Arra 5.26 278 Pn 03 58 06.5 -0.3
USRK Ussuriysk Ar. 5.26 278 P **Pn 03 58 07.2 +0.3**
baz=88,slow=14,SNR=360
USRK S **S 03 59 07.7 -1.4**
baz=89,slow=25,SNR=1.9
VLA Vladivostok 5.38 267*c i*PN **Pn 03 58 08.9 +0.5**
VLA Vladivostok 5.38 267 *e*P **Pn 03 58 08.9 +0.5**
SHO Shikotan 5.50 85*c i*PN **Pn 03 58 08.2 -1.7**
SHO *i* S **S 03 59 09.3 -5.2**
SHO pmax pmax
comp=Z,691nm,0.3s
SHO pmax pmax
comp=N,143nm,0.2s
SHO pmax pmax
comp=E,336nm,0.3s
SHO smax smax
comp=E,3μm,0.5s
SHO smax smax
comp=N,2μm,0.3s
SHO Shikotan 5.50 85 *i* P **Pn 03 58 08.0 -1.9**
SHO AMB AMB 03 58 09.5
comp=N,360nm,0.4s
SHO *i* rx rx 03 59 09.4
SHO A A 03 59 10.7
comp=N,2μm,0.5s
SHO A A 03 59 10.7
comp=N,2μm,0.5s
UGL Uglegorsk 5.76 19*c i*PN **Pn 03 58 14.6 +1.6**
UGL *e*S **S 03 59 19.6 -0.7**
UGL pmax pmax
comp=Z,600nm,1.3s
UGL pmax pmax
comp=Z,265nm,1.0s
UGL smax smax
comp=E,5μm,5.8s
UGL smax smax
comp=N,4μm,4.1s
UGL smax smax
comp=E,345nm,1.2s
UGL smax smax
comp=N,202nm,1.0s
UGL Uglegorsk 5.76 19 *i* P **Pn 03 58 14.6 +1.6**
UGL AMB AMB 03 58 15.5
comp=N,260nm,1.0s
UGL *e*S **S 03 59 20.1 -0.2**
UGL A A 03 59 23.5
comp=N,4μm,5.0s
UGL A A 03 59 23.5
comp=N,5μm,5.0s
UGL A A 03 59 30.5
comp=N,200nm,1.0s
UGL A A 03 59 30.5
comp=N,340nm,1.0s
MSHR Mys Shultsa 6.01 262*c i*PN **Pn 03 58 17.1 +0.8**
KUR Kuril'sk 6.37 73*d i*PN **Pn 03 58 20.9 +0.1**
KUR *e*S **S 03 59 34.4 -0.1**
KUR pmax pmax
comp=Z,275nm,0.5s
KUR pmax pmax
comp=N,64nm,0.3s
KUR pmax pmax
comp=E,77nm,0.4s
KUR pmax pmax
comp=Z,796nm,1.1s
KUR Kuril'sk 6.37 73 *i* P **Pn 03 58 21.7 +0.9**
KUR AMB AMB 03 58 22.0
comp=Z,580nm,0.6s
KUR AMB AMB 03 58 24.0
comp=Z,800nm,1.0s
KUR *e*S **S 03 59 34.4 -0.1**
KUR A A 03 59 41.9
comp=Z,340nm,1.0s
KUR A A 03 59 41.9
comp=Z,320nm,1.0s
MDJ Mudanjiang 7.00 281 P **Pn 03 58 29.6 +0.7**
MDJ sP 03 59 18.0
MDJ S **S 03 59 45.9 -3.2**
MDJ pmax pmax
comp=Z,170nm,0.9s
MDJ pmax pmax
comp=Z,350nm,5.0s
MDJ Mudanjiang 7.00 281 Pn 03 58 29.1 +0.2
MJB9 Matsu-Tunnel 7.15 187 Pn 03 58 30.8 -0.2
MAJO Matsushiro 7.16 187*d i*PN **Pn 03 58 30.9 -0.1**
MAJO Matsushiro 7.16 187 Pn 03 58 30.5 -0.5
MAT Matsushiro 7.16 187 P **Pn 03 58 30.8 -0.2**
MAT S **S 03 59 51.3 -1.6**
MJAR Matsushiro Arr 7.16 187 P **Pn 03 58 31.1 +0.1**
comp=Z,8.4nm,0.3s,baz=81,slow=9.0,SNR=435
MJAR S **S 03 59 50.4 -2.5**
baz=338,slow=29,SNR=2.3
GRNR Gornyy 7.36 346⇓*i*PN **Pn 03 58 33.7 +0.3**
GRNR *e*S **S 03 59 53.9 -3.5**
GRNR pmax pmax
comp=Z,540nm,0.6s
GRNR smax smax
comp=N,20nm,0.5s
GRNR MLR MLR
comp=Z,160nm,10.0s
GRNR Gornyy 7.36 346 *i* P **Pn 03 58 34.9 +1.5**
comp=Z,540nm,0.6s
GRNR AMS AMS 04 02 29.5
comp=Z,100nm,11.0s
GRNR AMS AMS 04 02 29.5
comp=Z,200nm,11.0s
TYV Tymovskoe 7.57 17 *e*PN **Pn 03 58 37.4 +1.4**
TYV *e*S **S 04 00 03.3 +1.1**
TYV pmax pmax
comp=Z,43nm,1.2s
TYV pmax pmax
comp=Z,200nm,1.6s
TYV smax smax
comp=E,2μm,5.4s
TYV smax smax
comp=E,38nm,1.2s
TYV Tymovskoe 7.57 17 *e*P **Pn 03 58 37.7 +1.7**
TYV AMB AMB 03 58 40.0
comp=E,200nm,2.0s
TYV AMB AMB 03 58 40.9
comp=E,60nm,0.8s
TYV *e*S **S 04 00 03.1 +0.9**
TYV A A 04 00 04.0
comp=E,2μm,5.0s
TYV A A 04 00 04.3
comp=E,60nm,1.0s
KLR Kul'dur 7.59 320*d i*PN **Pn 03 58 36.4 0.0**
KLR Kul'dur 7.59 320 P **Pn 03 58 36.8 +0.5**
comp=E,20nm,0.3s,baz=131,slow=13,SNR=590
KLR S **S 04 00 01.7 -1.2**
baz=108,slow=13,SNR=1.5
KLR ScP **ScP 04 08 02.5 +0.2**
comp=E,0.1nm,0.3s,baz=255,slow=0.4,SNR=7.8
KLR Kul'dur 7.59 320 *e*P **Pn 03 58 36.4 0.0**
INU Inuyama 8.48 192 Pn 03 58 47.3 -0.5
CN2 Changchun 9.98 276 ⇑P **Pn 03 59 06.9 -0.1**
CN2 pmax pmax
comp=E,90nm,1.2s
CN2 pmax pmax
comp=E,460nm,5.0s
EKMR Ekimchan 10.29 338 *i* P **Pn 03 59 10.0 -0.8**
EKMR AMB AMB 03 59 33.0
comp=E,50nm,0.7s
EKMR AMB AMB 03 59 33.0
comp=E,40nm,0.7s
EKMR AMB AMB 03 59 33.0
comp=E,50nm,0.7s
JHJ2 Mitsune 10.55 177 Pn 03 59 12.2 -2.0
KSRS Korea Array 10.60 238 PN **Pn 03 59 16.0 +1.1**
KSRS Korea Array 10.60 238 P **Pn 03 59 15.9 +1.1**
comp=E,6.5nm,0.3s,baz=52,slow=12,SNR=267
KSRS ScP **ScP 04 08 06.3 +0.4**
comp=E,0.4nm,0.3s,baz=80,slow=0.6,SNR=14
KSRS Korea Array 10.60 238 *e*P **Pn 03 59 16.0 +1.1**
KS19 Wonju Array Si 10.61 238 Pn 03 59 15.1 +0.2
INCN Inchon 11.39 241 PN **Pn 03 59 24.7 -0.2**
INCN Inchon 11.39 241 Pn 03 59 24.7 -0.2
TJN Taejon 11.64 235*c i*PN **Pn 03 59 28.7 +0.7**
JNU Nakatsue 12.39 215 P **Pn 03 59 37.3 -0.2**
comp=E,15nm,0.3s,baz=24,slow=3.7,SNR=69
JNU Nakatsue 12.39 215 Pn 03 59 37.7 +0.3
ZEA Zeya 12.80 326 *e*PN **Pn 03 59 41.6 -0.6**
ZEA pmax pmax
comp=N,160nm,1.2s
ZEA pmax pmax
comp=E,130nm,1.2s
ZEA pmax pmax
comp=Z,260nm,1.2s
ZEA pmax pmax
comp=Z,500nm,5.0s
ZEA Zeya 12.80 326 *e*P **Pn 03 59 41.6 -0.6**
ZEA AMB AMB 03 59 42.8
comp=Z,160nm,1.0s
ZEA AMB AMB 03 59 42.8
comp=Z,130nm,1.0s
ZEA AMB AMB 03 59 42.8
comp=Z,260nm,1.0s
ZEA AMB AMB 03 59 48.0
comp=Z,500nm,5.0s
BMKR Bomnak 12.96 332 *i* P **Pn 03 59 43.2 -1.0**
BMKR AMB AMB 03 59 47.8
comp=Z,100nm,1.0s
BMKR AMB AMB 03 59 47.8
comp=Z,40nm,1.0s
BMKR AMB AMB 03 59 47.8
comp=Z,220nm,1.0s
KROS Kirovskiy 13.42 328 *e*P **Pn 03 59 50.0 0.0**
KROS AMB AMB 03 59 52.0
comp=Z,20nm,0.9s
KROS AMB AMB 03 59 52.0
comp=Z,20nm,0.9s
KROS AMB AMB 03 59 52.0
comp=Z,50nm,0.9s
SKR Severo-Kuril's 13.44 53 *e*PN **Pn 03 59 49.6 -0.6**
SKR pmax pmax
comp=Z,523nm,0.6s
SKR Severo-Kuril's 13.44 53 *e*P **Pn 03 59 49.6 -0.6**
SKR AMB AMB 03 59 52.7
comp=Z,520nm,0.6s
DL2 Dalian 14.06 256 P **Pn 03 59 57.0 -0.9**
DL2 S **S 04 02 32.5 -0.9**
DL2 *e*PcS **PcS 04 08 35.6 +1.1**
DL2 pmax pmax
comp=Z,260nm,0.7s
DL2 pmax pmax
comp=Z,670nm,3.8s
HIA Hailar 14.54 299*d i*P **Pn 04 00 03.5 -0.2**
HIA Hailar 14.54 299 P **Pn 04 00 03.7 0.0**
PEA0B Petropavlovsk- 15.44 46 P **Pn 04 00 15.4 +0.9**
PEA0B pmax pmax
comp=Z,43nm,1.0s
PEA0B Petropavlovsk- 15.44 46 P **Pn 04 00 15.4 +0.9**
PEA0B IAmb IAmb 04 00 21.4
comp=Z,43nm,0.9s
PETK Petropavlovsk- 15.44 46 P **P 04 00 12.7 -1.4**
comp=Z,2.3nm,0.3s,baz=210,slow=6.2,SNR=20
PET Petropavlovsk 15.90 47 *e*P **Pn 04 00 20.3 +0.3**
PET *e*S **S 04 03 08.8 -5.4**
PET pmax pmax
comp=Z,43nm,1.0s
PET Petropavlovsk 15.90 47 *e*P **P 04 00 19.0 -0.1**
PET AMB AMB 04 00 33.6
comp=Z,40nm,1.0s
PET Petropavlovsk 15.90 47 P **Pn 04 00 19.7 -0.3**
PET IAmb IAmb 04 00 25.9
comp=Z,38nm,1.0s
JCJ Chichijima 16.70 171 P **P 04 00 28.0 -0.2**
comp=Z,51nm,0.3s,baz=355,slow=7.1,SNR=10
JCJ S **S 04 03 21.6 -9.2**
comp=Z,52nm,0.3s,baz=288,slow=19,SNR=7.9
MA2 Magadan 17.42 20*d i*P **P 04 00 35.1 -0.6**
MA2 pmax pmax
comp=Z,143nm,0.7s
MA2 Magadan 17.42 20 P **P 04 00 35.2 -0.5**
comp=Z,9.6nm,0.3s,baz=205,slow=10,SNR=52
MA2 Magadan 17.42 20 *e*P **P 04 00 35.1 -0.6**
MA2 Magadan 17.42 20 IAmb IAmb 04 00 36.8
comp=Z,136nm,0.7s
BJT Baijiatuau 17.56 266 P **P 04 00 37.0 -0.4**
BJT pmax pmax
comp=Z,87nm,0.7s
BJT Baijiatuau 17.56 266 P **P 04 00 37.0 -0.4**
TIA Tai'an 18.48 254 P **P 04 00 46.2 -1.3**
TIA pmax pmax
comp=Z,43nm,0.8s
JOW Kunigami 19.00 211 P **P 04 00 54.1 +1.0**
JOW IAmb IAmb 04 01 09.1
comp=Z,25nm,1.1s
YAK Yakutsk 19.24 346*d i*P **P 04 00 53.1 -2.2**
YAK *e*S **S 04 04 18.8 -1.6**
YAK pmax pmax
comp=Z,298nm,0.8s
YAK pmax pmax
comp=N,93nm,0.8s
YAK pmax pmax
comp=E,42nm,0.7s
YAK smax smax
comp=N,72nm,1.5s
YAK smax smax
comp=E,81nm,1.5s
YAK Yakutsk 19.24 346 P **P 04 00 53.1 -2.2**
comp=E,3.3nm,0.3s,baz=305,slow=0.4,SNR=134
YAK ScP **ScP 04 08 20.5 -0.5**
comp=E,0.1nm,0.3s,baz=335,slow=0.9,SNR=4.4
YAK Yakutsk 19.24 346 P **P 04 00 53.0 -2.2**
NJ2 Nanjing 19.78 241 *e*P **P 04 00 59.4 -1.9**
NJ2 pmax pmax
comp=E,190nm,0.8s
SEY Seymchan 20.76 17⇑*e*P **P 04 01 09.1 -2.4**
SEY Seymchan 20.76 17 P **P 04 01 09.6 -1.9**
comp=E,51nm,0.7s,baz=209,slow=8.0,SNR=88
SEY S **S 04 04 48.3 -0.6**
comp=E,7.9nm,1.1s,baz=30,slow=20,SNR=6.2
SEY Seymchan 20.76 17 *e*P **P 04 01 09.1 -2.4**
BOD Bodaibo 21.17 321 *e*P **P 04 01 12.5 -3.3**
BOD pmax pmax
comp=Z,5.0nm,1.3s
ULN Ulaanbaatar 22.75 292*ce*P **P 04 01 29.9 -1.0**
ULN pmax pmax
comp=Z,13nm,0.6s
ULN Ulaanbaatar 22.75 292 *e*P **P 04 01 29.9 -1.0**
ULN Ulaanbaatar 22.75 292 P **P 04 01 29.6 -1.3**
ULN IAmb IAmb 04 01 33.5
comp=Z,16nm,0.6s
SONM Songino Array 23.19 292 P **P 04 01 34.2 -0.6**
comp=Z,16nm,0.5s,baz=82,slow=9.8,SNR=116
SONM PcP **PcP 04 05 16.1 +0.5**
comp=Z,3.1nm,0.9s,baz=88,slow=0.5,SNR=3.7
SONM S **S 04 05 28.3 -0.8**
comp=Z,2.4nm,1.0s,baz=94,slow=10,SNR=3.6
SONM ScP **ScP 04 08 31.2 -0.1**
comp=Z,1.6nm,0.6s,baz=70,slow=0.8,SNR=6.5
SONM Songino Array 23.19 292 IAmb IAmb 04 01 36.7
comp=Z,12nm,0.6s
TATO Taipei 23.63 224 P **P 04 01 37.5 -1.3**
WHN Wuhan 23.67 245⇓P **P 04 01 37.0 -2.2**
YHNB Yeheng 23.94 223 P **P 04 01 40.8 -1.0**
YHNB IAmb IAmb 04 01 49.7
comp=Z,41nm,0.8s
IRK Irkutsk 24.73 303 *e*P **P 04 01 47.4 -1.3**
IRK pmax pmax
comp=Z,66nm,1.3s
SSLB Suanglung 24.88 223 P **P 04 01 47.8 -2.5**
SSLB IAmb IAmb 04 01 57.4
comp=Z,16nm,0.6s
TLY Talaya 25.07 301 *e*P **P 04 01 51.9 +0.2**
TLY *e*S **S 04 06 04.9 +6.4**
TLY pmax pmax
comp=Z,95nm,0.8s
TLY MLR MLR
comp=Z,60nm,6.0s
TLY Talaya 25.07 301 P **P 04 01 51.3 -0.4**
comp=Z,32nm,0.6s,baz=93,slow=3.4,SNR=16
TLY Talaya 25.07 301 *e*P **P 04 01 51.5 -0.2**
TLY Talaya 25.07 301 P **P 04 01 50.5 -1.2**
TLY IAmb IAmb 04 01 53.2
comp=Z,44nm,0.9s
QZH Quanzhou 25.17 229⇓*i*P **P 04 01 54.0 +1.2**
QZH S **S 04 06 05.8 +5.3**
ZAK Zakamensk 25.23 298 *e*P **P 04 01 52.4 -0.9**
ZAK *e* 04 05 58.8
ZAK pmax pmax
comp=Z,22nm,1.0s
ZAK Zakamensk 25.23 298 *e*P **P 04 01 52.4 -0.9**
XAN Xi'an 25.37 258 P **P 04 01 53.0 -1.6**
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN pmax pmax
comp=Z,120nm,4.3s
XAN Xi'an 25.37 258 P **P 04 01 53.4 -1.2**
XAN pmax pmax
comp=Z,34nm,0.5s
XAN Xi'an 25.37 258 P **P 04 01 53.4 -1.2**
MOY Mondy 26.71 301 *e*P **P 04 02 06.3 -0.2**
MOY pmax pmax
comp=Z,34nm,1.8s
MOY Mondy 26.71 301 *e*P **P 04 02 06.3 -0.2**
ENH Enshi 27.11 250 P **P 04 02 08.3 -1.8**
ENH IAmb IAmb 04 02 15.0
comp=Z,43nm,0.9s
LZH Lanzhou 28.03 266 ⇑P **P 04 02 21.0 +2.5**
LZH pP pP 04 03 02.9 -0.3
LZH sP sP 04 03 29.1 -0.3
LZH pmax pmax
comp=Z,42nm,1.0s
LZH pmax pmax
comp=Z,58nm,4.9s
BILL Bilibino 28.28 21⇓*e*P **P 04 02 18.4 -1.7**
BILL 04 03 23.0
BILL *SP **PP 04 03 30.0 +1.2**
BILL *e*S **S 04 06 45.8 -2.9**
BILL pmax pmax
comp=Z,20nm,1.4s
BILL Bilibino 28.28 21 *e*P **P 04 02 18.8 -1.3**
BILL Bilibino 28.28 21 P **P 04 02 19.1 -1.0**
BILL IAmb IAmb 04 02 20.6
comp=Z,18nm,0.6s
TIXI Tiksi 28.52 353*d i*P **P 04 02 19.4 -2.7**
TIXI pmax pmax
comp=Z,20nm,0.9s
TIXI Tiksi 28.52 353 P **P 04 02 19.6 -2.5**
comp=Z,26nm,0.6s,baz=170,slow=6.1,SNR=55
TIXI Tiksi 28.52 353 *e*P **P 04 02 19.4 -2.7**
TIXI Tiksi 28.52 353 P **P 04 02 19.5 -2.7**
TIXI IAmb IAmb 04 02 22.9
comp=Z,25nm,0.6s
GTA Gaotai 29.62 275 P **P 04 02 33.8 +1.4**
GTA pP pP 04 03 17.9 +0.4
GTA sP PP 04 03 46.8 +2.7
GTA ScP **ScP 04 08 51.0 +0.5**
GTA ScS **ScS 04 12 44.9 -1.0**
GTA pmax pmax
comp=Z,8.0nm,0.8s
CD2 Chengdu 30.73 257 P **P 04 02 40.0 -2.1**
CD2 pmax pmax
comp=Z,30nm,0.5s
GYA Guiyang 31.45 248⇑*i*P **P 04 02 46.7 -1.9**
GYA PP **sP 04 03 58.7 -1.0**
GYA PcP **PcP 04 05 32.7 -3.2**
GYA S **S 04 07 36.7 -2.5**
GYA ScS **ScS 04 12 53.9 -1.3**
GYA pmax pmax
comp=Z,10.0nm,0.5s

GYA pmax pmax
comp=Z,80nm,3.5s
GAMB Gambell 34.14 37 P P 04 03 11.1 -0.2
KMI Kunming 34.98 250 P P 04 03 21.1 +1.9
KMI pmax pmax
comp=Z,34nm,0.8s
KMI Kunming 34.98 250 P P 04 03 18.4 -0.8
KMI pmax pmax
comp=Z,26nm,0.6s
KMI Kunming 34.98 250 P P 04 03 18.4 -0.8
KMI IAmb IAmb 04 03 22.2
comp=Z,26nm,0.6s
ZAA0 Zalesovo Array 36.43 306 P P 04 03 30.9 0.0
ZALV Zalesovo Beam 36.43 306 P P 04 03 31.0 +0.1
comp=Z,65nm,0.4s,baz=91,slow=8.9,SNR=357
ZALV PcP **PcP 04 05 49.6 +0.1**
comp=Z,6.0nm,0.5s,baz=95,slow=2.8,SNR=5.8
ZALV ScP **ScP 04 09 13.6 -0.2**
comp=Z,13nm,0.6s,baz=87,slow=3.5,SNR=23
WMQ Urumqi 36.73 289 P P 04 03 34.3 +0.6
WMQ pP pP 04 04 18.0 -2.3
WMQ PP **PnPn 04 05 07.8 +2.2**
WMQ S **S 04 08 59.5 -0.3**
WMQ pmax pmax
comp=Z,24nm,0.7s
WMQ pmax pmax
comp=Z,170nm,4.3s
WMQ LR LR
comp=Z,400nm,29.2s
WMQ LR LR
comp=Z,1μm,29.0s
WMQ LR LR
comp=Z,92nm,29.1s
WMQ Urumqi 36.73 289 IAmb IAmb 04 03 36.5
comp=Z,32nm,0.5s
SLVN Son La 36.79 244 P P 04 03 33.6 -0.8
SLVN IAmb IAmb 04 03 37.0
comp=Z,31nm,0.9s
ANM Nome 37.01 36 P P 04 03 35.7 +0.1
ANM pmax pmax
comp=Z,31nm,0.8s
ANM Nome 37.01 36 P P 04 03 35.7 +0.1
ANM IAmb IAmb 04 03 37.2
comp=Z,31nm,0.8s
RDOG Red Dog Mine 38.49 31 IAmb IAmb 04 03 48.6
comp=Z,32nm,0.6s
KCP Kidapawan 38.56 203⇑ *i*P **P 04 03 50.8 +1.6**
MK31 Makanchi Array 39.48 295 *i* P **P 04 03 56.5 0.0**
MK31 Makanchi Array 39.48 295 P P 04 03 56.1 -0.4
MKAR Makanchi Array 39.48 295 P P 04 03 56.3 -0.1
comp=Z,12nm,0.7s,baz=81,slow=9.4,SNR=108
MKAR PP **PP 04 05 30.7 -1.3**
comp=Z,3.6nm,0.8s,baz=73,slow=9.7,SNR=3.0
MKAR PcP **PcP 04 06 00.9 +1.7**
comp=Z,3.4nm,0.8s,baz=88,slow=2.2,SNR=3.4
MKAR ScP **ScP 04 09 25.1 -0.4**
comp=Z,5.7nm,0.9s,baz=70,slow=4.0,SNR=8.3
MKAR S **S 04 09 39.5 -1.3**
comp=Z,3.2nm,1.0s,baz=61,slow=12,SNR=6.3
MAKZ Makanchi 39.68 295 P P 04 03 57.8 -0.3
MAKZ pmax pmax
comp=Z,23nm,0.8s
MAKZ Makanchi 39.68 295 P P 04 03 57.8 -0.3
MAKZ IAmb IAmb 04 03 59.3
comp=Z,23nm,0.8s
LSA Lhasa 40.45 266 P P 04 04 05.7 +0.5
LSA pmax pmax
comp=Z,8.0nm,0.7s
LSA Lhasa 40.45 266 P P 04 04 05.7 +0.5
KURK Kurchatov 40.76 302 P P 04 04 06.6 -0.2
KURK Kurchatov 40.76 302 *eP* **P 04 04 06.6 -0.2**
KURK Kurchatov 40.76 302 P P 04 04 06.6 -0.2
KURK Kurchatov 40.76 302 PP 04 05 44.7 -1.1
KURK **ScP 04 09 29.9 -0.5**
KURBB Kurchatov Arra 40.84 302 P P 04 04 07.7 +0.2
comp=Z,63nm,0.6s,baz=76,slow=9.0,SNR=284
KURBB PP **PP 04 05 44.7 -1.9**
comp=Z,1.8nm,0.3s,baz=82,slow=9.0,SNR=3.1
KURBB ScP **ScP 04 09 29.9 -0.8**
comp=Z,1.9nm,0.5s,baz=80,slow=4.1,SNR=7.0
DLV T Lat 41.25 229 IAmb IAmb 04 04 14.7
comp=Z,30nm,0.8s
SVW2 Sparrevohn 41.47 42 P P 04 04 13.3 +0.8
CHTO Chiang Mai 41.85 247 P P 04 04 16.2 +0.1
CHTO pmax pmax
comp=Z,40nm,0.8s
CHTO Chiang Mai 41.85 247 P P 04 04 16.2 +0.1
CHTO IAmb IAmb 04 04 17.6
comp=Z,40nm,0.8s
CM31 Chiang Mai Arr 42.10 246 P P 04 04 18.1 -0.1
CMAR Chiang Mai Arr 42.10 246 P P 04 04 18.6 +0.5
comp=Z,4.7nm,0.3s,baz=38,slow=6.5,SNR=38
CMAR ScP **ScP 04 09 37.0 +0.7**
comp=Z,7.4nm,0.7s,baz=11,slow=3.1,SNR=27
SHL Shillong 42.32 261 P P 04 04 19.5 -0.6
SHL pmax pmax
comp=Z,60nm,0.7s
SHL Shillong 42.32 261 P P 04 04 19.5 -0.6
SHL IAmb IAmb 04 04 21.7
comp=Z,60nm,0.7s
PDGK Podgornoye 42.50 291 P P 04 04 20.6 -0.6
KKM Kota Kinabalu 42.59 215 P P 04 04 22.4 +0.2
KKM IAmb IAmb 04 04 24.6
comp=Z,25nm,0.8s
PPLA Purkeypile 42.86 39 IAmb IAmb 04 04 26.6
comp=Z,28nm,0.7s
RSO Redoubt South 42.92 42 P P 04 04 24.3 -0.1
OHAK Old Harbor 43.24 47 P P 04 04 26.4 -0.3
OHAK IAmb IAmb 04 04 28.0
comp=Z,23nm,0.7s
BPAW Bear Paw Mtn. 43.26 37 IAmb IAmb 04 04 28.7
comp=Z,20nm,0.7s
MLY Manley 43.27 36 P P 04 04 27.3 +0.3
COLD Coldfoot 43.30 32 P P 04 04 27.4 +0.3
KTH Kantishna Hill 43.35 38 IAmb IAmb 04 04 30.4
comp=Z,65nm,0.9s
TOLK Toolik Lake Re 43.46 30 IAmb IAmb 04 04 30.7
comp=Z,33nm,0.8s
TOLK Toolik Lake Re 43.46 30 P P 04 04 28.5 +0.1
baz=273,SNR=28
KDAK Kodiak Island 43.49 46 P P 04 04 29.3 +0.6
comp=Z,24nm,0.6s,baz=279,slow=1.7,SNR=65
KDAK PcP **PcP 04 06 13.2 +1.0**
comp=Z,7.8nm,0.4s,baz=346,slow=2.1,SNR=6.3
KDAK Kodiak Island 43.49 46 P P 04 04 29.2 +0.5
KDAK IAmb IAmb 04 04 29.9
comp=Z,25nm,0.6s
TRF Thorofare Moun 43.65 38 IAmb IAmb 04 04 31.9
comp=Z,18nm,0.6s
SPMM Sapulut 43.70 214 P P 04 04 33.0 +2.1
SUA Susitna One 43.73 41 IAmb IAmb 04 04 32.5
comp=Z,24nm,0.5s
BRLK Bradley Lake 43.97 43 IAmb IAmb 04 04 35.6
comp=Z,44nm,0.5s
NEA Nenana 44.03 36 IAmb IAmb 04 04 35.0
comp=Z,42nm,0.8s
MCK McKinley 44.21 37 P P 04 04 35.4 +1.0
MCK pmax pmax
comp=Z,25nm,0.6s
MCK McKinley 44.21 37 P P 04 04 35.4 +1.0
MCK IAmb IAmb 04 04 36.6
comp=Z,25nm,0.6s
TAPN Taplejung 44.27 266 *eP* **P 04 04 36.7 +1.0**
comp=Z,58nm,0.4s
MDM Murphy Dome 44.33 36 IAmb IAmb 04 04 37.6
comp=Z,36nm,1.0s
WRH Wood River Hil 44.46 36 IAmb IAmb 04 04 40.2
comp=Z,28nm,0.9s
TCOL CIGO, UAF Yank 44.50 36 P P 04 04 37.5 +0.9
baz=278,SNR=16
COLA College 44.51 36*d* iP **P 04 04 36.8 +0.2**
COLA *i* *PP **pP 04 05 26.4 +1.0**
COLA pmax pmax
comp=Z,60nm,1.0s
COLA College 44.51 36 P P 04 04 36.8 +0.2
COLA IAmb IAmb 04 04 38.4
comp=Z,65nm,0.9s
GHO Glory Hole Cre 44.54 40 IAmb IAmb 04 04 39.6
comp=Z,82nm,0.9s
SEW Seward 44.61 43 IAmb IAmb 04 04 39.2
comp=Z,47nm,1.0s
POKR Poker Flat Res 44.65 35 P P 04 04 38.9 +1.0
baz=278,SNR=22
ODAN Odare 44.79 266 *eP* **P 04 04 40.5 +0.8**
comp=Z,109nm,0.7s
SML Sawmill 44.81 40 IAmb IAmb 04 04 42.1
comp=Z,47nm,0.7s
KNK Knik Glacier 44.82 41 IAmb IAmb 04 04 42.1
comp=Z,40nm,0.6s
SWI Sorong 44.90 191 P P 04 04 41.4 +1.1
comp=Z,30nm,0.9s
SIJI Sorong 44.91 191 P P 04 04 41.0 +0.6
comp=Z,19nm,0.5s,baz=6.3,slow=12,SNR=6.5
IL31 44.93 36 IAmb IAmb 04 04 41.8
comp=Z,25nm,0.8s
ILAR Eielson Array 44.93 36 P P 04 04 40.0 -0.1
ILAR Eielson Array 44.93 36 P P 04 04 40.0 -0.1
comp=Z,23nm,0.8s,baz=285,slow=5.5,SNR=189
ILAR ScP **ScP 04 09 47.6 +0.5**
comp=Z,0.5nm,0.8s,baz=265,slow=4.3,SNR=3.4
ILAR S **S 04 10 57.5 -2.5**
comp=Z,0.4nm,1.0s,baz=198,slow=5.7,SNR=3.1
HDA Harding Lake 44.96 36 P **P 04 04 40.6 +0.3**
baz=280,SNR=14
DHY Denali Highway 45.01 38 IAmb IAmb 04 04 42.4
comp=Z,39nm,0.6s
BVAR Borovoye Array 45.05 307 P P 04 04 41.7 +0.5
comp=Z,88nm,0.4s,baz=78,slow=9.4,SNR=382
SIMRM Sittwe 45.08 254 P P 04 04 42.5 +0.7
JIRN Jiri 45.20 267 *eP* **P 04 04 43.8 +0.7**
comp=Z,238nm,0.6s
BOOM Boomskoye usch 45.23 291 P P 04 04 43.4 +0.4
BOOM pmax pmax
comp=Z,34nm,1.1s
BOOM Boomskoye usch 45.23 291 P P 04 04 43.4 +0.4
BOOM IAmb IAmb 04 04 47.2
comp=Z,34nm,1.1s
SCM Sheep Creek Mo 45.27 40 IAmb IAmb 04 04 46.4
comp=Z,27nm,0.6s
GUN Gumba 45.28 268 *eP* **P 04 04 44.3 +0.6**
comp=Z,175nm,0.4s
TKM2 Tokmak 2 45.29 292 P P 04 04 44.1 +0.7
TKM2 Tokmak 2 45.29 292 P P 04 04 44.1 +0.7
SNR=12
RAMN Ramite 45.31 266 *eP* **P 04 04 44.4 +0.6**
comp=Z,310nm,0.8s
MRSI Marisa 45.69 205 P P 04 04 47.4 +0.9
comp=Z,3μmcomp=Z,89nm,0.8s
MRSI pP **pwP 04 05 40.7 +1.4**
comp=Z,3μmcomp=Z,89nm,0.8s
KKN Kakani 45.78 268 *eP* **P 04 04 48.3 +0.8**
comp=Z,110nm,0.6s
PKI Pulchoki 45.81 268 *eP* **P 04 04 48.1 +0.2**
comp=Z,11nm,0.5s
KBK Karagaybulak 45.83 292 P P 04 04 48.4 +0.8
SNR=9.0
KZA Kyzart 45.87 291 P P 04 04 49.6 +1.4
SNR=8.1
USP Ospenovka 45.88 293 P P 04 04 48.3 +0.4
SNR=15
DMN Daman 46.01 268 *eP* **P 04 04 49.9 +0.6**
comp=Z,52nm,0.4s
GKN Gorkha 46.13 269 *eP* **P 04 04 50.6 +0.5**
comp=Z,178nm,0.5s
AAK Ala-Archa 46.15 292*d* iP **P 04 04 50.1 0.0**
AAK pmax pmax
comp=Z,17nm,1.4s
AAK Ala-Archa 46.15 292 P P 04 04 49.8 -0.3
comp=Z,7.0nm,0.4s,baz=110,slow=4.5,SNR=23
AAK Ala-Archa 46.15 292 P P 04 04 50.2 +0.2
SNR=11
AAK Ala-Archa 46.15 292 *eP* **P 04 04 50.1 0.0**
AAK Ala-Archa 46.15 292 P P 04 04 49.8 -0.3
EYAK Cordova Ski Ar 46.30 41 IAmb IAmb 04 04 53.1
comp=Z,29nm,0.6s
SCRK Sand Creek 46.32 36 IAmb IAmb 04 04 52.1
comp=Z,43nm,0.7s
KSH Kashi 46.48 288 P P 04 04 56.8 +4.1
KSH S **S 04 11 31.4 +8.4**
KSH pmax pmax
comp=Z,10.0nm,0.7s
KSH pmax pmax
comp=Z,250nm,7.2s
KSH LR LR
comp=Z,270nm,4.4s
KSH LR LR
comp=Z,340nm,5.3s
KSH LR LR
comp=Z,270nm,7.1s
DANN Dangsing 46.57 270 *eP* **P 04 04 55.0 +1.3**
comp=Z,553nm,0.4s
EKS2 Erkin-Say 46.62 293 P P 04 04 53.9 +0.3
SNR=11
MENT Mentasta 46.67 38 IAmb IAmb 04 04 56.0
comp=Z,20nm,0.6s
FAKI Fak Fak 46.80 190 P P 04 04 54.5 -0.7
FAKI IAmb IAmb 04 04 56.6
comp=Z,43nm,0.8s
RAGM Ragged Mountai 46.86 41 IAmb IAmb 04 04 57.9
comp=Z,38nm,0.6s
LUWI Luwuk 46.89 203 P P 04 04 53.7 -2.2
LUWI IAmb IAmb 04 04 55.1
comp=Z,46nm,0.5s
AML Almayashu 46.90 292 P P 04 04 56.9 +0.7
SNR=9.5
KOLN Koldanda 47.01 269 *eP* **P 04 04 58.0 +1.0**
SANI Sanana 47.04 198 P P 04 04 55.7 -1.3
comp=Z,9.0nm,0.9s
SANI pP **pwP 04 05 51.2 +1.1**
comp=Z,9.0nm,0.9s
VRDI Verde Repeater 47.22 40 IAmb IAmb 04 05 00.3
comp=Z,29nm,0.8s
EGAK Eagle 47.33 35 IAmb IAmb 04 05 00.7
comp=Z,56nm,0.8s
MCARA McCarthy VSAT 47.37 40 IAmb IAmb 04 05 01.7
comp=Z,41nm,0.7s
CRQM Cirque 47.49 41 IAmb IAmb 04 05 02.7
comp=Z,52nm,1.0s
SBUM Sibu 47.53 218 P P 04 05 01.7 +0.8
SBUM Sibu 47.53 218 P P 04 05 03.0 +2.2
TGL Tana Glacier 47.64 41 IAmb IAmb 04 05 04.0
comp=Z,40nm,0.8s
ARSB Arslanbob 47.73 291 P P 04 05 02.6 +0.3
ARSB IAmb IAmb 04 05 04.0
comp=Z,40nm,0.8s
BALM Baldy 47.79 40 P P 04 05 03.1 +0.7
BALM IAmb IAmb 04 05 04.6
comp=Z,37nm,1.1s
KK31 Karatay Array 48.60 295 P P 04 05 08.8 0.0
KK31 pmax pmax
comp=Z,18nm,0.7s
KK31 Karatay Array 48.60 295 P P 04 05 08.8 0.0
KKAR Karatay Array 48.60 295 P P 04 05 08.8 0.0
KKAR pmax pmax
comp=Z,18nm,0.7s
KKAR Karatay Array 48.60 295 P P 04 05 08.8 0.0
EPYK Eagle Plains 48.70 32 P P 04 05 10.4 +1.2
baz=286
BKB Balikpapan 49.00 210 P P 04 05 12.7 +0.7
BKB IAmb IAmb 04 05 14.9
comp=Z,45nm,0.9s
SVE Sverdlovsk 49.19 315*c* iP **P 04 05 13.8 +0.9**
SVE pmax pmax
comp=Z,142nm,0.9s
SVE Sverdlovsk 49.19 315 *eP* **P 04 05 13.8 +0.9**
KSM Kuching 49.27 220 P P 04 05 14.3 +0.3
KSM Kuching 49.27 220 P P 04 05 16.0 +2.0
INK Inuvik 49.33 29 P P 04 05 14.0 +0.2
INK pmax pmax
comp=Z,99nm,0.6s
INK Inuvik 49.33 29 P P 04 05 14.7 +0.8
comp=Z,99nm,0.5s,baz=294,slow=6.9,SNR=844
INK Inuvik 49.33 29 P P 04 05 14.0 +0.2
ARU Arti 50.40 315*d* iP **P 04 05 22.3 +0.2**
ARU *PP **pP 04 04 06 11.9 +0.6**
ARU 04 06 36.4
ARU 04 07 19.3
ARU S **S 04 12 18.9 +1.9**
ARU SS **SS 04 15 49.1 -4.1**
ARU pmax pmax
comp=Z,100nm,1.4s
ARU Arti 50.40 315 *eP* **P 04 05 22.3 +0.2**
ARU Arti 50.40 315 P P 04 05 21.9 -0.2
ARU IAmb IAmb 04 05 25.4
comp=Z,48nm,0.8s
GAR Garm 50.61 290 P P 04 05 23.6 -0.5
GAR IAmb IAmb 04 05 29.5
comp=Z,28nm,0.9s
BNSI Bone 50.86 205 P P 04 05 26.8 +0.9
comp=Z,43nm,0.9s
KULM Kulim 51.10 233 P P 04 05 28.6 +0.8
KULM Kulim 51.10 233 P P 04 05 29.0 +1.2
JRMM Jerantut 51.21 230 P P 04 05 30.0 +1.4
NIL Nilore 51.26 282 P P 04 05 29.8 +1.0
NIL pmax pmax
comp=Z,14nm,0.8s
NIL Nilore 51.26 282 P P 04 05 29.8 +1.0
WHY Whitehorse 51.36 39 P P 04 05 30.3 +1.1
WHY IAmb IAmb 04 05 32.2
comp=Z,24nm,0.9s
IPM Ipoh 51.55 232 P P 04 05 31.3 +0.1
IPM IAmb IAmb 04 05 32.6
comp=Z,47nm,1.1s
IPM Ipoh 51.55 232 P P 04 05 32.0 +0.9
KAPI Kappang 51.55 205 P P 04 05 31.2 +0.1
KAPI pmax pmax
comp=Z,65nm,0.7s
KAPI Kappang 51.55 205 P P 04 05 31.7 +0.7
comp=Z,58nm,0.6s,baz=10.0,slow=2.7,SNR=34
KAPI Kappang 51.55 205 P P 04 05 31.2 +0.1
CHGR Chuyangaron 51.57 290 P P 04 05 30.3 -0.8
BKSI Bulukumba 51.73 205 P P 04 05 32.2 -0.1
C36M Paulatuk 52.18 26 P P 04 05 35.6 +0.7
C36M Paulatuk 52.18 26 P P 04 05 35.6 +0.7
baz=294,SNR=73
MYKOM Kota Tinggi 52.21 227 P P 04 05 36.9 +0.9
MYKOM IAmb IAmb 04 05 38.2
comp=Z,30nm,0.6s
MYKOM Kota Tinggi 52.21 227 P P 04 05 37.0 +1.0
AB31 Akbulak array 52.55 306 *i* P **P 04 05 38.3 +0.3**
ABKAR Akbulak array 52.55 306 P P 04 05 37.9 -0.1
AKTO Aktyubinsk 53.15 308 P P 04 05 42.6 +0.2
HOPEN Hopen 53.21 344 *eP* **P 04 05 42.7 +0.2**
SPA0 Spitsbergen Ar 53.70 348 *eP* **P 04 05 46.0 0.0**
SPA0 Spitsbergen Ar 53.70 348 P P 04 05 46.1 0.0
SPA0 IAmb IAmb 04 06 02.2
comp=Z,46nm,1.1s
KBL Kabul 53.75 286 P P 04 05 46.7 -0.6
KBL pmax pmax
comp=Z,12nm,0.7s
KBL Kabul 53.75 286 P P 04 05 46.7 -0.6
KBS Kingsbay 53.84 349*ce* P **P 04 05 47.1 +0.1**
KBS pmax pmax
comp=Z,183nm,1.0s
KBS Kingsbay 53.84 349 *eP* **P 04 05 47.5 +0.5**
KBS Kingsbay 53.84 349 P P 04 05 47.2 +0.2
KBS IAmb IAmb 04 05 48.4
comp=Z,37nm,0.9s
PSI Prapat 54.12 233 P P 04 05 50.1 +0.1
PSI pmax pmax
comp=Z,24nm,1.0s
PSI Prapat 54.12 233 P P 04 05 50.4 +0.4
comp=Z,18nm,0.8s,baz=10,slow=5.3,SNR=13
RPSI Rantau Prapat 54.20 233 P P 04 05 50.1 -0.4
RPSI IAmb IAmb 04 05 52.2
comp=Z,24nm,1.0s
MMRI Maumere 54.30 201 P P 04 05 51.1 +0.1
NOR Nord 54.33 356⇓ *i* P **P 04 05 49.8 -0.7**
comp=Z,20nm,0.8s
PRGR Permogore 54.36 324⇓ *i* P **P 04 05 51.1 +0.1**
PRGR pmax pmax
comp=Z,133nm,0.6s
DLBC Dease Lake 54.53 40 P P 04 05 54.1 +1.7
DLBC IAmb IAmb 04 05 55.4
comp=Z,18nm,0.8s
HSPB Hornsund (broa 54.62 347 *eP* **P 04 05 53.1 +0.4**
SOEI Soe 54.88 198 P P 04 05 54.5 -0.9
SOEI Soe 54.88 198 P P 04 05 54.9 -0.5
SOEI IAmb IAmb 04 06 03.2
comp=Z,45nm,0.8s
BKNI Bangkinang 54.95 229 P P 04 05 57.1 +1.2
comp=Z,4μmcomp=Z,162nm,1.0s
BKNI Bangkinang 54.95 229 P P 04 05 56.5 +0.6
LVZ Lovozero 55.41 334*ce* P **P 04 05 58.1 -0.4**
LVZ pmax pmax
comp=Z,74nm,0.8s
LVZ Lovozero 55.41 334 P P 04 05 58.0 -0.5
BATI Baumata 55.46 199 P P 04 05 59.2 -0.2
comp=Z,75nm,0.6s,baz=192,slow=1.3,SNR=9.4
BJO1 Bjornoya 55.64 344 *eP* **P 04 05 59.8 -0.1**
SDSI Sungai Dareh 55.79 228 P P 04 06 03.1 +1.3
SRBI Singaraja 55.93 209 P P 04 06 04.0 +1.3
comp=Z,57nm,1.0s
GSI Gunungsitoli 56.11 233 P P 04 06 05.3 +1.2
comp=Z,15μmcomp=Z,30nm,0.5s
GSI Gunungsitoli 56.11 233 P P 04 06 03.7 -0.4
GSI IAmb IAmb 04 06 15.5
comp=Z,32nm,0.8s
TMCR Tamitsa 56.17 329 *eP* **P 04 06 03.0 -0.8**
TMCR pmax pmax
comp=Z,81nm,1.1s
PDSI Padang 56.30 229 P P 04 06 05.1 -0.3
RES Resolute Bay 56.62 15 P P 04 06 06.6 -0.2
RES pmax pmax
comp=Z,71nm,0.7s
RES Resolute Bay 56.62 15 P P 04 06 06.6 -0.2
KRJI Kerinci 56.75 227 P P 04 06 08.8 +0.1
comp=Z,226nm,0.9s
HAMF Hammerfest 57.03 339 *eP* **P 04 06 09.4 -0.3**
ARCES ARCESS Array B 57.23 337 P P 04 06 10.8 -0.3
comp=Z,18nm,0.6s,baz=53,slow=6.4,SNR=121
ARE0 ARCESS Array S 57.23 337 *eP* **P 04 06 11.0 -0.2**
ARE0 ARCESS Array S 57.23 337 P P 04 06 11.2 0.0
MDSI Maura Dua 57.40 223 P P 04 06 13.7 +0.6
comp=Z,31nm,0.9s
MDSI pP **pwP 04 07 10.0 +1.8**
comp=Z,31nm,0.9s
KPJI Karang Pucung 57.71 216 P P 04 06 15.1 -0.1
LEM Lembang 57.83 218 P P 04 06 17.3 +1.0
comp=Z,27nm,0.5s,baz=40,slow=7.9,SNR=4.1
KTK1 Kautokeino 58.19 338 *eP* **P 04 06 18.0 +0.1**
HRA Herat 58.54 289 P P 04 06 19.9 -1.2
TRO Tromso 58.92 339 *eP* **P 04 06 22.7 -0.2**
YKA Yellowknife Ar 58.96 31 P P 04 06 23.4 +0.1
comp=Z,9.1nm,0.5s,baz=305,slow=6.6,SNR=170
YKA PcP **PcP 04 07 10.5 +0.8**
comp=Z,4.5nm,0.6s,baz=311,slow=3.6,SNR=12
YKA ScP **ScP 04 10 48.0 +0.3**
comp=Z,0.8nm,0.6s,baz=310,slow=4.3,SNR=6.5
DAG Danmarks Havn 59.02 354⇓ *i* P **P 04 06 23.3 -0.2**
DAG pmax pmax
comp=Z,93nm,0.8s
DAG Danmarks Havn 59.02 354⇓ *i* P **P 04 06 23.3 -0.2**
comp=Z,93nm,0.8s
GEYT Alibeck 59.35 295 P P 04 06 26.2 -0.2
comp=Z,8.9nm,0.7s,baz=31,slow=3.5,SNR=19
GEYT Alibeck 59.35 295 IAmb IAmb 04 06 33.1
comp=Z,8.7nm,0.8s
GYA0B ALIBECK ARRAY 59.35 295 P P 04 06 25.6 -0.8
GYA0B IAmb IAmb 04 06 32.8
comp=Z,13nm,0.5s
KNRA Kununurra 59.82 192 P P 04 06 29.4 -0.2
MOS Moscow 61.00 321 *eP* **P 04 06 35.9 -1.3**
MOS pmax pmax
comp=Z,60nm,1.1s
STEI Steigen 61.08 339 *eP* **P 04 06 37.1 -0.3**
STEI *eP* **P 04 06 37.2 -0.3**
LOF Lofoten 61.36 340 *eP* **P 04 06 38.9 -0.5**
KULLO Kullorsuaq 61.53 5 *i* P **P 04 06 40.5 +0.1**
KULLO pmax pmax
comp=Z,41nm,0.8s
KULLO Kullorsuaq 61.53 5 *i* P **P 04 06 40.5 +0.1**
comp=Z,41nm,0.8s
VRH Novokhopyorsk 61.63 315 *eP* **P 04 06 41.0 -0.5**
VRH pmax pmax
comp=Z,50nm,0.5s
PUL Pulkovo 61.68 327⇑ *eP* **P 04 06 42.1 +0.5**
PUL pmax pmax
comp=Z,81nm,0.7s
PUL Pulkovo 61.68 327 *eP* **P 04 06 42.1 +0.5**
OBN Obninsk 61.86 321*d* iP **P 04 06 42.8 -0.1**
OBN *e* 04 08 59.7
OBN *e*SS SS 04 18 50.0 -3.0
OBN *e*SSS SSS 04 21 45.2
OBN pmax pmax
comp=Z,29nm,0.5s
OBN Obninsk 61.86 321 *eP* **P 04 06 42.7 -0.1**
OBN Obninsk 61.86 321 P P 04 06 42.9 0.0
FINES FINESS Array B 62.21 330 P P 04 06 44.8 -0.3
comp=Z,48nm,0.4s,baz=72,slow=7.0,SNR=462
LPSR Galich'ya Gora 62.23 317 *eP* **P 04 06 45.1 -0.3**
LPSR pmax pmax
comp=Z,50nm,0.8s
MOR8 Moi Rana 62.59 338 *eP* **P 04 06 46.2 -1.4**
MOR8 *eP* **P 04 06 46.3 -1.4**
KONS Konsvik 62.70 339 *eP* **P 04 06 48.0 -0.3**

FITZ Fitzroy Crossi 62.71 195 P **P** **04 06 49.4 +0.5**
comp=Z,11nm,0.8s,baz=12,slow=8.8,SNR=5.3
FITZ Fitzroy Crossi 62.71 195 P **P** **04 06 49.7 +0.8**
FITZ IAmb IAmb 04 06 50.5
comp=Z,13nm,0.9s
VSR Storozhevoye 62.93 316*d iP* **P** **04 06 49.8 -0.3**
VSR pmax pmax
comp=Z,55nm,0.8s
VORD Divnogorie 63.02 316 *eP* **P** **04 06 50.2 -0.4**
VORD pmax pmax
comp=Z,50nm,1.0s
WRAB Tennant Creek 63.44 185*ceP* **P** **04 06 53.3 -0.4**
WRAB pmax pmax
comp=Z,9.0nm,1.0s
WRA Warramunga Arr 63.45 185 P **P** **04 06 53.5 -0.2**
comp=Z,8.5nm,0.4s,baz=0.7,slow=6.8,SNR=12
WRA PKPPKP **P'P'df** **04 35 49.9 +5.8**
comp=Z,1.2nm,0.8s,baz=199,slow=2.2,SNR=3.6
WRA Warramunga Arr 63.45 185 IAmb IAmb 04 06 54.3
comp=Z,0.8nm,0.8s
VSU Vasula 63.94 327*deP* **P** **04 06 56.5 0.0**
VSU pmax pmax
comp=Z,175nm,0.7s
VSU Vasula 63.94 327 *eP* **P** **04 06 56.7 +0.1**
B05A Bryant 63.97 47 P **P** **04 06 58.4 +1.4**
baz=307
SUMG Summit 64.05 359⇓*iP* **P** **04 06 58.6 +1.0**
SUMG pmax pmax
comp=Z,210nm,0.5s
SUMG Summit 64.05 359⇓*iP* **P** **04 06 58.6 +1.0**
comp=Z,211nm,0.5s
SUMG Summit 64.05 359 P **P** **04 06 58.1 +0.5**
GROC Groznyy 64.06 306 *eP* **P** **04 06 57.1 -0.5**
GROC *e* 04 07 31.4
GROC *e**PP **pP** **04 07 49.3 0.0**
GROC *eS* **S** **04 15 15.9 +0.7**
GROC pmax pmax
comp=Z,16nm,1.0s
NSS Namsos 64.51 338 *eP* **P** **04 06 59.6 -0.5**
GOF Gofitskoye 64.54 309⇓*iP* **P** **04 07 01.6 +0.9**
GOF pmax pmax
comp=Z,96nm,0.8s
SCO Scoresbysund 65.35 353 *iP* **P** **04 07 06.0 +0.6**
SCO Scoresbysund 65.35 353 *iP* **P** **04 07 06.0 +0.6**
KIV Kislovodsk 65.41 308 *eP* **P** **04 07 07.1 +0.7**
KIV *eS* **S** **04 15 32.7 +0.8**
KIV pmax pmax
comp=Z,268nm,1.0s
KIV pmax pmax
comp=Z,61nm,3.4s
KIV Kislovodsk 65.41 308⇑P **P** **04 07 08.2 +1.7**
KIV Kislovodsk 65.41 308 *eP* **P** **04 07 07.1 +0.7**
KIV Kislovodsk 65.41 308 P **P** **04 07 06.9 +0.4**
ZEI Tsey 65.42 306 *eP* **P** **04 07 03.3 -3.4**
ZEI pmax pmax
comp=Z,14nm,0.6s
KBZ Khabaz 65.43 308*d iP* **P** **04 07 06.9 +0.5**
KBZ Khabaz 65.43 308 P **P** **04 07 07.1 +0.7**
comp=Z,19nm,0.7s,baz=37,slow=4.7,SNR=50
KBZ Khabaz 65.43 308 *eP* **P** **04 07 06.9 +0.5**
TBLG Delisi 65.57 305 P **P** **04 07 08.0 +0.6**
TBLG Delisi 65.57 305 P **P** **04 07 08.0 +0.6**
NEY Neytrino 65.82 307⇑*eP* **P** **04 07 10.1 +0.9**
NEY pmax pmax
comp=Z,4.0nm,0.8s
IZAR Zarasai 65.97 325 *eP* **P** **04 07 09.8 +0.1**
TBLU Trondheim 65.98 337 *eP* **P** **04 07 08.5 -1.1**
ISAL Salakas 66.14 325 *eP* **P** **04 07 11.0 +0.3**
ISAL IAmb IAmb 04 07 12.2
comp=Z,50nm,0.6s
IIGN Ignalina 66.25 325 *eP* **P** **04 07 11.9 +0.5**
IIGN IAmb IAmb 04 07 12.9
comp=Z,76nm,0.5s
NACGM Naroch 66.32 324 *e* **P** **04 07 11.0 -0.9**
NACGM *e*LQ LQ 04 22 46.0
NACGM *e*LR LR 04 23 52.0
NACGM LRM MLR 04 24 52.0
comp=Z,2.7nm,18.0s
AKH Akhalkalaki 66.50 305⇑P **P** **04 07 15.1 +1.6**
AKH Akhalkalaki 66.50 305 IAmb IAmb 04 07 22.6
comp=Z,8.8nm,0.6s
GNI Garni 66.53 304*deP* **P** **04 07 14.6 +0.9**
GNI pmax pmax
comp=Z,39nm,0.9s
GNI Garni 66.53 304 P **P** **04 07 13.8 +0.1**
I04A Tendick Farm, 66.54 51 P **P** **04 07 15.1 +1.6**
baz=309
NEW Newport 66.58 45 P **P** **04 07 14.8 +1.0**
baz=310
PABE Paberze 67.07 326 *eP* **P** **04 07 16.8 +0.2**
PABE IAmb IAmb 04 07 17.7
comp=Z,85nm,0.6s
E09A Wood Farm, Sta 67.17 47 IAmb IAmb 04 07 19.4
comp=Z,12nm,0.8s
ASAR Alice Springs 67.18 185 P **P** **04 07 18.2 +0.6**
comp=Z,8.4nm,0.6s,baz=5.8,slow=5.1,SNR=16
ASAR PKPPKP **P'P'df** **04 35 40.8 +2.9**
comp=Z,0.3nm,0.6s,baz=169,slow=2.1,SNR=4.3
ILULI Ilulissat 67.18 4 P **P** **04 07 17.6 +0.5**
ILULI pmax pmax
comp=Z,50nm,0.6s
ILULI Ilulissat 67.18 4 P **P** **04 07 17.6 +0.5**
NC303 NORSAR Array S 67.26 336 *eP* **P** **04 07 17.7 0.0**
MOL Molde 67.28 338 *eP* **P** **04 07 18.0 +0.2**
DOMB Dombas 67.28 337 *eP* **P** **04 07 17.7 -0.2**
PSA00 Pilbara Seismi 67.31 200 P **P** **04 07 18.2 -0.2**
PSA00 IAmb IAmb 04 07 19.4
comp=Z,25nm,1.1s
PINE Pine Mountain 67.37 51 P **P** **04 07 19.9 +0.9**
PINE IAmb IAmb 04 07 21.5
comp=Z,14nm,0.8s
NB2 NORSAR Subarra 67.45 335 P **P** **04 07 18.6 -0.4**
comp=Z,25nm,0.5s,baz=36,slow=6.5
NB2 NORSAR Subarra 67.45 335 P **P** **04 07 18.6 -0.4**
baz=36,slow=6.5
NOA NORSAR Array B 67.45 335 P **P** **04 07 18.8 -0.2**
comp=Z,36nm,0.6s,baz=38,slow=6.3,SNR=172
PBUR Paburg 67.52 327 *eP* **P** **04 07 18.4 -0.9**
J05D Fort Rock, OR 67.53 51 P **P** **04 07 21.6 +1.7**
baz=309
L04D Klamath Falls 67.59 53 P **P** **04 07 21.7 +1.4**
baz=309
NBO00 NORSAR Array S 67.59 336 P **P** **04 07 19.8 0.0**
NC602 NORSAR Array S 67.59 335 IAmb IAmb 04 07 33.8
comp=Z,16nm,0.8s
AKN Aaknes 67.75 338 *eP* **P** **04 07 21.1 +0.3**
ANN Anapa 67.82 311 *eP* **P** **04 07 21.2 -0.3**
ANN pmax pmax
comp=Z,265nm,2.0s
AKASG Malin Array Be 68.10 320 P **P** **04 07 22.8 -0.3**
comp=Z,31nm,0.4s,baz=44,slow=6.4,SNR=205
AKASG Malin Array Be 68.10 320 IAmb IAmb 04 07 24.0
comp=Z,12nm,0.5s
M04C Macdoel 68.13 53 P **P** **04 07 25.4 +1.7**
baz=310
N02D Trinity Center 68.14 54 P **P** **04 07 25.6 +1.9**
baz=309
JTMT Jette 68.36 44 IAmb IAmb 04 07 35.8
comp=Z,9.7nm,0.7s
UOSS Minazif 68.38 284 P **P** **04 07 24.7 -0.6**
UOSS IAmb IAmb 04 07 25.8
comp=Z,14nm,0.7s
SUW Suwalki 68.45 325 *eP* **P** **04 07 24.9 -0.3**
SUW Suwalki 68.45 325 *eP* **P** **04 07 24.9 -0.3**
OSL Oslo 68.47 335 *eP* **P** **04 07 25.7 +0.4**
O02D Mt. Diablo Mer 68.59 55 P **P** **04 07 28.3 +1.8**
baz=310
SKAR Skarslia 68.60 336 *eP* **P** **04 07 26.6 +0.5**
FOO Floro 68.75 338 *eP* **P** **04 07 27.4 +0.4**
HYA Hoyanger 68.80 338 *eP* **P** **04 07 27.5 +0.3**
FFC Flin Flon 69.04 33 P **P** **04 07 29.3 +0.4**
FFC pmax pmax
comp=Z,33nm,0.8s
FFC Flin Flon 69.04 33 P **P** **04 07 29.3 +0.4**
FFC IAmb IAmb 04 07 30.3
comp=Z,33nm,0.8s
KONO Kongsberg 69.05 335*deP* **P** **04 07 28.7 -0.1**
KONO pmax pmax
comp=Z,35nm,0.7s
KONO Kongsberg 69.05 335 *eP* **P** **04 07 29.1 +0.3**
KONO Kongsberg 69.05 335 P **P** **04 07 29.0 +0.2**
O03E Paynes Creek 69.10 54 P **P** **04 07 30.4 +0.7**
baz=310
MSO Missoula 69.15 45 P **P** **04 07 30.5 +0.7**
baz=312

SFJD Kangerlussuaq 69.41 4 P **P** **04 07 31.1 +0.2**
SFJD pmax pmax
comp=Z,39nm,0.8s
SFJD Kangerlussuaq 69.41 4 *i* P **P** **04 07 30.0 -0.9**
SFJD Kangerlussuaq 69.41 4 P **P** **04 07 31.1 +0.2**
SIM Simferopol' 69.51 313*deP* **P** **04 07 32.2 +0.3**
SIM pmax pmax
comp=Z,36nm,0.7s
ASK Askoy 69.64 338 *eP* **P** **04 07 33.1 +0.7**
BER Bergen 69.69 338 *eP* **P** **04 07 33.4 +0.8**
ODD1 Odda 69.71 337 *eP* **P** **04 07 33.6 +0.6**
BLS5 Blasjo 70.17 336 *eP* **P** **04 07 36.2 +0.5**
SORM Soroca 70.27 318⇓P **P** **04 07 36.4 -0.1**
EGMT Eagleton 70.41 42 IAmb IAmb 04 07 39.2
comp=Z,22nm,0.8s
EGMT Eagleton 70.41 42 P **P** **04 07 38.5 +1.0**
baz=314
HOMB Homborsund 70.50 335 *eP* **P** **04 07 38.0 +0.4**
KMY Karmoy 70.69 337 *eP* **P** **04 07 39.6 +0.9**
KIS Kishinev 70.83 317⇑P **P** **04 07 39.8 -0.1**
SNART Snartemo 70.84 335 *eP* **P** **04 07 40.2 +0.5**
BSD Bornholm Skovb 70.85 330 *iP* **P** **04 07 39.7 -0.1**
BSD pmax pmax
comp=Z,62nm,0.5s
BSD Bornholm Skovb 70.85 330 *iP* **P** **04 07 39.7 -0.1**
comp=Z,62nm,0.5s
MILM Milestii Mici 70.89 317⇑P **P** **04 07 40.3 0.0**
ANGG Ammassalik, Gr 71.03 359 IAmb IAmb 04 07 42.3
comp=Z,31nm,0.8s
BEL Belsk 71.03 325 *eP* **P** **04 07 41.9 +0.9**
BEL Belsk 71.03 325 *eP* **P** **04 07 41.9 +0.9**
DIKM Dikmen 71.09 310⇓P **P** **04 07 42.5 +0.9**
LVV L'vov 71.10 322 *eP* **P** **04 07 41.6 +0.2**
COP Copenhagen 71.29 331 *iP* **P** **04 07 43.2 +0.8**
COP pmax pmax
comp=Z,45nm,0.7s
COP Copenhagen 71.29 331 *iP* **P** **04 07 43.2 +0.8**
comp=Z,45nm,0.7s
IAS Iasi 71.31 318⇓P **P** **04 07 43.1 +0.3**
GKP Gorka Klasztor 71.39 327 *eP* **P** **04 07 43.4 +0.3**
GKP Gorka Klasztor 71.39 327 *eP* **P** **04 07 43.4 +0.3**
YERR Yerington 71.45 54 IAmb IAmb 04 07 46.1
comp=Z,18nm,1.1s
LEOM Leova 71.48 317⇑P **P** **04 07 43.7 -0.1**
VASR Vaslui 71.59 317⇑P **P** **04 07 45.1 +0.7**
WAKR Walker 71.66 54 P **P** **04 07 46.7 +1.5**
MUD Monsted U'grnd 71.77 333 *iP* **P** **04 07 45.7 +0.5**
MUD pmax pmax
comp=Z,41nm,0.7s
MUD Monsted U'grnd 71.77 333 *iP* **P** **04 07 45.7 +0.5**
comp=Z,40nm,0.7s
KWP Kalwaria Pacla 71.82 322 P **P** **04 07 46.6 +0.8**
KWP pmax pmax
comp=Z,451nm,0.6s
KWP Kalwaria Pacla 71.82 322 *eP* **P** **04 07 46.7 +0.9**
KWP Kalwaria Pacla 71.82 322 P **P** **04 07 46.6 +0.8**
PRAR RASCA 71.84 319⇑P **P** **04 07 46.3 +0.4**
BIR Birlad 71.93 317 P **P** **04 07 48.5 +2.0**
BIR Birlad 71.93 317⇑P **P** **04 07 47.8 +1.3**
KVN Kaiserville 72.07 53 P **P** **04 07 49.0 +1.3**
KVN pmax pmax
comp=Z,11nm,0.6s
KVN Kaiserville 72.07 53 P **P** **04 07 49.0 +1.3**
KVN IAmb IAmb 04 07 49.5
comp=Z,11nm,0.6s
TLCR 72.10 316 P **P** **04 07 48.4 +0.9**
TLCR 72.10 316⇑P **P** **04 07 47.7 +0.3**
BUR08 Bucovina Ar. S 72.12 320 P **P** **04 07 48.4 +0.7**
BURAR Bucovina Array 72.14 320 P **P** **04 07 49.3 +1.5**
BURAR Bucovina Array 72.14 320⇑P **P** **04 07 48.7 +0.9**
GHRR 72.19 317⇑P **P** **04 07 49.3 +1.3**
GIUM Giurgiulesti 72.19 316⇑P **P** **04 07 48.9 +0.9**
BIZ Bicaz 72.20 319⇑P **P** **04 07 49.2 +1.1**
TESR Tescani 72.24 318⇓P **P** **04 07 48.8 +0.5**
ILGA Ilgaz 72.35 310 P **P** **04 07 49.4 0.0**
ILGA IAmb IAmb 04 07 58.4
comp=Z,28nm,0.9s
JURR Jurilovca 72.36 316⇑P **P** **04 07 49.5 +0.5**
NVAR Mina Array Bea 72.37 54 P **P** **04 07 50.8 +1.3**
comp=Z,7.2nm,0.8s,baz=296,slow=5.7,SNR=61
CFR Carcaliu 72.45 316⇓P **P** **04 07 49.9 +0.4**
PETR Petresti 72.51 317⇑P **P** **04 07 50.8 +0.9**
KOLS Kolonicke sedl 72.53 322 *eP* **P** **04 07 50.7 +0.7**
KOLS pmax pmax
comp=Z,11nm,0.8s
KOLS Kolonicke sedl 72.53 322 *eP* **P** **04 07 50.7 +0.7**
H17A Grant Village 72.53 45 P **P** **04 07 53.4 +3.0**
baz=315
TOPG Topolog 72.54 316⇓P **P** **04 07 50.5 +0.5**
ODBI Odobesti 72.57 317⇑P **P** **04 07 52.0 +1.8**
STHS Stebnicka Huta 72.63 323 *eP* **P** **04 07 51.0 +0.4**
STHS Stebnicka Huta 72.63 323 *eP* **P** **04 07 50.9 +0.4**
OJC Ojcow 72.65 324 *eP* **P** **04 07 51.5 +0.8**
OJC Ojcow 72.65 324 *eP* **P** **04 07 51.5 +0.8**
VRI Vrincioaia 72.66 317⇑P **P** **04 07 51.8 +1.0**
RLMT Red Lodge 72.69 44 P **P** **04 07 52.5 +1.3**
baz=315,SNR=9.7
DGMT Dagmar 72.69 39 P **P** **04 07 51.8 +0.8**
DGMT Dagmar 72.69 39 P **P** **04 07 51.9 +0.9**
baz=317
PLOR Plostina 72.71 317⇑P **P** **04 07 51.5 +0.3**
UZH Uzhgorod 72.74 322 *eP* **P** **04 07 50.8 -0.4**
UZH *i* 04 08 40.0
TIRR Tirgusor 72.81 316⇑P **P** **04 07 52.2 +0.5**
GRER 72.88 317⇑P **P** **04 07 53.8 +1.7**
BISRR Bisoca 72.89 317⇑P **P** **04 07 53.8 +1.6**
HARR Harsova 72.89 316 P **P** **04 07 52.9 +0.7**
HARR Harsova 72.89 316⇑P **P** **04 07 52.7 +0.5**
BMR Baia Mare 72.90 320⇑P **P** **04 07 52.6 +0.5**
ARCR ARCALIA 72.92 320⇓P **P** **04 07 53.9 +1.6**
GAZ Gaziantep 72.95 305 P **P** **04 07 53.6 +0.8**
GAZ IAmb IAmb 04 07 54.8
comp=Z,14nm,0.6s
OZUR 72.95 318⇑P **P** **04 07 54.2 +1.6**
NIE Niedzica 73.04 323 *eP* **P** **04 07 54.2 +1.2**
NIE Niedzica 73.04 323 *eP* **P** **04 07 54.2 +1.2**
LAO LASA Array 73.05 41 IAmb IAmb 04 07 55.1
comp=Z,16nm,0.8s
LAO LASA Array 73.05 41 P **P** **04 07 54.5 +1.4**
baz=316
PGOR Pogoanele 73.21 317⇑P **P** **04 07 55.8 +1.7**
DOPR Dopca 73.24 318⇑P **P** **04 07 55.5 +1.3**
ISR Istrita 73.28 317⇑P **P** **04 07 55.3 +0.8**
BRTR Keskin Array B 73.29 309 P **P** **04 07 54.8 0.0**
comp=Z,8.1nm,0.7s,baz=77,slow=3.7,SNR=40
BRTR PP **PP** **04 10 42.1 +1.3**
comp=Z,3.4nm,0.9s,baz=79,slow=7.5,SNR=7.2
MLR Muntele Rosu 73.31 318⇑P **P** **04 07 55.6 +0.8**
MLR Muntele Rosu 73.31 318 IAmb IAmb 04 07 56.5
comp=Z,13nm,0.8s
RUE Ruedersdorf 73.33 329 *eP* **P** **04 07 55.5 +1.0**
comp=Z,45nm,0.6s,baz=35,slow=5.7
RUE Ruedersdorf 73.33 329 *eP* **P** **04 07 55.3 +0.8**
ICOR Ion Corvin 73.37 316⇑P **P** **04 07 55.7 +0.8**
BSEG Bad Segeberg 73.42 331 *eP* **P** **04 07 56.1 +1.1**
comp=Z,45nm,0.7s,baz=35,slow=5.7
CJR Cluj-Napoca 73.55 320⇑P **P** **04 07 57.6 +1.5**
SECR 73.58 317⇑P **P** **04 07 56.4 +0.2**
LANS Liptovska Anna 73.60 324 *eP* **P** **04 07 57.7 +1.4**
LANS pmax pmax
comp=Z,18nm,0.9s
LANS Liptovska Anna 73.60 324 *eP* **P** **04 07 57.7 +1.4**
LEHL Lehliu 73.61 316⇑P **P** **04 07 57.2 +0.8**
KSP Ksiaz 73.63 326 *eP* **P** **04 07 57.0 +0.7**
KSP Ksiaz 73.63 326 *eP* **P** **04 07 57.0 +0.7**
VES Vestal, Richgr 73.64 56 P **P** **04 07 57.1 +0.5**
baz=312
OKC Ostrava-Krasne 73.64 325 *eP* **P** **04 07 57.3 +0.9**
OKC Ostrava-Krasne 73.64 325⇓*eP* **P** **04 07 57.3 +0.9**
KECS Kecovo 73.66 323 *eP* **P** **04 07 57.1 +0.5**
KECS pmax pmax
comp=Z,7.0nm,0.6s
KECS Kecovo 73.66 323 *eP* **P** **04 07 57.1 +0.5**
ANTO Ankara 73.67 310 P **P** **04 07 57.0 +0.1**
ANTO pmax pmax
comp=Z,21nm,0.8s
ANTO Ankara 73.67 310⇑P **P** **04 07 57.9 +1.0**
ANTO Ankara 73.67 310 P **P** **04 07 57.0 +0.1**
ANTO IAmb IAmb 04 07 58.5
comp=Z,21nm,0.8s
BR231 Keskin MP Arra 73.70 310 P **P** **04 07 57.6 +0.5**
BR231 IAmb IAmb 04 07 58.7
comp=Z,23nm,0.8s

SULR 73.74 317⇑P **P** **04 07 58.2 +1.1**
VOIR 73.79 318⇑P **P** **04 07 58.4 +0.9**
CWC Cottonwood Cre 73.84 55 P **P** **04 07 59.1 +1.0**
baz=313
OSTC Ostas 73.88 326⇓*iP* **P** **04 07 58.8 +0.9**
GRAC Grapevine Rang 73.88 54 P **P** **04 07 59.8 +1.7**
baz=313
DRGR 73.91 320⇑P **P** **04 07 58.8 +0.6**
CHVC Chvalec 73.92 326⇓*iP* **P** **04 07 59.0 +0.9**
MORC Moravsky Berou 73.94 325 P **P** **04 07 58.6 +0.4**
MORC pmax pmax
comp=Z,39nm,0.7s
MORC Moravsky Berou 73.94 325⇓P **P** **04 07 59.2 +0.9**
MORC Moravsky Berou 73.94 325 *eP* **P** **04 07 59.1 +0.9**
MORC Moravsky Berou 73.94 325 P **P** **04 07 58.6 +0.4**
HWUT Hardware Ranch 73.97 47 IAmb IAmb 04 08 01.1
comp=Z,13nm,0.9s
R11A Troy Canyon, C 74.00 52 P **P** **04 08 00.1 +1.1**
baz=313
DPC Dobruska-Polom 74.00 326⇓*iP* **P** **04 07 59.7 +1.1**
DPC Dobruska-Polom 74.00 326⇓*iP* **P** **04 07 59.7 +1.1**
UPC Upice 74.00 326 *eP* **P** **04 07 59.4 +0.9**
UPC Upice 74.00 326⇓*eP* **P** **04 07 59.4 +0.9**
UPC *ex* x 04 08 04.3
KRLC Kraliky 74.02 326⇓*iP* **P** **04 07 59.6 +0.9**
KRLC Kraliky 74.02 326⇓*iP* **P** **04 07 59.6 +0.9**
ARR Arges 74.04 318⇑P **P** **04 08 00.3 +1.4**
BW06 Boulder Array 74.21 46 IAmb IAmb 04 08 01.8
comp=Z,20nm,1.1s
BW06 Boulder Array 74.21 46 P **P** **04 08 00.9 +0.8**
baz=315
PD31 Pinedale Array 74.21 46 P **P** **04 08 00.9 +0.8**
PD31 IAmb IAmb 04 08 01.8
comp=Z,18nm,1.1s
PDAR Pinedale Array 74.21 46 P **P** **04 08 00.5 +0.3**
comp=Z,7.8nm,0.6s,baz=308,slow=0.9,SNR=75
DUG Dugway, Tooele 74.28 49 P **P** **04 08 02.1 +1.6**
baz=314,SNR=9.5
PSZ Piszkesteto 74.34 322 P **P** **04 08 02.2 +1.6**
PSZ Piszkesteto 74.34 322⇑P **P** **04 08 01.9 +1.3**
PSZ Piszkesteto 74.34 322 IAmb IAmb 04 08 02.6
comp=Z,26nm,0.8s
VYHS Vyhne 74.37 323 *eP* **P** **04 08 01.7 +1.0**
VYHS pmax pmax
comp=Z,20nm,0.7s
VYHS Vyhne 74.37 323 *eP* **P** **04 08 01.7 +1.0**
MPMC Manual Prospec 74.45 55 P **P** **04 08 02.6 +1.0**
baz=313
ORH Orhaniye 74.47 312 P P 04 08 08.2 +6.8
HUMR Humele 74.48 317⇑P **P** **04 08 01.1 -0.3**
DEV Deva 74.49 319⇑P **P** **04 08 02.8 +1.4**
CTU Camp Tracy 74.51 48 P **P** **04 08 02.8 +0.9**
BRG Berggiesshubel 74.54 328⇓*iP* **P** **04 08 02.0 +0.4**
comp=Z,21nm,0.5s
BRG *e*PP PP 04 10 33.3 -17
comp=Z,4.2nm,1.0s
BRG Berggiesshubel 74.54 328⇓*iP* **P** **04 08 02.0 +0.4**
BRG pmax pmax
comp=Z,21nm,0.5s
BRG pmax pmax
comp=Z,4.0nm,1.0s
BRG Berggiesshubel 74.54 328 *eP* **P** **04 08 02.3 +0.7**
comp=Z,21nm,0.5s,baz=35,slow=5.7
FURC Furnace Creek, 74.54 54 P **P** **04 08 03.3 +1.5**
baz=313
CLL Collm 74.55 328⇓*iP* **P** **04 08 01.9 +0.2**
CLL pmax pmax
comp=Z,59nm,0.6s
CLL Collm 74.55 328⇓*iP* **P** **04 08 01.9 +0.2**
comp=Z,59nm,0.6s
CLL Collm 74.55 328 *eP* **P** **04 08 02.2 +0.5**
comp=Z,54nm,0.7s,baz=35,slow=5.7
CLL Collm 74.55 328 P **P** **04 08 01.6 -0.1**
PVCC Panska Ves 74.56 327⇓*iP* **P** **04 08 02.8 +1.1**
PVCC Panska Ves 74.56 327⇓*iP* **P** **04 08 02.8 +1.1**
TPNV Topopah Spring 74.57 54 P **P** **04 08 03.5 +1.2**
baz=313
JAVC Velka Javorina 74.59 324 *eP* **P** **04 08 03.8 +1.8**
BSZH Besenyszg 74.64 322 *eP* **P** **04 08 03.1 +0.9**
COPA Copaceanca 74.65 317⇑P **P** **04 08 02.6 +0.3**
NRDL Niedersach Rie 74.67 331 *eP* **P** **04 08 03.1 +0.9**
comp=Z,24nm,0.8s,baz=35,slow=5.7
VRAC Vranov 74.69 325 P **P** **04 08 04.2 +1.7**
VRAC Vranov 74.69 325⇑P **P** **04 08 03.3 +0.7**
VRAC Vranov 74.69 325 *eP* **P** **04 08 03.6 +1.1**
LRMC Laurel Mtn Rad 74.72 55 P **P** **04 08 04.0 +0.9**
baz=313
FBE Freiberg 74.73 328 *eP* **P** **04 08 03.7 +1.0**
comp=Z,40nm,0.5s,baz=35,slow=5.7
RETH Rethem/Aller, 74.73 331 *eP* **P** **04 08 03.5 +0.9**
comp=Z,45nm,0.7s,baz=35,slow=5.7
ASSE Asse, Remlinge 74.76 330 *eP* **P** **04 08 03.7 +0.9**
comp=Z,20nm,1.0s,baz=35,slow=5.7
SIRR Siria 74.78 320⇑P **P** **04 08 03.4 +0.2**
ULM Lac du Bonnet 74.87 33 P **P** **04 08 03.6 +0.1**
comp=Z,79nm,0.5s,baz=324,slow=6.4,SNR=266
GZR Gura Zlata 74.91 319⇓P **P** **04 08 04.5 +0.5**
SZH Strazhica 74.92 316 *iP* **P** **04 08 04.2 +0.3**
ZIMR 74.92 317⇑P **P** **04 08 04.3 +0.4**
KAC Achnashellach 74.93 341 *eP* **P** **04 08 04.0 +0.3**
EDW2 Edwards Air Fo 74.94 56 P **P** **04 08 05.4 +1.1**
baz=313
SMOL Smolenice 74.96 324 *eP* **P** **04 08 05.3 +1.2**
SMOL pmax pmax
comp=Z,14nm,0.6s
SMOL Smolenice 74.96 324 *eP* **P** **04 08 05.3 +1.2**
GOPC GO Pecny, Ondr 74.96 326⇓*iP* **P** **04 08 04.8 +0.7**
GOPC GO Pecny, Ondr 74.96 326⇓*iP* **P** **04 08 04.8 +0.7**
KRUC Moravsky 74.97 325 *eP* **P** **04 08 05.1 +1.0**
CTYL Yalikoy Yolu 74.99 313⇑P **P** **04 08 04.5 +0.2**
PRU Pruhonice 75.00 327⇓*iP* **P** **04 08 05.2 +1.0**
BUD Budapest 75.06 323⇓*eP* **P** **04 08 00.0 -4.6**
NEUB Neuenburg 75.10 329 *eP* **P** **04 08 05.5 +0.7**
comp=Z,51nm,0.9s,baz=35,slow=5.7
CLZ Clausthal 75.10 330 *eP* **P** **04 08 06.0 +1.1**
comp=Z,51nm,0.6s,baz=35,slow=5.7
SRO Srobarova 75.11 323 *eP* **P** **04 08 06.2 +1.3**
SRO pmax pmax
comp=Z,56nm,0.8s
SRO Srobarova 75.11 323 *eP* **P** **04 08 06.2 +1.3**
MODS Modra-Piesok 75.13 324 *eP* **P** **04 08 05.5 +0.4**
MODS pmax pmax
comp=Z,20nm,0.9s
MODS Modra-Piesok 75.13 324 *eP* **P** **04 08 05.5 +0.4**
VLAD Vladila 75.15 317⇑P **P** **04 08 05.5 +0.3**
KPL Plockton 75.16 341 *eP* **P** **04 08 05.1 +0.1**
KPL IAmb IAmb 04 08 06.7
comp=Z,102nm,1.2s
TREC Trest 75.16 326⇓*iP* **P** **04 08 06.1 +0.9**
TREC Trest 75.16 326⇓*iP* **P** **04 08 06.1 +0.9**
MDND Maddock 75.19 37 P **P** **04 08 06.4 +0.9**
baz=320
ELND Elena 75.19 316⇑P **P** **04 08 06.1 +0.6**
STKA Stephens Creek 75.21 178 P **P** **04 08 06.8 +1.4**
comp=Z,2.2nm,0.4s,baz=346,slow=5.8,SNR=6.1
SRE Strehaia 75.25 318⇑P **P** **04 08 06.1 +0.4**
SHOC Shoshone, Teco 75.27 54 P **P** **04 08 07.5 +1.4**
baz=314
PHSR Pinarhisar 75.28 314⇑P **P** **04 08 07.8 +1.8**
BZS Buzias 75.29 320⇑P **P** **04 08 06.1 +0.1**
ZST Bratislava 75.34 324 *eP* **P** **04 08 06.5 +0.2**
ZST pmax pmax
comp=Z,14nm,0.8s
ZST Bratislava 75.34 324 *eP* **P** **04 08 06.4 +0.2**
ZST Bratislava 75.34 324 *e*SN **S** **04 17 25.6 -0.6**
GSC Goldstone, Bar 75.37 55 P **P** **04 08 07.9 +1.2**
baz=313
PBCC Pribram 75.45 327⇓*iP* **P** **04 08 07.6 +0.7**
TANN Tannenbergstha 75.47 328 *eP* **P** **04 08 07.7 +0.6**
comp=Z,23nm,1.3s,baz=35,slow=5.7
CSKK Cskako 75.48 323 *eP* **P** **04 08 07.5 +0.4**
PLVB Pleven 75.49 317⇑P **P** **04 08 07.8 +0.7**
GTTG Gvttingen 75.49 330 *eP* **P** **04 08 07.9 +0.9**
comp=Z,100nm,1.5s,baz=35,slow=5.7
PLN Plauen 75.53 328 *eP* **P** **04 08 08.1 +0.8**
comp=Z,63nm,2.2s,baz=35,slow=5.7
GUNZ Gunzen 75.56 328 *eP* **P** **04 08 08.4 +0.9**
comp=Z,20nm,0.6s,baz=35,slow=5.7
BFSC Mount Baldy Ra 75.58 56 P **P** **04 08 08.8 +0.8**
baz=313
INVG Invergeldie, C 75.59 340 *eP* **P** **04 08 07.5 0.0**
WERN Wernitzgruen 75.61 328 *eP* **P** **04 08 08.8 +1.0**
comp=Z,51nm,1.4s,baz=35,slow=5.7
MOX Moxa 75.61 329 *eP* **P** **04 08 08.5 +0.7**

comp=Z,14nm,0.7s,baz=35,slow=5.7
MOX eL L 04 23 14.4

comp=Z,3µm,18.0s
NKC Novy Kostel 75.62 328 *e*P **P 04 08 08.5 +0.7**
NKC Novy Kostel 75.62 328⇓*e*P **P 04 08 08.5 +0.7**
IBBN Ibbenburen 75.65 332 *e*P **P 04 08 08.5 +0.7**
comp=Z,39nm,0.6s,baz=35,slow=5.7
BAIL Bailesti 75.65 318 ⇑P **P 04 08 09.5 +1.5**
TUQ Turquoise Moun 75.80 55 P **P 04 08 10.5 +1.2**
baz=314
MSU Marysvale 75.81 50 P **P 04 08 10.7 +1.4**
MSU Marysvale 75.81 50 P **P 04 08 10.7 +1.4**
K22A Casper 75.84 44 P **P 04 08 09.9 +0.5**
baz=317
MDVR Moldovita 75.87 319 ⇑P **P 04 08 09.7 +0.4**
EBL Broad Law 75.92 339 *e*P **P 04 08 09.0 -0.4**
MANZ Manzenberg 75.95 328 *e*P **P 04 08 10.6 +0.8**
comp=Z,24nm,1.3s,baz=35,slow=5.7
SOP Sopron 75.97 324⇓*e*P **P 04 08 11.1 +1.3**
HEC Hector,Ludlow 75.97 55 P **P 04 08 11.3 +1.1**
baz=314
RSSD Black Hills 75.98 42 P **P 04 08 10.9 +0.7**
RSSD pmax pmax
comp=Z,11nm,0.7s
RSSD Black Hills 75.98 42 P **P 04 08 10.9 +0.7**
RSSD IAmb IAmb 04 08 11.2
comp=Z,11nm,0.7s
RSSD Black Hills 75.98 42 P **P 04 08 10.9 +0.7**
baz=318
TIH Tihany 76.00 323⇓*e*P **P 04 08 10.1 +0.1**
KHC Kasperske Hory 76.06 327⇓*i*P **P 04 08 11.2 +0.9**
KHC *e* 04 08 16.5
KHC Kasperske Hory 76.06 327⇓*i*P **P 04 08 11.2 +0.9**
KHC *ex* x 04 08 16.5
KHC Kasperske Hory 76.06 327 IAmb IAmb 04 08 12.1
comp=Z,16nm,0.7s
LAWE Loch Awe, Argy 76.07 341 *e*P **P 04 08 10.4 +0.2**
LAWE IAmb IAmb 04 08 20.7
comp=Z,1µm,3.3s
UBBA Unterbreizbach 76.07 330 *e*P **P 04 08 10.7 +0.6**
comp=Z,13nm,0.6s,baz=35,slow=5.7
CONA Conrad Observa 76.07 325 *i*P **P 04 08 11.7 +1.2**
comp=Z,22nm,0.7s,SNR=14
ROTZ Rotzenmuhle 76.09 328 *e*P **P 04 08 11.6 +1.2**
comp=Z,23nm,1.0s,baz=35,slow=5.7
RWWY Rawlins 76.19 45 IAmb IAmb 04 08 12.1
comp=Z,28nm,0.9s
MORH Mrgy, Hungar 76.19 322 *e*P **P 04 08 10.9 -0.2**
GEC2 GERESS Array S 76.24 326 *e*P **P 04 08 12.1 +0.7**
comp=Z,16nm,0.6s,baz=35,slow=5.7
GEC2 GERESS Array S 76.24 326 IAmb IAmb 04 08 12.6
comp=Z,15nm,0.6s
GERES GERESS Array B 76.24 326 P **P 04 08 11.6 +0.1**
comp=Z,11nm,0.5s,baz=38,slow=6.0,SNR=140
PGBU Glenifferbraes 76.25 340 *e*P **P 04 08 11.8 +0.5**
WET Wettzell 76.33 327 *e*P **P 04 08 13.0 +1.2**
comp=Z,29nm,1.0s,baz=35,slow=5.7
PGB Panagyurishte 76.33 316 *i*P **P 04 08 12.8 +0.8**
ESK Eskdalemuir 76.37 339 *e*P **P 04 08 11.7 -0.2**
GMRC Granite Mounta 76.41 55 P **P 04 08 13.8 +1.2**
baz=314
AGMN Agassiz Nation 76.42 34 IAmb IAmb 04 08 12.9
comp=Z,17nm,0.8s
AGMN Agassiz Nation 76.42 34 P **P 04 08 12.1 -0.2**
baz=322
EDMD Edmundbyers 76.47 338 *e*P **P 04 08 12.2 -0.3**
GRA1 Grafenberg Arr 76.53 328 P **P 04 08 13.1 +0.1**
GRF Grafenberg Arr 76.53 328 P **P 04 08 13.1 +0.1**
GRF pmax pmax
comp=Z,64nm,0.8s
GRF Grafenberg Arr 76.53 328 *e*P **P 04 08 14.3 +1.3**
comp=Z,65nm,0.8s,baz=35,slow=5.7
GRF *e*L L 04 23 21.8
comp=Z,1µm,19.1s
BUG Bochum--Univer 76.53 331 *e*P **P 04 08 13.5 +0.6**
comp=Z,36nm,0.6s,baz=35,slow=5.7
ALN Alexandroupoli 76.58 314 P **P 04 08 13.8 +0.5**
ALN Alexandroupoli 76.58 314 IAmb IAmb 04 08 14.8
comp=Z,14nm,0.9s
RDO Rodhopi 76.66 315 P **P 04 08 14.6 +0.8**
RZN Rozhen 76.69 316 *i*P **P 04 08 14.9 +0.7**
RAYN Ar Rayn 76.72 290 P **P 04 08 13.7 -0.8**
RAYN pmax pmax
comp=Z,6.0nm,0.6s
RAYN Ar Rayn 76.72 290 P **P 04 08 13.7 -0.8**
PFO Pinyon Flats O 76.74 56⇑*e*P **P 04 08 15.2 +0.7**
PFO pmax pmax
comp=Z,8.0nm,0.9s
PFO Pinyon Flats O 76.74 56 P **P 04 08 15.3 +0.7**
PFO Pinyon Flats O 76.74 56 P **P 04 08 15.0 +0.5**
baz=314
XPFO Pion Flat 76.74 56 P **P 04 08 14.9 +0.4**
TPFO Pinon Flats 76.74 56 P **P 04 08 15.3 +0.7**
baz=314,SNR=5.8
VTS Vitosha 76.74 317 P **P 04 08 16.4 +2.0**
VTS Vitosha 76.74 317 ⇑P **P 04 08 15.8 +1.3**
VTS Vitosha 76.74 317 *i*P **P 04 08 15.2 +0.8**
BELC Belle Mtn. Jos 76.75 56 P **P 04 08 15.1 +0.5**
baz=314
ARSA Arzberg 76.75 324 *i*P **P 04 08 15.0 +0.7**
comp=Z,7.4nm,0.5s,SNR=8.3
CSS Mathiatis 76.75 306 P **P 04 08 14.3 -0.1**
CSS IAmb IAmb 04 08 15.4
comp=Z,21nm,0.6s
O20A White River Ci 76.78 47 P **P 04 08 15.5 +0.7**
baz=317,SNR=6.8
MOA Molln 76.80 325 *i*P **P 04 08 15.2 +0.7**
comp=Z,10nm,0.7s,SNR=6.8
BEHE Becsehely 76.82 323⇓*e*P **P 04 08 14.5 -0.1**
MANT Manisa 76.98 311 P **P 04 08 15.6 -0.3**
KESW Keswick, Cumbr 76.99 339 *e*P **P 04 08 15.8 +0.5**
KESW IAmb IAmb 04 08 17.4
comp=Z,101nm,1.3s
TNS Taunus Mts 77.13 330 *e*P **P 04 08 17.0 +0.7**
comp=Z,17nm,0.7s,baz=35,slow=5.7
IRM Iron Mountain 77.14 55 P **P 04 08 17.9 +1.2**
baz=314
HPK Haverah Park 77.15 338 *e*P **P 04 08 16.8 +0.5**
HPK IAmb IAmb 04 08 17.2
comp=Z,46nm,0.6s
GAL1 Galloway 77.16 340 *e*P **P 04 08 16.4 +0.2**
GAL1 IAmb IAmb 04 08 17.5
comp=Z,39nm,0.7s
U15A North Rim 77.21 52 IAmb IAmb 04 08 19.9
comp=Z,14nm,0.8s
KALN Kalnik 77.22 323 *i*P **P 04 08 16.8 -0.1**
MONP2 Monument Peak 77.26 57 P **P 04 08 18.4 +0.9**
baz=314,SNR=9.0
MMB Musomiste 77.26 316 *i*P **P 04 08 17.8 +0.6**
BC3 Big Chuckawall 77.31 56 P **P 04 08 18.5 +0.8**
baz=314
CLGH Cloghs, Cushen 77.31 340 *e*P **P 04 08 17.6 +0.5**
CLGH IAmb IAmb 04 08 18.8
comp=Z,53nm,0.9s
AHRW Bad Neuenahr-A 77.35 331 *e*P **P 04 08 18.2 +0.7**
comp=Z,31nm,0.8s,baz=35,slow=5.7
NVR Nevrokopi 77.37 316 P **P 04 08 19.0 +1.2**
GROS Grobnik 77.38 324 *i*P **P 04 08 18.1 +0.3**
KKB Krupnik 77.38 317 *i*P **P 04 08 18.5 +0.7**
PERS Pernice 77.40 324 *i*P **P 04 08 18.4 +0.5**
SOKA Soboth 77.41 324 *i*P **P 04 08 18.5 +0.6**
comp=Z,16nm,0.7s,SNR=16
RJOB Jochberg 77.49 326 *e*P **P 04 08 19.6 +1.3**
comp=Z,27nm,0.9s,baz=35,slow=5.7
MOSL Moslavina 77.50 323 *i*P **P 04 08 18.3 -0.1**
WACR West Acre 77.59 336 *e*P **P 04 08 18.7 0.0**
WACR IAmb IAmb 04 08 21.1
comp=Z,51nm,0.8s
IKP In-Ko-Pah, Jac 77.61 57 P **P 04 08 20.5 +1.2**
baz=314
BEBN Eben Emael 77.62 332 P **P 04 08 19.0 +0.1**
comp=Z,56nm,0.7s
IOMK Kirk Michael 77.67 339 *e*P **P 04 08 19.1 0.0**
MEM Membach 77.67 332 P **P 04 08 19.1 -0.1**
comp=Z,27nm,0.7s
OBKA Obir 77.74 324 *i*P **P 04 08 20.2 +0.3**
comp=Z,19nm,0.6s,SNR=10
FUR Furstenfeldbru 77.75 327 *e*P **P 04 08 20.9 +1.1**
comp=Z,45nm,0.8s,baz=35,slow=5.7
KBA Koelnbreinsper 77.79 325 *i*P **P 04 08 20.7 +0.5**
comp=Z,26nm,0.5s,SNR=26
WIM Isle of Man 77.80 339 *e*P **P 04 08 20.1 +0.2**
Y12C Blythe 77.80 55 P **P 04 08 20.9 +0.7**
Y12C Blythe 77.80 55 P **P 04 08 21.4 +1.2**
baz=315

BSTI Sart Tilman 77.84 332 P **P 04 08 20.6 +0.4**
STIP Stip 77.95 317 *i*P **P 04 08 20.4 -0.5**
BLY Banja Luka 77.98 322 ⇑P **P 04 08 21.4 +0.4**
BLY Banja Luka 77.98 322 P **P 04 08 21.4 +0.4**
FETY Fethiye 78.02 309 P **P 04 08 21.2 -0.2**
MYKA Terra Mystica 78.03 325 *i*P **P 04 08 21.3 -0.1**
comp=Z,19nm,0.5s,SNR=12
GMM Mts of Mourne 78.04 340 *e*P **P 04 08 21.2 0.0**
VAY Valandovo 78.04 317 *i*P **P 04 08 22.2 +0.8**
STU Stuttgart 78.05 329 *e*P **P 04 08 22.2 +0.8**
comp=Z,42nm,0.7s,baz=35,slow=5.7
OZLJ Ozalj 78.06 323 *i*P **P 04 08 21.6 +0.2**
OUR Ouranopolis 78.06 315 P **P 04 08 21.8 +0.3**
BCLA Clavier 78.07 332 ⇑P **P 04 08 19.5 -1.9**
comp=Z,15nm,0.6s
SUSD Miller 78.11 38 P **P 04 08 22.3 +0.5**
baz=321
SKO Skopje 78.11 318 *i*P **P 04 08 22.9 +1.1**
LJU Ljubljana 78.12 324 *i*P **P 04 08 21.7 -0.1**
CWF Charnwood Fore 78.14 337 *e*P **P 04 08 21.8 0.0**
BGES Gesves 78.17 332 P **P 04 08 21.9 -0.1**
comp=Z,13nm,0.9s
WATA Walderalm 78.30 327 *i*P **P 04 08 23.5 +0.5**
comp=Z,19nm,0.7s,SNR=16
PLG Polygyros 78.30 315 P **P 04 08 23.1 +0.1**
RCHB Rochefort 78.32 332 P **P 04 08 22.6 -0.2**
BMRD Maredsous 78.35 332 P **P 04 08 22.9 0.0**
WME Myndd Eilian 78.38 339 *e*P **P 04 08 23.1 +0.1**
WUAZ Wupatki 78.38 52 P **P 04 08 25.1 +1.5**
baz=316
ABTA Abfaltersbach 78.40 326 *i*P **P 04 08 23.8 +0.4**
comp=Z,6.1nm,0.6s,SNR=6.2
ISCO Idaho Springs 78.40 45 P **P 04 08 25.4 +1.5**
baz=318
WLF Walferdange 78.41 331 P **P 04 08 24.6 +1.3**
WLF pmax pmax
comp=Z,14nm,1.0s
WLF Walferdange 78.41 331 P **P 04 08 24.6 +1.3**
WLF IAmb IAmb 04 08 26.3
comp=Z,14nm,1.0s
EYMN Ely 78.44 32 IAmb IAmb 04 08 23.9
comp=Z,18nm,0.7s
EYMN Ely 78.44 32 P **P 04 08 23.4 -0.1**
baz=325
MOTA Moosalm 78.48 327 *i*P **P 04 08 24.5 +0.6**
comp=Z,62nm,0.9s,SNR=29
WLF1 Llynfaes 78.50 339 *e*P **P 04 08 23.7 0.0**
WLF1 IAmb IAmb 04 08 26.6
comp=Z,79nm,1.1s
RETA Reutte 78.50 327 *i*P **P 04 08 24.6 +0.7**
comp=Z,40nm,1.0s,SNR=19
PAIG Paliouri 78.52 315 P **P 04 08 24.0 -0.1**
FOEL Foel Wylfa 78.54 338 *e*P **P 04 08 24.0 0.0**
FOEL IAmb IAmb 04 08 25.6
comp=Z,42nm,0.7s
SQTA Sankt Quirin 78.54 327 *i*P **P 04 08 24.8 +0.6**
comp=Z,21nm,0.8s,SNR=12
YLL Llanberis 78.57 339 *e*P **P 04 08 24.6 +0.5**
DOU Dourbes 78.59 332 P **P 04 08 23.7 -0.6**
BFO Black Forest 78.74 329 P **P 04 08 25.4 +0.2**
BFO pmax pmax
comp=Z,33nm,1.0s
BFO Black Forest 78.74 329 *e*P **P 04 08 25.7 +0.6**
comp=Z,39nm,1.0s,baz=35,slow=5.7
BFO Black Forest 78.74 329 P **P 04 08 25.4 +0.2**
BFO IAmb IAmb 04 08 26.5
comp=Z,33nm,1.0s
MVCO Mesa Verde 78.77 49 IAmb IAmb 04 08 27.8
comp=Z,14nm,0.8s
MVCO Mesa Verde 78.77 49 P **P 04 08 27.1 +1.2**
baz=317,SNR=8.8
UDBI Udbina 78.78 323 *i*P **P 04 08 25.3 -0.2**
PDG Podgorica 78.81 319 ⇑P **P 04 08 26.2 +0.5**
PHP Peshkopia 78.81 318 P **P 04 08 25.9 +0.2**
FETA Feichten 78.89 327 *i*P **P 04 08 26.8 +0.6**
comp=Z,21nm,0.9s,SNR=12
KIJV Kijevo 78.91 322 *i*P **P 04 08 26.1 0.0**
LIT Litokhoron 78.99 316 P **P 04 08 26.3 -0.4**
LIT Litokhoron 78.99 316 IAmb IAmb 04 08 31.1
comp=Z,13nm,0.7s
DAVA Damuels 79.01 328 *i*P **P 04 08 27.3 +0.5**
comp=Z,38nm,0.7s,SNR=16
FNA Florina 79.04 317 IAmb IAmb 04 08 28.2
comp=Z,8.9nm,0.6s
OHR Ohrid 79.08 317 *i*P **P 04 08 27.6 +0.4**
X16A Lo Mia Camp, P 79.13 53 P **P 04 08 28.6 +0.8**
DBRK Dubrovnik 79.15 320 *i*P **P 04 08 26.8 -0.7**
XOR Xorichti 79.19 315 P **P 04 08 26.7 -1.1**
MAKA Makarska 79.19 321 *i*P **P 04 08 26.7 -0.9**
STON Ston 79.20 320 *i*P **P 04 08 26.7 -1.0**
Q24A Divide 79.26 46 P **P 04 08 29.6 +1.0**
baz=318,SNR=5.9
ECH Echery 79.27 330 P **P 04 08 28.0 0.0**
ECH pmax pmax
comp=Z,18nm,0.8s
ECH Echery 79.27 330 P **P 04 08 28.0 0.0**
ECH IAmb IAmb 04 08 31.7
comp=Z,18nm,0.8s
MCH1 Michaelchurch 79.28 337 *e*P **P 04 08 27.9 0.0**
S22A 4UR Ranch, Cre 79.28 48 P **P 04 08 30.1 +1.4**
baz=318,SNR=7.3
HMNX Herstmonceux 79.30 335 *e*P **P 04 08 28.8 +0.8**
HMNX IAmb IAmb 04 08 29.1
comp=Z,112nm,0.6s
CTI Castel Tesino 79.31 326 IAmb IAmb 04 08 28.6
comp=Z,27nm,0.9s
MORI Morici 79.33 322 *i*P **P 04 08 27.6 -0.8**
OGNE Ogallala 79.35 43 P **P 04 08 29.4 +0.7**
baz=320
TIR Tirane 79.35 318 P **P 04 08 29.5 +0.9**
TIR Tirane 79.35 318 ⇑P **P 04 08 29.1 +0.5**
TIR Tirane 79.35 318 IAmb IAmb 04 08 29.9
comp=Z,38nm,0.9s
WOL Wolverton 79.38 336 *e*P **P 04 08 28.2 -0.3**
WOL IAmb IAmb 04 08 31.5
comp=Z,53nm,0.8s
SCHQ Schefferville 79.40 15 P **P 04 08 28.9 +0.3**
comp=Z,12nm,0.4s,baz=342,slow=4.9,SNR=28
SCHQ Schefferville 79.40 15 IAmb IAmb 04 08 29.6
comp=Z,23nm,0.9s
NEST Nestorio 79.48 317 P **P 04 08 29.3 -0.1**
DUGI Dugi Otok 79.52 323 *i*P **P 04 08 29.1 -0.3**
ZIRJ Zirje 79.52 322 *i*P **P 04 08 28.8 -0.6**
HVAR Hvar 79.54 321 *i*P **P 04 08 28.8 -0.7**
BATH Bath 79.58 337 *e*P **P 04 08 29.8 +0.2**
ECSD EROS Data Cent 79.71 38 P **P 04 08 30.5 0.0**
ECSD IAmb IAmb 04 08 31.5
comp=Z,21nm,0.7s
ECSD EROS Data Cent 79.71 38 P **P 04 08 30.8 +0.3**
baz=322,SNR=21
LKR Lokris 79.82 314 P **P 04 08 30.3 -0.8**
TEOL Teolo 79.86 325 P **P 04 08 30.2 -1.1**
TEOL IAmb IAmb 04 08 32.1
comp=Z,38nm,0.9s
KARP Karpathos 79.88 310 P **P 04 08 31.0 -0.5**
AGG Agios Georgios 79.89 315 P **P 04 08 30.3 -1.2**
AGG Agios Georgios 79.89 315 IAmb IAmb 04 08 34.8
comp=Z,13nm,0.9s
TUE Stuetta 79.89 327 IAmb IAmb 04 08 33.0
comp=Z,18nm,0.7s
SDCO Great Sand Dun 79.99 47 P **P 04 08 33.2 +0.8**
SDCO Great Sand Dun 79.99 47 P **P 04 08 33.6 +1.2**
baz=318,SNR=6.1
214A Organ Pipe Nat 80.08 55 P **P 04 08 33.8 +1.1**
baz=316
SALO Salr 80.12 326 P **P 04 08 32.5 -0.2**
SPMN Marine on St. 80.14 34 IAmb IAmb 04 08 33.0
comp=Z,7.6nm,0.5s
SPMN Marine on St. 80.14 34 P **P 04 08 32.7 0.0**
baz=325
SRN Sarande 80.41 317 P **P 04 08 34.1 -0.1**
SERG Sergoula 80.48 315 P **P 04 08 33.5 -1.2**
IGT Igoumenitsa 80.51 317 P **P 04 08 34.6 -0.2**
KEK Kerkira 80.64 317 P **P 04 08 35.5 0.0**
LAKA Lakka 80.66 315 P **P 04 08 35.1 -0.5**
SENIN Lac Senin/Sane 80.77 329 IAmb IAmb 04 08 37.4
comp=Z,16nm,0.9s
BGNE Belgrade 80.84 40 P **P 04 08 36.8 +0.2**
baz=322
PRMA PARMA 80.91 326 P **P 04 08 36.7 -0.1**
PRMA IAmb IAmb 04 08 38.6
comp=Z,25nm,0.9s
ZCCA Zocca 80.97 325 IAmb IAmb 04 08 39.8
comp=Z,27nm,0.7s
DRO Drossia 81.01 315 P **P 04 08 37.4 -0.1**

T25A Trinidad 81.02 46 IAmb IAmb 04 08 39.3
comp=Z,12nm,0.7s
T25A Trinidad 81.02 46 P **P 04 08 38.6 +0.7**
baz=319,SNR=11
TUC Tucson 81.03 54 P **P 04 08 38.5 +0.7**
TUC pmax pmax
comp=Z,5.0nm,1.1s
TUC Tucson 81.03 54 P **P 04 08 38.5 +0.7**
TUC Tucson 81.03 54 P **P 04 08 39.0 +1.2**
baz=316
EVGI Lefkada island 81.04 316 P **P 04 08 37.4 -0.2**
RLS Riolos of Patr 81.06 315 P **P 04 08 37.7 0.0**
G40A Rib Lake 81.15 33 IAmb IAmb 04 08 39.1
comp=Z,25nm,0.8s
MURB Monte Urbino 81.20 324 IAmb IAmb 04 08 40.6
comp=Z,31nm,0.7s
FSK Fiskardo 81.21 316 P **P 04 08 38.2 -0.3**
IDI Anoyia 81.32 311 P **P 04 08 38.8 -0.5**
comp=Z,11nm,0.3s,baz=31,slow=5.9,SNR=4.4
KFL Anninata 81.36 315 P **P 04 08 39.1 -0.2**
VLC Villacollemand 81.37 325 IAmb IAmb 04 08 41.1
comp=Z,22nm,0.8s
VLS Valsamata 81.41 316 P **P 04 08 39.2 -0.4**
JLP Les Platons 81.47 336 *e*P **P 04 08 39.4 -0.2**
ITM Ithomi 81.48 314 P **P 04 08 39.2 -0.8**
JQE Queens East 81.49 335 *e*P **P 04 08 39.8 0.0**
MATQ Matagami 81.54 23 P **P 04 08 39.8 -0.2**
baz=334,SNR=5.7
OSSC Osservatorio P 81.54 325 IAmb IAmb 04 08 40.9
comp=Z,22nm,0.7s
JSA Saint Aubin 81.54 336 *e*P **P 04 08 39.4 -0.6**
JSA IAmb IAmb 04 08 40.8
comp=Z,60nm,1.1s
ANMO Albuquerque 81.55 49⇓*e*P **P 04 08 42.1 +1.4**
ANMO pmax pmax
comp=Z,10.0nm,1.1s
ANMO Albuquerque 81.55 49 P **P 04 08 42.1 +1.4**
ANMO Albuquerque 81.55 49 P **P 04 08 42.0 +1.4**
baz=318
AQU L'Aquila 81.55 323 IAmb IAmb 04 08 42.0
comp=Z,31nm,0.8s
INTR Introdacqua 81.61 322 IAmb IAmb 04 08 41.2
comp=Z,21nm,0.6s
E44A Grand Marais A 81.62 30 P **P 04 08 40.6 +0.1**
baz=329
ACER Acerenza 81.65 320 IAmb IAmb 04 08 41.9
comp=Z,26nm,0.7s
PYL PYLOS 81.80 314 P **P 04 08 40.6 -1.0**
LATE Laterza 82.04 324 IAmb IAmb 04 08 51.0
comp=Z,30nm,1.0s
BNI Bardonecchia 82.10 328 IAmb IAmb 04 08 51.7
comp=Z,12nm,0.8s
CBKS Cedar Bluff 82.11 43 IAmb IAmb 04 08 43.9
comp=Z,18nm,0.7s
CBKS Cedar Bluff 82.11 43 P **P 04 08 43.1 -0.2**
baz=321,SNR=5.1
I40A Norwalk 82.12 34 IAmb IAmb 04 08 44.4
comp=Z,15nm,0.8s
LSQQ Lebel-sur-Quev 82.36 23 P **P 04 08 44.0 -0.3**
baz=334
E46A Sault Ste Mari 82.41 29 IAmb IAmb 04 08 46.4
comp=Z,11nm,0.6s
TIP Timpagrande 82.53 319 ⇑P **P 04 08 45.8 +0.3**
TIP Timpagrande 82.53 319 P **P 04 08 45.4 0.0**
TIP IAmb IAmb 04 08 46.4
comp=Z,11nm,0.8s
F45A CMU Biological 82.57 30 P **P 04 08 45.7 +0.2**
baz=329
319A Douglas 82.58 53 P **P 04 08 46.2 +0.3**
121A Cookes Peak, D 82.59 52 IAmb IAmb 04 08 48.5
comp=Z,11nm,0.8s
121A Cookes Peak, D 82.59 52 P **P 04 08 47.5 +1.5**
baz=318
SCIA State Center 82.67 37 P **P 04 08 46.7 +0.7**
baz=325,SNR=8.7
E47A Iron Bridge 82.69 28 P **P 04 08 45.5 -0.6**
baz=330
SSB Saint Sauveur 82.71 330 IAmb IAmb 04 08 47.4
comp=Z,13nm,0.7s
E48A Lockeyer 83.04 27 P **P 04 08 47.4 -0.5**
baz=331
G45A Suttons Bay 83.07 30 P **P 04 08 48.3 +0.3**
baz=329
JFWS Jewell Farm 83.08 34 P **P 04 08 47.8 -0.4**
baz=326
G46A Petoskey 83.12 30 P **P 04 08 48.4 +0.1**
baz=330,SNR=9.7
D50A G1974 Best Tow 83.19 26 P **P 04 08 48.0 -0.6**
baz=333,SNR=5.1
H45A Beulah 83.28 31 P **P 04 08 49.5 +0.4**
baz=329
L40A Anamosa 83.39 35 IAmb IAmb 04 08 50.3
comp=Z,23nm,0.8s
KSU1 Kansas State U 83.39 40 P **P 04 08 50.0 +0.2**
baz=323
D51A Lot 18 Range I 83.41 25 P **P 04 08 49.2 -0.5**
baz=333,SNR=5.5
G47A Hillman 83.60 29 P **P 04 08 51.0 +0.2**
baz=330
GLMI Grayling 83.63 30 P **P 04 08 51.1 +0.2**
baz=330
H46A Fife Lake 83.66 30 P **P 04 08 51.2 +0.1**
baz=329
F49A Sandfield 83.71 28 P **P 04 08 51.1 -0.2**
baz=331
E51A G1948 Merrick 83.86 26 P **P 04 08 51.5 -0.5**
baz=333,SNR=5.4
H47A Mio 83.97 30 P **P 04 08 52.7 0.0**
baz=330
L42A Oliver, Polo 84.08 34 IAmb IAmb 04 08 53.6
comp=Z,21nm,0.8s
I46A Reed City 84.09 31 P **P 04 08 53.6 +0.4**
baz=329,SNR=6.0
AMTX Amarillo 84.16 46 IAmb IAmb 04 08 55.6
comp=Z,19nm,0.8s
AMTX Amarillo 84.16 46 P **P 04 08 54.9 +1.0**
baz=321
H48A Harrisville 84.20 29 P **P 04 08 54.1 +0.3**
baz=331
F51A Arnstein 84.27 26 P **P 04 08 53.6 -0.5**
baz=333,SNR=5.1
MSTX Muleshoe 84.29 48 P **P 04 08 55.1 +0.6**
baz=320
E52A Mattawa 84.35 25 P **P 04 08 53.8 -0.7**
baz=334,SNR=6.3
I48A Sherman Twp 84.51 29 P **P 04 08 55.9 +0.6**
baz=330
J46A Howard City 84.52 31 P **P 04 08 56.0 +0.6**
baz=329,SNR=6.1
E53A Dumoine, Ponti 84.57 25 P **P 04 08 55.2 -0.4**
baz=334
MNTX Cornudas Mount 84.57 51 P **P 04 08 56.9 +1.0**
baz=319
F52A Sundridge 84.58 26 P **P 04 08 55.5 -0.2**
baz=333,SNR=6.9
D55A Sainte-Anne-du 84.63 23 P **P 04 08 55.8 -0.1**
baz=336,SNR=9.2
L44A Lake County Fo 84.64 33 P **P 04 08 56.4 +0.3**
baz=328
E54A Lac Daplat, Po 84.66 24 P **P 04 08 55.5 -0.5**
baz=334
N41A Harden Midland 84.66 36 IAmb IAmb 04 08 57.1
comp=Z,32nm,1.1s
D56A ZEC Mazanza, M 84.81 23 P **P 04 08 56.8 0.0**
baz=336,SNR=16
ALGO Algonquin Park 84.83 25 P **P 04 08 56.4 -0.5**
baz=334
J47A Sunmer 84.92 31 P **P 04 08 58.2 +0.8**
baz=330,SNR=9.6
E55A Montcerf-Lytto 84.98 24 P **P 04 08 57.5 -0.1**
baz=335,SNR=6.3
LATQ La Tuque 85.03 21 P **P 04 08 58.0 +0.1**
LATQ La Tuque 85.03 21 P **P 04 08 57.6 -0.2**
baz=337,SNR=5.3
I49A Point Hope 85.04 29 P **P 04 08 58.6 +0.7**
baz=331
K46A Dorr 85.04 32 P **P 04 08 58.5 +0.5**
baz=329,SNR=6.3
D57A Chemin Vers le 85.07 22 P **P 04 08 58.1 0.0**
baz=337,SNR=10.0
E56A St. Veronique 85.19 23 P **P 04 08 58.6 0.0**
baz=336,SNR=11
J48A Bridge Port 85.25 30 P **P 04 08 59.6 +0.6**
baz=330,SNR=7.1
D58A Chemin du LacG 85.27 21 P **P 04 08 58.8 -0.3**
baz=337
G54A Lake Saint Pet 85.32 25 P **P 04 08 58.7 -0.6**

	baz=334							
K47A	Vermontville	85.35	31	P	P	04 08 60.0	+0.4	
	baz=330							
G53A	Haliburton	85.40	26	P	P	04 08 59.5	-0.2	
	baz=334,SNR=8.1							
L46A	Eue Claire	85.42	32	P	P	04 09 00.2	+0.3	
	baz=329							
H52A	Wyevale	85.42	27	P	P	04 08 59.6	-0.2	
	baz=333,SNR=6.1							
HDIL	Hopedale	85.44	35	IAmb	IAmb	04 09 01.2		
	comp=Z,28nm,0.9s							
HDIL	Hopedale	85.44	35	P	P	04 09 00.2	+0.1	
	baz=327							
F55A	Otter Lake	85.45	24	P	P	04 08 59.4	-0.6	
	baz=335							
E57A	Chemin Saint G	85.56	22	P	P	04 09 00.6	+0.1	
	baz=336							
K48A	Perry	85.56	30	P	P	04 09 01.3	+0.7	
	baz=330,SNR=10							
D59A	Saint-Raymond	85.63	21	P	P	04 09 00.7	-0.1	
	baz=338							
WMOK	Wichita Mounta	85.77	44	P	P	04 09 02.6	+0.8	
	baz=322							
I51A	Listowel	85.78	28	P	P	04 09 02.1	+0.4	
	baz=332							
K49A	Clarkson	85.82	30	P	P	04 09 02.7	+0.9	
	baz=331							
E58A	La Victoria	85.83	22	P	P	04 09 01.7	-0.1	
	baz=337,SNR=9.1							
D61A	St Aubert, Com	85.86	20	P	P	04 09 02.2	+0.3	
	baz=339							
G55A	Calabogie	85.87	25	P	P	04 09 01.6	-0.4	
	baz=335,SNR=5.9							
L47A	Sherwood	85.87	32	P	P	04 09 02.4	+0.3	
	baz=330,SNR=11							
H53A	Bobcaygeon	85.90	26	P	P	04 09 01.9	-0.3	
	baz=334,SNR=5.0							
D60A	Saint Jean D'O	85.94	20	P	P	04 09 02.1	-0.2	
	baz=339,SNR=14							
PLVO	Plevna	85.95	25	IAmb	IAmb	04 09 02.9		
	comp=Z,20nm,0.7s							
P43A	Skaggs, Pawnee	86.11	36	IAmb	IAmb	04 09 04.4		
	comp=Z,18nm,0.7s							
L48A	N Adams	86.19	31	P	P	04 09 04.3	+0.6	
	baz=330,SNR=11							
D62A	Allapoint, All	86.24	19	P	P	04 09 04.0	+0.2	
D62A				IAmb	IAmb	04 09 04.8		
	comp=Z,15nm,0.6s							
D62A	Allapoint, All	86.24	19	P	P	04 09 04.0	+0.2	
	baz=340,SNR=11							
DELO	Deloro Mine	86.25	25	IAmb	IAmb	04 09 04.5		
	comp=Z,12nm,0.9s							
L49A	Milan	86.29	31	P	P	04 09 05.0	+0.9	
	baz=330							
E60A	Ste Agathe de	86.32	21	P	P	04 09 04.0	-0.1	
	baz=338							
TUL1	Leonard	86.33	42	IAmb	IAmb	04 09 05.9		
	comp=Z,16nm,0.8s							
TUL1	Leonard	86.33	42	P	P	04 09 05.1	+0.6	
	baz=324,SNR=6.5							
H55A	Tweed	86.36	25	P	P	04 09 04.4	-0.1	
	baz=334							
X34A	Smith Ranch, M	86.36	44	IAmb	IAmb	04 09 06.6		
	comp=Z,13nm,0.9s							
F59A	Saint Guilaume	86.45	22	P	P	04 09 05.0	+0.2	
	baz=337,SNR=5.6							
J52A	Paris	86.46	28	P	P	04 09 05.4	+0.4	
	baz=332							
SFIN	Lafayette	86.49	34	IAmb	IAmb	04 09 06.2		
	comp=Z,11nm,0.7s							
SFIN	Lafayette	86.49	34	P	P	04 09 05.4	+0.3	
	baz=328							
E61A	Lac Etchemin	86.50	20	P	P	04 09 05.3	+0.2	
	baz=339							
D63A	Stockholm	86.50	18	P	P	04 09 05.1	0.0	
	baz=341							
G57A	Newington	86.52	24	P	P	04 09 05.2	0.0	
	baz=336,SNR=7.2							
K51A	Iona Station	86.57	29	P	P	04 09 06.2	+0.7	
	baz=332							
N47A	Urbana	86.62	32	IAmb	IAmb	04 09 06.7		
	comp=Z,25nm,0.9s							
N47A	Urbana	86.62	32	P	P	04 09 05.9	+0.1	
	baz=329,SNR=5.1							
CCM	Cathedral Cave	86.69	38	P	P	04 09 06.3	+0.2	
CCM				pmax	pmax			
	comp=Z,21nm,1.0s							
CCM	Cathedral Cave	86.69	38	P	P	04 09 06.3	+0.2	
CCM				IAmb	IAmb	04 09 07.4		
	comp=Z,21nm,0.9s							
CCM	Cathedral Cave	86.69	38	P	P	04 09 06.5	+0.4	
	baz=326							
L50A	Kingsville	86.70	30	P	P	04 09 06.8	+0.6	
	baz=331							
G58A	Ormstown	86.74	23	P	P	04 09 06.1	-0.1	
	baz=337,SNR=6.8							
M49A	Liberty Center	86.76	31	P	P	04 09 06.9	+0.4	
	baz=330,SNR=5.5							
K52A	Tillsonburg	86.79	28	P	P	04 09 07.0	+0.5	
	baz=332							
F61A	St Evariste	86.80	21	P	P	04 09 07.3	+0.7	
	baz=339,SNR=7.8							
PQI	Presque Isle	86.87	18	IAmb	IAmb	04 09 07.6		
	comp=Z,14nm,0.7s							
N48A	Decatur	86.90	32	P	P	04 09 07.4	+0.3	
	baz=330,SNR=7.2							
HHAR	Hobbs	86.91	40	IAmb	IAmb	04 09 08.1		
	comp=Z,13nm,0.7s							
H57A	Richville	86.98	24	P	P	04 09 07.3	-0.2	
	baz=336							
E63A	Oxbow	87.01	19	IAmb	IAmb	04 09 08.2		
	comp=Z,15nm,0.8s							
E63A	Oxbow	87.01	19	P	P	04 09 07.3	-0.2	
	baz=340							
G59A	Clarenceville	87.05	22	P	P	04 09 07.8	+0.1	
	baz=337							
LONY	Lake Ozonia	87.08	23	P	P	04 09 07.5	-0.4	
	baz=336							
F62A	Pittston Farm,	87.13	20	P	P	04 09 08.5	+0.4	
	baz=339							
E64A	Bridgewater	87.15	18	P	P	04 09 08.2	0.0	
	baz=341							
N49A	Columbus Grove	87.16	31	IAmb	IAmb	04 09 09.8		
	comp=Z,26nm,0.8s							
N49A	Columbus Grove	87.16	31	P	P	04 09 08.8	+0.4	
	baz=330,SNR=9.7							
M50A	Fremont	87.17	30	IAmb	IAmb	04 09 09.6		
	comp=Z,17nm,0.8s							
M50A	Fremont	87.17	30	P	P	04 09 08.7	+0.3	
	baz=331							
G61A	St-Isidore-de-	87.31	21	P	P	04 09 09.6	+0.6	
	baz=338,SNR=7.1							
H59A	Cadyville	87.31	23	P	P	04 09 08.8	-0.2	
	baz=337,SNR=5.1							
TX32	Lajitas Array	87.32	51	P	P	04 09 10.2	+0.7	
TXAR	Lajitas Array	87.32	51	P	P	04 09 10.1	+0.6	
	comp=Z,1.6nm,0.5s,baz=281,slow=3.0,SNR=54							
U40A	Yellville	87.36	40	P	P	04 09 09.8	+0.4	
	baz=325,SNR=23							
O48A	Farmland	87.36	32	P	P	04 09 09.8	+0.4	
	baz=330,SNR=7.4							
H58A	Gabriels	87.38	23	P	P	04 09 09.4	0.0	
	baz=336,SNR=5.0							
OLIL	Olney	87.47	35	IAmb	IAmb	04 09 11.4		
	comp=Z,17nm,0.8s							
M51A	Elyria	87.55	30	P	P	04 09 10.6	+0.4	
	baz=331							
F64A	Sherman	87.55	19	P	P	04 09 10.3	+0.2	
	baz=340							
G62A	West of Eustis	87.62	21	P	P	04 09 11.2	+0.7	
	baz=339							
K54A	Basiliko Farm,	87.62	27	P	P	04 09 10.8	+0.3	
	baz=334							
ERPA	Erie	87.63	28	IAmb	IAmb	04 09 11.8		
	comp=Z,22nm,0.8s							
ERPA	Erie	87.63	28	P	P	04 09 11.1	+0.6	
	baz=333							
H60A	Morristown	87.66	22	P	P	04 09 11.2	+0.5	
	baz=338							
M52A	Chesterland	87.66	29	IAmb	IAmb	04 09 12.3		
	comp=Z,19nm,0.7s							
M52A	Chesterland	87.66	29	P	P	04 09 11.4	+0.7	
	baz=332							
L53A	Girard	87.68	28	P	P	04 09 11.3	+0.5	
	baz=333,SNR=9.4							
N50A	Nevada	87.68	31	P	P	04 09 11.5	+0.7	
	baz=331,SNR=8.8							
K55A	Perry	87.72	27	P	P	04 09 11.2	+0.2	
	baz=334,SNR=5.4							
O49A	Covington	87.74	32	IAmb	IAmb	04 09 12.4		
	comp=Z,17nm,0.8s							
O49A	Covington	87.74	32	P	P	04 09 11.5	+0.4	
	baz=330,SNR=7.8							
L54A	Sinclairville	87.75	28	P	P	04 09 11.3	+0.1	
	baz=333							
BLO	Bloomington	87.75	34	IAmb	IAmb	04 09 12.5		
	comp=Z,13nm,0.7s							
J57A	Williamstown	87.76	25	P	P	04 09 11.3	+0.2	
	baz=335							
MMNY	Mt. Morris Dam	87.77	26	IAmb	IAmb	04 09 12.0		
	comp=Z,17nm,0.7s							
NCB	Newcomb	87.77	23	IAmb	IAmb	04 09 12.1		
	comp=Z,7.9nm,0.7s							
WVNY	West Valley, N	87.83	27	IAmb	IAmb	04 09 12.6		
	comp=Z,14nm,0.8s							
N51A	Ashland	87.84	30	P	P	04 09 12.0	+0.4	
	baz=331,SNR=7.7							
VT1	Waterbury	87.86	22	IAmb	IAmb	04 09 12.9		
	comp=Z,17nm,0.6s							
S44A	Carbondale	87.86	36	P	P	04 09 12.4	+0.7	
PKME	Peaks-Kenny Pk	87.89	20	P	P	04 09 11.8	+0.1	
	baz=340							
H61A	Lyndonville	87.89	22	P	P	04 09 12.8	+1.0	
	baz=338,SNR=5.2							
P48A	Milroy	87.94	33	IAmb	IAmb	04 09 13.3		
	comp=Z,22nm,0.8s							
P48A	Milroy	87.94	33	P	P	04 09 12.6	+0.5	
	baz=329,SNR=6.7							
K56A	Middlesex	87.99	26	P	P	04 09 12.5	+0.2	
	baz=334							
M53A	WI Miller and	87.99	29	P	P	04 09 12.9	+0.6	
	baz=332,SNR=7.7							
J58A	Remsen	88.02	24	IAmb	IAmb	04 09 13.1		
	comp=Z,13nm,0.8s							
J58A	Remsen	88.02	24	P	P	04 09 12.5	+0.1	
	baz=336							
I59A	Olmsteadville	88.03	23	P	P	04 09 12.4	-0.1	
	baz=337							
O50A	Cable	88.05	31	P	P	04 09 13.5	+0.9	
	baz=330,SNR=15							
H62A	Milan	88.06	21	P	P	04 09 13.3	+0.8	
	baz=339,SNR=8.4							
PBMO	Poplar Bluff	88.11	38	IAmb	IAmb	04 09 14.3		
	comp=Z,25nm,0.8s							
J59A	Piesco	88.15	24	IAmb	IAmb	04 09 13.9		
	comp=Z,13nm,0.7s							
J59A	Piesco	88.15	24	P	P	04 09 13.3	+0.2	
	baz=336,SNR=6.2							
I60A	Shoreham	88.16	23	P	P	04 09 13.3	+0.3	
	baz=337							
N52A	McGinn's Farm,	88.18	30	P	P	04 09 13.8	+0.6	
	baz=332							
ACSO	Alum Creek Sta	88.21	31	P	P	04 09 14.1	+0.7	
	baz=331,SNR=15							
Q48A	North Vernon	88.28	33	P	P	04 09 14.4	+0.7	
	baz=329,SNR=8.7							
M54A	Oil Creek Stat	88.28	28	IAmb	IAmb	04 09 15.0		
	comp=Z,18nm,0.9s							
M54A	Oil Creek Stat	88.28	28	P	P	04 09 14.1	+0.5	
	baz=333,SNR=6.1							
I61A	Oroboro, Fairl	88.38	22	P	P	04 09 14.8	+0.8	
	baz=338							
L56A	Greenwood	88.42	26	IAmb	IAmb	04 09 16.4		
	comp=Z,10nm,0.9s							
L56A	Greenwood	88.42	26	P	P	04 09 14.3	0.0	
	baz=334							
O51A	Pataskala	88.43	31	P	P	04 09 15.0	+0.6	
	baz=331,SNR=6.8							
P50A	Jamestown	88.45	32	P	P	04 09 15.2	+0.7	
	baz=330,SNR=11							
K58A	Earlville	88.45	25	P	P	04 09 14.8	+0.3	
	baz=336							
N53A	Lisbon	88.49	29	P	P	04 09 15.4	+0.8	
	baz=332,SNR=9.0							
WHAR	Wooly Hollow	88.49	40	P	P	04 09 15.5	+0.7	
MIAR	Mount Ida	88.49	41	IAmb	IAmb	04 09 16.4		
	comp=Z,15nm,0.8s							
MIAR	Mount Ida	88.49	41	P	P	04 09 15.6	+0.8	
	baz=325							
Q49A	Aurora	88.54	33	P	P	04 09 15.8	+0.9	
	baz=330,SNR=9.3							
JCT	Junction City	88.57	48	IAmb	IAmb	04 09 16.6		
	comp=Z,8.0nm,0.8s							
JCT	Junction City	88.57	48	P	P	04 09 15.7	+0.4	
	baz=322							
W41B	Gary Mavity, V	88.61	40	P	P	04 09 15.8	+0.5	
	baz=326							
M55A	Ridgway	88.62	28	IAmb	IAmb	04 09 16.7		
	comp=Z,12nm,0.8s							
M55A	Ridgway	88.62	28	P	P	04 09 15.7	+0.4	
	baz=334							
WHTX	Lake Whitney,	88.62	45	IAmb	IAmb	04 09 16.9		
	comp=Z,13nm,0.8s							
WHTX	Lake Whitney,	88.62	45	P	P	04 09 16.2	+0.8	
	baz=323							
WCI	Wyandotte Cave	88.65	34	P	P	04 09 15.8	+0.3	
WCI				pmax	pmax			
	comp=Z,20nm,0.8s							
WCI	Wyandotte Cave	88.65	34	P	P	04 09 15.8	+0.3	
WCI				IAmb	IAmb	04 09 16.9		
	comp=Z,20nm,0.8s							
WCI	Wyandotte Cave	88.65	34	P	P	04 09 16.1	+0.7	
	baz=329							
N54A	Moraine State	88.65	29	P	P	04 09 16.2	+0.8	
	baz=333,SNR=16							
K59A	Cooperstown	88.68	24	P	P	04 09 15.8	+0.2	
	baz=336,SNR=6.6							
I63A	Otisfield	88.70	21	P	P	04 09 16.6	+1.1	
	baz=339							
O52A	Adamsville	88.74	30	P	P	04 09 16.5	+0.7	
	baz=332,SNR=12							
KEST	Kesra	88.78	321	P	P	04 09 15.8	-0.4	
	comp=Z,2.7nm,0.5s,baz=44,slow=1.5,SNR=8.6							
KEST	Kesra	88.78	321	IAmb	IAmb	04 09 19.2		
	comp=Z,4.0nm,0.8s							
J61A	Chester	88.82	23	P	P	04 09 17.0	+0.8	
	baz=338							
P51A	Williamsport	88.84	31	P	P	04 09 16.7	+0.4	
	baz=331,SNR=8.4							
O53A	New Philadelph	88.85	30	P	P	04 09 17.1	+0.7	
	baz=332,SNR=11							
BINY	Binghamton	88.86	25	P	P	04 09 16.7	+0.3	
	baz=335							
X40A	Basin Creek Fa	88.89	41	P	P	04 09 17.8	+1.2	
	baz=325							
L58A	Harry Jones Me	89.04	25	P	P	04 09 17.5	+0.3	
	baz=336							
Q50A	Georgetown	89.04	32	P	P	04 09 17.9	+0.6	
	baz=330,SNR=5.2							
P52A	Corning	89.05	31	P	P	04 09 17.7	+0.4	
	baz=332,SNR=6.7							
K60A	Five Rivers En	89.11	24	P	P	04 09 18.0	+0.5	
	baz=337							
Q51A	Peebles	89.13	32	P	P	04 09 18.5	+0.8	
	baz=331,SNR=14							
L59A	Alton	89.16	25	P	P	04 09 18.2	+0.4	
	baz=336,SNR=7.4							
N55A	Marion Center	89.16	28	P	P	04 09 18.5	+0.7	
	baz=333,SNR=10							
O54A	Avella	89.21	29	P	P	04 09 18.9	+0.9	
	baz=333,SNR=12							
N56A	West Decatur	89.27	27	P	P	04 09 19.0	+0.7	
	baz=334,SNR=6.2							
M57A	Sunshine Farm,	89.28	27	P	P	04 09 18.9	+0.6	
	baz=335,SNR=7.0							
R50A	Paris	89.39	33	IAmb	IAmb	04 09 20.5		
	comp=Z,20nm,0.9s							
R50A	Paris	89.39	33	P	P	04 09 19.9	+1.0	
	baz=330,SNR=5.2							
S49A	Springfield	89.44	34	P	P	04 09 19.8	+0.7	
	baz=330							
P53A	Whipple	89.46	30	P	P	04 09 20.0	+0.8	
	baz=332,SNR=8.3							
M58A	Price's Panora	89.46	26	P	P	04 09 19.6	+0.3	
	baz=335,SNR=5.9							
O55A	Ligonier	89.56	29	P	P	04 09 20.2	+0.5	
	baz=333,SNR=8.2							
PBRG	Braganca	89.59	335	eP	P	04 09 19.9	+0.1	
	comp=Z,24nm,1.6s							
L60A	Shokan	89.59	24	P	P	04 09 20.0	+0.2	
	baz=336							
Q52A	Bidwell	89.59	31	P	P	04 09 20.4	+0.6	
	baz=331							
L61A	Hillsdale 1, H	89.60	24	P	P	04 09 20.5	+0.7	
	baz=337							
M59A	Waymart	89.63	25	P	P	04 09 20.1	+0.1	
	baz=336							
SSPA	Standing Stone	89.66	27	P	P	04 09 20.4	+0.3	
SSPA				IAmb	IAmb	04 09 21.7		
	comp=Z,28nm,1.1s							
SSPA	Standing Stone	89.66	27	P	P	04 09 20.7	+0.6	
	baz=334							
N57A	Milroy	89.66	27	P	P	04 09 20.7	+0.6	
	baz=334,SNR=14							
R51A	Hillsboro	89.67	32	P	P	04 09 20.9	+0.7	
	baz=331							
P54A	Burton	89.68	30	P	P	04 09 21.1	+0.9	
	baz=332,SNR=8.4							
O56A	Blue Knob Stat	89.76	28	P	P	04 09 21.4	+0.7	
	baz=334,SNR=8.0							
WVT	Waverly	89.79	36	P	P	04 09 21.1	+0.3	
WVT				pmax	pmax			
	comp=Z,12nm,0.6s							
WVT	Waverly	89.79	36	P	P	04 09 21.1	+0.3	
WVT				IAmb	IAmb	04 09 21.9		
	comp=Z,12nm,0.6s							
WVT	Waverly	89.79	36	P	P	04 09 21.4	+0.6	
	baz=328							
MCWV	Mont Chateau	89.86	29	IAmb	IAmb	04 09 23.0		
	comp=Z,14nm,1.0s							
MCWV	Mont Chateau	89.86	29	P	P	04 09 22.1	+1.0	
	baz=333							
N58A	Sunbury	89.86	26	IAmb	IAmb	04 09 22.3		
	comp=Z,16nm,0.8s							
N58A	Sunbury	89.86	26	P	P	04 09 21.4	+0.3	
	baz=335,SNR=6.4							
S50A	Richmond	89.88	33	P	P	04 09 22.0	+0.8	
	baz=330							
T49A	Edmonton	89.92	34	IAmb	IAmb	04 09 23.1		
	comp=Z,14nm,0.8s							
T49A	Edmonton	89.92	34	P	P	04 09 22.2	+0.8	
	baz=329,SNR=5.9							
Q53A	Leroy	89.96	31	P	P	04 09 22.5	+0.9	
	baz=332							
P55A	Reedsville	90.00	29	P	P	04 09 22.9	+1.1	
	baz=333,SNR=7.0							
WES	Weston	90.05	22	P	P	04 09 22.6	+0.7	
WES				pmax	pmax			
	comp=Z,20nm,0.8s							
WES	Weston	90.05	22	P	P	04 09 22.6	+0.7	
WES				IAmb	IAmb	04 09 23.4		
	comp=Z,20nm,0.8s							
M60A	Port Jervis	90.07	25	P	P	04 09 22.5	+0.5	
	baz=336							
N59A	State Game Lan	90.09	26	IAmb	IAmb	04 09 23.6		
	comp=Z,21nm,0.8s							
N59A	State Game Lan	90.09	26	P	P	04 09 22.8	+0.6	
	baz=336,SNR=7.4							
Q54A	Coxs Mills	90.10	30	IAmb	IAmb	04 09 24.1		
	comp=Z,14nm,0.8s							
Q54A	Coxs Mills	90.10	30	P	P	04 09 23.3	+1.1	
	baz=332,SNR=5.4							
O57A	Amberson	90.12	27	P	P	04 09 23.1	+0.8	
	baz=334							
NATX	Nacogdoches	90.22	43	P	P	04 09 24.8	+1.9	
	baz=324							
S51A	Beattyville	90.24	33	P	P	04 09 23.9	+1.0	
	baz=331							
MVO	Moncorvo	90.26	335	eP	P	04 09 23.4	+0.4	
	comp=Z,26nm,1.0s							
T50A	Nancy	90.28	34	P	P	04 09 23.7	+0.7	
	baz=330,SNR=7.5							
POLO	Lamas de Olo	90.30	336	eP	P	04 09 23.5	+0.3	
	comp=Z,21nm,1.3s							
ODNJ	Ogdensburg	90.30	25	IAmb	IAmb	04 09 24.1		
	comp=Z,11nm,0.8s							
U49A	Red Boiling Sp	90.33	35	P	P	04 09 24.1	+0.8	
	baz=329,SNR=7.7							
N60A	Cedar Hill Far	90.34	25	P	P	04 09 23.7	+0.4	
	baz=336							
M61A	Granite Spring	90.35	24	P	P	04 09 23.9	+0.6	
	baz=337							
P56A	Dayton Farm, R	90.35	28	P	P	04 09 24.2	+0.9	
	baz=334,SNR=6.0							
PVRL	Vila Real	90.36	336	eP	P	04 09 23.8	+0.4	
	comp=Z,26nm,1.5s							
PAGS	Pennsylvania G	90.41	27	IAmb	IAmb	04 09 24.6		
	comp=Z,11nm,0.8s							
O58A	Lewisberry	90.44	27	P	P	04 09 24.0	+0.3	
	baz=335							
O59A	Robesonia	90.51	26	P	P	04 09 24.3	+0.2	
	baz=335							
V48A	Smith Brothers	90.55	36	IAmb	IAmb	04 09 25.7		
	comp=Z,11nm,0.8s							
L64A	Middleborough	90.60	22	P	P	04 09 24.8	+0.4	
	baz=339							
ESDC	Sonseca Array	90.63	332	P	P	04 09 24.3	-0.4	
	comp=Z,2.4nm,0.6s,baz=17,slow=4.2,SNR=31							
ESDC				PP	PP	04 13 04.1	+1.9	
	comp=Z,2.3nm,0.9s,baz=25,slow=8.0,SNR=6.0							
ESDC	Sonseca Array	90.63	332	IAmb	IAmb	04 09 25.2		
	comp=Z,2.8nm,0.8s							
N61A	South Mountain	90.70	25	P	P	04 09 25.3	+0.4	
	baz=336							
U50A	Jamestown	90.80	34	P	P	04 09 26.2	+0.7	
	baz=330							
PAB	San Pablo	90.87	333	P	P	04 09 25.8	-0.1	
PAB				pmax	pmax			
	comp=Z,4.0nm,0.8s							
PAB	San Pablo	90.87	333	P	P	04 09 25.8	-0.1	
P58A	Pank, Wackersv	90.89	27	P	P	04 09 26.3	+0.5	
	baz=334							
PVIS	Viseu	90.93	336	eP	P	04 09 26.2	+0.1	
PSUB	Penn St. - Bra	91.09	26	P	P	04 09 26.8	0.0	
PSUB				IAmb	IAmb	04 09 27.7		
	comp=Z,18nm,1.2s							
MTE	Manteigas	91.12	335	eP	P	04 09 27.3	+0.3	
	comp=Z,30nm,1.7s							
MTE	Manteigas	91.12	335	P	P	04 09 26.9	-0.1	
MTE				IAmb	IAmb	04 09 28.1		
	comp=Z,17nm,0.9s							
TZTN	Tazewell	91.20	33	P	P	04 09 28.2	+0.8	
	baz=331							
W49A	Belvidere	91.32	36	P	P	04 09 28.4	+0.5	
	baz=329							
T54A	Tazewell	91.52	32	P	P	04 09 29.4	+0.5	
	baz=332							
COI	Coimbra	91.55	336	eP	P	04 09 29.1	+0.2	
	comp=Z,32nm,1.3s							
COI	Coimbra	91.55	336	P	P	04 09 28.9	0.0	
COI				pmax	pmax			
	comp=Z,20nm,0.8s							
COI	Coimbra	91.55	336	P	P	04 09 28.9	0.0	
PCBR	Castelo Branco	91.61	335	eP	P	04 09 29.2	0.0	
	comp=Z,23nm,1.4s							
PCAS	Casmilo, Conde	91.72	336	eP	P	04 09 28.2	-1.5	
	comp=Z,41nm,2.0s							
CPCT	Cooper Cave	91.76	34	IAmb	IAmb	04 09 31.4		
	comp=Z,13nm,0.9s							
PMRV	Marv??o	91.96	335	eP	P	04 09 30.5	-0.3	
PTOM	Tomar	92.10	336	eP	P	04 09 31.5	+0.1	
	comp=Z,26nm,1.1s							
PESTR	Estremoz	92.53	335	P	P	04 09 33.4	-0.1	
PESTR				IAmb	IAmb	04 09 34.1		
	comp=Z,9.7nm,1.1s							
U57A	Blanch	92.91	30	P	P	04 09 35.6	+0.4	
	baz=333							
EVO	Evora	92.97	335	eP	P	04 09 35.6	+0.1	
	comp=Z,24nm,1.6s							
V56A	Mocksville	93.03	31	P	P	04 09 36.1	+0.3	
	baz=332							
Z50A	Ashland	93.06	37	IAmb	IAmb	04 09 37.0		
	comp=Z,14nm,0.8s							
Z50A	Ashland	93.06	37	P	P	04 09 36.3	+0.3	
	baz=329							
PBEJ	Beja	93.39	335	eP	P	04 09 37.6	+0.2

	comp=Z,6.7nm,0.3s								
SDV	**Santo Domingo**	**121.08**	**35**	PKP	**PKPdf**	**04 15 14.2**	**0.0**		
	comp=Z,14nm,0.6s,baz=326,slow=3.6,SNR=22								
VNDA	**Vanda**	**121.72**	**174**	PKP	**PKPdf**	**04 15 13.2**	**-0.1**		
	comp=Z,1.2nm,0.9s,baz=356,slow=4.2,SNR=3.3								
PCRV	**Puerto La Cruz**	**122.18**	**28**	PKP	**PKPdf**	**04 15 14.6**	**-1.6**		
	comp=Z,21nm,1.0s,baz=270,slow=5.1,SNR=3.7								
PLCV	**Puerto La Cruz**	**122.21**	**28**		**PKiKP**	**04 15 14.6**	**-1.6**		
MDP	**Montagnes des**	**130.29**	**16**	PKP	**PKiKP**	**04 15 32.5**	**0.0**		
	comp=Z,2.9nm,0.4s,baz=321,slow=6.5,SNR=5.2								
ATAH	**Atahualpa**	**130.94**	**53**	PKP	**PKiKP**	**04 15 35.0**	**+0.8**		
	comp=Z,6.0nm,0.7s,baz=32,slow=6.8,SNR=3.9								
LPAZ	**La Paz**	**144.17**	**49**	PKP	PKPbc	04 15 56.3	-0.1		
	comp=Z,1.8nm,0.3s,baz=329,slow=2.7,SNR=18								
MNMC	**Minye Minye**	**145.61**	**54**	PKPbc	**PKPab**	**04 16 01.2**	**+0.2**		
PB11	**IPOC Station P**	**146.06**	**55**	PKPbc	**PKPbc**	**04 16 01.8**	**+0.2**		
GO01	**Chusmiza**	**146.26**	**54**		**PKPab**	**04 16 03.3**	**-0.6**		
SNAA	**Sanae**	**146.49**	**201**	PKPdf	**PKiKP**	**04 16 03.6**	**-0.2**		
SNAA	**Sanae**	**146.49**	**201**	PKP2	**PKPab**	**04 16 02.4**	**-0.4**		
SNAA	**Sanae**	**146.49**	**201**		**PKPab**	**04 16 02.4**	**-0.4**		
SIV	**San Ignacio**	**147.45**	**38**	PKPbc	**PKPdf**	**04 16 03.5**	**+0.9**		
	comp=Z,18nm,0.8s,baz=319,slow=1.6,SNR=53								
VNA3	**Neumayer Olymp**	**148.43**	**199**	PKPdf	**PKPbc**	**04 16 06.4**	**+0.1**		
VNA1	**Neumayer--Stat**	**148.50**	**200**	PKPdf	**PKPab**	**04 16 11.8**	**+1.0**		
LVC	**Limon Verde**	**148.68**	**57**	PKP2	**PKiKP**	**04 16 10.0**	**-0.2**		
LVC	**Limon Verde**	**148.68**	**57**	PKPbc	**PKiKP**	**04 16 10.0**	**-0.2**		
	comp=Z,9.5nm,0.8s,baz=259,slow=3.2,SNR=7.6								
LVC	**Limon Verde**	**148.68**	**57**		**PKiKP**	**04 16 09.6**	**-0.6**		
GO02	**Mina Guanaco**	**150.12**	**61**		**PKPbc**	**04 16 12.5**	**+0.2**		
BDFB	**Brasilia**	**151.39**	**15**	PKPbc	**PKPbc**	**04 16 15.3**	**+0.1**		
	comp=Z,8.8nm,0.4s,baz=23,slow=2.7,SNR=23								
BDFB	**Brasilia**	**151.39**	**15**		**PKiKP**	**04 16 15.5**	**-0.1**		
CFA	**Coronel Fontan**	**155.25**	**70**	PKPbc	PKPbc	04 16 23.2			
	comp=Z,2.7nm,0.7s,baz=198,slow=1.2,SNR=6.1								
PLCA	**Paso Flores**	**157.79**	**93**	PKPab	**PKPab**	**04 16 52.5**	**+1.4**		
	comp=Z,1.7nm,0.7s,baz=243,slow=9.0,SNR=5.8								
CPUP	**Villa Florida**	**158.09**	**43**	PKPab	**PKPab**	**04 16 52.9**	**+0.4**		
	comp=Z,5.8nm,0.9s,baz=327,slow=4.5,SNR=9.5								

WEL 11 04:01:24.3,38°S±11″×18°0W±1′1,h33km,M3.6/25, MLv3.9/18,MLv3.7/21,MLv3.6/25,Error ellipse: s-maj=0.0km s-min=0.0km az=143.3,

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.46**	**274**	P	Pn	04 01 47.7	-0.7
WMGZ				S	Sn	04 02 02.0	-4.4
PUZ	**Puketiti**	**1.58**	**265**	P	Pn	04 01 47.6	-2.5
MXZ	**Matakaoa Point**	**1.59**	**283**	P	Pn	04 01 50.4	+0.3
MXZ				S	Sn	04 02 10.3	+0.7
CNGZ	**Carnagh Statio**	**1.70**	**251**	P	Pb	04 01 55.0	0.0
CNGZ				S	Sn	04 02 12.7	+0.4
PKGZ	**Pakihiroa**	**1.72**	**271**	P	Pn	04 01 52.7	+0.6
PKGZ				S	Sn	04 02 10.3	-2.6
TWGZ	**Tauwhareparae**	**1.81**	**262**	P	Pn	04 01 53.2	-0.1
TKGZ	**Te Karaka**	**1.96**	**255**	P	Pn	04 01 56.8	+1.6
TKGZ				S	Sn	04 02 19.2	+0.5
HAZ	**Te Kaha**	**1.97**	**275**	P	Pn	04 01 57.2	+1.9
RUGZ	**Raukumara Rang**	**2.04**	**269**	P	Pn	04 01 57.3	+0.9
RIGZ	**Rimuhau**	**2.10**	**248**	P	Pn	04 01 59.1	+1.8
RIGZ				S	Sn	04 02 23.1	+0.9
PRGZ	**Paritu Road**	**2.10**	**242**	P	Pb	04 01 59.8	-2.0
MWZ	**Matawai**	**2.19**	**259**	P	Pn	04 01 58.8	+0.4
MWZ				S	Sn	04 02 24.4	+0.1
MHGZ	**Mahia Peninsul**	**2.20**	**236**	P	Pn	04 02 00.8	+2.2
KNZ	**Kokohu**	**2.29**	**241**	P	Pn	04 02 01.5	+1.7
RAGZ	**Rawiri**	**2.30**	**255**	P	Pn	04 02 02.4	+2.4
RAGZ				S	Sn	04 02 28.1	+0.8
WHHZ	**Waihua**	**2.62**	**244**	P	Pn	04 02 04.4	0.0
RTZ	**Ruatahuna**	**2.66**	**254**	P	Pb	04 02 08.2	-3.2
RTZ				S	Sn	04 02 38.5	+2.3
RAHZ	**Arahi**	**2.67**	**248**	P	Pn	04 02 05.0	0.0
RAHZ				S	Sn	04 02 36.1	-0.2
MTHZ	**Maungataniwha**	**2.83**	**250**	P	Pn	04 02 07.2	-0.1
MTHZ				S	Sn	04 02 40.0	-0.3
OPRZ	**Ohinepanea**	**2.93**	**271**	P	Pn	04 02 07.8	-0.7
NMHZ	**Naumai**	**2.94**	**246**	P	Pn	04 02 09.6	+0.8
CKHZ	**Cape Kidnapper**	**3.02**	**234**	P	Pn	04 02 11.6	+1.9
CKHZ				S	Sn	04 02 42.7	-2.0
KUZ	**Kuaotunu**	**3.81**	**287**	P	Pn	04 02 18.9	-1.7
MKAZ	**Moumakai**	**4.13**	**280**	P	Pn	04 02 25.1	0.0
CTZ	**Chatham Island**	**6.25**	**159**	P	Pn	04 03 01.7	+7.6
CTZ				S	Sn	04 04 06.5	+2.0

IDC ***11*** *04:06:59.4±0.8, 6°.80S×154°.90E, h0km, mb3.7/8, mb1 4.0/9, mb1mx3.9/31, mbtmp3.8/9, ML3.9/1, MS2.8/3, Ms1 2.8/3, ms1mx2.6/37, Error ellipse: s-maj=27.8km s-min=21.6km az=103.0*

ISC 11 04:07:05.5±0.8, 6°.8S±0°.1×154°.8E±0°.1, h41km, n14, σ0s92/13, mb3.7/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.75**	**312**	Pn	**Pn**	**04 07 59.1**	**-1.7**
	8.2nm,0.3s,baz=104,slow=19,SNR=3.2						
KRVT				Sn	**Sn**	**04 08 45.4**	**+1.7**
	15nm,0.3s,baz=232,slow=18,SNR=3.0						
HNR	**Honiara**	**5.69**	**117**	LR	LR	04 10 18.4	
	comp=Z,90nm,22.0s,baz=290,slow=35						
PMG	**Port Moresby**	**8.02**	**251**	LR	LR	04 12 18.9	
	comp=Z,121nm,18.6s,baz=213,slow=40						
GUMO	**Guam**	**22.56**	**334**	LR	LR	04 19 55.2	
	comp=Z,16nm,21.2s,baz=74,slow=34						
WRA	**Warramunga Arr**	**23.78**	**235**	P	**P**	**04 12 14.8**	**+0.2**
	2.4nm,0.7s,baz=59,slow=9.7,SNR=9.6						
WRA				PcP	**PcP**	**04 15 58.7**	**+1.1**
	0.5nm,0.7s,baz=65,slow=2.4,SNR=3.2						
ASAR	**Alice Springs**	**26.17**	**228**	P	**P**	**04 12 36.5**	**+0.2**
	1.9nm,1.0s,baz=64,slow=8.9,SNR=7.8						
SONM	**Songino Array**	**69.10**	**327**	P	**P**	**04 18 07.3**	**-0.3**
	0.1nm,0.4s,baz=144,slow=6.9,SNR=3.3						
VNDA	**Vanda**	**70.76**	**178**	P	**P**	**04 18 16.7**	**-0.4**
	0.5nm,0.5s,baz=346,slow=3.6,SNR=3.0						
MKAR	**Makanchi Array**	**83.17**	**319**	P	**P**	**04 19 28.0**	**+0.5**
	0.5nm,0.7s,baz=108,slow=6.4,SNR=5.9						
ILAR	**Eielson Array**	**83.27**	**22**	P	**P**	**04 19 27.0**	**-0.6**
	0.2nm,0.6s,baz=252,slow=5.6,SNR=5.9						
NVAR	**Mina Array Bea**	**91.74**	**52**	P	**P**	**04 20 10.2**	**+0.7**
	0.5nm,0.7s,baz=252,slow=6.3,SNR=3.6						
YKA	**Yellowknife Ar**	**96.26**	**28**	P	**P**	**04 20 29.5**	**+0.2**
	0.2nm,0.7s,baz=267,slow=4.2,SNR=4.4						
GERES	**GERESS Array B**	**126.82**	**329**	PKP	**PKPdf**	**04 26 04.9**	**-0.2**
	0.2nm,0.3s,baz=81,slow=1.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**152.82**	**285**	PKPbc	**PKPbc**	**04 26 59.0**	**-0.2**
	1.7nm,0.8s,baz=71,slow=2.6,SNR=8.1						

IDC ***11*** *04:07:40.5±1.4, 20°.46S×172°.57E, h0km, mb4.0/7, mb1 4.2/8, mb1mx4.0/28, mbtmp4.0/8, ML3.4/1, MS3.4/5, Ms1 3.4/5, ms1mx3.1/31, Error ellipse: s-maj=62.1km s-min=23.2km az=151.0*

NEIC ***11*** *04:07:47.9±0.6, 20°.5S±0°.3×172°.4E±0°.1, h51km±10km, mb4.5/15, Error ellipse: s-maj=51.0km s-min=2.7km az=164.0*

ISC 11 04:07:44.4±0.8, 20°.8S±0°.2×172°.8E±0°.1, h35km, n70, σ1s12/63, mb4.2/12, MS3.6/7, 4C, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.04**	**257**	*e*Pn	**Pn**	**04 09 11.8**	**+0.3**
	4.8nm,0.3s						
DZM				*e*LR	LR	04 10 33.5	
	comp=Z,600nm,27.4s						
DZM	**Mont Dzumac**	**6.04**	**257**	Pn	**Pn**	**04 09 11.4**	**-0.1**
	1.0nm,0.3s,baz=140,slow=18,SNR=9.0						
RAR	**Rarotonga**	**25.60**	**96**	LR	LR	04 21 19.1	
	comp=Z,60nm,19.4s,baz=258,slow=32						
STKA	**Stephens Creek**	**29.95**	**242**	P	**P**	**04 13 49.9**	**+0.4**
	3.6nm,0.9s,baz=45,slow=7.1,SNR=4.8						
STKA				LR	LR	04 24 12.3	
	comp=Z,48nm,19.9s,baz=40,slow=33						
STKA	**Stephens Creek**	**29.95**	**242**	IAmb	IAmb	04 13 54.6	
	comp=Z,1.0nm,1.0s						
TBI	**Tubuai**	**35.00**	**101**	*e*LR	LR	04 23 49.5	
	comp=Z,202nm,32.2s						
PPT2	**Papeete2**	**35.63**	**91**	*e*S	**S**	**04 20 11.0**	**-2.5**
	comp=Z,36nm,24.0s						
PPT2				*e*LR	LR	04 24 07.2	
	comp=Z,207nm,27.0s						
PPT	**Papeete**	**35.63**	**91**	LR	LR	04 25 37.0	
	comp=Z,69nm,19.1s,baz=262,slow=30						
WRA	**Warramunga Arr**	**36.00**	**264**	LR	LR	04 28 57.8	
	comp=Z,92nm,18.8s,baz=35,slow=36						
ASAR	**Alice Springs**	**36.03**	**258**	P	**P**	**04 14 42.4**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=87,slow=8.1,SNR=3.3						
VNDA	**Vanda**	**57.00**	**183**	LR	LR	04 37 57.9	
	comp=Z,49nm,21.6s,baz=10,slow=32						
KSRS	**Korea Array**	**71.72**	**324**	P	**P**	**04 19 02.2**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=104,slow=5.1,SNR=4.1						
CMAR	**Chiang Mai Arr**	**82.20**	**293**	P	**P**	**04 20 01.8**	**-0.6**
CMB	**Columbia Colle**	**85.76**	**47**	P	**P**	**04 20 21.7**	**+1.6**
CMB				IAmb	IAmb	04 20 22.9	
	comp=Z,4.8nm,1.0s						
AFDM	**Forest Hills D**	**85.83**	**46**	P	**P**	**04 20 22.2**	**+1.7**
AFDM				IAmb	IAmb	04 20 23.3	
	comp=Z,3.9nm,1.0s						
ISA	**Isabella, Lake**	**85.91**	**50**	P	**P**	**04 20 22.5**	**+1.4**
NVAR	**Mina Array Bea**	**87.38**	**47**	P	**P**	**04 20 30.2**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=226,slow=7.7,SNR=6.1						
NV11	**Mina Array Sit**	**87.48**	**47**	P	**P**	**04 20 30.6**	**+1.9**
NV11				IAmb	IAmb	04 20 31.5	
	comp=Z,2.2nm,1.1s						
KVN	**Kaiserville**	**87.82**	**47**	P	**P**	**04 20 32.2**	**+1.8**
KVN				IAmb	IAmb	04 20 32.5	
	comp=Z,2.6nm,1.1s						
LCMT	**Little Creek M**	**90.28**	**50**	P	**P**	**04 20 43.9**	**+2.0**
CCUT	**Cedar City**	**90.43**	**50**	P	**P**	**04 20 45.4**	**+2.6**
X16A	**Lo Mia Camp, P**	**90.49**	**53**	P	**P**	**04 20 45.5**	**+2.4**
X16A				IAmb	IAmb	04 20 46.7	
	comp=Z,2.9nm,1.0s						
SONM	**Songino Array**	**90.50**	**322**	P	**P**	**04 20 42.4**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=151,slow=5.2,SNR=3.6						
SONM	**Songino Array**	**90.50**	**322**	IAmb	IAmb	04 20 42.9	
	comp=Z,0.8nm,1.0s						
SZCU	**Shurtz Canyon**	**90.65**	**50**	P	**P**	**04 20 45.6**	**+1.8**
U15A	**North Rim**	**90.72**	**51**	P	**P**	**04 20 46.7**	**+2.5**
ILAR	**Eielson Array**	**90.78**	**16**	P	**P**	**04 20 42.8**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=233,slow=5.0,SNR=8.7						
WUAZ	**Wupatki**	**91.00**	**52**	P	**P**	**04 20 46.7**	**+1.3**
MTPU	**Mount Pierson**	**91.48**	**50**	P	**P**	**04 20 49.9**	**+2.1**
LSA	**Lhasa**	**93.20**	**300**	P	**P**	**04 20 55.3**	**-0.8**
TXAR	**Lajitas Array**	**94.61**	**61**	P	**P**	**04 21 04.2**	**+2.2**
	comp=Z,0.8nm,0.8s,baz=224,slow=5.6,SNR=8.7						
DRGR		**144.47**	**324**	⇑P	PKPbc	04 27 16.1	+0.4
OSTC	**Ostas**	**145.05**	**334**	*e*PKP	**PKPdf**	**04 27 18.2**	**+0.2**
MORC	**Moravsky Berou**	**145.06**	**332**	*e*PKP	**PKPdf**	**04 27 18.1**	**+0.1**
CHVC	**Chvalec**	**145.09**	**334**	*e*PKP	**PKPdf**	**04 27 18.4**	**+0.4**
DPC	**Dobruska-Polom**	**145.16**	**333**	*e*PKP	**PKPdf**	**04 27 18.8**	**+0.6**
UPC	**Upice**	**145.17**	**334**	*e*PKP	**PKPdf**	**04 27 18.7**	**+0.6**
KRLC	**Kraliky**	**145.18**	**333**	*e*PKP	**PKPdf**	**04 27 18.4**	**+0.2**
GZR	**Gura Zlata**	**145.25**	**322**	⇑P	**PKPbc**	**04 27 18.3**	**0.0**
EKA	**Eskdalemuir Ar**	**145.40**	**356**	PKPbc	**PKPbc**	**04 27 16.8**	**-1.5**
	comp=Z,6.2nm,1.1s,baz=7.1,slow=2.9,SNR=4.3						
JAVC	**Velka Javorina**	**145.67**	**330**	*e*PKP	**PKPab**	**04 27 21.3**	**+1.5**
CLL	**Collm**	**145.70**	**337**	⇑*i*PKPdf	**PKPab**	**04 27 19.9**	**+0.2**
	comp=Z,17nm,0.9s						
CLL	**Collm**	**145.70**	**337**		**PKPbc**	**04 27 19.6**	**+0.2**
PVCC	**Panska Ves**	**145.74**	**335**	*e*PKP	**PKPab**	**04 27 20.6**	**+0.7**
BZS	**Buzias**	**145.78**	**323**	⇑P	**PKPab**	**04 27 20.1**	**-0.1**
VRAC	**Vranov**	**145.83**	**332**	*e*PKP	**PKPab**	**04 27 20.7**	**+0.4**
KRUC	**Moravsky**	**146.10**	**332**	*e*PKP	**PKPab**	**04 27 21.5**	**+0.2**
GOPC	**GO Pecny, Ondr**	**146.13**	**334**	*e*PKP	**PKPbc**	**04 27 21.1**	**+0.3**
PRU	**Pruhonice**	**146.17**	**335**	*e*PKP	**PKPab**	**04 27 21.4**	**-0.2**
PBCC	**Pribram**	**146.63**	**335**	*e*PKP	**PKPab**	**04 27 23.2**	**-0.2**
CONA	**Conrad Observa**	**147.18**	**331**	*i* PKPab	**PKPbc**	**04 27 24.8**	**+0.8**
	comp=Z,5.9nm,1.0s						
KHC	**Kasperske Hory**	**147.24**	**334**	*e*PKP	**PKPbc**	**04 27 24.5**	**+0.5**
KHC				*ex*	x	04 27 31.6	
KHC	**Kasperske Hory**	**147.24**	**334**		**PKPbc**	**04 27 25.0**	**+0.9**
GEC2	**GERESS Array S**	**147.41**	**334**		**PKPbc**	**04 27 25.3**	**+0.7**
GERES	**GERESS Array B**	**147.41**	**334**	PKPbc	**PKPbc**	**04 27 25.0**	**+0.4**
	comp=Z,27nm,0.7s,baz=29,slow=3.0,SNR=26						
SOKA	**Soseh**	**148.48**	**330**	*e*PKiKP	**PKPbc**	**04 27 27.4**	**-0.1**
	comp=Z,2.6nm,0.8s						
FNA	**Florina**	**148.62**	**316**		**PKPbc**	**04 27 28.1**	**+0.1**
BLY	**Banja Luka**	**148.76**	**325**		**PKiKP**	**04 27 29.0**	**-0.6**
KBA	**Koelnbreinsper**	**148.94**	**332**	*e*PKPbc	**PKPbc**	**04 27 28.3**	**-0.5**
	comp=Z,5.8nm,1.5s						
MYKA	**Terra Mystica**	**149.15**	**331**	*e*PKPbc	**PKPbc**	**04 27 28.8**	**-0.4**
	comp=Z,1.1nm,0.4s						
WATA	**Walderalm**	**149.47**	**334**	*e*PKiKP	**PKPbc**	**04 27 30.1**	**0.0**
	comp=Z,2.7nm,0.6s						
ABTA	**Abfaltersbach**	**149.55**	**333**	*i* PKiKP	**PKPbc**	**04 27 30.0**	**-0.3**
	comp=Z,2.9nm,0.6s						
MOTA	**Moosalm**	**149.66**	**335**	*e*PKiKP	**PKPbc**	**04 27 30.8**	**+0.2**
	comp=Z,5.3nm,0.9s						
RETA	**Reutte**	**149.67**	**336**	*e*PKiKP	**PKPbc**	**04 27 30.9**	**+0.5**
	comp=Z,6.5nm,1.3s						
SQTA	**Sankt Quirin**	**149.72**	**335**	*e*PKiKP	**PKPbc**	**04 27 31.0**	**+0.4**
	comp=Z,4.1nm,0.6s						
FETA	**Feichten**	**150.07**	**335**	*e*PKiKP	**PKPbc**	**04 27 31.5**	**-0.1**
	comp=Z,3.2nm,0.8s						
DAVA	**Damuels**	**150.18**	**336**	*e*PKiKP	**PKPbc**	**04 27 32.2**	**+0.4**
	comp=Z,6.0nm,1.6s						
FUORN	**Ofenpass-Fuorn**	**150.58**	**335**	PKPbc	**PKiKP**	**04 27 33.8**	**+0.2**
FUORN					**PKPab**	**04 27 40.4**	**+0.8**
ESDC	**Sonseca Array**	**161.00**	**352**	PKPab	**PKPab**	**04 28 24.0**	**0.0**
	comp=Z,0.6nm,0.8s,baz=5.2,slow=3.3,SNR=4.1						
ESDC	**Sonseca Array**	**161.00**	**352**	PKPdf	**PKPdf**	**04 27 40.8**	**-0.5**

TIR ***11*** *04:12:44.0, 37°.30N×21°.38E, h3km, Md4.8/7*

HLW ***11*** *04:12:54.2, 38°.01N×21°.18E, h30km±42km, Md5.4, MI5.2*

IDC ***11*** *04:12:55.9±0.5, 37°.95N×21°.00E, h0km, mb4.5/29, mb1 4.5/41, mb1mx4.5/45, mbtmp4.4/41, ML4.2/10, MS4.3/39, Ms1 4.3/39, ms1mx4.2/57, Error ellipse: s-maj=10.9km s-min=9.8km az=135.0*

BJI ***11*** *04:12:56.3±0.0, 37°.89N×21°.30E, h5km, mB5.1/27, mb4.7/35, Ms4.8/18, Ms7 4.6/14*

ATH ***11*** *04:12:56.7, 37°.84N×21°.01E, h7km±1km, ML4.7/33, Error ellipse: s-maj=1.2km s-min=0.6km az=19.0*

PDG ***11*** *04:12:56.2±0.7, 37°.89N×20°.89E, h0km±11km, MD5.4/2, ML4.8/14, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*

NEIC ***11*** *04:12:57.6±1.9, 37°.87N±0°.04×21°.04E±0°.06, h10km±2km, Error ellipse: s-maj=7.7km s-min=4.7km az=46.0,Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr-0.30; Mθθ3.31; Mφφ-3.02; Mrθ0.52; Mθφ-0.89; Mφr-1.18; Fault plane solution: M0 3.54000×10^16 NP1: φs=321.67000°, δ83.98000°, λ-21.16000°. NP2:φs=53.99000°, δ68.96000°, λ-173.55000°. Principal axes: T 3.5587, Plg10.0000°, Azm10.0000°; N -0.0388, Plg68.0000°, Azm127.0000°; P -3.5199, Plg19.0000°, Azm276.0000°;*

MOS ***11*** *04:12:57.0±1.3, 37°.99N×20°.99E, h14km, mb4.9/40, MS4.4/18 Error ellipse: s-maj=5.7km s-min=3.3km az=79.9*

MED_RC ***11*** *04:12:57.0±0.2, 37°.85N×21°.01E, h18km±1km, MW4.9/32, Moment Tensor Solution. Body waves: s2,c2;Mantle waves: s32,c59; Duration: 1s1 Moment tensor: Scale 10^16Nm; Mrr0.38±.12; Mθθ2.65±.10; Mφφ-3.03±.10; Mrθ-0.43±.19; Mθφ0.56±.07; Mφr0.15±.18; Best double couple: M0 2.94000×10^16 NP1:φs219.00000°, δ81.00000°, λ175.00000°. NP2:φs310.00000°, δ85.00000°, λ9.00000°. Principal axes: T 2.7800, Plg10.0000°, Azm175.0000°; N 0.3200, Plg80.0000°, Azm336.0000°; P -3.0900, Plg3.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=35s.*

THE ***11*** *04:12:57.1, 37°.83N×20°.97E, h0km±2km, ML4.7/24 Error ellipse: s-maj=2.1km s-min=0.7km az=249.0*

GCMT ***11*** *04:12:58.2±0.2, 37°.77N±0°.02×21°.02E±0°.02, h24km±1km, MW5.0/109, Moment Tensor Solution. s33,c41; s109,c163; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr0.20±.13; Mθθ3.32±.11; Mφφ-3.52±.11; Mrθ-0.44±.25; Mθφ0.61±.09; Mφr0.17±.22; Best double couple: M0 3.50800×10^16 NP1:φs220.00000°, δ82.00000°, λ177.00000°. NP2:φs310.00000°, δ87.00000°, λ8.00000°. Principal axes: T 3.4300, Plg8.0000°, Azm175.0000°; N 0.1520, Plg82.0000°, Azm332.0000°; P -3.5860, Plg3.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 04:12:57.8±0.5, 37°.84N±0°.02×21°.02E±0°.02, h13km±3km, n819, σ1s59/893, mb4.7/128, MS4.3/39, 61C-19D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLMS	**Volimes, Zakyn**	**0.28**	**278**	P	**Pg**	**04 13 03.2**	**-0.6**
VLMS				S	**Sg**	**04 13 06.3**	**-1.4**
VLMS				AML	AML	04 13 12.5	
VLMS				AML	AML	04 13 13.6	
KFL	**Anninata**	**0.33**	**326**	P	**Pg**	**04 13 03.5**	**-1.0**
KFL				S	**Sg**	**04 13 07.5**	**-1.5**
	214μm,0.4s						
KFL	**Anninata**	**0.33**	**326**	P	**Pg**	**04 13 03.4**	**-1.1**
KFL				S	**Sg**	**04 13 08.0**	**-1.0**
KFL				AML	AML	04 13 13.5	
KFL				AML	AML	04 13 13.9	
RLS	**Riolos of Patr**	**0.42**	**58**	P	**Pg**	**04 13 04.5**	**-1.6**
RLS				S	**Sb**	**04 13 12.4**	**-0.9**
	282μm,0.4s						
RLS	**Riolos of Patr**	**0.42**	**58**	P	**Pg**	**04 13 04.7**	**-1.4**
RLS				S	**Sg**	**04 13 11.2**	**-0.5**
RLS				AML	AML	04 13 15.1	
RLS				AML	AML	04 13 15.8	
VLS	**Valsamata**	**0.48**	**315**	P	**Pg**	**04 13 05.8**	**-1.5**
VLS				S	**Sg**	**04 13 13.1**	**-0.6**
	65μm,0.4s						
VLS	**Valsamata**	**0.48**	**315**	P	**Pg**	**04 13 05.7**	**-1.5**
VLS				S	**Sg**	**04 13 12.7**	**-1.0**
VLS				AML	AML	04 13 16.8	
VLS				AML	AML	04 13 17.4	
DRO	**Drossia**	**0.56**	**78**	P	**Pg**	**04 13 07.0**	**-1.8**
DRO				S	**Sb**	**04 13 17.9**	**+0.4**
	356μm,0.5s						
DRO	**Drossia**	**0.56**	**78**	P	**Pg**	**04 13 07.0**	**-1.8**
DRO				S	**Sg**	**04 13 15.4**	**-0.8**
DRO				AML	AML	04 13 20.7	
DRO				AML	AML	04 13 23.0	
AMT	**Artemida-Makis**	**0.63**	**119**	P	**Pg**	**04 13 09.1**	**-0.9**
AMT				S	**Sb**	**04 13 20.2**	**+0.8**
	108μm,0.7s						
AMT	**Artemida-Makis**	**0.63**	**119**	P	**Pg**	**04 13 09.3**	**-0.8**
AMT				S	**Sg**	**04 13 17.6**	**-0.7**
AMT				AML	AML	04 13 21.1	
AMT				AML	AML	04 13 29.0	
FSK	**Fiskardo**	**0.72**	**330**	P	**Pg**	**04 13 09.8**	**-2.0**
FSK	**Fiskardo**	**0.72**	**330**	P	**Pg**	**04 13 10.1**	**-1.7**
UPR	**University Cam**	**0.75**	**53**	P	**Pg**	**04 13 11.7**	**-0.7**
UPR				S	**Sn**	**04 13 24.1**	**-1.4**
UPR	**University Cam**	**0.75**	**53**	P	**Pg**	**04 13 11.2**	**-1.2**
UPR				S	**Sg**	**04 13 21.5**	**-0.8**
PDO	**Prodromos**	**0.77**	**10**	P	**Pg**	**04 13 11.6**	**-1.2**
EVGl	**Lefkada island**	**0.83**	**340**	P	**Pg**	**04 13 11.9**	**-2.0**
EVGl	**Lefkada island**	**0.83**	**340**	P	**Pg**	**04 13 12.1**	**-1.9**
MGNA	**Meganis**	**0.84**	**348**	P	**Pg**	**04 13 12.4**	**-1.6**
MGNA				S	**Sg**	**04 13 24.2**	**-0.8**
MGNA				AML	AML	04 13 32.7	
	comp=E,55956μm,0.5s						
MGNA				AML	AML	04 13 35.5	
	comp=N,30371μm,0.4s						
LAKA	**Lakka**	**0.86**	**62**	P	**Pg**	**04 13 12.2**	**-2.2**
LAKA				S	**Sb**	**04 13 26.4**	**+0.3**
	comp=N,43μm,0.7s						
LAKA	**Lakka**	**0.86**	**62**	P	**Pg**	**04 13 12.8**	**-1.6**
LAKA				S	**Sg**	**04 13 25.6**	**-0.1**
LAKA				AML	AML	04 13 29.0	
	comp=N,70274μm,0.9s						
LAKA				AML	AML	04 13 30.5	
PVO	**Paravola**	**0.88**	**27**	P	**Pg**	**04 13 13.4**	**-1.3**
PVO				S	**Sn**	**04 13 27.3**	**-1.2**
	comp=N,50μm,0.6s						
PVO	**Paravola**	**0.88**	**27**	P	**Pg**	**04 13 13.7**	**-1.0**
PVO				S	**Sg**	**04 13 25.6**	**-0.6**
PVO				AML	AML	04 13 32.8	
	comp=E,

DLFA AML AML 04 13 45.2
comp=E,43897µm,0.8s
DLFA AML AML 04 13 48.6
comp=N,64611µm,0.9s
MAKR Makrakomi, Fth 1.46 36 P **Pn 04 13 23.5 -0.5**
MAKR Makrakomi, Fth 1.46 36 P **Pb 04 13 24.7 -0.2**
MAKR S **Sb 04 13 43.3 -0.2**
MAKR AML AML 04 13 54.6
MAKR AML AML 04 13 56.3
comp=N,75794µm,0.7s
DYR Agios Nikonas 1.50 135 P **Pn 04 13 24.9 +0.4**
DYR S **Sg 04 13 48.1 +2.0**
comp=N,5µm,1.4s
DYR Agios Nikonas 1.50 135 P **Pb 04 13 25.1 -0.5**
DYR S **Sg 04 13 45.6 -0.5**
DYR AML AML 04 13 56.5
comp=N,9359µm,1.2s
DYR AML AML 04 14 02.6
comp=E,8833µm,1.7s
PROD Prodromos 1.54 74 P **Pn 04 13 24.8 -0.3**
PROD S **Sg 04 13 48.5 +1.0**
PROD Prodromos 1.54 74 P **Pn 04 13 25.1 0.0**
PROD AML AML 04 13 58.2
comp=E,44871µm,0.6s
PROD AML AML 04 14 04.4
comp=N,31715µm,0.6s
LTK Loutraki 1.55 83 P **Pn 04 13 25.2 0.0**
LTK S **Sg 04 13 49.2 +1.4**
comp=N,17µm,0.8s
LTK Loutraki 1.55 83 P **Pn 04 13 25.3 0.0**
LOUT Loutraki 1.55 84 P **Pn 04 13 25.4 +0.2**
LOUT Loutraki 1.55 84 P **Pb 04 13 25.9 -0.6**
LOUT AML AML 04 14 04.8
comp=N,6087µm,0.7s
LOUT AML AML 04 14 04.9
comp=E,6985µm,1.4s
AGG Agios Georgios 1.57 41 P **Pn 04 13 24.3 -1.2**
AGG S **Sg 04 13 49.3 +1.0**
comp=E,12µm,0.7s
AGG Agios Georgios 1.57 41 P **Pb 04 13 26.8 +0.1**
AGG Agios Georgios 1.57 41 P **Pb 04 13 25.9 -0.8**
AGG S **Sg 04 13 47.7 -0.7**
AGG AML AML 04 13 59.0
comp=N,22040µm,1.0s
AGG AML AML 04 13 59.4
comp=E,28459µm,0.5s
AGG Agios Georgios 1.57 41 P **Pn 04 13 24.9 -0.6**
AGG Agios Georgios 1.57 41 **Pb 04 13 26.8 +0.1**
AXAR Agios Charalam 1.59 54 P **Pn 04 13 26.0 +0.3**
KRND KRANIDI 1.75 104 P **Pb 04 13 29.3 -0.5**
KRND KRANIDI 1.75 104 P **Pb 04 13 30.0 +0.2**
LKR Lokris 1.76 62 P **Pn 04 13 27.9 -0.1**
LKR S **Sb 04 13 52.7 +0.8**
comp=E,13µm,0.6s
LKR Lokris 1.76 62 P **Pb 04 13 29.1 -0.8**
LKR S **Sg 04 13 53.5 -0.9**
LKR AML AML 04 14 00.6
comp=N,28526µm,0.6s
LKR AML AML 04 14 03.0
comp=E,31136µm,0.5s
IGT Igoumenitsa 1.78 343 P **Pn 04 13 28.5 +0.2**
IGT Igoumenitsa 1.78 343 P **Pn 04 13 28.7 +0.4**
DID Didima 1.79 100 P **Pn 04 13 28.5 0.0**
DID Didima 1.79 100 P **Pn 04 13 28.9 +0.4**
DID AML AML 04 14 03.8
comp=E,39742µm,0.6s
DID AML AML 04 14 10.0
comp=N,34423µm,1.1s
VIL2 Platees 1.81 77 P **Pb 04 13 30.1 -0.9**
VIL2 AML AML 04 14 05.5
comp=N,23730µm,0.7s
VIL2 AML AML 04 14 12.3
comp=E,28210µm,1.0s
JAN Janina 1.82 356 P **Pb 04 13 30.0 -1.0**
JAN Janina 1.82 356 P **Pb 04 13 30.1 -1.0**
VILL Villia 1.84 79 P **Pn 04 13 29.7 +0.5**
THL Klokotos Trika 1.89 24 P **Pb 04 13 31.2 -1.0**
THL Klokotos Trika 1.89 24 P **Pb 04 13 31.9 -0.3**
THL S **Sg 04 13 57.3 -1.4**
THL AML AML 04 14 10.5
comp=N,18444µm,0.7s
THL AML AML 04 14 13.7
comp=E,15961µm,0.6s
VLI Veliai 1.89 126 P **Pb 04 13 32.2 -0.1**
VLI Veliai 1.89 126 P **Pb 04 13 31.2 -1.1**
VLI AML AML 04 14 09.5
comp=E,24150µm,1.4s
VLI AML AML 04 14 11.7
comp=N,33876µm,1.0s
MEV Metsovon 1.95 5 P **Pb 04 13 32.5 -0.9**
YDRA Hydra 2.00 103 P **Pb 04 13 34.3 +0.2**
KASA Kassiopi 2.09 336 P **Pb 04 13 34.9 -0.6**
KEK Kerkira 2.10 333 P **Pn 04 13 32.8 0.0**
KEK Kerkira 2.10 333 P **Pn 04 13 33.0 +0.3**
LRSO Larissa Observ 2.12 30 P **Pb 04 13 34.5 -1.7**
LRSO Larissa Observ 2.12 30 P **Pb 04 13 34.7 -1.5**
KPRO Kipourio 2.13 7 P **Pb 04 13 35.5 -0.9**
ATH Athens Observa 2.14 86 P **Pn 04 13 34.1 +0.9**
ATH S **Sb 04 14 02.3 -0.6**
comp=N,10µm,1.8s
ATH Athens Observa 2.14 86 P **Pb 04 13 36.4 0.0**
SRN Sarande 2.19 339 P **Pn 04 13 34.1 +0.2**
SRN Sarande 2.19 339 *i* PN **Pn 04 13 34.4 +0.4**
SRN *i* SN **Sg 04 14 12.7 +4.5**
ATHU Athens Univers 2.19 86 P **Pn 04 13 34.4 +0.4**
ATHU Athens Univers 2.19 86 P **Pb 04 13 35.8 -1.5**
VLY Voula,Athens 2.20 89 P **Pn 04 13 34.4 +0.3**
VLY S **Sb 04 14 04.7 +0.1**
comp=N,7µm,1.2s
VLY Voula,Athens 2.20 89 P **Pb 04 13 36.4 -1.0**
VLY AML AML 04 14 13.6
comp=N,12663µm,1.0s
VLY AML AML 04 14 15.0
comp=E,14563µm,1.4s
MRKA Markates 2.20 66 P **Pn 04 13 35.0 +0.9**
MRKA Markates 2.20 66 P **Pb 04 13 36.0 -1.5**
MRKA AML AML 04 14 18.6
comp=E,16599µm,0.7s
MRKA AML AML 04 14 22.5
comp=N,15788µm,1.0s
KTHR Kythira 2.24 134 P **Pb 04 13 37.5 -0.6**
PTL Penteli 2.26 84 P **Pn 04 13 35.3 +0.3**
PTL S **Sb 04 14 05.7 -0.7**
comp=N,9µm,0.8s
PTL Penteli 2.26 84 P **Pb 04 13 37.6 -0.9**
PTL S **Sb 04 14 06.5 +0.1**
PTL AML AML 04 14 18.3
comp=N,20217µm,1.0s
PTL AML AML 04 14 19.3
comp=E,15990µm,0.7s
NEO Neokhori 2.27 49 P **Pb 04 13 37.2 -1.4**
KTHA Kythira Island 2.27 133 P **Pb 04 13 37.5 -1.2**
KTHA Kythira Island 2.27 133 P **Pb 04 13 37.9 -0.8**
KTHA Kythira Island 2.27 133 P **Pb 04 13 37.7 -1.0**
XOR Xorichti 2.29 47 P **Pn 04 13 36.4 +1.1**
SKIA Skiathos 2.33 55 P **Pn 04 13 37.2 +1.2**
SKIA Skiathos 2.33 55 P **Pn 04 13 37.4 +1.4**
EREA Eretria 2.37 75 P **Pn 04 13 37.5 +1.0**
EREA Eretria 2.37 75 P **Pb 04 13 38.9 -1.5**
KZN Kozani 2.54 13 P **Pn 04 13 40.4 +1.6**
KZN Kozani 2.54 13 P **Pn 04 13 40.5 +1.7**
LIT Litokhoron 2.54 26 P **Pn 04 13 39.6 +0.9**
LIT Litokhoron 2.54 26 P **Pb 04 13 40.9 -2.3**
LIT Litokhoron 2.54 26 P **Pb 04 13 41.3 -1.9**
LIT Litokhoron 2.54 26 **Pb 04 13 40.9 -2.3**
NEST Nestorio 2.58 1 P **Pb 04 13 41.7 -2.2**
NEST Nestorio 2.58 1 P **Pb 04 13 42.1 -1.8**
TPE Tepelena 2.58 343 P **Pn 04 13 39.9 +0.7**
TPE Tepelena 2.58 343 *i* PN **Pn 04 13 40.0 +0.7**
TPE *i* SN **Sg 04 14 22.9 +2.3**
AOS Alonnisos 2.61 58 P **Pn 04 13 40.6 +0.9**
AOS Alonnisos 2.61 58 P **Pn 04 13 41.0 +1.2**
AOS Alonnisos 2.61 58 P **Pn 04 13 40.6 +0.9**
ANKY Antikythira Is 2.69 136 P **Pb 04 13 43.6 -2.2**
ANKY Antikythira Is 2.69 136 P **Pb 04 13 43.5 -2.2**
KTI Kastanea 2.69 18 P **Pn 04 13 42.5 +1.5**
KARY Karystos 2.71 85 P **Pn 04 13 43.0 +1.9**
KARY Karystos 2.71 85 P **Pn 04 13 43.1 +1.9**
SERI Serifos 2.84 103 P **Pn 04 13 44.0 +1.1**
SERI Serifos 2.84 103 P **Pb 04 13 45.6 -2.8**
VLO Vlora 2.88 336 P **Pn 04 13 44.0 +0.5**
VLO Vlora 2.88 336 *i* PN **Pn 04 13 44.9 +1.4**
VLO *i* SN **Sg 04 14 30.5 +0.1**

MHLA Plaka, Milos I 2.92 111 P **Pn 04 13 46.2 +2.2**
MHLO Agia Marina, M 2.93 112 P **Pn 04 13 44.6 +0.5**
MHLO Agia Marina, M 2.93 112 P **Pn 04 13 45.7 +1.5**
PAIG Paliouri 2.94 44 P **Pn 04 13 45.4 +1.1**
FNA Florina 2.96 5 P **Pn 04 13 45.7 +1.1**
FNA Florina 2.96 5 P **Pn 04 13 45.3 +0.8**
FNA Florina 2.96 5 P **Pn 04 13 45.6 +1.1**
FNA Florina 2.96 5 P **Pn 04 13 44.9 +0.3**
FNA Florina 2.96 5 **Pn 04 13 45.3 +0.8**
SKY Skiros Island 2.96 68 P **Pn 04 13 46.5 +1.9**
SKY Skiros Island 2.96 68 P **Pn 04 13 46.9 +2.3**
SCTE Santa Cesarea 2.99 319 **Pn 04 13 45.1 +0.1**
PLG Polygyros 3.16 36 P **Pn 04 13 47.8 +0.5**
PLG Polygyros 3.16 36 P **Pn 04 13 48.1 +0.8**
RODP Rodopos 3.16 135 P **Pn 04 13 50.0 +2.7**
RODP Rodopos 3.16 135 P **Pn 04 13 47.6 +0.3**
THE Thessaloniki 3.17 28 P **Pn 04 13 48.6 +1.1**
HORT Hortiatis 3.20 30 P **Pn 04 13 48.6 +0.7**
HORT Hortiatis 3.20 30 P **Pn 04 13 49.3 +1.5**
HORT Hortiatis 3.20 30 P **Pn 04 13 48.7 +0.8**
OHR Ohrid 3.27 357 *i* Pn **Pn 04 13 50.3 +1.4**
GRG Griva 3.29 19 P **Pn 04 13 49.8 +0.6**
GRG Griva 3.29 19 P **Pn 04 13 50.0 +0.8**
GRG Griva 3.29 19 *e*P **Pn 04 13 50.0 +0.8**
IMMV Iera Moni Meta 3.36 134 P **Pn 04 13 52.0 +1.9**
IMMV Iera Moni Meta 3.36 134 P **Pn 04 13 52.2 +2.1**
IMMV Iera Moni Meta 3.36 134 *e*P **Pn 04 13 51.6 +1.5**
KNDR Palaiochora Ch 3.37 140 P **Pn 04 13 50.8 +0.6**
KNDR Palaiochora Ch 3.37 140 *e*P **Pn 04 13 50.8 +0.6**
OUR Ouranopolis 3.40 42 P **Pn 04 13 52.0 +1.5**
OUR Ouranopolis 3.40 42 *e*P **Pn 04 13 51.7 +1.2**
SOH Sokhos 3.40 31 P **Pn 04 13 53.5 +1.7**
VAM Vamos 3.52 133 P **Pn 04 13 53.6 +1.3**
VAM Vamos 3.52 133 P **Pn 04 13 54.2 +1.8**
IOSP Ios island 3.58 107 P **Pn 04 13 54.6 +1.5**
IOSP Ios island 3.58 107 P **Pn 04 13 54.7 +1.6**
TIP Timpagrande 3.60 293 P **Pn 04 13 53.2 -0.2**
TIP Timpagrande 3.60 293 ⇑P **Pn 04 13 53.5 +0.1**
TIP Timpagrande 3.60 293 ⇑S **Sn 04 14 33.1 -2.7**
TIP Timpagrande 3.60 293 **Pn 04 13 53.1 -0.3**
TIR Tirane 3.62 346 P **Pn 04 13 54.1 +0.5**
TIR Tirane 3.62 346 P **Pn 04 13 53.9 +0.3**
TIR Tirane 3.62 346 *i* PN **Pn 04 13 54.6 +1.0**
TIR *i* SN **Sb 04 14 47.1 +1.7**
TIR Tirane 3.62 346 ⇑P **Pn 04 13 54.2 +0.6**
TIR Tirane 3.62 346 **Pn 04 13 53.9 +0.3**
KNT Kendrikon 3.62 23 P **Pn 04 13 54.7 +1.0**
KNT Kendrikon 3.62 23 *e*P **Pn 04 13 55.0 +1.3**
APE Apeiranthos 3.67 101 P **Pn 04 13 55.5 +1.1**
APE Apeiranthos 3.67 101 *de*P **Pn 04 13 55.7 +1.4**
APE Apeiranthos 3.67 101 P **Pn 04 13 56.4 +2.1**
APE Apeiranthos 3.67 101 ⇓P **Pn 04 13 57.8 +3.5**
APE Apeiranthos 3.67 101 ⇓S **Sb 04 14 45.0 -2.0**
APE Apeiranthos 3.67 101 *e*P **Pn 04 13 55.8 +1.4**
VAY Valandovo 3.68 19 *i* Pn **Pn 04 13 55.4 +0.9**
PRNS Prines Rethymn 3.73 130 P **Pn 04 13 56.7 +1.5**
THT2 Imerovigli 3.79 110 *e*P **Pn 04 13 57.4 +1.5**
SANT Santorini 3.84 111 ⇑P **Pb 04 14 01.7 -3.8**
SANT Santorini 3.84 111 *e*P **Pn 04 13 58.7 +2.0**
SANT Santorini 3.84 111 **Pn 04 13 57.4 +0.7**
PHP Peshkopia 3.87 354 P **Pn 04 13 57.7 +0.6**
PHP Peshkopia 3.87 354 *i* PN **Pn 04 13 58.6 +1.5**
PHP *i* SN **Sb 04 14 54.8 +2.1**
GVDS Gavdos 3.88 139 *e*P **Pn 04 13 57.8 +0.6**
GVD Gavdhos 3.88 139 *e*P **Pn 04 13 57.8 +0.6**
CGL1 Ceglie Messapi 3.94 317 *e*Pn **Pn 04 13 57.7 -0.2**
TAR1 Taranto 3.95 314 *e*Pn **Pn 04 13 58.8 +0.6**
STIP Stip 3.96 13 ⇓*i* Pn **Pn 04 14 00.5 +2.2**
THAS Thassos island 3.99 45 P **Pn 04 13 59.2 +0.5**
CHOS Chios island 4.01 81 P **Pn 04 14 00.5 +1.4**
CHOS Chios island 4.01 81 *e*P **Pn 04 14 00.7 +1.6**
AMGA Amorgos Island 4.01 103 P **Pn 04 14 00.8 +1.8**
AMGA Amorgos Island 4.01 103 P **Pn 04 14 00.9 +1.8**
IDI Anoyia 4.02 128 Pn **Pn 04 13 59.0 -0.3**
comp=E,3.6nm,0.3s,baz=280,slow=11,SNR=40
IDI Sn **Sn 04 14 44.4 -1.9**
comp=E,21nm,0.3s,baz=297,slow=22,SNR=4.3
IDI LR LR 04 15 35.0
comp=E,4µm,19.5s,baz=246,slow=39
IDI Anoyia 4.02 128 P **Pn 04 14 00.9 +1.7**
IDI Anoyia 4.02 128 *e*P **Pn 04 14 00.9 +1.7**
SIGR SIGRI 4.03 69 P **Pn 04 14 01.6 +2.3**
SIGR SIGRI 4.03 69 *e*P **Pn 04 14 00.7 +1.4**
CEL Celeste 4.07 278 **Pn 04 13 59.5 -0.3**
MASS Massafra 4.10 314 *e*Pn **Pn 04 14 00.0 -0.3**
NVR Nevrokopi 4.14 31 P **Pn 04 14 02.1 +1.3**
NVR Nevrokopi 4.14 31 P **Pn 04 14 02.7 +1.9**
HRKL Herakleio 4.14 126 *e*P **Pn 04 14 02.0 +1.2**
SKO Skopje 4.14 4 *i* Pn **Pn 04 14 01.5 +0.6**
SIVA Sivas 4.15 131 P **Pn 04 14 02.4 +1.4**
SIVA Sivas 4.15 131 P **Pn 04 14 02.6 +1.6**
KAVA Kavala 4.16 40 P **Pn 04 14 01.6 +0.6**
PUK Puka 4.29 349 *i* PN **Pn 04 14 03.4 +0.5**
PUK *i* SN **Sb 04 15 05.4 +0.5**
MMB Musomiste 4.29 28 *i* P **Pn 04 14 03.9 +1.0**
KKB Krupnik 4.33 21 *i* P **Pn 04 14 06.7 +3.3**
ULC Ulcinj 4.34 342 *e*Pn **Pn 04 14 00.8 -0.8**
ULC *e*Sn **Sn 04 14 54.9 +0.8**
MATE Matera 4.37 311 ⇑P **Pn 04 14 03.4 -0.5**
SMTH Samothraki Isl 4.38 52 P **Pn 04 14 04.8 +0.7**
BOZC Bozcaada 4.41 61 *e*P **Pn 04 14 05.9 +1.4**
GADA Gvkgeada 4.47 57 P **Pn 04 14 06.2 +0.9**
GADA Gvkgeada 4.47 57 *e*P **Pn 04 14 06.5 +1.2**
LAST Lasithi 4.48 125 P **Pn 04 14 05.8 +0.3**
SG1 Sgolgore (BA) 4.51 313 *e*Pn **Pn 04 14 05.7 -0.1**
DRME Dracevica, Mon 4.57 343 ⇑*i* Pn **Pn 04 14 05.9 -0.7**
DRME Dracevica, Mon 4.57 343 *e*Pn **Pn 04 14 06.3 -0.3**
DRME *e*Sn **Sn 04 15 00.4 +0.8**
BAI Bari 4.57 317 *e*Pn **Pn 04 14 06.5 -0.2**
BCI Bajram Curri 4.58 351 *i* PN **Pn 04 14 08.0 +1.1**
BCI *i* SN **Sb 04 15 13.9 +0.6**
EZN Ezine 4.59 63 P **Pn 04 14 08.5 +1.6**
EZN Ezine 4.59 63 *e*P **Pn 04 14 08.6 +1.6**
SMG Samos 4.61 90 P **Pn 04 14 09.3 +2.0**
BUM Brajici-Budva 4.75 341 *e*Pn **Pn 04 14 08.2 +1.0**
BUM *e*Sn **Sn 04 15 04.6 +0.5**
BLCB Balcova 4.78 82 *e*P **Pn 04 14 11.8 +2.2**
DKL Dikili 4.78 73 *e*P **Pn 04 14 11.8 +2.2**
PDG Podgorica 4.78 344 ⇓P **Pn 04 14 09.4 -0.2**
PDG Podgorica 4.78 344 ⇓S **Sn 04 15 04.0 -0.9**
PDG Podgorica 4.78 344 ⇑*i* Pn **Pn 04 14 08.9 -0.7**
PDG Podgorica 4.78 344 **Pn 04 14 08.5 -1.1**
TTG Podgorica 4.78 344 *e*Pn **Pn 04 14 09.2 -0.4**
TTG *e*Sn **Sn 04 15 05.9 +1.0**
RZN Rozhen 4.79 35 *i* P **Pn 04 14 11.5 +1.7**
RDO Rodhopi 4.81 45 P **Pn 04 14 10.9 +0.9**
RDO Rodhopi 4.81 45 *e*P **Pn 04 14 11.2 +1.2**
PVY Plav 4.82 351 *e*Pn **Pn 04 14 10.7 +0.5**
PVY *e*Sn **Sn 04 15 07.4 +1.4**
KOSK Kos Island 4.87 101 *e*P **Pn 04 14 13.3 +2.5**
ACER Acerenza 4.92 308 **Pn 04 14 11.4 0.0**
ENEZ Enez 4.92 52 *e*P **Pn 04 14 13.6 +2.1**
GCAM G?celcaml? 4.93 90 *e*P **Pn 04 14 13.9 +2.4**
ALN Alexandroupoli 4.95 50 P **Pn 04 14 12.6 +0.7**
ALN Alexandroupoli 4.95 50 P **Pn 04 14 12.0 +0.1**
ALN Alexandroupoli 4.95 50 *e*P **Pn 04 14 13.3 +1.4**
ALN Alexandroupoli 4.95 50 **Pn 04 14 11.9 +0.1**
GELI Tayfur-Gelibol 4.95 57 *e*P **Pn 04 14 13.6 +1.7**
CEME Cevo 4.97 342 *e*Pn **Pn 04 14 11.3 -1.0**
CEME *e*Sn **Sn 04 15 09.8 +0.1**
ZKR Zakros 4.99 121 *e*P **Pn 04 14 14.6 +2.1**
HCY Herceg Novi 5.00 338 ⇑*i* Pn **Pn 04 14 10.8 -1.7**
HCY Herceg Novi 5.00 338 *e*Pn **Pn 04 14 11.0 -1.5**
HCY *e*Sn **Sn 04 15 10.6 +0.5**
BODT Bodrum 5.07 97 *e*P **Pn 04 14 16.3 +2.8**
VTS Vitosha 5.07 19 P **Pn 04 14 13.9 +0.3**
VTS Vitosha 5.07 19 P **Pn 04 14 14.0 +0.3**
VTS Vitosha 5.07 19 ⇓P **Pn 04 14 14.8 +1.1**
VTS Vitosha 5.07 19 ⇑S **Sn 04 15 12.2 0.0**
VTS Vitosha 5.07 19 *i* P **Pn 04 14 14.8 +1.1**
VTS Vitosha 5.07 19 **Pn 04 14 14.0 +0.3**
KDZ Kurdzhali 5.10 40 *e*P **Pn 04 14 14.7 +0.8**
KDZ Kurdzhali 5.10 40 *e*P **Pn 04 14 14.4 +0.5**
IVA Berane 5.10 351 *e*Pn **Pn 04 14 14.2 +0.1**
IVA *e*Sn **Sn 04 15 13.7 +0.8**
PLD Plovdiv 5.12 32 *e*P **Pn 04 14 15.9 +1.7**
ERIK Erikli-Kesan 5.12 55 *e*P **Pn 04 14 16.2 +2.0**
LPK Lapseki 5.13 59 *e*P **Pn 04 14 16.5 +2.1**
KOME Kolasin 5.14 348 *e*Pn **Pn 04 14 14.6 0.0**

KOME *e*Sn **Sn 04 15 14.4 +0.6**
NKME Niksic 5.17 343 *e*Pn **Pn 04 14 13.9 -1.1**
NKME *e*Sn **Sn 04 15 14.9 +0.4**
NKY Niksic 5.21 343 *e*Pn **Pn 04 14 14.5 -1.0**
NKY *e*Sn **Sn 04 15 15.7 +0.2**
VAE Valguarnera 5.25 268 Pn **Pn 04 14 17.2 +1.1**
comp=E,4.4nm,0.3s,baz=146,slow=5.9,SNR=24
VAE Sn **Sn 04 15 13.4 -3.2**
comp=E,7.6nm,0.3s,baz=156,slow=20,SNR=1.9
VAE LR LR 04 16 41.1
comp=E,2µm,21.9s,baz=76,slow=43
TREB Trebinje 5.28 338 *e*Pn **Pn 04 14 14.9 -1.6**
PGB Panagyurishte 5.29 26 *i* P **Pn 04 14 18.4 +1.8**
DBRK Dubrovnik 5.30 336 *e*Pn **Pn 04 14 16.7 -0.1**
DBRK Sn **Sn 04 15 14.8 -2.9**
DAT Datca 5.35 100 *e*P **Pn 04 14 19.4 +2.0**
MLSB Milas 5.40 94 *e*P **Pn 04 14 19.9 +1.8**
BRY Bratogost 5.40 340 ⇑*i* Pn **Pn 04 14 16.4 -1.8**
BRY Bratogost 5.40 340 *e*Pn **Pn 04 14 16.7 -1.5**
BRY *e*Sn **Sn 04 15 20.3 -0.1**
AYDB Zeytinkoy-Aydi 5.44 87 *e*P **Pn 04 14 21.3 +2.6**
KARP Karpathos 5.44 113 P **Pn 04 14 19.1 +0.4**
KARP Karpathos 5.44 113 *e*P **Pn 04 14 19.9 +1.3**
KARP Karpathos 5.44 113 **Pn 04 14 19.9 +1.3**
UKOP Uzunkopru-Edir 5.45 51 *e*P **Pn 04 14 20.5 +1.8**
DIM Dimitrovgrad 5.45 38 *i* P **Pn 04 14 20.6 +1.8**
KRBG Karabiga-Canak 5.51 60 *e*P **Pn 04 14 21.9 +2.3**
RKY Sarkoy-Tekirda 5.56 57 *e*P **Pn 04 14 23.1 +2.7**
WDD Wied Dalam 5.58 251 **Pn 04 14 19.4 -1.1**
UPM Unac-Piva 5.60 344 *e*Pn **Pn 04 14 20.1 -0.9**
UPM Unac-Piva 5.60 344 *e*Pn **Pn 04 14 20.9 -0.1**
UPM *e*Sn **Sn 04 15 25.7 +0.5**
PLE Pljevlja 5.63 348 *e*Pn **Pn 04 14 21.2 -0.1**
PLE *e*Sn **Sn 04 15 26.0 +0.2**
STON Ston 5.63 334 *e*Pn **Pn 04 14 20.9 -0.3**
STON Sn **Sn 04 15 23.1 -2.7**
STON Ston 5.63 334 ⇑*i* Pn **Pn 04 14 19.4 -1.8**
SGRT San Giovanni R 5.64 316 **Pn 04 14 20.4 -1.1**
BALB Balikesir 5.66 69 *e*P **Pn 04 14 24.7 +3.1**
MRMT Marmara Adasi 5.81 60 *e*P **Pn 04 14 26.2 +2.5**
YER Yerkesik 5.82 95 *e*P **Pn 04 14 26.3 +2.4**
EDC Edincik 5.88 63 *e*P **Pn 04 14 27.3 +2.6**
RUDO Rudo 5.91 348 *e*Pn **Pn 04 14 23.8 -1.3**
ARG Arkhangelos 5.91 104 P **Pn 04 14 27.8 +2.7**
ARG Arkhangelos 5.91 104 *e*P **Pn 04 14 27.6 +2.5**
EDRB Edirne 5.95 46 P **Pn 04 14 26.6 +0.9**
MANT Manisa 5.98 81 **Pn 04 14 29.0 +2.8**
TURN Turunc 6.12 97 *e*P **Pn 04 14 27.3 -0.6**
BBLS Lazići 6.15 349 ⇑*i* Pn **Pn 04 14 27.2 -1.2**
PLVB Pleven 6.18 25 ⇑P **Pn 04 14 31.3 +2.5**
CLTB Caltabellotta 6.19 270 **Pn 04 14 30.2 +1.1**
MAKA Makarska 6.24 332 *e*Pn **Pn 04 14 29.0 -0.6**
MAKA Sn **Sn 04 15 38.9 -1.8**
ELND Elena 6.29 35 ⇑P **Pn 04 14 32.6 +2.3**
PVL Pavlikeni 6.30 30 *i* P **Pn 04 14 31.0 +0.6**
DIVS Divibare 6.30 353 ⇑*i* Pn **Pn 04 14 29.3 -1.3**
HVAR Hvar 6.37 328 *i* Pn **Pn 04 14 29.9 -1.5**
HAPS Han Pijesak,BI 6.44 347 *e*Pn **Pn 04 14 30.6 -1.8**
FETY Fethiye 6.54 98 P **Pn 04 14 38.0 +4.2**
FETY Fethiye 6.54 98 *e*P **Pn 04 14 37.1 +3.3**
SZH Strazhica 6.59 33 *e*P **Pn** 04 14 41.0 +6.6
TEKS Tekeris 6.80 351 *e*Pn **Pn 04 14 35.7 -1.6**
MDVR Moldovita 6.96 4 ⇓P **Pn 04 14 39.4 -0.1**
KIJV Kijevo 7.08 332 *i* Pn **Pn 04 14 40.8 -0.3**
ZIRJ Zirje 7.10 327 *i* Pn **Pn 04 14 40.4 -1.0**
MGRS Mrkonjic Grad 7.21 337 ⇓*i* Pn **Pn 04 14 42.6 -0.4**
DOB Doboj 7.23 343 *e*Pn **Pn 04 14 40.8 -2.4**
PRD Provadia 7.23 40 *i* P **Pn 04 14 45.4 +2.2**
MORI Morici 7.24 328 *e*Pn **Pn 04 14 43.4 0.0**
HUMR Humele 7.32 23 ⇑P **Pn 04 14 45.8 +1.4**
FRGS Fruska Gora 7.37 353 ⇑*i* Pn **Pn 04 14 42.6 -2.5**
AQU L'Aquila 7.38 310 *e*Pn **Pn 04 14 46.5 +1.2**
BLY Banja Luka 7.48 339 ⇓P **Pn 04 14 45.8 -0.9**
BLY Banja Luka 7.48 339 ⇓S **Sn 04 16 05.5 -5.9**
BLY Banja Luka 7.48 339 ⇑*i* Pn **Pn 04 14 45.4 -1.2**
BLY Banja Luka 7.48 339 **Pn 04 14 45.5 -1.2**
DUGI Dugi Otok 7.62 326 *e*Pn **Pn 04 14 48.3 -0.3**
DUGI Sn **Sn 04 16 10.4 -4.5**
GZR Gura Zlata 7.66 9 ⇓P **Pn 04 14 49.2 0.0**
UDBI Udbina 7.77 331 *i* Pn **Pn 04 14 51.3 +0.6**
UDBI Sn **Sn 04 16 16.2 -2.3**
BZS Buzias 7.79 3 ⇑P **Pn 04 14 49.7 -1.1**
SULR 7.89 28 ⇓P **Pn 04 14 53.8 +1.6**
ARR Arges 8.00 19 ⇑P **Pn 04 14 55.0 +1.3**
NVLJ Novalja 8.16 327 *i* Pn **Pn 04 14 55.5 -0.4**
NVLJ Sn **Sn 04 16 25.5 -2.5**
VOIR 8.17 20 ⇑P **Pn 04 14 57.8 +1.7**
MATC Matruh 8.25 140 P **Pn 04 14 53.4 -3.8**
baz=141
MATC AMP 04 16 00.0
baz=141
MATC S Sn 04 16 20.7 -10
baz=141
ISR Istrita 8.37 28 ⇑P **Pn 04 15 02.9 +4.0**
ISR Istrita 8.37 28 ⇑P **Pn 04 15 02.9 +4.0**
MOSL Moslavina 8.40 339 *e*Pn **Pn 04 14 57.6 -1.6**
SIRR Siria 8.44 3 ⇑P **Pn 04 15 00.1 +0.3**
MLR Muntele Rosu 8.49 24 ⇑P **Pn 04 15 04.6 +4.0**
MLR Muntele Rosu 8.49 24 **Pn 04 15 02.0 +1.5**
comp=E,3.0nm,0.3s,baz=144,slow=8.7,SNR=12
MLR LR LR 04 18 26.3
comp=E,893nm,21.0s,baz=192,slow=39
MLR Muntele Rosu 8.49 24 ⇑P **Pn 04 15 04.6 +4.0**
MORH Mrgy, Hungar 8.56 349 ⇑*i* Pn **Pn 04 14 58.7 -2.7**
TIRR Tirgusor 8.65 38 ⇑P **Pn 04 15 04.6 +2.0**
DOPR Dopca 8.75 20 ⇑P **Pn 04 15 05.7 +1.7**
BOJS Bojanci 8.79 332 *e*Pn **Pn 04 15 04.0 -0.6**
BISRR Bisoca 8.80 27 ⇑P **Pn 04 15 09.4 +4.6**
OZLJ Ozalj 8.81 334 *i* Pn **Pn 04 15 05.4 +0.6**
ZAG Zagreb 8.82 336 *e*Pn **Pn 04 15 05.0 0.0**
ZAG Zagreb 8.82 336 *e*Pn **Pn 04 15 04.6 -0.4**
PTJ Puntijarka 8.90 337 *e*Pn **Pn 04 15 05.0 -1.2**
BRJN Brijuni 8.93 325 *e*Pn **Pn 04 15 06.1 -0.3**
BRJN Sn **Sn 04 16 43.7 -3.1**
RIY Rijeka 8.94 329 *e*Pn **Pn 04 15 05.5 -1.1**
TOPG Topolog 8.95 36 ⇑P **Pn 04 15 07.8 +1.1**
KALN Kalnik 8.96 339 *e*Pn **Pn 04 15 04.8 -2.1**
GBRS Gornja Briga 8.98 331 *i* Pn **Pn 04 15 07.0 -0.2**
CRES Cresnjev 8.99 334 ⇑*i* Pn **Pn 04 15 05.6 -1.8**
DRGR 9.04 7 ⇑P **Pn 04 15 08.3 +0.3**
PLOR Plostina 9.04 26 ⇑P **Pn 04 15 11.2 +3.1**
PLOR Plostina 9.04 26 ⇑P **Pn 04 15 11.2 +3.1**
CFR Carcaliu 9.07 34 ⇑P **Pn 04 15 10.0 +1.6**
VRI Vrincioaia 9.08 26 ⇑P **Pn 04 15 12.9 +4.3**
VRI Vrincioaia 9.08 26 ⇑P **Pn 04 15 12.9 +4.3**
BEHE Becsehely 9.18 341 ⇑*i* Pn **Pn 04 15 08.1 -1.9**
CEY Cerknica 9.30 330 ⇑*i* Pn **Pn 04 15 10.2 -1.4**
SWA2 9.33 155 P **Pn 04 15 09.9 -2.2**
baz=156
SWA2 AMP 04 16 00.0
baz=156
SWA2 S Sn 04 16 46.8 -10
baz=156
LJU Ljubljana 9.52 332 *e*Pn **Pn 04 15 12.8 -1.7**
KEST Kesra 9.60 261 Pn **Pn 04 15 15.8 +0.1**
comp=E,1.3nm,0.3s,baz=10,slow=7.1,SNR=23
KEST Sn **Sn 04 16 59.7 -3.8**
comp=E,0.6nm,0.3s,baz=342,slow=20,SNR=2.1
KEST LR LR 04 19 43.8
comp=E,1µm,19.8s,baz=10,slow=42
TESR Tescani 9.62 24 ⇑P **Pn** 04 15 28.5 +13
SOKA Soboth 9.88 335 *e*Pn **Pn 04 15 17.8 -1.8**
comp=E,24nm,0.4s,SNR=19
SOKA *e*Sn **Sn 04 17 05.0 -5.4**
comp=E,31nm,0.8s
OBKA Obir 9.90 333 *e*Pn **Pn 04 15 18.8 -1.2**
comp=E,19nm,0.4s,SNR=11
OBKA *e*Sn **Sn 04 17 06.8 -4.2**
comp=E,92nm,0.7s
BR131 Keskin Array S 10.03 75 P **Pn 04 15 25.6 +3.8**
BR131 Keskin Array S 10.03 75 **Pn 04 15 25.6 +3.8**
BRTR Keskin Array B 10.03 75 Pn **Pn** 04 15 26.9 +5.1
comp=E,1.1nm,0.3s,baz=258,slow=13,SNR=38
PSZ Piszkesteto 10.11 356 P **Pn 04 15 21.9 -0.8**
PSZ Piszkesteto 10.11 356 ⇑P **Pn 04 15 22.3 -0.4**
**PSZ Piszkesteto 10.11 356

baz=133
HBRG AMP 04 17 00.0
baz=133
CSS Mathiatis 10.33 102 Pn 04 15 26.8 +1.1
MYKA Terra Mystica 10.35 330 *e*Pn **Pn 04 15 24.9 -1.1**
comp=E,4.8nm,0.3s
MYKA *e*Sn **Sn 04 17 17.3 -4.5**
comp=E,16nm,0.5s
STAL STALIGIAL 10.43 326 Pn 04 15 25.7 -1.4
CONA Conrad Observa 10.77 341 *e*Pn **Pn 04 15 31.8 0.0**
comp=E,2.8nm,0.3s
CONA *e*Sn **Sn 04 17 30.0 -2.2**
comp=E,7.1nm,0.6s
VYHS Vyhne 10.77 352 *e*P **Pn 04 15 30.3 -1.4**
VYHS *e* 04 17 34.0
VYHS Vyhne 10.77 352 *e*PN **Pn 04 15 30.3 -1.4**
VYHS Vyhne 10.77 352 *e*SN **Sn 04 17 34.0 +1.9**
VYHS *e* 04 27 19.2
KIS Kishinev 10.81 30 *e*P **Pn 04 15 31.0 -1.3**
KIS *e*S **Sn 04 17 34.0 +0.9**
KIS *e*LQ LQ 04 18 36.0
KIS LRM MLR 04 20 10.0
comp=E,5µm,10.0s
KIS Kishinev 10.81 30 *e*P **Pn 04 15 31.0 -1.3**
KIS *e*S **Sn 04 17 34.0 +0.9**
KIS MLR MLR
comp=N,5µm,10.0s
KIS MLR MLR
comp=Z,3µm,12.0s
UZH Uzhgorod 10.83 5 *e*P **Pn 04 15 32.0 -0.5**
UZH *e*S **Sn 04 17 32.0 -1.5**
UZH MLR MLR
comp=N,450nm,16.0s
UZH MLR MLR
comp=E,530nm,16.0s
UZH MLR MLR
comp=Z,360nm,16.0s
KBA Koelnbreinsper 10.83 331 *e*Pn **Pn 04 15 31.9 -0.8**
comp=Z,17nm,0.6s,SNR=8.0
KBA Sn **Sn 04 17 29.5 -4.3**
comp=Z,56nm,0.9s
MODS Modra-Piesok 10.88 347 *e*P **Pn 04 15 31.6 -1.6**
MODS *e* 04 17 31.2
MODS Modra-Piesok 10.88 347 *e*PN **Sn 04 15 31.6 -1.6**
MODS *e*SN **Sn 04 17 31.2 -3.6**
MODS *e* 04 27 21.3
ABTA Abfaltersbach 10.90 327 *e*Pn **Pn 04 15 32.0 -1.6**
comp=Z,9.6nm,0.4s,SNR=8.3
ABTA *e*Sn **Sn 04 17 30.1 -5.3**
comp=Z,62nm,0.7s
KOLL Kolacno 10.90 351 *e*PN **Pn 04 15 32.4 -1.1**
KOLL *e*SN **Sn 04 17 32.7 -2.7**
KOLL *e* 04 27 20.2
SMOL Smolenice 10.99 347 *e*P **Pn 04 15 34.0 -0.7**
SMOL *e* 04 17 36.4
SMOL Smolenice 10.99 347 *e*PN **Pn 04 15 34.0 -0.7**
SMOL Smolenice 10.99 347 *e*SN **Sn 04 17 36.4 -1.0**
SMOL *e* 04 27 21.7
SALO Salr 11.04 318 Pn 04 15 34.7 -0.7
KOLS Kolonicke sedl 11.13 4 *e*P **Pn 04 15 37.3 +0.7**
KOLS Kolonicke sedl 11.13 4 *e*PN **Pn 04 15 37.3 +0.7**
MOA Molln 11.16 336 *e*Pn **Pn 04 15 35.8 -1.3**
comp=Z,13nm,0.4s,SNR=14
MOA *e*Sn **Sn 04 17 38.3 -3.4**
comp=Z,19nm,0.8s
JAVC Velka Javorina 11.28 349 *e*PN **Pn 04 15 38.2 -0.6**
RJOB Jochberg 11.59 331 *e*Pn **Pn 04 15 42.8 -0.1**
RJOB *e*Sn Sn 04 17 42.1 -10
NIE Niedzica 11.59 358 *e*P **Pn 04 15 43.5 +0.6**
NIE Niedzica 11.59 358 *e*P **Pn 04 15 43.5 +0.6**
KRUC Moravsky 11.71 345 *e*PN **Pn 04 15 43.0 -1.5**
WATA Walderalm 11.76 327 *e*Pn **Pn 04 15 45.4 0.0**
comp=Z,17nm,0.5s,SNR=12
WATA Sn **Sn 04 17 53.5 -3.0**
comp=Z,58nm,0.7s
SQTA Sankt Quirin 11.84 326 *i* Pn **Pn 04 15 47.5 +1.1**
comp=Z,7.8nm,0.4s,SNR=9.5
SQTA *e*Sn **Sn 04 17 55.5 -2.8**
comp=Z,70nm,0.8s
FUORN Ofenpass-Fuorn 11.85 321 Pn 04 15 46.3 -0.4
VRAC Vranov 11.90 346 Pn **Pn 04 15 45.0 -2.2**
comp=Z,0.2nm,0.3s,baz=167,slow=12,SNR=4.2
VRAC LR LR 04 21 08.0
comp=Z,1µm,18.1s,baz=170,slow=42
VRAC Vranov 11.90 346 *e*PN **Pn 04 15 45.2 -2.0**
FETA Feichten 11.91 324 *e*Pn **Pn 04 15 48.8 +1.4**
comp=Z,2.3nm,0.3s
FETA *e*Sn **Sn 04 17 58.4 -1.8**
comp=Z,9.5nm,0.5s
KOT Kottamia 11.95 128 P **Pn 04 15 44.2 -3.7**
baz=129
KOT AMP 04 18 43.8
baz=129
MOTA Moosalm 11.97 326 *e*Pn **Pn 04 15 48.4 +0.1**
comp=Z,8.3nm,0.5s,SNR=9.9
MOTA *e*Sn **Sn 04 17 58.5 -3.3**
comp=Z,51nm,0.7s
TREC Trest 12.13 343 AMS AMS 04 21 10.0
comp=Z,4µm,12.2s
OKC Ostrava-Krasne 12.17 351 *e*P **Pn 04 15 48.1 -2.8**
OKC MLR MLR
comp=Z,2µm,13.3s
OKC Ostrava-Krasne 12.17 351 *e*P **Pn 04 15 48.1 -2.8**
OKC AMS AMS 04 21 30.0
comp=Z,2µm,13.3s
MORC Moravsky Berou 12.20 349 *e*PN **Pn 04 15 49.9 -1.3**
TUE Stuetta 12.21 319 Pn 04 15 50.2 -1.5
GEC2 GERESS Array S 12.22 337 *e*Pn **Pn 04 15 49.3 -2.2**
GERES GERESS Array B 12.22 337 Pn **Pn 04 15 49.7 -1.8**
comp=Z,1.1nm,0.3s,baz=154,slow=13,SNR=33
GERES Sn Sn 04 17 58.1 -10
comp=Z,0.9nm,0.3s,baz=152,slow=21,SNR=3.8
GERES LR LR 04 21 13.8
comp=Z,2µm,18.2s,baz=154,slow=41
RETA Reutte 12.24 325 *e*Pn **Pn 04 15 53.0 +1.1**
comp=Z,2.1nm,0.3s
RETA *e*Sn **Sn 04 18 04.5 -3.6**
comp=Z,14nm,0.5s
HFRF Wahat Farafira 12.30 148 P **Pn 04 15 49.9 -2.8**
baz=149
OJC Ojcow 12.41 356 *e*P **P 04 16 03.6 -2.5**
OJC Ojcow 12.41 356 *e*P **P 04 16 03.6 -2.5**
DAVA Damuels 12.50 323 *i* Pn **Pn 04 15 57.2 +1.7**
comp=Z,5.6nm,0.5s
DAVA *e*Sn **Sn 04 18 10.4 -4.3**
comp=Z,19nm,0.4s
KHC Kasperske Hory 12.51 337 *e*P **Pn 04 15 53.0 -2.5**
KHC *e* 04 18 10.5
KHC MLR MLR
comp=Z,6µm,18.8s
KHC Kasperske Hory 12.51 337 *e*P **Pn 04 15 53.0 -2.5**
KHC *ex* x 04 16 00.2
KHC *ex* x 04 18 10.5
KHC *ex* x 04 18 24.0
KHC AMS AMS 04 21 30.0
comp=Z,6µm,18.8s
FUR Furstenfeldbru 12.53 329 *e*Pn **Pn 04 15 54.5 -1.3**
FUR *e*Sn Sn 04 18 04.7 -11
NBNS Bani Suef 12.58 134 P **Pn 04 15 52.5 -4.0**
baz=135
KRLC Kraliky 12.61 347 *e*P **Pn 04 15 56.5 -0.3**
KRLC MLR MLR
comp=Z,3µm,12.7s
KRLC Kraliky 12.61 347 *e*P **Pn 04 15 56.5 -0.3**
KRLC *ex* x 04 16 02.0
KRLC AMS AMS 04 21 50.0
comp=Z,3µm,12.7s
MMAI Mount Meron Ar 12.68 108 Pn **Pn 04 15 53.6 -4.3**
comp=Z,1.2nm,0.3s,baz=308,slow=13,SNR=11
MMAI Sn **Sn 04 18 11.6 -7.4**
comp=Z,5.5nm,0.3s,baz=316,slow=29,SNR=8.2
MMAI LR LR 04 22 34.3
comp=Z,622nm,18.4s,baz=270,slow=46
WET Wettzell 12.74 335 *e*Pn **Pn 04 15 58.4 -0.3**
WET *e*Sn **Sn 04 18 14.9 -5.5**
GOPC GO Pecny, Ondr 12.88 342 AMS AMS 04 21 40.0
comp=Z,3µm,19.0s
PBCC Pribram 12.88 339 *e*P **Pn 04 15 59.0 -1.5**
PBCC *ex* x 04 16 03.6
BNI Bardonecchia 12.94 308 P **Pn 04 16 00.8 -0.7**
BNI Bardonecchia 12.94 308 Pn 04 16 00.8 -0.7
DPC Dobruska-Polom 12.95 346 AMS AMS 04 21 50.0
comp=Z,4µm,13.1s
PRU Pruhonice 13.01 341 *e*P **Pn 04 16 01.5 -0.8**
PRU MLR MLR
comp=Z,3µm,16.2s
PRU Pruhonice 13.01 341 *e*P **Pn 04 16 01.5 -0.8**
PRU AMS AMS 04 21 40.0
comp=Z,3µm,16.2s
TAMRE El Minia 13.10 138 P **Pn 04 16 01.4 -2.3**
baz=138
PRA Prague 13.11 341 AMS AMS 04 21 50.0
comp=Z,3µm,17.3s
UPC Upice 13.16 346 AMS AMS 04 21 50.0
comp=Z,4µm,11.5s
OSTC Ostas 13.17 346 AMS AMS 04 22 00.0
comp=Z,4µm,12.5s
CHVC Chvalec 13.23 346 *e*P **Pn 04 16 05.4 +0.1**
CHVC AMS AMS 04 22 00.0
comp=Z,4µm,12.6s
SENIN Lac Senin/Sane 13.27 314 Pn 04 16 05.7 -0.3
KSP Ksiaz 13.43 347 *e*P **Pn 04 16 08.5 +0.4**
KSP Ksiaz 13.43 347 *e*P **Pn 04 16 08.5 +0.4**
PVCC Panska Ves 13.50 342 AMS AMS 04 22 00.0
comp=Z,3µm,12.5s
NKC Novy Kostel 13.83 336 AMS AMS 04 22 20.0
comp=Z,5µm,13.3s
BRG Berggiesshubel 13.97 341 *e*P **Pn 04 16 13.2 -2.2**
comp=Z,22nm,1.8s
BRG *e* 04 16 31.9
comp=Z,5.8nm,0.7s
comp=N,2µm,17.3s
comp=E,3µm,10.1s
comp=Z,3µm,10.7s
BRG Berggiesshubel 13.97 341 *e*P **Pn 04 16 13.2 -2.2**
BRG pmax pmax
comp=Z,23nm,1.8s
BRG pmax pmax
comp=Z,6.0nm,0.7s
BRG MLR MLR
comp=N,2µm,17.3s
BRG MLR MLR
comp=E,3µm,10.1s
BRG MLR MLR
comp=Z,3µm,10.7s
BFO Black Forest 13.98 323 P **Pn 04 16 15.1 -0.5**
BFO Black Forest 13.98 323 Pn 04 16 15.1 -0.5
BEL Belsk 14.00 359 *e*P **P 04 16 25.4 +1.7**
BEL Belsk 14.00 359 *e*P **P 04 16 25.4 +1.7**
AKASG Malin Array Be 14.13 22 Pn **Pn 04 16 14.6 -3.0**
comp=Z,0.9nm,0.3s,baz=207,slow=12,SNR=11
AKASG LR LR 04 21 59.7
comp=Z,2µm,19.3s,baz=185,slow=39
AKBB Malin Array Si 14.13 22‖ *e*P **Pn 04 16 16.9 -0.6**
AKBB Malin Array Si 14.13 22 Pn 04 16 17.5 0.0
EIL Elat 14.15 121 Pn **Pn 04 16 14.9 -3.1**
comp=Z,1.5nm,0.3s,baz=301,slow=9.0,SNR=19
EIL Sn Sn 04 18 44.3 -11
comp=Z,3.3nm,0.3s,baz=258,slow=18,SNR=7.7
ASF Jabal al Asfar 14.18 109 Pn **Pn 04 16 17.9 -0.6**
comp=Z,0.3nm,0.3s,baz=284,slow=6.5,SNR=4.2
ASF Sn **Sn 04 18 49.4 -6.4**
comp=Z,0.2nm,0.3s,baz=273,slow=17,SNR=2.4
MOX Moxa 14.45 335 *e*Pn **Pn 04 16 20.8 -1.2**
CLL Collm 14.62 340 *e*P **Pn 04 16 26.0 +1.8**
CLL Collm 14.62 340 *e*P **Pn 04 16 26.0 +1.8**
CLL *e*PP **PnPn 04 16 32.0 -0.1**
comp=Z,18nm,1.2s
CLL *i* (sPP) 04 16 34.7
comp=Z,60nm,1.8s
CLL LmH 04 21 00.0
comp=N,2µm,21.2s
CLL LmH 04 21 00.0
comp=E,3µm,21.5s
CLL Lmax 04 23 00.0
AKRG Al Kharijah 14.70 144 P **Pn 04 16 23.2 -2.2**
baz=145
WLF Walferdange 15.94 323 IAmb IAmb 04 17 06.9
comp=Z,70nm,1.1s
SUW Suwalki 16.25 5 P **Pn 04 16 45.4 -0.2**
SUW pmax pmax
comp=Z,198nm,1.1s
SUW Suwalki 16.25 5 *e*P **Pn 04 16 45.1 -0.6**
SUW Suwalki 16.25 5 Pn 04 16 45.4 -0.2
BCLA Clavier 16.85 323 pP **pP 04 16 57.4 -1.5**
BCLA sP sP 04 16 58.8 -1.7
BCLA x x 04 17 06.2
DOU Dourbes 16.98 321 x **P 04 16 57.9 +1.0**
DOU x x 04 17 05.5
DOU x x 04 17 09.1
BMRD Maredsous 17.03 322 x **P 04 16 58.1 +0.7**
BMRD sP **pP 04 17 00.7 -0.2**
BMRD x x 04 17 07.0
NEY Neytrino 17.34 65‖ *e*P **P 04 17 01.1 0.0**
SHA1 Shidzhatmaz 17.39 63‖ *e*P **P 04 17 04.3 +2.6**
KIV Kislovodsk 17.46 63 *e*P **P 04 17 03.3 +1.0**
KIV *e*S **Sn 04 20 17.9 +2.5**
KIV pmax pmax
comp=Z,40nm,1.0s
KIV MLR MLR
comp=Z,610nm,14.0s
KIV Kislovodsk 17.46 63 Pn **Pn 04 16 59.8 -1.3**
KBZ Khabaz 17.56 64‖ *e*P **Pn 04 17 02.5 +0.3**
KBZ Khabaz 17.56 64 P **P 04 17 02.7 -0.6**
baz=269,slow=12,SNR=2.6
AKH Akhalkalaki 17.67 71 P **Pn 04 17 03.1 -0.7**
AKH pmax pmax
comp=Z,16nm,1.1s
AKH Akhalkalaki 17.67 71 Pn **Pn 04 17 03.1 -0.7**
BSD Bornholm Skovb 17.77 348 *e*P **P 04 17 07.0 +1.5**
BSD Bornholm Skovb 17.77 348 *i* P **P 04 17 07.0 +1.5**
PYA1 Pyatigorsk 17.77 63‖ *e*P **P 04 17 07.8 +2.1**
ZEI Tsey 18.12 67 *e*P **P 04 17 14.3 +4.6**
ZEI pmax pmax
comp=Z,14nm,0.6s
VORD Divnogorie 18.45 39 *e*P **P 04 17 11.9 -1.1**
VORD pmax pmax
comp=Z,40nm,1.6s
VORD MLR MLR
comp=Z,550nm,9.0s
VSR Storozhevoye 18.54 38 *e*P **P 04 17 12.9 -1.1**
VSR pmax pmax
comp=Z,20nm,1.2s
VSR MLR MLR
comp=Z,2µm,11.0s
GNI Garni 18.57 75*d**e*P **P 04 17 14.4 -0.3**
GNI Garni 18.57 75 Pn 04 17 15.5 +0.6
comp=Z,0.3nm,0.3s,baz=313,slow=16,SNR=3.5
GNI LR LR 04 25 59.3
comp=Z,1µm,19.5s,baz=284,slow=42
GNI Garni 18.57 75 P **P 04 17 13.2 -1.5**
LPSR Galich'ya Gora 19.34 34 *e*P **P 04 17 22.6 -0.2**
LPSR pmax pmax
comp=Z,40nm,0.7s
LPSR MLR MLR
comp=Z,2µm,11.0s
GROC Groznyy 19.55 66 *e*P **P 04 17 24.7 -0.5**
GROC S **S 04 21 04.6 -1.1**
GROC pmax pmax
comp=Z,13nm,0.6s
ESDC Sonseca Array 19.56 283 P **P 04 17 25.3 0.0**
comp=Z,0.4nm,0.3s,baz=76,slow=11,SNR=54
ESDC LR LR 04 25 36.1
comp=Z,462nm,18.0s,baz=75,slow=39
ESDC Sonseca Array 19.56 283 IAmb IAmb 04 17 33.4
comp=Z,3.3nm,0.8s
BTLR Botlikh 19.80 68‖ *e*P **P 04 17 28.0 0.0**
VRH Novokhopyorsk 19.82 41 *e*P **P 04 17 28.5 +0.5**
VRH pmax pmax
comp=Z,40nm,0.6s
VRH MLR MLR
comp=Z,1µm,11.0s
PAB San Pablo 19.86 283 P **Pn 04 17 30.6 +0.3**
PAB pmax pmax
comp=Z,18nm,0.9s
PAB San Pablo 19.86 283 P **Pn 04 17 30.6 +0.3**
TAM Tamanrasset 20.05 226 P Pn 04 17 33.2 +0.5
TAM pmax pmax
comp=Z,12nm,1.0s
TAM Tamanrasset 20.05 226 P Pn 04 17 33.2 +0.5
OBN Obninsk 20.25 26‖ *e*P **P 04 17 32.7 +0.1**
OBN *e* 04 17 37.8
OBN PPP PPP 04 17 54.0
OBN *i* S Sn 04 21 22.5 +0.2
OBN *e* 04 21 29.7
OBN SS **SnSn 04 21 37.0 +0.2**
OBN SSS SSS 04 21 53.0
OBN pmax pmax
comp=Z,17nm,0.7s
OBN MLR MLR
comp=Z,837nm,15.0s
OBN Obninsk 20.25 26 P **P 04 17 32.1 -0.6**
comp=Z,3.5nm,0.3s,baz=225,slow=13,SNR=6.5
OBN LR LR 04 25 23.8
comp=Z,303nm,18.8s,baz=214,slow=37
OBN Obninsk 20.25 26 P **P 04 17 31.7 -1.0**
GNBR Gunib 20.32 69‖ *e*P **P 04 17 37.6 +1.9**
MAK Makhachkala 20.77 67 *e*P **P 04 17 38.9 +0.5**
MAK *e*S **S 04 21 29.9 0.0**
MAK pmax pmax
comp=Z,164nm,1.7s
MAK MLR MLR
comp=Z,319nm,14.0s
VSU Vasula 20.97 8*c**e*P **P 04 17 39.7 -0.8**
SWN1 Swindon 21.10 318 *e*P **P 04 17 42.1 +0.2**
SWN1 IAmb IAmb 04 17 47.8
comp=Z,96nm,0.7s
MOS Moscow 21.11 27 *e*P **P 04 17 41.4 -0.6**
MOS *e* 04 17 50.3
MOS *e* 04 18 07.1
MOS *e*SS Sn 04 22 04.9 +22
MOS *e*SSS SSS 04 22 23.6
MOS pmax pmax
comp=Z,92nm,1.4s
MOS pmax pmax
comp=Z,200nm,1.8s
MOS MLR MLR
comp=Z,700nm,14.0s
STRD Stroud 21.43 318 *e*P **P 04 17 46.1 +0.6**
STRD IAmb IAmb 04 17 50.6
comp=Z,167nm,0.8s
MDT Midelt 21.47 264 P **P 04 17 46.5 +0.3**
comp=Z,9.4nm,0.8s,baz=268,slow=12,SNR=19
MDT LR LR 04 28 04.9
comp=Z,341nm,18.6s,baz=75,slow=42
CWF Charnwood Fore 21.52 321 *e*P **P 04 17 46.8 +0.4**
OLDB Oldbury-Upon-S 21.58 317 *e*P **P 04 17 47.6 +0.5**
PBRG Braganca 21.65 289 *e*P **P 04 17 48.3 +0.3**
comp=Z,37nm,1.5s
MVO Moncorvo 21.86 288 *e*P **P 04 17 50.7 +0.4**
comp=Z,52nm,0.9s
MVO *e*LR LR 04 22 15.2
comp=Z,438nm,20.0s
MCH1 Michaelchurch 21.99 318 *e*P **P 04 17 51.1 -0.4**
MCH1 IAmb IAmb 04 17 57.1
comp=Z,98nm,1.1s
LBWR Ladybower, Pea 22.11 322 *e*P **P 04 17 52.4 -0.4**
STNC Stoke 22.17 321 *e*P **P 04 17 53.0 -0.4**
HLM1 Long Mynd 22.20 319 *e*P **P 04 17 54.3 +0.5**
HLM1 IAmb IAmb 04 17 56.3
comp=Z,138nm,1.5s
PMRV Marv??o 22.22 283 *e*P **P 04 17 53.4 -0.7**
comp=Z,41nm,1.2s
PMRV *e*LR LR 04 24 26.7
comp=Z,382nm,16.0s
PCBR Castelo Branco 22.25 284 *e*P **P 04 17 54.9 +0.5**
comp=Z,22nm,1.3s
MTE Manteigas 22.27 286 *e*P **P 04 17 54.5 -0.2**
comp=Z,40nm,1.2s
MTE *e*LR LR 04 24 24.7
comp=Z,648nm,20.0s
MTE Manteigas 22.27 286 P **P 04 17 53.9 -0.8**
MTE IAmb IAmb 04 18 00.8
comp=Z,22nm,0.8s
PVRL Vila Real 22.38 288 *e*P **P 04 17 55.8 0.0**
comp=Z,24nm,1.4s
SNART Snartemo 22.41 341 *e*P **P 04 17 56.0 +0.1**
POLO Lamas de Olo 22.43 288 *e*P **P 04 17 57.4 +0.9**
comp=Z,13nm,1.1s
PVIS Viseu 22.52 286 *e*P **P 04 17 57.2 -0.2**
comp=Z,32nm,1.8s
FOEL Foel Wylfa 22.56 320 *e*P **P 04 17 57.7 +0.1**
FOEL IAmb IAmb 04 18 04.2
comp=Z,126nm,0.9s
PCAB Cabril 22.61 289 *e*P **P 04 17 57.8 -0.4**
comp=Z,28nm,1.1s
PVAQ Vaqueiros 22.73 278 *e*P **P 04 18 00.8 +1.2**
comp=Z,51nm,1.5s
PVAQ *e*LR LR 04 24 36.3
comp=Z,332nm,18.0s
PBEJ Beja 22.75 279 *e*P **P 04 18 01.6 +1.9**
comp=Z,41nm,1.7s
EVO Evora 22.79 281 *e*P **P 04 18 00.0 -0.2**
comp=Z,32nm,2.3s
HFS Hagfors 22.80 351 P **P 04 17 58.5 -1.5**
comp=Z,11nm,0.5s,baz=167,slow=9.7,SNR=39
HFS LR LR 04 27 50.3
comp=Z,843nm,19.9s,baz=170,slow=39
PMTG Montargil 22.90 282 *e*P **P 04 18 00.8 -0.5**
comp=Z,30nm,1.0s
PBDV Barranco-do-Ve 22.93 277 *e*P **P 04 18 04.2 +2.5**
COI Coimbra 22.94 285 *e*P **P 04 18 03.0 +1.3**
comp=Z,55nm,2.3s
COI Coimbra 22.94 285 P **P 04 18 01.8 +0.1**
COI pmax pmax
comp=Z,30nm,0.8s
COI Coimbra 22.94 285 P **P 04 18 01.8 +0.1**
COI IAmb IAmb 04 18 09.4
comp=Z,30nm,0.8s
PCVE Castro Verde 22.95 278 *e*P **P 04 18 03.6 +1.8**
comp=Z,74nm,1.7s
PTOM Tomar 22.98 284 *e*P **P 04 18 02.4 +0.2**
comp=Z,62nm,1.3s
PCAS Casmilo, Conde 23.02 285 *e*P **P 04 18 02.6 +0.1**
comp=Z,37nm,1.3s
KONO Kongsberg 23.03 345‖ *e*P **P 04 18 02.0 -0.4**
KONO pmax pmax
comp=Z,12nm,0.8s
KONO Kongsberg 23.03 345 *e*P **P 04 18 02.3 -0.1**
OSL Oslo 23.08 347 *e*P **P 04 18 01.9 -1.0**
EDMD Edmundbyers 23.08 325 *e*P **P 04 18 02.9 -0.2**
EDMD IAmb IAmb 04 18 04.7
comp=Z,338nm,1.9s
YLL Llanberis 23.19 319 *e*P **P 04 18 04.3 +0.1**
PNCL Nicolau / Gran 23.25 280 *e*P **P 04 18 05.0 +0.1**
comp=Z,56nm,2.1s
KESW Keswick, Cumbr 23.47 323 *e*P **P 04 18 06.8 -0.1**
PTEO Sao Teotonio 23.50 278 *e*P **P 04 18 07.9 +0.5**
BLS5 Blasjo 23.55 341 *e*P **P 04 18 07.9 +0.2**
NC602 NORSAR Array S 23.69 348 *e*P **P 04 18 08.4 -0.7**
FINES FINESS Array B 23.84 6 P **P 04 18 09.1 -1.4**
comp=Z,6.9nm,0.5s,baz=182,slow=9.2,SNR=43
FINES LR LR 04 28 24.0
comp=Z,2µm,18.1s,baz=192,slow=39
FIA1 FINESS Array S 23.84 6 P **P 04 18 10.8 +0.3**
FIA1 IAmb IAmb 04 18 15.8
comp=Z,29nm,1.0s
NAO01 NORSAR Array S 23.90 348 P **P 04 18 10.7 -0.4**
EKA Eskdalemuir Ar 23.93 325 P **P 04 18 11.2 -0.2**
comp=Z,28nm,0.7s,baz=126,slow=8.8,SNR=49
ESK Eskdalemuir 23.94 325 *e*P **P 04 18 11.2 -0.3**
ESK Eskdalemuir 23.94 325 P **P 04 18 11.7 +0.2**
ESK pmax pmax
comp=Z,48nm,0.7s
ESK Eskdalemuir 23.94 325 P **P 04 18 11.7 +0.2**
WIM Isle of Man 23.98 321 *e*P **P 04 18 11.7 -0.2**
IOMK Kirk Michael 23.99 321 *e*P **P 04 18 12.0 +0.1**
IOMK IAmb IAmb 04 18 18.2
comp=Z,81nm,0.8s
NB2 NORSAR Subarra 24.03 348 P **P 04 18 11.1 -1.3**
comp=Z,17nm,0.7s,baz=160,slow=11
NB2 NORSAR Subarra 24.03 348 P **P 04 18 11.1 -1.3**
baz=160,slow=11
NOA NORSAR Array B 24.03 348 P **P 04 18 11.0 -1.3**
comp=Z,6.7nm,0.7s,baz=158,slow=8.7,SNR=34
NOA LR 04 28 55.5
comp=Z,573nm,18.4s,baz=175,slow=40
EBL Broad Law 24.15 326 *e*P **P 04 18 13.5 0.0**
SKAR Skarslia 24.24 345 *e*P **P 04 18 14.3 0.0**
EDI Edinburgh 24.30 326 *e*P **P 04 18 15.2 +0.4**
EDI IAmb IAmb 04 18 18.1
comp=Z,38nm,0.6s
NC204 NORSAR Array S 24.33 348 P **P 04 18 15.3 +0.3**
BER Bergen 24.66 341 *e*P **P 04 18 18.3 +0.3**
HYA Hoyanger 25.14 343 *e*P **P 04 18 21.8 -0.5**
DOMB Dombas 25.34 347 *e*P **P 04 18 25.2 +1.0**
RAYN Ar Rayn 25.34 117 P **P 04 18 25.3 +0.7**
RAYN pmax pmax
comp=Z,13nm,1.1s
RAYN Ar Rayn 25.34 117 P **P 04 18 25.3 +0.7**
SUE Sulen 25.39 341 *e*P **P 04 18 24.2 -0.3**
AKN Aaknes 25.86 345 *e*P **P 04 18 29.0 0.0**
MOL Molde 26.11 346 *e*P **P 04 18 31.6 +0.5**
NSS Namsos 27.27 351 *e*P **P 04 18 41.2 -0.3**
KIRV Kirov 27.73 32 P **P 04 18 45.1 -0.6**

comp=Z,8.8nm,0.5s,baz=246,slow=6.9,SNR=3.5
KIRV LR LR 04 30 17.0
comp=Z,475nm,18.9s,baz=230,slow=38
TMCR Tamitsa 28.26 16 *e*P **P 04 18 48.6 -1.8**
TMCR pmax pmax
comp=Z,20nm,0.9s
PRGR Permogore 28.30 25 *e*P P 04 18 45.5 -5.3
PRGR *e*S **S 04 23 31.5 -5.1**
PRGR pmax pmax
comp=Z,13nm,0.6s
MOR8 Moi Rana 28.63 354 *e*P **P 04 18 54.9 +1.1**
KONS Konsvik 29.07 353 *e*P **P 04 18 58.1 +0.5**
AKTO Aktyubinsk 29.07 52 P **P 04 18 57.3 -0.6**
comp=Z,3.5nm,0.4s,baz=242,slow=6.3,SNR=16
AKTO LR LR 04 32 53.5
comp=Z,361nm,18.5s,baz=270,slow=41
GEYT Alibeck 29.16 78 P **P 04 18 59.7 +0.9**
comp=Z,2.3nm,0.5s,baz=266,slow=5.7,SNR=4.9
GEYT LR LR 04 34 23.1
comp=Z,331nm,18.4s,baz=325,slow=44
GEYT Alibeck 29.16 78 IAmb IAmb 04 19 04.8
comp=Z,2.2nm,0.8s
TOA0 Torodi Ar. Sit 30.02 220 P **P 04 19 07.0 +0.5**
TORD Torodi Ar. Bea 30.02 220 P **P 04 19 06.5 0.0**
comp=Z,14nm,0.6s,baz=31,slow=7.2,SNR=64
TORD Torodi Ar. Bea 30.02 220 IAmb IAmb 04 19 09.9
comp=Z,7.9nm,0.7s
AB31 Akbulak array 30.11 55 *i*P **P 04 19 05.9 -1.1**
ABKAR Akbulak array 30.11 55 P **P 04 19 06.3 -0.8**
STEI Steigen 30.32 356 *e*P **P 04 19 08.5 -0.1**
APA Apatity 30.59 9⇓*i*P **P 04 19 10.7 -0.3**
APA pmax pmax
comp=Z,8.0nm,0.8s
APA MLR MLR
comp=Z,1μm,12.0s
LOF Lofoten 30.63 355 *e*P **P 04 19 11.9 +0.5**
ARU Arti 31.06 41 *d i*P **P 04 19 13.3 -2.0**
ARU 04 20 12.0
ARU S **S 04 24 18.1 -1.8**
ARU pmax pmax
comp=Z,8.0nm,1.1s
ARU MLR MLR
comp=Z,655nm,14.0s
ARU Arti 31.06 41 P **P 04 19 14.8 -0.5**
ARU IAmb IAmb 04 19 19.4
comp=Z,6.4nm,0.6s
KTK1 Kautokeino 31.26 2 *e*P **P 04 19 16.8 -0.1**
ARCES ARCESS Array B 31.85 3 P **P 04 19 20.5 -1.6**
comp=Z,2.9nm,0.6s,baz=190,slow=11,SNR=51
ARCES LR LR 04 33 46.3
comp=Z,910nm,18.9s,baz=182,slow=39
ARE0 ARCESS Array S 31.85 3 *e*P **P 04 19 21.2 -1.0**
TRO Tromso 31.88 359 *e*P **P 04 19 21.5 -0.9**
SVE Sverdlovsk 32.27 41 *e*P **P 04 19 25.3 -0.7**
SVE *e*S **S 04 24 38.5 -0.4**
SVE pmax pmax
comp=Z,23nm,0.9s
SVE MLR MLR
comp=Z,701nm,10.0s
UOSS Minazif 32.48 103 P **P 04 19 27.6 -0.5**
HAMF Hammerfest 32.90 2 *e*P **P 04 19 31.5 +0.2**
KK31 Karatay Array 37.57 66 P **P 04 20 12.6 +0.6**
KK31 pmax pmax
comp=Z,11nm,0.8s
KK31 Karatay Array 37.57 66 P **P 04 20 12.6 +0.6**
KK31 IAmb IAmb 04 20 29.4
comp=Z,11nm,0.8s
KKAR Karatay Array 37.57 66 P **P 04 20 12.6 +0.6**
KKAR pmax pmax
comp=Z,11nm,0.8s
KKAR Karatay Array 37.57 66 P **P 04 20 12.6 +0.6**
KKAR IAmb IAmb 04 20 29.4
comp=Z,11nm,0.8s
HOPEN Hopen 38.81 1 *e*P **P 04 20 22.6 +0.7**
DBIC Dimbokro 38.91 224 P **P 04 20 24.6 +1.2**
DBIC pmax pmax
comp=Z,14nm,0.9s
DBIC Dimbokro 38.91 224 P **P 04 20 23.5 +0.1**
comp=Z,8.3nm,0.6s,baz=8.8,slow=9.3,SNR=15
DBIC Dimbokro 38.91 224 P **P 04 20 24.6 +1.2**
DBIC IAmb IAmb 04 20 32.5
comp=Z,14nm,0.8s
TIC Toumodi 39.02 224 *e*PKP1 **P 04 20 26.6 +2.3**
KIC Kosan Boka 39.11 223 *e*PKP1 **P 04 20 27.4 +2.4**
comp=Z,9.2nm,0.5s
MBAR Mbarara 39.29 165⇑*e*P **P 04 20 30.2 +3.5**
MBAR pmax pmax
comp=Z,2.0nm,0.9s
MBAR Mbarara 39.29 165 P **P 04 20 28.2 +1.5**
LIC Lamto 39.38 223 *e*PKP1 **P 04 20 27.4 +0.1**
comp=Z,6.5nm,0.6s
SPA0 Spitsbergen Ar 40.50 359 *e*P **P 04 20 35.7 -0.2**
AAK Ala-Archa 40.54 66⇓*e*P **P 04 20 37.3 +0.4**
AAK pmax pmax
comp=Z,11nm,1.2s
AAK Ala-Archa 40.54 66 P **P 04 20 39.0 +2.1**
KBS Kingsbay 41.37 357 *e*P **P 04 20 46.0 +3.0**
KMBO Kilima Mbogo 41.57 155 P **P 04 20 46.5 +0.8**
comp=Z,2.4nm,0.9s,baz=11,slow=10,SNR=2.3
KMBO LR LR 04 41 26.7
comp=Z,330nm,18.6s,baz=313,slow=41
KMBO Kilima Mbogo 41.57 155 IAmb IAmb 04 20 54.4
comp=Z,4.4nm,0.9s
NIL Nilore 42.15 79 P **P 04 20 50.2 +0.1**
NIL pmax pmax
comp=Z,15nm,1.0s
NIL Nilore 42.15 79 P **P 04 20 50.2 +0.1**
NIL IAmb IAmb 04 20 55.0
comp=Z,15nm,0.9s
KURK Kurchatov 42.16 53 P **P 04 20 49.7 -0.2**
KURK pmax pmax
comp=Z,8.0nm,0.7s
KURK Kurchatov 42.16 53 P **P 04 20 49.7 -0.2**
KSH Kashi 42.37 70 P P 04 20 47.1 -4.8
KSH pP pP 04 20 54.1 -1.7
KSH PP **PP 04 22 29.4 -0.6**
KSH S **S 04 27 04.6 -8.4**
KSH SS SS 04 30 08.7 -13
KSH ScS **ScS 04 30 48.7 -5.1**
KSH pmax pmax
comp=Z,150nm,4.6s
KSH LR LR
comp=Z,240nm,5.9s
KSH LR LR
comp=Z,200nm,6.6s
KSH LR LR
comp=Z,310nm,6.1s
DAG Danmarks Havn 42.71 347 *e*P **P 04 20 53.4 -0.6**
DAG Danmarks Havn 42.71 347 *i*P **P 04 20 53.4 -0.6**
MAKZ Makanchi 44.93 58 P **P 04 21 12.9 +0.6**
MAKZ Makanchi 44.93 58 P **P 04 21 12.9 +0.6**
MAKZ IAmb IAmb 04 21 21.5
comp=Z,6.6nm,0.7s
MK31 Makanchi Array 45.15 58 P **P 04 21 13.7 -0.4**
MK31 pmax pmax
comp=Z,9.0nm,0.8s
MK31 Makanchi Array 45.15 58 P **P 04 21 13.7 -0.4**
MK31 IAmb IAmb 04 21 22.7
comp=Z,9.1nm,0.8s
MKAR Makanchi Array 45.15 58 P **P 04 21 13.6 -0.5**
comp=Z,5.9nm,0.4s,baz=276,slow=7.4,SNR=65
MKAR LR LR 04 45 01.0
comp=Z,115nm,18.2s,baz=280,slow=43
SUMG Summit 45.28 339 *i*P **P 04 21 15.0 -0.2**
SUMG Summit 45.28 339 *i*P **P 04 21 15.0 -0.2**
SUMG Summit 45.28 339 P **P 04 21 15.4 +0.2**
SUMG IAmb IAmb 04 21 24.2
comp=Z,7.6nm,0.8s
ZAA0 Zalesovo Array 45.63 48 P **P 04 21 17.3 -0.4**
ZALV Zalesovo Beam 45.63 48 P **P 04 21 16.3 -1.4**
comp=Z,17nm,0.5s,baz=274,slow=8.8,SNR=48
ZALV LR LR 04 41 51.5
comp=Z,238nm,18.5s,baz=274,slow=38
NOR Nord 45.87 353 *i*P **P 04 21 19.2 -0.1**
comp=Z,1.4nm,0.3s
WMQ Urumqi 49.58 61 *e*P **P 04 21 51.3 +2.6**
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ pmax pmax
comp=Z,44nm,4.3s
WMQ LR LR
comp=Z,440nm,22.9s
WMQ LR LR
comp=Z,970nm,29.0s
ZAK Zakamensk 57.49 49 *e*P **P 04 22 46.8 +0.2**
ZAK pmax pmax
comp=Z,3.0nm,1.1s
LSA Lhasa 57.64 76 P **P 04 22 48.6 +0.2**
LSA pmax pmax
comp=Z,5.0nm,0.6s
LSA Lhasa 57.64 76 P **P 04 22 48.6 +0.2**
LSA IAmb IAmb 04 23 01.9
comp=Z,5.3nm,0.6s
SCHQ Schefferville 58.98 318 P **P 04 22 56.5 -0.3**
comp=Z,5.2nm,0.4s,baz=71,slow=5.4,SNR=17
SCHQ LR LR 04 46 25.7
comp=Z,303nm,20.9s,baz=93,slow=34
SCHQ Schefferville 58.98 318 P **P 04 22 57.1 +0.2**
SCHQ IAmb IAmb 04 23 02.5
comp=Z,6.3nm,0.6s
GTA Gaotai 59.64 62 P **P 04 23 02.2 +0.4**
GTA pP sP 04 23 06.7 -0.7
GTA sP pP 04 23 09.0 +3.2
GTA PP **PP 04 25 19.6 +6.4**
GTA pmax pmax
comp=Z,38nm,4.5s
GTA LR LR
comp=Z,350nm,17.9s
GTA LR LR
comp=Z,260nm,20.3s
TIXI Tiksi 59.83 20⇑*e*P **P 04 23 03.9 +1.5**
TIXI pmax pmax
comp=Z,11nm,1.7s
TIXI Tiksi 59.83 20 P **P 04 23 02.8 +0.3**
TIXI IAmb IAmb 04 23 13.4
comp=Z,9.2nm,1.0s
RES Resolute Bay 60.20 344 P **P 04 23 05.6 +0.6**
RES pmax pmax
comp=Z,2.0nm,0.8s
RES Resolute Bay 60.20 344 P **P 04 23 05.6 +0.6**
SHL Shillong 60.23 79 P **P 04 23 06.6 +0.5**
SHL pmax pmax
comp=Z,9.0nm,1.1s
SHL Shillong 60.23 79 P **P 04 23 06.6 +0.5**
SHL IAmb IAmb 04 23 19.4
comp=Z,9.4nm,1.1s
SONM Songino Array 60.37 51 P **P 04 23 05.8 -0.9**
comp=Z,2.4nm,0.8s,baz=289,slow=7.9,SNR=11
SONM LR LR 04 49 58.4
comp=Z,219nm,19.5s,baz=3.0,slow=37
BOD Bodaibo 60.40 38 *e*P **P 04 23 06.3 -0.3**
BOD pmax pmax
comp=Z,9.0nm,0.9s
ULN Ulaanbaatar 60.76 50⇑*e*P **P 04 23 12.5 +3.1**
ULN pmax pmax
comp=Z,4.0nm,0.8s
ULN Ulaanbaatar 60.76 50 P **P 04 23 10.3 +0.9**
ULN IAmb IAmb 04 23 22.6
comp=Z,3.6nm,0.7s
LZH Lanzhou 64.00 63 *e*P **P 04 23 32.6 +1.3**
LZH pP pP 04 23 35.3 0.0
LZH sP sP 04 23 38.0 +1.1
LZH PP **PP 04 25 52.8 +1.0**
LZH pmax pmax
comp=Z,17nm,1.0s
LZH pmax pmax
comp=Z,62nm,5.5s
LZH LR LR
comp=Z,210nm,15.2s
LZH LR LR
comp=Z,210nm,15.5s
LZH LR LR
comp=Z,330nm,18.7s
YAK Yakutsk 65.21 29 *e*P **P 04 23 40.0 +1.5**
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=E,2.0nm,0.9s
LATQ La Tuque 65.64 312 P **P 04 23 42.6 +1.1**
baz=60
F60A Warwick 65.85 310 P **P 04 23 43.4 +0.5**
baz=60
G61A St-Isidore-de- **65.94 309** P **P 04 23 44.5 +0.9**
baz=60
BOSA Boshof 66.22 176 P **P 04 23 47.1 +1.6**
comp=E,1.7nm,0.5s,baz=1.6,slow=9.2,SNR=8.5
BOSA LR LR 04 55 26.6
comp=E,474nm,19.3s,baz=0.5,slow=38
E58A La Victoria 66.44 311 P **P 04 23 47.5 +0.7**
baz=59
HHC Hu-ho-hao-te 66.90 56 *e*P **P 04 23 49.6 -0.3**
HHC pmax pmax
comp=E,8.0nm,0.7s
HHC pmax pmax
comp=E,56nm,6.6s
E57A Chemin Saint G 66.94 312 P **P 04 23 50.7 +0.8**
baz=59
D56A ZEC Mazanza, M 66.97 312 P **P 04 23 51.3 +1.2**
baz=59
MATQ Matagami 67.19 316 P **P 04 23 52.1 +0.7**
baz=58
LSQQ Lebel-sur-Quev 67.19 315 P **P 04 23 52.5 +1.0**
baz=58
E56A St. Veronique 67.39 312 P **P 04 23 53.6 +0.8**
baz=58
D55A Sainte-Anne-du 67.40 313 P **P 04 23 54.0 +1.1**
baz=58
HIA Hailar 67.49 44⇑*e*P **P 04 23 54.6 +1.2**
HIA pmax pmax
comp=Z,29nm,0.9s
HIA Hailar 67.49 44 P **P 04 23 55.2 +1.8**
HIA IAmb IAmb 04 24 07.0
comp=Z,6.6nm,0.9s
I59A Olmsteadville 68.14 309 P **P 04 23 58.4 +0.9**
baz=58
M63A Gales Ferry 68.25 306 P **P 04 23 59.5 +1.2**
baz=58
XAN Xi'an 68.63 63 P P 04 24 07.8 +6.9
XAN pmax pmax
comp=Z,4.0nm,1.1s
XAN pmax pmax
comp=Z,91nm,4.3s
E54A Lac Daplat, Po 68.71 313 P **P 04 24 02.1 +1.0**
baz=57
E53A Dumoine, Ponti 69.02 313 P **P 04 24 04.2 +1.1**
baz=57
CHTO Chiang Mai 69.35 82 P **P 04 24 05.6 +0.1**
CHTO pmax pmax
comp=Z,9.0nm,1.0s
CHTO Chiang Mai 69.35 82 P **P 04 24 05.6 +0.1**
CHTO IAmb IAmb 04 24 09.8
comp=Z,8.7nm,1.0s
ALGO Algonquin Park 69.48 313 P **P 04 24 06.9 +1.1**
baz=57
CMAR Chiang Mai Arr 69.55 82*ce*P P 04 24 12.3 +5.6
CMAR pmax pmax
comp=Z,5.0nm,0.8s
CMAR Chiang Mai Arr 69.55 82 P **P 04 24 06.1 -0.6**
comp=Z,3.3nm,0.5s,baz=302,slow=7.5,SNR=9.2
CMAR LR LR 05 00 37.2
comp=Z,86nm,19.1s,baz=285,slow=41
D51A Lot 18 Range I 69.61 314 P **P 04 24 08.1 +1.5**
baz=56
E52A Mattawa 69.65 313 P **P 04 24 08.3 +1.4**
baz=56
FCC Fort Churchill 69.74 330 IAmb IAmb 04 24 20.3
comp=Z,5.3nm,0.8s
D50A G1974 Best Tow 69.83 314 P **P 04 24 09.2 +1.1**
baz=56
C36M Paulatuk 70.08 348 IAmb IAmb 04 24 11.2
comp=Z,4.3nm,0.8s
C36M Paulatuk 70.08 348 P **P 04 24 09.5 +0.4**
baz=29
SADO Sadowa 70.78 312 LR LR 04 53 02.8
comp=Z,131nm,21.2s,baz=46,slow=34
L57A Andrews Acres 70.95 309 P **P 04 24 16.6 +1.7**
baz=56
BILL Bilibino 71.26 13⇑*e*P **P 04 24 16.9 +0.5**
BILL *e**PP **sP 04 24 21.2 -0.7**
BILL *e**SP **pP 04 24 23.4 +3.0**
BILL 04 24 42.0
BILL S **S 04 33 40.0 +6.9**
BILL pmax pmax
comp=Z,23nm,2.9s
BILL MLR MLR
comp=Z,455nm,20.0s
M57A Sunshine Farm, **71.49 308** IAmb IAmb 04 24 27.2
comp=Z,7.9nm,0.7s
M57A Sunshine Farm, **71.49 308** P **P 04 24 19.7 +1.5**
baz=56
WVNY West Valley, N 71.80 310 P **P 04 24 20.6 +0.5**
WVNY IAmb IAmb 04 24 29.1
comp=Z,7.9nm,0.8s
E47A Iron Bridge 72.17 315 P **P 04 24 23.4 +1.1**
baz=54
SEY Seymchan 72.31 21⇑*e*P **P 04 24 25.5 +2.7**
SSPA Standing Stone 72.36 308 P **P 04 24 24.4 +0.9**
baz=55
M55A Ridgway 72.43 309 IAmb IAmb 04 24 33.3
comp=Z,7.6nm,0.7s
M55A Ridgway 72.43 309 P **P 04 24 25.3 +1.4**
baz=55
N55A Marion Center 72.96 309 P **P 04 24 28.3 +1.2**
baz=55
O56A Blue Knob Stat 73.00 308 P **P 04 24 28.3 +1.0**
baz=55
N54A Moraine State 73.48 309 IAmb IAmb 04 24 35.6
comp=Z,11nm,1.1s
N54A Moraine State 73.48 309 P **P 04 24 31.4 +1.3**
baz=54
TOLK Toolik Lake Re 73.61 356 IAmb IAmb 04 24 43.8
comp=Z,6.8nm,0.9s
TOLK Toolik Lake Re 73.61 356 P **P 04 24 32.3 +1.9**
baz=7.8
YKW3 Yellowknife Ar 73.79 340 P **P 04 24 31.8 +0.3**
YKW3 IAmb IAmb 04 24 44.9
comp=Z,6.8nm,1.1s
YKA Yellowknife Ar 73.84 340 P **P 04 24 31.7 -0.1**
comp=Z,1.4nm,0.7s,baz=32,slow=5.3,SNR=22
KLR Kul'dur 73.89 40⇓*e*P **P 04 24 32.7 +0.4**
KLR pmax pmax
comp=Z,6.0nm,0.9s
M52A Chesterland 73.97 310 P **P 04 24 33.9 +1.0**
baz=54
O54A Avella 74.17 309 P **P 04 24 34.7 +0.5**
baz=54
I47A Gladwin 74.33 314 P **P 04 24 36.7 +1.7**
baz=52
WHN Wuhan 74.38 63 P P 04 24 30.7 -4.8
RDOG Red Dog Mine 74.39 2 P **P 04 24 35.5 +0.5**
RDOG IAmb IAmb 04 24 37.6
comp=Z,5.7nm,0.9s
EPYK Eagle Plains 74.71 351 IAmb IAmb 04 24 46.0
comp=Z,13nm,1.1s
EPYK Eagle Plains 74.71 351 P **P 04 24 36.9 0.0**
baz=18
K48A Perry 74.85 313 P **P 04 24 38.6 +0.6**
baz=52
GRNR Gornyy 75.16 36 *e*P **P 04 24 39.2 -0.5**
GRNR pmax pmax
comp=Z,5.0nm,1.3s
GRNR MLR MLR
comp=Z,160nm,10.0s
K47A Vermontville 75.44 313 P **P 04 24 42.1 +0.7**
baz=52
O51A Pataskala 75.56 310 P **P 04 24 43.2 +1.0**
baz=52
EYMN Ely 75.62 320 IAmb IAmb 04 24 44.5
comp=Z,6.9nm,0.9s
EYMN Ely 75.62 320 P **P 04 24 43.3 +0.9**
baz=49
FFC Flin Flon 75.67 330 P **P 04 24 43.4 +0.8**
FFC pmax pmax
comp=Z,7.0nm,1.1s
FFC Flin Flon 75.67 330 P **P 04 24 43.4 +0.8**
FFC IAmb IAmb 04 24 44.8
comp=Z,7.3nm,1.1s
ACSO Alum Creek Sta 75.74 310 P **P 04 24 44.1 +0.8**
baz=52
N49A Columbus Grove 76.04 311 P **P 04 24 45.8 +0.8**
baz=52
ULM Lac du Bonnet 76.21 324 P **P 04 24 45.5 -0.2**
comp=Z,6.4nm,0.8s,baz=53,slow=6.2,SNR=9.4
ULM LR LR 04 56 47.8
comp=Z,180nm,21.9s,baz=40,slow=35
N48A Decatur 76.58 311 P **P 04 24 47.7 -0.3**
baz=51
NJ2 Nanjing 76.65 60 *e*P **P 04 24 49.2 +0.7**
NJ2 pmax pmax
comp=Z,12nm,0.5s
U55A TA2, Sparta 76.80 306 P **P 04 24 49.7 +0.3**
baz=53
N47A Urbana 76.96 312 P **P 04 24 50.4 +0.3**
baz=51
POKR Poker Plat Res 76.98 355 P **P 04 24 50.6 +0.7**
baz=9.4
COLA College 77.25 355⇑*e*P **P 04 24 52.3 +1.0**
COLA pmax pmax
comp=Z,3.0nm,0.9s
DAWY Dawson 77.25 351 IAmb IAmb 04 25 04.3
comp=Z,5.1nm,0.7s
USRK Ussuriysk Ar. 77.26 44 P **P 04 24 51.2 -0.5**
comp=Z,3.8nm,0.8s,baz=305,slow=4.4,SNR=4.1
USRK LR LR 05 00 48.9
comp=Z,180nm,18.8s,baz=308,slow=37
MLY Manley 77.26 356 IAmb IAmb 04 25 02.1
comp=Z,5.5nm,1.0s
IL31 77.28 355 P **P 04 24 53.5 +2.0**
ILAR Eielson Array 77.28 355 P **P 04 24 52.3 +0.8**
comp=Z,0.7nm,0.6s,baz=350,slow=2.8,SNR=13
HDA Harding Lake 77.65 355 IAmb IAmb 04 25 03.2
comp=Z,7.9nm,0.8s
HDA Harding Lake 77.65 355 P **P 04 24 53.9 +0.3**
baz=9.8
WRH Wood River Hil 77.67 355 IAmb IAmb 04 25 09.7
comp=Z,7.2nm,0.8s
ANM Nome 77.81 3 P **P 04 24 54.3 -0.2**
ANM pmax pmax
comp=Z,9.0nm,1.2s
ANM Nome 77.81 3 P **P 04 24 54.3 -0.2**
ANM IAmb IAmb 04 25 09.7
comp=Z,9.3nm,1.2s
SCRK Sand Creek 77.83 353 P **P 04 24 55.6 +0.9**
SFIN Lafayette 78.11 312 P **P 04 24 56.4 -0.1**
baz=50
JFWS Jewell Farm 78.26 316 P **P 04 24 57.8 +0.4**
baz=49
MCK McKinley 78.45 355 IAmb IAmb 04 25 07.3
comp=Z,12nm,1.2s
PSI Prapat 78.73 95 P **P 04 25 01.3 +0.8**
PSI pmax pmax
comp=Z,9.0nm,0.8s
U51A La Follette 78.76 307 P **P 04 25 01.4 +1.1**
baz=51
RPSI Rantau Prapat 78.80 95 P **P 04 25 01.3 +0.5**
RPSI IAmb IAmb 04 25 05.1
comp=Z,9.1nm,0.8s
WCI Wyandotte Cave 79.00 310 P **P 04 25 02.3 +0.8**
WCI pmax pmax
comp=Z,8.0nm,0.9s
WCI Wyandotte Cave 79.00 310 P **P 04 25 02.3 +0.8**
WCI IAmb IAmb 04 25 05.3
comp=Z,8.3nm,0.8s
WCI Wyandotte Cave 79.00 310 P **P 04 25 02.4 +0.8**
baz=50
DHY Denali Highway 79.00 355 IAmb IAmb 04 25 11.4
comp=Z,6.6nm,0.8s
KSRS Korea Array 79.24 51 P **P 04 25 02.6 -0.2**
comp=Z,3.8nm,0.6s,baz=314,slow=5.1,SNR=12
KSRS LR LR 05 02 50.5
comp=Z,175nm,18.2s,baz=319,slow=38
T49A Edmonton 79.25 309 P **P 04 25 03.3 +0.4**
baz=50
U49A Red Boiling Sp 79.77 308 P **P 04 25 06.4 +0.6**
baz=50
V50A Pikevile 79.88 307 P **P 04 25 07.7 +1.3**
baz=50
T47A Sharon Grove 80.29 309 IAmb IAmb 04 25 17.0
comp=Z,13nm,0.8s
W50A Signal Mountai 80.32 307 P **P 04 25 09.4 +0.6**
baz=50
V49A McMinnville 80.33 308 P **P 04 25 09.1 +0.3**
baz=50
YSS Yuzh-Sakhalins 80.81 36⇓*e*P **P 04 25 10.4 -0.7**
YSS *e* 04 25 18.1
YSS pmax pmax
comp=Z,20nm,1.0s
SUA Susitna One 80.82 356 IAmb IAmb 04 25 14.4
comp=Z,8.1nm,0.9s
ECSD EROS Data Cent 81.11 319 P **P 04 25 13.1 +0.3**
ECSD IAmb IAmb 04 25 21.7
comp=Z,5.3nm,0.8s
ECSD EROS Data Cent 81.11 319 P **P 04 25 13.5 +0.6**
baz=45
PETK Petropavlovsk- 81.95 25 LR LR 05 06 03.3
comp=Z,310nm,18.5s,baz=304,slow=39
CCM Cathedral Cave 82.06 312 P **P 04 25 18.7 +0.7**

CCM				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CCM	**Cathedral Cave**	**82.06**	**312**	P	**P**	**04 25 18.7**	**+0.7**
CCM				IAmb	IAmb	04 25 22.7	
	comp=Z,5.8nm,0.7s						
CCM	**Cathedral Cave**	**82.06**	**312**	P	**P**	**04 25 18.4**	**+0.4**
	baz=48						
PDSI	**Padang**	**82.22**	**97**	P	**P**	**04 25 16.8**	**-2.3**
LRAL	**Lakeview Retre**	**82.78**	**306**	P	**P**	**04 25 22.4**	**+0.6**
	baz=49						
BDFB	**Brasilia**	**83.73**	**245**	P	**P**	**04 25 26.9**	**0.0**
	comp=Z,3.5nm,0.8s,baz=69,slow=8.6,SNR=2.0						
BDFB				LR	LR	05 04 09.8	
	comp=Z,371nm,18.9s,baz=78,slow=37						
BDFB	**Brasilia**	**83.73**	**245**	IAmb	IAmb	04 25 31.7	
	comp=Z,3.1nm,0.7s						
W41B	**Gary Mavity, V**	**84.60**	**311**	P	**P**	**04 25 32.4**	**+1.3**
	baz=47						
WALA	**Waterton Lakes**	**84.71**	**332**	IAmb	IAmb	04 25 34.4	
	comp=Z,5.0nm,0.7s						
KSI	**Kapahiang**	**85.58**	**98**	P	**P**	**04 25 39.7**	**+3.4**
MIAR	**Mount Ida**	**85.83**	**311**	IAmb	IAmb	04 25 46.4	
	comp=Z,6.3nm,0.8s						
MIAR	**Mount Ida**	**85.83**	**311**	P	**P**	**04 25 38.7**	**+1.4**
	baz=46						
JTMT	**Jette**	**85.93**	**332**	P	**P**	**04 25 38.8**	**+1.1**
MJAR	**Matsushiro Arr**	**85.94**	**46**	P	**P**	**04 25 37.8**	**0.0**
	comp=Z,1.8nm,0.8s,baz=357,slow=4.9,SNR=4.1						
MJAR				LR	LR	05 07 20.7	
	comp=Z,108nm,19.4s,baz=235,slow=38						
MJAR	**Matsushiro Arr**	**85.94**	**46**	IAmb	IAmb	04 25 46.7	
	comp=Z,2.0nm,0.9s						
RLMT	**Red Lodge**	**86.05**	**327**	P	**P**	**04 25 39.8**	**+1.4**
	baz=37						
TUL1	**Leonard**	**86.17**	**313**	P	**P**	**04 25 40.3**	**+1.3**
	baz=45						
NEW	**Newport**	**86.53**	**333**	IAmb	IAmb	04 25 54.5	
	comp=Z,7.0nm,1.1s						
NEW	**Newport**	**86.53**	**333**	P	**P**	**04 25 41.5**	**+0.9**
	baz=32						
MSO	**Missoula**	**86.56**	**331**	P	**P**	**04 25 40.8**	**0.0**
	baz=34						
PDAR	**Pinedale Array**	**88.05**	**326**	P	**P**	**04 25 48.0**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=70,slow=4.9,SNR=4.3						
PDAR				LR	LR	05 07 03.6	
	comp=Z,262nm,19.9s,baz=37,slow=37						
WMOK	**Wichita Mounta**	**88.71**	**314**	P	**P**	**04 25 52.2**	**+0.9**
	baz=43						
O20A	**White River Ci**	**89.54**	**324**	IAmb	IAmb	04 26 04.3	
	comp=Z,3.1nm,0.7s						
O20A	**White River Ci**	**89.54**	**324**	P	**P**	**04 25 55.8**	**+0.5**
	baz=38						
RDMU	**Red Mountain**	**89.81**	**325**	P	**P**	**04 25 55.5**	**-1.0**
SDCO	**Great Sand Dun**	**90.07**	**320**	P	**P**	**04 25 58.5**	**+0.6**
	baz=40						
TNG	**Tangerang**	**90.30**	**98**	P	P	04 26 08.2	+9.3
ABTX	**Abilene, Hawle**	**90.74**	**313**	IAmb	IAmb	04 26 04.1	
	comp=Z,6.9nm,1.1s						
ROSC	**El Rosal**	**91.27**	**277**	LR	LR	05 03 30.4	
	comp=Z,109nm,20.9s,baz=43,slow=33						
SRU	**San Rafael Swe**	**91.42**	**324**	P	**P**	**04 26 04.4**	**+0.4**
SRU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SRU	**San Rafael Swe**	**91.42**	**324**	P	**P**	**04 26 04.4**	**+0.4**
DUG	**Dugway, Tooele**	**91.57**	**326**	P	**P**	**04 26 04.7**	**+0.1**
	baz=35						
MSU	**Marysvale**	**92.66**	**325**	P	**P**	**04 26 09.5**	**-0.3**
MSU	**Marysvale**	**92.66**	**325**	P	**P**	**04 26 09.5**	**-0.3**
NVAR	**Mina Array Bea**	**95.36**	**329**	P	**P**	**04 26 22.4**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=35,slow=2.5,SNR=2.7						
NVAR				LR	LR	05 12 39.1	
	comp=Z,373nm,19.0s,baz=12,slow=38						
TXAR	**Lajitas Array**	**95.49**	**314**	P	**P**	**04 26 23.5**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=74,slow=4.9,SNR=5.2						
TXAR				LR	LR	05 10 35.7	
	comp=Z,98nm,18.1s,baz=0.0,slow=36						
CPUP	**Villa Florida**	**97.24**	**242**	LR	LR	05 12 16.3	
	comp=Z,236nm,18.1s,baz=51,slow=37						
LPAZ	**La Paz**	**99.15**	**257**	LR	LR	05 12 50.7	
	comp=Z,66nm,19.5s,baz=58,slow=36						
WRA	**Warramunga Arr**	**120.13**	**93**	PKP	**PKPdf**	**04 31 47.2**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=301,slow=2.0,SNR=4.7						
ASAR	**Alice Springs**	**121.74**	**97**	PKP	**PKPdf**	**04 31 51.3**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=308,slow=1.4,SNR=9.0						

IDC 11 04:24:18.4±2.4, 16°62S×174°12W, h0 km, mb3.5/3, mb1 3.8/4, mb1mx3.6/21, mbtmp3.5/4, ML3.5/1, Error ellipse: s-maj=137.9km s-min=23.7km az=147.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.52**	**40**	Pn	Pn	04 25 13.4	-1.0
	4.5nm,0.3s,baz=219,slow=19,SNR=2.4						
AFI				Sn	Sn	04 25 53.5	-3.3
	12nm,0.3s,baz=130,slow=20,SNR=5.7						
WRA	**Warramunga Arr**	**48.91**	**258**	P	P	04 33 06.3	-0.3
	0.6nm,0.9s,baz=97,slow=7.5,SNR=3.3						
ASAR	**Alice Springs**	**49.09**	**253**	P	P	04 33 07.8	-0.2
	0.6nm,0.5s,baz=92,slow=8.4,SNR=10.0						
NVAR	**Mina Array Bea**	**75.69**	**42**	P	P	04 36 06.4	+0.3
	0.1nm,0.4s,baz=236,slow=11,SNR=2.8						
GERES	**GERESS Array B**	**147.24**	**350**	PKPbc	PKPbc	04 44 03.3	-0.6
	0.2nm,0.5s,baz=1.4,slow=3.9,SNR=3.2						

IDC 11 05:10:19.4±1.4, 10°20N×84°51W, h70 km±12 km, mb3.1/3, mb1 3.6/5, mb1mx3.3/33, mbtmp3.7/5, Error ellipse: s-maj=41.0km s-min=21.9km az=54.0
INET 11 05:10:20.9, 10°20N×84°46W, h69 km, ML3.9
NEIC 11 05:10:20.2±1.1, 10°19N±0.09×84°54W±0.05, h82 km±6 km, Mwr4.2(UCR), Error ellipse: s-maj=13.8km s-min=5.4km az=206.0
UCR 11 05:10:21.0±1.5, 10°18N×84°56W, h76 km±4 km, MD3.8, ML3.8, mb4.2(NEIC)
SNET 11 05:10:26.6±0.9, 10°31N×84°91W, h33 km±999 km, ML4.1
ISC 11 05:10:20.4±0.7, 10°20N±0.05×84°54W±0.05, h82 km±5 km, n63, σ1§43/86, mb3.2/3, 6D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRA1	**San Ramn**	**0.13**	**154**	*eP*	**Pn**	**05 10 32.2**	**-0.2**
FORC	**Fortuna**	**0.29**	**333**	*i*/*P*	**Pn**	**05 10 33.0**	**+0.2**
FORC				*i*	**Sn**	**05 10 42.4**	**+0.3**
CASO	**Castillo**	**0.30**	**320**	*i*/*P*	**Pn**	**05 10 33.0**	**+0.1**
ARE1	**Arenal 1**	**0.31**	**325**	*eP*	**Pn**	**05 10 33.3**	**+0.3**
CEDE	**Laguna Cedeo**	**0.33**	**330**	*eP*	**Pn**	**05 10 33.3**	**+0.2**
JTS	**Las Juntas de**	**0.42**	**282**	P	**Pn**	**05 10 33.2**	**-0.4**
	461nm,0.3s,baz=106,slow=4.9,SNR=5843						
JTS				S	**Sn**	**05 10 43.2**	**-0.3**
	1µm,0.3s,baz=53,slow=20,SNR=58						
JTS	**Las Juntas de**	**0.42**	**282**	*eP*	**Pn**	**05 10 33.3**	**-0.4**
JTS	**Las Juntas de**	**0.42**	**282**		**Pn**	**05 10 33.4**	**-0.3**
JTS				Sn	**Sn**	**05 10 43.5**	**-0.1**
HDC	**Heredia**	**0.46**	**116**	*eP*	**Pn**	**05 10 34.2**	**+0.1**
HDC				*eS*	**Sn**	**05 10 45.0**	**+0.7**
HDC	**Heredia**	**0.46**	**116**		**Pn**	**05 10 34.0**	**-0.2**
HDC				Sn	**Sn**	**05 10 44.7**	**+0.3**
SJS	**Escuela Geolog**	**0.54**	**119**	*eP*	**Pn**	**05 10 35.0**	**+0.2**
AMAS	**Alto Masis**	**0.60**	**312**	*i*/*P*	**Pn**	**05 10 35.2**	**-0.2**
AMAS				*i*	**Sn**	**05 10 46.5**	**0.0**
PTEN	**Parque Tenorio**	**0.67**	**319**	*i*/*P*	**Pn**	**05 10 36.1**	**+0.1**
LCR2	**La Lucha 2**	**0.70**	**131**	*eP*	**Pn**	**05 10 36.5**	**+0.1**
CUI	**Cuipilapa**	**0.76**	**306**	*i P*	**Pn**	**05 10 37.0**	**+0.1**
CUI				*i*	**Sn**	**05 10 49.4**	**+0.2**
CVTR	**Volcan Turrial**	**0.79**	**103**	*eP*	**Pn**	**05 10 37.6**	**+0.1**
COLC	**Colonia**	**0.80**	**305**	*i P*	**Pn**	**05 10 37.3**	**0.0**
COLC				*i*	**Sn**	**05 10 49.8**	**-0.1**
HORNC	**Hornillas**	**0.81**	**309**	*i P*	**Pn**	**05 10 37.4**	**0.0**
HORNC				*i*	**Sn**	**05 10 50.0**	**-0.1**
GUAB	**Guayabo de Bag**	**0.84**	**306**	*i P*	**Pn**	**05 10 37.7**	**-0.1**
GUAB				*i*	**Sn**	**05 10 51.0**	**+0.2**
LIM1	**Limonal**	**0.86**	**305**	*i*/*P*	**Pn**	**05 10 37.9**	**-0.1**
GPS3	**Bodega del ICE**	**0.98**	**304**	*i P*	**Pn**	**05 10 39.4**	**0.0**
BUAI	**Buenos Aires**	**1.03**	**311**	*i*/*P*	**Pn**	**05 10 39.9**	**-0.1**
BUEV	**Buena Vista**	**1.04**	**305**	*i P*	**Pn**	**05 10 40.1**	**0.0**
GB1A	**Borinquen Arri**	**1.04**	**306**	*eP*	**Pn**	**05 10 40.2**	**0.0**
EDDO	**Dominical**	**1.15**	**145**	*eP*	**Pn**	**05 10 41.6**	**+0.2**
EDDO				*eS*	**Sn**	**05 10 58.2**	**+1.1**
EDLM	**Las Mercedes**	**1.31**	**134**	*eP*	**Pn**	**05 10 43.7**	**+0.3**
EDLM				*eS*	**Sn**	**05 11 01.8**	**+1.0**
DRK0	**Durika**	**1.58**	**126**	*eP*	**Pn**	**05 10 47.0**	**0.0**
EDBA	**Buenos Aires**	**1.62**	**130**	*eP*	**Pn**	**05 10 47.4**	**0.0**
EDBA				*eS*	**Sn**	**05 11 07.9**	**+0.2**
EDPN	**Palmar Norte**	**1.63**	**139**	*eP*	**Pn**	**05 10 48.2**	**+0.7**
EDPN				*eS*	**Sn**	**05 11 08.9**	**+0.9**
ACON	**Acoyapa**	**1.86**	**340**	*eP*	**Pn**	**05 10 50.6**	**+0.1**
ACON	**Acoyapa**	**1.86**	**340**		**Pn**	**05 10 50.6**	**+0.1**
ACON				Sn	**Sn**	**05 11 13.3**	**-0.1**
ESPN	**Las Esperanzas**	**1.99**	**7**	*eP*	**Pn**	**05 10 52.4**	**+0.2**
ESPN	**Las Esperanzas**	**1.99**	**7**		**Pn**	**05 10 52.3**	**0.0**
ESPN				Sn	**Sn**	**05 11 16.4**	**-0.1**
BRU2	**Volcan**	**2.30**	**127**	*eP*	**Pn**	**05 10 56.7**	**+0.3**
ESTN	**Estel**	**3.39**	**328**		**Pn**	**05 11 11.2**	**0.0**
ESTN				Sn	**Sn**	**05 11 52.5**	**+2.0**
LCND	**La Caada**	**4.51**	**314**	*eP*	**Pn**	**05 11 28.2**	**+2.0**
LCND				IAML		05 12 19.7	
	comp=Z,133nm,0.5s						
LCND	**La Caada**	**4.51**	**314**	*eP*	**Pn**	**05 11 28.2**	**+2.0**
LCND				*eS*	**Sn**	**05 12 16.2**	**-1.3**
LCND				IAML		05 12 19.7	
	comp=Z,133nm,0.5s						
TGUH	**Tegucigalpa,Un**	**4.67**	**325**	Pn	**Pn**	**05 11 29.6**	**+1.0**
JUCU	**Jucuarn**	**4.73**	**310**	*eP*	**Pn**	**05 11 31.1**	**+1.7**
JUCU				*eS*	**Sn**	**05 12 22.2**	**-0.9**
JUCU				IAML		05 12 26.8	
	comp=Z,144nm,0.3s						
BCIP	**Isla Barro Col**	**4.75**	**102**	Pn	**Pn**	**05 11 29.7**	**+0.2**
PACA	**Pacayal**	**4.93**	**312**	*eP*	**Pn**	**05 11 35.0**	**+2.9**
PACA				IAML		05 11 38.3	
	comp=Z,547nm,0.3s						
PACA				*eS*	**Sn**	**05 12 28.3**	**+0.4**
PACA	**Pacayal**	**4.93**	**312**	*eP*	**Pn**	**05 11 35.0**	**+2.9**
PACA				IAML		05 11 38.3	
	comp=Z,547nm,0.3s						
PACA				*eS*	**Sn**	**05 12 28.3**	**+0.4**
TECA	**Tecapa**	**5.08**	**311**	*eP*	**Pn**	**05 11 37.1**	**+2.9**
TECA	**Tecapa**	**5.08**	**311**	*eP*	**Pn**	**05 11 37.1**	**+2.9**
COEB	**Comit de Eme**	**5.10**	**310**	*eP*	**Pn**	**05 11 37.2**	**+2.7**
COEB				IAML		05 11 38.5	
	comp=Z,135nm,0.3s						
LFRS	**El Faro**	**5.58**	**308**	*eP*	**Pn**	**05 11 43.6**	**+2.6**
LBRS	**Las Brisas**	**5.64**	**309**	*eP*	**Pn**	**05 11 44.6**	**+2.8**
LFU	**La Fuente**	**5.70**	**309**	*eP*	**Pn**	**05 11 45.2**	**+2.7**
LFU	**La Fuente**	**5.70**	**309**	*eP*	**Pn**	**05 11 45.2**	**+2.7**
SNET	**Serv Nac Est T**	**5.75**	**307**		**Pn**	**05 11 46.0**	**+2.7**
BOQS	**Boqueron**	**5.82**	**308**	*eP*	**Pn**	**05 11 46.8**	**+2.5**
SBLS	**San Blas**	**6.15**	**306**	*eP*	**Pn**	**05 11 51.3**	**+2.4**
SBLS	**San Blas**	**6.15**	**306**	*eP*	**Pn**	**05 11 51.3**	**+2.4**
APG	**El Apazote**	**7.50**	**310**	P	**Pn**	**05 12 10.5**	**+3.2**
	comp=Z,1.8nm,0.3s,baz=114,slow=8.6,SNR=17						
CMIG	**Matias Romero**	**12.16**	**305**	P	**Pn**	**05 13 10.5**	**-0.2**
	comp=Z,1.1nm,0.3s,baz=134,slow=9.5,SNR=21						
SDV	**Santo Domingo**	**13.78**	**94**	P	**Pn**	**05 13 30.4**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=329,slow=12,SNR=2.5						
SDV	**Santo Domingo**	**13.78**	**94**	P	**Pn**	**05 13 35.0**	**+2.7**
TLIG	**Tlapa**	**15.45**	**300**	P	**P**	**05 13 57.2**	**+0.5**
TXAR	**Lajitas Array**	**26.12**	**319**	P	**P**	**05 15 46.9**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=150,slow=9.9,SNR=6.1						
TXAR				pP	**pP**	**05 16 06.2**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=143,slow=9.1,SNR=5.0						
PLCA	**Paso Flores**	**52.30**	**167**	P	**P**	**05 19 24.0**	**+0.2**
	comp=Z,2.5nm,0.9s,baz=2.3,slow=6.5,SNR=4.8						
YKA	**Yellowknife Ar**	**56.53**	**344**	P	**P**	**05 19 54.4**	**+0.4**
	comp=Z,0.1nm,0.6s,baz=138,slow=7.3						
YKA				pP	**pP**	**05 20 14.3**	**-0.3**
	comp=Z,0.1nm,0.7s,baz=141,slow=6.9,SNR=5.0						
HHC	**Hu-ho-hao-te**	**127.07**	**345**	*eP*	**PKPdf**	**05 29 12.4**	**-3.3**
LZH	**Lanzhou**	**133.29**	**351**	*e*PKP	**PKPdf**	**05 29 23.6**	**-4.1**
LZH				pPKP	pPKPdf	05 29 49.9	-1.0
LZH				sPKP		05 30 04.0	

NEIC 11 05:15:06.2±0.9, 40°29N±0.04×124°66W±0.05, h29 km±7 km, Error ellipse: s-maj=6.0km s-min=5.3km az=76.0
NCEDC 11 05:15:08.3±3.4, 40°30N±0.04×124°52W±0.06, h19 km±6 km, Md2.8/64, Error ellipse: s-maj=6.5km s-min=5.1km az=81.0
ANF 11 05:15:08.6±1.1, 40°47N×124°40W, h20 km, ML2.4/3, Error ellipse: s-maj=9.6km s-min=4.6km az=61.0
ISC 11 05:15:05.7±1.6, 40°29N±0.04×124°71W±0.08, h31 km±9 km, n69, σ0§93/78, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.34**	**56**		**Pn**	**05 15 14.5**	**-0.2**
KCTM					**Sb**	**05 15 19.7**	**+0.3**
KSMM	**Slide Mountain**	**0.42**	**103**		**Pb**	**05 15 15.1**	**0.0**
KMPM	**Mount Pierce**	**0.47**	**73**		**Pb**	**05 15 15.9**	**+0.1**
KMPM					**Sb**	**05 15 21.9**	**-0.8**
KCRM	**Chalk Rock**	**0.70**	**78**		**Pn**	**05 15 19.4**	**-0.1**
JCC	**Jacoby Creek,**	**0.74**	**44**		**Pn**	**05 15 19.5**	**-0.6**
KMRM	**Mail Ridge**	**0.77**	**94**		**Pn**	**05 15 20.7**	**+0.2**
KBSM	**Bell Springs**	**0.93**	**113**		**Pn**	**05 15 23.0**	**+0.2**
KCSM	**Cold Springs**	**0.95**	**74**		**Pn**	**05 15 23.2**	**+0.1**
KHMM	**Horse Mountain**	**0.95**	**51**		**Pn**	**05 15 23.0**	**-0.1**
KRPM	**Rodgers**	**1.02**	**31**		**Pn**	**05 15 24.1**	**+0.1**
KCPM	**Cahto Peak**	**1.05**	**124**		**Pn**	**05 15 24.7**	**+0.3**
KIPM	**Iron Peak**	**1.06**	**116**		**Pn**	**05 15 24.9**	**+0.4**
KFPM	**Farley Peak**	**1.18**	**123**		**Pn**	**05 15 26.5**	**+0.3**
KHBM	**Hayfork Bally**	**1.20**	**71**		**Pn**	**05 15 26.4**	**-0.2**
KBNM	**Bluenose Ridge**	**1.23**	**108**		**Pn**	**05 15 27.3**	**+0.5**
GTC	**Three Chop Rid**	**1.25**	**134**		**Pn**	**05 15 27.6**	**+0.5**
GNAM	**Navarro Ridge**	**1.37**	**142**		**Pn**	**05 15 29.3**	**+0.6**
KOMM	**Orleans Mounta**	**1.38**	**44**		**Pn**	**05 15 29.1**	**+0.2**
KRMB	**Red Mountain**	**1.38**	**26**	Pn	**Pn**	**05 15 29.1**	**+0.1**
LBPM	**Beegum Peak**	**1.40**	**88**		**Pn**	**05 15 29.4**	**+0.2**
O02D	**Mt. Diablo Mer**	**1.48**	**94**		**Pn**	**05 15 30.9**	**+0.7**
O02D	**Mt. Diablo Mer**	**1.48**	**94**	P	**Pn**	**05 15 30.9**	**+0.7**
	baz=276,SNR=107						
O02D				S	**Sn**	**05 15 48.8**	**+0.3**
	baz=276						
GHOM	**Hamilton Openi**	**1.53**	**143**		**Pn**	**05 15 31.6**	**+0.6**
LGPM	**Granite Peak**	**1.56**	**66**		**Pn**	**05 15 31.6**	**+0.1**
GHMM	**Hull Mountain**	**1.58**	**119**		**Pn**	**05 15 32.0**	**+0.3**
GROM	**Round Mountain**	**1.61**	**103**		**Pn**	**05 15 33.5**	**+1.4**
GVV	**Valley View**	**1.64**	**107**		**Pn**	**05 15 33.0**	**+0.4**
GASB	**Alder Springs**	**1.66**	**112**		**Pn**	**05 15 33.0**	**+0.3**
KSXB	**Camp Six Broad**	**1.67**	**22**		**Pn**	**05 15 33.3**	**+0.4**
N02D	**Trinity Center**	**1.68**	**65**		**Pn**	**05 15 33.3**	**+0.3**
N02D	**Trinity Center**	**1.68**	**65**	P	**Pn**	**05 15 33.1**	**+0.1**
	baz=244,SNR=181						
N02D				S	**Sn**	**05 15 51.9**	**-1.5**
	baz=244						
WDC	**Whiskeytown Da**	**1.68**	**79**		**Pn**	**05 15 33.0**	**0.0**
GGUM	**Gualala**	**1.71**	**146**		**Pn**	**05 15 33.9**	**+0.5**
LBKM	**Bonanza King**	**1.75**	**62**		**Pn**	**05 15 34.5**	**+0.4**
GSNM	**Snow Mountain**	**1.78**	**138**		**Pn**	**05 15 35.2**	**+0.8**
M02C	**Callahan**	**1.79**	**51**		**Pn**	**05 15 35.1**	**+0.5**
M02C	**Callahan**	**1.79**	**51**	P	**Pn**	**05 15 34.8**	**+0.2**
	baz=230,SNR=270						
GHLM	**Highland Sprin**	**1.80**	**133**		**Pn**	**05 15 35.3**	**+0.5**
HOPS	**Hopland Field**	**1.81**	**135**	Pn	**Pn**	**05 15 35.4**	**+0.6**
GDCM	**Dry Creek**	**1.90**	**143**		**Pn**	**05 15 37.3**	**+1.3**
KTRM	**Thompson Ridge**	**1.91**	**31**		**Pn**	**05 15 36.9**	**+0.6**
LTCM	**Tuscan Springs**	**1.98**	**91**		**Pn**	**05 15 38.5**	**+1.3**
L02E	**Cave Junction**	**2.05**	**24**	P	**Pn**	**05 15 38.9**	**+0.8**
	baz=201,SNR=144						
L02E				S	**Sn**	**05 16 02.4**	**-0.2**
	baz=201						
LAMM	**Antelope Mount**	**2.06**	**49**		**Pn**	**05 15 39.1**	**+0.7**
YBH	**Yreka Blue Hor**	**2.09**	**46**		**Pn**	**05 15 38.5**	**-0.2**
LSHM	**Sage Hen Hill**	**2.10**	**75**		**Pn**	**05 15 39.6**	**+0.9**
FTR	**Fort Ross**	**2.13**	**145**		**Pn**	**05 15 40.0**	**+0.8**
LGBM	**Gray Butte**	**2.19**	**60**		**Pn**	**05 15 41.3**	**+1.2**
M03C	**McCloud**	**2.20**	**62**		**Pn**	**05 15 41.6**	**+1.4**
O03E	**Paynes Creek**	**2.23**	**89**		**Pn**	**05 15 40.7**	**+0.1**
O03E	**Paynes Creek**	**2.23**	**89**	P	**Pn**	**05 15 40.6**	**+0.1**
	baz=271,SNR=28						
LMPM	**Military Pass**	**2.28**	**57**		**Pn**	**05 15 42.9**	**+1.6**
LHEM	**Herd Peak**	**2.32**	**54**		**Pn**	**05 15 43.4**	**+1.5**
B040	**Montague**	**2.32**	**48**		**Pn**	**05 15 43.1**	**+1.3**
LBFM	**Black Fox Moun**	**2.39**	**63**		**Pn**	**05 15 44.3**	**+1.4**
MGL	**Magalia**	**2.47**	**100**		**Pn**	**05 15 43.9**	**+0.1**
LRDM	**Redding Peak**	**2.49**	**85**		**Pn**	**05 15 45.1**	**+1.0**
HATC	**Hat Creek Radi**	**2.53**	**77**		**Pn**	**05 15 46.1**	**+1.3**
K02D	**Willamette Mer**	**2.53**	**18**	P	**Pn**	**05 15 46.1**	**+1.3**
	baz=195,SNR=21						
K02D				S	**Sn**	**05 16 13.5**	**-1.1**
	baz=195						
ORV	**Oroville**	**2.58**	**105**		**Pn**	**05 15 45.5**	**+0.2**
LTIM	**Timbered Crate**	**2.61**	**69**		**Pn**	**05 15 46.6**	**+0.9**
LBCM	**Butte Creek Ri**	**2.62**	**77**		**Pn**	**05 15 47.0**	**+0.9**
L04D	**Klamath Falls**	**2.65**	**42**		**Pn**	**05 15 48.7**	**+2.2**
L04D	**Klamath Falls**	**2.65**	**42**	Pb	**Pn**	**05 15 48.8**	**+2.4**
	baz=222						
L04D				Sb	**Sn**	**05 16 20.1**	**+2.5**
	baz=222						
HUMO	**Hull Mountain**	**2.67**	**29**	Pn	**Pn**	**05 15 47.1**	**+0.5**
HUMO					**Sn**	**05 16 15.7**	**-2.2**
LASM	**Arnica Sink**	**2.71**	**60**		**Pn**	**05 15 48.3**	**+0.9**
CPIM	**Pinole Ridge**	**3.00**	**139**		**Pb**	**05 15 57.0**	**-1.5**
BEKR	**Beckworth**	**3.37**	**96**		**Pn**	**05 15 57.6**	**+1.3**
BEKR					**Sn**	**05 16 35.8**	**+0.5**
HAST	**Hastings Reser**	**4.62**	**146**		**Pn**	**05 16 13.8**	**+0.4**

IDC 11 05:18:00.5±1.3, 10°89S×166°66E, h0 km, mb3.9/7, mb1 4.0/8, mb1mx3.8/29, mbtmp3.8/8, ML3.3/1, MS3.7/1, Ms1 3.7/1, ms1mx2.7/32, Error ellipse: s-maj=52.4km s-min=22.4km az=129.0
NEIC 11 05:18:02.5±2.8, 10°85S±0.08×166°7E±0°1, h10 km±1 km, mb4.5/7, Error ellipse: s-maj=23.0km s-min=11.4km az=294.0
ISC 11 05:18:02.0±0.7, 10°9S±0°1×166°7E±0°1, h10 km, n19, σ1§24/20, mb4.0/10, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.84**	**282**	Pn	**Pn**	**05 19 43.5**	**+1.0**
DZM	**Mont Dzumac**	**11.12**	**181**	Pn	**Pn**	**05 20 40.8**	**-0.5**
	0.2nm,0.3s,baz=360,slow=19,SNR=2.4						
DZM				LR	LR	05 24 30.4	
	comp=Z,327nm,18.0s,baz=37,slow=35						
DZM	**Mont Dzumac**	**11.12**	**181**		**Pn**	**05 20 43.9**	**+2.6**
CTA	**Charters Tower**	**21.73**	**243**	P	**P**	**05 22 54.5**	**+0.8**
	5.2nm,0.8s,baz=73,slow=14,SNR=3.6						
ARMA	**Armidale**	**23.98**	**214**	P	**P**	**05 23 17.4**	**+0.4**
ARMA				IAmb	IAmb	05 23 30.5	
	comp=Z,15nm,1.1s						
STKA	**Stephens Creek**	**31.23**	**224**	P	**P**	**05 24 20.9**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=24,slow=10.0,SNR=4.4						
STKA	**Stephens Creek**	**31.23**	**224**	P	**P**	**05 24 21.3**	**-0.5**
WRA	**Warramunga Arr**	**32.45**	**250**	P	**P**	**05 24 31.8**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=84,slow=8.9,SNR=3.5						
WRA	**Warramunga Arr**	**32.45**	**250**	P	**P**	**05 24 31.0**	**-1.8**
ASAR	**Alice Springs**	**33.73**	**244**	P	**P**	**05 24 42.2**	**-1.8**
	comp=Z,1.0nm,0.8s,baz=75,slow=8.6,SNR=10						
ASAR				PcP	**PcP**	**05 27 24.5**	**+0.8**
	comp=Z,0.5nm,0.9s,baz=104,slow=2.4,SNR=3.1						
QSPA	**South Pole Qui**	**79.11**	**180**	P	**P**	**05 30 05.8**	**-0.9**
QSPA				IAmb	IAmb	05 30 12.1	
	comp=Z,4.7nm,1.1s						
ILAR	**Eielson Array**	**83.06**	**18**	P	**P**	**05 30 27.8**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=227,slow=5.9,SNR=15						
ILAR	**Eielson Array**	**83.06**	**18**	P	**P**	**05 30 28.7**	**+1.3**
SCRK	**Sand Creek**	**83.44**	**20**	P	**P**	**05 30 31.3**	**+1.7**
SCRK				IAmb	IAmb	05 30 37.5	
	comp=Z,4.1nm,1.0s						
YMP	**Mirror Lake Pl**	**92.73**	**45**	P	**P**	**05 31 13.8**	**-1.3**
ZAA0	**Zalesovo Array**	**94.00**	**324**	P	**P**	**05 31 20.5**	**+0.2**
MKAR	**Makanchi Array**	**94.08**	**317**	P	**P**	**05 31 20.7**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=99,slow=4.5,SNR=2.5						
YKA	**Y

MAKA				Sn		Sn	05 23 35.6	-3.3	
HVAR	**Hvar**	**5.84**	**331**	*i* Pn		**Pn**	**05 22 35.0**	**-0.1**	
ZIRJ	**Zirje**	**6.56**	**329**	*e*Pn		**Pn**	**05 22 44.0**	**-0.9**	
KIJV	**Kijevo**	**6.57**	**334**	*e*Pn		**Pn**	**05 22 45.3**	**+0.2**	
KIJV				Sn		Sn	05 23 57.9	-1.8	
MORI	**Morici**	**6.71**	**330**	*i* Pn		**Pn**	**05 22 46.9**	**-0.1**	
DUGI	**Dugi Otok**	**7.08**	**327**	*i* Pn		**Pn**	**05 22 54.6**	**+2.5**	
UDBI	**Udbina**	**7.25**	**333**	*e*Pn		**Pn**	**05 22 55.3**	**+0.8**	
NVLJ	**Novalja**	**7.63**	**329**	*e*Pn		**Pn**	**05 22 60.0**	**+0.4**	
SOKA	**Soboth** comp=N,0.3nm,0.2s	**9.39**	**337**	*e*Pn		**Pn**	**05 23 23.3**	**-0.5**	
OBKA	**Obir** comp=N,0.7nm,0.2s	**9.40**	**335**	*i* Pn		**Pn**	**05 23 24.9**	**+0.9**	
OBKA	comp=N,1.1nm,0.5s			*e*Sn		**Sn**	**05 25 06.7**	**-2.5**	
ARSA	**Arzberg** comp=N,0.3nm,0.2s	**9.77**	**340**	*e*Pn		**Pn**	**05 23 31.3**	**+2.3**	
MOA	**Molln** comp=N,0.9nm,0.3s	**10.67**	**337**	*e*Pn		**Pn**	**05 23 42.3**	**+1.0**	

IDC 11 05:30:29.5±1.5, 2°23S×136°64E, h0km, mb3.3/2, mb1 3.7/4, mb1mx3.5/30, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=39.1km s-min=28.0km az=74.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura** 3.5nm,0.3s,baz=248,slow=11,SNR=14	**4.08**	**94**	Pn	Pn	05 31 33.2	+0.1
JAY	4.6nm,0.3s,baz=119,slow=23,SNR=6.8			Sn	Sn	05 32 18.9	-2.8
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=8.8,slow=12,SNR=6.6	**17.75**	**187**	P	Pn	05 34 38.2	-0.1
ASAR	**Alice Springs** 0.7nm,0.6s,baz=6.9,slow=11,SNR=12	**21.48**	**187**	P	P	05 35 19.6	-0.3
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=123,slow=7.7,SNR=3.2	**68.15**	**323**	P	P	05 41 31.8	+0.2

*IDC **11** 05:33:02.4±1.1, 57°12S×147°45E, h0km, mb4.1/7, mb1 4.3/7, mb1mx4.1/30, mbtmp4.1/7, MS3.9/15, Ms1 3.9/15, ms1mx3.9/18, Error ellipse: s-maj=89.1km s-min=18.1km az=78.0*
*NEIC **11** 05:33:04.2±2.4, 57°04S±0°.08×148°.1E±0°.3, h14km±5km, mb4.6/11, Error ellipse: s-maj=27.8km s-min=8.6km az=72.0*
*GCMT **11** 05:33:07.2±0.3, 57°.02S±0°.01×147°.59E±0°.04, h12km, MW4.8/88, Moment Tensor Solution. s16,c18; s88,c123; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.08±.08; Mθθ0.98±.06; Mφφ-1.05±.08; Mrθ-0.12±.20; Mrφ-1.72±.05; Mθφ-0.75±.21; Best double couple: Mo2.12600×10¹⁶ NP1:ϕs344.00000°,δ84.00000°,λ-18.00000°. NP2: ϕs344.00000°,δ84.00000°,λ-174.00000°. Principal axes: T 1.9990, Plg8.0000°, Azm31.0000°; N 0.2570, Plg71.0000°, Azm146.0000°; P -2.2530, Plg17.0000°, Azm299.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 05:33:03.6±0.6, 57°.0S±0°.1×148°.4E±0°.2, h10km, n66, σ1.975/47, mb4.4/10, MS3.9/17, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYZ	**Puysegur Point**	**15.64**	**54**	Pn	**Pn**	**05 36 42.5**	**-1.3**
RPZ	**Rata Peaks** comp=Z,761nm,20.7s,baz=222,slow=32	**19.50**	**57**	LR	LR	05 43 37.5	
TOO	**Toolangi** comp=Z,55nm,1.4s	**19.52**	**353**	P	**P**	**05 37 30.4**	**-0.5**
TOO				IAmb	IAmb	05 37 39.8	
VNDA	**Vanda** comp=Z,1.6nm,0.7s,baz=328,slow=11,SNR=5.9	**21.15**	**172**	P	**P**	**05 37 48.8**	**+0.5**
VNDA	comp=Z,447nm,18.1s,baz=344,slow=34			LR	LR	05 45 11.2	
VNDA	**Vanda** comp=Z,16nm,1.5s	**21.15**	**172**	P	**P**	**05 37 49.7**	**+1.4**
VNDA				IAmb	IAmb	05 37 59.0	
STKA	**Stephens Creek** comp=Z,4.6nm,0.9s,baz=162,slow=12,SNR=7.3	**25.54**	**346**	P	**P**	**05 38 33.2**	**+1.0**
STKA	**Stephens Creek** comp=Z,6.7nm,1.5s	**25.54**	**346**	P	**P**	**05 38 35.3**	**+3.1**
STKA				IAmb	IAmb	05 38 38.8	
BBOO	**Buckleboo** comp=Z,32nm,1.1s	**25.62**	**335**	P	**P**	**05 38 34.3**	**+1.4**
BBOO				IAmb	IAmb	05 38 37.7	
URZ	**Urewera** comp=Z,468nm,18.1s,baz=218,slow=36	**26.61**	**58**	LR	LR	05 49 32.2	
FORT	**Forrest**	**29.79**	**323**		**P**	**05 39 10.8**	**+0.5**
H01W1	**Cape Leeuwin H** baz=143,slow=74,SNR=66	**31.95**	**299**	T	T	06 12 47.8	
H01W2	**Cape Leeuwin H** baz=143,slow=74,SNR=74	**31.95**	**299**	T	T	06 12 43.6	
H01W3	**Cape Leeuwin H** baz=143,slow=74,SNR=62	**31.96**	**299**	T	T	06 12 44.4	
QSPA	**South Pole Qui** comp=Z,0.6nm,0.7s,baz=77,slow=4.9,SNR=3.9	**33.12**	**180**	P	**P**	**05 39 38.0**	**-1.5**
QSPA	**South Pole Qui**	**33.12**	**180**	P	**P**	**05 39 38.3**	**-1.2**
ASAR	**Alice Springs** comp=Z,1.1nm,0.9s,baz=165,slow=8.5,SNR=12	**34.92**	**336**	P	**P**	**05 39 53.9**	**-1.4**
ASAR				PcP	**PcP**	**05 42 27.8**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=154,slow=3.2,SNR=5.0						
ASAR	comp=Z,151nm,18.2s,baz=166,slow=36			LR	LR	05 53 42.5	
ASAR	**Alice Springs**	**34.92**	**336**	P	**P**	**05 39 54.5**	**-0.7**
AS31	**Alice Springs**	**34.92**	**336**	P	**P**	**05 39 58.7**	**+3.4**
DZM	**Mont Dzumac** comp=Z,1μm,25.7s	**37.30**	**28**	*e*LR	LR	05 50 33.4	
MAW	**Mawson** comp=Z,428nm,21.6s,baz=68,slow=34	**37.88**	**218**	LR	LR	05 54 20.4	
WRA	**Warramunga Arr** comp=Z,3.5nm,0.6s,baz=167,slow=7.6,SNR=15	**38.43**	**338**	P	**P**	**05 40 24.4**	**-0.8**
WRA	comp=Z,1.0nm,0.8s,baz=194,slow=2.8,SNR=3.5			PcP	**PcP**	**05 42 37.8**	**-0.6**
WRA	comp=Z,100nm,18.8s,baz=160,slow=36			LR	LR	05 56 06.3	
WRA	**Warramunga Arr**	**38.43**	**338**	P	**P**	**05 40 24.6**	**-0.6**
WRAB	**Tennant Creek**	**38.44**	**338**	P	**P**	**05 40 25.4**	**0.0**
WRAB	comp=Z,27nm,1.5s			IAmb	IAmb	05 40 32.4	
PSA00	**Pilbara Seismi**	**41.11**	**317**	P	**P**	**05 40 45.8**	**-1.7**
PSA00	comp=Z,17nm,1.0s			IAmb	IAmb	05 40 51.0	
FITZ	**Fitzroy Crossi** comp=Z,9.0nm,1.0s,baz=172,slow=14,SNR=7.0	**42.39**	**327**	P	**P**	**05 40 58.0**	**0.0**
TBI	**Tubuai** comp=Z,152nm,32.8s	**55.60**	**80**	*e*LR	LR	05 58 44.8	
PPT2	**Papeete2** comp=Z,12nm,26.8s	**60.24**	**76**	*e*LR	LR	06 00 33.9	
PPT	**Papeete** comp=Z,60nm,18.6s,baz=194,slow=33	**60.26**	**76**	LR	LR	06 06 09.6	
H08S2	**Diego Garcia H** baz=147,slow=76,SNR=58	**75.95**	**278**	T	T	07 07 42.2	
H08S1	**Diego Carcia H** baz=147,slow=76,SNR=50	**75.96**	**278**	T	T	07 07 32.2	
H08S3	**Diego Garcia H** baz=147,slow=76,SNR=53	**75.97**	**278**	T	T	07 07 39.4	
PLCA	**Paso Flores** comp=Z,91nm,19.2s,baz=216,slow=31	**77.27**	**151**	LR	LR	06 12 40.2	
BOSA	**Boshof** comp=Z,93nm,18.3s,baz=104,slow=32	**82.21**	**228**	LR	LR	06 17 17.2	
CMAR	**Chiang Mai Arr** comp=Z,1.4nm,0.3s,baz=142,slow=4.6,SNR=2.4	**85.73**	**314**	P	**P**	**05 45 42.5**	**0.0**
CMAR	comp=Z,96nm,21.1s,baz=177,slow=34			LR	LR	06 21 10.0	
CMAR	**Chiang Mai Arr**	**85.73**	**314**	P	**P**	**05 45 42.3**	**-0.2**
MJAR	**Matsushiro Arr** comp=Z,19nm,19.6s,baz=155,slow=35	**93.56**	**352**	LR	LR	06 28 06.8	
CPUP	**Villa Florida** comp=Z,38nm,21.8s,baz=191,slow=32	**94.21**	**157**	LR	LR	06 23 19.0	
LVC	**Limon Verde** comp=Z,33nm,20.1s,baz=202,slow=30	**94.73**	**146**	LR	LR	06 21 05.3	
KSRS	**Korea Array** comp=Z,30nm,19.9s,baz=160,slow=35	**95.66**	**344**	LR	LR	06 28 56.4	
KMBO	**Kilima Mbogo** comp=Z,24nm,20.3s,baz=92,slow=31	**100.44**	**251**	LR	LR	06 25 05.6	
MKAR	**Makanchi Array** comp=Z,0.5nm,0.8s,baz=113,slow=3.3,SNR=3.6	**117.11**	**315**	PKP	**PKPdf**	**05 51 47.4**	**-0.3**
MKAR	**Makanchi Array**	**117.11**	**315**		**PKiKP**	**05 51 50.6**	**+2.8**
ILAR	**Eielson Array** comp=Z,0.8nm,1.1s,baz=227,slow=3.3,SNR=4.2	**130.98**	**31**	PKP	**PKiKP**	**05 52 16.0**	**+1.4**
ILAR	**Eielson Array**	**130.98**	**31**		**PKiKP**	**05 52 15.7**	**+1.1**
YKA	**Yellowknife Ar** comp=Z,0.2nm,0.8s,baz=233,slow=2.3	**140.54**	**46**	PKP	**PKPdf**	**05 52 31.5**	**-0.1**
AKASG	**Malin Array Be**	**144.64**	**286**	PKhKP	**PKPab**	**05 52 34.1**	**-3.8**
	comp=Z,0.4nm,0.5s,baz=99,slow=2.9,SNR=3.5						
AKASG	**Malin Array Be**	**144.64**	**286**		PKPbc	05 52 38.7	+0.7
KEST	**Kesra** comp=Z,6.2nm,1.0s,baz=174,slow=9.0,SNR=3.1	**145.39**	**250**	PKP	**PKPbc**	**05 52 40.5**	**-0.5**
KEST	**Kesra**	**145.39**	**250**		**PKPbc**	**05 52 40.8**	**-0.2**
FCC	**Fort Churchill**	**147.78**	**60**		**PKPbc**	**05 52 48.1**	**+1.0**
SOKA	**Soboth** comp=Z,1.3nm,0.7s	**149.97**	**270**	*e*pPKPbc	**PKiKP**	**05 52 56.5**	**+2.4**
ARSA	**Arzberg** comp=Z,0.8nm,0.4s	**150.04**	**271**	*e*PKiKP	**PKiKP**	**05 52 55.5**	**+1.3**
OBKA	**Obir** comp=Z,0.5nm,0.4s	**150.13**	**269**	*i* PKiKP	**PKiKP**	**05 52 55.4**	**+1.0**
CONA	**Conrad Observa** comp=Z,0.3nm,0.3s	**150.26**	**273**	*i* PKiKP	**PKiKP**	**05 52 57.2**	**+2.5**
FINES	**FINESS Array B** comp=Z,4.3nm,0.8s,baz=114,slow=3.5,SNR=6.8	**150.99**	**303**	PKPbc	**PKPbc**	**05 52 53.2**	**-1.8**
FINES	**FINESS Array B**	**150.99**	**303**		**PKPbc**	**05 52 52.8**	**-2.2**
MOA	**Molln** comp=Z,0.3nm,0.2s	**151.08**	**271**	*e*PKiKP	**PKiKP**	**05 52 57.8**	**+1.5**
KBA	**Koelnbreinsper** comp=Z,0.7nm,0.4s	**151.13**	**269**	*i* PKiKP	**PKiKP**	**05 52 58.4**	**+1.7**
ABTA	**Abfaltersbach** comp=Z,0.7nm,0.3s	**151.39**	**268**	*i* PKiKP	**PKiKP**	**05 52 59.4**	**+2.3**
GERES	**GERESS Array B** comp=Z,1.3nm,0.8s,baz=132,slow=1.5,SNR=8.4	**151.96**	**273**	PKPbc	**PKPbc**	**05 52 57.2**	**-0.7**
GERES	**GERESS Array B**	**151.96**	**273**		**PKPbc**	**05 52 56.9**	**-1.0**
SQTA	**Sankt Quirin** comp=Z,1.3nm,0.3s	**152.39**	**268**	*i* PKiKP	**PKiKP**	**05 53 01.9**	**+2.7**
MOTA	**Moosalm** comp=Z,1.4nm,0.3s	**152.52**	**268**	*i* pPKPbc	**PKiKP**	**05 53 02.9**	**+3.5**
FETA	**Feichten** comp=Z,1.8nm,0.7s	**152.53**	**267**	*i* pPKPbc	**PKiKP**	**05 53 03.1**	**+3.6**
ARCES	**ARCESS Array B** comp=Z,2.2nm,0.8s,baz=86,slow=4.6,SNR=7.3	**152.62**	**320**	PKPbc	**PKPbc**	**05 52 58.1**	**-0.5**
ARCES	**ARCESS Array B**	**152.62**	**320**		**PKPbc**	**05 52 57.7**	**-0.9**

*STR **11** 05:38:20.6±0.9, 47°.7N±2°×7°±°, h0km±6km, MLv1.3/6*
*LDG **11** 05:38:20.4±0.0, 47°.16N×7°.16E, h10km, Md2.1/1, Ml2.0/13, Error ellipse: s-maj=1.0km s-min=0.9km az=119.0*

ZUR 11 05:38:20.3, 47°.15N×7°.16E, h8km±3km, MLh1.4/11, 6C, Error ellipse: s-maj=7.1km s-min=1.0km az=160.0, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOURR	**Bourrignon** 0.1nm,SNR=1.4	**0.25**	**11**	Pg	Pg	05 38 25.8	+0.5
BOURR				Pg	Pg	05 38 25.8	+0.5
BOURR				Sg	Sg	05 38 29.6	+0.9
LOMF	**Lomont**	**0.30**	**312**	Pg	Pg	05 38 26.4	+0.1
LOMF				Sg	Sg	05 38 30.8	+0.5
TORNY	**Torny/Romont** 0.1nm,SNR=1.3	**0.40**	**200**	Pg	Pg	05 38 28.5	+0.3
TORNY				Pg	Pg	05 38 28.5	+0.3
TORNY				Sg	Sg	05 38 34.2	+0.8
BALST	**Balsthal**	**0.41**	**63**	⇑Pg	Pg	05 38 28.7	+0.4
BALST	0.1nm,SNR=1.0			⇑Pg	Pg	05 38 28.7	+0.4
BRANT	**Les Verrieres**	**0.52**	**246**	⇑Pg	Pg	05 38 30.6	+0.3
BRANT	0.1nm,SNR=0.6			⇑Pg	Pg	05 38 30.6	+0.3
ROTHE	**Rothenfluh** 0.1nm,SNR=1.6	**0.61**	**58**	Pg	Pg	05 38 32.6	+0.5
ROTHE				Pg	Pg	05 38 32.6	+0.5
EMMET	**Emmethof** 0.1nm,SNR=2.1	**0.65**	**64**	⇑Pg	Pg	05 38 33.1	+0.3
EMMET				⇑Pg	Pg	05 38 33.1	+0.3
HINF	**Hinteralfeld**	**0.70**	**343**	*e*Pg	Pg	05 38 33.7	0.0
HINF	**Hinteralfeld**	**0.70**	**343**	*e*Pn	Pb	05 38 35.0	+0.3
HINF	6.6nm,0.3s			*e*Sn	Sb	05 38 45.2	+0.8
CABF	**La Chapelle** 2.7nm,0.2s	**0.91**	**234**	*e*Pg	Pg	05 38 37.9	+0.1
CABF				*e*Sg	Sb	05 38 50.5	-0.1
METMA	**Mettma DE** 0.1nm,SNR=1.3	**0.93**	**53**	Pg	Pg	05 38 38.0	-0.1
METMA				Pg	Pg	05 38 38.0	-0.1
KIZ	**Kirchzarten**	**0.96**	**32**	Pg	Pg	05 38 38.6	-0.1
KIZ				Sg	Sg	05 38 50.9	-0.2
HAU	**Haudompre**	**1.01**	**328**	*e*Pg	Pg	05 38 39.5	-0.3
HAU	4.9nm,0.2s			*e*Sg	Sg	05 38 52.1	-0.9
ECH	**Echery**	**1.06**	**0**	Pg	Pb	05 38 41.0	0.0
ECH				Sg	Sg	05 38 53.7	-0.9
OG02	**Monnetier-Morn**	**1.19**	**213**	Pg	Pn	05 38 44.1	+1.0
CDF	**Champ du Feu**	**1.26**	**4**	*e*Pg	Pn	05 38 43.4	-0.9
CDF	1.5nm,0.3s			*e*Sn	Sb	05 38 57.7	-3.1
RSL	**Roselend**	**1.51**	**194**	Pn	Pg	05 38 49.3	+0.1
OG35	**Corcelles**	**1.56**	**225**	Pn	Pg	05 38 49.8	-0.3
LPL	**La Plagne** 0.9nm,0.2s	**1.66**	**190**	*e*Sn	Sn	05 39 08.5	-2.9
LPG	**La Plagne** 1.8nm,0.4s	**1.68**	**190**	*e*P	Pb	05 38 50.9	-0.6
LPG				*e*Sn	Sn	05 39 09.5	-2.4
PAGF	**Fort de Pagny** 2.3nm,0.2s	**1.70**	**326**	*e*Pn	Pn	05 38 48.5	-1.7
PAGF				*e*Sg	Sb	05 39 13.5	+0.1
SFTF	**Sexfontaines** 2.3nm,0.2s	**1.78**	**307**	*e*Pn	Pn	05 38 48.5	-2.8
SFTF				*e*Sg	Sb	05 39 16.0	+0.5
OGSM	**Saint Maurice**	**1.84**	**214**	Pn	Pb	05 38 54.8	+0.6
OGSM				Sn	Sb	05 39 18.4	+1.0
MEZF	**Maizieres J'vi** 1.4nm,0.2s	**1.96**	**314**	*e*Pn	Pn	05 38 50.4	-3.3
MEZF				*e*Sg	Sb	05 39 21.5	+0.8
LOR	**Lormes** baz=99	**2.25**	**274**	*e*Pg	Pg	05 39 02.5	-0.9
LOR	2.4nm,0.2s			*e*Sn	Sn	05 39 22.2	-3.5
SMF	**Signal de Mont** 1.7nm,0.2s	**2.33**	**259**	*e*Pg	Pg	05 39 04.0	-0.9
SMF				*e*Sg	Sg	05 39 34.4	-0.7
SSF	**Saint Saulge** 0.9nm,0.3s	**2.50**	**269**	*e*Pn	Pn	05 38 59.2	-1.9
SSF	**Saint Saulge**	**2.50**	**269**	*e*Pg	Pg	05 39 06.7	-1.4
SSF				*e*Sn	Sn	05 39 28.4	-3.3
AVF	**Avril sur Loir**	**2.63**	**263**	*e*P	Pn	05 39 03.5	+0.6
VIVF	**Saint-Julien-l** 2.2nm,0.3s	**2.88**	**218**	*e*Pg	Pg	05 39 13.6	-1.8
VIVF				*e*Sg	Sg	05 39 51.3	-1.3

VIE 11 05:39:02.4±0.7, 47°.11N×9°.17E, h11km±6km, ml1.1/1, Error ellipse: s-maj=5.1km s-min=2.5km az=105.0 13 km E of Glarus, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAVA	**Damuels** 0.5nm,0.2s	**0.51**	**70**	*e*Pg	Pg	05 39 12.7	+0.2
DAVA	2.3nm,0.2s			*e*Sg	Sg	05 39 20.2	+0.9

IDC 11 06:17:42.3±2.2, 6°42S×126°84E, h0km, mb3.3/1, mb1 3.8/3, mb1mx3.6/26, mbtmp3.6/3, ML3.6/2, Error ellipse: s-maj=311.3km s-min=29.8km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=330,slow=13,SNR=6.9	**15.29**	**152**	Pn	Pn	06 21 21.2	+1.5
ASAR	**Alice Springs** 0.6nm,0.3s,baz=344,slow=11,SNR=51	**18.45**	**159**	P	Pn	06 21 58.7	-0.9
MKAR	**Makanchi Array** 0.2nm,0.7s,baz=125,slow=8.0,SNR=3.1	**66.05**	**328**	P	P	06 28 31.1	0.0

MAN 11 06:39:22.9, 9°.90N×124°.03E, h35km, mb3.9, ML2.7, MS2.3, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.26**	**218**	⇑*e*P	Pn	06 39 32.0	+1.5
TBP				*e*S	Sn	06 39 36.3	+0.7
LLP	**Lapu-Lapu**	**0.42**	**352**	⇓*e*P	Pn	06 39 34.1	+1.6
LLP				*i* S	Sn	06 39 41.2	+2.1
MSLP	**Maasin**	**0.85**	**74**	*e*P	Pn	06 39 39.6	+1.1
MSLP				*e*S	Sn	06 39 50.3	+0.5

KRNET 11 07:09:08.3±0.1, 43°.28N×77°.76E, h35km, mb1.9, 4C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANVS	**Anan'yevo** baz=88	**0.50**	**188**	⇑*i* P	Pn	07 09 19.6	+0.5
ANVS	baz=88			⇑*i* S	Sn	07 09 28.3	+1.7
KDJ	**Kajisay** baz=0.0	**1.22**	**201**	⇑*i* P	Pn	07 09 30.4	+1.3
KDJ	baz=0.0			⇑*i* S	Sn	07 09 46.1	+1.6
BOOM	**Boomskoye usch** baz=40	**1.55**	**240**	⇓*i* P	Pn	07 09 34.9	+1.3
BOOM	baz=40			⇓*i* S	Sn	07 09 54.0	+1.4

*NNC **11** 07:09:49.7±0.2, 43°.17N×76°.80E, h0km, mpv2.2, Error ellipse: s-maj=1.6km s-min=1.3km az=154.0*

SOME 11 07:09:49.6, 43°.17N×76°.80E, h5km, 3C-1D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAA	**Alma-Ata** 22nm,0.1s	**0.09**	**63**	*e*P	Pg	07 09 51.9	+0.2
AAA	24nm,0.1s			*e*S	Sg	07 09 53.5	+0.5
KNDC	**Almaty** 12nm,0.1s	**0.13**	**67**	⇑P	Pg	07 09 52.5	+0.2
KNDC	15nm,0.1s			⇓S	Sg	07 09 54.8	+0.7
TNSS	**Tian-Shan** 4.3nm,0.1s	**0.17**	**140**	*e*P	Pg	07 09 52.8	-0.3
TNSS	14nm,0.1s			*e*S	Sg	07 09 55.1	-0.2
TNSS	**Tian-Shan** 8.7nm,0.2s	**0.17**	**140**	P	Pg	07 09 52.8	-0.3
TNSS	18nm,0.1s			S	Sg	07 09 55.1	-0.2
MDOK	**Medeo** 1.2nm,0.1s	**0.18**	**91**	*e*P	Pg	07 09 53.2	-0.1
MDOK	16nm,0.1s			*e*S	Sg	07 09 55.9	+0.2
MDOK	**Medeo** 1.2nm,0.2s	**0.18**	**91**	⇑P	Pg	07 09 53.1	-0.1
MDOK	10.0nm,0.2s			⇑S	Sg	07 09 55.9	+0.2
MDOK	**Medeo** 2.4nm,0.1s	**0.18**	**91**	Pg	Pg	07 09 53.3	0.0
MDOK	16nm,0.1s			Lg	Lg	07 09 55.9	
IZV	**Izvestkoviy** 1.2nm,0.1s	**0.19**	**226**	*e*P	Pg	07 09 53.6	+0.3
IZV	4.0nm,0.1s			*e*S	Sg	07 09 56.4	+0.5
IZV	**Izvestkoviy** 1.6nm,0.2s	**0.19**	**226**	P	Pg	07 09 53.6	+0.2
IZV	5.8nm,0.1s			S	Sg	07 09 56.4	+0.5
KOTS	**Kotyrbulak** 1.8nm,0.1s	**0.24**	**74**	*e*P	Pg	07 09 54.4	+0.1
KOTS	11nm,0.1s			*e*S	Sg	07 09 57.6	+0.2
KOTS	**Kotyrbulak** 5.6nm,0.1s	**0.24**	**74**	P	Pg	07 09 54.4	+0.1
KOTS	19nm,0.3s			S	Sg	07 09 57.6	+0.2
KTBS	**Karatobe** 0.9nm,0.1s	**0.55**	**351**	*e*P	Pg	07 10 00.5	+0.3
KTBS	4.3nm,0.2s			*e*S	Sg	07 10 08.3	+0.9
KTBS	**Karatobe** 0.9nm,0.1s	**0.55**	**351**	P	Pg	07 10 00.5	+0.3
KTBS	4.3nm,0.2s			S	Sg	07 10 08.3	+0.9

MAN 11 07:14:08.9, 7°.18N×126°.75E, h149km, mb3.9, ML2.7, MS2.2, 3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.54**	**244**	*e*P	Pn	07 14 31.5	+1.2
MATI				*e*S	Sn	07 14 50.2	+3.5
DMPH	**Davao City--Mi**	**1.23**	**266**	⇓*e*P	Sn	07 14 58.3	+2.2
DDMP	**Don Marcelino,**	**1.48**	**224**	*e*P	Pn	07 14 39.2	+1.0
DDMP				*e*S	Sn	07 15 02.0	+1.4
KCP	**Kidapawan**	**1.65**	**264**	⇓*i* P	Pn	07 14 40.2	+0.1
GSPH	**General Santos**	**2.09**	**239**	⇓*i* P	Pn	07 14 50.8	+5.6
GSPH				*i* S	Sn	07 15 11.7	-1.3

*IDC **11** 07:17:34.3±4.3, 46°.86N×152°.69E, h78km±37km, mb3.2/7, mb1 3.4/9, mb1mx3.2/32, mbtmp3.5/9, MS2.9/2, Ms1 3.0/2, ms1mx2.5/13, Error ellipse: s-maj=31.7km s-min=25.8km az=142.0*

ISC 11 07:17:33.2±1.1, 46°.8N±0°.2×152°.7E±0°.1, h67km, n17, σ0.999/9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-** 0.1nm,0.3s,baz=181,slow=12,SNR=3.5	**7.06**	**25**	P	**Pn**	**07 19 14.8**	**+0.9**
KLR	**Kul'dur** comp=Z,32nm,18.5s,baz=23,slow=39	**14.24**	**287**	LR	LR	07 26 52.4	
USRK	**Ussuriysk Ar.** baz=83,slow=11,SNR=3.0	**14.77**	**267**	P	**Pn**	**07 20 59.1**	**+0.9**
H11N2	**WAKE ISLAND Hy 29.40** baz=340,slow=76,SNR=75	**152**		T	T	07 54 52.2	
H11N1	**WAKE ISLAND Hy 29.42** baz=340,slow=76,SNR=53	**152**		T	T	07 54 56.0	
H11N3	**WAKE ISLAND Hy 29.42** baz=340,slow=76,SNR=12	**152**		T	T	07 54 54.0	
H11S1	**WAKE ISLAND Hy 30.49** baz=341,slow=76,SNR=51	**153**		T	T	07 56 14.8	
H11S3	**WAKE ISLAND Hy 30.49** baz=341,slow=76,SNR=62	**153**		T	T	07 56 03.1	
H11S2	**WAKE ISLAND Hy 30.50** baz=341,slow=76,SNR=66	**153**		T	T	07 56 19.1	
ILAR	**Eielson Array** comp=Z,23nm,19.6s,baz=9.0,slow=36	**36.66**	**39**	LR	LR	07 39 33.9	
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=76,slow=9.4,SNR=4.1	**46.68**	**297**	P	**P**	**07 25 54.3**	**-0.6**
YKA	**Yellowknife Ar** 0.1nm,0.6s,baz=297,slow=7.0,SNR=3.7	**51.02**	**37**	P	**P**	**07 26 26.4**	**-1.5**
FINES	**FINESS Array B** 0.8nm,0.4s,baz=39,slow=8.0,SNR=10	**63.87**	**335**	P	**P**	**07 27 57.9**	**-0.3**
NOA	**NORSAR Array B** 0.7nm,0.7s,baz=29,slow=6.6,SNR=4.2	**68.08**	**341**	P	**P**	**07 28 25.2**	**0.0**
AKASG	**Malin Array Be** 0.5nm,0.4s,baz=37,slow=6.7,SNR=3.4	**71.34**	**326**	P	**P**	**07 28 44.9**	**-0.5**
ASAR	**Alice Springs** 0.1nm,0.6s,baz=19,slow=5.9,SNR=4.2	**72.19**	**198**	P	**P**	**07 28 50.6**	**-0.1**
TXAR	**Lajitas Array** 0.1nm,0.7s,baz=340,slow=2.4,SNR=2.7	**77.69**	**60**	P	**P**	**07 29 23.9**	**+1.1**

*RSPR **11** 08:04:32.9, 18°.79N×67°.29W, h7km±1km, MD3.0/22*
*NEIC **11** 08:04:32.5±1.5, 18°.75N±0°.05×67°.26W±0°.02, h30km±10km, Error ellipse: s-maj=6.6km s-min=3.2km az=190.0*
*OSPL **11** 08:04:36.2±2.0, 18°.61N×67°.40W, h0km±11km, ML3.1*

ISC 11 08:04:28.2±1.3, 18°.90N±0°.04×67°.25W±0°.02, h2km±11km, n61, σ0.991/87, 17C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.45**	**163**	⇑*e*P	**Pn**	**08 04 40.4

AOPR	**Arecibo Observ**	**0.73**	**139**		**Pn**	**08 04 44.6**	**-0.9**
AOPR					**Sb**	**08 04 53.8**	**-0.3**
LSP	**Las Mesas**	**0.74**	**168**ǁ*eP*		**Pn**	**08 04 44.8**	**-0.9**
LSP	**Las Mesas**	**0.74**	**168** *eS*		**Sb**	**08 04 54.4**	**0.0**
LSP	**Las Mesas**	**0.74**	**168**		**Pn**	**08 04 44.8**	**-0.9**
LSP					**Sb**	**08 04 54.4**	**0.0**
EMPR	**Esperanza - Ma**	**0.81**	**122**ǁ*eP*		**Pn**	**08 04 46.8**	**+0.3**
EMPR	**Esperanza - Ma**	**0.81**	**122** *eS*		**Sn**	**08 04 58.2**	**-0.9**
EMPR	**Esperanza - Ma**	**0.81**	**122**		**Pn**	**08 04 46.8**	**+0.3**
EMPR					**Sn**	**08 04 58.2**	**-0.9**
UUPR	**Utuado, UPR, P**	**0.82**	**142**		**Pn**	**08 04 46.5**	**-0.2**
UUPR					**Sb**	**08 04 56.8**	**+0.1**
CRPR	**Cabo Rojo, PR**	**0.90**	**171**ǁ*eP*		**Pb**	**08 04 47.1**	**+0.5**
CRPR	**Cabo Rojo, PR**	**0.90**	**171** *eS*		**Sb**	**08 04 58.2**	**-0.8**
CRPR	**Cabo Rojo, PR**	**0.90**	**171**		**Pb**	**08 04 46.7**	**+0.2**
CRPR					**Sb**	**08 04 58.1**	**-0.8**
MLPR	**Magueyes Islan**	**0.95**	**168**ǁ*eP*		**Pb**	**08 04 47.7**	**+0.4**
MLPR	**Magueyes Islan**	**0.95**	**168**		**Pg**	**08 04 46.8**	**+0.4**
MLPR				Sg	**Sg**	**08 04 58.1**	**-0.6**
GBPR	**Guanica, Bosqu**	**0.99**	**159**ǁ*eP*		**Pn**	**08 04 48.8**	**-0.3**
GBPR	**Guanica, Bosqu**	**0.99**	**159** *eS*		**Sb**	**08 05 01.4**	**0.0**
GBPR	**Guanica, Bosqu**	**0.99**	**159**		**Pn**	**08 04 48.8**	**-0.3**
GBPR					**Sb**	**08 05 01.4**	**0.0**
OBIP	**Obispado Ponce**	**1.05**	**144**ǁ*eP*		**Pn**	**08 04 49.8**	**-0.2**
OBIP	**Obispado Ponce**	**1.05**	**144** *eS*		**Sb**	**08 05 03.2**	**-0.1**
OBIP	**Obispado Ponce**	**1.05**	**144**		**Pn**	**08 04 49.8**	**-0.2**
OBIP					**Sb**	**08 05 03.2**	**-0.1**
PCDR	**Punta Cana, DR**	**1.14**	**250**ǁ*eP*		**Pb**	**08 04 50.9**	**+0.3**
PCDR	**Punta Cana, DR**	**1.14**	**250** *eS*		**Sb**	**08 05 05.9**	**+0.1**
PCDR	**Punta Cana, DR**	**1.14**	**250** *i* P		**Pn**	**08 04 51.9**	**+0.8**
PCDR				*eS*	**Sg**	**08 05 04.7**	**-0.1**
PCDR				IAML		08 05 10.2	
	comp=Z,491nm,0.3s						
PCDR	**Punta Cana, DR**	**1.14**	**250**		**Pb**	**08 04 50.7**	**+0.1**
PCDR					**Sb**	**08 05 05.5**	**-0.3**
ICMP	**Isla Caja de M**	**1.22**	**146**ǁ*eP*		**Pg**	**08 04 51.9**	**+0.2**
ICMP				*eS*	**Sg**	**08 05 07.7**	**+0.2**
ICMP	**Isla Caja de M**	**1.22**	**146**		**Pg**	**08 04 51.9**	**+0.2**
ICMP					**Sg**	**08 05 07.7**	**+0.2**
GCPR	**Guaynabo City**	**1.25**	**118**		**Pn**	**08 04 53.3**	**+0.5**
SJG	**San Juan**	**1.31**	**127**		**Pb**	**08 04 53.7**	**+0.2**
IGPR	**InterUniversit**	**1.43**	**130**ǁ*eP*		**Pb**	**08 04 55.7**	**+0.1**
IGPR				*eS*	**Sb**	**08 05 13.6**	**-0.7**
IGPR	**InterUniversit**	**1.43**	**130**ǁ*eP*		**Pb**	**08 04 55.6**	**0.0**
IGPR	**InterUniversit**	**1.43**	**130**		**Pb**	**08 04 55.7**	**+0.1**
IGPR					**Sb**	**08 05 13.6**	**-0.7**
PDPR	**Patillas Dam,**	**1.46**	**127**ǁ*eP*		**Pg**	**08 04 56.5**	**+0.2**
PDPR				*eS*	**Sb**	**08 05 13.2**	**-1.9**
PDPR	**Patillas Dam,**	**1.46**	**127**		**Pg**	**08 04 56.5**	**+0.2**
CBYP	**Canovanas**	**1.47**	**115**ǁ*eP*		**Pb**	**08 04 56.2**	**0.0**
CBYP	**Canovanas**	**1.47**	**115**ǁ*eP*		**Pg**	**08 04 56.8**	**+0.4**
CBYP				*eS*	**Sb**	**08 05 15.1**	**-0.2**
CBYP	**Canovanas**	**1.47**	**115**		**Pb**	**08 04 56.2**	**0.0**
CBYP	**Canovanas**	**1.47**	**115**		**Sn**	**08 05 15.6**	**+0.1**
HUMP	**Col San Antoni**	**1.53**	**119**ǁ*eP*		**Pb**	**08 04 57.3**	**0.0**
HUMP	**Col San Antoni**	**1.53**	**119** *eS*		**Sg**	**08 05 17.5**	**0.0**
HUMP	**Col San Antoni**	**1.53**	**119**ǁ*eP*		**Pb**	**08 04 57.4**	**+0.1**
HUMP				*eS*	**Sn**	**08 05 16.5**	**-0.5**
HUMP	**Col San Antoni**	**1.53**	**119**		**Pb**	**08 04 57.4**	**+0.1**
HUMP					**Sn**	**08 05 16.5**	**-0.5**
MTP	**Monte Pirata**	**1.80**	**116**ǁ*eP*		**Pn**	**08 05 00.9**	**+0.6**
MTP	**Monte Pirata**	**1.80**	**116**		**Pn**	**08 05 00.9**	**+0.6**
DR12	**Loma Pena Alta**	**2.02**	**267**		**Pg**	**08 05 06.5**	**-0.5**
STVI	**Saint Thomas**	**2.25**	**104**ǁ*eP*		**Pn**	**08 05 07.3**	**+0.9**
STVI	**Saint Thomas**	**2.25**	**104**		**Pn**	**08 05 06.7**	**+0.3**
SDD	**Santo Domingo**	**2.56**	**261** *i* P		**Pb**	**08 05 15.9**	**+1.1**
SDD				*eS*	**Sn**	**08 05 43.2**	**+0.8**
SDD				IAML		08 05 51.8	
	comp=Z,62nm,0.5s						
BON1	**Bonao**	**2.98**	**271** *i* P		**Pb**	**08 05 21.3**	**-0.7**
BON1				*eS*	**Sn**	**08 05 55.0**	**+2.3**
BON1				IAML		08 06 04.6	
	comp=Z,421nm,0.8s						
BANI	**BANI**	**2.99**	**261**		**Pb**	**08 05 20.1**	**-2.1**
SC01	**Santiago de lo**	**3.33**	**280** *i* P		**Pb**	**08 05 26.9**	**-1.1**
SC01				IAML		08 06 31.8	
	comp=Z,164nm,0.6s						
SC01	**Santiago de lo**	**3.33**	**280**		**Pn**	**08 05 24.1**	**+2.8**
SDDR	**Presa de Saban**	**3.82**	**272** *i* P		**Pb**	**08 05 33.7**	**-2.7**
SDDR				IAML		08 06 30.2	
	comp=Z,90nm,0.4s						
SDDR	**Presa de Saban**	**3.82**	**272**		**Pb**	**08 05 33.0**	**-3.4**

*NEIC **11** 08:06:53.2±1.9, 4.°32S±0.°07×144.°76E±0.°06, h122km±8km, mb4.3/11, Error ellipse: s-maj=10.2km s-min=9.2km az=188.0*
*IDC **11** 08:06:54.6±2.2, 4.°44S×144.°68E, h132km×21km, mb3.6/6, mb1 3.7/9, mb1mx3.5/35, mbtmp4.0/9, Error ellipse: s-maj=26.1km s-min=16.7km az=68.0*
ISC 11 08:06:51.5±0.6, **4.°28S**±0.°06×**144.°58E**±0.°09, **h100**km, **n28, σ0s98/30, mb3.8/8, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.56**	**51**	P		Pn	**Pn**	**08 07 44.8**	**0.0**
MANU						Sn	**Sn**	**08 08 24.6**	**-1.5**
JAY	**Jayapura**	**4.25**	**294**	P		Pn	**Pn**	08 07 59.8	+5.7
	3.8nm,0.3s,baz=167,slow=12,SNR=8.6								
PMG	**Port Moresby**	**5.70**	**153**	P			**Pn**	**08 08 15.6**	**+1.9**
	1.1nm,0.3s,baz=301,slow=12,SNR=2.1								
PMG				S			**Sn**	**08 09 16.4**	**-1.4**
	2.6nm,0.3s,baz=131,slow=16,SNR=3.6								
PMG	**Port Moresby**	**5.70**	**153**				**Pn**	**08 08 14.2**	**+0.5**
PMG				Sn			**Sn**	**08 09 17.6**	**-0.3**
MTN	**Manton Dam**	**15.77**	**237**	P			**Pn**	**08 10 26.1**	**-2.0**
MTN				IAmb		IAmb		08 10 29.2	
	comp=Z,13nm,0.5s								
WR0	**Warramunga Arr**	**18.40**	**211**	P			**Pn**	**08 10 59.2**	**-0.9**
WR0				IAmb		IAmb		08 11 01.6	
	comp=Z,16nm,0.9s								
WRA	**Warramunga Arr**	**18.49**	**212**	P			**Pn**	**08 11 00.0**	**-1.2**
	comp=Z,1.7nm,0.3s,baz=30,slow=11,SNR=65								
WRA	**Warramunga Arr**	**18.49**	**212**	P			**P**	**08 10 59.0**	**-0.8**
KNRA	**Kununurra**	**19.23**	**233**	P			**Pn**	**08 11 08.2**	**-1.8**
KNRA				IAmb		IAmb		08 11 12.3	
	comp=Z,11nm,0.7s								
AS31	**Alice Springs**	**21.85**	**207**	P			**P**	**08 11 36.7**	**+0.6**
ASAR	**Alice Springs**	**21.85**	**207**	P			**P**	**08 11 36.6**	**+0.5**
	comp=Z,4.8nm,0.8s,baz=28,slow=13,SNR=39								
ASAR	**Alice Springs**	**21.85**	**207**	P			**P**	**08 11 36.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**23.06**	**232**	P			**P**	**08 11 47.7**	**-0.8**
	comp=Z,3.6nm,0.4s,baz=46,slow=11,SNR=18								
FITZ	**Fitzroy Crossi**	**23.06**	**232**	P			**P**	**08 11 48.7**	**+0.2**
FITZ				IAmb		IAmb		08 11 48.9	
	comp=Z,6.5nm,0.9s								
STKA	**Stephens Creek**	**27.59**	**185**	P			**P**	**08 12 28.2**	**-1.2**
	comp=Z,1.2nm,0.7s,baz=14,slow=12,SNR=3.3								
STKA	**Stephens Creek**	**27.59**	**185**	P			**P**	**08 12 29.0**	**-0.4**
BBOO	**Buckleboo**	**29.48**	**195**	P			**P**	**08 12 46.0**	**-0.1**
BBOO				IAmb		IAmb		08 12 52.8	
	comp=Z,20nm,1.4s								
FORT	**Forrest**	**30.61**	**209**	P			**P**	**08 12 56.4**	**+0.3**
SSLB	**Suanglung**	**36.17**	**322**	P			**P**	**08 13 45.4**	**+0.8**
VNDA	**Vanda**	**73.77**	**176**	P			**P**	**08 18 14.3**	**-0.1**
VNDA				IAmb		IAmb		08 18 24.8	
	comp=Z,2.8nm,1.4s								
MKAR	**Makanchi Array**	**74.65**	**321**	P			**P**	**08 18 20.9**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=98,slow=7.9,SNR=6.1								
MKAR	**Makanchi Array**	**74.65**	**321**	P			**P**	**08 18 21.0**	**+1.0**
ZALV	**Zalesovo Beam**	**76.29**	**328**	P			**P**	**08 18 29.0**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=134,slow=4.2,SNR=2.4								
ZALV	**Zalesovo Beam**	**76.29**	**328**	P			**P**	**08 18 29.2**	**0.0**
ILAR	**Eielson Array**	**84.87**	**24**	P			**P**	**08 19 15.1**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=263,slow=4.5,SNR=3.3								
ILAR	**Eielson Array**	**84.87**	**24**	P			**P**	**08 19 15.8**	**+1.0**
MTP	**Monte Pirata**	**147.49**	**63**	PKPbc			**PKPdf**	**08 26 22.3**	**+0.1**
SMRT	**St. Maarten**	**149.68**	**61**	PKPbc			**PKPdf**	**08 26 26.8**	**+1.0**

*IDC **11** 08:23:53.3±1.4, 6.°12S×128.°84E, h310km±16km, mb3.4/6, mb1 3.5/11, mb1mx3.3/28, mbtmp4.2/11, Error ellipse: s-maj=23.5km s-min=13.1km az=70.0*
*NEIC **11** 08:23:53.1±1.6, 6.°08S±0.°08×128.°81E±0.°08, h306km±9km, mb4.2/5, Error ellipse: s-maj=12.9km s-min=9.5km az=138.0*
ISC 11 08:23:52.2±0.6, **6.°11S**±0.°05×**128.°80E**±0.°06, **h300**km, **n30, σ1s88/39, mb3.7/6, Banda Sea**

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

SAUI	**Saumlaki**	**3.10**	**127**		**Pn**	**Pn**	**08 24 51.1**	**+2.2**
SAUI					S	**S**	**08 25 36.9**	**+2.6**
FAKI	**Fak Fak**	**4.68**	**47**	P	Pn	**Pn**	**08 25 07.5**	**+1.4**
FAKI					S	**S**	**08 26 03.8**	**-1.5**
SIJI	**Sorong**	**5.76**	**25**	P	P	**Pn**	**08 25 19.4**	**+0.6**
	6.5nm,0.3s,baz=223,slow=19,SNR=33							
SIJI					S	**S**	**08 26 24.9**	**-3.6**
	8.6nm,0.3s,baz=221,slow=19,SNR=13							
SOEI	**Soe**	**5.77**	**231**	P	Pn	**Pn**	**08 25 20.9**	**+2.0**
SOEI					S	**S**	**08 26 29.2**	**+0.5**
BATI	**Baumata**	**6.51**	**231**	P	P	**Pn**	**08 25 29.4**	**+1.7**
	20nm,0.3s,baz=30,slow=8.1,SNR=6.9							
BATI					S	**S**	**08 26 42.5**	**-2.4**
	33nm,0.3s,baz=22,slow=19,SNR=18							
MTN	**Manton Dam**	**7.07**	**161**	Pn	Pn	**Pn**	**08 25 35.3**	**+0.8**
KNRA	**Kununurra**	**9.51**	**180**	Pn	Pn	**Pn**	**08 26 05.5**	**+1.2**
FITZ	**Fitzroy Crossi**	**12.31**	**194**	P	Pn	**Pn**	**08 26 38.6**	**+0.1**
	0.5nm,0.3s,baz=40,slow=9.4,SNR=10							
FITZ					S	**S**	**08 28 51.9**	**-3.4**
	0.2nm,0.3s,baz=6.8,slow=19,SNR=2.1							
FITZ	**Fitzroy Crossi**	**12.31**	**194**	P	P	**Pn**	**08 26 40.0**	**+1.5**
WRAB	**Tennant Creek**	**14.76**	**159**	P	P	**P**	**08 27 07.8**	**+1.1**
WRA	**Warramunga Arr**	**14.76**	**159**	P	P	**P**	**08 27 07.4**	**+0.6**
	1.5nm,0.3s,baz=340,slow=11,SNR=38							
WRA					S	**S**	**08 29 42.6**	**-5.7**
	0.3nm,0.3s,baz=344,slow=23,SNR=6.5							
WR0	**Warramunga Arr**	**14.85**	**158**	P	P	**P**	**08 27 08.1**	**+0.3**
COEN	**Coen**	**16.15**	**120**	P	P	**P**	**08 27 23.0**	**+1.0**
COEN				IAmb	IAmb		08 27 23.6	
	comp=Z,20nm,0.7s							
PSA00	**Pilbara Seismi**	**17.64**	**209**	P	P	**P**	**08 27 39.0**	**+0.8**
PSA00				IAmb	IAmb		08 27 54.5	
	comp=Z,15nm,1.4s							
AS31	**Alice Springs**	**18.13**	**165**	P	P	**P**	**08 27 44.6**	**+1.3**
AS31				IAmb	IAmb		08 27 45.5	
	comp=Z,1.8nm,0.6s							
ASAR	**Alice Springs**	**18.13**	**165**	P	P	**P**	**08 27 44.3**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=345,slow=11,SNR=48							
ASAR					S	**S**	**08 30 51.2**	**-4.1**
	comp=Z,0.4nm,0.3s,baz=347,slow=22,SNR=29							
ASAR					ScP	**ScP**	**08 35 06.2**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=344,slow=1.9,SNR=4.0							
ASAR	**Alice Springs**	**18.13**	**165**	P	P	**P**	**08 27 45.1**	**+1.7**
CTA	**Charters Tower**	**21.92**	**131**	P	P	**P**	**08 28 22.0**	**+0.3**
	comp=Z,4.5nm,0.7s,baz=327,slow=6.4,SNR=3.6							
STKA	**Stephens Creek**	**28.29**	**157**	P	P	**P**	**08 29 18.1**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=338,slow=20,SNR=3.7							
STKA	**Stephens Creek**	**28.29**	**157**	P	P	**P**	**08 29 19.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**38.25**	**310**	P	P	**P**	**08 30 45.0**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=143,slow=8.2,SNR=7.4							
CMAR	**Chiang Mai Arr**	**38.25**	**310**	P	P	**P**	**08 30 45.0**	**+0.6**
PETK	**Petropavlovsk-**	**63.87**	**19**	P	P	**P**	**08 33 53.6**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=210,slow=11,SNR=3.1							
PETK	**Petropavlovsk-**	**63.87**	**19**	P	P	**P**	**08 33 52.1**	**-1.0**
MKAR	**Makanchi Array**	**66.84**	**327**	P	P	**P**	**08 34 12.3**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=125,slow=7.4,SNR=9.7							
ZALV	**Zalesovo Beam**	**70.27**	**334**	P	P	**P**	**08 34 34.0**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=101,slow=7.5,SNR=4.1							
KKAR	**Karatay Array**	**71.89**	**319**	P	P	**P**	**08 34 44.1**	**+0.9**
TAS	**Tashkent**	**71.91**	**317**	P	P	**P**	**08 34 43.7**	**+0.4**
ABKAR	**Akbulak array**	**81.08**	**322**	P	P	**P**	**08 35 33.6**	**-0.6**
SZCU	**Shurtz Canyon**	**115.88**	**51**	PKPdf	**PKPdf**	**PKPdf**	**08 42 00.6**	**+0.6**

*IDC **11** 08:54:41.1±3.3, 26.°29S×29.°05E, h0km, mb1 3.2/4, mb1mx3.1/47, mbtmp3.2/4, ML2.4/4, Error ellipse: s-maj=30.4km s-min=18.0km az=108.0*
ISC 11 08:54:36.9±1.3, **25.°80S**±0.°06×**29.°30E**±0.°08, **h10**km, **n14, σ2s10/19, South Africa**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LBTB	**Lobatse**	**3.43**	**282**			Pn	**Pb**	**08 55 36.9**	**-1.0**
	0.2nm,0.3s,baz=107,slow=7.9,SNR=3.2								
LBTB						Pg	**Pg**	**08 55 44.2**	**+1.5**
	0.7nm,0.3s,baz=109,slow=16,SNR=9.8								
LBTB						Lg	Lg	08 56 28.1	
	3.4nm,0.3s,baz=13,slow=21,SNR=12								
LBTB	**Lobatse**	**3.43**	**282**	*i* P			**Pg**	**08 55 42.0**	**-0.7**
LBTB				*i* S			**Sg**	**08 56 26.8**	**-0.4**
MSNA	**Messina**	**3.50**	**11**	*i* P			**Pn**	**08 55 31.4**	**0.0**
MSNA	**Messina**	**3.50**	**11**	*i* P			**Pg**	**08 55 43.7**	**-0.3**
MSNA				*i* S			**Sg**	**08 56 29.8**	**+0.4**
BOSA	**Boshof**	**4.56**	**231**	*i* P			**Pn**	**08 55 44.0**	**-2.1**
BOSA	**Boshof**	**4.56**	**231**	Pn			**Pn**	**08 55 44.1**	**-1.9**
	0.1nm,0.3s,baz=57,slow=9.5,SNR=2.5								
BOSA						Pg	**Pb**	**08 55 56.1**	**-0.9**
	0.6nm,0.3s,baz=57,slow=16,SNR=8.8								
BOSA						Lg	Lg	08 56 47.2	
	1.4nm,0.3s,baz=149,slow=22,SNR=7.7								
BOSA						Rg	Rg	08 57 09.5	
	2.6nm,0.5s,baz=142,slow=13,SNR=1.6								
BOSA	**Boshof**	**4.56**	**231**	*i* P			**Pn**	**08 55 49.2**	**+3.2**
BOSA				*i* S			**Sn**	**08 56 40.8**	**+1.6**
I47ZA	**BOSHOF INFRASO**	**4.58**	**231**	*i*				09 18 20.0	
	baz=54,slow=312,SNR=0.7								
MATP	**Matopo**	**5.40**	**352**	*i* P			**Pn**	**08 56 01.9**	**+4.3**
MATP				*i* S			**Sb**	**08 57 12.2**	**-4.1**
MATP	**Matopo**	**5.40**	**352**	Pn			**Pb**	**08 56 08.8**	**-2.5**
	0.1nm,0.3s,baz=168,slow=13,SNR=7.1								
MATP						Sn	**Sb**	**08 57 14.8**	**-1.5**
	0.3nm,0.3s,baz=131,slow=11,SNR=4.5								
MATP						Lg	Lg	08 57 44.5	
	1.1nm,0.3s,baz=140,slow=7.9,SNR=11								
MATP	**Matopo**	**5.40**	**352**	*i* P			**Pb**	**08 56 10.3**	**-1.0**
MATP				*i* S			**Sb**	**08 57 16.5**	**+0.2**
SUR	**Sutherland**	**9.90**	**227**	Pn			**Pn**	**08 56 59.0**	**-0.4**
	0.1nm,0.3s,baz=48,slow=12,SNR=3.2								
LSZ	**Lusaka**	**10.52**	**354**	Lg			Lg	09 00 21.9	
	0.1nm,0.3s,baz=59,slow=11,SNR=2.1								
I35NA	**TSUMEB INFRASO**	**12.67**	**299**	*i*				10 15 30.0	
	baz=118,slow=321,SNR=0.4								

*NNC **11** 09:07:46.5±10.0, 51.°59N×82.°05E, h0km, mb2.9, mpv2.5, Error ellipse: s-maj=101.5km s-min=39.4km az=12.0, Suspected Mining explosion.*
*IDC **11** 09:07:50.3±1.1, 51.°43N×81.°83E, h0km, mb1 2.1/3, mb1mx2.1/37, mbtmp2.1/3, ML1.7/3, Error ellipse: s-maj=13.5km s-min=10.7km az=118.0*
ISC 11 09:07:46.7±1.0, **51.°12N**±0.°05×**82.°02E**±0.°06, **h0**km, **n7, σ1s11/10, 2C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**2.19**	**261**			ǁPg	**Pg**	**09 08 29.0**	**+0.5**
	2.0nm,0.5s								
KURK						ǁLg	Lg	09 08 59.3	
	7.2nm,0.6s								
KURBB	**Kurchatov Arra**	**2.26**	**259**	Pn			**Pb**	**09 08 28.4**	**0.0**
	0.2nm,0.3s,baz=70,slow=18,SNR=21								
KURBB						Lg	Lg	09 09 01.2	
	0.5nm,0.3s,baz=69,slow=32,SNR=12								
KURBB	**Kurchatov Arra**	**2.26**	**259**			⇑Pg	**Pg**	**09 08 30.4**	**+0.4**
	1.8nm,0.5s								
KURBB						⇑Lg	Lg	09 09 01.0	
	14nm,0.6s								
I46RU	**ZALESOVO INFRA**	**3.31**	**30**	*i*				09 26 55.0	
	baz=214,slow=324,SNR=6.0								
ZALV	**Zalesovo Beam**	**3.31**	**30**	Pn			**Pn**	**09 08 40.0**	**+0.3**
	0.1nm,0.3s,baz=220,slow=14,SNR=2.3								
ZALV						Pg	**Pb**	**09 08 46.8**	**+0.6**
	0.4nm,0.3s,baz=220,slow=17,SNR=4.5								
ZALV						Sn	**Sn**	**09 09 17.6**	**-2.2**
	0.4nm,0.3s,baz=219,slow=23,SNR=3.7								
ZALV						Lg	Lg	09 09 30.0	
	0.7nm,0.3s,baz=222,slow=24,SNR=11								
ZALV					*i*			09 26 53.8	
	0.9nm,0.3s,baz=237,slow=19,SNR=5.3								
MK31	**Makanchi Array**	**4.33**	**177**	Pn			**Pb**	**09 09 03.1**	**-0.6**
	0.1nm,0.2s,baz=4.6,slow=12,SNR=11								
MK31						Pg	Pg	09 09 15.6	+5.9
	0.5nm,0.6s,baz=4.9,slow=14,SNR=5.3								
MK31						Lg	Lg	09 10 14.6	
	1.8nm,0.5s,baz=6.7,slow=28,SNR=7.6								
MKAR	**Makanchi Array**	**4.33**	**177**	Pn			**Pb**	**09 09 02.7**	**-1.0**
	0.1nm,0.3s,baz=355,slow=9.8,SNR=12								
MKAR						Pg	**Pg**	**09 09 11.0**	**+1.3**
	0.2nm,0.3s,baz=3.9,slow=10,SNR=8.1								
MKAR						Sn	**Sb**	**09 09 56.5**	**0.0**
	0.1nm,0.3s,baz=357,slow=26,SNR=3.0								
MKAR						Lg	Lg	09 10 12.6	
	0.2nm,0.3s,baz=358,slow=31,SNR=5.7								

*BGR **11** 09:32:04.5±0.0, 35.°70N×72.°29E, h33km, mb5.0*
*MOS **11** 09:32:30.6±1.0, 36.°51N×71.°34E, h219km, mb4.5/41, Error ellipse: s-maj=5.4km s-min=3.7km az=96.6*
*NEIC **11** 09:32:31.8±1.7, 36.°55N±0.°05×71.°25E±0.°07, h217km±6km, mb4.5/89, Error ellipse: s-maj=8.6km s-min=7.8km az=63.0*
*NNC **11** 09:32:32.4±3.8, 36.°76N×71.°06E, h189km±58km, mb3.9, mpv4.9, Error ellipse: s-maj=42.1km s-min=16.4km az=163.0*
*BJI **11** 09:32:32.1±0.0, 36.°63N×71.°39E, h212km, mB4.7/23, mb4.3/30*
*IDC **11** 09:32:32.7±0.6, 36.°49N×71.°29E, h227km±5km, mb3.9/32, mb1 4.0/39, mb1mx3.9/46, mbtmp4.5/39, Error ellipse: s-maj=8.5km s-min=7.2km az=21.0*
ISC 11 09:32:31.6±0.4, **36.°53N**±0.°03×**71.°29E**±0.°03, **h216**km±4km, **h216**km**:pP-P, n476, σ1s52/526, mb4.4**/140, **24C-31D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.58**	**343**				**Pn**	**09 33 17.5**	**+0.1**
GAR							**S**	**09 33 50.5**	**-2.8**
KBL	**Kabul**	**2.70**	**223**			PN	**Pn**	**09 33 19.4**	**+0.5**
KBL						S	**S**	**09 33 55.5**	**-0.1**
KBL	**Kabul**	**2.70**	**223**				**Pn**	**09 33 19.4**	**+0.5**
KBL							**S**	**09 33 55.5**	**-0.1**
KBL	**Kabul**	**2.70**	**223**	P			**Pn**	**09 33 19.3**	**+0.4**
	SNR=74								
CHGR	**Chuyangaron**	**2.72**	**322**				**Pn**	**09 33 18.6**	**-0.3**
CHGR							**S**	**09 33 53.1**	**-2.6**
CEP	**Cherat**	**2.75**	**169**	ǁP			**Pn**	**09 33 20.4**	**+1.0**
CEP				S			**S**	**09 33 57.0**	**+0.6**
CHCP	**Chirah Chowk**	**3.29**	**150**	ǁP			**Pn**	**09 33 26.7**	**+1.2**
NIL	**Nilore**	**3.29**	**150**				**Pn**	**09 33 27.0**	**+1.5**
NIL							**S**	**09 34 04.3**	**-3.2**
THW	**Thamme Wali**	**3.74**	**174**	ǁP			**Pn**	**09 33 31.4**	**+0.5**
FRG	**Fergana**	**4.22**	**5**	P			**Pn**	**09 33 33.5**	**-3.1**
FRG				S			**S**	**09 34 19.3**	**-8.3**
AGL	**Agalyk**	**4.59**	**312**	ǁ*i*P			**Pn**	**09 33 41.3**	**+0.1**
AGL				*i* S			**S**	**09 34 33.0**	**-2.9**
SAM	**Samarkand**	**4.62**	**314**	*i* P			**Pn**	**09 33 41.8**	**+0.2**
SAM				*i* S			**S**	**09 34 35.3**	**-1.4**
SARP	**Sargodha**	**4.74**	**166**	ǁP			**Pn**	**09 33 43.1**	**0.0**
KSH	**Kashi**	**4.75**	**50**	ǁ*i*P			**Pn**	**09 33 38.6**	**-4.7**
KSH				S			S	09 34 26.5	-13
KSH				LR			LR		
	comp=Z,3μm,4.5s								
ARSB	**Arslanbob**	**4.97**	**15**				**Pn**	**09 33 45.8**	**-0.2**
ARSB				S			**S**	**09 34 42.8**	**-1.9**
TAS	**Tashkent**	**5.04**	**343**	PN			**Pn**	**09 33 47.1**	**+0.4**
TAS	**Tashkent**	**5.04**	**343**				**Pn**	**09 33 47.1**	**+0.4**
TAS	**Tashkent**	**5.04**	**343**	*eS*			**S**	**09 34 43.0**	**-3.1**
CHRV	**Charvak**	**5.21**	**349**	*

BTLS Baital 8.76 13 *i* PN Pn 09 34 32.6 -1.8
BTLS Baital 8.76 13 *i* P Pn 09 34 32.7 -1.8
BTLS *eS* S 09 36 25.7 +13
KPKS Kokpek 8.95 37 *d i* PN Pn 09 34 36.7 -0.3
KPKS pmax pmax
comp=Z,2.0nm,0.3s
KPKS Kokpek 8.95 37 ⇓ *i* P Pn 09 34 36.8 -0.3
comp=Z,2.0nm,0.3s
KPKS *eS* S 09 36 14.7 -3.1
JOSI Joshimath 9.11 128 *e* PG Pn 09 34 39.3 -0.1
JOSI *ex* x 09 36 18.6
SHLS Shalkode 9.12 41 *i* P Pn 09 34 41.1 +1.8
SHLS Shalkode 9.12 41 *i* P Pn 09 34 41.1 +1.8
PDGK Podgornoye 9.26 40 P Pn 09 34 40.0 -1.0
PDGK Podgornoye 9.26 40 ⇑ P Pn 09 34 40.0 -1.0
comp=Z,8.6nm,0.8s
NDI New Delhi 9.28 146 *e* PG Pn 09 34 41.0 -0.4
NDI *ex* x 09 36 16.0
AYAN Aya Nagar 9.41 147 *ex* Pn 09 34 42.5 -0.5
AYAN *e* SG S 09 36 21.5 -7.3
KUDL Kundal 9.44 151 *e* PG Pn 09 34 36.9 -6.5
KUDL *e* SG S 09 36 15.9 -14
SONA Sohna 9.60 148 *e* PG Pn 09 34 44.6 -0.8
SONA *e* SG S 09 36 24.8 -8.3
GEYT Alibeck 10.60 282 P Pn 09 34 56.2 -2.0
comp=Z,1.8nm,0.3s,baz=113,slow=11,SNR=11
GEYT S S 09 36 50.0 -7.0
comp=Z,2.4nm,0.3s,baz=103,slow=20,SNR=4.3
GYA0B ALIBECK ARRAY 10.60 282 ⇓ P Pn 09 34 55.9 -2.3
GYA0B ⇑ S 09 36 50.6 -6.4
GYA0B ALIBECK ARRAY 10.60 282 Pn 09 34 56.2 -2.0
MAKZ Makanchi 13.00 34 P Pn 09 35 28.1 -0.2
MAKZ Makanchi 13.00 34 ⇓ P Pn 09 35 28.2 -0.2
comp=Z,9.6nm,0.5s
MAKZ Makanchi 13.00 34 Pn 09 35 27.9 -0.4
MK31 Makanchi Array 13.13 35 *i* P Pn 09 35 29.1 -0.9
MK31 Makanchi Array 13.13 35 P Pn 09 35 29.1 -0.9
comp=Z,1.2nm,0.3s,baz=213,slow=9.3,SNR=77
MK31 Makanchi Array 13.13 35 Pn 09 35 30.8 +0.8
MKAR Makanchi Array 13.13 35 *i* P Pn 09 35 30.2 +0.2
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MKAR Makanchi Array 13.13 35 P Pn 09 35 29.4 -0.6
comp=Z,0.9nm,0.3s,baz=221,slow=13,SNR=38
BHUJ Bhuj 13.30 187 *e* PG Pn 09 35 32.8 +0.4
DANN Dangsing 13.31 124 *e* P Pn 09 35 31.5 -1.2
BRZS Berezniki 13.48 4 *e* P Pn 09 35 33.1 -1.2
BRZS pmax pmax
comp=Z,9.0nm,1.1s
BRZS Berezniki 13.48 4 *e* P Pn 09 35 33.1 -1.2
comp=Z,8.6nm,1.1s
KOLN Koldanda 13.59 126 *e* P Pn 09 35 35.2 -0.9
comp=Z,165nm,0.6s
GKN Gorkha 14.12 123 *e* P Pn 09 35 42.6 0.0
BHPL Bhopal 14.27 156 *e* PG P 09 35 47.0 +1.6
BHPL *i* x x 09 35 47.5
WMQ Urumqi 14.49 55 *e* P P 09 35 48.1 +0.4
WMQ pmax pmax
comp=Z,6.0nm,0.7s
WMQ pmax pmax
comp=Z,150nm,4.5s
WMQ Urumqi 14.49 55 P Pn 09 35 46.1 -0.7
WMQ Urumqi 14.49 55 Pn Pn 09 35 46.1 -0.7
DMN Daman 14.69 123 *e* P Pn 09 35 49.5 -0.2
comp=Z,160nm,0.6s
KKN Kakani 14.69 122 *e* P Pn 09 35 49.2 -0.4
comp=Z,210nm,0.6s
PKI Pulchoki 14.92 123 *e* P Pn 09 35 52.3 -0.2
KURBB Kurchatov Arra 15.02 18 P Pn 09 35 52.2 -0.9
comp=Z,0.2nm,0.3s,baz=206,slow=11,SNR=19
GUN Gumba 15.03 121 *e* P Pn 09 35 53.6 -0.2
KURK Kurchatov 15.13 18 *ce* P Pn 09 35 53.5 -1.0
KURK pmax pmax
comp=Z,6.0nm,1.1s
KURK Kurchatov 15.13 18 P Pn 09 35 53.4 -1.0
AB31 Akbulak array 15.17 330 *i* P Pn 09 35 53.7 -1.3
AB31 S S 09 38 39.2 -3.5
AB31 Akbulak array 15.17 330 P Pn 09 35 53.7 -1.3
comp=Z,21nm,0.6s,baz=140,slow=11,SNR=250
ABKAR Akbulak array 15.17 330 P Pn 09 35 54.3 -0.7
JBP Jabalpur 15.29 148 ⇑ *ex* Pn 09 35 58.5 +1.8
JBP AMB AMB 09 36 06.6
comp=Z,10nm,0.6s
JBP *ex* x 09 38 40.5
JIRN Jiri 15.40 121 *e* P P 09 35 58.3 0.0
comp=Z,178nm,0.6s
RAMN Ramite 16.13 122 *e* P P 09 36 06.6 +0.4
comp=Z,145nm,0.6s
BVAR Borovoye Array 16.51 358 P Pn 09 36 10.8 -0.2
comp=Z,2.1nm,0.3s,baz=164,slow=12,SNR=60
BANOM Banah 16.60 235 P P 09 36 11.2 +0.1
SHME Shamm 16.62 235 P Pn 09 36 12.6 0.0
TAPN Taplejung 16.65 119 *e* P Pn 09 36 13.9 +0.6
comp=Z,140nm,0.7s
ODAN Odare 16.73 121 *e* P Pn 09 36 14.6 +0.5
comp=Z,151nm,0.7s
AKTO Aktyubinsk 16.87 330 P Pn 09 36 15.0 -0.3
AKTO S S 09 39 17.9 -0.7
AKTO Aktyubinsk 16.87 330 P Pn 09 36 14.8 -0.5
comp=Z,3.3nm,0.3s,baz=137,slow=11,SNR=75
AKTO S S 09 39 17.0 -1.6
comp=Z,0.3nm,0.3s,baz=0.0,slow=18,SNR=6.9
AKTO Aktyubinsk 16.87 330 ⇓ P Pn 09 36 15.0 -0.3
comp=Z,22nm,0.6s
MDH Madha 17.03 233 P P 09 36 16.1 +0.3
MDH Madha 17.03 233 P P 09 36 16.0 +0.2
MSFE Esma-Masafi 17.08 234 P Pn 09 36 17.9 -0.1
WSAR Wadi Sarin 17.18 223 P Pn 09 36 18.6 -0.6
comp=Z,2.1nm,0.3s,baz=54,slow=7.3,SNR=15
UOSS Minazif 17.34 232 P P 09 36 19.7 +0.5
UOSS Minazif 17.34 232 P P 09 36 18.2 -1.0
UOSS IAmb IAmb 09 36 20.8
comp=Z,20nm,0.7s
UOSS Minazif 17.34 232 P P 09 36 19.7 +0.5
HATD Hatta, Dubai 17.47 232 P P 09 36 21.0 +0.3
HATD Hatta, Dubai 17.47 232 P P 09 36 20.9 +0.3
ASHO Ashiyiah 17.62 232 *i* P P 09 36 23.0 +0.7
SNR=17
ASHO Ashiyiah 17.62 232 P P 09 36 22.9 +0.7
SNR=17
NAZ Nazwa, Dubai 17.66 234 P P 09 36 23.2 +0.6
BOK Bokaro 17.87 131 *ex* P 09 36 26.1 +1.2
BOK *ex* x 09 36 26.6
comp=Z,33nm,0.8s
BOK IAmb IAmb 09 36 29.8
comp=Z,33nm,0.8s
BOK *ex* x 09 39 28.0
LSA Lhasa 17.96 107 P Pn 09 36 29.7 +0.9
LSA pmax pmax
comp=Z,29nm,0.8s
LSA Lhasa 17.96 107 *i* P Pn 09 36 30.1 +1.3
SNR=10
LSA Lhasa 17.96 107 Pn 09 36 29.7 +0.9
POO Poona 18.07 172 *ex* P 09 36 27.5 +0.3
comp=Z,40nm,1.0s
POO *ex* x 09 40 03.5
ASUD Al Ashush, Dub 18.13 234 P P 09 36 28.7 +0.9
ASUD Al Ashush, Dub 18.13 234 P P 09 36 28.6 +0.9
SNR=10.0
ALNE Al Ain 18.26 231 *i* P P 09 36 29.5 +0.3
SNR=7.0
AJN Ajban 18.39 234 P P 09 36 30.7 +0.1
SRSP Sriramsagar 18.60 159 *e* P P 09 36 33.5 +0.6
RPR Rampur 18.96 156 *e* P P 09 36 38.1 +1.3
KLRI Killari 18.98 164 *e* P P 09 36 38.1 +1.0
MAK Makhachkala 19.35 297 *e* P P 09 36 40.3 -0.5
MAK *e* S S 09 40 08.4 +0.5
MAK pmax pmax
comp=Z,44nm,0.6s
MAK MLR MLR
comp=Z,64nm,15.0s
DMPR Damasthipur 19.78 162 *e* P P 09 36 46.5 +0.9
ZAA0 Zalesovo Array 19.79 24 P P 09 36 45.7 +0.4
ZAA0 IAmb IAmb 09 36 54.4
comp=Z,5.5nm,0.5s
ZALV Zalesovo Beam 19.79 24 *i* P Pn 09 36 48.5 -1.2
ZALV pmax pmax
comp=Z,5.0nm,0.3s
ZALV Zalesovo Beam 19.79 24 P P 09 36 45.8 +0.5
comp=Z,2.1nm,0.3s,baz=223,slow=10,SNR=15
HYBB Hyderabad (bro 20.09 159 *e* P P 09 36 49.4 +0.4
HYB Hyderabad 20.09 159 *i* P P 09 36 50.0 +1.0
HYB *e* 09 41 01.0
GGR Gangavaram 20.23 155 *e* P P 09 36 51.3 +0.9

MZR Muzera 20.47 234 P P 09 36 53.1 +0.2
SHL Shillong 20.71 116 P P 09 36 55.9 +0.2
SHL pmax pmax
comp=Z,49nm,0.9s
SHL Shillong 20.71 116 P P 09 36 55.9 +0.2
GNI Garni 21.11 288 *d i* P P 09 37 01.7 +2.0
GNI pmax pmax
comp=Z,112nm,1.0s
GNI Garni 21.11 288 P P 09 37 00.6 +1.0
comp=Z,20nm,0.7s,baz=144,slow=3.6,SNR=13
GNI Garni 21.11 288 P P 09 37 01.9 +2.2
NJS Nagarjunasagar 21.13 158 *e* P P 09 37 00.8 +0.9
CHLP Challavanipeta 21.19 145 *e* P P 09 37 01.8 +1.3
TBLG Delisi 21.20 292 P P 09 36 59.7 -0.8
TBLG pmax pmax
comp=Z,10.0nm,0.7s
TBLG Delisi 21.20 292 P P 09 36 59.7 -0.8
TBLG IAmb IAmb 09 37 04.6
comp=Z,10nm,0.7s
PVM Polavaram 21.27 152 *e* P P 09 37 02.5 +1.2
MYLAV Mylavaram 21.37 155 *e* P P 09 37 03.7 +1.4
SRLM Srisailam 21.44 160 *e* P P 09 37 04.1 +1.0
SVE Sverdlovsk 21.53 344 *e* P P 09 37 04.8 +1.2
ARU Arti 21.68 341 P P 09 37 06.3 +1.2
ARU pmax pmax
comp=Z,14nm,0.8s
ARU Arti 21.68 341 P P 09 37 06.3 +1.2
comp=Z,3.4nm,0.6s,baz=149,slow=5.4,SNR=13
ARU Arti 21.68 341 P P 09 37 06.3 +1.2
ARU IAmb IAmb 09 37 08.2
comp=Z,14nm,0.8s
ZEI Tsey 21.94 295 *e* P P 09 37 08.2 +0.2
ZEI pmax pmax
comp=Z,15nm,0.6s
ADKI Addanki 22.00 157 *e* P P 09 37 09.0 +0.5
AKH Akhalkalaki 22.11 291 P P 09 37 10.4 +0.9
AKH pmax pmax
comp=Z,27nm,0.8s
AKH Akhalkalaki 22.11 291 P P 09 37 10.4 +0.9
URV Uravakonda 22.14 165 *e* P P 09 37 10.3 +0.4
GTA Gaotai 22.63 74 *e* P P 09 37 17.7 +3.4
GTA pP pP 09 37 57.2 +3.8
GTA pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 22.80 297 P P 09 37 16.0 +0.5
KBZ Khabaz 22.80 297 P P 09 37 15.9 +0.5
comp=Z,10.0nm,0.8s,baz=112,slow=9.3,SNR=14
GOF Gofitskoye 22.93 301 ⇑ *e* P P 09 37 17.9 +1.2
GOF pmax pmax
comp=Z,117nm,1.1s
KIV Kislovodsk 22.98 298 *e* P P 09 37 17.9 +0.6
KIV *e* S S 09 41 11.9 +0.7
KIV pmax pmax
comp=Z,52nm,1.0s
KIV Kislovodsk 22.98 298 P P 09 37 17.4 +0.1
KIV IAmb IAmb 09 37 21.2
comp=Z,22nm,1.1s
SKHT Srikalahasti 23.91 159 *e* P P 09 37 26.3 +0.4
WHFO Wadi Hawf 24.14 224 P P 09 37 28.2 +0.2
SNR=29
ABTO Aybut 24.86 225 P P 09 37 34.8 +0.3
SNR=11
RAYN Ar Rayn 25.73 247 P P 09 37 41.9 -0.4
RAYN pmax pmax
comp=Z,18nm,1.1s
RAYN Ar Rayn 25.73 247 *i* P P 09 37 42.1 -0.2
SNR=7.8
RAYN Ar Rayn 25.73 247 P P 09 37 41.9 -0.4
RAYN IAmb IAmb 09 37 43.0
comp=Z,18nm,1.1s
LZH Lanzhou 26.17 81 *e* P P 09 37 47.9 +1.6
LZH pP pP 09 38 30.2 -0.4
LZH PP PnPn 09 38 40.2 +1.0
LZH sP sP 09 38 58.2 +2.0
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,66nm,5.4s
KIRV Kirov 26.32 334 P P 09 37 48.1 +1.0
comp=Z,22nm,0.6s,baz=172,slow=1.4,SNR=10
KIRV pP pP 09 38 33.4 +2.4
comp=Z,14nm,0.7s,baz=188,slow=3.3,SNR=3.1
VORD Divnogorie 26.99 312 *e* P P 09 37 53.1 -0.1
VORD pmax pmax
comp=Z,10.0nm,1.2s
VSR Storozhevoye 27.16 313 *e* P P 09 37 54.2 -0.5
VSR pmax pmax
comp=Z,10.0nm,1.3s
GAZ Gaziantep 27.20 282 P P 09 37 54.9 -0.4
GAZ IAmb IAmb 09 37 57.8
comp=Z,14nm,0.9s
TLY Talaya 27.45 46 P P 09 37 56.3 -1.1
TLY pmax pmax
comp=Z,3.0nm,0.7s
TLY Talaya 27.45 46 P P 09 37 56.3 -1.1
LPSR Galich'ya Gora 27.80 316 *e* P P 09 38 00.3 -0.1
LPSR pmax pmax
comp=Z,10.0nm,0.9s
SONM Songino Array 28.13 55 P P 09 38 04.8 +1.3
comp=Z,0.8nm,0.8s,baz=264,slow=9.0,SNR=4.5
SONM pP pP 09 38 50.4 +2.2
comp=Z,1.0nm,0.7s,baz=264,slow=9.3,SNR=4.4
ASF Jabal al Asfar 28.63 271 P P 09 38 10.2 +2.0
comp=Z,1.1nm,0.5s,baz=37,slow=5.1,SNR=3.8
MMAI Mount Meron Ar 29.58 274 P P 09 38 17.6 +1.1
comp=Z,2.0nm,0.6s,baz=75,slow=11,SNR=4.8
MMAI PcP PcP 09 41 16.2 +0.5
comp=Z,0.8nm,0.4s,baz=71,slow=6.7,SNR=3.6
BR131 Keskin Array S 29.65 288 P P 09 38 17.7 +0.6
BR131 pmax pmax
comp=Z,5.0nm,0.8s
BR131 Keskin Array S 29.65 288 P P 09 38 17.7 +0.6
BR131 IAmb IAmb 09 38 18.7
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 29.65 288 *ce* P P 09 38 17.7 +0.6
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 29.65 288 P P 09 38 17.6 +0.4
comp=Z,4.6nm,0.8s,baz=102,slow=8.4,SNR=16
CHTO Chiang Mai 30.03 119 P P 09 38 19.5 -0.9
CHTO pmax pmax
comp=Z,6.0nm,1.3s
CHTO Chiang Mai 30.03 119 P P 09 38 19.5 -0.9
OBN Obninsk 30.07 319 ⇓ *e* P P 09 38 21.4 +1.0
OBN *PP pP 09 39 06.0 +1.5
OBN *SP PP 09 39 35.0 +2.3
OBN pmax pmax
comp=Z,13nm,0.9s
OBN Obninsk 30.07 319 P P 09 38 20.9 +0.6
CMAR Chiang Mai Arr 30.26 119 *i* P P 09 38 24.8 +2.3
CMAR pmax pmax
comp=Z,3.0nm,0.6s
CMAR Chiang Mai Arr 30.26 119 P P 09 38 23.8 +1.3
comp=Z,2.8nm,0.6s,baz=303,slow=8.3,SNR=18
CMAR pP pP 09 39 07.7 +0.3
comp=Z,1.5nm,0.3s,baz=313,slow=9.3,SNR=1.5
PALK Pallekele 30.36 161 P P 09 38 23.8 +0.3
PALK pmax pmax
comp=Z,8.0nm,0.7s
PALK Pallekele 30.36 161 P P 09 38 23.5 +0.1
comp=Z,4.9nm,0.6s,baz=349,slow=11,SNR=4.8
PALK Pallekele 30.36 161 P P 09 38 23.8 +0.3
PALK IAmb IAmb 09 38 25.7
comp=Z,7.5nm,0.7s
XAN Xi'an 30.69 83 P P 09 38 25.1 -1.1
XAN Xi'an 30.69 83 P P 09 38 25.8 -0.4
XAN pmax pmax
comp=Z,6.0nm,0.7s
XAN Xi'an 30.69 83 P P 09 38 25.8 -0.4
XAN IAmb IAmb 09 38 26.0
comp=Z,6.4nm,0.7s
CSS Mathiatis 30.72 279 P P 09 38 25.5 -1.0
HHC Hu-ho-hao-te 31.53 70 *e* P P 09 38 35.4 +1.8
HHC pmax pmax
comp=Z,5.0nm,0.8s
HHC pmax pmax
comp=Z,100nm,6.6s
SLVN Son La 32.13 109 P P 09 38 39.7 +0.8
PBKT Sadao Pong 32.96 119 P P 09 38 47.7 +1.7
PBKT IAmb IAmb 09 38 49.6
comp=Z,6.5nm,0.7s
ELL Elmali 33.02 283 P P 09 38 47.7 +1.1
ELL pmax pmax
comp=Z,132nm,0.6s
ELL Elmali 33.02 283 P P 09 38 47.7 +1.1

AKASG Malin Array Be 33.11 309 *i* P P 09 38 47.4 +0.4
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKASG Malin Array Be 33.11 309 P P 09 38 47.1 0.0
comp=Z,4.5nm,0.5s,baz=80,slow=7.2,SNR=34
AKASG pP pP 09 39 32.7 +1.6
comp=Z,0.3nm,0.4s,baz=83,slow=7.2,SNR=1.0
AKASG sP sP 09 40 00.2 +4.1
comp=Z,1.3nm,0.6s,baz=92,slow=11,SNR=2.9
AKBB Malin Array Si 33.11 309 P P 09 38 47.5 +0.5
AKBB pmax pmax
comp=Z,17nm,1.2s
AKBB Malin Array Si 33.11 309 P P 09 38 47.5 +0.5
AKBB IAmb IAmb 09 38 48.1
comp=Z,17nm,1.1s
SORM Soroca 33.38 304 ⇓ P P 09 38 49.7 +0.3
CFR Carcaliu 33.43 299 ⇓ P P 09 38 50.8 +0.9
MANT Manisa 33.74 286 P P 09 38 52.2 -0.6
VRI Vrincioaia 34.42 300 ⇓ P P 09 38 59.5 +1.1
PLOR Plostina 34.47 300 ⇑ P P 09 39 01.2 +2.3
TESR Tescani 34.47 301 ⇑ P P 09 39 00.3 +1.4
BIZ Bicaz 34.85 302 ⇓ P P 09 39 03.4 +1.3
MLR Muntele Rosu 34.97 299 P P 09 39 05.2 +1.9
MLR pmax pmax
comp=Z,28nm,0.8s
MLR Muntele Rosu 34.97 299 ⇓ P P 09 39 05.4 +2.1
MLR Muntele Rosu 34.97 299 P P 09 39 05.2 +1.9
DOPR Dopca 35.35 300 ⇑ P P 09 39 07.8 +1.5
KARP Karpathos 35.47 282 P P 09 39 07.7 +0.2
BURAR Bucovina Array 35.47 303 ⇑ P P 09 38 08.9 +1.5
BUR08 Bucovina Ar. S 35.48 303 P P 09 39 07.1 -0.4
VOIR 35.60 299 ⇓ P P 09 39 09.7 +1.1
ARR Arges 35.90 299 ⇑ P P 09 39 12.8 +1.7
ARCR ARCALIA 36.05 302 ⇓ P P 09 39 14.3 +2.1
WHN Wuhan 36.16 87 P P 09 39 20.6 +7.3
VSU Vasula 36.31 321 *ce* P P 09 39 14.7 +0.5
VSU pmax pmax
comp=Z,43nm,0.8s
LVV L'vov 36.33 307 *e* P P 09 39 15.0 +0.4
DRGR 37.18 302 ⇓ P P 09 39 23.4 +1.5
KWP Kalwaria Pacla 37.18 306 P P 09 39 23.1 +1.3
KWP pmax pmax
comp=Z,194nm,0.9s
KWP Kalwaria Pacla 37.18 306 P P 09 39 23.1 +1.3
GZR Gura Zlata 37.20 299 ⇑ P P 09 39 22.8 +0.7
SUW Suwalki 37.27 313 P P 09 39 23.0 +0.6
SUW pmax pmax
comp=Z,31nm,0.6s
SUW Suwalki 37.27 313 P P 09 39 22.9 +0.6
TRPA Tarpa 37.27 304 *e* P P 09 39 25.3 +2.8
TRPA Tarpa 37.27 304 ⇑ P P 09 39 24.4 +1.9
IDI Anoyia 37.32 282 P P 09 39 23.1 -0.1
comp=Z,7.5nm,0.5s,baz=46,slow=5.2,SNR=8.1
UZH Uzhgorod 37.44 305 *e* P P 09 39 26.2 +2.3
UZH *i* 09 40 07.0
KOLS Kolonicke sedl 37.45 305 *e* P P 09 39 25.1 +1.0
KOLS pmax pmax
comp=Z,10.0nm,1.2s
KOLS Kolonicke sedl 37.45 305 *e* P P 09 39 25.1 +1.0
FIA1 FINESS Array S 37.59 326 P P 09 39 25.0 0.0
FIA1 IAmb IAmb 09 39 26.2
comp=Z,11nm,0.6s
FINES FINESS Array B 37.59 326 *i* P P 09 39 25.5 +0.5
FINES pmax pmax
comp=Z,6.0nm,0.4s
FINES FINESS Array B 37.59 326 P P 09 39 25.3 +0.3
comp=Z,5.8nm,0.4s,baz=120,slow=9.9,SNR=81
SIRR Siria 37.93 301 ⇑ P P 09 39 30.1 +2.0
BZS Buzias 38.00 300 ⇑ P P 09 39 30.0 +1.3
MDVR Moldovita 38.00 298 ⇓ P P 09 39 30.0 +1.3
FNA Florina 38.79 292 P P 09 39 35.3 -0.1
FNA pmax pmax
comp=Z,5.0nm,0.9s
FNA Florina 38.79 292 P P 09 39 35.3 -0.1
PSZ Piszkesteto 39.05 303 P P 09 39 37.1 -0.4
PSZ pmax pmax
comp=Z,7.0nm,0.8s
PSZ Piszkesteto 39.05 303 ⇓ P P 09 39 38.7 +1.2
PSZ Piszkesteto 39.05 303 P P 09 39 37.1 -0.4
PSZ IAmb IAmb 09 39 39.6
comp=Z,7.1nm,0.8s
OJC Ojcow 39.07 307 P P 09 39 37.9 +0.3
OJC pmax pmax
comp=Z,13nm,1.0s
OJC Ojcow 39.07 307 P P 09 39 37.9 +0.3
OJC IAmb IAmb 09 39 39.1
comp=Z,13nm,1.0s
NJ2 Nanjing 39.24 82 *e* P P 09 39 40.3 +1.2
NJ2 pmax pmax
comp=Z,7.0nm,0.7s
LANS Liptovska Anna 39.30 305 *e* P P 09 39 41.4 +2.0
LANS Liptovska Anna 39.30 305 *e* P P 09 39 41.4 +2.0
HKPS Hong Kong Po S 39.62 99 P P 09 39 40.9 -1.5
VYHS Vyhne 39.73 304 *e* P P 09 39 44.3 +1.2
VYHS pmax pmax
comp=Z,10.0nm,1.3s
VYHS Vyhne 39.73 304 *e* P P 09 39 44.2 +1.2
SRO Srobarova 40.12 303 *e* P P 09 39 48.0 +1.8
SRO pmax pmax
comp=Z,30nm,1.0s
SRO Srobarova 40.12 303 *e* P P 09 39 48.0 +1.8
JAVC Velka Javorina 40.49 305 *e* P P 09 39 51.3 +2.0
MORC Moravsky Berou 40.53 306 P P 09 39 51.6 +2.0
MORC Moravsky Berou 40.53 306 ⇓ P P 09 39 50.6 +1.1
MORC Moravsky Berou 40.53 306 *e* P P 09 39 50.7 +1.1
MORC Moravsky Berou 40.53 306 P P 09 39 48.7 -0.9
MORC IAmb IAmb 09 39 51.6
comp=Z,10nm,0.8s
KRLC Kraliky 41.02 307 *e* P P 09 39 54.6 +1.1
KRLC Kraliky 41.02 307 *e* P P 09 39 54.6 +1.1
VRAC Vranov 41.17 306 P P 09 39 57.1 +2.3
VRAC Vranov 41.17 306 ⇓ P P 09 39 56.2 +1.4
VRAC Vranov 41.17 306 *e* P P 09 39 56.2 +1.4
ARCES ARCESS Array B 41.21 338 P P 09 39 55.5 +0.7
comp=Z,5.8nm,0.4s,baz=113,slow=8.3,SNR=74
ARE0 ARCESS Array S 41.21 338 *e* P P 09 39 56.1 +1.3
BLY Banja Luka 41.21 299 P P 09 39 56.0 +0.9
BLY IAmb IAmb 09 39 56.8
comp=Z,13nm,1.4s
DPC Dobruska-Polom 41.30 307 *e* P P 09 39 57.3 +1.5
DPC Dobruska-Polom 41.30 307 *e* P P 09 39 57.3 +1.5
KRUC Moravsky 41.32 305 *e* P P 09 39 57.1 +1.2
OSTC Ostas 41.36 308 *e* P P 09 39 58.5 +2.2
CHVC Chvalec 41.46 308 *e* P P 09 39 58.5 +1.4
UPC Upice 41.49 308 *e* P P 09 39 58.6 +1.3
UPC Upice 41.49 308 *e* P P 09 39 58.6 +1.3
KTK1 Kautokeino 41.69 336 *e* P P 09 39 59.3 +0.7
CONA Conrad Observa 41.76 304 *i* P P 09 40 00.4 +0.8
comp=Z,16nm,0.9s,SNR=9.1
ARSA Arzberg 42.05 303 *e* P P 09 40 03.3 +1.4
comp=Z,5.3nm,1.1s
PSI Prapat 42.14 136 P P 09 40 02.9 -0.2
PSI pmax pmax
comp=Z,10.0nm,1.0s
PSI Prapat 42.14 136 P P 09 40 02.9 -0.2
comp=Z,11nm,1.2s,baz=360,slow=5.6,SNR=3.7
RPSI Rantau Prapat 42.23 136 P P 09 40 02.4 -1.2
RPSI IAmb IAmb 09 40 03.7
comp=Z,9.8nm,1.0s
RPSI Rantau Prapat 42.23 136 P P 09 40 02.9 -0.7
HAMF Hammerfest 42.28 339 *e* P P 09 40 04.5 +1.1
GOPC GO Pecny, Ondr 42.31 307 *e* P P 09 40 05.0 +1.0
GOPC GO Pecny, Ondr 42.31 307 *e* P P 09 40 05.0 +1.0
PERS Pernice 42.40 302 *i* P P 09 40 05.5 +0.8
SOKA Soboth 42.45 302 *e* P P 09 40 06.1 +0.8
comp=Z,13nm,0.6s,SNR=8.4
PRU Pruhonice 42.46 307 *e* P P 09 40 06.6 +1.4
PRU Pruhonice 42.46 307 *e* P P 09 40 06.6 +1.4
GSI Gunungsitoli 42.66 139 P P 09 40 08.0 +0.8
BRG Berggiesshubel 42.79 308 *e* P P 09 40 08.6 +0.8
comp=Z,17nm,0.9s
BRG Berggiesshubel 42.79 308 *e* P P 09 40 08.6 +0.8
BRG pmax pmax
comp=Z,17nm,0.9s
BRG Berggiesshubel 42.79 308 *e* P P 09 40 09.5 +1.7
comp=Z,17nm,0.9s,baz=85,slow=7.8
OBKA Obir 42.81 302 *e* P P 09 40 08.6 +0.5
comp=Z,5.1nm,0.9s
MOA Mollm 42.83 304 *e* P P 09 40 08.3 +0.1
comp=Z,10.0nm,0.9s
MOZS Mozjanca 42.91 301 *i* P P 09 40 09.6 +0.8
GEC2 GERESS Array S 43.10 305 P P 09 40 10.1 -0.3
GERES GERESS Array B 43.10 305 P P 09 40 10.8 +0.3

comp=Z,2.2nm,0.8s,baz=87,slow=7.0,SNR=15
GERES PP **PP** **09 41 53.1 -2.0**
comp=Z,0.5nm,0.6s,baz=97,slow=7.0,SNR=4.2
KHC Kasperske Hory 43.16 306 *eP* **P** **09 40 12.0 +1.2**
KHC Kasperske Hory 43.16 306 *eP* **P** **09 40 12.0 +1.2**
KHC Kasperske Hory 43.16 306 P **P** **09 40 10.8 0.0**
FBE Freiberg 43.16 308 *eP* **P** **09 40 12.6 +1.9**
comp=Z,22nm,0.9s,baz=85,slow=7.8
CLL Collm 43.36 309 P **P** **09 40 12.0 -0.3**
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL Collm 43.36 309 *i* P **P** **09 40 12.7 +0.4**
comp=Z,9.0nm,0.9s
CLL *e*PP **PP** **09 41 59.0 +1.5**
CLL Collm 43.36 309 *eP* **P** **09 40 13.4 +1.2**
comp=Z,8.6nm,0.9s,baz=85,slow=7.8
CLL Collm 43.36 309 P **P** **09 40 12.0 -0.3**
CADS Cadrg 43.40 302 *i* P **P** **09 40 13.2 +0.4**
KBA Koelnbreinsper 43.55 303 *eP* **P** **09 40 14.3 +0.2**
comp=Z,4.9nm,0.8s
TANN Tannenbergstha 43.76 308 *eP* **P** **09 40 17.2 +1.6**
comp=Z,23nm,1.2s,baz=85,slow=7.8
YAK Yakutsk 43.81 35 *i* P **P** **09 40 15.8 +0.1**
YAK pmax pmax
comp=Z,7.0nm,0.8s
GUNZ Gunzen 43.85 308 *eP* **P** **09 40 18.0 +1.7**
comp=Z,7.5nm,0.9s,baz=85,slow=7.8
MOR8 Moi Rana 43.91 331 *eP* **P** **09 40 16.2 -0.3**
PLN Plauen 43.95 308 *eP* **P** **09 40 18.6 +1.6**
comp=Z,9.2nm,1.1s,baz=85,slow=7.8
ROTZ Rotzenmuhle 43.99 307 *eP* **P** **09 40 19.5 +2.1**
comp=Z,13nm,1.3s,baz=85,slow=7.8
MANZ Manzenberg 44.03 307 *eP* **P** **09 40 19.7 +2.0**
comp=Z,16nm,1.4s,baz=85,slow=7.8
INTR Introdacqua 44.05 295 P **P** **09 40 17.4 -0.7**
STEI Steigen 44.05 333 *eP* **P** **09 40 16.7 -0.8**
STAL STALIGIAL 44.10 302 P **P** **09 40 17.8 -0.6**
STAL IAmb IAmb 09 40 19.1
comp=Z,11nm,0.7s
NEUB Neuenburg 44.13 309 *eP* **P** **09 40 20.0 +1.5**
comp=Z,21nm,0.9s,baz=85,slow=7.8
NC405 NORSAR Array S 44.26 323 P **P** **09 40 19.0 -0.4**
MOX Moxa 44.28 308 *eP* **P** **09 40 21.3 +1.6**
comp=Z,17nm,1.4s,baz=85,slow=7.8
NC602 NORSAR Array S 44.31 323 *eP* **P** **09 40 19.7 -0.1**
NC303 NORSAR Array S 44.44 323 P **P** **09 40 21.0 +0.2**
NRCA Norcia 44.45 297 P **P** **09 40 21.4 +0.1**
NB2 NORSAR Subarra 44.50 323 P **P** **09 40 21.1 -0.2**
comp=Z,13nm,0.8s,baz=96,slow=7.9
NB2 NORSAR Subarra 44.50 323 P **P** **09 40 21.1 -0.2**
baz=96,slow=7.9
NOA NORSAR Array B 44.50 323 P **P** **09 40 21.1 -0.2**
comp=Z,8.4nm,0.7s,baz=96,slow=7.7,SNR=40
KONS Konsvik 44.50 331 *eP* **P** **09 40 21.4 +0.3**
NAO01 NORSAR Array S 44.64 323 P **P** **09 40 22.2 -0.2**
NAO01 IAmb IAmb 09 40 23.1
comp=Z,22nm,0.9s
KSRS Korea Array 44.65 71 P **P** **09 40 23.4 +0.7**
comp=Z,1.0nm,0.5s,baz=270,slow=7.0,SNR=7.3
WATA Walderalm 44.71 303 *eP* **P** **09 40 22.8 -0.4**
comp=Z,3.8nm,0.6s
NBO00 NORSAR Array S 44.71 323 P **P** **09 40 22.5 -0.5**
NBO00 IAmb IAmb 09 40 23.4
comp=Z,29nm,1.0s
LOF Lofoten 44.72 333 *eP* **P** **09 40 23.4 +0.5**
NC204 NORSAR Array S 44.74 323 P **P** **09 40 22.8 -0.4**
MURB Monte Urbino 44.78 298 P **P** **09 40 25.1 +1.3**
MURB IAmb IAmb 09 40 26.8
comp=Z,25nm,0.8s
BSEG Bad Segeberg 44.84 313 *eP* **P** **09 40 26.1 +2.1**
comp=Z,19nm,0.7s,baz=85,slow=7.8
CTI Castel Tesino 44.86 302 P **P** **09 40 23.8 -0.7**
CTI pmax pmax
comp=Z,9.0nm,0.6s
CTI Castel Tesino 44.86 302 P **P** **09 40 23.8 -0.7**
CTI IAmb IAmb 09 40 25.3
comp=Z,9.4nm,0.6s
CLZ Clausthal 44.95 310 *eP* **P** **09 40 26.6 +1.6**
comp=Z,20nm,1.0s,baz=85,slow=7.8
SQTA Sankt Quirin 44.97 303 *eP* **P** **09 40 24.6 -0.8**
comp=Z,5.7nm,0.6s
TEOL Teolo 44.97 301 P **P** **09 40 24.7 -0.5**
TEOL IAmb IAmb 09 40 26.3
comp=Z,13nm,0.8s
MOTA Moosalm 45.02 303 *i* P **P** **09 40 24.9 -0.8**
comp=Z,6.3nm,0.6s
NRDL Niedersach Rie 45.06 311 *eP* **P** **09 40 27.6 +1.9**
comp=Z,16nm,0.9s,baz=85,slow=7.8
KONO Kongsberg 45.21 321 *eP* **P** **09 40 27.7 +0.9**
RETA Reutte 45.23 304 *eP* **P** **09 40 26.3 -1.0**
comp=Z,1.8nm,0.5s
GTTG Gvttingen 45.23 309 *eP* **P** **09 40 28.9 +1.8**
comp=Z,46nm,0.8s,baz=85,slow=7.8
FETA Feichten 45.33 303 *eP* **P** **09 40 27.6 -0.5**
comp=Z,12nm,1.1s
RETH Rethem/Aller, 45.50 311 *eP* **P** **09 40 30.9 +1.7**
comp=Z,15nm,0.9s,baz=85,slow=7.8
DOMB Dombas 45.61 324 *eP* **P** **09 40 28.9 -1.0**
UBR Ueberruh 45.64 304 *eP* **P** **09 40 31.2 +0.8**
comp=Z,12nm,0.7s,baz=85,slow=7.8
TIXI Tiksi 45.66 22 *ceP* **P** **09 40 30.8 +0.6**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
TIXI Tiksi 45.66 22 P **P** **09 40 30.4 +0.2**
FUORN Ofenpass-Fuorn 45.71 303 P **P** **09 40 31.1 -0.2**
DAVA Damuels 45.85 304 *eP* **P** **09 40 32.1 -0.2**
comp=Z,24nm,0.6s,SNR=10.0
STU Stuttgart 46.07 306 P **P** **09 40 34.3 +0.6**
STU pmax pmax
comp=Z,61nm,0.4s
STU Stuttgart 46.07 306 P **P** **09 40 34.3 +0.6**
TNS Taunus Mts 46.34 308 *eP* **P** **09 40 37.4 +1.5**
comp=Z,10.0nm,1.1s,baz=85,slow=7.8
IBBN Ibbenburen 46.51 311 *eP* **P** **09 40 38.7 +1.6**
comp=Z,33nm,0.9s,baz=85,slow=7.8
MSSA Maissana 46.68 300 P **P** **09 40 38.6 -0.1**
MSSA IAmb IAmb 09 40 39.7
comp=Z,30nm,1.1s
BUG Bochum--Univer 46.92 310 *eP* **P** **09 40 41.6 +1.4**
comp=Z,23nm,1.2s,baz=85,slow=7.8
AHRW Bad Neuenahr-A 47.17 308 *eP* **P** **09 40 43.9 +1.7**
comp=Z,19nm,1.0s,baz=85,slow=7.8
BER Bergen 47.36 322 *eP* **P** **09 40 43.1 -0.4**
SPA0 Spitsbergen Ar 47.52 347 *eP* **P** **09 40 44.2 -0.4**
SENIN Lac Senin/Sane 47.77 303 P **P** **09 40 46.9 -0.3**
SENIN IAmb IAmb 09 40 47.9
comp=Z,13nm,0.8s
MEM Membach 47.83 309 P **P** **09 40 47.0 -0.2**
WLF Walferdange 47.89 307 *eP* **P** **09 40 49.7 +1.9**
comp=Z,29nm,1.3s,baz=85,slow=7.8
WLF Walferdange 47.89 307 P **P** **09 40 49.2 +1.4**
comp=Z,15nm,1.2s
BNI Bardonecchia 48.48 301 P **P** **09 40 51.7 -0.9**
BNI pmax pmax
comp=Z,8.0nm,1.0s
BNI Bardonecchia 48.48 301 P **P** **09 40 51.7 -0.9**
BMRD Maredsous 48.66 308 P **P** **09 40 55.1 +1.5**
comp=Z,16nm,1.0s
KMBO Kilima Mbogo 49.02 228 *i* P **P** **09 40 58.4 +1.3**
KMBO pmax pmax
comp=Z,4.0nm,0.6s
KMBO Kilima Mbogo 49.02 228 P **P** **09 40 57.8 +0.7**
comp=Z,4.2nm,0.7s,baz=39,slow=12,SNR=10
KMBO Kilima Mbogo 49.02 228 P **P** **09 40 56.5 -0.6**
KEST Kesra 49.25 289 P **P** **09 40 59.1 +0.7**
comp=Z,9.1nm,0.7s,baz=33,slow=1.1,SNR=12
KEST Kesra 49.25 289 P **P** **09 40 58.8 +0.4**
KEST IAmb IAmb 09 41 00.7
comp=Z,28nm,1.4s
SSB Saint Sauveur 49.90 302 P **P** **09 41 02.5 -0.6**
SSB pmax pmax
comp=Z,8.0nm,0.6s
SSB Saint Sauveur 49.90 302 P **P** **09 41 02.5 -0.6**
SSB IAmb IAmb 09 41 04.2
comp=Z,8.5nm,0.6s
CLF Chambon-Foret 50.75 306 P **P** **09 41 10.5 +1.2**
KKM Kota Kinabalu 51.01 115 P **P** **09 41 11.6 -0.3**
KKM IAmb IAmb 09 41 22.7
comp=Z,27nm,1.1s
MBAR Mbarara 52.72 235 P **P** **09 41 24.1 -0.4**
MBAR pmax pmax
comp=Z,9.0nm,0.7s
MBAR Mbarara 52.72 235 P **P** **09 41 24.1 -0.4**
MBAR IAmb IAmb 09 41 28.8
comp=Z,9.2nm,0.7s
DAG Danmarks Havn 54.77 344 *i P* **P** **09 41 39.2 +0.9**
DAG pmax pmax
comp=Z,14nm,0.9s
DAG Danmarks Havn 54.77 344 *i P* **P** **09 41 39.2 +0.9**
comp=Z,14nm,0.9s
ESBB Sonseca Array 57.65 298 P **P** **09 41 58.6 -0.7**
ESBB IAmb IAmb 09 41 60.0
comp=Z,7.4nm,0.8s
ESDC Sonseca Array 57.65 298 P **P** **09 41 59.0 -0.4**
comp=Z,4.4nm,0.7s,baz=60,slow=7.5,SNR=41
TAM Tamanrasset 57.77 276 P **P** **09 42 00.0 -0.5**
TAM pmax pmax
comp=Z,3.0nm,0.7s
TAM Tamanrasset 57.77 276 P **P** **09 42 00.0 -0.5**
PAB San Pablo 57.98 298 P **P** **09 42 01.2 -0.5**
PAB pmax pmax
comp=Z,11nm,1.3s
PAB San Pablo 57.98 298 P **P** **09 42 01.2 -0.5**
PAB IAmb IAmb 09 42 02.4
comp=Z,11nm,1.3s
BILL Bilibino 58.48 26 *eP* **P** **09 42 06.0 +1.5**
BILL 09 42 52.0
BILL 09 44 17.0
BILL *SS **ScS** **09 51 37.0 +5.1**
BILL pmax pmax
comp=Z,7.0nm,1.9s
MVO Moncorvo 59.22 301 *eP* **P** **09 42 11.2 +1.0**
MTE Manteigas 59.89 300 *eP* **P** **09 42 15.4 +0.7**
comp=Z,18nm,0.9s
PVIS Viseu 60.00 300 *eP* **P** **09 42 16.1 +0.6**
comp=Z,20nm,1.0s
PCBR Castelo Branco 60.07 299 *eP* **P** **09 42 16.8 +0.9**
COI Coimbra 60.57 300 *eP* **P** **09 42 19.9 +0.6**
PCAS Casmilo, Conde 60.70 300 *eP* **P** **09 42 21.0 +0.9**
PTOM Tomar 60.82 299 *eP* **P** **09 42 21.8 +0.9**
comp=Z,24nm,1.4s
EVO Evora 60.99 298 *eP* **P** **09 42 22.4 +0.3**
comp=Z,23nm,1.7s
PBEJ Beja 61.10 298 *eP* **P** **09 42 23.2 +0.3**
SUMG Summit 61.11 341 *i* P **P** **09 42 24.1 +1.2**
SUMG Summit 61.11 341 *i* P **P** **09 42 24.1 +1.2**
SUMG Summit 61.11 341 P **P** **09 42 23.4 +0.6**
SUMG IAmb IAmb 09 42 26.2
comp=Z,12nm,0.9s
PVAQ Vaqueiros 61.27 297 *eP* **P** **09 42 24.2 +0.2**
PVAQ Vaqueiros 61.27 297 P **P** **09 42 23.2 -0.8**
PVAQ IAmb IAmb 09 42 25.2
comp=Z,21nm,1.3s
PBDV Barranco-do-Ve 61.49 297 *eP* **P** **09 42 26.4 +0.9**
comp=Z,76nm,1.8s
PNCL Nicolau / Gran 61.54 298 *eP* **P** **09 42 26.9 +1.1**
PFVI Vila Bisbo 62.18 297 *eP* **P** **09 42 29.9 -0.2**
LSZ Lusaka 65.64 226 P **P** **09 42 52.5 -0.4**
LSZ pmax pmax
comp=Z,6.0nm,0.8s
LSZ Lusaka 65.64 226 P **P** **09 42 52.5 -0.4**
LSZ IAmb IAmb 09 42 53.7
comp=Z,6.2nm,0.8s
TOA0 Torodi Ar. Sit 65.95 269 P **P** **09 42 52.6 -2.3**
TORD Torodi Ar. Bea 65.95 269 P **P** **09 42 53.0 -1.9**
comp=Z,7.3nm,0.5s,baz=49,slow=6.1,SNR=59
RDOG Red Dog Mine 68.16 19 P **P** **09 43 08.1 +0.1**
ANM Nome 69.92 23 P **P** **09 43 20.5 +1.7**
ANM pmax pmax
comp=Z,3.0nm,0.8s
ANM Nome 69.92 23 P **P** **09 43 20.5 +1.7**
TOLK Toolik Lake Re 70.83 15 P **P** **09 43 25.0 +0.7**
TOLK IAmb IAmb 09 43 26.0
comp=Z,4.6nm,0.8s
COLD Coldfoot 71.88 16 P **P** **09 43 31.0 +0.4**
MLY Manley 73.58 17 P **P** **09 43 40.6 -0.1**
C36M Paulatuk 73.83 6 P **P** **09 43 41.8 -0.1**
INK Inuvik 73.84 9 P **P** **09 43 42.5 +0.5**
INK pmax pmax
comp=Z,20nm,1.4s
INK Inuvik 73.84 9 P **P** **09 43 43.0 +1.0**
comp=Z,4.8nm,0.6s,baz=347,slow=6.6,SNR=50
INK Inuvik 73.84 9 P **P** **09 43 42.5 +0.5**
INK IAmb IAmb 09 43 43.9
comp=Z,20nm,1.4s
NEA Nenana 74.35 17 P **P** **09 43 45.5 +0.5**
NEA IAmb IAmb 09 43 55.3
comp=Z,8.0nm,0.6s
COLA College 74.38 16 P **P** **09 43 45.5 +0.3**
COLA pmax pmax
comp=Z,8.0nm,0.8s
COLA College 74.38 16 P **P** **09 43 45.5 +0.3**
COLA IAmb IAmb 09 43 47.1
comp=Z,8.4nm,0.8s
ILAR Eielson Array 74.69 16 P **P** **09 43 46.7 -0.3**
comp=Z,2.1nm,0.9s,baz=313,slow=4.7,SNR=21
ILAR pP **pP** **09 44 39.8 +0.5**
comp=Z,1.7nm,1.1s,baz=285,slow=4.5,SNR=4.3
DBIC Dimbokro 74.93 267 P **P** **09 43 47.7 -1.5**
comp=Z,5.8nm,0.6s,baz=24,slow=7.0,SNR=15
KIC Kosan Boka 75.02 267 *eP* **P** **09 43 49.4 -0.3**
comp=Z,18nm,0.6s
TIC Toumodi 75.08 267 *eP* **P** **09 43 49.6 -0.5**
LIC Lamto 75.33 267 *eP* **P** **09 43 51.0 -0.5**
comp=Z,24nm,0.5s
SKT Skwentna 75.91 19 P **P** **09 43 53.7 -0.3**
SKT IAmb IAmb 09 43 55.3
comp=Z,15nm,1.2s
SCRK Sand Creek 76.01 15 P **P** **09 43 55.0 +0.4**
SCRK IAmb IAmb 09 43 56.2
comp=Z,13nm,1.5s
DHY Denali Highway 76.03 17 P **P** **09 43 54.8 -0.1**
DHY IAmb IAmb 09 43 55.8
comp=Z,4.0nm,0.7s
DAWY Dawson 76.84 13 P **P** **09 43 59.7 +0.4**
DAWY IAmb IAmb 09 44 00.7
comp=Z,6.0nm,1.0s
BOSA Boshof 77.92 220 P **P** **09 44 05.2 -0.5**
comp=Z,1.3nm,0.5s,baz=6.1,slow=7.6,SNR=4.3
YKA Yellowknife Ar 81.20 3 P **P** **09 44 23.0 +0.2**
YKA Yellowknife Ar 81.20 3 P **P** **09 44 23.0 +0.2**
comp=Z,2.6nm,0.4s,baz=352,slow=5.4,SNR=200
WRA Warramunga Arr 81.81 122 P **P** **09 44 25.9 -0.8**
comp=Z,4.6nm,0.7s,baz=323,slow=4.8,SNR=35
WRAB Tennant Creek 81.81 122 *ceP* **P** **09 44 27.4 +0.8**
WRAB pmax pmax
comp=Z,9.0nm,1.7s
SCHQ Schefferville 82.16 337 P **P** **09 44 28.0 0.0**
comp=Z,3.3nm,0.9s,baz=20,slow=6.5,SNR=4.2
ASAR Alice Springs 84.08 125 P **P** **09 44 37.4 -0.9**
comp=Z,6.1nm,0.6s,baz=310,slow=4.9,SNR=112
ASAR pP **pP** **09 45 32.4 +0.6**
comp=Z,1.2nm,0.9s,baz=332,slow=5.9,SNR=3.4
FORT Forrest 85.52 134 P **P** **09 44 45.0 -0.2**
FFC Flin Flon 88.93 356 P **P** **09 45 01.2 -0.1**
FFC pmax pmax
comp=Z,10.0nm,1.4s
FFC Flin Flon 88.93 356 P **P** **09 45 01.2 -0.1**
FFC IAmb IAmb 09 45 02.6
comp=Z,10nm,1.4s
ULM Lac du Bonnet 92.85 352 P **P** **09 45 19.1 -0.5**
ULM pmax pmax
comp=Z,8.0nm,1.2s
ULM Lac du Bonnet 92.85 352 P **P** **09 45 19.1 -0.5**
comp=Z,2.9nm,1.0s,baz=2.3,slow=4.9,SNR=4.8
ULM Lac du Bonnet 92.85 352 P **P** **09 45 19.1 -0.5**
ULM IAmb IAmb 09 45 20.1
comp=Z,7.8nm,1.2s
STKA Stephens Creek 94.62 127 P **P** **09 45 26.6 -1.2**
comp=Z,1.4nm,0.8s,baz=4.2,slow=10,SNR=2.9
STKA Stephens Creek 94.62 127 P **P** **09 45 26.6 -1.2**
TXAR Lajitas Array 114.31 355 PKP PKPdf 09 50 45.9 +0.1
comp=Z,0.5nm,1.0s,baz=270,slow=2.7,SNR=2.7
PLCA Paso Flores 150.06 250 PKPbc **PKPbc** **09 51 55.9 -0.5**
comp=Z,3.8nm,0.7s,baz=33,slow=3.2,SNR=16

*IDC **11** 09:54:21.1±0.6,27.2°8N×140.7°19E,h450km±6km, mb3.1/13, mb1 3.2/16,mb1mx3.1/45,mbtmp3.9/16, Error ellipse: s-maj=16.3km s-min=11.6km az=77.0*

*JMA **11** 09:54:23.2±0.3,27.6°1N×140.7°88E,h468km±4km, M3.8*

ISC 11 09:54:22.0±0.7,27.4°2N±0.0°8×140.7°3E±0.0°1, h450km, n32, σ1°9 85/39, mb3.5/13, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.73**	**100**	P **P**	**09 55 22.3**	**+1.2**
CBIJ				S **S**	**09 56 08.9**	**0.0**
JCJ	**Chichijima**	**1.73**	**100**	P **P**	**09 55 22.4**	**+1.3**
	15nm,0.3s,baz=292,slow=19,SNR=8.7					
JCJ				S **S**	**09 56 08.7**	**-0.3**
JHH2	**Haha-jima-NKT2**	**1.86**	**114**	P **P**	**09 55 23.7**	**+1.9**
JHH2				*e*S **S**	**09 56 11.6**	**+1.4**
BSO1	**Boso 1**	**7.24**	**5**	S **S**	**09 57 37.0**	**+1.1**
BSO3	**Boso 3**	**7.37**	**1**	*e*S **S**	**09 57 38.3**	**-0.6**
BSO4	**Boso 4**	**7.55**	**0**	*e*S **S**	**09 57 42.3**	**-0.5**
JIE	**Ise**	**7.60**	**337**	P **P**	**09 56 16.2**	**+3.3**
JKN2	**Miekihoku**	**7.62**	**334**	P **P**	**09 56 17.0**	**+3.8**
JOD2	**Odawara 2**	**7.89**	**353**	P **P**	**09 56 18.3**	**+2.2**
JOD2				*e*S **S**	**09 57 50.9**	**+1.2**
JEG	**Eigenji**	**8.38**	**338**	P **P**	**09 56 25.6**	**+4.2**
JHU	**Hanno**	**8.45**	**354**	*e*S **S**	**09 57 59.3**	**-1.6**
JRY	**Ryogami san**	**8.65**	**353**	P **P**	**09 56 26.2**	**+1.9**
JRY				*e*S **S**	**09 58 04.8**	**-0.1**
JAG	**Ashikaga**	**9.01**	**356**	P **P**	**09 56 28.5**	**+0.3**
JAG				S **S**	**09 58 08.2**	**-3.7**
JHO	**Hitachi**	**9.17**	**1**	P **P**	**09 56 31.4**	**+1.5**
JHO				*e*S **S**	**09 58 12.4**	**-2.8**
MJAR	**Matsushiro Arr**	**9.27**	**350**	P **P**	**09 56 31.8**	**+0.9**
	0.2nm,0.3s,baz=250,slow=14,SNR=9.5					
JHS	**Saijyo**	**9.73**	**323**	P **P**	**09 56 39.6**	**+3.5**
JNU	**Nakatsue**	**9.92**	**307**	P **P**	**09 56 39.7**	**+1.6**
	0.5nm,0.3s,baz=148,slow=15,SNR=5.2					
USRK	**Ussuriysk Ar.**	**18.03**	**340**	P **P**	**09 58 05.7**	**+0.9**
	baz=162,slow=11,SNR=11					
KLR	**Kul'dur**	**22.75**	**345**	P **P**	**09 58 48.6**	**+0.6**
	0.6nm,0.3s,baz=160,slow=11,SNR=5.8					
SONM	**Songino Array**	**33.31**	**317**	P **P**	**10 00 19.8**	**-1.0**
	0.2nm,0.5s,baz=108,slow=4.7,SNR=2.8					
WRA	**Warramunga Arr**	**47.43**	**188**	P **P**	**10 02 12.5**	**-2.0**
	0.7nm,0.3s,baz=5.6,slow=7.6,SNR=13					
ZALV	**Zalesovo Beam**	**48.14**	**319**	P **P**	**10 02 18.4**	**-1.0**
	1.3nm,0.3s,baz=115,slow=6.5,SNR=8.0					
MKAR	**Makanchi Array**	**48.96**	**309**	P **P**	**10 02 24.9**	**-0.8**
	3.5nm,1.2s,baz=90,slow=9.8,SNR=6.9					
ASAR	**Alice Springs**	**51.16**	**188**	P **P**	**10 02 40.3**	**-1.9**
	0.2nm,0.3s,baz=1.1,slow=4.7,SNR=8.3					
KDAK	**Kodiak Island**	**55.13**	**37**	P **P**	**10 03 10.7**	**+0.6**
	6.4nm,1.1s,baz=259,slow=5.0,SNR=5.0					
ILAR	**Eielson Array**	**58.25**	**29**	P **P**	**10 03 31.6**	**0.0**
	0.2nm,0.3s,baz=248,slow=5.4,SNR=5.0					
YKA	**Yellowknife Ar**	**72.66**	**28**	P **P**	**10 05 02.5**	**+0.1**
	0.8nm,0.5s,baz=297,slow=6.0,SNR=27					
ARCES	**ARCESS Array B**	**72.68**	**340**	P **P**	**10 05 02.1**	**-0.4**
	0.7nm,0.4s,baz=71,slow=8.2,SNR=13					
FINES	**FINESS Array B**	**76.90**	**333**	P **P**	**10 05 25.4**	**-0.9**
	3.4nm,0.4s,baz=70,slow=4.9,SNR=42					
NVAR	**Mina Array Bea**	**81.65**	**51**	P **P**	**10 05 52.5**	**+0.1**
	0.4nm,0.7s,baz=272,slow=6.2,SNR=3.4					
NB2	**NORSAR Subarra**	**82.68**	**338**	P **P**	**10 05 55.4**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=55,slow=5.1					
NOA	**NORSAR Array B**	**82.68**	**338**	P **P**	**10 05 55.6**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=54,slow=6.6,SNR=4.3					

WEL 11 10:11:53.2,45°S±2°×16°8E±°, h82km±3km, M3.9/28, ML3.9/16, MLv3.9/28, Error ellipse: s-maj=0.0km s-min=0.0km az=67.3, South Island

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
MSZ	**Milford Sound**	**0.27**	**38**	P Pn	10 12 06.1	+0.6
MSZ				S Sn	10 12 15.1	+0.5
MLZ	**Mavora Lakes**	**0.57**	**148**	P Pn	10 12 08.5	+0.7
MLZ				S Sn	10 12 19.4	+0.8
DCZ	**Deep Cove**	**0.69**	**213**	P Pn	10 12 09.1	+0.2
DCZ				S Sn	10 12 20.9	+0.4
WKZ	**Wanaka**	**0.95**	**87**	P Pn	10 12 13.0	+1.2
WHZ	**Wether Hill Ro**	**1.02**	**170**	P Pn	10 12 13.4	+0.8
WHZ				S Sn	10 12 28.5	+1.4
JCZ	**Jackson Bay**	**1.13**	**44**	P Pn	10 12 14.3	+0.3
EAZ	**Earnscleugh**	**1.20**	**107**	P Pn	10 12 16.0	+1.3
PYZ	**Puysegur Point**	**1.46**	**209**	P Pn	10 12 19.5	+1.4
TUZ	**Tuapeka**	**1.73**	**129**	P Pn	10 12 22.7	+1.1
LBZ	**Lake Benmore**	**1.85**	**75**	P Pn	10 12 23.2	+0.1
SYZ	**Scrubby Hill**	**1.94**	**149**	P Pn	10 12 25.1	+0.9
APZ	**The Paps**	**1.96**	**174**	P Pn	10 12 25.5	+0.9
FOZ	**Fox Glacier**	**2.04**	**49**	P Pn	10 12 25.0	-0.6
ODZ	**Otahua Downs**	**2.10**	**95**	P Pn	10 12 26.8	+0.3
HHSZ	**Highcliff Hill**	**2.28**	**117**	P Pn	10 12 30.1	+1.2
RPZ	**Rata Peaks**	**2.69**	**65**	P Pn	10 12 33.6	-0.6
WVZ	**Waitaha Valley**	**2.85**	**52**	P Pn	10 12 35.7	-0.8
INZ	**Inchbonnie**	**3.47**	**53**	P Pn	10 12 44.2	-0.8
MQZ	**McQueen's Vall**	**3.75**	**73**	P Pn	10 12 47.6	-1.1
AKCZ	**Akaroa Harbour**	**3.88**	**77**	P Pn	10 12 49.8	-0.6
LTZ	**Lake Taylor**	**3.93**	**59**	P Pn	10 12 49.5	-1.6
OKCZ	**Okains Bay**	**4.03**	**75**	P Pn	10 12 52.0	-0.5
DSZ	**Denniston Nort**	**4.34**	**45**	P Pn	10 12 55.9	-0.9
THZ	**Tophouse**	**4.92**	**52**	P Pn	10 13 01.5	-3.2
QRZ	**Quartz Range**	**5.40**	**43**	P Pn	10 13 10.5	-0.6
NNZ	**Nelson**	**5.55**	**51**	P Pn	10 13 12.5	-0.7
DUWZ	**D'Urville Isla**	**6.13**	**50**	P Pn	10 13 22.4	+1.2
CAW	**Cannon Point**	**6.60**	**58**	P Pn	10 13 25.8	-1.7
PAWZ	**Paruwai Farm**	**6.66**	**61**	P Pn	10 13 33.8	+5.5
MTW	**Mount Morrison**	**6.83**	**60**	P Pn	10 13 28.9	-1.8
KHEZ	**Kahui Hut**	**7.30**	**42**	P Pn	10 13 37.6	+0.4
PREZ	**Palmer Road**	**7.33**	**43**	P Pn	10 13 38.4	+1.0
PKEZ	**Pukeiti**	**7.37**	**42**	P Pn	10 13 39.4	+1.3
VRZ	**Vera Road**	**7.80**	**45**	P Pn	10 13 44.9	+1.1
PKVZ	**Pokaka**	**7.98**	**48**	P Pn	10 13 48.2	+1.8
TRVZ	**Turoa**	**8.08**	**49**	P Pn	10 13 51.3	+3.4
NGZ	**Ngauruhoe**	**8.20**	**49**	P Pn	10 13 52.6	+3.1
HIZ	**Hauiti**	**8.32**	**43**	P Pn	10 13 50.5	-0.5
WCZ	**Waipu Caves**	**10.27**	**32**	P Pn	10 14 18.3	+0.7
OUZ	**Omahuta**	**10.66**	**27**	P Pn	10 14 23.8	+1.0

*NIED **11** 10:18:00,33.6°0N×139.7°0E,h160km, Mw3.8 Best double couple: M0 4.89000×10^14 NP1:φ=32.00000°, δ=82.00000°, λ=31.00000°. NP2:φ=297.00000°, δ=60.00000°, λ=171.00000°.*

*IDC **11** 10:18:28.3±2.1,33.4°2N×139.7°51E,h157km±19km,mb3.3/5, mb1 3.4/6,mb1mx3.1/43,mbtmp3.7/6, Error ellipse: s-maj=77.2km s-min=16.7km az=72.0*

*JMA **11** 10:18:28.8±0.1,33.5°9N×139.6°8E,h163km±1km, M3.5*

ISC 11 10:18:28.6±0.8, 33.5°3N±0.0°5×139.6°7E±0.0°6, h164km±6km, n30, σ1°0 3/44, mb3.5/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
JMKN	**Mikurajimanish**	**0.37**	**350**	P Pn	**10 18 50.9**	**-0.1**
JMKN				*e*S **Sn**	**10 19 07.7**	**-0.6**
JHJ2	**Mitsune**	**0.43**	**163**	P **Pn**	**10 18 51.6**	**+0.3**
JHJ2				S **Sn**	**10 19 09.5**	**+0.9**
JHCJ	**Hachijojimakas**	**0.47**	**167**	P **Pn**	**10 18 52.0**	**+0.6**
JHCJ				*e*S **Sn**	**10 19 08.8**	**-0.1**
JKO	**Kozu shima**	**0.79**	**326**	P **Pn**	**10 18 53.2**	**+0.1**
JKO				S **Sn**	**10 19 11.9**	**-0.2**
JNIO	**Niijimaoohara**	**0.89**	**338**	P **Pn**	**10 18 54.1**	**+0.3**
JNIO				*e*S **Sn**	**10 19 13.1**	**-0.2**
JAOM	**Aogashimamukai**	**1.06**	**176**	P **Pn**	**10 18 56.2**	**+0.9**
JIM2	**Oshima 3**	**1.20**	**351**	P **Pn**	**10 18 56.5**	**+0.1**
JIM2				*e*S **Sn**	**10 19 17.4**	**-0.6**
JIZS	**Izushimoda**	**1.36**	**331**	P **Pn**	**10 18 57.6**	**-0.2**
JIZS				*e*S **Sn**	**10 19 19.9**	**-0.5**
BSO3	**Boso 3**	**1.45**	**29**	P **Pn**	**10 18 58.9**	**+0.5**
BSO3				S **Sn**	**10 19 22.2**	**+0.7**
BSO1	**Boso 1**	**1.56**	**44**	P **Pn**	**10 18 59.8**	**+0.6**
BSO1				*e*S **Sn**	**10 19 23.2**	**+0.2**
TK02	**Tokai 2**	**1.65**	**285**	P **Pn**	**10 19 00.8**	**+0.4**
TK02				*e*S **Sn**	**10 19 26.2**	**+1.1**
TK04	**Tokai 4**	**1.72**	**300**	P **Pn**	**10 19 01.6**	**+0.3**
TK04				S **Sn**	**10 19 26.7**	**0.0**
JOD2	**Odawara 2**	**1.80**	**345**	P **Pn**	**10 19 02.2**	**-0.1**
JOD2				S **Sn**	**10 19 27.7**	**-0.8**
JFNN	**Fujinakano**	**1.85**	**334**	P **Pn**	**10 19 03.1**	**+0.2**
SHZ3	**Shizuoka 3**	**1.95**	**322**	P **Pn**	**10 19 04.3**	**+0.2**
SHZ3				*e*S **Sn**	**10 19 31.8**	**+0.2**
**J

baz=305,slow=75,SNR=14
H11N1 WAKE ISLAND Hy 27.85 113 T T 10 53 17.7
baz=305,slow=75,SNR=13
H11N3 WAKE ISLAND Hy 27.87 113 T T 10 53 15.2
baz=305,slow=75,SNR=11
ZALV Zalesovo Beam 43.31 315 P **P** **10 26 14.2 +0.4**
0.4nm,0.4s,baz=88,slow=8.4,SNR=2.7
ZALV PcP **PcP** **10 27 59.9 +0.3**
1.0nm,0.5s,baz=118,slow=3.4,SNR=5.1
MKAR Makanchi Array 44.86 305 P **P** **10 26 26.1 -0.3**
0.4nm,0.4s,baz=85,slow=9.6,SNR=12
WRA Warramunga Arr 53.41 186 P **P** **10 27 30.9 -0.6**
0.5nm,0.3s,baz=0.4,slow=7.6,SNR=24
ASAR Alice Springs 57.14 186 P **P** **10 27 58.0 -0.1**
0.2nm,0.3s,baz=23,slow=10,SNR=4.9
FINES FINESS Array B 71.25 332 P **P** **10 29 30.1 +0.6**
2.8nm,0.9s,baz=58,slow=6.4,SNR=4.1

SJA ***11*** *10:19:08.9±0.9,20.°60S×71.°20W,h38km±17km,ML4.3, MW4.3*
NEIC ***11*** *10:19:11.3±3.3,20.°59S±0.°02×70.°98W±0.°08,h33km±5km, Error ellipse: s-maj=10.4km s-min=2.6km az=100.0*
GUC ***11*** *10:19:12.1±0.7,20.°61S×70.°78W,h40km±1km,ML4.1*
IDC ***11*** *10:19:16.6±2.3,20.°50S×70.°56W,h49km±20km,mb3.8/8, mb1 3.9/12,mb1mx3.7/34,mbtmp4.0/12,ML4.1/4,MS3.5/5, Ms1 3.5/5,ms1mx3.1/24,Error ellipse: s-maj=27.4km s-min=13.8km az=86.0*
ISC 11 10:19:10.6±0.6,20.°60S±0.°03×70.°93W±0.°05,h22km±5km, n98,σ1°98/108,mb4.5/13,10C-2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.70**	**87**	⇓*i*P	**Pb**	**10 19 23.4**	**-0.8**
TA01				*i* S	**Sb**	**10 19 32.4**	**-1.1**
PATCX	**Punta Patache**	**0.76**	**107**	⇓*i*P	**Pb**	**10 19 24.9**	**-0.3**
PATCX				*i* S	**Sb**	**10 19 33.9**	**-1.3**
PATCX	**Punta Patache**	**0.76**	**107**	*e*P	**Pb**	**10 19 24.9**	**-0.3**
PATCX				*i* S	**Sb**	**10 19 34.1**	**-1.1**
PSGC	**Pisagua**	**1.25**	**37**	⇑*i*P	**Pn**	**10 19 32.9**	**0.0**
PSGC				IAML		10 19 52.0	
comp=N,7μm,0.5s							
PB11	**IPOC Station P**	**1.46**	**55**	*i* P	**Pn**	**10 19 36.2**	**+0.4**
PB11				*i* S	**Sn**	**10 19 53.8**	**-0.6**
PB11				IAML		10 19 58.3	
comp=N,9μm,0.4s							
PB11	**IPOC Station P**	**1.46**	**55**		**Pn**	**10 19 36.2**	**+0.4**
PB08	**IPOC Station P**	**1.73**	**75**	⇑*i*P	**Pn**	**10 19 40.3**	**+0.6**
PB08				*i* S	**Sn**	**10 20 01.2**	**-0.2**
PB08				IAML		10 20 04.8	
comp=N,3μm,0.3s							
PB03	**IPOC Station P**	**1.81**	**143**	⇑*i*P	**Pn**	**10 19 41.6**	**+0.9**
PB03				*i* S	**Sn**	**10 20 03.3**	**+0.2**
PB03				IAML		10 20 11.4	
comp=E,1μm,0.6s							
PB03	**IPOC Station P**	**1.81**	**143**	*e*P	**Pn**	**10 19 41.5**	**+0.9**
PB04	**IPOC Station P**	**1.87**	**157**	⇑*i*P	**Pn**	**10 19 42.4**	**+0.9**
PB04				*i* S	**Sb**	**10 20 11.8**	**+4.5**
PB04				IAML		10 20 20.6	
comp=N,4μm,0.5s							
PB04	**IPOC Station P**	**1.87**	**157**		**Pn**	**10 19 42.5**	**+0.9**
PB04				Sn	**Sn**	**10 20 04.2**	**-0.4**
PB04	**IPOC Station P**	**1.87**	**157**	*e*P	**Pn**	**10 19 42.4**	**+0.9**
PB04				IAML		10 20 19.6	
comp=Z,3μm,0.5s							
GO01	**Chusmiza**	**1.88**	**61**	⇑*i*P	**Pn**	**10 19 42.5**	**+0.7**
GO01				*i* S	**Sn**	**10 20 05.5**	**+0.4**
GO01				IAML		10 20 08.4	
comp=N,4μm,0.3s							
GO01	**Chusmiza**	**1.88**	**61**		**Pn**	**10 19 42.6**	**+0.8**
MNMC	**Minye Minye**	**1.93**	**41**	⇑*i*P	**Pn**	**10 19 43.0**	**+0.6**
MNMC				*i* S	**Sb**	**10 20 09.2**	**+0.2**
MNMC	**Minye Minye**	**1.93**	**41**	*e*P	**Pn**	**10 19 43.6**	**+1.2**
MNMCX	**Minye Minye**	**1.93**	**41**	*e*P	**Pn**	**10 19 43.7**	**+1.3**
MNMCX				*i* S	**Sb**	**10 20 09.8**	**+0.8**
PB09	**IPOC Station P**	**1.98**	**127**	⇑*i*P	**Pn**	**10 19 44.3**	**+1.4**
PB09				*i* S	**Sn**	**10 20 08.4**	**+1.2**
PB09				IAML		10 20 18.1	
comp=E,3μm,0.4s							
PB09	**IPOC Station P**	**1.98**	**127**	*i* P	**Pn**	**10 19 45.0**	**+2.1**
PB09				*i* S	**Sb**	**10 20 11.4**	**+1.1**
AP01	**Chacalluta**	**2.29**	**14**	⇑*i*P	**Pn**	**10 19 52.6**	**+1.4**
AP01				*i* S	**Sb**	**10 20 19.6**	**+0.6**
PB05	**IPOC Station P**	**2.34**	**163**	⇑*i*P	**Pn**	**10 19 48.6**	**+0.7**
PB05				*i* S	**Sn**	**10 20 18.5**	**+2.3**
PB05				IAML		10 20 33.2	
comp=N,2μm,0.7s							
PB05	**IPOC Station P**	**2.34**	**163**	*i* P	**Pn**	**10 19 48.6**	**+0.7**
PB06	**IPOC Station P**	**2.45**	**149**	*e*P	**Pn**	**10 19 50.3**	**+0.8**
PB06				IAML		10 20 36.2	
comp=Z,1μm,0.5s							
PB16	**IPOC Station P**	**2.62**	**31**	*i* P	**Pn**	**10 19 55.6**	**+3.4**
PB16				*i* S	**Sn**	**10 20 27.0**	**+3.4**
LVC	**Limon Verde**	**2.75**	**137**	*e*P	**Pn**	**10 19 56.2**	**+2.5**
LVC				*i* S	**Sb**	**10 20 33.3**	**+0.7**
LVC	**Limon Verde**	**2.75**	**137**	P	**Pn**	**10 19 56.4**	**+2.7**
comp=Z,66nm,0.3s,baz=324,slow=13,SNR=422							
LVC				S	**Sn**	**10 20 27.6**	**+1.2**
comp=Z,84nm,0.3s,baz=25,slow=2.9,SNR=4.6							
LVC	**Limon Verde**	**2.75**	**137**		**Pn**	**10 19 56.2**	**+2.5**
LVC	**Limon Verde**	**2.75**	**137**	*e*P	**Pn**	**10 19 56.3**	**+2.5**
PB10	**IPOC Station P**	**2.92**	**173**	⇑*i*P	**Pn**	**10 19 56.2**	**+0.4**
PB10				*i* S	**Sn**	**10 20 28.4**	**-1.8**
PB10	**IPOC Station P**	**2.92**	**173**		**Pn**	**10 19 56.2**	**+0.4**
PB10				Sn	**Sn**	**10 20 28.4**	**-1.8**
PB10	**IPOC Station P**	**2.92**	**173**	*i* P	**Pn**	**10 19 56.3**	**+0.5**
PB15	**IPOC Station P**	**2.93**	**153**	*i* P	**Pn**	**10 19 57.1**	**+1.0**
PB14	**IPOC Station P**	**4.04**	**173**	⇑*i*P	**Pn**	**10 20 11.6**	**+0.1**
GO02	**Mina Guanaco**	**4.71**	**165**		**Pn**	**10 20 21.6**	**+1.0**
LPAZ	**La Paz**	**5.05**	**32**	P	**Pn**	**10 20 28.6**	**+3.0**
comp=Z,4.0nm,0.3s,baz=214,slow=5.9,SNR=32							
LPAZ				LR	LR	10 22 29.9	
comp=Z,241nm,19.8s,baz=254,slow=40							
LPAZ	**La Paz**	**5.05**	**32**		Pn	10 20 31.7	+6.1
YJA	**Yavi**	**5.29**	**108**	⇑*i*P	**Pn**	**10 20 32.5**	**+3.8**
HJA	**Humahuaca**	**5.75**	**118**	*i* P	**Pn**	**10 20 39.2**	**+4.2**
AZAP	**Zapla**	**6.51**	**125**	⇑*i*P	**Pn**	**10 20 49.2**	**+3.8**
GO03	**Copiap**	**6.99**	**175**	Pn	**Pn**	**10 20 52.2**	**+0.4**
GO04	**Tololo Observa**	**9.53**	**179**	Pn	**Pn**	**10 21 26.6**	**-0.3**
NNA	**Nana**	**10.27**	**326**	S	**Sn**	**10 23 28.9**	**-2.5**
comp=Z,1.1nm,0.3s,baz=163,slow=20,SNR=2.7							
NNA				LR	LR	10 25 54.3	
comp=Z,111nm,18.3s,baz=146,slow=38							
NNA	**Nana**	**10.27**	**326**	Pn	**Pn**	**10 21 38.0**	**+1.1**
NNA				Sn	**Sn**	**10 23 28.6**	**-2.8**
SIV	**San Ignacio**	**10.42**	**66**	P	**Pn**	**10 21 37.9**	**-1.1**
comp=Z,2.7nm,0.3s,baz=271,slow=9.9,SNR=24							
SIV				LR	LR	10 26 12.8	
comp=Z,187nm,21.3s,baz=320,slow=41							
CFA	**Coronel Fontan**	**11.22**	**168**	P	Pn	10 21 55.0	+5.2
comp=Z,0.4nm,0.3s,baz=344,slow=15,SNR=4.4							
ROC1	**El Roble**	**12.33**	**180**	Pn	**Pn**	**10 22 02.9**	**-2.2**
SAML	**Samuel**	**13.79**	**34**	Pn	**Pn**	**10 22 23.8**	**-1.1**
PLCA	**Paso Flores**	**20.07**	**179**	P	Pn	10 23 45.4	+0.9
comp=Z,3.9nm,1.0s,baz=28,slow=11,SNR=5.9							
PLCA	**Paso Flores**	**20.07**	**179**	P	**P**	**10 23 41.3**	**-1.3**
SPB	**Sao Paulo**	**21.97**	**102**	P	**P**	**10 24 00.2**	**-3.0**
SPB				IAmb	IAmb	10 24 14.3	
comp=Z,14nm,1.1s							
OTAV	**Otavalo**	**21.98**	**340**	P	**P**	**10 24 03.9**	**+0.2**
BDFB	**Brasilia**	**22.32**	**81**	P	**P**	**10 24 04.8**	**-2.3**
comp=Z,1.2nm,0.4s,baz=263,slow=8.1,SNR=4.3							
BDFB				LR	LR	10 34 19.6	
comp=Z,268nm,20.6s,baz=294,slow=41							
BDFB	**Brasilia**	**22.32**	**81**	P	**P**	**10 24 05.1**	**-2.0**
GCUF	**Volcan Galeras**	**22.58**	**343**	*e*P	P	10 24 21.0	+11
TUMC	**Tumaco**	**23.56**	**340**	P	**P**	**10 24 20.2**	**+0.5**
ORTC	**Ortega, Tolima**	**24.72**	**350**	*e*P	**P**	**10 24 34.8**	**+4.2**
CHIC	**Chingaza**	**25.22**	**353**	*e*P	**P**	**10 24 38.3**	**+2.9**
GUY2C	**Guyana, Caldas**	**26.03**	**350**	*e*P	**P**	**10 24 44.6**	**+1.7**
RUSC	**La Rusia**	**26.41**	**355**	*e*P	**P**	**10 24 49.1**	**+2.7**
RUSC	**La Rusia**	**26.41**	**355**	P	**P**	**10 24 45.9**	**-0.5**
BARC	**Barichara**	**27.11**	**355**	*e*P	**P**	**10 24 50.9**	**-1.5**
SMLC	**San Martn de**	**29.38**	**354**	*e*P	**P**	**10 25 12.2**	**-0.2**
TOSP	**Speyside**	**33.31**	**19**	P	**P**	**10 25 45.5**	**-1.4**
JTS	**Las Juntas de**	**33.65**	**335**	P	**P**	**10 25 48.7**	**-1.3**
JTS				IAmb	IAmb	10 26 07.1	
comp=Z,17nm,1.4s							
SVB	**Belmont**	**34.98**	**17**	P	**P**	**10 25 59.2**	**-2.2**
ESPN	**Las Esperanzas**	**35.14**	**337**	P	P	10 25 59.6	-3.2
RCBR	**Riachuelo**	**37.01**	**72**	P	**P**	**10 26 16.9**	**-2.2**
TGUH	**Tegucigalpa,Un**	**38.00**	**334**	P	**P**	**10 26 27.9**	**+0.5**
TGUH				IAmb	IAmb	10 26 29.6	
comp=Z,16nm,1.1s							
OBIP	**Obispado Ponce**	**38.64**	**7**	P	**P**	**10 26 29.8**	**-2.8**
PMSA	**Palmer Station**	**44.39**	**176**	P	**P**	**10 27 16.9**	**-2.3**
PMSA				IAmb	IAmb	10 27 17.6	
comp=Z,34nm,1.4s							
TXAR	**Lajitas Array**	**58.83**	**327**	P	**P**	**10 29 10.7**	**+3.0**
comp=Z,0.3nm,0.7s,baz=146,slow=9.1,SNR=4.1							
VNA3	**Neumayer Olymp**	**61.53**	**161**	P	**P**	**10 29 28.8**	**+3.1**
VNA1	**Neumayer--Stat**	**61.76**	**160**	P	**P**	**10 29 30.5**	**+3.4**
L56A	**Greenwood**	**62.72**	**354**	P	**P**	**10 29 32.4**	**-1.5**
L56A				IAmb	IAmb	10 29 41.4	
comp=Z,16nm,1.4s							
SNAA	**Sanae**	**63.74**	**161**	P	**P**	**10 29 43.6**	**+3.2**
SNAA	**Sanae**	**63.74**	**161**	P	**P**	**10 29 43.4**	**+2.9**
comp=Z,2.9nm,0.7s,baz=282,slow=6.2,SNR=7.9							
SNAA	**Sanae**	**63.74**	**161**	P	**P**	**10 29 37.4**	**-3.1**
SNAA				IAmb	IAmb	10 29 44.2	
comp=Z,4.0nm,0.9s							
MOQ	**Mont Orford**	**65.60**	**359**	P	**P**	**10 29 49.8**	**-2.9**
QSPA	**South Pole Qui**	**69.58**	**180**	P	**P**	**10 30 21.7**	**+3.8**
comp=Z,1.9nm,0.6s,baz=177,slow=1.2,SNR=14							
QSPA	**South Pole Qui**	**69.58**	**180**	P	**P**	**10 30 15.1**	**-2.8**
QSPA				IAmb	IAmb	10 30 22.4	
comp=Z,3.2nm,0.8s							
ULM	**Lac du Bonnet**	**73.91**	**344**	P	**P**	**10 30 45.7**	**+2.0**
comp=Z,1.4nm,0.6s,baz=135,slow=4.8,SNR=4.2							
TOA0	**Torodi Ar. Sit**	**78.85**	**71**	P	**P**	**10 31 13.1**	**+0.6**
TOA0				IAmb	IAmb	10 31 13.5	
comp=Z,5.0nm,0.6s							
TORD	**Torodi Ar. Bea**	**78.85**	**71**	P	**P**	**10 31 13.1**	**+0.5**
comp=Z,3.7nm,0.5s,baz=250,slow=5.4,SNR=38							
TORD				LR	LR	11 05 33.6	
comp=Z,69nm,19.0s,baz=290,slow=35							
YKA	**Yellowknife Ar**	**89.72**	**341**	P	**P**	**10 32 09.0**	**+2.3**
comp=Z,0.6nm,0.8s,baz=134,slow=4.8,SNR=16							
H11S2	**WAKE ISLAND Hyd**	**25.89**	**278**	T	T	12 57 09.9	
baz=102,slow=74,SNR=107							
H11S1	**WAKE ISLAND Hyd**	**25.89**	**278**	T	T	12 57 17.4	
baz=102,slow=74,SNR=64							
H11S3	**WAKE ISLAND Hyd**	**25.90**	**278**	T	T	12 57 11.3	
baz=102,slow=74,SNR=59							
H11N3	**WAKE ISLAND Hyd**	**25.95**	**280**	T	T	12 57 11.5	
baz=102,slow=74,SNR=39							
H11N2	**WAKE ISLAND Hyd**	**25.96**	**280**	T	T	12 57 06.9	
baz=102,slow=74,SNR=30							
H11N1	**WAKE ISLAND Hyd**	**25.97**	**280**	T	T	12 57 16.6	
baz=102,slow=74,SNR=21							
ASAR	**Alice Springs**	**129.79**	**210**	PKP	**PKPdf**	**10 38 20.0**	**+0.9**
comp=Z,0.6nm,0.9s,baz=132,slow=1.4,SNR=4.6							
WRA	**Warramunga Arr**	**132.72**	**213**	PKP	**PKiKP**	**10 38 27.1**	**+1.3**
comp=Z,0.7nm,0.7s,baz=159,slow=2.0,SNR=6.4							
ZALV	**Zalesovo Beam**	**141.91**	**23**	PKP	**PKPdf**	**10 38 39.5**	**-1.0**
comp=Z,0.5nm,0.3s,baz=316,slow=2.9,SNR=3.9							
MAKZ	**Makanchi**	**145.80**	**34**		**PKPab**	**10 38 50.6**	**+2.2**
KSH	**Kashi**	**145.97**	**49**	*e*PKPbc	**PKPab**	**10 38 51.7**	**+2.2**
MK31	**Makanchi Array**	**145.97**	**34**		**PKPab**	**10 38 51.2**	**+2.1**
MKAR	**Makanchi Array**	**145.97**	**34**	PKPbc	**PKPab**	**10 38 50.6**	**+1.5**
comp=Z,1.4nm,0.4s,baz=314,slow=2.9,SNR=25							
LZH	**Lanzhou**	**163.91**	**15**	*e*PKP	**PKPdf**	**10 39 09.8**	**-2.8**
LZH				pPKP	sPKPdf	10 39 22.0	+1.1
LZH				sPKP		10 39 25.6	

NIED ***11*** *10:41:00,37.°30N×144.°50E,h11km,Mw3.7 Best double couple: M0 3.44000×10^14 NP1:φs172.00000°,δ53.00000°, λ-100.00000°. NP2:φs10.00000°,δ38.00000°, λ-76.00000°.*
IDC ***11*** *10:41:38.6±0.8,37.°06N×144.°86E,h0km,mb3.6/9, mb1 3.9/12,mb1mx3.8/32,mbtmp3.7/12,ML3.0/3,MS2.5/3, Ms1 2.5/3,ms1mx2.3/51,Error ellipse: s-maj=24.3km s-min=20.5km az=124.0*
NEIC ***11*** *10:41:40.3±1.9,37.°09N±0.°06×144.°8E±0.°1,h10km±1km, mb4.5/8,Error ellipse: s-maj=17.2km s-min=8.9km az=112.0*
JMA ***11*** *10:41:44.3±0.2,37.°32N×144.°47E,h39km,M4.3*
ISC 11 10:41:42.9±0.7,37.°23N±0.°05×144.°66E±0.°07,h26km,n48, σ1°71/56,mb3.9/12,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.75**	**294**	P	**Pn**	**10 42 25.1**	**-0.2**
JIKH				*e*S	**Sn**	**10 42 55.1**	**-2.5**
JIO	**Ouri**	**2.89**	**296**	P	**Pn**	**10 42 27.1**	**-0.1**
JIO				*e*S	**Sn**	**10 42 59.0**	**-2.1**
JKMT	**Kesennumamotoy**	**2.97**	**303**	P	**Pn**	**10 42 28.0**	**-0.3**
JKMT				S	**Sn**	**10 43 00.5**	**-2.5**
OFUJ	**Ofunato**	**2.99**	**309**	P	**Pn**	**10 42 28.3**	**-0.3**
JMK	**Ichinoseki**	**3.21**	**303**	P	**Pn**	**10 42 31.6**	**0.0**
JOU	**Okura**	**3.36**	**291**	P	**Pn**	**10 42 34.2**	**+0.5**
JFT	**Otama**	**3.45**	**276**	P	**Pn**	**10 42 35.8**	**+0.8**
JFT				*e*S	**Sn**	**10 43 13.5**	**-1.5**
JOM	**Ohasama**	**3.46**	**311**	P	**Pn**	**10 42 35.4**	**+0.3**
JOM				*e*S	**Sn**	**10 43 13.1**	**-2.2**
JYK	**Kaneyama**	**3.79**	**298**	P	**Pn**	**10 42 40.4**	**+0.9**
JYK				*e*S	**Sn**	**10 43 22.2**	**-1.0**
JAH	**Hinai**	**4.31**	**314**	P	**Pn**	**10 42 47.9**	**+1.1**
JAH				*e*S	**Sn**	**10 43 35.0**	**-1.2**
JTM	**Tenmabayashi**	**4.52**	**323**	P	**Pn**	**10 42 49.7**	**+0.1**
JTM				*e*S	**Sn**	**10 43 37.4**	**-3.9**
JRY	**Ryogami san**	**4.78**	**257**	P	**Pn**	**10 42 52.9**	**-0.4**
JRY				S	**Sn**	**10 43 44.8**	**-3.1**
JOD2	**Odawara 2**	**4.91**	**248**	P	**Pn**	**10 42 54.1**	**-0.9**
JOD2				S	**Sn**	**10 43 46.9**	**-4.1**
ERM	**Erimo**	**4.92**	**347**	Pn	**Pn**	**10 42 55.8**	**+0.7**
JOT	**Ohata**	**5.00**	**327**	P	**Pn**	**10 42 56.6**	**+0.4**
MJAR	**Matsushiro Arr**	**5.21**	**264**	Pn	**Pn**	**10 43 00.5**	**+1.3**
1.6nm,0.3s,baz=106,slow=11,SNR=103							
MJAR				Sn	**Sn**	**10 43 56.8**	**-1.7**
0.4nm,0.3s,baz=226,slow=21,SNR=4.6							
MJAR				LR	LR	10 45 26.2	
comp=Z,37nm,18.2s,baz=80,slow=43							
MAJO	**Matsushiro**	**5.21**	**264**		**Pn**	**10 43 00.9**	**+1.7**
MAT	**Matsushiro**	**5.21**	**264**	P	**Pn**	**10 43 00.5**	**+1.3**
MAT				S	**Sn**	**10 43 57.3**	**-1.2**
MJB9	**Matsu-Tunnel**	**5.22**	**264**		**Pn**	**10 43 00.9**	**+1.7**
JKB	**Kayabe**	**5.43**	**330**	*e*S	**Sn**	**10 44 01.2**	**-2.5**
JCH	**Churui**	**5.47**	**350**	P	**Pn**	**10 43 01.6**	**-1.0**
JCH				*e*S	**Sn**	**10 43 59.7**	**-5.0**
JHJ2	**Mitsune**	**5.71**	**225**	Pn	**Sn**	**10 44 08.8**	**-1.1**
JHJ2					**Sn**	**10 44 08.8**	**-1.9**
INU	**Inuyama**	**6.45**	**255**		**Pn**	**10 43 17.0**	**+0.8**
INU				Sn	**Sn**	**10 44 30.2**	**+1.3**
USRK	**Ussuriysk Ar.**	**11.86**	**310**	Pn	**Pn**	**10 44 32.3**	**+2.1**
baz=109,slow=14,SNR=4.3							
KSRS	**Korea Array**	**13.32**	**276**	Pn	**Pn**	**10 44 53.5**	**+3.3**
0.1nm,0.3s,baz=79,slow=13,SNR=5.4							
KSRS				LR	LR	10 50 00.9	
comp=Z,23nm,18.2s,baz=158,slow=37							
PETK	**Petropavlovsk-**	**18.30**	**26**	LR	LR	10 51 37.4	
comp=Z,0.6nm,21.9s,baz=51,slow=33							
H11N2	**WAKE ISLAND Hyd**	**26.09**	**126**	T	T	11 14 15.8	
baz=317,slow=74,SNR=107							
H11N1	**WAKE ISLAND Hyd**	**26.10**	**126**	T	T	11 14 16.0	
baz=317,slow=74,SNR=40							
H11N3	**WAKE ISLAND Hyd**	**26.11**	**126**	T	T	11 14 21.9	
baz=317,slow=74,SNR=44							
H11S1	**WAKE ISLAND Hyd**	**26.86**	**128**	T	T	11 15 12.0	
baz=318,slow=76,SNR=12							
H11S3	**WAKE ISLAND Hyd**	**26.86**	**128**	T	T	11 15 12.5	
baz=318,slow=76,SNR=14							
H11S2	**WAKE ISLAND Hyd**	**26.88**	**128**	T	T	11 15 01.7	
baz=318,slow=76,SNR=13							
MK31	**Makanchi Array**	**46.20**	**303**	P	**P**	**10 50 06.0**	**+0.4**
MKAR	**Makanchi Array**	**46.20**	**303**	P	**P**	**10 50 06.8**	**+1.3**
0.4nm,0.7s,baz=83,slow=9.9,SNR=4.2							
PMG	**Port Moresby**	**46.45**	**177**	P	**P**	**10 50 05.5**	**-2.1**
TOLK	**Toolik Lake Re**	**47.11**	**27**	P	**P**	**10 50 13.7**	**+1.3**
TOLK				IAmb	IAmb	10 50 26.5	
comp=Z,4.8nm,1.5s							
ILAR	**Eielson Array**	**47.94**	**32**	P	**P**	**10 50 18.9**	**+0.1**
comp=Z,0.2nm,0.6s,baz=266,slow=6.3,SNR=5.1							
SCRK	**Sand Creek**	**49.22**	**34**	P	**P**	**10 50 29.7**	**+0.9**
SCRK				IAmb	IAmb	10 50 36.9	
comp=Z,2.5nm,1.3s							
WRA	**Warramunga Arr**	**57.69**	**191**	P	**P**	**10 51 29.8**	**-1.5**
comp=Z,1.0nm,0.5s,baz=9.8,slow=7.0,SNR=8.6							
KBL	**Kabul**	**59.75**	**292**	P	**P**	**10 51 45.6**	**-0.2**
KBL				IAmb	IAmb	10 51 55.8	
comp=Z,4.1nm,0.3s							
ABKAR	**Akbulak array**	**59.78**	**311**	P	**P**	**10 51 46.7**	**+1.2**
ASAR	**Alice Springs**	**61.41**	**191**	P	**P**	**10 51 55.8**	**-1.1**
comp=Z,0.5nm,0.5s,baz=19,slow=6.9,SNR=5.9							
YKA	**Yellowknife Ar**	**62.32**	**31**	P	**P**	**10 52 02.8**	**+0.2**
comp=Z,0.1nm,0.6s,baz=297,slow=6.1,SNR=4.4							
NOA	**NORSAR Array B**	**74.98**	**339**	P	**P**	**10 53 22.3**	**+0.8**
comp=Z,1.2nm,1.0s,baz=65,slow=9.3,SNR=2.7							
PDAR	**Pinedale Array**	**75.66**	**47**	P	**P**	**10 53 26.3**	**+0.3**
comp=Z,0.3nm,0.5s,baz=301,slow=3.1,SNR=3.9							
AKASG	**Malin Array Be**	**75.70**	**324**	P	**P**	**10 53 26.3**	**+0.5**
comp=Z,0.6nm,0.4s,baz=47,slow=6.3,SNR=5.3							
TXAR	**Lajitas Array**	**87.93**	**54**	P	**P**	**10 54 31.1**	**+0.3**
comp=Z,0.3nm,0.6s,baz=321,slow=3.3,SNR=4.9							
ITM	**Ithomi**	**88.98**	**318**	P	**P**	**10 54 35.3**	**-0.2**

NNC 11 10:57:59.0±1.5,50.°93N×73.°71E,h0km,mb3.6,mpv3.3, 6C-3D,Error ellipse: s-maj=22.4km s-min=6.1km az=27.0,Suspected Mining explosion.,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BVB5	**Borovoye Array**	**2.94**	**317**	⇓Pg	Pb	10 58 52.9	+0.7
7.3nm,0.7s							
BVB5				⇑Lg	Lg	10 59 30.9	
23nm,0.7s							
KURBB	**Kurchatov Arra**	**3.07**	**94**	⇑Pg	Pb	10 58 56.0	+1.6
12nm,0.7s,baz=276,slow=14							
KURBB				⇑Lg	Lg	10 59 35.1	
56nm,0.7s,baz=298,slow=27							
KURK	**Kurchatov**	**3.12**	**92**	⇑Pg	Pb	10 58 56.0	+0.8
4.5nm,0.7s							
KURK				⇑Lg	Lg	10 59 37.6	
33nm,0.9s							
MAKZ	**Makanchi**	**6.84**	**124**	⇓Lg	Lg	11 01 34.7	
9.5nm,0.8s							
MK31	**Makanchi Array**	**7.01**	**123**	⇑Lg	Lg	11 01 38.0	
8.4nm,0.7s,baz=315,slow=26,SNR=6.1							
MDOK	**Medeo**	**8.10**	**162**	⇓Lg	Lg	11 02 16.5	
10nm,0.8s							

JSN ***11*** *11:01:33.7±0.7,19.°65N×78.°08W,h30km±999km,MD3.5*
SSNC ***11*** *11:01:33.5±1.6,19.°54N×78.°24W,h26km±42km,MD3.0, ML2.3,MW3.1*
ISC 11 11:01:33.5±6.8,19.°54N±0.°04×78.°19W±0.°06,h38km±8km, n10,σ2°37/17,4C-3D,Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMGC	**Las Mercedes**	**1.23**	**65**	*e*P	**Pn**	**11 01 53.8**	**-0.4**
LMGC				*e*S	**Sn**	**11 02 07.6**	**-2.0**
LMGC				IAML		11 02 08.2	
comp=N,106nm,0.2s							
LMGC				IAML		11 02 08.4	
comp=E,114nm,0.1s							
BBJ	**Bamboo Saint A**	**1.44**	**143**	⇑*i*P	**Pn**	**11 01 57.5**	**+0.3**
MCJ	**Malvern**	**1.67**	**163**	⇑*i*P	**Pn**	**11 02 01.4**	**+1.1**
MCJ				⇓*i*S	**Sn**	**11 02 21.9**	**+1.3**
BNJ	**Bonny Gate**	**1.69**	**136**	⇑*i*P	**Pn**	**11 02 00.4**	**-0.1**
CCCC	**Cccc**	**1.70**	**14**	*e*P	**Pn**	**11 02 04.4**	**+3.8**
CCCC				*e*S	**Sn**	**11 02 26.5**	**+5.4**
CCCC				IAML		11 02 30.1	
comp=N,6.2nm,0.3s							
CCCC				IAML		11 02 30.3	
comp=E,12nm,0.4s							
STH	**Stony Hill**	**1.96**	**138**	⇑*i*P	**Pn**	**11 02 04.1**	**-0.1**
PCJ	**Portland Cotta**	**2.04**	**151**	⇓*i*P	**Pn**	**11 02 06.5**	**+1.3**
PCJ				⇓*i*S	**Sn**	**11 02 30.6**	**+1.1**
RCC	**Rio Carpintero**	**2.39**	**79**	*e*P	**Pn**	**11 02 09.5**	**-0.7**
RCC				*e*S	**Sn**	**11 02 36.0**	**-2.2**
RCC				I

comp=Z,69nm,18.6s,baz=170,slow=37
MTN Manton Dam 38.40 200 P P 11 38 01.4 -0.8
YAK Yakutsk 39.51 350 P P 11 38 11.0 0.0
comp=Z,4.3nm,0.4s,baz=315,slow=1.4,SNR=4.2
YAK Yakutsk 39.51 350 P P 11 38 10.4 -0.6
KNRA Kununurra 41.83 202 P P 11 38 30.1 -0.6
KNRA IAmb IAmb 11 38 43.2
comp=Z,21nm,1.4s
CHTO Chiang Mai 42.02 272 P P 11 38 32.5 +0.1
CMAR Chiang Mai Arr 42.11 272 P P 11 38 34.3 +1.2
comp=Z,1.3nm,0.7s,baz=59,slow=7.9,SNR=10
CMAR LR LR 11 56 20.6
comp=Z,27nm,19.0s,baz=192,slow=36
CTA Charters Tower 43.59 177 P P 11 38 44.6 -0.3
comp=Z,5.6nm,0.9s,baz=352,slow=7.1,SNR=3.5
WRA Warramunga Arr 44.37 193 P P 11 38 50.4 -0.8
comp=Z,6.1nm,0.6s,baz=14,slow=8.5,SNR=48
FITZ Fitzroy Crossi 45.20 205 P P 11 38 58.3 +0.6
comp=Z,1.1nm,0.5s,baz=53,slow=3.8,SNR=2.9
FITZ Fitzroy Crossi 45.20 205 P P 11 38 58.4 +0.6
KULM Kulim 45.42 253 P P 11 39 00.5 +0.8
KULM IAmb IAmb 11 39 19.3
comp=Z,19nm,1.4s
SHL Shillong 47.04 284 P P 11 39 12.7 +0.1
LSA Lhasa 47.14 289 P P 11 39 14.2 +0.6
LSA IAmb IAmb 11 39 17.0
comp=Z,6.6nm,1.1s
AS31 Alice Springs 48.07 192 P P 11 39 19.3 -1.0
ASAR Alice Springs 48.07 192 P P 11 39 19.3 -1.0
comp=Z,2.5nm,0.6s,baz=16,slow=9.3,SNR=52
WMQ Urumqi 49.82 308 P P 11 39 33.8 +0.2
WMQ IAmb IAmb 11 39 38.2
comp=Z,6.8nm,1.0s
ZAA0 Zalesovo Array 53.05 321 P P 11 39 57.3 -0.2
ZALV Zalesovo Beam 53.05 321 P P 11 39 57.3 -0.2
comp=Z,1.6nm,0.8s,baz=100,slow=6.7,SNR=6.9
ZALV PcP **PcP** 11 41 05.3 -0.5
comp=Z,0.7nm,0.5s,baz=114,slow=4.6,SNR=2.7
MK31 Makanchi Array 53.83 312 P P 11 40 03.6 +0.2
MKAR Makanchi Array 53.83 312 P P 11 40 04.1 +0.7
comp=Z,2.8nm,0.7s,baz=93,slow=9.1,SNR=32
MAKZ Makanchi 54.04 312 P P 11 40 05.2 +0.3
MAKZ IAmb IAmb 11 40 06.6
comp=Z,3.6nm,0.8s
ARMA Armidale 54.33 172 P P 11 40 07.6 +0.4
ARMA IAmb IAmb 11 40 11.4
comp=Z,3.8nm,0.9s
STKA Stephens Creek 55.31 182 P P 11 40 13.7 -0.5
comp=Z,2.1nm,0.6s,baz=341,slow=7.2,SNR=9.6
STKA Stephens Creek 55.31 182 P P 11 40 13.4 -0.8
OHAK Old Harbor 55.74 36 P P 11 40 16.6 -0.4
KURK Kurchatov 56.45 316 P P 11 40 22.3 0.0
KURK IAmb IAmb 11 40 23.5
comp=Z,6.4nm,0.8s
KURBB Kurchatov Arra 56.51 316 P P 11 40 23.1 +0.5
comp=Z,7.3nm,0.7s,baz=93,slow=7.8,SNR=71
AAK Ala-Archa 59.46 307 P P 11 40 44.6 +0.9
comp=Z,0.4nm,0.3s,baz=153,slow=2.3,SNR=3.6
IL31 59.98 28 P P 11 40 46.4 -0.3
IL31 IAmb IAmb 11 40 59.3
comp=Z,5.7nm,1.4s
ILAR Eielson Array 59.98 28 P P 11 40 46.0 -0.6
comp=Z,0.6nm,0.7s,baz=256,slow=5.7,SNR=8.4
KK31 Karatay Array 62.32 308 IAmb IAmb 11 41 04.7
comp=Z,2.9nm,0.8s
KKAR Karatay Array 62.32 308 P P 11 41 03.5 +0.5
KKAR IAmb IAmb 11 41 04.7
comp=Z,2.9nm,0.8s
CHGR Chuyangaron 64.02 303 P P 11 41 14.5 +0.1
KBL Kabul 64.93 298 P P 11 41 21.0 +0.4
KBL IAmb IAmb 11 41 22.2
comp=Z,5.6nm,0.7s
INK Inuvik 65.48 24 P P 11 41 23.6 +0.3
comp=Z,1.7nm,1.0s,baz=256,slow=6.4,SNR=3.4
INK Inuvik 65.48 24 IAmb IAmb 11 41 26.0
comp=Z,4.9nm,1.4s
ARU Arti 68.03 323 P P 11 41 40.3 +0.6
comp=Z,2.4nm,0.5s,baz=106,slow=5.2,SNR=11
ARU Arti 68.03 323 P P 11 41 39.8 0.0
ABKAR Akbulak array 68.56 316 P P 11 41 43.1 0.0
ABKAR IAmb IAmb 11 41 46.0
comp=Z,3.9nm,0.6s
AKTO Aktyubinsk 69.53 317 P P 11 41 49.3 +0.1
comp=Z,1.4nm,0.7s,baz=86,slow=11,SNR=5.3
YKA Yellowknife Ar 74.40 28 P P 11 42 18.3 +0.2
comp=Z,1.2nm,0.6s,baz=291,slow=5.9,SNR=41
ARCES ARCESS Array B 77.23 341 P P 11 42 35.2 +1.0
comp=Z,3.9nm,1.0s,baz=22,slow=6.7,SNR=4.5
NVAR Mina Array Bea 81.41 52 P P 11 42 58.5 +0.6
comp=Z,0.6nm,0.7s,baz=289,slow=4.8,SNR=5.7
KBZ Khabaz 81.43 314 P P 11 42 58.5 +1.0
comp=Z,4.4nm,0.8s,baz=80,slow=4.5,SNR=8.5
FIA1 FINESS Array S 81.65 335 P P 11 42 58.2 -0.2
FINES FINESS Array B 81.65 335 P P 11 42 58.5 +0.1
comp=Z,3.0nm,0.5s,baz=66,slow=4.4,SNR=23
AKASG Malin Array Be 86.24 325 P P 11 43 22.0 -0.1
comp=Z,1.3nm,0.6s,baz=52,slow=4.9,SNR=7.1
NB2 NORSAR Subarra 87.31 339 P P 11 43 26.5 -0.6
comp=Z,1.0nm,0.7s,baz=41,slow=5.1
NOA NORSAR Array B 87.31 339 P P 11 43 26.6 -0.6
comp=Z,1.3nm,1.0s,baz=44,slow=4.8,SNR=3.1
BR131 Keskin Array S 89.42 314 P P 11 43 36.6 -1.1
BR131 IAmb IAmb 11 43 40.3
comp=Z,3.7nm,1.1s
BRTR Keskin Array B 89.42 314 P P 11 43 37.2 -0.5
comp=Z,1.6nm,0.8s,baz=82,slow=3.6,SNR=6.6
GERES GERESS Array B 95.19 330 P P 11 44 03.2 -0.9
comp=Z,0.1nm,0.2s,baz=347,slow=5.5,SNR=3.5
PLCA Paso Flores 146.56 129 PKPbc PKPbc 11 50 22.0 -0.1
comp=Z,2.8nm,0.7s,baz=240,slow=2.7,SNR=10
PLCA Paso Flores 146.56 129 PKPab 11 50 22.4 -0.7

*IDC **11** 11:35:14.4±0.7, 52.°17S×15.°56E, h0km, mb4.1/10, mb1 4.2/10, mb1mx4.0/40, mbtmp4.1/10, MS3.8/16, Ms1 3.7/16, ms1mx3.6/22, Error ellipse: s-maj=27.9km s-min=18.0km az=96.0*
*NEIC **11** 11:35:15.3±0.9, 52.°2S±0.°1×15.°5E±0.°2, h10km±1km, mb4.5/14, Error ellipse: s-maj=23.2km s-min=16.9km az=295.0*
ISC 11 11:35:15.5±0.6, 52.°16S±0.°09×15.°5E±0.°2, h10km, n57, σ0°84/42, mb4.3/11, MS3.8/19, 1C, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SUR	**Sutherland**	**20.14**	**13**	**P**		**P**		**11 39 50.7**	**+0.8**
	20nm,0.9s,baz=171,slow=8.1,SNR=4.0								
SUR				LR	LR			11 45 47.2	
	comp=Z,516nm,21.5s,baz=171,slow=31								
SUR	**Sutherland**	**20.14**	**13**	**P**		**P**		**11 39 49.4**	**-0.4**
SUR				IAmb	IAmb			11 39 57.7	
	comp=Z,20nm,0.8s								
SYO	**Syowa Base**	**20.38**	**155**	*eP*		Pn		11 39 53.6	-0.5
SNAA	**Sanae**	**21.21**	**196**	**P**		**P**		**11 40 02.1**	**+1.1**
SNAA	**Sanae**	**21.21**	**196**	**P**		**P**		**11 40 08.0**	**-0.3**
	comp=Z,17nm,1.0s,baz=31,slow=8.8,SNR=23								
SNAA				LR	LR			11 46 13.1	
	comp=Z,312nm,20.3s,baz=356,slow=31								
SNAA	**Sanae**	**21.21**	**196**	**P**		**P**		**11 39 59.7**	**-1.3**
SNAA				IAmb	IAmb			11 40 10.0	
	comp=Z,19nm,1.0s								
VNA1	**Neumayer--Stat**	**21.47**	**202**	**P**		**P**		**11 40 05.6**	**+1.9**
VNA3	**Neumayer Olymp**	**22.22**	**201**	**P**		**P**		**11 40 12.0**	**+0.2**
BOSA	**Boshof**	**24.62**	**21**	**P**		**P**		**11 40 35.8**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=197,slow=11,SNR=3.0								
BOSA				LR	LR			11 48 28.2	
	comp=Z,336nm,21.6s,baz=219,slow=32								
BOSA	**Boshof**	**24.62**	**21**	**P**		**P**		**11 40 36.2**	**+0.1**
BOSA				IAmb	IAmb			11 40 43.5	
	comp=Z,12nm,1.2s								
MAW	**Mawson**	**27.45**	**142**	LR	LR			11 49 36.4	
	comp=Z,197nm,21.4s,baz=250,slow=31								
LBTB	**Lobatse**	**28.18**	**20**	LR	LR			11 50 23.8	
	comp=Z,317nm,19.2s,baz=200,slow=32								
LBTB	**Lobatse**	**28.18**	**20**	**P**		**P**		**11 41 08.9**	**+0.8**
TSUM	**Tsumeb**	**32.93**	**4**	**P**		**P**		**11 41 50.5**	**+0.3**
TSUM				IAmb	IAmb			11 42 07.0	
	comp=Z,9.2nm,1.4s								
QSPA	**South Pole Qui**	**38.08**	**180**	**P**		**P**		**11 42 34.1**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=267,slow=2.6,SNR=5.6								
QSPA	**South Pole Qui**	**38.08**	**180**	**P**		**P**		**11 42 33.6**	**-0.4**
SHEL	**Horse Pasture**	**39.85**	**327**	**P**		**P**		**11 42 48.9**	**-0.4**
VNDA	**Vanda**	**48.91**	**171**	**P**		**P**		**11 44 02.1**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=249,slow=3.0,SNR=3.8								
VNDA				LR	LR			12 03 49.0	
	comp=Z,276nm,19.7s,baz=200,slow=35								
VNDA	**Vanda**	**48.91**	**171**	**P**		**P**		**11 44 00.8**	**-0.2**
VNDA				IAmb	IAmb			11 44 14.6	
	comp=Z,5.8nm,1.3s								
KMBO	**Kilima Mbogo**	**54.03**	**27**	LR	LR			12 06 14.4	
	comp=Z,107nm,19.3s,baz=53,slow=34								
PLCA	**Paso Flores**	**57.02**	**245**	LR	LR			12 06 22.4	
	comp=Z,35nm,21.2s,baz=147,slow=33								
GO06	**Curarrehue**	**58.32**	**245**	**P**		**P**		**11 45 10.0**	**-0.6**
GO06				IAmb	IAmb			11 45 17.0	
	comp=Z,5.2nm,1.2s								
CPUP	**Villa Florida**	**59.27**	**266**	**P**		**P**		**11 45 17.5**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=145,slow=9.1,SNR=5.6								
CPUP				LR	LR			12 05 42.1	
	comp=Z,61nm,21.9s,baz=122,slow=31								
CPUP	**Villa Florida**	**59.27**	**266**	**P**		**P**		**11 45 16.9**	**-0.3**
CPUP				IAmb	IAmb			11 45 27.2	
	comp=Z,4.7nm,1.1s								
DBIC	**Dimbokro**	**61.12**	**337**	LR	LR			12 05 23.3	
	comp=Z,90nm,21.1s,baz=140,slow=30								
BDFB	**Brasilia**	**61.58**	**281**	LR	LR			12 08 24.9	
	comp=Z,37nm,18.9s,baz=156,slow=32								
CFA	**Coronel Fontan**	**62.08**	**254**	**P**		**P**		**11 45 35.6**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=153,slow=14,SNR=4.0								
H08N3	**Diego Garcia H**	**64.33**	**65**	T		T		12 55 59.0	
	baz=217								
H08N1	**Diego Carcia H**	**64.34**	**65**	T		T		12 55 58.2	
	baz=217								
H08N2	**Diego Garcia H**	**64.35**	**65**	T		T		12 55 57.8	
	baz=217								
TORD	**Torodi Ar. Bea**	**66.12**	**345**	**P**		**P**		**11 46 02.3**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=189,slow=7.9,SNR=5.3								
TORD				LR	LR			12 11 25.8	
	comp=Z,24nm,19.0s,baz=290,slow=33								
TORD	**Torodi Ar. Bea**	**66.12**	**345**	**P**		**P**		**11 46 02.4**	**-0.4**
PB11	**IPOC Station P**	**71.70**	**261**	**P**		**P**		**11 46 38.0**	**+0.1**
LPAZ	**La Paz**	**73.42**	**265**	**P**		**P**		**11 46 50.3**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=121,slow=6.3,SNR=4.5								
LPAZ				LR	LR			12 15 36.4	
	comp=Z,28nm,20.7s,baz=123,slow=33								
LPAZ	**La Paz**	**73.42**	**265**	**P**		**P**		**11 46 48.3**	**-0.4**
ASAR	**Alice Springs**	**87.39**	**126**	**P**		**P**		**11 48 02.9**	**-0.1**
	comp=Z,1.9nm,0.7s,baz=205,slow=4.4,SNR=8.4								
ASAR	**Alice Springs**	**87.39**	**126**	**P**		**P**		**11 48 02.4**	**-0.6**
AS31	**Alice Springs**	**87.39**	**126**	**P**		**P**		**11 48 02.8**	**-0.3**
KEST	**Kesra**	**87.68**	**355**	LR	LR			12 24 14.0	
	comp=Z,42nm,21.5s,baz=270,slow=34								
BRTR	**Keskin Array B**	**92.86**	**14**	LR	LR			12 32 59.2	
	comp=Z,14nm,18.3s,baz=154,slow=37								
KBZ	**Khabaz**	**98.40**	**20**	LR	LR			12 34 03.3	
	comp=Z,76nm,19.0s,baz=192,slow=36								
DZM	**Mont Dzumac**	**101.85**	**153**	*e*LR	LR			12 22 38.5	
	comp=Z,91nm,33.6s								
TBI	**Tubuai**	**103.67**	**194**	*e*LR	LR			12 23 27.7	
	comp=Z,117nm,35.8s								
PPT2	**Papeete2**	**109.34**	**195**	*e*LR	LR			12 26 08.3	
	comp=Z,136nm,27.2s								
PDAR	**Pinedale Array**	**142.50**	**278**	PKP		**PKPdf**		**11 54 46.1**	**-2.1**
	comp=Z,0.4nm,0.7s,baz=106,slow=2.9,SNR=3.5								
PDAR	**Pinedale Array**	**142.50**	**278**			**PKPdf**		**11 54 47.6**	**-0.6**
ELK	**Elko**	**144.83**	**271**			**PKPdf**		**11 54 51.8**	**-0.6**
NV11	**Mina Array Sit**	**145.23**	**265**			**PKPab**		**11 54 52.6**	**-0.2**
NVAR	**Mina Array Bea**	**145.32**	**265**	PKPbc		**PKPab**		**11 54 53.8**	**+0.6**
	comp=Z,8.1nm,0.8s,baz=143,slow=4.5,SNR=76								
NVAR	**Mina Array Bea**	**145.32**	**265**			**PKPab**		**11 54 53.6**	**+0.4**
TIXI	**Tiksi**	**145.55**	**31**	PKPbc		**PKPbc**		**11 54 52.2**	**-0.3**
	comp=Z,5.5nm,0.6s,baz=270,slow=4.0,SNR=9.8								
TIXI	**Tiksi**	**145.55**	**31**			**PKPdf**		**11 54 51.9**	**-0.3**
KVN	**Kiseriville**	**145.58**	**266**			**PKPdf**		**11 54 52.6**	**-1.0**
AFDM	**Forest Hills D**	**147.28**	**264**			**PKPbc**		**11 54 58.9**	**+0.3**
YKA	**Yellowknife Ar**	**151.86**	**311**	PKPbc		**PKPbc**		**11 55 09.0**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=88,slow=2.4,SNR=26								
YKA				PKPab		**pPKPab**		**11 55 20.0**	**-0.7**
	comp=Z,1.1nm,0.9s,baz=98,slow=1.8,SNR=6.9								
ILAR	**Eielson Array**	**164.43**	**331**	PKPab		**PKPab**		**11 56 14.4**	**+1.7**
	comp=Z,0.5nm,0.9s,baz=59,slow=2.3,SNR=4.5								
ILAR	**Eielson Array**	**164.43**	**331**	PKPab		**PKPab**		**11 56 14.2**	**+1.5**

*IDC **11** 11:38:16.0±1.9, 18.°42S×177.°31W, h338km±20km, mb3.8/19, mb1 4.0/20, mb1mx3.8/36, mbtmp4.5/20, Error ellipse: s-maj=14.8km s-min=9.9km az=155.0*
*BJI **11** 11:38:18.8±0.0, 18.°44S×177.°21W, h365km, mB5.0/7, mb4.6/8*
*NEIC **11** 11:38:18.7±2.5, 18.°34S±0.°09×177.°10W±0.°08, h372km±4km, mb4.4/44, Error ellipse: s-maj=13.3km s-min=11.3km az=171.0*
ISC 11 11:38:17.1±0.3, 18.°50S±0.°05×177.°16W±0.°05, h350km, n100, σ1°91/109, mb4.3/38, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.62**	**279**				**Pn**	**11 39 37.5**	**+4.8**
NIUE	**Niue**	**6.87**	**96**	Pn		**Pn**	**Pn**	**11 39 59.8**	**+1.8**
NIUE				S		**S**	**S**	**11 41 22.2**	**+2.2**
AFI	**Afiamalu**	**6.89**	**49**	P		**Pn**	**Pn**	**11 39 57.4**	**-1.0**
	86nm,0.3s,baz=302,slow=9.5,SNR=7.9								
AFI				S		**S**	**S**	**11 41 13.3**	**-7.3**
	61nm,0.3s,baz=173,slow=22,SNR=3.8								
AFI	**Afiamalu**	**6.89**	**49**				**Pn**	**11 39 57.6**	**-0.8**
AFI				S		**S**	**S**	**11 41 16.0**	**-4.7**
FUNA	**Funafuti**	**10.52**	**340**	P		**Pn**	**Pn**	**11 40 42.5**	**+1.1**
RAO	**Raoul Island**	**10.73**	**184**	P		**Pn**	**Pn**	**11 40 42.8**	**-0.9**
	76nm,0.3s,baz=56,slow=18,SNR=4.3								
RAO				S		**S**	**S**	**11 42 39.0**	**-5.1**
	47nm,0.3s,baz=66,slow=20,SNR=2.7								
RAO	**Raoul Island**	**10.73**	**184**				**P**	**11 40 46.1**	**+1.5**
DZM	**Mont Dzumac**	**15.79**	**254**	P			**P**	**11 41 41.0**	**+0.5**
	0.3nm,0.3s,baz=19,slow=9.7,SNR=4.1								
DZM	**Mont Dzumac**	**15.79**	**254**	P			**P**	**11 41 41.6**	**+1.2**
DZM				IAmb	IAmb			11 41 49.7	
	comp=Z,30nm,1.3s								
KNTN	**Kanton**	**16.51**	**19**	P			**P**	**11 41 47.7**	**-0.5**
OUZ	**Omahuta**	**18.57**	**204**	P			**P**	**11 42 11.8**	**+1.8**
OUZ				IAmb	IAmb			11 42 13.2	
	comp=Z,30nm,1.0s								
MXZ	**Matakaoa Point**	**19.41**	**191**	P			**P**	**11 42 18.8**	**0.0**
MXZ	**Matakaoa Point**	**19.41**	**191**	P			**P**	**11 42 19.8**	**+1.0**
WMGZ	**Waiomatatini S**	**19.64**	**190**	P			**P**	**11 42 21.5**	**+0.2**
HAZ	**Te Kaha**	**19.70**	**192**	P			**P**	**11 42 21.4**	**-0.5**
PKGZ	**Pakihiroa**	**19.77**	**191**	P			**P**	**11 42 23.7**	**+1.1**
PUZ	**Puketiti**	**19.91**	**191**	P			**P**	**11 42 22.8**	**-1.3**
RUGZ	**Raukumara Rang**	**19.92**	**192**	P			**P**	**11 42 23.6**	**-0.6**
OPRZ	**Ohinepanea**	**20.05**	**195**	P			**P**	**11 42 25.7**	**+0.3**
MWZ	**Matawai**	**20.30**	**192**	P			**P**	**11 42 26.7**	**-1.1**
URZ	**Urewera**	**20.32**	**193**	P			**P**	**11 42 24.8**	**-3.1**
	comp=Z,19nm,0.3s,baz=264,slow=2.9,SNR=69								
URZ				S		**S**	**S**	**11 45 47.3**	**-5.8**
	comp=Z,3.9nm,0.8s,baz=180,slow=20,SNR=3.1								
URZ	**Urewera**	**20.32**	**193**	P			**P**	**11 42 24.9**	**-3.1**
CNGZ	**Carnagh Statio**	**20.32**	**191**	P			**P**	**11 42 28.1**	**+0.1**
MUGZ	**Murupara**	**20.60**	**194**	P			**P**	**11 42 29.0**	**-1.5**
RIGZ	**Rimuhau**	**20.62**	**191**	P			**P**	**11 42 29.7**	**-1.0**
PRRZ	**Plateau Road**	**20.71**	**194**	P			**P**	**11 42 30.9**	**-0.6**
HNR	**Honiara**	**23.95**	**289**	P			**P**	**11 42 57.3**	**-3.9**
	comp=Z,26nm,0.4s,baz=135,slow=11,SNR=2.2								
THZ	**Tophouse**	**24.70**	**198**	P			**P**	**11 43 07.5**	**-0.2**
PPT	**Papeete**	**26.23**	**92**	P			**P**	**11 43 23.0**	**+1.4**
	comp=Z,25nm,0.5s,baz=52,slow=3.5,SNR=8.1								
PPT	**Papeete**	**26.23**	**92**	P			**P**	**11 43 21.7**	**+0.1**
PPTF	**Pamatai, Papee**	**26.24**	**92**	P			**P**	**11 43 21.2**	**-0.5**
RPZ	**Rata Peaks**	**27.03**	**199**	P			**P**	**11 43 26.8**	**-1.5**
	comp=Z,7.4nm,0.4s,baz=354,slow=5.4,SNR=7.7								
WHZ	**Wether Hill Ro**	**29.98**	**201**	P			**P**	**11 43 55.5**	**+1.2**
EIDS	**Eidsvold**	**30.20**	**251**	P			**P**	**11 43 56.7**	**+0.2**
ARMA	**Armidale**	**30.69**	**241**	P			**P**	**11 44 01.7**	**+0.9**
CAN	**Canberra**	**34.31**	**234**	P			**P**	**11 44 32.4**	**+0.5**
CAN				IAmb	IAmb			11 44 33.5	
	comp=Z,14nm,0.9s								
CTA	**Charters Tower**	**34.53**	**261**	P			**P**	**11 44 33.0**	**-0.9**
	comp=Z,10nm,0.6s,baz=88,slow=10,SNR=14								
PMG	**Port Moresby**	**35.73**	**280**	P			**P**	**11 44 43.4**	**-0.7**
	comp=Z,22nm,0.8s,baz=80,slow=8.6,SNR=6.4								
PMG	**Port Moresby**	**35.73**	**280**	P			**P**	**11 44 44.0**	**-0.1**
PMG				IAmb	IAmb			11 44 44.8	
	comp=Z,23nm,0.8s								
TOO	**Toolangi**	**37.73**	**232**	P			**P**	**11 45 01.3**	**+0.7**
COEN	**Coen**	**38.30**	**271**	P			**P**	**11 45 04.8**	**-0.7**
STKA	**Stephens Creek**	**39.40**	**242**	P			**P**	**11 45 14.2**	**-0.2**
	comp=Z,9.6nm,0.6s,baz=87,slow=11,SNR=30								
STKA	**Stephens Creek**	**39.40**	**242**	P			**P**	**11 45 15.1**	**+0.7**
BBOO	**Buckleboo**	**44.17**	**242**	P			**P**	**11 45 52.7**	**+0.1**
BBOO				IAmb	IAmb			11 45 53.6	
	comp=Z,22nm,0.6s								
JAY	**Jayapura**	**44.21**	**286**	P			**P**	**11 45 51.0**	**-2.2**
	comp=Z,15nm,0.8s,baz=221,slow=19,SNR=4.0								
WRA	**Warramunga Arr**	**45.70**	**260**	P			**P**	**11 46 03.1**	**-1.5**
	comp=Z,1.3nm,0.3s,baz=92,slow=5.9,SNR=25								
WRA				S			S	11 52 10.2	-11
	comp=Z,0.7nm,0.9s,baz=98,slow=14,SNR=3.6								
WRA	**Warramunga Arr**	**45.70**	**260**	P			**P**	**11 46 03.2**	**-1.5**
AS31	**Alice Springs**	**45.78**	**255**	P			**P**	**11 46 04.6**	**-0.7**
ASAR	**Alice Springs**	**45.78**	**255**	P			**P**	**11 46 04.5**	**-0.8**
	comp=Z,7.0nm,0.4s,baz=90,slow=8.6,SNR=244								
ASAR				S			**S**	**11 52 16.0**	**-6.3**
	comp=Z,1.5nm,0.8s,baz=87,slow=15,SNR=12								
ASAR	**Alice Springs**	**45.78**	**255**	P			**P**	**11 46 04.2**	**-1.2**
MTN	**Manton Dam**	**49.97**	**269**	P			**P**	**11 46 35.9**	**-1.4**
MTN				IAmb	IAmb			11 46 37.4	
	comp=Z,11nm,0.8s								
FORT	**Forrest**	**50.84**	**245**	P			**P**	**11 46 43.1**	**-0.3**
KNRA	**Kununurra**	**51.61**	**264**	P			**P**	**11 46 48.6**	**-0.7**
KNRA				IAmb	IAmb			11 46 52.1	
	comp=Z,15nm,1.1s								
FAKI	**Fak Fak**	**51.86**	**281**	P			**P**	**11 46 50.3**	**-0.9**
FAKI				IAmb	IAmb			11 47 07.9	
	comp=Z,40nm,1.3s								
FITZ	**Fitzroy Crossi**	**54.11**	**261**	P			**P**	**11 47 06.8**	**-0.6**
	comp=Z,1.1nm,0.3s,baz=157,slow=6.8,SNR=6.8								
FITZ	**Fitzroy Crossi**	**54.11**	**261**	P			**P**	**11 47 07.1**	**-0.3**
SOEI	**Soe**	**57.26**	**270**	P			**P**	**11 47 30.2**	**+0.4**
PSA00	**Pilbara Seismi**	**58.91**	**256**	P			**P**	**11 47 39.9**	**-1.0**
PSA00				IAmb	IAmb			11 47 41.8	
	comp=Z,17nm,1.2s								
SBA	**Scott Base**	**59.91**	**184**	P			**P**	**11 47 48.4**	**+1.7**
SBA				IAmb	IAmb			11 48 00.7	
	comp=Z,14nm,1.2s								
VNDA	**Vanda**	**59.97**	**185**	P			**P**	**11 47 48.2**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=354,slow=7.1,SNR=7.8								
VNDA	**Vanda**	**59.97**	**185**	P			**P**	**11 47 48.0**	**+0.9**
NWAO	**Narrogin (SRO)**	**59.99**	**242**	P			**P**	**11 47 47.6**	**-0.4**
NWAO				IAmb	IAmb			11 48 00.3	
	comp=Z,37nm,1.4s								
MJAR	**Matsushiro Arr**	**69.09**	**323**	P			**P**	**11 48 44.5**	**-1.7**
	comp=Z,2.2nm,0.7s,baz=158,slow=6.3,SNR=6.7								
MJAR	**Matsushiro Arr**	**69.09**	**323**	P			**P**	**11 48 46.1**	**-0.1**
MJB9	**Matsu-Tunnel**	**69.09**	**323**	P			**P**	**11 48 46.8**	**+0.6**
MJB9				IAmb	IAmb			11 48 49.4	
	comp=Z,6.7nm,1.1s								
QSPA	**South Pole Qui**	**71.56**	**180**	P			**P**	**11 49 01.5**	**+0.7**
QSPA				IAmb	IAmb			11 49 02.4	
	comp=Z,8.4nm,0.8s								
SSLB	**Suanglung**	**73.55**	**303**	P			**P**	**11 49 12.3**	**-0.7**
KSRS	**Korea Array**	**75.93**	**318**	P			**P**	**11 49 25.8**	**-0.3**
	comp=Z,0.7nm,0.6s,baz=124,slow=5.8,SNR=3.7								
PNTR	**Pine Nut**	**78.57**	**42**	P			**P**	**11 49 42.1**	**+1.1**
PNTR				IAmb	IAmb			11 49 43.1	
	comp=Z,3.9nm,0.8s								
YERR	**Yerington**	**78.74**	**42**	P			**P**	**11 49 42.9**	**+1.1**
YERR				IAmb	IAmb			11 49 43.7	
	comp=Z,3.5nm,0.6s								
NVAR	**Mina Array Bea**	**79.03**	**43**	P			**P**	**11 49 44.2**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=223,slow=8.4,SNR=21								
NVAR	**Mina Array Bea**	**79.03**	**43**	P			**P**	**11 49 44.6**	**+1.1**
NV11	**Mina Array Sit**	**79.13**	**43**	P			**P**	**11 49 44.6**	**+0.7**
MTPU	**Mount Pierson**	**82.91**	**46**	P			**P**	**11 50 05.2**	**+1.2**
BARN	**Barnard Glacie**	**84.25**	**16**	P			**P**	**11 50 09.0**	**-0.9**
BARN				IAmb	IAmb			11 50 09.6	
	comp=Z,6.3nm,1.2s								
SEY	**Seymchan**	**84.62**	**347**	P			**P**	**11 50 10.6**	**-0.8**
	comp=Z,1.2nm,0.4s,baz=125,slow=12,SNR=6.6								
MNTX	**Cornudas Mount**	**84.94**	**54**	P			**P**	**11 50 14.8**	**+0.9**
TX31	**Lajitas Ar. Si**	**85.31**	**57**	P			**P**	**11 50 16.8**	**+1.0**
TX31				IAmb	IAmb			11 50 19.0	
	comp=Z,5.1nm,1.0s								
**TX32

KUZ Kuaotunu 7.51 214 P Pn 11 55 30.7 -1.1
HAZ Te Kaha 7.61 199 P Pn 11 55 28.4 -4.6
HAZ S S 11 56 52.3 -7.8
WCZ Waipu Caves 7.67 224 P Pn 11 55 34.9 +1.1
OUZ Omahuta 7.70 231 P Pn 11 55 34.4 +0.2
OUZ Omahuta 7.70 231 Pn 11 55 34.3 +0.2
RUGZ Raukumara Rang 7.83 199 P Pn 11 55 32.1 -3.9
TWGZ Tauwhareparae 7.95 197 P Pn 11 55 36.3 -1.2
TWGZ S S 11 57 00.1 -8.0
WHRZ Whale Island 7.95 203 P Pn 11 55 36.2 -1.2
MKAZ Moumakai 8.07 215 P Pn 11 55 39.5 +0.6
MARZ Manawahe 8.17 204 P Pn 11 55 37.9 -2.3
MWZ Matawai 8.22 199 P Pn 11 55 34.4 -6.4
MWZ S S 11 57 02.8 -11
TKGZ Te Karaka 8.23 197 P Pn 11 55 34.0 -6.9
TKGZ S S 11 57 07.5 -7.1
EDRZ Edgecumbe 8.26 204 P Pn 11 55 40.7 -0.6
URZ Urewera 8.27 201 P Pn 11 55 35.1 -6.3
2.2nm,0.3s,baz=256,slow=5.0,SNR=50
URZ S S 11 57 05.9 -10
35nm,0.3s,baz=69,slow=17,SNR=12
KARZ Kaharoa 8.36 206 P Pn 11 55 39.1 -3.5
RAGZ Rawiri 8.40 199 P Pn 11 55 36.3 -6.9
RAGZ S S 11 57 07.9 -11
TOZ Tahuroa Road 8.42 211 P Pn 11 55 43.6 +0.3
TARZ Mount Tarawera 8.45 204 P Pn 11 55 45.5 +1.6
RIGZ Rimuhau 8.51 197 P Pn 11 55 38.6 -5.9
RRRZ Republican Roa 8.54 204 P Pn 11 55 41.6 -3.3
MUGZ Murupara 8.58 202 P Pn 11 55 38.6 -6.8
RTZ Ruatahuna 8.64 201 P Pn 11 55 41.8 -4.4
PRGZ Paritu Road 8.68 196 P Pn 11 55 41.8 -4.9
PRRZ Plateau Road 8.73 204 P Pn 11 55 43.8 -3.5
WATZ Wairara 9.16 206 P Pn 11 55 48.4 -4.3
RITZ Rihia Road 9.35 205 P Pn 11 55 49.7 -5.4
HIZ Hauiti 9.35 211 P Pn 11 55 53.0 -2.1
CKHZ Cape Kidnapper 9.58 198 P Pn 11 55 50.5 -7.4
TWVZ Taurewa 9.59 207 P Pn 11 55 52.9 -5.3
NGZ Ngauruhoe 9.62 206 P Pn 11 55 52.9 -5.7
TUVZ Tukino 9.68 205 P Pn 11 55 53.6 -5.7
FWVZ Far West T-bar 9.70 206 P Pn 11 55 53.7 -6.1
BHHZ Black Hill Sta 9.73 203 P Pn 11 55 52.3 -7.7
TRVZ Turoa 9.74 205 P Pn 11 55 57.2 -3.0
MOVZ Moawhango 9.76 204 P Pn 11 55 53.9 -6.4
KRHZ Kereru 9.77 201 P Pn 11 55 52.2 -8.2
MTVZ Mangateitei 9.85 205 P Pn 11 55 55.8 -5.6
VRZ Vera Road 9.90 209 P Pn 11 55 58.2 -3.9
PXZ Pawanui 9.99 198 P Pn 11 55 56.3 -6.8
MHEZ Mangahewa 10.05 211 P Pn 11 56 05.1 +1.2
PNHZ Pukenui 10.07 201 P Pn 11 55 56.0 -8.2
WPHZ Waipukurau 10.14 200 P Pn 11 55 59.6 -5.4
DREZ Durham Road 10.20 211 P Pn 11 56 05.7 0.0
PRHZ Porangahau 10.27 199 P Pn 11 55 58.2 -8.4
TSZ Takapari Road 10.28 202 P Pn 11 55 58.1 -8.6
LREZ Lake Rotokare 10.34 209 P Pn 11 56 05.3 -2.2
WAZ Wanganui 10.35 206 P Pn 11 56 03.2 -4.5
KHEZ Kahui Hut 10.37 211 P Pn 11 56 07.0 -1.0
DVHZ Dannevirke 10.43 200 P Pn 11 56 00.4 -8.3
PRWZ Pori Road 10.73 201 P Pn 11 56 04.5 -7.9
BFZ Birch Farm 10.76 199 P Pn 11 56 04.0 -8.8
HOWZ Holdsworth Sta 11.18 202 P Pn 11 56 09.0 -9.1
OGWZ Otaki Gorge 11.22 203 P Pn 11 56 09.6 -8.9
CAW Cannon Point 11.52 203 P Pn 11 56 12.9 -9.4
BHW Baring Head 11.85 205 P Pn 11 56 17.4 -9.0
TCW Tory Channel 11.88 205 P Pn 11 56 17.7 -9.1
TUWZ Tuamarina 12.20 206 P Pn 11 56 22.5 -8.2
NNZ Nelson 12.23 208 P Pn 11 56 22.8 -8.4
QRZ Quartz Range 12.27 211 P Pn 11 56 25.3 -6.4
THZ Tophouse 12.89 208 P Pn 11 56 31.7 -7.5
MSVF Nonsavu 13.06 348 *i* P Pn 11 56 40.6 -1.1
MSVF Nonsavu 13.06 348 P 11 56 41.9 -1.5
KHZ Kahutara 13.21 205 P Pn 11 56 35.0 -8.1
CTZ Chatham Island 13.27 172 P P 11 56 46.7 +1.4
DSZ Denniston Nort 13.34 211 P Pn 11 56 38.5 -6.2
GVZ Greta Valley S 13.87 205 P Pn 11 56 43.3 -7.9
LTZ Lake Taylor 14.00 207 P Pn 11 56 44.9 -7.9
NIUE Niue 14.15 38 Pn Pn 11 56 52.6 -2.2
INZ Inchbonnie 14.29 209 P Pn 11 56 48.3 -8.0
OKCZ Okains Bay 14.52 203 P Pn 11 56 52.0 -7.1
MQZ McQueen's Vall 14.65 204 P P 11 56 52.0 -8.5
WVZ Waitaha Valley 14.88 210 P P 11 56 56.6 -6.5
RPZ Rata Peaks 15.27 208 P P 11 57 00.2 -7.2
4.8nm,0.3s,baz=88,slow=5.1,SNR=14
RPZ S S 11 59 39.7 -16
12nm,0.3s,baz=323,slow=22,SNR=12
RPZ Rata Peaks 15.27 208 P P 11 57 01.9 -5.6
DZM Mont Dzumac 15.49 300 *e*P Pn 11 57 09.7 -1.3
302nm,1.4s
DZM Mont Dzumac 15.49 300 Pn 11 57 10.6 -0.5
FOZ Fox Glacier 15.65 211 P P 11 57 06.5 -5.1
FOZ Fox Glacier 15.65 211 P P 11 57 07.5 -4.1
FOZ IAmb IAmb 11 57 12.0
comp=Z,26nm,1.0s
AFI Afiamalu 17.91 24 P P 11 57 35.0 -1.7
AFI pmax pmax
comp=Z,233nm,1.3s
AFI Afiamalu 17.91 24 S S 12 00 38.9 -10
comp=Z,10nm,0.3s,baz=266,slow=13,SNR=2.7
AFI Afiamalu 17.91 24 P P 11 57 35.0 -1.7
LHI Lord Howe Isla 18.75 262 P P 11 57 46.4 +0.9
RAR Rarotonga 19.70 66 P P 11 57 56.6 +1.0
RAR pmax pmax
comp=Z,101nm,1.2s
RAR Rarotonga 19.70 66 P Pn 11 57 58.6 -1.8
comp=Z,0.7nm,0.3s,baz=202,slow=12,SNR=2.1
RAR Rarotonga 19.70 66 P P 11 57 56.6 +1.0
ARMA Armidale 25.21 263 P P 11 58 50.2 +2.1
EIDS Eidsvold 26.81 274 P P 11 59 02.3 0.0
EIDS IAmb IAmb 11 59 23.8
comp=Z,37nm,1.4s
CAN Canberra 27.13 251 P P 11 59 06.4 +1.3
CAN pmax pmax
comp=Z,10.0nm,0.7s
CAN Canberra 27.13 251 P P 11 59 06.4 +1.3
KNTN Kanton 28.53 16 P P 11 59 17.3 -0.2
HNR Honiara 28.73 313 P P 11 59 18.4 -0.9
HNR pmax pmax
comp=Z,154nm,1.1s
HNR Honiara 28.73 313 P P 11 59 18.6 -0.7
comp=Z,62nm,0.8s,baz=174,slow=9.2,SNR=3.2
HNR Honiara 28.73 313 P P 11 59 18.4 -0.9
PPT2 Papeete2 29.78 71 *e*S S 12 04 01.5 -5.1
comp=Z,94nm,26.5s
PPT2 *e*LQ LQ 12 06 09.0
comp=Z,317nm,26.2s
PPT2 *e*LR LR 12 07 25.6
comp=Z,62nm,22.8s
TOO Toolangi 30.03 247 P P 11 59 31.0 +0.3
TOO pmax pmax
comp=Z,16nm,1.1s
TOO Toolangi 30.03 247 P P 11 59 31.0 +0.3
TARA Tarawa 32.66 345 P P 11 59 52.5 -1.3
STKA Stephens Creek 33.53 257 P P 12 00 02.2 +1.0
STKA pmax pmax
comp=Z,5.0nm,0.7s
STKA Stephens Creek 33.53 257 P P 12 00 02.5 +1.3
comp=Z,29nm,0.8s,baz=99,slow=12,SNR=60
STKA Stephens Creek 33.53 257 P P 12 00 02.1 +1.0
PMG Port Moresby 37.85 297 P P 12 00 37.7 -0.2
PMG pmax pmax
comp=Z,18nm,0.9s
PMG Port Moresby 37.85 297 P P 12 00 37.8 -0.2
comp=Z,7.4nm,0.6s,baz=113,slow=7.7,SNR=3.6
PMG PcP PcP 12 02 50.8 +2.0
comp=Z,7.3nm,0.8s,baz=153,slow=4.7,SNR=3.8
PMG Port Moresby 37.85 297 P P 12 00 37.7 -0.2
PMG IAmb IAmb 12 00 52.2
comp=Z,18nm,0.8s
BBOO Buckleboo 38.02 255 P P 12 00 38.9 -0.3
BBOO IAmb IAmb 12 00 42.1
comp=Z,21nm,0.9s
COEN Coen 38.43 287 P P 12 00 43.0 +0.2
AS31 Alice Springs 42.17 268 P P 12 01 12.7 -0.6
ASAR Alice Springs 42.17 268 P P 12 01 11.6 -1.8
ASAR Alice Springs 42.17 268 P P 12 01 12.7 -0.6
comp=Z,6.5nm,0.3s,baz=105,slow=7.2,SNR=268
ASAR ScP ScP 12 06 28.3 -0.8
comp=Z,13nm,1.0s,baz=118,slow=4.3,SNR=19
ASAR PKiKP PKiKP 12 10 06.9 -0.7
comp=Z,0.6nm,0.7s,baz=100,slow=1.6,SNR=7.0
ASAR Alice Springs 42.17 268 P P 12 01 11.6 -1.8
ASAR ScP 12 06 28.9 -0.2
WR0 Warramunga Arr 42.99 273 P P 12 01 19.1 -0.9
WR0 IAmb IAmb 12 01 20.4
comp=Z,15nm,0.5s
WRAB Tennant Creek 43.17 273 *ce*P P 12 01 19.5 -1.8
WRAB pmax pmax
comp=Z,12nm,0.6s
WRAB Tennant Creek 43.17 273 P P 12 01 20.2 -1.1
WRA Warramunga Arr 43.17 273 P P 12 01 20.3 -1.1
WRA pmax pmax
comp=Z,2.0nm,0.9s
WRA Warramunga Arr 43.17 273 P P 12 01 20.6 -0.8
comp=Z,20nm,0.4s,baz=112,slow=7.7,SNR=156
WRA pP pP 12 02 12.3 -0.3
comp=Z,6.2nm,0.7s,baz=111,slow=7.7,SNR=2.1
WRA ScP ScP 12 06 32.9 -0.3
comp=Z,9.3nm,1.0s,baz=110,slow=4.3,SNR=10
WRA S S 12 07 27.2 -1.7
comp=Z,3.8nm,1.0s,baz=114,slow=14,SNR=5.3
WRA PKiKP PKiKP 12 10 07.8 -0.7
comp=Z,0.6nm,0.5s,baz=89,slow=0.2,SNR=6.4
WRA Warramunga Arr 43.17 273 P P 12 01 20.3 -1.1
WRA ScP 12 06 32.5 -0.6
FORT Forrest 45.10 256 P P 12 01 35.3 -1.2
SBA Scott Base 47.78 184 P P 12 01 59.8 +3.2
SBA pmax pmax
comp=Z,15nm,1.0s
SBA Scott Base 47.78 184 P P 12 01 59.8 +3.2
VNDA Vanda 47.82 186 P P 12 01 58.9 +2.1
VNDA pmax pmax
comp=Z,4.0nm,1.1s
VNDA Vanda 47.82 186 P P 12 01 58.5 +1.6
comp=Z,0.5nm,0.6s,baz=16,slow=8.5,SNR=4.1
VNDA PcP PcP 12 03 22.9 +1.5
comp=Z,1.6nm,1.0s,baz=359,slow=5.0,SNR=7.2
VNDA ScP ScP 12 06 52.6 +1.2
comp=Z,5.0nm,0.7s,baz=347,slow=4.3,SNR=12
VNDA Vanda 47.82 186 P P 12 01 58.9 +2.1
MTN Manton Dam 49.09 280 P P 12 02 06.2 -1.2
MTN IAmb IAmb 12 02 21.8
comp=Z,58nm,1.6s
KNRA Kununurra 49.79 275 P P 12 02 11.9 -0.7
KNRA IAmb IAmb 12 02 33.0
comp=Z,44nm,1.6s
FITZ Fitzroy Crossi 51.43 271 P P 12 02 23.9 -0.9
comp=Z,8.9nm,0.8s,baz=158,slow=7.7,SNR=17
FITZ pP pP 12 03 17.1 -0.8
comp=Z,7.4nm,1.1s,baz=149,slow=5.9,SNR=1.8
FITZ Fitzroy Crossi 51.43 271 P P 12 02 24.2 -0.6
CASY Casey 54.54 208 P P 12 02 46.7 0.0
CASY IAmb IAmb 12 03 07.0
comp=Z,78nm,1.6s
MLH Mauna Loa 54.76 28 P P 12 02 50.7 +1.5
HMH Humu'ula Sheep 54.82 28 P P 12 02 51.0 +1.3
SIJI Sorong 55.54 292 P P 12 02 54.4 -0.2
comp=Z,9.2nm,0.7s,baz=76,slow=19,SNR=2.6
SOEI Soe 56.46 279 P P 12 03 01.4 +0.1
GIRL Giralia 59.39 260 P P 12 03 20.9 -0.5
QSPA South Pole Qui 59.52 180 P P 12 03 24.3 +2.6
comp=Z,39nm,0.7s,baz=20,slow=0.6,SNR=160
QSPA South Pole Qui 59.52 180 P P 12 03 24.0 +2.2
JCJ Chichijima 68.27 323 P P 12 04 18.2 -0.7
comp=Z,30nm,0.4s,baz=130,slow=18,SNR=3.9
KKM Kota Kinabalu 71.73 289 P P 12 04 39.6 -0.7
KKM IAmb IAmb 12 04 41.0
comp=Z,14nm,0.8s
PMSA Palmer Station 72.48 156 P P 12 04 45.5 +1.7
PMSA IAmb IAmb 12 04 54.1
comp=Z,67nm,1.6s
DBJI Dramaga 73.07 272 P P 12 05 00.6 +12
JOW Kunigami 76.10 313 P P 12 05 05.9 +0.8
JOW IAmb IAmb 12 05 09.5
comp=Z,48nm,1.4s
SYO Syowa Base 76.72 193⇑ *i*P P 12 05 06.3 -1.7
SYO Syowa Base 76.72 193⇓ *i*PcP PcP 12 05 17.0 -1.2
INU Inuyama 77.51 325 P P 12 05 13.0 +0.2
INU IAmb IAmb 12 05 14.2
comp=Z,18nm,0.9s
MJAR Matsushiro Arr 77.87 326 P P 12 05 14.4 -0.4
MJAR pmax pmax
comp=Z,6.0nm,1.1s
MJAR Matsushiro Arr 77.87 326 P P 12 05 14.1 -0.7
comp=Z,8.7nm,1.0s,baz=150,slow=4.5,SNR=13
MJAR Matsushiro Arr 77.87 326 P P 12 05 14.4 -0.4
MAJO Matsushiro 77.87 326 *i* P P 12 05 13.7 -1.1
MAJO pmax pmax
comp=Z,13nm,1.0s
MAJO Matsushiro 77.87 326 P P 12 05 14.7 -0.2
MAJO IAmb IAmb 12 05 16.7
comp=Z,24nm,1.2s
MAT Matsushiro 77.87 326 P P 12 05 14.3 -0.5
MJB9 Matsu-Tunnel 77.87 326 IAmb IAmb 12 05 16.7
comp=Z,24nm,1.2s
SNAA Sanae 77.99 179 P P 12 05 16.7 +1.5
SNAA Sanae 77.99 179⇓ *i*P P 12 05 16.1 +1.0
SNAA Sanae 77.99 179 P P 12 05 15.8 +0.7
SNAA IAmb IAmb 12 05 17.0
comp=Z,13nm,0.8s
VNA3 Neumayer Olymp 78.18 177 P P 12 05 17.4 +1.3
YULB Yu-li 78.42 306 P P 12 05 16.3 -1.8
YULB IAmb IAmb 12 05 18.8
comp=Z,16nm,1.1s
NVL N'lazarevskaya 78.63 184⇑ *i*P P 12 05 18.6 +0.1
NVL *e*S S 12 14 45.9 -7.9
NVL pmax pmax
comp=Z,14nm,0.7s
TPUB Ta-pu 78.82 306 P P 12 05 19.2 -1.2
VNA1 Neumayer--Stat 78.84 177 P P 12 05 21.3 +1.7
JNU Nakatsue 79.08 319 P P 12 05 21.0 -0.5
JNU IAmb IAmb 12 05 23.0
comp=Z,24nm,0.7s
ADK Adak 82.14 2 P P 12 05 38.2 +1.0
ADK pmax pmax
comp=Z,162nm,1.3s
ADK Adak 82.14 2 P P 12 05 38.1 +1.0
PLCA Paso Flores 83.06 133 P P 12 05 44.8 +2.2
PLCA pmax pmax
comp=Z,13nm,0.9s
PLCA Paso Flores 83.06 133 P P 12 05 45.6 +3.0
comp=Z,14nm,0.9s,baz=256,slow=5.1,SNR=38
PLCA pP pP 12 06 42.1 +0.9
comp=Z,4.5nm,0.9s,baz=247,slow=5.1,SNR=3.7
PLCA PKKPbc PKKPbc 12 24 03.1 +1.1
comp=Z,1.0nm,0.6s,baz=94,slow=3.7,SNR=4.3
PLCA Paso Flores 83.06 133 P P 12 05 44.8 +2.2
PLCA IAmb IAmb 12 05 46.4
comp=Z,13nm,0.9s
GO06 Curarrehue 83.12 132 P P 12 05 44.7 +1.7
EFI East Falkland 83.14 147 P P 12 05 43.9 +1.3
EFI pmax pmax
comp=Z,138nm,1.3s
EFI East Falkland 83.14 147 P P 12 05 43.9 +1.3
TJN Taejon 83.43 319 *ce*P P 12 05 44.7 +0.5
NIKH Nikolski High 83.68 6 P P 12 05 45.5 +0.5
KSRS Korea Array 83.89 320 P P 12 05 47.2 +0.8
comp=Z,7.9nm,0.9s,baz=142,slow=5.7,SNR=25
KSAR Wonju Array Be 83.90 320 P P 12 05 47.0 +0.4
KSAR Wonju Array Be 83.90 320 P P 12 05 47.0 +0.4
KS19 Wonju Array Si 83.95 320 P P 12 05 47.5 +0.7
KS19 IAmb IAmb 12 06 07.9
comp=Z,20nm,0.8s
YSS Yuzh-Sakhalins 84.51 335⇓ *e*P P 12 05 50.6 +1.3
YSS pmax pmax
comp=Z,120nm,0.7s
YSS pmax pmax
comp=N,30nm,1.1s
YSS pmax pmax
comp=E,50nm,0.8s
YSS pmax pmax
comp=Z,500nm,3.7s
YSS Yuzh-Sakhalins 84.51 335 P P 12 05 50.7 +1.3
UNV Unalaska Valle 84.79 7 P P 12 05 51.1 +0.6
PET Petropavlovsk 85.49 347 P P 12 05 55.3 +1.2
PET pmax pmax
comp=Z,42nm,0.7s
PET Petropavlovsk 85.49 347 P P 12 05 55.3 +1.2
NJ2 Nanjing 85.66 311 *e*P P 12 05 57.8 +2.4
NJ2 pmax pmax
comp=Z,16nm,0.5s
PEA0B Petropavlovsk- 85.77 346 P P 12 05 56.6 +1.2
PEA0B pmax pmax
comp=Z,76nm,1.0s
PEA0B Petropavlovsk- 85.77 346 P P 12 05 56.6 +1.2
PETK Petropavlovsk- 85.77 346 P P 12 05 55.9 +0.5
PETK Petropavlovsk- 85.77 346 P P 12 05 56.5 +1.1
comp=Z,50nm,0.8s,baz=143,slow=7.6,SNR=35
PETK PKiKP PKiKP 12 11 03.8 +0.7
comp=Z,10nm,1.2s,baz=313,slow=0.9,SNR=7.1
PETK Petropavlovsk- 85.77 346 P P 12 05 55.9 +0.5
PAGB Antelope Grade 86.06 44 P P 12 05 59.3 +1.9
109C Camp Elliot, M 86.14 48 P P 12 05 58.9 +1.1
BAR Barrett 86.29 49 IAmb IAmb 12 06 02.3
comp=Z,22nm,1.4s
PASC Pasadena Art C 86.29 47 P P 12 06 00.1 +1.6
PASC IAmb IAmb 12 06 01.7
comp=Z,15nm,1.1s
ARVC Arvin 86.52 45 P P 12 06 02.1 +2.5
baz=229,SNR=5.5
MURC Murrieta 86.54 48 P P 12 06 02.4 +2.6
baz=230,SNR=7.4
MONP2 Monument Peak 86.58 48 P P 12 06 03.1 +2.8
baz=230,SNR=10
IKP In-Ko-Pah, Jac 86.63 49 P P 12 06 03.2 +2.9
baz=230,SNR=8.2
BFSC Mount Baldy Ra 86.67 47 P P 12 06 02.9 +2.4
baz=229,SNR=9.9
USA0B Ussuriysk Arra 86.81 327 *i* P P 12 06 01.9 +1.2
USA0B Ussuriysk Arra 86.81 327 P P 12 06 01.7 +1.0
USA0B IAmb IAmb 12 06 03.3
comp=Z,37nm,1.1s
USRK Ussuriysk Ar. 86.81 327 P P 12 06 01.3 +0.6
USRK Ussuriysk Ar. 86.81 327 P P 12 06 01.6 +0.9
comp=Z,14nm,0.8s,baz=123,slow=3.7,SNR=24
USRK Ussuriysk Ar. 86.81 327 P P 12 06 01.2 +0.6
VES Vestal, Richgr 86.83 45 P P 12 06 03.3 +2.2
baz=228,SNR=10
EDW2 Edwards Air Fo 86.87 46 P P 12 06 03.9 +2.5
baz=229,SNR=19
SWSC Sam W. Stewart 87.02 49 P P 12 06 04.8 +2.8
baz=230,SNR=7.9
PFO Pinyon Flats O 87.02 48⇓ *e*P P 12 06 04.8 +2.6
PFO pmax pmax
comp=Z,38nm,1.8s
PFO Pinyon Flats O 87.02 48 P P 12 06 04.1 +1.9
PFO Pinyon Flats O 87.02 48 P P 12 06 04.8 +2.6
baz=230,SNR=9.9
XPFO Pion Flat 87.02 48 P P 12 06 04.0 +1.8
ISA Isabella, Lake 87.09 45 IAmb IAmb 12 06 06.1
comp=Z,22nm,0.9s
ISA Isabella, Lake 87.09 45 P P 12 06 05.0 +2.6
baz=229,SNR=17
BBRC Big Bear Solar 87.15 47 P P 12 06 05.5 +2.6
baz=230
LRMC Laurel Mtn Rad 87.46 46 P P 12 06 06.7 +2.5
baz=229,SNR=16
RRX Edison Barstow 87.49 47 P P 12 06 06.9 +2.6
baz=230
BELC Belle Mtn. Jos 87.56 48 P P 12 06 07.6 +2.9
baz=230,SNR=17
O02D Mt. Diablo Mer 87.63 40 P P 12 06 07.9 +3.0
baz=226,SNR=5.3
BC3 Big Chuckawall 87.69 48 P P 12 06 08.4 +3.1
baz=231,SNR=12
WHN Wuhan 87.72 308 P P 12 06 14.2 +8.8
GLA Glamis 87.72 49 P P 12 06 08.7 +3.3
baz=231,SNR=11
CWC Cottonwood Cre 87.84 45 P P 12 06 08.3 +2.2
baz=229
TYV Tymovskoe 87.85 337 *e*P P 12 06 07.2 +1.7
TYV *e*S S 12 16 25.6 -0.7
TYV pmax pmax
comp=Z,300nm,5.6s
TYV pmax pmax
comp=Z,71nm,0.9s
TYV smax smax
comp=E,800nm,9.0s
HEC Hector,Ludlow 87.88 47 P P 12 06 08.8 +2.6
baz=230
HSIG 87.88 54 P P 12 06 07.8 +1.6
HSIG IAmb IAmb 12 06 09.7
comp=Z,11nm,0.9s
GSC Goldstone, Bar 87.89 46 IAmb IAmb 12 06 09.9
comp=Z,25nm,1.2s
GSC Goldstone, Bar 87.89 46 P P 12 06 08.8 +2.6
baz=230,SNR=12
MPMC Manual Prospec 87.95 45 P P 12 06 09.0 +2.4
baz=229,SNR=9.7
MDPB Devils Postpil 88.03 43 P P 12 06 08.1 +1.1
MDPB IAmb IAmb 12 06 10.4
comp=Z,16nm,1.4s
OMMB Old Mammoth Mi 88.06 44 IAmb IAmb 12 06 10.8
comp=Z,19nm,1.7s
IRM Iron Mountain 88.21 48 P P 12 06 10.7 +3.1
baz=231,SNR=21
113A Mohawk Valley, 88.24 50 P P 12 06 09.7 +1.9
113A IAmb IAmb 12 06 12.0
comp=Z,23nm,1.2s
MDJ Mudanjiang 88.25 326 P P 12 06 09.5 +1.9
MDJ pmax pmax
comp=Z,32nm,1.0s
MDJ pmax pmax
comp=Z,250nm,4.2s
MDJ Mudanjiang 88.25 326 P P 12 06 08.0 +0.4
MDJ IAmb IAmb 12 06 10.2
comp=Z,34nm,1.1s
O03E Paynes Creek 88.26 40 P P 12 06 10.2 +2.3
baz=227
GMRC Granite Mounta 88.28 47 P P 12 06 10.8 +2.7
baz=230,SNR=8.1
Y12C Blythe 88.36 49 IAmb IAmb 12 06 12.5
comp=Z,17nm,1.1s
Y12C Blythe 88.36 49 P P 12 06 11.4 +3.1
baz=231,SNR=9.4
214A Organ Pipe Nat 88.38 51 IAmb IAmb 12 06 13.7
comp=Z,11nm,1.0s
214A Organ Pipe Nat 88.38 51 P P 12 06 11.6 +3.1
baz=232,SNR=7.1
WAKR Walker 88.39 43 IAmb IAmb 12 06 12.9
comp=Z,16nm,1.1s
M02C Callahan 88.44 39 P P 12 06 11.5 +2.8
baz=226
TUQ Turquoise Moun 88.53 47 P P 12 06 11.9 +2.6
baz=230,SNR=8.3
SHOC Shoshone, Teco 88.60 46 P P 12 06 11.9 +2.4
baz=230,SNR=9.3
FURC Furnace Creek, 88.60 46 P P 12 06 11.9 +2.6
baz=230
GRAC Grapevine Rang 88.64 45 P P 12 06 12.3 +2.7
baz=229,SNR=11
PNTR Pine Nut 88.69 42 IAmb IAmb 12 06 14.6
comp=Z,18nm,1.1s
YBH Yreka Blue Hor 88.76 39 P P 12 06 12.1 +2.0
comp=Z,8.9nm,1.1s,baz=188,slow=7.1,SNR=4.6
BEKR Beckworth 88.78 41 IAmb IAmb 12 06 14.2
comp=Z,16nm,1.4s
VCNR Virginia City 88.80 42 IAmb IAmb 12 06 13.9
comp=Z,15nm,1.3s
YERR Yerington 88.83 42 IAmb IAmb 12 06 13.8
comp=Z,21nm,1.4s
NVAR Mina Array Bea 89.01 43 P P 12 06 13.6 +2.0
comp=Z,8.4nm,1.0s,baz=220,slow=7.9,SNR=38
NVAR PKKPbc PKKPbc 12 23 50.0 +0.4
comp=Z,0.3nm,0.7s,baz=62,slow=4.3,SNR=2.9
NVAR Mina Array Bea 89.01 43 P P 12 06 13.2 +1.6
RYN Ryan 89.01 43 IAmb IAmb 12 06 14.8
comp=Z,21nm,1.6s
NV11 Mina Array Sit 89.10 43 IAmb IAmb 12 06 15.2
comp=Z,14nm,1.2s
PAHR Pah Rah Range 89.23 42 IAmb IAmb 12 06 16.2
comp=Z,11nm,1.2s
HUMO Hull Mountain 89.23 38 P 12 06 14.4 +2.2
HUMO IAmb IAmb 12 06 16.9
comp=Z,18nm,1.2s
M04C Macdoel 89.26 39 P P 12 06 15.6 +3.1
baz=226
TPNV Topopah Spring 89.29 45 IAmb IAmb 12 06 16.4
comp=Z,11nm,1.0s
TPNV Topopah Spring 89.29 45 P P 12 06 15.4 +2.5
baz=230,SNR=8.8
L04D Klamath Falls 89.31 38 P P 12 06 15.7 +2.9
baz=226
Y14A Wickenburg 89.46 49 IAmb IAmb 12 06 17.5
comp=Z,13nm,0.9s
SHPR Sheep Range 89.68 46 P P 12 06 16.1 +1.4
CN2 Changchun 89.73 323 *e*P P 12 06 15.3 +0.8
CN2 pmax pmax
comp=Z,40nm,1.0s
PBKT Sadao Pong 89.95 289 P P 12 06 16.2 +0.1
TUC Tucson 89.96 52 P P 12 06 17.9 +1.9
TUC pmax pmax
comp=Z,15nm,0.9s
TUC Tucson 89.96 52 P P 12 06 17.9 +1.9
TUC IAmb IAmb 12 06 20.5
comp=Z,15nm,0.8s

TUC	**Tucson**	**89.96**	**52**	P	**P**	**12 06 19.3**	**+3.3**
	baz=233								
GRNR	**Gornyy**	**90.03**	**334**	*i* P	**P**	**12 06 17.6**	**+1.9**
GRNR				*e*S	**S**	**12 16 48.9**	**+2.3**
GRNR				pmax	pmax		
	comp=Z,50nm,1.2s						
GRNR				smax	smax		
	comp=N,3.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,130nm,11.0s						
OHAK	**Old Harbor**	**90.14**	**14**	IAmb	IAmb	12 06 19.2	
	comp=Z,16nm,0.9s						
MOD	**Modoc Plateau**	**90.18**	**40**	IAmb	IAmb	12 06 20.0	
	comp=Z,10nm,1.0s						
319A	**Douglas**	**90.44**	**53**	IAmb	IAmb	12 06 22.5	
	comp=Z,18nm,1.1s						
HPIG		**90.48**	**59**	P	**P**	**12 06 19.7**	**+1.1**
R11A	**Troy Canyon, C**	**90.59**	**45**	P	**P**	**12 06 21.0**	**+2.1**
	baz=290						
KLR	**Kul'dur**	**90.73**	**330⇑**	*i* P	**P**	**12 06 21.0**	**+2.0**
KLR				pmax	pmax		
	comp=Z,34nm,0.8s						
KDAK	**Kodiak Island**	**90.81**	**14**	P	**P**	**12 06 20.3**	**+1.2**
KDAK				pmax	pmax		
	comp=Z,51nm,1.6s						
KDAK	**Kodiak Island**	**90.81**	**14**	P	**P**	**12 06 20.2**	**+1.1**
	comp=Z,7.7nm,0.7s,baz=208,slow=2.3,SNR=9.0						
KDAK	**Kodiak Island**	**90.81**	**14**	P	**P**	**12 06 20.3**	**+1.2**
ENH	**Enshi**	**90.94**	**305**	P	**P**	**12 06 20.6**	**+0.1**
I05D	**Terrebonne, OR**	**91.28**	**37**	P	**P**	**12 06 24.3**	**+2.5**
	baz=227						
U15A	**North Rim**	**91.45**	**48**	IAmb	IAmb	12 06 26.9	
	comp=Z,9.7nm,0.8s						
WVOR	**Wild Horse Val**	**91.46**	**40**	IAmb	IAmb	12 06 25.9	
	comp=Z,12nm,1.2s						
WUAZ	**Wupatki**	**91.49**	**49**	IAmb	IAmb	12 06 26.9	
	comp=Z,8.6nm,1.0s						
WUAZ	**Wupatki**	**91.49**	**49**	P	**P**	**12 06 26.1**	**+3.0**
	baz=233						
CMAR	**Chiang Mai Arr**	**92.58**	**290**	P	**P**	**12 06 29.0**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=152,slow=3.7,SNR=8.4						
CMAR				PP	**PP**	**12 10 13.8**	**0.0**
	comp=Z,0.4nm,0.4s,baz=138,slow=5.1,SNR=4.1						
CMAR				PKiKP	**PKiKP**	**12 11 16.4**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=237,slow=1.5,SNR=4.5						
CMAR	**Chiang Mai Arr**	**92.58**	**290**	P	**P**	**12 06 28.0**	**-0.3**
MA2	**Magadan**	**93.23**	**345**	*ce*P	**P**	**12 06 30.6**	**+0.3**
MA2				pmax	pmax		
	comp=Z,20nm,0.9s						
TXAR	**Lajitas Array**	**93.28**	**58**	P	**P**	**12 06 32.5**	**+1.1**
TXAR	**Lajitas Array**	**93.28**	**58**	P	**P**	**12 06 33.5**	**+2.1**
	comp=Z,1.4nm,0.8s,baz=209,slow=6.9,SNR=14						
TXAR	**Lajitas Array**	**93.28**	**58**	P	**P**	**12 06 32.5**	**+1.1**
MNTX	**Cornudas Mount**	**93.35**	**55**	P	**P**	**12 06 33.8**	**+2.2**
	baz=236						
ANMO	**Albuquerque**	**94.42**	**52**	P	**P**	**12 06 38.8**	**+2.1**
	baz=236						
SUA	**Susitna One**	**94.57**	**13**	IAmb	IAmb	12 06 39.0	
	comp=Z,8.4nm,0.8s						
HHC	**Hu-ho-hao-te**	**95.69**	**314**	*e*P	**P**	**12 06 45.8**	**+3.6**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,130nm,6.6s						
SEY	**Seymchan**	**95.95**	**347**	*i* P	**P**	**12 06 43.4**	**+0.8**
ZEA	**Zeya**	**95.96**	**331**	*e*P	**P**	**12 06 43.0**	**+0.1**
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
KTH	**Kantishna Hill**	**96.45**	**12**	IAmb	IAmb	12 06 46.3	
	comp=Z,7.6nm,1.0s						
TRF	**Thorofare Moun**	**96.47**	**13**	IAmb	IAmb	12 06 49.5	
	comp=Z,7.0nm,0.8s						
PDAR	**Pinedale Array**	**96.92**	**44**	P	**P**	**12 06 49.0**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=222,slow=2.0,SNR=6.3						
PDAR				PKKPbc	**PKKPbc**	**12 23 28.1**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=93,slow=4.4,SNR=12						
PDAR	**Pinedale Array**	**96.92**	**44**	P	**P**	**12 06 48.1**	**+0.3**
WRH	**Wood River Hil**	**97.81**	**13**	P	Pdif	12 06 51.7	+0.7
WRH				IAmb	IAmb	12 06 56.0	
	comp=Z,4.4nm,0.8s						
DOT	**Dot Lake**	**97.93**	**15**	IAmb	IAmb	12 06 57.5	
	comp=Z,5.6nm,1.0s						
CCB	**Clear Creek Bu**	**98.03**	**13**	IAmb	IAmb	12 06 57.5	
	comp=Z,5.6nm,0.9s						
LZH	**Lanzhou**	**98.09**	**307**	*e*P	Pdif	12 06 58.5	+5.3
LZH				pP	pP	12 07 50.2	-3.1
LZH				sP	sP	12 08 16.5	-2.5
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,87nm,5.4s						
COLA	**College**	**98.22**	**13**	*i* P	Pdif	12 06 54.2	+1.4
COLA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SCRK	**Sand Creek**	**98.23**	**15**	P	Pdif	12 06 54.0	+1.0
ILAR	**Eielson Array**	**98.32**	**13**	P	**P**	**12 06 53.7**	**+0.4**
ILAR	**Eielson Array**	**98.32**	**13**	P	**P**	**12 06 54.0**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=223,slow=4.8,SNR=14						
ILAR				PKiKP	**PKiKP**	**12 11 24.1**	**0.0**
	comp=Z,0.6nm,0.6s,baz=296,slow=2.4,SNR=8.2						
ILAR				PKKPbc	**PKKPbc**	**12 23 24.4**	**-1.6**
	comp=Z,0.8nm,0.5s,baz=32,slow=2.8,SNR=17						
ILAR	**Eielson Array**	**98.32**	**13**	P	**P**	**12 06 53.7**	**+0.4**
BILL	**Bilibino**	**98.93**	**354⇓**	*e*P	**P**	**12 06 57.4**	**+1.4**
BILL						12 10 58.0	
BILL				S	**SKSac**	**12 17 18.0**	**+9.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CPUP	**Villa Florida**	**100.60**	**129**	PKKPbc	PKKPbc	12 23 17.6	+0.3
	comp=Z,2.3nm,0.7s,baz=66,slow=3.8,SNR=5.1						
GTA	**Gaotai**	**102.52**	**308**	*e*P	**Pdif**	**12 07 14.1**	**+1.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	**Songino Array**	**102.66**	**318**	*i* P	**Pdif**	**12 07 12.0**	**-1.1**
SONM	**Songino Array**	**102.66**	**318**	P	**Pdif**	**12 07 14.3**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=145,slow=5.3,SNR=3.5						
SONM				PKiKP	**PKiKP**	**12 11 33.7**	**+1.0**
	comp=Z,1.2nm,0.9s,baz=111,slow=1.7,SNR=5.8						
SONM	**Songino Array**	**102.66**	**318**		**Pdif**	**12 07 12.0**	**-1.1**
INK	**Inuvik**	**104.21**	**16**	PKiKP	**PKiKP**	**12 11 35.5**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=147,slow=2.7,SNR=5.5						
TAPN	**Taplejung**	**105.92**	**293**	*e*P	**PKiKP**	**12 11 39.7**	**+0.2**
ODAN	**Odare**	**105.96**	**292**	*e*P	**PKiKP**	**12 11 40.2**	**+0.7**
	comp=Z,32nm,0.9s						
YKA	**Yellowknife Ar**	**106.02**	**26**	Pdiff	**Pdif**	**12 07 29.0**	**+1.5**
	baz=234,slow=4.7						
YKA				PKiKP	**PKiKP**	**12 11 38.3**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=242,slow=1.5,SNR=17						
YKA				PKKPbc	**PKKPbc**	**12 22 58.5**	**-4.5**
	comp=Z,0.8nm,0.6s,baz=39,slow=3.1,SNR=14						
RAMN	**Ramite**	**106.63**	**292**	*e*P	**PKiKP**	**12 11 41.1**	**+0.3**
	comp=Z,12nm,0.7s						
JIRN	**Jiri**	**107.27**	**292**	*e*P	**PKiKP**	**12 11 41.8**	**-0.3**
GUN	**Gumba**	**107.62**	**292**	*e*P	**PKiKP**	**12 11 42.3**	**-0.4**
PKI	**Pulchoki**	**107.86**	**292**	*e*P	**PKiKP**	**12 11 43.0**	**-0.1**
KKN	**Kakani**	**108.05**	**292**	*e*P	**PKiKP**	**12 11 43.9**	**+0.5**
KOLN	**Koldanda**	**109.39**	**291**	*e*P	**PKiKP**	**12 11 45.0**	**-0.9**
DANN	**Dangsing**	**109.50**	**292**	*e*P	**PKiKP**	**12 11 45.6**	**-0.6**
	comp=Z,13nm,0.6s						
WMQ	**Urumqi**	**112.61**	**308**	*e*PKP	**PKiKP**	**12 11 51.6**	**+0.3**
WMQ				LR	LR		
	comp=Z,230nm,28.9s						
WMQ				LR	LR		
	comp=Z,950nm,29.1s						
WMQ				LR	LR		
	comp=Z,120nm,29.1s						
BOSA	**Boshof**	**116.72**	**204**	PKIKP	**PKiKP**	**12 12 00.6**	**+0.7**
BOSA	**Boshof**	**116.72**	**204**	PKP	**PKiKP**	**12 12 00.5**	**+0.6**
	comp=Z,4.5nm,0.5s,baz=121,slow=1.1,SNR=19						
BOSA	**Boshof**	**116.72**	**204**		**PKiKP**	**12 12 00.6**	**+0.7**
MK31	**Makanchi Array**	**117.18**	**310**	PKIKP	**PKPdf**	**12 11 59.5**	**-0.4**
MK31	**Makanchi Array**	**117.18**	**310**		**PKPdf**	**12 11 59.5**	**-0.4**
MKAR	**Makanchi Array**	**117.18**	**310**	PKIKP	**PKPdf**	**12 11 59.5**	**-0.4**
MKAR	**Makanchi Array**	**117.18**	**310**	PKP	**PKiKP**	**12 11 59.7**	**-0.2**
	comp=Z,6.3nm,0.5s,baz=210,slow=1.2,SNR=126						
MKAR				PKKPbc	**PKKPab**	**12 22 26.9**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=286,slow=3.1,SNR=7.5						
MKAR	**Makanchi Array**	**117.18**	**310**		**PKPdf**	**12 11 59.5**	**-0.4**
MAKZ	**Makanchi**	**117.39**	**310**	PKIKP	**PKPdf**	**12 11 59.9**	**-0.4**
MAKZ	**Makanchi**	**117.39**	**310**		**PKPdf**	**12 11 59.9**	**-0.4**
ZAA0	**Zalesovo Array**	**117.55**	**318**		**PKPdf**	**12 11 59.5**	**-0.9**
ZALV	**Zalesovo Beam**	**117.55**	**318**	PKIKP	**PKPdf**	**12 11 59.4**	**-0.9**
ZALV	**Zalesovo Beam**	**117.55**	**318**	PKP	**PKPdf**	**12 11 59.7**	**-0.7**
	comp=Z,4.3nm,0.6s,baz=170,slow=1.2,SNR=23						
ZALV	**Zalesovo Beam**	**117.55**	**318**		**PKPdf**	**12 11 59.4**	**-0.9**
RES	**Resolute Bay**	**117.70**	**17**	PKIKP	**PKiKP**	**12 12 00.0**	**-0.1**
RES	**Resolute Bay**	**117.70**	**17**		**PKiKP**	**12 11 60.0**	**-0.1**
PDGK	**Podgornoye**	**118.09**	**306**	PKIKP	**PKPdf**	**12 12 01.5**	**-0.4**
PRZ	**Przheval'sk**	**118.62**	**305**	PKIKP	**PKiKP**	**12 12 03.2**	**+0.1**
PRZ	**Przheval'sk**	**118.62**	**305**		**PKiKP**	**12 12 03.2**	**+0.1**
L58A	**Harry Jones Me**	**119.00**	**56**	P	**PKiKP**	**12 12 04.2**	**+0.6**
	baz=254						
E54A	**Lac Daplat, Po**	**119.25**	**51**	P	**PKiKP**	**12 12 04.0**	**+0.1**
	baz=255						
KSH	**Kashi**	**119.53**	**301**	PKP	**PKiKP**	**12 12 06.1**	**+1.2**
KSH				sPKP		12 13 28.6	
KSH				PP	**sPKPdf**	**12 13 38.2**	**+5.4**
KSH				AMB	AMB		
	comp=Z,340nm,4.6s						
J58A	**Remsen**	**119.76**	**55**	P	**PKiKP**	**12 12 05.6**	**+0.6**
	baz=255						
NIL	**Nilore**	**119.84**	**294**	PKIKP	**PKPdf**	**12 12 04.7**	**-0.7**
NIL	**Nilore**	**119.84**	**294**		**PKPdf**	**12 12 04.7**	**-0.7**
E55A	**Montcerf-Lytto**	**120.01**	**51**	P	**PKiKP**	**12 12 05.7**	**+0.3**
	baz=256						
LSQQ	**Lebel-sur-Quev**	**120.02**	**48**	P	**PKiKP**	**12 12 05.2**	**-0.1**
	baz=257						
ULHL	**Ulahol**	**120.09**	**304**	P	**PKiKP**	**12 12 06.6**	**+0.6**
	SNR=23						
KURK	**Kurchatov**	**120.50**	**314**	PKIKP	**PKPdf**	**12 12 04.7**	**-1.4**
KURK	**Kurchatov**	**120.50**	**314**		**PKiKP**	**12 12 05.8**	**-0.4**
D55A	**Sainte-Anne-du**	**120.54**	**51**	P	**PKiKP**	**12 12 06.5**	**0.0**
	baz=257						
E56A	**St. Veronique**	**120.72**	**51**	P	**PKiKP**	**12 12 07.1**	**+0.3**
	baz=257						
TKM2	**Tokmak 2**	**120.73**	**304**	PKIKP	**PKPdf**	**12 12 06.3**	**-0.8**
TKM2	**Tokmak 2**	**120.73**	**304**	P	**PKiKP**	**12 12 07.1**	**-0.1**
	SNR=36						
KZA	**Kyzart**	**120.76**	**303**	P	**PKiKP**	**12 12 08.2**	**+0.6**
	SNR=30						
D56A	**ZEC Mazanza, M**	**121.02**	**51**	P	**PKiKP**	**12 12 07.4**	**0.0**
	baz=257						
KBK	**Karagaybulak**	**121.12**	**304**	P	**PKiKP**	**12 12 08.1**	**+0.2**
	SNR=22						
E57A	**Chemin Saint G**	**121.29**	**51**	P	**PKiKP**	**12 12 08.1**	**+0.1**
	baz=257						
UCH	**Uchur**	**121.33**	**303**	P	**PKiKP**	**12 12 09.3**	**+0.6**
	SNR=41						
CHMS	**Chumysh**	**121.35**	**304**	P	**PKiKP**	**12 12 08.3**	**+0.1**
	SNR=24						
L61B	**Northampton**	**121.38**	**56**	P	**PKiKP**	**12 12 09.0**	**+0.8**
	baz=256						
FRU1	**Bishkek**	**121.39**	**304**	PKIKP	**PKiKP**	**12 12 08.6**	**+0.2**
FRU1	**Bishkek**	**121.39**	**304**		**PKiKP**	**12 12 08.6**	**+0.2**
AAK	**Ala-Archa**	**121.44**	**304**	PKIKP	**PKiKP**	**12 12 08.6**	**0.0**
AAK	**Ala-Archa**	**121.44**	**304**	P	**PKiKP**	**12 12 08.8**	**+0.2**
	SNR=18						
AAK	**Ala-Archa**	**121.44**	**304**		**PKiKP**	**12 12 08.3**	**-0.3**
USP	**Ospennovka**	**121.59**	**305**	P	**PKiKP**	**12 12 08.6**	**-0.1**
	SNR=31						
D57A	**Chemin Vers le**	**121.59**	**51**	P	**PKiKP**	**12 12 08.9**	**+0.4**
	baz=258						
E58A	**La Victoria**	**121.87**	**52**	P	**PKiKP**	**12 12 09.5**	**+0.4**
	baz=258						
AML	**Almayashu**	**121.89**	**303**	P	**PKiKP**	**12 12 10.2**	**+0.4**
	SNR=63						
EKS2	**Erkin-Say**	**121.96**	**304**	P	**PKiKP**	**12 12 09.6**	**+0.1**
	SNR=21						
D58A	**Chemin du LacG**	**122.28**	**51**	P	**PKiKP**	**12 12 10.1**	**+0.2**
	baz=258						
F60A	**Warwick**	**122.68**	**52**	P	**PKiKP**	**12 12 11.3**	**+0.6**
	baz=258						
G61A	**St-Isidore-de-**	**122.83**	**53**	P	**PKiKP**	**12 12 11.9**	**+0.9**
	baz=258						
E60A	**Ste Agathe de**	**123.11**	**52**	P	**PKiKP**	**12 12 12.0**	**+0.5**
	baz=259						
F61A	**St Evariste**	**123.34**	**53**	P	**PKiKP**	**12 12 12.9**	**+1.0**
	baz=259						
KBL	**Kabul**	**123.44**	**293**	PKIKP	**PKiKP**	**12 12 13.0**	**+0.2**
KBL	**Kabul**	**123.44**	**293**		**PKiKP**	**12 12 13.0**	**+0.2**
G62A	**West of Eustis**	**123.51**	**53**		**PKiKP**	**12 12 12.4**	**+0.1**
G62A	**West of Eustis**	**123.51**	**53**	P	**PKiKP**	**12 12 13.0**	**+0.6**
	baz=259						
GAR	**Garm**	**123.63**	**299**		**PKiKP**	**12 12 12.8**	**-0.2**
E61A	**Lac Etchemin**	**123.77**	**52**	P	**PKiKP**	**12 12 13.9**	**+1.0**
	baz=260						
D61A	**St Aubert, Com**	**124.11**	**51**	P	**PKiKP**	**12 12 14.1**	**+0.6**
	baz=260						
TULEG	**Thule**	**124.21**	**15**		**PKPdf**	**12 12 12.3**	**-0.2**
H64A	**Troy**	**124.31**	**54**	P	**PKiKP**	**12 12 14.5**	**+0.6**
	baz=259						
PKME	**Peaks-Kenny Pk**	**124.38**	**54**		**PKiKP**	**12 12 14.6**	**+0.5**
PKME	**Peaks-Kenny Pk**	**124.38**	**54**	P	**PKiKP**	**12 12 14.9**	**+0.9**
	baz=260						
KK31	**Karatay Array**	**124.40**	**304**	*i* PKIKP	**PKiKP**	**12 12 14.4**	**+0.2**
KKAR	**Karatay Array**	**124.40**	**304**	PKIKP	**PKiKP**	**12 12 13.8**	**-0.4**
KKAR	**Karatay Array**	**124.40**	**304**		**PKiKP**	**12 12 13.8**	**-0.4**
CHGR	**Chuyangaron**	**124.42**	**298**		**PKiKP**	**12 12 15.0**	**+0.5**
F63A	**Nahmakanta, Br**	**124.59**	**53**	P	**PKiKP**	**12 12 15.0**	**+0.5**
	baz=260						
G64A	**Maxfield**	**124.75**	**54**	P	**PKiKP**	**12 12 15.7**	**+0.9**
	baz=260						
D62A	**Allapoint, All**	**124.86**	**51**	P	**PKiKP**	**12 12 15.1**	**+0.2**
	baz=261						
F64A	**Sherman**	**125.14**	**53**	P	**PKiKP**	**12 12 16.0**	**+0.4**
	baz=261						
E63A	**Oxbow**	**125.18**	**52**		**PKiKP**	**12 12 15.6**	**0.0**
E63A	**Oxbow**	**125.18**	**52**	P	**PKiKP**	**12 12 15.9**	**+0.3**
	baz=261						
D63A	**Stockholm**	**125.48**	**52**	P	**PKiKP**	**12 12 16.1**	**-0.1**
	baz=262						
PQI	**Presque Isle**	**125.49**	**52**		**PKiKP**	**12 12 16.2**	**0.0**
G65A	**Princeton**	**125.57**	**54**	P	**PKiKP**	**12 12 17.1**	**+0.7**
	baz=261						
E64A	**Bridgewater**	**125.58**	**52**	P	**PKiKP**	**12 12 16.6**	**+0.2**
	baz=261						
SCHQ	**Schefferville**	**127.00**	**42**	PKP	**PKPdf**	**12 12 18.4**	**-0.1**
	comp=Z,6.1nm,0.9s,baz=319,slow=3.4,SNR=6.6						
LSZ	**Lusaka**	**127.39**	**214**	PKIKP	**PKiKP**	**12 12 21.1**	**0.0**
LSZ	**Lusaka**	**127.39**	**214**		**PKiKP**	**12 12 21.1**	**0.0**
LMN	**Caledonia Moun**	**127.58**	**54**		**PKiKP**	**12 12 19.9**	**-0.5**
TSUM	**Tsumeb**	**127.97**	**200**		**PKiKP**	**12 12 22.6**	**+0.3**
KBS	**Kingsbay**	**131.33**	**357**	*e*PKPdf	**PKiKP**	**12 12 26.5**	**-0.6**
SVE	**Sverdlovsk**	**131.45**	**321**	*e*PKIKP	**PKiKP**	**12 12 27.5**	**-0.4**
SVE				pmax	pmax		
	comp=Z,16nm,0.8s						
AB31	**Akbulak array**	**132.32**	**311**	*i* PKIKP	**PKiKP**	**12 12 29.1**	**-0.8**
ARU	**Arti**	**132.64**	**320**	*i* PKIKP	**PKiKP**	**12 12 29.4**	**-0.9**
ARU						12 14 56.3	
ARU				SS	SS	12 32 11.7	-5.0
ARU	**Arti**	**132.64**	**320**		**PKiKP**	**12 12 29.6**	**-0.7**
GEYT	**Alibeck**	**132.79**	**295**	PKP	**PKiKP**	**12 12 30.8**	**-0.4**
	comp=Z,21nm,0.9s,baz=211,slow=1.7,SNR=27						
GEYT				SKPbc	**SKPab**	**12 15 34.4**	**-1.2**
	comp=Z,26nm,1.2s,baz=177,slow=2.7,SNR=13						
GEYT	**Alibeck**	**132.79**	**295**		**PKiKP**	**12 12 30.4**	**-0.9**
HSPB	**Hornsund (broa**	**133.00**	**356**	*e*PKPdf	**PKPdf**	**12 12 29.3**	**0.0**
KMBO	**Kilima Mbogo**	**133.21**	**234**	PKIKP	**PKiKP**	**12 12 33.2**	**+0.1**
KMBO	**Kilima Mbogo**	**133.21**	**234**	PKP	**PKiKP**	**12 12 32.9**	**-0.2**
	comp=Z,3.1nm,0.7s,baz=85,slow=2.3,SNR=8.4						
KMBO				SKPbc	**SKPbc**	**12 15 36.5**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=69,slow=1.5,SNR=6.2						
KMBO	**Kilima Mbogo**	**133.21**	**234**		**PKiKP**	**12 12 33.2**	**+0.1**
AKTO	**Aktyubinsk**	**133.54**	**312**	PKIKP	**PKiKP**	**12 12 31.5**	**-0.8**
PRGR	**Permogore**	**137.52**	**330**	*e*PKIKP	**PKPdf**	**12 12 34.0**	**-4.0**
PRGR				pmax	pmax		
	comp=Z,20nm,0.9s						
HAMF	**Hammerfest**	**137.94**	**349**	*e*PKPdf	**PKPdf**	**12 12 38.2**	**-0.3**
ARCES	**ARCESS Array B**	**138.57**	**347**	PKIKP	**PKiKP**	**12 12 41.5**	**-0.5**
ARCES	**ARCESS Array B**	**138.57**	**347**	PKhKP	PKPpre	12 12 31.1	
	comp=Z,4.3nm,0.5s,baz=38,slow=4.7,SNR=40						
ARCES				SKPbc	**SKPbc**	**12 15 51.0**	**+0.5**
	comp=Z,5.3nm,0.6s,baz=46,slow=3.5,SNR=11						
ARCES	**ARCESS Array B**	**138.57**	**347**		**PKiKP**	**12 12 41.5**	**-0.5**
ARE0	**ARCESS Array S**	**138.57**	**347**	*e*PKPdf	**PKiKP**	**12 12 42.9**	**+0.9**
KTK1	**Kautokeino**	**139.44**	**348**	*e*PKPdf	**PKiKP**	**12 12 44.4**	**+0.6**
TRO	**Tromso**	**139.59**	**350**	*e*PKPdf	**PKPdf**	**12 12 41.4**	**-0.2**
RAYN	**Ar Rayn**	**139.88**	**271**	PKIKP	**PKPdf**	**12 12 43.4**	**-0.2**
RAYN	**Ar Rayn**	**139.88**	**271**		**PKPdf**	**12 12 43.4**	**-0.2**
STEI	**Steigen**	**141.68**	**351**	*e*PKPdf	**PKPdf**	**12 12 44.9**	**-0.5**
LOF	**Lofoten**	**141.69**	**352**	*e*PKPdf	**PKPdf**	**12 12 42.6**	**-2.9**
KONS	**Konsvik**	**143.31**	**352**	*e*PKPdf	PKPbc	12 12 46.0	-0.2
GNI	**Garni**	**143.33**	**297**	*c i* PKIKP	**PKPdf**	**12 12 48.5**	**-1.0**
GNI				pmax	pmax		
	comp=Z,121nm,1.3s						
GNI	**Garni**	**143.33**	**297**		PKPbc	12 12 47.7	+0.3
MOR8	**Moi Rana**	**143.44**	**351**	*e*PKPdf	PKPbc	12 12 45.9	-0.8
STOK	**Stokkvaagen**	**143.48**	**352**	*e*PKPdf	**PKPdf**	**12 12 48.8**	**+0.2**
VRH	**Novokhopyorsk**	**143.54**	**316**	*e*PKIKP	PKPbc	12 12 46.8	-0.5
VRH				pmax	pmax		
	comp=Z,50nm,0.6s						
ZEI	**Tsey**	**143.81**	**302**	*e*PKIKP	PKPbc	12 12 48.7	0.0
ZEI				pmax	pmax		
	comp=Z,26nm,0.6s						
MOS	**Moscow**	**143.96**	**325**	*e*PKHKP	PKPab	12 12 47.0	-0.8
MOS				pmax	pmax		
	comp=Z,153nm,0.8s						
MOS				pmax	pmax		
	comp=Z,200nm,0.9s						
CLDR	**Caldiran**	**143.98**	**296**	*e*P	**PKPdf**	**12 12 49.8**	**-0.9**
GOF	**Gofitskoye**	**144.14**	**306⇓**	PKIKP	**PKPdf**	**12 12 50.4**	**-0.1**
GOF				pmax	pmax		
	comp=Z,91nm,0.7s						
ONI	**Oni**	**144.16**	**302**	*e*P	**PKPdf**	**12 12 49.8**	**-0.9**
AKH	**Akhalkalaki**	**144.22**	**299**	PKIKP	**PKPdf**	**12 12 51.4**	**+0.4**
AKH	**Akhalkalaki**	**144.22**	**299**	⇓P	**PKPdf**	**12 12 51.4**	**+0.4**
AKH	**Akhalkalaki**	**144.22**	**299**		**PKPdf**	**12 12 51.4**	**+0.4**
KBZ	**Khabaz**	**144.44**	**304**	PKP	**PKPdf**	**12 12 51.2**	**+0.3**
	comp=Z,12nm,0.4s,baz=2.7,slow=1.1,SNR=37						
KIV	**Kislovodsk**	**144.56**	**304**	*e*PKIKP	**PKPdf**	**12 12 51.9**	**+0.5**
KIV				pmax	pmax		
	comp=Z,99nm,1.1s						
KIV	**Kislovodsk**	**144.56**	**304**	⇑P	**PKPdf**	**12 12 52.4**	**+1.0**
KIV	**Kislovodsk**	**144.56**	**304**		**PKPdf**	**12 12 51.0**	**-0.4**
LPSR	**Galich'ya Gora**	**144.65**	**320**	*e*PKIKP	PKPbc	12 12 50.3	-0.3
LPSR				pmax	pmax		
	comp=Z,210nm,0.7s						
AGRB	**Hanur-Agry**	**144.69**	**296**	*e*P	**PKPdf**	**12 12 51.4**	**-0.5**
AKDM	**Akdamar-Van**	**144.71**	**294**	*e*P	**PKPdf**	**12 12 52.4**	**+0.5**
PUL	**Pulkovo**	**144.77**	**334**	*c i* PKIKP	**PKPdf**	**12 12 51.2**	**+0.1**
PUL				pmax	pmax		
	comp=Z,534nm,0.7s						
OBN	**Obninsk**	**144.79**	**324**	*d i* PKIKP	**PKPdf**	**12 12 51.2**	**0.0**
OBN				pmax	pmax		
	comp=Z,279nm,0.6s						
OBN				pmax	pmax		
	comp=Z,209nm,1.3s						
OBN	**Obninsk**	**144.79**	**324**		**PKPdf**	**12 12 51.2**	**0.0**
FIA1	**FINESS Array S**	**144.99**	**339**		**PKPab**	**12 12 51.3**	**-0.3**
FINES	**FINESS Array B**	**144.99**	**339**	PKIKP	**PKPab**	**12 12 51.4**	**-0.2**
FINES	**FINESS Array B**	**144.99**	**339**	PKP	**PKPab**	**12 12 51.7**	**+0.1**
	comp=Z,307nm,0.9s,baz=56,slow=3.7,SNR=460						
FINES				SKPbc	**SKiKP**	**12 16 07.4**	**0.0**
	comp=Z,5.6nm,0.8s,baz=270,slow=0.8,SNR=4.8						
FINES	**FINESS Array B**	**144.99**	**339**		**PKPab**	**12 12 51.4**	**-0.2**
VSR	**Storozhevoye**	**145.04**	**317**	*e*PKIKP	PKPbc	12 12 51.2	-0.6
VSR				pmax	pmax		
	comp=Z,240nm,0.6s						
VORD	**Divnogorie**	**145.06**	**317**	*e*PKIKP	**PKPab**	**12 12 51.6**	**-0.6**
VORD				pmax	pmax		
	comp=Z,160nm,0.7s						
SIRT	**Sirnak**	**145.13**	**293**	*e*P	**PKPab**	**12 12 52.6**	**-0.5**
SENK	**Senkaya-Erzuru**	**145.14**	**298**	*e*P	**PKPab**	**12 12 53.1**	**-0.1**
NSS	**Namsos**

TLCR			153.76 312	⇑P		**PKiKP**	**12 13 14.8**	**+0.9**
JURR	**Jurilovca**		153.89 311	⇑P		**PKiKP**	**12 13 15.1**	**+0.9**
LVV	**L'vov**		154.09 324	*e*PKiKP		**PKiKP**	**12 13 14.4**	**-0.1**
TOPG	**Topolog**		154.17 311	⇑P		**PKiKP**	**12 13 15.9**	**+1.0**
BEL	**Belsk**		154.19 331	*e*PKiKP		**PKiKP**	**12 13 15.9**	**+1.3**
BEL	**Belsk**		154.19 331	*e*PKP		**PKiKP**	**12 13 15.9**	**+1.3**
CFR	**Carcaliu**		154.20 312	⇑PKiKP		**PKiKP**	**12 13 15.6**	**+0.8**
CFR	**Carcaliu**		154.20 312	⇑P		**PKiKP**	**12 13 15.6**	**+0.8**
TIRR	**Tirgusor**		154.31 310	⇑PKiKP		**PKiKP**	**12 13 16.0**	**+0.9**
TIRR	**Tirgusor**		154.31 310	⇑P		**PKiKP**	**12 13 16.0**	**+0.9**
MFTR	**Murfatlar**		154.42 310	⇑P		**PKiKP**	**12 13 16.7**	**+1.4**
TESR	**Tescani**		154.51 316	⇑P		**PKiKP**	**12 13 15.6**	**+0.1**
HARR	**Harsova**		154.54 311	⇑PKiKP		**PKiKP**	**12 13 16.5**	**+0.9**
HARR	**Harsova**		154.54 311	⇑P		**PKiKP**	**12 13 16.5**	**+0.9**
BIZ	**Bicaz**		154.62 317	⇑P		**PKiKP**	**12 13 17.3**	**+1.5**
BUR08	**Bucovina Ar. S**		154.76 319			**PKiKP**	**12 13 16.8**	**+0.7**
BUR08					PKPab	**PKPab**	**12 13 33.2**	**+0.9**
BURAR	**Bucovina Array**		154.77 319	⇑PKiKP		**PKiKP**	**12 13 18.2**	**+2.1**
BURAR	**Bucovina Array**		154.77 319	⇑P		**PKiKP**	**12 13 18.2**	**+2.1**
VRI	**Vrincioaia**		154.78 314	⇑PKiKP		**PKiKP**	**12 13 16.8**	**+0.7**
VRI	**Vrincioaia**		154.78 314	⇑P		**PKiKP**	**12 13 16.8**	**+0.7**
PLOR	**Plostina**		154.83 314	⇑PKPab		**PKPab**	**12 13 33.7**	**+1.1**
PLOR	**Plostina**		154.83 314	⇑P		**PKPab**	**12 13 33.7**	**+1.1**
KWP	**Kalwaria Pacla**		154.87 325	*e*PKP2		**PKPab**	**12 13 33.5**	**+1.0**
KWP	**Kalwaria Pacla**		154.87 325	*e*PKPdf		**PKiKP**	**12 13 17.1**	**+0.9**
KWP				*e*PKPab		**PKPab**	**12 13 33.5**	**+1.0**
KWP	**Kalwaria Pacla**		154.87 325			**PKiKP**	**12 13 16.7**	**+0.6**
KWP						**PKPab**	**12 13 33.2**	**+0.7**
LIC	**Lamto**		155.13 166	*e*PKP2		**PKPab**	**12 13 36.1**	**+1.7**
	comp=Z,62nm,0.8s							
RASA	**Rasa**		155.24 311	⇑P		**PKPdf**	**12 13 15.3**	**+7.5**
KIC	**Kosan Boka**		155.32 166	*e*PKP2		**PKPab**	**12 13 36.8**	**+1.5**
	comp=Z,38nm,0.8s							
MLR	**Muntele Rosu**		155.44 314	⇓PKiKP	PKPdf		12 13 19.3	+11
MLR	**Muntele Rosu**		155.44 314	⇓P	PKPdf		12 13 19.3	+11
TIC	**Toumodi**		155.54 166	*e*PKP2		**PKPab**	**12 13 37.8**	**+1.6**
KOLS	**Kolonicke sedl**		155.54 325	*e*	PKPdf		12 13 19.0	+11
KOLS	**Kolonicke sedl**		155.54 325	*e*PKP		**PKPab**	**12 13 36.8**	**+1.4**
DBIC	**Dimbokro**		155.60 166	PKiKP		**PKPdf**	**12 13 10.4**	**+1.1**
DBIC							12 13 38.1	
DBIC	**Dimbokro**		155.60 166	PKP		**PKPdf**	**12 13 10.3**	**+1.0**
	comp=Z,5.3nm,0.9s,baz=224,slow=0.8,SNR=4.9							
DBIC					PKPbc	PKPbc	12 13 20.5	
	comp=Z,3.2nm,0.5s,baz=156,slow=3.8,SNR=5.3							
DBIC					PKPab	**PKPab**	**12 13 37.7**	**+1.3**
	comp=Z,8.9nm,0.7s,baz=188,slow=2.8,SNR=8.0							
DBIC	**Dimbokro**		155.60 166			**PKPdf**	**12 13 10.4**	**+1.1**
DBIC						PKPbc	12 13 20.4	
DBIC						**PKPab**	**12 13 38.1**	**+1.7**
BSEG	**Bad Segeberg**		155.69 346	*e*PKPab		**PKPab**	**12 13 37.0**	**+1.2**
	baz=26,slow=4.4							
UZH	**Uzhgorod**		155.73 324	*e*PKiKP	PKPdf		12 13 19.0	+11
UZH				*i*			12 13 35.7	
UZH				*i*			12 14 21.7	
OJC	**Ojcow**		155.81 330	PKiKP		**PKPdf**	**12 13 08.8**	**+0.3**
OJC							12 13 36.9	
OJC	**Ojcow**		155.81 330	*e*PKP		**PKPab**	**12 13 37.2**	**+0.7**
OJC	**Ojcow**		155.81 330	PKPdf		**PKPdf**	**12 13 08.8**	**+0.3**
OJC						**PKPab**	**12 13 36.9**	**+0.4**
VOIR			156.01 315	⇑PKiKP		**PKPdf**	**12 13 12.1**	**+3.1**
VOIR			156.01 315	⇑P		**PKPdf**	**12 13 12.1**	**+3.1**
NIE	**Niedzica**		156.16 328	*e*PKP2		**PKPab**	**12 13 39.3**	**+1.2**
NIE	**Niedzica**		156.16 328	*e*PKP		**PKPab**	**12 13 39.3**	**+1.2**
RUE	**Ruedersdorf**		156.17 340	*e*PKPab		**PKPab**	**12 13 39.2**	**+1.3**
	baz=26,slow=4.4							
ARR	**Arges**		156.30 315	⇓P		**PKPab**	**12 13 41.2**	**+2.3**
HUMR	**Humele**		156.50 313	⇑P		PKPdf	12 13 18.7	+9.2
DRGR			156.64 320	⇓PKiKP		PKPdf	12 13 20.8	+11
DRGR			156.64 320	⇓P		PKPdf	12 13 20.8	+11
LTVH	**Ltavrtes, Hu**		156.72 322	⇓*e*P		PKPab	12 13 50.5	+10
KECS	**Kecovo**		156.72 326	*e*PKP2		**PKPab**	**12 13 41.7**	**+1.2**
KECS	**Kecovo**		156.72 326	*e*PKP		**PKPab**	**12 13 41.7**	**+1.2**
LANS	**Liptovska Anna**		156.73 328	*e*PKP2		**PKPab**	**12 13 42.0**	**+1.4**
LANS	**Liptovska Anna**		156.73 328	*e*PKP		**PKPab**	**12 13 42.0**	**+1.4**
KSP	**Ksiaz**		156.74 335	*e*PKP2		**PKPab**	**12 13 41.7**	**+1.2**
KSP	**Ksiaz**		156.74 335	*e*PKPdf	PKPdf		12 13 21.4	+12
KSP				*e*PKPab		**PKPab**	**12 13 41.7**	**+1.2**
OKC	**Ostrava-Krasne**		156.80 331	*e*PKP2		**PKPab**	**12 13 41.6**	**+0.8**
OKC	**Ostrava-Krasne**		156.80 331	*e*PKPAB		**PKPab**	**12 13 41.6**	**+0.8**
OSTC	**Ostas**		157.00 334	⇑*e*PKP	PKPdf		12 13 21.9	+12
OSTC				*e*PKPAB		**PKPab**	**12 13 42.8**	**+1.1**
RETH	**Rethem/Aller,**		157.02 347	*e*PKPab		**PKPab**	**12 13 42.7**	**+1.1**
	baz=26,slow=4.4							
CHVC	**Chvalec**		157.03 335	⇑*e*PKP	PKPdf		12 13 21.9	+12
CHVC				*e*PKPAB		**PKPab**	**12 13 42.7**	**+0.9**
NRDL	**Niedersach Rie**		157.09 345	*e*PKPab		**PKPab**	**12 13 42.8**	**+1.0**
	baz=26,slow=4.4							
MORC	**Moravsky Berou**		157.10 332	PKP2		**PKPab**	**12 13 42.5**	**+0.4**
MORC							13 13 10.6	
MORC	**Moravsky Berou**		157.10 332	⇑P		**PKPab**	**12 13 43.2**	**+1.0**
MORC	**Moravsky Berou**		157.10 332	*e*PKP		**PKPdf**	**12 13 11.3**	**+1.1**
MORC				*e*			12 13 42.9	
MORC	**Moravsky Berou**		157.10 332	PKPdf		**PKPdf**	**12 13 10.6**	**+0.4**
MORC						**PKPab**	**12 13 42.5**	**+0.4**
UPC	**Upice**		157.12 335	*e*PKiKP	PKPdf		12 13 22.1	+12
UPC	**Upice**		157.12 335	⇑*e*PKP	PKPdf		12 13 22.1	+12
UPC				*e*PKPAB		**PKPab**	**12 13 42.9**	**+0.8**
DPC	**Dobruska-Polom**		157.13 334	*e*PKP2		**PKPab**	**12 13 43.3**	**+1.1**
DPC	**Dobruska-Polom**		157.13 334	*e*PKPAB		**PKPab**	**12 13 43.3**	**+1.1**
KRLC	**Kraliky**		157.17 333	*e*PKP2		**PKPab**	**12 13 43.3**	**+0.9**
KRLC	**Kraliky**		157.17 333	*e*PKPAB		**PKPab**	**12 13 43.3**	**+0.9**
ASSE	**Asse, Remlinge**		157.31 344	*e*PKPab		**PKPab**	**12 13 44.0**	**+1.3**
	baz=26,slow=4.4							
PSZ	**Piszkesteto**		157.40 325	PKiKP		**PKPdf**	**12 13 10.6**	**-0.1**
PSZ	**Piszkesteto**		157.40 325	⇑P		**PKPab**	**12 13 44.5**	**+1.0**
PSZ	**Piszkesteto**		157.40 325	PKPdf		**PKPdf**	**12 13 10.6**	**-0.1**
PSZ						**PKPab**	**12 13 44.5**	**+1.0**
GZR	**Gura Zlata**		157.40 317	⇑PKiKP		**PKPdf**	**12 13 11.9**	**+1.1**
GZR	**Gura Zlata**		157.40 317	⇑P		**PKPdf**	**12 13 11.9**	**+1.1**
CLL	**Collm**		157.43 340	PKP2		**PKPab**	**12 13 43.5**	**+0.1**
CLL	**Collm**		157.43 340	*e*PKPdiff	PKPdf		12 13 22.0	+11
	comp=Z,11nm,1.2s							
CLL				*i* PKPab		**PKPab**	**12 13 43.3**	**-0.1**
	comp=Z,52nm,0.8s							
CLL				*e*			12 14 04.0	
CLL	**Collm**		157.43 340	*e*PKPab		**PKPab**	**12 13 44.4**	**+1.0**
	baz=26,slow=4.4							
CLL	**Collm**		157.43 340			**PKPab**	**12 13 43.5**	**+0.1**
VYHS	**Vyhne**		157.50 328	*e*PKiKP	PKPdf		12 13 22.5	+12
VYHS	**Vyhne**		157.50 328	*e*PKP		**PKPab**	**12 13 45.1**	**+1.2**
BRG	**Berggiesshubel**		157.52 338	*e*PKP	PKPdf		12 13 22.8	+12
	comp=Z,16nm,1.6s							
BRG	**Berggiesshubel**		157.52 338	*i* PKP		**PKPab**	**12 13 44.8**	**+0.9**
	comp=Z,38nm,0.9s							
BRG	**Berggiesshubel**		157.52 338	*e*PKiKP	PKPdf		12 13 22.8	+12
BRG				pmax	pmax			
	comp=Z,16nm,1.6s							
BRG				pmax	pmax			
	comp=Z,38nm,0.9s							
BRG	**Berggiesshubel**		157.52 338	*e*PKPab		**PKPab**	**12 13 45.1**	**+1.3**
	baz=26,slow=4.4							
CLZ	**Clausthal**		157.64 344	*e*PKPab		**PKPab**	**12 13 45.7**	**+1.3**
	baz=26,slow=4.4							
FBE	**Freiberg**		157.67 339	*e*PKPab		**PKPab**	**12 13 46.0**	**+1.6**
	baz=26,slow=4.4							
IBBN	**Ibbenburen**		157.72 349	*e*PKPab		**PKPab**	**12 13 45.8**	**+1.2**
	baz=26,slow=4.4							
JAVC	**Velka Javorina**		157.75 330	*e*PKP		**PKPdf**	**12 13 13.0**	**+1.9**
JAVC				*e*			12 13 46.8	
VRAC	**Vranov**		157.85 332	*e*PKP		**PKPdf**	**12 13 11.9**	**+0.8**
VRAC				*e*			12 13 46.4	
NEUB	**Neuenburg**		157.87 342	*e*PKPab		**PKPab**	**12 13 46.5**	**+1.2**
	baz=26,slow=4.4							
BZS	**Buzias**		157.95 319	⇑PKiKP		**PKPdf**	**12 13 11.1**	**-0.3**
BZS	**Buzias**		157.95 319	⇑P		**PKPdf**	**12 13 11.1**	**-0.3**
GTTG	**Gvttingen**		158.01 345	*e*PKPab		**PKPab**	**12 13 47.2**	**+1.3**
	baz=26,slow=4.4							
GOPC	**GO Pecny, Ondr**		158.05 336	*e*PKP2		**PKPab**	**12 13 47.0**	**+0.8**
GOPC	**GO Pecny, Ondr**		158.05 336	*e*PKPAB		**PKPab**	**12 13 47.0**	**+0.8**
PRU	**Pruhonice**		158.07 336	*e*PKP2		**PKPab**	**12 13 46.9**	**+0.6**
PRU	**Pruhonice**		158.07 336	*e*PKPAB		**PKPab**	**12 13 46.9**	**+0.6**
SMOL	**Smolenice**		158.11 330	*e*PKP2		**PKPab**	**12 13 47.9**	**+1.4**
SMOL	**Smolenice**		158.11 330	*e*PKP		**PKPab**	**12 13 47.9**	**+1.4**
KRUC	**Moravsky**		158.13 332	*e*PKP		**PKPdf**	**12 13 12.2**	**+0.7**
KRUC				*e*			12 13 47.4	
MODS	**Modra-Piesok**		158.29 329	*e*PKiKP		**PKPdf**	**12 13 12.5**	**+0.8**
MODS				*e*			12 13 47.5	
MODS	**Modra-Piesok**		158.29 329	*e*PKP		**PKPdf**	**12 13 12.5**	**+0.8**
MODS				*e*			12 13 47.5	
TREC	**Trest**		158.30 334	*e*PKP2		**PKPab**	**12 13 48.4**	**+1.1**
TREC	**Trest**		158.30 334	*e*PKPAB		**PKPab**	**12 13 48.4**	**+1.1**
TANN	**Tannenbergstha**		158.38 340	*e*PKPab		**PKPab**	**12 13 49.1**	**+1.4**
	baz=26,slow=4.4							
PLN	**Plauen**		158.41 340	*e*PKPab		**PKPab**	**12 13 49.1**	**+1.4**
	baz=26,slow=4.4							
MOX	**Moxa**		158.42 341	*e*PKPab		**PKPab**	**12 13 49.0**	**+1.2**
	baz=26,slow=4.4							
GUNZ	**Gunzen**		158.47 340	*e*PKPab		**PKPab**	**12 13 49.5**	**+1.5**
	baz=26,slow=4.4							
ZST	**Bratislava**		158.50 329	*e*PKP2		**PKPab**	**12 13 48.7**	**+0.5**
ZST	**Bratislava**		158.50 329	*e*PKP		**PKPab**	**12 13 48.7**	**+0.5**
VTS	**Vitosha**		158.50 310	PKiKP		**PKPdf**	**12 13 11.5**	**-0.9**
VTS							12 13 49.6	
VTS	**Vitosha**		158.50 310	PKPdf		**PKPdf**	**12 13 11.4**	**-0.9**
VTS						**PKPab**	**12 13 49.6**	**+0.9**
PBCC	**Pribram**		158.52 336	*e*PKPAB		**PKPab**	**12 13 49.1**	**+0.9**
WERN	**Wernitzgruen**		158.52 340	*e*PKPab		**PKPab**	**12 13 49.8**	**+1.6**
	baz=26,slow=4.4							
MANZ	**Manzenberg**		158.87 340	*e*PKPab		**PKPab**	**12 13 51.2**	**+1.4**
	baz=26,slow=4.4							
ROTZ	**Rotzenmuhle**		159.03 339	*e*PKPab		**PKPab**	**12 13 52.2**	**+1.8**
	baz=26,slow=4.4							
MPLH	**Magyarpolny**		159.06 327	⇑*e*P		**PKPab**	**12 13 51.1**	**+0.4**
KHC	**Kasperske Hory**		159.14 336	*e*PKiKP		**PKPdf**	**12 13 14.0**	**+1.3**
KHC				*e*			12 13 51.9	
KHC	**Kasperske Hory**		159.14 336	*e*PKPDF		**PKPdf**	**12 13 14.0**	**+1.3**
KHC				*ex*		x	12 13 26.1	
KHC				*e*PKP		**PKPab**	**12 13 51.9**	**+0.9**
CONA	**Conrad Observa**		159.24 331	*i* PKPab		**PKPab**	**12 13 52.7**	**+1.2**
	comp=Z,23nm,0.7s,SNR=10							
GEC2	**GERESS Array S**		159.33 336	*e*PKPab		**PKPab**	**12 13 53.0**	**+1.1**
	baz=26,slow=4.4							
GEC2	**GERESS Array S**		159.33 336			**PKPab**	**12 13 52.5**	**+0.6**
GERES	**GERESS Array B**		159.33 336	PKiKP		**PKPdf**	**12 13 12.9**	**-0.1**
GERES							12 13 52.1	
GERES	**GERESS Array B**		159.33 336	PKP		**PKPdf**	**12 13 13.5**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=122,slow=1.7,SNR=5.9							
GERES					PKPab	**PKPab**	**12 13 51.8**	**-0.1**
	comp=Z,9.8nm,0.8s,baz=35,slow=4.9,SNR=24							
GERES	**GERESS Array B**		159.33 336			**PKPdf**	**12 13 12.9**	**-0.1**
GERES						**PKPab**	**12 13 52.1**	**+0.2**
WET	**Wettzell**		159.36 337	*e*PKPab		**PKPab**	**12 13 53.6**	**+1.6**
	baz=26,slow=4.4							
GRF	**Grafenberg Arr**		159.39 341	*e*PKPab		**PKPab**	**12 13 53.7**	**+1.7**
	baz=26,slow=4.4							
TNS	**Taunus Mts**		159.59 346	*e*PKPab		**PKPab**	**12 13 54.0**	**+1.1**
	baz=26,slow=4.4							
ARSA	**Arzberg**		159.91 330	*e*PKPab		**PKPab**	**12 13 55.2**	**+0.8**
	comp=Z,14nm,1.6s							
MOA	**Molln**		159.95 333	*i* PKPab		**PKPab**	**12 13 55.4**	**+0.8**
	comp=Z,14nm,1.1s,SNR=7.9							
WLF	**Walferdange**		160.54 350	*e*PKPab		**PKPab**	**12 13 58.4**	**+1.5**
	baz=26,slow=4.4							
PERS	**Pernice**		160.56 329	*e*PKPdf		**PKPdf**	**12 13 13.9**	**-0.5**
PERS				*i* PKPab		**PKPab**	**12 13 57.6**	**+0.3**
SOKA	**Soboth**		160.56 330	*i* PKPab		**PKPab**	**12 13 57.8**	**+0.4**
	comp=Z,30nm,1.5s,SNR=9.4							
RJOB	**Jochberg**		160.59 335	*e*PKPab		**PKPab**	**12 13 58.9**	**+1.5**
	baz=26,slow=4.4							
FUR	**Furstenfeldbru**		160.74 339	*e*PKPab		**PKPab**	**12 13 59.5**	**+1.6**
	baz=26,slow=4.4							
STU	**Stuttgart**		160.78 343	*e*PKPab		**PKPab**	**12 13 59.1**	**+1.1**
	baz=26,slow=4.4							
OBKA	**Obir**		160.90 330	*i* PKPab		**PKPab**	**12 13 59.0**	**+0.2**
	comp=Z,6.3nm,0.7s							
KBA	**Koelnbreinsper**		160.94 333	*i* PKPab		**PKPab**	**12 13 59.4**	**+0.4**
	comp=Z,9.7nm,0.9s							
PDKS	**Podkum**		161.05 329	*e*PKPdf		**PKPdf**	**12 13 14.7**	**-0.2**
PDKS				*i* PKPab		**PKPab**	**12 13 59.6**	**+0.1**
PDG	**Podgorica**		161.15 314	⇓P		**PKPab**	**12 14 00.8**	**+0.8**
MYKA	**Terra Mystica**		161.19 332	*i* PKPab		**PKPab**	**12 13 60.0**	**-0.1**
	comp=Z,16nm,0.8s,SNR=6.6							
WATA	**Walderalm**		161.37 337	*i* PKPab		**PKPab**	**12 14 01.7**	**+0.8**
	comp=Z,11nm,0.6s,SNR=6.4							
BFO	**Black Forest**		161.40 344	PKP2		**PKPab**	**12 14 01.1**	**+0.3**
BFO	**Black Forest**		161.40 344	*e*PKPab		**PKPab**	**12 14 01.8**	**+1.0**
	baz=26,slow=4.4							
BFO	**Black Forest**		161.40 344			**PKPab**	**12 14 01.1**	**+0.3**
RETA	**Reutte**		161.50 339	*i* PKPab		**PKPab**	**12 14 02.4**	**+1.0**
	comp=Z,44nm,1.0s,SNR=15							
MOTA	**Moosalm**		161.51 338	*i* PKPab		**PKPab**	**12 14 02.5**	**+0.9**
	comp=Z,37nm,0.9s,SNR=14							
ABTA	**Abfaltersbach**		161.53 334	*i* PKPab		**PKPab**	**12 14 01.4**	**-0.2**
	comp=Z,32nm,1.2s,SNR=9.1							
ROBS	**Robic**		161.55 331	*e*PKPdf		**PKPdf**	**12 13 15.1**	**-0.3**
SQTA	**Sankt Quirin**		161.59 337	*i* PKPab		**PKPab**	**12 14 02.8**	**+1.0**
	comp=Z,26nm,0.7s,SNR=9.8							
FETA	**Feichten**		161.92 338	*i* PKPab		**PKPab**	**12 14 04.4**	**+1.1**
	comp=Z,30nm,1.0s,SNR=9.4							
DAVA	**Damuels**		161.95 340	*i* PKPab		**PKPab**	**12 14 04.4**	**+1.0**
	comp=Z,56nm,1.1s,SNR=12							
TOA0	**Torodi Ar. Sit**		162.63 183			**PKPdf**	**12 13 17.0**	**-0.4**
TOA0						**PKPab**	**12 14 07.5**	**+0.6**
TORD	**Torodi Ar. Bea**		162.63 183	PKP		**PKPdf**	**12 13 18.4**	**+0.9**
	comp=Z,7.2nm,1.1s,baz=278,slow=0.8,SNR=16							
TORD				PKPab		**PKPab**	**12 14 07.7**	**+0.8**
	comp=Z,13nm,0.6s,baz=167,slow=4.4,SNR=28							
TORD	**Torodi Ar. Bea**		162.63 183			**PKPdf**	**12 13 17.4**	**0.0**
TORD						**PKPab**	**12 14 07.4**	**+0.5**
PAB	**San Pablo**		170.08 24	PKiKP		**PKPdf**	**12 13 23.6**	**+1.0**
PAB	**San Pablo**		170.08 24			**PKPdf**	**12 13 23.6**	**+1.0**
ESDC	**Sonseca Array**		170.09 22	PKP		**PKPdf**	**12 13 23.9**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=5.7,slow=2.4,SNR=16							
ESDC				PKPab		**PKPab**	**12 14 38.2**	**-1.3**
	comp=Z,2.6nm,0.5s,baz=322,slow=4.2,SNR=18							
ESDC	**Sonseca Array**		170.09 22			**PKPdf**	**12 13 23.1**	**+0.6**
ESDC						**PKPab**	**12 14 39.7**	**+0.2**

JMA 11 12:06:26.6±0.1, 37°.44N×141°.81E, h40km±3km, M3.6,
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.75**	**265**	P		Pn		12 06 40.8	+0.1
JFK				S		Sn		12 06 50.7	-0.2
JMST	**Minamisoumatoc**	**0.79**	**291**	P		Pn		12 06 41.2	0.0
JMST				S		Sn		12 06 51.3	-0.5
ONAJ	**Iwakimizuishiy**	**0.88**	**248**	P		Pn		12 06 42.3	-0.2
ONAJ				*e*S		Sn		12 06 53.7	-0.4
JIKH	**Ishinomakikobu**	**0.91**	**343**	P		Pn		12 06 43.0	+0.1
JIKH				*e*S		Sn		12 06 54.1	-0.8
JMM	**Marumori**	**0.91**	**298**	P		Pn		12 06 43.2	+0.3
JMM				S		Sn		12 06 54.2	-0.7
JIO	**Ouri**	**1.08**	**340**	P		Pn		12 06 45.4	+0.2
JIO				S		Sn		12 06 58.4	-0.5
JFT	**Otama**	**1.18**	**274**	P		Pn		12 06 47.7	+1.1
JFT				*e*S		Sn		12 07 02.7	+1.3
JOU	**Okura**	**1.29**	**316**	P		Pn		12 06 49.2	+1.0
JMK	**Ichinoseki**	**1.58**	**343**	P		Pn		12 06 52.9	+0.8
MAT	**Matsushiro**	**3.02**	**254**	P		Pn		12 07 16.0	+4.1
MAT				S		Sn		12 07 53.8	+6.9

*BJI **11** 12:51:42.2±0.0, 17°.37S×167°.49E, h13km, mB5.2/30, mb4.9/35, Ms5.1/12, Ms7 4.8/7*
*NEIC **11** 12:51:44.9±1.8, 16°.84S±0°.06×167°.48E±0°.06, h10km±1km, mb5.0/43, Error ellipse: s-maj=13.1km s-min=7.5km az=43.0*
*GCMT **11** 12:51:47.9±0.2, 16°.73S±0°.02×167°.46E±0°.01, h23km, MW5.1/89, Moment Tensor Solution. s45,c61; s89,c130; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.91±.22; Mθθ0.82±.15; Mθφ-4.73±.14; Mrθ1.45±.27; Mφφ1.03±.09; Mrφ-2.29±.19; Best double couple: Mo5.21000×10^16 NP1:φ6.00000°, δ32.00000°, λ116.00000°. NP2: φ156.00000°, δ61.00000°, λ75.00000°. Principal axes: T 4.8300, Plg70.0000°, Azm34.0000°; N 0.7600, Plg13.0000°, Azm164.0000°; P -5.5900, Plg15.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*IDC **11** 12:51:51.0±2.9, 17°.00S×167°.48E, h54km±25km, mb4.0/17, mb1 4.2/19, mb1mx4.1/40, mbtmp4.4/19, ML4.6/2, MS4.1/9, Ms1 4.1/9, ms1mx3.9/24 Error ellipse: s-maj=22.3km s-min=13.3km az=79.0*

ISC 11 12:51:47.5±0.3, 16°.90S±0°.05×167°.48E±0°.06, h25km, n122, σ1°.63/118, mb4.8/44, MS4.5/13, 3C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.24**	**191**	*e*Pn		**Pn**	**Pn**	**12 53 04.4**	**0.0**
	50nm,0.2s								
DZM				*e*Sn		**Sn**	**Sn**	**12 54 00.9**	**-3.1**
	71nm,0.2s								
DZM				*e*LR		LR	LR	12 54 05.4	
	comp=Z,3μm,23.1s								
DZM	**Mont Dzumac**	**5.24**	**191**	P		**Pn**	**Pn**	**12 53 05.4**	**+1.0**
	9.0nm,0.3s,baz=72,slow=5.4,SNR=340								
DZM				S		**Sn**	**Sn**	**12 54 03.3**	**-0.8**
	28nm,0.3s,baz=306,slow=22,SNR=7.4								
DZM				LR		LR	LR	12 54 58.9	
	comp=Z,2μm,21.1s,baz=19,slow=37								
DZM	**Mont Dzumac**	**5.24**	**191**			**Pn**	**Pn**	**12 53 05.1**	**+0.7**
DZM					Sn	**Sn**	**Sn**	**12 54 05.0**	**+1.0**
MSVF	**Nonsavu**	**10.13**	**96**			**Pn**	**Pn**	**12 54 11.7**	**+0.2**
HNR	**Honiara**	**10.43**	**314**	P		**Pn**	**Pn**	**12 54 19.3**	**+3.7**
	11nm,0.3s,baz=175,slow=4.4,SNR=4.1								
HNR				S		**Sn**	**Sn**	**12 56 08.6**	**-3.1**
	6.3nm,0.3s,baz=240,slow=20,SNR=3.0								
HNR				LR		LR	LR	12 57 19.2	
	comp=Z,738nm,21.8s,baz=154,slow=31								
HNR	**Honiara**	**10.43**	**314**	Pn		**Pn**	**Pn**	**12 54 14.7**	**-0.8**
HNR				Sn		**Sn**	**Sn**	**12 56 11.5**	**-0.2**
FUNA	**Funafuti**	**14.13**	**55**	Pn		**Pn**	**Pn**	**12 55 04.8**	**-1.4**
EIDS	**Eidsvold**	**17.45**	**238**			**Pn**	**Pn**	**12 55 49.6**	**+0.4**
RAO	**Raoul Island**	**18.19**	**135**	LR		LR	LR	13 01 06.5	
	comp=Z,582nm,19.9s,baz=76,slow=31								
OUZ	**Omahuta**	**19.05**	**164**	P		**Pn**	**Pn**	**12 56 08.6**	**-0.1**
ARMA	**Armidale**	**19.76**	**224**	P		**P**	**P**	**12 56 16.1**	**+0.2**
CTA	**Charters Tower**	**20.37**	**258**	P		**P**	**P**	**12 56 23.1**	**+0.6**
	5.6nm,0.8s,baz=86,slow=14,SN

HHC	**Hu-ho-hao-te**	**77.36**	**320**	*e*P	**P**	**13 03 41.8**	**+1.4**
HHC				pmax	pmax			
	comp=Z,5.0nm,0.8s							
HHC				pmax	pmax			
	comp=Z,80nm,5.7s							
CD2	**Chengdu**	**77.48**	**308**	*e*P	**P**	**13 03 42.0**	**+0.8**
HIA	**Hailar**	**78.26**	**330**	P	**P**	**13 03 45.5**	**+0.5**
HIA				IAmb	IAmb	13 03 51.6		
	comp=Z,8.0nm,1.1s							
LZH	**Lanzhou**	**79.92**	**313**	⇑P	**P**	**13 03 55.1**	**+0.4**
LZH				pP	sP	13 04 03.4	-1.1	
LZH				sP	pwP	13 04 06.8	+1.3	
LZH				PP	**PP**	**13 07 03.3**	**+6.6**	
LZH				pmax	pmax			
	comp=Z,17nm,1.1s							
LZH				pmax	pmax			
	comp=Z,67nm,4.9s							
LZH				LR	LR			
	comp=Z,140nm,16.7s							
LZH				LR	LR			
	comp=Z,150nm,17.0s							
ULN	**Ulaanbaatar**	**84.00**	**324**	P	**P**	**13 04 15.1**	**-0.8**
ULN				IAmb	IAmb	13 04 32.8		
	comp=Z,16nm,1.6s							
YAK	**Yakutsk**	**84.15**	**343**	P	**P**	**13 04 15.7**	**-0.4**
YAK				IAmb	IAmb	13 04 29.1		
	comp=Z,14nm,1.2s							
GTA	**Gaotai**	**84.31**	**314**	P	**P**	**13 04 16.7**	**-0.9**
GTA				pP	PcP	13 04 21.1	-0.2	
GTA				sP	pP	13 04 23.8	-1.0	
GTA				pmax	pmax			
	comp=Z,7.0nm,0.9s							
GTA				pmax	pmax			
	comp=Z,46nm,4.9s							
GTA				LR	LR			
	comp=Z,130nm,17.9s							
GTA				LR	LR			
	comp=Z,120nm,17.2s							
SONM	**Songino Array**	**84.35**	**324**	P	**P**	**13 04 14.6**	**-3.0**
	comp=Z,0.3nm,0.3s,baz=158,slow=4.6,SNR=5.5							
BILL	**Bilibino**	**84.70**	**360**	P	**P**	**13 04 18.2**	**-0.5**
BILL				IAmb	IAmb	13 04 30.9		
	comp=Z,12nm,1.4s							
SHL	**Shillong**	**84.77**	**299**	P	**P**	**13 04 19.0**	**-1.3**
SHL				IAmb	IAmb	13 04 28.9		
	comp=Z,17nm,1.1s							
SYO	**Syowa Base**	**86.70**	**197**	⇑*e*PcP	**PcP**	**13 04 32.0**	**+0.9**
LSA	**Lhasa**	**86.88**	**302**	P	**P**	**13 04 29.5**	**-1.5**
LSA				IAmb	IAmb	13 04 35.8		
	comp=Z,3.2nm,0.5s							
MESA	**MESA**	**86.92**	**23**	P	**P**	**13 04 28.6**	**-1.5**
IL31		**88.52**	**18**	P	**P**	**13 04 37.6**	**+0.2**
ILAR	**Eielson Array**	**88.52**	**18**	P	**P**	**13 04 37.4**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=233,slow=5.2,SNR=5.3							
NVAR	**Mina Array Bea**	**88.53**	**49**	P	**P**	**13 04 37.0**	**-1.5**
	comp=Z,1.1nm,1.0s,baz=222,slow=7.6,SNR=3.7							
SNAA	**Sanae**	**91.41**	**183**	P	**P**	**13 04 50.7**	**-0.5**
SNAA	**Sanae**	**91.41**	**183**	P	**P**	**13 04 49.4**	**-1.7**
	comp=Z,7.4nm,1.0s,baz=190,slow=6.8,SNR=12							
SNAA	**Sanae**	**91.41**	**183**	P	**P**	**13 04 50.0**	**-1.2**
SNAA				IAmb	IAmb	13 04 51.6		
	comp=Z,21nm,1.5s							
VNA3	**Neumayer Olymp**	**92.06**	**181**	P	**P**	**13 04 53.3**	**-0.8**
VNA1	**Neumayer--Stat**	**92.63**	**181**	P	**P**	**13 04 55.8**	**-0.9**
WMQ	**Urumqi**	**94.38**	**314**	*e*P	**P**	**13 05 05.8**	**+0.5**
WMQ				pmax	pmax			
	comp=Z,6.0nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,46nm,6.3s							
WMQ				LR	LR			
	comp=Z,650nm,28.9s							
WMQ				LR	LR			
	comp=Z,510nm,26.3s							
MKAR	**Makanchi Array**	**98.90**	**316**	P	**P**	**13 05 23.3**	**-2.4**
	comp=Z,0.3nm,0.7s,baz=102,slow=6.2,SNR=3.1							
ZALV	**Zalesovo Beam**	**99.25**	**324**	P	**Pdif**	**13 05 24.0**	**-2.9**
	comp=Z,0.5nm,0.6s,baz=119,slow=1.8,SNR=3.6							
YKA	**Yellowknife Ar**	**99.37**	**27**	P	**Pdif**	**13 05 27.4**	**+0.1**
	comp=Z,0.1nm,0.7s,baz=263,slow=4.6							
KSH	**Kashi**	**101.68**	**308**	P	**Pdif**	**13 05 40.2**	**+1.9**
KSH				pP	sPdif	13 05 47.3	-0.9	
KSH				PP	**PP**	**13 09 54.2**	**+5.0**	
KSH				S	**Sdif**	**13 17 18.4**	**+0.1**	
KSH				sS	pS	13 17 26.7	-1.1	
KSH				SS	**SS**	**13 24 24.5**	**+3.0**	
KSH				LR	LR			
	comp=Z,140nm,4.9s							
KSH				LR	LR			
	comp=Z,140nm,4.2s							
KSH				LR	LR			
	comp=Z,470nm,6.4s							
ARCES	**ARCESS Array B**	**122.39**	**345**	PKP	**PKPdf**	**13 10 37.0**	**-2.9**
	comp=Z,1.9nm,0.8s,baz=60,slow=2.0,SNR=9.9							
BRTR	**Keskin Array B**	**134.05**	**309**	PKP	**PKPdf**	**13 11 03.7**	**+0.5**
	comp=Z,1.4nm,1.0s,baz=76,slow=6.1,SNR=3.6							
KOLS	**Kolonicke sedl**	**137.36**	**326**	*e*PKP	**PKiKP**	**13 11 13.9**	**+3.1**
VYHS	**Vyhne**	**139.42**	**328**	*e*PKP	**PKiKP**	**13 11 16.8**	**+1.8**
GERES	**GERESS Array B**	**141.65**	**332**	PKhKP	PKPpre	13 11 10.2		
	comp=Z,0.4nm,0.6s,baz=95,slow=1.1,SNR=3.0							
MOA	**Molln**	**142.10**	**330**	*i* PKPdf	**PKPdf**	**13 11 15.0**	**-2.6**
	comp=Z,0.3nm,0.2s							
KBA	**Koelnbreinsper**	**143.09**	**330**	*i* PKPdf	PKPab	13 11 14.5	-0.5	
	comp=Z,0.6nm,0.3s							
WATA	**Walderalm**	**143.72**	**332**	*i* PKPdf	PKPab	13 11 16.6	-0.8	
	comp=Z,1.8nm,0.4s							
ABTA	**Abfaltersbach**	**143.73**	**331**	*i* PKPdf	PKPab	13 11 15.7	-1.7	
	comp=Z,2.2nm,0.6s							
MOTA	**Moosalm**	**143.93**	**332**	*e*PKPdf	PKPab	13 11 17.0	-1.1	
	comp=Z,2.0nm,0.7s							
RETA	**Reutte**	**143.97**	**333**	*i* PKPdf	PKPab	13 11 17.2	-1.0	
	comp=Z,1.0nm,0.4s							
SQTA	**Sankt Quirin**	**143.97**	**332**	*e*PKPdf	PKPab	13 11 17.3	-1.0	
	comp=Z,0.7nm,0.2s							
STAL	**STALIGIAL**	**143.99**	**330**		PKPab	13 11 18.4	+0.1	
FETA	**Feichten**	**144.34**	**332**	*i* PKPdf	**PKPab**	**13 11 18.5**	**-1.2**
	comp=Z,1.6nm,0.5s							
DAVA	**Damuels**	**144.50**	**333**	*i* PKPdf	**PKPab**	**13 11 18.8**	**-1.5**
	comp=Z,1.0nm,0.2s							
CTI	**Castel Tesino**	**144.65**	**330**		**PKPab**	**13 11 20.7**	**-0.1**
FUORN	**Ofenpass-Fuorn**	**144.85**	**332**		**PKPab**	**13 11 20.5**	**-1.3**
SGRT	**San Giovanni R**	**145.34**	**321**		**PKPbc**	**13 11 21.7**	**-1.7**
TUE	**Stuetta**	**145.37**	**333**		**PKPbc**	**13 11 21.2**	**-2.2**
ACER	**Acerenza**	**145.79**	**320**		**PKPdf**	**13 11 22.4**	**-1.9**
NRCA	**Norcia**	**146.16**	**325**		**PKPdf**	**13 11 22.5**	**-2.4**
TIP	**Timpagrande**	**146.18**	**317**		**PKPdf**	**13 11 23.7**	**-1.3**
MURB	**Monte Urbino**	**146.19**	**326**		**PKPdf**	**13 11 23.3**	**-1.6**
ZCCA	**Zocca**	**146.21**	**329**		**PKPdf**	**13 11 24.4**	**-0.4**
INTR	**Introdacqua**	**146.25**	**323**		**PKPdf**	**13 11 24.2**	**-0.8**
SENIN	**Lac Senin/Sane**	**146.31**	**335**		**PKPdf**	**13 11 24.0**	**-1.2**
BNI	**Bardonecchia**	**147.63**	**334**		**PKPdf**	**13 11 26.9**	**-0.4**
KEST	**Kesra**	**152.98**	**318**	PKPbc	**PKiKP**	**13 11 45.0**	**+1.6**
	comp=Z,4.6nm,1.0s,baz=48,slow=14,SNR=4.5							
TORD	**Torodi Ar. Bea**	**165.77**	**257**	PKPab	**PKPab**	**13 12 50.8**	**+0.4**
	comp=Z,1.3nm,1.0s,baz=102,slow=1.5,SNR=2.6							

*IDC **11** 12:58:00.1±2.9, 38°.29N×65°.73E, h0km, mb3.5/3, mb1 3.5/8, mb1mx3.3/44, mbtmp3.5/8, ML3.3/5, Error ellipse: s-maj=45.9km s-min=17.2km az=172.0*
*NNC **11** 12:58:07.0±5.6, 38°.98N×65°.84E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=71.0km s-min=41.7km az=143.0*

ISC 11 12:58:02.9±1.3, **38°.58N**±0°.10×**65°.71E**±0°.07, **h10**km, **n13, s22/19, 6C-1D, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SAM	**Samarkand**	**1.48**	**42**	S		**Sn**	**12 58 47.6**	**-1.3**
NUT	**Nurota**	**1.97**	**359**	*i* P		**Pb**	**12 58 41.4**	**+2.5**
NUT				*i* S		**Sb**	**12 59 06.4**	**+2.9**
KK31	**Karatay Array**	**5.80**	**37**	⇑Pn		**Pn**	**12 59 29.2**	**+0.3**
	0.5nm,0.3s,baz=214,slow=12,SNR=17							
KK31				⇑Sn		**Sn**	**13 00 31.6**	**-3.9**
	1.4nm,0.3s,baz=224,slow=17,SNR=6.0							
KK31				⇑Lg		Lg	13 01 04.1	
	5.3nm,0.3s,baz=228,slow=29,SNR=7.4							
GEYT	**Alibeck**	**6.01**	**266**	Pn		**Pn**	**12 59 31.3**	**-0.7**
	0.4nm,0.3s,baz=75,slow=14,SNR=2.7							
GEYT				Sn		**Sn**	**13 00 41.0**	**+0.1**
	1.3nm,0.3s,baz=104,slow=4.6,SNR=2.9							
AAK	**Ala-Archa**	**7.81**	**56**	Pn		**Pn**	**12 59 56.9**	**+0.2**
	0.5nm,0.3s,baz=194,slow=4.2,SNR=6.2							
AAK				Sn		**Sn**	**13 01 23.2**	**-2.1**
	baz=330,slow=20,SNR=2.9							
AAK				Lg		Lg	13 02 05.3	
	0.3nm,0.3s,baz=18,slow=19,SNR=2.0							
AAK	**Ala-Archa**	**7.81**	**56**	⇑Pn		**Pn**	**13 00 00.3**	**+3.6**
	1.5nm,0.6s							
AAK				⇓Sn		**Sn**	**13 01 24.7**	**-0.5**
	2.9nm,0.6s							
TKM2	**Tokmak 2**	**8.66**	**57**	⇑Pn		**Pn**	**13 00 07.7**	**-0.7**
	0.5nm,0.4s							
TKM2				⇑Sn		**Sn**	**13 01 46.5**	**+0.3**
	1.2nm,0.7s							
AKTO	**Aktyubinsk**	**13.05**	**338**	Pn		**Pn**	**13 01 08.4**	**+0.2**
	0.2nm,0.3s,baz=156,slow=12,SNR=3.6							
AKTO				Sn		**Sn**	**13 03 28.7**	**-4.7**
	0.1nm,0.3s,baz=333,slow=18,SNR=2.3							
MKAR	**Makanchi Array**	**14.68**	**51**	Pn		**Pn**	**13 01 28.3**	**-2.2**
	0.0nm,0.3s,baz=238,slow=14,SNR=2.5							
BVAR	**Borovoye Array**	**14.80**	**11**	Pn		Pn	13 01 29.5	-2.6
	0.7nm,0.3s,baz=190,slow=11,SNR=13							
ZALV	**Zalesovo Beam**	**20.16**	**34**	P		**P**	**13 02 37.4**	**+0.2**
	0.4nm,0.3s,baz=245,slow=12,SNR=1.8							
FINES	**FINESS Array B**	**33.42**	**326**	P		**P**	**13 04 40.9**	**-0.4**
	2.6nm,0.9s,baz=106,slow=7.4,SNR=2.7							
NOA	**NORSAR Array B**	**40.18**	**322**	P		**P**	**13 05 40.0**	**+1.0**
	0.5nm,0.7s,baz=99,slow=8.1,SNR=2.0							

*NEIC **11** 13:03:05.8±2.2, 27°.82S±0°.04×66°.83W±0°.09, h156km±5km, mb4.5/17, Error ellipse: s-maj=12.1km s-min=6.1km az=82.0*
*SJA **11** 13:03:05.8±0.7, 27°.89S×66°.91W, h181km±7km, ML4.2, MW4.6*
*IDC **11** 13:03:06.6±1.5, 27°.80S×66°.75W, h156km±13km, mb3.8/16, mb1 3.9/22, mb1mx3.8/43, mbtmp4.2/22, Error ellipse: s-maj=15.1km s-min=10.8km az=78.0*
*VAO **11** 13:03:07.7±0.5, 27°.79S×66°.71W, h149km±6km, mb4.6*

ISC 11 13:03:06.8±0.4, **27°.81S**±0°.04×**66°.92W**±0°.04, **h164**km, **n122,** σ1°.**21**/141, **mb4.2**/22, **5C-3D, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CYA	**Choya**	**1.17**	**123**	⇓*e*P		**Pn**	**13 03 35.3**	**+1.0**
CYA				*e*S		**Sn**	**13 03 55.0**	**-0.6**
CYA				IAML			13 03 56.1	
	comp=N,3μm,0.5s							
CYA	**Choya**	**1.17**	**123**	*i* P		**Pn**	**13 03 35.0**	**+0.6**
CYA				IAML			13 03 35.7	
	comp=Z,2μm,0.4s							
VCA	**Vinchina**	**1.46**	**231**	⇑*i* P		**Pn**	**13 03 38.1**	**+0.8**
VCA				*e*S		**Sn**	**13 04 00.1**	**-0.6**
VCA				IAML			13 04 04.1	
	comp=E,21μm,0.5s							
ACLC	**CERRO LA CRUZ**	**1.61**	**181**	*i* P		**Pn**	**13 03 39.1**	**+0.4**
AHML	**Horco Molle**	**1.74**	**54**	⇑*i* P		**Pn**	**13 03 40.8**	**+0.7**
AHML				*e*S		**Sn**	**13 04 04.7**	**-1.0**
AHML				IAML			13 04 07.3	
	comp=N,704nm,0.4s							
AHML	**Horco Molle**	**1.74**	**54**	*i* P		**Pn**	**13 03 40.8**	**+0.7**
AHML				IAML			13 03 41.1	
	comp=Z,578nm,0.3s							
APLL	**PUNTA DE LOS L**	**2.59**	**173**	*i* P		**Pn**	**13 03 49.4**	**-0.4**
APLL				IAML			13 04 22.5	
	comp=Z,1μm,0.6s							
GO03	**Copiap**	**2.95**	**273**	⇑*i* P		**Pn**	**13 03 54.6**	**+0.5**
GO03				*e*S		**Sn**	**13 04 30.1**	**-0.8**
GO03				IAML			13 04 31.7	
	comp=N,3μm,0.7s							
GO03	**Copiap**	**2.95**	**273**			**Pn**	**13 03 54.7**	**+0.5**
GO03					Sn	**Sn**	**13 04 30.1**	**-0.8**
GO03	**Copiap**	**2.95**	**273**	*i* P		**Pn**	**13 03 54.4**	**+0.2**
SLA	**San Lorenzo**	**3.33**	**23**	⇑*i* P		**Pn**	**13 04 00.7**	**+1.6**
SLA				*e*S		**Sn**	**13 04 40.0**	**+0.3**
SLA				IAML			13 05 13.4	
	comp=E,114nm,0.8s							
SLA	**San Lorenzo**	**3.33**	**23**	*i* P		**Pn**	**13 04 00.9**	**+1.8**
AMOG	**MOGNA**	**3.41**	**203**	*i* P		**Pn**	**13 03 59.6**	**-0.3**
AMOG				⇓*i* S		**Sn**	**13 04 39.3**	**-1.9**
GO02	**Mina Guanaco**	**3.56**	**317**	⇑*i* P		**Pn**	**13 04 03.7**	**+1.5**
GO02				*e*S		**Sn**	**13 04 45.9**	**+0.7**
GO02				IAML			13 04 47.9	
	comp=N,259nm,0.6s							
GO02	**Mina Guanaco**	**3.56**	**317**			**Pn**	**13 04 04.0**	**+1.7**
GO02					Sn	**Sn**	**13 04 46.9**	**+1.7**
AZAP	**Zapla**	**3.94**	**25**	⇑*i* P		**Pn**	**13 04 08.1**	**+1.1**
CFA	**Coronel Fontan**	**3.95**	**197**	P		**Pn**	**13 04 06.3**	**-0.5**
	comp=N,53nm,0.3s,baz=331,slow=8.3,SNR=583							
CFA				S		**Sn**	**13 04 51.0**	**-2.7**
	comp=N,279nm,0.3s,baz=246,slow=19,SNR=38							
TCA	**Tanti**	**4.05**	**151**	*i* P		**Pn**	**13 04 07.7**	**-0.5**
GO04	**Tololo Observa**	**4.13**	**234**			**Pn**	**13 04 08.9**	**-0.6**
GO04					Sn	**Sn**	**13 04 57.9**	**-0.3**
GO04	**Tololo Observa**	**4.13**	**234**	⇑*i* P		**Pn**	**13 04 08.8**	**-0.6**
RTCV	**Cerro Valdivia**	**4.27**	**199**	⇑*i* P		**Pn**	**13 04 10.5**	**-0.6**
ASTB	**Santa Barbara**	**4.44**	**31**	⇑*i* P		**Pn**	**13 04 14.6**	**+1.2**
ACAN	**Cantantal**	**4.45**	**183**	*i* P		**Pn**	**13 04 12.3**	**-1.0**
PB14	**IPOC Station P**	**4.46**	**315**	*i* P		**Pn**	**13 04 14.2**	**+0.5**
PB14				*i* S		**Sn**	**13 05 06.0**	**+0.1**
MRA	**San Martin**	**4.71**	**168**	⇓*i* P		**Pn**	**13 04 15.8**	**-0.9**
HJA	**Humahuaca**	**4.78**	**17**	⇑*i* P		**Pn**	**13 04 20.0**	**+1.9**
PB15	**IPOC Station P**	**5.13**	**333**	*i* P		**Pn**	**13 04 23.3**	**+0.8**
PB10	**IPOC Station P**	**5.39**	**322**			**Pn**	**13 04 25.3**	**-0.4**
PB10						**Sn**	**13 05 26.3**	**-1.2**
PB10	**IPOC Station P**	**5.39**	**322**	⇑*i* P		**Pn**	**13 04 26.7**	**+0.9**
LVC	**Limon Verde**	**5.49**	**340**	P		**Pn**	**13 04 28.3**	**+1.0**
	comp=N,3.2nm,0.3s,baz=144,slow=12,SNR=34							
LVC				S		**Sn**	**13 05 29.1**	**-1.1**
	comp=N,5.7nm,0.3s,baz=298,slow=19,SNR=16							
LVC	**Limon Verde**	**5.49**	**340**	*e*P		**Pn**	**13 04 27.8**	**+0.5**
LVC	**Limon Verde**	**5.49**	**340**			**Pn**	**13 04 28.5**	**+1.3**
LVC						**Sn**	**13 05 26.0**	**-4.2**
PB04	**IPOC Station P**	**6.19**	**331**			**Pn**	**13 04 35.3**	**-1.1**
PEL	**Peldehue**	**6.23**	**211**			**Pn**	**13 04 35.9**	**-0.8**
PEL	**Peldehue**	**6.23**	**211**	*i* P		**Pn**	**13 04 35.9**	**-0.8**
ROC1	**El Roble**	**6.25**	**214**			**Pn**	**13 04 34.5**	**-2.6**
PB09	**IPOC Station P**	**6.35**	**340**	*i* P		**Pn**	**13 04 39.2**	**+0.6**
GO01	**Chusmiza**	**8.37**	**345**			**Pn**	**13 05 04.4**	**-1.2**
CPUP	**Villa Florida**	**8.67**	**82**	P		**Pn**	**13 05 06.7**	**-2.4**
	comp=N,0.6nm,0.3s,baz=265,slow=12,SNR=25							
CPUP	**Villa Florida**	**8.67**	**82**	*e*P		**Pn**	**13 05 07.2**	**-1.9**
CPUP	**Villa Florida**	**8.67**	**82**			**Pn**	**13 05 06.9**	**-2.2**
ITQB	**Itaqui**	**9.22**	**104**	*e*P		**Pn**	**13 05 15.0**	**-1.3**
LPAZ	**La Paz**	**11.53**	**354**	P		**Pn**	**13 05 47.9**	**+0.6**
	comp=N,0.7nm,0.3s,baz=152,slow=14,SNR=4.9							
LPAZ				S		**Sn**	**13 07 49.9**	**-5.4**
	comp=N,0.1nm,0.3s,baz=30,slow=20,SNR=2.8							
LPAZ	**La Paz**	**11.53**	**354**	*e*P		**Pn**	**13 05 47.9**	**+0.6**
LPAZ	**La Paz**	**11.53**	**354**			**Pn**	**13 05 46.2**	**-1.0**
CPSB	**Cacapava Do Su**	**12.06**	**106**	*e*P		**Pn**	**13 05 51.2**	**-2.3**
PLTB	**Pedras Altas**	**12.21**	**112**	*e*P		**Pn**	**13 05 52.7**	**-2.7**
GO06	**Curarrehue**	**12.33**	**197**			**Pn**	**13 05 55.2**	**-1.8**
AQDB	**Aquidauana**	**12.57**	**57**	*e*P		**Pn**	**13 05 59.3**	**-0.9**
SIV	**San Ignacio**	**12.95**	**26**	P		**Pn**	**13 06 03.8**	**-1.2**
	comp=N,0.6nm,0.3s,baz=225,slow=15,SNR=34							
ITAB	**Concordia**	**13.14**	**91**	*e*P		**Pn**	**13 06 05.9**	**-1.4**
PLCA	**Paso Flores**	**13.23**	**192**	P		**Pn**	**13 06 07.7**	**-0.8**
	comp=N,0.1nm,0.3s,baz=48,slow=15,SNR=3.1							
PLCA	**Paso Flores**	**13.23**	**192**	*e*P		**P**	**13 06 11.8**	**-0.6**
PLCA	**Paso Flores**	**13.23**	**192**			**Pn**	**13 06 06.3**	**-2.1**
PTGB	**Pitanga**	**13.68**	**80**	*e*P		**Pn**	**13 06 14.4**	**+0.2**
TRCB	**Terra Rica**	**13.85**	**72**	*e*P		**Pn**	**13 06 16.3**	**0.0**
CNLB	**Canela**	**14.20**	**100**	*e*P		**Pn**	**13 06 21.0**	**+0.3**
PP1B	**Ponte de Pedra**	**15.04**	**50**	*e*P		**Pn**	**13 06 31.4**	**+0.1**
PCMB	**Pacaembu**	**15.50**	**70**	*e*P		**Pn**	**13 06 36.9**	**0.0**
C2SB	**Chapadao do Su**	**15.75**	**58**	*e*P		**Pn**	**13 06 40.1**	**+0.2**
SALV	**Santo Antonio**	**15.77**	**44**	*e*P		**Pn**	**13 06 39.9**	**-0.3**
FRTB	**Fartura**	**16.27**	**78**	*e*P		**P**	**13 06 46.4**	**+0.1**
ITRB	**Iturama**	**17.16**	**66**	*e*P		**P**	**13 06 56.6**	**+0.6**
BB19B	**Bebedouro**	**18.03**	**72**	*e*P		**P**	**13 07 05.5**	**-0.1**
RCLB	**Rio Claro- Sao**	**18.35**	**77**	*e*P		**P**	**13 07 09.1**	**0.0**
ARAG	**Araguaiana, MT**	**18.47**	**52**	*e*P		**P**	**13 07 10.4**	**0.0**
VAO	**Valinhos**	**18.64**	**80**	*e*P		**P**	**13 07 12.5**	**+0.2**
SAML	**Samuel**	**19.09**	**11**	*e*P		**P**	**13 07 18.4**	**+1.3**
SAML	**Samuel**	**19.09**	**11**	P		**P**	**13 07 15.6**	**-1.5**
IPMB	**Ipameri, GO**	**19.79**	**64**	*e*P		**P**	**13 07 24.1**	**-0.6**
CLDB	**Colider**	**19.83**	**34**	*e*P		**P**	**13 07 24.1**	**-0.9**
PMNB	**Patos De Minas**	**20.94**	**68**	*e*P		**P**	**13 07 36.0**	**-1.0**
BDFB	**Brasilia**	**21.30**	**59**	P		**P**	**13 07 39.3**	**-1.6**
	comp=N,6.0nm,0.4s,baz=233,slow=11,SNR=11							
BDFB	**Brasilia**	**21.30**	**59**	P		**P**	**13 07 39.9**	**-1.0**
BDFB						IAmb	13 07 41.0	
	comp=Z,9.9nm,0.7s							
JANB	**Januaria**	**24.52**	**63**	*e*P		**P**	**13 08 12.4**	**+1.1**
SJMB	**Sao Joao De Ma**	**25.28**	**75**	*e*P		**P**	**13 08 19.0**	**+0.8**
BSFB	**Barra de Sao F**	**25.51**	**75**	*e*P		**P**	**13 08 21.1**	**+0.8**
VNA3	**Neumayer Olymp**	**53.54**	**160**	P		**P**	**13 12 11.0**	**+0.8**
VNA1	**Neumayer--Stat**	**53.76**	**159**	P		**P**	**13 12 02.5**	**-9.2**
SNAA	**Sanae**	**55.75**	**160**	P		**P**	**13 12 26.7**	**+0.6**
SNAA	**Sanae**	**55.75**	**160**	P		**P**	**13 12 26.7**	**+0.6**
	comp=Z,4.4nm,0.7s,baz=276,slow=8.0,SNR=22							
SNAA	**Sanae**	**55.75**	**160**	P		**P**	**13 12 26.7**	**+0.6**
SNAA				IAmb		IAmb	13 12 27.7	
	comp=Z,7.8nm,1.0s							
QSPA	**South Pole Qui**	**62.41**	**180**	P		**P**	**13 13 13.2**	**+1.1**
	comp=Z,8.7nm,0.6s,baz=168,slow=1.0,SNR=84							
QSPA	**South Pole Qui**	**62.41**	**180**	P		**P**	**13 13 13.4**	**+1.3**
SWET	**Sewanee**	**65.21**	**343**	P		**P**	**13 13 29.4**	**-1.2**
WVT	**Waverly**	**66.59**	**342**	P		**P**	**13 13 38.6**	**-0.7**
WVT				IAmb		IAmb	13 13 39.9	
	comp=Z,9.1nm,0.7s							
TXAR	**Lajitas Array**	**66.83**	**325**	P		**P**	**13 13 42.4**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=149,slow=8.4,SNR=9.6							
PBMO	**Poplar Bluff**	**67.95**	**340**	P		**P**	**13 13 47.9**	**0.0**
U40A	**Yellville**	**68.34**	**338**	P		**P**	**13 13 50.5**	**+0.2**
U40A				IAmb		IAmb	13 13 51.7	
	comp=Z,6.0nm,0.7s							
MGMO	**Mountain Grove**	**68.88**	**338**	P		**P**	**13 13 53.6**	**0.0**
MGMO				IAmb		IAmb	13 13 55.1	
	comp=Z,9.1nm,1.1s							
DBIC	**Dimbokro**	**68.98**	**70**	P		**P**	**13 13 55.8**	**+1.0**
	comp=Z,1.3nm,0.4s,baz=206,slow=10.0,SNR=3.4							
CCM	**Cathedral Cave**	**69.38**	**340**	P		**P**	**13 13 57.1**	**+0.4**
CCM				IAmb		IAmb	13 13 57.8	
	comp=Z,8.5nm,0.7s							
MSTX	**Muleshoe**	**70.22**	**329**	P		**P**	**13 14 01.9**	**-0.1**
MSTX				IAmb		IAmb	13 14 03.6	
	comp=Z,5.0nm,0.7s							
VNDA	**Vanda**	**70.97**	**190**	P		**P**	**13 14 07.5**	**+1.6**
	comp=Z,1.9nm,0.9s,baz=148,slow=7.1,SNR=4.5							
ANMO	**Albuquerque**	**72.75**	**327**	P		**P**	**13 14 18.9**	**+1.6**
	comp=Z,1.8nm,0.6s,baz=136,slow=5.2,SNR=9.4							
ANMO	**Albuquerque**	**72.75**	**327**	P		**P**	**13 14 17.2**	**-0.2**
ECSD	**EROS Data Cent**	**76.23**	**338**	P		**P**	**13 14 36.8**	**-0.1**
PFO	**Pinyon Flats O**	**77.06**	**319**	P		**P**	**13 14 43.6**	**+1.6**
	comp=Z,2.7nm,1.0s,baz=81,slow=8.8,SNR=3.5							
PHWY	**Pilot Hill**	**77.48**	**331**	P		**P**	**13 14 42.8**	**-1.6**
KNB	**Kanab**	**77.58**	**324**	P		**P**	**13 14 44.2**	**-0.7**
TOA0	**Torodi Ar. Sit**	**77.89**	**68**	P		**P**	**13 14 47.1**	**+0.2**
TOA0				IAmb		IAmb	13 14 50.0	
	comp=Z,3.8nm,0.5s							
TORD	**Torodi Ar. Bea**	**77.89**	**68**	P		**P**	**13 14 46.4**	**-0.5**
	comp=Z,2.6nm,0.5s,baz=271,slow=5.8,SNR=17							
BOSA	**Boshof**	**78.95**	**116**	P		**P**	**13 14 52.7**	**0.0**
	comp=Z,5.5nm,0.7s,baz=268,slow=3.5,SNR=11							
BOSA	**Boshof**	**78.95**	**116**	P		**P**	**13 14 52.9**	**+0.2**
PDAR	**

THIG eS Sn 13 11 12.7 +2.7
THIG 0.28 326 Pn 13 11 02.8 +1.3
THIG Sn 13 11 12.7 +2.7
STG3 Santiaguito 3, 0.52 86 eP Pn 13 11 05.9 +2.3
FUG Fuego 3 1.24 100 eP Pn 13 11 14.4 +2.4
PCIG 1.48 314 eP Pn 13 11 16.3 +1.4
PCIG eS Sn 13 11 35.2 +1.5
PCIG 1.48 314 Pn 13 11 16.3 +1.4
PCIG Sn 13 11 35.2 +1.5
APG El Apazote 1.62 78 P Pn 13 11 19.9 +2.9
968nm,0.3s,baz=218,slow=14,SNR=828
APG S Sn
958nm,0.3s,baz=59,slow=22,SNR=6.8
APG LR LR 13 11 45.6
comp=Z,14µm,18.8s,baz=205,slow=52
IXG Ixpaco 1.69 107 eP Pn 13 11 20.1 +2.4
NBG Las Nubes 1.71 93 eP Pn 13 11 21.7 +3.6
FAME Alcalda de S 2.19 112 eP Pn 13 11 25.4 +1.1
FAME eS Sn 13 11 52.1 +1.6
TGBT Tuxtla Gutierr 2.29 336 eP Pn 13 11 27.8 +2.0
TGBT eS Sn 13 11 56.0 +3.0
TGBT Tuxtla Gutierr 2.29 336 Pn 13 11 29.0 +3.3
TGBT Sn 13 11 56.0 +3.0
RTR El Retiro 2.51 108⇑ iP Pn 13 11 30.8 +2.1
RTR El Retiro 2.51 108⇑ iP Pn 13 11 30.8 +2.1
SBLS San Blas 2.55 109⇑ iP Pn 13 11 31.1 +1.8
SBLS San Blas 2.55 109⇑ iP Pn 13 11 31.1 +1.8
CEVE Cerro Verde 2.55 109⇑ eP Pn 13 11 31.3 +1.9
CEVE IAML 13 12 10.2
comp=Z,38µm,0.4s
CEVE Cerro Verde 2.55 109⇑ eP Pn 13 11 31.3 +1.9
CEVE IAML 13 12 10.2
comp=Z,38µm,0.4s
MTO3 Montecristo 2.67 96⇑ iP Pn 13 11 33.0 +2.0
MTO3 Montecristo 2.67 96⇑ iP Pn 13 11 33.0 +2.0
BOQS Boqueron 2.90 108⇑ eP Pn 13 11 35.9 +1.8
UEES Universidad Ev 2.94 109 eP Pn 13 11 36.3 +1.8
UEES Universidad Ev 2.94 109 eP Pn 13 11 36.3 +1.8
SNET Serv Nac Est T 2.96 109⇑ eP Pn 13 11 36.4 +1.7
SNET IAML 13 12 26.8
comp=Z,7µm,0.4s
SNET Serv Nac Est T 2.96 109⇑ eP Pn 13 11 36.4 +1.7
SNET IAML 13 12 26.8
comp=Z,7µm,0.4s
SNET Serv Nac Est T 2.96 109 Pn 13 11 35.9 +1.2
SNET Sn Sn 13 12 12.8 +3.6
OPAM Oficina de Pla 2.98 108⇑ eP Pn 13 11 36.9 +1.8
OPAM Oficina de Pla 2.98 108⇑ eP Pn 13 11 36.9 +1.8
LFU La Fuente 3.04 107⇑ iP Pn 13 11 37.7 +1.8
LFU La Fuente 3.04 107⇑ iP Pn 13 11 37.7 +1.8
LBRS Las Brisas 3.11 107⇑ eP Pn 13 11 38.6 +1.7
LFRS El Faro 3.13 109⇑ iP Pn 13 11 38.7 +1.5
COEG Centro de Oper 3.30 108⇑ eP Pn 13 11 41.2 +1.8
COEG IAML 13 12 31.4
comp=Z,11µm,0.5s
CMIG Matias Romero 3.59 312 P Pn 13 11 45.2 +1.8
comp=Z,82nm,0.3s,baz=131,slow=11,SNR=436
CMIG S Sn 13 12 28.2 +3.6
comp=Z,691nm,0.3s,baz=221,slow=5.1,SNR=5.9
CMIG LR LR 13 13 03.4
comp=Z,1µm,19.5s,baz=129,slow=35
CMIG PcP PcP 13 19 14.4 +2.2
comp=Z,0.6nm,0.3s,baz=192,slow=5.5,SNR=3.4
COEB Comit de Eme 3.66 108 eP Pn 13 11 46.0 +1.6
COEB IAML 13 12 37.9
comp=Z,4µm,0.4s
ALJI Alcalda de J 3.68 111 eP Pn 13 11 47.1 +2.5
ALJI IAML 13 12 45.5
comp=Z,10µm,0.9s
TECA Tecapa 3.69 108 eP Pn 13 11 46.5 +1.7
TECA Tecapa 3.69 108 eP Pn 13 11 46.5 +1.7
PACA Pacayal 3.86 108 eP Pn 13 11 48.8 +1.7
PACA Pacayal 3.86 108 eP Pn 13 11 48.8 +1.7
FAGO Alcalda de S 4.00 104 eP Pn 13 11 50.0 +1.1
JUCU Jucuarįn 4.00 110⇓ iP Pn 13 11 51.2 +2.2
HUIG Huatulco 4.01 286 eP Pn 13 11 47.8 -1.2
HUIG eP Pn 13 11 47.9 -1.1
HUIG eS Sn 13 12 32.4 -2.6
HUIG Huatulco 4.01 286 Pn 13 11 47.9 -1.1
HUIG Sn 13 12 30.0 -4.9
LCND La Caada 4.31 108 eP Pn 13 11 54.8 +1.6
LCND La Caada 4.31 108 eP Pn 13 11 54.8 +1.6
CNCH Conchagua 4.37 108 eP Pn 13 11 55.8 +1.7
CNCH Conchagua 4.37 108 eP Pn 13 11 55.8 +1.7
TGUH Tegucigalpa,Un 4.72 97 Pn 13 12 00.7 +1.8
VHO Vista Hermosa 5.05 299 i P Pn 13 12 04.0 +0.6
VHO i S Sn 13 13 00.9 +0.3
ESTN Estel 5.79 105 Pn 13 12 15.1 +1.7
PNIG Pinotepa 6.05 287 eP Pn 13 12 17.1 +0.2
PNIG i S Sn 13 13 23.3 -1.5
PNIG Pinotepa 6.05 287 Pn 13 12 17.6 +0.7
PNIG Sn 13 13 22.3 -2.5
TEIG Tepich 6.62 33 Pn 13 12 27.2 +2.5
TEIG Sn Sn 13 12 40.1 +1.8
TLIG Tlapa 6.84 296 Pn 13 12 30.0 +2.2
ACON Acoyapa 7.26 111 Pn 13 12 34.9 +1.5
NY14 Universidad de 7.56 121⇑ eP Pn 13 12 40.1 +2.5
LAPC Finca la Perla 7.58 120 eP Pn 13 12 39.2 +1.3
GB1A Borinquen Arri 7.58 120 eP Pn 13 12 41.2 +3.3
BUEV Buena Vista 7.59 120 eP Pn 13 12 40.3 +2.3
BUEV eS Sn 13 14 02.2 -0.4
BUAI Buenos Aires 7.61 119⇑ eP Pn 13 12 38.6 +0.4
GPS3 Bodega del ICE 7.64 120 eP Pn 13 12 41.6 +2.9
GPS1 Guardaparques 7.65 120 eP Pn 13 12 41.8 +3.0
GPS2 Hotel Rincn d 7.66 120 eP Pn 13 12 42.8 +3.9
LIM1 Limonal 7.77 120 eP Pn 13 12 41.9 +1.4
GUAB Guayabo de Bag 7.78 120 eP Pn 13 12 42.6 +2.0
MESS Mesas 7.79 119 eP Pn 13 12 41.6 +0.8
HORNC Hornillas 7.82 119 eP Pn 13 12 43.0 +1.8
COLC Colonia 7.83 120 eP Pn 13 12 42.6 +1.4
CUI Cuipilapa 7.86 120 eP Pn 13 12 43.6 +1.9
CUI eS Sn 13 13 14.7 +4.4
ACAL Aguas Claras 7.98 119 eP Pn 13 12 45.1 +1.7
PTEN Parque Tenorio 7.98 119⇑ eP Pn 13 12 44.3 +0.9
ESPN Las Esperanzas 7.98 107 Pn 13 12 45.2 +1.8
AMAS Alto Masis 8.03 119 eP Pn 13 12 45.4 +1.3
UNM Universidad Na 8.20 305 P Pn 13 12 51.9 +5.4
UNM Universidad Na 8.20 305 i P Pn 13 12 46.7 +0.2
UNM Universidad Na 8.20 305 Pn 13 12 51.9 +5.4
JTS Las Juntas de 8.23 121 P Pn 13 12 48.4 +1.6
comp=Z,12nm,0.3s,baz=7.9,slow=6.3,SNR=57
JTS S Sn 13 14 15.0 -3.2
baz=22,slow=19,SNR=2.1
JTS PcP PcP 13 19 15.7 +0.8
comp=Z,1.1nm,0.3s,baz=26,slow=19,SNR=4.9
JTS Las Juntas de 8.23 121 eP Pn 13 12 49.5 +2.8
JTS eS Sn 13 14 20.7 +2.4
JTS Las Juntas de 8.23 121 i P Pn 13 12 47.2 +0.4
JTS eS Sn 13 14 18.8 +0.5
ARE1 Arenal 1 8.34 119 eP Pn 13 12 49.8 +1.6
ARE1 eS Sn 13 14 25.9 +5.0
CEDE Laguna Cedeo 8.34 119 eP Pn 13 12 49.9 +1.7
CASO Castillo 8.34 120⇑ eP Pn 13 12 48.6 +0.4
FORC Fortuna 8.38 119 eP Pn 13 12 50.0 +1.3
SRA1 San Ramn 8.73 121 eP Pn 13 12 57.7 +4.0
HDC Heredia 9.08 120 eP Pn 13 13 01.8 +3.3
HDC Heredia 9.08 120 i P Pn 13 13 00.3 +1.8
HDC eS Sn 13 14 38.0 -1.2
HDC Heredia 9.08 120 Pn 13 13 00.1 +1.6
SJS Escuela Geolog 9.17 120 eP Pn 13 13 03.0 +3.4
LCR2 La Lucha 2 9.31 121 eP Pn 13 13 03.1 +1.4
CVTR Volcan Turrial 9.37 119 eP Pn 13 13 03.4 +0.7
ZIIG Zihuatanejo 9.45 289 eP Pn 13 13 04.0 +0.6
EDDO Dominical 9.70 123 eP Pn 13 13 08.7 +2.0
EDLM Las Mercedes 9.91 122 eP Pn 13 13 12.2 +2.6
MOIG Morelia 10.00 301 Pn 13 13 15.0 +3.9
EDPN Palmar Norte 10.19 123 eP Pn 13 13 15.9 +2.5
PRVC Isla de Provid 10.50 96⇓ iP Pn 13 13 20.0 +2.3
EDSV San Vito 10.67 122 eP Pn 13 13 22.3 +2.2
CNI2 El Empalme, Bo 10.77 118 eP Pn 13 13 22.9 +1.5
CNI2 eS Sn 13 15 31.6 +11
BRU2 Volcan 10.91 121 eP Pn 13 13 24.0 +0.5
BRU2 Volcan 10.91 121 i P Pn 13 13 25.2 +1.7
BRU2 eS Sn 13 15 28.1 +4.1
BCO2 Palmira 11.09 121 eP Pn 13 13 27.8 +1.9
BAGA3 Bagala, Chiriq 11.23 122 eP Pn 13 13 29.6 +2.0
CHGR2 Aguacate 11.29 119 i P Pn 13 13 29.2 +0.7
DVD David 11.31 122 eP Pn 13 13 30.3 +1.6
DVD eS Sn 13 13 34.4 +1.0
LOCO3 Loma Colorada, 11.35 122 eP Pn 13 13 29.9 +0.6
FSCY Frank Sound, G 11.42 65 Pn 13 13 31.8 +1.6

GMAL Guarumal, Vera 12.68 122 eP Pn 13 13 49.4 +1.9
GMAL eS S 13 16 28.4 -0.6
ZAIG Zacatecas 12.76 311 Pn 13 13 52.3 +3.6
CBCY The Bluff, Cay 12.82 65 Pn 13 13 48.3 -1.1
BCIP Isla Barro Col 13.19 113 P Pn 13 13 53.3 -1.0
BCIP Isla Barro Col 13.19 113 eP Pn 13 13 53.9 -0.4
BCIP Isla Barro Col 13.19 113 eP Pn 13 13 52.5 -1.8
BCIP Isla Barro Col 13.19 113 Pn 13 13 53.3 -1.0
CACAO El Cacao, Vera 13.22 122 eP Pn 13 13 56.9 +2.2
CACAO eS S 13 16 43.9 +3.9
CHOR3 La Chorrera 13.37 114 i P Pn 13 13 57.0 +0.3
AZU Azuero 13.47 119 eP P 13 14 01.2 -3.4
AZU Azuero 13.47 119 eP Pn 13 14 00.1 +2.1
UPA Univ. de Panam 13.54 113 eP Pn 13 13 56.3 -2.6
UPA Univ. de Panam 13.54 113 i P Pn 13 13 58.2 -0.7
CHPO Chepo, Panama 13.84 112 eP Pn 13 14 01.9 -0.9
MCJ Malvern 14.21 75⇓ iP P 13 14 13.6 +0.6
PCJ Portland Cotta 14.68 76⇑ iP P 13 14 20.7 +2.6
BBJ Bamboo Saint A 14.70 73⇓ iP P 13 14 17.0 -1.4
STH Stony Hill 15.06 75 i PA P 13 14 22.7 +0.3
UPD2 Meteti 15.08 112 eP Pn 13 14 17.2 -1.8
UPD2 Meteti 15.08 112 eP Pn 13 14 17.4 -1.6
HOJ Hope 15.11 75⇑ iP P 13 14 25.4 +2.6
833A Chaparral WMA, 15.17 335 P P 13 14 23.6 +0.1
833A Chaparral WMA, 15.17 335 P P 13 14 23.8 +0.3
baz=152,SNR=20
061Z Ochoppi 15.30 42 P Pn 13 14 22.4 +0.7
061Z Ochoppi 15.30 42 P Pn 13 14 21.5 -0.1
baz=225,SNR=33
PAYG Puerto Ayora 15.36 173 P P 13 14 25.4 -0.3
PAYG lAmb lAmb 13 14 29.2
comp=Z,592nm,1.2s
CMJ Castle Mountai 15.48 75 eP P 13 14 27.4 +0.4
HKT Hockley 15.59 348 P P 13 14 29.4 +1.4
HKT pmax pmax
comp=Z,506nm,1.5s
HKT Hockley 15.59 348 P P 13 14 29.4 +1.4
060A Indiantown 16.47 40 P P 13 14 38.6 +0.8
060A Indiantown 16.47 40 P P 13 14 37.8 -0.1
baz=224,SNR=25
DWPF Disney Wildern 16.64 35 P P 13 14 42.0 +2.2
DWPF lAmb lAmb 13 14 55.7
comp=Z,769nm,0.9s
DWPF Disney Wildern 16.64 35 P P 13 14 39.8 +0.1
baz=218
SOLC Bahia Solano 16.70 119 eP Pn 13 14 35.7 -3.8
435B Jarrell 16.80 343 P P 13 14 44.1 +2.5
435B lAmb lAmb 13 15 01.9
comp=Z,711nm,1.4s
435B Jarrell 16.80 343 P P 13 14 42.1 +0.6
baz=161,SNR=15
553A Crawfordville 16.98 23 P P 13 14 45.5 +2.0
553A lAmb lAmb 13 14 52.1
comp=Z,847nm,1.0s
GTBY Guantanamo Bay 17.04 70 i P P 13 14 45.6 +1.3
GTBY IAML 13 14 55.4
comp=Z,279nm,0.7s
GTBY Guantanamo Bay 17.04 70 P P 13 14 46.2 +1.9
BRAL Brewton 17.06 15 P P 13 14 47.4 +3.1
BRAL Brewton 17.06 15 P P 13 14 47.1 +2.7
baz=196,SNR=36
656A Willston 17.09 30 P P 13 14 46.5 +1.8
NATX Nacogdoches 17.17 353 P P 13 14 48.9 +3.3
NATX lAmb lAmb 13 14 49.8
comp=Z,666nm,1.3s
NATX Nacogdoches 17.17 353 P P 13 14 47.1 +1.5
baz=171,SNR=34
SJCC San Jacinto, C 17.20 104⇑ iP Pn 13 14 43.8 -1.9
JCT Junction City 17.25 337 P P 13 14 47.8 +1.3
JCT pmax pmax
comp=Z,170nm,1.1s
JCT Junction City 17.25 337 P P 13 14 47.8 +1.3
JCT Junction City 17.25 337 P P 13 14 47.6 +1.0
baz=154,SNR=76
DBBC Dabeiba 17.36 114 eP Pn 13 14 47.3 -0.3
VBMS Vicksburg 17.52 4 P P 13 14 50.8 +1.3
VBMS Vicksburg 17.52 4 P P 13 14 51.7 +2.2
baz=185,SNR=56
HPIG 17.57 316 P P 13 14 53.3 +3.0
UREC San Jos de Ur 17.64 111 eP P 13 14 48.6 -2.3
WHTX Lake Whitney, 17.92 345 P Pn 13 14 56.0 +1.9
WHTX lAmb lAmb 13 14 59.7
comp=Z,465nm,1.1s
WHTX Lake Whitney, 17.92 345 P Pn 13 14 56.0 +1.9
baz=163,SNR=34
352A Blakely 17.97 20 P Pn 13 14 57.8 +2.9
352A Blakely 17.97 20 P Pn 13 14 56.9 +2.1
baz=203,SNR=83
GR1C Gorgona, Isla 17.99 129 eP Pn 13 14 56.2 +1.1
250A Grady 18.03 16 Pn 13 14 58.0 +2.4
CBOC Ciudad Bolivar 18.08 117⇑ iP P 13 14 55.9 -0.1
TXAR Lajitas Array 18.08 326 P Pn 13 14 59.0 +2.7
comp=Z,2.0nm,0.3s,baz=150,slow=10,SNR=181
TXAR PcP PcP 13 19 28.4 +1.4
comp=Z,1.2nm,0.3s,baz=160,slow=3.0,SNR=12
TXAR LR LR 13 22 37.4
comp=Z,429nm,19.3s,baz=0.0,slow=39
TXAR ScP ScP 13 22 59.8 +3.9
comp=Z,0.1nm,0.3s,baz=150,slow=3.8,SNR=11
TXAR PKiKP PKiKP 13 27 18.9 +0.4
comp=Z,0.1nm,0.3s,baz=114,slow=4.2,SNR=4.7
ARGC Ariguani, Magd 18.09 103⇑ iP P 13 14 55.6 -0.3
353A Camilla 18.10 22 P Pn 13 14 58.3 +1.9
baz=205,SNR=82
HELC Santa Helena 18.34 116⇑ iP P 13 14 58.1 -0.9
HELC Santa Helena 18.34 116 i P P 13 14 58.5 -0.5
PLMC San Jos del P 18.35 120⇑ iP P 13 14 59.0 +0.3
PLMC ⇓ iP P 13 14 59.1 +0.3
ZARC Zaragoza, Cauc 18.36 111 eP P 13 14 56.6 -2.2
TUMC Tumaco 18.37 133 eP Pn 13 14 60.0 +0.2
TIGA Tifton 18.42 24 Pn 13 15 02.5 +2.3
TIGA Tifton 18.42 24 P Pn 13 15 01.8 +1.5
baz=207,SNR=82
456A Hilliard 18.47 28 Pn 13 15 02.9 +2.1
252A Lumpkin 18.51 20 P Pn 13 15 02.6 +1.2
baz=203,SNR=143
Z41A Richland Creek 18.51 358 P Pn 13 15 02.2 +0.9
baz=178,SNR=124
SMLC San Martn de 18.59 106 eP P 13 15 00.2 -1.2
253A Americus 18.78 21 Pn 13 15 06.1 +1.5
253A lAmb lAmb 13 15 10.9
comp=Z,866nm,1.3s
253A Americus 18.78 21 P Pn 13 15 05.1 +0.5
baz=204,SNR=24
YOTC Yotoco, Valle 18.82 123⇑ iP Pn 13 15 05.2 -0.1
CODC Agustn Codazz 18.83 102 eP P 13 15 01.5 -2.4
LRAL Lakeview Retre 18.86 13 Pn 13 15 07.2 +1.7
LRAL lAmb lAmb 13 15 11.4
comp=Z,611nm,1.1s
LRAL Lakeview Retre 18.86 13 P Pn 13 15 06.5 +1.0
baz=195,SNR=174
GUY2C Guyana, Caldas 18.96 118⇑ iP P 13 15 06.2 +0.3
254A Abbeville 18.99 24 P Pn 13 15 07.4 +0.4
baz=207,SNR=60
LGNH Logne 19.07 76 P Pn 13 15 07.5 -0.7
PTBC PUERTO BERRIO, 19.13 113⇑ iP P 13 15 05.3 -2.0
152A Waverly Hall 19.14 19 Pn 13 15 10.3 +1.5
152A lAmb lAmb 13 15 14.2
comp=Z,397nm,0.9s
152A Waverly Hall 19.14 19 P Pn 13 15 09.3 +0.6
baz=202,SNR=93
RREF El Recreo 19.14 119⇑ iP Pn 13 15 09.4 -0.2
ABTX Abilene, Hawle 19.14 340 P Pn 13 15 09.8 +0.9
ABTX Abilene, Hawle 19.14 340 P Pn 13 15 08.8 -0.1
baz=157,SNR=62
CCAR Cane Creek 19.16 1 Pn 13 15 10.0 +0.9
NORC Norcasia 19.22 116⇑ iP P 13 15 07.9 -0.4
255A Hazlehurst 19.30 25 Pn 13 15 12.0 +1.3
255A Hazlehurst 19.30 25 P Pn 13 15 10.5 -0.2
baz=209,SNR=45
ANIL Santa Ana 19.31 120⇑ iP Pn 13 15 10.8 -0.5
BBAC Balboa, Cauca 19.32 129⇑ iP Pn 13 15 11.8 +0.5
TOLC Tolima 19.33 120 eP Pn 13 15 11.7 +0.2
Z50A Ashland 19.33 16 Pn 13 15 11.7 +0.6
Z50A lAmb lAmb 13 15 16.1
comp=Z,903nm,1.4s
Z50A Ashland 19.33 16 P Pn 13 15 11.5 +0.4
baz=198,SNR=95
153A Fort Valley 19.42 21 P Pn 13 15 11.9 -0.2
baz=204,SNR=29
POPC Popayan, Colom 19.42 127⇑ iP Pn 13 15 13.1 +0.5
OCAC Ocana 19.48 107⇑ iP P 13 15 08.6 -2.7
LPIG La Paz 19.55 301 P Pn 13 15 15.7 +2.0
comp=Z,2.3nm,0.3s,baz=161,slow=7.4,SNR=7.7

LPIG LR LR 13 22 56.6
comp=Z,2µm,20.3s,baz=119,slow=37
BRRC Barranca, Sant 19.55 111 eP P 13 15 09.5 -2.4
256A Glennville 19.59 27 P Pn 13 15 14.1 0.0
baz=210,SNR=25
Z51A Franklin 19.60 18 Pn 13 15 16.4 +2.1
Z51A lAmb lAmb 13 15 20.4
comp=Z,404nm,1.3s
154A Montrose 19.65 23 P Pn 13 15 14.7 -0.2
baz=206
OTAV Otavalo 19.70 136 P Pn 13 15 17.9 +1.9
OTAV pmax pmax
comp=Z,24nm,0.7s
OTAV Otavalo 19.70 136 eP Pn 13 15 15.2 -0.8
OTAV Otavalo 19.70 136 eP P 13 15 12.6 -1.4
OTAV Otavalo 19.70 136 Pn 13 15 17.9 +1.9
Z52A Williamson 19.71 19 P Pn 13 15 15.5 -0.1
baz=202,SNR=80
SOTA Rioblanco 19.73 128⇑ iP Pn 13 15 16.4 0.0
X40A Basin Creek Fa 19.74 358 P Pn 13 15 15.7 -0.2
X40A Basin Creek Fa 19.74 358 P P 13 15 14.5 +0.8
baz=178,SNR=48
ORTC Ortega, Tolima 19.76 121⇑ iP P 13 15 15.1 +0.9
ORTC ⇓ iP Pn 13 15 16.0 -0.4
PCON Cinco Dias 19.77 127⇑ iP Pn 13 15 17.2 +0.2
Y49A Blount Mountai 19.78 14 P Pn 13 15 16.4 0.0
Y49A lAmb lAmb 13 15 21.9
comp=Z,323nm,1.2s
X43A Marvell 19.79 3 P Pn 13 15 15.7 -0.7
baz=183,SNR=40
URIC Uribia, Colomb 19.80 96 eP P 13 15 12.4 -2.2
URIC Uribia, Colomb 19.80 96 P P 13 15 13.0 -1.6
MIAR Mount Ida 19.83 356 P Pn 13 15 15.9 -1.0
MIAR pmax pmax
comp=Z,549nm,1.4s
MIAR Mount Ida 19.83 356 P Pn 13 15 15.9 -1.0
MIAR lAmb lAmb 13 15 34.2
comp=Z,549nm,1.4s
MIAR Mount Ida 19.83 356 P P 13 15 15.5 +0.7
baz=176,SNR=77
CRUC La Cruz 19.84 130 eP P 13 15 16.4 +1.0
SPBC San Pablo de B 19.87 115 eP P 13 15 14.2 -1.2
OXF Oxford 19.90 7 P P 13 15 16.1 +0.6
baz=187
257A Skidaway Islan 19.98 29 P Pn 13 15 17.7 -1.0
257A Skidaway Islan 19.98 29 P Pn 13 15 18.3 -0.3
baz=213,SNR=9.7
UALR University of 20.02 359 P Pn 13 15 18.3 -0.8
UALR lAmb lAmb 13 15 23.6
comp=Z,677nm,1.2s
ROSC El Rosal 20.05 117 P Pn 13 15 19.1 -1.0
comp=Z,6.3nm,0.3s,baz=34,slow=3.6,SNR=43
ROSC PcP PcP 13 19 33.1 +2.0
comp=Z,1.5nm,0.3s,baz=322,slow=19,SNR=5.3
ROSC El Rosal 20.05 117⇑ iP Pn 13 15 19.0 -1.1
ROSC El Rosal 20.05 117 P Pn 13 15 19.0 -1.0
Z53A Monticello 20.08 21 P Pn 13 15 19.1 -0.8
baz=204,SNR=94
Y51A Rockmart 20.18 17 P Pn 13 15 20.3 -0.7
baz=200,SNR=83
X48A Hartselle 20.21 12 P Pn 13 15 20.4 -1.0
X48A lAmb lAmb 13 15 27.8
comp=Z,641nm,0.9s
GOGA Godfrey 20.23 21 P Pn 13 15 20.7 -1.0
GOGA pmax pmax
comp=Z,656nm,1.0s
GOGA Godfrey 20.23 21 P Pn 13 15 20.7 -1.0
GOGA lAmb lAmb 13 15 27.2
comp=Z,656nm,0.9s
GOGA Godfrey 20.23 21 P Pn 13 15 20.6 -1.1
baz=204,SNR=132
BARC Barichara 20.24 111 eP P 13 15 17.5 -2.1
Z54A Sparta 20.30 23 P Pn 13 15 21.3 -1.2
baz=206,SNR=64
BETC Betania 20.31 124 eP Pn 13 15 21.6 -1.2
SDDR Presa de Saban 20.38 75 i P Pn 13 15 22.3 -1.3
SDDR lAmL 13 15 48.2
comp=Z,148nm,0.8s
SDDR Presa de Saban 20.38 75 P Pn 13 15 22.3 -1.3
SDDR lAmb lAmb 13 15 23.9
comp=Z,260nm,0.7s
PAMC Pamplona, Colo 20.38 109⇑ iP P 13 15 19.1 -2.3
W41B Gary Mavity, V 20.41 360 P P 13 15 21.6 +0.5
baz=179,SNR=92
Y52A Lilburn 20.45 19 P Pn 13 15 23.4 -0.8
Y52A lAmb lAmb 13 15 38.5
comp=Z,423nm,0.9s
Y52A Lilburn 20.45 19 P Pn 13 15 23.2 -1.0
baz=202,SNR=65
W39A Magazine 20.49 356 P Pn 13 15 23.9 -0.8
W39A lAmb lAmb 13 15 33.1
comp=Z,536nm,1.2s
W39A Magazine 20.49 356 P P 13 15 22.8 +0.9
baz=175,SNR=34
X34A Smith Ranch, M 20.50 346 P Pn 13 15 23.4 -1.5
WHAR Wooly Hollow 20.53 360 P P 13 15 23.1 +0.8
WHAR lAmb lAmb 13 15 30.8
comp=Z,472nm,1.5s
CLNB Carlsbad 20.54 330 P Pn 13 15 26.0 +0.6
PLAL Pickwick Lake 20.55 9 P P 13 15 23.2 +0.7
PLAL lAmb lAmb 13 15 31.9
comp=Z,354nm,1.2s
Z55A Blythe 20.57 24 P Pn 13 15 24.2 -1.4
baz=208,SNR=50
157A Early Branch 20.58 28 P Pn 13 15 25.0 -0.8
baz=212,SNR=28
Y53A Monroe 20.60 21 P Pn 13 15 24.5 -1.5
baz=204,SNR=70
FPAL Fort Paine 20.63 15 P Pn 13 15 25.1 -1.3
FPAL lAmb lAmb 13 15 26.5
comp=Z,256nm,0.9s
RUSC La Rusia 20.64 113⇑ iP P 13 15 21.8 -2.3
RUSC La Rusia 20.64 113 P P 13 15 23.0 -1.2
CHIC Chingaza 20.66 117⇑ iP P 13 15 24.2 -0.1
GDL2 Guadalupe Moun 20.73 329 P Pn 13 15 27.8 +0.1
FLOC Florencia 20.82 127⇓ eP Pn 13 15 27.3 -1.4
FLOC ⇑ iP P 13 15 27.6 +1.9
FLOC Florencia 20.82 127 P Pn 13 15 27.9 -0.9
HBAR Harrisburg 20.83 3 P P 13 15 26.9 +1.4
HBAR lAmb lAmb 13 15 30.3
comp=Z,462nm,1.1s
W35A Tecumseh 20.84 349 P P 13 15 26.5 +0.9
MNTX Cornudas Mount 20.85 327 P Pn 13 15 28.4 -0.6
MNTX lAmb lAmb 13 15 31.5
comp=Z,246nm,0.8s
MNTX Cornudas Mount 20.85 327 P Pn 13 15 27.8 -1.2
baz=141,SNR=432
X51A Calhoun 20.86 17 P P 13 15 27.2 +1.3
X51A Calhoun 20.86 17 P P 13 15 26.9 +1.0
baz=200,SNR=35
WMOK Wichita Mounta 20.86 344 P P 13 15 27.2 +1.2
WMOK pmax pmax
comp=Z,218nm,1.2s
WMOK Wichita Mounta 20.86 344 P P 13 15 27.2 +1.2
WMOK Wichita Mounta 20.86 344 P P 13 15 26.0 +0.1
baz=161,SNR=133
LPAR Lepanto 20.90 4 P Pn 13 15 28.1 -1.5
Y54A Tignall 20.92 22 P P 13 15 27.4 +0.9
baz=206,SNR=53
VILC Villavicencio, 20.96 118 eP P 13 15 28.4 +1.2
SC01 Santiago de lo 20.97 74 i P Pn 13 15 29.0 -1.6
SC01 lAmL 13 15 35.9
comp=Z,487nm,0.8s
SC01 Santiago de lo 20.97 74 P Pn 13 15 28.8 -1.7
Z56A Williston 20.97 26 P P 13 15 27.9 +0.8
Z56A Williston 20.97 26 P P 13 15 28.4 +1.4
baz=210,SNR=25
158A Hollywood 21.00 29 P Pn 13 15 29.2 -1.5
baz=214,SNR=8.0
W49A Belvidere 21.03 13 P P 13 15 28.7 +1.1
baz=196,SNR=157
FNO Franklin 21.04 348 P P 13 15 29.6 +1.8
GRTK Grand Turk 21.05 68 P P 13 15 29.6 +1.6
X52A Dahlonega 21.18 19 P P 13 15 30.4 +1.1
baz=202
SWET Sewanee 21.20 14 P P 13 15 30.3 +0.8
SWET lAmb lAmb 13 15 31.9
comp=Z,562nm,1.0s
Z57A Bowman 21.23 27 P P 13 15 31.2 +1.4
baz=212,SNR=36
X53A Estanollee 21.28 20 P P 13 15 31.5 +1.1
baz=204,SNR=78
GNAR Gosnell 21.28 5 P P 13 15 30.2 -0.1
GNAR lAmb lAmb 13 15 34.8
comp=Z,567nm,1.5s

HALT Halls 21.29 6 P P 13 15 30.5 0.0
Y55A Saluda 21.30 24 P P 13 15 31.3 +0.7
baz=208,SNR=55
NHSC New Hope 21.31 29 P P 13 15 32.3 +1.6
baz=213,SNR=13
W50A Signal Mountai 21.33 15 P P 13 15 32.1 +1.2
W50A IAmb IAmb 13 15 49.6
comp=Z,559nm,0.9s
W50A Signal Mountai 21.33 15 P P 13 15 31.5 +0.5
baz=198,SNR=62
Y56A Pelion 21.40 25 P P 13 15 32.6 +1.0
baz=209,SNR=17
TUL1 Leonard 21.40 352 P P 13 15 31.5 -0.2
TUL1 IAmb IAmb 13 15 42.1
comp=Z,329nm,1.0s
TUL1 Leonard 21.40 352 P P 13 15 31.0 -0.6
baz=170,SNR=37
HODGE Hodges 21.41 23 P P 13 15 33.1 +1.4
PEBM Pemiscott Bayo 21.44 5 P P 13 15 33.4 +1.3
PEBM IAmb IAmb 13 15 36.1
comp=Z,365nm,0.9s
W51A Cleveland 21.44 17 P P 13 15 33.0 +0.9
baz=199,SNR=59
LNXT Lenox 21.47 6 P P 13 15 33.6 +1.3
LNXT IAmb IAmb 13 15 35.5
comp=Z,495nm,0.8s
MSTX Muleshoe 21.50 335 P P 13 15 34.0 +1.1
MSTX IAmb IAmb 13 15 36.7
comp=Z,223nm,1.0s
MSTX Muleshoe 21.50 335 P P 13 15 33.4 +0.5
baz=151,SNR=79
V48A Smith Brothers 21.51 12 P P 13 15 33.4 +0.6
V48A IAmb IAmb 13 15 35.2
comp=Z,566nm,0.9s
TAMC Tame, Arauca 21.57 110 eP P 13 15 31.4 -2.2
HHAR Hobbs 21.58 356 P P 13 15 33.5 -0.1
U40A Yellville 21.60 358 P P 13 15 34.5 +0.8
U40A Yellville 21.60 358 P P 13 15 33.8 0.0
baz=178,SNR=54
W52A Murphy 21.62 18 P P 13 15 36.0 +1.9
W52A Murphy 21.62 18 P P 13 15 35.2 +1.1
baz=202,SNR=28
X54A Belton 21.65 22 P P 13 15 35.3 +1.0
baz=206,SNR=42
GLAT Glass 21.65 6 P P 13 15 35.0 +0.7
Z58A St. Stephen 21.67 29 P P 13 15 35.7 +1.2
baz=214,SNR=21
WVT Waverly 21.71 9 P P 13 15 35.1 +0.2
WVT pmax pmax
comp=Z,128nm,0.6s
WVT Waverly 21.71 9 P P 13 15 35.1 +0.2
WVT IAmb IAmb 13 15 37.1
comp=Z,128nm,0.6s
WVT Waverly 21.71 9 P P 13 15 34.5 -0.4
baz=191
V49A McMinnville 21.73 14 P P 13 15 35.6 +0.5
baz=196,SNR=91
SOCV Socops 21.76 105 eP P 13 15 33.0 -2.7
CPCT Cooper Cave 21.78 17 P P 13 15 37.2 +1.5
CPCT IAmb IAmb 13 15 55.1
comp=Z,378nm,0.9s
SDV Santo Domingo 21.78 103 P P 13 15 33.6 -2.5
comp=Z,166nm,0.6s,baz=294,slow=7.1,SNR=23
SDV PcP PcP 13 19 34.8 +0.7
comp=Z,40nm,0.8s,baz=317,slow=4.6,SNR=6.1
SDV Santo Domingo 21.78 103 eP P 13 15 33.5 -2.7
SDV Santo Domingo 21.78 103 eP P 13 15 33.0 -3.2
SDV Santo Domingo 21.78 103 P P 13 15 34.2 -2.0
SDV IAmb IAmb 13 15 38.7
comp=Z,183nm,0.7s
PENMO Penman 21.80 5 IAmb IAmb 13 15 39.1
comp=Z,597nm,1.1s
V50A Pikevile 21.83 15 P P 13 15 36.7 +0.5
baz=198,SNR=79
JSC Jenkinsville 21.84 25 P P 13 15 37.7 +1.3
JSC pmax pmax
comp=Z,207nm,1.0s
JSC Jenkinsville 21.84 25 P P 13 15 37.6 +1.3
JSC IAmb IAmb 13 15 46.3
comp=Z,207nm,1.0s
Z59A Georgetown, SC 21.85 30 P P 13 15 37.6 +1.1
baz=215,SNR=8.0
BG3 Lake Jocassee 21.85 21 P P 13 15 38.0 +1.5
BG3 IAmb IAmb 13 15 48.1
comp=Z,479nm,1.4s
X55A Gracelyn & Ava 21.86 24 P P 13 15 37.6 +1.0
baz=208,SNR=37
AMTX Amarillo 21.89 338 P P 13 15 37.9 +0.9
AMTX IAmb IAmb 13 15 41.8
comp=Z,309nm,1.1s
AMTX Amarillo 21.89 338 P P 13 15 37.7 +0.7
baz=154
MACC Macarena, Meta 21.91 123 iP P 13 15 38.5 +1.2
HICK Hickman 21.93 6 P P 13 15 37.4 +0.1
W53A Cullowhee 21.94 20 P P 13 15 38.6 +1.1
baz=203,SNR=38
CLTN Cedars of Leba 21.95 13 P P 13 15 38.2 +0.8
CLTN IAmb IAmb 13 15 39.9
comp=Z,194nm,0.8s
Y57A Sumter 21.98 27 P P 13 15 39.2 +1.4
Y57A IAmb IAmb 13 15 40.7
comp=Z,599nm,1.2s
Y57A Sumter 21.98 27 P P 13 15 38.8 +1.0
baz=211,SNR=33
PARMO Parma 22.00 5 P P 13 15 39.2 +1.2
PBMO Poplar Bluff 22.07 4 P P 13 15 38.7 0.0
PBMO IAmb IAmb 13 15 40.8
comp=Z,265nm,0.8s
PAULI Pauline 22.10 23 P P 13 15 40.4 +1.3
PAULI IAmb IAmb 13 15 49.7
comp=Z,709nm,1.4s
X56A White Oak 22.12 25 P P 13 15 40.4 +1.0
baz=209,SNR=58
DR12 Loma Pena Alta 22.14 76 P P 13 15 41.0 +1.2
V51A Loudon 22.16 17 P P 13 15 40.9 +1.1
V51A IAmb IAmb 13 15 59.5
comp=Z,321nm,0.8s
V51A Loudon 22.16 17 P P 13 15 40.3 +0.6
baz=200,SNR=79
TKL Tuckaleechee C 22.19 18 P P 13 15 41.5 +1.3
TKL pmax pmax
comp=Z,943nm,1.4s
TKL Tuckaleechee C 22.19 18 P P 13 15 41.0 +0.8
comp=Z,217nm,0.7s,baz=191,slow=12,SNR=213
TKL LR LR 13 25 46.6
comp=Z,4µm,19.1s,baz=206,slow=41
TKL Tuckaleechee C 22.19 18 P P 13 15 41.5 +1.3
W54A Cherokee Point 22.20 22 P P 13 15 41.5 +1.3
baz=206,SNR=88
Y58A Scranton 22.21 28 IAmb IAmb 13 15 50.7
comp=Z,412nm,0.8s
Y58A Scranton 22.21 28 P P 13 15 40.6 +0.3
baz=213,SNR=6.5
PTGC Puerto Gaitan, 22.26 116 eP P 13 15 39.3 -1.7
PTLC Puerto Leguiza 22.38 129 iP P 13 15 45.6 +3.3
MGMO Mountain Grove 22.39 360 P P 13 15 42.2 -0.1
V52A Sevierville 22.42 18 P P 13 15 43.7 +1.1
V52A IAmb IAmb 13 15 46.0
comp=Z,498nm,1.2s
V52A Sevierville 22.42 18 P P 13 15 43.4 +0.8
baz=202,SNR=69
U49A Red Boiling Sp 22.47 13 P P 13 15 43.2 +0.1
baz=196,SNR=234
BIRD Birdtown, Kers 22.49 26 P P 13 15 44.3 +1.0
BIRD IAmb IAmb 13 15 44.8
comp=Z,200nm,0.8s
X57A Johnson Farm, 22.49 27 P P 13 15 44.0 +0.6
baz=211
V53A Saluda 22.51 20 IAmb IAmb 13 15 54.6
comp=Z,527nm,1.3s
V53A Saluda 22.51 20 P P 13 15 44.7 +1.1
baz=204,SNR=75
KMSC Kings Mountain 22.57 24 IAmb IAmb 13 15 45.9
comp=Z,277nm,0.8s
KMSC Kings Mountain 22.57 24 P P 13 15 45.0 +0.8
baz=208,SNR=101
U50A Jamestown 22.60 15 P P 13 15 44.7 +0.2
baz=198,SNR=240
Y59A Loris 22.65 30 P P 13 15 45.4 +0.3
baz=215,SNR=6.5
GUVC San Jose del G 22.69 120 eP P 13 15 46.2 +0.5
U51A La Follette 22.79 17 P P 13 15 47.1 +0.6
baz=200,SNR=177
121A Cookes Peak, D 22.80 324 IAmb IAmb 13 15 51.6
comp=Z,529nm,1.0s
121A Cookes Peak, D 22.80 324 P P 13 15 49.5 +2.6
baz=138,SNR=223
W56A Indian Trail 22.86 25 P P 13 15 47.7 +0.5
baz=210,SNR=73
319A Douglas 22.89 319 IAmb IAmb 13 15 51.9
comp=Z,418nm,1.2s
X58A Rowland 22.90 28 IAmb IAmb 13 15 49.2
comp=Z,661nm,1.3s
X58A Rowland 22.90 28 P P 13 15 47.9 +0.3
baz=213,SNR=30
V54A Nebo 22.90 22 P P 13 15 48.4 +0.7
baz=206,SNR=51
Y60A Bolivia 22.98 31 IAmb IAmb 13 15 50.9
comp=Z,412nm,1.2s
Y60A Bolivia 22.98 31 P P 13 15 48.7 +0.3
baz=216
U52A Thorn Hill 23.00 18 P P 13 15 48.8 +0.2
baz=202,SNR=34
TZTN Tazewell 23.08 18 IAmb IAmb 13 15 52.4
comp=Z,440nm,1.1s
TZTN Tazewell 23.08 18 P P 13 15 49.7 +0.3
baz=201,SNR=48
T49A Edmonton 23.09 13 P P 13 15 49.2 -0.3
baz=196,SNR=220
W57A Gilead 23.12 26 IAmb IAmb 13 15 51.2
comp=Z,275nm,1.0s
W57A Gilead 23.12 26 P P 13 15 49.8 0.0
baz=211,SNR=37
T50A Nancy 23.18 15 P P 13 15 50.0 -0.3
baz=198,SNR=97
U53A Fall Branch 23.22 20 P P 13 15 50.9 +0.1
baz=204,SNR=37
V55A Taylorsville 23.24 23 IAmb IAmb 13 15 52.0
comp=Z,219nm,0.7s
V55A Taylorsville 23.24 23 P P 13 15 51.5 +0.5
baz=207,SNR=38
X59A McDuffie Farm, 23.26 29 P P 13 15 51.4 +0.4
baz=215,SNR=28
CCM Cathedral Cave 23.30 2 P P 13 15 50.5 -0.9
CCM pmax pmax
comp=Z,513nm,1.4s
CCM Cathedral Cave 23.30 2 P P 13 15 50.5 -0.9
CCM IAmb IAmb 13 15 53.0
comp=Z,513nm,1.4s
CCM Cathedral Cave 23.30 2 P P 13 15 50.2 -1.3
baz=182
W58A Raeford 23.34 27 P P 13 15 51.9 +0.1
baz=213,SNR=28
T51A Gray 23.36 17 P P 13 15 52.0 0.0
baz=200,SNR=88
ELOV Elorza 23.47 107 eP P 13 15 50.2 -3.1
V56A Mocksville 23.48 24 P P 13 15 53.3 +0.2
baz=209,SNR=52
TVZX PASSCAL Wareho 23.51 328 P P 13 15 56.6 +3.2
baz=142,SNR=46
Y22D IRIS PASSCAL I 23.51 328 P P 13 15 56.5 +2.9
baz=142
X60A Albert Glenn T 23.56 30 P P 13 15 53.7 -0.1
baz=216,SNR=19
U54A Nelsons Funny 23.62 21 IAmb IAmb 13 15 56.4
comp=Z,434nm,0.8s
U54A Nelsons Funny 23.62 21 P P 13 15 54.7 +0.2
baz=205,SNR=88
T52A Hallie 23.77 18 IAmb IAmb 13 15 57.0
comp=Z,376nm,1.1s
T52A Hallie 23.77 18 P P 13 15 55.9 +0.1
baz=202,SNR=43
T53A Wise 23.80 19 P P 13 15 56.0 0.0
baz=203,SNR=46
S49A Springfield 23.80 13 P P 13 15 55.3 -0.6
baz=196,SNR=145
W59A Clinton 23.82 29 P P 13 15 56.0 -0.2
baz=214,SNR=7.0
V57A Coltrane Farms 23.84 25 P P 13 15 56.6 +0.3
baz=210,SNR=101
U55A TA2, Sparta 23.88 22 P P 13 15 57.3 +0.5
baz=207,SNR=87
S50A Richmond 23.91 15 P P 13 15 57.0 0.0
baz=198,SNR=131
ANMO Albuquerque 23.97 330 ceP P 13 15 59.9 +2.2
ANMO pmax pmax
comp=Z,122nm,0.7s
ANMO Albuquerque 23.97 330 P P 13 16 00.2 +2.5
comp=Z,113nm,0.7s,baz=136,slow=12,SNR=420
ANMO PcP PcP 13 19 39.9 +1.7
comp=Z,20nm,0.9s,baz=103,slow=3.3,SNR=6.4
ANMO Albuquerque 23.97 330 P P 13 16 00.5 +2.8
ANMO Albuquerque 23.97 330 P P 13 15 60.0 +2.2
baz=144
U56A King 23.99 24 P P 13 15 58.7 +1.0
U56A King 23.99 24 P P 13 15 58.4 +0.7
baz=209,SNR=85
WCI Wyandotte Cave 24.02 11 P P 13 15 58.0 +0.1
WCI pmax pmax
comp=Z,879nm,0.9s
WCI Wyandotte Cave 24.02 11 P P 13 15 58.0 +0.1
WCI Wyandotte Cave 24.02 11 P P 13 15 57.6 -0.3
baz=194
V58A Windy Hill, Pi 24.04 27 IAmb IAmb 13 15 60.0
comp=Z,386nm,0.8s
V58A Windy Hill, Pi 24.04 27 P P 13 15 58.3 +0.2
baz=212,SNR=70
W60A Pink Hill 24.07 30 P P 13 15 58.5 +0.1
baz=216,SNR=13
S51A Beattyville 24.09 17 IAmb IAmb 13 16 15.1
comp=Z,766nm,1.4s
S51A Beattyville 24.09 17 P P 13 15 58.5 0.0
baz=200,SNR=48
CNNC Cliffs of the 24.14 29 P P 13 15 59.4 +0.4
baz=215,SNR=7.6
T54A Tazewell 24.19 21 P P 13 15 59.7 +0.1
baz=205,SNR=43
CRPR Cabo Rojo, PR 24.21 79 P P 13 15 57.4 -2.4
CRPR PcP PcP 13 19 39.0 +0.2
OLIL Olney 24.23 8 P P 13 15 59.8 0.0
S52A Salyersville 24.27 18 P P 13 16 00.4 +0.1
baz=201,SNR=40
R49A Shelbyville 24.31 13 P P 13 16 00.1 -0.5
R49A IAmb IAmb 13 16 15.9
comp=Z,450nm,1.0s
R49A Shelbyville 24.31 13 P P 13 15 59.9 -0.6
baz=196,SNR=126
V59A Middlesex 24.41 28 P P 13 16 01.4 -0.1
baz=214,SNR=26
TUC Tucson 24.46 319 P P 13 16 04.1 +2.0
TUC pmax pmax
comp=Z,68nm,0.9s
TUC Tucson 24.46 319 P P 13 16 04.1 +2.0
TUC Tucson 24.46 319 P P 13 16 04.7 +2.7
baz=132
U57A Blanch 24.49 25 P P 13 16 02.7 +0.5
baz=211,SNR=71
R50A Paris 24.50 15 P P 13 16 02.1 -0.2
R50A IAmb IAmb 13 16 03.2
comp=Z,245nm,0.8s
R50A Paris 24.50 15 P P 13 16 02.0 -0.3
baz=198,SNR=110
T55A Pulaski 24.52 22 P P 13 16 03.0 +0.4
baz=207,SNR=28
W61A Ground Anchor 24.53 31 P P 13 16 03.1 +0.5
baz=217
S53A Williamson 24.57 19 P P 13 16 03.0 0.0
baz=204,SNR=49
KSU1 Kansas State U 24.65 352 P P 13 16 02.5 -1.2
baz=169,SNR=57
OBIP Obispado Ponce 24.69 79 P P 13 16 02.2 -2.0
OBIP PcP 13 19 40.3 +0.4
R51A Hillsboro 24.71 16 P P 13 16 04.1 -0.1
baz=200,SNR=47
T56A Rocky Mt 24.73 24 P P 13 16 04.9 +0.5
baz=209,SNR=34
BLA Blacksburg 24.74 23 IAmb IAmb 13 16 24.4
comp=Z,196nm,0.9s
BLA Blacksburg 24.74 23 P P 13 16 04.8 +0.3
baz=208,SNR=30
ICMP Isla Caja de M 24.75 79 IAmb IAmb 13 16 06.2
comp=Z,261nm,0.7s
U58A Oxford 24.79 27 P P 13 16 04.8 -0.2
baz=212,SNR=17
Q48A North Vernon 24.81 12 P P 13 16 04.5 -0.6
baz=195,SNR=103
V60A Jim Taylor Roa 24.86 30 P P 13 16 05.8 +0.2
baz=216,SNR=25
BLO Bloomington 24.89 10 P P 13 16 06.1 +0.2
BLO pmax pmax
comp=Z,280nm,0.6s
BLO Bloomington 24.89 10 P P 13 16 06.1 +0.2
BLO IAmb IAmb 13 16 06.6
comp=Z,280nm,0.6s
T25A Trinidad 24.91 336 P P 13 16 09.2 +2.9
T25A Trinidad 24.91 336 P P 13 16 08.3 +2.0
baz=151,SNR=68
S54A Dingess, Beckl 24.95 21 IAmb IAmb 13 16 07.4
comp=Z,213nm,0.8s
S54A Dingess, Beckl 24.95 21 P P 13 16 06.4 0.0
baz=205,SNR=37
CBKS Cedar Bluff 24.97 346 P P 13 16 06.3 -0.4
baz=162,SNR=25
T57A Hurt 25.01 25 IAmb IAmb 13 16 07.9
comp=Z,139nm,0.7s
T57A Hurt 25.01 25 P P 13 16 07.3 +0.4
baz=210,SNR=28
R52A Catlettsburg 25.01 18 P P 13 16 06.8 -0.2
baz=202,SNR=22
Q49A Aurora 25.06 13 P P 13 16 06.7 -0.6
baz=196,SNR=62
U59A Littleton 25.10 28 P P 13 16 07.5 -0.2
baz=214,SNR=22
Q50A Georgetown 25.12 15 P P 13 16 07.3 -0.6
baz=198,SNR=66
SJG San Juan 25.13 79 P P 13 16 05.1 -3.1
comp=Z,46nm,0.9s,baz=259,slow=7.6,SNR=8.7
SJG PcP PcP 13 19 41.3 +0.4
comp=Z,126nm,0.8s,baz=284,slow=5.1,SNR=19
SJG ScP ScP 13 23 12.2 -1.4
comp=Z,11nm,0.7s,baz=254,slow=4.3,SNR=5.6
SJG San Juan 25.13 79 eP P 13 16 03.9 -4.3
GCPR Guaynabo City 25.20 78 P P 13 16 06.7 -2.2
GCPR PcP 13 19 41.1 +0.1
S55A Lewisburg 25.20 22 P P 13 16 08.9 +0.2
baz=207,SNR=24
R53A Hurricane 25.22 19 P P 13 16 09.1 +0.2
R53A IAmb IAmb 13 16 10.1
comp=Z,216nm,0.8s
R53A Hurricane 25.22 19 P P 13 16 08.9 0.0
baz=203,SNR=38
P46A Rosedale 25.22 9 P P 13 16 08.9 +0.1
V61A Roper 25.22 31 P P 13 16 10.0 +1.2
V61A Roper 25.22 31 P P 13 16 09.1 +0.2
baz=217,SNR=7.4
T58A Grand View Acr 25.26 26 P P 13 16 09.2 0.0
baz=212,SNR=24
P48A Milroy 25.38 12 P P 13 16 09.8 -0.4
P48A IAmb IAmb 13 16 10.6
comp=Z,412nm,0.8s
P48A Milroy 25.38 12 P P 13 16 09.4 -0.9
baz=195,SNR=117
R54A Victor 25.40 21 P P 13 16 10.4 -0.1
baz=206,SNR=22
Q51A Peebles 25.46 16 IAmb IAmb 13 16 12.2
comp=Z,438nm,0.9s
Q51A Peebles 25.46 16 P P 13 16 10.9 0.0
baz=200,SNR=98
S56A Natural Bridge 25.47 24 P P 13 16 11.4 +0.2
baz=205,SNR=29
U60A Pendleton 25.49 29 P P 13 16 11.5 +0.2
baz=215,SNR=22
214A Organ Pipe Nat 25.56 316 P P 13 16 14.7 +2.6
baz=128,SNR=32
ATAH Atahualpa 25.58 147 P P 13 16 14.8 +2.0
comp=Z,134nm,0.8s,baz=332,slow=6.5,SNR=81
ATAH PcP PcP 13 19 44.9 +2.5
comp=Z,11nm,0.7s,baz=357,slow=0.5,SNR=4.1
ATAH LR LR 13 24 58.2
comp=Z,425nm,19.6s,baz=324,slow=33
O44A Mansfield 25.58 6 IAmb IAmb 13 16 12.6
comp=Z,162nm,0.8s
Q52A Bidwell 25.70 18 P P 13 16 13.2 0.0
baz=202,SNR=83
T59A Double "B" Far 25.71 28 IAmb IAmb 13 16 14.6
comp=Z,263nm,1.1s
T59A Double "B" Far 25.71 28 P P 13 16 13.4 +0.1
baz=214,SNR=51
S57A Dark Hollow, R 25.79 24 P P 13 16 14.0 0.0
baz=210,SNR=27
R55A Marlinton 25.80 22 IAmb IAmb 13 16 15.7
comp=Z,287nm,0.9s
R55A Marlinton 25.80 22 P P 13 16 14.4 +0.3
baz=207,SNR=53
W18A Petrified Fore 25.80 325 IAmb IAmb 13 16 19.8
comp=Z,395nm,1.2s
W18A Petrified Fore 25.80 325 P P 13 16 17.4 +3.0
baz=138,SNR=148
Q53A Leroy 25.84 19 P P 13 16 14.5 +0.1
baz=204,SNR=40
SDCO Great Sand Dun 25.87 335 P P 13 16 16.7 +1.6
baz=149,SNR=43
P50A Jamestown 25.89 15 P P 13 16 14.2 -0.7
baz=198,SNR=64
HDIL Hopedale 25.90 5 IAmb IAmb 13 16 15.7
comp=Z,276nm,0.8s
HDIL Hopedale 25.90 5 P P 13 16 14.0 -1.0
baz=186
KSCO Kaye Shedlock' 25.95 341 IAmb IAmb 13 16 20.1
comp=Z,180nm,1.1s
KSCO Kaye Shedlock' 25.95 341 P P 13 16 16.2 +0.5
baz=156,SNR=20
P51A Williamsport 25.96 16 IAmb IAmb 13 16 17.3
comp=Z,155nm,0.7s
P51A Williamsport 25.96 16 P P 13 16 15.2 -0.3
baz=200,SNR=53
SFIN Lafayette 25.98 9 IAmb IAmb 13 16 16.1
comp=Z,292nm,0.8s
SFIN Lafayette 25.98 9 P P 13 16 14.6 -1.0
baz=191,SNR=85
S58A Poland Farm, P 26.03 26 P P 13 16 16.1 -0.1
baz=212,SNR=23
R56A Bull Pasture M 26.17 23 P P 13 16 18.0 +0.4
baz=208,SNR=22
Q54A Coxs Mills 26.17 20 IAmb IAmb 13 16 18.8
comp=Z,381nm,1.1s
Q54A Coxs Mills 26.17 20 P P 13 16 17.7 +0.2
baz=205,SNR=54
O48A Farmland 26.20 12 P P 13 16 16.7 -1.0
baz=195,SNR=85
T60A Surry 26.23 29 IAmb IAmb 13 16 19.2
comp=Z,372nm,1.1s
T60A Surry 26.23 29 P P 13 16 18.1 +0.2
baz=215,SNR=11
STVI Saint Thomas 26.28 78 IAmb IAmb 13 16 22.0
comp=Z,170nm,1.1s
O49A Covington 26.31 14 IAmb IAmb 13 16 19.9
comp=Z,276nm,1.1s
O49A Covington 26.31 14 P P 13 16 17.7 -1.0
baz=197,SNR=62
P52A Corning 26.36 18 P P 13 16 18.8 -0.4
baz=202,SNR=24
R58B Mineral 26.40 26 P P 13 16 19.6 +0.1
baz=212,SNR=26
R57A Stanardsville 26.42 25 P P 13 16 19.8 +0.1
baz=210,SNR=28
S22A 4UR Ranch, Cre 26.43 333 P P 13 16 22.2 +2.0
baz=146,SNR=82
O50A Cable 26.44 15 P P 13 16 19.0 -0.9
baz=198,SNR=54
Q55A Buckhannon 26.44 21 P P 13 16 19.9 0.0
baz=207,SNR=16
P53A Whipple 26.45 19 IAmb IAmb 13 16 21.4
comp=Z,321nm,1.1s
P53A Whipple 26.45 19 P P 13 16 20.2 +0.2
baz=204,SNR=46
S59A Mechanicsville 26.48 27 P P 13 16 20.5 +0.2
baz=213,SNR=13
R58A Rapidan 26.63 25 P P 13 16 21.8 +0.2
baz=211,SNR=20
ACSO Alum Creek Sta 26.68 16 P P 13 16 21.7 -0.3
baz=200,SNR=18
N47A Urbana 26.70 11 IAmb IAmb 13 16 22.2
comp=Z,257nm,0.9s
N47A Urbana 26.70 11 P P 13 16 20.7 -1.5
baz=194,SNR=51
O51A Pataskala 26.70 16 P P 13 16 21.8 -0.4
baz=200,SNR=45
S60A Water View 26.73 28 P P 13 16 22.7 +0.3
baz=215,SNR=12
MVCO Mesa Verde 26.77 330 P P 13 16 26.0 +2.9
MVCO IAmb IAmb 13 16 27.0
comp=Z,297nm,1.0s
MVCO Mesa Verde 26.77 330 P P 13 16 25.4 +2.3
baz=143,SNR=164
Q24A Divide 26.79 337 P P 13 16 25.0 +1.7
baz=151
N48A Decatur 26.81 12 P P 13 16 22.0 -1.2
baz=195,SNR=129
Q56A Snyder Ridge, 26.81 23 P P 13 16 23.9 +0.7
Q56A Snyder Ridge, 26.81 23 P P 13 16 23.8 +0.7

baz=208,SNR=24
CBN Corbin Frederi 26.82 26 IAmb IAmb 13 16 24.9
comp=Z,625nm,1.4s
CBN Corbin Frederi 26.82 26 P P **13 16 23.6 +0.4**
baz=213,SNR=23
P54A Burton 26.85 20 P P **13 16 23.6 0.0**
baz=205,SNR=61
M44A Midewin, Midew 26.85 7 P P **13 16 23.2 -0.3**
M44A IAmb IAmb 13 16 23.9
comp=Z,222nm,0.8s
O52A Adamsville 26.89 18 IAmb IAmb 13 16 24.8
comp=Z,246nm,0.8s
O52A Adamsville 26.89 18 P P **13 16 23.8 -0.1**
baz=202,SNR=61
R59A King George, V 26.93 27 P P **13 16 24.9 +0.6**
baz=213,SNR=31
P55A Reedsville 26.99 21 P P **13 16 24.7 -0.2**
baz=207,SNR=14
WUAZ Wupatki 27.02 324 P P **13 16 26.6 +1.3**
WUAZ Wupatki 27.02 324 P P **13 16 28.2 +2.9**
baz=135,SNR=119
N49A Columbus Grove 27.05 13 P P **13 16 24.1 -1.2**
baz=197,SNR=34
Q57A Strasburg 27.10 24 P P **13 16 26.2 +0.4**
baz=210,SNR=18
MCWV Mont Chateau 27.12 21 P P **13 16 25.8 -0.1**
baz=206,SNR=18
N50A Nevada 27.15 15 P P **13 16 25.4 -0.8**
baz=199,SNR=12
SCIA State Center 27.15 358 P P **13 16 26.2 0.0**
baz=177
M47A Cromwell 27.18 11 P P **13 16 25.3 -1.1**
baz=194,SNR=29
PCRV Puerto La Cruz 27.18 96 P P **13 16 23.5 -3.4**
comp=Z,8.3nm,0.6s,baz=250,slow=1.9,SNR=2.8
PCRV LR LR 13 27 50.5
comp=Z,1µm,21.8s,slow=38
O53A New Philadelph 27.20 18 P P **13 16 26.6 -0.1**
baz=203,SNR=39
R60A Leonardtown, M 27.22 27 P P **13 16 27.4 +0.5**
baz=214,SNR=7.6
PLCV Puerto La Cruz 27.23 96 P P **13 16 23.5 -3.8**
Q58A Fox Den Farm, 27.31 25 P P **13 16 27.8 +0.1**
baz=211,SNR=14
L42A Oliver, Polo 27.31 4 IAmb IAmb 13 16 28.9
comp=Z,293nm,1.0s
P56A Dayton Farm, R 27.34 23 P P **13 16 28.3 +0.3**
baz=209,SNR=20
O54A Avella 27.41 20 IAmb IAmb 13 16 29.2
comp=Z,202nm,0.8s
O54A Avella 27.41 20 P P **13 16 28.3 -0.3**
baz=205,SNR=48
M48A Edgerton 27.47 12 IAmb IAmb 13 16 29.3
comp=Z,226nm,0.8s
M48A Edgerton 27.47 12 P P **13 16 28.0 -1.1**
baz=195,SNR=31
N51A Ashland 27.49 16 P P **13 16 28.5 -0.8**
baz=200,SNR=21
GLA Glamis 27.58 316 P P **13 16 33.0 +2.7**
baz=126,SNR=13
N52A McGinn's Farm, 27.58 17 P P **13 16 29.7 -0.4**
baz=202,SNR=60
M49A Liberty Center 27.62 13 P P **13 16 29.3 -1.2**
baz=197,SNR=17
P57A Homestead Farm 27.64 24 IAmb IAmb 13 16 32.4
comp=Z,295nm,1.1s
P57A Homestead Farm 27.64 24 P P **13 16 31.4 +0.7**
baz=210,SNR=58
L44A Lake County Fo 27.64 7 P P **13 16 30.2 -0.4**
baz=188,SNR=16
Q59A Harwood 27.68 27 P P **13 16 31.4 +0.4**
baz=213,SNR=17
ISCO Idaho Springs 27.69 337 P P **13 16 32.5 +1.0**
baz=151,SNR=7.8
L46A Eue Claire 27.70 9 P P **13 16 29.7 -1.5**
baz=192,SNR=23
M50A Fremont 27.77 15 P P **13 16 30.8 -0.9**
baz=199,SNR=11
O55A Ligonier 27.79 21 P P **13 16 31.8 -0.3**
baz=207,SNR=34
Y12C Blythe 27.80 317 P P **13 16 34.9 +2.8**
baz=128,SNR=16
N53A Lisbon 27.83 19 IAmb IAmb 13 16 33.0
comp=Z,291nm,1.1s
N53A Lisbon 27.83 19 P P **13 16 32.0 -0.3**
baz=204,SNR=57
L47A Sherwood 27.85 11 P P **13 16 30.9 -1.6**
baz=194,SNR=41
M51A Elyria 27.93 16 P P **13 16 32.4 -0.8**
baz=201,SNR=12
P58A Pank, Wackersv 27.93 25 P P **13 16 33.4 +0.1**
baz=212,SNR=17
L48A N Adams 27.97 12 P P **13 16 32.2 -1.4**
baz=196,SNR=110
O56A Blue Knob Stat 28.11 22 IAmb IAmb 13 16 36.1
comp=Z,209nm,1.0s
O56A Blue Knob Stat 28.11 22 P P **13 16 34.9 0.0**
baz=208,SNR=43
Q60A Greensboro 28.15 28 P P **13 16 35.5 +0.3**
baz=215,SNR=9.7
SWSC Sam W. Stewart 28.18 314 P P **13 16 38.2 +2.7**
baz=125,SNR=13
U15A North Rim 28.18 324 IAmb IAmb 13 16 40.4
comp=Z,207nm,1.4s
JFWS Jewell Farm 28.19 3 P P **13 16 34.0 -1.5**
baz=184,SNR=18
IKP In-Ko-Pah, Jac 28.23 313 P P **13 16 39.1 +2.9**
baz=124,SNR=13
N54A Moraine State 28.24 20 IAmb IAmb 13 16 36.8
comp=Z,309nm,0.9s
N54A Moraine State 28.24 20 P P **13 16 35.6 -0.3**
baz=205,SNR=90
L49A Milan 28.27 13 P P **13 16 35.1 -1.1**
baz=197,SNR=31
M52A Chesterland 28.35 17 IAmb IAmb 13 16 37.5
comp=Z,241nm,0.8s
M52A Chesterland 28.35 17 P P **13 16 36.3 -0.6**
baz=202,SNR=44
BC3 Big Chuckawall 28.36 316 P P **13 16 40.1 +2.9**
baz=126,SNR=68
P59A Jarrettsville 28.40 26 P P **13 16 37.5 +0.1**
baz=213,SNR=37
N55A Marion Center 28.41 21 P P **13 16 37.1 -0.5**
baz=207,SNR=27
O57A Amberson 28.41 24 P P **13 16 37.5 -0.1**
baz=210,SNR=30
L50A Kingsville 28.43 15 P P **13 16 36.4 -1.3**
baz=199,SNR=14
K46A Dorr 28.44 10 P P **13 16 35.8 -1.9**
baz=193,SNR=13
IRM Iron Mountain 28.45 317 P P **13 16 40.9 +2.9**
baz=127,SNR=37
M53A WI Miller and 28.45 18 P P **13 16 37.5 -0.4**
baz=203,SNR=54
NEE2 Needles Airpor 28.49 319 P P **13 16 41.1 +2.9**
baz=129,SNR=7.8
K47A Vermontville 28.56 11 P P **13 16 37.1 -1.7**
baz=194,SNR=23
MONP2 Monument Peak 28.59 314 P P **13 16 42.1 +2.7**
baz=124,SNR=9.9
O58A Lewisberry 28.62 25 P P **13 16 39.3 -0.1**
baz=212,SNR=20
SSPA Standing Stone 28.69 23 P P **13 16 40.1 +0.2**
SSPA IAmb IAmb 13 16 41.0
comp=Z,139nm,0.8s
SSPA Standing Stone 28.69 23 P P **13 16 39.9 -0.1**
baz=209
MVL Millersville 28.76 26 P P **13 16 40.9 +0.4**
MVL IAmb IAmb 13 16 41.8
comp=Z,100nm,0.7s
N23A Red Feather La 28.77 338 P P **13 16 41.9 +0.9**
baz=151
N56A West Decatur 28.78 22 P P **13 16 40.6 -0.2**
baz=208,SNR=31
ALLY Alegheny Colle 28.81 19 IAmb IAmb 13 16 41.1
comp=Z,104nm,0.8s
M54A Oil Creek Stat 28.84 20 P P **13 16 40.9 -0.4**
baz=205,SNR=23
K48A Perry 28.86 12 P P **13 16 39.9 -1.6**
baz=196,SNR=37
P60A Greenville 28.91 27 IAmb IAmb 13 16 42.8
comp=Z,109nm,0.8s
P60A Greenville 28.91 27 P P **13 16 41.7 -0.2**
baz=214,SNR=17
N57A Milroy 28.92 23 P P **13 16 41.6 -0.4**
baz=210,SNR=33
BELC Belle Mtn. Jos 28.93 316 P P **13 16 45.1 +2.8**
baz=126,SNR=25

K49A Clarkson 28.98 13 P P **13 16 41.1 -1.5**
baz=197,SNR=18
TPFO Pinon Flats 29.01 315 P P **13 16 45.9 +2.9**
baz=125,SNR=18
PFO Pinyon Flats O 29.02 315 *i* P P **13 16 45.7 +2.6**
PFO pmax pmax
comp=Z,68nm,0.8s
PFO Pinyon Flats O 29.02 315 P P **13 16 45.9 +2.8**
comp=Z,11nm,0.9s,baz=120,slow=9.3,SNR=16
PFO PcP PcP **13 19 52.5 +2.5**
comp=Z,25nm,0.9s,baz=111,slow=2.4,SNR=12
PFO ScP ScP **13 23 27.5 +2.3**
comp=Z,4.4nm,1.0s,baz=153,slow=2.3,SNR=5.8
PFO Pinyon Flats O 29.02 315 P P **13 16 43.9 +0.8**
PFO PcP **13 19 51.7 +1.7**
PFO Pinyon Flats O 29.02 315 P P **13 16 45.9 +2.8**
baz=125,SNR=13
O20A White River Ci 29.03 334 P P **13 16 45.1 +1.9**
baz=146,SNR=19
L53A Girard 29.05 18 P P **13 16 42.5 -0.6**
baz=204,SNR=18
O59A Robesonia 29.09 26 P P **13 16 43.5 +0.1**
baz=213,SNR=16
M55A Ridgway 29.10 21 IAmb IAmb 13 16 44.3
comp=Z,134nm,0.9s
M55A Ridgway 29.10 21 P P **13 16 43.2 -0.5**
baz=207,SNR=44
J46A Howard City 29.11 10 P P **13 16 42.2 -1.4**
baz=193,SNR=9.0
J47A Sunmer 29.14 11 P P **13 16 42.4 -1.6**
baz=194,SNR=11
K50A Casco 29.17 14 P P **13 16 42.9 -1.3**
baz=199,SNR=5.0
GMRC Granite Mounta 29.17 318 P P **13 16 47.4 +2.9**
baz=128,SNR=58
P61A Hammonton 29.17 28 P P **13 16 44.3 +0.1**
baz=216
ECSD EROS Data Cent 29.22 353 P P **13 16 43.7 -0.9**
baz=171,SNR=20
ERPA Erie 29.28 19 IAmb IAmb 13 16 45.7
comp=Z,116nm,0.8s
ERPA Erie 29.28 19 P P **13 16 44.6 -0.6**
baz=204,SNR=23
N58A Sunbury 29.32 24 IAmb IAmb 13 16 46.5
comp=Z,140nm,1.2s
N58A Sunbury 29.32 24 P P **13 16 45.1 -0.4**
baz=211,SNR=20
M56A Emporium 29.32 22 IAmb IAmb 13 16 46.2
comp=Z,132nm,0.8s
M56A Emporium 29.32 22 P P **13 16 45.1 -0.4**
baz=208,SNR=41
K51A Iona Station 29.40 16 P P **13 16 45.1 -1.2**
baz=201,SNR=17
J48A Bridge Port 29.41 12 P P **13 16 44.4 -1.9**
baz=196,SNR=11
O60A Telford 29.42 27 P P **13 16 46.3 -0.1**
baz=214,SNR=9.9
MURC Murrieta 29.52 314 P P **13 16 50.3 +2.9**
baz=124
M57A Sunshine Farm, 29.58 23 IAmb IAmb 13 16 49.0
comp=Z,222nm,0.9s
M57A Sunshine Farm, 29.58 23 P P **13 16 47.8 -0.1**
baz=210,SNR=51
L54A Sinclairville 29.60 19 P P **13 16 47.5 -0.5**
baz=205,SNR=43
J49A Marlette 29.60 13 P P **13 16 46.5 -1.5**
baz=198,SNR=24
O61A Allentown 29.62 28 P P **13 16 48.2 0.0**
baz=216,SNR=6.9
HEC Hector,Ludlow 29.64 317 P P **13 16 51.6 +3.1**
baz=127,SNR=27
K52A Tillsonburg 29.68 17 P P **13 16 47.9 -0.7**
baz=202,SNR=28
I45A Fontain 29.69 9 P P **13 16 47.8 -1.0**
baz=191,SNR=12
BBRC Big Bear Solar 29.70 315 P P **13 16 52.6 +3.3**
baz=125,SNR=9.0
I46A Reed City 29.72 10 P P **13 16 47.3 -1.8**
baz=193,SNR=30
TUQ Turquoise Moun 29.74 318 P P **13 16 52.4 +2.9**
baz=128,SNR=45
N59A State Game Lan 29.77 25 P P **13 16 49.6 0.0**
baz=213,SNR=27
L55A Hinsdale 29.85 21 P P **13 16 49.8 -0.5**
baz=207,SNR=28
M58A Price's Panora 29.87 24 P P **13 16 50.3 -0.1**
baz=211,SNR=60
SHPR Sheep Range 29.93 321 IAmb IAmb 13 16 55.6
comp=Z,137nm,1.3s
I47A Gladwin 29.96 11 P P **13 16 49.4 -1.7**
baz=195,SNR=6.1
WVNY West Valley, N 29.99 20 IAmb IAmb 13 16 52.2
comp=Z,162nm,0.8s
N60A Cedar Hill Far 30.01 26 P P **13 16 51.5 -0.1**
baz=214,SNR=34
BRNJ Basking Ridge 30.09 27 IAmb IAmb 13 16 53.5
comp=Z,177nm,0.8s
L56A Greenwood 30.11 22 IAmb IAmb 13 16 53.3
comp=Z,107nm,0.8s
L56A Greenwood 30.11 22 P P **13 16 52.1 -0.5**
baz=205,SNR=32
K54A Basiliko Farm, 30.14 20 P P **13 16 52.3 -0.5**
baz=206,SNR=54
J52A Paris 30.17 17 P P **13 16 52.0 -1.0**
baz=203,SNR=64
BFSC Mount Baldy Ra 30.19 315 P P **13 16 56.1 +2.5**
baz=124,SNR=6.7
I49A Point Hope 30.23 13 IAmb IAmb 13 16 53.2
comp=Z,130nm,0.8s
I49A Point Hope 30.23 13 P P **13 16 52.0 -1.5**
baz=198,SNR=12
GSC Goldstone, Bar 30.23 317 P P **13 16 56.8 +2.9**
baz=127,SNR=15
SUSD Miller 30.24 350 P P **13 16 52.6 -1.0**
baz=167
L57A Andrews Acres 30.26 23 P P **13 16 53.5 -0.4**
baz=210,SNR=39
N61A South Mountain 30.27 27 P P **13 16 53.9 0.0**
baz=216,SNR=8.6
CIS Catalina Islan 30.27 313 P P **13 16 57.1 +3.0**
baz=122
I48A Sherman Twp 30.27 12 P P **13 16 52.4 -1.5**
baz=196,SNR=8.2
H45A Beulah 30.29 9 P P **13 16 53.0 -1.0**
baz=192
H46A Fife Lake 30.34 10 P P **13 16 52.6 -2.0**
baz=193,SNR=27
ODNJ Ogdensburg 30.40 27 IAmb IAmb 13 16 56.0
comp=Z,112nm,1.0s
M59A Waymart 30.43 25 P P **13 16 55.2 -0.2**
baz=213,SNR=31
K55A Perry 30.46 21 P P **13 16 55.1 -0.5**
baz=207,SNR=32
SPMN Marine on St. 30.46 359 P P **13 16 54.2 -1.4**
baz=178
NNA Nana 30.50 150 P P **13 16 57.2 +0.9**
comp=Z,35nm,1.1s,baz=321,slow=8.5,SNR=8.1
NNA PcP PcP **13 19 56.0 +2.0**
comp=Z,10.0nm,0.4s,baz=314,slow=6.3,SNR=5.2
NNA LR LR 13 27 56.1
comp=Z,207nm,21.0s,baz=322,slow=34
K22A Casper 30.52 339 P P **13 16 57.2 +0.8**
baz=152,SNR=19
I51A Listowel 30.54 16 P P **13 16 55.2 -1.1**
baz=201,SNR=34
BBSR BB Station 30.55 50 P P **13 16 56.3 -0.3**
BBSR IAmb IAmb 13 16 56.9
comp=Z,140nm,0.8s
H47A Mio 30.57 11 P P **13 16 55.1 -1.4**
baz=195,SNR=7.6
M60A Port Jervis 30.59 26 P P **13 16 56.4 -0.3**
baz=215,SNR=23
PAL Palisades 30.64 28 IAmb IAmb 13 16 57.9
comp=Z,126nm,0.8s
PAL Palisades 30.64 28 P P **13 16 56.8 -0.4**
baz=216,SNR=18
L58A Harry Jones Me 30.68 24 P P **13 16 57.4 -0.2**
baz=212,SNR=50
K56A Middlesex 30.69 22 P P **13 16 57.3 -0.4**
baz=209,SNR=57
MEDO Medina 30.72 20 IAmb IAmb 13 16 58.3
comp=Z,200nm,0.9s
GLMI Grayling 30.72 10 P P **13 16 56.6 -1.2**
baz=194,SNR=17
J54A Appleton 30.75 19 IAmb IAmb 13 16 58.6
comp=Z,152nm,0.9s
J54A Appleton 30.75 19 P P **13 16 57.6 -0.6**
baz=206,SNR=15

G45A Suttons Bay 30.76 9 P P **13 16 57.3 -0.9**
baz=192,SNR=14
BINY Binghamton 30.76 24 P P **13 16 58.1 -0.1**
baz=211,SNR=56
EDW2 Edwards Air Fo 30.78 315 P P **13 17 01.0 +2.4**
baz=124,SNR=11
H48A Harrisville 30.84 12 P P **13 16 57.7 -1.3**
baz=196,SNR=7.6
TPNV Topopah Spring 30.89 320 P P **13 17 03.2 +3.5**
baz=130,SNR=70
LRMC Laurel Mtn Rad 30.91 317 P P **13 17 02.7 +2.9**
baz=126,SNR=29
M61A Granite Spring 30.95 27 P P **13 16 59.7 -0.3**
baz=216,SNR=21
I53A Kortright Cn E 30.96 18 P P **13 16 58.8 -1.2**
baz=204,SNR=7.0
FURC Furnace Creek, 30.97 319 P P **13 17 03.4 +3.2**
baz=128,SNR=48
K57A Scipio Center 31.01 23 P P **13 16 59.9 -0.6**
baz=210,SNR=25
I52A Shelburne 31.01 17 P P **13 16 59.7 -0.8**
baz=203,SNR=9.9
J55A Hilton 31.02 20 IAmb IAmb 13 17 01.0
comp=Z,239nm,1.5s
J55A Hilton 31.02 20 P P **13 16 59.8 -0.7**
baz=207,SNR=8.7
WSPT Westport, CT 31.04 28 IAmb IAmb 13 17 01.4
comp=Z,232nm,1.3s
RSSD Black Hills 31.06 343 P P **13 17 01.8 +0.6**
RSSD pmax pmax
comp=Z,31nm,0.6s
RSSD Black Hills 31.06 343 P P **13 17 01.8 +0.6**
RSSD Black Hills 31.06 343 P P **13 17 01.6 +0.4**
baz=157
CTU Camp Tracy 31.07 330 P P **13 17 04.4 +3.2**
CTU PcP **13 19 56.9 +1.6**
MPMC Manual Prospec 31.13 318 P P **13 17 04.6 +2.7**
baz=127,SNR=71
L59A Walton 31.13 25 P P **13 17 01.8 +0.2**
L59A IAmb IAmb 13 17 02.6
comp=Z,147nm,0.8s
L59A Walton 31.13 25 P P **13 17 01.4 -0.2**
baz=213,SNR=37
G47A Hillman 31.19 11 P P **13 17 00.5 -1.5**
baz=195,SNR=7.0
DUG Dugway, Tooele 31.21 328 P P **13 17 05.1 +2.6**
baz=139,SNR=48
L60A Shokan 31.30 26 P P **13 17 02.8 -0.2**
baz=215,SNR=32
J56A Wolcott 31.36 22 P P **13 17 03.1 -0.4**
baz=209,SNR=41
K58A Earlville 31.37 24 P P **13 17 03.3 -0.4**
baz=212,SNR=86
F45A CMU Biological 31.41 9 P P **13 17 02.2 -1.7**
baz=192
R11A Troy Canyon, C 31.41 323 IAmb IAmb 13 17 08.9
comp=Z,105nm,1.1s
R11A Troy Canyon, C 31.41 323 P P **13 17 07.5 +3.3**
baz=132,SNR=106
KSCT Kent School, K 31.41 27 IAmb IAmb 13 17 04.9
comp=Z,197nm,0.8s
M62A Hamden 31.45 28 P P **13 17 03.5 -0.8**
baz=217,SNR=10
ARVC Arvin 31.49 315 P P **13 17 07.8 +3.0**
baz=124,SNR=10
ISA Isabella, Lake 31.55 316 P P **13 17 08.4 +3.0**
baz=125,SNR=21
GRAC Grapevine Rang 31.62 319 P P **13 17 09.4 +3.5**
baz=128,SNR=65
H52A Wyevale 31.62 17 P P **13 17 04.9 -0.9**
baz=203,SNR=28
K59A Cooperstown 31.70 25 P P **13 17 06.0 -0.5**
baz=213,SNR=24
HWUT Hardware Ranch 31.70 332 IAmb IAmb 13 17 10.2
comp=Z,154nm,1.4s
CWC Cottonwood Cre 31.74 318 P P **13 17 09.9 +2.8**
baz=126
L61A Hillsdale 1, H 31.76 27 P P **13 17 06.6 -0.5**
baz=216,SNR=13
BW06 Boulder Array 31.77 335 P P **13 17 07.9 +0.5**
baz=146,SNR=15
PDAR Pinedale Array 31.77 335 P P **13 17 08.2 +0.8**
comp=Z,16nm,0.9s,baz=137,slow=9.3,SNR=30
PDAR PcP PcP **13 19 57.9 +0.7**
comp=Z,12nm,0.5s,baz=135,slow=5.4,SNR=41
PDAR ScP ScP **13 23 36.9 +2.8**
comp=Z,2.7nm,0.7s,baz=141,slow=6.5,SNR=7.6
PDAR PKiKP PKiKP **13 27 25.9 -0.1**
comp=Z,1.8nm,0.7s,baz=129,slow=1.1,SNR=10.0
PDAR LR LR 13 33 01.8
comp=Z,604nm,21.2s,baz=150,slow=42
PDAR P3KPbc 13 48 43.5
comp=Z,0.5nm,0.6s,baz=355,slow=1.1,SNR=7.2
J57A Williamstown 31.79 23 IAmb IAmb 13 17 07.8
comp=Z,154nm,1.0s
J57A Williamstown 31.79 23 P P **13 17 06.5 -0.8**
baz=210,SNR=24
M63A Gales Ferry 31.82 29 P P **13 17 07.7 +0.2**
baz=219,SNR=21
E43A Lone Tree Farm 31.89 7 IAmb IAmb 13 17 09.1
comp=Z,105nm,1.2s
I55A Frankford 31.91 20 P P **13 17 07.7 -0.6**
baz=207,SNR=34
H53A Bobcaygeon 31.94 18 P P **13 17 08.0 -0.6**
baz=205,SNR=114
SADO Sadowa 31.95 18 IAmb IAmb 13 17 08.8
comp=Z,209nm,1.1s
K60A Five Rivers En 31.96 26 P P **13 17 08.4 -0.3**
baz=215
J58A Remsen 32.02 23 IAmb IAmb 13 17 10.0
comp=Z,75nm,0.8s
J58A Remsen 32.02 23 P P **13 17 08.7 -0.6**
baz=212,SNR=22
L62A Suffield 32.03 28 P P **13 17 09.0 -0.4**
baz=217,SNR=14
PKM Mcpherson Peak 32.04 314 P P **13 17 12.2 +2.4**
baz=122
VES Vestal, Richgr 32.06 316 P P **13 17 13.2 +3.4**
baz=124,SNR=58
F48A Evansville 32.07 13 P P **13 17 07.8 -1.9**
baz=197,SNR=5.4
F49A Sandfield 32.13 13 P P **13 17 08.3 -1.9**
baz=198,SNR=7.9
TRY Troy 32.15 26 IAmb IAmb 13 17 11.6
comp=Z,174nm,1.0s
TIN Tinemaha, Big 32.20 319 P P **13 17 14.5 +3.4**
baz=127,SNR=21
E44A Grand Marais A 32.27 8 P P **13 17 10.7 -0.7**
baz=191,SNR=9.8
K61A Williamstown 32.27 26 P P **13 17 11.7 +0.2**
baz=216,SNR=21
M64A Tiverton 32.33 30 P P **13 17 11.9 -0.2**
baz=220
L61B Northampton 32.35 27 P P **13 17 11.4 -0.9**
baz=217,SNR=8.8
QUA2 Belchertown 32.36 28 IAmb IAmb 13 17 13.4
comp=Z,98nm,0.7s
H55A Tweed 32.37 20 P P **13 17 11.5 -0.8**
baz=208,SNR=34
I57A Carthage 32.37 22 P P **13 17 11.4 -1.0**
baz=210,SNR=5.8
L63A North Scituate 32.38 29 P P **13 17 12.0 -0.5**
baz=219,SNR=8.7
J59A Piesco 32.41 24 IAmb IAmb 13 17 14.5
comp=Z,126nm,1.1s
J59A Piesco 32.41 24 P P **13 17 12.1 -0.7**
baz=213,SNR=23
AHID Auburn Hatcher 32.41 333 P P **13 17 15.1 +2.1**
AHID PcP **13 20 00.4 +1.5**
G53A Haliburton 32.43 18 P P **13 17 11.9 -1.0**
baz=205,SNR=56
BRYW Bryant College 32.46 29 IAmb IAmb 13 17 13.3
comp=Z,75nm,0.8s
E47A Iron Bridge 32.54 11 P P **13 17 12.7 -1.1**
baz=196,SNR=18
J60A Lant Hill Farm 32.67 26 P P **13 17 14.8 -0.3**
baz=215,SNR=23
K62A Royalston 32.72 28 P P **13 17 14.5 -1.0**
baz=217
H56A Elgin 32.72 21 P P **13 17 14.7 -0.8**
baz=209,SNR=36
E48A Lockeyer 32.79 13 P P **13 17 14.6 -1.4**
baz=198,SNR=7.0
REDW Red Top Meadow 32.79 334 IAmb IAmb 13 17 20.3
comp=Z,183nm,1.1s
F51A Arnstein 32.80 16 P P **13 17 14.3 -1.8**
baz=202,SNR=10
L64A Middleborough 32.80 30 P P **13 17 16.1 0.0**

baz=220,SNR=39
SNOW Snow King Moun 32.84 335 lAmb lAmb 13 17 20.1
comp=Z,111nm,0.7s
G54A Lake Saint Pet 32.84 18 P **P** **13 17 15.5 -0.9**
baz=205,SNR=53
PLVO Plevna 32.84 20 lAmb lAmb 13 17 16.7
comp=Z,130nm,0.9s
ELK Elko 32.87 327 P **P** **13 17 19.7 +2.6**
comp=Z,101nm,0.9s,baz=140,slow=6.8,SNR=384
ELK PcP **PcP** **13 20 01.5 +1.2**
comp=Z,38nm,0.9s,baz=107,slow=4.3,SNR=12
ELK ScP **ScP** **13 23 41.2 +3.3**
comp=Z,4.4nm,1.0s,baz=152,slow=5.0,SNR=4.3
ELK PKiKP **PKiKP** **13 27 27.3 +0.5**
comp=Z,1.5nm,0.6s,baz=56,slow=1.6,SNR=6.5
ELK Elko 32.87 327 P **P** **13 17 20.4 +3.2**
ELK lAmb lAmb 13 17 21.3
comp=Z,131nm,1.0s
ELK **PcP** **13 20 02.0 +1.7**
HRV Adam Dziewonsk 32.90 29 P **P** **13 17 16.7 -0.4**
HRV pmax pmax
comp=Z,93nm,0.9s
HRV Adam Dziewonsk 32.90 29 P **P** **13 17 16.7 -0.4**
HRV lAmb lAmb 13 17 17.8
comp=Z,93nm,0.9s
HRV Adam Dziewonsk 32.90 29 P **P** **13 17 16.6 -0.5**
baz=218
H57A Richville 32.92 22 P **P** **13 17 16.5 -0.6**
baz=210,SNR=29
MLAC Mammoth, Mammo 32.93 319 P **P** **13 17 21.2 +3.5**
baz=127
I59A Olmsteadville 32.94 25 P **P** **13 17 16.4 -0.9**
baz=214,SNR=20
NCB Newcomb 32.95 24 P **P** **13 17 17.0 -0.4**
NCB lAmb lAmb 13 17 18.1
comp=Z,100nm,0.9s
NV11 Mina Array Sit 33.00 321 P **P** **13 17 21.6 +3.5**
K63A Dunstable 33.06 28 P **P** **13 17 18.0 -0.4**
baz=218,SNR=12
MOOW Moose Ponds 33.07 335 P **P** **13 17 19.8 +1.1**
NVAR Mina Array Bea 33.09 321 P **P** **13 17 22.5 +3.5**
comp=Z,290nm,1.1s,baz=136,slow=8.3,SNR=677
NVAR PcP **PcP** **13 20 02.6 +1.7**
comp=Z,49nm,0.8s,baz=134,slow=1.8,SNR=28
NVAR ScP **ScP** **13 23 42.6 +3.9**
comp=Z,7.8nm,0.7s,baz=130,slow=3.9,SNR=20
NVAR PKiKP **PKiKP** **13 27 28.9 +2.0**
comp=Z,1.4nm,0.7s,baz=184,slow=2.8,SNR=9.0
NVAR LR LR 13 32 45.5
comp=Z,780nm,18.6s,baz=136,slow=40
NVAR P3KPbc 13 48 35.5
comp=Z,0.4nm,0.6s,baz=297,slow=4.0,SNR=4.0
MDPB Devils Postpil 33.09 319 lAmb lAmb 13 17 23.7
comp=Z,140nm,1.3s
J61A Chester 33.12 27 P **P** **13 17 18.6 -0.4**
baz=216,SNR=8.5
G55A Calabogie 33.14 20 P **P** **13 17 18.4 -0.7**
baz=208,SNR=62
EYMN Ely 33.18 1 P **P** **13 17 17.2 -2.2**
baz=181,SNR=11
I60A Shoreham 33.22 25 P **P** **13 17 19.2 -0.6**
baz=214,SNR=44
FLWY Flagg Ranch 33.32 335 P **P** **13 17 21.3 +0.3**
FLWY **PcP** **13 20 03.4 +1.9**
H58A Gabriels 33.34 24 P **P** **13 17 20.0 -0.9**
baz=213,SNR=28
RYN Ryan 33.34 321 P **P** **13 17 23.3 +2.1**
RYN lAmb lAmb 13 17 25.8
comp=Z,148nm,1.2s
ALGO Algonquin Park 33.35 18 P **P** **13 17 19.9 -1.0**
baz=205,SNR=60
KVN Kaiserville 33.35 322 P **P** **13 17 24.6 +3.3**
KVN pmax pmax
comp=Z,227nm,1.1s
KVN Kaiserville 33.35 322 P **P** **13 17 24.6 +3.3**
J62A Henniker 33.35 27 P **P** **13 17 20.6 -0.4**
baz=217,SNR=9.5
LONY Lake Ozonia 33.35 23 P **P** **13 17 20.3 -0.7**
baz=212,SNR=16
E51A G1948 Merrick 33.48 16 P **P** **13 17 21.0 -1.0**
baz=202,SNR=46
E52A Mattawa 33.48 17 P **P** **13 17 20.6 -1.4**
baz=204,SNR=18
H17A Grant Village 33.53 336 P **P** **13 17 25.2 +2.4**
baz=146,SNR=9.1
G57A Newington 33.62 22 P **P** **13 17 22.5 -0.8**
baz=211,SNR=28
RLMT Red Lodge 33.65 338 P **P** **13 17 24.5 +0.7**
baz=149,SNR=6.5
MDND Maddock 33.66 351 P **P** **13 17 22.8 -0.8**
baz=167,SNR=15
AGMN Agassiz Nation 33.67 355 P **P** **13 17 21.9 -1.8**
baz=173,SNR=18
H59A Cadyville 33.72 24 P **P** **13 17 23.3 -0.8**
baz=213,SNR=15
J63A Strafford 33.73 28 P **P** **13 17 23.9 -0.3**
baz=218,SNR=17
I61A Oroboro, Fairl 33.74 26 P **P** **13 17 23.9 -0.5**
baz=216,SNR=8.4
F55A Otter Lake 33.78 20 P **P** **13 17 23.8 -0.8**
baz=208,SNR=20
WAKR Walker 33.84 320 lAmb lAmb 13 17 30.4
comp=Z,134nm,1.2s
E53A Dumoine, Ponti 33.85 18 P **P** **13 17 24.2 -1.0**
baz=205
YMR Madison River 33.92 336 P **P** **13 17 28.5 +2.4**
YMR **PcP** **13 20 05.7 +2.6**
FRNY Flat Rock 33.92 24 lAmb lAmb 13 17 26.6
comp=Z,91nm,1.1s
D50A G1974 Best Tow 33.97 15 P **P** **13 17 24.7 -1.6**
baz=201,SNR=25
G58A Ormstown 34.00 23 P **P** **13 17 25.7 -0.9**
baz=212,SNR=14
D51A Lot 18 Range I 34.02 16 P **P** **13 17 25.3 -1.4**
baz=202,SNR=45
LAO LASA Array 34.03 343 P **P** **13 17 26.9 -0.1**
baz=155,SNR=18
E54A Lac Daplat, Po 34.04 19 P **P** **13 17 26.1 -0.9**
baz=206
H60A Morristown 34.05 25 P **P** **13 17 26.3 -0.7**
baz=215,SNR=18
I62A Tamworth 34.08 27 lAmb lAmb 13 17 28.1
comp=Z,59nm,0.8s
I62A Tamworth 34.08 27 P **P** **13 17 26.8 -0.5**
baz=218,SNR=12
LBNH Lisbon 34.11 26 P **P** **13 17 27.0 -0.5**
baz=216,SNR=7.4
G59A Clarenceville 34.28 24 P **P** **13 17 28.5 -0.5**
baz=214,SNR=6.6
PNTR Pine Nut 34.29 320 lAmb lAmb 13 17 34.1
comp=Z,173nm,1.0s
H61A Lyndonville 34.35 26 P **P** **13 17 29.1 -0.5**
baz=216,SNR=8.4
E55A Montcerf-Lytto 34.42 20 P **P** **13 17 29.3 -0.9**
baz=208,SNR=33
PAHR Pah Rah Range 34.54 321 lAmb lAmb 13 17 35.9
comp=Z,118nm,1.0s
I63A Otisfield 34.55 28 lAmb lAmb 13 17 32.2
comp=Z,130nm,1.1s
I63A Otisfield 34.55 28 P **P** **13 17 30.9 -0.4**
baz=218,SNR=18
G60A Masonville 34.64 25 P **P** **13 17 31.4 -0.6**
baz=215,SNR=20
F58A St-Lin Laurent 34.70 23 P **P** **13 17 31.5 -1.0**
baz=212
H62A Milan 34.71 27 P **P** **13 17 31.9 -0.8**
baz=217
E56A St. Veronique 34.84 21 P **P** **13 17 33.3 -0.6**
baz=210,SNR=75
I64A Boothbay 34.89 29 P **P** **13 17 33.8 -0.4**
baz=220
E57A Chemin Saint G 35.04 22 P **P** **13 17 34.8 -0.8**
baz=211,SNR=40
F59A Saint Guilaume 35.08 24 P **P** **13 17 35.0 -0.8**
baz=214,SNR=8.6
D55A Sainte-Anne-du 35.11 20 P **P** **13 17 35.4 -0.7**
baz=209,SNR=97
MFID Camas Ranch 35.11 329 lAmb lAmb 13 17 41.2
comp=Z,98nm,0.8s
G61A St-Isidore-de- 35.12 26 P **P** **13 17 35.8 -0.4**
baz=216,SNR=12
DGMT Dagmar 35.15 346 P **P** **13 17 36.4 0.0**
baz=159,SNR=20
DLMT Dillon 35.15 335 lAmb lAmb 13 17 41.4
comp=Z,104nm,1.2s
BEKR Beckworth 35.23 321 lAmb lAmb 13 17 41.9
comp=Z,128nm,1.0s
H63A New Sharon 35.27 28 P **P** **13 17 37.1 -0.4**
baz=219,SNR=8.2
E58A La Victoria 35.33 23 P **P** **13 17 37.3 -0.7**
baz=212,SNR=31
WVL Waterville 35.37 28 lAmb lAmb 13 17 39.3
comp=Z,53nm,0.8s
D56A ZEC Mazanza, M 35.38 21 P **P** **13 17 37.5 -1.0**
baz=210,SNR=63
VLDQ Val d'Or 35.48 17 lAmb lAmb 13 17 39.2
comp=Z,61nm,0.9s
G62A West of Eustis 35.49 27 lAmb lAmb 13 17 40.4
comp=Z,65nm,0.8s
G62A West of Eustis 35.49 27 P **P** **13 17 38.9 -0.6**
baz=218,SNR=20
F60A Warwick 35.51 24 P **P** **13 17 38.8 -0.8**
baz=215,SNR=44
ULM Lac du Bonnet 35.61 356 P **P** **13 17 38.0 -2.4**
comp=Z,12nm,0.8s,baz=175,slow=10.0,SNR=31
ULM PcP **PcP** **13 20 07.3 -0.3**
comp=Z,59nm,0.8s,baz=171,slow=3.7,SNR=13
ULM ScP **ScP** **13 23 47.8 +0.6**
comp=Z,31nm,0.9s,baz=198,slow=3.6,SNR=12
ULM LR LR 13 35 47.2
comp=Z,534nm,19.1s,baz=175,slow=42
ULM Lac du Bonnet 35.61 356 P **P** **13 17 38.2 -2.1**
H64A Troy 35.63 28 P **P** **13 17 40.2 -0.4**
baz=220,SNR=11
D57A Chemin Vers le 35.65 22 P **P** **13 17 40.0 -0.8**
baz=211,SNR=54
G63A Kingsbury 35.81 28 P **P** **13 17 41.7 -0.5**
baz=219,SNR=16
WVOR Wild Horse Val 35.88 326 P **P** **13 17 45.6 +2.6**
WVOR pmax pmax
comp=Z,225nm,1.1s
WVOR Wild Horse Val 35.88 326 P **P** **13 17 45.6 +2.6**
F61A St Evariste 35.90 25 P **P** **13 17 42.0 -0.9**
baz=216,SNR=7.6
E60A Ste Agathe de 36.03 25 P **P** **13 17 43.2 -0.8**
baz=215,SNR=31
PKME Peaks-Kenny Pk 36.08 28 P **P** **13 17 43.9 -0.5**
PKME lAmb lAmb 13 17 45.1
comp=Z,53nm,0.7s
PKME Peaks-Kenny Pk 36.08 28 P **P** **13 17 43.7 -0.7**
baz=219,SNR=15
D58A Chemin du LacG 36.08 22 P **P** **13 17 43.7 -0.7**
baz=212,SNR=39
H65A Eastbrook 36.13 29 P **P** **13 17 44.4 -0.4**
baz=221,SNR=8.2
F62A Pittston Farm, 36.27 26 P **P** **13 17 45.0 -1.1**
baz=218,SNR=7.3
G64A Maxfield 36.31 28 P **P** **13 17 45.6 -0.8**
baz=220,SNR=23
EGMT Eagleton 36.32 340 lAmb lAmb 13 17 47.9
comp=Z,52nm,0.6s
EGMT Eagleton 36.32 340 P **P** **13 17 47.2 +0.6**
baz=150,SNR=26
LATQ La Luque 36.36 22 P **P** **13 17 46.3 -0.5**
baz=212,SNR=25
O03E Paynes Creek 36.37 320 P **P** **13 17 49.0 +1.9**
baz=126,SNR=20
MOD Modoc Plateau 36.46 324 P **P** **13 17 48.9 +1.0**
MOD lAmb lAmb 13 17 51.3
comp=Z,229nm,1.4s
MOD **PcP** **13 20 12.5 +1.9**
LSQQ Lebel-sur-Quev 36.47 17 P **P** **13 17 46.6 -1.2**
baz=205
E61A La Etchemin 36.48 25 P **P** **13 17 46.9 -1.0**
baz=217
F63A Nahmakanta, Br 36.50 27 lAmb lAmb 13 17 48.4
comp=Z,43nm,0.6s
F63A Nahmakanta, Br 36.50 27 P **P** **13 17 47.1 -0.9**
baz=219,SNR=14
EMMW East Machias 36.52 30 lAmb lAmb 13 17 49.0
comp=Z,206nm,1.4s
H66A Whiting 36.64 30 P **P** **13 17 48.8 -0.4**
baz=223,SNR=12
D60A Saint Jean D'O 36.69 24 P **P** **13 17 48.7 -0.8**
baz=216,SNR=31
G65A Princeton 36.83 29 lAmb lAmb 13 17 51.6
comp=Z,110nm,0.8s
G65A Princeton 36.83 29 P **P** **13 17 50.5 -0.3**
baz=222,SNR=21
MSO Missoula 36.88 335 lAmb lAmb 13 17 55.0
comp=Z,94nm,1.1s
MSO Missoula 36.88 335 P **P** **13 17 52.5 +1.0**
baz=143,SNR=39
BMO Blue Mountains 36.89 330 lAmb lAmb 13 17 53.9
comp=Z,142nm,1.1s
O02D Mt. Diablo Mer 36.92 319 P **P** **13 17 53.1 +1.3**
baz=125,SNR=10
MATQ Matagami 36.93 16 P **P** **13 17 50.4 -1.2**
baz=204,SNR=95
F64A Sherman 36.96 28 P **P** **13 17 51.2 -0.8**
baz=220,SNR=10
SAML Samuel 37.06 128 P **P** **13 17 51.9 -1.2**
SAML pmax pmax
comp=Z,261nm,0.9s
SAML Samuel 37.06 128 *e*P **P** **13 17 51.8 -1.3**
SAML Samuel 37.06 128 P **P** **13 17 51.9 -1.2**
D61A St Aubert, Com 37.22 25 P **P** **13 17 53.6 -0.5**
baz=216,SNR=55
M04C Macdoel 37.29 322 P **P** **13 17 57.4 +2.4**
baz=128,SNR=33
N02D Trinity Center 37.33 321 P **P** **13 17 56.2 +1.0**
baz=126
E63A Oxbow 37.35 27 lAmb lAmb 13 17 56.0
comp=Z,109nm,1.2s
E63A Oxbow 37.35 27 P **P** **13 17 54.5 -0.7**
baz=220,SNR=22
D62A Allapoint, All 37.59 26 lAmb lAmb 13 17 59.0
comp=Z,146nm,1.3s
D62A Allapoint, All 37.59 26 P **P** **13 17 56.6 -0.7**
baz=218,SNR=31
E64A Brgewater 37.62 28 P **P** **13 17 56.8 -0.7**
baz=220,SNR=13
M02C Callahan 37.66 321 P **P** **13 17 58.8 +0.8**
baz=126,SNR=5.4
K04D Chiloquin, OR 37.76 323 P **P** **13 18 00.8 +1.9**
baz=129,SNR=7.4
JTMT Jette 37.76 335 lAmb lAmb 13 18 02.4
comp=Z,67nm,1.1s
YBH Yreka Blue Hor 37.78 322 P **P** **13 17 59.9 +0.9**
comp=Z,21nm,0.9s,baz=154,slow=5.2,SNR=20
YBH PcP **PcP** **13 20 15.1 +0.6**
comp=Z,15nm,0.8s,baz=76,slow=3.9,SNR=11
L04D Klamath Falls 37.83 322 P **P** **13 18 01.3 +1.8**
baz=128,SNR=23
J05D Fort Rock, OR 37.88 325 P **P** **13 18 02.0 +2.1**
baz=130,SNR=8.6
D63A Stockholm 37.97 27 P **P** **13 17 59.7 -0.7**
baz=220,SNR=31
J04D Umpqua Nationa 38.34 324 P **P** **13 18 07.0 +3.1**
baz=129,SNR=6.0
HAL Halifax 38.43 33 lAmb lAmb 13 18 05.3
comp=Z,150nm,1.1s
E09A Wood Farm, Sta 38.50 331 lAmb lAmb 13 18 07.7
comp=Z,88nm,0.8s
L02E Cave Junction 38.56 321 P **P** **13 18 07.6 +2.1**
baz=126
I05D Terrebonne, OR 38.62 326 P **P** **13 18 07.9 +1.9**
baz=131,SNR=16
LMN Caledonia Moun 38.64 31 lAmb lAmb 13 18 06.5
comp=Z,148nm,1.1s
LPAZ La Paz 38.82 142 P **P** **13 18 06.6 -2.0**
LPAZ 13 20 21.1
LPAZ pmax pmax
comp=Z,19nm,0.9s
LPAZ La Paz 38.82 142 P **P** **13 18 08.8 +0.2**
comp=Z,16nm,0.7s,baz=332,slow=6.5,SNR=27
LPAZ PcP **PcP** **13 20 20.6 +1.9**
comp=Z,11nm,0.5s,baz=348,slow=3.4,SNR=14
LPAZ ScP **S** **13 24 04.4 +2.7**
comp=Z,1.9nm,0.4s,baz=23,slow=4.3,SNR=6.0
LPAZ LR LR 13 32 43.4
comp=Z,479nm,21.5s,baz=320,slow=34
LPAZ La Paz 38.82 142 *e*P **P** **13 18 08.9 +0.2**
LPAZ *e*pP **pP** **13 18 27.8 +1.1**
LPAZ La Paz 38.82 142 P **P** **13 18 06.6 -2.0**
LPAZ **PcP** **13 20 21.1 +2.4**
I04A Tendick Farm, 38.86 324 P **P** **13 18 09.6 +1.5**
baz=129,SNR=18
K02D Willamette Mer 38.92 322 P **P** **13 18 10.4 +1.8**
baz=126
BATG Bathurst New B 39.07 28 lAmb lAmb 13 18 10.2
comp=Z,68nm,1.1s
G05D Wamic, OR 39.20 327 P **P** **13 18 13.3 +2.4**
baz=132,SNR=17
I03D Drain, OR 39.34 324 P **P** **13 18 13.8 +1.9**
baz=128,SNR=18
NEW Newport 39.35 334 P **P** **13 18 12.9 +0.8**
comp=Z,31nm,1.0s,baz=139,slow=9.0,SNR=37
NEW PcP **PcP** **13 20 19.8 +0.6**
comp=Z,63nm,1.1s,baz=81,slow=2.4,SNR=15
NEW PKiKP **PKiKP** **13 27 31.0 -0.4**
comp=Z,1.4nm,0.6s,baz=199,slow=2.8,SNR=4.1
NEW Newport 39.35 334 P **P** **13 18 13.0 +1.0**
baz=140,SNR=30
J01E Myrtle Point 39.35 323 P **P** **13 18 14.5 +2.5**
baz=126,SNR=15
E07A Sunnyside 39.36 330 lAmb lAmb 13 18 14.2
comp=Z,56nm,0.7s
H04D Lebanon 39.50 325 P **P** **13 18 14.6 +1.3**
baz=129,SNR=12
F05D White Salmon 39.70 328 P **P** **13 18 17.8 +2.8**
baz=132,SNR=23
I02D Swisshome 39.87 324 P **P** **13 18 19.2 +2.9**
baz=127,SNR=6.1
MDP Montagnes des 39.96 100 ScP **ScP** **13 24 05.8 +1.4**
comp=Z,30nm,0.9s,baz=322,slow=3.5,SNR=6.4
GBN Guysborough 40.05 34 P **P** **13 18 17.4 -0.3**
GBN lAmb lAmb 13 18 18.3
comp=Z,162nm,1.0s
G03D McMinnville, O 40.23 326 P **P** **13 18 21.5 +2.2**
baz=129,SNR=7.2
MNMC Minye Minye 40.25 146 lAmb lAmb 13 18 22.3
comp=Z,108nm,0.9s
B08A Colville Reser 40.40 332 P **P** **13 18 22.2 +1.5**
LON Longmire 40.46 328 P **P** **13 18 23.6 +2.2**
LON **PcP** **13 20 24.2 +1.4**
F04D Rainier, OR 40.65 327 P **P** **13 18 25.1 +2.4**
baz=130,SNR=11
FFC Flin Flon 40.70 351 P **P** **13 18 22.4 -0.7**
FFC pmax pmax
comp=Z,11nm,0.8s
FFC Flin Flon 40.70 351 P **P** **13 18 22.4 -0.7**
E04D Cinebar 40.72 328 P **P** **13 18 25.2 +1.8**
baz=131,SNR=7.1
PB11 IPOC Station P 40.73 147 P **P** **13 18 24.2 +0.3**
C06D Leavenworth 40.82 330 P **P** **13 18 26.1 +1.9**
baz=134
D04E Lakebay 41.24 328 P **P** **13 18 29.6 +2.0**
baz=132
B05A Bryant 41.64 330 P **P** **13 18 31.7 +0.8**
baz=133,SNR=16
D03D Eldon 41.64 328 P **P** **13 18 32.3 +1.4**
baz=131,SNR=18
A04D Lummi Island 42.24 330 P **P** **13 18 37.4 +1.6**
baz=133,SNR=9.8
SIV San Ignacio 43.23 134 P **P** **13 18 43.9 -0.2**
comp=Z,36nm,0.6s,baz=310,slow=7.8,SNR=185
SIV PcP **PcP** **13 20 34.0 +1.6**
comp=Z,52nm,0.7s,baz=314,slow=3.1,SNR=16
LVC Limon Verde 43.47 148 P **P** **13 18 47.3 +0.9**
comp=Z,38nm,1.1s,baz=322,slow=5.4,SNR=19
LVC PcP **PcP** **13 20 36.9 +3.4**
comp=Z,20nm,0.6s,baz=297,slow=4.2,SNR=11
LVC Limon Verde 43.47 148 *e*P **P** **13 18 47.5 +1.2**
LVC *e*pP **pP** **13 19 06.2 +1.6**
CLDB Colider 44.04 123 *e*P **P** **13 18 47.8 -3.0**
CLDB *e*pP **pP** **13 19 07.8 -1.3**
DRLN Deer Lake 44.59 32 P **P** **13 18 53.2 -1.5**
DRLN lAmb lAmb 13 18 54.4
comp=Z,248nm,1.4s
SCHQ Schefferville 44.63 21 P **P** **13 18 53.4 -1.6**
comp=Z,80nm,0.9s,baz=218,slow=6.3,SNR=58
SCHQ PcP **PcP** **13 20 34.8 -1.7**
comp=Z,19nm,0.8s,baz=209,slow=3.2,SNR=3.1
SCHQ LR LR 13 38 32.8
comp=Z,3µm,19.8s,baz=223,slow=38
SCHQ Schefferville 44.63 21 P **P** **13 18 53.3 -1.6**
SCHQ lAmb lAmb 13 18 54.6
comp=Z,153nm,1.1s
SCHQ **PcP** **13 20 35.1 -1.4**
RPN Rapa Nui 44.79 202 P **P** **13 18 57.5 +1.0**
comp=Z,206nm,1.0s,baz=332,slow=6.8,SNR=8.0
GO02 Mina Guanaco 45.27 151 lAmb lAmb 13 19 02.6
comp=Z,99nm,1.1s
AZAP Zapla 46.82 145 *e*P **P** **13 19 13.1 +0.3**
AZAP lAmb lAmb 13 19 34.1
comp=Z,106nm,1.3s
SLA San Lorenzo 46.98 146 *e*P **P** **13 19 14.2 +0.2**
SLA lAmb lAmb 13 19 35.0
comp=Z,74nm,1.2s
SALV Santo Antonio 47.09 129 *e*P **P** **13 19 13.6 -1.1**
BBB Bella Bella 47.13 330 P **P** **13 19 15.6 +1.0**
comp=Z,41nm,0.9s,baz=111,slow=6.7,SNR=7.9
BBB Bella Bella 47.13 330 lAmb lAmb 13 19 18.5
comp=Z,117nm,1.1s
AHML Horco Molle 48.73 148 *e*P **P** **13 19 27.4 0.0**
AHML lAmb lAmb 13 19 47.8
comp=Z,99nm,1.2s
PP1B Ponte de Pedra 48.75 130 *e*P **P** **13 19 27.2 -0.4**
VCA Vinchina 48.96 152 *e*P **P** **13 19 30.5 +1.3**
VCA lAmb lAmb 13 19 52.7
comp=Z,111nm,1.4s
VCA lAmb lAmb 13 19 52.8
comp=Z,116nm,1.4s
AROD Rodeo 49.63 154 *e*P **P** **13 19 35.8 +1.4**
CYA Choya 49.85 149 *e*P **P** **13 19 36.0 +0.1**
CYA lAmb lAmb 13 19 58.3
comp=Z,116nm,1.3s
CYA lAmb lAmb 13 19 58.4
comp=Z,126nm,1.3s
SMTB Santa Maria do 49.95 115 *e*P **P** **13 19 34.6 -2.2**
ARAG Araguaiana, MT 49.97 126 *e*P **P** **13 19 35.2 -1.7**
AQDB Aquidauana 50.00 133 *e*P **P** **13 19 36.2 -0.8**
ACLC CERRO LA CRUZ 50.12 151 *e*P **P** **13 19 38.3 +0.2**
ACLC lAmb lAmb 13 20 16.2
ACCO Cerro Coronel 50.17 154 *e*P **P** **13 19 39.3 +0.8**
ACCO lAmb lAmb 13 19 40.1
comp=Z,21700µm,63.3s
YKA Yellowknife Ar 50.35 347 P **P** **13 19 38.8 -0.3**
comp=Z,45nm,0.5s,baz=151,slow=7.3,SNR=1487
YKA PcP **PcP** **13 20 57.0 +0.4**
comp=Z,18nm,0.7s,baz=149,slow=3.4,SNR=14
YKA ScP **ScP** **13 24 46.8 +0.7**
comp=Z,15nm,1.1s,baz=145,slow=4.2,SNR=14
YKA PKPPKP **P'P'df** **13 50 25.4 -3.6**
comp=Z,0.7nm,1.1s,baz=352,slow=2.4,SNR=3.7
YKA P4KPbc 13 57 10.0
comp=Z,0.9nm,0.6s,baz=149,slow=4.8,SNR=21
AMOG MOGNA 50.72 154 *e*P **P** **13 19 42.6 +0.3**
PEXB Peixe 50.90 119 *e*P **P** **13 19 42.3 -1.7**
C2SB Chapadao do Su 50.99 129 *e*P **P** **13 19 44.5 -0.1**
RTLL Cerro Villicun 51.06 154 *e*P **P** **13 19 45.1 +0.2**
RTLL *e*P **P** **13 19 45.3 +0.4**
RTLL lAmb lAmb 13 19 46.3
comp=E,224nm,0.9s
RTLL lAmb lAmb 13 20 07.9
comp=Z,150nm,1.1s
RTLS Leoncito 51.13 155 *e*P **P** **13 19 46.7 +1.0**
RTLS lAmb lAmb 13 19 47.5
comp=Z,80nm,0.9s
APLL PUNTA DE LOS L 51.13 151 *e*P **P** **13 19 45.3 -0.2**
APLL lAmb lAmb 13 20 06.3
comp=Z,135nm,1.1s
CFA Coronel Fontan 51.40 154 P **P** **13 19 47.9 +0.4**
comp=Z,30nm,0.7s,baz=336,slow=7.0,SNR=58
CFA PcP **PcP** **13 21 04.2 +3.1**
comp=Z,15nm,0.7s,baz=290,slow=2.5,SNR=5.8
CFA Coronel Fontan 51.40 154 *e*P **P** **13 19 47.8 +0.3**
RTCV Cerro Valdivia 51.49 154 *e*P **P** **13 19 48.9 +0.7**
ACAN Cantantal 52.43 153 *e*P **P** **13 19 55.4 +0.3**
TCA Tanti 52.83 150 *e*P **P** **13 19 57.8 -0.4**
TCA lAmb lAmb 13 20 18.2
comp=Z,148nm,1.0s
CPUP Villa Florida 52.96 140 P **P** **13 19 57.8 -1.2**
comp=Z,24nm,0.9s,baz=332,slow=8.1,SNR=18
CPUP PcP **PcP** **13 21 08.3 +1.3**
comp=Z,17nm,1.0s,baz=329,slow=4.6,SNR=6.0
CPUP LR LR 13 44 12.8
comp=Z,241nm,18.3s,baz=322,slow=38
CPUP Villa Florida 52.96 140 *e*P **P** **13 19 58.3 -0.8**
BDFB Brasilia 52.97 123 P **P** **13 19 58.6 -0.9**
comp=Z,130nm,0.9s,baz=294,slow=9.7,SNR=102
BDFB PcP **PcP** **13 21 08.3 +0.9**
comp=Z,26nm,0.7s,baz=216,slow=3.7,SNR=4.7
BDFB LR LR 13 43 12.2
comp=Z,522nm,20.0s,baz=304,slow=37
GO05 Huala 52.99 159 lAmb lAmb 13 20 00.2
comp=Z,94nm,0.9s
TAOE Nuku Hiva Isla 53.06 247 *e*S S 13 27 41.5 +16
comp=Z,457nm,30.2s
TAOE *e*LR LR 13 35 04.0
comp=Z,3µm,29.1s

TAOE Nuku Hiva Isla 53.06 247 *e*T T 14 15 55.6
comp=Z,35nm,0.2s
MRA San Martin 53.21 152 *e*P **P** **13 20 00.6 -0.3**
MRA IAmb IAmb 13 20 21.0
comp=Z,80nm,1.0s
ITRB Iturama 53.42 129 *e*P **P** **13 20 01.9 -0.7**
NBPS Pedro II - PI 53.66 107 *e*P **P** **13 20 01.6 -3.0**
TRCB Terra Rica 53.67 133 *e*P **P** **13 20 03.1 -1.2**
JIS Juneau Island 53.70 334 IAmb IAmb 13 20 07.7
comp=Z,137nm,1.2s
PCMB Pacaembu 53.90 131 *e*P **P** **13 20 04.5 -1.6**
BESE Bessie Mountai 54.07 334 IAmb IAmb 13 20 10.4
comp=Z,180nm,1.4s
IPMB Ipameri, GO 54.09 125 *e*P **P** **13 20 06.0 -1.6**
NBMO Morrinhos-CE 54.58 105 *e*P **P** **13 20 09.4 -1.7**
SKAG Skagway 54.79 335 IAmb IAmb 13 20 14.6
comp=Z,64nm,1.1s
PTGB Pitanga 55.31 135 *e*P **P** **13 20 14.5 -1.8**
PTGB *e*pP **pP** **13 20 35.6 +0.3**
WHY Whitehorse 55.32 336 IAmb IAmb 13 20 18.6
comp=Z,104nm,1.0s
BB19B Bebedouro 55.61 129 *e*P **P** **13 20 17.7 -0.8**
BB19B *e*pP **pP** **13 20 38.5 +1.0**
JANB Januaria 55.73 120 *e*P **P** **13 20 18.0 -1.4**
PMNB Patos De Minas 55.80 125 *e*P **P** **13 20 18.6 -1.4**
NBPB Pedra_Branca-C 55.81 107 *e*P **P** **13 20 18.6 -1.4**
ITQB Itaqui 55.81 142 *e*P **P** **13 20 19.3 -0.4**
FRTB Fartura 56.21 132 *e*P **P** **13 20 21.2 -1.5**
FRTB *e*pP **pP** **13 20 42.2 +0.5**
NBCL Cascavel-CE 56.53 105 *e*P **P** **13 20 23.2 -2.0**
ITAB Concordia 56.92 137 *e*P **P** **13 20 27.3 -0.4**
RCLB Rio Claro- Sao 57.15 129 *e*P **P** **13 20 28.7 -0.7**
RCLB *e*pP **pP** **13 20 49.3 +0.8**
NBMA Muriti-CE 57.24 109 *e*P **P** **13 20 27.9 -2.4**
NBPN Ponto Novo - B 57.35 113 *e*P **P** **13 20 28.6 -2.4**
VAO Valinhos 57.91 130 *e*P **P** **13 20 34.1 -0.7**
SPB Sao Paulo 57.91 130 *e*P **P** **13 20 34.4 -0.3**
SPB *e*pP **pP** **13 20 54.7 +0.9**
NBPA Parau_RN 58.17 106 *e*P **P** **13 20 33.9 -2.8**
C36M Paulatuk 58.22 347 P **P** **13 20 35.5 -0.7**
baz=143,SNR=18
CPSB Cacapava Do Su 58.26 141 *e*P **P** **13 20 36.3 -0.7**
BSCB Bom Sucesso 58.45 126 *e*P **P** **13 20 38.3 -0.3**
NBTA Tacaratu-PE 58.56 110 *e*P **P** **13 20 37.3 -2.2**
PLCA Paso Flores 58.64 161 P **P** **13 20 39.7 +0.2**
PLCA pmax pmax
comp=Z,132nm,1.2s
PLCA Paso Flores 58.64 161 P **P** **13 20 39.6 0.0**
comp=Z,79nm,1.1s,baz=0.9,slow=7.6,SNR=76
PLCA LR LR 13 41 51.5
comp=Z,483nm,18.5s,baz=2.5,slow=32
PLCA PKP2bc 13 50 29.0
comp=Z,1.8nm,0.9s,baz=202,slow=4.4,SNR=4.4
PLCA Paso Flores 58.64 161 *e*P **P** **13 20 39.7 +0.2**
PLCA *e*pP **pP** **13 20 59.8 +1.1**
PLCA Paso Flores 58.64 161 P **P** **13 20 39.7 +0.2**
SFJD Kangerlussuaq 58.91 18 *e*P **P** **13 20 38.5 -2.4**
SFJD Kangerlussuaq 58.91 18 *i* P **P** **13 20 38.5 -2.4**
NBLI Livramento-PB 58.91 108 *e*P **P** **13 20 40.3 -1.6**
DAWY Dawson 59.02 338 IAmb IAmb 13 20 43.5
comp=Z,58nm,0.7s
PLTB Pedras Altas 59.12 142 *e*P **P** **13 20 42.5 -0.5**
CNLB Canela 59.15 138 *e*P **P** **13 20 43.2 0.0**
CNLB *e*pP **pP** **13 21 03.8 +1.4**
RCBR Riachuelo 59.32 106 P **P** **13 20 42.4 -2.4**
comp=Z,117nm,0.9s,baz=270,slow=5.3,SNR=4.7
RCBR Riachuelo 59.32 106 *e*P **P** **13 20 42.6 -2.1**
RCBR Riachuelo 59.32 106 IAmb IAmb 13 20 45.7
comp=Z,154nm,1.0s
EPYK Eagle Plains 59.46 341 IAmb IAmb 13 20 46.9
comp=Z,98nm,1.1s
EPYK Eagle Plains 59.46 341 P **P** **13 20 45.7 +0.8**
baz=128
NBLA Lagarto - SE 59.56 112 *e*P **P** **13 20 43.7 -2.7**
INK Inuvik 59.77 343 P **P** **13 20 47.0 +0.1**
INK Inuvik 59.77 343 P **P** **13 20 47.0 +0.1**
comp=Z,63nm,0.5s,baz=128,slow=7.2,SNR=301
INK ScP **ScP** **13 25 28.4 +1.1**
comp=Z,12nm,1.1s,baz=116,slow=8.1,SNR=3.3
NBIT Itapeh - BA 59.81 117 *e*P **P** **13 20 46.9 -1.1**
ESAR Angra dos Reis 59.83 128 *e*P **P** **13 20 47.0 -1.0**
RES Resolute Bay 60.03 359 P **P** **13 20 47.2 -1.4**
comp=Z,10nm,0.5s,baz=180,slow=10.0,SNR=36
EGAK Eagle 60.05 338 P **P** **13 20 49.5 +0.7**
MENT Mentasta 60.08 336 IAmb IAmb 13 20 51.3
comp=Z,66nm,0.8s
NBPV Pedro Velho 60.10 106 *e*P **P** **13 20 48.3 -1.7**
SJMB Sao Joao De Ma 60.13 122 *e*P **P** **13 20 49.5 -0.7**
VAS01 Vassouras-RJ 60.19 127 *e*P **P** **13 20 48.9 -1.6**
OGAUY Aigu 60.33 145 *e*P **P** **13 20 53.6 +2.4**
NBAN Anadia - AL 60.40 110 *e*P **P** **13 20 50.0 -2.1**
BSFB Barra de Sao F 60.47 122 *e*P **P** **13 20 51.9 -0.5**
GLI Glacier Island 60.58 333 IAmb IAmb 13 20 55.9
comp=Z,86nm,0.8s
NBRF Rio Formoso - 61.07 109 *e*P **P** **13 20 53.9 -2.8**
SEW Seward 61.35 331 P **P** **13 20 58.7 +0.9**
DHY Denali Highway 61.63 335 IAmb IAmb 13 21 01.7
comp=Z,81nm,1.2s
HDA Harding Lake 62.04 336 P **P** **13 21 03.2 +0.8**
baz=116,SNR=46
KDAK Kodiak Island 62.09 328 P **P** **13 21 04.5 +1.7**
KDAK pmax pmax
comp=Z,141nm,1.0s
KDAK Kodiak Island 62.09 328 P **P** **13 21 04.3 +1.5**
comp=Z,71nm,0.6s,baz=126,slow=1.7,SNR=114
KDAK PcP **PcP** **13 21 44.0 +1.6**
comp=Z,23nm,0.8s,baz=150,slow=3.2,SNR=4.3
KDAK Kodiak Island 62.09 328 P **P** **13 21 04.5 +1.7**
IL31 62.18 337 P **P** **13 21 04.2 +1.0**
ILAR Eielson Array 62.18 337 P **P** **13 21 04.0 +0.6**
comp=Z,186nm,1.0s,baz=127,slow=4.5,SNR=723
ILAR PcP **PcP** **13 21 43.3 +0.6**
comp=Z,24nm,1.0s,baz=130,slow=1.7,SNR=6.8
ILAR ScP **ScP** **13 25 40.0 +1.8**
comp=Z,1.1nm,0.7s,baz=143,slow=2.4,SNR=6.0
ILAR PKPPKP 13 50 11.1
comp=Z,1.0nm,0.9s,baz=302,slow=3.1,SNR=5.2
ILAR LR LR 13 50 51.0
comp=Z,317nm,20.4s,baz=144,slow=39
FYU Fort Yukon 62.42 339 IAmb IAmb 13 21 09.0
comp=Z,104nm,1.2s
CCB Clear Creek Bu 62.48 336 IAmb IAmb 13 21 07.7
comp=Z,66nm,0.9s
WRH Wood River Hil 62.52 336 IAmb IAmb 13 21 07.0
comp=Z,85nm,1.0s
POKR Poker Plat Res 62.55 337 P **P** **13 21 06.6 +0.9**
baz=116,SNR=93
COLA College 62.60 337 *c* *i*P **P** **13 21 06.5 +0.5**
COLA pmax pmax
comp=Z,198nm,0.9s
TCOL CIGO, UAF Yank 62.60 337 P **P** **13 21 06.7 +0.6**
baz=116,SNR=71
KULLO Kullorsuaq 62.94 10 *i* P **P** **13 21 07.2 -0.9**
KULLO pmax pmax
comp=Z,7.0nm,0.4s
KULLO Kullorsuaq 62.94 10 *i* P **P** **13 21 07.2 -0.9**
comp=Z,6.6nm,0.4s
NEA Nenana 62.95 336 IAmb IAmb 13 21 10.3
comp=Z,95nm,0.9s
COLD Coldfoot 64.47 339 IAmb IAmb 13 21 21.5
comp=Z,176nm,1.2s
SVW2 Sparrevohn 64.53 331 IAmb IAmb 13 21 20.5
comp=Z,127nm,0.9s
TOLK Toolik Lake Re 64.86 340 P **P** **13 21 21.7 +0.8**
baz=116,SNR=89
TVO Taravao 64.92 242 *e*T T 14 30 49.6
comp=Z,0.9nm,0.3s
PPT Papeete 65.11 242 LR LR 13 42 21.6
comp=Z,299nm,20.7s,baz=54,slow=29
PPT2 Papeete2 65.12 242 *e*S S 13 30 16.5 +16
comp=Z,367nm,24.0s
PPT2 Papeete2 65.12 242 *e*LR LR 13 40 44.0
comp=Z,3µm,28.8s,baz=57
SUMG Summit 65.62 15 P **P** **13 21 24.7 -1.5**
SUMG pmax pmax
comp=Z,51nm,1.2s
SUMG Summit 65.62 15 *i* P **P** **13 21 24.2 -2.0**
comp=Z,234nm,1.5s
SUMG *i* 13 21 49.4
SUMG Summit 65.62 15 P **P** **13 21 24.7 -1.5**
TBI Tubuai 67.63 237 *e*S S 13 30 46.4 +15
comp=Z,521nm,37.8s
TBI Tubuai 67.63 237 *e*LR LR 13 42 06.7
comp=Z,3µm,30.0s,baz=60
TBI Tubuai 67.63 237 *e*T T 14 34 18.0
comp=Z,3.9nm,0.2s
UNV Unalaska Valle 69.08 322 P **P** **13 21 48.9 +1.0**
UNV IAmb IAmb 13 21 51.0
comp=Z,194nm,1.2s
RDOG Red Dog Mine 69.33 338 IAmb IAmb 13 21 51.3
comp=Z,139nm,1.0s
PMOZ Porto Moniz, M 69.64 60 *e*P **P** **13 21 52.6 +0.7**
PMOZ Porto Moniz, M 69.64 60 *e*LR LR 13 43 36.9
comp=Z,420nm,22.0s
ANM Nome 69.67 334 IAmb IAmb 13 21 53.8
comp=Z,91nm,0.8s
DAG Danmarks Havn 72.03 13⇑ *i*P **P** **13 22 03.5 -2.0**
DAG *i* 13 22 27.5
DAG Danmarks Havn 72.03 13⇑ *i*P **P** **13 22 03.5 -2.0**
DAG *i* 13 22 27.5
NOR Nord 73.45 9⇑ *i*P **P** **13 22 12.6 -1.2**
comp=Z,20nm,0.8s
ADK Adak 75.27 320 P **P** **13 22 24.4 -0.5**
ADK pmax pmax
comp=Z,222nm,1.1s
ADK Adak 75.27 320 P **P** **13 22 24.4 -0.5**
CLGH Cloghs, Cushen 75.83 36⇑ *e*P **P** **13 22 25.9 -2.1**
CLGH IAmb IAmb 13 22 26.2
comp=Z,64nm,0.9s
PCAS Casmilo, Conde 75.87 52 *e*P **P** **13 22 26.3 -2.3**
comp=Z,150nm,1.5s
PCAS *e*pP **pP** **13 22 52.6 +3.5**
KPL Plockton 75.88 34⇑ *e*P **P** **13 22 26.1 -2.2**
COI Coimbra 75.92 52 *e*P **P** **13 22 26.9 -1.9**
comp=Z,109nm,1.4s
PTOM Tomar 76.00 52 *e*P **P** **13 22 26.9 -2.4**
comp=Z,102nm,1.5s
PTOM *e*pP **pP** **13 22 53.3 +3.5**
PFVI Vila Bisbo 76.00 55 *e*P **P** **13 22 27.2 -2.2**
comp=Z,124nm,1.6s
PFVI *e*S **S** **13 32 07.9 +1.0**
PCAB Cabril 76.02 50 *e*P **P** **13 22 26.9 -2.5**
comp=Z,56nm,1.6s
PTEO Sao Teotonio 76.03 54 *e*P **P** **13 22 27.0 -2.5**
comp=Z,117nm,1.5s
PTEO Sao Teotonio 76.03 54 *e*PP PP 13 25 16.4 -4.5
RSC Scourie 76.05 33 *e*P **P** **13 22 27.1 -2.0**
KAC Achnashellach 76.06 34⇑ *e*P **P** **13 22 27.1 -2.2**
PNCL Nicolau / Gran 76.11 54 *e*P **P** **13 22 26.5 -3.4**
comp=Z,45nm,1.4s
PNCL *e*pP **pP** **13 22 51.3 +0.8**
LAWE Loch Awe, Argy 76.12 35⇑ *e*P **P** **13 22 27.4 -2.3**
LAWE IAmb IAmb 13 22 28.3
comp=Z,49nm,0.9s
MORF Marmelete 76.12 55 *e*P **P** **13 22 27.8 -2.4**
MORF AMb AMB 13 22 30.1
comp=Z,78nm,0.8s
MORF Marmelete 76.12 55 *e*P **P** **13 22 27.8 -2.4**
comp=Z,92nm,1.7s
MORF *e*pP **sP** **13 22 55.1 -3.3**
MORF Marmelete 76.12 55 *e*P **P** **13 22 27.7 -2.4**
PMTG Montargil 76.21 53 *e*P **P** **13 22 27.9 -2.6**
comp=Z,97nm,1.5s
PMTG *e*pP **pP** **13 22 54.6 +3.5**
POLO Lamas de Olo 76.23 50 *e*P **P** **13 22 27.9 -2.8**
comp=Z,29nm,1.3s
POLO *e*pP **pP** **13 22 53.8 +2.5**
PVIS Viseu 76.25 51 *e*P **P** **13 22 28.1 -2.7**
comp=Z,49nm,2.1s
PVIS *e*pP **pP** **13 22 55.0 +3.7**
PVRL Vila Real 76.31 51 *e*P **P** **13 22 28.3 -2.8**
comp=Z,40nm,1.3s
PVRL *e*pP **pP** **13 22 55.2 +3.6**
EVO Evora 76.45 53 *e*P **P** **13 22 29.5 -2.4**
comp=Z,72nm,1.4s
EVO *e*pP **pP** **13 22 56.1 +3.7**
MTE Manteigas 76.55 51 *e*P **P** **13 22 29.8 -2.7**
comp=Z,72nm,1.3s
MTE *e*pP **pP** **13 22 56.4 +3.3**
MTE Manteigas 76.55 51 *e*LQ LQ 13 43 47.1
MTE *e*LR LR 13 46 50.1
comp=Z,600nm,20.0s
PCVE Castro Verde 76.56 54 *e*P **P** **13 22 29.9 -2.6**
comp=Z,40nm,1.4s
PCVE *e*pP **pP** **13 22 56.3 +3.7**
MDO Dochfour 76.56 34⇑ *e*P **P** **13 22 29.9 -2.2**
PBEJ Beja 76.64 54 *e*P **P** **13 22 30.6 -2.4**
comp=Z,63nm,1.5s
PBEJ *e*pP **pP** **13 22 55.0 +1.9**
GAL1 Galloway 76.65 36⇑ *e*P **P** **13 22 30.5 -2.2**
GAL1 IAmb IAmb 13 22 31.3
comp=Z,57nm,0.9s
PGBU Glenifferbraes 76.68 35⇑ *e*P **P** **13 22 30.6 -2.2**
PGBU IAmb IAmb 13 22 31.1
comp=Z,67nm,0.8s
PCBR Castelo Branco 76.68 52 *e*P **P** **13 22 30.6 -2.6**
comp=Z,82nm,1.5s
PCBR *e*pP **pP** **13 22 55.0 +1.3**
PBDV Barranco-do-Ve 76.70 55 *e*P **P** **13 22 31.5 -1.9**
PBDV *e*pP **pP** **13 22 55.9 +2.4**
PBDV Barranco-do-Ve 76.70 55 *e*PP PP 13 25 28.4 +1.8
PBDV *e*S S 13 32 28.1 +14
EAB Aberfoyle 76.71 35⇑ *e*P **P** **13 22 30.9 -2.1**
PESTR Estremoz 76.73 53 *e*P **P** **13 22 30.6 -2.9**
comp=Z,57nm,1.4s
PESTR Estremoz 76.73 53 *e*S **SKSac** **13 32 38.9 -0.3**
PESTR Estremoz 76.73 53 P **P** **13 22 30.8 -2.7**
SNR=17
WIM Isle of Man 76.76 37⇑ *e*P **P** **13 22 31.2 -2.1**
PMRV Marv??o 76.80 52 *e*P **P** **13 22 31.2 -2.7**
comp=Z,65nm,1.6s
PMRV *e*pP **pP** **13 22 56.9 +2.4**
PMRV Marv??o 76.80 52 *e*LR LR 13 46 13.3
comp=Z,505nm,22.0s
IOMK Kirk Michael 76.81 37⇑ *e*P **P** **13 22 31.6 -2.0**
IOMK IAmb IAmb 13 22 32.3
comp=Z,116nm,0.7s
MVO Moncorvo 76.83 51 *e*P **P** **13 22 31.6 -2.5**
comp=Z,73nm,1.2s
MVO *e*pP **pP** **13 22 57.2 +2.5**
MVO Moncorvo 76.83 51 *e*LR LR 13 47 00.5
comp=Z,387nm,20.0s
PVAQ Vaqueiros 76.84 54 *e*P **P** **13 22 31.9 -2.2**
comp=Z,89nm,1.4s
PVAQ *e*pP **pP** **13 22 56.0 +1.8**
PVAQ *e*S **SKSac** **13 32 38.8 -1.2**
PVAQ Vaqueiros 76.84 54 *e*LR LR 13 46 44.5
comp=Z,464nm,22.0s
PVAQ Vaqueiros 76.84 54 P **P** **13 22 32.4 -1.7**
SNR=6.7
INVG Invergeldie, C 76.85 35⇑ *e*P **P** **13 22 31.5 -2.3**
INVG IAmb IAmb 13 22 32.8
comp=Z,100nm,0.9s
PBRG Braganca 76.96 50 *e*P **P** **13 22 32.4 -2.4**
comp=Z,82nm,1.5s
PBRG *e*pP **pP** **13 22 56.6 +1.2**
WME Myndd Eilian 77.07 38⇑ *e*P **P** **13 22 31.7 -3.3**
MCD Coleburn Disti 77.14 34⇑ *e*P **P** **13 22 33.6 -1.8**
YLL Llanberis 77.18 38⇑ *e*P **P** **13 22 33.5 -2.1**
SBD Saint Breward 77.19 41⇑ *e*P **P** **13 22 33.0 -2.8**
SBD IAmb IAmb 13 22 34.3
comp=Z,107nm,1.2s
EDI Edinburgh 77.39 35⇑ *e*P **P** **13 22 34.7 -2.1**
EDI IAmb IAmb 13 22 35.5
comp=Z,88nm,1.0s
EDU Dundee 77.40 35⇑ *e*P **P** **13 22 35.0 -1.8**
ESK Eskdalemuir 77.46 36⇑ *e*P **P** **13 22 35.1 -2.1**
ESK IAmb IAmb 13 22 35.8
comp=Z,120nm,0.9s
EBL Broad Law 77.49 35⇑ *e*P **P** **13 22 35.2 -2.2**
DRUM Mains of Drumt 77.64 34⇑ *e*P **P** **13 22 36.0 -2.2**
DRUM IAmb IAmb 13 22 37.0
comp=Z,109nm,0.9s
OUK Oukaimeden 77.70 61 P **P** **13 22 38.0 -1.5**
SNR=9.8
ESY Stoneypath 77.71 35⇑ *e*P **P** **13 22 36.6 -1.9**
HLM1 Long Mynd 78.04 39⇑ *e*P **P** **13 22 38.0 -2.5**
HLM1 IAmb IAmb 13 22 39.7
comp=Z,57nm,1.1s
MCH1 Michaelchurch 78.04 39⇑ *e*P **P** **13 22 37.9 -2.6**
MCH1 IAmb IAmb 13 22 38.8
comp=Z,56nm,1.1s
EDMD Edmundbyers 78.23 36⇑ *e*P **P** **13 22 39.6 -1.9**
EDMD IAmb IAmb 13 22 41.0
comp=Z,128nm,1.0s
ZHG ZHG 78.34 58 P **P** **13 22 41.0 -1.7**
SNR=9.0
OLDB Oldbury-Upon-S 78.37 39 *e*P **P** **13 22 39.9 -2.4**
KBS Kingsbay 78.37 11 *ce*P **P** **13 22 41.9 +0.1**
KBS pmax pmax
comp=Z,52nm,0.6s
KBS Kingsbay 78.37 11 *e*P **P** **13 22 41.9 +0.1**
HPK Haverah Park 78.56 37⇑ *e*P **P** **13 22 41.4 -2.0**
HPK IAmb IAmb 13 22 42.1
comp=Z,430nm,1.9s
STRD Stroud 78.59 39 *e*P **P** **13 22 41.3 -2.2**
STRD IAmb IAmb 13 22 41.7
comp=Z,75nm,0.9s
LBWR Ladybower, Pea 78.59 38⇑ *e*P **P** **13 22 41.6 -2.0**
LBWR IAmb IAmb 13 22 42.6
comp=Z,116nm,1.1s
OUZM OUZ 78.69 61 P **P** **13 22 43.0 -1.7**
SNR=13
HORN Hornachuelos 78.70 54 P **P** **13 22 42.1 -2.4**
SNR=22
RSA Sarsar 78.76 57 P **P** **13 22 44.0 -0.9**
SNR=6.1
SWN1 Swindon 78.85 40⇑ *e*P **P** **13 22 43.0 -2.0**
SWN1 IAmb IAmb 13 22 44.4
comp=Z,315nm,1.4s
CWF Charnwood Fore 78.95 38⇑ *e*P **P** **13 22 43.2 -2.3**
CWF IAmb IAmb 13 22 43.4
comp=Z,172nm,1.3s
GDLE Glaisdale, N Y 78.96 37⇑ *e*P **P** **13 22 43.9 -1.6**
GDLE IAmb IAmb 13 22 45.2
comp=Z,242nm,1.2s
JSA Saint Aubin 79.01 42 *e*P **P** **13 22 43.2 -2.7**
JSA IAmb IAmb 13 22 44.4
comp=Z,120nm,1.3s
WOL Wolverton 79.24 40⇑ *e*P **P** **13 22 44.8 -2.3**
WOL IAmb IAmb 13 22 46.9
comp=Z,314nm,1.6s
ESDC Sonseca Array 79.38 52 P **P** **13 22 45.9 -2.3**
comp=Z,31nm,0.9s,baz=289,slow=5.5,SNR=103
ESDC LR LR 13 54 15.4
comp=Z,318nm,19.4s,baz=285,slow=33
ESDC Sonseca Array 79.38 52 IAmb IAmb 13 22 47.2
comp=Z,39nm,1.1s
ESBB Sonseca Array 79.38 52 P **P** **13 22 46.1 -2.1**
SPA0 Spitsbergen Ar 79.45 11 *e*P **P** **13 22 46.9 -0.9**
SPA0 Spitsbergen Ar 79.45 11 P **P** **13 22 47.1 -0.7**
SPA0 IAmb IAmb 13 22 47.7
comp=Z,85nm,1.3s
HSPB Hornsund (broa 79.70 13 *e*P **P** **13 22 49.2 +0.1**
LCRM LCR 79.76 58 P **P** **13 22 49.0 -1.6**
SNR=6.0
MDT Midelt 80.13 59 P **P** **13 22 50.5 -2.0**
comp=Z,25nm,1.1s,baz=204,slow=3.6,SNR=30
AKLM AKL 80.42 57 P **P** **13 22 52.0 -2.0**
SNR=7.8
SESP Santiago Espad 80.76 53 P **P** **13 22 53.6 -2.2**
SNR=7.3
BILL Bilibino 80.80 338 *c* *i*P **P** **13 22 55.8 +0.6**
BILL *i* *PP **sP** **13 23 21.4 -2.0**
BILL *e*S **S** **13 32 53.1 -4.0**
BILL *e**SS sS 13 33 49.6 +18
BILL *e*SS **SS** **13 38 11.8 +0.5**
BILL pmax pmax
comp=Z,594nm,1.3s
BILL MLR MLR
comp=Z,624nm,23.0s
BILL Bilibino 80.80 338 P **P** **13 22 56.0 +0.8**
ASK Askoy 80.92 30 *e*P **P** **13 22 54.2 -1.8**
HYA Hoyanger 81.23 29 *e*P **P** **13 22 56.3 -1.3**
KMY Karmoy 81.25 31 *e*P **P** **13 22 56.2 -1.5**
ODD1 Odda 81.75 30 *e*P **P** **13 22 58.0 -2.4**
BLS5 Blasjo 81.80 31 *e*P **P** **13 22 59.7 -1.0**
HOPEN Hopen 81.89 12 *e*P **P** **13 23 00.0 -0.8**
PMSA Palmer Station 82.04 168 *e*P **P** **13 23 03.0 +1.4**
DOMB Dombas 82.32 28 *e*P **P** **13 23 02.7 -0.7**
SKAR Skarslia 82.35 29 *e*P **P** **13 23 02.5 -1.1**
SNART Snartemo 82.46 32 *e*P **P** **13 23 02.8 -1.3**
KONS Konsvik 82.61 23 *e*P **P** **13 23 04.3 -0.4**
NSS Namsos 82.81 25 *e*P **P** **13 23 04.8 -0.9**
STEI Steigen 82.88 21 *e*P **P** **13 23 05.2 -0.8**
DOU Dourbes 83.12 40 ⇑P **P** **13 23 05.5 -2.2**
comp=Z,23nm,1.2s
HOMB Homborsund 83.14 32 *e*P **P** **13 23 06.1 -1.5**
BMRD Maredsous 83.17 40 P **P** **13 23 05.9 -2.0**
comp=Z,38nm,1.5s
MOR8 Moi Rana 83.22 23 *e*P **P** **13 23 07.3 -0.6**
KONO Kongsberg 83.27 30 *ce*P **P** **13 23 07.1 -1.2**
KONO pmax pmax
comp=Z,36nm,1.7s
NC204 NORSAR Array S 83.32 28 *e*P **P** **13 23 07.3 -1.3**
NC204 NORSAR Array S 83.32 28 IAmb IAmb 13 23 08.2
comp=Z,83nm,1.1s
NBO00 NORSAR Array S 83.41 29 P **P** **13 23 07.6 -1.4**
TRO Tromso 83.44 19 *e*P **P** **13 23 08.2 -0.7**
BCLA Clavier 83.47 40 ⇑P **P** **13 23 07.5 -2.0**
comp=Z,36nm,1.2s
RCHB Rochefort 83.50 40 P **P** **13 23 07.7 -1.9**
comp=Z,36nm,1.4s
BSTI Sart Tilman 83.59 39 P **P** **13 23 08.6 -1.5**
BEBN Eben Emael 83.61 39 ⇑P **P** **13 23 08.1 -2.0**
comp=Z,34nm,0.0s
NB2 NORSAR Subarra 83.61 28 P **P** **13 23 09.0 -1.0**
comp=Z,75nm,1.7s,baz=290,slow=5.6
NB2 NORSAR Subarra 83.61 28 P **P** **13 23 09.0 -1.0**
baz=290,slow=5.6
NOA NORSAR Array B 83.61 28 P **P** **13 23 09.1 -1.0**
comp=Z,17nm,1.0s,baz=290,slow=5.2,SNR=26
NOA LR LR 13 56 47.7
comp=Z,147nm,21.5s,baz=285,slow=33
NC303 NORSAR Array S 83.62 28 P **P** **13 23 08.6 -1.5**
NB201 NORSAR Array S 83.64 28 P **P** **13 23 09.5 -0.7**
NB201 IAmb IAmb 13 23 10.7
comp=Z,108nm,1.4s
OSL Oslo 83.72 30 *e*P **P** **13 23 10.0 -0.6**
NC405 NORSAR Array S 83.81 28 IAmb IAmb 13 23 12.0
comp=Z,115nm,1.4s
MEM Membach 83.86 39 P **P** **13 23 09.6 -1.9**
comp=Z,23nm,1.3s
BHOU Houvegnez 83.92 40 P **P** **13 23 10.0 -1.8**
comp=Z,30nm,1.6s
MUD Monsted U'grnd 84.01 33 *i* P **P** **13 23 11.0 -1.1**
MUD Monsted U'grnd 84.01 33 *i* P **P** **13 23 11.0 -1.1**
WLF Walferdange 84.20 40 *e*P **P** **13 23 12.2 -1.1**
comp=Z,78nm,1.5s,baz=288,slow=4.9
WLF Walferdange 84.20 40 P **P** **13 23 11.6 -1.7**
comp=Z,30nm,1.5s
BUG Bochum--Univer 84.39 38 *e*P **P** **13 23 13.0 -1.2**
comp=Z,92nm,1.5s,baz=288,slow=4.9
HAMF Hammerfest 84.44 18 *e*P **P** **13 23 13.0 -1.0**
IBBN Ibbenburen 84.44 37 *e*P **P** **13 23 13.4 -1.0**
comp=Z,81nm,1.4s,baz=288,slow=4.9
AHRW Bad Neuenahr-A 84.53 39 *e*P **P** **13 23 14.0 -0.9**
comp=Z,92nm,1.4s,baz=288,slow=4.9
KTK1 Kautokeino 85.09 19 *e*P **P** **13 23 16.2 -1.1**
RETH Rethm/Aller, 85.25 37 *e*P **P** **13 23 17.9 -0.5**
comp=Z,169nm,1.2s,baz=288,slow=4.9
BSEG Bad Segeberg 85.42 35 *e*P **P** **13 23 18.5 -0.7**
comp=Z,125nm,1.1s,baz=288,slow=4.9
TNS Taunus Mts 85.46 39 *e*P **P** **13 23 18.6 -1.1**
comp=Z,117nm,1.2s,baz=288,slow=4.9
ARCES ARCESS Array B 85.53 18 P **P** **13 23 18.1 -1.5**
comp=Z,15nm,0.7s,baz=297,slow=4.0,SNR=68
ARCES PP PP 13 26 30.3 -8.2
comp=Z,4.7nm,0.9s,baz=290,slow=5.6,SNR=3.4
ARCES LR LR 14 01 03.6
comp=Z,747nm,21.6s,baz=312,slow=35
ARE0 ARCESS Array S 85.53 18 *e*P **P** **13 23 19.0 -0.5**
ARE0 ARCESS Array S 85.53 18 P **P** **13 23 17.2 -2.3**
ARE0 **P** **13 23 18.1 -1.5**
TIC Toumodi 85.54 84 *e*PKP2 **P** **13 23 17.5 -3.2**
LIC Lamto 85.63 85 *e*PKP2 **P** **13 23 18.1 -3.0**
comp=Z,87nm,1.2s
DBIC Dimbokro 85.69 84 P **P** **13 23 20.1 -1.3**
comp=Z,8.2nm,0.5s,baz=264,slow=5.1,SNR=24
DBIC LR LR 13 55 56.1
comp=Z,321nm,22.0s,baz=262,slow=32
NRDL Niedersach Rie 85.75 37 *e*P **P** **13 23 20.3 -0.6**
comp=Z,69nm,1.1s,baz=288,slow=4.9
BNI Bardonecchia 85.83 45 P **P** **13 23 20.1 -1.6**
BNI pmax pmax
comp=Z,79nm,1.2s
BNI Bardonecchia 85.83 45 P **P** **13 23 20.1 -1.6**
BNI IAmb IAmb 13 23 22.1
comp=Z,79nm,1.2s
SENIN Lac Senin/Sane 85.87 43 P **P** **13 23 19.7 -2.3**
SENIN IAmb IAmb 13 23 22.3
comp=Z,86nm,1.0s
KIC Kosan Boka 85.88 85 *e*PKP2 **P** **13 23 19.0 -3.3**
comp=Z,61nm,1.1s

BFO Black Forest 85.96 41 *eP* **P 13 23 20.3 -1.8**
comp=Z,57nm,1.2s,baz=288,slow=4.9
GTTG Gyttingen 85.97 38 *eP* **P 13 23 21.2 -0.9**
comp=Z,200nm,1.2s,baz=288,slow=4.9
CLZ Clausthal 86.12 37 *eP* **P 13 23 22.1 -0.7**
comp=Z,60nm,1.0s,baz=288,slow=4.9
ASSE Asse, Remlinge 86.20 37 *eP* **P 13 23 22.5 -0.6**
comp=Z,101nm,1.2s,baz=288,slow=4.9
UBBA Unterbreizbach 86.22 38 *eP* **P 13 23 22.4 -0.8**
comp=Z,58nm,1.5s,baz=288,slow=4.9
STU Stuttgart 86.37 41 *eP* **P 13 23 22.7 -1.4**
comp=Z,61nm,1.1s,baz=288,slow=4.9
NEUB Neuenburg 87.16 38 *eP* **P 13 23 27.0 -0.9**
comp=Z,63nm,1.4s,baz=288,slow=4.9
MOX Moxa 87.25 38 *eP* **P 13 23 27.4 -1.0**
comp=Z,41nm,1.3s,baz=288,slow=4.9
DAVA Damuels 87.27 42 *i* P **P 13 23 27.2 -1.6**
comp=Z,105nm,1.2s,SNR=31
DAVA *eP*PP **PP 13 26 51.8 -1.5**
comp=Z,14nm,1.6s
UBR Ueberruh 87.29 41 *eP* **P 13 23 27.4 -1.4**
comp=Z,69nm,1.1s,baz=288,slow=4.9
GRF Grafenberg Arr 87.33 39 *eP* **P 13 23 28.0 -0.8**
comp=Z,87nm,1.3s,baz=288,slow=4.9
GRF *epP* **sP 13 23 54.7 -2.9**
baz=290,slow=4.9
DAVOX Davos/Dischmat 87.44 42 P **P 13 23 28.6 -1.0**
comp=Z,31nm,1.0s,baz=292,slow=6.2,SNR=36
PLN Plauen 87.63 38 *eP* **P 13 23 29.1 -1.1**
comp=Z,53nm,1.4s,baz=288,slow=4.9
FUORN Ofenpass-Fuorn 87.74 42 P **P 13 23 29.8 -1.3**
FUORN IAmb IAmb 13 23 31.5
comp=Z,113nm,1.4s
MANZ Manzenberg 87.77 39 *eP* **P 13 23 29.9 -1.0**
comp=Z,31nm,1.3s,baz=288,slow=4.9
GUNZ Gunzen 87.78 38 *eP* **P 13 23 30.0 -0.9**
comp=Z,39nm,1.3s,baz=288,slow=4.9
GUNZ *epP* **sP 13 23 56.7 -3.1**
baz=290,slow=4.9
RETA Reutte 87.78 41 *i* P **P 13 23 29.3 -1.7**
comp=Z,62nm,1.1s,SNR=21
RETA *eP*PP **PP 13 26 56.5 -0.8**
comp=Z,10nm,1.2s
WERN Wernitzgruen 87.83 38 *eP* **P 13 23 30.4 -0.8**
comp=Z,42nm,1.3s,baz=288,slow=4.9
WERN *epP* **sP 13 23 57.0 -2.9**
baz=290,slow=4.9
TANN Tannenbergstha 87.84 38 *eP* **P 13 23 30.3 -1.0**
comp=Z,69nm,1.3s,baz=288,slow=4.9
CLL Collm 87.84 37⇑ *iP* **P 13 23 29.2 -2.0**
comp=Z,42nm,1.7s
CLL *e**PP **pP 13 23 53.0 +1.2**
CLL *eS*P **sP 13 24 03.0 +3.0**
CLL *i* PP **PP 13 26 55.3 -2.3**
comp=Z,15nm,1.1s
CLL *e*SKSac **SKSac 13 33 55.0 +2.1**
CLL *e*(S) **SKKSac 13 34 04.0 +1.0**
CLL *e* 13 35 03.0
CLL *ePS* PS 13 35 19.0 -0.7
CLL *eSS* 13 40 30.0
CLL *eSSS* SSS 13 43 24.0
CLL *e* 13 47 54.0
CLL Collm 87.84 37 *eP* **P 13 23 30.0 -1.1**
comp=Z,42nm,1.7s,baz=288,slow=4.9
CLL *eP*P **PP 13 26 55.9 -1.7**
RUE Ruedersdorf 87.87 36 *e* pP 13 23 49.9 -2.0
FUR Furstenfeldbru 87.88 41 *eP* **P 13 23 30.2 -1.3**
comp=Z,34nm,0.9s,baz=288,slow=4.9
NKC Novy Kostel 87.89 38 *eP* **P 13 23 30.2 -1.3**
NKC Novy Kostel 87.89 38 *eP* **P 13 23 30.2 -1.3**
FETA Feichten 87.91 42 *i* P **P 13 23 30.1 -1.7**
comp=Z,24nm,0.8s,SNR=17
FETA *eP*P **PP 13 26 58.1 -0.3**
comp=Z,7.2nm,1.0s
ROTZ Rotzenmuhle 87.91 39 *eP* **P 13 23 30.8 -0.8**
comp=Z,35nm,1.4s,baz=288,slow=4.9
ROTZ *epP* **sP 13 23 57.4 -3.0**
baz=290,slow=4.9
MOTA Moosalm 88.04 41 *i* P **P 13 23 30.6 -1.8**
comp=Z,37nm,1.1s,SNR=13
MOTA *eP*P **PP 13 26 58.6 -0.9**
comp=Z,16nm,1.7s
SEY Seymchan 88.10 336⇑ *iP* **P 13 23 33.3 +1.2**
SEY Seymchan 88.10 336 P **P 13 23 32.9 +0.8**
comp=Z,58nm,0.9s,baz=87,slow=4.8,SNR=96
SQTA Sankt Quirin 88.15 42 *i* P **P 13 23 31.2 -1.7**
comp=Z,40nm,1.1s,SNR=17
SQTA *eP*P **PP 13 26 59.8 -0.5**
comp=Z,17nm,1.3s
FBE Freiberg 88.19 38 *eP* **P 13 23 32.2 -0.6**
comp=Z,29nm,1.2s,baz=288,slow=4.9
FBE *epP* **sP 13 23 58.9 -2.8**
baz=290,slow=4.9
FBE *eP*P **PP 13 26 59.1 -1.2**
WATA Walderalm 88.35 41 *i* P **P 13 23 31.9 -1.9**
comp=Z,32nm,1.3s,SNR=8.0
WATA *eP*P **PP 13 27 01.0 -0.9**
comp=Z,9.9nm,1.1s
WET Wettzell 88.54 39 *eP* **P 13 23 33.8 -0.7**
comp=Z,42nm,1.3s,baz=288,slow=4.9
WET *epP* **sP 13 24 00.5 -2.8**
baz=290,slow=4.9
BRG Berggiesshubel 88.55 38 *eP* **P 13 23 32.8 -1.8**
comp=Z,14nm,1.0s
BRG *epP* **sP 13 23 59.6 -3.8**
comp=Z,7.6nm,1.0s
BRG *eP*P **PP 13 27 00.8 -2.4**
comp=Z,18nm,1.2s
comp=N,282nm,22.4s
comp=E,609nm,30.5s
comp=Z,465nm,23.0s
BRG Berggiesshubel 88.55 38 *eP* **P 13 23 32.8 -1.8**
BRG *e**PP **sP 13 23 59.6 -3.8**
BRG *e* 13 27 00.9
BRG pmax pmax
comp=Z,14nm,1.0s
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG pmax pmax
comp=Z,19nm,1.2s
BRG MLR MLR
comp=N,282nm,22.4s
BRG MLR MLR
comp=E,609nm,30.5s
BRG MLR MLR
comp=Z,465nm,23.0s
BRG Berggiesshubel 88.55 38 *eP* **P 13 23 33.4 -1.2**
comp=Z,14nm,1.0s,baz=288,slow=4.9
BRG *eP*P **PP 13 27 01.7 -1.5**
ZCCA Zocca 88.96 44 P **P 13 23 35.1 -1.6**
ZCCA IAmb IAmb 13 23 36.3
comp=Z,49nm,0.6s
KHC Kasperske Hory 88.97 39 *eP* **P 13 23 34.9 -1.7**
KHC *e* 13 24 02.5
KHC *e* 13 27 05.6
KHC MLR MLR
comp=Z,800nm,20.8s
KHC Kasperske Hory 88.97 39 *eP* **P 13 23 34.9 -1.7**
KHC *epP* **sP 13 24 02.5 -2.9**
KHC *ex* x 13 24 18.5
KHC *eP*P **PP 13 27 05.6 -1.1**
KHC AMS AMS 14 00 50.0
comp=Z,800nm,20.8s
RJOB Jochberg 88.98 41 *eP* **P 13 23 35.4 -1.3**
comp=Z,20nm,1.3s,baz=288,slow=4.9
PBCC Pribram 89.02 39 *eP* **P 13 23 35.5 -1.3**
PVCC Panska Ves 89.05 38 *eP* **P 13 23 36.1 -0.8**
PVCC Panska Ves 89.05 38 *eP* **P 13 23 36.1 -0.8**
GEC2 GERESS Array S 89.15 39 *eP* **P 13 23 36.2 -1.3**
comp=Z,22nm,1.1s,baz=288,slow=4.9
GERES GERESS Array B 89.15 39 P **P 13 23 35.7 -1.8**
comp=Z,12nm,1.1s,baz=302,slow=3.0,SNR=46
GERES PP **PP 13 27 05.7 -2.6**
comp=Z,3.0nm,0.9s,baz=308,slow=6.6,SNR=5.4
GERES PKKPbc **PKKPbc 13 41 14.1 -1.7**
comp=Z,0.5nm,0.6s,baz=166,slow=0.6,SNR=3.7
GERES LR LR 14 02 05.0
comp=Z,647nm,20.1s,baz=288,slow=35
ABTA Abfaltersbach 89.15 42 *i* P **P 13 23 35.6 -1.9**
comp=Z,45nm,1.4s,SNR=15
ABTA *eP*P **PP 13 27 05.5 -2.8**
comp=Z,9.7nm,1.1s
PRU Pruhonice 89.24 38 *eP* **P 13 23 36.3 -1.5**
PRU Pruhonice 89.24 38 *eP* **P 13 23 36.3 -1.5**
GOPC GO Pecny, Ondr 89.41 38 *eP* **P 13 23 36.3 -2.3**
GOPC GO Pecny, Ondr 89.41 38 *eP* **P 13 23 36.3 -2.3**
PET Petropavlovsk 89.54 325 *eP* **P 13 23 41.0 +1.9**
PET *e* 13 34 08.4
PET *eS* **S 13 34 28.9 +5.0**
PET *ePS* PS 13 35 36.7 -1.7
PET *eSS* SS 13 40 33.0 +13
PET pmax pmax
comp=Z,56nm,1.3s
PET MLR MLR
comp=Z,900nm,20.0s
KBA Koelnbreinsper 89.57 41 *i* P **P 13 23 37.6 -2.0**
comp=Z,14nm,1.0s,SNR=8.2
KBA *eP*P **PP 13 27 09.7 -2.0**
comp=Z,12nm,1.1s
TIXI Tiksi 89.58 348⇑ *iP* **P 13 23 37.8 -1.1**
TIXI pmax pmax
comp=Z,81nm,1.1s
TIXI Tiksi 89.58 348 LR LR 14 07 44.3
comp=Z,193nm,21.6s,baz=24,slow=38
TIXI Tiksi 89.58 348 P **P 13 23 38.2 -0.7**
TIXI IAmb IAmb 13 23 39.8
comp=Z,88nm,1.1s
MOA Molln 89.87 40 *i* P **P 13 23 39.0 -1.8**
comp=Z,13nm,0.9s,SNR=5.6
MOA *eP*P **PP 13 27 13.7 -0.2**
comp=Z,9.8nm,0.9s
CHVC Chvalec 89.90 37 *eP* **P 13 23 39.4 -1.5**
CHVC *eP*P **PP 13 27 12.0 -2.1**
CHVC AMS AMS 14 03 20.0
comp=Z,800nm,19.5s
UPC Upice 89.91 37 *eP* **P 13 23 39.6 -1.3**
UPC Upice 89.91 37 *eP* **P 13 23 39.6 -1.3**
MYKA Terra Mystica 89.92 42 *i* P **P 13 23 39.2 -1.9**
comp=Z,21nm,1.2s,SNR=6.9
FINES FINESS Array B 89.93 25 P **P 13 23 39.0 -1.8**
FINES FINESS Array B 89.93 25 P **P 13 23 39.0 -1.8**
comp=Z,22nm,0.9s,baz=336,slow=1.8,SNR=32
FINES LR LR 14 05 12.6
comp=Z,468nm,19.1s,baz=292,slow=36
FIA1 FINESS Array S 89.94 25 P **P 13 23 38.8 -2.0**
FIA1 IAmb IAmb 13 23 40.5
comp=Z,57nm,1.2s
KSP Ksiaz 89.94 37 *eP* **P 13 23 39.5 -1.5**
KSP *e* 13 27 12.2
KSP Ksiaz 89.94 37 *eP* **P 13 23 39.5 -1.5**
KSP *e* 13 27 12.2
OSTC Ostas 90.01 37 *eP* **P 13 23 40.1 -1.3**
OSTC *eP*P **PP 13 27 13.2 -1.7**
PEA0B Petropavlovsk- 90.03 326 P **P 13 23 43.2 +1.7**
PEA0B pmax pmax
comp=Z,91nm,1.1s
PEA0B Petropavlovsk- 90.03 326 P **P 13 23 43.2 +1.7**
PEA0B IAmb IAmb 13 23 44.3
comp=Z,91nm,1.1s
PETK Petropavlovsk- 90.03 326 P **P 13 23 42.5 +1.1**
comp=Z,44nm,0.9s,baz=88,slow=17,SNR=26
TREC Trest 90.07 39 AMS AMS 14 03 20.0
comp=Z,500nm,19.7s
CADS Cadrg 90.13 42 *i* P **P 13 23 40.0 -2.1**
DPC Dobruska-Polom 90.15 37 *eP* **P 13 23 41.0 -1.1**
DPC *e* 13 27 14.3
DPC MLR MLR
comp=Z,600nm,18.4s
DPC Dobruska-Polom 90.15 37 *eP* **P 13 23 41.0 -1.1**
DPC *eP*P **PP 13 27 14.3 -1.8**
DPC AMS AMS 14 03 00.0
comp=Z,600nm,18.4s
SLIT Slitere, Latvi 90.16 29 *e* P 13 23 49.8 +7.9
TORD Torodi Ar. Bea 90.32 76 P **P 13 23 39.8 -3.7**
comp=Z,4.0nm,0.6s,baz=294,slow=5.1,SNR=22
TORD LR LR 14 00 59.6
comp=Z,236nm,21.7s,baz=305,slow=34
MA2 Magadan 90.45 333*c iP* **P 13 23 44.2 +1.0**
KRLC Kraliky 90.53 38 *eP* **P 13 23 42.6 -1.3**
KRLC *e* 13 27 17.8
KRLC MLR MLR
comp=Z,500nm,17.5s
KRLC Kraliky 90.53 38 *eP* **P 13 23 42.6 -1.3**
KRLC *eP*P **PP 13 27 17.8 -1.3**
KRLC AMS AMS 14 03 30.0
comp=Z,500nm,17.5s
OBKA Obir 90.55 41 *i* P **P 13 23 41.9 -2.2**
comp=Z,24nm,1.4s,SNR=8.9
KEST Kesra 90.57 53 P **P 13 23 42.6 -1.8**
comp=Z,35nm,1.0s,baz=251,slow=1.4,SNR=22
KEST LR LR 13 57 57.8
comp=Z,189nm,20.1s,baz=277,slow=31
KEST Kesra 90.57 53 P **P 13 23 42.7 -1.8**
KEST IAmb IAmb 13 23 43.9
comp=Z,42nm,1.1s
LJU Ljubljana 90.71 42 *i* P **P 13 23 43.0 -1.7**
KRUC Moravsky 90.71 39 *eP* **P 13 23 42.9 -1.8**
KRUC *eP*P **PP 13 27 18.9 -1.6**
VRAC Vranov 90.73 38⇑P **P 13 23 44.0 -0.8**
VRAC Vranov 90.73 38⇑P **P 13 23 44.0 -0.8**
VRAC Vranov 90.73 38 *eP* **P 13 23 43.3 -1.5**
VRAC *eP*P **PP 13 27 19.1 -1.5**
PBUR Paburg 90.74 31 *eP* **P 13 23 43.1 -1.5**
PBUR Paburg 90.74 31 *eP* P 13 23 49.6 +4.9
CEY Cerknica 90.75 42 *i* P **P 13 23 43.5 -1.5**
CEY Cerknica 90.75 42⇑ *iP* **P 13 23 43.2 -1.8**
SOKA Soboth 90.79 41 *i* P **P 13 23 42.0 -3.2**
comp=Z,21nm,1.3s,SNR=8.7
SOKA *eP*P **PP 13 27 19.1 -2.2**
comp=Z,9.7nm,1.3s
CONA Conrad Observa 90.83 40 *i* P **P 13 23 43.8 -1.6**
comp=Z,22nm,1.2s,SNR=10
CONA *eP*P **PP 13 27 20.7 -0.8**
comp=Z,13nm,2.1s
ARSA Arzberg 90.88 40 *i* P **P 13 23 43.1 -2.4**
comp=Z,10nm,1.2s,SNR=6.5
ARSA *eP*P **PP 13 27 20.6 -1.3**
comp=Z,6.9nm,1.2s
MORC Moravsky Berou 91.11 38⇑P **P 13 23 45.4 -1.2**
MORC Moravsky Berou 91.11 38⇑P **P 13 23 45.4 -1.2**
MORC Moravsky Berou 91.11 38 *eP* **P 13 23 45.2 -1.4**
MORC *eP*P **PP 13 27 22.1 -1.5**
CRES Cresnjev 91.39 42⇑ *iP* **P 13 23 45.8 -2.1**
OKC Ostrava-Krasne 91.44 37 *eP* **P 13 23 46.5 -1.5**
OKC Ostrava-Krasne 91.44 37 *eP* **P 13 23 46.5 -1.5**
ZST Bratislava 91.49 39 *eP* **P 13 23 46.4 -1.9**
ZST pmax pmax
comp=Z,32nm,1.2s
ZST Bratislava 91.49 39 *eP* **P 13 23 46.4 -1.9**
MODS Modra-Piesok 91.52 39 *eP* **P 13 23 46.3 -2.2**
MODS pmax pmax
comp=Z,34nm,1.2s
MODS Modra-Piesok 91.52 39 *eP* **P 13 23 46.3 -2.2**
SMOL Smolenice 91.56 39 *eP* **P 13 23 47.7 -0.9**
SMOL pmax pmax
comp=Z,13nm,1.2s
SMOL Smolenice 91.56 39 *eP* **P 13 23 47.7 -0.9**
JAVC Velka Javorina 91.56 38 *eP* **P 13 23 48.2 -0.5**
JAVC *eP*P **PP 13 27 26.3 -1.0**
VSU Vasula 91.79 27 *e* **P 13 23 49.5 +0.1**
PABE Paberze 92.00 31 *eP* **P 13 23 49.0 -1.5**
PABE IAmb IAmb 13 23 51.7
comp=Z,63nm,1.2s
PABE Paberze 92.00 31 *eP* **P 13 23 49.0 -1.5**
PABE IAmb IAmb 13 23 51.7
comp=Z,63nm,1.2s
BEL Belsk 92.08 35 *eP* **P 13 23 50.2 -0.7**
BEL Belsk 92.08 35 *eP* **P 13 23 50.2 -0.7**
MPLH Magyarpolny 92.17 40⇑ *eP* **P 13 23 56.0 +4.5**
OJC Ojcow 92.23 37 *eP* **P 13 23 50.2 -1.5**
OJC *e* 13 27 29.9
OJC Ojcow 92.23 37 *eP* **P 13 23 50.2 -1.5**
OJC *e* 13 27 29.9
SUW Suwalki 92.34 32 *eP* **P 13 23 49.9 -2.2**
SUW Suwalki 92.34 32 *eP* **P 13 23 49.9 -2.2**
SRO Srobarova 92.39 39 *eP* **P 13 23 51.2 -1.2**
SRO pmax pmax
comp=Z,24nm,1.3s
SRO Srobarova 92.39 39 *eP* **P 13 23 51.2 -1.2**
VYHS Vyhne 92.42 38 *eP* **P 13 23 51.1 -1.5**
VYHS pmax pmax
comp=Z,23nm,1.2s
VYHS Vyhne 92.42 38 *eP* **P 13 23 51.1 -1.5**
LANS Liptovska Anna 92.51 38 *eP* **P 13 23 52.6 -0.5**
LANS pmax pmax
comp=Z,14nm,1.2s
LANS Liptovska Anna 92.51 38 *eP* **P 13 23 52.6 -0.5**
NIE Niedzica 92.88 37 *eP* **P 13 23 53.9 -0.9**
NIE *e* 13 27 35.7
NIE Niedzica 92.88 37 *eP* **P 13 23 53.9 -0.9**
NIE *e* 13 27 35.7
BLY Banja Luka 92.93 42⇑ *iP* **P 13 23 53.4 -1.6**
IZAR Zarasai 92.99 30 *eP* **P 13 23 54.1 -1.0**
IZAR IAmb IAmb 13 23 55.2
comp=Z,16nm,1.1s
IZAR Zarasai 92.99 30 *eP* **P 13 23 54.1 -1.0**
IZAR IAmb IAmb 13 23 55.2
comp=Z,16nm,1.1s
ISAL Salakas 93.03 30 *eP* **P 13 23 54.4 -0.8**
ISAL Salakas 93.03 30 *eP* **P 13 23 54.4 -0.8**
IIGN Ignalina 93.19 30 *eP* **P 13 23 54.4 -1.6**
IIGN IAmb IAmb 13 23 55.4
comp=Z,8.0nm,0.8s
IIGN Ignalina 93.19 30 *eP* **P 13 23 54.4 -1.6**
IIGN IAmb IAmb 13 23 55.4
comp=Z,8.0nm,0.8s
PSZ Piszkesteto 93.30 39⇓P **P 13 23 55.3 -1.5**
PSZ Piszkesteto 93.30 39⇓P **P 13 23 55.3 -1.5**
KECS Kecovo 93.41 38 *eP* **P 13 23 56.3 -0.9**
KECS pmax pmax
comp=Z,10.0nm,1.1s
KECS Kecovo 93.41 38 *eP* **P 13 23 56.3 -0.9**
STON Ston 94.04 44⇑ *iP* **P 13 23 57.7 -2.4**
KWP Kalwaria Pacla 94.18 36 *eP* **P 13 23 59.7 -1.0**
KWP Kalwaria Pacla 94.18 36 *eP* **P 13 23 59.7 -1.0**
MATE Matera 94.25 46⇑P **P 13 23 59.3 -1.9**
KOLS Kolonicke sedl 94.25 37 *eP* **P 13 24 00.0 -1.1**
KOLS pmax pmax
comp=Z,14nm,1.2s
KOLS Kolonicke sedl 94.25 37 *eP* **P 13 24 00.0 -1.1**
HAPS Han Pijesak,Bl 94.36 42 *eP* **P 13 23 58.3 -3.5**
UZH Uzhgorod 94.41 37⇓ *eP* **P 13 24 00.7 -1.0**
UZH *e* 13 24 19.7
UZH *i* 13 24 26.8
FRGS Fruska Gora 94.45 41⇑ *iP* **P 13 23 59.7 -2.4**
BRY Bratogost 94.59 44 *eP* **P 13 24 01.2 -1.7**
UPM Unac-Piva 94.70 43 *eP* **P 13 24 02.0 -1.5**
HCY Herceg Novi 94.75 44 *eP* **P 13 24 02.2 -1.2**
BBLS Lazići 94.75 42⇑ *iP* **P 13 24 01.6 -1.9**
RUDO Rudo 94.83 43 *eP* **P 13 24 01.1 -2.7**
LVV L'vov 94.84 36 *eP* **P 13 24 01.8 -1.9**
TIP Timpagrande 94.87 48⇑P **P 13 24 00.7 -3.5**
DIVS Divibare 95.03 42⇑ *iP* **P 13 24 02.9 -1.9**
SIRR Siria 95.12 40⇑P **P 13 24 03.6 -1.5**
PDG Podgorica 95.27 44⇑P **P 13 24 04.2 -1.6**
DRME Dracevica, Mon 95.32 44 *eP* **P 13 24 03.5 -2.6**
BZS Buzias 95.39 40⇑P **P 13 24 05.0 -1.3**
BZS Buzias 95.39 40⇑P **P 13 24 05.0 -1.3**
DRGR 95.52 39⇑P **P 13 24 05.3 -1.7**
DRGR 95.52 39⇑P **P 13 24 05.3 -1.7**
MDVR Moldovita 95.83 41⇑P **P 13 24 06.7 -1.7**
GZR Gura Zlata 96.22 40⇑P **P 13 24 08.6 -1.6**
GZR Gura Zlata 96.22 40⇑P **P 13 24 08.6 -1.6**
ARCR ARCALIA 96.37 38⇑P **P 13 24 09.1 -1.6**
BURAR Bucovina Array 96.61 37⇑P **P 13 24 10.7 -1.3**
BURAR Bucovina Array 96.61 37⇑P **P 13 24 10.7 -1.3**
YAK Yakutsk 96.79 342 *eP* **P 13 24 12.0 -0.2**
YAK *e* 13 28 08.2
YAK *e*PPP PPP 13 30 13.2
YAK *eS* **SKSac 13 34 37.2 -5.2**
YAK *e* 13 35 25.1
YAK *eSS* **SS 13 42 01.4 -1.7**
YAK *eSSS* SSS 13 45 51.8
YAK pmax pmax
comp=Z,23nm,1.1s
YAK pmax pmax
comp=N,4.0nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.2s
YAK pmax pmax
comp=Z,163nm,2.9s
YAK pmax pmax
comp=N,142nm,3.0s
YAK pmax pmax
comp=E,383nm,3.1s
YAK smax smax
comp=N,109nm,2.6s
YAK smax smax
comp=E,83nm,2.8s
PRGR Permogore 96.94 19 *eP* **P 13 24 10.3 -2.6**
PRGR pmax pmax
comp=Z,28nm,0.9s
AKASG Malin Array Be 97.22 33 P **P 13 24 11.3 -3.1**
comp=Z,1.9nm,0.7s,baz=291,slow=3.7,SNR=9.7
AKASG PP **PP 13 28 03.6 -7.5**
comp=Z,3.5nm,0.8s,baz=302,slow=7.0,SNR=5.1
AKASG LR LR 14 11 19.1
comp=Z,202nm,18.3s,baz=290,slow=38
ARR Arges 97.38 39⇑P **P 13 24 14.7 -0.7**
BIZ Bicaz 97.48 38⇑P **P 13 24 14.8 -1.0**
DOPR Dopca 97.54 39⇑P **P 13 24 14.5 -1.6**
VOIR 97.60 39⇑P **P 13 24 15.2 -1.2**
VOIR 97.60 39⇑P **P 13 24 15.2 -1.2**
OZUR 97.72 38⇑P **P 13 24 15.7 -1.1**
HUMR Humele 98.00 40⇑P **P 13 24 16.8 -1.4**
MLR Muntele Rosu 98.12 39⇑P **P 13 24 17.5 -1.3**
MLR Muntele Rosu 98.12 39⇑P **P 13 24 17.5 -1.3**
OBN Obninsk 98.13 27⇑ *eP* **P 13 24 16.5 -1.9**
OBN *e* 13 28 22.5
OBN *eS* **SKSac 13 34 54.4 +4.9**
OBN SSS SSS 13 46 06.0
OBN pmax pmax
comp=Z,19nm,1.1s
OBN MLR MLR
comp=Z,631nm,22.0s
SORM Soroca 98.15 36⇑P **P 13 24 16.8 -1.9**
SORM Soroca 98.15 36⇑P **P 13 24 16.8 -1.9**
MOS Moscow 98.18 26 *eP* **P 13 24 15.8 -2.8**
YUK Yuzh-Kuril'sk 101.30 321 P **Pdif 13 24 21.2 -12**
YUK *e* 13 28 45.9
YUK *eP*PP PPP 13 30 52.0
YUK *eSS* SS 13 43 16.7 +10
YUK *eSSS* SSS 13 46 58.7
GRNR Gornyy 102.27 331⇑ *iP* **Pdif 13 24 36.8 -0.2**
GRNR pmax pmax
comp=Z,7.0nm,1.2s
QSPA South Pole Qui 104.62 180 Pdiff **Pdif 13 24 52.1 +4.9**
comp=Z,1.5nm,1.1s,baz=151,slow=3.5,SNR=4.8
DZM Mont Dzumac 105.80 251 *eLR* LR 14 00 00.5
comp=Z,939nm,25.3s
BRTR Keskin Array B 106.01 41 PKiKP **PKiKP 13 29 05.4 -0.6**
comp=Z,2.6nm,0.8s,baz=247,slow=0.2,SNR=9.2
BRTR PKKPbc **PKKPbc 13 40 28.4 -0.9**
comp=Z,1.6nm,0.8s,baz=173,slow=3.8,SNR=7.4
KBZ Khabaz 108.83 33 PKiKP **PKiKP 13 29 10.1 -0.8**
comp=Z,3.5nm,0.8s,baz=124,slow=2.5,SNR=4.9
MJAR Matsushiro Arr 110.39 319 PKiKP **PKiKP 13 29 14.7 +0.6**
comp=Z,2.3nm,0.6s,baz=140,slow=1.0,SNR=11
MJAR PKKPab **PKKPab 13 40 23.1 -4.0**
comp=Z,2.4nm,0.9s,baz=270,slow=0.2,SNR=5.1
ZALV Zalesovo Beam 111.60 2 PKiKP **PKiKP 13 29 14.9 -1.0**
comp=Z,4.4nm,0.5s,baz=267,slow=2.3,SNR=24
ZALV SKP 13 32 45.7
comp=Z,0.8nm,0.6s,baz=268,slow=3.4,SNR=3.0
ZALV PKKP **PKKPdf 13 40 35.4 +6.1**
comp=Z,0.8nm,0.6s,baz=205,slow=3.1,SNR=5.1
AB31 Akbulak array 111.71 19 *i* PKiKP **PKiKP 13 29 16.4 +0.2**
KURK Kurchatov 114.39 6*c i*PKiKP **PKiKP 13 29 21.1 -0.2**
KURK pmax pmax
comp=Z,28nm,1.0s
ULN Ulaanbaatar 115.43 346*c i*PKiKP **PKiKP 13 29 22.0 -1.6**
ULN pmax pmax
comp=Z,16nm,1.7s
SONM Songino Array 115.61 346 PKP **PKiKP 13 29 23.7 -0.2**
comp=Z,3.1nm,0.6s,baz=354,slow=0.7,SNR=24
SONM PKKPbc **PKKPbc 13 39 57.4 -1.0**
comp=Z,1.3nm,0.6s,baz=173,slow=4.8,SNR=7.8
KS19 Wonju Array Si 115.93 325 **PKPdf 13 29 26.1 +1.4**
KSRS Korea Array 115.93 325 PKP **PKPdf 13 29 25.1 +0.4**
comp=Z,19nm,0.6s,baz=4.7,slow=1.7,SNR=79
SUR Sutherland 115.94 119 PKP **PKiKP 13 29 27.3 +0.4**
comp=Z,19nm,0.8s,baz=280,slow=1.4,SNR=16
SUR Sutherland 116.94 119 **PKiKP 13 29 27.6 +0.7**
TJN Taejon 117.02 325*c i*PKiKP **PKiKP 13 29 27.6 +0.8**
SYO Syowa Base 117.83 162⇑ *eP* PP 13 30 40.4 -1.2
MAKZ Makanchi 118.57 5 PKiKP **PKPdf 13 29 27.7 -1.8**

MK31	**Makanchi Array**	**118.61**	**4**	*i* PKIKP	**PKPdf**	**13 29 27.9**	**-1.7**
MK31	**Makanchi Array**	**118.61**	**4**		**PKPdf**	**13 29 28.6**	**-0.9**
MKAR	**Makanchi Array**	**118.61**	**4**	PKP	**PKPdf**	**13 29 28.6**	**-1.0**
	comp=Z,13nm,0.7s,baz=359,slow=2.0,SNR=98						
MKAR				SKP		13 32 59.9	
	comp=Z,2.4nm,0.8s,baz=28,slow=2.9,SNR=5.1						
MKAR				PKKPbc	**PKKPbc**	**13 39 44.8**	**-2.8**
	comp=Z,0.6nm,0.8s,baz=180,slow=3.7,SNR=4.0						
HHC	**Hu-ho-hao-te**	**120.56**	**339**	*eP*	**PKiKP**	**13 29 34.7**	**+1.0**
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC	**Hu-ho-hao-te**	**120.56**	**339**	*e*PKP	**PKiKP**	**13 29 34.6**	**+0.9**
HHC				LR	LR		
	comp=Z,420nm,20.8s						
HHC				LR	LR		
	comp=Z,190nm,20.4s						
HHC				LR	LR		
	comp=Z,220nm,20.8s						
GEYT	**Alibeck**	**120.67**	**27**	PKP	**PKPdf**	**13 29 33.2**	**-0.6**
	comp=Z,29nm,0.8s,baz=275,slow=3.7,SNR=48						
GEYT				SKP		13 33 03.6	
	comp=Z,1.8nm,0.6s,baz=258,slow=4.4,SNR=3.6						
GEYT				PKKPbc	**PKKPbc**	**13 39 39.7**	**-0.1**
	comp=Z,1.5nm,0.6s,baz=190,slow=7.5,SNR=7.1						
GYA0B	**ALIBECK ARRAY**	**120.67**	**27**		**PKPdf**	**13 29 33.8**	**-0.1**
BOSA	**Boshof**	**120.73**	**115**	PKP	**PKPdf**	**13 29 34.2**	**0.0**
	comp=Z,43nm,0.8s,baz=267,slow=2.3,SNR=51						
BOSA				SKP		13 33 05.5	
	comp=Z,5.1nm,0.7s,baz=306,slow=2.7,SNR=4.6						
BOSA				PKKPab	**PKKPab**	**13 39 44.2**	**+4.5**
	comp=Z,1.8nm,0.8s,baz=116,slow=3.3,SNR=3.3						
LBTB	**Lobatse**	**120.94**	**111**	PKP	**PKiKP**	**13 29 35.3**	**+0.5**
	comp=Z,16nm,0.7s,baz=268,slow=2.8,SNR=22						
USP	**Ospenovka**	**121.05**	**11**	P	**PKiKP**	**13 29 34.5**	**-0.1**
	SNR=76						
CHMS	**Chumysh**	**121.36**	**11**	P	**PKiKP**	**13 29 35.2**	**+0.1**
	SNR=26						
EKS2	**Erkin-Say**	**121.49**	**12**	P	**PKiKP**	**13 29 35.8**	**+0.3**
	SNR=42						
TKM2	**Tokmak 2**	**121.59**	**11**	PKIKP	**PKPdf**	**13 29 35.4**	**-0.3**
TKM2	**Tokmak 2**	**121.59**	**11**	P	**PKPdf**	**13 29 35.5**	**-0.2**
	SNR=50						
AAK	**Ala-Archa**	**121.66**	**12**	*c i*PKIKP	**PKiKP**	**13 29 36.2**	**+0.3**
AAK				pmax	pmax		
	comp=Z,50nm,1.3s						
AAK	**Ala-Archa**	**121.66**	**12**	PKKPbc	PKKPbc	13 39 34.3	-2.1
	comp=Z,1.3nm,0.5s,baz=159,slow=6.4,SNR=6.4						
AAK	**Ala-Archa**	**121.66**	**12**	P	**PKiKP**	**13 29 36.1**	**+0.3**
	SNR=31						
AAK	**Ala-Archa**	**121.66**	**12**	*i* PKiKP	**PKiKP**	**13 29 36.0**	**+0.1**
	SNR=50						
KBK	**Karagaybulak**	**121.72**	**11**	P	**PKPdf**	**13 29 35.8**	**-0.1**
	SNR=33						
PDGK	**Podgornoye**	**121.77**	**7**	PKIKP	**PKPdf**	**13 29 35.4**	**-0.5**
WMQ	**Urumqi**	**121.79**	**0**	PKP	**PKiKP**	**13 29 36.5**	**+0.5**
WMQ				sPKP		13 30 08.7	
WMQ				LR	LR		
	comp=Z,710nm,26.3s						
WMQ				LR	LR		
	comp=Z,1μm,29.1s						
WMQ				LR	LR		
	comp=Z,1μm,29.3s						
MBAR	**Mbarara**	**121.84**	**81**	PKP	**PKiKP**	**13 29 37.4**	**+0.4**
	comp=Z,27nm,0.8s,baz=293,slow=0.7,SNR=19						
AML	**Almayashu**	**121.98**	**12**	P	**PKiKP**	**13 29 37.0**	**+0.1**
	SNR=67						
UCH	**Uchtor**	**122.06**	**12**	P	**PKiKP**	**13 29 37.3**	**+0.3**
	SNR=77						
KZA	**Kyzart**	**122.34**	**11**	P	**PKiKP**	**13 29 37.8**	**+0.2**
	SNR=21						
TIA	**Tai'an**	**122.34**	**332**	PKP	**PKiKP**	**13 29 37.8**	**+0.6**
ULHL	**Ulahol**	**122.36**	**10**	P	**PKiKP**	**13 29 37.9**	**+0.5**
	SNR=54						
LSZ	**Lusaka**	**122.48**	**99**	PKP	**PKiKP**	**13 29 38.1**	**+0.1**
	comp=Z,13nm,0.7s,baz=251,slow=2.5,SNR=14						
LSZ				SKP		13 33 08.8	
	comp=Z,1.6nm,0.3s,baz=194,slow=4.2,SNR=4.5						
MATP	**Matopo**	**123.33**	**105**	PKP	**PKPdf**	**13 29 39.3**	**-0.1**
	comp=Z,22nm,0.6s,baz=244,slow=1.4,SNR=55						
RAYN	**Ar Rayn**	**123.79**	**48**	*i* PKPdf	**PKPdf**	**13 29 39.6**	**-0.7**
	SNR=9.4						
NJ2	**Nanjing**	**124.88**	**328**	*e*PKP	**PKiKP**	**13 29 42.8**	**+0.5**
KSH	**Kashi**	**124.95**	**11**	⇑*i*PKP	**PKiKP**	**13 29 43.4**	**+0.9**
KSH				sPKP		13 30 14.1	
KSH				AMB	AMB		
	comp=Z,310nm,4.0s						
KSH				LR	LR		
	comp=Z,140nm,4.2s						
KSH				LR	LR		
	comp=Z,170nm,4.5s						
KSH				LR	LR		
	comp=Z,340nm,5.6s						
GTA	**Gaotai**	**125.06**	**349**	PKP	**PKPdf**	**13 29 42.3**	**0.0**
GTA				LR	LR		
	comp=Z,320nm,21.3s						
GTA				LR	LR		
	comp=Z,210nm,22.0s						
GTA				LR	LR		
	comp=Z,530nm,22.3s						
HRA	**Herat**	**125.45**	**26**		**PKiKP**	**13 29 43.7**	**0.0**
LZH	**Lanzhou**	**127.31**	**344**	*e*PKP	**PKPdf**	**13 29 45.7**	**-1.1**
LZH				sPKP		13 30 20.4	
LZH				LR	LR		
	comp=Z,300nm,17.8s						
LZH				LR	LR		
	comp=Z,310nm,18.1s						
LZH				LR	LR		
	comp=Z,370nm,20.0s						
XAN	**Xi'an**	**127.58**	**338**	PKP	**PKPdf**	**13 29 47.0**	**-0.2**
XAN				AMB	AMB		
	comp=Z,250nm,10.8s						
XAN				LR	LR		
	comp=Z,400nm,20.9s						
XAN				LR	LR		
	comp=Z,300nm,22.0s						
XAN				LR	LR		
	comp=Z,440nm,24.4s						
KMBO	**Kilima Mbogo**	**128.21**	**80**	PKP	**PKiKP**	**13 29 50.2**	**+0.4**
	comp=Z,12nm,0.8s,baz=295,slow=3.1,SNR=24						
STKA	**Stephens Creek**	**128.30**	**241**	PKP	**PKiKP**	**13 29 48.9**	**-0.2**
	comp=Z,9.4nm,0.8s,baz=110,slow=1.1,SNR=16						
STKA	**Stephens Creek**	**128.30**	**241**		**PKiKP**	**13 29 49.3**	**+0.2**
ATD	**Arta Tunnel**	**128.33**	**62**	PKP	**PKiKP**	**13 29 50.4**	**+0.7**
	comp=Z,63nm,1.0s,baz=309,slow=4.2,SNR=15						
WHN	**Wuhan**	**128.33**	**331**	PKP	**PKiKP**	**13 29 49.9**	**+0.7**
WHN				LR	LR		
	comp=Z,650nm,18.4s						
SHME	**Shamm**	**129.08**	**38**	*i* PKPdf	**PKPdf**	**13 29 49.8**	**-0.4**
	SNR=5.7						
BANOM	**Banah**	**129.26**	**38**	PKPdf	**PKPdf**	**13 29 49.5**	**-1.1**
NAZ	**Nazwa, Dubai**	**129.58**	**39**	*i* PKPdf	**PKPdf**	**13 29 50.6**	**-0.5**
	SNR=5.7						
MSFE	**Esma-Masafi**	**129.60**	**38**	*i* PKPdf	**PKPdf**	**13 29 50.6**	**-0.7**
	SNR=17						
MZR	**Muzera**	**129.63**	**43**	*i* PKiKP	**PKPdf**	**13 29 51.2**	**-0.1**
	SNR=6.8						
ASUD	**Al Ashush, Dub**	**129.64**	**40**	*i* PKPdf	**PKPdf**	**13 29 51.0**	**-0.3**
	SNR=6.1						
UOSS	**Minazif**	**129.94**	**38**	PKPdf	**PKPdf**	**13 29 50.4**	**-1.4**
HATD	**Hatta, Dubai**	**129.99**	**39**	*i* PKPdf	**PKPdf**	**13 29 50.8**	**-1.2**
	SNR=9.9						
ASHO	**Ashiyiah**	**130.05**	**39**	*i* PKPdf	**PKPdf**	**13 29 50.5**	**-1.6**
	SNR=7.9						
ALNE	**Al Ain**	**130.32**	**40**	*i* PKPdf	**PKPdf**	**13 29 51.8**	**-0.8**
	SNR=11						
DHRM	**DHARAMSHALA**	**132.04**	**13**	*eP*	**PKPdf**	**13 29 56.0**	**+0.1**
CD2	**Chengdu**	**132.18**	**342**	PKP	**PKPdf**	**13 29 54.7**	**-1.3**
CD2				PP	**PP**	**13 32 20.0**	**+2.8**
CD2				AMB	AMB		
	comp=Z,630nm,6.1s						
CD2				LR	LR		
	comp=Z,490nm,15.7s						
CD2				LR	LR		
	comp=Z,620nm,17.2s						
WSAR	**Wadi Sarin**	**132.67**	**38**	SKPbc	**SKPbc**	**13 33 17.1**	**-0.9**
	comp=Z,6.1nm,0.7s,baz=45,slow=2.4,SNR=5.9						
SMLA	**Simla**	**133.31**	**13**	*eP*	**PKPdf**	**13 29 57.8**	**-0.2**
SMLA				*i* x	x	13 29 58.5	
SMLA				IAmb	IAmb	13 30 00.5	
	comp=Z,90nm,0.6s						
GYA	**Guiyang**	**135.22**	**336**	⇓*i*PKP	**PKPdf**	**13 30 02.4**	**+0.5**
GYA				SKKS		13 39 18.2	
GYA				AMB	AMB		
	comp=Z,90nm,8.1s						
GYA				LR	LR		
	comp=Z,260nm,19.3s						
GYA				LR	LR		
	comp=Z,250nm,20.4s						
GYA				LR	LR		
	comp=Z,390nm,19.7s						
WRAB	**Tennant Creek**	**135.45**	**256**	*c i*PKIKP	**PKiKP**	**13 30 05.0**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s						
WRA	**Warramunga Arr**	**135.46**	**256**	PKhKP	PKPpre	13 29 53.1	
	comp=Z,1.6nm,0.6s,baz=94,slow=2.4,SNR=9.9						
WRA				PKP	**PKPdf**	**13 30 02.6**	**+0.3**
	comp=Z,9.0nm,0.8s,baz=86,slow=1.3,SNR=12						
WRA				SKP		13 33 33.8	
	comp=Z,2.1nm,0.8s,baz=86,slow=3.3,SNR=3.3						
WRA				PKKP	**PKKPdf**	**13 39 43.3**	**-1.1**
	comp=Z,0.5nm,0.9s,baz=288,slow=1.4,SNR=6.2						
NDI	**New Delhi**	**135.68**	**13**	*eP*	**PKPdf**	**13 30 03.0**	**+0.4**
LSA	**Lhasa**	**135.77**	**356**	PKiKP	**PKPdf**	**13 30 03.5**	**+0.2**
ASAR	**Alice Springs**	**135.79**	**251**	PKhKP	PKPpre	13 29 47.2	
	comp=Z,0.6nm,0.5s,baz=107,slow=3.6,SNR=7.8						
ASAR				PKP	**PKPdf**	**13 30 02.8**	**-0.1**
	comp=Z,5.7nm,0.9s,baz=110,slow=3.7,SNR=22						
ASAR				SKP		13 33 34.8	
	comp=Z,1.7nm,0.7s,baz=98,slow=3.8,SNR=3.9						
ASAR				PKKP	**PKKPdf**	**13 39 42.5**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=294,slow=1.5,SNR=13						
ASAR				SKKPbc	SKKPbc	13 42 27.8	-0.8
	comp=Z,1.0nm,0.7s,baz=277,slow=3.2,SNR=4.3						
KMI	**Kunming**	**137.88**	**340**	PKP	**PKPdf**	**13 30 07.0**	**0.0**
KMI				LR	LR		
	comp=Z,280nm,24.8s						
KMI				LR	LR		
	comp=Z,260nm,20.8s						
KMI				LR	LR		
	comp=Z,480nm,22.3s						
GTK	**Tadong**	**138.25**	**359**	*eP*	**PKPdf**	**13 30 06.6**	**-0.9**
GTK				IAmb	IAmb	13 30 09.2	
	comp=Z,27nm,0.7s						
SHL	**Shillong**	**139.81**	**354**	*eP*	**PKPdf**	**13 30 09.5**	**-1.0**
SHL				IAmb	IAmb	13 30 13.8	
	comp=Z,79nm,1.2s						
OPO	**Ambohidratompo**	**140.86**	**101**	PKhKP	PKPpre	13 30 05.9	
	comp=Z,22nm,0.9s,baz=261,slow=5.0,SNR=11						
OPO				SKPbc	**SKPbc**	**13 33 42.8**	**0.0**
	comp=Z,1.7nm,0.3s,baz=270,slow=1.0,SNR=4.1						
BHPL	**Bhopal**	**140.95**	**15**	*eP*	**PKPdf**	**13 30 11.3**	**-1.1**
BOK	**Bokaro**	**141.72**	**3**	*eP*	**PKPdf**	**13 30 12.1**	**-1.7**
BOK				IAmb	IAmb	13 30 15.2	
	comp=Z,36nm,0.6s						
POO	**Poona**	**144.22**	**23**	*eP*	**PKPab**	**13 30 13.0**	**-3.2**
BWNR	**Bhubaneshwar**	**145.19**	**3**	*eP*	**PKPbc**	**13 30 18.8**	**-0.8**
BWNR				IAmb	IAmb	13 30 21.6	
	comp=Z,83nm,0.9s						
BWNR				*i* x	x	13 33 55.7	
SRSP	**Sriramsagar**	**145.31**	**16**	*e*PKPbc	**PKPbc**	**13 30 17.8**	**-2.2**
CM31	**Chiang Mai Arr**	**145.32**	**341**		**PKPbc**	**13 30 19.5**	**-0.5**
CMAR	**Chiang Mai Arr**	**145.32**	**341**	PKPbc	**PKPbc**	**13 30 20.1**	**0.0**
	comp=Z,133nm,0.8s,baz=343,slow=4.0,SNR=526						
CMAR				SKPbc	**SKiKP**	**13 33 56.4**	**+2.4**
	comp=Z,6.4nm,0.9s,baz=344,slow=3.2,SNR=5.8						
KLRI	**Killari**	**145.61**	**19**	*e*PKPdf	**PKPdf**	**13 30 18.6**	**-2.1**
RPR	**Rampur**	**145.62**	**15**	*e*PKPdf	**PKPdf**	**13 30 19.1**	**-1.6**
DMPR	**Damasthipur**	**146.48**	**18**	*e*PKPdf	**PKPdf**	**13 30 21.5**	**-0.7**
MSEY	**Mahe Island**	**146.58**	**76**	*i* PKPab	**PKPbc**	**13 30 23.6**	**-0.5**
	SNR=8.1						
HYBB	**Hyderabad (bro**	**146.81**	**16**	*e*PKPdf	**PKPdf**	**13 30 22.2**	**-0.6**
HYB	**Hyderabad**	**146.81**	**16**	*i* PKP	**PKPdf**	**13 30 22.0**	**-0.8**
HYB	**Hyderabad**	**146.81**	**16**	*eP*	**PKPdf**	**13 30 22.0**	**-0.8**
HYB				IAmb	IAmb	13 30 25.7	
	comp=Z,68nm,0.9s						
CHLP	**Challavanipeta**	**146.81**	**7**	*e*PKPbc	**PKPdf**	**13 30 22.6**	**-0.1**
GGR	**Gangavaram**	**146.83**	**13**	*e*PKPdf	**PKPdf**	**13 30 22.3**	**-0.5**
GOA	**Goa**	**146.96**	**25**	*eP*	**PKPdf**	**13 30 23.4**	**+0.4**
GOA				IAmb	IAmb	13 30 25.8	
	comp=Z,114nm,0.9s						
PVM	**Polavaram**	**147.68**	**11**	*e*PKPdf	**PKPdf**	**13 30 23.8**	**-0.4**
NJS	**Nagarjunasagar**	**147.83**	**16**	*e*PKPdf	**PKPdf**	**13 30 24.1**	**-0.3**
MYLAV	**Mylavaram**	**147.96**	**13**	*e*PKPdf	**PKPdf**	**13 30 24.8**	**+0.1**
SRLM	**Srisailam**	**148.16**	**17**	*e*PKPdf	**PKPdf**	**13 30 23.8**	**-1.2**
ADKI	**Addanki**	**148.68**	**15**	*e*PKPdf	**PKPdf**	**13 30 25.8**	**0.0**
URV	**Uravakonda**	**148.75**	**20**	*e*PKPdf	**PKPdf**	**13 30 26.0**	**0.0**
SKHT	**Srikalahasti**	**150.63**	**16**	*e*PKPdf	**PKPdf**	**13 30 29.1**	**+0.2**
MDRS	**Chennai**	**151.41**	**16**	*eP*	**PKPdf**	**13 30 31.4**	**+1.3**
MDRS				*i* x	x	13 30 36.0	
MDRS				IAmb	IAmb	13 30 38.5	
	comp=Z,322nm,1.1s						
PBA	**Port Blair**	**153.40**	**349**	*ex*	PKPbc	13 30 41.5	+0.7
PBA				IAmb	IAmb	13 30 42.7	
	comp=Z,352nm,0.5s						
TRD	**Trivandrum**	**154.54**	**26**	*eP*	**PKPdf**	**13 30 33.5**	**-1.3**
TRD				*i* x	x	13 30 43.0	
PALK	**Pallekele**	**157.06**	**19**	PKP	**PKPdf**	**13 30 38.9**	**+0.8**
	comp=Z,21nm,1.1s,baz=268,slow=2.3,SNR=8.8						
PALK	**Pallekele**	**157.06**	**19**	PKPdf	**PKPdf**	**13 30 37.8**	**-0.3**

MAN 11 13:32:35.9, 11°.55N × 124°.44E, h9 km, mb4.7, ML3.6, MS3.5, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.52**	**161**	*eP*		Pg	13 32 46.0	0.0
OCLP				*eS*		Sb	13 32 54.5	-0.4
CNP	**Catarman**	**0.98**	**13**	*eP*		Pb	13 32 55.1	-0.1
CNP				*eS*		Sn	13 33 09.4	-0.6
LLP	**Lapu-Lapu**	**1.30**	**201**	⇓*iP*		Pn	13 32 58.6	-1.8
LLP				*i* S		Sb	13 33 15.8	-1.7
MSLP	**Maasin**	**1.46**	**163**	*eP*		Pn	13 33 02.2	-0.3
MSLP				*eS*		Sg	13 33 23.9	+0.9
RCP	**Roxas**	**1.66**	**271**	⇑*eP*		Pn	13 33 05.5	+0.3
RCP				*eS*		Sn	13 33 27.1	+0.5

*ECX **11** 13:37:03.6±0.5, 31°.24N × 115°.88W, h5 km, MD3.1, ML3.3*
*MEX **11** 13:37:04.1±0.6, 31°.11N × 115°.89W, h10 km, MD4.0*
*ANF **11** 13:37:04.7±0.8, 31°.32N × 115°.82W, h15 km±5km, ML3.2/12,*
Error ellipse: s-maj=6.2km s-min=2.6km az=43.0
ISC 11 13:37:01.8±1.1, 31°.25N±0°.03 × 115°.89W±0°.04, h8 km±10 km, n27, σ0°.94/44, 3C-2D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPIG	**San Pedro Mart**	**0.42**	**119**	*i* P		**Pb**	**13 37 11.3**	**-0.3**
SPIG				*eS*		**Sb**	**13 37 17.0**	**-1.2**
SPIG	**San Pedro Mart**	**0.42**	**119**	*i* P		**Pb**	**13 37 11.3**	**-0.3**
SPIG				*eS*		**Sb**	**13 37 17.0**	**-1.2**
SPX	**San Pedro Mart**	**0.42**	**120**	*eP*		**Pg**	**13 37 10.1**	**0.0**
SPX				*eS*		**Sg**	**13 37 16.3**	**+0.3**
SPX	**San Pedro Mart**	**0.42**	**120**	⇑*iP*		**Pg**	**13 37 10.3**	**+0.2**
SPX				*eS*		**Sg**	**13 37 15.9**	**+0.2**
SPX				IAML			13 37 16.4	
	comp=N,3μm,0.1s						
SPX				⇓*e*			13 37 16.4	
SPX				IAML			13 37 16.4	
	comp=E,2μm,0.1s						
SQX	**San Quintin**	**0.67**	**179**	⇓*iP*		**Pb**	**13 37 15.2**	**-0.5**
SQX				*eS*		**Sg**	**13 37 24.0**	**+0.6**
ESJX	**Sierra Juarez**	**0.76**	**356**	*eP*		**Pb**	**13 37 17.4**	**+0.1**
ESJX				*eS*		**Sb**	**13 37 27.6**	**-0.3**
SFX	**San Felipe**	**0.92**	**103**	⇑*eP*		**Pg**	**13 37 19.5**	**0.0**
SFX				*eS*		**Sg**	**13 37 31.3**	**0.0**
CBX	**Cerro Bola**	**1.25**	**328**	*eP*		**Pg**	**13 37 25.6**	**-0.1**
CBX				*eS*		**Sn**	**13 37 42.5**	**-0.3**
CBX	**Cerro Bola**	**1.25**	**328**	*eP*		**Pb**	**13 37 25.5**	**-0.2**
CBX				*eS*		**Sg**	**13 37 42.0**	**0.0**
CBX				IAML			13 37 45.5	
	comp=N,552nm,0.6s						
CBX				⇑*e*			13 37 45.5	
MBIG	**Mexicali**	**1.30**	**27**	*eP*		**Pn**	**13 37 25.8**	**-0.4**
MBIG				*i* S		**Sg**	**13 37 43.9**	**+0.3**
ERMX	**Rumorosa**	**1.31**	**355**	*eP*		**Pg**	**13 37 27.0**	**+0.1**
ERMX				*eS*		**Sg**	**13 37 44.1**	**+0.2**
ERMX				IAML			13 37 50.5	
	comp=E,518nm,0.5s						
ERMX				*e*			13 37 50.5	
TJIG	**Tijuana**	**1.36**	**331**	*eP*		**Pb**	**13 37 27.8**	**-0.2**
TJIG				*eS*		**Sn**	**13 37 44.7**	**-0.6**
TJIG	**Tijuana**	**1.36**	**331**	*eP*		**Pb**	**13 37 27.1**	**-0.4**
IKP	**In-Ko-Pah, Jac**	**1.41**	**353**	P		**Pg**	**13 37 29.0**	**+0.1**
	baz=170,SNR=147						
IKP				S		**Sg**	**13 37 47.3**	**+0.1**
	baz=170						
BAR	**Barrett**	**1.57**	**335**	*eP*		**Pb**	**13 37 30.7**	**-0.5**
SWSC	**Sam W. Stewart**	**1.69**	**3**	Pb		**Pg**	**13 37 34.4**	**+0.1**
	baz=181,SNR=69						
SWSC				Sb		**Sg**	**13 37 57.0**	**+0.7**
	baz=181						
MONP2	**Monument Peak**	**1.70**	**345**	P		**Pb**	**13 37 33.5**	**0.0**
	baz=162,SNR=95						
MONP2				S		**Sb**	**13 37 55.4**	**+0.3**
	baz=162						
SDRC	**San Diego Road**	**1.73**	**329**	*eP*		**Pb**	**13 37 33.5**	**-0.3**
109C	**Camp Elliot, M**	**1.93**	**328**	P		**Pb**	**13 37 36.9**	**-0.4**
	baz=145,SNR=9.7						
109C				S		**Sb**	**13 38 01.5**	**-0.1**
	baz=145						
GLA	**Glamis**	**2.01**	**26**	P		**Pn**	**13 37 37.0**	**+0.8**
	baz=206,SNR=9.3						
PFO	**Pinyon Flats O**	**2.41**	**349**	Pb		**Pg**	**13 37 46.6**	**-1.3**
	baz=167						
PFO				Sb		**Sg**	**13 38 17.6**	**-1.5**
	baz=167						
BC3	**Big Chuckawall**	**2.43**	**9**	P		**Pn**	**13 37 43.4**	**+1.4**
	baz=188,SNR=7.6						
214A	**Organ Pipe Nat**	**2.72**	**74**	P		**Pn**	**13 37 46.5**	**+0.6**
	baz=257,SNR=15						
BELC	**Belle Mtn. Jos**	**2.75**	**358**	Pb		**Pg**	**13 37 53.3**	**-1.1**
	baz=177						
BBRC	**Big Bear Solar**	**3.13**	**344**	Sb		**Sg**	**13 38 40.1**	**-2.2**
	baz=162						
EDW2	**Edwards Air Fo**	**4.03**	**335**	Sb		**Sb**	**13 39 05.8**	**+3.8**
	baz=152						
TUC	**Tucson**	**4.48**	**75**	P		**Pn**	**13 38 11.1**	**+1.1**
	baz=258						

*IDC **11** 13:43:26.3±4.1, 21°.47S × 70°.11W, h0 km, mb3.9/1,*
mb1 3.7/2, mb1mx3.4/34, mbtmp3.7/2, ML3.4/1, Error
ellipse: s-maj=137.4km s-min=62.5km az=94.0
*SJA **11** 13:43:26.4±1.4, 20°.64S × 70°.79W, h22 km±16 km, ML3.6,*
MW3.7
*GUC **11** 13:43:30.6±0.8, 20°.68S × 70°.54W, h34 km±2 km, ML3.5*
ISC 11 13:43:26.7±1.8, 20°.68S±0°.03 × 70°.68W±0°.07, h3 km±11 km, n27, σ0°.77/39, 3C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TA01	**Diego Aracena**	**0.48**	**76**	⇓*eP*		**Pb**	**13 43 38.9**	**+1.1**
TA01				*eS*		**Sb**	**13 43 44.4**	**-0.9**
PATCX	**Punta Patache**	**0.51**	**106**	⇓*eP*		**Pb**	**13 43 39.5**	**+1.2**
PATCX				*eS*		**Sb**	**13 43 46.0**	**-0.2**
PATCX				IAML			13 43 46.5	
	comp=E,5μm,0.2s						
PATCX	**Punta Patache**	**0.51**	**106**	*eP*		**Pb**	**13 43 39.5**	**+1.2**
PATCX				*i* S		**Sb**	**13 43 46.2**	**-0.1**
PSGC	**Pisagua**	**1.20**	**26**	⇓*iP*		**Pb**	**13 43 50.8**	**+0.7**
PSGC				*eS*		**Sb**	**13 44 06.2**	**+0.2**
PSGC				IAML			13 44 08.1	
	comp=N,3μm,0.5s						
PB11	**IPOC Station P**	**1.33**	**47**	⇓*eP*		**Pn**	**13 43 52.7**	**+0.5**
PB11				*eS*		**Sb**	**13 44 09.4**	**-0.4**
PB11				IAML			13 44 12.1	
	comp=N,3μm,0.3s						
PB08	**IPOC Station P**	**1.53**	**70**	⇑*iP*		**Pb**	**13 43 55.8**	**-0.1**
PB08				*eS*		**Sg**	**13 44 14.9**	**-0.9**
PB08				IAML			13 44 16.5	
	comp=E,1μm,0.2s						
PB08	**IPOC Station P**	**1.53**	**70**	*eP*		**Pg**	**13 43 55.9**	**-0.1**
PB03	**IPOC Station P**	**1.61**	**148**	*eP*		**Pb**	**13 43 57.0**	**-0.2**
PB03				*eS*		**Sg**	**13 44 18.1**	**-0.4**
PB03				IAML			13 44 25.1	
	comp=E,503nm,0.2s						
PB03	**IPOC Station P**	**1.61**	**148**	*eP*		**Pb**	**13 43 57.0**	**-0.2**
PB04	**IPOC Station P**	**1.72**	**163**	⇓*iP*		**Pn**	**13 43 58.4**	**+0.7**
PB04				*i* S		**Sn**	**13 44 20.3**	**0.0**
PB04				IAML			13 44 25.9	
	comp=E,980nm,0.1s						
PB04	**IPOC Station P**	**1.72**	**163**	*i* P		**Pn**	**13 43 58.4**	**+0.7**
PB04				*i* S		**Sg**	**13 44 22.3**	**+0.4**
PB04				IAML			13 44 28.2	
	comp=Z,755nm,0.5s						
GO01	**Chusmiza**	**1.72**	**54**	⇓*eP*		**Pb**	**13 43 59.1**	**-0.1**
GO01				*eS*		**Sn**	**13 44 20.3**	**-0.4**
PB09	**IPOC Station P**	**1.74**	**130**	*eP*		**Pb**	**13 43 59.6**	**+0.2**
PB09				*eS*		**Sb**	**13 44 21.2**	**-0.6**
PB09				IAML			13 44 30.4	
	comp=E,767nm,0.3s						
PB09	**IPOC Station P**	**1.74**	**130**	*i* P		**Pg**	**13 44 00.0**	**0.0**
PB09				⇑*i*S		**Sg**	**13 44 22.6**	**-0.1**
PB09				IAML			13 44 31.4	
	comp=Z,481nm,0.3s						
MNMC	**Minye Minye**	**1.85**	**34**	⇑*iP*		**Pb**	**13 44 01.5**	**+0.2**
MNMC				*eS*		**Sb**	**13

1.4nm,0.3s,baz=203,slow=22,SNR=7.1
PET Petropavlovsk 1.71 26 *e*P **Pn 13 58 15.0 -0.3**
PET *e*S **Sn 13 58 38.1 -0.1**
UGLR Uglovaya 1.92 26 *e*P **Pn 13 58 18.8 +0.8**
UGLR *e*S **Sn 13 58 45.0 +2.0**
AVH Avacha 1.94 24 *e*P **Pn 13 58 19.4 +1.1**
AVH *e*S **Sn 13 58 45.4 +1.8**
KOK Koryaka 1.95 22 *e*P **Pn 13 58 19.2 +0.8**
SMAR Somma 1.96 25 *e*P **Pn 13 58 19.4 +0.7**
KRER Koryakskii 1.98 23 *e*P **Pn 13 58 19.7 +0.8**
KRER *e*S **Sn 13 58 45.9 +1.3**
SDLR Sedlovina 2.00 26 *e*P **Pn 13 58 19.3 +0.3**
SDLR *e*S **Sn 13 58 45.3 +0.6**
KRX Arik 2.01 21 *e*P **Pn 13 58 20.2 +1.0**
KRX *e*S **Sn 13 58 46.5 +1.4**
NLC Nalytchevo 2.05 34 *e*S **Sn 13 58 44.1 -1.5**
SPN Mys Shipunski 2.26 44 *e*P **Pn 13 58 21.3 -0.9**
SPN *e*S **Sn 13 58 49.2 -1.2**
KZV Kizimen 4.01 24 *e*P **Pn 13 58 45.3 +0.1**
MKZ Mys Kozlova 4.02 39 *e*P **Pn 13 58 44.1 -1.0**
TUMD Tumrok D 4.12 24 *e*P **Pn 13 58 46.9 +0.4**
TUMR Tumrok 4.13 22 *e*P **Pn 13 58 47.9 +1.2**
KLR Kul'dur 16.52 272 LR LR 14 07 34.9
comp=Z,89nm,18.4s,baz=37,slow=37
H11N2 WAKE ISLAND Hy 32.56 163 T T 14 38 24.7
baz=349
H11N3 WAKE ISLAND Hy 32.58 163 T T 14 38 42.5
baz=349,slow=74
H11N1 WAKE ISLAND Hy 32.58 163 T T 14 38 26.2
baz=349,slow=74
YKA Yellowknife Ar 45.44 41 P **P 14 05 50.6 -0.8**
0.1nm,0.3s,baz=297,slow=7.6
TXAR Lajitas Array 72.78 65 P **P 14 09 01.1 +0.6**
0.3nm,0.5s,baz=294,slow=4.7,SNR=6.7

GUC 11 14:02:25.3±0.6, 20°.11S×68°.67W, h215km±5km, ML3.8, 3C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.46**	**267**	⇑ *i* P	Pn	14 02 54.0	-0.5
PB08				*e*S	S	14 03 16.1	-1.2
PB08				IAML		14 03 16.6	
	comp=E,4μm,0.3s						
PB11	**IPOC Station P**	**0.99**	**291**	⇓ *e*P	Pn	14 02 56.1	-0.7
PB11				*e*S	S	14 03 19.5	-1.7
PB11				IAML		14 03 20.4	
	comp=E,725nm,0.5s						
MNMC	**Minye Minye**	**1.31**	**318**	⇑ *i* P	Pn	14 02 58.9	-0.3
MNMC				*e*S	S	14 03 24.2	-1.2
MNMC				IAML		14 03 28.0	
	comp=N,2μm,0.8s						
PSGC	**Pisagua**	**1.46**	**290**	*i* S	S	14 03 32.7	+5.6
TA01	**Diego Aracena**	**1.49**	**252**	IAML		14 03 50.9	
	comp=N,222nm,0.7s						
PATCX	**Punta Patache**	**1.56**	**243**	*i* P	Pn	14 02 59.8	-1.2
PATCX				*e*S	S	14 03 27.3	-1.2
PATCX				IAML		14 03 36.1	
	comp=N,268nm,0.2s						
PB16	**IPOC Station P**	**1.94**	**336**	⇑ *i* P	Pn	14 03 10.8	+5.8
PB16				*e*S	S	14 03 37.5	+1.8

IDC 11 14:03:06.1±3.2, 19°.49S×68°.87W, h35km±26km, mb3.4/2, mb1 3.6/4, mb1mx3.4/24, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=49.1km s-min=18.7km az=96.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**3.10**	**181**	Pn	Pn	14 03 53.1	+0.2
	16nm,0.3s,baz=335,slow=7.4,SNR=26						
LVC					Sn	14 04 31.4	+2.5
	23nm,0.3s,baz=75,slow=23,SNR=24						
LPAZ	**La Paz**	**3.27**	**13**	Pg	Pb	14 04 07.6	+3.9
	0.7nm,0.3s,baz=197,slow=18,SNR=7.9						
LPAZ				Lg	Lg	14 04 50.9	
	0.1nm,0.3s,baz=220,slow=18,SNR=1.6						
SIV	**San Ignacio**	**8.21**	**66**	Pn	Pn	14 05 03.1	+0.4
	0.3nm,0.3s,baz=247,slow=15,SNR=4.0						
TORD	**Torodi Ar. Bea**	**76.66**	**71**	P	P	14 14 53.2	-0.7
	0.4nm,0.6s,baz=235,slow=5.1,SNR=2.9						
YKA	**Yellowknife Ar**	**89.32**	**341**	P	P	14 15 58.1	-0.2
	0.2nm,0.7s,baz=133,slow=4.4,SNR=7.4						

YARS 11 14:37:26.6±0.0, 56°.77N×124°.86E, h17km, mb0.0/44, ML3.8/12, Ms0.0/44, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLNS	**Chul'man**	**0.07**	**13**	*e*Pg	Pg	14 37 31.2	+1.2
	946nm,0.1s						
CLNS				*e*Sg	Sg	14 37 32.9	+0.7
	17μm,0.2s						
IENR	**Iengra**	**0.54**	**180**	*e*Pg	Pg	14 37 37.1	-0.3
	229nm,0.4s						
IENR				*e*Sg	Sg	14 37 43.9	-0.8
	686nm,0.2s						
TNDR	**Tynda**	**1.62**	**183**	*e*Pg	Pb	14 37 56.8	+0.7
	288nm,0.4s						
TNDR				*e*Sg	Sb	14 38 17.5	+1.3
	1μm,0.4s						
YKLR	**Yuktali**	**1.78**	**266**	*e*Pg	Pb	14 37 59.2	+0.5
	287nm,0.6s						
YKLR				*e*Sg	Sb	14 38 22.0	+1.2
	229nm,0.2s						
ALDR	**Aldan**	**1.87**	**9**	*e*Pg	Pg	14 38 01.6	-1.0
	24nm,0.2s						
ALDR				*e*Sg	Sg	14 38 26.0	-0.9
	319nm,0.1s						
KROS	**Kirovskiy**	**2.63**	**152**	*i* Pg	Pb	14 38 13.9	+0.7
	10.0nm,0.3s						
KROS				*i* Sg	Sg	14 38 48.6	-2.3
	42nm,0.3s						
KHN	**Khani**	**2.79**	**275**	*e*Pg	Pb	14 38 15.3	-0.7
	550nm,0.5s						
KHN				*e*Sg	Sb	14 38 50.4	+0.5
	80nm,0.1s						
BMKR	**Bomnak**	**3.05**	**131**	*e*Pg	Pg	14 38 22.8	-2.2
	299nm,0.2s						
BMKR				*i* Sg	Sg	14 39 02.2	-2.2
	638nm,0.2s						
CRS	**Chara**	**3.63**	**275**	*i* Sg	Sg	14 39 19.6	-3.3
TUP	**Tupik**	**3.64**	**232**	*e*Pn	Pn	14 38 23.2	+1.0
TUP				*e*Pg	Pb	14 38 31.6	+1.1
	168nm,0.6s						
TUP				*i* Sn	Sn	14 39 05.1	+0.4
TUP				*i* Sg	Sg	14 39 20.1	-3.3
CGD	**Chagda**	**3.67**	**55**	*e*Pn	Pn	14 38 24.3	+1.8
CGD				*e*Pg	Pb	14 38 32.4	+1.4
	34nm,0.5s						
CGD				*e*Sn	Sn	14 39 05.2	-0.1
CGD				*e*Sg	Sg	14 39 21.1	-3.3
	215nm,0.4s						
OLMR	**Olekminsk**	**4.29**	**329**	*e*Pn	Pn	14 38 33.0	+2.0
OLMR				*e*Pg	Pg	14 38 45.1	-3.6
	18nm,0.3s						
OLMR				*e*Sg	Sg	14 39 41.0	-3.2
	178nm,0.6s						
BLSR	**Buluus**	**5.08**	**23**	*e*Pg	Pb	14 38 58.6	+3.6
	686nm,0.3s						
BLSR				*e*Sg	Sg	14 40 05.2	-4.4
	2μm,0.5s						
TBGR	**Tabaga**	**5.63**	**24**	*e*Pn	Pn	14 38 50.6	+1.3
TBGR				*e*Pg	Pb	14 39 07.7	+3.4
	52nm,0.4s						
TBGR				*e*Sn	Sn	14 39 54.5	+0.9
TBGR				*e*Sg	Sg	14 40 21.9	-5.2
	685nm,0.8s						
YAK	**Yakutsk**	**5.83**	**23**	*e*Pn	Pn	14 38 53.0	+0.9
YAK				*e*Pg	Pb	14 39 10.9	+3.3
	5.0nm,0.6s						
YAK				*e*Sn	Sn	14 39 59.1	+0.7
YAK				*e*Sg	Sg	14 40 28.5	-4.8
	131nm,0.7s						
YCRN	**Chernyshevskiy**	**8.82**	**320**	*e*Pn	Pn	14 39 35.4	+2.2
YCRN				*e*Pg		14 40 06.5	
	22nm,1.0s						
YCRN				*e*Sn	Sn	14 41 12.1	0.0
YCRN				*e*Sg		14 42 01.7	
	65nm,1.2s						

*NORS **11** 14:49:27.5±0.0, 42°.99N×46°.67E, h71km±3km, MPVA3.7*

ISC 11 14:49:28.5±1.4, 43°.07N±0°.05×46°.67E±0°.04, h73km±7km, n34, σ1°13/63, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBC	**Dubki**	**0.13**	**112**	*i* Pg	Pn	14 49 38.9	-0.5
DBC				*e*Sg	Sn	14 49 47.4	+0.1
KRNR	**Karanay**	**0.30**	**144**	*i* Pg	Pn	14 49 40.0	-0.2
KRNR				*i* Sg	Sn	14 49 49.0	+0.3
UNCR	**Uncukul**	**0.36**	**165**	*i* Pg	Pn	14 49 40.0	-0.6
UNCR				*i* Sg	Sn	14 49 49.0	-0.4
BUJR	**Buynaksk**	**0.40**	**127**	*i* Pg	Pn	14 49 40.5	-0.4
BUJR				*e*Sg	Sn	14 49 50.7	+0.8
BTLR	**Botlikh**	**0.52**	**219**	*e*Pg	Pn	14 49 41.6	-0.3
BTLR				*e*Sg	Sn	14 49 51.9	+0.2
ARKR	**Arakani**	**0.52**	**153**	*i* Pg	Pn	14 49 42.0	+0.1
ARKR				*i* Sg	Sn	14 49 52.0	+0.2
XNZR	**Khunzakh**	**0.53**	**177**	*e*Pg	Pn	14 49 40.5	-1.6
XNZR				*e*Sg	Sn	14 49 51.0	-1.0
MAK	**Makhachkala**	**0.62**	**99**	*e*Pg	Pn	14 49 42.6	-0.2
MAK				*e*Sg	Sn	14 49 54.1	+0.8
GROC	**Groznyy**	**0.65**	**282**	*e*Pg	Pn	14 49 44.2	+1.1
GROC				*e*Sg	Sn	14 49 54.3	+0.3
GNBR	**Gunib**	**0.71**	**162**	*e*Pg	Pn	14 49 43.4	-0.5
GNBR				*e*Sg	Sn	14 49 56.3	+1.1
KMKR	**Kumukh**	**0.99**	**161**	*e*Pg	Pn	14 49 47.0	-0.3
KMKR				*e*Sg	Sn	14 50 00.5	-0.7
URKR	**Urkarakh**	**1.15**	**141**	*e*Pg	Pn	14 49 48.3	-0.9
URKR				*e*Sg	Sn	14 50 04.6	0.0
LGD	**Lagodekhi**	**1.27**	**195**	P	Pn	14 49 50.1	-0.5
LGD				S	Sn	14 50 07.4	+0.2
LGD	**Lagodekhi**	**1.27**	**195**	*e*Pg	Pn	14 49 50.6	0.0
LGD				*e*Sg	Sn	14 50 07.6	+0.4
KMGR	**Komgaron**	**1.32**	**270**	*e*Pg	Pn	14 49 53.0	+1.7
KMGR				*e*Sg	Sn	14 50 12.2	+3.8
DRN	**Derbent**	**1.61**	**130**	*e*Pg	Pn	14 49 56.0	+1.1
DRN				*e*Sg	Sn	14 50 16.7	+1.8
DDFL	**Dedoflistskaro**	**1.67**	**194**	P	Pn	14 49 55.9	0.0
DDFL				S	Sn	14 50 20.1	+3.5
DDFL	**Dedoflistskaro**	**1.67**	**194**	*e*Pg	Pn	14 49 55.9	0.0
GUDG	**Gudauri**	**1.72**	**250**	*e*Pg	Pn	14 49 57.4	+0.7
GUDG				*e*Sg	Sn	14 50 17.3	-0.8
ARNR	**Ardon**	**1.75**	**275**	*e*Pg	Pn	14 49 57.9	+1.0
ARNR				*e*Sg	Sn	14 50 19.8	+1.4
LACR	**Lac**	**1.76**	**263**	*e*Pg	Pn	14 49 55.9	-1.3
LACR				*e*Sg	Sn	14 50 18.3	-0.5
AKT	**Akhty**	**1.77**	**153**	*e*Pg	Pn	14 49 56.5	-0.7
AKT				*e*Sg	Sn	14 50 18.2	-0.9
KORR	**Kora**	**1.91**	**271**	*e*Pg	Pn	14 50 00.1	+1.1
KORR				*e*Sg	Sn	14 50 22.2	+0.1
STDR	**Stavd-Durt**	**1.93**	**280**	*e*Pg	Pn	14 50 00.4	+1.1
ZEI	**Tsey**	**2.05**	**263**	*e*Pg	Pn	14 50 00.3	-0.8
ZEI				*e*Sg	Sn	14 50 24.5	-1.4
LSNR	**Lesken**	**2.09**	**277**	*e*Pg	Pn	14 50 02.0	+0.5
LSNR				*e*Sg	Sn	14 50 27.8	+1.2
DIGR	**Digorskoe uzhe**	**2.27**	**267**	*e*Sn	Sn	14 50 30.7	-0.6
ONI	**Oni**	**2.41**	**260**	*e*Pn	Pn	14 50 07.1	+1.3
PYA1	**Pyatigorsk**	**2.78**	**292**	*e*Pn	Pn	14 50 10.8	0.0
PYA1				*e*Sn	Sn	14 50 42.2	-1.1
KBZ	**Khabaz**	**2.83**	**285**	*e*Pn	Pn	14 50 10.4	-0.9
NEY	**Neytrino**	**2.89**	**275**	*e*Pn	Pn	14 50 11.8	-0.6
NEY				*e*Sn	Sn	14 50 44.5	-1.7
SHA1	**Shidzhatmaz**	**3.00**	**284**	*e*Pn	Pn	14 50 13.0	-0.9
SHA1				*e*Sn	Sn	14 50 46.5	-2.4
KIV0	**Kislovodsk Arr**	**3.02**	**288**	*e*Pn	Pn	14 50 13.4	-0.8
KIV0				*e*Sn	Sn	14 50 47.8	-1.5
GOF	**Gofitskoye**	**3.29**	**309**	*e*Pn	Pn	14 50 18.1	+0.5
GOF				*e*Sn	Sn	14 50 55.3	-0.3

*NEIC **11** 14:50:03.5±2.1, 21°.2S±0°.1×176°.7W±0°.1, h299km±7km, mb4.5/15, Error ellipse: s-maj=19.3km s-min=17.0km az=180.0*
*IDC **11** 14:50:07.0±7.5, 21°.15S×176°.79W, h325km±69km, mb3.4/5, mb1 3.6/7, mb1mx3.4/24, mbtmp4.3/7, Error ellipse: s-maj=42.2km s-min=29.5km az=30.0*

ISC 11 14:50:03.9±0.7, 21°.15S±0°.06×176°.8W±0°.1, h300km, n76, σ2s16/82, mb4.1/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.97**	**304**	Pn	Pn	14 51 32.2	-0.8
GLKZ	**Green Lake**	**8.14**	**187**	P	Pn	14 51 59.5	+0.3
GLKZ				S	S	14 53 32.2	-0.6
DZM	**Mont Dzumac**	**15.66**	**264**	P	Pn	14 53 31.5	+1.3
	0.8nm,0.3s,baz=78,slow=20,SNR=7.4						
DZM	**Mont Dzumac**	**15.66**	**264**	IAmb	IAmb	14 53 43.9	
	comp=Z,27nm,1.4s						
KUZ	**Kuotunu**	**16.87**	**201**	P	Pn	14 53 46.1	+2.1
MXZ	**Matakaoa Point**	**16.91**	**194**	P	Pn	14 53 46.5	+2.0
WMGZ	**Waiomatatini S**	**17.13**	**193**	P	Pn	14 53 47.2	+0.1
WMGZ				S	S	14 56 46.6	-0.3
HAZ	**Te Kaha**	**17.21**	**195**	P	Pn	14 53 46.0	-2.1
HAZ				S	S	14 56 47.1	-1.4
PKGZ	**Pakihiroa**	**17.27**	**194**	P	Pn	14 53 46.6	-2.2
PKGZ				S	S	14 56 46.0	-3.8
MKAZ	**Moumakai**	**17.38**	**202**	P	Pn	14 53 50.7	+0.7
PUZ	**Puketiti**	**17.41**	**193**	P	Pn	14 53 48.2	-2.2
PUZ				S	S	14 56 50.2	-2.3
RUGZ	**Raukumara Rang**	**17.44**	**195**	P	Pn	14 53 50.6	-0.2
OPRZ	**Ohinepanea**	**17.62**	**198**	P	P	14 53 50.0	+0.6
MARZ	**Manawahe**	**17.71**	**197**	P	P	14 53 50.7	+0.3
CNGZ	**Carnagh Statio**	**17.81**	**193**	P	Pn	14 53 54.9	-0.2
MWZ	**Matawai**	**17.82**	**195**	P	Pn	14 53 53.1	-2.2
MWZ				S	S	14 57 01.1	+0.5
TOZ	**Tahuroa Road**	**17.83**	**200**	P	Pn	14 53 55.8	+0.4
TKGZ	**Te Karaka**	**17.85**	**194**	P	P	14 53 52.5	+0.7
TKGZ				S	S	14 57 03.1	+2.1
URZ	**Urewera**	**17.86**	**196**	P	Pn	14 53 53.1	-2.5
	comp=Z,5.4nm,0.3s,baz=286,slow=3.5,SNR=54						
URZ				S	S	14 56 59.6	-1.6
	comp=Z,0.3nm,0.3s,baz=306,slow=16,SNR=3.6						
URZ	**Urewera**	**17.86**	**196**	P	Pn	14 53 53.2	-2.5
URZ				S	S	14 57 01.2	0.0
URZ	**Urewera**	**17.86**	**196**	IAmb	IAmb	14 53 55.7	
	comp=Z,43nm,1.4s						
RIGZ	**Rimuhau**	**18.12**	**194**	P	P	14 53 57.4	+2.6
MUGZ	**Murupara**	**18.15**	**197**	P	P	14 53 57.3	+2.2
SNGZ	**Shannon Statio**	**18.29**	**195**	P	P	14 53 59.5	+2.8
PRGZ	**Paritu Road**	**18.30**	**193**	P	P	14 54 01.1	+4.4
TLZ	**Tolley Road**	**18.37**	**200**	P	P	14 54 01.2	+3.7
RAHZ	**Arahi**	**18.48**	**195**	P	P	14 54 00.7	+2.1
MTHZ	**Maungatangiwha**	**18.48**	**196**	P	P	14 54 01.8	+3.1
MRHZ	**Matea Rd**	**18.58**	**197**	P	P	14 54 02.3	+2.6
NMHZ	**Naumai**	**18.72**	**196**	P	P	14 54 03.7	+2.4
HIZ	**Hauiti**	**18.76**	**201**	P	P	14 54 05.4	+3.8
ARHZ	**Aropaoanui**	**18.83**	**195**	P	P	14 54 06.0	+3.6
MCHZ	**McNeill Hill**	**19.08**	**196**	P	P	14 54 06.7	+1.7
TWVZ	**Taurewa**	**19.08**	**199**	P	P	14 54 09.9	+4.7
KWHZ	**Kaweka Forest**	**19.13**	**196**	P	P	14 54 08.4	+2.8
CKHZ	**Cape Kidnapper**	**19.19**	**195**	P	P	14 54 04.1	-2.0
BHHZ	**Black Hill Sta**	**19.29**	**197**	P	P	14 54 09.3	+2.0
KRHZ	**Kereru**	**19.35**	**196**	P	P	14 54 10.0	+2.1
KAHZ	**Kahuranaki**	**19.37**	**195**	P	P	14 54 11.3	+3.2
PNHZ	**Pukenui**	**19.65**	**196**	P	P	14 54 13.7	+2.6
TSZ	**Takapari Road**	**19.85**	**197**	P	P	14 54 13.4	+0.2
HOWZ	**Holdsworth Sta**	**20.75**	**197**	P	P	14 54 26.2	+3.9
OGWZ	**Otaki Gorge**	**20.77**	**198**	P	P	14 54 19.5	-3.0
TCW	**Tory Channel**	**21.39**	**199**	P	P	14 54 28.9	+0.6
QRZ	**Quartz Range**	**21.62**	**203**	P	P	14 54 33.7	+3.3
NNZ	**Nelson**	**21.68**	**200**	P	P	14 54 32.1	+1.2
BSWZ	**Blackbirch Sta**	**21.98**	**199**	P	P	14 54 30.1	-3.5
THZ	**Tophouse**	**22.33**	**201**	P	P	14 54 39.9	+3.1
DSZ	**Denniston Nort**	**22.69**	**203**	P	P	14 54 43.3	+3.2
KHZ	**Kahutara**	**22.72**	**199**	P	P	14 54 40.7	+0.4
GVZ	**Greta Valley S**	**23.38**	**199**	P	P	14 54 49.1	+2.8
LTZ	**Lake Taylor**	**23.45**	**201**	P	P	14 54 51.5	+4.5
INZ	**Inchbonnie**	**23.68**	**202**	P	P	14 54 51.0	+2.0
CTA	**Charters Tower**	**34.59**	**265**	P	P	14 56 26.0	+0.6
	comp=Z,2.4nm,0.4s,baz=90,slow=11,SNR=12						
TAOE	**Nuku Hiva Isla**	**37.31**	**76**	P	P	14 56 48.7	+0.3
STKA	**Stephens Creek**	**38.57**	**245**	P	P	14 56 59.8	+1.2
	comp=Z,2.1nm,0.8s,baz=96,slow=13,SNR=3.2						
STKA	**Stephens Creek**	**38.57**	**245**	IAmb	IAmb	14 57 01.1	
	comp=Z,1.5nm,1.4s						
COEN	**Coen**	**38.79**	**274**	P	P	14 57 00.2	-0.4
COEN				IAmb	IAmb	14 57 05.8	
	comp=Z,22nm,1.3s						
BBOO	**Buckleboo**	**43.31**	**244**	P	P	14 57 35.5	-1.5
BBOO				IAmb	IAmb	14 57 51.0	
	comp=Z,29nm,1.4s						

WR0	**Warramunga Arr**	**45.48**	**262**	P	P	14 57 53.6	-0.6
AS31	**Alice Springs**	**45.51**	**257**	P	P	14 57 55.6	+1.1
ASAR	**Alice Springs**	**45.51**	**257**	P	P	14 57 55.0	+0.5
	comp=Z,1.9nm,0.5s,baz=92,slow=8.3,SNR=62						
ASAR				PcP	sP	14 59 28.6	-1.0
	comp=Z,0.5nm,0.6s,baz=96,slow=4.1,SNR=5.8						
WRAB	**Tennant Creek**	**45.66**	**262**	P	P	14 57 55.0	-0.7
WRAB				IAmb	IAmb	14 58 02.8	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**45.67**	**262**	P	P	14 57 55.4	-0.3
	comp=Z,2.1nm,0.7s,baz=97,slow=7.2,SNR=24						
MTN	**Manton Dam**	**50.34**	**271**	P	P	14 58 30.7	-0.6
MTN				IAmb	IAmb	14 58 34.6	
	comp=Z,49nm,1.3s						
MJAR	**Matsushiro Arr**	**71.43**	**323**	P	P	15 00 51.9	-0.1
	comp=Z,0.7nm,0.5s,baz=147,slow=5.8,SNR=4.4						
MAW	**Mawson**	**81.35**	**200**	P	P	15 01 44.0	-2.9
SUA	**Susitna One**	**84.94**	**12**	P	P	15 02 06.6	+1.3
SUA				IAmb	IAmb	15 02 07.2	
	comp=Z,4.3nm,0.6s						
RND	**Reindeer**	**87.08**	**12**	P	P	15 02 17.1	+1.5
RND				IAmb	IAmb	15 02 18.3	
	comp=Z,10nm,1.2s						
CCB	**Clear Creek Bu**	**88.40**	**12**	P	P	15 02 22.8	+1.1
ARCES	**ARCESS Array B**	**129.76**	**350**	PKP	**PKiKP**	15 08 38.2	+0.5
	comp=Z,2.7nm,1.0s,baz=0.0,slow=1.2,SNR=4.3						
AKASG	**Malin Array Be**	**144.14**	**332**	PKP	PKPbc	15 09 01.7	-1.1
	comp=Z,0.4nm,0.4s,baz=44,slow=4.5,SNR=5.1						
EKA	**Eskdalemuir Ar**	**145.53**	**6**	PKPbc	**PKPab**	15 09 07.2	-0.4
	comp=Z,1.4nm,0.8s,baz=310,slow=2.5,SNR=3.7						
BRTR	**Keskin Array B**	**148.14**	**312**	PKPbc	**PKiKP**	15 09 15.0	-1.3
	comp=Z,0.5nm,0.8s,baz=48,slow=2.1,SNR=3.0						
CLL	**Collm**	**148.95**	**348**	*i* PKPbc	**PKiKP**	15 09 17.9	+0.5
GERES	**GERESS Array B**	**151.13**	**346**	PKPbc	**PKiKP**	15 09 21.1	-1.1
	comp=Z,0.7nm,0.8s,baz=323,slow=4.2,SNR=4.6						

*IDC **11** 14:50:59.2±0.4, 26°.40N×44°.55W, h0km, mb4.5/34, mb1 4.7/34, mb1mx4.6/46, mbtmp4.5/34, MS3.9/33, Ms1 3.9/33, ms1mx3.8/46, Error ellipse: s-maj=12.4km s-min=10.8km az=140.0*
*BJI **11** 14:50:59.0±0.0, 26°.40N×44°.70W, h10km, mb5.0/5, Ms5.1/4, Ms7 4.9/4*
*MOS **11** 14:50:59.2±0.9, 26°.40N×44°.54W, h10km, mb5.1/31, Error ellipse: s-maj=10.8km s-min=5.7km az=57.9*
*NEIC **11** 14:50:59.8±1.9, 26°.24N±0°.10×44°.52W±0°.06, h10km±1km, mb5.0/32, Error ellipse: s-maj=16.4km s-min=9.6km az=192.0*
*GCMT **11** 14:51:00.8±0.4, 26°.44N±0°.04×44°.35W±0°.04, h21km±1km, MW4.9/73, Moment Tensor Solution. s17,c18; s73,c85; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.75±.25; $M_{\theta\theta}$-1.20±.16; $M_{\phi\phi}$-1.54±.15; $M_{r\theta}$1.32±.25; $M_{\theta\phi}$-0.96±.08; $M_{r\phi}$0.86±.27; Best double couple: M_{o}2.99000×10^{16} NP1:ϕ_s214.00000°, δ30.00000°, λ78.00000°. NP2: ϕ_s48.00000°, δ61.00000°, λ97.00000°. Principal axes: T 3.2170, Plg73.0000°, Azm335.0000°; N -0.4440, Plg6.0000°, Azm225.0000°; P -2.7630, Plg16.0000°, Azm133.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 11 14:51:00.8±0.3, 26°.39N±0°.06×44°.53W±0°.06, h11km, n303, σ1°36/295, mb4.9/92, MS3.9/37, 23C-13D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**18.19**	**245**	Pn	**Pn**	14 55 09.2	-4.2
ANWB					**P**	14 55 12.9	-0.8
ANWB				IAmb	IAmb	14 55 31.0	
	comp=Z,65nm,0.7s						
BBGH	**Gun Hill**	**19.31**	**230**	P	**P**	14 55 24.8	-1.2
SJG	**San Juan**	**21.62**	**252**	LR	LR	15 02 11.7	
	comp=Z,235nm,21.4s,baz=76,slow=31						
EMPR	**Esperanza - Ma**	**21.79**	**253**	P	**P**	14 55 47.5	-5.4
AOPR	**Arecibo Observ**	**22.04**	**253**	P	**P**	14 55 54.5	-1.2
AGPR	**Aguadilla, PR**	**22.29**	**254**	P	**P**	14 55 57.1	-1.3
MDP	**Montagnes des**	**22.54**	**202**	P	**P**	14 56 02.2	+1.2
	comp=Z,26nm,1.0s,baz=16,slow=11,SNR=5.6						
MDP				LR	LR	15 02 44.7	
	comp=Z,196nm,20.6s,baz=20,slow=31						
HRV	**Adam Dziewonsk**	**27.33**	**313**	P	**P**	14 56 44.2	-1.5
HRV				pmax	pmax		
	comp=Z,20nm,1.0s						
HRV	**Adam Dziewonsk**	**27.33**	**313**	P	**P**	14 56 44.2	-1.5
HRV				IAmb	IAmb	14 57 02.6	
	comp=Z,20nm,0.9s						
HRV	**Adam Dziewonsk**	**27.33**	**313**	P	**P**	14 56 47.5	+1.8
	baz=118						
G63A	**Kingsbury**	**27.46**	**319**	P	**P**	14 56 47.5	+0.6
	baz=125						
WSPT	**Westport, CT**	**27.96**	**309**	P	**P**	14 56 49.9	-1.4
WSPT				IAmb	IAmb	14 57 04.5	
	comp=Z,26nm,1.0s						
G62A	**West of Eustis**	**28.06**	**319**	P	**P**	14 56 51.2	-1.0
E58A	**La Victoria**	**30.30**	**319**	P	**P**	14 57 13.2	+1.1

	comp=Z,98nm,1.1s									
SPMN	**Marine on St.** baz=100	42.73	309		P		P	14 58 59.3	+1.3	
KIC	**Kosan Boka** comp=Z,56nm,1.0s	42.80	111		*e*P		P	14 58 58.6	-0.3	
W39A	**Magazine** baz=88	42.85	294		P		P	14 58 59.4	+0.2	
SALV	**Santo Antonio**	43.41	196		*e*P		P	14 59 04.2	+0.4	
TUL1	**Leonard** baz=88	44.46	295		P		P	14 59 11.9	-0.2	
PMNB	**Patos De Minas**	44.69	183		*e*P		P	14 59 14.3	+0.2	
H10N2	**ASCENSION HYDR** baz=320,slow=75	44.80	135		T		T	15 46 50.5		
H10N3	**ASCENSION HYDR** baz=320,slow=75	44.80	135		T		T	15 46 47.2		
H10N1	**ASCENSION HYDR** baz=320,slow=75	44.82	135		T		T	15 46 51.6		
KSU1	**Kansas State U** baz=90	45.05	300		P		P	14 59 16.7	0.0	
TORD	**Torodi Ar. Bea** comp=Z,7.5nm,1.1s,baz=302,slow=5.6,SNR=15	45.21	98		P		P	14 59 17.1	-1.2	
TORD					LR		LR	15 17 31.4		
ECSD	comp=Z,331nm,18.5s,baz=315,slow=35 **EROS Data Cent** baz=95	45.25	306		P		P	14 59 18.6	+0.2	
MEM	**Membach**	45.25	44	⇑	P		P	14 59 17.8	-0.4	
AGMN	**Agassiz Nation** baz=100	45.31	313		P		P	14 59 19.5	+0.7	
ULM	**Lac du Bonnet** comp=Z,9.6nm,1.1s,baz=90,slow=8.1,SNR=11	45.69	316		P		P	14 59 20.3	-1.3	
ULM					LR		LR	15 16 00.2		
SCO	comp=Z,173nm,21.1s,baz=118,slow=33 **Scoresbysund**	46.00	10		P		P	14 59 24.9	+1.1	
SCO	comp=Z,57nm,1.5s				pmax		pmax			
SCO	**Scoresbysund**	46.00	10	*i*	P		P	14 59 22.4	-1.4	
SCO	**Scoresbysund**	46.00	10		P		P	14 59 24.9	+1.1	
WHTX	**Lake Whitney,** baz=83	46.17	290		P		P	14 59 26.9	+1.1	
SUMG	**Summit** comp=Z,50nm,1.1s	46.35	3	*i*	P		P	14 59 27.0	0.0	
SUMG					pmax		pmax			
SUMG	**Summit** comp=Z,50nm,1.1s	46.35	3	*i*	P		P	14 59 27.0	0.0	
KEST	**Kesra** comp=Z,17nm,1.1s,baz=196,slow=3.4,SNR=11	46.58	65		P		P	14 59 29.6	+0.6	
KEST					LR		LR	15 17 50.9		
WMOK	comp=Z,88nm,18.7s,baz=220,slow=35 **Wichita Mounta** baz=85	46.98	294		P		P	14 59 32.7	+0.6	
FCC	**Fort Churchill**	47.12	327		P		P	14 59 32.8	+0.1	
FCC	comp=Z,35nm,1.3s				pmax		pmax			
FCC	**Fort Churchill**	47.12	327		P		P	14 59 32.8	+0.1	
DAVOX	**Davos/Dischmat** comp=Z,5.9nm,0.9s,baz=295,slow=10,SNR=7.8	47.16	50		P		P	14 59 33.8	+0.3	
DAVA	**Damuels** comp=Z,30nm,1.1s,SNR=9.2	47.22	49		*e*pP		P	14 59 34.9	+1.0	
BB19B	**Bebedouro**	47.33	185		*e*P		P	14 59 35.6	+0.8	
FETA	**Feichten** comp=Z,20nm,1.1s,SNR=8.3	47.77	49		*e*pP		P	14 59 39.2	+1.0	
RETA	**Reutte** comp=Z,23nm,1.3s,SNR=8.8	47.83	49		*e*pP		P	14 59 39.4	+0.8	
OSSC	**Osservatorio P**	47.91	54		P		P	14 59 37.3	-1.8	
ABTX	**Abilene, Hawle** baz=83	47.93	291		P		P	14 59 40.2	+0.7	
MOTA	**Moosalm** comp=Z,22nm,1.6s,SNR=8.5	48.05	49		*e*pP		P	14 59 41.3	+0.9	
SQTA	**Sankt Quirin** comp=Z,26nm,1.0s,SNR=12	48.11	49		*e*pP		P	14 59 41.5	+0.6	
PCMB	**Pacaembu**	48.15	188		*e*P		P	14 59 41.8	+0.7	
LPAZ	**La Paz** comp=Z,14nm,1.0s,baz=22,slow=9.4,SNR=27	48.23	211		P		P	14 59 41.9	-0.7	
LPAZ					LR		LR	15 18 57.0		
LPAZ	comp=Z,79nm,19.3s,baz=34,slow=35 **La Paz**	48.23	211		*e*P		P	14 59 42.2	-0.3	
LPAZ	**La Paz**	48.23	211		P		P	14 59 39.8	-2.7	
LPAZ	comp=Z,21nm,1.1s				IAmb		IAmb	14 59 44.8		
CTI	**Castel Tesino** comp=Z,17nm,1.0s	48.32	51		P		P	14 59 41.6	-0.8	
CTI					pmax		pmax			
CTI	**Castel Tesino**	48.32	51		P		P	14 59 41.6	-0.8	
CTI	comp=Z,17nm,1.0s				IAmb		IAmb	14 59 43.6		
WATA	**Walderalm** comp=Z,23nm,1.3s,SNR=7.9	48.37	49		*e*pP		P	14 59 43.4	+0.5	
JCT	**Junction City** baz=81	48.38	288		P		P	14 59 43.3	+0.3	
GRF	**Grafenberg Arp** comp=Z,17nm,1.2s,baz=262,slow=7.3	48.39	46		*e*P		P	14 59 43.2	+0.4	
KULLO	**Kullorsuaq**	48.70	356	*i*	P		P	14 59 44.7	0.0	
KULLO	comp=Z,32nm,1.2s				pmax		pmax			
KULLO	**Kullorsuaq** comp=Z,32nm,1.2s	48.70	356	*i*	P		P	14 59 44.7	0.0	
ABTA	**Abfaltersbach** comp=Z,20nm,1.0s,SNR=11	48.96	50		*e*pP		P	14 59 47.5	+0.1	
JMIC	**Jan Mayen** comp=Z,69nm,19.5s,baz=235,slow=30	49.05	15		LR		LR	15 15 18.7		
VAO	**Valinhos**	49.15	183		*e*P		P	14 59 50.0	+1.0	
NKC	**Novy Kostel**	49.25	45		*e*P		P	14 59 50.6	+1.2	
NKC	**Novy Kostel**	49.25	45		*e*P		P	14 59 50.6	+1.2	
AMTX	**Amarillo** baz=84	49.34	294		P		P	14 59 51.5	+1.1	
KBA	**Koelnbreinsper** comp=Z,10nm,0.9s,SNR=6.9	49.55	50		*e*pP		P	14 59 52.1	+0.1	
FRTB	**Fartura**	49.68	186		*e*P		P	14 59 54.1	+1.2	
CLL	**Collm**	49.73	44	*i*	P		P	14 59 53.2	+0.2	
CLL	comp=Z,22nm,1.5s				pmax		pmax			
CLL	**Collm** comp=Z,22nm,1.5s	49.73	44	*i*	P		P	14 59 53.2	+0.2	
CLL				*i*				15 00 09.2		
MYKA	**Terra Mystica** comp=Z,15nm,1.2s,SNR=6.0	49.73	50		*e*pP		P	14 59 53.0	-0.2	
CADS	**Cadrg**	49.78	51	*i*	P		P	14 59 53.6	+0.1	
KHC	**Kasperske Hory**	49.86	47	*e*	P		P	14 59 54.7	+0.6	
KHC				*e*				14 59 57.2		
KHC	**Kasperske Hory**	49.86	47	*e*	P		P	14 59 54.7	+0.6	
KHC					epP		sP	14 59 57.2	-0.3	
GERES	**GERESS Array B** comp=Z,5.6nm,1.0s,baz=269,slow=7.7,SNR=26	49.92	47		P		P	14 59 54.8	+0.2	
GERES					LR		LR	15 17 27.2		
JAVS	comp=Z,38nm,20.1s,baz=278,slow=32 **Javornik**	49.99	51	*i*	P		P	14 59 55.5	+0.3	
MOA	**Molln** comp=Z,8.9nm,0.9s	50.22	49	*e*	P		P	14 59 56.6	-0.3	
BRG	**Berggiesshubel** comp=Z,23nm,1.7s	50.27	45	*e*	P		P	14 59 57.2	+0.1	
BRG				*e*				15 00 11.9		
BRG	comp=Z,57nm,2.3s **Berggiesshubel**	50.27	45	*e*	P		P	14 59 57.2	+0.1	
BRG	comp=Z,23nm,1.7s				pmax		pmax			
BRG	comp=Z,57nm,2.3s				pmax		pmax			
MSTX	**Muleshoe** baz=82	50.35	293		P		P	14 59 58.5	+0.3	
OBKA	**Obir** comp=Z,30nm,0.8s,SNR=16	50.35	50		*e*pP		P	14 59 58.2	+0.2	
PRU	**Pruhonice**	50.56	46	*e*	P		P	15 00 00.6	+1.3	
PRU				*e*				15 00 00.7		
PRU	**Pruhonice**	50.56	46	*e*	P		P	15 00 00.6	+1.3	
SOKA	**Soboth** comp=Z,12nm,1.2s	50.69	50	*i*	P		P	14 59 59.9	-0.6	
GOPC	**GO Pecny, Ondr**	50.71	46	*e*	P		P	15 00 01.4	+0.9	
GOPC	**GO Pecny, Ondr**	50.71	46	*e*	P		P	15 00 01.4	+0.9	
NB2	**NORSAR Subarra** comp=Z,3.8nm,1.2s,baz=253,slow=7.9	50.81	31		P		P	15 00 02.0	+0.9	
NOA	**NORSAR Array B** comp=Z,5.3nm,0.9s,baz=253,slow=7.8,SNR=7.9	50.81	31		P		P	15 00 01.7	+0.6	
NOA					LR		LR	15 17 56.8		
BOJS	comp=Z,107nm,18.0s,baz=250,slow=32 **Bojanci**	50.82	52	*i*	P		P	15 00 01.7	+0.4	
NC303	**NORSAR Array S**	50.93	31		P		P	15 00 02.8	+0.8	
ARSA	**Arzberg** comp=Z,16nm,1.0s,SNR=10	51.05	49	*e*	P		P	15 00 02.3	-0.7	
T25A	**Trinidad** baz=84	51.29	298		P		P	15 00 05.4	0.0	
CONA	**Conrad Observa** comp=Z,13nm,1.1s,SNR=6.9	51.30	49	*e*	P		P	15 00 03.9	-1.1	
CHVC	**Chvalec**	51.58	45	*e*	P		P	15 00 07.5	+0.5	
OSTC	**Ostas**	51.68	45	*e*	P		P	15 00 08.5	+0.7	
Q24A	**Divide** baz=85	51.69	300		P		P	15 00 09.4	+1.0	
KRUC	**Moravsky**	51.70	47	*e*	P		P	15 00 08.2	+0.2	
DPC	**Dobruska-Polom**	51.73	45	*e*	P		P	15 00 09.2	+1.0	
DPC	**Dobruska-Polom**	51.73	45	*e*	P		P	15 00 09.2	+1.0	
HFS	**Hagfors** comp=Z,13nm,1.0s,baz=251,slow=9.2,SNR=6.8	51.75	33		P		P	15 00 08.7	+0.6	
KSP	**Ksiaz**	51.75	45	*e*	P		P	15 00 08.7	+0.5	
KSP	**Ksiaz**	51.75	45	*e*	P		P	15 00 08.7	+0.5	
VRAC	**Vranov**	51.85	47	*e*	P		P	15 00 09.4	+0.4	
TXAR	**Lajitas Array** comp=Z,1.6nm,0.8s,baz=96,slow=7.0,SNR=17	51.89	288		P		P	15 00 09.7	-0.1	
TXAR					PcP		PcP	15 01 23.1	+0.6	
TXAR	comp=Z,1.5nm,0.9s,baz=102,slow=3.9,SNR=4.9				LR		LR	15 22 48.1		
PB11	comp=Z,28nm,18.1s,baz=0.0,slow=37 **IPOC Station P**	51.95	211		P		P	15 00 08.4	-1.8	
DAG	**Danmarks Havn**	51.97	7	*i*	P		P	15 00 10.0	+0.5	
DAG	comp=Z,20nm,1.3s				pmax		pmax			
DAG	**Danmarks Havn** comp=Z,20nm,1.3s	51.97	7	*i*	P		P	15 00 10.0	+0.5	
KRLC	**Kraliky**	52.01	46	*e*	P		P	15 00 11.0	+0.7	
KRLC	**Kraliky**	52.01	46	*e*	P		P	15 00 11.0	+0.7	
ZST	**Bratislava**	52.14	48	*e*	P		P	15 00 10.8	-0.4	
ZST	comp=Z,13nm,1.1s				pmax		pmax			
ZST	**Bratislava**	52.14	48	*e*	P		P	15 00 10.8	-0.4	
MODS	**Modra-Piesok**	52.26	48	*e*	P		P	15 00 11.9	-0.3	
MODS	comp=Z,30nm,1.5s				pmax		pmax			
MODS	**Modra-Piesok**	52.26	48	*e*	P		P	15 00 11.9	-0.3	
SMOL	**Smolenice**	52.37	48	*e*	P		P	15 00 13.7	+0.8	
SMOL	comp=Z,7.0nm,1.3s				pmax		pmax			
SMOL	**Smolenice**	52.37	48	*e*	P		P	15 00 13.7	+0.8	
MORC	**Moravsky Berou**	52.48	46	*e*	P		P	15 00 14.2	+0.4	
JAVC	**Velka Javorina**	52.54	47	*e*	P		P	15 00 15.2	+1.0	
MNTX	**Cornudas Mount**	52.88	291		P		P	15 00 17.0	0.0	
MNTX	**Cornudas Mount** baz=79	52.88	291		P		P	15 00 17.1	+0.1	
SRO	**Srobarova**	52.95	49	*e*	P		P	15 00 17.6	+0.4	
SRO	comp=Z,23nm,1.3s				pmax		pmax			
SRO	**Srobarova**	52.95	49	*e*	P		P	15 00 17.5	+0.4	
S22A	**4UR Ranch, Cre** baz=83	53.13	299		P		P	15 00 20.9	+1.8	
ANMO	**Albuquerque**	53.22	295	*ce*	P		P	15 00 21.2	+1.5	
ANMO	comp=Z,18nm,1.6s				pmax		pmax			
ANMO	**Albuquerque** baz=81	53.22	295		P		P	15 00 21.2	+1.5	
VYHS	**Vyhne**	53.30	48	*e*	P		P	15 00 19.8	0.0	
VYHS	comp=Z,10.0nm,1.1s				pmax		pmax			
VYHS	**Vyhne**	53.30	48	*e*	P		P	15 00 19.8	0.0	
PDG	**Podgorica**	53.80	55	⇑	P		P	15 00 24.2	+0.7	
CPUP	**Villa Florida** comp=Z,6.4nm,1.1s,baz=11,slow=6.0,SNR=4.9	53.84	194		P		P	15 00 22.9	-1.0	
CPUP					LR		LR	15 23 26.5		
O20A	comp=Z,61nm,19.4s,baz=38,slow=36 **White River Ci** baz=84	53.96	302		P		P	15 00 24.8	-0.2	
LVC	**Limon Verde**	54.13	208		*e*P		P	15 00 26.3	-0.2	
NIE	**Niedzica**	54.27	47	*e*	P		P	15 00 28.8	+1.9	
NIE	**Niedzica**	54.27	47	*e*	P		P	15 00 28.8	+1.9	
RLMT	**Red Lodge** baz=87	54.33	308		P		P	15 00 29.0	+1.3	
MVCO	**Mesa Verde** baz=82	54.52	298		P		P	15 00 30.8	+1.6	
EGMT	**Eagleton** baz=89	54.55	312		P		P	15 00 30.0	+0.9	
PD31	**Pinedale Array**	54.70	305		P		P	15 00 29.2	-1.2	
PD31	comp=Z,22nm,1.2s				IAmb		IAmb	15 00 40.9		
PDAR	**Pinedale Array** comp=Z,6.7nm,1.0s,baz=90,slow=7.4,SNR=32	54.70	305		P		P	15 00 30.4	0.0	
PDAR					LR		LR	15 22 45.5		
BW06	comp=Z,205nm,18.9s,baz=95,slow=35 **Boulder Array**	54.70	305		P		P	15 00 29.7	-0.7	
BW06	comp=Z,24nm,1.2s				IAmb		IAmb	15 00 40.9		
BW06	**Boulder Array** baz=85	54.70	305		P		P	15 00 30.5	+0.1	
121A	**Cookes Peak, D** baz=79	54.73	292		P		P	15 00 32.5	+1.8	
SIRR	**Siria**	55.27	51	⇑	P		P	15 00 35.9	+1.7	
BZS	**Buzias**	55.28	51	⇑	P		P	15 00 35.5	+1.2	
BZS	**Buzias**	55.28	51	⇑	P		P	15 00 35.5	+1.2	
MDVR	**Moldovita**	55.41	52	⇓	P		P	15 00 35.5	+0.3	
SKO	**Skopje**	55.46	56	*i*	P		P	15 00 36.7	+1.0	
KOLS	**Kolonicke sedl**	55.57	47	*e*	P		P	15 00 37.9	+1.6	
KOLS	**Kolonicke sedl**	55.57	47	*e*	P		P	15 00 37.9	+1.6	
UZH	**Uzhgorod**	55.60	48	*e*	P		P	15 00 36.7	+0.2	
UZH				*i*				15 00 42.1		
SRU	**San Rafael Swe**	55.84	301		P		P	15 00 39.7	+1.1	
SRU	comp=Z,14nm,1.0s				pmax		pmax			
SRU	**San Rafael Swe**	55.84	301		P		P	15 00 39.7	+1.1	
W18A	**Petrified Fore** baz=80	55.84	296		P		P	15 00 39.6	+0.9	
STIP	**Stip**	56.05	56	*i*	P		P	15 00 41.6	+1.8	
GZR	**Gura Zlata**	56.11	52	⇑	P		P	15 00 41.0	+0.7	
GZR	**Gura Zlata**	56.11	52	⇑	P		P	15 00 41.0	+0.7	
TMUT	**Trail Mountain**	56.34	301		P		P	15 00 43.1	+0.8	
Q16A	**Castle Valley**	56.36	301		P		P	15 00 43.0	+0.6	
NOR	**Nord** comp=Z,17nm,1.1s	56.37	5	*i*	P		P	15 00 41.6	+0.1	
VAY	**Valandovo**	56.38	56	*i*	P		P	15 00 43.2	+1.0	
CJR	**Cluj-Napoca**	56.58	50	⇑	P		P	15 00 45.0	+1.4	
CJR	**Cluj-Napoca**	56.58	50	⇑	P		P	15 00 45.0	+1.4	
LVV	**L'vov**	56.69	46	*e*	P		P	15 00 45.2	+0.9	
VTS	**Vitosha**	56.71	55	⇓	P		P	15 00 44.7	-0.1	
VTS	**Vitosha**	56.71	55	⇓	P		P	15 00 44.7	-0.1	
SPUT	**South Promonto**	57.00	304		P		P	15 00 46.5	-0.3	
ARCR	**ARCALIA**	57.07	49	⇑	P		P	15 00 48.0	+1.0	
WUAZ	**Wupatki** baz=79	57.09	297		P		P	15 00 49.6	+2.0	
TUC	**Tucson** baz=78	57.25	293		P		P	15 00 50.1	+1.4	
ARR	**Arges**	57.42	51	⇑	P		P	15 00 51.0	+1.3	
DUG	**Dugway, Tooele** baz=82	57.43	302		P		P	15 00 50.6	+0.8	
BURAR	**Bucovina Array**	57.61	49	⇑	P		P	15 00 52.1	+1.1	
BURAR	**Bucovina Array**	57.61	49	⇑	P		P	15 00 52.1	+1.1	
VOIR		57.70	51	⇓	P		P	15 00 52.0	+0.4	
VOIR		57.70	51	⇓	P		P	15 00 52.0	+0.4	
YKA	**Yellowknife Ar** comp=Z,4.3nm,0.9s,baz=94,slow=7.5,SNR=48	57.77	329		P		P	15 00 51.1	-0.6	
YKA					PcP		PcP	15 01 44.0	-0.3	
YKA	comp=Z,0.7nm,0.8s,baz=96,slow=5.6,SNR=3.9				LR		LR	15 24 31.2		
DOPR	comp=Z,53nm,20.8s,baz=92,slow=35 **Dopca**	57.88	51	⇑	P		P	15 00 53.2	+0.4	
FINES	**FINESS Array B** comp=Z,6.1nm,0.8s,baz=270,slow=3.8,SNR=12	57.94	32		P		P	15 00 52.9	0.0	
FINES					LR		LR	15 21 10.8		
BIZ	comp=Z,61nm,20.0s,baz=220,slow=31 **Bicaz**	58.28	49	⇓	P		P	15 00 56.8	+1.3	
MLR	**Muntele Rosu**	58.32	51	⇑	P		P	15 00 56.8	+0.8	
MLR	**Muntele Rosu**	58.32	51	⇑	P		P	15 00 56.8	+0.8	
ARCES	**ARCESS Array B** comp=Z,8.8nm,0.8s,baz=282,slow=5.7,SNR=16	58.56	23		P		P	15 00 56.7	-0.5	
ARCES					LR		LR	15 21 33.6		
VRI	comp=Z,39nm,18.4s,baz=312,slow=31 **Vrincioaia**	58.82	51	⇓	P		P	15 01 00.5	+1.1	
VRI	**Vrincioaia**	58.82	51	⇓	P		P	15 01 00.5	+1.1	
214A	**Organ Pipe Nat** baz=76	59.01	293		P		P	15 01 02.5	+1.6	
ELK	**Elko** comp=Z,226nm,18.3s,baz=65,slow=35	59.17	303		LR		LR	15 25 14.6		
NEW	**Newport** comp=Z,325nm,19.1s,baz=64,slow=35	59.46	312		LR		LR	15 25 24.0		
NEW	**Newport** baz=84	59.46	312		P		P	15 01 04.4	+0.6	
SORM	**Soroca**	59.66	48	⇓	P		P	15 01 04.3	-0.8	
SORM	**Soroca**	59.66	48	⇓	P		P	15 01 04.3	-0.8	
R11A	**Troy Canyon, C** baz=79	59.87	301		P		P	15 01 07.8	+0.8	
AKASG	**Malin Array Be** comp=Z,11nm,1.1s,baz=275,slow=5.9,SNR=20	59.95	45		P		P	15 01 06.8	-0.2	
AKASG					LR		LR	15 24 56.7		
Y12C	comp=Z,63nm,18.0s,baz=255,slow=34 **Blythe** baz=77	60.00	295		P		P	15 01 09.0	+1.4	
MILM	**Milestii Mici**	60.12	49	⇓	P		P	15 01 07.4	-0.8	
GLA	**Glamis** baz=76	60.41	295		P		P	15 01 11.8	+1.2	
IRM	**Iron Mountain** baz=77	60.41	296		P		P	15 01 12.0	+1.5	
TPNV	**Topopah Spring** baz=78	60.67	299		P		P	15 01 14.2	+1.8	
GMRC	**Granite Mounta** baz=77	60.68	297		P		P	15 01 13.8	+1.4	
TUQ	**Turquoise Moun** baz=77	60.74	297		P		P	15 01 13.1	+0.2	
BC3	**Big Chuckawall** baz=76	60.77	295		P		P	15 01 13.6	+0.5	
PURM	**Purcari**	60.90	50	⇑	P		P	15 01 14.6	+1.0	
BELC	**Belle Mtn. Jos** baz=76	61.13	296		P		P	15 01 15.7	+0.1	
GSC	**Goldstone, Bar** baz=77	61.47	298		P		P	15 01 18.8	+1.0	
IKP	**In-Ko-Pah, Jac** baz=76	61.55	294		P		P	15 01 19.5	+1.1	
TPFO	**Pinon Flats** baz=76	61.59	296		P		P	15 01 19.8	+1.1	
PFO	**Pinyon Flats O**	61.60	296	*i*	P		P	15 01 20.0	+1.2	
PFO	comp=Z,20nm,1.5s				pmax		pmax			
PFO	**Pinyon Flats O** comp=Z,110nm,18.6s,baz=67,slow=34	61.60	296		LR		LR	15 25 55.7		
PFO	**Pinyon Flats O** baz=76	61.60	296		P		P	15 01 19.9	+1.2	
MONP2	**Monument Peak** baz=76	61.74	295		P		P	15 01 21.3	+1.4	
MPMC	**Manual Prospec** baz=77	61.84	299		P		P	15 01 21.6	+1.2	
NVAR	**Mina Array Bea** comp=Z,3.1nm,1.1s,baz=85,slow=6.4,SNR=11	61.94	301		P		P	15 01 21.3	+0.2	
NVAR					LR		LR	15 26 28.5		
LRMC	comp=Z,287nm,20.7s,baz=49,slow=34 **Laurel Mtn Rad** baz=76	62.13	298		P		P	15 01 23.6	+1.4	
MURC	**Murrieta** baz=76	62.19	296		P		P	15 01 23.8	+1.2	
CWC	**Cottonwood Cre** baz=77	62.21	299		P		P	15 01 24.6	+1.7	
EDW2	**Edwards Air Fo** baz=76	62.52	297		P		P	15 01 25.2	+0.4	
ISA	**Isabella, Lake** baz=76	62.71	298		P		P	15 01 27.7	+1.6	
OBN	**Obninsk**	63.80	39	⇓	*e*P		P	15 01 33.8	+1.0	
OBN					*e*			15 01 39.2		
OBN								15 02 07.0		
OBN	comp=Z,22nm,1.4s				pmax		pmax			
OBN	comp=Z,59nm,15.0s				MLR		MLR			
MOS	**Moscow**	64.29	38		*e*P		P	15 01 33.1	-3.0	
MOS					*e*			15 03 58.5		
MOS					*e*S		S	15 10 06.4	-7.3	
MOS	comp=Z,42nm,0.7s				pmax		pmax			
YBH	**Yreka Blue Hor** comp=Z,210nm,19.4s,baz=65,slow=34	64.50	306		LR		LR	15 27 37.0		
BR131	**Keskin Array S**	64.96	56	*i*	P		P	15 01 41.4	+0.5	
BRTR	**Keskin Array B** comp=Z,9.8nm,0.9s,baz=272,slow=5.0,SNR=44	64.96	56		P		P	15 01 41.4	+0.5	
INK	**Inuvik**	65.41	336		P		P	15 01 40.9	-2.2	
INK	comp=Z,16nm,1.1s				pmax		pmax			
INK	**Inuvik**	65.41	336		P		P	15 01 40.9	-2.2	
INK	comp=Z,16nm,1.1s				IAmb		IAmb	15 01 44.0		
LPSR	**Galich'ya Gora**	65.63	42	*e*	P		P	15 01 44.8	0.0	
LPSR	comp=Z,10.0nm,1.1s				pmax		pmax			
BBB	**Bella Bella** comp=Z,150nm,18.8s,baz=80,slow=36	65.80	318		LR		LR	15 30 02.5		
VSR	**Storozhevoye**	66.07	43	*e*	P		P	15 01 46.8	-0.9	
VSR	comp=Z,10.0nm,1.1s				pmax		pmax			
EPYK	**Eagle Plains** baz=77	67.00	334		P		P	15 01 53.8	+0.3	
MMAI	**Mount Meron Ar** comp=Z,0.8nm,0.5s,baz=298,slow=5.3,SNR=5.8	68.19	63		P		P	15 02 02.2	+0.6	
DAWY	**Dawson**	68.68	332		P		P	15 02 04.8	+0.7	
DAWY	comp=Z,16nm,1.1s				IAmb		IAmb	15 02 05.5		
EIL	**Elat** comp=Z,5.1nm,0.9s,baz=267,slow=5.1,SNR=5.2	68.88	67		P		P	15 02 06.3	+0.4	
EGAK	**Eagle**	69.21	333		P		P	15 02 07.9	+0.6	
ASF	**Jabal al Asfar** comp=Z,1.6nm,0.6s,baz=101,slow=4.0,SNR=4.4	69.65	63		P		P	15 02 11.0	+0.3	
H09N1	**TRISTAN DA CUN** SNR=6.8	70.02	153		T		T	16 18 24.8		
H09W1	**TRISTAN DA CUN** SNR=14	70.03	153		T		T	16 18 26.0		
KIV	**Kislovodsk**	70.29	50	*e*	P		P	15 02 14.1	-0.4	
KIV	comp=Z,40nm,1.0s				pmax		pmax			
KBZ	**Khabaz**	70.50	50	*i*	P		P	15 02 16.8	+1.2	
KBZ	**Khabaz** comp=Z,8nm,0.9s,baz=270,slow=11,SNR=3.3	70.50	50		P		P	15 02 16.3	+0.7	
DOT	**Dot Lake**	70.78	332		P		P	15 02 15.6	-1.4	
DOT	comp=Z,14nm,1.5s				IAmb		IAmb	15 02 22.3		
TOLK	**Toolik Lake Re** baz=66	70.97	338		P		P	15 02 19.5	+1.4	
PLCA	**Paso Flores** comp=Z,5.4nm,0.8s,baz=57,slow=8.0,SNR=16	71.02	201		P		P	15 02 19.2	+0.5	
PLCA	**Paso Flores**	71.02	201	*e*	P		P	15 02 19.4	+0.7	
PLCA	**Paso Flores**	71.02	201		P		P	15 02 19.2	+0.5	
PLCA					IAmb		IAmb	15 02 19.9		
IL31	comp=Z,9.4nm,0.9s	71.51	334		P		P	15 02 20.7	-0.6	
IL31					IAmb		IAmb	15 02 22.8		
ILAR	comp=Z,12nm,1.0s **Eielson Array** comp=Z,6.0nm,0.8s,baz=70,slow=4.6,SNR=58	71.51	334		P		P	15 02 21.8	+0.4	
ILAR					LR		LR	15 32 54.3		
POKR	comp=Z,124nm,20.8s,baz=84,slow=35 **Poker Flat Res** baz=67	71.59	334		P		P	15 02 23.1	+1.2	
COLA	**College**	71.85	334	*i*	P		P	15 02 23.3	-0.1	
COLA	comp=Z,17nm,1.5s

YAK					pmax	pmax		
	comp=Z,4.0nm,0.9s							
MKAR	**Makanchi Array**	**92.76**	**33**	*ce*P		**P**	**15 04 13.8**	**+0.4**
MKAR					pmax	pmax		
	comp=Z,1.0nm,0.9s							
MKAR	**Makanchi Array**	**92.76**	**33**	P		**P**	**15 04 12.9**	**-0.5**
	comp=Z,0.8nm,0.9s,baz=338,slow=2.9,SNR=6.5							
MKAR					LR	LR	15 43 38.7	
	comp=Z,38nm,18.1s,baz=198,slow=34							
KSH	**Kashi**	**94.13**	**42**	P		**P**	**15 04 21.5**	**+1.6**
KSH					sP	sP	15 04 25.1	+1.7
KSH					PP	**PP**	**15 08 05.2**	**-0.5**
KSH					S	**S**	**15 15 24.5**	**-6.6**
KSH					sS	sS	15 15 36.6	+1.2
KSH					LR	LR		
	comp=Z,120nm,3.8s							
KSH					LR	LR		
	comp=Z,100nm,4.3s							
KSH					LR	LR		
	comp=Z,150nm,6.6s							
WMQ	**Urumqi**	**97.55**	**33**	*e*P		Pdif	15 04 35.7	+0.3
WMQ					pmax	pmax		
	comp=Z,6.0nm,0.9s							
WMQ					LR	LR		
	comp=Z,490nm,25.5s							
WMQ					LR	LR		
	comp=Z,130nm,19.9s							
YSS	**Yuzh-Sakhalins**	**106.71**	**355**	*e*P		**Pdif**	**15 05 24.0**	**+8.0**
LZH	**Lanzhou**	**111.06**	**27**	*e*PKP		**PKiKP**	**15 09 29.4**	**-5.6**
LZH					LR	LR		
	comp=Z,200nm,17.8s							
LZH					LR	LR		
	comp=Z,220nm,18.1s							
LZH					LR	LR		
	comp=Z,270nm,20.0s							
CD2	**Chengdu**	**115.46**	**30**	PKP		**PKiKP**	**15 09 41.7**	**-1.7**
NJ2	**Nanjing**	**119.76**	**16**	*e*PKP		**PKPdf**	**15 09 50.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**123.03**	**42**	PKP		**PKPdf**	**15 09 57.9**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=305,slow=3.0,SNR=17							
VNDA	**Vanda**	**127.32**	**187**	PKP		**PKPdf**	**15 10 04.7**	**+0.1**
	comp=Z,3.0nm,0.9s,baz=180,slow=1.0,SNR=8.6							
WRA	**Warramunga Arr**	**173.50**	**9**	PKPab		**PKPab**	**15 12 38.5**	**-1.1**
	comp=Z,2.6nm,1.1s,baz=342,slow=4.9,SNR=5.3							
ASAR	**Alice Springs**	**176.94**	**28**	PKP		**PKPdf**	**15 11 11.6**	**-0.4**
	comp=Z,1.8nm,1.0s,baz=147,slow=1.4,SNR=10							

*BGS **11** 15:07:00.9±1.2,49.52N×1.62W,h7km±9km,ML2.2*
*LDG **11** 15:07:01.1±0.1,49.55N×1.64W,h4km,Md3.1/3,Ml3.0/35,*
Error ellipse: s-maj=0.9km s-min=0.8km az=167.0
*STR **11** 15:07:01.9±0.6,50.2°N×2.7°E±°,h15km±5km,MLv2.9/6*
ISC 11 15:06:59.5±1.1,49.56N±0.02×1.59W±0.02,h18km±5km,
n68,σ1§37/122,France

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JQE	**Queens East**	**0.46**	**220**	*e*P		**Pb**	**15 07 09.5**	**+0.4**
JQE	**Queens East**	**0.46**	**220**	*e*P		**Pb**	**15 07 09.5**	**+0.4**
JRS	**Jersey**	**0.49**	**222**	*e*P		**Pb**	**15 07 09.9**	**+0.4**
JRS				*e*S		**Sb**	**15 07 16.4**	**0.0**
JRS				IAML			15 07 16.6	
	comp=N,55nm,0.1s							
JRS				IAML			15 07 19.8	
	comp=E,71nm,0.3s							
JRS	**Jersey**	**0.49**	**222**	*e*P		**Pb**	**15 07 09.9**	**+0.4**
JRS				*e*S		**Sb**	**15 07 16.4**	**0.0**
JRS				IAML			15 07 16.6	
	comp=N,55nm,0.1s							
JRS				IAML			15 07 19.8	
	comp=E,71nm,0.3s							
JSA	**Saint Aubin**	**0.53**	**226**	*e*P		**Pb**	**15 07 10.6**	**+0.4**
JSA				*e*S		**Sb**	**15 07 17.3**	**-0.2**
JSA				IAML			15 07 19.7	
	comp=N,51nm,0.2s							
JSA				IAML			15 07 20.5	
	comp=E,55nm,0.2s							
JSA	**Saint Aubin**	**0.53**	**226**	*e*P		**Pb**	**15 07 10.6**	**+0.4**
JSA				*e*S		**Sb**	**15 07 17.3**	**-0.2**
JSA				IAML			15 07 19.7	
	comp=N,51nm,0.2s							
JSA				IAML			15 07 20.5	
	comp=E,55nm,0.2s							
JSA	**Saint Aubin**	**0.53**	**226**	Pg		**Pb**	**15 07 10.6**	**+0.4**
JSA				Sg		**Sb**	**15 07 17.5**	**0.0**
FLN	**La Foliniere**	**1.08**	**137**	*e*Pn		**Pn**	**15 07 21.4**	**+1.8**
	baz=316							
FLN	**La Foliniere**	**1.08**	**137**	*e*Pg		**Pn**	**15 07 21.9**	**+2.3**
	baz=317							
FLN				*e*Sg		**Sn**	**15 07 36.0**	**+1.9**
	comp=E,82nm,0.2s,baz=319							
GRR	**Gorron**	**1.26**	**157**	*e*Pn		**Pg**	**15 07 24.1**	**+0.2**
GRR	**Gorron**	**1.26**	**157**	*e*Pg		**Pg**	**15 07 24.9**	**+1.0**
GRR				*e*Sg		**Sn**	**15 07 41.0**	**+2.3**
	comp=E,100nm,0.2s							
LDF	**La Druitiere**	**1.36**	**134**	*e*Pn		**Pg**	**15 07 25.5**	**-0.2**
LDF	**La Druitiere**	**1.36**	**134**	*e*Pg		**Pg**	**15 07 26.6**	**+0.9**
LDF				*e*Sg		**Sg**	**15 07 44.9**	**+1.4**
	comp=E,26nm,0.2s							
RENF	**Rennes**	**1.44**	**181**	*e*P		**Pg**	**15 07 28.0**	**+0.8**
RENF				*e*S		**Sg**	**15 07 46.9**	**+1.0**
RENF	**Rennes**	**1.44**	**181**	*e*P		**Pg**	**15 07 28.0**	**+0.8**
RENF				*e*S		**Sg**	**15 07 46.9**	**+1.0**
RENF	**Rennes**	**1.44**	**181**	Pg		**Pg**	**15 07 28.3**	**+1.1**
RENF				Sg		**Sg**	**15 07 47.1**	**+1.1**
SGMF	**Saint Gilles**	**1.45**	**207**	*e*Pn		**Pb**	**15 07 26.3**	**+0.3**
SGMF	**Saint Gilles**	**1.45**	**207**	*e*Pg		**Pg**	**15 07 27.5**	**+0.1**
SGMF				*e*Sn		**Sn**	**15 07 44.3**	**+0.9**
SGMF				*e*Sg		**Sg**	**15 07 46.4**	**0.0**
	comp=E,24nm,0.2s							
ROSF	**Rostrenen**	**1.65**	**223**	*e*Pn		**Pn**	**15 07 28.7**	**+1.1**
ROSF	**Rostrenen**	**1.65**	**223**	*e*Pg		**Pg**	**15 07 31.0**	**-0.2**
ROSF				*e*Sn		**Sn**	**15 07 49.2**	**+0.9**
ROSF				*e*Sg		**Sg**	**15 07 52.3**	**-0.4**
	comp=E,31nm,0.2s							
ROSF	**Rostrenen**	**1.65**	**223**	*e*P		**Pb**	**15 07 28.9**	**-0.5**
ROSF				*e*S		**Sb**	**15 07 50.3**	**+0.4**
ROSF	**Rostrenen**	**1.65**	**223**	*e*P		**Pb**	**15 07 28.9**	**-0.5**
ROSF				*e*S		**Sb**	**15 07 50.3**	**+0.4**
WOL	**Wolverton**	**1.77**	**7**	*e*P		**Pg**	**15 07 32.8**	**-0.8**
WOL				IAML			15 08 00.3	
	comp=N,30nm,0.3s							
WOL				IAML			15 08 05.2	
	comp=E,22nm,0.3s							
WOL	**Wolverton**	**1.77**	**7**	*e*P		**Pg**	**15 07 32.8**	**-0.8**
WOL				IAML			15 08 00.3	
	comp=N,30nm,0.3s							
WOL				IAML			15 08 05.2	
	comp=E,22nm,0.3s							
HMNX	**Herstmonceux**	**1.80**	**43**	*e*P		**Pb**	**15 07 32.2**	**+0.3**
HMNX				IAML			15 07 59.8	
	comp=E,74nm,0.4s							
HMNX				IAML			15 08 03.5	
	comp=N,73nm,0.2s							
HMNX	**Herstmonceux**	**1.80**	**43**	*e*P		**Pb**	**15 07 32.2**	**+0.3**
HMNX				IAML			15 07 59.8	
	comp=E,74nm,0.4s							
HMNX				IAML			15 08 03.5	
	comp=N,73nm,0.2s							
HMNX	**Herstmonceux**	**1.80**	**43**	Pn		**Pb**	**15 07 32.2**	**+0.3**
HMNX				Pg		**Pg**	**15 07 34.8**	**+0.7**
QUIF	**Quistinic**	**1.95**	**213**	*e*Pn		**Pn**	**15 07 32.8**	**+1.2**
QUIF	**Quistinic**	**1.95**	**213**	*e*Pg		**Pg**	**15 07 36.1**	**-0.7**
QUIF				*e*Sn		**Sn**	**15 07 55.9**	**+0.4**
QUIF				*e*Sg		**Sg**	**15 08 01.3**	**-0.8**
	comp=N,16nm,0.2s							
SWN1	**Swindon**	**1.96**	**356**	Pn		**Pn**	**15 07 33.6**	**+1.8**
HTL	**Hartland**	**2.35**	**309**	Pg		**Pg**	**15 07 43.9**	**-0.7**
HTL				Sg		**Sg**	**15 08 14.4**	**-0.7**
ELSH	**Elham, Standar**	**2.36**	**47**	Pn		**Pn**	**15 07 39.6**	**+2.3**
CCA1	**Carnmenellis**	**2.44**	**286**	*e*P		**Pn**	**15 07 40.2**	**+1.8**
CCA1	**Carnmenellis**	**2.44**	**286**	*e*P		**Pn**	**15 07 40.2**	**+1.8**
CCA1	**Carnmenellis**	**2.44**	**286**	Pn		**Pn**	**15 07 39.0**	**+0.7**
MCH1	**Michaelchurch**	**2.60**	**340**	*e*P		**Pn**	**15 07 42.4**	**+1.7**
MCH1				IAML			15 08 20.7	
	comp=E,19nm,0.3s							
MCH1				IAML			15 08 22.4	
	comp=N,24nm,0.4s							
MCH1	**Michaelchurch**	**2.60**	**340**	*e*P		**Pn**	**15 07 42.4**	**+1.7**
MCH1				IAML			15 08 20.7	
	comp=E,19nm,0.3s							
MCH1				IAML			15 08 22.4	
	comp=N,24nm,0.4s							
MFF	**Saint Martin d**	**3.11**	**161**	*e*Pn		**Pn**	**15 07 48.3**	**+0.7**
MFF	**Saint Martin d**	**3.11**	**161**	*e*Pg		**Pg**	**15 07 59.8**	**+0.7**
MFF				*e*Sn		**Sn**	**15 08 24.7**	**+0.4**
MFF				*e*Sg		**Sg**	**15 08 38.7**	**-0.6**
	comp=N,15nm,0.3s							
MFF	**Saint Martin d**	**3.11**	**161**	Pn		**Pn**	**15 07 48.3**	**+0.7**
HYF	**Humbligny**	**3.63**	**128**	*e*Pn		**Pn**	**15 07 57.0**	**+2.2**
HYF	**Humbligny**	**3.63**	**128**	*e*Pg		**Pg**	**15 08 09.5**	**+0.5**
HYF				*e*Sn		**Sn**	**15 08 37.0**	**-0.1**
HYF				*e*Sg		**Sg**	**15 08 55.1**	**-0.8**
BAIF	**Baives**	**3.79**	**80**	*e*Pn		**Pn**	**15 07 59.7**	**+2.8**
BAIF	**Baives**	**3.79**	**80**	*e*Pg		**Pg**	**15 08 11.7**	**-0.3**
BAIF				*e*Sn		**Sn**	**15 08 41.3**	**+0.3**
BAIF				*e*Sg		**Sg**	**15 08 59.5**	**-1.5**
	comp=N,9.2nm,0.3s							
TCF	**Toulx Ste Croi**	**4.15**	**141**	*e*Sn		**Sn**	**15 08 49.7**	**-0.3**
	comp=N,2.8nm,0.2s							
GIVF	**Givet**	**4.19**	**80**	*e*Pn		**Pn**	**15 08 04.2**	**+1.8**
GIVF	**Givet**	**4.19**	**80**	*e*Pg		**Pg**	**15 08 18.9**	**-0.7**
GIVF				*e*Sn		**Sn**	**15 08 51.1**	**+0.3**
GIVF				*e*Sg		**Sg**	**15 09 13.3**	**-0.5**
	comp=N,9.0nm,0.3s							
SSF	**Saint Saulge**	**4.22**	**124**	*e*Pn		**Pn**	**15 08 04.2**	**+1.4**
SSF	**Saint Saulge**	**4.22**	**124**	*e*Pg		**Pg**	**15 08 19.5**	**-0.7**
SSF				*e*Sg		**Sg**	**15 09 14.0**	**-0.8**
	comp=N,3.9nm,0.3s							
BGF	**Bois d'Agland**	**4.22**	**134**	*e*Pn		**Pn**	**15 08 05.0**	**+2.1**
BGF	**Bois d'Agland**	**4.22**	**134**	*e*Pg		**Pg**	**15 08 19.3**	**-1.0**
BGF				*e*Sn		**Sn**	**15 08 52.0**	**+0.2**
BGF				*e*Sg		**Sg**	**15 09 14.1**	**-0.9**
	comp=N,13nm,0.3s							
LOR	**Lormes**	**4.29**	**120**	*e*Pn		**Pn**	**15 08 05.8**	**+2.0**
	baz=299							
LOR	**Lormes**	**4.29**	**120**	*e*Pg		**Pg**	**15 08 22.4**	**+0.8**
	baz=302							
LOR				*e*Sn		**Sn**	**15 08 53.2**	**-0.2**
	comp=N,2.1nm,0.2s,baz=304							
LOR				*e*Sg		**Sg**	**15 09 16.6**	**-0.5**
	comp=N,5.9nm,0.3s,baz=300							
AVF	**Avril sur Loir**	**4.31**	**128**	*e*Pn		**Pn**	**15 08 04.9**	**+0.8**
AVF				*e*Sn		**Sn**	**15 08 54.1**	**+0.2**
	comp=N,1.5nm,0.2s							
AVF				*e*Sg		**Sg**	**15 09 16.9**	**-0.9**
	comp=N,2.7nm,0.4s							
MEZF	**Maizieres J'vi**	**4.49**	**101**	*e*Pn		**Pn**	**15 08 08.1**	**+1.5**
MEZF				*e*Sn		**Sn**	**15 08 58.1**	**-0.3**
MEZF				*e*Sg		**Sg**	**15 09 22.2**	**-1.4**
	comp=N,6.1nm,0.4s							
SFTF	**Sexfontaines**	**4.58**	**105**	*e*Pn		**Pn**	**15 08 10.2**	**+2.4**
SFTF				*e*Sn		**Sn**	**15 08 59.0**	**-1.5**
	comp=N,2.6nm,0.1s							
SFTF				*e*Sg		**Sg**	**15 09 25.5**	**-0.8**
	comp=N,4.3nm,0.2s							
SMF	**Signal de Mont**	**4.66**	**127**	*e*Pn		**Pn**	**15 08 10.5**	**+1.6**
SMF				*e*Sn		**Sn**	**15 09 02.5**	**0.0**
	comp=N,1.3nm,0.2s							
SMF				*e*Sg		**Sg**	**15 09 28.0**	**-1.0**
	comp=N,4.0nm,0.3s							
RJF	**Les Rejaudoux**	**4.75**	**153**	*e*Sn		**Sn**	**15 09 02.8**	**-1.9**
RJF				*e*Sg		**Sg**	**15 09 30.5**	**-1.3**
	comp=N,10nm,0.3s							
LFF	**La Frestale**	**4.88**	**160**	*e*Sn		**Sn**	**15 09 05.7**	**-2.3**
LFF				*e*Sg		**Sg**	**15 09 34.5**	**-1.6**
	comp=N,21nm,0.4s							
CAF	**Calviac**	**5.26**	**150**	*e*Sn		**Sn**	**15 09 14.6**	**-2.7**
CAF				*e*Sg		**Sg**	**15 09 46.3**	**-1.8**
	comp=N,6.8nm,0.4s							
HAU	**Haudompre**	**5.47**	**103**	*e*Pn		**Pn**	**15 08 21.6**	**+1.5**
HAU	**Haudompre**	**5.47**	**103**	*e*Pg		**Pg**	**15 08 42.9**	**-1.2**
HAU				*e*Sn		**Sn**	**15 09 22.0**	**-0.5**
HAU				*e*Sg		**Sg**	**15 09 53.6**	**-1.3**
	comp=N,6.0nm,0.4s							
HINF	**Hinteralfeld**	**5.85**	**104**	*e*Pn		**Pn**	**15 08 27.1**	**+1.7**
HINF	**Hinteralfeld**	**5.85**	**104**	*e*Pg		**Pg**	**15 08 49.6**	**-1.9**
HINF				*e*Sn		**Sn**	**15 09 30.5**	**-1.5**
HINF				*e*Sg		**Sg**	**15 10 06.1**	**-1.1**
	comp=N,3.8nm,0.3s							
CABF	**La Chapelle**	**5.93**	**117**	*e*Pn		**Pn**	**15 08 28.2**	**+1.8**
CABF				*e*Sg		**Sg**	**15 10 07.9**	**-1.7**
	comp=N,1.3nm,0.3s							
CDF	**Champ du Feu**	**5.95**	**98**	*e*Pn		**Pn**	**15 08 28.3**	**+1.6**
CDF				*e*Sn		**Sn**	**15 09 32.4**	**-1.9**
	comp=N,0.9nm,0.2s							
CDF				*e*Sg		**Sg**	**15 10 08.6**	**-1.6**
	comp=N,2.4nm,0.3s							
SJPF	**Ste Jean**	**6.45**	**178**	*e*Sn		**Sn**	**15 09 44.1**	**-2.5**
SJPF				*e*Sg		**Sg**	**15 10 23.0**	**-3.3**
	comp=N,0.5nm,0.2s							
EPF	**Esparros**	**6.66**	**168**	*e*Sn		**Sn**	**15 09 47.0**	**-4.9**
EPF				*e*Sg		**Sg**	**15 10 29.7**	**-3.5**
	comp=N,1.8nm,0.3s							

IDC 11 15:07:02.2±5.2,1.85S×139.92E,h0km,mb3.4/2,
mb1 3.8/3,mb1mx3.5/22,mbtmpg3.6/3,ML3.9/1,Error
ellipse: s-maj=206.8km s-min=27.8km az=87.0,Near
north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.79**	**197**	P		P	15 11 23.4	0.0
	0.4nm,0.3s,baz=19,slow=12,SNR=13							
ASAR	**Alice Springs**	**22.45**	**195**	P		P	15 12 03.1	+0.1
	1.4nm,0.6s,baz=23,slow=11,SNR=15							
H11S3	**WAKE ISLAND Hy**	**33.20**	**51**	T		T	15 49 26.2	
	baz=236,slow=75,SNR=26							
H11S2	**WAKE ISLAND Hy**	**33.22**	**51**	T		T	15 49 25.9	
	baz=236,slow=75,SNR=22							
H11S1	**WAKE ISLAND Hy**	**33.22**	**51**	T		T	15 49 27.4	
	baz=236,slow=75,SNR=21							
H11N1	**WAKE ISLAND Hy**	**34.06**	**50**	T		T	15 50 30.5	
	baz=233,slow=74							
H11N2	**WAKE ISLAND Hy**	**34.08**	**50**	T		T	15 50 32.1	
	baz=233,slow=74							
H11N3	**WAKE ISLAND Hy**	**34.08**	**50**	T		T	15 50 35.5	
	baz=233							
MKAR	**Makanchi Array**	**69.86**	**322**	P		P	15 18 14.9	0.0
	0.2nm,0.5s,baz=98,slow=7.4,SNR=3.2							

JMA 11 15:13:50.5,35.86N×136.41E,h10km±1km,M1.7,
Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYTA	**Yamagatataniai**	**0.38**	**135**	P		Pg	15 13 57.9	0.0
JYTA				S		Sg	15 14 03.0	+0.1
JKG	**Kaga**	**0.42**	**351**	P		Pg	15 13 58.9	+0.1
JKG				S		Sg	15 14 04.7	+0.3
JICN	**Ichinomiyachia**	**0.66**	**148**	P		Pg	15 14 03.4	+0.1

JMA 11 15:14:10.8±0.1,37.04N×138.41E,h17km±1km,M1.2,
Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JJN	**Nakama**	**0.21**	**288**	P		Pg	15 14 15.8	+0.1
JJN				S		Sg	15 14 19.4	+0.3
MAT	**Matsushiro**	**0.52**	**198**	P		Pg	15 14 20.7	-0.5
MAT				S		Sg	15 14 27.6	-0.7
MAT	**Matsushiro**	**0.52**	**198**	P		Pg	15 14 20.7	-0.5
MAT				S		Sg	15 14 27.5	-0.8
JHK	**Hiroka**	**0.53**	**67**	P		Pg	15 14 21.3	0.0
JHK				S		Sb	15 14 28.8	-0.2
JNG	**Nsakai**	**0.68**	**202**	P		Pg	15 14 23.3	-0.9
JNG				S		Sg	15 14 32.4	-0.8
JKT	**Katashina**	**0.73**	**112**	P		Pg	15 14 24.5	-0.5
JKT				S		Sg	15 14 34.1	-0.6
JSD	**Sado**	**1.00**	**353**	P		Pb	15 14 29.2	-0.5
JSD				*e*S		Sb	15 14 42.6	0.0

*GCMT **11** 15:14:51.3±0.2,48.75S×0.01×126.52E±0.04,h12km,*
MW4.9/94,Moment Tensor Solution. s36,c42; s94,c131;
Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~3.04±.08;
Mθθ2.56±.07; Mϕϕ0.48±.09; Mrθ~0.29±.26; Mrϕ~0.62±.07;
Mθϕ~0.08±.37; Best double couple: M₀2.90200×10¹⁶
NP1:ϕs103.00000°,δ48.00000°,λ-94.00000°. Principal axes:
T 2.7450, Plg3.0000°, Azm195.0000°; N 0.3200,
Plg3.0000°, Azm105.0000°; P -3.0580, Plg86.0000°,
Azm330.0000°; nsta1 refers to body waves, cutoff=40s.
nsta2 refers to surface waves, cutoff=50s. Triangular
moment-rate function

*IDC **11** 15:14:52.6±0.5,48.73S×126.76E,h0km,mb4.4/12,*
mb1 4.6/13,mb1mx4.4/25,mbtmpg4.4/13,ML2.6/1,MS4.1/20,
Ms1 4.1/20,ms1mx4.0/27 Error ellipse: s-maj=33.9km
s-min=14.0km az=91.0
*NEIC **11** 15:14:54.3±2.3,48.70S±0.10×126.5E±0.2,h10km±1km,*
mb4.7/20,Error ellipse: s-maj=25.4km s-min=16.4km
az=99.0
ISC 11 15:14:54.5±0.4,48.78S±0.07×126.6E±0.1,h10km,n79,
σ1§22/59,mb4.8/24,MS4.1/24,3C,Western
Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.64**	**322**	T		T	15 35 41.8	
	baz=151,slow=74							
H01W2	**Cape Leeuwin H**	**16.64**	**322**	T		T	15 35 45.7	
	baz=151,slow=74							
H01W3	**Cape Leeuwin H**	**16.66**	**322**	T		T	15 35 45.3	
	baz=151,slow=74							
NWAO	**Narrogin (SRO)**	**17.31**	**333**	P		**Pn**	**15 18 55.2**	**-0.9**
	0.9nm,0.3s,baz=144,slow=14,SNR=13							
NWAO				LR		LR	15 23 48.0	
	comp=Z,1μm,21.6s,baz=138,slow=31							
NWAO	**Narrogin (SRO)**	**17.31**	**333**	P		**Pn**	**15 18 55.9**	**-0.3**
NWAO				IAmb		IAmb	15 19 04.6	
	comp=Z,66nm,1.3s							
NWAO	**Narrogin (SRO)**	**17.31**	**333**	P		**Pn**	**15 18 55.6**	**-0.5**
NWAO				IAmb		IAmb	15 19 04.6	
	comp=Z,59nm,1.4s							
FORT	**Forrest**	**18.01**	**4**	P		**P**	**15 19 05.9**	**+0.6**
CASY	**Casey**	**19.43**	**200**			**P**	**15 19 20.7**	**0.0**
STKA	**Stephens Creek**	**20.34**	**39**	P		**P**	**15 19 30.6**	**-0.1**
	comp=Z,7.3nm,1.0s,baz=176,slow=8.0,SNR=4.8							
STKA				LR		LR	15 25 49.3	
	comp=Z,987nm,21.8s,baz=208,slow=32							
STKA	**Stephens Creek**	**20.34**	**39**	P		**P**	**15 19 31.8**	**+1.0**
MORW	**Morawa**	**21.28**	**334**	P		**P**	**15 19 40.5**	**-0.4**
CAN	**Canberra**	**21.31**	**59**	P		**P**	**15 19 41.8**	**+0.5**
ASAR	**Alice Springs**	**25.72**	**16**	P		**P**	**15 20 23.3**	**-1.7**
	comp=Z,18nm,0.8s,baz=188,slow=9.6,SNR=93							
ASAR				PcP		**PcP**	**15 23 53.8**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=182,slow=2.8,SNR=5.5							
ASAR				LR		LR	15 29 31.5	
	comp=Z,588nm,21.1s,baz=204,slow=34							
AS31	**Alice Springs**	**25.73**	**16**	P		**P**	**15 20 23.4**	**-1.6**
AS31				IAmb		IAmb	15 20 32.1	
	comp=Z,12nm,0.9s							
ARMA	**Armidale**	**26.44**	**55**	P		**P**	**15 20 32.6**	**+1.1**
ARMA				IAmb		IAmb	15 20 40.3	
	comp=Z,19nm,1.3s							
WRA	**Warramunga Arr**	**29.44**	**15**	P		**P**	**15 20 56.7**	**-1.6**
	comp=Z,5.7nm,1.1s,baz=194,slow=8.3,SNR=8.7							
WRA				PcP		**PcP**	**15 24 01.8**	**-2.1**
	comp=Z,1.4nm,0.9s,baz=201,slow=1.7,SNR=3.9							
WRA				LR		LR	15 31 36.1	
	comp=Z,820nm,21.4s,baz=195,slow=34							
WRAB	**Tennant Creek**	**29.45**	**15**	P		**P**	**15 20 57.3**	**-1.1**
WRAB				IAmb		IAmb	15 21 05.0	
	comp=Z,25nm,1.3s							
WR0	**Warramunga Arr**	**29.46**	**15**	P		**P**	**15 20 57.8**	**-0.7**
RPZ	**Rata Peaks**	**30.84**	**98**	LR		LR	15 31 06.0	
	comp=Z,233nm,19.3s,baz=278,slow=32							
VNDA	**Vanda**	**31.85**	**166**	P		**P**	**15 21 19.3**	**+0.3**
	comp=Z,4.0nm,0.7s,baz=317,slow=8.5,SNR=20							
VNDA				LR		LR	15 33 25.5	
	comp=Z,842nm,18.2s,baz=330,slow=35							
VNDA	**Vanda**	**31.85**	**166**	P		**P**	**15 21 19.7**	**+0.7**
VNDA				IAmb		IAmb	15 21 27.1	
	comp=Z,12nm,0.9s							
SBA	**Scott Base**	**32.86**	**165**	P		**P**	**15 21 28.5**	**+0.6**
SBA				IAmb		IAmb	15 21 39.4	
	comp=Z,17nm,1.4s							
KNRA	**Kununurra**	**33.06**	**4**	P		**P**	**15 21 29.4**	**-0.7**
MAW	**Mawson**	**36.39**	**215**	LR		LR	15 34 38.6	
	comp=Z,226nm,18.3s,baz=60,slow=32							
MAW	**Mawson**	**36.39**	**215**	P		P	15 22 04.3	+6.0
DZM	**Mont Dzumac**	**41.32**	**64**	*e*LR		LR	15 34 10.7	
	comp=Z,475nm,27.9s							
QSPA	**South Pole Qui**	**41.34**	**180**	P		**P**	**15 22 41.0**	**+0.8**
	comp=Z,5.0nm,1.0s,baz=344,slow=5.6,SNR=10							
QSPA				PcP		**PcP**	**15 24 37.8**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=296,slow=4.3,SNR=6.1							
QSPA	**South Pole Qui**	**41.34**	**180**	P		**P**	**15 22 41.0**	**+0.8**
QSPA				IAmb		IAmb	15 22 49.0	
	comp=Z,19nm,1.1s							
PMG	**Port Moresby**	**42.88**	**31**	P		**P**	**15 22 53.0**	**0.0**
PMG				IAmb		IAmb	15 23 00.8	
	comp=Z,20nm,1.1s							
SYO	**Syowa Base**	**44.59**	**211**	⇑*e*P		**P**	**15 23 05.0**	**-1.2**
SYO	**Syowa Base**	**44.59**	**211**	⇑*e*P		P	15 23 18.0	+12
LEM	**Lembang**	**44.78**	**333**	P		**P**	**15 23 09.9**	**+1.4**
	comp=Z,5.4nm,0.4s,baz=161,slow=8.8,SNR=5.3							
HNR	**Honiara**	**48.16**	**47**	LR		LR	15 42 07.2	
	comp=Z,359nm,19.9s,baz=180,slow=34							
SNAA	**Sanae**	**54.65

GTA					pmax	pmax		
	comp=Z,8.0nm,1.7s							
USRK	**Ussuriysk Ar.**	**92.72**	**4**	LR	LR	16 07 29.3		
	comp=Z,72nm,21.6s,baz=137,slow=34							
KLR	**Kul'dur**	**97.73**	**3**	LR	LR	16 10 56.5		
	comp=Z,68nm,20.9s,baz=221,slow=34							
SONM	**Songino Array**	**97.81**	**346**	P	**P**	**15 28 28.7**	**-0.8**	
	comp=Z,0.2nm,0.3s,baz=167,slow=3.5,SNR=5.5							
SONM				LR	LR	16 15 16.7		
	comp=Z,38nm,19.6s,baz=139,slow=37							
WMQ	**Urumqi**	**98.32**	**333**	*e*P	Pdif	15 28 33.2	+1.4	
WMQ				pmax	pmax			
	comp=Z,8.0nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,46nm,5.1s							
WMQ				LR	LR			
	comp=Z,730nm,28.9s							
KSH	**Kashi**	**98.65**	**323**	*e*P	Pdif	15 28 37.8	+4.3	
MKAR	**Makanchi Array**	**102.68**	**331**	P	**Pdif**	**15 28 51.9**	**+0.8**	
	comp=Z,0.2nm,0.7s,baz=112,slow=6.4,SNR=3.2							
BRTR	**Keskin Array B**	**120.23**	**297**	PKP	**PKPdf**	**15 33 44.2**	**-1.2**	
	comp=Z,0.5nm,0.8s,baz=174,slow=2.9,SNR=3.1							
TORD	**Torodi Ar. Bea**	**122.54**	**251**	PKP	**PKPdf**	**15 33 49.7**	**-0.6**	
	comp=Z,1.7nm,1.1s,baz=110,slow=3.0,SNR=5.4							
AKASG	**Malin Array Be**	**129.24**	**305**	PKP	**PKPdf**	**15 34 00.6**	**-1.3**	
	comp=Z,0.2nm,0.4s,baz=98,slow=2.8,SNR=3.4							
ILAR	**Eielson Array**	**131.34**	**35**	PKP	**PKPdf**	**15 34 05.2**	**-0.4**	
	comp=Z,0.3nm,0.8s,baz=298,slow=3.2,SNR=4.0							
NVAR	**Mina Array Bea**	**133.22**	**77**	PKP	**PKPdf**	**15 34 10.4**	**+0.2**	
	comp=Z,1.1nm,1.0s,baz=205,slow=4.0,SNR=5.4							
VYHS	**Vyhne**	**133.94**	**298**	*e*PKP	**PKPdf**	**15 34 10.9**	**-0.1**	
FINES	**FINESS Array B**	**135.69**	**317**	PKP	**PKPdf**	**15 34 14.0**	**+0.2**	
	comp=Z,1.4nm,0.8s,baz=17,slow=1.5,SNR=3.3							
GERES	**GERESS Array B**	**137.12**	**297**	PKP	**PKPdf**	**15 34 17.2**	**+0.1**	
	comp=Z,1.2nm,1.0s,baz=147,slow=2.7,SNR=5.0							
TXAR	**Lajitas Array**	**137.31**	**98**	PKP	**PKPdf**	**15 34 18.8**	**+0.8**	
	comp=Z,1.3nm,1.0s,baz=198,slow=3.7,SNR=5.1							
INK	**Inuvik**	**137.60**	**33**	PKP	**PKPdf**	**15 34 16.6**	**-0.5**	
	comp=Z,0.8nm,0.6s,baz=191,slow=3.4,SNR=3.2							
CLL	**Collm**	**138.57**	**300**	*i* PKPdf	**PKiKP**	**15 34 21.0**	**-0.6**	
	comp=Z,23nm,1.9s							
ESDC	**Sonseca Array**	**143.96**	**274**	PKP	PKPab	15 34 27.0	0.0	
	comp=Z,0.2nm,0.4s,baz=96,slow=2.9,SNR=6.4							
YKA	**Yellowknife Ar**	**144.32**	**44**	PKP	**PKPab**	**15 34 27.4**	**0.0**	
	comp=Z,1.5nm,0.9s,baz=269,slow=2.9,SNR=24							
ULM	**Lac du Bonnet**	**152.67**	**71**	PKPbc	**PKPbc**	**15 34 49.0**	**-1.4**	
	comp=Z,1.0nm,0.6s,baz=305,slow=4.5,SNR=3.7							
FRB	**Frobisher Bay**	**162.88**	**23**	PKPab	**PKPab**	**15 35 43.5**	**-1.4**	
	comp=Z,2.0nm,0.8s,baz=282,slow=4.0,SNR=4.3							

*GUC **11** 15:22:58.8±0.8,20.°56S×69.°64W,h84km±5km,ML3.5*
*SJA **11** 15:22:58.7±1.1,20.°60S×69.°75W,h75km,ML3.5,MW3.5*
ISC 11 15:22:58.4±1.6,20.°57S±0.°03×69.°71W±0.°06,h99km±11km, n22,σ0°65/43,7C-4D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.45**	**270**	⇑	*i*P		**Pn**	**15 23 13.6**	**0.0**
TA01				⇓	*e*P			15 23 14.0	
TA01					eS		**Sn**	**15 23 24.8**	**-0.3**
TA01					IAML			15 23 26.2	
	comp=E,3μm,0.4s								
PATCX	**Punta Patache**	**0.49**	**239**	⇑	*i*P		**Pn**	**15 23 14.3**	**+0.3**
PATCX					eS		**Sn**	**15 23 26.0**	**+0.3**
PATCX					IAML			15 23 27.9	
	comp=E,2μm,0.3s								
PATCX	**Punta Patache**	**0.49**	**239**		*e*P		**Pn**	**15 23 14.8**	**+0.7**
PATCX					eS		**Sn**	**15 23 26.1**	**+0.3**
PB08	**IPOC Station P**	**0.67**	**51**	⇑	*i*P		**Pn**	**15 23 15.7**	**-0.2**
PB08					eS		**Sn**	**15 23 27.8**	**-1.1**
PB08					IAML			15 23 28.2	
	comp=E,4μm,0.2s								
PB08	**IPOC Station P**	**0.67**	**51**		*e*P		**Pn**	**15 23 15.8**	**-0.2**
PB08					eS		**Sn**	**15 23 27.9**	**-1.1**
PB11	**IPOC Station P**	**0.81**	**3**	⇓	*e*P		**Pn**	**15 23 17.0**	**+0.1**
PB11					eS		**Sn**	**15 23 30.8**	**+0.1**
PB11					IAML			15 23 34.1	
	comp=E,1μm,0.2s								
PB11	**IPOC Station P**	**0.81**	**3**		*e*P		**Pn**	**15 23 17.0**	**+0.1**
PB11					eS		**Sn**	**15 23 30.8**	**+0.1**
GO01	**Chusmiza**	**1.02**	**28**	⇑	*i*P		**Pn**	**15 23 19.2**	**-0.2**
GO01					eS		**Sn**	**15 23 34.6**	**-0.6**
GO01					IAML			15 23 35.2	
	comp=E,4μm,0.2s								
PSGCX	**Pisagua**	**1.04**	**338**		*i* P		**Pn**	**15 23 19.5**	**+0.2**
PSGCX					eS		**Sn**	**15 23 35.1**	**+0.1**
PSGC	**Pisagua**	**1.04**	**338**	⇓	*e*P		**Pn**	**15 23 19.5**	**+0.1**
PSGC					eS		**Sn**	**15 23 35.3**	**+0.2**
PB09	**IPOC Station P**	**1.29**	**161**	⇑	*i*P		**Pn**	**15 23 23.0**	**+0.6**
PB09					eS		**Sn**	**15 23 40.7**	**+0.4**
PB09					IAML			15 23 42.0	
	comp=E,986nm,0.4s								
PB09	**IPOC Station P**	**1.29**	**161**		*i* P		**Pn**	**15 23 22.9**	**+0.6**
PB09					*i* S		**Sn**	**15 23 40.7**	**+0.4**
PB09					IAML			15 23 41.3	
	comp=Z,966nm,0.4s								
MNMC	**Minye Minye**	**1.44**	**4**	⇓	*e*P		**Pn**	**15 23 24.6**	**+0.5**
MNMC					eS		**Sn**	**15 23 43.7**	**+0.2**
MNMC					IAML			15 23 45.6	
	comp=N,1μm,0.2s								
MNMCX	**Minye Minye**	**1.44**	**4**		*e*P		**Pn**	**15 23 24.6**	**+0.6**
MNMCX					eS		**Sn**	**15 23 43.7**	**+0.2**
PB03	**IPOC Station P**	**1.47**	**182**	⇑	*i*P		**Pn**	**15 23 25.0**	**+0.6**
PB03					eS		**Sn**	**15 23 44.3**	**+0.2**
PB03					IAML			15 23 45.2	
	comp=E,1μm,0.3s								
PB03	**IPOC Station P**	**1.47**	**182**		*e*P		**Pn**	**15 23 25.0**	**+0.6**
PB03					eS		**Sn**	**15 23 43.6**	**-0.5**
PB04	**IPOC Station P**	**1.80**	**193**	⇑	*i*P		**Pn**	**15 23 29.0**	**+0.4**
PB04					eS		**Sn**	**15 23 50.4**	**-1.1**
PB04					IAML			15 23 51.7	
	comp=E,596nm,0.2s								
PB04	**IPOC Station P**	**1.80**	**193**		*i* P		**Pn**	**15 23 29.0**	**+0.4**
PB04					*i* S		**Sn**	**15 23 50.4**	**-1.1**
PB04					IAML			15 23 53.4	
	comp=Z,384nm,0.2s								
PB06	**IPOC Station P**	**2.13**	**177**		*i* P		**Pn**	**15 23 33.1**	**+0.3**
PB06					*i* S		**Sn**	**15 23 58.2**	**-0.8**
PB06					IAML			15 24 00.7	
	comp=Z,278nm,0.4s								
LVC	**Limon Verde**	**2.16**	**160**	⇑	*i*P		**Pn**	**15 23 34.5**	**+1.2**
LVC					*i* S		**Sn**	**15 24 00.7**	**+0.7**
PB05	**IPOC Station P**	**2.32**	**191**		*i* P		**Pn**	**15 23 35.2**	**0.0**
PB05					*i* S		**Sn**	**15 24 01.3**	**-2.1**
PB10	**IPOC Station P**	**3.03**	**195**		*i* P		**Pn**	**15 23 44.2**	**-0.4**

*IDC **11** 15:27:57.2±8.6,20.°58S×177.°86W,h618km±116km, mb2.8/5,mb1 3.1/6,mb1mx2.9/27,mbtmp3.8/6,Error ellipse: s-maj=58.0km s-min=28.1km az=13.0*
ISC 11 15:27:50.4±1.1,20.°3S±0.°2×177.°8W±0.°2,h534km,n7, σ2°03/7,mb3.4/5,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.41**	**193**	P		**P**	**P**	**15 31 32.1**	**-0.5**
	0.4nm,0.3s,baz=98,slow=15,SNR=4.9								
ASAR	**Alice Springs**	**44.73**	**257**	P		**P**	**P**	**15 35 17.6**	**+1.1**
	1.1nm,0.6s,baz=91,slow=7.1,SNR=27								
WRA	**Warramunga Arr**	**44.80**	**262**	P		**P**	**P**	**15 35 17.6**	**+0.6**
	0.7nm,0.5s,baz=98,slow=7.9,SNR=14								
MJAR	**Matsushiro Arr**	**70.17**	**324**	P		**P**	**P**	**15 38 09.7**	**+0.2**
	0.9nm,0.6s,baz=140,slow=5.3,SNR=4.7								
TXAR	**Lajitas Array**	**86.81**	**57**	P		**P**	**P**	**15 39 40.5**	**+2.0**
	0.1nm,0.6s,baz=212,slow=4.9,SNR=2.2								
ILAR	**Eielson Array**	**88.10**	**13**	P		**P**	**P**	**15 39 42.7**	**-0.9**
	0.3nm,0.8s,baz=210,slow=5.2,SNR=4.2								
AKASG	**Malin Array Be**	**142.94**	**331**	PKP		**PKPdf**	**P**	**15 46 20.0**	**-3.1**
	0.2nm,0.3s,baz=40,slow=3.8,SNR=3.9								

*JMA **11** 15:42:53.2±0.1,33.°93N×137.°56E,h359km,M2.7*
*IDC **11** 15:42:56.6±5.6,34.°10N×137.°45E,h325km±24km,mb2.4/2, mb1 2.6/4,mb1mx2.5/51,mbtmp3.1/4,Error ellipse: s-maj=95.9km s-min=26.1km az=168.0*
ISC 11 15:42:56.1±1.4,34.°1N±0.°2×137.°6E±0.°1,h347km,n18, σ2°00/21,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JIE	**Ise**	**0.75**	**291**	P		P	**Pn**	**15 43 39.6**	**-1.0**
JKN2	**Miekihoku**	**1.07**	**276**	P		P	**Pn**	**15 43 40.4**	**-1.3**
JYTA	**Yamagatataniai**	**1.61**	**336**	P		P	**Pn**	**15 43 43.9**	**-0.5**
JWY	**Kouya**	**1.63**	**274**	P		P	**Pn**	**15 43 43.3**	**-1.4**
JTNC	**Tanabenakahech**	**1.64**	**260**	P		P	**Pn**	**15 43 43.3**	**-1.5**
JWT	**Wachi**	**2.11**	**304**	P		P	**Pn**	**15 43 46.9**	**-0.9**
JRY	**Ryogami san**	**2.19**	**30**	P		P	**Pn**	**15 43 49.1**	**+0.7**
JHU	**Hanno**	**2.23**	**39**	P		P	**Pn**	**15 43 48.9**	**+0.2**
BSO4	**Boso 4**	**2.46**	**69**	*e*S		**S**	**S**	**15 44 33.1**	**-0.9**
MJAR	**Matsushiro Arr**	**2.47**	**12**	P		P	**Pn**	**15 43 50.3**	**-0.2**
	0.1nm,0.3s,baz=178,slow=9.7,SNR=11								
MJAR				S			**S**	**15 44 32.4**	**-2.0**
	0.0nm,0.3s,baz=193,slow=21,SNR=2.6								
JAI	**Aioi**	**2.60**	**263**	P		P	**Pn**	**15 43 49.9**	**-1.8**
JAG	**Ashikaga**	**2.77**	**34**	P		P	**Pn**	**15 43 52.2**	**-0.9**
JYT	**Yasato**	**3.01**	**45**	P		P	**Pn**	**15 43 54.3**	**-0.9**
JYT				S		S	**S**	**15 44 38.1**	**-4.7**
JHO	**Hitachi**	**3.50**	**44**	P		P	**Pn**	**15 43 59.2**	**-0.6**
JFK	**Kawauchi**	**4.21**	**39**	P		P	**Pn**	**15 44 06.7**	**-0.3**
JFK				S		S	**S**	**15 45 00.0**	**-4.3**
KSRS	**Korea Array**	**8.50**	**296**	P		P	**Pn**	**15 44 56.1**	**+0.2**
	0.2nm,0.3s,baz=109,slow=13,SNR=7.9								
MKAR	**Makanchi Array**	**43.07**	**304**	P		P	**P**	**15 50 24.2**	**+1.3**
	0.2nm,0.6s,baz=88,slow=9.6,SNR=3.9								
YKA	**Yellowknife Ar**	**67.88**	**28**	P		P	**P**	**15 53 20.8**	**+3.3**
	0.1nm,0.4s,baz=298,slow=6.9								

*NIED **11** 15:46:00,38.°90N×141.°90E,h50km,Mw3.9 Best double couple: M6.90000×10^14 NP1:φs17.00000°,δ76.00000°, λ89.00000°. NP2:φs201.00000°,δ14.00000°,λ94.00000°.*
*JMA **11** 15:46:14.8±0.1,38.°92N×141.°93E,h51km±1km,M4.0 Broadband fault plane solution: P waves. NP1: φs188.00000°,δ28.00000°,λ86.00000°. NP2:φs13.00000°, δ62.00000°,λ92.00000°. Principal axes: T Plg73.0000°, Azm288.0000°; N Plg2.0000°, Azm192.0000°; P Plg17.0000°, Azm101.0000°;*
JMA Felt II J1.
*IDC **11** 15:46:16.9±3.3,38.°89N×141.°97E,h78km±27km,mb3.6/14, mb1 3.8/17,mb1mx3.6/50,mbtmp3.9/17,MS3.0/3, Ms1 3.0/3,ms1mx2.6/44 Error ellipse: s-maj=28.3km s-min=18.8km az=87.0*
*NEIC **11** 15:46:16.6±1.6,38.°93N±0.°09×141.°94E±0.°03,h74km±8km, mb4.4/6,Error ellipse: s-maj=13.2km s-min=2.1km az=166.0*
ISC 11 15:46:13.7±1.0,38.°93N±0.°05×142.°05E±0.°10,h49km±5km, n52,σ1°33/55,mb4.2/22,10D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.33**	**297**	⇓	P		**Pn**	**15 46 23.8**	**+0.7**
OFUJ					S		**Sn**	**15 46 29.9**	**+0.2**
JKMT	**Kesennumamotoy**	**0.47**	**255**	⇓	P		**Pn**	**15 46 24.7**	**+0.2**
JKMT					*i* S		**Sn**	**15 46 31.4**	**-0.8**
JMK	**Ichinoseki**	**0.65**	**272**	⇓	P		**Pn**	**15 46 26.8**	**0.0**
JMK					S		**Sn**	**15 46 35.3**	**-0.9**
JIO	**Ouri**	**0.73**	**229**	⇓	P		**Pn**	**15 46 27.7**	**-0.1**
JIO					S		**Sn**	**15 46 36.5**	**-1.4**
JOM	**Ohasama**	**0.80**	**313**	⇓	P		**Pn**	**15 46 29.3**	**+0.5**
JOM					*e*S		**Sn**	**15 46 39.6**	**-0.1**
JRG	**Rokugo**	**1.20**	**293**	⇓	P		**Pn**	**15 46 34.1**	**0.0**
JRG					*e*S		**Sn**	**15 46 48.5**	**-0.7**
JOU	**Okura**	**1.23**	**243**	⇓	P		**Pn**	**15 46 34.2**	**-0.3**
JOU					S		**Sn**	**15 46 48.9**	**-1.0**
JYK	**Kaneyama**	**1.32**	**270**	⇓	P		**Pn**	**15 46 35.7**	**-0.1**
JMM	**Marumori**	**1.45**	**223**	⇓	P		**Pn**	**15 46 37.0**	**-0.6**
JMM					eS		**Sn**	**15 46 54.0**	**-1.4**
JANG	**Nango**	**1.50**	**344**	⇓	P		**Pn**	**15 46 38.8**	**+0.6**
ERM	**Erimo**	**3.19**	**15**		Pn		Pn	15 47 03.5	+2.1
MJAR	**Matsushiro Arr**	**3.87**	**233**		P		**Pn**	**15 47 12.6**	**+1.8**
	1.1nm,0.3s,baz=41,slow=12,SNR=73								
MJAR					LR		LR	15 48 51.7	
	comp=Z,62nm,20.7s,baz=45,slow=41								
MAJO	**Matsushiro**	**3.87**	**233**				**Pn**	**15 47 11.4**	**+0.7**
MAT	**Matsushiro**	**3.87**	**233**		P		**Pn**	**15 47 12.4**	**+1.7**
MAT					eS		**Sn**	**15 48 00.2**	**+5.3**
MJB9	**Matsu-Tunnel**	**3.87**	**233**				**Pn**	**15 47 11.2**	**+0.5**
INU	**Inuyama**	**5.38**	**230**				**Pn**	**15 47 34.5**	**+3.1**
USRK	**Ussuriysk Ar.**	**9.20**	**308**		P		**Pn**	**15 48 24.6**	**+1.0**
	baz=123,slow=16,SNR=18								
KSRS	**Korea Array**	**11.22**	**267**		P		**Pn**	**15 48 55.5**	**+4.2**
	0.3nm,0.3s,baz=84,slow=14,SNR=4.6								
KLR	**Kul'dur**	**12.67**	**328**		LR		LR	15 53 37.2	
	comp=Z,69nm,18.4s,baz=9.5,slow=35								
SONM	**Songino Array**	**27.20**	**301**		P		**P**	**15 51 53.0**	**+0.2**
	0.5nm,0.5s,baz=105,slow=8.0,SNR=4.2								
ENH	**Enshi**	**28.05**	**262**		P		**P**	**15 51 57.7**	**-2.8**
ENH					IAmb		IAmb	15 52 04.5	
	comp=Z,8.3nm,0.8s								
H11N2	**WAKE ISLAND Hy**	**28.75**	**125**		T		T	16 22 34.0	
	baz=317,slow=75,SNR=1004								
H11N1	**WAKE ISLAND Hy**	**28.75**	**125**		T		T	16 22 34.8	
	baz=317,slow=75,SNR=969								
H11N3	**WAKE ISLAND Hy**	**28.76**	**125**		T		T	16 22 34.2	
	baz=317,slow=75,SNR=748								
H11S1	**WAKE ISLAND Hy**	**29.52**	**127**		T		T	16 23 39.2	
	baz=318,slow=76,SNR=81								
H11S3	**WAKE ISLAND Hy**	**29.52**	**127**		T		T	16 23 39.6	
	baz=318,slow=76,SNR=87								
H11S2	**WAKE ISLAND Hy**	**29.54**	**127**		T		T	16 23 40.7	
	baz=318,slow=76,SNR=78								
ZAA0	**Zalesovo Array**	**41.03**	**311**		P		**P**	**15 53 50.8**	**-1.2**
ZALV	**Zalesovo Beam**	**41.03**	**311**		P		**P**	**15 53 52.2**	**+0.2**
	comp=Z,3.0nm,0.5s,baz=90,slow=7.5,SNR=15								
ZALV					pP		**sP**	**15 54 10.1**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=85,slow=8.1,SNR=5.3								
ZALV					PcP		**PcP**	**15 55 50.5**	**-0.5**
	comp=Z,0.5nm,0.4s,baz=96,slow=3.9,SNR=3.6								
CMAR	**Chiang Mai Arr**	**42.49**	**254**		P		**P**	**15 54 04.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=46,slow=7.7,SNR=4.1								
MK31	**Makanchi Array**	**43.57**	**301**		P		**P**	**15 54 12.9**	**+0.1**
MK31					IAmb		IAmb	15 54 13.7	
	comp=Z,4.2nm,0.8s								
MKAR	**Makanchi Array**	**43.57**	**301**		P		**P**	**15 54 12.9**	**+0.2**
	comp=Z,4.1nm,0.7s,baz=86,slow=9.9,SNR=49								
MKAR					pP		**sP**	**15 54 31.4**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=88,slow=7.5,SNR=5.9								
KURK	**Kurchatov**	**45.18**	**307**		P		**P**	**15 54 25.4**	**-0.1**
KURK					IAmb		IAmb	15 54 26.7	
	comp=Z,6.4nm,0.9s								
TAPN	**Taplejung**	**46.34**	**273**	*e*P			**P**	**15 54 36.8**	**+1.5**
	comp=Z,24nm,1.5s								
RAMN	**Ramite**	**47.40**	**273**	*e*P			**P**	**15 54 43.3**	**-0.2**
GUN	**Gumba**	**47.49**	**274**	*e*P			**P**	**15 54 44.7**	**+0.3**
	comp=Z,9.3nm,0.4s								
ILAR	**Eielson Array**	**47.63**	**33**	P			**P**	**15 54 46.0**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=269,slow=6.5,SNR=7.0								
KKN	**Kakani**	**48.02**	**274**	*e*P			**P**	**15 54 48.0**	**-0.3**
	comp=Z,3.4nm,0.4s								
DANN	**Dangsing**	**48.93**	**276**	*e*P			**P**	**15 54 55.8**	**+0.4**
	comp=Z,16nm,0.6s								
ARU	**Arti**	**55.29**	**318**	P			**P**	**15 55 41.9**	**0.0**
ABKAR	**Akbulak array**	**57.12**	**309**	P			**P**	**15 55 54.6**	**-0.4**
ABKAR					IAmb		IAmb	15 55 55.3	
	comp=Z,2.7nm,0.6s								
WRA	**Warramunga Arr**	**59.01**	**188**	P			**P**	**15 56 07.9**	**-0.5**
	comp=Z,0.8nm,0.4s,baz=6.8,slow=7.5,SNR=2.9								
KIRV	**Kirov**	**59.05**	**322**	LR			LR	16 23 21.7	
	comp=Z,48nm,18.3s,baz=120,slow=38								
ARCES	**ARCESS Array B**	**62.40**	**339**	P			**P**	**15 56 30.8**	**-0.2**
	comp=Z,2.2nm,0.9s,baz=64,slow=7.1,SNR=3.0								
ASAR	**Alice Springs**	**62.73**	**188**	P			**P**	**15 56 33.0**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=355,slow=5.5,SNR=3.2								
FINES	**FINESS Array B**	**67.38**	**332**	P			**P**	**15 57 03.2**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=36,slow=10,SNR=9.8								
KBZ	**Khabaz**	**70.06**	**310**	P			**P**	**15 57 20.9**	**+0.5**
	comp=Z,2.6nm,1.0s,baz=53,slow=5.1,SNR=3.0								
NOA	**NORSAR Array B**	**72.63**	**337**	P			**P**	**15 57 34.8**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=38,slow=6.2,SNR=3.1								
AKASG	**Malin Array Be**	**73.11**	**322**	P			**P**	**15 57 37.8**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=42,slow=6.1,SNR=6.1								
BRTR	**Keskin Array B**	**77.97**	**312**	P			**P**	**15 58 06.7**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=112,slow=3.4,SNR=6.9								
CLL	**Collm**	**79.70**	**330**	*e*P			**P**	**15 58 17.0**	**+1.0**
GERES	**GERESS Array B**	**81.36**	**328**	P			**P**	**15 58 25.2**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=39,slow=6.6,SNR=3.5								

*IDC **11** 15:49:48.1±1.5,5.°34S×152.°26E,h63km±10km,mb3.9/12, mb1 4.1/13,mb1mx3.8/39,mbtmp4.2/13,Error ellipse: s-maj=22.0km s-min=10.1km az=112.0*
*NEIC **11** 15:49:50.1±1.4,5.°4S±0.°1×152.°4E±0.°1,h83km±9km, mb4.4/12,Error ellipse: s-maj=21.9km s-min=13.5km az=132.0*
ISC 11 15:49:45.7±0.7,5.°33S±0.°06×152.°5E±0.°1,h40km,n30, σ1°37/32,mb4.3/17,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.10**	**338**	P		P	**Pn**	**15 50 06.5**	**+1.8**
	359nm,0.3s,baz=180,slow=1.3,SNR=126								
KRVT				S			**Sn**	**15 50 21.3**	**+2.6**
	1μm,0.3s,baz=165,slow=20,SNR=46								
KRVT				LR		LR	LR	15 50 49.4	
	comp=Z,352nm,20.1s,baz=120,slow=58								
PMG	**Port Moresby**	**6.62**	**232**	P		P	**Pn**	**15 51 22.6**	**+2.0**
	2.9nm,0.3s,baz=44,slow=13,SNR=16								
PMG				S			**Sn**	**15 52 34.2**	**-0.7**
	26nm,0.3s,baz=139,slow=21,SNR=20								
PMG	**Port Moresby**	**6.62**	**232**				**Pn**	**15 51 23.6**	**+3.0**
PMG							**Sn**	**15 52 37.9**	**+3.0**
DZM	**Mont Dzumac**	**21.46**	**142**	P		P	**P**	**15 54 32.6**	**+1.6**
	8.0nm,0.9s,baz=0.0,slow=19,SNR=7.2								
DZM	**Mont Dzumac**	**21.46**	**142**	P		P	**P**	**15 54 31.2**	**+0.3**
DZM				IAmb		IAmb	IAmb	15 54 47.7	
	comp=Z,19nm,1.2s								
SIJI	**Sorong**	**21.60**	**281**	P		P	**P**	**15 54 31.1**	**-1.3**
	comp=Z,2.6nm,0.3s,baz=151,slow=14,SNR=4.9								
MTN	**Manton Dam**	**22.32**	**249**	P		P	**P**	**15 54 39.9**	**-0.2**
MTN				IAmb		IAmb	IAmb	15 54 48.2	
	comp=Z,28nm,1.1s								
WR0	**Warramunga Arr**	**22.69**	**229**	P		P	**P**	**15 54 44.2**	**+0.1**
WRAB	**Tennant Creek**	**22.82**	**229**	P		P	**P**	**15 54 45.0**	**-0.4**
WRA	**Warramunga Arr**	**22.83**	**229**	P		P	**P**	**15 54 44.5**	**-1.1**
	comp=Z,5.6nm,0.5s,baz=53,slow=10.0,SNR=51								
KNRA	**Kununurra**	**25.42**	**244**	P		P	**P**	**15 55 09.2**	**-0.7**
AS31	**Alice Springs**	**25.52**	**223**	P		P	**P**	**15 55 10.1**	**-0.7**
ASAR	**Alice Springs**	**25.52**	**223**	P		P	**P**	**15 55 09.7**	**-1.1**
	comp=Z,2.4nm,0.4s,baz=59,slow=8.8,SNR=64								
FITZ	**Fitzroy Crossi**	**29.10**	**242**	P		P	**P**	**15 55 41.1**	**-1.7**
	comp=Z,6.0nm,0.5s,baz=56,slow=7.8,SNR=30								
FITZ	**Fitzroy Crossi**	**29.10**	**242**	P		P	**P**	**15 55 41.4**	**-1.4**
PSA00	**Pilbara Seismi**	**35.46**	**240**	P		P	**P**	15 56 32.9	-5.7
CMAR	**Chiang Mai Arr**	**57.78**	**296**	P		P	**P**	**15 59 32.1**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=130,slow=5.4,SNR=7.8								
PETK	**Petropavlovsk-**	**58.39**	**4**	P		P	**P**	**15 59 36.9**	**-0.1**
	comp=Z,7.4nm,1.1s,baz=149,slow=6.6,SNR=3.4								
SONM	**Songino Array**	**66.58**	**328**	P		P	**P**	**16 00 31.6**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=140,slow=4.6,SNR=6.8								
SUA	**Susitna One**	**79.58**	**24**	P		P	**P**	**16 01 48.7**	**+0.1**
SUA				IAmb		IAmb	IAmb	16 01 50.3	
	comp=Z,5.1nm,0.9s								
RDOG	**Red Dog Mine**	**79.58**	**16**	P		P	**P**	**16 01 47.2**	**-1.1**
RC01	**Rabbit Creek A**	**79.80**	**25**	P		P	**P**	**16 01 50.2**	**+0.6**
RC01				IAmb		IAmb	IAmb	16 01 53.8	
	comp=Z,9.3nm,1.3s								
MKAR	**Makanchi Array**	**80.49**	**319**

1.1nm,0.7s,baz=72,slow=6.4,SNR=4.2
ASAR Alice Springs 47.37 258 P P 16 39 15.8 -0.8
0.1nm,0.3s,baz=104,slow=6.7,SNR=4.4
WRA Warramunga Arr 47.68 263 P P 16 39 18.2 -0.7
0.8nm,0.3s,baz=98,slow=8.3,SNR=18
FITZ Fitzroy Crossi 56.11 263 P P 16 40 22.9 +1.0
1.3nm,0.7s,baz=90,slow=10,SNR=3.7

*BJI **11** 16:35:14.4±0.0, 37.°26S×177.°07E, h216km, mB5.2/9, mb4.7/11*
*NEIC **11** 16:35:16.3±1.8, 36.°8S±0.°1×177.°2E±0.°1, h252km±5km, mb4.3/21, Error ellipse: s-maj=16.4km s-min=15.0km az=90.0*
*WEL **11** 16:35:17.3, 37.°S±5.°×177.°7E±.°, h246km±5km, M4.4/135, MLv4.4/135, Error ellipse: s-maj=0.0km s-min=0.0km az=1.2*
*IDC **11** 16:35:20.2±2.8, 36.°56S×177.°16E, h284km±23km, mb3.9/12, mb1 4.0/12, mb1mx3.7/37, mbtmp4.6/12, Error ellipse: s-maj=25.9km s-min=13.3km az=55.0*
ISC 11 16:35:17.0±0.7,**37.°03S**±0.°08×**177.°03E**±0.°07,**h257**km±5km, **n226,** σ1°**43**/235,**mb4.2**/25,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.52**	**166**	P			**Pn**	**16 35 50.5**	**-0.2**
WIZ				S			**S**	16 36 13.9	-3.4
WHRZ	**Whale Island**	**0.83**	**183**	P			**Pn**	**16 35 52.0**	**+0.1**
WHRZ				S			**S**	16 36 17.3	-2.2
OPRZ	**Ohinepanea**	**0.90**	**205**	P			**Pn**	**16 35 51.7**	**-0.5**
TGRZ	**Tauranga**	**0.93**	**221**	P			**Pn**	**16 35 52.1**	**-0.2**
HAZ	**Te Kaha**	**0.94**	**141**	P			**Pn**	**16 35 51.4**	**-0.9**
HAZ				S			**S**	16 36 17.7	-2.7
MARZ	**Manawahe**	**1.00**	**196**	P			**Pn**	**16 35 52.9**	**+0.1**
RUGZ	**Raukumara Rang**	**1.07**	**151**	P			**Pn**	16 35 52.1	-1.2
RUGZ				S			**S**	16 36 17.9	-4.0
KUZ	**Kuaotunu**	**1.09**	**285**	P			**Pn**	**16 35 51.4**	**-1.8**
EDRZ	**Edgecumbe**	**1.10**	**192**	P			**Pn**	**16 35 53.7**	**+0.3**
MXZ	**Matakaoa Point**	**1.15**	**118**	P			**Pn**	**16 35 52.7**	**-0.8**
MXZ				S			**S**	16 36 20.4	-2.1
MXZ	**Matakaoa Point**	**1.15**	**118**				**Pn**	**16 35 52.8**	**-0.8**
MXZ				S			**S**	16 36 21.5	-0.9
KARZ	**Kaharoa**	**1.17**	**212**	P			**Pn**	**16 35 54.4**	**+0.6**
KMRZ	**Kaimai**	**1.19**	**226**	P			**Pn**	16 35 53.9	0.0
PKGZ	**Pakihiroa**	**1.20**	**136**	P			**Pn**	16 35 53.8	-0.2
PKGZ				S			**S**	16 36 20.6	-2.5
MKRZ	**Makatiti**	**1.20**	**202**	P			**Pn**	16 35 55.3	+1.4
OMRZ	**Omania**	**1.20**	**206**	P			**Pn**	16 35 54.7	+0.7
URZ	**Urewera**	**1.23**	**177**	P			**Pn**	**16 35 53.7**	**-0.4**
	58nm,0.3s,baz=268,slow=4.5,SNR=1.09								
URZ				S			**S**	**16 36 21.2**	**-2.2**
	307nm,0.3s,baz=156,slow=21,SNR=23								
URZ	**Urewera**	**1.23**	**177**	P			**Pn**	16 35 53.6	-0.4
URZ				S			**S**	16 36 20.6	-2.8
URZ	**Urewera**	**1.23**	**177**				**Pn**	16 35 53.7	-0.4
URZ				S			**S**	16 36 22.9	-0.5
NGRZ	**Ngongotaha**	**1.27**	**212**	P			**Pn**	16 35 55.2	+0.9
TARZ	**Mount Tarawera**	**1.28**	**199**	P			**Pn**	16 35 55.3	+0.8
UTU	**Utuhina**	**1.33**	**210**	P			**Pn**	16 35 55.9	+1.2
HLRZ	**Highlands Stat**	**1.34**	**204**	P			**Pn**	16 35 55.8	+1.0
WMGZ	**Waiomatatini S**	**1.36**	**126**	P			**Pn**	16 35 54.8	-0.1
WMGZ				S			**S**	16 36 23.0	-1.8
MWZ	**Matawai**	**1.36**	**163**	P			**Pn**	16 35 54.9	-0.1
MWZ				S			**S**	16 36 23.1	-2.0
RRRZ	**Republican Roa**	**1.37**	**197**	P			**Pn**	16 35 55.5	+0.5
TOZ	**Tahuroa Road**	**1.41**	**240**	P			**Pn**	16 35 55.4	+0.1
HSRZ	**Hossack Road**	**1.43**	**206**	P			**Pn**	16 35 57.3	+1.9
PUZ	**Puketiti**	**1.43**	**137**	P			**Pn**	16 35 55.5	0.0
PUZ				S			**S**	16 36 23.3	-2.5
MUGZ	**Murupara**	**1.46**	**188**	P			**Pn**	16 35 55.6	-0.1
MUGZ				S			**S**	16 36 23.2	-3.1
GRZ	**Great Barrier**	**1.48**	**301**	P			**Pn**	16 35 53.5	-2.3
HRRZ	**Handcock Road**	**1.49**	**203**	P			**Pn**	16 35 57.0	+1.1
MKAZ	**Moumakai**	**1.50**	**266**	P			**Pn**	16 35 55.2	-0.7
RAGZ	**Rawiri**	**1.50**	**168**	P			**Pn**	16 35 56.2	+0.2
GRRZ	**Galatos Road**	**1.51**	**209**	P			**Pn**	16 35 57.0	+1.0
WIAZ	**Waiheke Island**	**1.54**	**278**	P			**Pn**	16 35 55.1	-1.1
TKGZ	**Te Karaka**	**1.55**	**156**	P			**Pn**	16 35 56.7	+0.4
PRRZ	**Plateau Road**	**1.56**	**199**	P			**Pn**	16 35 56.8	+0.4
RTZ	**Ruatahuna**	**1.59**	**181**	P			**Pn**	16 35 56.7	0.0
ALRZ	**Allen Road**	**1.63**	**199**	P			**Pn**	16 35 57.7	+0.8
WPRZ	**Whakapapatarin**	**1.64**	**205**	P			**Pn**	16 35 58.9	+1.9
ETAZ	**East Tamaki Re**	**1.69**	**272**	P			**Pn**	16 35 56.6	-0.8
KBAZ	**Karaka Road Bo**	**1.71**	**267**	P			**Pn**	16 35 57.3	-0.3
CNGZ	**Carnagh Statio**	**1.73**	**148**	P			**Pn**	16 35 58.6	+0.9
MBAZ	**Motutapu North**	**1.76**	**268**	P			**Pn**	16 35 56.2	-0.9
KUTZ	**Kaahu Road**	**1.75**	**213**	P			**Pn**	16 35 59.2	+1.4
TLZ	**Tolley Road**	**1.76**	**222**	P			**Pn**	16 35 58.9	+0.9
SNGZ	**Shannon Statio**	**1.77**	**172**	P			**Pn**	16 35 58.5	+0.5
RIGZ	**Rimuhau**	**1.77**	**161**	P			**Pn**	16 35 58.8	+0.7
ABAZ	**Army Bay**	**1.81**	**283**	P			**Pn**	16 35 57.4	-1.0
MTHZ	**Maungataniwha**	**1.83**	**185**	P			**Pn**	16 35 58.7	+0.2
EPAZ	**Eden Park BICE**	**1.84**	**274**	P			**Pn**	16 35 57.8	-0.8
WHTZ	**Whakaora**	**1.84**	**207**	P			**Pn**	16 36 00.3	+1.5
HBAZ	**Herne Bay Bore**	**1.85**	**275**	P			**Pn**	16 35 57.9	-0.8
MRHZ	**Matea Rd**	**1.87**	**195**	P			**Pn**	16 35 59.1	+0.2
RAHZ	**Arahi**	**1.89**	**179**	P			**Pn**	16 35 59.8	+0.7
AWAZ	**Awhitu Peninsu**	**1.91**	**268**	P			**Pn**	16 35 58.5	-0.7
WATZ	**Wairara**	**1.97**	**211**	P			**Pn**	16 36 00.9	+1.2
WTAZ	**Waiatarua**	**1.97**	**272**	P			**Pn**	16 35 59.0	-0.8
HATZ	**Hinemaiaia**	**2.00**	**201**	P			**Pn**	16 36 00.4	+0.3
PRGZ	**Paritu Road**	**2.01**	**161**	P			**Pn**	16 36 01.0	+0.9
WHHZ	**Waihua**	**2.05**	**176**	P			**Pn**	16 36 01.4	+0.9
KNZ	**Kokohu**	**2.06**	**166**	P			**Pn**	16 36 01.0	+0.5
NMHZ	**Naumai**	**2.08**	**185**	P			**Pn**	16 36 01.8	+1.0
RATZ	**Rangitukua**	**2.09**	**208**	P			**Pn**	16 36 01.7	+0.8
RITZ	**Rihia Road**	**2.16**	**205**	P			**Pn**	16 36 02.3	+0.9
KATZ	**Kakaramea**	**2.21**	**208**	P			**Pn**	16 36 03.0	+0.9
MHGZ	**Mahia Peninsul**	**2.23**	**162**	P			**Pn**	16 36 03.3	+1.2
ARHZ	**Aropaoanui**	**2.23**	**181**	P			**Pn**	16 36 02.9	+0.8
HIZ	**Hauiti**	**2.27**	**229**	P			**Pn**	16 36 03.8	+1.3
HIZ	**Hauiti**	**2.27**	**229**				**Pn**	16 36 03.6	+1.1
KRVZ	**Karewarewa**	**2.34**	**208**	P			**Pn**	16 36 04.1	+0.8
WTVZ	**West Tongariro**	**2.38**	**208**	P			**Pn**	16 36 04.3	+0.7
TWVZ	**Taurewa**	**2.40**	**211**	P			**Pn**	16 36 04.7	+0.9
WCZ	**Waipu Caves**	**2.42**	**296**	P			**Pn**	16 36 02.2	-1.8
NGZ	**Ngauruhoe**	**2.42**	**207**	P			**Pn**	16 36 05.2	+1.0
MCHZ	**McNeill Hill**	**2.43**	**186**	P			**Pn**	16 36 04.8	+0.8
KWHZ	**Kaweka Forest**	**2.44**	**191**	P			**Pn**	16 36 04.6	+0.5
TUVZ	**Tukino**	**2.49**	**205**	P			**Pn**	16 36 05.3	+0.5
FWZ	**Far West T-bar**	**2.51**	**207**	P			**Pn**	16 36 05.7	+0.7
WHVZ	**Whangaehu Hut**	**2.52**	**206**	P			**Pn**	16 36 05.8	+0.6
DRZ	**Dome Shelter**	**2.53**	**207**	P			**Pn**	16 36 07.1	+1.8
TRVZ	**Turoa**	**2.55**	**207**	P			**Pn**	16 36 06.0	+0.5
BHHZ	**Black Hill Sta**	**2.58**	**197**	P			**Pn**	16 36 05.5	0.0
MOVZ	**Moawhango**	**2.58**	**203**	P			**Pn**	16 36 05.6	0.0
PKVZ	**Pokaka**	**2.62**	**210**	P			**Pn**	16 36 06.6	+0.6
CKHZ	**Cape Kidnapper**	**2.63**	**179**	P			**Pn**	16 36 06.6	+0.7
MTVZ	**Mangateitei**	**2.66**	**207**	P			**Pn**	16 36 07.3	+0.9
KRHZ	**Kereru**	**2.67**	**191**	P			**Pn**	16 36 06.5	+0.2
VRZ	**Vera Road**	**2.76**	**220**	P			**Pn**	16 36 09.0	+1.7
KAHZ	**Kahuranaki**	**2.77**	**182**	P			**Pn**	16 36 08.0	+0.6
PNHZ	**Pukenui**	**2.96**	**192**	P			**Pn**	16 36 09.3	-0.1
MHEZ	**Mangahewa**	**2.96**	**225**	P			**Pn**	16 36 12.1	+2.7
PXZ	**Pawanui**	**3.00**	**182**	P			**Pn**	16 36 10.1	+0.2
WPHZ	**Waipukurau**	**3.07**	**188**	P			**Pn**	16 36 10.8	+0.2
DREZ	**Durham Road**	**3.11**	**225**	P			**Pn**	16 36 13.8	+2.8
TSZ	**Takapari Road**	**3.14**	**195**	P			**Pn**	16 36 11.2	-0.2
WAZ	**Wanganui**	**3.16**	**210**	P			**Pn**	16 36 12.2	+0.6
LREZ	**Lake Rotokare**	**3.19**	**220**	P			**Pn**	16 36 14.2	+2.3
PKE	**Pukeiti**	**3.23**	**227**	P			**Pn**	16 36 15.3	+3.0
PREZ	**Palmer Road**	**3.24**	**224**	P			**Pn**	16 36 14.9	+2.5
PRHZ	**Porangahau**	**3.25**	**185**	P			**Pn**	16 36 12.7	+0.2
KHEZ	**Kahui Hut**	**3.28**	**225**	P			**Pn**	16 36 15.5	+2.5
OUZ	**Omahuta**	**3.31**	**302**	P			**Pn**	16 36 11.5	-1.8
OUZ	**Omahuta**	**3.31**	**302**				**Pn**	16 36 11.5	-1.8
DVHZ	**Dannevirke**	**3.34**	**191**	P			**Pn**	16 36 13.1	-0.4
NBEZ	**Newall Road No**	**3.35**	**227**	P			**Pn**	16 36 16.7	+3.1
NMEZ	**Namu Road**	**3.44**	**225**	P			**Pn**	16 36 17.6	+2.9
OHWZ	**Ohakea**	**3.45**	**202**	P			**Pn**	16 36 15.4	+0.7
ANWZ	**Angora Road**	**3.46**	**187**	P			**Pn**	16 36 14.5	-0.3
POWZ	**Post Office Ro**	**3.50**	**196**	P			**Pn**	16 36 15.4	+0.1
PRWZ	**Pori Road**	**3.62**	**193**	P			**Pn**	16 36 16.7	+0.1
BFZ	**Birch Farm**	**3.70**	**189**	P			**Pn**	16 36 17.5	0.0
BFZ	**Birch Farm**	**3.70**	**189**				**Pn**	16 36 17.6	+0.1
MRZ	**Mangatainoka R**	**3.80**	**197**	P			**Pn**	16 36 17.9	-0.8
TIWZ	**Tintock**	**3.85**	**193**	P			**Pn**	16 36 19.4	+0.1
CPWZ	**Castlepoint**	**3.93**	**189**	P			**Pn**	**16 36 21.0**	**+0.8**
HOWZ	**Holdsworth Sta**	**4.04**	**197**	P			**Pn**	**16 36 20.8**	**-0.8**
OGWZ	**Otaki Gorge**	**4.05**	**200**	P			**Pn**	**16 36 20.9**	**-0.8**
KIW	**Kapiti Island**	**4.17**	**203**	P			**Pn**	**16 36 22.2**	**-0.8**
TMWZ	**Te Maipa**	**4.17**	**192**	P			**Pn**	**16 36 22.6**	**-0.4**
MTW	**Mount Morrison**	**4.29**	**196**	P			**Pn**	**16 36 23.7**	**-0.7**
CAW	**Cannon Point**	**4.35**	**200**	P			**Pn**	**16 36 24.2**	**-1.0**
DUWZ	**D'Urville Isla**	**4.48**	**212**	P			**Pn**	**16 36 25.9**	**-0.9**
TRWZ	**Traveller**	**4.49**	**193**	P			**Pn**	**16 36 26.6**	**-0.2**
PAWZ	**Paruwai Farm**	**4.53**	**195**	P			**Pn**	**16 36 26.5**	**-0.8**
MSWZ	**Moikau Station**	**4.60**	**197**	P			**Pn**	**16 36 26.9**	**-1.1**
MSWZ	**Moikau Station**	**4.60**	**197**				**Pn**	**16 36 27.3**	**-0.8**
WEL	**Wellington**	**4.60**	**202**	P			**Pn**	**16 36 27.3**	**-0.8**
SNZO	**South Karori**	**4.64**	**202**				**Pn**	**16 36 27.7**	**-0.9**
BHW	**Baring Head**	**4.69**	**200**	P			**Pn**	**16 36 27.8**	**-1.3**
BHW	**Baring Head**	**4.69**	**200**				**Pn**	**16 36 28.0**	**-1.1**
TCW	**Tory Channel**	**4.70**	**206**	P			**Pn**	**16 36 28.2**	**-1.0**
PLWZ	**Palliser**	**4.74**	**196**	P			**Pn**	**16 36 28.9**	**-0.9**
PLWZ	**Palliser**	**4.74**	**196**				**Pn**	**16 36 28.7**	**-1.2**
TUWZ	**Tuamarina**	**5.01**	**208**	P			**Pn**	**16 36 32.1**	**-0.9**
TUWZ	**Tuamarina**	**5.01**	**208**				**Pn**	**16 36 32.0**	**-0.9**
NNZ	**Nelson**	**5.06**	**213**	P			**Pn**	**16 36 32.0**	**-1.5**
NNZ	**Nelson**	**5.06**	**213**				**Pn**	**16 36 32.1**	**-1.5**
QRZ	**Quartz Range**	**5.17**	**221**	P			**Pn**	**16 36 33.4**	**-1.6**
QRZ	**Quartz Range**	**5.17**	**221**				**Pn**	**16 36 33.3**	**-1.6**
CMWZ	**Cape Campbell**	**5.20**	**204**	P			**Pn**	**16 36 35.7**	**+0.4**
BSWZ	**Blackbirch Sta**	**5.28**	**207**	P			**Pn**	**16 36 35.7**	**-0.6**
BSWZ	**Blackbirch Sta**	**5.28**	**207**				**Pn**	**16 36 35.5**	**-0.9**
THZ	**Tophouse**	**5.71**	**213**	P			**Pn**	**16 36 40.2**	**-1.5**
THZ	**Tophouse**	**5.71**	**213**				**Pn**	**16 36 41.3**	**-0.3**
KHZ	**Kahutara**	**6.02**	**205**	P			**Pn**	**16 36 44.4**	**-1.0**
KHZ	**Kahutara**	**6.02**	**205**				**Pn**	**16 36 44.5**	**-0.9**
DSZ	**Dannisan Nort**	**6.21**	**219**	P			**Pn**	**16 36 45.5**	**-2.4**
GVZ	**Greta Valley S**	**6.68**	**206**	P			**Pn**	**16 36 52.5**	**-1.1**
LTZ	**Lake Taylor**	**6.81**	**211**	P			**Pn**	**16 36 53.8**	**-1.6**
LTZ	**Lake Taylor**	**6.81**	**211**				**Pn**	**16 36 53.7**	**-1.6**
AMCZ	**Amberley**	**7.00**	**207**	P			**Pn**	**16 36 56.4**	**-1.2**
INZ	**Inchbonnie**	**7.13**	**215**	P			**Pn**	**16 36 57.1**	**-2.1**
OKCZ	**Okains Bay**	**7.34**	**203**	P			**Pn**	**16 37 00.9**	**-1.0**
MQZ	**McQueen's Vall**	**7.46**	**205**	P			**Pn**	**16 37 01.3**	**-2.1**
MQZ	**McQueen's Vall**	**7.46**	**205**				**Pn**	**16 37 00.2**	**-3.2**
AKCZ	**Akaroa Harbour**	**7.53**	**203**	P			**Pn**	**16 37 03.1**	**-1.1**
WVZ	**Waitaha Valley**	**7.73**	**217**	P			**Pn**	**16 37 05.0**	**-1.8**
RPZ	**Rata Peaks**	**8.09**	**212**	P			**Pn**	**16 37 09.4**	**-1.9**
	9.7nm,0.3s,baz=33,slow=4.2,SNR=28								
RPZ				S			S	16 38 37.2	-6.3
	15nm,0.3s,baz=134,slow=22,SNR=15								
RPZ	**Rata Peaks**	**8.09**	**212**	P			**Pn**	**16 37 09.5**	**-1.8**
RPZ	**Rata Peaks**	**8.09**	**212**				**Pn**	**16 37 08.7**	**-2.7**
FOZ	**Fox Glacier**	**8.52**	**218**	P			**Pn**	**16 37 14.4**	**-2.3**
LBZ	**Lake Benmore**	**9.00**	**213**	P			**Pn**	**16 37 20.9**	**-1.9**
ODZ	**Otahua Downs**	**9.35**	**209**	P			**Pn**	**16 37 26.6**	**-0.5**
ODZ	**Otahua Downs**	**9.35**	**209**				**Pn**	**16 37 26.7**	**-0.5**
JCZ	**Jackson Bay**	**9.43**	**219**	P			**Pn**	**16 37 25.9**	**-2.3**
WKZ	**Wanaka**	**9.87**	**215**	P			**Pn**	**16 37 31.1**	**-2.6**
EAZ	**Earnscleugh**	**10.05**	**213**	P			**Pn**	**16 37 34.0**	**-2.0**
HHSZ	**Highcliff Hill**	**10.08**	**207**	P			**Pn**	**16 37 37.2**	**+0.9**
TUZ	**Tuapeka**	**10.50**	**210**	P			**Pn**	**16 37 41.7**	**+0.1**
MLZ	**Mavora Lakes**	**10.70**	**216**	P			**Pn**	**16 37 42.6**	**-1.4**
WHZ	**Wether Hill Ro**	**11.17**	**215**	P			**Pn**	**16 37 48.4**	**-1.6**
SYZ	**Scrubby Hill**	**11.18**	**209**	P			**Pn**	**16 37 50.4**	**+0.4**
APZ	**The Paps**	**11.88**	**212**	P			**Pn**	**16 37 58.5**	**-0.3**
ARMA	**Armidale**	**22.10**	**280**	P			**P**	**16 39 52.2**	**+0.8**
ARMA					IAmb		IAmb	16 40 05.0	
	comp=Z,11nm,1.4s								
TOO	**Toolangi**	**25.04**	**259**	P			**P**	**16 40 18.5**	**+0.6**
STKA	**Stephens Creek**	**29.56**	**269**	P			**P**	**16 41 00.5**	**+2.4**
	comp=Z,8.1nm,1.2s,baz=107,slow=18,SNR=4.9								
STKA	**Stephens Creek**	**29.56**	**269**	P			**P**	**16 40 58.6**	**+0.6**
CTA	**Charters Tower**	**31.68**	**294**	P			**P**	**16 41 17.2**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=134,slow=11,SNR=5.0								
COEN	**Coen**	**37.91**	**298**	P			**P**	**16 42 11.3**	**+1.3**
COEN					IAmb		IAmb	16 42 11.6	
	comp=Z,13nm,1.1s								
PMG	**Port Moresby**	**38.55**	**308**	P			**P**	**16 42 14.6**	**-0.6**
	comp=Z,5.4nm,0.8s,baz=176,slow=19,SNR=3.1								
PMG	**Port Moresby**	**38.55**	**308**	P			**P**	**16 42 15.4**	**+0.2**
AS31	**Alice Springs**	**39.21**	**277**	P			**P**	**16 42 22.0**	**+1.3**
AS31					IAmb		IAmb	16 42 23.1	
	comp=Z,5.2nm,0.5s								
ASAR	**Alice Springs**	**39.21**	**277**	P			**P**	**16 42 21.7**	**+1.0**
	comp=Z,9.2nm,0.6s,baz=119,slow=8.1,SNR=276								
ASAR					PcP		**PcP**	**16 44 23.3**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=116,slow=4.7,SNR=3.9								
ASAR					ScP		**ScP**	**16 47 45.5**	**-2.4**
	comp=Z,0.2nm,0.5s,baz=117,slow=3.4,SNR=6.8								
WR0	**Warramunga Arr**	**40.66**	**283**	P			**P**	**16 42 33.6**	**+1.0**
FORT	**Forrest**	**40.76**	**264**	P			**P**	**16 42 34.9**	**+1.6**
WRAB	**Tennant Creek**	**40.82**	**283**	P			**P**	**16 42 34.3**	**+0.4**
WRAB					IAmb		IAmb	16 42 35.2	
	comp=Z,11nm,1.0s								
WRA	**Warramunga Arr**	**40.83**	**283**	P			**P**	**16 42 34.5**	**+0.5**
	comp=Z,4.8nm,0.4s,baz=123,slow=7.0,SNR=69								
WRA					ScP		**ScP**	**16 47 52.5**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=125,slow=3.4,SNR=4.7								
VNDA	**Vanda**	**41.13**	**185**	P			**P**	16 42 40.3	+4.7
	comp=Z,2.7nm,0.8s,baz=357,slow=8.0,SNR=11								
VNDA	**Vanda**	**41.13**	**185**	P			**P**	16 42 40.9	+5.3
SBA	**Scott Base**	**41.17**	**183**	P			**P**	16 42 41.2	+5.3
SBA					IAmb		IAmb	16 42 43.0	
	comp=Z,8.3nm,0.8s								
MTN	**Manton Dam**	**47.50**	**288**	P			**P**	**16 43 27.3**	**+0.6**
MTN					IAmb		IAmb	16 43 43.6	
	comp=Z,27nm,1.3s								
KNRA	**Kununurra**	**47.61**	**283**	P			**P**	**16 43 28.8**	**+1.2**
KNRA					IAmb		IAmb	16 43 39.5	
	comp=Z,33nm,1.4s								
NWAO	**Narrogin (SRO)**	**48.47**	**256**	P			**P**	**16 43 34.9**	**+0.9**
	comp=Z,3.2nm,0.6s,baz=110,slow=6.4,SNR=5.7								
NWAO	**Narrogin (SRO)**	**48.47**	**256**	P			**P**	**16 43 35.3**	**+1.3**
FITZ	**Fitzroy Crossi**	**48.69**	**278**	P			**P**	**16 43 36.8**	**+1.0**
	comp=Z,7.8nm,0.7s,baz=159,slow=8.7,SNR=24								
FITZ	**Fitzroy Crossi**	**48.69**	**278**	P			**P**	**16 43 37.0**	**+1.3**
FITZ					IAmb		IAmb	16 43 37.8	
	comp=Z,7.7nm,0.7s								
MORW	**Morawa**	**50.98**	**260**	P			**P**	**16 43 53.6**	**+0.7**
PSAC3	**Pilbara Seismi**	**51.46**	**271**	P			**P**	**16 43 56.0**	**-0.5**
PSAC3					IAmb		IAmb	16 44 13.5	
	comp=Z,20nm,1.4s								
PSA00	**Pilbara Seismi**	**51.47**	**271**	P			**P**	**16 43 55.5**	**-1.1**
PSA00					IAmb		IAmb	16 44 00.4	
	comp=Z,24nm,1.5s								
QSPA	**South Pole Qui**	**53.10**	**180**	P			P	16 44 12.5	+4.5
	comp=Z,27nm,0.6s,baz=35,slow=0.2,SNR=354								
QSPA	**South Pole Qui**	**53.10**	**180**	P			P	16 44 12.8	+4.8
GIRL	**Giralia**	**55.42**	**266**	P			P	**16 44 27.3**	**+2.1**
SIJI	**Sorong**	**55.44**	**300**	P			P	**16 44 25.5**	**+0.1**
	comp=Z,4.3nm,0.6s,baz=180,slow=16,SNR=4.2								
SNAA	**Sanae**	**71.60**	**180**	P			**P**	**16 46 12.1**	**+2.1**
SNAA	**Sanae**	**71.60**	**180**	P			**P**	**16 46 11.1**	**+1.1**
SNAA					IAmb		IAmb	16 46 13.6	
	comp=Z,5.4nm,1.1s								
VNA3	**Neumayer Olymp**	**71.93**	**178**	P			**P**	**16 46 14.2**	**+2.3**
VNA1	**Neumayer--Stat**	**72.56**	**178**	P			P	16 46 18.2	+2.6
NJ2	**Nanjing**	**87.61**	**314**	*eP*			P	16 47 40.6	+4.5
NJ2					pmax		pmax		
	comp=Z,9.0nm,0.7s								
PETK	**Petropavlovsk-**	**91.32**	**348**	P			**P**	**16 47 52.2**	**-0.8**
	comp=Z,2.7nm,0.9s,baz=173,slow=6.2,SNR=2.6								
CMAR	**Chiang Mai Arr**	**91.83**	**292**	P			**P**	**16 47 57.1**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=146,slow=3.7,SNR=12								
HHC	**Hu-ho-hao-te**	**97.97**	**316**	*eP*			Pdif	16 48 28.4	+4.7
HHC					pmax		pmax		
	comp=Z,5.0nm,0.7s								
HHC					pmax		pmax		
	comp=Z,85nm,7.6s								
LZH	**Lanzhou**	**99.45**	**308**	*eP*			**Pdif**	**16 48 35.8**	**+5.3**
LZH					pP		pP	16 49 25.9	-6.9
LZH					sP		sP	16 49 52.5	-6.9
LZH					pmax		pmax		
	comp=Z,16nm,1.3s								
LZH					pmax		pmax		
	comp=Z,66nm,4.9s								
WMQ	**Urumqi**	**114.02**	**308**	*e*PKP			**PKiKP**	**16 53 28.8**	**+3.7**
WMQ					AMB		AMB		
	comp=Z,7.0nm,3.6s								
MKAR	**Makanchi Array**	**118.76**	**309**	PKP			**PKiKP**	**16 53 32.6**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=158,slow=1.6,SNR=3.3								
KSH	**Kashi**	**119.92**	**299**	*e*PKP			PKiKP	16 53 41.2	+4.4
KSH					sPKP			16 55 00.7	
KSH					PP		sPKPdf	16 55 10.3	+2.9
KURK	**Kurchatov**	**122.50**	**312**				**PKiKP**	**16 53 39.9**	**-1.4**
KURBB	**Kurchatov Arra**	**122.52**	**312**	PKP			**PKiKP**	**16 53 39.9**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=111,slow=1.9,SNR=7.5								
BVAR	**Borovoye Array**	**128.05**	**313**	PKP			**PKiKP**	**16 53 51.1**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=38,slow=2.6,SNR=3.9								
ARCES	**ARCESS Array B**	**143.97**	**343**	PKP			**PKPdf**	**16 54 18.5**	**-2.1**
	comp=Z,2.5nm,0.6s,baz=50,slow=3.2,SNR=15								
KBZ	**Khabaz**	**144.79**	**296**	PKP			**PKiKP**	**16 54 22.5**	**-4.1**
	comp=Z,4.1nm,1.0s,baz=30,slow=13,SNR=4.2								
FINES	**FINESS Array B**	**149.54**	**333**	PKPbc			**PKiKP**	**16 54 33.7**	**-2.2**
	comp=Z,2.1nm,0.5s,baz=40,slow=4.7,SNR=20								
BRTR	**Keskin Array B**	**151.30**	**287**	PKPbc			**PKiKP**	**16 54 39.6**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=138,slow=4.4,SNR=13								
AKASG	**Malin Array Be**	**153.31**	**311**

	comp=N,30nm,1.0s						
H17A				IAML		17 04 05.2	
	comp=E,18nm,0.6s						
FLWY	**Flagg Ranch**	**4.00**	**279**		**Pn**	**17 03 01.6**	**+1.8**
FLWY				IAML		17 04 09.7	
	comp=E,34nm,1.3s						
FLWY				IAML		17 04 23.9	
	comp=E,18nm,1.1s						
MOOW	**Moose Ponds**	**4.01**	**274**		**Pn**	**17 02 59.9**	**-0.2**
SNOW	**Snow King Moun**	**4.03**	**270**		**Pn**	**17 03 01.6**	**+1.3**
SNOW				IAML		17 04 06.2	
	comp=E,29nm,2.0s						
SNOW				IAML		17 04 25.8	
	comp=E,27nm,1.1s						
YNR	**Norris Junctio**	**4.09**	**288**	Pn	**Pn**	**17 03 02.5**	**+1.3**
YNR					**Sg**	**17 04 09.6**	**+1.1**
YPP	**Pitchstone Pla**	**4.09**	**282**		**Pn**	**17 03 02.1**	**+0.9**
REDW	**Red Top Meadow**	**4.11**	**269**		**Pn**	**17 03 03.8**	**+2.4**
REDW				IAML		17 04 21.1	
	comp=E,32nm,0.6s						
O20A	**White River Ci**	**4.12**	**214**		**Pn**	**17 03 01.9**	**+0.4**
O20A				IAML		17 04 15.6	
	comp=N,26nm,0.9s						
O20A				IAML		17 04 15.9	
	comp=E,28nm,0.9s						
AHID	**Auburn Hatcher**	**4.38**	**261**		**Pn**	**17 03 05.6**	**+0.5**
AHID				IAML		17 04 25.1	
	comp=E,19nm,1.0s						
RDMU	**Red Mountain**	**4.42**	**229**		**Pn**	**17 03 09.0**	**+3.3**
YHB	**Horse Butte**	**4.46**	**287**		**Pn**	**17 03 06.7**	**+0.5**
YHL	**Hebgen Lake**	**4.47**	**289**		**Pn**	**17 03 08.5**	**+2.0**
Q24A	**Divide**	**4.61**	**179**		**Pn**	**17 03 10.4**	**+1.9**
Q24A				IAML		17 04 25.8	
	comp=E,15nm,0.5s						
Q24A				IAML		17 04 48.2	
	comp=N,9.5nm,1.6s						
DGMT	**Dagmar**	**4.94**	**8**		**Pn**	**17 03 11.8**	**-0.9**
KSCO	**Kaye Shedlock'**	**4.97**	**156**		**Pn**	**17 03 13.6**	**+0.5**
HWUT	**Hardware Ranch**	**5.08**	**249**		**Pn**	**17 03 15.4**	**+0.7**
HWUT				IAML		17 04 39.9	
	comp=N,14nm,1.0s						
HWUT				IAML		17 04 51.2	
	comp=N,17nm,1.1s						
TCUT	**Toone Canyon**	**5.21**	**244**		**Pn**	**17 03 17.1**	**+0.5**
EGMT	**Eagleton**	**5.46**	**326**		**Pn**	**17 03 20.2**	**+0.5**
DLMT	**Dillon**	**5.57**	**291**	Pn	**Pn**	**17 03 19.0**	**-2.4**
SPUT	**South Promonto**	**5.81**	**249**		**Pn**	**17 03 25.2**	**+0.4**
P17A	**Butcher Ranch,**	**5.83**	**227**		**Pn**	**17 03 26.3**	**+1.2**
S22A	**4UR Ranch, Cre**	**5.96**	**192**	Pn	**Pn**	**17 03 26.2**	**-0.7**
SRU	**San Rafael Swe**	**5.99**	**224**		**Pn**	**17 03 26.7**	**-0.5**
ECSD	**EROS Data Cent**	**6.24**	**86**	Pn	**Pn**	**17 03 35.2**	**+4.6**
CBKS	**Cedar Bluff**	**6.31**	**137**		**Pn**	**17 03 31.1**	**-0.3**
T25A	**Trinidad**	**6.47**	**174**		**Pn**	**17 03 32.7**	**-1.1**
Q16A	**Castle Valley**	**6.47**	**226**		**Pn**	**17 03 34.5**	**+0.7**
ULM	**Lac du Bonnet**	**9.23**	**41**	Pn	**Pn**	**17 04 10.0**	**-1.5**
	comp=N,0.5nm,0.3s,baz=233,slow=12,SNR=6.5						
ULM				Lg	Lg	17 06 44.6	
	comp=N,0.2nm,0.3s,baz=323,slow=21,SNR=3.9						
YKA	**Yellowknife Ar**	**19.73**	**347**	P	**P**	**17 06 28.7**	**+0.7**
	baz=159,slow=13						
ARCES	**ARCESS Array B**	**61.55**	**18**	P	**P**	**17 12 14.7**	**-0.9**
	comp=N,2.3nm,0.9s,baz=327,slow=6.5,SNR=3.8						

NIED ***11*** *17:08:00,39.°90N×144.°60E,h5km,Mw3.5 Best double couple: M₀2.00000×10¹⁴ NP1:φ₀212.00000°,δ61.00000°, λ-66.00000°. NP2:φ₀350.00000°,δ37.00000°, λ-126.00000°.*

IDC ***11*** *17:08:04.3±0.9,39.°67N×144.°75E,h0km,mb3.4/8, mb1 3.7/9,mb1mx3.5/46,mbtmp3.4/9,ML2.4/1,MS2.4/2, Ms1 2.4/2,ms1mx2.2/28,Error ellipse: s-maj=33.3km s-min=19.0km az=127.0*

JMA ***11*** *17:08:08.3±0.2,39.°89N×144.°57E,h44km,M3.5*

ISC 11 17:08:09.6±0.8,39.°86N±0.°05×144.°62E±0.°07,h34km,n35, σ1ᵍ39/42,mb3.5/8,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**2.12**	**273**	P	**Pn**	**17 08 41.6**	**-1.0**
MIYJ	**Miyakonagasawa**	**2.18**	**263**	P	**Pn**	**17 08 42.7**	**-0.6**
MIYJ				*e*S	**Sn**	**17 09 07.9**	**-1.2**
JKEN	**Kujiedanarisaw**	**2.26**	**280**	P	**Pn**	**17 08 43.4**	**-1.1**
JKEN				*e*S	**Sn**	**17 09 09.6**	**-1.5**
JANG	**Nango**	**2.43**	**283**	P	**Pn**	**17 08 46.2**	**-0.7**
JANG				*e*S	**Sn**	**17 09 13.9**	**-1.6**
JOM	**Ohasama**	**2.60**	**263**	P	**Pn**	**17 08 49.1**	**0.0**
JOM				*e*S	**Sn**	**17 09 18.7**	**-0.8**
JMK	**Ichinoseki**	**2.78**	**252**	P	**Pn**	**17 08 51.1**	**-0.6**
JMK				*e*S	**Sn**	**17 09 23.0**	**-1.1**
JNBK	**Urakawa-nobuka**	**2.80**	**330**	P	**Pn**	**17 08 52.1**	**+0.2**
JNBK				*e*S	**Sn**	**17 09 25.4**	**+0.9**
JCH	**Churui**	**2.91**	**341**	P	**Pn**	**17 08 52.9**	**-0.5**
JCH				*e*S	**Sn**	**17 09 26.0**	**-1.2**
JOT	**Ohata**	**3.11**	**300**	P	**Pn**	**17 08 56.6**	**+0.4**
JOT				*e*S	**Sn**	**17 09 31.7**	**-0.5**
JAK	**Akkeshi**	**3.13**	**1**	P	**Pn**	**17 08 55.2**	**-1.3**
JAK				*e*S	**Sn**	**17 09 31.7**	**-1.0**
JKB	**Kayabe**	**3.39**	**308**	P	**Pn**	**17 09 00.5**	**+0.5**
JYK	**Kaneyama**	**3.43**	**255**	P	**Pn**	**17 09 00.9**	**+0.3**
JYK				*e*S	**Sn**	**17 09 40.1**	**0.0**
JAR	**Ashorobuto**	**3.49**	**350**	P	**Pn**	**17 09 00.1**	**-1.3**
JAR				*e*S	**Sn**	**17 09 40.1**	**-1.5**
NEM2	**Nemuro 2**	**3.60**	**13**	P	**Pn**	**17 09 00.7**	**-2.2**
NEM2				*e*S	**Sn**	**17 09 41.0**	**-3.3**
JFR	**Furan**	**3.63**	**336**	P	**Pn**	**17 09 03.9**	**+0.5**
JEW	**Eniwo**	**3.81**	**322**	P	**Pn**	**17 09 07.5**	**+1.6**
JTKR	**Abashiri--Toko**	**4.14**	**353**	P	**Pn**	**17 09 10.2**	**-0.1**
JTKR				*e*S	**Sn**	**17 09 56.4**	**-1.1**
JRY	**Ryogami san**	**5.93**	**231**	P	**Pn**	**17 09 34.0**	**-0.9**
JRY				*e*S	**Sn**	**17 10 37.1**	**-4.5**
MJAR	**Matsushiro Arr**	**6.04**	**239**	Pn	**Pn**	**17 09 36.2**	**-0.2**
	0.1nm,0.3s,baz=60,slow=13,SNR=9.1						
MJAR				Sn	**Sn**	**17 10 46.2**	**+1.8**
	0.1nm,0.3s,baz=71,slow=22,SNR=3.2						
JNU	**Nakatsue**	**12.93**	**243**	LR	LR	17 16 54.4	
	comp=Z,16nm,18.9s,baz=32,slow=41						
KSRS	**Korea Array**	**13.27**	**265**	LR	LR	17 15 52.2	
	comp=Z,14nm,18.3s,baz=55,slow=35						
H11N2	**WAKE ISLAND Hy**	**27.72**	**130**	T	T	17 42 48.1	
	baz=322,SNR=4.0						
H11N1	**WAKE ISLAND Hy**	**27.73**	**130**	T	T	17 42 48.0	
	baz=322						
H11N3	**WAKE ISLAND Hy**	**27.74**	**130**	T	T	17 42 48.2	
	baz=322						
H11S1	**WAKE ISLAND Hy**	**28.57**	**132**	T	T	17 43 48.0	
	baz=323,slow=76,SNR=6.9						
H11S3	**WAKE ISLAND Hy**	**28.57**	**132**	T	T	17 43 48.5	
	baz=323,slow=76,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**28.58**	**132**	T	T	17 43 49.5	
	baz=323,slow=76,SNR=3.7						
MKAR	**Makanchi Array**	**44.81**	**300**	P	**P**	**17 16 20.9**	**+0.9**
	0.3nm,0.7s,baz=94,slow=8.8,SNR=3.3						
ILAR	**Eielson Array**	**45.76**	**34**	P	**P**	**17 16 27.5**	**+0.2**
	0.4nm,0.8s,baz=259,slow=6.8,SNR=5.7						
INK	**Inuvik**	**50.72**	**28**	P	**P**	**17 17 06.7**	**+1.2**
	0.6nm,0.6s,baz=272,slow=5.4,SNR=4.3						
YKA	**Yellowknife Ar**	**60.09**	**32**	P	**P**	**17 18 13.6**	**+0.7**
	0.2nm,0.5s,baz=298,slow=6.1						
WRA	**Warramunga Arr**	**60.26**	**191**	P	**P**	**17 18 13.0**	**-1.5**
	0.3nm,0.5s,baz=7.8,slow=6.9,SNR=5.0						
ASAR	**Alice Springs**	**63.98**	**191**	P	**P**	**17 18 37.9**	**-1.5**
	0.3nm,0.8s,baz=2.4,slow=6.8,SNR=2.7						
AKASG	**Malin Array Be**	**73.58**	**323**	P	**P**	**17 19 39.9**	**+0.9**
	0.4nm,0.4s,baz=41,slow=5.8,SNR=4.0						
TXAR	**Lajitas Array**	**86.42**	**54**	P	**P**	**17 20 49.8**	**+1.0**
	0.2nm,0.5s,baz=284,slow=3.6,SNR=3.1						

MAN 11 17:10:07.2,9.°80N×123.°93E,h1km,mb3.8,ML2.6,MS2.1, 1D,Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.52**	**4**	*e*P	Pg	17 10 16.6	-0.5
LLP				*e*S	Sg	17 10 23.3	-0.5
MSLP	**Maasin**	**0.97**	**70**	*e*P	Pb	17 10 26.6	-0.3
MSLP				*e*S	Sb	17 10 40.6	+0.3
OCLP	**Ormoc**	**1.41**	**28**	*e*P	Pn	17 10 33.4	-0.7
OCLP				*e*S	Sn	17 10 53.8	+0.4

IDC ***11*** *17:14:34.6±5.6,4.°20S×142.°79E,h146km±38km, mb3.4/3, mb1 3.6/4,mb1mx3.2/28,mbtmp3.9/4,MS2.7/1,Ms1 2.7/1, ms1mx2.2/24,Error ellipse: s-maj=84.5km s-min=22.4km az=92.0*

NEIC ***11*** *17:14:36.3±1.1,4.°2S±0.°2×142.°4E±0.°2,h145km±12km, mb4.5/10,Error ellipse: s-maj=30.3km s-min=9.0km az=224.0*

ISC 11 17:14:36.5±1.1,4.°2S±0.°1×142.°5E±0.°2,h150km,n17, σ1ᵍ39/18,mb4.1/5,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.40**	**313**	P	**Pn**	**17 15 17.7**	**+1.2**
	0.7nm,0.3s,baz=145,slow=19,SNR=2.8						
JAY				S	**Sn**	**17 15 45.5**	**-1.8**
	1.3nm,0.3s,baz=146,slow=6.6,SNR=3.2						
WR0	**Warramunga Arr**	**17.48**	**206**	P	**P**	**17 18 29.4**	**-0.8**
WRAB	**Tennant Creek**	**17.54**	**206**	P	**P**	**17 18 29.1**	**-1.8**
WRAB				IAmb	IAmb	17 18 32.6	
	comp=Z,17nm,1.5s						
WRA	**Warramunga Arr**	**17.55**	**206**	P	**P**	**17 18 29.6**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=29,slow=12,SNR=14						
WRA	**Warramunga Arr**	**17.55**	**206**	P	**P**	**17 18 27.7**	**-3.3**
KNRA	**Kununurra**	**17.66**	**229**		**Pn**	**17 18 33.9**	**+0.5**
KNRA				IAmb	IAmb	17 18 35.4	
	comp=Z,163nm,1.9s						
AS31	**Alice Springs**	**21.06**	**202**	P	**P**	**17 19 08.2**	**-0.8**
ASAR	**Alice Springs**	**21.06**	**202**	P	**P**	**17 19 09.2**	**+0.1**
	comp=Z,9.0nm,0.7s,baz=34,slow=8.2,SNR=31						
ASAR				PcP	**PcP**	**17 23 07.9**	**-1.8**
	comp=Z,0.5nm,1.1s,baz=33,slow=2.4,SNR=3.0						
ASAR	**Alice Springs**	**21.06**	**202**	P	**P**	**17 19 08.2**	**-0.8**
FITZ	**Fitzroy Crossi**	**21.50**	**229**	P	**P**	**17 19 14.6**	**+0.9**
	comp=Z,1.3nm,0.8s,baz=40,slow=7.9,SNR=8.2						
FITZ	**Fitzroy Crossi**	**21.50**	**229**	P	**P**	**17 19 13.2**	**-0.4**
FITZ				IAmb	IAmb	17 20 02.5	
	comp=Z,32nm,1.7s						
KAPI	**Kappang**	**22.64**	**267**	LR	LR	17 28 49.7	
	comp=Z,19nm,20.4s,baz=299,slow=37						
LHI	**Lord Howe Isla**	**31.37**	**152**	P	**P**	**17 20 43.3**	**+0.2**
YHNB	**Yeheng**	**35.25**	**325**	P	**P**	**17 21 16.9**	**0.0**
MKAR	**Makanchi Array**	**73.24**	**322**	P	**P**	**17 25 51.2**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=108,slow=7.7,SNR=5.3						
MAKZ	**Makanchi**	**73.44**	**321**	P	**P**	**17 25 52.8**	**+0.3**
MAKZ				IAmb	IAmb	17 28 28.1	
	comp=Z,6.6nm,1.8s						
SBA	**Scott Base**	**74.74**	**175**	P	**P**	**17 26 00.2**	**+0.8**
SBA				IAmb	IAmb	17 28 39.8	
	comp=Z,30nm,1.5s						

IDC ***11*** *17:28:24.0±2.0,24.°20S×179.°95E,h499km±19km,mb3.3/7, mb1 3.5/8,mb1mx3.2/31,mbtmp4.1/8,Error ellipse: s-maj=43.3km s-min=18.5km az=153.0*

NEIC ***11*** *17:28:27.1±1.8,24.°4S±0.°1×179.°9E±0.°1,h540km±8km, mb4.4/23,Error ellipse: s-maj=19.6km s-min=18.1km az=84.0*

ISC 11 17:28:23.9±0.6,24.°42S±0.°09×179.°9W±0.°1,h500km,n46, σ1ᵍ27/49,mb4.3/19,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.76**	**278**	P	**P**	**17 31 12.7**	**+2.0**
	0.6nm,0.3s,baz=78,slow=17,SNR=6.3						
DZM	**Mont Dzumac**	**12.76**	**278**	P	**P**	**17 31 13.0**	**+2.3**
URZ	**Urewera**	**14.03**	**190**	P	**P**	**17 31 25.3**	**+1.6**
	0.2nm,0.3s,baz=54,slow=19,SNR=2.2						
URZ				S	**S**	**17 33 50.8**	**-1.2**
	0.5nm,0.3s,baz=36,slow=19,SNR=6.8						
QRZ	**Quartz Range**	**17.54**	**199**	P	**P**	**17 32 00.2**	**+0.3**
NNZ	**Nelson**	**17.67**	**197**	P	**P**	**17 32 01.7**	**+0.7**
ARMA	**Armidale**	**25.92**	**250**	P	**P**	**17 33 17.0**	**+1.3**
ARMA				IAmb	IAmb	17 33 25.6	
	comp=Z,8.2nm,1.2s						
EIDS	**Eidsvold**	**26.31**	**262**	P	**P**	**17 33 19.4**	**+0.4**
EIDS				IAmb	IAmb	17 33 26.9	
	comp=Z,18nm,1.4s						
CAN	**Canberra**	**28.96**	**241**	P	**P**	**17 33 42.1**	**-0.1**
CAN				IAmb	IAmb	17 33 50.5	
	comp=Z,19nm,1.4s						
TOO	**Toolangi**	**32.24**	**238**	P	**P**	**17 34 10.9**	**+0.4**
TOO				IAmb	IAmb	17 34 22.2	
	comp=Z,8.8nm,1.1s						
STKA	**Stephens Creek**	**34.61**	**249**	P	**P**	**17 34 30.8**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=96,slow=12,SNR=11						
STKA	**Stephens Creek**	**34.61**	**249**	P	**P**	**17 34 30.8**	**+0.3**
KWAJ	**Kwajalein Atol**	**35.19**	**338**	P	**P**	**17 34 36.9**	**+1.4**
BBOO	**Buckleboo**	**39.32**	**247**	P	**P**	**17 35 08.7**	**-0.6**
BBOO				IAmb	IAmb	17 35 11.2	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**42.03**	**261**	P	**P**	**17 35 30.7**	**-0.5**
ASAR	**Alice Springs**	**42.03**	**261**	P	**P**	**17 35 30.6**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=91,slow=6.7,SNR=73						
ASAR				ScP	**ScP**	**17 40 16.9**	**-0.5**
	comp=Z,0.4nm,1.0s,baz=109,slow=4.8,SNR=3.7						
WR0	**Warramunga Arr**	**42.27**	**267**	P	**P**	**17 35 32.0**	**-1.0**
WR0				IAmb	IAmb	17 35 33.9	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**42.45**	**267**	P	**P**	**17 35 33.4**	**-1.1**
WRA	**Warramunga Arr**	**42.45**	**267**	P	**P**	**17 35 33.5**	**-1.0**
	comp=Z,3.1nm,0.3s,baz=98,slow=8.4,SNR=62						
WRA				ScP	**ScP**	**17 40 19.8**	**+0.6**
	comp=Z,1.1nm,1.1s,baz=103,slow=4.4,SNR=4.9						
WRA	**Warramunga Arr**	**42.45**	**267**	P	**P**	**17 35 33.5**	**-1.0**
FORT	**Forrest**	**46.21**	**250**	P	**P**	**17 36 02.3**	**-1.1**
MTN	**Manton Dam**	**47.58**	**275**	P	**P**	**17 36 12.4**	**-1.5**
MTN				IAmb	IAmb	17 36 23.0	
	comp=Z,32nm,1.3s						
KNRA	**Kununurra**	**48.77**	**270**	P	**P**	**17 36 22.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**50.87**	**266**	P	**P**	**17 36 38.0**	**-0.4**
FITZ				IAmb	IAmb	17 36 42.5	
	comp=Z,19nm,1.6s						
PSA00	**Pilbara Seismi**	**55.15**	**260**	P	**P**	**17 37 07.0**	**-2.0**
PSA00				IAmb	IAmb	17 37 23.1	
	comp=Z,31nm,1.5s						
PSAC1	**Pilbara Seismi**	**55.20**	**260**	P	**P**	**17 37 07.2**	**-2.1**
PSAC1				IAmb	IAmb	17 37 15.6	
	comp=Z,39nm,1.6s						
MORW	**Morawa**	**56.77**	**250**	P	**P**	**17 37 19.0**	**-1.1**
MORW				IAmb	IAmb	17 37 30.2	
	comp=Z,37nm,1.6s						
QSPA	**South Pole Qui**	**65.67**	**180**	P	**P**	**17 38 19.6**	**+1.6**
MAW	**Mawson**	**77.30**	**200**	P	**P**	**17 39 25.7**	**-0.2**
MAW				IAmb	IAmb	17 39 26.6	
	comp=Z,6.1nm,0.6s						
PETK	**Petropavlovsk-**	**79.62**	**346**	P	**P**	**17 39 38.3**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=116,slow=6.0,SNR=3.3						
PETK	**Petropavlovsk-**	**79.62**	**346**	P	**P**	**17 39 38.9**	**+0.5**
SNAA	**Sanae**	**84.15**	**179**	P	**P**	**17 40 01.7**	**+0.2**
TXAR	**Lajitas Array**	**90.64**	**58**	P	**P**	**17 40 33.8**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=214,slow=7.5,SNR=7.9						
TXAR	**Lajitas Array**	**90.64**	**58**	P	**P**	**17 40 32.7**	**-0.2**
JLU	**Jordanelle**	**90.67**	**45**		pP	17 42 29.5	+5.4
ILAR	**Eielson Array**	**92.51**	**14**	P	**P**	**17 40 39.1**	**-1.4**
	comp=Z,0.4nm,1.0s,baz=236,slow=6.4,SNR=3.8						
ILAR	**Eielson Array**	**92.51**	**14**	P	**P**	**17 40 40.2**	**-0.4**
PDAR	**Pinedale Array**	**93.00**	**44**	P	**P**	**17 40 43.5**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=251,slow=5.6,SNR=2.7						
PDAR	**Pinedale Array**	**93.00**	**44**	P	**P**	**17 40 43.8**	**+0.1**
MKAR	**Makanchi Array**	**112.56**	**313**	PKiKP	**PKiKP**	**17 46 00.1**	**-2.8**
	comp=Z,0.2nm,0.7s,baz=114,slow=3.6,SNR=3.0						
MKAR	**Makanchi Array**	**112.56**	**313**		**PKiKP**	**17 46 00.5**	**-2.3**
ARCES	**ARCESS Array B**	**132.41**	**348**	PKP	**PKPdf**	**17 46 39.8**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=66,slow=3.0,SNR=6.2						
FINES	**FINESS Array B**	**138.96**	**341**	PKhKP	PKPpre	17 46 42.2	
	comp=Z,1.1nm,0.9s,baz=46,slow=4.0,SNR=3.8						
FINES				PKP	**PKPdf**	**17 46 53.2**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=95,slow=1.5,SNR=4.4						
FINES				SKPbc	**SKPbc**	**17 49 38.5**	**-1.6**
	comp=Z,2.5nm,0.9s,baz=82,slow=4.0,SNR=3.7						
FINES	**FINESS Array B**	**138.96**	**341**	PKPdf	**PKPdf**	**17 46 50.7**	**-1.7**
AKASG	**Malin Array Be**	**145.45**	**327**	PKPbc	**PKPdf**	**17 47 04.1**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=47,slow=4.2,SNR=4.2						
BRTR	**Keskin Array B**	**147.95**	**307**	PKPbc	**PKPdf**	**17 47 11.8**	**+2.8**
	comp=Z,0.5nm,0.9s,baz=38,slow=2.6,SNR=3.4						
BRTR	**Keskin Array B**	**147.95**	**307**		**PKPdf**	**17 47 10.9**	**+1.9**

NEIC ***11*** *17:34:36.0±1.5,18.°9N±0.°1×145.°5E±0.°3,h104km±9km, mb4.7/19,Error ellipse: s-maj=43.8km s-min=15.6km az=105.0*

IDC ***11*** *17:34:37.6±5.2,19.°01N×145.°15E,h123km±45km,mb3.3/6, mb1 3.7/7,mb1mx3.3/35,mbtmp3.8/7,Error ellipse: s-maj=131.6km s-min=18.8km az=112.0*

ISC 11 17:34:35.9±0.9,18.°9N±0.°1×145.°6E±0.°4,h100km,n38, σ0ᵍ96/33,mb4.6/16,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SARN	**Sarigan**	**2.17**	**176**	Pn	**Pn**	**17 35 10.8**	**+0.1**
GUMO	**Guam**	**5.30**	**188**	P	**Pn**	**17 35 55.9**	**+3.2**
	11nm,0.3s,baz=100,slow=2.4,SNR=11						
GUMO				S	**Sn**	**17 36 52.1**	**-0.6**
	2.3nm,0.3s,baz=52,slow=19,SNR=2.2						
GUMO	**Guam**	**5.30**	**188**		**Pn**	**17 35 53.1**	**+0.3**
H11S3	**WAKE ISLAND Hy**	**19.95**	**88**	T	T	17 59 51.3	
	baz=274,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	**19.96**	**88**	T	T	17 59 48.8	
	baz=274,slow=75,SNR=26						
H11S2	**WAKE ISLAND Hy**	**19.97**	**88**	T	T	17 59 49.5	
	baz=274,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**20.09**	**84**	T	T	18 00 13.1	
	baz=271,slow=75,SNR=3.4						
H11N2	**WAKE ISLAND Hy**	**20.09**	**84**	T	T	18 00 11.0	
	baz=271,slow=75,SNR=3.9						
H11N3	**WAKE ISLAND Hy**	**20.10**	**84**	T	T	18 00 14.0	
	baz=271,slow=75,SNR=4.8						
FAKI	**Fak Fak**	**25.34**	**213**	P	**P**	**17 39 53.1**	**-0.6**
FAKI				IAmb	IAmb	17 40 20.1	
	comp=Z,20nm,1.1s						
WRAB	**Tennant Creek**	**40.12**	**197**	P	**P**	**17 42 01.3**	**-0.7**
WRAB				IAmb	IAmb	17 42 15.0	
	comp=Z,18nm,1.4s						
WRA	**Warramunga Arr**	**40.13**	**197**	P	**P**	**17 42 01.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=14,slow=8.1,SNR=9.3						
WRA	**Warramunga Arr**	**40.13**	**197**	P	**P**	**17 42 00.6**	**-1.5**
FITZ	**Fitzroy Crossi**	**41.66**	**209**	P	**P**	**17 42 15.6**	**+0.9**
AS31	**Alice Springs**	**43.80**	**196**	P	**P**	**17 42 31.1**	**-0.8**
ASAR	**Alice Springs**	**43.80**	**196**	P	**P**	**17 42 31.2**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=16,slow=6.9,SNR=16						
ASAR	**Alice Springs**	**43.80**	**196**	P	**P**	**17 42 30.8**	**-1.2**
SKT	**Skwentna**	**60.82**	**29**	P	**P**	**17 44 36.9**	**-0.4**
SKT				IAmb	IAmb	17 44 59.4	
	comp=Z,20nm,1.8s						
SUA	**Susitna One**	**61.05**	**29**	P	**P**	**17 44 38.8**	**-0.2**
SUA				IAmb	IAmb	17 44 45.6	
	comp=Z,19nm,1.8s						
IMAR	**Indian Mountai**	**61.09**	**24**	P	**P**	**17 44 40.4**	**+1.4**
TRF	**Thorofare Moun**	**61.76**	**27**	P	**P**	**17 44 42.5**	**-1.2**
TRF				IAmb	IAmb	17 44 47.5	
	comp=Z,14nm,1.7s						
SML	**Sawmill**	**62.25**	**29**	P	**P**	**17 44 48.2**	**+1.2**
SCM	**Sheep Creek Mo**	**62.72**	**29**	P	**P**	**17 44 50.8**	**+0.6**
TOLK	**Toolik Lake Re**	**63.46**	**22**	P	**P**	**17 44 54.7**	**-0.1**
IL31		**63.52**	**26**	P	**P**	**17 44 54.6**	**-0.7**
IL31				IAmb	IAmb	17 45 10.9	
	comp=Z,17nm,1.8s						
ILAR	**Eielson Array**	**63.52**	**26**	P	**P**	**17 44 54.4**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=256,slow=5.9,SNR=6.8						
ILAR	**Eielson Array**	**63.52**	**26**	P	**P**	**17 44 55.3**	**0.0**
VRDI	**Verde Repeater**	**64.46**	**30**	P	**P**	**17 45 02.5**	**+0.8**
DOT	**Dot Lake**	**64.52**	**28**	P	**P**	**17 45 02.6**	**+0.7**
DOT				IAmb	IAmb	17 45 20.6	
	comp=Z,18nm,1.7s						
FYU	**Fort Yukon**	**64.56**	**24**	P	**P**	**17 45 01.6**	**-0.4**
FYU				IAmb	IAmb	17 45 06.2	
	comp=Z,9.3nm,1.1s						
SCRK	**Sand Creek**	**64.61**	**27**	P	**P**	**17 45 03.2**	**+0.6**
MCARA	**McCarthy VSAT**	**64.68**	**30**	P	**P**	**17 45 04.0**	**+1.0**
MCARA				IAmb	IAmb	17 45 10.4	
	comp=Z,17nm,1.5s						
BARN	**Barnard Glacie**	**65.30**	**31**	P	**P**	**17 45 07.2**	**0.0**
BARN				IAmb	IAmb	17 45 20.8	
	comp=Z,6.3nm,1.2s						
INK	**Inuvik**	**69.24**	**23**	P	**P**	**17 45 31.6**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=270,slow=4.0,SNR=3.8						
INK	**Inuvik**	**69.24**	**23**	P	**P**	**17 45 31.7**	**0.0**
YKA	**Yellowknife Ar**	**77.86**	**28**	P	**P**	**17 46 22.5**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=289,slow=5.4,SNR=9.9						
NVAR	**Mina Array Bea**	**83.08**	**52**	P	**P**

	comp=N,10.0nm,0.7s							
GRNR	**Gornyy**	**6.78**	**319**	*e*PN		**Pn**	**17 51 44.0**	**-4.4**
GRNR				pmax		pmax		
	comp=Z,20nm,0.5s							
GRNR	**Gornyy**	**6.78**	**319**	*e*P		**Pn**	**17 51 49.0**	**+0.6**
GRNR				AMB		AMB	17 51 49.1	
	comp=Z,20nm,0.5s							
GRNR				*e*S		**S**	**17 53 08.3**	**-0.6**
USRK	**Ussuriysk Ar.**	**8.26**	**263**	P		**Pn**	**17 52 06.8**	**+0.7**
	baz=72,slow=12,SNR=15							
KLR	**Kul'dur**	**8.59**	**297**	*i* PN		**Pn**	**17 52 09.6**	**-0.4**
KLR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
KLR	**Kul'dur**	**8.59**	**297**	P		**Pn**	**17 52 09.3**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=105,slow=13,SNR=4.9							
EKMR	**Ekimchan**	**9.93**	**321**	*e*P		**Pn**	**17 52 26.5**	**+0.4**
EKMR				AMB		AMB	17 52 28.0	
	comp=Z,10.0nm,0.6s							
MJA0	**Matsu Arr-Jizo**	**10.07**	**204**	*e*PN		**Pn**	**17 52 29.2**	**+1.0**
MJAR	**Matsushiro Arr**	**10.08**	**205**	P		**Pn**	**17 52 29.5**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=7,4,slow=12,SNR=13							
PETK	**Petropavlovsk-**	**11.78**	**47**	P		**P**	**17 52 49.4**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=212,slow=7.3,SNR=10							
MA2	**Magadan**	**14.44**	**15**	P		**P**	**17 53 18.5**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=207,slow=18,SNR=5.2							
SEY	**Seymchan**	**17.87**	**13**	P		**P**	**17 53 55.3**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=184,slow=6.7,SNR=8.9							
YAK	**Yakutsk**	**18.05**	**339**	P		**P**	**17 53 55.7**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=114,slow=3.1,SNR=7.4							
BILL	**Bilibino**	**25.19**	**20**	*e*P		**P**	**17 55 07.4**	**+2.1**
BILL							17 56 10.0	
BILL				pmax		pmax		
	comp=Z,11nm,2.1s							
KDAK	**Kodiak Island**	**39.83**	**49**	P		**P**	**17 57 10.8**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=304,slow=7.3,SNR=8.6							
COLA	**College**	**40.98**	**37**	*i* P		**P**	**17 57 21.1**	**+0.8**
COLA				pmax		pmax		
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**41.28**	**294**	P		**P**	**17 57 23.3**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=76,slow=6.1,SNR=3.5							
ILAR	**Eielson Array**	**41.41**	**37**	*e*P		**P**	**17 57 24.4**	**+0.6**
ILAR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
ILAR	**Eielson Array**	**41.41**	**37**	P		**P**	**17 57 23.4**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=278,slow=7.9,SNR=9.9							
INK	**Inuvik**	**45.95**	**31**	P		**P**	**17 57 58.9**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=263,slow=6.8,SNR=4.9							
YKA	**Yellowknife Ar**	**55.53**	**33**	P		**P**	**17 59 10.6**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=306,slow=6.9,SNR=13							
ARCES	**ARCESS Array B**	**56.33**	**338**	P		**P**	**17 59 15.7**	**-0.4**
	comp=Z,3.5nm,0.9s,baz=29,slow=7.6,SNR=3.2							
FINES	**FINESS Array B**	**61.78**	**331**	*e*P		**P**	**17 59 50.7**	**-2.5**
FINES				pmax		pmax		
	comp=Z,4.0nm,1.0s							
FINES	**FINESS Array B**	**61.78**	**331**	P		**P**	**17 59 52.0**	**-1.1**
	comp=Z,4.3nm,1.1s,baz=46,slow=8.2,SNR=8.0							
WRA	**Warramunga Arr**	**65.99**	**189**	P		**P**	**18 00 22.6**	**+1.7**
	comp=Z,0.5nm,0.8s,baz=8.4,slow=5.9,SNR=2.9							
ASAR	**Alice Springs**	**69.72**	**189**	P		**P**	**18 00 46.7**	**+2.8**
	comp=Z,0.7nm,0.6s,baz=4.7,slow=5.5,SNR=21							
PDAR	**Pinedale Array**	**70.55**	**48**	P		**P**	**18 00 50.1**	**+1.1**
	comp=Z,0.2nm,0.4s,baz=349,slow=2.3,SNR=4.9							
TXAR	**Lajitas Array**	**83.64**	**54**	P		**P**	**18 02 03.0**	**+1.6**
TXAR	**Lajitas Array**	**83.64**	**54**	P		**P**	**18 02 03.0**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=311,slow=5.9,SNR=3.5							

TAP ***11*** *18:18:43.1,24.52N×122.91E,h69km,ML2.6,D*
JMA ***11*** *18:18:43.5±0.2,24.53N×122.85E,h69km±1km,M1.9*
ISC 11 18:18:44.6±1.3,24.48N±0.05×122.87E±0.03,h62km±8km,
n55,σ1§03/95,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.08**	**110**	P		**Pn**	**18 18 53.7**	**0.0**
JYNG				S		**Sn**	**18 19 01.2**	**+0.9**
YOJ	**Yonaguni jima**	**0.13**	**97**	P		**Pn**	**18 18 53.8**	**-0.1**
YOJ				*e*S		**Sn**	**18 19 01.1**	**+0.5**
EOS1	**EOS1**	**0.68**	**276**	P		**Pn**	**18 18 58.1**	**-0.5**
	baz=273							
EOS1				S		**Sn**	**18 19 09.5**	**+0.6**
	baz=273							
TWC	**Suao**	**0.94**	**278**	P		**Pn**	**18 19 00.6**	**-1.3**
	baz=275							
TWC				S		**Sn**	**18 19 13.2**	**-1.4**
	baz=275							
HATJ	**Hateruma jima**	**0.95**	**116**	P		**Pn**	**18 19 02.5**	**+0.5**
NANB	**Nanao**	**1.02**	**267**	P		**Pn**	**18 19 02.4**	**-0.5**
	baz=269							
NANB				S		**Sn**	**18 19 16.9**	**+0.3**
	baz=269							
ENA	**Nanau**	**1.03**	**267**	P		**Pn**	**18 19 03.0**	**0.0**
	baz=269							
ENA				S		**Sn**	**18 19 17.2**	**+0.5**
	baz=269							
TIPB	**Shuangxi**	**1.07**	**298**	P		**Pn**	**18 19 02.7**	**-0.8**
	baz=294							
TIPB				*e*S		**Sn**	**18 19 17.1**	**-0.6**
	baz=294							
JKRS	**Kuro-shima**	**1.07**	**103**	P		**Pn**	**18 19 03.5**	**0.0**
JKRS				S		**Sn**	**18 19 18.5**	**+0.9**
TWE	**Neicheng**	**1.12**	**283**	P		**Pn**	**18 19 03.5**	**-0.6**
	baz=286							
SLBB	**Yuanshan**	**1.15**	**284**	*e*P		**Pn**	**18 19 03.6**	**-1.1**
	baz=288							
JIJ	**Ishigaki jima**	**1.17**	**95**	P		**Pn**	**18 19 04.2**	**-0.7**
JIJ				S		**Sn**	**18 19 19.4**	**-0.6**
ENTT	**Nioudou**	**1.20**	**278**	P		**Pn**	**18 19 05.2**	**-0.1**
	baz=275							
ENTT				*e*S		**Sn**	**18 19 21.2**	**+0.5**
	baz=275							
NACB	**Ninganchiao**	**1.20**	**256**	P		**Pn**	**18 19 04.3**	**-1.0**
	baz=254							
NACB				S		**Sn**	**18 19 20.2**	**-0.6**
	baz=254							
NDT	**Datong Townshi**	**1.24**	**276**	P		**Pn**	**18 19 06.0**	**+0.1**
	baz=279							
NDT				S		**Sn**	**18 19 22.0**	**+0.3**
	baz=279							
NWLT	**Wulai**	**1.28**	**284**	P		**Pn**	**18 19 05.9**	**-0.4**
	baz=281							
NWLT				*e*S		**Sn**	**18 19 22.5**	**-0.1**
	baz=281							
ETLH	**Xiulin Townshi**	**1.29**	**258**	*e*P		**Pn**	**18 19 06.0**	**-0.6**
	baz=247							
ETLH				*e*S		**Sn**	**18 19 23.1**	**+0.1**
	baz=247							
JISG	**Ishigakijimahi**	**1.32**	**85**	P		**Pn**	**18 19 06.1**	**-0.7**
JISG				S		**Sn**	**18 19 23.1**	**-0.5**
NNSH	**Datong**	**1.35**	**268**	P		**Pn**	**18 19 06.7**	**-0.7**
	baz=257							
NNSH				*e*S		**Sn**	**18 19 24.3**	**-0.3**
	baz=257							
NNS	**Nan Shan**	**1.36**	**269**	P		**Pn**	**18 19 07.5**	**-0.1**
	baz=257							
NNS				*e*S		**Sn**	**18 19 24.7**	**-0.1**
	baz=257							
YHNB	**Yeheng**	**1.37**	**278**	P		**Pn**	**18 19 07.9**	**+0.3**
	baz=276							
YHNB				S		**Sn**	**18 19 25.6**	**+0.6**
	baz=276							
NSK	**Sanguang**	**1.39**	**278**	P		**Pn**	**18 19 07.9**	**0.0**
	baz=276							
NSK				S		**Sn**	**18 19 26.1**	**+0.8**
	baz=276							
ESL	**Shilin**	**1.47**	**244**	*e*P		**Pn**	**18 19 08.0**	**-0.9**
	baz=235							
ESL				*e*S		**Sn**	**18 19 26.4**	**-0.7**
	baz=235							
EGFH	**Guangfu**	**1.54**	**239**	*e*P		**Pn**	**18 19 08.3**	**-1.6**
	baz=231							
EGFH				S		**Sn**	**18 19 27.5**	**-1.5**
	baz=231							
CHGB	**Renai**	**1.60**	**255**	P		**Pn**	**18 19 10.6**	**-0.3**
	baz=244							
CHGB				S		**Sn**	**18 19 29.9**	**-0.7**
	baz=244							
OWD	**Renai**	**1.63**	**252**	P		**Pn**	**18 19 10.9**	**-0.3**
	baz=250							
OWD				S		**Sn**	**18 19 29.5**	**-1.7**
	baz=250							
HGSD	**Ruisui**	**1.65**	**234**	P		**Pn**	**18 19 10.0**	**-1.2**
	baz=233							
HGSD				S		**Sn**	**18 19 30.6**	**-0.8**
	baz=233							
LIOB	**Emei**	**1.69**	**276**	*e*P		**Pn**	**18 19 12.5**	**+0.6**
	baz=275							
EHY	**Hungye**	**1.71**	**236**	*e*P		**Pn**	**18 19 11.5**	**-0.7**
	baz=244							
EHY				*e*S		**Sn**	**18 19 32.2**	**-0.8**
	baz=244							
VWDT	**VWDT**	**1.73**	**246**	*e*P		**Pn**	**18 19 12.1**	**-0.3**
	baz=244							
VWDT				S		**Sn**	**18 19 32.6**	**-0.9**
	baz=244							
WHP	**Taichung City**	**1.76**	**264**	P		**Pn**	**18 19 13.7**	**+0.7**
	baz=262							
WHP				S		**Sn**	**18 19 34.6**	**+0.2**
	baz=262							
YULB	**Yu-li**	**1.80**	**233**	P		**Pn**	**18 19 11.9**	**-1.4**
	baz=227							
YULB				*e*S		**Sn**	**18 19 33.5**	**-1.6**
	baz=227							
TWF1	**Yuli**	**1.82**	**232**	*e*P		**Pn**	**18 19 13.0**	**-0.7**
	baz=225							
TWF1				*e*S		**Sn**	**18 19 34.0**	**-1.7**
	baz=225							
DPDB	**Guoxing**	**1.83**	**256**	P		**Pn**	**18 19 13.8**	**0.0**
	baz=248							
DPDB				*e*S		**Sn**	**18 19 36.0**	**+0.1**
	baz=248							
SSLB	**Suanglung**	**1.88**	**249**	P		**Pn**	**18 19 14.4**	**-0.1**
	baz=248							
SSLB				S		**Sn**	**18 19 36.2**	**-0.9**
	baz=248							
SMLT	**Sun Moon Lake**	**1.89**	**252**	P		**Pn**	**18 19 14.8**	**+0.1**
	baz=244							
SMLT				S		**Sn**	**18 19 37.3**	**-0.3**
	baz=244							
FULB	**Fuli**	**1.92**	**229**	*e*P		**Pn**	**18 19 13.4**	**-1.6**
	baz=228							
FULB				*e*S		**Sn**	**18 19 37.0**	**-1.2**
	baz=228							
TYC	**Yuchr**	**1.92**	**253**	P		**Pn**	**18 19 15.3**	**+0.4**
	baz=245							
TYC				S		**Sn**	**18 19 38.0**	**-0.2**
	baz=245							
WHYT	**Xinyi Township**	**2.00**	**247**	P		**Pn**	**18 19 16.5**	**+0.5**
	baz=246							
WHYT				S		**Sn**	**18 19 40.7**	**+0.7**
	baz=246							
WJS	**Zhushan**	**2.06**	**252**	*e*S		**Sn**	**18 19 44.2**	**+2.7**
	baz=245							
WNT	**Mingjian**	**2.08**	**254**	S		**Sn**	**18 19 43.7**	**+1.7**
	baz=252							
ALS	**Alishan**	**2.12**	**243**	*e*S		**Sn**	**18 19 43.2**	**-0.1**
	baz=235							
ELDTW	**Lidau**	**2.12**	**233**	*e*P		**Pn**	**18 19 16.4**	**-1.4**
	baz=232							
ELDTW				S		**Sn**	**18 19 41.3**	**-2.0**
	baz=232							
CHN5	**Tsauling**	**2.19**	**247**	P		**Pn**	**18 19 19.4**	**+0.8**
	baz=237							
CHN5				S		**Sn**	**18 19 45.9**	**+1.3**
	baz=237							
WDLH	**Douliu**	**2.27**	**250**	*e*S		**Sn**	**18 19 48.9**	**+2.4**
	baz=249							
TPUB	**Ta-pu**	**2.36**	**241**	P		**Pn**	**18 19 22.3**	**+1.3**
	baz=239							
TPUB				S		**Sn**	**18 19 49.4**	**+0.6**
	baz=239							
CHN4	**Tsaushan**	**2.36**	**242**	S		**Sn**	**18 19 51.0**	**+2.1**
	baz=235							
WTP	**Ta-pu**	**2.40**	**240**	S		**Sn**	**18 19 51.7**	**+1.9**
	baz=238							
TWK	**Hsinying**	**2.49**	**242**	S		**Sn**	**18 19 54.2**	**+2.1**
	baz=238							
CHN1	**Nanshi**	**2.50**	**239**	S		**Sn**	**18 19 53.5**	**+1.3**
	baz=238							
SGST	**Jiashian**	**2.51**	**237**	*e*S		**Sn**	**18 19 54.7**	**+2.1**
	baz=236							
SLGT	**Liugui**	**2.52**	**234**	S		**Sn**	**18 19 54.8**	**+2.2**
	baz=229							
SSD	**Sandimen**	**2.68**	**230**	*e*P		**Pn**	**18 19 26.0**	**+0.7**
	baz=227							
SSD				*e*S		**Sn**	**18 19 56.8**	**+0.2**
	baz=227							
MASBT	**Mashibuluo**	**2.77**	**228**	*e*P		**Pn**	**18 19 27.6**	**+1.1**
	baz=223							
MASBT				*e*S		**Sn**	**18 19 59.2**	**+0.5**
	baz=223							
VWUC	**VWUC**	**3.15**	**280**	*e*S		**Sn**	**18 20 07.2**	**-0.9**
	baz=271							

IDC ***11*** *18:25:29.8±1.5,2.04N×127.01E,h0km,mb3.7/5,*
mb1 3.9/5,mb1mx3.5/34,mbtmp3.7/5,MS3.9/2,Ms1 3.9/2,
ms1mx2.8/38,Error ellipse: s-maj=106.3km s-min=21.9km
az=68.0
DJA ***11*** *18:25:34.5±0.5,2°N±9'×12°7E±°,h10km,M3.9/7,mb4.2/1,*
MLv3.8/7
NEIC ***11*** *18:25:35.4±2.3,1.92N±0.10'×126.89E±0.08,h56km±9km,*
mb4.4/10,Error ellipse: s-maj=15.7km s-min=10.3km
az=213.0
ISC 11 18:25:35.3±0.8,1.89N±0.10'×126.72E±0.09,h35km,n34,
σ1§40/24,mb4.1/8,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.29**	**150**	P		**Pn**	**18 25 57.6**	**+0.8**
TNTI	**Ternate**	**1.29**	**150**			**Pn**	**18 25 57.7**	**+0.8**
KMSI	**Cibinong**	**3.03**	**244**	P		**Pn**	**18 26 20.6**	**-0.2**
SANI	**Sanana**	**3.98**	**191**	P		**Pn**	**18 26 34.7**	**+0.8**
LUWI	**Luwuk**	**4.90**	**234**	Pn		**Pn**	**18 26 47.7**	**+1.2**
APSI	**Ampana**	**5.78**	**241**	P		**Pn**	**18 26 58.4**	**-0.2**
FAKI	**Fak Fak**	**7.31**	**131**	Pn		**Pn**	**18 27 17.7**	**-2.0**
SOEI	**Soe**	**11.83**	**192**	Pn		**Pn**	**18 28 22.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**19.89**	**183**	P		**P**	**18 30 05.2**	**+1.4**
	2.0nm,1.0s,baz=0.0,slow=8.1,SNR=1.0							
FITZ	**Fitzroy Crossi**	**19.89**	**183**	P		**P**	**18 30 05.0**	**+1.2**
FITZ				IAmb		IAmb	18 30 17.5	
	comp=Z,30nm,1.8s							
YULB	**Yu-li**	**22.01**	**347**	P		**P**	**18 30 28.9**	**+2.3**
YULB				IAmb		IAmb	18 30 30.3	
	comp=Z,19nm,1.2s							
WRAB	**Tennant Creek**	**22.95**	**161**	P		**P**	**18 30 36.8**	**+0.1**
WRAB				IAmb		IAmb	18 30 39.0	
	comp=Z,16nm,1.7s							
WRA	**Warramunga Arr**	**22.95**	**161**	P		**P**	**18 30 35.4**	**-1.3**
	comp=Z,2.1nm,0.8s,baz=341,slow=11,SNR=11							
WRA	**Warramunga Arr**	**22.95**	**161**	P		**P**	**18 30 35.8**	**-1.0**
WR0	**Warramunga Arr**	**23.04**	**161**	P		**P**	**18 30 35.0**	**-2.6**
AS31	**Alice Springs**	**26.35**	**165**	P		**P**	**18 31 05.7**	**-2.6**
ASAR	**Alice Springs**	**26.35**	**165**	P		**P**	**18 31 08.1**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=345,slow=8.0,SNR=2.3							
ASAR				PcP		**PcP**	**18 34 34.2**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=339,slow=1.9,SNR=3.4							
ASAR	**Alice Springs**	**26.35**	**165**	P		**P**	**18 31 06.3**	**-2.0**
JHJ2	**Mitsune**	**33.40**	**20**	P		P	18 32 08.0	-2.6
INU	**Inuyama**	**34.64**	**15**	P		P	18 32 18.6	-2.7
MJAR	**Matsushiro Arr**	**36.08**	**16**	LR		LR	18 46 18.8	
	comp=Z,172nm,21.9s,baz=190,slow=35							
STKA	**Stephens Creek**	**36.43**	**158**	P		**P**	**18 32 37.1**	**+0.4**
	comp=Z,2.1nm,0.9s,baz=318,slow=12,SNR=3.3							
H11S3	**WAKE ISLAND Hy**	**42.51**	**64**	T		T	19 18 46.1	
	baz=253,slow=75,SNR=9.0							
H11S2	**WAKE ISLAND Hy**	**42.52**	**64**	T		T	19 18 47.2	
	baz=253,slow=75,SNR=15							
H11S1	**WAKE ISLAND Hy**	**42.52**	**64**	T		T	19 18 47.1	
	baz=253,slow=75,SNR=9.1							
H11N1	**WAKE ISLAND Hy**	**43.08**	**63**	T		T	19 19 25.4	
	baz=253,slow=75,SNR=10							
H11N2	**WAKE ISLAND Hy**	**43.09**	**63**	T		T	19 19 24.3	
	baz=253,slow=75,SNR=9.0							
H11N3	**WAKE ISLAND Hy**	**43.09**	**63**	T		T	19 19 24.0	
	baz=253,slow=75,SNR=7.9							
MKAR	**Makanchi Array**	**59.05**	**326**	P		**P**	**18 35 31.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=119,slow=7.7,SNR=14							
MKAR	**Makanchi Array**	**59.05**	**326**	P		**P**	**18 35 30.2**	**-1.7**
ABKAR	**Akbulak array**	**73.56**	**321**	P		**P**	**18 37 05.2**	**+0.5**
SBA	**Scott Base**	**82.53**	**172**	P		P	18 37 45.2	-8.7
SBA				IAmb		IAmb	18 37 51.4	
	comp=Z,13nm,1.3s							
KIV	**Kislovodsk**	**84.39**	**314**	P		**P**	**18 38 03.4**	**-1.0**
KIV				IAmb		IAmb	18 38 25.4	
	comp=Z,5.1nm,1.0s							
ARCES	**ARCESS Array B**	**92.16**	**340**	LR		LR	19 26 23.7	
	comp=Z,57nm,19.0s,baz=256,slow=40							

BJI ***11*** *18:34:44.3±0.0,20.25N×147.24E,h25km,mB5.1/26,*
mb4.5/32,Ms4.6/18,Ms7 4.3/12

IDC ***11*** *18:34:46.1±0.5,20.56N×146.86E,h0km,mb4.4/23,*
mb1 4.5/25,mb1mx4.3/58,mbtmp4.4/25,ML4.1/2,MS3.7/11,
Ms1 3.7/11,ms1mx3.5/43,Error ellipse: s-maj=17.1km
s-min=11.8km az=98.0
NEIC ***11*** *18:34:48.5±1.2,20.61N±0.05×146.8E±0.1,h14km±3km,*
mb4.8/115,Error ellipse: s-maj=15.0km s-min=6.6km
az=82.0
GCMT ***11*** *18:34:50.5±0.3,20.84N±0.03×147.04E±0.02,h17km±1km,*
MW4.9/106,Moment Tensor Solution. s22,c24;
s106,c138; Duration: 0 Moment tensor: Scale 10¹⁶Nm;
Mrr-2.58±.16; Mθθ0.43±.09; Mϕϕ2.15±.10; Mrθ0.56±.25;
Mθϕ-1.04±.06; Mϕr-0.06±.21; Best double couple:
M₀2.67000×10¹⁶ NP1:ϕs165.00000°,δ43.00000°,
λ-75.00000°. NP2:ϕs325.00000°,δ49.00000°,
λ-104.00000°. Principal axes: T 2.6560, Plg3.0000°,
Azm64.0000°; N 0.0310, Plg10.0000°, Azm334.0000°; P
-2.6840, Plg79.0000°, Azm171.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
ISC 11 18:34:51.1±1.9,20.64N±0.04×146.83E±0.07,h32km±13km,
n188,σ1§14/191,mb4.7/77,MS4.0/17,Mariana Islands
region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SARN	**Sarigan**	**4.04**	**194**	Pn		**Pn**	**18 35 49.0**	**-1.8**
GUMO	**Guam**	**7.25**	**195**	Pn		**Pn**	**18 36 36.8**	**+1.9**
	25nm,0.3s,baz=48,slow=18,SNR=12							
GUMO				Sn		**Sn**	**18 37 59.2**	**+2.9**
	10.0nm,0.3s,baz=328,slow=24,SNR=1.3							
GUMO	**Guam**	**7.25**	**195**	Pn		**Pn**	**18 36 34.6**	**-0.4**
GUMO						**Sn**	**18 37 56.8**	**+0.5**
JCJ	**Chichijima**	**7.71**	**327**	Pn		**Pn**	**18 36 40.9**	**-0.3**
	12nm,0.3s,baz=147,slow=10,SNR=4.4							
JCJ				Sn		**Sn**	**18 38 01.2**	**-6.2**
	57nm,0.3s,baz=288,slow=22,SNR=18							
INU	**Inuyama**	**17.01**	**332**			**Pn**	**18 38 45.5**	**-1.1**
MJAR	**Matsushiro Arr**	**17.55**	**336**	P		**Pn**	**18 38 52.9**	**-0.4**
	0.1nm,0.3s,baz=150,slow=10,SNR=10							
MJAR	**Matsushiro Arr**	**17.55**	**336**	P		**Pn**	**18 38 51.6**	**-1.7**
MAJO	**Matsushiro**	**17.55**	**336**	P		**P**	**18 38 54.2**	**0.0**
MAT	**Matsushiro**	**17.55**	**336**	P		**Pn**	**18 38 51.0**	**-2.4**
MJB9	**Matsu-Tunnel**	**17.55**	**336**	P		**P**	**18 38 54.2**	**-0.1**
PATS	**Pohnpei**	**17.66**	**139**			**Pn**	**18 38 55.0**	**+0.1**
PATS				IAmb		IAmb	18 39 07.5	
	comp=Z,96nm,1.1s							
H11S3	**WAKE ISLAND Hy**	**18.84**	**93**	T		T	18 57 26.9	
	baz=280,slow=74,SNR=6.9							
H11S1	**WAKE ISLAND Hy**	**18.85**	**93**	T		T	18 57 19.9	
	baz=280,slow=74,SNR=6.7							
H11S2	**WAKE ISLAND Hy**	**18.85**	**93**	T		T	18 57 25.6	
	baz=280,slow=74,SNR=5.9							
H11N1	**WAKE ISLAND Hy**	**18.86**	**89**	T		T	18 57 30.4	
	baz=276,slow=74,SNR=4.1							
H11N2	**WAKE ISLAND Hy**	**18.86**	**89**	T		T	18 57 27.5	
	baz=276,slow=74,SNR=3.3							
JNU	**Nakatsue**	**18.87**	**315**	P		**P**	**18 39 08.7**	**-0.1**
H11N3	**WAKE ISLAND Hy**	**18.88**	**89**	T		T	18 57 32.0	
	baz=276,slow=74,SNR=3.9							
ERM	**Erimo**	**21.54**	**353**	P		**P**	**18 39 36.1**	**-1.5**
ERM				IAmb		IAmb	18 39 53.5	
	comp=Z,66nm,1.1s							
KSRS	**Korea Array**	**23.46**	**320**	P		**P**	**18 39 59.2**	**+1.4**
	comp=Z,4.6nm,0.9s,baz=143,slow=9.5,SNR=4.1							
KS19	**Wonju Array Si**	**23.53**	**320**	P		**P**	**18 39 55.6**	**-2.9**
DAV	**Davao City (W)**	**24.60**	**240**	LR		LR	18 48 44.3	
	comp=Z,439nm,19.0s,baz=61,slow=34							
KRVT	**Keravat (AS076**	**25.31**	**168**	LR		LR	18 49 39.7	
	comp=Z,133nm,20.1s,baz=45,slow=35							
YSS	**Yuzh-Sakhalins**	**26.46**	**354**	P		**P**	**18 40 26.3**	**+1.1**
USA0B	**Ussuriysk Arra**	**26.54**	**336**	P		**P**	**18 40 25.6**	**-0.4**
USA0B				IAmb		IAmb	18 40 33.5	
	comp=Z,17nm,1.1s							
USRK	**Ussuriysk Ar.**	**26.54**	**336**	P		**P**	**18 40 25.8**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=148,slow=8.4,SNR=8.2							
USRK	**Ussuriysk Ar.**	**26.54**	**336**	P		**P**	**18 40 25.3**	**-0.7**
FAKI	**Fak Fak**	**27.43**	**213**	P		**P**	**18 40 33.3**	**-0.9**
FAKI				IAmb		IAmb	18 40 36.0	
	comp=Z,30nm,1.2s							
NJ2	**Nanjing**	**27.45**	**300**	*e*P		**P**	**18 40 33.5**	**-0.7**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
PMG	**Port Moresby**	**29.85**	**179**	P		**P**	**18 40 54.6**	**-1.1**
PMG				IAmb		IAmb	18 41 14.1	
	comp=Z,22nm,1.0s							
PEA0B	**Petropavlovsk-**	**33.48**	**12**	P		**P**	**18 41 27.8**	**+0.5**
PETK	**Petropavlovsk-**	**33.48**	**12**	LR		LR	18 57 32.8	
	comp=Z,176nm,18.1s,baz=221,slow=41							
COEN	**Coen**	**34.56**	**186**	P		**P**	**18 41 36.6**	**-0.4**
HHC	**Hu-ho-hao-te**	**36.06**	**312**	*e*P		**P**	**18 41 50.8**	**+0.9**
HHC				S		**S**	**18 47 28.3**	**+1.2**
HHC				pmax		pmax		
	comp=Z,5.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,61nm,6.6s							
HHC				LR		LR		
	comp=Z,150nm,15.2s							
HHC				LR		LR		
	comp=Z,130nm,16.1s							
MTN	**Manton Dam**	**36.67**	**206**	P		**P**	**18 41 54.1**	**-1.1**
MA2	**Magadan**	**39.00**	**3**	P		**P**	**18 42 14.8**	**+0.4**
	comp=Z,9.0

CMAR	**Chiang Mai Arr**	**45.05**	**276**	P		**P**		**18 43 04.1**	**-0.3**
CMAR						**PcP**		**18 44 44.4**	**-0.6**
UGM	**Wanagama**	**45.59**	**235**	P		**P**		**18 43 08.2**	**-0.4**
AS31	**Alice Springs**	**45.80**	**197**	P		**P**		**18 43 09.7**	**-0.4**
ASAR	**Alice Springs**	**45.80**	**197**	P		**P**		**18 43 09.1**	**-1.0**
	comp=Z,2.3nm,0.7s,baz=13,slow=8.0,SNR=26								
ASAR	**Alice Springs**	**45.80**	**197**	P		**P**		**18 43 09.2**	**-0.9**
DZM	**Mont Dzumac**	**46.57**	**155**	*e*LR		LR		18 56 29.8	
	comp=Z,336nm,23.6s								
BILL	**Bilibino**	**48.94**	**10**	P		**P**		**18 43 34.8**	**+0.8**
BILL				IAmb		IAmb		18 43 37.9	
	comp=Z,7.6nm,1.0s								
PSA00	**Pilbara Seismi**	**49.55**	**214**	P		**P**		**18 43 39.0**	**-0.2**
PSA00				IAmb		IAmb		18 43 50.4	
	comp=Z,18nm,1.1s								
LSA	**Lhasa**	**50.79**	**292**	P		**P**		**18 43 50.2**	**+0.9**
GSI	**Gunungsitoli**	**51.75**	**255**	P		**P**		**18 43 56.3**	**+0.3**
GSI				IAmb		IAmb		18 43 57.1	
	comp=Z,10nm,0.8s								
STKA	**Stephens Creek**	**52.45**	**186**	P		**P**		**18 43 58.7**	**-2.2**
	comp=Z,2.6nm,0.8s,baz=342,slow=5.9,SNR=3.9								
STKA	**Stephens Creek**	**52.45**	**186**	P		**P**		**18 43 59.1**	**-1.7**
WMQ	**Urumqi**	**53.87**	**310**	*e*P		**P**		**18 44 13.6**	**+2.2**
WMQ				pP		sP		18 44 21.9	-1.0
WMQ				pmax		pmax			
	comp=Z,7.0nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,100nm,4.3s								
WMQ				LR		LR			
	comp=Z,340nm,28.9s								
WMQ				LR		LR			
	comp=Z,1μm,29.0s								
FORT	**Forrest**	**54.21**	**200**	P		**P**		**18 44 13.4**	**-0.4**
SVW2	**Sparrevohn**	**56.63**	**29**	P		**P**		**18 44 31.1**	**+0.2**
OHAK	**Old Harbor**	**56.66**	**34**	P		**P**		**18 44 31.9**	**+0.7**
ZAA0	**Zalesovo Array**	**57.15**	**322**	P		**P**		**18 44 33.9**	**-0.8**
ZAA0				IAmb		IAmb		18 44 38.1	
	comp=Z,6.9nm,0.9s								
ZALV	**Zalesovo Beam**	**57.15**	**322**	P		**P**		**18 44 34.5**	**-0.2**
	comp=Z,6.6nm,0.8s,baz=105,slow=6.0,SNR=8.2								
ZALV				PcP		**PcP**		**18 45 29.0**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=109,slow=4.3,SNR=2.8								
ZALV	**Zalesovo Beam**	**57.15**	**322**	P		**P**		**18 44 34.4**	**-0.2**
ZALV						**PcP**		**18 45 28.3**	**-0.8**
KDAK	**Kodiak Island**	**57.16**	**34**	P		**P**		**18 44 34.4**	**-0.3**
	comp=Z,2.4nm,0.4s,baz=277,slow=8.0,SNR=6.5								
KDAK	**Kodiak Island**	**57.16**	**34**	P		**P**		**18 44 35.2**	**+0.5**
KDAK				PcP		**PcP**		**18 45 29.6**	**+0.5**
MORW	**Morawa**	**57.65**	**212**	P		**P**		**18 44 37.8**	**-0.8**
MORW				IAmb		IAmb		18 44 49.1	
	comp=Z,18nm,1.2s								
RSO	**Redoubt South**	**57.76**	**31**	P		**P**		**18 44 38.8**	**-0.4**
MK31	**Makanchi Array**	**57.91**	**313**	P		**P**		**18 44 40.4**	**+0.2**
MKAR	**Makanchi Array**	**57.91**	**313**	P		**P**		**18 44 40.5**	**+0.2**
	comp=Z,1.7nm,0.9s,baz=131,slow=3.4,SNR=4.6								
MKAR	**Makanchi Array**	**57.91**	**313**	P		**P**		**18 44 40.1**	**-0.1**
MAKZ	**Makanchi**	**58.13**	**313**	P		**P**		**18 44 42.0**	**+0.3**
MAKZ				IAmb		IAmb		18 45 01.2	
	comp=Z,12nm,1.1s								
BRLK	**Bradley Lake**	**58.49**	**32**	P		**P**		**18 44 43.9**	**-0.2**
BRLK				IAmb		IAmb		18 45 00.3	
	comp=Z,23nm,1.5s								
CHLP	**Challavanipeta**	**58.85**	**280**	*e*P		**P**		**18 44 48.1**	**+0.9**
MLY	**Manley**	**59.92**	**26**	P		**P**		**18 44 54.7**	**+0.8**
MLY				IAmb		IAmb		18 45 06.5	
	comp=Z,10.0nm,1.3s								
SML	**Sawmill**	**60.17**	**30**	P		**P**		**18 44 56.0**	**+0.4**
RND	**Reindeer**	**60.30**	**28**	P		**P**		**18 44 56.6**	**+0.1**
RND				IAmb		IAmb		18 45 17.2	
	comp=Z,10nm,1.4s								
NEA	**Nenana**	**60.48**	**26**	P		**P**		**18 44 58.7**	**+1.0**
NEA				IAmb		IAmb		18 45 21.0	
	comp=Z,4.5nm,0.8s								
KURK	**Kurchatov**	**60.56**	**317**	P		**P**		**18 44 57.8**	**-0.7**
KURBB	**Kurchatov Arra**	**60.61**	**317**	P		**P**		**18 44 58.6**	**-0.2**
	comp=Z,2.7nm,0.5s,baz=97,slow=6.7,SNR=8.2								
WRH	**Wood River Hil**	**60.87**	**27**	P		**P**		**18 44 59.5**	**-0.8**
TOLK	**Toolik Lake Re**	**61.41**	**22**	P		**P**		**18 45 04.8**	**+0.8**
TOLK				IAmb		IAmb		18 45 25.6	
	comp=Z,7.1nm,1.1s								
IL31		**61.45**	**27**	P		**P**		**18 45 03.2**	**-1.0**
IL31				IAmb		IAmb		18 45 21.4	
	comp=Z,16nm,1.6s								
ILAR	**Eielson Array**	**61.45**	**27**	P		**P**		**18 45 03.5**	**-0.7**
	comp=Z,2.5nm,1.0s,baz=244,slow=5.0,SNR=12								
ILAR				LR		LR		19 07 10.4	
	comp=Z,56nm,21.6s,baz=271,slow=32								
ILAR	**Eielson Array**	**61.45**	**27**	P		**P**		**18 45 03.1**	**-1.1**
RIDG	**Independent Ri**	**62.12**	**28**	P		**P**		**18 45 10.4**	**+1.6**
GLB	**Gilahina Butte**	**62.23**	**31**	P		**P**		**18 45 11.5**	**+1.9**
DOT	**Dot Lake**	**62.45**	**28**	P		**P**		**18 45 11.6**	**+0.6**
FYU	**Fort Yukon**	**62.50**	**25**	P		**P**		**18 45 11.4**	**+0.2**
SCRK	**Sand Creek**	**62.53**	**28**	P		**P**		**18 45 11.6**	**-0.1**
SCRK				IAmb		IAmb		18 45 23.5	
	comp=Z,15nm,1.5s								
GGR	**Gangavaram**	**62.58**	**280**	*e*P		**P**		**18 45 12.7**	**0.0**
KSH	**Kashi**	**62.64**	**305**	P		**P**		**18 45 12.3**	**-0.5**
KSH				pP		sP		18 45 24.7	+0.3
KSH				PP		**PP**		**18 47 34.1**	**+3.4**
KSH				S		**S**		**18 53 36.7**	**-2.5**
KSH				ScS		**ScS**		**18 55 04.1**	**+0.8**
KSH				pmax		pmax			
	comp=Z,360nm,5.0s								
KSH				LR		LR			
	comp=Z,170nm,4.9s								
KSH				LR		LR			
	comp=Z,160nm,4.3s								
KSH				LR		LR			
	comp=Z,440nm,5.8s								
SRSP	**Sriramsagar**	**64.02**	**282**	*e*P		**P**		**18 45 22.4**	**+0.3**
HYB	**Hyderabad**	**64.20**	**280**	*i* P		**P**		**18 45 24.0**	**+0.6**
HYBB	**Hyderabad (bro**	**64.20**	**280**	*e*P		**P**		**18 45 24.1**	**+0.7**
SRLM	**Srisailam**	**64.23**	**278**	*e*P		**P**		**18 45 23.8**	**+0.2**
DMPR	**Damasthipur**	**64.95**	**280**	*e*P		**P**		**18 45 28.2**	**-0.1**
HYT	**Haines Junctio**	**65.23**	**32**			**P**		**18 45 31.1**	**+1.6**
HYT				IAmb		IAmb		18 45 42.0	
	comp=Z,8.1nm,1.2s								
BVAR	**Borovoye Array**	**65.68**	**320**	P		**P**		**18 45 32.8**	**+0.4**
	comp=Z,5.3nm,0.7s,baz=86,slow=7.6,SNR=11								
INK	**Inuvik**	**67.18**	**23**	P		**P**		**18 45 41.8**	**+0.1**
	comp=Z,3.7nm,0.9s,baz=251,slow=7.1,SNR=13								
INK	**Inuvik**	**67.18**	**23**	P		**P**		**18 45 41.5**	**-0.1**
INK				IAmb		IAmb		18 45 42.8	
	comp=Z,5.5nm,1.0s								
KHZ	**Kahutara**	**67.41**	**159**	P		**P**		**18 45 43.3**	**-0.1**
CHGR	**Chuyangaron**	**68.00**	**304**	P		**P**		**18 45 47.6**	**0.0**
KBL	**Kabul**	**68.82**	**300**	P		**P**		**18 45 53.0**	**+0.1**
KBL				IAmb		IAmb		18 46 05.9	
	comp=Z,10nm,0.9s								
C36M	**Paulatuk**	**70.56**	**22**	P		**P**		**18 46 02.7**	**0.0**
C36M				IAmb		IAmb		18 46 03.6	
	comp=Z,6.9nm,0.8s								
ARU	**Arti**	**72.12**	**324**	P		**P**		**18 46 11.8**	**-0.6**
ABKAR	**Akbulak array**	**72.66**	**317**	P		**P**		**18 46 15.6**	**-0.2**
ABKAR				IAmb		IAmb		18 46 27.2	
	comp=Z,10.0nm,1.4s								
PPT2	**Papeete2**	**73.02**	**117**	*e*S		**S**		**18 55 43.9**	**+0.1**
	comp=Z,48nm,27.0s								
PPT2	**Papeete2**	**73.02**	**117**	*e*LR		LR		19 08 37.3	
	comp=Z,340nm,28.0s								
YKW3	**Yellowknife Ar**	**75.76**	**28**	P		**P**		**18 46 33.6**	**+0.1**
YKA	**Yellowknife Ar**	**75.79**	**28**	P		**P**		**18 46 33.6**	**-0.1**
	comp=Z,3.7nm,0.8s,baz=288,slow=5.5,SNR=54								
YKA				LR		LR		19 17 19.8	
	comp=Z,13nm,21.9s,baz=289,slow=34								
RES	**Resolute Bay**	**77.30**	**14**	P		**P**		**18 46 42.4**	**+0.4**
ORV	**Oroville**	**78.40**	**52**	P		**P**		**18 46 48.7**	**-0.1**
BEKR	**Beckworth**	**79.15**	**52**	P		**P**		**18 46 53.4**	**+0.2**
BEKR				IAmb		IAmb		18 46 54.9	
	comp=Z,6.0nm,1.0s								
CMB	**Columbia Colle**	**79.69**	**53**	P		**P**		**18 46 56.6**	**+0.6**
BMO	**Blue Mountains**	**79.74**	**46**	P		**P**		**18 46 56.7**	**+0.5**
BMO				IAmb		IAmb		18 46 58.2	
	comp=Z,8.7nm,1.2s								
PAHR	**Pah Rah Range**	**79.91**	**51**	P		**P**		**18 46 57.4**	**+0.1**
PAHR				IAmb		IAmb		18 47 09.0	
	comp=Z,8.9nm,0.9s								
TULEG	**Thule**	**80.66**	**8**	P		**P**		**18 47 00.9**	**+0.5**
TULEG				IAmb		IAmb		18 47 05.3	
	comp=Z,17nm,1.1s								
JTMT	**Jette**	**80.74**	**42**	P		**P**		**18 47 02.1**	**+0.5**
JTMT				IAmb		IAmb		18 47 04.8	
	comp=Z,29nm,1.6s								
RYN	**Ryan**	**80.89**	**52**	P		**P**		**18 47 02.9**	**+0.3**
RYN				IAmb		IAmb		18 47 04.6	
	comp=Z,5.3nm,0.8s								
KVN	**Kaiserville**	**81.06**	**52**	P		**P**		**18 47 04.1**	**+0.5**
KVN				IAmb		IAmb		18 47 05.4	
	comp=Z,6.0nm,0.9s								
NVAR	**Mina Array Bea**	**81.12**	**52**	P		**P**		**18 47 04.9**	**+1.0**
	comp=Z,7.7nm,0.8s,baz=262,slow=6.3,SNR=39								
NVAR				LR		LR		19 17 17.6	
	comp=Z,85nm,19.9s,baz=288,slow=31								
NVAR	**Mina Array Bea**	**81.12**	**52**	P		**P**		**18 47 04.5**	**+0.6**
MFID	**Camas Ranch**	**81.22**	**47**	P		**P**		**18 47 05.2**	**+1.0**
NV11	**Mina Array Sit**	**81.23**	**52**	P		**P**		**18 47 05.1**	**+0.7**
NV11				IAmb		IAmb		18 47 06.3	
	comp=Z,6.4nm,0.9s								
ELK	**Elko**	**82.56**	**49**	P		**P**		**18 47 11.9**	**+0.5**
ELK				IAmb		IAmb		18 47 13.3	
	comp=Z,7.4nm,0.9s								
TPNV	**Topopah Spring**	**83.15**	**53**	P		**P**		**18 47 14.3**	**-0.2**
TPNV				IAmb		IAmb		18 47 16.2	
	comp=Z,8.2nm,1.0s								
R11A	**Troy Canyon, C**	**83.15**	**52**	P		**P**		**18 47 15.2**	**+0.6**
R11A				IAmb		IAmb		18 47 18.5	
	comp=Z,19nm,1.8s								
SHPR	**Sheep Range**	**84.13**	**53**	P		**P**		**18 47 20.3**	**+0.8**
SHPR				IAmb		IAmb		18 47 21.5	
	comp=Z,4.8nm,1.0s								
PFO	**Pinyon Flats O**	**84.17**	**56**	P		**P**		**18 47 20.1**	**+0.3**
PFO				IAmb		IAmb		18 47 21.1	
	comp=Z,10nm,1.1s								
XPFO	**Pion Flat**	**84.17**	**56**	P		**P**		**18 47 19.9**	**+0.2**
XPFO				IAmb		IAmb		18 47 21.1	
	comp=Z,9.2nm,1.1s								
PSUT	**Pine Spring**	**84.35**	**51**	P		**P**		**18 47 21.6**	**+0.9**
DUG	**Dugway, Tooele**	**84.48**	**49**	P		**P**		**18 47 21.7**	**+0.4**
DUG				IAmb		IAmb		18 47 22.4	
	comp=Z,4.0nm,0.8s								
HWUT	**Hardware Ranch**	**84.81**	**48**	P		**P**		**18 47 22.8**	**-0.1**
HWUT				IAmb		IAmb		18 47 24.7	
	comp=Z,12nm,1.2s								
FFC	**Flin Flon**	**84.90**	**33**	P		**P**		**18 47 23.3**	**+0.5**
FFC				IAmb		IAmb		18 47 24.4	
	comp=Z,11nm,1.1s								
RLMT	**Red Lodge**	**84.95**	**44**	P		**P**		**18 47 23.9**	**+0.3**
CCUT	**Cedar City**	**85.08**	**52**	P		**P**		**18 47 25.5**	**+1.1**
NLU	**North Lily Min**	**85.09**	**49**	P		**P**		**18 47 24.6**	**+0.2**
JLU	**Jordanelle**	**85.28**	**48**	P		**P**		**18 47 26.3**	**+0.9**
W13A	**Hualapai Mount**	**85.61**	**54**	P		**P**		**18 47 27.7**	**+0.6**
GLA	**Glamis**	**85.64**	**56**	P		**P**		**18 47 27.1**	**0.0**
GLA				IAmb		IAmb		18 47 28.8	
	comp=Z,5.7nm,0.8s								
KNB	**Kanab**	**85.68**	**52**	P		**P**		**18 47 28.6**	**+1.3**
BW06	**Boulder Array**	**85.72**	**46**	P		**P**		**18 47 27.6**	**+0.1**
PD31	**Pinedale Array**	**85.72**	**46**	P		**P**		**18 47 27.5**	**0.0**
PDAR	**Pinedale Array**	**85.72**	**46**	P		**P**		**18 47 27.7**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=256,slow=1.0,SNR=15								
PDAR				LR		LR		19 18 19.0	
	comp=Z,63nm,21.6s,baz=302,slow=30								
TMUT	**Trail Mountain**	**85.97**	**50**	P		**P**		**18 47 29.5**	**+0.6**
Q16A	**Castle Valley**	**86.14**	**50**	P		**P**		**18 47 30.8**	**+1.1**
LAO	**LASA Array**	**86.21**	**41**	P		**P**		**18 47 30.0**	**+0.4**
P17A	**Butcher Ranch,**	**86.23**	**49**	P		**P**		**18 47 30.3**	**+0.2**
U15A	**North Rim**	**86.30**	**53**	P		**P**		**18 47 31.3**	**+0.7**
U15A				IAmb		IAmb		18 47 32.2	
	comp=Z,3.7nm,0.8s								
FCC	**Fort Churchill**	**86.46**	**27**	P		**P**		**18 47 30.0**	**-0.5**
FCC				IAmb		IAmb		18 47 31.1	
	comp=Z,6.0nm,0.8s								
SRU	**San Rafael Swe**	**86.53**	**50**	P		**P**		**18 47 31.7**	**+0.2**
Y14A	**Wickenburg**	**86.72**	**55**	P		**P**		**18 47 32.6**	**+0.3**
Y14A				IAmb		IAmb		18 47 34.2	
	comp=Z,8.8nm,1.1s								
WUAZ	**Wupatki**	**87.34**	**53**	P		**P**		**18 47 36.6**	**+1.1**
214A	**Organ Pipe Nat**	**87.63**	**57**	P		**P**		**18 47 36.9**	**+0.1**
214A				IAmb		IAmb		18 47 38.7	
	comp=Z,5.5nm,0.9s								
O20A	**White River Ci**	**87.71**	**48**	P		**P**		**18 47 37.3**	**+0.1**
O20A				IAmb		IAmb		18 47 38.6	
	comp=Z,8.8nm,1.1s								
X16A	**Lo Mia Camp, P**	**87.73**	**54**	P		**P**		**18 47 38.5**	**+1.0**
N23A	**Red Feather La**	**88.96**	**46**	P		**P**		**18 47 44.3**	**+1.1**
SMCO	**Snowmass**	**89.01**	**48**	P		**P**		**18 47 44.2**	**+0.6**
SMCO				IAmb		IAmb		18 47 45.5	
	comp=Z,5.0nm,0.9s								
TUC	**Tucson**	**89.07**	**56**	P		**P**		**18 47 44.8**	**+1.1**
TUC				IAmb		IAmb		18 47 47.5	
	comp=Z,3.4nm,0.9s								
PHWY	**Pilot Hill**	**89.10**	**46**	P		**P**		**18 47 44.0**	**+0.1**
S22A	**4UR Ranch, Cre**	**89.73**	**50**	P		**P**		**18 47 47.6**	**+0.7**
S22A				IAmb		IAmb		18 47 49.0	
	comp=Z,4.1nm,0.9s								
ULM	**Lac du Bonnet**	**90.41**	**35**	P		**P**		**18 47 49.2**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=288,slow=3.3,SNR=6.8								
ULM				LR		LR		19 22 51.9	
	comp=Z,44nm,20.5s,baz=308,slow=32								
ULM	**Lac du Bonnet**	**90.41**	**35**	P		**P**		**18 47 49.1**	**-0.3**
ANMO	**Albuquerque**	**91.23**	**52**	P		**P**		**18 47 55.0**	**+1.2**
AGMN	**Agassiz Nation**	**91.50**	**36**	P		**P**		**18 47 54.3**	**-0.2**
MNTX	**Cornudas Mount**	**93.48**	**54**	P		**P**		**18 48 04.9**	**+0.8**
MNTX				IAmb		IAmb		18 48 05.6	
	comp=Z,2.9nm,0.8s								
BRTR	**Keskin Array B**	**93.52**	**315**	LR		LR		19 34 11.8	
	comp=Z,39nm,18.3s,baz=350,slow=38								
TXAR	**Lajitas Array**	**95.87**	**56**	P		**P**		**18 48 15.1**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=270,slow=3.8,SNR=5.2								
TXAR				LR		LR		19 24 08.3	
	comp=Z,30nm,21.8s,baz=0.0,slow=31								
TXAR	**Lajitas Array**	**95.87**	**56**	P		**P**		**18 48 14.6**	**-0.6**
LSZ	**Lusaka**	**121.67**	**264**			**PKiKP**		**18 53 43.3**	**+0.5**
TORD	**Torodi Ar. Bea**	**132.02**	**311**	PKP		**PKPdf**		**18 54 02.7**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=36,slow=4.5,SNR=3.2								
PLCA	**Paso Flores**	**142.50**	**131**	PKP		**PKPdf**		**18 54 18.8**	**-2.3**
	comp=Z,1.8nm,0.8s,baz=245,slow=3.0,SNR=4.0								
PLCA	**Paso Flores**	**142.50**	**131**			**PKPdf**		**18 54 18.1**	**-2.9**
PB11	**IPOC Station P**	**145.79**	**95**			**PKPab**		**18 54 28.8**	**+0.3**
LPAZ	**La Paz**	**146.60**	**88**	PKPbc		**PKPab**		**18 54 32.1**	**-0.1**
	comp=Z,4.0nm,0.8s,baz=345,slow=2.2,SNR=10								
LPAZ	**La Paz**	**146.60**	**88**			**PKPdf**		**18 54 29.9**	**+0.3**
SAML	**Samuel**	**148.81**	**73**			**PKPbc**		**18 54 36.4**	**0.0**

NIED ***11*** *18:35:00.25˝.50N×126˝.40E,h44km,Mw4.7 Best double couple: M₀1.28000×10¹⁶ NP1:φs49.00000°,δ77.00000°, λ93.00000°. NP2:φs217.00000°,δ13.00000°,λ79.00000°.*

BJI ***11*** *18:35:36.0±0.0,25˝.12N×126˝.80E,h10km,mB4.7/42, mb4.4/58,Ms4.2/42,Ms7 3.9/41*

MOS ***11*** *18:35:44.4±0.8,25˝.64N×126˝.36E,h33km,mb5.1/21, MS4.0/5,Error ellipse: s-maj=8.2km s-min=5.2km az=120.7*

JMA ***11*** *18:35:45.1±0.2,25˝.54N×126˝.36E,h79km±4km,M4.5*

IDC ***11*** *18:35:46.3±0.7,25˝.51N×126˝.43E,h43km±6km,mb4.3/27, mb1 4.4/29,mb1mx4.2/55,mbtmp4.5/29,ML3.4/2,MS3.9/11, Ms1 3.9/11,ms1mx3.5/46,Error ellipse: s-maj=14.6km s-min=12.0km az=108.0*

NEIC ***11*** *18:35:46.5±1.5,25˝.49N±0˝.08×126˝.32E±0˝.06,h42km±6km, mb5.0/135,Error ellipse: s-maj=13.2km s-min=5.2km az=151.0*

ISC 11 18:35:45.6±0.5,25˝.45N±0˝.04×126˝.55E±0˝.04,h40km±3km, h40km:pP-P,n415,σ1§55/436,mb4.9/157,MS4.0/19, 24C-17D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.90**	**14**	P	**Pn**	**18 36 02.8**	**+1.0**
JKE				S	**Sn**	**18 36 15.1**	**+1.5**
JOGS	**Gusukube**	**1.24**	**237**	P	**Pn**	**18 36 06.3**	**-0.2**
JOGS				S	**Sn**	**18 36 22.8**	**+0.8**
JIKM	**Ikemajima**	**1.29**	**246**	P	**Pn**	**18 36 06.7**	**-0.4**
JIKM				S	**Sn**	**18 36 24.2**	**+1.0**
JAGN	**Aguni-jima**	**1.30**	**29**	P	**Pn**	**18 36 08.9**	**+1.7**
JMJ2	**Miyako jima3**	**1.31**	**238**	P	**Pn**	**18 36 07.1**	**-0.3**
JMJ2				*e*S	**Sn**	**18 36 23.7**	**0.0**
JJT3	**Tamagusuku3**	**1.31**	**58**	P	**Pn**	**18 36 09.2**	**+1.7**
JIRB	**Irabujima**	**1.39**	**244**	P	**Pn**	**18 36 07.8**	**-0.7**
JIRB				S	**Sn**	**18 36 26.2**	**+0.5**
JNTH	**Nagotoyohara**	**1.70**	**51**	P	**Pn**	**18 36 15.0**	**+2.2**
JTJ	**Tarama**	**1.86**	**245**	P	**Pn**	**18 36 14.0**	**-0.9**
JIH	**Iheya**	**2.03**	**39**	P	**Pn**	**18 36 19.1**	**+1.8**
JOW	**Kunigami**	**2.08**	**48**	P	**Pn**	**18 36 20.0**	**+2.0**
JOW	**Kunigami**	**2.08**	**48**		**Pn**	**18 36 20.2**	**+2.3**
JISG	**Ishigakijimahi**	**2.20**	**248**	P	**Pn**	**18 36 18.2**	**-1.5**
JYRO	**Yoronjima**	**2.32**	**47**	P	**Pn**	**18 36 23.1**	**+1.8**
JIJ	**Ishigaki jima**	**2.44**	**244**	P	**Pn**	**18 36 21.2**	**-1.7**
JKRS	**Kuro-shima**	**2.60**	**243**	P	**Pn**	**18 36 23.9**	**-1.3**
JOKE	**Okinoerabujima**	**2.63**	**43**	P	**Pn**	**18 36 27.4**	**+1.8**
YOJ	**Yonaguni jima**	**3.36**	**254**	P	**Pn**	**18 36 34.2**	**-1.4**
YOJ	**Yonaguni jima**	**3.36**	**254**		**Pn**	**18 36 34.2**	**-1.4**
JMZ	**Minamidaito 2**	**4.23**	**84**	P	**Pn**	**18 36 45.5**	**-2.1**
JMZ				S	**Sn**	**18 37 30.7**	**-5.1**
JKDJ	**Kitadaitoujima**	**4.31**	**82**	P	**Pn**	**18 36 46.9**	**-1.8**
JKDJ				S	**Sn**	**18 37 33.0**	**-4.8**
TATO	**Taipei**	**4.61**	**265**		**Pn**	**18 36 54.0**	**+1.2**
NACB	**Ninganchiao**	**4.68**	**255**		**Pn**	**18 36 52.1**	**-1.6**
YHNB	**Yeheng**	**4.75**	**262**		**Pn**	**18 36 55.5**	**+0.7**
YULB	**Yu-li**	**5.21**	**248**		**Pn**	**18 36 57.5**	**-3.5**
SSLB	**Suanglung**	**5.35**	**253**		**Pn**	**18 37 00.9**	**-2.1**
TWG	**Pinlang**	**5.64**	**244**		**Pn**	**18 37 02.9**	**-4.1**
TPUB	**Ta-pu**	**5.80**	**250**		**Pn**	**18 37 07.8**	**-1.4**
KNMB	**Chin-men Tao**	**7.47**	**264**	Pn	**Pn**	**18 37 30.9**	**-1.2**
JNU	**Nakatsue**	**8.53**	**25**	P	**Pn**	**18 37 49.0**	**+2.4**
	0.7nm,0.3s,baz=190,slow=11,SNR=17						
JNU				S	**Sn**	**18 39 13.3**	**-8.3**
	0.4nm,0.3s,baz=90,slow=11,SNR=1.5						
JNU				LR	LR	18 41 25.2	
	comp=Z,310nm,18.8s,baz=225,slow=40						
JNU	**Nakatsue**	**8.53**	**25**		**Pn**	**18 37 48.2**	**+1.6**
NJ2	**Nanjing**	**9.43**	**316**	*e*P	**Pn**	**18 37 56.5**	**-2.3**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=N,490nm,15.6s						
NJ2				LR	LR		
	comp=E,470nm,14.2s						
NJ2				LR	LR		
	comp=Z,720nm,18.0s						
WHN	**Wuhan**	**11.91**	**298**	⇓P	**Pn**	**18 38 34.7**	**+1.8**
WHN				S	**Sn**	**18 40 49.1**	**+4.6**
WHN				pmax	pmax		
	comp=Z,44nm,0.9s						
WHN				LR	LR		
	comp=N,860nm,11.6s						
WHN				LR	LR		
	comp=E,350nm,7.8s						
WHN				LR	LR		
	comp=Z,1μm,18.2s						
KSRS	**Korea Array**	**12.03**	**5**	P	**Pn**	**18 38 37.3**	**+2.9**
	0.2nm,0.3s,baz=181,slow=14,SNR=17						
KSRS				LR	LR	18 43 40.2	
	comp=Z,262nm,18.2s,baz=160,slow=40						
KSRS	**Korea Array**	**12.03**	**5**		**Pn**	**18 38 37.3**	**+2.9**
KS19	**Wonju Array Si**	**12.07**	**5**	Pn	**Pn**	**18 38 36.3**	**+1.3**
DL2	**Dalian**	**14.05**	**344**	*e*P	**Pn**	**18 39 03.5**	**+1.5**
DL2				*e*S	**Sn**	**18 41 37.9**	**+1.4**
DL2				pmax	pmax		
	comp=Z,50nm,1.2s						
DL2				pmax	pmax		
	comp=Z,150nm,4.6s						
DL2				LR	LR		
	comp=N,520nm,13.5s						
DL2				LR	LR		
	comp=E,570nm,12.4s						
DL2				LR	LR		
	comp=Z,510nm,15.6s						
ENH	**Enshi**	**15.83**	**292**	P	**P**	**18 39 27.6**	**-1.4**
XAN	**Xi'an**	**17.52**	**303**	P	**P**	**18 39 47.8**	**+0.1**
XAN				pP	pP	18 39 56.4	-1.1
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,58nm,3.8s						
XAN

GTA ScP **ScP** **18 48 19.8 -0.3**
GTA PcS **PcS** **18 48 23.7 -0.8**
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,50nm,6.0s
GTA LR LR
comp=Z,170nm,15.5s
GTA LR LR
comp=Z,230nm,17.2s
GTA LR LR
comp=Z,290nm,17.5s
GRNR Gornyy 26.40 14 *i* P P 18 41 07.7 -11
GRNR *e* 18 41 18.4
GRNR pmax pmax
comp=Z,4.0nm,0.9s
GRNR MLR MLR
comp=Z,160nm,16.0s
CM31 Chiang Mai Arr 26.50 260 P **P** **18 41 18.4 -1.1**
CMAR Chiang Mai Arr 26.50 260 P **P** **18 41 18.8 -0.7**
comp=Z,1.2nm,0.8s,baz=62,slow=7.9,SNR=14
CMAR Chiang Mai Arr 26.50 260 P **P** **18 41 17.8 -1.6**
LUWI Luwuk 26.59 188 P **P** **18 41 20.7 +0.5**
LUWI IAmb IAmb 18 41 26.5
comp=Z,42nm,1.3s
SBUM Sibu 26.71 213 P **P** **18 41 22.4 +1.1**
ULN Ulaanbaatar 27.15 330 *ce* P **P** **18 41 23.7 -1.5**
ULN pmax pmax
comp=Z,6.0nm,1.0s
ULN Ulaanbaatar 27.15 330 P **P** **18 41 24.2 -1.1**
SONM Songino Array 27.42 330 P **P** **18 41 26.3 -1.3**
SONM pmax pmax
comp=Z,5.0nm,0.6s
SONM Songino Array 27.42 330 P **P** **18 41 26.8 -0.8**
comp=Z,8.7nm,0.5s,baz=149,slow=9.1,SNR=39
SONM LR LR 18 54 02.7
comp=Z,377nm,18.6s,baz=130,slow=40
SONM Songino Array 27.42 330 P **P** **18 41 26.3 -1.3**
SHL Shillong 31.23 278 P **P** **18 42 01.5 -0.3**
SHL pmax pmax
comp=Z,25nm,0.4s
SHL Shillong 31.23 278 P **P** **18 42 01.5 -0.3**
TLY Talaya 31.47 332 ⇓ *e* P **P** **18 42 01.7 -1.6**
TLY pmax pmax
comp=Z,7.0nm,1.0s
TLY Talaya 31.47 332 P **P** **18 42 02.0 -1.3**
LSA Lhasa 31.59 286 P **P** **18 42 04.6 -0.5**
LSA pmax pmax
comp=Z,8.0nm,0.7s
LSA Lhasa 31.59 286 P **P** **18 42 04.6 -0.5**
IPM Ipoh 32.16 234 P **P** **18 42 07.4 -2.4**
IPM IAmb IAmb 18 42 33.3
comp=Z,58nm,2.0s
MOY Mondy 32.61 330 *eP* **P** **18 42 12.6 -0.9**
TAPN Taplejung 34.75 282 *eP* **P** **18 42 32.4 -0.2**
comp=Z,11nm,0.4s
ODAN Odare 35.09 281 *eP* **P** **18 42 35.0 -0.4**
comp=Z,24nm,0.5s
RAMN Ramite 35.77 281 *eP* **P** **18 42 41.2 -0.1**
comp=Z,18nm,0.6s
JIRN Jiri 36.06 283 *eP* **P** **18 42 43.5 -0.4**
comp=Z,22nm,0.6s
PEA0B Petropavlovsk- 36.16 32 P **P** **18 42 45.2 +1.2**
PEA0B pmax pmax
comp=Z,84nm,1.5s
PEA0B Petropavlovsk- 36.16 32 P **P** **18 42 45.2 +1.2**
PETK Petropavlovsk- 36.16 32 P **P** **18 42 44.7 +0.7**
comp=Z,5.3nm,0.9s,baz=251,slow=9.3,SNR=7.4
PETK Petropavlovsk- 36.16 32 P **P** **18 42 44.6 +0.6**
GUN Gumba 36.31 283 *eP* **P** **18 42 45.4 -0.6**
comp=Z,16nm,0.4s
WMQ Urumqi 36.44 310 *eP* **P** **18 42 46.6 0.0**
WMQ pP pP 18 42 56.6 -1.1
WMQ pmax pmax
comp=Z,9.0nm,1.3s
WMQ pmax pmax
comp=Z,110nm,5.7s
WMQ LR LR
comp=Z,430nm,28.8s
WMQ LR LR
comp=Z,770nm,29.1s
WMQ LR LR
comp=Z,190nm,25.5s
YAK Yakutsk 36.63 2 *eP* **P** **18 42 47.2 -0.7**
YAK pmax pmax
comp=Z,10.0nm,0.8s
YAK pmax pmax
comp=N,8.0nm,1.1s
YAK pmax pmax
comp=E,3.0nm,1.2s
YAK Yakutsk 36.63 2 P **P** **18 42 47.2 -0.7**
comp=E,6.5nm,0.7s,baz=203,slow=2.8,SNR=8.8
YAK Yakutsk 36.63 2 P **P** **18 42 47.6 -0.2**
YAK IAmb IAmb 18 42 50.4
comp=Z,12nm,0.8s
PKI Pulchoki 36.76 283 *eP* **P** **18 42 49.1 -0.7**
comp=Z,2.0nm,0.4s
KKN Kakani 36.85 283 *eP* **P** **18 42 49.6 -0.9**
comp=Z,15nm,0.4s
LEM Lembang 36.99 212 P **P** **18 42 53.0 +1.4**
comp=Z,9.0nm,0.6s,baz=350,slow=19,SNR=4.1
DMN Daman 37.02 283 *eP* **P** **18 42 51.5 -0.5**
comp=Z,11nm,0.5s
GKN Gorkha 37.39 283 *eP* **P** **18 42 54.6 -0.4**
comp=Z,17nm,0.3s
H11N1 WAKE ISLAND Hy 37.58 90 T T 19 23 04.6
baz=283,slow=74,SNR=15
H11N2 WAKE ISLAND Hy 37.58 90 T T 19 23 04.8
baz=283,slow=74,SNR=12
H11N3 WAKE ISLAND Hy 37.60 90 T T 19 23 06.8
baz=283,slow=74,SNR=15
DANN Dangsing 38.13 284 *eP* **P** **18 43 01.2 -0.2**
comp=Z,30nm,0.5s
MTN Manton Dam 38.32 173 P **P** **18 43 06.2 +3.5**
MTN IAmb IAmb 18 43 14.9
comp=Z,27nm,0.9s
KOLN Koldanda 38.33 283 *eP* **P** **18 43 03.0 0.0**
comp=Z,24nm,0.9s
CHLP Challavanipeta 39.88 269 *eP* **P** **18 43 16.2 +0.4**
MK31 Makanchi Array 40.94 313 *eP* **P** **18 43 23.3 -1.0**
MK31 Makanchi Array 40.94 313 P **P** **18 43 22.7 -1.6**
MKAR Makanchi Array 40.94 313 P **P** **18 43 23.5 -0.8**
comp=Z,9.8nm,0.4s,baz=98,slow=9.4,SNR=376
MKAR LR LR 19 02 06.1
comp=Z,105nm,18.4s,baz=93,slow=39
MKAR Makanchi Array 40.94 313 P **P** **18 43 23.4 -0.8**
MAKZ Makanchi 41.15 313 P **P** **18 43 24.9 -1.1**
MAKZ pmax pmax
comp=Z,7.0nm,0.6s
MAKZ Makanchi 41.15 313 P **P** **18 43 24.9 -1.1**
SEY Seymchan 41.21 18 P **P** **18 43 27.2 +1.0**
comp=Z,10nm,0.7s,baz=220,slow=7.5,SNR=20
ZAA0 Zalesovo Array 41.97 324 P **P** **18 43 30.8 -1.7**
ZALV Zalesovo Beam 41.97 324 P **P** **18 43 31.0 -1.5**
ZALV Zalesovo Beam 41.97 324 P **P** **18 43 30.9 -1.7**
comp=Z,6.3nm,0.5s,baz=114,slow=8.3,SNR=42
ZALV Zalesovo Beam 41.97 324 P **P** **18 43 31.0 -1.5**
PDGK Podgornoye 42.13 307 P **P** **18 43 33.1 -1.1**
PVM Polavaram 42.47 268 *eP* **P** **18 43 38.1 +1.0**
PRZ Przheval'sk 42.80 306 P **P** **18 43 40.5 +0.8**
PRZ pmax pmax
comp=Z,17nm,1.0s
PRZ Przheval'sk 42.80 306 P **P** **18 43 40.5 +0.8**
FITZ Fitzroy Crossi 43.29 181 pP pP 18 43 54.1 -0.4
comp=Z,9.8nm,0.8s,baz=24,slow=6.2,SNR=3.7
FITZ Fitzroy Crossi 43.29 181 P **P** **18 43 42.9 -0.6**
FITZ IAmb IAmb 18 44 03.3
comp=Z,56nm,1.9s
MYLAV Mylavaram 43.53 268 *eP* **P** **18 43 47.0 +1.4**
GGR Gangavaram 43.57 270 *eP* **P** **18 43 45.7 -0.3**
RPR Rampur 44.08 271 *eP* **P** **18 43 49.6 -0.5**
KURK Kurchatov 44.36 318 *i* P **P** **18 43 50.2 -1.7**
KURK pmax pmax
comp=Z,8.0nm,0.3s
KURK Kurchatov 44.36 318 P **P** **18 43 50.6 -1.3**
KURK IAmb IAmb 18 43 51.6
comp=Z,11nm,0.4s
KSH Kashi 44.36 301 P **P** **18 43 54.9 +2.7**
KSH sP pP 18 44 00.5 -3.0
KSH PP **PP** **18 45 36.7 +0.6**
KSH S **S** **18 50 25.1 +1.1**
KSH ScS **ScS** **18 53 53.5 +6.1**
KSH pmax pmax
comp=Z,20nm,1.2s
KSH pmax pmax
comp=Z,330nm,5.4s
KSH LR LR
comp=Z,190nm,5.7s
KSH LR LR
comp=Z,200nm,4.5s
KSH LR LR
comp=Z,390nm,5.3s
KURBB Kurchatov Arra 44.39 317 P **P** **18 43 51.0 -1.2**
comp=Z,4.3nm,0.3s,baz=108,slow=9.2,SNR=40
ADKI Addanki 44.43 267 *eP* **P** **18 43 54.6 +1.7**
NRN Naryn 44.46 304 P **P** **18 43 53.0 -0.3**
NRN pmax pmax
comp=Z,8.0nm,0.9s
NRN Naryn 44.46 304 P **P** **18 43 53.0 -0.3**
TKM2 Tokmak 2 44.90 306 P **P** **18 43 56.6 0.0**
SRSP Sriramsagar 44.91 272 *eP* **P** **18 43 56.3 -0.5**
HYB Hyderabad 45.19 270 *i* P **P** **18 43 59.0 0.0**
HYBB Hyderabad (bro 45.19 270 *eP* **P** **18 43 58.9 -0.1**
SKHT Srikalahasti 45.42 264 *eP* **P** **18 44 01.3 +0.5**
AAK Ala-Archa 45.68 306 P **P** **18 44 02.2 -0.5**
comp=Z,1.7nm,0.6s,baz=149,slow=9.7,SNR=7.5
AAK Ala-Archa 45.68 306 P **P** **18 44 02.5 -0.2**
WRAB Tennant Creek 45.74 170 *ce* P P 18 44 14.1 +11
WRAB pmax pmax
comp=Z,24nm,1.1s
WRAB Tennant Creek 45.74 170 P **P** **18 44 05.6 +2.5**
WRAB IAmb IAmb 18 44 17.9
comp=Z,25nm,1.1s
WRA Warramunga Arr 45.75 170 P **P** **18 44 06.4 +3.2**
WRA pmax pmax
comp=Z,1.0nm,0.9s
WRA Warramunga Arr 45.75 170 P **P** **18 44 04.7 +1.5**
comp=Z,1.1nm,0.6s,baz=349,slow=8.7,SNR=5.6
WRA Warramunga Arr 45.75 170 P **P** **18 44 06.4 +3.2**
WR0 Warramunga Arr 45.80 169 P **P** **18 44 07.0 +3.4**
WR0 IAmb IAmb 18 44 18.9
comp=Z,12nm,0.9s
DMPR Damasthipur 45.92 270 *eP* **P** **18 44 04.5 -0.4**
TIXI Tiksi 46.25 1 *i* P **P** **18 44 05.2 -1.4**
TIXI pmax pmax
comp=Z,2.0nm,1.2s
TIXI Tiksi 46.25 1 P **P** **18 44 05.2 -1.4**
NIL Nilore 46.65 293 P **P** **18 44 09.8 -0.6**
NIL pmax pmax
comp=Z,20nm,1.1s
NIL Nilore 46.65 293 P **P** **18 44 09.8 -0.6**
NIL IAmb IAmb 18 45 43.5
comp=Z,20nm,1.1s
ARSB Arslanbob 46.72 304 P **P** **18 44 10.8 -0.1**
ARSB IAmb IAmb 18 45 46.5
comp=Z,38nm,1.9s
KLRI Killari 46.75 271 *eP* **P** **18 44 10.9 -0.4**
PSA00 Pilbara Seismi 47.19 189 P **P** **18 44 13.2 -1.3**
URV Uravakonda 47.19 267 *eP* **P** **18 44 14.2 -0.5**
BTK Batken 48.34 302 P **P** **18 44 22.8 -0.7**
BTK pmax pmax
comp=Z,3.0nm,0.7s
BTK Batken 48.34 302 P **P** **18 44 22.8 -0.7**
KK31 Karatay Array 48.63 306 *i* P **P** **18 44 25.0 -0.6**
KK31 Karatay Array 48.63 306 P **P** **18 44 25.4 -0.2**
KKAR Karatay Array 48.63 306 P **P** **18 44 25.4 -0.2**
KKAR pmax pmax
comp=Z,7.0nm,1.0s
KKAR Karatay Array 48.63 306 P **P** **18 44 25.4 -0.2**
GAR Garm 48.74 301 P **P** **18 44 26.1 -0.5**
GAR IAmb IAmb 18 44 27.0
comp=Z,20nm,1.1s
BILL Bilibino 48.89 19 ⇓ *eP* **P** **18 44 27.4 +0.3**
BILL *PP **pP** **18 44 37.0 -1.5**
BILL *SP **sP** **18 44 40.0 -3.2**
BILL 18 46 22.0
BILL pmax pmax
comp=Z,7.0nm,1.1s
BILL MLR MLR
comp=Z,99nm,16.0s
ASAR Alice Springs 49.34 171 P **P** **18 44 31.1 0.0**
comp=Z,0.8nm,0.5s,baz=355,slow=7.8,SNR=5.4
ASAR pP **pP** **18 44 43.0 +0.8**
comp=Z,4.1nm,0.9s,baz=356,slow=7.3,SNR=7.6
ASAR PcP **PcP** **18 45 53.2 -0.1**
comp=Z,1.1nm,0.6s,baz=352,slow=3.4,SNR=5.3
ASAR Alice Springs 49.34 171 P **P** **18 44 31.0 0.0**
CHGR Chuyangaron 49.66 300 P **P** **18 44 32.9 -0.7**
CHGR IAmb IAmb 18 44 34.5
comp=Z,11nm,0.7s
MIDW Midway 49.74 74 P **P** **18 44 38.1 +3.9**
BVAR Borovoye Array 49.86 319 P **P** **18 44 33.8 -0.9**
comp=Z,4.7nm,0.5s,baz=100,slow=8.2,SNR=58
KBL Kabul 50.05 295 P **P** **18 44 36.7 0.0**
KBL pmax pmax
comp=Z,15nm,0.8s
KBL Kabul 50.05 295 P **P** **18 44 36.7 0.0**
KBL IAmb IAmb 18 44 38.3
comp=Z,15nm,0.8s
HRA Herat 55.64 295 P **P** **18 45 18.0 0.0**
SVE Sverdlovsk 55.96 323 ⇑ *i* P **P** **18 45 19.5 -0.1**
SVE pmax pmax
comp=Z,21nm,0.9s
AB31 Akbulak array 56.08 314 *i* P **P** **18 45 20.0 -0.6**
ABKAR Akbulak array 56.08 314 P **P** **18 45 19.8 -0.9**
ARU Arti 57.07 322 *c* P **P** **18 45 26.5 -1.1**
ARU 18 47 33.1
ARU S **S** **18 53 18.1 -1.4**
ARU pmax pmax
comp=Z,18nm,0.9s
ARU MLR MLR
comp=Z,303nm,19.0s
ARU Arti 57.07 322 P **P** **18 45 25.9 -1.7**
ARU IAmb IAmb 18 45 27.5
comp=Z,15nm,0.9s
AKTO Aktyubinsk 57.31 315 P **P** **18 45 29.5 +0.1**
ANM Nome 57.91 28 P **P** **18 45 35.5 +2.1**
ANM pmax pmax
comp=Z,25nm,1.7s
ANM Nome 57.91 28 P **P** **18 45 35.5 +2.1**
ANM IAmb IAmb 18 46 23.5
comp=Z,25nm,1.7s
GEYT Alibeck 58.37 300 P **P** **18 45 37.4 +0.3**
comp=Z,11nm,0.7s,baz=62,slow=3.5,SNR=20
GEYT LR LR 19 14 17.3
comp=Z,102nm,19.6s,baz=20,slow=40
GEYT Alibeck 58.37 300 P **P** **18 45 37.1 +0.1**
GYA0B ALIBECK ARRAY 58.37 300 P **P** **18 45 37.1 0.0**
GYA0B IAmb IAmb 18 45 38.6
comp=Z,14nm,0.8s
STKA Stephens Creek 58.79 165 pP pP 18 45 52.6 +1.5
comp=Z,3.9nm,0.9s,baz=325,slow=9.4,SNR=3.4
WSAR Wadi Sarin 61.30 284 P **P** **18 45 57.8 +0.5**
comp=Z,3.8nm,0.5s,baz=95,slow=4.8,SNR=7.2
SVW2 Sparrevohn 62.24 32 P **P** **18 46 05.2 +2.1**
UOSS Minazif 62.91 286 P **P** **18 46 08.8 +0.6**
RSO Redoubt South 63.67 33 P **P** **18 46 13.5 +0.7**
PRGR Permogore 63.67 328 *eP* **P** **18 46 08.9 -3.6**
PRGR pmax pmax
comp=Z,10.0nm,0.6s
PPLA Purkeypile 63.72 30 P **P** **18 46 14.9 +1.9**
KDAK Kodiak Island 64.04 36 P **P** **18 46 15.4 +0.3**
KDAK pmax pmax
comp=Z,61nm,1.8s
KDAK Kodiak Island 64.04 36 P **P** **18 46 14.7 -0.3**
comp=Z,5.4nm,0.7s,baz=266,slow=5.5,SNR=4.4
KDAK Kodiak Island 64.04 36 P **P** **18 46 15.4 +0.3**
SKT Skwentna 64.11 31 P **P** **18 46 16.1 +0.6**
SKT IAmb IAmb 18 46 31.1
comp=Z,35nm,1.8s
BPAW Bear Paw Mtn. 64.15 29 P **P** **18 46 15.4 -0.4**
BPAW IAmb IAmb 18 47 06.7
comp=Z,12nm,1.0s
MLY Manley 64.18 28 P **P** **18 46 17.4 +1.5**
MLY IAmb IAmb 18 46 31.7
comp=Z,12nm,1.4s
COLD Coldfoot 64.22 25 P **P** **18 46 19.3 +3.2**
KTH Kantishna Hill 64.23 30 P **P** **18 46 17.7 +1.4**
KTH IAmb IAmb 18 47 28.0
comp=Z,29nm,1.7s
TOLK Toolik Lake Re 64.35 24 P **P** **18 46 18.6 +1.6**
TOLK IAmb IAmb 18 46 20.4
comp=Z,12nm,1.2s
SUA Susitna One 64.53 32 P **P** **18 46 18.5 +0.1**
BRLK Bradley Lake 64.67 34 P **P** **18 46 20.7 +1.5**
BWN Browne 64.81 29 P **P** **18 46 22.1 +2.1**
NEA Nenana 64.93 28 P **P** **18 46 21.8 +1.0**
NEA IAmb IAmb 18 46 36.3
comp=Z,19nm,1.3s
MCK McKinley 65.09 29 P **P** **18 46 21.9 0.0**
MCK pmax pmax
comp=Z,28nm,1.5s
MCK McKinley 65.09 29 P **P** **18 46 21.9 0.0**
MCK IAmb IAmb 18 46 40.5
comp=Z,28nm,1.5s
RND Reindeer 65.17 30 P **P** **18 46 22.7 +0.2**
RND pmax pmax
comp=Z,10.0nm,0.7s
RND Reindeer 65.17 30 P **P** **18 46 22.7 +0.2**
RND IAmb IAmb 18 46 23.8
comp=Z,10nm,0.7s
MDM Murphy Dome 65.24 28 P **P** **18 46 24.0 +1.2**
MDM IAmb IAmb 18 46 25.2
comp=Z,10nm,0.8s
SEW Seward 65.34 33 P **P** **18 46 24.2 +0.7**
SEW IAmb IAmb 18 48 39.3
comp=Z,28nm,1.3s
GHO Glory Hole Cre 65.36 31 P **P** **18 46 24.3 +0.6**
GHO IAmb IAmb 18 47 18.4
comp=Z,25nm,1.6s
WRH Wood River Hil 65.37 28 P **P** **18 46 25.1 +1.5**
CCB Clear Creek Bu 65.47 28 P **P** **18 46 25.2 +0.9**
CCB IAmb IAmb 18 48 45.0
comp=Z,22nm,1.9s
KNK Knik Glacier 65.63 32 P **P** **18 46 26.0 +0.6**
KNK IAmb IAmb 18 46 27.3
comp=Z,16nm,1.1s
SML Sawmill 65.63 31 P **P** **18 46 26.2 +0.8**
IL31 65.84 28 P **P** **18 46 27.7 +1.1**
IL31 IAmb IAmb 18 48 15.9
comp=Z,22nm,1.9s
ILAR Eielson Array 65.84 28 P **P** **18 46 26.9 +0.2**
ILAR Eielson Array 65.84 28 P **P** **18 46 26.8 +0.1**
comp=Z,0.8nm,0.6s,baz=278,slow=7.0,SNR=8.5
ILAR Eielson Array 65.84 28 P **P** **18 46 26.9 +0.2**
HDA Harding Lake 65.87 28 P **P** **18 46 27.4 +0.6**
DHY Denali Highway 65.88 30 P **P** **18 46 28.0 +0.9**
DHY IAmb IAmb 18 46 54.6
comp=Z,13nm,1.5s
PRP Porcupine Dome 66.29 27 P **P** **18 46 30.1 +0.4**
GLI Glacier Island 66.37 32 P **P** **18 46 30.6 +0.5**
GLI IAmb IAmb 18 48 38.2
comp=Z,21nm,1.0s
PAX Paxson 66.75 30 P **P** **18 46 32.9 +0.2**
PAX pmax pmax
comp=Z,17nm,1.6s
PAX Paxson 66.75 30 P **P** **18 46 32.9 +0.2**
PAX IAmb IAmb 18 46 53.3
comp=Z,17nm,1.6s
TMCR Tamitsa 66.77 332 *eP* **P** **18 46 32.0 -0.6**
TMCR pmax pmax
comp=Z,19nm,0.7s
RIDG Independent Ri 66.89 29 P **P** **18 46 33.8 +0.3**
RIDG IAmb IAmb 18 46 34.9
comp=Z,12nm,1.2s
SCRK Sand Creek 67.22 29 P **P** **18 46 36.4 +0.8**
DOT Dot Lake 67.25 29 P **P** **18 46 36.4 +0.7**
LVZ Lovozero 67.40 336 P **P** **18 46 36.2 -0.4**
LVZ pmax pmax
comp=Z,215nm,1.9s
LVZ Lovozero 67.40 336 P **P** **18 46 36.2 -0.4**
RAGM Ragged Mountai 67.64 32 P **P** **18 46 39.7 +1.5**
GLB Gilahina Butte 67.82 31 P **P** **18 46 40.7 +1.3**
GLB IAmb IAmb 18 46 45.8
comp=Z,16nm,1.4s
ZEI Tsey 68.01 308 *eP* **P** **18 46 39.9 -1.2**
ZEI pmax pmax
comp=Z,17nm,0.9s
VRDI Verde Repeater 68.04 31 P **P** **18 46 42.2 +1.3**
GNI Garni 68.09 305 *ce* P **P** **18 46 42.0 +0.4**
GNI pmax pmax
comp=Z,89nm,1.7s
GNI Garni 68.09 305 P **P** **18 46 41.8 +0.2**
GNI IAmb IAmb 18 46 51.5
comp=Z,15nm,0.8s
MCARA McCarthy VSAT 68.20 31 P **P** **18 46 44.0 +2.2**
EGAK Eagle 68.25 27 P **P** **18 46 43.2 +1.3**
EGAK IAmb IAmb 18 48 23.3
comp=Z,16nm,1.6s
CRQM Cirque 68.29 32 P **P** **18 46 43.9 +1.3**
CRQM IAmb IAmb 18 47 52.9
comp=Z,18nm,1.2s
TGL Tana Glacier 68.44 32 P **P** **18 46 44.3 +0.9**
TGL IAmb IAmb 18 47 46.9
comp=Z,31nm,1.4s
KBZ Khabaz 68.48 309 P **P** **18 46 43.5 -0.2**
comp=Z,20nm,0.9s,baz=109,slow=4.9,SNR=28
KIV Kislovodsk 68.57 310 *eP* **P** **18 46 44.1 -0.3**
KIV pmax pmax
comp=Z,94nm,1.0s
KIV Kislovodsk 68.57 310 P **P** **18 46 44.7 +0.2**
BALM Baldy 68.61 32 P **P** **18 46 45.2 +0.9**
BALM IAmb IAmb 18 46 49.6
comp=Z,39nm,2.0s
AKH Akhalkalaki 68.67 307 P **P** **18 46 46.0 +0.8**
AKH pmax pmax
comp=Z,21nm,0.8s
AKH Akhalkalaki 68.67 307 ⇑ P **P** **18 46 46.4 +1.2**
AKH Akhalkalaki 68.67 307 P **P** **18 46 46.0 +0.8**
BARN Barnard Glacie 68.92 31 P **P** **18 46 47.9 +1.4**
BARN IAmb IAmb 18 49 01.5
comp=Z,26nm,1.6s
CTGM Chitina Glacie 69.10 31 P **P** **18 46 49.1 +1.6**
CTGM IAmb IAmb 18 47 08.5
comp=Z,28nm,1.3s
DAWY Dawson 69.17 28 P **P** **18 46 48.4 +0.6**
SOCY Socotra 69.23 274 P **P** **18 46 47.5 -1.5**
SPA0 Spitsbergen Ar 69.28 348 *eP* **P** **18 46 47.9 -0.3**
SPA0 Spitsbergen Ar 69.28 348 P **P** **18 46 48.1 -0.1**
OBN Obninsk 69.52 322 ⇓ *eP* **P** **18 46 49.0 -0.9**
OBN *e* 18 47 15.2
OBN *e* 18 56 51.4
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,96nm,17.0s
EPYK Eagle Plains 69.61 25 P **P** **18 46 51.8 +1.3**
EPYK IAmb IAmb 18 46 52.5
comp=Z,15nm,0.7s
PCA Pinnacle 69.84 32 P **P** **18 46 53.7 +1.7**
PCA IAmb IAmb 18 48 44.7
comp=Z,26nm,1.2s
ARCES ARCESS Array B 70.18 338 P **P** **18 46 53.5 -0.3**
comp=Z,3.1nm,0.8s,baz=67,slow=7.8,SNR=12
ARCES ARCESS Array B 70.18 338 P **P** **18 46 53.2 -0.6**
ARE0 ARCESS Array S 70.18 338 *eP* **P** **18 46 53.7 -0.1**
ARE0 ARCESS Array S 70.18 338 P **P** **18 46 53.6 -0.2**
INK Inuvik 70.20 23 P **P** **18 46 54.9 +1.0**
INK pmax pmax
comp=Z,13nm,1.2s
INK Inuvik 70.20 23 P **P** **18 46 54.4 +0.5**
comp=Z,6.3nm,0.7s,baz=296,slow=8.2,SNR=10
INK Inuvik 70.20 23 P **P** **18 46 54.9 +1.0**
INK IAmb IAmb 18 46 59.3
comp=Z,13nm,1.1s
HYT Haines Junctio 70.94 31 P **P** **18 46 59.8 +1.1**
HYT IAmb IAmb 18 48 03.6
comp=Z,24nm,1.7s
KTK1 Kautokeino 71.12 338 *eP* **P** **18 46 59.6 +0.1**
NOR Nord 71.57 355 *i* P **P** **18 47 02.1 0.0**
comp=Z,6.5nm,0.7s
WHY Whitehorse 72.21 31 P **P** **18 47 08.0 +1.6**
TRO Tromso 72.27 339 *eP* **P** **18 47 06.4 -0.1**
RAYN Ar Rayn 72.62 288 P **P** **18 47 09.3 -0.1**
RAYN pmax pmax
comp=Z,40nm,2.0s
RAYN Ar Rayn 72.62 288 P **P** **18 47 09.3 -0.1**
RAYN IAmb IAmb 18 47 28.3
comp=Z,40nm,2.0s
FIA1 FINESS Array S 72.79 330 P **P** **18 47 09.5 -0.2**
FIA1 IAmb IAmb 18 47 10.1
comp=Z,21nm,1.0s
FINES FINESS Array B 72.79 330 P **P** **18 47 09.4 -0.3**
comp=Z,6.7nm,0.5s,baz=57,slow=5.6,SNR=112
FINES FINESS Array B 72.79 330 P **P** **18 47 09.3 -0.3**
C36M Paulatuk 72.96 20 P **P** **18 47 11.0 +0.5**
C36M IAmb IAmb 18 47 11.9
comp=Z,13nm,0.8s
VSU Vasula 73.59 327 *ce* P **P** **18 47 13.5 -0.9**
VSU pmax pmax
comp=Z,74nm,1.7s
SIM Simferopol' 74.12 312 *ce* P **P** **18 47 17.5 -0.3**
SIM pmax pmax

	comp=Z,17nm,0.8s						
STEI	**Steigen**	**74.25**	**339**	*e*P	**P**	**18 47 18.3**	**+0.2**
GAZ	**Gaziantep**	**74.61**	**304**	P	**P**	**18 47 18.6**	**-2.3**
GAZ				IAmb	IAmb	18 47 22.3	
	comp=Z,11nm,0.9s						
AKASG	**Malin Array Be**	**75.14**	**319**	P	**P**	**18 47 22.5**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AKASG	**Malin Array Be**	**75.14**	**319**	P	**P**	**18 47 23.0**	**-0.6**
	comp=Z,4.3nm,0.4s,baz=58,slow=6.5,SNR=42						
AKASG	**Malin Array Be**	**75.14**	**319**	P	**P**	**18 47 22.5**	**-1.1**
AKBB	**Malin Array Si**	**75.14**	**319**	P	**P**	**18 47 22.9**	**-0.7**
AKBB				pmax	pmax		
	comp=Z,14nm,0.7s						
AKBB	**Malin Array Si**	**75.14**	**319**	P	**P**	**18 47 22.9**	**-0.7**
AKBB				IAmb	IAmb	18 47 23.8	
	comp=Z,14nm,0.7s						
DAG	**Danmarks Havn**	**75.83**	**352**	*i* P	**P**	**18 47 26.3**	**-0.8**
DAG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DAG	**Danmarks Havn**	**75.83**	**352**	*i* P	**P**	**18 47 26.3**	**-0.8**
	comp=Z,7.2nm,0.9s						
BR131	**Keskin Array S**	**76.31**	**308**	P	**P**	**18 47 30.4**	**-0.3**
BR131				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BR131	**Keskin Array S**	**76.31**	**308**	P	**P**	**18 47 30.4**	**-0.3**
BR131				IAmb	IAmb	18 47 31.5	
	comp=Z,9.0nm,0.8s						
BRTR	**Keskin Array B**	**76.31**	**308**	*ce*P	**P**	**18 47 30.7**	**0.0**
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRTR	**Keskin Array B**	**76.31**	**308**	P	**P**	**18 47 30.4**	**-0.3**
	comp=Z,8.0nm,0.8s,baz=98,slow=5.4,SNR=58						
BRTR				pP	**pP**	**18 47 43.6**	**+1.0**
	comp=Z,5.2nm,0.9s,baz=90,slow=3.7,SNR=8.8						
BRTR	**Keskin Array B**	**76.31**	**308**	P	**P**	**18 47 30.5**	**-0.3**
RES	**Resolute Bay**	**76.59**	**10**	P	**P**	**18 47 31.9**	**+0.4**
RES				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RES	**Resolute Bay**	**76.59**	**10**	P	**P**	**18 47 31.9**	**+0.4**
RES				IAmb	IAmb	18 47 34.6	
	comp=Z,9.6nm,0.8s						
SORM	**Soroca**	**76.65**	**317**	⇓P	**P**	**18 47 31.7**	**-0.6**
NSS	**Namsos**	**77.13**	**336**	*e*P	**P**	**18 47 33.6**	**-1.1**
SUW	**Suwalki**	**77.20**	**324**	P	**P**	**18 47 34.2**	**-1.0**
SUW				pmax	pmax		
	comp=Z,52nm,0.9s						
SUW	**Suwalki**	**77.20**	**324**	P	**P**	**18 47 34.1**	**-1.0**
TLCR		**77.52**	**314**	P	**P**	**18 47 37.6**	**+0.4**
TLCR		**77.52**	**314**	⇑P	**P**	**18 47 37.2**	**+0.1**
JURR	**Jurilovca**	**77.65**	**314**	⇑P	**P**	**18 47 38.4**	**+0.5**
TOPG	**Topolog**	**77.93**	**314**	⇓P	**P**	**18 47 39.6**	**+0.1**
PETR	**Petresti**	**78.32**	**315**	⇓P	**P**	**18 47 43.0**	**+1.3**
CSS	**Mathiatis**	**78.34**	**303**	P	**P**	**18 47 42.0**	**-0.1**
CSS				IAmb	IAmb	18 47 42.6	
	comp=Z,13nm,0.8s						
ODBI	**Odobesti**	**78.42**	**315**	⇓P	**P**	**18 47 43.1**	**+0.9**
BIZ	**Bicaz**	**78.53**	**317**	⇑P	**P**	**18 47 43.1**	**+0.3**
VRI	**Vrincioaia**	**78.58**	**315**	⇑P	**P**	**18 47 43.7**	**+0.5**
BISRR	**Bisoca**	**78.73**	**315**	⇓P	**P**	**18 47 45.3**	**+1.3**
BUR08	**Bucovina Ar. S**	**78.78**	**317**	P	**P**	**18 47 44.2**	**-0.1**
BUR08				IAmb	IAmb	18 47 45.5	
	comp=Z,8.5nm,0.8s						
BURAR	**Bucovina Array**	**78.78**	**317**	P	**P**	**18 47 45.6**	**+1.3**
BURAR	**Bucovina Array**	**78.78**	**317**	⇑P	**P**	**18 47 44.7**	**+0.4**
HFS	**Hagfors**	**78.80**	**332**	LR	LR	19 26 29.2	
	comp=Z,174nm,19.7s,baz=54,slow=39						
OZUR		**79.08**	**316**	⇑P	**P**	**18 47 46.7**	**+0.8**
NC405	**NORSAR Array S**	**79.09**	**333**	P	**P**	**18 47 45.4**	**-0.2**
NC303	**NORSAR Array S**	**79.17**	**334**	P	**P**	**18 47 46.0**	**0.0**
MLR	**Muntele Rosu**	**79.24**	**315**	P	**P**	**18 47 46.6**	**-0.3**
MLR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MLR	**Muntele Rosu**	**79.24**	**315**	⇑P	**P**	**18 47 47.9**	**+1.0**
MLR	**Muntele Rosu**	**79.24**	**315**	P	**P**	**18 47 46.6**	**-0.3**
MLR				IAmb	IAmb	18 47 48.1	
	comp=Z,9.8nm,0.9s						
NB201	**NORSAR Array S**	**79.30**	**333**	P	**P**	**18 47 46.0**	**-0.8**
NB2	**NORSAR Subarra**	**79.34**	**333**	P	**P**	**18 47 46.6**	**-0.4**
	comp=Z,4.6nm,0.6s,baz=56,slow=5.3						
NB2	**NORSAR Subarra**	**79.34**	**333**	P	**P**	**18 47 46.6**	**-0.4**
	baz=56,slow=5.3						
NOA	**NORSAR Array B**	**79.34**	**333**	P	**P**	**18 47 46.5**	**-0.4**
	comp=Z,7.0nm,0.6s,baz=53,slow=5.7,SNR=32						
NC602	**NORSAR Array S**	**79.37**	**333**	*e*P	**P**	**18 47 46.6**	**-0.5**
DOPR	**Dopca**	**79.39**	**316**	⇓P	**P**	**18 47 48.5**	**+0.9**
NC204	**NORSAR Array S**	**79.39**	**334**	P	**P**	**18 47 46.6**	**-0.7**
KWP	**Kalwaria Pacla**	**79.39**	**320**	P	**P**	**18 47 47.6**	**+0.1**
KWP				pmax	pmax		
	comp=Z,240nm,0.9s						
KWP	**Kalwaria Pacla**	**79.39**	**320**	P	**P**	**18 47 47.6**	**+0.1**
NBO00	**NORSAR Array S**	**79.52**	**334**	P	**P**	**18 47 47.7**	**-0.3**
ARCR	**ARCALIA**	**79.54**	**317**	⇑P	**P**	**18 47 49.5**	**+1.1**
NAO01	**NORSAR Array S**	**79.58**	**333**	P	**P**	**18 47 47.8**	**-0.5**
DOMB	**Dombas**	**79.61**	**335**	*e*P	**P**	**18 47 48.3**	**-0.2**
YKW3	**Yellowknife Ar**	**79.82**	**24**	P	**P**	**18 47 50.3**	**+0.8**
YKW3				IAmb	IAmb	18 47 51.3	
	comp=Z,9.7nm,0.9s						
YKA	**Yellowknife Ar**	**79.86**	**24**	P	**P**	**18 47 50.7**	**+1.0**
	comp=Z,5.2nm,0.7s,baz=300,slow=5.3,SNR=23						
YKA				pP	**pP**	**18 48 03.1**	**+1.3**
	comp=Z,2.7nm,0.8s,baz=309,slow=5.4,SNR=4.4						
YKA	**Yellowknife Ar**	**79.86**	**24**	P	**P**	**18 47 50.7**	**+1.0**
YKA					**pP**	**18 48 03.1**	**+1.3**
MOL	**Molde**	**79.88**	**336**	*e*P	**P**	**18 47 50.1**	**+0.3**
KOLS	**Kolonicke sedl**	**79.97**	**320**	*e*P	**P**	**18 47 51.0**	**+0.4**
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KOLS	**Kolonicke sedl**	**79.97**	**320**	*e*P	**P**	**18 47 51.0**	**+0.4**
UZH	**Uzhgorod**	**80.09**	**319**	⇓*e*P	**P**	**18 47 51.6**	**+0.3**
UZH				*i*		18 48 02.0	
UZH				*e*		18 48 10.1	
ARR	**Arges**	**80.12**	**316**	⇑P	**P**	**18 47 52.4**	**+0.7**
OSL	**Oslo**	**80.16**	**333**	*e*P	**P**	**18 47 51.7**	**+0.3**
ELL	**Elmali**	**80.18**	**306**	P	**P**	**18 47 51.9**	**-0.3**
ELL				pmax	pmax		
	comp=Z,54nm,0.6s						
ELL	**Elmali**	**80.18**	**306**	P	**P**	**18 47 51.9**	**-0.3**
HUMR	**Humele**	**80.27**	**315**	⇑P	**P**	**18 47 52.1**	**-0.2**
AKN	**Aaknes**	**80.32**	**336**	*e*P	**P**	**18 47 52.4**	**+0.1**
ELND	**Elena**	**80.39**	**313**	⇓P	**P**	**18 47 53.4**	**+0.4**
DRGR		**80.68**	**317**	⇑P	**P**	**18 47 55.2**	**+0.6**
SKAR	**Skarslia**	**80.71**	**334**	*e*P	**P**	**18 47 55.2**	**+0.7**
OJC	**Ojcow**	**80.79**	**321**	P	**P**	**18 47 54.4**	**-0.6**
OJC				pmax	pmax		
	comp=Z,12nm,0.6s						
OJC	**Ojcow**	**80.79**	**321**	*e*P	**P**	**18 47 55.6**	**+0.6**
OJC	**Ojcow**	**80.79**	**321**	P	**P**	**18 47 54.4**	**-0.6**
OJC				IAmb	IAmb	18 47 56.3	
	comp=Z,12nm,0.6s						
KONO	**Kongsberg**	**80.79**	**333**	*e*P	**P**	**18 47 55.1**	**+0.3**
NIE	**Niedzica**	**80.88**	**321**	*e*P	**P**	**18 47 56.5**	**+0.9**
NIE	**Niedzica**	**80.88**	**321**	*e*P	**P**	**18 47 56.5**	**+0.9**
ALN	**Alexandroupoli**	**81.15**	**311**	P	**P**	**18 47 56.4**	**-0.7**
ALN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ALN	**Alexandroupoli**	**81.15**	**311**	P	**P**	**18 47 56.4**	**-0.7**
KECS	**Kecovo**	**81.22**	**320**	*e*P	**P**	**18 47 57.8**	**+0.4**
KECS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KECS	**Kecovo**	**81.22**	**320**	*e*P	**P**	**18 47 57.8**	**+0.4**
HYA	**Hoyanger**	**81.24**	**335**	*e*P	**P**	**18 47 56.7**	**-0.5**
GZR	**Gura Zlata**	**81.28**	**316**	⇑P	**P**	**18 47 58.7**	**+0.9**
PUNG	**Punghina**	**81.69**	**315**	⇓P	**P**	**18 48 00.6**	**+0.6**
SUMG	**Summit**	**81.70**	**355**	P	**P**	**18 48 00.0**	**+0.1**
SUMG				pmax	pmax		
	comp=Z,15nm,0.9s						
SUMG	**Summit**	**81.70**	**355**	*i* P	**P**	**18 47 59.7**	**-0.2**
	comp=Z,32nm,0.8s						
SUMG	**Summit**	**81.70**	**355**	P	**P**	**18 47 60.0**	**+0.1**
SUMG				IAmb	IAmb	18 48 01.7	
	comp=Z,14nm,0.9s						
SCO	**Scoresbysund**	**81.75**	**350**	P	**P**	**18 48 01.4**	**+1.7**
SCO				pmax	pmax		
	comp=Z,61nm,1.5s						
SCO	**Scoresbysund**	**81.75**	**350**	P	**P**	**18 48 01.4**	**+1.7**
ODD1	**Odda**	**81.84**	**334**	*e*P	**P**	**18 47 59.9**	**-0.6**
BZS	**Buzias**	**81.90**	**317**	⇓P	**P**	**18 48 01.1**	**+0.2**
ASK	**Askoy**	**82.05**	**335**	*e*P	**P**	**18 48 01.5**	**+0.1**
BER	**Bergen**	**82.06**	**335**	*e*P	**P**	**18 48 01.5**	**0.0**
VYHS	**Vyhne**	**82.18**	**320**	*e*P	**P**	**18 48 03.1**	**+0.7**
VYHS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VYHS	**Vyhne**	**82.18**	**320**	*e*P	**P**	**18 48 03.1**	**+0.7**
MDVR	**Moldovita**	**82.23**	**316**	⇓P	**P**	**18 48 03.3**	**+0.5**
VTS	**Vitosha**	**82.26**	**314**	P	**P**	**18 48 03.5**	**+0.3**
VTS				pmax	pmax		
	comp=Z,14nm,0.9s						
VTS	**Vitosha**	**82.26**	**314**	P	**P**	**18 48 03.5**	**+0.3**
VTS				IAmb	IAmb	18 48 18.4	
	comp=Z,14nm,0.9s						
KSP	**Ksiaz**	**82.41**	**323**	*e*P	**P**	**18 48 04.2**	**+0.6**
KSP	**Ksiaz**	**82.41**	**323**	*e*P	**P**	**18 48 04.2**	**+0.6**
OSTC	**Ostas**	**82.60**	**323**	*e*P	**P**	**18 48 09.2**	**+4.6**
DPC	**Dobruska-Polom**	**82.65**	**323**	*e*P	**P**	**18 48 09.0**	**+4.1**
DPC	**Dobruska-Polom**	**82.65**	**323**	*e*P	**P**	**18 48 09.0**	**+4.1**
KARP	**Karpathos**	**82.70**	**306**	P	**P**	**18 48 05.1**	**-0.3**
VRAC	**Vranov**	**83.04**	**322**	P	**P**	**18 48 08.8**	**+1.9**
VRAC	**Vranov**	**83.04**	**322**	LR	LR	19 29 18.2	
	comp=Z,104nm,18.3s,baz=55,slow=39						
VRAC	**Vranov**	**83.04**	**322**	⇓P	**P**	**18 48 08.0**	**+1.1**
VAY	**Valandovo**	**83.30**	**313**	*i* P	**P**	**18 48 08.6**	**+0.3**
STIP	**Stip**	**83.38**	**313**	*i* P	**P**	**18 48 08.1**	**-0.7**
BRG	**Berggiesshubel**	**83.66**	**324**	*e*P	**P**	**18 48 12.0**	**+2.0**
	comp=Z,4.9nm,0.9s						
BRG	**Berggiesshubel**	**83.66**	**324**	*e*P	**P**	**18 48 12.0**	**+2.0**
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SKO	**Skopje**	**83.74**	**314**	*i* P	**P**	**18 48 11.4**	**+0.8**
CLL	**Collm**	**83.92**	**325**	*e*P	**P**	**18 48 11.0**	**-0.3**
CLL				*e*		18 48 24.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CLL	**Collm**	**83.92**	**325**	*e*P	**P**	**18 48 11.0**	**-0.3**
	comp=Z,6.0nm,0.7s						
CLL				*e*pP	**pP**	**18 48 24.0**	**+0.6**
CLL				Lm	MLR	19 28 00.0	
	comp=Z,200nm,19.8s						
CLL	**Collm**	**83.92**	**325**	P	**P**	**18 48 10.7**	**-0.6**
LIT	**Litokhoron**	**83.93**	**312**	P	**P**	**18 48 11.4**	**-0.3**
LIT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LIT	**Litokhoron**	**83.93**	**312**	P	**P**	**18 48 11.4**	**-0.3**
LIT				IAmb	IAmb	18 48 12.8	
	comp=Z,5.9nm,0.7s						
CONA	**Conrad Observa**	**84.18**	**321**	*e*PcP	**P**	**18 48 14.5**	**+1.7**
	comp=Z,9.4nm,1.4s						
FNA	**Florina**	**84.35**	**313**	P	**P**	**18 48 13.5**	**-0.3**
FNA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
FNA	**Florina**	**84.35**	**313**	P	**P**	**18 48 13.5**	**-0.3**
AGG	**Agios Georgios**	**84.55**	**311**	P	**P**	**18 48 13.3**	**-1.5**
AGG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AGG	**Agios Georgios**	**84.55**	**311**	P	**P**	**18 48 13.3**	**-1.5**
AGG				IAmb	IAmb	18 48 27.4	
	comp=Z,8.4nm,0.8s						
ARSA	**Arzberg**	**84.73**	**320**	*e*PcP	**P**	**18 48 18.2**	**+2.6**
	comp=Z,2.4nm,1.0s						
GERES	**GERESS Array B**	**84.90**	**322**	P	**P**	**18 48 17.0**	**+0.5**
GERES	**GERESS Array B**	**84.90**	**322**	P	**P**	**18 48 17.0**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=60,slow=4.7,SNR=6.7						
GERES				LR	LR	19 28 17.0	
	comp=Z,98nm,18.6s,baz=73,slow=37						
GERES	**GERESS Array B**	**84.90**	**322**	P	**P**	**18 48 15.9**	**-0.5**
PDG	**Podgorica**	**84.93**	**315**	⇑P	**P**	**18 48 17.1**	**+0.5**
PDG	**Podgorica**	**84.93**	**315**	P	**P**	**18 48 16.6**	**0.0**
PDG				IAmb	IAmb	18 48 18.4	
	comp=Z,12nm,0.8s						
BLY	**Banja Luka**	**85.05**	**318**	P	**P**	**18 48 17.5**	**+0.3**
BLY				IAmb	IAmb	18 48 18.7	
	comp=Z,5.7nm,0.7s						
MOA	**Molln**	**85.13**	**321**	*e*PcP	**P**	**18 48 19.0**	**+1.4**
	comp=Z,1.6nm,0.5s,SNR=4.2						
PERS	**Pernice**	**85.29**	**320**	*i* P	**P**	**18 48 18.5**	**+0.1**
SOKA	**Soboth**	**85.32**	**320**	*i* PcP	**P**	**18 48 19.1**	**+0.5**
	comp=Z,3.3nm,0.6s,SNR=5.5						
GOLS	**Golise**	**85.33**	**319**	*i* P	**P**	**18 48 18.9**	**+0.3**
OBKA	**Obir**	**85.69**	**320**	*e*PcP	**P**	**18 48 21.3**	**+0.8**
	comp=Z,2.0nm,0.6s						
ITM	**Ithomi**	**85.71**	**309**	P	**P**	**18 48 19.7**	**-0.9**
KBA	**Koelnbreinsper**	**86.07**	**321**	*i* PcP	**P**	**18 48 23.1**	**+0.6**
	comp=Z,3.7nm,0.5s						
MYKA	**Terra Mystica**	**86.15**	**320**	*i* P	**P**	**18 48 20.3**	**-2.4**
	comp=Z,1.9nm,0.5s						
ABTA	**Abfaltersbach**	**86.73**	**321**	*e*PcP	**P**	**18 48 25.2**	**-0.4**
	comp=Z,2.0nm,0.6s						
WATA	**Walderalm**	**86.92**	**322**	*e*PcP	**P**	**18 48 27.3**	**+0.7**
	comp=Z,2.5nm,0.7s						
MOTA	**Moosalm**	**87.18**	**322**	*e*PcP	**P**	**18 48 27.7**	**-0.2**
	comp=Z,2.4nm,0.9s						
SQTA	**Sankt Quirin**	**87.19**	**322**	*e*PcP	**P**	**18 48 28.0**	**+0.2**
	comp=Z,4.1nm,0.8s						
FUORN	**Ofenpass-Fuorn**	**88.07**	**322**	P	**P**	**18 48 32.2**	**0.0**
FUORN				IAmb	IAmb	18 49 06.5	
	comp=Z,22nm,1.7s						
DAVOX	**Davos/Dischmat**	**88.19**	**322**	LR	LR	19 31 26.9	
	comp=Z,119nm,18.4s,baz=81,slow=38						
FFC	**Flin Flon**	**89.96**	**26**	P	**P**	**18 48 41.0**	**+0.4**
FFC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FFC	**Flin Flon**	**89.96**	**26**	P	**P**	**18 48 41.0**	**+0.4**
FFC				IAmb	IAmb	18 48 55.7	
	comp=Z,6.9nm,0.8s						
ESDC	**Sonseca Array**	**100.46**	**323**	P	**Pdif**	**18 49 28.4**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=30,slow=4.0,SNR=4.5						

*IDC **11** 18:43:07.2±10.0, 26°.16S×179°.63E, h486km±109km, mb3.3/3, mb1 3.5/4, mb1mx3.0/29, mbtmp4.2/4, Error ellipse: s-maj=90.5km s-min=37.9km az=23.0*
*NEIC **11** 18:43:08.2±1.7, 26°.1S±0°.2×179°.6E±0°.2, h510km±5km, mb4.6/18, Error ellipse: s-maj=23.6km s-min=20.0km az=144.0*

ISC 11 18:43:07.8±0.9, 26°22S±0°09×179°.6E±0°.1, h503km, n32, σ1§61/34, mb4.4/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.72**	**145**	P	**P**	**18 44 27.0**	**+2.8**
OUZ	**Omahuta**	**10.36**	**209**	P	**P**	**18 45 32.4**	**+3.5**
URZ	**Urewera**	**12.19**	**189**	P	**P**	**18 45 49.0**	**+0.8**
	1.2nm,0.3s,baz=86,slow=2.0,SNR=8.3						
URZ				S	**S**	**18 47 58.0**	**-2.5**
	0.1nm,0.3s,baz=96,slow=19,SNR=1.9						
URZ	**Urewera**	**12.19**	**189**	P	**P**	**18 45 48.3**	**+0.1**
URZ					**S**	**18 47 57.1**	**-3.3**
DZM	**Mont Dzumac**	**12.73**	**286**	P	**P**	**18 45 53.1**	**-1.1**
BFZ	**Birch Farm**	**14.70**	**190**	P	**P**	**18 46 12.2**	**-2.4**
QRZ	**Quartz Range**	**15.71**	**200**	P	**P**	**18 46 27.7**	**+2.5**
QRZ				IAmb	IAmb	18 46 41.8	
	comp=Z,40nm,1.3s						
NNZ	**Nelson**	**15.83**	**198**	P	**P**	**18 46 27.6**	**+1.2**
NNZ				IAmb	IAmb	18 46 45.1	
	comp=Z,71nm,1.7s						
THZ	**Tophouse**	**16.47**	**198**	P	**P**	**18 46 33.8**	**+0.7**
THZ				IAmb	IAmb	18 46 48.5	
	comp=Z,32nm,1.3s						
KHZ	**Kahutara**	**16.91**	**196**	P	**P**	**18 46 39.1**	**+1.5**
MQZ	**McQueen's Vall**	**18.35**	**196**	P	**P**	**18 46 53.9**	**+2.9**
FOZ	**Fox Glacier**	**19.03**	**202**	P	**P**	**18 46 59.4**	**+2.1**
HNR	**Honiara**	**25.04**	**308**	P	**P**	**18 47 50.7**	**-0.9**
HNR				IAmb	IAmb	18 48 05.2	
	comp=Z,37nm,1.0s						
STKA	**Stephens Creek**	**33.61**	**251**	P	**P**	**18 49 07.1**	**+1.2**
	comp=Z,0.7nm,0.4s,baz=90,slow=7.3,SNR=4.1						
STKA	**Stephens Creek**	**33.61**	**251**	P	**P**	**18 49 06.0**	**+0.2**
COEN	**Coen**	**36.22**	**282**	P	**P**	**18 49 28.8**	**+0.8**
COEN				IAmb	IAmb	18 49 46.2	
	comp=Z,31nm,1.6s						
BBOO	**Buckleboo**	**38.28**	**250**	P	**P**	**18 49 44.8**	**+0.2**
AS31	**Alice Springs**	**41.38**	**263**	P	**P**	**18 50 09.9**	**+0.1**
ASAR	**Alice Springs**	**41.38**	**263**	P	**P**	**18 50 10.2**	**+0.5**
	comp=Z,1nm,0.5s,baz=92,slow=7.3,SNR=55						
ASAR	**Alice Springs**	**41.38**	**263**	P	**P**	**18 50 09.8**	**0.0**
WR0	**Warramunga Arr**	**41.79**	**269**	P	**P**	**18 50 13.0**	**0.0**
WRAB	**Tennant Creek**	**41.97**	**269**	P	**P**	**18 50 14.4**	**0.0**
WRAB				IAmb	IAmb	18 50 32.7	
	comp=Z,19nm,1.6s						
WRA	**Warramunga Arr**	**41.97**	**269**	P	**P**	**18 50 14.5**	**0.0**
	comp=Z,2.9nm,0.4s,baz=105,slow=7.9,SNR=44						
WRA	**Warramunga Arr**	**41.97**	**269**	P	**P**	**18 50 14.3**	**-0.2**
MTN	**Manton Dam**	**47.35**	**277**	P	**P**	**18 50 55.7**	**-0.2**
MTN				IAmb	IAmb	18 51 08.1	
	comp=Z,27nm,1.4s						
KNRA	**Kununurra**	**48.39**	**272**	P	**P**	**18 51 04.4**	**+0.6**
FITZ	**Fitzroy Crossi**	**50.36**	**268**	P	**P**	**18 51 18.9**	**+0.6**
FITZ				IAmb	IAmb	18 51 37.2	
	comp=Z,25nm,1.8s						
AIN	**Ainahou**	**51.37**	**31**	P	**P**	**18 51 24.4**	**-1.4**
PSAC2	**Pilbara Seismi**	**54.41**	**261**	P	**P**	**18 51 45.2**	**-2.2**
PSAC2				IAmb	IAmb	18 51 54.3	
	comp=Z,30nm,1.6s						
AKASG	**Malin Array Be**	**146.71**	**325**	PKPbc	**PKPbc**	**19 01 53.1**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=50,slow=4.4,SNR=3.2						
BRTR	**Keskin Array B**	**148.65**	**304**	PKPbc	**PKPbc**	**19 01 58.2**	**0.0**
	comp=Z,0.3nm,0.7s,baz=69,slow=4.9,SNR=1.7						
BRTR	**Keskin Array B**	**148.65**	**304**		**PKPbc**	**19 01 57.7**	**-0.5**

IDC 11 19:03:23.7±2.1, 6°.84S×155°.52E, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.5/27, mbtmp3.7/4, ML4.1/1, MS2.8/1, Ms1 2.8/1, ms1mx2.3/14, Error ellipse: s-maj=54.4km s-min=35.9km az=141.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.29**	**306**	Pn	Pn	19 04 32.0	+1.7
	11nm,0.3s,baz=90,slow=2.0,SNR=3.0						
KRVT				Sn	Sn	19 05 15.6	-5.4
	9.0nm,0.3s,baz=240,slow=23,SNR=1.0						
WRA	**Warramunga Arr**	**24.33**	**236**	P	P	19 08 43.5	+0.1
	0.3nm,0.4s,baz=58,slow=9.4,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**27.48**	**23**	T	T	19 37 40.8	
	baz=206,slow=74						
H11S2	**WAKE ISLAND Hy**	**27.48**	**24**	T	T	19 37 30.0	
	baz=206,slow=74						
H11S1	**WAKE ISLAND Hy**	**27.50**	**23**	T	T	19 37 33.3	
	baz=206						
KSRS	**Korea Array**	**51.04**	**332**	LR	LR	19 33 02.1	
	comp=Z,8.5nm,19.0s,baz=240,slow=35						
CMAR	**Chiang Mai Arr**	**61.18**	**295**	P	P	19 13 40.2	-0.5
	0.5nm,0.5s,baz=120,slow=5.0,SNR=5.5						
ILAR	**Eielson Array**	**83.04**	**21**	P	P	19 15 50.8	+0.1
	0.5nm,1.0s,baz=237,slow=6.3,SNR=2.7						

IDC 11 19:03:55.2±4.8, 24°.58S×178°.15W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/25, mbtmp3.8/3, Error ellipse: s-maj=230.5km s-min=49.0km az=157.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.17**	**271**	P	P	19 10 34.8	+1.1
	3.6nm,0.9s,baz=86,slow=5.9,SNR=4.5						
ASAR	**Alice Springs**	**43.59**	**261**	P	P	19 12 01.6	+0.2
	0.5nm,0.8s,baz=90,slow=7.3,SNR=4.4						
WRA	**Warramunga Arr**	**44.05**	**266**	P	P	19 12 03.8	-1.3
	0.6nm,0.3s,baz=104,slow=8.3,SNR=15						
HFS	**Hagfors**	**143.52**	**350**	PKP	PKPdf	19 23 30.2	-1.2
	4.0nm,1.1s,baz=42,slow=2.3,SNR=5.9						
AKASG	**Malin Array Be**	**146.44**	**328**	PKPbc	PKPbc	19 23 37.5	-0.5
	0.3nm,0.4s,baz=49,slow=4.7,SNR=3.8						

*TEH **11** 19:05:29.7, 29°.50N×56°.73E, h8km, ML3.7*
*THR **11** 19:05:30.2±0.6, 29°.53N×56°.66E, h14km±4km, ML3.6*
*OMAN **11** 19:05:33.5±1.2, 29°.24N×57°.16E, h8km, ml3.6/4, Error ellipse: s-maj=44.5km s-min=10.9km az=108.0*

ISC 11 19:05:30.3±1.5, 29°.50N±0°.04×56°.72E±0°.04, h2km±14km, n40, σ0§88/48, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NGRK	**Negar Kerman**	**0.14**	**4**	*e*Pg	**Pg**	**19 05 33.2**	**0.0**
NGRK				*e*Sg	**Sg**	**19 05 35.3**	**+0.1**
KRBR	**Kerman**	**0.48**	**4**	*e*Pg	**Pg**	**19 05 39.5**	**-0.1**
KRBR	**Kerman**	**0.48**	**4**	*e*Pg	**Pg**	**19 05 39.5**	**-0.1**
KRBR				*e*Sg	**Sg**	**19 05 46.3**	**+0.4**
KRBR				IAML		19 05 46.7	
	comp=E,4μm,0.2s						
TVBK	**TV Kerman**	**0.48**	**4**	*e*Pg	**Pg**	**19 05 38.8**	**-0.9**
TVBK				*e*		19 05 46.6	

SPIA	Saint Paul Isl	4.08	352	Pn		Pn	19 34 05.8	-2.3
ADK	Adak	4.73	257	Pn		Pn	19 34 18.2	+1.2
SDPT	Sand Point	5.58	63	Pn		Pn	19 34 30.1	+1.4
OHAK	Old Harbor	9.98	60	Pn		Pn	19 35 26.6	-2.2
SMY	Shemya	10.08	274	Pn		Pn	19 35 31.9	+1.8
KDAK	Kodiak Island	10.52	57	Pn		Pn	19 35 34.8	-1.3
BRLK	Bradley Lake	12.09	50	Pn		Pn	19 35 57.1	-0.4
GHO	Glory Hole Cre	13.87	43	Pn		Pn	19 36 21.6	+0.1
SCM	Sheep Creek Mo	14.56	45	Pn		Pn	19 36 28.7	-2.0
CCB	Clear Creek Bu	15.87	35	Pn		Pn	19 36 46.2	-0.9
IL31		16.26	36	Pn		Pn	19 36 52.0	-0.1
RIDG	Independent Ri	16.47	40			P	19 36 55.7	-0.7
RIDG				IAmb	IAmb		19 37 08.8	
	comp=Z,3.8nm,1.2s							
SCRK	Sand Creek	16.91	40			P	19 37 01.0	-0.5
SCRK				IAmb	IAmb		19 37 17.3	
	comp=Z,3.9nm,1.4s							
CTGM	Chitina Glacie	16.95	51	P		P	19 37 02.0	+0.1
CTGM				IAmb	IAmb		19 37 17.8	
	comp=Z,7.1nm,1.3s							
EGAK	Eagle	18.38	40	P		P	19 37 17.6	+0.3
HYT	Haines Junctio	18.75	53			P	19 37 21.6	-0.1
HYT				IAmb	IAmb		19 37 25.2	
	comp=Z,7.8nm,1.3s							
EPYK	Eagle Plains	20.72	38	P		P	19 37 42.9	-0.1
INK	Inuvik	22.64	34	P		P	19 38 02.1	-1.3
INK				IAmb	IAmb		19 38 09.2	
	comp=Z,5.6nm,1.5s							

IDC 11 19:34:39.8±1.1, 56°22S×27°30W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/20, mbtmp3.8/3, MS3.6/2, Ms1 3.6/2, ms1mx3.1/17, Error ellipse: s-maj=50.2km s-min=36.6km az=78.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	31.97	280	LR	LR	19 53 19.3	
	comp=Z,31nm,18.7s,baz=212,slow=35						
VNDA	Vanda	46.40	183	P	P	19 43 07.7	+0.4
	0.5nm,0.6s,baz=191,slow=7.3,SNR=3.3						
H10N1	ASCENSION HYDR	49.30	17	T	T	20 36 45.5	
	baz=189,slow=75,SNR=86						
H10N3	ASCENSION HYDR	49.30	17	T	T	20 36 46.6	
	baz=189,slow=75,SNR=265						
H10N2	ASCENSION HYDR	49.32	17	T	T	20 36 46.7	
	baz=189,slow=75,SNR=192						
LPAZ	La Paz	50.43	305	P	P	19 43 39.9	+0.3
	1.2nm,0.7s,baz=143,slow=5.1,SNR=4.4						
TORD	Torodi Ar. Bea	73.24	30	P	P	19 46 13.3	+0.8
	0.8nm,0.7s,baz=205,slow=5.8,SNR=2.5						
RAR	Rarotonga	93.07	224	LR	LR	20 23 30.6	
	comp=Z,98nm,19.3s,baz=304,slow=32						
YKA	Yellowknife Ar	136.26	318	PKP	PKPdf	19 54 00.5	-1.1
	0.4nm,0.9s,baz=127,slow=2.3,SNR=6.1						
ILAR	Eielson Array	150.19	311	PKPbc	PKPbc	19 54 30.1	-0.9
	3.7nm,0.7s,baz=132,slow=3.0,SNR=30						
SONM	Songino Array	150.80	87	PKPbc	PKPbc	19 54 32.3	-0.9
	0.5nm,0.7s,baz=203,slow=3.6,SNR=4.2						

IDC 11 19:41:22.2±0.9, 3°45S×150°74E, h0km, mb3.9/11, mb1 4.1/11, mb1mx4.0/29, mbtmp3.9/11, MS3.4/16, Ms1 3.4/16, ms1mx3.2/31, Error ellipse: s-maj=24.1km s-min=19.0km az=109.0

NEIC 11 19:41:24.0±1.1, 3°44S±0°09×150°7E±0°1, h10km±1km, mb4.6/16, Error ellipse: s-maj=20.0km s-min=14.8km az=69.0

ISC 11 19:41:26.4±0.5, 3°41S±0°08×150°81E±0°07, h27km, n42, σ1s03/34, mb4.2/18, MS3.4/12, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	Keravat (AS076	1.51	126	Pn	Pn	19 41 50.9	-0.7
	13nm,0.3s,baz=270,slow=6.1,SNR=3.9						
KRVT				Sn	Sn	19 42 09.2	-1.3
	14nm,0.3s,baz=354,slow=23,SNR=2.4						
KRVT				LR	LR	19 42 41.2	
	comp=Z,412nm,20.4s,baz=315,slow=51						
MANU	Manus Island	3.69	292	Pn	Pn	19 42 20.7	-1.0
PMG	Port Moresby	6.97	211	Pn	Pn	19 43 09.7	+2.9
	0.3nm,0.3s,baz=8.9,slow=4.2,SNR=5.5						
PMG				LR	LR	19 45 49.4	
	comp=Z,209nm,21.8s,baz=41,slow=39						
PMG	Port Moresby	6.97	211		Pn	19 43 05.9	-0.9
JAY	Jayapura	10.13	275	LR	LR	19 47 01.7	
	comp=Z,342nm,19.2s,baz=114,slow=34						
HNR	Honiara	10.87	124	LR	LR	19 48 02.6	
	comp=Z,168nm,20.1s,baz=291,slow=37						
GUMO	Guam	17.89	341	LR	LR	19 52 08.5	
	comp=Z,40nm,20.3s,baz=106,slow=36						
WRAB	Tennant Creek	22.96	223	P	P	19 46 27.7	-1.2
WRA	Warramunga Arr	22.98	223	P	P	19 46 28.1	-1.1
	2.4nm,0.7s,baz=49,slow=9.4,SNR=12						
DZM	Mont Dzumac	23.97	142	P	P	19 46 38.6	-0.2
DZM				IAmb	IAmb	19 46 44.3	
	comp=Z,15nm,0.9s						
KNRA	Kununurra	24.88	239	P	P	19 46 46.6	-0.5
AS31	Alice Springs	25.93	218	P	P	19 46 56.1	-0.5
ASAR	Alice Springs	25.93	218	P	P	19 46 56.4	-0.3
	comp=Z,1.0nm,0.7s,baz=55,slow=8.7,SNR=9.2						
ASAR				LR	LR	19 57 45.3	
	comp=Z,48nm,18.0s,baz=56,slow=38						
DAV	Davao City (W)	27.25	292	LR	LR	19 57 34.8	
	comp=Z,72nm,19.2s,baz=112,slow=36						
BATI	Baumata	27.77	255	LR	LR	19 58 42.8	
	comp=Z,156nm,19.7s,baz=120,slow=38						
FITZ	Fitzroy Crossi	28.64	238	P	P	19 47 18.8	-2.2
	comp=Z,2.9nm,0.8s,baz=54,slow=8.7,SNR=2.5						
FITZ				LR	LR	19 59 37.5	
	comp=Z,99nm,18.8s,baz=62,slow=38						
FITZ	Fitzroy Crossi	28.64	238	P	P	19 47 19.2	-1.8
FITZ				IAmb	IAmb	19 47 31.6	
	comp=Z,12nm,1.3s						
STKA	Stephens Creek	29.61	196	LR	LR	19 59 28.3	
	comp=Z,102nm,18.6s,baz=20,slow=37						
KAPI	Kappang	31.01	266	LR	LR	20 00 47.3	
	comp=Z,32nm,18.1s,baz=97,slow=38						
JNU	Nakatsue	40.94	334	P	P	19 49 06.6	-0.2
MJAR	Matsushiro Arr	41.45	345	LR	LR	20 05 11.1	
	comp=Z,40nm,20.2s,baz=110,slow=34						
LEM	Lembang	43.14	264	LR	LR	20 09 42.7	
	comp=Z,41nm,18.7s,baz=67,slow=40						
KSRS	Korea Array	45.89	334	P	P	19 49 47.1	+0.5
	comp=Z,0.9nm,0.8s,baz=142,slow=9.1,SNR=3.2						
KSRS				LR	LR	20 07 14.5	
	comp=Z,35nm,18.4s,baz=154,slow=34						
XAN	Xi'an	54.25	317	P	P	19 50 49.8	-0.5
XAN				IAmb	IAmb	19 50 58.0	
	comp=Z,5.8nm,1.0s						
CM31	Chiang Mai Arr	55.49	295	P	P	19 50 58.6	-0.8
CMAR	Chiang Mai Arr	55.49	295	P	P	19 50 59.0	-0.4
	comp=Z,1.3nm,0.7s,baz=120,slow=5.8,SNR=11						
CMAR	Chiang Mai Arr	55.49	295	P	P	19 50 59.0	-0.4
PETK	Petropavlovsk-	56.61	5	P	P	19 51 06.5	-0.3
	comp=Z,2.2nm,0.7s,baz=168,slow=7.3,SNR=4.2						
PETK				LR	LR	20 10 57.9	
	comp=Z,35nm,20.6s,baz=241,slow=31						
SONM	Songino Array	64.10	328	P	P	19 51 58.2	-0.2
	comp=Z,0.7nm,0.7s,baz=146,slow=5.0,SNR=5.2						
SONM				LR	LR	20 19 30.6	
	comp=Z,40nm,20.3s,baz=140,slow=36						
YAK	Yakutsk	67.24	349	P	P	19 52 19.3	+1.2
MKAR	Makanchi Array	77.98	319	P	P	19 53 23.1	+0.7
	comp=Z,1.1nm,0.9s,baz=101,slow=6.3,SNR=5.1						
MAKZ	Makanchi	78.19	319	P	P	19 53 24.1	+0.5
MAKZ				IAmb	IAmb	19 53 26.0	
	comp=Z,2.8nm,0.6s						
ZALV	Zalesovo Beam	78.91	327	P	P	19 53 27.7	+0.4
	comp=Z,1.4nm,0.7s,baz=100,slow=6.0,SNR=5.9						
ZALV				LR	LR	20 27 38.7	
	comp=Z,25nm,21.5s,baz=64,slow=35						
RND	Reindeer	80.24	23	P	P	19 53 34.9	+0.4
RND				IAmb	IAmb	19 53 47.3	
	comp=Z,5.8nm,1.1s						
MLY	Manley	80.32	22	P	P	19 53 35.8	+0.9
NIL	Nilore	81.56	305	P	P	19 53 42.3	+0.2
IL31		81.64	23	P	P	19 53 42.9	+1.2
IL31				IAmb	IAmb	19 53 44.2	
	comp=Z,6.4nm,1.2s						
ILAR	Eielson Array	81.64	23	P	P	19 53 42.0	+0.2
	comp=Z,1.7nm,1.0s,baz=260,slow=5.7,SNR=10						
KK31	Karatay Array	85.24	314	P	P	19 54 00.7	-0.1
KK31				IAmb	IAmb	19 54 06.3	
	comp=Z,5.2nm,1.1s						
KKAR	Karatay Array	85.24	314	P	P	19 54 00.6	-0.3
KKAR				IAmb	IAmb	19 54 06.3	
	comp=Z,5.2nm,1.1s						
QSPA	South Pole Qui	86.54	180	P	P	19 54 07.9	+1.0
YKA	Yellowknife Ar	95.13	28	P	P	19 54 48.0	+1.0
	comp=Z,0.5nm,0.8s,baz=270,slow=4.8,SNR=6.4						

DDA 11 19:57:58.7, 39°78N×26°07E, h20km, MW3.5
ISK 11 19:57:59.3, 39°79N×26°13E, h10km, ML3.7/44
ATH 11 19:57:59.6, 39°76N×26°12E, h32km±1km, ML3.2/20, Error ellipse: s-maj=2.1km s-min=0.7km az=102.0
THE 11 19:57:59.9, 39°80N×26°12E, h11km±1km, ML3.3/10, Error ellipse: s-maj=1.7km s-min=0.6km az=92.0
SOF 11 19:58:01.4, 39°75N×26°16E, h50km, MD3.4

ISC 11 19:57:59.7±0.8, 39°78N±0°02×26°15E±0°02, h15km±5km, n172, σ0s90/198, 17C-9D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.09	309	PG	Pg	19 58 02.4	-0.4
BOZC				SG	Sg	19 58 04.2	-0.7
BOZC	Bozcaada	0.09	309	*i* P	Pg	19 58 02.5	-0.4
EZN	Ezine	0.14	73	P	Pg	19 58 03.3	-0.2
EZN				S	Sg	19 58 05.6	-0.4
	31μm,0.1s						
EZN	Ezine	0.14	73	⇑P	Pg	19 58 03.8	+0.4
EZN	Ezine	0.14	73	PG	Pg	19 58 03.2	-0.2
EZN				SG	Sg	19 58 05.7	-0.3
BAYC	CANAKKALE_Bayr	0.31	98	P	Pb	19 58 06.5	-0.5
GPNR	Gulpinar-Canak	0.33	182	PG	Pg	19 58 06.6	+0.2
GPNR				SG	Sb	19 58 11.7	-0.6
GADA	Gvkgeada	0.45	335	P	Pg	19 58 08.6	0.0
GADA				S	Sg	19 58 14.4	-0.3
GADA	Gvkgeada	0.45	335	PG	Pg	19 58 08.6	0.0
GADA				SG	Sg	19 58 15.2	+0.5
PRK	Paraskevi	0.55	170	P	Pb	19 58 11.4	+0.5
PRK				S	Sb	19 58 19.4	+0.8
	6μm,0.5s						
PRK	Paraskevi	0.55	170	P	Pb	19 58 11.4	+0.5
PRK				S	Sb	19 58 18.7	+0.1
PRK				AML	AML	19 58 21.0	
	comp=N,12525μm,0.6s						
PRK				AML	AML	19 58 24.9	
	comp=E,9292μm,0.3s						
SIGR	SIGRI	0.61	201	P	Pg	19 58 11.7	0.0
SIGR				S	Sg	19 58 20.6	+0.8
	comp=E,8μm,0.2s						
SIGR	SIGRI	0.61	201	P	Pg	19 58 11.5	-0.2
SIGR				S	Sg	19 58 20.3	+0.5
SIGR				AML	AML	19 58 23.8	
	comp=E,14984μm,0.2s						
SIGR				AML	AML	19 58 24.0	
	comp=N,16045μm,0.2s						
SIGR	SIGRI	0.61	201	PG	Pg	19 58 11.7	0.0
SIGR				SG	Sg	19 58 20.6	+0.8
GELI	Tayfur-Gelibol	0.66	22	PG	Pg	19 58 12.8	+0.2
LPK	Lapseki	0.75	39	PG	Pg	19 58 14.2	-0.1
ENZZ	Sultanice-Enez	0.82	360	PG	Pg	19 58 15.6	0.0
SMTH	Samothraki Isl	0.83	326	P	Pg	19 58 15.7	-0.1
SMTH				S	Sg	19 58 26.6	-0.2
	comp=N,2μm,0.5s						
SMTH	Samothraki Isl	0.83	326	P	Pg	19 58 15.7	-0.1
SMTH				S	Sg	19 58 27.5	+0.7
SMTH				AML	AML	19 58 30.4	
	comp=N,4605μm,0.2s						
SMTH				AML	AML	19 58 31.3	
	comp=E,4211μm,0.6s						
DKL	Dikili	0.92	140	PG	Pb	19 58 17.7	+0.3
EFSA	Agios Efstrati	0.93	255	P	Pg	19 58 17.3	-0.3
EFSA				S	Sg	19 58 29.6	-0.1
EFSA				AML	AML	19 58 32.8	
	comp=N,10118μm,0.6s						
EFSA				AML	AML	19 58 34.1	
	comp=E,4843μm,0.4s						
ERIK	Erikli-Kesan	0.93	18	PG	Pg	19 58 17.3	-0.4
ENEZ	Enez	0.95	0	PG	Pg	19 58 17.9	-0.2
KRBG	Karabiga-Canak	1.07	55	PN	Pn	19 58 20.4	+0.2
ZEDA	zmir-Bergama	1.09	138	*i* P	Pn	19 58 20.9	+0.4
ALN	Alexandroupoli	1.11	356	P	Pg	19 58 20.4	-0.8
ALN				S	Sg	19 58 35.1	-0.6
	comp=E,3μm,0.7s						
ALN	Alexandroupoli	1.11	356	P	Pg	19 58 20.4	-0.8
ALN				S	Sb	19 58 36.4	+1.4
ALN				AML	AML	19 58 37.5	
	comp=E,6109μm,0.5s						
ALN				AML	AML	19 58 37.9	
	comp=N,6512μm,0.7s						
ALN	Alexandroupoli	1.11	356	PN	Pg	19 58 20.8	-0.4
KESN	Edirne-Kesan	1.12	21	*i* P	Pg	19 58 20.2	-1.1
BALY	Balya	1.14	92	*i* P	Pn	19 58 21.8	+0.6
FOCM	Foa	1.16	157	PN	Pn	19 58 21.4	+0.5
KNL	Balikesir	1.17	65	*i* P	Pn	19 58 21.8	+0.3
RKY	Sarkoy-Tekirda	1.20	41	PN	Pb	19 58 22.5	+0.3
SART	Tekirdag	1.20	41	*i* P	Pb	19 58 22.4	+0.2
GONE	Gonen-Balikesi	1.21	77	PN	Pn	19 58 22.8	+0.7
KRBN	Karaburun	1.23	165	PN	Pg	19 58 22.8	-0.6
STEP	BALIKESIR_Sava	1.28	108	*i* P	Pn	19 58 24.0	+0.9
PSRA	Psara	1.32	200	P	Pn	19 58 24.0	+0.5
PSRA				S	Sb	19 58 41.2	+0.3
PSRA				AML	AML	19 58 46.7	
	comp=E,4404μm,0.2s						
PSRA				AML	AML	19 58 46.9	
	comp=N,5312μm,0.3s						
BALB	Balikesir	1.35	96	PN	Pb	19 58 24.4	-0.2
THAS	Thassos island	1.37	307	P	Pn	19 58 24.0	-0.2
THAS				S	Sb	19 58 40.9	-1.3
	comp=N,630nm,0.4s						
THAS	Thassos island	1.37	307	P	Pn	19 58 23.9	-0.2
THAS				S	Sb	19 58 41.4	-0.8
THAS				AML	AML	19 58 42.4	
	comp=N,1491μm,0.4s						
THAS				AML	AML	19 58 43.0	
	comp=E,1052μm,0.5s						
UKOP	Uzunkopru-Edir	1.39	15	PN	Pn	19 58 25.5	+0.9
CHOS	Chios island	1.40	183	P	Pn	19 58 24.5	-0.2
CHOS	Chios island	1.40	183	P	Pn	19 58 24.8	+0.1
CHOS				AML	AML	19 58 48.5	
	comp=E,3072μm,0.2s						
CHOS				AML	AML	19 58 51.7	
	comp=N,1775μm,0.3s						
CHOS	Chios island	1.40	183	PN	Pn	19 58 24.8	+0.1
EDC	Edincik	1.43	66	PN	Pn	19 58 25.8	+0.6
RDO	Rodhopi	1.44	341	P	Pn	19 58 25.9	+0.7
RDO				S	Sn	19 58 43.6	-0.2
	comp=N,605nm,0.8s						
RDO	Rodhopi	1.44	341	P	Pn	19 58 25.7	+0.5
RDO				S	Sn	19 58 44.8	+0.9
RDO				AML	AML	19 58 48.6	
	comp=E,945μm,0.4s						
RDO				AML	AML	19 58 49.1	
	comp=N,1150μm,0.9s						
RDO	Rodhopi	1.44	341	PN	Pn	19 58 25.9	+0.7
CESE	eme	1.46	175	PN	Pn	19 58 25.9	+0.4
SKY	Skiros Island	1.53	234	P	Pn	19 58 26.1	-0.4
SKY	Skiros Island	1.53	234	P	Pn	19 58 26.2	-0.4
SKY				AML	AML	19 58 52.4	
	comp=E,1869μm,0.2s						
SKY				AML	AML	19 58 52.6	
	comp=N,1803μm,0.2s						
BLCB	Balcova	1.56	153	PN	Pn	19 58 27.7	+0.8
ZEY	zmir	1.57	170	*i* P	Pn	19 58 27.1	+0.1
AKS	Akhisar	1.58	124	PN	Pb	19 58 28.1	-0.5
AKHS	Akhisar	1.58	124	*i* P	Pb	19 58 28.4	-0.1
AKHS				IAML		19 58 53.0	
	comp=E,161nm,0.3s						
TKR	Tekirdag	1.61	41	PN	Pn	19 58 28.3	+0.8
KAVA	Kavala	1.74	315	P	Pn	19 58 29.5	+0.2
KAVA				S	Sn	19 58 50.5	-0.7
	comp=E,262nm,0.5s						
KAVA	Kavala	1.74	315	P	Pn	19 58 30.1	+0.7
KAVA				S	Sn	19 58 50.8	-0.4
KAVA				AML	AML	19 58 52.1	
	comp=N,589μm,0.5s						
KAVA				AML	AML	19 59 06.0	
	comp=E,571μm,0.8s						
OUR	Ouranopolis	1.75	289	P	Pn	19 58 29.5	0.0
OUR				S	Sn	19 58 50.6	-0.9
	comp=E,532nm,0.5s						
OUR	Ouranopolis	1.75	289	P	Pn	19 58 29.7	+0.3
OUR				AML	AML	19 58 56.3	
	comp=N,1155μm,0.6s						
OUR				AML	AML	19 58 58.4	
	comp=E,938μm,0.4s						
OUR	Ouranopolis	1.75	289	PN	Pn	19 58 29.8	+0.3
KCTX	Karacabey (Bur	1.77	73	PN	Pn	19 58 30.2	+0.5
KVLA	Kavala	1.77	311	P	Pn	19 58 30.3	+0.5
KVLA				S	Sn	19 58 51.4	-0.6
DURS	Dursunbey	1.81	95	*i* P	Pn	19 58 31.4	+1.0
CRLT	Corlu	1.81	42	PN	Pn	19 58 31.4	+1.0
DGB	zmir	1.82	161	*i* P	Pn	19 58 31.0	+0.5
BOTS	Marmara Eregli	1.85	49	PN	Pn	19 58 31.8	+0.9
AOS	Alonnisos	1.86	251	P	Pn	19 58 30.9	-0.1
AOS	Alonnisos	1.86	251	P	Pn	19 58 31.2	+0.2
AOS				AML	AML	19 59 12.1	
	comp=N,446μm,0.8s						
AOS				AML	AML	19 59 15.9	
	comp=E,440μm,1.2s						
AOS	Alonnisos	1.86	251	PN	Pn	19 58 31.4	+0.4
PAIG	Paliouri	1.90	275	P	Pn	19 58 31.7	+0.1
PAIG	Paliouri	1.90	275	P	Pn	19 58 31.7	+0.1
PAIG				AML	AML	19 59 04.5	
	comp=N,340μm,0.6s						
PAIG				AML	AML	19 59 08.6	
	comp=E,193μm,0.7s						
KDZ	Kurdzhali	1.94	344	P	Pn	19 58 32.9	+0.7
KDZ	Kurdzhali	1.94	344	PN	Pn	19 58 32.9	+0.7
EDRB	Edirne	2.11	12	P	Pn	19 58 34.7	+0.2
EDRB	Edirne	2.11	12	PN	Pn	19 58 35.3	+0.8
SB02	Marmara Sea	2.12	55	PN	Pn	19 58 35.6	+1.1
KIRK	Kırklareli	2.12	20	*i* P	Pn	19 58 34.7	+0.1
PHSR	Pinarhisar	2.12	29	⇑P	Pb	19 58 38.2	+0.4
PHSR	Pinarhisar	2.12	29	⇓S	Sg	19 59 06.4	-1.5
PHSR	Pinarhisar	2.12	29	PN	Pn	19 58 35.5	+0.9
SLVT	Silivri	2.14	47	PN	Pn	19 58 36.0	+1.2
SMG	Samos	2.14	165	P	Pn	19 58 34.7	-0.2
SMG	Samos	2.14	165	P	Pn	19 58 34.8	-0.1
SMG				AML	AML	19 59 11.4	
	comp=N,835μm,0.4s						
SMG				AML	AML	19 59 12.2	
	comp=E,1378μm,0.9s						
PLG	Polygyros	2.15	287	P	Pn	19 58 35.4	+0.3
PLG	Polygyros	2.15	287	P	Pn	19 58 35.7	+0.6
PLG				AML	AML	19 59 11.3	
	comp=E,443μm,0.6s						
PLG				AML	AML	19 59 11.3	
	comp=N,388μm,0.7s						
SKIA	Skiathos	2.16	254	P	Pn	19 58 35.4	+0.2
SKIA				AML	AML	19 59 11.4	
	comp=N,420μm,0.5s						
SKIA				AML	AML	19 59 16.4	
	comp=E,552μm,0.5s						
MDNY	Mudanya-Bursa	2.18	74	PN	Pn	19 58 36.8	+1.4
RZN	Rozhen	2.19	331	P	Pn	19 58 36.9	+1.2
EREA	Eretria	2.20	232	P	Pn	19 58 35.1	-0.6
EREA	Eretria	2.20	232	P	Pn	19 58 35.4	-0.2
KARY	Karystos	2.20	218	P	Pn	19 58 35.0	-0.7
ARMT	Armutlu	2.22	69	PN	Pn	19 58 37.4	+1.4
GCAM	G?zelcaml?	2.25	157	PN	Pn	19 58 37.3	+1.0
MRKA	Markates	2.26	242	P	Pn	19 58 36.8	+0.2
AYDB	Zeytinkoy-Aydi	2.29	143	PN	Pn	19 58 37.9	+0.9
NEO	Neokhori	2.31	259	P	Pn	19 58 38.1	+0.9
CTKS	Kestanelik-??a	2.31	50	PN	Pn	19 58 38.1	+0.9
XOR	Xorichti	2.32	261	P	Pn	19 58 37.1	-0.2
XOR	Xorichti	2.32	261	P	Pn	19 58 37.2	-0.2
NVR	Nevrokopi	2.34	313	P	Pn	19 58 38.8	+1.1
NVR				S	Sn	19 59 06.0	-0.2
	comp=E,108nm,0.4s						
NVR	Nevrokopi	2.34	313	P	Pn	19 58 39.3	+1.6
NVR				AML	AML	19 59 18.7	
	comp=N,202μm,0.5s						
NVR				AML	AML	19 59 18.8	
	comp=E,229μm,0.4s						
CTYL	Yalikoy Yolu	2.35	43	⇓P	Pg	19 58 43.3	-1.4
CTYL	Yalikoy Yolu	2.35	43	⇓S	Sg	19 59 14.4	-0.7
SRS	Serrai	2.36	305	P	Pn	19 58 38.3	+0.4
SRS	Serrai	2.36	305	P	Pn	19 58 38.5	+0.5
SRS				AML	AML	19 59 21.6	
	comp=E,307μm,0.7s						
SRS				AML	AML	19 59 22.4	
	comp=N,285μm,0.6s						
SOH	Sokhos	2.37	297	P	Pn	19 58 38.5	+0.4
SOH	Sokhos	2.37	297	P	Pn	19 58 38.5	+0.4
SOH				AML	AML	19 59 17.4	
	comp=E,434μm,0.6s						
SOH				AML	AML	19 59 26.9	
	comp=N,254μm,0.6s						
IGD	Bursa	2.40	77	*i* P	Pn	19 58 39.5	+1.2
GEMT	Gemlik	2.42	73	PN	Pn	19 58 39.9	+1.1
BGKT	Hrogazkoy	2.44	54	PN	Pn	19 58 40.3	+1.1
HORT	Hortiatis	2.47	290	P	Pn	19 58 40.3	+0.7
HORT	Hortiatis	2.47	290	PN	Pn	19 58 40.2	+0.7
PTL	Penteli	2.48	226	P	Pn	19 58 39.3	-0.3
SHAP	Saphane-Kutahy	2.50	107	PN	Pn	19 58 41.6	+1.6
PLD	Plovdiv	2.56	335	PN	Pn	19 58 41.8	+1.1
KAVV	Kandilli-Istan	2.57	59	PN	Pn	19 58 42.2	+1.5
ISK	Istanbul-Kandi	2.57	59	PN	Pn	19 58 42.5	+1.8
MMB	Musomiste	2.57	315	P	Pn	19 58 41.3	+0.4
TVSB	Tavsanli	2.58	96	PN	Pn	19 58 42.2	+1.1
ATHU	Athens Univers	2.59	226	P	Pn	19 58 40.7	-0.4
YLV	Yalova	2.59	71	⇓P	Pg	19 58 48.0	-1.4
YLV	Yalova	2.59	71	⇓S	Sg	19 59 21.4	-1.6
YLV	Yalova	2.59	71	PN	Pn	19 58 42.5	+1.3
TUZL	Tuzla-Istanbul	2.60	66	PN	Pn	19 58 42.5	+1.3
YLVH	Yalova	2.63	69	PN	Pn	19 58 43.1	+1.5
KLYT	Kilyos	2.65	55	⇑P	Pb	19 58 47.0	+0.2
KLYT	Kilyos	2.65	55	PN	Pn	19 58 43.3	+1.4
VLY	Voula,Athens	2.66	224	P	Pn	19 58 41.7	-0.3
JMB	Yambol	2.70	7	P	Pn	19 58 43.9	+1.3

K22A	**Casper**	**1.52**	**217**			**Pn**	**20 02 34.7**	**-2.2**
K22A				IAML			20 03 00.4	
	comp=E,657nm,0.3s							
K22A				IAML			20 03 00.5	
	comp=N,620nm,0.3s							
PHWY	**Pilot Hill**	**2.58**	**183**	Pn		**Pn**	**20 02 51.1**	**-0.5**
RWWY	**Rawlins**	**2.60**	**213**			**Pn**	**20 02 51.3**	**-0.6**
RWWY				IAML			20 03 28.7	
	comp=N,184nm,0.8s							
RWWY				IAML			20 03 30.0	
	comp=N,137nm,0.7s							
LAO	**LASA Array**	**2.88**	**347**			**Pn**	**20 02 56.9**	**+1.4**
N23A	**Red Feather La**	**3.02**	**189**			**Pn**	**20 02 56.1**	**-1.5**
N23A				IAML			20 03 40.8	
	comp=N,103nm,0.6s							
N23A				IAML			20 03 44.0	
	comp=E,103nm,0.4s							
RLMT	**Red Lodge**	**3.10**	**295**			**Pn**	**20 02 59.2**	**+0.5**
RLMT				IAML			20 03 52.6	
	comp=E,85nm,0.4s							
BW06	**Boulder Array**	**3.30**	**252**			**Pn**	**20 03 01.9**	**+0.4**
BW06				IAML			20 03 52.2	
	comp=E,79nm,0.4s							
BW06				IAML			20 03 54.3	
	comp=N,78nm,0.4s							
PD31	**Pinedale Array**	**3.30**	**252**			**Pn**	**20 03 01.5**	**+0.1**
PDAR	**Pinedale Array**	**3.30**	**252**	Pn		**Pn**	**20 03 01.9**	**+0.4**
	comp=N,5.0nm,0.3s,baz=74,slow=16,SNR=80							
PDAR				Pg		**Pb**	**20 03 07.5**	**-0.4**
	comp=N,28nm,0.3s,baz=75,slow=17,SNR=82							
PDAR				Lg		Lg	20 03 46.8	
	comp=N,14nm,0.3s,baz=69,slow=36,SNR=8.6							
YNE	**Yellowstone No**	**3.56**	**290**			**Pn**	**20 03 04.8**	**-0.1**
YMP	**Mirror Lake Pl**	**3.59**	**286**			**Pn**	**20 03 06.6**	**+1.1**
LKWY	**Lake**	**3.73**	**282**			**Pn**	**20 03 08.1**	**+0.8**
LKWY				IAML			20 03 39.8	
	comp=N,54nm,0.6s							
OGNE	**Ogallala**	**3.80**	**139**			**Pn**	**20 03 08.3**	**+0.2**
H17A	**Grant Village**	**3.83**	**280**			**Pn**	**20 03 10.2**	**+1.5**
H17A				IAML			20 04 14.3	
	comp=E,38nm,0.3s							
FLWY	**Flagg Ranch**	**3.91**	**275**			**Pn**	**20 03 10.8**	**+1.1**
FLWY				IAML			20 04 21.0	
	comp=E,48nm,2.5s							
MOOW	**Moose Ponds**	**3.95**	**270**			**Pn**	**20 03 11.9**	**+1.6**
YNR	**Norris Junctio**	**3.95**	**284**	Pn		**Pn**	**20 03 10.8**	**+0.4**
SNOW	**Snow King Moun**	**3.98**	**266**			**Pn**	**20 03 12.7**	**+1.9**
SNOW				IAML			20 04 30.7	
	comp=E,55nm,1.8s							
SNOW				IAML			20 04 35.3	
	comp=E,61nm,1.4s							
YPP	**Pitchstone Pla**	**3.99**	**278**			**Pn**	**20 03 12.2**	**+1.3**
REDW	**Red Top Meadow**	**4.07**	**265**			**Pn**	**20 03 13.2**	**+1.3**
REDW				IAML			20 04 30.9	
	comp=E,59nm,1.7s							
ISCO	**Idaho Springs**	**4.08**	**183**			**Pn**	**20 03 12.0**	**-0.2**
YHB	**Horse Butte**	**4.32**	**284**			**Pn**	**20 03 15.1**	**-0.3**
YHL	**Hebgen Lake**	**4.33**	**285**			**Pn**	**20 03 16.6**	**+1.0**
O20A	**White River Ci**	**4.34**	**211**			**Pn**	**20 03 14.9**	**-0.7**
O20A				IAML			20 04 39.1	
	comp=N,54nm,2.4s							
O20A				IAML			20 05 19.0	
	comp=E,43nm,2.2s							
AHID	**Auburn Hatcher**	**4.38**	**257**			**Pn**	**20 03 16.8**	**+0.6**
AHID				IAML			20 04 42.6	
	comp=E,39nm,1.1s							
RDMU	**Red Mountain**	**4.58**	**225**			**Pn**	**20 03 20.0**	**+1.0**
DGMT	**Dagmar**	**4.65**	**9**			**Pn**	**20 03 22.2**	**+2.4**
Q24A	**Divide**	**4.91**	**179**	Pn		**Pn**	**20 03 22.5**	**-1.1**
HWUT	**Hardware Ranch**	**5.14**	**246**			**Pn**	**20 03 27.5**	**+0.8**
HWUT				IAML			20 05 05.1	
	comp=E,27nm,1.3s							
EGMT	**Eagleton**	**5.18**	**325**			**Pn**	**20 03 28.4**	**+1.3**
KSCO	**Kaye Shedlock'**	**5.26**	**157**			**Pn**	**20 03 26.8**	**-1.5**
TCUT	**Toone Canyon**	**5.29**	**241**			**Pn**	**20 03 27.9**	**-0.9**
JLU	**Jordanelle**	**5.62**	**236**			**Pn**	**20 03 34.4**	**+1.1**
CTU	**Camp Tracy**	**5.75**	**239**	Pn		**Pn**	**20 03 34.3**	**-0.7**
BGNE	**Belgrade**	**5.82**	**113**	Pn		**Pn**	**20 03 36.8**	**+1.0**
SPUT	**South Promonto**	**5.87**	**246**			**Pn**	**20 03 37.7**	**+1.0**
P17A	**Butcher Ranch,**	**6.00**	**225**			**Pn**	**20 03 38.2**	**-0.2**
SDCO	**Great Sand Dun**	**6.13**	**182**	Pn		**Pn**	**20 03 41.0**	**+0.6**
SRU	**San Rafael Swe**	**6.17**	**221**			**Pn**	**20 03 39.8**	**-1.1**
S22A	**4UR Ranch, Cre**	**6.24**	**191**			**Pn**	**20 03 41.3**	**-0.5**
ECSD	**EROS Data Cent**	**6.29**	**88**			**Pn**	**20 03 42.1**	**-0.1**
TMUT	**Trail Mountain**	**6.37**	**226**			**Pn**	**20 03 44.0**	**+0.3**
NLU	**North Lily Min**	**6.40**	**235**	Pn		**Pn**	**20 03 43.8**	**-0.2**
BGU	**Big Grassy Mou**	**6.44**	**245**			**Pn**	**20 03 44.8**	**+0.3**
CBKS	**Cedar Bluff**	**6.56**	**139**			**Pn**	**20 03 46.3**	**+0.2**
Q16A	**Castle Valley**	**6.64**	**224**			**Pn**	**20 03 46.8**	**-0.5**
DUG	**Dugway, Tooele**	**6.70**	**239**			**Pn**	**20 03 47.2**	**-0.8**
MSO	**Missoula**	**6.76**	**299**	Pn		**Pn**	**20 03 49.8**	**+0.9**
T25A	**Trinidad**	**6.77**	**174**			**Pn**	**20 03 49.1**	**+0.1**
MVCO	**Mesa Verde**	**7.09**	**201**			**Pn**	**20 03 54.9**	**+1.4**
JTMT	**Jette**	**7.37**	**305**	Pn		**Pn**	**20 03 58.9**	**+1.7**
AGMN	**Agassiz Nation**	**7.91**	**53**			**Pn**	**20 04 04.9**	**+0.5**
ELK	**Elko**	**8.01**	**250**	Pn		**Pn**	**20 04 07.1**	**+1.1**
	comp=E,0.7nm,0.3s,baz=63,slow=9.0,SNR=9.9							
PSUT	**Pine Spring**	**8.37**	**233**			**Pn**	**20 04 11.7**	**+0.7**
U32A	**Winter Ranch,**	**8.91**	**145**			**Pn**	**20 04 19.0**	**+0.8**
I10CA	**LAC DU BONNET**	**8.94**	**42**	*i*			21 00 00.0	
	baz=219,slow=309,SNR=2.6							
SPMN	**Marine on St.**	**9.02**	**77**	Pn		**Pn**	**20 04 20.0**	**+0.2**
ULM	**Lac du Bonnet**	**9.05**	**42**	Pn		**Pn**	**20 04 19.2**	**-0.8**
	comp=E,1.1nm,0.3s,baz=238,slow=13,SNR=15							
ULM				Lg		Lg	20 06 48.7	
	comp=E,0.3nm,0.3s,baz=143,slow=22,SNR=1.8							
ULM	**Lac du Bonnet**	**9.05**	**42**			**Pn**	**20 04 20.1**	**+0.1**
AMTX	**Amarillo**	**9.41**	**162**	Pn		**Pn**	**20 04 25.8**	**+0.7**
FFC	**Flin Flon**	**11.07**	**10**			**Pn**	**20 04 47.7**	**0.0**
TXAR	**Lajitas Array**	**14.58**	**174**	Pn		**Pn**	**20 05 38.9**	**+3.0**
	comp=E,0.0nm,0.3s,baz=0.4,slow=13,SNR=2.3							
TXAR				Pg		Pg	20 06 35.6	
	comp=E,0.0nm,0.3s,baz=358,slow=14,SNR=3.8							
YKA	**Yellowknife Ar**	**19.42**	**347**	P		**P**	**20 06 35.0**	**-0.8**
	baz=157,slow=11							
ARCES	**ARCESS Array B**	**61.29**	**18**	P		**P**	**20 12 24.0**	**-0.8**
	comp=E,3.9nm,1.1s,baz=338,slow=6.9,SNR=4.6							
ZALV	**Zalesovo Beam**	**82.16**	**354**	P		**P**	**20 14 29.8**	**-0.8**
	comp=E,0.4nm,0.4s,baz=25,slow=5.1,SNR=2.8							
SONM	**Songino Array**	**84.50**	**339**	P		**P**	**20 14 42.0**	**-1.0**
	comp=E,0.1nm,0.6s,baz=8.9,slow=6.6,SNR=3.0							
MKAR	**Makanchi Array**	**89.46**	**355**	P		**P**	**20 15 06.6**	**-0.3**
	comp=E,0.4nm,0.7s,baz=11,slow=6.5,SNR=4.4							

IDC ***11*** *20:08:36.0±2.5, 11°.73S×166°.98E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/38, mbtmp3.9/5, ML4.4/1, MS3.5/8, Ms1 3.5/8, ms1mx3.2/25, Error ellipse: s-maj=78.0km s-min=35.5km az=143.0*

ISC 11 20:08:53.0±1.3, 10°.9S±0°.1×166°.1E±0°.2, h100km, n16, σ2§29/6, mb3.7/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.22**	**283**	Pn	**Pn**	**20 10 23.2**	**+0.8**
	6.0nm,0.3s,baz=101,slow=5.2,SNR=2.4						
HNR				LR	LR	20 13 09.7	
	comp=Z,811nm,19.3s,baz=116,slow=38						
DZM	**Mont Dzumac**	**11.16**	**178**	*e*Pn	**Pn**	**20 11 30.6**	**+0.9**
	1.5nm,0.3s						
DZM				*e*LR	LR	20 14 00.6	
	comp=Z,674nm,25.1s						
DZM	**Mont Dzumac**	**11.16**	**178**	LR	LR	20 14 19.3	
	comp=Z,169nm,19.8s,baz=41,slow=33						
KRVT	**Keravat (AS076**	**15.39**	**294**	LR	LR	20 19 01.8	
	comp=Z,175nm,18.4s,baz=67,slow=38						
PMG	**Port Moresby**	**18.70**	**273**	LR	LR	20 19 52.8	
	comp=Z,232nm,20.4s,baz=139,slow=34						
AFI	**Afiamalu**	**21.82**	**100**	LR	LR	20 20 11.4	
	comp=Z,111nm,18.4s,baz=3.0,slow=33						
H11S2	**WAKE ISLAND Hy**	**29.16**	**1**	T	T	20 45 43.8	
	baz=181,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**29.16**	**1**	T	T	20 45 38.6	
	baz=181,slow=76,SNR=12						
H11S1	**WAKE ISLAND Hy**	**29.18**	**1**	T	T	20 45 41.5	
	baz=181,slow=76,SNR=12						
WRA	**Warramunga Arr**	**31.88**	**250**	P	**P**	**20 15 07.7**	**-1.4**
	0.4nm,0.7s,baz=84,slow=9.2,SNR=1.5						
RPZ	**Rata Peaks**	**33.03**	**173**	LR	LR	20 27 05.8	
	comp=Z,171nm,20.6s,baz=266,slow=35						
ASAR	**Alice Springs**	**33.19**	**243**	P	**P**	**20 15 18.2**	**-2.3**
	0.7nm,0.8s,baz=69,slow=10,SNR=4.9						
ASAR				LR	LR	20 27 33.5	
	comp=Z,51nm,20.2s,baz=78,slow=34						
PPT2	**Papeete2**	**43.40**	**104**	*e*LR	LR	20 28 32.5	
	comp=Z,94nm,26.0s						
PETK	**Petropavlovsk-**	**64.11**	**354**	LR	LR	20 43 45.8	
	comp=Z,24nm,19.1s,baz=221,slow=32						
ILAR	**Eielson Array**	**83.22**	**18**	P	**P**	**20 21 06.5**	**-1.4**
	1.3nm,0.9s,baz=232,slow=6.0,SNR=2.3						
MKAR	**Makanchi Array**	**93.62**	**317**	P	**P**	**20 22 00.4**	**+2.2**
	0.3nm,0.7s,baz=112,slow=5.2,SNR=1.9						

DDA ***11*** *20:12:08.3, 35°.85N×31°.39E, h36km±2km, ML2.6*
ISK ***11*** *20:12:08.1, 35°.99N×31°.31E, h15km, ML3.1/45*
NIC ***11*** *20:12:09.7±0.0, 36°.25N×31°.64E, h20km±2km, Md3.6/5, Ml3.1/5*
HLW ***11*** *20:12:16.6, 35°.50N×30°.88E, h27km±22km, Ml3.3*

ISC 11 20:12:10.5±1.0, 36°.04N±0°.03×31°.34E±0°.02, h32km±12km, n86, σ1§61/112, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALAN	**Alanya-ANTALYA**	**0.76**	**47**	PG	**Pn**	**20 12 25.1**	**0.0**
ALAN				SG	**Sn**	**20 12 35.9**	**+0.4**
GAZI	**Gazipasa**	**0.81**	**76**	PG	**Pn**	**20 12 25.6**	**-0.2**
GAZI				SG	**Sn**	**20 12 37.1**	**+0.3**
GAZI	**Gazipasa**	**0.81**	**76**	*i* P	**Pn**	**20 12 25.4**	**-0.3**
GAZI				*i* S	**Sb**	**20 12 36.3**	**-0.6**
GAZI				IAML		20 12 38.0	
	comp=N,296nm,0.4s						
GAZI				IAML		20 12 38.0	
	comp=E,282nm,0.3s						
KEMT	**Kemer-ANTALYA**	**0.85**	**312**	PG	**Pb**	**20 12 25.7**	**-1.1**
KEMT				SG	**Sn**	**20 12 37.9**	**+0.4**
AKUM	**Antalya-Kumluc**	**0.85**	**290**	*i* P	**Pn**	**20 12 27.4**	**+1.2**
AKUM				*i* S	**Sn**	**20 12 40.5**	**+2.8**
AKUM				IAML		20 12 43.0	
	comp=E,271nm,0.5s						
AKUM				IAML		20 12 44.0	
	comp=N,369nm,0.6s						
KEPZ	**Antalya-Kepez**	**0.89**	**14**	*i* P	**Pn**	**20 12 27.2**	**+0.4**
KEPZ				*i* S	**Sb**	**20 12 37.9**	**-1.2**
KEPZ				IAML		20 12 42.0	
	comp=N,151nm,0.8s						
KEPZ				IAML		20 12 42.0	
	comp=E,159nm,0.6s						
ANTB	**Antalya**	**1.02**	**328**	PG	**Pn**	**20 12 28.5**	**-0.1**
DEMR	**Demre-Antalya**	**1.18**	**280**	PN	**Pn**	**20 12 30.4**	**-0.3**
KORT	**Korkueli**	**1.25**	**321**	PN	**Pn**	**20 12 32.0**	**+0.2**
KORT	**Korkueli**	**1.25**	**321**	*i* P	**Pb**	**20 12 34.9**	**+1.3**
KORT				*i* S	**Sb**	**20 12 54.8**	**+5.4**
KORT				IAML		20 12 58.0	
	comp=N,74nm,0.7s						
KORT				IAML		20 13 03.0	
	comp=E,106nm,0.4s						
AKMS	**Akamas**	**1.30**	**141**	P	**Pb**	**20 12 33.2**	**-1.2**
AKMS				S	**Sb**	**20 12 51.0**	**+0.2**
AKMS				AML	AML	20 12 57.9	
	comp=E,1.0nm,0.3s						
AKMS				AML	AML	20 12 57.9	
	comp=E,1.0nm,0.3s						
AKMS				AMd		20 13 39.1	
AKMS				AMd		20 13 39.1	
ALFC	**Alefka**	**1.35**	**130**	P	**Pb**	**20 12 33.2**	**-2.1**
ALFC				S	**Sb**	**20 12 50.7**	**-1.5**
ALFC				AML	AML	20 12 52.0	
	comp=E,0.5nm,0.2s						
ALFC				AML	AML	20 12 52.0	
	comp=E,0.5nm,0.2s						
ELL	**Elmali**	**1.35**	**302**	PN	**Pn**	**20 12 33.4**	**+0.1**
ELL	**Elmali**	**1.35**	**302**	P	**Pb**	**20 12 35.1**	**-0.2**
ERMK	**Ermenek**	**1.41**	**64**	*i* P	**Pb**	**20 12 35.3**	**-1.0**
ERMK				*i* S	**Sb**	**20 12 57.4**	**+3.5**
ERMK				IAML		20 13 01.0	
	comp=N,225nm,0.3s						
ERMK				IAML		20 13 04.0	
	comp=E,230nm,0.4s						
AKAS	**Kas**	**1.42**	**278**	PN	**Pn**	**20 12 33.9**	**-0.2**
AKAS	**Kas**	**1.42**	**278**	*i* P	**Pb**	**20 12 34.9**	**-1.5**
AKAS				*i* S	**Sn**	**20 12 50.4**	**-1.3**
AKAS				IAML		20 13 05.0	
	comp=N,74nm,0.6s						
AKAS				IAML		20 13 07.0	
	comp=E,53nm,0.5s						
TEKE	**Tekeli-Mersin**	**1.44**	**85**	PN	**Pn**	**20 12 34.9**	**+0.5**
BCK	**Bucak**	**1.54**	**337**	PN	**Pn**	**20 12 36.2**	**+0.3**
BERE	**Bereket-Mersin**	**1.56**	**78**	PN	**Pn**	**20 12 36.8**	**+0.7**
LEF	**Lefka**	**1.56**	**125**	PN	**Pn**	**20 12 35.1**	**-0.9**
LEF	**Lefka**	**1.56**	**125**	*i* P	**Pn**	**20 12 35.1**	**-0.9**
LEF				*i* S	**Sn**	**20 12 52.2**	**-3.0**
LEF				IAML		20 13 00.0	
	comp=E,74nm,0.2s						
LEF				IAML		20 13 05.0	
	comp=N,110nm,0.6s						
NATA	**Nata**	**1.61**	**141**	P	**Pb**	**20 12 40.7**	**+1.1**
NATA				AML	AML	20 13 11.3	
	comp=N,1.1nm,0.5s						
NATA				AMd		20 13 47.7	
YORU	**Yoruktepe-Mers**	**1.68**	**85**	PN	**Pn**	**20 12 38.3**	**+0.7**
OREN	**Orenkoy-Mersin**	**1.73**	**84**	PN	**Pn**	**20 12 38.7**	**+0.5**
TEVE	**Tevekalti-Mers**	**1.75**	**76**	PN	**Pn**	**20 12 39.1**	**+0.5**
AKK1	**Akkuyu-Mersin**	**1.79**	**86**	PN	**Pn**	**20 12 39.7**	**+0.6**
GULN	**MERSIN_Gulnar**	**1.79**	**85**	*i* P	**Pb**	**20 12 40.5**	**-2.1**
GULN				*i* S	**Sn**	**20 13 02.0**	**+1.1**
GULN				IAML		20 13 05.0	
	comp=E,95nm,0.6s						
GULN				IAML		20 13 08.0	
	comp=N,54nm,0.4s						
AKK2	**Akkuyu-Mersin**	**1.79**	**86**	PN	**Pn**	**20 12 39.9**	**+0.7**
AKKU	**Akkuyu-Mersin**	**1.80**	**85**	PN	**Pn**	**20 12 39.9**	**+0.7**
SZAC	**Souni**	**1.80**	**135**	P	**Pb**	**20 12 42.3**	**-0.4**
SZAC				S	**Sb**	**20 13 11.2**	**+6.3**
SZAC				AML	AML	20 13 14.8	
	comp=N,0.4nm,0.2s						
SZAC				AML	AML	20 13 14.8	
	comp=N,0.4nm,0.2s						
SZAC				AMd		20 13 45.8	
SZAC				AMd		20 13 45.8	
TEPK	**Tepekoy-MERSIN**	**1.80**	**83**	PN	**Pn**	**20 12 39.7**	**+0.4**
GOLH	**Golhisar**	**1.86**	**310**	*i* P	**Pb**	**20 12 42.9**	**-1.1**
GOLH				*i* S	**Sb**	**20 13 05.2**	**-1.8**
GOLH				IAML		20 13 08.0	
	comp=E,312nm,1.0s						
GOLH				IAML		20 13 23.0	
	comp=N,64nm,0.9s						
YESI	**Yesilovacik-Me**	**1.87**	**84**	PN	**Pn**	**20 12 40.7**	**+0.4**
TISA	**Tisan-Mersin**	**1.90**	**86**	PN	**Pn**	**20 12 41.0**	**+0.4**
ATHAL	**Athalassa**	**1.90**	**117**	P	**Pn**	**20 12 41.4**	**+0.8**
ATHAL				S	**Sn**	**20 13 04.5**	**+1.0**
IKL	**Isikli**	**1.91**	**83**	PN	**Pn**	**20 12 41.5**	**+0.7**
KMER	**Konya-Meram**	**1.92**	**25**	*i* P	**Pb**	**20 12 43.6**	**-1.2**
KMER				*i* S	**Sb**	**20 13 06.8**	**-1.6**
KMER				IAML		20 13 10.0	
	comp=N,41nm,0.3s						
KMER				IAML		20 13 11.0	
	comp=E,53nm,0.5s						
FETY	**Fethiye**	**1.92**	**289**	PN	**Pn**	**20 12 41.1**	**+0.2**
FETY	**Fethiye**	**1.92**	**289**	*i* P	**Pn**	**20 12 41.5**	**+0.5**
FETY				*i* S	**Sn**	**20 13 04.6**	**+0.6**
KARG	**Kargicak-Mersi**	**1.93**	**84**	PN	**Pn**	**20 12 41.8**	**+0.8**
CSS	**Mathiatis**	**1.95**	**123**	PN	**Pn**	**20 12 40.9**	**-0.4**
CSS	**Mathiatis**	**1.95**	**123**	P	**Pn**	**20 12 40.6**	**-0.7**
CSS				S	**Sn**	**20 13 04.0**	**-0.7**
KEBE	**Keben-Mersin**	**1.96**	**77**	PN	**Pn**	**20 12 42.4**	**+0.8**
ASGA	**Asgata**	**2.00**	**128**	P	**Pb**	**20 12 44.9**	**-1.3**
ASGA				AML	AML	20 13 20.8	
	comp=E,0.4nm,0.5s						
ASGA				AMd		20 14 01.2	
BAGO	**Egridir - ISPA**	**2.00**	**347**	*i* P	**Pn**	**20 12 43.7**	**+1.5**
BAGO				*i* S	**Sn**	**20 13 02.1**	**-4.0**
KONT	**Konya--Tatoy**	**2.07**	**23**	PN	**Pn**	**20 12 44.1**	**+1.0**
KONT	**Konya--Tatoy**	**2.07**	**23**	*i* P	**Pn**	**20 12 44.9**	**+1.8**
KONT				*i* S	**Sn**	**20 13 09.6**	**+1.7**
KONT				IAML		20 13 19.0	
	comp=N,26nm,0.6s						
KONT				IAML		20 13 24.0	
	comp=E,32nm,0.9s						
DOGA	**KONYA_Doganhis**	**2.08**	**7**	*i* P	**Pb**	**20 12 45.7**	**-2.0**
DOGA				*i* S	**Sn**	**20 13 07.1**	**-1.2**
DOGA				IAML		20 13 14.0	
	comp=N,46nm,0.4s						
DOGA				IAML		20 13 18.0	
	comp=E,45nm,0.6s						
SILI	**Silifke-Mersin**	**2.12**	**80**	PN	**Pn**	**20 12 44.4**	**+0.8**
MVOU	**Mavrovouni**	**2.13**	**118**	P	**Pn**	**20 12 42.8**	**-1.0**
MVOU				S	**Sn**	**20 13 06.9**	**-2.2**
MVOU				AMd		20 13 47.7	
MVOU				AMd		20 13 47.7	
BASM	**Basmaki-Afyon**	**2.14**	**332**	PN	**Pn**	**20 12 44.9**	**+0.8**
KIZK	**Mersin**	**2.31**	**78**	PN	**Pn**	**20 12 47.4**	**+1.1**
LADK	**Ladik-KONYA**	**2.31**	**20**	PN	**Pn**	**20 12 47.3**	**+0.9**
EREN	**Erenkoy**	**2.36**	**102**	PN	**Pn**	**20 12 47.6**	**+0.7**
EREN	**Erenkoy**	**2.36**	**102**	*i* P	**Pn**	**20 12 48.6**	**+1.7**
EREN				*i* S	**Sn**	**20 13 15.4**	**+0.7**
EREN				IAML		20 13 21.0	
	comp=N,107nm,0.3s						
EREN				IAML		20 13 22.0	
	comp=E,116nm,1.1s						
TURN	**Turunc**	**2.36**	**292**	PN	**Pb**	**20 12 50.9**	**-1.4**
SHUT	**Suhut-Afyon**	**2.59**	**346**	PN	**Pn**	**20 12 51.2**	**+0.9**
ARG	**Arkhangelos**	**2.61**	**275**	PN	**Pn**	**20 12 50.5**	**+0.1**
KERG	**Konya-Eregli**	**2.63**	**58**	*i* P	**Pb**	**20 12 53.6**	**-3.4**
KERG				*i* S	**Sn**	**20 13 24.9**	**+3.3**
KERG				IAML		20 13 30.0	
	comp=E,50nm,0.3s						
KERG				IAML		20 13 32.0	
	comp=N,43nm,0.4s						
YER	**Yerkesik**	**2.69**	**295**	PN	**Pn**	**20 12 52.1**	**+0.5**
CHBY	**Cihanbeyli**	**2.83**	**25**	PN	**Pn**	**20 12 54.7**	**+1.2**
DED	**Mersin**	**2.94**	**71**	*i* P	**Pn**	**20 12 57.6**	**+2.7**
DED				*i* S	**Sn**	**20 13 33.0**	**+3.9**
DED				IAML		20 13 39.0	
	comp=N,23nm,0.5s						
DED				IAML		20 13 39.0	
	comp=E,22nm,0.5s						
DATC	**Datca-Mugla**	**3.05**	**285**	PN	**Pn**	**20 12 57.2**	**+0.7**
DAT	**Datca**	**3.11**	**284**	PN	**Pn**	**20 12 57.8**	**+0.4**
MLSB	**Milas**	**3.13**	**295**	PN	**Pn**	**20 12 58.4**	**+0.8**
KARA	**Karaisali**	**3.23**	**67**	PN	**Pn**	**20 13 00.3**	**+1.4**
KULU	**Kulu**	**3.28**	**23**	PN	**Pn**	**20 13 01.0**	**+1.3**
KRTS	**Karatas**	**3.30**	**79**	PN	**Pn**	**20 13 01.2**	**+1.3**
CIFT	**Cifteler, Eski**	**3.33**	**356**	PN	**Pn**	**20 13 01.7**	**+1.3**
CMRD	**Camardi-Nigde**	**3.35**	**60**	PN	**Pn**	**20 13 02.0**	**+1.3**
AYDB	**Zeytinkoy-Aydi**	**3.35**	**306**	PN	**Pn**	**20 13 01.3**	**+0.5**
AUSV	**SIVRIHISAR**	**3.40**	**3**	PN	**Pn**	**20 13 02.8**	**+1.4**
SVRH	**Sivrihisar-ESK**	**3.41**	**2**	PN	**Pn**	**20 13 02.9**	**+1.4**
YAYX	**Yaylak**	**3.50**	**33**	PN	**Pn**	**20 13 04.3**	**+1.5**
YURE	**YUREGIR**	**3.55**	**76**	PN	**Pn**	**20 13 04.8**	**+1.4**
AFSR	**Afar-Bala (An**	**3.67**	**21**	PN	**Pn**	**20 13 06.7**	**+1.6**
CEYT	**Ceyhan**	**3.68**	**73**	PN	**Pn**	**20 13 06.7**	**+1.6**
TVSB	**Tavsanli**	**3.72**	**337**	PN	**Pn**	**20 13 07.2**	**+1.4**
KOZT	**Kozan**	**3.88**	**67**	PN	**Pn**	**20 13 09.6**	**+1.7**
MATC	**Matruh**	**5.80**	**217**	P	**Pn**	**20 13 32.5**	**-1.8**
	baz=218						
MATC				AMP		20 14 00.0	
	baz=218						
SUZ	**Suez**	**6.30**	**168**	P	**Pn**	**20 13 42.1**	**+0.9**
	baz=163						
NBNS	**Bani Suef**	**7.39**	**180**	P	**Pn**	**20 13 56.0**	**-0.2**
	baz=176						
NBNS				AMP		20 15 00.0	
	baz=176						
NBNS				S	Sn	20 15 08.0	-11
	baz=176						
TAMRE	**El Minia**	**8.34**	**183**	P	**Pn**	**20 14 09.0**	**-0.2**
	baz=179						
SWA2		**8.39**	**218**	P	**Pn**	**20 14 07.2**	**-2.7**
	baz=218						
SWA2				AMP		20 15 00.0	
	baz=218						
SWA2				S	Sn	20 15 29.8	-14
	baz=218						
HFRF	**Wahat Farafira**	**9.23**	**197**	P	**Pn**	**20 14 20.1**	**-1.2**
	baz=196						
HFRF				AMP		20 16 00.0	
	baz=196						

IDC ***11*** *20:18:10.1±0.6, 60°.29S×47°.54W, h0km, mb4.4/13, mb1 4.4/14, mb1mx4.3/28, mbtmp4.4/14, ML4.8/1, MS4.0/16, Ms1 3.9/16, ms1mx3.9/20, Error ellipse: s-maj=21.3km s-min=15.1km az=81.0*

NEIC ***11*** *20:18:11.2±1.3, 60°.35S±0°.08×47°.6W±0°.1, h10km±1km, mb4.9/27, Error ellipse: s-maj=14.1km s-min=10.6km az=139.0*

GCMT ***11*** *20:18:14.2±0.2, 60°.58S±0°.02×47°.84W±0°.04, h21km, MW5.0/83, Moment Tensor Solution. s40,c51; s83,c118; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=3.13±.20; Mθθ 1.11±.14; Mϕϕ 2.02±.14; Mrθ 0.56±.27; Mϕθ 1.97±.08; Mϕr 1.46±.29; Best double couple: M0 3.71000×10^16 NP1:

AQDB	Aquidauana	40.27	348	eP	P	P	20 25 49.5	+1.0
SBA	Scott Base	40.44	191	P	P	P	20 25 50.9	+1.5
SBA				IAmb	IAmb	IAmb	20 25 53.4	
	comp=Z,31nm,1.4s							
LVC	Limon Verde	40.59	329	eP	P	P	20 25 52.6	+1.1
LVC	Limon Verde	40.59	329	P	P	P	20 25 51.0	-0.5
ITRB	Iturama	40.66	356	eP	P	P	20 25 52.8	+1.1
VNDA	Vanda	41.17	189	P	P	P	20 25 57.5	+2.1
	comp=Z,5.1nm,1.2s,baz=179,slow=7.0,SNR=6.6							
VNDA	Vanda	41.17	189	P	P	P	20 25 56.0	+0.6
C2SB	Chapadao do Su	41.72	352	eP	P	P	20 26 01.8	+1.4
PMNB	Patos De Minas	41.78	2	eP	P	P	20 26 02.5	+1.5
IPMB	Ipameri, GO	42.33	359	eP	P	P	20 26 06.4	+1.0
MAW	Mawson	42.69	148	LR	LR	LR	20 43 29.5	
	comp=Z,346nm,18.7s,baz=238,slow=36							
MAW	Mawson	42.69	148	P	P	P	20 26 07.6	-0.2
PP1B	Ponte de Pedra	43.03	350	eP	P	P	20 26 12.4	+1.3
GO01	Chusmiza	43.48	330	P	P	P	20 26 15.1	-0.2
PB11	IPOC Station P	43.51	329	P	P	P	20 26 14.7	-0.4
PB11				IAmb	IAmb	IAmb	20 26 29.7	
	comp=Z,21nm,1.2s							
MNMC	Minye Minye	44.09	329	P	P	P	20 26 19.9	-0.1
MNMC				IAmb	IAmb	IAmb	20 26 36.4	
	comp=Z,16nm,0.7s							
BDFB	Brasilia	44.66	359	P	P	P	20 26 25.1	+0.8
	comp=Z,13nm,0.8s,baz=173,slow=5.3,SNR=15							
BDFB	Brasilia	44.66	359	P	P	P	20 26 23.6	-0.7
BDFB				IAmb	IAmb	IAmb	20 26 26.2	
	comp=Z,14nm,0.8s							
ARAG	Araguaiana, MT	44.70	354	eP	P	P	20 26 25.5	+1.0
SALV	Santo Antonio	44.79	349	eP	P	P	20 26 26.4	+1.2
JANB	Januaria	45.30	4	eP	P	P	20 26 29.8	+0.4
SIV	San Ignacio	45.38	342	P	P	P	20 26 29.7	-0.4
	comp=Z,2.1nm,0.5s,baz=147,slow=9.2,SNR=14							
LPAZ	La Paz	46.47	332	P	P	P	20 26 39.6	+0.4
	comp=Z,1.1nm,0.8s,baz=180,slow=12,SNR=4.1							
LPAZ				LR	LR	LR	20 47 57.0	
	comp=Z,120nm,19.0s,baz=178,slow=38							
LPAZ	La Paz	46.47	332	eP	P	P	20 26 40.0	+0.8
LPAZ	La Paz	46.47	332	P	P	P	20 26 38.8	-0.5
PEXB	Peixe	48.17	359	eP	P	P	20 26 52.8	+0.9
NBPN	Ponto Novo - B	49.72	9	eP	P	P	20 27 05.5	+1.8
CLDB	Colider	49.77	349	eP	P	P	20 27 04.3	+0.1
NBLA	Lagarto - SE	49.81	13	eP	P	P	20 27 06.4	+2.0
NBAN	Anadia - AL	51.29	14	eP	P	P	20 27 16.8	+1.3
SMTB	Santa Maria do	51.39	360	eP	P	P	20 27 17.2	+0.8
NBTA	Tacaratu-PE	51.63	12	eP	P	P	20 27 19.5	+1.4
SUR	Sutherland	51.86	90	P	P	P	20 27 20.9	+1.0
	comp=Z,3.1nm,0.5s,baz=208,slow=10,SNR=11							
SUR	Sutherland	51.86	90	P	P	P	20 27 20.8	+0.8
NBRF	Rio Formoso -	52.41	16	eP	P	P	20 27 24.9	+1.1
SAML	Samuel	52.63	340	eP	P	P	20 27 26.4	+0.8
SAML	Samuel	52.63	340	P	P	P	20 27 25.7	+0.2
NBMA	Muriti-CE	53.29	11	eP	P	P	20 27 31.7	+1.2
NBLI	Livramento-PB	53.48	13	eP	P	P	20 27 33.1	+1.2
NBPV	Pedro Velho	54.62	15	eP	P	P	20 27 41.4	+1.3
BOSA	Boshof	57.13	91	P	P	P	20 27 58.2	0.0
	comp=Z,2.7nm,0.5s,baz=217,slow=6.9,SNR=13							
BOSA				LR	LR	LR	20 47 51.1	
	comp=Z,125nm,19.5s,baz=252,slow=31							
BOSA	Boshof	57.13	91	P	P	P	20 27 58.0	-0.3
NBMO	Morrinhos-CE	57.20	9	eP	P	P	20 27 59.4	+0.9
H10N3	ASCENSION HYDR	57.97	40	T	T	T	21 31 30.5	
	baz=199							
H10N1	ASCENSION HYDR	57.97	40	T	T	T	21 31 24.8	
	baz=199							
H10N2	ASCENSION HYDR	57.98	40	T	T	T	21 31 32.8	
	baz=199							
LBTB	Lobatse	60.28	89	P	P	P	20 28 19.5	-0.7
LBTB				IAmb	IAmb	IAmb	20 28 21.0	
	comp=Z,22nm,1.4s							
TSUM	Tsumeb	61.23	78	P	P	P	20 28 26.6	-0.1
TSUM				IAmb	IAmb	IAmb	20 28 27.6	
	comp=Z,19nm,1.6s							
OTAV	Otavalo	64.98	325	eP	P	P	20 28 52.8	+0.9
OTAV	Otavalo	64.98	325	P	P	P	20 28 51.6	-0.3
OTAV				IAmb	IAmb	IAmb	20 28 53.6	
	comp=Z,9.6nm,0.8s							
RUSC	La Rusia	69.05	333	P	P	P	20 29 17.0	-0.8
LSZ	Lusaka	69.79	85	P	P	P	20 29 22.4	+0.4
LSZ				IAmb	IAmb	IAmb	20 29 23.6	
	comp=Z,6.0nm,0.8s							
SDV	Santo Domingo	71.42	336	eP	P	P	20 29 32.5	+0.5
DBIC	Dimbokro	74.76	44	P	P	P	20 29 51.8	+0.2
	comp=Z,2.9nm,0.8s,baz=239,slow=5.9,SNR=3.3							
DBIC				LR	LR	LR	20 56 33.7	
	comp=Z,55nm,20.5s,baz=178,slow=31							
DBIC	Dimbokro	74.76	44	P	P	P	20 29 51.4	-0.2
DBIC				IAmb	IAmb	IAmb	20 29 52.5	
	comp=Z,29nm,1.6s							
TBI	Tubuai	75.66	248	eLR	LR	LR	20 53 22.2	
	comp=Z,233nm,23.5s							
PPT2	Papeete2	80.69	251	eLR	LR	LR	20 55 39.8	
	comp=Z,147nm,24.8s							
PPT	Papeete	80.71	251	LR	LR	LR	20 56 08.5	
	comp=Z,89nm,21.4s,baz=180,slow=28							
TOO	Toolangi	81.83	190	P	P	P	20 30 30.7	+0.2
TORD	Torodi Ar. Bea	83.11	48	P	P	P	20 30 38.0	+0.7
	comp=Z,5.0nm,0.9s,baz=211,slow=4.8							
NWAO	Narrogin (SRO)	86.21	167	LR	LR	LR	21 06 43.0	
	comp=Z,102nm,20.2s,baz=166,slow=34							
KMBO	Kilima Mbogo	86.44	86	LR	LR	LR	21 05 48.3	
	comp=Z,82nm,19.8s,baz=95,slow=33							
STKA	Stephens Creek	87.79	188	P	P	P	20 31 00.8	+0.3
	comp=Z,3.8nm,1.2s,baz=166,slow=4.2,SNR=2.2							
STKA				LR	LR	LR	21 07 32.5	
	comp=Z,32nm,21.7s,baz=203,slow=34							
DZM	Mont Dzumac	93.33	211	eLR	LR	LR	21 01 32.3	
	comp=Z,113nm,22.4s							
ASAR	Alice Springs	96.27	181	P	P	P	20 31 38.9	-1.2
	comp=Z,1.1nm,0.7s,baz=169,slow=4.3,SNR=9.9							
ASAR				LR	LR	LR	21 16 57.3	
	comp=Z,80nm,18.1s,baz=179,slow=37							
H08S1	Diego Carcia H	97.57	120	T	T	T	22 19 49.7	
	baz=209,slow=76,SNR=126							
H08S2	Diego Garcia H	97.58	120	T	T	T	22 19 50.4	
	baz=209,slow=76,SNR=63							
H08S3	Diego Garcia H	97.59	120	T	T	T	22 19 50.8	
	baz=209,slow=76,SNR=171							
MDT	Midelt	99.30	36	LR	LR	LR	21 14 16.8	
	comp=Z,44nm,18.1s,baz=226,slow=34							
WRA	Warramunga Arr	99.97	182	P	P	Pdif	20 31 56.0	-0.7
	comp=Z,0.9nm,0.6s,baz=181,slow=4.4,SNR=9.1							
VYHS	Vyhne	121.03	45	ePKP	PKPdf	PKPdf	20 37 02.2	-0.9
AKASG	Malin Array Be	126.68	51	PKP	PKPdf	PKPdf	20 37 12.2	-1.6
	comp=Z,0.4nm,0.5s,baz=249,slow=1.9,SNR=3.9							
CMAR	Chiang Mai Arr	131.79	135	PKP	PKPdf	PKPdf	20 37 24.3	-0.3
	comp=Z,1.1nm,0.7s,baz=224,slow=3.6,SNR=10							
YKA	Yellowknife Ar	132.74	324	PKP	PKPdf	PKPdf	20 37 24.1	-0.8
	comp=Z,0.4nm,0.5s,baz=141,slow=2.3,SNR=7.1							
ARCES	ARCESS Array B	139.58	31	PKiKP	PKPpre	PKPpre	20 37 26.2	
	comp=Z,1.0nm,0.5s,baz=204,slow=2.0,SNR=8.1							
KSH	Kashi	139.66	95	PKP	PKPdf	PKPdf	20 37 37.7	-1.0
KSH				PP	PP	PP	20 40 36.3	+1.6
KSH				SKS	SKSdf	SKSdf	20 44 48.2	-0.7
KSH				SKKS	SKKSac	SKKSac	20 47 24.7	-3.2
KSH				SS	SS	SS	20 58 50.7	-4.0
KSH				AMB	AMB			
	comp=Z,320nm,5.5s							
SCRK	Sand Creek	143.45	313			PKPab	20 37 41.5	+0.5
RIDG	Independent Ri	143.64	312			PKPab	20 37 42.2	+0.5
KNK	Knik Glacier	143.71	307			PKPab	20 37 42.2	+0.2
SML	Sawmill	143.88	308			PKPab	20 37 42.2	-0.4
RC01	Rabbit Creek A	144.04	306			PKPab	20 37 43.6	+0.4
GHO	Glory Hole Cre	144.10	307			PKPab	20 37 43.4	-0.2
SUA	Susitna One	144.55	306			PKPab	20 37 45.3	-0.4
CD2	Chengdu	144.91	134	PKP		PKPbc	20 37 47.7	+0.2
IL31		144.94	313			PKPab	20 37 45.7	-0.7
ILAR	Eielson Array	144.94	313	PKP		PKPab	20 37 45.8	-0.7
	comp=Z,5.6nm,0.5s,baz=145,slow=1.5,SNR=147							
RND	Reindeer	144.96	310			PKPbc	20 37 46.3	-0.3
MCK	McKinley	145.16	310			PKPbc	20 37 46.5	-0.7
CCB	Clear Creek Bu	145.22	312			PKPbc	20 37 46.4	-0.9
WRH	Wood River Hil	145.23	312			PKPbc	20 37 46.9	-0.5
SKT	Skwentna	145.25	306			PKPbc	20 37 46.8	-0.7
FYU	Fort Yukon	145.28	316			PKPbc	20 37 46.4	-1.1
COLA	College	145.35	312			PKPbc	20 37 46.8	-0.9
TRF	Thorofare Moun	145.53	309			PKPdf	20 37 48.0	-0.5
BWN	Browne	145.59	311			PKPdf	20 37 48.3	+0.1
KTH	Kantishna Hill	145.83	309			PKPdf	20 37 48.7	-0.1
PPLA	Purkeypile	145.99	308			PKPdf	20 37 49.1	-0.1
BPAW	Bear Paw Mtn.	146.13	310			PKPdf	20 37 49.2	0.0
ENH	Enshi	146.21	143			PKPdf	20 37 50.5	+0.1
SVW2	Sparrevohn	146.43	303			PKPdf	20 37 49.5	-0.3
MLY	Manley	146.50	312			PKPdf	20 37 50.6	+0.7
TOLK	Toolik Lake Re	147.71	318			PKPbc	20 37 53.9	-0.8
WHN	Wuhan	147.82	150	PKPbc		PKPbc	20 37 56.0	0.0
MAKZ	Makanchi	147.98	92			PKPbc	20 37 55.1	-0.9
MK31	Makanchi Array	148.13	92			PKPbc	20 37 55.4	-1.0
MKAR	Makanchi Array	148.13	92	PKPbc		PKPbc	20 37 55.6	-0.8
	comp=Z,4.2nm,0.5s,baz=237,slow=3.6,SNR=80							
WMQ	Urumqi	148.67	101			PKPbc	20 37 57.6	-0.3
KURK	Kurchatov	148.90	84			PKPbc	20 37 57.8	-0.4
XAN	Xi'an	149.53	139	PKPbc		PKPbc	20 37 59.2	-1.2
XAN				AMB	AMB			
	comp=Z,87nm,5.7s							
LZH	Lanzhou	149.57	130	ePKPbc		PKPdf	20 37 51.9	-4.1
LZH				LR	LR			
	comp=Z,58nm,17.8s							
LZH				LR	LR			
	comp=Z,65nm,18.1s							
LZH				LR	LR			
	comp=Z,91nm,20.0s							
GTA	Gaotai	150.80	121	PKPbc		PKPbc	20 38 03.2	-0.2
GTA				pPKP		pPKPab	20 38 13.9	+0.9
GTA				sPKP			20 38 18.2	
ZALV	Zalesovo Beam	153.88	83	PKPbc		PKPbc	20 38 08.0	-1.6
	comp=Z,0.7nm,0.6s,baz=204,slow=2.4,SNR=4.5							
ZALV				PKPab		PKPab	20 38 21.8	-1.2
	comp=Z,1.0nm,0.6s,baz=239,slow=4.1,SNR=4.2							
SONM	Songino Array	160.40	118	PKPab		PKPab	20 38 51.0	-0.4
	comp=Z,0.3nm,0.5s,baz=225,slow=3.9,SNR=3.7							

WEL 11 20:28:14.6,43°S±8°×17°6E±°,h33km,M3.6/54,ML3.4/20, MLv3.6/54,Error ellipse: s-maj=0.0km s-min=0.0km az=0.5,Off east coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLWZ	Palliser	1.64	351	P	Pb	20 28 43.4	-0.8
PLWZ				S	Sb	20 29 05.2	+0.7
KHZ	Kahutara	1.70	296	P	Pn	20 28 43.1	+1.3
KHZ				S	Sn	20 29 03.5	+1.1
MSWZ	Moikau Station	1.79	352	P	Pb	20 28 45.0	-1.8
TRWZ	Traveller	1.79	2	P	Pb	20 28 45.3	-1.5
PAWZ	Paruwai Farm	1.81	356	P	Pb	20 28 45.4	-1.7
PAWZ				S	Sb	20 29 10.3	+0.9
BHW	Baring Head	1.86	343	P	Pb	20 28 46.2	-1.7
GVZ	Greta Valley S	1.89	276	P	Pn	20 28 44.6	+0.1
BSWZ	Blackbirch Sta	1.94	319	P	Pn	20 28 47.3	+2.0
BSWZ				S	Sb	20 29 11.7	-1.5
MTW	Mount Morrison	2.03	358	P	Pn	20 28 48.2	+1.7
MTW				S	Sn	20 29 11.7	+1.0
TMWZ	Te Maipa	2.09	6	P	Pn	20 28 49.4	+2.1
CAW	Cannon Point	2.12	349	P	Pb	20 28 50.0	-2.3
TUWZ	Tuamarina	2.14	325	P	Pn	20 28 50.0	+2.0
MQZ	McQueen's Vall	2.20	255	P	Pn	20 28 47.1	-1.7
MQZ				S	Sn	20 29 11.1	-3.8
TCW	Tory Channel	2.21	333	P	Pn	20 28 51.0	+2.2
TCW				S	Sb	20 29 18.1	-2.6
HOWZ	Holdsworth Sta	2.29	359	P	Pn	20 28 51.8	+1.7
HOWZ				S	Sn	20 29 18.9	+1.8
KIW	Kapiti Island	2.38	347	P	Pn	20 28 53.9	+2.6
OGWZ	Otaki Gorge	2.39	352	P	Pn	20 28 53.7	+2.3
OGWZ				S	Sn	20 29 21.7	+2.1
THZ	Tophouse	2.45	305	P	Pn	20 28 54.6	+2.3
MRZ	Mangatainoka R	2.53	360	P	Pn	20 28 55.1	+1.8
MRZ				S	Sn	20 29 25.8	+2.8
BFZ	Birch Farm	2.55	11	P	Pn	20 28 55.5	+1.9
NNZ	Nelson	2.57	319	P	Pn	20 28 55.6	+1.8
PRWZ	Pori Road	2.65	6	P	Pn	20 28 57.2	+2.2
DUWZ	D'Urville Isla	2.69	332	P	Pn	20 28 58.3	+2.7
POWZ	Post Office Ro	2.80	3	P	Pn	20 28 59.3	+2.3
DVHZ	Dannevirke	2.92	9	P	Pn	20 29 00.4	+1.7
PRHZ	Porangahau	3.02	15	P	Pn	20 29 01.4	+1.3
INZ	Inchbonnie	3.08	277	P	Pn	20 29 01.8	+0.9
TSZ	Takapari Road	3.14	5	P	Pn	20 29 03.8	+2.0
DSZ	Denniston Nort	3.15	296	P	Pn	20 29 04.1	+2.2
WPHZ	Waipukurau	3.19	12	P	Pn	20 29 04.2	+1.8
QRZ	Quartz Range	3.28	315	P	Pn	20 29 06.0	+2.3
PXZ	Pawanui	3.30	17	P	Pn	20 29 03.5	-0.3
PNHZ	Pukenui	3.30	8	P	Pn	20 29 06.0	+2.0
WAZ	Wanganui	3.46	352	P	Pn	20 29 10.4	+4.3
KAHZ	Kahuranaki	3.53	16	P	Pn	20 29 08.1	+1.0
WVZ	Waitaha Valley	3.56	270	P	Pn	20 29 08.7	+1.3
KRHZ	Kereru	3.59	10	P	Pn	20 29 09.6	+1.7
BHHZ	Black Hill Sta	3.71	6	P	Pn	20 29 12.1	+2.4
MOVZ	Moawhango	3.78	2	P	Pn	20 29 13.4	+2.7
MTVZ	Mangateitei	3.80	359	P	Pn	20 29 14.7	+3.8
KWHZ	Kaweka Forest	3.81	10	P	Pn	20 29 13.1	+2.0
MCHZ	McNeill Hill	3.83	13	P	Pn	20 29 13.3	+2.0
TRVZ	Turoa	3.89	359	P	Pn	20 29 15.4	+3.2
PKVZ	Pokaka	3.90	357	P	Pn	20 29 15.8	+3.5
WHVZ	Whangaehu Hut	3.90	360	P	Pn	20 29 15.6	+3.2
TUVZ	Tukino	3.92	1	P	Pn	20 29 15.8	+3.3
FWVZ	Far West T-bar	3.93	360	P	Pn	20 29 16.1	+3.3
NGZ	Ngauruhoe	4.01	0	P	Pn	20 29 17.1	+3.3
ODZ	Otahua Downs	4.02	241	P	Pn	20 29 11.0	-2.8
ARHZ	Aropaoanui	4.06	16	P	Pn	20 29 15.7	+1.3
WTVZ	West Tongariro	4.07	360	P	Pn	20 29 17.8	+3.2
LBZ	Lake Benmore	4.09	251	P	Pn	20 29 13.2	-1.7
VRZ	Vera Road	4.11	351	P	Pn	20 29 18.8	+3.7
TWVZ	Taurewa	4.12	358	P	Pn	20 29 18.4	+3.1
NMHZ	Naumai	4.19	13	P	Pn	20 29 18.4	+2.2
RITZ	Rihia Road	4.21	3	P	Pn	20 29 19.3	+2.8
FOZ	Fox Glacier	4.23	263	P	Pn	20 29 17.5	+0.9
MRHZ	Matea Rd	4.39	8	P	Pn	20 29 20.6	+1.5
RAHZ	Arahi	4.42	15	P	Pn	20 29 20.8	+1.5
MTHZ	Maungataniwha	4.43	13	P	Pn	20 29 21.1	+1.5
WATZ	Wairara	4.48	1	P	Pn	20 29 22.6	+2.4
SNGZ	Shannon Statio	4.60	17	P	Pn	20 29 23.0	+1.2
RTZ	Ruatahuna	4.69	13	P	Pn	20 29 24.5	+1.4
HIZ	Hauiti	4.70	353	P	Pn	20 29 26.6	+3.3
RIGZ	Rimuhau	4.77	21	P	Pn	20 29 24.6	+0.4
MUGZ	Murupara	4.79	11	P	Pn	20 29 25.6	+1.2
EAZ	Earnscleugh	4.96	244	P	Pn	20 29 24.7	-2.0
TARZ	Mount Tarawera	5.00	8	P	Pn	20 29 28.6	+1.3
WKZ	Wanaka	5.02	249	P	Pn	20 29 25.9	-1.6
URZ	Urewera	5.06	14	P	Pn	20 29 28.6	+0.6
TUZ	Tuapeka	5.08	235	P	Pn	20 29 25.6	-2.7
RUGZ	Raukumara Rang	5.45	18	P	Pn	20 29 34.0	+0.4
SYZ	Scrubby Hill	5.68	232	P	Pn	20 29 33.5	-3.0
HAZ	Te Kaha	5.68	18	P	Pn	20 29 36.9	+0.3
WMGZ	Waiomatatini S	5.78	23	P	Pn	20 29 37.8	-0.2
MLZ	Mavora Lakes	5.79	245	P	Pn	20 29 36.1	-2.0
WHZ	Wether Hill Ro	6.09	241	P	Pn	20 29 39.8	-2.5

WEL 11 20:32:31.8,40°S±7°×17°9E±°,h33km,M3.5/56,ML3.7/18, MLv3.5/56,Error ellipse: s-maj=0.0km s-min=0.0km az=24.7,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MHGZ	Mahia Peninsul	1.37	319	P	Pn	20 32 54.5	-0.1
MHGZ				S	Sn	20 33 10.6	-1.1
PRGZ	Paritu Road	1.56	324	P	Pn	20 32 57.2	-0.1
KNZ	Kokohu	1.59	317	P	Pn	20 32 57.4	-0.2
KNZ				S	Sn	20 33 14.6	-2.4
CKHZ	Cape Kidnapper	1.61	289	P	Pn	20 32 58.2	+0.2
PXZ	Pawanui	1.69	275	P	Pn	20 32 56.1	-2.9
PXZ				S	Sn	20 33 17.4	-2.1
KAHZ	Kahuranaki	1.72	283	P	Pn	20 32 59.5	0.0
KAHZ				S	Sn	20 33 19.5	-0.9
RIGZ	Rimuhau	1.80	326	P	Pn	20 33 00.8	+0.3
RIGZ				S	Sn	20 33 21.0	-1.2
WHHZ	Waihua	1.80	308	P	Pn	20 33 00.8	+0.3
CNGZ	Carnagh Statio	1.83	339	P	Pn	20 33 00.9	+0.1
ARHZ	Aropaoanui	1.84	300	P	Pn	20 33 01.6	+0.5
PRHZ	Porangahau	1.85	267	P	Pn	20 32 58.7	-2.5
SNGZ	Shannon Statio	1.94	316	P	Pn	20 33 02.8	+0.3
SNGZ				S	Sn	20 33 24.6	-1.2
MCHZ	McNeill Hill	1.97	292	P	Pn	20 33 03.5	+0.7
MCHZ				S	Sn	20 33 26.4	0.0
TKGZ	Te Karaka	1.99	332	P	Pn	20 33 03.1	0.0
KRHZ	Kereru	2.14	284	P	Pn	20 33 05.1	-0.1
MTHZ	Maungataniwha	2.18	307	P	Pn	20 33 06.0	+0.3
MWZ	Matawai	2.21	327	P	Pn	20 33 06.3	+0.1
PUZ	Puketiti	2.21	343	P	Pn	20 33 05.7	-0.6
DVHZ	Dannevirke	2.21	266	P	Pn	20 33 05.8	-0.4
RTZ	Ruatahuna	2.25	314	P	Pn	20 33 07.3	+0.4
PRWZ	Pori Road	2.38	260	P	Pn	20 33 08.3	-0.2
BHHZ	Black Hill Sta	2.41	286	P	Pn	20 33 09.3	+0.3
PKGZ	Pakihiroa	2.43	341	P	Pn	20 33 09.2	-0.1
MRHZ	Matea Rd	2.46	303	P	Pn	20 33 10.3	+0.8
URZ	Urewera	2.46	321	P	Pn	20 33 09.9	+0.4
MUGZ	Murupara	2.47	313	P	Pn	20 33 10.4	+0.6
POWZ	Post Office Ro	2.52	265	P	Pn	20 33 10.6	+0.1
HAZ	Te Kaha	2.63	337	P	Pn	20 33 11.8	-0.1
MOVZ	Moawhango	2.67	286	P	Pn	20 33 13.2	+0.7
MRZ	Mangatainoka R	2.69	259	P	Pn	20 33 11.6	-1.2
MXZ	Matakaoa Point	2.70	347	P	Pn	20 33 13.0	+0.2
RRRZ	Republican Roa	2.71	312	P	Pn	20 33 13.7	+0.7
TUVZ	Tukino	2.78	288	P	Pn	20 33 15.6	+1.4
TARZ	Mount Tarawera	2.79	314	P	Pn	20 33 15.0	+0.8
HOWZ	Holdsworth Sta	2.79	254	P	Pn	20 33 12.8	-1.3
WPRZ	Whakapapatarin	2.80	306	P	Pn	20 33 14.7	+0.4
TRWZ	Traveller	2.82	244	P	Pn	20 33 14.1	-0.5
WHVZ	Whangaehu Hut	2.83	288	P	Pn	20 33 16.0	+1.1
WHRZ	Whale Island	2.85	325	P	Pn	20 33 15.8	+0.9
TRVZ	Turoa	2.85	287	P	Pn	20 33 16.0	+0.8
NGZ	Ngauruhoe	2.85	290	P	Pn	20 33 16.1	+0.9
KRVZ	Karewarewa	2.86	292	P	Pn	20 33 16.2	+1.0
FWVZ	Far West T-bar	2.86	288	P	Pn	20 33 16.1	+0.8
MARZ	Manawahe	2.88	319	P	Pn	20 33 18.0	+2.5
WTVZ	West Tongariro	2.89	291	P	Pn	20 33 16.6	+1.1
PKVZ	Pokaka	3.00	286	P	Pn	20 33 18.0	+0.9
TWVZ	Taurewa	3.01	291	P	Pn	20 33 18.4	+1.1
OGWZ	Otaki Gorge	3.03	257	P	Pn	20 33 16.1	-1.2
KUTZ	Kaahu Road	3.03	303	P	Pn	20 33 18.2	+0.7
OPRZ	Ohinepanea	3.05	320	P	Pn	20 33 17.6	-0.1
WAZ	Wanganui	3.16	277	P	Pn	20 33 20.9	+1.7
CAW	Cannon Point	3.17	252	P	Pn	20 33 17.9	-1.4
PLWZ	Palliser	3.19	243	P	Pn	20 33 17.8	-1.9
KIW	Kapiti Island	3.23	257	P	Pn	20 33 20.1	-0.1
TLZ	Tolley Road	3.31	303	P	Pn	20 33 21.5	+0.2
HIZ	Hauiti	3.67	296	P	Pn	20 33 27.0	+0.8
TCW	Tory Channel	3.77	253	P	Pn	20 33 26.6	-1.0
PKE	Pukeiti	4.04	283	P	Pn	20 33 35.2	+3.9
MKAZ	Moumakai	4.34	314	P	Pn	20 33 36.8	+1.3
NNZ	Nelson	4.43	255	P	Pn	20 33 36.8	+0.1
ETAZ	East Tamaki Re	4.58	314	P	Pn	20 33 40.4	+1.7
WIAZ	Waiheke Island	4.59	317	P	Pn	20 33 39.6	+0.8
KHZ	Kahutara	4.71	240	P	Pn	20 33 39.0	-1.4
MBAZ	Motutapu North	4.73	315	P	Pn	20 33 42.1	+1.3
QRZ	Quartz Range	5.01	261	P	Pn	20 33 43.2	-1.5

IDC 11 20:56:58.0±1.2,2°23S×127°81E,h0km,mb3.8/3, mb1 3.8/5,mb1mx3.5/52,mbtmpg3.7/5,ML3.6/2,Error ellipse: s-maj=41.1km s-min=22.0km az=64.0,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	3.72	69	Pn	Pn	20 57 57.1	+0.4
	7.7nm,0.3s,baz=226,slow=18,SNR=26						
SIJI				Sn	Sn	20 58 39.2	-2.0
	9.6nm,0.3s,baz=180,slow=20,SNR=27						
WRA	Warramunga Arr	18.72	161	P	P	21 01 18.4	0.0

ZAM	Aeronautique	3.43	18	*e*P	Pn	21 01 00.6	+1.6
LPMF	Morne Lapointe	3.45	19	*e*P	Pn	21 01 00.8	+1.6
MVM	Montagne Vaucl	3.45	20	*e*P	Pn	21 01 00.8	+1.4
FDF	Fort de France	3.54	15	*e*P	Pn	21 01 01.7	+1.2
FDF				*e*S	Sn	21 01 41.8	-0.6
FDF	Fort de France	3.54	15	*e*P	Pn	21 01 01.5	+0.9
FDF	Fort de France	3.54	15		Sn	21 01 41.8	-0.6
FDF	Fort de France	3.54	15	Pn	Pn	21 01 01.8	+1.2
PRGV	PARIAGUAN	3.54	225	*e*P	Pn	21 01 02.3	+1.7
PRGV				*e*S	Sn	21 01 41.2	-1.1
PML	Morne Lenard	3.58	15	*e*P	Pn	21 01 02.4	+1.3
GBMF	Grand Be	3.60	15	*e*P	Pn	21 01 02.4	+1.0
PCM	Pelee Case Pet	3.61	14	*e*P	Pn	21 01 02.6	+1.2
CXM	Morne La Croix	3.62	15	*e*P	Pn	21 01 02.4	+0.7
BAMF	Morne Balai	3.62	15	*e*P	Pn	21 01 02.7	+1.0
SVN	Savane Anatole	3.65	15	*e*P	Pn	21 01 03.2	+1.3
CUPV	Cpira	3.82	252	*e*P	Pn	21 01 06.7	+2.5
CUPV				*e*S	Sn	21 01 48.7	-0.1
BIRV	Birongo	4.16	259	*e*P	Pn	21 01 11.9	+3.2
BBL	Barber's Block	4.25	8	*e*P	Pn	21 01 11.1	+1.1
BBL	Barber's Block	4.25	8		Pn	21 01 11.1	+1.1
MERV	Las Mercedes	4.59	244	*e*P	Pn	21 01 15.7	+1.3
MERV				*e*S	Sn	21 02 05.8	-1.2
LUEV	Luepa	5.45	173	*e*P	Pn	21 01 26.9	+0.8
LUEV				*e*S	Sn	21 02 24.5	-3.5
TURV	Turiamo	5.69	262	*e*P	Pn	21 01 30.9	+1.8
BAUV	El Baul	6.29	249	*e*P	Pn	21 01 38.0	+0.9
BAUV	El Baul	6.29	249	*e*P	Pn	21 01 37.9	+0.8
BAUV				*e*S	Sn	21 02 45.1	-2.7
BAUV	El Baul	6.29	249		Pn	21 01 38.0	+0.9
BAUV					Sn	21 02 45.2	-2.6
TEPV	Terepaima	7.08	260	*e*P	Pn	21 01 49.5	+1.7
CURV	Curarigua	7.82	261	*e*P	Pn	21 01 58.9	+1.1
PAYV	Puerto Ayacuch	8.01	224	*e*P	Pn	21 02 00.8	+0.6
MDP	Montagnes des	11.21	123	Pn	Pn	21 02 41.5	-1.5
	0.8nm,0.3s,baz=315,slow=15,SNR=17						
MDP				Sn	Sn	21 04 40.6	-6.2
	4.7nm,0.3s,baz=47,slow=19,SNR=19						
OTAV	Otavalo	19.60	237	P	P	21 04 22.3	-2.7
OTAV				IAmb	IAmb	21 04 24.3	
	comp=Z,1.9nm,0.6s						
TXAR	Lajitas Array	42.63	301	P	P	21 07 50.7	+0.7
	comp=Z,0.2nm,0.4s,baz=115,slow=11,SNR=5.2						
PDAR	Pinedale Array	51.67	316	P	P	21 08 59.2	-0.9
	comp=Z,0.3nm,0.4s,baz=118,slow=9.8,SNR=4.8						
RPN	Rapa Nui	59.64	229	LR	LR	21 31 54.4	
	comp=Z,62nm,21.2s,baz=128,slow=32						
YKA	Yellowknife Ar	63.28	336	P	P	21 10 18.9	-1.8
	comp=Z,0.1nm,0.5s,baz=107,slow=7.0						
CASP	Castiglione de	69.94	49	P	P	21 11 01.8	-1.6
CRAG	Craig	70.02	325	P	P	21 11 02.3	-1.3
PRP	Porcupine Dome	77.07	335	P	P	21 11 47.4	+2.5
EYAK	Cordova Ski Ar	77.12	330	P	P	21 11 48.8	+3.8
EYAK				IAmb	IAmb	21 11 50.3	
	comp=Z,11nm,1.1s						
ARCES	ARCESS Array B	78.67	21	P	P	21 11 55.5	+2.1
	comp=Z,1.7nm,0.9s,baz=267,slow=7.0,SNR=2.8						
FINES	FINESS Array B	79.31	29	P	P	21 11 59.4	+2.4
	comp=Z,0.9nm,0.5s,baz=266,slow=3.8,SNR=8.6						
CMAR	Chiang Mai Arr	145.02	33	PKP	PKPdf	21 19 30.6	+1.6
	comp=Z,0.3nm,0.5s,baz=318,slow=4.9,SNR=4.8						

IDC ***11*** *21:00:48.5±4.3,36°.28N×70°.80E,h194km±38km,mb3.2/8, mb1 3.2/11,mb1mx2.9/71,mbtmp3.6/11,MS2.9/2, Ms1 3.0/2,ms1mx2.4/33,Error ellipse: s-maj=32.0km s-min=20.0km az=34.0*

NNC ***11*** *21:00:52.9±8.1,37°.08N×70°.55E,h0km,mb3.9,mpv3.5, Error ellipse: s-maj=77.8km s-min=46.1km az=155.0*

ISC 11 21:00:50.1±1.1,36°.5N±0°.1×70°.8E±0°.1,h200km,n22, σ1℘61/24**,mb3.3/7,5C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AML	Almayashu	6.02	21	P		Pn	21 02 19.5	+1.6
	SNR=18							
UCH	Uchtor	6.37	25	P		Pn	21 02 23.9	+1.4
	SNR=8.4							
KK31	Karatay Array	6.58	358	Pn		Pn	21 02 25.8	+1.1
	1.0nm,0.3s,baz=177,slow=12,SNR=38							
KK31				⇑Sn		Sn	21 03 35.3	-4.5
	1.3nm,0.4s,baz=184,slow=22,SNR=5.8							
AAK	Ala-Archa	6.73	24	P		Pn	21 02 28.2	+1.4
	1.8nm,0.3s,baz=186,slow=7.2,SNR=27							
AAK				S		Sn	21 03 42.7	-0.8
	0.5nm,0.3s,baz=124,slow=23,SNR=11							
AAK	Ala-Archa	6.73	24	P		Pn	21 02 28.3	+1.5
	SNR=8.2							
AAK	Ala-Archa	6.73	24	⇑Pn		Pn	21 02 28.1	+1.4
	3.0nm,0.4s							
AAK				⇑Sn		Sn	21 03 42.6	-0.9
	4.7nm,0.6s							
USP	Ospenovka	7.30	22	P		Pn	21 02 35.4	+1.3
	SNR=5.2							
TKM2	Tokmak 2	7.37	28	P		Pn	21 02 36.0	+0.9
	SNR=5.0							
TKM2	Tokmak 2	7.37	28	⇑Pn		Pn	21 02 35.9	+0.7
	2.1nm,0.6s							
TKM2				⇑Sn		Sn	21 03 56.1	-2.5
	2.9nm,0.8s							
MKAR	Makanchi Array	13.35	36	P		P	21 03 55.0	+0.5
	0.1nm,0.3s,baz=223,slow=14,SNR=5.5							
AB31	Akbulak array	15.00	331	⇓P		P	21 04 14.5	+1.7
	0.6nm,0.2s,baz=142,slow=12,SNR=14							
BVAR	Borovoye Array	16.50	359	P		Pn	21 04 30.5	+0.3
	0.1nm,0.3s,baz=174,slow=12,SNR=5.1							
ZALV	Zalesovo Beam	19.95	25	P		P	21 05 06.6	0.0
	0.9nm,0.4s,baz=221,slow=12,SNR=4.7							
CMAR	Chiang Mai Arr	30.58	118	LR		LR	21 21 41.7	
	comp=Z,20nm,21.0s,baz=205,slow=41							
IDI	Anoyia	36.97	282	LR		LR	21 24 33.7	
	comp=Z,20nm,18.3s,baz=179,slow=38							
FINES	FINESS Array B	37.40	326	P		P	21 07 44.3	+1.0
	2.2nm,1.0s,baz=119,slow=5.4,SNR=3.7							
ARCES	ARCESS Array B	41.08	338	P		P	21 08 14.7	+1.0
	1.3nm,0.6s,baz=116,slow=8.5,SNR=9.1							
NOA	NORSAR Array B	44.29	323	P		P	21 08 40.4	+0.8
	1.2nm,1.1s,baz=96,slow=7.7,SNR=2.7							
TORD	Torodi Ar. Bea	65.59	269	P		P	21 11 11.2	-1.6
	0.2nm,0.4s,baz=59,slow=6.7,SNR=6.6							
YKA	Yellowknife Ar	81.23	3	P		P	21 12 43.4	+0.3
	0.2nm,0.4s,baz=352,slow=5.5,SNR=7.2							
WRA	Warramunga Ar	82.11	122	P		P	21 12 47.1	-1.4
	0.8nm,1.2s,baz=304,slow=5.9,SNR=3.5							
ASAR	Alice Springs	84.37	125	P		P	21 12 59.0	-1.0
	0.3nm,0.9s,baz=308,slow=4.5,SNR=3.1							

THR ***11*** *21:02:18.8±0.3,26°.86N×54°.07E,h14km±6km,ML3.7*

IDC ***11*** *21:02:21.9±0.7,26°.65N×53°.88E,h0km,mb3.8/21, mb1 3.9/25,mb1mx3.8/67,mbtmp3.8/25,ML3.7/4,MS2.9/6, Ms1 2.9/6,ms1mx2.6/42,Error ellipse: s-maj=18.1km s-min=13.9km az=20.0*

NEIC ***11*** *21:02:23.6±1.7,26°.73N±0°.08×53°.85E±0°.06,h10km±1km, mb4.1/20,Error ellipse: s-maj=14.6km s-min=8.1km az=201.0*

DSN ***11*** *21:02:23.9±1.0,26°.97N×53°.98E,h10km,ML4.0/8,Error ellipse: s-maj=13.1km s-min=4.8km az=175.0*

TEH ***11*** *21:02:23.6,26°.75N×53°.93E,h10km,ML3.8*

OMAN ***11*** *21:02:28.2±0.8,26°.69N×54°.00E,h30km,ml3.9/16,Error ellipse: s-maj=12.0km s-min=7.8km az=55.0*

ISC 11 21:02:23.6±0.4,26°.76N±0°.04×53°.97E±0°.04,h10km,n124, σ1℘64/128**,mb3.9/32,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHRM	Jahrom	1.77	349	*e*Pn		Pb	21 02 56.5	+0.3
JHRM				*e*			21 03 30.0	
UMQ	Umm Al-Quwin	1.96	129	P		Pb	21 02 59.1	-0.3
UMQ	Umm Al-Quwin	1.96	129	*e*Pn		Pb	21 02 59.5	+0.1
BNDS	Bandar-Abbas	2.07	72	*e*Pg		Pn	21 02 54.4	-4.1
BNDS	Bandar-Abbas	2.07	72	*e*Pg		Pn	21 02 54.4	-4.1
GENO	Geno	2.07	72	*e*Pn		Pb	21 03 00.8	-0.5
GENO				*e*			21 03 48.9	
SHME	Shamm	2.08	110	*e*P		Pn	21 02 59.7	+1.1
	SNR=15							
SHME				S		Sb	21 03 27.3	0.0
SHME	Shamm	2.08	110	*e*Pn		Pn	21 02 59.9	+1.4
BANOM	Banah	2.26	111	*e*P		Pn	21 03 02.4	+1.5
	SNR=39							
BANOM	Banah	2.26	111	P		Pn	21 03 02.6	+1.6
	SNR=39							
NAZ	Nazwa, Dubai	2.34	139	*e*P		Pb	21 03 04.8	-1.0
	SNR=11							
NAZ	Nazwa, Dubai	2.34	139	*e*Pn		Pb	21 03 05.3	-0.5
NAZ	Nazwa, Dubai	2.34	139	P		Pb	21 03 05.3	-0.5
	SNR=11							
AJN	Ajban	2.38	157	*e*Pn		Pb	21 03 05.8	-0.7
AJN	Ajban	2.38	157	P		Pb	21 03 05.7	-0.8
MSFE	Esma-Masafi	2.42	125	*e*P		Pn	21 03 05.0	+1.8
	SNR=13							
MSFE	Esma-Masafi	2.42	125	*e*Pn		Pn	21 03 05.6	+2.4
ASUD	Al Ashush, Dub	2.46	150	*e*P		Pb	21 03 07.0	-0.9
	SNR=28							
ASUD	Al Ashush, Dub	2.46	150	*e*Pn		Pb	21 03 07.2	-0.7
ASUD	Al Ashush, Dub	2.46	150	P		Pb	21 03 07.1	-0.7
	SNR=28							
FAQ	Al Faqa, Dubai	2.49	144	*e*Pn		Pb	21 03 07.6	-0.8
FAQ	Al Faqa, Dubai	2.49	144	P		Pb	21 03 07.0	-1.3
MDH	Madha	2.56	124	*e*Pn		Pb	21 03 07.8	-1.7
MDH	Madha	2.56	124	P		Pn	21 03 07.2	+2.1
	SNR=5.2							
NIAN	Nian	2.68	72	*e*Pn		Pn	21 03 09.4	+2.6
NIAN				*e*			21 04 13.0	
UOSS	Minazif	2.71	131	*e*P		Pn	21 03 09.0	+1.8
	SNR=49							
UOSS	Minazif	2.71	131	*e*Pn		Pn	21 03 09.0	+1.8
UOSS	Minazif	2.71	131			Pn	21 03 09.0	+1.8
UOSS	Minazif	2.71	131	P		Pn	21 03 09.2	+2.0
HATD	Hatta, Dubai	2.75	134	*e*P		Pn	21 03 10.0	+2.3
	SNR=9.0							
HATD	Hatta, Dubai	2.75	134	*e*Pn		Pn	21 03 09.0	+1.3
HATD	Hatta, Dubai	2.75	134	P		Pn	21 03 10.2	+2.5
	SNR=9.0							
ASHO	Ashiyiah	2.80	137	*e*P		Pn	21 03 10.7	+2.2
	SNR=55							
ASHO	Ashiyiah	2.80	137	*e*Pn		Pn	21 03 11.1	+2.6
ASHO	Ashiyiah	2.80	137	P		Pn	21 03 11.0	+2.5
	SNR=55							
ASHO				S		Sn	21 03 45.0	+2.6
SHI	Shiraz	3.14	336	*e*Pn		Pn	21 03 14.6	+1.3
SHI				*e*			21 04 26.9	
ALNE	Al Ain	3.14	149	*i* P		Pn	21 03 15.4	+2.2
	SNR=25							
ALNE	Al Ain	3.14	149	*e*Pn		Pn	21 03 15.7	+2.5
SOHO	SOHO	3.50	138	P		Pn	21 03 19.8	+1.7
	SNR=27							
KHNJ	Kahnooj	3.53	70	*e*Pn		Pn	21 03 20.4	+1.9
SLWS		3.58	238	*e*Pn		Pn	21 03 21.2	+2.1
KRBR	Kerman	4.04	37	*e*Pn		Pn	21 03 20.9	-4.9
KRBR	Kerman	4.04	37	*e*Pn		Pn	21 03 20.9	-5.0
KRBR				*e*Sg		Sb	21 04 20.5	-3.7
KRBR				IAML			21 04 24.7	
	comp=E,66nm,0.4s							
KRBR				IAML			21 04 28.9	
	comp=N,71nm,0.5s							
TVBK	TV Kerman	4.05	37	*e*Pn		Pn	21 03 29.0	+3.1
TVBK				*e*			21 04 45.8	
ARQ	Araqi	4.12	145	P		Pn	21 03 28.6	+1.9
	SNR=36							
KHGB	Koh Gabri	4.22	31	*e*Pn		Pn	21 03 31.4	+3.2
KHGB				*e*			21 04 24.9	
HOQ	Hoqain	4.38	136	P		Pn	21 03 31.3	+1.1
	SNR=17							
HOQ				S		Sn	21 04 22.1	+0.6
CHMN	Cheshme madani	4.41	45	*e*Pn		Pn	21 03 34.8	+3.9
CHMN				*e*			21 04 32.0	
IMEH	Mehriz	4.64	7	*e*Pn		Pn	21 03 36.9	+2.9
KLNJ	Kolanjah	4.71	334	*e*Pn		Pn	21 03 36.2	+1.1
BSY	Bisya	4.96	143	P		Pn	21 03 40.3	+2.0
	SNR=20							
BSY				S		Sn	21 04 36.2	+0.5
IBAF	Bafgh	5.01	16	*e*Pn		Pn	21 03 41.3	+2.3
ISAD	Sadrabad	5.14	357	*e*Pn		Pn	21 03 43.2	+2.3
IRAM	Rameshe h	5.21	345	*e*Pn		Pn	21 03 43.5	+1.6
SMDO	Samad	5.23	134	P		Pn	21 03 43.8	+1.9
	SNR=26							
SMDO				S		Sn	21 04 43.4	+1.0
ICHK	Chekchek	5.47	4	*e*Pn		Pn	21 03 47.2	+1.8
WSAR	Wadi Sarin	5.50	129	Pn		Pn	21 03 47.0	+1.4
	comp=N,4.4nm,0.3s,baz=309,slow=14,SNR=47							
WSAR				Sn		Sn	21 04 46.6	-2.3
	comp=N,1.1nm,0.3s,baz=18,slow=20,SNR=3.8							
WSAR				LR		LR	21 06 24.0	
	comp=N,117nm,20.6s,baz=314,slow=44							
JMDO	Jabal Madar	5.77	138	P		Pn	21 03 50.7	+1.4
	SNR=17							
JMDO				S		Sn	21 04 55.2	-0.5
WBK	Wadi Bani Khal	6.15	131	P		Pn	21 03 55.7	+1.2
	SNR=28							
WBK				S		Sn	21 05 06.4	+1.4
JHBN	Jahan bin	6.16	333	*e*Pn		Pn	21 03 56.7	+1.8
IZEF	Zefreh	6.27	347	*e*Pn		Pn	21 03 56.7	+0.3
ANAR	Anarak	6.41	358	*e*Pn		Pn	21 03 59.0	+0.8
MHTO	MHTO	6.82	147	P		Pn	21 04 05.2	+1.6
	SNR=10							
IKLH	Kolahrood	6.85	343	*e*Pn		Pn	21 04 05.2	+0.8
KRSH	Karshahi	7.35	348	*e*Pn		Pn	21 04 11.1	-0.1
DQM	DQM	7.55	154	P		Pn	21 04 14.7	+0.9
	SNR=17							
RAYN	Ar Rayn	8.32	249			Pn	21 04 23.9	-0.5
ASAO	Ashtian	8.47	337	IAML			21 06 05.9	
	comp=E,5.4nm,0.7s							
HRA	Herat	10.42	41	Pn		Pn	21 04 56.5	+3.3
GEYT	Alibeck	11.67	16	LR		LR	21 10 22.0	
	comp=E,35nm,21.2s,baz=350,slow=41							
GYA0B	ALIBECK ARRAY	11.67	16	Pn		Pn	21 05 11.7	+1.5
KBL	Kabul	15.11	55	Pn		Pn	21 05 59.9	+2.7
KBL				IAmb		IAmb	21 06 05.3	
	comp=Z,7.9nm,1.6s							
GNI	Garni	15.40	332	Pn		P	21 06 07.8	+2.1
	comp=Z,1.0nm,0.3s,baz=184,slow=3.7,SNR=8.0							
GNI				LR		LR	21 13 31.1	
	comp=Z,17nm,19.2s,baz=228,slow=43							
GNI	Garni	15.40	332			P	21 06 03.7	-2.0
GNI				IAmb		IAmb	21 06 09.0	
	comp=Z,18nm,1.1s							
AKH	Akhalkalaki	16.97	332	Pn		Pn	21 06 21.4	+0.2
MMAI	Mount Meron Ar	17.25	296	P		P	21 06 25.4	-0.8
	comp=Z,0.2nm,0.3s,baz=101,slow=15,SNR=2.6							
GAZ	Gaziantep	17.57	310	Pn		Pn	21 06 27.9	-0.8
ATD	Arta Tunnel	18.42	217	LR		LR	21 14 32.2	
	comp=Z,63nm,18.6s,baz=163,slow=40							
KBZ	Khabaz	19.16	335	P		Pn	21 06 49.4	+1.5
	comp=Z,0.1nm,0.3s,baz=142,slow=6.6,SNR=5.0							
BTK	Batken	19.29	42	P		P	21 06 49.3	+0.7
KVAR	Kislovodsk Arr	19.43	335	P		Pn	21 06 52.4	+1.1
	baz=73,slow=19,SNR=3.7							
KIV	Kislovodsk	19.43	335	P		Pn	21 06 51.2	-0.1
KIV				IAmb		IAmb	21 06 54.0	
	comp=Z,6.0nm,0.9s							
KK31	Karatay Array	21.14	35	P		P	21 07 09.5	+0.8
KK31				IAmb		IAmb	21 07 43.7	
	comp=Z,7.9nm,1.8s							
KKAR	Karatay Array	21.14	35	P		P	21 07 09.8	+1.1
BR131	Keskin Array S	21.30	312	P		P	21 07 10.2	-0.3
BRTR	Keskin Array B	21.30	312	P		P	21 07 11.2	+0.6
	comp=Z,2.9nm,0.8s,baz=134,slow=13,SNR=13							
ARSB	Arslanbob	21.36	42	P		P	21 07 11.4	+0.2
ARSB				IAmb		IAmb	21 07 12.7	
	comp=Z,5.9nm,0.8s							
ANTO	Ankara	21.93	312	P		P	21 07 15.9	-1.3
AAK	Ala-Archa	23.05	41	P		P	21 07 30.6	+1.4
	comp=Z,0.6nm,0.6s,baz=207,slow=6.8,SNR=3.1							
AAK	Ala-Archa	23.05	41	P		P	21 07 31.3	+2.1
AAK				IAmb		IAmb	21 07 46.2	
	comp=Z,7.3nm,1.6s							
AKTO	Aktyubinsk	23.84	6	P		P	21 07 38.6	+1.8
	comp=Z,1.4nm,0.5s,baz=181,slow=7.8,SNR=5.8							
BVAR	Borovoye Array	28.96	21	P		P	21 08 23.5	+0.5
	comp=Z,0.6nm,0.6s,baz=235,slow=5.2,SNR=5.1							
BVAR				PcP		PcP	21 11 31.3	-0.3
	comp=Z,0.3nm,0.6s,baz=197,slow=4.5,SNR=2.8							
ARU	Arti	29.83	5	LR		LR	21 21 47.0	
	comp=Z,52nm,18.4s,baz=129,slow=39							
MK31	Makanchi Array	29.98	41	P		P	21 08 32.9	+0.7
MK31				IAmb		IAmb	21 08 52.9	
	comp=Z,6.7nm,2.0s							
MKAR	Makanchi Array	29.98	41	P		P	21 08 33.2	+1.0
	comp=Z,0.5nm,0.6s,baz=224,slow=7.8,SNR=6.9							
KURBB	Kurchatov Arra	30.32	32	P		P	21 08 36.6	+1.6
	comp=Z,0.7nm,0.6s,baz=233,slow=8.7,SNR=6.6							
AKASG	Malin Array Be	30.45	328	P		P	21 08 35.5	-0.7
	comp=Z,0.5nm,0.4s,baz=135,slow=8.5,SNR=4.6							
OJC	Ojcow	35.07	321	P		P	21 09 16.5	-0.2
OJC				IAmb		IAmb	21 09 18.4	
	comp=Z,3.8nm,0.7s							
ZAA0	Zalesovo Array	35.41	32	P		P	21 09 18.9	-0.7
ZAA0				IAmb		IAmb	21 09 20.9	
	comp=Z,3.6nm,0.6s							
ZALV	Zalesovo Beam	35.41	32	P		P	21 09 20.3	+0.7
	comp=Z,4.1nm,0.6s,baz=242,slow=9.0,SNR=22							
WATA	Walderalm	38.97	313	*i* pP		P	21 09 50.2	+0.1
	comp=Z,1.9nm,0.5s							
SQTA	Sankt Quirin	39.18	313	*i* pP		P	21 09 51.7	0.0
	comp=Z,2.3nm,0.5s							
FINES	FINESS Array B	39.42	339	P		P	21 09 53.2	-0.2
	comp=Z,4.9nm,1.0s,baz=146,slow=11,SNR=8.1							
FETA	Feichten	39.44	312	*i* pP		P	21 09 54.4	+0.4
	comp=Z,1.6nm,0.5s							
RETA	Reutte	39.54	313	*i* pP		P	21 09 54.7	0.0
	comp=Z,1.3nm,0.5s							
DAVA	Damuels	40.07	313	*i* pP		P	21 09 59.3	+0.1
	comp=Z,5.8nm,0.5s							
TUE	Stuetta	40.22	311	P		P	21 09 58.1	-2.5
TUE				IAmb		IAmb	21 10 04.9	
	comp=Z,5.8nm,0.7s							
CMAR	Chiang Mai Arr	42.16	92	P		P	21 10 17.6	+1.0
	comp=Z,0.3nm,0.4s,baz=284,slow=10,SNR=4.8							
CMAR				PcP		PcP	21 12 11.4	+0.3
	comp=Z,0.4nm,0.8s,baz=293,slow=4.7,SNR=3.4							
HFS	Hagfors	43.18	332	P		P	21 10 24.3	0.0
	comp=Z,1.5nm,0.7s,baz=133,slow=6.1,SNR=2.8							
NOA	NORSAR Array B	44.70	332	P		P	21 10 36.5	-0.1
	comp=Z,1.0nm,0.9s,baz=134,slow=8.7,SNR=3.0							
TLY	Talaya	44.71	42	P		P	21 10 35.5	-1.3
SONM	Songino Array	45.71	48	P		P	21 10 46.0	+1.1
	comp=Z,0.5nm,0.6s,baz=278,slow=10,SNR=5.7							
ARCES	ARCESS Array B	45.91	347	P		P	21 10 46.1	+0.1
	comp=Z,1.4nm,0.6s,baz=143,slow=8.9,SNR=16							
IPM	Ipoh	50.06	108	P		P	21 11 16.0	-2.9
TORD	Torodi Ar. Bea	50.64	265	P		P	21 11 22.4	-0.9
	comp=Z,0.9nm,0.6s,baz=58,slow=7.7,SNR=10							
MDT	Midelt	50.64	292	P		P	21 11 23.4	+0.2
	comp=Z,0.5nm,0.6s,baz=131,slow=20,SNR=4.0							
SPA0	Spitsbergen Ar	54.24	351	P		P	21 11 49.8	+0.6
KNMB	Chin-men Tao	57.58	77	P		P	21 12 11.6	-2.2
DBIC	Dimbokro	59.24	261	P		P	21 12 24.9	-0.6
	comp=Z,1.5nm,0.5s,baz=32,slow=9.2,SNR=5.5							
KSRS	Korea Array	62.10	60	LR		LR	21 44 14.3	
	comp=Z,17nm,18.1s,baz=198,slow=40							
FITZ	Fitzroy Crossi	82.58	114	P		P	21 14 47.1	-0.1
	comp=Z,2.3nm,0.8s,baz=270,slow=5.1,SNR=4.9							
YKA	Yellowknife Ar	90.58	355	P		P	21 15 25.8	+0.1
	comp=Z,0.1nm,0.5s,baz=6.5,slow=4.6,SNR=4.2							
WRA	Warramunga Arr	90.64	112	P		P	21 15 26.2	-0.6
	comp=Z,0.5nm,0.9s,baz=297,slow=3.7,SNR=3.5							
ASAR	Alice Springs	92.04	115	P		P	21 15 32.9	-0.3
	comp=Z,0.3nm,0.7s,baz=299,slow=5.0,SNR=3.8							

IDC 11 21:09:05.7±2.8,27.7N×128.79E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.2/50,mbtmp3.5/3,Error ellipse: s-maj=209.9km s-min=25.3km az=69.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.22	167	P		P	21 14 14.2	-0.3
	0.4nm,0.4s,baz=344,slow=9.5,SNR=7.1							
ASAR	Alice Springs	26.74	170	P		P	21 14 45.7	-1.5
	0.9nm,1.1s,baz=339,slow=6.4,SNR=4.9							
MKAR	Makanchi Array	59.52	325	P		P	21 19 12.0	+1.1
	0.3nm,0.3s,baz=120,slow=7.7,SNR=6.9							

IDC ***11*** *21:09:23.7±1.6,26°.77N×53°.82E,h0km,mb3.7/7, mb1 3.8/9,mb1mx3.5/51,mbtmp3.8/9,ML3.1/2,MS3.4/2, Ms1 3.4/2,ms1mx2.5/43,Error ellipse: s-maj=33.5km s-min=24.8km az=19.0*

TEH ***11*** *21:09:25.5,26°.78N×53°.99E,h11km,ML3.5*

DSN ***11*** *21:09:25.2±0.0,26°.97N×53°.98E,h10km,ML3.5/7,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

OMAN ***11*** *21:09:32.9±0.2,26°.28N×53°.77E,h37km±27km,ml3.3/15, Error ellipse: s-maj=8.7km s-min=2.4km az=352.0*

**ISC 11 21:09:26.7±0.7,26°.64N±0°.05×53°.81E±0°.05,

WHFO				S	Sn	21 13 03.8	-4.2	
DMTO	**DMTO**	**8.94**	**173**	P	Pn	21 11 34.9	+0.4	
	SNR=9.6							
DMTO				S	Sn	21 13 10.1	-4.4	
RBK	**Rabkut**	**9.10**	**178**	P	Pn	21 11 38.8	+2.1	
RBK				S	Sn	21 13 14.2	-4.1	
ABTO	**Aybut**	**9.25**	**183**	P	Pn	21 11 39.3	+0.5	
GNI	**Garni**	**15.44**	**333**	Pn	Pn	21 13 05.2	+2.1	
	0.5nm,0.3s,baz=154,slow=7.4,SNR=5.0							
BRTR	**Keskin Array B**	**21.28**	**313**	P	P	21 14 12.2	+0.7	
	1.6nm,0.9s,baz=136,slow=13,SNR=6.3							
AAK	**Ala-Archa**	**23.24**	**41**	LR	LR	21 25 01.2		
	comp=Z,38nm,18.4s,baz=90,slow=40							
MKAR	**Makanchi Array**	**30.17**	**41**	P	P	21 15 35.2	+0.3	
	0.5nm,0.9s,baz=216,slow=7.1,SNR=3.3							
AKASG	**Malin Array Be**	**30.48**	**329**	P	P	21 15 36.3	-1.3	
	0.3nm,0.4s,baz=136,slow=8.3,SNR=2.7							
ZALV	**Zalesovo Beam**	**35.59**	**32**	P	P	21 16 21.4	-0.7	
	0.9nm,0.5s,baz=238,slow=9.5,SNR=6.5							
FINES	**FINESS Array B**	**39.48**	**339**	P	P	21 16 54.4	-0.5	
	1.5nm,0.8s,baz=147,slow=8.3,SNR=5.5							
ARCES	**ARCESS Array B**	**46.00**	**347**	P	P	21 17 47.5	-0.2	
	3.8nm,1.1s,baz=141,slow=8.7,SNR=5.9							
TORD	**Torodi Ar. Bea**	**50.49**	**265**	P	P	21 18 23.8	+0.7	
	0.6nm,0.8s,baz=61,slow=6.2,SNR=3.6							
RES	**Resolute Bay**	**76.90**	**352**	LR	LR	21 58 33.4		
	comp=Z,44nm,18.7s,baz=203,slow=38							

IDC 11 21:25:28.2±2.8, 30°.89S×178°.18W, h0km, mb3.8/2, mb1 4.0/3, mb1mx3.7/33, mbtmp3.8/3, ML3.1/1, Error ellipse: s-maj=68.4km s-min=21.7km az=117.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.65**	**8**	Pn	Pn	21 25 58.9	+0.5
	69nm,0.3s,baz=270,slow=20,SNR=2.3						
RAO				Sn	Sg	21 26 21.6	+0.4
	85nm,0.3s,baz=270,slow=20,SNR=2.2						
URZ	**Urewera**	**8.31**	**207**	Pn	Pn	21 27 31.0	+1.0
	0.3nm,0.3s,baz=347,slow=18,SNR=3.3						
URZ				Sn	Sn	21 28 59.5	-5.0
	0.8nm,0.3s,baz=0.0,slow=20,SNR=9.6						
ASAR	**Alice Springs**	**42.93**	**268**	P	P	21 33 28.8	-0.2
	0.8nm,0.6s,baz=104,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**43.96**	**273**	P	P	21 33 37.2	-0.2
	1.0nm,0.5s,baz=114,slow=7.4,SNR=10						
FINES	**FINESS Array B**	**145.55**	**340**	PKPbc	PKPdf	21 45 06.4	-1.2
	2.8nm,1.0s,baz=69,slow=4.6,SNR=7.0						

*ANF **11** 21:27:08.1±0.1, 33°.17N×115°.59W, h1km, ML2.2/8, ML2.0/10, Error ellipse: s-maj=1.6km s-min=0.9km az=127.0*

SCEDC 11 21:27:08.1, 33°.17N×115°.57W, h1km, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWSC	**Sam W. Stewart**	**0.30**	**217**	P	Pg	21 27 14.3	+0.4
	baz=40,SNR=92						
SWSC				S	Sg	21 27 18.3	+0.5
	baz=40						
BC3	**Big Chuckawall**	**0.48**	**13**	P	Pg	21 27 17.6	+0.3
	baz=192,SNR=22						
BC3				S	Sg	21 27 24.6	+1.0
	baz=192						
GLA	**Glamis**	**0.65**	**102**	P	Pg	21 27 20.3	-0.3
	baz=281,SNR=24						
GLA				S	Sg	21 27 30.0	+1.0
	baz=281						
IKP	**In-Ko-Pah, Jac**	**0.69**	**220**	P	Pg	21 27 21.4	-0.1
	baz=41,SNR=18						
IKP				S	Sg	21 27 31.2	+0.8
	baz=41						
MONP2	**Monument Peak**	**0.76**	**247**	P	Pg	21 27 22.8	0.0
	baz=68,SNR=10.0						
MONP2				S	Sg	21 27 33.7	+1.0
	baz=68						
PFO	**Pinyon Flats O**	**0.84**	**300**	P	Pg	21 27 24.0	-0.3
	baz=120,SNR=16						
PFO				S	Sg	21 27 36.1	+0.8
	baz=120						
BELC	**Belle Mtn. Jos**	**0.88**	**337**	P	Pg	21 27 25.0	0.0
	baz=157,SNR=10						
IRM	**Iron Mountain**	**1.03**	**21**	P	Pg	21 27 27.7	-0.3
	baz=200,SNR=27						
IRM				S	Sb	21 27 42.6	-0.3
	baz=200						
Y12C	**Blythe**	**1.05**	**57**	P	Pg	21 27 28.4	+0.1
	baz=237,SNR=14						
Y12C				S	Sg	21 27 42.6	+0.7
	baz=237						
GMRC	**Granite Mounta**	**1.59**	**358**	Pg	Pg	21 27 38.9	+0.3
	baz=177						

*ANF **11** 21:27:59.7±0.2, 33°.19N×115°.58W, h1km, Error ellipse: s-maj=1.8km s-min=1.0km az=133.0*

SCEDC 11 21:27:59.6, 33°.19N×115°.57W, h2km, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWSC	**Sam W. Stewart**	**0.30**	**217**	S	Sg	21 28 09.8	+0.4
	baz=39						
BC3	**Big Chuckawall**	**0.48**	**13**	P	Pg	21 28 09.1	+0.2
	baz=191						
BC3				S	Sg	21 28 16.2	+1.1
	baz=191						
GLA	**Glamis**	**0.65**	**102**	P	Pg	21 28 12.0	-0.1
	baz=282						
GLA				S	Sg	21 28 21.4	+0.9
	baz=282						
IKP	**In-Ko-Pah, Jac**	**0.69**	**220**	P	Pg	21 28 12.8	-0.2
	baz=40						
IKP				S	Sg	21 28 23.2	+1.2
	baz=40						
MONP2	**Monument Peak**	**0.76**	**248**	P	Pg	21 28 14.2	-0.1
	baz=68						
MONP2				S	Sg	21 28 25.2	+0.9
	baz=68						
PFO	**Pinyon Flats O**	**0.85**	**300**	P	Pg	21 28 15.3	-0.7
	baz=120						
PFO				S	Sg	21 28 27.7	+0.8
	baz=120						
IRM	**Iron Mountain**	**1.03**	**21**	P	Pb	21 28 20.1	-0.4
	baz=200						
IRM				S	Sb	21 28 34.1	-0.5
	baz=200						
Y12C	**Blythe**	**1.05**	**57**	P	Pg	21 28 19.9	+0.1
	baz=237						
Y12C				S	Sg	21 28 33.9	+0.5
	baz=237						

NNC 11 21:57:14.7±5.2, 37°.10N×70°.78E, h0km, mb3.7, mpv3.3, 4C-1D, Error ellipse: s-maj=42.1km s-min=31.9km az=163.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.00**	**358**	P	Pn	21 58 46.6	+1.8
	0.9nm,0.4s,baz=176,slow=13,SNR=25						
KK31				⇑S	Sn	21 59 55.9	+1.8
	6.2nm,0.5s,baz=181,slow=22,SNR=21						
AAK	**Ala-Archa**	**6.22**	**26**	⇑P	Pn	21 58 48.4	+0.4
	1.3nm,0.5s						
AAK				⇑S	Sn	22 00 00.4	+0.5
	3.4nm,0.8s						
TKM2	**Tokmak 2**	**6.88**	**31**	⇓P	Pn	21 58 56.3	-0.8
	3.5nm,0.8s						
TKM2				⇑S	Sn	22 00 16.8	+0.6
	0.9nm,0.7s						
AB31	**Akbulak array**	**14.47**	**330**	P	Pn	22 00 37.5	-3.3
	0.3nm,0.2s,baz=156,slow=10,SNR=7.6						

*IDC **11** 22:18:15.2±2.7, 6°.48S×101°.98E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/34, mbtmp3.5/6, ML3.7/1, Error ellipse: s-maj=91.3km s-min=23.5km az=50.0*

ISC 11 22:18:20.6±2.1, 6°.4S±0°.3×102°.1E±0°.3, h35km, n10, σ0°.42/7, mb3.5/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**5.50**	**95**	Pn	Pn	22 19 40.2	-0.1
	2.2nm,0.3s,baz=311,slow=19,SNR=1.8						
CMAR	**Chiang Mai Arr**	**24.91**	**353**	P	P	22 23 41.1	+0.6
	0.7nm,0.3s,baz=185,slow=8.6,SNR=4.5						
H08S2	**Diego Garcia H**	**29.40**	**266**	T	T	22 56 31.2	
	baz=88						
H08S3	**Diego Garcia H**	**29.41**	**266**	T	T	22 56 23.6	
	baz=88						
H08S1	**Diego Carcia H**	**29.42**	**266**	T	T	22 56 37.9	
	baz=88						
WRA	**Warramunga Arr**	**34.07**	**116**	P	P	22 25 02.2	+0.2
	0.6nm,0.6s,baz=285,slow=12,SNR=3.2						
ASAR	**Alice Springs**	**35.05**	**123**	P	P	22 25 10.3	-0.1
	0.4nm,0.8s,baz=298,slow=8.0,SNR=2.9						
SONM	**Songino Array**	**54.15**	**4**	P	P	22 27 42.2	-0.2
	0.3nm,0.6s,baz=196,slow=9.0,SNR=3.1						
MKAR	**Makanchi Array**	**55.82**	**344**	P	P	22 27 54.0	-0.4
	0.3nm,0.7s,baz=146,slow=7.9,SNR=2.4						
TXAR	**Lajitas Array**	**146.68**	**44**	PKPbc	**PKPbc**	22 37 59.9	+0.3
	0.7nm,0.7s,baz=276,slow=1.1,SNR=8.5						

*ROM **11** 22:33:39.8±0.1, 44°.689N±0°.005×7°.06E±0°.01, h7km, ML2.0/20, Error ellipse: s-maj=1.1km s-min=0.2km az=251.0*
*GEN **11** 22:33:40.6, 44°.70N×7°.09E, h3km±1km, Ml1.9*
*STR **11** 22:33:40.9±0.8, 45°.N±2°×7°±°, h2km±6km, MLv2.1/6*
*LDG **11** 22:33:41.1±0.1, 44°.69N×7°.15E, h2km, Md2.4/2, Ml2.5/21, Error ellipse: s-maj=2.1km s-min=1.3km az=65.0*

ISC 11 22:33:40.7±0.8, 44°.70N±0°.01×7°.13E±0°.01, h10km±6km, n86, σ0°.82/143, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHB	**Bricherasio**	**0.17**	**33**	P	Pg	22 33 44.7	+0.2
BHB				S	Sg	22 33 47.1	-0.1
BHB	**Bricherasio**	**0.17**	**33**	P	Pg	22 33 44.6	+0.2
BHB				S	Sg	22 33 47.0	-0.1
PZZ	**Stroppo**	**0.19**	**183**	*i* P	Pg	22 33 44.5	-0.3
PZZ				S	Sg	22 33 47.1	-0.6
PZZ				AML	AML		
	comp=E,2560μm,0.5s						
PZZ				AML	AML		
	comp=N,2220μm,0.4s						
PZZ	**Stroppo**	**0.19**	**183**	P	Pg	22 33 44.5	-0.3
PZZ				S	Sg	22 33 47.1	-0.6
DOI	**San Damiano**	**0.21**	**157**	*i* P	Pg	22 33 45.1	0.0
DOI				S	Sg	22 33 48.4	+0.3
DOI				AML	AML		
	comp=E,1615μm,0.2s						
DOI				AML	AML		
	comp=N,1555μm,0.9s						
MBDF	**Montbardon**	**0.26**	**277**	*e*Pg	Pg	22 33 45.3	-0.7
MBDF				*e*Sg	Sg	22 33 48.7	-0.9
	comp=N,252nm,0.4s						
SURF	**Saint Ours**	**0.31**	**227**	Pg	Pg	22 33 46.7	-0.4
SURF				Sg	Sg	22 33 51.0	-0.3
RRL	**Rocca Remolon**	**0.33**	**313**	*i* P	Pg	22 33 46.9	-0.5
RRL				S	Sg	22 33 51.3	-0.5
RRL				AML	AML		
	comp=E,520μm,0.3s						
RRL				AML	AML		
	comp=N,382μm,1.6s						
RRL	**Rocca Remolon**	**0.33**	**313**	P	Pg	22 33 46.9	-0.5
RRL				S	Sg	22 33 51.1	-0.8
RSP	**Reno Superiore**	**0.46**	**12**	*i* P	Pg	22 33 49.9	+0.2
RSP				S	Sg	22 33 56.9	+0.9
RSP				AML	AML		
	comp=E,254μm,1.3s						
RSP				AML	AML		
	comp=N,314μm,0.4s						
RSP	**Reno Superiore**	**0.46**	**12**	P	Pg	22 33 49.9	+0.2
RSP				S	Sg	22 33 56.2	+0.3
STV	**Sant Anna di V**	**0.47**	**163**	P	Pg	22 33 50.0	+0.1
STV				S	Sg	22 33 56.6	+0.5
STV				AML	AML		
	comp=N,146μm,0.9s						
STV				AML	AML		
	comp=E,140μm,0.4s						
STV	**Sant Anna di V**	**0.47**	**163**	P	Pg	22 33 50.0	+0.1
STV				S	Sg	22 33 56.2	+0.1
BNI	**Bardonecchia**	**0.48**	**318**	*e*P	Pg	22 33 49.6	-0.6
BNI				S	Sg	22 33 55.5	-1.0
OGAG	**Argentiere**	**0.49**	**240**	Pg	Pg	22 33 48.8	-1.3
OGAG				Sg	Sg	22 33 54.6	-2.0
ENR	**Entracque**	**0.51**	**156**	*i* P	Pg	22 33 50.8	+0.2
ENR				S	Sg	22 33 57.8	+0.4
ENR				AML	AML		
	comp=N,325μm,0.1s						
ENR				AML	AML		
	comp=E,312μm,0.2s						
ENR	**Entracque**	**0.51**	**156**	P	Pg	22 33 50.6	0.0
ENR				S	Sg	22 33 57.7	+0.2
ISO	**Isola**	**0.52**	**187**	Pg	Pg	22 33 50.6	-0.1
ISO				Sg	Sg	22 33 57.8	+0.3
GBOS	**Grotte di Boss**	**0.68**	**132**	*i* P	Pg	22 33 54.0	+0.1
GBOS				S	Sg	22 34 03.4	+0.6
GBOS				AML	AML		
	comp=E,108μm,0.2s						
GBOS				AML	AML		
	comp=N,118μm,1.0s						
GBOS	**Grotte di Boss**	**0.68**	**132**	P	Pg	22 33 54.0	+0.1
GBOS				S	Sg	22 34 03.1	+0.4
MONC	**Moncucco Torin**	**0.68**	**56**	P	Pb	22 33 55.2	+0.5
MONC				AML	AML		
	comp=N,258μm,0.3s						
MONC				AML	AML		
	comp=E,224μm,0.5s						
TURF	**col de Turini**	**0.74**	**165**	Pg	Pg	22 33 55.3	+0.2
TURF				Sg	Sg	22 34 05.2	+0.4
LSD	**Lago del Serru**	**0.76**	**0**	P	Pg	22 33 55.2	-0.3
LSD				S	Sg	22 34 05.4	-0.1
LSD				AML	AML		
	comp=N,162μm,1.5s						
LSD				AML	AML		
	comp=E,202μm,0.2s						
LSD	**Lago del Serru**	**0.76**	**0**	P	Pg	22 33 55.2	-0.3
LSD				S	Sg	22 34 05.1	-0.4
SAOF	**Saorge**	**0.77**	**157**	Pg	Pg	22 33 55.5	-0.1
SAOF				Sg	Sg	22 34 06.0	+0.3
SAOF	**Saorge**	**0.77**	**157**	*e*P	Pg	22 33 55.5	-0.1
SAOF				S	Sg	22 34 05.8	+0.2
SAOF				AML	AML		
	comp=E,184μm,0.4s						
SAOF				AML	AML		
	comp=N,146μm,0.4s						
OGDI	**Digne**	**0.83**	**226**	Pg	Pn	22 33 58.4	-0.1
LPG	**La Plagne**	**0.85**	**342**	*e*Pg	Pg	22 33 56.5	-0.6
LPG				*e*Sg	Sg	22 34 08.4	+0.3
	comp=N,29nm,0.2s						
SBF	**Sospel**	**0.86**	**165**	*e*Pg	Pg	22 33 57.2	-0.1
SBF				*e*Sg	Sg	22 34 07.7	-0.8
	comp=N,75nm,0.4s						
LPL	**La Plagne**	**0.87**	**341**	*e*Pg	Pg	22 33 57.0	-0.5
LPL				*e*Sg	Sg	22 34 08.7	-0.1
	comp=N,46nm,0.3s						
ESCA	**l'Escarene**	**0.88**	**169**	Pg	Pg	22 33 57.7	+0.1
ESCA				Sg	Sg	22 34 09.7	+0.6
GDM	**Grand'Maison**	**0.88**	**306**	Pg	Pg	22 33 57.2	-0.5
GDM				Sg	Sg	22 34 08.6	-0.6
ROTM	**Rocchetta Tana**	**0.88**	**80**	P	Pn	22 33 58.9	-0.2
ROTM				S	Sn	22 34 12.0	+0.1
ROTM				AML	AML		
	comp=N,422μm,0.3s						
ROTM				AML	AML		
	comp=E,234μm,1.6s						
ROTM	**Rocchetta Tana**	**0.88**	**80**	P	Pn	22 33 59.0	-0.2
ROTM				S	Sn	22 34 11.4	-0.6
RORO	**Rocca Rossa**	**0.89**	**131**	*i* P	Pg	22 33 57.6	-0.2
RORO				AML	AML		
	comp=E,95μm,0.2s						
RORO				AML	AML		
	comp=N,98μm,0.9s						
RORO	**Rocca Rossa**	**0.89**	**131**	P	Pg	22 33 57.6	-0.2
RORO				S	Sg	22 34 09.0	-0.3
ORIF	**Oris-en-Rattie**	**0.92**	**284**	*e*Pg	Pg	22 33 57.5	-0.9
ORIF				*e*Sg	Sg	22 34 10.7	+0.4
	comp=N,11nm,0.2s						
TRAV	**Traversella**	**0.93**	**28**	P	Pg	22 33 57.4	-1.1
TRAV				AML	AML		
	comp=E,65μm,0.3s						
TRAV				AML	AML		
	comp=N,58μm,1.4s						
TRAV	**Traversella**	**0.93**	**28**	P	Pg	22 33 57.4	-1.1
TRAV				S	Sg	22 34 10.0	-0.6
NEGI	**Seborga**	**0.94**	**154**	*e*P	Pg	22 33 58.6	-0.2
NEGI				S	Sg	22 34 11.3	+0.2
NEGI				AML	AML		
	comp=E,105μm,0.9s						
NEGI				AML	AML		
	comp=N,124μm,0.2s						
NEGI	**Seborga**	**0.94**	**154**	P	Pg	22 33 58.5	-0.2
NEGI				S	Sg	22 34 10.5	-0.5
QLNO	**Quiliano**	**0.94**	**113**	P	Pg	22 33 58.8	-0.1
QLNO				AML	AML		
	comp=N,76μm,1.5s						
QLNO				AML	AML		
	comp=E,48μm,1.5s						
CALF	**Calern**	**0.95**	**189**	Pg	Pg	22 33 59.1	+0.1
CALF				Sg	Sb	22 34 12.3	+0.3
IMI	**Imperia**	**0.96**	**145**	*e*P	Pg	22 33 58.9	-0.2
IMI				S	Sb	22 34 12.4	+0.3
IMI				AML	AML		
	comp=E,70μm,1.0s						
IMI				AML	AML		
	comp=N,136μm,1.5s						
IMI	**Imperia**	**0.96**	**145**	P	Pg	22 33 58.7	-0.4
IMI				S	Sg	22 34 11.3	-0.3
CIRO	**Champorcher**	**0.96**	**19**	P	Pg	22 33 58.1	-1.0
CIRO	**Champorcher**	**0.96**	**19**	P	Pg	22 33 58.1	-1.0
CIRO				S	Sg	22 34 11.7	+0.1
FINB	**Finale Ligure**	**1.00**	**121**	P	Pg	22 33 59.9	0.0
FINB				AML	AML		
	comp=E,38μm,0.3s						
FINB				AML	AML		
	comp=N,39μm,0.9s						
PCP	**Piancastagn**	**1.02**	**98**	P	Pg	22 34 00.2	-0.2
PCP				AML	AML		
	comp=E,40μm,0.9s						
PCP				AML	AML		
	comp=N,40μm,1.1s						
PCP	**Piancastagn**	**1.02**	**98**	P	Pg	22 34 00.1	-0.2
PCP				S	Sg	22 34 13.8	+0.1
MRGE	**Morge**	**1.07**	**357**	*i* P	Pg	22 34 01.1	-0.3
MRGE				AML	AML		
	comp=E,50μm,1.6s						
MRGE				AML	AML		
	comp=N,57μm,1.4s						
BLAF	**les Blancs**	**1.08**	**227**	Pg	Pn	22 34 02.0	+0.2
FRF	**La Foret Royal**	**1.19**	**197**	*e*Pn	Pb	22 34 02.9	-0.3
FRF				*e*Sn	Sb	22 34 18.7	+0.1
	comp=N,33nm,0.2s						
MLYF	**Mely**	**1.21**	**235**	Pn	Pg	22 34 05.2	+1.4
SATI	**Passo dei Sala**	**1.29**	**24**	P	Pn	22 34 03.4	-1.6
SATI				AML	AML		
	comp=E,28μm,1.2s						
SATI				AML	AML		
	comp=N,29μm,1.6s						
SMRF	**Simiane la Rot**	**1.33**	**238**	*e*Pn	Pg	22 34 06.5	+0.3
SMRF				*e*Sg	Sb	22 34 23.0	+0.3
	comp=N,8.7nm,0.3s						
OGSM	**Saint Maurice**	**1.37**	**313**	Pn	Pg	22 34 07.0	+0.1
RUSF	**Rustrel**	**1.40**	**238**	Pn	Pg	22 34 08.5	+0.9
LMR	**La Mourre**	**1.43**	**198**	*e*Pn	Pn	22 34 07.1	+0.4
LMR				*e*Sg	Sb	22 34 26.2	+0.5
	comp=N,29nm,0.3s						
MMK	**Mattmark**	**1.48**	**23**	P	Pb	22 34 08.5	+0.2
OG02	**Monnetier-Morn**	**1.59**	**337**	Pn	Pb	22 34 10.6	+0.4
VIVF	**Saint-Julien-l**	**1.76**	**276**	*e*Pn	Pb	22 34 12.8	-0.2
VIVF				*e*Sg	Sg	22 34 36.4	-0.8
	comp=N,7.3nm,0.3s						
CABF	**La Chapelle**	**2.05**	**339**	*e*Pn	Pn	22 34 16.3	+1.0
CABF				*e*Sg	Sg	22 34 46.3	-0.3
	comp=N,6.5nm,0.5s						
LASF	**Ste Croix**	**2.43**	**256**	*e*Pn	Pn	22 34 21.5	+1.1
LASF				*e*Sn	Sn	22 34 48.5	-1.6
	comp=N,2.1nm,0.3s						
PGF	**Pioggiola**	**2.54**	**147**	*e*Pn	Pn	22 34 20.6	-1.4
PGF				*e*Sn	Sn	22 34 50.4	-2.6
	comp=N,2.4nm,0.2s						
CHMF	**Charmoille**	**2.58**	**353**	Pn	Pn	22 34 24.5	+2.0
BAG8	**Bagolino**	**2.61**	**63**	S	Sg	22 35 05.0	+0.5
SMF	**Signal de Mont**	**3.02**	**311**	*e*Pn	Pn	22 34 29.9	+1.4
SMF	**Signal de Mont**	**3.02**	**311**	*e*Pg	Pb	22 34 36.5	+2.0
SMF				*e*Sn	Sn	22 35 06.1	+1.4
	comp=N,1.7nm,0.3s						
SMF				*e*Sg	Sg	22 35 17.6	-0.1
	comp=N,3.2nm,0.3s						
HINF	**Hinteralfeld**	**3.13**	**357**	*e*Pn	Pn	22 34 31.0	+1.0
HINF	**Hinteralfeld**	**3.13**	**357**	*e*Pg	Pg	22 34 40.0	-0.6
HINF				*e*Sn	Sn	22 35 06.7	-0.7
	comp=N,1.3nm,0.3s						
HINF				*e*Sg	Sg	22 35 20.6	-0.5
	comp=N,2.0nm,0.3s						
LMD	**Lutirano**	**3.34**	**99**	P	Pg	22 34 43.2	-1.4
HAU	**Haudompre**	**3.35**	**351**	*e*Pn	Pn	22 34 34.5	+1.4
AVF	**Avril sur Loir**	**3.38**	**310**	*e*Pn	Pn	22 34 34.3	+1.0
LOR	**Lormes**	**3.44**	**320**	*e*Pn	Pn	22 34 35.7	+1.4
LOR	**Lormes**	**3.44**	**320**	*e*Pg	Pg	22 34 45.8	-0.7
LOR				*e*Sn	Sn	22 35 13.2	-1.8
	comp=N,1.8nm,0.4s						
SSF	**Saint Saulge**	**3.46**	**314**	*e*Pn	Pn	22 34 35.8	+1.2
SSF				*e*Sn	Sn	22 35 14.8	-0.9
	comp=N,1.4nm,0.4s						
BGF	**Bois d'Agland**	**3.54**	**303**	*e*Pn	Pn	22 34 36.7	+1.1
BGF				*e*Sn	Sn	22 35 15.5	-1.9
	comp=N,5.1nm,0.6s						
BGF				*e*Sg	Sg	22 35 34.2	0.0
	comp=N,2.5nm,0.4s						
CAF	**Calviac**	**3.61**	**275**	*e*Pn	Pn	22 34 38.6	+1.9
CDF	**Champ du Feu**	**3.72**	**1**	*e*Pn	Pn	22 34 38.0	-0.2
MTLF	**Montolieu**	**3.79**	**251**	*e*Pn	Pn	22 34 39.2	+0.1
SFTF	**Sexfontaines**	**3.80**	**338**	*e*Pn	Pn	22 34 40.8	+1.6
TCF	**Toulx Ste Croi**	**3.81**	**296**	*e*Pn	Pn	22 34 41.2	+1.8
FNEB	**Nbias**	**4.05**	**246**	Pn	Pn	22 34 44.2	+1.5
MEZF	**Maizieres J'vi**	**4.07**	**340**	*e*Sn	Sn	22 35 29.4	-1.1
	comp=N,1.9nm,0.5s						
BAIF	**Baives**	**5.72**	**341**	*e*Pn	Pn	22 35 07.6	+2.0

IDC 11 22:33:42.7±2.1, 1°.07N×126°.58E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/45, mbtmp3.5/3, Error ellipse: s-maj=187.8km s-min=24.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.23**	**160**	P	P	22 38 40.7	-0.4
	0.6nm,0.4s,baz=339,slow=11,SNR=13						
ASAR	**Alice Springs**	**25.60**	**164**	P	P	22 39 14.2	+0.3
	0.4nm,0.4s,baz=344,slow=10,SNR=15						
MKAR	**Makanchi Array**	**59.65**	**326**	P	P	22 43 48.8	-0.1
	0.2nm,0.4s,baz=124,slow=7.2,SNR=8.6						

NNC 11 22:44:58.9±1.1, 37°.53N×77°.77E, h0km, mb3.9, mpv3.5, 1C-1D, Error ellipse: s-maj=11.4km s-min=7.1km az=87.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNSS	**Tian-Shan**	**5.53**	**354**	Pg	Pb	22 46 39.6	+3.0
	3.6nm,0.6s						
TNSS				Lg	Lg	22 47 54.8	
	8.6nm,0.5s						
SATY	**Saty**	**5.54**	**5**	Pg	Pb	22 46 40.4	+3.9
	4.1nm,0.6s						
SATY				Lg	Lg	22 47 56.2	
	8.3nm,0.6s						
MDOK	**Medeo**	**5.65**	**355**	Pg	Pb	22 46 42.7	+4.3
	2.4nm,0.6s						
MDOK				Lg	Lg	22 47 56

	4.7nm,0.6s						
KOTS	**Kotyrbulak**	**5.72**	**355**	Pg	Pb	22 46 42.9	+3.4
	7.5nm,0.5s						
KOTS				Lg	Lg	22 48 00.6	
	18nm,0.4s						
KURS	**Kuram**	**5.96**	**3**	Pg	Pb	22 46 47.9	+4.4
	1.5nm,0.4s						
KURS				Lg	Lg	22 48 09.1	
	2.6nm,1.2s						
KTBS	**Karatobe**	**6.23**	**353**	Pg	Pb	22 46 52.3	+4.1
	1.3nm,0.6s						
KTBS				Lg	Lg	22 48 16.7	
	4.4nm,0.8s						
CHKK	**Chushkaly**	**6.34**	**355**	Pg	Pb	22 46 54.7	+4.6
	0.6nm,0.1s						
CHKK				Lg	Lg	22 48 20.8	
	2.4nm,0.2s						
ARXS	**Arharly**	**6.67**	**0**	Pg	Pb	22 47 00.6	+4.8
	0.7nm,0.3s						
ARXS				Lg	Lg	22 48 31.0	
	5.7nm,0.6s						

IDC 11 22:47:13.3±3.6, 10°.83S×118°.84E, h0km, mb3.1/1, mb1 3.3/3, mb1mx3.2/25, mbtmp3.1/3, ML3.2/2, Error ellipse: s-maj=264.4km s-min=31.2km az=48.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.46**	**123**	P	Pn	22 51 17.1	-1.4
	0.1nm,0.3s,baz=293,slow=13,SNR=4.8						
WRA				S	Sn	22 54 20.9	-13
	0.1nm,0.3s,baz=318,slow=16,SNR=2.1						
ASAR	**Alice Springs**	**19.21**	**134**	P	Pn	22 51 40.0	+0.1
	0.1nm,0.3s,baz=309,slow=12,SNR=8.4						
MKAR	**Makanchi Array**	**66.01**	**335**	P	P	22 58 01.6	-0.1
	0.1nm,0.4s,baz=150,slow=7.6,SNR=2.0						

WEL 11 23:12:11.4, 38°.5S±0°.5×177°.0E±0°.5, h8km±1km, M3.2/83, ML3.9/15, MLv3.2/83, Error ellipse: s-maj=0.0km s-min=0.0km az=72.4, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTZ	**Ruatahuna**	**0.15**	**188**	P	Pg	23 12 15.5	+0.9
RTZ				S	Sg	23 12 18.2	+1.4
MUGZ	**Murupara**	**0.19**	**268**	P	Pg	23 12 16.1	+0.9
MUGZ				S	Sg	23 12 19.5	+1.7
URZ	**Urewera**	**0.23**	**21**	P	Pg	23 12 16.8	+0.9
URZ				S	Sg	23 12 20.9	+1.9
RAGZ	**Rawiri**	**0.32**	**95**	P	Pb	23 12 19.0	-0.5
RAGZ				S	Sb	23 12 24.2	-0.7
MTHZ	**Maungataniwha**	**0.40**	**199**	P	Pb	23 12 20.1	-0.7
MTHZ				S	Sb	23 12 26.9	-0.3
SNGZ	**Shannon Statio**	**0.41**	**140**	P	Pb	23 12 20.8	-0.1
RRRZ	**Republican Roa**	**0.41**	**289**	P	Pb	23 12 20.5	-0.5
EDRZ	**Edgecumbe**	**0.42**	**330**	P	Pb	23 12 20.7	-0.4
MWZ	**Matawai**	**0.43**	**72**	P	Pb	23 12 20.7	-0.6
RAHZ	**Arahi**	**0.45**	**172**	P	Pb	23 12 21.5	-0.2
RAHZ				S	Sb	23 12 28.7	+0.2
TARZ	**Mount Tarawera**	**0.46**	**301**	P	Pb	23 12 21.8	0.0
PRRZ	**Plateau Road**	**0.48**	**266**	P	Pb	23 12 21.7	-0.5
ALRZ	**Allen Road**	**0.53**	**260**	P	Pb	23 12 22.6	-0.4
MKRZ	**Makatiti**	**0.54**	**308**	P	Pb	23 12 23.6	+0.4
MARZ	**Manawahe**	**0.55**	**331**	P	Pb	23 12 23.2	-0.2
HLRZ	**Highlands Stat**	**0.56**	**293**	P	Pb	23 12 23.6	+0.1
HRRZ	**Handcock Road**	**0.57**	**278**	P	Pb	23 12 23.7	-0.1
MRHZ	**Matea Rd**	**0.59**	**232**	P	Pg	23 12 23.4	+0.6
WHRZ	**Whale Island**	**0.61**	**358**	P	Pb	23 12 24.2	-0.3
OMRZ	**Omania**	**0.62**	**306**	P	Pb	23 12 24.7	+0.2
HSRZ	**Hossack Road**	**0.62**	**285**	P	Pb	23 12 24.8	+0.2
WHHZ	**Waihua**	**0.63**	**164**	P	Pb	23 12 25.5	+0.7
RIGZ	**Rimuhau**	**0.64**	**112**	P	Pn	23 12 26.0	-0.8
NMHZ	**Naumai**	**0.65**	**194**	P	Pb	23 12 25.3	+0.3
TKGZ	**Te Karaka**	**0.66**	**88**	P	Pb	23 12 26.1	+0.9
WPRZ	**Whakapapatarin**	**0.67**	**266**	P	Pb	23 12 25.4	+0.1
LIRZ	**Lichensteins R**	**0.68**	**313**	P	Pb	23 12 25.9	+0.4
UTU	**Utuhina**	**0.70**	**294**	P	Pb	23 12 26.7	+0.7
GRRZ	**Galatos Road**	**0.72**	**279**	P	Pb	23 12 26.5	+0.4
OPRZ	**Ohinepanea**	**0.72**	**330**	P	Pb	23 12 26.1	-0.2
RUGZ	**Raukumara Rang**	**0.73**	**46**	P	Pb	23 12 26.1	-0.4
NGRZ	**Ngongotaha**	**0.74**	**299**	P	Pn	23 12 27.8	-0.5
KARZ	**Kaharoa**	**0.75**	**307**	P	Pb	23 12 27.2	+0.4
KNZ	**Kokohu**	**0.76**	**137**	P	Pn	23 12 28.1	-0.3
ARHZ	**Aropaoanui**	**0.79**	**181**	P	Pn	23 12 28.4	-0.6
PRGZ	**Paritu Road**	**0.82**	**124**	P	Pn	23 12 29.4	+0.1
HATZ	**Hinemaiaia**	**0.83**	**239**	P	Pb	23 12 27.8	-0.3
WHTZ	**Whakaora**	**0.85**	**256**	P	Pn	23 12 29.8	0.0
KUTZ	**Kaahu Road**	**0.93**	**269**	P	Pb	23 12 30.0	+0.2
HAZ	**Te Kaha**	**0.94**	**41**	P	Pb	23 12 29.8	-0.2
CNGZ	**Carnagh Statio**	**0.94**	**91**	P	Pn	23 12 32.8	+1.8
TGRZ	**Tauranga**	**0.95**	**321**	P	Pb	23 12 30.2	+0.1
MHGZ	**Mahia Peninsul**	**0.98**	**134**	P	Pn	23 12 32.4	+0.8
MCHZ	**McNeill Hill**	**1.00**	**194**	P	Pn	23 12 32.4	+0.6
PKGZ	**Pakihiroa**	**1.02**	**236**	P	Pn	23 12 32.4	+0.2
WATZ	**Wairara**	**1.03**	**256**	P	Pb	23 12 31.5	0.0
RITZ	**Rihia Road**	**1.03**	**240**	P	Pb	23 12 31.9	+0.3
RATZ	**Rangitukua**	**1.04**	**247**	P	Pn	23 12 32.6	+0.1
KMRZ	**Kaimai**	**1.05**	**306**	P	Pn	23 12 32.2	-0.2
KWHZ	**Kaweka Forest**	**1.06**	**205**	P	Pb	23 12 32.2	+0.2
PUZ	**Puketiti**	**1.06**	**68**	P	Pn	23 12 33.6	+0.9
TLZ	**Tolley Road**	**1.16**	**277**	P	Pg	23 12 33.1	-0.6
CKHZ	**Cape Kidnapper**	**1.19**	**177**	P	Pn	23 12 35.6	+1.2
KRVZ	**Karewarewa**	**1.24**	**239**	P	Pb	23 12 34.7	-0.4
BHHZ	**Black Hill Sta**	**1.26**	**216**	P	Pn	23 12 35.0	-0.4
KRHZ	**Kereru**	**1.27**	**203**	P	Pg	23 12 36.3	+0.5
WTVZ	**West Tongariro**	**1.28**	**239**	P	Pn	23 12 35.4	-0.4
WMGZ	**Waiomatatini S**	**1.29**	**60**	P	Pg	23 12 38.4	+2.3
NGZ	**Ngauruhoe**	**1.30**	**237**	P	Pn	23 12 35.8	-0.4
KAHZ	**Kahuranaki**	**1.33**	**184**	P	Pg	23 12 37.8	+0.9
MOVZ	**Moawhango**	**1.35**	**226**	P	Pn	23 12 36.1	-0.7
TWVZ	**Taurewa**	**1.37**	**243**	P	Pg	23 12 38.8	+1.2
MXZ	**Matakaoa Point**	**1.37**	**49**	P	Pg	23 12 38.0	+0.4
WHVZ	**Whangaehu Hut**	**1.37**	**233**	P	Pn	23 12 36.6	-0.5
FWVZ	**Far West T-bar**	**1.38**	**235**	P	Pn	23 12 36.7	-0.5
TOZ	**Tahuroa Road**	**1.40**	**301**	P	Pb	23 12 37.7	-0.1
TRVZ	**Turoa**	**1.41**	**234**	P	Pn	23 12 37.1	-0.5
PKVZ	**Pokaka**	**1.53**	**237**	P	Pn	23 12 39.5	+0.3
PXZ	**Pawanui**	**1.56**	**184**	P	Pb	23 12 40.1	-0.5
PNHZ	**Pukenui**	**1.57**	**203**	P	Pb	23 12 40.7	-0.1
WPHZ	**Waipukurau**	**1.65**	**195**	P	Pb	23 12 42.1	-0.1
HIZ	**Hauiti**	**1.69**	**268**	P	Pb	23 12 43.1	+0.3
TSZ	**Takapari Road**	**1.78**	**207**	P	Pn	23 12 43.3	+0.7
PRHZ	**Porangahau**	**1.82**	**189**	P	Pn	23 12 43.8	+0.8
VRZ	**Vera Road**	**1.88**	**249**	P	Pb	23 12 45.8	-0.1
DVHZ	**Dannevirke**	**1.94**	**199**	P	Pn	23 12 45.0	+0.3
MKAZ	**Moumakai**	**2.00**	**312**	P	Pg	23 12 49.1	-0.6
KUZ	**Kuaotunu**	**2.00**	**329**	P	Pg	23 12 49.1	-0.7
WAZ	**Wanganui**	**2.03**	**230**	P	Pb	23 12 47.3	-1.2
ETAZ	**East Tamaki Re**	**2.24**	**112**	P	Pg	23 12 54.6	+0.3
MBAZ	**Motutapu North**	**2.39**	**315**	P	Pg	23 12 56.9	-0.2
MRZ	**Mangatainoka R**	**2.45**	**206**	P	Pn	23 12 52.0	+0.2
PKE	**Pukeiti**	**2.47**	**252**	P	Pb	23 12 55.4	-0.6
KHEZ	**Kahui Hut**	**2.48**	**250**	P	Pb	23 12 55.5	-0.7
OGWZ	**Otaki Gorge**	**2.74**	**211**	P	Pn	23 12 55.9	+0.2
DUWZ	**D'Urville Isla**	**3.33**	**225**	P	Pb	23 13 08.1	-2.7
TUWZ	**Tuamarina**	**3.78**	**218**	P	Pb	23 13 17.7	-0.7
WVZ	**Waitaha Valley**	**6.62**	**224**	P	Pn	23 13 56.2	+7.2

*TAP **11** 23:26:56.0, 24°.64N×122°.52E, h104km, ML3.3, C*
*JMA **11** 23:26:55.5±0.2, 24°.57N×122°.49E, h104km±2km, M2.6*
ISC 11 23:26:55.3±1.4, 24°.63N±0°.04×122°.53E±0°.03, h108km±7km, n85, σ1°.14/169, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.37**	**258**	*e*P	**Pn**	**23 27 11.4**	**+0.3**
	baz=256						
EOS1				*e*S	**Sn**	**23 27 23.3**	**+0.5**
	baz=256						
JYNG	**Yonagunijimaku**	**0.42**	**115**	P	**Pn**	**23 27 11.5**	**+0.1**
JYNG				S	**Sn**	**23 27 23.1**	**-0.3**
YOJ	**Yonaguni jima**	**0.47**	**110**	*i* P	**Pn**	**23 27 11.9**	**+0.2**
	baz=110						
YOJ				*e*S	**Sn**	**23 27 23.7**	**-0.4**
	baz=110						
YOJ	**Yonaguni jima**	**0.47**	**110**	P	**Pn**	**23 27 11.9**	**+0.2**
YOJ				*e*S	**Sn**	**23 27 23.6**	**-0.4**
TWC	**Suao**	**0.61**	**268**	*e*P	**Pn**	**23 27 12.6**	**-0.2**
	baz=267						
TWC				*e*S	**Sn**	**23 27 24.7**	**-1.1**
	baz=267						
NTC	**Toucheng**	**0.67**	**290**	*e*P	**Pn**	**23 27 13.2**	**+0.1**
	baz=288						
NTC				*e*S	**Sn**	**23 27 25.8**	**-0.8**
	baz=288						
ILA	**Ilan**	**0.72**	**281**	*e*P	**Pn**	**23 27 13.8**	**+0.3**
	baz=280						
ILA				*e*S	**Sn**	**23 27 27.3**	**0.0**
	baz=280						
TIPB	**Shuangxi**	**0.72**	**298**	↑*i*P	**Pn**	**23 27 13.8**	**+0.2**
	baz=297						
TIPB				*e*S	**Sn**	**23 27 26.2**	**-1.2**
	baz=297						
NANB	**Nanao**	**0.73**	**254**	*e*P	**Pn**	**23 27 14.0**	**+0.3**
	baz=253						
NANB				*e*S	**Sn**	**23 27 27.3**	**-0.2**
	baz=253						
ENA	**Nanau**	**0.74**	**255**	*e*P	**Pn**	**23 27 14.1**	**+0.3**
	baz=253						
ENA				*e*S	**Sn**	**23 27 27.4**	**-0.3**
	baz=253						
TWE	**Neicheng**	**0.79**	**277**	*e*P	**Pn**	**23 27 14.5**	**+0.3**
	baz=275						
TWE				*e*S	**Sn**	**23 27 27.9**	**-0.4**
	baz=275						
NWF	**Wu-fen Shan**	**0.81**	**303**	*e*P	**Pn**	**23 27 14.8**	**+0.3**
	baz=302						
NWF				*e*S	**Sn**	**23 27 29.0**	**+0.1**
	baz=302						
WFSB	**Wu-fen Shan**	**0.81**	**303**	*e*P	**Pn**	**23 27 14.8**	**+0.4**
	baz=302						
WFSB				*e*S	**Sn**	**23 27 28.5**	**-0.2**
	baz=302						
SLBB	**Yuanshan**	**0.82**	**279**	*e*P	**Pn**	**23 27 14.0**	**-0.5**
	baz=278						
SLBB				*e*S	**Sn**	**23 27 27.5**	**-1.5**
	baz=278						
ENTT	**Nioudou**	**0.87**	**271**	*e*P	**Pn**	**23 27 16.0**	**+0.9**
	baz=270						
ENTT				*e*S	**Sn**	**23 27 29.8**	**-0.1**
	baz=270						
NDT	**Datong Townshi**	**0.92**	**269**	*e*P	**Pn**	**23 27 16.4**	**+0.9**
	baz=267						
NDT				*e*S	**Sn**	**23 27 31.4**	**+0.6**
	baz=267						
NWLT	**Wulai**	**0.94**	**279**	*e*P	**Pn**	**23 27 16.1**	**+0.4**
	baz=278						
NWLT				*e*S	**Sn**	**23 27 30.2**	**-1.0**
	baz=278						
NACB	**Ninganchiao**	**0.96**	**242**	*e*P	**Pn**	**23 27 15.7**	**-0.2**
	baz=241						
NACB				*e*S	**Sn**	**23 27 29.3**	**-2.2**
	baz=241						
NHDH	**Xindian Distri**	**0.97**	**290**	*e*P	**Pn**	**23 27 16.1**	**+0.1**
	baz=289						
NHDH				*e*S	**Sn**	**23 27 30.3**	**-1.2**
	baz=289						
TWD	**Chiawan**	**1.01**	**237**	*e*P	**Pn**	**23 27 16.1**	**-0.3**
	baz=236						
TWD				*e*S	**Sn**	**23 27 31.9**	**-0.4**
	baz=236						
YM01	**YM01**	**1.01**	**301**	*i* P	**Pn**	**23 27 16.8**	**+0.4**
	baz=300						
YM01				*e*S	**Sn**	**23 27 31.7**	**-0.7**
	baz=300						
YM08	**YM08**	**1.02**	**303**	*e*P	**Pn**	**23 27 16.5**	**0.0**
	baz=302						
YM08				*e*S	**Sn**	**23 27 30.5**	**-2.0**
	baz=302						
YM11	**YM11**	**1.02**	**302**	*e*P	**Pn**	**23 27 16.8**	**+0.3**
	baz=301						
YM11				*e*S	**Sn**	**23 27 35.5**	**+2.9**
	baz=301						
YM10	**YM10**	**1.02**	**301**	*e*P	**Pn**	**23 27 16.8**	**+0.2**
	baz=300						
YM10				*e*S	**Sn**	**23 27 33.6**	**+0.9**
	baz=300						
YM05	**YM05**	**1.02**	**302**	*e*P	**Pn**	**23 27 16.8**	**+0.2**
	baz=301						
YM05				*e*S	**Sn**	**23 27 35.3**	**+2.6**
	baz=301						
ETLH	**Xiulin Townshi**	**1.04**	**246**	*e*P	**Pn**	**23 27 16.9**	**+0.1**
	baz=245						
ETLH				*e*S	**Sn**	**23 27 32.4**	**-0.7**
	baz=245						
YM04	**YM04**	**1.04**	**300**	*e*P	**Pn**	**23 27 16.9**	**+0.1**
	baz=299						
YM04				*e*S	**Sn**	**23 27 32.0**	**-0.9**
	baz=299						
YHNB	**Yeheng**	**1.05**	**273**	↑*i*P	**Pn**	**23 27 17.5**	**+0.7**
	baz=271						
YHNB				*e*S	**Sn**	**23 27 33.0**	**-0.2**
	baz=271						
NNSH	**Datong**	**1.06**	**259**	*e*P	**Pn**	**23 27 17.5**	**+0.5**
	baz=258						
NNSH				*e*S	**Sn**	**23 27 33.5**	**+0.1**
	baz=258						
TWY	**Chenhua**	**1.06**	**308**	*e*P	**Pn**	**23 27 17.4**	**+0.5**
	baz=307						
TWY				*e*S	**Sn**	**23 27 33.9**	**+0.7**
	baz=307						
HWA	**Hwalien**	**1.06**	**233**	*e*P	**Pn**	**23 27 17.3**	**+0.3**
	baz=231						
HWA				*e*S	**Sn**	**23 27 33.5**	**+0.3**
	baz=231						
NSK	**Sanguang**	**1.06**	**273**	*i* P	**Pn**	**23 27 17.7**	**+0.7**
	baz=271						
NSK				*e*S	**Sn**	**23 27 33.2**	**-0.2**
	baz=271						
NNS	**Nan Shan**	**1.06**	**260**	*e*P	**Pn**	**23 27 17.6**	**+0.5**
	baz=259						
NNS				*e*S	**Sn**	**23 27 33.1**	**-0.5**
	baz=259						
ENLB	**Shoufeng**	**1.11**	**230**	*e*P	**Pn**	**23 27 16.7**	**-0.7**
	baz=228						
ENLB				*e*S	**Sn**	**23 27 33.3**	**-0.9**
	baz=228						
TWS1	**Kuangyinshan**	**1.11**	**295**	*e*P	**Pn**	**23 27 17.8**	**+0.4**
	baz=294						
TWS1				*e*S	**Sn**	**23 27 34.2**	**0.0**
	baz=294						
WLTB	**Daxi**	**1.18**	**281**	*e*P	**Pn**	**23 27 19.2**	**+1.0**
	baz=280						
WLTB				*e*S	**Sn**	**23 27 35.9**	**+0.4**
	baz=280						
WHF	**Hehuan Shan**	**1.25**	**248**	*e*P	**Pn**	**23 27 19.8**	**+0.3**
	baz=246						
WHF				*e*S	**Sn**	**23 27 38.0**	**+0.4**
	baz=246						
ESL	**Shilin**	**1.28**	**231**	*e*P	**Pn**	**23 27 19.2**	**-0.2**
	baz=230						
ESL				*e*S	**Sn**	**23 27 36.8**	**-0.9**
	baz=230						
TWT	**Tachien**	**1.28**	**253**	*e*P	**Pn**	**23 27 20.9**	**+1.3**
	baz=252						
TWT				*e*S	**Sn**	**23 27 38.4**	**+0.4**
	baz=252						
HATJ	**Hateruma jima**	**1.30**	**116**	P	**Pn**	**23 27 20.4**	**+0.8**
TDCB	**Techi**	**1.30**	**254**	*e*P	**Pn**	**23 27 20.8**	**+1.1**
	baz=252						
TDCB				*e*S	**Sn**	**23 27 37.9**	**-0.4**
	baz=252						
LIOB	**Emei**	**1.37**	**271**	*e*P	**Pn**	**23 27 21.2**	**+0.7**
	baz=270						
LIOB				*e*S	**Sn**	**23 27 39.1**	**-0.5**
	baz=270						
EGFH	**Guangfu**	**1.38**	**227**	*e*P	**Pn**	**23 27 20.6**	**-0.1**
	baz=226						
EGFH				*e*S	**Sn**	**23 27 39.3**	**-0.5**
	baz=226						
NSTT	**Nanjuang**	**1.39**	**270**	*e*P	**Pn**	**23 27 21.2**	**+0.6**
	baz=269						
NSTT				*e*S	**Sn**	**23 27 39.8**	**0.0**
	baz=269						
NHW	**Xinwu Township**	**1.39**	**286**	*e*P	**Pn**	**23 27 21.4**	**+0.7**
	baz=285						
NHW				*e*S	**Sn**	**23 27 40.6**	**+0.6**
	baz=285						
OWD	**Renai**	**1.40**	**242**	*e*P	**Pn**	**23 27 21.3**	**+0.4**
	baz=241						
OWD				*e*S	**Sn**	**23 27 39.5**	**-0.9**
	baz=241						
JKRS	**Kuro-shima**	**1.41**	**106**	P	**Pn**	**23 27 21.7**	**+0.9**
JKRS				S	**Sn**	**23 27 40.8**	**+0.6**
WHP	**Taichung City**	**1.48**	**257**	*e*P	**Pn**	**23 27 23.3**	**+1.5**
	baz=255						
WHP				*e*S	**Sn**	**23 27 42.7**	**+0.8**
	baz=255						
JIJ	**Ishigaki jima**	**1.50**	**100**	P	**Pn**	**23 27 22.4**	**+0.5**
JIJ				S	**Sn**	**23 27 41.4**	**-0.7**
HGSD	**Ruisui**	**1.51**	**222**	*e*P	**Pn**	**23 27 22.3**	**+0.1**
	baz=221						
HGSD				*e*S	**Sn**	**23 27 42.8**	**+0.2**
	baz=221						
VWDT	**VWDT**	**1.53**	**236**	*e*P	**Pn**	**23 27 23.2**	**+0.8**
	baz=235						
VWDT				*e*S	**Sn**	**23 27 42.7**	**-0.2**
	baz=235						
EHY	**Hungye**	**1.57**	**225**	*e*P	**Pn**	**23 27 22.5**	**-0.3**
	baz=223						
EHY				*e*S	**Sn**	**23 27 41.4**	**-2.3**
	baz=223						
DPDB	**Guoxing**	**1.57**	**248**	*e*P	**Pn**	**23 27 24.3**	**+1.4**
	baz=247						
DPDB				*e*S	**Sn**	**23 27 44.9**	**+0.9**
	baz=247						
NMLH	**Miaoli**	**1.58**	**267**	*e*P	**Pn**	**23 27 23.9**	**+1.0**
	baz=266						
NMLH				*e*S	**Sn**	**23 27 43.8**	**-0.1**
	baz=266						
NSY	**Sanyi**	**1.62**	**263**	*e*P	**Pn**	**23 27 24.7**	**+1.2**
	baz=262						
NSY				*e*S	**Sn**	**23 27 45.4**	**+0.6**
	baz=262						
TWQ1	**Liyutan**	**1.62**	**260**	*e*P	**Pn**	**23 27 24.3**	**+0.9**
	baz=259						
TWQ1				*e*S	**Sn**	**23 27 45.1**	**+0.2**
	baz=259						
JISG	**Ishigakijimahi**	**1.63**	**91**	P	**Pn**	**23 27 23.7**	**+0.2**
JISG				S	**Sn**	**23 27 44.5**	**-0.4**
SMLT	**Sun Moon Lake**	**1.66**	**244**	*e*P	**Pn**	**23 27 25.1**	**+1.1**
	baz=242						
SMLT				*e*S	**Sn**	**23 27 48.0**	**+2.1**
	baz=242						
SSLB	**Suanglung**	**1.66**	**240**	*e*P	**Pn**	**23 27 24.5**	**+0.5**
	baz=239						
SSLB				*e*S	**Sn**	**23 27 46.9**	**+1.1**
	baz=239						
YULB	**Yu-li**	**1.67**	**223**	*e*P	**Pn**	**23 27 23.6**	**-0.4**
	baz=222						
YULB				*e*S	**Sn**	**23 27 44.8**	**-1.1**
	baz=222						
TYC	**Yuchr**	**1.68**	**245**	*e*P	**Pn**	**23 27 25.8**	**+1.6**
	baz=244						
TYC				*e*S	**Sn**	**23 27 47.6**	**+1.4**
	baz=244						
TWF1	**Yuli**	**1.69**	**222**	*e*P	**Pn**	**23 27 24.3**	**-0.1**
	baz=220						
TWF1				*e*S	**Sn**	**23 27 45.1**	**-1.4**
	baz=220						
WHYT	**Xinyi Township**	**1.79**	**239**	*e*P	**Pn**	**23 27 27.3**	**+1.7**
	baz=238						
WHYT				*e*S	**Sn**	**23 27 50.4**	**+1.8**
	baz=238						
FULB	**Fuli**	**1.81**	**219**	*e*P	**Pn**	**23 27 26.1**	**+0.2**
	baz=218						
FULB				*e*S	**Sn**	**23 27 50.8**	**+1.6**
	baz=218						
WJS	**Zhushan**	**1.83**	**244**	*e*P	**Pn**	**23 27 27.6**	**+1.6**
	baz=243						
WJS				*e*S	**Sn**	**23 27 50.9**	**+1.5**
	baz=243						
YUS	**Yu-Shan**	**1.83**	**232**	*e*P	**Pn**	**23 27 27.5**	**+0.9**
	baz=231						
YUS				*e*S	**Sn**	**23 27 49.7**	**-0.5**
	baz=231						
WNT	**Mingjian**	**1.84**	**246**	*e*P	**Pn**	**23 27 28.2**	**+2.1**
	baz=245						
WNT				*e*S	**Sn**	**23 27 51.4**	**+1.7**
	baz=245						
CHKT	**Chengkung**	**1.85**	**215**	*e*P	**Pn**	**23 27 26.2**	**-0.1**
	baz=214						
CHKT				*e*S	**Sn**	**23 27 48.4**	**-1.6**
	baz=214						
ALS	**Alishan**	**1.93**	**235**	*e*P	**Pn**	**23 27 28.7**	**+1.2**
	baz=234						
ALS				*e*S	**Sn**	**23 27 54.5**	**+2.4**
	baz=234						
CHN5	**Tsauling**	**1.98**	**239**	*e*P	**Pn**	**23 27 29.4**	**+1.5**
	baz=238						
CHN5				*e*S	**Sn**	**23 27 54.9**	**+2.1**
	baz=238						
JTJ	**Tarama**	**1.98**	**89**	P	**Pn**	**23 27 28.9**	**+1.0**
JTJ				*e*S	**Sn**	**23 27 52.5**	**-0.3**
ELDTW	**Lidau**	**1.99**	**224**	*e*P	**Pn**	**23 27 28.1**	**-0.1**
	baz=223						
ELDTW				*e*S	**Sn**	**23 27 53.0**	**-0.2**
	baz=223						
TWH	**Lutao**	**2.14**	**207**	*e*P	**Pn**	**23 27 30.0**	**+0.1**
	baz=205						
TWH				*e*S	**Sn**	**23 27 54.9**	**-1.5**
	baz=205						
CHN4	**Tsaushan**	**2.18**	**235**	*e*P	**Pn**	**23 27 32.3**	**+1.8**
	baz=234						
CHN4				*e*S	**Sn**	**23 27 59.7**	**+2.3**
	baz=234						
TPUB	**Ta-pu**	**2.18**	**233**	*e*P	**Pn**	**23 27 32.2**	**+1.6**
	baz=232						
TPUB				*e*S	**Sn**	**23 27 59.4**	**+1.9**
	baz=232						
WTP	**Ta-pu**	**2.22**	**232**	*e*P	**Pn**	**23 27 32.2**	**+1.1**
	baz=231						
WTP				*e*S	**Sn**	**23 28 00.5**	**+1.9**
	baz=231						
TWGBT	**Beinan**	**2.24**	**217**	*e*P	**Pn**	**23 27 31.2**	**0.0**
	baz=216						
TWGBT				*e*S	**Sn**	**23 27 58.4**	**-0.4**
	baz=216						
TWG	**Pinlang**	**2.24**	**217**	*e*P	**Pn**	**23 27 31.4**	**+0.2**
	baz=216						
TWG				*e*S	**Sn**	**23 27 59.0**	**+0.2**
	baz=216						
TWK	**Hsinying**	**2.30**	**234**	*e*P	**Pn**	**23 27 33.6**	**+1.5**
	baz=233						
TWK				*e*S	**Sn**	**23 28 01.4**	**+1.1**
	baz=233						
EAST	**Anshuo**	**2.71**	**215**	*e*P	**Pn**	**23 27 39.1**	**+1.6**
	baz=214						
EAST				*e*S	**Sn**	**23 28 09.9**	**0.0**
	baz=214						
LAY	**Lan-yu**	**2.73**	**199**	*e*P	**Pn**	**23 27 37.9**	**+0.2**
	baz=198						
LAY				*e*S	**Sn**	**23 28 07.7**	**-2.6**
	baz=198						
VWUC	**VWUC**	**2.82**	**278**	*e*P	**Pn**	**23

	1.2nm,0.1s								
UZB					S		Sg	23 37 09.4	+1.3
	7.1nm,0.2s								
PDGK	**Podgornoye**	**0.44**	**2**		P		Pg	23 37 02.2	-0.8
	0.5nm,0.1s								
PDGK					S		Sb	23 37 10.7	-0.4
	3.3nm,0.3s								
PDGK	**Podgornoye**	**0.44**	**2**	⇓	P		Pg	23 37 02.3	-0.8
	1.1nm,0.5s								
PDGK				⇑	S		Sg	23 37 10.3	+1.4
	1.3nm,0.2s								
KPKS	**Kokpek**	**0.81**	**315**		*e*P		Pg	23 37 08.5	-1.6
	1.6nm,0.1s								
KPKS					*e*S		Sg	23 37 21.7	+1.0
	6.9nm,0.3s								
PRZ	**Przheval'sk**	**0.89**	**243**	⇓	*i*P		Pn	23 37 13.6	+0.4
	baz=74								
PRZ				⇓	*i*S		Sn	23 37 26.0	-0.3
	baz=74								
ANVS	**Anan'yevo**	**1.33**	**266**	⇑	*i*P		Pg	23 37 22.1	+2.2
	baz=85								
ANVS				⇑	*i*S		Sg	23 37 40.9	+3.7
	baz=85								
MNBS	**Baschi**	**1.42**	**327**		*e*P		Pn	23 37 20.0	-0.4
	0.8nm,0.1s								
MNBS					*e*S		Sg	23 37 41.4	+1.3
	2.8nm,0.1s								
MNBS	**Baschi**	**1.42**	**327**		P		Pn	23 37 20.0	-0.4
	0.8nm,0.1s								
MNBS					S		Sg	23 37 41.4	+1.3
	2.8nm,0.1s								
DJR	**Jarkent**	**1.46**	**9**		*e*P		Pb	23 37 20.7	-1.0
	0.4nm,0.1s								
DJR					*e*S		Sg	23 37 42.4	+1.1
	3.9nm,0.2s								
DJR	**Jarkent**	**1.46**	**9**		P		Pb	23 37 20.5	-1.3
	0.2nm,0.1s								
DJR					S		Sg	23 37 42.4	+1.1
	3.9nm,0.2s								
KOTS	**Kotyrbulak**	**1.76**	**282**		*e*P		Pn	23 37 24.6	-0.6
	3.0nm,0.2s								
KOTS					*e*S		Sb	23 37 49.3	+0.1
	8.6nm,0.5s								
KOTS	**Kotyrbulak**	**1.76**	**282**		P		Pn	23 37 24.5	-0.6
	3.0nm,0.2s								
KOTS					S		Sb	23 37 49.3	+0.1
	8.6nm,0.5s								
ARXS	**Arharly**	**1.78**	**318**		*e*P		Pb	23 37 26.2	-1.0
	1.2nm,0.4s								
ARXS					*e*S		Sg	23 37 52.1	+0.5
	4.2nm,0.5s								
ARXS	**Arharly**	**1.78**	**318**		Pg		Pb	23 37 26.2	-1.0
	1.2nm,0.4s								
ARXS					Lg		Lg	23 37 52.1	
	4.2nm,0.5s								
KDJ	**Kajisay**	**1.86**	**247**	⇑	*i*P		Pb	23 37 26.8	-1.7
	baz=61								
KDJ				⇑	*i*S		Sn	23 37 49.1	-1.1
	baz=61								
KTBS	**Karatobe**	**2.19**	**293**		*e*P		Pb	23 37 32.5	-1.8
	0.5nm,0.3s								
KTBS					*e*S		Sb	23 38 02.9	+1.3
	6.1nm,0.3s								
KTBS	**Karatobe**	**2.19**	**293**		Pg		Pb	23 37 32.5	-1.8
	0.5nm,0.3s								
KTBS					Lg		Lg	23 38 02.9	
	6.1nm,0.3s								
KAPS	**Kapalarasan**	**2.40**	**358**		*e*P		Pb	23 37 37.6	-0.1
	0.9nm,0.4s								
KAPS					*e*S		Sg	23 38 11.2	-0.1
	2.0nm,0.2s								
KAPS	**Kapalarasan**	**2.40**	**358**		Lg		Lg	23 38 11.2	
	2.0nm,0.2s								
BOOM	**Boomskoye usch**	**2.63**	**262**	⇑	*i*P		Pb	23 37 39.3	-2.5
	baz=73								
BOOM				⇑	*i*S		Sn	23 38 10.5	+1.2
	baz=73								

DJA 11 23:55:43.8±1.5,**9°S**±18″×**11°7E**±°,**h22**km±23km,**M3.6/7,**
mb3.9/1,MLv3.5/7,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**0.88**	**51**	P	Pb	23 56 00.3	-0.1
PLAI				S	Sn	23 56 12.9	-0.1
IGBI	**Denpasar**	**1.99**	**286**	P	Pn	23 56 15.8	-0.3
IGBI				S	Sn	23 56 39.0	-1.4
SRBI	**Singaraja**	**2.25**	**305**	P	Pn	23 56 20.3	+0.6
JAGI	**Jajag, Banyuwa**	**3.03**	**287**	P	Pn	23 56 30.1	-0.4
JAGI				S	Sn	23 57 04.3	-1.8
GMJI	**Gumukmas**	**3.76**	**287**	P	Pn	23 56 40.6	+0.1
BKSI	**Bulukumba**	**5.04**	**37**	P	Pn	23 56 58.7	+0.6

ATH ***12*** *00:05:02.0,37°.84N×21°.00E,h29km±1km, ML3.2/8, Error ellipse: s-maj=1.7km s-min=0.9km az=275.0*
THE ***12*** *00:05:02.1,37°.82N×20°.99E,h12km±1km, ML3.1/13, Error ellipse: s-maj=1.9km s-min=0.8km az=315.0*
IDC ***12*** *00:05:11.7±3.8,38°.07N×20°.95E,h72km±39km, mb3.3/6, mb1 3.2/9, mb1mx3.1/43, mbtmp3.4/9, ML3.7/2, MS3.3/1, Ms1 3.3/1, ms1mx2.3/25, Error ellipse: s-maj=28.0km s-min=21.3km az=159.0*

ISC 12 00:05:02.7±1.0,**37°.82N**±0°.03×**21°.04E**±0°.03,**h11**km±7km,
n77,σ1°29/99,mb3.6/6,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLMS	**Volimes, Zakyn**	**0.31**	**281**	P	**Pg**	**00 05 09.1**	**+0.1**
KFL	**Anninata**	**0.35**	**325**	P	**Pg**	**00 05 08.8**	**-1.0**
KFL				S	**Sg**	**00 05 15.3**	**+0.8**
	4μm,0.4s						
KFL	**Anninata**	**0.35**	**325**	P	**Pg**	**00 05 10.0**	**+0.2**
KFL				S	**Sg**	**00 05 15.6**	**+1.2**
KFL				AML	AML	00 05 22.4	
	comp=E,7986μm,0.3s						
KFL				AML	AML	00 05 25.7	
	comp=N,8172μm,0.3s						
RLS	**Riolos of Patr**	**0.41**	**55**	P	**Pg**	**00 05 10.2**	**-0.6**
RLS				S	**Sb**	**00 05 17.3**	**-1.0**
	comp=N,5μm,0.4s						
RLS	**Riolos of Patr**	**0.41**	**55**	P	**Pg**	**00 05 10.7**	**-0.1**
RLS				S	**Sb**	**00 05 17.6**	**-0.7**
RLS				AML	AML	00 05 19.5	
	comp=N,11485μm,0.4s						
RLS				AML	AML	00 05 19.6	
	comp=E,10232μm,0.4s						
VLS	**Valsamata**	**0.51**	**315**	P	**Pg**	**00 05 10.2**	**-2.4**
VLS				S	**Sg**	**00 05 19.8**	**+0.5**
	comp=E,1μm,0.6s						
VLS	**Valsamata**	**0.51**	**315**	P	**Pg**	**00 05 12.2**	**-0.4**
VLS				S	**Sg**	**00 05 20.1**	**+0.8**
VLS				AML	AML	00 05 20.4	
	comp=E,1821μm,0.3s						
VLS				AML	AML	00 05 21.0	
	comp=N,3171μm,0.3s						
DRO	**Drossia**	**0.54**	**76**	P	**Pg**	**00 05 12.3**	**-1.0**
DRO				S	**Sb**	**00 05 23.0**	**+0.8**
	comp=N,7μm,0.5s						
DRO	**Drossia**	**0.54**	**76**	P	**Pb**	**00 05 13.6**	**-0.7**
DRO				S	**Sb**	**00 05 23.2**	**+1.0**
DRO				AML	AML	00 05 24.6	
	comp=E,14901μm,0.5s						
DRO				AML	AML	00 05 27.2	
	comp=N,11617μm,0.4s						
AMT	**Artemida-Makis**	**0.60**	**118**	P	**Pg**	**00 05 13.5**	**-0.9**
AMT				S	**Sn**	**00 05 24.1**	**-3.0**
	comp=N,2μm,0.8s						
AMT	**Artemida-Makis**	**0.60**	**118**	P	**Pb**	**00 05 15.0**	**-0.3**
AMT				S	**Sb**	**00 05 23.5**	**-0.3**
FSK	**Fiskardo**	**0.74**	**329**	P	**Pg**	**00 05 15.7**	**-1.4**
FSK	**Fiskardo**	**0.74**	**329**	P	**Pg**	**00 05 16.3**	**-0.8**
PDO	**Prodromos**	**0.79**	**8**	P	**Pg**	**00 05 17.2**	**-0.7**
LAKA	**Lakka**	**0.85**	**60**	P	**Pb**	**00 05 18.9**	**-0.7**
LAKA				S	**Sn**	**00 05 32.0**	**-1.2**
	comp=N,1μm,1.0s						
LAKA	**Lakka**	**0.85**	**60**	P	**Pb**	**00 05 19.1**	**-0.5**
LAKA				S	**Sn**	**00 05 31.9**	**-1.3**
LAKA				AML	AML	00 05 37.5	
	comp=N,2118μm,0.8s						
LAKA				AML	AML	00 05 38.9	
	comp=E,2550μm,0.7s						
EVGI	**Lefkada island**	**0.86**	**339**	P	**Pg**	**00 05 17.9**	**-1.3**
EVGI	**Lefkada island**	**0.86**	**339**	P	**Pg**	**00 05 17.9**	**-1.3**
EVGI				S	**Sg**	**00 05 30.5**	**+0.1**
PVO	**Paravola**	**0.88**	**25**	P	**Pg**	**00 05 18.9**	**-0.8**
PVO				S	**Sn**	**00 05 33.7**	**-0.3**
	comp=E,1μm,0.4s						
PVO	**Paravola**	**0.88**	**25**	P	**Pg**	**00 05 19.7**	**-0.1**
PVO				S	**Sg**	**00 05 31.5**	**+0.3**
PVO				AML	AML	00 05 37.2	
	comp=E,2576μm,0.3s						
PVO				AML	AML	00 05 39.7	
	comp=N,2531μm,0.7s						
KLV	**Kalavryta, Ach**	**0.90**	**75**	P	**Pg**	**00 05 19.2**	**-0.9**
KLV				S	**Sn**	**00 05 33.7**	**-0.9**
	comp=N,638nm,1.0s						
KLV	**Kalavryta, Ach**	**0.90**	**75**	P	**Pb**	**00 05 19.7**	**-0.8**
EFP	**Efpalio**	**0.91**	**48**	P	**Pg**	**00 05 19.8**	**-0.5**
EFP				S	**Sn**	**00 05 34.2**	**-0.5**
	comp=N,1μm,0.5s						
EFP	**Efpalio**	**0.91**	**48**	P	**Pb**	**00 05 20.1**	**-0.4**
ITM	**Ithomi**	**0.95**	**132**	P	**Pn**	**00 05 21.2**	**-0.9**
ITM				S	**Sn**	**00 05 36.2**	**+0.5**
	comp=N,642nm,0.7s						
ITM	**Ithomi**	**0.95**	**132**	P	**Pn**	**00 05 21.7**	**-0.4**
ALIK	**Aliki, Aigiali**	**0.95**	**62**	P	**Pg**	**00 05 20.3**	**-0.7**
TRIZ	**Trizonia**	**0.98**	**56**	P	**Pg**	**00 05 21.0**	**-0.6**
TRIZ				S	**Sn**	**00 05 35.7**	**-0.6**
	comp=N,1μm,0.5s						
TRIZ	**Trizonia**	**0.98**	**56**	P	**Pb**	**00 05 21.3**	**-0.4**
SERG	**Sergoula**	**0.99**	**53**	P	**Pg**	**00 05 21.0**	**-0.9**
SERG				S	**Sn**	**00 05 35.6**	**-1.2**
	comp=N,1μm,0.5s						
SERG	**Sergoula**	**0.99**	**53**	P	**Pb**	**00 05 21.6**	**-0.4**
SERG				S	**Sn**	**00 05 36.2**	**-0.6**
SERG				AML	AML	00 05 40.6	
	comp=E,2530μm,0.5s						
SERG				AML	AML	00 05 43.0	
	comp=N,2872μm,0.5s						
LKD2	**Lefkada island**	**1.01**	**343**	P	**Pg**	**00 05 20.7**	**-1.6**
LKD2	**Lefkada island**	**1.01**	**343**	P	**Pg**	**00 05 20.6**	**-1.6**
LKD2				S	**Sg**	**00 05 35.2**	**-0.2**
LKD2				AML	AML	00 05 43.6	
	comp=E,2394μm,0.4s						
LKD2				AML	AML	00 05 45.7	
	comp=N,2236μm,0.7s						
KALE	**Kalithea**	**1.04**	**56**	P	**Pg**	**00 05 21.4**	**-1.3**
KALE				S	**Sn**	**00 05 38.0**	**+0.1**
	comp=N,1μm,0.5s						
TSLK	**Tsoukalades, L**	**1.05**	**343**	P	**Pg**	**00 05 21.0**	**-1.9**
TSLK	**Tsoukalades, L**	**1.05**	**343**	P	**Pg**	**00 05 21.1**	**-1.9**
PYL	**PYLOS**	**1.08**	**149**	P	**Pb**	**00 05 22.5**	**-0.9**
PYL	**PYLOS**	**1.08**	**149**	P	**Pn**	**00 05 23.3**	**-0.6**
VLX	**Vlachokerasia**	**1.15**	**113**	P	**Pg**	**00 05 23.2**	**-1.7**
THAL	**Thalero**	**1.30**	**80**	P	**Pg**	**00 05 26.6**	**-1.1**
OHR	**Ohrid**	**3.29**	**357**	*i* Pn	**Pn**	**00 05 56.8**	**+2.4**
VAY	**Valandovo**	**3.69**	**18**	*i* Pn	**Pb**	**00 06 09.0**	**+1.0**
STIP	**Stip**	**3.97**	**12**	*i* Pn	**Pn**	**00 06 06.5**	**+3.0**
DRME	**Dracevica, Mon**	**4.59**	**342**	*e*Pn	**Pn**	**00 06 11.4**	**-0.7**
PDG	**Podgorica**	**4.80**	**344**	*e*Pn	**Pn**	**00 06 14.2**	**-0.8**
HCY	**Herceg Novi**	**5.02**	**338**	*e*Pn	**Pn**	**00 06 16.5**	**-1.5**
TREB	**Trebinje**	**5.31**	**338**	*e*Pn	**Pn**	**00 06 20.7**	**-1.3**
DBRK	**Dubrovnik**	**5.33**	**336**	*e*Pn	**Pn**	**00 06 22.0**	**-0.2**
BRY	**Bratogost**	**5.42**	**340**	*e*Pn	**Pn**	**00 06 21.6**	**-2.1**
STON	**Ston**	**5.66**	**334**	*e*Pn	**Pn**	**00 06 25.7**	**-1.0**
STON	**Ston**	**5.66**	**334**	*e*Pn	**Pn**	**00 06 24.4**	**-2.3**
MAKA	**Makarska**	**6.26**	**332**	*e*Pn	**Pn**	**00 06 34.0**	**-1.1**
DIVS	**Divibare**	**6.32**	**353**	*e*Pn	**Pn**	**00 06 34.7**	**-1.3**
HVAR	**Hvar**	**6.39**	**328**	*e*Pn	**Pn**	**00 06 35.6**	**-1.3**
HAPS	**Han Pijesak,Bl**	**6.46**	**346**	*e*Pn	**Pn**	**00 06 35.5**	**-2.4**
KIJV	**Kijevo**	**7.11**	**332**	*e*Pn	**Pn**	**00 06 46.2**	**-0.5**
ZIRJ	**Zirje**	**7.12**	**327**	*e*Pn	**Pn**	**00 06 46.1**	**-0.8**
ZIRJ					Sn	**00 08 03.4**	**-4.4**
MORI	**Morici**	**7.27**	**328**	*e*Pn	**Pn**	**00 06 48.7**	**-0.2**
DUGI	**Dugi Otok**	**7.65**	**326**	*e*Pn	**Pn**	**00 06 53.4**	**-0.7**
NVLJ	**Novalja**	**8.19**	**327**	*e*Pn	**Pn**	**00 07 01.4**	**0.0**
CRES	**Cresnjev**	**9.02**	**334**	*e*Pn	**Pn**	**00 07 11.8**	**-1.1**
CEY	**Cerknica**	**9.32**	**330**	*e*Pn	**Pn**	**00 07 18.5**	**+1.4**
SOKA	**Soboth**	**9.91**	**335**	*i* Pn	**Pn**	**00 07 24.0**	**-1.2**
	comp=N,1.3nm,0.7s						
OBKA	**Obir**	**9.93**	**333**	*i* Pn	**Pn**	**00 07 23.6**	**-1.8**
	comp=N,1.2nm,0.5s						
BRTR	**Keskin Array B**	**10.02**	**75**	P	Pn	00 07 33.8	+7.0
	comp=N,0.0nm,0.3s,baz=266,slow=13,SNR=2.7						
ARSA	**Arzberg**	**10.26**	**338**	Pn	**Pn**	**00 07 29.1**	**-0.9**
	comp=N,0.5nm,0.3s						
VYHS	**Vyhne**	**10.79**	**352**	*e*PN	**Pn**	**00 07 40.0**	**+2.9**
ABTA	**Abfaltersbach**	**10.93**	**327**	*e*Pn	**Pn**	**00 07 37.9**	**-1.2**
	comp=N,0.3nm,0.3s						
GERES	**GERESS Array B**	**12.24**	**337**	P	**Pn**	**00 07 58.4**	**+1.3**
	comp=N,0.2nm,0.3s,baz=156,slow=12,SNR=4.7						
ESDC	**Sonseca Array**	**19.58**	**283**	P	**Pn**	**00 09 32.8**	**+0.7**
	comp=N,0.1nm,0.3s,baz=77,slow=11,SNR=2.8						
HFS	**Hagfors**	**22.82**	**350**	P	**P**	**00 10 05.3**	**-0.2**
	comp=N,1.7nm,0.6s,baz=172,slow=12,SNR=4.7						
FINES	**FINESS Array B**	**23.86**	**6**	P	**P**	**00 10 16.6**	**+0.7**
	comp=N,2.4nm,0.9s,baz=159,slow=8.3,SNR=2.6						
EKA	**Eskdalemuir Ar**	**23.96**	**325**	P	**P**	**00 10 17.1**	**+0.2**
	comp=N,1.0nm,0.7s,baz=125,slow=10,SNR=2.7						
TORD	**Tordi Ar. Bea**	**30.02**	**220**	P	**P**	**00 11 14.7**	**+3.0**
	comp=N,0.8nm,0.9s,baz=32,slow=7.7,SNR=3.7						
MKAR	**Makanchi Array**	**45.14**	**58**	P	**P**	**00 13 19.9**	**+0.6**
	comp=N,0.3nm,0.6s,baz=270,slow=7.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**45.62**	**48**	P	**P**	**00 13 23.4**	**+0.5**
	comp=N,0.6nm,0.4s,baz=271,slow=8.7,SNR=4.3						
MATP	**Matopo**	**58.36**	**172**	LR	LR	00 43 49.8	
	comp=N,23nm,18.1s,baz=237,slow=40						

IDC ***12*** *00:06:10.4±1.1,81°.76N×8°.91W,h0km, mb3.4/7, mb1 3.7/10, mb1mx3.4/40, mbtmp3.6/10, ML3.8/3, MS3.3/21, Ms1 3.3/21, ms1mx3.1/38, Error ellipse: s-maj=37.4km s-min=16.5km az=37.0*
IEPN ***12*** *00:06:16.0,82°.35N×2°.26W,h15km*

ISC 12 00:06:12.4±0.7,**81°.88N**±0°.08×**6°.11W**±0°.05,**h10**km,**n35,**
σ2s64/29,mb3.3/7,MS3.2/18,2C-3D,North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NOR	**Nord**	**1.55**	**265**	⇓ *i*P	**Pn**	**00 06 39.6**	**-0.4**
NOR				*i* S	**Sn**	**00 06 58.0**	**-2.1**
KBS	**Kingsbay**	**4.21**	**125**	*e*P	**Pn**	**00 07 16.6**	**+0.1**
KBS				*e*S	**Sn**	**00 08 02.3**	**-3.3**
KBS				IAML		00 08 02.5	
	comp=Z,7.3nm,0.5s						
KBS	**Kingsbay**	**4.21**	**125**	⇑ *i*P	**Pn**	**00 07 16.5**	**+0.1**
KBS				*e*S	**Sn**	**00 08 02.1**	**-3.5**
SPA0	**Spitsbergen Ar**	**5.34**	**122**	*e*P	**Pn**	**00 07 31.8**	**-0.2**
SPA0				*e*S	**Sn**	**00 08 29.1**	**-4.3**
SPA0				IAML		00 08 41.1	
	comp=Z,9.8nm,0.9s						
SPA0	**Spitsbergen Ar**	**5.34**	**122**	⇑ *i*P	**Pn**	**00 07 31.8**	**-0.2**
SPA0				*i* S	**Sn**	**00 08 28.4**	**-5.1**
SPITS	**Spitsbergen Ar**	**5.34**	**122**	Pn	**Pn**	**00 07 31.9**	**-0.1**
	baz=344,slow=8.7,SNR=176						
SPITS					Sn	**00 08 28.8**	**-4.7**
	baz=297,slow=13,SNR=1.4						
SPITS				LR	LR	00 09 35.7	
	comp=Z,255nm,18.4s,baz=325,slow=36						
DAG	**Danmarks Havn**	**5.62**	**211**	*i* P	**Pn**	**00 07 38.1**	**+2.3**
DAG				*i* S	**Sn**	**00 08 39.7**	**-0.6**
HSPB	**Hornsund (broa**	**6.25**	**130**	⇓ *i*P	**Pn**	**00 07 45.5**	**+1.1**
HSPB	**Hornsund (broa**	**6.25**	**130**	⇓ *i*P	**Pn**	**00 07 45.4**	**+1.1**
HSPB				*e*S	**Sn**	**00 08 54.2**	**-1.5**
HOPEN	**Hopen**	**7.80**	**117**	*e*P	**Pn**	**00 08 05.7**	**+0.1**
HOPEN				*e*S	**Sn**	**00 09 28.3**	**-5.5**
ZFI2	**Zemlya Franca-**	**7.91**	**70**	*e*P	Pn	00 08 00.9	-6.3
ZFI2				*e*S	Sn	00 09 18.9	-18
	comp=Z,17nm,0.5s						
JMIC	**Jan Mayen**	**10.97**	**184**	LR	LR	00 12 03.2	
	comp=Z,54nm,18.2s,baz=253,slow=33						
SUMG	**Summit**	**11.47**	**234**	*i* P	**Pn**	**00 08 54.9**	**-1.3**
ARCES	**ARCESS Array B**	**14.26**	**132**	Pn	**Pn**	**00 09 33.6**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=348,slow=12,SNR=14						
ARCES				LR	LR	00 14 41.7	
	comp=Z,55nm,20.8s,baz=342,slow=35						
RES	**Resolute Bay**	**17.24**	**296**	Pn	Pn	00 10 06.0	-6.7
	comp=Z,0.3nm,0.3s,baz=16,slow=13,SNR=7.7						
RES				LR	LR	00 16 33.6	
	comp=Z,110nm,18.0s,baz=296,slow=37						
FINES	**FINESS Array B**	**22.20**	**137**	P	**P**	**00 11 11.2**	**+2.9**
	comp=Z,1.9nm,0.9s,baz=5.2,slow=17,SNR=2.3						
FINES				LR	LR	00 20 35.6	
	comp=Z,41nm,18.6s,baz=14,slow=39						
FRB	**Frobisher Bay**	**23.68**	**259**	LR	LR	00 20 52.4	
	comp=Z,66nm,18.6s,baz=128,slow=38						
KIRV	**Kirov**	**27.71**	**112**	LR	LR	00 23 54.4	
	comp=Z,40nm,19.1s,baz=175,slow=38						
YKA	**Yellowknife Ar**	**31.16**	**302**	P	**P**	**00 12 28.2**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=40,slow=11,SNR=4.9						
YKA				PcP	**PcP**	**00 15 24.4**	**-0.7**
	comp=Z,0.2nm,0.8s,baz=15,slow=1.9,SNR=4.0						
YKA				LR	LR	00 26 25.4	
	comp=Z,6.5nm,18.4s,baz=33,slow=39						
SCHQ	**Schefferville**	**32.05**	**252**	LR	LR	00 24 12.6	
	comp=Z,40nm,18.1s,baz=354,slow=34						
ILAR	**Eielson Array**	**32.10**	**329**	P	**P**	**00 12 36.6**	**-2.3**
	comp=Z,0.3nm,0.9s,baz=0.0,slow=5.4,SNR=3.8						
AKTO	**Aktyubinsk**	**36.81**	**106**	LR	LR	00 29 39.6	
	comp=Z,46nm,20.8s,baz=346,slow=38						
ZALV	**Zalesovo Beam**	**37.15**	**78**	LR	LR	00 33 38.0	
	comp=Z,20nm,18.0s,baz=30,slow=44						
ULM	**Lac du Bonnet**	**40.60**	**279**	LR	LR	00 29 25.8	
	comp=Z,74nm,21.7s,baz=294,slow=35						
TLY	**Talaya**	**41.87**	**61**	LR	LR	00 31 57.3	
	comp=Z,32nm,21.2s,baz=346,slow=37						
MKAR	**Makanchi Array**	**43.78**	**83**	P	**P**	**00 14 21.0**	**+3.4**
	comp=Z,0.2nm,0.6s,baz=340,slow=5.9,SNR=2.2						
MKAR				LR	LR	00 35 05.5	
	comp=Z,38nm,19.2s,baz=357,slow=39						
BRTR	**Keskin Array B**	**44.41**	**135**	P	**P**	**00 14 24.1**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=337,slow=6.9,SNR=2.9						
BRTR				LR	LR	00 35 40.1	
	comp=Z,9.7nm,18.3s,baz=26,slow=40						
PETK	**Petropavlovsk-**	**44.97**	**14**	P	**P**	**00 14 28.2**	**+1.2**
	comp=Z,2.5nm,0.9s,baz=310,slow=6.8,SNR=3.0						
SONM	**Songino Array**	**45.99**	**60**	P	**P**	**00 14 38.2**	**+2.9**
	comp=Z,0.4nm,0.4s,baz=350,slow=6.4,SNR=4.2						
SONM				LR	LR	00 35 56.6	
	comp=Z,32nm,18.5s,baz=76,slow=38						
AAK	**Ala-Archa**	**46.75**	**92**	LR	LR	00 38 08.3	
	comp=Z,52nm,18.1s,baz=332,slow=41						
GEYT	**Alibeck**	**49.10**	**110**	LR	LR	00 40 21.0	
	comp=Z,28nm,18.2s,baz=200,slow=42						
PDAR	**Pinedale Array**	**49.81**	**290**	LR	LR	00 36 28.9	
	comp=Z,64nm,20.8s,baz=314,slow=37						
NVAR	**Mina Array Bea**	**55.21**	**298**	LR	LR	00 38 40.1	
	comp=Z,97nm,20.0s,baz=256,slow=36						
TXAR	**Lajitas Array**	**62.22**	**282**	LR	LR	00 44 16.4	
	comp=Z,42nm,19.6s,baz=0.0,slow=37						
CMAR	**Chiang Mai Arr**	**73.95**	**73**	LR	LR	00 53 49.3	
	comp=Z,6.8nm,21.2s,baz=15,slow=38						

IDC 12 00:07:28.0±2.1,**2°.40N×124°.85E,h0km,mb3.4/3,**
mb1 3.6/3,mb1mx3.3/30,mbtmp3.4/3,Error ellipse:
s-maj=236.4km s-min=25.5km az=64.0,Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.08**	**158**	P	P	00 12 44.9	-0.5
	0.7nm,0.5s,baz=336,slow=10.0,SNR=7.3						
ASAR	**Alice Springs**	**27.37**	**162**	P	P	00 13 15.7	+0.5
	0.2nm,0.5s,baz=339,slow=7.1,SNR=6.7						
MKAR	**Makanchi Array**	**57.60**	**327**	P	P	00 17 19.7	-0.1
	0.2nm,0.3s,baz=127,slow=8.9,SNR=6.7						

ATH ***12*** *00:29:15.8,41°.85N×22°.90E,h10km±31km, ML2.6/5, Error ellipse: s-maj=31.6km s-min=2.4km az=0.0*
BEO ***12*** *00:29:15.8±0.4,41°.84N×23°.00E,h0km, ML2.5/17*
SKO ***12*** *00:29:16.0,41°.82N×23°.00E,h15km*
ISK ***12*** *00:29:17.3,41°.73N×22°.97E,h13km, ML2.8/11*
THE ***12*** *00:29:18.0,41°.74N×22°.95E,h7km±1km, ML2.5/8, Error ellipse: s-maj=2.2km s-min=1.2km az=171.0*

ISC 12 00:29:15.8±1.1,**41°.83N**±0°.01×**22°.91E**±0°.02,**h4**km±10km,
n80,σ0s98/116,7C-7D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STIP	**Stip**	**0.56**	**257**	*e*Pg	**Pg**	**00 29 24.7**	**-1.7**
STIP				*i* Sg	**Sg**	**00 29 28.5**	**-5.1**
STIP				*e*Lg	Lg	00 29 28.9	
	comp=N,746nm,0.2s						
VAY	**Valandovo**	**0.56**	**207**	*e*Pg	**Pg**	**00 29 26.8**	**+0.2**
VAY				*e*Sg	**Sg**	**00 29 34.3**	**+0.4**
VAY	**Valandovo**	**0.56**	**207**	*i* Pg	**Pb**	**00 29 28.6**	**+0.4**
VAY				*i* Sg	**Sb**	**00 29 35.7**	**-0.9**
VAY				*e*Lg	Lg	00 29 35.9	
	comp=E,286nm,0.3s						
KNT	**Kendrikon**	**0.66**	**181**	P	**Pg**	**00 29 28.9**	**+0.5**
KNT				S	**Sg**	**00 29 37.8**	**+0.7**
	comp=E,732nm,0.1s						
KNT	**Kendrikon**	**0.66**	**181**	P	**Pg**	**00 29 29.0**	**+0.5**
KNT				S	**Sg**	**00 29 37.8**	**+0.7**
KNT				AML	AML

OHR	**Ohrid**	**1.74**	**246**	*i* Pn	**Pb**	**00**	**29**	**48.4 +0.1**
OHR				*i* Sn	**Sg**	**00**	**30**	**11.8 +0.2**
OHR				*e*Lg	Lg	00	30	15.9
	comp=E,18nm,0.5s							
LIT	**Litokhoron**	**1.75**	**191**	P	**Pn**	**00**	**29**	**47.3 +0.4**
BLKB	**Belogradchik**	**1.81**	**355**	⇓S	**Sg**	**00**	**30**	**13.8 +0.1**
THAS	**Thassos island**	**1.83**	**131**	P	**Pn**	**00**	**29**	**47.7 -0.3**
KDZ	**Kurdzhali**	**1.89**	**94**	PN	**Pn**	**00**	**29**	**48.9 +0.1**
SELS	**Selova**	**1.92**	**317**	*e*Pg	**Pb**	**00**	**29**	**51.2 -0.2**
SELS				*e*Sg	**Sg**	**00**	**30**	**18.1 +0.6**
PAIG	**Paliouri**	**1.98**	**163**	P	**Pn**	**00**	**29**	**50.3 +0.2**
PLVB	**Pleven**	**2.01**	**38**	⇑P	**Pn**	**00**	**29**	**47.5 -3.0**
PLVB	**Pleven**	**2.01**	**38**	⇓S	**Sg**	**00**	**30**	**21.6 +1.3**
BOVS	**Bovan**	**2.01**	**334**	*e*Pg	**Pn**	**00**	**29**	**51.4 +0.9**
BOVS				*e*Sg	**Sg**	**00**	**30**	**21.7 +1.2**
ZAGS	**Zajecar**	**2.05**	**346**	*e*Pg	**Pn**	**00**	**29**	**51.7 +0.7**
ZAGS				*e*Sg	**Sg**	**00**	**30**	**21.2 -0.3**
RDO	**Rodhopi**	**2.09**	**108**	PN	**Pn**	**00**	**29**	**52.1 +0.5**
SMTH	**Samothraki Isl**	**2.40**	**123**	P	**Pn**	**00**	**29**	**55.5 -0.3**
VLAD	**Vladila**	**2.44**	**26**	⇑P	**Pn**	**00**	**29**	**57.9 +1.6**
ELND	**Elena**	**2.46**	**62**	⇓P	**Pn**	**00**	**29**	**57.3 +0.6**
XOR	**Xorichti**	**2.47**	**175**	P	**Pn**	**00**	**29**	**57.3 +0.5**
NEO	**Neokhori**	**2.53**	**174**	P	**Pn**	**00**	**29**	**58.0 +0.4**
ALN	**Alexandroupoli**	**2.54**	**110**	PN	**Pn**	**00**	**29**	**57.7 0.0**
SJES	**Sjenica**	**2.60**	**304**	*e*Pn	**Pn**	**00**	**30**	**01.1 +2.4**
SJES				*e*Sg	**Sg**	**00**	**30**	**40.4 +1.1**
GRUS	**Gruza**	**2.62**	**323**	*e*Pn	**Pn**	**00**	**29**	**59.7 +0.9**
GRUS				*e*Sg	**Sg**	**00**	**30**	**39.2 -0.6**
ENEZ	**Enez**	**2.68**	**113**	PN	**Pn**	**00**	**29**	**59.9 +0.3**
IVAS	**Ivanjica**	**2.68**	**312**	*e*Pn	**Pn**	**00**	**30**	**00.4 +0.6**
IVAS				*e*Sg	**Sg**	**00**	**30**	**42.2 +0.3**
KUBS	**Kucevo**	**2.74**	**341**	*e*Pn	**Pn**	**00**	**30**	**00.7 +0.2**
KUBS				*e*Sg	**Sg**	**00**	**30**	**42.1 -1.6**
AOS	**Alonnisos**	**2.75**	**164**	PN	**Pn**	**00**	**30**	**00.6 -0.1**
GADA	**Gvkgeada**	**2.79**	**125**	PN	**Pn**	**00**	**30**	**01.3 +0.1**
AGG	**Agios Georgios**	**2.83**	**189**	PN	**Pn**	**00**	**30**	**01.6 -0.2**
SRE	**Strehaia**	**2.84**	**4**	⇑P	**Pn**	**00**	**30**	**03.0 +1.0**
EDRB	**Edirne**	**2.87**	**88**	PN	**Pn**	**00**	**30**	**02.6 +0.3**
UKOP	**Uzunkopru-Edir**	**2.88**	**103**	PN	**Pn**	**00**	**30**	**03.2 +0.7**
ERIK	**Erikli-Kesan**	**2.95**	**112**	PN	**Pn**	**00**	**30**	**04.4 +1.0**
TRUS	**Trudelj**	**3.02**	**323**	*e*Pn	**Pn**	**00**	**30**	**05.1 +0.7**
TRUS				*e*Sg	**Sg**	**00**	**30**	**51.9 -0.8**
GELI	**Tayfur-Gelibol**	**3.05**	**117**	PN	**Pn**	**00**	**30**	**05.2 +0.5**
MDVR	**Moldovita**	**3.08**	**344**	⇑P	**Pn**	**00**	**30**	**05.8 +0.6**
BOZC	**Bozcaada**	**3.10**	**129**	PN	**Pn**	**00**	**30**	**05.9 +0.4**
DIVS	**Divibare**	**3.12**	**318**	*e*Pn	**Pn**	**00**	**30**	**06.5 +0.7**
DIVS				*e*Sg	**Sg**	**00**	**30**	**56.0 0.0**
LPK	**Lapseki**	**3.25**	**115**	PN	**Pn**	**00**	**30**	**08.5 +0.9**
EZN	**Ezine**	**3.27**	**126**	PN	**Pn**	**00**	**30**	**08.5 +0.7**
BBLS	**Lazići**	**3.29**	**310**	*e*Pg	**Pb**	**00**	**30**	**15.2 +0.5**
BBLS				*e*Sg	**Sg**	**00**	**31**	**02.3 +1.0**
SGRR	**Singureni**	**3.29**	**42**	⇑P	**Pn**	**00**	**30**	**10.3 +2.3**
RKY	**Sarkoy-Tekirda**	**3.41**	**108**	PN	**Pn**	**00**	**30**	**10.6 +0.8**
SIGR	**SIGRI**	**3.44**	**138**	PN	**Pn**	**00**	**30**	**10.7 +0.5**
GZR	**Gura Zlata**	**3.57**	**359**	⇓P	**Pn**	**00**	**30**	**12.5 +0.5**
KRBG	**Karabiga-Canak**	**3.61**	**112**	PN	**Pn**	**00**	**30**	**13.7 +1.2**
BZS	**Buzias**	**3.90**	**347**	*e*Pn	**Pn**	**00**	**30**	**16.9 +0.4**
BZS	**Buzias**	**3.90**	**347**	⇑P	**Pn**	**00**	**30**	**16.9 +0.4**
VOIR		**3.93**	**23**	⇑P	**Pn**	**00**	**30**	**19.1 +2.1**
VRI	**Vrincioaia**	**4.89**	**33**	⇓P	**Pn**	**00**	**30**	**31.8 +1.7**

IDC 12 00:29:47.1±6.2, 6°50S×130°44E, h347km±74km, mb2.6/1, mb1 3.0/3, mb1mx2.7/26, mbtmp3.7/3, Error ellipse: s-maj=97.0km s-min=24.0km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.88**	**165**	P	P	00 32 49.8	+0.1
	0.6nm,0.3s,baz=344,slow=11,SNR=14						
WRA				S	S	00 35 16.7	-4.4
	0.2nm,0.3s,baz=345,slow=22,SNR=4.7						
ASAR	**Alice Springs**	**17.39**	**169**	P	P	00 33 27.9	+0.1
	0.5nm,0.3s,baz=348,slow=12,SNR=37						
ASAR				S	S	00 36 33.0	+2.3
	0.0nm,0.3s,baz=347,slow=21,SNR=2.7						
MKAR	**Makanchi Array**	**68.06**	**327**	P	P	00 40 10.0	-0.1
	0.1nm,0.4s,baz=127,slow=7.4,SNR=4.0						

ASRS 12 00:38:11.8±0.3, 52°N±2°×9°8E±°, h5km, MLh3.5/7, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/tab confirmed, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	**1.37**	**52**	Pg	Pn	00 38 36.3	-1.4
ORL				Sg	Sg	00 38 55.2	-0.6
TDJR	**Todzha**	**1.40**	**301**	Pg	Pg	00 38 39.0	+0.5
TDJR				Sg	Sn	00 38 59.5	+2.7
MOY	**Mondy**	**1.83**	**90**	Pg	Pn	00 38 43.6	-0.4
MOY				Sg	Sn	00 39 06.9	-0.7
KZLR	**Kyzyl**	**2.24**	**272**	Pg	Pg	00 38 54.2	-0.5
KZLR				Sg	Sg	00 39 23.1	-0.6
ORY	**Orie**	**3.75**	**333**	Pg	Pb	00 39 19.7	+1.2
ORY				Sg	Sg	00 40 08.8	-3.3
MINR	**Mina**	**3.95**	**326**	Pg	Pg	00 39 24.9	-2.6
MINR				Sg	Sg	00 40 20.9	+2.2
DJOS	**Djoyskaya Sosn**	**4.23**	**288**	Pg	Pg	00 39 30.1	-2.8
DJOS				Sg	Sg	00 40 24.0	-3.7
CERR	**Cheremushki**	**4.24**	**288**	Sg	Sg	00 40 24.8	-3.0
TEL	**Teeli**	**4.97**	**265**	Pg	Pb	00 39 42.7	+3.4
TEL				Sg	Sg	00 40 46.9	-4.4
VEH	**Verkhnyaya Baz**	**4.98**	**291**	Pg	Pb	00 39 42.0	+2.6
VEH				Sg	Sg	00 40 47.6	-4.0
GZLN	**Zheleznogorsk**	**5.32**	**333**	Pg	Pb	00 39 48.3	+3.1
GZLN				Sg	Sg	00 41 01.6	-1.1
LUZB	**Luzhba, Kemero**	**5.90**	**293**	Pg	Pb	00 39 56.4	+1.3
LUZB				Sg	Sg	00 41 16.5	-4.7
TASR	**Tashtagol**	**6.34**	**284**	Pg	Pb	00 40 07.7	+5.2
TASR				Sg	Sg	00 41 30.6	-4.6
CUR	**Chagan-Uzun**	**6.34**	**259**	Pg	Pb	00 40 06.7	+4.0
CUR				Sg	Sg	00 41 28.9	-6.5
ULGR	**Ulagan, Altay**	**6.44**	**264**	Pg	Pg	00 40 14.8	-0.3
ULGR				Sg	Sg	00 41 33.0	-5.5
ARTR	**Artybash**	**6.69**	**275**	Pg	Pg	00 40 15.0	-4.9
ARTR				Sg	Sg	00 41 39.8	-6.7
AKAR	**Aktash**	**6.73**	**262**	Pg	Pg	00 40 18.0	-2.6
AKAR				Sg	Sg	00 41 42.8	-4.9
CHBI	**Chibit, Altay**	**6.80**	**262**	Pg	Pg	00 40 20.6	-1.4
CHBI				Sg	Sg	00 41 45.8	-4.3
ELT	**Eltsovka**	**7.38**	**287**	Pg	Pg	00 40 30.0	-3.1
ELT				Sg	Sg	00 42 02.0	-6.7
ELDR	**Elanda**	**7.49**	**271**	Pg	Pg	00 40 31.4	-3.7
ELDR				Sg	Sg	00 42 11.0	-1.2
TUNR	**Tungur**	**7.57**	**263**	Sg	Sg	00 42 13.7	-0.9
SALR	**Pechorkino, Sa**	**7.92**	**295**	Sg	Sg	00 42 23.1	-2.8
UKR	**Ust'-Kan**	**8.36**	**270**	Sg	Sg	00 42 37.2	-2.6

NEIC ***12*** *00:52:20.1±1.3, 5°.36N±0°.09×123°.6E±0°.1, h549km±2km, mb4.3/90, Error ellipse: s-maj=14.8km s-min=12.3km az=68.0*

DJA ***12*** *00:52:21.5±0.9, 5°N±10°×12°4E±°, h548km±8km, M4.5/12, mb4.6/12, mB4.8/9, MLv4.9/7, Mw(mB)4.1/9, Mwp5.2/1*

IDC ***12*** *00:52:22.3±1.1, 5°.33N×123°.59E, h579km±13km, mb3.4/17, mb1 3.6/17, mb1mx3.4/36, mbtmp4.4/17, Error ellipse: s-maj=18.0km s-min=7.4km az=74.0*

ISC 12 00:52:20.0±0.3, 5°.33N±0°.05×123°.55E±0°.07, h551km, n146, σ1§44/157, mb4.3/70, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**2.26**	**42**	⇓*i*P	**P**	**00**	**53**	**34.1 +2.9**
KCP				*i* S	**S**	**00**	**54**	**32.4 +3.5**
DAV	**Davao City (W)**	**2.66**	**49**	P	**P**	**00**	**53**	**32.2 -0.9**
MRSI	**Marisa**	**5.08**	**199**	P	**P**	**00**	**53**	**53.1 +2.5**
	0.5nm1µm130nm,0.8s							
TNTI	**Ternate**	**5.91**	**140**	P	**P**	**00**	**53**	**59.8 +1.9**
	0.5nm100nm,0.4s							
TNTI				S	**S**	**00**	**55**	**19.2 +1.3**
	0.5nm100nm,0.4s							
TNTI	**Ternate**	**5.91**	**140**	P	**P**	**00**	**53**	**58.2 +0.3**
MPSI	**Mapaga**	**6.16**	**216**	P	**P**	**00**	**54**	**01.6 +1.5**
	0.1nm23nm,0.6s							
LUWI	**Luwuk**	**6.37**	**187**	P	**P**	**00**	**54**	**03.2 +1.0**
	1.1nm5µm7µm61nm,0.5s							
LUWI	**Luwuk**	**6.37**	**187**	P	**P**	**00**	**54**	**03.0 +0.8**
LBMI	**Labuha**	**7.12**	**146**	P	**P**	**00**	**54**	**09.7 +0.5**
	1.2nm4µm219nm,0.5s							

KKM	**Kota Kinabalu**	**7.34**	**276**	P	**P**	**00**	**54**	**11.2 -0.2**
SANI	**Sanana**	**7.72**	**162**	P	**P**	**00**	**54**	**17.0 +1.9**
	0.5nm1µm82nm,0.6s							
TTSI	**Tana Toraja**	**9.11**	**204**	P	**P**	**00**	**54**	**32.8 +3.8**
	793nm85nm,0.8s							
BKB	**Balikpapan**	**9.33**	**226**	P	**P**	**00**	**54**	**29.6 -1.6**
SPSI	**Sidrap Palu**	**9.97**	**202**	P	**P**	**00**	**54**	**40.3 +2.6**
	757nm80nm,0.7s							
BNSI	**Bone**	**10.26**	**200**	P	**P**	**00**	**54**	**44.7 +4.0**
	25nm,1.2s							
KBKI	**Kotabaru**	**11.31**	**221**	P	**P**	**00**	**54**	**55.1 +3.6**
	2µm15nm,1.0s							
SBUM	**Sibu**	**11.66**	**256**	P	**P**	**00**	**54**	**56.3 +1.2**
FAKI	**Fak Fak**	**11.94**	**133**	P	**P**	**00**	**54**	**58.9 +0.9**
KSM	**Kuching**	**13.76**	**254**	P	**P**	**00**	**55**	**17.1 +0.2**
SOEI	**Soe**	**15.00**	**177**	P	**P**	**00**	**55**	**30.5 +0.8**
PLAI	**Plampang**	**15.19**	**202**	P	**P**	**00**	**55**	**33.8 +2.3**
	1µm93nm,0.8s							
BATI	**Baumata**	**15.43**	**180**	P	**P**	**00**	**55**	**34.7 +0.8**
	20nm,0.3s,baz=336,slow=0.9,SNR=32							
BATI	**Baumata**	**15.43**	**180**	P	**P**	**00**	**55**	**34.8 +0.8**
JAGI	**Jajag, Banyuwa**	**16.61**	**214**	P	**P**	**00**	**55**	**45.9 +0.6**
TWG	**Pinlang**	**17.56**	**352**	P	**P**	**00**	**55**	**53.3 -0.5**
TPUB	**Ta-pu**	**18.09**	**351**	P	**P**	**00**	**55**	**59.5 +0.8**
YULB	**Yu-li**	**18.09**	**353**	P	**P**	**00**	**55**	**57.7 -1.0**
YULB				IAmb	IAmb	00	56	07.0
	comp=Z,7.6nm,1.1s							
SSLB	**Suanglung**	**18.52**	**352**	P	**P**	**00**	**56**	**02.5 -0.2**
SSLB				IAmb	IAmb	00	56	05.9
	comp=Z,8.6nm,0.9s							
NACB	**Ninganchiao**	**18.83**	**354**	P	**P**	**00**	**56**	**04.9 -0.5**
YOJ	**Yonaguni jima**	**19.03**	**358**	P	**P**	**00**	**56**	**07.8 +0.6**
YHNB	**Yeheng**	**19.35**	**354**	P	**P**	**00**	**56**	**10.1 -0.1**
YHNB				IAmb	IAmb	00	56	25.8
	comp=Z,11nm,1.0s							
MTN	**Manton Dam**	**19.56**	**157**	P	**P**	**00**	**56**	**12.7 +0.6**
UBPT	**Khong Chiam**	**20.34**	**300**	P	**P**	**00**	**56**	**19.2 0.0**
UBPT				IAmb	IAmb	00	56	21.1
	comp=Z,8.1nm,0.7s							
JOW	**Kunigami**	**21.86**	**11**	P	**P**	**00**	**56**	**31.9 -0.9**
FITZ	**Fitzroy Crossi**	**23.37**	**175**	P	**P**	**00**	**56**	**46.9 +0.5**
	comp=Z,4.6nm,0.4s,baz=4.6,slow=8.5,SNR=49							
FITZ				ScP	**ScP**	**01**	**02**	**57.4 -2.3**
	comp=Z,1.2nm,0.6s,baz=348,slow=9.3,SNR=4.6							
FITZ	**Fitzroy Crossi**	**23.37**	**175**	P	**P**	**00**	**56**	**46.8 +0.5**
FITZ				IAmb	IAmb	00	56	50.8
	comp=Z,4.5nm,0.7s							
WHN	**Wuhan**	**26.54**	**342**	P	**P**	**00**	**57**	**16.8 +2.6**
MBWA	**Marble Bar**	**26.59**	**188**	P	**P**	**00**	**57**	**14.9 +0.2**
MBWA				IAmb	IAmb	00	57	18.7
	comp=Z,11nm,1.0s							
PSA00	**Pilbara Seismi**	**26.98**	**188**	P	**P**	**00**	**57**	**18.4 +0.2**
PSA00				IAmb	IAmb	00	57	19.0
	comp=Z,9.9nm,0.8s							
WRAB	**Tennant Creek**	**27.25**	**157**	P	**P**	**00**	**57**	**21.1 +0.4**
WRA	**Warramunga Arr**	**27.26**	**157**	P	**P**	**00**	**57**	**20.9 +0.2**
	comp=Z,16nm,0.5s,baz=337,slow=9.5,SNR=183							
WRA				S	**S**	**01**	**01**	**13.0 -8.7**
	comp=Z,0.5nm,0.8s,baz=331,slow=22,SNR=3.9							
WRA				ScP	**ScP**	**01**	**03**	**09.2 -1.8**
	comp=Z,1.3nm,0.5s,baz=341,slow=3.1,SNR=8.3							
COEN	**Coen**	**27.32**	**135**	P	**P**	**00**	**57**	**21.0 -0.2**
COEN				IAmb	IAmb	00	57	39.5
	comp=Z,6.1nm,1.1s							
CMAR	**Chiang Mai Arr**	**27.34**	**301**	P	**P**	**00**	**57**	**23.2 +1.8**
	comp=Z,3.5nm,0.8s,baz=100,slow=5.9,SNR=19							
CMAR				ScP	**ScP**	**01**	**03**	**08.5 -2.8**
	comp=Z,0.6nm,0.3s,baz=72,slow=2.9,SNR=2.7							
WR0	**Warramunga Arr**	**27.35**	**157**	P	**P**	**00**	**57**	**21.8 +0.2**
WR0				IAmb	IAmb	00	57	22.4
	comp=Z,12nm,1.0s							
CHTO	**Chiang Mai**	**27.49**	**301**	P	**P**	**00**	**57**	**23.8 +1.0**
CHTO				IAmb	IAmb	00	57	24.6
	comp=Z,5.4nm,0.7s							
KMI	**Kunming**	**28.04**	**317**	P	**P**	**00**	**57**	**28.9 +1.2**
KMI				pmax	pmax			
	comp=Z,11nm,1.0s							
JNU	**Nakatsue**	**28.48**	**13**	P	**P**	**00**	**57**	**31.3 0.0**
JNU				IAmb	IAmb	00	57	32.3
	comp=Z,7.1nm,0.9s							
GIRL	**Giralia**	**29.25**	**198**	P	**P**	**00**	**57**	**39.1 +1.1**
ASAR	**Alice Springs**	**30.54**	**161**	P	**P**	**00**	**57**	**50.1 +1.0**
	comp=Z,12nm,0.3s,baz=338,slow=7.3,SNR=572							
ASAR				S	**S**	**01**	**02**	**09.9 -2.5**
	comp=Z,0.5nm,0.6s,baz=332,slow=13,SNR=4.4							
ASAR				ScP	**ScP**	**01**	**03**	**19.4 -2.0**
	comp=Z,2.5nm,0.7s,baz=338,slow=2.8,SNR=16							
XAN	**Xi'an**	**31.63**	**336**	P	**P**	**00**	**57**	**59.2 +0.8**
XAN				pmax	pmax			
	comp=Z,11nm,0.9s							
XAN				pmax	pmax			
	comp=Z,69nm,3.5s							
INU	**Inuyama**	**32.36**	**21**	P	**P**	**00**	**58**	**04.3 -0.2**
INU				IAmb	IAmb	00	58	07.6
	comp=Z,11nm,1.1s							
MJAR	**Matsushiro Arr**	**33.85**	**21**	P	**P**	**00**	**58**	**16.8 -0.3**
	comp=Z,3.1nm,0.7s,baz=197,slow=10,SNR=9.8							
MJB9	**Matsu-Tunnel**	**33.85**	**21**	P	**P**	**00**	**58**	**16.5 -0.7**
MJB9				IAmb	IAmb	00	58	26.9
	comp=Z,5.8nm,1.1s							
MORW	**Morawa**	**34.95**	**192**	P	**P**	**00**	**58**	**26.6 +0.2**
BJT	**Baijiatuan**	**35.17**	**350**	P	**P**	**00**	**58**	**27.4 -0.7**
BJT				IAmb	IAmb	00	58	43.6
	comp=Z,5.2nm,0.9s							
LZH	**Lanzhou**	**35.57**	**332**	⇑P	**P**	**00**	**58**	**33.6 +1.9**
LZH				pP	pP	01	00	05.1 -0.1
LZH				PP	**PP**	**01**	**00**	**11.6 -4.2**
LZH				sP	sP	01	01	12.8 +4.6
LZH				pmax	pmax			
	comp=Z,15nm,1.3s							
LZH				pmax	pmax			
	comp=Z,67nm,5.0s							
FORT	**Forrest**	**36.16**	**173**	P	**P**	**00**	**58**	**37.4 +1.0**
SHL	**Shillong**	**36.39**	**307**	P	**P**	**00**	**58**	**39.2 +0.6**
HHC	**Hu-ho-hao-te**	**36.97**	**345**	*e*P	**P**	**00**	**58**	**43.8 +0.8**
HHC				pmax	pmax			
	comp=Z,6.0nm,1.2s							
HHC				pmax	pmax			
	comp=Z,110nm,5.4s							
NWAO	**Narrogin (SRO)**	**38.51**	**189**	P	**P**	**00**	**58**	**56.4 +0.9**
	baz=20,slow=7.9							
NWAO	**Narrogin (SRO)**	**38.51**	**189**	P	**P**	**00**	**58**	**56.6 +1.0**
NWAO				IAmb	IAmb	00	58	59.9
	comp=Z,12nm,1.1s							
NWAO	**Narrogin (SRO)**	**38.51**	**189**	P	**P**	**00**	**58**	**56.0 +0.5**
NWAO				IAmb	IAmb	00	58	59.8
	comp=Z,20nm,1.1s							
LSA	**Lhasa**	**39.02**	**312**	P	**P**	**00**	**59**	**00.1 -0.2**
LSA				IAmb	IAmb	00	59	03.2
	comp=Z,5.9nm,0.6s							
HNR	**Honiara**	**39.12**	**112**	P	**P**	**00**	**59**	**01.3 +0.5**
USA0B	**Ussuriysk Arra**	**39.42**	**10**	P	**P**	**00**	**59**	**03.4 +0.7**
USA0B				IAmb	IAmb	00	59	14.3
	comp=Z,8.0nm,1.1s							
USRK	**Ussuriysk Ar.**	**39.42**	**10**	P	**P**	**00**	**59**	**03.4 +0.7**
	comp=Z,3.3nm,0.8s,baz=197,slow=8.9,SNR=4.1							
BBOO	**Buckleboo**	**39.74**	**163**	P	**P**	**00**	**59**	**06.4 +0.9**
GTA	**Gaotai**	**40.14**	**331**	⇓P	**P**	**00**	**59**	**09.9 +1.1**
GTA				pP	pP	01	00	46.9 +2.0
GTA				sP	sP	01	01	47.3 +0.1
GTA				pmax	pmax			
	comp=Z,8.0nm,0.8s							
TAPN	**Taplejung**	**40.53**	**307**	*e*P	**P**	**00**	**59**	**13.1 +0.9**
	comp=Z,26nm,0.8s							
EIDS	**Eidsvold**	**40.58**	**140**	P	**P**	**00**	**59**	**13.0 +0.8**
EIDS				IAmb	IAmb	00	59	13.8
	comp=Z,12nm,0.9s							
STKA	**Stephens Creek**	**40.80**	**156**	P	**P**	**00**	**59**	**15.2 +1.3**
	comp=Z,12nm,0.6s,baz=334,slow=8.6,SNR=29							
RAMN	**Ramite**	**41.25**	**306**	*e*P	**P**	**00**	**59**	**19.0 +1.1**
	comp=Z,20nm,0.8s							
JIRN	**Jiri**	**41.88**	**306**	*e*P	**P**	**00**	**59**	**23.8 +0.8**
	comp=Z,24nm,0.6s							
GUN	**Gumba**	**42.23**	**306**	*e*P	**P**	**00**	**59**	**26.6 +0.8**
	comp=Z,31nm,0.6s							
PKI	**Pulchoki**	**42.47**	**306**	*e*P	**P**	**00**	**59**	**27.9 +0.3**
KKN	**Kakani**	**42.66**	**306**	*e*P	**P**	**00**	**59**	**29.8 +0.8**
DMN	**Daman**	**42.73**	**306**	*e*P	**P**	**00**	**59**	**30.6 +1.0**
GKN	**Gorkha**	**43.27**	**306**	*e*P	**P**	**00**	**59**	**34.2 +0.5**
KOLN	**Koldanda**	**44.02**	**305**	*e*P	**P**	**00**	**59**	**40.5 +1.0**
	comp=Z,53nm,0.7s							
DANN	**Dangsing**	**44.12**	**306**	*e*P	**P**	**00**	**59**	**41.1 +0.7**
	comp=Z,67nm,0.6s							
ARMA	**Armidale**	**44.56**	**145**	P	**P**	**00**	**59**	**42.9 -0.6**
ARMA				IAmb	IAmb	00	59	46.4
	comp=Z,4.8nm,0.8s							
ULN	**Ulaanbaatar**	**44.68**	**344**	P	**P**	**00**	**59**	**44.6 +0.4**
SONM	**Songino Array**	**44.83**	**344**	P	**P**	**00**	**59**	**46.1 +0.7**
	comp=Z,2.9nm,0.8s,baz=159,slow=8.4,SNR=21							
SONM				PcP	**PcP**	**01**	**01**	**14.8 -0.5**
	comp=Z,0.6nm,0.6s,baz=153,slow=2.7,SNR=3.5							
CAN	**Canberra**	**46.98**	**151**	P	**P**	**01**	**00**	**02.8 +1.0**
CAN				IAmb	IAmb	01	00	05.0
	comp=Z,9.1nm,0.7s							
TOO	**Toolangi**	**47.32**	**156**	P	**P**	**01**	**00**	**04.8 +0.5**
TOO				IAmb	IAmb	01	00	06.7
	comp=Z,6.7nm,0.8s							
TLY	**Talaya**	**49.08**	**344**	P	**P**	**01**	**00**	**16.0 -1.1**
TLY				IAmb	IAmb	01	00	19.2
	comp=Z,6.2nm,0.7s							
WMQ	**Urumqi**	**49.63**	**326**	*e*P	**P**	**01**	**00**	**22.9 +1.5**
WMQ				pmax	pmax			
	comp=Z,7.0nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,100nm,4.5s							
KAAM	**Kaadhehdhoo**	**50.70**	**266**	P	**P**	**01**	**00**	**28.3 -1.4**
TAU	**Tasmania Unive**	**52.63**	**158**	P	**P**	**01**	**00**	**44.0 +1.1**
TAU				IAmb	IAmb	01	00	46.0
	comp=Z,31nm,1.1s							
NIL	**Nilore**	**54.45**	**308**	P	**P**	**01**	**00**	**57.4 +1.2**
MK31	**Makanchi Array**	**54.46**	**326**	IAmb	IAmb	01	00	57.1
	comp=Z,4.6nm,0.5s							
MKAR	**Makanchi Array**	**54.46**	**326**	P	**P**	**01**	**00**	**56.7 +0.7**
	comp=Z,5.6nm,0.4s,baz=115,slow=10,SNR=174							
MKAR				PcP	**PcP**	**01**	**01**	**50.5 -0.5**
	comp=Z,2.2nm,0.7s,baz=117,slow=4.5,SNR=11							
MKAR				ScP	**ScP**	**01**	**04**	**54.2 -2.5**
	comp=Z,0.2nm,0.6s,baz=124,slow=5.1,SNR=2.3							
MAKZ	**Makanchi**	**54.64**	**326**	P	**P**	**01**	**00**	**57.9 +0.7**
MAKZ				IAmb	IAmb	01	00	59.3
	comp=Z,5.9nm,0.6s							
KSH	**Kashi**	**54.69**	**316**	P	**P**	**01**	**01**	**00.0 +2.2**
KSH				pP	pwP	01	02	46.0 -1.2
KSH				pmax	pmax			
	comp=Z,390nm,5.1s							
KDJ	**Kajisay**	**55.06**	**319**	P	**P**	**01**	**01**	**05.1 +1.0**
KDJ				IAmb	IAmb	01	01	05.2
	comp=Z,7.3nm,0.8s							
PEA0B	**Petropavlovsk-**	**55.22**	**24**	P	**P**	**01**	**01**	**01.7 +0.6**
PEA0B				IAmb	IAmb	01	01	10.9
	comp=Z,19nm,1.1s							
PETK	**Petropavlovsk-**	**55.22**	**24**	P	**P**	**01**	**01**	**02.2 +1.1**
	comp=Z,2.4nm,0.6s,baz=201,slow=4.6,SNR=8.7							
NRN	**Naryn**	**55.52**	**318**	P	**P**	**01**	**01**	**04.3 +0.5**
YAK	**Yakutsk**	**56.76**	**3**	P	**P**	**01**	**01**	**11.6 +0.1**
YAK				IAmb	IAmb	01	01	13.0
	comp=Z,17nm,0.7s							
AAK	**Ala-Archa**	**57.06**	**318**	P	**P**	**01**	**01**	**14.7 +0.5**
ZALV	**Zalesovo Beam**	**57.76**	**334**	P	**P**	**01**	**01**	**18.0 -0.5**
	comp=Z,2.9nm,0.6s,baz=132,slow=6.0,SNR=14							
MA2	**Magadan**	**57.99**	**16**

PB09				*i* S		**Sn**	**00 59 24.9**	**+1.2**
YJA	**Yavi**	**1.75**	**96**	*i* P		**Pn**	**00 58 58.2**	**+0.8**
YJA				*i* S		**Sn**	**00 59 24.2**	**-0.3**
YJA				IAML			00 59 27.6	
	comp=Z,85nm,0.6s							
PB06	**IPOC Station P**	**2.14**	**250**	*i* P		**Pn**	**00 59 01.0**	**-0.2**
PB06				*i* S		**Sn**	**00 59 29.9**	**-1.6**
PB06				IAML			00 59 32.3	
	comp=N,460nm,0.2s							
PB06	**IPOC Station P**	**2.14**	**250**	*i* P		**Pn**	**00 59 01.1**	**-0.1**
PB06				IAML			00 59 02.7	
	comp=Z,205nm,0.1s							
PB06				*i* S		**Sn**	**00 59 30.5**	**-0.9**
HJA	**Humahuaca**	**2.19**	**124**	*i* P		**Pn**	**00 59 02.9**	**+0.9**
HJA				IAML			00 59 03.3	
	comp=Z,105nm,0.3s							
HJA				*i* S		**Sn**	**00 59 34.8**	**+1.9**
PB03	**IPOC Station P**	**2.19**	**268**	*i* P		**Pn**	**00 59 01.5**	**-0.3**
PB03				*i* S		**Sn**	**00 59 31.2**	**-1.3**
PB03				IAML			00 59 32.1	
	comp=E,430nm,0.2s							
PB15	**IPOC Station P**	**2.27**	**238**	*i* P		**Pn**	**00 59 02.6**	**-0.1**
PB15				*i* S		**Sn**	**00 59 33.0**	**-1.1**
PB15	**IPOC Station P**	**2.27**	**238**	*i* P		**Pn**	**00 59 02.7**	**0.0**
PB15				*i* S		**Sn**	**00 59 33.2**	**-0.9**
PB08	**IPOC Station P**	**2.47**	**318**	*i* P		**Pn**	**00 59 06.8**	**+1.5**
PB08				*i* S		**Sn**	**00 59 40.0**	**+1.4**
PB04	**IPOC Station P**	**2.58**	**262**	*i* P		**Pn**	**00 59 05.9**	**-0.3**
PB04				*i* S		**Sn**	**00 59 38.0**	**-2.4**
PB04				IAML			00 59 40.7	
	comp=N,342nm,0.4s							
PB04	**IPOC Station P**	**2.58**	**262**	*i* P		**Pn**	**00 59 06.0**	**-0.3**
PB04				*i* S		**Sn**	**00 59 39.6**	**-0.8**
PB05	**IPOC Station P**	**2.74**	**251**	*i* P		**Pn**	**00 59 07.3**	**-0.7**
PB05				*i* S		**Sn**	**00 59 40.6**	**-3.0**
PB05				IAML			00 59 43.0	
	comp=E,185nm,0.5s							
PB05	**IPOC Station P**	**2.74**	**251**	*i* P		**Pn**	**00 59 07.6**	**-0.4**
PB05				*i* S		**Sn**	**00 59 40.8**	**-2.9**
PATCX	**Punta Patache**	**2.83**	**294**	*i* P		**Pn**	**00 59 08.9**	**-0.1**
PATCX				*i* S		**Sn**	**00 59 43.9**	**-1.6**
PATCX				IAML			00 59 44.7	
	comp=N,351nm,0.3s							
GO01	**Chusmiza**	**2.87**	**324**	*i* P		**Pn**	**00 59 11.1**	**+1.1**
GO01				*i* S		**Sn**	**00 59 48.3**	**+1.3**
GO01				IAML			00 59 51.9	
	comp=N,388nm,0.1s							
TA01	**Diego Aracena**	**2.97**	**298**	*i* P		**Pn**	**00 59 10.1**	**-0.6**
TA01				*i* S		**Sn**	**00 59 46.3**	**-2.0**
PB11	**IPOC Station P**	**3.07**	**316**	*i* P		**Pn**	**00 59 12.0**	**-0.1**
PB11				*i* S		**Sn**	**00 59 50.5**	**-0.5**
PB11				IAML			00 59 51.2	
	comp=E,392nm,0.2s							
PB10	**IPOC Station P**	**3.29**	**242**	*i* P		**Pn**	**00 59 13.6**	**-0.9**
PB10				*i* S		**Sn**	**00 59 51.5**	**-3.9**
PB10				IAML			00 59 53.3	
	comp=N,145nm,0.2s							
PSGC	**Pisagua**	**3.50**	**313**	*e*P		**Pn**	**00 59 16.2**	**-1.1**
PSGC				*i* S		**Sn**	**00 59 57.8**	**-2.5**
MNMC	**Minye Minye**	**3.52**	**324**	*i* P		**Pn**	**00 59 18.4**	**+0.6**
MNMC				*i* S		**Sn**	**01 00 00.5**	**-0.6**
GO02	**Mina Guanaco**	**3.74**	**212**	*i* P		**Pn**	**00 59 19.9**	**-0.6**
GO02				*i* S		**Sn**	**01 00 03.0**	**-3.1**
PB14	**IPOC Station P**	**3.81**	**226**	IAML			01 00 05.7	
	comp=E,65nm,0.3s							
PB14	**IPOC Station P**	**3.81**	**226**	*i* P		**Pn**	**00 59 20.4**	**-0.9**
PB14				*i* S		**Sn**	**01 00 04.1**	**-3.5**
PB16	**IPOC Station P**	**4.15**	**331**	*e*P		**Pn**	**00 59 27.0**	**+1.0**
PB16				*i* S		**Sn**	**01 00 16.0**	**+0.2**
LPAZ	**La Paz**	**5.72**	**353**	P		**Pn**	**00 59 46.0**	**-0.4**
	comp=E,0.4nm,0.3s,baz=157,slow=5.3,SNR=9.3							
LPAZ				S		**Sn**	**01 00 49.3**	**-3.1**
	baz=90,slow=2.0,SNR=2.1							
SIV	**San Ignacio**	**8.45**	**46**	P		**Pn**	**01 00 19.5**	**-2.1**
	comp=E,6.0nm,0.3s,baz=252,slow=9.4,SNR=74							
SIV				S		**Sn**	**01 01 48.6**	**-7.7**
	comp=E,1.1nm,0.3s,baz=180,slow=21,SNR=7.9							
BDFB	**Brasilia**	**19.39**	**74**	P		**P**	**01 02 34.3**	**-0.2**
	comp=E,0.2nm,0.3s,baz=276,slow=19,SNR=2.6							
TXAR	**Lajitas Array**	**61.85**	**324**	P		**P**	**01 08 23.0**	**+0.7**
	comp=E,0.1nm,0.6s,baz=156,slow=7.9,SNR=2.7							
PDAR	**Pinedale Array**	**75.25**	**329**	P		**P**	**01 09 46.8**	**+1.6**
	comp=E,0.2nm,0.5s,baz=132,slow=5.3,SNR=3.2							
TORD	**Torodi Ar. Bea**	**76.20**	**70**	P		**P**	**01 09 51.2**	**+0.3**
	comp=E,0.4nm,0.3s,baz=256,slow=5.5,SNR=21							
YKA	**Yellowknife Ar**	**92.13**	**340**	P		**P**	**01 11 10.9**	**+0.6**
	comp=E,0.5nm,0.7s,baz=133,slow=4.7,SNR=16							
MKAR	**Makanchi Array**	**145.19**	**37**	PKPbc		**PKPab**	**01 17 38.7**	**+0.5**
	comp=E,0.3nm,0.5s,baz=327,slow=2.5,SNR=7.0							

ISK 12 01:14:30.1, 39.79N×26.15E, h11km, ML1.4/8, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BOZC	**Bozcaada**	**0.09**	**305**	PG		Pg	01 14 33.1	+0.4
BOZC				SG		Sg	01 14 34.7	+0.2
EZN	**Ezine**	**0.14**	**76**	PG		Pg	01 14 33.9	+0.5
EZN				SG		Sg	01 14 36.4	+0.6
GADA	**Gvkgeada**	**0.44**	**335**	PG		Pb	01 14 39.6	-0.3
GADA				SG		Sb	01 14 45.8	-0.7
SIGR	**SIGRI**	**0.62**	**201**	PG		Pg	01 14 42.5	+0.3
ERIK	**Erikli-Kesan**	**0.92**	**18**	PG		Pb	01 14 48.2	+0.1
ENEZ	**Enez**	**0.94**	**0**	PG		Pb	01 14 48.4	+0.1
KRBG	**Karabiga-Canak**	**1.07**	**55**	PG		Pn	01 14 51.2	+0.2
ALN	**Alexandroupoli**	**1.11**	**356**	PN		Pb	01 14 50.9	-0.3
RKY	**Sarkoy-Tekirda**	**1.19**	**41**	PN		Pb	01 14 52.4	-0.4

*THE **12** 01:15:15.5, 39.80N×26.13E, h6km±3km, ML1.8/5, Error ellipse: s-maj=3.6km s-min=0.6km az=79.0*
*ATH **12** 01:15:15.3, 39.79N×26.09E, h30km±2km, ML1.8/3, Error ellipse: s-maj=3.5km s-min=1.0km az=258.0*

DDA 12 01:15:15.4, 39.81N×26.17E, h7km±3km, ML1.9, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BOZC	**Bozcaada**	**0.09**	**291**	*i* P		Pg	01 15 17.9	+0.3
BOZC				IAML			01 15 19.0	
	comp=N,447nm,0.1s							
BOZC				IAML			01 15 19.0	
	comp=E,409nm,0.2s							
BOZC				*i* S		Sg	01 15 19.3	+0.2
EZN	**Ezine**	**0.12**	**82**	P		Pg	01 15 18.7	+0.7
EZN				S		Sg	01 15 20.9	+1.1
	comp=E,668nm,0.2s							
BAYC	**CANAKKALE_Bayr**	**0.30**	**103**	*i* P		Pg	01 15 21.8	+0.5
BAYC				*i* S		Sg	01 15 26.1	+0.9
GADA	**Gvkgeada**	**0.43**	**332**	P		Pg	01 15 24.1	+0.3
GADA				S		Sg	01 15 30.0	+0.5
PRK	**Paraskevi**	**0.57**	**172**	P		Pb	01 15 27.3	-0.4
PRK				S		Sb	01 15 35.0	-0.9
	comp=E,80nm,0.4s							
PRK	**Paraskevi**	**0.57**	**172**	P		Pb	01 15 27.3	-0.4
PRK				S		Sb	01 15 35.4	-0.5
SIGR	**SIGRI**	**0.64**	**202**	P		Pg	01 15 27.3	-0.5
SIGR				S		Sg	01 15 36.2	0.0
	comp=E,170nm,0.2s							
SIGR	**SIGRI**	**0.64**	**202**	P		Pg	01 15 27.3	-0.5
SIGR				S		Sg	01 15 36.6	+0.5
SIGR				AML		AML	01 15 39.1	
	comp=N,352μm,0.2s							
SIGR				AML		AML	01 15 39.1	
	comp=E,315μm,0.3s							
SMTH	**Samothraki Isl**	**0.82**	**324**	P		Pg	01 15 31.2	0.0
SMTH				S		Sg	01 15 42.3	+0.4
	comp=E,55nm,0.3s							
SMTH	**Samothraki Isl**	**0.82**	**324**	P		Pg	01 15 31.2	0.0
SMTH				S		Sb	01 15 42.7	-0.6
SMTH				AML		AML	01 15 43.8	
	comp=E,82μm,0.1s							
SMTH				AML		AML	01 15 46.1	
	comp=N,140μm,0.2s							
KESN	**Edirne-Kesan**	**1.09**	**21**	*i* P		Pb	01 15 36.9	+0.1
KESN				*i* S		Sn	01 15 52.5	-0.5
KESN				IAML			01 15 54.0	
	comp=N,47nm,0.6s							
KESN				IAML			01 15 54.0	
	comp=E,55nm,0.4s							
ALN	**Alexandroupoli**	**1.09**	**355**	P		Pg	01 15 36.0	-0.3
ALN				S		Sb	01 15 51.1	+0.1
	comp=E,35nm,0.4s							
ALN	**Alexandroupoli**	**1.09**	**355**	P		Pg	01 15 36.1	-0.2
ALN				S		Sb	01 15 51.5	+0.5
ALN				AML		AML	01 15 52.6	
	comp=E,65μm,0.3s							
ALN				AML		AML	01 15 53.1	
	comp=N,61μm,0.6s							
BALY	**Balya**	**1.12**	**93**	*i* P		Pn	01 15 37.6	+0.1
BALY				*i* S		Sb	01 15 52.1	+0.1
KNL	**Balıkesir**	**1.14**	**66**	*i* P		Pg	01 15 37.0	-0.3
KNL				*i* S		Sg	01 15 52.1	0.0
KNL				IAML			01 15 53.0	
	comp=E,23nm,0.5s							
SART	**Tekirdag**	**1.17**	**41**	*i* P		Pb	01 15 38.0	0.0
SART				*i* S		Sn	01 15 54.8	+0.2
RDO	**Rodhopi**	**1.42**	**340**	P		Pn	01 15 41.5	-0.1
CHOS	**Chios island**	**1.42**	**184**	P		Pn	01 15 40.4	-1.3
CHOS	**Chios island**	**1.42**	**184**	P		Pn	01 15 40.4	-1.3
OUR	**Ouranopolis**	**1.76**	**288**	P		Pn	01 15 45.4	-0.8

RSNC 12 01:18:44.5±1.0, 1.48N×79.41W, h8km±5km, ML3.1, Mw3.5, 1D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TUMC	**Tumaco**	**0.76**	**63**	*i* P		Pg	01 18 57.5	-1.6
TUMC				*e*S		Sg	01 19 08.7	-0.3
TUMC				*i*			01 19 27.0	
	comp=Z,2μm,0.6s							
OTAV	**Otavalo**	**1.56**	**142**	*e*P		Pn	01 19 11.9	-1.1
OTAV				*e*S		Sn	01 19 33.4	-0.3
OTAV				*i*			01 19 48.2	
	comp=Z,76nm,0.6s							
GR1C	**Gorgona, Isla**	**1.95**	**39**	*e*P		Pn	01 19 13.9	-4.0
GR1C				*e*S		Sn	01 19 42.4	-0.3
GR1C				*i*			01 20 02.2	
	comp=Z,72nm,0.8s							
GCUF	**Volcan Galeras**	**2.08**	**97**	*e*P		Pn	01 19 18.7	-1.4
GCUF				*e*S		Sn	01 19 45.8	-0.6
GCUF				*i*			01 19 50.6	
	comp=Z,142nm,1.6s							
BBAC	**Balboa, Cauca**	**2.22**	**76**	*e*P		Pn	01 19 19.6	-2.3
BBAC				*e*S		Sn	01 19 48.6	-1.1
BBAC				*i*			01 19 50.0	
	comp=Z,125nm,0.3s							
CRUC	**La Cruz**	**2.46**	**88**	*e*P		Pn	01 19 23.4	-1.8
CRUC				*e*S		Sn	01 19 54.3	-1.3
CRUC				*i*			01 20 16.1	
	comp=Z,216nm,0.7s							
SOTA	**Rioblanco**	**2.87**	**77**	*e*P		Pn	01 19 30.4	-0.6
SOTA				*e*S		Sn	01 20 05.6	-0.4
SOTA				*i*			01 20 12.4	
	comp=Z,111nm,0.6s							
POPC	**Popayan, Colom**	**2.92**	**69**	*e*P		Pn	01 19 30.1	-1.4
POPC				*e*S		Sn	01 20 05.3	-1.7
POPC				*i*			01 20 10.6	
	comp=Z,44nm,1.0s							
PCON	**Cinco Dias**	**3.12**	**74**	*e*P		Pn	01 19 34.1	-0.5
PCON				*e*S		Sn	01 20 11.5	-0.8
PCON				*i*			01 20 22.3	
	comp=Z,86nm,0.7s							
FLOC	**Florencia**	**3.75**	**88**	*e*P		Pn	01 19 43.2	+0.4
FLOC				*i*			01 20 49.1	
	comp=Z,37nm,1.0s							
YOTC	**Yotoco, Valle**	**3.94**	**51**	*e*P		Pn	01 19 40.7	-4.7
YOTC				*e*S		Sn	01 20 30.1	-1.8
YOTC				*i*			01 20 49.4	
	comp=Z,18nm,0.9s							
CBOC	**Ciudad Bolivar**	**5.51**	**38**	*e*P		Pn	01 20 04.5	-2.7
CBOC				*i*			01 21 50.8	
	comp=Z,20nm,1.5s							
CHIC	**Chingaza**	**6.47**	**61**	*e*P		Pn	01 20 20.3	-0.2
CHIC				*i*			01 21 54.5	
	comp=Z,8.6nm,0.9s							

*ATH **12** 01:19:34.9, 38.82N×27.98E, h20km±3km, ML3.5/4, Error ellipse: s-maj=4.5km s-min=2.4km az=295.0*
*DDA **12** 01:19:36.4, 38.80N×27.83E, h8km±1km, MW3.5*
*ISK **12** 01:19:36.2, 38.82N×27.83E, h12km, ML3.5/33*
*THE **12** 01:19:36.4, 38.79N×27.87E, h0km±1km, ML3.4/4, Error ellipse: s-maj=3.3km s-min=1.1km az=60.0*

ISC 12 01:19:36.6±0.8, 38.81N±0.02×27.86E±0.01, h10km±5km, n114, g0670/153, 9C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKHS	**Akhisar**	**0.08**	**334**	*i* P		**Pg**	**01 19 38.8**	**-0.1**
AKHS				IAML			01 19 40.0	
	comp=E,31μm,0.2s							
AKHS				*i* S		**Sg**	**01 19 40.2**	**-0.4**
AKS	**Akhisar**	**0.08**	**334**	PG		**Pg**	**01 19 38.8**	**-0.1**
AKS				SG		**Sg**	**01 19 40.2**	**-0.4**
GOMA	**Golmarmara-Man**	**0.11**	**155**	PG		**Pg**	**01 19 39.9**	**+0.6**
GOMA				SG		**Sg**	**01 19 42.2**	**+1.0**
STEP	**BALIKESIR_Sava**	**0.58**	**349**	*i* P		**Pg**	**01 19 48.0**	**+0.2**
STEP				*i* S		**Sg**	**01 19 56.0**	**+0.5**
STEP				IAML			01 19 57.0	
	comp=N,5μm,0.5s							
ZEDA	**zmir-Bergama**	**0.63**	**285**	*i* P		**Pg**	**01 19 48.7**	**-0.1**
ZEDA				IAML			01 19 58.0	
	comp=N,3μm,0.3s							
ZEDA				IAML			01 19 58.0	
	comp=E,859nm,0.6s							
ZEDA				*i* S		**Sb**	**01 19 58.1**	**-0.5**
DEMI	**Demirci**	**0.71**	**71**	*i* P		**Pb**	**01 19 50.8**	**-0.4**
DEMI				*i* S		**Sg**	**01 19 59.5**	**-0.2**
DEMI				IAML			01 20 04.0	
	comp=N,973nm,0.4s							
DEMI				IAML			01 20 05.0	
	comp=E,1μm,0.5s							
BLCB	**Balcova**	**0.77**	**237**	PG		**Pg**	**01 19 50.9**	**-0.5**
DKL	**Dikili**	**0.79**	**290**	PG		**Pb**	**01 19 52.1**	**-0.3**
BALB	**Balikesir**	**0.83**	**1**	PG		**Pb**	**01 19 53.2**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**0.86**	**178**	PG		**Pb**	**01 19 53.4**	**-0.4**
FOCM	**Foa**	**0.89**	**264**	PG		**Pg**	**01 19 53.6**	**-0.1**
USAK	**Uak-Merkez**	**0.91**	**96**	*i* P		**Pb**	**01 19 54.3**	**-0.3**
USAK				*i* S		**Sg**	**01 20 05.3**	**-0.7**
USAK				IAML			01 20 10.0	
	comp=N,366nm,0.8s							
USAK				IAML			01 20 11.0	
	comp=E,401nm,0.5s							
SMAA	**Simav-Kutahya**	**0.92**	**71**	PG		**Pb**	**01 19 55.0**	**+0.2**
DURS	**Dursunbey**	**0.93**	**31**	*i* P		**Pg**	**01 19 54.5**	**0.0**
DURS				*i* S		**Sb**	**01 20 07.2**	**0.0**
DURS				IAML			01 20 10.0	
	comp=N,1μm,0.7s							
DURS				IAML			01 20 13.0	
	comp=E,936nm,0.6s							
BALY	**Balya**	**0.95**	**349**	*i* P		**Pg**	**01 19 54.8**	**-0.1**
BALY				*i* S		**Sb**	**01 20 07.8**	**-0.1**
BALY				IAML			01 20 09.0	
	comp=N,1μm,0.4s							
BALY				IAML			01 20 10.0	
	comp=E,2μm,0.4s							
GMLD	**Gumuldur**	**1.04**	**226**	PG		**Pb**	**01 19 56.7**	**0.0**
KRBN	**Karaburun**	**1.04**	**258**	PG		**Pb**	**01 19 56.7**	**-0.1**
DGB	**zmir**	**1.08**	**226**	*i* P		**Pb**	**01 19 56.9**	**-0.4**
DGB				*i* S		**Sg**	**01 20 11.0**	**-0.3**
DGB				IAML			01 20 16.0	
	comp=E,477nm,0.3s							
DGB				IAML			01 20 18.0	
	comp=N,376nm,0.6s							
SHAP	**Saphane-Kutahy**	**1.09**	**78**	PN		**Pn**	**01 19 58.3**	**+0.3**
AYDN	**Tasoluk**	**1.15**	**179**	*i* P		**Pn**	**01 19 58.7**	**-0.1**
AYDN				*i* S		**Sn**	**01 20 14.0**	**-0.6**
AYDN				IAML			01 20 16.0	
	comp=E,2μm,0.6s							
AYDN				IAML			01 20 17.0	
	comp=N,1μm,0.6s							
ZEY	**zmir**	**1.21**	**242**	*i* P		**Pn**	**01 19 58.9**	**-0.7**
ZEY				*i* S		**Sb**	**01 20 15.0**	**-0.2**
ZEY				IAML			01 20 18.0	
	comp=N,2μm,0.4s							
ZEY				IAML			01 20 20.0	
	comp=E,829nm,0.3s							
GCAM	**G?zelcaml?**	**1.21**	**204**	PN		**Pn**	**01 19 58.8**	**-0.8**
GCAM	**G?zelcaml?**	**1.21**	**204**	*i* P		**Pn**	**01 19 58.9**	**-0.7**
GCAM				*i* S		**Sg**	**01 20 15.4**	**-0.2**
GCAM				IAML			01 20 22.0	
	comp=N,422nm,0.7s							
GCAM				IAML			01 20 27.0	
	comp=E,332nm,1.1s							
GEDZ	**Gediz**	**1.23**	**79**	PN		**Pg**	**01 20 00.7**	**+0.4**
GONE	**Gonen-Balikesi**	**1.24**	**354**	PN		**Pg**	**01 20 00.3**	**-0.2**
GDZ	**Gediz**	**1.30**	**77**	*i* P		**Pg**	**01 20 02.3**	**+0.8**
GDZ				*i* S		**Sn**	**01 20 18.3**	**-0.2**
PRK	**Paraskevi**	**1.31**	**290**	P		**Pg**	**01 20 01.9**	**+0.1**
PRK				S		**Sg**	**01 20 19.2**	**+0.4**
	comp=E,2μm,0.6s							
PRK	**Paraskevi**	**1.31**	**290**	P		**Pg**	**01 20 02.1**	**+0.3**
PRK				S		**Sg**	**01 20 21.0**	**+2.2**
PRK				AML		AML	01 20 22.5	
	comp=E,4736μm,0.6s							
PRK				AML		AML	01 20 23.0	
	comp=N,3047μm,0.5s							
CESE	**eme**	**1.31**	**249**	PN		**Pn**	**01 20 00.9**	**-0.1**
KHAL	**Karahalli**	**1.35**	**108**	*i* P		**Pg**	**01 20 02.6**	**0.0**
KHAL				*i* S		**Sb**	**01 20 19.3**	**-0.3**
KHAL				IAML			01 20 23.0	
	comp=N,279nm,0.8s							
KHAL				IAML			01 20 26.0	
	comp=E,171nm,0.4s							
SMG	**Samos**	**1.36**	**216**	P		**Pn**	**01 20 00.7**	**-1.0**
SMG				S		**Sg**	**01 20 20.5**	**+0.1**
	comp=E,885nm,0.7s							
SMG	**Samos**	**1.36**	**216**	P		**Pb**	**01 20 02.1**	**-0.1**
SMG				S		**Sg**	**01 20 21.9**	**+1.5**
SMG				AML		AML	01 20 24.8	
	comp=N,2178μm,0.4s							
SMG				AML		AML	01 20 25.3	
	comp=E,1579μm,0.5s							
BAYC	**CANAKKALE_Bayr**	**1.38**	**313**	*i* P		**Pn**	**01 20 01.7**	**-0.2**
BAYC				*i* S		**Sb**	**01 20 19.3**	**-0.9**
BAYC				IAML			01 20 22.0	
	comp=E,430nm,0.4s							
BAYC				IAML			01 20 30.0	
	comp=N,325nm,0.8s							
KHL	**Karahalli**	**1.39**	**110**	PN		**Pb**	**01 20 02.7**	**-0.1**
DENT	**Denizli**	**1.40**	**138**	PN		**Pb**	**01 20 02.6**	**-0.3**
TVSB	**Tavsanli**	**1.40**	**62**	PN		**Pb**	**01 20 02.8**	**-0.2**
CHOS	**Chios island**	**1.47**	**254**	P		**Pn**	**01 20 03.0**	**-0.3**
CHOS				S		**Sg**	**01 20 23.9**	**-0.1**
	comp=N,880nm,0.6s							
CHOS	**Chios island**	**1.47**	**254**	P		**Pn**	**01 20 03.2**	**-0.1**
CHOS				S		**Sg**	**01 20 24.7**	**+0.7**
CHOS				AML		AML	01 20 31.6	
	comp=E,2066μm,0.5s							
CHOS				AML		AML	01 20 32.3	
	comp=N,1362μm,0.6s							
CHOS	**Chios island**	**1.47**	**254**	PN		**Pn**	**01 20 03.3**	**-0.1**
KNL	**Balıkesir**	**1.48**	**350**	*i* P		**Pn**	**01 20 03.4**	**0.0**
KNL				*i* S		**Sb**	**01 20 22.9**	**-0.3**
KNL				IAML			01 20 25.0	
	comp=E,992nm,0.7s							
KNL				IAML			01 20 29.0	
	comp=N,754nm,0.5s							
GPNR	**Gulpinar-Canak**	**1.49**	**296**	PN		**Pn**	**01 20 03.1**	**-0.4**
KCTX	**Karacabey (Bur**	**1.50**	**15**	PN		**Pn**	**01 20 03.6**	**-0.1**
DIDI	**Didim-Aydin**	**1.51**	**199**	PN		**Pn**	**01 20 03.7**	**-0.1**
MLSB	**Milas**	**1.51**	**182**	PN		**Pn**	**01 20 03.6**	**-0.2**
EDC	**Edincik**	**1.54**	**0**	PN		**Pn**	**01 20 03.9**	**-0.2**
EZN	**Ezine**	**1.56**	**311**	P		**Pn**	**01 20 04.2**	**-0.3**
EZN	**Ezine**	**1.56**	**311**	PN		**Pn**	**01 20 03.9**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.58**	**148**	*i* P		**Pb**	**01 20 05.4**	**-0.6**
TAVA				*i* S		**Sb**	**01 20 26.5**	**+0.4**
TAVA				IAML			01 20 30.0	
	comp=E,130nm,0.6s							
TAVA				IAML			01 20 35.0	
	comp=N,114nm,0.6s							
SIGR	**SIGRI**	**1.61**	**285**	P		**Pn**	**01 20 04.8**	**-0.3**
SIGR				S		**Sg**	**01 20 28.3**	**-0.1**
	comp=N,1μm,0.5s							
SIGR	**SIGRI**	**1.61**	**285**	P		**Pn**	**01 20 05.0**	**-0.2**
SIGR				S		**Sg**	**01 20 28.6**	**+0.2**
SIGR				AML		AML	01 20 30.3	
	comp=N,3265μm,0.5s							
SIGR				AML		AML	01 20 31.5	
	comp=E,2688μm,0.5s							
SIGR	**SIGRI**	**1.61**	**285**	PN		**Pn**	**01 20 04.8**	**-0.3**
KRBG	**Karabiga-Canak**	**1.64**	**345**	PN		**Pn**	**01 20 05.0**	**-0.5**
ULDT	**Uludag**	**1.66**	**36**	*i* P		**Pg**	**01 20 08.4**	**-0.1**
ULDT				*i* S		**Sg**	**01 20 29.8**	**-0.2**
ULDT				IAML			01 20 34.0	
	comp=N,368nm,0.4s							
ULDT				IAML			01 20 34.0	
	comp=E,570nm,0.6s							
YER	**Yerkesik**	**1.71**	**168**	P		**Pn**	**01 20 06.4**	**-0.1**
YER				S		**Sb**	**01 20 29.1**	**-0.6**
YER	**Yerkesik**	**1.71**	**168**	PN		**Pn**	**01 20 06.6**	**+0.1**
BOZC	**Bozcaada**	**1.74**	**307**	PN		**Pn**	**01 20 06.2**	**-0.7**
BOZC	**Bozcaada**	**1.74**	**307**	*i* P		**Pn**	**01 20 06.7**	**-0.2**
BOZC				IAML			01 20 35.0	
	comp=E,180nm,0.6s							
BOZC				IAML			01 20 40.0	
	comp=N,129nm,0.3s							
MDNY	**Mudanya-Bursa**	**1.75**	**27**	PN		**Pn**	**01 20 07.4**	**+0.4**
LPK	**Lapseki**	**1.78**	**332**	PN		**Pn**	**01 20 07.5**	**+0.1**
IGD	**Bursa**	**1.79**	**35**	*i* P		**Pg**	**01 20 10.0**	**-0.1**
IGD				*i* S		**Sb**	**01 20 31.9**	**0.0**
IGD				IAML			01 20 37.0	
	comp=N,98nm,0.4s							
IGD				IAML			01 20 37.0	
	comp=E,119nm,0.7s							
BODT	**Bodrum**	**1.80**	**194**	P		**Pn**	**01 20 06.8**	**-0.9**
BODT	**Bodrum**	**1.80**	**194**	PN		**Pn**	**01 20 07.2**	**-0.5**

ALN	**Alexandroupoli**	**2.51**	**327**	P		**Pn**	**01 20 17.7**	**+0.2**
ALN	**Alexandroupoli**	**2.51**	**327**	P		**Pn**	**01 20 17.8**	**+0.3**
RDO	**Rodhopi**	**2.94**	**323**	P		**Pn**	**01 20 23.7**	**+0.3**
KIRK	**Kırklareli**	**3.03**	**349**	*i* P		**Pn**	**01 20 24.1**	**-0.6**
KIRK				*i* S		**Sn**	**01 20 57.2**	**-3.8**
SAHE	**Sakarya_HENDEK**	**3.08**	**48**	*i* P		**Pg**	**01 20 34.8**	**-0.8**
SAHE				*i* S		**Sg**	**01 21 14.5**	**-1.1**
SAHE				IAML			01 21 21.0	
	comp=N,81nm,0.7s							
SAHE				IAML			01 21 25.0	
	comp=E,79nm,0.8s							
EDRB	**Edirne**	**3.15**	**345**	P		**Pn**	**01 20 26.1**	**-0.2**
ELND	**Elena**	**4.38**	**341**	⇑P		**Pn**	**01 20 43.9**	**+0.7**
VTS	**Vitosha**	**5.18**	**319**	⇓P		**Pn**	**01 20 55.3**	**+0.9**
PLVB	**Pleven**	**5.18**	**333**	⇑P		**Pn**	**01 20 55.0**	**+0.8**
STIP	**Stip**	**5.21**	**305**	*i* Pn		**Pn**	**01 20 54.2**	**-0.4**
TIRR	**Tirgusor**	**5.66**	**4**	⇑P		**Pn**	**01 20 59.7**	**-1.1**
CFR	**Carcaliu**	**6.37**	**2**	⇑P		**Pn**	**01 21 10.6**	**+0.1**
VOIR		**6.94**	**343**	⇓P		**Pn**	**01 21 18.8**	**+0.3**
VRI	**Vrincioaia**	**7.10**	**354**	⇑P		**Pn**	**01 21 22.6**	**+2.0**
DOPR	**Dopca**	**7.38**	**346**	⇓P		**Pn**	**01 21 26.3**	**+1.8**
MDVR	**Moldovita**	**7.53**	**324**	⇓P		**Pn**	**01 21 26.8**	**+0.4**
GZR	**Gura Zlata**	**7.58**	**332**	⇑P		**Pn**	**01 21 27.1**	**-0.2**
TESR	**Tescani**	**7.75**	**354**	⇑P		**Pn**	**01 21 30.1**	**+0.6**
BIZ	**Bicaz**	**8.23**	**352**	⇑P		**Pn**	**01 21 37.7**	**+1.7**
BZS	**Buzias**	**8.23**	**328**	⇑P		**Pn**	**01 21 35.8**	**-0.2**
DUGI	**Dugi Otok**	**10.92**	**302**	Sg		**Sn**	**01 24 17.7**	**+2.6**

DDA ***12*** *01:22:43.8,39.˚81N×26.˚17E,h6km±2km,ML2.1*

ISK 12 01:22:43.2,39.˚79N×26.˚14E,h8km,ML2.3/20,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.08**	**309**	PG	Pg	01 22 46.2	+0.9
BOZC				SG	Sg	01 22 47.7	+0.9
BOZC	**Bozcaada**	**0.08**	**309**	*i* P	Pg	01 22 46.3	+1.0
BOZC				*i* S	Sg	01 22 47.9	+1.1
BOZC				IAML		01 22 48.0	
	comp=N,1μm,0.1s						
BOZC				IAML		01 22 48.0	
	comp=E,517nm,0.1s						
EZN	**Ezine**	**0.15**	**77**	PG	Pg	01 22 47.1	+0.7
EZN				SG	Sg	01 22 49.5	+1.0
BAYC	**CANAKKALE_Bayr**	**0.32**	**99**	*i* P	Pg	01 22 49.6	+0.1
BAYC				*i* S	Sg	01 22 54.8	+1.0
BAYC				IAML		01 22 55.0	
	comp=N,75nm,0.3s						
GPNR	**Gulpinar-Canak**	**0.34**	**180**	PG	Pg	01 22 50.5	+0.7
GADA	**Gvkgeada**	**0.44**	**336**	PG	Pg	01 22 52.4	+0.7
GADA				SG	Sg	01 22 58.7	+1.2
SIGR	**SIGRI**	**0.62**	**201**	PG	Pg	01 22 55.6	+0.5
GELI	**Tayfur-Gelibol**	**0.66**	**23**	PG	Pb	01 22 56.5	-0.5
LPK	**Lapseki**	**0.75**	**39**	PG	Pg	01 22 57.9	+0.2
ENZZ	**Sultanice-Enez**	**0.81**	**0**	PG	Pb	01 22 59.4	-0.2
ERIK	**Erikli-Kesan**	**0.93**	**18**	PG	Pg	01 23 00.9	-0.1
DKL	**Dikili**	**0.93**	**140**	PG	Pb	01 23 01.9	+0.3
ENEZ	**Enez**	**0.94**	**1**	PG	Pb	01 23 01.7	-0.1
KRBG	**Karabiga-Canak**	**1.08**	**56**	PG	Pg	01 23 03.7	-0.1
ZEDA	**zmir-Bergama**	**1.10**	**138**	*i* P	Pn	01 23 04.8	-0.1
ZEDA				*i* S	Sg	01 23 14.1	-4.5
ZEDA				IAML		01 23 20.0	
	comp=E,23nm,0.3s						
ZEDA				IAML		01 23 22.0	
	comp=N,38nm,0.4s						
ALN	**Alexandroupoli**	**1.11**	**356**	PN	Pg	01 23 04.3	-0.2
KESN	**Edirne-Kesan**	**1.11**	**22**	*i* P	Pb	01 23 05.0	0.0
KESN				*i* S	Sb	01 23 20.3	+0.5
KESN				IAML		01 23 22.0	
	comp=N,82nm,0.6s						
KESN				IAML		01 23 23.0	
	comp=E,101nm,0.2s						
BALY	**Balya**	**1.15**	**92**	*i* P	Pn	01 23 05.8	+0.2
BALY				*i* S	Sb	01 23 20.6	+0.2
BALY				IAML		01 23 24.0	
	comp=E,47nm,0.4s						
BALY				IAML		01 23 25.0	
	comp=N,25nm,0.5s						
KNL	**Balıkesir**	**1.17**	**65**	*i* P	Pb	01 23 05.7	0.0
KNL				*i* S	Sg	01 23 20.8	-0.1
KNL				IAML		01 23 27.0	
	comp=N,38nm,0.4s						
KNL				IAML		01 23 27.0	
	comp=E,49nm,0.3s						
FOCM	**Foa**	**1.17**	**157**	PN	Pg	01 23 05.5	-0.2
RKY	**Sarkoy-Tekirda**	**1.20**	**41**	PN	Pn	01 23 06.4	0.0
SART	**Tekirdag**	**1.20**	**41**	*i* P	Pn	01 23 06.3	-0.1
SART				*i* S	Sb	01 23 22.4	+0.4
SART				IAML		01 23 25.0	
	comp=E,31nm,0.6s						
SART				IAML		01 23 26.0	
	comp=N,19nm,0.2s						
GONE	**Gonen-Balikesi**	**1.22**	**77**	PN	Pg	01 23 06.8	+0.2
KRBN	**Karaburun**	**1.24**	**165**	PN	Pg	01 23 07.3	+0.3
STEP	**BALIKESIR_Sava**	**1.29**	**108**	*i* P	Pn	01 23 04.4	-3.2
STEP				*i* S	Sb	01 23 12.4	-12
STEP				IAML		01 23 19.0	
	comp=E,45nm,0.8s						
STEP				IAML		01 23 20.0	
	comp=N,58nm,0.8s						
UKOP	**Uzunkopru-Edir**	**1.39**	**16**	PN	Pg	01 23 09.7	-0.1
CHOS	**Chios island**	**1.40**	**183**	PN	Pn	01 23 08.9	-0.3
RDO	**Rodhopi**	**1.43**	**342**	PN	Pn	01 23 09.4	0.0
EDC	**Edincik**	**1.44**	**67**	PN	Pb	01 23 10.2	0.0
ZEY	**zmir**	**1.58**	**169**	*i* P	Pn	01 23 11.0	-0.5
ZEY				*i* S	Sn	01 23 30.8	-1.3
ZEY				IAML		01 23 37.0	
	comp=N,25nm,0.3s						
ZEY				IAML		01 23 42.0	
	comp=E,22nm,0.3s						
TKR	**Tekirdag**	**1.61**	**41**	PN	Pb	01 23 12.9	-0.2
OUR	**Ouranopolis**	**1.74**	**289**	PN	Pn	01 23 13.7	0.0
KCTX	**Karacabey (Bur**	**1.77**	**74**	PN	Pn	01 23 14.6	+0.4
CRLT	**Corlu**	**1.81**	**42**	PN	Pn	01 23 15.4	+0.7
DURS	**Dursunbey**	**1.81**	**95**	*i* P	Pn	01 23 11.2	-3.6
DURS				*i* S	Sn	01 23 23.0	-15
DURS				IAML		01 23 32.0	
	comp=E,13nm,0.7s						
DURS				IAML		01 23 45.0	
	comp=N,15nm,0.7s						
DGB	**zmir**	**1.83**	**161**	*i* P	Pn	01 23 13.9	-1.1
DGB				*i* S	Sn	01 23 27.1	-11
DGB				IAML		01 23 39.0	
	comp=E,5.4nm,0.2s						
KDZ	**Kurdzhali**	**1.94**	**344**	PN	Pn	01 23 16.7	+0.3
EDRB	**Edirne**	**2.10**	**12**	PN	Pn	01 23 19.3	+0.5
PHSR	**Pinarhisar**	**2.12**	**29**	PN	Pn	01 23 19.9	+0.9
SB02	**Marmara Sea**	**2.12**	**56**	PN	Pn	01 23 19.9	+1.0
SLVT	**Silivri**	**2.14**	**47**	PN	Pn	01 23 19.8	+0.6

ISK 12 01:22:52.5,38.˚82N×27.˚82E,h10km,ML2.2/8,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.06**	**357**	*i* P	Pg	01 22 55.2	+0.5
AKHS				*i* S	Sg	01 22 56.6	+0.4
AKHS				IAML		01 23 20.0	
	comp=E,63nm,0.4s						
AKS	**Akhisar**	**0.06**	**356**	PG	Pg	01 22 55.0	+0.3
AKS				SG	Sg	01 22 56.5	+0.3
GOMA	**Golmarmara-Man**	**0.14**	**146**	PG	Pg	01 22 56.1	+0.4
GOMA				SG	Sg	01 22 58.6	+0.7
DEMI	**Demirci**	**0.73**	**72**	*i* P	Pb	01 23 07.2	-0.2
DEMI				IAML		01 23 26.0	
	comp=N,9.7nm,0.3s						
DEMI				IAML		01 23 26.0	
	comp=E,19nm,0.6s						
BLCB	**Balcova**	**0.75**	**235**	PG	Pb	01 23 07.4	-0.2
BALB	**Balikesir**	**0.82**	**3**	PG	Pb	01 23 08.9	+0.1
FOCM	**Foa**	**0.86**	**263**	PG	Pg	01 23 09.2	+0.2
AYDB	**Zeytinkoy-Aydi**	**0.88**	**176**	PG	Pb	01 23 09.7	-0.2
GCAM	**G?zelcaml?**	**1.21**	**202**	PN	Pg	01 23 15.9	+0.1
GEDZ	**Gediz**	**1.26**	**79**	PN	Pb	01 23 16.4	0.0
TVSB	**Tavsanli**	**1.42**	**63**	PN	Pb	01 23 19.1	-0.1
ARMT	**Armutlu**	**1.92**	**24**	PN	Pn	01 23 25.2	0.0
YLV	**Yalova**	**2.12**	**34**	PN	Pn	01 23 28.9	+0.9

IDC ***12*** *01:29:31.4±1.2,23.˚84N×121.˚76E,h0km,mb3.6/6, mb1 3.7/7,mb1mx3.5/32,mbtmp3.6/7,ML3.5/1,Error ellipse: s-maj=67.2km s-min=18.9km az=67.0*

TAP ***12*** *01:29:34.7,24.˚02N×122.˚31E,h25km,ML3.8,D*

JMA ***12*** *01:29:34.5±0.1,23.˚92N×122.˚28E,h22km±3km,M3.5*

ISC 12 01:29:34.4±1.1,23.˚95N±0.˚02×122.˚28E±0.˚02,h25km±9km, n118,s0693/207,mb3.5/6,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.61**	**347**	P	**Pb**	**01 29 45.8**	**-0.7**
	baz=334						
EOS1				S	**Sb**	**01 29 53.9**	**-0.8**
	baz=334						
HWA	**Hwalien**	**0.62**	**273**	P	**Pb**	**01 29 46.6**	**+0.1**
	baz=254						
HWA				S	**Sn**	**01 29 57.1**	**+0.4**
	baz=254						
ENLB	**Shoufeng**	**0.62**	**266**	*e*S	**Sn**	**01 29 56.3**	**-0.5**
	baz=248						
NACB	**Ninganchiao**	**0.67**	**290**	*e*P	**Pb**	**01 29 47.4**	**+0.1**
	baz=269						
NACB				*e*S	**Sb**	**01 29 56.7**	**+0.5**
	baz=269						
NANB	**Nanao**	**0.68**	**315**	P	**Pb**	**01 29 47.2**	**-0.4**
	baz=317						
NANB				*e*S	**Sb**	**01 29 57.5**	**+0.8**
	baz=317						
ENA	**Nanau**	**0.69**	**314**	*e*P	**Pb**	**01 29 46.6**	**-1.1**
	baz=317						
ENA				*e*S	**Sb**	**01 29 57.3**	**+0.5**
	baz=317						
TWC	**Suao**	**0.77**	**329**	P	**Pb**	**01 29 48.0**	**-1.1**
	baz=324						
TWC				*e*S	**Sb**	**01 29 57.7**	**-1.4**
	baz=324						
ETLH	**Xiulin Townshi**	**0.77**	**290**	*e*P	**Pb**	**01 29 49.5**	**+0.3**
	baz=271						
ETLH				S	**Sb**	**01 30 00.4**	**+1.0**
	baz=271						
ESL	**Shilin**	**0.79**	**260**	*e*P	**Pb**	**01 29 49.5**	**+0.2**
	baz=247						
ESL				*e*S	**Sb**	**01 30 00.2**	**+0.5**
	baz=247						
JYNG	**Yonagunijimaku**	**0.79**	**50**	P	**Pb**	**01 29 49.4**	**0.0**
JYNG				*e*S	**Sb**	**01 30 00.6**	**+0.9**
EGFH	**Guangfu**	**0.83**	**251**	*e*S	**Sn**	**01 30 01.9**	**0.0**
	baz=247						
YOJ	**Yonaguni jima**	**0.84**	**52**	P	**Pb**	**01 29 49.9**	**-0.4**
	baz=64						
YOJ				*e*S	**Sb**	**01 30 01.2**	**-0.1**
	baz=64						
YOJ	**Yonaguni jima**	**0.84**	**52**	P	**Pb**	**01 29 50.4**	**+0.1**
YOJ				*e*S	**Sb**	**01 30 02.0**	**+0.8**
HGSD	**Ruisui**	**0.91**	**240**	*e*P	**Pn**	**01 29 51.7**	**+0.1**
	baz=237						
HGSD				*e*S	**Sn**	**01 30 04.4**	**+0.6**
	baz=237						
ENTT	**Nioudou**	**0.95**	**317**	*e*P	**Pb**	**01 29 51.5**	**-0.7**
	baz=323						
ENTT				S	**Sn**	**01 30 05.6**	**+0.7**
	baz=323						
ILA	**Ilan**	**0.95**	**329**	P	**Pb**	**01 29 51.7**	**-0.5**
	baz=324						
ILA				*e*S	**Sb**	**01 30 05.0**	**+0.8**
	baz=324						
WHF	**Hehuan Shan**	**0.95**	**282**	*e*P	**Pb**	**01 29 52.6**	**+0.2**
	baz=264						
WHF				S	**Sb**	**01 30 04.2**	**-0.5**
	baz=264						
NNSH	**Datong**	**0.95**	**300**	P	**Pb**	**01 29 52.2**	**0.0**
	baz=283						
NNSH				S	**Sb**	**01 30 05.4**	**+1.0**
	baz=283						
TWE	**Neicheng**	**0.95**	**324**	P	**Pb**	**01 29 51.5**	**-0.7**
	baz=327						
TWE				*e*S	**Sb**	**01 30 03.5**	**-0.9**
	baz=327						
NDT	**Datong Townshi**	**0.96**	**313**	P	**Pb**	**01 29 52.2**	**0.0**
	baz=307						
NDT				S	**Sb**	**01 30 05.0**	**+0.5**
	baz=307						
NNS	**Nan Shan**	**0.96**	**301**	P	**Pb**	**01 29 51.7**	**-0.8**
	baz=284						
NNS				S	**Sb**	**01 30 05.8**	**+1.0**
	baz=284						
EHY	**Hungye**	**0.98**	**244**	*e*P	**Pn**	**01 29 52.8**	**+0.3**
	baz=230						
EHY				*e*S	**Sn**	**01 30 07.2**	**+1.5**
	baz=230						
NTC	**Toucheng**	**0.99**	**336**	P	**Pb**	**01 29 52.5**	**-0.4**
	baz=331						
NTC				*e*S	**Sb**	**01 30 06.2**	**+0.7**
	baz=331						
SLBB	**Yuanshan**	**0.99**	**324**	P	**Pb**	**01 29 51.9**	**-1.1**
	baz=325						
SLBB				S	**Sb**	**01 30 06.2**	**+0.5**
	baz=325						
OWD	**Renai**	**1.01**	**271**	*e*P	**Pb**	**01 29 52.5**	**-0.8**
	baz=266						
OWD				*e*S	**Sb**	**01 30 06.4**	**+0.2**
	baz=266						
CHGB	**Renai**	**1.02**	**277**	*e*P	**Pb**	**01 29 52.2**	**-1.2**
	baz=260						
CHGB				S	**Sb**	**01 30 06.8**	**+0.3**
	baz=260						
TWT	**Tachien**	**1.05**	**287**	P	**Pn**	**01 29 54.2**	**+0.5**
	baz=272						
TWT				S	**Sn**	**01 30 08.5**	**+0.8**
	baz=272						
YULB	**Yu-li**	**1.06**	**239**	*e*P	**Pn**	**01 29 53.4**	**-0.2**
	baz=253						
YULB				*e*S	**Sn**	**01 30 08.5**	**+0.9**
	baz=253						
VWDT	**VWDT**	**1.06**	**260**	*e*P	**Pn**	**01 29 53.6**	**0.0**
	baz=256						
VWDT				*e*S	**Sn**	**01 30 08.1**	**+0.5**
	baz=256						
TDCB	**Techi**	**1.07**	**287**	*e*P	**Pn**	**01 29 53.4**	**-0.5**
	baz=273						
TDCB				*e*S	**Sb**	**01 30 08.5**	**+0.6**
	baz=273						
TWF1	**Yuli**	**1.08**	**237**	*e*P	**Pb**	**01 29 54.6**	**+0.2**
	baz=224						
TWF1				S	**Sn**	**01 30 09.5**	**+1.4**
	baz=224						
NWLT	**Wulai**	**1.09**	**320**	P	**Pn**	**01 29 54.8**	**+0.7**
	baz=314						
NWLT				S	**Sb**	**01 30 08.5**	**+0.2**
	baz=314						
TWB1	**Santiao Chiao**	**1.09**	**346**	*e*P	**Pn**	**01 29 53.4**	**-0.6**
	baz=341						
TWB1				*e*S	**Sb**	**01 30 07.9**	**-0.4**
	baz=341						
YHNB	**Yeheng**	**1.09**	**311**	*e*P	**Pn**	**01 29 54.2**	**0.0**
	baz=306						
YHNB				*e*S	**Sb**	**01 30 07.9**	**-0.6**
	baz=306						
TIPB	**Shuangxi**	**1.10**	**338**	*e*P	**Pn**	**01 29 54.0**	**-0.3**
	baz=333						
TIPB				S	**Sb**	**01 30 07.5**	**-1.2**
	baz=333						
NSK	**Sanguang**	**1.11**	**311**	*e*P	**Pn**	**01 29 54.6**	**+0.2**
	baz=306						
NSK				S	**Sb**	**01 30 07.9**	**-1.1**
	baz=306						
FULB	**Fuli**	**1.17**	**231**	*e*P	**Pb**	**01 29 55.6**	**-0.3**
	baz=217						
FULB				S	**Sn**	**01 30 11.6**	**+1.2**
	baz=217						
CHKT	**Chengkung**	**1.19**	**225**	*e*P	**Pn**	**01 29 53.6**	**-1.8**
	baz=213						
CHKT				*e*S	**Sb**	**01 30 10.1**	**-1.2**
	baz=213						
NWF	**Wu-fen Shan**	**1.21**	**338**	*e*P	**Pn**	**01 29 56.1**	**+0.4**
	baz=333						
NWF				S	**Sn**	**01 30 11.8**	**+0.4**
	baz=333						
WFSB	**Wu-fen Shan**	**1.21**	**338**	*e*P	**Pn**	**01 29 56.1**	**+0.4**
	baz=333						
WFSB				*e*S	**Sn**	**01 30 11.8**	**+0.5**
	baz=333						
TWA	**Mucha**	**1.21**	**328**	P	**Pn**	**01 29 56.3**	**+0.6**
	baz=324						
TWA				*e*S	**Sn**	**01 30 11.8**	**+0.5**
	baz=324						
NHDH	**Xindian Distri**	**1.22**	**326**	*e*P	**Pb**	**01 29 57.1**	**+0.3**
	baz=321						
NHDH				S	**Sb**	**01 30 14.5**	**+2.3**
	baz=321						
SSLB	**Suanglung**	**1.22**	**263**	*e*P	**Pb**	**01 29 56.9**	**+0.1**
	baz=259						
SSLB				*e*S	**Sb**	**01 30 12.6**	**+0.3**
	baz=259						
DPDB	**Guoxing**	**1.24**	**274**	*e*P	**Pb**	**01 29 57.5**	**+0.3**
	baz=261						
DPDB				*e*S	**Sb**	**01 30 13.5**	**+0.8**
	baz=261						
TATO	**Taipei**	**1.25**	**325**	*e*P	**Pb**	**01 29 57.7**	**+0.4**
	baz=320						
TATO				*e*S	**Sn**	**01 30 12.5**	**+0.1**
	baz=320						
WHP	**Taichung City**	**1.26**	**285**	*e*P	**Pb**	**01 29 58.1**	**+0.5**
	baz=270						
WHP				*e*S	**Sb**	**01 30 13.7**	**+0.3**
	baz=270						
SMLT	**Sun Moon Lake**	**1.26**	**267**	*e*P	**Pb**	**01 29 58.1**	**+0.5**
	baz=254						
SMLT				*e*S	**Sb**	**01 30 14.1**	**+0.6**
	baz=254						
TAP	**Taipei**	**1.29**	**327**	*e*P	**Pn**	**01 29 58.1**	**+1.2**
	baz=322						
TAP				*e*S	**Sn**	**01 30 14.5**	**+1.1**
	baz=322						
WLTB	**Daxi**	**1.30**	**314**	*e*P	**Pn**	**01 29 57.5**	**+0.5**
	baz=297						
WLTB				*e*S	**Sb**	**01 30 14.9**	**+0.5**
	baz=297						
WHYT	**Xinyi Township**	**1.33**	**259**	*e*P	**Pb**	**01 29 58.4**	**-0.2**
	baz=256						
LIOB	**Emei**	**1.35**	**301**	P	**Pn**	**01 29 58.5**	**+0.9**
	baz=297						
LIOB				S	**Sb**	**01 30 16.4**	**+0.7**
	baz=297						
NSTT	**Nanjuang**	**1.35**	**301**	P	**Pb**	**01 29 59.6**	**+0.6**
	baz=283						
NSTT				S	**Sb**	**01 30 17.0**	**+1.2**
	baz=283						
YM01	**YM01**	**1.36**	**332**	*e*P	**Pn**	**01 29 58.2**	**+0.5**
	baz=342						
YM01				*e*S	**Sn**	**01 30 15.5**	**+0.4**
	baz=342						
YM10	**YM10**	**1.37**	**332**	*e*P	**Pn**	**01 29 58.8**	**+0.9**
	baz=344						
YM11	**YM11**	**1.37**	**332**	*e*P	**Pn**	**01 29 58.4**	**+0.4**
	baz=344						
YM05	**YM05**	**1.38**	**332**	*e*P	**Pn**	**01 29 58.1**	**0.0**
	baz=343						
YM04	**YM04**	**1.38**	**331**	*e*P	**Pn**	**01 29 58.4**	**+0.4**
	baz=343						
IRIF	**Iriomote-Funau**	**1.38**	**73**	*e*S	**Sb**	**01 30 17.5**	**+0.8**
ELDTW	**Lidau**	**1.38**	**237**	P	**Pn**	**01 29 58.6**	**+0.4**
	baz=236						
ELDTW				S	**Sn**	**01 30 15.7**	**-0.1**
	baz=236						
TWS1	**Kuangyinshan**	**1.39**	**326**	P	**Pn**	**01 29 59.1**	**+0.9**
	baz=333						
TWS1				*e*S	**Sn**	**01 30 16.6**	**+0.8**
	baz=333						
ANP	**Anpu**	**1.41**	**331**	*e*P	**Pn**	**01 29 59.0**	**+0.4**
	baz=327						
ALS	**Alishan**	**1.42**	**252**	P	**Pb**	**01 30 00.4**	**0.0**
	baz=250						
ALS				*e*S	**Sb**	**01 30 18.8**	**+0.6**
	baz=250						
NCU	**National Centr**	**1.42**	**316**	*e*S	**Sb**	**01 30 18.8**	**+0.8**
	baz=310						
NCUH	**Zhongli**	**1.42**	**316**	P	**Pn**	**01 29 59.8**	**+1.1**
	baz=310						
NCUH				*e*S	**Sb**	**01 30 19.0**	**+1.0**
	baz=310						
WJS	**Zhushan**	**1.43**	**265**	*e*P	**Pb**	**01 29 59.8**	**-0.5**
	baz=262						
WJS				*e*S	**Sb**	**01 30 20.1**	**+2.1**
	baz=262						
NTST	**Danshui**	**1.43**	**328**	*e*P	**Pn**	**01 29 59.4**	**+0.7**
	baz=340						
NTST				*e*S	**Sn**	**01 30 17.8**	**+1.1**
	baz=340						
TWQ1	**Liyutan**	**1.43**	**286**	*e*P	**Pb**	**01 30 00.2**	**-0.2**
	baz=282						
TWQ1				*e*S	**Sb**	**01 30 19.1**	**+0.9**
	baz=282						
TWH	**Lutao**	**1.44**	**211**	P	**Pn**	**01 29 59.0**	**+0.2**
	baz=211						
TWH				*e*S	**Sn**	**01 30 17.2**	**+0.4**
	baz=211						
SBCB	**Hsinchu**	**1.45**	**306**	*e*S	**Sb**	**01 30 19.6**	**+0.9**
	baz=300						
TWY	**Chenhua**	**1.46**	**335**	*e*P	**Pn**	**01 29 59.4**	**+0.3**
	baz=330						
TWY				*e*S	**Sn**	**01 30 18.0**	**+0.5**
	baz=330						
WNT	**Mingjian**	**1.46**	**268**	*e*P	**Pb**	**01 30 01.5**	**+0.7**
	baz=264						
WNT				S	**Sb**	**01 30 21.5**	**+2.4**
	baz=264						
NSY	**Sanyi**	**1.46**	**289**	P	**Pb**	**01 30 01.2**	**+0.2**
	baz=284						
NSY				S	**Sb**	**01 30 20.3**	**+1.2**
	baz=284						
HSN	**Hsinchu**	**1.47**	**306**	*e*S	**Sb**	**01 30 19.9**	**+0.7**
	baz=302						
NMLH	**Miaoli**	**1.48**	**294**	P	**Pb**	**01 30 02.1**	**+0.9**
	baz=289						
NMLH				*e*S	**Sb**	**01 30 21.3**	**+1.7**
	baz=289						
TCU	**Taichung**	**1.48**	**278**	*e*P	**Pb**	**01 30 01.5**	**+0.4**
	baz=274						
TCU				S	**Sb**	**01 30 21.5**	**+1.9**
	baz=274						
CHN5	**Tsauling**	**1.51**	**257**	*e*P	**Pb**	**01 30 01.5**	**-0.2**
	baz=243						
CHN5				*e*S	**Sb**	**01 30 21.9**	**+1.4**
	baz=243						
PTSB	**Yuanli**	**1.52**	**289**	*e*S	**Sb**	**01 30 22.1**	**+1.3**
	baz=285						
WDJ	**Dajia District**	**1.55**	**285**	*e*P	**Pb**	**01 30 02.5**	**+0.1**
	baz=281						
WDJ				*e*S	**Sb**	**01 30 22.4**	**+0.9**
	baz=281						
TWGBT	**Beinan**	**1.57**	**225**	*e*P	**Pn**	**01 30 01.2**	**+0.4**
	baz=236						
TWGBT				*e*S	**Sn**	**01 30 21.1**	**+0.7**
	baz=236						
TWG	**Pinlang**	**1.58**	**225**	*e*P	**Pn**	**01 30 00.8**	**0.0**
	baz=236						
TWG				*e*S	**Sn**	**01 30 20.7**	**+0.3**
	baz=236						
WCHH	**Zhanghua**	**1.58**	**275**	*e*P	**Pb**	**01 30 02.5**	**-0.4**
	baz=271						
WCHH				*e*S	**Sb**	**01 30 23.8**	**+1.4**
	baz=271						
WGK	**Gukeng**	**1.59**	**261**	*e*P	**Pb**	**01 30 03.1**	**0.0**
	baz=258						
WGK				*e*S	**Sb**	**01 30 25.0**	**+2.1**
	baz=258						
STYT	**Tauyuan**	**1.60**	**241**	*e*P	**Pb**	**01 30 02.7**	**-0.6**
	baz=229						
STYT				*e*S	**Sb**	**01 30 23.2**	**+0.1**
	baz=229						
JKRS	**Kuro-shima**	**1.61**	**79**	P	**Pb**	**01 30 02.6**	**-0.7**
JKRS				*e*S	**Sb**	**01 30 23.6**	**+0.4**
WDLH	**Douliu**	**1.62**	**261**	*e*S	**Sb**	**01 30 25.9**	**+2.5**
	baz=258						
TPUB	**Ta-pu**	**1.65**	**247**	*e*P	**Pb**	**01 30 03.9**	**-0.1**
	baz=246						
TPUB				*e

SLGT				eS		Sb	01 30 28.1	0.0
	baz=228							
CHN1	**Nanshi**	**1.78**	**245**	*eP*		**Pb**	**01 30 05.9**	**-0.4**
	baz=244							
CHN1				S		**Sb**	**01 30 29.6**	**+1.4**
	baz=244							
TWK	**Hsinying**	**1.78**	**248**	*eP*		**Pb**	**01 30 05.7**	**-0.6**
	baz=246							
TWK				eS		**Sb**	**01 30 27.3**	**-0.9**
	baz=246							
SGST	**Jiashian**	**1.78**	**241**	*eP*		**Pb**	**01 30 06.0**	**-0.3**
	baz=229							
SGST				eS		**Sb**	**01 30 28.6**	**+0.4**
	baz=229							
SNST	**Tainan City**	**1.79**	**246**	*eS*		**Sb**	**01 30 30.6**	**+2.1**
	baz=245							
ECL	**Taimali**	**1.81**	**222**	*eP*		**Pn**	**01 30 04.6**	**+0.6**
	baz=223							
ECL				eS		**Sn**	**01 30 26.5**	**+0.3**
	baz=223							
WTCT	**Ta-ch'eng**	**1.83**	**268**	*eS*		**Sb**	**01 30 31.2**	**+1.5**
	baz=265							
WSF	**Szhu**	**1.91**	**261**	*eS*		**Sb**	**01 30 32.5**	**+0.6**
	baz=258							
SSD	**Sandimen**	**1.93**	**232**	*eP*		**Pn**	**01 30 07.0**	**+1.4**
	baz=225							
SSD				eS		**Sb**	**01 30 31.7**	**-0.8**
	baz=225							
JISG	**Ishigakijimahi**	**1.96**	**71**	P		**Pn**	**01 30 07.3**	**+1.3**
JISG				eS		**Sn**	**01 30 30.9**	**+1.1**
LAY	**Lan-yu**	**2.02**	**200**	P		**Pn**	**01 30 06.6**	**-0.3**
	baz=210							
LAY				S		**Sn**	**01 30 32.1**	**+0.9**
	baz=210							
MASBT	**Mashibuluo**	**2.02**	**229**	*eP*		**Pn**	**01 30 08.5**	**+1.7**
	baz=222							
MASBT				eS		**Sb**	**01 30 33.9**	**-1.1**
	baz=222							
TAW	**Tawu**	**2.03**	**219**	*eS*		**Sn**	**01 30 32.7**	**+1.1**
	baz=220							
EAST	**Anshuo**	**2.04**	**221**	*eP*		**Pn**	**01 30 07.5**	**+0.4**
	baz=221							
EAST				eS		**Sn**	**01 30 32.5**	**+0.6**
	baz=221							
TWM1	**Shoushan**	**2.04**	**237**	*eS*		**Sb**	**01 30 37.5**	**+1.8**
	baz=236							
SCLT	**Jiali**	**2.06**	**249**	*eS*		**Sb**	**01 30 36.0**	**-0.3**
	baz=247							
SSPT	**Xinbi**	**2.15**	**228**	*eP*		**Pn**	**01 30 10.2**	**+1.7**
	baz=222							
SSPT				eS		**Sb**	**01 30 37.0**	**-1.7**
	baz=222							
SCZT	**Fangliau**	**2.19**	**225**	*eP*		**Pn**	**01 30 10.4**	**+1.3**
	baz=219							
SCZT				eS		**Sb**	**01 30 37.5**	**-2.4**
	baz=219							
JTJ	**Tarama**	**2.31**	**72**	P		**Pn**	**01 30 12.6**	**+1.7**
JTJ				eS		**Sn**	**01 30 40.7**	**+2.1**
KSRS	**Korea Array**	**14.31**	**18**	Pn		**P**	**01 33 00.4**	**-1.8**
	0.2nm,0.3s,baz=202,slow=12,SNR=3.7							
SONM	**Songino Array**	**26.98**	**336**	P		**P**	**01 35 13.3**	**-0.9**
	2.0nm,0.8s,baz=147,slow=9.1,SNR=12							
MKAR	**Makanchi Array**	**39.20**	**316**	P		**P**	**01 37 00.1**	**-0.4**
	0.3nm,0.5s,baz=99,slow=9.6,SNR=6.7							
ZALV	**Zalesovo Beam**	**40.99**	**327**	P		**P**	**01 37 13.6**	**-1.6**
	0.6nm,0.5s,baz=108,slow=8.3,SNR=4.3							
WRA	**Warramunga Arr**	**45.18**	**164**	P		**P**	**01 37 49.4**	**0.0**
	0.4nm,0.8s,baz=344,slow=8.9,SNR=3.0							
ASAR	**Alice Springs**	**48.66**	**166**	P		**P**	**01 38 18.4**	**+1.9**
	0.3nm,0.8s,baz=350,slow=9.7,SNR=3.2							
BRTR	**Keskin Array B**	**74.12**	**307**	P		**P**	**01 41 08.4**	**-0.5**
	0.7nm,0.9s,baz=72,slow=4.0,SNR=3.9							

NEIC ***12*** *01:32:29.2±2.3, 15°.24N±0°.05×96°.43W±0°.08, h16km±9km, Error ellipse: s-maj=12.7km s-min=2.6km az=122.0*
MEX ***12*** *01:32:29.7±0.7, 15°.08N×96°.38W, h21km±36km, MD4.1*
ISC 12 01:32:30.1±1.5**, 15°.22N**±0°.08×**96°.36W**±0°.06**, h25km, n8, σ1§22/15, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.60**	**24**	*eP*	**Pb**	**01 32 41.3**	**-0.7**
HUIG				*eS*	**Sb**	**01 32 50.3**	**+0.2**
HUIG	**Huatulco**	**0.60**	**24**		**Pb**	**01 32 41.3**	**-0.7**
HUIG					**Sb**	**01 32 50.3**	**+0.2**
VHO	**Vista Hermosa**	**1.87**	**349**	*i* P	**Pn**	**01 32 60.0**	**-0.8**
VHO				*eS*	**Sn**	**01 33 23.8**	**0.0**
CMIG	**Matias Romero**	**2.34**	**37**	*eP*	**Pn**	**01 33 06.8**	**-0.2**
CMIG				*i* S	**Sn**	**01 33 35.5**	**+0.5**
CMIG	**Matias Romero**	**2.34**	**37**		**Pn**	**01 33 07.2**	**+0.2**
CMIG					**Sn**	**01 33 36.6**	**+1.7**
TLIG	**Tlapa**	**3.14**	**318**	*i* P	**Pn**	**01 33 17.5**	**-0.7**
TLIG				*i* S	**Sn**	**01 33 54.1**	**-0.9**
TLIG	**Tlapa**	**3.14**	**318**		**Pb**	**01 33 28.0**	**+2.6**
TLIG					**Sn**	**01 33 52.8**	**-2.2**
SNET	**Serv Nac Est T**	**7.08**	**102**		**Pn**	**01 34 12.1**	**-0.2**

IDC ***12*** *01:46:58.6±0.9, 44°.71N×110°.69W, h0km, mb3.5/1, mb1 3.6/5, mb1mx3.3/44, mbtmp3.3/5, ML3.2/2, MS2.9/1, Ms1 2.9/1, ms1mx2.3/35, Error ellipse: s-maj=11.3km s-min=8.1km az=70.0*
UUSS ***12*** *01:46:59.1±2.1, 44°.81N±0°.04×110°.52W±0°.08, h9km±6km, ML3.4/6, Error ellipse: s-maj=8.1km s-min=5.7km az=108.0*
NEIC ***12*** *01:46:59.7±1.4, 44°.83N±0°.04×110°.49W±0°.07, h12km±7km, Error ellipse: s-maj=7.7km s-min=5.0km az=80.0*
ISC 12 01:46:59.5±1.0**, 44°.80N**±0°.03×**110°.54W**±0°.03**, h12**km±8km**, n62, σ0§86/62, Yellowstone region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUF	**Upper Falls**	**0.09**	**165**	Pg	**Pg**	**01 47 02.5**	**-0.1**
YNR	**Norris Junctio**	**0.13**	**231**	Pg	**Pg**	**01 47 03.4**	**+0.4**
YNM	**Yellowstone No**	**0.13**	**239**	Pg	**Pg**	**01 47 03.4**	**+0.3**
LKWY	**Lake**	**0.25**	**156**	Pg	**Pb**	**01 47 05.7**	**-0.4**
YMP	**Mirror Lake Pl**	**0.28**	**101**	Pg	**Pb**	**01 47 07.0**	**+0.3**
YMR	**Madison River**	**0.33**	**247**	Pg	**Pb**	**01 47 07.3**	**-0.1**
H17A	**Grant Village**	**0.40**	**183**	Pg	**Pb**	**01 47 08.7**	**0.0**
YNE	**Yellowstone No**	**0.43**	**61**	Pg	**Pb**	**01 47 08.7**	**-0.6**
YHL	**Hebgen Lake**	**0.46**	**277**		**Pb**	**01 47 09.6**	**-0.1**
YHB	**Horse Butte**	**0.47**	**265**		**Pb**	**01 47 09.7**	**-0.1**
YPP	**Pitchstone Pla**	**0.56**	**200**	Pg	**Pb**	**01 47 12.0**	**+0.7**
FLWY	**Flagg Ranch**	**0.72**	**189**		**Pb**	**01 47 14.2**	**0.0**
RLMT	**Red Lodge**	**0.96**	**70**	Pg	**Pb**	**01 47 17.8**	**-0.4**
MOOW	**Moose Ponds**	**1.06**	**188**		**Pb**	**01 47 19.9**	**+0.1**
GCMT	**Greycliff**	**1.17**	**32**		**Pn**	**01 47 21.6**	**-0.3**
SNOW	**Snow King Moun**	**1.34**	**187**		**Pg**	**01 47 25.4**	**0.0**
REDW	**Red Top Meadow**	**1.45**	**189**		**Pb**	**01 47 26.7**	**+0.1**
DLMT	**Dillon**	**1.56**	**292**		**Pg**	**01 47 29.1**	**-0.4**
AHID	**Auburn Hatcher**	**2.07**	**191**		**Pb**	**01 47 36.2**	**-0.9**
BW06	**Boulder Array**	**2.15**	**160**	Pn	**Pn**	**01 47 34.3**	**-1.1**
PDAR	**Pinedale Array**	**2.15**	**160**	Pn	**Pb**	**01 47 38.4**	**-0.1**
	4.8nm,0.3s,baz=343,slow=12,SNR=165						
PDAR				Lg	Lg	01 48 04.5	
	2.6nm,0.3s,baz=340,slow=18,SNR=4.2						
MSO	**Missoula**	**3.13**	**312**		**Pn**	**01 47 50.2**	**+1.5**
HWUT	**Hardware Ranch**	**3.27**	**194**	Pn	**Pn**	**01 47 51.8**	**+1.0**
EGMT	**Eagleton**	**3.27**	**9**	Pn	**Pn**	**01 47 50.0**	**-0.7**
HVU	**Hansel Valley**	**3.43**	**209**	Pn	**Pn**	**01 47 54.2**	**+1.4**
LAO	**LASA Array**	**3.57**	**56**		**Pn**	**01 47 54.5**	**-0.2**
K22A	**Casper**	**3.62**	**125**		**Pn**	**01 47 55.6**	**+0.2**
TCUT	**Toone Canyon**	**3.73**	**190**		**Pn**	**01 47 56.7**	**-0.5**
SPUT	**South Promonto**	**3.75**	**203**	Pn	**Pn**	**01 47 58.0**	**+0.6**
JTMT	**Jette**	**3.93**	**320**	Pn	**Pn**	**01 47 59.2**	**-0.5**
RWWY	**Rawlins**	**3.94**	**141**	Pn	**Pn**	**01 47 58.7**	**-1.4**
MFID	**Camas Ranch**	**4.05**	**252**		**Pn**	**01 48 02.1**	**+0.7**
CTU	**Camp Tracy**	**4.20**	**193**	Pn	**Pn**	**01 48 04.3**	**+0.9**
JLU	**Jordanelle**	**4.24**	**189**	Pn	**Pn**	**01 48 05.4**	**+1.2**
BGU	**Big Grassy Mou**	**4.28**	**206**	Pn	**Pn**	**01 48 05.2**	**+0.7**
RDMU	**Red Mountain**	**4.28**	**170**	Pn	**Pn**	**01 48 05.1**	**+0.4**
RSSD	**Black Hills**	**4.71**	**96**		**Pn**	**01 48 11.4**	**+0.9**
BMO	**Blue Mountains**	**4.81**	**273**	Pn	**Pn**	**01 48 12.3**	**+0.5**
F10A	**Beach Ranch, E**	**4.86**	**286**		**Pn**	**01 48 14.1**	**+1.7**
DUG	**Dugway, Tooele**	**4.89**	**201**	Pn	**Pn**	**01 48 13.3**	**+0.3**
O20A	**White River Ci**	**4.96**	**159**	Pn	**Pn**	**01 48 14.3**	**+0.4**
NLU	**North Lily Min**	**4.97**	**194**	Pn	**Pn**	**01 48 13.7**	**-0.4**
PHWY	**Pilot Hill**	**5.11**	**131**	Pn	**Pn**	**01 48 15.5**	**-0.5**
N23A	**Red Feather La**	**5.16**	**137**		**Pn**	**01 48 15.9**	**-0.9**
P17A	**Butcher Ranch,**	**5.32**	**182**	Pn	**Pn**	**01 48 17.2**	**-1.7**
ELK	**Elko**	**5.32**	**222**	Pn	**Pn**	**01 48 19.8**	**+0.9**
	0.0nm,0.3s,baz=110,slow=12,SNR=3.3						
ELK				Pg	**Pb**	**01 48 29.3**	**-3.3**
	0.6nm,0.3s,baz=38,slow=16,SNR=10						
ELK				Lg	Lg	01 49 42.3	
	baz=330,slow=20,SNR=2.1						
ELK				LR	LR	01 50 22.9	
	comp=Z,118nm,21.0s,baz=150,slow=39						
ELK	**Elko**	**5.32**	**222**	Pn	**Pn**	**01 48 19.5**	**+0.5**
TMUT	**Trail Mountain**	**5.52**	**185**	Pn	**Pn**	**01 48 22.0**	**+0.3**
SRU	**San Rafael Swe**	**5.68**	**180**	Pn	**Pn**	**01 48 24.5**	**+0.7**
DGMT	**Dagmar**	**5.71**	**48**	Pn	**Pn**	**01 48 23.3**	**-0.8**
NEW	**Newport**	**5.71**	**310**	Pg	**Pb**	**01 48 38.2**	**-0.9**
	0.3nm,0.3s,baz=123,slow=13,SNR=2.6						
NEW				Lg	Lg	01 49 54.8	
	0.6nm,0.3s,baz=180,slow=20,SNR=2.9						
NEW	**Newport**	**5.71**	**310**	Pn	**Pn**	**01 48 24.9**	**+0.8**
ISCO	**Idaho Springs**	**6.19**	**142**	Pn	**Pn**	**01 48 30.3**	**-0.6**
KVN	**Kaiserville**	**8.04**	**227**	Pn	**Pn**	**01 48 55.3**	**-0.9**
MDND	**Maddock**	**8.16**	**64**	Pn	**Pn**	**01 48 57.3**	**-0.5**
SUSD	**Miller**	**8.28**	**88**	Pn	**Pn**	**01 48 59.1**	**-0.2**
NVAR	**Mina Array Bea**	**8.61**	**225**	Pg	Pg	01 49 24.9	-19
	0.2nm,0.3s,baz=38,slow=16,SNR=2.4						
MDPB	**Devils Postpil**	**9.62**	**225**	Pn	**Pn**	**01 49 17.8**	**-0.1**
ULM	**Lac du Bonnet**	**11.31**	**56**	Pn	**Pn**	**01 49 40.1**	**-0.7**
	0.5nm,0.3s,baz=244,slow=9.4,SNR=9.3						
ULM				Lg	Lg	01 52 41.7	
	0.3nm,0.3s,baz=180,slow=20,SNR=2.1						
FFC	**Flin Flon**	**11.37**	**26**		**Pn**	**01 49 42.6**	**+1.1**
YKA	**Yellowknife Ar**	**17.89**	**354**	P	**Pn**	**01 51 07.5**	**-0.3**
	0.1nm,0.3s,baz=174,slow=12,SNR=6.7						
ILAR	**Eielson Array**	**28.33**	**328**	P	**P**	**01 52 54.1**	**+1.4**
	0.4nm,0.7s,baz=120,slow=7.6,SNR=7.0						

JMA ***12*** *01:55:34.8, 24°.18N×121°.71E, h53km±1km, M2.7*
TAP ***12*** *01:55:35.4, 24°.21N×121°.70E, h52km, ML3.1, B*
ISC 12 01:55:36.4±1.2**, 24°.20N**±0°.02×**121°.76E**±0°.02**, h45**km±5km**, n81, σ1§01/135, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.15**	**261**	P	**Pn**	**01 55 43.2**	**-0.6**
	baz=251						
NACB				S	**Sn**	**01 55 48.9**	**-0.2**
	baz=251						
TWD	**Chiawan**	**0.19**	**231**	*i* P	**Pn**	**01 55 43.7**	**-0.4**
	baz=229						
TWD				*i* S	**Sn**	**01 55 49.4**	**-0.1**
	baz=229						
NANB	**Nanao**	**0.23**	**359**	P	**Pn**	**01 55 44.1**	**-0.4**
	baz=4.0						
NANB				S	**Sn**	**01 55 50.9**	**+0.8**
	baz=4.0						
ENA	**Nanau**	**0.23**	**357**	*i* P	**Pn**	**01 55 44.5**	**0.0**
	baz=3.0						
ENA				*i* S	**Sn**	**01 55 51.5**	**+1.3**
	baz=3.0						
ETLH	**Xiulin Townshi**	**0.25**	**272**	P	**Pn**	**01 55 44.0**	**-0.7**
	baz=264						
ETLH				S	**Sn**	**01 55 50.1**	**-0.5**
	baz=264						
HWA	**Hwalien**	**0.26**	**212**	P	**Pn**	**01 55 45.5**	**+0.8**
	baz=209						
HWA				S	**Sn**	**01 55 51.9**	**+1.5**
	baz=209						
ENLB	**Shoufeng**	**0.32**	**206**	*eP*	**Pn**	**01 55 45.1**	**-0.2**
	baz=205						
ENLB				*eS*	**Sn**	**01 55 53.4**	**+1.9**
	baz=205						
NNSH	**Datong**	**0.41**	**304**	*i* P	**Pn**	**01 55 45.6**	**-0.8**
	baz=307						
NNSH				S	**Sn**	**01 55 52.7**	**-0.8**
	baz=307						
TWC	**Suao**	**0.42**	**12**	P	**Pn**	**01 55 46.4**	**0.0**
	baz=16						
TWC				S	**Sn**	**01 55 54.9**	**+1.4**
	baz=16						
NNS	**Nan Shan**	**0.42**	**305**	P	**Pn**	**01 55 45.6**	**-1.0**
	baz=308						
NNS				S	**Sn**	**01 55 53.5**	**-0.2**
	baz=308						
WHF	**Hehuan Shan**	**0.45**	**264**	P	**Pn**	**01 55 46.6**	**-0.6**
	baz=257						
WHF				S	**Sn**	**01 55 54.4**	**-0.4**
	baz=257						
NDT	**Datong Townshi**	**0.46**	**331**	*i* P	**Pn**	**01 55 46.2**	**-0.7**
	baz=339						
NDT				*i* S	**Sn**	**01 55 54.0**	**-0.4**
	baz=339						
ENTT	**Nioudou**	**0.47**	**339**	P	**Pn**	**01 55 46.5**	**-0.7**
	baz=344						
ENTT				S	**Sn**	**01 55 53.9**	**-0.8**
	baz=344						
ESL	**Shilin**	**0.48**	**218**	P	**Pn**	**01 55 45.8**	**-1.4**
	baz=217						
ESL				S	**Sn**	**01 55 53.5**	**-1.2**
	baz=217						
EOS1	**EOS1**	**0.49**	**44**	P	**Pn**	**01 55 47.8**	**+0.6**
	baz=61						
EOS1				S	**Sn**	**01 55 57.6**	**+2.8**
	baz=61						
TWE	**Neicheng**	**0.53**	**351**	*i* P	**Pn**	**01 55 47.4**	**-0.4**
	baz=352						
TWE				*i* S	**Sn**	**01 55 56.2**	**+0.4**
	baz=352						
CHGB	**Renai**	**0.55**	**256**	P	**Pn**	**01 55 47.4**	**-0.8**
	baz=250						
CHGB				S	**Sn**	**01 55 56.1**	**-0.5**
	baz=250						
TDCB	**Techi**	**0.55**	**276**	*eP*	**Pn**	**01 55 47.9**	**-0.3**
	baz=270						
TDCB				*eS*	**Sn**	**01 55 56.1**	**-0.4**
	baz=270						
SLBB	**Yuanshan**	**0.56**	**349**	*eS*	**Sn**	**01 55 56.3**	**-0.5**
	baz=353						
OWD	**Renai**	**0.58**	**246**	P	**Pn**	**01 55 47.6**	**-1.0**
	baz=240						
OWD				S	**Sn**	**01 55 55.8**	**-1.4**
	baz=240						
YHNB	**Yeheng**	**0.58**	**324**	P	**Pn**	**01 55 47.8**	**-0.7**
	baz=326						
YHNB				*eS*	**Sn**	**01 55 56.3**	**-1.0**
	baz=326						
NSK	**Sanguang**	**0.60**	**323**	*i* P	**Pn**	**01 55 47.9**	**-0.9**
	baz=326						
NSK				*i* S	**Sn**	**01 55 56.6**	**-1.0**
	baz=326						
EGFH	**Guangfu**	**0.60**	**210**	*eP*	**Pn**	**01 55 48.2**	**-0.5**
	baz=212						
EGFH				S	**Sn**	**01 55 56.4**	**-1.1**
	baz=212						
NWLT	**Wulai**	**0.62**	**338**	P	**Pn**	**01 55 48.3**	**-0.7**
	baz=335						
NWLT				S	**Sn**	**01 55 57.6**	**-0.4**
	baz=335						
NTC	**Toucheng**	**0.66**	**6**	*eP*	**Pn**	**01 55 49.7**	**+0.2**
	baz=359						
NTC				*eS*	**Sn**	**01 55 59.7**	**+0.9**
	baz=359						
EGS		**0.67**	**14**	P	**Pn**	**01 55 50.0**	**+0.5**
	baz=12						
EGS				*eS*	**Sn**	**01 56 00.8**	**+1.9**
	baz=12						
VWDT	**VWDT**	**0.71**	**232**	P	**Pn**	**01 55 49.9**	**-0.3**
	baz=222						
VWDT				S	**Sn**	**01 55 59.7**	**-0.4**
	baz=222						
WHP	**Taichung City**	**0.74**	**276**	*eP*	**Pn**	**01 55 50.5**	**-0.2**
	baz=276						
WHP				S	**Sn**	**01 56 00.6**	**-0.3**
	baz=276						
HGSD	**Ruisui**	**0.76**	**203**	*eP*	**Pn**	**01 55 50.5**	**-0.4**
	baz=210						
HGSD				*eS*	**Sn**	**01 56 01.4**	**+0.2**
	baz=210						
DPDB	**Guoxing**	**0.78**	**258**	*eP*	**Pn**	**01 55 50.5**	**-0.6**
	baz=257						
DPDB				*eS*	**Sn**	**01 56 01.3**	**-0.4**
	baz=257						
TIPB	**Shuangxi**	**0.78**	**5**	*eP*	**Pn**	**01 55 51.0**	**-0.1**
	baz=1.0						
TIPB				*eS*	**Sn**	**01 56 02.6**	**+1.0**
	baz=1.0						
NHDH	**Xindian Distri**	**0.79**	**345**	*eP*	**Pn**	**01 55 51.6**	**+0.4**
	baz=347						
NHDH				*eS*	**Sn**	**01 56 01.3**	**-0.7**
	baz=347						
EHY	**Hungye**	**0.79**	**210**	P	**Pn**	**01 55 50.0**	**-1.3**
	baz=207						
EHY				S	**Sn**	**01 56 01.0**	**-1.1**
	baz=207						
TWA	**Mucha**	**0.80**	**349**	S	**Sn**	**01 56 02.1**	**0.0**
	baz=340						
WLTB	**Daxi**	**0.80**	**325**	*eS*	**Sn**	**01 56 01.9**	**-0.2**
	baz=328						
LIOB	**Emei**	**0.81**	**304**	*eP*	**Pn**	**01 55 51.8**	**+0.3**
	baz=304						
LIOB				*eS*	**Sn**	**01 56 02.2**	**-0.2**
	baz=304						
NSTT	**Nanjuang**	**0.81**	**302**	P	**Pn**	**01 55 51.5**	**-0.1**
	baz=303						
NSTT				S	**Sn**	**01 56 02.6**	**+0.1**
	baz=303						
TWB1	**Santiao Chiao**	**0.84**	**15**	P	**Pn**	**01 55 52.1**	**+0.3**
	baz=24						
TWB1				S	**Sn**	**01 56 04.0**	**+1.0**
	baz=24						
SSLB	**Suanglung**	**0.84**	**241**	*eP*	**Pn**	**01 55 51.6**	**-0.3**
	baz=239						
TYC	**Yuchr**	**0.87**	**251**	*eP*	**Pn**	**01 55 51.8**	**-0.5**
	baz=244						
YULB	**Yu-li**	**0.90**	**208**	*eP*	**Pn**	**01 55 51.1**	**-1.6**
	baz=205						
YULB				*eS*	**Sn**	**01 56 02.1**	**-2.6**
	baz=205						
TWQ1	**Liyutan**	**0.91**	**280**	*eP*	**Pn**	**01 55 52.1**	**-0.7**
	baz=279						
TWQ1				*eS*	**Sn**	**01 56 04.8**	**0.0**
	baz=279						
NSY	**Sanyi**	**0.93**	**284**	*eS*	**Sn**	**01 56 06.1**	**+0.7**
	baz=283						
TWF1	**Yuli**	**0.94**	**207**	*eP*	**Pn**	**01 55 51.9**	**-1.3**
	baz=210						
TWF1				*eS*	**Sn**	**01 56 04.5**	**-1.1**
	baz=210						
YM01	**YM01**	**0.96**	**350**	*eP*	**Pn**	**01 55 52.6**	**-1.0**
	baz=341						
YM01				*eS*	**Sn**	**01 56 04.8**	**-1.3**
	baz=341						
WHYT	**Xinyi Township**	**0.96**	**239**	*eP*	**Pn**	**01 55 53.2**	**-0.4**
	baz=238						
YM10	**YM10**	**0.97**	**350**	*eS*	**Sn**	**01 56 04.8**	**-1.6**
	baz=350						
TCU	**Taichung**	**0.99**	**267**	*eS*	**Sn**	**01 56 07.2**	**+0.6**
	baz=266						
PTSB	**Yuanli**	**0.99**	**285**	*eS*	**Sn**	**01 56 07.4**	**+0.6**
	baz=284						
YM08	**YM08**	**1.00**	**351**	*eP*	**Pn**	**01 55 52.1**	**-2.0**
	baz=341						
YM08				*eS*	**Sn**	**01 56 05.8**	**-1.2**
	baz=341						
WJS	**Zhushan**	**1.01**	**249**	P	**Pn**	**01 55 55.0**	**+0.8**
	baz=247						
WJS				S	**Sn**	**01 56 09.5**	**+2.2**
	baz=247						
YUS	**Yu-Shan**	**1.02**	**226**	*eP*	**Pn**	**01 55 54.2**	**-0.6**
	baz=216						
YUS				*eS*	**Sn**	**01 56 08.9**	**+0.7**
	baz=216						
WDJ	**Dajia District**	**1.03**	**279**	*eS*	**Sn**	**01 56 07.7**	**0.0**
	baz=278						
WNT	**Mingjian**	**1.03**	**252**	*eP*	**Pn**	**01 55 55.5**	**+1.0**
	baz=251						
WNT				*eS*	**Sn**	**01 56 08.9**	**+1.1**
	baz=251						
FULB	**Fuli**	**1.08**	**203**	*eS*	**Sn**	**01 56 09.2**	**+0.2**
	baz=209						
WCHH	**Zhanghua**	**1.10**	**264**	S	**Sn**	**01 56 10.0**	**+0.6**
	baz=263						
ALS	**Alishan**	**1.11**	**232**	*eP*	**Pn**	**01 55 55.6**	**-0.1**
	baz=223						
CHKT	**Chengkung**	**1.15**	**198**	*eS*	**Sn**	**01 56 10.8**	**+0.2**
	baz=203						
CHN5	**Tsauling**	**1.15**	**239**	*eP*	**Pn**	**01 55 56.6**	**+0.4**
	baz=238						
CHN5				*eS*	**Sn**	**01 56 11.9**	**+1.1**
	baz=238						
YOJ	**Yonaguni jima**	**1.18**	**77**	S	**Sn**	**01 56 11.6**	**+0.3**
	baz=79						
YOJ	**Yonaguni jima**	**1.18**	**77**	*eS*	**Sn**	**01 56 11.1**	**-0.2**
ELDTW	**Lidau**	**1.21**	**214**	*eP*	**Pn**	**01 55 56.1**	**-0.9**
	baz=205						
ELDTW				*eS*	**Sn**	**01 56 11.1**	**-1.2**
	baz=205						
WDLH	**Douliu**	**1.22**	**246**	*eP*	**Pn**	**01 55 58.7**	**+1.6**
	baz=245						
WDLH				*eS*	**Sn**	**01 56 14.7**	**+2.2**
	baz=245						
RLNB	**Erlin**	**1.31**	**257**	*eS*	**Sn**	**01 56 16.0**	**+1.4**
	baz=256						
CHN2	**Minshiung**	**1.35**	**241**	*eS*	**Sn**	**01 56 17.4**	**+1.9**
	baz=240						
CHN4	**Tsaushan**	**1.36**	**232**	P	**Pn**	**01 56 00.2**	**+1.2**
	baz=231						
CHN4				*eS*	**Sn**	**01 56 17.9**	**+2.1**
	baz=231						
TPUB	**Ta-pu**	**1.36**	**229**	*eP*	**Pn**	**01 56 00.0**	**+0.9**
	baz=219						
TPUB				*eS*	**Sn**	**01 56 17.1**	**+1.1**
	baz=219						
STYT	**Tauyuan**	**1.38**	**222**	*eP*	**Pn**	**01 55 59.5**	**+0.2**
	baz=220						
STYT				*eS*	**Sn**	**01 56 17.2**	**+0.9**
	baz=220						
CHY	**Chiayi**	**1.40**	**241**	*eS*	**Sn**	**01 56 19.2**	**+2.3**
	baz=250						
WTP	**Ta-pu**	**1.41**	**228**	P	**Pn**	**01 56 00.5**	**+0.8**
	baz=227						
WTP				*eS*	**Sn**	**01 56 18.5**	**+1.4**
	baz=227						
TWK	**Hsinying**	**1.48**	**232**	P	**Pn**	**01 56 01.6**	**+0.9**
	baz=230						
TWK				*eS*	**Sn**	**01 56 20.6**	**+1.7**
	baz=230						
TWH	**Lutao**	**1.50**	**190**	*eS*	**Sn**	**01 56 18.2**	**-1.1**
	baz=180						
TWG	**Pinlang**	**1.51**	**205**	*eS*	**Sn**	**01 56 18.2**	**-1.2**
	baz=197						
TWGBT	**Beinan**	**1.51**	**204**	*eS*	**Sn**	**01 56 18.2**	**-1.2**
	baz=197						
**WS

YOJ	**Yonaguni jima**	**0.71**	**44**	P	**Pb**	02 16 30.7	**+0.2**
	baz=47						
YOJ				S	**Sb**	02 16 41.7	**+1.4**
	baz=47						
YOJ	**Yonaguni jima**	**0.71**	**44**	P	**Pg**	02 16 30.4	**+0.3**
YOJ				*e*S	**Sb**	02 16 41.4	**+1.1**
NANB	**Nanao**	**0.81**	**306**	P	**Pg**	02 16 31.9	**0.0**
	baz=304						
NANB				*e*S	**Sb**	02 16 43.4	**+0.4**
	baz=304						
ENA	**Nanau**	**0.82**	**306**	*i* P	**Pb**	02 16 32.1	**-0.1**
	baz=303						
ENA				*e*S	**Sb**	02 16 43.9	**+0.7**
	baz=303						
NACB	**Ninganchiao**	**0.83**	**286**	*e*P	**Pg**	02 16 32.1	**-0.1**
	baz=282						
NACB				S	**Sn**	02 16 44.8	**-0.9**
	baz=282						
TWC	**Suao**	**0.87**	**320**	*i* P	**Pg**	02 16 32.9	**0.0**
	baz=318						
TWC				*i* S	**Sb**	02 16 44.8	**+0.2**
	baz=318						
NTC	**Toucheng**	**1.07**	**327**	P	**Pb**	02 16 35.9	**-0.8**
	baz=326						
NTC				S	**Sn**	02 16 51.9	**+0.2**
	baz=326						
WHF	**Hehuan Shan**	**1.11**	**280**	*e*P	**Pb**	02 16 37.5	**0.0**
	baz=277						
WHF				*e*S	**Sn**	02 16 53.3	**-0.1**
	baz=277						
TIPB	**Shuangxi**	**1.18**	**330**	P	**Pg**	02 16 38.7	**-0.1**
	baz=329						
TIPB				S	**Sb**	02 16 53.5	**0.0**
	baz=329						
CHGB	**Renai**	**1.19**	**276**	*e*P	**Pb**	02 16 38.6	**-0.1**
	baz=273						
CHGB				*e*S	**Sn**	02 16 54.7	**-0.1**
	baz=273						
YULB	**Yu-li**	**1.20**	**243**	*e*P	**Pb**	02 16 39.1	**+0.2**
	baz=240						
YULB				*e*S	**Sb**	02 16 54.6	**+0.2**
	baz=240						
NWLT	**Wulai**	**1.21**	**313**	*e*P	**Pb**	02 16 39.0	**+0.1**
	baz=312						
NWLT				*e*S	**Sn**	02 16 55.6	**+0.6**
	baz=312						
IRIF	**Iriomote-Funau**	**1.22**	**71**	P	**Pn**	02 16 38.5	**-0.4**
IRIF				S	**Sb**	02 16 55.4	**+0.6**
VWDT	**VWDT**	**1.23**	**261**	*e*P	**Pg**	02 16 39.7	**-0.1**
	baz=258						
VWDT				*e*S	**Sg**	02 16 55.7	**0.0**
	baz=258						
YHNB	**Yeheng**	**1.23**	**306**	*e*P	**Pg**	02 16 39.5	**-0.3**
	baz=304						
YHNB				*e*S	**Sg**	02 16 55.5	**-0.3**
	baz=304						
HATJ	**Hateruma jima**	**1.23**	**85**	P	**Pn**	02 16 39.0	**-0.1**
HATJ				*e*S	**Sb**	02 16 55.4	**+0.3**
NSK	**Sanguang**	**1.24**	**306**	P	**Pg**	02 16 40.0	**-0.1**
	baz=304						
NSK				*e*S	**Sn**	02 16 57.4	**+1.4**
	baz=304						
WFSB	**Wu-fen Shan**	**1.28**	**331**	*e*S	**Sg**	02 16 57.4	**-0.1**
	baz=330						
TATO	**Taipei**	**1.36**	**319**	*e*S	**Sg**	02 16 60.0	**+0.1**
	baz=318						
SSLB	**Suanglung**	**1.39**	**264**	*e*P	**Pn**	02 16 41.4	**0.0**
	baz=261						
SMLT	**Sun Moon Lake**	**1.43**	**268**	*e*P	**Pb**	02 16 42.8	**0.0**
	baz=265						
SMLT				*e*S	**Sg**	02 17 03.0	**+0.6**
	baz=265						
TYC	**Yuchr**	**1.47**	**269**	*e*P	**Pb**	02 16 43.2	**-0.2**
	baz=266						
TYC				*e*S	**Sg**	02 17 03.5	**-0.1**
	baz=266						
JIJ	**Ishigaki jima**	**1.59**	**75**	P	**Pn**	02 16 43.7	**-0.3**
JIJ				*e*S	**Sn**	02 17 03.6	**-0.8**
JISG	**Ishigakijimahi**	**1.80**	**69**	P	**Pn**	02 16 46.4	**-0.5**
JISG				*e*S	**Sn**	02 17 09.0	**-0.7**

NEIC **12** *02:20:38.1±2.2,8.˚90N±0.˚06×126.˚25E±0.˚09, h10km±2km, mb4.3/49, Error ellipse: s-maj=12.8km s-min=8.3km az=100.0*

NEIC **12** *02:20:38±2.1,8.˚90N±0.˚07×126.˚30E±0.˚09, h10km±3km, Error ellipse: s-maj=12.8km s-min=9.3km az=88.0*

MAN **12** *02:20:44.2,8.˚88N×126.˚37E, h25km, mb5.5, ML4.5, MS4.7*

MAN Intensity III - Tandag Surigao del Sur; Intensity II - Bislig City DSurigao del Sur.

IDC **12** *02:20:45.2±1.7,8.˚89N×126.˚37E, h64km±17km, mb4.0/21, mb1 4.1/22, mb1mx3.9/45, mbtmp4.3/22, MS2.9/1, Ms1 2.9/1, ms1mx2.8/13, Error ellipse: s-maj=18.6km s-min=9.5km az=85.0*

DJA **12** *02:20:46.8±0.5, 9˚N±4˚×12˚6E±˚, h69km±3km, M5.1/46, mb5.0/46, mB5.5/16, MLv5.5/4, Mw(mB)5.0/16, Mwp5.3/1*

ISC 12 02:20:43.9±0.4,**8.90N**±0.04×**126.39E**±0.07,**h54**km,**n138,** σ1§**74**/131,**mb4.3**/51,**7C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.76**	**275**	*e*P	**Pn**	**02 20 58.6**	**+0.1**
BUTP				*e*S	Sn	02 21 29.8	+21
SCPH	**Surigao**	**1.25**	**315**‖	*e*P	**Pn**	**02 21 05.7**	**+0.7**
SCPH				*e*S	**Sn**	**02 21 24.2**	**+3.5**
BUKP	**Musuan**	**1.66**	**232**	*e*P	**Pn**	**02 21 11.8**	**+1.2**
BUKP				*e*S	Sn	02 21 51.9	+21
CGP	**Cagayan de Oro**	**1.73**	**255**↑	*i* P	**Pn**	**02 21 12.4**	**+0.8**
CGP				*i* S	Sn	02 21 52.5	+20
MSLP	**Maasin**	**1.94**	**309**	*e*P	**Pn**	**02 21 16.3**	**+1.8**
MSLP				*e*S	Sn	02 22 00.5	+23
MATI	**Mati**	**1.95**	**184**	*e*P	**Pn**	**02 21 15.8**	**+1.2**
MATI				*e*S	Sn	02 22 00.6	+23
DAV	**Davao City (W)**	**1.99**	**204**	P	**Pn**	**02 21 17.0**	**+1.9**
	112nm,0.3s,baz=90,slow=20,SNR=11						
DAV				S	**Sn**	**02 21 40.3**	**+1.5**
	301nm,0.3s,baz=334,slow=18,SNR=16						
DAV	**Davao City (W)**	**1.99**	**204**	Pg	**Pn**	**02 21 16.6**	**+1.5**
KCP	**Kidapawan**	**2.27**	**214**↑	*i* P	**Pn**	**02 21 19.7**	**+0.6**
KCP				*i* S	Sn	02 22 06.0	+20
CTBH	**Cotabato--PC H**	**2.70**	**232**↑	*e*P	**Pn**	**02 21 32.4**	**+1.4**
CTBH				*i* S	Sn	02 22 17.0	+21
LLP	**Lapu-Lapu**	**2.77**	**301**↑	*e*P	**Pn**	**02 21 27.5**	**+1.7**
LLP				*e*S	Sn	02 22 20.4	+22
DDMP	**Don Marcelino,**	**2.86**	**194**	*e*P	**Pn**	**02 21 31.2**	**+4.2**
DDMP				*e*S	Sn	02 22 15.7	+15
DCPH	**Dipolog City**	**3.02**	**264**↑	*i* P	**Pn**	**02 21 30.5**	**+1.3**
DCPH				*i* S	Sn	02 21 50.7	-13
GSPH	**General Santos**	**3.14**	**207**↑	*i* P	**Pn**	**02 21 32.6**	**+1.6**
CNP	**Catarman**	**3.97**	**335**	*e*P	**Pn**	**02 21 42.1**	**-0.2**
CNP				*e*S	Sn	02 22 49.9	+22
RCP	**Roxas**	**4.45**	**307**↑	*e*P	**Pn**	**02 21 52.2**	**+3.3**
RCP				*e*S	Sn	02 22 11.7	-28
TNTI	**Ternate**	**8.13**	**173**	P	**Pn**	**02 22 42.8**	**+3.4**
	228nm,1.4s						
TNTI	**Ternate**	**8.13**	**173**	Pn	**Pn**	**02 22 36.8**	**-2.6**
KMSI	**Cibinong**	**8.61**	**196**	P	**Pn**	**02 22 49.6**	**+3.7**
	116nm,0.5s						
MRSI	**Marisa**	**9.47**	**208**	P	**Pn**	**02 22 59.8**	**+2.1**
	1µm91nm,0.9s						
KKM	**Kota Kinabalu**	**10.47**	**255**	Pn	**Pn**	**02 23 07.5**	**-4.1**
LUWI	**Luwuk**	**10.51**	**200**	P	**Pn**	**02 23 15.3**	**+3.3**
	5µm8µm150nm,1.3s						
LUWI	**Luwuk**	**10.51**	**200**	Pn	Pn	02 23 07.1	-4.9
SWI	**Sorong**	**10.85**	**153**	P	**Pn**	**02 23 19.5**	**+2.9**
	40nm,0.9s						
SIJI	**Sorong**	**10.86**	**153**	P	**Pn**	**02 23 16.6**	**-0.1**
	2.9nm,0.3s,baz=332,slow=14,SNR=5.6						
SANI	**Sanana**	**10.88**	**182**	P	**Pn**	**02 23 17.0**	**-0.1**
	1µm81nm,1.3s						
NLAI	**Namlea**	**12.08**	**177**	P	**Pn**	**02 23 33.5**	**+0.1**
	47nm,0.7s						
SMKI	**Samarinda**	**13.03**	**225**	P	**Pn**	**02 23 48.4**	**+2.0**
	10µm73nm,0.4s						
TTSI	**Tana Toraja**	**13.55**	**209**	P	**Pn**	**02 23 56.7**	**+3.2**
	2µm130nm,1.0s						
BKB	**Balikpapan**	**13.83**	**224**	Pn	Pn	02 23 51.0	-6.3
SPSI	**Sidrap Palu**	**14.38**	**208**	P	**Pn**	**02 24 06.5**	**+1.9**
	2µm91nm,1.0s						
BNSI	**Bone**	**14.62**	**206**	P	**Pn**	**02 24 09.7**	**+1.9**
	3µm408nm,1.2s						
KAPI	**Kappang**	**15.32**	**206**	Pn	**Pn**	**02 24 13.1**	**-3.8**
KAPI				IAmb	IAmb	02 24 16.8	
	comp=Z,18nm,1.4s						
TPUB	**Ta-pu**	**15.34**	**340**	Pn	**Pn**	**02 24 14.8**	**-2.3**
TPUB				IAmb	IAmb	02 24 17.6	
	comp=Z,21nm,1.4s						
BKSI	**Bulukumba**	**15.45**	**204**	P	**P**	**02 24 20.7**	**-1.3**
	comp=Z,743nmcomp=Z,78nm,1.0s						
SBUM	**Sibu**	**15.48**	**246**	Pn	**Pn**	**02 24 15.8**	**-3.0**
KBKI	**Kotabaru**	**15.83**	**220**	P	**P**	**02 24 25.2**	**-1.1**
	comp=Z,34nm,1.4s						
SMPI	**Sarmi**	**16.37**	**131**	P	**Pn**	**02 24 30.1**	**-0.1**
	comp=Z,31nm,0.9s						
KSM	**Kuching**	**17.62**	**246**	Pn	**Pn**	**02 24 40.4**	**-5.4**
MMRI	**Maumere**	**17.90**	**193**	Pn	**Pn**	**02 24 45.9**	**-3.3**
JOW	**Kunigami**	**17.93**	**5**		**Pn**	**02 24 47.5**	**-1.9**
SOEI	**Soe**	**18.65**	**187**	P	**Pn**	**02 24 59.9**	**+1.5**
	comp=Z,2µmcomp=Z,98nm,1.0s						
SOEI	**Soe**	**18.65**	**187**	P	**P**	**02 24 54.8**	**-2.8**
SOEI				IAmb	IAmb	02 24 56.0	
	comp=Z,38nm,1.3s						
BATI	**Baumata**	**19.17**	**188**	P	**Pn**	**02 25 04.0**	**-0.6**
	comp=Z,14nm,0.3s,baz=7.4,slow=7.7,SNR=15						
BATI	**Baumata**	**19.17**	**188**	P	**Pn**	**02 25 05.1**	**+0.5**
	comp=Z,1µmcomp=Z,186nm,0.9s						
PLAI	**Plampang**	**19.59**	**206**	P	**Pn**	**02 25 09.6**	**+0.1**
	comp=Z,105nm,0.8s						
KMMI	**Kalianget**	**20.11**	**218**	P	Pn	02 25 15.0	-0.6
	comp=Z,161nm,0.9s						
SRBI	**Singaraja**	**20.21**	**214**	P	Pn	02 25 17.1	+0.2
	comp=Z,173nm,1.1s						
GRJI	**Gresik**	**20.95**	**222**	P	Pn	02 25 24.8	-0.8
	comp=Z,76nm,1.1s						
JAGI	**Jajag, Banyuwa**	**21.12**	**216**	P	**P**	**02 25 26.6**	**+2.2**
	comp=Z,74nm,1.5s						
JAGI	**Jajag, Banyuwa**	**21.12**	**216**	P	**P**	**02 25 20.9**	**-3.5**
JAGI				IAmb	IAmb	02 25 22.1	
	comp=Z,12nm,1.0s						
TPI	**Tanjungpandan**	**21.97**	**239**	P	**P**	**02 25 33.8**	**+0.3**
	comp=Z,38nm,1.2s						
WOJI	**Wonogiri, Jawa**	**22.67**	**223**	P	**P**	**02 25 42.0**	**+1.1**
	comp=Z,30nm,1.0s						
KPJI	**Karang Pucung**	**23.72**	**228**	P	**P**	**02 25 53.7**	**+2.5**
	comp=Z,102nm,1.2s						
LEM	**Lembang**	**24.37**	**231**	P	**P**	**02 25 58.5**	**+1.1**
	comp=Z,41nm,0.8s,baz=315,slow=22,SNR=5.8						
JNU	**Nakatsue**	**24.46**	**9**	P	**P**	**02 25 57.5**	**-0.4**
	comp=Z,7.7nm,0.8s,baz=130,slow=3.8,SNR=4.1						
JNU	**Nakatsue**	**24.46**	**9**	P	**P**	**02 25 56.7**	**-1.1**
KNRA	**Kununurra**	**24.53**	**174**	P	**P**	**02 25 58.2**	**-0.3**
CISI	**Cisompet, Garu**	**24.69**	**229**	P	**P**	**02 26 02.6**	**+2.4**
	comp=Z,5µmcomp=Z,75nm,1.3s						
CISI	**Cisompet, Garu**	**24.69**	**229**	P	**P**	**02 25 58.1**	**-2.1**
DBJI	**Dramaga**	**24.88**	**233**	P	**P**	**02 26 03.8**	**+2.0**
	comp=Z,7µmcomp=Z,184nm,1.4s						
CNJI	**Cibinong**	**25.05**	**231**	P	**P**	**02 26 06.6**	**+3.2**
	comp=Z,1µmcomp=Z,158nm,1.2s						
SKJI	**Sukabumi**	**25.30**	**232**	P	**P**	**02 26 08.1**	**+2.4**
	comp=Z,79nm,0.6s						
IPM	**Ipoh**	**25.56**	**262**	P	**P**	**02 26 04.9**	**-3.2**
IPM				IAmb	IAmb	02 26 06.1	
	comp=Z,5.6nm,0.9s						
KULM	**Kulim**	**25.78**	**264**	P	**P**	**02 26 06.6**	**-3.5**
KULM				IAmb	IAmb	02 26 07.5	
	comp=Z,7.5nm,0.9s						
PBKT	**Sadao Pong**	**25.91**	**290**	P	**P**	**02 26 11.0**	**-0.2**
PBKT				IAmb	IAmb	02 26 14.4	
	comp=Z,8.3nm,1.1s						
FITZ	**Fitzroy Crossi**	**26.84**	**182**	P	**P**	**02 26 19.9**	**+0.5**
	comp=Z,6.1nm,0.8s,baz=354,slow=7.2,SNR=30						
FITZ	**Fitzroy Crossi**	**26.84**	**182**	IAmb	IAmb	02 26 24.2	
	comp=Z,4.8nm,0.7s						
PMG	**Port Moresby**	**27.54**	**131**	LR	LR	02 37 59.0	
	comp=Z,25nm,22.0s,baz=336,slow=38						
RPSI	**Rantau Prapat**	**27.99**	**259**	P	**P**	**02 26 29.2**	**-0.8**
CMAR	**Chiang Mai Arr**	**28.27**	**293**	P	**P**	**02 26 33.6**	**+1.3**
	comp=Z,2.1nm,0.9s,baz=113,slow=6.8,SNR=7.4						
KSRS	**Korea Array**	**28.46**	**3**	P	**P**	**02 26 34.4**	**+0.6**
	comp=Z,4.0nm,1.0s,baz=180,slow=12,SNR=7.8						
SISI	**Saibi**	**29.03**	**251**	P	**P**	**02 26 42.4**	**+3.2**
	comp=Z,30nm,0.9s						
GSI	**Gunungsitoli**	**29.65**	**257**	P	**P**	**02 26 46.8**	**+2.1**
	comp=Z,33nm,1.0s						
WRA	**Warramunga Arr**	**29.71**	**165**	P	**P**	**02 26 44.3**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=344,slow=8.1,SNR=22						
WRA	**Warramunga Arr**	**29.71**	**165**	IAmb	IAmb	02 26 47.9	
	comp=Z,0.1nm,0.7s						
AS31	**Alice Springs**	**33.19**	**167**	P	**P**	**02 27 16.3**	**+0.6**
AS31				IAmb	IAmb	02 27 17.8	
	comp=Z,1.4nm,0.4s						
ASAR	**Alice Springs**	**33.19**	**167**	P	**P**	**02 27 15.6**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=348,slow=7.1,SNR=36						
ASAR				PcP	**PcP**	**02 29 57.5**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=352,slow=3.0,SNR=3.0						
SIMRM	**Sittwe**	**34.23**	**293**	P	**P**	**02 27 24.1**	**-0.6**
CTA	**Charters Tower**	**34.82**	**146**	P	**P**	**02 27 31.4**	**+1.6**
	comp=Z,1.0nm,0.4s,baz=327,slow=15,SNR=4.1						
USA0B	**Ussuriysk Arra**	**35.50**	**7**	P	**P**	**02 27 36.5**	**+1.1**
USRK	**Ussuriysk Ar.**	**35.50**	**7**	P	**P**	**02 27 36.4**	**+1.0**
	comp=Z,12nm,0.6s,baz=181,slow=6.7,SNR=25						
SHL	**Shillong**	**36.73**	**301**	P	**P**	**02 27 46.2**	**-0.2**
LSA	**Lhasa**	**38.92**	**307**	P	**P**	**02 28 03.7**	**-1.5**
FORT	**Forrest**	**39.48**	**178**	P	**P**	**02 28 08.7**	**-0.6**
KLR	**Kul'dur**	**40.45**	**5**	P	**P**	**02 28 17.5**	**+0.5**
	comp=Z,2.1nm,0.5s,baz=192,slow=6.1,SNR=13						
HIA	**Hailar**	**40.62**	**353**	P	**P**	**02 28 17.1**	**-1.4**
HIA				IAmb	IAmb	02 28 18.4	
	comp=Z,5.1nm,1.0s						
TAPN	**Taplejung**	**40.85**	**302**	*e*P	**P**	**02 28 21.4**	**+0.3**
ODAN	**Odare**	**40.96**	**301**	*e*P	**P**	**02 28 21.9**	**0.0**
	comp=Z,11nm,0.4s						
RAMN	**Ramite**	**41.66**	**301**	*e*P	**P**	**02 28 28.0**	**+0.3**
JIRN	**Jiri**	**42.23**	**302**	*e*P	**P**	**02 28 32.6**	**+0.2**
	comp=Z,15nm,0.5s						
SONM	**Songino Array**	**42.34**	**340**	P	**P**	**02 28 34.0**	**+1.2**
	comp=Z,0.3nm,0.4s,baz=128,slow=4.4,SNR=3.4						
SONM	**Songino Array**	**42.34**	**340**	IAmb	IAmb	02 28 37.6	
	comp=Z,0.5nm,1.2s						
BBOO	**Buckleboo**	**42.49**	**168**	P	**P**	**02 28 34.8**	**+0.8**
NWAO	**Narrogin (SRO)**	**42.50**	**191**	P	**P**	**02 28 35.2**	**+1.2**
	comp=Z,5.1nm,0.7s,baz=41,slow=10,SNR=4.5						
NWAO	**Narrogin (SRO)**	**42.50**	**191**	IAmb	IAmb	02 28 37.4	
	comp=Z,13nm,1.2s						
GUN	**Gumba**	**42.57**	**302**	*e*P	**P**	**02 28 34.4**	**-0.8**
PKI	**Pulchoki**	**42.86**	**301**	*e*P	**P**	**02 28 37.4**	**-0.1**
KKN	**Kakani**	**43.04**	**301**	*e*P	**P**	**02 28 39.7**	**+0.9**
	comp=Z,4.9nm,0.3s						
STKA	**Stephens Creek**	**43.08**	**161**	P	**P**	**02 28 38.4**	**-0.3**
	comp=Z,2.0nm,0.3s,baz=344,slow=7.6,SNR=12						
KOLN	**Koldanda**	**44.45**	**301**	*e*P	**P**	**02 28 49.4**	**-0.8**
DANN	**Dangsing**	**44.48**	**302**	*e*P	**P**	**02 28 49.2**	**-1.3**
PETK	**Petropavlovsk-**	**50.83**	**24**	P	**P**	**02 29 40.9**	**+1.9**
	comp=Z,3.7nm,0.7s,baz=209,slow=4.3,SNR=12						
YAK	**Yakutsk**	**53.09**	**2**	P	**P**	**02 29 55.9**	**+0.3**
MK31	**Makanchi Array**	**53.18**	**323**	P	**P**	**02 29 55.9**	**-0.7**
MKAR	**Makanchi Array**	**53.18**	**323**	P	**P**	**02 29 56.2**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=119,slow=8.1,SNR=33						
MAKZ	**Makanchi**	**53.38**	**323**	P	**P**	**02 29 57.3**	**-0.7**
MAKZ				IAmb	IAmb	02 29 58.4	
	comp=Z,3.2nm,1.1s						
NIL	**Nilore**	**54.60**	**305**	P	**P**	**02 30 05.7**	**-1.5**
NIL				IAmb	IAmb	02 30 10.0	
	comp=Z,3.6nm,0.8s						
ZAA0	**Zalesovo Array**	**55.88**	**332**	P	**P**	**02 30 15.4**	**-0.5**
ZAA0				IAmb	IAmb	02 30 17.0	
	comp=Z,3.7nm,1.3s						
ZALV	**Zalesovo Beam**	**55.88**	**332**	P	**P**	**02 30 14.6**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=121,slow=7.4,SNR=5.4						
KURK	**Kurchatov**	**57.26**	**326**	P	**P**	**02 30 25.3**	**-0.5**
BTK	**Batken**	**58.17**	**312**	P	**P**	**02 30 32.1**	**-0.5**
BTK				IAmb	IAmb	02 30 32.6	
	comp=Z,1.5nm,0.5s						
KBL	**Kabul**	**58.20**	**305**	P	**P**	**02 30 32.7**	**-0.3**
KBL				IAmb	IAmb	02 30 35.5	
	comp=Z,2.5nm,0.9s						
GAR	**Garm**	**58.26**	**311**	P	**P**	**02 30 32.7**	**-0.6**
GAR				IAmb	IAmb	02 30 36.2	
	comp=Z,4.7nm,1.0s						
KK31	**Karatay Array**	**59.29**	**315**	P	**P**	**02 30 39.3**	**-0.9**
KKAR	**Karatay Array**	**59.29**	**315**	P	**P**	**02 30 39.5**	**-0.8**
TIXI	**Tiksi**	**62.71**	**1**	P	**P**	**02 31 02.4**	**-0.4**
HRA	**Herat**	**63.72**	**304**	P	**P**	**02 31 09.7**	**-0.7**
HRA				IAmb	IAmb	02 31 14.2	
	comp=Z,2.0nm,0.9s						
BILL	**Bilibino**	**64.68**	**15**	P	**P**	**02 31 17.1**	**+1.1**
BILL				IAmb	IAmb	02 31 19.5	
	comp=Z,2.5nm,0.9s						
ABKAR	**Akbulak array**	**67.98**	**320**	P	**P**	**02 31 36.9**	**-0.4**
RAYN	**Ar Rayn**	**78.19**	**292**	P	**P**	**02 32 37.3**	**-0.9**
TOLK	**Toolik Lake Re**	**79.60**	**22**	P	**P**	**02 32 44.6**	**-0.4**
PMR	**Palmer**	**79.61**	**29**	P	**P**	**02 32 45.5**	**+0.4**
PMR				IAmb	IAmb	02 32 47.6	
	comp=Z,3.8nm,1.0s						
IL31		**80.62**	**26**	P	**P**	**02 32 51.0**	**+0.5**
ILAR	**Eielson Array**	**80.62**	**26**	P	**P**	**02 32 50.5**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=255,slow=4.2,SNR=17						
CTGM	**Chitina Glacie**	**83.40**	**29**	P	**P**	**02 33 07.0**	**+1.6**
DAWY	**Dawson**	**83.91**	**26**	P	**P**	**02 33 07.6**	**-0.3**
DAWY				IAmb	IAmb	02 33 10.3	
	comp=Z,2.7nm,0.9s						
GAZ	**Gaziantep**	**84.04**	**307**	P	**P**	**02 33 08.0**	**-1.1**
GAZ				IAmb	IAmb	02 33 09.6	
	comp=Z,2.3nm,0.7s						
ARCES	**ARCESS Array B**	**85.51**	**340**	P	**P**	**02 33 15.9**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=81,slow=6.4,SNR=6.7						
BR131	**Keskin Array S**	**86.48**	**309**	P	**P**	**02 33 19.6**	**-1.8**
BRTR	**Keskin Array B**	**86.48**	**309**	P	**P**	**02 33 22.6**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=78,slow=1.7,SNR=3.4						
FINES	**FINESS Array B**	**87.14**	**332**	P	**P**	**02 33 22.7**	**-1.2**
	comp=Z,1.1nm,0.4s,baz=53,slow=7.4,SNR=18						
VNDA	**Vanda**	**88.56**	**173**	P	**P**	**02 33 30.8**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=312,slow=5.6,SNR=10						
VNDA	**Vanda**	**88.56**	**173**	P	**P**	**02 33 30.8**	**+0.5**
YKA	**Yellowknife Ar**	**94.95**	**24**	P	**P**	**02 34 01.0**	**+0.7**
	comp=Z,0.7nm,0.7s,baz=300,slow=4.4,SNR=17						
TXAR	**Lajitas Array**	**118.63**	**50**	PKP	**PKPdf**	**02 39 25.8**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=222,slow=1.2,SNR=2.4						
TORD	**Torodi Ar. Bea**	**120.87**	**291**	PKP	**PKPdf**	**02 39 31.1**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=71,slow=1.7,SNR=5.8						
PLCA	**Paso Flores**	**144.91**	**157**	PKP	**PKPdf**	**02 40 15.2**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=291,slow=2.4,SNR=9.0						

NEIC **12** *02:20:58.0±2.0,8.˚94N±0.˚06×126.˚34E±0.˚09, h11km±2km, mb4.8/94, Error ellipse: s-maj=12.5km s-min=9.3km az=90.0*

BJI **12** *02:21:01.0±0.0,9.˚00N×126.˚50E, h40km, mB5.1/41, mb4.7/52, Ms4.4/22, Ms7 4.1/22*

MOS **12** *02:21:01.2±1.1,8.˚94N×126.˚35E, h49km, mb5.0/41, Error ellipse: s-maj=9.8km s-min=5.8km az=108.1*

GCMT **12** *02:21:03.0±0.3,8.˚98N±0.˚02×126.˚25E±0.˚02, h12km, MW5.0/79, Moment Tensor Solution. s14,c16; s79,c98; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr0.57±.08; Mθθ0.21±.05; Mϕϕ -0.78±.07; Mrθ -2.67±.16; Mrϕ -0.30±.05; Mθϕ3.40±.18; Best double couple: M₀4.37300×10¹⁶ NP1:ϕs216.00000°, δ8.00000°, λ162.00000°. NP2: ϕs323.00000°, δ88.00000°, λ83.00000°. Principal axes: T 4.5950, Plg47.0000°, Azm226.0000°; N -0.4430, Plg7.0000°, Azm324.0000°; P -4.1510, Plg42.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC **12** *02:21:05.3±1.3,8.˚93N×126.˚40E, h74km±12km, mb4.3/28, mb1 4.4/31, mb1mx4.3/46, mbtmp4.6/31, MS4.2/2, Ms1 4.2/2, ms1mx3.4/15 Error ellipse: s-maj=15.2km s-min=8.1km az=90.0*

ISC 12 02:21:03.2±0.9,**8.90N**±0.04×**126.40E**±0.06,**h52**km±8km, **n226,** σ1§**39**/228,**mb4.7**/104,**MS4.1**/13,**9C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.99**	**204**	P	**Pn**	**02 21 35.9**	**+1.4**
	143nm,0.3s,baz=117,slow=2.3,SNR=11						
DAV				S	**Sn**	**02 22 02.4**	**+4.2**
	446nm,0.3s,baz=258,slow=21,SNR=9.5						
DAV				LR	LR	02 22 37.3	
	comp=Z,10µm,18.1s,baz=354,slow=46						
DAV	**Davao City (W)**	**1.99**	**204**‖	*e*P	**Pn**	**02 21 32.6**	**-1.9**
DAV	**Davao City (W)**	**1.99**	**204**	Pg	**Pn**	**02 21 36.4**	**+1.9**
OCLP	**Ormoc**	**2.77**	**321**	*e*P	**Pn**	**02 21 47.6**	**+2.4**
OCLP				*e*S	**Sn**	**02 22 20.8**	**+3.4**
TGY	**Tagaytay City**	**7.44**	**315**	LR	LR	02 26 01.4	
	comp=Z,716nm,19.5s,baz=110,slow=40						
TNTI	**Ternate**	**8.13**	**173**	Pn	**Pn**	**02 22 57.3**	**-1.4**
KKM	**Kota Kinabalu**	**10.49**	**255**		**Pn**	**02 23 27.2**	**-3.9**

KMI LR LR
comp=Z,310nm,19.8s
KMI LR LR
comp=Z,320nm,20.1s
PSI Prapat 27.98 259 P **P** **02 26 49.7 +0.2**
PSI pmax pmax
comp=Z,41nm,1.1s
RPSI Rantau Prapat 28.01 259 P **P** **02 26 49.7 +0.2**
CM31 Chiang Mai Arr 28.28 293 P **P** **02 26 52.3 +0.3**
CM31 IAmb IAmb 02 26 55.8
comp=Z,10nm,0.8s
CMAR Chiang Mai Arr 28.28 293 P **P** **02 26 53.1 +1.1**
comp=Z,6.0nm,0.7s,baz=108,slow=7.0,SNR=19
CHTO Chiang Mai 28.38 293 P **P** **02 26 52.6 -0.3**
CHTO pmax pmax
comp=Z,7.0nm,0.9s
CHTO Chiang Mai 28.38 293 P **P** **02 26 52.6 -0.3**
KSRS Korea Array 28.46 3 P **P** **02 26 53.2 -0.1**
comp=Z,5.7nm,0.8s,baz=182,slow=11,SNR=14
MAT Matsushiro 29.54 20 P **P** **02 27 02.3 -0.6**
MJAR Matsushiro Arr 29.54 20 P **P** **02 27 02.2 -0.7**
MJAR pmax pmax
comp=Z,2.0nm,0.9s
MJAR Matsushiro Arr 29.54 20 P **P** **02 27 02.2 -0.7**
comp=Z,4.0nm,0.7s,baz=190,slow=8.6,SNR=11
MJAR Matsushiro Arr 29.54 20 IAmb IAmb 02 27 03.5
comp=Z,1.6nm,0.9s
GSI Gunungsitoli 29.66 257 P **P** **02 27 04.0 -0.2**
WRAB Tennant Creek 29.70 165 *ceP* **P** **02 27 04.8 +0.3**
WRAB pmax pmax
comp=Z,17nm,1.7s
WRA Warramunga Arr 29.71 165 P **P** **02 27 03.5 -1.1**
comp=Z,5.6nm,0.9s,baz=347,slow=9.1,SNR=13
WRA PcP **PcP** **02 30 07.9 +0.1**
comp=Z,3.3nm,1.0s,baz=336,slow=3.2,SNR=5.0
WRA Warramunga Arr 29.71 165 IAmb IAmb 02 27 07.2
comp=Z,0.4nm,0.8s
WR0 Warramunga Arr 29.78 164 P **P** **02 27 05.3 +0.1**
WR0 IAmb IAmb 02 27 09.3
comp=Z,8.7nm,0.8s
MLSI Meulaboh, Aceh 30.14 263 P **P** **02 27 12.1 +3.6**
CD2 Chengdu 30.41 319 *eP* **P** **02 27 11.3 +0.5**
CD2 S **S** **02 32 11.0 +2.9**
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 LR LR
comp=Z,490nm,16.7s
CD2 LR LR
comp=Z,490nm,15.7s
CD2 LR LR
comp=Z,650nm,15.2s
PSAD1 Pilbara Seismi 30.85 192 P **P** **02 27 15.8 +1.2**
PSAD1 IAmb IAmb 02 27 24.7
comp=Z,16nm,1.1s
PSAC1 Pilbara Seismi 30.93 192 P **P** **02 27 15.8 +0.5**
PSAC1 IAmb IAmb 02 27 16.5
comp=Z,16nm,0.8s
PSAA2 Pilbara Seismi 30.95 192 P **P** **02 27 15.6 +0.1**
PSAA2 IAmb IAmb 02 27 16.7
comp=Z,20nm,1.1s
PSA00 Pilbara Seismi 30.96 192 P **P** **02 27 15.5 -0.1**
BJT Baijiatuan 32.31 345 P **P** **02 27 26.8 -0.4**
BJT pmax pmax
comp=Z,9.0nm,1.1s
BJT Baijiatuan 32.31 345 P **P** **02 27 26.8 -0.4**
AS31 Alice Springs 33.19 167 P **P** **02 27 35.7 +0.5**
ASAR Alice Springs 33.19 167 P **P** **02 27 34.9 -0.3**
comp=Z,6.9nm,0.9s,baz=354,slow=6.8,SNR=18
ASAR PcP **PcP** **02 30 16.6 -0.6**
comp=Z,1.7nm,0.6s,baz=353,slow=1.8,SNR=5.3
ASAR ScP **ScP** **02 33 55.0 -2.3**
comp=Z,0.9nm,0.8s,baz=341,slow=0.5,SNR=6.0
LZH Lanzhou 33.98 326 *eP* **P** **02 27 41.8 -0.3**
LZH PP **PP** **02 29 01.8 +2.0**
LZH pmax pmax
comp=Z,15nm,1.1s
LZH pmax pmax
comp=Z,59nm,4.8s
LZH LR LR
comp=Z,190nm,13.2s
LZH LR LR
comp=Z,200nm,13.6s
LZH LR LR
comp=Z,250nm,15.1s
SIMRM Sittwe 34.24 293 P **P** **02 27 45.8 +1.4**
SIMRM IAmb IAmb 02 27 48.1
comp=Z,17nm,0.8s
HHC Hu-ho-hao-te 34.44 340 *eP* **P** **02 27 46.8 +0.8**
HHC pmax pmax
comp=Z,5.0nm,1.1s
HHC pmax pmax
comp=Z,80nm,5.7s
CN2 Changchun 34.78 359 *eP* **P** **02 27 48.5 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CTA Charters Tower 34.81 146 P **P** **02 27 49.2 0.0**
comp=Z,16nm,1.1s,baz=345,slow=10,SNR=6.1
USA0B Ussuriysk Arra 35.50 7 P **P** **02 27 55.1 +0.2**
USA0B pmax pmax
comp=Z,27nm,0.8s
USA0B Ussuriysk Arra 35.50 7 P **P** **02 27 55.1 +0.2**
USRK Ussuriysk Ar. 35.50 7 P **P** **02 27 55.0 0.0**
USRK Ussuriysk Ar. 35.50 7 P **P** **02 27 55.0 0.0**
comp=Z,24nm,0.8s,baz=193,slow=8.4,SNR=20
MDJ Mudanjiang 35.69 4 P **P** **02 27 57.6 +1.0**
MDJ pmax pmax
comp=Z,35nm,0.9s
MDJ pmax pmax
comp=Z,380nm,3.9s
MDJ Mudanjiang 35.69 4 P **P** **02 27 56.9 +0.3**
SHL Shillong 36.74 301 P **P** **02 28 05.3 -0.7**
SHL pmax pmax
comp=Z,25nm,1.1s
SHL Shillong 36.74 301 P **P** **02 28 05.3 -0.7**
SHL IAmb IAmb 02 28 08.2
comp=Z,25nm,1.1s
TEY Ternei 37.07 12⇑ *iP* **P** **02 28 09.7 +1.4**
TEY pmax pmax
comp=N,20nm,1.1s
TEY pmax pmax
comp=Z,50nm,1.0s
TEY pmax pmax
comp=E,10.0nm,1.8s
GTA Gaotai 38.58 326 *eP* **P** **02 28 22.9 +1.6**
GTA PcP **PcP** **02 30 33.5 +0.4**
GTA pmax pmax
comp=E,4.0nm,0.8s
GTA pmax pmax
comp=E,140nm,5.6s
GTA LR LR
comp=E,240nm,16.5s
GTA LR LR
comp=E,220nm,17.2s
GTA LR LR
comp=E,310nm,18.2s
LSA Lhasa 38.94 307 P **P** **02 28 25.3 +0.4**
LSA pmax pmax
comp=Z,5.0nm,0.7s
LSA Lhasa 38.94 307 P **P** **02 28 25.3 +0.4**
MORW Morawa 39.05 194 P **P** **02 28 25.4 +0.3**
MORW IAmb IAmb 02 28 26.6
comp=Z,16nm,0.8s
YSS Yuzh-Sakhalins 40.41 17 *i* P **P** **02 28 37.2 +1.0**
KLR Kul'dur 40.45 5 *i* P **P** **02 28 36.7 +0.1**
KLR pmax pmax
comp=Z,19nm,1.6s
KLR Kul'dur 40.45 5 P **P** **02 28 35.8 -0.8**
comp=Z,3.7nm,0.5s,baz=179,slow=9.2,SNR=13
HIA Hailar 40.62 353 P **P** **02 28 37.7 -0.4**
HIA pmax pmax
comp=Z,6.0nm,1.0s
HIA Hailar 40.62 353 P **P** **02 28 37.6 -0.4**
ULN Ulaanbaatar 42.15 341 P **P** **02 28 51.1 +0.3**
ULN pmax pmax
comp=Z,3.0nm,0.6s
ULN Ulaanbaatar 42.15 341 P **P** **02 28 51.0 +0.3**
SONM Songino Array 42.34 340 P **P** **02 28 51.8 -0.5**
comp=Z,0.7nm,0.5s,baz=153,slow=8.4,SNR=6.1
SONM PcP **PcP** **02 30 43.1 -1.9**
comp=Z,0.7nm,0.4s,baz=178,slow=3.2,SNR=4.5
SONM Songino Array 42.34 340 IAmb IAmb 02 28 53.9
comp=Z,1.4nm,0.9s
BBOO Buckleboo 42.48 168 P **P** **02 28 54.5 +1.1**
NWAO Narrogin (SRO) 42.50 191 P **P** **02 28 54.5 +0.9**
comp=Z,9.6nm,0.6s,baz=28,slow=10,SNR=6.0
GRNR Gornyy 42.56 9⇓ *iP* P 02 28 48.5 -5.3

GRNR pmax pmax
comp=Z,8.0nm,1.1s
GRNR MLR MLR
comp=Z,150nm,18.0s
STKA Stephens Creek 43.07 161 P **P** **02 28 58.6 +0.4**
STKA pmax pmax
comp=Z,3.0nm,1.0s
STKA Stephens Creek 43.07 161 P **P** **02 28 57.8 -0.4**
comp=Z,8.4nm,0.7s,baz=337,slow=9.4,SNR=12
STKA Stephens Creek 43.07 161 P **P** **02 28 58.6 +0.4**
ZEA Zeya 44.72 1 *eP* **P** **02 29 10.9 -0.2**
ZEA pmax pmax
comp=Z,80nm,1.8s
ZEA MLR MLR
comp=N,300nm,20.0s
ZEA MLR MLR
comp=Z,300nm,20.0s
ARMA Armidale 45.99 149 P **P** **02 29 22.3 +0.6**
ARMA IAmb IAmb 02 29 26.4
comp=Z,11nm,1.1s
TLY Talaya 46.56 341 P **P** **02 29 26.2 +0.4**
TLY pmax pmax
comp=Z,6.0nm,0.7s
TLY Talaya 46.56 341 P **P** **02 29 26.2 +0.4**
TLY IAmb IAmb 02 29 29.8
comp=Z,5.8nm,0.7s
WMQ Urumqi 48.38 323 *eP* **P** **02 29 40.2 +0.1**
WMQ pmax pmax
comp=Z,10.0nm,1.1s
WMQ pmax pmax
comp=Z,97nm,4.7s
WMQ LR LR
comp=Z,260nm,24.1s
WMQ LR LR
comp=Z,1μm,29.2s
WMQ LR LR
comp=Z,180nm,20.3s
WMQ Urumqi 48.38 323 P **P** **02 29 40.2 +0.1**
WMQ pmax pmax
comp=Z,7.0nm,1.0s
WMQ Urumqi 48.38 323 P **P** **02 29 40.2 +0.1**
WMQ IAmb IAmb 02 29 43.9
comp=Z,7.2nm,1.0s
TOO Toolangi 49.56 160 P **P** **02 29 50.7 +1.6**
TOO pmax pmax
comp=Z,15nm,1.1s
TOO Toolangi 49.56 160 P **P** **02 29 50.7 +1.6**
TOO IAmb IAmb 02 29 55.0
comp=Z,15nm,1.1s
BOD Bodaibo 49.74 351 *eP* **P** **02 29 50.0 -0.1**
BOD pmax pmax
comp=Z,9.0nm,1.7s
DZM Mont Dzumac 49.89 129 *e*LR LR 02 44 14.8
comp=Z,234nm,24.1s
PETK Petropavlovsk- 50.83 24 P **P** **02 29 59.8 +1.3**
comp=Z,5.5nm,0.6s,baz=203,slow=4.0,SNR=14
YAK Yakutsk 53.09 2 *eP* **P** **02 30 13.9 -1.2**
YAK pmax pmax
comp=Z,22nm,1.3s
YAK pmax pmax
comp=N,22nm,1.6s
YAK pmax pmax
comp=E,4.0nm,1.2s
YAK Yakutsk 53.09 2 P **P** **02 30 14.6 -0.5**
comp=E,4.1nm,0.3s,baz=258,slow=1.6,SNR=5.5
YAK Yakutsk 53.09 2 P **P** **02 30 14.9 -0.1**
YAK IAmb IAmb 02 30 16.1
comp=Z,17nm,0.9s
MK31 Makanchi Array 53.19 323 P **P** **02 30 15.7 -0.5**
MK31 pmax pmax
comp=Z,7.0nm,0.8s
MK31 Makanchi Array 53.19 323 P **P** **02 30 15.7 -0.5**
MK31 IAmb IAmb 02 30 19.0
comp=Z,6.8nm,0.8s
MKAR Makanchi Array 53.19 323 P **P** **02 30 15.8 -0.5**
comp=Z,8.0nm,0.7s,baz=126,slow=8.0,SNR=6.1
MKAR PcP **PcP** **02 31 23.5 -0.2**
comp=Z,5.1nm,0.7s,baz=120,slow=5.4,SNR=7.0
MAKZ Makanchi 53.38 323 P **P** **02 30 17.2 -0.4**
MAKZ pmax pmax
comp=Z,7.0nm,0.9s
MAKZ Makanchi 53.38 323 P **P** **02 30 17.2 -0.4**
MAKZ IAmb IAmb 02 30 19.9
comp=Z,7.1nm,0.8s
KSH Kashi 54.24 313 P **P** **02 30 25.4 +1.2**
KSH PP **PP** **02 32 28.5 +2.1**
KSH S **S** **02 38 01.7 +3.6**
KSH SS **SS** **02 41 42.4 +1.8**
KSH pmax pmax
comp=Z,370nm,5.3s
KSH LR LR
comp=Z,200nm,4.8s
KSH LR LR
comp=Z,180nm,6.8s
KSH LR LR
comp=Z,390nm,6.4s
NIL Nilore 54.61 305 P **P** **02 30 26.6 -0.2**
NIL pmax pmax
comp=Z,22nm,0.9s
NIL Nilore 54.61 305 P **P** **02 30 26.6 -0.2**
ZAA0 Zalesovo Array 55.88 332 P **P** **02 30 34.7 -0.8**
ZALV Zalesovo Beam 55.88 332 P **P** **02 30 33.8 -1.8**
comp=Z,1.8nm,0.4s,baz=116,slow=6.8,SNR=10
ZALV PcP **PcP** **02 31 32.1 -1.6**
comp=Z,1.5nm,0.4s,baz=125,slow=3.1,SNR=4.3
DGAR Diego Garcia 56.15 255 P **P** **02 30 37.5 -0.6**
DGAR pmax pmax
comp=Z,104nm,1.0s
DGAR Diego Garcia 56.15 255 P **P** **02 30 37.5 -0.6**
AAK Ala-Archa 56.39 316 P **P** **02 30 38.1 -1.5**
AAK pmax pmax
comp=Z,2.0nm,1.1s
AAK Ala-Archa 56.39 316 P **P** **02 30 38.1 -1.5**
KURK Kurchatov 57.27 326 *ce*P **P** **02 30 43.5 -1.9**
KURK pmax pmax
comp=Z,23nm,1.3s
KURK Kurchatov 57.27 326 P **P** **02 30 44.5 -0.9**
KURK IAmb IAmb 02 30 48.1
comp=Z,14nm,0.9s
BTK Batken 58.19 312 P **P** **02 30 51.7 -0.5**
BTK pmax pmax
comp=Z,5.0nm,1.1s
BTK Batken 58.19 312 P **P** **02 30 51.7 -0.5**
KBL Kabul 58.22 305 P **P** **02 30 53.0 +0.3**
KBL pmax pmax
comp=Z,7.0nm,0.9s
KBL Kabul 58.22 305 P **P** **02 30 53.0 +0.3**
KBL IAmb IAmb 02 30 54.6
comp=Z,7.3nm,0.8s
SMY Shemya 58.24 32 P **P** **02 30 52.7 +0.5**
SMY pmax pmax
comp=Z,130nm,1.1s
SMY Shemya 58.24 32 P **P** **02 30 52.7 +0.5**
GAR Garm 58.27 311 P **P** **02 30 52.0 -0.9**
CHGR Chuyangaron 59.05 310 P **P** **02 30 58.8 +0.5**
TIXI Tiksi 62.71 1 *ce*P **P** **02 31 22.7 +0.3**
TIXI pmax pmax
comp=Z,20nm,1.3s
TIXI Tiksi 62.71 1 P **P** **02 31 21.9 -0.4**
TIXI IAmb IAmb 02 31 25.2
comp=Z,9.4nm,0.8s
HRA Herat 63.73 304 P **P** **02 31 30.8 +0.7**
HRA IAmb IAmb 02 31 32.2
comp=Z,4.6nm,0.8s
BILL Bilibino 64.68 15⇑ *e*P **P** **02 31 36.3 +0.9**
BILL *e* 02 34 05.0
BILL pmax pmax
comp=Z,9.0nm,1.7s
BILL MLR MLR
comp=Z,106nm,19.0s
GEYT Alibeck 67.47 307 P **P** **02 31 54.4 +0.4**
comp=Z,4.2nm,0.9s,baz=106,slow=3.8,SNR=8.2
GEYT Alibeck 67.47 307 IAmb IAmb 02 31 56.3
comp=Z,2.9nm,0.9s
GYA0B ALIBECK ARRAY 67.47 307 P **P** **02 31 54.7 +0.7**
GYA0B IAmb IAmb 02 31 58.9
comp=Z,7.7nm,0.9s
ABKAR Akbulak array 67.99 320 P **P** **02 31 57.0 0.0**
ABKAR IAmb IAmb 02 31 59.5
comp=Z,5.9nm,0.8s
SVE Sverdlovsk 69.43 328 *eP* **P** **02 32 04.4 -1.4**
SVE pmax pmax
comp=Z,13nm,1.0s
ARU Arti 70.44 327 *c iP* **P** **02 32 10.4 -1.5**
ARU 02 32 29.6
ARU S **S** **02 41 24.4 +3.6**

ARU SS **SS** **02 45 48.6 -3.8**
ARU pmax pmax
comp=Z,25nm,2.6s
ARU Arti 70.44 327 P **P** **02 32 12.1 +0.1**
ARU IAmb IAmb 02 32 13.9
comp=Z,6.4nm,0.6s
RDOG Red Dog Mine 74.62 22 P **P** **02 32 38.0 +1.3**
RDOG IAmb IAmb 02 32 40.2
comp=Z,10nm,1.2s
PRGR Permogore 77.84 331 *eP* **P** **02 32 53.0 -2.0**
PRGR pmax pmax
comp=Z,9.0nm,0.6s
TBLG Delisi 77.93 311 P **P** **02 32 56.5 +0.5**
TBLG pmax pmax
comp=Z,7.0nm,0.7s
TBLG Delisi 77.93 311 P **P** **02 32 56.5 +0.5**
TBLG IAmb IAmb 02 32 59.9
comp=Z,7.3nm,0.7s
RAYN Ar Rayn 78.20 292 P **P** **02 32 57.6 -0.3**
RAYN pmax pmax
comp=Z,10.0nm,0.8s
RAYN Ar Rayn 78.20 292 P **P** **02 32 57.6 -0.3**
RAYN IAmb IAmb 02 32 59.9
comp=Z,10.0nm,0.8s
BPAW Bear Paw Mtn. 78.82 26 P **P** **02 33 02.1 +1.7**
BPAW IAmb IAmb 02 33 02.2
comp=Z,14nm,1.1s
AKH Akhalkalaki 78.87 310 P **P** **02 33 02.3 +0.9**
AKH pmax pmax
comp=Z,9.0nm,1.1s
AKH Akhalkalaki 78.87 310 P **P** **02 33 02.3 +0.9**
AKH IAmb IAmb 02 33 04.9
comp=Z,8.8nm,1.1s
MLY Manley 78.97 25 IAmb IAmb 02 33 04.7
comp=Z,12nm,1.1s
KIV Kislovodsk 79.37 313 *eP* **P** **02 33 03.7 -0.2**
KIV pmax pmax
comp=Z,19nm,1.0s
TOLK Toolik Lake Re 79.59 22 P **P** **02 33 05.9 +1.3**
TOLK IAmb IAmb 02 33 08.2
comp=Z,10nm,1.1s
PMR Palmer 79.60 29 P **P** **02 33 05.9 +1.2**
PMR pmax pmax
comp=Z,8.0nm,1.0s
PMR Palmer 79.60 29 P **P** **02 33 05.9 +1.2**
MCK McKinley 79.72 27 P **P** **02 33 06.0 +0.7**
MCK pmax pmax
comp=Z,12nm,1.1s
MCK McKinley 79.72 27 P **P** **02 33 06.0 +0.7**
MCK IAmb IAmb 02 33 06.5
comp=Z,12nm,1.1s
RND Reindeer 79.75 27 P **P** **02 33 06.2 +0.6**
RND pmax pmax
comp=Z,11nm,1.1s
RND Reindeer 79.75 27 P **P** **02 33 06.2 +0.6**
RND IAmb IAmb 02 33 08.8
comp=Z,10nm,1.1s
VRH Novokhopyorsk 79.80 320 *eP* **P** **02 33 03.9 -2.0**
VRH pmax pmax
comp=Z,10.0nm,1.0s
KNK Knik Glacier 79.92 29 IAmb IAmb 02 33 09.5
comp=Z,12nm,0.9s
WRH Wood River Hil 80.09 26 P **P** **02 33 08.6 +1.3**
CCB Clear Creek Bu 80.22 26 P **P** **02 33 08.4 +0.5**
IL31 80.61 26 P **P** **02 33 10.7 +0.6**
ILAR Eielson Array 80.61 26 P **P** **02 33 09.2 -0.9**
comp=Z,1.2nm,0.5s,baz=256,slow=3.8,SNR=23
PAX Paxson 81.29 28 P **P** **02 33 14.9 +1.0**
PAX pmax pmax
comp=Z,6.0nm,1.1s
PAX Paxson 81.29 28 P **P** **02 33 14.9 +1.0**
VORD Divnogorie 81.34 320 *eP* **P** **02 33 13.9 -0.3**
VORD pmax pmax
comp=Z,7.0nm,0.6s
VSR Storozhevoye 81.40 321 *eP* **P** **02 33 13.4 -1.2**
VSR pmax pmax
comp=Z,8.0nm,0.7s
LPSR Galich'ya Gora 81.47 322 *eP* **P** **02 33 14.7 -0.2**
LPSR pmax pmax
comp=Z,9.0nm,0.6s
RIDG Independent Ri 81.54 27 P **P** **02 33 16.2 +1.1**
DOT Dot Lake 81.89 27 P **P** **02 33 18.6 +1.7**
DOT IAmb IAmb 02 33 19.0
comp=Z,8.7nm,1.1s
SCRK Sand Creek 81.90 26 P **P** **02 33 18.2 +1.1**
ATD Arta Tunnel 81.99 280 P **P** **02 33 17.6 -0.9**
comp=Z,3.8nm,0.4s,baz=40,slow=5.4,SNR=3.9
ATD Arta Tunnel 81.99 280 IAmb IAmb 02 33 22.1
comp=Z,12nm,1.0s
OPO Ambohidratompo 82.72 250 P **P** **02 33 20.9 -1.4**
comp=Z,3.8nm,0.8s,baz=55,slow=8.8,SNR=3.8
DAWY Dawson 83.91 26 P **P** **02 33 29.1 +1.7**
DAWY IAmb IAmb 02 33 30.2
comp=Z,10nm,1.1s
GAZ Gaziantep 84.05 307 P **P** **02 33 28.8 0.0**
GAZ IAmb IAmb 02 33 42.9
comp=Z,6.4nm,0.9s
SIM Simferopol' 85.40 315 *de*P **P** **02 33 37.1 +1.9**
SIM pmax pmax
comp=Z,12nm,0.7s
INK Inuvik 85.50 22 P **P** **02 33 35.0 -0.2**
INK pmax pmax
comp=Z,3.0nm,0.8s
INK Inuvik 85.50 22 P **P** **02 33 35.0 -0.2**
ARCES ARCESS Array B 85.52 340 P **P** **02 33 34.4 -1.0**
comp=Z,3.7nm,0.7s,baz=84,slow=5.9,SNR=17
BR131 Keskin Array S 86.50 309 P **P** **02 33 41.1 +0.1**
BR131 pmax pmax
comp=Z,2.0nm,0.9s
BR131 Keskin Array S 86.50 309 P **P** **02 33 41.1 +0.1**
BRTR Keskin Array B 86.50 309 *ce*P **P** **02 33 40.9 -0.1**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 86.50 309 P **P** **02 33 39.5 -1.4**
comp=Z,1.3nm,0.8s,baz=87,slow=4.3,SNR=8.0
PPT2 Papeete2 87.02 108 *e*LR LR 03 01 25.4
comp=Z,129nm,22.8s
PPT2 Papeete2 87.02 108 *e*T T 04 09 35.3
comp=Z,2.1nm,0.4s
PAE Paea 87.03 108 *e*T T 04 09 35.0
comp=Z,1.0nm,0.3s
ANTO Ankara 87.12 310 P **P** **02 33 42.5 -1.4**
ANTO Ankara 87.12 310 P **P** **02 33 42.5 -1.4**
ANTO IAmb IAmb 02 33 48.0
comp=Z,6.6nm,1.1s
FINES FINESS Array B 87.15 332 P **P** **02 33 42.1 -1.4**
comp=Z,4.0nm,0.4s,baz=71,slow=4.3,SNR=20
AKASG Malin Array Be 87.70 321 P **P** **02 33 43.9 -2.5**
comp=Z,1.5nm,0.7s,baz=68,slow=4.8,SNR=7.2
TBI Tubuai 88.16 114 *e*LR LR 03 01 53.0
comp=Z,140nm,34.2s
C36M Paulatuk 88.48 20 P **P** **02 33 49.6 -0.1**
C36M IAmb IAmb 02 33 50.8
comp=Z,4.6nm,0.8s
VNDA Vanda 88.56 173 P **P** **02 33 50.3 +0.5**
VNDA pmax pmax
comp=Z,9.0nm,0.9s
VNDA Vanda 88.56 173 P **P** **02 33 50.0 +0.2**
comp=Z,7.6nm,0.9s,baz=318,slow=6.0,SNR=15
VNDA Vanda 88.56 173 P **P** **02 33 50.3 +0.5**
KMBO Kilima Mbogo 89.33 269 *ce*P **P** **02 33 57.4 +2.3**
KMBO pmax pmax
comp=Z,1.0nm,0.9s
BUR08 Bucovina Ar. S 90.95 318 P **P** **02 34 01.7 -0.1**
RES Resolute Bay 92.82 10 P **P** **02 34 10.7 +1.0**
RES pmax pmax
comp=Z,4.0nm,1.0s
RES Resolute Bay 92.82 10 P **P** **02 34 10.7 +1.0**
RES IAmb IAmb 02 34 11.2
comp=Z,4.4nm,0.9s
NB2 NORSAR Subarra 94.04 334 P **P** **02 34 13.9 -1.8**
comp=Z,5.9nm,1.0s,baz=67,slow=4.6
NB2 NORSAR Subarra 94.04 334 P **P** **02 34 13.9 -1.8**
baz=67,slow=4.6
NOA NORSAR Array B 94.04 334 P **P** **02 34 13.3 -2.4**
comp=Z,0.3nm,0.6s,baz=66,slow=4.5,SNR=7.6
TAOE Nuku Hiva Isla 94.72 98 *e*LR LR 03 05 02.0
comp=Z,174nm,26.3s
VYHS Vyhne 94.80 320 *eP* **P** **02 34 19.7 +0.3**
VYHS Vyhne 94.80 320 *eP* **P** **02 34 19.7 +0.3**
YKA Yellowknife Ar 94.95 24 P **P** **02 34 18.4 -1.4**
comp=Z,1.1nm,0.6s,baz=300,slow=4.5,SNR=19
YKA PKiKP **PKiKP** **02 39 01.0 -0.3**
baz=319,slow=1.8
GERES GERESS Array B 97.85 322 P **P** **02 34 32.3 -1.1**
comp=Z,0.6nm,0.7s,baz=48,slow=2.0,SNR=4.1

TXAR	**Lajitas Array**	**118.62**	**50**	PKP	**PKPdf**	**02 39 45.4**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=190,slow=0.8,SNR=4.9						
TORD	**Torodi Ar. Bea**	**120.88**	**291**	PKP	**PKPdf**	**02 39 49.8**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=64,slow=2.1,SNR=8.7						
PLCA	**Paso Flores**	**144.90**	**157**	PKIKP	**PKPdf**	**02 40 35.4**	**+0.4**
PLCA	**Paso Flores**	**144.90**	**157**	PKP	PKPbc	02 40 34.2	0.0
	comp=Z,13nm,0.9s,baz=223,slow=2.8,SNR=15						
PLCA	**Paso Flores**	**144.90**	**157**		**PKPdf**	**02 40 35.4**	**+0.4**
GO06	**Curarrehue**	**145.52**	**155**		**PKPab**	**02 40 36.9**	**+0.4**

MAN 12 02:43:52.5, 9.82N×123.27E, h0km, mb3.5, ML2.1, MS1.5, Negros

JMA ***12*** *02:51:57.1±0.1, 28.00N×130.30E, h33km±2km, M3.4*
NEIC ***12*** *02:52:07.4±2.7, 27.80N±0.09×129.4E±0.1, h78km±5km, mb4.1/7, Error ellipse: s-maj=19.0km s-min=13.1km az=81.0*
IDC ***12*** *02:52:11.0±4.5, 28.05N×129.81E, h123km±44km, mb3.5/9, mb1 3.7/10, mb1mx3.4/36, mbtmp3.9/10, Error ellipse: s-maj=95.2km s-min=18.7km az=73.0*

ISC 12 02:51:59.6±0.6, 28.00N±0.03×130.13E±0.05, h33km, n38, σ1s39/45, mb3.9/11, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
JZK	**Kikaishima**	**0.34**	**337**	P		Pb		02 52 06.3	-1.5
JZK				*e*S		**Sb**		**02 52 13.2**	**-0.3**
JAM	**Amami Oshima**	**0.61**	**312**	P		**Pb**		**02 52 11.0**	**-1.0**
JAM				*e*S		**Sn**		**02 52 20.1**	**-0.6**
JAMN	**Amaminishikomi**	**0.87**	**286**	P		**Pn**		**02 52 15.2**	**-0.3**
JAMN				*e*S		**Sn**		**02 52 28.1**	**+1.0**
JTK	**Tokunoshima**	**1.06**	**259**	P		**Pb**		**02 52 18.5**	**-0.9**
JTK				*e*S		**Sb**		**02 52 34.4**	**+1.4**
JTAJ	**Takarajima**	**1.41**	**325**	P		**Pn**		**02 52 22.6**	**-0.2**
JTAJ				*e*S		**Sb**		**02 52 41.3**	**-1.5**
JOKE	**Okinoerabujima**	**1.52**	**246**	P		**Pn**		**02 52 25.8**	**-1.4**
JYRO	**Yoronjima**	**1.78**	**237**	P		**Pn**		**02 52 28.5**	**+0.5**
JYRO				*e*S		**Sb**		**02 52 51.3**	**-2.1**
JNN	**Nakanoshima**	**1.85**	**353**	P		**Pn**		**02 52 28.2**	**-0.7**
JNN				*e*S		**Sn**		**02 52 50.6**	**-0.6**
JOW	**Kunigami**	**2.02**	**235**	P		**Pn**		**02 52 31.7**	**+0.4**
JOW				*e*S		**Sb**		**02 52 57.8**	**-2.5**
JOW	**Kunigami**	**2.02**	**235**			**Pn**		**02 52 31.3**	**0.0**
JIH	**Iheya**	**2.15**	**244**	P		**Pn**		**02 52 33.3**	**+0.3**
JYAK	**Yakushimahirau**	**2.25**	**8**	P		Pn		02 52 32.1	-2.4
JYAK				*e*S		**Sn**		**02 52 58.6**	**-2.6**
JKDJ	**Kitadaitoujima**	**2.30**	**153**	P		Pn		02 52 34.2	-0.9
JKDJ				*e*S		**Sn**		**02 53 01.1**	**-1.1**
JMZ	**Minamidaito 2**	**2.38**	**156**	*e*S		**Sn**		**02 53 02.6**	**-1.8**
JNTH	**Nagotoyohara**	**2.38**	**232**	P		**Pn**		**02 52 37.0**	**+0.7**
JNTH				*e*S		**Sb**		**02 53 06.1**	**-4.8**
JKC	**Kuchinoerabu**	**2.45**	**1**	*e*S		**Sn**		**02 53 05.7**	**-0.4**
JMTN	**Minamitane**	**2.48**	**16**	P		**Pn**		**02 52 37.5**	**-0.2**
JMTN				*e*S		**Sn**		**02 53 05.9**	**-0.9**
JTN	**Tanegashima 3**	**2.75**	**16**	P		Pn		02 52 40.9	-0.4
JTN				*e*S		**Sn**		**02 53 12.4**	**-1.0**
JAGN	**Aguni-jima**	**2.93**	**242**	P		**Pn**		**02 52 44.8**	**+1.0**
KSRS	**Korea Array**	**9.61**	**349**	P		Pn		02 54 25.6	+10
	0.1nm,0.3s,baz=168,slow=14,SNR=4.0								
XAN	**Xi'an**	**19.13**	**294**	P		**P**		**02 56 20.4**	**+0.5**
XAN				IAmb		IAmb		02 56 22.1	
	comp=Z,8.3nm,0.7s								
SHL	**Shillong**	**34.13**	**275**	P		**P**		**02 58 40.9**	**-0.9**
MK31	**Makanchi Array**	**41.66**	**310**	P		**P**		**02 59 44.3**	**-0.5**
MK31				IAmb		IAmb		02 59 45.5	
	comp=Z,0.9nm,0.8s								
MKAR	**Makanchi Array**	**41.66**	**310**	P		**P**		**02 59 43.8**	**-1.0**
KURK	**Kurchatov**	**44.73**	**315**	P		**P**		**03 00 08.8**	**-0.8**
KURK	**Kurchatov**	**44.73**	**315**	IAmb		IAmb		03 01 13.5	
	comp=Z,6.5nm,1.6s								
KURBB	**Kurchatov Arra**	**44.77**	**315**	P		**P**		**03 00 08.8**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=101,slow=8.9,SNR=4.4								
WRA	**Warramunga Arr**	**47.84**	**175**	P		**P**		**03 00 35.6**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=353,slow=8.3,SNR=2.8								
NIL	**Nilore**	**48.65**	**291**	P		**P**		**03 00 40.3**	**-0.3**
KKAR	**Karatay Array**	**49.79**	**304**	P		**P**		**03 00 49.6**	**+0.5**
ASAR	**Alice Springs**	**51.50**	**176**	P		**P**		**03 01 05.4**	**+3.3**
	comp=Z,0.2nm,0.5s,baz=7,0,slow=13,SNR=4.7								
ARCES	**ARCESS Array B**	**68.98**	**339**	P		**P**		**03 03 01.1**	**0.0**
	comp=Z,2.5nm,0.9s,baz=75,slow=10,SNR=4.0								
FINES	**FINESS Array B**	**72.15**	**331**	P		**P**		**03 03 20.9**	**+0.3**
	comp=Z,1.5nm,0.5s,baz=68,slow=5.3,SNR=27								
AKASG	**Malin Array Be**	**75.28**	**320**	P		**P**		**03 03 39.9**	**+0.7**
	comp=Z,1.4nm,0.5s,baz=54,slow=7.0,SNR=7.3								
BRTR	**Keskin Array B**	**77.28**	**308**	P		**P**		**03 03 51.9**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=90,slow=4.3,SNR=4.3								
NOA	**NORSAR Array B**	**78.47**	**334**	P		**P**		**03 03 56.6**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=51,slow=5.4,SNR=3.8								
CLL	**Collm**	**83.65**	**326**	*i* P		**P**		**03 04 26.0**	**+1.3**
GERES	**GERESS Array B**	**84.80**	**324**	P		**P**		**03 04 32.2**	**+1.4**
	comp=Z,0.5nm,0.6s,baz=65,slow=9.8,SNR=3.0								

JMA ***12*** *02:59:05.0±0.1, 28.01N×130.30E, h34km±1km, M3.5*
JMA Felt I J1.
IDC ***12*** *02:59:12.5±4.4, 28.15N×129.87E, h62km±39km, mb3.4/12, mb1 3.6/13, mb1mx3.4/42, mbtmp3.7/13, ML2.9/1, MS3.3/3, Ms1 3.4/3, ms1mx2.8/21, Error ellipse: s-maj=39.9km s-min=17.2km az=72.0*

ISC 12 02:59:06.0±1.3, 28.00N±0.03×130.19E±0.04, h18km±5km, n36, σ1s04/54, mb3.8/12, MS3.2/3, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
JZK	**Kikaishima**	**0.37**	**328**	P		**Pg**		**02 59 14.2**	**+0.4**
JZK				*e*S		**Sb**		**02 59 20.8**	**+1.2**
JAM	**Amami Oshima**	**0.66**	**308**	P		**Pb**		**02 59 18.7**	**-0.3**
JAM				*e*S		**Sb**		**02 59 28.6**	**+0.8**
JAMN	**Amaminishikomi**	**0.93**	**285**	P		**Pb**		**02 59 23.0**	**-0.6**
JAMN				*e*S		**Sb**		**02 59 36.5**	**+0.9**
JTK	**Tokunoshima**	**1.12**	**259**	P		**Pn**		**02 59 26.2**	**-0.6**
JTK				*e*S		**Sb**		**02 59 41.5**	**+0.4**
JTAJ	**Takarajima**	**1.44**	**323**	P		**Pn**		**02 59 30.4**	**-0.8**
JTAJ				*e*S		**Sn**		**02 59 48.3**	**-1.4**
JOKE	**Okinoerabujima**	**1.57**	**247**	P		**Pn**		**02 59 33.5**	**+0.5**
JYRO	**Yoronjima**	**1.83**	**238**	P		**Pn**		**02 59 36.1**	**-0.4**
JYRO				*e*S		**Sn**		**02 59 58.2**	**-0.9**
JNN	**Nakanoshima**	**1.86**	**351**	P		**Pn**		**02 59 37.6**	**+0.7**
JNN				*e*S		**Sn**		**02 59 58.6**	**-1.3**
JOW	**Kunigami**	**2.06**	**236**	P		**Pn**		**02 59 39.8**	**+0.1**
JOW				*e*S		**Sn**		**03 00 05.5**	**+0.5**
JIH	**Iheya**	**2.20**	**245**	P		**Pn**		**02 59 41.2**	**-0.4**
JIH				*e*S		**Sn**		**03 00 07.8**	**-0.5**
JYAK	**Yakushimahirau**	**2.25**	**7**	P		**Pn**		**02 59 42.7**	**+0.4**
JYAK				*e*S		**Sn**		**03 00 09.0**	**-0.5**
JKDJ	**Kitadaitoujima**	**2.27**	**154**	P		**Pn**		**02 59 42.4**	**-0.1**
JKDJ				*e*S		**Sn**		**03 00 08.6**	**-1.4**
JMZ	**Minamidaito 2**	**2.36**	**157**	P		**Pn**		**02 59 44.3**	**+0.6**
JMZ				*e*S		**Sn**		**03 00 10.9**	**-1.3**
JNTH	**Nagotoyohara**	**2.43**	**233**	P		**Pn**		**02 59 44.4**	**-0.4**
JNTH				*e*S		**Sn**		**03 00 14.0**	**-0.1**
JKC	**Kuchinoerabu**	**2.46**	**0**	P		**Pn**		**02 59 45.0**	**-0.1**
JKC				*e*S		**Sn**		**03 00 14.8**	**+0.2**
JMTN	**Minamitane**	**2.47**	**14**	P		**Pn**		**02 59 45.3**	**0.0**
JMTN				*e*S		**Sn**		**03 00 14.2**	**-0.8**
JTN	**Tanegashima 3**	**2.73**	**14**	P		**Pn**		**02 59 48.8**	**-0.2**
JTN				*e*S		**Sn**		**03 00 21.1**	**-0.4**
JAGN	**Aguni-jima**	**2.98**	**243**	P		**Pn**		**02 59 53.1**	**+0.8**
JAGN				*e*S		**Sn**		**03 00 27.6**	**0.0**
JKE	**Kume jima 2**	**3.46**	**242**	P		**Pn**		**02 59 58.9**	**-0.1**
JKE				*e*S		**Sn**		**03 00 41.1**	**+1.6**
KSRS	**Korea Array**	**9.62**	**349**	P		**Pn**		**03 01 26.5**	**+3.0**
	0.1nm,0.3s,baz=164,slow=14,SNR=4.0								
CMAR	**Chiang Mai Arr**	**30.17**	**258**	LR		LR		03 19 00.2	
	comp=Z,50nm,19.1s,baz=22,slow=40								
PETK	**Petropavlovsk-**	**32.28**	**31**	LR		LR		03 18 50.4	
	comp=Z,42nm,21.4s,baz=239,slow=36								
MKAR	**Makanchi Array**	**41.70**	**310**	P		**P**		**03 06 51.9**	**-1.8**
	0.3nm,0.5s,baz=90,slow=12,SNR=5.9								
MKAR				PcP		**PcP**		**03 08 50.3**	**+0.3**
	0.8nm,0.8s,baz=72,slow=4.0,SNR=7.1								
ZALV	**Zalesovo Beam**	**41.94**	**321**	PcP		**PcP**		**03 08 50.5**	**-0.2**
	0.3nm,0.4s,baz=101,slow=5.3,SNR=4.0								
KURBB	**Kurchatov Arra**	**44.82**	**315**	P		**P**		**03 07 17.2**	**-1.5**
	0.4nm,0.4s,baz=97,slow=9.2,SNR=5.0								
KURBB				PcP		**PcP**		**03 08 59.1**	**-1.3**
	0.4nm,0.8s,baz=104,slow=3.6,SNR=3.6								
WRA	**Warramunga Arr**	**47.83**	**175**	P		**P**		**03 07 44.6**	**+1.9**
	0.8nm,1.0s,baz=354,slow=8.4,SNR=3.4								
BVAR	**Borovoye Array**	**50.15**	**317**	P		**P**		**03 07 59.1**	**-1.0**
	0.4nm,0.4s,baz=76,slow=11,SNR=5.5								
BVAR				PcP		**PcP**		**03 09 19.7**	**+0.3**
	1.6nm,0.8s,baz=85,slow=4.9,SNR=8.7								
ASAR	**Alice Springs**	**51.49**	**176**	P		**P**		**03 08 13.5**	**+3.0**
	0.2nm,0.5s,baz=5.0,slow=14,SNR=4.5								
ARCES	**ARCESS Array B**	**69.00**	**339**	P		**P**		**03 10 09.2**	**-0.7**
	0.9nm,0.6s,baz=70,slow=7.3,SNR=5.7								
AFI	**Afiamalu**	**69.93**	**119**	LR		LR		03 34 51.2	
	comp=Z,32nm,19.4s,baz=8.5,slow=30								
FINES	**FINESS Array B**	**72.19**	**331**	P		**P**		**03 10 28.4**	**-1.0**
	2.0nm,0.4s,baz=67,slow=5.6,SNR=31								
AKASG	**Malin Array Be**	**75.32**	**320**	P		**P**		**03 10 47.2**	**-0.8**
	0.9nm,0.5s,baz=55,slow=5.8,SNR=8.6								
YKA	**Yellowknife Ar**	**76.18**	**26**	P		**P**		**03 10 53.3**	**+0.6**
	0.2nm,0.9s,baz=303,slow=5.6								
BRTR	**Keskin Array B**	**77.33**	**308**	P		**P**		**03 10 59.1**	**-0.7**
	0.7nm,0.8s,baz=87,slow=4.8,SNR=4.2								
NOA	**NORSAR Array B**	**78.50**	**334**	P		**P**		**03 11 05.1**	**-0.7**
	0.9nm,0.7s,baz=52,slow=5.5,SNR=3.3								
GERES	**GERESS Array B**	**84.84**	**324**	P		**P**		**03 11 40.4**	**+0.8**
	0.5nm,0.7s,baz=32,slow=6.1,SNR=2.4								

IDC ***12*** *03:27:35.7±0.9, 20.24N×120.46E, h0km, mb3.7/8, mb1 3.9/9, mb1mx3.7/34, mbtmp3.7/9, ML3.2/1, MS2.8/3, Ms1 2.9/3, ms1mx2.5/34, Error ellipse: s-maj=44.8km s-min=17.8km az=71.0*

ISC 12 03:27:39.9±0.9, 20.13N±0.11×120.6E±0.13, h28km, n11, σ1s26/10, mb3.6/8, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KSRS	**Korea Array**	**18.27**	**19**	P		**P**		**03 31 49.5**	**-1.8**
	0.1nm,0.3s,baz=200,slow=10,SNR=3.3								
KSRS				LR		LR		03 40 08.5	
	comp=Z,14nm,18.3s,baz=130,slow=41								
CMAR	**Chiang Mai Arr**	**20.47**	**269**	LR		LR		03 39 57.7	
	comp=Z,23nm,19.4s,baz=95,slow=36								
SIJI	**Sorong**	**23.50**	**152**	P		**P**		**03 32 48.6**	**+0.9**
	7.2nm,0.6s,baz=24,slow=6.8,SNR=4.1								
SONM	**Songino Array**	**29.77**	**341**	P		**P**		**03 33 44.8**	**+0.5**
	0.7nm,0.8s,baz=162,slow=9.0,SNR=5.2								
KLR	**Kul'dur**	**30.23**	**15**	LR		LR		03 45 56.1	
	comp=Z,37nm,18.1s,baz=218,slow=36								
MKAR	**Makanchi Array**	**40.81**	**319**	P		**P**		**03 35 19.4**	**+0.5**
	0.7nm,0.8s,baz=118,slow=10.0,SNR=5.6								
MKAR				PcP		**PcP**		**03 37 18.5**	**-1.2**
	0.2nm,0.6s,baz=124,slow=4.4,SNR=2.8								
WRA	**Warramunga Arr**	**42.20**	**161**	P		**P**		**03 35 29.2**	**-1.4**
	0.7nm,0.8s,baz=339,slow=9.0,SNR=3.4								
ZALV	**Zalesovo Beam**	**43.24**	**330**	P		**P**		**03 35 37.8**	**-0.9**
	0.7nm,0.5s,baz=126,slow=7.5,SNR=4.2								
ASAR	**Alice Springs**	**45.59**	**163**	P		**P**		**03 35 57.6**	**-0.2**
	0.4nm,0.8s,baz=352,slow=6.2,SNR=3.8								
ILAR	**Eielson Array**	**72.93**	**27**	P		**P**		**03 39 07.4**	**+1.0**
	0.6nm,0.8s,baz=269,slow=6.8,SNR=5.9								
YKA	**Yellowknife Ar**	**86.77**	**22**	P		**P**		**03 40 22.5**	**+1.2**
	0.6nm,0.8s,baz=314,slow=4.5,SNR=12								

NNC ***12*** *03:59:04.5±0.7, 43.13N×78.41E, h9km±4km, mb2.7, mpv2.5, Error ellipse: s-maj=4.6km s-min=3.6km az=1.0*
KRNET ***12*** *03:59:05.1±0.1, 43.13N×78.36E, h15km, mb2.6*
SOME ***12*** *03:59:05.7, 43.17N×78.37E, h15km*

ISC 12 03:59:04.9±0.8, 43.14N±0.03×78.37E±0.02, h13km±4km, n25, σ0s42/49, 1C-12D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
ZHN	**Zhinishke**	**0.06**	**60**	*e*P		**Pg**		**03 59 07.6**	**0.0**
	baz=57								
ZHN				*e*S		**Sg**		**03 59 09.0**	**-0.5**
	baz=57								
ZHN	**Zhinishke**	**0.06**	**60**	*e*P		**Pg**		**03 59 07.6**	**0.0**
	37nm,0.0s								
ZHN				*e*S		**Sg**		**03 59 09.0**	**-0.5**
	138nm,0.1s								
ZHN	**Zhinishke**	**0.06**	**60**	P		**Pg**		**03 59 07.6**	**0.0**
	37nm,0.0s								
ZHN				S		**Sg**		**03 59 09.0**	**-0.5**
	138nm,0.1s								
SATY	**Saty**	**0.09**	**159**	*e*P		**Pg**		**03 59 08.2**	**+0.4**
	58nm,0.1s								
SATY				*e*S		**Sg**		**03 59 10.1**	**+0.1**
	347nm,0.1s								
SATY	**Saty**	**0.09**	**159**	P		**Pg**		**03 59 08.2**	**+0.4**
	58nm,0.1s								
SATY				S		**Sg**		**03 59 10.1**	**+0.1**
	347nm,0.1s								
KURS	**Kuram**	**0.38**	**338**	*e*P		**Pg**		**03 59 12.7**	**+0.1**
	baz=38								
KURS				*e*S		**Sg**		**03 59 17.7**	**0.0**
	baz=38								
KURS	**Kuram**	**0.38**	**338**	*e*P		**Pg**		**03 59 12.7**	**+0.1**
	3.8nm,0.1s								
KURS				*e*S		**Sg**		**03 59 17.7**	**0.0**
	7.9nm,0.3s								
KURS	**Kuram**	**0.38**	**338**	P		**Pg**		**03 59 12.7**	**+0.1**
	3.8nm,0.1s								
KURS				S		**Sg**		**03 59 17.7**	**0.0**
	7.9nm,0.3s								
KPKS	**Kokpek**	**0.40**	**35**	*e*P		**Pg**		**03 59 13.1**	**+0.1**
	baz=36								
KPKS				*e*S		**Sg**		**03 59 18.4**	**0.0**
	baz=36								
KPKS	**Kokpek**	**0.40**	**35**	*e*P		**Pg**		**03 59 13.1**	**+0.1**
	5.2nm,0.1s								
KPKS				*e*S		**Sg**		**03 59 18.4**	**0.0**
	21nm,0.1s								
UZB	**Uzunbulak**	**0.48**	**89**	*e*P		**Pg**		**03 59 14.6**	**+0.2**
	baz=88								
UZB				*e*S		**Sg**		**03 59 21.0**	**+0.2**
	baz=88								
UZB	**Uzunbulak**	**0.48**	**89**	*e*P		**Pg**		**03 59 14.6**	**+0.2**
	14nm,0.1s								
UZB				*e*S		**Sg**		**03 59 21.1**	**+0.2**
	12nm,0.1s								
UZB	**Uzunbulak**	**0.48**	**89**	P		**Pg**		**03 59 14.6**	**+0.2**
	14nm,0.1s								
UZB				S		**Sg**		**03 59 21.0**	**+0.2**
	12nm,0.1s								
ANVS	**Anan'yevo**	**0.62**	**236**	⇓*i* P		**Pg**		**03 59 16.7**	**-0.4**
	baz=36								
ANVS				⇓*i* S		**Sg**		**03 59 25.7**	**+0.3**
	baz=36								
PDGK	**Podgornoye**	**0.84**	**77**	P		**Pg**		**03 59 20.9**	**-0.4**
	1.1nm,0.2s								
PDGK				S		**Sg**		**03 59 31.8**	**-0.5**
	1.3nm,0.2s								
PDGK	**Podgornoye**	**0.84**	**77**	⇓P		**Pg**		**03 59 20.8**	**-0.5**
	0.8nm,0.4s								
PDGK				⇓S		**Sg**		**03 59 31.9**	**-0.5**
	1.7nm,0.6s								
MNBS	**Baschi**	**0.94**	**2**	*e*P		**Pb**		**03 59 23.1**	**-0.1**
	2.8nm,0.1s								
MNBS				*e*S		**Sb**		**03 59 35.6**	**0.0**
	2.9nm,0.2s								
MNBS	**Baschi**	**0.94**	**2**	P		**Pb**		**03 59 23.2**	**-0.1**
	2.8nm,0.1s								
MNBS				S		**Sb**		**03 59 35.6**	**0.0**
	2.9nm,0.2s								
KDJ	**Kajisay**	**1.33**	**221**	⇓*i* P		**Pn**		**03 59 29.6**	**+0.1**
	baz=21								
KDJ				⇓*i* S		**Sg**		**03 59 48.0**	**+0.1**
	baz=21								
KTBS	**Karatobe**	**1.35**	**296**	*e*P		**Pb**		**03 59 30.3**	**+0.1**
	0.9nm,0.2s								
KTBS				*e*S		**Sb**		**03 59 47.9**	**+0.4**
	4.9nm,0.2s								
KTBS	**Karatobe**	**1.35**	**296**	P		**Pb**		**03 59 30.3**	**+0.1**
	0.9nm,0.2s								
KTBS				S		**Sb**		**03 59 47.9**	**+0.4**
	4.9nm,0.2s								
ULHL	**Ulahol**	**1.80**	**241**	⇓*i* P		**Pb**		**03 59 38.0**	**+0.1**
	baz=41								
ULHL				⇓*i* S		**Sg**		**04 00 02.4**	**-0.5**
	baz=41								
BOOM	**Boomskoye usch**	**1.90**	**251**	⇓*i* P		**Pb**		**03 59 39.2**	**-0.4**
	baz=51								
BOOM				⇓*i* S		**Sg**		**04 00 04.9**	**-1.1**
	baz=51								
TKM2	**Tokmak 2**	**2.04**	**265**	⇓*i* P		**Pb**		**03 59 41.7**	**-0.3**
	baz=65								
TKM2				⇓*i* S		**Sb**		**04 00 08.7**	**+1.3**
	baz=65								
TKM2	**Tokmak 2**	**2.04**	**265**	⇑Pg		**Pb**		**03 59 40.7**	**-1.3**
	1.2nm,1.0s								
TKM2				Lg		Lg		04 00 11.5	
	0.5nm,0.2s								

IDC ***12*** *04:04:55.5±1.4, 32.75N×91.43E, h0km, mb3.4/6, mb1 3.5/8, mb1mx3.3/35, mbtmp3.4/8, ML2.6/1, MS2.9/5, Ms1 2.9/5, ms1mx2.7/36, Error ellipse: s-maj=55.6km s-min=19.7km az=63.0*

ISC 12 04:05:00.6±1.5, 32.9N±0.2×91.4E±0.3, h35km, n13, σ0s82/8, mb3.5/5, MS2.8/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MKAR	**Makanchi Array**	**15.57**	**336**	Pn		**Pn**		**04 08 36.2**	**-1.2**
	0.0nm,0.3s,baz=156,slow=12,SNR=3.6								
AAK	**Ala-Archa**	**16.53**	**311**	LR		LR		04 16 07.3	
	comp=Z,49nm,18.9s,baz=128,slow=40								
SONM	**Songino Array**	**18.79**	**33**	P		**Pn**		**04 09 17.7**	**0.0**
	baz=217,slow=13,SNR=7.3								
KURBB	**Kurchatov Arra**	**20.14**	**336**	P		**P**		**04 09 32.7**	**+1.2**
	0.3nm,0.4s,baz=145,slow=11,SNR=3.2								
TLY	**Talaya**	**20.84**	**22**	LR		LR		04 18 34.8	
	comp=Z,36nm,19.6s,baz=284,slow=39								
ZALV	**Zalesovo Beam**	**21.61**	**349**	P		**P**		**04 09 47.4**	**0.0**
	2.4nm,0.7s,baz=167,slow=8.9,SNR=9.9								
ZALV				LR		LR		04 17 55.7	
	comp=Z,25nm,19.4s,baz=1.0,slow=36								
BVAR	**Borovoye Array**	**25.19**	**329**	P		**P**		**04 10 23.2**	**+0.5**
	0.3nm,0.5s,baz=115,slow=9.7,SNR=2.7								
GEYT	**Alibeck**	**27.50**	**290**	LR		LR		04 23 41.6	
	comp=Z,48nm,19.0s,baz=250,slow=41								
KSRS	**Korea Array**	**30.10**	**71**	LR		LR		04 23 20.6	
	comp=Z,13nm,19.4s,baz=35,slow=37								
GUMO	**Guam**	**52.18**	**98**	LR		LR		04 35 31.8	
	comp=Z,225nm,21.2s,baz=301,slow=35								
WRA	**Warramunga Arr**	**66.63**	**136**	P		**P**		**04 15 47.5**	**-0.3**
	1.0nm,1.1s,baz=325,slow=6.2,SNR=2.2								
ASAR	**Alice Springs**	**69.30**	**139**	P		**P**		**04 16 04.5**	**-0.1**
	0.5nm,0.9s,baz=318,slow=5.4,SNR=3.8								
ILAR	**Eielson Array**	**72.66**	**22**	P		**P**		**04 16 24.8**	**+0.4**
	0.3nm,0.9s,baz=304,slow=4.6,SNR=4.6								

JMA 12 04:06:38.8±0.2, 24.90N×123.39E, h26km, M1.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
YOJ	**Yonaguni jima**	**0.56**	**218**	P		**Pb**		**04 06 49.7**	**-0.3**
YOJ				S		Sb		04 06 56.9	-0.7
JYNG	**Yonagunijimaku**	**0.60**	**222**	P		Pb		04 06 50.5	-0.3
JYNG				S		Sb		04 06 57.9	-1.0
IRIF	**Iriomote-Funau**	**0.64**	**151**	P		Pb		04 06 51.1	-0.3
IRIF				S		Sb		04 07 00.0	0.0
JKRS	**Kuro-shima**	**0.87**	**139**	P		Pb		04 06 55.0	-0.2
JKRS				S		Sb		04 07 06.4	0.0
JIJ	**Ishigaki jima**	**0.87**	**128**	P		Pb		04 06 54.5	-0.8
JISG	**Ishigakijimahi**	**0.89**	**110**	P		Pb		04 06 55.1	-0.6
JISG				S		Sb		04 07 06.8	-0.4
HATJ	**Hateruma jima**	**0.92**	**156**	P		Pn		04 06 55.8	-0.3
HATJ				*e*S		Sb		04 07 08.0	0.0

TAP 12 04:07:07.9, 24.46N×121.81E, h26km, ML2.1, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
NANB	**Nanao**	**0.07**	**244**	P		Pb		04 07 13.0	+0.5
	baz=244								
NANB				S		Sb		04 07 16.3	+0.7
	baz=244								
ENA	**Nanau**	**0.07**	**247**	P		Pb		04 07 13.0	+0.5

OWD	**Renai** baz=229	**0.77**	**230**	*e*P	Pb	04 07 22.8	+0.1
OWD	baz=229			S	Sn	04 07 33.5	-0.4
WHP	**Taichung City** baz=257	**0.81**	**258**	*e*P	Pn	04 07 24.6	+0.9
WHP	baz=257			*e*S	Sn	04 07 36.1	+1.2
SSLB	**Suanglung** baz=229	**1.03**	**230**	*e*S	Sn	04 07 40.5	+0.2

IDC 12 04:18:33.9±2.0, 32°59N×91°46E, h0km, mb3.3/3, mb1 3.4/5, mb1mx3.2/48, mbtmp3.3/5, ML2.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/32, Error ellipse: s-maj=69.2km s-min=25.9km az=67.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array** 0.0nm,0.3s,baz=146,slow=10,SNR=2.4	**15.83**	**336**	Pn	Pn	04 22 14.5	-3.5
AAK	**Ala-Archa** comp=Z,30nm,19.4s,baz=96,slow=38	**16.74**	**312**	LR	LR	04 29 08.9	
SONM	**Songino Array** 0.1nm,0.3s,baz=215,slow=12,SNR=8.2	**18.98**	**32**	P	P	04 22 56.9	+0.1
KURBB	**Kurchatov Arra** 0.3nm,0.3s,baz=147,slow=11,SNR=2.2	**20.39**	**336**	P	P	04 23 12.5	+0.3
ZALV	**Zalesovo Beam** 1.4nm,0.6s,baz=176,slow=9.4,SNR=7.3	**21.87**	**349**	P	P	04 23 28.0	-0.1
ASAR	**Alice Springs** 0.3nm,0.7s,baz=323,slow=6.1,SNR=5.3	**69.07**	**139**	P	P	04 29 41.8	0.0

*IDC **12** 04:30:23.6±1.2,20°53S×172°55E,h0km,mb4.1/8, mb1 4.4/8,mb1mx4.1/35,mbtmp4.1/8,MS3.6/21, Ms1 3.6/21,ms1mx3.5/41,Error ellipse: s-maj=60.0km s-min=21.7km az=151.0*

*NEIC **12** 04:30:29.4±1.1,20°5S±0°2×172°4E±0°1,h35km,7km, mb4.7/23,Error ellipse: s-maj=27.3km s-min=16.6km az=159.0*

ISC 12 04:30:29.3±0.6, 20°4S±0°2×172°3E±0°1, h35km, n104, σ0s92/77, mb4.4/16, MS3.6/19, 8C-4D, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac** 3.8nm,0.3s	**5.70**	**252**	*e*Pn	**Pn**	**04 31 48.9**	**-2.7**
DZM	comp=Z,876nm,26.4s			*e*LR	LR	04 33 18.0	
DZM	**Mont Dzumac** comp=Z,183nm,20.0s,baz=189,slow=27	**5.70**	**252**	LR	LR	04 33 02.2	
DZM	**Mont Dzumac**	**5.70**	**252**		**Pn**	**04 31 49.9**	**-1.7**
RAO	**Raoul Island** comp=Z,290nm,21.1s,baz=130,slow=28	**12.47**	**137**	LR	LR	04 36 07.4	
HNR	**Honiara** comp=Z,254nm,18.9s,baz=136,slow=34	**16.18**	**311**	LR	LR	04 39 41.2	
AFI	**Afiamalu** comp=Z,130nm,21.6s,baz=305,slow=33	**16.53**	**69**	LR	LR	04 39 16.4	
URZ	**Urewera** comp=Z,321nm,19.8s,baz=348,slow=32	**18.24**	**168**	LR	LR	04 39 55.3	
URZ	**Urewera**	**18.24**	**168**	P	**P**	**04 34 39.4**	**-0.1**
EIDS	**Eidsvold**	**20.15**	**252**	P	Pn	04 35 02.3	-0.3
RPZ	**Rata Peaks** comp=Z,184nm,21.7s,baz=360,slow=33	**23.23**	**182**	LR	LR	04 43 17.6	
RAR	**Rarotonga** comp=Z,101nm,21.2s,baz=263,slow=31	**26.10**	**97**	LR	LR	04 43 51.5	
PMG	**Port Moresby** comp=Z,182nm,20.8s,baz=194,slow=32	**26.62**	**291**	LR	LR	04 44 55.7	
STKA	**Stephens Creek** 3.0nm,0.9s,baz=92,slow=12,SNR=5.2	**29.72**	**241**	P	**P**	**04 36 33.2**	**+0.9**
STKA	comp=Z,93nm,18.9s,baz=50,slow=35			LR	LR	04 48 02.3	
STKA	**Stephens Creek**	**29.72**	**241**	P	**P**	**04 36 34.5**	**+2.2**
TBI	**Tubuai** comp=Z,264nm,31.8s	**35.53**	**102**	*e*LR	LR	04 46 29.1	
WRA	**Warramunga Arr** 0.8nm,0.9s,baz=97,slow=8.7,SNR=3.7	**35.58**	**264**	P	**P**	**04 37 24.1**	**+0.4**
WRA	comp=Z,101nm,18.2s,baz=75,slow=36			LR	LR	04 51 52.5	
ASAR	**Alice Springs** 1.3nm,0.8s,baz=84,slow=8.1,SNR=11	**35.66**	**258**	P	**P**	**04 37 25.9**	**+1.6**
ASAR	comp=Z,128nm,21.8s,baz=100,slow=35			LR	LR	04 51 05.4	
PPT2	**Papeete2** comp=Z,320nm,28.8s	**36.10**	**92**	*e*LR	LR	04 46 44.3	
PPT	**Papeete** comp=Z,80nm,21.0s,baz=252,slow=29	**36.10**	**92**	LR	LR	04 47 29.0	
TAOE	**Nuku Hiva Isla** comp=Z,168nm,25.2s	**47.26**	**83**	*e*LR	LR	04 51 48.9	
BKB	**Balikpapan**	**57.33**	**282**	P	**P**	**04 40 14.6**	**+0.4**
VNDA	**Vanda** comp=Z,49nm,19.2s,baz=0.0,slow=32	**57.35**	**183**	LR	LR	05 01 27.2	
MJAR	**Matsushiro Arr** comp=Z,34nm,21.5s,baz=70,slow=32	**65.19**	**330**	LR	LR	05 05 04.9	
KSRS	**Korea Array** comp=Z,19nm,21.8s,baz=114,slow=33	**71.15**	**324**	LR	LR	05 09 52.8	
USRK	**Ussuriysk Ar.** comp=Z,41nm,21.7s,baz=185,slow=32	**74.15**	**331**	LR	LR	05 10 07.4	
PETK	**Petropavlovsk-** comp=Z,41nm,21.4s,baz=64,slow=30	**74.33**	**351**	LR	LR	05 08 02.1	
KLR	**Kul'dur** comp=Z,44nm,21.6s,baz=252,slow=31	**78.18**	**334**	LR	LR	05 10 24.1	
CMAR	**Chiang Mai Arr** 0.6nm,0.3s,baz=125,slow=4.2,SNR=6.0	**81.63**	**293**	P	**P**	**04 42 46.8**	**+2.5**
CMB	**Columbia Colle** comp=Z,5.0nm,1.0s	**85.84**	**47**	P	**P**	**04 43 05.1**	**-0.3**
CMB				IAmb	IAmb	04 43 06.4	
ORV	**Oroville** comp=Z,9.6nm,1.1s	**85.85**	**45**	P	**P**	**04 43 05.8**	**+0.4**
ORV				IAmb	IAmb	04 43 06.5	
AFDM	**Forest Hills D** comp=Z,8.4nm,1.1s	**85.90**	**46**	P	**P**	**04 43 05.9**	**+0.2**
AFDM				IAmb	IAmb	04 43 06.8	
ISA	**Isabella, Lake**	**86.02**	**50**	P	**P**	**04 43 06.1**	**-0.4**
NVAR	**Mina Array Bea** comp=Z,1.8nm,0.9s,baz=222,slow=7.9,SNR=7.4	**87.46**	**47**	P	**P**	**04 43 13.1**	**-0.5**
KVN	**Kaiserville** comp=Z,2.1nm,0.9s	**87.90**	**47**	P	**P**	**04 43 15.6**	**0.0**
KVN				IAmb	IAmb	04 43 25.7	
TPNV	**Topopah Spring**	**88.21**	**49**	P	**P**	**04 43 17.0**	**-0.1**
YAK	**Yakutsk** comp=Z,44nm,19.9s,baz=126,slow=32	**88.91**	**341**	LR	LR	05 17 08.5	
ULN	**Ulaanbaatar** comp=Z,2.2nm,1.0s	**89.56**	**322**	P	**P**	**04 43 19.2**	**-4.0**
ULN				IAmb	IAmb	04 43 27.7	
NEA	**Nenana**	**89.83**	**16**	P	**P**	**04 43 24.3**	**+0.4**
SONM	**Songino Array** comp=Z,0.4nm,0.6s,baz=123,slow=5.3,SNR=4.0	**89.92**	**322**	P	**P**	**04 43 25.0**	**+0.1**
TUC	**Tucson** comp=Z,4.4nm,1.1s	**90.28**	**56**	P	**P**	**04 43 26.6**	**-0.2**
TUC				IAmb	IAmb	04 43 28.5	
LCMT	**Little Creek M**	**90.40**	**50**	P	**P**	**04 43 27.5**	**+0.1**
SHL	**Shillong**	**90.46**	**297**	P	**P**	**04 43 28.4**	**+0.5**
ILAR	**Eielson Array** comp=Z,1.1nm,0.8s,baz=232,slow=5.0,SNR=14	**90.55**	**16**	P	**P**	**04 43 25.6**	**-1.6**
ELK	**Elko** comp=Z,4.5nm,1.1s	**90.63**	**46**	IAmb	IAmb	04 43 29.7	
X16A	**Lo Mia Camp, P** comp=Z,7.4nm,1.1s	**90.64**	**53**	IAmb	IAmb	04 43 30.3	
JLU	**Jordanelle**	**93.17**	**48**		pP	04 43 50.5	0.0
TXAR	**Lajitas Array** comp=Z,0.9nm,0.8s,baz=226,slow=6.4,SNR=12	**94.82**	**61**	P	**P**	**04 43 48.1**	**+0.2**
PLCA	**Paso Flores** comp=Z,45nm,21.9s,baz=260,slow=29	**95.71**	**137**	LR	LR	05 16 52.2	
TIXI	**Tiksi** comp=Z,44nm,19.6s,baz=74,slow=34	**96.53**	**347**	LR	LR	05 24 55.1	
VOIR		**143.31**	**320**	⇑P	**PKPdf**	**04 49 59.8**	**-0.3**
MTUR	**Matau**	**143.42**	**320**	⇑P	**PKPdf**	**04 50 00.7**	**+0.5**
ARR	**Arges**	**143.60**	**321**	⇑P	**PKPdf**	**04 49 59.4**	**-1.1**
DRGR		**143.90**	**324**	⇑P	PKPbc	04 49 59.3	+0.5
OSTC	**Ostas**	**144.51**	**334**	*e*PKP	**PKPdf**	**04 50 01.6**	**-0.3**
MORC	**Moravsky Berou**	**144.52**	**332**	⇓P	PKPbc	04 50 00.4	-0.1
MORC	**Moravsky Berou**	**144.52**	**332**	*e*PKP	**PKPdf**	**04 50 01.3**	**-0.7**
CHVC	**Chvalec**	**144.56**	**334**	*e*PKP	PKPbc	04 50 01.1	+0.4
CHVC				*ex*	x	04 50 04.4	
DPC	**Dobruska-Polom**	**144.62**	**333**	*e*PKP	**PKPdf**	**04 50 02.0**	**-0.1**
UPC	**Upice**	**144.63**	**334**	*e*PKP	PKPbc	04 50 01.2	+0.3
SIRR	**Siria**	**144.80**	**324**	⇑P	**PKPdf**	**04 50 02.9**	**+0.4**
VYHS	**Vyhne**	**144.82**	**329**	*e*	**PKPdf**	**04 50 02.8**	**+0.3**
KOLL	**Kolacno**	**144.97**	**329**	*e*	**PKPdf**	**04 50 03.5**	**+0.8**
JAVC	**Velka Javorina**	**145.12**	**330**	*e*PKP	**PKPdf**	**04 50 04.8**	**+1.8**
BRG	**Berggiesshubel** comp=Z,21nm,0.9s	**145.18**	**336**	*i* PKP	**PKPdf**	**04 50 03.2**	**+0.2**
CLL	**Collm**	**145.18**	**337**	*i* PKPdf	**PKPdf**	**04 50 03.0**	**0.0**
	comp=Z,25nm,0.9s						
CLL				*i*		04 50 09.9	
CLL				*i* pPKPdf	**pPKPdf**	**04 50 13.6**	**+0.3**
CLL	**Collm**	**145.18**	**337**		**PKPdf**	**04 50 02.9**	**-0.1**
VRAC	**Vranov**	**145.28**	**332**	⇓P	**PKPdf**	**04 50 04.1**	**+0.9**
VRAC	**Vranov**	**145.28**	**332**	*e*PKP	**PKPdf**	**04 50 04.1**	**+0.9**
SMOL	**Smolenice**	**145.48**	**330**	*e*	**PKPab**	**04 50 05.4**	**+1.5**
KRUC	**Moravsky**	**145.55**	**332**	*e*PKP	**PKPab**	**04 50 04.8**	**+0.7**
GOPC	**GO Pecny, Ondr**	**145.60**	**334**	*e*PKP	**PKPab**	**04 50 04.6**	**+0.3**
PRU	**Pruhonice**	**145.64**	**334**	*e*PKP	**PKPab**	**04 50 04.8**	**+0.4**
MODS	**Modra-Piesok**	**145.65**	**330**	*e*	**PKPab**	**04 50 04.9**	**+0.4**
ZST	**Bratislava**	**145.86**	**330**	*e*	**PKPab**	**04 50 05.1**	**-0.2**
VTS	**Vitosha**	**145.90**	**317**	⇓P	**PKPab**	**04 50 06.4**	**+0.6**
VTS	**Vitosha**	**145.90**	**317**	PKPbc	**PKPab**	**04 50 05.9**	**0.0**
PBCC	**Pribram**	**146.10**	**335**	*e*PKP	**PKPab**	**04 50 06.1**	**-0.1**
PBCC				*ex*	x	04 50 12.0	
CONA	**Conrad Observa** comp=Z,14nm,1.4s,SNR=6.4	**146.63**	**331**	*i* PKPab	**PKPbc**	**04 50 07.6**	**+0.4**
KHC	**Kasperske Hory**	**146.70**	**334**	*e*PKP	**PKPbc**	**04 50 07.4**	**0.0**
GEC2	**GERESS Array S**	**146.87**	**334**		**PKPbc**	**04 50 08.1**	**+0.1**
GERES	**GERESS Array B** comp=Z,5.0nm,0.8s,baz=34,slow=3.4,SNR=24	**146.87**	**334**	PKPbc	**PKPbc**	**04 50 08.4**	**+0.5**
ARSA	**Arzberg** comp=Z,7.8nm,1.8s	**147.28**	**330**	*i* PKPbc	**PKPbc**	**04 50 08.0**	**-1.1**
MOA	**Molln** comp=Z,5.8nm,1.4s	**147.40**	**332**	*i* PKPab	**PKPbc**	**04 50 09.8**	**+0.4**
SOKA	**Soboth** comp=Z,3.9nm,0.8s	**147.93**	**330**	*i* PKPbc	**PKPbc**	**04 50 10.7**	**-0.2**
FNA	**Florina**	**148.03**	**316**		**PKPbc**	**04 50 11.2**	**-0.2**
BLY	**Banja Luka**	**148.19**	**325**	⇑P	**PKPbc**	**04 50 10.7**	**-0.9**
OBKA	**Obir** comp=Z,3.1nm,0.9s	**148.28**	**330**	*i* PKPbc	**PKPbc**	**04 50 11.6**	**-0.3**
PDG	**Podgorica**	**148.46**	**320**	⇑P	**PKPbc**	**04 50 12.3**	**0.0**
PDG	**Podgorica**	**148.46**	**320**		**PKPbc**	**04 50 11.4**	**-0.9**
MYKA	**Terra Mystica** comp=Z,5.1nm,0.9s	**148.60**	**331**	*i* PKPbc	**PKPbc**	**04 50 12.2**	**-0.5**
WATA	**Walderalm** comp=Z,4.2nm,0.9s	**148.94**	**334**	*i* PKiKP	**PKPbc**	**04 50 13.5**	**-0.2**
ABTA	**Abfaltersbach** comp=Z,2.9nm,0.6s	**149.01**	**333**	*i* PKPbc	**PKPbc**	**04 50 13.4**	**-0.4**
MOTA	**Moosalm** comp=Z,10nm,1.0s,SNR=9.4	**149.12**	**335**	*i* PKiKP	**PKPbc**	**04 50 14.2**	**+0.1**
RETA	**Reutte** comp=Z,3.7nm,0.8s,SNR=4.3	**149.14**	**335**	*i* PKiKP	**PKPbc**	**04 50 14.2**	**+0.1**
SQTA	**Sankt Quirin** comp=Z,6.2nm,0.7s,SNR=9.7	**149.18**	**334**	*i* PKiKP	**PKPbc**	**04 50 14.1**	**-0.1**
FETA	**Feichten** comp=Z,8.2nm,0.9s,SNR=11	**149.54**	**335**	*i* PKiKP	**PKPbc**	**04 50 15.3**	**+0.2**
DAVA	**Damuels** comp=Z,8.9nm,1.1s	**149.65**	**336**	*i* PKiKP	**PKPbc**	**04 50 15.1**	**-0.3**
CTI	**Castel Tesino**	**149.93**	**333**		**PKPbc**	**04 50 16.2**	**+0.2**
TEOL	**Teolo**	**150.46**	**332**		**PKiKP**	**04 50 17.5**	**-0.4**
NRCA	**Norcia**	**151.65**	**327**		**PKPbc**	**04 50 19.7**	**-0.4**
TIP	**Timpagrande**	**151.88**	**317**	⇑P	**PKiKP**	**04 50 20.9**	**-0.2**
TIP	**Timpagrande**	**151.88**	**317**		**PKiKP**	**04 50 21.0**	**-0.2**
ESDC	**Sonseca Array** comp=Z,0.6nm,0.7s,baz=28,slow=4.4,SNR=4.9	**160.57**	**351**	PKPab	**PKPab**	**04 51 07.1**	**+0.1**
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.9s,baz=101,slow=1.5,SNR=3.6	**168.45**	**233**	PKP	**PKPdf**	**04 50 32.2**	**-1.0**
TORD				PKPab	**PKPab**	**04 51 41.3**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=134,slow=4.2,SNR=2.6						

*IDC **12** 04:34:06.1±1.0,12°47N×144°46E,h0km,mb3.5/6, mb1 3.7/6,mb1mx3.6/41,mbtmp3.5/6,MS3.0/3,Ms1 3.0/3, ms1mx2.7/27,Error ellipse: s-maj=43.7km s-min=16.0km az=107.0*

ISC 12 04:34:10.5±1.1, 12°5N±0°1×144°5E±0°3, h30km, n16, σ0s93/8, mb3.6/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam** 149nm,0.3s,baz=329,slow=6.2,SNR=98	**1.15**	**18**	Pn	**Pn**	**04 34 30.4**	**-0.2**
GUMO	266nm,0.3s,baz=353,slow=23,SNR=12			Sn	**Sn**	**04 34 46.0**	**-0.4**
SIJI	**Sorong** comp=Z,78nm,18.8s,baz=38,slow=35	**18.67**	**226**	LR	LR	04 44 59.4	
H11S3	**WAKE ISLAND Hy** baz=258,slow=75,SNR=26	**22.19**	**72**	T	T	05 02 11.3	
H11S1	**WAKE ISLAND Hy** baz=258,slow=75,SNR=21	**22.20**	**72**	T	T	05 02 12.9	
H11S2	**WAKE ISLAND Hy** baz=258,slow=75,SNR=23	**22.20**	**72**	T	T	05 02 10.4	
H11N1	**WAKE ISLAND Hy** baz=255,slow=75,SNR=42	**22.66**	**69**	T	T	05 02 46.0	
H11N2	**WAKE ISLAND Hy** baz=255,slow=75,SNR=50	**22.68**	**69**	T	T	05 02 46.1	
H11N3	**WAKE ISLAND Hy** baz=255,slow=75,SNR=42	**22.68**	**69**	T	T	05 02 47.4	
MJAR	**Matsushiro Arr** comp=Z,45nm,18.5s,baz=215,slow=35	**24.61**	**348**	LR	LR	04 48 20.5	
KSRS	**Korea Array** comp=Z,15nm,19.3s,baz=70,slow=35	**28.95**	**332**	LR	LR	04 51 10.1	
WRA	**Warramunga Arr** 1.1nm,1.0s,baz=14,slow=9.6,SNR=5.2	**33.74**	**197**	P	**P**	**04 40 49.7**	**+0.1**
ASAR	**Alice Springs** 0.8nm,0.7s,baz=18,slow=12,SNR=9.4	**37.40**	**196**	P	**P**	**04 41 20.1**	**-0.9**
SONM	**Songino Array** 0.2nm,0.3s,baz=125,slow=3.2,SNR=3.2	**47.42**	**326**	P	**P**	**04 42 41.6**	**-0.9**
MKAR	**Makanchi Array** 0.3nm,0.7s,baz=89,slow=7.4,SNR=3.2	**62.03**	**317**	P	**P**	**04 44 29.2**	**+1.0**
ILAR	**Eielson Array** 1.6nm,1.2s,baz=240,slow=6.1,SNR=3.9	**69.71**	**25**	P	**P**	**04 45 18.5**	**+1.2**
YKA	**Yellowknife Ar** 0.1nm,0.6s,baz=284,slow=5.0	**84.00**	**27**	P	**P**	**04 46 37.4**	**-0.4**

ROM 12 04:47:43.4±0.1, 43°386N±0°003×12°507E±0°004, h7km, ML0.8/7, Error ellipse: s-maj=0.3km s-min=0.1km az=345.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.05**	**112**	P	Pg	04 47 45.1	+0.1
ATFO				S	Sg	04 47 46.4	+0.1
ATFO				AML	AML		
	comp=E,240μm,0.6s						
ATFO				AML	AML		
	comp=N,279μm,0.4s						
ATVO	**AVT- Monte Val**	**0.07**	**267**	P	Pg	04 47 45.5	+0.2
ATVO				S	Sg	04 47 46.9	+0.3
ATVO				AML	AML		
	comp=N,118μm,0.1s						
ATVO				AML	AML		
	comp=N,118μm,0.1s						
ATVO				AML	AML		
	comp=E,125μm,0.4s						
ATPI	**Pietralunga -**	**0.10**	**311**	P	Pg	04 47 46.0	+0.3
ATPI				S	Sg	04 47 47.9	+0.6
ATPI				AML	AML		
	comp=E,30μm,0.7s						
ATPI				AML	AML		
	comp=N,70μm,0.1s						
ATPI				AML	AML		
	comp=E,31μm,0.7s						
MURB	**Monte Urbino**	**0.12**	**174**	P	Pg	04 47 46.6	+0.6
MURB				S	Sg	04 47 49.2	+1.3
MURB				AML	AML		
	comp=N,88μm,0.2s						
MURB				AML	AML		
	comp=N,88μm,0.2s						
MURB				AML	AML		
	comp=E,98μm,1.1s						
PIEI	**Pieia**	**0.15**	**8**	P	Pg	04 47 47.0	+0.5
PIEI				S	Sg	04 47 50.2	+1.4
PIEI				AML	AML		
	comp=E,61μm,0.1s						
PIEI				AML	AML		
	comp=N,61μm,0.6s						
FRON	**Frontone**	**0.21**	**50**	P	Pg	04 47 48.0	+0.5
FRON				S	Sg	04 47 51.7	+1.3
FRON				AML	AML		
	comp=N,42μm,0.1s						
FRON				AML	AML		
	comp=E,20μm,1.5s						
SSFR	**Montelago di S**	**0.21**	**76**	P	Pg	04 47 48.0	+0.5
SSFR				S	Sg	04 47 51.6	+1.3
SSFR				AML	AML		
	comp=E,58μm,0.2s						
SSFR				AML	AML		
	comp=N,34μm,0.7s						
ATTE	**AVT- Monte Tez**	**0.22**	**211**	P	Pg	04 47 48.4	+0.7
ATTE				S	Sg	04 47 52.0	+1.3
ATCC	**AVT- Casa Cast**	**0.22**	**154**	P	Pg	04 47 48.6	+0.8
BADI	**Badiali**	**0.23**	**303**	P	Pg	04 47 48.5	+0.6
BADI				S	Sg	04 47 52.5	+1.6
BADI				AML	AML		
	comp=E,76μm,1.6s						
BADI				AML	AML		
	comp=N,117μm,1.6s						
BADI				AML	AML		
	comp=E,82μm,1.6s						
BADI				AML	AML		
	comp=N,123μm,1.6s						
NARO	**Abbazia di Nar**	**0.23**	**13**	P	Pg	04 47 48.5	+0.6
ARVD	**Arcevia**	**0.34**	**70**	P	Pg	04 47 50.5	+0.5
SNTG	**Esanatoglia**	**0.34**	**112**	P	Pg	04 47 50.7	+0.6
FSSB	**Fossombrone**	**0.36**	**33**	P	Pg	04 47 51.0	+0.5
FSSB				AML	AML		
	comp=N,26μm,1.4s						
FSSB				AML	AML		
	comp=E,21μm,1.0s						

INET 12 04:59:38.6, 11°74N×86°50W, h74km, ML3.6, Near coast of Nicaragua

*IDC **12** 05:10:20.6±1.6,41°84N×141°78E,h0km,mb3.8/10, mb1 3.9/11,mb1mx3.7/44,mbtmp3.8/11,ML2.3/1,MS3.1/2, Ms1 3.1/2,ms1mx2.5/46,Error ellipse: s-maj=40.5km s-min=21.7km az=157.0*

*JMA **12** 05:10:26.5±0.1,41°48N×141°98E,h64km±2km,M3.3 JMA Felt I J1.*

*NEIC **12** 05:10:27.7±0.7,41°6N±0°2×141°9E±0°2,h59km±12km, mb4.1/5,Error ellipse: s-maj=31.7km s-min=9.8km az=143.0*

ISC 12 05:10:26.8±0.8, 41°50N±0°04×141°97E±0°04, h60km±7km, n50, σ0s78/54, mb4.0/13, 1C-9D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.53**	**244**	⇓P	**Pn**	**05 10 39.4**	**+0.3**
JAHD				*e*S	**Sn**	**05 10 48.8**	**+0.8**
JARK	**Aomorirokkasho**	**0.67**	**223**	⇓P	**Pn**	**05 10 40.4**	**-0.3**
JARK				S	**Sn**	**05 10 50.4**	**-0.4**
JOT	**Ohata**	**0.70**	**261**	⇓P	**Pn**	**05 10 41.0**	**-0.1**
JOT				S	**Sn**	**05 10 52.0**	**+0.5**
JKB	**Kayabe**	**0.80**	**299**	⇓P	**Pn**	**05 10 42.1**	**-0.2**
JNBK	**Urakawa-nobuka**	**0.98**	**37**	P	**Pn**	**05 10 44.0**	**-0.5**
JTM	**Tenmabayashi**	**0.98**	**224**	⇓P	**Pn**	**05 10 44.7**	**+0.1**
JTM				S	**Sn**	**05 10 57.8**	**0.0**
ERM	**Erimo**	**1.03**	**59**		**Pn**	**05 10 45.2**	**+0.1**
ERM				Sn	**Sn**	**05 10 59.9**	**+1.1**
JEM	**Erimo**	**1.03**	**59**	⇑P	**Pn**	**05 10 45.1**	**-0.1**
JEM				*e*S	**Sn**	**05 10 59.1**	**+0.3**
JIAM	**Iburiatsuma**	**1.12**	**358**	P	**Pn**	**05 10 47.5**	**+1.0**
JSR	**Shiriuchi**	**1.17**	**272**	⇓P	**Pn**	**05 10 47.3**	**+0.3**
JANG	**Nango**	**1.18**	**197**	P	**Pn**	**05 10 46.6**	**-0.6**
JANG				*e*S	**Sn**	**05 11 01.6**	**-0.7**
JNB	**Noboribetsu**	**1.19**	**325**	⇓P	**Pn**	**05 10 47.0**	**-0.4**
JNB				S	**Sn**	**05 11 02.4**	**-0.3**
JBT2	**Biratori 2**	**1.31**	**13**	P	**Pn**	**05 10 49.3**	**+0.3**
JBT2				*e*S	**Sn**	**05 11 06.1**	**+0.5**
JYM2	**Yakumo 2**	**1.35**	**298**	⇓P	**Pn**	**05 10 50.0**	**+0.6**
JYM2				*e*S	**Sn**	**05 11 07.4**	**+1.1**
JEW	**Eniwo**	**1.40**	**344**	P	**Pn**	**05 10 50.5**	**+0.4**
JEW				*e*S	**Sn**	**05 11 08.4**	**+0.9**
JCH	**Churui**	**1.52**	**42**	⇓P	**Pn**	**05 10 52.5**	**+0.7**
JFR	**Furan**	**1.73**	**15**	P	**Pn**	**05 10 54.9**	**+0.3**
JOSM	**Okushiri--Mats**	**1.96**	**288**	P	**Pn**	**05 10 57.6**	**0.0**
MJB9	**Matsu-Tunnel**	**5.75**	**212**	Pn	**Pn**	**05 11 51.7**	**+2.1**
MAJO	**Matsushiro**	**5.75**	**212**	Pn	**Pn**	**05 11 51.7**	**+2.1**
MJAR	**Matsushiro Arr** 0.1nm,0.3s,baz=24,slow=15,SNR=6.5	**5.75**	**212**	Pn	**Pn**	**05 11 50.9**	**+1.3**
MJAR	**Matsushiro Arr**	**5.75**	**212**		**Pn**	**05 11 51.8**	**+2.3**
SONM	**Songino Array** 0.8nm,0.7s,baz=76,slow=8.4,SNR=5.6	**25.92**	**296**	P	**P**	**05 15 52.1**	**-1.2**
H11N2	**WAKE ISLAND Hy** baz=323,slow=75,SNR=21	**30.32**	**128**	T	T	05 47 56.7	
H11N1	**WAKE ISLAND Hy** baz=323,slow=75,SNR=37	**30.33**	**128**	T	T	05 47 58.0	
H11N3	**WAKE ISLAND Hy** baz=323,slow=75,SNR=31	**30.34**	**128**	T	T	05 48 02.9	
H11S1	**WAKE ISLAND Hy** baz=324,slow=76,SNR=24	**31.16**	**130**	T	T	05 49 17.8	
H11S3	**WAKE ISLAND Hy** baz=324,slow=76,SNR=19	**31.16**	**130**	T	T	05 49 17.9	
H11S2	**WAKE ISLAND Hy** baz=324,slow=76,SNR=16	**31.18**	**130**	T	T	05 49 19.1	
ZAA0	**Zalesovo Array**	**39.35**	**308**	P	**P**	**05 17 50.8**	**+0.8**
ZAA0	comp=Z,2.1nm,0.8s			IAmb	IAmb	05 17 54.3	
ZALV	**Zalesovo Beam** comp=Z,2.0nm,0.7s,baz=91,slow=7.4,SNR=8.7	**39.35**	**308**	P	**P**	**05 17 49.2**	**-0.8**
ZALV				PcP	**PcP**	**05 19 57.3**	**0.0**
ZALV	**Zalesovo Beam** comp=Z,0.6nm,0.5s,baz=72,slow=4.7,SNR=3.3	**39.35**	**308**	P	**P**	**05 17 50.4**	**+0.4**
MK31	**Makanchi Array**	**42.25**	**298**	P	**P**	**05 18 14.4**	**+0.4**
MK31	comp=Z,6.0nm,1.4s			IAmb	IAmb	05 18 18.4	
MKAR	**Makanchi Array** comp=Z,1.6nm,0.8s,baz=83,slow=9.7,SNR=11	**42.25**	**298**	P	**P**	**05 18 13.8**	**-0.3**
MKAR	**Makanchi Array**	**42.25**	**298**	P	**P**	**05 18 14.1**	**0.0**
MAKZ	**Makanchi**	**42.46**	**298**	P	**P**	**05 18 15.2**	**-0.4**
IMAR	**Indian Mountai**	**42.63**	**33**	P	**P**	**05 18 16.8**	**0.0**
CMAR	**Chiang Mai Arr** comp=Z,10nm,20.2s,baz=70,slow=35	**43.20**	**251**	LR	LR	05 35 15.9	
KURK	**Kurchatov** comp=Z,2.1nm,0.7s	**43.64**	**305**	P	**P**	**05 18 25.3**	**+0.2**
KURK				IAmb	IAmb	05 18 25.5	
ILAR	**Eielson Array** comp=Z,1.2nm,0.9s,baz=279,slow=10.0,SNR=12	**45.54**	**35**	P	**P**	**05 18 40.2**	**+0.2**
INK	**Inuvik** comp=Z,2.9nm,0.6s,baz=302,slow=7.2,SNR=22	**50.24**	**29**	P	**P**	**05 19 16.9**	**+0.6**
INK	**Inuvik**	**50.24**	**29**	P	**P**	**05 19 17.0**	**+0.6**
YKA	**Yellowknife Ar

ASAR				ScP	ScP	05 41 02.3	+4.9	
	0.9nm,0.9s,baz=137,slow=4.7,SNR=4.0							
WRA	**Warramunga Arr**	**42.59**	**267**	P	**P**	05 36 14.0	-1.6	
	7.5nm,0.4s,baz=100,slow=8.1,SNR=76							
WRA				ScP	ScP	05 41 04.5	+5.4	
	1.8nm,0.8s,baz=99,slow=4.2,SNR=6.3							
QSPA	**South Pole Qui**	**65.60**	**180**	P	**P**	05 38 58.5	+1.0	
	4.4nm,0.7s,baz=60,slow=0.2,SNR=32							
PETK	**Petropavlovsk-**	**79.72**	**346**	P	**P**	05 40 17.3	-1.5	
	3.3nm,0.9s,baz=131,slow=6.4,SNR=4.8							
TXAR	**Lajitas Array**	**90.55**	**58**	P	**P**	05 41 13.9	+1.5	
	1.5nm,0.7s,baz=216,slow=5.6,SNR=18							
ILAR	**Eielson Array**	**92.55**	**13**	P	**P**	05 41 19.9	-0.7	
	0.4nm,0.6s,baz=220,slow=5.0,SNR=6.5							
PDAR	**Pinedale Array**	**92.96**	**44**	P	**P**	05 41 22.5	-0.9	
	0.2nm,0.4s,baz=251,slow=4.7,SNR=3.5							
BVAR	**Borovoye Array**	**121.02**	**318**	PKP	**PKiKP**	05 46 59.2	+0.4	
	0.4nm,0.4s,baz=202,slow=2.3,SNR=3.3							
ARCES	**ARCESS Array B**	**132.50**	**348**	PKP	**PKiKP**	05 47 21.1	-0.3	
	2.4nm,0.9s,baz=67,slow=5.0,SNR=7.4							
FINES	**FINESS Array B**	**139.07**	**341**	PKP	**PKiKP**	05 47 34.0	-0.9	
	2.5nm,0.9s,baz=108,slow=3.5,SNR=4.2							
AKASG	**Malin Array Be**	**145.58**	**327**	PKPbc	**PKPdf**	05 47 45.0	+0.7	
	0.6nm,0.3s,baz=48,slow=4.2,SNR=7.6							
TORD	**Torodi Ar. Bea**	**168.64**	**187**	PKPab	**PKPab**	05 49 28.0	+1.3	
	0.5nm,0.7s,baz=174,slow=5.4,SNR=3.3							

IDC ***12*** *05:34:46.0±0.9,28°.47N×70°.22E, h0km, mb3.6/11, mb1 3.8/13,mb1mx3.6/45,mbtmp3.7/13,ML3.8/2,MS3.2/4, Ms1 3.2/4,ms1mx2.7/44,Error ellipse: s-maj=22.2km s-min=19.9km az=77.0*

ISC 12 05:34:50.2±0.7,28°.38N±0°.07×70°.29E±0°.07,h35km,n26, σ1§82/24,mb3.6/10,MS2.9/3,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**4.57**	**16**	P		**Pn**	**05 35 58.2**	**+1.3**
CEP	**Cherat**	**5.60**	**14**	P		**Pn**	**05 36 12.6**	**+1.5**
CHCP	**Chirah Chowk**	**5.84**	**25**	P		**Pn**	**05 36 14.9**	**+0.5**
NDI	**New Delhi**	**6.10**	**86**	*e*Pn		Pn	05 36 24.0	+6.2
NDI				*e*SN		**Sn**	**05 37 28.0**	**+1.6**
POO	**Poona**	**10.34**	**161**	*ex*		**Sn**	**05 39 06.0**	**-4.7**
WSAR	**Wadi Sarin**	**11.68**	**247**	Pn		**Pn**	**05 37 34.2**	**-0.3**
	0.7nm,0.3s,baz=66,slow=12,SNR=3.2							
WSAR				Sn		Sn	05 39 30.7	-13
	0.4nm,0.3s,baz=162,slow=9.6,SNR=4.0							
KOLN	**Koldanda**	**11.77**	**90**	*e*P		**Pn**	**05 37 36.5**	**+0.7**
DANN	**Dangsing**	**11.86**	**87**	*e*P		**Pn**	**05 37 38.9**	**+1.8**
PKI	**Pulchoki**	**13.39**	**90**	*e*P		**Pn**	**05 37 58.1**	**+0.1**
	3.1nm,0.6s							
GUN	**Gumba**	**13.76**	**88**	*e*P		**Pn**	**05 38 01.7**	**-1.5**
	91nm,0.9s							
GUN	**Gumba**	**13.76**	**88**	*e*P		**Pn**	**05 38 03.2**	**0.0**
AAK	**Ala-Archa**	**14.63**	**12**	Pn		**Pn**	**05 38 12.4**	**-2.2**
	0.4nm,0.3s,baz=170,slow=12,SNR=3.6							
AAK				Sn		**Sn**	**05 40 51.5**	**-4.1**
	0.1nm,0.3s,baz=324,slow=19,SNR=2.8							
AAK				LR		LR	05 43 57.7	
	comp=Z,29nm,19.4s,baz=330,slow=38							
MKAR	**Makanchi Array**	**20.65**	**24**	P		**P**	**05 39 26.3**	**-0.4**
	0.3nm,0.5s,baz=205,slow=9.5,SNR=2.2							
KURBB	**Kurchatov Arra**	**23.07**	**13**	P		**P**	**05 39 52.5**	**0.0**
	0.4nm,0.6s,baz=208,slow=9.9,SNR=3.2							
PALK	**Pallekele**	**23.19**	**153**	LR		LR	05 49 09.5	
	comp=Z,34nm,18.7s,baz=56,slow=37							
ZALV	**Zalesovo Beam**	**27.67**	**19**	P		**P**	**05 40 35.6**	**+1.0**
	0.5nm,0.5s,baz=219,slow=12,SNR=2.0							
EIL	**Elat**	**30.86**	**281**	LR		LR	05 57 31.1	
	comp=Z,27nm,20.1s,baz=131,slow=44							
FINES	**FINESS Array B**	**44.10**	**331**	P		**P**	**05 42 54.8**	**+0.2**
	2.8nm,0.8s,baz=108,slow=7.5,SNR=4.1							
GERES	**GERESS Array B**	**47.51**	**312**	P		**P**	**05 43 23.0**	**+1.1**
	0.2nm,0.5s,baz=96,slow=9.0,SNR=2.2							
ARCES	**ARCESS Array B**	**48.50**	**341**	P		**P**	**05 43 29.1**	**-0.1**
	10nm,1.3s,baz=122,slow=8.6,SNR=7.9							
NOA	**NORSAR Array B**	**50.69**	**327**	P		**P**	**05 43 45.5**	**-0.5**
	0.9nm,0.8s,baz=105,slow=7.3,SNR=2.3							
TORD	**Torodi Ar. Bea**	**65.16**	**272**	P		**P**	**05 45 28.7**	**+0.6**
	0.5nm,0.8s,baz=56,slow=6.1,SNR=7.0							
WRA	**Warramunga Arr**	**78.32**	**120**	P		**P**	**05 46 48.5**	**+1.4**
	0.6nm,0.9s,baz=320,slow=5.5,SNR=3.0							
ASAR	**Alice Springs**	**80.19**	**124**	P		**P**	**05 47 00.1**	**+2.8**
	0.3nm,0.6s,baz=309,slow=5.9,SNR=3.7							
PMG	**Port Moresby**	**83.06**	**105**	LR		LR	06 27 42.5	
	comp=Z,95nm,21.4s,baz=203,slow=38							
YKA	**Yellowknife Ar**	**89.36**	**2**	P		**P**	**05 47 42.3**	**-0.4**
	0.1nm,0.5s,baz=350,slow=5.3,SNR=4.4							

IDC ***12*** *05:54:29.9±1.3,26°.78N×53°.88E, h0km, mb3.7/10, mb1 3.8/11,mb1mx3.6/46,mbtmp3.7/11,ML3.3/1,MS3.1/1, Ms1 3.1/1,ms1mx2.4/37,Error ellipse: s-maj=28.6km s-min=21.7km az=162.0*

TEH ***12*** *05:54:32.3,26°.83N×53°.97E, h10km, ML3.7*

OMAN ***12*** *05:54:36.0±1.4,26°.58N×53°.78E, h33km, ml3.6/7,Error ellipse: s-maj=15.1km s-min=6.2km az=168.0*

ISC 12 05:54:32.7±0.6,26°.76N±0°.05×53°.90E±0°.07,h19km,n47, σ1§45/52,mb3.8/15,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHRM	**Jahrom**	**1.76**	**351**	*e*Pn		**Pn**	**05 55 03.1**	**+0.8**
JHRM				*e*			05 55 42.0	
GENO	**Geno**	**2.13**	**72**	*e*			05 55 50.9	
GENO				*e*Pn		**Pn**	**05 55 08.9**	**+1.5**
BANOM	**Banah**	**2.31**	**111**	P		**Pn**	**05 55 10.2**	**+0.4**
	SNR=8.1							
BANOM				S		**Sn**	**05 55 40.6**	**+2.8**
NAZ	**Nazwa, Dubai**	**2.38**	**138**	*e*Pn		**Pn**	**05 55 13.2**	**+2.5**
AJN	**Ajban**	**2.40**	**156**	*e*Pn		**Pg**	**05 55 18.2**	**-0.6**
ASUD	**Al Ashush, Dub**	**2.49**	**148**	*e*Pn		**Pb**	**05 55 15.5**	**-1.3**
ASUD	**Al Ashush, Dub**	**2.49**	**148**	P		**Pn**	**05 55 15.0**	**+2.8**
FAQ	**Al Faqa, Dubai**	**2.52**	**142**	*e*Pn		**Pb**	**05 55 16.6**	**-0.8**
MDH	**Madha**	**2.61**	**123**	*e*Pn		**Pn**	**05 55 13.8**	**0.0**
MDH	**Madha**	**2.61**	**123**	P		**Pn**	**05 55 15.6**	**+1.7**
NIAN	**Nian**	**2.74**	**72**	*e*Pn		**Pn**	**05 55 16.5**	**+0.9**
NIAN				*e*			05 56 10.1	
UOSS	**Minazif**	**2.76**	**131**	*e*Pn		**Pn**	**05 55 17.1**	**+1.2**
HATD	**Hatta, Dubai**	**2.79**	**133**	*e*Pn		**Pn**	**05 55 17.7**	**+1.3**
HATD	**Hatta, Dubai**	**2.79**	**133**	P		**Pn**	**05 55 17.7**	**+1.3**
ASHO	**Ashiyiah**	**2.84**	**136**	*e*Pn		**Pn**	**05 55 18.8**	**+1.6**
ASHO	**Ashiyiah**	**2.84**	**136**	P		**Pn**	**05 55 18.8**	**+1.6**
	SNR=11							
ALNE	**Al Ain**	**3.17**	**148**	*e*Pn		**Pn**	**05 55 26.0**	**+4.3**
TVBK	**TV Kerman**	**4.08**	**38**	*e*Pn		**Pn**	**05 55 36.8**	**+1.3**
TVBK				*e*			05 56 36.6	
KHGB	**Koh Gabri**	**4.26**	**32**	*e*Pn		**Pn**	**05 55 36.5**	**-0.2**
CHMN	**Cheshme madani**	**4.46**	**45**	*e*Pn		**Pn**	**05 55 41.8**	**+2.2**
CHMN				*e*			05 55 43.7	
IMEH	**Mehriz**	**4.65**	**8**	*e*Pn		**Pn**	**05 55 44.1**	**+1.9**
KLNJ	**Kolanjah**	**4.69**	**335**	*e*Pn		**Pn**	**05 55 45.2**	**+2.4**
BSY	**Bisya**	**5.00**	**142**	P		**Pn**	**05 55 48.0**	**+1.2**
	SNR=5.5							
BSY				S		**Sn**	**05 56 44.5**	**+0.3**
IBAF	**Bafgh**	**5.03**	**16**	*e*Pn		**Pn**	**05 55 48.5**	**+1.2**
IRAM	**Rameshesh**	**5.20**	**346**	*e*Pn		**Pn**	**05 55 51.4**	**+1.7**
SMDO	**Samad**	**5.27**	**133**	P		**Pn**	**05 55 51.9**	**+1.3**
SMDO				S		**Sn**	**05 56 53.0**	**+2.0**
WSAR	**Wadi Sarin**	**5.54**	**128**	Pn		**Pn**	**05 55 54.5**	**+0.2**
	1.0nm,0.3s,baz=320,slow=8.3,SNR=6.1							
WSAR				Sn		**Sn**	**05 56 54.8**	**-2.8**
	0.9nm,0.3s,baz=150,slow=20,SNR=3.4							
WSAR	**Wadi Sarin**	**5.54**	**128**	P		**Pn**	**05 55 55.4**	**+1.1**
WBK	**Wadi Bani Khal**	**6.20**	**131**	P		**Pn**	**05 56 03.8**	**+0.5**
	SNR=8.7							
WBK				S		**Sn**	**05 57 13.0**	**-0.6**
IZEF	**Zefreh**	**6.26**	**348**	*e*Pn		**Pn**	**05 56 04.4**	**+0.1**
WHFO	**Wadi Hawf**	**8.80**	**181**	P		**Pn**	**05 56 37.6**	**-1.5**
ABTO	**Aybut**	**9.38**	**184**	P		**Pn**	**05 56 47.0**	**0.0**
	SNR=6.8							
BRTR	**Keskin Array B**	**21.25**	**313**	P		**P**	**05 59 18.5**	**+0.6**
	0.7nm,0.7s,baz=135,slow=13,SNR=5.1							
BVAR	**Borovoye Array**	**28.98**	**21**	P		**P**	**06 00 31.0**	**+0.1**
	0.3nm,0.3s,baz=196,slow=8.1,SNR=3.9							
MKAR	**Makanchi Array**	**30.02**	**41**	P		**P**	**06 00 40.2**	**-0.1**
	0.3nm,0.5s,baz=232,slow=9.0,SNR=3.3							
AKASG	**Malin Array Be**	**30.42**	**328**	P		**P**	**06 00 43.4**	**-0.3**
	0.3nm,0.4s,baz=138,slow=8.3,SNR=3.8							
ZALV	**Zalesovo Beam**	**35.45**	**32**	P		**P**	**06 01 27.4**	**-0.2**
	2.8nm,0.5s,baz=245,slow=9.3,SNR=18							
ZALV				LR		LR	06 17 40.1	
	comp=Z,29nm,19.7s,baz=32,slow=39							
WATA	**Walderalm**	**38.92**	**313**	*i* P		**P**	**06 01 56.9**	**-0.5**
	2.0nm,0.6s							
SQTA	**Sankt Quirin**	**39.13**	**313**	*i* P		**P**	**06 01 58.6**	**-0.5**
	1.9nm,0.5s							
MOTA	**Moosalm**	**39.24**	**313**	*i* P		**P**	**06 02 00.5**	**+0.5**
	0.8nm,0.4s							
FETA	**Feichten**	**39.39**	**312**	*i* P		**P**	**06 02 01.1**	**-0.2**
	0.7nm,0.5s							
FINES	**FINESS Array B**	**39.40**	**339**	P		**P**	**06 02 00.2**	**-0.7**
	1.3nm,0.7s,baz=143,slow=8.8,SNR=8.5							
DAVA	**Damuels**	**40.02**	**313**	*i* P		**P**	**06 02 06.3**	**-0.3**
	3.2nm,0.5s							
ARCES	**ARCESS Array B**	**45.90**	**347**	P		**P**	**06 02 53.7**	**0.0**
	1.3nm,0.6s,baz=138,slow=9.6,SNR=10							
TORD	**Torodi Ar. Bea**	**50.58**	**265**	P		**P**	**06 03 30.0**	**-0.5**
	0.4nm,0.5s,baz=61,slow=8.1,SNR=4.2							
DBIC	**Dimbokro**	**59.18**	**261**	P		**P**	**06 04 32.9**	**+0.1**
	2.2nm,0.9s,baz=3.1,slow=2.5,SNR=4.2							
YKA	**Yellowknife Ar**	**90.58**	**355**	P		**P**	**06 07 33.8**	**+0.4**
	0.2nm,0.6s,baz=5.6,slow=5.0,SNR=12							

NIED ***12*** *06:06:00,37°.30N×144°.50E, h8km, Mw3.4 Best double couple: Mo1.61000×1014 NP1:φs209.00000°, δ67.00000°, λ-70.00000°. NP2:φs346.00000°, δ30.00000°, λ-128.00000°.*

IDC ***12*** *06:06:21.8±2.0,37°.10N×144°.77E, h0km, mb3.4/4, mb1 3.6/5, mb1mx3.3/54, mbtmp3.4/5, ML2.8/1, Error ellipse: s-maj=51.8km s-min=26.3km az=56.0*

JMA ***12*** *06:06:26.4±0.2,37°.29N×144°.51E, h47km, M4.2*

ISC 12 06:06:25.8±1.3,37°.27N±0°.06×144°.70E±0°.09,h35km,n38, σ1§68/50,mb3.6/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JIKH	**Ishinomakibobu**	**2.77**	**293**	P		**Pn**	**06 07 07.8**	**+0.2**
JIKH				S		**Sn**	**06 07 37.7**	**-2.1**
JIO	**Ouri**	**2.91**	**295**	P		**Pn**	**06 07 09.7**	**+0.2**
JIO				*e*S		**Sn**	**06 07 41.5**	**-1.7**
JKMT	**Kesennumamotoy**	**2.98**	**302**	P		**Pn**	**06 07 10.6**	**+0.1**
JKMT				*e*S		**Sn**	**06 07 43.0**	**-2.0**
OFUJ	**Ofunato**	**3.00**	**308**	P		**Pn**	**06 07 10.9**	**+0.1**
OFUJ				*e*S		**Sn**	**06 07 44.3**	**-1.2**
JFK	**Kawauchi**	**3.05**	**273**	P		**Pn**	**06 07 11.4**	**-0.2**
JFK				*e*S		**Sn**	**06 07 45.3**	**-1.6**
JMST	**Minamisoumatoc**	**3.07**	**280**	P		**Pn**	**06 07 11.5**	**-0.2**
JMST				*e*S		**Sn**	**06 07 45.2**	**-2.0**
ONAJ	**Iwakimizuishiy**	**3.12**	**268**	*e*S		**Sn**	**06 07 46.4**	**-2.2**
JMM	**Marumori**	**3.16**	**282**	P		**Pn**	**06 07 12.9**	**-0.1**
JMM				*e*S		**Sn**	**06 07 48.4**	**-1.1**
JMK	**Ichinoseki**	**3.22**	**303**	P		**Pn**	**06 07 14.2**	**+0.4**
JMK				*e*S		**Sn**	**06 07 49.4**	**-1.6**
MIYJ	**Miyakonagasawa**	**3.23**	**316**	P		**Pn**	**06 07 13.8**	**-0.2**
MIYJ				*e*S		**Sn**	**06 07 49.9**	**-1.4**
JFFD	**Fukushimafurud**	**3.31**	**268**	P		**Pn**	**06 07 14.9**	**-0.2**
JHO	**Hitachi**	**3.37**	**260**	P		**Pn**	**06 07 15.5**	**-0.5**
JOU	**Okura**	**3.38**	**290**	P		**Pn**	**06 07 16.9**	**+0.8**
JOM	**Ohasama**	**3.47**	**310**	P		**Pn**	**06 07 17.8**	**+0.5**
JOM				*e*S		**Sn**	**06 07 56.0**	**-1.1**
JFT	**Otama**	**3.48**	**275**	P		**Pn**	**06 07 18.5**	**+1.0**
JFT				*e*S		**Sn**	**06 07 56.3**	**-1.2**
JYT	**Yasato**	**3.77**	**255**	P		**Pn**	**06 07 20.8**	**-0.5**
JYK	**Kaneyama**	**3.80**	**297**	P		**Pn**	**06 07 23.0**	**+1.2**
JYK				*e*S		**Sn**	**06 08 04.5**	**-0.8**
JRG	**Rokugo**	**3.84**	**305**	P		**Pn**	**06 07 23.2**	**+0.8**
JRG				*e*S		**Sn**	**06 08 06.1**	**-0.2**
BSO1	**Boso 1**	**3.99**	**230**	P		**Pn**	**06 07 23.4**	**-0.5**
JTM	**Tenmabayashi**	**4.51**	**322**	*e*S		**Sn**	**06 08 19.8**	**-3.0**
JRY	**Ryogami san**	**4.83**	**257**	P		**Pn**	**06 07 35.7**	**-0.3**
JRY				*e*S		**Sn**	**06 08 25.2**	**-5.5**
JOD2	**Odawara 2**	**4.96**	**248**	P		**Pn**	**06 07 37.7**	**0.0**
JOD2				*e*S		**Sn**	**06 08 29.2**	**-4.6**
JOT	**Ohata**	**4.99**	**327**	P		**Pn**	**06 07 39.0**	**+0.8**
JOT				*e*S		**Sn**	**06 08 31.7**	**-2.9**
MJAR	**Matsushiro Arr**	**5.25**	**264**	Pn		**Pn**	**06 07 43.1**	**+1.3**
	0.3nm,0.3s,baz=103,slow=12,SNR=15							
MJAR				Sn		**Sn**	**06 08 42.2**	**+1.1**
	0.2nm,0.3s,baz=20,slow=25,SNR=4.7							
MAT	**Matsushiro**	**5.25**	**264**	P		**Pn**	**06 07 43.4**	**+1.6**
MAT				S		**Sn**	**06 08 42.2**	**+1.0**
JCH	**Churui**	**5.44**	**350**	P		**Pn**	**06 07 43.2**	**-1.1**
NEM2	**Nemuro 2**	**6.14**	**7**	P		**Pn**	**06 07 51.5**	**-2.5**
JTKR	**Abashiri--Toko**	**6.72**	**355**	P		**Pn**	**06 08 01.1**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**26.08**	**126**	T		T	06 38 45.2	
	baz=317,slow=75,SNR=14							
H11N1	**WAKE ISLAND Hy**	**26.09**	**126**	T		T	06 38 44.6	
	baz=317,slow=75,SNR=23							
H11N3	**WAKE ISLAND Hy**	**26.10**	**126**	T		T	06 39 09.7	
	baz=317,slow=75,SNR=42							
H11S1	**WAKE ISLAND Hy**	**26.86**	**128**	T		T	06 39 46.9	
	baz=319,slow=76,SNR=9.5							
H11S3	**WAKE ISLAND Hy**	**26.86**	**128**	T		T	06 39 49.2	
	baz=319,slow=76,SNR=9.0							
H11S2	**WAKE ISLAND Hy**	**26.87**	**128**	T		T	06 39 46.1	
	baz=319,slow=76,SNR=8.9							
MKAR	**Makanchi Array**	**46.22**	**302**	P		**P**	**06 14 49.2**	**+1.9**
	0.1nm,0.4s,baz=81,slow=8.9,SNR=2.5							
KURBB	**Kurchatov Arra**	**47.92**	**308**	P		**P**	**06 15 03.0**	**+2.5**
	0.5nm,0.5s,baz=82,slow=7.7,SNR=4.5							
WRA	**Warramunga Arr**	**57.73**	**192**	P		**P**	**06 16 13.2**	**0.0**
	0.6nm,0.8s,baz=8.4,slow=7.0,SNR=3.2							
ASAR	**Alice Springs**	**61.45**	**191**	P		**P**	**06 16 39.0**	**+0.3**
	0.2nm,0.5s,baz=7.1,slow=7.2,SNR=4.6							

IDC ***12*** *06:26:05.7±2.1,19°.48S×176°.53W, h0km, mb3.8/6, mb1 4.1/6,mb1mx3.9/31,mbtmp3.8/6,MS3.7/16, Ms1 3.7/16,ms1mx3.6/26,Error ellipse: s-maj=120.8km s-min=24.4km az=148.0*

ISC 12 06:26:10.9±1.7,19°.4S±0°.6×176°.6W±0°.4,h35km,n36, σ1§18/19,mb3.9/6,MS3.9/15,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**9.88**	**187**	LR		LR	06 31 52.3	
	comp=Z,1μm,19.3s,baz=54,slow=35							
RAR	**Rarotonga**	**15.88**	**99**	LR		LR	06 35 54.3	
	comp=Z,167nm,18.9s,baz=270,slow=37							
DZM	**Mont Dzumac**	**16.09**	**258**	*e*LR		LR	06 33 43.3	
	comp=Z,1μm,24.6s							
DZM	**Mont Dzumac**	**16.09**	**258**	LR		LR	06 35 22.0	
	comp=Z,722nm,18.3s,baz=48,slow=34							
URZ	**Urewera**	**19.57**	**195**	LR		LR	06 37 21.5	
	comp=Z,366nm,21.7s,baz=19,slow=35							
HNR	**Honiara**	**24.76**	**290**	LR		LR	06 39 44.7	
	comp=Z,123nm,21.2s,baz=138,slow=33							
TBI	**Tubuai**	**25.55**	**104**	*e*LQ		LQ	06 36 32.6	
	588nm,27.5s							
TBI				*e*LR		LR	06 37 39.0	
	comp=Z,462nm,28.2s							
PPT2	**Papeete2**	**25.68**	**90**	*e*LR		LR	06 37 40.3	
	comp=Z,892nm,26.8s,baz=267							
PPT	**Papeete**	**25.68**	**90**	LR		LR	06 38 45.6	
	comp=Z,228nm,20.7s,baz=287,slow=30							
TAOE	**Nuku Hiva Isla**	**36.79**	**79**	*e*LR		LR	06 42 52.7	
	comp=Z,278nm,24.7s							
STKA	**Stephens Creek**	**39.45**	**243**	P		**P**	**06 33 38.8**	**+0.9**
	2.6nm,0.8s,baz=344,slow=6.9,SNR=4.5							
STKA				LR		LR	06 48 39.7	
	comp=Z,173nm,18.6s,baz=45,slow=34							
ASAR	**Alice Springs**	**46.06**	**256**	P		**P**	**06 34 31.9**	**+0.2**
	2.6nm,0.8s,baz=86,slow=8.2,SNR=18							
WRA	**Warramunga Arr**	**46.07**	**261**	P		**P**	**06 34 30.8**	**-1.0**
	1.8nm,1.1s,baz=94,slow=4.9,SNR=2.8							
WRA				LR		LR	06 53 23.8	
	comp=Z,310nm,18.5s,baz=90,slow=36							
VNDA	**Vanda**	**59.11**	**185**	LR		LR	06 57 54.4	
	comp=Z,25nm,20.1s,baz=18,slow=32							
MJAR	**Matsushiro Arr**	**70.13**	**323**	LR		LR	07 09 24.5	
	comp=Z,13nm,18.0s,baz=70,slow=37							
PETK	**Petropavlovsk-**	**75.57**	**344**	LR		LR	07 02 46.6	
	comp=Z,119nm,21.8s,baz=70,slow=29							
KSRS	**Korea Array**	**76.96**	**318**	LR		LR	07 06 39.2	
	comp=Z,23nm,21.2s,baz=165,slow=32							
MAW	**Mawson**	**83.03**	**199**	LR		LR	07 14 45.8	
	comp=Z,69nm,18.1s,baz=233,slow=35							
TXAR	**Lajitas Array**	**85.36**	**57**	P		**P**	**06 38 45.2**	**+0.2**
	0.4nm,1.0s,baz=250,slow=2.7,SNR=3.4							
ILAR	**Eielson Array**	**86.97**	**12**	P		**P**	**06 38 54.3**	**+2.4**
	0.4nm,0.6s,baz=221,slow=5.4,SNR=6.1							
ILAR				LR		LR	07 14 42.0	
	comp=Z,63nm,20.0s,baz=166,slow=34							
PLCA	**Paso Flores**	**89.06**	**133**	LR		LR	07 16 23.2	
	comp=Z,17nm,18.5s,baz=208,slow=34							
CMAR	**Chiang Mai Arr**	**91.00**	**289**	LR		LR	07 20 55.2	
	comp=Z,9.8nm,19.3s,baz=115,slow=36							
YKA	**Yellowknife Ar**	**94.97**	**24**	P		**P**	**06 39 28.3**	**-1.0**
	0.1nm,0.7s,baz=251,slow=3.8							
BRTR	**Keskin Array B**	**147.05**	**314**	PKPbc		**PKPbc**	**06 45 50.3**	**-0.2**
	0.6nm,0.7s,baz=77,slow=3.5,SNR=4.3							
GERES	**GERESS Array B**	**149.48**	**347**	PKPbc		**PKiKP**	**06 45 56.7**	**-0.9**
	0.9nm,0.8s,baz=54,slow=1.7,SNR=5.0							
CONA	**Conrad Observa**	**149.80**	**343**	*i* PKPdf		**PKiKP**	**06 45 58.5**	**+0.2**
	6.9nm,1.4s							
MOA	**Molln**	**150.28**	**345**	*i* PKPdf		**PKiKP**	**06 46 00.1**	**+0.9**
	3.8nm,1.2s							
ARSA	**Arzberg**	**150.51**	**343**	*i* PKPdf		**PKPbc**	**06 45 58.2**	**-0.8**
	2.8nm,1.0s							
SOKA	**Soboth**	**151.17**	**343**	*i* PKPdf		**PKPbc**	**06 45 59.7**	**-0.9**
	3.9nm,1.3s							
WATA	**Walderalm**	**151.35**	**348**	*i* PKPdf		**PKPbc**	**06 45 59.6**	**-1.5**
	5.4nm,1.6s							
RETA	**Reutte**	**151.35**	**350**	*i* PKPdf		**PKPbc**	**06 45 58.9**	**-2.1**
	5.2nm,1.5s							
MOTA	**Moosalm**	**151.43**	**349**	*i* PKPdf		**PKPbc**	**06 46 00.7**	**-0.5**
	4.8nm,1.7s							
OBKA	**Obir**	**151.46**	**344**	*i* PKPdf		**PKPbc**	**06 46 00.7**	**-0.6**
	3.2nm,1.2s							
DAVA	**Damuels**	**151.69**	**351**	*i* PKPdf		**PKiKP**	**06 46 02.2**	**-0.1**
	8.5nm,1.4s							
ABTA	**Abfaltersbach**	**151.72**	**347**	*i* PKPdf		**PKPbc**	**06 46 00.1**	**-1.8**
	6.0nm,1.2s							
FETA	**Feichten**	**151.81**	**349**	*i* PKPdf		**PKiKP**	**06 46 02.1**	**-0.5**
	3.5nm,0.9s							

INET 12 07:15:20.4,15°.98N×86°.28W,h30km,ML4.3,Honduras

IDC ***12*** *07:30:59.7±1.6,32°.68N×48°.13E, h0km, mb3.5/8, mb1 3.6/12,mb1mx3.5/40,mbtmp3.6/12,ML3.5/4,MS2.9/4, Ms1 3.0/4,ms1mx2.5/48,Error ellipse: s-maj=31.8km s-min=20.6km az=167.0*

TEH ***12*** *07:31:02.2,32°.71N×48°.20E,h13km,ML4.0*

ISN ***12*** *07:31:03.0±0.6,32°.68N×48°.11E, h14km±10km, ML4.0*

THR ***12*** *07:31:03.2±0.9,32°.74N×48°.20E, h15km±9km, ML3.7*

ISC 12 07:31:02.0±0.7,32°.67N±0°.04×48°.18E±0°.03,h15km,n86, σ1§77/88,mb3.4/8,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.77**	**137**	*e*Pg		**Pn**	**07 31 18.6**	**+0.3**
SHGR	**Shooshtar-Gavs**	**0.77**	**137**	*e*Pg		**Pn**	**07 31 18.6**	**+0.3**
SHGR				IAML			07 31 37.9	
	comp=N,2μm,0.4s							
IKMR	**Kamar-syah**	**0.86**	**11**	*e*Pg		**Pb**	**07 31 17.4**	**-1.2**
IKFM	**Kafar-mosalman**	**0.90**	**342**	*e*Pg		**Pb**	**07 31 19.0**	**-0.2**
IKFM				*e*			07 31 33.0	
IDOB	**Doab**	**1.11**	**360

comp=Z,45nm,18.3s,baz=70,slow=45
WSAR Wadi Sarin 13.17 133 Pn **Pn 07 34 07.5 -0.9**
comp=Z,0.7nm,0.3s,baz=322,slow=12,SNR=4.9
WSAR Sn Sn 07 36 23.6 -11
comp=Z,0.4nm,0.3s,baz=338,slow=19,SNR=4.0
WSAR LR LR 07 40 04.1
comp=Z,60nm,21.7s,baz=250,slow=41
AKTO Aktyubinsk 19.18 19 P **Pn 07 35 25.8 -0.1**
comp=Z,0.2nm,0.3s,baz=209,slow=13,SNR=2.8
AKASG Malin Array Be 22.80 328 P **P 07 36 03.0 -0.9**
comp=Z,0.2nm,0.3s,baz=135,slow=9.0,SNR=3.9
BVAR Borovoye Array 25.86 32 P **P 07 36 33.1 +0.3**
comp=Z,0.3nm,0.4s,baz=238,slow=8.3,SNR=3.7
KURBB Kurchatov Arra 28.62 42 P **P 07 36 57.7 +0.1**
comp=Z,0.3nm,0.6s,baz=243,slow=9.2,SNR=2.9
MKAR Makanchi Array 29.52 51 P **P 07 37 06.0 +0.3**
comp=Z,0.6nm,0.6s,baz=248,slow=10,SNR=6.6
FINES FINESS Array B 32.15 340 P **P 07 37 28.3 -0.4**
comp=Z,1.5nm,0.7s,baz=146,slow=11,SNR=8.0
ZALV Zalesovo Beam 33.55 40 P **P 07 37 41.3 +0.3**
comp=Z,0.5nm,0.4s,baz=228,slow=9.0,SNR=3.3
ARCES ARCESS Array B 39.05 348 P **P 07 38 27.2 -0.6**
comp=Z,1.9nm,1.0s,baz=159,slow=7.7,SNR=3.0
TORD Torodi Ar. Bea 46.60 256 P **P 07 39 29.4 -0.2**
comp=Z,0.1nm,0.5s,baz=85,slow=1.7,SNR=2.1
CMAR Chiang Mai Arr 47.51 94 LR LR 08 01 24.9
comp=Z,16nm,18.4s,baz=45,slow=38
JCJ Chichijima 79.00 65 LR LR 08 22 31.0
comp=Z,154nm,21.7s,baz=54,slow=39

*FUNV **12** 07:42:30.1,6˚.85N×73˚.26W,h169km,MW2.6*
*RSNC **12** 07:42:32.4±1.0,6˚.83N×73˚.14W,h144km±4km,ML2.6, Mw2.9*
ISC 12 07:42:29.7±1.3,6˚.87N±0˚.03×73˚.09W±0˚.04,h160km±8km, n31,σ1§17/53,1C-1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BARC	**Barichara**	**0.29**	**198**	⇑*iP*		**Pn**	**07 42 52.2**	**+0.4**
BARC				*eS*		**Sn**	**07 43 07.0**	**-1.6**
BARC				*i*			07 43 08.7	
	comp=Z,118nm,0.3s							
PAMC	**Pamplona, Colo**	**0.61**	**40**	*eP*		**Pn**	**07 42 55.0**	**+1.6**
PAMC				*eS*		**Sn**	**07 43 11.6**	**+0.1**
PAMC				*i*			07 43 13.9	
	comp=Z,66nm,0.5s							
RUSC	**La Rusia**	**0.97**	**179**	⇓*iP*		**Pn**	**07 42 56.2**	**+0.3**
RUSC				*eS*		**Sn**	**07 43 15.3**	**-0.5**
RUSC				*i*			07 43 15.9	
	comp=Z,36nm,0.3s							
RUSC	**La Rusia**	**0.97**	**179**	*eP*		**Pn**	**07 42 55.7**	**-0.1**
RUSC				*eS*		**Sn**	**07 43 15.3**	**-0.5**
OCAC	**Ocana**	**1.38**	**351**	*eP*		**Pn**	**07 43 00.2**	**+1.1**
OCAC				*eS*		**Sn**	**07 43 21.7**	**-0.1**
OCAC				*i*			07 43 25.4	
	comp=Z,34nm,0.3s							
PTBC	**PUERTO BERRIO,**	**1.39**	**257**	*eP*		**Pn**	**07 42 58.9**	**-0.2**
PTBC				*eS*		**Sn**	**07 43 19.6**	**-1.9**
PTBC				*i*			07 43 27.1	
	comp=Z,42nm,0.4s							
SPBC	**San Pablo de B**	**1.55**	**219**	*eP*		**Pn**	**07 43 01.2**	**+0.5**
SPBC				*eS*		**Sn**	**07 43 23.0**	**-1.5**
SPBC				*i*			07 43 25.5	
	comp=Z,40nm,0.3s							
ZARC	**Zaragoza, Cauc**	**1.86**	**290**	*eP*		**Pn**	**07 43 04.6**	**+0.7**
ZARC				*eS*		**Sn**	**07 43 29.8**	**-0.4**
ZARC				*i*			07 43 35.4	
	comp=Z,28nm,0.3s							
ZARC				*i*			07 43 37.2	
	comp=Z,26nm,0.3s							
SMLC	**San Martn de**	**2.15**	**333**	*eP*		**Pn**	**07 43 08.3**	**+1.1**
SMLC				*eS*		**Sn**	**07 43 36.6**	**+0.3**
SMLC				*i*			07 43 47.7	
	comp=Z,39nm,0.1s							
NORC	**Norcasia**	**2.19**	**234**	*eP*		**Pn**	**07 43 08.3**	**+0.5**
NORC				*eS*		**Sn**	**07 43 36.6**	**-0.5**
NORC				*i*			07 43 41.9	
	comp=Z,22nm,0.4s							
CHIC	**Chingaza**	**2.31**	**196**	*eP*		**Pn**	**07 43 10.3**	**+0.7**
CHIC				*eS*		**Sn**	**07 43 39.6**	**-0.6**
CHIC				*i*			07 43 42.8	
	comp=Z,29nm,0.5s							
ROSC	**El Rosal**	**2.35**	**211**	*eP*		**Pn**	**07 43 12.3**	**+2.2**
ROSC				*eS*		**Sn**	**07 43 40.8**	**-0.3**
ROSC				*i*			07 43 45.8	
	comp=Z,48nm,0.5s							
HELC	**Santa Helena**	**2.51**	**255**	*eP*		**Pn**	**07 43 13.6**	**+1.7**
HELC				*eS*		**Sn**	**07 43 44.4**	**0.0**
HELC				*i*			07 43 50.2	
	comp=Z,22nm,0.3s							
HELC	**Santa Helena**	**2.51**	**255**	*eP*		**Pn**	**07 43 10.8**	**-1.1**
UREC	**San Jos de Ur**	**2.57**	**290**	*eP*		**Pn**	**07 43 11.9**	**-0.3**
UREC				*eS*		**Sn**	**07 43 42.6**	**-2.5**
UREC				*i*			07 43 54.8	
	comp=Z,20nm,0.2s							
VIGV	**El Vigia**	**2.60**	**41**	*eP*		**Pn**	**07 43 14.2**	**+1.5**
SOCV	**Socops**	**2.63**	**57**	*eP*		**Pn**	**07 43 14.4**	**+1.4**
GUY2C	**Guyana, Caldas**	**2.79**	**234**	*eP*		**Pn**	**07 43 16.1**	**+0.8**
GUY2C				*eS*		**Sn**	**07 43 51.5**	**+0.9**
GUY2C				*i*			07 43 58.3	
	comp=Z,22nm,0.3s							
VILC	**Villavicencio,**	**2.80**	**192**	*eP*		**Pn**	**07 43 15.6**	**+0.3**
VILC				*eS*		**Sn**	**07 43 49.5**	**-0.9**
VILC				*i*			07 43 59.9	
	comp=Z,36nm,0.4s							
RREF	**El Recreo**	**2.97**	**229**	*eP*		**Pn**	**07 43 18.6**	**+0.8**
RREF				*eS*		**Sn**	**07 43 55.0**	**0.0**
RREF				*i*			07 44 04.0	
	comp=Z,23nm,0.4s							
CBOC	**Ciudad Bolivar**	**3.07**	**251**	*eP*		**Pn**	**07 43 20.0**	**+1.4**
CBOC				*eS*		**Sn**	**07 43 55.9**	**-0.4**
CBOC				*i*			07 44 02.4	
	comp=Z,6.6nm,1.0s							
SDV	**Santo Domingo**	**3.16**	**50**	*eP*		**Pn**	**07 43 20.9**	**+1.2**
SDV				*eS*		**Sn**	**07 43 59.0**	**+0.5**
ORTC	**Ortega, Tolima**	**3.64**	**216**	*eP*		**Pn**	**07 43 26.4**	**+0.8**
ORTC				*eS*		**Sn**	**07 44 09.7**	**+0.5**
ORTC				*i*			07 44 13.3	
	comp=Z,14nm,0.5s							
SJCC	**San Jacinto, C**	**3.65**	**326**	*eP*		**Pn**	**07 43 26.4**	**+0.6**
SJCC				*eS*		**Sn**	**07 44 07.3**	**-2.2**
SJCC				*i*			07 44 32.9	
	comp=Z,13nm,2.5s							
QARV	**Quebrada Arrib**	**4.18**	**37**	*eP*		**Pn**	**07 43 33.1**	**+0.4**
CURV	**Curarigua**	**4.40**	**45**	*eP*		**Pn**	**07 43 36.9**	**+1.3**
SIQV	**Siquisique**	**4.97**	**41**	*eP*		**Pn**	**07 43 43.4**	**+0.4**
BAUV	**El Baul**	**5.41**	**67**	*eP*		**Pn**	**07 43 48.6**	**-0.3**
BAUV				*eS*		**Sn**	**07 44 47.1**	**-3.6**
MAPV	**Macapo**	**5.45**	**57**	*eP*		**Pn**	**07 43 50.6**	**+1.3**
PAYV	**Puerto Ayacuch**	**5.59**	**105**	*eP*		**Pn**	**07 43 51.3**	**+0.1**
MONV	**Montecano**	**5.92**	**31**	*eP*		**Pn**	**07 43 56.4**	**+0.8**

IDC 12 07:53:52.7±2.9,22˚.59S×174˚.91W,h0km,mb3.8/6, mb1 4.1/6,mb1mx3.8/38,mbtmp3.8/6,Error ellipse: s-maj=151.2km s-min=28.8km az=154.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ASAR	**Alice Springs**	**46.88**	**258**	P		P	08 02 24.9	-0.3
	1.0nm,0.9s,baz=96,slow=9.0,SNR=7.5							
WRA	**Warramunga Arr**	**47.19**	**263**	P		P	08 02 26.6	-1.0
	1.0nm,1.0s,baz=103,slow=6.7,SNR=4.3							
TXAR	**Lajitas Array**	**85.79**	**56**	P		P	08 06 34.4	0.0
	0.3nm,0.9s,baz=214,slow=6.4,SNR=2.8							
ILAR	**Eielson Array**	**89.74**	**12**	P		P	08 06 52.0	-0.4
	0.2nm,0.7s,baz=206,slow=6.0,SNR=2.9							
CMAR	**Chiang Mai Arr**	**93.51**	**288**	P		P	08 07 11.7	+0.7
	1.0nm,0.4s,baz=106,slow=3.2,SNR=4.7							
YKA	**Yellowknife Ar**	**97.22**	**24**	P		P	08 07 25.8	-1.1
	0.1nm,0.7s,baz=239,slow=4.0,SNR=5.5							
AKASG	**Malin Array Be**	**146.21**	**332**	PKPbc		PKPbc	08 13 34.7	-0.2
	0.3nm,0.3s,baz=32,slow=3.4,SNR=5.6							
BRTR	**Keskin Array B**	**150.37**	**312**	PKPbc		PKiKP	08 13 47.1	-0.2
	0.2nm,0.4s,baz=48,slow=2.1,SNR=3.7							

*NNC **12** 07:54:30.4±0.3,50˚.00N×78˚.67E,h0km,mb3.8,mpv3.4, Error ellipse: s-maj=3.7km s-min=1.7km az=74.0, Suspected Mining explosion.*
*IDC **12** 07:54:31.4±0.7,50˚.03N×78˚.75E,h0km,mb1 3.3/4, mb1mx3.1/58,mbtmp3.3/4,ML3.1/4,Error ellipse:*

2014 JAN

s-maj=9.7km s-min=5.5km az=63.0
*ASRS **12** 07:54:35.1±0.8,50˚.74N×75˚.96E±˚,h10km,MLh3.5/7, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
ISC 12 07:54:30.4±0.7,49˚.95N±0˚.03×78˚.61E±0˚.04,h0km,n41, σ1§68/61,26C-8D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR07	**Kurchatov Arra**	**0.63**	**355**	⇑P		**Pg**	**07 54 42.0**	**-0.5**
KUR07				⇓S		**Sb**	**07 54 51.2**	**-2.6**
KUR06	**Kurchatov Arra**	**0.65**	**355**	⇑P		**Pg**	**07 54 42.3**	**-0.6**
KUR06				⇓S		**Sb**	**07 54 51.5**	**-2.8**
KUR14	**Kurchatov Arra**	**0.66**	**359**	⇓P		**Pg**	**07 54 42.3**	**-0.8**
KUR14				⇑S		**Sg**	**07 54 51.3**	**-0.4**
KUR15	**Kurchatov Arra**	**0.67**	**357**	⇑P		**Pg**	**07 54 42.5**	**-0.7**
KUR15				⇓S		**Sg**	**07 54 51.8**	**-0.1**
KURBB	**Kurchatov Arra**	**0.67**	**356**	Pg		**Pg**	**07 54 43.0**	**-0.3**
	6.5nm,0.3s,baz=167,slow=17,SNR=167							
KURBB				Lg		Lg	07 54 51.7	
	7.1nm,0.3s,baz=166,slow=18,SNR=58							
KURBB	**Kurchatov Arra**	**0.67**	**356**	⇑P		**Pg**	**07 54 42.6**	**-0.7**
	50nm,0.3s							
KURBB				⇓S		**Sg**	**07 54 51.7**	**-0.3**
	118nm,0.3s							
KUR16	**Kurchatov Arra**	**0.68**	**354**	⇑P		**Pg**	**07 54 42.6**	**-0.8**
KUR16				⇑S		**Sg**	**07 54 51.9**	**-0.3**
KUR17	**Kurchatov Arra**	**0.69**	**352**	⇑P		**Pg**	**07 54 42.9**	**-0.7**
KUR17				⇑S		**Sg**	**07 54 52.3**	**-0.1**
KUR05	**Kurchatov Arra**	**0.69**	**356**	⇑P		**Pg**	**07 54 43.0**	**-0.7**
KUR05				⇑S		**Sg**	**07 54 52.0**	**-0.6**
KUR04	**Kurchatov Arra**	**0.71**	**357**	⇑P		**Pg**	**07 54 43.4**	**-0.7**
KUR04				⇑S		**Sg**	**07 54 52.4**	**-0.8**
SEM	**Semipalatinsk**	**1.15**	**66**	P		**Pg**	**07 54 50.9**	**-1.5**
	15nm,0.1s							
SEM				S		**Sg**	**07 55 05.8**	**-1.5**
	59nm,0.3s							
BRZS	**Berezniki**	**3.83**	**273**	Pg		**Pg**	**07 55 42.1**	**-1.6**
	20nm,0.3s							
BRZS				Lg		Lg	07 56 33.2	
	14nm,0.6s							
MAKZ	**Makanchi**	**3.87**	**143**	P		**Pn**	**07 55 33.2**	**+2.2**
MAKZ	**Makanchi**	**3.87**	**143**	⇓Pn		**Pn**	**07 55 31.5**	**+0.4**
	0.3nm,0.2s							
MAKZ				⇑Pg		**Pb**	**07 55 41.7**	**+2.3**
	3.2nm,0.7s							
MAKZ				⇑Lg		Lg	07 56 33.4	
	13nm,0.6s							
MK31	**Makanchi Array**	**4.00**	**141**	Pn		**Pn**	**07 55 34.3**	**+1.4**
	0.2nm,0.1s,baz=323,slow=10,SNR=28							
MK31				⇑Pg		**Pb**	**07 55 43.0**	**+1.3**
	0.5nm,0.2s,baz=317,slow=15,SNR=9.3							
MK31				⇑Lg		Lg	07 56 37.5	
	3.9nm,0.5s,baz=333,slow=21,SNR=26							
MKAR	**Makanchi Array**	**4.00**	**141**	Pn		**Pn**	**07 55 34.8**	**+1.8**
	1.0nm,0.3s,baz=326,slow=10,SNR=33							
MKAR				Pg		**Pb**	**07 55 41.2**	**-0.6**
	1.4nm,0.3s,baz=321,slow=13,SNR=18							
MKAR				Sn		**Sn**	**07 56 24.4**	**+3.8**
	0.8nm,0.3s,baz=323,slow=16,SNR=3.2							
MKAR				Lg		Lg	07 56 36.5	
	2.6nm,0.3s,baz=331,slow=27,SNR=18							
MKAR	**Makanchi Array**	**4.00**	**141**	P		**Pn**	**07 55 35.0**	**+2.0**
MKAR				S		**Sn**	**07 56 15.6**	**-4.9**
UKR	**Ust'-Kan**	**4.06**	**74**	P		**Pn**	**07 55 35.1**	**+1.3**
UKR				S		**Sn**	**07 56 21.3**	**-0.8**
KAPS	**Kapalarasan**	**4.70**	**174**	Pg		**Pb**	**07 55 56.2**	**+2.6**
	2.8nm,0.3s							
KAPS				Lg		Lg	07 56 57.9	
	11nm,0.6s							
ZSN	**Zaisan**	**4.84**	**119**	Pg		**Pb**	**07 55 58.6**	**+2.6**
	5.1nm,0.3s							
ZSN				Lg		Lg	07 57 02.5	
	14nm,0.6s							
ZAA0	**Zalesovo Array**	**5.54**	**41**	⇑Pn		**Pn**	**07 55 55.0**	**+0.9**
	0.2nm,0.3s							
ZAA0				⇑Lg		Lg	07 57 26.4	
	1.1nm,0.6s							
ZALV	**Zalesovo Beam**	**5.54**	**41**	Pn		**Pn**	**07 55 55.4**	**+1.3**
	2.2nm,0.3s,baz=232,slow=14,SNR=18							
ZALV				Sn		**Sn**	**07 56 59.0**	**+0.5**
	0.5nm,0.3s,baz=227,slow=23,SNR=2.8							
ZALV				Lg		Lg	07 57 22.4	
	0.6nm,0.3s,baz=225,slow=26,SNR=4.2							
I46RU	**ZALESOVO INFRA**	**5.54**	**41**	*i*			08 27 30.0	
	baz=225,slow=330,SNR=3.2							
DGZ	**Jazzator, Alta**	**5.71**	**89**	P		**Pn**	**07 55 58.4**	**+1.8**
DGZ				S		**Sn**	**07 57 03.8**	**+0.8**
CHBI	**Chibit, Altay**	**5.73**	**83**	P		**Pn**	**07 55 58.3**	**+1.5**
CHBI				S		**Sn**	**07 57 03.5**	**+0.3**
ARXS	**Arharly**	**5.77**	**186**	Pg		Pb	07 56 17.7	+5.8
	2.5nm,0.4s							
ARXS				Lg		Lg	07 57 33.7	
	15nm,0.7s							
ARTR	**Artybash**	**5.79**	**68**	P		**Pn**	**07 55 59.0**	**+1.5**
ARTR				S		**Sn**	**07 57 00.3**	**-4.3**
ELT	**Eltsovka**	**5.79**	**52**	P		**Pn**	**07 55 59.0**	**+1.5**
ELT				S		**Sn**	**07 57 04.1**	**-0.5**
AKAR	**Aktash**	**5.81**	**83**	P		**Pn**	**07 55 59.5**	**+1.7**
AKAR				S		**Sn**	**07 57 05.1**	**-0.1**
BVA1	**Borovoye Array**	**5.99**	**304**	⇑Pn		**Pn**	**07 56 00.6**	**+0.4**
	0.6nm,0.4s							
BVA1				⇓Sn		**Sn**	**07 57 09.6**	**+0.3**
	2.0nm,0.4s							
BVA1				⇓Lg		Lg	07 57 39.5	
	3.6nm,0.6s							
BVAR	**Borovoye Array**	**5.99**	**304**	Pn		**Pn**	**07 56 00.7**	**+0.5**
	0.3nm,0.3s,baz=110,slow=14,SNR=8.9							
BVAR				Sn		**Sn**	**07 57 10.8**	**+1.4**
	0.8nm,0.3s,baz=115,slow=22,SNR=14							
BVAR				Lg		Lg	07 57 42.8	
	0.6nm,0.3s,baz=119,slow=26,SNR=5.8							
ULGR	**Ulagan, Altay**	**6.03**	**80**	P		**Pn**	**07 56 02.6**	**+1.7**
ULGR				S		**Sn**	**07 57 09.1**	**-1.5**
KTBS	**Karatobe**	**6.38**	**193**	Pg		Pb	07 56 28.0	+5.7
	1.0nm,0.2s							
KTBS				Lg		Lg	07 57 51.2	
	13nm,0.8s							
PDGK	**Podgornoye**	**6.65**	**174**	⇑Lg		Lg	07 58 03.7	
	7.4nm,0.7s							
KOTS	**Kotyrbulak**	**6.80**	**189**	Pg		**Pg**	**07 56 38.8**	**-1.9**
	4.9nm,0.4s							
KOTS				Lg		Lg	07 58 09.8	
	25nm,0.8s							
DGS	**Degeres**	**6.99**	**197**	Pg		**Pg**	**07 56 41.7**	**-2.6**
	3.6nm,0.4s							
DGS				Lg		Lg	07 58 14.9	
	13nm,0.6s							
IZV	**Izvestkoviy**	**7.05**	**192**	Pg		**Pg**	**07 56 43.1**	**-2.4**
	1.8nm,0.3s							
IZV				Lg		Lg	07 58 17.7	
	6.9nm,0.7s							
TKM2	**Tokmak 2**	**7.33**	**198**	⇑Lg		Lg	07 58 24.5	
	3.2nm,0.7s							
AAK	**Ala-Archa**	**7.85**	**203**	Pn		**Pn**	**07 56 27.5**	**+1.6**
	0.7nm,0.3s,baz=27,slow=9.0,SNR=6.3							
AAK				Lg		Lg	07 58 42.6	
	0.2nm,0.3s,baz=309,slow=13,SNR=4.8							
AAK	**Ala-Archa**	**7.85**	**203**	⇑Lg		Lg	07 58 39.9	
	5.3nm,0.9s							
KK31	**Karatay Array**	**8.83**	**222**	⇑Pn		**Pn**	**07 56 39.2**	**-0.1**
	0.1nm,0.3s,baz=33,slow=12,SNR=9.2							
KK31				⇑Sn		**Sn**	**07 58 19.4**	**-0.1**
	0.3nm,0.5s,baz=333,slow=19,SNR=4.1							
KK31				⇑Lg		Lg	07 59 11.6	
	1.8nm,0.7s,baz=32,slow=27,SNR=3.5							

IDC 12 08:43:01.8±11.0,17˚.32S×178˚.57W,h548km±108km, mb3.3/4,mb1 3.6/4,mb1mx3.1/26,mbtmp4.3/4,Error ellipse: s-maj=123.3km s-min=42.8km az=130.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STKA	**Stephens Creek**	**38.78**	**240**	P		P	08 49 39.6	-0.1
	3.0nm,0.5s,baz=84,slow=9.2,SNR=11							
WRA	**Warramunga Arr**	**44.59**	**259**	P		P	08 50 25.5	-0.3
	1.4nm,0.5s,baz=93,slow=6.9,SNR=10							
ASAR	**Alice Springs**	**44.80**	**254**	P		P	08 50 27.4	-0.1
	15nm,0.6s,baz=89,slow=7.8,SNR=328							
ASAR				PcP		PcP	08 51 56.9	-0.7
	0.6nm,0.5s,baz=108,slow=3.6,SNR=4.7							
ILAR	**Eielson Array**	**85.35**	**13**	P		P	08 54 40.5	-0.3
	0.5nm,1.1s,baz=224,slow=5.0,SNR=3.0							
BRTR	**Keskin Array B**	**144.26**	**315**	PKP		PKPbc	09 01 35.9	+0.1
	0.8nm,0.9s,baz=100,slow=3.2,SNR=3.6							
GERES	**GERESS Array B**	**147.01**	**345**	PKPbc		PKPbc	09 01 42.9	-0.4
	0.5nm,0.4s,baz=8.4,slow=3.4,SNR=5.5							

*IDC **12** 09:02:26.9±2.3,54˚.71N×167˚.47E,h0km,mb3.3/5, mb1 3.5/6,mb1mx3.3/40,mbtmp3.4/6,ML2.7/1,Error ellipse: s-maj=90.4km s-min=20.1km az=171.0*
*KRSC **12** 09:02:28.7±1.6,54˚.17N×167˚.01E,h31km±28km,ML3.8*
ISC 12 09:02:30.2±1.1,54˚.23N±0˚.08×167˚.39E±0˚.08,h35km,n36, σ1§39/38,mb3.4/5,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BKI	**Bering**	**1.28**	**321**	*eP*		**Pn**	**09 02 49.9**	**-1.6**
BKI				*eS*		**Sn**	**09 03 07.0**	**-0.4**
MKZ	**Mys Kozlova**	**3.33**	**278**	*eP*		**Pn**	**09 03 18.8**	**-0.8**
MKZ				*eS*		**Sn**	**09 03 56.0**	**-1.9**
TUMD	**Tumrok D**	**4.17**	**286**	*eP*		**Pn**	**09 03 31.6**	**+0.3**
TUMD				*eS*		**Sn**	**09 04 19.5**	**+0.7**
KZV	**Kizimen**	**4.22**	**285**	*eP*		**Pn**	**09 03 31.9**	**-0.1**
KZV				*eS*		**Sn**	**09 04 18.9**	**-1.1**
TUMR	**Tumrok**	**4.33**	**287**	*eP*		**Pn**	**09 03 35.2**	**+1.7**
KMNR	**Kamenistaya**	**4.40**	**293**	*eP*		**Pn**	**09 03 34.6**	**+0.2**
KPT	**Kopyto**	**4.47**	**296**	*eP*		**Pn**	**09 03 36.5**	**+1.0**
SPN	**Mys Shipunski**	**4.53**	**259**	*eS*		**Sn**	**09 04 24.9**	**-2.5**
SRDR	**Sredinnyy**	**4.86**	**299**	*eP*		**Pn**	**09 03 42.6**	**+1.8**
NLC	**Nalytchevo**	**4.90**	**261**	*eS*		**Sn**	**09 04 35.6**	**-1.0**
SDLR	**Sedlovina**	**5.14**	**263**	*eP*		**Pn**	**09 03 45.1**	**+0.5**
SDLR				*eS*		**Sn**	**09 04 43.1**	**+0.4**
SMAR	**Somma**	**5.19**	**263**	*eP*		**Pn**	**09 03 45.9**	**+0.5**
UGLR	**Uglovaya**	**5.19**	**262**	*eP*		**Pn**	**09 03 45.2**	**-0.1**
KRER	**Koryakskii**	**5.21**	**263**	*eP*		**Pn**	**09 03 46.7**	**+1.0**
AVH	**Avacha**	**5.23**	**263**	*eP*		**Pn**	**09 03 46.3**	**+0.5**
KRX	**Arik**	**5.26**	**264**	*eP*		**Pn**	**09 03 46.3**	**0.0**
ESO	**Esso**	**5.28**	**292**	*eP*		**Pn**	**09 03 47.2**	**+0.8**
KOK	**Koryaka**	**5.28**	**263**	*eP*		**Pn**	**09 03 47.5**	**+1.0**
RUS	**Russkaya**	**5.62**	**255**	*eS*		**Sn**	**09 04 52.8**	**-1.5**
KRMR	**Karymshinskiy**	**5.70**	**260**	*eP*		**Pn**	**09 03 52.5**	**+0.3**
KRMR				*eS*		**Sn**	**09 04 53.8**	**-2.5**
MTVR	**Mutnovka**	**5.79**	**256**	*eP*		**Pn**	**09 03 55.0**	**+1.5**
GRL	**Gorelyy**	**5.82**	**257**	*eP*		**Pn**	**09 03 55.2**	**+1.2**
PETK	**Petropavlovsk-**	**5.87**	**263**	Pn		**Pn**	**09 03 56.7**	**+2.1**
	1.1nm,0.3s,baz=80,slow=18,SNR=25							
PETK				Sn		**Sn**	**09 05 01.3**	**+0.7**
	0.6nm,0.3s,baz=78,slow=13,SNR=5.2							
ASAK	**Asacha**	**5.98**	**256**	*eP*		**Pn**	**09 03 57.2**	**+1.0**
KDTR	**Khodutka, Kamc**	**6.12**	**250**	*eP*		**Pn**	**09 03 58.5**	**+0.5**
KDTR				*eS*		**Sn**	**09 05 03.2**	**-3.5**
KDAK	**Kodiak Island**	**22.42**	**65**	P		**P**	**09 07 23.4**	**-2.0**
	5.9nm,1.0s,baz=255,slow=12,SNR=3.5							
ILAR	**Eielson Array**	**24.90**	**47**	P		**P**	**09 07 48.6**	**-0.7**
	0.3nm,0.6s,baz=257,slow=8.4,SNR=6.1							
H11N2	**WAKE ISLAND Hy**	**34.44**	**181**	T		T	09 46 04.8	
	baz=0.7,slow=76,SNR=32							
H11N3	**WAKE ISLAND Hy**	**34.45**	**181**	T		T	09 46 10.1	
	baz=0.7,slow=76,SNR=30							
H11N1	**WAKE ISLAND Hy**	**34.45**	**181**	T		T	09 46 12.1	
	baz=0.7,slow=76,SNR=44							
H11S1	**WAKE ISLAND Hy**	**35.65**	**181**	T		T	09 47 41.9	
	baz=1.7,slow=74							
H11S3	**WAKE ISLAND Hy**	**35.67**	**181**	T		T	09 47 41.6	
	baz=1.7							
H11S2	**WAKE ISLAND Hy**	**35.67**	**181**	T		T	09 47 45.0	
	baz=1.7,slow=74							
SONM	**Songino Array**	**37.82**	**286**	P		**P**	**09 09 45.2**	**+2.1**
	0.4nm,0.7s,baz=72,slow=9.6,SNR=2.4							
MKAR	**Makanchi Array**	**51.49**	**299**	P		**P**	**09 11 31.2**	**-0.8**
	0.2nm,0.7s,baz=57,slow=9.0,SNR=2.5							
TXAR	**Lajitas Array**	**66.17**	**73**	P		**P**	**09 13 15.2**	**+1.0**
	0.2nm,0.6s,baz=297,slow=4.0,SNR=2.9							

*IDC **12** 09:41:44.5±0.9,49˚.79S×115˚.43E,h0km,mb4.0/6, mb1 4.2/6,mb1mx3.9/32,mbtmp4.0/6,MS3.6/13, Ms1 3.6/13,ms1mx3.4/27,Error ellipse: s-maj=46.0km s-min=19.3km az=110.0*
*NEIC **12** 09:41:45.9±0.9,49˚.74S±0˚.10×115˚.2E±0˚.2,h10km±1km, mb4.1/8,Error ellipse: s-maj=26.8km s-min=16.4km az=81.0*
ISC 12 09:41:45.7±0.7,49˚.75S±0˚.1×115˚.3E±0˚.2,h10km,n37, σ0§63/21,mb3.9/8,MS3.5/12,Western Indian-Antarctic Ridge

| Code | Station Name | Δ° | AZ° |

IDC ***12*** *10:02:01.4±1.4,2°.99S×129°.15E,h0km,mb3.9/2, mb1 4.2/5,mb1mx3.7/43,mbtmp4.0/5,ML3.8/3,MS3.3/4, Ms1 3.3/4,ms1mx2.8/37,Error ellipse: s-maj=36.5km s-min=22.3km az=96.0*

NEIC ***12*** *10:02:08.1±2.9,2°.98S±0°.07×129°.41E±0°.08,h59km±7km, mb4.2/5,Error ellipse: s-maj=11.7km s-min=9.5km az=68.0*

ISC 12 10:02:04.3±0.8,**2°.87S**±0°.07×**129°.44E**±0°.08,**h28**km,**n21,** σ1**9**85/19,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.69**	**43**	Pn		**Pb**	**10 02 50.5**	**-1.4**
	19nm,0.3s,baz=251,slow=11,SNR=37							
SIJI				Sn		**Sb**	**10 03 26.0**	**+1.4**
	18nm,0.3s,baz=211,slow=19,SNR=8.2							
FAKI	**Fak Fak**	**2.81**	**91**	Pn		**Pb**	**10 02 52.8**	**-1.0**
LUWI	**Luwuk**	**6.91**	**285**	Pn		**Pn**	**10 03 45.7**	**+2.0**
SOEI	**Soe**	**8.56**	**217**	Pn		**Pn**	**10 04 05.4**	**-1.2**
MTN	**Manton Dam**	**10.05**	**170**	Pn		**Pn**	**10 04 31.7**	**+4.7**
DAV	**Davao City (W)**	**10.59**	**339**	LR		LR	10 09 02.0	
	comp=Z,59nm,18.2s,baz=87,slow=40							
KNRA	**Kununurra**	**12.75**	**183**	Pn		**Pn**	**10 05 05.0**	**+1.1**
FITZ	**Fitzroy Crossi**	**15.59**	**194**	Pn		**Pn**	**10 05 39.8**	**-2.5**
	0.1nm,0.3s,baz=8.6,slow=9.7,SNR=2.0							
FITZ	**Fitzroy Crossi**	**15.59**	**194**			**Pn**	**10 05 39.8**	**-2.5**
WRA	**Warramunga Arr**	**17.64**	**165**	P		**Pn**	**10 06 07.7**	**-0.4**
	0.5nm,0.3s,baz=346,slow=13,SNR=14							
WRA	**Warramunga Arr**	**17.64**	**165**	P		**P**	**10 06 08.6**	**-0.4**
PSA00	**Pilbara Seismi**	**20.80**	**206**	P		**P**	**10 06 44.5**	**+0.9**
PSA00				IAmb		IAmb	10 06 51.4	
	comp=Z,24nm,1.4s							
AS31	**Alice Springs**	**21.12**	**169**	P		**P**	**10 06 47.9**	**+0.8**
AS31				IAmb		IAmb	10 06 49.2	
	comp=Z,4.8nm,0.5s							
ASAR	**Alice Springs**	**21.13**	**169**	P		**P**	**10 06 47.9**	**+0.7**
	comp=Z,7.4nm,0.5s,baz=348,slow=11,SNR=170							
ASAR				S		**S**	**10 10 39.3**	**-1.7**
	comp=Z,1.0nm,0.9s,baz=347,slow=20,SNR=4.7							
LEM	**Lembang**	**22.09**	**259**	LR		LR	10 15 54.0	
	comp=Z,30nm,19.8s,baz=64,slow=38							
CMWZ	**Cape Campbell**	**55.70**	**140**	P		**P**	**10 11 36.9**	**-1.5**
BFZ	**Birch Farm**	**56.49**	**138**	P		**P**	**10 11 43.6**	**-0.4**
MKAR	**Makanchi Array**	**64.49**	**326**	P		**P**	**10 12 39.5**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=121,slow=7.2,SNR=2.8							
ZALV	**Zalesovo Beam**	**67.66**	**333**	LR		LR	10 44 27.3	
	comp=Z,28nm,18.3s,baz=90,slow=38							
KDAK	**Kodiak Island**	**86.01**	**32**	LR		LR	10 53 25.1	
	comp=Z,76nm,19.1s,baz=128,slow=36							
OTAV	**Otavalo**	**152.00**	**95**	PKPbc		**PKPbc**	**10 21 58.1**	**-0.6**

JMA ***12*** *10:04:34.8±0.4,41°.12N×132°.44E,h599km,M4.0*

MOS ***12*** *10:04:36.4±0.9,41°.18N×132°.03E,h531km,mb4.0/27, Error ellipse: s-maj=8.5km s-min=6.5km az=87.9*

BJI ***12*** *10:04:36.7±0.0,41°.33N×132°.02E,h540km,mB4.7/21, mb4.5/27*

IDC ***12*** *10:04:37.1±0.7,41°.16N×131°.94E,h527km±7km,mb3.2/19, mb1 3.4/25,mb1mx3.3/55,mbtmp4.1/25,Error ellipse: s-maj=10.8km s-min=9.7km az=124.0*

NEIC ***12*** *10:04:38.0±1.5,41°.24N±0°.09×132°.0E±0°.1,h531km±7km, mb4.1/97,Error ellipse: s-maj=13.1km s-min=12.9km az=210.0*

ISC 12 10:04:38.1±0.4,**41°.15N**±0°.06×**132°.20E**±0°.05,**h550**km, **n254,**σ2**9**01/273,**mb4.1**/96,**6C-12D,Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSHR	**Mys Shultsa**	**1.62**	**332**	∥*e*P		**P**	**10 05 43.0**	**-3.0**
USA0B	**Ussuriysk Arra**	**3.05**	**357**	P		**P**	**10 05 50.6**	**-2.6**
USA0B	**Ussuriysk Arra**	**3.05**	**357**	P		**P**	**10 05 50.6**	**-2.6**
USRK	**Ussuriysk Ar.**	**3.05**	**357**	P		**P**	**10 05 50.7**	**-2.5**
	baz=189,slow=6.5,SNR=160							
USRK				S		**S**	**10 06 50.4**	**-4.3**
	baz=184,slow=13,SNR=4.2							
USRK	**Ussuriysk Ar.**	**3.05**	**357**	P		**P**	**10 05 50.4**	**-2.8**
USRK						**S**	**10 06 50.6**	**-4.1**
MDJ	**Mudanjiang**	**3.96**	**332**	P		**P**	**10 05 56.7**	**-2.7**
KS19	**Wonju Array Si**	**4.96**	**224**	P		**P**	**10 06 05.4**	**-2.2**
KSRS	**Korea Array**	**4.96**	**223**	P		**P**	**10 06 05.5**	**-2.1**
	13nm,0.3s,baz=39,slow=8.3,SNR=290							
KSAR	**Wonju Array Be**	**4.99**	**223**	P		**P**	**10 06 05.3**	**-2.6**
KSAR	**Wonju Array Be**	**4.99**	**223**	P		**P**	**10 06 05.2**	**-2.6**
INCN	**Inchon**	**5.66**	**231**	P		**P**	**10 06 11.3**	**-2.4**
INCN	**Inchon**	**5.66**	**231**	P		**P**	**10 06 11.3**	**-2.4**
JIW	**Iwasaki**	**5.95**	**93**	P		**P**	**10 06 14.4**	**-1.7**
JSH	**Shimam**	**6.04**	**73**	P		**P**	**10 06 15.7**	**-1.2**
JTT	**Ttatey**	**6.05**	**137**	P		**P**	**10 06 15.7**	**-1.6**
JAW	**Awa shima**	**6.06**	**114**	P		**P**	**10 06 15.5**	**-1.7**
TJN	**Taejon**	**6.08**	**220**	⇑*i*P		**P**	**10 06 15.4**	**-2.1**
JHS	**Saijyo**	**6.19**	**173**	P		**P**	**10 06 17.2**	**-1.4**
JWT	**Wachi**	**6.38**	**156**	P		**P**	**10 06 19.2**	**-1.1**
MJB9	**Matsu-Tunnel**	**6.56**	**133**	P		**P**	**10 06 19.9**	**-2.1**
MAJO	**Matsushiro**	**6.57**	**133**	∥*e*P		**P**	**10 06 20.6**	**-1.4**
MAJO	**Matsushiro**	**6.57**	**133**	P		**P**	**10 06 20.0**	**-2.0**
MAT	**Matsushiro**	**6.57**	**133**	P		**P**	**10 06 19.3**	**-2.7**
MJAR	**Matsushiro Arr**	**6.57**	**133**	P		**P**	**10 06 20.9**	**-1.2**
MJAR	**Matsushiro Arr**	**6.57**	**133**	P		**P**	**10 06 20.1**	**-2.0**
	0.4nm,0.3s,baz=316,slow=9.9,SNR=19							
MJAR	**Matsushiro Arr**	**6.57**	**133**	P		**P**	**10 06 20.9**	**-1.2**
JHK	**Hiroka**	**6.57**	**124**	P		**P**	**10 06 19.6**	**-2.4**
JNG	**Nsakai**	**6.61**	**134**	P		**P**	**10 06 21.4**	**-1.1**
JOT	**Ohata**	**6.67**	**85**	P		**P**	**10 06 20.6**	**-2.2**
JRG	**Rokugo**	**6.68**	**102**	P		**P**	**10 06 20.0**	**-3.0**
JRG				S		**S**	**10 07 42.5**	**-6.4**
INU	**Inuyama**	**6.92**	**145**	P		**P**	**10 06 24.3**	**-1.1**
JTU	**Tsushima**	**6.98**	**199**	P		**P**	**10 06 24.2**	**-1.7**
JMK	**Ichinoseki**	**7.26**	**105**	P		**P**	**10 06 25.0**	**-3.5**
JFT	**Otama**	**7.28**	**117**	P		**P**	**10 06 26.0**	**-2.7**
JMM	**Marumori**	**7.41**	**114**	P		**P**	**10 06 26.7**	**-3.3**
JIE	**Ise**	**7.63**	**151**	P		**P**	**10 06 30.9**	**-1.4**
JFK	**Kawauchi**	**7.72**	**117**	P		**P**	**10 06 29.7**	**-3.4**
JOD2	**Odawara 2**	**8.00**	**135**	P		**P**	**10 06 33.0**	**-2.9**
KLR	**Kul'dur**	**8.08**	**358**	*c*P		**P**	**10 06 35.1**	**-1.3**
KLR	**Kul'dur**	**8.08**	**358**	P		**P**	**10 06 34.8**	**-1.6**
	2.8nm,0.3s,baz=186,slow=9.3,SNR=83							
KLR				S		**S**	**10 08 10.0**	**-3.6**
	baz=292,slow=19,SNR=4.9							
JNU	**Nakatsue**	**8.09**	**188**	P		**P**	**10 06 35.2**	**-1.6**
	1.0nm,0.3s,baz=33,slow=4.0,SNR=11							
JNU	**Nakatsue**	**8.09**	**188**	P		**P**	**10 06 35.5**	**-1.3**
JWK2	**Keihoku**	**8.21**	**56**	P		**P**	**10 06 37.7**	**0.0**
ERM	**Erimo**	**8.26**	**80**	∥*e*P		**P**	**10 06 39.4**	**+1.2**
ERM	**Erimo**	**8.26**	**80**	P		**P**	**10 06 35.2**	**-3.0**
JCH	**Churui**	**8.46**	**76**	P		**P**	**10 06 37.4**	**-2.8**
JCH				*e*S		**S**	**10 08 12.5**	**-8.0**
JTKR	**Abashiri--Toko**	**9.09**	**68**	P		**P**	**10 06 45.1**	**-1.4**
JTKR				S		**S**	**10 08 26.1**	**-6.0**
JHJ2	**Mitsune**	**10.06**	**140**	P		**P**	**10 06 54.3**	**-2.4**
NMR	**Nemuro--Hokkai**	**10.27**	**73**	*d*iP		**P**	**10 06 56.8**	**-1.8**
NMR				*i* S		**S**	**10 08 47.9**	**-6.3**
NEM2	**Nemuro 2**	**10.28**	**73**	P		**P**	**10 06 56.5**	**-2.2**
NEM2				*e*S		**S**	**10 08 48.9**	**-5.5**
SHO	**Shikotan**	**11.14**	**71**	∥*i*P		**P**	**10 07 06.1**	**-1.4**
SHO				*i* S		**S**	**10 09 05.6**	**-4.9**
SHO				pmax	pmax			
	comp=Z,22nm,0.3s							
SHO				smax	smax			
	comp=E,93nm,2.0s							
SHO				smax	smax			
	comp=N,74nm,1.1s							
HIA	**Hailar**	**11.95**	**317**	*d*iP		**P**	**10 07 13.5**	**-2.4**
HIA	**Hailar**	**11.95**	**317**	P		**P**	**10 07 13.4**	**-2.4**
TYV	**Tymovskoe**	**12.12**	**33**	*e*P		**P**	**10 07 17.5**	**0.0**
TYV				pmax	pmax			
	comp=Z,21nm,0.9s							
BJT	**Baijiatuau**	**12.24**	**270**	P		**P**	**10 07 16.4**	**-2.6**
BJT	**Baijiatuau**	**12.24**	**270**	P		**P**	**10 07 16.4**	**-2.6**
HHC	**Hu-ho-hao-te**	**15.59**	**276**	*e*P		**P**	**10 07 51.1**	**-2.5**
HHC				pmax	pmax			
	comp=Z,9.0nm,1.1s							
HHC				pmax	pmax			
	comp=Z,73nm,5.8s							
WHN	**Wuhan**	**17.90**	**239**	P		**P**	**10 08 17.5**	**+2.5**
ULN	**Ulaanbaatar**	**19.10**	**299**	*de*P		**P**	**10 08 25.8**	**-0.1**
ULN				pmax	pmax			
	comp=Z,10.0nm,0.7s							
ULN	**Ulaanbaatar**	**19.10**	**299**	P		**P**	**10 08 25.5**	**-0.4**
SONM	**Songino Array**	**19.53**	**299**	P		**P**	**10 08 29.4**	**-0.4**
SONM				pmax	pmax			
	comp=Z,10.0nm,0.9s							
SONM	**Songino Array**	**19.53**	**299**	P		**P**	**10 08 29.8**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=103,slow=9.3,SNR=98							
SONM	**Songino Array**	**19.53**	**299**	P		**P**	**10 08 29.4**	**-0.4**
XAN	**Xi'an**	**19.73**	**256**	P		**P**	**10 08 31.5**	**-0.3**
XAN				pmax	pmax			
	comp=Z,8.0nm,0.5s							
XAN				pmax	pmax			
	comp=Z,130nm,4.6s							
XAN	**Xi'an**	**19.73**	**256**	P		**P**	**10 08 29.7**	**-2.1**
XAN				pmax	pmax			
	comp=Z,8.0nm,0.4s							
XAN	**Xi'an**	**19.73**	**256**	P		**P**	**10 08 29.6**	**-2.1**
BOD	**Bodaibo**	**20.33**	**331**	*e*P		**P**	**10 08 35.4**	**-1.3**
BOD				pmax	pmax			
	comp=Z,7.0nm,1.7s							
YAK	**Yakutsk**	**20.96**	**357**	*e*P		**P**	**10 08 42.7**	**+0.3**
YAK				pmax	pmax			
	comp=Z,5.0nm,0.7s							
MA2	**Magadan**	**21.78**	**26**	∥*e*P		**P**	**10 08 50.8**	**+1.0**
MA2				pmax	pmax			
	comp=Z,53nm,3.3s							
TLY	**Talaya**	**22.19**	**308**	∥*e*P		**P**	**10 08 54.2**	**+0.6**
TLY				pmax	pmax			
	comp=Z,6.0nm,0.8s							
LZH	**Lanzhou**	**22.67**	**266**	*e*P		**P**	**10 08 58.6**	**+0.3**
LZH				sP	sP		10 11 18.2	-5.2
LZH				pmax	pmax			
	comp=Z,17nm,1.3s							
LZH				pmax	pmax			
	comp=Z,59nm,4.9s							
GTA	**Gaotai**	**24.69**	**277**	P		**P**	**10 09 15.8**	**-0.4**
GTA				sP	sP		10 11 47.2	+2.0
GTA				pmax	pmax			
	comp=Z,6.0nm,1.0s							
SEY	**Seymchan**	**24.88**	**22**	P		**P**	**10 09 18.4**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=190,slow=11,SNR=4.6							
TIXI	**Tiksi**	**30.62**	**358**	∥*e*P		**P**	**10 10 06.4**	**-0.8**
TIXI				pmax	pmax			
	comp=Z,1.0nm,0.6s							
TIXI	**Tiksi**	**30.62**	**358**	P		**P**	**10 10 06.8**	**-0.4**
BILL	**Bilibino**	**32.57**	**23**	⇑*i*P		**P**	**10 10 24.9**	**+1.0**
BILL				*e**PP		**pP**	**10 11 57.2**	**+1.3**
BILL				*e*S		**S**	**10 15 02.4**	**+1.9**
BILL				pmax	pmax			
	comp=Z,8.0nm,1.2s							
BILL	**Bilibino**	**32.57**	**23**	P		**P**	**10 10 25.1**	**+1.2**
BILL				IAmb	IAmb		10 10 26.8	
	comp=Z,8.3nm,1.2s							
WMQ	**Urumqi**	**32.63**	**290**	*e*P		**P**	**10 10 25.2**	**+0.3**
WMQ				pmax	pmax			
	comp=Z,11nm,0.7s							
WMQ				pmax	pmax			
	comp=Z,150nm,5.7s							
ZAA0	**Zalesovo Array**	**33.80**	**309**	P		**P**	**10 10 33.2**	**-1.3**
ZAA0				IAmb	IAmb		10 10 34.2	
	comp=Z,3.0nm,0.9s							
ZALV	**Zalesovo Beam**	**33.80**	**309**	*i* P		**P**	**10 10 33.4**	**-1.1**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.3s							
ZALV	**Zalesovo Beam**	**33.80**	**309**	P		**P**	**10 10 33.2**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=93,slow=7.4,SNR=8.7							
ZALV	**Zalesovo Beam**	**33.80**	**309**	P		**P**	**10 10 33.4**	**-1.1**
MK31	**Makanchi Array**	**35.86**	**296**	P		**P**	**10 10 51.3**	**-0.5**
MK31				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MK31	**Makanchi Array**	**35.86**	**296**	P		**P**	**10 10 51.3**	**-0.5**
MKAR	**Makanchi Array**	**35.86**	**296**	P		**P**	**10 10 51.3**	**-0.5**
MKAR	**Makanchi Array**	**35.86**	**296**	P		**P**	**10 10 50.9**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=88,slow=10,SNR=23							
MKAR	**Makanchi Array**	**35.86**	**296**	P		**P**	**10 10 51.3**	**-0.5**
MAKZ	**Makanchi**	**36.07**	**296**	P		**P**	**10 10 52.8**	**-0.7**
MAKZ				pmax	pmax			
	comp=Z,2.0nm,0.6s							
MAKZ	**Makanchi**	**36.07**	**296**	P		**P**	**10 10 52.8**	**-0.7**
MAKZ				IAmb	IAmb		10 10 53.6	
	comp=Z,1.7nm,0.6s							
CHTO	**Chiang Mai**	**36.07**	**242**	P		**P**	**10 10 53.9**	**0.0**
CHTO				pmax	pmax			
	comp=Z,2.0nm,0.6s							
CHTO	**Chiang Mai**	**36.07**	**242**	P		**P**	**10 10 53.9**	**0.0**
CHTO				IAmb	IAmb		10 10 54.4	
	comp=Z,2.3nm,0.6s							
ADK	**Adak**	**36.07**	**55**	P		**P**	**10 10 54.0**	**+0.6**
ADK				pmax	pmax			
	comp=Z,55nm,1.2s							
ADK	**Adak**	**36.07**	**55**	P		**P**	**10 10 54.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**36.32**	**241**	P		**P**	**10 10 56.7**	**+0.7**
CMAR	**Chiang Mai Arr**	**36.32**	**241**	P		**P**	**10 10 54.5**	**-1.5**
	comp=Z,1.1nm,0.6s,baz=34,slow=6.6,SNR=4.5							
CMAR	**Chiang Mai Arr**	**36.32**	**241**	P		**P**	**10 10 56.7**	**+0.7**
SHL	**Shillong**	**36.73**	**258**	P		**P**	**10 10 57.8**	**-1.7**
SHL				pmax	pmax			
	comp=Z,10.0nm,1.2s							
SHL	**Shillong**	**36.73**	**258**	P		**P**	**10 10 57.8**	**-1.7**
SHL				IAmb	IAmb		10 11 02.3	
	comp=Z,9.7nm,1.2s							
KURK	**Kurchatov**	**37.72**	**303**	*d*iP		**P**	**10 11 05.8**	**-1.1**
KURK				pmax	pmax			
	comp=Z,10.0nm,0.7s							
KURK	**Kurchatov**	**37.72**	**303**	P		**P**	**10 11 05.8**	**-1.1**
TAPN	**Taplejung**	**38.85**	**264**	*e*P		**P**	**10 11 16.2**	**-0.7**
	comp=Z,9.2nm,0.4s							
ODAN	**Odare**	**39.36**	**263**	*e*P		**P**	**10 11 20.1**	**-0.7**
	comp=Z,5.3nm,0.3s							
JIRN	**Jiri**	**39.83**	**265**	*e*P		**P**	**10 11 23.8**	**-1.0**
	comp=Z,9.7nm,0.3s							
RAMN	**Ramite**	**39.90**	**264**	*e*P		**P**	**10 11 24.2**	**-1.0**
	comp=Z,9.3nm,0.3s							
GUN	**Gumba**	**39.93**	**266**	*e*P		**P**	**10 11 25.1**	**-0.5**
	comp=Z,26nm,0.4s							
KKN	**Kakani**	**40.45**	**266**	*e*P		**P**	**10 11 29.2**	**-0.3**
PKI	**Pulchoki**	**40.47**	**266**	*e*P		**P**	**10 11 29.0**	**-0.8**
	comp=Z,1.3nm,0.5s							
KDJ	**Kajisay**	**40.52**	**290**	P		**P**	**10 11 29.5**	**-0.4**
KDJ				pmax	pmax			
	comp=Z,3.0nm,0.6s							
KDJ	**Kajisay**	**40.52**	**290**	P		**P**	**10 11 29.4**	**-0.4**
KDJ				IAmb	IAmb		10 11 30.3	
	comp=Z,3.3nm,0.6s							
DMN	**Daman**	**40.67**	**266**	*e*P		**P**	**10 11 30.9**	**-0.5**
	comp=Z,6.7nm,0.4s							
GKN	**Gorkha**	**40.82**	**267**	*e*P		**P**	**10 11 31.5**	**-0.9**
	comp=Z,18nm,0.3s							
DANN	**Dangsing**	**41.30**	**268**	*e*P		**P**	**10 11 35.7**	**-0.7**
	comp=Z,53nm,0.4s							
KOLN	**Koldanda**	**41.73**	**267**	*e*P		**P**	**10 11 39.2**	**-0.4**
	comp=Z,7.1nm,0.5s							
ANM	**Nome**	**42.08**	**35**	P		**P**	**10 11 44.5**	**+2.9**
ANM				pmax	pmax			
	comp=Z,5.0nm,1.3s							
ANM	**Nome**	**42.08**	**35**	P		**P**	**10 11 44.5**	**+2.9**
ANM				IAmb	IAmb		10 11 54.4	
	comp=Z,4.8nm,1.3s							
AAK	**Ala-Archa**	**42.26**	**292**	∥*e*P		**P**	**10 11 43.0**	**-0.6**
AAK				pmax	pmax			
	comp=Z,2.0nm,0.8s							
AAK	**Ala-Archa**	**42.26**	**292**	P		**P**	**10 11 43.2**	**-0.4**
RDOG	**Red Dog Mine**	**43.29**	**30**	P		**P**	**10 11 52.5**	**+1.5**
KK31	**Karatay Array**	**44.87**	**294**	P		**P**	**10 12 02.5**	**-1.2**
KK31				pmax	pmax			
	comp=Z,4.0nm,1.1s							
KK31	**Karatay Array**	**44.87**	**294**	P		**P**	**10 12 02.5**	**-1.2**
KK31				IAmb	IAmb		10 12 04.0	
	comp=Z,4.0nm,1.1s							
KKAR	**Karatay Array**	**44.87**	**294**	P		**P**	**10 12 02.3**	**-1.4**
KKAR				pmax	pmax			
	comp=Z,4.0nm,1.1s							
KKAR	**Karatay Array**	**44.87**	**294**	P		**P**	**10 12 02.3**	**-1.4**
KKAR				IAmb	IAmb		10 12 04.0	
	comp=Z,4.0nm,1.1s							
GAR	**Garm**	**46.51**	**289**	P		**P**	**10 12 16.0**	**-0.4**
NIL	**Nilore**	**46.65**	**281**	P		**P**	**10 12 18.2**	**+0.9**
NIL				pmax	pmax			
	comp=Z,7.0nm,0.7s							
NIL	**Nilore**	**46.65**	**281**	P		**P**	**10 12 18.2**	**+0.9**
NIL				IAmb	IAmb		10 12 18.4	
	comp=Z,6.8nm,0.7s							
SVW2	**Sparrevohn**	**46.76**	**39**	P		**P**	**10 12 20.5**	**+2.8**
SVW2				IAmb	IAmb		10 12 27.6	
	comp=Z,9.4nm,1.2s							
IMAR	**Indian Mountai**	**46.92**	**33**	P		**P**	**10 12 20.6**	**+1.8**
CHGR	**Chuyangaron**	**47.48**	**289**	P		**P**	**10 12 23.2**	**-0.4**
CHIR	**Chirikof Islan**	**47.81**	**46**	P		**P**	**10 12 27.5**	**+1.9**
PPLA	**Purkeypile**	**48.03**	**37**	P		**P**	**10 12 30.1**	**+2.8**
PPLA				IAmb	IAmb		10 12 31.6	
	comp=Z,14nm,1.4s							
COLD	**Coldfoot**	**48.16**	**31**	P		**P**	**10 12 25.8**	**-2.3**
COLD				IAmb	IAmb		10 12 26.5	
	comp=Z,5.4nm,0.5s							
TOLK	**Toolik Lake Re**	**48.21**	**29**	P		**P**	**10 12 30.2**	**+1.8**
TOLK				PcP	PcP		**10 13 47.8**	**+2.9**
MLY	**Manley**	**48.29**	**34**	P		**P**	**10 12 29.8**	**+0.7**
ARU	**Arti**	**48.45**	**315**	*d*iP		**P**	**10 12 29.5**	**-0.9**
ARU							10 13 44.9	
ARU							10 14 29.0	
ARU				S		**S**	**10 18 51.5**	**+1.0**
ARU				pmax	pmax			
	comp=Z,7.0nm,0.8s							
ARU	**Arti**	**48.45**	**315**	P		**P**	**10 12 29.8**	**-0.6**
ARU				IAmb	IAmb		10 12 30.9	
	comp=Z,7.7nm,0.9s							
KTH	**Kantishna Hill**	**48.48**	**36**	P		**P**	**10 12 33.0**	**+2.5**
SKT	**Skwentna**	**48.51**	**38**	P		**P**	**10 12 32.2**	**+1.5**
SKT				IAmb	IAmb		10 12 35.0	
	comp=Z,6.1nm,1.2s							
OHAK	**Old Harbor**	**48.72**	**44**	P		**P**	**10 12 33.6**	**+1.3**
TRF	**Thorofare Moun**	**48.77**	**36**	P		**P**	10 12 37.1	+4.2
KDAK	**Kodiak Island**	**48.94**	**43**	P		**P**	**10 12 35.2**	**+1.2**
KDAK				pmax	pmax			
	comp=Z,18nm,1.2s							
KDAK	**Kodiak Island**	**48.94**	**43**	P		**P**	**10 12 35.2**	**+1.2**
SUA	**Susitna One**	**48.98**	**38**	P		**P**	**10 12 36.1**	**+1.7**
SUA				IAmb	IAmb		10 12 39.1	
	comp=Z,14nm,1.4s							
BWN	**Browne**	**48.99**	**35**	P		**P**	**10 12 37.4**	**+3.2**
MCK	**McKinley**	**49.31**	**35**	P		**P**	**10 12 38.5**	**+1.8**
MCK				pmax	pmax			
	comp=Z,3.0nm,1.1s							
MCK	**McKinley**	**49.31**	**35**	P		**P**	**10 12 38.5**	**+1.8**
BRLK	**Bradley Lake**	**49.31**	**41**	P		**P**	**10 12 38.3**	**+1.5**
BRLK				PcP	PcP		**10 13 51.0**	**+1.9**
MDM	**Murphy Dome**	**49.35**	**33**	P		**P**	**10 12 39.2**	**+2.3**
MDM				IAmb	IAmb		10 12 39.8	
	comp=Z,5.0nm,0.7s							
RND	**Reindeer**	**49.41**	**36**	P		**P**	**10 12 39.4**	**+1.9**
RND				pmax	pmax			
	comp=Z,3.0nm,0.9s							
RND	**Reindeer**	**49.41**	**36**	P		**P**	**10 12 39.4**	**+1.9**
COLA	**College**	**49.53**	**34**	∥*e*P		**P**	**10 12 40.4**	**+2.2**
COLA				pmax	pmax			
	comp=Z,6.0nm,0.7s							
RC01	**Rabbit Creek A**	**49.54**	**39**	P		**P**	**10 12 40.2**	**+1.8**
CCB	**Clear Creek Bu**	**49.60**	**34**	P		**P**	**10 12 40.4**	**+1.7**
GHO	**Glory Hole Cre**	**49.76**	**38**	P		**P**	**10 12 42.5**	**+2.4**
GHO				IAmb	IAmb		10 13 00.4	
	comp=Z,13nm,1.4s							
SEW	**Seward**	**49.92**	**40**	P		**P**	**10 12 42.6**	**+1.5**
IL31		**49.95**	**34**	P		**P**	**10 12 42.6**	**+1.3**
IL31				IAmb	IAmb		10 12 59.1	
	comp=Z,4.6nm,1.1s							
ILAR	**Eielson Array**	**49.95**	**34**	P		**P**	**10 12 42.5**	**+1.2**
	comp=Z,1.3nm,0.4s,baz=290,slow=7.8,SNR=36							
HDA	**Harding Lake**	**50.01**	**34**	P		**P**	**10 12 43.1**	**+1.4**
HDA				IAmb	IAmb		10 12 43.7	
	comp=Z,6.9nm,0.7s							
SML	**Sawmill**	**50.02**	**38**	P		**P**	**10 12 44.2**	**+2.2**
SML				IAmb	IAmb		10 12 54.9	
	comp=Z,13nm,1.2s							
KNK	**Knik Glacier**	**50.06**	**38**	P		**P**	**10 12 44.5**	**+2.3**
KNK				IAmb	IAmb		10 12 44.9	
	comp=Z,7.1nm,0.6s							
DHY	**Denali Highway**	**50.14**	**36**	P		**P**	**10 12 44.9**	**+1.9**
DHY				IAmb	IAmb		10 12 46.6	
	comp=Z,4.7nm,0.9s							
DHY				PcP	PcP		**10 13 54.6**	**+2.3**
BMAR	**Burnt Mountain**	**50.27**	**30**	P		**P**	**10 12 46.6**	**+2.9**
PRP	**Porcupine Dome**	**50.34**	**32**	P		**P**	**10 12 46.2**	**+1.9**
PRP				IAmb	IAmb		10 12 47.4	
	comp=Z,7.2nm,1.2s							
SCM	**Sheep Creek Mo**	**50.48**	**37**	P		**P**	**10 12 47.7**	**+2.4**
SCM				pmax	pmax			
	comp=Z,16nm,0.6s							
SCM	**Sheep Creek Mo**	**50.48**	**37**	P		**P**	**10 12 47.6**	**+2.4**
GSI	**

YKW3	**Yellowknife Ar**	**63.69**	**28**	P	**P**	**10 14 17.1**	**+1.7**
YKW3				IAmb	IAmb	10 14 17.3	
	comp=Z,2.4nm,0.6s						
YKA	**Yellowknife Ar**	**63.73**	**28**	P	**P**	**10 14 17.1**	**+1.5**
	comp=Z,1.9nm,0.6s,baz=310,slow=5.8,SNR=50						
UOSS	**Minazif**	**63.84**	**281**	P	**P**	**10 14 17.2**	**+0.2**
AS31	**Alice Springs**	**64.51**	**178**	P	**P**	**10 14 22.1**	**+1.0**
ASAR	**Alice Springs**	**64.51**	**178**	P	**P**	**10 14 21.9**	**+0.8**
ASAR	**Alice Springs**	**64.51**	**178**	P	**P**	**10 14 21.8**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=356,slow=7.0,SNR=9.9						
ASAR	**Alice Springs**	**64.51**	**178**	P	**P**	**10 14 21.9**	**+0.8**
AKASG	**Malin Array Be**	**66.54**	**318**	P	**P**	**10 14 32.6**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=50,slow=6.8,SNR=11						
AKASG	**Malin Array Be**	**66.54**	**318**	P	**P**	**10 14 33.2**	**-0.2**
AKBB	**Malin Array Si**	**66.54**	**318**	P	**P**	**10 14 32.6**	**-0.8**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	**Malin Array Si**	**66.54**	**318**	P	**P**	**10 14 32.6**	**-0.8**
AKBB				IAmb	IAmb	10 14 33.0	
	comp=Z,2.6nm,0.7s						
HFS	**Hagfors**	**67.22**	**332**	P	**P**	**10 14 37.3**	**-0.2**
	baz=74,slow=6.2						
NC405	**NORSAR Array S**	**67.23**	**333**	P	**P**	**10 14 37.6**	**+0.1**
NB2	**NORSAR Subarra**	**67.45**	**333**	P	**P**	**10 14 39.1**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=74,slow=6.5						
NOA	**NORSAR Array B**	**67.45**	**333**	P	**P**	**10 14 38.7**	**-0.2**
	comp=Z,0.8nm,0.8s,baz=27,slow=5.8,SNR=5.1						
BUR08	**Bucovina Ar. S**	**70.51**	**317**	P	**P**	**10 14 58.1**	**+0.4**
BURAR	**Bucovina Array**	**70.52**	**317**	P	**P**	**10 14 58.4**	**+0.7**
BRTR	**Keskin Array B**	**70.69**	**306**	P	**P**	**10 14 58.8**	**-0.1**
BRTR	**Keskin Array B**	**70.69**	**306**	P	**P**	**10 14 58.5**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=308,slow=5.4,SNR=2.0						
BRTR	**Keskin Array B**	**70.69**	**306**	P	**P**	**10 14 58.8**	**-0.1**
OJC	**Ojcow**	**71.48**	**321**	P	**P**	**10 15 04.1**	**+0.9**
OJC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OJC	**Ojcow**	**71.48**	**321**	P	**P**	**10 15 04.1**	**+0.9**
OJC				IAmb	IAmb	10 15 04.3	
	comp=Z,3.2nm,0.7s						
PINE	**Pine Mountain**	**72.93**	**46**	P	**P**	**10 15 15.1**	**+3.2**
PINE				IAmb	IAmb	10 15 29.0	
	comp=Z,11nm,1.4s						
STKA	**Stephens Creek**	**73.18**	**172**	P	**P**	**10 15 15.2**	**+2.2**
STKA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
STKA	**Stephens Creek**	**73.18**	**172**	P	**P**	**10 15 14.6**	**+1.6**
	comp=Z,0.9nm,0.4s,baz=358,slow=5.6,SNR=5.3						
STKA	**Stephens Creek**	**73.18**	**172**	P	**P**	**10 15 15.2**	**+2.2**
FCC	**Fort Churchill**	**73.29**	**23**	P	**P**	**10 15 15.0**	**+1.6**
FCC				pmax	pmax		
	comp=Z,4.0nm,1.3s						
FCC	**Fort Churchill**	**73.29**	**23**	P	**P**	**10 15 15.0**	**+1.6**
CLL	**Collm**	**73.79**	**325**	*eP*	**P**	**10 15 17.0**	**+0.6**
CLL				*e*pP	**pP**	**10 17 07.0**	**-4.1**
VTS	**Vitosha**	**74.86**	**314**	P	**P**	**10 15 23.9**	**+1.1**
VTS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VTS	**Vitosha**	**74.86**	**314**	P	**P**	**10 15 23.9**	**+1.1**
KHC	**Kasperske Hory**	**75.12**	**323**	*e*P	**P**	**10 15 25.5**	**+1.5**
GERES	**GERESS Array B**	**75.28**	**323**	P	**P**	**10 15 25.2**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=28,slow=4.7,SNR=3.5						
NVAR	**Mina Array Bea**	**78.00**	**49**	P	**P**	**10 15 43.0**	**+2.8**
	comp=Z,1.4nm,0.6s,baz=310,slow=5.3,SNR=6.5						
NVAR	**Mina Array Bea**	**78.00**	**49**	P	**P**	**10 15 43.3**	**+3.1**
NRS	**Narsarsuaq**	**78.02**	**359**	P	**P**	**10 15 40.1**	**+0.6**
NRS	**Narsarsuaq**	**78.02**	**359**	P	**P**	**10 15 40.1**	**+0.6**
NV11	**Mina Array Sit**	**78.09**	**49**	P	**P**	**10 15 43.4**	**+2.8**
FUORN	**Ofenpass-Fuorn**	**78.48**	**323**	P	**P**	**10 15 43.9**	**+1.3**
SGRT	**San Giovanni R**	**79.44**	**317**	P	**P**	**10 15 48.6**	**+1.0**
PD31	**Pinedale Array**	**79.61**	**41**	P	**P**	**10 15 50.7**	**+2.1**
PDAR	**Pinedale Array**	**79.61**	**41**	P	**P**	**10 15 50.5**	**+1.8**
	comp=Z,1.9nm,0.7s,baz=336,slow=2.0,SNR=18						
PDAR	**Pinedale Array**	**79.61**	**41**	P	**P**	**10 15 50.6**	**+1.9**
ULM	**Lac du Bonnet**	**79.70**	**29**	P	**P**	**10 15 50.2**	**+1.5**
ULM				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ULM	**Lac du Bonnet**	**79.70**	**29**	P	**P**	**10 15 49.7**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=324,slow=8.8,SNR=4.3						
ULM	**Lac du Bonnet**	**79.70**	**29**	P	**P**	**10 15 50.2**	**+1.5**
TPNV	**Topopah Spring**	**80.20**	**49**	P	**P**	**10 15 54.6**	**+2.8**
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TPNV	**Topopah Spring**	**80.20**	**49**	P	**P**	**10 15 54.6**	**+2.8**
EYMN	**Ely**	**83.21**	**28**	P	**P**	**10 16 08.4**	**+1.7**
EYMN				IAmb	IAmb	10 16 21.3	
	comp=Z,5.3nm,1.1s						
ECSD	**EROS Data Cent**	**84.77**	**33**	P	**P**	**10 16 16.5**	**+2.0**
ECSD				IAmb	IAmb	10 16 17.0	
	comp=Z,4.6nm,1.0s						
LPAZ	**La Paz**	**149.63**	**41**	PKP2	**PKPab**	**10 23 32.5**	**-1.9**
LPAZ	**La Paz**	**149.63**	**41**	PKPab	**PKPab**	**10 23 32.5**	**-1.9**
PB11	**IPOC Station P**	**151.69**	**48**	PKPbc	**PKiKP**	**10 23 33.0**	**+1.8**
PB11				PKPab	**PKPab**	**10 23 44.5**	**+2.1**
GO01	**Chusmiza**	**151.88**	**47**	PKPbc	**PKiKP**	**10 23 34.0**	**+2.0**

MAN 12 10:05:23.2,5.95N×125.69E,h114km,mb4.0,ML2.4, MS2.8,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.16**	**8**	*e*P	Pn	10 05 40.1	+1.1
DDMP				*e*S	Sn	10 05 52.6	+1.7
MATI	**Mati**	**1.14**	**30**	*e*P	Pn	10 05 46.8	+0.6
MATI				*e*S	Sn	10 06 18.7	+15
KCP	**Kidapawan**	**1.21**	**331**	*e*P	Pn	10 05 47.6	+0.6
KCP				*i* S	Sn	10 06 06.2	+1.1

MAN 12 10:38:48.6,8.73N×126.19E,h1km,mb4.4,ML3.3,MS3.1, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.57**	**163**	*i*P	Pg	10 38 59.7	+0.1
BIPH				*i* S	Sb	10 39 09.6	-0.5
BUTP	**Butuan**	**0.61**	**293**	*e*P	Pg	10 39 00.3	0.0
BUTP				*e*S	Sb	10 39 12.1	+0.9
BUKP	**Musuan**	**1.40**	**233**	*e*P	Pn	10 39 14.7	-0.7
BUKP				*e*S	Sn	10 39 35.1	+0.5
CGP	**Cagayan de Oro**	**1.51**	**260**	*e*P	Pn	10 39 16.7	-0.1
CGP				*e*S	Sb	10 39 34.6	-2.4

*NEIC **12** 10:42:38.9±1.1,21.59N±0.09×143.4E±0.1,h285km±6km, mb4.1/14, Error ellipse: s-maj=18.1km s-min=10.0km az=61.0*
*IDC **12** 10:42:40.3±2.2,21.57N×143.24E,h296km±21km, mb3.3/14,mb1 3.4/17,mb1mx3.3/54,mbtmp4.0/17, Error ellipse: s-maj=22.1km s-min=9.3km az=88.0*

ISC 12 10:42:40.3±0.6,21.66N±0.07×143.4E±0.1,h300km,n41, σ0.88/43,mb3.7/16,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.52**	**349**	P	**Pn**	**10 44 04.4**	**+0.5**
	18nm,0.3s,baz=165,slow=19,SNR=20						
JCJ				S	**S**	**10 45 08.9**	**-2.2**
	3.7nm,0.3s,baz=135,slow=20,SNR=2.0						
INU	**Inuyama**	**14.73**	**339**	P	**Pn**	**10 45 54.7**	**-0.8**
MJAR	**Matsushiro Arr**	**15.49**	**344**	P	**P**	**10 46 02.8**	**+0.1**
	0.2nm,0.3s,baz=177,slow=12,SNR=15						
MJAR	**Matsushiro Arr**	**15.49**	**344**	P	**P**	**10 46 02.3**	**-0.4**
MAJO	**Matsushiro**	**15.50**	**344**	P	**Pn**	**10 46 03.7**	**-0.8**
MAJO				IAmb	IAmb	10 46 16.2	
	comp=Z,15nm,1.2s						
MJB9	**Matsu-Tunnel**	**15.50**	**344**	P	**Pn**	**10 46 03.2**	**-1.3**
MJB9				IAmb	IAmb	10 46 16.2	
	comp=Z,16nm,1.2s						
JNU	**Nakatsue**	**15.90**	**319**	P	**Pn**	**10 46 08.8**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=97,slow=8.1,SNR=3.5						
KSRS	**Korea Array**	**20.64**	**323**	P	**P**	**10 46 58.6**	**+1.0**
	comp=Z,1.6nm,0.8s,baz=147,slow=8.4,SNR=6.5						
USRK	**Ussuriysk Ar.**	**24.38**	**340**	P	**P**	**10 47 32.3**	**+0.6**
	comp=Z,2.9nm,0.9s,baz=144,slow=11,SNR=4.2						
KLR	**Kul'dur**	**29.02**	**344**	P	**P**	**10 48 13.4**	**+0.5**
	comp=Z,4.2nm,0.5s,baz=171,slow=7.3,SNR=18						
SBUM	**Sibu**	**35.80**	**242**	P	**P**	**10 49 12.4**	**+0.4**
SBUM				IAmb	IAmb	10 49 19.2	
	comp=Z,3.1nm,1.2s						
SONM	**Songino Array**	**39.47**	**320**	P	**P**	**10 49 42.8**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=124,slow=6.6,SNR=4.4						
KNRA	**Kununurra**	**39.77**	**202**	P	**P**	**10 49 44.4**	**-0.5**
KNRA				IAmb	IAmb	10 49 57.1	
	comp=Z,16nm,1.1s						
WR0	**Warramunga Arr**	**42.25**	**192**	P	**P**	**10 50 04.2**	**-0.8**
WR0				IAmb	IAmb	10 50 15.9	
	comp=Z,15nm,1.4s						
WRAB	**Tennant Creek**	**42.26**	**193**	P	**P**	**10 50 04.7**	**-0.4**
WRA	**Warramunga Arr**	**42.28**	**193**	P	**P**	**10 50 04.5**	**-0.6**
	comp=Z,4.2nm,0.5s,baz=15,slow=9.0,SNR=54						
WRA	**Warramunga Arr**	**42.28**	**193**	P	**P**	**10 50 04.3**	**-0.9**
FITZ	**Fitzroy Crossi**	**43.15**	**205**	P	**P**	**10 50 11.3**	**-0.9**
	comp=Z,3.0nm,0.6s,baz=29,slow=6.2,SNR=7.0						
FITZ	**Fitzroy Crossi**	**43.15**	**205**	P	**P**	**10 50 11.4**	**-0.7**
FITZ				IAmb	IAmb	10 50 23.6	
	comp=Z,12nm,1.4s						
AS31	**Alice Springs**	**45.98**	**192**	P	**P**	**10 50 33.4**	**-0.9**
ASAR	**Alice Springs**	**45.98**	**192**	P	**P**	**10 50 33.2**	**-1.1**
WR0							
	comp=Z,1.3nm,0.6s,baz=16,slow=11,SNR=25						
ASAR	**Alice Springs**	**45.98**	**192**	P	**P**	**10 50 33.5**	**-0.9**
STKA	**Stephens Creek**	**53.26**	**182**	P	**P**	**10 51 28.2**	**-0.5**
	comp=Z,2.7nm,0.4s,baz=3.7,slow=6.8,SNR=10						
STKA	**Stephens Creek**	**53.26**	**182**	P	**P**	**10 51 28.4**	**-0.3**
ZALV	**Zalesovo Beam**	**54.34**	**322**	PcP	**PcP**	**10 52 35.5**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=117,slow=1.6,SNR=2.8						
MKAR	**Makanchi Array**	**54.85**	**313**	P	**P**	**10 51 40.3**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=90,slow=8.3,SNR=3.4						
MKAR				PcP	**PcP**	**10 52 38.2**	**0.0**
	comp=Z,0.3nm,0.4s,baz=78,slow=4.6,SNR=5.6						
JCUZ	**Jacuzzi**	**57.35**	**80**	P	**P**	**10 51 57.4**	**-0.7**
NWAO	**Narrogin (SRO)**	**59.74**	**205**	P	**P**	**10 52 14.9**	**+0.8**
ILAR	**Eielson Array**	**62.00**	**27**	P	**P**	**10 52 29.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=262,slow=5.0,SNR=5.0						
INK	**Inuvik**	**67.54**	**24**	P	**P**	**10 53 06.5**	**+2.2**
	comp=Z,1.1nm,0.8s,baz=258,slow=4.7,SNR=3.4						
INK	**Inuvik**	**67.54**	**24**	P	**P**	**10 53 06.6**	**+2.3**
YKA	**Yellowknife Ar**	**76.41**	**28**	P	**P**	**10 53 57.4**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=291,slow=6.0,SNR=8.4						
ARCES	**ARCESS Array B**	**79.01**	**342**	P	**P**	**10 54 11.4**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=78,slow=8.4,SNR=4.2						
FINES	**FINESS Array B**	**83.29**	**335**	P	**P**	**10 54 33.0**	**-0.4**
	comp=Z,2.1nm,0.9s,baz=90,slow=3.8,SNR=7.7						
FINES	**FINESS Array B**	**83.29**	**335**	P	**P**	**10 54 33.6**	**+0.1**
TORD	**Torodi Ar. Bea**	**128.89**	**309**	PKP	**PKPdf**	**11 01 12.7**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=50,slow=2.3,SNR=3.2						
TORD	**Torodi Ar. Bea**	**128.89**	**309**		**PKiKP**	**11 01 13.4**	**-0.6**
PLCA	**Paso Flores**	**145.61**	**131**	PKPbc	**PKPab**	**11 01 44.7**	**-0.1**
	comp=Z,2.1nm,0.5s,baz=265,slow=3.3,SNR=16						
PLCA	**Paso Flores**	**145.61**	**131**		**PKPab**	**11 01 45.0**	**+0.1**
LPAZ	**La Paz**	**149.78**	**85**	PKPbc	**PKiKP**	**11 01 57.4**	**+0.1**
	comp=Z,1.2nm,0.5s,baz=329,slow=5.9,SNR=5.4						
LPAZ	**La Paz**	**149.78**	**85**		**PKiKP**	**11 01 56.7**	**-0.6**

*DJA **12** 10:46:48.3±1.0,9.7S±4.7×107.9E±.°,h21km±10km,M4.1/18, mb3.6/1,MLv4.3/18*
*NEIC **12** 10:46:51.2±2.5,8.29S±0.05×109.50E±0.05,h90km±6km, mb4.2/11,Error ellipse: s-maj=7.8km s-min=5.7km az=219.0*
*IDC **12** 10:46:52.1±2.4,7.97S×109.70E,h93km±23km,mb3.6/6, mb1 3.7/8,mb1mx3.5/39,mbtmp3.9/8,MS2.4/2,Ms1 2.6/2, ms1mx2.3/37,Error ellipse: s-maj=42.6km s-min=15.7km az=44.0*

ISC 12 10:46:49.2±0.9,8.50S±0.08×109.42E±0.03,h75km±9km, n60,σ1.946/72,mb4.1/9,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**1.10**	**52**	P	**Pn**	**10 47 09.0**	**-0.3**
YOGI				S	**Sn**	**10 47 22.9**	**-1.4**
CMJI	**Cimerak**	**1.19**	**307**	P	**Pn**	**10 47 10.0**	**-0.4**
CMJI				S	**Sn**	**10 47 24.7**	**-1.6**
UGM	**Wanagama**	**1.24**	**62**	P	**Pn**	**10 47 11.1**	**0.0**
UGM				S	**Sn**	**10 47 27.0**	**-0.5**
UGM	**Wanagama**	**1.24**	**62**		**Pn**	**10 47 11.1**	**0.0**
UGM				Sn	**Sn**	**10 47 26.6**	**-0.9**
KPJI	**Karang Pucung**	**1.25**	**338**	P	**Pn**	**10 47 12.2**	**+1.0**
KPJI				S	**Sn**	**10 47 29.9**	**+2.2**
WOJI	**Wonogiri, Jawa**	**1.63**	**66**	P	**Pn**	**10 47 15.6**	**-0.5**
WOJI				S	**Sn**	**10 47 34.4**	**-2.1**
SMRI	**Semarang**	**1.76**	**35**	P	**Pn**	**10 47 19.5**	**+1.6**
SMRI				S	**Sn**	**10 47 42.8**	**+3.2**
SMRI	**Semarang**	**1.76**	**35**		**Pn**	**10 47 19.6**	**+1.6**
PCJI	**Pacitan**	**1.77**	**80**	P	**Pn**	**10 47 18.2**	**+0.3**
PCJI				S	**Sn**	**10 47 39.7**	**0.0**
CISI	**Cisompet, Garu**	**1.84**	**301**	P	**Pn**	**10 47 18.8**	**-0.1**
CISI				S	**Sn**	**10 47 41.1**	**-0.4**
CISI	**Cisompet, Garu**	**1.84**	**301**		**Pn**	**10 47 18.9**	**0.0**
CISI					**Sn**	**10 47 40.6**	**-1.0**
NGJI	**Ngawi**	**2.32**	**61**	P	**Pn**	**10 47 26.7**	**+1.4**
PWJI	**Pagerwojo**	**2.41**	**79**	P	**Pn**	**10 47 26.7**	**+0.2**
PWJI				S	**Sn**	**10 47 55.8**	**+0.7**
LEM	**Lembang**	**2.44**	**313**	P	**Pn**	**10 47 29.4**	**+2.3**
	35nm,0.3s,baz=88,slow=10,SNR=36						
LEM				S	**Sn**	**10 47 58.9**	**+2.9**
	45nm,0.3s,baz=292,slow=19,SNR=12						
LEM				LR	LR	10 48 08.7	
	comp=Z,42nm,19.6s,baz=246,slow=32						
LEM	**Lembang**	**2.44**	**313**	P	**Pn**	**10 47 28.7**	**+1.7**
CNJI	**Cibinong**	**2.56**	**297**	P	**Pn**	**10 47 28.5**	**0.0**
UWJI	**Ujung Watu**	**2.57**	**36**	P	**Pn**	**10 47 29.3**	**+0.7**
TBJI	**Tambak Boyo**	**2.93**	**55**	P	**Pn**	**10 47 33.9**	**+0.3**
SKJI	**Sukabumi**	**3.20**	**297**	P	**Pn**	**10 47 38.2**	**+1.0**
DBJI	**Dramaga**	**3.27**	**306**	P	**Pn**	**10 47 39.5**	**+1.2**
GRJI	**Gresik**	**3.42**	**63**	P	**Pn**	**10 47 41.5**	**+1.3**
GMJI	**Gumukmas**	**3.99**	**87**	P	**Pn**	**10 47 48.1**	**+0.1**
CGJI	**Cibinong**	**4.14**	**297**	P	**Pn**	**10 47 49.5**	**-0.5**
JAGI	**Jajag, Banyuwa**	**4.69**	**90**	P	**Pn**	**10 47 57.7**	**+0.2**
JAGI	**Jajag, Banyuwa**	**4.69**	**90**		**Pn**	**10 47 59.3**	**+1.8**
JAGI					**Sn**	**10 48 49.8**	**-0.8**
PMBI	**Palembang**	**7.21**	**320**	Pn	**Pn**	**10 48 31.3**	**-0.7**
MNAI	**Manna**	**7.62**	**302**	Pn	**Pn**	**10 48 39.1**	**+1.4**
PSA00	**Pilbara Seismi**	**16.43**	**143**	Pn	**Pn**	**10 50 33.3**	**-1.9**
PSA00				IAmb	IAmb	10 50 39.9	
	comp=Z,20nm,1.4s						
FITZ	**Fitzroy Crossi**	**18.43**	**123**	P	**Pn**	**10 51 02.2**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=304,slow=9.6,SNR=2.3						
FITZ				S	S	10 54 11.4	-13
	comp=Z,0.1nm,0.3s,baz=356,slow=19,SNR=2.6						
FITZ	**Fitzroy Crossi**	**18.43**	**123**	P	**Pn**	**10 51 01.0**	**+1.3**
FITZ				IAmb	IAmb	10 51 09.8	
	comp=Z,15nm,1.4s						
WRA	**Warramunga Arr**	**26.66**	**118**	P	**P**	**10 52 22.5**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=289,slow=12,SNR=6.6						
WRA				PcP	**PcP**	**10 55 44.3**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=308,slow=1.8,SNR=4.2						
WRA	**Warramunga Arr**	**26.66**	**118**	P	**P**	**10 52 21.8**	**+0.5**
WRA				PcP	**PcP**	**10 55 44.3**	**+0.7**
QIZ	**Qiongzhong**	**27.36**	**1**	P	**P**	**10 52 25.1**	**-2.4**
AS31	**Alice Springs**	**27.88**	**126**	P	**P**	**10 52 34.4**	**+2.2**
AS31				PcP	**PcP**	**10 55 47.6**	**+1.2**
ASAR	**Alice Springs**	**27.88**	**126**	P	**P**	**10 52 34.0**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=306,slow=9.1,SNR=8.2						
ASAR				PcP	**PcP**	**10 55 47.5**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=306,slow=2.0,SNR=12						
ASAR	**Alice Springs**	**27.88**	**126**	P	**P**	**10 52 33.7**	**+1.6**
ASAR				PcP	**PcP**	**10 55 47.3**	**+0.9**
CMAR	**Chiang Mai Arr**	**28.71**	**339**	LR	LR	11 05 36.2	
	comp=Z,15nm,18.7s,baz=160,slow=40						
BBOO	**Buckleboo**	**34.54**	**138**		**P**	**10 53 31.6**	**+0.9**
H08S2	**Diego Garcia H**	**36.56**	**269**	T	T	11 33 00.7	
	baz=95,slow=75						
H08S3	**Diego Garcia H**	**36.57**	**269**	T	T	11 32 58.2	
H08S1	**Diego Garcia H**	**36.58**	**269**	T	T	11 32 42.0	
	baz=95,slow=75						
STKA	**Stephens Creek**	**37.87**	**132**	P	**P**	**10 54 00.4**	**+1.4**
	comp=Z,1.8nm,0.7s,baz=320,slow=13,SNR=4.3						
STKA	**Stephens Creek**	**37.87**	**132**	P	**P**	**10 54 00.5**	**+1.5**
WHN	**Wuhan**	**39.11**	**7**	P	**P**	10 54 14.3	+5.0
KSH	**Kashi**	**56.95**	**329**	P	P	10 56 36.6	+10
KSH				pP	pP	10 56 42.2	-3.8
KSH				pmax	pmax		
	comp=Z,230nm,5.1s						
MK31	**Makanchi Array**	**60.12**	**339**	P	**P**	**10 56 46.8**	**-2.1**
MK31				IAmb	IAmb	10 57 04.3	
	comp=Z,0.8nm,0.8s						
MKAR	**Makanchi Array**	**60.12**	**339**	P	**P**	**10 56 47.0**	**-1.8**
	comp=Z,0.4nm,0.4s,baz=153,slow=7.6,SNR=6.2						
MKAR	**Makanchi Array**	**60.12**	**339**	P	**P**	**10 56 47.6**	**-1.2**
ABKAR	**Akbulak array**	**71.93**	**328**	P	**P**	**10 58 03.4**	**-1.0**
PETK	**Petropavlovsk-**	**73.76**	**28**	P	**P**	**10 58 12.6**	**-2.6**
	comp=Z,4.6nm,1.0s,baz=220,slow=8.7,SNR=4.6						
VNDA	**Vanda**	**74.07**	**170**	P	**P**	**10 58 18.5**	**+1.9**
VNDA				IAmb	IAmb	10 58 34.2	
	comp=Z,6.8nm,1.5s						
QSPA	**South Pole Qui**	**81.50**	**180**	P	**P**	**10 58 59.8**	**+1.6**
QSPA				IAmb	IAmb	10 59 00.1	
	comp=Z,7.7nm,1.4s						
BR131	**Keskin Array S**	**84.61**	**311**	P	**P**	**10 59 15.4**	**+0.6**
BR131				IAmb	IAmb	10 59 15.8	
	comp=Z,3.1nm,1.2s						
BRTR	**Keskin Array B**	**84.61**	**311**	P	**P**	**10 59 14.7**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=132,slow=6.4,SNR=6.5						
BRTR	**Keskin Array B**	**84.61**	**311**	P	**P**	**10 59 14.5**	**-0.3**
YKA	**Yellowknife Ar**	**117.41**	**21**	PKP	**PKPdf**	**11 05 25.3**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=339,slow=1.7,SNR=8.5						
TXAR	**Lajitas Array**	**142.68**	**52**	PKP	**PKPdf**	**11 06 11.6**	**-3.1**
	comp=Z,0.2nm,0.9s,baz=263,slow=2.4,SNR=3.0						
TXAR	**Lajitas Array**	**142.68**	**52**		**PKPdf**	**11 06 11.4**	**-3.2**
BDFB	**Brasilia**	**147.21**	**223**	PKPbc	**PKPab**	**11 06 26.9**	**0.0**
	comp=Z,2.5nm,0.6s,baz=145,slow=5.8,SNR=3.4						
BDFB	**Brasilia**	**147.21**	**223**		**PKPbc**	**11 06 25.8**	**+0.7**

JMA 12 10:55:46.0±0.2,24.75N×123.08E,h38km,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.29**	**192**	P	Pn	10 55 53.8	-0.4
IRIF	**Iriomote-Funau**	**0.72**	**125**	P	Pn	10 55 59.5	-0.2
IRIF				*e*S	Sn	10 56 10.4	+0.9
HATJ	**Hateruma jima**	**0.96**	**136**	S	Sn	10 56 16.6	+1.3
JKRS	**Kuro-shima**	**0.99**	**121**	P	Pn	10 56 03.7	+0.4
JIJ	**Ishigaki jima**	**1.04**	**111**	P	Pn	10 56 04.0	0.0
JIJ				S	Sn	10 56 17.2	-0.2
JISG	**Ishigakijimahi**	**1.13**	**98**	P	Pn	10 56 06.3	+1.0
JISG				*e*S	Sn	10 56 20.5	+0.9

TAP 12 10:55:46.9,24.27N×121.49E,h10km±1km,ML1.3,1C,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ETLH	**Xiulin Townshi**	**0.07**	**183**	*e*P	Pg	10 55 49.8	+0.6
	baz=182						
ETLH				*e*S	Sg	10 55 51.0	+0.3
	baz=182						
NACB	**Ninganchiao**	**0.14**	**134**	*e*P	Pg	10 55 51.1	+1.0
	baz=134						
NACB				*e*S	Sg	10 55 53.1	+0.8
	baz=134						
NNSH	**Datong**	**0.18**	**329**	P	Pg	10 55 52.0	+1.1
	baz=329						
NNSH				S	Sg	10 55 54.5	+1.0
	baz=329						
NNS	**Nan Shan**	**0.20**	**329**	P	Pg	10 55 52.6	+1.5
	baz=330						
NNS				S	Sg	10 55 55.2	+1.3
	baz=330						
TWD	**Chiawan**	**0.22**	**152**	*e*S	Sg	10 55 55.6	+1.2
	baz=150						
WHF	**Hehuan Shan**	**0.24**	**238**	*i*P	Pg	10 55 52.8	+0.8
	baz=236						
WHF				S	Sg	10 55 55.9	+0.5
	baz=236						
ENA	**Nanau**	**0.28**	**56**	*e*P	Pb	10 55 53.5	-0.5
	baz=57						
TWT	**Tachien**	**0.28**	**266**	P	Pb	10 55 54.3	+0.1
	baz=265						
TWT				*e*S	Sb	10 55 58.4	-0.7
	baz=265						
NANB	**Nanao**	**0.29**	**57**	*e*P	Pb	10 55 53.6	-0.6
	baz=57						
TDCB	**Techi**	**0.30**	**266**	P	Pb	10 55 54.3	-0.1
	baz=266						
TDCB				*e*S	Sg	10 55 58.0	+1.0
	baz=266					

FSK	**Fiskardo**	**0.76**	**325**	P	**Pg**	**11 17 38.4**	**-1.2**
FSK	**Fiskardo**	**0.76**	**325**	P	**Pg**	**11 17 38.6**	**-1.0**
PDO	**Prodromos**	**0.76**	**4**	P	**Pg**	**11 17 39.6**	**0.0**
LAKA	**Lakka**	**0.79**	**59**	P	**Pn**	**11 17 41.2**	**-1.3**
LAKA				S	**Sn**	**11 17 53.7**	**-0.8**
	comp=E,965nm,0.8s						
LAKA	**Lakka**	**0.79**	**59**	P	**Pn**	**11 17 41.4**	**-1.0**
LAKA				AML	AML	11 17 58.0	
	comp=E,2210µm,0.8s						
LAKA				AML	AML	11 17 59.9	
	comp=N,1863µm,0.6s						
KLV	**Kalavryta, Ach**	**0.84**	**76**	P	**Pb**	**11 17 41.4**	**-0.5**
KLV				S	**Sn**	**11 17 55.9**	**+0.1**
	comp=N,612nm,0.6s						
KLV	**Kalavryta, Ach**	**0.84**	**76**	P	**Pn**	**11 17 41.6**	**-1.6**
PVO	**Paravola**	**0.84**	**22**	P	**Pg**	**11 17 41.5**	**+0.3**
PVO	**Paravola**	**0.84**	**22**	P	**Pb**	**11 17 42.0**	**+0.1**
PVO				S	**Sb**	**11 17 53.4**	**0.0**
PVO				AML	AML	11 18 03.5	
	comp=E,1459µm,0.5s						
PVO				AML	AML	11 18 03.7	
	comp=N,1783µm,0.4s						
EFP	**Efpalio**	**0.86**	**46**	P	**Pb**	**11 17 41.9**	**-0.2**
EFP				S	**Sn**	**11 17 55.7**	**-0.4**
	comp=N,810nm,0.6s						
EVGl	**Lefkada island**	**0.86**	**335**	P	**Pg**	**11 17 40.3**	**-1.2**
EVGl	**Lefkada island**	**0.86**	**335**	P	**Pg**	**11 17 40.5**	**-1.0**
ITM	**Ithomi**	**0.92**	**135**	P	**Pn**	**11 17 43.7**	**-0.5**
ITM				S	**Sn**	**11 17 57.6**	**0.0**
	comp=N,475nm,0.5s						
TRIZ	**Trizonia**	**0.92**	**55**	P	**Pn**	**11 17 43.4**	**-0.8**
TRIZ				S	**Sn**	**11 17 56.8**	**-0.8**
	comp=N,958nm,0.7s						
SERG	**Sergoula**	**0.94**	**52**	P	**Pb**	**11 17 43.4**	**-0.1**
SERG				S	**Sn**	**11 17 58.9**	**+0.8**
	comp=N,828nm,0.4s						
SERG	**Sergoula**	**0.94**	**52**	P	**Pn**	**11 17 43.8**	**-0.7**
KALE	**Kalithea**	**0.98**	**55**	P	**Pb**	**11 17 44.0**	**-0.2**
KALE				S	**Sn**	**11 18 00.9**	**+1.7**
	comp=N,740nm,0.4s						
LKD2	**Lefkada island**	**1.02**	**339**	P	**Pg**	**11 17 42.9**	**-1.6**
LKD2	**Lefkada island**	**1.02**	**339**	P	**Pg**	**11 17 43.2**	**-1.3**
LKD2				AML	AML	11 18 06.7	
	comp=E,1743µm,0.4s						
LKD2				AML	AML	11 18 10.5	
	comp=N,1387µm,0.4s						
TSLK	**Tsoukalades, L**	**1.05**	**340**	P	**Pg**	**11 17 43.9**	**-1.2**
PYL	**PYLOS**	**1.06**	**152**	P	**Pn**	**11 17 45.3**	**-0.9**
EVR	**Evrytania**	**1.21**	**27**	P	**Pg**	**11 17 47.9**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.42**	**34**	P	**Pb**	**11 17 52.0**	**+0.3**
DYR	**Agios Nikonas**	**1.45**	**137**	P	**Pb**	**11 17 53.1**	**+0.9**
LTK	**Loutraki**	**1.48**	**82**	P	**Pb**	**11 17 53.0**	**+0.4**
AGG	**Agios Georgios**	**1.52**	**38**	P	**Pg**	**11 17 54.4**	**+0.3**
DID	**Didima**	**1.71**	**100**	P	**Pg**	**11 17 57.9**	**+0.1**
VILL	**Villia**	**1.77**	**79**	P	**Pg**	**11 17 59.1**	**+0.3**
IGT	**Igoumenitsa**	**1.80**	**340**	P	**Pn**	**11 17 57.1**	**+0.8**
VLI	**Veliai**	**1.83**	**127**	P	**Pg**	**11 18 00.1**	**0.0**
THL	**Klokotos Trika**	**1.86**	**22**	P	**Pb**	**11 18 00.1**	**+0.9**
VLY	**Voula,Athens**	**2.12**	**89**	P	**Pg**	**11 18 04.7**	**-0.9**
KPRO	**Kipourio**	**2.12**	**5**	P	**Pb**	**11 18 03.6**	**-0.1**
XOR	**Xorichti**	**2.23**	**46**	P	**Pb**	**11 18 05.4**	**-0.1**
AOS	**Alonnisos**	**2.54**	**58**	P	**Pb**	**11 18 09.0**	**-1.9**
FINES	**FINESS Array B**	**23.83**	**6**	P	**P**	**11 22 37.9**	**-0.4**
	comp=N,4.2nm,1.1s,baz=189,slow=11,SNR=3.1						
TORD	**Torodi Ar. Bea**	**30.07**	**220**	P	**P**	**11 23 34.5**	**-0.3**
	comp=N,0.4nm,0.6s,baz=30,slow=7.7,SNR=2.6						
MKAR	**Makanchi Array**	**45.08**	**58**	P	**P**	**11 25 41.4**	**-0.1**
	comp=N,0.1nm,0.4s,baz=281,slow=8.2,SNR=5.6						
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**11 25 47.2**	**+2.1**
	comp=N,0.7nm,0.5s,baz=284,slow=9.2,SNR=2.5						

IDC 12 11:19:27.9±2.4, 32°.71N×91°.63E, h0km, mb3.5/2, mb1 3.4/4, mb1mx3.2/38, mbtmp3.3/4, MLL3.4/1, Error ellipse: s-maj=82.2km s-min=29.6km az=71.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**15.77**	**336**	Pn	Pn	11 23 08.9	-2.4
	baz=147,slow=14,SNR=3.5						
SONM	**Songino Array**	**18.80**	**32**	P	P	11 23 49.1	+0.1
	0.1nm,0.3s,baz=215,slow=12,SNR=3.5						
ZALV	**Zalesovo Beam**	**21.78**	**349**	P	P	11 24 20.9	-0.3
	0.9nm,0.6s,baz=171,slow=10,SNR=4.8						
ASAR	**Alice Springs**	**69.07**	**139**	P	P	11 30 35.8	0.0
	0.5nm,0.9s,baz=322,slow=5.9,SNR=4.1						

IDC 12 11:41:20.3±2.3, 51°.44N×175°.16W, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.3/44, mbtmp3.2/4, ML3.6/1, Error ellipse: s-maj=62.2km s-min=46.3km az=164.0
NEIC 12 11:41:27.2±1.6, 51°.62N±0°.10×175°.20W±0°.07, h41km±5km, Error ellipse: s-maj=14.6km s-min=4.9km az=161.0
AEIC 12 11:41:27.5±1.5, 51°.7N±0°.1×175°.23W±0°.06, h47km±7km, ML3.1/16, mb3.7/11(NEIC), Error ellipse: s-maj=15.0km s-min=3.5km az=166.0

ISC 12 11:41:27.0±1.0, 51°.6N±0°.1×175°.14W±0°.05, h40km, n42, σ0 99/40, mb3.5/5, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSMY	**Great Sitkin M**	**0.73**	**309**		**Pn**	**11 41 40.6**	**-0.2**
GSTR	**Great Sitkin T**	**0.76**	**312**		**Pn**	**11 41 41.3**	**+0.1**
GSTD	**Great Sitkin T**	**0.78**	**307**		**Pn**	**11 41 41.3**	**-0.2**
GSTD					**Sn**	**11 41 51.8**	**-0.3**
KOKL	**Mount Kliuchef**	**0.93**	**38**		**Pn**	**11 41 44.1**	**+0.5**
KOKL					**Sn**	**11 41 56.1**	**+0.2**
KOFP	**Korovin Flat P**	**0.94**	**43**		**Pn**	**11 41 43.9**	**+0.2**
ADAG	**Mount Adagdak**	**0.99**	**294**		**Pn**	**11 41 44.6**	**+0.3**
ADK	**Adak**	**1.00**	**287**		**Pn**	**11 41 43.8**	**-0.7**
KIWB	**Kanaga Island**	**1.28**	**283**		**Pn**	**11 41 48.0**	**-0.3**
KIMD	**Kanaga Island**	**1.32**	**278**		**Pn**	**11 41 48.5**	**-0.3**
KIMD					**Sn**	**11 42 04.1**	**-1.0**
TAPA	**Tanaga Point A**	**1.68**	**279**		**Pn**	**11 41 54.1**	**+0.3**
TAFP	**Tanaga Falls P**	**1.80**	**281**		**Pn**	**11 41 55.9**	**+0.5**
TAFP					**Sn**	**11 42 17.6**	**+0.7**
TASE	**Tanaga Southea**	**1.82**	**279**		**Pn**	**11 41 56.4**	**+0.6**
SPIA	**Saint Paul Isl**	**6.28**	**25**	Pn	**Pn**	**11 42 55.0**	**-1.9**
OHAK	**Old Harbor**	**13.88**	**58**	P	**P**	**11 44 48.7**	**+0.3**
ANM	**Nome**	**13.97**	**18**	P	**P**	**11 44 47.0**	**-2.3**
KDAK	**Kodiak Island**	**14.40**	**56**	P	**P**	**11 44 53.8**	**-0.2**
SEW	**Seward**	**16.65**	**49**	P	**P**	**11 45 18.6**	**-0.4**
GHO	**Glory Hole Cre**	**17.51**	**44**	P	**P**	**11 45 29.1**	**+0.5**
KTH	**Kantishna Hill**	**17.52**	**38**	P	**P**	**11 45 30.7**	**+1.9**
KTH				IAmb	IAmb	11 45 33.1	
	comp=Z,12nm,1.4s						
TRF	**Thorofare Moun**	**17.71**	**38**	P	**P**	**11 45 33.9**	**+2.9**
TRF				IAmb	IAmb	11 45 44.5	
	comp=Z,11nm,1.5s						
RND	**Reindeer**	**18.25**	**40**	P	**Pn**	**11 45 37.7**	**+0.8**
MCK	**McKinley**	**18.38**	**39**	P	**Pn**	**11 45 39.0**	**+0.6**
MLY	**Manley**	**18.41**	**34**	P	**Pn**	**11 45 41.0**	**+2.2**
DHY	**Denali Highway**	**18.70**	**41**	P	**P**	**11 45 41.9**	**+0.1**
IL31		**19.67**	**37**	P	**P**	**11 45 51.9**	**-0.2**
IL31				IAmb	IAmb	11 46 11.1	
	comp=Z,4.6nm,1.4s						
ILAR	**Eielson Array**	**19.67**	**37**	P	**P**	**11 45 51.4**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=234,slow=10,SNR=13						
ILAR	**Eielson Array**	**19.67**	**37**	P	**P**	**11 45 51.9**	**-0.3**
RIDG	**Independent Ri**	**20.02**	**41**	P	**P**	**11 45 56.5**	**+0.5**
RIDG				IAmb	IAmb	11 46 00.0	
	comp=Z,3.2nm,0.9s						
SCRK	**Sand Creek**	**20.46**	**41**	P	**P**	**11 46 00.3**	**-0.6**
SCRK				IAmb	IAmb	11 46 04.3	
	comp=Z,6.1nm,0.9s						
TOLK	**Toolik Lake Re**	**21.03**	**26**	P	**P**	**11 46 07.9**	**+1.0**
EGAK	**Eagle**	**21.90**	**40**	P	**P**	**11 46 16.4**	**+0.2**
EGAK				IAmb	IAmb	11 46 24.2	
	comp=Z,2.3nm,1.1s						
DAWY	**Dawson**	**22.39**	**42**	P	**P**	**11 46 22.8**	**+1.2**
DAWY				IAmb	IAmb	11 46 32.9	
	comp=Z,3.6nm,1.1s						
YKA	**Yellowknife Ar**	**33.41**	**47**	P	**P**	**11 48 01.4**	**+0.1**
	comp=Z,0.1nm,0.6s,baz=279,slow=8.1						
H11N2	**WAKE ISLAND Hy**	**34.79**	**211**	T	T	12 25 36.3	
	baz=20,slow=76,SNR=4.7						
H11N3	**WAKE ISLAND Hy**	**34.80**	**211**	T	T	12 25 40.2	
	baz=20,slow=76,SNR=9.2						
H11N1	**WAKE ISLAND Hy**	**34.81**	**211**	T	T	12 25 35.5	
	baz=20,slow=76,SNR=8.7						
H11S1	**WAKE ISLAND Hy**	**36.00**	**210**	T	T	12 27 16.1	
	baz=19,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**36.01**	**210**	T	T	12 27 17.9	
	baz=19,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**36.01**	**210**	T	T	12 27 17.4	
	baz=19,slow=76,SNR=5.7						
PDAR	**Pinedale Array**	**44.05**	**75**	P	**P**	**11 49 30.2**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=310,slow=3.4,SNR=7.1						
TXAR	**Lajitas Array**	**56.35**	**84**	P	**P**	**11 51 03.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=305,slow=5.4,SNR=2.3						
BOSA	**Boshof**	**152.43**	**319**	PKPbc	**PKPbc**	**12 01 18.2**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=31,slow=1.3,SNR=4.0						

NIED 12 11:56:00.43°.20N×146°.00E, h44km, Mw3.6 Best double couple: M0 2.58000×10^14 NP1:φs 352.00000°, δ89.00000°, λ -72.00000°. NP2:φs 85.00000°, δ18.00000°, λ -177.00000°.
MOS 12 11:56:16.1±1.1, 42°.85N×146°.01E, h41km, mb4.6/6, Error ellipse: s-maj=15.3km s-min=7.0km az=85.5
SKHL 12 11:56:20.0±0.8, 43°.10N×146°.00E, h63km±1km, mb4.3/5
JMA 12 11:56:21.4±0.1, 43°.16N×145°.96E, h45km±1km, M3.8
JMA Felt I J1.
NEIC 12 11:56:22.8±1.7, 43°.22N±0°.09×146°.1E±0°.1, h66km±8km, mb4.5/14, Error ellipse: s-maj=16.6km s-min=11.9km az=125.0
IDC 12 11:56:27.2±4.8, 43°.67N×145°.98E, h85km±39km, mb3.4/14, mb1 3.6/16, mb1mx3.4/60, mbtmp3.8/16, Error ellipse: s-maj=50.3km s-min=16.3km az=169.0

ISC 12 11:56:20.0±0.9, 43°.13N±0°.05×146°.07E±0°.04, h44km±7km, n85, σ1 °23/97, mb4.0/22, 3C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.34**	**314**	P	**Pn**	**11 56 29.6**	**+0.6**
NEM2				*e*S	**Sn**	**11 56 35.1**	**-0.2**
NMR	**Nemuro--Hokkai**	**0.35**	**314**	*d* iPN	**Pn**	**11 56 29.7**	**+0.6**
NMR				*i* S	**Sn**	**11 56 36.1**	**+0.6**
NMR	**Nemuro--Hokkai**	**0.35**	**314**	*i* P	**Pn**	**11 56 29.7**	**+0.6**
NMR				*i* S	**Sn**	**11 56 36.1**	**+0.6**
JKHN	**Kushirohamanak**	**0.67**	**266**	P	**Pn**	**11 56 33.9**	**+0.8**
GLVR	**Golovnino**	**0.73**	**327**	*d* iPN	**Pn**	**11 56 34.4**	**+0.5**
GLVR				*e*S	**Sn**	**11 56 44.8**	**+0.8**
GLVR				pmax	pmax		
	comp=Z,708nm,0.1s						
GLVR				smax	smax		
	comp=N,9µm,0.3s						
GLVR				smax	smax		
	comp=E,5µm,0.3s						
GLVR	**Golovnino**	**0.73**	**327**	*i* P	**Pn**	**11 56 34.4**	**+0.5**
GLVR				AMB	AMB	11 56 35.0	
	comp=E,150nm,0.3s						
GLVR				*e*S	**Sn**	**11 56 44.8**	**+0.8**
GLVR				A	A	11 56 45.0	
	comp=E,2µm,0.3s						
GLVR				A	A	11 56 45.0	
	comp=E,900nm,0.3s						
GRPR	**Tuman**	**0.89**	**346**	*e*PN	**Pn**	**11 56 36.2**	**+0.1**
GRPR				*i* S	**Sn**	**11 56 47.5**	**-0.3**
GRPR				pmax	pmax		
	comp=Z,847nm,0.2s						
GRPR				smax	smax		
	comp=N,3µm,0.1s						
GRPR				smax	smax		
	comp=E,4µm,0.2s						
GRPR	**Tuman**	**0.89**	**346**	*e*P	**Pn**	**11 56 36.2**	**+0.1**
GRPR				AMB	AMB	11 56 37.0	
	comp=E,200nm,0.3s						
GRPR				*i* S	**Sn**	**11 56 47.5**	**-0.3**
GRPR				A	A	11 56 48.0	
	comp=E,740nm,0.3s						
GRPR				A	A	11 56 48.0	
	comp=E,1µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.92**	**350**	*d* iPN	**Pn**	**11 56 36.5**	**+0.1**
YUK				*i* S	**Sn**	**11 56 48.6**	**+0.1**
YUK				pmax	pmax		
	comp=N,470nm,0.3s						
YUK				pmax	pmax		
	comp=E,881nm,0.3s						
YUK				pmax	pmax		
	comp=E,520nm,0.1s						
YUK				smax	smax		
	comp=N,630nm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.92**	**350**	*i* P	**Pn**	**11 56 36.5**	**+0.1**
YUK				AMB	AMB	11 56 38.0	
	comp=E,120nm,0.2s						
YUK				*i* S	**Sn**	**11 56 48.6**	**+0.1**
YUK				A	A	11 56 50.0	
	comp=E,630nm,0.3s						
YUK				A	A	11 56 50.0	
	comp=E,850nm,0.3s						
SHO	**Shikotan**	**0.92**	**36**	*d* iPN	**Pn**	**11 56 36.5**	**-0.1**
SHO				*i* S	**Sn**	**11 56 48.1**	**-0.5**
SHO				pmax	pmax		
	comp=Z,139nm,0.1s						
SHO				smax	smax		
	comp=N,2µm,0.1s						
SHO				smax	smax		
	comp=E,2µm,0.3s						
SHO	**Shikotan**	**0.92**	**36**	*i* P	**Pn**	**11 56 36.4**	**-0.1**
SHO				AMB	AMB	11 56 36.8	
	comp=E,40nm,0.3s						
SHO				AMB	AMB	11 56 36.8	
	comp=E,70nm,0.3s						
SHO				AMB	AMB	11 56 36.8	
	comp=E,140nm,0.3s						
SHO				*i* S	**Sn**	**11 56 48.2**	**-0.4**
SHO				A	A	11 56 49.8	
	comp=E,820nm,0.4s						
SHO				A	A	11 56 49.8	
	comp=E,2µm,0.4s						
JNSB	**Nemuroshibetsu**	**1.01**	**310**	P	**Pn**	**11 56 38.1**	**+0.4**
JNSB				*e*S	**Sn**	**11 56 50.4**	**-0.4**
JAK	**Akkeshi**	**1.02**	**263**	P	**Pn**	**11 56 38.1**	**+0.3**
JAK				*e*S	**Sn**	**11 56 50.8**	**-0.1**
JRA	**Rausu**	**1.06**	**320**	P	**Pn**	**11 56 39.1**	**+0.7**
JRA				*e*S	**Sn**	**11 56 52.4**	**+0.4**
JNK	**Nakash**	**1.09**	**295**	P	**Pn**	**11 56 38.8**	**0.0**
JNK				*e*S	**Sn**	**11 56 51.9**	**-0.7**
JOB	**Onbets**	**1.66**	**263**	P	**Pn**	**11 56 47.1**	**+0.6**
JAR	**Ashorobuto**	**1.69**	**276**	P	**Pn**	**11 56 47.8**	**+0.8**
JAR				*e*S	**Sn**	**11 57 07.6**	**+0.1**
JTKR	**Abashiri--Toko**	**1.78**	**299**	P	**Pn**	**11 56 49.6**	**+1.3**
JTKR				*e*S	**Sn**	**11 57 11.0**	**+1.3**
ERM	**Erimo**	**2.42**	**244**	*ce*PN	**Pn**	**11 56 59.7**	**+2.6**
ERM	**Erimo**	**2.42**	**244**		**Pn**	**11 57 00.0**	**+2.9**
KUR	**Kuril'sk**	**2.47**	**31**	*d* iPN	**Pn**	**11 56 59.7**	**+2.0**
KUR				*i* S	**Sn**	**11 57 28.4**	**+1.9**
KUR				pmax	pmax		
	comp=Z,81nm,0.4s						
KUR				pmax	pmax		
	comp=N,47nm,0.3s						
KUR				pmax	pmax		
	comp=E,21nm,0.3s						
KUR				smax	smax		
	comp=N,428nm,0.4s						
KUR				smax	smax		
	comp=E,228nm,0.2s						
KUR	**Kuril'sk**	**2.47**	**31**	*i* P	**Pn**	**11 56 59.0**	**+1.3**
KUR				AMB	AMB	11 57 02.0	
	comp=E,60nm,0.5s						
KUR				*i* S	**Sn**	**11 57 27.7**	**+1.2**
KUR				A	A	11 57 33.0	
	comp=E,320nm,0.4s						
KUR				A	A	11 57 33.0	
	comp=E,230nm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.49**	**330**	PN	**Pn**	**11 57 27.8**	**+2.4**
YSS	**Yuzh-Sakhalins**	**4.49**	**330**	*e*P	**Pn**	**11 57 26.8**	**+1.4**
YSS	**Yuzh-Sakhalins**	**4.49**	**330**	Pn	**Pn**	**11 57 27.8**	**+2.4**
PETK	**Petropavlovsk-**	**12.63**	**34**	P	**Pn**	**11 59 17.1**	**+0.2**
	comp=E,0.1nm,0.3s,baz=202,slow=14,SNR=2.9						
PET	**Petropavlovsk**	**12.97**	**36**	PN	**Pn**	**11 59 21.4**	**0.0**
PET	**Petropavlovsk**	**12.97**	**36**	Pn	**Pn**	**11 59 21.4**	**0.0**
KSRS	**Korea Array**	**14.96**	**254**	P	**P**	**11 59 56.7**	**+3.6**
	comp=E,0.1nm,0.3s,baz=66,slow=13,SNR=3.4						
TJN	**Taejon**	**15.87**	**251**	*ePb*	**Pn**	**11 59 54.4**	**-5.8**
SONM	**Songino Array**	**27.99**	**294**	P	**P**	**12 02 05.3**	**-1.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SONM	**Songino Array**	**27.99**	**294**	P	**P**	**12 02 07.7**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=86,slow=9.6,SNR=2.8						
SONM	**Songino Array**	**27.99**	**294**	P	**P**	**12 02 05.3**	**-1.3**
H11N2	**WAKE ISLAND Hy**	**29.17**	**137**	T	T	12 33 08.0	
	baz=328,slow=76,SNR=372						
H11N1	**WAKE ISLAND Hy**	**29.18**	**137**	T	T	12 33 09.0	
	baz=328,slow=76,SNR=295						
H11N3	**WAKE ISLAND Hy**	**29.19**	**137**	T	T	12 33 09.5	
	baz=328,slow=76,SNR=285						
H11S1	**WAKE ISLAND Hy**	**30.11**	**138**	T	T	12 34 17.1	
	baz=329,slow=76,SNR=586						
H11S3	**WAKE ISLAND Hy**	**30.11**	**138**	T	T	12 34 18.9	
	baz=329,slow=76,SNR=386						
H11S2	**WAKE ISLAND Hy**	**30.12**	**138**	T	T	12 34 18.3	
	baz=329,slow=76,SNR=304						
IMAR	**Indian Mountai**	**39.60**	**34**		**P**	**12 03 47.0**	**+0.3**
BPAW	**Bear Paw Mtn.**	**40.69**	**37**	P	**P**	**12 03 54.4**	**-1.3**
SUA	**Susitna One**	**40.88**	**41**	P	**P**	**12 03 56.7**	**-0.7**
SUA				IAmb	IAmb	12 04 03.2	
	comp=Z,9.0nm,1.3s						
COLA	**College**	**42.03**	**36**	*ePb*	**P**	**12 04 08.6**	**+1.9**
COLA				pmax	pmax		
	comp=Z,28nm,4.1s						
ILAR	**Eielson Array**	**42.45**	**36**	*eP*	**P**	**12 04 11.0**	**+0.9**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**42.45**	**36**	P	**P**	**12 04 09.8**	**-0.3**
	comp=Z,0.8nm,0.8s,baz=271,slow=9.5,SNR=7.2						
ILAR	**Eielson Array**	**42.45**	**36**	P	**P**	**12 04 11.1**	**+1.0**
PRP	**Porcupine Dome**	**42.98**	**35**	P	**P**	**12 04 15.7**	**+1.1**
FYU	**Fort Yukon**	**43.05**	**33**	P	**P**	**12 04 16.6**	**+1.6**
FYU				IAmb	IAmb	12 04 17.1	
	comp=Z,5.5nm,0.8s						
MKAR	**Makanchi Array**	**44.18**	**298**	P	**P**	**12 04 24.3**	**0.0**
	comp=Z,0.2nm,0.6s,baz=84,slow=6.1,SNR=3.6						
MKAR	**Makanchi Array**	**44.18**	**298**	P	**P**	**12 04 23.4**	**-0.9**
EGAK	**Eagle**	**44.89**	**35**	P	**P**	**12 04 30.2**	**+0.5**
CTGM	**Chitina Glacie**	**45.45**	**41**	P	**P**	**12 04 34.2**	**-0.2**
HYT	**Haines Junctio**	**47.31**	**40**	P	**P**	**12 04 51.2**	**+2.2**
HYT				IAmb	IAmb	12 05 09.6	
	comp=Z,12nm,1.3s						
INK	**Inuvik**	**47.33**	**30**	P	**P**	**12 04 49.3**	**+0.5**
INK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
INK	**Inuvik**	**47.33**	**30**	P	**P**	**12 04 49.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=299,slow=8.5,SNR=6.3						
INK	**Inuvik**	**47.33**	**30**	P	**P**	**12 04 49.3**	**+0.5**
KKAR	**Karatay Array**	**53.31**	**298**	P	**P**	**12 05 34.1**	**-0.3**
KKAR	**Karatay Array**	**53.31**	**298**	P	**P**	**12 05 34.1**	**-0.3**
RES	**Resolute Bay**	**55.78**	**16**	P	**P**	**12 05 52.2**	**+0.4**
RES				pmax	pmax		
	comp=Z,4.0nm,1.3s						
RES	**Resolute Bay**	**55.78**	**16**	P	**P**	**12 05 51.6**	**-0.3**
	comp=Z,2.4nm,0.6s,baz=314,slow=9.0,SNR=7.3						
RES	**Resolute Bay**	**55.78**	**16**	P	**P**	**12 05 52.2**	**+0.4**
RES				IAmb	IAmb	12 05 55.9	
	comp=Z,4.3nm,1.2s						
MMRI	**Maumere**	**55.91**	**209**	P	**P**	**12 05 53.7**	**+0.3**
YKA	**Yellowknife Ar**	**56.75**	**33**	P	**P**	**12 05 58.8**	**0.0**
	comp=Z,0.4nm,0.8s,baz=302,slow=6.9,SNR=5.5						
ABKAR	**Akbulak array**	**56.84**	**309**	P	**P**	**12 05 59.3**	**-0.5**
WRAB	**Tennant Creek**	**63.67**	**192**	*ePb*	**P**	**12 06 43.1**	**-3.5**
WRAB				pmax	pmax		
	comp=Z,18nm,0.5s						
FINES	**FINESS Array B**	**65.07**	**333**	P	**P**	**12 06 54.8**	**-0.5**
FINES	**FINESS Array B**	**65.07**	**333**	P	**P**	**12 06 54.6**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=46,slow=8.0,SNR=11						
OBN	**Obninsk**	**65.35**	**323**	*ce*P	P	12 06 50.1	-7.1
OBN				*e*S	S	12 15 27.6	-10
OBN				pmax	pmax		
	comp=Z,43nm,2.1s						
FCC	**Fort Churchill**	**66.95**	**29**	P	**P**	**12 07 07.4**	**-0.1**
FCC				pmax	pmax		
	comp=Z,6.0nm,1.5s						
FCC	**Fort Churchill**	**66.95**	**29**	P	**P**	**12 07 07.4**	**-0.1**
NVAR	**Mina Array Bea**	**68.57**	**57**	P	**P**	**12 07 19.6**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=305,slow=7.1,SNR=3.1						
KBZ	**Khabaz**	**69.62**	**311**	P	**P**	**12 07 25.0**	**+0.6**
KBZ	**Khabaz**	**69.62**	**311**	P	**P**	**12 07 25.0**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=49,slow=11,SNR=2.9						
KBZ	**Khabaz**	**69.62**	**311**	*i* P	**P**	**12 07 25.0**	**+0.6**
NOA	**NORSAR Array B**	**69.89**	**338**	P	**P**	**12 07 25.3**	**-0.6**
	comp=Z,1.1nm,0.9s,baz=34,slow=6.4,SNR=2.6						
HFS	**Hagfors**	**69.95**	**337**	P	**P**	**12 07 25.7**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=39,slow=9.3,SNR=5.6						
FRB	**Frobisher Bay**	**69.99**	**16**	P	**P**	**12 07 25.6**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=30,slow=6.8,SNR=5.0						
AKASG	**Malin Array Be**	**71.61**	**323**	P	**P**	**12 07 36.8**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,1.2s						
AKASG	**Malin Array Be**	**71.61**	**323**	P	**P**	**12 07 35.9**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=40,slow=5.8,SNR=5.6						
AKASG	**Malin Array Be**	**71.61**	**323**	P	**P**	**12 07 36.8**	**+0.4**
AKBB	**Malin Array Si**	**71.61**	**323**	P	**P**	**12 07 36.9**	**+0.4**
AKBB				pmax	pmax		
	comp=Z,8.0nm,1.5s						
AKBB	**Malin Array Si**	**71.61**	**323**	P	**P**	**12 07 36.9**	**+0.4**
AKBB				IAmb	IAmb	12 07 44.0	
	comp=Z,8.

TOLK	**Toolik Lake Re**	**17.14**	**17**	P	**P**	**12 03 17.4**	**+3.8**
TOLK				IAmb	IAmb	12 03 21.5	
	comp=Z,8.7nm,1.5s						
PETK	**Petropavlovsk-**	**23.14**	**286**	P	**P**	**12 04 19.4**	**+0.7**
	comp=Z,3.4nm,1.0s,baz=86,slow=8.9,SNR=4.0						
PETK	**Petropavlovsk-**	**23.14**	**286**	P	**P**	**12 04 18.2**	**-0.5**
YKA	**Yellowknife Ar**	**27.21**	**50**	P	**P**	**12 04 57.0**	**+0.8**
	comp=Z,0.1nm,0.7s,baz=268,slow=8.4						
B08A	**Colville Reser**	**28.07**	**81**	P	**P**	**12 05 05.9**	**+1.8**
PDAR	**Pinedale Array**	**36.82**	**84**	P	**P**	**12 06 21.0**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=306,slow=4.1,SNR=7.3						
PDAR	**Pinedale Array**	**36.82**	**84**	P	**P**	**12 06 21.3**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**40.23**	**226**	T	T	12 49 23.2	
	baz=28,slow=76,SNR=5.7						
H11N3	**WAKE ISLAND Hy**	**40.23**	**226**	T	T	12 49 23.8	
	baz=28,slow=76,SNR=7.6						
H11N1	**WAKE ISLAND Hy**	**40.24**	**226**	T	T	12 49 27.1	
	baz=28,slow=76,SNR=4.7						
H11S1	**WAKE ISLAND Hy**	**41.39**	**225**	T	T	12 50 50.0	
	baz=27,slow=76,SNR=3.8						
H11S2	**WAKE ISLAND Hy**	**41.41**	**225**	T	T	12 50 51.8	
	baz=27,slow=76,SNR=5.3						
H11S3	**WAKE ISLAND Hy**	**41.41**	**225**	T	T	12 50 53.5	
	baz=27,slow=76,SNR=3.9						
FRB	**Frobisher Bay**	**46.45**	**38**	P	**P**	**12 07 40.3**	**+1.2**
	comp=Z,0.9nm,0.5s,baz=289,slow=7.6,SNR=5.9						
TXAR	**Lajitas Array**	**49.21**	**94**	P	**P**	**12 08 00.8**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=307,slow=5.8,SNR=5.2						
TXAR	**Lajitas Array**	**49.21**	**94**	P	**P**	**12 08 01.0**	**-0.2**

NEIC ***12*** *11:59:15.4±1.8, 18°.55S±0°.10×177°.81W±0°.09, h537km±5km, mb4.7/59, Error ellipse: s-maj=15.5km s-min=11.1km az=150.0*

IDC ***12*** *11:59:15.2±1.6, 18°.48S×177°.87W, h528km±18km, mb3.7/16, mb1 3.9/18, mb1mx3.7/44, mbtmp4.5/18, Error ellipse: s-maj=15.6km s-min=11.4km az=143.0*

BJI ***12*** *11:59:16.6±0.0, 18°.24S×177°.90W, h540km, mB4.9/16, mb4.5/21*

ISC 12 11:59:16.9±0.3, 18°.64S±0°.05×177°.77W±0°.06, h557km, n163, σ1§62/171, mb4.7/50, 1C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.08**	**282**	P	**P**	**12 00 40.4**	**+0.4**
AFI	**Afiamalu**	**7.43**	**52**	P	**P**	**12 01 05.6**	**-3.9**
	13nm,0.3s,baz=294,slow=2.4,SNR=8.7						
AFI				S	S	12 02 32.3	-9.3
	3.1nm,0.3s,baz=252,slow=20,SNR=3.8						
AFI	**Afiamalu**	**7.43**	**52**	P	**P**	**12 01 06.4**	**-3.1**
AFI				S	**S**	**12 02 37.5**	**-4.1**
NIUE	**Niue**	**7.44**	**95**	P	**P**	**12 01 08.0**	**-1.4**
FUNA	**Funafuti**	**10.48**	**343**	P	**P**	**12 01 39.0**	**-1.0**
RIZ	**Raoul Island**	**10.56**	**181**	P	P	12 01 49.0	+8.6
GLKZ	**Green Lake**	**10.57**	**181**	P	**P**	**12 01 42.9**	**+2.3**
GLKZ				S	**S**	**12 03 36.3**	**-2.6**
DZM	**Mont Dzumac**	**15.19**	**254**	P	**P**	**12 02 26.7**	**-1.6**
	2.3nm,0.3s,baz=115,slow=17,SNR=22						
DZM	**Mont Dzumac**	**15.19**	**254**	P	**P**	**12 02 27.4**	**-0.9**
OUZ	**Omahuta**	**18.20**	**203**	P	**P**	**12 02 58.2**	**+2.0**
OUZ				IAmb	IAmb	12 02 59.0	
	comp=Z,15nm,0.8s						
KUZ	**Kuaotunu**	**18.92**	**196**	P	**P**	**12 03 03.9**	**+1.2**
MXZ	**Matakaoa Point**	**19.16**	**190**	P	**P**	**12 03 04.2**	**-0.6**
MXZ	**Matakaoa Point**	**19.16**	**190**	P	**P**	**12 03 04.1**	**-0.7**
ETAZ	**East Tamaki Re**	**19.34**	**198**	P	**P**	**12 03 08.1**	**+1.6**
WMGZ	**Waiomatatini S**	**19.40**	**189**	P	**P**	**12 03 07.0**	**0.0**
MKAZ	**Moumakai**	**19.41**	**197**	P	**P**	**12 03 08.4**	**+1.3**
WTAZ	**Waiatarua**	**19.43**	**199**	P	**P**	**12 03 08.9**	**+1.6**
HAZ	**Te Kaha**	**19.44**	**191**	P	**P**	**12 03 06.5**	**-0.8**
HAZ				S	**S**	**12 06 09.5**	**-4.8**
KBAZ	**Karaka Road Bo**	**19.48**	**198**	P	**P**	**12 03 09.5**	**+1.8**
RUGZ	**Raukumara Rang**	**19.66**	**191**	P	**P**	**12 03 08.2**	**-1.3**
PUZ	**Puketiti**	**19.67**	**189**	P	**P**	**12 03 08.9**	**-0.6**
PUZ				S	**S**	**12 06 17.1**	**-1.0**
TOZ	**Tahuroa Road**	**19.91**	**196**	P	**P**	**12 03 12.8**	**+1.1**
MWZ	**Matawai**	**20.04**	**191**	P	**P**	**12 03 10.9**	**-2.0**
MWZ				S	**S**	**12 06 17.4**	**-6.8**
URZ	**Urewera**	**20.05**	**192**	P	**P**	**12 03 09.5**	**-3.4**
	comp=Z,25nm,0.6s,baz=303,slow=1.9,SNR=22						
URZ				S	**S**	**12 06 15.2**	**-8.9**
	comp=Z,4.9nm,0.7s,baz=344,slow=20,SNR=2.7						
URZ	**Urewera**	**20.05**	**192**	P	**P**	**12 03 09.8**	**-3.1**
URZ				S	**S**	**12 06 18.9**	**-5.2**
URZ	**Urewera**	**20.05**	**192**	P	**P**	**12 03 10.5**	**-2.4**
CNGZ	**Carnagh Statio**	**20.08**	**189**	P	**P**	**12 03 13.7**	**+0.6**
MUGZ	**Murupara**	**20.33**	**192**	P	**P**	**12 03 14.0**	**-1.5**
PLWZ	**Palliser**	**23.62**	**193**	P	**P**	**12 03 43.8**	**-1.1**
QRZ	**Quartz Range**	**23.63**	**199**	P	**P**	**12 03 44.2**	**-0.7**
THZ	**Tophouse**	**24.38**	**197**	P	**P**	**12 03 50.5**	**-1.2**
THZ				IAmb	IAmb	12 04 05.7	
	comp=Z,35nm,1.2s						
KHZ	**Kahutara**	**24.82**	**195**	P	**P**	**12 03 53.6**	**-1.9**
FOZ	**Fox Glacier**	**26.93**	**200**	P	**P**	**12 04 13.7**	**-0.4**
MLZ	**Mavora Lakes**	**29.12**	**201**	P	**P**	**12 04 33.2**	**0.0**
MLZ				IAmb	IAmb	12 04 34.5	
	comp=Z,30nm,0.9s						
EIDS	**Eidsvold**	**29.60**	**251**	P	**P**	**12 04 37.1**	**-0.5**
EIDS				IAmb	IAmb	12 04 38.0	
	comp=Z,22nm,0.8s						
WHZ	**Wether Hill Ro**	**29.64**	**200**	P	**P**	**12 04 37.8**	**+0.1**
WHZ				IAmb	IAmb	12 04 43.2	
	comp=Z,47nm,1.2s						
ARMA	**Armidale**	**30.11**	**241**	P	**P**	**12 04 42.8**	**+0.7**
ARMA				IAmb	IAmb	12 04 43.2	
	comp=Z,14nm,0.5s						
CAN	**Canberra**	**33.75**	**234**	P	**P**	**12 05 13.0**	**+0.1**
CAN				IAmb	IAmb	12 05 14.2	
	comp=Z,23nm,1.1s						
PMG	**Port Moresby**	**35.18**	**280**	*d iP*	**P**	**12 05 25.2**	**+0.1**
PMG				pmax	pmax		
	comp=Z,405nm,0.9s						
PMG	**Port Moresby**	**35.18**	**280**	P	**P**	**12 05 24.8**	**-0.2**
	comp=Z,73nm,0.8s,baz=78,slow=6.0,SNR=38						
PMG	**Port Moresby**	**35.18**	**280**	P	**P**	**12 05 25.5**	**+0.4**
TOO	**Toolangi**	**37.19**	**232**	P	**P**	**12 05 42.1**	**+0.8**
TOO				IAmb	IAmb	12 05 42.6	
	comp=Z,15nm,0.8s						
COEN	**Coen**	**37.72**	**271**	P	**P**	**12 05 46.2**	**+0.3**
STKA	**Stephens Creek**	**38.82**	**242**	P	**P**	**12 05 55.0**	**+0.3**
	comp=Z,29nm,0.7s,baz=89,slow=9.7,SNR=55						
STKA	**Stephens Creek**	**38.82**	**242**	P	**P**	**12 05 55.3**	**+0.7**
BBOO	**Buckleboo**	**43.59**	**242**	P	**P**	**12 06 32.6**	**+0.2**
BBOO				IAmb	IAmb	12 06 33.2	
	comp=Z,22nm,0.7s						
PTCN	**Pitcairn Islan**	**44.53**	**107**	P	**P**	**12 06 40.3**	**+0.6**
WR0	**Warramunga Arr**	**44.91**	**260**	P	**P**	**12 06 42.0**	**-0.8**
WRAB	**Tennant Creek**	**45.09**	**260**	P	**P**	**12 06 42.6**	**-1.6**
WRA	**Warramunga Arr**	**45.10**	**260**	P	**P**	**12 06 43.3**	**-0.9**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WRA	**Warramunga Arr**	**45.10**	**260**	P	**P**	**12 06 43.0**	**-1.2**
	comp=Z,27nm,0.6s,baz=98,slow=6.8,SNR=416						
WRA	**Warramunga Arr**	**45.10**	**260**	P	**P**	**12 06 43.3**	**-1.0**
AS31	**Alice Springs**	**45.18**	**255**	P	**P**	**12 06 44.7**	**-0.1**
AS31				IAmb	IAmb	12 06 45.6	
	comp=Z,25nm,0.5s						
ASAR	**Alice Springs**	**45.18**	**255**	P	**P**	**12 06 44.5**	**-0.4**
	comp=Z,67nm,0.6s,baz=89,slow=8.8,SNR=1013						
ASAR				ScP	**ScP**	**12 11 15.6**	**+2.6**
	comp=Z,1.1nm,0.9s,baz=102,slow=4.4,SNR=4.3						
ASAR				S	**S**	**12 12 42.4**	**-2.2**
	comp=Z,2.9nm,0.8s,baz=89,slow=16,SNR=17						
ASAR	**Alice Springs**	**45.18**	**255**	P	**P**	**12 06 44.1**	**-0.7**
MTN	**Manton Dam**	**49.39**	**269**	P	**P**	**12 07 15.8**	**-0.7**
MTN				IAmb	IAmb	12 07 16.2	
	comp=Z,27nm,0.8s						
FORT	**Forrest**	**50.25**	**245**	P	**P**	**12 07 21.9**	**-0.6**
FORT				IAmb	IAmb	12 07 22.5	
	comp=Z,23nm,0.7s						
KNRA	**Kununurra**	**51.02**	**265**	P	**P**	**12 07 27.9**	**-0.4**
KNRA				IAmb	IAmb	12 07 28.6	
	comp=Z,38nm,0.7s						
FAKI	**Fak Fak**	**51.32**	**282**	P	**P**	**12 07 30.2**	**-0.3**
FAKI				IAmb	IAmb	12 07 33.2	
	comp=Z,43nm,1.3s						
FITZ	**Fitzroy Crossi**	**53.51**	**261**	P	**P**	**12 07 46.0**	**-0.1**
SOEI	**Soe**	**56.68**	**270**	P	**P**	**12 08 09.8**	**+1.3**
SOEI				IAmb	IAmb	12 08 10.4	
	comp=Z,57nm,0.8s						
PSA00	**Pilbara Seismi**	**58.32**	**256**	P	**P**	**12 08 18.7**	**-0.6**
PSA00				IAmb	IAmb	12 08 19.6	
	comp=Z,27nm,1.1s						

SBA	**Scott Base**	**59.73**	**184**	P	**P**	**12 08 30.7**	**+2.9**
VNDA	**Vanda**	**59.77**	**185**	P	**P**	**12 08 29.8**	**+1.7**
	comp=Z,5.0nm,1.0s,baz=20,slow=6.0,SNR=12						
VNDA	**Vanda**	**59.77**	**185**	P	**P**	**12 08 30.0**	**+2.0**
MORW	**Morawa**	**60.75**	**247**	P	**P**	**12 08 35.0**	**-0.4**
JHJ2	**Mitsune**	**65.50**	**322**	P	**P**	**12 09 06.0**	**+0.4**
BKB	**Balikpapan**	**66.26**	**277**	P	**P**	**12 09 11.1**	**+0.2**
JAGI	**Jajag, Banyuwa**	**66.63**	**269**	P	**P**	**12 09 11.9**	**-1.3**
JAGI				IAmb	IAmb	12 09 12.4	
	comp=Z,26nm,0.7s						
MJAR	**Matsushiro Arr**	**68.86**	**323**	P	**P**	**12 09 25.5**	**-0.7**
	comp=Z,3.8nm,0.7s,baz=144,slow=6.2,SNR=12						
MJAR	**Matsushiro Arr**	**68.86**	**323**	P	**P**	**12 09 25.2**	**-1.0**
MAJO	**Matsushiro**	**68.86**	**323**	P	**P**	**12 09 26.1**	**-0.2**
MAJO				IAmb	IAmb	12 09 34.1	
	comp=Z,34nm,1.4s						
MAT	**Matsushiro**	**68.86**	**323**	P	**P**	**12 09 25.9**	**-0.3**
MJB9	**Matsu-Tunnel**	**68.86**	**323**	P	**P**	**12 09 26.1**	**-0.1**
MJB9				IAmb	IAmb	12 09 34.1	
	comp=Z,38nm,1.5s						
KKM	**Kota Kinabalu**	**69.51**	**284**	P	**P**	**12 09 31.1**	**+0.4**
KKM				IAmb	IAmb	12 09 31.4	
	comp=Z,16nm,0.8s						
PCJI	**Pacitan**	**69.53**	**268**	P	**P**	**12 09 30.1**	**-0.6**
	comp=Z,128nm,0.9s						
UGM	**Wanagama**	**70.23**	**268**	P	**P**	**12 09 34.8**	**-0.2**
QSPA	**South Pole Qui**	**71.42**	**180**	P	**P**	**12 09 42.4**	**+1.3**
QSPA				IAmb	IAmb	12 09 43.3	
	comp=Z,15nm,0.9s						
YULB	**Yu-li**	**72.68**	**303**	P	**P**	**12 09 47.9**	**-1.0**
NACB	**Ninganchiao**	**72.83**	**304**	P	**P**	**12 09 47.8**	**-2.0**
NACB				IAmb	IAmb	12 09 49.9	
	comp=Z,56nm,1.5s						
SSLB	**Suanglung**	**73.14**	**303**	P	**P**	**12 09 50.5**	**-1.1**
SSLB				IAmb	IAmb	12 09 51.5	
	comp=Z,14nm,0.9s						
TPUB	**Ta-pu**	**73.17**	**302**	P	**P**	**12 09 50.6**	**-1.1**
TPUB				IAmb	IAmb	12 09 51.1	
	comp=Z,22nm,0.7s						
KSM	**Kuching**	**73.38**	**277**	P	**P**	**12 09 54.1**	**+0.9**
KSM				IAmb	IAmb	12 09 54.6	
	comp=Z,26nm,0.9s						
PEA0B	**Petropavlovsk-**	**74.54**	**345**	P	**P**	**12 09 58.0**	**-0.9**
PETK	**Petropavlovsk-**	**74.54**	**345**	P	**P**	**12 09 58.6**	**-0.2**
	comp=Z,9.3nm,0.8s,baz=121,slow=7.7,SNR=18						
NJ2	**Nanjing**	**78.87**	**309**	*eP*	**P**	**12 10 23.0**	**0.0**
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NVAR	**Mina Array Bea**	**79.53**	**43**	P	**P**	**12 10 28.3**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=235,slow=8.7,SNR=5.3						
NVAR	**Mina Array Bea**	**79.53**	**43**	P	**P**	**12 10 27.7**	**+1.1**
WHN	**Wuhan**	**81.53**	**306**	P	**P**	**12 10 36.2**	**-0.6**
SUA	**Susitna One**	**82.71**	**13**	P	**P**	**12 10 42.4**	**+0.1**
IPM	**Ipoh**	**83.12**	**277**	P	**P**	**12 10 45.8**	**+0.5**
IPM				IAmb	IAmb	12 10 47.1	
	comp=Z,15nm,1.0s						
SCM	**Sheep Creek Mo**	**83.79**	**14**	P	**P**	**12 10 47.9**	**+0.2**
SCM				IAmb	IAmb	12 10 57.0	
	comp=Z,28nm,1.5s						
GLB	**Gilahina Butte**	**84.30**	**16**	P	**P**	**12 10 50.9**	**+0.8**
BALM	**Baldy**	**84.35**	**16**	P	**P**	**12 10 51.0**	**+0.6**
TRF	**Thorofare Moun**	**84.60**	**12**	P	**P**	**12 10 51.1**	**-0.6**
SEY	**Seymchan**	**84.63**	**347**	P	**P**	**12 10 51.1**	**-0.4**
	comp=Z,5.3nm,0.8s,baz=146,slow=9.6,SNR=9.8						
RND	**Reindeer**	**84.85**	**13**	P	**P**	**12 10 53.5**	**+0.8**
ENH	**Enshi**	**85.19**	**304**	P	**P**	**12 10 55.6**	**+0.5**
ENH				IAmb	IAmb	12 10 56.4	
	comp=Z,9.0nm,0.8s						
NEA	**Nenana**	**85.85**	**12**	P	**P**	**12 10 57.7**	**+0.2**
TX31	**Lajitas Ar. Si**	**85.87**	**57**	P	**P**	**12 11 00.8**	**+2.3**
TXAR	**Lajitas Array**	**85.88**	**57**	P	**P**	**12 11 00.5**	**+2.0**
	comp=Z,1.6nm,0.7s,baz=218,slow=6.3,SNR=24						
TXAR	**Lajitas Array**	**85.88**	**57**	P	**P**	**12 11 00.7**	**+2.1**
ANMO	**Albuquerque**	**86.08**	**51**	P	**P**	**12 11 00.9**	**+1.4**
	comp=Z,0.7nm,0.8s,baz=250,slow=13,SNR=3.5						
ILAR	**Eielson Array**	**86.46**	**13**	P	**P**	**12 10 60.0**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=214,slow=5.1,SNR=12						
ILAR	**Eielson Array**	**86.46**	**13**	P	**P**	**12 10 59.7**	**-0.6**
XAN	**Xi'an**	**87.19**	**307**	P	**P**	**12 11 05.8**	**+1.2**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,110nm,5.4s						
PDAR	**Pinedale Array**	**87.47**	**43**	P	**P**	**12 11 07.3**	**+1.4**
	comp=Z,0.6nm,0.8s,baz=204,slow=3.3,SNR=4.3						
HHC	**Hu-ho-hao-te**	**88.22**	**314**	*eP*	P	12 11 22.9	+14
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,63nm,5.2s						
SYO	**Syowa Base**	**88.58**	**193**	*eP*	**P**	**12 11 09.0**	**-1.3**
CMAR	**Chiang Mai Arr**	**89.70**	**289**	P	**P**	**12 11 17.9**	**+1.3**
	comp=Z,2.9nm,0.7s,baz=114,slow=2.9,SNR=23						
CMAR	**Chiang Mai Arr**	**89.70**	**289**	P	**P**	**12 11 17.2**	**+0.7**
VNA3	**Neumayer Olymp**	**89.97**	**176**	P	**P**	**12 11 17.3**	**+0.5**
	slow=8.2						
PLCA	**Paso Flores**	**90.39**	**133**	P	**P**	**12 11 21.1**	**+1.7**
	comp=Z,2.5nm,0.9s,baz=253,slow=4.1,SNR=6.7						
PLCA	**Paso Flores**	**90.39**	**133**	P	**P**	**12 11 20.0**	**+0.5**
VNA1	**Neumayer--Stat**	**90.64**	**177**	P	**P**	**12 11 21.4**	**+1.5**
	slow=8.2						
LZH	**Lanzhou**	**91.82**	**307**	*eP*	**P**	**12 11 27.2**	**+1.0**
LZH				pP	pP	12 13 26.6	-1.7
LZH				PP	**PP**	**12 15 11.8**	**-3.7**
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
LZH				pmax	pmax		
	comp=Z,58nm,4.3s						
INK	**Inuvik**	**92.43**	**15**	P	**P**	**12 11 27.1**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=197,slow=10,SNR=3.0						
INK	**Inuvik**	**92.43**	**15**	P	**P**	**12 11 27.8**	**-0.1**
SONM	**Songino Array**	**94.50**	**319**	P	**P**	**12 11 38.7**	**+0.6**
	comp=Z,0.6nm,1.0s,baz=118,slow=2.6,SNR=3.3						
SONM	**Songino Array**	**94.50**	**319**	P	**P**	**12 11 38.5**	**+0.4**
YKA	**Yellowknife Ar**	**94.74**	**25**	P	**P**	**12 11 38.4**	**-0.3**
	comp=Z,0.1nm,0.6s,baz=230,slow=5.0						
MKAR	**Makanchi Array**	**110.08**	**314**	PKiKP	**PKiKP**	**12 16 44.6**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=111,slow=1.7,SNR=8.1						
KSH	**Kashi**	**114.00**	**306**	PKP	**PKiKP**	**12 16 55.1**	**+1.7**
KSH				PP	**PP**	**12 18 03.0**	**+4.6**
KSH				AMB	AMB		
	comp=Z,290nm,5.0s						
FRU1	**Bishkek**	**115.22**	**309**		**PKiKP**	**12 16 56.5**	**+0.9**
GAR	**Garm**	**118.35**	**305**	PKPdf	**PKiKP**	**12 17 01.9**	**+0.1**
ARCES	**ARCESS Array B**	**127.14**	**350**	PKP	**PKPdf**	**12 17 17.6**	**+0.1**
	comp=Z,4.4nm,1.0s,baz=36,slow=1.3,SNR=11						
ARCES	**ARCESS Array B**	**127.14**	**350**		**PKPdf**	**12 17 17.8**	**+0.2**
FINES	**FINESS Array B**	**134.06**	**344**	PKP	**PKPdf**	**12 17 30.5**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=72,slow=2.7,SNR=4.1						
AKASG	**Malin Array Be**	**141.49**	**332**	PKhKP	PKPpre	12 17 39.3	
	comp=Z,1.0nm,0.4s,baz=42,slow=4.2,SNR=8.7						
OJC	**Ojcow**	**145.51**	**340**	PKPbc	**PKPbc**	**12 17 53.6**	**+0.4**
BUR08	**Bucovina Ar. S**	**145.53**	**332**	PKPbc	**PKPab**	**12 17 54.6**	**-0.3**
KOLS	**Vyhnicke sedl**	**145.72**	**336**	*e*PKP	**PKPab**	**12 17 54.7**	**-0.8**
BR131	**Keskin Array S**	**145.73**	**314**	PKPbc	**PKPbc**	**12 17 54.2**	**-0.1**
BRTR	**Keskin Array B**	**145.73**	**314**	PKPbc	**PKPbc**	**12 17 54.0**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=138,slow=4.6,SNR=15						
BRTR	**Keskin Array B**	**145.73**	**314**		**PKPbc**	**12 17 53.8**	**-0.6**
OSTC	**Ostas**	**146.26**	**344**	*e*PKP	**PKPbc**	**12 17 56.0**	**+0.7**
CLL	**Collm**	**146.31**	**348**	*i* PKPbc	**PKPbc**	**12 17 55.8**	**+0.4**
	comp=Z,11nm,1.0s						
CLL	**Collm**	**146.31**	**348**	PKPbc	**PKPbc**	**12 17 54.5**	**-0.8**
DPC	**Dobruska-Polom**	**146.42**	**344**	*e*PKP	**PKPbc**	**12 17 56.6**	**+0.8**
DPC				*ex*	x	12 17 59.2	
BRG	**Berggiesshubel**	**146.52**	**347**	*i* PKP	**PKPbc**	**12 17 56.5**	**+0.5**
	comp=Z,6.1nm,0.9s						
VYHS	**Vyhne**	**147.32**	**339**	*e*PKP	**PKPbc**	**12 17 58.9**	**+0.7**
MODS	**Modra-Piesok**	**147.92**	**341**	*e*PKP	**PKPbc**	**12 18 00.0**	**+0.2**
CSS	**Mathiatis**	**148.01**	**307**	PKPbc	**PKPbc**	**12 18 00.5**	**+0.1**
KHC	**Kasperske Hory**	**148.24**	**346**	*e*PKP	**PKPbc**	**12 18 00.9**	**+0.3**
KHC				*ex*	x	12 18 06.2	
KHC	**Kasperske Hory**	**148.24**	**346**	PKPbc	**PKiKP**	**12 18 01.2**	**-0.6**
GERES	**GERESS Array B**	**148.47**	**345**	PKPbc	**PKPbc**	**12 18 01.7**	**+0.4**
	comp=Z,1.8nm,0.8s,baz=28,slow=3.2,SNR=12						
GERES	**GERESS Array B**	**148.47**	**345**		**PKPbc**	**12 18 01.2**	**0.0**
CONA	**Conrad Observa**	**148.75**	**342**	*i* PKiKP	**PKiKP**	**12 18 02.7**	**-0.2**
	comp=Z,3.9nm,0.9s						
MOA	**Molln**	**149.26**	**344**	*i* PKiKP	**PKPbc**	**12 18 03.4**	**+0.4**
	comp=Z,4.7nm,1.2s						
ARSA	**Arzberg**	**149.46**	**342**	*i* PKPdf	**PKPdf**	**12 17 59.1**	**+0.7**
	comp=Z,3.4nm,1.2s						
ALN	**Alexandroupoli**	**149.86**	**322**	PKPbc	**PKPbc**	**12 18 03.9**	**-0.8**
SOKA	**Soboth**	**150.12**	**342**	*i* PKPbc	**PKPbc**	**12 18 04.9**	**-0.4**
	comp=Z,4.7nm,1.1s						
PERS	**Pernice**	**150.13**	**342**	*i* PKPbc	**PKPbc**	**12 18 05.0**	**-0.2**

VTS	**Vitosha**	**150.20**	**328**		**PKPbc**	**12 18 05.6**	**0.0**
WATA	**Walderalm**	**150.38**	**347**	*i* PKiKP	**PKPbc**	**12 18 05.8**	**-0.1**
	comp=Z,2.8nm,0.6s						
OBKA	**Obir**	**150.41**	**343**	*i* PKiKP	**PKPbc**	**12 18 05.7**	**-0.2**
	comp=Z,5.1nm,1.8s						
MOTA	**Moosalm**	**150.46**	**348**	*i* PKiKP	**PKPbc**	**12 18 06.1**	**0.0**
	comp=Z,5.1nm,1.0s						
MYKA	**Terra Mystica**	**150.55**	**344**	*i* PKPbc	**PKPbc**	**12 18 04.4**	**-1.9**
	comp=Z,1.4nm,0.5s						
SQTA	**Sankt Quirin**	**150.56**	**348**	*i* PKiKP	**PKPbc**	**12 18 06.5**	**+0.2**
	comp=Z,4.1nm,0.7s						
ABTA	**Abfaltersbach**	**150.72**	**345**	*i* PKPbc	**PKPbc**	**12 18 05.9**	**-0.7**
	comp=Z,4.3nm,0.6s						
FETA	**Feichten**	**150.85**	**348**	*i* PKiKP	**PKPbc**	**12 18 07.1**	**+0.1**
	comp=Z,6.4nm,1.5s						
FUORN	**Ofenpass-Fuorn**	**151.32**	**348**	PKPbc	**PKiKP**	**12 18 09.0**	**+0.5**
TORD	**Torodi Ar. Bea**	**174.51**	**175**	PKPab	**PKPab**	**12 20 01.3**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=150,slow=3.2,SNR=3.1						

IDC ***12*** *12:11:18.4±2.8, 10°.97N×126°.46E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/35, mbtmp3.3/3, Error ellipse: s-maj=240.5km s-min=26.2km az=65.0*

ISC 12 12:11:23.0±1.5, 11°.1N±0°.2×126°.8E±0°.2, h35km, n4, σ0§52/5, mb3.3/3, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.87**	**225**	*ieP*	**Pn**	**12 11 52.5**	**0.0**
WRA	**Warramunga Arr**	**31.75**	**166**	P	**P**	**12 17 43.5**	**-0.5**
	0.4nm,0.7s,baz=346,slow=9.8,SNR=3.3						
ASAR	**Alice Springs**	**35.27**	**169**	P	**P**	**12 18 14.7**	**+0.1**
	0.1nm,0.3s,baz=350,slow=7.1,SNR=7.1						
ASAR				PcP	**PcP**	**12 20 45.5**	**+0.6**
	0.1nm,0.7s,baz=350,slow=3.3,SNR=2.7						
MKAR	**Makanchi Array**	**51.68**	**322**	P	**P**	**12 20 26.4**	**-0.1**
	0.2nm,0.6s,baz=114,slow=6.5,SNR=3.1						

NEIC ***12*** *12:33:04.0±0.7, 24°.4S±0°.2×179°.9E±0°.1, h521km±10km, mb4.1/8, Error ellipse: s-maj=24.3km s-min=13.8km az=203.0*

IDC ***12*** *12:33:06.2±4.0, 24°.58S×179°.80E, h537km±42km, mb2.9/3, mb1 3.3/5, mb1mx3.0/23, mbtmp4.0/5, Error ellipse: s-maj=36.0km s-min=27.2km az=24.0*

ISC 12 12:33:04.1±0.8, 24°.49S±0°.09×179°.9E±0°.1, h517km, n26, σ0§83/26, mb3.9/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.95**	**345**	P	**P**	**12 34 49.6**	**-1.0**
DZM	**Mont Dzumac**	**12.63**	**278**	P	**P**	**12 35 51.1**	**+1.6**
	0.5nm,0.3s,baz=82,slow=17,SNR=6.8						
DZM	**Mont Dzumac**	**12.63**	**278**	P	**P**	**12 35 51.3**	**+1.8**
URZ	**Urewera**	**13.94

AKBB	**Malin Array Si**	**148.69**	**326**	PKPbc	**PKiKP**	**13 08 53.4**	**-0.2**
BRTR	**Keskin Array B**	**150.81**	**303**	PKPbc	**PKiKP**	**13 08 59.5**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=110,slow=1.8,SNR=3.6						
EKA	**Eskdalemuir Ar**	**151.84**	**6**	PKPbc	**PKiKP**	**13 09 00.6**	**+0.6**
	comp=Z,1.7nm,1.0s,baz=350,slow=3.6,SNR=3.1						
CSS	**Mathiatis**	**151.97**	**294**	PKPbc	**PKiKP**	**13 09 02.7**	**+1.7**
CSS				PKPab	**PKPab**	**13 09 11.2**	**-0.4**
BURAR	**Bucovina Array**	**152.67**	**324**	PKPbc	**PKiKP**	**13 09 04.9**	**+2.8**
TIP	**Timpagrande**	**162.78**	**317**	PKPab	**PKPab**	**13 09 56.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**165.85**	**180**	PKPab	**PKPab**	**13 10 15.4**	**+3.5**
	comp=Z,0.5nm,0.7s,baz=163,slow=5.6,SNR=3.0						
TORD	**Torodi Ar. Bea**	**165.85**	**180**	PKPdf	**PKPdf**	**13 09 10.5**	**0.0**
ESDC	**Sonseca Array**	**166.86**	**20**	PKPab	**PKPab**	**13 10 18.2**	**+2.2**

NEIC ***12*** *12:52:44.2±2.9, 41˚.86N±0˚.05×125˚.9W±0˚.1, h8km±8km, Error ellipse: s-maj=11.6km s-min=7.3km az=95.0*

NCEDC ***12*** *12:52:44±3.0, 41˚.91N±0˚.04×126˚.14W±0˚.09, h24km±8km, ML3.0/6, Error ellipse: s-maj=11.3km s-min=4.3km az=117.0*

IDC ***12*** *12:52:45.2±2.6, 41˚.80N×125˚.81W, h0km, mb3.4/3, mb1 3.7/7, mb1mx3.4/55, mbtmp3.4/7, ML3.2/4, MS3.3/3, Ms1 3.2/3, ms1mx2.9/21, Error ellipse: s-maj=33.2km s-min=18.2km az=50.0*

ANF ***12*** *12:52:45.2±1.4, 41˚.97N×125˚.69W, h5km, Error ellipse: s-maj=16.3km s-min=6.6km az=86.0*

ISC 12 12:52:45.4±1.6, **41˚.90N**±0˚.04×**126˚.0W**±0˚.1, **h11**km, **n96, σ1§94/98, mb3.5/3, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.32**	**76**		**Pn**	**12 53 06.9**	**-2.9**
KEBM	**Edson Butte**	**1.54**	**50**	Pn	**Pn**	**12 53 09.8**	**-3.1**
KSXB	**Camp Six Broad**	**1.55**	**92**		**Pn**	**12 53 10.3**	**-2.7**
KSXB					**Sn**	**12 53 30.7**	**-2.5**
KRMB	**Red Mountain**	**1.57**	**103**		**Pn**	**12 53 10.3**	**-3.0**
KRMB					**Sn**	**12 53 31.4**	**-2.4**
KRPM	**Rodgers**	**1.63**	**117**		**Pn**	**12 53 11.3**	**-2.7**
KRPM					**Sn**	**12 53 32.8**	**-2.2**
L02E	**Cave Junction**	**1.77**	**81**		**Pn**	**12 53 13.4**	**-2.5**
L02E	**Cave Junction**	**1.77**	**81**	P	**Pn**	**12 53 13.4**	**-2.5**
	baz=263,SNR=91						
JCC	**Jacoby Creek,**	**1.81**	**126**		**Pn**	**12 53 13.2**	**-3.2**
K02D	**Willamette Mer**	**1.87**	**64**	P	**Pn**	**12 53 14.4**	**-3.0**
	baz=248,SNR=35						
KTRM	**Thompson Ridge**	**1.92**	**89**		**Pn**	**12 53 15.3**	**-2.8**
J01E	**Myrtle Point**	**1.95**	**49**	P	**Pn**	**12 53 15.2**	**-3.2**
	baz=233,SNR=5.9						
J01E				S	**Sn**	**12 53 39.7**	**-3.2**
	baz=233						
KHMM	**Horse Mountain**	**1.96**	**121**		**Pn**	**12 53 15.9**	**-2.8**
KOMM	**Orleans Mounta**	**1.97**	**108**		**Pn**	**12 53 16.6**	**-2.2**
KMPM	**Mount Pierce**	**2.03**	**136**		**Pn**	**12 53 16.6**	**-3.0**
KSMM	**Slide Mountain**	**2.18**	**141**		**Pn**	**12 53 18.3**	**-3.3**
KCSM	**Cold Springs**	**2.29**	**126**		**Pn**	**12 53 20.8**	**-2.4**
HUMO	**Hull Mountain**	**2.33**	**71**		**Pn**	**12 53 21.1**	**-2.6**
DBO	**Dodson Butte**	**2.34**	**58**		**Pn**	**12 53 21.4**	**-2.4**
M02C	**Callahan**	**2.38**	**101**		**Pn**	**12 53 22.6**	**-1.7**
M02C	**Callahan**	**2.38**	**101**	P	**Pn**	**12 53 22.6**	**-1.7**
	baz=283,SNR=52						
KMRM	**Mail Ridge**	**2.38**	**134**		**Pn**	**12 53 22.0**	**-2.4**
YBH	**Yreka Blue Hor**	**2.43**	**93**	Pn	**Pn**	**12 53 23.9**	**-1.2**
	3.9nm,0.3s,baz=279,slow=14,SNR=70						
YBH					**Sn**	**12 53 54.6**	**-0.2**
	1.1nm,0.3s,baz=193,slow=18,SNR=3.8						
YBH	**Yreka Blue Hor**	**2.43**	**93**		**Pn**	**12 53 23.7**	**-1.4**
LAMM	**Antelope Mount**	**2.50**	**96**		**Pn**	**12 53 25.2**	**-1.0**
LGPM	**Granite Peak**	**2.55**	**112**		**Pn**	**12 53 24.5**	**-2.2**
LBKM	**Bonanza King**	**2.60**	**107**		**Pn**	**12 53 26.0**	**-1.4**
N02D	**Trinity Center**	**2.61**	**110**		**Pn**	**12 53 25.6**	**-1.9**
N02D	**Trinity Center**	**2.61**	**110**	P	**Pn**	**12 53 25.8**	**-1.8**
	baz=291,SNR=31						
I03D	**Drain, OR**	**2.62**	**46**	P	**Pn**	**12 53 24.8**	**-2.8**
	baz=230,SNR=26						
B040	**Montague**	**2.64**	**90**		**Pn**	**12 53 26.8**	**-1.1**
I02D	**Swisshome**	**2.69**	**34**	S	**Sn**	**12 53 57.9**	**-3.2**
	baz=218						
LCSM	**College of the**	**2.71**	**99**		**Pn**	**12 53 26.5**	**-2.5**
L04D	**Klamath Falls**	**2.73**	**82**		**Pn**	**12 53 28.4**	**-0.9**
L04D	**Klamath Falls**	**2.73**	**82**	P	**Pn**	**12 53 28.4**	**-0.9**
	baz=265,SNR=60						
LHEM	**Herd Peak**	**2.80**	**94**		**Pn**	**12 53 29.7**	**-0.7**
KCPM	**Cahto Peak**	**2.85**	**140**	Pn	**Pn**	**12 53 28.0**	**-2.9**
LMPM	**Military Pass**	**2.87**	**97**		**Pn**	**12 53 31.1**	**-0.1**
LGBM	**Gray Butte**	**2.87**	**100**		**Pn**	**12 53 29.9**	**-1.3**
WDC	**Whiskeytown Da**	**2.89**	**116**		**Pn**	**12 53 29.7**	**-1.7**
M03C	**McCloud**	**2.94**	**101**		**Pn**	**12 53 31.7**	**-0.4**
O02D	**Mt. Diablo Mer**	**2.95**	**125**	P	**Pn**	**12 53 30.4**	**-1.8**
	baz=306,SNR=14						
O02D				S	**Sn**	**12 54 06.6**	**-1.0**
	baz=306						
KFPM	**Farley Peak**	**2.96**	**139**		**Pn**	**12 53 29.5**	**-2.9**
M04C	**Macdoel**	**3.07**	**91**		**Pn**	**12 53 33.2**	**-0.8**
M04C	**Macdoel**	**3.07**	**91**	P	**Pn**	**12 53 33.2**	**-0.8**
	baz=274,SNR=9.1						
LBFM	**Black Fox Moun**	**3.09**	**99**		**Pn**	**12 53 34.5**	**+0.1**
LGMM	**Garner Mountai**	**3.09**	**94**		**Pn**	**12 53 33.8**	**-0.5**
I04A	**Tendick Farm,**	**3.22**	**53**	P	**Pn**	**12 53 34.5**	**-1.4**
	baz=237						
I04A				S	**Sn**	**12 54 13.1**	**-1.0**
	baz=237						
GVV	**Valley View**	**3.27**	**129**		**Pn**	**12 53 35.0**	**-1.6**
COR	**Corvallis**	**3.31**	**35**		**Pn**	**12 53 36.0**	**-1.0**
LTCM	**Tuscan Springs**	**3.35**	**119**		**Pn**	**12 53 36.5**	**-1.2**
LTIM	**Timbered Crate**	**3.42**	**101**		**Pn**	**12 53 38.0**	**-0.8**
LDBM	**Digger Butte**	**3.47**	**114**		**Pn**	**12 53 38.7**	**-0.7**
H04D	**Lebanon**	**3.52**	**41**	P	**Pn**	**12 53 38.7**	**-1.2**
	baz=225,SNR=6.2						
H04D				S	**Sn**	**12 54 19.0**	**-2.5**
	baz=225						
LMEM	**Manzanita Entr**	**3.57**	**111**		**Pn**	**12 53 40.8**	**-0.1**
LBCM	**Butte Creek Ri**	**3.62**	**106**		**Pn**	**12 53 40.7**	**-0.8**
J05D	**Fort Rock, OR**	**3.75**	**67**	P	**Pn**	**12 53 42.2**	**-1.0**
	baz=251						
MGL	**Magalia**	**3.93**	**121**		**Pn**	**12 53 44.0**	**-1.8**
ORV	**Oroville**	**4.11**	**123**		**Pn**	**12 53 45.6**	**-2.5**
PINE	**Pine Mountain**	**4.14**	**61**		**Pn**	**12 53 46.3**	**-2.3**
MOD	**Modoc Plateau**	**4.21**	**88**		**Pn**	**12 53 47.5**	**-2.2**
BEKR	**Beckworth**	**4.70**	**114**		**Pn**	**12 53 55.1**	**-1.3**
F04A	**Amboy**	**4.77**	**31**	Pn	**Pn**	**12 53 55.2**	**-1.9**
AFDM	**Forest Hills D**	**4.81**	**126**		**Pn**	**12 53 56.4**	**-1.3**
IND	**Independence**	**4.96**	**118**		**Pn**	**12 54 00.1**	**+0.1**
KBF	**Kyburz Flat**	**4.97**	**117**		**Pn**	**12 54 00.1**	**-0.1**
DONR	**Donner Summit**	**4.98**	**119**		**Pn**	**12 54 00.0**	**-0.3**
G06A	**Carlson Farm,**	**5.10**	**47**	Pn	**Pn**	**12 54 00.3**	**-1.4**
E04D	**Cinebar**	**5.25**	**26**	P	**Pn**	**12 54 03.7**	**0.0**
	baz=210,SNR=13						
RUBR	**Rubicon Trail**	**5.25**	**121**	Pn	**Pn**	**12 54 02.4**	**-1.7**
PAHR	**Pah Rah Range**	**5.44**	**112**	Pn	**Pn**	**12 54 06.0**	**-0.5**
PNTR	**Pine Nut**	**5.60**	**118**		**Pn**	**12 54 08.0**	**-0.7**
LON	**Longmire**	**5.68**	**30**	Pn	**Pn**	**12 54 08.8**	**-1.0**
YERR	**Yerington**	**5.89**	**117**		**Pn**	**12 54 12.4**	**-0.3**
D05A	**Enumclaw**	**5.99**	**27**	Pn	**Pn**	**12 54 12.9**	**-1.0**
WAKR	**Walker**	**6.03**	**122**	Pn	**Pn**	**12 54 13.9**	**-0.8**
LTY	**Liberty**	**6.55**	**33**	Pn	**Pn**	**12 54 21.5**	**-0.1**
RYN	**Ryan**	**6.55**	**117**	Pn	**Pn**	**12 54 20.7**	**-1.1**
KVN	**Kaiserville**	**6.63**	**113**		**Pn**	**12 54 22.8**	**-0.1**
E08A	**Dider Farm, El**	**6.75**	**45**	Pn	**Pn**	**12 54 23.7**	**-0.6**
NVAR	**Mina Array Bea**	**6.80**	**118**	Pn	**Pn**	**12 54 24.8**	**-0.6**
	0.4nm,0.3s,baz=294,slow=14,SNR=8.1						
NVAR					**Sn**	**12 55 41.6**	**-1.3**
	0.1nm,0.3s,baz=37,slow=28,SNR=2.0						
NVAR	**Mina Array Bea**	**6.80**	**118**		**Pn**	**12 54 24.0**	**-1.3**
NV11	**Mina Array Sit**	**6.90**	**118**	Pn	**Pn**	**12 54 26.6**	**0.0**
B08A	**Colville Reser**	**7.97**	**34**	Pn	**Pn**	**12 54 40.0**	**-1.1**
ELK	**Elko**	**8.14**	**95**	Pn	**Pn**	**12 54 45.4**	**+1.6**
	0.1nm,0.3s,baz=284,slow=16,SNR=5.7						
ELK					LR	LR	12 58 10.6
	comp=Z,178nm,20.3s,baz=282,slow=40						
R11A	**Troy Canyon, C**	**8.70**	**111**	Pn	**Pn**	**12 54 52.8**	**+1.5**
PDAR	**Pinedale Array**	**12.16**	**80**	Pn	**Pn**	**12 55 43.6**	**+4.8**
	0.0nm,0.3s,baz=271,slow=9.8,SNR=3.1						
PDAR					LR	LR	13 00 17.9
	comp=Z,55nm,19.8s,baz=265,slow=38						
YKA	**Yellowknife Ar**	**21.70**	**14**	P	**P**	**12 57 37.8**	**+1.8**
	1.6nm,0.8s,baz=204,slow=12,SNR=15						
TXAR	**Lajitas Array**	**21.96**	**118**	P	**P**	**12 57 41.0**	**+1.8**
	0.9nm,0.9s,baz=298,slow=8.4,SNR=8.0						
ULM	**Lac du Bonnet**	**22.35**	**58**	P	**P**	**12 57 46.0**	**+2.8**
	3.4nm,1.0s,baz=270,slow=9.1,SNR=4.5						
H11N3	**WAKE ISLAND Hy**	**60.24**	**270**	T	T	14 08 01.6	
	baz=52,slow=74						
H11N2	**WAKE ISLAND Hy**	**60.24**	**270**	T	T	14 07 56.7	
	baz=52						
H11N1	**WAKE ISLAND Hy**	**60.26**	**270**	T	T	14 08 02.6	
	baz=52,slow=74						
H11S1	**WAKE ISLAND Hy**	**61.14**	**270**	T	T	14 09 07.1	
	baz=51,slow=75,SNR=6.6						
H11S2	**WAKE ISLAND Hy**	**61.14**	**269**	T	T	14 09 05.2	
	baz=51,slow=75,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	**61.15**	**270**	T	T	14 09 04.6	
	baz=51,slow=75,SNR=4.4						
USRK	**Ussuriysk Ar.**	**69.51**	**311**	LR	LR	13 34 34.9	
	comp=Z,45nm,18.1s,baz=152,slow=36						

MAN 12 13:04:33.8, 9˚.80N×123˚.90E, h2km, mb4.3, ML3.1, MS2.9, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.52**	**7**	*i*/*e*P	**Pg**	13 04 43.9	+0.1
LLP				*i* S	**Sg**	13 04 51.2	+0.6
MSLP	**Maasin**	**1.00**	**70**	*e*P	**Pb**	13 04 53.7	-0.2
MSLP				*e*S	**Sb**	13 05 07.9	+0.4
DCPH	**Dipolog City**	**1.32**	**204**	*i*/*e*P	**Sn**	13 05 17.7	+0.3
DCPH				*i* S	**Sb**	13 05 24.2	+7.5
OCLP	**Ormoc**	**1.43**	**29**	*e*P	**Pn**	13 05 00.1	-0.7
OCLP				*e*S	**Sn**	13 05 20.6	+0.5

MAN ***12*** *13:07:47.7, 5˚.52N×125˚.75E, h133km, mb5.6, ML4.6, MS5.0*

MAN Intensity IV - Mati Davao Oriental; Intensity III - General Santos City; Tampakan South Cotabato; Tagum City; Davao City; Malita Davao del Sur; Intensity II - Kidapawan City; Koronadal City; Glan Sarangani.

NEIC ***12*** *13:07:50.3±1.6, 5˚.79N±0˚.06×125˚.59E±0˚.08, h136km±4km, mb5.0/122, Error ellipse: s-maj=12.2km s-min=8.3km az=81.0*

MOS ***12*** *13:07:50.7±1.2, 5˚.80N×125˚.48E, h153km, mb4.8/46, Error ellipse: s-maj=9.0km s-min=4.9km az=105.9*

IDC ***12*** *13:07:50.9±0.9, 5˚.79N×125˚.56E, h140km±8km, mb4.5/28, mb1 4.6/28, mb1mx4.5/35, mbtmp4.9/28, MS3.9/15, Ms1 3.9/15, ms1mx3.7/39, Error ellipse: s-maj=13.2km s-min=7.1km az=75.0*

KLM ***12*** *13:07:50.0, 5˚.83N×125˚.94E, h132km, mb5.4*

GCMT ***12*** *13:07:51.3±0.2, 5˚.85N±0˚.01×125˚.63E±0˚.01, h138km±1km, MW5.2/119, Moment Tensor Solution. s83,c113; s119,c199; Duration: 1§0 Moment tensor: Scale 10^17 Nm; Mrr=0.12±.01; Mθθ=0.66±.01; Mϕϕ=-0.53±.02; Mrθ=0.12±.01; Mθϕ=0.63±.02; Mϕr=-0.34±.01; Best double couple: M=0.94900×10^17 NP1:ϕ=289.00000°, δ=73.00000°, λ=-16.00000°. NP2:ϕ=24.00000°, δ=75.00000°, λ=-162.00000°. Principal axes: T 0.9350, Plg1.0000°, Azm156.0000°; N 0.0290, Plg67.0000°, Azm63.0000°; P -0.9640, Plg23.0000°, Azm247.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***12*** *13:07:51.3±0.2, 6˚.N±2˚×12˚.6E±˚, h130km±2km, M5.2/61, mb5.2/61, mB5.6/37, MLv5.8/10, Mw(mB)5.1/37, Mwp5.3/7*

ISC 12 13:07:50.3±0.3, **5˚.75N**±0˚.03×**125˚.62E**±0˚.04, **h137**km±2km, **h137**km:**pP-P, n423, σ1§79/482, mb4.9**/156, **20C-20D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.36**	**15**	*e*P	**Pn**	**13 08 09.3**	**-0.3**
GSPH	**General Santos**	**0.74**	**297**	*i*/*i*P	**Pn**	**13 08 11.7**	**-0.2**
GSPH				*i* S	**Sn**	**13 08 28.0**	**-0.2**
DAV	**Davao City (W)**	**1.31**	**358**	P	**Pn**	**13 08 17.5**	**+0.6**
	1µm,0.3s,baz=157,slow=1.3,SNR=104						
DAV				S	**Sn**	**13 08 39.1**	**+1.9**
	9µm,0.3s,baz=288,slow=19,SNR=27						
DAV	**Davao City (W)**	**1.31**	**358**	*e*P	**Pn**	**13 08 14.6**	**-2.3**
DAV	**Davao City (W)**	**1.31**	**358**		**Pn**	**13 08 17.4**	**+0.6**
DAV				Sn	**Sn**	**13 08 36.0**	**-1.2**
DMPH	**Davao City--Mi**	**1.33**	**355**	*e*P	**Pn**	**13 08 18.8**	**+1.7**
DMPH				*e*S	**Sn**	**13 08 40.0**	**+2.5**
MATI	**Mati**	**1.35**	**28**	*e*P	**Pn**	**13 08 16.4**	**-0.8**
MATI				*e*S	**Sn**	**13 08 35.1**	**-2.7**
KCP	**Kidapawan**	**1.35**	**337**	*i*/*i*P	**Pn**	**13 08 17.9**	**+0.5**
KCP				*i* S	**Sn**	**13 08 39.4**	**+1.3**
CTBH	**Cotabato--PC H**	**2.00**	**317**	*i*/*e*P	**Pn**	**13 08 25.1**	**+0.4**
CTBH				*i* S	**Sn**	**13 08 47.5**	**-3.4**
BUKP	**Musuan**	**2.19**	**345**	*e*P	**Pn**	**13 08 27.8**	**+0.8**
BUKP				*e*S	**Sn**	**13 08 57.6**	**+2.5**
BIPH	**Bislig**	**2.53**	**17**	*i*/*i*P	**Pn**	**13 08 32.1**	**+0.9**
BIPH				*i* S	**Sn**	**13 09 06.2**	**+3.5**
CGP	**Cagayan de Oro**	**2.84**	**341**	*i*/*i*P	**Pn**	**13 08 36.2**	**+1.1**
CGP				*i* S	**Sn**	**13 09 11.1**	**+1.4**
BUTP	**Butuan**	**3.20**	**0**	*e*P	**Pn**	**13 08 40.9**	**+1.1**
BUTP				*e*S	**Sn**	**13 08 48.0**	**+8.0**
DCPH	**Dipolog City**	**3.60**	**322**	*i*/*i*P	**Pn**	**13 08 48.8**	**+3.8**
IPIL	**Ipil**	**3.64**	**304**	*e*P	**Pn**	**13 08 47.9**	**+2.4**
ZCP	**Zamboanga City**	**3.71**	**289**	*i*/*i*P	**Pn**	**13 08 47.5**	**+1.1**
ZCP				*i* S	**Sn**	**13 09 32.0**	**+2.0**
SCPH	**Surigao**	**4.01**	**358**	*i*/*e*P	**Pn**	**13 08 50.2**	**-0.2**
MSLP	**Maasin**	**4.42**	**350**	*e*P	**Pn**	**13 08 56.1**	**+0.3**
MSLP				*e*S	**Sn**	**13 09 45.2**	**-1.5**
LLP	**Lapu-Lapu**	**4.82**	**340**	*i*/*e*P	**Pn**	**13 09 02.3**	**+1.1**
LLP				*i* S	**Sn**	**13 10 02.1**	**+5.7**
TNTI	**Ternate**	**5.25**	**161**	P	**Pn**	**13 09 05.6**	**-1.3**
	10nm4µm40µm3µm,0.6s						
TNTI	**Ternate**	**5.25**	**161**		**Pn**	**13 09 05.7**	**-1.1**
OCLP	**Ormoc**	**5.36**	**349**	*e*P	**Pn**	**13 09 09.5**	**+1.2**
KMSI	**Cibinong**	**5.40**	**198**	P	**Pn**	**13 09 10.8**	**+1.9**
	7.9nm690nm13µm2µm,0.7s						
KMSI				S	**Sn**	**13 10 13.6**	**+3.5**
	7.9nm690nm13µm2µm,0.7s						
BESP	**Borongan**	**5.81**	**358**	*e*P	**Pn**	**13 09 16.5**	**+2.0**
BESP				*e*S	**Sn**	**13 10 20.3**	**+0.1**
MRSI	**Marisa**	**6.40**	**215**	P	**Pn**	**13 09 24.3**	**+2.0**
	6.4nm4µm6µm414nm,1.1s						
RCP	**Roxas**	**6.43**	**334**	*i*/*e*P	**Pn**	**13 09 24.9**	**+2.2**
CNP	**Catarman**	**6.78**	**352**	*e*P	**Pn**	**13 09 29.5**	**+2.1**
CNP				*e*S	**Sn**	**13 10 48.4**	**+4.9**
CUYO	**Cuyo Island**	**6.81**	**318**	*e*P	**Pn**	**13 09 29.4**	**+1.6**
LUWI	**Luwuk**	**7.32**	**203**	P	**Pn**	**13 09 38.1**	**+3.4**
	6.4nm10µm787nm,0.8s						
LUWI	**Luwuk**	**7.32**	**203**		**Pn**	**13 09 36.8**	**+2.1**
OTRP	**Odiongan**	**7.47**	**332**	*e*P	**Pn**	**13 09 38.3**	**+1.7**
APSI	**Ampana**	**7.71**	**211**	P	**Pn**	**13 09 43.0**	**+3.0**
	2.0nm3µm292nm,0.8s						
SANI	**Sanana**	**7.76**	**177**	P	**Pn**	**13 09 37.9**	**-2.7**
	4.9nm4µm16µm1µm,0.8s						
MPSI	**Mapaga**	**7.84**	**227**	P	**Pn**	**13 09 44.5**	**+2.8**
	0.5nm2µm90nm,0.8s						
BOAC	**Boac**	**8.51**	**334**	*e*P	**Pn**	**13 09 54.0**	**+3.3**
SPMM	**Sapulut**	**9.17**	**264**	P	**Pn**	**13 10 05.0**	**+5.4**
LQP	**Lukban**	**9.23**	**335**	*e*P	**Pn**	**13 10 03.4**	**+2.9**
KKM	**Kota Kinabalu**	**9.36**	**272**		**Pn**	**13 10 02.1**	**0.0**
TGY	**Tagaytay City**	**9.49**	**331**	P	**Pn**	**13 10 06.8**	**+2.9**
	17nm,0.3s,baz=149,slow=18,SNR=14						
POLP	**Polilio Island**	**9.63**	**338**	*e*P	**Pn**	**13 10 08.4**	**+2.8**
KDI	**Kendari**	**10.10**	**197**	P	**Pn**	**13 10 13.2**	**+1.2**
	52µm85nm,1.2s						
TTSI	**Tana Toraja**	**10.48**	**214**	P	**Pn**	**13 10 19.3**	**+2.2**
	2µm187nm,0.8s						
BALP	**Baler**	**10.69**	**339**	*e*P	**Pn**	**13 10 23.3**	**+3.5**
FAKI	**Fak Fak**	**10.87**	**142**	P	**Pn**	**13 10 20.3**	**-1.9**
	6µm360nm,1.1s						
FAKI	**Fak Fak**	**10.87**	**142**		**Pn**	**13 10 21.4**	**-0.7**
BKB	**Balikpapan**	**11.15**	**232**	P	**Pn**	**13 10 30.0**	**+4.0**
	5µm12µm1µm,1.1s						
BKB	**Balikpapan**	**11.15**	**232**		**Pn**	**13 10 24.3**	**-1.7**
SPSI	**Sidrap Palu**	**11.28**	**211**	P	**Pn**	**13 10 29.6**	**+1.9**
	2µm98nm,1.3s						
BNSI	**Bone**	**11.49**	**209**	P	**Pn**	**13 10 33.9**	**+3.5**
	4µm359nm,1.4s						
CAUP	**Cauayan**	**11.73**	**342**	*e*P	**Pn**	**13 10 34.9**	**+1.4**
BOLP	**Bolinao**	**11.95**	**333**	*e*P	**Pn**	**13 10 38.2**	**+1.7**
KAPI	**Kappang**	**12.19**	**209**	P	**Pn**	**13 10 42.1**	**+2.5**
KAPI	**Kappang**	**12.19**	**209**	P	**Pn**	**13 10 42.6**	**+3.0**
	13nm,0.3s,baz=112,slow=5.7,SNR=19						
KAPI				LR	LR	13 15 12.6	
	comp=Z,806nm,21.1s,baz=301,slow=36						
KAPI	**Kappang**	**12.19**	**209**		**Pn**	**13 10 42.1**	**+2.5**
BKSI	**Bulukumba**	**12.29**	**207**	P	**Pn**	**13 10 42.7**	**+1.8**
	922nm77nm,1.3s						
APYP	**Conner**	**12.77**	**341**	*e*P	**Pn**	**13 10 48.1**	**+1.0**
SBUM	**Sibu**	**13.76**	**257**	P	**P**	**13 11 03.5**	**-0.3**
SBUM	**Sibu**	**13.76**	**257**	P	**P**	**13 11 04.0**	**+0.2**
MMRI	**Maumere**	**14.68**	**193**	P	**P**	**13 11 15.0**	**+0.9**
	3µm274nm,0.8s						
MMRI	**Maumere**	**14.68**	**193**		**Pn**	**13 11 11.3**	**-0.2**
SAUI	**Saumlaki**	**14.77**	**157**	P	**Pn**	**13 11 12.6**	**-0.1**
	1µm,0.6s						
SAUI	**Saumlaki**	**14.77**	**157**	Pn	**Pn**	**13 11 12.7**	**+0.1**
STKI	**Sintang**	**15.21**	**249**	P	**P**	**13 11 22.2**	**+2.3**
	13µm295nm,1.4s						
SOEI	**Soe**	**15.46**	**185**	P	**P**	**13 11 22.5**	**-0.3**
	2µm230nm,0.8s						
SOEI	**Soe**	**15.46**	**185**		**Pn**	**13 11 21.1**	**-0.3**
KSM	**Kuching**	**15.86**	**255**	P	**Pn**	**13 11 26.1**	**-0.1**
PLAI	**Plampang**	**16.46**	**208**	P	**P**	**13 11 35.2**	**+1.5**
	2µm211nm,0.8s						
GENI	**Genyem**	**16.73**	**119**	P	**Pn**	**13 11 39.5**	**+2.7**
	3µm218nm,0.6s						
TWG	**Pinlang**	**17.53**	**346**	P	**P**	**13 11 44.2**	**-1.3**
DLV	**T Lat**	**18.00**	**291**	P	**P**	**13 11 50.8**	**-0.1**
YULB	**Yu-li**	**18.03**	**347**	P	**P**	**13 11 49.5**	**-1.4**
TPUB	**Ta-pu**	**18.10**	**345**	P	**P**	**13 11 50.8**	**-0.9**
JAGI	**Jajag, Banyuwa**	**18.17**	**219**	P	**Pn**	**13 11 54.8**	**+0.7**
	2µm136nm,1.1s						
JAGI	**Jajag, Banyuwa**	**18.17**	**219**	P	**Pn**	**13 11 53.6**	**-0.5**
JAGI				IAmb	IAmb	13 11 58.1	
	comp=Z,156nm,1.2s						
SSLB	**Suanglung**	**18.49**	**346**	P	**P**	**13 11 55.2**	**-0.7**
SSLB				IAmb	IAmb	13 12 00.2	
	comp=Z,37nm,0.9s						
NACB	**Ninganchiao**	**18.72**	**348**	P	**P**	**13 11 57.5**	**-1.0**
UWJI	**Ujung Watu**	**18.99**	**231**	P	**Pn**	**13 12 05.3**	**+1.6**
	comp=Z,3µmcomp=Z,269nm,0.8s						
NGJI	**Ngawi**	**19.22**	**227**	P	**Pn**	**13 12 09.0**	**+2.6**
	comp=Z,217nm,1.5s						
YHNB	**Yeheng**	**19.25**	**348**	P	**P**	**13 12 04.3**	**0.0**
YHNB				IAmb	IAmb	13 12 21.0	
	comp=Z,70nm,1.1s						
MTN	**Manton Dam**	**19.27**	**163**	P	**P**	**13 12 05.0**	**+0.5**
SMRI	**Semarang**	**19.77**	**230**	P	**Pn**	**13 12 13.6**	**+0.7**
	comp=Z,212nm,1.2s						
SMRI	**Semarang**	**19.77**	**230**	P	**P**	**13 12 09.0**	**-1.0**
HKPS	**Hong Kong Po S**	**19.82**	**327**	P	**P**	**13 12 10.0**	**-0.5**
TPI	**Tanjungpanan**	**19.83**	**245**	P	**Pn**	**13 12 13.6**	**0.0**
	comp=Z,1µmcomp=Z,83nm,0.9s						
KNMB	**Chin-men Tao**	**19.86**	**340**	P	**P**	**13 12 11.7**	**+0.9**
KNMB				IAmb	IAmb	13 12 25.5	
	comp=Z,57nm,0.8s						
WOJI	**Wonogiri, Jawa**	**19.93**	**228**	P	**Pn**	**13 12 14.2**	**-0.4**
	comp=Z,66nm,1.3s						
PCJI	**Pacitan**	**19.98**	**226**	P	**Pn**	**13 12 14.6**	**-0.7**
	comp=Z,72nm,1.4s						
QZH	**Quanzhou**	**20.24**	**341**	*i*/*i*P	**Pn**	**13 12 22.2**	**+4.0**
QZH				S	**S**	**13 15 55.7**	**+1.2**
QZH				sS	sS	13 16 22.4	-12
QZH				SS	Sn	13 16 44.0	+37
QZH				pmax	pmax		
	comp=Z,72nm,0.8s						
QZH				pmax	pmax		
	comp=Z,

WRA S **S** **13 17 40.2 -6.0**
comp=Z,5.2nm,0.7s,baz=335,slow=16,SNR=6.6
WRA ScP **ScP** **13 20 05.3 -0.2**
comp=Z,4.1nm,0.8s,baz=349,slow=3.2,SNR=4.3
WR0 Warramunga Arr 27.02 161 P **P** **13 13 19.3 -0.5**
WR0 IAmb IAmb 13 13 30.9
comp=Z,35nm,0.9s
GYA Guiyang 27.41 321 P **P** **13 13 26.0 +2.6**
GYA pP pP 13 13 56.7 +4.1
GYA sP sP 13 14 12.0 +3.6
GYA S **S** **13 17 52.6 -1.2**
GYA sS sS 13 18 47.4 +2.9
GYA ScP **ScP** **13 20 07.8 +0.8**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,120nm,4.9s
SISI Saibi 27.41 256 P **P** **13 13 25.5 +2.1**
JNU Nakatsue 27.67 10 P **P** **13 13 25.1 -0.5**
comp=Z,48nm,0.9s,baz=163,slow=5.6,SNR=21
JNU Nakatsue 27.67 10 P **P** **13 13 24.7 -0.9**
JNU IAmb IAmb 13 13 27.0
comp=Z,67nm,1.0s
PSA00 Pilbara Seismi 27.74 192 P **P** **13 13 26.1 -0.1**
PSA00 IAmb IAmb 13 13 29.0
comp=Z,54nm,0.8s
KRVT Keravat (AS076 28.20 110 P **P** **13 13 32.4 +2.0**
comp=Z,107nm,0.7s,baz=343,slow=14,SNR=5.3
KRVT LR LR 13 23 15.8
comp=Z,372nm,19.5s,baz=311,slow=33
GSI Gunungsitoli 28.33 262 P **P** **13 13 33.4 +1.8**
comp=Z,245nm,0.9s
GSI Gunungsitoli 28.33 262 P **P** **13 13 31.8 +0.2**
ENH Enshi 28.73 330 P **P** **13 13 33.8 -1.2**
ENH IAmb IAmb 13 13 45.1
comp=Z,20nm,1.0s
CM31 Chiang Mai Arr 28.92 298 P **P** **13 13 34.9 -1.9**
CMAR Chiang Mai Arr 28.92 298 P **P** **13 13 37.8 +1.0**
comp=Z,4.4nm,0.7s,baz=118,slow=7.5,SNR=35
CMAR ScP **ScP** **13 20 11.3 -0.4**
comp=Z,2.0nm,0.7s,baz=110,slow=1.6,SNR=8.1
CHTO Chiang Mai 29.06 299 P **P** **13 13 37.6 -0.4**
CHTO pmax pmax
comp=Z,10.0nm,0.6s
CHTO Chiang Mai 29.06 299 P **P** **13 13 37.6 -0.4**
CHTO IAmb IAmb 13 13 43.4
comp=Z,10nm,0.6s
KMI Kunming 29.18 314 P **P** **13 13 39.9 +0.6**
KMI pP pP 13 14 07.0 -1.6
KMI sP sP 13 14 22.9 -1.5
KMI PP **PnPn** **13 14 38.6 -0.7**
KMI S **S** **13 18 20.9 -1.1**
KMI pmax pmax
comp=Z,9.0nm,0.5s
KMI pmax pmax
comp=Z,260nm,5.1s
KMI LR LR
comp=Z,660nm,19.9s
KMI LR LR
comp=Z,480nm,16.8s
KMI LR LR
comp=Z,420nm,19.3s
JHJ Hachijo jima 2 30.26 24 LR LR 13 23 28.4
comp=Z,13μm,21.7s,baz=86,slow=31
AS31 Alice Springs 30.34 165 P **P** **13 13 49.5 +0.2**
AS31 IAmb IAmb 13 14 08.6
comp=Z,12nm,0.7s
ASAR Alice Springs 30.34 165 P **P** **13 13 49.5 +0.3**
comp=Z,15nm,0.6s,baz=345,slow=7.4,SNR=296
ASAR PcP **PcP** **13 16 46.9 +0.6**
comp=Z,3.5nm,0.4s,baz=347,slow=2.1,SNR=5.1
ASAR S **S** **13 18 38.1 -1.5**
comp=Z,4.6nm,0.7s,baz=358,slow=20,SNR=3.7
ASAR ScP **ScP** **13 20 15.5 -0.6**
comp=Z,5.4nm,0.7s,baz=348,slow=2.5,SNR=7.2
ASAR LR LR 13 28 20.3
comp=Z,128nm,18.3s,baz=2.5,slow=40
TJN Taejon 30.52 3‖ *eP* **P** **13 13 51.1 +0.4**
INU Inuyama 31.27 18 P **P** **13 13 57.3 0.0**
TIA Tai'an 31.30 347 P P 13 14 04.9 +7.3
TIA pmax pmax
comp=Z,11nm,0.7s
KSRS Korea Array 31.62 4 P **P** **13 14 01.1 +0.8**
comp=Z,19nm,0.8s,baz=183,slow=10.0,SNR=37
KSRS ScP **ScP** **13 20 20.1 +0.1**
comp=Z,2.7nm,0.9s,baz=190,slow=1.6,SNR=5.7
KSRS LR LR 13 27 56.1
comp=Z,101nm,21.0s,baz=182,slow=38
KS19 Wonju Array Si 31.67 3 P **P** **13 14 00.3 -0.5**
KS19 IAmb IAmb 13 14 03.4
comp=Z,37nm,1.0s
XAN Xi'an 32.12 333 P **P** **13 14 04.3 -0.6**
XAN PP **PP** **13 15 22.3 +2.1**
XAN S **S** **13 19 07.0 -0.4**
XAN SS **SnSn** **13 21 04.3 -10**
XAN pmax pmax
comp=Z,18nm,1.0s
XAN pmax pmax
comp=Z,150nm,6.8s
XAN LR LR
comp=Z,390nm,15.7s
XAN LR LR
comp=Z,350nm,17.1s
XAN LR LR
comp=Z,470nm,16.5s
XAN Xi'an 32.12 333 P **P** **13 14 03.9 -1.0**
XAN pmax pmax
comp=Z,19nm,0.7s
XAN Xi'an 32.12 333 P **P** **13 14 03.9 -1.0**
XAN IAmb IAmb 13 14 15.6
comp=Z,19nm,0.7s
CD2 Chengdu 32.37 323 *eP* **P** **13 14 08.4 +1.3**
CD2 S **S** **13 19 13.0 +1.7**
CD2 pmax pmax
comp=Z,30nm,0.4s
CD2 LR LR
comp=Z,470nm,15.2s
CD2 LR LR
comp=Z,960nm,19.1s
CD2 LR LR
comp=Z,550nm,13.2s
CTA Charters Tower 32.73 142 P **P** **13 14 10.8 +0.6**
comp=Z,12nm,0.6s,baz=324,slow=11,SNR=27
MJAR Matsushiro Arr 32.75 19 P **P** **13 14 09.7 -0.6**
comp=Z,17nm,0.7s,baz=185,slow=8.6,SNR=55
MJAR LR LR 13 27 27.5
comp=Z,188nm,19.4s,baz=235,slow=36
MJAR Matsushiro Arr 32.75 19 IAmb IAmb 13 14 12.5
comp=Z,6.9nm,0.8s
MAJO Matsushiro 32.75 19 *de*P **P** **13 14 09.5 -0.7**
MAJO pmax pmax
comp=Z,27nm,0.7s
MAJO Matsushiro 32.75 19 P **P** **13 14 09.4 -0.8**
MAJO IAmb IAmb 13 14 11.5
comp=Z,28nm,0.7s
MAT Matsushiro 32.75 19 P **P** **13 14 09.5 -0.7**
MAT *eS* **S** **13 19 14.8 -2.1**
MJB9 Matsu-Tunnel 32.75 19 P **P** **13 14 09.7 -0.6**
MJB9 IAmb IAmb 13 14 11.5
comp=Z,28nm,0.7s
DL2 Dalian 33.20 354 P **P** **13 14 15.0 +0.9**
DL2 pmax pmax
comp=Z,55nm,1.4s
BJT Baijiatuan 35.16 347 P **P** **13 14 30.5 -0.5**
BJT pmax pmax
comp=Z,23nm,0.9s
BJT Baijiatuan 35.16 347 P **P** **13 14 30.5 -0.5**
BJT IAmb IAmb 13 14 47.9
comp=Z,23nm,0.9s
BJI Beijing 35.18 347‖ *i*P **P** **13 14 30.9 -0.2**
BJI sP **sP** **13 15 14.8 -1.8**
BJI S **S** **13 20 01.1 +6.9**
BJI ScP **ScP** **13 20 32.6 +0.1**
BJI sS **sS** **13 20 47.1 +1.5**
BJI pmax pmax
comp=Z,19nm,0.8s
MORW Morawa 35.82 194 P **P** **13 14 36.5 -0.3**
SNY Shenyang 35.97 357‖ P **P** **13 14 37.0 -0.9**
SNY pP **pP** **13 15 09.8 +2.4**
SNY pmax pmax
comp=Z,23nm,0.8s
LZH Lanzhou 36.21 329 *eP* **P** **13 14 42.0 +1.8**
LZH pP pP 13 15 13.6 +3.2
LZH sP sP 13 15 27.6 +1.4
LZH PP **PnPn** **13 16 07.4 +0.8**
LZH pmax pmax
comp=Z,18nm,1.1s
LZH pmax pmax
comp=Z,75nm,4.9s
LZH LR LR
comp=Z,240nm,15.2s
LZH LR LR
comp=Z,410nm,16.3s
LZH LR LR
comp=Z,500nm,16.8s
FORT Forrest 36.40 176 P **P** **13 14 42.1 +0.4**
MSHR Mys Shultsa 37.00 7‖ *eP* **P** **13 14 47.2 +0.6**
HHC Hu-ho-hao-te 37.15 342 *eP* **P** **13 14 50.1 +2.1**
HHC pmax pmax
comp=Z,6.0nm,1.1s
HHC pmax pmax
comp=Z,92nm,5.6s
HNR Honiara 37.39 114 P **P** **13 14 50.2 -0.1**
HNR pmax pmax
comp=Z,62nm,0.5s
HNR Honiara 37.39 114 P **P** **13 14 50.7 +0.4**
comp=Z,45nm,0.5s,baz=269,slow=2.6,SNR=8.9
HNR Honiara 37.39 114 P **P** **13 14 50.2 -0.1**
TEZP TEZPUR 37.54 307 *eP* **P** **13 14 50.7 -0.7**
TEZP IAmb IAmb 13 14 55.5
comp=Z,12nm,0.3s
VLA Vladivostok 37.62 8*ceP* **P** **13 14 52.9 +1.0**
VLA pmax pmax
comp=Z,85nm,1.0s
SHL Shillong 37.80 305 P **P** **13 14 53.3 -0.6**
SHL pmax pmax
comp=Z,38nm,0.6s
SHL Shillong 37.80 305 *eP* **P** **13 14 54.5 +0.6**
SHL IAmb IAmb 13 14 58.9
comp=Z,24nm,0.5s
SHL Shillong 37.80 305 P **P** **13 14 53.3 -0.6**
CN2 Changchun 37.90 360 *eP* **P** **13 14 58.6 +4.5**
CN2 *eS* **S** **13 20 33.0 -2.5**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,110nm,3.2s
CN2 LR LR
comp=Z,310nm,19.0s
CN2 LR LR
comp=Z,370nm,19.0s
CN2 LR LR
comp=Z,290nm,16.0s
USA0B Ussuriysk Arra 38.70 7*ceP* **P** **13 15 02.0 +1.1**
USA0B Ussuriysk Arra 38.70 7 P **P** **13 15 01.6 +0.7**
USA0B IAmb IAmb 13 15 03.4
comp=Z,43nm,0.8s
USRK Ussuriysk Ar. 38.70 7 P **P** **13 15 01.9 +1.0**
comp=Z,46nm,0.8s,baz=196,slow=7.4,SNR=69
MDJ Mudanjiang 38.87 5 P **P** **13 15 03.3 +1.0**
MDJ pP pwP 13 15 33.1 -1.0
MDJ sP sP 13 15 48.8 +1.5
MDJ S **S** **13 20 53.5 +3.4**
MDJ sS sS 13 21 46.5 +4.5
MDJ ScS **ScS** **13 24 59.4 +2.0**
MDJ pmax pmax
comp=Z,120nm,0.9s
MDJ Mudanjiang 38.87 5 P **P** **13 15 02.9 +0.6**
NWAO Narrogin (SRO) 39.28 191 P **P** **13 15 06.6 +0.8**
NWAO pmax pmax
comp=Z,38nm,0.6s
NWAO Narrogin (SRO) 39.28 191 P **P** **13 15 06.3 +0.5**
comp=Z,32nm,0.3s,baz=28,slow=7.7,SNR=87
NWAO Narrogin (SRO) 39.28 191 P **P** **13 15 06.6 +0.8**
NWAO Narrogin (SRO) 39.28 191 P **P** **13 15 06.6 +0.8**
NWAO IAmb IAmb 13 15 09.2
comp=Z,38nm,0.6s
ERM Erimo 39.34 21‖ *eP* **P** **13 15 07.7 +1.5**
ERM pmax pmax
comp=Z,121nm,1.6s
BBOO Buckleboo 39.61 166 P **P** **13 15 09.2 +0.6**
EIDS Eidsvold 39.62 142 P **P** **13 15 08.8 +0.1**
EIDS IAmb IAmb 13 15 19.8
comp=Z,13nm,0.9s
TEY Ternei 40.29 12‖ *eP* **P** **13 15 14.6 +0.6**
TEY pmax pmax
comp=N,20nm,1.1s
TEY pmax pmax
comp=Z,40nm,1.0s
STKA Stephens Creek 40.40 159 P **P** **13 15 15.8 +0.7**
STKA pmax pmax
comp=Z,13nm,0.6s
STKA Stephens Creek 40.40 159 P **P** **13 15 16.4 +1.2**
comp=Z,52nm,0.6s,baz=332,slow=8.5,SNR=173
STKA ScP **ScP** **13 20 52.1 -0.3**
comp=Z,8.3nm,0.7s,baz=351,slow=4.9,SNR=6.6
STKA S **S** **13 21 11.5 -1.8**
comp=Z,5.7nm,0.7s,baz=90,slow=18,SNR=5.2
STKA LR LR 13 33 35.2
comp=Z,228nm,18.6s,baz=347,slow=38
STKA Stephens Creek 40.40 159 P **P** **13 15 15.8 +0.7**
STKA IAmb IAmb 13 15 17.6
comp=Z,13nm,0.6s
GTA Gaotai 40.80 329 P **P** **13 15 18.7 +0.2**
GTA pP pP 13 15 52.4 +3.1
GTA sP sP 13 16 08.5 +3.6
GTA PcP **PcP** **13 17 19.7 +2.7**
GTA ScP **ScP** **13 20 53.0 -1.1**
GTA S **S** **13 21 15.9 -3.5**
GTA ScS **ScS** **13 25 08.3 -1.1**
GTA pmax pmax
comp=Z,5.0nm,1.2s
GTA pmax pmax
comp=Z,21nm,4.3s
GTA LR LR
comp=Z,280nm,16.1s
GTA LR LR
comp=Z,360nm,18.5s
GTA LR LR
comp=Z,390nm,19.6s
BWNR Bhubaneshwar 41.26 294 *eP* **P** **13 15 21.6 -0.7**
BWNR IAmb IAmb 13 15 27.3
comp=Z,16nm,0.7s
TAPN Taplejung 41.94 305 *eP* **P** **13 15 29.0 +0.8**
comp=Z,19nm,0.5s
H11S3 WAKE ISLAND Hy 41.99 69 T T 14 00 05.2
baz=262,slow=72,SNR=68
H11S1 WAKE ISLAND Hy 42.00 69 T T 14 00 09.7
baz=262,slow=72,SNR=44
H11S2 WAKE ISLAND Hy 42.00 69 T T 14 00 04.8
baz=262,slow=72,SNR=46
ODAN Odare 42.01 304 *eP* **P** **13 15 29.9 +1.2**
comp=Z,25nm,0.5s
YUK Yuzh-Kuril'sk 42.07 22 *eP* **P** **13 15 29.2 +0.6**
YUK S **S** **13 21 37.2 -0.5**
CHLP Challavanipeta 42.45 291 *eP* **P** **13 15 34.0 +1.9**
CHLP IAmb IAmb 13 15 36.5
comp=Z,24nm,0.9s
RAMN Ramite 42.70 304 *eP* **P** **13 15 34.9 +0.6**
comp=Z,23nm,0.6s
JIRN Jiri 43.31 305 *eP* **P** **13 15 39.9 +0.6**
comp=Z,40nm,0.4s
YSS Yuzh-Sakhalins 43.62 17 *eP* **P** **13 15 42.1 +1.1**
YSS *e* 13 17 33.6
YSS *i* S **S** **13 22 02.0 +1.8**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS pmax pmax
comp=Z,600nm,4.4s
YSS Yuzh-Sakhalins 43.62 17 P **P** **13 15 40.6 -0.4**
YSS IAmb IAmb 13 15 53.6
comp=Z,22nm,0.8s
KLR Kul'dur 43.64 6*c iP* **P** **13 15 41.2 +0.1**
KLR pmax pmax
comp=Z,34nm,0.9s
KLR Kul'dur 43.64 6 P **P** **13 15 41.6 +0.5**
comp=Z,15nm,0.6s,baz=210,slow=6.0,SNR=53
HIA Hailar 43.65 354 P **P** **13 15 40.7 -0.6**
HIA pmax pmax
comp=Z,16nm,1.3s
HIA Hailar 43.65 354 P **P** **13 15 40.7 -0.6**
GUN Gumba 43.66 305 *eP* **P** **13 15 42.8 +0.7**
comp=Z,42nm,0.4s
ARMA Armidale 43.75 147 P **P** **13 15 42.8 +0.3**
ARMA IAmb IAmb 13 15 56.4
comp=Z,26nm,0.7s
PKI Pulchoki 43.91 304 *eP* **P** **13 15 44.7 +0.6**
KKN Kakani 44.10 305 *eP* **P** **13 15 46.5 +1.0**
PVM Polavaram 44.49 289 *eP* **P** **13 15 51.0 +2.5**
PVM IAML 13 15 54.2
comp=Z,5.0nm,0.7s
PALK Pallekele 44.64 275 P **P** **13 15 49.5 -0.2**
PALK pmax pmax
comp=Z,23nm,1.2s
PALK Pallekele 44.64 275 P **P** **13 15 52.5 +2.7**
comp=Z,2.8nm,0.5s,baz=112,slow=2.4,SNR=3.8
PALK Pallekele 44.64 275 P **P** **13 15 49.5 -0.2**
PALK IAmb IAmb 13 16 00.9
comp=Z,23nm,1.1s
GKN Gorkha 44.71 304 *eP* **P** **13 15 51.5 +1.3**
comp=Z,14nm,0.4s
ULN Ulaanbaatar 44.87 342*deP* **P** **13 15 51.2 0.0**
ULN pmax pmax
comp=Z,10.0nm,1.1s
ULN Ulaanbaatar 44.87 342 P **P** **13 15 50.9 -0.3**
SONM Songino Array 45.04 342 P **P** **13 15 52.2 -0.4**
comp=Z,2.3nm,0.8s,baz=163,slow=5.8,SNR=13
SONM PcP **PcP** **13 17 31.5 +0.4**
comp=Z,2.3nm,0.6s,baz=163,slow=4.5,SNR=2.4
SONM ScP **ScP** **13 21 10.5 -0.5**
comp=Z,1.8nm,1.0s,baz=165,slow=2.9,SNR=5.7
SONM LR LR 13 37 26.0
comp=Z,215nm,19.2s,baz=144,slow=40
MYLAV Mylavaram 45.35 288 *eP* **P** **13 15 57.8 +2.6**
MYLAV IAmb IAmb 13 15 59.6
comp=Z,11nm,0.7s
KOLN Koldanda 45.48 304 *eP* **P** **13 15 56.7 +0.3**
comp=Z,39nm,0.3s
DANN Dangsing 45.55 305 *eP* **P** **13 15 57.7 +0.6**
comp=Z,61nm,0.5s
GRNR Gornyy 45.77 10‖ *iP* **P** **13 15 59.6 +1.6**
GRNR *eS* **S** **13 22 35.4 +4.2**
GRNR pmax pmax
comp=Z,20nm,0.9s
GRNR smax smax
comp=N,3.0nm,1.1s
GRNR MLR MLR
comp=Z,160nm,18.0s
ADKI Addanki 45.85 286 *eP* **P** **13 16 00.8 +1.5**
ADKI IAmb IAmb 13 16 02.9
comp=Z,8.2nm,0.7s
SKHT Srikalahasti 45.87 283 *eP* **P** **13 16 01.8 +2.4**
SKHT IAmb IAmb 13 16 02.7
comp=Z,24nm,0.5s
GGR Gangavaram 45.92 289 *eP* **P** **13 16 02.0 +2.1**
GGR IAmb IAmb 13 16 03.6
comp=Z,14nm,0.5s
CAN Canberra 46.40 153 P **P** **13 16 04.9 +1.6**
CAN pmax pmax
comp=Z,23nm,0.7s
CAN Canberra 46.40 153 P **P** **13 16 04.9 +1.6**
CAN IAmb IAmb 13 16 06.8
comp=Z,23nm,0.7s
NJS Nagarjunasagar 46.58 287 *eP* **P** **13 16 07.0 +2.1**
NJS IAmb IAmb 13 16 09.0
comp=Z,12nm,0.6s
SRLM Srisailam 46.91 287 *eP* **P** **13 16 09.5 +1.9**
SRLM IAmb IAmb 13 16 10.6
comp=Z,11nm,0.7s
TOO Toolangi 46.91 158 P **P** **13 16 09.4 +2.2**
TOO pmax pmax
comp=Z,23nm,0.8s
TOO Toolangi 46.91 158 P **P** **13 16 09.3 +2.2**
TOO IAmb IAmb 13 16 10.6
comp=Z,23nm,0.8s
RPR Rampur 46.95 290 *eP* **P** **13 16 10.0 +2.2**
RPR IAmb IAmb 13 16 11.6
comp=Z,12nm,0.8s
HYB Hyderabad 47.41 288 *i* P **P** **13 16 12.5 +1.1**
HYB Hyderabad 47.41 288 IAmb IAmb 13 16 09.8
comp=Z,35nm,0.3s
HYB *eP* **P** **13 16 10.9 -0.5**
HYBB Hyderabad (bro 47.41 288 *eP* **P** **13 16 12.8 +1.4**
HYBB IAmb IAmb 13 16 14.0
comp=Z,13nm,0.5s
SRSP Sriramsagar 47.84 290 *eP* **P** **13 16 16.4 +1.7**
SRSP IAmb IAmb 13 16 18.3
comp=Z,10nm,0.8s
ZEA Zeya 47.86 1 *eP* **P** **13 16 14.0 -0.2**
ZEA pmax pmax
comp=N,35nm,1.0s
ZEA pmax pmax
comp=Z,41nm,1.0s
URV Uravakonda 48.35 285 *eP* **P** **13 16 20.1 +1.4**
URV IAmb IAmb 13 16 21.4
comp=Z,18nm,0.9s
DZM Mont Dzumac 48.61 126 *eP* **P** **13 16 21.6 +1.0**
comp=Z,54nm,1.2s
DZM Mont Dzumac 48.61 126 *e*LR LR 13 30 20.9
comp=Z,331nm,29.2s
DZM Mont Dzumac 48.61 126 P **P** **13 16 21.3 +0.8**
DZM IAmb IAmb 13 16 23.6
comp=Z,26nm,1.1s
KLRI Killari 49.35 289 *eP* **P** **13 16 27.0 +0.7**
KLRI IAmb IAmb 13 16 28.8
comp=Z,14nm,0.5s
BHPL Bhopal 49.52 296 *eP* **P** **13 16 26.8 -0.7**
BHPL IAmb IAmb 13 16 31.9
comp=Z,15nm,0.4s
MOY Mondy 50.12 340 *eP* **P** **13 16 33.2 +1.6**
WMQ Urumqi 50.44 325 *eP* **P** **13 16 34.6 +0.4**
WMQ pP pP 13 17 11.0 +5.2
WMQ pmax pmax
comp=Z,9.0nm,1.5s
WMQ pmax pmax
comp=Z,100nm,4.5s
WMQ LR LR
comp=Z,710nm,20.7s
WMQ LR LR
comp=Z,1μm,28.9s
WMQ LR LR
comp=Z,240nm,19.1s
WMQ Urumqi 50.44 325 P **P** **13 16 34.3 +0.1**
WMQ pmax pmax
comp=Z,5.0nm,0.5s
WMQ Urumqi 50.44 325 P **P** **13 16 34.3 +0.1**
SMLA Simla 51.89 305 *eP* **P** **13 16 44.7 -0.4**
SMLA IAmb IAmb 13 16 52.0
comp=Z,16nm,0.8s
BOD Bodaibo 52.72 352 *eP* **P** **13 16 49.9 -0.8**
BOD pmax pmax
comp=Z,16nm,1.1s
KAAM Kaadhehdhoo 52.78 266 P **P** **13 16 51.7 -0.2**
KAAM IAmb IAmb 13 17 02.8
comp=Z,44nm,1.5s
DHRM DHARAMSHALA 52.95 306 *eP* **P** **13 16 52.4 -0.8**
DHRM IAmb IAmb 13 17 02.4
comp=Z,21nm,0.8s
PETK Petropavlovsk- 54.01 23 P **P** **13 17 00.8 +0.6**
comp=Z,20nm,1.0s,baz=198,slow=3.5,SNR=24
PDGK Podgornoye 55.16 320 P **P** **13 17 08.1 -0.8**
MK31 Makanchi Array 55.27 325 *eP* **P** **13 17 09.1 -0.4**
MK31 Makanchi Array 55.27 325 P **P** **13 17 08.6 -0.9**
MKAR Makanchi Array 55.27 325*ceP* **P** **13 17 09.1 -0.4**
MKAR pmax pmax
comp=Z,6.0nm,0.5s
MKAR Makanchi Array 55.27 325 P **P** **13 17 09.2 -0.3**
comp=Z,5.5nm,0.5s,baz=121,slow=7.0,SNR=81
MKAR ScP **ScP** **13 21 53.7 -1.1**
comp=Z,3.2nm,0.7s,baz=120,slow=4.4,SNR=5.7
MAKZ Makanchi 55.46 325 P **P** **13 17 10.9 0.0**
MAKZ Makanchi 55.46 325 P **P** **13 17 09.6 -1.2**
NIL Nilore 55.83 307 P **P** **13 17 13.6 -0.1**
NIL pmax pmax
comp=Z,44nm,1.2s
NIL Nilore 55.83 307 P **P** **13 17 13.6 -0.1**
NIL IAmb IAmb 13 17 17.7
comp=Z,44nm,1.2s
KSH Kashi 55.84 315 P **P** **13 17 16.1 +2.3**
KSH pP pP 13 17 49.1 +2.9
KSH PP **PP** **13 19 23.3 +3.4**
KSH S **S** **13 24 50.7 -0.1**
KSH sS sS 13 25 47.9 +1.6
KSH ScS **ScS** **13 26 46.6 -3.2**
KSH SS **SS** **13 28 41.8 +3.3**
KSH pmax pmax
comp=Z,41nm,1.2s
KSH pmax pmax
comp=Z,270nm,4.4s
KSH LR LR
comp=Z,390nm,5.7s
KSH LR LR
comp=Z,330nm,6.0s
KSH LR LR
comp=Z,250nm,6.0s
KDJ Kajisay 56.11 318 P **P** **13 17 15.4 -0.4**

KDJ pmax pmax
comp=Z,16nm,1.3s
KDJ Kajisay 56.11 318 P **P** **13 17 15.3 -0.4**
KDJ IAmb IAmb 13 17 27.1
comp=Z,16nm,1.3s
YAK Yakutsk 56.24 2*c i*P **P** **13 17 16.3 +0.3**
YAK *e*S **S** **13 24 55.1 +0.2**
YAK *e* 13 26 46.7
YAK *e*SSS SSS 13 30 57.5
YAK pmax pmax
comp=Z,258nm,0.9s
YAK pmax pmax
comp=N,75nm,1.1s
YAK pmax pmax
comp=E,9.0nm,1.2s
YAK pmax pmax
comp=Z,99nm,2.5s
YAK pmax pmax
comp=N,62nm,2.3s
YAK pmax pmax
comp=E,56nm,1.8s
YAK smax smax
comp=N,89nm,2.2s
YAK smax smax
comp=E,60nm,1.4s
YAK Yakutsk 56.24 2 P **P** **13 17 16.1 +0.1**
NRN Naryn 56.61 317 P **P** **13 17 19.1 -0.4**
NRN pmax pmax
comp=Z,4.0nm,0.5s
NRN Naryn 56.61 317 P **P** **13 17 19.1 -0.4**
ULHL Ulahol 56.79 318 P **P** **13 17 20.9 +0.3**
SNR=6.5
MA2 Magadan 57.04 15⇓*e*P **P** **13 17 23.2 +1.4**
MA2 pmax pmax
comp=Z,14nm,0.9s
MA2 Magadan 57.04 15 P **P** **13 17 22.4 +0.7**
MA2 IAmb IAmb 13 17 27.3
comp=Z,11nm,0.6s
KZA Kyzart 57.39 317 P **P** **13 17 25.9 +0.8**
SNR=9.0
TKM2 Tokmak 2 57.51 318 P **P** **13 17 24.3 -1.4**
TKM2 Tokmak 2 57.51 318 P **P** **13 17 25.0 -0.7**
SNR=9.6
UCH Uchtor 57.95 317 P **P** **13 17 29.9 +0.9**
SNR=9.7
AAK Ala-Archa 58.13 317⇓*e*P **P** **13 17 30.1 +0.2**
AAK pmax pmax
comp=Z,10.0nm,1.6s
AAK Ala-Archa 58.13 317 P **P** **13 17 29.3 -0.6**
ZAA0 Zalesovo Array 58.30 333 P **P** **13 17 28.2 -2.4**
ZALV Zalesovo Beam 58.30 333 P **P** **13 17 29.2 -1.5**
comp=Z,2.9nm,0.5s,baz=124,slow=7.5,SNR=12
ZALV LR LR 13 44 51.4
comp=Z,97nm,18.6s,baz=128,slow=38
USP Ospenovka 58.38 318 P **P** **13 17 31.6 0.0**
SNR=11
AML Almayashu 58.47 317 P **P** **13 17 33.0 +0.4**
SNR=8.4
EKS2 Erkin-Say 58.62 317 P **P** **13 17 33.6 +0.3**
SNR=5.8
KBL Kabul 59.43 307 P **P** **13 17 37.7 -1.4**
KBL pmax pmax
comp=Z,12nm,0.6s
KBL Kabul 59.43 307 P **P** **13 17 37.7 -1.4**
KBL IAmb IAmb 13 17 43.3
comp=Z,12nm,0.6s
KURK Kurchatov 59.45 327⇓*e*P **P** **13 17 38.3 -0.4**
KURK pmax pmax
comp=Z,16nm,1.0s
KURK Kurchatov 59.45 327 P **P** **13 17 37.7 -1.0**
KURK IAmb IAmb 13 17 44.0
comp=Z,14nm,0.7s
BTK Batken 59.73 313 P **P** **13 17 40.0 -1.0**
BTK pmax pmax
comp=Z,20nm,1.4s
BTK Batken 59.73 313 P **P** **13 17 40.0 -1.0**
BTK IAmb IAmb 13 17 49.5
comp=Z,20nm,1.4s
GAR Garm 59.75 312 P **P** **13 17 40.6 -0.5**
GAR IAmb IAmb 13 17 44.3
comp=Z,27nm,0.8s
SEY Seymchan 60.33 14⇑*e*P **P** **13 17 46.2 +1.7**
CHGR Chuyangaron 60.50 311 P **P** **13 17 44.9 -1.4**
CHGR IAmb IAmb 13 17 51.5
comp=Z,15nm,0.7s
KK31 Karatay Array 61.01 317 *i*P **P** **13 17 48.6 -0.9**
KK31 Karatay Array 61.01 317 P **P** **13 17 48.5 -0.9**
KKAR Karatay Array 61.01 317 P **P** **13 17 48.1 -1.4**
KKAR pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 61.01 317 P **P** **13 17 48.1 -1.4**
TIXI Tiksi 65.85 1 *i*P **P** **13 18 20.2 -0.5**
TIXI pmax pmax
comp=Z,42nm,1.1s
TIXI Tiksi 65.85 1 P **P** **13 18 19.6 -1.1**
BILL Bilibino 67.90 15⇑*e*P **P** **13 18 32.9 -0.9**
BILL *e**PP **pP** **13 19 06.3 -0.2**
BILL *e* 13 21 08.5
BILL pmax pmax
comp=Z,9.0nm,1.4s
BILL Bilibino 67.90 15 P **P** **13 18 33.0 -0.9**
GEYT Alibeck 68.78 308 P **P** **13 18 40.1 +0.2**
comp=Z,4.2nm,0.9s,baz=121,slow=2.6,SNR=10
GEYT Alibeck 68.78 308 IAmb IAmb 13 18 42.8
comp=Z,4.0nm,0.9s
AB31 Akbulak array 69.89 321 *i*P **P** **13 18 44.8 -1.7**
ABKAR Akbulak array 69.89 321 P **P** **13 18 44.2 -2.3**
AKTO Aktyubinsk 71.40 321 P **P** **13 18 53.8 -1.8**
SVE Sverdlovsk 71.67 328 *e*P **P** **13 18 57.7 +0.6**
ARU Arti 72.65 328*d i*P **P** **13 19 03.0 +0.1**
ARU *e**PP **pP** **13 19 38.0 +1.4**
ARU 13 21 43.0
ARU S **S** **13 28 18.5 +1.7**
ARU SS **SS** **13 32 58.6 -0.2**
ARU pmax pmax
comp=Z,14nm,1.6s
ARU Arti 72.65 328 P **P** **13 19 00.7 -2.2**
CASY Casey 72.68 186 P **P** **13 19 03.2 +0.4**
CASY IAmb IAmb 13 19 05.6
comp=Z,25nm,1.0s
GAMB Gambell 73.02 24 P **P** **13 19 04.0 -0.9**
ANM Nome 75.89 25 P **P** **13 19 22.0 +0.4**
ANM pmax pmax
comp=Z,8.0nm,1.0s
ANM Nome 75.89 25 P **P** **13 19 22.0 +0.4**
AKT Akhty 77.14 311 *e*P **P** **13 19 25.9 -3.3**
AKT *e* 13 19 36.6
AKT *e**PP **pP** **13 20 01.1 -2.2**
AKT pmax pmax
comp=Z,5.0nm,0.6s
MAK Makhachkala 77.41 313 *e*P **P** **13 19 28.1 -2.4**
MAK *e**PP **pP** **13 20 02.3 -2.2**
MAK *e**SP **sP** **13 20 17.9 -1.2**
MAK *e* 13 22 23.9
MAK *e*PPP PPP 13 24 11.7
MAK *e*S **S** **13 29 04.4 -5.5**
MAK *e**SS **sS** **13 30 07.0 -1.7**
MAK *e*SS **SS** **13 34 08.4 -3.1**
MAK pmax pmax
comp=Z,114nm,1.7s
RDOG Red Dog Mine 77.81 21 P **P** **13 19 32.7 +0.5**
RAYN Ar Rayn 78.68 293 P **P** **13 19 36.3 -1.7**
RAYN pmax pmax
comp=Z,10.0nm,1.2s
RAYN Ar Rayn 78.68 293 P **P** **13 19 36.3 -1.7**
ZEI Tsey 80.04 312 *e*P P 13 19 54.6 +9.4
ZEI pmax pmax
comp=Z,4.0nm,0.6s
PRGR Permogore 80.21 331 *e*P **P** **13 19 43.5 -1.9**
PRGR pmax pmax
comp=Z,8.0nm,0.9s
KDAK Kodiak Island 80.79 32 LR LR 13 49 29.8
comp=Z,67nm,21.2s,baz=298,slow=31
KIV Kislovodsk 80.95 313 *e*P **P** **13 19 46.8 -3.1**
KIV pmax pmax
comp=Z,14nm,1.1s
PPLA Purkeypile 81.35 27 P **P** **13 19 51.1 -0.6**
SKT Skwentna 81.59 28 P **P** **13 19 52.8 0.0**
SKT IAmb IAmb 13 20 10.1
comp=Z,22nm,1.1s
VRH Novokhopyorsk 81.72 321 *e*P **P** **13 19 52.9 -0.7**
VRH pmax pmax
comp=Z,8.0nm,0.6s
SUA Susitna One 81.94 29 P **P** **13 19 54.4 -0.3**
SUA IAmb IAmb 13 19 57.7
comp=Z,38nm,1.2s
MLY Manley 82.13 25 P **P** **13 19 55.9 +0.3**
TRF Thorofare Moun 82.24 27 P **P** **13 19 56.9 +0.5**
TRF IAmb IAmb 13 20 06.4
comp=Z,33nm,1.3s
RC01 Rabbit Creek A 82.41 29 P **P** **13 19 58.1 +1.1**
RC01 IAmb IAmb 13 20 17.6
comp=Z,11nm,0.6s
COLD Coldfoot 82.47 23 P **P** **13 19 58.8 +1.6**
PMR Palmer 82.71 29 P **P** **13 19 59.1 +0.5**
PMR pmax pmax
comp=Z,14nm,0.8s
PMR Palmer 82.71 29 P **P** **13 19 59.1 +0.5**
PMR IAmb IAmb 13 20 18.3
comp=Z,14nm,0.8s
TOLK Toolik Lake Re 82.78 22 P **P** **13 19 59.4 +0.5**
MCK McKinley 82.86 27 P **P** **13 19 59.6 +0.2**
MCK pmax pmax
comp=Z,24nm,0.9s
MCK McKinley 82.86 27 P **P** **13 19 59.6 +0.2**
MCK IAmb IAmb 13 20 19.0
comp=Z,24nm,0.9s
RND Reindeer 82.89 27 P **P** **13 19 59.4 -0.2**
RND pmax pmax
comp=Z,23nm,1.1s
RND Reindeer 82.89 27 P **P** **13 19 59.4 -0.2**
RND IAmb IAmb 13 20 17.7
comp=Z,23nm,1.1s
KNK Knik Glacier 83.03 29 P **P** **13 20 00.7 +0.4**
KNK IAmb IAmb 13 20 19.8
comp=Z,51nm,1.3s
SML Sawmill 83.10 29 P **P** **13 20 01.5 +0.8**
SML IAmb IAmb 13 20 19.8
comp=Z,50nm,1.4s
SOC Sochi 83.10 313 *e*P P 13 19 54.9 -6.1
SOC *e* 13 23 13.9
SOC *e*PPP PPP 13 25 04.7
SOC *e*S S 13 29 59.7 -10
SOC *e*SS **SS** **13 35 36.5 0.0**
SOC *e*SSS SSS 13 39 04.7
WRH Wood River Hil 83.25 26 P **P** **13 20 01.6 +0.4**
VORD Divnogorie 83.25 321 *e*P **P** **13 19 59.5 -2.1**
VORD pmax pmax
comp=Z,8.0nm,0.7s
VSR Storozhevoye 83.33 321 *e*P **P** **13 19 59.0 -3.0**
VSR pmax pmax
comp=Z,20nm,1.8s
COLA College 83.36 25⇓*e*P **P** **13 20 03.9 +2.1**
COLA pmax pmax
comp=Z,25nm,2.6s
CCB Clear Creek Bu 83.37 26 P **P** **13 20 02.3 +0.4**
CCB IAmb IAmb 13 20 21.6
comp=Z,30nm,1.4s
HDA Harding Lake 83.74 26 P **P** **13 20 03.3 -0.5**
HDA IAmb IAmb 13 20 17.6
comp=Z,13nm,0.7s
IL31 83.77 26 P **P** **13 20 03.3 -0.6**
ILAR Eielson Array 83.77 26 P **P** **13 20 03.5 -0.5**
comp=Z,2.7nm,0.6s,baz=259,slow=5.4,SNR=28
TMCR Tamitsa 83.81 334 *e*P **P** **13 20 04.9 +0.8**
MOS Moscow 84.16 325 *e*P **P** **13 20 05.1 -1.0**
MOS *e**PP **pP** **13 20 46.4 +5.7**
MOS *e*S **S** **13 30 13.3 -6.2**
RIDG Independent Ri 84.68 27 P **P** **13 20 08.3 -0.3**
RIDG IAmb IAmb 13 20 27.4
comp=Z,14nm,1.0s
ANN Anapa 84.70 314 *e*P **P** **13 20 04.9 -4.2**
ANN *e**PP **pP** **13 20 39.1 -4.6**
ANN *e*S S 13 30 14.2 -11
ANN *e**SS **sS** **13 31 18.3 -6.9**
ANN pmax pmax
comp=Z,102nm,1.2s
OBN Obninsk 84.78 325⇓*e*P **P** **13 20 09.6 +0.4**
OBN *e* 13 23 27.6
OBN *e*S S 13 30 16.2 -10
OBN pmax pmax
comp=Z,8.0nm,0.5s
MAW Mawson 85.26 200 P **P** **13 20 11.5 +0.2**
MAW pmax pmax
comp=Z,2.0nm,0.7s
MAW Mawson 85.26 200 P **P** **13 20 12.3 +1.1**
comp=Z,7.5nm,0.7s,baz=62,slow=5.7,SNR=9.0
MAW Mawson 85.26 200 P **P** **13 20 11.5 +0.2**
GLB Gilahina Butte 85.27 29 P **P** **13 20 11.7 0.0**
GLB IAmb IAmb 13 20 30.8
comp=Z,18nm,0.9s
VNDA Vanda 85.56 173 P **P** **13 20 13.4 +0.8**
comp=Z,1.8nm,0.7s,baz=319,slow=5.8,SNR=12
VNDA LR LR 13 57 45.2
comp=Z,43nm,21.4s,baz=329,slow=35
PPT2 Papeete2 86.79 108 *e*LR LR 13 47 08.4
comp=Z,203nm,25.8s
TBI Tubuai 87.61 114 *e*LQ LQ 13 44 40.7
comp=Z,391nm,36.5s
TBI *e*LR LR 13 47 42.2
comp=Z,230nm,26.0s
EPYK Eagle Plains 87.84 24 P **P** **13 20 24.6 +0.5**
EPYK IAmb IAmb 13 20 26.7
comp=Z,6.3nm,0.7s
BR131 Keskin Array S 87.89 310⇑*e*P **P** **13 20 24.7 -0.3**
BRTR Keskin Array B 87.89 310*ce*P **P** **13 20 24.7 -0.3**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 87.89 310 P **P** **13 20 23.4 -1.6**
comp=Z,1.2nm,0.7s,baz=131,slow=5.0,SNR=7.4
ARCES ARCESS Array B 88.18 340 P **P** **13 20 24.8 -0.7**
comp=Z,5.5nm,0.8s,baz=84,slow=4.9,SNR=17
ARCES PKKPbc **PKKPbc** **13 38 09.1 -3.1**
comp=Z,1.1nm,0.7s,baz=270,slow=2.7,SNR=7.9
ARCES LR LR 14 05 23.4
comp=Z,71nm,18.9s,baz=140,slow=39
ARE0 ARCESS Array S 88.18 340 *e*P **P** **13 20 24.2 -1.3**
SPA0 Spitsbergen Ar 88.29 349 *e*P **P** **13 20 26.0 +0.1**
KMBO Kilima Mbogo 88.48 269 P **P** **13 20 28.3 -0.1**
comp=Z,2.0nm,0.9s,baz=24,slow=9.3,SNR=4.0
KMBO Kilima Mbogo 88.48 269 IAmb IAmb 13 20 31.1
comp=Z,2.4nm,1.0s
HAMF Hammerfest 88.55 341 *e*P **P** **13 20 27.0 -0.2**
INK Inuvik 88.70 21 P **P** **13 20 28.2 +0.3**
INK pmax pmax
comp=Z,6.0nm,1.2s
INK Inuvik 88.70 21 P **P** **13 20 28.2 +0.3**
KTK1 Kautokeino 89.08 339 *e*P **P** **13 20 29.9 +0.1**
FINES FINESS Array B 89.54 332 *i*P **P** **13 20 31.3 -0.7**
FINES pmax pmax
comp=Z,3.0nm,0.4s
FINES FINESS Array B 89.54 332 P **P** **13 20 30.4 -1.7**
comp=Z,2.5nm,0.4s,baz=59,slow=4.9,SNR=36
FINES LR LR 14 02 38.7
comp=Z,92nm,18.8s,baz=90,slow=37
AKASG Malin Array Be 89.64 321 P **P** **13 20 31.2 -1.5**
comp=Z,0.7nm,0.6s,baz=65,slow=4.4,SNR=4.5
AKASG Malin Array Be 89.64 321 IAmb IAmb 13 20 40.9
comp=Z,2.0nm,1.2s
TRO Tromso 90.39 340 *e*P **P** **13 20 35.2 -0.6**
NOR Nord 90.99 355 *i*P **P** **13 20 35.9 -2.6**
comp=Z,24nm,1.6s
STEI Steigen 92.22 339 *e*P **P** **13 20 44.4 +0.1**
MOR8 Moi Rana 93.16 338 *e*P **P** **13 20 47.9 -0.9**
KONS Konsvik 93.53 338 *e*P **P** **13 20 50.2 -0.2**
SYO Syowa Base 93.90 201⇑*e*P **P** **13 20 51.4 -0.6**
SYO Syowa Base 93.90 201⇓*i*PcP **PcP** **13 20 54.2 +1.8**
UZH Uzhgorod 94.45 320 *e*P **P** **13 20 54.8 -0.2**
UZH *e* 13 21 34.1
TAOE Nuku Hiva Isla 95.04 98 *e*LR LR 13 51 45.6
comp=Z,188nm,24.4s
DAG Danmarks Havn 95.11 352 *i*P **P** **13 20 56.2 -1.3**
DAG Danmarks Havn 95.11 352 *i*P **P** **13 20 56.2 -1.3**
DAG Danmarks Havn 95.11 352 *i*P **P** **13 20 57.0 -0.5**
QSPA South Pole Qui 95.64 180 P **P** **13 21 00.7 +0.5**
QSPA IAmb IAmb 13 21 02.5
comp=Z,5.3nm,1.1s
RES Resolute Bay 96.03 10 P **P** **13 21 02.2 +0.5**
RES pmax pmax
comp=Z,5.0nm,1.1s
RES Resolute Bay 96.03 10 P **P** **13 21 02.2 +0.5**
RES IAmb IAmb 13 21 04.0
comp=Z,5.3nm,1.1s
NB2 NORSAR Subarra 96.50 334 P **P** **13 21 03.5 -0.6**
comp=Z,0.6nm,0.5s,baz=64,slow=4.6
NB2 NORSAR Subarra 96.50 334 P **P** **13 21 03.5 -0.6**
baz=64,slow=4.6
NOA NORSAR Array B 96.50 334 P **P** **13 21 03.1 -1.0**
comp=Z,1.4nm,0.7s,baz=66,slow=4.6,SNR=5.1
NOA LR LR 14 09 12.8
comp=Z,88nm,18.6s,baz=55,slow=38
YKA Yellowknife Ar 98.12 24 P Pdif 13 21 11.7 +0.3
comp=Z,1.3nm,0.9s,baz=300,slow=4.6,SNR=19
YKA PKKPbc **PKKPbc** **13 37 42.6 -3.4**
comp=Z,1.0nm,0.6s,baz=122,slow=2.9,SNR=25
GERES GERESS Array B 99.82 322 LR LR 14 08 52.3
comp=Z,56nm,19.0s,baz=72,slow=37
PDAR Pinedale Array 110.55 40 PKKPab PKKPab 13 37 17.0 -2.1
comp=Z,0.7nm,0.8s,baz=108,slow=4.8,SNR=5.0
ULM Lac du Bonnet 113.71 28 PKiKP **PKiKP** **13 26 13.6 +0.8**
comp=Z,1.3nm,0.6s,baz=28,slow=1.9,SNR=4.1
SCHQ Schefferville 118.75 8 PKP **PKiKP** **13 26 22.6 +0.3**
comp=Z,2.1nm,0.4s,baz=23,slow=2.4,SNR=5.9
TXAR Lajitas Array 121.21 51 PKP **PKiKP** **13 26 28.6 +0.5**
comp=Z,0.6nm,0.7s,baz=330,slow=1.1,SNR=6.9
TXAR PKKPab **PKKPbc** **13 36 30.2 -0.5**
comp=Z,0.7nm,1.0s,baz=148,slow=7.4,SNR=4.6
TORD Torodi Ar. Bea 121.23 289 PKP **PKPdf** **13 26 27.4 -0.8**
comp=Z,1.4nm,0.6s,baz=74,slow=1.8,SNR=13
JCT Junction City 123.55 48 PKiKP **PKiKP** **13 26 32.5 -0.1**
JCT Junction City 123.55 48 **PKiKP** **13 26 32.5 -0.1**
DBIC Dimbokro 129.06 283 SKPbc SKPab 13 29 50.8 -0.1
comp=Z,3.1nm,0.6s,baz=60,slow=4.3,SNR=7.6
PLCA Paso Flores 142.27 160 PKhKP PKPpre 13 27 03.4
comp=Z,2.3nm,0.8s,baz=254,slow=3.0,SNR=9.4
PLCA SKPbc **SKPbc** **13 30 32.8 +0.4**
comp=Z,3.0nm,0.7s,baz=272,slow=3.2,SNR=6.1
ROC1 El Roble 148.79 152 **PKPbc** **13 27 22.7 +0.1**
PEL Peldehue 148.81 153 PKP2 **PKPbc** **13 27 22.8 +0.4**
PEL Peldehue 148.81 153 **PKPbc** **13 27 22.8 +0.4**
CPUP Villa Florida 159.34 172 PKP **PKPdf** **13 27 34.1 +0.8**
comp=Z,0.8nm,0.6s,baz=280,slow=6.1,SNR=4.0
CPUP PKPab **PKPab** **13 28 12.1 +0.9**
comp=Z,6.5nm,1.1s,baz=177,slow=0.9,SNR=5.4
LPAZ La Paz 162.93 129 PKP **PKPdf** **13 27 38.1 0.0**
comp=Z,2.4nm,1.0s,baz=219,slow=6.5,SNR=4.7
LPAZ La Paz 162.93 129 **PKPdf** **13 27 36.2 -2.0**

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*IDC **12** 13:36:59.9±0.7, 15°.24S×172°.96W, h0km, mb4.1/9, mb1 4.3/10, mb1mx4.1/34, mbtmp4.1/10, ML3.2/1, MS3.7/17, Ms1 3.7/17, ms1mx3.6/32, Error ellipse: s-maj=31.3km s-min=18.8km az=134.0*
*NEIC **12** 13:37:01.0±2.9, 15°.09S±0°.07×172°.7W±0°.1, h10km±1km, mb4.7/18, Error ellipse: s-maj=22.1km s-min=11.4km az=105.0*
ISC 12 13:37:04.3±0.5,**15°.12S**±0°.06×**172°.69W**±0°.09,**h35**km,**n77**, σ2s**61**/58,**mb4.5**/14,**MS3.8**/18,**Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.50**	**36**	Pn	**Pn**	**13 37 26.3**	**-2.5**
AFI	63nm,0.3s,baz=233,slow=5.1,SNR=24			Sn	**Sn**	**13 37 42.1**	**-5.0**
	372nm,0.3s,baz=233,slow=20,SNR=39						
NIUE	**Niue**	**4.74**	**146**		**Pn**	**13 38 11.2**	**-2.1**
RAR	**Rarotonga**	**13.69**	**118**	Pn	**Pn**	**13 40 16.2**	**+0.2**
	1.1nm,0.3s,baz=297,slow=2.3,SNR=3.5						
PPT	**Papeete**	**22.31**	**99**	LR	LR	13 48 14.8	
	comp=Z,66nm,21.2s,baz=286,slow=30						
OUZ	**Omahuta**	**23.50**	**209**	P	**P**	**13 42 11.4**	**+0.3**
OUZ				IAmb	IAmb	13 42 13.6	
	comp=Z,43nm,1.5s						
MXZ	**Matakaoa Point**	**23.74**	**198**	P	**P**	**13 42 13.8**	**+0.5**
URZ	**Urewera**	**24.75**	**199**	P	**P**	**13 42 21.8**	**-0.8**
	comp=Z,13nm,0.6s,baz=298,slow=3.3,SNR=13						
URZ	**Urewera**	**24.75**	**199**	IAmb	IAmb	13 42 23.9	
	comp=Z,20nm,0.9s						
HATZ	**Hinemaiaia**	**25.66**	**201**	P	**S**	**13 46 57.2**	**+0.2**
ARHZ	**Aropaoanui**	**25.70**	**199**	P	**S**	**13 47 04.5**	**+6.9**
MCHZ	**McNeill Hill**	**25.96**	**199**	P	**S**	**13 47 04.1**	**+2.3**
CKHZ	**Cape Kidnapper**	**26.04**	**198**	P	**S**	**13 47 07.4**	**+4.4**
TWVZ	**Taurewa**	**26.04**	**201**	P	**S**	**13 46 59.0**	**-4.2**
BHHZ	**Black Hill Sta**	**26.20**	**200**	P	**S**	**13 47 01.4**	**-4.3**
KAHZ	**Kahuranaki**	**26.22**	**198**	P	**S**	**13 47 07.5**	**+1.5**
MOVZ	**Moawhango**	**26.23**	**201**	P	**S**	**13 47 00.6**	**-5.7**
KRHZ	**Kereru**	**26.24**	**199**	P	**S**	**13 47 03.8**	**-2.5**
VRZ	**Vera Road**	**26.33**	**202**	P	**S**	**13 47 03.0**	**-4.6**
PXZ	**Pawanui**	**26.45**	**198**	P	**S**	**13 47 09.0**	**-0.3**
PNHZ	**Pukenui**	**26.54**	**199**	P	**S**	**13 47 06.1**	**-5.0**
WPHZ	**Waipukurau**	**26.61**	**199**	P	**S**	**13 47 08.0**	**-4.0**
TSZ	**Takapari Road**	**26.75**	**200**	P	**S**	**13 47 07.2**	**-7.1**
MRZ	**Mangatainoka R**	**27.42**	**200**	P	S	13 47 13.6	-11
QRZ	**Quartz Range**	**28.66**	**204**	P	**P**	**13 42 58.5**	**+0.7**
NNZ	**Nelson**	**28.68**	**202**	P	**P**	**13 42 58.6**	**+0.7**
KHZ	**Kahutara**	**29.67**	**201**	P	**P**	**13 43 07.8**	**+1.1**
MLZ	**Mavora Lakes**	**34.22**	**204**	P	**P**	**13 43 46.9**	**+0.2**
DCZ	**Deep Cove**	**34.69**	**205**	P	**P**	**13 43 50.2**	**-0.5**
WHZ	**Wether Hill Ro**	**34.72**	**204**	P	**P**	**13 43 51.3**	**+0.3**
H11S2	**WAKE ISLAND Hy**	**39.08**	**328**	T	T	14 25 04.7	
	baz=146,slow=76,SNR=7.1						
H11S3	**WAKE ISLAND Hy**	**39.09**	**328**	T	T	14 25 05.3	
	baz=146,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**39.10**	**328**	T	T	14 25 05.0	
	baz=146,slow=76,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**40.01**	**329**	T	T	14 26 14.7	
	baz=147						
H11N1	**WAKE ISLAND Hy**	**40.02**	**329**	T	T	14 27 09.5	
	baz=147						
H11N2	**WAKE ISLAND Hy**	**40.03**	**329**	T	T	14 26 13.5	
	baz=147						
TOO	**Toolangi**	**43.17**	**231**	P	**P**	**13 45 01.1**	**-0.8**
TOO				IAmb	IAmb	13 46 07.9	
	comp=Z,42nm,1.8s						
STKA	**Stephens Creek**	**44.77**	**240**	P	**P**	**13 45 12.6**	**-2.2**
	comp=Z,1.0nm,0.6s,baz=78,slow=12,SNR=4.3						
STKA				LR	LR	14 01 20.7	
	comp=Z,56nm,19.8s,baz=32,slow=33						
WRA	**Warramunga Arr**	**50.57**	**256**	P	**P**	**13 45 57.7**	**-2.3**
	comp=Z,0.5nm,0.4s,baz=91,slow=7.1,SNR=10						
AS31	**Alice Springs**	**50.84**	**252**	P	**P**	**13 45 59.6**	**-2.4**
ASAR	**Alice Springs**	**50.84**	**252**	P	**P**	**13 45 59.6**	**-2.4**
	comp=Z,2.3nm,0.4s,baz=89,slow=7.7,SNR=54						
MTN	**Manton Dam**	**54.44**	**265**	P	**P**	**13 46 26.6**	**-2.0**
FORT	**Forrest**	**56.15**	**243**	P	**P**	**13 46 40.7**	**-0.1**
VNDA	**Vanda**	**63.72**	**186**	LR	LR	14 08 31.7	
	comp=Z,21nm,21.7s,baz=350,slow=30						
MJAR	**Matsushiro Arr**	**69.17**	**319**	LR	LR	14 12 55.4	
	comp=Z,56nm,21.8s,baz=135,slow=31						
PETK	**Petropavlovsk-**	**72.58**	**342**	P	**P**	**13 48 30.0**	**+2.3**
	comp=Z,4.0nm,0.8s,baz=188,slow=8.7,SNR=3.5						
PETK				LR	LR	14 16 04.6	
	comp=Z,19nm,21.7s,baz=71,slow=32						
PETK	**Petropavlovsk-**	**72.58**	**342**	P	**P**	**13 48 29.4**	**+1.6**
YBH	**Yreka Blue Hor**	**72.97**	**37**	LR	LR	14 12 34.4	
	comp=Z,151nm,19.4s,baz=238,slow=29						
NVAR	**Mina Array Bea**	**73.67**	**42**	P	**P**	**13 48 36.7**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=224,slow=7.6,SNR=3.7						
NVAR				LR	LR	14 12 36.9	
	comp=Z,114nm,20.6s,baz=247,slow=29						
QSPA	**South Pole Qui**	**74.92**	**180**	P	**P**	**13 48 43.5**	**+1.9**
QSPA				IAmb	IAmb	13 48 44.9	
	comp=Z,10nm,1.1s						
KSRS	**Korea Array**	**76.44**	**315**	LR	LR	14 16 40.0	
	comp=Z,23nm,20.6s,baz=86,slow=31						
BBB	**Bella Bella**	**77.33**	**26**	LR	LR	14 18 04.5	
	comp=Z,118nm,18.0s,baz=161,slow=32						
USRK	**Ussuriysk Ar.**	**77.57**	**323**	LR	LR	14 15 58.7	
	comp=Z,80nm,21.4s,baz=147,slow=30						
TXAR	**Lajitas Array**	**79.89**	**56**	P	**P**	**13 49 11.7**	**+1.7**
	comp=Z,0.2nm,0.8s,baz=228,slow=7.9,SNR=2.5						
TXAR				LR	LR	14 19 01.5	
	comp=Z,45nm,18.3s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**79.89**	**56**	P	**P**	**13 49 10.6**	**+0.5**
CCB	**Clear Creek Bu**	**81.76**	**11**	P	**P**	**13 49 20.8**	**+1.8**
CCB				IAmb	IAmb	13 49 31.7	
	comp=Z,4.9nm,1.0s						
ILAR	**Eielson Array**	**82.04**	**11**	P	**P**	**13 49 22.2**	**+1.7**
	comp=Z,0.8nm,0.7s,baz=213,slow=5.9,SNR=9.0						
ILAR	**Eielson Array**	**82.04**	**11**	P	**P**	**13 49 21.6**	**+1.0**
MAW	**Mawson**	**88.27**	**198**	P	**P**	**13 49 53.6**	**+1.8**
	comp=Z,5.8nm,1.0s,baz=118,slow=8.7,SNR=6.6						
MAW				LR	LR	14 25 20.8	
	comp=Z,58nm,21.9s,baz=226,slow=33						
MAW	**Mawson**	**88.27**	**198**	P	**P**	**13 49 53.5**	**+1.6**
MAW				IAmb	IAmb	13 49 54.9	
	comp=Z,4.6nm,1.4s						
PLCA	**Paso Flores**	**89.19**	**132**	LR	LR	14 20 57.8	
	comp=Z,55nm,21.2s,baz=226,slow=30						
YKA	**Yellowknife Ar**	**89.57**	**23**	P	**P**	**13 49 57.3**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=239,slow=4.8,SNR=8.3						
YKA				LR	LR	14 26 40.7	
	comp=Z,8.4nm,18.0s,baz=212,slow=33						
CMAR	**Chiang Mai Arr**	**93.18**	**288**	LR	LR	14 26 06.9	

comp=Z,17nm,20.6s,baz=346,slow=32
ULM Lac du Bonnet 93.29 39 LR LR 14 28 56.0
comp=Z,66nm,18.4s,baz=294,slow=33
TIXI Tiksi 94.92 344 LR LR 14 27 41.8
comp=Z,36nm,20.1s,baz=147,slow=32
TLY Talaya 97.84 321 LR LR 14 28 54.9
comp=Z,35nm,20.3s,baz=83,slow=32
MKAR Makanchi Array 111.12 315 PKiKP **PKiKP 13 55 36.0 +1.6**
comp=Z,0.2nm,0.6s,baz=110,slow=2.4,SNR=3.1
KHC Kasperske Hory 145.70 353 *e*PKP **PKPab 13 56 41.0 +1.1**
KHC *ex* x 13 56 56.0
GERES GERESS Array B 146.95 352 PKPbc **PKPab 13 56 41.4 +0.5**
comp=Z,1.6nm,0.8s,baz=26,slow=3.4,SNR=12
BRTR Keskin Array B 146.37 322 PKPbc **PKPab 13 56 43.4 +0.5**
comp=Z,2.1nm,0.8s,baz=107,slow=2.0,SNR=14
CONA Conrad Observa 146.53 350 *i* pPKPdf **PKPab 13 56 43.7 +0.5**
comp=Z,3.0nm,1.0s
ARSA Arzberg 147.24 350 *i* pPKPbc **PKiKP 13 56 47.4 +0.9**
comp=Z,3.0nm,1.3s
RETA Reutte 147.60 356 *i* sPKPbc **PKPab 13 56 48.5 +1.2**
comp=Z,12nm,2.1s
WATA Walderalm 147.68 355 *i* sPKPbc **PKPab 13 56 49.8 +2.1**
comp=Z,3.5nm,0.9s
MOTA Moosalm 147.72 355 *es*PKPdf **PKiKP 13 56 46.5 -1.1**
SOKA Soboth 147.88 350 *i* sPKPdf **PKiKP 13 56 46.9 -1.0**
comp=Z,4.2nm,1.0s
FETA Feichten 148.07 356 *i* sPKPbc **PKPab 13 56 50.9 +1.6**
comp=Z,5.9nm,1.3s
FUORN Ofenpass-Fuorn 148.50 356 PKPab 13 56 50.8 -0.4

*MEX **12** 13:49:49.0±0.6, 17°.83N×101°.72W, h45km±7km, MD4.0*
*NEIC **12** 13:49:49.8±2.2, 17°.66N±0°.06×101°.64W±0°.04, h39km±17km, Error ellipse: s-maj=9.4km s-min=3.1km az=153.0*
ISC 12 13:49:50.1±0.9, 17°.85N±0°.05×101°.40W±0°.05, h32km±10km, n17, σ1§61/31, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.25**	**195**	*eP*	**Pb**	**13 49 56.7**	**-0.4**
ZIIG				*eS*	**Sb**	**13 50 02.1**	**+0.2**
ZIIG	**Zihuatanejo**	**0.25**	**195**		**Pb**	**13 49 56.7**	**-0.4**
ZIIG					**Sb**	**13 50 02.1**	**+0.2**
ARIG	**Puente Sto Nin**	**1.09**	**67**	*eP*	**Pb**	**13 50 09.5**	**-0.8**
ARIG				*i* S	**Sn**	**13 50 26.6**	**+3.5**
ARIG	**Puente Sto Nin**	**1.09**	**67**		**Pb**	**13 50 09.6**	**-0.8**
ARIG					**Sn**	**13 50 25.1**	**+1.9**
CAIG	**El Cayaco**	**1.34**	**126**	*eP*	**Pn**	**13 50 12.9**	**+0.2**
CAIG				*eS*	**Sb**	**13 50 31.7**	**+0.2**
CAIG	**El Cayaco**	**1.34**	**126**		**Pn**	**13 50 12.3**	**-0.4**
CAIG					**Sb**	**13 50 31.7**	**+0.2**
MEIG	**Mezcala**	**1.69**	**87**	*eP*	**Pb**	**13 50 19.2**	**-1.5**
MEIG				*eS*	**Sb**	**13 50 42.3**	**+0.6**
MEIG	**Mezcala**	**1.69**	**87**		**Pn**	**13 50 18.0**	**+0.4**
MEIG					**Sb**	**13 50 42.3**	**+0.6**
MOIG	**Morelia**	**1.83**	**6**	Pn	**Pb**	**13 50 22.8**	**-0.3**
PLIG	**Platanillo**	**1.88**	**73**	*i* P	**Pb**	**13 50 22.1**	**-1.8**
PLIG				*i* S	**Sb**	**13 50 47.4**	**+0.4**
PLIG	**Platanillo**	**1.88**	**73**		**Pb**	**13 50 23.2**	**-0.7**
PLIG					**Sb**	**13 50 48.5**	**+1.4**
YAIG	**Yautepec**	**2.43**	**65**	*eP*	**Pn**	**13 50 29.4**	**+1.6**
YAIG				*i* S	**Sb**	**13 50 59.3**	**-3.6**
YAIG	**Yautepec**	**2.43**	**65**		**Pb**	**13 50 32.1**	**-1.2**
YAIG					**Sb**	**13 51 03.3**	**+0.4**
TLIG	**Tlapa**	**2.71**	**96**	*i* P	**Pn**	**13 50 33.7**	**+2.1**
TLIG				*i* S	**Sb**	**13 51 07.9**	**-3.1**
TLIG	**Tlapa**	**2.71**	**96**		**Pn**	**13 50 34.1**	**+2.4**
TLIG					**Sb**	**13 51 10.2**	**-0.8**
HSIG		**14.15**	**324**	Pn	**Pn**	**13 53 08.0**	**-0.4**
WUAZ	**Wupatki**	**19.70**	**335**	P	**P**	**13 54 14.8**	**-2.2**
WUAZ				IAmb	IAmb	13 54 16.3	
comp=Z,5.5nm,0.8s

*IDC **12** 14:03:29.1±2.7, 23°.85S×179°.83W, h496km±29km, mb3.4/8, mb1 3.7/9, mb1mx3.4/34, mbtmp4.3/9, Error ellipse: s-maj=28.1km s-min=18.9km az=163.0*
*NEIC **12** 14:03:31.6±1.2, 24°.05S±0°.2×179°.9W±0°.2, h531km±8km, mb4.6/23, Error ellipse: s-maj=24.9km s-min=19.5km az=131.0*
ISC 12 14:03:30.6±0.7, 24°.1S±0°.1×179°.8W±0°.1, h518km, n43, σ1§03/45, mb4.3/15, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUZ	**Omahuta**	**12.51**	**206**	P	**P**	**14 06 15.9**	**+1.6**
MXZ	**Matakaoa Point**	**13.55**	**186**	P	**P**	**14 06 26.2**	**+1.0**
URZ	**Urewera**	**14.39**	**190**	P	**P**	**14 06 34.9**	**+0.9**
3.7nm,0.3s,baz=298,slow=2.0,SNR=9.5
URZ S **S 14 09 03.3 -2.0**
0.9nm,0.3s,baz=56,slow=19,SNR=7.1
BHW Baring Head 17.86 193 P **P 14 07 08.6 0.0**
QRZ Quartz Range 17.91 199 P **P 14 07 08.9 -0.2**
THZ Tophouse 18.67 197 P **P 14 07 16.7 +0.7**
KHZ Kahutara 19.12 195 P **P 14 07 19.7 -0.3**
LTZ Lake Taylor 19.79 197 P **P 14 07 26.6 +0.4**
RPZ Rata Peaks 21.00 199 P **P 14 07 39.1 +2.0**
5.8nm,0.4s,baz=27,slow=6.8,SNR=3.2
ARMA Armidale 26.15 250 P **P 14 08 23.6 +0.2**
EIDS Eidsvold 26.48 261 P **P 14 08 26.1 -0.1**
EIDS IAmb IAmb 14 09 02.3
comp=Z,18nm,1.4s
CAN Canberra 29.23 240 P **P 14 08 51.3 +1.0**
CAN IAmb IAmb 14 09 02.8
comp=Z,39nm,1.7s
TOO Toolangi 32.52 237 P **P 14 09 19.3 +0.8**
PMG Port Moresby 34.74 289 P **P 14 09 36.9 -0.5**
PMG IAmb IAmb 14 09 38.2
comp=Z,14nm,0.8s
STKA Stephens Creek 34.84 248 P **P 14 09 38.8 +0.7**
comp=Z,0.9nm,0.3s,baz=101,slow=8.5,SNR=7.5
STKA Stephens Creek 34.84 248 P **P 14 09 38.7 +0.6**
COEN Coen 36.34 279 P **P 14 09 50.6 -0.1**
BBOO Buckleboo 39.56 247 P **P 14 10 16.4 -0.4**
BBOO IAmb IAmb 14 11 27.7
comp=Z,36nm,1.6s
AS31 Alice Springs 42.20 261 P **P 14 10 37.8 -0.2**
ASAR Alice Springs 42.20 261 P **P 14 10 38.0 0.0**
comp=Z,3.3nm,0.3s,baz=97,slow=7.5,SNR=154
ASAR ScP **ScP 14 15 24.9 +3.4**
comp=Z,0.4nm,0.8s,baz=114,slow=4.8,SNR=3.2
ASAR Alice Springs 42.20 261 P **P 14 10 37.5 -0.6**
WR0 Warramunga Arr 42.41 266 P **P 14 10 38.9 -0.7**
WR0 IAmb IAmb 14 10 39.6
comp=Z,8.3nm,0.8s
WRAB Tennant Creek 42.59 266 P **P 14 10 39.9 -1.1**
WRA Warramunga Arr 42.59 266 P **P 14 10 40.3 -0.8**
comp=Z,13nm,0.5s,baz=96,slow=8.3,SNR=276
WRA Warramunga Arr 42.59 266 P **P 14 10 39.5 -1.6**
FORT Forrest 46.44 250 P **P 14 11 09.9 -0.7**
FORT IAmb IAmb 14 11 10.6
comp=Z,19nm,0.7s
MTN Manton Dam 47.66 274 P **P 14 11 19.0 -1.0**
KNRA Kununurra 48.88 270 P **P 14 11 29.1 -0.1**
FITZ Fitzroy Crossi 51.01 266 P **P 14 11 44.9 +0.2**
PSA00 Pilbara Seismi 55.33 260 P **P 14 12 14.9 -0.6**
PSA00 IAmb IAmb 14 13 26.2
comp=Z,15nm,1.1s
MORW Morawa 57.00 250 P **P 14 12 26.7 -0.3**
MORW IAmb IAmb 14 14 37.4
comp=Z,43nm,1.5s
NVAR Mina Array Bea 84.73 44 P **P 14 15 11.0 +0.9**
comp=Z,0.2nm,0.5s,baz=235,slow=7.6,SNR=2.7
CMAR Chiang Mai Arr 89.77 290 P **P 14 15 35.7 +1.6**
comp=Z,0.8nm,0.3s,baz=116,slow=4.1,SNR=5.1
TXAR Lajitas Array 90.35 58 P **P 14 15 36.9 +0.3**
comp=Z,0.5nm,0.7s,baz=199,slow=6.2,SNR=7.8
PDAR Pinedale Array 92.67 44 P **P 14 15 46.8 -0.4**
comp=Z,0.2nm,0.6s,baz=218,slow=5.7,SNR=2.1
RLMT Red Lodge 94.05 42 P **P 14 15 52.9 -0.5**
MKAR Makanchi Array 112.41 313 PKiKP **PKiKP 14 21 06.4 -1.1**
comp=Z,0.1nm,0.6s,baz=132,slow=2.1,SNR=2.7
GYA0B ALIBECK ARRAY 129.22 300 PKPdf 14 21 38.1 -2.0
FINES FINESS Array B 138.67 341 SKPbc **SKPbc 14 24 43.3 +0.6**
comp=Z,2.0nm,0.9s,baz=25,slow=4.6,SNR=5.7
AKASG Malin Array Be 145.22 327 PKPbc **PKPdf 14 22 08.6 -0.2**
comp=Z,0.3nm,0.4s,baz=34,slow=2.5,SNR=3.2
BRTR Keskin Array B 147.84 307 PKPbc **PKPbc 14 22 16.6 -0.8**
comp=Z,0.4nm,0.7s,baz=3.6,slow=4.6,SNR=2.8
TORD Torodi Ar. Bea 169.05 188 PKPab **PKPab 14 23 54.1 +0.4**
comp=Z,0.2nm,0.4s,baz=181,slow=5.1,SNR=2.3
TORD Torodi Ar. Bea 169.05 188 PKPab 14 23 53.6 -0.2

*IDC **12** 14:20:23.8±5.0, 5°.08S×153°.48E, h62km±36km, mb3.4/7, mb1 3.5/8, mb1mx3.3/36, mbtmp3.7/8, ML1.8/1, Error ellipse: s-maj=41.1km s-min=16.9km az=93.0*
ISC 12 14:20:23.2±1.1, 5°.06S±0°.1×153°.5E±0°.1, h56km, n13, σ0§78/13, mb3.6/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.65**	**297**	P	**Pn**	**14 20 49.1**	**-0.7**
31nm,0.3s,baz=173,slow=3.9,SNR=27
KRVT S **Sn 14 21 10.8 +0.9**
64nm,0.3s,baz=123,slow=22,SNR=12
PMG Port Moresby 7.63 | **235** | P **Pn 14 22 11.8 +0.1**
0.9nm,0.3s,baz=45,slow=11,SNR=4.3
PMG S **Sn 14 23 36.9 +0.1**
3.1nm,0.3s,baz=53,slow=20,SNR=12
WRA Warramunga Arr 23.80 230 P **P 14 25 31.0 -0.1**
0.4nm,0.8s,baz=54,slow=10,SNR=3.6
ASAR Alice Springs 26.43 224 P **P 14 25 55.5 +0.5**
0.5nm,1.0s,baz=58,slow=8.3,SNR=3.5
ASAR PcP **PcP 14 29 19.2 -0.1**
0.3nm,0.8s,baz=50,slow=3.6,SNR=3.2
H11S3 WAKE ISLAND Hy 26.78 29 T T 14 54 12.5
baz=209,slow=76,SNR=3.4
H11S2 WAKE ISLAND Hy 26.78 29 T T 14 54 13.6
baz=209,slow=76,SNR=3.1
H11S1 WAKE ISLAND Hy 26.79 29 T T 14 54 13.2
baz=209,slow=76,SNR=3.6
PETK Petropavlovsk- 58.06 3 P **P 14 30 11.9 +1.5**
4.8nm,1.0s,baz=200,slow=7.5,SNR=2.8
SONM Songino Array 66.92 328 P **P 14 31 09.6 -0.3**
0.5nm,0.4s,baz=136,slow=6.3,SNR=3.9
MKAR Makanchi Array 80.98 319 P **P 14 32 31.9 0.0**
0.3nm,0.5s,baz=88,slow=8.3,SNR=6.3
ZALV Zalesovo Beam 81.75 326 P **P 14 32 34.8 -1.0**
0.6nm,0.4s,baz=109,slow=6.3,SNR=3.6
KURBB Kurchatov Arra 84.43 322 P **P 14 32 48.8 -0.9**
0.5nm,0.8s,baz=100,slow=5.2,SNR=3.9
TORD Torodi Ar. Bea 151.05 288 PKPbc **PKPbc 14 40 10.4 -0.6**
1.2nm,0.6s,baz=66,slow=2.2,SNR=8.0

*IDC **12** 14:37:21.7±2.7, 12°.94N×89°.72W, h0km, mb3.1/3, mb1 3.6/5, mb1mx3.4/32, mbtmp3.3/5, ML3.3/2, MS2.6/2, Ms1 2.6/2, ms1mx2.4/16, Error ellipse: s-maj=81.4km s-min=40.5km az=61.0*
*SNET **12** 14:37:25.0±0.7, 12°.90N×90°.42W, h2km±10km, ML3.4*
*GCG **12** 14:37:28.7±0.3, 13°.08N×90°.80W, h2km±14km, MD4.1*
ISC 12 14:37:25.3±2.2, 12°.91N±0°.08×90°.37W±0°.05, h4km±12km, n21, σ1§94/27, 3C-1D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcalda de S**	**0.99**	**20**	*eP*	**Pb**	**14 37 44.5**	**-0.4**
FAME *eS* **Sb 14 37 59.2 +0.9**
CEVE Cerro Verde 1.16 38 *eP* **Pb 14 37 48.0 -0.1**
CEVE *eS* **Sn 14 38 06.0 +1.1**
CEVE IAML 14 38 08.9
comp=Z,2µm,0.3s
SBLS San Blas 1.17 38 *eP* **Pb 14 37 48.0 -0.2**
SBLS *eS* **Sn 14 38 06.3 +1.2**
RTR El Retiro 1.21 35 *eP* **Pb 14 37 48.6 -0.1**
SNJE San Jose 1.21 38 *eP* **Pg 14 37 48.5 +0.1**
IXG Ixpaco 1.26 357 *eP* **Pg 14 37 48.7 -0.6**
UNIC Universidad Ca 1.33 37 *eP* **Pg 14 37 50.4 -0.4**
UNIC *eS* **Sn 14 38 09.4 +0.6**
UNIC IAML 14 38 15.8
comp=Z,211nm,0.4s
LFU La Fuente 1.48 55 *eP* **Pn 14 37 52.9 +0.2**
FUG Fuego 3 1.60 343 *eP* **Pb 14 37 54.3 -1.1**
PAVA Las Pavas 1.60 60 *eP* **Pb 14 37 55.4 -0.1**
NBG Las Nubes 1.67 1 *eS* **Sg 14 38 20.8 +1.9**
PACA Pacayal 2.06 74 *eP* **Pn 14 38 01.5 +0.7**
APG El Apazote 2.08 357 Pn **Pn 14 38 01.2 +0.1**
comp=Z,22nm,0.3s,baz=129,slow=9.8,SNR=30
APG LR LR 14 38 22.2
comp=Z,21nm,21.7s,baz=264,slow=28
APG Sn **Sb 14 38 28.4 -1.7**
comp=Z,12nm,0.3s,baz=235,slow=23,SNR=7.0
STG3 Santiaguito 3, 2.14 327 *eP* **Pn 14 38 01.1 -0.8**
STG3 *eS* **Sn 14 38 26.3 -2.7**
LCND La Caada 2.44 80 *eP* **Pn 14 38 05.9 0.0**
CMIG Matias Romero 6.03 314 Pn **Pn 14 38 56.8 +1.6**
comp=Z,0.2nm,0.3s,baz=122,slow=9.5,SNR=2.3
CMIG Sn **Sn 14 40 11.6 +6.9**
comp=Z,0.4nm,0.3s,baz=81,slow=19,SNR=2.9
TXAR Lajitas Array 20.49 325 P **P 14 42 04.6 +0.3**
comp=Z,0.4nm,0.6s,baz=140,slow=12,SNR=5.2
PFO Pinyon Flats O 31.45 315 LR LR 14 57 24.2
comp=Z,87nm,19.4s,baz=326,slow=38
NVAR Mina Array Bea 35.52 321 P **P 14 44 24.5 +1.0**
comp=Z,0.3nm,0.7s,baz=135,slow=9.0,SNR=2.7
YKA Yellowknife Ar 52.45 346 P **P 14 46 35.0 -3.8**
comp=Z,0.2nm,0.5s,baz=140,slow=6.6,SNR=5.2
CMAR Chiang Mai Arr 147.51 343 PKPbc **PKPdf 14 57 09.7 +0.7**
comp=Z,0.2nm,0.6s,baz=347,slow=3.7,SNR=2.8

*IDC **12** 14:52:19.6±1.0, 21°.62S×69°.71W, h72km±7km, mb3.5/4, mb1 3.8/6, mb1mx3.6/26, mbtmp3.8/6, Error ellipse: s-maj=28.5km s-min=26.8km az=78.0*
*NEIC **12** 14:52:19.6±1.5, 21°.54S±0°.05×69°.77W±0°.09, h69km±4km, Error ellipse: s-maj=11.7km s-min=6.6km az=104.0*
*GUC **12** 14:52:19.4±0.8, 21°.53S×69°.75W, h69km±4km, ML4.1*
*SJA **12** 14:52:19.5±1.1, 21°.53S×69°.79W, h62km±7km, ML3.6, MW3.5*
ISC 12 14:52:19.6±0.6, 21°.54S±0°.03×69°.83W±0°.05, h70km±6km, n75, σ1§26/86, mb3.9/6, 9C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB03	**IPOC Station P**	**0.51**	**172**	*i* P	**Pn**	**14 52 33.0**	**+0.3**
PB03 *i* S **Sn 14 52 42.7 +0.3**
PB03 IAML 14 52 43.3
comp=N,13µm,0.4s
PB03 IPOC Station P 0.51 172 *e*P **Pn 14 52 33.1 +0.3**
PB03 *e*S **Sn 14 52 42.6 +0.3**
PB09 IPOC Station P 0.60 115 *i* P **Pn 14 52 33.6 0.0**
PB09 *i* S **Sn 14 52 43.2 -0.8**
PB09 IAML 14 52 45.5
comp=E,8µm,0.5s
PB09 IPOC Station P 0.60 115 *i* P **Pn 14 52 33.6 0.0**
PATCX Punta Patache 0.78 337 *i* P **Pn 14 52 36.0 +0.4**
PATCX *i* S **Sn 14 52 48.4 +1.1**
PATCX IAML 14 52 49.5
comp=E,26µm,0.3s
PATCX Punta Patache 0.78 337 *e*P **Pn 14 52 36.0 +0.4**
PATCX *e*S **Sn 14 52 48.3 +1.0**
PB04 IPOC Station P 0.84 201 *i* P **Pn 14 52 37.1 +0.7**
PB04 *i* S **Sn 14 52 50.3 +1.5**
PB04 IAML 14 52 51.9
comp=E,9µm,0.6s
PB04 IPOC Station P 0.84 201 P **Sn 14 52 37.1 +0.7**
PB04 Sn **Sn 14 52 49.8 +1.0**
PB04 IPOC Station P 0.84 201 *i* P **Pn 14 52 37.2 +0.7**
PB04 *i* S **Sn 14 52 50.2 +1.4**
TA01 Diego Aracena 1.03 341 *i* P **Pn 14 52 38.7 +0.2**
TA01 *i* S **Sn 14 52 53.3 +0.8**
PB06 IPOC Station P 1.18 168 *i* P **Pn 14 52 41.1 +0.5**
PB06 *i* S **Sn 14 52 57.1 +0.8**
PB06 IAML 14 52 58.5
comp=N,11µm,0.5s
PB05 IPOC Station P 1.35 195 *i* P **Pn 14 52 43.3 +0.5**
PB05 *i* S **Sn 14 53 01.6 +1.6**
PB05 IAML 14 53 03.4
comp=E,3µm,0.3s
PB05 IPOC Station P 1.35 195 *i* P **Pn 14 52 43.3 +0.5**
LVC Limon Verde 1.36 141 *e*P **Pn 14 52 43.8 +0.7**
LVC Limon Verde 1.36 141 Pn **Pn 14 52 44.2 +1.1**
LVC Limon Verde 1.36 141 *i* P **Pn 14 52 44.2 +1.1**
LVC IAML 14 53 08.5
comp=Z,883nm,0.3s
PB08 IPOC Station P 1.53 24 *i* P **Pn 14 52 45.6 +0.2**
PB08 *i* S **Sn 14 53 05.1 +0.3**
PB08 IAML 14 53 05.9
comp=E,5µm,0.6s
PB08 IPOC Station P 1.53 24 *e*P **Pn 14 52 45.6 +0.2**
PB08 *e*S **Sn 14 53 05.1 +0.3**
PB15 IPOC Station P 1.69 169 *i* P **Pn 14 52 48.0 +0.7**
PB15 *i* S **Sn 14 53 09.9 +1.7**
PB11 IPOC Station P 1.78 5 *i* P **Pn 14 52 48.3 -0.2**
PB11 *i* S **Sn 14 53 10.9 +0.6**
PB11 IPOC Station P 1.78 5 Pn **Pn 14 52 48.2 -0.3**
PSGC Pisagua 1.96 352 *e*P **Pn 14 52 50.3 -0.5**
PSGC *i* S **Sn 14 53 14.1 -0.4**
PSGCX Pisagua 1.96 352 *e*P **Pn 14 52 50.4 -0.4**
PSGCX *e*S **Sn 14 53 16.1 +1.7**
GO01 Chusmiza 1.96 18 *i* P **Pn 14 52 51.3 +0.1**
GO01 *i* S **Sn 14 53 15.8 +0.8**
GO01 Chusmiza 1.96 18 **Pn 14 52 51.1 -0.1**
PB10 IPOC Station P 2.07 199 **Pn 14 52 51.8 -0.5**
PB10 IPOC Station P 2.07 199 *i* P **Pn 14 52 52.0 -0.3**
MNMC Minye Minye 2.41 5 Pn **Pn 14 52 57.0 -0.1**
MNMCX Minye Minye 2.41 5 *e*P **Pn 14 52 58.6 +1.5**
PB14 IPOC Station P 3.11 190 *i* P **Pn 14 53 05.7 -1.0**
GO02 Mina Guanaco 3.61 177 *i* P **Pn 14 53 13.5 0.0**
GO02 *i* S **Sn 14 53 55.2 +0.2**
GO02 Mina Guanaco 3.61 177 Pn **Pn 14 53 13.4 0.0**
YJA Yavi 4.05 100 *i* P **Pn 14 53 22.7 +3.0**
HJA Humahuaca 4.41 113 *i* P **Pn 14 53 27.4 +2.9**
LPAZ La Paz 5.47 17 P **Pn 14 53 41.5 +2.4**
comp=E,2.2nm,0.3s,baz=214,slow=5.9,SNR=34
LPAZ La Paz 5.47 17 **Pn 14 53 41.4 +2.2**
LPAZ La Paz 5.47 17 *i* P **Pn 14 53 41.5 +2.4**
GO03 Copiap 6.04 183 Pn **Pn 14 53 44.3 -2.1**
GO03 Copiap 6.04 183 *i* P **Pn 14 53 44.4 -2.0**
AHML Horco Molle 6.64 143 *i* P **Pn 14 53 55.3 +0.8**
VCA Vinchina 7.31 169 *i* P **Pn 14 54 04.4 +0.5**
CYA Choya 7.78 153 *i* P **Pn 14 54 10.9 +0.8**
ACLC CERRO LA CRUZ 8.27 162 *i* P **Pn 14 54 15.9 -1.1**
GO04 Tololo Observa 8.64 186 Pn **Pn 14 54 20.2 -1.8**
GO04 Tololo Observa 8.64 186 *i* P **Pn 14 54 19.4 -2.7**
APLL PUNTA DE LOS L 9.30 162 *i* P **Pn 14 54 30.9 -3.1**
AMOG MOGNA 9.43 173 *i* P **Pn 14 54 31.0 -1.8**
CFA Coronel Fontan 10.12 172 *i* P **Pn 14 54 39.3 -2.9**
RTCV Cerro Valdivia 10.34 174 *i* P **Pn 14 54 48.5 +3.3**
TCA Tanti 10.82 155 *i* P **Pn 14 54 48.9 -2.8**
CPUP Villa Florida 12.38 115 Pn **Pn 14 55 11.7 -1.3**
GO06 Curarrehue 18.04 184 P **P 14 56 25.3 +0.2**
PLCA Paso Flores 19.14 182 P **P 14 56 37.6 +0.4**
comp=E,0.0nm,0.3s,baz=17,slow=11,SNR=2.7
PLCA Paso Flores 19.14 182 IAmb IAmb 14 56 55.0
comp=Z,22nm,1.9s
SPB Sao Paulo 20.78 100 P **P 14 56 53.0 -2.1**
SPB IAmb IAmb 14 57 18.1
comp=Z,120nm,2.0s
BDFB Brasilia 21.48 78 P **P 14 57 02.2 -0.6**
comp=Z,1.9nm,0.4s,baz=265,slow=11,SNR=4.7
BDFB Brasilia 21.48 78 P **P 14 57 01.3 -1.4**
BDFB IAmb IAmb 14 57 40.6
comp=Z,12nm,1.4s
FLOC Florencia 23.68 345 P **P 14 57 24.6 -0.4**
TXAR Lajitas Array 60.18 326 P **P 15 02 21.1 +0.7**
comp=Z,0.3nm,0.8s,baz=139,slow=7.2,SNR=2.7
QSPA South Pole Qui 68.65 180 P **P 15 03 16.3 +1.0**
TCUT Toone Canyon 73.32 328 P **P 15 03 44.1 +0.2**
PDAR Pinedale Array 73.72 331 pP pP 15 04 06.2 +0.8
comp=Z,0.3nm,0.6s,baz=148,slow=5.3,SNR=2.9
NVAR Mina Array Bea 75.00 323 pP pP 15 04 14.3 +1.3
comp=Z,1.1nm,0.8s,baz=155,slow=6.7,SNR=4.2
TORD Torodi Ar. Bea 78.17 71 P **P 15 04 10.7 -1.2**
comp=Z,1.0nm,0.7s,baz=250,slow=5.7,SNR=9.6
TORD pP **pP 15 04 30.4 -0.8**
comp=Z,1.0nm,0.5s,baz=253,slow=5.2,SNR=3.6
TORD Torodi Ar. Bea 78.17 71 IAmb IAmb 15 04 11.6
comp=Z,0.9nm,0.8s
YKA Yellowknife Ar 90.95 341 P **P 15 05 15.3 +0.1**
comp=Z,0.5nm,0.7s,baz=135,slow=4.2,SNR=12
YKA pP **pP 15 05 34.7 -0.3**
comp=Z,0.4nm,0.9s,baz=132,slow=4.3,SNR=5.4
H11S2 WAKE ISLAND Hy 27.04 277 T T 17 30 58.8
baz=105,slow=75,SNR=42
H11S1 WAKE ISLAND Hy 27.04 277 T T 17 31 13.2
baz=105,slow=75,SNR=42
H11S3 WAKE ISLAND Hy 27.05 277 T T 17 31 10.8
baz=105,slow=75,SNR=34
H11N3 WAKE ISLAND Hy 27.12 279 T T 17 31 01.9
baz=104,slow=74,SNR=27
H11N2 WAKE ISLAND Hy 27.14 279 T T 17 31 20.0
baz=104,slow=74,SNR=27
H11N1 WAKE ISLAND Hy 27.14 279 T T 17 31 03.3
baz=104,slow=74,SNR=24
ASAR Alice Springs 129.47 209 PKP **PKPdf 15 11 19.6 -1.5**
comp=Z,0.3nm,0.7s,baz=148,slow=2.1,SNR=4.0
WRA Warramunga Arr 132.48 211 PKP **PKPdf 15 11 27.4 +0.5**
comp=Z,0.3nm,0.6s,baz=151,slow=2.1,SNR=2.7
MKAR Makanchi Array 146.16 35 PKPbc **PKPdf 15 11 51.1 +0.3**
comp=Z,0.6nm,0.7s,baz=320,slow=3.2,SNR=8.5
MKAR pPKPbc pPKPbc 15 12 11.6 -0.6
comp=Z,0.5nm,0.7s,baz=343,slow=3.8,SNR=4.0

PGC 12 15:18:29.8±0.6, 48°.83N×128°.67W, h10km, MLSn3.0/24, Mw3.6/24, 204km west of Tofino, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMF	**NEPTUNE Canada**	**0.92**	**198**	P	**Pg**	**15 18 45.2**	**-2.3**
NC89	**ODP889**	**1.22**	**97**	S	**Sb**	**15 19 03.4**	**-5.0**
BPBC	**Brooks Peninsu**	**1.46**	**23**	Pn	**Pn**	**15 18 53.6**	**-2.6**
BPBC Sn **Sn 15 19 11.4 -4.0**
EDB Eliza Dome 1.46 43 Pn **Pn 15 18 54.0 -2.2**
EDB Sn **Sn 15 19 11.4 -3.9**
PACB Port Alice, BC 1.79 25 Pn **Pn 15 18 58.3 -2.3**
PACB Sn **Sn 15 19 18.0 -4.4**
HOLB Holberg 1.85 11 Pn **Pn 15 19 00.0 -1.6**
HOLB Sn **Sn 15 19 21.4 -3.6**
TOFB Tofino 1.85 79 Pn **Pn 15 18 59.6 -1.9**
TOFB Sn **Sn 15 19 20.9 -4.0**
MAYB Maynard 1.86 31 Pn **Pn 15 19 00.1 -1.7**
MAYB Sn **Sn 15 19 21.4 -3.9**
WOSB Woss 1.91 45 Pn **Pn 15 19 00.9 -1.5**
GDR Gold River 1.98 60 Pn **Pn 15 19 01.4 -1.8**
PHC Port Hardy 2.05 23 Pn **Pn 15 19 02.5 -1.8**
PHC Sn **Sn 15 19 25.8 -4.0**
TLCB Telegraph Cove 2.10 34 Pn **Pn 15 19 03.7 -1.2**
TLCB Sn **Sn 15 19 27.4 -3.6**
OZB Mount Ozzard 2.10 85 Pn **Pn 15 19 03.1 -1.9**
OZB Sn **Sn 15 19 27.2 -4.0**
BTB Buttle Lake 2.17 72 Pn **Pn 15 19 04.6 -1.4**
BTB Sn **Sn 15 19 29.5 -3.5**
SPLB Strathcona Par 2.24 60 Pn **Pn 15 19 05.9 -1.1**
NCRB Newcastle Ridg 2.32 46 Pn **Pn 15 19 07.5 -1.0**
NCRB Sn **Sn 15 19 33.7 -3.1**
BFSB Bamfield 2.34 88 Pn **Pn 15 19 06.4 -1.8**
BFSB Sn **Sn 15 19 32.9 -4.0**
B928 Bamfield 2.34 88 Pn **Pn 15 19 06.3 -1.8**
B928 Sn **Sn 15 19 33.0 -3.9**
CBB Campbell River 2.47 60 Pn **Pn 15 19 09.1 -1.0**
CBB Sn **Sn 15 19 37.2 -3.2**
B927 Port Alberni 2.57 80 Pn **Pn 15 19 09.8 -1.6**
B927 Sn **Sn 15 19 39.4 -3.3**
MGB Mount Grey 2.63 85 Pn **Pn 15 19 10.8 -1.6**
MGB Sn **Sn 15 19 40.0 -4.4**
TXB Texada 2.91 71 Pn **Pn 15 19 15.4 -0.7**
YOUB Youbou, Lake C 2.91 87 Pn **Pn 15 19 15.0 -1.2**
YOUB Sn **Sn 15 19 47.7 -3.6**
B926 Mesachie Lake 3.00 88 Pn **Pn 15 19 15.8 -1.5**
B926 Sn **Sn 15 19 49.8 -3.5**
NLLB Nanaimo Lost L 3.11 81 Pn **Pn 15 19 18.3 -0.5**
NLLB Sn **Sn 15 19 53.0 -3.0**
LZB Mount Lazard 3.22 92 Pn **Pn 15 19 19.7 -0.7**
LZB Sn **Sn 15 19 55.2 -3.6**
SHB Sechelt 3.24 74 Pn **Pn 15 19 20.3 -0.4**
SHB Sn **Sn 15 19 56.6 -2.8**
BBB Bella Bella 3.38 6 Pn **Pn 15 19 21.5 -1.1**
BBB Sn **Sn 15 19 59.0 -3.7**
B009 North Saanich 3.46 91 Pn **Pn 15 19 22.9 -0.7**
B010 North Saanich 3.46 91 Pn **Pn 15 19 21.7 -1.9**
PGC Sidney 3.46 91 Sn **Sn 15 20 02.2 -2.4**
BIB Bowen Island 3.57 79 Pn **Pn 15 19 24.3 -0.9**
VDB Vedder Mountai 4.34 85 Pn **Pn 15 19 35.0 -0.6**
MBW Mount Baker 4.48 88 Pn **Pn 15 19 36.8 -1.0**
LLLB Lillooet 4.75 65 Pn **Pn 15 19 41.9 +0.4**
FSB Fort Saint Jam 6.27 24 Pn **Pn 15 20 02.6 +0.3**
SLEB Sale Mountain 7.19 67 Pn **Pn 15 20 15.4 +0.4**

*NEIC **12** 15:57:49.1±2.0, 10°.4S±0°.1×161°.92E±0°.09,

mb1 3.8/8,mb1mx3.5/39,mbtmp4.0/8,MS3.4/7,Ms1 3.3/7, ms1mx3.0/21,Error ellipse: s-maj=28.3km s-min=19.5km az=58.0

ISC 12 15:57:48.2±0.6, 10°34S±0.07×162°01E±0.08, h54km, n35, σ1§55/33, mb3.9/10, MS3.4/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.22**	**294**	P	**Pn**	**15 58 22.9**	**+0.3**
	94nm,0.3s,baz=174,slow=5.7,SNR=65						
HNR				S	**Sn**	**15 58 49.8**	**+0.9**
	257nm,0.3s,baz=38,slow=20,SNR=15						
HNR				LR	LR	15 59 27.4	
	comp=Z,169nm,21.4s,baz=179,slow=46						
HNR	**Honiara**	**2.22**	**294**	*e*P	Pn	15 58 13.0	-10
HNR				*i* S	**Sn**	**15 58 50.0**	**+1.0**
KRVT	**Keravat (AS076**	**11.57**	**300**	LR	LR	16 05 09.5	
	comp=Z,108nm,18.3s,baz=115,slow=38						
RAO	**Raoul Island**	**26.58**	**138**	LR	LR	16 11 53.3	
	comp=Z,239nm,21.0s,baz=149,slow=32						
WRAB	**Tennant Creek**	**28.31**	**247**	P	**P**	**16 03 34.9**	**-2.1**
WRAB				IAmb	IAmb	16 03 36.7	
	comp=Z,2.6nm,0.8s						
WRA	**Warramunga Arr**	**28.32**	**247**	P	**P**	**16 03 36.4**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=77,slow=9.3,SNR=18						
WRA				LR	LR	16 14 29.3	
	comp=Z,62nm,18.1s,baz=75,slow=36						
WRA	**Warramunga Arr**	**28.32**	**247**	P	**P**	**16 03 35.5**	**-1.6**
NIUE	**Niue**	**28.46**	**111**	P	**P**	**16 03 38.6**	**+0.3**
STKA	**Stephens Creek**	**28.56**	**218**	LR	LR	16 13 56.0	
	comp=Z,99nm,18.8s,baz=26,slow=34						
AS31	**Alice Springs**	**29.89**	**240**	P	**P**	**16 03 50.1**	**-0.9**
ASAR	**Alice Springs**	**29.89**	**240**	P	**P**	**16 03 49.7**	**-1.3**
	comp=Z,1.5nm,1.0s,baz=63,slow=10,SNR=17						
ASAR				LR	LR	16 15 13.1	
	comp=Z,49nm,20.7s,baz=80,slow=35						
ASAR	**Alice Springs**	**29.89**	**240**	P	**P**	**16 03 49.9**	**-1.1**
TOO	**Toolangi**	**30.92**	**206**	P	**P**	**16 04 02.1**	**+2.1**
TOO				IAmb	IAmb	16 04 11.9	
	comp=Z,4.2nm,0.9s						
ANA2	**Anatahan**	**31.03**	**328**	P	**P**	**16 04 02.5**	**+1.5**
KNRA	**Kununurra**	**32.80**	**257**	P	**P**	**16 04 15.7**	**-0.9**
KNRA				IAmb	IAmb	16 05 25.9	
	comp=Z,11nm,1.1s						
PLWZ	**Palliser**	**33.22**	**162**	P	**P**	**16 04 19.8**	**-0.3**
FITZ	**Fitzroy Crossi**	**36.03**	**253**	P	**P**	**16 04 43.4**	**-1.2**
FITZ				IAmb	IAmb	16 05 26.7	
	comp=Z,6.3nm,1.1s						
MORW	**Morawa**	**46.77**	**240**	P	**P**	**16 06 12.3**	**-0.2**
JOW	**Kunigami**	**49.38**	**319**	P	**P**	**16 06 30.5**	**-2.1**
CISI	**Cisompet, Garu**	**53.56**	**268**	P	**P**	**16 07 01.6**	**-2.5**
HKPS	**Hong Kong Po S**	**57.03**	**305**	P	**P**	**16 07 27.2**	**-1.8**
CMAR	**Chiang Mai Arr**	**68.47**	**295**	P	**P**	**16 08 44.9**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=124,slow=5.1,SNR=4.2						
SONM	**Songino Array**	**75.96**	**325**	P	**P**	**16 09 30.5**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=131,slow=4.0,SNR=4.9						
SONM	**Songino Array**	**75.96**	**325**	IAmb	IAmb	16 09 31.3	
	comp=Z,0.8nm,0.8s						
MAW	**Mawson**	**83.98**	**202**	LR	LR	16 42 43.9	
	comp=Z,37nm,20.9s,baz=240,slow=32						
ILAR	**Eielson Array**	**84.05**	**20**	P	**P**	**16 10 13.2**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=237,slow=4.9,SNR=5.7						
MKAR	**Makanchi Array**	**90.51**	**317**	P	**P**	**16 10 44.2**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=95,slow=4.8,SNR=3.4						
MCMT	**McKenzie Canyo**	**93.78**	**45**	P	**P**	**16 11 01.3**	**+1.5**
Q16A	**Castle Valley**	**93.96**	**51**	P	**P**	**16 10 59.9**	**-0.8**

IDC 12 16:05:00.5±623.0, 3°46N×62°00E, h0km, Error ellipse: s-maj=346.0km s-min=214.6km az=91.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I19DJ	**I19DJ**	**20.28**	**294**	*i*		18 10 50.0	
	baz=112,slow=308,SNR=4.0						
I32KE	**NAIROBI INFRAS**	**25.59**	**260**	*i*		18 40 20.0	
	baz=83,slow=365,SNR=2.4						
I33MG	**ANTANANARIVO I**	**26.60**	**212**	*i*		18 49 50.0	
	baz=35,slow=310,SNR=3.3						
I47ZA	**BOSHOF INFRASO**	**47.58**	**225**	*i*		21 09 53.6	
	baz=55,slow=322						

IDC 12 16:07:52.7±0.7,31°82N×90°13E,h0km, mb3.8/16, mb1 4.0/17,mb1mx3.8/43,mbtmp3.8/17,ML3.8/1,MS3.3/14, Ms1 3.4/14,ms1mx3.1/49,Error ellipse: s-maj=23.7km s-min=15.6km az=48.0

BJI 12 16:07:55.6±0.0,31°97N×90°30E,h8km,mB4.6/6, mb4.3/20,ML4.2/1,Ms3.8/15,Ms7 3.7/13

ISC 12 16:07:55.1±0.4, 31°90N±0°05×90°38E±0°07, h10km, n59, σ1§86/51, mb4.0/20, MS3.3/11, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**2.29**	**163**	Pg	**Pb**	**16 08 38.0**	**+1.2**
LSA				Sg	**Sb**	**16 09 10.1**	**+4.8**
TAPN	**Taplejung**	**5.09**	**208**	*e*P	**Pn**	**16 09 13.3**	**+1.6**
	37nm,0.4s						
GUN	**Gumba**	**5.57**	**226**	*e*P	**Pn**	**16 09 20.6**	**+2.3**
	58nm,0.4s						
JIRN	**Jiri**	**5.57**	**222**	*e*P	**Pn**	**16 09 20.1**	**+1.7**
ODAN	**Odare**	**5.65**	**208**	*e*P	**Pn**	**16 09 20.3**	**+0.9**
	36nm,0.4s						
RAMN	**Ramite**	**5.93**	**215**	*e*P	**Pn**	**16 09 23.7**	**+0.5**
	87nm,0.3s						
KKN	**Kakani**	**6.03**	**229**	*e*P	**Pn**	**16 09 26.4**	**+1.9**
	63nm,0.4s						
PKI	**Pulchoki**	**6.10**	**226**	*e*P	**Pn**	**16 09 27.2**	**+1.5**
	5.5nm,0.4s						
DMN	**Daman**	**6.26**	**228**	*e*P	**Pn**	**16 09 29.7**	**+1.9**
	44nm,0.4s						
GKN	**Gorkha**	**6.31**	**234**	*e*P	**Pn**	**16 09 29.5**	**+1.1**
	86nm,0.4s						
DANN	**Dangsing**	**6.73**	**240**	*e*P	**Pn**	**16 09 35.5**	**+1.2**
	128nm,0.5s						
KOLN	**Koldanda**	**7.18**	**237**	*e*P	**Pn**	**16 09 40.1**	**-0.2**
	18nm,0.3s						
GTA	**Gaotai**	**10.73**	**43**	P	**Pn**	**16 10 31.0**	**+2.1**
GTA				pP		16 10 34.1	
GTA				sP		16 10 37.1	
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,78nm,4.5s						
GTA				LR	LR		
	comp=N,420nm,13.1s						
GTA				LR	LR		
	comp=E,370nm,13.1s						
GTA				LR	LR		
	comp=Z,350nm,11.3s						
WMQ	**Urumqi**	**12.09**	**351**	*e*P	**Pn**	**16 10 50.6**	**+3.1**
KSH	**Kashi**	**13.94**	**307**	P	**Pn**	**16 11 16.4**	**+3.5**
KSH				pP	P	16 11 20.7	-0.3
CMAR	**Chiang Mai Arr**	**15.46**	**148**	Pn	**Pn**	**16 11 33.4**	**+0.1**
	0.1nm,0.3s,baz=327,slow=12,SNR=15						
CMAR				LR	LR	16 17 03.4	
	comp=Z,40nm,18.1s,baz=340,slow=36						
XAN	**Xi'an**	**15.71**	**77**	P	**P**	**16 11 43.4**	**+2.7**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,4.6s						
KZA	**Kyzart**	**15.77**	**314**	P	**P**	**16 11 43.8**	**+2.2**
	SNR=15						
TKM2	**Tokmak 2**	**16.07**	**317**	P	**P**	**16 11 47.0**	**+2.3**
	SNR=11						
MKAR	**Makanchi Array**	**16.12**	**340**	Pn	**Pn**	**16 11 40.4**	**-1.4**
	0.3nm,0.3s,baz=146,slow=14,SNR=16						
MKAR				LR	LR	16 18 51.9	
	comp=Z,135nm,19.1s,baz=156,slow=41						
KBK	**Karagaybulak**	**16.29**	**316**	P	**P**	**16 11 49.7**	**+2.6**
	SNR=7.2						
UCH	**Uchtor**	**16.30**	**314**	P	**P**	**16 11 49.6**	**+2.0**
	SNR=6.6						
AAK	**Ala-Archa**	**16.55**	**315**	Pn	**P**	**16 11 48.3**	**-1.6**
	0.1nm,0.3s,baz=150,slow=6.4,SNR=12						
AAK				LR	LR	16 18 54.8	
	comp=Z,62nm,20.2s,baz=130,slow=40						
AAK	**Ala-Archa**	**16.55**	**315**	P	**P**	**16 11 52.5**	**+2.5**
	SNR=5.1						
USP	**Ospenovka**	**16.91**	**317**	P	**P**	**16 11 56.0**	**+2.1**
	SNR=13						
SONM	**Songino Array**	**20.05**	**33**	P	Pn	16 12 29.8	-0.4
	1.1nm,0.5s,baz=216,slow=11,SNR=14						
SONM				LR	LR	16 21 13.0	
	comp=Z,137nm,19.0s,baz=216,slow=40						
WHN	**Wuhan**	**20.54**	**87**	P	Pn	16 12 41.8	+5.8
KURBB	**Kurchatov Arra**	**20.67**	**338**	P	**P**	**16 12 34.6**	**-0.4**
	3.8nm,0.7s,baz=146,slow=11,SNR=24						
TLY	**Talaya**	**22.04**	**22**	LR	LR	16 22 27.6	
	comp=Z,58nm,21.3s,baz=354,slow=39						
ZALV	**Zalesovo Beam**	**22.40**	**351**	P	**P**	**16 12 52.8**	**-0.7**
	1.7nm,0.5s,baz=170,slow=9.8,SNR=10						
ZALV				LR	LR	16 21 56.8	
	comp=Z,98nm,19.0s,baz=182,slow=38						
BVAR	**Borovoye Array**	**25.59**	**331**	P	**P**	**16 13 24.2**	**0.0**
	3.6nm,0.9s,baz=132,slow=12,SNR=15						
BVAR				PcP	**PcP**	**16 16 53.6**	**-1.4**
	0.2nm,0.4s,baz=144,slow=0.9,SNR=2.8						
PALK	**Pallekele**	**26.11**	**202**	LR	LR	16 24 40.0	
	comp=Z,38nm,20.0s,baz=40,slow=39						
GEYT	**Alibeck**	**27.04**	**292**	LR	LR	16 25 31.6	
	comp=Z,80nm,20.5s,baz=260,slow=39						
WSAR	**Wadi Sarin**	**29.35**	**261**	LR	LR	16 26 08.8	
	comp=Z,47nm,21.0s,baz=98,slow=38						
GSI	**Gununguitoli**	**31.18**	**166**	P	**P**	**16 14 12.8**	**-1.7**
	11nm,1.8s						
KSRS	**Korea Array**	**31.23**	**69**	P	**P**	**16 14 14.8**	**0.0**
	1.1nm,0.6s,baz=289,slow=9.9,SNR=4.8						
PPSI	**Pulau Pagai**	**35.66**	**163**	P	**P**	**16 14 52.2**	**-1.3**
	166nm,1.5s						
KIRV	**Kirov**	**38.34**	**326**	LR	LR	16 32 35.3	
	comp=Z,65nm,18.6s,baz=88,slow=39						
CISI	**Cisompet, Garu**	**42.62**	**154**	P	**P**	**16 15 50.3**	**-1.5**
	14nm,1.0s						
WOJI	**Wonogiri, Jawa**	**44.12**	**150**	P	**P**	**16 16 02.3**	**-1.5**
	25nm,2.8s						
PCJI	**Pacitan**	**44.55**	**150**	P	**P**	**16 16 05.5**	**-1.7**
	30nm,1.4s						
LUWI	**Luwuk**	**44.88**	**131**	P	**P**	**16 16 08.4**	**-1.6**
	3µm38nm,1.4s						
BRTR	**Keskin Array B**	**46.01**	**296**	P	**P**	**16 16 15.5**	**-3.4**
	0.3nm,0.5s,baz=91,slow=8.3,SNR=2.3						
EIL	**Elat**	**47.23**	**283**	LR	LR	16 38 21.7	
	comp=Z,51nm,19.4s,baz=90,slow=39						
BBSI	**Bau Bau**	**48.20**	**135**	P	**P**	**16 16 33.4**	**-2.6**
FINES	**FINESS Array B**	**50.33**	**326**	P	**P**	**16 16 51.0**	**-0.7**
	1.0nm,0.6s,baz=101,slow=7.2,SNR=5.4						
SPITS	**Spitsbergen Ar**	**55.75**	**346**	LR	LR	16 45 29.9	
	comp=Z,63nm,18.3s,baz=290,slow=40						
HFS	**Hagfors**	**56.41**	**324**	LR	LR	16 42 37.7	
	comp=Z,54nm,19.2s,baz=102,slow=37						
NOA	**NOSAR Array B**	**57.51**	**325**	P	**P**	**16 17 42.5**	**-1.8**
	0.8nm,0.8s,baz=86,slow=6.6,SNR=2.9						
NOA				LR	LR	16 43 38.1	
	comp=Z,27nm,21.5s,baz=70,slow=37						
GERES	**GERESS Array B**	**58.38**	**311**	P	**P**	**16 17 48.9**	**-1.8**
	0.5nm,0.6s,baz=69,slow=6.4,SNR=2.8						
WRA	**Warramunga Arr**	**66.57**	**135**	P	**P**	**16 18 45.5**	**-0.1**
	0.7nm,0.7s,baz=324,slow=6.4,SNR=6.5						
ASAR	**Alice Springs**	**69.17**	**137**	P	**P**	**16 19 02.2**	**+0.2**
	1.0nm,0.8s,baz=325,slow=6.8,SNR=12						
ESDC	**Sonseca Array**	**73.46**	**307**	P	**P**	**16 19 26.6**	**-1.3**
	0.1nm,0.4s,baz=47,slow=5.3,SNR=2.7						
ILAR	**Eielson Array**	**73.86**	**22**	P	**P**	**16 19 29.6**	**-0.1**
	1.5nm,0.9s,baz=294,slow=5.4,SNR=14						
INK	**Inuvik**	**74.91**	**15**	P	**P**	**16 19 35.8**	**+0.1**
	2.0nm,0.8s,baz=312,slow=6.3,SNR=6.2						
TORD	**Torodi Ar. Bea**	**82.07**	**280**	P	**P**	**16 20 15.0**	**-1.2**
	0.5nm,0.6s,baz=54,slow=4.4,SNR=5.0						
YKA	**Yellowknife Ar**	**83.81**	**11**	P	**P**	**16 20 24.3**	**-0.1**
	0.5nm,0.6s,baz=328,slow=5.1,SNR=12						
TXAR	**Lajitas Array**	**117.66**	**14**	PKP	**PKPdf**	**16 26 41.4**	**-0.6**
	0.1nm,0.4s,baz=357,slow=1.8,SNR=3.0						
CPUP	**Villa Florida**	**151.31**	**273**	PKPbc	**PKPbc**	**16 27 47.8**	**-1.5**
	1.2nm,0.9s,baz=63,slow=2.3,SNR=3.7						

IDC 12 16:52:15.8±1.9,43°80N×128°72W,h0km,mb3.3/4, mb1 3.6/5,mb1mx3.3/42,mbtmp3.3/5,ML3.5/1,MS3.2/3, Ms1 3.2/3,ms1mx2.9/9,Error ellipse: s-maj=63.8km s-min=22.8km az=46.0

NEIC 12 16:52:19.1±1.7,43°90N±0.09×128°51W±0.08,h16km±6km, ML3.7/8,Error ellipse: s-maj=13.2km s-min=8.8km az=178.0

ISC 12 16:52:18.6±1.2, 43°92N±0.08×128°5W±0.1, h13km, n27, σ0§83/19, mb3.6/3, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRMB	**Red Mountain**	**4.17**	**123**	Pn	**Pn**	**16 53 21.5**	**-0.4**
KRMB				IAML		16 54 28.6	
	comp=N,71nm,2.5s						
KRMB				IAML		16 54 59.4	
	comp=E,79nm,4.3s						
HUMO	**Hull Mountain**	**4.28**	**106**	Pn	**Pn**	**16 53 21.4**	**-2.0**
NLWA	**Neilton Lookou**	**4.77**	**42**	Pn	**Pn**	**16 53 31.2**	**+1.0**
F04A	**Amboy**	**4.79**	**63**	Pn	**Pn**	**16 53 30.3**	**-0.1**
F04A				IAML		16 54 53.9	
	comp=N,68nm,4.5s						
F04A				IAML		16 55 49.1	
	comp=E,59nm,4.2s						
PINE	**Pine Mountain**	**5.50**	**89**	Pn	**Pn**	**16 53 40.8**	**+0.5**
LON	**Longmire**	**5.52**	**57**	Pn	**Pn**	**16 53 40.2**	**-0.3**
D05A	**Enumclaw**	**5.64**	**52**	Pn	**Pn**	**16 53 42.9**	**+0.8**
LTY	**Liberty**	**6.45**	**56**	Pn	**Pn**	**16 53 53.4**	**+0.1**
ORV	**Oroville**	**6.83**	**127**		**Pn**	**16 53 59.2**	**+0.7**
G08A	**Pilot Rock**	**6.97**	**75**	Pn	**Pn**	**16 53 59.6**	**-0.9**
D08A	**Wollman Farm,**	**7.45**	**62**	Pn	**Pn**	**16 54 06.4**	**-0.5**
BMO	**Blue Mountains**	**8.10**	**79**	Pn	**Pn**	**16 54 16.1**	**+0.1**
YERR	**Yerington**	**8.54**	**122**	Pn	**Pn**	**16 54 23.0**	**+0.9**
NVAR	**Mina Array Bea**	**9.46**	**122**	Pn	**Pn**	**16 54 35.7**	**+1.0**
	comp=E,4nm,0.3s,baz=305,slow=14,SNR=5.1						
PDAR	**Pinedale Array**	**13.86**	**88**	LR	LR	17 00 54.8	
	comp=E,88nm,19.9s,baz=260,slow=37						
YKA	**Yellowknife Ar**	**20.31**	**19**	P	**P**	**16 56 54.8**	**+0.9**
	comp=E,0.8nm,0.8s,baz=206,slow=11,SNR=14						
KDAK	**Kodiak Island**	**20.42**	**321**	LR	LR	17 02 51.6	
	comp=E,74nm,18.1s,baz=132,slow=31						
TXAR	**Lajitas Array**	**24.58**	**118**	P	**P**	**16 57 38.4**	**0.0**
	comp=E,0.3nm,0.9s,baz=321,slow=8.1,SNR=2.5						
TXAR				LR	LR	17 07 58.6	
	comp=E,56nm,18.2s,baz=0.0,slow=38						
H11N3	**WAKE ISLAND Hy**	**58.38**	**267**	T	T	18 05 29.9	
	baz=49,slow=75,SNR=19						
H11N2	**WAKE ISLAND Hy**	**58.38**	**268**	T	T	18 05 24.4	
	baz=49,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy**	**58.39**	**267**	T	T	18 05 27.0	
	baz=49,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**59.30**	**267**	T	T	18 06 33.5	
	baz=50,slow=76,SNR=8.5						
H11S2	**WAKE ISLAND Hy**	**59.31**	**267**	T	T	18 06 33.3	
	baz=50,slow=76,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**59.32**	**267**	T	T	18 06 34.9	
	baz=50,slow=76,SNR=4.9						
SONM	**Songino Array**	**76.64**	**325**	P	**P**	**17 04 08.8**	**-0.2**
	comp=E,0.5nm,1.0s,baz=46,slow=4.2,SNR=3.7						
KURK	**Kurchatov**	**82.83**	**343**	P	**P**	**17 04 42.1**	**-0.2**
KURBB	**Kurchatov Arra**	**82.94**	**343**	P	**P**	**17 04 42.1**	**-0.7**
	comp=E,0.4nm,0.8s,baz=16,slow=5.8,SNR=3.5						

NEIC 12 17:23:17.8±1.6, 16°9N±0.1×93°86W±0.08,h168km±8km, Error ellipse: s-maj=18.1km s-min=7.5km az=207.0

MEX 12 17:23:20.0±0.5, 16°79N×93°93W,h166km±5km,MD4.0

ISC 12 17:23:18.7±1.1, 16°93N±0.10×93°86W±0.06, h149km, n10, σ1§16/17, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.99**	**280**	*e*P	**Pn**	**17 23 44.5**	**+1.2**
CMIG				*e*S	**Sn**	**17 24 04.0**	**+1.9**
CMIG	**Matias Romero**	**0.99**	**280**		**Pn**	**17 23 44.5**	**+1.2**
CMIG					**Sn**	**17 24 04.0**	**+1.9**
PCIG		**1.36**	**153**	*e*P	**Pn**	**17 23 47.2**	**+0.5**
PCIG				*i* S	**Sn**	**17 24 08.7**	**+0.5**
PCIG		**1.36**	**153**		**Pn**	**17 23 47.2**	**+0.5**
PCIG					**Sn**	**17 24 08.7**	**+0.5**
VHO	**Vista Hermosa**	**2.75**	**273**	*e*P	**Pn**	**17 24 04.0**	**+0.8**
VHO				*e*S	**Sn**	**17 24 37.2**	**-0.2**
PNIG	**Pinotepa**	**4.13**	**263**	*e*P	**Pn**	**17 24 20.5**	**-0.1**
PNIG				*e*S	**Sn**	**17 25 07.5**	**-1.2**
PNIG	**Pinotepa**	**4.13**	**263**		**Pn**	**17 24 20.5**	**-0.1**
PNIG					**Sn**	**17 25 07.5**	**-1.2**
TEIG	**Tepich**	**6.23**	**57**	Pn	**Pn**	**17 24 47.1**	**-1.3**
WHTX	**Lake Whitney,**	**15.35**	**348**	Pn	**P**	**17 26 47.3**	**-1.5**
WHTX				IAmb	IAmb	17 27 03.7	
	comp=Z,13nm,0.9s						
BRAL	**Brewton**	**15.47**	**22**	Pn	**P**	**17 26 49.9**	**-0.3**
BRAL				IAmb	IAmb	17 26 57.2	
	comp=Z,17nm,0.8s						

MAN 12 17:51:27.8, 8°96N×125°18E, h9km, mb4.1, ML2.9, MS2.6, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.44**	**89**	*e*P	Pg	17 51 37.0	+0.6
BUTP				*e*S	Sb	17 51 48.7	+4.3
CGP	**Cagayan de Oro**	**0.69**	**224**	*e*P	Pg	17 51 40.4	-0.9
SCPH	**Surigao**	**0.87**	**21**	*e*P	Pg	17 51 44.5	-0.2
BUKP	**Musuan**	**1.08**	**186**	*e*P	Pn	17 51 49.9	+0.7
BUKP				*e*S	Sn	17 52 11.1	+6.8

NEIC 12 17:51:28.0±3.3,52°97N±0.06×165°56W±0.08,h1km±3km, Error ellipse: s-maj=9.6km s-min=5.1km az=143.0

IDC 12 17:51:29.2±1.2,53°31N×165°58W,h0km,mb3.9/14, mb1 4.0/16,mb1mx3.8/49,mbtmp3.9/16,ML3.6/2,MS3.3/2, Ms1 3.3/2,ms1mx2.6/49,Error ellipse: s-maj=30.6km s-min=14.0km az=178.0

AEIC 12 17:51:32.5±2.3,52°99N±0.06×165°53W±0.08,h42km±6km, ML3.4/30,mb4.0/16(NEIC),Error ellipse: s-maj=9.4km s-min=6.5km az=149.0

ISC 12 17:51:31.0±0.7, 52°97N±0.08×165°46W±0.05, h21km±4km, n73, σ1§67/73, mb3.9/15, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	**1.08**	**325**		**Pn**	**17 51 50.2**	**-0.6**
UNV					**Sn**	**17 52 05.0**	**0.0**
MREP	**Makushin Rep't**	**1.14**	**318**		**Pn**	**17 51 51.7**	**0.0**
AKBBA	**Akutan Broad B**	**1.17**	**346**		**Pb**	**17 51 52.3**	**-0.1**
AKBBA					**Sn**	**17 52 08.1**	**+0.8**
AKMO	**Akutan Morgan**	**1.17**	**344**		**Pb**	**17 51 52.4**	**-0.1**
AKMO					**Sn**	**17 52 08.2**	**+0.7**
AKSA	**Akutan Strait**	**1.18**	**353**		**Sn**	**17 52 07.9**	**+0.3**
AKUT	**Akutan**	**1.18**	**351**		**Pb**	**17 51 52.5**	**-0.1**
AKUT					**Sn**	**17 52 08.1**	**+0.4**
AKRB	**Akutan Reef Bi**	**1.22**	**343**		**Pb**	**17 51 53.1**	**-0.2**
AKRB					**Sn**	**17 52 09.6**	**+1.0**
AKLV	**Akutan Long Va**	**1.23**	**346**		**Pn**	**17 51 53.0**	**0.0**
AKLV					**Sb**	**17 52 09.0**	**+0.1**
MSW	**Makushin Switc**	**1.23**	**321**		**Pn**	**17 51 53.1**	**+0.2**
MTBL	**Makushin Table**	**1.24**	**325**		**Pb**	**17 51 53.6**	**-0.1**
AKGG	**Akutan Green G**	**1.27**	**346**		**Pb**	**17 51 54.1**	**-0.1**
AKGG					**Sb**	**17 52 11.2**	**+1.1**
MCIR	**Makushin Cirqu**	**1.30**	**320**		**Pb**	**17 51 54.6**	**-0.2**
OKFG	**Magazine Ridge**	**1.54**	**288**		**Pn**	**17 51 57.4**	**+0.3**
WESP	**Westdahl Peak**	**1.59**	**16**		**Pn**	**17 51 58.7**	**+0.8**
WESP					**Sn**	**17 52 18.6**	**+0.8**
WEBT	**Westdahl Beart**	**1.68**	**14**		**Pn**	**17 51 60.0**	**+0.9**
OKSP	**Okmok Steeple**	**1.73**	**281**		**Pn**	**17 51 59.9**	**+0.1**
SSBA	**Shishaldin**	**1.98**	**23**		**Pn**	**17 52 03.6**	**+0.4**
NIKH	**Nikolski High**	**2.05**	**271**		**Pn**	**17 52 04.3**	**+0.1**
NIKH					**Sn**	**17 52 28.1**	**-1.0**
FALS	**False Pass**	**2.25**	**32**		**Pn**	**17 52 07.3**	**+0.5**
SDPT	**Sand Point**	**3.78**	**49**		**Pn**	**17 52 28.8**	**+0.9**
KOFP	**Korovin Flat P**	**5.31**	**266**		**Pn**	**17 52 51.0**	**+2.0**
KDAK	**Kodiak Island**	**8.77**	**52**	Pn	**Pn**	**17 53 35.1**	**-1.3**
	2.7nm,0.3s,baz=161,slow=5.2,SNR=80						
KDAK				Sn	**Sn**	**17 55 06.9**	**-7.6**
	0.3nm,0.3s,baz=170,slow=12,SNR=3.0						
MLY	**Manley**	**14.22**	**26**	P	**Pn**	**17 54 52.9**	**+2.0**
IMAR	**Indian Mountai**	**14.31**	**20**	P	**P**	**17 54 58.5**	**-0.5**
NEA	**Nenana**	**14.35**	**29**	Pn	**Pn**	**17 54 49.6**	**-3.0**
GLB	**Gilahina Butte**	**14.42**	**45**	Pn	**Pn**	**17 54 51.7**	**-1.9**
CRQM	**Cirque**	**14.43**	**48**	Pn	**Pn**	**17 54 52.0**	**-1.9**
PAX	**Paxson**	**14.52**	**39**	Pn	**Pn**	**17 54 52.8**	**-2.3**
TGL	**Tana Glacier**	**14.57**	**49**	Pn	**Pn**	**17 54 54.3**	**-1.4**
MCARA	**McCarthy VSAT**	**14.73**	**46**		**Pn**	**17 54 57.8**	**0.0**
MESA	**MESA**	**14.77**	**51**	Pn	**Pn**	**17 54 57.9**	**-0.7**
BALM	**Baldy**	**14.89**	**48**	Pn	**Pn**	**17 54 58.9**	**-1.2**
ILAR	**Eielson Array**	**15.16**	**31**	Pn	**Pn**	**17 54 59.9**	**-3.6**
	0.1nm,0.3s,baz=223,slow=11,SNR=4.4						
BARN	**Barnard Glacie**	**15.21**	**48**		**Pn**	**17 55 04.0**	**-0.4**
BARN				IAmb	IAmb	17 55 13.5	
	comp=Z,6.9nm,0.6s						
CTGM	**Chitina Glacie**	**15.33**	**49**	Pn	**Pn**	**17 55 04.8**	**-1.1**
CTGM				IAmb	IAmb	17 55 13.9	
	comp=Z,17nm,1.2s						
SCRK	**Sand Creek**	**15.64**	**37**	Pn	**Pn**	**17 55 06.6**	**-3.4**
SCRK				IAmb	IAmb	17 55 14.1	
	comp=Z,5.2nm,1.0s						
BCAR	**Beaver Creek A**	**16.01**	**42**	Pn	**Pn**	**17 55 12.7**	**-1.9**

ZALV	**Zalesovo Beam**	**58.55**	**319**	P	**P**	**18 01 24.7**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=49,slow=8.0,SNR=3.7						
MKAR	**Makanchi Array**	**65.08**	**315**	P	**P**	**18 02 08.8**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=41,slow=5.6,SNR=5.4						
FINES	**FINESS Array B**	**65.57**	**354**	P	**P**	**18 02 11.4**	**-1.0**
	comp=Z,3.0nm,1.0s,baz=358,slow=7.2,SNR=3.5						
AKASG	**Malin Array Be**	**75.96**	**350**	LR	LR	18 39 42.1	
	comp=Z,24nm,19.6s,baz=275,slow=38						
CMAR	**Chiang Mai Arr**	**78.78**	**286**	P	**P**	**18 03 33.3**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=15,slow=6.4,SNR=3.7						

IDC ***12*** *17:59:22.6±1.6, 15°.79S×177°.62W, h406km±17km, mb4.0/13, mb1 4.2/15, mb1mx3.9/26, mbtmp4.8/15, Error ellipse: s-maj=19.7km s-min=10.2km az=139.0*
NEIC ***12*** *17:59:23.1±2.8, 15°.9S±0°.1×177°.4W±0°.1, h414km±6km, mb4.5/50, Error ellipse: s-maj=21.1km s-min=13.6km az=143.0*

ISC 12 17:59:24.8±0.4, **15°.85S**±0°.09×**177°.28W**±0°.07, **h450**km, **n132**, σ2§**40**/130, **mb4.4**/43, **2C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.85**	**247**	P	**P**	**18 00 46.5**	**-1.3**
AFI	**Afiamalu**	**5.66**	**71**	P	**P**	**18 00 54.6**	**-1.2**
	10nm,0.3s,baz=277,slow=16,SNR=36						
AFI				S	**S**	**18 02 04.1**	**-5.9**
	3.6nm,0.3s,baz=45,slow=19,SNR=1.8						
AFI	**Afiamalu**	**5.66**	**71**	P	**P**	**18 00 54.7**	**-1.2**
AFI					**S**	**18 02 04.9**	**-5.1**
KNTN	**Kanton**	**14.10**	**23**	P	**P**	**18 02 25.4**	**-1.2**
DZM	**Mont Dzumac**	**16.59**	**246**	P	**P**	**18 02 50.9**	**-2.0**
	0.7nm,0.3s,baz=58,slow=19,SNR=8.3						
DZM	**Mont Dzumac**	**16.59**	**246**	P	**P**	**18 02 51.3**	**-1.7**
DZM				IAmb	IAmb	18 02 55.7	
	comp=Z,23nm,0.8s						
OUZ	**Omahuta**	**20.95**	**201**	P	**P**	**18 03 36.8**	**+2.1**
URZ	**Urewera**	**22.86**	**191**	P	**P**	**18 03 48.7**	**-3.3**
	comp=Z,28nm,0.8s,baz=64,slow=4.0,SNR=11						
MSWZ	**Moikau Station**	**26.28**	**193**	P	**P**	**18 04 20.1**	**-2.4**
RPZ	**Rata Peaks**	**29.50**	**197**	P	**P**	**18 04 49.2**	**-1.6**
	comp=Z,8.4nm,0.6s,baz=15,slow=12,SNR=4.2						
CTA	**Charters Tower**	**34.90**	**258**	P	**P**	**18 05 36.1**	**-1.3**
	comp=Z,11nm,0.7s,baz=85,slow=12,SNR=2.3						
PMG	**Port Moresby**	**35.25**	**276**	P	P	18 05 43.3	+2.9
PMG				IAmb	IAmb	18 05 45.8	
	comp=Z,22nm,0.8s						
COEN	**Coen**	**38.23**	**267**	P	**P**	**18 06 05.2**	**+0.2**
COEN				IAmb	IAmb	18 06 05.9	
	comp=Z,23nm,0.8s						
TOO	**Toolangi**	**39.31**	**229**	P	**P**	**18 06 13.2**	**-0.4**
TOO				IAmb	IAmb	18 06 16.2	
	comp=Z,32nm,1.3s						
STKA	**Stephens Creek**	**40.59**	**239**	P	**P**	**18 06 22.9**	**-1.0**
	comp=Z,8.6nm,0.4s,baz=88,slow=10,SNR=51						
STKA	**Stephens Creek**	**40.59**	**239**	P	**P**	**18 06 23.4**	**-0.6**
BBOO	**Buckleboo**	**45.36**	**239**	P	**P**	**18 07 01.1**	**-0.5**
WR0	**Warramunga Arr**	**45.91**	**257**	P	**P**	**18 07 04.8**	**-1.2**
WRAB	**Tennant Creek**	**46.09**	**257**	P	**P**	**18 07 06.3**	**-1.1**
WRAB				IAmb	IAmb	18 07 07.0	
	comp=Z,19nm,0.6s						
WRA	**Warramunga Arr**	**46.10**	**257**	P	**P**	**18 07 06.0**	**-1.5**
	comp=Z,18nm,0.6s,baz=94,slow=6.6,SNR=246						
WRA				S	**S**	**18 13 15.8**	**-3.6**
	comp=Z,0.6nm,0.7s,baz=87,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**46.10**	**257**	IAmb	IAmb	18 07 07.0	
	comp=Z,1.8nm,0.8s						
AS31	**Alice Springs**	**46.42**	**252**	P	**P**	**18 07 09.4**	**-0.4**
ASAR	**Alice Springs**	**46.42**	**252**	P	**P**	**18 07 09.2**	**-0.7**
	comp=Z,104nm,0.7s,baz=86,slow=8.1,SNR=2440						
ASAR				ScP	**ScP**	**18 11 51.7**	**+5.7**
	comp=Z,1.0nm,0.7s,baz=91,slow=4.9,SNR=5.3						
ASAR				S	**S**	**18 13 21.1**	**-2.8**
	comp=Z,2.6nm,1.0s,baz=83,slow=16,SNR=11						
ASAR	**Alice Springs**	**46.42**	**252**		**ScP**	**18 11 52.2**	**+6.2**
MTN	**Manton Dam**	**49.97**	**266**	P	**P**	**18 07 36.3**	**-0.3**
MTN				IAmb	IAmb	18 07 36.7	
	comp=Z,32nm,0.9s						
MTN					**S**	**18 14 15.1**	**+2.0**
FORT	**Forrest**	**51.88**	**243**	P	**P**	**18 07 49.5**	**-0.9**
PSA00	**Pilbara Seismi**	**59.49**	**254**	P	**P**	**18 08 43.6**	**-0.2**
VNDA	**Vanda**	**62.58**	**185**	P	**P**	**18 09 05.6**	**+2.5**
	comp=Z,1.4nm,0.5s,baz=349,slow=8.8,SNR=11						
SPSI	**Sidrap Palu**	**62.92**	**274**	P	**P**	**18 09 06.5**	**0.0**
	comp=Z,10nm,1.4s						
PETK	**Petropavlovsk-**	**71.99**	**344**	P	**P**	**18 10 02.3**	**+0.8**
	comp=Z,6.5nm,0.9s,baz=131,slow=8.9,SNR=7.2						
QSPA	**South Pole Qui**	**74.19**	**180**	P	**P**	**18 10 17.2**	**+2.9**
KMRM	**Mail Ridge**	**74.75**	**40**	P	**P**	**18 10 20.6**	**+2.8**
MWC	**Mount Wilson**	**75.16**	**47**	P	**P**	**18 10 21.0**	**+0.6**
MWC				IAmb	IAmb	18 10 24.3	
	comp=Z,13nm,0.9s						
CMB	**Columbia Colle**	**75.61**	**43**	P	**P**	**18 10 26.0**	**+3.4**
CMB				IAmb	IAmb	18 10 26.6	
	comp=Z,8.7nm,0.9s						
ISA	**Isabella, Lake**	**75.62**	**46**	P	P	18 10 26.3	+3.5
ISA				IAmb	IAmb	18 10 27.2	
	comp=Z,12nm,1.2s						
AFDM	**Forest Hills D**	**75.74**	**42**	P	**P**	**18 10 26.4**	**+3.1**
AFDM				IAmb	IAmb	18 10 27.2	
	comp=Z,8.2nm,0.9s						
ORV	**Oroville**	**75.74**	**41**	P	**P**	**18 10 25.0**	**+1.7**
MDPB	**Devils Postpil**	**76.25**	**44**	P	**P**	**18 10 29.6**	**+3.1**
MDPB				IAmb	IAmb	18 10 30.6	
	comp=Z,10nm,0.8s						
YBH	**Yreka Blue Hor**	**76.25**	**39**	P	P	18 10 29.6	+3.5
	comp=Z,7.5nm,0.9s,baz=155,slow=2.7,SNR=8.1						
WAKR	**Walker**	**76.49**	**43**	P	P	18 10 31.6	+3.9
WAKR				IAmb	IAmb	18 10 31.7	
	comp=Z,7.6nm,0.8s						
BEKR	**Beckworth**	**76.64**	**42**	P	**P**	**18 10 31.8**	**+3.3**
PNTR	**Pine Nut**	**76.70**	**43**	P	P	18 10 32.5	+3.6
YERR	**Yerington**	**76.88**	**43**	P	**P**	**18 10 33.0**	**+3.1**
YERR				IAmb	IAmb	18 10 33.5	
	comp=Z,8.5nm,0.7s						
RYN	**Ryan**	**77.16**	**43**	P	**P**	**18 10 34.6**	**+3.2**
NVAR	**Mina Array Bea**	**77.20**	**44**	P	**P**	**18 10 34.9**	**+3.3**
	comp=Z,6.2nm,0.7s,baz=226,slow=8.7,SNR=49						
NV11	**Mina Array Sit**	**77.30**	**44**	P	**P**	**18 10 34.7**	**+2.6**
NV11				IAmb	IAmb	18 10 36.3	
	comp=Z,19nm,1.3s						
NJ2	**Nanjing**	**77.49**	**309**	*e*P	**P**	**18 10 35.2**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KVN	**Kaiserville**	**77.66**	**43**	P	**P**	**18 10 37.5**	**+3.3**
KVN				IAmb	IAmb	18 10 38.1	
	comp=Z,8.3nm,0.8s						
TPNV	**Topopah Spring**	**77.82**	**46**	P	**P**	**18 10 38.0**	**+3.0**
TPNV				IAmb	IAmb	18 10 39.2	
	comp=Z,9.1nm,0.7s						
214A	**Organ Pipe Nat**	**77.90**	**52**	P	**P**	**18 10 36.7**	**+1.3**
SHPR	**Sheep Range**	**78.35**	**47**	P	**P**	**18 10 41.2**	**+3.3**
R11A	**Troy Canyon, C**	**78.98**	**45**	P	**P**	**18 10 44.6**	**+3.3**
TUC	**Tucson**	**79.59**	**52**	P	**P**	**18 10 47.6**	**+3.1**
TUC				IAmb	IAmb	18 10 49.6	
	comp=Z,7.4nm,0.8s						
WHN	**Wuhan**	**80.28**	**306**	P	**P**	**18 10 43.9**	**-4.1**
SEY	**Seymchan**	**82.03**	**347**	P	**P**	**18 10 57.5**	**+1.1**
	comp=Z,4.6nm,0.7s,baz=138,slow=6.4,SNR=19						
WRH	**Wood River Hil**	**83.14**	**12**	P	**P**	**18 11 03.6**	**+1.7**
HDA	**Harding Lake**	**83.32**	**13**	P	**P**	**18 11 04.6**	**+1.7**
CCB	**Clear Creek Bu**	**83.35**	**12**	P	**P**	**18 11 04.6**	**+1.6**
COLA	**College**	**83.54**	**12**	P	**P**	**18 11 04.0**	**+0.1**
SCRK	**Sand Creek**	**83.61**	**14**	P	**P**	**18 11 06.4**	**+1.9**
SCRK				IAmb	IAmb	18 11 07.2	
	comp=Z,6.4nm,0.7s						
IL31		**83.65**	**13**	P	**P**	**18 11 05.9**	**+1.4**
IL31				IAmb	IAmb	18 11 06.8	
	comp=Z,7.0nm,0.7s						
ILAR	**Eielson Array**	**83.65**	**13**	P	**P**	**18 11 05.8**	**+1.3**
	comp=Z,5.1nm,0.6s,baz=224,slow=5.1,SNR=71						
TX31	**Lajitas Ar. Si**	**83.98**	**57**	P	P	18 11 11.2	+4.1
TX31				IAmb	IAmb	18 11 12.6	
	comp=Z,17nm,1.1s						
TXAR	**Lajitas Array**	**83.98**	**57**	P	P	18 11 11.4	+4.3
	comp=Z,6.8nm,0.8s,baz=219,slow=6.8,SNR=64						
DLMT	**Dillon**	**84.40**	**40**	P	**P**	**18 11 11.8**	**+2.9**
DLMT				IAmb	IAmb	18 11 13.0	
	comp=Z,7.0nm,0.8s						
BILL	**Bilibino**	**84.51**	**354**	P	**P**	**18 11 09.8**	**+1.1**
BILL				IAmb	IAmb	18 11 11.1	
	comp=Z,8.9nm,0.8s						
PRP	**Porcupine Dome**	**84.59**	**13**	P	**P**	**18 11 11.9**	**+2.5**
PRP				IAmb	IAmb	18 11 12.5	
	comp=Z,7.7nm,1.1s						
DAWY	**Dawson**	**84.83**	**16**	P	**P**	**18 11 12.7**	**+2.3**
DAWY				IAmb	IAmb	18 11 13.5	
	comp=Z,8.1nm,1.0s						
BW06	**Boulder Array**	**85.12**	**43**	P	**P**	**18 11 15.2**	**+2.5**
PD31	**Pinedale Array**	**85.12**	**43**	P	**P**	**18 11 15.2**	**+2.5**
PDAR	**Pinedale Array**	**85.12**	**43**	P	**P**	**18 11 15.3**	**+2.7**
	comp=Z,1.8nm,0.6s,baz=217,slow=3.9,SNR=20						
MAW	**Mawson**	**86.15**	**199**	P	**P**	**18 11 18.4**	**+1.6**
	comp=Z,2.1nm,0.3s,baz=129,slow=8.4,SNR=5.1						
HHC	**Hu-ho-hao-te**	**86.62**	**314**	*e*P	P	18 11 22.9	+3.2
HHC				pmax	pmax		
	comp=Z,120nm,5.7s						
RSSD	**Black Hills**	**89.34**	**44**	P	**P**	**18 11 34.8**	**+2.3**
RSSD				IAmb	IAmb	18 11 35.9	
	comp=Z,6.5nm,1.1s						
LZH	**Lanzhou**	**90.50**	**307**	*e*P	**P**	**18 11 39.4**	**+1.4**
LZH				pP	pP	18 13 15.8	-3.6
LZH				PP	**PP**	**18 15 21.0**	**+0.3**
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
LZH				pmax	pmax		
	comp=Z,73nm,5.4s						
SYO	**Syowa Base**	**91.39**	**192**	*e*P	**P**	**18 11 41.0**	**-0.3**
SYO	**Syowa Base**	**91.39**	**192**	*e*PcP	**PcP**	**18 11 43.4**	**+1.5**
YKA	**Yellowknife Ar**	**92.02**	**24**	P	**P**	**18 11 46.2**	**+2.1**
	comp=Z,2.1nm,0.6s,baz=244,slow=4.4,SNR=53						
MKAR	**Makanchi Array**	**108.48**	**315**	PKiKP	**PKiKP**	**18 17 02.1**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=80,slow=1.9,SNR=5.2						
KSH	**Kashi**	**112.74**	**307**	PKP	**PKiKP**	**18 17 09.7**	**-0.1**
KSH				PP	PP	18 18 11.8	+6.0
ARCES	**ARCESS Array B**	**124.49**	**350**	PKP	**PKiKP**	**18 17 33.0**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=40,slow=0.3,SNR=21						
FINES	**FINESS Array B**	**131.50**	**345**	PKP	**PKiKP**	**18 17 45.6**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=85,slow=2.1,SNR=5.5						
NOA	**NORSAR Array B**	**134.46**	**354**	PKP	**PKiKP**	**18 17 51.2**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=14,slow=3.6,SNR=2.6						
AKASG	**Malin Array Be**	**139.22**	**334**	PKP	**PKiKP**	**18 18 00.0**	**-1.9**
	comp=Z,0.6nm,0.5s,baz=44,slow=1.7,SNR=4.8						
BURAR	**Bucovina Array**	**143.28**	**334**	PKPdf	**PKiKP**	**18 18 07.7**	**-2.8**
KOLS	**Kolonicke sedl**	**143.34**	**338**	*e*PKP	**PKiKP**	**18 18 07.2**	**-3.3**
CLL	**Collm**	**143.68**	**349**	*e*PKPdf	**PKiKP**	**18 18 08.0**	**-3.1**
OSTC	**Ostas**	**143.71**	**345**	*e*PKP	**PKiKP**	**18 18 08.2**	**-3.0**
UPC	**Upice**	**143.80**	**346**	*e*PKP	**PKiKP**	**18 18 08.3**	**-3.1**
OKC	**Ostrava-Krasne**	**143.86**	**343**	*e*PKP	**PKiKP**	**18 18 08.3**	**-3.2**
DPC	**Dobruska-Polom**	**143.88**	**345**	*e*PKP	**PKiKP**	**18 18 08.9**	**-2.7**
BRTR	**Keskin Array B**	**144.06**	**318**	PKP	**PKiKP**	**18 18 09.5**	**-3.0**
	comp=Z,8.3nm,0.8s,baz=85,slow=2.7,SNR=46						
BRTR	**Keskin Array B**	**144.06**	**318**		**PKiKP**	**18 18 09.8**	**-2.7**
LANS	**Liptovska Anna**	**144.08**	**341**	*e*PKP	**PKiKP**	**18 18 10.1**	**-2.0**
MORC	**Moravsky Berou**	**144.08**	**344**	*e*PKP	**PKiKP**	**18 18 09.2**	**-2.9**
KECS	**Kecovo**	**144.34**	**340**	*e*PKP	**PKiKP**	**18 18 10.5**	**-2.1**
PRU	**Pruhonice**	**144.63**	**347**	*e*PKP	**PKiKP**	**18 18 10.6**	**-2.5**
GOPC	**GO Pecny, Ondr**	**144.64**	**346**	*e*PKP	**PKiKP**	**18 18 10.2**	**-3.0**
VRAC	**Vranov**	**144.76**	**344**	*e*PKP	**PKiKP**	**18 18 11.8**	**-1.6**
NKC	**Novy Kostel**	**144.81**	**349**	*e*PKP	**PKiKP**	**18 18 11.5**	**-2.0**
VYHS	**Vyhne**	**144.86**	**341**	*e*PKP	**PKiKP**	**18 18 12.0**	**-1.7**
JAVC	**Velka Javorina**	**144.88**	**343**	*e*PKP	**PKiKP**	**18 18 13.0**	**-0.8**
KRUC	**Moravsky**	**145.04**	**344**	*e*PKP	**PKiKP**	**18 18 12.2**	**-1.8**
SMOL	**Smolenice**	**145.26**	**343**	*e*PKP	**PKiKP**	**18 18 13.5**	**-1.0**
MODS	**Modra-Piesok**	**145.43**	**343**	*e*PKP	**PKiKP**	**18 18 13.0**	**-1.9**
GRA1	**Grafenberg Arr**	**145.55**	**350**	PKPbc	**PKiKP**	**18 18 14.3**	**-0.7**
KHC	**Kasperske Hory**	**145.65**	**347**	*e*PKP	**PKiKP**	**18 18 13.3**	**-2.0**
KHC	**Kasperske Hory**	**145.65**	**347**	PKPbc	**PKiKP**	**18 18 14.7**	**-0.6**
GEC2	**GERESS Array S**	**145.89**	**347**	PKPbc	**PKiKP**	**18 18 15.1**	**-0.8**
GERES	**GERESS Array B**	**145.89**	**347**	PKPbc	**PKiKP**	**18 18 14.7**	**-1.2**
	comp=Z,2.9nm,0.6s,baz=24,slow=3.6,SNR=28						
CONA	**Conrad Observa**	**146.23**	**344**	*e*PKPab	**PKiKP**	**18 18 16.3**	**-0.3**
	comp=Z,7.5nm,0.7s						
MOA	**Molln**	**146.70**	**346**	*i* PKPbc	**PKPab**	**18 18 17.1**	**-0.6**
	comp=Z,5.2nm,0.8s						
ARSA	**Arzberg**	**146.94**	**344**	*i* PKPbc	**PKPab**	**18 18 17.8**	**-0.9**
	comp=Z,6.5nm,1.2s						
BFO	**Black Forest**	**147.28**	**353**		**PKPab**	**18 18 19.3**	**-0.7**
SOKA	**Soboth**	**147.60**	**344**	*i* PKPbc	**PKPab**	**18 18 19.2**	**-2.2**
	comp=Z,3.9nm,1.0s						
KBA	**Koelnbreinsper**	**147.64**	**346**	*e*PKPbc	**PKiKP**	**18 18 18.9**	**-0.7**
	comp=Z,1.5nm,0.4s						
RETA	**Reutte**	**147.76**	**350**	*i* PKPbc	**PKPab**	**18 18 20.0**	**-2.0**
	comp=Z,2.3nm,0.5s						
WATA	**Walderalm**	**147.76**	**349**	*i* PKPbc	**PKPab**	**18 18 19.7**	**-2.4**
	comp=Z,3.4nm,0.6s						
MOTA	**Moosalm**	**147.84**	**349**	*i* PKPbc	**PKPab**	**18 18 19.8**	**-2.6**
	comp=Z,5.8nm,0.9s						
OBKA	**Obir**	**147.88**	**345**	*i* PKiKP	**PKPab**	**18 18 21.6**	**-0.9**
	comp=Z,2.8nm,0.8s						
SQTA	**Sankt Quirin**	**147.94**	**349**	*i* PKPbc	**PKPab**	**18 18 20.1**	**-2.7**
	comp=Z,10nm,1.1s						
MYKA	**Terra Mystica**	**147.99**	**346**	*i* PKPbc	**PKPab**	**18 18 20.0**	**-3.0**
	comp=Z,5.7nm,0.7s						
DAVA	**Damuels**	**148.10**	**351**	*i* PKPbc	**PKPab**	**18 18 21.0**	**-2.5**
	comp=Z,10.0nm,1.0s						
ABTA	**Abfaltersbach**	**148.13**	**347**	*e*PKPbc	**PKPab**	**18 18 20.5**	**-3.1**
	comp=Z,8.8nm,0.6s						
FETA	**Feichten**	**148.22**	**350**	*i* PKPbc	**PKPab**	**18 18 21.1**	**-3.0**
	comp=Z,4.5nm,1.1s						
STAL	**STALIGIAL**	**148.55**	**347**		**PKiKP**	**18 18 21.6**	**+0.2**
FUORN	**Ofenpass-Fuorn**	**148.69**	**350**		**PKPab**	**18 18 23.2**	**-2.9**
TEOL	**Teolo**	**149.63**	**347**		**PKPab**	**18 18 25.0**	**-4.7**
LIT	**Litokhoron**	**150.33**	**328**		**PKiKP**	**18 18 26.0**	**+0.7**
FNA	**Florina**	**150.35**	**331**		**PKiKP**	**18 18 26.2**	**+0.9**
BNI	**Bardonecchia**	**150.70**	**354**		**PKPab**	**18 18 28.7**	**-5.6**
TORD	**Torodi Ar. Bea**	**177.13**	**160**	PKP	**PKPdf**	**18 18 44.1**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=138,slow=3.8,SNR=5.7						
TORD				PKPab	PKPab	18 20 32.8	+2.4
	comp=Z,1.1nm,0.9s,baz=236,slow=3.9,SNR=4.0						

IDC 12 18:12:32.4±2.1, **6°.59S**×**129°.44E**, **h0**km, **mb3.2**/1, **mb1 3.8**/4, **mb1mx3.5**/43, **mbtmp3.6**/4, **ML3.7**/3, **Error ellipse: s-maj=89.4km s-min=27.4km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.02**	**198**	Pn	Pn	18 15 26.6	+1.4
	0.2nm,0.3s,baz=27,slow=14,SNR=10						
FITZ				Sn	Sn	18 17 25.4	-15
	0.3nm,0.3s,baz=80,slow=18,SNR=4.1						
WRA	**Warramunga Arr**	**14.10**	**161**	Pn	Pn	18 15 52.7	-0.9
	0.5nm,0.3s,baz=341,slow=13,SNR=23						
WRA				Sn	Sn	18 18 17.8	-13
	0.3nm,0.3s,baz=336,slow=24,SNR=4.7						
ASAR	**Alice Springs**	**17.51**	**166**	P	Pn	18 16 37.6	-0.6
	0.2nm,0.3s,baz=344,slow=11,SNR=28						
ASAR				S	Sn	18 19 40.7	-13
	0.1nm,0.3s,baz=343,slow=25,SNR=4.0						
MKAR	**Makanchi Array**	**67.58**	**327**	P	P	18 23 30.9	0.0
	0.1nm,0.3s,baz=118,slow=8.3,SNR=3.1						

IDC ***12*** *18:14:40.6±1.0, 31°.43S×177°.60W, h0km, mb4.3/7, mb1 4.5/8, mb1mx4.1/36, mbtmp4.3/8, ML4.5/1, MS3.1/4, Ms1 3.1/4, ms1mx2.8/33, Error ellipse: s-maj=27.8km s-min=24.5km az=148.0*
NEIC ***12*** *18:14:42.5±1.6, 31°.53S±0°.07×177°.7W±0°.2, h10km±4km, mb4.6/11, Error ellipse: s-maj=25.6km s-min=8.1km az=103.0*

ISC 12 18:14:44.2±1.0, **31°.55S**±0°.08×**177°.8W**±0°.2, **h26**km, **n28**, σ1§**48**/23, **mb4.5**/12, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.29**	**356**	Pn	**Pn**	**18 15 17.9**	**-2.5**
	155nm,0.3s,baz=90,slow=20,SNR=5.0						
RAO				Sn	**Sn**	**18 15 46.7**	**-1.0**
	229nm,0.3s,baz=237,slow=22,SNR=4.7						
URZ	**Urewera**	**7.91**	**211**	Pn	**Pn**	**18 16 35.0**	**-2.5**
	0.5nm,0.3s,baz=133,slow=19,SNR=6.2						
URZ				Sn	**Sn**	**18 18 03.8**	**-2.4**
	2.7nm,0.3s,baz=231,slow=23,SNR=6.4						
DZM	**Mont Dzumac**	**16.96**	**300**	LR	LR	18 24 15.6	
	comp=Z,113nm,18.3s,baz=205,slow=34						
RAR	**Rarotonga**	**19.09**	**62**	LR	LR	18 27 09.5	
	comp=Z,21nm,18.5s,baz=251,slow=40						
ARMA	**Armidale**	**26.24**	**264**	P	**P**	**18 20 15.6**	**-1.7**
ARMA				IAmb	IAmb	18 20 29.4	
	comp=Z,13nm,1.4s						
HNR	**Honiara**	**30.22**	**312**	LR	LR	18 30 26.4	
	comp=Z,25nm,18.4s,baz=44,slow=31						
TOO	**Toolangi**	**30.73**	**249**	P	**P**	**18 20 56.8**	**-0.4**
TOO				IAmb	IAmb	18 21 09.5	
	comp=Z,16nm,1.4s						
CTA	**Charters Tower**	**34.21**	**281**	P	**P**	**18 21 30.4**	**+2.6**
	comp=Z,6.6nm,0.9s,baz=118,slow=15,SNR=3.1						
STKA	**Stephens Creek**	**34.44**	**259**	P	**P**	**18 21 32.2**	**+2.4**
	comp=Z,2.2nm,0.8s,baz=91,slow=11,SNR=6.9						
STKA	**Stephens Creek**	**34.44**	**259**	IAmb	IAmb	18 21 33.4	
	comp=Z,0.5nm,0.8s						
BBOO	**Buckleboo**	**38.88**	**256**	P	**P**	**18 22 08.2**	**+0.7**
BBOO				IAmb	IAmb	18 22 08.9	
	comp=Z,8.7nm,0.9s						
COEN	**Coen**	**39.80**	**287**	P	**P**	**18 22 15.7**	**+0.3**
COEN				IAmb	IAmb	18 22 26.2	
	comp=Z,25nm,1.4s						
AS31	**Alice Springs**	**43.27**	**268**	P	**P**	**18 22 44.6**	**+0.8**
ASAR	**Alice Springs**	**43.27**	**268**	P	**P**	**18 22 44.9**	**+1.0**
	comp=Z,2.3nm,0.7s,baz=106,slow=7.6,SNR=24						
ASAR				PcP	**PcP**	**18 24 33.0**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=115,slow=3.8,SNR=2.9						
WR0	**Warramunga Arr**	**44.19**	**273**	P	**P**	**18 22 52.1**	**+0.9**
WR0				IAmb	IAmb	18 23 11.5	
	comp=Z,15nm,1.1s						
WRAB	**Tennant Creek**	**44.36**	**273**	P	**P**	**18 22 53.4**	**+0.8**
WRA	**Warramunga Arr**	**44.37**	**273**	P	**P**	**18 22 53.2**	**+0.5**
	comp=Z,6.7nm,0.7s,baz=113,slow=7.6,SNR=28						
WRA	**Warramunga Arr**	**44.37**	**273**	P	**P**	**18 22 53.6**	**+1.0**
FITZ	**Fitzroy Crossi**	**52.58**	**271**	P	**P**	**18 23 57.0**	**+1.1**
	comp=Z,5.4nm,1.0s,baz=134,slow=4.3,SNR=4.3						
FITZ	**Fitzroy Crossi**	**52.58**	**271**	IAmb	IAmb	18 24 01.8	
	comp=Z,24nm,1.4s						
QSPA	**South Pole Qui**	**58.56**	**180**	P	**P**	**18 24 39.8**	**+1.4**
	comp=Z,1.8nm,0.9s,baz=9.5,slow=6.1,SNR=4.9						
QSPA	**South Pole Qui**	**58.56**	**180**	IAmb	IAmb	18 24 56.9	
	comp=Z,5.5nm,1.0s						
NVAR	**Mina Array Bea**	**88.94**	**43**	P	**P**	**18 27 37.3**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=213,slow=6.5,SNR=3.3						
DLBC	**Dease Lake**	**98.09**	**23**	LR	LR	19 07 19.1	
	comp=Z,2µm,19.1s,baz=312,slow=32						
TEIG	**Tepich**	**99.88**	**72**	LR	LR	19 12 02.0	
	comp=Z,13nm,18.0s,slow=34						
FINES	**FINESS Array B**	**146.29**	**340**	PKPbc	**PKPbc**	**18 34 21.5**	**-0.2**
	comp=Z,3.1nm,0.6s,baz=45,slow=3.1,SNR=11						
AKASG	**Malin Array Be**	**152.34**	**322**	PKPbc	**PKPbc**	**18 34 37.4**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=70,slow=0.7,SNR=3.1						
BRTR	**Keskin Array B**	**153.32**	**297**	PKPbc	**PKPbc**	**18 34 40.0**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=92,slow=4.3,SNR=3.5						

IDC ***12*** *18:16:07.2±2.4, 20°.52S×71°.11W, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.5/29, mbtmp3.7/3, ML3.7/1, MS2.4/1, Ms1 2.5/1, ms1mx2.3/22, Error ellipse: s-maj=72.2km s-min=58.5km az=163.0*
SJA ***12*** *18:16:15.8±1.0, 20°.39S×70°.56W, h40km, ML3.4, MW3.5*
NEIC ***12*** *18:16:17.0±1.9, 20°.29S±0°.06×70°.3W±0°.1, h54km±4km, Error ellipse: s-maj=18.0km s-min=7.3km az=101.0*
GUC ***12*** *18:16:17.7±0.8, 20°.24S×70°.10W, h73km±4km, ML3.9*

ISC 12 18:16:16.5±0.9, **20°.29S**

H11N1	**WAKE ISLAND Hyl**	**26.53**	**280**	T	T	20 54 55.0			
	baz=101,slow=74,SNR=12								
MKAR	**Makanchi Array**	**145.37**	**34**	PKPbc	**PKiKP**	**18 35 46.9**	**-2.5**		
	comp=Z,0.2nm,0.5s,baz=312,slow=3.2,SNR=3.0								

ROM 12 18:25:01.2±0.2, 43°.403N±0'.004×12°.483E±0'.005, h6km±1km, ML1.1/7, Error ellipse: s-maj=0.4km s-min=0.1km az=25.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.06**	**249**	P	Pg	18 25 02.9	+0.1
ATVO				S	Sg	18 25 04.2	+0.2
ATFO	**Monte Foce - G**	**0.07**	**120**	P	Pg	18 25 03.1	0.0
ATFO				S	Sg	18 25 04.7	+0.3
ATFO				AML	AML		
	comp=E,290μm,0.5s						
ATFO				AML	AML		
	comp=N,328μm,1.1s						
ATPI	**Pietralunga -**	**0.07**	**309**	P	Pg	18 25 03.2	+0.1
ATPI				S	Sg	18 25 04.8	+0.4
PIEI	**Pieia**	**0.14**	**16**	P	Pg	18 25 04.5	+0.4
PIEI				S	Sg	18 25 07.7	+1.6
PIEI				AML	AML		
	comp=N,99μm,0.2s						
PIEI				AML	AML		
	comp=E,158μm,0.3s						
MURB	**Monte Urbino**	**0.14**	**168**	P	Pg	18 25 04.6	+0.4
MURB				S	Sg	18 25 07.6	+1.4
MURB				AML	AML		
	comp=E,172μm,0.2s						
MURB				AML	AML		
	comp=N,148μm,0.7s						
MURB				AML	AML		
	comp=E,173μm,0.2s						
MURB				AML	AML		
	comp=N,148μm,0.7s						
ATMI	**Monte Miggiano**	**0.17**	**246**	P	Pg	18 25 05.3	+0.6
ATMI				S	Sg	18 25 08.1	+1.1
ATMI				AML	AML		
	comp=E,79μm,0.2s						
ATMI				AML	AML		
	comp=N,68μm,0.3s						
ATMI				AML	AML		
	comp=E,79μm,0.2s						
BADI	**Badiali**	**0.20**	**302**	P	Pg	18 25 05.8	+0.5
BADI				S	Sg	18 25 09.6	+1.6
BADI				AML	AML		
	comp=E,118μm,1.1s						
BADI				AML	AML		
	comp=N,108μm,0.4s						
NARO	**Abbazia di Nar**	**0.22**	**19**	P	Pg	18 25 05.8	+0.3
SSFR	**Montelago di S**	**0.22**	**81**	P	Pg	18 25 05.9	+0.3
SSFR				S	Sg	18 25 09.8	+1.3
SSFR				AML	AML		
	comp=E,112μm,1.4s						
SSFR				AML	AML		
	comp=N,91μm,1.1s						
ATTE	**AVT- Monte Tez**	**0.23**	**205**	P	Pg	18 25 06.6	+1.0
ATTE				S	Sg	18 25 09.9	+1.3
ATTE				AML	AML		
	comp=N,28μm,1.6s						
ATTE				AML	AML		
	comp=E,26μm,1.3s						
ATCC	**AVT- Casa Cast**	**0.25**	**152**	P	Pg	18 25 06.7	+0.7
ATCC				S	Sg	18 25 11.3	+2.0

*MOS **12** 18:26:01.1±1.0, 45°.52N×26°.38E, h143km, mb4.0/5, Error ellipse: s-maj=6.2km s-min=5.3km az=122.5*
*SIGU **12** 18:26:02.6±0.1, 46°.N±1°×2°.6E±°, h137km, mb3.5/8*
*BUC **12** 18:26:02.5±0.2, 45°.51N×26°.43E, h137km±2km, ml4.4/68, Error ellipse: s-maj=1.6km s-min=1.4km az=176.0*
*IDC **12** 18:26:02.5±0.5, 45°.59N×26°.27E, h138km±5km, mb3.4/13, mb1 3.4/22, mb1mx3.4/38, mbtmp3.8/22, Error ellipse: s-maj=13.2km s-min=9.2km az=162.0*
*NEIC **12** 18:26:02.1±2.0, 45°.54N±0'.05×26°.34E±0'.05, h141km±4km, Error ellipse: s-maj=8.0km s-min=5.5km az=174.0*
*SOF **12** 18:26:03.1, 45°.57N×26°.36E, h100km, MD4.1*
ISC 12 18:26:02.3±0.5, 45°.53N±0'.02×26°.42E±0'.02, h142km±4km, n464, σ1¥00/564, mb3.9/20, 144C-94D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BISRR	**Bisoca**	**0.21**	**86**	⇑P	**Pn**	**18 26 22.1**	**+0.4**
BISRR				⇑S	**Sn**	**18 26 36.2**	**-0.2**
BISRR	**Bisoca**	**0.21**	**86**	⇑P	**Pn**	**18 26 22.1**	**+0.4**
BISRR	**Bisoca**	**0.21**	**86**		**Pn**	**18 26 22.0**	**+0.4**
BISRR					**Sn**	**18 26 37.0**	**+0.6**
MLR	**Muntele Rosu**	**0.34**	**263**	⇓P	**Pn**	**18 26 22.4**	**+0.2**
MLR				⇓S	**Sn**	**18 26 36.7**	**-0.5**
MLR	**Muntele Rosu**	**0.34**	**263**	P	**Pn**	**18 26 22.3**	**+0.1**
	109nm,0.3s,baz=350,slow=11,SNR=285						
MLR				S	**Sn**	**18 26 36.4**	**-0.8**
	2μm,0.3s,baz=143,slow=20,SNR=145						
MLR	**Muntele Rosu**	**0.34**	**263**	⇓P	**Pn**	**18 26 22.4**	**+0.2**
MLR	**Muntele Rosu**	**0.34**	**263**	⇓S	**Sn**	**18 26 36.7**	**-0.5**
PLOR	**Plostina**	**0.36**	**27**	⇑P	**Pn**	**18 26 22.0**	**-0.2**
PLOR				⇓S	**Sn**	**18 26 36.7**	**-0.5**
PLOR	**Plostina**	**0.36**	**27**	⇑P	**Pn**	**18 26 22.0**	**-0.2**
PLOR	**Plostina**	**0.36**	**27**		**Pn**	**18 26 22.0**	**-0.2**
PLOR					**Sn**	**18 26 36.7**	**-0.5**
VRI	**Vrincioaia**	**0.40**	**33**	P	**Pn**	**18 26 22.3**	**0.0**
VRI						18 26 36.8	
VRI	**Vrincioaia**	**0.40**	**33**	⇑P	**Pn**	**18 26 22.3**	**0.0**
VRI				⇑S	**Sn**	**18 26 36.8**	**-0.6**
VRI	**Vrincioaia**	**0.40**	**33**	⇑P	**Pn**	**18 26 22.3**	**0.0**
VRI	**Vrincioaia**	**0.40**	**33**	P	**Pn**	**18 26 22.3**	**0.0**
VRI	**Vrincioaia**	**0.40**	**33**		**Pn**	**18 26 22.3**	**0.0**
VRI					**Sn**	**18 26 36.8**	**-0.6**
GRER		**0.42**	**111**	⇓P	**Pn**	**18 26 23.4**	**+1.0**
GRER				⇓S	**Sn**	**18 26 38.5**	**+0.9**
GRER		**0.42**	**111**	⇓P	**Pn**	**18 26 23.4**	**+1.0**
ISR	**Istrita**	**0.42**	**168**	⇑P	**Pn**	**18 26 22.7**	**+0.3**
ISR				⇓S	**Sn**	**18 26 38.1**	**+0.4**
ISR	**Istrita**	**0.42**	**168**	⇑P	**Pn**	**18 26 22.7**	**+0.3**
ODBI	**Odobesti**	**0.50**	**63**	⇓P	**Pn**	**18 26 23.6**	**+0.9**
ODBI				⇓S	**Sn**	**18 26 38.5**	**+0.3**
ODBI	**Odobesti**	**0.50**	**63**	⇓P	**Pn**	**18 26 23.6**	**+0.9**
SECR		**0.56**	**207**	⇑P	**Pn**	**18 26 23.6**	**+0.6**
SECR				⇑S	**Sn**	**18 26 39.4**	**+0.6**
SECR		**0.56**	**207**	⇑P	**Pn**	**18 26 23.6**	**+0.6**
PETR	**Petresti**	**0.60**	**71**	⇑P	**Pn**	**18 26 23.8**	**+0.6**
PETR				⇑S	**Sn**	**18 26 39.3**	**+0.1**
PETR	**Petresti**	**0.60**	**71**	⇑P	**Pn**	**18 26 23.8**	**+0.6**
PETR	**Petresti**	**0.60**	**71**		**Pn**	**18 26 23.8**	**+0.6**
PETR					**Sn**	**18 26 39.3**	**+0.1**
PLAR	**PLOIESTI**	**0.68**	**204**	⇑P	**Pn**	**18 26 24.4**	**+0.6**
PLAR				⇑S	**Sn**	**18 26 40.7**	**+0.7**
PLAR	**PLOIESTI**	**0.68**	**204**	⇑P	**Pn**	**18 26 24.4**	**+0.6**
OZUR		**0.71**	**322**	⇓P	**Pn**	**18 26 23.7**	**-0.4**
OZUR				⇓S	**Sn**	**18 26 39.1**	**-1.6**
OZUR		**0.71**	**322**	⇓P	**Pn**	**18 26 23.7**	**-0.4**
PGOR	**Pogoanele**	**0.74**	**147**	⇑P	**Pn**	**18 26 24.7**	**+0.5**
PGOR				⇑S	**Sn**	**18 26 41.5**	**+0.7**
PGOR	**Pogoanele**	**0.74**	**147**	⇑P	**Pn**	**18 26 24.7**	**+0.5**
PGOR	**Pogoanele**	**0.74**	**147**		**Pn**	**18 26 24.7**	**+0.5**
PGOR					**Sn**	**18 26 41.8**	**+1.0**
DOPR	**Dopca**	**0.84**	**301**	⇑P	**Pn**	**18 26 24.8**	**-0.2**
DOPR				⇓S	**Sn**	**18 26 41.3**	**-1.0**
DOPR	**Dopca**	**0.84**	**301**	⇑P	**Pn**	**18 26 24.8**	**-0.2**
DOPR	**Dopca**	**0.84**	**301**		**Pn**	**18 26 24.8**	**-0.2**
DOPR					**Sn**	**18 26 41.3**	**-1.0**
SULR		**0.86**	**188**	⇓P	**Pn**	**18 26 25.6**	**+0.5**
SULR				⇓S	**Sn**	**18 26 42.9**	**+0.5**
SULR		**0.86**	**188**	⇓P	**Pn**	**18 26 25.6**	**+0.5**
GHRR		**0.87**	**52**	⇑P	**Pn**	**18 26 25.6**	**+0.4**
GHRR				⇑S	**Sn**	**18 26 42.3**	**-0.4**
GHRR		**0.87**	**52**	⇑P	**Pn**	**18 26 25.6**	**+0.4**
TUDR		**0.88**	**86**	⇑P	**Pn**	**18 26 24.9**	**-0.3**
TUDR				⇑S	**Sn**	**18 26 41.9**	**-0.8**
TUDR		**0.88**	**86**	⇑P	**Pn**	**18 26 24.9**	**-0.3**
TUDR		**0.88**	**86**		**Pn**	**18 26 24.9**	**-0.3**
TUDR					**Sn**	**18 26 41.9**	**-0.8**
IZVR	**Izvoarele**	**0.95**	**89**	⇑P	**Pn**	**18 26 25.3**	**-0.5**
IZVR				⇑S	**Sn**	**18 26 42.2**	**-1.5**
IZVR	**Izvoarele**	**0.95**	**89**	⇑P	**Pn**	**18 26 25.3**	**-0.5**
SLCR	**Slobozia Conac**	**0.95**	**86**	⇑P	**Pn**	**18 26 25.5**	**-0.3**
SLCR				⇑S	**Sn**	**18 26 43.0**	**-0.8**
SLCR	**Slobozia Conac**	**0.95**	**86**	⇑P	**Pn**	**18 26 25.5**	**-0.3**

VOIR		**0.97**	**265**	P	**Pn**	**18 26 25.9**	**-0.2**
VOIR						18 26 42.6	
VOIR		**0.97**	**265**	⇓P	**Pn**	**18 26 25.9**	**-0.2**
VOIR				⇑S	**Sn**	**18 26 43.0**	**-1.2**
VOIR		**0.97**	**265**	⇓P	**Pn**	**18 26 25.9**	**-0.2**
VOIR		**0.97**	**265**		**Pn**	**18 26 25.9**	**-0.2**
VOIR					**Sn**	**18 26 42.6**	**-1.6**
TESR	**Tescani**	**0.99**	**9**	⇑P	**Pn**	**18 26 25.9**	**-0.3**
TESR	**Tescani**	**0.99**	**9**	⇑P	**Pn**	**18 26 25.9**	**-0.3**
TESR	**Tescani**	**0.99**	**9**	⇑S	**Sn**	**18 26 43.0**	**-1.6**
TESR	**Tescani**	**0.99**	**9**		**Pn**	**18 26 25.9**	**-0.3**
TESR					**Sn**	**18 26 43.0**	**-1.6**
BRAG	**Branistea**	**1.00**	**95**	⇑P	**Pn**	**18 26 25.9**	**-0.4**
BRAG				⇑S	**Sn**	**18 26 42.9**	**-1.6**
BRAG	**Branistea**	**1.00**	**95**	⇑P	**Pn**	**18 26 25.9**	**-0.4**
MTUR	**Matau**	**1.00**	**253**	⇑P	**Pn**	**18 26 26.6**	**+0.1**
MTUR	**Matau**	**1.00**	**253**	⇑P	**Pn**	**18 26 26.6**	**+0.1**
NEGR	**Negresti**	**1.02**	**89**	⇓P	**Pn**	**18 26 26.4**	**-0.1**
NEGR				⇑S	**Sn**	**18 26 44.1**	**-0.7**
NEGR	**Negresti**	**1.02**	**89**	⇓P	**Pn**	**18 26 26.4**	**-0.1**
INCR	**INCERC-Sediu C**	**1.11**	**190**	⇑P	**Pn**	**18 26 27.5**	**+0.2**
INCR				⇑S	**Sn**	**18 26 46.0**	**-0.2**
INCR	**INCERC-Sediu C**	**1.11**	**190**	⇑P	**Pn**	**18 26 27.5**	**+0.2**
BIR	**Birlad**	**1.12**	**49**	⇑P	**Pn**	**18 26 27.5**	**+0.1**
BIR				⇑S	**Sn**	**18 26 45.4**	**-1.0**
BIR	**Birlad**	**1.12**	**49**	⇑P	**Pn**	**18 26 27.5**	**+0.1**
AMRR	**Amara**	**1.13**	**144**	⇑P	**Pn**	**18 26 27.8**	**+0.3**
AMRR				⇑S	**Sn**	**18 26 46.2**	**-0.3**
AMRR	**Amara**	**1.13**	**144**	⇑P	**Pn**	**18 26 27.8**	**+0.3**
AMRR	**Amara**	**1.13**	**144**		**Pn**	**18 26 27.8**	**+0.3**
AMRR					**Sn**	**18 26 46.2**	**-0.3**
GISR	**Galati**	**1.16**	**94**	⇑P	**Pn**	**18 26 27.8**	**+0.2**
GISR				⇑S	**Sn**	**18 26 46.3**	**-0.4**
GISR	**Galati**	**1.16**	**94**	⇑P	**Pn**	**18 26 27.8**	**+0.2**
BUC1	**Bucharest**	**1.22**	**193**	⇓P	**Pn**	**18 26 28.6**	**+0.3**
BUC1				⇑S	**Sn**	**18 26 47.7**	**-0.4**
BUC1	**Bucharest**	**1.22**	**193**	⇓P	**Pn**	**18 26 28.6**	**+0.3**
GOLR		**1.24**	**237**	⇓P	**Pn**	**18 26 28.9**	**+0.4**
GOLR				⇓S	**Sn**	**18 26 48.7**	**+0.2**
GOLR		**1.24**	**237**	⇓P	**Pn**	**18 26 28.9**	**+0.4**
GIUM	**Giurgiulesti**	**1.26**	**92**	⇑P	**Pn**	**18 26 28.9**	**+0.2**
GIUM				⇓S	**Sn**	**18 26 48.5**	**-0.3**
GIUM	**Giurgiulesti**	**1.26**	**92**	⇑P	**Pn**	**18 26 28.9**	**+0.2**
GIUM	**Giurgiulesti**	**1.26**	**92**	⇑P	**Pn**	**18 26 28.9**	**+0.2**
ARR	**Arges**	**1.27**	**263**	⇓P	**Pn**	**18 26 29.0**	**+0.1**
ARR				⇑S	**Sn**	**18 26 49.0**	**-0.1**
ARR	**Arges**	**1.27**	**263**	⇓P	**Pn**	**18 26 29.0**	**+0.1**
ARR	**Arges**	**1.27**	**263**		**Pn**	**18 26 29.0**	**+0.1**
ARR					**Sn**	**18 26 49.0**	**-0.1**
JOSR	**Joseni**	**1.33**	**332**	⇑P	**Pn**	**18 26 29.2**	**-0.3**
JOSR	**Joseni**	**1.33**	**332**	⇑P	**Pn**	**18 26 29.2**	**-0.3**
SGRR	**Singureni**	**1.35**	**194**	⇑P	**Pn**	**18 26 29.8**	**+0.1**
SGRR				⇑S	**Sn**	**18 26 49.7**	**-0.8**
SGRR	**Singureni**	**1.35**	**194**	⇑P	**Pn**	**18 26 29.8**	**+0.1**
HARR	**Harsova**	**1.36**	**128**	P	**Pn**	**18 26 29.8**	**0.0**
HARR	**Harsova**	**1.36**	**128**	⇓P	**Pn**	**18 26 29.8**	**0.0**
HARR	**Harsova**	**1.36**	**128**	⇓P	**Pn**	**18 26 29.8**	**0.0**
HARR	**Harsova**	**1.36**	**128**		**Pn**	**18 26 29.8**	**0.0**
RASA	**Rasa**	**1.42**	**158**	⇑P	**Pn**	**18 26 30.5**	**+0.1**
RASA				⇓S	**Sn**	**18 26 51.8**	**0.0**
RASA	**Rasa**	**1.42**	**158**	⇑P	**Pn**	**18 26 30.5**	**+0.1**
BIZ	**Bicaz**	**1.42**	**351**	⇓P	**Pn**	**18 26 31.3**	**+0.9**
BIZ	**Bicaz**	**1.42**	**351**	⇓P	**Pn**	**18 26 31.3**	**+0.9**
GIRR	**Girov**	**1.42**	**2**	⇑P	**Pn**	**18 26 30.8**	**+0.4**
GIRR	**Girov**	**1.42**	**2**	⇑P	**Pn**	**18 26 30.8**	**+0.4**
HUMR	**Humele**	**1.43**	**226**	⇓P	**Pn**	**18 26 30.5**	**0.0**
HUMR				⇑S	**Sn**	**18 26 51.2**	**-0.8**
HUMR	**Humele**	**1.43**	**226**	⇓P	**Pn**	**18 26 30.5**	**0.0**
HUMR	**Humele**	**1.43**	**226**		**Pn**	**18 26 30.5**	**0.0**
HUMR					**Sn**	**18 26 51.2**	**-0.8**
VASR	**Vaslui**	**1.46**	**40**	⇓P	**Pn**	**18 26 30.9**	**0.0**
VASR				⇓S	**Sn**	**18 26 51.4**	**-1.3**
VASR	**Vaslui**	**1.46**	**40**	⇓P	**Pn**	**18 26 30.9**	**0.0**
TOPG	**Topolog**	**1.53**	**115**	⇑P	**Pn**	**18 26 31.2**	**-0.4**
TOPG				⇑S	**Sn**	**18 26 52.3**	**-1.6**
TOPG	**Topolog**	**1.53**	**115**	⇑P	**Pn**	**18 26 31.2**	**-0.4**
MDB	**Medias**	**1.55**	**294**	P	Pn	18 26 39.9	+8.1
MDB	**Medias**	**1.55**	**294**	⇓P	**Pn**	**18 26 32.5**	**+0.7**
MDB	**Medias**	**1.55**	**294**	⇓P	**Pn**	**18 26 32.5**	**+0.7**
LEOM	**Leova**	**1.58**	**53**	⇓P	**Pn**	**18 26 32.1**	**+0.1**
LEOM				⇑S	**Sn**	**18 26 53.8**	**-1.2**
LEOM	**Leova**	**1.58**	**53**	P	**Pn**	**18 26 31.8**	**-0.3**
LEOM	**Leova**	**1.58**	**53**	⇓P	**Pn**	**18 26 32.1**	**+0.1**
LEOM	**Leova**	**1.58**	**53**	P	**Pn**	**18 26 32.2**	**+0.1**
COPA	**Copaceanca**	**1.64**	**212**	⇓P	**Pn**	**18 26 32.8**	**0.0**
COPA				⇑S	**Sn**	**18 26 54.9**	**-1.1**
COPA	**Copaceanca**	**1.64**	**212**	⇓P	**Pn**	**18 26 32.8**	**0.0**
CVDA	**Cernavoda**	**1.66**	**136**	⇑P	**Pn**	**18 26 33.2**	**+0.2**
CVDA				⇑S	**Sn**	**18 26 55.0**	**-1.5**
CVDA	**Cernavoda**	**1.66**	**136**	⇑P	**Pn**	**18 26 33.2**	**+0.2**
ICOR	**Ion Corvin**	**1.72**	**145**	⇑P	**Pn**	**18 26 34.0**	**+0.2**
ICOR				⇑S	**Sn**	**18 26 56.5**	**-1.3**
ICOR	**Ion Corvin**	**1.72**	**145**	⇑P	**Pn**	**18 26 34.0**	**+0.2**
TLCR		**1.73**	**101**	P	**Pn**	**18 26 33.5**	**-0.2**
TLCR						18 26 57.3	
TLCR		**1.73**	**101**	⇑P	**Pn**	**18 26 33.5**	**-0.2**
TLCR				⇑S	**Sn**	**18 26 57.3**	**-0.4**
TLCR		**1.73**	**101**	⇑P	**Pn**	**18 26 33.5**	**-0.2**
TLCR		**1.73**	**101**		**Pn**	**18 26 33.5**	**-0.2**
TLCR					**Sn**	**18 26 57.3**	**-0.4**
TIRR	**Tirgusor**	**1.78**	**127**	P	**Pn**	**18 26 33.7**	**-0.6**
TIRR	**Tirgusor**	**1.78**	**127**	⇑P	**Pn**	**18 26 34.4**	**0.0**
TIRR				⇑S	**Sn**	**18 26 57.6**	**-1.2**
TIRR	**Tirgusor**	**1.78**	**127**	⇑P	**Pn**	**18 26 34.4**	**0.0**
TIRR	**Tirgusor**	**1.78**	**127**		**Pn**	**18 26 33.6**	**-0.6**
PRAR	**RASCA**	**1.83**	**356**	⇑P	**Pn**	**18 26 35.6**	**+0.6**
PRAR	**RASCA**	**1.83**	**356**	⇑P	**Pn**	**18 26 35.6**	**+0.6**
IAS	**Iasi**	**1.84**	**25**	⇑P	**Pn**	**18 26 34.8**	**-0.2**
IAS	**Iasi**	**1.84**	**25**	⇑P	**Pn**	**18 26 34.8**	**-0.2**
IAS	**Iasi**	**1.84**	**25**	⇑S	**Sn**	**18 26 58.3**	**-1.9**
JURR	**Jurilovca**	**1.90**	**113**	⇑P	**Pn**	**18 26 35.7**	**0.0**
JURR	**Jurilovca**	**1.90**	**113**	⇑P	**Pn**	**18 26 35.7**	**0.0**
MFTR	**Murfatlar**	**1.97**	**133**	⇑P	**Pn**	**18 26 36.6**	**0.0**
MFTR				⇑S	**Sn**	**18 27 01.4**	**-1.4**
MFTR	**Murfatlar**	**1.97**	**133**	⇑P	**Pn**	**18 26 36.6**	**0.0**
MFTR	**Murfatlar**	**1.97**	**133**		**Pn**	**18 26 36.6**	**0.0**
MFTR					**Sn**	**18 27 01.3**	**-1.4**
RAZG	**Razgrad**	**1.97**	**178**	⇓P	**Pn**	**18 26 36.6**	**0.0**
RAZG				⇓S	**Sn**	**18 27 01.8**	**-1.1**
RAZG	**Razgrad**	**1.97**	**178**	⇓P	**Pn**	**18 26 36.6**	**0.0**
ZIMR		**2.02**	**202**	⇓P	**Pn**	**18 26 37.3**	**+0.1**
ZIMR				⇓S	**Sn**	**18 27 02.6**	**-1.3**
ZIMR		**2.02**	**202**	⇓P	**Pn**	**18 26 37.3**	**+0.1**
VLAD	**Vladila**	**2.10**	**224**	⇓P	**Pn**	**18 26 37.9**	**-0.2**
VLAD				⇑S	**Sn**	**18 27 03.7**	**-1.9**
VLAD	**Vladila**	**2.10**	**224**	⇓P	**Pn**	**18 26 37.9**	**-0.2**
VLAD	**Vladila**	**2.10**	**224**		**Pn**	**18 26 37.9**	**-0.2**
VLAD					**Sn**	**18 27 03.6**	**-1.9**
TSCT	**Constanta Port**	**2.10**	**130**	⇓P	**Pn**	**18 26 38.3**	**+0.2**
TSCT				⇓S	**Sn**	**18 27 04.5**	**-1.2**
TSCT	**Constanta Port**	**2.10**	**130**	⇓P	**Pn**	**18 26 38.3**	**+0.2**
ARCR	**ARCALIA**	**2.11**	**318**	⇓P	**Pn**	**18 26 38.1**	**-0.2**
ARCR	**ARCALIA**	**2.11**	**318**	⇓P	**Pn**	**18 26 38.1**	**-0.2**
EFOR	**EFORIE**	**2.14**	**132**	⇑P	**Pn**	**18 26 38.9**	**+0.3**
EFOR				⇑S	**Sn**	**18 27 05.4**	**-1.2**
EFOR	**EFORIE**	**2.14**	**132**	⇑P	**Pn**	**18 26 38.9**	**+0.3**
EFOR	**EFORIE**	**2.14**	**132**		**Pn**	**18 26 38.9**	**+0.3**
EFOR					**Sn**	**18 27 05.3**	**-1.2**
KIS	**Kishinev**	**2.22**	**48**	⇑ *i* P	**Pn**	**18 26 39.4**	**-0.1**
	230nm,0.5s						
KIS				⇑ *i* S	**Sn**	**18 27 05.6**	**-2.5**
	10μm,0.8s						
KIS	**Kishinev**	**2.22**	**48**	*i* P	**Pn**	**18 26 39.4**	**-0.1**
KIS				*i* S	**Sn**	**18 27 05.6**	**-2.5**
KIS				pmax	pmax		
	comp=Z,230nm,0.5s						
KIS				smax	smax		
	comp=N,9700μm,0.8s						
KIS	**Kishinev**	**2.22**	**48**	P	**Pn**	**18 26 39.4**	**-0.1**
KIS				Pm		18 26 39.7	
KIS				S	**Sn**	**18 27 05.6**	**-2.5**
KIS				Sm		18 27 06.0	
PSN	**Preselentsi**	**2.24**	**145**	*i* P	**Pn**	**18 26 40.4**	**+0.6**
BURAR	**Bucovina Array**	**2.24**	**339**	⇑P	**Pn**	**18 26 41.3**	**+1.4**
BURAR				⇓S	**Sn**	**18 27 10.0**	**+1.1**
BURAR	**Bucovina Array**	**2.24**	**339**	⇑P	**Pn**	**18 26 41.3**	**+1.4**
BURAR	**Bucovina Array**	**2.24**	**339**		**Pn**	**18 26 41.3**	**+1.4**
BURAR					**Sn**	**18 27 10.0**	**+1.1**
BURAR	**Bucovina Array**	**2.24**	**339**	Pn	**Pn**	**18 26 41.0**	**+1.1**
BUR08	**Bucovina Ar. S**	**2.27**	**339**		**Pn**	**18 26 41.4**	**+1.1**

CJR	**Cluj-Napoca**	**2.29**	**302**	⇑P	**Pn**	**18 26 39.9**	**-0.5**
CJR	**Cluj-Napoca**	**2.29**	**302**	⇑P	**Pn**	**18 26 39.9**	**-0.5**
SZH	**Strazhica**	**2.29**	**189**	*i* P	**Pn**	**18 26 40.7**	**+0.2**
MANR	**Mangalia**	**2.31**	**137**	⇑P	**Pn**	**18 26 40.7**	**0.0**
MANR				⇑S	**Sn**	**18 27 08.9**	**-1.2**
MANR	**Mangalia**	**2.31**	**137**	⇑P	**Pn**	**18 26 40.7**	**0.0**
TSMN	**Mangalia Port-**	**2.33**	**137**	⇓P	**Pn**	**18 26 41.0**	**+0.2**
TSMN				⇑S	**Sn**	**18 27 10.2**	**-0.3**
TSMN	**Mangalia Port-**	**2.33**	**137**	⇓P	**Pn**	**18 26 41.0**	**+0.2**
TSSL	**Sulina**	**2.36**	**98**	⇓P	**Pn**	**18 26 41.4**	**+0.1**
TSSL				⇑S	**Sn**	**18 27 11.0**	**-0.3**
TSSL	**Sulina**	**2.36**	**98**	⇓P	**Pn**	**18 26 41.4**	**+0.1**
PRD	**Provadia**	**2.44**	**163**	*i* P	**Pn**	**18 26 43.1**	**+0.9**
SRE	**Strehaia**	**2.44**	**250**	⇓P	**Pn**	**18 26 42.0**	**-0.2**
SRE				⇑S	**Sn**	**18 27 11.8**	**-1.1**
SRE	**Strehaia**	**2.44**	**250**	⇓P	**Pn**	**18 26 42.0**	**-0.2**
PVL	**Pavlikeni**	**2.44**	**199**	*i* P	**Pn**	**18 26 44.0**	**+1.7**
DEV	**Deva**	**2.49**	**279**	P	**Pn**	**18 26 44.0**	**+1.2**
DEV	**Deva**	**2.49**	**279**	⇓P	**Pn**	**18 26 43.4**	**+0.5**
DEV	**Deva**	**2.49**	**279**	⇓P	**Pn**	**18 26 43.4**	**+0.5**
PLVB	**Pleven**	**2.50**	**212**	⇑P	**Pn**	**18 26 43.1**	**0.0**
PLVB				⇑S	**Sn**	**18 27 12.3**	**-2.1**
PLVB	**Pleven**	**2.50**	**212**	⇑P	**Pn**	**18 26 43.1**	**0.0**
KALB	**Balgarevo**	**2.56**	**145**	⇓P	**Pn**	**18 26 44.5**	**+0.7**
KALB				⇑S	**Sn**	**18 27 14.8**	**-0.9**
KALB	**Balgarevo**	**2.56**	**145**	⇓P	**Pn**	**18 26 44.5**	**+0.7**
GZR	**Gura Zlata**	**2.57**	**268**	⇓P	**Pn**	**18 26 43.8**	**-0.1**
GZR				⇓S	**Sn**	**18 27 15.9**	**0.0**
GZR	**Gura Zlata**	**2.57**	**268**	⇓P	**Pn**	**18 26 43.8**	**-0.1**
ELND	**Elena**	**2.63**	**189**	⇑P	**Pn**	**18 26 44.9**	**+0.2**
ELND				⇓S	**Sn**	**18 27 16.3**	**-1.0**
ELND	**Elena**	**2.63**	**189**	⇑P	**Pn**	**18 26 44.9**	**+0.2**
BAIL	**Bailesti**	**2.66**	**236**	⇓P	**Pn**	**18 26 44.8**	**-0.2**
BAIL				⇓S	**Sn**	**18 27 17.6**	**-0.3**
BAIL	**Bailesti**	**2.66**	**236**	⇓P	**Pn**	**18 26 44.8**	**-0.2**
PUNG	**Punghina**	**2.78**	**244**	⇑P	**Pn**	**18 26 45.6**	**-0.9**
PUNG	**Punghina**	**2.78**	**244**	⇑P	**Pn**	**18 26 45.6**	**-0.9**
DRGR		**2.87**	**297**	P	Pn	18 27 00.9	+13
DRGR		**2.87**	**297**	⇓P	**Pn**	**18 26 47.3**	**-0.4**
DRGR		**2.87**	**297**	⇓P	**Pn**	**18 26 47.3**	**-0.4**
MPEP	**Malo Peshtene**	**2.90**	**222**	*i* P	**Pn**	**18 26 48.5**	**+0.4**
SORM	**Soroca**	**2.92**	**26**	⇑P	**Pn**	**18 26 47.7**	**-0.5**
SORM	**Soroca**	**2.92**	**26**	⇑P	**Pn**	**18 26 47.7**	**-0

ARMT Armutlu 5.28 159 *e*P Pn 18 27 18.5 -0.8
EDC Edincik 5.29 168 *e*P Pn 18 27 19.1 -0.4
GADA Gvkgeada 5.35 184 *e*P Pn 18 27 19.7 -0.6
RUDO Rudo 5.39 252 *e*Pn Pn 18 27 19.3 -1.4
YLV Yalova 5.42 155 *e*P Pn 18 27 20.1 -1.1
GRG Griva 5.43 214 P Pn 18 27 20.9 -0.5
GRG Griva 5.43 214 *e*P Pn 18 27 20.8 -0.6
SIM Simferopol' 5.47 93 P Pn 18 27 20.7 -1.1
SIM *e*S **Sn** 18 28 21.3 -2.4
SIM pmax pmax
comp=Z,47nm,0.3s
SIM smax smax
comp=N,40nm,0.6s
SIM smax smax
comp=E,121nm,1.1s
SIM Simferopol' 5.47 93 P Pn 18 27 21.2 -0.6
SIM Pm 18 27 23.0
SIM Sm 18 28 23.9
OUR Ouranopolis 5.49 200 P Pn 18 27 21.3 -0.9
OUR Ouranopolis 5.49 200 *e*P Pn 18 27 22.1 -0.1
HORT Hortiatis 5.50 207 P Pn 18 27 22.1 -0.2
HORT Hortiatis 5.50 207 *e*P Pn 18 27 21.9 -0.4
AKASG Malin Array Be 5.50 19 *i* P Pn 18 27 21.5 -0.7
AKASG pmax pmax
comp=Z,5.0nm,0.3s
AKASG Malin Array Be 5.50 19 P Pn 18 27 21.1 -1.0
comp=Z,7.5nm,0.3s,baz=200,slow=11,SNR=34
AKASG S **Sn** 18 28 19.4 -5.1
comp=Z,9.3nm,0.3s,baz=201,slow=22,SNR=6.1
AKASG Malin Array Be 5.50 19 Pn 18 27 19.4 -2.8
AKBB Malin Array Si 5.50 19 P Pn 18 27 21.5 -0.6
AKBB Malin Array Si 5.50 19 Pn 18 27 21.5 -0.6
HAPS Han Pijesak,BI 5.51 257 *e*Pn Pn 18 27 20.7 -1.7
YAL Yalta 5.58 98⇑ *i*P Pn 18 27 22.3 -1.0
YAL *e*S **Sn** 18 28 24.8 -1.7
YAL Yalta 5.58 98 P Pn 18 27 22.3 -1.0
YAL S **Sn** 18 28 24.8 -1.7
PLG Polygyros 5.60 204 P Pn 18 27 23.5 -0.1
BOZC Bozcaada 5.69 183 *e*P Pn 18 27 24.6 -0.2
EZN Ezine 5.70 181 *e*P Pn 18 27 24.4 -0.6
ALU Alushta 5.72 96⇑ *i*P Pn 18 27 24.7 -0.4
ALU *e*S **Sn** 18 28 28.3 -1.3
ALU Alushta 5.72 96 P Pn 18 27 24.7 -0.4
ALU Pm 18 27 24.9
ALU S **Sn** 18 28 28.3 -1.3
ALU Sm 18 28 33.2
PHP Peshkopia 5.80 231 P Pn 18 27 26.9 +0.6
UPM Unac-Piva 5.87 249 *e*Pn Pn 18 27 27.4 +0.1
KURC Kurucasile-Bar 5.88 127 *e*P Pn 18 27 26.1 -1.2
CAVI Cavuskoy 5.89 154 *e*P Pn 18 27 26.4 -1.1
GULT Gulveren 5.92 148 *e*P Pn 18 27 27.2 -0.7
CSKK Cskako 5.93 291 *e*Pn Pn 18 27 30.2 +2.3
LANS Liptovska Anna 5.95 310 *e*P Pn 18 27 29.4 +1.2
LANS Liptovska Anna 5.95 310 *e*P Pn 18 27 29.4 +1.2
PAIG Paliouri 5.95 201 P Pn 18 27 27.5 -0.8
VYHS Vyhne 5.97 302 *e*P Pn 18 27 28.9 +0.4
VYHS Vyhne 5.97 302 *e*P Pn 18 27 28.9 +0.4
BALB Balikesir 5.99 169 *e*P Pn 18 27 28.2 -0.5
FNA Florina 6.01 220 P Pn 18 27 26.0 -3.1
FNA Florina 6.01 220 Pn 18 27 26.0 -3.1
SRO Srobarova 6.03 295 *e*P Pn 18 27 30.3 +1.1
SRO Srobarova 6.03 295 *e*P Pn 18 27 30.3 +1.1
PDG Podgorica 6.03 242 ⇑P Pn 18 27 30.0 +0.7
PDG ⇑S **Sn** 18 28 36.5 -0.6
PDG Podgorica 6.03 242 ⇑P Pn 18 27 30.0 +0.7
PDG ⇑S **Sn** 18 28 36.5 -0.6
PDG Podgorica 6.03 242 *e*Pn Pn 18 27 29.9 +0.7
PDG Podgorica 6.03 242 Pn 18 27 30.0 +0.7
SUDU Sudak 6.10 93⇓ *e*P Pn 18 27 29.8 -0.4
SUDU *i*S **Sn** 18 28 36.5 -2.3
SUDU Sudak 6.10 93 P Pn 18 27 29.8 -0.4
SUDU Pm 18 27 30.5
SUDU Sm 18 28 37.6
LIT Litokhoron 6.15 209 P Pn 18 27 30.0 -1.0
LIT Litokhoron 6.15 209 Pn 18 27 30.0 -1.0
MDUB Mudurnu 6.15 144 Pn 18 27 30.6 -0.5
DRME Dracevica, Mon 6.21 240 *e*Pn Pn 18 27 33.3 +1.6
BRY Bratogost 6.24 248 *e*Pn Pn 18 27 31.9 -0.4
SRCK Saricakaya, Es 6.30 149 *e*P Pn 18 27 31.6 -1.3
SIGR SIGRI 6.33 184 *e*P Pn 18 27 32.8 -0.5
FEO Feodosiya 6.35 91 *e*P Pn 18 27 33.9 +0.3
FEO *e*S **Sn** 18 28 44.2 -0.7
FEO Feodosiya 6.35 91 P Pn 18 27 33.9 +0.3
FEO Pm 18 27 34.8
FEO S **Sn** 18 28 44.2 -0.7
FEO Sm 18 28 44.4
BORA Eskisehir 6.38 151 *e*P Pn 18 27 33.1 -1.0
YUVA Yuva-Kibriscik 6.43 141 *e*P Pn 18 27 32.9 -1.9
TREB Trebinje 6.45 247 *e*Pn Pn 18 27 36.6 +1.7
TVSB Tavsanli 6.48 159 *e*P Pn 18 27 34.7 -0.8
HCV Herceg Novi 6.49 244 *e*Pn Pn 18 27 35.8 +0.3
BZK Bozkurt 6.55 120 *e*P Pn 18 27 35.1 -1.2
BLY Banja Luka 6.58 266 ⇓ *i*Pn Pn 18 27 37.7 +1.1
BLY Banja Luka 6.58 266 Pn 18 27 34.3 -2.3
DBRK Dubrovnik 6.61 247 *e*Pn Pn 18 27 38.3 +1.3
DBRK Sn **Sn** 18 28 51.8 +0.7
MGRS Mrkonjic Grad 6.71 264 *e*Pn Pn 18 27 39.8 +1.3
BEHE Becsehely 6.78 281 *e*Pn Pn 18 27 40.3 +1.0
BEHE Becsehely 6.78 281 *e*Pn Pn 18 27 40.1 +0.8
MOSL Moslavina 6.78 274 *e*Pn Pn 18 27 40.1 +0.8
STON Ston 6.81 250 *e*Pn Pn 18 27 41.0 +1.4
STON Sn **Sn** 18 28 56.9 +1.0
STON Ston 6.81 250 ⇓ *i*Pn Pn 18 27 41.0 +1.4
ILGA Ilgaz 6.96 128 Pn Pn 18 27 43.1 +1.2
KALN Kalnik 6.99 278 *e*Pn Pn 18 27 43.1 +1.0
MAKA Makarska 7.09 255 *e*Pn Pn 18 27 44.8 +1.2
SOP Sopron 7.12 291 *e*Pn Pn 18 27 44.3 +0.4
AGG Agios Georgios 7.18 206 P Pn 18 27 42.1 -2.6
AGG Agios Georgios 7.18 206 Pn Pn 18 27 42.1 -2.6
KIJV Kijevo 7.29 261 *e*Pn Pn 18 27 47.4 +1.2
HVAR Hvar 7.52 255 *e*Pn Pn 18 27 51.2 +1.9
UDBI Udbina 7.62 266 *i*Pn Pn 18 27 52.5 +2.0
CONA Conrad Observa 7.64 292 *i*Pn Pn 18 27 51.4 +0.5
comp=Z,3.8nm,0.7s
VRAC Vranov 7.66 303 P Pn 18 27 49.9 -1.1
comp=Z,0.1nm,0.3s,baz=115,slow=15,SNR=5.6
CRES Cresnjev 7.68 276 *e*Pn Pn 18 27 52.4 +0.9
CRES Cresnjev 7.68 276 ⇓ *i*Pn Pn 18 27 52.0 +0.6
ARSA Arzberg 7.73 287 *e*Pn Pn 18 27 53.3 +1.3
comp=Z,0.9nm,0.4s
MORI Morici 7.81 261 *i*Pn Pn 18 27 54.9 +1.8
BR131 Keskin Array S 7.87 135 P Pn 18 27 54.2 +0.1
BR131 Keskin Array S 7.87 135 Pn Pn 18 27 54.2 +0.1
BRTR Keskin Array B 7.87 135 *i*P Pn 18 27 54.0 -0.2
BRTR pmax pmax
comp=Z,1.0nm,0.5s
BRTR Keskin Array B 7.87 135 P Pn 18 27 54.3 +0.2
comp=Z,0.1nm,0.3s,baz=327,slow=13,SNR=5.8
BRTR Keskin Array B 7.87 135 Pn 18 27 53.4 -0.8
ZIRJ Zirje 7.92 260 *e*Pn Pn 18 27 55.8 +1.3
SOKA Soboth 8.00 282 Pn Pn 18 27 56.9 +1.2
comp=Z,6.6nm,0.7s,SNR=11
NVLJ Novalja 8.23 267 *e*Pn Pn 18 28 01.2 +2.4
OBKA Obir 8.32 281 *i*Pn Pn 18 28 01.1 +1.1
comp=Z,7.8nm,1.7s
CEY Cerknica 8.41 276 *e*Pn Pn 18 27 59.1 -2.0
SGRT San Giovanni R 8.61 248 Pn Pn 18 28 02.2 -1.8
MOA Molln 8.67 290 *i*Pn Pn 18 28 05.5 +0.9
comp=Z,7.0nm,1.6s
KBA Koelnbreinsper 9.18 284 *e*Pn Pn 18 28 10.1 -1.5
comp=Z,7.8nm,1.4s
GERES GERESS Array B 9.27 295 P Pn 18 28 11.5 -1.2
comp=Z,0.1nm,0.3s,baz=116,slow=12,SNR=5.7
KHC Kasperske Hory 9.43 297 *e*P Pn 18 28 16.0 +1.2
KHC Kasperske Hory 9.43 297 *e*Pn Pn 18 28 16.0 +1.2
TIP Timpagrande 9.56 232 Pn Pn 18 28 16.2 -0.4
STAL STALIGIAL 9.59 279 Pn Pn 18 28 18.3 +1.4
NRCA Norcia 9.93 259 Pn 18 28 18.6 -2.9
VSR Storozhevoye 10.21 52 *e*P Pn 18 28 24.2 -0.8
VSR pmax pmax
comp=Z,10.0nm,0.4s
CTI Castel Tesino 10.33 278 P Pn 18 28 26.9 +0.1
CTI Castel Tesino 10.33 278 Pn 18 28 26.9 +0.1
WATA Walderalm 10.40 285 *i*Pn Pn 18 28 28.5 +0.7
comp=Z,3.3nm,0.9s
MOTA Moosalm 10.73 285 *i*Pn Pn 18 28 30.4 -1.7
comp=Z,5.4nm,1.3s
LPSR Galich'ya Gora 10.82 45 *e*P Pn 18 28 32.2 -1.0
LPSR pmax pmax
comp=Z,9.0nm,0.3s
FETA Feichten 10.96 283 *i*Pn Pn 18 28 32.8 -2.5
comp=Z,4.5nm,1.2s
DAVA Damuels 11.55 285 *i*Pn Pn 18 28 43.5 +0.5
comp=Z,10nm,1.5s
OBN Obninsk 11.56 30 P Pn 18 28 40.1 -2.8
comp=Z,1.2nm,0.3s,baz=192,slow=16,SNR=4.7
VRH Novokhopyorsk 11.64 55 *e*P Pn 18 28 40.9 -3.1
VRH pmax pmax
comp=Z,20nm,0.7s
KIV Kislovodsk 11.68 92 *e*P Pn 18 28 45.9 +1.3
KVAR Kislovodsk Arr 11.69 92 P Pn 18 28 44.6 -0.1
baz=270,slow=18,SNR=2.8
SHA1 Shidzhatmaz 11.71 93 *ce*P Pn 18 28 46.5 +1.3
KBZ Khabaz 11.88 93 P Pn 18 28 47.4 +0.3
comp=Z,0.1nm,0.3s,baz=270,slow=16,SNR=3.6
NEY Neytrino 11.89 95⇑ *e*P Pn 18 28 49.9 +2.4
NEY pmax pmax
comp=Z,1.0nm,1.0s
GROC Groznyy 14.06 93 *e*P Pn 18 29 15.2 +0.1
GROC *e*S **Sn** 18 31 52.5 +1.9
GROC pmax pmax
comp=Z,7.0nm,0.4s
GNI Garni 14.47 105⇓ *e*P P 18 29 23.0 -0.3
FINES FINESS Array B 15.94 359 P Pn 18 29 35.7 -2.7
comp=Z,0.2nm,0.3s,baz=189,slow=11,SNR=7.1
HFS Hagfors 16.47 337 P Pn 18 29 43.3 -1.6
comp=Z,0.5nm,0.3s,baz=154,slow=13,SNR=14
OSL Oslo 17.20 333 *e*P P 18 29 53.3 +0.3
NAO01 NORSAR Array S 17.86 335 *e*P P 18 30 01.0 +0.7
NB2 NORSAR Subarra 17.92 335 P P 18 30 00.1 -0.9
comp=Z,1.1nm,0.4s,baz=141,slow=12
NB2 NORSAR Subarra 17.92 335 P P 18 30 00.1 -0.9
baz=141,slow=12
NOA NORSAR Array B 17.92 335 P P 18 30 00.7 -0.3
comp=Z,0.1nm,0.3s,baz=144,slow=9.9,SNR=14
BLS5 Blasjo 18.36 326 *e*P Pn 18 30 07.0 -0.6
SKAR Skarslia 18.56 331 *e*P P 18 30 08.8 +0.8
KIRV Kirov 19.12 39 P Pn 18 30 15.5 -0.9
comp=Z,1.3nm,0.3s,baz=225,slow=13,SNR=3.7
DOMB Dombas 19.35 335 *e*P P 18 30 17.6 +1.1
HYA Hoyanger 19.64 330 *e*P P 18 30 21.0 +1.5
AKN Aaknes 20.09 333 *e*P P 18 30 25.7 +1.2
MOL Molde 20.21 334 *e*P P 18 30 26.5 +0.8
FOO Floro 20.33 330 *e*P P 18 30 27.3 +0.3
NSS Namsos 20.66 342 *e*P P 18 30 30.6 +0.1
EKA Eskdalemuir Ar 21.09 308 P P 18 30 34.8 -0.4
comp=Z,0.7nm,0.4s,baz=114,slow=11,SNR=6.5
AKTO Aktyubinsk 21.61 65 P P 18 30 41.5 +0.7
comp=Z,2.5nm,0.6s,baz=270,slow=10,SNR=14
MOR8 Moi Rana 21.67 347 *e*P P 18 30 42.4 +1.0
KONS Konsvik 22.19 346 *e*P P 18 30 46.8 +0.2
ARU Arti 22.77 50 P P 18 30 52.1 -0.2
ARU 18 31 20.5
ARU S **S** 18 34 51.8 +1.7
ARU SS **SnSn** 18 35 42.1 +4.0
ARU Arti 22.77 50 P P 18 30 52.2 -0.1
comp=Z,1.6nm,0.4s,baz=245,slow=6.5,SNR=12
ARU Arti 22.77 50 P P 18 30 51.4 -1.0
ARU IAmb IAmb 18 30 53.8
comp=Z,7.6nm,1.1s
ABKAR Akbulak array 22.89 69 P P 18 30 54.7 +1.3
ABKAR Akbulak array 22.89 69 P P 18 30 53.2 -0.3
ESDC Sonseca Array 23.03 266 P P 18 30 53.8 -1.2
comp=Z,0.3nm,0.3s,baz=68,slow=9.5,SNR=8.9
ESDC Sonseca Array 23.03 266 P P 18 30 54.1 -0.9
STEI Steigen 23.20 349 *e*P P 18 30 56.6 +0.5
KTK1 Kautokeino 23.60 357 *e*P P 18 31 00.2 +0.4
ARCES ARCESS Array B 24.07 359 P P 18 31 03.6 -0.5
comp=Z,0.9nm,0.7s,baz=172,slow=9.6,SNR=7.2
TRO Tromso 24.46 354 *e*P P 18 31 08.0 +0.4
GEYT Alibeck 24.73 97 P P 18 31 13.2 +2.7
comp=Z,3.7nm,0.7s,baz=300,slow=12,SNR=9.2
GEYT Alibeck 24.73 97 IAmb IAmb 18 31 15.7
comp=Z,2.6nm,0.7s
BVAR Borovoye Array 29.26 59 P P 18 31 52.8 +2.1
comp=Z,0.6nm,0.7s,baz=280,slow=8.3,SNR=6.0
BVAR pP **pP** 18 32 21.1 +0.2
comp=Z,0.7nm,0.5s,baz=277,slow=11,SNR=5.4
KK31 Karatay Array 31.35 78 P P 18 32 08.5 -0.7
KK31 pmax pmax
comp=Z,2.0nm,0.9s
KK31 Karatay Array 31.35 78 P P 18 32 08.5 -0.7
KK31 IAmb IAmb 18 32 12.8
comp=Z,1.8nm,0.9s
KKAR Karatay Array 31.35 78 P P 18 32 08.4 -0.8
KKAR pmax pmax
comp=Z,2.0nm,0.9s
KKAR Karatay Array 31.35 78 P P 18 32 08.4 -0.8
KKAR IAmb IAmb 18 32 12.8
comp=Z,1.8nm,0.9s
KKAR Karatay Array 31.35 78 P P 18 32 07.0 -2.2
AAK Ala-Archa 34.25 77 P P 18 32 36.8 +2.1
AAK pmax pmax
comp=Z,2.0nm,0.9s
AAK Ala-Archa 34.25 77 P P 18 32 36.8 +2.1
AAK IAmb IAmb 18 32 38.4
comp=Z,1.9nm,0.8s
ZALV Zalesovo Beam 37.68 55 P P 18 33 04.8 +1.3
comp=Z,1.0nm,0.5s,baz=286,slow=9.1,SNR=5.7
ZALV pP **pP** 18 33 35.1 +0.6
comp=Z,2.3nm,0.7s,baz=285,slow=9.8,SNR=6.5
MKAR Makanchi Array 38.02 67 *i*P P 18 33 08.3 +1.8
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 38.02 67 P P 18 33 08.0 +1.4
comp=Z,0.4nm,0.4s,baz=273,slow=7.2,SNR=14
TOA0 Torodi Ar. Sit 38.49 221 P P 18 33 10.8 +0.1
TOA0 IAmb IAmb 18 33 12.6
comp=Z,3.7nm,0.7s
TORD Torodi Ar. Bea 38.49 221 P P 18 33 11.6 +0.9
comp=Z,3.9nm,0.5s,baz=26,slow=8.6,SNR=37
TORD PcP **PcP** 18 35 20.7 0.0
comp=Z,0.5nm,0.7s,baz=21,slow=1.4,SNR=3.6
TORD Torodi Ar. Bea 38.49 221 P P 18 33 10.8 +0.1
DBIC Dimbokro 47.25 225 P P 18 34 21.1 -0.1
DBIC pmax pmax
comp=Z,7.0nm,0.9s
DBIC Dimbokro 47.25 225 P P 18 34 21.1 -0.1
comp=Z,4.0nm,0.5s,baz=5.6,slow=9.2,SNR=12
DBIC Dimbokro 47.25 225 IAmb IAmb 18 34 22.4
comp=Z,7.4nm,0.8s
TIC Toumodi 47.35 225 *e*P P 18 34 21.9 -0.1
KIC Kosan Boka 47.46 224 *e*P P 18 34 23.0 +0.2
comp=Z,7.6nm,0.6s
LIC Lamto 47.72 225 *e*P P 18 34 25.5 +0.7
comp=Z,3.0nm,0.2s
SONM Songino Array 52.55 57 pP pP 18 35 35.1 +1.3
comp=Z,0.7nm,0.6s,baz=278,slow=8.5,SNR=2.2
CMAR Chiang Mai Arr 64.90 89 P P 18 36 27.6 +1.0
comp=Z,0.5nm,0.5s,baz=302,slow=7.7,SNR=4.2
CMAR pP **pP** 18 37 00.7 +0.1
comp=Z,0.4nm,0.7s,baz=305,slow=6.5,SNR=2.4
YKA Yellowknife Ar 67.90 342 P P 18 36 44.9 -0.1
comp=Z,0.4nm,0.6s,baz=30,slow=5.8,SNR=10
ASAR Alice Springs 118.53 96 PKIKP **PKPdf** 18 44 33.0 -0.2
ASAR Alice Springs 118.53 96 PKP **PKPdf** 18 44 33.0 -0.2
comp=Z,0.5nm,1.1s,baz=321,slow=2.6,SNR=3.8

*IDC **12** 18:28:14.5±2.6, 31°.71S×177°.47W, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.8/23, mbtmp3.9/4, ML3.2/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/23, Error ellipse: s-maj=67.6km s-min=42.5km az=132.0*
*NEIC **12** 18:28:14.2±1.5, 32°.0S±0°.2×177°.3W±0°.1, h10km±1km, mb4.5/9, Error ellipse: s-maj=22.6km s-min=13.7km az=159.0*
ISC 12 18:28:15.9±2.1, 31°.8S±0°.1×177°.4W±0°.3, h18km, n14, σ1§57/16, mb4.2/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.83**	**213**	Pn		**Pn**		**18 30 09.5**	**+0.7**
URZ	0.3nm,0.3s,baz=109,slow=12,SNR=2.5			Sn		**Sn**		**18 31 37.8**	**+0.8**
URZ	1.4nm,0.3s,baz=130,slow=23,SNR=7.0			LR		LR		18 32 42.2	
URZ	comp=Z,44nm,20.6s,baz=183,slow=34 **Urewera**	**7.83**	**213**			**Pn**		**18 30 07.8**	**-1.1**
OUZ	**Omahuta**	**8.22**	**243**	Pn		**Pn**		**18 30 14.2**	**-0.1**
ARMA	**Armidale**	**26.49**	**265**	P		**P**		**18 33 50.5**	**-1.8**
ARMA	comp=Z,5.8nm,1.1s			IAmb		IAmb		18 34 00.9	
CAN	**Canberra**	**28.11**	**254**	P		**P**		**18 34 06.0**	**-0.9**
CAN	comp=Z,21nm,1.5s			IAmb		IAmb		18 34 21.6	
EIDS	**Eidsvold**	**28.32**	**275**	P		**P**		**18 34 07.0**	**-1.8**
EIDS	comp=Z,14nm,1.2s			IAmb		IAmb		18 34 16.7	
TOO	**Toolangi**	**30.88**	**249**	P		**P**		**18 34 28.5**	**-2.8**
STKA	**Stephens Creek**	**34.66**	**259**	P		**P**		**18 35 07.5**	**+3.1**
	comp=Z,1.8nm,0.8s,baz=108,slow=9.6,SNR=3.7								
AS31	**Alice Springs**	**43.54**	**268**	P		**P**		**18 36 19.9**	**+1.1**
ASAR	**Alice Springs**	**43.54**	**268**	P		**P**		**18 36 19.1**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=107,slow=7.4,SNR=16								
ASAR				PcP		**PcP**		**18 38 07.7**	**+1.1**
	comp=Z,1.2nm,1.2s,baz=114,slow=4.2,SNR=3.2								
WR0	**Warramunga Arr**	**44.48**	**273**	P		**P**		**18 36 27.1**	**+0.7**
WR0				IAmb		IAmb		18 36 34.6	
	comp=Z,4.7nm,1.1s								
WRAB	**Tennant Creek**	**44.65**	**273**	P		**P**		**18 36 28.7**	**+1.0**
WRA	**Warramunga Arr**	**44.66**	**273**	P		**P**		**18 36 28.6**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=113,slow=7.6,SNR=14								
FINES	**FINESS Array B**	**146.65**	**340**	PKPbc		**PKPab**		**18 47 56.5**	**-0.4**
	comp=Z,5.4nm,1.0s,baz=48,slow=4.1,SNR=6.4								

*IDC **12** 18:54:19.6±1.5, 44°.20N×105°.61W, h0km, mb3.5/1, mb1 3.4/4, mb1mx3.2/52, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=45.1km s-min=8.5km az=145.0*
*NEIC **12** 18:54:20.1±1.6, 44°.08N±0°.04×105°.38W±0°.06, h0km±2km, ML3.1/37, Error ellipse: s-maj=7.3km s-min=6.0km az=49.0*
ISC 12 18:54:19.0±1.0, 44°.10N±0°.07×105°.35W±0°.07, h0km, n30, σ1§24/30, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**89**				**Pb**	**18 54 38.2**	**-0.1**
K22A	**Casper**	**1.69**	**211**				**Pn**	**18 54 50.3**	**+0.4**
LAO	**LASA Array**	**2.66**	**347**				**Pn**	**18 55 04.3**	**+1.1**
LAO				IAML				18 55 44.3	
	97nm,0.3s								
RWWY	**Rawlins**	**2.78**	**210**				**Pn**	**18 55 03.2**	**-1.7**
RWWY				IAML				18 55 46.6	
	68nm,0.6s								
RWWY				IAML				18 55 49.0	
	52nm,0.6s								
PHWY	**Pilot Hill**	**2.80**	**182**				**Pn**	**18 55 06.0**	**+0.6**
PHWY				IAML				18 55 45.8	
	43nm,0.3s								
RLMT	**Red Lodge**	**2.98**	**291**				**Pn**	**18 55 09.0**	**+1.2**
RLMT				IAML				18 55 56.5	
	48nm,0.4s								
RLMT				IAML				18 55 57.4	
	41nm,0.5s								
N23A	**Red Feather La**	**3.24**	**188**				**Pn**	**18 55 13.1**	**+1.8**
N23A				IAML				18 56 04.3	
	comp=E,45nm,0.5s								
N23A				IAML				18 56 06.6	
	comp=N,54nm,0.6s								
BW06	**Boulder Array**	**3.35**	**248**				**Pn**	**18 55 13.7**	**+0.8**
BW06				IAML				18 56 05.2	
	comp=N,39nm,0.6s								
BW06				IAML				18 56 06.4	
	comp=E,34nm,0.6s								
PD31	**Pinedale Array**	**3.35**	**248**				**Pn**	**18 55 13.5**	**+0.6**
PDAR	**Pinedale Array**	**3.35**	**248**	Pn			**Pn**	**18 55 13.9**	**+1.1**
	comp=E,2.2nm,0.3s,baz=67,slow=15,SNR=30								
PDAR				Lg		Lg		18 56 00.8	
	comp=E,12nm,0.3s,baz=66,slow=36,SNR=9.8								
YNE	**Yellowstone No**	**3.45**	**287**				**Pn**	**18 55 14.5**	**+0.2**
YMP	**Mirror Lake Pl**	**3.50**	**282**				**Pn**	**18 55 15.5**	**+0.5**
H17A	**Grant Village**	**3.77**	**276**				**Pn**	**18 55 20.7**	**+2.0**
FLWY	**Flagg Ranch**	**3.86**	**272**				**Pn**	**18 55 21.4**	**+1.6**
FLWY				IAML				18 56 27.6	
	comp=E,28nm,3.2s								
FLWY				IAML				18 56 30.7	
	comp=E,33nm,1.4s								
MOOW	**Moose Ponds**	**3.92**	**267**				**Pn**	**18 55 21.4**	**+0.8**
SNOW	**Snow King Moun**	**3.97**	**263**				**Pn**	**18 55 22.8**	**+1.4**
SNOW				IAML				18 57 00.2	
	comp=E,34nm,4.9s								
SNOW				IAML				18 57 02.6	
	comp=E,26nm,3.2s								
REDW	**Red Top Meadow**	**4.06**	**261**				**Pn**	**18 55 23.5**	**+0.9**
REDW				IAML				18 56 28.4	
	comp=E,24nm,3.4s								
REDW				IAML				18 56 54.5	
	comp=E,24nm,3.2s								
YHL	**Hebgen Lake**	**4.25**	**282**				**Pn**	**18 55 26.6**	**+1.4**
ISCO	**Idaho Springs**	**4.31**	**183**				**Pn**	**18 55 28.0**	**+2.0**
ISCO				IAML				18 56 38.4	
	comp=E,16nm,2.3s								
DGMT	**Dagmar**	**4.44**	**10**				**Pn**	**18 55 30.0**	**+2.4**
O20A	**White River Ci**	**4.51**	**209**				**Pn**	**18 55 29.2**	**+0.4**
BGNE	**Belgrade**	**5.94**	**114**				**Pn**	**18 55 50.0**	**+1.7**
ECSD	**EROS Data Cent**	**6.32**	**90**				**Pn**	**18 55 52.8**	**-0.6**
MSO	**Missoula**	**6.63**	**297**				**Pn**	**18 55 58.3**	**+0.5**
DUG	**Dugway Tooele**	**6.79**	**237**				**Pn**	**18 55 59.9**	**-0.1**
AGMN	**Agassiz Nation**	**7.80**	**54**				**Pn**	**18 56 13.4**	**-0.3**
ULM	**Lac du Bonnet**	**8.90**	**43**	Pn			**Pn**	**18 56 28.5**	**-0.3**
	comp=E,1.1nm,0.3s,baz=228,slow=13,SNR=13								
ULM				Lg		Lg		18 58 57.6	
	comp=E,0.2nm,0.3s,baz=319,slow=19,SNR=2.6								
ULM	**Lac du Bonnet**	**8.90**	**43**				**Pn**	**18 56 28.2**	**-0.7**
YKA	**Yellowknife Ar**	**19.20**	**347**	P			**P**	**18 58 42.2**	**-1.9**
	comp=E,0.1nm,0.3s,baz=166,slow=12,SNR=4.3								
MKAR	**Makanchi Array**	**89.23**	**355**	P			**P**	**19 07 17.1**	**+0.4**
	comp=E,0.1nm,0.4s,baz=14,slow=5.7,SNR=2.9								

*IDC **12** 18:57:48.0±1.3, 3°.59S×151°.42E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.5/31, mbtmp3.7/5, ML1.5/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/21, Error ellipse: s-maj=25.6km s-min=23.2km az=175.0*
ISC 12 18:57:52.9±1.2, 3.7S±0°.1×151°.54E±0°.09, h35km, n8, σ1§08/9, mb3.5/4, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.80**	**143**	Pn			**Pn**	**18 58 08.2**	**+0.5**
	130nm,0.3s,baz=13,slow=3.6,SNR=304								
KRVT				LR			LR	18 58 15.4	
	comp=Z,57nm,18.6s,baz=86,slow=30								
KRVT				Sn			**Sn**	**18 58 18.2**	**-0.2**
	300nm,0.3s,baz=126,slow=19,SNR=45								
PMG	**Port Moresby**	**7.18**	**217**	Pn			**Pn**	**18 59 36.1**	**+0.7**
	0.5nm,0.3s,baz=18,slow=6.4,SNR=2.9								
PMG				Sn			**Sn**	**19 00 55.6**	**-0.3**
	0.7nm,0.3s,baz=192,slow=20,SNR=3.2								
WRA	**Warramunga Arr**	**23.31**	**225**	P			**P**	**19 02 55.9**	**-2.0**
	0.8nm,0.5s,baz=49,slow=10,SNR=13								
DZM	**Mont Dzumac**	**23.32**	**143**	LR			LR	19 10 19.8	
	comp=Z,33nm,21.1s,baz=5.0,slow=32								
ASAR	**Alice Springs**	**26.19**	**219**	P			**P**	**19 03 24.5**	**0.0**
	0.4nm,0.5s,baz=51,slow=8.5,SNR=9.6								
FITZ	**Fitzroy Crossi**	**29.14**	**239**	P			**P**	**19 03 51.2**	**+0.4**
	0.9nm,0.3s,baz=67,slow=6.8,SNR=15								
ILAR	**Eielson Array**	**81.58**	**22**	P			**P**	**19 10 07.1**	**+0.3**
	0.4nm,0.8s,baz=261,slow=5.0,SNR=4.2								
TORD	**Torodi Ar. Bea**	**148.75**	**289**	PKPbc			**PKiKP**	**19 17 37.8**	**-1.3**
	1.2nm,0.8s,baz=80,slow=2.8,SNR=5.6								

MAN 12 19:12:46.0, 9°.91N×124°.01E, h1km, mb4.8, ML3.7, MS3.6, 1C-4D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.41**	**353** ⇓	*i*P			Pg	19 12 54.6	+0.8
LLP				*i*S			Sb	19 13 01.0	-1.7

ISC 12 19:18:09.6±1.1, 8°25N±0°05×82°57W±0°03, h29km±6km, n45, σ1$ 45/75, 2C-7D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PEDE3	**Pedregal, Chir**	**0.20**	**46**	⇓*i*P	**Pb**	**19 18 15.1**	**-0.5**
PEDE3				*e*S	**Sb**	**19 18 19.6**	**-0.2**
LOCO3	**Loma Colorada,**	**0.22**	**42**	⇓*i*P	**Pb**	**19 18 15.3**	**-0.5**
LOCO3				*e*S	**Sb**	**19 18 19.9**	**-0.3**
DVD	**David**	**0.22**	**31**	⇑*i*P	**Pb**	**19 18 15.2**	**-0.7**
DVD				*e*S	**Sb**	**19 18 20.9**	**+0.7**
BAGA3	**Bagala, Chiriq**	**0.22**	**10**	⇓*i*P	**Pb**	**19 18 15.3**	**-0.6**
BAGA3				*e*S	**Sb**	**19 18 19.8**	**-0.5**
DVD3	**San Pablo Viej**	**0.22**	**30**	⇓*i*P	**Pb**	**19 18 15.2**	**-0.7**
DVD3				*e*S	**Sb**	**19 18 20.8**	**+0.6**
SBAR3	**San Bartolo, C**	**0.32**	**283**	⇑*i*P	**Pb**	**19 18 15.3**	**-2.0**
BCO2	**Palmira**	**0.47**	**4**	⇓*i*P	**Pb**	**19 18 18.3**	**-1.3**
BCO2				*e*S	**Sb**	**19 18 25.6**	**-0.9**
BRU2	**Volcan**	**0.56**	**347**	*i*P	**Pb**	**19 18 19.2**	**-1.8**
BRU2				*e*S	**Sb**	**19 18 27.8**	**-1.0**
BRU2	**Volcan**	**0.56**	**347**	⇓*i*P	**Pb**	**19 18 19.3**	**-1.8**
BRU2				⇓*i*S	**Sb**	**19 18 27.9**	**-1.0**
EDSV	**San Vito**	**0.70**	**325**	*e*P	**Pb**	**19 18 21.1**	**-2.2**
EDSV				*e*S	**Sb**	**19 18 31.6**	**-1.1**
CHGR2	**Aguacate**	**0.80**	**31**	*i*P	**Pb**	**19 18 22.7**	**-2.4**
CHGR2				*e*S	**Sb**	**19 18 34.0**	**-1.5**
NANC3	**Nancito, Chiri**	**0.82**	**90**	*e*P	**Pb**	**19 18 23.7**	**-1.7**
NANC3				*e*S	**Sb**	**19 18 33.0**	**-3.2**
PVID3	**Puerto Vidal,**	**0.97**	**102**	*e*P	**Pn**	**19 18 25.6**	**-1.6**
EDPN	**Palmar Norte**	**1.13**	**309**	*e*P	**Pn**	**19 18 27.1**	**-2.4**
EDBA	**Buenos Aires**	**1.15**	**322**	*e*P	**Pn**	**19 18 28.6**	**-1.1**
CNI2	**El Empalme, Bo**	**1.18**	**5**	*i*P	**Pn**	**19 18 28.9**	**-1.1**
CNI2				*e*S	**Sn**	**19 18 44.9**	**-0.2**
RGM0	**Gandoca**	**1.34**	**358**	*e*S	**Sb**	**19 18 52.3**	**+1.5**
CNAZ3	**Canazas, Verag**	**1.35**	**86**	*e*P	**Pn**	**19 18 31.6**	**-0.9**
CNAZ3				*e*S	**Sn**	**19 18 49.7**	**+0.4**
MESA3	**La Mesa, Verag**	**1.37**	**94**	*e*P	**Pn**	**19 18 32.0**	**-0.7**
MESA3				*e*S	**Sn**	**19 18 50.2**	**+0.3**
GMAL	**Guarumal, Vera**	**1.40**	**110**	*e*P	**Pn**	**19 18 32.5**	**-0.7**
GMAL				*e*S	**Sn**	**19 18 50.5**	**-0.2**
EDLM	**Las Mercedes**	**1.44**	**315**	*e*P	**Pn**	**19 18 32.8**	**-1.0**
SFRA3	**San Francisco,**	**1.58**	**90**	*i*P	**Pn**	**19 18 35.4**	**-0.2**
SFRA3				*e*S	**Sn**	**19 18 54.4**	**-0.7**
STIA3	**Santiago, Vera**	**1.58**	**95**	*i*P	**Pn**	**19 18 35.8**	**+0.1**
STIA3				*e*S	**Sn**	**19 18 55.7**	**+0.5**
PONU3	**Ponuga, Veragu**	**1.61**	**103**	*e*P	**Pn**	**19 18 36.2**	**+0.1**
PONU3				*e*S	**Sb**	**19 19 00.0**	**+1.4**
EDDO	**Dominical**	**1.63**	**308**	*e*P	**Pn**	**19 18 35.8**	**-0.5**
EDDO				*e*S	**Sn**	**19 18 57.8**	**+1.4**
CALO3	**Calobre, Verag**	**1.71**	**87**	*e*P	**Pn**	**19 18 36.5**	**-0.9**
CALO3				*e*S	**Sn**	**19 19 00.2**	**+1.9**
OCU3	**Ocu, Herrera**	**1.80**	**99**	*e*P	**Pn**	**19 18 39.0**	**+0.3**
OCU3				*e*S	**Sn**	**19 19 02.7**	**+2.2**
CACAO	**El Cacao, Vera**	**1.91**	**118**	*e*P	**Pn**	**19 18 40.1**	**0.0**
CACAO				*e*S	**Sn**	**19 19 03.7**	**+0.4**
CRIS3	**El Cristo, Coc**	**1.93**	**90**	*e*P	**Pn**	**19 18 40.2**	**-0.2**
CRIS3				*e*S	**Sb**	**19 19 07.2**	**-0.5**
LCR2	**La Lucha 2**	**2.06**	**316**	*e*P	**Pn**	**19 18 41.5**	**-0.9**
CVTR	**Volcan Turrial**	**2.12**	**326**	*e*P	**Pn**	**19 18 43.4**	**-0.1**
AZU	**Azuero**	**2.31**	**101**	*e*P	**Pn**	**19 18 47.0**	**+1.3**
AZU	**Azuero**	**2.31**	**101**	*e*P	**Pn**	**19 18 47.2**	**+1.5**
AZU				*e*S	**Sn**	**19 19 15.7**	**+2.4**
HDC	**Heredia**	**2.32**	**319**	*e*P	**Pn**	**19 18 46.5**	**+0.6**
HDC				*e*S	**Sn**	**19 19 15.9**	**+2.3**
HDC	**Heredia**	**2.32**	**319**	*e*P	**Pn**	**19 18 46.4**	**+0.5**
HDC				*e*S	**Sn**	**19 19 15.7**	**+2.1**
VTON	**El Valle, Cocl**	**2.45**	**81**	*e*P	**Pn**	**19 18 49.9**	**+2.2**
VTON				*e*S	**Sn**	**19 19 16.8**	**0.0**
SRA1	**San Ramn**	**2.63**	**314**	*e*P	**Pn**	**19 18 52.7**	**+2.5**
CHOR3	**La Chorrera**	**2.84**	**77**	*e*P	**Pn**	**19 18 55.8**	**+2.7**
CHOR3				*e*S	**Sb**	**19 19 34.7**	**+0.6**
FOU2	**Fortuna**	**3.03**	**317**	*i*P	**Pn**	**19 18 56.1**	**+0.4**
CASO	**Castillo**	**3.05**	**316**	*i*P	**Pn**	**19 18 56.6**	**+0.7**
ARE1	**Arenal 1**	**3.06**	**316**	*e*P	**Pn**	**19 18 57.5**	**+1.5**
UPA	**Univ. de Panam**	**3.08**	**76**	*e*P	**Pn**	**19 18 59.1**	**+2.7**
UPA				*e*S	**Sb**	**19 19 40.8**	**-0.2**
JTS	**Las Juntas de**	**3.11**	**311**	*e*P	**Pn**	**19 18 57.5**	**+0.7**
JTS	**Las Juntas de**	**3.11**	**311**	*e*P	**Pn**	**19 18 58.0**	**+1.3**
JTS				*e*S	**Sn**	**19 19 36.7**	**+3.7**
NY14	**Universidad de**	**3.78**	**309**	*i*P	**Pn**	**19 19 08.3**	**+2.4**

*KRNET **12** 19:30:37.1±0.1, 42°.26N×70°.58E, mb2.3*
*NNC **12** 19:30:37.9±0.4, 42°.40N×70°.63E, h0km, mb2.7, mpv2.6, Error ellipse: s-maj=2.6km s-min=2.0km az=111.0*
*SOME **12** 19:30:37.4, 42°.37N×70°.68E, h20km*

ISC 12 19:30:36.0±1.2, 42°.39N±0°.03×70°.67E±0°.03, h18km±5km, n21, σ1$ 26/38, 19C-6D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IUG	**Iuzhnay** 0.9nm,0.1s	**0.53**	**243**	*e*P	**Pn**	**19 30 48.2**	**-0.5**
IUG	82nm,0.2s			*e*S	**Sn**	**19 30 55.6**	**-1.7**
IUG	**Iuzhnay** 2.2nm,0.1s	**0.53**	**243**	P	**Pn**	**19 30 48.0**	**-0.8**
IUG	82nm,0.2s			S	**Sb**	**19 30 54.5**	**+0.4**
KK31	**Karatay Array** 0.5nm,0.2s,baz=150,slow=4.3,SNR=245	**0.73**	**351**	⇑P	**Pn**	**19 30 51.9**	**+0.5**
KK31	8.0nm,0.3s,baz=174,slow=21,SNR=52			⇑S	**Sg**	**19 31 01.7**	**+1.7**
BRLS	**Borolday** 0.3nm,0.1s	**0.89**	**317**	*e*P	**Pb**	**19 30 53.5**	**+0.6**
BRLS	24nm,0.3s			*e*S	**Sb**	**19 31 04.5**	**0.0**
BRLS	**Borolday** 0.3nm,0.1s	**0.89**	**317**	P	**Pb**	**19 30 53.5**	**+0.6**
BRLS	2.5nm,0.2s			S	**Sb**	**19 31 05.3**	**+0.9**
ARK	**Arkit** baz=14	**1.13**	**121**	⇑*i*P	**Pg**	**19 30 59.1**	**+1.2**
ARK	baz=14			⇑*i*S	**Sg**	**19 31 15.3**	**+2.6**
MRKS	**Merke** 1.2nm,0.1s	**1.92**	**78**	*e*P	**Pg**	**19 31 11.9**	**-1.1**
MRKS	5.9nm,0.2s			*e*S	**Sg**	**19 31 36.4**	**-1.5**
MRKS	**Merke** 1.7nm,0.1s	**1.92**	**78**	P	**Pg**	**19 31 13.2**	**+0.3**
MRKS	9.6nm,0.2s			S	**Sg**	**19 31 38.4**	**+0.4**
ARSB	**Arslanbob** baz=17	**2.03**	**121**	⇓*i*P	**Pg**	**19 31 14.5**	**-0.5**
ARSB	baz=17			⇓*i*S	**Sg**	**19 31 41.9**	**+0.6**
AML	**Almayashu** baz=92	**2.26**	**95**	⇑*i*P	**Pg**	**19 31 19.7**	**+0.3**
AML	baz=92			⇑*i*S	**Sg**	**19 31 50.2**	**+1.4**
EKS2	**Erkin-Say** baz=79	**2.31**	**82**	⇑*i*P	**Pg**	**19 31 20.0**	**-0.4**
EKS2	baz=79			⇑*i*S	**Sg**	**19 31 50.7**	**+0.2**
BTK	**Batken** baz=75	**2.33**	**177**	⇑*i*P	**Pb**	**19 31 17.6**	**+0.1**
BTK	baz=75			⇑*i*S	**Sb**	**19 31 46.5**	**+0.6**
ARLS	**Aral** baz=97	**2.77**	**100**	⇑*i*P	**Pb**	**19 31 25.5**	**+0.5**
ARLS	baz=97			⇑*i*S	**Sb**	**19 32 00.9**	**+2.2**
AAK	**Ala-Archa** baz=81	**2.84**	**84**	⇑*i*P	**Pb**	**19 31 27.2**	**+1.0**
AAK	baz=81			⇑*i*S	**Sg**	**19 32 03.7**	**-3.6**
AAK	**Ala-Archa** 1.0nm,0.6s	**2.84**	**84**	Pg	**Pg**	**19 31 30.5**	**+0.1**
AAK	5.4nm,1.1s			Lg	Lg	19 32 09.9	
USP	**Ospenovka** baz=69	**2.95**	**71**	⇓*i*P	**Pb**	**19 31 28.6**	**+0.5**
USP	baz=69			⇓*i*S	**Sb**	**19 32 05.6**	**+1.7**
KBK	**Karagaybulak** baz=82	**3.17**	**84**	⇓*i*P	**Pb**	**19 31 32.0**	**0.0**
KBK	baz=82			⇓*i*S	**Sb**	**19 32 11.8**	**+1.4**
KZA	**Kyzart** baz=91	**3.42**	**94**	⇑*i*P	**Pb**	**19 31 35.6**	**-0.6**
KZA	baz=91			⇑*i*S	**Sb**	**19 32 18.2**	**+0.7**
TKM2	**Tokmak 2**	**3.67**	**80**	⇑*i*P	**Pb**	**19 31 39.0**	**-1.5**
TKM2	baz=78			⇑*i*S	**Sb**	**19 32 23.7**	**-1.1**
TKM2	**Tokmak 2** 2.3nm,0.8s	**3.67**	**80**	⇑Lg	Lg	19 32 35.8	
KST	**Kastek** 1.3nm,0.1s	**3.96**	**79**	Pg	**Pg**	**19 31 50.4**	**-1.3**
KST	1.7nm,0.2s			Lg	Lg	19 32 41.5	

*NNC **12** 19:48:20.6±0.8, 42°.03N×72°.83E, h0km±5km, mb3.7, mpv3.4, Error ellipse: s-maj=7.6km s-min=2.8km az=176.0*
*KRNET **12** 19:48:21.1±0.1, 42°.04N×72°.86E, h14km, mb3.1*
*SOME **12** 19:48:21.5, 42°.13N×72°.85E, h5km*
*KNET **12** 19:48:23.2±0.5, 42°.08N×73°.00E, h7km±2km, ml2.4, Error ellipse: s-maj=3.6km s-min=3.4km az=177.0*

ISC 12 19:48:20.6±1.0, 42°.09N±0°.03×72°.86E±0°.01, h19km±9km, n83, σ1$ 48/145, 37C-30D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** baz=81	**0.62**	**86**	⇑*i*P	**Pb**	**19 48 33.5**	**+0.6**
AML	baz=81			⇑*i*S	**Sb**	**19 48 42.0**	**+0.6**
AML	**Almayashu** 23nm,0.1s,SNR=27	**0.62**	**86**	⇓P	**Pb**	**19 48 33.7**	**+0.7**
AML	258nm,0.3s			⇓S	**Sb**	**19 48 42.5**	**+1.1**
MRKS	**Merke** baz=21	**0.71**	**22**	⇓*i*P	**Pn**	**19 48 35.9**	**+0.2**
MRKS	baz=21			⇓*e*S	**Sn**	**19 48 46.6**	**+0.4**
MRKS	**Merke** 31nm,0.1s	**0.71**	**22**	⇓*i*P	**Pn**	**19 48 35.9**	**+0.2**
MRKS	68nm,0.1s			*e*S	**Sn**	**19 48 46.6**	**+0.4**
MRKS	**Merke** 31nm,0.1s	**0.71**	**22**	P	**Pn**	**19 48 35.9**	**+0.2**
MRKS	33nm,0.1s			S	**Sn**	**19 48 46.6**	**+0.4**
ARK	**Arkit** baz=49	**0.73**	**247**	⇓*i*P	**Pb**	**19 48 34.7**	**0.0**
ARK	baz=49			⇓*i*S	**Sb**	**19 48 44.4**	**0.0**
ARSB	**Arslanbob** baz=73	**0.77**	**173**	⇓*i*P	**Pg**	**19 48 34.7**	**-1.0**
ARSB	baz=73			⇓*i*S	**Sg**	**19 48 44.3**	**-1.7**
EKS2	**Erkin-Say** baz=47	**0.89**	**50**	⇑*i*P	**Pn**	**19 48 38.8**	**+0.6**
EKS2	baz=47			⇑*i*S	**Sn**	**19 48 51.4**	**+0.8**
EKS2	**Erkin-Say** 8.2nm,0.1s,SNR=58	**0.89**	**50**	P	**Pn**	**19 48 39.0**	**+0.9**
ARLS	**Aral** baz=98	**1.11**	**101**	⇑*i*P	**Pn**	**19 48 42.3**	**+1.0**
ARLS	baz=98			⇑*i*S	**Sn**	**19 48 56.9**	**+0.7**
UCH	**Uchtor** baz=81	**1.24**	**83**	⇑*i*P	**Pg**	**19 48 44.8**	**+0.2**
UCH	baz=81			⇑*i*S	**Sn**	**19 49 01.6**	**+2.0**
UCH	**Uchtor** 6.4nm,0.1s,SNR=17	**1.24**	**83**	⇑P	**Pg**	**19 48 44.9**	**+0.3**
UCH	54nm,0.3s			⇓S	**Sn**	**19 49 01.7**	**+2.1**
AAK	**Ala-Archa** baz=63	**1.33**	**65**	⇓*i*P	**Pg**	**19 48 46.4**	**+0.1**
AAK	baz=63			⇓*i*S	**Sg**	**19 49 05.0**	**+1.3**
AAK	**Ala-Archa** 9.2nm,0.2s,SNR=11	**1.33**	**65**	⇓P	**Pg**	**19 48 46.7**	**+0.4**
AAK	12nm,0.2s			⇓S	**Sg**	**19 49 05.4**	**+1.7**
AAK	**Ala-Archa** 1.5nm,0.2s	**1.33**	**65**	⇑P	**Pg**	**19 48 46.7**	**+0.4**
AAK	13nm,0.6s			⇑S	**Sg**	**19 49 05.0**	**+1.3**
DZA	**Taraz** baz=8.0	**1.39**	**306**	*e*P	**Pg**	**19 48 47.6**	**+0.3**
DZA	baz=8.0			*e*S	**Sg**	**19 49 05.7**	**+0.2**
DZA	**Taraz** 83nm,0.1s	**1.39**	**306**	*e*P	**Pg**	**19 48 47.6**	**+0.3**
DZA	135nm,0.3s			*e*S	**Sg**	**19 49 05.7**	**+0.2**
DZA	**Taraz** 83nm,0.1s	**1.39**	**306**	P	**Pg**	**19 48 47.6**	**+0.3**
DZA	135nm,0.3s			S	**Sg**	**19 49 05.5**	**+0.1**
FRU1	**Bishkek** baz=59	**1.49**	**61**	⇑*i*P	**Pg**	**19 48 49.6**	**+0.2**
FRU1	baz=59			⇑*i*S	**Sg**	**19 49 10.2**	**+1.3**
KBK	**Karagaybulak** baz=67	**1.65**	**69**	⇓*i*P	**Pg**	**19 48 52.3**	**0.0**
KBK	baz=67			⇓*i*S	**Sg**	**19 49 14.6**	**+0.8**
KBK	**Karagaybulak** 8.7nm,0.1s,SNR=18	**1.65**	**69**	⇑P	**Pg**	**19 48 53.1**	**+0.8**
CHMS	**Chumysh** baz=55	**1.67**	**56**	⇑*i*P	**Pg**	**19 48 52.7**	**0.0**
CHMS	baz=55			⇑*i*S	**Sg**	**19 49 15.6**	**+1.2**
CHMS	**Chumysh** 9.9nm,0.2s,SNR=20	**1.67**	**56**	⇑P	**Pg**	**19 48 52.9**	**+0.3**
CHMS	23nm,0.2s			⇑S	**Sg**	**19 49 16.0**	**+1.6**
USP	**Ospenovka** baz=44	**1.69**	**45**	⇑*i*P	**Pg**	**19 48 53.1**	**0.0**
USP	baz=44			⇑*i*S	**Sg**	**19 49 16.4**	**+1.4**
USP	**Ospenovka** 12nm,0.3s,SNR=25	**1.69**	**45**	⇑P	**Pg**	**19 48 53.1**	**0.0**
USP	40nm,0.2s			⇑S	**Sg**	**19 49 16.5**	**+1.5**
JBG	**Jabagly** baz=78	**1.75**	**282**	*e*P	**Pg**	**19 48 55.2**	**+0.9**
JBG	baz=78			*e*S	**Sg**	**19 49 19.3**	**+2.2**
KZA	**Kyzart** baz=88	**1.78**	**90**	⇑*i*P	**Pg**	**19 48 54.4**	**-0.4**
KZA	baz=88			⇑*i*S	**Sg**	**19 49 18.2**	**+0.2**
KZA	**Kyzart** 11nm,0.2s,SNR=13	**1.78**	**90**	⇑P	**Pg**	**19 48 54.6**	**-0.3**
KZA	38nm,0.2s			⇑S	**Sg**	**19 49 19.1**	**+1.0**
SGDS	**Sogindy** 16nm,0.1s	**1.89**	**43**	Pg	**Pg**	**19 48 56.4**	**-0.4**
SGDS	65nm,0.2s			Lg	Lg	19 49 22.2	
KK31	**Karatay Array** 4.6nm,0.2s,baz=117,slow=13,SNR=113	**2.01**	**301**	⇑Pn	**Pb**	**19 48 56.3**	**-0.1**
KK31	16nm,0.3s,baz=126,slow=29,SNR=20			Sn	**Sg**	**19 49 23.3**	**-2.0**
IUG	**Iuzhnay** baz=74	**2.11**	**273**	*e*P	**Pg**	**19 48 59.6**	**-1.4**
IUG	baz=74			*e*S	**Sg**	**19 49 27.1**	**-1.3**
IUG	**Iuzhnay** 6.5nm,0.2s	**2.11**	**273**	*e*P	**Pg**	**19 48 59.6**	**-1.4**
IUG	130nm,0.3s			*e*S	**Sg**	**19 49 27.1**	**-1.3**
IUG	**Iuzhnay** 6.5nm,0.2s	**2.11**	**273**	Pg	**Pg**	**19 48 59.6**	**-1.4**
IUG	130nm,0.3s			Lg	Lg	19 49 27.8	
TKM2	**Tokmak 2** baz=65	**2.19**	**67**	⇑*i*P	**Pg**	**19 49 01.2**	**-1.4**
TKM2	baz=65			⇑*i*S	**Sg**	**19 49 29.8**	**-1.2**
TKM2	**Tokmak 2** 4.1nm,0.1s,SNR=20	**2.19**	**67**	⇑P	**Pg**	**19 49 02.0**	**-0.6**
TKM2	**Tokmak 2** 5.6nm,0.4s	**2.19**	**67**	⇓Pn	**Pb**	**19 49 00.0**	**+0.4**
TKM2	11nm,0.3s			⇓Lg	Lg	19 49 31.5	
CHRV	**Charvak**	**2.22**	**259**	*e*P	**Pg**	**19 49 02.6**	**-0.6**
CHRV				S	**Sg**	**19 49 30.6**	**-1.4**
BOOM	**Boomskoye usch** baz=78	**2.32**	**79**	⇓*i*P	**Pb**	**19 49 02.8**	**+0.9**
BOOM	baz=78			⇓*i*S	**Sg**	**19 49 32.6**	**-2.6**
BRLS	**Borolday** baz=95	**2.42**	**294**	*e*P	**Pg**	**19 49 05.9**	**-1.2**
BRLS	baz=95			*e*S	**Sg**	**19 49 37.8**	**-0.8**
BRLS	**Borolday** 1.5nm,0.4s	**2.42**	**294**	*e*P	**Pg**	**19 49 05.9**	**-1.2**
BRLS	17nm,0.3s			*e*S	**Sg**	**19 49 37.8**	**-0.8**
BRLS	**Borolday** 1.5nm,0.4s	**2.42**	**294**	Pg	**Pg**	**19 49 05.9**	**-1.2**
BRLS	17nm,0.3s			Lg	Lg	19 49 37.8	
CHM	**Chimkent** 48nm,0.3s	**2.43**	**277**	*e*P	**Pg**	**19 49 07.7**	**+0.5**
CHM	88nm,0.5s			*e*S	**Sg**	**19 49 40.9**	**+2.1**
NRN	**Naryn** baz=4.0	**2.44**	**105**	⇑*i*P	**Pb**	**19 49 04.3**	**+0.3**
NRN	baz=4.0			⇑*i*S	**Sb**	**19 49 34.8**	**+1.0**
KST	**Kastek** baz=65	**2.48**	**66**	⇓*i*P	**Pg**	**19 49 07.4**	**-0.8**
KST	baz=65			⇓*e*S	**Sg**	**19 49 40.6**	**+0.2**
KST	**Kastek** 6.9nm,0.3s	**2.48**	**66**	⇓*i*P	**Pg**	**19 49 07.4**	**-0.8**
KST	14nm,0.4s			*e*S	**Sg**	**19 49 40.6**	**+0.2**
KST	**Kastek** 6.9nm,0.3s	**2.48**	**66**	Pg	**Pg**	**19 49 07.4**	**-0.8**
KST	14nm,0.4s			Lg	Lg	19 49 40.6	
ULHL	**Ulahol** baz=84	**2.52**	**85**	⇓*i*P	**Pb**	**19 49 05.2**	**-0.1**
ULHL	baz=84			⇓*i*S	**Sb**	**19 49 37.4**	**+1.4**
BTK	**Batken** baz=19	**2.55**	**218**	⇑*i*P	**Pb**	**19 49 05.5**	**-0.2**
BTK	baz=19			⇑*i*S	**Sb**	**19 49 38.2**	**+1.5**
KRBS	**Karabastau** 1.5nm,0.3s	**2.62**	**51**	*e*P	**Pg**	**19 49 08.9**	**-1.9**
KRBS	18nm,0.3s			*e*S	**Sg**	**19 49 42.6**	**-2.1**
MTBS	**Maitube** baz=66	**2.83**	**67**	*e*P	**Pg**	**19 49 14.0**	**-0.9**
MTBS	baz=66			⇓*i*S	**Sg**	**19 49 51.9**	**+0.3**
MTBS	**Maitube** 0.8nm,0.0s	**2.83**	**67**	*e*P	**Pg**	**19 49 14.0**	**-0.9**
MTBS	11nm,0.3s			⇓*i*S	**Sg**	**19 49 51.9**	**+0.3**
MTBS	**Maitube** 0.8nm,0.0s	**2.83**	**67**	Pg	**Pg**	**19 49 14.0**	**-0.9**
MTBS	11nm,0.3s			Lg	Lg	19 49 51.9	
IZV	**Izvestkoviy** baz=69	**2.93**	**70**	*e*P	**Pg**	**19 49 16.5**	**-0.2**
IZV	baz=69			*e*S	**Sg**	**19 49 55.6**	**+0.9**
IZV	**Izvestkoviy** 5.5nm,0.3s	**2.93**	**70**	*e*P	**Pg**	**19 49 16.5**	**-0.2**
IZV	19nm,0.5s			*e*S	**Sg**	**19 49 55.6**	**+0.9**
BTLS	**Baital** baz=16	**3.07**	**16**	*e*P	**Pg**	**19 49 18.0**	**-1.5**
BTLS	baz=16			*e*S	**Sg**	**19 49 58.4**	**-0.9**
BTLS	**Baital** 1.1nm,0.1s	**3.07**	**16**	*e*P	**Pg**	**19 49 18.0**	**-1.5**
BTLS	11nm,0.2s			*e*S	**Sg**	**19 49 58.4**	**-0.9**
BTLS	**Baital** 1.1nm,0.1s	**3.07**	**16**	Pg	**Pg**	**19 49 18.0**	**-1.5**
BTLS	11nm,0.2s			Lg	Lg	19 49 58.4	
TNSS	**Tian-Shan** baz=70	**3.16**	**71**	*e*P	**Pg**	**19 49 20.0**	**-1.2**
TNSS	baz=70			*e*S	**Sg**	**19 50 02.1**	**-0.2**
TNSS	**Tian-Shan** 4.5nm,0.3s	**3.16**	**71**	*e*P	**Pg**	**19 49 20.0**	**-1.2**
TNSS	10nm,0.6s			*e*S	**Sg**	**19 50 02.1**	**-0.2**
TNSS	**Tian-Shan** 4.5nm,0.3s	**3.16**	**71**	Pg	**Pg**	**19 49 20.0**	**-1.2**
TNSS	10nm,0.6s			Lg	Lg	19 50 02.1	
KTBS	**Karatobe** baz=56	**3.24**	**59**	*e*P	**Pg**	**19 49 21.0**	**-1.7**
KTBS	baz=56			*e*S	**Sg**	**19 50 03.4**	**-1.3**
KTBS	**Karatobe** 2.9nm,0.3s	**3.24**	**59**	*e*P	**Pg**	**19 49 21.0**	**-1.7**
KTBS	25nm,0.4s			*e*S	**Sg**	**19 50 03.4**	**-1.3**
KTBS	**Karatobe** 2.9nm,0.3s	**3.24**	**59**	Pg	**Pg**	**19 49 21.0**	**-1.7**
KTBS	25nm,0.4s			Lg	Lg	19 50 03.4	
MDOK	**Medeo** baz=69	**3.27**	**69**	*e*P	**Pg**	**19 49 21.4**	**-1.8**
MDOK	baz=69			⇓*i*S	**Sg**	**19 50 04.5**	**-1.2**
MDOK	**Medeo** 7.2nm,0.3s	**3.27**	**69**	*e*P	**Pg**	**19 49 21.4**	**-1.8**
MDOK	11nm,0.5s			⇓*i*S	**Sg**	**19 50 04.5**	**-1.2**
MDOK	**Medeo** 4.2nm,0.4s	**3.27**	**69**	⇑Pg	**Pg**	**19 49 20.9**	**-2.3**
MDOK	13nm,1.0s			⇑Lg	Lg	19 50 05.7	
MDOK	**Medeo** 7.2nm,0.3s	**3.27**	**69**	Pg	**Pg**	**19 49 21.4**	**-1.8**
MDOK	11nm,0.5s			Lg	Lg	19 50 04.5	
KOTS	**Kotyrbulak** baz=68	**3.34**	**69**	*e*P	**Pg**	**19 49 22.1**	**-2.4**
KOTS	baz=68			*e*S	**Sg**	**19 50 05.7**	**-2.1**
KOTS	**Kotyrbulak** 13nm,0.4s	**3.34**	**69**	*e*P	**Pg**	**19 49 22.1**	**-2.4**
KOTS	36nm,0.6s			*e*S	**Sg**	**19 50 05.7**	**-2.1**
KOTS	**Kotyrbulak** 13nm,0.4s	**3.34**	**69**	Pg	**Pg**	**19 49 22.1**	**-2.4**
KOTS	6.1nm,0.5s			Lg	Lg	19 50 06.4	
CHKK	**Chushkaly** baz=58	**3.50**	**58**	*e*P	**Pg**	**19 49 25.5**	**-2.2**
CHKK	baz=58			*e*S	**Sg**	**19 50 11.3**	**-1.8**
CHKK	**Chushkaly** 2.4nm,0.2s	**3.50**	**58**	*e*P	**Pg**	**19 49 25.5**	**-2.2**
CHKK	11nm,0.2s			*e*S	**Sg**	**19 50 11.4**	**-1.8**
CHKK	**Chushkaly** 2.4nm,0.2s	**3.50**	**58**	Pg	**Pg**	**19 49 25.5**	**-2.2**
CHKK	11nm,0.2s			Lg	Lg	19 50 11.4	
ARXS	**Arharly** 3.6nm,0.3s	**4.21**	**58**	*e*P	**Pg**	**19 49 38.2**	**-2.9**
ARXS	16nm,0.5s			*e*S	**Sg**	**19 50 33.0**	**-2.7**
ARXS	**Arharly** 3.6nm,0.3s	**4.21**	**58**	Pg	**Pg**	**19 49 38.2**	**-2.9**
ARXS	16nm,0.5s			Lg	Lg	19 50 33.0	
KPKS	**Kokpek** baz=70	**4.50**	**70**	*e*P	**Pg**	**19 49 43.8**	**-3.0**
KPKS	baz=70			*e*S	**Sg**	**19 50 43.1**	**-2.0**
KPKS	**Kokpek** 3.7nm,0.5s	**4.50**	**70**	*e*P	**Pg**	**19 49 43.8**	**-3.0**
KPKS	9.1nm,0.4s			*e*S	**Sg**	**19 50 43.1**	**-2.0**
UZB	**Uzynbulak** baz=74	**4.67**	**75**	*e*P	**Pg**	**19 49 47.3**	**-2.6**
UZB	baz=74			*e*S	**Sg**	**19 50 48.4**	**-2.0**
UZB	**Uzynbulak** 2.3nm,0.8s	**4.67**	**75**	*e*P	**Pg**	**19 49 47.3**	**-2.6**
UZB	4.4nm,0.4s			*e*S	**Sg**	**19 50 48.4**	**-2.0**
TDK	**Taldyqorghan** 8.4nm,0.5s	**4.97**	**52**	*e*P	**Pg**	**19 49 52.3**	**-3.5**
TDK	31nm,0.5s			*e*S	**Sg**	**19 50 56.9**	**-3.2**
PDGK	**Podgornoye** 0.5nm,0.5s	**5.04**	**74**	Pg	**Pg**	**19 49 53.5**	**-3.5**

PDGK Lg Lg 19 50 58.2
2.0nm,0.7s
PDGK Podgornoye 5.04 74 ⇑Pg Pg 19 49 53.6 -3.5
1.9nm,0.9s
PDGK ⇓Lg Lg 19 51 02.3
4.5nm,0.8s
KAPS Kapalarasan 5.69 54 Pg Pg 19 50 04.1 -5.4
0.8nm,0.5s
KAPS Lg Lg 19 51 17.9
3.8nm,0.5s

*IDC **12** 19:59:09.3±1.9,5˚.40N×126˚.38E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.4/30,mbtmp3.6/4,MS3.6/1,Ms1 3.6/1, ms1mx2.5/31,Error ellipse: s-maj=121.6km s-min=23.6km az=70.0*
*NEIC **12** 19:59:14.5±2.9,5˚.4N±0˚.2×126˚.2E±0˚.3,h60km±19km, mb4.1/9,Error ellipse: s-maj=43.4km s-min=13.5km az=65.0*
*MAN **12** 19:59:16.2,5˚.91N×126˚.03E,h124km,mb4.5,ML3.4, MS3.2*
ISC 12 19:59:16.9±0.9,5˚.82N±0˚.08×126˚.08E±0˚.09,h119km±9km, n24,σ1§71/26,mb3.7/6,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.46**	**308**		*e*P		**Pn**	**19 59 35.5**	**+0.9**
DDMP					*e*S		**Sn**	**19 59 49.3**	**+1.5**
MATI	**Mati**	**1.14**	**9**		*e*P		**Pn**	**19 59 39.9**	**-0.4**
MATI					*e*S		**Sn**	**19 59 57.7**	**-0.3**
GSPH	**General Santos**	**1.15**	**284**	⇑P			**Sn**	**19 59 56.9**	**-1.6**
DAV	**Davao City (W)**	**1.34**	**338**	Pn			**Pn**	**19 59 42.3**	**-0.2**
	83nm,0.3s,baz=230,slow=3.6,SNR=7.5								
DAV				Sn			**Sn**	**20 00 01.4**	**-0.5**
	64nm,0.3s,baz=41,slow=20,SNR=7.8								
DMPH	**Davao City--Mi**	**1.38**	**336**		*e*P		**Pn**	**19 59 42.2**	**-0.7**
DMPH					*i* S		**Sn**	**20 00 02.2**	**-0.5**
SKMP	**Bagumbayan, Su**	**1.68**	**295**		*e*P		**Pn**	**19 59 45.2**	**-1.2**
SKMP					*e*S		**Sn**	**20 00 09.4**	**+0.6**
BUKP	**Musuan**	**2.29**	**334**		*e*P		**Pn**	**19 59 53.1**	**-0.8**
BUKP					*e*S		**Sn**	**20 00 19.8**	**-2.6**
TGY	**Tagaytay City**	**9.66**	**329**	LR			LR	20 05 30.4	
	comp=Z,345nm,19.0s,baz=256,slow=38								
SBUM	**Sibu**	**14.22**	**257**	P			**P**	**20 02 38.5**	**+1.8**
SAUI	**Saumlaki**	**14.66**	**159**	Pn			Pn	20 02 32.8	-5.9
NACB	**Ninganchiao**	**18.76**	**347**	P			**Pn**	**20 03 30.5**	**+2.0**
MTN	**Manton Dam**	**19.20**	**165**	P			**P**	**20 03 27.8**	**-3.9**
MTN				IAmb			IAmb	20 03 41.1	
	comp=Z,27nm,1.4s								
HKPS	**Hong Kong Po S**	**20.02**	**326**	P			Pn	20 03 46.1	+2.7
KNRA	**Kununurra**	**21.52**	**173**	P			**P**	**20 03 52.7**	**-3.9**
FITZ	**Fitzroy Crossi**	**23.77**	**181**	P			**P**	**20 04 20.6**	**+2.0**
	comp=Z,0.9nm,0.4s,baz=5.5,slow=11,SNR=5.4								
FITZ	**Fitzroy Crossi**	**23.77**	**181**	P			**P**	**20 04 17.7**	**-0.9**
WRAB	**Tennant Creek**	**26.85**	**163**	P			**P**	**20 04 47.3**	**+0.7**
WRAB				IAmb			IAmb	20 04 49.2	
	comp=Z,9.2nm,1.3s								
WRA	**Warramunga Arr**	**26.86**	**163**	P			**P**	**20 04 47.2**	**+0.7**
	comp=Z,0.9nm,1.1s,baz=339,slow=11,SNR=4.1								
WRA	**Warramunga Arr**	**26.86**	**163**	P			**P**	**20 04 46.6**	**+0.1**
WR0	**Warramunga Arr**	**26.93**	**162**	P			**P**	**20 04 48.5**	**+1.3**
WR0				IAmb			IAmb	20 05 05.6	
	comp=Z,5.8nm,1.2s								
AS31	**Alice Springs**	**30.28**	**166**	P			**P**	**20 05 17.0**	**0.0**
ASAR	**Alice Springs**	**30.28**	**166**	P			**P**	**20 05 18.0**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=344,slow=8.0,SNR=5.9								
STKA	**Stephens Creek**	**40.30**	**159**	P			**P**	**20 06 43.9**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=352,slow=7.1,SNR=4.0								
STKA	**Stephens Creek**	**40.30**	**159**	IAmb			IAmb	20 06 49.6	
	comp=Z,2.6nm,1.5s								

*ROM **12** 20:11:36.9±0.1,46˚.824N±0˚.008×11˚.196E±0˚.008, h11km,ML3.1/31,Error ellipse: s-maj=0.7km s-min=0.7km az=18.0*
*ZUR **12** 20:11:37.0,46˚.81N×11˚.20E,h11km±1km,MLh3.0/26, Error ellipse: s-maj=2.9km s-min=1.0km az=350.0*
*VIE **12** 20:11:36.8±0.1,46˚.82N×11˚.18E,h9km±1km,mb2.6/14, ml3.4/17,Error ellipse: s-maj=0.8km s-min=0.7km az=1.0 5 km NW of St.Martin im Passeiertal*
*LDG **12** 20:11:38.4±0.2,46˚.84N×11˚.34E,h10km,Ml2.9/22,Error ellipse: s-maj=4.8km s-min=3.3km az=31.0*
*PRU **12** 20:11:38.1±0.0,46˚.91N×11˚.19E,h2km*
*BGR **12** 20:11:39.2±0.3,46˚.85N×11˚.19E,h10km,ML3.1/26,Error ellipse: s-maj=4.4km s-min=2.2km az=179.0*
BGR Clearly felt by many people in Tirol.
*STR **12** 20:11:42.5±1.1,47˚.N±6˚×1˚1E±1˚0,h0km,MLv3.0/7*
ISC 12 20:11:37.3±0.8,46˚.83N±0˚.01×11˚.19E±0˚.01,h10km±5km, n173,σ1§29/312,14C-13D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ABSI	**Aberstueckl**	**0.14**	**140**	⇓Pg			**Pg**	**20 11 40.5**	**-0.1**
	21nm,SNR=379								
ABSI				⇓Pg			**Pg**	**20 11 40.5**	**-0.1**
ABSI				Sg			**Sg**	**20 11 42.6**	**-0.4**
ABSI	**Aberstueckl**	**0.14**	**140**	P			**Pg**	**20 11 40.5**	**-0.1**
ABSI				S			**Sg**	**20 11 42.6**	**-0.4**
ABSI				AML			AML		
	comp=N,19500μm,0.4s								
ABSI				AML			AML		
	comp=E,24000μm,0.1s								
ROSI	**Rosskopf**	**0.18**	**58**	⇑Pg			**Pg**	**20 11 41.4**	**+0.1**
	comp=E,17nm,SNR=362								
ROSI				⇑Pg			**Pg**	**20 11 41.4**	**+0.1**
ROSI	**Rosskopf**	**0.18**	**58**	P			**Pg**	**20 11 41.4**	**+0.1**
ROSI				S			**Sg**	**20 11 44.2**	**+0.1**
ROSI				AML			AML		
	comp=N,14250μm,0.2s								
ROSI				AML			AML		
	comp=E,16350μm,0.5s								
ROSI				AML			AML		
	comp=N,14250μm,0.2s								
BOSI	**Bolzano**	**0.35**	**165**	⇓Pg			**Pg**	**20 11 44.2**	**-0.1**
BOSI				⇓Pg			**Pg**	**20 11 44.2**	**-0.1**
	comp=N,9.4nm,SNR=34								
BOSI	**Bolzano**	**0.35**	**165**	P			**Pg**	**20 11 44.2**	**-0.1**
BOSI				S			**Sg**	**20 11 49.0**	**+0.1**
BOSI				AML			AML		
	comp=E,3125μm,0.3s								
BOSI				AML			AML		
	comp=E,3130μm,0.3s								
BOSI				AML			AML		
	comp=N,4425μm,1.2s								
APPI	**Appiano**	**0.36**	**176**	P			**Pg**	**20 11 44.2**	**-0.2**
APPI				S			**Sg**	**20 11 49.0**	**-0.2**
APPI				AML			AML		
	comp=E,2715μm,0.8s								
APPI				AML			AML		
	comp=E,2710μm,0.8s								
APPI				AML			AML		
	comp=N,1825μm,1.4s								
FETA	**Feichten**	**0.37**	**301**	*e*Pg			**Pg**	**20 11 44.8**	**+0.1**
	comp=N,76nm,0.1s,SNR=1660								
FETA				*i* Sg			**Sg**	**20 11 49.4**	**-0.2**
	comp=N,269nm,0.1s								
SQTA	**Sankt Quirin**	**0.39**	**2**	*e*Pg			**Pg**	**20 11 45.4**	**+0.4**
	comp=N,246nm,0.1s,SNR=1837								
SQTA				*i* Sg			**Sg**	**20 11 50.6**	**+0.4**
	comp=N,2μm,0.1s								
KOSI	**Kohlern**	**0.39**	**161**	⇓Pg			**Pg**	**20 11 45.0**	**-0.2**
KOSI				⇓Pg			**Pg**	**20 11 45.0**	**-0.2**
	comp=N,2.1nm,SNR=50								
KOSI	**Kohlern**	**0.39**	**161**	P			**Pg**	**20 11 45.0**	**-0.2**
KOSI				S			**Sg**	**20 11 49.8**	**-0.5**
KOSI				AML			AML		
	comp=E,819μm,0.9s								
KOSI				AML			AML		
	comp=N,952μm,0.5s								
BRES	**Bressanone**	**0.40**	**110**	P			**Pg**	**20 11 45.3**	**0.0**
BRES				S			**Sg**	**20 11 50.3**	**-0.3**
BRES				AML			AML		
	comp=E,4170μm,0.3s								
BRES				AML			AML		
	comp=N,7670μm,0.2s								
BRES				AML			AML		
	comp=N,7665μm,0.2s								
BRES				AML			AML		
	comp=E,4165μm,0.3s								
BRES				AML			AML		
	comp=N,7675μm,0.2s								
OZOL	**Ozolo**	**0.44**	**193**	⇓*e*Pg			**Pg**	**20 11 45.7**	**-0.3**
OZOL				*e*Sg			**Sg**	**20 11 51.7**	**-0.1**
MOSI	**Grossmontoni**	**0.49**	**244**	⇑Pg			**Pg**	**20 11 46.3**	**-0.7**
	comp=N,3.0nm,SNR=43								
MOSI				⇑Pg			**Pg**	**20 11 46.3**	**-0.7**
MOSI	**Grossmontoni**	**0.49**	**244**	P			**Pg**	**20 11 46.5**	**-0.5**
MOSI				S			**Sg**	**20 11 53.1**	**-0.4**
MOSI				AML			AML		
	comp=E,2495μm,0.4s								
MOSI				AML			AML		
	comp=N,4300μm,0.8s								
MOTA	**Moosalm**	**0.52**	**353**	*e*Pg			**Pg**	**20 11 47.7**	**+0.3**
	comp=N,220nm,0.1s,SNR=1337								
MOTA				*i* Sg			**Sg**	**20 11 54.7**	**+0.4**
	comp=N,344nm,0.1s								
CARE	**Lago del Cares**	**0.53**	**220**	⇑*e*Pg			**Pg**	**20 11 47.1**	**-0.7**
CARE				*e*Sg			**Sg**	**20 11 54.4**	**-0.4**
WATA	**Walderalm**	**0.57**	**28**	*e*Pg			**Pg**	**20 11 48.3**	**-0.1**
	comp=N,0.5nm,0.0s,SNR=183								
WATA				*i* Sg			**Sg**	**20 11 56.2**	**+0.3**
	comp=N,116nm,0.2s								
SCUC	**Scuol-Clozza**	**0.61**	**267**	⇑Pg			**Pg**	**20 11 48.8**	**-0.4**
RISI	**Rein**	**0.62**	**79**	⇑Pg			**Pg**	**20 11 48.8**	**-0.6**
	comp=N,2.8nm,SNR=87								
RISI				⇑Pg			**Pg**	**20 11 48.8**	**-0.6**
RISI	**Rein**	**0.62**	**79**	P			**Pg**	**20 11 48.8**	**-0.6**
RISI				AML			AML		
	comp=E,1910μm,1.2s								
RISI				AML			AML		
	comp=N,3120μm,0.3s								
STSP	**Tschierv**	**0.62**	**251**	Pg			**Pg**	**20 11 49.0**	**-0.5**
PART	**Garmisch-Parte**	**0.67**	**356**	*e*Pg			**Pg**	**20 11 49.9**	**-0.3**
PART				*e*Sg			**Sg**	**20 11 59.4**	**+0.4**
BRMO	**Bormio**	**0.67**	**238**	Pg			**Pg**	**20 11 49.3**	**-1.0**
	comp=N,2.0nm,SNR=40								
BRMO				Pg			**Pg**	**20 11 49.3**	**-1.0**
BRMO	**Bormio**	**0.67**	**238**	P			**Pg**	**20 11 49.5**	**-0.7**
BRMO				AML			AML		
	comp=E,1083μm,0.2s								
BRMO				AML			AML		
	comp=E,1082μm,0.2s								
BRMO				AML			AML		
	comp=N,716μm,0.2s								
FUORN	**Ofenpass-Fuorn**	**0.67**	**252**	⇑Pg			**Pg**	**20 11 49.5**	**-0.9**
FUORN				⇑Pg			**Pg**	**20 11 49.5**	**-0.9**
	comp=N,1.0nm,SNR=12								
FUORN	**Ofenpass-Fuorn**	**0.67**	**252**	P			**Pg**	**20 11 49.5**	**-0.9**
FUORN				S			**Sg**	**20 11 58.6**	**-0.7**
FUORN				AML			AML		
	comp=E,808μm,0.4s								
FUORN				AML			AML		
	comp=N,748μm,0.3s								
FUORN				AML			AML		
	comp=E,808μm,0.4s								
RETA	**Reutte**	**0.72**	**336**	*e*Pg			**Pg**	**20 11 50.8**	**-0.4**
	comp=E,12nm,0.1s,SNR=17								
RETA				*i* Sg			**Sb**	**20 12 01.6**	**-0.2**
	comp=E,33nm,0.1s								
AFL	**Alpe Faloria**	**0.75**	**114**	⇓*e*Pg			**Pg**	**20 11 51.7**	**-0.1**
AFL				*e*Sg			**Sb**	**20 12 02.3**	**-0.6**
GAGG	**Gaggia**	**0.77**	**192**	⇓*e*Pg			**Pg**	**20 11 51.6**	**-0.6**
GAGG				*e*Sg			**Sg**	**20 12 02.4**	**+0.2**
PANI	**Panarotta**	**0.79**	**173**	⇓*e*Pg			**Pg**	**20 11 52.2**	**-0.4**
PANI				*e*Sg			**Sg**	**20 12 02.9**	**-0.1**
FAU	**Forcella Aurin**	**0.81**	**138**	⇓*e*Pg			**Pg**	**20 11 52.6**	**-0.5**
FAU				*e*Sg			**Sg**	**20 12 03.1**	**-0.6**
OBER	**Oberstdorf**	**0.84**	**313**	*e*Pg			**Pg**	**20 11 53.4**	**-0.8**
OBER				*e*Sg			**Sb**	**20 12 06.2**	**+0.8**
CTI	**Castel Tesino**	**0.85**	**158**	P			**Pg**	**20 11 53.0**	**-0.7**
CTI				S			**Sg**	**20 12 04.1**	**-0.6**
CTI				AML			AML		
	comp=E,1455μm,0.9s								
CTI				AML			AML		
	comp=N,1705μm,0.3s								
CTI				AML			AML		
	comp=E,1450μm,0.9s								
DAVOX	**Davos/Dischmat**	**0.90**	**267**	⇑Pg			**Pg**	**20 11 53.8**	**-0.9**
DAVOX				⇑Pg			**Pg**	**20 11 53.8**	**-0.9**
	comp=E,0.5nm,SNR=6.9								
DAVOX	**Davos/Dischmat**	**0.90**	**267**	P			**Pg**	**20 11 53.9**	**-0.9**
DAVOX				S			**Sg**	**20 12 05.9**	**-0.6**
DAVOX				AML			AML		
	comp=E,316μm,1.5s								
DAVOX				AML			AML		
	comp=E,316μm,1.5s								
DAVOX				AML			AML		
	comp=N,484μm,0.5s								
BERNI	**Berninapass**	**0.91**	**243**	⇑Pg			**Pg**	**20 11 53.6**	**-1.3**
	comp=N,0.7nm,SNR=11								
BERNI				⇑Pg			**Pg**	**20 11 53.6**	**-1.3**
BERNI	**Berninapass**	**0.91**	**243**	P			**Pg**	**20 11 53.9**	**-1.0**
BERNI				S			**Sg**	**20 12 06.4**	**-0.3**
BERNI				AML			AML		
	comp=E,423μm,0.7s								
BERNI				AML			AML		
	comp=N,298μm,1.1s								
MABI	**Malga Bissina**	**0.91**	**211**	Pg			**Pg**	**20 11 53.8**	**-1.1**
MABI				Pg			**Pg**	**20 11 53.8**	**-1.1**
	comp=N,1.3nm,SNR=18								
MABI	**Malga Bissina**	**0.91**	**211**	P			**Pg**	**20 11 53.8**	**-1.1**
MABI				S			**Sg**	**20 12 05.5**	**-1.2**
MABI				AML			AML		
	comp=E,440μm,0.4s								
MABI				AML			AML		
	comp=N,545μm,0.4s								
MABI				AML			AML		
	comp=E,439μm,0.4s								
ABTA	**Abfaltersbach**	**0.91**	**95**	*e*Pg			**Pg**	**20 11 54.3**	**-0.6**
	comp=E,18nm,0.1s,SNR=69								
ABTA				*i* Sg			**Sb**	**20 12 07.0**	**-0.5**
	comp=E,38nm,0.1s								
DAVA	**Damuels**	**1.00**	**297**	*e*Pg			**Pn**	**20 11 57.3**	**-0.4**
DAVA				*e*Sg			**Sb**	**20 12 10.9**	**+0.7**
DAVA	**Damuels**	**1.00**	**297**	*i* Pg			**Pg**	**20 11 56.6**	**-0.1**
	comp=E,13nm,0.1s								
DAVA				*i* Sg			**Sb**	**20 12 10.3**	**+0.1**
	comp=E,40nm,0.2s								
CGRP	**Cima Grappa**	**1.04**	**156**	⇓Pg			**Pg**	**20 11 56.2**	**-1.2**
	comp=E,0.6nm,SNR=13								
CGRP				⇓Pg			**Pg**	**20 11 56.2**	**-1.2**
CGRP	**Cima Grappa**	**1.04**	**156**	P			**Pg**	**20 11 56.5**	**-0.9**
CGRP				AML			AML		
	comp=E,680μm,0.5s								
CGRP				AML			AML		
	comp=N,416μm,1.1s								
CGRP				AML			AML		
	comp=N,416μm,1.1s								
FVI	**Forni Avoltri**	**1.12**	**102**	P			**Pb**	**20 11 58.1**	**-0.7**
FVI				S			**Sb**	**20 12 12.3**	**-1.2**
FVI				AML			AML		
	comp=E,1440μm,0.2s								
FVI				AML			AML		
	comp=N,1235μm,0.2s								
UBR	**Ueberruh**	**1.12**	**319**	Pn			**Pn**	**20 11 59.4**	**+0.2**
UBR	**Ueberruh**	**1.12**	**319**	*e*Pg			**Pn**	**20 11 59.5**	**+0.4**
UBR				*e*Sg			**Sn**	**20 12 16.5**	**+1.8**
MAGA	**Magasa**	**1.13**	**200**	P			**Pb**	**20 11 58.1**	**-0.8**
MAGA				S			**Sb**	**20 12 13.6**	**-0.1**
MAGA				AML			AML		
	comp=N,1205μm,0.3s								
MAGA				AML			AML		
	comp=E,2150μm,0.5s								
ROVR	**Rover Verones**	**1.19**	**184**	P			**Pb**	**20 11 59.3**	**-0.7**
ROVR				S			**Sb**	**20 12 14.9**	**-0.6**
ROVR				AML			AML		
	comp=E,720μm,0.7s								
ROVR				AML			AML		
	comp=N,1560μm,1.1s								
ROVR				AML			AML		
	comp=E,314μm,0.7s								
ROVR				AML			AML		
	comp=N,620μm,1.1s								
STAL	**STALIGIAL**	**1.20**	**118**	P			**Pb**	**20 11 59.7**	**-0.4**
STAL				AML			AML		
	comp=N,1420μm,0.6s								
STAL				AML			AML		
	comp=N,1640μm,0.2s								
STAL				AML			AML		
	comp=E,1163μm,0.2s								
STAL				AML			AML		
	comp=E,1256μm,0.2s								
VDL	**Val di Lei**	**1.25**	**254**	Pn			**Pn**	**20 11 59.5**	**-1.5**
VDL				Pn			**Pn**	**20 11 59.5**	**-1.5**
	comp=E,0.4nm,SNR=5.4								
PLONS	**Plons/SG**	**1.26**	**281**	*e*Sg			**Sn**	**20 12 19.0**	**+1.0**
PLONS	**Plons/SG**	**1.26**	**281**	AML			AML		
	comp=N,251μm,1.5s								
PLONS				AML			AML		
	comp=E,354μm,0.4s								
FUR	**Furstenfeldbru**	**1.33**	**2**	*e*Pn			**Pg**	**20 12 03.2**	**+0.3**
FUR				*e*Pg			**Pb**	**20 12 04.7**	**+2.3**
FUR				*e*Sg			**Sg**	**20 12 22.4**	**+2.1**
RJOB	**Jochberg**	**1.42**	**50**	*e*Pn			**Pb**	**20 12 03.3**	**-0.6**
RJOB				*e*Pg			**Pg**	**20 12 05.8**	**+1.3**
RJOB				*e*Sg			**Sg**	**20 12 24.3**	**+1.3**
MDI	**Monti di Nese**	**1.47**	**225**	P			**Pb**	**20 12 04.4**	**-0.5**
MDI				AML			AML		
	comp=N,232μm,0.4s								
MDI				AML			AML		
	comp=E,252μm,0.6s								
KBA	**Koelnbreinsper**	**1.50**	**80**	*e*Pn			**Pn**	**20 12 04.3**	**-0.1**
KBA				*e*Sg			**Sg**	**20 12 24.6**	**-0.8**
KBA	**Koelnbreinsper**	**1.50**	**80**	*e*Pn			**Pn**	**20 12 04.3**	**-0.1**
	comp=E,11nm,0.1s,SNR=50								
KBA				*i* Sn			**Sg**	**20 12 24.7**	**-0.8**
	comp=E,19nm,0.1s								
TEOL	**Teolo**	**1.51**	**167**	P			**Pb**	**20 12 05.1**	**-0.4**
TEOL				AML			AML		
	comp=N,1460μm,1.3s								
TEOL				AML			AML		
	comp=E,1560μm,0.7s								
PTCC	**Patocco-Chiusa**	**1.55**	**105**	P			**Pb**	**20 12 06.0**	**-0.2**
PTCC				AML			AML		
	comp=E,342μm,1.1s								
PTCC				AML			AML		
	comp=E,342μm,1.1s								
PTCC				AML			AML		
	comp=N,465μm,0.3s								
ACOM	**Acomizza, Ital**	**1.62**	**99**	P			**Pb**	**20 12 07.0**	**-0.5**
ACOM				AML			AML		
	comp=E,882μm,0.3s								
ACOM				AML			AML		
	comp=N,596μm,1.5s								
MYKA	**Terra Mystica**	**1.70**	**96**	*e*Pn			**Pb**	**20 12 08.2**	**-0.5**
	comp=N,15nm,0.2s,SNR=23								
MYKA				*i* Sn			**Sb**	**20 12 30.7**	**+0.5**
	comp=N,10nm,0.1s								
CADS	**Cadrg**	**1.86**	**108**	*i* Pn			**Pb**	**20 12 11.1**	**-0.3**
CADS				*e*Sn			**Sg**	**20 12 36.7**	**-0.4**
	comp=Z,68nm,0.2s								
SABO	**M.te Sabotino**	**1.87**	**116**	P			**Pb**	**20 12 11.1**	**-0.5**
SABO				AML			AML		
	comp=E,706μm,0.4s								
SABO				AML			AML		
	comp=N,908μm,0.5s								
BNALP	**Bannalp**	**1.90**	**272**	P			**Pg**	**20 12 14.2**	**+0.5**
BNALP				AML			AML		
	comp=N,172μm,0.4s								
BNALP				AML			AML		
	comp=E,140μm,1.2s								
EMING	**Emmingen-Lipti**	**1.92**	**304**	*e*Pn			**Pb**	**20 12 11.5**	**-0.9**
EMING				*e*Sg			**Sg**	**20 12 38.5**	**-0.3**
NORI	**Noerdlinger Ri**	**1.93**	**349**	*e*Pn			**Pn**	**20 12 10.7**	**+0.6**
NORI				*e*Sg			**Sg**	**20 12 40.1**	**+0.9**
VARE	**Varese**	**1.94**	**241**	P			**Pg**	**20 12 14.0**	**-0.4**
CAVE	**Cavezzo**	**1.97**	**184**	P			**Pg**	**20 12 14.2**	**-0.9**
CAVE				AML			AML		
	comp=E,1065μm,0.8s								
CAVE				AML			AML		
	comp=N,497μm,0.2s								
VOJS	**Vojsko**	**2.03**	**112**	*i* Pn			**Pb**	**20 12 13.0**	**-1.4**
VOJS				*e*Sn			**Sb**	**20 12 40.8**	**+1.2**
SLE	**Schleitheim**	**2.06**	**298**	*e*Pn			**Pb**	**20 12 13.4**	**-1.4**
SLE				*e*Pg			**Pg**	**20 12 17.2**	**+0.4**
SLE				*e*Sg			**Sg**	**20 12 43.4**	**-0.1**
NOVE	**Novellara**	**2.06**	**189**	P			**Pg**	**20 12 17.1**	**+0.2**
METMA	**Mettma DE**	**2.18**	**295**	*e*Pn			**Pb**	**20 12 15.7**	**-1.2**
METMA				*e*Sg			**Sg**	**20 12 47.5**	**0.0**
SULZ	**Cheisacher**	**2.21**	**289**	*e*Sg			**Sg**	**20 12 48.4**	**+0.1**
BERGE	**Lenzkirch (DE)**	**2.30**	**298**	*e*Pn			**Pn**	**20 12 16.7**	**+1.4**
BERGE				*e*Pg			**Pg**	**20 12 21.6**	**+0.3**
BERGE				*e*Sg			**Sg**	**20 12 50.5**	**-0.6**
MOA	**Molln**	**2.33**	**63**	*e*Pn			**Pb**	**20 12 17.5**	**-1.9**
MOA				*e*Sg			**Sg**	**20 12 52.3**	**+0.3**
MOA	**Molln**	**2.33**	**63**	*e*Pn			**Pn**	**20 12 15.1**	**-0.5**
	comp=N,0.9nm,0.1s,SNR=12								
MOA				*i* Sn			**Sn**	**20 12 45.7**	**+1.4**
	comp=N,32nm,0.2s								
OBKA	**Obir**	**2.34**	**97**	*e*Pn			**Pb**	**20 12 18.4**	**-1.2**
OBKA				*e*Sg			**Sg**	**20 12 52.4**	**+0.1**
OBKA	**Obir**	**2.34**	**97**	*e*Pn			**Pn**	**20 12 16.0**	**+0.1**
	SNR=13								
OBKA				*i* Sn			**Sn**	**20 12 44.4**	**-0.2**
	comp=N,19nm,0.3s								
LJU	**Ljubljana**	**2.44**	**108**	P			**Pb**	**20 12 20.0**	**-1.2**
LJU				S			**Sg**	**20 12 57.0**	**+1.3**
LJU				AML			AML		
	comp=E,340μm,0.3s								
LJU				AML			AML		
	comp=N,484μm,0.3s								
BFO	**Black Forest**	**2.45**	**309**	*e*Pn			**Pb**	**20 12 19.3**	**-2.2**
BFO				*e*Pg			**Pg**	**20 12 26.8**	**+2.5**
BFO				*e*Sg			**Sg**	**20 12 55.9**	**0.0**
KIZ	**Kirchzarten**	**2.49**	**298**	Pn			**Pb**	**20 12 19.9**	**-2.2**
WET	**Wettzell**	**2.58**	**26**	*e*Pn			**Pn**	**20 12 20.0**	**+0.9**
WET				*e*Sg			**Sg**	**20 12 59.1**	**-0.9**
OPP	**Oppenau**	**2.62**	**310**	Pn			**Pn**	**20 12 21.5**	**+1.8**
GEC2	**GERESS Array S**	**2.63**	**39**	*e*Pn			**Pn**	**20 12 20.9**	**+1.0**
GEC2				*e*Sg			**Sg**	**20 13 00.7**	**-1.1**
BRJN	**Brijuni**	**2.63**	**136**	*e*Pn			**Pn**	**20 12 20.8**	**+1.0**
SOKA	**Soboth**	**2.65**	**92**	*i* Pn			**Pn**	**20 12 19.5**	**-0.7**
	comp=N,1.4nm,0.2s								
SOKA				*i* Sn			**Sn**	**20 12 53.1**	**+0.8**
	comp=N,5.5nm,0.3s								
VISS	**Visnje**	**2.73**	**111**	*i* Pn			**Pn**	**20 12 22.6**	**+1.4**
KHC	**Kasperske Hory**	**2.80**	**34**	*e*PN			**Pn**	**20 12 23.0**	**+0.8**
KHC				*e*PG			**Pb**	**20 12 28.1**	**+0.6**
KHC				*e*SN			**Sn**	**20 12 56.3**	**+0.2**
KHC				*e*

PTJ	**Puntijarka**	**3.44**	**104**	*e*Pn		**Pn**	**20 12 32.5**	**+1.5**
NVLJ	**Novalja**	**3.44**	**130**	*e*Pn		**Pn**	**20 12 31.8**	**+0.9**
HAU	**Haudompre**	**3.49**	**291**	*e*Pn		**Pn**	**20 12 33.7**	**+2.0**
HAU				*e*Sg		**Sg**	**20 13 28.9**	**-0.5**
	comp=N,22nm,0.3s							
NKC	**Novy Kostel**	**3.50**	**13**	*e*PN		**Pn**	**20 12 31.6**	**-0.2**
NKC				*e*SN		**Sn**	**20 13 12.9**	**-0.4**
NKC				*e*SG		**Sg**	**20 13 26.6**	**-3.2**
	comp=N,52nm,0.4s							
KOGS	**Kog**	**3.51**	**94**	P		**Pn**	**20 12 33.3**	**+1.4**
KOGS				AML		AML		
	comp=N,92µm,0.4s							
KOGS				AML		AML		
	comp=E,85µm,1.5s							
CABF	**La Chapelle**	**3.52**	**268**	*e*Pn		**Pn**	**20 12 34.5**	**+2.4**
CABF				*e*Sg		**Sg**	**20 13 30.1**	**-0.1**
	comp=E,26nm,0.7s							
KALN	**Kalnik**	**3.71**	**99**	*i* Pn		**Pn**	**20 12 35.0**	**+0.4**
CING	**Cingoli**	**3.74**	**157**	P		**Pn**	**20 12 36.9**	**+1.8**
CING				AML		AML		
	comp=E,37µm,0.8s							
CING				AML		AML		
	comp=N,22µm,1.4s							
MBDF	**Montbardon**	**3.74**	**237**	*e*Pn		**Pn**	**20 12 39.2**	**+4.0**
TREC	**Trest**	**3.79**	**48**	*e*PN		**Pn**	**20 12 37.1**	**+1.3**
TREC				*e*SG		**Sg**	**20 13 36.3**	**-2.7**
	comp=N,27nm,0.5s							
MOX	**Moxa**	**3.82**	**4**	*e*Pn		**Pn**	**20 12 36.4**	**+0.1**
MOX				*e*Sn		**Sn**	**20 13 20.5**	**-0.7**
MOX				*e*Sg		**Sg**	**20 13 39.5**	**-0.6**
TNS	**Taunus Mts**	**3.85**	**333**	*e*Pn		**Pn**	**20 12 38.2**	**+1.5**
TNS				*e*Sg		**Sg**	**20 13 41.8**	**+0.9**
PRU	**Pruhonice**	**3.87**	**34**	*e*PN		**Pn**	**20 12 38.0**	**+1.2**
PRU				*e*SN		**Sn**	**20 13 22.3**	**+0.1**
PRU				*e*SG		**Sg**	**20 13 38.7**	**-2.7**
	comp=N,35nm,0.7s							
PRA	**Prague**	**3.89**	**32**	*e*SG		**Sg**	**20 13 40.4**	**-1.8**
	comp=N,19nm,0.4s							
ABH	**Alteburg**	**3.90**	**323**	Pn		**Pn**	**20 12 39.9**	**+2.7**
GOPC	**GO Pecny, Ondr**	**3.91**	**37**	*e*PN		**Pn**	**20 12 38.0**	**+0.6**
GOPC				*e*SG		**Sg**	**20 13 40.1**	**-2.6**
	comp=N,21nm,0.3s							
DUGI	**Dugi Otok**	**3.94**	**135**	*e*Pn		**Pn**	**20 12 38.9**	**+1.2**
DUGI				Sn		**Sn**	**20 13 24.6**	**+0.6**
UDBI	**Udbina**	**3.95**	**124**	*e*Pn		**Pn**	**20 12 39.0**	**+1.0**
SBF	**Sospel**	**3.98**	**223**	*e*Pn		**Pn**	**20 12 41.1**	**+2.7**
SBF				*e*Sn		**Sn**	**20 13 27.7**	**+2.6**
	comp=N,8.3nm,0.4s							
MOSL	**Moslavina**	**4.05**	**106**	*i* Pn		**Pn**	**20 12 40.4**	**+1.1**
PAGF	**Fort de Pagny**	**4.07**	**297**	*e*Pn		**Pn**	**20 12 40.2**	**+0.6**
PAGF	**Fort de Pagny**	**4.07**	**297**	*e*Pg		**Pg**	**20 12 55.4**	**+0.1**
PAGF				*e*Sg		**Sg**	**20 13 47.5**	**-0.6**
	comp=N,8.7nm,0.4s							
KRUC	**Moravsky**	**4.15**	**56**	*e*PN		**Pn**	**20 12 41.3**	**+0.6**
KRUC				*e*SN		**Sn**	**20 13 30.1**	**+0.9**
ORIF	**Oris-en-Rattie**	**4.17**	**245**	*e*Pn		**Pn**	**20 12 44.1**	**+3.0**
ORIF				*e*Sn		**Sn**	**20 13 32.1**	**+2.1**
	comp=N,5.5nm,0.4s							
ZST	**Bratislava**	**4.23**	**69**	*e*SG		**Sg**	**20 13 51.4**	**-1.8**
PVCC	**Panska Ves**	**4.32**	**30**	*e*SG		**Sg**	**20 13 54.2**	**-1.8**
	comp=N,34nm,0.4s							
MORI	**Morici**	**4.35**	**131**	*i* Pn		**Pn**	**20 12 46.4**	**+2.9**
MORI				Sn		**Sn**	**20 13 35.0**	**+0.8**
SFTF	**Sexfontaines** baz=106	**4.39**	**290**	*e*Pn		**Pn**	**20 12 46.4**	**+2.4**
SFTF				*e*Sn		**Sn**	**20 13 35.7**	**+0.6**
	comp=N,1.5nm,0.2s,baz=104							
VRAC	**Vranov**	**4.39**	**54**	*e*PN		**Pn**	**20 12 44.8**	**+0.8**
VRAC				*e*SN		**Sn**	**20 13 33.9**	**-1.2**
MODS	**Modra-Piesok**	**4.40**	**67**	*e*PN		**Pn**	**20 12 45.5**	**+1.4**
MODS				*e*SN		**Sn**	**20 13 35.4**	**+0.1**
MODS				*e*SG		**Sg**	**20 13 56.9**	**-1.5**
BRG	**Berggiesshubel**	**4.43**	**23**	PG		**Pb**	**20 12 54.4**	**-0.8**
BRG				*e*			20 13 34.4	
BRG				*i*			20 13 47.3	
BRG	**Berggiesshubel**	**4.43**	**23**	SG		**Sg**	**20 13 59.0**	**-0.6**
	comp=N,11nm,0.5s							
MEZF	**Maizieres J'vi**	**4.47**	**294**	*e*Pg		**Pg**	**20 13 01.8**	**-1.1**
MEZF				*e*Sg		**Sg**	**20 14 00.0**	**-0.8**
	comp=N,5.4nm,0.3s							
ZIRJ	**Zirje**	**4.47**	**134**	*e*Pn		**Pn**	**20 12 46.2**	**+1.1**
ZIRJ				Sn		**Sn**	**20 13 37.1**	**0.0**
PGF	**Pioggiola**	**4.56**	**201**	*e*Pn		**Pn**	**20 12 49.4**	**+2.9**
PGF				*e*Sn		**Sn**	**20 13 41.4**	**+1.9**
	comp=N,1.1nm,0.3s							
FRF	**La Foret Royal**	**4.58**	**226**	*e*Pn		**Pn**	**20 12 50.9**	**+4.2**
CLL	**Collm**	**4.63**	**14**	*e*Pn		**Pn**	**20 12 47.0**	**-0.3**
CLL				*e*Pg		**Pg**	**20 13 09.0**	**+3.0**
CLL				*e*Sn		Sn	20 13 29.0	-12
CLL				*e*			20 13 40.0	
CLL				*e*Sg		**Sg**	**20 14 04.0**	**-2.0**
	comp=Z,19nm,0.6s							
KIJV	**Kijevo**	**4.63**	**126**	*e*Pn		**Pn**	**20 12 49.3**	**+1.9**
KIJV				Sn		**Sn**	**20 13 42.5**	**+1.3**
UPC	**Upice**	**4.87**	**39**	*e*PN		**Pn**	**20 12 50.8**	**+0.2**
UPC				*e*SN		**Sn**	**20 13 46.3**	**-0.7**
UPC				*e*SG		**Sg**	**20 14 10.2**	**-3.4**
	comp=Z,35nm,0.7s							
SMRF	**Simiane la Rot**	**4.88**	**236**	*e*Pn		**Pn**	**20 12 52.9**	**+2.1**
SMRF				*e*Sn		**Sn**	**20 13 48.4**	**+1.1**
	comp=Z,0.6nm,0.3s							
DPC	**Dobruska-Polom**	**4.90**	**42**	*e*PN		**Pn**	**20 12 51.6**	**+0.6**
DPC				*e*SN		**Sn**	**20 13 46.9**	**-0.8**
DPC				*e*SG		**Sg**	**20 14 11.5**	**-3.0**
	comp=Z,12nm,0.4s							
CHVC	**Chvalec**	**4.95**	**39**	*e*Pn		**Pn**	**20 12 52.0**	**+0.3**
CHVC				*e*SN		**Sn**	**20 13 47.9**	**-1.0**
CHVC				*e*SG		**Sg**	**20 14 14.3**	**-1.8**
	comp=Z,50nm,1.1s							
VIVF	**Saint-Julien-l**	**4.96**	**249**	*e*Pn		**Pn**	**20 12 54.3**	**+2.4**
VIVF				*e*Sn		**Sn**	**20 13 49.5**	**+0.1**
	comp=Z,2.3nm,0.3s							
OSTC	**Ostas**	**5.00**	**40**	*e*PN		**Pn**	**20 12 52.7**	**+0.4**
OSTC				*e*SN		**Sn**	**20 13 48.9**	**-1.2**
OSTC				*e*SG		**Sg**	**20 14 15.3**	**-2.3**
	comp=Z,17nm,0.6s							
LOR	**Lormes** baz=94	**5.03**	**278**	*e*Pn		**Pn**	**20 12 54.4**	**+1.6**
LOR				*e*Sn		**Sn**	**20 13 50.3**	**-0.7**
	comp=Z,3.1nm,0.3s,baz=88							
LOR				*e*Sg		**Sg**	**20 14 17.3**	**-1.5**
	baz=92							
SMF	**Signal de Mont**	**5.06**	**271**	*e*Pn		**Pn**	**20 12 55.1**	**+1.9**
SMF				*e*Sn		**Sn**	**20 13 52.7**	**+1.1**
	comp=Z,2.4nm,0.2s							
MORC	**Moravsky Berou**	**5.16**	**53**	*e*PN		**Pn**	**20 12 55.1**	**+0.5**
MORC				*e*SN		**Sn**	**20 13 53.7**	**-0.5**
HVAR	**Hvar**	**5.22**	**133**	*e*Pn		**Pn**	**20 12 56.5**	**+1.0**
HVAR				Sn		**Sn**	**20 13 56.4**	**+0.8**
SSF	**Saint Saulge**	**5.27**	**275**	*e*Pn		**Pn**	**20 12 57.6**	**+1.5**
SSF				*e*Sg		**Sg**	**20 14 25.5**	**-0.9**
	comp=Z,2.9nm,0.3s							
AVF	**Avril sur Loir**	**5.38**	**272**	*e*Pn		**Pn**	**20 12 59.3**	**+1.7**
VYHS	**Vyhne**	**5.43**	**69**	*e*PN		**Pn**	**20 12 58.9**	**+0.7**
VYHS				*e*SN		**Sn**	**20 14 00.6**	**-0.1**
VYHS				*e*SG		**Sg**	**20 14 30.8**	**-0.6**
MAKA	**Makarska**	**5.44**	**129**	*i* Pn		**Pn**	**20 12 59.9**	**+1.5**
DOU	**Dourbes**	**5.47**	**309**	Pn		**Pn**	**20 13 00.9**	**+2.2**
OKC	**Ostrava-Krasne**	**5.53**	**55**	*e*SG		**Sg**	**20 14 31.6**	**-3.1**
	comp=Z,11nm,0.6s							
BAIF	**Baives**	**5.66**	**307**	*e*Pn		**Pn**	**20 13 01.0**	**-0.4**
BGF	**Bois d'Agland**	**5.75**	**270**	*e*Pn		**Pn**	**20 13 04.5**	**+1.9**
BGF				*e*Sn		**Sn**	**20 14 10.3**	**+1.7**
	comp=Z,13nm,0.3s							
LASF	**Ste Croix**	**5.85**	**245**	*e*Pn		**Pn**	**20 13 06.6**	**+2.5**
LASF				*e*Sn		**Sn**	**20 14 11.5**	**+0.4**
	comp=Z,3.8nm,0.4s							
STON	**Ston**	**6.09**	**128**	*e*Pn		**Pn**	**20 13 08.2**	**+0.9**
TCF	**Toulx Ste Croi**	**6.22**	**268**	*e*Pn		**Pn**	**20 13 10.4**	**+1.3**
TCF				*e*Sn		**Sn**	**20 14 19.4**	**-0.8**
	comp=Z,3.7nm,0.3s							
DBRK	**Dubrovnik**	**6.47**	**128**	*e*Pn		**Pn**	**20 13 13.0**	**+0.4**
CAF	**Calviac**	**6.65**	**257**	*e*Pn		**Pn**	**20 13 16.7**	**+1.6**
CAF				*e*Sn		**Sn**	**20 14 30.8**	**-0.1**
	comp=Z,2.8nm,0.5s							
MFF	**Saint Martin d**	**7.80**	**272**	*e*Pn		**Pn**	**20 13 32.1**	**+1.4**

IDC ***12*** *20:21:45.3±1.7, 35°.35S×104°.49W, h0km, mb3.7/5, mb1 4.1/5, mb1mx3.8/43, mbtmp3.7/5, MS3.4/9, Ms1 3.4/9, ms1mx3.3/22, Error ellipse: s-maj=62.3km s-min=30.1km az=36.0*

ISC 12 20:21:47.4±1.7, 35°.3S±0°.4×104°.4W±0°.3, h10km, n16, σ0°86/8, mb3.8/5, MS3.5/8, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
RPN	**Rapa Nui**	**9.16**	**331**	LR	LR	20 26 37.8		
	comp=Z,86nm,20.2s,baz=251,slow=32							
PLCA	**Paso Flores**	**27.13**	**112**	P	**P**	**20 27 31.5**		**+0.9**
	2.2nm,1.0s,baz=229,slow=9.3,SNR=3.2							
PLCA				LR	LR	20 35 34.6		
	comp=Z,51nm,21.9s,baz=275,slow=30							
CFA	**Coronel Fontan**	**30.31**	**93**	LR	LR	20 37 02.5		
	comp=Z,164nm,20.6s,baz=256,slow=30							
NNA	**Nana**	**34.09**	**54**	LR	LR	20 38 56.0		
	comp=Z,96nm,18.3s,baz=224,slow=30							
ATAH	**Atahualpa**	**36.83**	**47**	LR	LR	20 40 06.4		
	comp=Z,78nm,21.6s,baz=253,slow=30							
LPAZ	**La Paz**	**37.48**	**69**	LR	LR	20 41 41.8		
	comp=Z,19nm,18.1s,baz=232,slow=32							
CPUP	**Villa Florida**	**41.10**	**91**	LR	LR	20 43 09.0		
	comp=Z,75nm,21.9s,baz=217,slow=31							
SIV	**San Ignacio**	**43.15**	**75**	P	**P**	**20 29 47.7**		**-0.7**
	1.3nm,0.8s,baz=241,slow=13,SNR=6.0							
PPT	**Papeete**	**43.70**	**282**	LR	LR	20 43 05.6		
	comp=Z,90nm,18.4s,baz=214,slow=29							
BDFB	**Brasilia**	**53.83**	**84**	LR	LR	20 52 03.9		
	comp=Z,56nm,18.6s,baz=152,slow=34							
TXAR	**Lajitas Array**	**64.28**	**1**	P	**P**	**20 32 23.5**		**+0.6**
	0.6nm,0.9s,baz=196,slow=6.4,SNR=4.4							
NVAR	**Mina Array Bea**	**74.47**	**349**	P	**P**	**20 33 26.2**		**+0.3**
	0.1nm,0.3s,baz=187,slow=6.9,SNR=4.2							
PDAR	**Pinedale Array**	**77.82**	**356**	P	**P**	**20 33 44.6**		**-0.3**
	0.7nm,0.9s,baz=194,slow=5.6,SNR=4.4							
BRTR	**Keskin Array B**	**146.66**	**70**	PKPbc	**PKPdf**	**20 41 27.4**		**-0.4**
	0.9nm,0.9s,baz=222,slow=1.9,SNR=5.0							
SONM	**Songino Array**	**153.94**	**308**	PKPbc	**PKPbc**	**20 41 45.7**		**-1.1**
	0.3nm,0.8s,baz=128,slow=1.6,SNR=2.4							
MKAR	**Makanchi Array**	**167.44**	**338**	PKP	**PKPdf**	**20 41 54.0**		**+0.7**
	0.4nm,0.9s,baz=354,slow=2.9,SNR=3.6							

BJI ***12*** *20:24:44.0±0.0, 38°.80N×122°.80W, h5km, mB4.9/1, mb5.0/11, Ms7 4.7/1*

NCEDC ***12*** *20:24:46.7±1.6, 38°.81N±0°.05×122°.82W±0°.06, h3km±5km, Mwr4.5/10, mb4.1/4(NEIC), Error ellipse: s-maj=8.8km s-min=5.2km az=224.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=5.03; Mθθ-3.13; Mϕϕ8.16; Mrθ1.53; Mϕϕ3.52; Mϕr-0.83;*

GCMT ***12*** *20:24:47.7±0.5, 38°.68N±0°.04×122°.98W±0°.04, h23km±1km, MW4.8/71, Moment Tensor Solution. s11,c12; s71,c90; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.51±.23; Mθθ-0.59±.14; Mϕϕ2.10±.14; Mrθ0.31±.25; Mϕθ0.79±.08; Mϕr-0.11±.17; Best double couple: Mo1.97600×10¹⁶ NP1:ϕ=215.00000°, δ48.00000°, λ-61.00000°. NP2: ϕ=355.00000°, δ49.00000°, λ-119.00000°. Principal axes: T 2.3150, Plg0.0000°, Azm105.0000°; N -0.6790, Plg21.0000°, Azm15.0000°; P -1.6370, Plg69.0000°, Azm196.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***12*** *20:24:47.4±1.0, 38°.79N×122°.74W, h0km, mb3.8/6, mb1 4.0/11, mb1mx3.8/45, mbtmp3.8/11, ML3.6/6, MS3.9/38, Ms1 3.9/38, ms1mx3.9/44 Error ellipse: s-maj=18.4km s-min=10.8km az=45.0*

NEIC ***12*** *20:24:47.3±1.9, 38°.78N±0°.02×122°.79W±0°.07, h1km±5km, Error ellipse: s-maj=7.5km s-min=2.7km az=93.0*

PMR ***12*** *20:24:48±2.8, 38°.76N±0°.03×122°.78W±0°.06, h5km±5km, Error ellipse: s-maj=7.5km s-min=4.4km az=73.0*

ISC 12 20:24:46.6±1.4, 38°.80N±0°.01×122°.80W±0°.02, h0km±10km, n272, σ1°$14/244, mb4.1/12, MS3.9/29, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	ISC	Res
GDXM	**Geysers**	**0.01**	**30**		**Pg**	**20 24 47.4**		**+0.4**
GCRM	**Castle Rock Sp**	**0.07**	**109**		**Pg**	**20 24 48.6**		**+0.6**
GACM	**Adobe Creek**	**0.09**	**329**		**Pg**	**20 24 48.4**		**0.0**
GAXM	**Alexander Vall**	**0.09**	**156**		**Pg**	**20 24 49.1**		**+0.7**
GBGM	**Boggs Mountain**	**0.10**	**80**		**Pg**	**20 24 49.3**		**+0.8**
GSGM	**Seigler Mounta**	**0.10**	**46**		**Pg**	**20 24 49.3**		**+0.7**
GPMM	**Pine Mountain**	**0.12**	**294**		**Pg**	**20 24 49.2**		**+0.2**
GCVM	**Cloverdale**	**0.17**	**261**		**Pg**	**20 24 50.4**		**+0.6**
GMKM	**Mount Konocti**	**0.17**	**4**		**Pg**	**20 24 50.6**		**+0.6**
GRTM	**Round Top Moun**	**0.17**	**36**		**Pg**	**20 24 50.3**		**+0.3**
GSSM	**Skaggs Springs**	**0.19**	**240**		**Pg**	**20 24 51.0**		**+0.7**
NHSM	**Mount Saint He**	**0.20**	**134**		**Pg**	**20 24 51.2**		**+0.7**
NMCNC	**Mill Creek, So**	**0.22**	**203**		**Pg**	**20 24 51.8**		**+0.9**
MAC	**Mark West Spri**	**0.25**	**166**		**Pg**	**20 24 52.5**		**+1.0**
NMTM	**Middletown**	**0.28**	**88**		**Pg**	**20 24 52.7**		**+0.8**
HOPS	**Hopland Field**	**0.29**	**313**		**Pg**	**20 24 52.6**		**+0.4**
MNRC	**McLaughlin Min**	**0.29**	**74**		**Pg**	**20 24 53.4**		**+1.1**
GHLM	**Highland Sprin**	**0.30**	**325**		**Pg**	**20 24 52.5**		**+0.2**
NSHM	**Saint Helena R**	**0.32**	**151**		**Pg**	**20 24 53.7**		**+1.0**
GSNM	**Snow Mountain**	**0.34**	**295**		**Pg**	**20 24 53.6**		**+0.5**
GDCM	**Dry Creek**	**0.34**	**265**		**Pg**	**20 24 54.0**		**+0.7**
GWKM	**Walker Ridge**	**0.35**	**44**		**Pg**	**20 24 54.1**		**+0.7**
GHCM	**House Creek**	**0.36**	**238**		**Pg**	**20 24 54.5**		**+0.9**
FTR	**Fort Ross**	**0.39**	**226**		**Pb**	**20 24 55.1**		**-1.3**
GBMM	**Baldy Mountain**	**0.42**	**35**		**Pg**	**20 24 55.3**		**+0.6**
NTYM	**Taylor**	**0.42**	**165**		**Pg**	**20 24 55.7**		**+1.0**
NBPM	**Berryessa Peak**	**0.49**	**105**		**Pg**	**20 24 57.7**		**-0.5**
CVS	**Carmenet Viney**	**0.53**	**149**		**Pg**	**20 24 57.5**		**+0.8**
GTSM	**Trough Springs**	**0.54**	**17**		**Pg**	**20 24 57.6**		**+0.7**
GGUM	**Gualala**	**0.55**	**276**		**Pg**	**20 24 57.7**		**+0.6**
NAPC	**Atlas Peak**	**0.56**	**129**		**Pg**	**20 24 58.1**		**+0.7**
GHOM	**Hamilton Openi**	**0.63**	**293**		**Pg**	**20 24 59.2**		**+0.6**
MCCM	**Marconi Confer**	**0.65**	**185**		**Pb**	**20 25 00.4**		**-0.5**
GFC	**Funks Creek**	**0.66**	**37**		**Pb**	**20 25 02.0**		**+0.9**
SNT	**Sears Point**	**0.67**	**156**		**Pg**	**20 24 60.0**		**+0.4**
NGVM		**0.69**	**138**		**Pb**	**20 25 01.2**		**-0.3**
NDHM	**Dunnigan Hills**	**0.70**	**92**		**Pb**	**20 25 02.3**		**+0.6**
GHMM	**Hull Mountain**	**0.70**	**352**		**Pb**	**20 25 01.0**		**-0.9**
NADM	**Allendale**	**0.73**	**117**		**Pb**	**20 25 02.9**		**+0.7**
NOLM	**Olema**	**0.76**	**179**		**Pb**	**20 25 02.6**		**0.0**
GNAM	**Navarro Ridge**	**0.76**	**302**		**Pb**	**20 25 02.0**		**-0.7**
GCK	**Clark Valley**	**0.80**	**21**		**Pb**	**20 25 04.0**		**+0.6**
NPRM	**Point Reyes**	**0.82**	**192**		**Pb**	**20 25 03.4**		**-0.3**
KRKM	**Rockpile Spring**	**0.82**	**339**		**Pb**	**20 25 03.3**		**-0.5**
GTC	**Three Chop Rid**	**0.84**	**316**		**Pg**	**20 25 03.0**		**+0.2**
NLHM	**Lake Herman**	**0.85**	**143**		**Pg**	**20 25 03.4**		**+0.5**
GASB	**Alder Springs**	**0.86**	**4**		**Pb**	**20 25 03.9**		**-0.6**
OSUM	**Sutter Buttes**	**0.88**	**57**		**Pg**	**20 25 03.6**		**+0.1**
HERB	**Hercules**	**0.89**	**151**		**Pb**	**20 25 04.5**		**-0.5**
CPMM	**Point Molate**	**0.90**	**160**		**Pg**	**20 25 04.3**		**+0.4**
SUTB	**Sutter Butte**	**0.90**	**61**		**Pg**	**20 25 03.4**		**-0.5**
CSPM	**San Pablo Ridg**	**0.92**	**155**		**Pb**	**20 25 05.3**		**-0.2**
CPIM	**Pinole Ridge**	**0.93**	**150**		**Pb**	**20 25 05.2**		**-0.4**
RFSB	**Richmond Field**	**0.95**	**157**		**Pb**	**20 25 05.5**		**-0.4**
KFPM	**Farley Peak**	**0.97**	**330**		**Pg**	**20 25 05.6**		**+0.4**
GVV	**Valley View**	**0.98**	**6**		**Pb**	**20 25 06.4**		**-0.2**
BL88	**Building 88, L**	**1.01**	**155**		**Pb**	**20 25 06.9**		**-0.2**
BRK	**Berkeley--Havi**	**1.02**	**155**		**Pb**	**20 25 06.7**		**-0.4**
VAK	**Adit at Lawren**	**1.02**	**154**		**Pb**	**20 25 06.8**		**-0.2**
BL67	**Building 67, L**	**1.02**	**155**		**Pb**	**20 25 06.9**		**-0.2**
CVPM	**Vollmer Peak**	**1.02**	**153**		**Pg**	**20 25 06.1**		**-0.3**
BKS	**Berkeley--Byer**	**1.02**	**154**		**Pb**	**20 25 06.9**		**-0.3**
JPRM	**Presidio of Sa**	**1.03**	**165**		**Pg**	**20 25 06.8**		**+0.3**
CYBM	**Yerba Buena Is**	**1.04**	**160**		**Pg**	**20 25 06.4**		**-0.2**
KCPM	**Cahto Peak**	**1.07**	**326**		**Pb**	**20 25 08.2**		**0.0**
SMCB	**Saint Mary's C**	**1.10**	**150**		**Pg**	**20 25 08.1**		**+0.4**
FARB	**Farallon Islan**	**1.11**	**188**		**Pg**	**20 25 07.8**		**0.0**
BDM	**Black Diamond**	**1.12**	**139**		**Pg**	**20 25 07.7**		**-0.4**
GROM	**Round Mountain**	**1.12**	**5**		**Pb**	**20 25 09.1**		**0.0**
CMCM	**Mills College**	**1.13**	**154**		**Pb**	**20 25 09.0**		**0.0**
CRPB	**Russellman Par**	**1.13**	**141**		**Pg**	**20 25 07.7**		**-0.6**
CRHM	**Round Hill Res**	**1.13**	**146**		**Pg**	**20 25 08.4**		**+0.1**
KBNM	**Bluenose Ridge**	**1.14**	**345**		**Pn**	**20 25 09.6**		**-0.4**
BGC	**Bolinger Road**	**1.14**	**149**		**Pg**	**20 25 08.0**		**-0.5**
KIPM	**Iron Peak**	**1.14**	**333**		**Pg**	**20 25 07.8**		**-0.7**
OHCM	**Honcut**	**1.16**	**62**		**Pg**	**20 25 07.0**		**-1.8**
PAM	**Palermo**	**1.19**	**56**		**Pg**	**20 25 07.7**		**-1.8**
CLCB	**Lake Chabot**	**1.21**	**151**		**Pb**	**20 25 10.4**		**0.0**
SAC	**San Andreas**	**1.25**	**166**		**Pg**	**20 25 09.6**		**-1.0**
CMOB	**Morgan Territo**	**1.26**	**141**		**Pg**	**20 25 10.3**		**-0.5**
ORV	**Oroville**	**1.26**	**53**		**Pg**	**20 25 08.8**		**-2.1**
ORV	**Oroville**	**1.26**	**53**		**Pg**	**20 25 08.7**		**-2.1**
JCPM	**Coyote Point**	**1.27**	**162**		**Pb**	**20 25 11.3**		**0.0**
KBSM	**Bell Springs**	**1.28**	**331**		**Pb**	**20 25 11.3**		**-0.4**
OXMT	**Ox Mountain**	**1.33**	**167**		**Pg**	**20 25 11.0**		**-1.1**
CBSNC	**Byron Hot Spri**	**1.34**	**137**		**Pg**	**20 25 11.1**		**-1.2**

AASM	**Arroyo Seco**	**1.38**	**105**			**Pg**	**20 25 10.5**		**-2.5**
O02D	**Mt. Diablo Mer**	**1.38**	**0**			**Pb**	**20 25 13.4**		**+0.1**
CVLM	**Vallecito**	**1.40**	**147**			**Pn**	**20 25 12.0**		**-1.4**
MGL	**Magalia**	**1.40**	**43**			**Pn**	**20 25 10.9**		**-2.6**
JHPM	**Huddart Park**	**1.41**	**164**			**Pn**	**20 25 12.7**		**-0.8**
WENL	**Wente Vineyard**	**1.43**	**145**			**Pn**	**20 25 12.6**		**-1.3**
AFDM	**Forest Hills D**	**1.44**	**83**			**Pn**	**20 25 11.8**		**-2.2**
JRSC	**Jasper Ridge**	**1.46**	**162**			**Pn**	**20 25 12.6**		**-1.6**
JSFB	**Stanford Teles**	**1.48**	**160**			**Pn**	**20 25 13.9**		**-0.5**
BGH	**Bear Gulch**	**1.50**	**166**			**Pg**	**20 25 16.4**		**+1.1**
LTCM	**Tuscan Springs**	**1.50**	**20**			**Pn**	**20 25 14.1**		**-0.8**
JFP	**Foothills Park**	**1.51**	**161**			**Pn**	**20 25 13.3**		**-1.7**
LBPM	**Beegum Peak**	**1.52**	**358**			**Pn**	**20 25 15.4**		**+0.2**
JJRM	**Joaquin Road**	**1.53**	**162**			**Pn**	**20 25 14.3**		**-0.9**
KMRM	**Mail Ridge**	**1.59**	**334**			**Pg**	**20 25 17.3**		**+0.3**
JPC	**Peters Creek,**	**1.59**	**163**			**Pn**	**20 25 15.2**		**-0.9**
CMLM	**Mount Lewis**	**1.60**	**145**			**Pn**	**20 25 14.9**		**-1.3**
KPPM	**Pickett Peak**	**1.61**	**345**			**Pg**	**20 25 19.5**		**+2.1**
JSGM	**Saratoga Golf**	**1.62**	**158**			**Pn**	**20 25 15.4**		**-1.1**
ASMM	**Slate Mountain**	**1.66**	**88**			**Pn**	**20 25 15.5**		**-1.5**
JHUM	**Huhtala Lane,**	**1.66**	**162**			**Pn**	**20 25 15.7**		**-1.2**
LCMM	**Colby Mountain**	**1.67**	**36**			**Pn**	**20 25 15.8**		**-1.6**
CMMM	**Mount Mocho**	**1.69**	**142**			**Pn**	**20 25 15.8**		**-1.7**
MNHB	**New Hogan Dam**	**1.69**	**112**			**Pn**	**20 25 15.5**		**-1.9**
JJOM	**Saint Joseph's**	**1.72**	**157**			**Pn**	**20 25 16.4**		**-1.4**
MHC	**Mount Hamilton**	**1.72**	**147**			**Pn**	**20 25 17.1**		**-0.8**
JBNB	**Ben Lomond Mou**	**1.75**	**163**			**Pn**	**20 25 17.0**		**-1.2**
KSMM	**Slide Mountain**	**1.75**	**323**			**Pn**	**20 25 16.7**		**-1.5**
ARN	**Arnold Ranch**	**1.76**	**145**			**Pn**	**20 25 17.1**		**-1.3**
JSTM	**Santa Teresa H**	**1.77**	**153**			**Pn**	**20 25 16.6**		**-1.9**
CCOB	**Coe Ranch Numb**	**1.78**	**149**			**Pn**	**20 25 17.6**		**-1.0**
JUMM	**Mount Umunhum**	**1.78**	**156**			**Pn**	**20 25 17.6**		**-1.1**
WDC	**Whisk

DUG	**Dugway, Tooele**	**7.85**	**77**		**Pn**	**20 26 43.5 +1.3**	
MSU	**Marysvale**	**8.32**	**89**		**Pn**	**20 26 50.7 +2.0**	
NEW	**Newport**	**10.32**	**22**	LR	LR	20 31 33.2	
	comp=Z,408nm,20.9s,baz=210,slow=39						
PDAR	**Pinedale Array**	**10.80**	**64**	Pn	**Pn**	**20 27 26.9 +4.2**	
	0.1nm,0.3s,baz=250,slow=12,SNR=18						
PDAR				LR	LR	20 31 47.7	
	comp=Z,414nm,18.6s,baz=257,slow=39						
ANMO	**Albuquerque**	**13.64**	**101**	LR	LR	20 33 43.6	
	comp=Z,858nm,19.4s,baz=292,slow=40						
BBB	**Bella Bella**	**13.89**	**346**	LR	LR	20 32 45.1	
	comp=Z,487nm,20.2s,baz=187,slow=34						
LPIG	**La Paz**	**18.09**	**140**	LR	LR	20 36 17.7	
	comp=Z,1μm,18.6s,baz=330,slow=38						
TXAR	**Lajitas Array**	**18.42**	**115**	P	**P**	**20 29 04.6 +1.0**	
	0.0nm,0.3s,baz=289,slow=8.9,SNR=26						
TXAR				LR	LR	20 37 11.1	
	comp=Z,158nm,21.5s,baz=0.0,slow=40						
FFC	**Flin Flon**	**21.26**	**35**	P	**P**	**20 29 33.2 -1.0**	
FFC				IAmb	IAmb	20 29 42.8	
	comp=Z,6.6nm,0.8s						
ULM	**Lac du Bonnet**	**22.23**	**50**	P	**P**	**20 29 44.0 -0.6**	
	comp=Z,2.5nm,0.7s,baz=262,slow=11,SNR=4.8						
ULM				LR	LR	20 38 14.7	
	comp=Z,324nm,18.2s,baz=252,slow=36						
ULM	**Lac du Bonnet**	**22.23**	**50**	IAmb	IAmb	20 29 47.2	
	comp=Z,13nm,1.4s						
YKA	**Yellowknife Ar**	**24.25**	**9**	P	**P**	**20 30 06.4 +1.4**	
	comp=Z,0.4nm,0.8s,baz=191,slow=10,SNR=6.3						
YKA				PcP	**PcP**	**20 33 46.1 +1.1**	
	comp=Z,0.1nm,0.7s,baz=184,slow=2.4,SNR=3.9						
YKA				LR	LR	20 41 03.9	
	comp=Z,31nm,20.6s,baz=200,slow=40						
ILAR	**Eielson Array**	**29.59**	**339**	P	**P**	**20 30 54.1 +1.1**	
	comp=Z,0.4nm,0.8s,baz=137,slow=7.0,SNR=3.6						
ILAR				LR	LR	20 41 06.4	
	comp=Z,283nm,21.1s,baz=144,slow=33						
TKL	**Tuckaleechee C**	**31.07**	**83**	LR	LR	20 44 43.5	
	comp=Z,357nm,18.2s,baz=287,slow=38						
CMIG	**Matias Romero**	**32.58**	**124**	LR	LR	20 45 43.4	
	comp=Z,333nm,19.1s,baz=284,slow=39						
SADO	**Sadowa**	**32.79**	**65**	LR	LR	20 45 14.5	
	comp=Z,229nm,18.1s,baz=330,slow=38						
TEIG	**Tepich**	**35.01**	**112**	LR	LR	20 49 45.5	
	comp=Z,188nm,18.0s,slow=43						
SCHQ	**Schefferville**	**40.36**	**48**	LR	LR	20 48 30.1	
	comp=Z,180nm,18.1s,baz=314,slow=35						
PETK	**Petropavlovsk-**	**54.29**	**313**	LR	LR	20 54 28.9	
	comp=Z,46nm,19.9s,baz=61,slow=33						
ROSC	**El Rosal**	**55.36**	**115**	LR	LR	21 01 14.4	
	comp=Z,65nm,18.2s,baz=264,slow=40						
PPT	**Papeete**	**61.42**	**209**	LR	LR	20 54 57.5	
	comp=Z,34nm,21.8s,baz=224,slow=30						
ARCES	**ARCESS Array B**	**69.50**	**11**	LR	LR	21 06 11.7	
	comp=Z,106nm,18.7s,baz=348,slow=36						
NOA	**NORSAR Array B**	**73.69**	**21**	LR	LR	21 08 52.8	
	comp=Z,73nm,20.2s,baz=320,slow=36						
MJAR	**Matsushiro Arr**	**74.24**	**304**	LR	LR	21 02 43.7	
	comp=Z,54nm,21.4s,baz=50,slow=31						
LPAZ	**La Paz**	**74.93**	**126**	LR	LR	21 08 44.9	
	comp=Z,54nm,19.1s,baz=322,slow=35						
FINES	**FINESS Array B**	**76.95**	**15**	LR	LR	21 10 10.0	
	comp=Z,84nm,18.8s,baz=3.0,slow=35						
KSRS	**Korea Array**	**80.06**	**310**	LR	LR	21 07 13.4	
	comp=Z,33nm,20.5s,baz=60,slow=32						
TLY	**Talaya**	**81.19**	**333**	LR	LR	21 12 31.0	
	comp=Z,64nm,20.8s,baz=44,slow=35						
SONM	**Songino Array**	**83.28**	**329**	P	**P**	**20 37 17.0 +1.9**	
	comp=Z,0.9nm,0.8s,baz=46,slow=2.9,SNR=6.5						
SONM				LR	LR	21 13 47.5	
	comp=Z,80nm,21.4s,baz=10.0,slow=35						
SONM	**Songino Array**	**83.28**	**329**	IAmb	IAmb	20 37 18.8	
	comp=Z,1.0nm,0.8s						
ESDC	**Sonseca Array**	**83.92**	**43**	P	**P**	**20 37 20.3 +1.8**	
	comp=Z,0.2nm,0.3s,baz=314,slow=6.1,SNR=4.5						
ESDC	**Sonseca Array**	**83.92**	**43**	IAmb	IAmb	20 37 21.1	
	comp=Z,1.0nm,0.9s						
ZALV	**Zalesovo Beam**	**84.60**	**344**	P	**P**	**20 37 22.4 +0.8**	
	comp=Z,0.7nm,0.6s,baz=18,slow=5.2,SNR=4.4						
ZALV				LR	LR	21 18 21.5	
	comp=Z,89nm,18.3s,baz=50,slow=38						
ARU	**Arti**	**85.13**	**359**	LR	LR	21 18 57.0	
	comp=Z,91nm,18.7s,baz=314,slow=38						
HHC	**Hu-ho-hao-te**	**86.49**	**322**	*eP*	**P**	**20 37 30.5 -1.0**	
HHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,56nm,5.4s						
AKASG	**Malin Array Be**	**87.55**	**17**	LR	LR	21 15 26.7	
	comp=Z,77nm,19.6s,baz=265,slow=35						
BDFB	**Brasilia**	**88.26**	**112**	LR	LR	21 21 53.0	
	comp=Z,98nm,19.6s,baz=266,slow=39						
CPUP	**Villa Florida**	**89.00**	**126**	LR	LR	21 19 26.9	
	comp=Z,37nm,18.8s,baz=33,slow=37						
NJ2	**Nanjing**	**89.17**	**312**	*eP*	**P**	**20 37 42.6 -1.7**	
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
AKTO	**Aktyubinsk**	**91.14**	**359**	LR	LR	21 22 35.4	
	comp=Z,83nm,19.9s,baz=352,slow=38						
MKAR	**Makanchi Array**	**91.88**	**343**	P	**P**	**20 37 57.1 +0.4**	
	comp=Z,0.6nm,0.9s,baz=359,slow=4.9,SNR=5.1						
MKAR				LR	LR	21 22 34.6	
	comp=Z,61nm,18.3s,baz=8.0,slow=38						
PLCA	**Paso Flores**	**92.41**	**143**	LR	LR	21 10 52.1	
	comp=Z,46nm,21.4s,baz=329,slow=30						
WMQ	**Urumqi**	**93.26**	**338**	*eP*	**P**	**20 38 04.0 +0.8**	
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KEST	**Kesra**	**93.66**	**37**	LR	LR	21 18 23.0	
	comp=Z,37nm,19.7s,baz=300,slow=34						
LZH	**Lanzhou**	**93.93**	**324**	*eP*	**P**	**20 38 02.5 -4.0**	
LZH				pP	PcP	20 38 07.1 +0.1	
LZH				sP		20 38 09.3	
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
BRTR	**Keskin Array B**	**98.93**	**18**	LR	LR	21 27 09.9	
	comp=Z,40nm,18.7s,baz=322,slow=38						
KSH	**Kashi**	**100.19**	**345**	P	**Pdif**	**20 38 32.9 -1.8**	
KSH				pP		20 38 39.0	

*NNC **12** 20:35:06.8±2.5, 37.26N×71.46E, h110km±66km, mb2.9, mpv3.5, Error ellipse: s-maj=20.6km s-min=18.1km az=179.0*

ISC 12 20:35:08.3±3.5, 37.4N±0.2×71.5E±0.1, h109km, n11, σ1§98/14, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANR	**Andizhan**	**3.44**	**11**	P	**Sn**	**20 36 34.8**	**-5.4**
AML	**Almayashu**	**5.05**	**19**	P	**Pn**	**20 36 22.0**	**-0.1**
	SNR=13						
UCH	**Uchtor**	**5.38**	**25**	P	**Sn**	**20 37 27.7**	**+0.2**
	SNR=7.2						
EKS2	**Erkin-Say**	**5.57**	**18**	P	**Pn**	**20 36 30.0**	**+1.2**
	SNR=12						
AAK	**Ala-Archa**	**5.74**	**23**	P	**Pn**	**20 36 31.2**	**0.0**
	SNR=7.6						
AAK	**Ala-Archa**	**5.74**	**23**	⇓P	**Pn**	**20 36 31.1**	**-0.2**
	2.4nm,0.5s						
AAK				⇓S	**Sn**	**20 37 37.4**	**+1.5**
	11nm,0.8s						
KK31	**Karatay Array**	**5.76**	**353**	⇑P	**Pn**	**20 36 32.1**	**+0.7**
	1.6nm,0.3s,baz=253,slow=4.0,SNR=16						
KK31				⇑S	**Sn**	**20 37 38.0**	**+1.7**
	3.0nm,0.5s,baz=171,slow=22,SNR=9.0						
CHMS	**Chumysh**	**6.15**	**23**	P	**Pn**	**20 36 36.6**	**0.0**
	SNR=5.7						
TKM2	**Tokmak 2**	**6.38**	**28**	P	**Pn**	**20 36 39.6**	**-0.2**
	SNR=7.5						
TKM2	**Tokmak 2**	**6.38**	**28**	⇓P	**Pn**	**20 36 39.4**	**-0.4**
	2.8nm,0.5s						
TKM2				⇑S	**Sn**	**20 37 53.7**	**+2.4**
	2.6nm,0.7s						
AB31	**Akbulak array**	**14.51**	**329**	P	**Pn**	**20 38 27.9**	**-0.4**
	0.3nm,0.6s,baz=149,slow=13,SNR=2.9						

IDC 12 20:59:24.7±4.8, 23.83N×93.95E, h78km±42km, mb3.1/4, mb1 3.3/5, mb1mx3.0/36, mbtmp3.4/5, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/20, Error ellipse: s-maj=78.2km s-min=20.5km az=67.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**7.09**	**138**	P	Pn	21 01 05.8	0.0
	0.3nm,0.3s,baz=316,slow=13,SNR=5.7						
MKAR	**Makanchi Array**	**24.76**	**341**	P	P	21 04 39.2	+0.2
	0.2nm,0.4s,baz=158,slow=11,SNR=7.9						
SONM	**Songino Array**	**25.93**	**19**	P	P	21 04 49.5	-0.3
	0.4nm,0.6s,baz=199,slow=9.0,SNR=3.5						
YAK	**Yakutsk**	**45.19**	**23**	LR	LR	21 25 50.5	
	comp=Z,29nm,18.4s,baz=70,slow=35						
WRA	**Warramunga Arr**	**58.67**	**134**	P	P	21 09 14.3	0.0
	0.3nm,0.4s,baz=305,slow=5.6,SNR=4.9						
ASAR	**Alice Springs**	**61.10**	**138**	P	P	21 09 30.9	0.0
	0.3nm,0.3s,baz=316,slow=6.9,SNR=5.6						

*IDC **12** 21:03:37.4±5.9, 25.26N×64.64E, h0km, mb3.5/4, mb1 3.5/4, mb1mx3.1/49, mbtmp3.5/4, MS2.8/1, Ms1 3.0/1, ms1mx2.4/40, Error ellipse: s-maj=184.1km s-min=28.8km az=141.0*

*OMAN **12** 21:03:50.7±1.7, 25.66N×63.72E, h34km, ml3.5/1, Error ellipse: s-maj=19.7km s-min=14.0km az=137.0*

ISC 12 21:03:45.8±1.3, 25.8N±0.1×64.0E±0.1, h35km, n20, σ1§62/21, mb3.5/4, Southwestern Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WSAR	**Wadi Sarin**	**5.51**	**243**	P	**Pn**	**21 05 05.4**	**0.0**
	SNR=31						
WSAR				S	**Sn**	**21 06 05.1**	**-2.5**
WBK	**Wadi Bani Khal**	**5.58**	**236**	P	**Pn**	**21 05 06.4**	**0.0**
WBK				S	**Sn**	**21 06 08.9**	**-0.4**
BIDO	**Bidbid**	**5.80**	**248**	P	**Pn**	**21 05 10.3**	**+1.0**
SMDO	**Samad**	**6.06**	**244**	P	**Pn**	**21 05 13.7**	**+0.6**
SMDO				S	**Sn**	**21 06 20.2**	**-1.2**
JMDO	**Jabal Madar**	**6.37**	**239**	P	**Pn**	**21 05 19.1**	**+1.8**
HOQ	**Hoqain**	**6.46**	**251**	P	**Pn**	**21 05 18.2**	**-0.3**
	SNR=7.2						
BSY	**Bisya**	**6.90**	**245**	P	**Pn**	**21 05 26.2**	**+1.6**
BANOM	**Banah**	**6.92**	**273**	P	**Pn**	**21 05 26.1**	**+1.2**
BANOM				S	**Sn**	**21 06 42.3**	**-0.1**
MDH	**Madha**	**6.96**	**267**	S	**Sn**	**21 06 41.2**	**-2.1**
UOSS	**Minazif**	**7.09**	**265**	P	**Pn**	**21 05 26.3**	**-0.8**
ARQ	**Araqi**	**7.23**	**252**	P	**Pn**	**21 05 31.8**	**+2.8**
ASHO	**Ashiyiah**	**7.26**	**263**	P	**Pn**	**21 05 32.3**	**+2.7**
ASHO				S	**Sn**	**21 06 49.8**	**-1.0**
MKAR	**Makanchi Array**	**25.49**	**30**	P	**P**	**21 09 08.0**	**-2.8**
	0.3nm,0.7s,baz=225,slow=9.4,SNR=4.2						
BVAR	**Borovoye Array**	**27.60**	**8**	P	**P**	**21 09 30.0**	**+0.4**
	0.5nm,0.6s,baz=175,slow=7.2,SNR=6.2						
ZALV	**Zalesovo Beam**	**32.08**	**23**	P	**P**	**21 10 10.1**	**+0.8**
	0.3nm,0.4s,baz=202,slow=11,SNR=2.5						
H08N2	**Diego Garcia H**	**32.67**	**167**	T	T	21 43 39.4	
	baz=348,slow=76,SNR=8.9						
H08N3	**Diego Garcia H**	**32.68**	**167**	T	T	21 43 37.1	
	baz=348,slow=76,SNR=11						
H08N1	**Diego Garcia H**	**32.69**	**167**	T	T	21 43 40.2	
	baz=348,slow=76,SNR=7.8						
CMAR	**Chiang Mai Arr**	**33.13**	**96**	LR	LR	21 25 50.2	
	comp=Z,17nm,19.5s,baz=29,slow=41						
TORD	**Torodi Ar. Bea**	**59.59**	**271**	P	**P**	**21 13 47.5**	**+1.0**
	0.6nm,1.0s,baz=63,slow=8.0,SNR=2.6						

*IDC **12** 21:11:07.7±2.5, 0.34N×129.80E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/35, mbtmp3.5/4, Error ellipse: s-maj=110.1km s-min=24.0km az=63.0*

*DJA **12** 21:11:11.7±1.3, 0.S±8.×13.0E±., h15km±10km, M3.4/6, MLv3.4/6*

ISC 12 21:11:13.2±1.1, 0.2N±0.1×129.68E±0.08, h35km, n11, σ1§25/11, mb3.6/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWI	**Sorong**	**1.88**	**123**	P	**Pn**	**21 11 42.6**	**-0.3**
SWI				S	**Sn**	**21 12 06.6**	**+1.2**
LBMI	**Labuha**	**2.32**	**250**	P	**Pn**	**21 11 47.8**	**-1.1**
TNTI	**Ternate**	**2.39**	**285**	P	**Pn**	**21 11 49.3**	**-0.5**
TNTI				S	**Sn**	**21 12 20.3**	**+2.4**
FAKI	**Fak Fak**	**4.00**	**140**	P	**Pn**	**21 12 12.1**	**+0.1**
FAKI				S	**Sn**	**21 12 57.1**	**-0.6**
WRA	**Warramunga Arr**	**20.50**	**167**	P	**P**	**21 15 48.7**	**+0.3**
	1.3nm,1.0s,baz=346,slow=12,SNR=3.8						
ASAR	**Alice Springs**	**24.04**	**170**	P	**P**	**21 16 26.4**	**+1.1**
	2.1nm,1.0s,baz=350,slow=9.8,SNR=9.5						
CMAR	**Chiang Mai Arr**	**35.24**	**303**	P	**P**	**21 18 05.0**	**+0.3**
	0.8nm,0.9s,baz=117,slow=6.7,SNR=5.9						
H11N1	**WAKE ISLAND Hy**	**41.30**	**60**	T	T	22 02 27.6	
	baz=246,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hy**	**41.31**	**60**	T	T	22 02 29.4	
	baz=246,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**41.32**	**60**	T	T	22 02 28.9	
	baz=246,slow=75,SNR=11						
MKAR	**Makanchi Array**	**62.14**	**325**	P	**P**	**21 21 29.5**	**-1.4**
	0.3nm,0.7s,baz=116,slow=6.6,SNR=2.9						

*IDC **12** 21:38:48.2±3.1, 14.42N×92.49W, h54km±24km, mb3.7/4, mb1 4.0/7, mb1mx3.6/35, mbtmp3.9/7, ML3.7/3, MS3.3/11, Ms1 3.4/11, ms1mx3.1/29, Error ellipse: s-maj=34.8km s-min=8.5km az=20.0*

*NEIC **12** 21:38:49.3±1.8, 14.55N±0.06×92.43W±0.05, h69km±7km, Error ellipse: s-maj=10.4km s-min=4.3km az=218.0*

*MEX **12** 21:38:50.4±0.4, 14.57N×92.39W, h65km±6km, MD4.1*

*UCR **12** 21:38:51.5±1.1, 14.61N×92.28W, h57km±13km, ML4.0, mb4.0(NEIC)*

*SNET **12** 21:38:51.2±1.0, 14.59N×92.29W, h58km±13km, ML4.1*

*GCG **12** 21:38:56.6±0.7, 14.73N×91.94W, h35km±8km, MD4.5*

ISC 12 21:38:49.6±0.8, 14.66N±0.06×92.39W±0.04, h66km±7km, n71, σ1§13/78, mb4.1/6, 1D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.27**	**26**	*eP*	**Pn**	**21 39 00.4**	**+0.2**
THIG				*eS*	**Sn**	**21 39 07.8**	**-0.2**
THIG		**0.27**	**26**		**Pn**	**21 39 00.4**	**+0.2**
STG3	**Santiaguito 3,**	**0.80**	**86**	⇓*iP*	**Pn**	**21 39 05.8**	**+0.2**
ERG	**Entre ros, C**	**0.83**	**105**	*eP*	**Pn**	**21 39 06.8**	**+1.0**
PCIG		**1.31**	**323**	*eP*	**Pn**	**21 39 12.7**	**+0.8**
PCIG				*eS*	**Sn**	**21 39 29.3**	**+0.7**
PCIG		**1.31**	**323**		**Pn**	**21 39 12.7**	**+0.8**
PCIG					**Sn**	**21 39 29.3**	**+0.7**
FUG	**Fuego 3**	**1.52**	**98**	*eP*	**Pn**	**21 39 15.8**	**+0.9**
PCG	**Pacaya**	**1.75**	**99**	*eP*	**Pn**	**21 39 20.0**	**+2.0**
APG	**El Apazote**	**1.90**	**79**	P	**Pn**	**21 39 20.1**	**+0.2**
	18nm,0.3s,baz=301,slow=12,SNR=24						
APG				S	**Sn**	**21 39 45.5**	**+2.5**
	101nm,0.3s,baz=330,slow=19,SNR=14						
IXG	**Ixpaco**	**1.95**	**104**	*eP*	**Pn**	**21 39 21.7**	**+1.0**
NBG	**Las Nubes**	**1.98**	**92**	*eP*	**Pn**	**21 39 23.0**	**+1.9**
FAME	**Alcalda de S**	**2.44**	**109**	*eP*	**Pn**	**21 39 27.4**	**+0.3**
FAME				*eS*	**Sn**	**21 39 54.9**	**-1.2**
MRL	**Marmol**	**2.65**	**81**	*eP*	**Pn**	**21 39 31.7**	**+1.5**
RTR	**El Retiro**	**2.77**	**106**	*eP*	**Pn**	**21 39 33.0**	**+1.2**
RTR	**El Retiro**	**2.77**	**106**	*eP*	**Pn**	**21 39 33.0**	**+1.2**
SBLS	**San Blas**	**2.81**	**107**	*eP*	**Pn**	**21 39 33.5**	**+1.1**
SBLS				*eS*	**Sn**	**21 40 06.4**	**+1.2**
SBLS	**San Blas**	**2.81**	**107**	*eP*	**Pn**	**21 39 33.5**	**+1.1**
SBLS				*eS*	**Sn**	**21 40 06.4**	**+1.2**
CEVE	**Cerro Verde**	**2.81**	**107**	*eP*	**Pn**	**21 39 32.5**	**+0.1**
CEVE				IAML		21 40 12.9	
	comp=Z,2μm,0.4s						
CEVE	**Cerro Verde**	**2.81**	**107**	*eP*	**Pn**	**21 39 32.5**	**+0.1**
CEVE				IAML		21 40 12.9	
	comp=Z,2μm,0.4s						
SNJE	**San Jose**	**2.81**	**106**	*eP*	**Pn**	**21 39 32.9**	**+0.5**
SNJE	**San Jose**	**2.81**	**106**	*eP*	**Pn**	**21 39 32.9**	**+0.5**
MTO3	**Montecristo**	**2.95**	**95**	*eP*	**Pn**	**21 39 34.9**	**+0.7**
MTO3	**Montecristo**	**2.95**	**95**	*eP*	**Pn**	**21 39 34.9**	**+0.7**
BOQS	**Boqueron**	**3.15**	**107**	*eP*	**Pn**	**21 39 38.2**	**+1.1**
SNET	**Serv Nac Est T**	**3.21**	**107**	Pn	**Pn**	**21 39 38.2**	**+0.4**
SNET				Sn	**Sn**	**21 40 13.4**	**-1.6**
LFRS	**El Faro**	**3.39**	**107**	*eP*	**Pn**	**21 39 40.8**	**+0.6**
CMIG	**Matias Romero**	**3.41**	**316**	P	**Pn**	**21 39 40.8**	**+0.5**
	comp=Z,10nm,0.3s,baz=133,slow=11,SNR=35						
CMIG				S	**Sn**	**21 40 20.8**	**+1.3**
	comp=Z,50nm,0.3s,baz=103,slow=18,SNR=6.9						
CMIG	**Matias Romero**	**3.41**	**316**	*eP*	**Pn**	**21 39 41.6**	**+1.3**
CMIG				*eS*	**Sn**	**21 40 19.9**	**+0.4**
CMIG	**Matias Romero**	**3.41**	**316**		**Pn**	**21 39 41.6**	**+1.3**
CMIG					**Sn**	**21 40 19.9**	**+0.4**
PAVA	**Las Pavas**	**3.48**	**105**	*eP*	**Pn**	**21 39 42.1**	**+0.7**
PAVA	**Las Pavas**	**3.48**	**105**	*eP*	**Pn**	**21 39 42.1**	**+0.7**
HUIG	**Huatulco**	**3.75**	**288**	*eP*	**Pn**	**21 39 44.5**	**-0.5**
HUIG				*eS*	**Sn**	**21 40 28.3**	**+0.2**
HUIG	**Huatulco**	**3.75**	**288**		**Pn**	**21 39 44.5**	**-0.5**
HUIG					**Sn**	**21 40 28.3**	**+0.2**
CNCH	**Conchagua**	**4.63**	**107**	*eP*	**Pn**	**21 39 58.6**	**+1.4**
CNCH	**Conchagua**	**4.63**	**107**	*eP*	**Pn**	**21 39 58.6**	**+1.4**
VHO	**Vista Hermosa**	**4.82**	**300**	*iP*	**Pn**	**21 40 01.0**	**+1.2**
VHO				*eS*	**Sn**	**21 40 55.3**	**+0.9**
TGUH	**Tegucigalpa,Un**	**5.00**	**96**	Pn	**Pn**	**21 40 03.5**	**+1.3**
TLIG	**Tlapa**	**6.60**	**297**	Pn	**Pn**	**21 40 25.1**	**+1.0**
TEIG	**Tepich**	**6.79**	**35**	P	**Pn**	**21 40 26.1**	**-0.4**
TEIG	**Tepich**	**6.79**	**35**		**Pn**	**21 40 26.3**	**-0.2**
TEIG				Sn	**Sn**	**21 41 40.4**	**-2.0**
JTS	**Las Juntas de**	**8.46**	**120**	P	**Pn**	**21 40 52.4**	**+2.9**
	comp=Z,1.5nm,0.3s,baz=30,slow=14,SNR=4.6						
JTS	**Las Juntas de**	**8.46**	**120**		**Pn**	**21 40 50.1**	**+0.6**
BCIP	**Isla Barro Col**	**13.44**	**113**	Pn	**Pn**	**21 41 55.3**	**-2.2**
TXAR	**Lajitas Array**	**17.94**	**326**	P	**Pn**	**21 42 56.8**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=149,slow=12,SNR=9.8						
TXAR				LR	LR	21 50 56.9	
	comp=Z,23nm,19.2s,baz=0.0,slow=40						
TXAR	**Lajitas Array**	**17.94**	**326**	P	**Pn**	**21 42 54.8**	**+0.2**
TX31	**Lajitas Ar. Si**	**17.94**	**326**	P	**Pn**	**21 42 54.2**	**-0.4**
TX32	**Lajitas Array**	**17.94**	**326**	P	**P**	**21 42 53.6**	**-0.9**
LRAL	**Lakeview Retre**	**18.94**	**14**	P	**Pn**	**21 43 06.1**	**-0.5**
LRAL				IAmb	IAmb	21 43 09.4	
	comp=Z,13nm,1.1s						
Z50A	**Ashland**	**19.42**	**16**	P	**Pn**	**21 43 11.7**	**-0.6**
Z50A				IAmb	IAmb	21 43 12.4	
	comp=Z,7.7nm,1.1s						
MIAR	**Mount Ida**	**19.83**	**357**	P	**Pn**	**21 43 16.3**	**-0.7**
X37A	**Clayton**	**20.02**	**353**	P	**P**	**21 43 17.6**	**+0.5**
X37A				IAmb	IAmb	21 43 25.6	
	comp=Z,14nm,1.0s						
RUSC	**La Rusia**	**20.88**	**113**	P	**P**	**21 43 26.6**	**-0.5**
TKL	**Tuckaleechee C**	**22.29**	**19**	LR	LR	21 53 10.8	
	comp=Z,80nm,19.4s,baz=201,slow=38						
121A	**Cookes Peak, D**	**22.65**	**324**	P	**P**	**21 43 44.5**	**-1.1**
121A				IAmb	IAmb	21 43 49.5	
	comp=Z,8.6nm,1.1s						
ANMO	**Albuquerque**	**23.84**	**330**	P	**P**	**21 43 58.4**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=144,slow=8.7,SNR=3.9						
ANMO	**Albuquerque**	**23.84**	**330**	P	**P**	**21 43 55.1**	**-1.9**
ANMO				IAmb	IAmb	21 43 56.0	
	comp=Z,1.4nm,1.1s						
SJG	**San Juan**	**25.40**	**79**	LR	LR	21 54 48.6	
	comp=Z,31nm,18.4s,baz=253,slow=38						
PFO	**Pinyon Flats O**	**28.83**	**315**	LR	LR	21 55 51.7	
	comp=Z,39nm,21.3s,baz=266,slow=35						
NV11	**Mina Array Sit**	**32.83**	**321**	P	**P**	**21 45 17.6**	**+0.5**
NV11				IAmb	IAmb	21 45 20.5	
	comp=Z,2.4nm,0.8s						
NVAR	**Mina Array Bea**	**32.92**	**321**	P	**P**	**21 45 20.6**	**+2.6**
	comp=Z,2.8nm,0.7s,baz=133,slow=8.9,SNR=19						
NVAR				PcP	**PcP**	**21 48 01.7**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=160,slow=2.9,SNR=2.9						
NVAR				LR	LR	22 01 42.0	
	comp=Z,86nm,18.2s,baz=196,slow=42						
NVAR	**Mina Array Bea**	**32.92**	**321**	P	**P**	**21 45 18.1**	**+0.2**
ULM	**Lac du Bonnet**	**35.61**	**356**	LR	LR	22 02 44.2	
	comp=Z,34nm,18.0s,baz=148,slow=40						
F10A	**Beach Ranch, E**	**37.55**	**331**	P	**P**	**21 45 58.0**	**+0.6**
SIV	**San Ignacio**	**43.42**	**133**	P	**P**	**21 46 44.8**	**-1.3**
	comp=Z,1.1nm,0.6s,baz=311,slow=8.6,SNR=7.3						
SCHQ	**Schefferville**	**44.74**	**21**	LR	LR	22 06 31.0	
	comp=Z,74nm,19.0s,baz=1.5,slow=37						
CPUP	**Villa Florida**	**53.13**	**140**	LR	LR	22 10 15.1	
	comp=Z,44nm,18.0s,baz=214,slow=36						
ILAR	**Eielson Array**	**62.09**	**337**	P	**P**	**21 49 03.3**	**+0.2**
	comp=Z,1.9nm,0.8s,baz=119,slow=5.7,SNR=18						
NOA	**NORSAR Array B**	**83.75**	**28**	LR	LR	22 28 29.6	
	comp=Z,20nm,18.4s,baz=255,slow=36						
ARCES	**ARCESS Array B**	**85.63**	**18**	LR	LR	22 31 36.7	
	comp=Z,26nm,18.4s,baz=200,slow=37						
FINES	**FINESS Array B**	**90.06**	**25**	LR	LR	22 31 53.1	
	comp=Z,26nm,18.4s,baz=236,slow=35						
CMAR	**Chiang Mai Arr**	**145.25**	**341**	PKPbc	**PKPdf**	**21 58 19.9**	**-0.7**
	comp=Z,2.9nm,0.7s,baz=344

baz=263
TWC Suao 1.21 324 *e*S Sn 21 43 12.1 -0.8
baz=325
IRIF Iriomote-Funau 1.23 55 P Pg 21 42 58.6 +0.7
IRIF *e*S Sg 21 43 13.5 -0.5
YULB Yu-li 1.24 260 P Pg 21 42 58.1 0.0
baz=250
YULB *e*S Sb 21 43 12.8 -0.4
baz=250
TWF1 Yuli 1.25 258 P Pg 21 42 58.1 -0.1
baz=256
TWF1 *e*S Sb 21 43 12.8 -0.6
baz=256
CHKT Chengkung 1.27 246 *e*S Sb 21 43 13.3 -0.7
baz=236
FULB Fuli 1.29 251 *e*P Pb 21 42 58.4 +0.1
baz=240
FULB *e*S Sb 21 43 13.7 -1.1
baz=240
WHF Hehuan Shan 1.35 293 *e*S Sb 21 43 16.0 -0.7
baz=283
VWDT VWDT 1.37 276 *e*P Pg 21 43 00.1 -0.4
baz=274
VWDT *e*S Sn 21 43 16.1 -0.6
baz=274
OWD Renai 1.37 284 *e*P Pb 21 42 59.9 +0.3
baz=283
NNSH Datong 1.39 305 *e*P Pg 21 43 00.9 -0.1
baz=305
NNSH *e*S Sn 21 43 17.1 -0.4
baz=305
TWH Lutao 1.39 230 *e*S Sn 21 43 15.8 -1.5
baz=226
CHGB Renai 1.40 288 *e*P Pb 21 43 00.3 +0.1
baz=281
CHGB *e*S Sn 21 43 16.4 -1.4
baz=281
TWE Neicheng 1.40 321 P Pg 21 43 01.0 -0.1
baz=322
TWE *e*S Sb 21 43 17.5 -0.3
baz=322
ENTT Nioudou 1.40 316 *e*P Pg 21 43 00.7 -0.5
baz=317
ENTT *e*S Sb 21 43 17.8 0.0
baz=317
JKRS Kuro-shima 1.41 64 P Pg 21 43 00.9 -0.3
JKRS *e*S Sg 21 43 18.8 -0.7
NNS Nan Shan 1.41 306 *e*P Pg 21 43 00.8 -0.4
baz=305
NNS *e*S Sn 21 43 17.4 -0.4
baz=305
NDT Datong Townshi 1.41 314 *e*P Pg 21 43 00.9 -0.4
baz=314
NDT *e*S Sb 21 43 18.0 0.0
baz=314
SLBB Yuanshan 1.45 321 *e*P Pb 21 43 00.8 0.0
baz=321
TWT Tachien 1.47 296 *e*P Pg 21 43 02.0 -0.4
baz=285
TWT *e*S Sn 21 43 19.1 -0.3
baz=285
TDCB Techi 1.48 295 *e*P Pg 21 43 02.0 -0.7
baz=286
TDCB *e*S Sn 21 43 19.4 -0.4
baz=286
TIPB Shuangxi 1.53 332 *e*P Pb 21 43 02.4 +0.1
baz=332
TIPB *e*S Sb 21 43 20.6 -0.9
baz=332
ELDTW Lidau 1.54 254 *e*P Pb 21 43 02.1 -0.4
baz=252
ELDTW *e*S Sn 21 43 19.6 -1.5
baz=252
NWLT Wulai 1.54 318 *e*P Pg 21 43 03.3 -0.5
baz=319
NWLT *e*S Sb 21 43 21.4 -0.5
baz=319
SSLB Suanglung 1.54 276 *e*P Pb 21 43 02.5 0.0
baz=275
SSLB *e*S Sn 21 43 20.3 -0.7
baz=275
YUS Yu-Shan 1.54 265 *e*P Pb 21 43 03.2 +0.5
baz=264
YUS *e*S Sn 21 43 21.3 -0.3
baz=264
YHNB Yeheng 1.55 313 P Pg 21 43 03.5 -0.4
baz=312
YHNB *e*S Sb 21 43 21.3 -0.8
baz=312
NSK Sanguang 1.56 312 *e*P Pb 21 43 03.0 +0.1
baz=312
NSK *e*S Sn 21 43 21.2 -0.4
baz=312
JIJ Ishigaki jima 1.57 62 P Pb 21 43 02.7 -0.2
JIJ *e*S Sn 21 43 21.1 -0.6
SMLT Sun Moon Lake 1.60 280 *e*P Pb 21 43 03.7 +0.1
baz=278
DPDB Guoxing 1.61 285 *e*P Pb 21 43 04.0 +0.4
baz=276
DPDB *e*S Sn 21 43 22.3 -0.5
baz=276
WHYT Xinyi Township 1.63 273 *e*P Pg 21 43 04.7 -0.7
baz=271
TWGBT Beinan 1.63 241 *e*P Pb 21 43 03.6 -0.4
baz=232
TWGBT *e*S Sn 21 43 22.5 -0.7
baz=232
TWG Pinlang 1.64 241 *e*S Sn 21 43 23.2 -0.1
baz=232
TYC Yuchr 1.65 280 *e*P Pb 21 43 04.4 +0.2
baz=279
TYC *e*S Sn 21 43 23.4 -0.1
baz=279
WHP Taichung City 1.67 293 *e*S Sb 21 43 24.7 -0.9
baz=293
ALS Alishan 1.68 267 *e*P Pb 21 43 05.6 +0.7
baz=265
ALS *e*S Sn 21 43 24.1 -0.6
baz=265
TATO Taipei 1.70 323 *e*S Sb 21 43 25.7 -0.8
baz=323
STYT Tauyuan 1.78 255 *e*S Sn 21 43 26.5 -0.4
baz=248
CHN5 Tsauling 1.79 270 *e*P Pg 21 43 07.6 -0.9
baz=268
CHN5 *e*S Sn 21 43 27.9 +0.8
baz=268
LIOB Emei 1.79 305 *e*P Pg 21 43 07.9 -0.7
baz=296
LIOB *e*S Sb 21 43 28.0 -1.1
baz=296
NSTT Nanjuang 1.79 304 *e*S Sb 21 43 27.9 -1.1
baz=304
YM10 YM10 1.81 328 *e*P Pb 21 43 07.0 0.0
baz=340
JISG Ishigakijimahi 1.81 58 P Pn 21 43 05.9 +1.0
JISG S Sn 21 43 27.7 0.0
TWQ1 Liyutan 1.84 293 *e*S Sn 21 43 29.1 +0.7
baz=284
ECL Taimali 1.85 237 *e*S Sn 21 43 27.2 -1.3
baz=245
TPUB Ta-pu 1.86 261 *e*P Pb 21 43 08.5 +0.6
baz=259
TPUB *e*S Sb 21 43 30.2 -0.9
baz=259
WTP Ta-pu 1.89 259 *e*P Pb 21 43 08.8 +0.4
baz=257
WTP *e*S Sn 21 43 30.4 +0.8
baz=257
CHN4 Tsaushan 1.89 262 *e*P Pb 21 43 09.4 +1.0
baz=261
CHN4 *e*S Sb 21 43 31.2 -0.5
baz=261
SLGT Liugui 1.93 251 *e*P Pb 21 43 09.6 +0.6
baz=245
SLGT *e*S Sn 21 43 31.1 +0.7
baz=245
SGST Jiashian 1.95 254 *e*P Pb 21 43 09.2 -0.2
baz=252
CHN1 Nanshi 1.98 258 *e*P Pb 21 43 10.5 +0.7
baz=256
CHN1 *e*S Sb 21 43 34.2 -0.1
baz=256
TWK Hsinying 2.00 260 *e*P Pb 21 43 10.6 +0.4
baz=259
TWK *e*S Sb 21 43 33.9 -1.0
baz=259
SSD Sandimen 2.03 245 *e*P Pb 21 43 10.8 0.0
baz=238
EAST Anshuo 2.05 233 *e*P Pn 21 43 10.0 +1.8
baz=240
MASBT Mashibuluo 2.09 242 *e*S Sn 21 43 34.6 0.0
baz=236
JTJ Tarama 2.15 61 P Pb 21 43 11.4 -1.4

IDC **12** *21:53:13.1±2.1, 5°.56S×147°.52E, h168km±21km, mb3.6/7, mb1 3.8/9, mb1mx3.4/37, mbtmp4.1/9, Error ellipse: s-maj=48.8km s-min=13.1km az=110.0*
NEIC **12** *21:53:13.4±0.7, 5°.7S±0°.1×147°.5E±0°.3, h179km±11km, mb4.2/11, Error ellipse: s-maj=37.7km s-min=15.9km az=104.0*

ISC 12 21:53:12.6±1.0, **5°.61S**±0°.07×**147°.6E**±0°.2, **h170**km, **n27**, σ1°**04**/30, **mb3.7**/9, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.79**	**186**	P	**Pn**	**21 54 11.2**	**+0.5**
	15nm,0.3s,baz=12,slow=9.5,SNR=25						
PMG				S	**Sn**	**21 54 54.4**	**-1.8**
	38nm,0.3s,baz=120,slow=20,SNR=20						
PMG	**Port Moresby**	**3.79**	**186**		**Pn**	**21 54 11.2**	**+0.5**
PMG					**Sn**	**21 54 56.3**	**+0.1**
MTN	**Manton Dam**	**17.73**	**245**		**P**	**21 57 07.9**	**+0.3**
WR0	**Warramunga Arr**	**19.07**	**220**	P	**P**	**21 57 19.8**	**-2.4**
WR0				IAmb	IAmb	21 57 24.1	
	comp=Z,8.3nm,0.7s						
WRA	**Warramunga Arr**	**19.19**	**221**	P	**P**	**21 57 24.2**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=42,slow=12,SNR=61						
WRA	**Warramunga Arr**	**19.19**	**221**	P	**P**	**21 57 22.7**	**-0.8**
KNRA	**Kununurra**	**20.99**	**240**	P	**P**	**21 57 42.1**	**-0.7**
KNRA				IAmb	IAmb	21 57 57.3	
	comp=Z,13nm,1.1s						
AS31	**Alice Springs**	**22.25**	**215**	P	**P**	**21 57 56.2**	**+0.4**
ASAR	**Alice Springs**	**22.25**	**215**	P	**P**	**21 57 57.3**	**+1.5**
	comp=Z,5.3nm,0.7s,baz=50,slow=7.9,SNR=31						
ASAR				S	**S**	**22 01 50.0**	**+1.7**
	comp=Z,2.0nm,0.9s,baz=35,slow=20,SNR=7.9						
ASAR	**Alice Springs**	**22.25**	**215**	P	**P**	**21 57 55.4**	**-0.5**
FITZ	**Fitzroy Crossi**	**24.75**	**238**	P	**P**	**21 58 19.0**	**+0.4**
	comp=Z,4.2nm,0.5s,baz=62,slow=10,SNR=15						
FITZ	**Fitzroy Crossi**	**24.75**	**238**	P	**P**	**21 58 15.8**	**-2.8**
FITZ				IAmb	IAmb	21 58 20.9	
	comp=Z,4.3nm,0.6s						
MORW	**Morawa**	**37.84**	**228**	P	**P**	**22 00 13.0**	**-0.1**
MORW				IAmb	IAmb	22 00 19.0	
	comp=Z,8.7nm,1.1s						
YULB	**Yu-li**	**38.59**	**319**	P	**P**	**22 00 19.0**	**-0.3**
TPUB	**Ta-pu**	**38.96**	**319**	P	**P**	**22 00 21.4**	**-1.0**
SONM	**Songino Array**	**64.34**	**331**	P	**P**	**22 03 31.2**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=143,slow=7.5,SNR=6.1						
SONM	**Songino Array**	**64.34**	**331**	P	**P**	**22 03 30.0**	**-0.3**
MKAR	**Makanchi Array**	**77.56**	**320**	P	**P**	**22 04 50.2**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=97,slow=7.3,SNR=10						
MKAR	**Makanchi Array**	**77.56**	**320**	P	**P**	**22 04 49.9**	**+0.1**
MAKZ	**Makanchi**	**77.76**	**320**	P	**P**	**22 04 50.0**	**-0.9**
MAKZ				IAmb	IAmb	22 04 52.1	
	comp=Z,2.3nm,1.1s						
ZALV	**Zalesovo Beam**	**78.99**	**328**	P	**P**	**22 04 56.8**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=109,slow=6.7,SNR=5.2						
ZALV	**Zalesovo Beam**	**78.99**	**328**	P	**P**	**22 04 57.3**	**-0.1**
ILAR	**Eielson Array**	**84.91**	**23**	P	**P**	**22 05 28.8**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=250,slow=4.7,SNR=5.2						
ILAR	**Eielson Array**	**84.91**	**23**	P	**P**	**22 05 28.2**	**+0.1**
BVAR	**Borovoye Array**	**86.79**	**324**	P	**P**	**22 05 37.6**	**0.0**
	comp=Z,0.6nm,0.6s,baz=111,slow=6.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**145.54**	**285**	PKPbc	**PKPdf**	**22 12 31.9**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=67,slow=4.4,SNR=20						
TORD	**Torodi Ar. Bea**	**145.54**	**285**		**PKPdf**	**22 12 30.4**	**-1.2**

NCEDC 12 22:05:48.3±0.9, **38°.818N**±0°.007×**122°.81W**±0°.01, **h2**km±6km, **Md2.5**/46, **Error ellipse: s-maj=1.6km s-min=0.9km az=69.0, Northern California**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDXM	**Geysers**	**0.02**	**124**		Pg	22 05 49.0	0.0
GACM	**Adobe Creek**	**0.07**	**325**		Pg	22 05 49.9	+0.2
GCRM	**Castle Rock Sp**	**0.09**	**120**		Pg	22 05 50.2	+0.1
GSGM	**Seigler Mounta**	**0.09**	**59**		Pg	22 05 50.8	+0.7
GBGM	**Boggs Mountain**	**0.10**	**92**		Pg	22 05 50.9	+0.5
GPMM	**Pine Mountain**	**0.11**	**286**		Pg	22 05 50.9	+0.4
GAXM	**Alexander Vall**	**0.12**	**157**		Pg	22 05 50.7	+0.2
GMKM	**Mount Konoctai**	**0.15**	**8**		Pg	22 05 52.1	+0.8
GCVM	**Cloverdale**	**0.16**	**253**		Pg	22 05 52.1	+0.6
GSSM	**Skaggs Springs**	**0.19**	**234**		Pg	22 05 52.7	+0.7
NHSM	**Mount Saint He**	**0.22**	**136**		Pg	22 05 52.8	+0.2
NMCNC	**Mill Creek, So**	**0.24**	**199**		Pg	22 05 53.5	+0.6
HOPS	**Hopland Field**	**0.27**	**311**		Pg	22 05 54.1	+0.6
GHLM	**Highland Sprin**	**0.27**	**324**		Pg	22 05 54.0	+0.4
MAC	**Mark West Spri**	**0.28**	**165**		Pg	22 05 54.2	+0.6
NMTM	**Middletown**	**0.29**	**92**		Pg	22 05 54.3	+0.5
MNRC	**McLaughlin Min**	**0.30**	**78**		Pg	22 05 54.9	+0.9
GSNM	**Snow Mountain**	**0.32**	**293**		Pg	22 05 55.2	+0.7
NSHM	**Saint Helena R**	**0.34**	**151**		Pg	22 05 55.4	+0.6
GWKM	**Walker Ridge**	**0.34**	**47**		Pg	22 05 55.5	+0.6
GBMM	**Baldy Mountain**	**0.41**	**37**		Pg	22 05 57.0	+0.8
NTYM	**Taylor**	**0.44**	**164**		Pg	22 05 57.4	+0.6
NBPM	**Berryessa Peak**	**0.51**	**107**		Pb	22 05 59.3	-0.6
GTSM	**Trough Springs**	**0.52**	**18**		Pb	22 05 59.4	-0.8
GGUM	**Gualala**	**0.54**	**274**		Pg	22 05 59.4	+0.8
CVS	**Carmenet Viney**	**0.55**	**149**		Pg	22 05 59.1	+0.3
NAPC	**Atlas Peak**	**0.58**	**131**		Pg	22 05 59.9	+0.5
GHOM	**Hamilton Openi**	**0.61**	**292**		Pb	22 06 01.0	-0.7
MCCM	**Marconi Confer**	**0.67**	**184**		Pb	22 06 02.2	-0.5
GHMM	**Hull Mountain**	**0.68**	**352**		Pb	22 06 03.5	+0.4
SNT	**Sears Point**	**0.69**	**156**		Pg	22 06 01.7	+0.1
NDHM	**Dunnigan Hills**	**0.71**	**94**		Pb	22 06 04.0	+0.7
NADM	**Allendale**	**0.75**	**118**		Pb	22 06 04.6	+0.6
NLHM	**Lake Herman**	**0.87**	**143**		Pb	22 06 05.7	-0.4
KCPM	**Cahto Peak**	**1.05**	**326**	Pg	Pg	22 06 08.3	-0.2
CMB	**Columbia Colle**	**2.06**	**112**		Pn	22 06 23.3	-0.6
BEKR	**Beckworth**	**2.17**	**60**		Pn	22 06 25.3	-0.3
PNTR	**Pine Nut**	**2.52**	**83**		Pn	22 06 30.0	-0.4
WAKR	**Walker**	**2.66**	**96**		Pn	22 06 31.7	-0.7
KVN	**Kaiserville**	**3.68**	**85**	Pn	Pn	22 06 46.1	-0.3

IDC **12** *22:24:52.7±0.7, 17°.72S×173°.39W, h0km, mb4.4/13, mb1 4.6/14, mb1mx4.3/32, mbtmp4.4/14, ML4.0/1, MS3.5/11, Ms1 3.5/11, ms1mx3.3/24, Error ellipse: s-maj=31.7km s-min=15.5km az=141.0*
NEIC **12** *22:24:57.0±1.7, 17°.80S±0°.05×173°.1W±0°.1, h35km±1km, mb4.6/15, Error ellipse: s-maj=19.6km s-min=6.5km az=70.0*

ISC 12 22:24:56.1±0.4, **17°.80S**±0°.06×**173°.01W**±0°.07, **h26**km, **n98**, σ1°**45**/90, **mb4.5**/21, **MS3.5**/11, **10C-5D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**3.19**	**114**		**Pn**	**22 25 44.4**	**-0.2**
NIUE					**Sn**	**22 26 20.4**	**-1.5**
AFI	**Afiamalu**	**4.04**	**17**	Pn	**Pn**	**22 25 54.9**	**-1.6**
	8.5nm,0.3s,baz=188,slow=7.1,SNR=5.9						
AFI				Sn	Sn	22 26 35.1	-8.0
	61nm,0.3s,baz=277,slow=17,SNR=8.5						
AFI	**Afiamalu**	**4.04**	**17**		**Pn**	**22 25 55.2**	**-1.2**
AFI					**Sn**	**22 26 41.0**	**-2.0**
RAR	**Rarotonga**	**12.93**	**107**	Pn	**Pn**	**22 27 57.3**	**-1.0**
	3.0nm,0.3s,baz=235,slow=3.6,SNR=5.9						
RAR				LR	LR	22 31 21.4	
	comp=Z,96nm,21.1s,baz=312,slow=29						
RAR	**Rarotonga**	**12.93**	**107**		**Pn**	**22 27 57.6**	**-0.7**
DZM	**Mont Dzumac**	**19.78**	**254**	LR	LR	22 35 44.1	
	comp=Z,225nm,20.6s,baz=36,slow=34						
URZ	**Urewera**	**22.14**	**201**	P	**P**	**22 29 49.5**	**-0.4**
	14nm,0.5s,baz=336,slow=4.0,SNR=11						
URZ	**Urewera**	**22.14**	**201**	P	**P**	**22 29 49.4**	**-0.6**
URZ				IAmb	IAmb	22 29 53.6	
	comp=Z,19nm,0.6s						
PAE	**Paea**	**22.31**	**93**	*e*T	T	22 52 38.9	
	comp=Z,2.2nm,0.3s						
PPT2	**Papeete2**	**22.32**	**93**	*e*S	**S**	**22 33 53.1**	**-3.3**
PPT2	comp=Z,66nm,25.2s			*e*LR	LR	22 35 12.4	
	comp=Z,159nm,24.0s						
PPT2	**Papeete2**	**22.32**	**93**	*e*T	T	22 52 40.9	
	comp=Z,4.2nm,0.3s						
PPT	**Papeete**	**22.32**	**93**	LR	LR	22 36 15.2	
	comp=Z,64nm,20.6s,baz=262,slow=30						
TVO	**Taravao**	**22.62**	**94**	*e*T	T	22 53 03.0	
	comp=Z,1.5nm,0.2s						
TBI	**Tubuai**	**22.71**	**108**	*e*LR	LR	22 35 23.7	
	comp=Z,266nm,29.8s						
TBI	**Tubuai**	**22.71**	**108**	*e*T	T	22 53 24.1	
	comp=Z,5.6nm,0.3s						
HNR	**Honiara**	**27.54**	**284**	LR	LR	22 39 52.3	
	comp=Z,128nm,18.8s,baz=118,slow=33						
RPZ	**Rata Peaks**	**29.14**	**204**	P	**P**	**22 30 57.9**	**+2.9**
	comp=Z,16nm,0.9s,baz=58,slow=9.5,SNR=2.4						
RPZ				LR	LR	22 41 34.4	
	comp=Z,154nm,21.4s,baz=358,slow=34						
RPZ	**Rata Peaks**	**29.14**	**204**	P	**P**	**22 30 53.9**	**-1.1**
TAOE	**Nuku Hiva Isla**	**33.14**	**79**	*e*T	T	23 05 56.8	
	comp=Z,41nm,0.3s						
CTA	**Charters Tower**	**38.53**	**260**	P	**P**	**22 32 14.7**	**-2.2**
	comp=Z,4.8nm,0.8s,baz=108,slow=7.7,SNR=3.9						
STKA	**Stephens Creek**	**43.21**	**242**	P	**P**	**22 32 52.9**	**-2.4**
	comp=Z,3.2nm,1.1s,baz=32,slow=13,SNR=3.4						
STKA				LR	LR	22 49 23.2	
	comp=Z,81nm,18.8s,baz=24,slow=34						
STKA	**Stephens Creek**	**43.21**	**242**	P	**P**	**22 32 53.5**	**-1.8**
WRA	**Warramunga Arr**	**49.70**	**259**	P	P	22 33 42.8	-3.6
	comp=Z,1.5nm,0.4s,baz=98,slow=7.2,SNR=30						
WRA				PcP	**PcP**	**22 35 08.0**	**+0.6**
	comp=Z,1.6nm,1.0s,baz=99,slow=3.2,SNR=2.5						
AS31	**Alice Springs**	**49.77**	**254**	P	**P**	**22 33 44.8**	**-2.1**
AS31				IAmb	IAmb	22 33 55.6	
	comp=Z,2.9nm,0.6s						
ASAR	**Alice Springs**	**49.77**	**254**	P	P	22 33 43.5	-3.4
	comp=Z,5.7nm,0.5s,baz=90,slow=8.6,SNR=84						
ASAR				PcP	**PcP**	**22 35 07.9**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=102,slow=4.3,SNR=3.5						
MJAR	**Matsushiro Art**	**71.01**	**320**	LR	LR	23 00 39.4	
	comp=Z,22nm,21.8s,baz=220,slow=30						
QSPA	**South Pole Qui**	**72.26**	**180**	P	**P**	**22 36 18.3**	**-0.8**
QSPA				IAmb	IAmb	22 36 21.7	
	comp=Z,4.1nm,0.7s						
PETK	**Petropavlovsk-**	**75.02**	**342**	P	**P**	**22 36 34.8**	**-0.3**
	comp=Z,4.0nm,0.8s,baz=148,slow=8.5,SNR=3.1						
PETK	**Petropavlovsk-**	**75.02**	**342**	P	**P**	**22 36 35.3**	**+0.2**
NVAR	**Mina Array Bea**	**75.86**	**41**	P	**P**	**22 36 42.7**	**+2.1**
	comp=Z,1.9nm,0.8s,baz=229,slow=8.2,SNR=11						
NVAR	**Mina Array Bea**	**75.86**	**41**	P	**P**	**22 36 40.5**	**-0.1**
LEM	**Lembang**	**77.86**	**267**	P	**P**	**22 36 51.6**	**-0.8**
	comp=Z,9.6nm,0.5s,baz=39,slow=4.9,SNR=5.6						
KSRS	**Korea Array**	**78.13**	**316**	LR	LR	23 03 56.9	
	comp=Z,21nm,21.2s,baz=114,slow=30						
PSUT	**Pine Spring**	**78.78**	**43**	P	**P**	**22 36 54.6**	**-2.3**
TXAR	**Lajitas Array**	**81.64**	**56**	P	**P**	**22 37 14.4**	**+1.9**
	comp=Z,0.6nm,0.9s,baz=241,slow=6.5,SNR=5.4						
TXAR	**Lajitas Array**	**81.64**	**56**	P	**P**	**22 37 12.4**	**0.0**
S22A	**4UR Ranch, Cre**	**83.12**	**47**	P	**P**	**22 37 23.3**	**+3.1**
S22A				IAmb	IAmb	22 37 23.9	
	comp=Z,6.1nm,1.1s						
MCK	**McKinley**	**83.40**	**11**	P	**P**	**22 37 21.8**	**+1.1**
MCK				IAmb	IAmb	22 37 24.8	
	comp=Z,3.3nm,0.9s						
PDAR	**Pinedale Array**	**83.80**	**41**	P	**P**	**22 37 24.9**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=210,slow=4.0,SNR=11						
PDAR	**Pinedale Array**	**83.80**	**41**	P	**P**	**22 37 22.8**	**-0.7**
WRH	**Wood River Hil**	**84.22**	**11**	P	**P**	**22 37 24.4**	**-0.5**
CCB	**Clear Creek Bu**	**84.44**	**11**	P	**P**	**22 37 25.9**	**0.0**
CCB				IAmb	IAmb	22 37 27.7	
	comp=Z,6.2nm,0.8s						
ILAR	**Eielson Array**	**84.71**	**11**	P	**P**	**22 37 27.6**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=231,slow=6.0,SNR=19						
ILAR	**Eielson Array**	**84.71**	**11**	P	**P**	**22 37 27.3**	**0.0**
PRP	**Porcupine Dome**	**85.64**	**11**	P	**P**	**22 37 31.6**	**-0.6**
PRP				IAmb	IAmb	22 37 33.9	
	comp=Z,4.8nm,0.9s						
DAWY	**Dawson**	**85.64**	**14**	P	**P**	**22 37 31.2**	**-0.9**
DAWY				IAmb	IAmb	22 37 34.3	
	comp=Z,4.2nm,0.9s						
RPSI	**Rantau Prapat**	**88.98**	**273**	P	**P**	**22 37 49.2**	**-0.1**
PSI	**Prapat**	**89.01**	**273**	P	**P**	**22 37 49.2**	**-0.4**
	comp=Z,3.5nm,0.5s,baz=150,slow=8.1,SNR=3.9						
CMAR	**Chiang Mai Arr**	**93.72**	**288**	P	**P**	**22 38 11.9**	**+0.7**
	comp=Z,1.9nm,0.9s,baz=97,slow=2.4,SNR=10						
CMAR				LR	LR	23 17 03.9	
	comp=Z,8.7nm,20.0s,baz=290,slow=34						
ULM	**Lac du Bonnet**	**95.55**	**39**	LR	LR	23 13 52.6	
	comp=Z,58nm,18.9s,baz=342,slow=31						
SONM	**Songino Array**	**96.87**	**318**	LR	LR	23 15 55.3	
	comp=Z,15nm,20.5s,baz=30,slow=32						
MKAR	**Makanchi Array**	**112.76**	**314**	PKiKP	**PKiKP**	**22 43 30.6**	**0.0**
	comp=Z,0.3nm,0.7s,baz=107,slow=1.0,SNR=3.9						
KURK	**Kurchatov**	**115.18**	**318**		**PKiKP**	**22 43 35.1**	**+0.1**
KURBB	**Kurchatov Arra**	**115.24**	**318**	PKP	**PKiKP**	**22 43 35.1**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=123,slow=2.0,SNR=4.4						
KBL	**Kabul**	**122.69**	**300**		**PKPdf**	**22 43 49.7**	**-0.6**
KMBO	**Kilima Mbogo**	**144.77**	**241**	PKP	**PKPab**	**22 44 30.4**	**-0.5**
	comp=Z,3.3nm,0.9s,baz=195,slow=10.0,SNR=8.0						
CLL	**Collm**	**146.22**	**353**	↑iPKPbc	**PKPdf**	**22 44 34.7**	**+1.6**
CLL	comp=Z,16nm,1.1s			*i* PKiKP	**PKiKP**	**22 44 38.8**	**+1.5**
CLL	**Collm**	**146.22**	**353**		**PKPdf**	**22 44 31.8**	**-1.2**
OSTC	**Ostas**	**146.49**	**349**	*e*PKP	**PKPdf**	**22 44 35.6**	**+2.0**
DPC	**Dobruska-Polom**	**146.67**	**349**	*e*PKP	**PKPbc**	**22 44 37.0**	**+1.4**
BURAR	**Bucovina Array**	**146.72**	**337**	↑P	**PKPab**	**22 44 38.5**	**+1.5**
PVCC	**Panska Ves**	**146.79**	**351**	*e*PKP	**PKPbc**	**22 44 37.2**	**+1.4**
OKC	**Ostrava-Krasne**	**146.80**	**347**	*e*PKP	**PKPbc**	**22 44 37.6**	**+1.8**
BIZ	**Bicaz**	**146.94**	**336**	↑P	**PKPbc**	**22 44 37.6**	**+1.2**
MORC	**Moravsky Berou**	**146.98**	**347**	↑P	**PKPbc**	**22 44 37.6**	**+1.2**
GHRR		**147.12**	**333**	↑P	**PKPbc**	**22 44 38.8**	**+1.9**
LANS	**Liptovska Anna**	**147.13**	**345**	*e*PKP	**PKPbc**	**22 44 38.7**	**+1.8**
TRPA	**Tarpa**	**147.19**	**341**	↓P	**PKPbc**	**22 44 38.1**	**+1.1**
PRU	**Pruhonice**	**147.32**	**351**	*e*PKP	**PKPbc**	**22 44 38.3**	**+1.0**
ARCR	**ARCALIA**	**147.48**	**338**	↑P	**PKPbc**	**22 44 39.2**	**+1.3**
VYHS	**Vyhne**	**147.90**	**345**	*e*PKP	**PKPbc**	**22 44 40.1**	**+1.1**
DOPR	**Dopca**	**148.02**	**335**	↓P	**PKPbc**	**22 44 40.7**	**+1.3**
CJR	**Cluj-Napoca**	**148.07**	**338**	↓P	**PKPbc**	**22 44 40.5**	**+1.0**
BR131	**Keskin Array S**	**148.22**	**319**		**PKPdf**	**22 44 39.6**	**+2.6**
BRTR	**Keskin Array B**	**148.22**	**319**	PKP	**PKPdf**	**22 44 38.0**	**+1.0**
	comp=Z,2.8nm,0.8s,baz=102,slow=2.1,SNR=12						
BRTR				PKPbc	**PKPbc**	**22 44 40.7**	**+0.4**
	comp=Z,2.8nm,0.8s,baz=121,slow=2.1,SNR=13						
BRTR	**Keskin Array B**	**148.22**	**319**		**PKPbc**	**22 44 40.2**	**+3.2**
KHC	**Kasperske Hory**	**148.29**	**352**	*e*PKP	**PKPbc**	**22 44 41.0**	**+1.0**
DRGR		**148.31**	**339**	↓P	**PKPbc**	**22 44 41.1**	**+0.9**
MODS	**Modra-Piesok**	**148.37**	**347**	*e*PKP	**PKPbc**	**22 44 41.4**	**+1.2**
GERES	**GERESS Array B**	**148.56**	**351**	PKPbc	**PKPbc**	**22 44 40.8**	**0.0**
	comp=Z,2.0nm,0.8s,baz=25,slow=3.5,SNR=16						
VOIR		**148.59**	**335**	↑P	**PKPbc**	**22 44 42.8**	**+1.8**
ARR	**Arges**	**148.82**	**336**	↑P	**PKPbc**	**22 44 43.2**	**+1.6**
CONA	**Conrad Observa**	**149.08**	**348**	*i* PKPab	**PKPbc**	**22 44 43.4**	**+1.2**
	comp=Z,6.9nm,1.1s						
BZS	**Buzias**	**149.70**	**339**	↑P	**PKPbc**	**22 44 44.2**	**+0.6**
YLV	**Yalova**	**150.22**	**324**	↓P	**PKPab**	**22 44 52.9**	**+1.7**
KBA	**Koelnbreinsper**	**150.33**	**351**	*i* PKiKP	**PKPbc**	**22 44 46.1**	**+0.7**
	comp=Z,2.4nm,1.1s						
MOTA	**Moosalm**	**150.34**	**354**	*i* PKiKP	**PKPbc**	**22 44 46.3**	**+0.9**
	comp=Z,7.8nm,1.1s						
SOKA	**Soboth**	**150.44**	**349**	*i* PKiKP	**PKPbc**	**22 44 45.

ML3.2, Error ellipse: s-maj=3.0km s-min=2.4km az=55.0
*LDG **12** 22:26:51.8, 36°.72N×7°.31W, h30km*
*MDD **12** 22:26:51.5±0.6, 36°.77N×7°.27W, h25km±6km, mbLg3.2/63,*
Error ellipse: s-maj=5.3km s-min=2.4km az=36.0, PRXIMO
ISC 12 22:26:50.7±1.1, **36°.78N**±0°.03×**7°.21W**±0°.03, **h34**km±2km, **n155**, σ1s**59**/275, **2C-12D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBDV	**Barranco-do-Ve**	**0.74**	**309**	⇓*i* Pg	**Pn**	**22 27 04.4**	**-0.3**
PBDV				*e*Sg	**Sn**	**22 27 14.0**	**-0.9**
PBDV				A	A	22 27 18.7	
	398nm,0.3s						
PBDV	**Barranco-do-Ve**	**0.74**	**309**	P	**Pn**	**22 27 04.4**	**-0.3**
PBDV				S	**Sn**	**22 27 14.0**	**-0.9**
	398nm,0.3s						
PVAQ	**Vaqueiros**	**0.74**	**327**	⇓*i* Pg	**Pb**	**22 27 05.0**	**-0.3**
PVAQ				*e*Sg	**Sn**	**22 27 14.7**	**-0.2**
PVAQ				A	A	22 27 16.1	
	792nm,0.2s						
PVAQ	**Vaqueiros**	**0.74**	**327**	P	**Pb**	**22 27 05.0**	**-0.3**
PVAQ				S	**Sn**	**22 27 14.7**	**-0.2**
	792nm,0.2s						
PVAQ	**Vaqueiros**	**0.74**	**327**	P	**Pb**	**22 27 04.9**	**-0.3**
PVAQ				S	**Sn**	**22 27 14.5**	**-0.4**
EGRO	**El Granado**	**0.78**	**344**	⇓P	**Pb**	**22 27 06.0**	**+0.1**
	75nm,0.1s,SNR=18						
EGRO				S	**Sb**	**22 27 16.4**	**+0.1**
	726nm,0.2s						
SFS	**San Fernando**	**0.86**	**111**	*e*P	**Pb**	**22 27 08.2**	**+0.9**
SFS				*e*S	**Sb**	**22 27 19.1**	**+0.6**
SFS	**San Fernando**	**0.86**	**111**	P	**Pb**	**22 27 08.2**	**+0.9**
SFS				S	**Sb**	**22 27 19.1**	**+0.6**
GIBL	**Gibalbin**	**1.00**	**87**	*e*P	**Pb**	**22 27 09.9**	**+0.4**
GIBL				*e*S	**Sn**	**22 27 21.7**	**+0.5**
GIBL	**Gibalbin**	**1.00**	**87**	P	**Pb**	**22 27 09.9**	**+0.4**
GIBL				S	**Sn**	**22 27 21.7**	**+0.5**
CNIL	**Conil**	**1.01**	**114**	*e*P	**Pb**	**22 27 10.0**	**+0.3**
CNIL	**Conil**	**1.01**	**114**	P	**Pb**	**22 27 10.0**	**+0.3**
EMIN	**Mina Concepcio**	**1.07**	**23**	P	**Pb**	**22 27 10.2**	**-0.6**
	12nm,0.1s,SNR=278						
EMIN				S	**Sn**	**22 27 23.7**	**+0.7**
	142nm,0.1s,SNR=28						
PCVE	**Castro Verde**	**1.08**	**322**	⇓*e*P	**Pn**	**22 27 09.7**	**+0.3**
PCVE				*e*S	**Sn**	**22 27 23.6**	**+0.5**
PCVE				A	A	22 27 23.8	
	342nm,0.2s						
PCVE	**Castro Verde**	**1.08**	**322**	P	**Pn**	**22 27 09.7**	**+0.3**
PCVE				S	**Sn**	**22 27 23.6**	**+0.5**
	342nm,0.2s						
MORF	**Marmelete**	**1.27**	**295**	*e*P	**Pn**	**22 27 11.3**	**-0.7**
MORF				*e*S	**Sn**	**22 27 25.8**	**-2.1**
MORF				AML	AML	22 27 28.9	
	comp=E,250nm,0.2s						
MORF	**Marmelete**	**1.27**	**295**	⇓*e*P	**Pn**	**22 27 11.4**	**-0.7**
MORF				*e*S	**Sn**	**22 27 27.5**	**-0.4**
MORF				A	A	22 27 32.8	
	comp=E,377nm,0.2s						
MORF	**Marmelete**	**1.27**	**295**	P	**Pn**	**22 27 11.4**	**-0.7**
MORF				S	**Sn**	**22 27 27.5**	**-0.4**
	comp=E,377nm,0.2s						
ALJ	**Aljibe**	**1.28**	**101**	*e*P	**Pb**	**22 27 13.7**	**-0.5**
ALJ				*e*S	**Sb**	**22 27 29.4**	**-1.0**
ALJ	**Aljibe**	**1.28**	**101**	P	**Pb**	**22 27 13.7**	**-0.5**
ALJ				S	**Sb**	**22 27 29.4**	**-1.0**
PFVI	**Vila Bisbo**	**1.34**	**286**	⇓*e*P	**Pn**	**22 27 12.2**	**-0.8**
PFVI				*e*S	**Sn**	**22 27 27.7**	**-2.0**
PFVI				A	A	22 27 38.2	
	comp=E,267nm,0.3s						
PFVI	**Vila Bisbo**	**1.34**	**286**	⇓P	**Pn**	**22 27 12.2**	**-0.8**
	comp=E,16nm,0.1s,SNR=18						
PFVI				S	**Sn**	**22 27 28.5**	**-1.2**
	comp=E,372nm,0.1s,SNR=5.7						
PFVI	**Vila Bisbo**	**1.34**	**286**	P	**Pn**	**22 27 12.1**	**-0.8**
PBEJ	**Beja**	**1.35**	**337**	*e*P	**Pn**	**22 27 13.6**	**+0.5**
PBEJ				*e*S	**Sn**	**22 27 30.8**	**+1.0**
PBEJ				A	A	22 27 37.2	
	comp=E,132nm,0.2s						
PBEJ	**Beja**	**1.35**	**337**	P	**Pn**	**22 27 13.6**	**+0.5**
PBEJ				S	**Sn**	**22 27 30.8**	**+1.0**
	comp=E,66nm,0.2s						
PBAR	**Barrancos**	**1.40**	**5**	*e*P	**Pn**	**22 27 14.9**	**+1.1**
PBAR				*e*S	**Sb**	**22 27 32.9**	**-0.9**
PBAR				A	A	22 27 38.2	
	comp=E,262nm,0.3s						
PBAR	**Barrancos**	**1.40**	**5**	P	**Pn**	**22 27 14.9**	**+1.1**
PBAR				S	**Sb**	**22 27 32.9**	**-0.9**
	comp=E,262nm,0.3s						
PTEO	**Sao Teotonio**	**1.43**	**303**	⇓*i* P	**Pn**	**22 27 14.3**	**+0.1**
PTEO				*e*S	**Sn**	**22 27 31.3**	**-0.6**
PTEO				A	A	22 27 46.0	
	comp=E,252nm,0.7s						
PTEO	**Sao Teotonio**	**1.43**	**303**	P	**Pn**	**22 27 14.3**	**+0.1**
PTEO				S	**Sn**	**22 27 31.3**	**-0.6**
	comp=E,126nm,0.7s						
REAL	**Reales**	**1.64**	**100**	*e*P	**Pb**	**22 27 19.5**	**-0.8**
REAL				*e*S	**Sn**	**22 27 38.5**	**+1.4**
REAL	**Reales**	**1.64**	**100**	P	**Pb**	**22 27 19.5**	**-0.8**
REAL				S	**Sn**	**22 27 38.5**	**+1.4**
PNCL	**Nicolau / Gran**	**1.69**	**322**	⇓*e*P	**Pn**	**22 27 18.1**	**+0.3**
PNCL				*e*S	**Sn**	**22 27 37.7**	**-0.6**
PNCL				A	A	22 27 48.8	
	comp=E,135nm,0.5s						
PNCL	**Nicolau / Gran**	**1.69**	**322**	P	**Pn**	**22 27 18.1**	**+0.3**
PNCL				S	**Sn**	**22 27 37.7**	**-0.6**
	comp=E,135nm,0.5s						
ECEU	**Ceuta**	**1.72**	**120**	⇓P	**Pn**	**22 27 19.6**	**+1.4**
	comp=E,14nm,0.1s,SNR=18						
ECEU				S	**Sn**	**22 27 40.0**	**+1.0**
	comp=E,74nm,0.1s,SNR=6.1						
CEU	**Ceuta**	**1.72**	**120**	*e*P	**Pb**	**22 27 20.1**	**-1.6**
CEU				*e*S	**Sb**	**22 27 42.4**	**-0.6**
CEU	**Ceuta**	**1.72**	**120**	P	**Pb**	**22 27 20.1**	**-1.6**
SMIR	**Smir Dam**	**1.84**	**126**	P	**Pn**	**22 27 20.5**	**+0.7**
SMIR				S	**Sn**	**22 27 42.0**	**+0.1**
EVO	**Evora**	**1.86**	**340**	⇓*e*Pn	**Pn**	**22 27 20.9**	**+0.8**
EVO				*e*Sn	**Sn**	**22 27 43.5**	**+1.0**
EVO				A	A	22 27 53.7	
	comp=E,118nm,0.4s						
EVO	**Evora**	**1.86**	**340**	*i* Pn	**Pn**	**22 27 20.9**	**+0.8**
EVO	**Evora**	**1.86**	**340**	*i* Pg	**Pb**	**22 27 24.9**	**+0.8**
EVO				*e*S	**Sn**	**22 27 41.7**	**-0.8**
EVO	**Evora**	**1.86**	**340**	P	**Pn**	**22 27 20.9**	**+0.8**
EVO				S	**Sn**	**22 27 41.7**	**-0.8**
HORN	**Hornachuelos**	**1.88**	**55**	P	**Pn**	**22 27 21.3**	**+0.9**
HORN				S	**Sn**	**22 27 43.4**	**+0.4**
ECAB	**El Cabril**	**1.92**	**47**	P	**Pn**	**22 27 21.9**	**+0.9**
	comp=E,2.8nm,0.1s,SNR=94						
ECAB				S	**Sn**	**22 27 45.6**	**+1.6**
	comp=E,18nm,0.1s,SNR=8.5						
EMIJ	**Mijas**	**1.97**	**96**	P	**Pn**	**22 27 22.5**	**+0.9**
	comp=E,1.3nm,0.1s,SNR=27						
EMIJ				S	**Sn**	**22 27 46.7**	**+1.5**
	comp=E,73nm,0.3s						
EBAD	**Badajoz**	**1.98**	**4**	P	**Pn**	**22 27 22.5**	**+0.8**
	comp=E,5.9nm,0.1s,SNR=92						
EBAD				S	**Sn**	**22 27 45.9**	**+0.5**
	comp=E,249nm,0.2s,SNR=6.0						
PESTR	**Estremoz**	**2.10**	**352**	*e*Pn	**Pn**	**22 27 24.2**	**+0.7**
PESTR				*e*Sn	**Sn**	**22 27 48.6**	**+0.1**
PESTR				A	A	22 27 58.9	
	comp=E,89nm,0.6s						
PESTR	**Estremoz**	**2.10**	**352**	P	**Pn**	**22 27 23.9**	**+0.4**
PESTR				S	**Sn**	**22 27 48.2**	**-0.3**
RSA	**Sarsar**	**2.20**	**149**	P	**Pn**	**22 27 24.6**	**-0.3**
RSA				S	**Sn**	**22 27 47.6**	**-3.4**
EMAL	**Malaga-Limoner**	**2.23**	**90**	⇑*e*P	**Pn**	**22 27 27.0**	**+1.8**
EMAL				*e*S	**Sn**	**22 27 53.0**	**+1.4**
EMAL	**Malaga-Limoner**	**2.23**	**90**	P	**Pn**	**22 27 27.0**	**+1.8**
EMAL				S	**Sn**	**22 27 53.0**	**+1.4**
PMTG	**Montargil**	**2.42**	**341**	*e*Pn	**Pn**	**22 27 28.0**	**+0.2**
PMTG				*e*Sn	**Sn**	**22 27 56.5**	**+0.2**
PMTG				A	A	22 28 10.9	
	comp=E,112nm,0.4s						
PMTG	**Montargil**	**2.42**	**341**	P	**Pn**	**22 27 28.0**	**+0.2**
PMTG				S	**Sn**	**22 27 56.5**	**+0.2**
	comp=E,112nm,0.4s						
LIS	**Lisbon**	**2.47**	**322**	*e*P	**Pn**	**22 27 28.6**	**+0.1**
LIS	**Lisbon**	**2.47**	**322**	*e*Pn	**Pn**	**22 27 30.3**	**+1.8**
LIS				*e*Sn	**Sn**	**22 27 59.2**	**+1.7**
LIS	**Lisbon**	**2.47**	**322**	P	**Pn**	**22 27 30.3**	**+1.8**
EGOR	**Sierra Gorda,**	**2.50**	**82**	P	**Pn**	**22 27 30.7**	**+1.6**
	comp=E,0.5nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**22 27 58.9**	**+0.4**
	comp=E,29nm,0.2s,SNR=7.9						
INMG	**Instituto de M**	**2.50**	**323**	*e*Pn	**Pn**	**22 27 29.4**	**+0.4**
INMG	**Instituto de M**	**2.50**	**323**	P	**Pn**	**22 27 29.4**	**+0.4**
EADA	**Adamuz**	**2.51**	**56**	P	**Pn**	**22 27 30.4**	**+1.3**
	comp=E,1.8nm,0.0s,SNR=53						
EADA				S	**Sn**	**22 27 59.6**	**+1.1**
	comp=E,28nm,0.1s,SNR=5.9						
PMRV	**Marv??o**	**2.65**	**357**	*e*Pn	**Pn**	**22 27 31.8**	**+0.8**
PMRV				*e*Sn	**Sn**	**22 28 02.7**	**+0.8**
PMRV				A	A	22 28 18.9	
	comp=E,90nm,0.6s						
PMRV	**Marv??o**	**2.65**	**357**	P	**Pn**	**22 27 31.8**	**+0.8**
PMRV				S	**Sn**	**22 28 02.7**	**+0.8**
	comp=E,90nm,0.6s						
PMAFR	**Mafra**	**2.72**	**324**	*e*Pn	**Pn**	**22 27 32.7**	**+0.7**
PMAFR				*e*Sn	**Sn**	**22 28 03.5**	**-0.2**
PMAFR				A	A	22 28 38.3	
	comp=E,99nm,0.4s						
PMAFR	**Mafra**	**2.72**	**324**	P	**Pn**	**22 27 32.7**	**+0.7**
	comp=E,21nm,0.1s,SNR=102						
PMAFR				S	**Sn**	**22 28 03.4**	**-0.2**
	comp=E,97nm,0.1s,SNR=7.6						
PVLZ	**Peæn de**	**2.85**	**123**	⇑*e*P	**Pn**	**22 27 33.9**	**+0.2**
PVLZ				*e*S	**Sn**	**22 28 06.2**	**-0.7**
PVLZ	**Peæn de**	**2.85**	**123**	P	**Pn**	**22 27 33.9**	**+0.2**
PVLZ				S	**Sn**	**22 28 06.2**	**-0.7**
ELGU	**Los Guajares,**	**2.87**	**87**	P	**Pn**	**22 27 35.6**	**+1.5**
	comp=E,4.0nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**22 28 07.5**	**-0.1**
	comp=E,54nm,0.2s,SNR=7.9						
PTOM	**Tomar**	**2.99**	**342**	*e*Pn	**Pn**	**22 27 36.5**	**+0.9**
PTOM				*e*Sn	**Sn**	**22 28 10.6**	**+0.4**
PTOM				A	A	22 28 33.3	
	comp=E,82nm,0.3s						
PTOM	**Tomar**	**2.99**	**342**	P	**Pn**	**22 27 36.5**	**+0.9**
PTOM				S	**Sn**	**22 28 10.6**	**+0.4**
	comp=E,41nm,0.3s						
EQUE	**Quentar**	**3.04**	**81**	S	**Sn**	**22 28 12.7**	**+0.8**
	comp=E,27nm,0.2s,SNR=5.6						
PCBR	**Castelo Branco**	**3.06**	**356**	*e*Pn	**Pn**	**22 27 37.6**	**+1.0**
PCBR				*e*Sn	**Sn**	**22 28 12.5**	**+0.4**
PCBR				A	A	22 28 32.7	
	comp=E,38nm,0.5s						
PCBR	**Castelo Branco**	**3.06**	**356**	P	**Pn**	**22 27 37.6**	**+1.0**
PCBR				S	**Sn**	**22 28 12.5**	**+0.4**
	comp=E,19nm,0.5s						
PALE	**Palemas**	**3.08**	**120**	P	**Pn**	**22 27 36.6**	**-0.2**
PALE				S	**Sn**	**22 28 10.4**	**-2.1**
ZHG	**ZHG**	**3.36**	**172**	P	**Pn**	**22 27 40.5**	**-0.4**
EPLA	**Plasencia**	**3.40**	**15**	P	**Pn**	**22 27 42.2**	**+0.9**
	comp=E,10nm,0.1s,SNR=68						
EPLA				S	**Sn**	**22 28 19.9**	**-0.4**
	comp=E,22nm,0.1s,SNR=11						
GORA	**Gorafe**	**3.40**	**77**	P	**Pn**	**22 27 43.3**	**+1.9**
	comp=E,1.9nm,0.1s,SNR=7.9						
GORA				S	**Sn**	**22 28 20.7**	**+0.1**
	comp=E,41nm,0.1s,SNR=7.9						
PCAS	**Casmilo, Conde**	**3.42**	**343**	*e*Pn	**Pn**	**22 27 42.5**	**+0.9**
PCAS				*e*Sn	**Sn**	**22 28 21.3**	**+0.4**
PCAS				A	A	22 28 44.6	
	comp=E,57nm,0.4s						
PCAS	**Casmilo, Conde**	**3.42**	**343**	P	**Pn**	**22 27 42.5**	**+0.9**
PCAS				S	**Sn**	**22 28 21.3**	**+0.4**
	comp=E,57nm,0.4s						
EQES	**Quesada**	**3.45**	**72**	P	**Pn**	**22 27 43.1**	**+1.0**
	comp=E,1.0nm,0.0s,SNR=38						
EQES				S	**Sn**	**22 28 22.3**	**+0.4**
	comp=E,19nm,0.2s,SNR=5.1						
EBER	**Berja**	**3.46**	**87**	P	**Pn**	**22 27 44.1**	**+1.8**
	comp=E,1.0nm,0.1s,SNR=23						
EBER				S	**Sn**	**22 28 22.1**	**-0.2**
	comp=E,33nm,0.3s,SNR=8.7						
EALB	**Alboran**	**3.47**	**103**	P	**Pn**	**22 27 42.6**	**+0.4**
	comp=E,4.5nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**22 28 21.6**	**-0.5**
	comp=E,28nm,0.2s,SNR=6.7						
COI	**Coimbra**	**3.55**	**345**	*e*Sn	**Sn**	**22 28 23.3**	**-0.8**
COI				A	A	22 28 52.0	
	comp=E,68nm,0.6s						
COI	**Coimbra**	**3.55**	**345**	S	**Sn**	**22 28 23.3**	**-0.8**
	comp=E,34nm,0.6s						
PAB	**San Pablo**	**3.56**	**38**	P	**Pn**	**22 27 45.1**	**+1.5**
	comp=E,1.5nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**22 28 23.1**	**-1.5**
	comp=E,5.9nm,0.1s,SNR=7.9						
MTE	**Manteigas**	**3.62**	**356**	*e*Pn	**Pn**	**22 27 45.3**	**+0.9**
MTE				*e*Sn	**Sn**	**22 28 25.1**	**-0.9**
MTE				A	A	22 28 58.3	
	comp=E,94nm,0.6s						
MTE	**Manteigas**	**3.62**	**356**	P	**Pn**	**22 27 45.3**	**+0.9**
MTE				S	**Sn**	**22 28 25.1**	**-0.9**
	comp=E,47nm,0.6s						
IFR	**Ifrane**	**3.67**	**152**	*e*Pn	**Pn**	**22 27 44.0**	**-1.3**
IFR	**Ifrane**	**3.67**	**152**	*i* Pg	**Pn**	**22 27 46.2**	**+0.9**
IFR				*e*S	**Sn**	**22 28 22.4**	**-5.1**
GOG	**Mont Gurugu**	**3.75**	**113**	P	**Pn**	**22 27 45.4**	**-0.8**
GOG				S	**Sn**	**22 28 27.1**	**-2.2**
MELI	**Melilla**	**3.77**	**112**	*e*S	**Sn**	**22 28 27.6**	**-1.9**
MELI	**Melilla**	**3.77**	**112**	S	**Sn**	**22 28 28.8**	**-0.6**
ESDC	**Sonseca Array**	**3.86**	**40**	Pn	**Pn**	**22 27 48.9**	**+1.3**
	comp=E,1.7nm,0.3s,baz=224,slow=13,SNR=21						
ESDC				Sn	**Sn**	**22 28 30.4**	**-1.3**
	comp=E,4.6nm,0.3s,baz=224,slow=24,SNR=6.5						
ESDC				Lg	Lg	22 28 50.4	
	comp=E,5.2nm,0.3s,baz=230,slow=29,SNR=3.4						
ESDC	**Sonseca Array**	**3.86**	**40**	P	**Pn**	**22 27 48.9**	**+1.3**
	comp=E,14nm,0.2s,baz=223,slow=14,SNR=38						
ESDC				S	**Sn**	**22 28 30.9**	**-0.9**
	comp=E,7.7nm,0.1s,baz=222,slow=24,SNR=7.9						
SESP	**Santiago Espad**	**3.94**	**69**	P	**Pn**	**22 27 49.7**	**+0.7**
	comp=E,2.9nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**22 28 33.4**	**-0.7**
	comp=E,42nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**3.94**	**69**	P	**Pn**	**22 27 49.6**	**+0.7**
SESP				S	**Sn**	**22 28 32.9**	**-1.2**
PVIS	**Viseu**	**3.96**	**352**	*e*Pn	**Pn**	**22 27 50.0**	**+0.9**
PVIS				*e*Sn	**Sn**	**22 28 34.0**	**-0.4**
PVIS				A	A	22 29 14.1	
	comp=E,26nm,0.5s						
PVIS	**Viseu**	**3.96**	**352**	P	**Pn**	**22 27 50.0**	**+0.9**
PVIS				S	**Sn**	**22 28 34.0**	**-0.4**
	comp=E,13nm,0.5s						
ENIJ	**Nijar**	**4.01**	**86**	P	**Pn**	**22 27 51.1**	**+1.4**
	comp=E,0.4nm,0.1s,SNR=7.9						
ENIJ				S	**Sn**	**22 28 35.5**	**-0.1**
	comp=E,14nm,0.2s,SNR=7.9						
TAF	**Taforalt**	**4.36**	**115**	P	**Pn**	**22 27 54.3**	**-0.3**
TAF				S	**Sn**	**22 28 43.2**	**-1.1**
MVO	**Moncorvo**	**4.38**	**2**	*e*Pn	**Pn**	**22 27 55.6**	**+0.8**
MVO				*e*Sn	**Sn**	**22 28 42.8**	**-1.9**
MVO				A	A	22 28 46.7	
	comp=E,40nm,0.3s						
MVO	**Moncorvo**	**4.38**	**2**	P	**Pn**	**22 27 55.6**	**+0.8**
	comp=E,4.9nm,0.1s,SNR=29						
MVO				S	**Sn**	**22 28 42.7**	**-1.9**
	comp=E,30nm,0.2s,SNR=10						
MD31	**MD31**	**4.39**	**152**	P	**Pn**	**22 27 54.1**	**-1.0**
MD31				S	**Sn**	**22 28 40.2**	**-4.8**
JBK	**JBK**	**4.50**	**121**	P	**Pn**	**22 27 56.2**	**-0.4**
PVRL	**Vila Real**	**4.51**	**355**	*e*Pn	**Pn**	**22 27 57.1**	**+0.6**
PVRL				*e*Sn	**Sn**	**22 28 45.6**	**-2.1**
PVRL				A	A	22 29 21.0	
	comp=E,23nm,0.6s						
PVRL	**Vila Real**	**4.51**	**355**	P	**Pn**	**22 27 57.1**	**+0.6**
PVRL				S	**Sn**	**22 28 45.6**	**-2.1**
	comp=E,12nm,0.6s						
GUD	**Guadarrama**	**4.54**	**31**	P	**Pn**	**22 27 58.5**	**+1.5**
	comp=E,0.4nm,0.1s,SNR=10.0						
GUD				S	**Sn**	**22 28 47.1**	**-1.5**
	comp=E,4.0nm,0.3s,SNR=6.1						
POLO	**Lamas de Olo**	**4.61**	**354**	*e*Pn	**Pn**	**22 27 58.5**	**+0.5**
POLO				*e*Sn	**Sn**	**22 28 48.5**	**-1.9**
POLO				A	A	22 28 50.8	
	comp=E,11nm,0.3s						
POLO	**Lamas de Olo**	**4.61**	**354**	P	**Pn**	**22 27 58.5**	**+0.5**
POLO				S	**Sn**	**22 28 48.5**	**-1.9**
	comp=E,11nm,0.3s						
UCM	**Universidad Co**	**4.70**	**40**	*e*P	**Pn**	**22 28 01.0**	**+1.8**
UCM				*e*S	**Sn**	**22 28 50.1**	**-2.4**
UCM	**Universidad Co**	**4.70**	**40**	P	**Pn**	**22 28 01.0**	**+1.8**
UCM				S	**Sn**	**22 28 50.1**	**-2.4**
ETOB	**Tobarra**	**4.86**	**66**	⇓P	**Pn**	**22 28 01.9**	**+0.5**
	comp=E,3.7nm,0.1s,SNR=18						
ETOB				S	**Sn**	**22 28 54.9**	**-1.6**
	comp=E,29nm,0.2s,SNR=11						
EMUR	**La Murta**	**4.87**	**76**	P	**Pn**	**22 28 02.7**	**+1.1**
	comp=E,0.2nm,0.1s,SNR=9.7						
EMUR				S	**Sn**	**22 28 55.9**	**-0.9**
	comp=E,22nm,0.4s,SNR=7.2						
PCAB	**Cabril**	**4.96**	**353**	*e*Pn	**Pn**	**22 28 03.4**	**+0.6**
PCAB				*e*Sn	**Sn**	**22 28 56.8**	**-2.2**
PCAB				A	A	22 29 01.0	
	comp=E,14nm,0.3s						
PCAB	**Cabril**	**4.96**	**353**	P	**Pn**	**22 28 03.4**	**+0.6**
PCAB				S	**Sn**	**22 28 56.8**	**-2.2**
	comp=E,6.8nm,0.3s						
CART	**Cartagena**	**5.02**	**79**	*e*P	**Pn**	**22 28 04.7**	**+1.2**
CART				*e*S	**Sn**	**22 28 57.6**	**-2.7**
CART	**Cartagena**	**5.02**	**79**	P	**Pn**	**22 28 04.7**	**+1.2**
CART				S	**Sn**	**22 28 57.6**	**-2.7**
PBRG	**Braganca**	**5.03**	**4**	*e*Pn	**Pn**	**22 28 04.6**	**+0.9**
PBRG				*e*Sn	**Sn**	**22 28 59.3**	**-1.4**
PBRG				A	A	22 29 35.1	
	comp=E,23nm,0.5s						
PBRG	**Braganca**	**5.03**	**4**	P	**Pn**	**22 28 04.6**	**+0.9**
PBRG				S	**Sn**	**22 28 59.3**	**-1.4**
	comp=E,11nm,0.5s						
ELOB	**Lobios**	**5.12**	**353**	P	**Pn**	**22 28 05.7**	**+0.6**
	comp=E,1.2nm,0.1s,SNR=7.3						
ELOB				S	**Sn**	**22 29 00.6**	**-2.4**
	comp=E,17nm,0.3s,SNR=6.1						
ECAL	**Calabor**	**5.17**	**4**	P	**Pn**	**22 28 06.7**	**+1.1**
	comp=E,13nm,0.3s,SNR=13						
ECAL				S	**Sn**	**22 29 02.1**	**-2.0**
	comp=E,34nm,0.3s,SNR=5.5						
EZAM	**Zamans**	**5.48**	**348**	P	**Pn**	**22 28 10.7**	**+0.8**
	comp=E,2.1nm,0.1s,SNR=7.9						
EZAM				S	**Sn**	**22 29 08.8**	**-3.0**
	comp=E,10.0nm,0.3s,SNR=7.9						
AFON	**Font Roja**	**5.61**	**68**	S	**Sn**	**22 29 13.5**	**-1.6**
	comp=E,6.8nm,0.1s,SNR=7.9						
EBEN2	**Beniarda presa**	**5.88**	**69**	P	**Pn**	**22 28 15.7**	**+0.4**
	comp=E,0.5nm,0.1s,SNR=7.9						
EBEN2				S	**Sn**	**22 29 18.5**	**-2.9**
	comp=E,5.9nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.05**	**354**	P	**Pn**	**22 28 18.5**	**+0.7**
	comp=E,1.0nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**22 29 22.2**	**-3.6**
	comp=E,3.5nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.31**	**348**	P	**Pn**	**22 28 21.9**	**+0.7**
	comp=E,5.0nm,0.2s,SNR=7.9						
EMAZ				S	**Sn**	**22 29 28.2**	**-3.9**
	comp=E,4.9nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**6.37**	**54**	P	**Pn**	**22 28 24.1**	**+1.7**
	comp=E,0.3nm,0.1s,SNR=7.8						
EMOS				S	**Sn**	**22 29 30.8**	**-3.2**
	comp=E,2.1nm,0.2s,SNR=7.9						
EPON	**Pontenova**	**6.54**	**0**	P	**Pn**	**22 28 26.2**	**+1.8**
	comp=E,0.1nm,0.1s,SNR=7.9						
EPON				S	**Sn**	**22 29 33.9**	**-3.9**
	comp=E,2.6nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**6.69**	**13**	P	**Pn**	**22 28 27.5**	**+1.0**
	comp=E,0.3nm,0.2s,SNR=6.9						
EARI				S	**Sn**	**22 29 38.3**	**-3.3**
	comp=E,2.1nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**7.06**	**23**	P	**Pn**	**22 28 32.9**	**+1.3**
	comp=E,0.3nm,0.1s,SNR=7.7						
ELAN				S	**Sn**	**22 29 47.2**	**-3.5**
	comp=E,1.3nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**7.12**	**69**	P	**Pn**	**22 28 33.9**	**+1.4**
	comp=E,0.3nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**22 29 48.6**	**-3.6**
	comp=E,5.3nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**7.21**	**52**	S	**Sn**	**22 29 51.4**	**-2.9**
	comp=E,1.4nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**7.60**	**35**	P	**Pn**	**22 28 40.5**	**+1.4**
	comp=E,0.4nm,0.1s,SNR=7.9						
EORO				S	**Sn**	**22 30 00.4**	**-3.6**
	comp=E,2.6nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**7.78**	**32**	P	**Pn**	**22 28 42.8**	**+1.4**
	comp=E,0.0nm,0.1s,SNR=7.9						
EALK				S	**Sn**	**22 30 04.5**	**-3.8**
	comp=E,11nm,0.4s,SNR=7.9						
SJPF	**Ste Jean**	**7.81**	**34**	*e*Pn	**Pn**	**22 28 43.7**	**+1.8**
SJPF				*e*Sn	**Sn**	**22 30 05.5**	**-3.7**
	com

comp=E,188nm,0.4s
ACAN Cantantal 2.05 103 *i* P **Pn 22 38 11.0 -0.6**

MEX ***12*** *22:46:17.7±0.3, 14.°58N×92.°37W, h68km±4km, MD3.7*
GCG ***12*** *22:46:19.5±0.3, 14.°89N×92.°23W, h40km±29km, MD3.6*
ISC 12 22:46:19.8±2.8, 15.°0N±0.°6×92.°2W±0.°3, h55km±31km, n5, σ0991/8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
THIG		**0.10**	**216**	*e*P		**Pn**	**22 46 27.6**	**-0.7**
THIG				*e*S		**Sn**	**22 46 35.3**	**+1.0**
STG3	**Santiaguito 3,**	**0.67**	**114**	*e*P		**Pn**	**22 46 33.1**	**-0.5**
STG3				*e*S		**Sn**	**22 46 43.6**	**-0.1**
PCIG		**1.21**	**306**	*e*P		**Pn**	**22 46 40.0**	**-0.6**
PCIG				*e*S		**Sn**	**22 46 56.7**	**+0.8**
FUG	**Fuego 3**	**1.42**	**112**	*e*S		**Sn**	**22 47 02.0**	**+0.7**
IXG	**Ixpaco**	**1.89**	**115**	*e*P		**Pn**	**22 46 49.8**	**-0.1**

IDC 12 23:22:33.4±3.5, 5.°25S×149.°62E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.6/35, mbtmp4.0/3, Error ellipse: s-maj=112.8km s-min=46.0km az=116.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.84**	**224**	P		P	23 27 17.0	+0.1
	1.8nm,0.4s,baz=50,slow=10,SNR=18							
ASAR	**Alice Springs**	**23.76**	**218**	P		P	23 27 47.8	+0.1
	1.3nm,0.6s,baz=54,slow=8.8,SNR=15							
FITZ	**Fitzroy Crossi**	**26.68**	**239**	P		P	23 28 13.6	-0.9
	2.2nm,0.5s,baz=68,slow=11,SNR=1.7							
TORD	**Torodi Ar. Bea**	**147.41**	**286**	PKPbc		PKPbc	23 42 20.1	-0.3
	0.4nm,0.8s,baz=94,slow=2.4,SNR=6.3							

IDC ***12*** *23:23:44.5±0.5, 28.°72S×175.°67W, h0km, mb4.4/13, mb1 4.5/14, mb1mx4.3/33, mbtmp4.3/14, ML3.5/1, MS3.4/10, Ms1 3.4/10, ms1mx3.2/27, Error ellipse: s-maj=20.9km s-min=17.4km az=168.0*
NEIC ***12*** *23:23:44.1±1.7, 28.°72S±0.°06×175.°67W±0.°07, h10km±3km, mb4.8/79, Error ellipse: s-maj=9.2km s-min=9.0km az=92.0*
ISC 12 23:23:44.0±0.3, 28.°75S±0.°06×175.°65W±0.°05, h10km, n158, σ1984/150, mb4.7/44, MS3.5/8, 2C-1D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**2.05**	**255**	Pn		**Pg**	**23 24 22.3**	**-1.1**
	2μm,0.3s,baz=95,slow=7.6,SNR=86							
RAO				Sn		**Sb**	**23 24 45.9**	**-1.1**
	4μm,0.3s,baz=123,slow=19,SNR=9.5							
RAO	**Raoul Island**	**2.05**	**255**	Pn		**Pb**	**23 24 21.9**	**+0.5**
MXZ	**Matakaoa Point**	**10.14**	**208**	Pn		**Pn**	**23 26 08.7**	**-1.0**
NIUE	**Niue**	**10.96**	**30**	Pn		**Pn**	**23 26 16.2**	**-4.7**
OUZ	**Omahuta**	**11.18**	**232**	Pn		**Pn**	**23 26 23.4**	**-0.5**
URZ	**Urewera**	**11.24**	**211**	Pn		**Pn**	**23 26 20.8**	**-3.9**
	0.6nm,0.3s,baz=315,slow=15,SNR=1.7							
URZ				Sn		**Sn**	**23 28 22.3**	**-8.2**
	9.8nm,0.3s,baz=292,slow=19,SNR=11							
URZ				LR		LR	23 30 26.0	
	comp=Z,115nm,20.3s,baz=21,slow=36							
URZ	**Urewera**	**11.24**	**211**	Pn		**Pn**	**23 26 22.8**	**-1.9**
MSVF	**Nonsavu**	**12.40**	**331**	Pn		**Pn**	**23 26 37.0**	**-3.8**
HIZ	**Hauiti**	**12.54**	**217**	Pn		**Pn**	**23 26 42.0**	**-0.5**
BFZ	**Birch Farm**	**13.63**	**207**	Pn		**Pn**	**23 26 55.9**	**-1.5**
MSWZ	**Moikau Station**	**14.66**	**208**	Pn		**Pn**	**23 27 10.2**	**-1.3**
PLWZ	**Palliser**	**14.79**	**208**	Pn		**Pn**	**23 27 12.0**	**-1.2**
SNZO	**South Karori**	**14.80**	**210**	Pn		**Pn**	**23 27 13.0**	**-0.4**
BHW	**Baring Head**	**14.81**	**209**	Pn		**Pn**	**23 27 11.8**	**-1.8**
AFI	**Afiamalu**	**15.20**	**14**	LR		LR	23 33 50.7	
	comp=Z,35nm,19.6s,baz=64,slow=40							
TUWZ	**Tuamarina**	**15.24**	**211**	Pn		**Pn**	**23 27 18.6**	**-0.6**
NNZ	**Nelson**	**15.33**	**213**	Pn		**Pn**	**23 27 17.3**	**-3.1**
NNZ				IAmb		IAmb	23 27 28.8	
	comp=Z,72nm,1.1s							
CMWZ	**Cape Campbell**	**15.37**	**210**	Pn		**Pn**	**23 27 20.9**	**-0.2**
QRZ	**Quartz Range**	**15.46**	**216**	Pn		**Pn**	**23 27 22.3**	**+0.2**
BSWZ	**Blackbirch Sta**	**15.49**	**211**	Pn		**Pn**	**23 27 23.0**	**+0.4**
THZ	**Tophouse**	**15.98**	**213**	Pn		**Pn**	**23 27 26.9**	**-2.0**
THZ				IAmb		IAmb	23 27 44.0	
	comp=Z,41nm,0.9s							
KHZ	**Kahutara**	**16.21**	**210**	Pn		**Pn**	**23 27 29.4**	**-2.4**
KHZ				IAmb		IAmb	23 27 44.8	
	comp=Z,29nm,0.8s							
RAR	**Rarotonga**	**16.22**	**66**	Pn		**Pn**	**23 27 26.8**	**-5.3**
	comp=Z,1.4nm,0.3s,baz=236,slow=16,SNR=1.9							
RAR				LR		LR	23 33 09.7	
	comp=Z,90nm,18.9s,baz=304,slow=35							
RAR	**Rarotonga**	**16.22**	**66**	Pn		**Pn**	**23 27 27.2**	**-4.9**
LTZ	**Lake Taylor**	**17.07**	**212**	Pn		**Pn**	**23 27 40.6**	**-2.2**
DZM	**Mont Dzumac**	**17.48**	**288**	*e*P		P	23 27 59.2	+10
	comp=Z,44nm,1.4s							
DZM				*e*LR		LR	23 32 08.3	
	comp=Z,474nm,29.1s							
DZM	**Mont Dzumac**	**17.48**	**288**	P		**P**	**23 27 50.3**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=135,slow=20,SNR=2.2							
DZM				LR		LR	23 33 05.2	
	comp=Z,254nm,19.6s,baz=33,slow=32							
DZM	**Mont Dzumac**	**17.48**	**288**	Pn		**Pn**	**23 27 46.8**	**-1.4**
OXZ	**Oxford**	**17.60**	**211**	Pn		**Pn**	**23 27 48.5**	**-0.8**
OXZ				IAmb		IAmb	23 28 06.6	
	comp=Z,31nm,0.8s							
MQZ	**McQueen's Vall**	**17.63**	**209**	Pn		**Pn**	**23 27 44.6**	**-5.1**
RPZ	**Rata Peaks**	**18.35**	**212**	P		**Pn**	**23 27 57.6**	**-1.1**
	comp=Z,1.7nm,0.3s,baz=104,slow=8.3,SNR=2.3							
RPZ				S		Sn	23 31 04.7	-19
	comp=Z,1.1nm,0.3s,baz=108,slow=20,SNR=5.0							
RPZ	**Rata Peaks**	**18.35**	**212**	Pn		**Pn**	**23 27 56.1**	**-2.5**
FOZ	**Fox Glacier**	**18.81**	**214**			**P**	**23 28 02.1**	**-1.6**
LBZ	**Lake Benmore**	**19.27**	**212**			**P**	**23 28 08.3**	**-0.5**
ODZ	**Otahua Downs**	**19.57**	**210**			**P**	**23 28 11.6**	**-0.4**
ODZ				IAmb		IAmb	23 28 25.5	
	comp=Z,45nm,1.2s							
WKZ	**Wanaka**	**20.15**	**213**			**P**	**23 28 18.2**	**-0.2**
WKZ				IAmb		IAmb	23 28 21.8	
	comp=Z,35nm,1.1s							
MLZ	**Mavora Lakes**	**20.98**	**213**			**P**	**23 28 27.1**	**-0.3**
MLZ				IAmb		IAmb	23 28 34.0	
	comp=Z,26nm,1.1s							
WHZ	**Wether Hill Ro**	**21.45**	**213**	P		**P**	**23 28 33.7**	**+1.3**
TBI	**Tubuai**	**24.11**	**83**	*e*LR		LR	23 34 25.4	
	comp=Z,253nm,33.8s							
TBI	**Tubuai**	**24.11**	**83**	*e*T		T	23 51 55.8	
	comp=Z,13nm,0.4s							
PAE	**Paea**	**26.32**	**71**	*e*T		T	23 54 52.0	
	comp=Z,2.1nm,0.3s							
PPT2	**Papeete2**	**26.36**	**71**	*e*LR		LR	23 35 24.0	
	comp=Z,296nm,32.0s							
PPT2	**Papeete2**	**26.36**	**71**	*e*T		T	23 55 05.0	
	comp=Z,2.4nm,0.3s							
PPTF	**Pamatai, Papee**	**26.36**	**71**	P		**P**	**23 29 21.3**	**+0.6**
PPTF				IAmb		IAmb	23 29 39.4	
	comp=Z,30nm,1.1s							
PPT	**Papeete**	**26.37**	**71**	LR		LR	23 38 19.1	
	comp=Z,58nm,18.6s,baz=188,slow=33							
PPT	**Papeete**	**26.37**	**71**	P		**P**	**23 29 21.6**	**+1.0**
ARMA	**Armidale**	**28.46**	**259**	P		**P**	**23 29 38.6**	**-0.7**
EIDS	**Eidsvold**	**29.77**	**269**	P		**P**	**23 29 50.2**	**-0.7**
STKA	**Stephens Creek**	**36.87**	**254**	P		**P**	**23 30 55.9**	**+3.1**
	comp=Z,1.0nm,0.6s,baz=102,slow=14,SNR=3.2							
STKA				LR		LR	23 45 09.1	
	comp=Z,93nm,18.8s,baz=35,slow=35							
KWAJ	**Kwajalein Atol**	**40.68**	**334**	P		**P**	**23 31 24.0**	**-0.8**
COEN	**Coen**	**40.86**	**282**	P		**P**	**23 31 26.4**	**0.0**
BBOO	**Buckleboo**	**41.41**	**252**	P		**P**	**23 31 32.7**	**+1.9**
ASAR	**Alice Springs**	**45.28**	**264**	P		**P**	**23 32 03.3**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=95,slow=6.6,SNR=14							
ASAR				PcP		**PcP**	**23 33 44.5**	**+2.5**
	comp=Z,1.4nm,0.6s,baz=119,slow=3.8,SNR=6.4							
ASAR				LR		LR	23 50 35.6	
	comp=Z,160nm,18.3s,baz=99,slow=36							
WRA	**Warramunga Arr**	**46.13**	**269**	P		**P**	**23 32 09.6**	**+0.7**
	comp=Z,1.3nm,0.4s,baz=108,slow=6.4,SNR=17							
WRA				PcP		**PcP**	**23 33 47.7**	**+2.7**
	comp=Z,2.4nm,0.9s,baz=120,slow=4.2,SNR=5.2							
WRA				LR		LR	23 50 21.2	
	comp=Z,55nm,18.4s,baz=130,slow=35							
FORT	**Forrest**	**48.47**	**253**	P		**P**	**23 32 27.9**	**+0.9**
FORT				IAmb		IAmb	23 32 40.1	
	comp=Z,12nm,0.8s							
SBA	**Scott Base**	**49.84**	**185**	P		**P**	**23 32 37.4**	**+0.7**
SBA				IAmb		IAmb	23 32 43.3	
	comp=Z,13nm,1.1s							
VNDA	**Vanda**	**49.95**	**186**	P		**P**	**23 32 38.8**	**+1.2**
WAKE	**Wake Island**	**50.72**	**338**	P		**P**	**23 32 44.6**	**+0.5**
HLP	**Hilina Pali**	**51.65**	**25**	P		**P**	**23 32 51.4**	**+0.3**
MLOA	**Mauna Loa Obse**	**51.77**	**24**	P		**P**	**23 32 51.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**54.45**	**268**	P		**P**	**23 33 12.2**	**+0.2**
	comp=Z,4.6nm,1.1s,baz=80,slow=4.1,SNR=3.8							
CASY	**Casey**	**57.55**	**207**	P		**P**	**23 33 32.7**	**-0.7**
CASY				IAmb		IAmb	23 33 45.4	
	comp=Z,11nm,0.9s							
RPN	**Rapa Nui**	**57.90**	**106**	P		**P**	**23 33 35.6**	**-0.9**
MORW	**Morawa**	**58.98**	**252**	P		**P**	**23 33 43.1**	**-1.0**
MORW				IAmb		IAmb	23 33 45.9	
	comp=Z,5.4nm,1.0s							
SOEI	**Soe**	**59.19**	**276**	P		**P**	**23 33 43.0**	**-2.8**
QSPA	**South Pole Qui**	**61.36**	**180**	P		**P**	**23 34 02.4**	**+2.5**
	comp=Z,10nm,0.8s,baz=35,slow=4.5,SNR=32							
QSPA	**South Pole Qui**	**61.36**	**180**	P		**P**	**23 33 59.6**	**-0.3**
QSPA				IAmb		IAmb	23 34 03.6	
	comp=Z,13nm,0.8s							
TNTI	**Ternate**	**61.84**	**288**	P		**P**	**23 34 03.0**	**-0.7**
LUWI	**Luwuk**	**64.76**	**284**	P		**P**	**23 34 22.4**	**-0.7**
MAW	**Mawson**	**74.56**	**200**	P		**P**	**23 35 26.0**	**+3.3**
	comp=Z,3.1nm,0.8s,baz=119,slow=8.4,SNR=3.5							
JHJ2	**Mitsune**	**74.62**	**322**	P		**P**	**23 35 22.9**	**-0.5**
GO09	**Cerro Castillo**	**75.80**	**141**	P		**P**	**23 35 30.2**	**0.0**
GO09				IAmb		IAmb	23 35 49.4	
	comp=Z,18nm,1.1s							
KSM	**Kuching**	**76.76**	**279**	P		**P**	**23 35 35.0**	**-1.2**
KSM				IAmb		IAmb	23 35 37.2	
	comp=Z,12nm,0.9s							
JOW	**Kunigami**	**77.11**	**310**	P		**P**	**23 35 38.0**	**+0.1**
INU	**Inuyama**	**77.83**	**322**	P		**P**	**23 35 40.3**	**-1.4**
INU				IAmb		IAmb	23 35 58.5	
	comp=Z,3.1nm,0.5s							
MAJO	**Matsushiro**	**78.10**	**324**	P		**P**	**23 35 42.5**	**-0.7**
MAJO				IAmb		IAmb	23 35 51.7	
	comp=Z,4.3nm,0.9s							
MJB9	**Matsu-Tunnel**	**78.10**	**324**	P		**P**	**23 35 42.6**	**-0.6**
MJB9				IAmb		IAmb	23 35 51.7	
	comp=Z,4.0nm,0.9s							
SYO	**Syowa Base**	**79.17**	**192**	*e*P		**P**	**23 35 47.9**	**-0.7**
SYO	**Syowa Base**	**79.17**	**192**	*i*pP		pP	23 35 49.6	-0.3
SYO	**Syowa Base**	**79.17**	**192**	*i*esP		sP	23 35 52.0	+1.7
TWG	**Pinlang**	**79.65**	**303**	P		**P**	**23 35 51.2**	**-0.7**
JNU	**Nakatsue**	**79.73**	**317**	P		**P**	**23 35 51.2**	**-1.1**
JNU				IAmb		IAmb	23 35 58.5	
	comp=Z,11nm,1.0s							
SNAA	**Sanae**	**79.73**	**178**	P		**P**	**23 35 52.2**	**+0.4**
SNAA				IAmb		IAmb	23 35 54.0	
	comp=Z,4.9nm,0.8s							
YULB	**Yu-li**	**79.83**	**304**	P		**P**	**23 35 52.5**	**-0.4**
YULB				IAmb		IAmb	23 35 58.4	
	comp=Z,16nm,1.0s							
ERM	**Erimo**	**80.02**	**330**	P		**P**	**23 35 53.0**	**-0.5**
NACB	**Ninganchiao**	**80.08**	**304**	P		**P**	**23 35 53.5**	**-0.8**
NACB				IAmb		IAmb	23 36 10.4	
	comp=Z,26nm,1.1s							
SNCC	**San Nicolas Is**	**81.43**	**45**	P		**P**	**23 36 00.7**	**-0.6**
GO06	**Curarrehue**	**82.10**	**131**	P		**P**	**23 36 04.8**	**-0.3**
GO06				IAmb		IAmb	23 36 18.8	
	comp=Z,4.7nm,0.9s							
PLCA	**Paso Flores**	**82.11**	**132**	P		**P**	**23 36 07.0**	**+1.9**
	comp=Z,4.3nm,1.2s,baz=257,slow=9.0,SNR=4.3							
PLCA	**Paso Flores**	**82.11**	**132**	P		**P**	**23 36 05.2**	**+0.1**
PAGB	**Antelope Grade**	**82.67**	**42**	P		**P**	**23 36 07.5**	**-0.3**
PAGB				IAmb		IAmb	23 36 17.0	
	comp=Z,9.3nm,1.2s							
SAO	**San Andreas Ge**	**82.69**	**41**	P		**P**	**23 36 06.9**	**-1.0**
SAO				IAmb		IAmb	23 36 17.6	
	comp=Z,16nm,1.1s							
PEA0B	**Petropavlovsk-**	**84.76**	**344**	P		**P**	**23 36 17.6**	**-0.4**
PETK	**Petropavlovsk-**	**84.76**	**344**	P		**P**	**23 36 20.9**	**+2.9**
	comp=Z,8.3nm,0.9s,baz=143,slow=5.2,SNR=5.0							
PNTR	**Pine Nut**	**85.34**	**40**	P		**P**	**23 36 21.7**	**0.0**
PNTR				IAmb		IAmb	23 36 25.1	
	comp=Z,7.5nm,1.0s							
PAYG	**Puerto Ayora**	**85.61**	**88**	P		**P**	**23 36 22.4**	**-0.9**
NVAR	**Mina Array Bea**	**85.64**	**42**	P		**P**	**23 36 25.7**	**+2.5**
	comp=Z,2.4nm,0.9s,baz=222,slow=8.2,SNR=9.4							
NV11	**Mina Array Sit**	**85.73**	**42**	P		**P**	**23 36 24.0**	**+0.5**
Y14A	**Wickenburg**	**86.01**	**48**	P		**P**	**23 36 24.7**	**-0.1**
Y14A				IAmb		IAmb	23 36 28.6	
	comp=Z,4.3nm,0.9s							
W13A	**Hualapai Mount**	**86.17**	**46**	P		**P**	**23 36 24.4**	**-1.4**
KVN	**Kaiserville**	**86.18**	**41**	P		**P**	**23 36 25.8**	**+0.1**
TUC	**Tucson**	**86.48**	**50**	P		**P**	**23 36 26.9**	**-0.3**
TUC				IAmb		IAmb	23 36 31.4	
	comp=Z,5.0nm,0.9s							
319A	**Douglas**	**86.95**	**52**	P		**P**	**23 36 28.1**	**-1.5**
319A				IAmb		IAmb	23 36 33.6	
	comp=Z,5.3nm,0.8s							
KULM	**Kulim**	**87.02**	**278**	P		**P**	**23 36 28.8**	**-1.4**
KULM				IAmb		IAmb	23 36 34.2	
	comp=Z,8.2nm,1.0s							
ZAIG	**Zacatecas**	**87.03**	**62**	P		**P**	**23 36 30.1**	**-0.4**
ZAIG				IAmb		IAmb	23 36 31.3	
	comp=Z,2.4nm,0.8s							
RPSI	**Rantau Prapat**	**87.28**	**275**	P		**P**	**23 36 31.4**	**-0.1**
RPSI				IAmb		IAmb	23 36 34.5	
	comp=Z,9.8nm,1.0s							
X16A	**Lo Mia Camp, P**	**87.33**	**48**	P		**P**	**23 36 31.9**	**+0.4**
X16A				IAmb		IAmb	23 36 35.7	
	comp=Z,3.0nm,0.9s							
BMN	**Battle Mountai**	**87.60**	**41**	P		**P**	**23 36 33.3**	**+0.7**
BMN				IAmb		IAmb	23 36 37.6	
	comp=Z,6.9nm,1.1s							
GSI	**Gununguitoli**	**87.79**	**273**	P		**P**	**23 36 33.6**	**-0.4**
U15A	**North Rim**	**88.01**	**46**	P		**P**	**23 36 35.4**	**+0.6**
U15A				IAmb		IAmb	23 36 38.5	
	comp=Z,3.6nm,0.9s							
X18A	**Snowflake**	**88.37**	**49**	P		**P**	**23 36 35.9**	**-0.6**
X18A				IAmb		IAmb	23 36 45.2	
	comp=Z,1.9nm,0.5s							
MSU	**Marysvale**	**89.37**	**45**	P		**P**	**23 36 41.0**	**-0.1**
TX31	**Lajitas Ar. Si**	**89.77**	**56**	P		**P**	**23 36 42.6**	**-0.4**
TX32	**Lajitas Array**	**89.77**	**56**	P		**P**	**23 36 42.8**	**-0.3**
TXAR	**Lajitas Array**	**89.77**	**56**	P		**P**	**23 36 45.3**	**+2.2**
	comp=Z,2.1nm,1.0s,baz=224,slow=5.2,SNR=12							
G08A	**Pilot Rock**	**89.91**	**36**	P		**P**	**23 36 43.1**	**-0.2**
G08A				IAmb		IAmb	23 36 47.6	
	comp=Z,9.7nm,1.1s							
LENM	**Lemitar**	**90.15**	**51**	P		**P**	**23 36 44.2**	**-0.6**
BGU	**Big Grassy Mou**	**90.36**	**42**	P		**P**	**23 36 43.5**	**-2.1**
KLR	**Kul'dur**	**90.67**	**329**	P		**P**	**23 36 50.0**	**+3.4**
	comp=Z,1.0nm,0.9s,baz=112,slow=5.4,SNR=4.0							
MID	**Middleton Isla**	**91.14**	**14**	P		**P**	**23 36 47.6**	**-0.8**
TCUT	**Toone Canyon**	**91.44**	**43**	P		**P**	**23 36 51.4**	**+0.7**
SML	**Sawmill**	**92.90**	**13**	P		**P**	**23 36 56.3**	**-0.4**
SML				IAmb		IAmb	23 37 06.0	
	comp=Z,5.9nm,1.2s							
MSTX	**Muleshoe**	**92.94**	**53**	P		**P**	**23 36 57.4**	**-0.2**
MSTX				IAmb		IAmb	23 37 00.2	
	comp=Z,6.6nm,1.0s							
APG	**El Apazote**	**92.97**	**75**	LR		LR	00 08 36.1	
	comp=Z,19nm,20.6s,baz=29,slow=29							
CMAR	**Chiang Mai Arr**	**94.81**	**288**	P		**P**	**23 37 09.8**	**+3.3**
	comp=Z,0.4nm,0.3s,baz=145,slow=3.3,SNR=2.4							
ILAR	**Eielson Array**	**95.88**	**12**	P		**P**	**23 37 12.1**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=220,slow=5.6,SNR=11							
LPAZ	**La Paz**	**96.92**	**113**	LR		LR	00 12 50.2	
	comp=Z,13nm,18.1s,baz=54,slow=30							
ZALV	**Zalesovo Beam**	**118.16**	**319**	PKP		**PKiKP**	**23 42 32.5**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=99,slow=2.7,SNR=3.5							
MKAR	**Makanchi Array**	**119.28**	**310**	PKP		**PKiKP**	**23 42 32.7**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=71,slow=2.2,SNR=9.7							
ARCES	**ARCESS Array B**	**137.39**	**349**	PKP		**PKiKP**	**23 43 10.5**	**+1.6**
	comp=Z,1.4nm,0.7s,baz=27,slow=1.0,SNR=6.8							
H10N3	**ASCENSION HYDR**	**139.33**	**151**	T		T	02 20 32.6	
	baz=204,slow=75,SNR=2.7							
H10N1	**ASCENSION HYDR**	**139.33**	**151**	T		T	02 20 35.3	
	baz=204,slow=75,SNR=2.7							
H10N2	**ASCENSION HYDR**	**139.35**	**151**	T		T	02 20 35.2	
	baz=204,slow=75,SNR=3.0							
FINES	**FINESS Array B**	**144.25**	**342**	PKP		**PKPdf**	**23 43 19.3**	**-0.3**
	comp=Z,5.6nm,0.6s,baz=56,slow=2.5,SNR=22							
KBZ	**Khabaz**	**145.84**	**306**	PKPbc		**PKPab**	**23 43 23.9**	**0.0**
	comp=Z,2.0nm,0.8s,baz=114,slow=2.4,SNR=5.0							
NB2	**NORSAR Subarra**	**147.38**	**354**	PKP		**PKPab**	**23 43 29.4**	**0.0**
	comp=Z,2.5nm,0.7s,baz=7.7,slow=2.9							
NOA	**NORSAR Array B**	**147.38**	**354**	PKPbc		**PKPab**	**23 43 29.1**	**-0.3**
	comp=Z,6.5nm,1.0s,baz=13,slow=4.4,SNR=12							
AKASG	**Malin Array Be**	**151.15**	**326**	PKPbc		**PKiKP**	**23 43 38.9**	**+1.1**
	comp=Z,7.4nm,0.8s,baz=45,slow=2.7,SNR=21							
AKASG				PKPab		**PKPab**	**23 43 46.4**	**+1.5**
	comp=Z,2.7nm,0.7s,baz=46,slow=4.2,SNR=6.9							
BRTR	**Keskin Array B**	**153.54**	**302**	PKPbc		**PKiKP**	**23 43 44.8**	**+1.6**
	comp=Z,1.0nm,0.9s,baz=122,slow=1.4,SNR=4.4							
BRTR				PKPab		**PKPab**	**23 43 56.8**	**+1.2**
	comp=Z,1.5nm,0.9s,baz=45,slow=1.9,SNR=4.8							
LIC	**Lamto**	**155.90**	**157**	*e*PKP2		**PKPab**	**23 44 07.5**	**+1.6**
	comp=Z,8.9nm,0.8s							
LIC	**Lamto**	**155.90**	**157**			**PKPab**	**23 44 07.5**	**+1.6**
KIC	**Kosan Boka**	**156.13**	**157**	*e*PKP2		**PKPab**	**23 44 08.5**	**+1.6**
	comp=Z,15nm,1.1s							
KIC	**Kosan Boka**	**156.13**	**157**			**PKPab**	**23 44 08.5**	**+1.6**
TIC	**Toumodi**	**156.29**	**156**	*e*PKP2		**PKPab**	**23 44 09.2**	**+1.6**
	comp=Z,1.0nm,0.3s							
TIC	**Toumodi**	**156.29**	**156**			**PKPab**	**23 44 09.2**	**+1.6**
DBIC	**Dimbokro**	**156.38**	**157**	PKPab		**PKPab**	**23 44 09.4**	**+1.4**
	comp=Z,2.5nm,0.8s,baz=169,slow=6.0,SNR=3.4							
CLL	**Collm**	**156.55**	**346**	*e*PKPab		**PKPab**	**23 44 09.0**	**+1.3**
CONA	**Conrad Observa**	**158.87**	**338**	*i* pPKPab		**PKPab**	**23 44 20.9**	**+2.9**
	comp=Z,5.0nm,1.8s							
MOA	**Molln**	**159.44**	**341**	*i* pPKPab		**PKPab**	**23 44 23.4**	**+3.1**
	comp=Z,7.1nm,1.4s							
SOKA	**Soboth**	**160.24**	**338**	*i* pPKPab		**PKPab**	**23 44 26.4**	**+2.4**
	comp=Z,7.0nm,1.6s							
KBA	**Koelnbreinsper**	**160.40**	**341**	*i* pPKPab		**PKPab**	**23 44 27.9**	**+3.1**
	comp=Z,2.4nm,0.9s							
OBKA	**Obir**	**160.55**	**338**	*i* PKPab		**PKPab**	**23 44 26.3**	**+0.9**
	comp=Z,3.2nm,1.2s							
WATA	**Walderalm**	**160.61**	**345**	*i* pPKPab		**PKPab**	**23 44 28.3**	**+2.7**
	comp=Z,4.1nm,1.2s							
RETA	**Reutte**	**160.64**	**347**	*i* sPKPab		**PKPab**	**23 44 30.0**	**+4.4**
	comp=Z,9.5nm,1.6s							
MOTA	**Moosalm**	**160.70**	**346**	*i* pPKPab		**PKPab**	**23 44 28.7**	**+2.7**
	comp=Z,7.7nm,1.7s							
MYKA	**Terra Mystica**	**160.72**	**340**	*i* PKPab		**PKPab**	**23 44 26.9**	**+0.8**
	comp=Z,1.6nm,0.5s							
ABTA	**Abfaltersbach**	**160.93**	**343**	*i* pPKPab		**PKPab**	**23 44 28.7**	**+1.7**
	comp=Z,3.3nm,0.9s							
TORD	**Torodi Ar. Bea**	**164.28**	**170**	PKP		**PKPdf**	**23 43 49.9**	**+1.3**
	comp=Z,1.7nm,1.1s,baz=202,slow=1.6,SNR=5.8							
TORD				PKPab		**PKPab**	**23 44 44.0**	**+1.7**
	comp=Z,8.0nm,0.8s,baz=178,slow=4.5,SNR=36							

NIED ***12*** *23:29:00, 36.°70N×140.°60E, h5km, Mw3.5 Best double couple: M0 1.69000×10^14 NP1:φs152.00000°, δ48.00000°, λ-95.00000°. NP2:φs341.00000°, δ42.00000°, λ-84.00000°.*
IDC ***12*** *23:29:26.9±1.1, 36.°79N×140.°67E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/32, mbtmp3.6/6, Error ellipse: s-maj=26.4km s-min=22.7km az=24.0*
JMA ***12*** *23:29:28.3, 36.°70N×140.°61E, h7km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs124.00000°, δ40.00000°, λ-113.00000°. NP2: φs333.00000°, δ54.00000°, λ-72.00000°. Principal axes: T Plg7.0000°, Azm50.0000°; N Plg14.0000°, Azm142.0000°; P Plg74.0000°, Azm294.0000°;*
JMA Felt III J1.
NEIC ***12*** *23:29:

IDC ***13*** *00:31:40.2±0.8,20°.65N×146°.81E,h0km,mb3.7/12, mb1 4.0/13,mb1mx3.8/39,mbtmp3.8/13,ML4.1/1,MS2.5/1, Ms1 2.5/1,ms1mx2.1/42,Error ellipse: s-maj=27.5km s-min=20.6km az=97.0*

ISC 13 00:31:49.1±1.8,21°.1N±0°.3×146°.8E±0°.2,h44km,n14, σ0s57/12,mb3.7/12,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**7.31**	**325**	Pn	**Pn**	**00 33 34.0**	**+0.7**
	2.9nm,0.3s,baz=311,slow=19,SNR=2.5						
JCJ				Sn	**Sn**	**00 34 54.3**	**-0.7**
	6.3nm,0.3s,baz=279,slow=23,SNR=5.9						
KSRS	**Korea Array**	**23.10**	**319**	LR	LR	00 46 05.7	
	comp=Z,12nm,19.7s,baz=110,slow=37						
KLR	**Kul'dur**	**30.52**	**340**	P	**P**	**00 37 58.8**	**+0.7**
	0.4nm,0.3s,baz=172,slow=14,SNR=2.9						
SONM	**Songino Array**	**41.97**	**319**	P	**P**	**00 39 35.7**	**-0.3**
	0.2nm,0.5s,baz=123,slow=9.2,SNR=2.5						
WRA	**Warramunga Arr**	**42.61**	**198**	P	P	00 39 34.6	-6.7
	0.6nm,0.7s,baz=1.6,slow=8.7,SNR=6.6						
ASAR	**Alice Springs**	**46.27**	**197**	P	P	00 40 03.3	-7.2
	0.3nm,0.6s,baz=12,slow=7.7,SNR=2.4						
ZALV	**Zalesovo Beam**	**56.78**	**321**	P	**P**	**00 41 28.8**	**+0.1**
	0.7nm,0.6s,baz=81,slow=8.9,SNR=4.7						
MKAR	**Makanchi Array**	**57.59**	**313**	P	**P**	**00 41 34.7**	**+0.2**
	0.3nm,0.6s,baz=98,slow=9.2,SNR=3.9						
ILAR	**Eielson Array**	**61.00**	**27**	P	**P**	**00 41 57.2**	**-0.6**
	1.5nm,1.3s,baz=266,slow=5.4,SNR=3.3						
INK	**Inuvik**	**66.73**	**23**	P	**P**	**00 42 35.2**	**-0.2**
	1.9nm,1.0s,baz=242,slow=6.9,SNR=3.2						
YKA	**Yellowknife Ar**	**75.35**	**28**	P	**P**	**00 43 28.0**	**+0.3**
	1.1nm,0.8s,baz=289,slow=5.7,SNR=16						
NVAR	**Mina Array Bea**	**80.81**	**52**	P	**P**	**00 43 59.2**	**+0.4**
	1.6nm,0.8s,baz=266,slow=6.9,SNR=8.5						
FINES	**FINESS Array B**	**85.14**	**336**	P	**P**	**00 44 19.6**	**-0.8**
	3.2nm,1.0s,baz=48,slow=8,SNR=4.4						
PDAR	**Pinedale Array**	**85.37**	**46**	P	**P**	**00 44 22.0**	**-0.2**
	0.2nm,0.5s,baz=278,slow=0.6,SNR=3.3						

BGR ***13*** *00:47:30.9±0.0,23°.80S×179°.84E,h500km*

IDC ***13*** *00:47:35.0±0.8,23°.47S×179°.21E,h530km±7km,mb3.9/28, mb1 4.0/31,mb1mx3.9/43,mbtmp4.7/31,Error ellipse: s-maj=10.6km s-min=9.0km az=132.0*

NEIC ***13*** *00:47:35.2±2.0,23°.49S±0°.04×179°.21E±0°.09,h530km±6km, mb4.5/146,Error ellipse: s-maj=13.3km s-min=1.6km az=63.0*

MOS ***13*** *00:47:37.2±3.3,23°.30S×179°.19E,h527km,mb4.6/26, Error ellipse: s-maj=12.3km s-min=9.9km az=98.5*

ISC 13 00:47:35.1±0.5,23°.51S±0°.05×179°.26E±0°.05,h538km±4km, h539km:pP-P,n483,σ1s19/503,mb4.5/123,73C-19D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.86**	**349**	*c i* P	**P**	**00 49 13.7**	**+1.6**
MSVF	**Nonsavu**	**5.86**	**349**	P	**P**	**00 49 11.1**	**-1.0**
RAO	**Raoul Island**	**6.25**	**157**	P	**P**	**00 49 15.6**	**+0.2**
RAO	**Raoul Island**	**6.25**	**157**	P	**P**	**00 49 15.6**	**+0.2**
NIUE	**Niue**	**11.00**	**67**	P	**P**	**00 50 01.4**	**-1.9**
DZM	**Mont Dzumac**	**11.91**	**274**	P	**P**	**00 50 11.3**	**-1.6**
	0.5nm,0.3s,baz=111,slow=17,SNR=4.8						
DZM	**Mont Dzumac**	**11.91**	**274**	P	**P**	**00 50 13.0**	**+0.1**
OUZ	**Omahuta**	**12.67**	**202**	P	**P**	**00 50 22.3**	**+1.9**
AFI	**Afiamalu**	**12.77**	**43**	P	**P**	**00 50 19.7**	**-2.1**
AFI	**Afiamalu**	**12.77**	**43**	P	**P**	**00 50 20.0**	**-1.9**
	9.1nm,0.3s,baz=31,slow=4.9,SNR=20						
AFI				S	**S**	**00 52 32.5**	**-6.6**
	2.7nm,0.3s,baz=144,slow=8.7,SNR=2.5						
AFI	**Afiamalu**	**12.77**	**43**	P	**P**	**00 50 19.7**	**-2.1**
MXZ	**Matakaoa Point**	**14.03**	**183**	P	**P**	**00 50 33.8**	**-0.8**
URZ	**Urewera**	**14.82**	**187**	P	**P**	**00 50 41.2**	**-1.5**
	7.8nm,0.3s,baz=14,slow=4.8,SNR=31						
URZ				S	**S**	**00 53 11.1**	**-6.3**
	2.0nm,0.3s,baz=209,slow=23,SNR=12						
URZ	**Urewera**	**14.82**	**187**	P	**P**	**00 50 40.6**	**-2.1**
URZ					**S**	**00 53 17.6**	**+0.2**
HIZ	**Hauiti**	**15.42**	**193**	P	**P**	**00 50 49.5**	**+0.5**
BFZ	**Birch Farm**	**17.31**	**188**	P	**P**	**00 51 05.8**	**-1.2**
SNZO	**South Karori**	**18.16**	**191**	P	**P**	**00 51 13.6**	**-1.1**
MSWZ	**Moikau Station**	**18.17**	**190**	P	**P**	**00 51 13.6**	**-1.3**
QRZ	**Quartz Range**	**18.17**	**197**	P	**P**	**00 51 16.1**	**+1.2**
BHW	**Baring Head**	**18.23**	**191**	P	**P**	**00 51 14.6**	**-0.8**
PLWZ	**Palliser**	**18.32**	**190**	P	**P**	**00 51 14.9**	**-1.4**
NNZ	**Nelson**	**18.34**	**194**	P	**P**	**00 51 16.7**	**+0.3**
TUWZ	**Tuamarina**	**18.42**	**193**	P	**P**	**00 51 16.7**	**-0.4**
CMWZ	**Cape Campbell**	**18.67**	**192**	P	**P**	**00 51 20.3**	**+0.8**
BSWZ	**Blackbirch Sta**	**18.71**	**193**	P	**P**	**00 51 19.3**	**-0.5**
THZ	**Tophouse**	**18.96**	**195**	P	**P**	**00 51 22.9**	**+0.7**
KHZ	**Kahutara**	**19.45**	**193**	P	**P**	**00 51 26.0**	**-0.5**
RAR	**Rarotonga**	**19.52**	**87**	P	**P**	**00 51 26.3**	**-1.2**
RAR				pmax	pmax		
	comp=Z,26nm,1.1s						
RAR	**Rarotonga**	**19.52**	**87**	P	**P**	**00 51 26.3**	**-1.2**
RAR				IAmb	IAmb	00 51 33.0	
	comp=Z,26nm,1.1s						
LHI	**Lord Howe Isla**	**19.59**	**242**	P	**P**	**00 51 29.4**	**+1.4**
MQZ	**McQueen's Vall**	**20.87**	**194**	P	**P**	**00 51 38.8**	**-0.6**
RPZ	**Rata Peaks**	**21.26**	**197**	P	**P**	**00 51 43.3**	**+0.3**
	comp=Z,16nm,0.4s,baz=327,slow=0.7,SNR=10						
RPZ	**Rata Peaks**	**21.26**	**197**	P	**P**	**00 51 43.6**	**+0.7**
FOZ	**Fox Glacier**	**21.44**	**199**	P	**P**	**00 51 44.8**	**+0.3**
LBZ	**Lake Benmore**	**22.12**	**197**	P	**P**	**00 51 49.9**	**-0.7**
LBZ				IAmb	IAmb	00 52 04.8	
	comp=Z,24nm,1.0s						
KNTN	**Kanton**	**22.38**	**24**	P	**P**	**00 51 50.5**	**-3.0**
ODZ	**Otahua Downs**	**22.61**	**196**	P	**P**	**00 51 54.4**	**-0.6**
ODZ				IAmb	IAmb	00 52 01.7	
	comp=Z,32nm,1.2s						
WKZ	**Wanaka**	**22.86**	**199**	P	**P**	**00 51 56.8**	**-0.5**
MLZ	**Mavora Lakes**	**23.62**	**200**	P	**P**	**00 52 04.6**	**+0.5**
DCZ	**Deep Cove**	**24.02**	**201**	P	**P**	**00 52 08.0**	**+0.5**
DCZ				IAmb	IAmb	00 52 13.5	
	comp=Z,35nm,1.1s						
WHZ	**Wether Hill Ro**	**24.14**	**200**	P	**P**	**00 52 09.6**	**+0.9**
ARMA	**Armidale**	**25.53**	**248**	P	**P**	**00 52 22.7**	**+1.4**
ARMA				IAmb	IAmb	00 52 23.3	
	comp=Z,12nm,0.6s						
EIDS	**Eidsvold**	**25.70**	**260**	P	**P**	**00 52 23.6**	**+0.8**
EIDS				IAmb	IAmb	00 52 23.8	
	comp=Z,6.2nm,0.7s						
CTA	**Charters Tower**	**30.80**	**270**	P	**P**	**00 53 07.8**	**+0.5**
	comp=Z,7.5nm,0.3s,baz=94,slow=10,SNR=15						
CTA				PcP	**PcP**	**00 55 48.1**	**+0.2**
	comp=Z,3.6nm,0.5s,baz=127,slow=5.1,SNR=2.8						
TOO	**Toolangi**	**32.10**	**236**	P	**P**	**00 53 18.9**	**+0.7**
TOO				pmax	pmax		
	comp=Z,30nm,1.1s						
TOO	**Toolangi**	**32.10**	**236**	P	**P**	**00 53 18.9**	**+0.7**
TOO				IAmb	IAmb	00 53 20.4	
	comp=Z,30nm,1.1s						
TAU	**Tasmania Unive**	**32.71**	**226**	P	**P**	**00 53 24.1**	**+0.8**
TAU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TAU	**Tasmania Unive**	**32.71**	**226**	P	**P**	**00 53 24.1**	**+0.8**
TAU				IAmb	IAmb	00 53 26.7	
	comp=Z,10nm,0.9s						
PMG	**Port Moresby**	**33.73**	**289**	*c i* P	**P**	**00 53 32.4**	**+0.2**
PMG				pmax	pmax		
	comp=Z,135nm,0.7s						
PMG	**Port Moresby**	**33.73**	**289**	P	**P**	**00 53 32.2**	**0.0**
	comp=Z,29nm,0.6s,baz=103,slow=5.9,SNR=14						
PMG	**Port Moresby**	**33.73**	**289**	P	**P**	**00 53 32.7**	**+0.5**
STKA	**Stephens Creek**	**34.24**	**248**	P	**P**	**00 53 37.0**	**+0.6**
	comp=Z,9.4nm,0.5s,baz=93,slow=9.8,SNR=27						
STKA				PcP	**PcP**	**00 55 57.4**	**0.0**
	comp=Z,3.5nm,0.4s,baz=107,slow=5.3,SNR=5.3						
COEN	**Coen**	**35.38**	**279**	P	**P**	**00 53 46.7**	**+0.6**
BBOO	**Buckleboo**	**38.98**	**246**	P	**P**	**00 54 14.8**	**-0.5**
BBOO				IAmb	IAmb	00 54 15.7	
	comp=Z,8.8nm,0.9s						
AS31	**Alice Springs**	**41.43**	**260**		**P**	**00 54 35.6**	**+0.5**
ASAR	**Alice Springs**	**41.43**	**260**	P	**P**	**00 54 35.1**	**0.0**
	comp=Z,12nm,0.9s,baz=90,slow=8.3,SNR=42						
ASAR				PcP	**PcP**	**00 56 20.2**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=99,slow=4.6,SNR=8.3						
ASAR				ScP	**ScP**	**00 59 20.3**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=102,slow=4.3,SNR=7.9						
ASAR				S	**S**	**01 00 04.5**	**-7.1**
	comp=Z,1.3nm,0.9s,baz=103,slow=15,SNR=3.7						
WR0	**Warramunga Arr**	**41.57**	**266**	P	**P**	**00 54 35.9**	**-0.3**
WRAB	**Tennant Creek**	**41.75**	**266**	*ce* P	**P**	**00 54 37.0**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WRA	**Warramunga Arr**	**41.76**	**266**	*i* P	**P**	**00 54 37.0**	**-0.7**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.2s						
WRA	**Warramunga Ar**	**41.76**	**266**	P	**P**	**00 54 37.0**	**-0.7**
	comp=Z,3.1nm,0.2s,baz=90,slow=5.7,SNR=128						
WRA				PcP	**PcP**	**00 56 21.1**	**-0.3**
	comp=Z,2.9nm,1.0s,baz=100,slow=4.7						
WRA				ScP	**ScP**	**00 59 22.0**	**+1.5**
	comp=Z,3.8nm,1.0s,baz=100,slow=4.1,SNR=6.5						
WRA				S	**S**	**01 00 10.6**	**-5.8**
	comp=Z,3.1nm,1.0s,baz=102,slow=14,SNR=6.4						
JAY	**Jayapura**	**42.74**	**293**	P	**P**	**00 54 45.3**	**-0.2**
	comp=Z,16nm,0.9s,baz=359,slow=22,SNR=4.5						
WAKE	**Wake Island**	**44.27**	**343**	P	**P**	**00 54 55.6**	**-1.5**
FORT	**Forrest**	**45.81**	**249**	IAmb	IAmb	00 55 09.3	
	comp=Z,23nm,0.7s						
MTN	**Manton Dam**	**46.75**	**274**	P	**P**	**00 55 15.4**	**-0.8**
MTN				IAmb	IAmb	00 55 22.1	
	comp=Z,11nm,1.0s						
KNRA	**Kununurra**	**48.01**	**270**	P	**P**	**00 55 25.6**	**-0.1**
KNRA				IAmb	IAmb	00 55 40.2	
	comp=Z,21nm,1.1s						
KHLU	**Kahalu`u**	**49.22**	**32**	P	**P**	**00 55 35.2**	**+0.5**
KHLU				IAmb	IAmb	00 55 43.1	
	comp=Z,20nm,0.8s						
HMH	**Humu'ula Sheep**	**49.43**	**32**	P	**P**	**00 55 37.5**	**+1.1**
FAKI	**Fak Fak**	**49.82**	**287**	P	**P**	**00 55 38.2**	**-0.9**
FAKI				IAmb	IAmb	00 55 53.3	
	comp=Z,29nm,1.0s						
OPA	**Opana**	**50.08**	**28**	P	**P**	**00 55 41.4**	**+0.6**
OPA				pmax	pmax		
	comp=Z,48nm,1.1s						
OPA	**Opana**	**50.08**	**28**	P	**P**	**00 55 41.4**	**+0.6**
FITZ	**Fitzroy Crossi**	**50.18**	**266**	P	**P**	**00 55 41.5**	**-0.2**
	comp=Z,2.5nm,0.5s,baz=104,slow=4.1,SNR=13						
FITZ	**Fitzroy Crossi**	**50.18**	**266**	P	**P**	**00 55 41.6**	**-0.2**
SWI	**Sorong**	**51.68**	**289**	P	**P**	**00 55 52.5**	**-0.1**
	comp=Z,56nm,0.7s						
PSA00	**Pilbara Seismi**	**54.57**	**260**	P	**P**	**00 56 11.8**	**-1.3**
VNDA	**Vanda**	**54.71**	**185**	P	**P**	**00 56 13.8**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=29,slow=6.8,SNR=3.6						
MORW	**Morawa**	**56.37**	**250**	P	**P**	**00 56 24.6**	**-1.0**
GIRL	**Giralia**	**59.34**	**257**	P	**P**	**00 56 46.5**	**+0.7**
BKSI	**Bulukumba**	**59.64**	**278**	P	**P**	**00 56 47.1**	**-0.8**
	comp=Z,24nm,0.7s						
BNSI	**Bone**	**60.03**	**279**	P	**P**	**00 56 50.1**	**-0.4**
	comp=Z,16nm,1.0s						
CASY	**Casey**	**60.17**	**206**	P	**P**	**00 56 49.9**	**-0.6**
CASY				IAmb	IAmb	00 57 04.6	
	comp=Z,14nm,1.1s						
PLAI	**Plampang**	**60.42**	**273**	P	**P**	**00 56 51.5**	**-1.6**
	comp=Z,50nm,1.0s						
JCJ	**Chichijima**	**61.76**	**322**	P	**P**	**00 57 01.3**	**-0.2**
	comp=Z,13nm,0.3s,baz=131,slow=19,SNR=3.9						
PCI	**Palu**	**61.76**	**282**	P	P	00 57 15.0	+13
MPSI	**Mapaga**	**62.26**	**284**	P	**P**	**00 57 04.2**	**-0.9**
	comp=Z,13nm,0.9s						
GRJI	**Gresik**	**66.00**	**273**	P	**P**	**00 57 28.7**	**-0.2**
	comp=Z,63nm,0.8s						
QSPA	**South Pole Qui**	**66.57**	**180**	P	**P**	**00 57 32.9**	**+1.1**
	comp=Z,4.4nm,0.7s,baz=27,slow=3.0,SNR=11						
QSPA	**South Pole Qui**	**66.57**	**180**	P	**P**	**00 57 33.5**	**+1.8**
PCJI	**Pacitan**	**66.71**	**271**	P	**P**	**00 57 33.2**	**-0.1**
	comp=Z,67nm,0.7s						
UGM	**Wanagama**	**67.42**	**271**	P	**P**	**00 57 37.4**	**-0.3**
UWJI	**Ujung Watu**	**67.59**	**273**	P	**P**	**00 57 38.3**	**-0.4**
	comp=Z,146nm,0.7s						
KPJI	**Karang Pucung**	**69.10**	**271**	P	**P**	**00 57 47.4**	**-0.4**
	comp=Z,26nm,1.9s						
LEM	**Lembang**	**70.49**	**271**	P	**P**	**00 57 56.1**	**-0.2**
	comp=Z,26nm,0.7s,baz=23,slow=6.3,SNR=5.6						
MJAR	**Matsushiro Arr**	**71.19**	**326**	P	**P**	**00 57 59.5**	**-0.3**
	comp=Z,7.7nm,0.8s,baz=153,slow=5.3,SNR=15						
MAJO	**Matsushiro**	**71.19**	**326**	*ie* P	**P**	**00 58 00.0**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DBJI	**Dramaga**	**71.39**	**271**	P	**P**	**00 58 01.0**	**-0.5**
JNU	**Nakatsue**	**72.79**	**319**	P	**P**	**00 58 09.7**	**+0.6**
	comp=Z,8.6nm,0.6s,baz=359,slow=0.2,SNR=5.6						
JNU	**Nakatsue**	**72.79**	**319**	P	**P**	**00 58 09.8**	**+0.7**
JNU				IAmb	IAmb	00 58 11.9	
	comp=Z,15nm,0.8s						
MDSI	**Maura Dua**	**74.55**	**272**	P	**P**	**00 58 17.9**	**-1.7**
	comp=Z,9.2nm,2.2s						
MNAI	**Manna**	**75.72**	**271**	P	**P**	**00 58 25.9**	**-0.2**
	comp=Z,348nm,1.6s						
TJN	**Taejon**	**77.12**	**319**	*ie* P	**P**	**00 58 33.3**	**+0.1**
YSS	**Yuzh-Sakhalins**	**77.50**	**335**	*i* P	**P**	**00 58 36.4**	**+1.4**
YSS				pmax	pmax		
	comp=Z,30nm,0.6s						
YSS	**Yuzh-Sakhalins**	**77.50**	**335**	P	**P**	**00 58 36.9**	**+1.9**
YSS				IAmb	IAmb	00 58 37.5	
	comp=Z,24nm,0.6s						
KSRS	**Korea Array**	**77.51**	**320**	P	**P**	**00 58 36.3**	**+1.0**
	comp=Z,4.7nm,0.8s,baz=137,slow=5.7,SNR=13						
MAW	**Mawson**	**77.88**	**201**	P	**P**	**00 58 37.8**	**+1.0**
	comp=Z,5.0nm,0.6s,baz=136,slow=3.8,SNR=9.1						
UNV	**Unalaska Valle**	**78.01**	**9**	P	**P**	**00 58 37.9**	**+0.2**
AKUT	**Akutan**	**78.39**	**9**	P	**P**	**00 58 39.3**	**-0.4**
PEA0B	**Petropavlovsk-**	**78.56**	**347**	P	**P**	**00 58 41.6**	**+0.9**
PEA0B				pmax	pmax		
	comp=Z,12nm,1.0s						
PEA0B	**Petropavlovsk-**	**78.56**	**347**	P	**P**	**00 58 41.6**	**+0.9**
PEA0B				IAmb	IAmb	00 58 58.2	
	comp=Z,12nm,0.9s						
PETK	**Petropavlovsk-**	**78.56**	**347**	P	**P**	**00 58 41.4**	**+0.7**
	comp=Z,11nm,0.6s,baz=137,slow=7.6,SNR=16						
VLA	**Vladivostok**	**79.34**	**327**	*ie* P	**P**	**00 58 45.9**	**+0.9**
VLA				pmax	pmax		
	comp=Z,42nm,0.6s						
NJ2	**Nanjing**	**79.89**	**311**	*e* P	**P**	**00 58 51.0**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USA0B	**Ussuriysk Arra**	**80.07**	**328**	P	**P**	**00 58 49.0**	**+0.2**
USA0B				pmax	pmax		
	comp=Z,11nm,1.1s						
USA0B	**Ussuriysk Arra**	**80.07**	**328**	P	**P**	**00 58 49.0**	**+0.2**
USRK	**Ussuriysk Ar.**	**80.07**	**328**	P	**P**	**00 58 48.7**	**-0.1**
	comp=Z,12nm,1.0s,baz=129,slow=3.8,SNR=10.0						
TYV	**Tymovskoe**	**80.78**	**337**	*e* P	**P**	**00 58 53.8**	**+1.5**
TYV				pmax	pmax		
	comp=Z,400nm,2.4s						
TYV				pmax	pmax		
	comp=Z,20nm,1.1s						
MDJ	**Mudanjiang**	**81.56**	**327**	P	**P**	**00 58 58.0**	**+1.5**
MDJ				pmax	pmax		
	comp=Z,17nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,120nm,3.8s						
HOPS	**Hopland Field**	**82.30**	**42**	P	**P**	**00 59 02.2**	**+1.8**
HOPS				IAmb	IAmb	00 59 02.8	
	comp=Z,12nm,0.9s						
KMRM	**Mail Ridge**	**82.68**	**40**	P	**P**	**00 59 05.1**	**+2.7**
KMRM				IAmb	IAmb	00 59 06.0	
	comp=Z,15nm,0.9s						
KHMM	**Horse Mountain**	**83.08**	**40**	P	**P**	**00 59 06.6**	**+2.1**
KHMM				IAmb	IAmb	00 59 13.5	
	comp=Z,22nm,1.1s						
SYO	**Syowa Base**	**83.23**	**194**	*ie* P	**P**	**00 59 02.6**	**-2.0**
SYO	**Syowa Base**	**83.23**	**194**	*ie* PcP	**P**	**00 59 06.2**	**+1.6**
ISA	**Isabella, Lake**	**83.24**	**47**	IAmb	IAmb	00 59 08.2	
	comp=Z,13nm,0.9s						
CMB	**Columbia Colle**	**83.38**	**44**	IAmb	IAmb	00 59 08.5	
	comp=Z,9.0nm,0.9s						
KRMB	**Red Mountain**	**83.39**	**39**	P	**P**	**00 59 07.8**	**+1.9**
PFO	**Pinyon Flats O**	**83.46**	**49**	P	**P**	**00 59 07.7**	**+1.2**
	comp=Z,1.8nm,0.6s,baz=252,slow=3.2,SNR=3.4						
AFDM	**Forest Hills D**	**83.56**	**43**	IAmb	IAmb	00 59 09.4	
	comp=Z,10nm,1.0s						
WDC	**Whiskeytown Da**	**83.60**	**41**	P	**P**	**00 59 08.1**	**+1.2**
WDC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WDC	**Whiskeytown Da**	**83.60**	**41**	P	**P**	**00 59 08.1**	**+1.2**
OHAK	**Old Harbor**	**83.67**	**15**	P	**P**	**00 59 08.0**	**+1.2**
OHAK				IAmb	IAmb	00 59 24.3	
	comp=Z,12nm,1.0s						
KLR	**Kul'dur**	**83.86**	**331**	*ie* P	**P**	**00 59 08.2**	**+0.2**
KLR				pmax	pmax		
	comp=Z,15nm,1.8s						
GSC	**Goldstone, Bar**	**84.16**	**48**	IAmb	IAmb	00 59 12.6	
	comp=Z,8.8nm,1.1s						
YBH	**Yreka Blue Hor**	**84.22**	**40**	P	**P**	**00 59 10.9**	**+0.8**
	comp=Z,4.5nm,0.9s,baz=246,slow=8.5,SNR=4.1						
KDAK	**Kodiak Island**	**84.34**	**15**	P	**P**	**00 59 11.6**	**+1.5**
KDAK				pmax	pmax		
	comp=Z,23nm,1.2s						
KDAK	**Kodiak Island**	**84.34**	**15**	P	**P**	**00 59 11.6**	**+1.5**
KDAK				IAmb	IAmb	00 59 20.1	
	comp=Z,23nm,1.1s						
PNTR	**Pine Nut**	**84.50**	**43**	IAmb	IAmb	00 59 14.5	
	comp=Z,11nm,0.9s						
HUMO	**Hull Mountain**	**84.62**	**39**	P	**P**	**00 59 13.9**	**+2.0**
HUMO				IAmb	IAmb	00 59 16.9	
	comp=Z,8.2nm,1.1s						
Y12C	**Blythe**	**84.89**	**50**	IAmb	IAmb	00 59 16.5	
	comp=Z,7.9nm,1.1s						
NVAR	**Mina Array Bea**	**84.94**	**44**	P	**P**	**00 59 15.4**	**+1.5**
	comp=Z,3.0nm,0.8s,baz=224,slow=8.6,SNR=18						
PAHR	**Pah Rah Range**	**85.00**	**43**	P	**P**	**00 59 16.0**	**+1.9**
HSIG		**85.05**	**56**	P	**P**	**00 59 16.2**	**+1.9**
HSIG				IAmb	IAmb	00 59 17.4	
	comp=Z,9.3nm,0.8s						
SNAA	**Sanae**	**85.07**	**179**	P	**P**	**00 59 13.3**	**-0.4**
SNAA	**Sanae**	**85.07**	**179**	*ie* P	**P**	**00 59 13.7**	**-0.1**
SNAA	**Sanae**	**85.07**	**179**	P	**P**	**00 59 13.6**	**-0.2**
VNA3	**Neumayer Olymp**	**85.30**	**177**	P	**P**	**00 59 14.5**	**-0.3**
KVN	**Kaiserville**	**85.43**	**44**	IAmb	IAmb	00 59 18.4	
	comp=Z,5.2nm,0.6s						
MOD	**Modoc Plateau**	**85.74**	**41**	P	**P**	**00 59 18.1**	**+0.6**
MOD				IAmb	IAmb	00 59 20.2	
	comp=Z,7.7nm,0.9s						
SHPR	**Sheep Range**	**85.94**	**47**	P	**P**	**00 59 19.0**	**+0.4**
MA2	**Magadan**	**86.03**	**346**	*ie* P	**P**	**00 59 18.8**	**+0.5**
MA2				pmax	pmax		
	comp=Z,19nm,0.9s						
MA2	**Magadan**	**86.03**	**346**	P	**P**	**00 59 18.4**	**+0.1**
MA2				IAmb	IAmb	00 59 19.3	
	comp=Z,14nm,0.8s						
MA2	**Magadan**	**86.03**	**346**		**P**	**00 59 18.8**	**+0.5**
W13A	**Hualapai Mount**	**86.05**	**49**	P	**P**	**00 59 20.2**	**+1.0**
PBKT	**Sadao Pong**	**86.20**	**290**	P	**P**	**00 59 20.6**	**+0.5**
PBKT				IAmb	IAmb	00 59 22.1	
	comp=Z,9.1nm,1.1s						
HOM	**Homer**	**86.24**	**14**	P	**P**	**00 59 21.0**	**+1.8**
BJT	**Baijiatuao**	**86.27**	**317**	P	**P**	**00 59 20.4**	**+0.5**
BJT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BJT	**Baijiatuao**	**86.27**	**317**	P	**P**	**00 59 20.4**	**+0.5**
BJT				IAmb	IAmb	00 59 21.1	
	comp=Z,5.0nm,0.7s						
PINE	**Pine Mountain**	**86.51**	**39**	P	**P**	**00 59 22.4**	**+1.2**
PINE				IAmb	IAmb	00 59 23.9	
	comp=Z,7.8nm,0.7s						
BRLK	**Bradley Lake**	**86.51**	**15**	P	**P**	**00 59 21.3**	**+0.7**
BRLK				IAmb	IAmb	00 59 22.6	
	comp=Z,27nm,1.2s						
R11A	**Troy Canyon, C**	**86.66**	**46**	P	**P**	**00 59 22.7**	**+0.7**
TUC	**Tucson**	**86.82**	**53**	P	**P**	**00 59 25.7**	**+2.9**
TUC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TUC	**Tucson**	**86.82**	**53**	P	**P**	**00 59 25.7**	**+2.9**
WVOR	**Wild Horse Val**	**87.06**	**41**	P	**P**	**00 59 25.3**	**+1.6**
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WVOR	**Wild Horse Val**	**87.06**	**41**	P	**P**	**00 59 25.3**	**+1.6**
WVOR				IAmb	IAmb	00 59 26.0	
	comp=Z,5.9nm,0.7s						
319A	**Douglas**	**87.47**	**54**	IAmb	IAmb	00 59 29.6	
	comp=Z,13nm,0.8s						
LCMT	**Little Creek M**	**87.51**	**48**	P	**P**	**00 59 27.6**	**+1.6**
CCUT	**Cedar City**	**87.71**	**47**	P	**P**	**00 59 28.0**	**+1.0**
LON	**Longmire**	**87.83**	**36**	P	**P**	**00 59 28.8**	**+1.7**
LON				pmax	pmax		
	comp=Z,5.0nm,1.1s						
LON	**Longmire**	**87.83**	**36**	P	**P**	**00 59 28.8**	**+1.7**
LON				IAmb	IAmb	00 59 37.4	
	comp=Z,5.2nm,1.1s						
U15A	**North Rim**	**87.85**	**49**	IAmb	IAmb	00 59 30.9	
	comp=Z,9.9nm,0.8s						
**PS

LENM Lemitar 90.51 53 P **P** **00 59 41.5 +1.4**
MNTX Cornudas Mount 90.55 56 IAmb IAmb 00 59 43.0
comp=Z,4.2nm,0.8s
TX31 Lajitas Ar. Si 90.80 58 IAmb IAmb 00 59 44.7
comp=Z,6.3nm,1.1s
TX32 Lajitas Array 90.80 58 IAmb IAmb 00 59 44.6
comp=Z,6.4nm,1.1s
TXAR Lajitas Array 90.80 58 P **P** **00 59 42.6 +1.2**
comp=Z,3.5nm,0.9s,baz=211,slow=6.8,SNR=33
TXAR PKKPbc **PKKPbc** **01 17 03.8 -0.2**
comp=Z,0.2nm,0.5s,baz=132,slow=3.6,SNR=4.8
ANMO Albuquerque 91.25 52⇓*e*P **P** **00 59 44.9 +1.4**
ANMO pmax pmax
comp=Z,6.0nm,1.7s
HDA Harding Lake 91.48 14 P **P** **00 59 43.8 +0.2**
HDA IAmb IAmb 00 59 43.9
comp=Z,1.8nm,0.6s
CCB Clear Creek Bu 91.50 14 P **P** **00 59 43.4 -0.2**
CCB IAmb IAmb 00 59 44.8
comp=Z,4.4nm,1.2s
DOT Dot Lake 91.51 15 P **P** **00 59 44.6 +0.8**
DOT IAmb IAmb 00 59 46.8
comp=Z,2.4nm,0.7s
COLA College 91.69 13⇑*e*P **P** **00 59 44.4 -0.1**
COLA pmax pmax
comp=Z,10.0nm,1.7s
WHY Whitehorse 91.74 21 P **P** **00 59 46.5 +1.5**
BILL Bilibino 91.78 355*c i*P **P** **00 59 45.7 +0.9**
BILL *i* *PP **pP** **01 01 42.0 -0.3**
BILL pmax pmax
comp=Z,8.0nm,0.9s
IL31 91.81 14 P **P** **00 59 46.0 +0.9**
ILAR Eielson Array 91.81 14 P **P** **00 59 44.6 -0.5**
comp=Z,0.8nm,0.5s,baz=232,slow=5.1,SNR=22
ILAR pP **pP** **01 01 43.5 +0.9**
comp=Z,0.5nm,0.9s,baz=207,slow=2.9,SNR=2.7
MSO Missoula 92.29 39 P **P** **00 59 49.1 +1.2**
O20A White River Ci 92.46 47 P **P** **00 59 50.3 +1.3**
O20A IAmb IAmb 00 59 50.6
comp=Z,1.7nm,0.7s
LZH Lanzhou 92.60 308*e*P **P** **00 59 50.3 +0.7**
LZH pP pwP 01 01 50.3 -2.2
LZH PP **PP** **01 03 45.2 +4.2**
LZH pmax pmax
comp=Z,13nm,1.3s
LZH pmax pmax
comp=Z,58nm,4.3s
PRP Porcupine Dome 92.75 14 P **P** **00 59 49.3 -0.3**
PD31 Pinedale Array 92.88 44 P **P** **00 59 51.3 +0.5**
PDAR Pinedale Array 92.88 44 P **P** **00 59 51.3 +0.5**
comp=Z,0.8nm,0.6s,baz=220,slow=3.4,SNR=9.8
PDAR pP **pP** **01 01 49.2 +0.2**
comp=Z,0.3nm,0.9s,baz=272,slow=6.2,SNR=1.5
YMR Madison River 92.95 42 P **P** **00 59 53.0 +1.9**
DAWY Dawson 93.05 17 IAmb IAmb 00 59 52.3
comp=Z,5.4nm,0.9s
ULN Ulaanbaatar 95.99 320⇓*e*P **P** **01 00 04.6 -0.1**
ULN pmax pmax
comp=Z,6.0nm,1.5s
SONM Songino Array 96.37 320 P **P** **01 00 06.5 +0.1**
comp=Z,0.6nm,0.7s,baz=129,slow=3.4,SNR=4.8
GTA Gaotai 96.92 310*e*P **P** **01 00 09.7 +0.6**
GTA pmax pmax
comp=Z,2.0nm,1.3s
INK Inuvik 97.84 16 P Pdif 01 00 12.3 0.0
comp=Z,1.5nm,0.9s,baz=191,slow=3.0,SNR=4.8
YKA Yellowknife Ar 100.30 26 P **Pdif** **01 00 23.5 +0.2**
comp=Z,0.1nm,0.4s,baz=237,slow=4.2,SNR=3.8
YKA PKiKP **PKiKP** **01 04 46.8 0.0**
comp=Z,0.2nm,0.5s,baz=252,slow=1.1,SNR=5.3
YKA PKKPbc **PKKPbc** **01 16 36.2 -3.5**
comp=Z,0.2nm,0.5s,baz=40,slow=2.5,SNR=7.6
ZALV Zalesovo Beam 111.22 321 PKiKP **PKiKP** **01 05 06.1 -1.3**
comp=Z,0.5nm,0.4s,baz=78,slow=2.6,SNR=4.6
MKAR Makanchi Array 111.39 313 Pdiff **Pdif** **01 01 14.3 +1.2**
comp=Z,0.2nm,0.5s,baz=97,slow=6.3,SNR=3.3
MKAR PKiKP **PKiKP** **01 05 07.1 -0.9**
comp=Z,0.6nm,0.5s,baz=128,slow=0.7,SNR=15
MKAR PKKPab **PKKPab** **01 16 16.8 +1.7**
comp=Z,1.1nm,0.7s,baz=274,slow=3.9,SNR=9.0
KURK Kurchatov 114.45 317*c i*PKiKP PKPdf 01 05 12.8 -0.9
KURK pmax pmax
comp=Z,3.0nm,1.0s
KSH Kashi 114.49 304*e*PKP PKPdf 01 05 12.5 -1.8
AAK Ala-Archa 116.12 307⇑*i*PKiKP **PKPdf** **01 05 16.9 -0.5**
KBL Kabul 119.06 298 PKiKP **PKPdf** **01 05 23.5 +0.1**
KBL Kabul 119.06 298 **PKPdf** **01 05 23.5 +0.1**
BDFB Brasilia 119.59 126 PKP **PKPdf** **01 05 24.2 -0.7**
comp=Z,2.2nm,0.7s,baz=174,slow=15,SNR=3.8
BRVK Borovoye 119.76 319 PKiKP **PKPdf** **01 05 23.5 -0.4**
BRVK Borovoye 119.76 319 **PKPdf** **01 05 23.5 -0.4**
BOSA Boshof 122.44 207 PKP **PKPdf** **01 05 30.2 +0.2**
comp=Z,1.2nm,0.5s,baz=176,slow=2.4,SNR=6.3
SCHQ Schefferville 122.80 39 PKP **PKPdf** **01 05 28.3 -0.9**
comp=Z,6.0nm,1.1s,baz=342,slow=6.4,SNR=4.1
SPA0 Spitsbergen Ar 124.68 356*e*PKPdf **PKPdf** **01 05 32.6 0.0**
ARU Arti 126.17 324*i*PKiKP **PKPdf** **01 05 36.1 +0.1**
ARU 01 07 35.3
ARU 01 11 56.7
ARU Arti 126.17 324 **PKPdf** **01 05 35.5 -0.5**
SFJD Kangerlussuaq 126.67 22 PKP **PKPdf** **01 05 35.9 -0.7**
comp=Z,3.2nm,0.5s,baz=133,slow=4.0,SNR=4.9
GEYT Alibeck 128.19 301 PKP **PKPdf** **01 05 41.0 +0.4**
comp=Z,4.0nm,0.7s,baz=151,slow=3.4,SNR=9.2
KIRV Kirov 130.24 328 PKP **PKiKP** **01 05 44.4 -0.2**
comp=Z,11nm,0.5s,baz=126,slow=1.0,SNR=5.1
ARCES ARCESS Array B 131.37 348 PKhKP PKPpre 01 05 35.1
comp=Z,3.3nm,0.9s,baz=78,slow=1.4,SNR=7.6
ARCES PKP **PKPdf** **01 05 45.4 -0.2**
comp=Z,6.2nm,0.8s,baz=56,slow=1.8,SNR=27
ARE0 ARCESS Array S 131.37 348*e*PKPdf **PKPdf** **01 05 45.7 +0.1**
KTK1 Kautokeino 132.24 349*e*PKPdf **PKPdf** **01 05 47.7 +0.5**
TRO Tromso 132.39 351*e*PKPdf **PKPdf** **01 05 47.9 +0.4**
KMBO Kilima Mbogo 135.69 242 PKP **PKiKP** **01 05 57.0 -0.3**
comp=Z,1.8nm,0.8s,baz=21,slow=5.6,SNR=5.1
KMBO SKPbc **SKPbc** **01 08 37.0 +0.2**
comp=Z,1.3nm,0.9s,baz=183,slow=13,SNR=3.8
VRH Novokhopyorsk 137.25 321 PKiKP **PKPdf** **01 05 56.6 -0.4**
VRH pmax pmax
comp=Z,10.0nm,1.4s
FINES FINESS Array B 137.86 341*c i*PKiKP **PKiKP** **01 05 59.2 -0.8**
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES FINESS Array B 137.86 341 PKhKP PKPpre 01 05 46.3
comp=Z,1.0nm,0.5s,baz=54,slow=2.4,SNR=7.2
FINES PKP **PKPdf** **01 05 58.4 +0.6**
comp=Z,2.3nm,0.4s,baz=64,slow=1.5,SNR=13
FINES SKPbc **SKPbc** **01 08 40.6 -0.6**
comp=Z,7.6nm,1.2s,baz=48,slow=2.1,SNR=3.7
LPSR Galich'ya Gora 138.19 324*e*PKiKP **PKPdf** **01 05 58.7 0.0**
LPSR pmax pmax
comp=Z,6.0nm,0.9s
GNI Garni 138.42 305⇑*i*PKiKP **PKPdf** **01 05 58.5 -1.3**
GNI Garni 138.42 305 PKP **PKPdf** **01 05 59.3 -0.5**
comp=Z,2.3nm,0.7s,baz=117,slow=18,SNR=3.1
VSR Storozhevoye 138.70 322⇓*i*PKiKP **PKiKP** **01 06 01.5 -0.5**
NEY Neytrino 139.26 310⇓*i*PKiKP **PKiKP** **01 06 03.4 -0.3**
DOMB Dombas 140.91 353 *e*PKPdf **PKPdf** **01 06 02.8 -0.6**
NB2 NORSAR Subarra 141.59 351 PKP **PKPdf** **01 05 59.8 -4.9**
comp=Z,278nm,5.0s,baz=14,slow=3.1
NB2 NORSAR Subarra 141.59 351 PKP **PKPdf** **01 05 59.8 -4.9**
baz=14,slow=3.1
NOA NORSAR Array B 141.59 351 PKhKP **PKPdf** **01 05 59.8 -4.9**
comp=Z,1.2nm,0.6s,baz=70,slow=0.8,SNR=21
NC602 NORSAR Array S 141.83 350 *e*PKPdf **PKPdf** **01 06 00.6 -4.4**
HFS Hagfors 142.03 348 PKhKP **PKPdf** **01 06 01.3 -4.2**
comp=Z,14nm,0.5s,baz=64,slow=3.4,SNR=128
SUE Sulen 142.28 356 *e*PKPdf **PKPdf** **01 06 02.9 -3.0**
SKAR Skarslia 142.32 353 *e*PKPdf **PKPdf** **01 06 04.8 -1.2**
OSL Oslo 142.72 350 *e*PKPdf **PKPdf** **01 06 03.8 -2.8**
ASK Askoy 142.82 355 *e*PKPdf **PKPdf** **01 06 04.5 -2.3**
BER Bergen 142.91 355 *e*PKPdf **PKPdf** **01 06 04.9 -2.0**
KONO Kongsberg 143.16 351 PKHKP PKPab 01 06 05.6 +0.4
KONO Kongsberg 143.16 351 *e*PKPbc PKPab 01 06 05.5 +0.2
KONO Kongsberg 143.16 351 PKPab 01 06 05.6 +0.4
ODD1 Odda 143.25 354 *e*PKPab PKPab 01 06 05.7 0.0
BLS5 Blasjo 143.75 354 *e*PKPab PKPab 01 06 07.8 +0.2
KMY Karmoy 144.07 355 *e*PKPdf **PKPab** **01 06 08.8 +0.2**
AKASG Malin Array Be 144.28 327 PKP PKPbc 01 06 08.6 -0.8
comp=Z,17nm,0.6s,baz=46,slow=4.3,SNR=75
SUW Suwalki 144.63 336 *e*PKHKP **PKPdf** **01 06 10.3 +0.2**
SUW Suwalki 144.63 336 *e*PKP **PKPdf** **01 06 10.3 +0.2**
SNART Snartemo 144.74 353 *e*PKPab **PKPab** **01 06 11.1 -0.2**
KLNR Kaliningrad 145.22 339⇓*e*PKIKP **PKPbc** **01 06 12.5 +0.4**
ASF Jabal al Asfar 145.76 293 PKPbc **PKPbc** **01 06 15.0 +0.5**
comp=Z,3.9nm,0.6s,baz=66,slow=4.4,SNR=11
KAC Achnashellach 145.88 4*e*P **PKPbc** **01 06 14.3 +0.3**
MCD Coleburn Disti 145.91 2*e*P **PKPbc** **01 06 13.8 -0.3**
MDO Dochfour 146.00 4*e*P **PKPbc** **01 06 14.2 -0.1**
KPL Plockton 146.01 5*e*P **PKPbc** **01 06 13.5 -0.8**
SORM Soroca 146.29 324⇓*e*PKIKP **PKPbc** **01 06 15.4 0.0**
SORM Soroca 146.29 324⇓*i*P **PKPbc** **01 06 15.4 0.0**
BSD Bornholm Skovb 146.35 344 *i* PKIKP **PKPbc** **01 06 15.1 -0.2**
BSD pmax pmax
comp=Z,4.0nm,0.4s
BSD Bornholm Skovb 146.35 344 *i* P **PKPbc** **01 06 15.1 -0.2**
comp=Z,4.0nm,0.4s
DRUM Mains of Drumt 146.61 2*e*P **PKPbc** **01 06 15.0 -1.0**
MILM Milestii Mici 146.74 322⇑*i*P **PKPbc** **01 06 16.6 -0.1**
BRTR Keskin Array B 146.80 307*c i*PKIKP **PKPbc** **01 06 16.7 -0.6**
BRTR pmax pmax
comp=Z,6.0nm,0.7s
BRTR Keskin Array B 146.80 307 PKPbc **PKPbc** **01 06 16.9 -0.4**
comp=Z,5.9nm,0.7s,baz=142,slow=5.1,SNR=38
MMAI Mount Meron Ar 146.92 295 PKPbc **PKPbc** **01 06 18.5 +0.8**
comp=Z,11nm,0.4s,baz=76,slow=7.0,SNR=99
EDU Dundee 146.95 2*e*P **PKPbc** **01 06 17.2 +0.2**
INVG Invergeldie, C 147.03 3*e*P **PKPbc** **01 06 16.6 -0.5**
LAWE Loch Awe, Argy 147.11 5*e*P **PKPbc** **01 06 16.5 -0.8**
BEL Belsk 147.24 335*e*PKiKP **PKPbc** **01 06 18.3 +0.5**
BEL Belsk 147.24 335*e*PKP **PKPbc** **01 06 18.3 +0.5**
EAB Aberfoyle 147.25 4*e*P **PKPbc** **01 06 17.5 -0.2**
GKP Gorka Klasztor 147.31 340*e*PKiKP **PKPbc** **01 06 18.2 +0.2**
GKP Gorka Klasztor 147.31 340*e*PKP **PKPbc** **01 06 18.2 +0.2**
LEOM Leova 147.31 322⇑*i*PKiKP **PKPbc** **01 06 18.6 +0.4**
LEOM Leova 147.31 322⇑*i*P **PKPbc** **01 06 18.6 +0.4**
LVV L'vov 147.36 330*e*PKHKP **PKPbc** **01 06 16.9 -1.3**
ANTO Ankara 147.37 308 PKiKP **PKPbc** **01 06 19.2 +0.5**
ANTO Ankara 147.37 308 **PKPbc** **01 06 19.2 +0.5**
EIL Elat 147.59 289 PKPbc **PKPbc** **01 06 19.9 +0.4**
comp=Z,9.3nm,0.7s,baz=276,slow=2.8,SNR=9.8
ESY Stoneypath 147.60 2*e*P **PKPbc** **01 06 18.8 +0.1**
PGBU Glenifferbraes 147.62 4*e*P **PKPdf** **01 06 16.9 +1.8**
EAU Auchinoon 147.64 3*e*P **PKPbc** **01 06 19.1 +0.4**
TLCR 147.69 319⇑*i*PKiKP **PKPbc** **01 06 19.7 +0.5**
TLCR 147.69 319⇑*i*P **PKPbc** **01 06 19.7 +0.5**
EBL Broad Law 147.73 2*e*P **PKPbc** **01 06 19.0 0.0**
GHRR 148.03 322⇑*i*P **PKiKP** **01 06 21.4 0.0**
CFR Carcaliu 148.10 320⇓*e*PKHKP **PKPbc** **01 06 20.5 +0.3**
CFR Carcaliu 148.10 320⇓*i*P **PKPbc** **01 06 20.5 +0.3**
KWP Kalwaria Pacla 148.10 331*e*PKHKP **PKPbc** **01 06 20.6 +0.5**
KWP Kalwaria Pacla 148.10 331*e*PKP **PKPbc** **01 06 20.6 +0.5**
TOPG Topolog 148.11 319⇑*i*P **PKPbc** **01 06 20.9 +0.6**
EKA Eskdalemuir Ar 148.16 3 PKPbc **PKPbc** **01 06 19.9 -0.2**
comp=Z,4.5nm,0.5s,baz=344,slow=2.5,SNR=38
TESR Tescani 148.19 323⇑*i*P **PKPbc** **01 06 20.8 +0.4**
BIZ Bicaz 148.22 324⇓*i*P **PKPbc** **01 06 21.2 +0.6**
BURAR Bucovina Array 148.27 326⇑*e*PHKP **PKiKP** **01 06 22.6 +0.6**
BURAR Bucovina Array 148.27 326⇑*i*P **PKiKP** **01 06 22.6 +0.6**
MFTR Murfatlar 148.45 318⇑*i*P **PKPbc** **01 06 21.8 +0.7**
HARR Harsova 148.48 319⇑*e*PKHKP **PKPbc** **01 06 21.8 +0.6**
HARR Harsova 148.48 319⇑*i*P **PKPbc** **01 06 21.8 +0.6**
BSEG Bad Segeberg 148.49 347 *e*PKPbc **PKiKP** **01 06 21.6 -0.4**
baz=24,slow=2.3
BSEG *e*PKPab **PKPab** **01 06 27.3 +0.9**
baz=21,slow=4.2
VRI Vrincioaia 148.52 322⇑*e*PKHKP **PKPbc** **01 06 20.6 -0.7**
VRI Vrincioaia 148.52 322⇑*i*P **PKPbc** **01 06 20.6 -0.7**
MANR Mangalia 148.54 317⇑*i*P **PKPbc** **01 06 21.3 -0.1**
GAL1 Galloway 148.54 4*e*P **PKPbc** **01 06 20.4 -0.6**
HLG Helgoland 148.69 350 *e*PKPab **PKPab** **01 06 28.7 +1.5**
baz=21,slow=4.2
EDMD Edmundbyers 148.70 1*e*P **PKPbc** **01 06 20.7 -0.7**
KOLS Kolonicke sedl 148.80 330*e*PKHKP **PKPbc** **01 06 22.8 +0.9**
KOLS Kolonicke sedl 148.80 330*e*PKP **PKPbc** **01 06 22.8 +0.9**
OJC Ojcow 148.89 334*e*PKHKP **PKPbc** **01 06 22.3 +0.2**
OJC Ojcow 148.89 334*e*PKP **PKPbc** **01 06 22.3 +0.2**
STHS Stebnicka Huta 148.90 332*e*PKHKP **PKPbc** **01 06 22.1 -0.1**
STHS Stebnicka Huta 148.90 332*e*PKP **PKPbc** **01 06 22.1 -0.1**
UZH Uzhgorod 149.01 330⇑*i*PKHKP **PKPbc** **01 06 21.4 -1.0**
UZH *i* 01 06 22.9
UZH *e* 01 06 28.9
UZH *e* 01 08 25.5
RUE Ruedersdorf 149.01 343 *e*PKPbc **PKiKP** **01 06 22.9 -0.2**
baz=24,slow=2.3
ARCR ARCALIA 149.06 326⇓*i*P **PKiKP** **01 06 23.2 -0.3**
MLR Muntele Rosu 149.19 322⇓*e*PHKHKP **PKPbc** **01 06 23.3 +0.2**
MLR Muntele Rosu 149.19 322⇓*i*P **PKPbc** **01 06 23.3 +0.2**
DOPR Dopca 149.21 323⇑*i*P **PKiKP** **01 06 23.8 -0.1**
TRPA Tarpa 149.25 329⇓*i*P **PKPbc** **01 06 23.2 +0.3**
NIE Niedzica 149.30 333*e*PHKHKP **PKPbc** **01 06 24.1 +0.9**
NIE Niedzica 149.30 333*e*PKP **PKPbc** **01 06 24.1 +0.9**
SECR 149.39 321⇑*i*P **PKiKP** **01 06 24.1 -0.1**
HPK Haverah Park 149.59 1*e*P **PKPbc** **01 06 23.7 +0.1**
KSP Ksiaz 149.68 338*e*PHKHKP **PKPbc** **01 06 24.5 +0.6**
KSP Ksiaz 149.68 338*e*PKP **PKPbc** **01 06 24.5 +0.6**
CJR Cluj-Napoca 149.69 326⇑*e*PHKHKP **PKPbc** **01 06 24.9 +0.7**
CJR Cluj-Napoca 149.69 326⇑*i*P **PKPbc** **01 06 24.9 +0.7**
RETH Rethem/Aller, 149.81 348 *e*PKPbc **PKiKP** **01 06 24.7 -0.1**
baz=24,slow=2.3
OKC Ostrava-Krasne 149.84 335*e*PHKHKP **PKPbc** **01 06 24.2 -0.1**
OKC Ostrava-Krasne 149.84 335⇑*e*PKP **PKPbc** **01 06 24.2 -0.1**
MTUR Matau 149.84 322⇓*e*PHKHKP **PKPbc** **01 06 26.2 +1.6**
MTUR Matau 149.84 322⇓*i*P **PKPbc** **01 06 26.2 +1.6**
LANS Liptovska Anna 149.86 333*e*PHKHKP **PKiKP** **01 06 26.0 +0.9**
LANS *e* 01 06 33.5
LANS Liptovska Anna 149.86 333*e*PKP **PKiKP** **01 06 26.0 +0.9**
LANS *e* 01 06 33.5
NRDL Niedersach Rie 149.89 347 *e*PKPbc **PKiKP** **01 06 25.1 +0.1**
baz=24,slow=2.3
OSTC Ostas 149.95 338⇑*e*PKP **PKiKP** **01 06 25.2 0.0**
RAZG Razgrad 149.95 318⇑*i*P **PKPbc** **01 06 25.1 +0.3**
CHVC Chvalec 149.97 338⇑*e*PKP **PKiKP** **01 06 25.3 0.0**
ARR Arges 150.00 323⇑*i*P **PKiKP** **01 06 26.2 +0.7**
DPC Dobruska-Polom 150.08 338 *e*PHKHKP **PKPbc** **01 06 25.4 +0.4**
DPC *e* 01 06 34.4
DPC Dobruska-Polom 150.08 338⇑*e*PKP **PKPbc** **01 06 25.4 +0.4**
DPC *e*PKPAB **PKPab** **01 06 34.4 +1.2**
DRGR 150.09 327⇑*e*PHKHKP **PKPbc** **01 06 25.4 +0.3**
DRGR 150.09 327⇑*i*P **PKPbc** **01 06 25.4 +0.3**
ASSE Asse, Remlinge 150.11 346 *e*PKPbc **PKiKP** **01 06 25.5 +0.1**
baz=24,slow=2.3
MORC Moravsky Berou 150.12 336⇑*e*PHKHKP **PKPbc** **01 06 25.9 +0.8**
MORC Moravsky Berou 150.12 336⇑*i*P **PKiKP** **01 06 25.9 +0.2**
MORC Moravsky Berou 150.12 336 *e*PKP **PKPbc** **01 06 25.2 +0.1**
WLF1 Llynfaes 150.13 4*e*P **PKPbc** **01 06 24.8 -0.1**
LBWR Ladybower, Pea 150.14 1*e*P **PKPbc** **01 06 25.0 +0.1**
KRLC Kraliky 150.15 337 *e*PHKHKP **PKPbc** **01 06 25.8 +0.7**
KRLC *e* 01 06 34.2
KRLC Kraliky 150.15 337⇑*e*PKP **PKPbc** **01 06 25.8 +0.7**
KRLC *e*PKPAB **PKPab** **01 06 34.2 +0.7**
CLL Collm 150.28 342⇓*i*PKiKP **PKPbc** **01 06 25.4 +0.1**
CLL *i* 01 06 34.3
CLL pmax pmax
comp=Z,43nm,0.9s
CLL pmax pmax
comp=Z,13nm,1.0s
CLL Collm 150.28 342⇓*i*PKPbc **PKPbc** **01 06 25.4 +0.1**
comp=Z,43nm,0.9s
CLL ⇑*i*PKPab **PKPab** **01 06 34.3 +0.4**
comp=Z,13nm,1.0s
CLL *e*pPKPab **pPKPab** **01 08 34.0 +0.8**
CLL Collm 150.28 342 *e*PKPbc **PKiKP** **01 06 25.9 0.0**
baz=24,slow=2.3
HUMR Humele 150.31 321⇑*i*P **PKPbc** **01 06 25.6 0.0**
BRG Berggiesshubel 150.40 341 *i* PKP **PKiKP** **01 06 26.1 0.0**
comp=Z,28nm,0.5s
BRG *e* 01 06 35.0
comp=Z,14nm,0.9s
BRG *e* 01 08 40.1
comp=Z,20nm,1.6s
BRG Berggiesshubel 150.40 341 *i* PKIKP **PKiKP** **01 06 26.1 0.0**
BRG *e* 01 06 35.0
BRG pmax pmax
comp=Z,28nm,0.5s
BRG pmax pmax
comp=Z,14nm,0.9s
BRG pmax pmax
comp=Z,20nm,1.6s
BRG Berggiesshubel 150.40 341 *e*PKPbc **PKiKP** **01 06 26.4 +0.3**
baz=24,slow=2.3
CLZ Clausthal 150.45 346 *e*PKPbc **PKiKP** **01 06 26.6 +0.4**
baz=24,slow=2.3
PVCC Panska Ves 150.51 340 *e*PKPAB **PKPab** **01 06 35.6 +0.7**
IBBN Ibbenburen 150.52 349 *e*PKPbc **PKiKP** **01 06 26.4 +0.1**
baz=24,slow=2.3
IBBN *e*PKPab **PKPab** **01 06 35.6 +0.7**
baz=21,slow=4.2
FBE Freiberg 150.53 342 *e*PKPbc **PKiKP** **01 06 26.9 +0.5**
baz=24,slow=2.3
DEV Deva 150.60 325⇑PKIKP **PKiKP** **01 06 26.6 -0.1**
DEV Deva 150.60 325⇑P **PKiKP** **01 06 26.6 -0.1**
FOEL Foel Wylfa 150.60 3 *e*P **PKPbc** **01 06 25.8 -0.3**
VYHS Vyhne 150.63 333 *e*PKIKP **PKPbc** **01 06 26.5 +0.2**
VYHS *e* 01 06 36.4
VYHS Vyhne 150.63 333 *e*PKP **PKPbc** **01 06 26.5 +0.2**
VYHS *e* 01 06 36.4
ELND Elena 150.69 318⇑P **PKiKP** **01 06 27.1 +0.2**
NEUB Neuenburg 150.70 344 *e*PKPbc **PKiKP** **01 06 27.0 +0.2**
baz=24,slow=2.3
JAVC Velka Javorina 150.81 335 *e*PKP **PKiKP** **01 06 27.6 +0.5**
GTTG Gvttingen 150.81 346 *e*PKPbc **PKiKP** **01 06 27.2 +0.3**
baz=24,slow=2.3
VRAC Vranov 150.86 336⇑PKIKP **PKiKP** **01 06 27.4 +0.2**
VRAC Vranov 150.86 336⇑P **PKiKP** **01 06 27.4 +0.2**
VRAC Vranov 150.86 336 *e*PKP **PKPbc** **01 06 26.8 0.0**
VRAC *e* 01 06 37.2
PRA Prague 150.95 340 *e*PKIKP **PKiKP** **01 06 27.4 +0.1**
PRA Prague 150.95 340⇑*e*PKP **PKiKP** **01 06 27.4 +0.1**
SIRR Siria 150.98 327⇑P **PKiKP** **01 06 27.7 +0.2**
HLM1 Long Mynd 150.99 3 *e*P **PKPbc** **01 06 26.3 -0.6**
PRU Pruhonice 150.99 339 *e*PKIKP **PKiKP** **01 06 27.3 -0.1**
PRU Pruhonice 150.99 339⇑*e*PKP **PKiKP** **01 06 27.3 -0.1**
GZR Gura Zlata 150.99 325⇑PKIKP **PKPbc** **01 06 27.2 -0.1**
GZR Gura Zlata 150.99 325⇑P **PKPbc** **01 06 27.2 -0.1**
KRUC Moravsky 151.13 336 *e*PKP **PKPbc** **01 06 27.2 -0.2**
KRUC *e* 01 06 38.2
SMOL Smolenice 151.19 335 *e*PKIKP **PKiKP** **01 06 28.3 +0.5**
SMOL *e* 01 06 39.1
SMOL Smolenice 151.19 335 *e*PKP **PKiKP** **01 06 28.3 +0.5**
SMOL *e* 01 06 39.1
PLVB Pleven 151.19 320⇑P **PKiKP** **01 06 28.1 +0.1**
TANN Tannenbergstha 151.24 342 *e*PKPbc **PKiKP** **01 06 28.2 +0.2**
baz=24,slow=2.3
MOX Moxa 151.25 344 *e*PKPbc **PKiKP** **01 06 28.0 +0.1**
baz=24,slow=2.3
PLN Plauen 151.26 343 *e*PKPbc **PKiKP** **01 06 28.2 +0.3**
baz=24,slow=2.3
PLN *e*PKPab **PKPab** **01 06 39.1 +1.0**
baz=21,slow=4.2
TREC Trest 151.26 338 *e*PKIKP **PKPbc** **01 06 27.9 +0.2**
TREC *e* 01 06 38.9
TREC Trest 151.26 338⇑*e*PKP **PKPbc** **01 06 27.9 +0.2**
TREC *e*PKPAB **PKPab** **01 06 38.9 +0.7**
GUNZ Gunzen 151.32 342 *e*PKPbc **PKiKP** **01 06 28.5 +0.4**
baz=24,slow=2.3
GUNZ *e*PKPab **PKPab** **01 06 39.5 +1.1**
baz=21,slow=4.2
MODS Modra-Piesok 151.36 335 *e*PKIKP **PKPbc** **01 06 27.9 0.0**
MODS *e* 01 06 38.5
MODS Modra-Piesok 151.36 335 *e*PKP **PKPbc** **01 06 27.9 0.0**
MODS *e* 01 06 38.5
WERN Wernitzgruen 151.37 342 *e*PKPbc **PKiKP** **01 06 28.7 +0.5**
baz=24,slow=2.3
WERN *e*PKPab **PKPab** **01 06 39.9 +1.3**
baz=21,slow=4.2
SRO Srobarova 151.38 333 *e*PKIKP **PKiKP** **01 06 28.6 +0.4**
SRO Srobarova 151.38 333 *e*PKP **PKiKP** **01 06 28.6 +0.4**
NKC Novy Kostel 151.40 342 *e*PKIKP **PKiKP** **01 06 28.5 +0.2**
NKC Novy Kostel 151.40 342⇑*e*PKP **PKiKP** **01 06 28.5 +0.2**
PBCC Pribram 151.43 340⇑*e*PKP **PKiKP** **01 06 28.3 0.0**
BZS Buzias 151.45 326⇑PKIKP **PKPbc** **01 06 28.3 +0.1**
BZS Buzias 151.45 326⇑P **PKPbc** **01 06 28.3 +0.1**
MCH1 Michaelchurch 151.50 3 *e*P **PKPbc** **01 06 27.8 -0.3**
ZST Bratislava 151.57 334 *e*PKIKP **PKPbc** **01 06 28.4 0.0**
ZST *e* 01 06 39.7
ZST Bratislava 151.57 334 *e*PKP **PKPbc** **01 06 28.4 0.0**
ZST *e* 01 06 39.7
MANZ Manzenberg 151.72 342 *e*PKPbc **PKiKP** **01 06 29.2 +0.3**
baz=24,slow=2.3
ROTZ Rotzenmuhle 151.89 342 *e*PKPab **PKPab** **01 06 42.2 +1.4**
baz=21,slow=4.2
MDVR Moldovita 151.96 325⇑P **PKPbc** **01 06 29.5 +0.1**
SWN1 Swindon 152.03 1 *e*P **PKPbc** **01 06 29.3 0.0**
KHC Kasperske Hory 152.04 340 *e*PKIKP **PKiKP** **01 06 29.8 +0.2**
KHC *e* 01 06 42.3
KHC Kasperske Hory 152.04 340⇑*e*PKP **PKiKP** **01 06 29.8 +0.2**
KHC *e*PKPAB **PKPab** **01 06 42.3 +0.8**
KHC *e*pPKP **pPKPab** **01 08 43.2 +2.6**
WET Wettzell 152.25 341 *e*PKPab **PKPab** **01 06 43.8 +1.4**
baz=21,slow=4.2
GEC2 GERESS Array S 152.25 339 *e*PKPbc **PKiKP** **01 06 30.2 +0.1**
baz=24,slow=2.3
GERES GERESS Array B 152.25 339 PKPbc **PKPbc** **01 06 29.9 -0.1**
comp=Z,3.7nm,0.8s,baz=32,slow=2.0,SNR=24
GERES PKPab **PKPab** **01 06 42.9 +0.4**
comp=Z,2.3nm,0.6s,baz=33,slow=5.0,SNR=12
CONA Conrad Observa 152.27 336 *i* PKPbc **PKiKP** **01 06 30.4 +0.1**
comp=Z,8.4nm,1.1s
CONA *i* PKPab **PKPab** **01 06 43.6 +1.0**
comp=Z,8.5nm,0.8s
TNS Taunus Mts 152.38 347 *e*PKPbc **PKiKP** **01 06 30.6 +0.3**
baz=24,slow=2.3
MOA Moln 152.92 337 *i* PKPbc **PKPbc** **01 06 31.2 -0.2**
comp=Z,7.4nm,1.8s
MOA *i* PKPab **PKPab** **01 06 46.1 +0.8**
comp=Z,6.4nm,0.9s
ARSA Arzberg 152.96 335 *i* PKPbc **PKPbc** **01 06 31.5 0.0**
RJOB Jochberg 153.52 339 *e*PKPab **PKPab** **01 06 49.2 +1.3**
baz=21,slow=4.2
STU Stuttgart 153.59 345 *e*PKPab **PKPab** **01 06 48.9 +0.9**
baz=21,slow=4.2
FUR Furstenfeldbru 153.60 342 *e*PKPab **PKPab** **01 06 49.5 +1.3**
baz=21,slow=4.2
SOKA Soboth 153.62 335 *i* PKPbc **PKPbc** **01 06 32.4 -0.7**
comp=Z,3.7nm,1.1s
SOKA *i* PKPab **PKPab** **01 06 48.3 -0.1**
comp=Z,7.7nm,1.2s
KBA Koelnbreinsper 153.91 338 *i* PKPbc **PKPbc** **01 06 33.0 -0.7**
comp=Z,5.8nm,1.1s
KBA *i* PKPab **PKPab** **01 06 50.8 +1.1**
comp=Z,3.0nm,0.5s
MYKA Terra Mystica 154.18 337 *i* PKPbc **PKPbc** **01 06 33.5 -0.7**
comp=Z,4.7nm,0.9s
MYKA *i* PKPab **PKPab** **01 06 50.3 -0.4**
comp=Z,5.7nm,0.7s
WATA Walderalm 154.26 340 *i* PKPbc **PKiKP** **01 06 34.1 -0.3**
comp=Z,1.7nm,0.5s
WATA *i* PKPab **PKPab** **01 06 51.6 +0.4**
comp=Z,5.0nm,0.5s
LJU Ljubljana 154.34 335 *i* PKPdf **PKPdf** **01 06 25.7 0.0**
LJU *i* PKPbc **PKPbc** **01 06 34.7 +0.2**
LJU *i* PKPab **PKPab** **01 06 51.3 -0.1**
RETA Reutte 154.36 342 *i* PKPab **PKPab** **01 06 52.0 +0.5**
comp=Z,9.1nm,1.1s,SNR=5.3
MOTA Moosalm 154.39 341 *i* PKPbc **PKiKP** **01 06 34.0 -0.7**
comp=Z,8.6nm,1.3s
MOTA *i* PKPab **PKPab** **01 06 51.6 -0.2**
comp=Z,9.5nm,1.1s,SNR=4.2
SQTA Sankt Quirin 154.47 341 *i* PKPdf **PKPdf** **01 06 25.8 -0.1**
comp=Z,4.6nm,1.2s
SQTA *i* PKPab **PKPab** **01 06 52.4 +0.3**
ABTA Abfaltersbach 154.48 339 *

TORD	**Torodi Ar. Bea**	**169.44**	**193**	PKP	**PKPdf**	**01 06 40.8**	**-0.8**
	comp=Z,3.1nm,1.0s,baz=17,slow=0.6,SNR=11						
TORD				PKPab	**PKPab**	**01 07 58.2**	**+0.1**
	comp=Z,3.6nm,0.8s,baz=165,slow=4.9,SNR=14						
MDT	**Midelt**	**170.12**	**19**	PKP	**PKPdf**	**01 06 43.0**	**+1.4**
	comp=Z,3.4nm,0.8s,baz=161,slow=0.7,SNR=14						
MDT				PKPab	**PKPab**	**01 08 01.5**	**+0.5**
	comp=Z,5.2nm,0.9s,baz=62,slow=0.9,SNR=16						

MEX ***13*** *00:54:31.7±0.9, 17°.11N×94°.53W, h143km±9km, MD4.2*
NEIC ***13*** *00:54:32.1±1.3, 17°.29N±0°.10×94°.51W±0°.07, h127km±9km, Error ellipse: s-maj=14.0km s-min=9.9km az=184.0*

ISC 13 00:54:30.5±1.0, 17°.2N±0°.2×94°.53W±0°.07, h150km, n12, σ1s55/17, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.37**	**247**	*i* P	**Pn**	**00 54 50.4**	**-0.9**
CMIG				*e*S	**Sn**	**00 55 04.5**	**-2.6**
CMIG	**Matias Romero**	**0.37**	**247**		**Pn**	**00 54 50.4**	**-0.9**
CMIG					**Sn**	**00 55 04.5**	**-2.6**
VHO	**Vista Hermosa**	**2.12**	**266**	*e*P	**Pn**	**00 55 07.5**	**+0.3**
VHO				*i* S	**Sn**	**00 55 34.4**	**-1.0**
TLIG	**Tlapa**	**3.87**	**275**	*e*P	**Pn**	**00 55 29.7**	**+0.5**
TLIG				*e*S	**Sn**	**00 56 13.4**	**-1.4**
TLIG	**Tlapa**	**3.87**	**275**		**Pn**	**00 55 30.1**	**+0.9**
TLIG					**Sn**	**00 56 13.4**	**-1.4**
TLIG	**Tlapa**	**3.87**	**275**	Pn	**Pn**	**00 55 30.4**	**+1.2**
UNM	**Universidad Na**	**4.88**	**296**	Pn	**Pn**	**00 55 44.5**	**+1.8**
TEIG	**Tepich**	**6.62**	**62**	Pn	**Pn**	**00 56 04.2**	**-1.3**
MOIG	**Morelia**	**6.77**	**292**	Pn	**Pn**	**00 56 09.2**	**+1.4**
ESPN	**Las Esperanzas**	**11.09**	**116**		**Sn**	**00 59 09.5**	**+2.0**
HDC	**Heredia**	**12.41**	**124**	Pn	**Pn**	**00 57 22.9**	**+0.6**
CBCY	**The Bluff, Cay**	**14.23**	**78**	Pn	**P**	**00 57 48.5**	**+0.3**

IDC ***13*** *01:26:15.2±1.9, 62°.89N×149°.32W, h68km±18km, mb3.3/7, mb1 3.6/12, mb1mx3.4/47, mbtmp3.7/12, MS2.7/1, Ms1 2.8/1, ms1mx2.4/24, Error ellipse: s-maj=18.8km s-min=14.5km az=92.0*
AEIC ***13*** *01:26:16±1.1, 62°.81N±0°.04×149°.05W±0°.08, h72km±4km, ML3.7/90, mb3.9/3(NEIC), Error ellipse: s-maj=5.3km s-min=5.1km az=109.0*
NEIC ***13*** *01:26:16.2±1.3, 62°.82N±0°.03×149°.11W±0°.07, h75km±5km, Error ellipse: s-maj=5.5km s-min=2.9km az=224.0*

ISC 13 01:26:15.8±0.7, 62°.82N±0°.03×149°.06W±0°.03, h75km±6km, n140, σ0s96/155, mb3.6/8, Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WAT1	**Susitna Watana**	**0.24**	**88**		**Pn**	**01 26 27.5**	**+0.3**
WAT1					**Sn**	**01 26 35.7**	**+0.2**
WAT2	**Susitna Watana**	**0.26**	**57**		**Pn**	**01 26 27.7**	**+0.2**
WAT2					**Sn**	**01 26 36.3**	**+0.3**
HUR	**Hurricane**	**0.30**	**301**		**Pn**	**01 26 27.9**	**+0.3**
RND	**Reindeer**	**0.59**	**9**		**Pn**	**01 26 30.5**	**+0.4**
RND					**Sn**	**01 26 41.1**	**+0.5**
WAT6	**Susitna Watana**	**0.66**	**111**		**Pn**	**01 26 30.6**	**-0.1**
WAT6					**Sn**	**01 26 41.4**	**-0.4**
DHY	**Denali Highway**	**0.81**	**71**		**Pn**	**01 26 33.0**	**+0.6**
DHY					**Sn**	**01 26 45.6**	**+0.8**
TRF	**Thorofare Moun**	**0.84**	**319**		**Pn**	**01 26 33.4**	**+0.6**
TRF					**Sn**	**01 26 46.5**	**+1.0**
MCK	**McKinley**	**0.92**	**4**		**Pn**	**01 26 34.4**	**+0.9**
MCK					**Sn**	**01 26 47.5**	**+0.7**
GHO	**Glory Hole Cre**	**1.06**	**176**		**Pn**	**01 26 35.6**	**+0.3**
SML	**Sawmill**	**1.07**	**161**		**Pn**	**01 26 35.8**	**+0.3**
SML					**Sn**	**01 26 51.6**	**+1.4**
KTH	**Kantishna Hill**	**1.12**	**312**		**Pn**	**01 26 37.0**	**+0.9**
PMR	**Palmer**	**1.23**	**181**		**Pn**	**01 26 37.9**	**+0.5**
PMR					**Sn**	**01 26 54.6**	**+1.0**
SCM	**Sheep Creek Mo**	**1.28**	**140**		**Pn**	**01 26 38.8**	**+0.7**
BWN	**Browne**	**1.37**	**353**		**Pn**	**01 26 39.9**	**+0.7**
SKT	**Skwentna**	**1.43**	**235**		**Pn**	**01 26 40.4**	**+0.4**
SKT					**Sn**	**01 26 58.9**	**+0.7**
PPLA	**Purkeypile**	**1.44**	**274**		**Pn**	**01 26 40.6**	**+0.5**
KNK	**Knik Glacier**	**1.44**	**168**		**Pn**	**01 26 40.9**	**+0.7**
CAST	**Castle Rocks**	**1.50**	**295**		**Pn**	**01 26 41.1**	**+0.2**
BPAW	**Bear Paw Mtn.**	**1.55**	**327**		**Pn**	**01 26 42.0**	**+0.4**
SUA	**Susitna One**	**1.58**	**211**		**Pn**	**01 26 43.0**	**+1.0**
PS10	**TAPS Pump St10**	**1.61**	**67**		**Pn**	**01 26 44.1**	**+1.7**
PAX	**Paxson**	**1.65**	**83**		**Pn**	**01 26 44.5**	**+1.5**
WRH	**Wood River Hil**	**1.71**	**14**		**Pn**	**01 26 44.2**	**+0.5**
WRH	**Wood River Hil**	**1.71**	**14**		**Sn**	**01 27 03.2**	**-1.6**
NEA	**Nenana**	**1.76**	**360**		**Pn**	**01 26 44.9**	**+0.6**
RC01	**Rabbit Creek A**	**1.77**	**191**		**Pn**	**01 26 45.0**	**+0.5**
FIS	**Fire Island**	**1.77**	**198**		**Pn**	**01 26 45.6**	**+1.2**
CHUM	**Lake Minchumin**	**1.81**	**307**		**Pn**	**01 26 45.6**	**+0.6**
PS11	**TAPS Pump St11**	**1.83**	**112**		**Pn**	**01 26 47.0**	**+1.8**
HDA	**Harding Lake**	**1.85**	**30**		**Pn**	**01 26 46.3**	**+0.8**
CCB	**Clear Creek Bu**	**1.92**	**16**		**Pn**	**01 26 46.8**	**+0.4**
CCB	**Clear Creek Bu**	**1.92**	**16**		**Sn**	**01 27 09.1**	**-0.5**
PS08	**TAPS Pump Stn8**	**2.00**	**29**		**Pn**	**01 26 48.2**	**+0.7**
PWL	**Port Wells**	**2.00**	**170**		**Pn**	**01 26 48.1**	**+0.5**
SPCG	**Spurr Capps Gl**	**2.07**	**224**		**Pn**	**01 26 49.8**	**+1.2**
RIDG	**Independent Ri**	**2.12**	**62**		**Pn**	**01 26 51.3**	**+2.2**
JPK	**Jack Peak**	**2.12**	**146**		**Pn**	**01 26 49.1**	**-0.1**
TCOL	**CIGO, UAF Yank**	**2.13**	**14**		**Pn**	**01 26 49.0**	**+0.8**
COLA	**College**	**2.13**	**14**		**Pn**	**01 26 49.9**	**+0.7**
COLA	**College**	**2.13**	**14**		**Pn**	**01 26 50.2**	**+1.0**
COLA					**Sn**	**01 27 15.3**	**+0.6**
CRP	**Crater Peak**	**2.13**	**224**		**Pn**	**01 26 49.9**	**+0.4**
VMT	**TAPS Tl Valdez**	**2.16**	**143**		**Pn**	**01 26 49.6**	**-0.1**
GLI	**Glacier Island**	**2.16**	**154**		**Pn**	**01 26 49.5**	**-0.3**
MDM	**Murphy Dome**	**2.18**	**9**		**Pn**	**01 26 50.6**	**+0.7**
IL31		**2.18**	**25**		**Pn**	**01 26 50.5**	**+0.5**
ILAR	**Eielson Array**	**2.18**	**25**	P	**Pn**	**01 26 50.5**	**+0.6**
	41nm,0.3s,baz=205,slow=14,SNR=2612						
ILAR				S	**Sn**	**01 27 15.5**	**-0.6**
	119nm,0.3s,baz=214,slow=20,SNR=35						
ILAR				LR	LR	01 27 29.1	
	comp=Z,176nm,21.3s,baz=25,slow=34						
SPCR	**Spurr Chakacha**	**2.20**	**224**		**Pn**	**01 26 51.2**	**+0.9**
SPBG	**Spurr Blockage**	**2.21**	**226**		**Pn**	**01 26 51.6**	**+1.1**
MLY	**Manley**	**2.34**	**342**		**Pn**	**01 26 52.9**	**+0.8**
SLKM	**Skilak Lake**	**2.39**	**194**		**Pn**	**01 26 54.0**	**+1.3**
DOT	**Dot Lake**	**2.41**	**68**		**Pn**	**01 26 54.5**	**+1.4**
POKR	**Poker Plat Res**	**2.41**	**17**		**Pn**	**01 26 53.8**	**+0.7**
FID	**Port Fidalgo**	**2.42**	**148**		**Pn**	**01 26 53.0**	**-0.1**
FID	**Port Fidalgo**	**2.42**	**148**		**Sn**	**01 27 21.8**	**+0.1**
MENT	**Mentasta**	**2.45**	**85**		**Pn**	**01 26 54.7**	**+1.1**
SCRK	**Sand Creek**	**2.56**	**61**		**Pn**	**01 26 56.0**	**+0.8**
HIN	**Hinchinbrook I**	**2.73**	**152**		**Pn**	**01 26 57.2**	**-0.2**
SEW	**Seward**	**2.73**	**184**		**Pn**	**01 26 58.5**	**+1.1**
EYAK	**Cordova Ski Ar**	**2.77**	**144**		**Pn**	**01 26 58.2**	**+0.3**
GLB	**Gilahina Butte**	**2.83**	**117**		**Pn**	**01 26 59.5**	**+0.7**
RDJH	**Redoubt Jeurge**	**2.86**	**220**		**Pn**	**01 27 00.5**	**+1.2**
RSO	**Redoubt South**	**2.95**	**218**		**Pn**	**01 26 59.0**	**-1.5**
RDWB	**Redoubt West**	**2.96**	**219**		**Pn**	**01 27 01.3**	**+0.7**
RED	**Redoubt Volcan**	**2.99**	**218**		**Pn**	**01 27 01.8**	**+0.8**
GOAT	**Goat Mountain**	**3.05**	**136**		**Pn**	**01 27 01.8**	**0.0**
PRP	**Porcupine Dome**	**3.12**	**28**		**Pn**	**01 27 03.7**	**+1.0**
PRP	**Porcupine Dome**	**3.12**	**28**		**Sn**	**01 27 38.8**	**-0.1**
MCARA	**McCarthy VSAT**	**3.19**	**114**		**Pn**	**01 27 04.5**	**+1.0**
TT01	**Tatalina**	**3.19**	**275**		**Pn**	**01 27 03.8**	**+0.2**
BRLK	**Bradley Lake**	**3.19**	**197**		**Pn**	**01 27 04.5**	**+0.9**
BRSE	**Bradley Lake S**	**3.20**	**195**		**Pn**	**01 27 04.5**	**+0.8**
RAGM	**Ragged Mountai**	**3.22**	**137**		**Pn**	**01 27 04.0**	**-0.1**
BC03		**3.34**	**83**		**Pn**	**01 27 06.5**	**+1.0**
BCAR	**Beaver Creek A**	**3.34**	**83**	Pn	**Pn**	**01 27 06.4**	**+0.8**
HMT	**Hamilton**	**3.39**	**135**		**Pn**	**01 27 06.3**	**-0.1**
ILW	**Iliamna West**	**3.39**	**217**		**Pn**	**01 27 07.7**	**+1.2**
IVE	**Iliamna Volcan**	**3.40**	**216**		**Pn**	**01 27 07.7**	**+1.2**
HOM	**Homer**	**3.41**	**203**		**Pn**	**01 27 08.0**	**+1.4**
PTPK	**Patty Peak**	**3.52**	**115**		**Pn**	**01 27 09.0**	**+0.8**
SVW2	**Sparrevohn**	**3.53**	**244**		**Pn**	**01 27 08.4**	**+0.2**
BERG	**Berg Lake**	**3.54**	**131**		**Pn**	**01 27 08.0**	**-0.4**
TGL	**Tana Glacier**	**3.61**	**122**		**Pn**	**01 27 09.5**	**0.0**
BALM	**Baldy**	**3.65**	**116**		**Pn**	**01 27 09.9**	**0.0**
MID	**Middleton Isla**	**3.65**	**158**	Pn	**Pn**	**01 27 11.0**	**+1.2**
KIAG	**Kiagna River**	**3.70**	**118**		**Pn**	**01 27 10.4**	**-0.3**
SUCK	**Suckling Hills**	**3.75**	**135**		**Pn**	**01 27 11.2**	**0.0**
IM03		**3.77**	**329**		**Pn**	**01 27 12.0**	**+0.6**
IMAR	**Indian Mountai**	**3.77**	**329**	Pn	**Pn**	**01 27 12.3**	**+0.9**
IMAR					**Sn**	**01 27 53.7**	**-0.8**
BVCY	**Beaver Creek**	**3.81**	**93**		**Pn**	**01 27 13.3**	**+1.2**
BARN	**Barnard Glacie**	**3.92**	**114**		**Pn**	**01 27 14.5**	**+0.8**
KULT	**Kultieth River**	**3.99**	**128**		**Pn**	**01 27 14.3**	**-0.2**
EGAK	**Eagle**	**4.02**	**57**		**Pn**	**01 27 15.8**	**+1.0**
AU22	**Augustine Moun**	**4.04**	**213**		**Pn**	**01 27 16.3**	**+1.1**
GRNC	**Granite Creek**	**4.06**	**118**		**Pn**	**01 27 15.3**	**-0.3**
PS05	**TAPS Pump Stn5**	**4.06**	**351**		**Pn**	**01 27 16.9**	**+1.5**
AUQ	**Augustine Qik'**	**4.07**	**213**		**Pn**	**01 27 16.5**	**+0.9**
AUJK	**Augustine Jueg**	**4.07**	**213**		**Pn**	**01 27 16.9**	**+1.3**
FYU	**Fort Yukon**	**4.10**	**22**		**Pn**	**01 27 17.5**	**+1.5**
CTGM	**Chitina Glacie**	**4.11**	**114**		**Pn**	**01 27 17.0**	**+0.8**
MESA	**MESA**	**4.32**	**125**		**Pn**	**01 27 19.1**	**0.0**
COLD	**Coldfoot**	**4.45**	**354**		**Pn**	**01 27 22.9**	**+2.2**
COLD					**Sn**	**01 28 10.3**	**-0.9**
RKAV	**Rock Avalanche**	**4.47**	**121**		**Pn**	**01 27 21.6**	**+0.3**
DAWY	**Dawson**	**4.52**	**70**		**Pn**	**01 27 22.6**	**+0.9**
BM03	**Burnt Mountain**	**4.98**	**20**		**Pn**	**01 27 28.9**	**+0.9**
BMAR	**Burnt Mountain**	**5.00**	**20**	Pn	**Pn**	**01 27 28.9**	**+0.7**
PCA	**Pinnacle**	**5.03**	**119**		**Pn**	**01 27 28.7**	**0.0**
YUK4	**Talbot Arm**	**5.12**	**102**		**Pn**	**01 27 30.8**	**+0.8**
KDAK	**Kodiak Island**	**5.35**	**201**	P	**Pn**	**01 27 32.2**	**-0.8**
	1.6nm,0.3s,baz=46,slow=8.4,SNR=43						
KDAK				S	**Sn**	**01 28 29.4**	**-3.8**
	3.7nm,0.3s,baz=308,slow=23,SNR=9.9						
KDAK	**Kodiak Island**	**5.35**	**201**	Pn	**Pn**	**01 27 32.7**	**-0.3**
KDAK	**Kodiak Island**	**5.35**	**201**		**Sn**	**01 28 32.1**	**-1.1**
YUK6	**Outpost Mounta**	**5.40**	**106**		**Pn**	**01 27 34.4**	**+0.5**
KABU	**Katmai Buttres**	**5.50**	**217**		**Pn**	**01 27 35.8**	**+0.6**
YUK5	**Granite Creek**	**5.55**	**103**		**Pn**	**01 27 36.4**	**+0.5**
PNL	**Peninsula**	**5.64**	**120**		**Pn**	**01 27 37.2**	**+0.2**
TOLK	**Toolik Lake Re**	**5.85**	**358**		**Pn**	**01 27 42.2**	**+2.4**
OHAK	**Old Harbor**	**6.00**	**203**		**Pn**	**01 27 41.0**	**+0.9**
EPYK	**Eagle Plains**	**6.39**	**51**		**Pn**	**01 27 47.8**	**+0.6**
EPYK	**Eagle Plains**	**6.39**	**51**		**Sn**	**01 28 58.6**	**0.0**
DHAK	**Deception Hill**	**6.47**	**120**		**Pn**	**01 27 48.9**	**+0.5**
PLBC	**Pleasant Camp**	**7.01**	**113**		**Pn**	**01 27 55.8**	**+0.1**
WHY	**Whitehorse**	**7.07**	**101**		**Pn**	**01 27 57.0**	**+0.4**
ANM	**Nome**	**7.45**	**291**		**Pn**	**01 28 03.6**	**+2.0**
ANM					**Sn**	**01 29 24.9**	**+0.4**
BESE	**Bessie Mountai**	**8.16**	**115**		**Pn**	**01 28 10.7**	**-0.7**
INK	**Inuvik**	**8.45**	**43**	P	**Pn**	**01 28 15.8**	**+0.6**
	1.6nm,0.3s,baz=232,slow=14,SNR=46						
INK				S	**Sn**	**01 29 47.0**	**-1.9**
	1.2nm,0.3s,baz=281,slow=32,SNR=5.9						
INK	**Inuvik**	**8.45**	**43**		**Pn**	**01 28 16.5**	**+1.2**
JIS	**Juneau Island**	**8.54**	**116**		**Pn**	**01 28 16.0**	**-0.5**
GAMB	**Gambell**	**10.22**	**285**	Pn	**Pn**	**01 28 40.4**	**+1.1**
DLBC	**Dease Lake**	**10.31**	**107**	P	**Pn**	**01 28 41.1**	**+0.3**
	0.3nm,0.3s,baz=299,slow=12,SNR=3.1						
C36M	**Paulatuk**	**11.98**	**46**		**Pn**	**01 29 01.0**	**-2.3**
YKA	**Yellowknife Ar**	**15.72**	**76**	P	**Pn**	**01 29 52.7**	**+0.2**
	0.1nm,0.3s,baz=284,slow=13,SNR=14						
RES	**Resolute Bay**	**21.90**	**35**	P	**P**	**01 31 02.0**	**-0.1**
	0.4nm,0.3s,baz=263,slow=8.1,SNR=1.7						
RES	**Resolute Bay**	**21.90**	**35**	IAmb	IAmb	01 31 20.5	
	comp=Z,8.1nm,1.5s						
SEY	**Seymchan**	**25.90**	**297**	P	**P**	**01 31 38.8**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=90,slow=16,SNR=3.2						
WVOR	**Wild Horse Val**	**27.09**	**125**	P	**P**	**01 31 51.0**	**-0.3**
WVOR				IAmb	IAmb	01 31 54.9	
	comp=Z,5.2nm,1.4s						
PDAR	**Pinedale Array**	**30.47**	**113**	P	**P**	**01 32 23.2**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=293,slow=4.2,SNR=3.8						
TXAR	**Lajitas Array**	**44.40**	**117**	P	**P**	**01 34 19.8**	**+0.9**
	comp=Z,0.6nm,0.9s,baz=339,slow=7.3,SNR=4.2						
SONM	**Songino Array**	**54.63**	**307**	P	**P**	**01 35 36.7**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=28,slow=6.5,SNR=5.9						
SONM	**Songino Array**	**54.63**	**307**	IAmb	IAmb	01 35 37.8	
	comp=Z,0.7nm,0.8s						
MKAR	**Makanchi Array**	**63.36**	**323**	P	**P**	**01 36 34.9**	**-1.8**
	comp=Z,0.3nm,0.4s,baz=35,slow=5.9,SNR=6.6						
ESDC	**Sonseca Array**	**74.08**	**27**	P	**P**	**01 37 43.8**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=349,slow=4.6,SNR=3.3						

IDC 13 01:51:14.4±1.8, 2°.25S×138°.97E, h0km, mb3.0/2, mb1 3.3/3, mb1mx3.2/18, mbtmp3.1/3, ML3.0/1, Error ellipse: s-maj=32.8km s-min=16.4km az=5.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.75**	**99**	Pg	Pb	01 51 46.9	-0.5
	3.6nm,0.3s,baz=288,slow=20,SNR=2.8						
JAY				Lg	Lg	01 52 09.5	
	2.5nm,0.3s,baz=133,slow=14,SNR=1.8						
WRA	**Warramunga Arr**	**18.16**	**194**	P	P	01 55 30.0	+1.4
	0.1nm,0.3s,baz=17,slow=12,SNR=2.3						
ASAR	**Alice Springs**	**21.85**	**193**	P	P	01 56 07.8	-1.0
	0.4nm,0.9s,baz=20,slow=11,SNR=2.1						
MKAR	**Makanchi Array**	**69.59**	**322**	P	P	02 02 25.3	-0.2
	0.1nm,0.4s,baz=130,slow=5.8,SNR=1.7						

IDC ***13*** *02:26:20.5±1.5, 60°.13N×153°.45W, h118km±25km, mb3.2/3, mb1 3.3/7, mb1mx3.0/41, mbtmp3.6/7, Error ellipse: s-maj=33.9km s-min=11.8km az=108.0*
NEIC ***13*** *02:26:22.2±1.7, 60°.03N±0°.05×153°.3W±0°.1, h150km±4km, Error ellipse: s-maj=9.4km s-min=6.7km az=103.0*
AEIC ***13*** *02:26:22±2.1, 60°.00N±0°.04×153°.2W±0°.1, h156km±4km, ML3.0/60, Error ellipse: s-maj=8.8km s-min=5.5km az=111.0*

ISC 13 02:26:22.2±0.9, 60°.07N±0°.04×153°.26W±0°.04, h152km±5km, n124, σ1s18/157, mb3.3/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILS	**Iliamna Low So**	**0.15**	**138**		**Pn**	**02 26 42.6**	**-0.2**
ILIM	**Iliamna**	**0.15**	**85**		**Pn**	**02 26 42.5**	**-0.2**
RED	**Redoubt Volcan**	**0.43**	**34**		**Pn**	**02 26 43.5**	**0.0**
RED					**Sn**	**02 26 59.2**	**-0.7**
RSO	**Redoubt South**	**0.47**	**32**		**Pn**	**02 26 41.5**	**-2.4**
RSO					**Sn**	**02 26 58.6**	**-1.9**
RDWB	**Redoubt West**	**0.47**	**26**		**Pn**	**02 26 43.8**	**0.0**
RDWB					**Sn**	**02 26 59.5**	**-0.9**
NCT	**North Crescent**	**0.52**	**18**		**Pn**	**02 26 44.0**	**0.0**
NCT					**Sn**	**02 26 59.9**	**-0.8**
RDJH	**Redoubt Jeurge**	**0.57**	**23**		**Pn**	**02 26 44.5**	**+0.2**
RDJH					**Sn**	**02 27 00.9**	**-0.3**
DFR	**Drift River**	**0.60**	**28**		**Pn**	**02 26 44.3**	**-0.1**
DFR					**Sn**	**02 27 01.2**	**-0.2**
AU22	**Augustine Moun**	**0.70**	**184**		**Pn**	**02 26 44.8**	**-0.1**
AU22					**Sn**	**02 27 01.5**	**-0.6**
AUW	**Augustine West**	**0.71**	**189**		**Pn**	**02 26 45.0**	**0.0**
AUQ	**Augustine Qik'**	**0.72**	**186**		**Pn**	**02 26 45.2**	**+0.1**
HOM	**Homer**	**0.91**	**116**		**Pn**	**02 26 46.8**	**+0.4**
HOM					**Sn**	**02 27 05.6**	**+0.8**
BRLK	**Bradley Lake**	**1.23**	**103**		**Pn**	**02 26 49.8**	**+0.5**
BRLK					**Sn**	**02 27 09.0**	**-1.0**
SPCR	**Spurr Chakacha**	**1.25**	**24**		**Pn**	**02 26 50.0**	**+0.6**
CAPN	**Captain Cook N**	**1.26**	**55**		**Pn**	**02 26 51.3**	**+1.9**
SPBG	**Spurr Blockage**	**1.27**	**20**		**Pn**	**02 26 50.7**	**+1.0**
SPBG					**Sn**	**02 27 11.6**	**+0.7**
FOSS	**Fourpeaked Sta**	**1.29**	**190**		**Pn**	**02 26 49.4**	**-0.4**
BRSE	**Bradley Lake S**	**1.31**	**103**		**Pn**	**02 26 50.4**	**+0.4**
BRSE					**Sn**	**02 27 10.6**	**-0.6**
CRP	**Crater Peak**	**1.32**	**24**		**Pn**	**02 26 50.3**	**+0.1**
SPCP	**Crater Peak Br**	**1.32**	**24**		**Pn**	**02 26 50.9**	**+0.7**
SPCG	**Spurr Capps Gl**	**1.37**	**26**		**Pn**	**02 26 51.2**	**+0.5**
SPCG					**Sn**	**02 27 12.4**	**-0.2**
SVW2	**Sparrevohn**	**1.54**	**313**		**Pn**	**02 26 52.0**	**-0.3**
SLKM	**Skilak Lake**	**1.58**	**72**		**Pn**	**02 26 53.0**	**+0.3**
SLKM					**Sn**	**02 27 14.9**	**-1.2**
KAHC	**Katmai Hardscr**	**1.68**	**213**		**Pn**	**02 26 53.4**	**-0.5**
KAHG	**Katmai Hook Gl**	**1.71**	**203**		**Pn**	**02 26 54.0**	**-0.2**
FIS	**Fire Island**	**1.85**	**53**		**Pn**	**02 26 56.3**	**+0.7**
SUA	**Susitna One**	**1.87**	**40**		**Pn**	**02 26 56.5**	**+0.5**
SUA					**Sn**	**02 27 22.2**	**+0.3**
SEW	**Seward**	**1.91**	**87**		**Pn**	**02 26 56.4**	**+0.1**
SEW					**Sn**	**02 27 21.5**	**-1.0**
RC01	**Rabbit Creek A**	**2.02**	**58**		**Pn**	**02 26 57.9**	**+0.3**
RC01					**Sn**	**02 27 24.4**	**-0.5**
KABU	**Katmai Buttres**	**2.08**	**211**		**Pn**	**02 26 58.2**	**-0.2**
SKT	**Skwentna**	**2.10**	**23**		**Pn**	**02 26 58.8**	**+0.3**
ANGK	**Angle Creek**	**2.20**	**213**		**Pn**	**02 26 59.7**	**-0.2**
KDAK	**Kodiak Island**	**2.32**	**171**	P	**Pn**	**02 26 59.6**	**-1.6**
	2.3nm,0.3s,baz=351,slow=11,SNR=3.9						
KDAK				S	**Sn**	**02 27 28.5**	**-2.6**
	14nm,0.3s,baz=136,slow=22,SNR=8.5						
PMR	**Palmer**	**2.54**	**51**		**Pn**	**02 27 02.8**	**-1.0**
PMR					**Sn**	**02 27 33.9**	**-1.9**
PWL	**Port Wells**	**2.57**	**70**		**Pn**	**02 27 03.5**	**-0.6**
PWL					**Sn**	**02 27 35.0**	**-1.5**
KNK	**Knik Glacier**	**2.72**	**58**		**Pn**	**02 27 05.3**	**-0.7**
KNK					**Sn**	**02 27 38.9**	**-1.0**
GHO	**Glory Hole Cre**	**2.72**	**49**		**Pn**	**02 27 05.4**	**-0.8**
OHAK	**Old Harbor**	**2.85**	**180**		**Pn**	**02 27 05.8**	**-1.9**
OHAK					**Sn**	**02 27 39.5**	**-3.4**
PPLA	**Purkeypile**	**2.88**	**10**		**Pn**	**02 27 09.3**	**+1.1**
SML	**Sawmill**	**2.97**	**52**		**Sn**	**02 27 41.9**	**-3.8**
SML	**Sawmill**	**2.97**	**52**		**Pn**	**02 27 08.6**	**-0.7**
TT01	**Tatalina**	**3.14**	**336**		**Pn**	**02 27 11.2**	**-0.1**
GLI	**Glacier Island**	**3.16**	**72**		**Pn**	**02 27 11.7**	**+0.1**
GLI					**Sn**	**02 27 48.3**	**-1.5**
HIN	**Hinchinbrook I**	**3.39**	**81**		**Pn**	**02 27 14.5**	**0.0**
HIN					**Sn**	**02 27 54.5**	**-0.6**
SCM	**Sheep Creek Mo**	**3.39**	**56**		**Pn**	**02 27 14.5**	**-0.1**
HUR	**Hurricane**	**3.40**	**29**		**Pn**	**02 27 14.8**	**+0.2**
FID	**Port Fidalgo**	**3.43**	**76**		**Pn**	**02 27 14.8**	**-0.3**
FID					**Sn**	**02 27 53.5**	**-2.6**
JPK	**Jack Peak**	**3.44**	**70**		**Pn**	**02 27 15.4**	**+0.2**
SII	**Sitkinak Islan**	**3.55**	**188**		**Pn**	**02 27 14.4**	**-2.3**
SII	**Sitkinak Islan**	**3.55**	**188**		**Sn**	**02 27 55.0**	**-3.9**
WAT1	**Susitna Watana**	**3.58**	**37**		**Pn**	**02 27 17.0**	**+0.1**
WAT6	**Susitna Watana**	**3.67**	**44**		**Pn**	**02 27 17.9**	**-0.4**
WAT2	**Susitna Watana**	**3.67**	**36**		**Pn**	**02 27 18.1**	**-0.1**
KTH	**Kantishna Hill**	**3.67**	**17**		**Pn**	**02 27 18.5**	**+0.3**
KTH	**Kantishna Hill**	**3.67**	**17**		**Sn**	**02 28 00.1**	**-1.5**
TRF	**Thorofare Moun**	**3.68**	**21**		**Pn**	**02 27 18.6**	**+0.3**
EYAK	**Cordova Ski Ar**	**3.77**	**79**		**Pn**	**02 27 19.3**	**0.0**
EYAK					**Sn**	**02 28 02.5**	**-1.3**
CHUM	**Lake Minchumin**	**3.86**	**6**		**Pn**	**02 27 20.5**	**0.0**
RND	**Reindeer**	**3.95**	**30**		**Pn**	**02 27 21.8**	**0.0**
DHY	**Denali Highway**	**4.13**	**40**		**Pn**	**02 27 24.1**	**-0.1**
DHY	**Denali Highway**	**4.13**	**40**		**Sn**	**02 28 10.6**	**-1.8**
BPAW	**Bear Paw Mtn.**	**4.19**	**14**		**Pn**	**02 27 25.2**	**+0.4**
MCK	**McKinley**	**4.21**	**27**		**Pn**	**02 27 25.5**	**+0.3**
PS12	**TAPS Pump St12**	**4.22**	**67**		**Pn**	**02 27 26.0**	**+0.6**
GOAT	**Goat Mountain**

AFI	**Afiamalu**	**3.13**	**13**			**Pn**	**02 44 02.3**	**-0.9**
NIUE	**Niue**	**3.23**	**131**	Pn		**Pn**	**02 44 02.2**	**-2.2**
NIUE						**Pn**	**02 44 02.3**	**-2.2**
MSVF	**Nonsavu**	**9.05**	**264**			Pn	02 45 28.9	+4.4
RAR	**Rarotonga**	**12.76**	**111**	LR		LR	02 50 51.0	
	comp=Z,337nm,18.6s,baz=276,slow=34							
RAR	**Rarotonga**	**12.76**	**111**	Pn		**Pn**	**02 46 14.7**	**-0.5**
DZM	**Mont Dzumac**	**20.47**	**252**	*e*LR		LR	02 52 54.3	
	comp=Z,587nm,25.1s							
DZM	**Mont Dzumac**	**20.47**	**252**	LR		LR	02 54 19.9	
	comp=Z,385nm,19.4s,baz=38,slow=33							
PPT2	**Papeete2**	**21.91**	**95**	*e*LQ		LQ	02 52 24.3	
	305nm,27.0s							
PPT2				*e*LR		LR	02 53 16.5	
	comp=Z,372nm,26.8s,baz=260							
PPT	**Papeete**	**21.91**	**95**	LR		LR	02 55 15.7	
	comp=Z,184nm,18.1s,baz=264,slow=32							
PPT	**Papeete**	**21.91**	**95**	P		**P**	**02 48 03.3**	**-4.0**
OUZ	**Omahuta**	**22.00**	**212**	P		**P**	**02 48 08.4**	**+0.4**
OUZ				IAmb		IAmb	02 48 12.7	
	comp=Z,30nm,1.3s							
TBI	**Tubuai**	**22.53**	**110**	*e*LQ		LQ	02 52 38.4	
	comp=Z,569nm,27.0s							
TBI				*e*LR		LR	02 53 26.0	
	comp=Z,356nm,30.2s							
URZ	**Urewera**	**23.08**	**201**	P		**P**	**02 48 20.3**	**+0.8**
	comp=Z,6.8nm,0.5s,baz=335,slow=0.6,SNR=6.1							
URZ	**Urewera**	**23.08**	**201**	P		**P**	**02 48 19.7**	**+0.2**
TAOE	**Nuku Hiva Isla**	**32.52**	**80**	*e*LR		LR	02 58 07.7	
	comp=Z,196nm,27.3s							
H11S2	**WAKE ISLAND Hy**	**40.75**	**329**	T		T	03 34 32.0	
	baz=149							
H11S3	**WAKE ISLAND Hy**	**40.76**	**329**	T		T	03 34 29.7	
	baz=149							
H11S1	**WAKE ISLAND Hy**	**40.76**	**329**	T		T	03 34 31.7	
	baz=149							
STKA	**Stephens Creek**	**44.02**	**242**	P		**P**	**02 51 18.2**	**-3.5**
	comp=Z,1.8nm,0.8s,baz=228,slow=3.4,SNR=3.0							
STKA	**Stephens Creek**	**44.02**	**242**	P		**P**	**02 51 21.1**	**-0.7**
STKA				IAmb		IAmb	02 51 24.1	
	comp=Z,0.8nm,1.0s							
WRA	**Warramunga Arr**	**50.34**	**258**	P		**P**	**02 52 08.0**	**-3.2**
	comp=Z,0.6nm,0.4s,baz=96,slow=7.0,SNR=10							
WRA	**Warramunga Arr**	**50.34**	**258**	P		**P**	**02 52 09.1**	**-2.1**
ASAR	**Alice Springs**	**50.45**	**253**	P		**P**	**02 52 10.3**	**-1.8**
	comp=Z,5.4nm,0.8s,baz=86,slow=8.2,SNR=26							
QSPA	**South Pole Qui**	**73.08**	**180**	P		**P**	**02 54 45.4**	**+1.3**
NVAR	**Mina Array Bea**	**74.93**	**41**	P		**P**	**02 54 58.7**	**+3.4**
	comp=Z,1.8nm,1.1s,baz=225,slow=8.7,SNR=5.2							
NVAR	**Mina Array Bea**	**74.93**	**41**	P		**P**	**02 54 56.6**	**+1.3**
TXAR	**Lajitas Array**	**80.78**	**56**	P		**P**	**02 55 31.8**	**+3.8**
	comp=Z,1.6nm,1.1s,baz=224,slow=7.5,SNR=6.5							
TXAR	**Lajitas Array**	**80.78**	**56**	P		**P**	**02 55 28.9**	**+0.9**
PDAR	**Pinedale Array**	**82.87**	**41**	P		**P**	**02 55 41.8**	**+2.9**
	comp=Z,0.6nm,0.7s,baz=188,slow=1.8,SNR=4.8							
PDAR	**Pinedale Array**	**82.87**	**41**	P		**P**	**02 55 39.1**	**+0.2**
ILAR	**Eielson Array**	**83.82**	**11**	P		**P**	**02 55 45.0**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=225,slow=5.3,SNR=13							
ILAR	**Eielson Array**	**83.82**	**11**	P		**P**	**02 55 42.8**	**-0.1**
YKA	**Yellowknife Ar**	**91.20**	**23**	P		**P**	**02 56 21.1**	**+2.4**
	comp=Z,0.3nm,0.9s,baz=224,slow=3.9,SNR=4.2							
MKAR	**Makanchi Array**	**112.53**	**314**	PKiKP		**PKiKP**	**03 01 51.0**	**+0.7**
	comp=Z,0.1nm,0.5s,baz=67,slow=1.8,SNR=2.7							
KMBO	**Kilima Mbogo**	**145.58**	**241**	PKPbc		**PKPab**	**03 02 54.3**	**+0.2**
	comp=Z,2.5nm,0.9s,baz=49,slow=4.8,SNR=7.3							
KMBO	**Kilima Mbogo**	**145.58**	**241**			**PKPdf**	**03 02 53.4**	**-0.3**
MORC	**Moravsky Berou**	**146.28**	**348**	⇓P		**PKiKP**	**03 02 59.3**	**+1.5**
TRPA	**Tarpa**	**146.57**	**342**	⇓P		**PKiKP**	**03 02 58.1**	**-0.3**
DOPR	**Dopca**	**147.47**	**337**	⇓P		**PKiKP**	**03 03 01.9**	**+1.6**
KHC	**Kasperske Hory**	**147.55**	**353**	*e*PKP		**PKiKP**	**03 03 01.5**	**+1.1**
GERES	**GERESS Array B**	**147.81**	**352**	PKPbc		**PKiKP**	**03 03 00.6**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=54,slow=6.8,SNR=5.4							
BRTR	**Keskin Array B**	**147.91**	**320**	PKPbc		**PKPbc**	**03 02 59.6**	**-0.1**
	comp=Z,2.7nm,1.0s,baz=75,slow=1.4,SNR=9.6							
BRTR	**Keskin Array B**	**147.91**	**320**			**PKPbc**	**03 02 58.8**	**-0.9**
VOIR		**148.04**	**336**	⇓P		**PKPab**	**03 03 02.5**	**0.0**
ARR	**Arges**	**148.26**	**337**	⇓P		**PKPab**	**03 03 04.1**	**+0.8**
CONA	**Conrad Observa**	**148.37**	**349**	*i* pPKiKP		**PKPab**	**03 03 04.1**	**+0.4**
	comp=Z,6.7nm,1.4s							
SIRR	**Siria**	**148.50**	**341**	⇑P		**PKPab**	**03 03 03.9**	**-0.3**
MOA	**Molln**	**148.71**	**351**	*i* sPKPab		**PKPab**	**03 03 08.3**	**+3.3**
	comp=Z,7.6nm,1.8s							
GZR	**Gura Zlata**	**148.91**	**339**	⇑P		**PKPab**	**03 03 07.0**	**+1.0**
ARSA	**Arzberg**	**149.09**	**349**	*i* pPKiKP		**PKPab**	**03 03 05.8**	**-0.7**
	comp=Z,4.6nm,1.1s							
BZS	**Buzias**	**149.10**	**341**	⇑P		**PKPab**	**03 03 05.0**	**-1.5**
RETA	**Reutte**	**149.45**	**356**	*i* pPKPbc		**PKPab**	**03 03 05.2**	**-2.9**
	comp=Z,6.0nm,1.5s							
WATA	**Walderalm**	**149.54**	**355**	*i* sPKPbc		**PKPab**	**03 03 06.0**	**-2.4**
	comp=Z,3.4nm,1.0s							
MOTA	**Moosalm**	**149.57**	**355**	*i* pPKiKP		**PKPab**	**03 03 07.0**	**-1.6**
	comp=Z,6.6nm,1.1s							
SQTA	**Sankt Quirin**	**149.68**	**355**	*i* sPKPbc		**PKPab**	**03 03 06.8**	**-2.3**
	comp=Z,7.2nm,1.4s							
SOKA	**Soboth**	**149.73**	**350**	*i* PKPab		**PKPab**	**03 03 07.9**	**-1.3**
	comp=Z,5.6nm,1.4s							
FETA	**Feichten**	**149.92**	**356**	*i* pPKiKP		**PKPab**	**03 03 07.8**	**-2.3**
	comp=Z,7.8nm,1.2s							
MYKA	**Terra Mystica**	**149.99**	**352**	*i* sPKiKP		**PKPab**	**03 03 09.1**	**-1.2**
ABTA	**Abfaltersbach**	**150.02**	**353**	*i* pPKiKP		**PKPab**	**03 03 07.8**	**-2.6**
	comp=Z,5.0nm,1.1s							
VTS	**Vitosha**	**151.12**	**335**	⇑P		**PKiKP**	**03 03 10.1**	**+2.0**
TORD	**Torodi Ar. Bea**	**173.23**	**123**	PKPab		**PKPab**	**03 04 56.4**	**+4.3**
	comp=Z,0.8nm,0.9s,baz=217,slow=4.9,SNR=3.4							

IDC 13 02:59:01.8±2.2, 15°21N×145°60E, h117km±22km, mb3.1/4, mb1 3.4/4, mb1mx3.1/44, mbtmp3.5/4, Error ellipse: s-maj=48.1km s-min=26.2km az=105.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.76**	**204**	P	Pn	02 59 32.6	+0.5
	70nm,0.3s,baz=347,slow=3.6,SNR=14						
GUMO				S	Sn	02 59 55.4	+0.1
	125nm,0.3s,baz=171,slow=21,SNR=12						
H11N1	**WAKE ISLAND Hy**	**20.79**	**75**	T	T	03 24 56.3	
	baz=265						
H11N2	**WAKE ISLAND Hy**	**20.80**	**74**	T	T	03 24 56.0	
	baz=265						
H11N3	**WAKE ISLAND Hy**	**20.81**	**75**	T	T	03 24 54.3	
	baz=265						
WRA	**Warramunga Arr**	**36.65**	**198**	P	P	03 05 57.1	-0.2
	0.9nm,0.8s,baz=9.0,slow=8.4,SNR=4.5						
MKAR	**Makanchi Array**	**60.83**	**315**	P	P	03 09 02.7	+0.9
	0.2nm,0.4s,baz=92,slow=8.8,SNR=6.0						
ILAR	**Eielson Array**	**66.81**	**26**	P	P	03 09 40.0	-0.7
	0.1nm,0.4s,baz=269,slow=5.3,SNR=4.0						
YKA	**Yellowknife Ar**	**81.10**	**28**	P	P	03 11 03.4	-0.4
	0.1nm,0.4s,baz=285,slow=5.2,SNR=4.6						

*NEIC **13** 03:01:57.6±2.1, 20°.4S±0°.2×172°.6E±0°.1, h10km±2km, mb4.3/5, Error ellipse: s-maj=40.9km s-min=6.6km az=338.0*

*IDC **13** 03:02:00.0±0.9, 20°.56S×172°.62E, h0km, mb4.1/7, mb1 4.3/8, mb1mx4.1/31, mbtmp4.1/8, ML3.5/1, MS3.7/14, Ms1 3.7/14, ms1mx3.6/28, Error ellipse: s-maj=37.4km s-min=22.4km az=147.0*

*GCMT **13** 03:02:05.6±0.4, 20°.53S±0°.02×172°.52E±0°.02, h18km±2km, MW4.8/67, Moment Tensor Solution. s15,c17; s67,c85; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.01±.13; Mθθ-0.93±.13; Mφφ0.94±.12; Mrθ-0.62±.28; Mφθ1.84±.10; Mφr0.44±.24; Best double couple: Mo2.19000×10^16 NP1:θs75.00000°, δ76.00000°, λ-12.00000°. NP2: φs168.00000°, δ78.00000°, λ-166.00000°. Principal axes: T 2.0720, Plg2.0000°, Azm301.0000°; N 0.2380, Plg72.0000°, Azm206.0000°; P -2.3090, Plg18.0000°, Azm32.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 03:01:58.9±0.6, 20°.5S±0°.1×172°.83E±0°.08, h10km, n42, σ2s06/31, mb4.0/7, MS3.7/14, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.64**	**62**		**Pn**	**03 03 22.9**	**0.0**
MSVF					**Sn**	**03 04 23.8**	**-4.0**
DZM	**Mont Dzumac**	**6.16**	**254**	*e*Pn	**Pn**	**03 03 31.0**	**+1.0**
DZM	4.2nm,0.3s			*e*LR	LR	03 04 49.4	
	comp=Z,398nm,23.6s						
DZM	**Mont Dzumac**	**6.16**	**254**	Pn	**Pn**	**03 03 30.1**	**+0.1**
	1.4nm,0.3s,baz=120,slow=22,SNR=14						
DZM	**Mont Dzumac**	**6.16**	**254**		**Pn**	**03 03 25.6**	**-4.4**
RAO	**Raoul Island**	**12.12**	**138**	LR	LR	03 08 40.6	
	comp=Z,690nm,18.1s,baz=142,slow=33						
AFI	**Afiamalu**	**16.09**	**69**	Pn	**P**	**03 05 47.0**	**-1.7**
URZ	**Urewera**	**18.11**	**169**		**Pn**	**03 06 10.3**	**-0.2**
URZ				IAmb	IAmb	03 06 16.8	
	comp=Z,24nm,1.1s						
EIDS	**Eidsvold**	**20.60**	**252**	P	**P**	**03 06 33.9**	**-4.4**
EIDS				IAmb	IAmb	03 06 47.3	
	comp=Z,13nm,0.9s						
TUWZ	**Tuamarina**	**20.92**	**178**	P	**P**	**03 06 42.0**	**+0.5**
MSWZ	**Moikau Station**	**20.98**	**175**		**P**	**03 06 42.3**	**0.0**
PLWZ	**Palliser**	**21.13**	**175**	P	**P**	**03 06 43.5**	**-0.5**
STKA	**Stephens Creek**	**30.14**	**241**	P	**P**	**03 08 10.1**	**+1.0**
	comp=Z,6.0nm,1.1s,baz=80,slow=10,SNR=6.1						
STKA				LR	LR	03 19 42.4	
	comp=Z,202nm,18.4s,baz=57,slow=36						
STKA	**Stephens Creek**	**30.14**	**241**	P	**P**	**03 08 06.6**	**-2.5**
BBOO	**Buckleboo**	**34.91**	**242**	P	**P**	**03 08 50.9**	**0.0**
PPT2	**Papeete2**	**35.61**	**92**	*e*LQ	LQ	03 16 45.0	
	comp=Z,458nm,35.8s						
PPT2				*e*LR	LR	03 18 43.9	
	comp=Z,354nm,28.2s						
PPT	**Papeete**	**35.61**	**92**	LR	LR	03 19 42.8	
	comp=Z,141nm,21.3s,baz=255,slow=30						
WRA	**Warramunga Arr**	**36.07**	**264**	LR	LR	03 23 45.1	
	comp=Z,150nm,18.7s,baz=90,slow=36						
ASAR	**Alice Springs**	**36.14**	**258**	P	**P**	**03 09 01.5**	**0.0**
	comp=Z,1.1nm,0.8s,baz=76,slow=9.3,SNR=7.4						
ASAR				LR	LR	03 22 58.1	
	comp=Z,260nm,18.1s,baz=97,slow=35						
BATI	**Baumata**	**48.34**	**275**	LR	LR	03 31 11.7	
	comp=Z,119nm,18.2s,baz=208,slow=36						
KAPI	**Kappang**	**53.74**	**279**	LR	LR	03 35 04.6	
	comp=Z,38nm,18.2s,baz=299,slow=37						
DAV	**Davao City (W)**	**53.90**	**296**	LR	LR	03 32 59.0	
	comp=Z,47nm,18.3s,baz=150,slow=35						
JCJ	**Chichijima**	**55.83**	**327**	LR	LR	03 31 02.4	
	comp=Z,57nm,20.0s,baz=84,slow=31						
VNDA	**Vanda**	**57.34**	**183**	P	**P**	**03 11 48.5**	**+1.8**
	comp=Z,0.9nm,0.9s,baz=347,slow=9.6,SNR=1.7						
VNDA				LR	LR	03 31 58.0	
	comp=Z,75nm,21.4s,baz=346,slow=31						
LEM	**Lembang**	**64.44**	**272**	LR	LR	03 38 05.3	
	comp=Z,85nm,21.9s,baz=202,slow=34						
MJAR	**Matsushiro Arr**	**65.46**	**330**	LR	LR	03 35 45.6	
	comp=Z,34nm,22.0s,baz=100,slow=31						
KSRS	**Korea Array**	**71.46**	**324**	LR	LR	03 41 27.6	
	comp=Z,26nm,21.3s,baz=166,slow=33						
CMAR	**Chiang Mai Arr**	**82.09**	**293**	P	**P**	**03 14 23.1**	**+3.0**
	comp=Z,1.1nm,0.3s,baz=116,slow=2.1,SNR=3.4						
CMAR				LR	LR	03 48 41.1	
	comp=Z,15nm,21.5s,baz=158,slow=34						
NVAR	**Mina Array Bea**	**87.12**	**47**	P	**P**	**03 14 49.6**	**+4.1**
	comp=Z,2.0nm,1.1s,baz=220,slow=9.0,SNR=5.5						
ILAR	**Eielson Array**	**90.44**	**16**	P	**P**	**03 15 01.6**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=240,slow=4.3,SNR=7.6						
TXAR	**Lajitas Array**	**94.41**	**60**	P	P	03 15 24.1	+4.6
	comp=Z,0.6nm,0.8s,baz=232,slow=6.2,SNR=5.8						
CLL	**Collm**	**145.39**	**338**	*i* PKiKP	**PKiKP**	**03 21 39.4**	**-1.5**
	comp=Z,9.0nm,0.9s						
CLL				*i*		03 21 50.4	
	comp=Z,10.0nm,0.9s						
CLL				*e*		03 21 58.0	
BRG	**Berggiesshubel**	**145.40**	**336**	*e*PKP	**PKiKP**	**03 21 39.4**	**-1.5**
	comp=Z,11nm,1.0s						
CONA	**Conrad Observa**	**146.89**	**331**	*i* pPKPab	**PKPab**	**03 21 42.7**	**-0.2**
	comp=Z,7.0nm,1.5s						
GERES	**GERESS Array B**	**147.11**	**334**	PKPbc	**PKiKP**	**03 21 44.8**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=29,slow=3.0,SNR=12						
ARSA	**Arzberg**	**147.54**	**331**	*i* PKPbc	**PKPdf**	**03 21 39.9**	**-0.8**
	comp=Z,0.9nm,0.5s						
OBKA	**Obir**	**148.54**	**331**	*i* pPKPab	**PKPab**	**03 21 50.9**	**+1.4**
	comp=Z,3.4nm,1.3s						
MYKA	**Terra Mystica**	**148.86**	**332**	*i* pPKPab	**PKPab**	**03 21 52.3**	**+1.6**
	comp=Z,1.2nm,0.5s						
ABTA	**Abfaltersbach**	**149.26**	**333**	*i* PKiKP	**PKPbc**	**03 21 47.1**	**-0.8**
	comp=Z,4.2nm,1.3s						
MOTA	**Moosalm**	**149.35**	**335**	*i* PKPab	**PKiKP**	**03 21 49.8**	**+0.4**
	comp=Z,6.8nm,1.2s						
RETA	**Reutte**	**149.37**	**336**	*i* pPKiKP	**PKPab**	**03 21 51.0**	**-1.8**
	comp=Z,5.2nm,1.7s						
SQTA	**Sankt Quirin**	**149.41**	**335**	*i* pPKiKP	**PKPab**	**03 21 50.8**	**-2.2**
	comp=Z,4.0nm,1.1s						
FETA	**Feichten**	**149.77**	**335**	*i* PKPab	**PKiKP**	**03 21 51.6**	**+1.3**
	comp=Z,5.2nm,1.1s						

*IDC **13** 03:08:11.9±1.3, 38°.85N×23°.37E, h0km, mb3.4/5, mb1 3.5/6, mb1mx3.3/31, mbtmp3.4/6, ML2.5/1, Error ellipse: s-maj=44.3km s-min=21.8km az=157.0*

*ISK **13** 03:08:12.9, 38°.88N×23°.41E, h19km, ML3.2/29*

*ATH **13** 03:08:12.7, 38°.86N×23°.39E, h24km, ML3.3/28, Error ellipse: s-maj=0.9km s-min=0.6km az=92.0*

*THE **13** 03:08:13.8, 38°.87N±0°.02×23°.41E±0°.02, h15km±6km, n204, σ0s85/236, mb3.5/5, 8C-2D, Greece*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKA	**Markates**	**0.22**	**140**	P	**Pg**	**03 08 18.5**	**+0.1**
MRKA				S	**Sg**	**03 08 22.0**	**+0.3**
	18μm,0.2s						
MRKA	**Markates**	**0.22**	**140**	P	**Pg**	**03 08 18.5**	**+0.1**
MRKA				S	**Sg**	**03 08 22.0**	**+0.3**
MRKA				AML	AML	03 08 22.5	
	comp=E,36328μm,0.3s						
MRKA				AML	AML	03 08 22.8	
	comp=N,33517μm,0.2s						
SKIA	**Skiathos**	**0.30**	**9**	P	**Pb**	**03 08 20.5**	**-0.1**
SKIA	**Skiathos**	**0.30**	**9**	P	**Pb**	**03 08 20.5**	**-0.1**
SKIA				S	**Sb**	**03 08 24.9**	**-0.4**
SKIA				AML	AML	03 08 29.9	
	comp=N,19246μm,0.4s						
SKIA				AML	AML	03 08 30.0	
	comp=E,24917μm,0.3s						
LKR	**Lokris**	**0.39**	**235**	P	**Pg**	**03 08 20.7**	**-0.6**
LKR	**Lokris**	**0.39**	**235**	P	**Pg**	**03 08 20.8**	**-0.6**
LKR				S	**Sg**	**03 08 26.0**	**-0.7**
LKR				AML	AML	03 08 27.3	
	comp=E,12941μm,0.3s						
LKR				AML	AML	03 08 27.4	
	comp=N,10673μm,0.2s						
ALNA	**Alonissos**	**0.45**	**52**	P	**Pb**	**03 08 23.0**	**-0.2**
ALNA				S	**Sb**	**03 08 29.1**	**-0.6**
ALNA				AML	AML	03 08 30.6	
	comp=E,12407μm,0.4s						
ALNA				AML	AML	03 08 32.4	
	comp=N,10014μm,0.7s						
NEO	**Neokhori**	**0.46**	**342**	P	**Pb**	**03 08 22.8**	**-0.5**
NEO				S	**Sg**	**03 08 29.1**	**+0.3**
	comp=N,14μm,0.3s						
NEO	**Neokhori**	**0.46**	**342**	P	**Pb**	**03 08 22.8**	**-0.5**
NEO				S	**Sg**	**03 08 28.9**	**+0.1**
NEO				AML	AML	03 08 30.8	
	comp=E,29280μm,0.2s						
NEO				AML	AML	03 08 33.7	
	comp=N,28400μm,0.3s						
AOS	**Alonnisos**	**0.47**	**51**	P	**Pb**	**03 08 23.0**	**-0.5**
AOS				S	**Sb**	**03 08 29.9**	**-0.5**
	comp=N,3μm,0.4s						
AOS	**Alonnisos**	**0.47**	**51**	P	**Pb**	**03 08 23.0**	**-0.5**
AOS				S	**Sb**	**03 08 29.4**	**-1.0**
AOS				AML	AML	03 08 31.1	
	comp=N,6436μm,0.4s						
AOS				AML	AML	03 08 33.8	
	comp=E,5793μm,0.4s						
AOS	**Alonnisos**	**0.47**	**51**	PG	**Pb**	**03 08 23.0**	**-0.5**
AOS				SG	**Sb**	**03 08 29.9**	**-0.5**
XOR	**Xorichti**	**0.52**	**341**	P	**Pb**	**03 08 23.9**	**-0.5**
XOR				S	**Sg**	**03 08 30.8**	**0.0**
	comp=E,4μm,0.3s						
XOR	**Xorichti**	**0.52**	**341**	P	**Pb**	**03 08 23.9**	**-0.5**
XOR				S	**Sg**	**03 08 31.0**	**+0.2**
XOR				AML	AML	03 08 32.7	
	comp=N,9630μm,0.3s						
XOR				AML	AML	03 08 33.0	
	comp=E,6197μm,0.3s						
AXAR	**Agios Charalam**	**0.59**	**260**	P	**Pg**	**03 08 24.9**	**-0.3**
AXAR				AML	AML	03 08 37.5	
	comp=E,6678μm,0.3s						
AXAR				AML	AML	03 08 38.0	
	comp=N,7803μm,0.4s						
EREA	**Eretria**	**0.61**	**138**	P	**Pb**	**03 08 25.5**	**-0.4**
EREA				S	**Sb**	**03 08 34.8**	**+0.5**
	comp=N,12μm,0.4s						
EREA	**Eretria**	**0.61**	**138**	P	**Pb**	**03 08 25.4**	**-0.5**
EREA				S	**Sb**	**03 08 34.3**	**-0.1**
EREA				AML	AML	03 08 35.6	
	comp=E,31386μm,0.4s						
EREA				AML	AML	03 08 35.9	
	comp=N,14444μm,0.4s						
VIL2	**Platees**	**0.67**	**189**	P	**Pb**	**03 08 26.5**	**-0.4**
VIL2				AML	AML	03 08 40.8	
	comp=N,11291μm,0.6s						
VIL2				AML	AML	03 08 42.2	
	comp=E,20082μm,0.8s						
VILL	**Villia**	**0.71**	**186**	P	**Pg**	**03 08 26.4**	**-1.0**
VILL				S	**Sb**	**03 08 37.6**	**+0.4**
	comp=E,9μm,0.6s						
PROD	**Prodromos**	**0.73**	**213**	P	**Pg**	**03 08 26.5**	**-1.2**
PROD				AML	AML	03 08 39.1	
	comp=N,6569μm,0.3s						
PROD				AML	AML	03 08 41.7	
	comp=E,7788μm,0.2s						
DLFA	**Delphi**	**0.81**	**241**	P	**Pg**	**03 08 28.1**	**-1.2**
AGG	**Agios Georgios**	**0.85**	**280**	P	**Pg**	**03 08 28.9**	**-1.1**
AGG				S	**Sg**	**03 08 41.0**	**-0.3**
	comp=E,675nm,0.7s						
AGG	**Agios Georgios**	**0.85**	**280**	P	**Pg**	**03 08 28.9**	**-1.1**
AGG				AML	AML	03 08 45.8	
	comp=N,1262μm,0.5s						
AGG				AML	AML	03 08 50.7	
	comp=E,2002μm,0.7s						
AGG	**Agios Georgios**	**0.85**	**280**	PG	**Pg**	**03 08 29.0**	**-1.1**
AGG				SG	**Sb**	**03 08 42.3**	**+1.0**
SKY	**Skiros Island**	**0.89**	**89**	P	**Pn**	**03 08 31.1**	**-0.4**
SKY				S	**Sn**	**03 08 44.5**	**+0.3**
	comp=E,4μm,0.2s						
SKY	**Skiros Island**	**0.89**	**89**	P	**Pn**	**03 08 30.9**	**-0.6**
SKY				AML	AML	03 08 45.4	
	comp=E,8139μm,0.2s						
SKY				AML	AML	03 08 47.4	
	comp=N,6119μm,0.2s						
PTL	**Penteli**	**0.90**	**156**	P	**Pb**	**03 08 30.5**	**-0.3**
PTL	**Penteli**	**0.90**	**156**	P	**Pg**	**03 08 30.1**	**-0.8**
PTL				AML	AML	03 08 44.5	
	comp=N,6472μm,0.8s						
PTL				AML	AML	03 08 44.6	
	comp=E,7322μm,0.9s						
LTK	**Loutraki**	**0.92**	**202**	P	**Pg**	**03 08 29.9**	**-1.3**
LTK				S	**Sn**	**03 08 46.3**	**+1.5**
	comp=E,2μm,0.4s						
LTK	**Loutraki**	**0.92**	**202**	P	**Pg**	**03 08 29.9**	**-1.3**
LTK				AML	AML	03 08 45.0	
	comp=E,4084μm,0.5s						
LTK				AML	AML	03 08 47.9	
	comp=N,5388μm,0.4s						
ATH	**Athens Observa**	**0.93**	**165**	P	**Pg**	**03 08 30.9**	**-0.6**
ATH	**Athens Observa**	**0.93**	**165**	P	**Pg**	**03 08 30.7**	**-0.8**
ATH				AML	AML	03 08 45.6	
	comp=N,5541μm,0.2s						
ATH				AML	AML	03 08 47.6	
	comp=E,6771μm,0.2s						
LOUT	**Loutraki**	**0.95**	**201**	P	**Pg**	**03 08 30.5**	**-1.3**
LOUT				S	**Sn**	**03 08 46.0**	**+0.5**
LOUT	**Loutraki**	**0.95**	**201**	P	**Pg**	**03 08 30.5**	**-1.3**
LOUT				AML	AML	03 08 52.6	
	comp=E,677μm,0.4s						
LOUT				AML	AML	03 08 55.4	
	comp=N,523μm,0.4s						
ATHU	**Athens Univers**	**0.95**	**162**	P	**Pb**	**03 08 31.5**	**-0.2**
ATHU	**Athens Univers**	**0.95**	**162**	P	**Pg**	**03 08 31.1**	**-0.8**
ATHU				AML	AML	03 08 46.1	
	comp=E,1363μm,0.4s						
ATHU				AML	AML	03 08 46.2	
	comp=N,1860μm,0.3s						
MAKR	**Makrakomi, Fth**	**1.00**	**278**	P	**Pg**	**03 08 31.8**	**-1.1**
MAKR				S	**Sb**	**03 08 46.6**	**+0.9**
	comp=N,590nm,0.4s						
MAKR	**Makrakomi, Fth**	**1.00**	**278**	P	**Pg**	**03 08 31.7**	**-1.1**
THAL	**Thalero**	**1.02**	**215**	P	**Pg**	**03 08 31.8**	**-1.4**
THAL	**Thalero**	**1.02**	**215**	P	**Pg**	**03 08 31.8**	**-1.4**
VLY	**Voula,Athens**	**1.06**	**163**	P	**Pg**	**03 08 33.2**	**-0.8**
VLY				S	**Sb**	**03 08 47.4**	**+0.1**
	comp=N,3μm,0.3s						
VLY	**Voula,Athens**	**1.06**	**163**	P	**Pg**	**03 08 33.3**	**-0.7**
VLY				AML	AML	03 08 48.2	
	comp=E,7149μm,0.3s						
VLY				AML	AML	03 08 49.8	
	comp=N,4029μm,0.4s						
PAIG	**Paliouri**	**1.07**	**11**	P	**Pb**	**03 08 33.7**	**-0.1**
KALE	**Kalithea**	**1.10**	**245**	P	**Pg**	**03 08 34.2**	**-0.6**
KALE				S	**Sg**	**03 08 48.0**	**-1

VLX				AML	AML	03 09 15.6		
	comp=E,1151µm,0.5s							
RLS	**Riolos of Patr**	**1.73**	**242**	P	**Pn**	**03 08 43.9**	**+0.9**
RLS	**Riolos of Patr**	**1.73**	**242**	P	**Pn**	**03 08 43.9**	**+0.9**
HORT	**Hortiatis**	**1.74**	**352**	P	**Pn**	**03 08 43.7**	**+0.4**
HORT				S	**Sn**	**03 09 03.8**	**-1.4**
	comp=E,318nm,0.4s							
HORT	**Hortiatis**	**1.74**	**352**	P	**Pn**	**03 08 43.4**	**+0.1**
HORT				AML	AML	03 09 06.2		
	comp=N,530µm,0.4s							
HORT				AML	AML	03 09 06.9		
	comp=E,804µm,0.5s							
HORT	**Hortiatis**	**1.74**	**352**	PN	**Pn**	**03 08 43.3**	**+0.1**
THE	**Thessaloniki**	**1.79**	**349**	P	**Pn**	**03 08 44.4**	**+0.5**
THE	**Thessaloniki**	**1.79**	**349**	P	**Pn**	**03 08 43.9**	**0.0**
AMT	**Artemida-Makis**	**1.89**	**226**	P	**Pn**	**03 08 45.8**	**+0.5**
AMT	**Artemida-Makis**	**1.89**	**226**	P	**Pn**	**03 08 45.5**	**+0.2**
SERI	**Serifos**	**1.91**	**153**	P	**Pn**	**03 08 45.5**	**-0.1**
KZN	**Kozani**	**1.91**	**319**	P	**Pn**	**03 08 46.2**	**+0.6**
KZN	**Kozani**	**1.91**	**319**	P	**Pn**	**03 08 45.6**	**0.0**
KPRO	**Kipourio**	**1.92**	**305**	P	**Pn**	**03 08 46.1**	**+0.4**
KPRO	**Kipourio**	**1.92**	**305**	P	**Pn**	**03 08 45.7**	**0.0**
TNSA	**Tinos**	**1.92**	**133**	P	**Pb**	**03 08 46.7**	**-1.5**
SIGR	**SIGRI**	**1.94**	**79**	P	**Pn**	**03 08 45.9**	**0.0**
SIGR	**SIGRI**	**1.94**	**79**	PN	**Pn**	**03 08 45.8**	**0.0**
SOH	**Sokhos**	**1.95**	**359**	P	**Pn**	**03 08 46.7**	**+0.6**
SOH	**Sokhos**	**1.95**	**359**	P	**Pn**	**03 08 46.7**	**+0.6**
THAS	**Thassos island**	**2.00**	**30**	P	**Pn**	**03 08 46.2**	**-0.6**
THAS	**Thassos island**	**2.00**	**30**	P	**Pn**	**03 08 46.2**	**-0.6**
ITM	**Ithomi**	**2.06**	**215**	P	**Pn**	**03 08 48.8**	**+1.2**
ITM	**Ithomi**	**2.06**	**215**	P	**Pn**	**03 08 48.7**	**+1.2**
ITM	**Ithomi**	**2.06**	**215**	PN	**Pn**	**03 08 48.1**	**+0.6**
CHOS	**Chios island**	**2.13**	**102**	P	**Pn**	**03 08 49.3**	**+0.6**
CHOS	**Chios island**	**2.13**	**102**	P	**Pn**	**03 08 49.1**	**+0.5**
CHOS	**Chios island**	**2.13**	**102**	PN	**Pn**	**03 08 49.2**	**+0.6**
JAN	**Janina**	**2.13**	**292**	P	**Pb**	**03 08 51.8**	**-0.1**
EVGI	**Lefkada island**	**2.17**	**264**	P	**Pb**	**03 08 51.7**	**-0.7**
VLI	**Veliai**	**2.18**	**190**	P	**Pn**	**03 08 49.3**	**0.0**
VLI	**Veliai**	**2.18**	**190**	P	**Pn**	**03 08 49.2**	**0.0**
KFL	**Anninata**	**2.19**	**250**	P	**Pn**	**03 08 45.4**	**-4.0**
GRG	**Griva**	**2.22**	**340**	P	**Pn**	**03 08 50.3**	**+0.5**
GRG	**Griva**	**2.22**	**340**	P	**Pn**	**03 08 49.8**	**0.0**
GRG	**Griva**	**2.22**	**340**	PN	**Pn**	**03 08 49.9**	**0.0**
SRS	**Serrai**	**2.25**	**4**	P	**Pn**	**03 08 50.3**	**+0.1**
SRS	**Serrai**	**2.25**	**4**	P	**Pn**	**03 08 49.7**	**-0.5**
PRK	**Paraskevi**	**2.26**	**80**	P	**Pn**	**03 08 51.7**	**+1.4**
PRK	**Paraskevi**	**2.26**	**80**	P	**Pn**	**03 08 51.5**	**+1.2**
FSK	**Fiskardo**	**2.27**	**260**	P	**Pn**	**03 08 51.4**	**+1.0**
BOZC	**Bozcaada**	**2.27**	**64**	PN	**Pn**	**03 08 50.3**	**-0.1**
DYR	**Agios Nikonas**	**2.27**	**202**	P	**Pn**	**03 08 51.7**	**+1.2**
DYR	**Agios Nikonas**	**2.27**	**202**	P	**Pn**	**03 08 51.6**	**+1.0**
KAVA	**Kavala**	**2.29**	**21**	P	**Pn**	**03 08 50.3**	**-0.4**
KAVA	**Kavala**	**2.29**	**21**	P	**Pn**	**03 08 50.2**	**-0.5**
SMTH	**Samothraki Isl**	**2.29**	**45**	P	**Pn**	**03 08 50.0**	**-0.7**
SMTH	**Samothraki Isl**	**2.29**	**45**	P	**Pn**	**03 08 50.0**	**-0.7**
VLS	**Valsamata**	**2.32**	**253**	P	**Pn**	**03 08 47.6**	**-3.5**
KNT	**Kendrikon**	**2.32**	**350**	P	**Pn**	**03 08 52.0**	**+0.8**
KNT	**Kendrikon**	**2.32**	**350**	P	**Pn**	**03 08 52.3**	**+1.1**
KNT	**Kendrikon**	**2.32**	**350**	PN	**Pn**	**03 08 51.4**	**+0.2**
GADA	**Gvkgeada**	**2.33**	**55**	PN	**Pn**	**03 08 51.3**	**0.0**
PYL	**PYLOS**	**2.37**	**214**	P	**Pn**	**03 08 53.7**	**+1.8**
PYL	**PYLOS**	**2.37**	**214**	P	**Pn**	**03 08 53.3**	**+1.4**
NEST	**Nestorio**	**2.38**	**311**	P	**Pn**	**03 08 54.3**	**+2.1**
EZN	**Ezine**	**2.45**	**66**	‖P	**Pb**	**03 08 55.4**	**-1.9**
EZN	**Ezine**	**2.45**	**66**	PN	**Pn**	**03 08 53.3**	**+0.3**
APE	**Apeiranthos**	**2.46**	**136**	P	**Pn**	**03 08 53.7**	**+0.5**
APE	**Apeiranthos**	**2.46**	**136**	P	**Pn**	**03 08 53.7**	**+0.5**
APE	**Apeiranthos**	**2.46**	**136**	⇑P	**Pn**	**03 08 53.6**	**+0.4**
APE	**Apeiranthos**	**2.46**	**136**	PN	**Pn**	**03 08 53.2**	**0.0**
FNA	**Florina**	**2.47**	**321**	P	**Pn**	**03 08 54.3**	**+1.0**
FNA	**Florina**	**2.47**	**321**	P	**Pn**	**03 08 54.3**	**+1.0**
FNA	**Florina**	**2.47**	**321**	PN	**Pn**	**03 08 53.8**	**+0.5**
NVR	**Nevrokopi**	**2.50**	**8**	P	**Pn**	**03 08 54.6**	**+0.9**
NVR	**Nevrokopi**	**2.50**	**8**	P	**Pn**	**03 08 54.3**	**+0.6**
VAY	**Valandovo**	**2.53**	**346**	*i* Pn	**Pn**	**03 08 55.2**	**+1.1**
IOSP	**Ios island**	**2.61**	**145**	P	**Pn**	**03 08 55.8**	**+0.6**
IOSP	**Ios island**	**2.61**	**145**	P	**Pn**	**03 08 55.9**	**+0.6**
KTHA	**Kythira Island**	**2.63**	**186**	P	**Pn**	**03 08 55.3**	**-0.1**
KTHA	**Kythira Island**	**2.63**	**186**	PN	**Pn**	**03 08 55.5**	**+0.1**
KTHR	**Kythira**	**2.63**	**187**	P	**Pn**	**03 08 56.0**	**+0.6**
DKL	**Dikili**	**2.73**	**85**	PN	**Pn**	**03 08 57.3**	**+0.5**
RDO	**Rodhopi**	**2.80**	**35**	P	**Pn**	**03 08 57.2**	**-0.6**
RDO	**Rodhopi**	**2.80**	**35**	PN	**Pn**	**03 08 57.5**	**-0.2**
GELI	**Tayfur-Gelibol**	**2.81**	**56**	PN	**Pn**	**03 08 58.2**	**+0.2**
ENEZ	**Enez**	**2.82**	**48**	PN	**Pn**	**03 08 57.9**	**-0.1**
AMGA	**Amorgos Island**	**2.83**	**135**	P	**Pn**	**03 08 58.9**	**+0.7**
ALN	**Alexandroupoli**	**2.87**	**44**	PN	**Pn**	**03 08 58.8**	**+0.2**
THT2	**Imerovigli**	**2.91**	**146**	PN	**Pn**	**03 08 59.8**	**+0.5**
SMG	**Samos**	**2.94**	**112**	P	**Pn**	**03 09 00.0**	**+0.3**
STIP	**Stip**	**2.97**	**342**	*i* Pn	**Pn**	**03 08 59.9**	**-0.2**
SANT	**Santorini**	**2.98**	**146**	PN	**Pn**	**03 09 00.6**	**+0.3**
LPK	**Lapseki**	**2.99**	**59**	PN	**Pn**	**03 09 00.5**	**+0.1**
ERIK	**Erikli-Kesan**	**2.99**	**52**	PN	**Pn**	**03 08 59.9**	**-0.5**
ANKY	**Antikythira Is**	**3.00**	**182**	P	**Pn**	**03 09 00.8**	**+0.3**
KDZ	**Kurdzhali**	**3.17**	**20**	PN	**Pn**	**03 09 02.8**	**-0.6**
GCAM	**G?zelcaml?**	**3.23**	**110**	PN	**Pn**	**03 09 04.3**	**+0.6**
RODP	**Rodopos**	**3.32**	**175**	PN	**Pn**	**03 09 05.5**	**+0.6**
UKOP	**Uzunkopru-Edir**	**3.35**	**47**	PN	**Pn**	**03 09 05.7**	**+0.4**
KRBG	**Karabiga-Canak**	**3.37**	**62**	PN	**Pn**	**03 09 06.3**	**+0.8**
PLD	**Plovdiv**	**3.38**	**17**	PN	**Pn**	**03 09 06.2**	**+0.5**
RKY	**Sarkoy-Tekirda**	**3.42**	**57**	PN	**Pn**	**03 09 07.2**	**+0.8**
IMMV	**Iera Moni Meta**	**3.44**	**172**	P	**Pn**	**03 09 06.8**	**+0.3**
IMMV	**Iera Moni Meta**	**3.44**	**172**	PN	**Pn**	**03 09 07.1**	**+0.6**
KOSK	**Kos Island**	**3.53**	**126**	PN	**Pn**	**03 09 08.4**	**+0.6**
BALB	**Balikesir**	**3.56**	**76**	PN	**Pn**	**03 09 08.4**	**+0.3**
BODT	**Bodrum**	**3.58**	**119**	PN	**Pn**	**03 09 09.2**	**+0.8**
KNDR	**Palaiochora Ch**	**3.64**	**176**	PN	**Pn**	**03 09 10.3**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**3.64**	**103**	PN	**Pn**	**03 09 10.3**	**+0.9**
MRMT	**Marmara Adasi**	**3.66**	**61**	PN	**Pn**	**03 09 10.4**	**+0.7**
EDC	**Edincik**	**3.74**	**65**	PN	**Pn**	**03 09 11.3**	**+0.6**
VTS	**Vitosha**	**3.74**	**358**	⇑P	**Pn**	**03 09 12.6**	**+1.7**
IDI	**Anoyia**	**3.77**	**161**	PN	**Pn**	**03 09 12.1**	**+0.9**
HRKL	**Herakleio**	**3.80**	**159**	PN	**Pn**	**03 09 12.3**	**+0.8**
EDRB	**Edirne**	**3.91**	**40**	PN	**Pn**	**03 09 13.9**	**+0.8**
DAT	**Datca**	**3.94**	**122**	PN	**Pn**	**03 09 14.1**	**+0.6**
KCTX	**Karacabey (Bur**	**4.07**	**68**	PN	**Pn**	**03 09 16.0**	**+0.8**
YER	**Yerkesik**	**4.22**	**113**	PN	**Pn**	**03 09 18.3**	**+0.9**
ELND	**Elena**	**4.46**	**24**	⇑P	**Pn**	**03 09 21.0**	**+0.3**
PDG	**Podgorica**	**4.75**	**320**	⇑P	**Pn**	**03 09 27.4**	**+2.8**
DBRK	**Dubrovnik**	**5.51**	**315**	*i* Pn	**Pn**	**03 09 35.3**	**+0.3**
STON	**Ston**	**5.89**	**315**	*e*Pn	**Pn**	**03 09 40.7**	**+0.5**
MDVR	**Moldovita**	**6.04**	**348**	‖P	**Pn**	**03 09 42.3**	**0.0**
GZR	**Gura Zlata**	**6.53**	**356**	⇑P	**Pn**	**03 09 48.4**	**-0.7**
MAKA	**Makarska**	**6.54**	**314**	*i* Pn	**Pn**	**03 09 49.0**	**-0.1**
MAKA				Sn	**Sn**	**03 11 01.1**	**-2.2**
ARR	**Arges**	**6.55**	**8**	⇑P	**Pn**	**03 09 50.1**	**+0.7**
VOIR		**6.67**	**10**	⇑P	**Pn**	**03 09 52.5**	**+1.5**
BZS	**Buzias**	**6.87**	**349**	⇑P	**Pn**	**03 09 54.4**	**+0.7**
MORI	**Morici**	**7.64**	**313**	*e*Pn	**Pn**	**03 10 05.2**	**+1.0**
BRTR	**Keskin Array B**	**7.98**	**81**	Pn	**Pn**	**03 10 11.0**	**+1.9**
	comp=E,0.1nm,0.3s,baz=250,slow=13,SNR=1.8							
BRTR				Sn	**Sn**	**03 11 37.3**	**-1.8**
	comp=E,0.0nm,0.3s,baz=344,slow=37,SNR=2.5							
ESDC	**Sonseca Array**	**21.18**	**281**	P	**P**	**03 12 59.0**	**+0.6**
	comp=E,0.3nm,0.5s,baz=74,slow=11,SNR=4.1							
TORD	**Torodi Ar. Bea**	**32.04**	**223**	P	**P**	**03 14 39.9**	**+0.2**
	comp=E,0.4nm,0.4s,baz=36,slow=9.3,SNR=7.1							
MKAR	**Makanchi Array**	**43.00**	**60**	P	**P**	**03 16 13.6**	**+1.3**
	comp=E,0.4nm,0.4s,baz=274,slow=7.3,SNR=7.1							
ZALV	**Zalesovo Beam**	**43.54**	**49**	P	**P**	**03 16 17.3**	**+0.9**
	comp=E,0.6nm,0.5s,baz=290,slow=9.7,SNR=2.5							
YKA	**Yellowknife Ar**	**73.49**	**341**	P	**P**	**03 19 45.5**	**+0.4**
	comp=E,0.1nm,0.6s,baz=33,slow=5.5,SNR=4.1							

IDC ***13*** *03:25:51.2±1.9, 3°.95N×126°.47E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.4/52, mbtmp3.7/5, ML4.5/1, Error ellipse: s-maj=120.3km s-min=29.2km az=76.0*

ISC 13 03:25:44.0±1.1, 4°.99N±0°.07×125°.0E±0°.2, h35km, n7, σ1§30/9, mb3.5/4, 1D, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKMP	**Bagumbayan, Su**	**1.57**	**345**	*e*P		**Pn**	**03 26 08.9**	**-0.5**
SKMP				*e*S		**Sn**	**03 26 28.2**	**-0.3**
KCP	**Kidapawan**	**2.01**	**4**	‖*i*P		**Pn**	**03 26 14.6**	**-0.8**
KCP				*i* S		**Sn**	**03 26 41.4**	**+1.9**
DAV	**Davao City (W)**	**2.15**	**17**	Pn		**Sn**	**03 26 43.4**	**+0.4**
	55nm,0.3s,baz=42,slow=14,SNR=1.4							
FITZ	**Fitzroy Crossi**	**22.95**	**178**	P		**P**	**03 30 46.8**	**+1.4**
	2.2nm,0.8s,baz=356,slow=13,SNR=1.7							

WRA	**Warramunga Arr**	**26.44**	**160**	P		**P**	**03 31 16.0**	**-1.8**
	0.5nm,0.7s,baz=341,slow=10,SNR=5.8							
ASAR	**Alice Springs**	**29.79**	**163**	P		**P**	**03 31 47.7**	**-0.1**
	0.2nm,0.4s,baz=342,slow=7.5,SNR=2.0							
STKA	**Stephens Creek**	**39.95**	**158**	P		**P**	**03 33 14.8**	**-0.3**
	0.6nm,0.4s,baz=334,slow=8.2,SNR=4.3							

ISK ***13*** *03:34:17.8, 41°.49N×22°.88E, h14km, ML2.5/9*
SKO ***13*** *03:34:17.2, 41°.53N×22°.87E, h15km*
THE ***13*** *03:34:18.5, 41°.50N×22°.89E, h6km±1km, ML2.2/7, Error ellipse: s-maj=1.1km s-min=0.6km az=154.0*
BEO ***13*** *03:34:18.8±0.5, 41°.55N×22°.89E, h0km, ML2.4/9*
ATH ***13*** *03:34:18.1, 41°.49N×22°.88E, h23km±1km, ML2.3/5, Error ellipse: s-maj=3.2km s-min=1.1km az=161.0*

ISC 13 03:34:17.6±1.0, 41°.53N±0°.02×22°.86E±0°.02, h11km±9km, n59, σ0§86/92, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	**Valandovo**	**0.30**	**226**	*e*Pg		**Pb**	**03 34 24.7**	**-0.3**
VAY				*e*Sg		**Sg**	**03 34 28.5**	**+0.8**
VAY	**Valandovo**	**0.30**	**226**	⇑*i*Pg		**Pb**	**03 34 24.7**	**-0.3**
VAY				*i* Sg		**Sb**	**03 34 29.3**	**-0.7**
VAY				*e*Lg		Lg	03 34 29.5	
	comp=E,660nm,0.3s							
VAY				*e*Lg		Lg	03 34 29.7	
	comp=N,653nm,0.2s							
KNT	**Kendrikon**	**0.37**	**175**	P		**Pg**	**03 34 24.9**	**-0.1**
KNT				S		**Sg**	**03 34 30.2**	**+0.4**
	comp=N,2µm,0.1s							
KNT	**Kendrikon**	**0.37**	**175**	P		**Pg**	**03 34 24.9**	**-0.1**
KNT				S		**Sg**	**03 34 30.2**	**+0.4**
KNT				AML	AML		03 34 30.8	
	comp=E,2650µm,0.1s							
KNT				AML	AML		03 34 30.9	
	comp=N,5267µm,0.1s							
KNT	**Kendrikon**	**0.37**	**175**	PG		**Pg**	**03 34 24.9**	**-0.1**
KNT				SG		**Sg**	**03 34 30.2**	**+0.4**
STIP	**Stip**	**0.53**	**288**	*i* Pg		**Pg**	**03 34 25.3**	**-2.7**
STIP				*i* Sg		**Sg**	**03 34 31.8**	**-3.2**
STIP				*e*Lg		Lg	03 34 31.9	
	comp=E,206nm,0.2s							
STIP				*e*Lg		Lg	03 34 32.2	
	comp=N,434nm,0.2s							
GRG	**Griva**	**0.67**	**211**	P		**Pg**	**03 34 30.9**	**+0.3**
GRG				S		**Sb**	**03 34 40.0**	**-0.6**
	comp=N,278nm,0.3s							
GRG	**Griva**	**0.67**	**211**	P		**Pg**	**03 34 30.6**	**0.0**
GRG				S		**Sb**	**03 34 40.3**	**-0.3**
GRG				AML	AML		03 34 40.8	
	comp=N,461µm,0.3s							
GRG				AML	AML		03 34 41.0	
	comp=E,641µm,0.2s							
GRG	**Griva**	**0.67**	**211**	PG		**Pg**	**03 34 30.8**	**+0.2**
GRG				SG		**Sb**	**03 34 40.1**	**-0.6**
SRS	**Serrai**	**0.69**	**126**	P		**Pg**	**03 34 30.8**	**-0.2**
SRS				S		**Sg**	**03 34 40.1**	**0.0**
SRS	**Serrai**	**0.69**	**126**	P		**Pg**	**03 34 30.7**	**-0.3**
SRS				S		**Sg**	**03 34 40.0**	**0.0**
SRS				AML	AML		03 34 40.6	
	comp=N,279µm,0.5s							
SRS				AML	AML		03 34 41.5	
	comp=E,381µm,0.1s							
NVR	**Nevrokopi**	**0.78**	**103**	P		**Pb**	**03 34 33.3**	**+0.1**
NVR				S		**Sb**	**03 34 43.5**	**-0.3**
	comp=E,162nm,0.3s							
NVR	**Nevrokopi**	**0.78**	**103**	P		**Pg**	**03 34 32.8**	**+0.2**
NVR				S		**Sb**	**03 34 43.7**	**-0.1**
NVR				AML	AML		03 34 48.0	
	comp=E,319µm,0.3s							
NVR				AML	AML		03 34 48.9	
	comp=N,294µm,0.2s							
SOH	**Sokhos**	**0.80**	**152**	P		**Pg**	**03 34 33.2**	**+0.1**
SOH				S		**Sb**	**03 34 44.3**	**-0.2**
	comp=N,375nm,0.3s							
SOH	**Sokhos**	**0.80**	**152**	P		**Pg**	**03 34 32.6**	**-0.5**
SOH				S		**Sb**	**03 34 43.8**	**-0.7**
SOH				AML	AML		03 34 45.5	
	comp=N,768µm,0.4s							
SOH				AML	AML		03 34 46.1	
	comp=E,722µm,0.2s							
THE	**Thessaloniki**	**0.90**	**175**	P		**Pg**	**03 34 34.8**	**-0.1**
THE	**Thessaloniki**	**0.90**	**175**	P		**Pg**	**03 34 34.9**	**-0.1**
THE				S		**Sb**	**03 34 46.8**	**-0.5**
HORT	**Hortiatis**	**0.95**	**169**	P		**Pg**	**03 34 35.8**	**-0.1**
HORT	**Hortiatis**	**0.95**	**169**	P		**Pg**	**03 34 35.8**	**-0.1**
HORT				S		**Sb**	**03 34 48.7**	**0.0**
HORT	**Hortiatis**	**0.95**	**169**	PG		**Pg**	**03 34 35.7**	**-0.1**
HORT				SG		**Sb**	**03 34 48.9**	**+0.1**
BOSS	**Bosilegrad**	**1.01**	**344**	*e*Pg		**Pb**	**03 34 37.3**	**+0.2**
BOSS				*e*Sg		**Sb**	**03 34 50.8**	**+0.4**
VTS	**Vitosha**	**1.12**	**14**	P		**Pb**	**03 34 38.9**	**-0.3**
VTS	**Vitosha**	**1.12**	**14**	*e*Pg		**Pb**	**03 34 39.0**	**-0.3**
VTS				*e*Sg		**Sb**	**03 34 52.8**	**-1.1**
PLG	**Polygyros**	**1.24**	**159**	P		**Pn**	**03 34 40.8**	**-0.2**
PLG				S		**Sn**	**03 34 58.0**	**+0.3**
	comp=E,68nm,0.4s							
PLG	**Polygyros**	**1.24**	**159**	P		**Pn**	**03 34 40.7**	**-0.2**
FNA	**Florina**	**1.34**	**237**	P		**Pb**	**03 34 43.2**	**+0.4**
FNA				S		**Sg**	**03 35 02.0**	**+1.1**
	comp=E,62nm,0.6s							
FNA	**Florina**	**1.34**	**237**	P		**Pb**	**03 34 43.3**	**+0.4**
FNA				S		**Sg**	**03 35 01.8**	**+1.0**
FNA	**Florina**	**1.34**	**237**	PN		**Pb**	**03 34 42.7**	**-0.2**
KAVA	**Kavala**	**1.36**	**113**	P		**Pb**	**03 34 43.1**	**0.0**
KAVA				S		**Sg**	**03 35 01.4**	**+0.1**
	comp=E,122nm,0.4s							
KAVA	**Kavala**	**1.36**	**113**	P		**Pb**	**03 34 43.1**	**0.0**
LIT	**Litokhoron**	**1.45**	**191**	P		**Pn**	**03 34 43.7**	**-0.2**
OUR	**Ouranopolis**	**1.47**	**144**	P		**Pb**	**03 34 44.9**	**0.0**
OUR	**Ouranopolis**	**1.47**	**144**	PN		**Pn**	**03 34 43.8**	**-0.2**
PLD	**Plovdiv**	**1.50**	**67**	PN		**Pb**	**03 34 45.0**	**-0.4**
BARS	**Barje**	**1.50**	**329**	*e*Pg		**Pb**	**03 34 45.7**	**+0.1**
BARS	**Barje**	**1.50**	**329**	*e*Pn		**Sn**	**03 35 01.3**	**-2.9**
BARS				*e*Sg		**Sg**	**03 35 06.0**	**+0.1**
THAS	**Thassos island**	**1.68**	**123**	P		**Pn**	**03 34 47.1**	**+0.1**
THAS	**Thassos island**	**1.68**	**123**	P		**Pn**	**03 34 47.1**	**+0.1**
ZAPS	**Zavoj**	**1.75**	**355**	*e*Pg		**Pg**	**03 34 50.9**	**-0.3**
ZAPS				*e*Sg		**Sb**	**03 35 13.3**	**+1.4**
NEST	**Nestorio**	**1.77**	**231**	P		**Pb**	**03 34 49.8**	**-0.2**
KDZ	**Kurdzhali**	**1.92**	**86**	PN		**Pn**	**03 34 50.1**	**-0.3**
RDO	**Rodhopi**	**2.06**	**100**	PN		**Pn**	**03 34 52.4**	**+0.3**
SELS	**Selova**	**2.12**	**323**	*e*Pg		**Pb**	**03 34 57.4**	**+1.2**
SELS				*e*Sg		**Sg**	**03 35 26.2**	**+0.3**
BOVS	**Bovan**	**2.27**	**338**	*e*Pg		**Pb**	**03 34 59.3**	**+0.7**
BOVS				*e*Sg		**Sg**	**03 35 30.6**	**+0.1**
ZAGS	**Zajecar**	**2.33**	**349**	*e*Pg		**Pb**	**03 34 59.2**	**-0.4**
ZAGS				*e*Sg		**Sg**	**03 35 31.3**	**-1.1**
AOS	**Alonnisos**	**2.48**	**161**	PN		**Pn**	**03 34 57.9**	**-0.1**
ALN	**Alexandroupoli**	**2.49**	**104**	PN		**Pn**	**03 34 58.5**	**+0.4**
AGG	**Agios Georgios**	**2.54**	**189**	P		**Pn**	**03 34 59.6**	**+0.7**
AGG	**Agios Georgios**	**2.54**	**189**	PN		**Pn**	**03 34 59.2**	**+0.4**
GADA	**Gvkgeada**	**2.67**	**119**	PN		**Pn**	**03 35 01.1**	**+0.5**
GRUS	**Gruza**	**2.84**	**327**	*e*Pg		**Pb**	**03 35 09.2**	**+0.9**
GRUS				*e*Sg		**Sg**	**03 35 49.4**	**+0.7**
IVAS	**Ivanjica**	**2.86**	**317**	*e*Pg		**Pb**	**03 35 09.8**	**+1.1**
IVAS				*e*Sg		**Sg**	**03 35 50.8**	**+1.3**
UKOP	**Uzunkopru-Edir**	**2.87**	**97**	PN		**Pn**	**03 35 04.5**	**+1.1**
ERIK	**Erikli-Kesan**	**2.89**	**106**	PN		**Pn**	**03 35 04.2**	**+0.5**
EDRB	**Edirne**	**2.93**	**82**	PN		**Pn**	**03 35 05.0**	**+0.8**
TRUS	**Trudelj**	**3.24**	**327**	*e*Pn		**Pn**	**03 35 11.8**	**+3.4**
TRUS				*e*Sg		**Sg**	**03 36 00.5**	**-1.1**
SIGR	**SIGRI**	**3.26**	**134**	PN		**Pn**	**03 35 09.3**	**+0.6**
DIVS	**Divibare**	**3.32**	**322**	*e*Pn		**Pn**	**03 35 11.8**	**+2.1**
DIVS				*e*Sg		**Sg**	**03 36 04.2**	**-0.1**
BBLS	**Lazići**	**3.45**	**314**	*e*Sg		**Sg**	**03 36 09.0**	**+0.5**

IDC ***13*** *03:56:32.2±2.7, 10°.27S×161°.10E, h80km±22km, mb3.4/3, mb1 3.7/4, mb1mx3.4/33, mbtmp3.7/4, Error ellipse: s-maj=31.1km s-min=25.1km az=63.0*

ISC 13 03:56:31.0±1.4, 10°.2S±0°.1×161°.2E±0°.1, h62km, n7, σ1§66/8, mb3.4/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	**Honiara**	**1.47**	**300**	P		**Pn**	**03 56 56.2**	**+0.8**
	58nm,0.3s,baz=236,slow=2.4,SNR=7.3							
HNR				S		**Sn**	**03 57 14.5**	**+0.8**
	356nm,0.3s,baz=172,slow=22,SNR=15							
HNR	**Honiara**	**1.47**	**300**	*e*P		Pn	03 56 49.0	-6.4
HNR				*i* S		**Sn**	**03 57 13.0**	**-0.7**
DZM	**Mont Dzumac**	**12.84**	**158**	P		**Pn**	**03 59 31.3**	**+0.6**
	0.3nm,0.3s,baz=39,slow=10,SNR=7.8							
CTA	**Charters Tower**	**17.48**	**234**	P		**P**	**04 00 33.1**	**+1.9**
	0.4nm,0.3s,baz=62,slow=15,SNR=4.2							
WRA	**Warramunga Arr**	**27.69**	**246**	P		**P**	**04 02 12.1**	**-1.5**
	1.9nm,0.7s,baz=76,slow=8.9,SNR=9.8							
ASAR	**Alice Springs**	**29.31**	**239**	P		**P**	**04 02 25.6**	**-2.4**
	0.5nm,0.6s,baz=64,slow=9.4,SNR=4.9							
ILAR	**Eielson Array**	**84.16**	**20**	P		**P**	**04 08 54.9**	**-0.2**
	0.1nm,0.5s,baz=235,slow=5.3,SNR=4.5							

SNET ***13*** *04:00:55.1±3.2, 19°.73N×66°.33W, h0km±60km*
UCR ***13*** *04:01:01.6±2.3, 19°.23N×66°.68W, h20km±999km, mb6.4(NEIC)*
MOS ***13*** *04:01:02.4±1.2, 18°.98N×66°.94W, h23km, mb6.3/61, MS6.2/55, Error ellipse: s-maj=6.8km s-min=4.7km az=70.6*
IDC ***13*** *04:01:02.2±1.2, 18°.94N×66°.91W, h12km±7km, mb5.5/36, mb1 5.6/38, mb1mx5.6/38, mbtmp5.6/38, ML5.4/2, MS6.1/39, Ms1 6.1/39, ms1mx6.1/43, Error ellipse: s-maj=8.0km s-min=6.8km az=83.0*
OSPL ***13*** *04:01:03.1±2.6, 19°.16N×66°.75W, h14km±16km, ML5.9, MW6.1*
NEIC ***13*** *04:01:03.2±2.5, 19°.04N±0°.03×66°.81W±0°.03, h20km±1km, mb6.3/667, Ms_20 6.2/758, Mwb6.2/71, Mwc6.3/107, Mww6.4, Md6.4/57(RSPR), Mwc6.4(GCMT), Error ellipse: s-maj=5.8km s-min=5.2km az=354.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr1.08; Mθθ-1.45; Mθφ0.37; Mrθ-0.75; Mφφ0.90; Mφr1.96; Fault plane solution: Mo2.63000×10¹⁸ NP1:φs80.67000°, δ31.71000°, λ26.48000°. NP2:φs327.71000°, δ76.45000°, λ118.94000°. Principal axes: T 2.7179, Plg50.0000°, Azm270.0000°; N -0.1855, Plg28.0000°, Azm140.0000°; P -2.5324, Plg26.0000°, Azm35.0000°;*
BGR ***13*** *04:01:04.6±0.0, 18°.88N×66°.84W, h26km, mb6.6, mB_BB6.8, Ms6.4*
BJI ***13*** *04:01:05.0±0.0, 19°.01N×66°.86W, h30km, mB6.2/57

IGPR InterUniversit 1.25 145 Sb 04 01 42.7 -0.6
PDPR Patillas Dam, 1.26 140⇑ eP Pn 04 01 26.4 +0.3
PDPR eS Sb 04 01 43.1 -0.4
PDPR Patillas Dam, 1.26 140⇑ eP Pb 04 01 26.9 -0.7
PDPR Patillas Dam, 1.26 140 Pn 04 01 26.3 +0.3
PDPR Patillas Dam, 1.26 140 Sb 04 01 43.1 -0.4
HUMP Col San Antoni 1.28 131⇑ eP Pn 04 01 27.0 +0.6
HUMP Col San Antoni 1.28 131⇑ eP Pn 04 01 26.5 +0.1
HUMP eS Sb 04 01 43.5 -0.8
HUMP Col San Antoni 1.28 131 Pn 04 01 26.1 -0.3
HUMP Col San Antoni 1.28 131 Sb 04 01 43.5 -0.8
PCDR Punta Cana, DR 1.51 252⇑ eP Pb 04 01 30.8 -1.2
PCDR eS Sb 04 01 50.6 -0.2
PCDR Punta Cana, DR 1.51 252⇑ eP Pb 04 01 31.4 -0.6
PCDR Punta Cana, DR 1.51 252 i P Pb 04 01 30.9 -1.0
PCDR eS Sn 04 01 48.2 +0.1
PCDR IAML 04 02 01.5
comp=Z,156µm,1.2s
PCDR Punta Cana, DR 1.51 252 Pb 04 01 30.8 -1.2
PCDR Punta Cana, DR 1.51 252 Sb 04 01 50.6 -0.2
MTP Monte Pirata 1.53 125⇑ eP Pn 04 01 30.3 +0.5
MTP Monte Pirata 1.53 125 eS Sn 04 01 48.7 0.0
MTP Monte Pirata 1.53 125 Pn 04 01 29.4 -0.4
MTP Monte Pirata 1.53 125 Sn 04 01 48.7 0.0
STVI Saint Thomas 1.92 109⇑ eP Pn 04 01 34.6 -0.5
STVI eS Sn 04 01 57.5 -0.8
STVI Saint Thomas 1.92 109⇑ eP Pn 04 01 35.0 -0.2
STVI Saint Thomas 1.92 109 Pn 04 01 34.2 -1.0
STVI Saint Thomas 1.92 109 Sn 04 01 57.4 -0.9
TBVI Tortola 2.21 105⇑ eP Pn 04 01 38.7 -0.4
TBVI Tortola 2.21 105 Pn 04 01 38.7 -0.4
SDD Santo Domingo 2.93 260 i P Pn 04 01 50.5 +1.4
SDD eS Sn 04 02 25.9 +2.7
SDD Santo Domingo 2.93 260 Pn 04 01 50.5 +1.4
BANI BANI 3.36 260 i P Pn 04 01 56.4 +1.3
SABA Saba 3.71 111 eP Pn 04 02 00.2 +0.6
SABA Saba 3.71 111 eP Pn 04 02 00.5 +0.8
SABA Saba 3.71 111 eS Sn 04 02 45.7 +3.4
SABA Saba 3.71 111 Pn 04 02 00.9 +1.3
SMRT St. Maarten 3.72 104 eP Pn 04 01 59.9 0.0
SMRT St. Maarten 3.72 104 eP Pn 04 02 00.4 +0.5
SMRT eS Sn 04 02 43.3 +0.6
SMRT St. Maarten 3.72 104 Pn 04 01 59.9 0.0
SEUS St. Eustatius 3.98 111 eP Pn 04 02 04.4 +0.9
SEUS St. Eustatius 3.98 111 eP Pn 04 02 05.1 +1.6
SEUS St. Eustatius 3.98 111 eS Sn 04 02 53.8 +4.6
SEUS St. Eustatius 3.98 111 Pn 04 02 04.8 +1.3
LOBA1 Barahona 4.09 258 i P Pn 04 02 07.1 +2.1
LOBA1 IAML 04 03 13.3
comp=Z,11µm,0.5s
SDDR Presa de Saban 4.18 271 i P Pn 04 02 07.5 +1.2
SDDR IAML 04 03 17.9
comp=Z,53µm,1.2s
SKI Saint Kitts 4.26 112 eP Pn 04 02 09.3 +2.0
SKI Saint Kitts 4.26 112 eS Sn 04 02 59.8 +3.8
LONE1 Neyba 4.34 264 i P Pn 04 02 09.4 +0.9
LONE1 IAML 04 03 26.0
comp=Z,9µm,0.6s
NVDO Nevis, Disaste 4.45 114 eP Pn 04 02 10.8 +0.9
NEV Hard Times 4.49 114 eP Pn 04 02 14.7 +4.2
NEV Hard Times 4.49 114 eS Sb 04 03 14.5 -1.7
GRTK Grand Turk 4.72 303 i P Pn 04 02 11.2 -2.5
GRTK eS Sn 04 03 02.2 -5.2
GRTK IAML 04 03 31.0
comp=Z,14µm,1.6s
GRTK Grand Turk 4.72 303 Pn 04 02 11.0 -2.7
LOPE2 Hotel El Peder 4.72 259 i P Pn 04 02 13.6 -0.1
LOPE2 IAML 04 03 38.3
comp=Z,10µm,0.7s
MLYT Lee's Yard 4.99 116 eP Pn 04 02 19.4 +2.0
MLYT Lee's Yard 4.99 116 eS Sn 04 03 20.2 +6.0
ANWB Willy Bob 5.00 104 eP Pn 04 02 16.1 -1.4
ANWB Willy Bob 5.00 104 eP Pn 04 02 17.8 +0.2
ANWB Willy Bob 5.00 104 eS Sn 04 03 17.7 +3.3
ANWB Willy Bob 5.00 104 Pn 04 02 16.1 -1.4
BPA Boggy Peak 5.15 111 eP Pn 04 02 21.9 +2.4
BPA Boggy Peak 5.15 111 eS Sn 04 03 22.7 +4.7
NQBME Bureau des Min 5.16 266 Pn 04 02 21.2 +1.5
NQWLB Fermate 5.18 265 Pn 04 02 21.4 +1.2
JAKH Jacmel 5.41 263 IAML 04 04 06.8
comp=Z,5µm,2.6s
JAKH Jacmel 5.41 263 Pn 04 02 22.6 -0.5
LGNH Logne 5.46 266 i P Pn 04 02 24.7 +1.0
LGNH IAML 04 04 12.3
comp=Z,7µm,1.5s
ABD La Joyeuse, An 5.71 115 eP Pn 04 02 28.6 +1.4
CBE Ff, Capester 5.80 119 eP Pn 04 02 30.0 +1.5
TDBA Terre de Bas, 5.80 121 eP Pn 04 02 30.4 +0.8
DEG La Desirade 6.14 115 eP Pn 04 02 31.9 -1.4
H05N1 Guadeloupe/Mar 6.15 115 Pn Pn 04 02 34.8 +1.5
H05N1 Sn Sn 04 03 45.1 +2.5
MDPO Dominica; Chan 6.19 122 eP Pn 04 02 36.0 +2.2
BBL Barber's Block 6.20 123 eP Pn 04 02 35.7 +1.6
DWS Wesley 6.31 122 eP Pn 04 02 39.6 +4.2
DWS Wesley 6.31 122 eS Sn 04 03 53.8 +7.4
MDN Morne-Daniel 6.38 124 eP Pn 04 02 39.9 +3.4
DPMT Pointe Michel 6.43 124 eP Pn 04 02 40.8 +3.6
DBCT Belle View Cho 6.45 124 eP Pn 04 02 40.6 +3.2
PCM Pelee Case Pet 6.82 127 eP Pn 04 02 43.3 +0.7
SVN Savane Anatole 6.84 126 eP Pn 04 02 43.7 +0.9
CXM Morne La Croix 6.86 126 eP Pn 04 02 44.5 +1.3
PML Morne Lenard 6.87 127 eP Pn 04 02 44.7 +1.6
GBMF Grand Be 6.87 127 eP Pn 04 02 44.7 +1.4
BAMF Morne Balai 6.87 126 eP Pn 04 02 44.3 +1.0
FDF Fort de France 6.92 127 P Pn 04 02 42.7 -1.2
FDF Fort de France 6.92 127 eP Pn 04 02 44.6 +0.7
FDF Fort de France 6.92 127 eP Pn 04 02 45.8 +1.8
FDF Fort de France 6.92 127 eS Sn 04 04 12.4 +11
FDF Fort de France 6.92 127 Pn Pn 04 02 42.7 -1.2
ILAM Ilet Lapin Mar 7.11 125 eP Pn 04 02 49.2 +2.8
ZAM Aeronautique 7.11 127 eP Pn 04 02 47.2 +0.7
BIM Bigot 7.12 128 eP Pn 04 02 47.9 +1.3
TRMF Trois Ilets 7.12 128 eP Pn 04 02 47.6 +0.9
LPMF Morne Lapointe 7.16 127 eP Pn 04 02 48.3 +1.1
MPOM Morne Pois Mar 7.32 127 eP Pn 04 02 51.0 +1.6
SLBI Saint Lucia, B 7.51 130 eP Pn 04 02 53.5 +1.5
SLBI Saint Lucia, B 7.51 130 eS Sb 04 04 30.1 -13
SLB Belfond 7.59 132 eP Pn 04 02 57.3 +4.1
SVV Soufriere Volc 7.83 135 eP Pn 04 03 00.5 +4.1
GTBY Guantanamo Bay 7.83 278 i P Pn 04 02 53.6 -2.8
GTBY IAML 04 06 08.5
comp=Z,3µm,4.0s
GTBY Guantanamo Bay 7.83 278 Pn 04 02 54.5 -1.9
GTBY Sn 04 04 19.3 -4.7
SVB Belmont 7.84 136 eP Pn 04 02 58.1 +1.5
SVB Belmont 7.84 136 eS Sb 04 04 49.0 -3.7
SVCV St. Vincent, C 7.91 135 eP Pn 04 03 01.2 +3.7
GRSS Sisters 8.36 142 eP Pn 04 03 07.2 +3.5
GRHS Sauteurs 8.40 142 eP Pn 04 03 08.2 +3.9
GRGR Grenville 8.47 143 eP Pn 04 03 06.7 +1.5
GRGR Grenville 8.47 143 eP Pn 04 03 06.8 +1.6
GRGR Grenville 8.47 143 eS Sb 04 05 04.0 -6.8
GRGR Grenville 8.47 143 Pn 04 03 06.8 +1.6
URIC Uribia, Colomb 8.77 215 eP Pn 04 03 09.4 +0.1
URIC Uribia, Colomb 8.77 215 Pn Pn 04 03 10.4 +1.1
PCRV Puerto La Cruz 9.03 166 Pn Pn 04 03 16.2 +3.3
comp=Z,22nm,0.3s,baz=315,slow=5.7,SNR=51
PCRV Sn Sn 04 04 50.1 -3.4
comp=Z,35nm,0.3s,baz=53,slow=20,SNR=2.4
PLCV Puerto La Cruz 9.05 166 Sn 04 04 50.1 -4.0
BCHC Barbados, Cave 9.07 129 eP Pn 04 03 19.6 +6.2
BCHC Barbados, Cave 9.07 129 eS Sn 04 05 14.8 +20
BBGH Gun Hill 9.12 129 eP Pn 04 03 19.2 +5.1
BBGH Gun Hill 9.12 129 eP Pn 04 03 20.9 +6.8
BBGH Gun Hill 9.12 129 eS Sn 04 05 17.6 +22
BBSP Saint Philip 9.22 128 eP Pn 04 03 20.4 +4.9
BBSP Saint Philip 9.22 128 eS Sn 04 05 18.6 +20
HOJ Hope 9.43 266 i PA Pn 04 03 21.1 +2.8
STH Stony Hill 9.47 266 i PA Pn 04 03 20.0 +1.0
TOSP Speyside 9.79 140 eP Pn 04 03 28.7 +5.4
TOSP Speyside 9.79 140 eS Sn 04 05 24.9 +13
TRN Trinidad (W) 9.83 147 eP Pn 04 03 28.1 +4.2
TRN Trinidad (W) 9.83 147 eS Sn 04 05 15.2 +2.0
PCJ Portland Cotta 9.85 264 i P Pn 04 03 28.0 +3.9
BBJ Bamboo Saint A 9.87 268 i PA Pn 04 03 25.3 +0.8
TBH Brigand Hill 10.15 146 eP Pn 04 03 37.6 +9.4
TBH Brigand Hill 10.15 146 eS Sn 04 05 35.4 +14
MCJ Malvern 10.32 266 i PA Pn 04 03 33.3 +2.6
ORIV Oritupano 10.42 161 eP Pn 04 03 39.9 +8.0
ORIV Oritupano 10.42 161 eS Sn 04 05 31.2 +3.6

SMRC Santa Marta, M 10.53 223 eP Pn 04 03 31.7 -1.8
SDV Santo Domingo 10.69 200 Pn Pn 04 03 38.5 +2.7
comp=Z,23nm,0.3s,baz=67,slow=7.6,SNR=60
SDV Sn Sn 04 05 30.6 -3.9
comp=Z,13nm,0.3s,baz=0.0,slow=20,SNR=2.3
SDV LR LR 04 08 14.1
comp=Z,98µm,21.0s,baz=28,slow=41
SDV ScS ScS 04 16 41.1 -2.2
comp=Z,0.7nm,0.3s,baz=189,slow=19,SNR=7.4
SDV Santo Domingo 10.69 200 eP Pn 04 03 35.9 +0.1
SDV Santo Domingo 10.69 200 Pn Pn 04 03 36.1 +0.3
CODC Agustn Codazz 11.03 216 eP Pn 04 03 38.6 -1.6
ARGC Ariguani, Magd 11.55 219 eP Pn 04 03 48.6 +1.2
SJCC San Jacinto, C 12.10 223 eP Pn 04 03 54.3 -0.7
SJCC San Jacinto, C 12.10 223⇑ iP Pn 04 03 56.1 +1.1
SMLC San Martn de 12.30 216 eP Pn 04 03 56.1 -1.7
OCAC Ocana 12.39 211 eP Pn 04 03 59.0 0.0
PAMC Pamplona, Colo 12.90 207 eP Pn 04 04 08.0 +1.7
TAMC Tame, Arauca 13.37 202 eP Pn 04 04 13.5 +1.2
BBSR BB Station 13.47 8 Pn 04 04 09.9 -3.5
BRRC Barranca, Sant 13.56 210 eP Pn 04 04 14.8 -0.1
LCBC Los crdobas, 13.65 224 eP Pn 04 04 17.6 +1.5
BARC Barichara 13.77 207 eP Pn 04 04 18.7 +0.7
ZARC Zaragoza, Cauc 13.82 215 eP Pn 04 04 18.7 +0.3
URUC San Jos de Ur 13.99 218 eP Pn 04 04 23.1 +2.3
RUSC La Russia 14.36 206 eP Pn 04 04 27.4 +1.2
PTBC PUERTO BERRIO, 14.41 212 eP Pn 04 04 25.4 -1.2
061Z Ochoppi 14.67 300 Pn Pn 04 04 26.4 -3.5
061Z Ochoppi 14.67 300 P Pn 04 04 25.4 -4.5
baz=115,SNR=17
060A Indiantown 14.77 305 Pn Pn 04 04 28.8 -2.5
060A Indiantown 14.77 305 P Pn 04 04 26.5 -4.8
baz=120,SNR=15
DBBC Dabeiba 14.97 219 eP Pn 04 04 35.2 +1.0
UPD2 Meteti 14.99 228⇑ iP Pn 04 04 34.4 +0.1
PRVC Isla de Provid 15.00 250 eP Pn 04 04 34.1 -0.3
SPBC San Pablo de B 15.00 209 eP Pn 04 04 35.2 +0.6
HELC Santa Helena 15.27 215 eP Pn 04 04 37.9 -0.5
HELC Santa Helena 15.27 215⇑ iP Pn 04 04 39.2 +0.9
NORC Norcasia 15.46 211 eP Pn 04 04 40.0 +0.5
PTGC Puerto Gaitan, 15.58 200 eP Pn 04 04 42.9 +0.8
CHIC Chingaza 15.77 206 eP Pn 04 04 45.9 +1.0
CBOC Ciudad Bolivar 15.80 215 eP P 04 04 47.4 -1.3
UPA Univ. de Panam 15.80 233⇑ iP Pn 04 04 45.6 +0.6
ROSC El Rosal 15.84 208 Pn P 04 04 47.5 -1.7
comp=Z,5.8nm,0.3s,baz=20,slow=10,SNR=60
ROSC Sn Sn 04 07 36.6 -3.9
comp=Z,4.5nm,0.3s,baz=30,slow=20,SNR=2.6
ROSC LR LR 04 11 28.8
comp=Z,138µm,19.7s,baz=14,slow=40
ROSC ScS ScS 04 16 56.2 +0.6
comp=Z,0.3nm,0.3s,baz=155,slow=19,SNR=4.0
ROSC El Rosal 15.84 208 eP Pn 04 04 47.1 +1.4
ROSC El Rosal 15.84 208 Pn Pn 04 04 44.8 -0.9
ROSC IAmb IAmb 04 04 55.9
comp=Z,2µm,1.1s
PTAC Punta Ardita, 15.87 224 eP Pn 04 04 45.7 -0.1
BCIP Isla Barro Col 15.91 234 P Pn 04 04 43.8 -2.6
BCIP pmax pmax
comp=Z,6µm,1.9s
BCIP Isla Barro Col 15.91 234 eP Pn 04 04 46.1 -0.2
BCIP Isla Barro Col 15.91 234⇑ iP Pn 04 04 47.0 +0.6
BCIP Isla Barro Col 15.91 234 Pn Pn 04 04 43.8 -2.6
BCIP IAmb IAmb 04 05 05.4
comp=Z,6µm,1.9s
GUY2C Guyana, Caldas 16.00 212 eP Pn 04 04 48.2 +0.3
CVER Cruz Verde, Cu 16.01 207 eP P 04 04 51.9 +0.5
DWPF Disney Wildern 16.13 307 Pn Pn 04 04 45.7 -3.4
DWPF IAmb IAmb 04 05 13.6
comp=Z,2µm,0.8s
DWPF Disney Wildern 16.13 307 P Pn 04 04 45.9 -3.2
baz=121
VILC Villavicencio, 16.22 205 eP Pn 04 04 51.2 +0.8
RREF El Recreo 16.27 212 eP Pn 04 04 51.2 -0.3
SOLC Bahia Solano 16.32 220 eP P 04 04 53.5 -0.8
PLMC San Jose del P 16.75 214 eP Pn 04 04 57.1 +0.1
ORTC Ortega, Tolima 17.08 210 eP Pn 04 05 00.9 -0.3
AZU Azuero 17.13 231⇑ iP Pn 04 05 01.6 -0.1
GUVC San Jose del G 17.29 200 eP P 04 05 07.1 +2.1
YOTC Yotoco, Valle 17.56 213 eP Pn 04 05 07.1 -0.1
656A Willston 17.62 309 Pn Pn 04 05 05.7 -2.0
656A IAmb IAmb 04 05 11.1
comp=Z,1µm,0.6s
CACAO El Cacao, Vera 17.86 231⇑ iP P 04 05 11.7 +0.4
CHGR2 Aguacate 17.86 238⇑ iP P 04 05 11.8 +0.4
GMAL Guarumal, Vera 17.87 233⇑ iP Pn 04 05 11.0 +0.1
Z59A Georgetown, SC 18.02 324 P Pn 04 05 10.5 -2.1
baz=139,SNR=157
Y60A Bolivia 18.05 328 P Pn 04 05 11.4 -1.7
Y60A IAmb IAmb 04 05 34.5
comp=Z,1µm,0.8s
Y60A Bolivia 18.05 328 P Pn 04 05 10.2 -2.8
baz=143,SNR=58
MALC Bahia Malaga 18.06 216 eP P 04 05 16.8 +3.3
MACC Macarena, Meta 18.09 203 eP Pn 04 05 13.5 -0.1
ESPN Las Esperanzas 18.09 251 P Pn 04 05 13.4 -0.3
257A Skidaway Islan 18.15 318 P Pn 04 05 12.0 -2.3
257A Skidaway Islan 18.15 318 P Pn 04 05 11.9 -2.3
baz=132,SNR=94
158A Hollywood 18.17 321 P Pn 04 05 12.5 -2.0
baz=136,SNR=202
BETC Betania 18.25 208 eP Pn 04 05 16.4 +0.7
BCO2 Palmira 18.30 238⇑ iP Pn 04 05 17.7 +1.3
V62A Hyde County Ai 18.36 336 P P 04 05 16.3 -0.3
baz=152,SNR=53
Y59A Loris 18.38 327 P P 04 05 15.7 -1.1
baz=141,SNR=205
BRU2 Volcan 18.39 239⇑ iP Pn 04 05 17.6 +0.2
Z58A St. Stephen 18.39 324 P P 04 05 15.0 -2.0
baz=138,SNR=221
X60A Albert Glenn T 18.40 330 P P 04 05 14.7 -2.4
baz=145,SNR=96
NHSC New Hope 18.43 322 IAmb IAmb 04 05 54.9
comp=Z,2µm,0.9s
NHSC New Hope 18.43 322 P P 04 05 15.9 -1.5
baz=136,SNR=131
W61A Ground Anchor 18.45 333 P P 04 05 15.3 -2.3
baz=148,SNR=65
EDSV San Vito 18.60 239 eP Pn 04 05 21.4 +1.4
157A Early Branch 18.61 320 P P 04 05 18.0 -1.5
baz=134,SNR=152
EDBA Buenos Aires 18.66 241 eP Pn 04 05 22.8 +2.2
W60A Pink Hill 18.66 331 P P 04 05 18.1 -1.9
baz=146,SNR=177
X59A McDuffie Farm, 18.70 328 P P 04 05 19.2 -1.1
baz=143,SNR=56
256A Glennville 18.71 317 P P 04 05 18.6 -2.0
baz=130,SNR=148
Y58A Scranton 18.73 325 IAmb IAmb 04 05 35.5
comp=Z,2µm,0.7s
Y58A Scranton 18.73 325 P P 04 05 19.7 -1.0
baz=139,SNR=180
V61A Roper 18.80 335 P P 04 05 19.9 -1.6
baz=150,SNR=118
EDLM Las Mercedes 18.86 241 eP Pn 04 05 23.1 +0.1
Z57A Bowman 18.87 322 P P 04 05 21.1 -1.2
baz=136,SNR=199
CNNC Cliffs of the 18.90 331 P P 04 05 21.3 -1.3
baz=146,SNR=54
156A Sylvania 18.90 319 P P 04 05 21.8 -0.8
baz=132,SNR=386
EDPN Palmar Norte 18.92 240 eP Pn 04 05 24.6 +0.8
HDC Heredia 18.92 244⇑ iP Pn 04 05 24.3 +0.3
ACON Acoyapa 18.96 251 IAmb IAmb 04 05 51.2
comp=Z,2µm,1.5s
PCON Cinco Dias 19.01 211 eP Pn 04 05 27.0 +1.6
X58A Rowland 19.06 327 IAmb IAmb 04 05 26.6
comp=Z,3µm,1.7s
X58A Rowland 19.06 327 P P 04 05 23.9 -0.3
baz=141,SNR=90
255A Hazlehurst 19.06 316 IAmb IAmb 04 05 29.7
comp=Z,1µm,0.6s
255A Hazlehurst 19.06 316 P P 04 05 23.3 -1.1
baz=129,SNR=234
V60A Jim Taylor Roa 19.07 333 IAmb IAmb 04 05 41.7
comp=Z,1µm,0.6s
V60A Jim Taylor Roa 19.07 333 P P 04 05 23.4 -1.0
baz=148,SNR=41
EDDO Dominical 19.10 242 eP Pn 04 05 27.0 +1.1
W59A Clinton 19.10 330 P P 04 05 24.1 -0.7
baz=144,SNR=24
FORC Fortuna 19.18 246 eP Pn 04 05 27.7 +0.9
CEDE Laguna Cedeo 19.20 246⇑ eP P 04 05 26.6 +0.5
Y57A Sumter 19.21 324 IAmb IAmb 04 05 48.4

comp=Z,1µm,0.6s
Y57A Sumter 19.21 324 P P 04 05 25.8 -0.3
baz=138,SNR=116
U61A Possum Corner 19.22 336 P P 04 05 25.5 -0.6
baz=151,SNR=170
CASO Castillo 19.25 246⇑ eP Pn 04 05 27.2 -0.6
SOTA Rioblanco 19.28 211 eP Pn 04 05 29.4 +0.8
SOTA eP Pn 04 05 29.8 +1.3
Z56A Williston 19.29 321 P P 04 05 26.4 -0.4
baz=134,SNR=73
FLOC Florencia 19.32 207 eP Pn 04 05 28.6 0.0
PTEN Parque Tenorio 19.34 247⇑ eP P 04 05 27.8 +0.2
GR1C Gorgona, Isla 19.36 216 eP Pn 04 05 28.5 -0.5
W58A Raeford 19.37 328 P P 04 05 27.8 +0.1
baz=142,SNR=72
X57A Johnson Farm, 19.39 325 P P 04 05 27.8 -0.1
baz=139,SNR=72
ACAL Aguas Claras 19.41 247 eP P 04 05 29.1 +0.6
V59A Middlesex 19.49 331 P P 04 05 28.3 -0.8
baz=146,SNR=89
155A Kite 19.50 317 P P 04 05 28.8 -0.4
baz=130,SNR=158
JTS Las Juntas de 19.50 246 c iP P 04 05 29.5 +0.1
JTS pmax pmax
comp=Z,904nm,1.0s
JTS MLR MLR
comp=Z,42µm,17.0s
JTS Las Juntas de 19.50 246 P P 04 05 29.7 +0.3
comp=Z,12nm,0.3s,baz=152,slow=1.3,SNR=54
JTS S Sn 04 09 08.8 -0.1
comp=Z,1.3nm,0.3s,baz=19,slow=10.0,SNR=3.3
JTS LR LR 04 12 41.1
comp=Z,44µm,19.2s,baz=130,slow=36
JTS ScS ScS 04 17 02.2 -3.6
comp=Z,0.2nm,0.3s,baz=207,slow=17,SNR=6.2
JTS Las Juntas de 19.50 246⇑ iP P 04 05 29.6 +0.3
JTS Las Juntas de 19.50 246 P P 04 05 29.5 +0.1
JTS IAmb IAmb 04 05 55.2
comp=Z,2µm,1.4s
HORNC Hornillas 19.50 248 eP Pn 04 05 31.5 +0.6
MESS Mesas 19.51 248 eP Pn 04 05 31.0 +0.1
CUI Cuipilapa 19.52 247 eP Pn 04 05 30.6 -0.4
TIGA Tifton 19.52 313 IAmb IAmb 04 05 53.9
comp=Z,4µm,1.6s
TIGA Tifton 19.52 313 P P 04 05 29.9 +0.5
baz=125,SNR=54
COLC Colonia 19.55 248⇑ eP Pn 04 05 31.7 +0.3
GUAB Guayabo de Bag 19.55 248 eP Pn 04 05 31.7 +0.3
BUAI Buenos Aires 19.57 248⇑ eP Pn 04 05 30.9 -0.6
Y56A Pelion 19.57 322 P P 04 05 29.6 -0.4
baz=135,SNR=91
LIM1 Limonal 19.57 248 eP Pn 04 05 32.1 +0.4
MDP Montagnes des 19.58 133 P P 04 05 30.0 -0.1
comp=Z,10.0nm,0.3s,baz=319,slow=11,SNR=48
MDP S S 04 09 01.9 -7.7
comp=Z,2.2nm,0.3s,baz=72,slow=19,SNR=3.7
MDP ScS ScS 04 17 06.5 +0.5
comp=Z,0.2nm,0.3s,baz=52,slow=20,SNR=2.6
254A Abbeville 19.62 314 P P 04 05 30.5 +0.1
baz=127,SNR=256
GPS1 Guardaparques 19.63 248 eP Pn 04 05 33.8 +1.5
U60A Pendleton 19.63 335 P P 04 05 29.5 -1.1
baz=150,SNR=42
GPS2 Hotel Rincn d 19.64 248 eP Pn 04 05 33.5 +1.0
GPS3 Bodega del ICE 19.65 248 eP Pn 04 05 32.2 -0.3
GB1A Borinquen Arri 19.65 248 eP Pn 04 05 34.7 +2.1
BUEV Buena Vista 19.67 248 eP Pn 04 05 32.5 -0.3
Z55A Blythe 19.68 319 P P 04 05 30.6 -0.6
baz=132,SNR=106
BBAC Balboa, Cauca 19.69 212 eP Pn 04 05 32.6 -0.6
LAPC Finca la Perla 19.70 248 eP P 04 05 32.1 +0.5
BIRD Birdtown, Kers 19.72 325 IAmb IAmb 04 05 59.6
comp=Z,1µm,0.9s
U59A Littleton 19.79 333 P P 04 05 31.2 -1.1
baz=148,SNR=36
NY14 Universidad de 19.84 248 eP P 04 05 33.9 +0.8
W57A Gilead 19.86 327 P P 04 05 32.8 -0.2
baz=141,SNR=78
154A Montrose 19.91 316 P P 04 05 33.4 -0.3
baz=129,SNR=189
353A Camilla 19.91 311 P P 04 05 33.9 +0.2
baz=124,SNR=61
X56A White Oak 19.92 324 P P 04 05 33.3 -0.5
baz=137,SNR=76
V58A Windy Hill, Pi 19.93 330 IAmb IAmb 04 05 52.5
comp=Z,2µm,1.6s
V58A Windy Hill, Pi 19.93 330 P P 04 05 33.5 -0.3
baz=144,SNR=91
CRUC La Cruz 19.94 211 eP Pn 04 05 38.3 +2.1
Y55A Saluda 20.00 321 P P 04 05 33.9 -0.8
baz=134,SNR=198
T60A Surry 20.04 336 P P 04 05 33.6 -1.5
baz=152,SNR=138
Z54A Sparta 20.14 318 P P 04 05 36.0 -0.1
baz=131,SNR=79
S61A Accomac 20.15 339 IAMs_20 IAMs_20 04 12 56.8
comp=Z,83µm,19.0s
S61A Accomac 20.15 339 P P 04 05 35.2 -1.0
baz=155,SNR=12
W56A Indian Trail 20.16 326 P P 04 05 35.9 -0.4
baz=139,SNR=44
U58A Oxford 20.16 332 P P 04 05 35.9 -0.4
baz=146,SNR=56
TGUH Tegucigalpa,Un 20.16 259⇑ iP Pn 04 05 37.8 -0.9
TGUH Tegucigalpa,Un 20.16 259 IAMs_20 IAMs_20 04 13 54.5
comp=Z,129µm,19.0s
TEIG Tepich 20.20 277 P P 04 05 37.1 +0.2
TEIG IAmb IAmb 04 05 57.5
comp=Z,2µm,1.2s
TEIG PcP PcP 04 09 54.1 +3.3
T59A Double "B" Far 20.22 335 P P 04 05 36.4 -0.6
baz=149,SNR=117
X55A Graclyn & Ava 20.25 323 P P 04 05 36.8 -0.5
baz=136,SNR=102
PTLC Puerto Leguiza 20.26 203 eP Pn 04 05 40.6 +0.9
253A Americus 20.26 313 P P 04 05 38.0 +0.6
253A S S 04 09 04.0 -19
253A Americus 20.26 313 P P 04 05 37.4 -0.1
baz=126,SNR=48
V57A Coltrane Farms 20.32 329 P P 04 05 37.4 -0.7
baz=142,SNR=124
153A Fort Valley 20.41 315 P P 04 05 39.3 +0.2
baz=128,SNR=21
Y54A Tignall 20.45 320 P P 04 05 39.2 -0.3
baz=132,SNR=164
352A Blakely 20.49 311 IAmb IAmb 04 06 07.0
comp=Z,2µm,1.3s
352A Blakely 20.49 311 P P 04 05 40.0 0.0
baz=123,SNR=113
S60A Water View 20.51 337 P P 04 05 39.8 -0.3
baz=153,SNR=35
U57A Blanch 20.55 330 P P 04 05 40.0 -0.5
baz=144,SNR=102
KMSC Kings Mountain 20.57 324 IAmb IAmb 04 06 00.7
comp=Z,744nm,0.8s
KMSC Kings Mountain 20.57 324 P P 04 05 40.1 -0.7
baz=138,SNR=128
PAULI Pauline 20.60 323 IAmb IAmb 04 06 11.0
comp=Z,595nm,0.7s
T58A Grand View Acr 20.61 333 P P 04 05 40.1 -1.1
baz=147,SNR=54
V56A Mocksville 20.63 327 P P 04 05 40.8 -0.6
baz=141,SNR=65
Z53A Monticello 20.63 317 P P 04 05 41.1 -0.4
baz=129,SNR=233
R61A Willards 20.63 341 P P 04 05 41.2 -0.2
baz=157,SNR=15
TUMC Tumaco 20.64 216 eP Pn 04 05 43.7 -0.5
252A Lumpkin 20.64 312 P P 04 05 41.3 -0.3
baz=124,SNR=109
GOGA Godfrey 20.65 317 P P 04 05 41.9 +0.2
baz=130,SNR=201
X54A Belton 20.73 321 P P 04 05 41.8 -0.8
baz=134,SNR=129
S59A Mechanicsville 20.80 336 P P 04 05 42.8 -0.5
baz=151,SNR=34
LCND La Caada 20.96 257⇑ iP Pn 04 05 46.8 -1.0
S58A Poland Farm, P 20.97 335 IAmb IAmb 04 05 59.4
comp=Z,925nm,0.9s
S58A Poland Farm, P 20.97 335 P P 04 05 44.3 -0.8
baz=149,SNR=63
T57A Hurt 20.97 331 IAmb IAmb 04 06 17.2
comp=Z,2µm,1.5s
T57A IAMs_20 IAMs_20 04 13 32.0
comp=Z,81µm,20.0s
T57A Hurt 20.97 331 P P 04 05 44.6 -0.5
baz=145,SNR=52

R60A	**Leonardtown, M**	**20.99**	**338**	P	**P**	**04 05 45.3**	**0.0**
	baz=153,SNR=56						
U56A	**King**	**20.99**	**328**	IAmb	IAmb	04 06 01.1	
	comp=Z,2µm,1.4s						
U56A	**King**	**20.99**	**328**	P	**P**	**04 05 45.0**	**-0.4**
	baz=142,SNR=57						
W54A	**Cherokee Point**	**21.00**	**323**	P	**P**	**04 05 45.3**	**-0.2**
	baz=136,SNR=64						
Y53A	**Monroe**	**21.01**	**318**	P	**P**	**04 05 45.2**	**-0.4**
	baz=130,SNR=68						
152A	**Waverly Hall**	**21.02**	**314**	IAmb	IAmb	04 05 57.9	
	comp=Z,3µm,1.7s						
152A	**Waverly Hall**	**21.02**	**314**	P	**P**	**04 05 45.7**	**0.0**
	baz=126,SNR=176						
V55A	**Taylorsville**	**21.03**	**326**	IAmb	IAmb	04 06 11.8	
	comp=Z,542nm,0.6s						
V55A	**Taylorsville**	**21.03**	**326**	P	**P**	**04 05 45.1**	**-0.7**
	baz=139,SNR=37						
FAGO	**Alcalda de S**	**21.04**	**259**	ǁ *iP*	**P**	**04 05 48.2**	**+2.1**
R59A	**King George, V**	**21.12**	**337**	P	**P**	**04 05 46.0**	**-0.7**
	baz=152,SNR=54						
Z52A	**Williamson**	**21.13**	**315**	P	**P**	**04 05 47.0**	**+0.2**
	baz=128,SNR=109						
Q61A	**Milford**	**21.13**	**341**	P	**P**	**04 05 46.8**	**-0.1**
	baz=157,SNR=25						
R58B	**Mineral**	**21.20**	**335**	IAmb	IAmb	04 06 20.2	
	comp=Z,646nm,0.8s						
R58B	**Mineral**	**21.20**	**335**	P	**P**	**04 05 47.0**	**-0.6**
	baz=150,SNR=112						
CBN	**Corbin Frederi**	**21.22**	**337**	P	**P**	**04 05 46.9**	**-0.9**
	baz=151,SNR=32						
BLLM	**Bellamira**	**21.24**	**258**	*eP*	**P**	**04 05 51.2**	**+2.9**
X53A	**Estanollee**	**21.26**	**320**	P	**P**	**04 05 48.2**	**-0.1**
	baz=132,SNR=119						
VSM	**San Miguel**	**21.28**	**258**	*eP*	**P**	**04 05 51.1**	**+2.2**
LCY	**Lacayo**	**21.30**	**258**	ǁ *iP*	**P**	**04 05 51.1**	**+2.2**
JUCU	**Jucuarın**	**21.31**	**258**	*i P*	**P**	**04 05 50.6**	**+1.6**
PACA	**Pacayal**	**21.31**	**258**	⇑ *iP*	**P**	**04 05 49.1**	**0.0**
PACA				*eS*	Sn	04 09 54.4	+1.7
Y52A	**Lilburn**	**21.32**	**317**	IAmb	IAmb	04 06 00.7	
	comp=Z,892nm,0.5s						
Y52A	**Lilburn**	**21.32**	**317**	P	**P**	**04 05 48.4**	**-0.5**
	baz=130,SNR=87						
T56A	**Rocky Mt**	**21.36**	**330**	P	**P**	**04 05 49.1**	**-0.2**
	baz=144,SNR=42						
V54A	**Nebo**	**21.37**	**325**	P	**P**	**04 05 49.1**	**-0.4**
	baz=137,SNR=81						
Q60A	**Greensboro**	**21.40**	**341**	P	**P**	**04 05 49.4**	**-0.3**
	baz=156,SNR=69						
U55A	**TA2, Sparta**	**21.44**	**327**	P	**P**	**04 05 50.2**	**-0.1**
	baz=141,SNR=107						
TECA	**Tecapa**	**21.47**	**258**	*eP*	**P**	**04 05 53.0**	**+2.1**
S57A	**Dark Hollow, R**	**21.47**	**333**	IAmb	IAmb	04 06 10.9	
	comp=Z,2µm,1.6s						
S57A				IAMs_20	IAMs_20	04 13 37.2	
	comp=Z,80µm,20.0s						
S57A	**Dark Hollow, R**	**21.47**	**333**	P	**P**	**04 05 50.1**	**-0.4**
	baz=147,SNR=84						
COEB	**Comit de Eme**	**21.49**	**259**	ǁ *iP*	**P**	**04 05 53.5**	**+2.4**
R58A	**Rapidan**	**21.54**	**336**	P	**P**	**04 05 50.6**	**-0.7**
	baz=150,SNR=96						
Q59A	**Harwood**	**21.55**	**339**	P	**P**	**04 05 50.5**	**-0.8**
	baz=154,SNR=99						
ALJI	**Alcalda de J**	**21.58**	**258**	ǁ *eP*	**P**	**04 05 53.8**	**+1.9**
W53A	**Cullowhee**	**21.63**	**321**	P	**P**	**04 05 52.5**	**+0.1**
	baz=134,SNR=57						
S56A	**Natural Bridge**	**21.67**	**332**	P	**P**	**04 05 52.1**	**-0.5**
	baz=146,SNR=55						
BLA	**Blacksburg**	**21.69**	**330**	IAmb	IAmb	04 06 22.1	
	comp=Z,1µm,0.8s						
BLA	**Blacksburg**	**21.69**	**330**	P	**P**	**04 05 52.5**	**-0.4**
	baz=143,SNR=101						
LLGN	**La Laguna**	**21.69**	**261**	⇑ *eP*	**P**	**04 05 53.2**	**+0.1**
X52A	**Dahlonega**	**21.69**	**319**	P	**P**	**04 05 52.4**	**-0.5**
	baz=131,SNR=58						
Z51A	**Franklin**	**21.71**	**315**	IAmb	IAmb	04 06 21.4	
	comp=Z,1µm,1.4s						
P61A	**Hammonton**	**21.72**	**343**	P	**P**	**04 05 52.9**	**-0.2**
	baz=159,SNR=30						
R57A	**Stanardsville**	**21.75**	**335**	P	**P**	**04 05 52.9**	**-0.6**
	baz=149,SNR=60						
V53A	**Saluda**	**21.78**	**323**	P	**P**	**04 05 53.5**	**-0.4**
	baz=135,SNR=150						
T55A	**Pulaski**	**21.79**	**329**	P	**P**	**04 05 53.5**	**-0.5**
	baz=142,SNR=23						
OTAV	**Otavalo**	**21.83**	**213**	P	**P**	**04 05 56.5**	**+1.5**
OTAV				pmax	pmax		
	comp=Z,10µm,2.0s						
OTAV				MLR	MLR		
	comp=Z,70µm,22.0s						
OTAV	**Otavalo**	**21.83**	**213**	*eP*	**P**	**04 05 54.5**	**-0.5**
OTAV				*eS*	**S**	**04 09 57.6**	**+2.5**
OTAV	**Otavalo**	**21.83**	**213**	P	**P**	**04 05 56.5**	**+1.5**
U54A	**Nelsons Funny**	**21.86**	**326**	IAmb	IAmb	04 06 18.5	
	comp=Z,1µm,1.2s						
U54A	**Nelsons Funny**	**21.86**	**326**	P	**P**	**04 05 54.5**	**-0.2**
	baz=139,SNR=50						
GSR	**Geological Sur**	**21.87**	**338**	P	**P**	**04 05 55.5**	**+0.7**
BRAL	**Brewton**	**21.89**	**308**	P	**P**	**04 05 54.9**	**-0.2**
	baz=119,SNR=72						
LFU	**La Fuente**	**21.96**	**260**	*eP*	**P**	**04 05 58.7**	**+2.6**
AEIL	**Aeropuerto Ilo**	**21.98**	**259**	ǁ *iP*	**P**	**04 06 01.7**	**+5.4**
Q58A	**Fox Den Farm,**	**21.98**	**337**	P	**P**	**04 05 55.0**	**-0.9**
	baz=152,SNR=99						
Q58A				S	**S**	**04 09 58.4**	**+1.5**
	baz=152						
Y51A	**Rockmart**	**21.99**	**316**	P	**P**	**04 05 55.4**	**-0.8**
	baz=128,SNR=116						
Y51A				S	**S**	**04 09 57.6**	**+0.3**
	baz=128						
UDBS	**Universidad Do**	**22.01**	**260**	*eP*	**P**	**04 06 02.9**	**+6.3**
MTO3	**Montecristo**	**22.02**	**261**	⇑ *iP*	**P**	**04 05 58.1**	**+1.3**
CUSC	**Alcaldia de Cu**	**22.03**	**260**	*eP*	**P**	**04 05 59.0**	**+2.2**
W52A	**Murphy**	**22.04**	**320**	P	**P**	**04 05 56.5**	**-0.2**
	baz=132,SNR=73						
O61A	**Allentown**	**22.05**	**344**	P	**P**	**04 05 55.9**	**-0.7**
	baz=160,SNR=35						
OPAM	**Oficina de Pla**	**22.05**	**260**	*i P*	**P**	**04 06 00.0**	**+3.0**
P60A	**Greenville**	**22.08**	**342**	P	**P**	**04 05 55.8**	**-1.2**
	baz=157,SNR=25						
UEES	**Universidad Ev**	**22.09**	**260**	ǁ *iP*	**P**	**04 06 00.0**	**+2.6**
UEES				*eP*	**P**	**04 06 00.1**	**+2.7**
UEES				IAML		04 06 03.9	
	comp=Z,440nm,0.9s						
SNET	**Serv Nac Est T**	**22.09**	**260**	⇑ *iP*	**P**	**04 05 58.5**	**+1.1**
SNET	**Serv Nac Est T**	**22.09**	**260**	IAmb	IAmb	04 06 08.4	
	comp=Z,2µm,1.1s						
SDMD	**Soldier's Deli**	**22.10**	**339**	IAmb	IAmb	04 06 20.5	
	comp=Z,2µm,1.6s						
PSUB	**Penn St. - Bra**	**22.14**	**342**	IAmb	IAmb	04 06 34.9	
	comp=Z,2µm,1.5s						
T54A	**Tazewell**	**22.14**	**327**	P	**P**	**04 05 57.5**	**-0.3**
	baz=140,SNR=54						
T54A				S	**S**	**04 10 01.5**	**+1.3**
	baz=140						
P59A	**Jarrettsville**	**22.15**	**340**	P	**P**	**04 05 57.4**	**-0.3**
	baz=155,SNR=34						
P59A				S	**S**	**04 09 58.9**	**-1.1**
	baz=155						
U53A	**Fall Branch**	**22.15**	**325**	P	**P**	**04 05 57.3**	**-0.6**
	baz=137,SNR=110						
U53A				S	**S**	**04 10 00.9**	**+0.7**
	baz=137						
S55A	**Lewisburg**	**22.18**	**330**	P	**P**	**04 05 57.6**	**-0.5**
	baz=144,SNR=69						
Z50A	**Ashland**	**22.18**	**314**	IAmb	IAmb	04 06 19.1	
	comp=Z,1µm,1.2s						
Z50A	**Ashland**	**22.18**	**314**	P	**P**	**04 05 57.7**	**-0.5**
	baz=125,SNR=134						
Z50A				S	**S**	**04 10 01.0**	**+0.1**
	baz=125						
R56A	**Bull Pasture M**	**22.21**	**333**	P	**P**	**04 05 57.9**	**-0.6**
	baz=147,SNR=43						
X51A	**Calhoun**	**22.27**	**318**	P	**P**	**04 05 58.8**	**-0.3**
	baz=130,SNR=28						
UNIC	**Universidad Ca**	**22.30**	**261**	*eP*	**P**	**04 05 59.4**	**-0.3**
P58A	**Pank, Wackersv**	**22.33**	**338**	P	**P**	**04 05 58.3**	**-1.4**
	baz=153,SNR=29						
TKL	**Tuckaleechee C**	**22.33**	**321**	P	**P**	**04 05 59.5**	**-0.2**
	comp=Z,178nm,1.1s,baz=146,slow=9.2,SNR=60						
TKL				S	**S**	**04 09 55.7**	**-7.9**
	comp=Z,187nm,0.6s,baz=60,slow=20,SNR=5.6						
TKL				LR	LR	04 15 56.0	
	comp=Z,51µm,18.2s,baz=140,slow=40						
TKL	**Tuckaleechee C**	**22.33**	**321**	IAmb	IAmb	04 06 27.8	
	comp=Z,1µm,1.2s						
Q57A	**Strasburg**	**22.34**	**336**	P	**P**	**04 05 59.3**	**-0.5**
	baz=150						
Q57A				S	**S**	**04 10 05.1**	**+1.4**
	baz=150						
V52A	**Sevierville**	**22.35**	**322**	IAmb	IAmb	04 06 21.9	
	comp=Z,700nm,0.9s						
V52A	**Sevierville**	**22.35**	**322**	P	**P**	**04 05 59.2**	**-0.8**
V52A	baz=134,SNR=44			S	**S**	**04 10 05.2**	**+1.2**
	baz=134						
M66A	**Nantucket**	**22.37**	**354**	P	**P**	**04 06 02.7**	**+2.7**
	baz=172						
SNJE	**San Jose**	**22.39**	**260**	*eP*	**P**	**04 06 00.8**	**0.0**
SBLS	**San Blas**	**22.41**	**260**	*eP*	**P**	**04 06 03.4**	**+2.3**
CEVE	**Cerro Verde**	**22.42**	**260**	*eP*	**P**	**04 06 03.3**	**+2.2**
RTR	**El Retiro**	**22.42**	**260**	*eP*	**P**	**04 06 03.4**	**+2.4**
R55A	**Marlinton**	**22.42**	**332**	IAmb	IAmb	04 06 39.2	
	comp=Z,1µm,0.9s						
R55A				IAMs_20	IAMs_20	04 13 45.2	
	comp=Z,81µm,18.0s						
R55A	**Marlinton**	**22.42**	**332**	P	**P**	**04 06 00.9**	**+0.1**
	baz=145,SNR=34						
R55A				S	**S**	**04 10 05.9**	**+0.7**
	baz=145						
N63A	**Mattituck**	**22.45**	**349**	P	**P**	**04 06 01.9**	**+0.9**
	baz=166						
MVL	**Millersville**	**22.47**	**341**	IAmb	IAmb	04 06 37.1	
	comp=Z,842nm,1.1s						
MVL				IAMs_20	IAMs_20	04 14 37.3	
	comp=Z,64µm,18.0s						
O60A	**Telford**	**22.49**	**343**	P	**P**	**04 06 02.4**	**+1.0**
	baz=158,SNR=10						
O60A				S	**S**	**04 10 05.9**	**-0.3**
	baz=158						
P57A	**Homestead Farm**	**22.58**	**337**	IAmb	IAmb	04 06 20.4	
	comp=Z,810nm,1.0s						
P57A	**Homestead Farm**	**22.58**	**337**	P	**P**	**04 06 02.1**	**-0.3**
	baz=152,SNR=17						
P57A				S	**S**	**04 10 08.1**	**+0.2**
	baz=152						
T53A	**Wise**	**22.58**	**326**	P	**P**	**04 06 02.2**	**-0.3**
	baz=138,SNR=76						
T53A				S	**S**	**04 10 09.1**	**+0.9**
	baz=138						
N62A	**Caumsett State**	**22.59**	**347**	P	**P**	**04 06 03.7**	**+1.3**
	baz=163						
N62A				S	**S**	**04 10 06.8**	**-1.2**
	baz=163						
S54A	**Dingess, Beckl**	**22.59**	**329**	IAMs_20	IAMs_20	04 13 29.4	
	comp=Z,70µm,20.0s						
S54A	**Dingess, Beckl**	**22.59**	**329**	P	**P**	**04 06 02.0**	**-0.6**
	baz=142,SNR=61						
S54A				S	**S**	**04 10 08.7**	**+0.5**
	baz=142						
W51A	**Cleveland**	**22.59**	**319**	P	**P**	**04 06 02.1**	**-0.4**
	baz=131,SNR=95						
W51A				S	**S**	**04 10 08.8**	**+0.5**
	baz=131						
N61A	**South Mountain**	**22.61**	**345**	P	**P**	**04 06 02.2**	**-0.5**
	baz=161,SNR=17						
N61A				S	**S**	**04 10 07.6**	**-0.7**
	baz=161						
U52A	**Thorn Hill**	**22.61**	**323**	P	**P**	**04 06 02.4**	**-0.4**
	baz=136						
U52A				S	**S**	**04 10 09.8**	**+1.1**
	baz=136						
CPCT	**Cooper Cave**	**22.64**	**320**	IAmb	IAmb	04 06 31.5	
	comp=Z,1µm,0.9s						
Q56A	**Snyder Ridge,**	**22.65**	**334**	IAMs_20	IAMs_20	04 14 14.3	
	comp=Z,73µm,20.0s						
Q56A	**Snyder Ridge,**	**22.65**	**334**	P	**P**	**04 06 03.1**	**-0.1**
	baz=148,SNR=28						
O59A	**Robesonia**	**22.71**	**341**	P	**P**	**04 06 02.9**	**-0.8**
	baz=156,SNR=22						
O59A				S	**S**	**04 10 10.2**	**0.0**
	baz=156						
M65A	**Busby, Falmout**	**22.73**	**353**	P	**P**	**04 06 04.8**	**+0.9**
M65A				IAmb	IAmb	04 06 34.0	
	comp=Z,1µm,0.8s						
M65A	**Busby, Falmout**	**22.73**	**353**	P	**P**	**04 06 05.0**	**+1.2**
	baz=171						
R54A	**Victor**	**22.74**	**330**	P	**P**	**04 06 03.5**	**-0.6**
	baz=143,SNR=18						
R54A				S	**S**	**04 10 12.1**	**+1.3**
	baz=143						
PAL	**Palisades**	**22.75**	**346**	P	**P**	**04 06 02.7**	**-1.5**
	baz=162,SNR=14						
PAL				S	**S**	**04 10 10.5**	**-0.5**
	baz=162						
O58A	**Lewisberry**	**22.77**	**340**	P	**P**	**04 06 03.3**	**-1.1**
	baz=155,SNR=55						
O58A				S	**S**	**04 10 11.5**	**+0.2**
	baz=155						
V51A	**Loudon**	**22.77**	**321**	IAmb	IAmb	04 06 26.4	
	comp=Z,610nm,0.7s						
V51A	**Loudon**	**22.77**	**321**	P	**P**	**04 06 03.7**	**-0.7**
	baz=133,SNR=29						
V51A				S	**S**	**04 10 12.2**	**+0.8**
	baz=133						
M63A	**Gales Ferry**	**22.77**	**350**	P	**P**	**04 06 04.3**	**-0.1**
	baz=167,SNR=37						
M63A				S	**S**	**04 10 10.3**	**-1.0**
	baz=167						
FAME	**Alcalda de S**	**22.78**	**260**	ǁ *iP*	**P**	**04 06 05.8**	**+1.1**
M64A	**Tiverton**	**22.79**	**352**	P	**P**	**04 06 05.7**	**+1.2**
	baz=169,SNR=27						
M64A				S	**S**	**04 10 10.7**	**-0.9**
	baz=169						
PAGS	**Pennsylvania G**	**22.80**	**340**	IAmb	IAmb	04 06 35.6	
	comp=Z,2µm,1.4s						
PAGS				IAMs_20	IAMs_20	04 14 48.0	
	comp=Z,75µm,19.0s						
LRAL	**Lakeview Retre**	**22.81**	**312**	IAmb	IAmb	04 06 26.1	
	comp=Z,1µm,1.2s						
LRAL	**Lakeview Retre**	**22.81**	**312**	P	**P**	**04 06 04.7**	**-0.2**
	baz=123,SNR=135						
LRAL				S	**S**	**04 10 12.7**	**+0.6**
	baz=123						
TZTN	**Tazewell**	**22.82**	**323**	IAmb	IAmb	04 06 35.2	
	comp=Z,1µm,1.1s						
TZTN	**Tazewell**	**22.82**	**323**	P	**P**	**04 06 04.6**	**-0.4**
	baz=136,SNR=73						
TZTN				S	**S**	**04 10 13.4**	**+1.1**
	baz=136						
NBG	**Las Nubes**	**22.89**	**263**	*eP*	**P**	**04 06 10.8**	**+4.6**
S53A	**Williamson**	**22.90**	**328**	P	**P**	**04 06 05.3**	**-0.5**
	baz=140,SNR=46						
S53A				S	**S**	**04 10 14.7**	**+1.0**
	baz=140						
APG	**El Apazote**	**22.90**	**264**	P	**P**	**04 06 06.7**	**+0.4**
	comp=Z,362nm,0.8s,baz=78,slow=9.1,SNR=147						
APG				S	**S**	**04 10 18.2**	**+3.7**
	comp=Z,19nm,0.9s,baz=337,slow=18,SNR=1.8						
APG				ScP	**ScP**	**04 13 33.9**	**+1.8**
	comp=Z,35nm,1.1s,baz=294,slow=6.4,SNR=6.0						
APG				LR	LR	04 15 13.5	
	comp=Z,77µm,21.7s,baz=86,slow=37						
APG				ScS	**ScS**	**04 17 18.7**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=308,slow=19,SNR=2.0						
P56A	**Dayton Farm, R**	**22.91**	**336**	P	**P**	**04 06 05.6**	**-0.3**
	baz=150,SNR=46						
P56A				S	**S**	**04 10 15.7**	**+2.0**
	baz=150						
T52A	**Hallie**	**22.92**	**325**	IAmb	IAmb	04 06 50.1	
	comp=Z,557nm,0.9s						
T52A	**Hallie**	**22.92**	**325**	P	**P**	**04 06 05.4**	**-0.6**
	baz=138,SNR=44						
T52A				S	**S**	**04 10 15.2**	**+1.2**
	baz=138						
N60A	**Cedar Hill Far**	**22.92**	**344**	P	**P**	**04 06 05.6**	**-0.3**
	baz=160,SNR=30						
M62A	**Hamden**	**22.96**	**348**	P	**P**	**04 06 07.6**	**+1.3**
	baz=165,SNR=18						
M62A				S	**S**	**04 10 14.0**	**-0.5**
	baz=165						
W50A	**Signal Mountai**	**22.96**	**318**	IAmb	IAmb	04 06 32.6	
	comp=Z,896nm,1.1s						
W50A	**Signal Mountai**	**22.96**	**318**	P	**P**	**04 06 06.5**	**0.0**
	baz=130,SNR=64						
W50A				S	**S**	**04 10 15.5**	**+0.7**
	baz=130						
U51A	**La Follette**	**22.97**	**322**	P	**P**	**04 06 06.0**	**-0.6**
	baz=134,SNR=45						
Q55A	**Buckhannon**	**22.99**	**333**	P	**P**	**04 06 07.1**	**+0.3**
	baz=146,SNR=22						
Q55A				S	**S**	**04 10 18.2**	**+3.0**
	baz=146						
ODNJ	**Ogdensburg**	**22.99**	**345**	IAmb	IAmb	04 06 53.3	
	comp=Z,537nm,0.8s						
M61A	**Granite Spring**	**23.01**	**347**	P	**P**	**04 06 08.5**	**+1.7**
	baz=163,SNR=12						
M61A				S	**S**	**04 10 14.7**	**-0.8**
	baz=163						
IXG	**Ixpaco**	**23.09**	**262**	*eP*	**P**	**04 06 10.9**	**+2.8**
O57A	**Amberson**	**23.09**	**339**	P	**P**	**04 06 07.7**	**0.0**
	baz=153,SNR=33						
O57A				S	**S**	**04 10 18.2**	**+1.5**
	baz=153						
L64A	**Middleborough**	**23.12**	**352**	P	**P**	**04 06 09.5**	**+1.6**
	baz=170						
L65A	**Cape Cod Natio**	**23.12**	**354**	P	**P**	**04 06 09.3**	**+1.4**
	baz=172						
V50A	**Pikevile**	**23.14**	**320**	P	**P**	**04 06 07.8**	**-0.4**
	baz=131,SNR=49						
V50A				S	**S**	**04 10 17.6**	**-0.1**
	baz=131						
N59A	**State Game Lan**	**23.15**	**343**	P	**P**	**04 06 08.2**	**-0.1**
	baz=158,SNR=16						
L63A	**North Scituate**	**23.15**	**351**	P	**P**	**04 06 09.5**	**+1.3**
	baz=168,SNR=11						
L63A				S	**S**	**04 10 17.5**	**-0.2**
	baz=168						
BRYW	**Bryant College**	**23.20**	**351**	IAmb	IAmb	04 06 29.0	
	comp=Z,499nm,0.8s						
M60A	**Port Jervis**	**23.23**	**345**	P	**P**	**04 06 10.9**	**+1.8**
	baz=161,SNR=14						
P55A	**Reedsville**	**23.31**	**334**	P	**P**	**04 06 10.1**	**+0.2**
	baz=148,SNR=21						
P55A				S	**S**	**04 10 22.4**	**+1.9**
	baz=148						
Q54A	**Coxs Mills**	**23.31**	**332**	IAmb	IAmb	04 06 39.6	
	comp=Z,2µm,1.6s						
Q54A				IAMs_20	IAMs_20	04 14 12.9	
	comp=Z,89µm,19.0s						
Q54A	**Coxs Mills**	**23.31**	**332**	P	**P**	**04 06 10.4**	**+0.5**
	baz=145						
Q54A				S	**S**	**04 10 19.3**	**-1.2**
	baz=145						
R53A	**Hurricane**	**23.32**	**329**	IAmb	IAmb	04 07 02.9	
	comp=Z,460nm,0.7s						
R53A				IAMs_20	IAMs_20	04 15 57.7	
	comp=Z,65µm,18.0s						
R53A	**Hurricane**	**23.32**	**329**	P	**P**	**04 06 10.0**	**0.0**
	baz=141,SNR=22						
R53A				S	**S**	**04 10 19.5**	**-1.1**
	baz=141						
T51A	**Gray**	**23.34**	**324**	P	**P**	**04 06 09.9**	**-0.4**
	baz=135,SNR=32						
T51A				S	**S**	**04 10 21.4**	**+0.3**
	baz=135						
N58A	**Sunbury**	**23.36**	**341**	IAmb	IAmb	04 07 00.5	
	comp=Z,510nm,0.9s						
N58A	**Sunbury**	**23.36**	**341**	P	**P**	**04 06 09.9**	**-0.4**
	baz=156,SNR=16						
N58A				S	**S**	**04 10 21.3**	**+0.2**
	baz=156						
S52A	**Salyersville**	**23.39**	**326**	P	**P**	**04 06 10.3**	**-0.4**
	baz=138,SNR=34						
S52A				S	**S**	**04 10 22.4**	**+0.6**
	baz=138						
FUG	**Fuego 3**	**23.39**	**263**	*eP*	**P**	**04 06 13.7**	**+2.6**
MCWV	**Mont Chateau**	**23.45**	**334**	P	**P**	**04 06 11.3**	**+0.1**
	baz=148,SNR=17						
MCWV				S	**S**	**04 10 24.8**	**+2.2**
	baz=148						
O56A	**Blue Knob Stat**	**23.47**	**337**	IAmb	IAmb	04 06 44.3	
	comp=Z,916nm,1.1s						
O56A	**Blue Knob Stat**	**23.47**	**337**	P	**P**	**04 06 11.8**	**+0.3**
	baz=151,SNR=26						
O56A				S	**S**	**04 10 22.1**	**-1.0**
	baz=151						
U50A	**Jamestown**	**23.48**	**321**	P	**P**	**04 06 10.9**	**-0.7**
	baz=133,SNR=67						
U50A				S	**S**	**04 10 24.1**	**+0.8**
	baz=133						
L62A	**Suffield**	**23.49**	**349**	P	**P**	**04 06 12.5**	**+0.9**
	baz=166						
W49A	**Belvidere**	**23.52**	**317**	P	**P**	**04 06 11.8**	**-0.2**
	baz=128,SNR=67						
W49A				S	**S**	**04 10 24.2**	**+0.3**
	baz=128						
Q53A	**Leroy**	**23.53**	**330**	P	**P**	**04 06 11.6**	**-0.5**
	baz=143,SNR=24						
Q53A				S	**S**	**04 10 23.5**	**-0.5**
	baz=143						
N57A	**Milroy**	**23.55**	**339**	P	**P**	**04 06 11.7**	**-0.5**
	baz=154,SNR=24						
N57A				S	**S**	**04 10 22.9**	**-1.3**
	baz=154						
BCX	**Boston College**	**23.55**	**352**	IAmb	IAmb	04 06 31.8	
	comp=Z,2µm,1.8s						
SSPA	**Standing Stone**	**23.55**	**339**	P	**P**	**04 06 13.1**	**+0.9**
SSPA				IAmb	IAmb	04 06 47.6	
	comp=Z,2µm,1.6s						
SSPA	**Standing Stone**	**23.55**	**339**	IAMs_20	IAMs_20	04 15 09.9	
	comp=Z,63µm,19.0s						
SSPA	**Standing Stone**	**23.55**	**339**	P	**P**	**04 06 12.0**	**-0.3**
	baz=153						
SSPA				S	**S**	**04 10 24.0**	**-0.4**
	baz=153						
WES	**Weston**	**23.62**	**352**	IAmb	IAmb	04 06 47.1	
	comp=Z,1µm,1.4s						
M59A	**Waymart**	**23.64**	**344**	P	**P**	**04 06 12.9**	**-0.2**
	baz=159,SNR=27						
S51A	**Beattyville**	**23.64**	**325**	P	**P**	**04 06 12.2**	**-0.9**
	baz=137,SNR=24						
S51A				S	**S**	**04 10 26.3**	**+0.6**
	baz=137						
R52A	**Catlettsburg**	**23.66**	**328**	P	**P**	**04 06 12.7**	**-0.7**
	baz=140,SNR=16						
R52A				S	**S**	**04 10 26.1**	**-0.1**
	baz=140						
P54A	**Burton**	**23.67**	**333**	P	**P**	**04 06 12.9**	**-0.5**
	baz=146,SNR=17						
P54A				S	**S**	**04 10 28.1**	**+1.9**
	baz=146						
QUA2	**Belchertown**	**23.68**	**350**	IAmb	IAmb	04 06 47.2	
	comp=Z,641nm,0.8s						
V49A	**McMinnville**	**23.70**	**319**	P	**P**	**04 06 13.0**	**-0.7**
	baz=130,SNR=92						
V49A				S	**S**	**04 10 27.3**	**+0.6**
	baz=130						
O55A	**Ligonier**	**23.70**	**336**	P	**P**	**04 06 13.7**	**+0.1**
	baz=149,SNR=12						
O55A				S	**S**	**04 10 26.7**	**-0.1**
	baz=149						
L60A	**Shokan**	**23.76**	**346**	P	**P**	**04 06 14.5**	**+0.2**
	baz=162,SNR=34						
L60A				S	**S**	**04 10 25.7**	**-1.9**
	baz=162						
M58A	**Price's Panora**	**23.77**	**342**	P	**P**	**04 06 14.0**	**-0.3**
	baz=157,SNR=11						
M58A				S	**S**	**04 10 27.0**	**-0.8**
	baz=157						
HRV	**Adam Dziewonsk**	**23.78**	**351**	P	**P**	**04 06 15.2**	**+0.9**
HRV				pmax	pmax		
	comp=Z,2µm,1.8s						
HR

baz=169,SNR=14
K63A S S 04 10 29.7 -0.9
baz=169
Q52A Bidwell 23.96 329 P P 04 06 15.8 -0.4
baz=142,SNR=51
Q52A S S 04 10 32.3 +1.4
baz=142
P53A Whipple 23.97 331 IAMs_20 IAMs_20 04 14 34.4
comp=Z,73µm,20.0s
P53A Whipple 23.97 331 P P 04 06 16.1 -0.1
baz=144,SNR=20
P53A S S 04 10 31.4 +0.3
baz=144
K62A Royalston 24.03 350 IAmb IAmb 04 06 53.9
comp=Z,484nm,0.8s
K62A Royalston 24.03 350 P P 04 06 17.1 +0.3
baz=167
K62A S S 04 10 31.2 -0.8
baz=167
N55A Marion Center 24.07 337 P P 04 06 17.1 -0.1
baz=151,SNR=35
N55A S S 04 10 33.6 +0.8
baz=151
ERG Entre ros, C 24.08 263 eP P 04 06 22.6 +5.1
U49A Red Boiling Sp 24.10 320 P P 04 06 17.3 -0.2
baz=131,SNR=53
U49A S S 04 10 33.7 +0.4
baz=131
S50A Richmond 24.11 324 P P 04 06 17.4 -0.1
baz=136,SNR=34
S50A S S 04 10 34.1 +0.8
baz=136
O54A Avella 24.11 334 IAmb IAmb 04 07 06.6
comp=Z,623nm,0.9s
O54A IAMs_20 IAMs_20 04 15 08.9
comp=Z,82µm,20.0s
O54A Avella 24.11 334 P P 04 06 17.7 +0.2
baz=147,SNR=33
O54A S S 04 10 34.4 +1.1
baz=147
R51A Hillsboro 24.12 326 P P 04 06 17.8 +0.2
baz=138,SNR=43
R51A S S 04 10 34.6 +1.1
baz=138
L59A Walton 24.15 345 IAmb IAmb 04 06 59.6
comp=Z,630nm,1.1s
L59A Walton 24.15 345 P P 04 06 18.3 +0.5
baz=161,SNR=6.4
L59A S S 04 10 34.3 +0.5
baz=161
L58A Harry Jones Me 24.22 344 P P 04 06 19.0 +0.5
baz=159,SNR=16
L58A S S 04 10 35.5 +0.5
baz=159
K61A Williamstown 24.22 348 P P 04 06 19.1 +0.6
baz=165,SNR=12
K61A S S 04 10 35.5 +0.5
baz=165
V48A Smith Brothers 24.26 317 IAmb IAmb 04 06 41.6
comp=Z,741nm,1.3s
K60A Five Rivers En 24.29 347 P P 04 06 19.4 +0.3
baz=164
T49A Edmonton 24.35 322 P P 04 06 19.8 0.0
baz=133,SNR=6.3
T49A S S 04 10 37.7 +0.4
baz=133
BINY Binghamton 24.40 343 P P 04 06 20.3 +0.1
baz=159,SNR=26
BINY S S 04 10 38.5 +0.6
baz=159
M56A Emporium 24.41 339 IAmb IAmb 04 07 04.9
comp=Z,483nm,0.8s
M56A IAMs_20 IAMs_20 04 15 36.6
comp=Z,57µm,19.0s
M56A Emporium 24.41 339 P P 04 06 20.8 +0.6
baz=153,SNR=30
P52A Corning 24.43 331 P P 04 06 20.0 -0.4
baz=143,SNR=19
L57A Andrews Acres 24.46 342 P P 04 06 21.3 +0.6
baz=157,SNR=21
L57A S S 04 10 40.3 +1.4
baz=157
J63A Strafford 24.47 353 P P 04 06 21.9 +1.1
baz=170,SNR=8.7
J63A S S 04 10 39.0 0.0
baz=170
R50A Paris 24.50 325 IAmb IAmb 04 06 47.1
comp=Z,836nm,0.9s
R50A Paris 24.50 325 P P 04 06 21.7 +0.5
baz=137,SNR=53
R50A S S 04 10 40.2 +0.6
baz=137
O53A New Philadelph 24.52 333 P P 04 06 21.5 +0.3
baz=146,SNR=35
O53A S S 04 10 40.7 +0.9
baz=146
J62A Henniker 24.52 351 P P 04 06 22.4 +1.2
baz=169,SNR=7.3
J62A S S 04 10 39.9 +0.2
baz=169
Q51A Peebles 24.54 328 IAmb IAmb 04 07 07.4
comp=Z,723nm,0.8s
Q51A Peebles 24.54 328 P P 04 06 21.5 0.0
baz=140,SNR=39
Q51A S S 04 10 41.9 +1.6
baz=140
M55A Ridgway 24.60 338 P P 04 06 21.9 -0.1
baz=152,SNR=25
M55A S S 04 10 41.3 +0.2
baz=152
N54A Moraine State 24.61 336 IAmb IAmb 04 06 50.8
comp=Z,651nm,1.0s
N54A IAMs_20 IAMs_20 04 15 24.1
comp=Z,64µm,20.0s
N54A Moraine State 24.61 336 P P 04 06 22.5 +0.4
baz=149,SNR=40
N54A S S 04 10 42.2 +0.8
baz=149
K59A Cooperstown 24.65 346 P P 04 06 23.1 +0.6
baz=162,SNR=12
K59A S S 04 10 42.6 +0.5
baz=162
S49A Springfield 24.68 323 P P 04 06 22.9 +0.2
baz=134,SNR=32
S49A S S 04 10 43.6 +1.2
baz=134
O52A Adamsville 24.68 332 IAmb IAmb 04 06 57.2
comp=Z,849nm,1.1s
O52A IAMs_20 IAMs_20 04 15 05.2
comp=Z,77µm,19.0s
O52A Adamsville 24.68 332 P P 04 06 22.7 -0.1
baz=144,SNR=41
O52A S S 04 10 43.5 +0.9
baz=144
Q50A Georgetown 24.73 327 P P 04 06 23.5 +0.3
baz=138,SNR=23
Q50A S S 04 10 44.8 +1.5
baz=138
FFD Franklin Falls 24.73 352 P P 04 06 25.4 +2.3
FFD IAmb IAmb 04 07 12.5
comp=Z,608nm,0.8s
J61A Chester 24.75 350 P P 04 06 24.6 +1.3
baz=167,SNR=25
J61A S S 04 10 44.2 +0.7
baz=167
P51A Williamsport 24.75 329 IAmb IAmb 04 07 01.8
comp=Z,468nm,0.9s
P51A IAMs_20 IAMs_20 04 14 47.2
comp=Z,61µm,20.0s
P51A Williamsport 24.75 329 P P 04 06 23.2 -0.2
baz=141,SNR=44
P51A S S 04 10 44.1 +0.5
baz=141
L56A Greenwood 24.80 341 IAmb IAmb 04 07 16.1
comp=Z,968nm,1.3s
L56A IAMs_20 IAMs_20 04 15 50.8
comp=Z,77µm,18.0s
L56A Greenwood 24.80 341 P P 04 06 23.9 +0.1
baz=155,SNR=24
L56A S S 04 10 44.4 0.0
baz=155
J60A Lant Hill Farm 24.80 349 P P 04 06 24.8 +1.0
baz=165
J60A S S 04 10 45.8 +1.4
baz=165
N53A Lisbon 24.82 334 IAmb IAmb 04 07 01.0
comp=Z,1µm,1.2s
N53A IAMs_20 IAMs_20 04 15 31.8
comp=Z,73µm,20.0s
N53A Lisbon 24.82 334 P P 04 06 24.3 +0.3
baz=147,SNR=59
N53A S S 04 10 45.0 +0.2
baz=147
K58A Earlville 24.84 344 P P 04 06 24.7 +0.6
baz=160,SNR=17
K58A S S 04 10 45.8 +0.9
baz=160
M54A Oil Creek Stat 24.96 337 P P 04 06 25.7 +0.4
baz=150,SNR=32
M54A S S 04 10 47.3 +0.4
baz=150
I64A Boothbay 24.96 355 P P 04 06 26.2 +1.0
baz=174
I64A S S 04 10 47.3 +0.5
baz=174
R49A Shelbyville 24.97 324 IAmb IAmb 04 07 10.1
comp=Z,318nm,0.7s
R49A Shelbyville 24.97 324 P P 04 06 25.8 +0.4
baz=135,SNR=26
R49A S S 04 10 47.8 +0.6
baz=135
VBMS Vicksburg 25.00 306 P P 04 06 26.4 +0.8
baz=116,SNR=46
K57A Scipio Center 25.04 343 P P 04 06 26.7 +0.7
baz=158,SNR=11
K57A S S 04 10 48.4 +0.3
baz=158
HNH Hanover 25.06 351 IAmb IAmb 04 07 24.8
comp=Z,385nm,0.7s
O51A Pataskala 25.06 331 P P 04 06 26.1 -0.1
baz=143,SNR=42
O51A S S 04 10 49.0 +0.4
baz=143
I62A Tamworth 25.09 352 IAmb IAmb 04 07 11.2
comp=Z,523nm,0.8s
I62A Tamworth 25.09 352 P P 04 06 26.7 +0.3
baz=170
I62A S S 04 10 50.1 +1.2
baz=170
L55A Hinsdale 25.12 339 P P 04 06 27.2 +0.5
baz=153,SNR=28
L55A S S 04 10 49.4 -0.1
baz=153
WVT Waverly 25.14 317 P P 04 06 26.9 -0.1
WVT pmax pmax
comp=Z,306nm,0.8s
WVT MLR MLR
comp=Z,51µm,19.0s
WVT Waverly 25.14 317 P P 04 06 26.9 -0.1
WVT Waverly 25.14 317 P P 04 06 26.9 -0.1
baz=127
WVT S S 04 10 49.5 -0.5
baz=127
I63A Otisfield 25.18 354 IAmb IAmb 04 07 18.6
comp=Z,398nm,0.7s
I63A Otisfield 25.18 354 P P 04 06 27.7 +0.6
baz=172,SNR=12
I63A S S 04 10 51.3 +1.0
baz=172
N52A McGinn's Farm, 25.19 333 P P 04 06 27.6 +0.3
baz=145,SNR=17
N52A S S 04 10 50.6 +0.1
baz=145
P50A Jamestown 25.21 328 P P 04 06 28.3 +0.7
baz=140,SNR=46
P50A S S 04 10 52.3 +1.2
baz=140
T47A Sharon Grove 25.22 319 IAmb IAmb 04 07 12.6
comp=Z,1µm,1.5s
J59A Piesco 25.23 347 P P 04 06 28.8 +1.1
baz=163,SNR=9.4
J59A S S 04 10 52.8 +1.5
baz=163
K56A Middlesex 25.24 342 P P 04 06 28.2 +0.5
baz=156
K56A S S 04 10 51.1 -0.3
baz=156
ALLY Alegheny Colle 25.26 336 IAmb IAmb 04 06 57.6
comp=Z,621nm,0.8s
ALLY IAMs_20 IAMs_20 04 16 05.3
comp=Z,61µm,20.0s
I61A Oroboro, Fairl 25.27 351 P P 04 06 28.8 +0.8
baz=168,SNR=11
I61A S S 04 10 52.5 +0.7
baz=168
M53A WI Miller and 25.29 335 P P 04 06 28.6 +0.4
baz=148,SNR=47
M53A S S 04 10 53.2 +1.0
baz=148
OXF Oxford 25.29 312 IAmb IAmb 04 06 48.2
comp=Z,939nm,1.0s
OXF Oxford 25.29 312 P P 04 06 28.5 +0.2
baz=122,SNR=101
ACSO Alum Creek Sta 25.30 330 P P 04 06 28.8 +0.4
baz=142,SNR=35
ACSO S S 04 10 53.7 +1.3
baz=142
J58A Remsen 25.31 346 IAMs_20 IAMs_20 04 16 10.2
comp=Z,54µm,19.0s
J58A Remsen 25.31 346 P P 04 06 29.5 +1.1
baz=161,SNR=9.6
J58A S S 04 10 53.5 +1.0
baz=161
Q49A Aurora 25.33 326 P P 04 06 29.0 +0.4
baz=137,SNR=37
Q49A S S 04 10 53.6 +0.7
baz=137
I60A Shoreham 25.36 349 P P 04 06 29.4 +0.6
baz=166,SNR=51
I60A S S 04 10 54.6 +1.4
baz=166
WVNY West Valley, N 25.38 339 IAmb IAmb 04 07 24.1
comp=Z,504nm,0.9s
WVNY IAMs_20 IAMs_20 04 16 27.2
comp=Z,54µm,19.0s
I59A Olmsteadville 25.42 348 S S 04 10 55.6 +1.4
baz=164
MMNY Mt. Morris Dam 25.44 341 IAmb IAmb 04 07 16.0
comp=Z,515nm,1.1s
MMNY IAMs_20 IAMs_20 04 16 27.9
comp=Z,76µm,18.0s
L54A Sinclairville 25.47 338 P P 04 06 30.2 +0.4
baz=152,SNR=44
L54A S S 04 10 54.5 -0.6
baz=152
K55A Perry 25.49 341 P P 04 06 30.6 +0.5
baz=155,SNR=31
K55A S S 04 10 55.2 -0.2
baz=155
LBNH Lisbon 25.53 352 IAmb IAmb 04 07 18.8
comp=Z,470nm,0.8s
LBNH Lisbon 25.53 352 P P 04 06 30.8 +0.4
baz=169
J57A Williamstown 25.53 344 IAmb IAmb 04 07 26.5
comp=Z,463nm,1.0s
J57A Williamstown 25.53 344 P P 04 06 31.2 +0.8
baz=160,SNR=19
J57A S S 04 10 56.3 +0.3
baz=160
O50A Cable 25.54 329 P P 04 06 30.8 +0.3
baz=141,SNR=26
O50A S S 04 10 56.8 +0.6
baz=141
WCI Wyandotte Cave 25.56 323 P P 04 06 31.0 +0.3
WCI pmax pmax
comp=Z,1µm,1.7s
WCI MLR MLR
comp=Z,37µm,20.0s
WCI Wyandotte Cave 25.56 323 P P 04 06 31.0 +0.3
WCI IAmb IAmb 04 07 15.1
comp=Z,1µm,1.6s
WCI Wyandotte Cave 25.56 323 P P 04 06 30.8 +0.1
baz=133
WCI S S 04 10 57.1 +0.6
baz=133
L53A Girard 25.57 336 P P 04 06 30.8 0.0
baz=149,SNR=16
N51A Ashland 25.57 332 IAmb IAmb 04 07 16.2
comp=Z,1µm,1.6s
N51A IAMs_20 IAMs_20 04 16 15.7
comp=Z,67µm,19.0s
N51A Ashland 25.57 332 P P 04 06 30.6 -0.2
baz=144,SNR=19
N51A S S 04 10 56.6 -0.1
baz=144
K54A Basiliko Farm, 25.59 339 P P 04 06 31.6 +0.7
baz=153,SNR=22
K54A S S 04 10 56.3 -0.6
baz=153
WVL Waterville 25.61 355 IAmb IAmb 04 07 04.9
comp=Z,1µm,1.5s
ERPA Erie 25.61 337 IAmb IAmb 04 07 01.3
comp=Z,572nm,0.7s
ERPA Erie 25.61 337 P P 04 06 31.6 +0.5
baz=150,SNR=16
ERPA S S 04 10 57.5 +0.3
baz=150
J56A Wolcott 25.63 343 IAmb IAmb 04 07 10.4
comp=Z,456nm,0.7s
J56A Wolcott 25.63 343 P P 04 06 31.5 +0.2
baz=158,SNR=8.3
J56A S S 04 10 56.7 -0.8
baz=158
EMMW East Machias 25.65 359 IAmb IAmb 04 07 03.0
comp=Z,419nm,1.0s
H64A Troy 25.65 356 P P 04 06 32.6 +1.2
baz=175,SNR=7.0
H64A S S 04 10 58.5 +0.8
baz=175
M52A Chesterland 25.65 334 IAmb IAmb 04 07 20.2
comp=Z,682nm,0.9s
M52A IAMs_20 IAMs_20 04 16 07.4
comp=Z,71µm,21.0s
M52A Chesterland 25.65 334 P P 04 06 31.6 +0.1
baz=147,SNR=12
M52A S S 04 10 58.0 +0.1
baz=147
H65A Eastbrook 25.66 358 P P 04 06 32.2 +0.7
baz=177
H65A S S 04 10 57.7 -0.1
baz=177
HAL Halifax 25.72 5 IAmb IAmb 04 06 53.1
comp=Z,851nm,1.5s
H66A Whiting 25.72 359 P P 04 06 32.3 +0.2
baz=179,SNR=11
H66A S S 04 10 58.8 -0.1
baz=179
Q48A North Vernon 25.73 324 P P 04 06 32.9 +0.7
baz=135,SNR=57
Q48A S S 04 11 00.0 +0.8
baz=135
H63A New Sharon 25.73 355 P P 04 06 33.4 +1.3
baz=173,SNR=9.7
H63A S S 04 11 00.3 +1.2
baz=173
H62A Milan 25.76 353 P P 04 06 32.5 +0.1
baz=170,SNR=8.2
H62A S S 04 11 01.0 +1.5
baz=170
N50A Nevada 25.81 331 P P 04 06 32.9 0.0
baz=142,SNR=24
N50A S S 04 11 00.5 +0.1
baz=142
H61A Lyndonville 25.82 352 P P 04 06 34.0 +1.0
baz=169,SNR=22
H61A S S 04 11 01.6 +1.1
baz=169
M51A Elyria 25.83 333 P P 04 06 33.1 0.0
baz=145,SNR=6.2
M51A S S 04 10 59.8 -0.9
baz=145
J55A Hilton 25.90 341 IAmb IAmb 04 06 52.2
comp=Z,2µm,1.9s
J55A IAMs_20 IAMs_20 04 16 44.0
comp=Z,72µm,18.0s
J55A Hilton 25.90 341 P P 04 06 33.7 0.0
baz=156,SNR=11
J55A S S 04 11 00.9 -0.9
baz=156
O49A Covington 25.92 328 IAMs_20 IAMs_20 04 15 23.7
comp=Z,56µm,20.0s
O49A Covington 25.92 328 P P 04 06 33.9 -0.1
baz=139,SNR=23
O49A S S 04 11 01.9 -0.3
baz=139
I57A Carthage 25.94 345 P P 04 06 34.3 +0.2
baz=161,SNR=21
I57A S S 04 11 02.5 0.0
baz=161
P48A Milroy 25.95 326 P P 04 06 33.6 -0.6
baz=136,SNR=16
H60A Morristown 25.96 350 P P 04 06 34.8 +0.5
baz=167,SNR=8.5
H60A S S 04 11 04.3 +1.6
baz=167
MEDO Medina 26.01 340 IAMs_20 IAMs_20 04 16 54.9
comp=Z,58µm,19.0s
GGN Saint George 26.05 0 IAmb IAmb 04 07 23.6
comp=Z,527nm,0.8s
H58A Gabriels 26.08 348 P P 04 06 35.9 +0.5
baz=164,SNR=6.0
H58A S S 04 11 05.1 +0.4
baz=164
G65A Princeton 26.14 359 IAmb IAmb 04 07 11.3
comp=Z,619nm,1.2s
G65A Princeton 26.14 359 P P 04 06 36.4 +0.6
baz=178
G65A S S 04 11 05.6 +0.1
baz=178
G63A Kingsbury 26.15 356 P P 04 06 36.3 +0.3
baz=174,SNR=12
G63A S S 04 11 06.5 +0.8
baz=174
J54A Appleton 26.16 340 IAMs_20 IAMs_20 04 16 60.0
comp=Z,61µm,19.0s
J54A Appleton 26.16 340 P P 04 06 36.2 +0.1
baz=154,SNR=6.3
J54A S S 04 11 04.9 -1.1
baz=154
GLAT Glass 26.18 316 IAMs_20 IAMs_20 04 16 52.7
comp=Z,54µm,20.0s
USIN University of 26.19 321 IAmb IAmb 04 07 00.9
comp=Z,892nm,1.1s
H59A Cadyville 26.21 349 P P 04 06 37.2 +0.7
baz=165,SNR=15
H59A S S 04 11 07.1 +0.5
baz=165
G64A Maxfield 26.23 357 P P 04 06 37.3 +0.6
baz=176,SNR=7.0
G64A S S 04 11 06.4 -0.6
baz=176
M50A Fremont 26.26 332 IAmb IAmb 04 07 28.4
comp=Z,489nm,0.8s
M50A IAMs_20 IAMs_20 04 16 37.0
comp=Z,71µm,20.0s
M50A Fremont 26.26 332 P P 04 06 37.2 +0.2
baz=143,SNR=11
M50A S S 04 11 07.1 -0.4
baz=143
PKME Peaks-Kenny Pk 26.27 356 P P 04 06 38.1 +1.0
baz=175
PKME S S 04 11 08.0 +0.4
baz=175
G62A West of Eustis 26.33 354 P P 04 06 39.0 +1.3
baz=172,SNR=15
G62A S S 04 11 09.3 +0.7
baz=172
BLO Bloomington 26.34 324 IAmb IAmb 04 07 21.5
comp=Z,1µm,1.6s
X43A Marvell 26.34 311 P P 04 06 38.2 +0.4
baz=120,SNR=16
LONY Lake Ozonia 26.35 348 IAmb IAmb 04 06 56.8
comp=Z,762nm,1.6s
LONY Lake Ozonia 26.35 348 P P 04 06 38.8 +1.0
baz=163,SNR=20
LONY S S 04 11 09.2 +0.2
baz=163
FRNY Flat Rock 26.37 349 IAmb IAmb 04 06 57.0
comp=Z,565nm,1.3s
H57A Richville 26.38 346 P P 04 06 38.5 +0.5
baz=162,SNR=11
H57A S S 04 11 08.4 -0.9
baz=162
O48A Farmland 26.39 327 P P 04 06 38.0 -0.2
baz=138,SNR=20
O48A S S 04 11 09.2 -0.4
baz=138
N49A Columbus Grove 26.41 330 IAMs_20 IAMs_20 04 16 11.1
comp=Z,63µm,20.0s
N49A Columbus Grove 26.41 330 P P 04 06 38.6 +0.2
baz=141,SNR=5.9
N49A S S 04 11 09.9 0.0
baz=141
G60A Masonville 26.43 351 P P 04 06 38.7 +0.2
baz=168,SNR=17

G60A
baz=168
K52A Tillsonburg 26.45 337 P **P** **04 06 38.6 -0.1**
K52A
baz=149,SNR=9.0
S **S** **04 11 09.9 -0.6**
baz=149
LPAR Lepanto 26.49 313 P **P** **04 06 40.1 +1.0**
G61A St-Isidore-de- 26.50 353 P **P** **04 06 39.1 0.0**
G61A
baz=170,SNR=9.9
S **S** **04 11 12.1 +0.8**
baz=170
PENMO Penman 26.51 316 IAMs_20 IAMs_20 04 17 11.4
comp=Z,51µm,20.0s
PVMO Portageville 26.53 316 IAMs_20 IAMs_20 04 17 12.0
comp=Z,53µm,19.0s
G59A Clarenceville 26.54 350 P **P** **04 06 39.8 +0.4**
baz=166,SNR=12
HENM Henderson Moun 26.56 316 IAMs_20 IAMs_20 04 16 53.7
comp=Z,50µm,19.0s
L50A Kingsville 26.68 333 P **P** **04 06 40.9 +0.1**
baz=145,SNR=12
L50A
baz=145
S **S** **04 11 14.0 -0.1**
CMIG Matias Romero 26.70 270 P **P** **04 06 39.7 -1.5**
comp=Z,31nm,0.7s,baz=73,slow=6.5,SNR=35
CMIG
S **S** **04 11 19.6 +4.7**
comp=Z,5.0nm,0.8s,baz=119,slow=19,SNR=2.3
CMIG
ScP **ScP** **04 13 44.4 +2.0**
comp=Z,60nm,1.2s,baz=93,slow=3.8,SNR=8.8
CMIG
ScS **ScS** **04 17 30.8 -2.5**
comp=Z,1.4nm,0.8s,baz=27,slow=6.8,SNR=3.5
CMIG
LR LR 04 17 45.3
comp=Z,35µm,19.8s,baz=84,slow=38
CCAR Cane Creek 26.70 309 IAmb IAmb 04 07 06.5
comp=Z,1µm,1.1s
F63A Nahmakanta, Br 26.70 357 IAmb IAmb 04 07 18.2
comp=Z,983nm,1.6s
F63A Nahmakanta, Br 26.70 357 P **P** **04 06 40.5 -0.5**
baz=175
F63A
baz=175
S **S** **04 11 13.9 -0.5**
K51A Iona Station 26.70 336 P **P** **04 06 40.5 -0.5**
baz=148,SNR=8.3
K51A
baz=148
S **S** **04 11 13.3 -1.2**
H56A Elgin 26.71 345 P **P** **04 06 40.8 -0.2**
baz=160,SNR=18
H56A
baz=160
S **S** **04 11 13.7 -0.7**
HBAR Harrisburg 26.71 313 P **P** **04 06 42.0 +0.9**
HBAR
IAmb IAmb 04 07 13.7
comp=Z,1µm,1.4s
HBAR
IAMs_20 IAMs_20 04 19 06.9
comp=Z,54µm,19.0s
GBN Guysborough 26.71 8 IAmb IAmb 04 07 03.9
comp=Z,992nm,1.9s
I55A Frankford 26.73 343 P **P** **04 06 40.8 -0.5**
baz=157,SNR=11
I55A
baz=157
S **S** **04 11 13.5 -1.4**
M49A Liberty Center 26.74 331 P **P** **04 06 41.0 -0.4**
baz=142,SNR=14
M49A
baz=142
S **S** **04 11 15.3 +0.1**
G58A Ormstown 26.76 349 P **P** **04 06 41.7 +0.3**
baz=165
G58A
baz=165
S **S** **04 11 16.1 +0.8**
J52A Paris 26.76 338 P **P** **04 06 41.3 -0.2**
baz=150,SNR=16
J52A
baz=150
S **S** **04 11 14.5 -0.9**
N48A Decatur 26.78 328 P **P** **04 06 41.5 -0.2**
baz=139,SNR=17
N48A
baz=139
S **S** **04 11 15.2 -0.5**
F64A Sherman 26.82 358 P **P** **04 06 42.3 +0.2**
baz=177
F64A
baz=177
S **S** **04 11 16.2 -0.1**
LMN Caledonia Moun 26.84 3 IAmb IAmb 04 07 04.6
comp=Z,1µm,1.7s
G57A Newington 26.90 347 P **P** **04 06 43.1 +0.4**
baz=163,SNR=17
G57A
baz=163
S **S** **04 11 16.7 -0.8**
H55A Tweed 26.90 344 P **P** **04 06 43.8 +1.0**
baz=158,SNR=20
H55A
baz=158
S **S** **04 11 17.1 -0.5**
OLIL Olney 26.95 321 IAmb IAmb 04 07 17.9
comp=Z,696nm,1.0s
DELO Deloro Mine 26.99 343 IAmb IAmb 04 07 04.1
comp=Z,1µm,1.9s
S44A Carbondale 27.00 318 IAmb IAmb 04 07 20.9
comp=Z,644nm,0.9s
P46A Rosedale 27.03 324 IAmb IAmb 04 07 27.6
comp=Z,639nm,0.7s
M48A Edgerton 27.10 330 IAMs_20 IAMs_20 04 16 42.3
comp=Z,59µm,20.0s
M48A Edgerton 27.10 330 P **P** **04 06 44.3 -0.3**
baz=140
M48A
baz=140
S **S** **04 11 19.9 -0.9**
F61A St Evariste 27.12 354 P **P** **04 06 44.9 +0.1**
baz=171
N47A Urbana 27.13 328 IAMs_20 IAMs_20 04 16 10.6
comp=Z,53µm,20.0s
N47A Urbana 27.13 328 P **P** **04 06 44.8 -0.1**
baz=138,SNR=46
N47A
baz=138
S **S** **04 11 21.0 -0.3**
L49A Milan 27.15 332 P **P** **04 06 45.1 +0.1**
baz=143,SNR=15
L49A
baz=143
S **S** **04 11 21.9 +0.4**
Z41A Richland Creek 27.18 307 P **P** **04 06 45.7 +0.3**
baz=115,SNR=28
K50A Casco 27.20 334 IAMs_20 IAMs_20 04 16 55.3
comp=Z,65µm,21.0s
K50A Casco 27.20 334 P **P** **04 06 45.1 -0.3**
baz=146,SNR=8.3
K50A
baz=146
S **S** **04 11 22.2 0.0**
PBMO Poplar Bluff 27.23 315 IAMs_20 IAMs_20 04 17 33.4
comp=Z,50µm,18.0s
F59A Saint Guilaume 27.23 351 P **P** **04 06 45.6 -0.1**
baz=168
F60A Warwick 27.23 352 P **P** **04 06 46.3 +0.6**
baz=169,SNR=13
H53A Bobcaygeon 27.32 342 P **P** **04 06 46.2 -0.4**
baz=155,SNR=15
L48A N Adams 27.32 331 P **P** **04 06 46.6 -0.1**
baz=142,SNR=28
L48A
baz=142
S **S** **04 11 24.6 +0.3**
LCAR Lake Charles 27.33 313 IAMs_20 IAMs_20 04 19 26.1
comp=Z,52µm,21.0s
PLVO Plevna 27.33 344 IAMs_20 IAMs_20 04 17 21.7
comp=Z,57µm,19.0s
E64A Bridgewater 27.36 359 P **P** **04 06 47.3 +0.5**
baz=178
I52A Shelburne 27.38 339 P **P** **04 06 47.0 -0.1**
baz=152
E63A Oxbow 27.39 358 P **P** **04 06 47.1 0.0**
baz=177
E63A
baz=177
S **S** **04 11 24.5 -0.7**
F58A St-Lin Laurent 27.41 349 P **P** **04 06 47.1 -0.2**
baz=166
G55A Calabogie 27.44 345 P **P** **04 06 47.6 0.0**
baz=159
G55A
baz=159
S **S** **04 11 24.8 -1.2**
I51A Listowel 27.45 337 P **P** **04 06 47.3 -0.4**
baz=150,SNR=9.4
I51A
baz=150
S **S** **04 11 24.1 -2.1**
M47A Cromwell 27.45 328 P **P** **04 06 47.8 0.0**
baz=139,SNR=5.7
M47A
baz=139
S **S** **04 11 26.2 -0.1**
SFIN Lafayette 27.50 325 IAmb IAmb 04 07 38.9
comp=Z,511nm,1.2s
SFIN Lafayette 27.50 325 P **P** **04 06 47.8 -0.3**
baz=135,SNR=17
SFIN
baz=135
S **S** **04 11 27.2 +0.1**

UALR University of 27.52 310 IAmb IAmb 04 07 11.3
comp=Z,1µm,1.8s
UALR
IAMs_20 IAMs_20 04 19 26.3
comp=Z,56µm,20.0s
E61A Lac Etchemin 27.53 355 P **P** **04 06 48.4 0.0**
baz=172
K49A Clarkson 27.56 333 P **P** **04 06 48.2 -0.5**
baz=144,SNR=15
K49A
baz=144
S **S** **04 11 27.7 -0.3**
E60A Ste Agathe de 27.56 353 P **P** **04 06 48.6 -0.1**
baz=170
WLAR White Oak Lake 27.60 307 IAmb IAmb 04 07 40.7
comp=Z,703nm,1.3s
WLAR
IAMs_20 IAMs_20 04 19 37.5
comp=Z,54µm,18.0s
PQI Presque Isle 27.62 358 IAmb IAmb 04 07 38.6
comp=Z,641nm,1.6s
W41B Gary Mavity, V 27.64 311 P **P** **04 06 49.0 -0.5**
baz=119,SNR=115
SADO Sadowa 27.67 341 P **P** **04 06 49.2 -0.4**
comp=Z,25nm,1.0s,baz=171,slow=3.3,SNR=7.6
SADO
S **S** **04 11 34.1 +4.4**
comp=Z,16nm,0.5s,baz=102,slow=11,SNR=2.5
SADO
ScS **ScS** **04 17 33.9 -2.8**
comp=Z,23nm,1.0s,baz=90,slow=20,SNR=1.9
SADO
LR LR 04 17 59.0
comp=Z,55µm,20.1s,baz=175,slow=37
SADO Sadowa 27.67 341 IAMs_20 IAMs_20 04 17 46.8
comp=Z,79nm,19.0s
L47A Sherwood 27.71 330 P **P** **04 06 49.8 -0.3**
baz=140,SNR=19
L47A
baz=140
S **S** **04 11 30.6 +0.1**
WHAR Wooly Hollow 27.73 311 IAmb IAmb 04 07 14.9
comp=Z,646nm,1.1s
WHAR
IAMs_20 IAMs_20 04 19 12.7
comp=Z,54µm,21.0s
X40A Basin Creek Fa 27.74 309 P **P** **04 06 50.4 0.0**
baz=117,SNR=97
X40A
baz=117
S **S** **04 11 31.2 +0.2**
H52A Wyevale 27.79 340 P **P** **04 06 50.2 -0.5**
baz=153,SNR=10
E59A St. Maurice 27.81 352 P **P** **04 06 51.0 +0.2**
baz=168
E59A
baz=168
S **S** **04 11 31.4 -0.3**
E58A La Victoria 27.81 350 P **P** **04 06 51.0 +0.1**
baz=167,SNR=23
E58A
baz=167
S **S** **04 11 31.7 -0.2**
G53A Haliburton 27.83 342 P **P** **04 06 51.1 0.0**
baz=156,SNR=10
G53A
baz=156
S **S** **04 11 29.9 -2.3**
K48A Perry 27.86 332 P **P** **04 06 51.7 +0.3**
baz=143,SNR=29
K48A
baz=143
S **S** **04 11 32.9 +0.1**
F55A Otter Lake 27.89 346 P **P** **04 06 51.5 -0.1**
baz=160
F55A
baz=160
S **S** **04 11 32.3 -0.9**
J49A Marlette 27.89 334 P **P** **04 06 51.0 -0.7**
baz=145,SNR=6.6
J49A
baz=145
S **S** **04 11 32.5 -0.8**
G54A Lake Saint Pet 27.93 343 P **P** **04 06 52.0 -0.1**
baz=157,SNR=7.1
G54A
baz=157
S **S** **04 11 32.1 -1.8**
D63A Stockholm 27.99 358 P **P** **04 06 52.0 -0.5**
baz=177
D63A
baz=177
S **S** **04 11 34.8 +0.2**
SAML Samuel 28.00 172 P **P** **04 06 52.1 -0.7**
SAML
IAmb IAmb 04 06 56.2
comp=Z,368nm,0.8s
SAML
PcP **PcP** **04 10 04.5 -3.1**
SAML
S **S** **04 11 32.0 -3.3**
D60A Saint Jean D'O 28.05 354 P **P** **04 06 53.4 +0.5**
baz=172,SNR=15
NATX Nacogdoches 28.05 302 P **P** **04 06 54.2 +1.0**
baz=110,SNR=146
NATX
S **S** **04 11 39.1 +3.0**
baz=110
D62A Allapoint, All 28.07 357 IAMs_20 IAMs_20 04 18 27.8
comp=Z,44µm,18.0s
D62A Allapoint, All 28.07 357 P **P** **04 06 52.8 -0.4**
baz=176
D62A
baz=176
S **S** **04 11 35.9 -0.1**
O44A Mansfield 28.10 323 IAmb IAmb 04 07 17.6
comp=Z,562nm,1.1s
J48A Bridge Port 28.12 333 IAmb IAmb 04 07 35.5
comp=Z,371nm,0.7s
J48A
IAMs_20 IAMs_20 04 17 02.0
comp=Z,63µm,19.0s
J48A Bridge Port 28.12 333 P **P** **04 06 53.5 -0.1**
baz=144,SNR=12
J48A
baz=144
S **S** **04 11 35.7 -1.1**
K47A Vermontville 28.15 331 P **P** **04 06 53.5 -0.5**
baz=141,SNR=12
K47A
baz=141
S **S** **04 11 37.2 -0.1**
SLM Saint Louis 28.18 319 IAmb IAmb 04 07 39.2
comp=Z,540nm,0.8s
BATG Bathurst New B 28.22 1 P **P** **04 06 54.7 +0.2**
D59A Saint-Raymond 28.24 353 P **P** **04 06 55.3 +0.6**
baz=170,SNR=8.4
D59A
baz=170
S **S** **04 11 38.7 +0.2**
I49A Point Hope 28.25 335 P **P** **04 06 52.4 -2.4**
I49A
IAMs_20 IAMs_20 04 17 37.4
comp=Z,62µm,21.0s
I49A Point Hope 28.25 335 P **P** **04 06 54.7 -0.1**
baz=147
D61A St Aubert, Com 28.27 355 P **P** **04 06 55.6 +0.7**
baz=173,SNR=6.9
D61A
baz=173
S **S** **04 11 39.8 +0.8**
L46A Eue Claire 28.27 328 IAmb IAmb 04 07 55.2
comp=Z,665nm,1.1s
L46A
IAMs_20 IAMs_20 04 17 27.9
comp=Z,54µm,19.0s
L46A Eue Claire 28.27 328 P **P** **04 06 54.9 -0.2**
baz=138
L46A
baz=138
S **S** **04 11 39.8 +0.5**
E56A St. Veronique 28.29 348 P **P** **04 06 55.6 +0.4**
baz=163
E56A
baz=163
S **S** **04 11 39.8 +0.4**
MIAR Mount Ida 28.32 309 P **P** **04 06 55.9 +0.3**
baz=116,SNR=26
MIAR
baz=116
S **S** **04 11 40.1 -0.1**
ATAH Atahualpa 28.34 205 P **P** **04 06 56.5 +0.2**
comp=Z,647nm,0.9s,baz=14,slow=4.6,SNR=172
ATAH
S **S** **04 11 42.7 +1.2**
comp=Z,14nm,1.0s,baz=51,slow=13,SNR=1.8
ATAH
ScS **ScS** **04 17 44.6 +3.2**
comp=Z,6.4nm,0.9s,baz=90,slow=20,SNR=4.2
ATAH
LR LR 04 19 50.5
comp=Z,75µm,21.7s,baz=15,slow=40
P43A Skaggs, Pawnee 28.38 321 IAmb IAmb 04 07 19.3
comp=Z,495nm,0.8s
E55A Montcerf-Lytto 28.41 347 P **P** **04 06 56.6 +0.4**
baz=161
E55A
baz=161
S **S** **04 11 40.9 -0.4**
ALGO Algonquin Park 28.43 343 P **P** **04 06 56.8 +0.3**
baz=157,SNR=6.4
ALGO
baz=157
S **S** **04 11 40.5 -1.2**
HKT Hockley 28.45 298 P **P** **04 06 58.0 +1.3**
HKT
PcP **PcP** **04 10 12.5 +4.1**
D58A Chemin du LacG 28.46 351 P **P** **04 06 56.6 -0.1**
baz=168,SNR=10
D58A
baz=168
S **S** **04 11 41.2 -0.9**
CCM Cathedral Cave 28.48 317 P **P** **04 06 56.7 -0.3**
CCM
pmax pmax
comp=Z,538nm,1.3s
CCM
MLR MLR
comp=Z,45µm,20.0s

CCM Cathedral Cave 28.48 317 P **P** **04 06 56.7 -0.3**
CCM
IAmb IAmb 04 07 15.9
comp=Z,538nm,1.2s
CCM Cathedral Cave 28.48 317 P **P** **04 06 56.7 -0.3**
baz=125
CCM
S **S** **04 11 41.2 -1.4**
baz=125
J47A Sunmer 28.52 332 IAmb IAmb 04 07 50.6
comp=Z,520nm,1.1s
J47A
IAMs_20 IAMs_20 04 17 25.7
comp=Z,77µm,19.0s
J47A Sunmer 28.52 332 P **P** **04 06 57.5 +0.2**
baz=142,SNR=9.7
J47A
S **S** **04 11 43.2 +0.1**
baz=142
K46A Dorr 28.53 330 P **P** **04 06 57.0 -0.4**
baz=140,SNR=7.1
K46A
S **S** **04 11 43.1 -0.2**
baz=140
D57A Chemin Vers le 28.54 350 P **P** **04 06 57.5 +0.1**
baz=166
D57A
S **S** **04 11 42.4 -0.9**
baz=166
U40A Yellville 28.65 312 IAMs_20 IAMs_20 04 20 23.2
comp=Z,54µm,20.0s
U40A Yellville 28.65 312 P **P** **04 06 58.4 -0.1**
baz=120,SNR=65
U40A
S **S** **04 11 43.7 -1.7**
baz=120
E54A Lac Daplat, Po 28.66 345 P **P** **04 06 58.8 +0.3**
baz=159
E54A
S **S** **04 11 44.4 -0.9**
baz=159
MGMO Mountain Grove 28.66 314 IAmb IAmb 04 07 17.7
comp=Z,766nm,1.1s
MGMO
IAMs_20 IAMs_20 04 20 08.4
comp=Z,43µm,18.0s
D56A ZEC Mazanza, M 28.72 349 P **P** **04 06 59.0 0.0**
baz=164
D56A
S **S** **04 11 44.8 -1.4**
baz=164
E53A Dumoine, Ponti 28.73 344 P **P** **04 06 59.4 +0.3**
baz=158
E53A
S **S** **04 11 45.6 -0.7**
baz=158
LATQ La Tuque 28.73 352 P **P** **04 06 59.4 +0.4**
baz=168,SNR=11
LATQ
S **S** **04 11 44.7 -1.6**
baz=168
W39A Magazine 28.76 310 IAmb IAmb 04 07 22.6
comp=Z,754nm,1.6s
W39A
IAMs_20 IAMs_20 04 20 24.2
comp=Z,45µm,20.0s
W39A Magazine 28.76 310 P **P** **04 07 00.1 +0.6**
baz=117,SNR=64
W39A
S **S** **04 11 50.7 +3.6**
baz=117
I48A Sherman Twp 28.81 334 P **P** **04 06 59.1 -0.7**
baz=145
I48A
S **S** **04 11 47.0 -0.6**
baz=145
D55A Sainte-Anne-du 28.83 348 P **P** **04 06 59.6 -0.3**
baz=163,SNR=12
D55A
S **S** **04 11 47.1 -0.8**
baz=163
HDIL Hopedale 28.84 323 IAmb IAmb 04 07 59.5
comp=Z,813nm,1.2s
HDIL
IAMs_20 IAMs_20 04 16 56.1
comp=Z,46µm,20.0s
HDIL Hopedale 28.84 323 P **P** **04 07 00.0 -0.2**
baz=132,SNR=9.9
HDIL
S **S** **04 11 47.8 -0.5**
baz=132
E52A Mattawa 28.91 343 P **P** **04 07 00.4 -0.2**
baz=156
E52A
S **S** **04 11 47.4 -1.7**
baz=156
F51A Arnstein 28.95 341 P **P** **04 07 00.5 -0.5**
baz=154
F51A
S **S** **04 11 47.3 -2.5**
baz=154
J46A Howard City 28.98 331 P **P** **04 07 01.2 -0.2**
baz=141
I47A Gladwin 29.01 333 IAmb IAmb 04 08 05.7
comp=Z,597nm,1.4s
I47A
IAMs_20 IAMs_20 04 18 12.5
comp=Z,66µm,20.0s
I47A Gladwin 29.01 333 P **P** **04 07 01.6 0.0**
baz=144
H48A Harrisville 29.08 335 P **P** **04 07 02.7 +0.5**
H48A
IAmb IAmb 04 07 48.4
comp=Z,498nm,0.7s
H48A
IAMs_20 IAMs_20 04 18 02.4
comp=Z,58µm,20.0s
H48A Harrisville 29.08 335 P **P** **04 07 02.5 +0.2**
baz=146
D54A Lac Fusel, La 29.21 346 P **P** **04 07 03.4 +0.1**
baz=161,SNR=20
D54A
S **S** **04 11 52.3 -1.6**
baz=161
L44A Lake County Fo 29.21 327 IAmb IAmb 04 07 26.7
comp=Z,394nm,1.0s
L44A Lake County Fo 29.21 327 P **P** **04 07 03.0 -0.4**
baz=136,SNR=8.7
L44A
S **S** **04 11 53.0 -1.1**
baz=136
H47A Mio 29.35 334 P **P** **04 07 04.1 -0.6**
baz=145
I46A Reed City 29.35 332 P **P** **04 07 03.9 -0.7**
baz=142
E51A G1948 Merrick 29.37 342 P **P** **04 07 04.3 -0.5**
baz=155,SNR=8.7
E51A
S **S** **04 11 55.1 -1.3**
baz=155
HHAR Hobbs 29.38 311 IAmb IAmb 04 07 07.4
comp=Z,746nm,1.3s
HHAR
IAMs_20 IAMs_20 04 20 14.5
comp=Z,51µm,22.0s
J45A Montague 29.39 330 P **P** **04 07 06.3 +1.3**
J45A
IAmb IAmb 04 08 08.2
comp=Z,390nm,0.8s
J45A
IAMs_20 IAMs_20 04 18 01.9
comp=Z,47µm,20.0s
J45A Montague 29.39 330 P **P** **04 07 04.7 -0.3**
baz=140
F49A Sandfield 29.51 338 P **P** **04 07 05.5 -0.5**
baz=150
KVTX Kingsville 29.68 292 IAMs_20 IAMs_20 04 21 09.5
comp=Z,57µm,20.0s
G47A Hillman 29.68 335 P **P** **04 07 07.6 0.0**
baz=146,SNR=6.0
G47A
S **S** **04 12 01.3 -0.1**
baz=146
GLMI Grayling 29.70 334 IAmb IAmb 04 07 55.0
comp=Z,563nm,0.9s
GLMI
IAMs_20 IAMs_20 04 18 22.0
comp=Z,56µm,20.0s
GLMI Grayling 29.70 334 P **P** **04 07 07.6 -0.1**
baz=144,SNR=15
H46A Fife Lake 29.72 333 P **P** **04 07 08.0 +0.1**
baz=143,SNR=10
F48A Evansville 29.77 338 P **P** **04 07 07.4 -0.9**
baz=149
F48A
S **S** **04 12 00.9 -1.8**
baz=149
I45A Fountain 29.78 331 P **P** **04 07 09.6 +1.1**
I45A
IAmb IAmb 04 08 09.7
comp=Z,388nm,0.7s
I45A
IAMs_20 IAMs_20 04 18 13.2
comp=Z,71µm,20.0s
I45A Fountain 29.78 331 P **P** **04 07 08.2 -0.3**
baz=141
K43A Burlington 29.80 327 IAmb IAmb 04 08 03.5
comp=Z,404nm,0.9s
D51A Lot 18 Range I 29.84 343 P **P** **04 07 09.4 +0.4**
baz=156,SNR=9.1
D51A
S **S** **04 12 01.9 -1.9**
baz=156
N41A Harden Midland 29.84 322 IAMs_20 IAMs_20 04 19 05.6
comp=Z,43µm,19.0s
L42A Oliver, Polo 30.02 325 IAmb IAmb 04 07 29.9
comp=Z,528nm,1.3s
D50A G1974 Best Tow 30.04 342 P **P** **04 07 10.9 +0.2**
baz=155,SNR=15
435B Jarrell 30.14 299 IAMs_20 IAMs_20 04 21 15.5
comp=Z,46µm,22.0s
435B Jarrell 30.14 299 P **P** **04 07 12.0 +0.2**
baz=106,SNR=128

435B S S 04 12 09.6 +0.8
baz=106
H45A Beulah 30.16 332 P P 04 07 11.8 +0.1
baz=142
E48A Lockeyer 30.17 339 P P 04 07 11.9 0.0
baz=150,SNR=8.2
E48A S S 04 12 08.3 -0.7
baz=150
PAYG Puerto Ayora 30.18 232 P P 04 07 09.6 -2.6
PAYG Puerto Ayora 30.18 232 IAMs_20 IAMs_20 04 18 25.4
comp=Z,45µm,20.0s
G46A Petoskey 30.21 334 P P 04 07 12.0 -0.2
baz=144
VLDQ Val d'Or 30.30 346 IAMs_20 IAMs_20 04 19 05.9
comp=Z,46µm,19.0s
G45A Suttons Bay 30.32 333 P P 04 07 11.7 -1.5
G45A IAmb IAmb 04 08 19.9
comp=Z,313nm,0.6s
G45A IAMs_20 IAMs_20 04 18 52.2
comp=Z,78µm,20.0s
G45A Suttons Bay 30.32 333 P P 04 07 12.7 -0.5
baz=143
WHTX Lake Whitney, 30.38 301 IAMs_20 IAMs_20 04 21 16.3
comp=Z,64µm,21.0s
WHTX Lake Whitney, 30.38 301 P P 04 07 14.2 +0.4
baz=108,SNR=101
WHTX S S 04 12 14.5 +1.9
baz=108
UNM Universidad Na 30.50 276 P P 04 07 16.8 +1.4
UNM pmax pmax
comp=Z,1µm,1.6s
UNM MLR MLR
comp=Z,60µm,20.0s
UNM Universidad Na 30.50 276 P P 04 07 16.8 +1.4
UNM IAmb IAmb 04 07 32.8
comp=Z,1µm,1.6s
UNM IAMs_20 IAMs_20 04 21 35.9
comp=Z,61µm,20.0s
E47A Iron Bridge 30.54 337 P P 04 07 15.2 0.0
baz=148,SNR=7.5
E47A S S 04 12 13.9 -0.9
baz=148
TUL1 Leonard 30.55 309 P P 04 07 14.9 -0.4
baz=116,SNR=98
D48A Paudash Townsh 30.66 340 P P 04 07 15.6 -0.5
baz=151
D48A S S 04 12 15.2 -1.4
baz=151
F45A CMU Biological 30.77 334 P P 04 07 17.6 +0.5
baz=144
F45A S S 04 12 19.1 +0.7
baz=144
H43A Windswept, Lux 30.83 330 P P 04 07 16.4 -1.3
H43A IAmb IAmb 04 07 38.1
comp=Z,700nm,1.6s
H43A IAMs_20 IAMs_20 04 18 55.8
comp=Z,54µm,20.0s
E46A Sault Ste Mari 30.85 336 IAmb IAmb 04 08 12.5
comp=Z,472nm,0.9s
E46A IAMs_20 IAMs_20 04 19 17.2
comp=Z,42µm,21.0s
L40A Anamosa 30.93 323 IAmb IAmb 04 08 27.1
comp=Z,291nm,0.9s
L40A IAMs_20 IAMs_20 04 18 09.2
comp=Z,52µm,20.0s
I42A Draeger Farm, 30.95 328 IAmb IAmb 04 07 39.2
comp=Z,466nm,1.3s
I42A IAMs_20 IAMs_20 04 18 59.9
comp=Z,54µm,20.0s
JFWS Jewell Farm 30.96 325 IAmb IAmb 04 08 22.8
comp=Z,214nm,0.7s
JFWS Jewell Farm 30.96 325 IAMs_20 IAMs_20 04 20 36.0
comp=Z,41µm,20.0s
JFWS Jewell Farm 30.96 325 P P 04 07 19.1 +0.2
baz=133,SNR=28
JFWS S S 04 12 20.7 -0.8
baz=133
LSQQ Lebel-sur-Quev 31.08 347 P P 04 07 20.5 +0.7
baz=161
LSQQ S S 04 12 21.4 -1.8
baz=161
833A Chaparral WMA, 31.12 294 P P 04 07 20.7 +0.1
baz=100,SNR=132
OKCFA Oklahoma City 31.57 307 IAmb IAmb 04 07 43.3
comp=Z,463nm,1.1s
OKCFA IAMs_20 IAMs_20 04 20 19.7
comp=Z,46µm,21.0s
CLDB Colider 31.62 159 eP P 04 07 24.3 -0.7
E44A Grand Marais A 31.70 335 IAMs_20 IAMs_20 04 19 44.6
comp=Z,52µm,20.0s
E44A Grand Marais A 31.70 335 P P 04 07 25.7 +0.4
baz=144,SNR=5.2
I40A Norwalk 31.82 326 IAMs_20 IAMs_20 04 20 21.9
comp=Z,44µm,19.0s
MATQ Matagami 31.89 347 P P 04 07 26.7 -0.3
baz=160,SNR=9.6
MATQ S S 04 12 33.3 -2.4
baz=160
JCT Junction City 31.91 297 P P 04 07 27.3 -0.1
baz=103,SNR=326
JCT S S 04 12 36.3 -0.5
baz=103
E43A Lone Tree Farm 31.95 333 IAMs_20 IAMs_20 04 19 51.4
comp=Z,68µm,21.0s
F42A Maple Grove Fa 31.97 331 IAMs_20 IAMs_20 04 19 31.1
comp=Z,61µm,20.0s
SCIA State Center 31.98 321 IAMs_20 IAMs_20 04 20 21.2
comp=Z,37µm,19.0s
SCIA State Center 31.98 321 P P 04 07 27.7 -0.3
baz=128,SNR=6.4
SCIA S S 04 12 35.8 -1.6
baz=128
NNA Nana 32.32 198 c iP P 04 07 29.8 -1.3
NNA pmax pmax
comp=Z,550nm,1.8s
NNA MLR MLR
comp=Z,40µm,18.0s
NNA Nana 32.32 198 ScP ScP 04 14 02.5 +2.1
comp=Z,20nm,1.1s,baz=338,slow=3.3,SNR=3.8
NNA LR LR 04 22 58.7
comp=Z,18µm,19.0s,baz=50,slow=41
NNA Nana 32.32 198 P P 04 07 30.3 -0.8
WMOK Wichita Mounta 32.33 306 IAmb IAmb 04 07 49.4
comp=Z,681nm,1.6s
WMOK Wichita Mounta 32.33 306 P P 04 07 30.3 -0.8
baz=111,SNR=113
WMOK S S 04 12 42.4 -0.7
baz=111
ABTX Abilene, Hawle 32.33 301 P P 04 07 31.3 +0.1
baz=107,SNR=359
ABTX S S 04 12 41.7 -1.5
baz=107
G40A Rib Lake 32.58 329 IAmb IAmb 04 07 53.6
comp=Z,309nm,1.2s
G40A IAMs_20 IAMs_20 04 19 59.0
comp=Z,42µm,19.0s
KSU1 Kansas State U 32.60 314 IAMs_20 IAMs_20 04 22 44.7
comp=Z,50µm,18.0s
KSU1 Kansas State U 32.60 314 P P 04 07 32.1 -1.2
baz=119,SNR=42
KSU1 S S 04 12 44.2 -3.0
baz=119
COWI Conover 32.69 331 P P 04 07 34.9 +0.9
COWI IAmb IAmb 04 07 54.7
comp=Z,698nm,1.5s
COWI PP PP 04 08 49.6 +1.4
COWI ScP ScP 04 14 09.4 +8.2
COWI IAMs_20 IAMs_20 04 19 53.1
comp=Z,59µm,20.0s
U32A Winter Ranch, 33.10 308 IAmb IAmb 04 07 57.2
comp=Z,450nm,1.1s
D41A Chassel 33.16 332 IAMs_20 IAMs_20 04 20 07.4
comp=Z,68µm,19.0s
ZAIG Zacatecas 33.52 283 IAmb IAmb 04 07 46.2
comp=Z,458nm,1.5s
SPMN Marine on St. 33.88 326 IAmb IAmb 04 08 05.4
comp=Z,671nm,1.8s
SPMN IAMs_20 IAMs_20 04 22 06.2
comp=Z,38µm,19.0s
SPMN Marine on St. 33.88 326 P P 04 07 44.1 -0.3
baz=132,SNR=26
SPMN S S 04 13 04.9 -1.9
baz=132
E38A The Farm, Brul 34.20 329 IAMs_20 IAMs_20 04 20 59.2
comp=Z,43µm,20.0s
AMTX Amarillo 34.63 304 P P 04 07 50.8 -0.4
baz=108
AMTX S S 04 13 18.3 -0.6
baz=108
CBKS Cedar Bluff 34.63 312 IAMs_20 IAMs_20 04 23 25.5
comp=Z,43µm,18.0s
CBKS Cedar Bluff 34.63 312 P P 04 07 50.8 -0.3
baz=115,SNR=95
CBKS S S 04 13 17.6 -1.2
baz=115
BGNE Belgrade 34.77 317 IAMs_20 IAMs_20 04 21 59.1
comp=Z,37µm,20.0s
BGNE Belgrade 34.77 317 P P 04 07 51.3 -0.9
baz=120,SNR=25
TXAR Lajitas Array 34.99 294 P P 04 07 54.5 +0.1
comp=Z,156nm,0.6s,baz=105,slow=5.7,SNR=326
TXAR PcP PcP 04 10 27.5 +1.2
comp=Z,61nm,0.8s,baz=131,slow=5.9,SNR=5.9
TXAR S S 04 13 26.4 +1.8
comp=Z,1.3nm,0.8s,baz=16,slow=20,SNR=2.2
TXAR ScP ScP 04 14 12.8 +3.0
comp=Z,13nm,1.0s,baz=98,slow=3.8,SNR=5.2
TXAR LR LR 04 25 26.3
comp=Z,11µm,21.0s,baz=0.0,slow=42
TXAR P3KPbc 04 38 48.5
comp=Z,0.7nm,0.8s,baz=273,slow=2.3,SNR=7.2
ECSD EROS Data Cent 35.08 321 IAMs_20 IAMs_20 04 20 40.1
comp=Z,43µm,19.0s
ECSD EROS Data Cent 35.08 321 P P 04 07 54.5 -0.4
baz=125,SNR=124
ECSD S S 04 13 23.9 -1.5
baz=125
LPAZ La Paz 35.08 182 P P 04 07 55.0 -0.7
comp=Z,191nm,1.1s,baz=12,slow=9.6,SNR=151
LPAZ S S 04 13 16.9 -10
comp=Z,8.5nm,1.0s,baz=240,slow=20,SNR=2.7
LPAZ LR LR 04 24 20.8
comp=Z,13µm,19.7s,baz=346,slow=40
LPAZ La Paz 35.08 182 eP P 04 07 55.1 -0.7
EYMN Ely 35.14 331 IAmb IAmb 04 08 14.5
comp=Z,797nm,1.6s
EYMN Ely 35.14 331 IAMs_20 IAMs_20 04 21 28.9
comp=Z,62µm,20.0s
EYMN Ely 35.14 331 P P 04 07 54.5 -0.8
baz=137,SNR=70
EYMN S S 04 13 24.7 -1.5
baz=137
MSTX Muleshoe 35.23 302 IAMs_20 IAMs_20 04 23 15.5
comp=Z,43µm,21.0s
MSTX Muleshoe 35.23 302 P P 04 07 55.7 -0.7
baz=106,SNR=384
MSTX S S 04 13 28.7 +0.6
baz=106
SIV San Ignacio 35.23 170 P P 04 07 55.9 -0.5
comp=Z,166nm,0.8s,baz=7.6,slow=8.3,SNR=157
SIV S S 04 13 22.4 -5.7
comp=Z,20nm,1.0s,baz=277,slow=19,SNR=2.1
SCHQ Schefferville 35.78 0 P P 04 08 01.0 +0.3
comp=Z,69nm,0.9s,baz=188,slow=6.5,SNR=48
SCHQ S S 04 13 27.2 -8.6
comp=Z,12nm,0.8s,baz=48,slow=18,SNR=1.4
SCHQ LR LR 04 21 45.7
comp=Z,15µm,21.5s,baz=185,slow=35
SCHQ Schefferville 35.78 0 IAmb IAmb 04 08 19.6
comp=Z,355nm,1.4s
PEXB Peixe 35.92 148 eP P 04 08 02.9 +0.6
PEXB eS S 04 13 41.7 +3.0
SALV Santo Antonio 36.38 162 eP P 04 08 05.3 -0.8
HPIG 36.48 290 IAmb IAmb 04 08 10.2
comp=Z,521nm,1.4s
KSCO Kaye Shedlock' 36.77 310 IAMs_20 IAMs_20 04 24 54.2
comp=Z,31µm,18.0s
KSCO Kaye Shedlock' 36.77 310 P P 04 08 09.4 -0.2
baz=112,SNR=44
KSCO S S 04 13 51.1 -0.6
baz=112
H07S1 FLORES T-PHASE 36.84 49 eP P 04 08 09.5 -0.6
H07S1 FLORES T-PHASE 36.84 49 T T 04 47 19.6
SNR=26
MNTX Cornudas Mount 36.84 298 IAMs_20 IAMs_20 04 26 12.3
comp=Z,38µm,21.0s
MNTX Cornudas Mount 36.84 298 P P 04 08 10.1 0.0
baz=101,SNR=502
MNTX S S 04 13 53.7 +0.9
baz=101
SUSD Miller 36.87 321 IAmb IAmb 04 08 29.0
comp=Z,912nm,1.4s
SUSD IAMs_20 IAMs_20 04 25 10.6
comp=Z,48µm,20.0s
SUSD Miller 36.87 321 P P 04 08 09.0 -1.2
baz=123,SNR=7.2
SUSD S S 04 13 50.9 -2.0
baz=123
H07N1 FLORES T-PHASE 37.03 48 eP P 04 08 12.1 +0.5
H07N1 FLORES T-PHASE 37.03 48 T T 04 48 01.8
SNR=6
PB16 IPOC Station P 37.19 184 i P P 04 08 06.6 -7.1
D32A Dogwood Acres, 37.34 326 IAMs_20 IAMs_20 04 24 23.0
comp=Z,45µm,20.0s
T25A Trinidad 37.44 307 IAmb IAmb 04 08 35.2
comp=Z,841nm,1.3s
T25A IAMs_20 IAMs_20 04 26 22.9
comp=Z,34µm,20.0s
T25A Trinidad 37.44 307 P P 04 08 15.5 +0.2
baz=108,SNR=208
T25A S S 04 14 03.1 +1.0
baz=108
AGMN Agassiz Nation 37.49 328 IAMs_20 IAMs_20 04 24 33.8
comp=Z,36µm,18.0s
AGMN Agassiz Nation 37.49 328 P P 04 08 14.3 -1.1
baz=131,SNR=50
AGMN S S 04 13 58.8 -3.4
baz=131
ARAG Araguaiana, MT 37.53 156 eP P 04 08 16.0 +0.1
EPT El Paso 37.80 298 IAMs_20 IAMs_20 04 26 18.6
comp=Z,33µm,21.0s
MNMC Minye Minye 37.98 184 P P 04 08 17.8 -2.2
MNMC IAmb IAmb 04 08 43.9
comp=Z,401nm,0.8s
MNMC IAMs_20 IAMs_20 04 26 17.8
comp=Z,28µm,18.0s
MNMCX Minye Minye 37.98 184 eP P 04 08 16.1 -3.9
PP1B Ponte de Pedra 38.23 161 eP P 04 08 21.8 -0.1
BNM Barren Site 38.37 301 P P 04 08 23.5 +0.2
PCED Cedros 38.39 51 eP P 04 08 23.1 0.0
comp=Z,671nm,1.2s
HOR Horta 38.41 51 eP P 04 08 26.6 +3.4
comp=Z,614nm,1.5s
LPM Los Pinos Moun 38.41 302 P P 04 08 23.8 +0.2
LPM PcP PcP 04 10 39.3 +2.6
ANMO Albuquerque 38.42 303 c iP P 04 08 24.4 +0.7
ANMO pmax pmax
comp=Z,423nm,1.7s
ANMO MLR MLR
comp=Z,31µm,17.0s
ANMO Albuquerque 38.42 303 P P 04 08 24.3 +0.7
comp=Z,150nm,1.1s,baz=113,slow=8.5,SNR=199
ANMO Albuquerque 38.42 303 P P 04 08 23.8 +0.2
ANMO Albuquerque 38.42 303 IAMs_20 IAMs_20 04 27 19.0
comp=Z,34µm,18.0s
ANMO Albuquerque 38.42 303 P P 04 08 24.0 +0.4
baz=104
ANMO S S 04 14 20.9 +3.9
baz=104
SDCO Great Sand Dun 38.45 307 IAmb IAmb 04 08 43.8
comp=Z,398nm,1.1s
SDCO Great Sand Dun 38.45 307 P P 04 08 24.3 +0.3
baz=108,SNR=264
PSGCX Pisagua 38.48 185 eP P 04 08 21.5 -2.6
GO01 Chusmiza 38.49 184 ⇑iP P 04 08 21.9 -2.7
GO01 Chusmiza 38.49 184 P P 04 08 22.4 -2.2
GO01 IAmb IAmb 04 08 25.7
comp=Z,448nm,0.9s
PCAN Candelaria 38.49 52 eP P 04 08 23.9 -0.1
comp=Z,446nm,1.7s
PICO Pico 38.55 52 eP P 04 08 24.9 +0.3
comp=Z,648nm,1.4s
Q24A Divide 38.59 309 P P 04 08 24.7 -0.5
baz=110
Q24A S S 04 14 20.4 +0.7
baz=110
TVZX PASSCAL Wareho 38.59 301 P P 04 08 26.1 +1.3
baz=102,SNR=9.6
Y22D IRIS PASSCAL I 38.59 301 P P 04 08 27.3 +2.2
Y22D IAMs_20 IAMs_20 04 25 45.6
comp=Z,57µm,22.0s
Y22D IRIS PASSCAL I 38.59 301 P P 04 08 25.6 +0.5
baz=102,SNR=9.2
PB11 IPOC Station P 38.61 184 ⇑iP P 04 08 22.6 -2.6
PB11 IPOC Station P 38.61 184 P P 04 08 23.1 -2.1
PB11 IAmb IAmb 04 08 37.4
comp=Z,695nm,1.0s
PB11 PcP PcP 04 10 39.7 +2.4
PB11 IAMs_20 IAMs_20 04 26 36.8
comp=Z,27µm,19.0s
LENM Lemitar 38.65 301 P P 04 08 25.7 +0.1
PPNO Prainha do Nor 38.66 52 eP P 04 08 26.6 +1.1
comp=Z,205nm,0.5s
ROSA Rosais 38.76 51 eP P 04 08 26.1 -0.1
comp=Z,370nm,1.3s
ROSA eS S 04 14 23.0 +1.4
ROSA eLQ LQ 04 16 56.6
ROSA eLR LR 04 19 01.5
comp=Z,5µm,11.9s
ROSA Rosais 38.76 51 IAMs_20 IAMs_20 04 22 27.4
comp=Z,31µm,20.0s
ULM Lac du Bonnet 38.80 330 P P 04 08 25.8 -0.7
comp=Z,55nm,1.0s,baz=134,slow=8.0,SNR=50
ULM S S 04 14 16.2 -5.8
comp=Z,11nm,0.8s,baz=238,slow=19,SNR=1.8
ULM ScS ScS 04 18 36.8 +2.8
comp=Z,39nm,1.1s,baz=29,slow=19,SNR=2.7
ULM LR LR 04 24 02.2
comp=Z,42µm,20.8s,baz=135,slow=36
ULM Lac du Bonnet 38.80 330 IAMs_20 IAMs_20 04 23 40.9
comp=Z,52µm,19.0s
PMAN Manadas 38.84 51 eP P 04 08 28.8 +1.9
comp=Z,346nm,1.1s
PB08 IPOC Station P 38.96 183 i P P 04 08 26.4 -2.0
121A Cookes Peak, D 39.00 298 IAMs_20 IAMs_20 04 27 39.2
comp=Z,32µm,19.0s
121A Cookes Peak, D 39.00 298 P P 04 08 29.5 +1.0
baz=100,SNR=168
121A S S 04 14 28.8 +3.0
baz=100
SRBC Serra Branca 39.01 51 eP P 04 08 27.2 -1.1
comp=Z,492nm,0.6s
PGRA Graciosa 39.05 51 eP P 04 08 27.7 -1.0
comp=Z,485nm,1.5s
PGRA eS S 04 14 25.0 -1.0
PGRA eLQ LQ 04 17 10.6
PGRA eLR LR 04 19 00.8
comp=Z,8µm,19.5s
BDFB Brasilia 39.10 150 P P 04 08 29.8 +0.4
comp=Z,36nm,0.8s,baz=328,slow=10,SNR=43
BDFB ScP ScP 04 14 26.0 +0.8
comp=Z,32nm,1.0s,baz=266,slow=7.0,SNR=4.3
BDFB LR LR 04 25 13.5
comp=Z,38µm,20.9s,baz=326,slow=37
BDFB Brasilia 39.10 150 IAMs_20 IAMs_20 04 25 03.2
comp=Z,39µm,21.0s
MDND Maddock 39.17 325 IAmb IAmb 04 08 48.6
comp=Z,436nm,1.1s
MDND IAMs_20 IAMs_20 04 25 37.5
comp=Z,41µm,20.0s
MDND Maddock 39.17 325 P P 04 08 29.2 -0.4
baz=126,SNR=8.9
MDND S S 04 14 24.9 -2.7
baz=126
ISCO Idaho Springs 39.21 310 IAMs_20 IAMs_20 04 26 52.8
comp=Z,32µm,19.0s
ISCO Idaho Springs 39.21 310 P P 04 08 30.6 +0.2
baz=110,SNR=109
RCBR Riachuelo 39.23 126 P P 04 08 31.6 +1.1
RCBR pmax pmax
comp=Z,136nm,0.7s
RCBR MLR MLR
comp=Z,74µm,19.0s
RCBR Riachuelo 39.23 126 P P 04 08 31.0 +0.5
comp=Z,138nm,0.7s,baz=339,slow=1.0,SNR=32
RCBR Riachuelo 39.23 126 eP P 04 08 30.9 +0.5
RCBR Riachuelo 39.23 126 P P 04 08 31.6 +1.1
S22A 4UR Ranch, Cre 39.45 307 IAMs_20 IAMs_20 04 27 48.3
comp=Z,35µm,20.0s
S22A 4UR Ranch, Cre 39.45 307 P P 04 08 32.7 +0.3
baz=107,SNR=118
ADH Angra Heroismo 39.48 52 eP P 04 08 33.9 +1.6
comp=Z,589nm,1.5s
PSCM Serra do Cume 39.59 52 eP P 04 08 32.5 -0.6
comp=Z,682nm,1.5s
PHWY Pilot Hill 39.65 313 IAmb IAmb 04 08 53.3
comp=Z,560nm,1.2s
PHWY IAMs_20 IAMs_20 04 26 27.3
comp=Z,29µm,21.0s
N23A Red Feather La 39.84 312 IAMs_20 IAMs_20 04 26 42.4
comp=Z,30µm,19.0s
N23A Red Feather La 39.84 312 P P 04 08 35.5 -0.1
baz=111,SNR=38
RSSD Black Hills 39.87 317 P P 04 08 35.9 +0.2
RSSD pmax pmax
comp=Z,692nm,1.8s
RSSD MLR MLR
comp=Z,44µm,21.0s
RSSD Black Hills 39.87 317 P P 04 08 35.9 +0.2
RSSD IAmb IAmb 04 08 54.8
comp=Z,692nm,1.8s
RSSD Black Hills 39.87 317 IAMs_20 IAMs_20 04 25 11.1
comp=Z,44µm,21.0s
RSSD Black Hills 39.87 317 P P 04 08 34.9 -0.8
baz=117
RSSD S S 04 14 37.3 -1.4
baz=117
SMCO Snowmass 40.00 309 IAMs_20 IAMs_20 04 23 05.8
comp=Z,30µm,22.0s
319A Douglas 40.08 296 IAmb IAmb 04 08 57.2
comp=Z,794nm,1.2s
319A IAMs_20 IAMs_20 04 27 54.3
comp=Z,29µm,22.0s
PDA Ponta Delgada 40.40 54 eP P 04 08 40.1 +0.2
comp=Z,668nm,1.8s
GRON Grota Negra 40.51 54 eP P 04 08 42.7 +1.9
comp=Z,477nm,1.0s
CMLA Cha da Macela 40.51 54 eP P 04 08 41.7 +0.9
comp=Z,561nm,2.0s
CMLA eS S 04 14 48.6 +0.7
CMLA eLQ LQ 04 17 50.1
CMLA eLR LR 04 19 30.5
comp=Z,8µm,17.5s
CMLA Cha da Macela 40.51 54 IAMs_20 IAMs_20 04 24 18.2
comp=Z,42µm,18.0s
PCALD Caldeiras da R 40.55 54 eP P 04 08 40.7 -0.4
comp=Z,413nm,0.8s
MVCO Mesa Verde 40.58 305 IAMs_20 IAMs_20 04 26 26.4
comp=Z,33µm,21.0s
MVCO Mesa Verde 40.58 305 P P 04 08 41.6 -0.2
baz=105,SNR=65
MVCO S S 04 14 51.7 +2.2
baz=105
PB09 IPOC Station P 40.60 183 ⇑iP P 04 08 40.0 -1.8
PSMA Santa Maria 40.61 55 eP P 04 08 42.1 +0.4
comp=Z,262nm,1.4s
PSMN Pico do Norte, 40.66 55 eP P 04 08 40.3 -1.8
comp=Z,340nm,1.3s
PSMN eS S 04 14 49.8 -0.5
PSMN eLQ LQ 04 18 02.9
PSMN eLR LR 04 19 35.5
comp=Z,2µm,12.4s
AQDB Aquidauana 40.72 164 eP P 04 08 42.7 +0.1
BART Pico Bartolome 40.79 54 eP P 04 08 43.2 0.0
comp=Z,332nm,1.4s
BART eS S 04 14 51.0 -1.2
PB03 IPOC Station P 40.89 184 i P P 04 08 41.2 -3.0
K22A Casper 40.90 314 IAMs_20 IAMs_20 04 27 06.5
comp=Z,31µm,21.0s
K22A Casper 40.90 314 P P 04 08 44.0 -0.2
baz=113,SNR=113
K22A S S 04 14 54.7 +0.8
baz=113
RWWY Rawlins 41.02 312 IAmb IAmb 04 09 04.0
comp=Z,702nm,1.2s
RWWY IAMs_20 IAMs_20 04 27 20.6
comp=Z,31µm,18.0s
IPMB Ipameri, GO 41.06 152 eP P 04 08 44.8 -0.7
W18A Petrified Fore 41.08 302 IAmb IAmb 04 09 06.0
comp=Z,767nm,1.2s
W18A IAMs_20 IAMs_20 04 29 03.5
comp=Z,37µm,20.0s
W18A Petrified Fore 41.08 302 P P 04 08 46.3 +0.5
baz=102,SNR=54
W18A S S 04 14 58.0 +1.2
baz=102
PB04 IPOC Station P 41.20 185 ⇑iP P 04 08 44.0 -2.7
PB04 IPOC Station P 41.20 185 P P 04 08 45.0 -1.8
PB04 ScP ScP 04 14 36.7 +3.4
O20A White River Ci 41.23 310 IAMs_20 IAMs_20 04 29 06.3
comp=Z,31µm,22.0s
O20A White River Ci 41.23 310 P P 04 08 47.2 +0.3

baz=108,SNR=48
HSIG **41.28 293** IAmb IAmb 04 08 50.6
comp=Z,653nm,1.6s
LVC **Limon Verde** **41.40 183** P **P** **04 08 47.0 -1.6**
LVC pmax pmax
comp=Z,243nm,0.9s
LVC **Limon Verde** **41.40 183** P **P** **04 08 47.3 -1.3**
comp=Z,238nm,0.9s,baz=19,slow=6.1,SNR=80
LVC ScP **ScP** **04 14 37.6 +3.3**
comp=Z,22nm,1.0s,baz=43,slow=4.7,SNR=5.3
LVC **Limon Verde** **41.40 183** *e*P **P** **04 08 47.5 -1.0**
LVC **Limon Verde** **41.40 183** P **P** **04 08 47.0 -1.6**
LVC **ScP** **04 14 37.6 +3.3**
TUC **Tucson** **41.47 298** P **P** **04 08 49.6 +0.8**
TUC IAmb IAmb 04 08 52.9
comp=Z,938nm,1.6s
TUC ScP **ScP** **04 14 36.8 +2.4**
TUC **Tucson** **41.47 298** IAMs_20 IAMs_20 04 28 23.8
comp=Z,44µm,22.0s
TUC **Tucson** **41.47 298** P **P** **04 08 49.7 +0.8**
baz=98
TUC S **S** **04 15 05.9 +3.3**
baz=98
SACV **Santiago Islan** **41.49 89** P **P** **04 08 49.0 -0.1**
SACV ScP **ScP** **04 14 35.4 +0.8**
PB06 **IPOC Station P** **41.53 184**⇑ *i*P **P** **04 08 46.2 -3.2**
H06E1 **SOCORRO T-PHAS** **41.60 277** P **P** **04 08 49.7 -0.4**
H06S1 **SOCORRO T** **41.64 277** P **P** **04 08 53.1 +2.8**
H06N1 **SOCORRO T-PHAS** **41.65 277** P **P** **04 08 51.5 +1.1**
PB05 **IPOC Station P** **41.72 185** *e*P **P** **04 08 48.6 -2.4**
PB15 **IPOC Station P** **42.02 184**⇑ *i*P **P** **04 08 51.5 -2.0**
DGMT **Dagmar** **42.08 323** IAMs_20 IAMs_20 04 27 52.4
comp=Z,35µm,19.0s
DGMT **Dagmar** **42.08 323** P **P** **04 08 53.8 +0.2**
baz=121,SNR=26
X16A **Lo Mia Camp, P** **42.33 301** IAMs_20 IAMs_20 04 28 06.7
comp=Z,45µm,22.0s
PMNB **Patos De Minas** **42.35 151** *e*P **P** **04 08 55.7 -0.4**
PB10 **IPOC Station P** **42.40 185**⇑ *i*P **P** **04 08 54.6 -1.7**
PB10 **IPOC Station P** **42.40 185** IAmb IAmb 04 08 57.9
comp=Z,423nm,1.1s
LAO **LASA Array** **42.41 320** IAMs_20 IAMs_20 04 29 01.3
comp=Z,43µm,20.0s
LAO **LASA Array** **42.41 320** P **P** **04 08 56.5 +0.2**
baz=117,SNR=128
LAO S **S** **04 15 15.5 -0.5**
baz=117
WUAZ **Wupatki** **42.47 302** IAmb IAmb 04 09 00.8
comp=Z,930nm,1.1s
WUAZ IAMs_20 IAMs_20 04 29 58.4
comp=Z,31µm,19.0s
WUAZ **Wupatki** **42.47 302** P **P** **04 08 58.0 +0.9**
baz=101,SNR=427
WUAZ S **S** **04 15 19.6 +2.2**
baz=101
BW06 **Boulder Array** **43.03 313** IAMs_20 IAMs_20 04 27 03.8
comp=Z,26µm,20.0s
BW06 **Boulder Array** **43.03 313** P **P** **04 09 01.2 -0.4**
baz=110,SNR=64
BW06 S **S** **04 15 24.8 -0.7**
baz=110
PDAR **Pinedale Array** **43.03 313** P **P** **04 09 01.8 +0.2**
comp=Z,55nm,1.0s,baz=119,slow=8.6,SNR=175
PDAR PcP **PcP** **04 10 51.5 0.0**
comp=Z,28nm,0.7s,baz=125,slow=5.5,SNR=3.9
PDAR ScP **ScP** **04 14 41.6 +1.0**
comp=Z,16nm,1.0s,baz=104,slow=6.3,SNR=5.9
PDAR LR LR 04 29 14.1
comp=Z,16µm,18.1s,baz=120,slow=39
PDAR **Pinedale Array** **43.03 313** P **P** **04 09 01.1 -0.6**
214A **Organ Pipe Nat** **43.14 297** IAmb IAmb 04 09 06.5
comp=Z,1µm,1.7s
214A IAMs_20 IAMs_20 04 29 37.3
comp=Z,27µm,21.0s
214A **Organ Pipe Nat** **43.14 297** P **P** **04 09 03.5 +1.0**
baz=96,SNR=176
214A S **S** **04 15 30.3 +3.3**
baz=96
PCMB **Pacaembu** **43.14 159** *e*P **P** **04 09 02.1 -0.3**
U15A **North Rim** **43.38 303** IAMs_20 IAMs_20 04 27 56.2
comp=Z,36µm,22.0s
PB14 **IPOC Station P** **43.49 185**⇑ *i*P **P** **04 09 02.5 -3.1**
Y14A **Wickenburg** **43.54 300** IAmb IAmb 04 09 09.5
comp=Z,780nm,1.5s
Y14A IAMs_20 IAMs_20 04 30 00.7
comp=Z,26µm,20.0s
BB19B **Bebedouro** **43.67 155** *e*P **P** **04 09 06.5 -0.3**
RLMT **Red Lodge** **43.68 316** IAMs_20 IAMs_20 04 29 47.0
comp=Z,37µm,20.0s
RLMT **Red Lodge** **43.68 316** P **P** **04 09 07.1 +0.2**
baz=112,SNR=339
RLMT S **S** **04 15 33.8 -1.2**
baz=112
TRCB **Terra Rica** **43.80 161** *e*P **P** **04 09 07.8 0.0**
CTU **Camp Tracy** **43.95 309** P **P** **04 09 09.4 +0.3**
CTU ScP **ScP** **04 14 46.7 +2.4**
113A **Mohawk Valley,** **44.03 298** IAmb IAmb 04 09 13.3
comp=Z,800nm,1.6s
113A IAMs_20 IAMs_20 04 30 38.5
comp=Z,23µm,20.0s
HWUT **Hardware Ranch** **44.08 311** IAMs_20 IAMs_20 04 31 00.6
comp=Z,37µm,18.0s
SNOW **Snow King Moun** **44.09 313** IAmb IAmb 04 09 13.0
comp=Z,776nm,1.2s
SNOW IAMs_20 IAMs_20 04 28 47.7
comp=Z,23µm,20.0s
AHID **Auburn Hatcher** **44.10 312** IAmb IAmb 04 09 29.4
comp=Z,548nm,1.4s
AHID IAMs_20 IAMs_20 04 29 23.2
comp=Z,41µm,20.0s
REDW **Red Top Meadow** **44.12 313** IAMs_20 IAMs_20 04 28 50.6
comp=Z,25µm,21.0s
MOOW **Moose Ponds** **44.18 314** IAmb IAmb 04 09 31.1
comp=Z,383nm,1.1s
MOOW IAMs_20 IAMs_20 04 27 32.1
comp=Z,25µm,19.0s
IVI **Ivigtut** **44.19 13** IAMs_20 IAMs_20 04 25 12.1
comp=Z,33µm,21.0s
LKWY **Lake** **44.23 315** IAmb IAmb 04 09 36.4
comp=Z,518nm,1.4s
FLWY **Flagg Ranch** **44.26 314** IAmb IAmb 04 09 31.2
comp=Z,706nm,1.4s
FLWY IAMs_20 IAMs_20 04 27 33.2
comp=Z,42µm,19.0s
H17A **Grant Village** **44.28 315** IAMs_20 IAMs_20 04 26 02.0
comp=Z,47µm,20.0s
H17A **Grant Village** **44.28 315** P **P** **04 09 12.2 +0.5**
baz=110,SNR=97
FCC **Fort Churchill** **44.39 340** IAmb IAmb 04 09 30.2
comp=Z,410nm,1.1s
FCC IAMs_20 IAMs_20 04 27 46.1
comp=Z,45µm,19.0s
W13A **Hualapai Mount** **44.43 301** IAmb IAmb 04 09 17.2
comp=Z,714nm,1.4s
W13A IAMs_20 IAMs_20 04 29 46.1
comp=Z,40µm,21.0s
FFC **Flin Flon** **44.56 332** P **P** **04 09 12.3 -1.1**
FFC pmax pmax
comp=Z,121nm,1.0s
FFC MLR MLR
comp=Z,44µm,20.0s
FFC **Flin Flon** **44.56 332** P **P** **04 09 12.3 -1.1**
FFC **Flin Flon** **44.56 332** IAMs_20 IAMs_20 04 27 36.1
comp=Z,44µm,20.0s
DUG **Dugway, Tooele** **44.61 308** IAMs_20 IAMs_20 04 27 57.7
comp=Z,23µm,19.0s
DUG **Dugway, Tooele** **44.61 308** P **P** **04 09 14.4 +0.1**
baz=104,SNR=116
DUG S **S** **04 15 54.8 +6.3**
baz=104
FRB **Frobisher Bay** **44.73 359** P **P** **04 09 14.6 0.0**
comp=Z,86nm,1.1s,baz=178,slow=8.2,SNR=64
NRS **Narsarsuaq** **44.77 15** IAMs_20 IAMs_20 04 27 36.4
comp=Z,29µm,20.0s
Y12C **Blythe** **44.77 299** IAmb IAmb 04 09 36.3
comp=Z,427nm,1.1s
Y12C IAMs_20 IAMs_20 04 29 54.4
comp=Z,26µm,22.0s
Y12C **Blythe** **44.77 299** P **P** **04 09 16.8 +1.3**
baz=97,SNR=86
Y12C S **S** **04 15 55.6 +4.9**
baz=97
GLA **Glamis** **44.95 298** P **P** **04 09 18.1 +1.1**
baz=96,SNR=19
GLA S **S** **04 15 57.6 +4.2**
baz=96
NEE2 **Needles Airpor** **44.98 300** P **P** **04 09 18.3 +1.2**
baz=98,SNR=30
NEE2 S **S** **04 15 57.1 +3.4**
baz=98
EGMT **Eagleton** **45.16 320** IAMs_20 IAMs_20 04 30 37.9
comp=Z,44µm,20.0s
EGMT **Eagleton** **45.16 320** P **P** **04 09 18.7 +0.3**
baz=115,SNR=94
EGMT S **S** **04 15 57.8 +1.7**
baz=115
SJMB **Sao Joao De Ma** **45.16 145** *e*P **P** **04 09 18.6 -0.1**
BSCB **Bom Sucesso** **45.25 150** *e*P **P** **04 09 19.7 +0.3**
RCLB **Rio Claro- Sao** **45.29 154** *e*P **P** **04 09 20.1 +0.4**
IRM **Iron Mountain** **45.33 300** P **P** **04 09 21.8 +1.8**
baz=97,SNR=225
IRM S **S** **04 16 02.0 +3.1**
baz=97
FRTB **Fartura** **45.34 157** *e*P **P** **04 09 19.6 -0.5**
BSFB **Barra de Sao F** **45.45 144** *e*P **P** **04 09 21.0 +0.1**
BC3 **Big Chuckawall** **45.53 299** P **P** **04 09 22.8 +1.2**
baz=96,SNR=137
BC3 S **S** **04 16 05.0 +3.0**
baz=96
SHPR **Sheep Range** **45.66 303** IAmb IAmb 04 09 47.9
comp=Z,343nm,1.2s
SHPR IAMs_20 IAMs_20 04 30 15.9
comp=Z,38µm,22.0s
SWSC **Sam W. Stewart** **45.75 298** P **P** **04 09 24.4 +1.2**
baz=95,SNR=109
SWSC S **S** **04 16 09.2 +4.3**
baz=95
PTGB **Pitanga** **45.77 161** *e*P **P** **04 09 23.7 +0.2**
GMRC **Granite Mounta** **45.83 300** P **P** **04 09 25.2 +1.2**
baz=97,SNR=163
GMRC S **S** **04 16 11.0 +4.8**
baz=97
DLMT **Dillon** **45.97 315** IAMs_20 IAMs_20 04 31 10.4
comp=Z,27µm,21.0s
IKP **In-Ko-Pah, Jac** **45.98 297** P **P** **04 09 26.8 +1.6**
baz=95,SNR=72
IKP S **S** **04 16 11.8 +3.3**
baz=95
CPUP **Villa Florida** **45.99 168** P **P** **04 09 22.8 -2.3**
comp=Z,92nm,0.8s,baz=30,slow=5.5,SNR=2.9
CPUP ScP **ScP** **04 14 54.2 +1.7**
comp=Z,17nm,1.0s,baz=12,slow=4.6,SNR=4.1
CPUP LR LR 04 29 29.9
comp=Z,17µm,20.0s,baz=352,slow=37
BELC **Belle Mtn. Jos** **46.02 299** P **P** **04 09 26.8 +1.2**
baz=96,SNR=58
BELC S **S** **04 16 12.6 +3.6**
baz=96
VAO **Valinhos** **46.04 154** *e*P **P** **04 09 26.2 +0.6**
TUQ **Turquoise Moun** **46.12 301** P **P** **04 09 27.4 +1.0**
baz=97,SNR=200
MONP2 **Monument Peak** **46.27 298** P **P** **04 09 29.0 +1.4**
baz=95,SNR=228
MONP2 S **S** **04 16 17.3 +4.5**
baz=95
R11A **Troy Canyon, C** **46.31 305** IAmb IAmb 04 09 31.4
comp=Z,494nm,1.6s
R11A IAMs_20 IAMs_20 04 29 40.8
comp=Z,31µm,21.0s
R11A **Troy Canyon, C** **46.31 305** P **P** **04 09 28.6 +0.8**
baz=100,SNR=170
R11A S **S** **04 16 14.9 +1.7**
baz=100
TPFO **Pinon Flats** **46.36 299** S **S** **04 16 18.1 +4.3**
baz=95
XPFO **Pion Flat** **46.36 299** P **P** **04 09 30.2 +2.0**
XPFO ScP **ScP** **04 14 57.7 +3.4**
XPFO IAMs_20 IAMs_20 04 30 52.8
comp=Z,24µm,20.0s
PMOZ **Porto Moniz, M** **46.36 62** *e*P **P** **04 09 29.0 +0.8**
comp=Z,2µm,1.4s
PMOZ *e*S S 04 16 23.9 +10
PMOZ *e*LQ LQ 04 20 09.4
PMOZ *e*LR LR 04 22 12.8
comp=Z,35µm,18.0s
PMOZ **Porto Moniz, M** **46.36 62** P **P** **04 09 30.6 +2.4**
SNR=9.2
PMOZ **Porto Moniz, M** **46.36 62** P **P** **04 09 27.8 -0.4**
PMOZ ScP **ScP** **04 14 56.0 +1.8**
PFO **Pinyon Flats O** **46.36 299***c* *i*P **P** **04 09 29.3 +1.1**
PFO pmax pmax
comp=Z,1µm,1.7s
PFO MLR MLR
comp=Z,31µm,19.0s
PFO **Pinyon Flats O** **46.36 299** P **P** **04 09 30.2 +1.9**
PFO ScP **ScP** **04 14 57.7 +3.4**
PFO IAMs_20 IAMs_20 04 30 52.1
comp=Z,24µm,21.0s
PFO **Pinyon Flats O** **46.36 299** P **P** **04 09 29.9 +1.7**
baz=95,SNR=109
PFO S **S** **04 16 18.6 +4.7**
baz=95
SPB **Sao Paulo** **46.38 155** *e*P **P** **04 09 28.2 +0.1**
SPB **Sao Paulo** **46.38 155** P **P** **04 09 27.4 -0.8**
HEC **Hector,Ludlow** **46.38 300** P **P** **04 09 30.2 +1.9**
baz=96,SNR=41
HEC S **S** **04 16 18.0 +3.8**
baz=96
BAR **Barrett** **46.46 297** IAMs_20 IAMs_20 04 31 15.8
comp=Z,26µm,21.0s
SHOC **Shoshone, Teco** **46.47 302** P **P** **04 09 30.3 +1.4**
baz=98,SNR=43
SHOC S **S** **04 16 18.5 +3.3**
baz=98
ELK **Elko** **46.53 309** IAMs_20 IAMs_20 04 28 44.6
comp=Z,22µm,20.0s
PMAR **Madeira** **46.59 63** *e*P **P** **04 09 30.6 +0.5**
comp=Z,875nm,1.6s
TPNV **Topopah Spring** **46.60 303** IAmb IAmb 04 09 50.3
comp=Z,320nm,0.9s
TPNV IAMs_20 IAMs_20 04 30 35.5
comp=Z,37µm,22.0s
TPNV **Topopah Spring** **46.60 303** P **P** **04 09 31.6 +1.5**
baz=99,SNR=160
TPNV S **S** **04 16 20.8 +3.5**
baz=99
FUL **Funchal** **46.60 63** *e*P **P** **04 09 31.1 +1.2**
comp=Z,549nm,1.7s
BBRC **Big Bear Solar** **46.80 299** P **P** **04 09 33.4 +1.6**
baz=96,SNR=25
BBRC S **S** **04 16 25.5 +5.0**
baz=96
GSC **Goldstone, Bar** **46.82 301** IAMs_20 IAMs_20 04 31 10.6
comp=Z,28µm,21.0s
GSC **Goldstone, Bar** **46.82 301** P **P** **04 09 33.0 +1.2**
baz=97,SNR=197
GSC S **S** **04 16 24.9 +4.5**
baz=97
109C **Camp Elliot, M** **46.84 298** IAMs_20 IAMs_20 04 31 27.9
comp=Z,23µm,22.0s
109C **Camp Elliot, M** **46.84 298** P **P** **04 09 33.1 +1.3**
baz=94,SNR=78
109C S **S** **04 16 24.8 +4.3**
baz=94
RRX **Edison Barstow** **46.93 300** P **P** **04 09 34.3 +1.7**
baz=96,SNR=19
RRX S **S** **04 16 26.5 +4.7**
baz=96
MURC **Murrieta** **46.97 299** P **P** **04 09 34.4 +1.5**
baz=95,SNR=171
MURC S **S** **04 16 27.0 +4.5**
baz=95
VAS01 **Vassouras-RJ** **46.98 150** *e*P **P** **04 09 32.9 0.0**
FURC **Furnace Creek,** **47.02 302** P **P** **04 09 34.5 +1.4**
baz=98,SNR=122
PMPS **Porto Santo** **47.10 62** *e*P **P** **04 09 36.1 +2.3**
comp=Z,653nm,1.7s
PMPST **Porto Santo, M** **47.10 62** *e*P **P** **04 09 34.3 +0.4**
comp=Z,660nm,1.7s
MSO **Missoula** **47.34 317** IAmb IAmb 04 09 55.3
comp=Z,330nm,1.2s
MSO IAMs_20 IAMs_20 04 29 58.6
comp=Z,35µm,20.0s
MSO **Missoula** **47.34 317** P **P** **04 09 35.8 +0.2**
baz=110,SNR=82
MSO S **S** **04 16 28.7 +1.2**
baz=110
BFSC **Mount Baldy Ra** **47.41 299** P **P** **04 09 37.6 +1.1**
baz=95,SNR=94
BFSC S **S** **04 16 32.9 +4.0**
baz=95
MPMC **Manual Prospec** **47.47 302** P **P** **04 09 37.6 +0.7**
baz=97,SNR=142
MPMC S **S** **04 16 34.1 +4.3**
baz=97
GRAC **Grapevine Rang** **47.49 303** P **P** **04 09 38.4 +1.5**
baz=98,SNR=99
LRMC **Laurel Mtn Rad** **47.55 301** P **P** **04 09 38.7 +1.1**
baz=96,SNR=79
LRMC S **S** **04 16 35.6 +4.6**
baz=96
DAC **Darwin (Calif)** **47.58 302** IAMs_20 IAMs_20 04 31 40.5
comp=Z,44µm,22.0s
MFID **Camas Ranch** **47.60 312** IAmb IAmb 04 09 57.4
comp=Z,427nm,1.1s
MFID IAMs_20 IAMs_20 04 33 07.8
comp=Z,33µm,19.0s
MWC **Mount Wilson** **47.74 299** IAMs_20 IAMs_20 04 31 35.9
comp=Z,31µm,21.0s
EDW2 **Edwards Air Fo** **47.75 300** P **P** **04 09 40.2 +1.2**
baz=96,SNR=212
EDW2 S **S** **04 16 36.9 +3.3**
baz=96
PASC **Pasadena Art C** **47.84 299** IAMs_20 IAMs_20 04 31 48.5
comp=Z,29µm,21.0s
JTMT **Jette** **47.87 318** IAMs_20 IAMs_20 04 29 53.6
comp=Z,35µm,20.0s
FMP **Fort Macarthur** **47.89 299** P **P** **04 09 41.5 +1.5**
baz=94,SNR=10
FMP S **S** **04 16 40.5 +5.0**
baz=94
BMN **Battle Mountai** **47.95 308** IAMs_20 IAMs_20 04 33 34.0
comp=Z,22µm,20.0s
DECC **Green Verdugo** **47.97 299** P **P** **04 09 41.6 +1.0**
baz=95,SNR=31
CIS **Catalina Islan** **47.97 298** P **P** **04 09 42.2 +1.6**
baz=94,SNR=51
CIS S **S** **04 16 40.9 +4.2**
baz=94
CWC **Cottonwood Cre** **47.99 302** P **P** **04 09 41.9 +1.0**
baz=97
CWC S **S** **04 16 41.0 +3.9**
baz=97
SCI2 **San Clemente I** **48.05 298** P **P** **04 09 42.9 +1.6**
baz=94,SNR=11
SCI2 S **S** **04 16 42.5 +4.7**
baz=94
WALA **Waterton Lakes** **48.10 320** IAMs_20 IAMs_20 04 32 29.8
comp=Z,38µm,20.0s
ITAB **Concordia** **48.12 162** *e*P **P** **04 09 41.3 -0.4**
TIN **Tinemaha, Big** **48.18 303** P **P** **04 09 43.6 +1.3**
baz=97,SNR=18
TIN S **S** **04 16 44.3 +4.5**
baz=97
ISA **Isabella, Lake** **48.22 301** IAMs_20 IAMs_20 04 32 49.4
comp=Z,24µm,20.0s
ISA **Isabella, Lake** **48.22 301** P **P** **04 09 44.0 +1.4**
baz=96,SNR=89
ISA S **S** **04 16 44.5 +4.3**
baz=96
NV11 **Mina Array Sit** **48.32 305** IAMs_20 IAMs_20 04 30 55.9
comp=Z,39µm,22.0s
OSI **Osito Audit: C** **48.32 300** IAmb IAmb 04 10 02.7
comp=Z,445nm,1.1s
OSI IAMs_20 IAMs_20 04 32 05.3
comp=Z,24µm,20.0s
OSI **Osito Audit: C** **48.32 300** P **P** **04 09 43.9 +0.5**
baz=95,SNR=16
OSI S **S** **04 16 44.4 +2.7**
baz=95
KVN **Kaiserville** **48.37 306** IAMs_20 IAMs_20 04 33 38.9
comp=Z,23µm,19.0s
NVAR **Mina Array Bea** **48.43 305** P **P** **04 09 45.8 +1.4**
comp=Z,235nm,1.1s,baz=104,slow=6.0,SNR=298
NVAR ScP **ScP** **04 15 06.2 +3.1**
comp=Z,17nm,1.0s,baz=116,slow=4.8,SNR=6.3
NVAR ScS **ScS** **04 19 37.3 +1.9**
comp=Z,0.5nm,0.8s,baz=102,slow=4.0,SNR=2.4
NVAR LR LR 04 31 18.8
comp=Z,30µm,22.0s,baz=106,slow=38
NVAR **Mina Array Bea** **48.43 305** P **P** **04 09 44.6 +0.2**
NVAR PP PP 04 11 27.9 -9.2
NVAR ScP **ScP** **04 15 05.5 +2.5**
ARVC **Arvin** **48.45 300** P **P** **04 09 46.0 +1.6**
baz=95,SNR=70
ARVC S **S** **04 16 47.7 +4.3**
baz=95
BLG **Laguna Peak, P** **48.56 299** P **P** **04 09 46.1 +0.9**
baz=94
BLG S **S** **04 16 48.6 +3.5**
baz=94
RYN **Ryan** **48.63 305** IAmb IAmb 04 10 05.8
comp=Z,310nm,1.1s
RYN IAMs_20 IAMs_20 04 31 06.2
comp=Z,29µm,22.0s
VES **Vestal, Richgr** **48.73 301** P **P** **04 09 47.7 +1.3**
baz=96,SNR=161
MLAC **Mammoth, Mammo** **48.74 304** P **P** **04 09 48.2 +1.5**
baz=97,SNR=32
OMMB **Old Mammoth Mi** **48.86 304** IAmb IAmb 04 10 07.6
comp=Z,323nm,1.1s
OMMB IAMs_20 IAMs_20 04 33 15.5
comp=Z,37µm,20.0s
SNCC **San Nicolas Is** **48.89 298** IAMs_20 IAMs_20 04 33 23.8
comp=Z,20µm,20.0s
SNCC **San Nicolas Is** **48.89 298** P **P** **04 09 48.8 +1.1**
baz=93,SNR=8.9
SNCC S **S** **04 16 54.5 +4.9**
baz=93
MDPB **Devils Postpil** **48.93 304** IAMs_20 IAMs_20 04 33 18.2
comp=Z,33µm,20.0s
BMO **Blue Mountains** **49.00 313** IAmb IAmb 04 10 07.5
comp=Z,390nm,1.2s
BMO IAMs_20 IAMs_20 04 33 23.7
comp=Z,30µm,20.0s
VOG **Valley Oaks Go** **49.02 302** P **P** **04 09 49.1 +0.5**
baz=96,SNR=17
GO04 **Tololo Observa** **49.03 185** *e*P P 04 09 43.9 -5.0
GO04 **Tololo Observa** **49.03 185** IAmb IAmb 04 10 10.1
comp=Z,210nm,0.9s
SCZ2 **Santa Cruz Isl** **49.03 299** P **P** **04 09 49.4 +0.7**
baz=94,SNR=32
SCZ2 S **S** **04 16 55.2 +3.6**
baz=94
SFJD **Kangerlussuaq** **49.12 8** P **P** **04 09 48.2 -0.7**
SFJD pmax pmax
comp=Z,299nm,1.4s
SFJD **Kangerlussuaq** **49.12 8** P **P** **04 09 50.2 +1.4**
comp=Z,45nm,0.9s,baz=196,slow=9.1,SNR=14
SFJD **Kangerlussuaq** **49.12 8** *i* P **P** **04 09 49.5 +0.6**
comp=Z,19µm,18.0s
SFJD **Kangerlussuaq** **49.12 8** P **P** **04 09 48.1 -0.7**
SFJD IAmb IAmb 04 10 07.5
comp=Z,299nm,1.4s
SFJD **Kangerlussuaq** **49.12 8** IAMs_20 IAMs_20 04 27 55.9
comp=Z,22µm,20.0s
SBC **Santa Barbara** **49.12 299** P **P** **04 09 50.2 +0.7**
baz=94,SNR=15
SBC S **S** **04 16 56.9 +4.1**
baz=94
YERR **Yerington** **49.24 305** IAmb IAmb 04 10 11.4
comp=Z,540nm,1.2s
YERR IAMs_20 IAMs_20 04 31 27.3
comp=Z,25µm,21.0s
PKM **Mcpherson Peak** **49.24 300** P **P** **04 09 51.8 +1.3**
baz=94,SNR=67
F10A **Beach Ranch, E** **49.24 315** IAmb IAmb 04 10 11.5
comp=Z,464nm,1.4s
F10A IAMs_20 IAMs_20 04 34 21.1
comp=Z,24µm,18.0s
WAKR **Walker** **49.32 305** IAMs_20 IAMs_20 04 31 28.6
comp=Z,39µm,21.0s
WVOR **Wild Horse Val** **49.38 310** IAMs_20 IAMs_20 04 33 07.1
comp=Z,19µm,20.0s
SMMC **Simmler** **49.42 301** P **P** **04 09 53.4 +1.6**
baz=95,SNR=57
SMMC S **S** **04 17 01.3 +4.2**
baz=95
PAHR **Pah Rah Range** **49.45 306** IAMs_20 IAMs_20 04 31 08.1
comp=Z,30µm,21.0s
PNTR **Pine Nut** **49.53 306** IAmb IAmb 04 10 28.3
comp=Z,402nm,1.6s
PNTR IAMs_20 IAMs_20 04 31 35.7
comp=Z,27µm,22.0s
VCNR **Virginia City** **49.60 306** IAMs_20 IAMs_20 04 31 25.8
comp=Z,23µm,22.0s
PAGB **Antelope Grade** **49.66 301** IAmb IAmb 04 10 16.4
comp=Z,234nm,0.9s
NEW **Newport** **49.84 318** IAMs_20 IAMs_20 04 31 16.8
comp=Z,40µm,20.0s
NEW **Newport** **49.84 318** P **P** **04 09 54.6 -0.2**
baz=108,SNR=311

NEW S **S** **04 17 02.1 -0.5**
baz=108
RUBR **Rubicon Trail** **49.95 305** IAMs_20 IAMs_20 04 31 50.2
comp=Z,30µm,22.0s
E09A **Wood Farm, Sta** **50.00 315** IAmb IAmb 04 10 15.1
comp=Z,402nm,1.4s
E09A IAMs_20 IAMs_20 04 34 55.2
comp=Z,25µm,18.0s
CMB **Columbia Colle** **50.00 304** IAMs_20 IAMs_20 04 32 12.6
comp=Z,41µm,22.0s
CO02 **Combarbal** **50.06 185** *e*P **P** **04 09 53.9 -2.8**
PMPB **Monarch Peak** **50.15 302** IAmb IAmb 04 10 16.3
comp=Z,510nm,1.4s
PMPB IAMs_20 IAMs_20 04 33 07.1
comp=Z,28µm,21.0s
BEKR **Beckworth** **50.22 306** IAMs_20 IAMs_20 04 31 19.9
comp=Z,22µm,21.0s
G08A **Pilot Rock** **50.24 314** IAmb IAmb 04 10 17.4
comp=Z,495nm,1.3s
G08A IAMs_20 IAMs_20 04 34 02.6
comp=Z,32µm,19.0s
CFA **Coronel Fontan** **50.33 182** P **P** **04 09 57.4 -1.2**
comp=Z,53nm,0.8s,baz=355,slow=8.4
CFA PcP **PcP** **04 11 19.2 +2.2**
comp=Z,55nm,0.7s,baz=351,slow=5.1,SNR=2.6
CFA ScP **ScP** **04 15 13.2 +2.4**
comp=Z,14nm,0.9s,baz=342,slow=6.0,SNR=4.3
CFA S **S** **04 17 11.9 +2.4**
comp=Z,3.6nm,1.0s,baz=190,slow=17,SNR=3.8
CFA ScS **ScS** **04 19 48.6 +1.1**
comp=Z,1.6nm,0.2s,baz=246,slow=19,SNR=21
ANGG **Ammassalik, Gr** **50.42 15** IAmb IAmb 04 10 32.4
comp=Z,294nm,1.4s
C09A **Chrisman Ranch** **50.44 317** IAmb IAmb 04 10 18.6
comp=Z,477nm,1.1s
C09A IAMs_20 IAMs_20 04 31 54.7
comp=Z,40µm,20.0s
CNLB **Canela** **50.45 162** *e*P **P** **04 09 59.2 -0.4**
MOD **Modoc Plateau** **50.50 309** IAMs_20 IAMs_20 04 34 45.6
comp=Z,22µm,20.0s
AFDM **Forest Hills D** **50.57 305** IAmb IAmb 04 10 03.3
comp=Z,415nm,1.6s
AFDM IAMs_20 IAMs_20 04 32 19.5
comp=Z,27µm,22.0s
E08A **Dider Farm, El** **50.61 315** IAmb IAmb 04 10 18.9
comp=Z,539nm,1.7s
E08A IAMs_20 IAMs_20 04 35 23.2
comp=Z,24µm,20.0s
D08A **Wollman Farm,** **50.66 316** IAMs_20 IAMs_20 04 35 05.6
comp=Z,23µm,20.0s
SAO **San Andreas Ge** **50.72 302** IAmb IAmb 04 10 20.9
comp=Z,448nm,1.2s
SAO IAMs_20 IAMs_20 04 35 10.5
comp=Z,30µm,18.0s
HAWA **Hanford** **50.90 315** IAmb IAmb 04 10 21.3
comp=Z,628nm,1.6s
HAWA IAMs_20 IAMs_20 04 32 56.9
comp=Z,21µm,20.0s
F07A **Phinny Hill Vi** **51.05 314** IAmb IAmb 04 10 23.2
comp=Z,355nm,1.1s
F07A IAMs_20 IAMs_20 04 34 36.9
comp=Z,35µm,19.0s
ORV **Oroville** **51.05 306** IAmb IAmb 04 10 23.0
comp=Z,257nm,1.1s
ORV IAMs_20 IAMs_20 04 32 09.3
comp=Z,25µm,21.0s
ILULI **Ilulissat** **51.15 7** *i* P **P** **04 10 05.4 +1.2**
ILULI **Ilulissat** **51.15 7** *i* P **P** **04 10 05.4 +1.2**
ILULI *i* 04 10 23.0
ILULI **Ilulissat** **51.15 7** IAmb IAmb 04 10 27.6
comp=Z,214nm,0.9s
ILULI IAMs_20 IAMs_20 04 28 34.7
comp=Z,31µm,22.0s
E07A **Sunnyside** **51.16 315** IAmb IAmb 04 10 24.3
comp=Z,476nm,1.2s
E07A IAMs_20 IAMs_20 04 35 39.7
comp=Z,21µm,19.0s
B08A **Colville Reser** **51.28 317** IAmb IAmb 04 10 24.5
comp=Z,606nm,1.4s
PINE **Pine Mountain** **51.31 311** IAmb IAmb 04 10 09.0
comp=Z,482nm,1.6s
PINE IAMs_20 IAMs_20 04 35 42.8
comp=Z,25µm,21.0s
O03E **Paynes Creek** **51.38 307** P **P** **04 10 05.7 -0.8**
baz=98
O03E S **S** **04 17 23.7 -0.5**
baz=98
G06A **Carlson Farm,** **51.38 313** IAmb IAmb 04 10 26.7
comp=Z,628nm,1.5s
G06A IAMs_20 IAMs_20 04 33 06.8
comp=Z,24µm,20.0s
J05D **Fort Rock, OR** **51.42 311** P **P** **04 10 06.7 -0.3**
baz=100,SNR=56
J05D S **S** **04 17 27.3 +2.4**
baz=100
M04C **Macdoel** **51.62 309** P **P** **04 10 08.0 -0.4**
baz=99,SNR=14
K04D **Chiloquin, OR** **51.69 310** P **P** **04 10 08.8 0.0**
baz=99,SNR=40
I05D **Terrebonne, OR** **51.69 312** P **P** **04 10 09.0 +0.2**
baz=101,SNR=28
ROCH **El Roble** **51.82 184** *e*P **P** **04 10 06.6 -3.3**
G05D **Wamic, OR** **51.86 313** P **P** **04 10 11.2 +1.2**
baz=102,SNR=20
LTY **Liberty** **51.87 316** IAMs_20 IAMs_20 04 35 53.4
comp=Z,21µm,20.0s
VA01 **Torpederas** **51.92 185** *e*P **P** **04 10 07.2 -3.2**
PEL **Peldehue** **51.97 184** *e*P **P** **04 10 08.9 -1.9**
PEL **Peldehue** **51.97 184** IAMs_20 IAMs_20 04 36 20.2
comp=Z,18µm,20.0s
MCCM **Marconi Confer** **51.97 304** IAmb IAmb 04 10 30.3
comp=Z,421nm,1.0s
MCCM IAMs_20 IAMs_20 04 34 18.8
comp=Z,25µm,20.0s
L04D **Klamath Falls** **52.02 309** P **P** **04 10 11.5 0.0**
baz=99,SNR=58
J04D **Umpqua Nationa** **52.04 310** P **P** **04 10 11.9 +0.2**
baz=100,SNR=44
PLTB **Pedras Altas** **52.05 166** *e*P **P** **04 10 11.5 +0.1**
F05D **White Salmon** **52.09 314** P **P** **04 10 12.5 +0.8**
baz=102,SNR=68
O02D **Mt. Diablo Mer** **52.11 306** P **P** **04 10 11.1 -1.0**
baz=97,SNR=15
FCH **Farellones** **52.13 184** *e*P **P** **04 10 11.5 -0.9**
N02D **Trinity Center** **52.15 307** P **P** **04 10 11.0 -1.3**
baz=97,SNR=9.8
C06D **Leavenworth** **52.18 316** P **P** **04 10 11.9 -0.4**
baz=104,SNR=9.8
HOPS **Hopland Field** **52.20 305** IAmb IAmb 04 10 33.3
comp=Z,489nm,1.3s
CLCH **Cerro Calan** **52.21 184** *e*P **P** **04 10 11.5 -1.2**
MT05 **Renca** **52.22 184** ⇑*i*P **P** **04 10 10.7 -2.0**
YBH **Yreka Blue Hor** **52.25 308** IAMs_20 IAMs_20 04 34 02.0
comp=Z,17µm,20.0s
MT03 **Universidad Ad** **52.31 184** ⇓*i*P **P** **04 10 11.9 -1.5**
MT03 *i* P **P** **04 10 11.9 -1.5**
M02C **Callahan** **52.31 308** P **P** **04 10 12.8 -0.7**
baz=98,SNR=12
I04A **Tendick Farm,** **52.35 311** P **P** **04 10 13.5 -0.3**
baz=100,SNR=20
LON **Longmire** **52.51 315** IAMs_20 IAMs_20 04 33 47.6
comp=Z,21µm,22.0s
LMEL **Las Meloses** **52.64 183** *e*P **P** **04 10 14.9 -1.1**
KCPM **Cahto Peak** **52.66 306** IAmb IAmb 04 10 35.9
comp=Z,388nm,1.4s
KCPM IAMs_20 IAMs_20 04 36 38.5
comp=Z,28µm,18.0s
H04D **Lebanon** **52.71 312** P **P** **04 10 15.8 -0.5**
baz=100,SNR=13
D05A **Enumclaw** **52.73 315** IAMs_20 IAMs_20 04 36 29.2
comp=Z,22µm,18.0s
F04A **Amboy** **52.75 314** IAMs_20 IAMs_20 04 35 40.0
comp=Z,26µm,20.0s
KMRM **Mail Ridge** **52.82 306** IAmb IAmb 04 10 37.0
comp=Z,352nm,1.1s
KMRM IAMs_20 IAMs_20 04 33 19.0
comp=Z,28µm,22.0s
KHMM **Horse Mountain** **52.91 307** IAMs_20 IAMs_20 04 35 53.4
comp=Z,19µm,19.0s
L02E **Cave Junction** **52.97 309** P **P** **04 10 17.8 -0.5**
baz=98,SNR=5.9
E04D **Cinebar** **52.98 314** P **P** **04 10 17.1 -1.2**
baz=102,SNR=5.5
I03D **Drain, OR** **53.01 311** P **P** **04 10 17.7 -0.8**
baz=99
B05A **Bryant** **53.04 317** P **P** **04 10 17.6 -1.0**
baz=103,SNR=27
K02D **Willamette Mer** **53.09 310** P **P** **04 10 18.4 -0.8**
baz=98,SNR=16
KRMB **Red Mountain** **53.12 308** IAMs_20 IAMs_20 04 31 22.8
comp=Z,24µm,22.0s
COR **Corvallis** **53.12 312** P **P** **04 10 19.0 -0.3**
COR pmax pmax
comp=Z,661nm,1.4s
COR MLR MLR
comp=Z,18µm,19.0s
COR **Corvallis** **53.12 312** P **P** **04 10 19.0 -0.3**
COR IAmb IAmb 04 10 39.1
comp=Z,661nm,1.4s
COR **Corvallis** **53.12 312** IAMs_20 IAMs_20 04 37 14.8
comp=Z,18µm,19.0s
JCC **Jacoby Creek,** **53.12 307** IAmb IAmb 04 10 39.5
comp=Z,474nm,1.1s
JCC IAMs_20 IAMs_20 04 31 26.1
comp=Z,20µm,21.0s
F04D **Rainier, OR** **53.19 314** P **P** **04 10 19.3 -0.5**
baz=101
G03D **McMinnville, O** **53.20 313** P **P** **04 10 19.5 -0.4**
baz=100,SNR=9.4
D04E **Lakebay** **53.24 315** P **P** **04 10 19.4 -0.8**
baz=102
PMAFR **Mafra** **53.27 55** *e*P **P** **04 10 20.8 +0.2**
comp=Z,219nm,2.3s
PMAFR *e*S **S** **04 17 49.0 -1.1**
J01E **Myrtle Point** **53.35 310** P **P** **04 10 20.5 -0.6**
baz=98,SNR=9.7
LIS **Lisbon** **53.36 56** *e*P **P** **04 10 21.3 +0.2**
LIS *e*S **S** **04 17 52.0 +0.8**
LIS AMS AMS 04 30 23.4
comp=Z,44µm,20.4s
LIS **Lisbon** **53.36 56** *e*P **P** **04 10 21.3 +0.2**
LIS *e*S **S** **04 17 51.9 +0.8**
I02D **Swisshome** **53.43 311** P **P** **04 10 21.8 +0.3**
baz=99
KBO **Bosley Butte** **53.44 309** IAMs_20 IAMs_20 04 37 22.3
comp=Z,24µm,19.0s
LLLB **Lillypet** **53.49 319** IAmb IAmb 04 10 40.7
comp=Z,572nm,1.2s
PFVI **Vila Bisbo** **53.51 58** *e*P **P** **04 10 21.8 -0.5**
comp=Z,394nm,1.8s
PFVI *e*S **S** **04 17 55.4 +2.1**
PFVI **Vila Bisbo** **53.51 58** P **P** **04 10 25.9 +3.6**
SNR=10
PFVI P **P** **04 10 25.9 +3.6**
SNR=10
D03D **Eldon** **53.53 316** P **P** **04 10 20.9 -1.4**
baz=102
F03A **Seaside** **53.53 314** IAMs_20 IAMs_20 04 34 34.7
comp=Z,22µm,21.0s
A04D **Lummi Island** **53.54 317** P **P** **04 10 21.1 -1.2**
baz=103
KEBM **Edson Butte** **53.60 310** IAMs_20 IAMs_20 04 34 24.6
comp=Z,20µm,20.0s
PTEO **Sao Teotonio** **53.61 57** *e*P **P** **04 10 23.9 +0.9**
comp=Z,518nm,1.6s
MORF **Marmelete** **53.66 57** *e*P **P** **04 10 23.5 0.0**
MORF *e*S **S** **04 17 56.2 +0.8**
MORF AMS AMS 04 30 59.2
comp=Z,80µm,20.1s
MORF **Marmelete** **53.66 57** *e*P **P** **04 10 24.3 +0.8**
comp=Z,474nm,1.6s
MORF *e*S **S** **04 17 56.9 +1.5**
MORF **Marmelete** **53.66 57** *e*P **P** **04 10 23.5 0.0**
MORF *e*S **S** **04 17 56.2 +0.8**
TTIG **Tnine Tigouga,** **53.77 66** P **P** **04 10 27.0 +2.5**
SNR=15
TTIG P **P** **04 10 27.0 +2.5**
SNR=15
PNCL **Nicolau / Gran** **53.80 56** *e*P **P** **04 10 24.1 -0.3**
comp=Z,267nm,1.6s
PNCL *e*S **S** **04 17 59.2 +2.0**
PCAS **Casmilo, Conde** **53.97 54** *e*P **P** **04 10 25.9 +0.3**
comp=Z,473nm,1.7s
PCAS *e*S **S** **04 17 59.8 +0.3**
PTOM **Tomar** **54.00 54** *e*P **P** **04 10 26.6 +0.7**
comp=Z,468nm,1.5s
NLWA **Neilton Lookou** **54.02 315** IAmb IAmb 04 10 45.3
comp=Z,340nm,1.2s
COI **Coimbra** **54.05 54** *e*P **P** **04 10 26.4 +0.2**
comp=Z,422nm,1.5s
COI *e*S **S** **04 18 02.8 +2.3**
COI **Coimbra** **54.05 54** IAmb IAmb 04 10 31.0
comp=Z,327nm,1.2s
PMTG **Montargil** **54.10 55** *e*P **P** **04 10 26.4 -0.2**
comp=Z,527nm,1.7s
PMTG *e*S **S** **04 18 01.0 -0.3**
PCVE **Castro Verde** **54.16 57** *e*P **P** **04 10 28.1 +1.0**
comp=Z,385nm,1.8s
PCVE *e*S **S** **04 18 04.7 +2.6**
PBDV **Barranco-do-Ve** **54.23 57** *e*P **P** **04 10 28.3 +0.7**
comp=Z,586nm,1.8s
PBDV *e*S **S** **04 18 06.0 +2.9**
EVO **Evora** **54.23 56** *e*P **P** **04 10 27.9 +0.3**
comp=Z,391nm,1.7s
EVO **Evora** **54.23 56** ⇓*i*P **P** **04 10 27.9 +0.3**
EVO *i* S **S** **04 18 04.3 +1.3**
OUK **Oukaimeden** **54.24 65** P **P** **04 10 30.0 +1.8**
SNR=88
OUK P **P** **04 10 30.0 +1.8**
SNR=88
LPA **La Plata** **54.27 171** *e*P P 04 10 16.0 -12
LPA pP pP 04 10 36.2 +0.1
LPA PCP **PcP** **04 11 24.5 -7.1**
LPA PP **PP** **04 12 30.0 0.0**
LPA pPP 04 12 44.3
LPA PPP PPP 04 13 38.5
LPA S **S** **04 18 04.0 +0.7**
LPA SCS **ScS** **04 20 07.8 -7.0**
LPA SS **SS** **04 21 46.1 +0.1**
LPA SSS SSS 04 23 46.6
PBEJ **Beja** **54.32 56** *e*P **P** **04 10 29.3 +1.1**
comp=Z,390nm,1.9s
PVAQ **Vaqueiros** **54.41 57** *e*P **P** **04 10 29.7 +0.8**
comp=Z,440nm,1.8s
PVAQ *e*S **S** **04 18 08.3 +2.9**
PVAQ *e*LR LR 04 25 52.3
comp=Z,67µm,20.0s
PVAQ **Vaqueiros** **54.41 57** P **P** **04 10 32.8 +4.0**
SNR=13
PVAQ P **P** **04 10 32.8 +4.0**
SNR=13
PVAQ **Vaqueiros** **54.41 57** IAmb IAmb 04 10 34.3
comp=Z,282nm,1.3s
YKA **Yellowknife Ar** **54.41 335** P **P** **04 10 27.6 -0.8**
comp=Z,46nm,0.7s,baz=114,slow=6.9,SNR=195
YKA PKPPKP **P'P'df** **04 40 41.7 -4.0**
comp=Z,0.6nm,0.8s,baz=286,slow=2.3,SNR=3.7
YKA PKP2ab 04 41 17.5
comp=Z,1.4nm,1.0s,baz=304,slow=2.0,SNR=4.4
PCAB **Cabril** **54.48 52** *e*P **P** **04 10 30.4 +1.0**
comp=Z,214nm,1.5s
PVIS **Viseu** **54.48 53** *e*P **P** **04 10 30.4 +0.9**
comp=Z,286nm,1.9s
PESTR **Estremoz** **54.58 55** *e*S **S** **04 18 06.9 -0.9**
PESTR **Estremoz** **54.58 55** P **P** **04 10 33.5 +3.4**
SNR=14
PESTR **Estremoz** **54.58 55** IAMs_20 IAMs_20 04 30 25.6
comp=Z,22µm,20.0s
PVRL **Vila Real** **54.67 52** *e*P **P** **04 10 31.9 +1.1**
comp=Z,584nm,1.6s
MTE **Manteigas** **54.73 54** *e*P **P** **04 10 30.6 -0.6**
comp=Z,295nm,1.6s
MTE *e*S **S** **04 18 11.2 +1.4**
MTE *e*LQ LQ 04 24 09.6
MTE *e*LR LR 04 26 00.8
comp=Z,65µm,20.0s
PCBR **Castelo Branco** **54.73 54** *e*P **P** **04 10 32.0 +0.8**
comp=Z,309nm,1.6s
PMRV **Marv??o** **54.77 55** *e*P **P** **04 10 32.4 +0.9**
comp=Z,274nm,1.7s
PMRV *e*S **S** **04 18 10.1 -0.2**
PMRV *e*LQ LQ 04 24 00.7
PMRV *e*LR LR 04 26 01.9
comp=Z,39µm,22.0s
BORG **Borgarnes** **54.80 22** P **P** **04 10 30.6 -0.6**
BORG pmax pmax
comp=Z,509nm,1.6s
BORG **Borgarnes** **54.80 22** P **P** **04 10 33.7 +2.5**
comp=Z,141nm,1.3s,baz=271,slow=4.0,SNR=4.5
BORG **Borgarnes** **54.80 22** P **P** **04 10 30.6 -0.6**
BORG IAmb IAmb 04 10 54.4
comp=Z,509nm,1.6s
BORG **Borgarnes** **54.80 22** IAMs_20 IAMs_20 04 29 20.3
comp=Z,19µm,21.0s
RTC **Rabat Centre** **55.04 61** P **P** **04 10 36.6 +3.1**
SNR=18
RTC P **P** **04 10 36.6 +3.1**
SNR=18
MVO **Moncorvo** **55.18 53** *e*P **P** **04 10 34.3 -0.2**
comp=Z,461nm,1.3s
MVO *e*S **S** **04 18 15.8 0.0**
MVO *e*LQ LQ 04 24 17.3
MVO *e*LR LR 04 26 24.0
comp=Z,31µm,18.0s
PBRG **Braganca** **55.45 52** *e*P **P** **04 10 36.2 -0.2**
comp=Z,256nm,1.9s
PBRG *e*S **S** **04 18 22.2 +2.8**
SFS **San Fernando** **55.59 58** ⇓*i*P **P** **04 10 39.4 +2.0**
SFS *i* S **S** **04 18 24.9 +3.7**
SFS **San Fernando** **55.59 58** IAMs_20 IAMs_20 04 30 34.4
comp=Z,22µm,21.0s
CNIL **Conil** **55.71 59** *e*P **P** **04 10 41.5 +3.2**
GIBL **Gibalbin** **55.78 58** *e*P **P** **04 10 41.0 +2.1**
RSA **Sarsar** **55.89 60** P **P** **04 10 42.0 +2.3**
SNR=42
SUMG **Summit** **56.00 10** *i* P **P** **04 10 41.0 +0.7**
SUMG pmax pmax
comp=Z,320nm,0.9s
SUMG MLR MLR
comp=Z,95µm,22.0s
SUMG **Summit** **56.00 10** *i* P **P** **04 10 41.0 +0.7**
comp=Z,321nm,0.9s
comp=Z,95µm,22.0s
ALJ **Aljibe** **56.04 58** *e*P **P** **04 10 43.0 +2.3**
TZRR **Tazzarine** **56.23 65** P **P** **04 10 44.1 +1.9**
SNR=75
TZRR P **P** **04 10 44.1 +1.9**
SNR=75
SMIR **Smir Dam** **56.25 59** P **P** **04 10 44.5 +2.4**
SNR=92
SMIR P **P** **04 10 44.5 +2.4**
SNR=92
CEU **Ceuta** **56.26 59** ⇓*i*P **P** **04 10 44.0 +1.9**
CEU *i* S **S** **04 18 32.4 +2.2**
CHEFC **Chefchaouen** **56.29 60** P **P** **04 10 45.2 +2.6**
SNR=110
CHEFC P **P** **04 10 45.2 +2.6**
SNR=110
HORN **Hornachuelos** **56.37 57** P **P** **04 10 46.6 +3.5**
SNR=9.8
IFR **Ifrane** **56.49 62** ⇓*i*P **P** **04 10 45.1 +0.9**
IFR *i* S **S** **04 18 33.3 -0.5**
GOLM **Goulmima** **56.71 64** P **P** **04 10 48.0 +2.3**
SNR=75
GOLM P **P** **04 10 48.0 +2.3**
SNR=75
MDT **Midelt** **56.95 63** P **P** **04 10 49.6 +2.2**
SNR=298
EMAL **Malaga-Limoner** **57.02 58** ⇓*i*P **P** **04 10 49.0 +1.4**
EMAL *i* S **S** **04 18 40.0 -0.2**
PAB **San Pablo** **57.13 55** P **P** **04 10 49.6 +1.1**
PAB pmax pmax
comp=Z,417nm,1.6s
PAB **San Pablo** **57.13 55** P **P** **04 10 49.5 +1.1**
PAB IAmb IAmb 04 10 52.1
comp=Z,417nm,1.6s
PVLZ **Peæn de** **57.14 60** ⇓*i*P **P** **04 10 48.9 +0.4**
PVLZ *i* S **S** **04 18 39.3 -2.5**
DSB **Dublin** **57.41 38** IAMs_20 IAMs_20 04 32 20.2
comp=Z,32µm,20.0s
ESDC **Sonseca Array** **57.43 55** P **P** **04 10 51.8 +1.2**
comp=Z,220nm,0.9s,baz=272,slow=6.9,SNR=299
ESDC ScP **ScP** **04 15 43.2 +1.2**
comp=Z,3.3nm,0.9s,baz=283,slow=4.5,SNR=3.9
ESDC LR LR 04 31 32.5
comp=Z,36µm,21.3s,baz=270,slow=32
ESDC PKPPKP **P'P'df** **04 40 40.9 -0.7**
comp=Z,2.3nm,1.1s,baz=58,slow=4.0,SNR=5.2
ESDC **Sonseca Array** **57.43 55** IAmb IAmb 04 10 53.6
comp=Z,214nm,1.1s
ESBB **Sonseca Array** **57.43 55** IAmb IAmb 04 10 53.5
comp=Z,320nm,1.1s
PALE **Palemas** **57.43 60** P **P** **04 10 53.0 +2.3**
SNR=38
PALE P **P** **04 10 53.0 +2.3**
SNR=38
TULEG **Thule** **57.59 359** IAmb IAmb 04 11 10.0
comp=Z,436nm,1.5s
TULEG IAMs_20 IAMs_20 04 32 03.9
comp=Z,17µm,18.0s
BBB **Bella Bella** **57.64 320** LR LR 04 38 34.7
comp=Z,14µm,18.1s,baz=106,slow=39
BBB **Bella Bella** **57.64 320** IAMs_20 IAMs_20 04 38 32.1
comp=Z,26µm,20.0s
RES **Resolute Bay** **57.74 352** P **P** **04 10 52.4 +0.3**
comp=Z,6.9nm,0.6s,baz=168,slow=9.2,SNR=21
RES PKPPKP P'P'df 04 40 30.6 -10
comp=Z,1.0nm,0.8s,baz=285,slow=9.0,SNR=4.0
RES PKP2bc 04 40 44.9
comp=Z,8.4nm,1.2s,baz=1.4,slow=4.4,SNR=5.2
RES PKP2ab 04 41 05.8
comp=Z,8.3nm,1.2s,baz=307,slow=3.8,SNR=3.5
RES **Resolute Bay** **57.74 352** IAMs_20 IAMs_20 04 32 44.3
comp=Z,24µm,19.0s
CLGH **Cloghs, Cushen** **57.97 36** ⇑*e*P **P** **04 10 54.2 +0.2**
CLGH IAmb IAmb 04 10 56.7
comp=Z,267nm,1.1s
CLGH IAMs_20 IAMs_20 04 32 38.0
comp=Z,20µm,18.5s
UCM **Universidad Co** **58.00 54** ⇓*i*P **P** **04 10 55.1 +0.5**
UCM *i* S **S** **04 18 53.9 +0.8**
SCO **Scoresbysund** **58.00 16** *e*P **P** **04 10 55.2 +1.2**
SCO MLR MLR
comp=Z,17µm,20.0s
SCO **Scoresbysund** **58.00 16** *i* P **P** **04 10 55.2 +1.2**
comp=Z,17µm,20.0s
SCO **Scoresbysund** **58.00 16** IAMs_20 IAMs_20 04 32 07.1
comp=Z,17µm,20.0s
H10N3 **ASCENSION HYDR** **58.09 112** P **P** **04 10 58.2 +3.1**
H10N2 **ASCENSION HYDR** **58.09 112** P **P** **04 10 55.8 +0.7**
H10N1 **ASCENSION HYDR** **58.11 112** P **P** **04 10 56.9 +1.6**
GOG **Mont Gurugu** **58.20 60** P **P** **04 10 58.0 +1.9**
SNR=104
GOG P **P** **04 10 58.0 +1.9**
SNR=104
MELI **Melilla** **58.25 60** ⇓*i*P **P** **04 10 56.4 +0.1**
MELI *i* S **S** **04 18 58.9 +2.4**
ASCN **Ascension** **58.26 112** P **P** **04 10 56.1 -0.5**
GO06 **Curarrehue** **58.43 184** IAMs_20 IAMs_20 04 40 24.3
comp=Z,18µm,20.0s
YRC **Rhoscolyn** **58.47 39** ⇑*e*P **P** **04 10 58.1 +0.7**
H10S3 **ASCENSION HYDR** **58.47 114** P **P** **04 11 00.2 +2.3**
H10S2 **ASCENSION HYDR** **58.49 114** P **P** **04 11 00.3 +2.3**
SESP **Santiago Espad** **58.52 56** P **P** **04 11 02.0 +3.7**
SNR=13
WLF1 **Llynfaes** **58.58 39** *e*P **P** **04 10 58.5 +0.2**
WLF1 IAmb IAmb 04 11 00.8
comp=Z,310nm,1.1s
WLF1 IAMs_20 IAMs_20 04 32 59.8
comp=Z,61µm,18.3s
WIM **Isle of Man** **58.58 38** ⇑*e*P **P** **04 10 59.2 +0.9**
LAWE **Loch Awe, Argy** **58.62 35** ⇑*e*P **P** **04 10 59.3 +0.8**
LAWE IAMs_20 IAMs_20 04 29 32.5
comp=Z,20µm,28.6s
WME **Myndd Eilian** **58.66 38** ⇑*e*P **P** **04 10 59.0 +0.2**
YLL **Llanberis** **58.69 39** ⇑*e*P **P** **04 11 00.0 +1.0**
GAL1 **Galloway** **58.71 37** ⇑*e*P **P** **04 10 59.1 0.0**
GAL1 IAmb IAmb 04 11 01.0
comp=Z,337nm,1.1s
GAL1 IAMs_20 IAMs_20 04 33 28.4
comp=Z,20µm,19.6s
KPL **Plockton** **58.74 34** *e*P **P** **04 10 59.0 -0.3**
KPL IAMs_20 IAMs_20 04 32 59.5
comp=Z,36µm,20.2s
RRR **Rubha Reidh** **58.79 33** *e*P **P** **04 10 59.8 +0.1**
LLW **Llanuwychllyn** **58.94 39** ⇑*e*P **P** **04 11 01.4 +0.6**
LLW IAmb IAmb 04 11 03.5
comp=Z,717nm,2.3s
KAC **Achnashellach** **58.97 34** ⇑*e*P **P** **04 11 01.3 +0.4**
PGBU **Glenifferbraes** **59.03 36** *e*P **P** **04 11 01.1 -0.3**
PGBU IAmb IAmb 04 11 03.8
comp=Z,448nm,1.1s
PGBU IAMs_20 IAMs_20 04 32 47.4
comp=Z,22µm,21.6s
TDRA **Tendrara** **59.11 62** P **P** **04 11 05.0 +2.5**
SNR=308
TDRA P **P** **04 11 05.0 +2.5**
SNR=308
MCH1 **Michaelchurch** **59.21 40** ⇑*e*P **P** **04 11 03.4 +0.7**
MCH1 IAmb IAmb 04 11 05.1

comp=Z,3µm,2.8s
MCH1 IAMs_20 IAMs_20 04 33 02.9
comp=Z,49µm,20.8s
FOEL Foel Wylfa 59.23 39⇑ *e*P **P 04 11 02.8 0.0**
FOEL IAmb IAmb 04 11 07.1
comp=Z,225nm,0.9s
FOEL IAMs_20 IAMs_20 04 30 23.4
comp=Z,21µm,26.6s
JVM Valle D.L. Mar 59.35 44⇑ *e*P **P 04 11 04.6 +0.9**
HLM1 Long Mynd 59.36 40⇑ *e*P **P 04 11 04.0 +0.2**
HLM1 IAmb IAmb 04 11 05.7
comp=Z,386nm,1.1s
HLM1 IAMs_20 IAMs_20 04 35 52.1
comp=Z,27µm,19.0s
JSA Saint Aubin 59.37 44⇑ *e*P **P 04 11 05.0 +1.2**
JSA IAmb IAmb 04 11 06.2
comp=Z,240nm,1.0s
JSA IAMs_20 IAMs_20 04 29 54.0
comp=Z,36µm,26.4s
INVG Invergeldie, C 59.40 35⇑ *e*P **P 04 11 04.1 +0.2**
INVG IAmb IAmb 04 11 05.9
comp=Z,168nm,1.1s
INVG IAMs_20 IAMs_20 04 29 43.2
comp=Z,18µm,29.8s
JLP Les Platons 59.42 44⇑ *e*P **P 04 11 05.1 +0.9**
OLDB Oldbury-Upon-S 59.44 41⇑ *e*P **P 04 11 04.7 +0.5**
OLDB IAmb IAmb 04 11 07.0
comp=Z,438nm,1.1s
OLDB IAMs_20 IAMs_20 04 33 09.3
comp=Z,57µm,20.4s
PLCA Paso Flores 59.52 183 P **P 04 11 03.4 -1.5**
comp=Z,18nm,0.8s,baz=24,slow=7.5,SNR=42
PLCA PcP **PcP 04 11 52.4 +0.3**
comp=Z,31nm,0.7s,baz=12,slow=4.6,SNR=4.6
PLCA S **S 04 19 10.6 -1.9**
comp=Z,2.0nm,0.8s,baz=141,slow=20,SNR=2.1
PLCA ScS **ScS 04 20 51.1 -1.8**
comp=Z,2.3nm,1.1s,baz=320,slow=16,SNR=1.8
PLCA LR LR 04 38 46.0
comp=Z,8µm,18.2s,baz=31,slow=38
PLCA PKP2ab 04 40 53.0
comp=Z,3.6nm,1.1s,baz=191,slow=5.6,SNR=3.1
PLCA Paso Flores 59.52 183 *e*P **P 04 11 03.8 -1.1**
BATH Bath 59.54 41⇑ *e*P **P 04 11 05.8 +0.9**
BATH IAMs_20 IAMs_20 04 33 12.1
comp=Z,53µm,20.1s
KESW Keswick, Cumbr 59.57 37 *e*P **P 04 11 05.7 +0.6**
KESW IAMs_20 IAMs_20 04 29 53.0
comp=Z,18µm,25.4s
ESK Eskdalemuir 59.64 36 *e*P **P 04 11 06.0 +0.5**
ESK IAmb IAmb 04 11 07.3
comp=Z,335nm,1.3s
ESK IAMs_20 IAMs_20 04 33 25.9
comp=Z,22µm,20.5s
ESK Eskdalemuir 59.64 36 P **P 04 11 06.1 +0.5**
ESK pmax pmax
comp=Z,262nm,1.3s
ESK Eskdalemuir 59.64 36 P **P 04 11 06.1 +0.5**
ESK IAmb IAmb 04 11 07.5
comp=Z,262nm,1.2s
ESK Eskdalemuir 59.64 36 IAMs_20 IAMs_20 04 33 30.9
comp=Z,22µm,20.0s
STRD Stroud 59.69 41 *e*P **P 04 11 06.5 +0.5**
STRD IAmb IAmb 04 11 08.1
comp=Z,435nm,1.2s
STRD IAMs_20 IAMs_20 04 33 07.0
comp=Z,55µm,19.9s
CART Cartagena 59.75 57⇓ *i*P **P 04 11 05.7 -1.0**
CART *i* S **S 04 19 15.6 -0.2**
CART Cartagena 59.75 57 IAmb IAmb 04 11 08.7
comp=Z,201nm,1.4s
CART IAMs_20 IAMs_20 04 32 43.4
comp=Z,25µm,22.0s
FIGM Figuig 59.81 63 P **P 04 11 09.0 +1.6**
SNR=252
FIGM P **P 04 11 09.0 +1.6**
SNR=252
EBL Broad Law 59.82 36⇑ *e*P **P 04 11 06.3 -0.5**
STNC Stoke 59.85 39 *e*P **P 04 11 07.8 +0.8**
STNC IAmb IAmb 04 11 09.6
comp=Z,2µm,2.8s
STNC IAMs_20 IAMs_20 04 30 41.5
comp=Z,21µm,27.7s
SWN1 Swindon 59.88 41⇑ *e*P **P 04 11 07.8 +0.5**
SWN1 IAmb IAmb 04 11 12.0
comp=Z,519nm,1.3s
SWN1 IAMs_20 IAMs_20 04 33 23.7
comp=Z,50µm,18.7s
BIGH Upper Bighouse 59.92 33⇑ *e*P **P 04 11 06.8 -0.6**
BIGH IAmb IAmb 04 11 10.1
comp=Z,171nm,1.2s
BIGH IAMs_20 IAMs_20 04 33 55.3
comp=Z,53µm,19.1s
EDU Dundee 59.98 35⇑ *e*P **P 04 11 08.5 +0.6**
DLBC Dease Lake 60.01 327 LR LR 04 38 17.7
comp=Z,23µm,19.4s,baz=101,slow=37
MCD Coleburn Disti 60.06 34 *e*P **P 04 11 08.4 0.0**
ESY Stoneypath 60.08 36⇑ *e*P **P 04 11 09.1 +0.4**
MOBC Moresby Island 60.12 321 IAMs_20 IAMs_20 04 38 32.6
comp=Z,29µm,20.0s
LBWR Ladybower, Pea 60.18 39⇑ *e*P **P 04 11 10.3 +1.0**
LBWR IAmb IAmb 04 11 12.1
comp=Z,488nm,1.1s
LBWR IAMs_20 IAMs_20 04 34 18.3
comp=Z,23µm,17.7s
WOL Wolverton 60.22 41⇑ *e*P **P 04 11 10.0 +0.4**
WOL IAmb IAmb 04 11 14.7
comp=Z,354nm,1.1s
WOL IAMs_20 IAMs_20 04 33 43.8
comp=Z,44µm,21.0s
EDMD Edmundbyers 60.26 37⇑ *e*P **P 04 11 10.0 +0.1**
EDMD IAmb IAmb 04 11 12.3
comp=Z,440nm,1.6s
EDMD IAMs_20 IAMs_20 04 31 13.9
comp=Z,15µm,21.7s
HPK Haverah Park 60.32 38 *e*P **P 04 11 10.6 +0.3**
HPK IAmb IAmb 04 11 12.8
comp=Z,222nm,1.0s
HPK IAMs_20 IAMs_20 04 33 38.5
comp=Z,34µm,20.5s
CWF Charnwood Fore 60.34 40 *e*P **P 04 11 10.6 +0.2**
CWF IAmb IAmb 04 11 13.0
comp=Z,175nm,1.3s
CWF IAMs_20 IAMs_20 04 36 50.7
comp=Z,27µm,17.5s
DIB Dawson Inlet, 60.43 321 IAmb IAmb 04 11 30.9
comp=Z,272nm,1.2s
H02S1 DAWSON INLET T 60.43 321 P **P 04 11 11.8 +0.8**
WRAK Wrangell Islan 60.84 325 IAmb IAmb 04 11 33.2
comp=Z,250nm,1.2s
GDLE Glaisdale, N Y 60.86 38⇑ *e*P **P 04 11 14.8 +0.8**
GDLE IAmb IAmb 04 11 16.0
comp=Z,304nm,1.0s
GDLE IAMs_20 IAMs_20 04 33 55.2
comp=Z,24µm,20.8s
LMK Market Rasen 61.02 39 *e*P **P 04 11 16.0 +0.9**
LMK IAmb IAmb 04 11 17.6
comp=Z,852nm,1.3s
LMK IAMs_20 IAMs_20 04 34 42.4
comp=Z,20µm,18.1s
C36M Paulatuk 61.03 340 P **P 04 11 13.6 -1.2**
baz=114,SNR=7.0
C36M S **S 04 19 25.4 -5.8**
baz=114
CRAG Craig 61.13 323 IAmb IAmb 04 11 36.0
comp=Z,404nm,1.3s
TIC Toumodi 61.27 93 *e*P **P 04 11 16.9 -0.5**
comp=Z,219nm,0.8s
LIC Lamto 61.39 93 *e*P **P 04 11 17.5 -0.7**
comp=Z,300nm,0.8s
DBIC Dimbokro 61.42 93 P **P 04 11 18.9 +0.5**
comp=Z,138nm,0.8s,baz=280,slow=6.2,SNR=68
DBIC S **S 04 19 35.3 -2.5**
comp=Z,8.5nm,1.1s,baz=124,slow=15,SNR=6.5
DBIC LR LR 04 33 24.3
comp=Z,37µm,21.6s,baz=263,slow=32
DBIC PKP2bc 04 40 39.0
comp=Z,8.9nm,0.8s,baz=83,slow=3.1,SNR=8.3
DBIC PKP2ab 04 40 47.4
comp=Z,9.8nm,1.0s,baz=67,slow=2.3,SNR=4.1
DBIC Dimbokro 61.42 93 IAmb IAmb 04 11 38.9
comp=Z,221nm,1.0s
EANR 'Ain N'Sour 61.51 59 P **P 04 11 19.8 +1.0**
WACR West Acre 61.51 40⇑ *e*P **P 04 11 18.8 +0.5**
WACR IAmb IAmb 04 11 23.4
comp=Z,440nm,1.0s
WACR IAMs_20 IAMs_20 04 34 43.8
comp=Z,35µm,19.3s
RPN Rapa Nui 61.62 223 P **P 04 11 18.4 -1.0**
RPN pmax pmax
comp=Z,841nm,1.7s
RPN Rapa Nui 61.62 223 P **P 04 11 18.4 -1.0**
RPN IAMs_20 IAMs_20 04 32 57.5
comp=Z,21µm,20.0s
KIC Kosan Boka 61.62 93 *e*P **P 04 11 19.8 0.0**
comp=Z,187nm,0.6s
ETRT Tiaret 61.70 59 P **P 04 11 23.0 +2.8**
ECHA Ech Chlef 61.71 59 P **P 04 11 21.0 +1.0**
EBNR Beni Rached 61.83 58 P **P 04 11 23.0 +2.1**
JMIC Jan Mayen 62.08 18 *e*P **P 04 11 24.0 +2.1**
JMIC *e*S **S 04 19 51.2 +6.8**
CLF Chambon-Foret 62.22 45 IAMs_20 IAMs_20 04 34 32.9
comp=Z,20µm,21.0s
JIS Juneau Island 62.23 327 IAmb IAmb 04 11 43.2
comp=Z,382nm,1.6s
BESE Bessie Mountai 62.52 327 IAmb IAmb 04 11 44.4
comp=Z,261nm,1.4s
DAG Danmarks Havn 62.61 11⇓ *i*P **P 04 11 26.0 +0.6**
DAG pmax pmax
comp=Z,160nm,1.0s
DAG MLR MLR
comp=Z,27µm,19.0s
DAG Danmarks Havn 62.61 11⇓ *i*P **P 04 11 26.0 +0.6**
comp=Z,155nm,1.0s
comp=Z,27µm,19.0s
WHY Whitehorse 62.87 329 IAmb IAmb 04 11 46.4
comp=Z,222nm,1.2s
WHY IAMs_20 IAMs_20 04 39 02.9
comp=Z,21µm,19.0s
UCC Uccle 63.69 42 IAmb IAmb 04 11 35.5
comp=Z,335nm,1.2s
SSB Saint Sauveur 63.76 48 IAMs_20 IAMs_20 04 37 25.0
comp=Z,14µm,20.0s
MAHO Mahon 63.77 54⇓ *i*P **P 04 11 34.0 +0.3**
MAHO *i* S **S 04 20 08.6 +2.0**
INK Inuvik 63.92 338 LR LR 04 40 02.9
comp=Z,18µm,20.4s,baz=104,slow=37
INK PKPPKP **P'P'df 04 40 28.2 -2.5**
comp=Z,4.4nm,1.1s,baz=299,slow=2.9,SNR=3.6
INK PKP2ab 04 40 40.8
comp=Z,3.8nm,0.9s,baz=236,slow=3.5,SNR=4.9
INK Inuvik 63.92 338 IAMs_20 IAMs_20 04 40 02.3
comp=Z,25µm,21.0s
HYT Haines Junctio 64.17 329 IAmb IAmb 04 11 56.0
comp=Z,397nm,1.4s
HYT IAMs_20 IAMs_20 04 39 52.3
comp=Z,25µm,19.0s
SUE Sulen 64.68 31 *e*P **P 04 11 39.8 +0.5**
SUE *e*S **S 04 20 19.1 +2.0**
SUE IVMs_BB IVMs_BB 04 37 03.7
comp=Z,7µm,21.9s
EPYK Eagle Plains 64.69 335 IAmb IAmb 04 11 58.1
comp=Z,252nm,1.1s
EPYK Eagle Plains 64.69 335 P **P 04 11 39.2 -0.2**
baz=101,SNR=21
EPYK S **S 04 20 15.1 -2.2**
baz=101
KMY Karmoy 64.73 33 *e*P **P 04 11 39.7 +0.1**
KMY IVmB_BB 04 11 53.0
comp=Z,5µm,3.6s
KMY *e*S **S 04 20 19.1 +1.3**
WLF Walferdange 64.82 43 *e*P **P 04 11 41.6 +1.2**
comp=Z,1µm,2.4s,baz=273,slow=6.3
WLF *ep*P **pP 04 11 49.0 +0.7**
WLF Walferdange 64.82 43 IAMs_20 IAMs_20 04 35 48.6
comp=Z,27µm,21.0s
ASK Askoy 64.83 31 *e*P **P 04 11 40.8 +0.6**
ASK IVmB_BB 04 11 43.6
comp=Z,3µm,3.0s
ASK *e*S **S 04 20 21.6 +2.6**
ASK IVMs_BB IVMs_BB 04 36 48.4
comp=Z,10µm,20.1s
FOO Floro 64.88 30 *e*P **P 04 11 42.4 +1.9**
FOO IVmB_BB 04 11 49.3
comp=Z,3µm,4.1s
FOO *e*S **S 04 20 22.3 +2.7**
BER Bergen 64.89 31 *e*P **P 04 11 41.9 +1.3**
BER IVmB_BB 04 11 49.7
comp=Z,3µm,2.4s
BER *e*S **S 04 20 22.5 +2.8**
BER *e*SS **SS 04 24 38.2 +7.0**
BER ⇑*e* 04 36 28.2
BER IVMs_BB IVMs_BB 04 36 30.8
comp=Z,7µm,20.3s
SET Setif 64.96 58 P **P 04 11 45.0 +3.3**
CKHR Kef el Ahmar 65.06 58 P **P 04 11 44.8 +2.4**
YKU2 Yakutat 65.11 328 IAMs_20 IAMs_20 04 39 48.1
comp=Z,19µm,18.0s
BNI Bardonecchia 65.28 48 IAmb IAmb 04 12 12.5
comp=Z,251nm,1.3s
BNI IAMs_20 IAMs_20 04 35 55.2
comp=Z,16µm,21.0s
DFRA Djebel Bou Aff 65.30 58 P **P 04 11 45.4 +1.4**
BLS5 Blasjo 65.36 33 *e*P **P 04 11 45.6 +1.8**
BLS5 IVmB_BB 04 11 47.8
comp=Z,4µm,2.8s
BLS5 *e*S **S 04 20 27.1 +1.3**
HYA Hoyanger 65.38 31 *e*P **P 04 11 44.8 +1.0**
HYA *e*S **S 04 20 30.0 +4.3**
AHRW Bad Neuenahr-A 65.41 42 *e*P **P 04 11 45.7 +1.5**
comp=Z,1µm,1.9s,baz=273,slow=6.3
AHRW *ep*P **pP 04 11 53.2 +1.1**
PCA Pinnacle 65.45 328 IAMs_20 IAMs_20 04 42 46.6
comp=Z,20µm,21.0s
ODD1 Odda 65.49 32 *e*P **P 04 11 45.5 +0.8**
ODD1 IVmB_BB 04 11 54.2
comp=Z,5µm,2.8s
ODD1 *e*S **S 04 20 31.6 +4.3**
ECH Echery 65.50 45 IAmb IAmb 04 11 47.9
comp=Z,406nm,1.4s
ECH IAMs_20 IAMs_20 04 36 40.7
comp=Z,14µm,20.0s
BUG Bochum--Univer 65.53 41 *e*P **P 04 11 45.9 +1.0**
comp=Z,872nm,1.9s,baz=273,slow=6.3
BUG *ep*P **pP 04 11 53.3 +0.5**
SENIN Lac Senin/Sane 65.66 47 IAmb IAmb 04 11 56.8
comp=Z,318nm,1.2s
SENIN IAMs_20 IAMs_20 04 37 24.1
comp=Z,21µm,21.0s
SNART Snartemo 65.69 34 *e*P **P 04 11 46.5 +0.6**
SNART *e*S **S 04 20 32.1 +2.5**
CTEI Djebel Teioual 65.78 58 P **P 04 11 48.2 +1.1**
TOA0 Torodi Ar. Sit 65.80 84 P **P 04 11 47.2 -0.1**
TOA0 IAmb IAmb 04 12 05.5
comp=Z,177nm,0.9s
TORD Torodi Ar. Bea 65.80 84 P **P 04 11 47.9 +0.5**
comp=Z,98nm,0.7s,baz=292,slow=5.4,SNR=133
TORD S **S 04 20 29.1 -3.2**
comp=Z,8.5nm,1.4s,baz=270,slow=5.8,SNR=3.7
TORD LR LR 04 36 58.0
comp=Z,45µm,21.3s,baz=305,slow=33
TORD PKPPKP 04 40 24.3
comp=Z,8.3nm,1.1s,baz=94,slow=1.8,SNR=6.6
TORD PKP2ab 04 40 33.3
comp=Z,2.8nm,0.8s,baz=98,slow=1.0,SNR=5.4
TORD Torodi Ar. Bea 65.80 84 P **P 04 11 46.9 -0.4**
TORD PP **PP 04 14 04.8 -7.6**
CASM Ain Smara 65.83 58 P **P 04 11 48.4 +1.1**
IBBN Ibbenburen 65.83 40 *e*P **P 04 11 48.0 +1.1**
comp=Z,2µm,2.4s,baz=273,slow=6.3
IBBN *ep*P **pP 04 11 55.6 +0.8**
NOR Nord 65.85 7 *i*P **P 04 11 47.0 +0.4**
AKN Aaknes 65.86 30 *e*P **P 04 11 47.6 +0.7**
AKN IVmB_BB 04 11 50.7
comp=Z,4µm,2.8s
AKN *e*S **S 04 20 33.8 +2.1**
AKN IVMsBB 04 33 15.4
comp=Z,4µm,29.4s
HLG Helgoland 65.92 38 *e*P **P 04 11 48.5 +1.1**
comp=Z,324nm,1.3s,baz=273,slow=6.3
CKFL Kef-Lekhel 66.00 58 P **P 04 11 52.2 +3.8**
CTGM Chitina Glacie 66.05 329 IAmb IAmb 04 12 08.2
comp=Z,249nm,1.0s
CTGM IAMs_20 IAMs_20 04 40 55.0
comp=Z,23µm,21.0s
CAEH 'Ain El Ouahch 66.06 57 P **P 04 11 49.4 +0.7**
MOL Molde 66.14 29 *e*P **P 04 11 50.5 +1.8**
MOL IVmB_BB 04 11 52.1
comp=Z,2µm,2.6s
MOL *e*S **S 04 20 35.6 +0.5**
MOL *e*SS **SS 04 24 47.6 -3.1**
BFO Black Forest 66.28 45 P **P 04 11 49.7 -0.2**
BFO pmax pmax
comp=Z,142nm,1.2s
BFO Black Forest 66.28 45 *e*P **P 04 11 50.6 +0.7**
comp=Z,918nm,2.4s,baz=273,slow=6.3
BFO Black Forest 66.28 45 P **P 04 11 49.7 -0.2**
BFO IAMs_20 IAMs_20 04 37 13.3
comp=Z,18µm,20.0s
TNS Taunus Mts 66.30 43 *e*P **P 04 11 51.2 +1.2**
comp=Z,544nm,1.7s,baz=273,slow=6.3
TNS *ep*P **pP 04 11 58.6 +0.7**
HOMB Homborsund 66.37 34 *e*P **P 04 11 51.9 +1.7**
HOMB IVmB_BB 04 11 53.8
comp=Z,4µm,2.3s
HOMB *e*S **S 04 20 40.5 +2.7**
HOMB *e*SS **SS 04 24 54.9 +0.6**
HOMB IVMs_BB IVMs_BB 04 38 04.5
comp=Z,9µm,22.3s
SKAR Skarslia 66.37 31 *e*P **P 04 11 52.0 +1.6**
SKAR *e*S **S 04 20 39.1 +1.1**
SKAR *e*SS **SS 04 24 57.9 +3.4**
SKAR IVmBBB 04 37 25.3
comp=Z,8µm,21.3s
CMAH Djebel Manchou 66.53 58 P **P 04 11 52.2 +0.4**
BALM Baldy 66.54 329 IAmb IAmb 04 12 10.6
comp=Z,163nm,1.2s
BALM IAMs_20 IAMs_20 04 41 10.0
comp=Z,24µm,20.0s
ABSA Djebel Ababsia 66.62 58 P **P 04 11 53.7 +1.3**
MUD Monsted U'grnd 66.69 36 *i*P **P 04 11 53.3 +1.0**
MUD pmax pmax
comp=Z,410nm,1.3s
MUD Monsted U'grnd 66.69 36 *i*P **P 04 11 53.3 +1.0**
comp=Z,405nm,1.3s
TGL Tana Glacier 66.76 329 IAmb IAmb 04 12 15.3
comp=Z,344nm,1.3s
TGL IAMs_20 IAMs_20 04 41 18.9
comp=Z,22µm,20.0s
RETH Rethem/Aller, 66.81 40 *e*P **P 04 11 54.5 +1.4**
comp=Z,758nm,1.8s,baz=273,slow=6.3
RETH *ep*P **pP 04 12 02.1 +1.1**
DOMB Dombas 66.81 30 *e*P **P 04 11 54.1 +1.0**
DOMB IVmB_BB 04 12 02.6
comp=Z,3µm,3.0s
DOMB *e*S **S 04 20 45.9 +2.5**
DOMB *e*SS **SS 04 25 03.6 +2.4**
DOMB IVMs_BB IVMs_BB 04 33 44.5
comp=Z,5µm,20.9s
STU Stuttgart 66.84 44 *e*P **P 04 11 54.1 +0.7**
comp=Z,1µm,2.2s,baz=273,slow=6.3
STU Stuttgart 66.84 44 IAmb IAmb 04 12 14.0
comp=Z,276nm,1.3s
STU IAMs_20 IAMs_20 04 39 38.0
comp=Z,19µm,19.0s
CRQM Cirque 66.92 329 IAmb IAmb 04 12 18.9
comp=Z,219nm,1.0s
CRQM IAMs_20 IAMs_20 04 41 23.3
comp=Z,24µm,20.0s
KONO Kongsberg 66.98 32*d i*P **P 04 11 55.8 +1.7**
KONO pmax pmax
comp=Z,137nm,1.0s
KONO MLR MLR
comp=Z,20µm,18.0s
KONO Kongsberg 66.98 32 *e*P **P 04 11 55.9 +1.7**
KONO IVmB_BB 04 11 57.8
comp=Z,4µm,2.8s
KONO *e*S **S 04 20 47.8 +2.6**
KONO *e*SS **SS 04 25 08.5 +4.8**
KONO Kongsberg 66.98 32 P **P 04 11 54.6 +0.5**
KONO IAmb IAmb 04 12 12.6
comp=Z,163nm,1.1s
KONO PP **PP 04 14 23.2 +1.6**
TUE Stuetta 67.07 47 IAMs_20 IAMs_20 04 44 32.3
comp=Z,12µm,18.0s
GTTG Guttingen 67.22 41 *e*P **P 04 11 56.9 +1.2**
comp=Z,764nm,1.9s,baz=273,slow=6.3
GTTG *ep*P **pP 04 12 04.2 +0.6**
UBBA Unterbreizbach 67.27 42 *e*P **P 04 11 57.2 +1.2**
comp=Z,526nm,1.9s,baz=273,slow=6.3
UBBA *ep*P **pP 04 12 04.6 +0.7**
GLB Gilahina Butte 67.27 330 IAmb IAmb 04 12 15.7
comp=Z,232nm,1.0s
NRDL Niedersach Rie 67.27 40 *e*P **P 04 11 57.5 +1.5**
comp=Z,786nm,1.9s,baz=273,slow=6.3
NRDL *ep*P **pP 04 12 05.1 +1.2**
MSSA Maissana 67.35 49 IAmb IAmb 04 12 08.2
comp=Z,138nm,1.0s
MSSA IAMs_20 IAMs_20 04 39 15.9
comp=Z,13µm,20.0s
BSEG Bad Segeberg 67.36 39 *e*P **P 04 11 57.5 +1.0**
comp=Z,844nm,2.3s,baz=273,slow=6.3
BSEG *ep*P **pP 04 12 05.1 +0.7**
DAVA Damuels 67.38 46 *i*P **P 04 11 57.7 +0.6**
comp=Z,369nm,1.6s,SNR=69
TBLU Trondheim 67.43 29 *e*P **P 04 11 58.6 +1.8**
TBLU IVmB_BB 04 12 01.1
comp=Z,3µm,2.3s
TBLU *e*S **S 04 20 53.1 +2.6**
TBLU *e*ScS **ScS 04 21 52.7 +0.1**
CLZ Clausthal 67.46 41 *e*P **P 04 11 58.5 +1.2**
comp=Z,2µm,2.9s,baz=273,slow=6.3
DOT Dot Lake 67.47 332 IAMs_20 IAMs_20 04 40 01.0
comp=Z,24µm,20.0s
UBR Ueberruh 67.51 45 *e*P **P 04 11 58.8 +1.0**
comp=Z,319nm,1.6s,baz=273,slow=6.3
OSL Oslo 67.55 32 *e*P **P 04 11 59.0 +1.3**
OSL IVmB_BB 04 12 07.4
comp=Z,3µm,6.0s
OSL *e*S **S 04 20 54.4 +2.3**
OSL *e*SS **SS 04 25 07.9 -4.7**
NC204 NORSAR Array S 67.59 31 IAmb IAmb 04 12 16.7
comp=Z,282nm,1.2s
NBO00 NORSAR Array S 67.60 31 *e*P **P 04 11 60.0 +1.9**
NBO00 IVmB_BB 04 12 02.0
comp=Z,3µm,2.9s
NBO00 *e*S **S 04 20 55.1 +2.3**
NBO00 IVMs_BB IVMs_BB 04 38 42.4
comp=Z,6µm,20.7s
NBO00 NORSAR Array S 67.60 31 IAmb IAmb 04 12 16.9
comp=Z,435nm,1.3s
ASSE Asse, Remlinge 67.63 41 *e*P **P 04 11 59.8 +1.5**
comp=Z,2µm,2.5s,baz=273,slow=6.3
ASSE *ep*P **pP 04 12 07.4 +1.2**
RAGM Ragged Mountai 67.66 328 IAmb IAmb 04 12 18.4
comp=Z,401nm,1.2s
FUORN Ofenpass-Fuorn 67.69 47 IAMs_20 IAMs_20 04 40 32.7
comp=Z,15µm,20.0s
NB2 NORSAR Subarra 67.81 31 P **P 04 12 00.0 +0.6**
comp=Z,650nm,2.0s,baz=270,slow=6.5
NB2 NORSAR Subarra 67.81 31 P **P 04 12 00.0 +0.6**
baz=270,slow=6.5
NOA NORSAR Array B 67.81 31 P **P 04 12 00.7 +1.2**
comp=Z,47nm,0.9s,baz=270,slow=6.4,SNR=56
NOA LR LR 04 38 33.6
comp=Z,13µm,20.2s,baz=260,slow=33
NOA PKPPKP **P'P'df 04 40 20.0 -4.5**
comp=Z,3.1nm,1.0s,baz=84,slow=4.2,SNR=3.6
NC303 NORSAR Array S 67.89 31 IAmb IAmb 04 12 18.6
comp=Z,413nm,1.3s
SALO Salr 67.95 48 IAmb IAmb 04 12 04.5
comp=Z,427nm,1.3s
SALO IAMs_20 IAMs_20 04 42 54.7
comp=Z,14µm,18.0s
RETA Reutte 67.96 46 *i*P **P 04 12 01.2 +0.5**
comp=Z,272nm,1.3s,SNR=70
FETA Feichten 67.98 46 *i*P **P 04 12 01.4 +0.5**
comp=Z,292nm,1.1s,SNR=144
VLC Villacollemand 67.99 49 IAmb IAmb 04 12 10.0
comp=Z,296nm,1.3s
VLC IAMs_20 IAMs_20 04 38 33.8
comp=Z,13µm,20.0s
PAX Paxson 68.09 331 IAmb IAmb 04 12 20.9
comp=Z,288nm,1.1s
GRA1 Grafenberg Arr 68.11 43 IAMs_20 IAMs_20 04 37 18.6
comp=Z,24µm,21.0s
GRF Grafenberg Arr 68.11 43 *e*P **P 04 12 02.5 +1.0**
comp=Z,793nm,2.1s,baz=273,slow=6.3
GRF *ep*P **pP 04 12 10.0 +0.6**
GRF *e*L L 04 37 29.3
comp=Z,24µm,21.5s
KEST Kesra 68.19 58 P **P 04 12 03.4 +1.0**
comp=Z,60nm,0.8s,baz=203,slow=2.1,SNR=36
KEST S **S 04 21 00.1 -0.8**
comp=Z,5.4nm,1.2s,baz=307,slow=20,SNR=4.1
KEST LR LR 04 38 47.1
comp=Z,19µm,20.6s,baz=234,slow=33
KEST PKPPKP 04 40 20.3
comp=Z,8.7nm,1.2s,baz=56,slow=11,SNR=3.2

KEST Kesra 68.19 58 IAMs_20 IAMs_20 04 38 56.0
comp=Z,20µm,20.0s
EYAK Cordova Ski Ar 68.20 329 IAmb IAmb 04 12 23.8
comp=Z,208nm,1.1s
MOTA Moosalm 68.21 46 iP P 04 12 02.6 +0.3
comp=Z,382nm,2.4s,SNR=74
NSS Namsos 68.23 27 eP P 04 12 02.6 +0.7
NSS eS S 04 21 01.7 +1.6
NSS eSS SS 04 25 28.5 +5.6
FUR Furstenfeldbru 68.26 45 eP P 04 12 03.4 +1.0
comp=Z,2µm,2.5s,baz=273,slow=6.3
FUR epP pP 04 12 10.9 +0.5
SQTA Sankt Quirin 68.29 46 iP P 04 12 02.9 +0.1
comp=Z,290nm,1.4s,SNR=80
MOX Moxa 68.30 42 eP P 04 12 03.7 +1.1
comp=Z,321nm,1.9s,baz=273,slow=6.3
MOX eL L 04 38 19.5
comp=Z,29µm,21.0s
NEUB Neuenburg 68.37 42 eP P 04 12 04.1 +1.1
comp=Z,2µm,2.6s,baz=273,slow=6.3
NEUB epP pP 04 12 11.6 +0.7
ZCCA Zocca 68.39 49 IAmb IAmb 04 12 37.9
comp=Z,301nm,1.2s
ZCCA IAMs_20 IAMs_20 04 37 28.4
comp=Z,13µm,20.0s
MID Middleton Isla 68.50 327 IAMs_20 IAMs_20 04 43 34.0
comp=Z,17µm,18.0s
COP Copenhagen 68.53 37 iP P 04 12 04.8 +0.9
COP pmax pmax
comp=Z,160nm,1.1s
COP MLR MLR
comp=Z,8µm,20.0s
COP Copenhagen 68.53 37 iP P 04 12 04.8 +0.9
comp=Z,163nm,1.1s
comp=Z,8µm,20.0s
WATA Walderalm 68.53 46 iP P 04 12 04.7 +0.4
comp=Z,244nm,2.0s,SNR=44
FID Port Fidalgo 68.56 329 IAmb IAmb 04 12 24.0
comp=Z,365nm,1.1s
PLN Plauen 68.66 42 eP P 04 12 05.7 +0.9
comp=Z,662nm,2.4s,baz=273,slow=6.3
PLN epP pP 04 12 13.1 +0.4
MANZ Manzenberg 68.66 43 eP P 04 12 06.1 +1.2
comp=Z,2µm,2.5s,baz=273,slow=6.3
MANZ epP pP 04 12 13.7 +0.9
CTI Castel Tesino 68.70 47 IAMs_20 IAMs_20 04 41 58.4
comp=Z,14µm,20.0s
STOK Stokkvaagen 68.71 25 eP P 04 12 05.7 +0.9
STOK eS S 04 21 09.6 +3.8
ILAR Eielson Array 68.74 333 P P 04 12 05.2 0.0
comp=Z,71nm,0.9s,baz=100,slow=3.8,SNR=148
ILAR S S 04 21 03.6 -2.7
comp=Z,2.2nm,1.2s,baz=97,slow=7.4,SNR=6.3
ILAR PKP2bc 04 40 18.8
comp=Z,1.1nm,1.0s,baz=256,slow=3.3,SNR=3.7
ILAR LR LR 04 42 38.2
comp=Z,48µm,20.5s,baz=98,slow=36
ROTZ Rotzenmuhle 68.74 43 eP P 04 12 06.7 +1.3
comp=Z,929nm,2.2s,baz=273,slow=6.3
ROTZ epP pP 04 12 14.2 +0.8
KONS Konsvik 68.76 25 eP P 04 12 06.4 +1.2
KONS eS S 04 21 08.9 +2.6
HDA Harding Lake 68.77 333 IAmb IAmb 04 12 24.5
comp=Z,350nm,1.2s
HDA Harding Lake 68.77 333 P P 04 12 04.9 -0.4
baz=90,SNR=35
HDA S S 04 21 05.1 -1.5
baz=90
HDA S S 04 21 05.1 -1.5
baz=90
GUNZ Gunzen 68.78 42 eP P 04 12 06.7 +1.0
comp=Z,581nm,2.3s,baz=273,slow=6.3
GUNZ epP pP 04 12 14.1 +0.5
TEOL Teolo 68.78 48 IAMs_20 IAMs_20 04 40 07.7
comp=Z,13µm,20.0s
WERN Wernitzgruen 68.81 43 eP P 04 12 07.0 +1.1
comp=Z,535nm,2.2s,baz=273,slow=6.3
WERN epP pP 04 12 14.4 +0.6
GLI Glacier Island 68.86 329 IAmb IAmb 04 12 25.2
comp=Z,263nm,1.1s
TANN Tannenbergstha 68.86 42 eP P 04 12 07.2 +1.0
comp=Z,2µm,2.5s,baz=273,slow=6.3
TANN epP pP 04 12 14.6 +0.5
NKC Novy Kostel 68.86 43 eP P 04 12 07.0 +0.8
NKC eS S 04 21 10.6 +2.4
NKC MLR MLR
comp=Z,35µm,21.0s
NKC Novy Kostel 68.86 43 eP P 04 12 07.0 +0.8
NKC eS S 04 21 10.6 +2.4
NKC AMS AMS 04 38 10.0
comp=Z,35µm,21.0s
DHY Denali Highway 68.96 331 IAmb IAmb 04 12 29.7
comp=Z,141nm,1.0s
DHY IAMs_20 IAMs_20 04 41 54.1
comp=Z,18µm,21.0s
LOF Lofoten 68.96 23 eP P 04 12 07.7 +1.2
LOF IVmB_BB 04 12 15.4
comp=Z,3µm,2.7s
LOF eS S 04 21 11.0 +2.3
LOF eSS SS 04 25 37.6 +3.6
LOF IVMs_BB IVMs_BB 04 37 40.0
comp=Z,5µm,19.0s
POKR Poker Plat Res 68.98 333 P P 04 12 06.4 -0.2
baz=90,SNR=104
POKR S S 04 21 08.3 -0.8
baz=90
HFS Hagfors 69.04 32 PKP2bc P'P'bc 04 40 19.1 -3.4
comp=Z,5.3nm,1.0s,baz=171,slow=10,SNR=3.7
RGN Rugen 69.09 38 eP P 04 12 08.9 +1.5
comp=Z,817nm,2.0s,baz=273,slow=6.3
RGN epP pP 04 12 16.4 +1.1
RGN Rugen 69.09 38 eP P 04 12 07.7 +0.3
CLL Collm 69.13 41⇓iP P 04 12 08.3 +0.5
CLL i*PP pP 04 12 13.4 -2.3
CLL eS S 04 21 14.0 +2.8
CLL pmax pmax
comp=Z,1µm,2.6s
CLL Collm 69.13 41⇓iP P 04 12 08.3 +0.5
comp=Z,1µm,2.6s
CLL ipP pP 04 12 13.4 -2.3
CLL isP sP 04 12 15.8 -2.8
CLL i 04 12 24.0
CLL ePP PP 04 14 42.0 +1.5
CLL e 04 16 42.0
CLL eS S 04 21 14.0 +2.8
CLL ePPS PPS 04 21 48.0
CLL e(SKSac) 04 22 05.0
CLL eSS SS 04 25 48.0 +11
CLL e 04 26 01.0
CLL e 04 26 48.0
CLL eSSS SSS 04 29 00.0
CLL Lm MLR 04 39 00.0
comp=N,21µm,20.6s
CLL Lm MLR 04 39 00.0
comp=E,27µm,21.6s
CLL Lm MLR 04 39 00.0
comp=Z,32µm,20.8s
CLL Lmax 04 39 00.0
CLL ePKPPKPbc 04 40 17.0
CLL Collm 69.13 41 eP P 04 12 08.8 +1.0
comp=Z,1µm,2.6s,baz=273,slow=6.3
CLL epP pP 04 12 16.2 +0.6
CCB Clear Creek Bu 69.14 333 IAmb IAmb 04 12 26.5
comp=Z,247nm,1.0s
COLA College 69.16 333c iP P 04 12 08.2 +0.5
COLA pmax pmax
comp=Z,154nm,1.1s
COLA MLR MLR
comp=Z,51µm,19.0s
COLA College 69.16 333 P P 04 12 07.8 +0.2
TCOL CIGO, UAF Yank 69.16 333 P P 04 12 07.5 -0.2
baz=90,SNR=22
TCOL S S 04 21 09.4 -1.7
baz=90
LATE Laterza 69.18 51 IAMs_20 IAMs_20 04 38 55.5
comp=Z,14µm,20.0s
ABTA Abfaltersbach 69.22 46 iP P 04 12 08.7 +0.1
comp=Z,169nm,1.1s,SNR=82
WET Wettzell 69.23 44 eP P 04 12 09.6 +1.1
comp=Z,1µm,2.6s,baz=273,slow=6.3
WET epP pP 04 12 17.0 +0.6
WRH Wood River Hil 69.26 333 IAmb IAmb 04 12 27.7
comp=Z,346nm,1.2s
MOR8 Moi Rana 69.29 25 eP P 04 12 11.1 +2.6
MOR8 IVmB_BB 04 12 18.4
comp=Z,3µm,2.9s
MOR8 eS S 04 21 16.8 +4.1
MOR8 eSS SS 04 25 41.4 +2.2
MOR8 IVMs_BB IVMs_BB 04 38 12.7
comp=Z,4µm,18.2s
RJOB Jochberg 69.31 45 eP P 04 12 10.0 +0.9
comp=Z,187nm,1.5s,baz=273,slow=6.3
KBS Kingsbay 69.34 12deP P 04 12 10.4 +1.8
KBS pmax pmax
comp=Z,197nm,1.3s
KBS MLR MLR
comp=Z,25µm,16.0s
KBS Kingsbay 69.34 12 eP P 04 12 10.5 +1.8
KBS IVmB_BB 04 12 18.5
comp=Z,2µm,2.5s
KBS eS S 04 21 14.5 +1.6
KBS eSS SS 04 25 38.9 -0.7
KBS Kingsbay 69.34 12 P P 04 12 07.0 -1.6
KBS IAmb IAmb 04 12 30.4
comp=Z,213nm,1.4s
KBS Kingsbay 69.34 12 IAMs_20 IAMs_20 04 38 57.1
comp=Z,14µm,21.0s
FBE Freiberg 69.38 42 eP P 04 12 10.6 +1.3
comp=Z,1µm,2.3s,baz=273,slow=6.3
FBE epP pP 04 12 18.1 +0.9
STAL STALIGIAL 69.41 47 IAMs_20 IAMs_20 04 38 09.2
comp=Z,15µm,21.0s
SML Sawmill 69.43 330 IAmb IAmb 04 12 28.3
comp=Z,447nm,1.3s
KNK Knik Glacier 69.50 329 IAmb IAmb 04 12 29.0
comp=Z,367nm,1.2s
RUE Ruedersdorf 69.52 40 eP P 04 12 11.1 +1.0
comp=Z,1µm,2.6s,baz=273,slow=6.3
RUE epP pP 04 12 18.7 +0.7
RUE Ruedersdorf 69.52 40 eP P 04 12 10.9 +0.8
STEI Steigen 69.60 24 eP P 04 12 12.1 +1.8
STEI IVmB_BB 04 12 19.4
comp=Z,3µm,3.1s
STEI eS S 04 21 19.2 +3.0
STEI eSS SS 04 25 45.5 +1.7
STEI IVMs_BB IVMs_BB 04 38 02.2
comp=Z,5µm,19.6s
MURB Monte Urbino 69.63 50 IAmb IAmb 04 12 30.8
comp=Z,194nm,1.0s
MCK McKinley 69.65 332 IAmb IAmb 04 12 30.0
comp=Z,326nm,1.1s
KHC Kasperske Hory 69.69 44diP P 04 12 09.7 -1.7
KHC pmax pmax
comp=Z,331nm,1.2s
KHC MLR MLR
comp=Z,23µm,18.0s
KHC Kasperske Hory 69.69 44 eP P 04 12 12.3 +0.9
KHC epP pP 04 12 19.2 -0.1
KHC eS S 04 21 19.8 +1.7
KHC AMS AMS 04 36 10.0
comp=Z,20µm,24.0s
KBA Koelnbreinsper 69.75 46 iP P 04 12 12.2 +0.2
comp=Z,149nm,1.1s,SNR=98
BRG Berggiesshubel 69.76 42 iP P 04 12 12.8 +1.1
comp=Z,163nm,1.2s
BRG S S 04 21 13.0 -5.7
BRG SS SS 04 25 36.0 -11
BRG ePKPPKP 04 40 16.4
comp=Z,39nm,1.8s
comp=N,16µm,21.9s
comp=E,19µm,20.8s
comp=Z,28µm,23.2s
BRG Berggiesshubel 69.76 42 iP P 04 12 12.8 +1.1
BRG S S 04 21 13.0 -5.7
BRG pmax pmax
comp=Z,163nm,1.2s
BRG pmax pmax
comp=Z,39nm,1.8s
BRG MLR MLR
comp=N,16µm,21.9s
BRG MLR MLR
comp=E,19µm,20.8s
BRG MLR MLR
comp=Z,28µm,23.2s
BRG Berggiesshubel 69.76 42 eP P 04 12 12.7 +1.1
comp=Z,1µm,2.5s,baz=273,slow=6.3
BRG epP pP 04 12 20.2 +0.7
GEC2 GERESS Array S 69.80 44 eP P 04 12 13.1 +1.0
comp=Z,662nm,2.1s,baz=273,slow=6.3
GEC2 epP pP 04 12 20.4 +0.3
GEC2 GERESS Array S 69.80 44 IAmb IAmb 04 12 32.1
comp=Z,242nm,1.6s
GERES GERESS Array B 69.80 44 P P 04 12 12.4 +0.3
comp=Z,25nm,1.0s,baz=270,slow=4.0,SNR=109
GERES PKP2bc 04 40 16.6
comp=Z,0.6nm,0.8s,baz=108,slow=4.3,SNR=4.4
GERES LR LR 04 43 17.5
comp=Z,10µm,18.2s,baz=271,slow=36
PMR Palmer 69.82 330 IAmb IAmb 04 12 31.3
comp=Z,206nm,1.1s
TOLK Toolik Lake Re 69.82 337 IAmb IAmb 04 12 53.6
comp=Z,198nm,1.2s
TOLK IAMs_20 IAMs_20 04 47 45.4
comp=Z,20µm,19.0s
TOLK Toolik Lake Re 69.82 337 P P 04 12 11.7 -0.1
baz=90,SNR=19
TOLK S S 04 21 16.5 -2.4
baz=90
PBCC Pribram 69.91 43 eP P 04 12 13.8 +1.2
PBCC eS S 04 21 22.5 +2.0
HSPB Hornsund (broa 69.92 14 eP P 04 12 12.1 -0.1
HSPB e 04 14 46.5
HSPB eS S 04 21 22.0 +2.3
HSPB e 04 22 09.1
HSPB Hornsund (broa 69.92 14 eP P 04 12 12.1 -0.1
HSPB ePP PP 04 14 46.5 -0.2
HSPB eS S 04 21 22.0 +2.3
HSPB eSKSac SKSac 04 22 09.1 -1.4
HSPB eL L 04 37 36.1
comp=Z,12µm,22.7s
HSPB Hornsund (broa 69.92 14 eP P 04 12 14.8 +2.7
HSPB IVmB_BB 04 12 22.3
comp=Z,3µm,3.0s
HSPB eS S 04 21 22.4 +2.7
BSD Bornholm Skovb 69.97 37⇓iP P 04 12 13.9 +1.0
BSD pmax pmax
comp=Z,230nm,1.2s
BSD MLR MLR
comp=Z,13µm,21.0s
BSD Bornholm Skovb 69.97 37⇓iP P 04 12 13.9 +1.0
comp=Z,228nm,1.2s
comp=Z,13µm,21.0s
MYKA Terra Mystica 70.01 46 iP P 04 12 13.4 0.0
comp=Z,100nm,1.1s,SNR=48
SEW Seward 70.05 328 IAmb IAmb 04 12 32.4
comp=Z,232nm,1.0s
COLD Coldfoot 70.08 336 IAMs_20 IAMs_20 04 36 53.4
comp=Z,23µm,20.0s
NRCA Norcia 70.11 50 IAMs_20 IAMs_20 04 40 53.1
comp=Z,20µm,20.0s
CADS Cadrg 70.12 47 iP P 04 12 13.9 -0.2
CADS iS S 04 21 20.6 -2.6
CADS e 04 22 15.4
RC01 Rabbit Creek A 70.13 329 IAmb IAmb 04 12 33.0
comp=Z,277nm,1.4s
PRA Prague 70.15 43 eP P 04 12 15.5 +1.4
PRA eS S 04 21 25.6 +2.3
PRA MLR MLR
comp=Z,33µm,20.7s
PRA Prague 70.15 43 eP P 04 12 15.5 +1.4
PRA eS S 04 21 25.6 +2.3
PRA AMS AMS 04 38 30.0
comp=Z,33µm,20.7s
SPA0 Spitsbergen Ar 70.15 13 eP P 04 12 15.0 +1.4
SPA0 IVmB_BB 04 12 22.8
comp=Z,2µm,2.6s
SPA0 eS S 04 21 22.2 -0.3
SPA0 eSS SS 04 25 50.5 -1.7
PVCC Panska Ves 70.19 42 eP P 04 12 15.3 +1.0
PVCC e 04 12 22.1
PVCC eS S 04 21 23.5 -0.2
PVCC MLR MLR
comp=Z,33µm,20.7s
PVCC Panska Ves 70.19 42 eP P 04 12 15.3 +1.0
PVCC epP pP 04 12 22.1 -0.1
PVCC eS S 04 21 23.5 -0.2
PVCC AMS AMS 04 38 50.0
comp=Z,33µm,20.7s
PRU Pruhonice 70.23 43 eP P 04 12 15.3 +0.7
PRU e 04 12 21.5
PRU eS S 04 21 24.6 +0.4
PRU MLR MLR
comp=Z,31µm,21.0s
PRU Pruhonice 70.23 43 eP P 04 12 15.3 +0.7
PRU epP pP 04 12 21.5 -1.0
PRU eS S 04 21 24.6 +0.4
PRU AMS AMS 04 38 30.0
comp=Z,31µm,21.0s
MOA Molln 70.29 45 iP P 04 12 15.3 +0.3
comp=Z,158nm,1.8s,SNR=58
MLY Manley 70.38 333 IAmb IAmb 04 12 34.6
comp=Z,447nm,1.4s
AQU L'Aquila 70.39 51⇓iP P 04 12 15.8 0.0
AQU L'Aquila 70.39 51 IAmb IAmb 04 12 34.0
comp=Z,316nm,1.3s
GOPC GO Pecny, Ondr 70.39 43 eP P 04 12 16.4 +0.8
GOPC eS S 04 21 27.3 +1.1
GOPC MLR MLR
comp=Z,27µm,20.3s
GOPC GO Pecny, Ondr 70.39 43 eP P 04 12 16.4 +0.8
GOPC eS S 04 21 27.3 +1.1
GOPC AMS AMS 04 38 50.0
comp=Z,27µm,20.3s
SUA Susitna One 70.60 330 IAmb IAmb 04 12 35.7
comp=Z,285nm,1.3s
OBKA Obir 70.64 46 iP P 04 12 17.9 +0.5
comp=Z,184nm,1.3s,SNR=76
CEY Cerknica 70.66 47⇓iP P 04 12 17.5 +0.2
LJU Ljubljana 70.69 47 iP P 04 12 17.9 +0.4
LJU eS S 04 21 30.0 +0.2
LJU e 04 22 20.3
LJU Ljubljana 70.69 47⇓iP P 04 12 17.6 +0.1
BJO1 Bjornoya 70.74 17 eP P 04 12 18.1 +0.9
BJO1 eS S 04 21 32.4 +3.0
BJO1 eSS SS 04 25 56.0 -5.1
BJO1 IVMs_BB IVMs_BB 04 37 37.0
comp=Z,7µm,23.6s
RIY Rijeka 70.75 48 eP P 04 12 18.5 +0.6
EFI East Falkland 70.78 174⇓iP P 04 12 18.4 +0.7
EFI pmax pmax
comp=Z,117nm,1.0s
EFI MLR MLR
comp=Z,10µm,19.0s
EFI East Falkland 70.78 174 P P 04 12 17.5 -0.1
EFI East Falkland 70.78 174 IAMs_20 IAMs_20 04 42 38.9
comp=Z,14µm,20.0s
BRLK Bradley Lake 70.80 328 IAmb IAmb 04 12 36.8
comp=Z,196nm,1.1s
INTR Introdacqua 70.81 51 IAmb IAmb 04 12 45.3
comp=Z,186nm,1.2s
TRO Tromso 70.89 22 eP P 04 12 20.2 +1.9
TRO IVmB_BB 04 12 27.5
comp=Z,4µm,2.9s
TRO eS S 04 21 33.6 +2.3
TRO eSS SS 04 26 05.8 +2.1
TRO IVMs_BB IVMs_BB 04 39 25.1
comp=Z,4µm,19.9s
TREC Trest 70.92 43 eP P 04 12 19.5 +0.7
TREC eS S 04 21 30.3 -2.1
TREC MLR MLR
comp=Z,21µm,22.6s
TREC Trest 70.92 43 eP P 04 12 19.5 +0.7
TREC eS S 04 21 30.3 -2.1
TREC AMS AMS 04 37 10.0
comp=Z,21µm,22.6s
SKT Skwentna 70.93 330 IAmb IAmb 04 12 37.0
comp=Z,260nm,1.2s
SOKA Soboth 70.95 46 iP P 04 12 19.1 -0.1
comp=Z,110nm,1.3s,SNR=60
CLTB Caltabellotta 70.98 56 IAmb IAmb 04 12 38.5
comp=Z,273nm,1.2s
CORL Corleone 71.00 56 IAmb IAmb 04 12 36.6
comp=Z,313nm,1.0s
UPC Upice 71.11 42 eP P 04 12 21.2 +1.3
UPC eS S 04 21 35.2 +0.7
UPC MLR MLR
comp=Z,39µm,21.3s
UPC Upice 71.11 42 eP P 04 12 21.2 +1.3
UPC eS S 04 21 35.2 +0.7
UPC AMS AMS 04 39 10.0
comp=Z,39µm,21.3s
CHVC Chvalec 71.12 42 eP P 04 12 20.6 +0.5
CHVC ex x 04 12 27.7
CHVC eS S 04 21 27.9 -6.8
CHVC AMS AMS 04 39 30.0
comp=Z,34µm,21.0s
NVLJ Novalja 71.13 48 iP P 04 12 20.2 +0.1
HOM Homer 71.19 328 IAmb IAmb 04 12 41.7
comp=Z,342nm,1.1s
ARSA Arzberg 71.21 46 iP P 04 12 20.8 +0.2
comp=Z,210nm,2.2s,SNR=40
OSTC Ostas 71.23 42 eP P 04 12 21.4 +0.7
OSTC AMS AMS 04 39 30.0
comp=Z,37µm,21.5s
KSP Ksiaz 71.24 42 eP P 04 12 20.3 -0.4
KSP eS S 04 21 36.6 +0.6
KSP e 04 22 25.5
KSP Ksiaz 71.24 42 eP P 04 12 20.3 -0.4
KSP eS S 04 21 36.6 +0.6
KSP eSKSac ScS 04 22 25.5 +2.4
KSP eL L 04 40 17.2
comp=Z,36µm,21.3s
BOJS Bojanci 71.26 47 iP P 04 12 21.3 +0.3
BOJS iS S 04 21 33.6 -2.8
DPC Dobruska-Polom 71.32 42 eP P 04 12 21.9 +0.6
DPC e 04 12 29.2
DPC eS S 04 21 33.8 -3.3
DPC MLR MLR
comp=Z,34µm,21.4s
DPC Dobruska-Polom 71.32 42 eP P 04 12 21.9 +0.6
DPC epP pP 04 12 29.2 0.0
DPC eS S 04 21 33.8 -3.3
DPC AMS AMS 04 39 20.0
comp=Z,34µm,21.4s
CONA Conrad Observa 71.34 45 iP P 04 12 22.0 +0.5
comp=Z,121nm,1.7s,SNR=46
DUGI Dugi Otok 71.35 49 iP P 04 12 21.8 +0.3
CRES Cresnjev 71.36 47⇓iP P 04 12 21.6 0.0
OZLJ Ozalj 71.40 47 iP P 04 12 22.9 +1.1
PAOL Paolisi 71.45 52 IAmb IAmb 04 12 32.5
comp=Z,284nm,1.2s
GKP Gorka Klasztor 71.52 39 eP P 04 12 23.0 +0.7
GKP eS S 04 21 41.6 +2.5
GKP Gorka Klasztor 71.52 39 eP P 04 12 23.0 +0.7
GKP eS S 04 21 41.6 +2.5
GKP eL L 04 42 15.4
comp=Z,33µm,20.1s
KRUC Moravsky 71.54 44⇓iP P 04 12 21.6 -1.0
KRUC ePP PP 04 14 50.5 -11
KRUC eS S 04 21 39.6 +0.1
KRUC eSS SS 04 25 58.4 -16
KRUC e 04 34 18.3
VRAC Vranov 71.63 43⇑iP P 04 12 24.3 +1.1
VRAC Vranov 71.63 43⇓iP P 04 12 22.7 -0.5
VRAC ePP PP 04 14 51.1 -11
VRAC eS S 04 21 41.4 +0.8
VRAC eSS SS 04 26 03.2 -13
VRAC e 04 34 31.3
KRLC Kraliky 71.65 42 eP P 04 12 24.5 +1.2
KRLC eS S 04 21 40.4 -0.5
KRLC MLR MLR
comp=Z,27µm,21.1s
KRLC Kraliky 71.65 42 eP P 04 12 24.5 +1.2
KRLC eS S 04 21 40.4 -0.5
KRLC AMS AMS 04 39 50.0
comp=Z,27µm,21.1s
ZAG Zagreb 71.73 47⇓iP P 04 12 24.3 +0.5
UDBI Udbina 71.77 48 iP P 04 12 24.6 +0.5
MORI Morici 71.83 49 iP P 04 12 24.9 +0.5
SOP Sopron 71.84 45 eS S 04 21 50.3 +7.3
KDAK Kodiak Island 71.88 326 P P 04 12 25.1 +0.7
KDAK pmax pmax
comp=Z,365nm,1.3s
KDAK MLR MLR
comp=Z,20µm,20.0s
KDAK Kodiak Island 71.88 326 P P 04 12 25.1 +0.7
KDAK IAmb IAmb 04 12 43.5
comp=Z,365nm,1.3s
KDAK Kodiak Island 71.88 326 IAMs_20 IAMs_20 04 46 28.8
comp=Z,20µm,20.0s
GO10 Punta Arenas 71.94 183 IAmb IAmb 04 12 47.4
comp=Z,250nm,1.4s
KALN Kalnik 72.00 47 iP P 04 12 26.1 +0.6
HOPEN Hopen 72.11 14 eP P 04 12 26.7 +1.2
HOPEN IVmB_BB 04 12 34.5

HOPEN eS S 04 21 44.8 -0.4
comp=Z,3µm,2.6s
ZST Bratislava 72.13 44 eP P 04 12 26.4 +0.3
ZST pmax pmax
comp=Z,270nm,1.2s
ZST Bratislava 72.13 44 eP P 04 12 26.4 +0.3
BEHE Becsehely 72.17 46⇓iP P 04 12 27.0 +0.6
MORC Moravsky Berou 72.18 43⇑P P 04 12 27.4 +0.9
MORC Moravsky Berou 72.18 43⇓iP P 04 12 26.1 -0.4
MORC eS S 04 21 48.9 +1.9
MORC eSS SS 04 26 08.0 -16
MORC e 04 34 44.4
MORC Moravsky Berou 72.18 43 IAmb IAmb 04 12 37.0
comp=Z,360nm,1.6s
MORC IAMs_20 IAMs_20 04 40 05.2
comp=Z,22µm,20.0s
MODS Modra-Piesok 72.22 44 eP P 04 12 27.0 +0.3
MODS pmax pmax
comp=Z,270nm,1.1s
MODS Modra-Piesok 72.22 44 eP P 04 12 27.0 +0.3
KIJV Kijevo 72.31 49 iP P 04 12 28.2 +0.9
WDD Wied Dalam 72.32 57 IAmb IAmb 04 12 38.6
comp=Z,446nm,1.1s
OHAK Old Harbor 72.33 325 IAmb IAmb 04 12 46.3
comp=Z,459nm,1.4s
OHAK IAMs_20 IAMs_20 04 46 34.7
comp=Z,18µm,20.0s
JAVC Velka Javorina 72.40 44⇓iP P 04 12 28.5 +0.7
JAVC eS S 04 21 51.7 +2.1
JAVC e 04 34 57.4
HAMF Hammerfest 72.43 20 eP P 04 12 28.5 +1.0
HAMF IVmB_BB 04 12 36.7
comp=Z,3µm,3.4s
HAMF eS S 04 21 51.3 +2.4
HAMF eSS SS 04 26 31.9 +4.8
KTK1 Kautokeino 72.47 22 eP P 04 12 28.6 +0.7
KTK1 IVmB_BB 04 12 36.9
comp=Z,4µm,2.5s
KTK1 eS S 04 21 52.5 +2.9
HVAR Hvar 72.48 50 iP P 04 12 29.0 +0.7
RAC Raciborz 72.55 42 eP P 04 12 29.4 +0.8
RAC eS S 04 21 52.8 +1.8
OKC Ostrava-Krasne 72.56 43 eP P 04 12 29.7 +1.0
OKC eS S 04 21 53.1 +1.9
OKC MLR MLR
comp=Z,23µm,21.2s
OKC Ostrava-Krasne 72.56 43 eP P 04 12 29.7 +1.0
OKC eS S 04 21 53.1 +1.9
OKC AMS AMS 04 40 00.0
comp=Z,23µm,21.2s
MGRS Mrkonjic Grad 72.72 48⇑iP P 04 12 31.2 +1.4
BLY Banja Luka 72.73 48⇓P P 04 12 30.5 +0.7
BLY Banja Luka 72.73 48⇓iP P 04 12 29.3 -0.5
BLY Banja Luka 72.73 48 IAmb IAmb 04 12 40.3
comp=Z,207nm,1.2s
MAKA Makarska 72.87 49 iP P 04 12 30.8 +0.2
CEL Celeste 72.94 55 IAMs_20 IAMs_20 04 40 39.5
comp=Z,22µm,20.0s
SVW2 Sparrevohn 72.96 329 IAmb IAmb 04 12 49.5
comp=Z,226nm,1.0s
SRO Srobarova 72.99 45 eP P 04 12 32.6 +1.4
SRO pmax pmax
comp=Z,304nm,1.6s
SRO Srobarova 72.99 45 eP P 04 12 32.6 +1.4
SG1 Sgolgore (BA) 73.06 52 eP P 04 12 31.6 -0.3
MATE Matera 73.11 52⇑P P 04 12 31.8 -0.3
BAI Bari 73.16 52 eP P 04 12 32.9 +0.5
ARCES ARCESS Array B 73.20 22 P P 04 12 32.8 +0.7
comp=Z,52nm,0.8s,baz=282,slow=4.2,SNR=112
ARCES S S 04 21 57.1 -0.7
comp=Z,3.1nm,0.9s,baz=298,slow=19,SNR=2.4
ARCES LR LR 04 40 15.6
comp=Z,8µm,21.6s,baz=282,slow=32
ARE0 ARCESS Array S 73.20 22 eP P 04 12 33.3 +1.2
ARE0 IVmB_BB 04 12 41.1
comp=Z,4µm,2.7s
ARE0 eS S 04 21 59.2 +1.4
ARE0 IVMs_BB IVMs_BB 04 37 56.1
comp=Z,3µm,23.5s
VYHS Vyhne 73.22 44 eP P 04 12 34.2 +1.6
VYHS pmax pmax
comp=Z,243nm,1.4s
VYHS Vyhne 73.22 44 eP P 04 12 34.1 +1.5
DOB Doboj 73.38 48 eP P 04 12 34.8 +1.2
TIP Timpagrande 73.43 54 P P 04 12 32.0 -2.1
TIP Timpagrande 73.43 54⇑P P 04 12 33.8 -0.4
STON Ston 73.43 50 iP P 04 12 34.6 +0.7
STON Ston 73.43 50⇓iP P 04 12 33.7 -0.2
MASS Massafra 73.44 52⇓iP P 04 12 33.8 -0.3
LANS Liptovska Anna 73.52 43 eP P 04 12 37.2 +2.8
LANS pmax pmax
comp=Z,87nm,1.4s
LANS Liptovska Anna 73.52 43 eP P 04 12 37.1 +2.7
BUD Budapest 73.52 45⇓iP P 04 12 36.0 +1.6
OJC Ojcow 73.55 42 eP P 04 12 35.6 +1.1
OJC eS SKiKP 04 22 03.6 +0.8
OJC e 04 22 46.6
OJC eSS SS 04 26 49.3 +4.2
OJC Ojcow 73.55 42 eP P 04 12 35.6 +1.1
OJC eS SKiKP 04 22 03.6 +0.8
OJC eSKSac ScS 04 22 46.6 +5.2
OJC eSS SS 04 26 49.3 +4.2
OJC eL L 04 41 14.5
comp=Z,36µm,21.4s
TAR1 Taranto 73.57 52⇓iP P 04 12 33.9 -0.9
CGL1 Ceglie Messapi 73.69 52⇓iP P 04 12 35.0 -0.5
SLIT Slitere, Latvi 73.73 34 eP P 04 12 33.9 -1.5
DBRK Dubrovnik 73.79 50 iP P 04 12 36.5 +0.4
PBUR Paburg 73.81 36 eP P 04 12 37.2 +1.3
BEL Belsk 73.88 40 eP P 04 12 38.0 +1.6
BEL eS S 04 22 08.1 +2.0
BEL Belsk 73.88 40 eP P 04 12 38.0 +1.6
BEL eS S 04 22 08.1 +2.0
BEL eL L 04 38 36.9
comp=Z,26µm,24.4s
TREB Trebinje 73.93 50 eP P 04 12 37.6 +0.7
NIE Niedzica 74.01 43 eP P 04 12 39.1 +1.8
NIE e 04 15 22.6
NIE eS S 04 22 11.2 +3.5
NIE e 04 22 53.3
NIE Niedzica 74.01 43 eP P 04 12 39.1 +1.8
NIE ePP PP 04 15 22.6 +0.2
NIE eS S 04 22 11.2 +3.5
NIE eSKSac ScS 04 22 53.3 +8.0
NIE eL L 04 38 53.0
comp=Z,19µm,23.9s
PSZ Piszkesteto 74.02 44⇑P P 04 12 39.3 +1.9
PSZ Piszkesteto 74.02 44 IAmb IAmb 04 12 58.2
comp=Z,788nm,1.9s
BRY Bratogost 74.03 50 eP P 04 12 38.8 +1.1
HCY Herceg Novi 74.09 50 eP P 04 12 38.4 +0.6
HAPS Han Pijesak,BI 74.10 48⇓iP P 04 12 38.6 +0.6
UPM Unac-Piva 74.24 49⇓iP P 04 12 40.0 +1.1
KECS Kecovo 74.30 44 eP P 04 12 41.0 +2.0
KECS pmax pmax
comp=Z,45nm,1.2s
KECS Kecovo 74.30 44 eP P 04 12 41.0 +2.0
BSZH Besenyszg 74.38 45 eS S 04 22 17.9 +6.0
TEKS Tekeris 74.42 48⇓iP P 04 12 41.4 +1.7
BBLS Lazići 74.46 49⇓iP P 04 12 40.8 +0.7
RUDO Rudo 74.49 49 eP P 04 12 40.6 +0.4
FRGS Fruska Gora 74.49 47⇓iP P 04 12 39.9 -0.3
SCTE Santa Cesarea 74.55 53 IAmb IAmb 04 12 51.2
comp=Z,357nm,1.0s
DRME Dracevica, Mon 74.64 50⇓iP P 04 12 42.3 +1.2
PDG Podgorica 74.64 50⇓P P 04 12 42.5 +1.4
PDG Podgorica 74.64 50⇓iP P 04 12 41.8 +0.8
PDG Podgorica 74.64 50 IAmb IAmb 04 12 52.0
comp=Z,390nm,1.2s
RDOG Red Dog Mine 74.79 337 IAmb IAmb 04 13 00.5
comp=Z,317nm,1.2s
DIVS Divibare 74.83 48⇓iP P 04 12 42.9 +0.7
SUW Suwalki 74.89 38 eP P 04 12 42.3 +0.1
SUW eS S 04 22 17.1 -0.2
SUW Suwalki 74.89 38 eP P 04 12 42.3 +0.1
SUW eS S 04 22 17.1 -0.2
SUW eL L 04 42 59.0
comp=Z,21µm,21.3s
SUW Suwalki 74.89 38 IAmb IAmb 04 13 03.3
comp=Z,309nm,1.1s
FINES FINESS Array B 74.91 30 P P 04 12 43.1 +0.9
comp=Z,55nm,0.9s,baz=264,slow=3.3,SNR=54
FINES S S 04 22 18.9 +1.6
comp=Z,7.3nm,1.2s,baz=258,slow=9.7,SNR=2.7
FINES LR LR 04 42 04.3
comp=Z,17µm,22.0s,baz=272,slow=33
PABE Paberze 75.04 36 eP P 04 12 43.9 +0.9
PUK Puka 75.19 50 iP P 04 12 48.2 +3.9
VLO Vlora 75.23 52 iP P 04 12 45.4 +0.9
BCI Bajram Curri 75.25 50 iP P 04 12 47.4 +2.8
TIR Tirane 75.32 51 P P 04 12 45.7 +0.7
TIR Tirane 75.32 51 iP P 04 12 46.3 +1.3
TIR Tirane 75.32 51⇑P P 04 12 47.1 +2.1
TIR Tirane 75.32 51 IAmb IAmb 04 13 04.5
comp=Z,377nm,1.2s
BANR Banloc 75.36 47⇓P P 04 12 46.4 +1.3
KOLS Kolonicke sedl 75.37 43 eP P 04 12 47.4 +2.2
KOLS pmax pmax
comp=Z,131nm,1.3s
KOLS Kolonicke sedl 75.37 43 eP P 04 12 47.4 +2.2
UZH Uzhgorod 75.45 43 eP P 04 12 47.8 +2.2
UZH e 04 13 06.8
UZH e 04 15 35.3
UZH iS S 04 22 23.5 -0.2
UZH ePS PnS 04 23 05.0 +2.9
UZH MLR MLR
comp=N,900nm,17.0s
UZH MLR MLR
comp=E,1µm,17.0s
UZH MLR MLR
comp=Z,900nm,17.0s
LTVH Ltavrtes, Hu 75.45 45 eS S 04 22 27.5 +3.7
KWP Kalwaria Pacla 75.50 42 eP P 04 12 47.7 +1.8
KWP eS S 04 22 28.4 +4.1
KWP Kalwaria Pacla 75.50 42 eP P 04 12 47.7 +1.8
KWP eS S 04 22 28.4 +4.1
KWP eL L 04 39 01.2
comp=Z,24µm,24.9s
PTCN Pitcairn Islan 75.51 237 IAMs_20 IAMs_20 04 38 59.5
comp=Z,12µm,22.0s
SIRR Siria 75.53 46⇑P P 04 12 47.1 +1.0
KEK Kerkira 75.62 53 P P 04 12 47.5 +0.7
BZS Buzias 75.64 46⇑P P 04 12 47.7 +1.0
TPE Tepelena 75.65 52 P P 04 12 48.1 +1.2
TPE Tepelena 75.65 52 iP P 04 12 49.2 +2.3
PHP Peshkopia 75.67 51 P P 04 12 48.3 +1.3
PHP Peshkopia 75.67 51 iP P 04 12 53.0 +6.0
TRPA Tarpa 75.72 44⇑P P 04 12 48.4 +1.3
SRN Sarande 75.74 52 P P 04 12 48.0 +0.6
SRN Sarande 75.74 52 iP P 04 12 46.8 -0.5
VSU Vasula 75.88 33deP P 04 12 48.3 +0.5
VSU pmax pmax
comp=Z,503nm,1.1s
VSU MLR MLR
comp=Z,44µm,18.0s
VSU Vasula 75.88 33 eP P 04 12 47.9 0.0
VSU IAmb IAmb 04 12 50.4
comp=Z,454nm,1.1s
MDVR Moldovita 75.89 47⇑P P 04 12 49.6 +1.4
OHR Ohrid 76.06 51 iP P 04 12 50.4 +1.1
IGT Igoumenitsa 76.06 53 P P 04 12 50.3 +1.0
DRGR 76.12 45⇓P P 04 12 49.8 +0.2
ISAL Salakas 76.22 36 eP P 04 12 50.7 +0.9
ISAL IAmb IAmb 04 12 53.5
comp=Z,45nm,1.1s
IZAR Zarasai 76.25 36 eP P 04 12 50.7 +0.7
LVV L'vov 76.30 42 eP P 04 12 52.0 +1.6
LVV eS S 04 22 35.0 +1.9
LVV MLR MLR
comp=Z,11µm,19.0s
IIGN Ignalina 76.33 36 eP P 04 12 51.1 +0.7
IIGN IAmb IAmb 04 12 54.0
comp=Z,81nm,0.9s
SKO Skopje 76.33 50 iP P 04 12 51.9 +1.1
NEST Nestorio 76.40 52 P P 04 12 52.4 +1.1
JAN Janina 76.43 53 P P 04 12 52.1 +0.7
BMR Baia Mare 76.45 44⇓P P 04 12 53.6 +2.3
DEV Deva 76.46 46⇑P P 04 12 52.0 +0.6
APA Apatity 76.47 23⇑iP P 04 12 51.6 +0.6
APA i 04 13 00.2
APA iS S 04 22 36.0 +1.7
APA iPS PnS 04 23 03.0 -12
APA pmax pmax
comp=Z,58nm,0.9s
LKD2 Lefkada island 76.48 53 P P 04 12 53.1 +1.4
FSK Fiskardo 76.49 54 P P 04 12 51.8 +0.1
GZR Gura Zlata 76.49 46⇓P P 04 12 52.8 +1.1
EVGI Lefkada island 76.52 54 P P 04 12 52.9 +1.0
FNA Florina 76.56 51 P P 04 12 52.5 +0.4
FNA Florina 76.56 51 IAmb IAmb 04 13 03.1
comp=Z,392nm,0.9s
VLS Valsamata 76.57 54 P P 04 12 51.0 -1.2
SDPT Sand Point 76.61 324 IAMs_20 IAMs_20 04 47 23.2
comp=Z,19µm,20.0s
CJR Cluj-Napoca 76.74 45⇑P P 04 12 55.2 +2.2
KPRO Kipourio 76.74 52 P P 04 12 53.6 +0.4
KFL Anninata 76.74 54 P P 04 12 53.5 +0.3
NACGM Naroch 76.75 36 eP P 04 12 51.0 -1.8
NACGM PM 04 12 53.0
comp=Z,0.4nm,1.0s
NACGM ePcP pwP 04 13 12.0 +3.8
NACGM ePP PP 04 15 32.0 -13
NACGM ePPP PPP 04 17 16.0
NACGM eS S 04 22 38.0 +0.3
NACGM ePS PnS 04 23 12.0 -6.5
NACGM eSS SS 04 27 33.0 -0.4
NACGM eSSS SSS 04 30 30.0
NACGM eLQ LQ 04 35 02.0
NACGM eLR LR 04 38 22.0
NACGM LRM MLR 04 44 12.0
comp=Z,34nm,19.0s
NACGM LRM MLR 04 44 26.0
comp=E,31nm,19.0s
LVZ Lovozero 76.83 22diP P 04 12 54.5 +1.4
LVZ pmax pmax
comp=Z,80nm,0.9s
LVZ MLR MLR
comp=Z,7µm,20.0s
LVZ Lovozero 76.83 22 P P 04 12 53.6 +0.5
LVZ IAMs_20 IAMs_20 04 43 16.6
comp=Z,12µm,21.0s
PUNG Punghina 76.86 48⇑P P 04 12 55.3 +1.7
STIP Stip 76.94 50 iP P 04 12 55.2 +1.0
SRE Strehaia 76.95 47⇑P P 04 12 55.6 +1.3
KZN Kozani 76.96 52 P P 04 12 54.9 +0.4
ARCR ARCALIA 77.15 44⇓P P 04 12 57.7 +2.4
PVO Paravola 77.18 53 P P 04 12 57.4 +1.8
GRG Griva 77.27 51 P P 04 12 56.6 +0.5
RLS Riolos of Patr 77.27 54 P P 04 12 57.0 +0.9
VAY Valandovo 77.31 51 iP P 04 12 56.8 +0.5
TAOE Nuku Hiva Isla 77.32 256 eP P 04 12 57.6 +0.7
comp=Z,636nm,1.4s
TAOE Nuku Hiva Isla 77.32 256 ePP PP 04 15 48.8 -2.7
comp=Z,5µm,32.7s
TAOE eS S 04 22 44.4 -1.1
comp=Z,4µm,23.4s
TAOE Nuku Hiva Isla 77.32 256 eLQ LQ 04 33 37.3
comp=Z,12µm,38.7s
TAOE eLR LR 04 36 51.4
comp=Z,35µm,23.9s,baz=65
TAOE Nuku Hiva Isla 77.32 256 IAMs_20 IAMs_20 04 40 11.3
comp=Z,13µm,22.0s
THL Klokotos Trika 77.32 52 P P 04 12 56.5 +0.1
EVR Evrytania 77.33 53 P P 04 12 58.4 +1.8
PUL Pulkovo 77.34 31⇑eP P 04 12 56.4 +0.3
PUL pmax pmax
comp=Z,171nm,1.1s
PUL MLR MLR
comp=Z,13µm,18.0s
MDB Medias 77.40 45⇑P P 04 12 59.2 +2.5
MICGM Minsk 77.46 37⇓eP P 04 12 57.0 +0.1
MICGM PM 04 12 58.0
comp=Z,0.5nm,1.0s
MICGM PM 04 13 00.0
comp=N,0.4nm,1.0s
MICGM PM 04 13 00.0
comp=E,0.3nm,1.0s
MICGM PM 04 13 00.0
comp=Z,3.5nm,4.0s
MICGM ePcP pP 04 13 04.0 -0.8
MICGM ePP PP 04 15 52.0 +0.7
MICGM ePPP PPP 04 17 34.0
MICGM eS S 04 22 44.0 -1.6
MICGM SM 04 22 47.0
comp=N,5.6nm,8.0s
MICGM SM 04 22 48.0
comp=N,8.7nm,8.0s
MICGM eSS SS 04 27 40.0 -4.2
MICGM eSSS SSS 04 31 10.0
MICGM eLQ LQ 04 36 46.0
MICGM eLR LR 04 37 26.0
MICGM LRM MLR 04 42 50.0
comp=N,14nm,20.0s
MICGM LRM MLR 04 42 52.0
comp=N,2.6nm,20.0s
MICGM LRM MLR 04 44 12.0
comp=Z,25nm,20.0s
MICGM LRM MLR 04 44 12.0
comp=E,8.3nm,20.0s
MICGM LRM MLR 04 44 16.0
comp=Z,19nm,20.0s
MICGM LRM MLR 04 44 16.0
comp=E,12nm,20.0s
MNK Minsk 77.46 37diP P 04 12 57.0 +0.1
VTS Vitosha 77.47 49 P P 04 12 57.3 -0.1
VTS Vitosha 77.47 49⇓P P 04 12 58.9 +1.5
VTS Vitosha 77.47 49 iP P 04 12 57.5 +0.1
VTS Vitosha 77.47 49 IAmb IAmb 04 13 08.5
comp=Z,192nm,1.1s
VTS IAMs_20 IAMs_20 04 43 44.7
comp=Z,16µm,21.0s
DRO Drossia 77.49 54 P P 04 12 58.7 +1.3
HOPE Hope Point 77.49 162 IAMs_20 IAMs_20 04 47 47.0
comp=Z,14µm,20.0s
EFP Efpalio 77.52 54 P P 04 12 59.4 +1.9
KKB Krupnik 77.54 50 iP P 04 12 59.2 +1.6
LIT Litokhoron 77.55 52 P P 04 12 55.5 -2.2
MAKR Makrakomi, Fth 77.55 53 P P 04 13 00.4 +2.7
BUR08 Bucovina Ar. S 77.57 44 IAmb IAmb 04 13 16.6
comp=Z,255nm,1.3s
KNT Kendrikon 77.58 51 P P 04 12 58.8 +1.0
AMT Artemida-Makis 77.59 54 P P 04 12 58.7 +0.7
BURAR Bucovina Array 77.59 44⇓P P 04 12 58.8 +0.9
SERG Sergoula 77.64 54 P P 04 12 58.7 +0.5
MPEP Malo Peshtene 77.64 48 iP P 04 12 59.6 +1.5
TRIZ Trizonia 77.66 54 P P 04 13 00.0 +1.7
AGG Agios Georgios 77.69 53 P P 04 12 59.0 +0.5
KALE Kalithea 77.71 54 P P 04 12 58.6 0.0
ARR Arges 77.76 46⇓P P 04 13 01.1 +2.2
THE Thessaloniki 77.76 51 P P 04 12 59.3 +0.5
PYL PYLOS 77.77 55 P P 04 12 59.1 +0.1
KLV Kalavryta, Ach 77.80 54 P P 04 12 59.9 +0.7
ITM Ithomi 77.85 55 P P 04 13 00.7 +1.3
ITM Ithomi 77.85 55 IAmb IAmb 04 13 10.5
comp=Z,246nm,1.0s
HORT Hortiatis 77.87 51 P P 04 13 00.1 +0.5
VLAD Vladila 77.95 48⇑P P 04 13 02.3 +2.5
SOH Sokhos 78.00 51 P P 04 13 00.8 +0.6
VOIR 78.03 46⇓P P 04 13 01.6 +1.2
MMB Musomiste 78.08 50 iP P 04 13 01.8 +1.2
MTUR Matau 78.09 46⇑P P 04 13 01.9 +1.2
SRS Serrai 78.10 51 P P 04 13 01.1 +0.4
DOPR Dopca 78.12 45⇑P P 04 13 02.3 +1.6
GOLR 78.12 47⇑P P 04 13 03.2 +2.5
VLX Vlachokerasia 78.15 54 P P 04 13 02.4 +1.2
PGB Panagyurishte 78.15 49 iP P 04 13 02.2 +1.2
PLG Polygyros 78.18 51 P P 04 13 02.6 +1.4
HUMR Humele 78.22 47⇑P P 04 13 02.8 +1.5
NVR Nevrokopi 78.24 50 P P 04 13 02.1 +0.6
XOR Xorichti 78.25 52 P P 04 13 01.2 -0.4
PLVB Pleven 78.26 48⇓P P 04 13 02.7 +1.2
DYR Agios Nikonas 78.27 55 P P 04 13 02.0 +0.3
LKR Lokris 78.29 53 P P 04 13 02.3 +0.5
NEO Neokhori 78.29 52 P P 04 13 01.7 -0.1
PRAR RASCA 78.32 44⇑P P 04 13 03.3 +1.5
BIZ Bicaz 78.35 44⇓P P 04 13 03.8 +1.9
LTK Loutraki 78.43 54 P P 04 13 03.2 +0.6
LOUT Loutraki 78.44 54 P P 04 13 03.7 +1.0
PAIG Paliouri 78.47 52 P P 04 13 03.0 +0.2
COPA Copaceanca 78.48 47⇑P P 04 13 03.4 +0.7
SKIA Skiathos 78.51 52 P P 04 13 03.7 +0.7
OUR Ouranopolis 78.59 51 P P 04 13 03.9 +0.5
MLR Muntele Rosu 78.62 46 LR LR 04 43 54.6
comp=Z,7µm,21.9s,baz=275,slow=33
MLR Muntele Rosu 78.62 46⇑P P 04 13 05.3 +1.7
PLD Plovdiv 78.65 49 iP P 04 13 03.9 +0.2
VILL Villia 78.66 54 P P 04 13 04.8 +0.9
MRKA Markates 78.72 53 P P 04 13 04.8 +0.6
KRND KRANIDI 78.74 54 P P 04 13 05.0 +0.7
VLI Veliai 78.75 55 P P 04 13 05.2 +0.8
DID Didima 78.77 54 P P 04 13 04.7 +0.2
RZN Rozhen 78.77 50 iP P 04 13 06.0 +1.4
KAVA Kavala 78.81 50 P P 04 13 04.9 +0.3
AOS Alonnisos 78.82 52 P P 04 13 05.0 +0.3
TESR Tescani 78.82 45⇑P P 04 13 06.1 +1.5
KTHR Kythira 78.92 55 P P 04 13 06.5 +1.2
KTHA Kythira Island 78.97 55 P P 04 13 06.8 +1.2
SGRR Singureni 78.98 47⇑P P 04 13 06.5 +1.0
PLOR Plostina 79.00 45⇓P P 04 13 08.2 +2.5
ATH Athens Observa 79.01 54 P P 04 13 06.8 +1.0
EREA Eretria 79.06 53 P P 04 13 06.5 +0.4
THAS Thassos island 79.06 51 P P 04 13 06.0 0.0
ATHU Athens Univers 79.07 54 P P 04 13 06.3 +0.2
VLY Voula,Athens 79.11 54 P P 04 13 06.7 +0.4
PTL Penteli 79.11 54 P P 04 13 06.5 +0.1
BISRR Bisoca 79.13 46⇑P P 04 13 08.3 +2.0
ISR Istrita 79.13 46⇑P P 04 13 08.1 +1.7
SZH Strazhica 79.21 48 iP P 04 13 08.2 +1.4
IAS Iasi 79.24 44⇓P P 04 13 08.0 +1.2
ANKY Antikythira Is 79.26 56 P P 04 13 08.7 +1.5
DIM Dimitrovgrad 79.26 49 iP P 04 13 09.0 +1.9
ELND Elena 79.27 48⇓P P 04 13 09.0 +1.9
AKASG Malin Array Be 79.29 40 iP P 04 13 07.5 +0.5
AKASG pmax pmax
comp=Z,68nm,1.1s
AKASG Malin Array Be 79.29 40 P P 04 13 07.5 +0.5
comp=Z,48nm,1.0s,baz=276,slow=4.7,SNR=105
AKASG PKKPbc **PKKPbc 04 31 57.8 -0.4**
comp=Z,2.0nm,0.7s,baz=84,slow=2.1,SNR=7.4
AKASG PKPPKP 04 40 06.1
comp=Z,0.8nm,0.4s,baz=79,slow=2.0,SNR=5.7
AKASG LR LR 04 46 18.2
comp=Z,30µm,20.4s,baz=290,slow=34
AKASG Malin Array Be 79.29 40 P P 04 13 07.1 +0.1
ODBI Odobesti 79.30 45⇑P P 04 13 10.1 +2.9
TMCR Tamitsa 79.39 26 eP P 04 13 06.8 -0.5
TMCR eS S 04 23 07.7 +1.9
TMCR pmax pmax
comp=Z,162nm,1.3s
SKY Skiros Island 79.40 53 P P 04 13 09.7 +1.8
GHRR 79.45 45⇑P P 04 13 10.6 +2.5
SORM Soroca 79.48 43⇓P P 04 13 08.7 +0.5
PGOR Pogoanele 79.49 46⇑P P 04 13 09.4 +1.1
RDO Rodhopi 79.51 50 P P 04 13 08.7 +0.3
RAZG Razgrad 79.53 48⇑P P 04 13 10.1 +1.5
SMTH Samothraki Isl 79.69 51 P P 04 13 10.1 +0.6
KNDR Palaiochora Ch 79.73 56 P P 04 13 09.4 -0.3
SERI Serifos 79.82 54 P P 04 13 09.2 -1.1
LEOM Leova 79.89 44⇓P P 04 13 10.9 +0.5
JMB Yambol 79.89 49 iP P 04 13 10.7 +0.2
IMMV Iera Moni Meta 79.90 56 P P 04 13 11.1 +0.4
CHAN Chania 79.93 56 P P 04 13 12.1 +1.3
ALN Alexandroupoli 79.95 50 P P 04 13 10.2 -0.6
ALN Alexandroupoli 79.95 50 IAMs_20 IAMs_20 04 45 13.6
comp=Z,10µm,21.0s
GADA Gvkgeada 80.04 51 P P 04 13 11.8 +0.5
VAM Vamos 80.09 56 P P 04 13 11.9 +0.2
KIS Kishinev 80.12 44⇑iP P 04 13 12.0 +0.4
comp=Z,420nm,2.0s
KIS Kishinev 80.12 44 iPcP PcP 04 13 20.0 +1.1
KIS Kishinev 80.12 44 ePP PP 04 16 10.0 -3.7
KIS iS S 04 23 18.0 +3.8
comp=Z,4µm,10.0s
KIS Kishinev 80.12 44⇑iP P 04 13 12.0 +0.4
KIS i 04 13 20.0
KIS e 04 16 10.0
KIS iS S 04 23 18.0 +3.8
KIS iPS PnS 04 24 02.0 +0.6
KIS eSS SS 04 28 25.0 +0.6
KIS pmax pmax
comp=Z,420nm,2.0s
KIS pmax pmax
comp=Z,4µm,12.0s
KIS smax smax
comp=N,4µm,10.0s
MILM Milestii Mici 80.14 44⇑P P 04 13 11.7 0.0
GIUM Giurgiulesti 80.15 45⇑P P 04 13 13.2 +1.4
GVD Gavdhos 80.16 57 P P 04 13 12.8 +0.7

EDRB	**Edirne**	**80.19**	**49**	P	**P**	04 13 12.7	**+0.6**
CFR	**Carcaliu**	**80.19**	**46**	⇓P	**P**	04 13 11.8	**-0.3**
HARR	**Harsova**	**80.20**	**46**	⇑P	**P**	04 13 12.6	**+0.6**
ICOR	**Ion Corvin**	**80.28**	**47**	⇑P	**P**	04 13 13.6	**+1.1**
SIGR	**SIGRI**	**80.28**	**52**	P	**P**	04 13 13.4	**+0.7**
UNV	**Unalaska Valle**	**80.40**	**324**	IAmb	IAmb	04 13 33.3	
	comp=Z,472nm,1.2s						
UNV				IAMs_20	IAMs_20	04 50 01.4	
	comp=Z,17µm,20.0s						
TOPG	**Topolog**	**80.45**	**46**	⇑P	**P**	04 13 15.0	**+1.6**
EZN	**Ezine**	**80.46**	**51**	P	**P**	04 13 14.1	**+0.5**
IOSP	**Ios island**	**80.56**	**54**	P	**P**	04 13 13.7	**-0.5**
PRK	**Paraskevi**	**80.58**	**52**	P	**P**	04 13 15.7	**+1.4**
TIRR	**Tirgusor**	**80.59**	**46**	⇑P	**P**	04 13 15.3	**+1.1**
TIRR	**Tirgusor**	**80.59**	**46**	IAmb	IAmb	04 13 31.9	
	comp=Z,308nm,1.3s						
APE	**Apeiranthos**	**80.65**	**54**	P	**P**	04 13 15.1	**+0.3**
APE	**Apeiranthos**	**80.65**	**54**	⇓P	**P**	04 13 15.1	**+0.3**
IDI	**Anoyia**	**80.66**	**56**	PKKPbc	PKKPbc	04 31 55.2	+0.5
	comp=Z,7.2nm,0.8s,baz=107,slow=7.4,SNR=3.7						
PSN	**Preselentsi**	**80.67**	**47**	*i* P	**P**	04 13 15.0	**+0.4**
CHOS	**Chios island**	**80.67**	**53**	P	**P**	04 13 15.6	**+0.7**
SIVA	**Sivas**	**80.67**	**56**	P	**P**	04 13 15.8	**+1.0**
SAP1	**Santorini-Akro**	**80.75**	**55**	P	**P**	04 13 17.4	**+2.2**
SANT	**Santorini**	**80.79**	**55**	P	**P**	04 13 15.2	**-0.3**
SANT	**Santorini**	**80.79**	**55**	⇑P	**P**	04 13 16.3	**+0.8**
SANT	**Santorini**	**80.79**	**55**	IAmb	IAmb	04 13 33.7	
	comp=Z,489nm,1.5s						
SANT				IAMs_20	IAMs_20	04 46 45.3	
	comp=Z,12µm,21.0s						
JURR	**Jurilovca**	**80.82**	**46**	⇑P	**P**	04 13 18.0	**+2.6**
MANR	**Mangalia**	**80.91**	**47**	⇑P	**P**	04 13 18.0	**+2.1**
KALB	**Balgarevo**	**80.91**	**47**	⇓P	**P**	04 13 18.9	**+3.0**
AMGA	**Amorgos Island**	**81.00**	**54**	P	**P**	04 13 16.3	**-0.3**
LAST	**Lasithi**	**81.16**	**56**	P	**P**	04 13 18.2	**+0.7**
NPS	**Neapolis**	**81.23**	**56**	P	**P**	04 13 18.0	**+0.1**
SMG	**Samos**	**81.46**	**53**	P	**P**	04 13 19.8	**+0.8**
ZKR	**Zakros**	**81.75**	**56**	P	**P**	04 13 21.2	**+0.6**
KOSK	**Kos Island**	**81.85**	**54**	P	**P**	04 13 22.1	**+1.1**
NISR	**Nisiros**	**82.01**	**54**	P	**P**	04 13 21.5	**-0.4**
BODT	**Bodrum**	**82.01**	**54**	P	**P**	04 13 21.9	**0.0**
NIKH	**Nikolski High**	**82.02**	**323**	IAMs_20	IAMs_20	04 48 46.3	
	comp=Z,14µm,20.0s						
OBN	**Obninsk**	**82.04**	**34**	*d i* P	**P**	04 13 21.9	**+0.3**
OBN				*i*		04 13 28.3	
OBN				*i*		04 16 25.7	
OBN				*i* S	**S**	**04 23 31.1**	**-2.8**
OBN				pmax	pmax		
	comp=Z,258nm,1.2s						
OBN				MLR	MLR		
	comp=Z,15µm,18.0s						
OBN	**Obninsk**	**82.04**	**34**	⇑P	**P**	04 13 23.1	**+1.5**
OBN	**Obninsk**	**82.04**	**34**	P	**P**	04 13 22.7	**+1.1**
OBN				IAMs_20	IAMs_20	04 48 04.0	
	comp=Z,18µm,20.0s						
ISK	**Istanbul-Kandi**	**82.08**	**49**	P	**P**	04 13 22.1	**-0.1**
KARP	**Karpathos**	**82.36**	**55**	P	**P**	04 13 23.2	**-0.6**
KARP	**Karpathos**	**82.36**	**55**	IAmb	IAmb	04 13 34.0	
	comp=Z,258nm,0.9s						
KARP				IAMs_20	IAMs_20	04 49 32.7	
	comp=Z,11µm,20.0s						
MOS	**Moscow**	**82.37**	**34**	*e* P	**P**	04 13 23.7	**+0.4**
MOS				*e*		04 13 29.9	
MOS				*e*S	**S**	**04 23 33.9**	**-3.3**
MOS				*e*SS	**SS**	**04 29 00.1**	**+2.7**
MOS				pmax	pmax		
	comp=Z,237nm,1.4s						
MOS				smax	smax		
	comp=N,3µm,5.3s						
MOS				smax	smax		
	comp=E,4µm,5.3s						
MOS				MLR	MLR		
	comp=Z,10µm,18.0s						
PUH	**Pauahi**	**82.39**	**288**	IAmb	IAmb	04 13 43.7	
	comp=Z,348nm,1.1s						
MLH	**Mauna Loa**	**82.51**	**288**	IAmb	IAmb	04 13 44.5	
	comp=Z,412nm,1.2s						
MANT	**Manisa**	**82.51**	**52**	IAmb	IAmb	04 13 43.2	
	comp=Z,440nm,1.2s						
POHA	**Pohakuloa**	**82.56**	**288**	IAMs_20	IAMs_20	04 47 33.6	
	comp=Z,10µm,20.0s						
MLOA	**Mauna Loa Obse**	**82.67**	**288**	IAMs_20	IAMs_20	04 47 27.0	
	comp=Z,8µm,20.0s						
MWH	**Moku'aweowe**	**82.70**	**288**	IAmb	IAmb	04 13 46.5	
	comp=Z,267nm,1.1s						
YER	**Yerkesik**	**82.73**	**53**	P	**P**	04 13 24.2	**-1.5**
KHU	**Kahuku**	**82.79**	**288**	IAMs_20	IAMs_20	04 48 02.6	
	comp=Z,8µm,20.0s						
ARG	**Arkhangelos**	**82.90**	**54**	P	**P**	04 13 25.9	**-0.6**
KHLU	**Kahalu`u**	**82.93**	**288**	IAmb	IAmb	04 13 30.8	
	comp=Z,219nm,1.0s						
KHLU				IAMs_20	IAMs_20	04 47 43.5	
	comp=Z,9µm,20.0s						
FETY	**Fethiye**	**83.50**	**54**	P	**P**	04 13 29.0	**-0.7**
PMSA	**Palmer Station**	**83.53**	**179**	P	**P**	04 13 31.3	**+2.4**
PMSA				IAmb	IAmb	04 13 53.7	
	comp=Z,356nm,1.5s						
PMSA	**Palmer Station**	**83.53**	**179**	IAMs_20	IAMs_20	04 51 58.0	
	comp=Z,8µm,21.0s						
PRGR	**Permogore**	**83.61**	**26**	⇑*i* P	**P**	04 13 31.0	**+1.3**
PRGR				*i* *PP	**pP**	04 13 37.3	**-0.3**
PRGR				pmax	pmax		
	comp=Z,142nm,0.8s						
KSL	**Kastellorizon**	**84.03**	**54**	P	**P**	04 13 32.6	**+0.2**
OPA	**Opana**	**84.19**	**291**	IAmb	IAmb	04 13 54.5	
	comp=Z,182nm,1.1s						
KIP	**Kipapa**	**84.27**	**291**	P	**P**	04 13 31.8	**-2.0**
KIP				pmax	pmax		
	comp=Z,431nm,1.5s						
KIP	**Kipapa**	**84.27**	**291**	P	**P**	04 13 31.8	**-2.0**
SIM	**Simferopol'**	**84.28**	**44**	*d i* P	**P**	04 13 34.7	**+1.2**
SIM				*i* S	**SKSac**	**04 23 52.1**	**-2.9**
SIM				pmax	pmax		
	comp=Z,420nm,2.4s						
SIM				MLR	MLR		
	comp=Z,4µm,16.0s						
HON	**Honolulu**	**84.29**	**290**	P	**P**	04 13 33.1	**-0.8**
HON	**Honolulu**	**84.29**	**290**	P	**P**	04 13 33.1	**-0.8**
LPSR	**Galich'ya Gora**	**84.31**	**36**	*e* P	**P**	04 13 34.0	**+0.6**
LPSR				*e*		04 13 36.7	
LPSR				*e*S	**SKSac**	**04 23 51.5**	**-3.3**
LPSR				pmax	pmax		
	comp=Z,370nm,1.9s						
LPSR				pmax	pmax		
	comp=Z,950nm,2.0s						
LPSR				smax	smax		
	comp=E,9µm,13.3s						
LPSR				MLR	MLR		
	comp=Z,10µm,19.0s						
VORR	**Voronezh**	**84.84**	**37**	*e* P	**P**	04 13 36.0	**-0.1**
VORR				pmax	pmax		
	comp=Z,500nm,1.2s						
VSR	**Storozhevoye**	**85.00**	**37**	*e* P	**P**	04 13 36.9	**-0.1**
VSR				*e*		04 13 39.0	
VSR				*e*S	**SKSac**	**04 23 53.4**	**-6.0**
VSR				pmax	pmax		
	comp=Z,240nm,1.7s						
VSR				pmax	pmax		
	comp=Z,890nm,1.7s						
VSR				smax	smax		
	comp=N,1µm,7.9s						
BILL	**Bilibino**	**85.05**	**342**	*c i* P	**P**	04 13 37.5	**+0.6**
BILL				*i*		04 13 45.9	
BILL				*i*		04 13 52.1	
BILL				*i* S	**SKSac**	**04 23 59.2**	**+0.1**
BILL				*i* SS	**SS**	**04 29 33.3**	**-3.2**
BILL				pmax	pmax		
	comp=Z,69nm,0.9s						
BILL				MLR	MLR		
	comp=Z,12µm,19.0s						
BILL	**Bilibino**	**85.05**	**342**	P	**P**	04 13 36.9	**0.0**
BILL				IAMs_20	IAMs_20	04 53 53.8	
	comp=Z,12µm,20.0s						
BR231	**Keskin MP Arra**	**85.16**	**50**	IAmb	IAmb	04 13 49.2	
	comp=Z,159nm,1.0s						
ANTO	**Ankara**	**85.16**	**50**	P	**P**	04 13 39.6	**+1.4**
ANTO				pmax	pmax		
	comp=Z,156nm,1.0s						
ANTO				MLR	MLR		
	comp=Z,12µm,20.0s						
ANTO	**Ankara**	**85.16**	**50**	⇓P	**P**	04 13 39.6	**+1.4**
ANTO	**Ankara**	**85.16**	**50**	P	**P**	04 13 39.6	**+1.4**
ANTO				IAmb	IAmb	04 14 06.5	
	comp=Z,156nm,1.0s						
ANTO	**Ankara**	**85.16**	**50**	IAMs_20	IAMs_20	04 51 21.4	
	comp=Z,12µm,20.0s						
VORD	**Divnogorie**	**85.18**	**38**	*e* P	**P**	**04 13 36.5**	**-1.3**
VORD				*e*S	**SKSac**	**04 23 53.4**	**-7.0**
VORD				pmax	pmax		
	comp=Z,250nm,1.4s						
VORD				pmax	pmax		
	comp=Z,160nm,0.9s						
VORD				smax	smax		
	comp=E,4µm,10.7s						
KEKH	**Kekaha**	**85.59**	**292**	IAmb	IAmb	04 13 43.4	
	comp=Z,250nm,1.1s						
BRTR	**Keskin Array B**	**85.82**	**49**	P	**P**	04 13 42.6	**+1.1**
	comp=Z,14nm,0.7s,baz=267,slow=4.3,SNR=59						
BRTR				PKKPbc	**PKKPbc**	**04 31 43.9**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=147,slow=4.5,SNR=7.7						
BRTR				PKPPKP		04 39 51.1	
	comp=Z,1.3nm,1.1s,baz=132,slow=2.1,SNR=3.7						
BRTR				LR	LR	04 48 56.0	
	comp=Z,6µm,21.8s,baz=267,slow=34						
VRH	**Novokhopyorsk**	**86.46**	**37**	*e* P	**P**	04 13 45.0	**+0.8**
VRH				*e*		04 13 47.5	
VRH				*e*S	**SKSac**	**04 24 07.7**	**-0.8**
VRH				pmax	pmax		
	comp=Z,270nm,1.2s						
VRH				pmax	pmax		
	comp=Z,730nm,1.8s						
VRH				smax	smax		
	comp=E,9µm,12.9s						
ANN	**Anapa**	**86.52**	**44**	*e* P	**P**	04 13 45.6	**+1.0**
ANN				*e**PP	**pP**	04 13 50.5	**-2.1**
ANN				*i* S	**SKSac**	**04 24 06.6**	**-2.5**
ANN				pmax	pmax		
	comp=Z,214nm,1.1s						
ANN				pmax	pmax		
	comp=Z,2µm,5.8s						
ANN				MLR	MLR		
	comp=N,12µm,18.0s						
ANN				MLR	MLR		
	comp=E,5µm,18.0s						
ANN				MLR	MLR		
	comp=Z,8µm,18.0s						
CSS	**Mathiatis**	**87.31**	**54**	P	**P**	04 13 49.7	**+1.0**
CSS	**Mathiatis**	**87.31**	**54**	IAmb	IAmb	04 13 59.8	
	comp=Z,117nm,0.9s						
CSS				IAMs_20	IAMs_20	04 52 20.8	
	comp=Z,11µm,20.0s						
SOC	**Sochi**	**88.51**	**44**	*e* P	**P**	04 13 55.0	**+0.8**
SOC				*e*		04 17 18.3	
SOC				*e*PPP	PPP	04 19 19.3	
SOC				*i* S	**SKSac**	**04 24 21.9**	**+0.6**
SOC				*e*SS	**SS**	**04 30 31.1**	**+2.7**
SOC				pmax	pmax		
	comp=Z,227nm,1.2s						
SOC				MLR	MLR		
	comp=Z,9µm,20.0s						
TVO	**Taravao**	**88.78**	**251**	*e* P	**P**	04 13 55.8	**-0.2**
	comp=Z,132nm,1.3s						
TIXI	**Tiksi**	**88.95**	**355**	⇓*e* P	**P**	04 13 56.1	**+0.4**
TIXI				pmax	pmax		
	comp=Z,100nm,1.6s						
TIXI	**Tiksi**	**88.95**	**355**	LR	LR	04 58 28.3	
	comp=Z,5µm,18.1s,baz=26,slow=39						
TIXI	**Tiksi**	**88.95**	**355**	P	**P**	04 13 56.3	**+0.6**
TIXI				IAmb	IAmb	04 14 15.0	
	comp=Z,191nm,1.1s						
TIXI				IAMs_20	IAMs_20	04 58 26.1	
	comp=Z,14µm,20.0s						
PPTF	**Pamatai, Papee**	**88.99**	**251**	IAMs_20	IAMs_20	04 48 10.2	
	comp=Z,9µm,20.0s						
PPT	**Papeete**	**89.00**	**251**	P	**P**	04 13 58.9	**+1.9**
	comp=Z,28nm,0.6s,baz=81,slow=9.6,SNR=6.8						
PPT				LR	LR	04 48 12.3	
	comp=Z,8µm,19.1s,baz=55,slow=32						
PPT2	**Papeete2**	**89.00**	**251**	*e* P	**P**	04 13 56.8	**-0.2**
PPT2	**Papeete2**	**89.00**	**251**	*e*PP	PP	04 17 23.6	-3.7
	comp=Z,2µm,25.0s						
PPT2				*e*S	**S**	**04 24 41.4**	**-2.4**
	comp=Z,7µm,25.8s						
PPT2				*e*SS	**SS**	**04 30 37.2**	**-0.4**
	comp=Z,5µm,26.0s						
PPT2	**Papeete2**	**89.00**	**251**	*e*LR	LR	04 42 21.6	
	comp=Z,24µm,23.5s,baz=60						
PAE	**Paea**	**89.03**	**251**	*e* P	**P**	04 13 56.6	**-0.5**
GAZ	**Gaziantep**	**89.38**	**51**	IAmb	IAmb	04 14 10.2	
	comp=Z,270nm,1.7s						
GAZ				IAMs_20	IAMs_20	04 53 40.2	
	comp=Z,13µm,20.0s						
XMAS	**Kiritimati**	**89.89**	**272**	P	**P**	04 14 01.0	**-0.2**
XMAS				IAMs_20	IAMs_20	04 51 19.9	
	comp=Z,11µm,19.0s						
GOF	**Gofitskoye**	**90.01**	**42**	⇑*e* P	**P**	04 14 03.7	**+2.4**
GOF				pmax	pmax		
	comp=Z,165nm,1.5s						
KIV	**Kislovodsk**	**90.28**	**43**	*e* P	**P**	04 14 04.7	**+2.0**
KIV				*e*		04 17 38.6	
KIV				*e*		04 24 34.2	
KIV				pmax	pmax		
	comp=Z,120nm,1.0s						
KIV				pmax	pmax		
	comp=Z,1µm,4.7s						
KIV	**Kislovodsk**	**90.28**	**43**	P	**P**	04 14 03.4	**+0.7**
KIV				IAmb	IAmb	04 14 22.1	
	comp=Z,200nm,1.6s						
KIV				IAMs_20	IAMs_20	04 51 36.2	
	comp=Z,8µm,22.0s						
KBZ	**Khabaz**	**90.52**	**43**	P	**P**	04 14 05.5	**+1.9**
	comp=Z,23nm,1.0s,baz=272,slow=3.8,SNR=20						
KBZ				PKKPbc	**PKKPbc**	**04 31 31.4**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=18,slow=6.4,SNR=3.2						
KBZ				LR	LR	04 51 36.6	
	comp=Z,9µm,22.0s,baz=314,slow=34						
NEY	**Neytrino**	**90.63**	**44**	⇑*e* P	**P**	04 14 07.0	**+2.6**
NEY				pmax	pmax		
	comp=Z,11nm,0.9s						
TBI	**Tubuai**	**90.88**	**246**	*e* P	**P**	04 14 06.0	**+0.4**
	comp=Z,615nm,1.4s						
TBI	**Tubuai**	**90.88**	**246**	*e*PP	PP	04 17 37.7	-4.3
	comp=Z,2µm,27.0s						
TBI				*e*S	**S**	**04 24 58.9**	**-1.9**
	comp=Z,4µm,30.0s						
TBI				*e*SS	**SS**	**04 31 03.0**	**-1.5**
	comp=Z,4µm,25.8s						
TBI				*e*LQ	LQ	04 39 24.0	
	comp=Z,4µm,31.8s						
TBI				*e*LR	LR	04 43 12.4	
	comp=Z,12µm,27.5s,baz=68						
TSUM	**Tsumeb**	**91.11**	**110**	P	**P**	04 14 06.8	**-0.1**
ZEI	**Tsey**	**91.61**	**44**	*e* P	**P**	04 14 10.0	**+1.0**
ZEI				pmax	pmax		
	comp=Z,46nm,1.0s						
AKH	**Akhalkalaki**	**91.98**	**45**	⇑P	**P**	04 14 12.8	**+2.1**
AKH	**Akhalkalaki**	**91.98**	**45**	IAMs_20	IAMs_20	04 56 29.2	
	comp=Z,7µm,20.0s						
ARU	**Arti**	**92.05**	**27**	P	**P**	04 14 12.4	**+1.9**
ARU						04 17 53.0	
ARU				PPP	PPP	04 19 50.7	
ARU				S	**SKSac**	**04 24 39.4**	**-1.9**
ARU				SP	SP	04 26 20.9	+1.5
ARU				PS	PS	04 26 34.7	+11
ARU				SS	**SS**	**04 31 23.2**	**+4.6**
ARU				SSS	SSS	04 35 01.2	
ARU	**Arti**	**92.05**	**27**	P	**P**	**04 14 09.5**	**-1.0**
ARU				IAmb	IAmb	04 14 39.9	
	comp=Z,162nm,1.4s						
ARU				PP	**PP**	**04 17 42.8**	**-6.9**
ARU				IAMs_20	IAMs_20	04 51 23.2	
	comp=Z,7µm,20.0s						
GROC	**Groznyy**	**92.63**	**42**	*e* P	**P**	04 14 15.1	**+1.6**
GROC				*e*		04 17 58.4	
GROC				pmax	pmax		
	comp=Z,75nm,1.1s						
SVE	**Sverdlovsk**	**92.67**	**26**	*ce* P	**P**	04 14 15.1	**+1.8**
SVE				*e*		04 17 51.1	
SVE				*e*S	**SKSac**	**04 24 42.3**	**-2.4**
SVE				pmax	pmax		
	comp=Z,184nm,1.5s						
SEY	**Seymchan**	**92.72**	**343**	⇓*i* P	**P**	04 14 14.8	**+1.4**
GNI	**Garni**	**93.40**	**46**	*de* P	**P**	04 14 19.7	**+2.4**
GNI				pmax	pmax		
	comp=Z,131nm,1.7s						
GNI				MLR	MLR		
	comp=Z,14µm,20.0s						
GNI	**Garni**	**93.40**	**46**	P	**P**	04 14 13.9	**-3.4**
GNI				IAmb	IAmb	04 14 44.6	
	comp=Z,78nm,1.1s						
MAK	**Makhachkala**	**93.84**	**42**	*e* P	**P**	04 14 16.8	**-2.2**
MAK				*e*		04 18 01.8	
MAK				*e*		04 24 48.1	
MAK				*e*SS	SS	04 31 45.1	+0.1
MAK				*e*SSS	SSS	04 35 27.1	
MAK				pmax	pmax		
	comp=Z,434nm,1.4s						
AKT	**Akhty**	**94.73**	**43**	*e* P	**P**	**04 14 25.3**	**+2.0**
AKT				*e*		04 18 13.7	
AKT				pmax	pmax		
	comp=Z,39nm,1.0s						
AKTO	**Aktyubinsk**	**95.59**	**32**	P	**P**	**04 14 28.0**	**+1.1**
AKTO	**Aktyubinsk**	**95.59**	**32**	PKKPbc	PKKPbc	04 31 17.4	-1.4
	comp=Z,2.1nm,0.8s,baz=144,slow=5.2,SNR=3.3						
MA2	**Magadan**	**95.91**	**342**	*de* P	**P**	**04 14 30.4**	**+2.3**
MA2				pmax	pmax		
	comp=Z,34nm,1.8s						
MA2				MLR	MLR		
	comp=Z,8µm,17.0s						
MA2	**Magadan**	**95.91**	**342**	LR	LR	05 02 25.3	
	comp=Z,6µm,19.3s,baz=48,slow=38						
MA2	**Magadan**	**95.91**	**342**	IAMs_20	IAMs_20	05 02 33.5	
	comp=Z,9µm,19.0s						
AB31	**Akbulak array**	**97.30**	**32**	*i* P	Pdif	04 14 35.1	+0.4
SUR	**Sutherland**	**98.05**	**121**	IAMs_20	IAMs_20	04 55 18.7	
	comp=Z,8µm,20.0s						
VNA3	**Neumayer Olymp**	**98.06**	**164**	Pdiff	Pdif	04 14 38.5	+1.0
YAK	**Yakutsk**	**98.18**	**352**	*e* P	**P**	**04 14 37.2**	**-1.1**
YAK				*e**PP	**pP**	**04 14 47.2**	**+0.5**
YAK				*e*S	**SKSac**	**04 25 12.0**	**-1.8**
YAK				*e*		04 25 54.0	
YAK				pmax	pmax		
	comp=Z,12nm,1.2s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,167nm,3.2s						
YAK				pmax	pmax		
	comp=N,191nm,3.4s						
YAK				pmax	pmax		
	comp=E,125nm,3.5s						
YAK				smax	smax		
	comp=N,738nm,3.8s						
YAK				smax	smax		
	comp=E,447nm,3.0s						
YAK				MLR	MLR		
	comp=Z,6µm,18.0s						
YAK				MLR	MLR		
	comp=E,4µm,16.0s						
YAK				MLR	MLR		
	comp=N,8µm,18.0s						
YAK	**Yakutsk**	**98.18**	**352**	LR	LR	05 04 32.2	
	comp=N,5µm,18.0s,baz=18,slow=39						
YAK	**Yakutsk**	**98.18**	**352**	IAMs_20	IAMs_20	05 05 03.9	
	comp=Z,9µm,19.0s						
PET	**Petropavlovsk**	**98.20**	**334**	*e* P	**P**	**04 14 37.8**	**-0.8**
PET				*e*		04 18 39.0	
PET				*e*		04 25 20.4	
PET				*e*S	**S**	**04 26 01.0**	**-3.0**
PET				*e*SS	**SS**	**04 32 43.9**	**-2.0**
PET				pmax	pmax		
	comp=Z,500nm,12.7s						
PET				pmax	pmax		
	comp=Z,1µm,13.3s						
PET				MLR	MLR		
	comp=Z,14µm,18.0s						
PET				MLR	MLR		
	comp=Z,10µm,16.0s						
PEA0B	**Petropavlovsk-**	**98.53**	**335**	IAMs_20	IAMs_20	05 01 09.6	
	comp=Z,11µm,21.0s						
PETK	**Petropavlovsk-**	**98.53**	**335**	P	**P**	**04 14 39.9**	**-0.2**
PETK	**Petropavlovsk-**	**98.53**	**335**	P	Pdif	04 14 41.6	+1.4
	comp=Z,1.2nm,0.5s,baz=38,slow=7.3,SNR=3.6						
PETK				LR	LR	05 01 11.1	
	comp=Z,7µm,20.9s,baz=41,slow=37						
PETK	**Petropavlovsk-**	**98.53**	**335**	P	**P**	**04 14 39.9**	**-0.2**
BRVK	**Borovoye**	**99.25**	**25**	IAMs_20	IAMs_20	05 02 56.6	
	comp=Z,11µm,20.0s						
RAR	**Rarotonga**	**99.27**	**251**	IAMs_20	IAMs_20	04 50 40.5	
	comp=Z,10µm,22.0s						
BVAR	**Borovoye Array**	**99.32**	**25**	P	**Pdif**	**04 14 45.1**	**+1.4**
	comp=Z,0.7nm,0.5s,baz=290,slow=5.4,SNR=6.6						
BVAR				PKKPbc	**PKKPbc**	**04 31 08.0**	**-0.7**
	comp=Z,3.1nm,0.8s,baz=148,slow=3.3,SNR=9.6						
SNAA	**Sanae**	**100.12**	**163**	Pdiff	**Pdif**	**04 14 47.6**	**+0.9**
SNAA				SKS		04 25 25.3	
SNAA	**Sanae**	**100.12**	**163**	⇓*e* P	**Pdif**	**04 14 48.1**	**+1.4**
SNAA	**Sanae**	**100.12**	**163**	S	**SKSac**	**04 25 24.3**	**+1.5**
	comp=Z,12nm,1.1s,baz=181,slow=21,SNR=24						
SNAA	**Sanae**	**100.12**	**163**		**Pdif**	**04 14 47.9**	**+1.1**
SNAA				IAMs_20	IAMs_20	05 00 04.3	
	comp=Z,7µm,20.0s						
BOSA	**Boshof**	**100.66**	**117**	P	**Pdif**	**04 14 50.5**	**+0.3**
BOSA	**Boshof**	**100.66**	**117**	P	**Pdif**	**04 14 52.4**	**+2.2**
	comp=Z,1.2nm,0.6s,baz=344,slow=7.4,SNR=2.4						
BOSA				PP	**PP**	**04 18 59.0**	**+1.0**
	comp=Z,5.6nm,0.9s,baz=255,slow=6.1,SNR=3.4						
BOSA				PKKPbc	**PKKPbc**	**04 31 03.4**	**-1.2**
	comp=Z,4.5nm,0.8s,baz=136,slow=2.8,SNR=6.4						
BOSA	**Boshof**	**100.66**	**117**		**Pdif**	**04 14 50.5**	**+0.3**
BRZS	**Berezniki**	**102.58**	**25**	*e* PP	**PP**	**04 19 10.6**	**-0.1**
GEYT	**Alibeck**	**103.36**	**42**	Pdiff	**Pdif**	**04 15 02.5**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=311,slow=11,SNR=2.6						
GEYT				PP	**PP**	**04 19 14.0**	**-3.1**
	comp=Z,6.7nm,1.2s,baz=310,slow=12,SNR=4.4						
GEYT				PKKPbc	**PKKPbc**	**04 30 57.0**	**+0.2**
	comp=Z,2.5nm,0.6s,baz=130,slow=2.3,SNR=4.6						
GYA0B	**ALIBECK ARRAY**	**103.36**	**42**	IAMs_20	IAMs_20	05 06 45.0	
	comp=Z,8µm,20.0s						
ZAA0	**Zalesovo Array**	**103.38**	**17**	IAMs_20	IAMs_20	05 04 15.0	
	comp=Z,9µm,21.0s						
ZALV	**Zalesovo Beam**	**103.38**	**17**	Pdiff	**Pdif**	**04 15 00.0**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=353,slow=3.6,SNR=3.2						
ZALV				PKIKP	**PKiKP**	**04 19 21.8**	**+1.2**
	comp=Z,3.2nm,0.8s,baz=316,slow=4.0,SNR=4.5						
ZALV				PKKPbc	**PKKPbc**	**04 30 54.9**	**-2.2**
	comp=Z,1.7nm,0.7s,baz=169,slow=2.8,SNR=4.2						
ZALV				PKKP	**PKKPdf**	**04 31 05.7**	**+1.5**
	comp=Z,1.2nm,0.6s,baz=170,slow=4.5,SNR=3.6						
BOD	**Bodaibo**	**103.48**	**360**	*e* P	**Pdif**	**04 15 02.0**	**0.0**
BOD				pmax	pmax		
	comp=Z,31nm,1.8s						
ASHT	**Ashkhabad

	comp=Z,7μm,20.0s								
AFI	**Afiamalu**	**108.28**	**261**		IAMs_20	IAMs_20	04 55 58.8		
	comp=Z,12μm,21.0s								
SGDS	**Sogindy**	**108.52**	**29**	*e*	PP	**PP**	**04 19 56.9**	**+2.1**	
MKAR	**Makanchi Array**	**108.85**	**22**		P	**Pdif**	**04 15 27.3**	**+1.0**	
MKAR	**Makanchi Array**	**108.85**	**22**		Pdiff	**Pdif**	**04 15 27.1**	**+0.9**	
	comp=Z,0.1nm,0.5s,baz=346,slow=3.0,SNR=2.8								
MKAR					PKIKP	**PKiKP**	**04 19 31.2**	**+0.2**	
	comp=Z,1.6nm,0.8s,baz=302,slow=2.5,SNR=7.1								
MKAR					PP	**PP**	**04 19 55.7**	**-1.2**	
	comp=Z,2.9nm,0.8s,baz=38,slow=2.2,SNR=4.6								
MKAR					PKKPbc	**PKKPbc**	**04 30 38.2**	**-2.0**	
	comp=Z,2.8nm,0.8s,baz=116,slow=5.6,SNR=8.5								
MKAR					PKKP	**PKKPdf**	**04 30 51.0**	**-3.2**	
	comp=Z,3.9nm,0.8s,baz=138,slow=6.0,SNR=8.6								
MKAR	**Makanchi Array**	**108.85**	**22**			**Pdif**	**04 15 27.2**	**+1.0**	
TDK	**Taldyqorghan**	**108.89**	**25**	*e*	PP	**PP**	**04 20 00.8**	**+3.5**	
QSPA	**South Pole Qui**	**108.94**	**180**		PKiKP	**PKiKP**	**04 19 30.0**	**-0.4**	
	comp=Z,4.3nm,1.0s,baz=174,slow=6.5,SNR=2.4								
QSPA					PP	**PP**	**04 19 59.1**	**+0.9**	
	comp=Z,9.3nm,1.0s,baz=141,slow=6.4,SNR=3.3								
QSPA					PKKPab	**PKKPab**	**04 30 48.6**	**-1.0**	
	comp=Z,3.9nm,0.8s,baz=324,slow=1.1,SNR=5.9								
QSPA	**South Pole Qui**	**108.94**	**180**		Pdif	**Pdif**	**04 15 26.7**	**+0.6**	
QSPA	**South Pole Qui**	**108.94**	**180**		IAMs_20	IAMs_20	05 07 07.4		
	comp=Z,8μm,20.0s								
AAK	**Ala-Archa**	**109.09**	**29**		PKKPbc	PKKPbc	04 30 37.9	-1.6	
	comp=Z,4.1nm,0.8s,baz=158,slow=4.9,SNR=8.6								
YSS	**Yuzh-Sakhalins**	**109.14**	**339**	*e*	P	**Pdif**	**04 15 28.6**	**+1.2**	
YSS					pmax	pmax			
	comp=Z,2μm,14.5s								
YSS					pmax	pmax			
	comp=N,1μm,15.3s								
YSS	**Yuzh-Sakhalins**	**109.14**	**339**		IAMs_20	IAMs_20	05 09 08.5		
	comp=Z,11μm,20.0s								
TLY	**Talaya**	**109.14**	**6**		IAMs_20	IAMs_20	05 06 46.2		
	comp=Z,8μm,20.0s								
ZSN	**Zaisan**	**109.15**	**20**	*e*	PP	**PP**	**04 20 01.1**	**+2.0**	
UOSS	**Minazif**	**109.45**	**54**		IAMs_20	IAMs_20	05 12 49.2		
	comp=Z,6μm,20.0s								
MDOK	**Medeo**	**109.82**	**27**	*e*	PP	**PP**	**04 20 04.9**	**+0.6**	
MDOK				*e*	PS	PS	04 29 27.6	-6.0	
KLR	**Kul'dur**	**110.09**	**347**	‖ *i*	PKiKP	**PKiKP**	**04 19 35.1**	**+1.9**	
KLR	**Kul'dur**	**110.09**	**347**		PKKPbc	PKKPbc	04 30 34.7	-1.6	
	comp=Z,1.7nm,0.8s,baz=260,slow=3.6,SNR=5.1								
KPKS	**Kokpek**	**110.27**	**26**	*e*	PP	**PP**	**04 20 12.4**	**+5.0**	
KPKS				*e*	PS	PS	04 29 31.0	-6.8	
ZAK	**Zakamensk**	**110.39**	**7**	*e*	P	**Pdif**	**04 15 49.5**	**+16**	
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.2s								
SATY	**Saty**	**110.48**	**26**	*e*	PP	**PP**	**04 20 06.1**	**-2.9**	
SATY				*e*	PS	PS	04 29 33.2	-6.6	
UZB	**Uzynbulak**	**110.67**	**26**	*e*	PP	**PP**	**04 20 09.6**	**-0.8**	
UZB				*e*	PS	**PS**	**04 29 37.0**	**-4.6**	
SHLS	**Shalkode**	**110.84**	**26**	*e*	PP	**PP**	**04 20 14.2**	**+2.6**	
SHLS				*e*	PS	**PS**	**04 29 40.4**	**-2.7**	
NMR	**Nemuro--Hokkai**	**111.10**	**335**	*e*	P	**Pdif**	**04 15 32.1**	**-4.1**	
KSH	**Kashi**	**112.23**	**30**		PKP	**PKiKP**	**04 19 37.3**	**-0.4**	
KSH					sPKP		04 19 52.4		
KSH					PKS		04 23 08.8		
KSH					SKS	**SKSdf**	**04 26 43.8**	**-4.1**	
KSH					SKKS	**SKKSac**	**04 27 15.8**	**-7.3**	
KSH					AMB	AMB			
	comp=Z,3μm,5.3s								
KSH					LR	LR			
	comp=Z,5μm,18.1s								
KSH					LR	LR			
	comp=Z,18μm,19.7s								
KBL	**Kabul**	**112.24**	**38**		IAMs_20	IAMs_20	05 06 42.6		
	comp=Z,9μm,21.0s								
WSAR	**Wadi Sarin**	**112.24**	**54**		PKKPab	PKKPab	04 30 38.1	-0.5	
	comp=Z,6.2nm,0.8s,baz=169,slow=3.1,SNR=5.2								
SONM	**Songino Array**	**113.21**	**5**		Pdiff	**Pdif**	**04 15 48.5**	**+2.7**	
	comp=Z,0.3nm,0.6s,baz=337,slow=14,SNR=2.5								
SONM					PKKPbc	**PKKPbc**	**04 30 25.0**	**-1.2**	
	comp=Z,3.3nm,0.8s,baz=176,slow=2.7,SNR=12								
SONM					PKKPab	**PKKPab**	**04 30 32.5**	**-2.7**	
	comp=Z,8.4nm,1.0s,baz=176,slow=2.8,SNR=15								
SONM					SKKP		04 34 25.5		
	comp=Z,3.2nm,1.2s,baz=168,slow=6.2,SNR=4.3								
ULN	**Ulaanbaatar**	**113.23**	**4**	‖ *i*	PKiKP	**PKiKP**	**04 19 37.6**	**-1.8**	
ULN					MLR	MLR			
	comp=Z,9μm,20.0s								
ULN	**Ulaanbaatar**	**113.23**	**4**		IAMs_20	IAMs_20	05 07 20.3		
	comp=Z,9μm,21.0s								
ERM	**Erimo**	**113.25**	**336**		IAMs_20	IAMs_20	05 09 40.0		
	comp=Z,8μm,21.0s								
WMQ	**Urumqi**	**113.28**	**20**	*e*	PKP	**PKiKP**	**04 19 41.3**	**+1.8**	
WMQ					sPKP		04 19 55.3		
WMQ					PP	**PP**	**04 20 35.8**	**+7.0**	
WMQ					SKKS		04 27 25.4		
WMQ					SS	**SS**	**04 36 16.1**	**+4.5**	
WMQ					AMB	AMB			
	comp=Z,1μm,5.5s								
WMQ					LR	LR			
	comp=Z,6μm,19.3s								
WMQ					LR	LR			
	comp=Z,12μm,22.1s								
SYO	**Syowa Base**	**113.48**	**158**	‖ *e*	Pdiff	**Pdif**	**04 15 47.4**	**+1.4**	
SYO	**Syowa Base**	**113.48**	**158**	⇑ *e*	PP	**PP**	**04 20 29.0**	**-1.6**	
USRK	**Ussuriysk Ar.**	**114.79**	**345**		PKIKP	PKPdf	04 19 43.0	+0.8	
USRK	**Ussuriysk Ar.**	**114.79**	**345**		PKP	PKPdf	04 19 43.0	+0.7	
	comp=Z,6.4nm,1.0s,baz=18,slow=0.5,SNR=4.2								
USRK					PP	**PP**	**04 20 40.9**	**+1.6**	
	comp=Z,2.8nm,0.7s,baz=5.0,slow=6.7,SNR=2.3								
VLA	**Vladivostok**	**115.83**	**345**	‖ *i*	PKiKP	**PKiKP**	**04 19 44.1**	**-0.2**	
CN2	**Changchun**	**116.50**	**350**		Pdif	**Pdif**	**04 16 00.4**	**+0.1**	
CN2				*e*	PP	**PP**	**04 20 57.1**	**+5.9**	
CN2				*e*	SS	SS	04 36 57.0	+3.6	
CN2					AMB	AMB			
	comp=Z,600nm,6.0s								
CN2					LR	LR			
	comp=Z,9μm,20.0s								
CN2					LR	LR			
	comp=Z,7μm,20.0s								
CN2					LR	LR			
	comp=Z,5μm,22.0s								
VNDA	**Vanda**	**116.84**	**191**		PKP	**PKiKP**	**04 19 46.0**	**+0.9**	
	comp=Z,1.9nm,0.8s,baz=158,slow=5.0,SNR=4.1								
RAO	**Raoul Island**	**117.02**	**246**		IAMs_20	IAMs_20	05 00 14.1		
	comp=Z,5μm,22.0s								
OPO	**Ambohidratompo**	**117.92**	**101**		PKKPbc	PKKPbc	04 30 09.2	+0.3	
	comp=Z,4.1nm,0.8s,baz=163,slow=9.5,SNR=4.1								
ABPO	**Ambohimpanom**	**118.05**	**102**		PKiKP	**PKPdf**	**04 19 48.4**	**-1.0**	
ABPO					MLR	MLR			
	comp=Z,10μm,21.0s								
ABPO	**Ambohimpanom**	**118.05**	**102**		PKPdf	**PKPdf**	**04 19 48.4**	**-1.0**	
SNY	**Shenyang**	**118.72**	**351**	⇑	Pdif	**Pdif**	**04 16 14.4**	**+4.2**	
SNY					PP	**PP**	**04 21 08.5**	**+1.9**	
SNY					AMB	AMB			
	comp=Z,950nm,7.8s								
SNY					LR	LR			
	comp=Z,5μm,20.6s								
SNY					LR	LR			
	comp=Z,12μm,22.1s								
SMLA	**Simla**	**119.36**	**35**	*e*	P	**PKPdf**	**04 19 50.7**	**-0.7**	
SMLA				*i*	x	x	04 21 05.1		
KWAJ	**Kwajalein Atol**	**119.61**	**292**		IAMs_20	IAMs_20	05 06 37.7		
	comp=Z,8μm,20.0s								
MJB9	**Matsu-Tunnel**	**119.89**	**337**		IAMs_20	IAMs_20	05 08 31.7		
	comp=Z,7μm,21.0s								
MAJO	**Matsushiro**	**119.90**	**337**	⇑	PKiKP	**PKiKP**	**04 19 52.9**	**+0.5**	
MAJO	**Matsushiro**	**119.90**	**337**			**PKiKP**	**04 19 53.3**	**+0.9**	
MAJO	**Matsushiro**	**119.90**	**337**		IAMs_20	IAMs_20	05 08 30.7		
	comp=Z,6μm,21.0s								
MAT	**Matsushiro**	**119.90**	**337**		PKP	**PKiKP**	**04 19 52.7**	**+0.3**	
MJAR	**Matsushiro Arr**	**119.90**	**337**		PKIKP	**PKPdf**	**04 19 51.5**	**-0.8**	
MJAR							04 21 17.1		
MJAR	**Matsushiro Arr**	**119.90**	**337**		PKP	**PKiKP**	**04 19 52.7**	**+0.3**	
	comp=Z,5.8nm,0.7s,baz=46,slow=0.7,SNR=11								
MJAR					PP	**PP**	**04 21 17.1**	**+2.0**	
	comp=Z,2.2nm,0.8s,baz=353,slow=4.9,SNR=2.6								
MJAR	**Matsushiro Arr**	**119.90**	**337**			**PKPdf**	**04 19 51.5**	**-0.8**	
HHC	**Hu-ho-hao-te**	**120.45**	**1**	*e*	PKP	**PKiKP**	**04 19 54.9**	**+1.4**	
HHC					sPKP		04 20 10.3		
HHC					PP	**PP**	**04 21 20.8**	**+2.1**	
HHC					SKKS		04 28 18.8		
HHC					AMB	AMB			
	comp=Z,450nm,10.6s								
HHC					LR	LR			
	comp=Z,4μm,18.4s								
HHC					LR	LR			
	comp=Z,7μm,19.5s								
GTA	**Gaotai**	**120.58**	**12**	‖	PKP	**PKiKP**	**04 19 55.3**	**+1.5**	
GTA					sPKP		04 20 09.4		
GTA					PP	**PP**	**04 21 21.3**	**+1.6**	
GTA					SKKS		04 28 14.9		
GTA					AMB	AMB			
	comp=Z,790nm,6.8s								
GTA					LR	LR			
	comp=Z,8μm,21.0s								
GTA					LR	LR			
	comp=Z,8μm,20.6s								
GTA					LR	LR			
	comp=Z,9μm,22.0s								
BJI	**Beijing**	**121.21**	**357**	*i*	PKP	**PKPdf**	**04 19 54.3**	**-0.4**	
BJI					PP	**PP**	**04 21 25.1**	**+1.4**	
BJI					SS	SS	04 37 53.3	-0.7	
BJI					AMB	AMB			
	comp=Z,930nm,8.8s								
BJI					LR	LR			
	comp=Z,6μm,18.8s								
BJI					LR	LR			
	comp=Z,6μm,20.2s								
BJT	**Baijiatuau**	**121.23**	**357**		IAMs_20	IAMs_20	05 13 29.5		
	comp=Z,9μm,19.0s								
INU	**Inuyama**	**121.40**	**337**		IAMs_20	IAMs_20	05 10 36.3		
	comp=Z,6μm,22.0s								
URZ	**Urewera**	**121.75**	**236**			**PKiKP**	**04 19 56.6**	**+0.8**	
URZ					IAMs_20	IAMs_20	05 03 14.0		
	comp=Z,8μm,20.0s								
DL2	**Dalian**	**121.86**	**352**		PKP	**PKPdf**	**04 19 55.6**	**-0.4**	
DL2					AMB	AMB			
	comp=Z,820nm,7.8s								
DL2					LR	LR			
	comp=Z,2μm,17.3s								
DL2					LR	LR			
	comp=Z,8μm,18.9s								
DL2					LR	LR			
	comp=Z,9μm,22.1s								
MAW	**Mawson**	**122.05**	**160**		PKIKP	**PKiKP**	**04 19 56.4**	**+0.9**	
MAW	**Mawson**	**122.05**	**160**		PKP	**PKiKP**	**04 19 56.6**	**+1.1**	
	comp=Z,7.7nm,0.7s,baz=221,slow=3.3,SNR=4.7								
MAW	**Mawson**	**122.05**	**160**			**PKiKP**	**04 19 56.4**	**+0.9**	
KSRS	**Korea Array**	**122.15**	**346**		PKP	**PKiKP**	**04 19 57.1**	**+0.3**	
	comp=Z,11nm,0.8s,baz=16,slow=1.4,SNR=31								
KSRS					PP	**PP**	**04 21 30.4**	**+0.2**	
	comp=Z,2.7nm,0.8s,baz=353,slow=3.1,SNR=2.8								
BFZ	**Birch Farm**	**122.38**	**233**		IAMs_20	IAMs_20	05 07 07.2		
	comp=Z,6μm,19.0s								
INCN	**Inchon**	**122.41**	**347**		IAMs_20	IAMs_20	05 15 44.2		
	comp=Z,8μm,22.0s								
SNZO	**South Karori**	**123.51**	**233**		IAMs_20	IAMs_20	05 03 12.5		
	comp=Z,6μm,22.0s								
HIZ	**Hauiti**	**123.52**	**236**		IAMs_20	IAMs_20	05 05 43.7		
	comp=Z,6μm,20.0s								
TIY	**Taiyuan**	**123.59**	**1**		PKP	PKiKP	04 20 14.1	+14	
TIY					PP	PP	04 21 49.3	+9.3	
TIY					SKS	**SKSdf**	**04 27 02.8**	**-6.7**	
TIY	**Taiyuan**	**123.59**	**1**		SS	SS	04 38 27.8	+3.1	
TIY					AMB	AMB			
	comp=Z,660nm,9.2s								
TIY					LR	LR			
	comp=N,7μm,17.5s								
TIY					LR	LR			
	comp=E,9μm,18.3s								
TIY					LR	LR			
	comp=Z,11μm,23.5s								
KHZ	**Kahutara**	**124.29**	**231**		IAMs_20	IAMs_20	05 06 12.8		
	comp=Z,6μm,21.0s								
NNZ	**Nelson**	**124.51**	**233**		IAMs_20	IAMs_20	05 11 20.7		
	comp=Z,5μm,21.0s								
LZH	**Lanzhou**	**124.52**	**9**	⇑	PKP	**PKiKP**	**04 20 02.6**	**+0.9**	
LZH					sPKP		04 20 17.4		
LZH					PP	**PP**	**04 21 47.0**	**+0.6**	
LZH					SKKS		04 28 42.3		
LZH					SS	**SS**	**04 38 35.5**	**-1.1**	
LZH					AMB	AMB			
	comp=Z,590nm,4.9s								
LZH					LR	LR			
	comp=Z,8μm,17.4s								
LZH					LR	LR			
	comp=Z,6μm,17.3s								
LZH					LR	LR			
	comp=Z,10μm,20.5s								
OUZ	**Omahuta**	**124.59**	**240**		IAMs_20	IAMs_20	05 04 23.2		
	comp=Z,8μm,21.0s								
THZ	**Tophouse**	**124.82**	**232**		IAMs_20	IAMs_20	05 10 53.8		
	comp=Z,5μm,20.0s								
TIA	**Tai'an**	**124.97**	**356**		PKP	**PKPdf**	**04 20 02.1**	**0.0**	
TIA					LR	LR			
	comp=Z,8μm,21.1s								
TIA					LR	LR			
	comp=Z,2μm,15.7s								
TIA					LR	LR			
	comp=Z,11μm,17.8s								
DANN	**Dangsing**	**125.03**	**32**	*e*	P	**PKPdf**	**04 20 02.8**	**0.0**	
	comp=Z,156nm,0.8s								
QRZ	**Quartz Range**	**125.19**	**233**		IAMs_20	IAMs_20	05 06 20.6		
	comp=Z,6μm,20.0s								
LTZ	**Lake Taylor**	**125.19**	**231**		IAMs_20	IAMs_20	05 07 58.0		
	comp=Z,7μm,20.0s								
OXZ	**Oxford**	**125.29**	**230**		IAMs_20	IAMs_20	05 04 24.2		
	comp=Z,8μm,21.0s								
BHPL	**Bhopal**	**125.44**	**41**	*e*	P	**PKPdf**	**04 20 02.5**	**-0.9**	
BHPL				*i*	x	x	04 21 50.2		
JNU	**Nakatsue**	**125.47**	**342**		PKP	**PKiKP**	**04 20 03.4**	**-0.1**	
	comp=Z,13nm,1.0s,baz=344,slow=7.4,SNR=3.2								
GKN	**Gorkha**	**125.75**	**31**	*e*	P	**PKiKP**	**04 20 04.4**	**0.0**	
	comp=Z,237nm,0.9s								
RPZ	**Rata Peaks**	**125.95**	**229**		PKP	**PKPdf**	**04 20 03.7**	**0.0**	
	comp=Z,41nm,0.8s,baz=220,slow=7.9								
JCJ	**Chichijima**	**126.22**	**328**		PKP	**PKPdf**	**04 20 04.7**	**0.0**	
	comp=Z,54nm,0.8s,baz=24,slow=12,SNR=3.8								
KKN	**Kakani**	**126.24**	**31**	*e*	P	**PKPdf**	**04 20 04.9**	**-0.1**	
DMN	**Daman**	**126.31**	**31**	*e*	P	**PKPdf**	**04 20 04.5**	**-0.7**	
GUN	**Gumba**	**126.43**	**30**	*e*	P	**PKPdf**	**04 20 05.7**	**+0.2**	
LBZ	**Lake Benmore**	**126.47**	**228**		IAMs_20	IAMs_20	05 05 20.3		
	comp=Z,8μm,21.0s								
PKI	**Pulchoki**	**126.49**	**31**	*e*	P	**PKPdf**	**04 20 05.3**	**-0.3**	
JIRN	**Jiri**	**126.79**	**30**	*e*	P	**PKiKP**	**04 20 07.0**	**+0.3**	
XAN	**Xi'an**	**127.11**	**4**		PKP	**PKiKP**	**04 20 06.6**	**-0.2**	
XAN					sPKP		04 20 21.1		
XAN					PP	**PP**	**04 22 04.0**	**+0.6**	
XAN					SKS	**SKSdf**	**04 27 12.4**	**-3.8**	
XAN					AMB	AMB			
	comp=Z,880nm,4.7s								
XAN					LR	LR			
	comp=Z,4μm,23.0s								
XAN					LR	LR			
	comp=Z,8μm,17.9s								
XAN	**Xi'an**	**127.11**	**4**		IAMs_20	IAMs_20	05 20 35.0		
	comp=Z,8μm,20.0s								
LSA	**Lhasa**	**127.15**	**24**		PKP	**PKiKP**	**04 20 08.8**	**+1.3**	
LSA	**Lhasa**	**127.15**	**24**		IAMs_20	IAMs_20	05 16 55.7		
	comp=Z,9μm,21.0s								
RAMN	**Ramite**	**127.58**	**30**	*e*	P	**PKPdf**	**04 20 07.8**	**+0.2**	
	comp=Z,340nm,1.3s								
TAPN	**Taplejung**	**127.76**	**29**	*e*	P	**PKiKP**	**04 20 08.4**	**-0.2**	
NGP	**Nagpur**	**127.99**	**42**	*i*	x	**PKPdf**	**04 20 09.4**	**+1.1**	
NGP				*ex*		x	04 33 59.4		
ODAN	**Odare**	**128.03**	**30**	*e*	P	**PKPdf**	**04 20 08.6**	**+0.1**	
GTK	**Tadong**	**128.19**	**28**	*e*	P	**PKPdf**	**04 20 08.1**	**-0.6**	
GTK				*i*	x	x	04 22 10.0		
GTK				*ex*		x	04 23 20.1		
GOA	**Goa**	**128.32**	**51**	*e*	P	**PKPdf**	**04 20 08.0**	**-0.9**	
GOA				*i*	x	x	04 22 11.3		
GOA				*ex*		x	04 23 25.9		
DCZ	**Deep Cove**	**128.39**	**227**		IAMs_20	IAMs_20	05 06 16.9		
	comp=Z,8μm,22.0s								
KLRI	**Killari**	**128.57**	**46**	*e*	PKiKP	**PKiKP**	**04 20 11.1**	**+1.0**	
PATS	**Pohnpei**	**128.61**	**296**		IAMs_20	IAMs_20	05 10 30.7		
	comp=Z,8μm,21.0s								
NJ2	**Nanjing**	**128.95**	**354**	*e*	PKP	**PKiKP**	**04 20 10.3**	**-0.1**	
NJ2					sPKP		04 20 25.8		
NJ2					PP	PP	04 22 23.6	+8.1	
NJ2					SS	SS	04 39 39.1	+7.6	
NJ2					AMB	AMB			
	comp=Z,850nm,9.7s								
NJ2					LR	LR			
	comp=Z,3μm,18.9s								
NJ2					LR	LR			
	comp=Z,8μm,19.4s								
SRSP	**Sriramsagar**	**129.15**	**44**	*e*	PKiKP	**PKiKP**	**04 20 12.2**	**+1.0**	
CD2	**Chengdu**	**129.57**	**10**		PKP	**PKPdf**	**04 20 09.3**	**-1.8**	
CD2					sPKP		04 20 22.5		
CD2					SKKS		04 29 11.0		
CD2					AMB	AMB			
	comp=Z,810nm,8.4s								
CD2					LR	LR			
	comp=Z,13μm,21.1s								
SSE	**Sheshan**	**129.60**	**351**		PKP	**PKiKP**	**04 20 11.9**	**+0.1**	
SSE					PP	**PP**	**04 22 22.0**	**+2.3**	
SSE					LR	LR			
	comp=Z,2μm,21.6s								
SSE					LR	LR			
	comp=Z,3μm,18.6s								
DMPR	**Damasthipur**	**129.73**	**46**	*e*	PKiKP	**PKiKP**	**04 20 14.2**	**+1.8**	
RPR	**Rampur**	**129.82**	**43**	*e*	PKiKP	**PKiKP**	**04 20 13.7**	**+1.2**	
BOK	**Bokaro**	**129.85**	**33**	*e*	P	**PKPdf**	**04 20 10.8**	**-1.0**	
BOK				*i*	x	x	04 22 16.3		
BOK				*ex*		x	04 23 27.9		
DZM	**Mont Dzumac**	**130.18**	**257**	*e*	PP	PP	04 22 23.1	-2.8	
	comp=Z,5μm,25.8s								
DZM	**Mont Dzumac**	**130.18**	**257**	*e*	SS	SS	04 39 48.0	-3.0	
	comp=Z,3μm,28.7s								
DZM	**Mont Dzumac**	**130.18**	**257**	*e*	LQ	LQ	04 55 52.6		
	comp=Z,5μm,37.6s								
DZM				*e*	LR	LR	05 01 28.0		
	comp=Z,18μm,25.0s								
DZM	**Mont Dzumac**	**130.18**	**257**		PKP	**PKiKP**	**04 20 14.0**	**+0.8**	
	comp=Z,43nm,0.8s,baz=82,slow=14,SNR=6.0								
DZM					SKPbc	**SKPbc**	**04 23 35.4**	**+2.1**	
	comp=Z,56nm,1.3s,baz=108,slow=8.5,SNR=5.4								
DZM	**Mont Dzumac**	**130.18**	**257**		PP	PP	04 22 25.6	-0.3	
DZM					IAMs_20	IAMs_20	05 05 28.1		
	comp=Z,7μm,22.0s								
HYBB	**Hyderabad (bro**	**130.36**	**45**	*e*	PKPdf	**PKiKP**	**04 20 13.6**	**-0.1**	
HYBB				*e*	PP	**PP**	**04 22 24.9**	**-0.9**	
HYBB				*e*	SKPbc	**SKPab**	**04 23 29.8**	**-4.0**	
HYBB				*e*	SKKSac	**SKKSac**	**04 29 15.3**	**-6.3**	
HYB	**Hyderabad**	**130.36**	**45**	*i*	PKP	**PKiKP**	**04 20 14.0**	**+0.3**	
HYB	**Hyderabad**	**130.36**	**45**	*e*	P	**PKiKP**	**04 20 13.4**	**-0.2**	
HYB				*i*	x	x	04 22 16.0		
HYB				*ex*		x	04 23 30.4		
ITAN	**ITANAGAR**	**130.43**	**23**	*e*	P	**PKiKP**	**04 20 13.2**	**-0.4**	
ITAN				*i*	x	x	04 22 27.0		
ITAN				*ex*		x	04 23 31.6		
GUWA	**GUWAHATI**	**130.49**	**26**	*e*	P	**PKPdf**	**04 20 12.1**	**-0.7**	
GUWA				*i*	x	x	04 22 26.7		
GUWA				*ex*		x	04 23 32.2		
TEZP	**TEZPUR**	**130.55**	**24**	*e*	P	**PKiKP**	**04 20 14.2**	**+0.4**	
TEZP				*i*	x	x	04 22 18.1		
TEZP				*ex*		x	04 23 32.5		
WHN	**Wuhan**	**130.74**	**359**		PKP	**PKPdf**	**04 20 12.4**	**-0.8**	
WHN					SKKS		04 29 19.9		
WHN					SS	**SS**	**04 39 52.0**	**-1.4**	
WHN					LR	LR			
	comp=Z,26μm,19.6s								
SHL	**Shillong**	**131.12**	**26**	*e*	P	**PKPdf**	**04 20 14.0**	**-0.3**	
SHL				*i*	x	x	04 22 20.0		
SHL				*ex*		x	04 23 33.1		
GGR	**Gangavaram**	**131.16**	**43**	*e*	PKiKP	**PKiKP**	**04 20 16.5**	**+1.2**	
URV	**Uravakonda**	**131.16**	**49**	*e*	PKiKP	**PKiKP**	**04 20 16.5**	**+1.2**	
NJS	**Nagarjunasagar**	**131.47**	**45**	*e*	PKiKP	**PKiKP**	**04 20 17.4**	**+1.5**	
SRLM	**Srisailam**	**131.51**	**46**	*e*	PKiKP	**PKiKP**	**04 20 17.2**	**+1.2**	
JOW	**Kunigami**	**132.14**	**342**		IAMs_20	IAMs_20	05 26 17.2		
	comp=Z,5μm,22.0s								
MYLAV	**Mylavaram**	**132.22**	**44**	*e*	PKiKP	**PKiKP**	**04 20 18.4**	**+1.1**	
ADKI	**Addanki**	**132.42**	**46**	*e*	PKiKP	**PKiKP**	**04 20 19.2**	**+1.4**	
PVM	**Polavaram**	**132.50**	**43**	*e*	PKiKP	**PKiKP**	**04 20 19.0**	**+1.1**	
BWNR	**Bhubaneshwar**	**132.65**	**36**	*e*	P	**PKiKP**	**04 20 18.6**	**+0.4**	
BWNR				*i*	x	x	04 22 36.1		
BWNR				*ex*		x	04 23 36.6		
CHLP	**Challavanipeta**	**133.06**	**39**	*e*	PKiKP	**PKiKP**	**04 20 20.4**	**+1.4**	
AZL	**Aizawl**	**133.08**	**26**	*e*	P	**PKPdf**	**04 20 17.7**	**-0.3**	
AZL				*i*	x	x	04 22 42.5		
AZL				*ex*		x	04 23 37.7		
SKHT	**Srikalahasti**	**133.72**	**48**	*e*	PKiKP	**PKiKP**	**04 20 21.9**	**+1.5**	
HNR	**Honiara**	**133.75**	**275**		IAMs_20	IAMs_20	05 11 11.7		
	comp=Z,6μm,22.0s								
**SAI

QIZ				LR	LR				
	comp=Z,9μm,23.1s								
DGPR	**DIGLIPUR**	**142.34**	**33**	*eP*		**PKPdf**	**04 20 33.0**	**-2.0**
DGPR				*i* x	x		04 23 38.4	
TAU	**Tasmania Unive**	**142.61**	**223**	IAMs_20	IAMs_20		05 13 25.7	
	comp=Z,6μm,21.0s								
PBKT	**Sadao Pong**	**142.69**	**19**	IAMs_20	IAMs_20		05 27 21.1	
	comp=Z,3μm,20.0s								
ARMA	**Armidale**	**143.39**	**244**	IAMs_20	IAMs_20		05 13 15.6		
	comp=Z,7μm,22.0s								
PBA	**Port Blair**	**143.51**	**35**	*i* x		PKPdf	04 20 36.4	-0.7	
SMPP	**San Manuel, Pa**	**144.30**	**348**	*eP*		**PKPab**	**04 20 35.9**	**-0.5**	
EIDS	**Eidsvold**	**144.38**	**253**	IAMs_20	IAMs_20		05 14 54.4		
	comp=Z,7μm,22.0s								
CAN	**Canberra**	**144.41**	**235**	IAMs_20	IAMs_20		05 18 14.8		
	comp=Z,5μm,20.0s								
UBPT	**Khong Chiam**	**145.12**	**13**	IAMs_20	IAMs_20		05 31 08.3		
	comp=Z,6μm,21.0s								
PMG	**Port Moresby**	**145.72**	**281**	PKP2		**PKPab**	**04 20 42.2**	**+0.5**	
PMG	**Port Moresby**	**145.72**	**281**	PKPbc		**PKPab**	**04 20 42.0**	**+0.3**	
	comp=Z,145nm,1.1s,baz=42,slow=3.4,SNR=56								
PMG	**Port Moresby**	**145.72**	**281**			**PKPab**	**04 20 42.1**	**+0.5**	
PMG	**Port Moresby**	**145.72**	**281**	IAMs_20	IAMs_20		05 16 53.6		
	comp=Z,6μm,22.0s								
TGY	**Tagaytay City**	**146.23**	**346**	PKPbc		**PKPbc**	**04 20 42.9**	**0.0**	
	comp=Z,129nm,0.3s,baz=45,slow=5.9,SNR=6.2								
TOO	**Toolangi**	**146.25**	**230**	IAMs_20	IAMs_20		05 31 00.5		
	comp=Z,4μm,19.0s								
RCP	**Roxas**	**148.20**	**342**⇑	*eP*		**PKPbc**	**04 20 47.9**	**-0.5**	
JAY	**Jayapura**	**148.44**	**298**	PKPbc		**PKPbc**	**04 20 47.9**	**-1.2**	
	comp=Z,128nm,0.9s,baz=22,slow=2.2,SNR=16								
CTA	**Charters Tower**	**148.79**	**262**	PKPbc		**PKPbc**	**04 20 48.2**	**-1.6**	
	comp=Z,78nm,0.7s,baz=90,slow=2.8,SNR=24								
MSLP	**Maasin**	**148.83**	**337**	*eP*		**PKiKP**	**04 20 51.7**	**+0.3**	
DLV	**T Lat**	**148.92**	**9**	PKPdf		**PKPdf**	**04 20 44.4**	**-2.1**	
DLV						**PKPbc**	**04 20 49.4**	**-1.1**	
GENI	**Genyem**	**148.93**	**298**	PKP		**PKPdf**	**04 20 47.8**	**+1.5**	
CGP	**Cagayan de Oro**	**150.44**	**336**	*eP*		**PKiKP**	**04 20 55.2**	**+0.4**	
COEN	**Coen**	**150.78**	**275**			**PKPdf**	**04 20 48.4**	**-0.8**	
COEN				IAMs_20	IAMs_20		05 20 01.9		
	comp=Z,6μm,21.0s								
DAV	**Davao City (W)**	**151.34**	**334**	PKPbc		**PKiKP**	**04 20 57.0**	**+0.3**	
	comp=Z,150nm,0.3s,baz=28,slow=0.9,SNR=7.0								
DAV	**Davao City (W)**	**151.34**	**334**			**PKiKP**	**04 20 58.1**	**+1.4**	
DAV	**Davao City (W)**	**151.34**	**334**	IAMs_20	IAMs_20		05 27 55.2		
	comp=Z,7μm,22.0s								
STKA	**Stephens Creek**	**151.37**	**238**	PKIKP		**PKiKP**	**04 20 56.2**	**0.0**	
STKA	**Stephens Creek**	**151.37**	**238**	PKP		**PKPdf**	**04 20 50.8**	**+1.2**	
	comp=Z,49nm,0.8s,baz=74,slow=1.2,SNR=26								
STKA				PKPbc		**PKiKP**	**04 20 56.5**	**+0.3**	
	comp=Z,128nm,0.8s,baz=39,slow=2.2,SNR=62								
STKA	**Stephens Creek**	**151.37**	**238**			**PKPdf**	**04 20 50.9**	**+1.3**	
STKA				PKPbc		**PKiKP**	**04 20 56.2**	**0.0**	
KCP	**Kidapawan**	**151.60**	**334**⇓	*eP*		**PKPdf**	**04 20 52.1**	**+1.5**	
KCP				*i* S		**pPKPab**	**04 21 15.1**	**+1.5**	
DDMP	**Don Marcelino,**	**152.15**	**332**	*eP*		**PKPdf**	**04 20 51.6**	**+0.3**	
SKMP	**Bagumbayan, Su**	**152.27**	**335**	*eP*		**PKiKP**	**04 20 59.2**	**+0.7**	
IPM	**Ipoh**	**153.81**	**28**			**PKPdf**	**04 20 53.0**	**-0.8**	
IPM				PKPab		**PKPab**	**04 21 10.6**	**-3.9**	
SIJI	**Sorong**	**154.69**	**313**	PKP		**PKPdf**	**04 20 55.1**	**+0.1**	
	comp=Z,5.8nm,0.4s,baz=337,slow=6.6,SNR=6.4								
SIJI				PKPbc		**PKiKP**	**04 21 03.7**	**+0.1**	
	comp=Z,23nm,0.7s,baz=18,slow=5.6,SNR=6.6								
SIJI				PKPab		**PKPab**	**04 21 19.8**	**+1.5**	
	comp=Z,35nm,0.8s,baz=20,slow=7.7,SNR=6.2								
KKM	**Kota Kinabalu**	**154.94**	**353**			**PKPdf**	**04 20 57.3**	**+1.9**	
BBOO	**Buckleboo**	**155.28**	**232**			**PKPdf**	**04 20 55.6**	**+0.4**	
BBOO				PKPab		**PKPab**	**04 21 19.2**	**-1.2**	
BBOO				IAMs_20	IAMs_20		05 36 20.0		
	comp=Z,5μm,21.0s								
FAKI	**Fak Fak**	**155.40**	**308**	IAMs_20	IAMs_20		05 22 23.2		
	comp=Z,6μm,22.0s								
SBUM	**Sibu**	**158.67**	**3**	IAMs_20	IAMs_20		05 38 42.9		
	comp=Z,3μm,21.0s								
LUWI	**Luwuk**	**159.81**	**331**	IAMs_20	IAMs_20		05 33 51.0		
	comp=Z,3μm,21.0s								
WRAB	**Tennant Creek**	**159.97**	**264**	PKIKP		**PKPdf**	**04 21 02.1**	**+0.7**	
WRAB							04 21 40.8		
WRAB	**Tennant Creek**	**159.97**	**264**			**PKPdf**	**04 21 02.1**	**+0.7**	
WRAB				PKPab		**PKPab**	**04 21 40.8**	**-0.3**	
WRA	**Warramunga Arr**	**159.98**	**264**	PKP		**PKPdf**	**04 21 01.1**	**-0.4**	
	comp=Z,31nm,1.0s,baz=69,slow=0.9,SNR=49								
WRA				PKPab		**PKPab**	**04 21 41.7**	**+0.6**	
	comp=Z,21nm,0.7s,baz=89,slow=4.1,SNR=7.6								
WRA				PP		**PP**	**04 25 23.8**	**+0.4**	
	comp=Z,2.9nm,1.0s,baz=90,slow=3.6,SNR=6.2								
ASAR	**Alice Springs**	**160.10**	**253**	PKP2		**PKPab**	**04 21 42.0**	**+0.4**	
ASAR							05 21 01.1		
ASAR							05 25 23.5		
ASAR	**Alice Springs**	**160.10**	**253**	PKP		**PKPdf**	**04 21 01.1**	**-0.4**	
	comp=Z,26nm,1.1s,baz=104,slow=1.2,SNR=64								
ASAR				PKPab		**PKPab**	**04 21 42.0**	**+0.4**	
	comp=Z,42nm,0.7s,baz=97,slow=3.3,SNR=5.2								
ASAR				PP		**PP**	**04 25 23.5**	**-0.4**	
	comp=Z,3.6nm,0.9s,baz=84,slow=2.9,SNR=3.2								
FORT	**Forrest**	**162.10**	**226**			**PKPdf**	**04 21 01.9**	**-1.5**	
FORT				PKPab		**PKPab**	**04 21 49.0**	**-0.9**	
FORT				PP		**PP**	**04 25 31.4**	**-2.3**	
KAPI	**Kappang**	**164.68**	**334**	PKP		**PKPdf**	**04 21 06.9**	**+0.6**	
	comp=Z,5.4nm,0.8s,baz=187,slow=16,SNR=2.2								
KAPI				PKPab		**PKPab**	**04 22 02.4**	**+0.9**	
	comp=Z,8.7nm,0.6s,baz=303,slow=2.2,SNR=3.6								
KAPI	**Kappang**	**164.68**	**334**			**PKPab**	**04 21 58.9**	**-2.6**	
NWAO	**Narrogin (SRO)**	**165.64**	**194**	PKP		**PKPdf**	**04 21 07.4**	**+0.8**	
	comp=Z,17nm,1.0s,baz=152,slow=4.8,SNR=4.3								
NWAO				PKPab		**PKPab**	**04 22 05.2**	**-0.1**	
	comp=Z,44nm,1.0s,baz=149,slow=3.9,SNR=5.9								
BATI	**Baumata**	**166.58**	**309**	PKPab		**PKPab**	**04 22 12.6**	**+2.5**	
	comp=Z,47nm,0.6s,baz=41,slow=6.6,SNR=4.4								
LEM	**Lembang**	**166.77**	**25**	PKP		**PKPdf**	**04 21 08.5**	**+0.3**	
	comp=Z,20nm,0.4s,baz=58,slow=1.0,SNR=7.0								
FITZ	**Fitzroy Crossi**	**168.10**	**272**	PKP		**PKPdf**	**04 21 09.3**	**+0.5**	
	comp=Z,17nm,1.1s,baz=308,slow=4.0,SNR=5.2								
FITZ				PKPab		**PKPab**	**04 22 16.9**	**0.0**	
	comp=Z,21nm,0.7s,baz=154,slow=5.1,SNR=12								
FITZ				PP		**PP**	**04 26 03.1**	**-3.0**	
	comp=Z,6.1nm,1.0s,baz=84,slow=6.7,SNR=3.9								

*IDC **13** 04:09:37.8±1.4,6°.42N×72°.61W,h186^{km}±10^{km}, mb3.8/3, mb1 4.1/5, mb1mx3.6/34, mbtmp4.3/5, Error ellipse: s-maj=47.3km s-min=8.3km az=134.0*
*RSNC **13** 04:09:40.4±0.9,6°.81N×73°.12W,h152^{km}±4^{km}, ML3.6, Mw3.6*

ISC 13 04:09:39.4±0.8,6°.85N±0°.03×73°.09W±0°.04,h155^{km}±6^{km}, n42,σ1°09/63,1C-1D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**200**	⇑*iP*			**Pn**	**04 10 00.7**	**-0.1**
BARC				*eS*			**Sn**	**04 10 16.1**	**-0.9**
PAMC	**Pamplona, Colo**	**0.62**	**38**	*eP*			**Pn**	**04 10 03.5**	**+0.9**
PAMC				*eS*			**Sn**	**04 10 20.6**	**+0.4**
BRRC	**Barranca, Sant**	**0.67**	**293**	*eP*			**Pn**	**04 10 02.6**	**+0.4**
BRRC				*eS*			**Sn**	**04 10 20.0**	**+0.4**
BRRC				*i*				04 10 22.4	
	comp=Z,489nm,0.2s								
RUSC	**La Rusia**	**0.95**	**180**	*eP*			**Pn**	**04 10 04.6**	**-0.2**
RUSC				*eS*			**Sn**	**04 10 23.8**	**-0.4**
RUSC				*i*				04 10 25.3	
	comp=Z,716nm,0.9s								
TAMC	**Tame, Arauca**	**1.35**	**107**	⇓*iP*			**Pn**	**04 10 08.8**	**+0.9**
TAMC				*eS*			**Sn**	**04 10 30.5**	**+0.8**
PTBC	**PUERTO BERRIO,**	**1.39**	**257**	*eP*			**Pn**	**04 10 07.3**	**-0.9**
PTBC				*eS*			**Sn**	**04 10 28.8**	**-1.5**
PTBC				*i*				04 10 34.8	
	comp=Z,521nm,0.4s								
OCAC	**Ocana**	**1.40**	**351**	*eP*			**Pn**	**04 10 08.7**	**+0.2**
OCAC				*eS*			**Sn**	**04 10 30.9**	**-0.1**
OCAC				*i*				04 10 36.7	
	comp=Z,449nm,0.2s								
SPBC	**San Pablo de B**	**1.54**	**220**	*eP*			**Pn**	**04 10 09.6**	**-0.3**
SPBC				*eS*			**Sn**	**04 10 32.5**	**-0.7**
SPBC				*i*				04 10 37.6	
	comp=Z,692nm,0.1s								
ZARC	**Zaragoza, Cauc**	**1.87**	**290**	*eP*			**Pn**	**04 10 13.4**	**+0.1**
ZARC				*eS*			**Sn**	**04 10 39.0**	**-0.5**
ZARC				*i*				04 10 45.2	
	comp=Z,422nm,0.3s								
SMLC	**San Martn de**	**2.17**	**333**	*eP*			**Pn**	**04 10 16.8**	**-0.1**
SMLC				*eS*			**Sn**	**04 10 47.2**	**+1.5**
SMLC				*i*				04 10 48.8	
	comp=Z,518nm,0.3s								
NORC	**Norcasia**	**2.18**	**234**	*eP*			**Pn**	**04 10 16.5**	**-0.5**
NORC				*eS*			**Sn**	**04 10 44.8**	**-1.1**
CHIC	**Chingaza**	**2.29**	**196**	*eP*			**Pn**	**04 10 18.7**	**0.0**
CHIC				*eS*			**Sn**	**04 10 48.4**	**-0.5**
CHIC				*i*				04 10 54.1	
	comp=Z,151nm,0.2s								
ROSC	**El Rosal**	**2.34**	**212**	P			**Pn**	**04 10 20.8**	**+1.6**
	comp=Z,35nm,0.3s,baz=325,slow=1.5,SNR=156								
ROSC				S			**Sn**	**04 10 51.3**	**+1.4**
	comp=Z,95nm,0.3s,baz=166,slow=21,SNR=14								
ROSC	**El Rosal**	**2.34**	**212**	*eP*			**Pn**	**04 10 20.5**	**+1.3**
CVER	**Cruz Verde, Cu**	**2.51**	**203**	*eP*			**Pn**	**04 10 21.9**	**+0.5**
HELC	**Santa Helena**	**2.51**	**255**	*eP*			**Pn**	**04 10 21.6**	**+0.3**
HELC				*eS*			**Sn**	**04 10 53.8**	**+0.3**
HELC				*i*				04 11 01.5	
	comp=Z,148nm,0.2s								
UREC	**San Jos de Ur**	**2.59**	**291**	*eP*			**Pn**	**04 10 21.6**	**-0.3**
GUY2C	**Guyana, Caldas**	**2.78**	**235**	*eP*			**Pn**	**04 10 24.7**	**0.0**
GUY2C				*eS*			**Sn**	**04 11 03.7**	**+4.1**
GUY2C				*i*				04 11 07.7	
	comp=Z,331nm,0.8s								
VILC	**Villavicencio,**	**2.78**	**193**	*eP*			**Pn**	**04 10 24.5**	**+0.1**
VILC				*eS*			**Sn**	**04 10 59.1**	**-0.1**
PTGC	**Puerto Gaitan,**	**2.79**	**160**	*eP*			**Pn**	**04 10 23.6**	**-0.9**
PTGC				*eS*			**Sn**	**04 10 57.6**	**-1.7**
CBOC	**Ciudad Bolivar**	**3.06**	**252**	*eP*			**Pn**	**04 10 28.4**	**+0.4**
CODC	**Agustn Codazz**	**3.09**	**354**	*eP*			**Pn**	**04 10 28.0**	**-0.1**
CODC				*eS*			**Sn**	**04 11 07.1**	**+1.1**
CODC				*i*				04 11 13.0	
	comp=Z,76nm,0.6s								
DBBC	**Dabeiba**	**3.10**	**273**	*eP*			**Pn**	**04 10 28.4**	**0.0**
SDV	**Santo Domingo**	**3.17**	**50**	P			**Pn**	**04 10 30.0**	**+0.8**
	comp=Z,27nm,0.3s,baz=263,slow=23,SNR=110								
SDV				S			**Sn**	**04 11 07.9**	**0.0**
	comp=Z,24nm,0.3s,baz=61,slow=14,SNR=8.2								
SDV	**Santo Domingo**	**3.17**	**50**	*eP*			**Pn**	**04 10 30.1**	**+0.8**
ARGC	**Ariguani, Magd**	**3.21**	**339**	*eP*			**Pn**	**04 10 30.8**	**+1.1**
ANIL	**Santa Ana**	**3.28**	**225**	*eP*			**Pn**	**04 10 30.5**	**-0.3**
ORTC	**Ortega, Tolima**	**3.62**	**216**	*eP*			**Pn**	**04 10 34.7**	**-0.2**
ORTC				*eS*			**Sn**	**04 11 20.7**	**+2.5**
ORTC				*i*				04 11 25.4	
	comp=Z,103nm,0.2s								
SJCC	**San Jacinto, C**	**3.67**	**326**	*eP*			**Pn**	**04 10 34.9**	**-0.7**
PLMC	**San Jos del P**	**3.71**	**239**	*eP*			**Pn**	**04 10 36.7**	**+0.4**
GUVC	**San Jose del G**	**4.30**	**174**	*eP*			**Pn**	**04 10 43.3**	**-0.5**
YOTC	**Yotoco, Valle**	**4.31**	**229**	*eP*			**Pn**	**04 10 43.4**	**-0.6**
SMRC	**Santa Marta, M**	**4.44**	**345**	*eP*			**Pn**	**04 10 46.1**	**+0.5**
SMRC				*eS*			**Sn**	**04 11 33.9**	**-3.1**
MACC	**Macarena, Meta**	**4.73**	**189**	*eP*			**Pn**	**04 10 48.0**	**-1.4**
URIC	**Uribia, Colomb**	**4.95**	**13**	*eP*			**Pn**	**04 10 51.0**	**-1.2**
MALC	**Bahia Malaga**	**5.08**	**237**	*eP*			**Pn**	**04 10 54.9**	**+0.9**
PCON	**Cinco Dias**	**5.57**	**216**	*eP*			**Pn**	**04 11 01.2**	**+0.2**
FLOC	**Florencia**	**5.82**	**206**	*eP*			**Pn**	**04 11 03.2**	**-0.6**
TXAR	**Lajitas Array**	**36.47**	**312**	P			**P**	**04 16 30.0**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=119,slow=9.4,SNR=2.4								
ULM	**Lac du Bonnet**	**47.27**	**340**	P			**P**	**04 17 56.0**	**-1.1**
	comp=Z,27nm,1.2s,baz=144,slow=8.7,SNR=2.1								
YKA	**Yellowknife Ar**	**63.25**	**340**	P			**P**	**04 19 50.9**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=136,slow=6.5,SNR=7.1								
CMAR	**Chiang Mai Arr**	**153.66**	**17**	PKPbc			**PKPdf**	**04 29 14.8**	**+1.7**
	comp=Z,1.2nm,0.3s,baz=316,slow=5.0,SNR=4.3								

ATH 13 04:11:20.4,37°.54N×20°.59E,h31^{km}±2^{km},ML1.8/3,Error ellipse: s-maj=6.6km s-min=1.6km az=46.0,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLMS	**Volimes, Zakyn**	**0.34**	**10**	P			Pb	04 11 28.4	-0.2
VLMS				S			Sn	04 11 35.0	-0.2
VLMS				AML			AML	04 11 35.1	
	comp=E,584μm,0.2s								
VLMS				AML			AML	04 11 38.2	
	comp=N,345μm,0.2s								
KFL	**Anninata**	**0.59**	**15**	P			Pb	04 11 32.4	0.0
KFL				S			Sn	04 11 42.2	+0.9
KFL				AML			AML	04 11 43.7	
	comp=N,283μm,0.2s								
KFL				AML			AML	04 11 45.9	
	comp=E,209μm,0.5s								
VLS	**Valsamata**	**0.64**	**0**	P			Pn	04 11 33.6	+0.2
VLS				S			Sn	04 11 43.0	+0.6
VLS				AML			AML	04 11 45.5	
	comp=E,110μm,0.2s								
VLS				AML			AML	04 11 45.8	
	comp=N,149μm,0.2s								
RLS	**Riolos of Patr**	**0.87**	**53**	P			Pn	04 11 36.7	+0.2
AMT	**Artemida-Makis**	**0.89**	**90**	P			Pb	04 11 38.4	+1.0
FSK	**Fiskardo**	**0.92**	**359**	P			Pb	04 11 38.5	+0.7
DRO	**Drossia**	**0.98**	**65**	P			Pb	04 11 38.6	-0.2
EVGI	**Lefkada island**	**1.08**	**3**	P			Pb	04 11 41.0	+0.4
LKD2	**Lefkada island**	**1.25**	**3**	P			Pb	04 11 43.7	+0.3
PVO	**Paravola**	**1.31**	**34**	P			Pb	04 11 44.9	+0.6

IDC 13 04:13:27.1±3.1,7°.49S×129°.44E,h105^{km}±43^{km},mb3.5/1, mb1 3.6/5,mb1mx3.3/52,mbtmp3.8/5,MS4.4/2,Ms1 4.4/2, ms1mx3.4/39,Error ellipse: s-maj=70.9km s-min=24.1km az=91.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.82**	**16**	P			Pn	04 15 04.7	0.0
	2.0nm,0.3s,baz=229,slow=19,SNR=2.0								
SIJI				S			Sn	04 16 12.2	-8.7
	0.9nm,0.3s,baz=198,slow=20,SNR=2.3								
FITZ	**Fitzroy Crossi**	**11.18**	**199**	P			Pn	04 16 04.2	+0.4
	0.3nm,0.3s,baz=32,slow=8.7,SNR=3.0								
FITZ				S			Sn	04 18 00.5	-6.3
	0.9nm,0.3s,baz=87,slow=20,SNR=10								
JAY	**Jayapura**	**12.26**	**67**	LR			LR	04 21 38.2	
	comp=Z,2μm,21.9s,baz=358,slow=40								
WRA	**Warramunga Arr**	**13.26**	**160**	P			Pn	04 16 30.2	-1.2
	0.4nm,0.3s,baz=341,slow=13,SNR=3.0								
WRA				S			Sn	04 18 49.1	-8.3
	0.9nm,0.3s,baz=338,slow=22,SNR=12								
DAV	**Davao City (W)**	**14.96**	**345**	LR			LR	04 24 13.4	
	comp=Z,1μm,18.0s,baz=164,slow=43								
ASAR	**Alice Springs**	**16.65**	**166**	P			P	04 17 15.2	+0.3
	0.1nm,0.3s,baz=339,slow=10,SNR=4.6								
ASAR				S			Sn	04 20 08.9	-10
	0.1nm,0.3s,baz=350,slow=27,SNR=3.5								
MKAR	**Makanchi Array**	**68.33**	**327**	P			P	04 24 17.1	0.0
	0.9nm,0.8s,baz=119,slow=7.6,SNR=2.0								

*NEIC **13** 04:30:21.4±1.8,57°.59N±0°.03×156°.37W±0°.08,h6^{km}±9^{km}, Error ellipse: s-maj=6.3km s-min=4.3km az=111.0*
AEIC 13 04:30:19.9±2.1,57°.61N±0°.03×156°.41W±0°.05,h2^{km}±6^{km}, ML3.5/44,Error ellipse: s-maj=4.6km s-min=3.6km az=223.0,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANCK	**Angle Creek**	**0.77**	**39**				Pb	04 30 28.2	+0.1
ACHA	**Angle Creek He**	**0.84**	**43**				Pb	04 30 37.0	-0.2
KABU	**Katmai Buttres**	**0.90**	**42**				Pb	04 30 38.1	-0.1
KAHC	**Katmai Hardscr**	**1.28**	**35**				Pb	04 30 44.8	0.0
KAHC							Sn	04 31 03.4	+0.6
SII	**Sitkinak Islan**	**1.61**	**130**				Pn	04 30 49.2	-0.2
SII							Sn	04 31 10.3	-0.4
OHAK	**Old Harbor**	**1.73**	**102**				Pn	04 30 50.9	-0.1
OHAK							Sn	04 31 13.6	-0.2
CHIR	**Chirikof Islan**	**1.84**	**166**				Pn	04 30 53.4	+0.8
CHIR							Sb	04 31 17.2	-0.7
FOSS	**Fourpeaked Sta**	**1.87**	**49**				Pn	04 30 53.5	+0.5
VNHG	**Veniaminof 1**	**2.05**	**228**				Pn	04 30 55.9	+0.4
KDAK	**Kodiak Island**	**2.06**	**84**				Pn	04 30 56.2	+0.7
KDAK							Sb	04 31 24.3	+0.1
VNNF	**Veniaminof 3**	**2.07**	**231**				Pn	04 30 56.4	+0.6
VNSS	**Veniaminof 8**	**2.17**	**232**				Pn	04 30 57.7	+0.5
VNFG	**Fog Glacier, M**	**2.17**	**234**				Pn	04 30 57.1	-0.1
AUH	**Augustine H**	**2.35**	**40**				Pn	04 31 00.8	+1.2
AUQ	**Augustine Qik'**	**2.35**	**41**				Pn	04 31 00.2	+0.5
ILS	**Iliamna Low So**	**2.93**	**35**				Pn	04 31 08.8	+1.2
ILW	**Iliamna West**	**2.99**	**33**				Pn	04 31 08.9	+0.4
SDPT	**Sand Point**	**3.19**	**227**				Pn	04 31 11.8	+0.6
HOM	**Homer**	**3.23**	**48**				Pn	04 31 13.3	+1.7
RED	**Redoubt Volcan**	**3.39**	**32**				Pn	04 31 15.6	+1.6
RDWB	**Redoubt West**	**3.43**	**31**				Pn	04 31 15.1	+0.6
RSO	**Redoubt South**	**3.43**	**32**				Pn	04 31 13.3	-1.3
SVW2	**Sparrevohn**	**3.52**	**7**				Pn	04 31 17.1	+1.4
SVW2	**Sparrevohn**	**3.52**	**7**				Sn	04 31 52.9	-5.0
DFR	**Drift River**	**3.56**	**31**				Pn	04 31 17.5	+1.3
BRLK	**Bradley Lake**	**3.60**	**51**				Pn	04 31 17.1	+0.3
BRLK							Sn	04 32 02.3	+2.4
BRSE	**Bradley Lake S**	**3.65**	**52**				Pn	04 31 18.0	+0.5
SLKM	**Skilak Lake**	**4.32**	**45**				Pn	04 31 26.9	+0.3
SPCG	**Spurr Capps Gl**	**4.32**	**29**				Pn	04 31 27.4	+0.6
SEW	**Seward**	**4.40**	**52**	Pn			Pn	04 31 29.6	+2.0
SUA	**Susitna One**	**4.82**	**34**				Pn	04 31 35.9	+2.3
RC01	**Rabbit Creek A**	**4.88**	**42**	Pn			Pn	04 31 37.5	+3.2
SKT	**Skwentna**	**5.03**	**27**				Pn	04 31 38.9	+2.5
TT01	**Tatalina**	**5.32**	**2**				Pn	04 31 41.3	+1.0
PMR	**Palmer**	**5.44**	**40**				Pn	04 31 43.9	+1.9
KNK	**Knik Glacier**	**5.56**	**43**				Pn	04 31 44.8	+1.1
GHO	**Glory Hole Cre**	**5.64**	**39**				Pn	04 31 46.5	+1.7
GLI	**Glacier Island**	**5.80**	**52**	Pn			Pn	04 31 48.7	+1.8
HIN	**Hinchinbrook I**	**5.83**	**57**				Pn	04 31 48.3	+0.9
HIN	**Hinchinbrook I**	**5.83**	**57**				Sn	04 32 54.0	-0.8
FID	**Port Fidalgo**	**6.00**	**54**				Pn	04 31 49.7	0.0
EYAK	**Cordova Ski Ar**	**6.24**	**57**	Pn			Pn	04 31 54.0	+1.2
EYAK							Sn	04 32 59.0	-5.6
SCM	**Sheep Creek Mo**	**6.25**	**44**				Pn	04 31 54.6	+1.4
TRF	**Thorofare Moun**	**6.59**	**25**				Pn	04 31 60.0	+2.1
RAGM	**Ragged Mountai**	**6.67**	**60**	Pn			Pn	04 32 00.1	+1.1
RAGM							Sn	04 33 14.2	-1.3
UNV	**Unalaska Valle**	**6.83**	**241**	Pn			Pn	04 32 02.4	+1.3
MCK	**McKinley**	**7.15**	**28**				Pn	04 32 08.7	+3.2
GLB	**Gilahina Butte**	**7.47**	**54**	Pn			Pn	04 32 10.6	+0.7
GLB							Sn	04 33 32.4	-2.7
CRQM	**Cirque**	**7.51**	**60**	Pn			Pn	04 32 11.4	+0.9
CRQM							Sn	04 33 34.5	-1.8
TGL	**Tana Glacier**	**7.65**	**60**	Pn			Pn	04 32 13.3	+0.8
MLY	**Manley**	**7.93**	**18**	Pn			Pn	04 32 21.2	+5.1
BALM	**Baldy**	**7.97**	**59**	Pn			Pn	04 32 18.3	+1.5
BALM							Sn	04 33 46.2	-1.2
WRH	**Wood River Hil**	**7.97**	**27**	Pn			Pn	04 32 17.2	+0.5
CCB	**Clear Creek Bu**	**8.19**	**27**	Pn			Pn	04 32 21.2	+1.5
ANM	**Nome**	**8.21**	**332**				Pn	04 32 21.1	+1.2
BARN	**Barnard Glacie**	**8.29**	**59**	Pn			Pn	04 32 21.6	+0.4

BIPH				*i* S		**Sn**	05 01 00.6	**-1.7**
SKMP	**Bagumbayan, Su**	**1.96**	**273**	*e*P		**Pn**	05 00 43.2	**-0.5**
SKMP				*e*S		**Sn**	05 01 06.9	**-0.3**
BUKP	**Musuan**	**2.05**	**315**	*e*P		**Pn**	05 00 45.9	**+0.9**
BUKP				*e*S		**Sn**	05 01 10.8	**+1.4**
BUTP	**Butuan**	**2.69**	**341**	*e*P		**Pn**	05 00 56.9	**+3.2**
BUTP				*e*S		**Sn**	05 01 30.1	**+5.0**
LUWI	**Luwuk**	**8.29**	**207**	Pn		**Pn**	05 02 13.2	**+2.5**
LUWI				Sn		**Sn**	05 03 44.6	**+1.6**
FAKI	**Fak Fak**	**10.89**	**148**	Pn		**Pn**	05 02 47.8	**+1.6**
MTN	**Manton Dam**	**19.67**	**167**	P		**Pn**	05 04 39.1	**-0.7**
MTN				IAmb		IAmb	05 04 49.0	
	comp=Z,31nm,1.4s							
KNRA	**Kununurra**	**22.06**	**174**	P		**P**	05 05 04.4	**+0.6**
KNRA				IAmb		IAmb	05 05 14.4	
	comp=Z,31nm,1.1s							
FITZ	**Fitzroy Crossi**	**24.37**	**182**	P		**P**	05 05 27.1	**+0.5**
	comp=Z,4.5nm,0.5s,baz=4.3,slow=8.5,SNR=18							
FITZ	**Fitzroy Crossi**	**24.37**	**182**	P		**P**	05 05 27.4	**+0.8**
FITZ				IAmb		IAmb	05 05 29.7	
	comp=Z,14nm,1.2s							
WRA	**Warramunga Arr**	**27.30**	**164**	P		**P**	05 05 51.3	**-1.8**
	comp=Z,0.5nm,0.3s,baz=339,slow=11,SNR=6.4							
PSA00	**Pilbara Seismi**	**28.57**	**193**	P		**P**	05 06 04.3	**-0.2**
PSA00				IAmb		IAmb	05 06 05.0	
	comp=Z,15nm,0.5s							
ASAR	**Alice Springs**	**30.75**	**167**	P		**P**	05 06 24.4	**+0.5**
	comp=Z,0.7nm,0.4s,baz=341,slow=7.0,SNR=13							
ASAR				PcP		**PcP**	05 09 20.5	**-0.1**
	comp=Z,0.2nm,0.4s,baz=348,slow=2.1,SNR=2.9							
MORW	**Morawa**	**36.69**	**195**	P		**P**	05 07 15.5	**+0.2**
BBOO	**Buckleboo**	**40.05**	**167**	P		**P**	05 07 44.2	**+0.8**
BBOO				IAmb		IAmb	05 07 45.5	
	comp=Z,7.9nm,1.2s							
NWAO	**Narrogin (SRO)**	**40.11**	**192**	P		**P**	05 07 44.3	**+0.4**
	comp=Z,7.4nm,0.5s,baz=23,slow=8.4,SNR=13							
NWAO	**Narrogin (SRO)**	**40.11**	**192**	P		**P**	05 07 44.6	**+0.7**
STKA	**Stephens Creek**	**40.70**	**160**	P		**P**	05 07 49.0	**+0.1**
	comp=Z,1.1nm,0.5s,baz=342,slow=10,SNR=5.2							
STKA	**Stephens Creek**	**40.70**	**160**	P		**P**	05 07 49.6	**+0.7**
MK31	**Makanchi Array**	**55.26**	**324**	P		**P**	05 09 40.5	**-0.8**
MKAR	**Makanchi Array**	**55.26**	**324**	P		**P**	05 09 40.2	**-1.1**
	comp=Z,0.5nm,0.5s,baz=124,slow=8.6,SNR=12							
MAKZ	**Makanchi**	**55.45**	**324**	P		**P**	05 09 41.7	**-0.9**
MAKZ				IAmb		IAmb	05 09 43.7	
	comp=Z,2.2nm,1.4s							
KURK	**Kurchatov**	**59.39**	**327**	P		**P**	05 10 09.0	**-1.2**
KURK				IAmb		IAmb	05 10 11.1	
	comp=Z,1.3nm,0.6s							
KURBB	**Kurchatov Arra**	**59.39**	**327**	P		**P**	05 10 09.1	**-1.2**
	comp=Z,0.8nm,0.6s,baz=126,slow=6.3,SNR=8.9							
TORD	**Torodi Ar. Bea**	**121.85**	**290**	PKP		**PKPdf**	05 19 01.0	**-1.7**
	comp=Z,0.5nm,0.6s,baz=69,slow=1.8,SNR=4.0							

MAN ***13*** *05:09:05.7,5.°35N×126.°36E,h1km,mb4.9,ML3.8,MS3.8*
NEIC ***13*** *05:09:08.3±1.2,5.°4N±0.°1×126.°5E±0.°2,h67km±7km, mb4.2/13,Error ellipse: s-maj=36.5km s-min=10.6km az=64.0*
IDC ***13*** *05:09:09.3±2.1,5.°37N×126.°54E,h74km±17km,mb3.8/12, mb1 3.9/12,mb1mx3.7/34,mbtmp4.1/12,Error ellipse: s-maj=53.9km s-min=11.0km az=72.0*

ISC 13 05:09:08.1±1.0,5.°20N±0.°06×126.°19E±0.°10,h61km±10km, n35,σ1°35/44,mb4.2/17,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.02**	**332**	*e*P			**Pn**	**05 09 25.1**	**-1.4**
DDMP				*e*S			**Sn**	**05 09 39.0**	**-0.9**
GSPH	**General Santos**	**1.52**	**306**	⇑*i*P			**Pn**	**05 09 31.7**	**-1.4**
GSPH				*i* S			**Sn**	**05 09 51.7**	**-0.3**
MATI	**Mati**	**1.74**	**2**	*e*P			**Pn**	**05 09 34.6**	**-1.4**
MATI				*e*S			**Sn**	**05 09 56.7**	**-0.4**
DAV	**Davao City (W)**	**1.95**	**342**	P			**Pn**	**05 09 38.6**	**-0.3**
	73nm,0.3s,baz=94,slow=9.6,SNR=5.8								
DAV				S			**Sn**	**05 10 04.9**	**+2.4**
	99nm,0.3s,baz=240,slow=20,SNR=5.6								
DAV	**Davao City (W)**	**1.95**	**342**				**Pn**	**05 09 38.7**	**-0.3**
DAV							**Sn**	**05 10 04.2**	**+1.7**
DMPH	**Davao City--Mi**	**1.99**	**340**	*e*P			**Pn**	**05 09 42.8**	**+3.4**
BUKP	**Musuan**	**2.89**	**337**	*e*P			**Pn**	**05 09 52.1**	**+0.4**
BUKP				*e*S			**Sn**	**05 10 28.5**	**+3.2**
BUTP	**Butuan**	**3.79**	**352**	*e*P			**Pn**	**05 10 06.1**	**+2.1**
FAKI	**Fak Fak**	**10.09**	**143**	Pn			**Pn**	**05 11 30.0**	**-0.2**
MTN	**Manton Dam**	**18.59**	**165**	P			**P**	**05 13 19.9**	**-0.5**
MTN				IAmb			IAmb	05 13 33.4	
	comp=Z,11nm,1.1s								
KNRA	**Kununurra**	**20.90**	**173**	P			**P**	**05 13 46.3**	**+0.8**
FITZ	**Fitzroy Crossi**	**23.16**	**181**	P			**P**	**05 14 10.4**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=27,slow=14,SNR=2.8								
FITZ	**Fitzroy Crossi**	**23.16**	**181**	P			**P**	**05 14 10.6**	**+1.2**
FITZ				IAmb			IAmb	05 14 27.6	
	comp=Z,15nm,1.2s								
WRA	**Warramunga Arr**	**26.24**	**162**	P			**P**	**05 14 38.3**	**+0.7**
	comp=Z,2.6nm,0.8s,baz=343,slow=10,SNR=16								
ASAR	**Alice Springs**	**29.66**	**166**	P			**P**	**05 15 08.8**	**+0.6**
	comp=Z,0.5nm,0.4s,baz=350,slow=7.9,SNR=7.0								
ASAR				PcP			**PcP**	**05 18 11.0**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=344,slow=2.3,SNR=3.3								
NWAO	**Narrogin (SRO)**	**38.86**	**192**	P			**P**	**05 16 30.0**	**+2.5**
	comp=Z,6.0nm,0.9s,baz=24,slow=15,SNR=3.5								
NWAO	**Narrogin (SRO)**	**38.86**	**192**	P			**P**	**05 16 29.9**	**+2.4**
BBOO	**Buckleboo**	**38.95**	**167**	P			**P**	**05 16 28.6**	**+0.4**
BBOO				IAmb			IAmb	05 16 35.4	
	comp=Z,3.7nm,0.9s								
STKA	**Stephens Creek**	**39.69**	**159**	P			**P**	**05 16 34.7**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=346,slow=8.1,SNR=7.7								
STKA	**Stephens Creek**	**39.69**	**159**	P			**P**	**05 16 33.0**	**-1.5**
SONM	**Songino Array**	**45.74**	**341**	P			**P**	**05 17 23.2**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=157,slow=8.2,SNR=8.8								
SONM				PcP			**PcP**	**05 19 01.0**	**+0.6**
	comp=Z,0.8nm,0.9s,baz=114,slow=3.3,SNR=4.1								
MK31	**Makanchi Array**	**56.05**	**325**	P			**P**	**05 18 41.0**	**+0.1**
MKAR	**Makanchi Array**	**56.05**	**325**	P			**P**	**05 18 40.8**	**0.0**
	comp=Z,1.3nm,0.4s,baz=117,slow=7.7,SNR=30								
MKAR				PcP			**PcP**	**05 19 38.9**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=120,slow=4.3,SNR=5.0								
MAKZ	**Makanchi**	**56.23**	**325**	P			**P**	**05 18 42.5**	**+0.4**
MAKZ				IAmb			IAmb	05 18 43.5	
	comp=Z,2.1nm,1.0s								
ZAA0	**Zalesovo Array**	**59.04**	**333**	P			**P**	**05 19 00.8**	**-0.9**
ZAA0				IAmb			IAmb	05 19 18.4	
	comp=Z,2.1nm,1.0s								
ZALV	**Zalesovo Beam**	**59.04**	**333**	P			**P**	**05 19 00.5**	**-1.2**
	comp=Z,1.0nm,0.5s,baz=108,slow=4.7,SNR=5.7								
KURK	**Kurchatov**	**60.22**	**327**	P			**P**	**05 19 09.6**	**-0.3**
KK31	**Karatay Array**	**61.80**	**317**	P			**P**	**05 19 19.5**	**-1.2**
KK31				IAmb			IAmb	05 19 22.2	
	comp=Z,2.6nm,1.1s								
KKAR	**Karatay Array**	**61.80**	**317**	P			**P**	**05 19 19.9**	**-0.8**
KKAR				IAmb			IAmb	05 19 22.2	
	comp=Z,2.6nm,1.1s								
ABKAR	**Akbulak array**	**70.68**	**321**	P			**P**	**05 20 17.6**	**+0.1**
ILAR	**Eielson Array**	**84.02**	**25**	P			**P**	**05 21 29.9**	**-1.8**
	comp=Z,0.6nm,1.1s,baz=225,slow=5.7,SNR=4.1								
ARCES	**ARCESS Array B**	**88.89**	**340**	P			**P**	**05 21 55.1**	**-0.3**
	comp=Z,2.3nm,0.7s,baz=82,slow=6.1,SNR=17								
FINES	**FINESS Array B**	**90.29**	**332**	P			**P**	**05 22 02.2**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=56,slow=4.8,SNR=6.3								
NOA	**NORSAR Array B**	**97.24**	**334**	P			**P**	**05 22 32.4**	**-1.7**
	comp=Z,1.0nm,0.8s,baz=67,slow=4.7,SNR=3.7								
TORD	**Torodi Ar. Bea**	**121.94**	**289**	PKP			**PKPdf**	**05 27 56.2**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=64,slow=1.8,SNR=5.0								

NNC 13 05:22:19.7±3.5,37.°13N×71.°10E,h0km,mb3.6,mpv3.2, 3C-3D,Error ellipse: s-maj=27.4km s-min=26.0km az=143.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.38**	**21**	P			Pn	05 23 42.5	+0.9
	SNR=30								
UCH	**Uchtor**	**5.73**	**26**	P			Pn	05 23 47.4	+0.9
	SNR=9.6								
KZA	**Kyzart**	**5.89**	**32**	P			Pn	05 23 48.3	-0.3
	SNR=5.6								
EKS2	**Erkin-Say**	**5.90**	**20**	P			Pn	05 23 49.5	+1.1
	SNR=6.3								
KK31	**Karatay Array**	**5.99**	**356**	⇓Pn			Pn	05 23 50.6	+1.1
	0.3nm,0.3s,baz=176,slow=13,SNR=5.8								
KK31				⇑Sn			Sn	05 24 59.4	+0.6
	4.1nm,0.6s,baz=182,slow=20,SNR=11								
AAK	**Ala-Archa**	**6.09**	**24**	⇑Pn			Pn	05 23 50.9	-0.2
	2.5nm,0.7s								
AAK				⇓Sn			Sn	05 25 03.8	+2.2
	3.9nm,0.8s								
TKM2	**Tokmak 2**	**6.74**	**29**	P			Pn	05 23 59.7	-0.3
	SNR=5.1								
TKM2	**Tokmak 2**	**6.74**	**29**	⇓Pn			Pn	05 23 59.1	-0.9
	2.8nm,0.6s								
TKM2				⇑Sn			Sn	05 25 18.2	+0.7
	0.7nm,0.4s								

NCEDC ***13*** *05:48:11.9±0.9,38.°81N±0.°03×122.°82W±0.°02,h2km±6km, Md2.8/89,Error ellipse: s-maj=4.5km s-min=1.3km az=198.0*

NEIC 13 05:48:12.3±0.7,38.°81N±0.°03×122.°80W±0.°01,h3km±3km, Error ellipse: s-maj=4.1km s-min=1.0km az=192.0, Northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.01**	**76**				Pg	05 48 12.6	-0.5
GDXM							Pg	05 48 13.0	-0.1
GCRM	**Castle Rock Sp**	**0.07**	**116**				Pg	05 48 13.7	-0.2
GAAM	**Adobe Creek**	**0.08**	**325**				Pg	05 48 13.6	-0.4
GSGM	**Seigler Mounta**	**0.09**	**50**				Pg	05 48 14.6	+0.4
GBGM	**Boggs Mountain**	**0.10**	**85**				Pg	05 48 14.5	+0.2
GAXM	**Alexander Vall**	**0.10**	**159**				Pg	05 48 14.1	-0.3
GPMM	**Pine Mountain**	**0.12**	**290**				Pg	05 48 14.3	-0.4
GMKM	**Mount Konoctai**	**0.16**	**4**				Pg	05 48 15.9	+0.4
GCVM	**Cloverdale**	**0.17**	**258**				Pg	05 48 15.5	-0.2
GSSM	**Skaggs Springs**	**0.20**	**238**				Pg	05 48 15.9	-0.2
NHSM	**Mount Saint He**	**0.21**	**136**				Pg	05 48 16.6	+0.2
NMCNC	**Mill Creek, So**	**0.23**	**202**				Pg	05 48 16.7	-0.1
MAC	**Mark West Spri**	**0.26**	**166**				Pg	05 48 17.5	+0.1
NMTM	**Middletown**	**0.28**	**90**				Pg	05 48 17.9	+0.2
HOPS	**Hopland Field**	**0.28**	**312**				Pg	05 48 17.8	0.0
HOPS							Sg	05 48 19.8	-1.7
GHLM	**Highland Sprin**	**0.29**	**324**				Pg	05 48 17.8	-0.1
MNRC	**McLaughlin Min**	**0.29**	**75**				Pg	05 48 18.6	+0.7
NSHM	**Saint Helena R**	**0.32**	**152**				Pg	05 48 18.7	+0.2
GSNM	**Snow Mountain**	**0.33**	**294**				Pg	05 48 18.8	0.0
GDZM	**Dry Creek**	**0.34**	**264**				Pg	05 48 19.0	0.0
GWKM	**Walker Ridge**	**0.34**	**45**				Pg	05 48 19.6	+0.6
GHCM	**House Creek**	**0.37**	**237**				Pg	05 48 19.4	0.0
FTR	**Fort Ross**	**0.40**	**225**				Pg	05 48 20.1	+0.1
NTYM	**Taylor**	**0.43**	**165**				Pg	05 48 20.9	+0.3
NBPM	**Berryessa Peak**	**0.50**	**106**				Pb	05 48 22.8	-0.9
GTSM	**Trough Springs**	**0.53**	**17**				Pg	05 48 23.4	+0.9
CVS	**Carmenet Viney**	**0.53**	**150**				Pg	05 48 22.6	0.0
GGUM	**Gualala**	**0.55**	**275**				Pg	05 48 22.8	0.0
NAPC	**Atlas Peak**	**0.56**	**130**				Pg	05 48 23.4	+0.2
GHOM	**Hamilton Openi**	**0.62**	**293**				Pg	05 48 24.4	+0.1
MCCM	**Marconi Confer**	**0.66**	**185**				Pg	05 48 25.5	+0.4
MCCM	**Marconi Confer**	**0.66**	**185**				Pg	05 48 25.3	+0.2
MCCM	**Marconi Confer**	**0.66**	**185**				Sb	05 48 35.5	-0.6
SNT	**Sears Point**	**0.68**	**156**				Pg	05 48 25.1	-0.3
NDHM	**Dunnigan Hills**	**0.70**	**93**				Pb	05 48 27.5	+0.4
NADM	**Allendale**	**0.74**	**118**				Pb	05 48 28.1	+0.3
GNAM	**Navarro Ridge**	**0.76**	**301**				Pg	05 48 28.3	+0.5
GCK	**Clark Valley**	**0.79**	**21**				Pb	05 48 29.5	+0.8
KRKM	**Rackout Spring**	**0.81**	**339**				Pb	05 48 28.6	-0.5
GTC	**Three Chop Rid**	**0.83**	**316**				Pg	05 48 28.2	-0.1
GASB	**Alder Springs**	**0.85**	**4**				Pb	05 48 30.6	+0.7
NLHM	**Lake Herman**	**0.86**	**143**				Pg	05 48 28.9	+0.2
SUTB	**Sutter Butte**	**0.90**	**62**				Pg	05 48 29.1	-0.4
HERB	**Hercules**	**0.90**	**152**				Pg	05 48 29.7	+0.2
CPMM	**Point Molate**	**0.91**	**160**				Pg	05 48 30.0	+0.2
CSPM	**San Pablo Ridg**	**0.93**	**155**				Pb	05 48 30.9	-0.3
CPIM	**Pinole Ridge**	**0.94**	**150**				Pg	05 48 30.4	+0.1
KFPM	**Farley Peak**	**0.96**	**330**				Pb	05 48 31.7	0.0
GVV	**Valley View**	**0.97**	**6**				Pb	05 48 32.4	+0.4
VAK	**Adit at Lawren**	**1.02**	**155**				Pg	05 48 32.2	+0.3
CVPM	**Vollmer Peak**	**1.03**	**153**				Pg	05 48 31.9	-0.2
BKS	**Berkeley--Byer**	**1.03**	**154**				Pg	05 48 32.0	-0.1
JPRM	**Presidio of Sa**	**1.04**	**166**				Pg	05 48 32.5	+0.2
KCPM	**Cahto Peak**	**1.07**	**326**				Pg	05 48 33.1	+0.3
KCPM							Sg	05 48 45.7	-1.0
BDM	**Black Diamond**	**1.12**	**139**				Pg	05 48 33.6	-0.3
CRPB	**Russellman Par**	**1.14**	**142**				Pg	05 48 33.4	-0.7
OHCM	**Honcut**	**1.15**	**62**				Pg	05 48 33.2	-1.3
ORV	**Oroville**	**1.26**	**53**				Pg	05 48 34.1	-2.3
ORV	**Oroville**	**1.26**	**53**				Pg	05 48 34.9	-1.6
ORV	**Oroville**	**1.26**	**53**				Pg	05 48 34.8	-1.7
O02D	**Mt. Diablo Mer**	**1.37**	**0**				Pb	05 48 39.4	+0.7
AASM	**Arroyo Seco**	**1.38**	**105**				Pn	05 48 35.9	-2.5
MGL	**Magalia**	**1.39**	**43**				Pn	05 48 36.0	-2.8
AFDM	**Forest Hills D**	**1.44**	**84**				Pn	05 48 37.1	-2.2
AFDM							Sb	05 48 56.9	-1.5
KMRM	**Mail Ridge**	**1.58**	**334**				Pg	05 48 42.5	-0.2
WDC	**Whiskeytown Da**	**1.78**	**6**				Pn	05 48 44.6	+0.5
DONR	**Donner Summit**	**2.01**	**73**				Pn	05 48 46.8	-0.6
CMB	**Columbia Colle**	**2.05**	**111**				Pn	05 48 46.9	-0.9
CMB							Sn	05 49 13.1	-0.8
IND	**Independence**	**2.05**	**71**				Pn	05 48 48.2	+0.3
RUBR	**Rubicon Trail**	**2.08**	**82**				Pn	05 48 47.7	-0.6
RUBR							Sn	05 49 14.2	-0.7
TAHR	**Tahoe**	**2.08**	**80**				Pn	05 48 49.2	+0.7
EMB	**Emerald Bay**	**2.11**	**85**				Pn	05 48 49.0	+0.2
LOY	**Loyalton**	**2.17**	**66**				Pn	05 48 50.7	+1.2
BEKR	**Beckworth**	**2.17**	**60**				Pn	05 48 49.6	0.0
BEKR							Sn	05 49 16.3	-0.7
MPK	**Martis Peak**	**2.21**	**76**				Pn	05 48 51.0	+0.7
BABR	**Babbit Peak**	**2.24**	**68**				Pn	05 48 51.5	+0.9
VPK	**Verdi Peak**	**2.25**	**72**				Pn	05 48 52.0	+1.3
GNO	**Genoa**	**2.31**	**86**				Pn	05 48 52.2	+0.8
PEAR	**Peavine Mounta**	**2.35**	**69**				Pn	05 48 52.4	+0.4
BFC	**Buffalo Canyon**	**2.50**	**87**				Pn	05 48 54.8	+0.8
VCNR	**Virginia City**	**2.50**	**78**				Pn	05 48 54.6	+0.5
PNTR	**Pine Nut**	**2.51**	**83**				Pn	05 48 54.0	-0.3
WAKR	**Walker**	**2.65**	**95**				Pn	05 48 55.6	-0.5
YERR	**Yerington**	**2.78**	**85**				Pn	05 48 57.8	-0.2
PAHR	**Pah Rah Range**	**2.80**	**70**				Pn	05 48 57.8	-0.4
YBH	**Yreka Blue Hor**	**2.92**	**1**				Pn	05 48 59.0	-0.9
MDPB	**Devils Postpil**	**3.16**	**111**				Pn	05 49 02.6	-0.6
OMMB	**Old Mammoth Mi**	**3.22**	**111**				Pn	05 49 04.9	+0.8
RYN	**Ryan**	**3.35**	**92**				Pn	05 49 05.7	-0.1
NV11	**Mina Array Sit**	**3.66**	**94**				Pn	05 49 10.1	+0.1
KVN	**Kaiserville**	**3.67**	**85**				Pn	05 49 09.9	-0.4

DRS ***13*** *06:01:23.6±0.0,43.°04N×45.°66E,h12km*
NORS ***13*** *06:01:23.6±0.0,42.°97N×45.°71E,h6km,MPVA3.7*

ISC 13 06:01:24.3±0.9,43.°08N±0.°02×45.°66E±0.°02,h8km±8km, n38,σ1°67/75,Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GROC	**Groznyy**	**0.16**	**40**	*i* Pg			**Pg**	**06 01 27.9**	**+0.2**
GROC				*e*Sg			**Sg**	**06 01 32.2**	**+2.2**
KMGR	**Komgaron**	**0.58**	**268**	*e*Pg			**Pg**	**06 01 35.2**	**-0.3**
KMGR				*e*Sg			**Sb**	**06 01 46.5**	**+1.4**
BTLR	**Botlikh**	**0.59**	**135**	*e*Pg			**Pg**	**06 01 34.3**	**-1.4**
BTLR				*e*Sg			**Sg**	**06 01 42.4**	**-1.0**
BTKR	**Batakoyurt**	**0.86**	**290**	*e*Pg			**Pg**	**06 01 40.6**	**-0.3**
BTKR				*e*Sg			**Sn**	**06 01 54.8**	**-0.8**
DBC	**Dubki**	**0.86**	**94**	*e*Pg			**Pg**	**06 01 40.1**	**-0.8**
DBC				*e*Sg			**Sg**	**06 01 51.3**	**-0.9**
UNCR	**Uncukul**	**0.91**	**113**	*e*Pg			**Pg**	**06 01 41.0**	**-0.9**
UNCR				*e*Sg			**Sg**	**06 01 53.0**	**-0.7**
TRKR	**Terskaya**	**0.93**	**314**	*e*Pg			**Pb**	**06 01 43.0**	**+0.3**
TRKR				*e*Sg			**Sn**	**06 02 00.4**	**+3.3**
XNZR	**Khunzakh**	**0.94**	**125**	*e*Pg			**Pg**	**06 01 41.5**	**-0.9**
XNZR				*e*Sg			**Sg**	**06 01 54.0**	**-0.7**
KRNR	**Karanay**	**0.95**	**105**	*e*Pg			**Pg**	**06 01 42.0**	**-0.6**
KRNR				*i* Sg			**Sg**	**06 01 53.5**	**-1.5**
LACR	**Lac**	**1.03**	**256**	*e*Pg			**Pg**	**06 01 43.4**	**-0.7**
LACR				*e*Sg			**Sn**	**06 01 59.0**	**-0.8**
GUDG	**Gudauri**	**1.06**	**235**	P			**Pg**	**06 01 43.0**	**-1.7**
GUDG							**Sg**	**06 01 57.1**	**-1.5**
GUDG	**Gudauri**	**1.06**	**235**	*e*Pg			**Pg**	**06 01 43.1**	**-1.6**
GUDG				*e*Sg			**Sg**	**06 01 57.2**	**-1.3**
ARKR	**Arakani**	**1.09**	**115**	*e*Pg			**Pg**	**06 01 45.0**	**-0.3**
ARKR				*e*Sg			**Sn**	**06 02 02.0**	**+0.7**
KORR	**Kora**	**1.16**	**271**	*e*Pg			**Pn**	**06 01 47.3**	**+0.4**
KORR				*e*Sg			**Sn**	**06 02 04.6**	**+1.7**
GNBR	**Gunib**	**1.19**	**125**	*e*Pg			**Pb**	**06 01 45.8**	**-1.3**
GNBR				*e*Sg			**Sb**	**06 02 02.0**	**-0.6**
STDR	**Stavd-Durt**	**1.20**	**284**	*e*Pg			**Pg**	**06 01 48.2**	**+0.9**
STDR				*e*Sg			**Sn**	**06 02 07.3**	**+3.5**
LGD	**Lagodekhi**	**1.32**	**161**	P			**Pn**	**06 01 48.5**	**-0.4**
LGD				S			**Sb**	**06 02 05.6**	**-0.7**
LGD	**Lagodekhi**	**1.32**	**161**	*e*Pg			**Pn**	**06 01 48.5**	**-0.4**
LGD				*e*Sg			**Sb**	**06 02 05.7**	**-0.6**
ZEI	**Tsey**	**1.32**	**258**	*i* Pg			**Pn**	**06 01 48.1**	**-1.1**
ZEI				*e*Sg			**Sb**	**06 02 06.4**	**-0.1**
KMKR	**Kumukh**	**1.43**	**131**	*e*Pg			**Pn**	**06 01 50.5**	**-0.1**
KMKR				*e*Sg			**Sb**	**06 02 09.0**	**-0.6**
TBLG	**Delisi**	**1.51**	**207**	P			**Sg**	**06 02 13.6**	**+0.8**
DIGR	**Digorskoe uzhe**	**1.53**	**264**	*e*Pg			**Pn**	**06 01 52.1**	**0.0**
DIGR				*e*Sg			**Sb**	**06 02 12.2**	**-0.4**
BTNK	**Botanikuri**	**1.53**	**205**	P			**Pb**	**06 01 52.5**	**-0.5**
BTNK				S			**Sg**	**06 02 13.8**	**+0.2**
BTNK	**Botanikuri**	**1.53**	**205**	*e*Pg			**Pb**	**06 01 52.5**	**-0.5**
BTNK				*e*Sg			**Sg**	**06 02 13.8**	**+0.2**
DGRG	**David-gareji**	**1.64**	**187**	P			**Pg**	**06 01 55.3**	**-0.4**
DGRG				S			**Sg**	**06 02 20.6**	**+3.6**
DGRG	**David-gareji**	**1.64**	**187**	*e*Pg			**Pg**	**06 01 55.4**	**-0.4**
DGRG				*e*Sg			**Sg**	**06 02 19.2**	**+2.2**
DDFL	**Dedoflistskaro**	**1.67**	**168**	P			**Pg**	**06 01 57.0**	**+0.7**
DDFL				S			**Sg**	**06 02 24.8**	**+6.8**
DDFL	**Dedoflistskaro**	**1.67**	**168**	*e*Pg			**Pg**	**06 01 57.0**	**+0.7**
DDFL				*e*Sg			**Sg**	**06 02 24.8**	**+6.8**
ONI	**Oni**	**1.69**	**254**	P			**Pb**	**06 01 54.8**	**-0.9**
ONI				S			**Sg**	**06 02 18.1**	**-0.6**
ONI	**Oni**	**1.69**	**254**	*e*Pg			**Pb**	**06 01 54.8**	**-0.9**
ONI				*e*Sg			**Sg**	**06 02 18.1**	**-0.6**
TRLG	**Trialeti**	**1.92**	**217**	P			**Pn**	**06 01 58.0**	**+0.5**
TRLG				S			**Sg**	**06 02 25.0**	**-1.1**
TRLG	**Trialeti**	**1.92**	**217**	*e*Pg			**Pn**	**06 01 58.0**	**+0.5**
TRLG				*e*Sg			**Sg**	**06 02 25.0**	**-1.1**
PYA1	**Pyatigorsk**	**2.10**	**299**	*e*Pg			**Pn**	**06 01 57.7**	**-2.1**
PYA1				*e*Sg			**Sn**	**06 02 25.2**	**-1.0**
KBZ	**Khabaz**	**2.11**	**289**	*e*Pg			**Pn**	**06 01 59.4**

IDC 13 06:22:35.1±3.9,5°.31S×129°.91E,h371km±45km,mb3.3/1, mb1 3.4/3,mb1mx3.0/20,mbtmp4.1/3,Error ellipse: s-maj=112.6km s-min=13.6km az=72.0

ISC 13 06:22:26.4±0.9,5°.54S±0°.07×128°.98E±0°.10,h250km,n13, σ25°30/17,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.35**	**137**	Pn	**Pn**	**06 23 22.6**	**-0.1**
FAKI	**Fak Fak**	**4.17**	**52**	Pn	**Pn**	**06 23 34.1**	**+1.7**
FAKI				S	**S**	**06 24 24.6**	**-0.1**
SOEI	**Soe**	**6.27**	**228**	Pn	**Pn**	**06 23 58.9**	**+0.8**
MTN	**Manton Dam**	**7.56**	**164**		**Pn**	**06 24 16.1**	**+1.9**
MTN				S	**S**	**06 25 42.5**	**+1.6**
KNRA	**Kununurra**	**10.07**	**181**	Pn	**Pn**	**06 24 46.9**	**+0.9**
FITZ	**Fitzroy Crossi**	**12.90**	**194**		**P**	**06 25 24.3**	**+1.2**
WRAB	**Tennant Creek**	**15.23**	**160**	P	**P**	**06 25 47.7**	**-1.2**
WRA	**Warramunga Arr**	**15.23**	**160**	P	**Pn**	**06 25 50.3**	**+0.8**
	1.4nm,0.3s,baz=342,slow=12,SNR=25						
WRA				S	**S**	**06 28 31.5**	**-5.7**
	0.3nm,0.3s,baz=346,slow=21,SNR=5.3						
AS31	**Alice Springs**	**18.63**	**166**	P	**P**	**06 26 27.9**	**+1.9**
AS31				IAmb	IAmb	06 26 33.7	
	comp=Z,2.2nm,0.3s						
ASAR	**Alice Springs**	**18.64**	**166**	P	**P**	**06 26 28.2**	**+2.2**
	comp=Z,1.3nm,0.3s,baz=346,slow=12,SNR=29						
ASAR				S	**S**	**06 29 41.3**	**-3.6**
	comp=Z,0.3nm,0.3s,baz=352,slow=17,SNR=8.7						
MK31	**Makanchi Array**	**66.46**	**327**	P	**P**	**06 32 47.7**	**-1.4**
MKAR	**Makanchi Array**	**66.46**	**327**	P	**P**	**06 32 47.8**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=117,slow=7.3,SNR=16						
QSPA	**South Pole Qui**	**84.43**	**180**	P	**P**	**06 34 29.7**	**-1.1**
QSPA				IAmb	IAmb	06 34 47.6	
	comp=Z,9.0nm,1.4s						

TEH 13 06:32:02.1,31°.04N×55°.74E,h10km,ML3.6
THR 13 06:32:02.1±0.8,31°.03N×55°.70E,h14km±6km,ML3.5

ISC 13 06:32:02.3±1.0,31°.03N±0°.04×55°.74E±0°.04,h10km,n34, σ1°57/34,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBAF	**Bafgh**	**0.58**	**346**	*e*Pg	**Pg**	**06 32 12.1**	**-1.5**
IBAF				*e*		06 32 23.2	
KHGB	**Koh Gabri**	**0.91**	**135**	*e*Pg	**Pg**	**06 32 18.6**	**-1.2**
IMEH	**Mehriz**	**1.03**	**291**	*e*Pg	**Pg**	**06 32 21.2**	**-0.9**
TVBK	**TV Kerman**	**1.36**	**139**	*e*Pg	**Pn**	**06 32 27.1**	**-0.6**
TVBK				*e*		06 32 51.4	
KRBR	**Kerman**	**1.37**	**139**	*e*Pg	**Pb**	**06 32 27.9**	**-0.2**
KRBR	**Kerman**	**1.37**	**139**	*e*Pg	**Pb**	**06 32 27.9**	**-0.2**
NGRK	**Negar Kerman**	**1.62**	**148**	*e*Pn	**Pn**	**06 32 31.4**	**+0.1**
NGRK				*e*		06 33 01.5	
ICHK	**Chekchek**	**1.66**	**317**	*e*Pn	**Pb**	**06 32 32.2**	**-0.9**
ICHK				*e*		06 32 58.7	
YZKH	**Yazd**	**1.67**	**325**	*e*Pg	**Pb**	**06 32 32.4**	**-0.8**
YZKH	**Yazd**	**1.67**	**325**	*e*Pg	**Pb**	**06 32 32.4**	**-0.8**
YZKH				IAML		06 32 59.5	
	comp=E,488nm,0.2s						
CHMN	**Cheshme madani**	**1.94**	**126**	*e*Pn	**Pb**	**06 32 37.4**	**-0.6**
CHMN				*e*		06 32 41.6	
ISAD	**Sadrabad**	**1.96**	**297**	*e*Pn	**Pb**	**06 32 37.0**	**-1.3**
ISAD				*e*		06 33 07.9	
TPRV	**Parvadeh(Tabas**	**2.15**	**22**	*e*Pn	**Pb**	**06 32 40.3**	**-1.1**
ANAR	**Anarak**	**2.75**	**322**	*e*Pn	**Pn**	**06 32 47.6**	**+1.1**
TKDS	**Koohdasht(Taba**	**2.83**	**24**	*e*Pn	**Pn**	**06 32 49.8**	**+2.1**
TABS	**Tabas**	**2.87**	**24**	*e*Pn	**Pn**	**06 32 50.1**	**+2.0**
TABS	**Tabas**	**2.87**	**24**	*e*Pn	**Pn**	**06 32 50.1**	**+2.0**
IRAM	**Ramesheh**	**2.97**	**286**	*e*Pn	**Pn**	**06 32 50.6**	**+0.9**
TNSJ	**Nastanj**	**3.02**	**14**	*e*Pn	**Pn**	**06 32 52.0**	**+1.7**
BSRN	**Basiran**	**3.04**	**71**	*e*Pn	**Pn**	**06 32 52.0**	**+1.4**
BSRN	**Basiran**	**3.04**	**71**	*e*Pn	**Pn**	**06 32 52.0**	**+1.4**
IKOO	**Kooshah**	**3.12**	**63**	*e*Pn	**Pn**	**06 32 53.3**	**+1.6**
IKOO				*e*		06 33 43.4	
ITEG	**Tejag**	**3.17**	**53**	*e*Pn	**Pn**	**06 32 54.1**	**+1.7**
ITEG				*e*		06 33 48.9	
IZEF	**Zefreh**	**3.44**	**304**	*e*Pn	**Pn**	**06 32 57.2**	**+1.0**
KLNJ	**Kolanjah**	**3.56**	**271**	*e*Pn	**Pn**	**06 33 00.7**	**+2.8**
GENO	**Geno**	**3.63**	**174**	*e*Pn	**Pn**	**06 33 01.4**	**+2.6**
BNDS	**Bandar-Abbas**	**3.63**	**174**	*e*Pn	**Pn**	**06 33 00.3**	**+1.5**
BNDS	**Bandar-Abbas**	**3.63**	**174**	*e*Pn	**Pn**	**06 33 00.3**	**+1.5**
AFRZ	**Afriz**	**3.67**	**48**	*e*Pn	**Pn**	**06 33 01.0**	**+1.8**
NHDN	**Nehbandan**	**3.71**	**83**	*e*Pn	**Pn**	**06 33 01.5**	**+1.7**
IDAH	**Dahanechah**	**3.91**	**63**	*e*Pn	**Pn**	**06 33 04.8**	**+2.2**
IKLH	**Kolahrood**	**4.20**	**304**	*e*Pn	**Pn**	**06 33 08.1**	**+1.5**
KRSH	**Karshahi**	**4.23**	**315**	*e*Pn	**Pn**	**06 33 08.1**	**+1.2**
JHBN	**Jahan bin**	**4.49**	**287**	*e*Pn	**Pn**	**06 33 12.7**	**+2.1**

IDC 13 06:33:52.3±5.3,19°.26N×66°.38W,h0km,mb3.4/2, mb1 3.9/3,mb1mx3.4/25,mbtmp3.7/3,ML2.7/1,Error ellipse: s-maj=112.9km s-min=47.6km az=102.0
NEIC 13 06:33:57.9±1.7,19°.13N±0°.04×66°.76W±0°.02,h33km±8km, Error ellipse: s-maj=6.5km s-min=3.3km az=184.0
RSPR 13 06:33:58.5,19°.17N×66°.81W,h38km±5km,MD3.4/13

ISC 13 06:33:54.9±1.3,19°.17N±0°.04×66°.76W±0°.03,h13km±9km, n71,σ1°03/96,mb4.1/8,16C-1D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.72**	**163**	⇑*e*P	**Pn**	**06 34 11.5**	**+0.6**
EMPR	**Esperanza - Ma**	**0.72**	**163**	*e*S	**Sn**	**06 34 21.4**	**-0.4**
EMPR	**Esperanza - Ma**	**0.72**	**163**		**Pn**	**06 34 11.3**	**+0.5**
EMPR					**Sn**	**06 34 21.7**	**-0.1**
AGPR	**Aguadilla, PR**	**0.78**	**206**	⇑*e*P	**Pn**	**06 34 10.8**	**-0.7**
AGPR	**Aguadilla, PR**	**0.78**	**206**	*e*S	**Sn**	**06 34 21.9**	**-1.2**
AGPR	**Aguadilla, PR**	**0.78**	**206**		**Pn**	**06 34 10.9**	**-0.7**
AGPR					**Sn**	**06 34 22.2**	**-0.9**
AOPR	**Arecibo Observ**	**0.82**	**180**	⇑*e*P	**Pn**	**06 34 12.1**	**-0.1**
AOPR	**Arecibo Observ**	**0.82**	**180**	*e*S	**Sn**	**06 34 23.7**	**-0.6**
AOPR	**Arecibo Observ**	**0.82**	**180**		**Pn**	**06 34 11.9**	**-0.4**
AOPR					**Sn**	**06 34 23.6**	**-0.7**
MPR	**Mayaguez**	**1.02**	**201**		**Pg**	**06 34 14.5**	**-0.2**
MPR				Sn	**Sn**	**06 34 29.3**	**+0.2**
LSP	**Las Mesas**	**1.04**	**198**	⇑*e*P	**Pn**	**06 34 15.1**	**-0.2**
LSP	**Las Mesas**	**1.04**	**198**		**Pn**	**06 34 15.1**	**-0.2**
GCPR	**Guaynabo City**	**1.07**	**143**		**Pg**	**06 34 16.5**	**+1.0**
GCPR				Sn	**Sn**	**06 34 29.9**	**-0.4**
CELP	**Cerrillos**	**1.10**	**171**	⇑*e*P	**Pg**	**06 34 16.6**	**+0.4**
CELP				*e*S	**Sg**	**06 34 30.3**	**-0.3**
CELP	**Cerrillos**	**1.10**	**171**		**Pg**	**06 34 16.6**	**+0.4**
CELP					**Sg**	**06 34 30.3**	**-0.3**
OBIP	**Obispado Ponce**	**1.13**	**173**	⇑*e*P	**Pg**	**06 34 16.9**	**+0.2**
OBIP	**Obispado Ponce**	**1.13**	**173**	*e*S	**Sb**	**06 34 30.8**	**-0.2**
OBIP	**Obispado Ponce**	**1.13**	**173**		**Pg**	**06 34 16.8**	**+0.1**
OBIP					**Sb**	**06 34 30.6**	**-0.4**
GBPR	**Guanica, Bosqu**	**1.20**	**186**	⇓*e*P	**Pg**	**06 34 17.9**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.20**	**186**	*e*S	**Sb**	**06 34 32.5**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.20**	**186**		**Pg**	**06 34 17.9**	**-0.1**
GBPR					**Sb**	**06 34 32.5**	**-0.3**
SJG	**San Juan**	**1.20**	**151**		**Pg**	**06 34 17.9**	**-0.1**
SJG				Sn	**Sg**	**06 34 33.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.21**	**196**	⇑*e*P	**Pb**	**06 34 17.4**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.21**	**196**	*e*S	**Sb**	**06 34 32.3**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.21**	**196**		**Pb**	**06 34 17.3**	**-0.3**
CRPR					**Sb**	**06 34 32.2**	**-0.9**
MLPR	**Magueyes Islan**	**1.23**	**193**	⇑*e*P	**Pn**	**06 34 16.8**	**-1.0**
MLPR	**Magueyes Islan**	**1.23**	**193**	*e*S	**Sb**	**06 34 33.2**	**-0.6**
MLPR	**Magueyes Islan**	**1.23**	**193**		**Pn**	**06 34 16.6**	**-1.2**
MLPR					**Sb**	**06 34 33.1**	**-0.6**
CBYP	**Canovanas**	**1.24**	**136**	⇑*e*P	**Pg**	**06 34 18.6**	**0.0**
CBYP	**Canovanas**	**1.24**	**136**	⇑*e*P	**Pg**	**06 34 18.7**	**0.0**
CBYP				*e*S	**Sb**	**06 34 34.0**	**-0.1**
CBYP	**Canovanas**	**1.24**	**136**	Pn	**Pg**	**06 34 18.5**	**-0.2**
CBYP					**Sb**	**06 34 34.0**	**-0.1**
ICMP	**Isla Caja de M**	**1.30**	**170**		**Pg**	**06 34 19.8**	**-0.1**
ICMP				Sn	**Sb**	**06 34 34.8**	**-0.9**
HUMP	**Col San Antoni**	**1.34**	**140**	⇑*e*P	**Pg**	**06 34 20.2**	**-0.4**
HUMP	**Col San Antoni**	**1.34**	**140**	*e*S	**Sn**	**06 34 36.6**	**-0.3**
HUMP	**Col San Antoni**	**1.34**	**140**	⇑*e*P	**Pg**	**06 34 20.6**	**-0.1**
HUMP				*e*S	**Sn**	**06 34 37.2**	**+0.2**
HUMP	**Col San Antoni**	**1.34**	**140**	Pn	**Pg**	**06 34 20.4**	**-0.3**
HUMP				Sn	**Sb**	**06 34 36.0**	**-0.9**
PDPR	**Patillas Dam,**	**1.34**	**149**		**Pg**	**06 34 20.3**	**-0.4**
PDPR				Sn	**Sg**	**06 34 37.7**	**-0.5**
IGPR	**InterUniversit**	**1.35**	**153**	⇑*e*P	**Pg**	**06 34 20.4**	**-0.5**
IGPR	**InterUniversit**	**1.35**	**153**	*e*S	**Sb**	**06 34 37.3**	**+0.1**
IGPR	**InterUniversit**	**1.35**	**153**		**Pg**	**06 34 21.9**	**+1.0**
IGPR					**Sb**	**06 34 37.3**	**+0.1**
MTP	**Monte Pirata**	**1.56**	**133**	⇑*e*P	**Pb**	**06 34 23.1**	**-0.6**
MTP	**Monte Pirata**	**1.56**	**133**	*e*S	**Sn**	**06 34 42.4**	**-0.1**
MTP	**Monte Pirata**	**1.56**	**133**		**Pb**	**06 34 23.2**	**-0.6**
MTP					**Sn**	**06 34 40.6**	**-2.0**
PCDR	**Punta Cana, DR**	**1.67**	**247**		**Pb**	**06 34 25.3**	**-0.3**
PCDR				Sn	**Sn**	**06 34 43.3**	**-2.0**
STVI	**Saint Thomas**	**1.89**	**115**	⇑*e*P	**Pb**	**06 34 27.9**	**-1.4**
STVI	**Saint Thomas**	**1.89**	**115**		**Pb**	**06 34 28.0**	**-1.4**
STVI				Sn	**Sb**	**06 34 51.7**	**-1.2**
TBVI	**Tortola**	**2.16**	**110**	⇑*e*P	**Pb**	**06 34 33.2**	**-0.7**
TBVI	**Tortola**	**2.16**	**110**	*e*S	**Sn**	**06 34 57.8**	**+0.4**
TBVI	**Tortola**	**2.16**	**110**		**Pb**	**06 34 33.2**	**-0.7**
TBVI					**Sn**	**06 34 57.8**	**+0.4**
DR12	**Loma Pena Alta**	**2.51**	**262**		**Pn**	**06 34 36.7**	**+1.1**
DR12				Sn	**Sn**	**06 35 06.6**	**+0.4**
BANI	**BANI**	**3.50**	**258**		**Pn**	**06 34 50.5**	**+1.3**
SDDR	**Presa de Saban**	**4.29**	**268**		**Pn**	**06 35 02.2**	**+2.2**
GRTK	**Grand Turk**	**4.72**	**300**	Pn	**Pn**	**06 35 07.2**	**+1.4**
GRTK				Sn	**Sn**	**06 35 54.2**	**-6.3**
RUSC	**La Rusia**	**14.57**	**206**	Pn	**Pn**	**06 37 23.8**	**+2.4**
ROSC	**El Rosal**	**16.04**	**208**	Pn	**P**	**06 37 43.1**	**-1.1**
	0.6nm,0.3s,baz=29,slow=19,SNR=2.0						
656A	**Willston**	**17.59**	**308**	P	**P**	**06 38 00.8**	**0.0**
Y60A	**Bolivia**	**17.96**	**328**	P	**Pn**	**06 38 03.6**	**-0.7**
456A	**Hilliard**	**17.98**	**313**	P	**P**	**06 38 05.2**	**+0.1**
456A				IAmb	IAmb	06 38 18.0	
	comp=Z,25nm,1.2s						
NHSC	**New Hope**	**18.35**	**322**	P	**P**	**06 38 08.9**	**-0.4**
NHSC				IAmb	IAmb	06 38 18.3	
	comp=Z,14nm,1.1s						
Y58A	**Scranton**	**18.65**	**324**	P	**Pn**	**06 38 12.3**	**-0.5**
Y58A				IAmb	IAmb	06 38 24.7	
	comp=Z,22nm,1.1s						
V58A	**Windy Hill, Pi**	**19.83**	**329**	P	**P**	**06 38 25.6**	**+0.2**
Y52A	**Lilburn**	**21.26**	**317**	P	**P**	**06 38 40.3**	**-0.6**
Y52A				IAmb	IAmb	06 38 52.4	
	comp=Z,18nm,1.4s						
S57A	**Dark Hollow, R**	**21.36**	**333**	P	**P**	**06 38 42.5**	**+0.5**
V52A	**Sevierville**	**22.28**	**322**	P	**P**	**06 38 52.5**	**+0.6**
V52A				IAmb	IAmb	06 38 54.0	
	comp=Z,6.0nm,1.4s						
R55A	**Marlinton**	**22.31**	**331**	P	**P**	**06 38 51.6**	**-0.7**
R55A				IAmb	IAmb	06 39 00.6	
	comp=Z,16nm,1.5s						
S54A	**Dingess, Beckl**	**22.49**	**329**	P	**P**	**06 38 52.8**	**-1.4**
S54A				IAmb	IAmb	06 39 00.3	
	comp=Z,8.6nm,1.1s						
Q56A	**Snyder Ridge,**	**22.54**	**334**	P	**P**	**06 38 56.0**	**+1.3**
Q56A				IAmb	IAmb	06 39 01.3	
	comp=Z,11nm,1.4s						
CPCT	**Cooper Cave**	**22.57**	**320**	P	**P**	**06 38 55.5**	**+0.4**
V51A	**Loudon**	**22.70**	**320**	P	**P**	**06 38 56.9**	**+0.5**
V51A				IAmb	IAmb	06 39 07.4	
	comp=Z,9.4nm,1.3s						
TXAR	**Lajitas Array**	**35.01**	**294**	P	**P**	**06 40 49.2**	**+1.7**
	comp=Z,0.8nm,0.6s,baz=101,slow=9.3,SNR=10.0						
YKA	**Yellowknife Ar**	**54.29**	**335**	P	**P**	**06 43 20.6**	**0.0**
	comp=Z,0.2nm,0.6s,baz=113,slow=7.3,SNR=3.6						

NNC 13 06:45:55.7±7.2,37°.09N×71°.18E,h0km,mb3.8,mpv3.4, 4C-2D,Error ellipse: s-maj=56.7km s-min=53.3km az=139.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.03**	**355**	⇑Pn	Pn	06 47 26.2	0.0
	1.0nm,0.5s,baz=181,slow=12,SNR=15						
KK31				⇑Sn	Sn	06 48 36.7	+0.7
	1.4nm,0.5s,baz=180,slow=20,SNR=6.6						
AAK	**Ala-Archa**	**6.10**	**24**	⇓Pn	Pn	06 47 28.1	+0.8
	2.2nm,0.3s						
AAK				⇑Sn	Sn	06 48 41.7	+3.8
	2.7nm,0.7s						
TKM2	**Tokmak 2**	**6.74**	**29**	⇑Pn	Pn	06 47 35.4	-0.7
	2.5nm,0.8s						
TKM2				⇓Sn	Sn	06 48 52.0	-1.6
	1.0nm,0.7s						

SJA 13 06:46:39.3±0.8,21°.06S×69°.10W,h131km±10km,ML2.7, MW2.8
GUC 13 06:46:40.1±0.7,21°.03S×69°.01W,h106km±5km,ML3.4

ISC 13 06:46:39.4±1.5,21°.04S±0°.04×69°.09W±0°.07, h129km±13km,n26,σ1°08/37,6C-3D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.76**	**191**	⇑*i*P	**Pn**	**06 47 00.4**	**0.0**
PB09				*e*S	**Sn**	**06 47 15.6**	**-0.6**
PB09				IAML		06 47 17.6	
	comp=E,825nm,0.2s						
PB09	**IPOC Station P**	**0.76**	**191**	*i* P	**Pn**	**06 47 00.4**	**0.0**
PB08	**IPOC Station P**	**0.90**	**356**	⇓*i*P	**Pn**	**06 47 01.6**	**-0.1**
PB08				*e*S	**Sn**	**06 47 17.4**	**-1.2**
PB08				IAML		06 47 18.3	
	comp=E,2μm,0.4s						
PATCX	**Punta Patache**	**1.02**	**282**	*e*P	**Pn**	**06 47 03.2**	**+0.7**
PATCX				*e*S	**Sn**	**06 47 20.6**	**+0.7**
PATCX				IAML		06 47 22.9	
	comp=E,2μm,0.3s						
TA01	**Diego Aracena**	**1.12**	**295**	⇑*i*P	**Pn**	**06 47 04.0**	**+0.6**
TA01				*e*S	**Sn**	**06 47 22.1**	**+0.5**
TA01				IAML		06 47 23.2	
	comp=E,1μm,0.4s						
PB03	**IPOC Station P**	**1.18**	**212**	⇑*i*P	**Pn**	**06 47 04.6**	**+0.5**
PB03				*e*S	**Sn**	**06 47 23.1**	**+0.2**
PB03				IAML		06 47 24.4	
	comp=E,813nm,0.2s						
GO01	**Chusmiza**	**1.37**	**356**	*e*P	**Pn**	**06 47 06.8**	**+0.2**
GO01				*e*S	**Sn**	**06 47 26.6**	**-0.4**
GO01				IAML		06 47 29.0	
	comp=E,2μm,0.1s						
PB11	**IPOC Station P**	**1.38**	**337**	⇓*i*P	**Pn**	**06 47 06.5**	**+0.2**
PB11				*e*S	**Sn**	**06 47 26.3**	**-0.4**
PB11				IAML		06 47 27.8	
	comp=N,1μm,0.3s						
LVC	**Limon Verde**	**1.57**	**174**	*i* P	**Pn**	**06 47 09.3**	**+0.7**
LVC				*i* S	**Sn**	**06 47 31.7**	**+0.9**
LVC				IAML		06 47 35.2	
	comp=Z,61nm,0.3s						
PB04	**IPOC Station P**	**1.62**	**217**	⇑*i*P	**Pn**	**06 47 09.8**	**+0.8**
PB04				*e*S	**Sn**	**06 47 32.4**	**+0.9**
PB04				IAML		06 47 33.9	
	comp=N,328nm,0.1s						
PB04	**IPOC Station P**	**1.62**	**217**	*i* P	**Pn**	**06 47 10.0**	**+1.0**
PB04				*i* S	**Sn**	**06 47 30.6**	**-0.9**
PB06	**IPOC Station P**	**1.72**	**195**	⇑*i*P	**Pn**	**06 47 10.9**	**+0.8**
PB06				*e*S	**Sn**	**06 47 33.8**	**+0.2**
PB06				IAML		06 47 38.8	
	comp=E,226nm,0.2s						
PB06	**IPOC Station P**	**1.72**	**195**	*i* P	**Pn**	**06 47 11.1**	**+1.0**
PSGC	**Pisagua**	**1.73**	**326**	⇑*i*P	**Pn**	**06 47 10.6**	**+0.4**
PSGC				*e*S	**Sn**	**06 47 33.2**	**-0.5**
PSGC				IAML		06 47 35.7	
	comp=E,320nm,0.3s						
PB05	**IPOC Station P**	**2.08**	**210**	*i* P	**Pn**	**06 47 15.2**	**+0.7**
PB15	**IPOC Station P**	**2.19**	**189**	*i* P	**Pn**	**06 47 17.0**	**+1.2**
PB10	**IPOC Station P**	**2.81**	**209**	*i* P	**Pn**	**06 47 24.1**	**+0.5**
PB14	**IPOC Station P**	**3.77**	**199**	*i* P	**Pn**	**06 47 36.7**	**+0.3**
HJA	**Humahuaca**	**4.04**	**123**	*i* P	**Pn**	**06 47 41.6**	**+1.6**
LPAZ	**La Paz**	**4.81**	**11**	*i* P	**Pn**	**06 47 52.0**	**+1.4**
ACDV	**Cuesta del Vie**	**9.09**	**180**	*i* P	**Pn**	**06 48 47.3**	**-0.4**
GO04	**Tololo Observa**	**9.22**	**189**	*i* P	Pn	06 48 46.2	-3.4
ACCO	**Cerro Coronel**	**9.51**	**180**	*i* P	**Pn**	**06 48 52.1**	**-1.4**
AMOG	**MOGNA**	**9.87**	**177**	*i* P	**Pn**	**06 48 55.4**	**-2.7**
RTLL	**Cerro Villicun**	**10.26**	**177**	*i* P	**Pn**	**06 49 01.2**	**-2.1**
CFA	**Coronel Fontan**	**10.55**	**176**	*i* P	**Pn**	**06 49 04.6**	**-2.6**
CFA				⇓*i*S	Sn	06 50 53.8	-10

IDC 13 07:08:07.2±2.1,19°.06N×66°.62W,h34km±18km,mb3.6/9, mb1 3.9/12,mb1mx3.7/35,mbtmp3.9/12,ML3.0/3,Error ellipse: s-maj=25.2km s-min=17.6km az=59.0
RSPR 13 07:08:08.4,19°.11N×66°.79W,h39km±4km,MD3.6/14
NEIC 13 07:08:08.3±1.7,19°.06N±0°.04×66°.75W±0°.04,h42km±4km, Error ellipse: s-maj=6.2km s-min=4.7km az=202.0

ISC 13 07:08:08.2±0.9,19°.07N±0°.04×66°.76W±0°.03,h41km±10km, n110,σ1°23/147,mb4.1/18,21C,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.63**	**160**	⇑*e*P	**Pn**	**07 08 20.7**	**0.0**
EMPR	**Esperanza - Ma**	**0.63**	**160**	*e*S	**Sn**	**07 08 30.4**	**+0.8**
EMPR	**Esperanza - Ma**	**0.63**	**160**		**Pn**	**07 08 20.6**	**-0.1**
EMPR					**Sn**	**07 08 31.2**	**+1.6**
AGPR	**Aguadilla, PR**	**0.69**	**209**	⇑*e*P	**Pn**	**07 08 20.4**	**-1.1**
AGPR	**Aguadilla, PR**	**0.69**	**209**	*e*S	**Sn**	**07 08 30.4**	**-0.6**
AGPR	**Aguadilla, PR**	**0.69**	**209**	Pn	**Pn**	**07 08 20.2**	**-1.3**
AGPR				Sn	**Sn**	**07 08 29.7**	**-1.3**
AGPR	**Aguadilla, PR**	**0.69**	**209**		**Pn**	**07 08 20.4**	**-1.1**
AGPR					**Sn**	**07 08 29.8**	**-1.2**
AOPR	**Arecibo Observ**	**0.72**	**180**	⇑*e*P	**Pn**	**07 08 21.5**	**-0.4**
AOPR	**Arecibo Observ**	**0.72**	**180**	⇑*e*P	**Pn**	**07 08 21.6**	**-0.4**
AOPR				*e*S	**Sn**	**07 08 31.9**	**+0.1**
AOPR	**Arecibo Observ**	**0.72**	**180**		**Pn**	**07 08 21.3**	**-0.7**
AOPR					**Sn**	**07 08 31.9**	**+0.1**
UUPR	**Utuado, UPR, P**	**0.81**	**177**		**Pn**	**07 08 22.8**	**-0.5**
UUPR					**Sn**	**07 08 33.5**	**-0.6**
MPR	**Mayaguez**	**0.93**	**203**		**Pn**	**07 08 23.9**	**-0.8**
MPR				Sn	**Sn**	**07 08 34.3**	**-2.6**
LSP	**Las Mesas**	**0.94**	**199**	⇑*e*P	**Pn**	**07 08 24.5**	**-0.5**
LSP	**Las Mesas**	**0.94**	**199**		**Pn**	**07 08 24.5**	**-0.5**
GCPR	**Guaynabo City**	**0.99**	**140**		**Pn**	**07 08 25.2**	**-0.4**
GCPR				Sn	**Sn**	**07 08 39.1**	**+0.7**
CELP	**Cerrillos**	**1.00**	**170**	⇑*e*P	**Pn**	**07 08 25.9**	**+0.1**
CELP	**Cerrillos**	**1.00**	**170**		**Pn**	**07 08 25.9**	**+0.1**
OBIP	**Obispado Ponce**	**1.03**	**172**	⇑*e*P	**Pn**	**07 08 26.3**	**+0.1**
OBIP	**Obispado Ponce**	**1.03**	**172**	*e*S	**Sn**	**07 08 39.3**	**-0.2**
OBIP	**Obispado Ponce**	**1.03**	**172**		**Pn**	**07 08 25.2**	**-1.1**
OBIP					**Sn**	**07 08 39.3**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.09**	**186**	⇑*e*P	**Pn**	**07 08 27.3**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.09**	**186**	*e*S	**Sn**	**07 08 41.3**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.09**	**186**		**Pn**	**07 08 27.3**	**+0.2**
GBPR					**Sn**	**07 08 41.3**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.11**	**198**	⇑*e*P	**Pn**	**07 08 26.9**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.11**	**198**	*e*S	**Sn**	**07 08 41.0**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.11**	**198**		**Pn**	**07 08 26.8**	**-0.4**
CRPR				Sn	**Sn**	**07 08 40.4**	**-0.9**
SJG	**San Juan**	**1.11**	**149**	Pg	**Pn**	**07 08 26.9**	**-0.4**
	50nm,0.3s,baz=320,slow=9.8,SNR=75						
SJG				Lg	Lg	07 08 41.6	
	208nm,0.3s,baz=307,slow=20,SNR=25						
SJG	**San Juan**	**1.11**	**149**		**Pn**	**07 08 27.2**	**-0.2**
SJG				Sn	**Sn**	**07 08 42.2**	**+0.8**
MLPR	**Magueyes Islan**	**1.13**	**194**	⇑*e*P	**Pn**	**07 08 26.4**	**-1.1**
MLPR	**Magueyes Islan**	**1.13**	**194**	*e*S	**Sn**	**07 08 41.5**	**-0.3**
MLPR	**Magueyes Islan**	**1.13**	**194**		**Pn**	**07 08 26.0**	**-1.5**
MLPR				Sn	**Sn**	**07 08 41.1**	**-0.7**
CBYP	**Canovanas**	**1.17**	**133**	⇑*e*P	**Pn**	**07 08 27.8**	**-0.4**
CBYP	**Canovanas**	**1.17**	**133**	⇑*e*P	**Pn**	**07 08 27.9**	**-0.2**
CBYP				*e*S	**Sn**	**07 08 42.9**	**0.0**
CBYP	**Canovanas**	**1.17**	**133**		**Pn**	**07 08

TX31				IAmb	IAmb	07 14 59.5
	comp=Z,2.5nm,0.7s					
TX32	**Lajitas Array**	**35.05 294**	P	**P**		**07 14 57.8 +0.4**
TX32				IAmb	IAmb	07 14 59.5
	comp=Z,2.7nm,0.7s					
LPAZ	**La Paz**	**35.16 182**	P	**P**		**07 14 59.2 +0.3**
	comp=Z,0.5nm,0.5s,baz=14,slow=4.2,SNR=3.0					
LPAZ	**La Paz**	**35.16 182**	IAmb	IAmb		07 15 03.0
	comp=Z,3.8nm,1.4s					
PDAR	**Pinedale Array**	**43.05 313**	P	**P**		**07 16 04.0 -0.3**
	comp=Z,0.5nm,0.7s,baz=105,slow=10,SNR=3.7					
RLMT	**Red Lodge**	**43.70 316**	P	**P**		**07 16 10.1 +0.6**
RLMT				IAmb	IAmb	07 16 11.4
	comp=Z,3.0nm,0.7s					
YHB	**Horse Butte**	**44.84 315**	P	**P**		**07 16 19.8 +1.2**
CPUP	**Villa Florida**	**46.05 168**	P	**P**		**07 16 25.8 -2.2**
	comp=Z,1.1nm,0.7s,baz=0.9,slow=6.6,SNR=3.6					
CPUP	**Villa Florida**	**46.05 168**	IAmb	IAmb		07 16 37.0
	comp=Z,6.0nm,1.5s					
NVAR	**Mina Array Bea**	**48.47 305**	P	**P**		**07 16 48.0 +0.8**
	comp=Z,1.0nm,0.9s,baz=89,slow=5.9,SNR=5.5					
NVAR				PcP	**PcP**	**07 18 13.9 +1.0**
	comp=Z,0.2nm,0.5s,baz=152,slow=2.5,SNR=3.2					
YKA	**Yellowknife Ar**	**54.38 335**	P	**P**		**07 17 30.5 -0.2**
	comp=Z,1.0nm,0.7s,baz=111,slow=7.5,SNR=15					
TORD	**Torodi Ar. Bea**	**65.68 84**	P	**P**		**07 18 49.1 +0.1**
	comp=Z,0.5nm,0.7s,baz=286,slow=7.3,SNR=3.1					
ILAR	**Eielson Array**	**68.72 333**	P	**P**		**07 19 07.7 +0.3**
	comp=Z,0.8nm,0.7s,baz=108,slow=4.1,SNR=13					
STKA	**Stephens Creek**	**151.50 238**	PKPbc	**PKPbc**		**07 27 57.4 -0.8**
	comp=Z,1.2nm,0.6s,baz=125,slow=3.4,SNR=4.9					
ASAR	**Alice Springs**	**160.23 253**	PKPab	**PKPab**		**07 28 43.8 -0.7**
	comp=Z,0.2nm,0.5s,baz=103,slow=5.0,SNR=5.4					

*IDC **13** 07:12:19.1±3.3, 19.°06N×66.°82W, h20km±22km, mb3.6/11, mb1 3.9/13, mb1mx3.7/37, mbtmpb3.8/13, ML2.9/2, Error ellipse: s-maj=20.4km s-min=12.7km az=57.0*
*NEIC **13** 07:12:20.4±1.9, 19.°10N±0.°04×66.°84W±0.°03, h35km±1km, Error ellipse: s-maj=5.4km s-min=4.1km az=179.0*
*RSPR **13** 07:12:21.1, 19.°14N×66.°85W, h41km±5km, MD3.7/16*

ISC 13 07:12:19.2±1.2, 19.°10N±0.°04×66.°83W±0.°03, h25km±9km, n155, σ1°29/183, mb4.3/35, 14C-5D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
AGPR	**Aguadilla, PR**	**0.69**	**203**	**ǁeP**		**Pn**	**07 12 33.3**	**-0.1**
AGPR	**Aguadilla, PR**	**0.69**	**203**	*eS*		**Sn**	**07 12 43.4**	**+0.2**
AGPR	**Aguadilla, PR**	**0.69**	**203**			**Pb**	**07 12 33.2**	**+0.6**
AGPR					Sn	**Sb**	**07 12 41.5**	**-0.1**
EMPR	**Esperanza - Ma**	**0.69**	**155**	**ĥeP**		**Pn**	**07 12 33.9**	**+0.5**
EMPR	**Esperanza - Ma**	**0.69**	**155**	*eS*		**Sn**	**07 12 44.1**	**+0.8**
EMPR	**Esperanza - Ma**	**0.69**	**155**			**Pn**	**07 12 34.1**	**+0.7**
EMPR					Sn	**Sn**	**07 12 44.0**	**+0.8**
AOPR	**Arecibo Observ**	**0.76**	**174**			**Pn**	**07 12 34.6**	**+0.2**
AOPR					Sn	**Sb**	**07 12 40.3**	**-3.4**
MPR	**Mayaguez**	**0.93**	**198**	**ǁeP**		**Pn**	**07 12 37.0**	**+0.3**
MPR				*eS*		**Sb**	**07 12 50.0**	**+1.3**
MPR	**Mayaguez**	**0.93**	**198**			**Pn**	**07 12 37.0**	**+0.3**
MPR					Sn	**Sn**	**07 12 46.7**	**-2.7**
LSP	**Las Mesas**	**0.95**	**195**	**ǁeP**		**Pb**	**07 12 37.4**	**+0.3**
LSP	**Las Mesas**	**0.95**	**195**	*eS*		**Sb**	**07 12 50.2**	**+0.9**
LSP	**Las Mesas**	**0.95**	**195**			**Pb**	**07 12 37.4**	**+0.3**
LSP						**Sb**	**07 12 50.2**	**+0.9**
CELP	**Cerrillos**	**1.05**	**167**	**ĥeP**		**Pb**	**07 12 39.0**	**+0.2**
CELP				*eS*		**Sb**	**07 12 52.8**	**+0.7**
CELP	**Cerrillos**	**1.05**	**167**			**Pb**	**07 12 39.0**	**+0.2**
CELP						**Sb**	**07 12 52.8**	**+0.7**
GCPR	**Guaynabo City**	**1.06**	**138**			**Pn**	**07 12 38.5**	**0.0**
GCPR					Sn	**Sb**	**07 12 52.8**	**+0.4**
OBIP	**Obispado Ponce**	**1.08**	**168**	**ĥeP**		**Pb**	**07 12 39.5**	**+0.3**
OBIP	**Obispado Ponce**	**1.08**	**168**	*eS*		**Sb**	**07 12 53.3**	**+0.5**
OBIP	**Obispado Ponce**	**1.08**	**168**			**Pb**	**07 12 39.3**	**+0.1**
OBIP					Sn	**Sn**	**07 12 52.2**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.12**	**194**	**ǁeP**		**Pb**	**07 12 40.0**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.12**	**194**	*eS*		**Sn**	**07 12 54.2**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.12**	**194**			**Pn**	**07 12 39.7**	**+0.4**
CRPR					Sn	**Sn**	**07 12 54.1**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.12**	**182**	**ĥeP**		**Pb**	**07 12 40.0**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.12**	**182**	*eS*		**Sb**	**07 12 54.4**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.12**	**182**			**Pb**	**07 12 40.0**	**+0.1**
GBPR						**Sb**	**07 12 54.4**	**+0.2**
MLPR	**Magueyes Islan**	**1.15**	**190**	**ǁeP**		**Pn**	**07 12 39.9**	**+0.1**
MLPR	**Magueyes Islan**	**1.15**	**190**	*eS*		**Sn**	**07 12 54.8**	**+0.1**
MLPR	**Magueyes Islan**	**1.15**	**190**			**Pn**	**07 12 39.1**	**-0.6**
MLPR					Sn	**Sb**	**07 12 54.9**	**+0.1**
SJG	**San Juan**	**1.18**	**147**	Pg		**Pn**	**07 12 40.5**	**+0.3**
	73nm,0.3s,baz=327,slow=14,SNR=24							
SJG				Lg		Lg	07 12 54.9	
	369nm,0.3s,baz=49,slow=20,SNR=29							
SJG	**San Juan**	**1.18**	**147**			**Pn**	**07 12 40.4**	**+0.3**
SJG					Sn	**Sn**	**07 12 55.4**	**-0.1**
CBYP	**Canovanas**	**1.24**	**132**	**ǁeP**		**Sn**	**07 12 41.3**	**+0.2**
CBYP	**Canovanas**	**1.24**	**132**	*eS*		**Sn**	**07 12 56.6**	**-0.5**
CBYP	**Canovanas**	**1.24**	**132**			**Pn**	**07 12 41.2**	**+0.1**
CBYP						**Sn**	**07 12 56.7**	**-0.4**
ICMP	**Isla Caja de M**	**1.25**	**166**	**ĥeP**		**Pn**	**07 12 41.6**	**+0.5**
ICMP	**Isla Caja de M**	**1.25**	**166**	*eS*		**Sn**	**07 12 57.2**	**+0.2**
ICMP	**Isla Caja de M**	**1.25**	**166**			**Pn**	**07 12 41.6**	**+0.5**
ICMP					Sn	**Sn**	**07 12 56.5**	**-0.6**
IGPR	**InterUniversit**	**1.32**	**149**	**ĥeP**		**Pn**	**07 12 42.7**	**+0.6**
IGPR	**InterUniversit**	**1.32**	**149**	*eS*		**Sn**	**07 12 58.7**	**-0.3**
IGPR	**InterUniversit**	**1.32**	**149**			**Pn**	**07 12 42.9**	**+0.7**
PDPR	**Patillas Dam,**	**1.33**	**144**			**Pn**	**07 12 42.3**	**+0.1**
PDPR					Sn	**Sn**	**07 12 57.7**	**-1.4**
HUMP	**Col San Antoni**	**1.34**	**136**	**ĥeP**		**Pn**	**07 12 42.4**	**+0.1**
HUMP	**Col San Antoni**	**1.34**	**136**	**ĥeP**		**Pn**	**07 12 42.6**	**+0.3**
HUMP				*eS*		**Sn**	**07 12 59.7**	**+0.4**
HUMP	**Col San Antoni**	**1.34**	**136**			**Pn**	**07 12 42.5**	**+0.2**
HUMP					Sn	**Sn**	**07 12 59.3**	**0.0**
MTP	**Monte Pirata**	**1.57**	**129**	**ĥeP**		**Pn**	**07 12 45.7**	**0.0**
MTP	**Monte Pirata**	**1.57**	**129**	*eS*		**Sn**	**07 13 05.1**	**-0.1**
MTP	**Monte Pirata**	**1.57**	**129**			**Pn**	**07 12 45.8**	**+0.2**
MTP						**Sn**	**07 13 04.5**	**-0.7**
PCDR	**Punta Cana, DR**	**1.58**	**248**	**ĥeP**		**Pn**	**07 12 46.3**	**+0.6**
PCDR				*eS*		**Sn**	**07 13 04.3**	**-1.0**
PCDR	**Punta Cana, DR**	**1.58**	**248**			**Pb**	**07 12 47.1**	**-0.7**
PCDR						**Sn**	**07 13 03.6**	**-1.7**
STVI	**Saint Thomas**	**1.93**	**112**	**ĥeP**		**Pn**	**07 12 50.5**	**0.0**
STVI	**Saint Thomas**	**1.93**	**112**	**ǁeP**		**Pn**	**07 12 51.0**	**+0.5**
STVI				*eS*		**Sn**	**07 13 14.3**	**+0.2**
STVI	**Saint Thomas**	**1.93**	**112**			**Pn**	**07 12 50.5**	**0.0**
STVI						**Sn**	**07 13 14.1**	**0.0**
TBVI	**Tortola**	**2.21**	**108**	**ǁeP**		**Pn**	**07 12 55.0**	**+0.7**
TBVI	**Tortola**	**2.21**	**108**	*eS*		**Sn**	**07 13 21.4**	**+0.5**
TBVI	**Tortola**	**2.21**	**108**			**Pn**	**07 12 55.0**	**+0.7**
TBVI						**Sn**	**07 13 21.4**	**+0.5**
DR12	**Loma Pena Alta**	**2.43**	**263**			**Pn**	**07 12 59.1**	**+1.6**
DR12					Sn	**Sn**	**07 13 26.1**	**-0.3**
SDD	**Santo Domingo**	**2.99**	**258**			**Pn**	**07 13 07.7**	**+2.6**
SDD					Sn	**Sn**	**07 13 40.2**	**+0.1**
BANI	**BANI**	**3.41**	**259**			**Pn**	**07 13 13.6**	**+2.6**
SABA	**Saba**	**3.72**	**113**	Pn		**Pn**	**07 13 16.1**	**+1.0**
SABA					Sn	**Sn**	**07 14 00.4**	**+2.3**
SDDR	**Presa de Saban**	**4.21**	**269**			**Pn**	**07 13 25.1**	**+3.1**
SDDR					Sn	**Sn**	**07 14 07.6**	**-2.9**
SKI	**Saint Kitts**	**4.27**	**114**	Pn		**Pn**	**07 13 24.4**	**+1.7**
GRTK	**Grand Turk**	**4.69**	**301**	Pn		**Pn**	**07 13 27.9**	**-0.6**
LGNH	**Logne**	**5.50**	**265**	Pn		**Pn**	**07 13 40.0**	**+0.4**
FDF	**Fort de France**	**6.96**	**128**	Pn		**Pn**	**07 14 00.1**	**+0.4**
GTBY	**Guantanamo Bay**	**7.85**	**277**	Pn		**Pn**	**07 14 11.1**	**-0.8**
PCRV	**Puerto La Cruz**	**9.13**	**166**	Pn		**Pn**	**07 14 31.4**	**+1.9**
	0.5nm,0.3s,baz=339,slow=17,SNR=4.3							
PCRV					Sn	**Sn**	**07 16 02.8**	**-8.7**
	0.7nm,0.3s,baz=288,slow=20,SNR=2.6							
PLCV	**Puerto La Cruz**	**9.15**	**166**			**Pn**	**07 14 31.4**	**+1.6**
PLCV						Sn	07 16 02.8	-9.2
TOSP	**Speyside**	**9.86**	**141**	Pn		**Pn**	**07 14 38.0**	**-1.4**
SDV	**Santo Domingo**	**10.80**	**200**	Pn		**Pn**	**07 14 53.9**	**+1.2**
	0.2nm,0.3s,baz=17,slow=11,SNR=2.2							
SDV					Sn	**Sn**	**07 16 53.9**	**+1.0**
	0.4nm,0.3s,baz=189,slow=19,SNR=2.1							
SDV	**Santo Domingo**	**10.80**	**200**	Pn		**Pn**	**07 14 53.0**	**+0.3**
BBSR	**BB Station**	**13.35**	**8**	Pn		**Pn**	**07 15 26.4**	**-0.7**
RUSC	**La Rusia**	**14.47**	**206**	Pn		**Pn**	**07 15 44.7**	**+1.6**
061Z	**Ochoppi**	**14.64**	**300**	Pn		**Pn**	**07 15 43.6**	**-1.2**
ROSC	**El Rosal**	**15.95**	**208**	Pn		**P**	**07 16 05.0**	**-0.9**
	1.2nm,0.3s,baz=55,slow=16,SNR=6.9							
656A	**Willston**	**17.57**	**309**			**Pn**	**07 16 22.1**	**-0.4**
656A					IAmb	IAmb	07 16 36.5	
	comp=Z,46nm,1.1s							
456A	**Hilliard**	**17.97**	**313**	P		**Pn**	**07 16 26.9**	**-0.4**
Y60A	**Bolivia**	**17.98**	**328**	P		**Pn**	**07 16 26.7**	**-0.7**
Y60A					IAmb	IAmb	07 16 44.1	
	comp=Z,62nm,1.4s							
V62A	**Hyde County Ai**	**18.27**	**336**	P		**P**	**07 16 30.7**	**-0.4**
NHSC	**New Hope**	**18.36**	**322**	P		**P**	**07 16 32.0**	**-0.1**
Y58A	**Scranton**	**18.66**	**325**	P		**P**	**07 16 34.7**	**-0.7**
Y58A					IAmb	IAmb	07 16 41.8	
	comp=Z,25nm,0.9s							
V61A	**Roper**	**18.72**	**335**	P		**Pn**	**07 16 36.5**	**0.0**
255A	**Hazlehurst**	**19.00**	**315**	P		**Pn**	**07 16 43.4**	**+3.4**
U61A	**Possum Corner**	**19.14**	**336**	P		**Pn**	**07 16 43.2**	**+1.7**
553A	**Crawfordville**	**19.41**	**308**	P		**Pn**	**07 16 44.5**	**-0.3**
FLOC	**Florencia**	**19.44**	**207**	P		**P**	**07 16 43.6**	**-0.5**
BIRD	**Birdtown, Kers**	**19.65**	**325**	P		**Pn**	**07 16 47.9**	**+0.2**
BIRD					IAmb	IAmb	07 16 55.5	
	comp=Z,16nm,1.2s							
U59A	**Littleton**	**19.70**	**333**	P		**P**	**07 16 46.3**	**-0.5**
JSC	**Jenkinsville**	**19.83**	**323**	P		**P**	**07 16 47.5**	**-0.7**
V58A	**Windy Hill, Pi**	**19.85**	**329**	P		**P**	**07 16 48.4**	**0.0**
154A	**Montrose**	**19.85**	**316**	P		**Pn**	**07 16 52.8**	**+2.7**
154A					IAmb	IAmb	07 16 57.8	
	comp=Z,33nm,1.1s							
T60A	**Surry**	**19.95**	**336**	P		**P**	**07 16 48.6**	**-0.9**
T59A	**Double "B" Far**	**20.13**	**334**		Pn		07 16 52.8	-0.6
T59A					IAmb	IAmb	07 17 00.7	
	comp=Z,23nm,1.4s							
TEIG	**Tepich**	**20.22**	**277**	P		**P**	**07 16 49.8**	**-2.8**
TEIG					IAmb	IAmb	07 17 06.4	
	comp=Z,32nm,1.4s							
HODGE	**Hodges**	**20.38**	**321**	P		**P**	**07 16 52.7**	**-1.5**
HODGE					IAmb	IAmb	07 17 04.6	
	comp=Z,7.9nm,0.6s							
PAULI	**Pauline**	**20.54**	**323**	P		**P**	**07 16 54.7**	**-1.2**
PAULI					IAmb	IAmb	07 17 08.5	
	comp=Z,7.3nm,0.6s							
R61A	**Willards**	**20.54**	**341**	P		Pn	07 16 58.8	+0.7
GOGA	**Godfrey**	**20.59**	**317**	P		**P**	**07 16 54.2**	**-2.3**
S58A	**Poland Farm, P**	**20.89**	**334**	P		**P**	**07 17 00.3**	**+0.7**
S58A					IAmb	IAmb	07 17 11.9	
	comp=Z,15nm,0.7s							
T57A	**Hurt**	**20.89**	**331**	P		**P**	**07 17 00.3**	**+0.6**
V55A	**Taylorsville**	**20.96**	**326**	P		**P**	**07 17 01.1**	**+0.6**
V55A					IAmb	IAmb	07 17 14.2	
	comp=Z,6.7nm,0.7s							
R58B	**Mineral**	**21.12**	**335**	P		**P**	**07 17 02.0**	**-0.1**
R58B					IAmb	IAmb	07 17 15.3	
	comp=Z,17nm,0.7s							
BG3	**Lake Jocassee**	**21.31**	**321**	P		**P**	**07 17 05.0**	**+0.7**
BG3					IAmb	IAmb	07 17 19.1	
	comp=Z,6.6nm,0.5s							
S57A	**Dark Hollow, R**	**21.39**	**333**	P		**P**	**07 17 05.5**	**+0.4**
S57A					IAmb	IAmb	07 17 20.6	
	comp=Z,10nm,0.7s							
P61A	**Hammonton**	**21.62**	**343**	P		**P**	**07 17 07.5**	**0.0**
250A	**Grady**	**21.68**	**310**	P		**P**	**07 17 08.4**	**+0.3**
V53A	**Saluda**	**21.71**	**323**	P		**P**	**07 17 09.3**	**+0.7**
V53A					IAmb	IAmb	07 17 25.5	
	comp=Z,7.3nm,0.6s							
BRAL	**Brewton**	**21.85**	**307**	P		**P**	**07 17 09.4**	**-0.6**
OTAV	**Otavalo**	**21.94**	**213**	P		**P**	**07 17 11.2**	**-0.5**
W52A	**Murphy**	**21.97**	**320**	P		**P**	**07 17 11.8**	**+0.3**
W52A					IAmb	IAmb	07 17 27.3	
	comp=Z,10nm,0.8s							
SDMD	**Soldier's Deli**	**22.01**	**339**	P		**P**	**07 17 09.6**	**-2.1**
PSUB	**Penn St. - Bra**	**22.04**	**342**	P		**P**	**07 17 10.6**	**-1.5**
TKL	**Tuckaleechee C**	**22.26**	**321**	P		**P**	**07 17 14.2**	**-0.3**
TKL					IAmb	IAmb	07 17 27.2	
	comp=Z,21nm,1.4s							
V52A	**Sevierville**	**22.29**	**322**	P		**P**	**07 17 12.8**	**-2.0**
V52A					IAmb	IAmb	07 17 31.0	
	comp=Z,8.1nm,0.9s							
R55A	**Marlinton**	**22.34**	**332**	P		**P**	**07 17 18.0**	**+2.6**
R55A					IAmb	IAmb	07 17 33.0	
	comp=Z,9.6nm,0.6s							
MVL	**Millersville**	**22.38**	**341**	P		**P**	**07 17 15.1**	**-0.5**
P57A	**Homestead Farm**	**22.49**	**337**	P		**P**	**07 17 17.4**	**+0.6**
P57A					IAmb	IAmb	07 17 34.0	
	comp=Z,11nm,0.6s							
BRNJ	**Basking Ridge**	**22.51**	**344**	P		**P**	**07 17 16.4**	**-0.6**
BRNJ					IAmb	IAmb	07 17 20.9	
	comp=Z,9.3nm,1.1s							
S54A	**Dingess, Beckl**	**22.51**	**329**	P		**P**	**07 17 17.0**	**-0.2**
S54A					IAmb	IAmb	07 17 36.7	
	comp=Z,11nm,1.1s							
Q56A	**Snyder Ridge,**	**22.57**	**334**	P		**P**	**07 17 17.4**	**-0.4**
Q56A					IAmb	IAmb	07 17 36.3	
	comp=Z,17nm,0.8s							
CPCT	**Cooper Cave**	**22.57**	**320**	P		**P**	**07 17 15.6**	**-2.2**
CPCT					IAmb	IAmb	07 17 31.5	
	comp=Z,12nm,1.3s							
V51A	**Loudon**	**22.71**	**321**	P		**P**	**07 17 18.4**	**-0.8**
V51A					IAmb	IAmb	07 17 37.0	
	comp=Z,28nm,1.5s							
PAGS	**Pennsylvania G**	**22.71**	**340**	P		**P**	**07 17 18.7**	**-0.4**
PAGS					IAmb	IAmb	07 17 34.6	
	comp=Z,19nm,1.3s							
TZTN	**Tazewell**	**22.75**	**323**	P		**P**	**07 17 19.1**	**-0.5**
TZTN					IAmb	IAmb	07 17 34.9	
	comp=Z,15nm,1.4s							
LRAL	**Lakeview Retre**	**22.76**	**312**	P		**P**	**07 17 19.7**	**-0.1**
T52A	**Hallie**	**22.85**	**325**	P		**P**	**07 17 19.1**	**-1.6**
T52A					IAmb	IAmb	07 17 29.7	
	comp=Z,16nm,1.4s							
ODNJ	**Ogdensburg**	**22.89**	**345**	P		**P**	**07 17 21.4**	**+0.3**
ODNJ					IAmb	IAmb	07 17 35.4	
	comp=Z,14nm,1.4s							
W50A	**Signal Mountai**	**22.90**	**318**	P		**P**	**07 17 19.4**	**-1.9**
APG	**El Apazote**	**22.95**	**263**	P		**P**	**07 17 22.6**	**+0.4**
	comp=Z,4.2nm,0.8s,baz=9.8,slow=8.3,SNR=6.0							
BRYW	**Bryant College**	**23.09**	**351**	P		**P**	**07 17 21.7**	**-1.4**
R53A	**Hurricane**	**23.24**	**329**	P		**P**	**07 17 24.7**	**0.0**
R53A					IAmb	IAmb	07 17 32.7	
	comp=Z,13nm,0.9s							
N58A	**Sunbury**	**23.26**	**341**	P		**P**	**07 17 24.6**	**-0.2**
N58A					IAmb	IAmb	07 17 39.0	
	comp=Z,22nm,1.4s							
O56A	**Blue Knob Stat**	**23.38**	**337**	P		**P**	**07 17 25.0**	**-1.1**
HHAR	**Hobbs**	**29.33**	**311**	P		**P**	**07 18 16.6**	**-3.5**
ABTX	**Abilene, Hawle**	**32.30**	**301**	P		**P**	**07 18 47.8**	**+1.4**
TXAR	**Lajitas Array**	**34.97**	**294**	P		**P**	**07 19 11.0**	**+1.2**
	comp=Z,3.3nm,0.6s,baz=111,slow=9.8,SNR=45							
TXAR					PcP	**PcP**	**07 21 43.1**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=138,slow=5.7,SNR=4.8							
TX31	**Lajitas Ar. Si**	**34.97**	**294**	P		**P**	**07 19 11.3**	**+1.6**
TX31					IAmb	IAmb	07 19 12.4	
	comp=Z,4.2nm,0.7s							
TX32	**Lajitas Array**	**34.97**	**294**	P		**P**	**07 19 10.6**	**+0.9**
TX32					IAmb	IAmb	07 19 12.4	
	comp=Z,4.3nm,0.7s							
ECSD	**EROS Data Cent**	**35.01**	**321**	P		**P**	**07 19 09.3**	**-0.5**
ECSD					IAmb	IAmb	07 19 18.7	
	comp=Z,3.6nm,1.1s							
LPAZ	**La Paz**	**35.19**	**182**	P		**P**	**07 19 13.9**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=42,slow=15,SNR=2.4							
LPAZ	**La Paz**	**35.19**	**182**	IAmb		IAmb	07 19 19.4	
	comp=Z,2.1nm,1.3s							
SIV	**San Ignacio**	**35.33**	**170**	P		**P**	**07 19 12.6**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=308,slow=12,SNR=4.2							
MNTX	**Cornudas Mount**	**36.82**	**298**	P		**P**	**07 19 24.5**	**-1.0**
PDAR	**Pinedale Array**	**42.98**	**313**	P		**P**	**07 20 18.1**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=102,slow=8.6,SNR=5.1							
PDAR					PcP	**PcP**	**07 22 07.6**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=90,slow=5.4,SNR=2.7							
RLMT	**Red Lodge**	**43.63**	**316**	P		**P**	**07 20 21.0**	**-0.9**
RLMT					IAmb	IAmb	07 20 24.5	
	comp=Z,4.6nm,0.7s							
YHB	**Horse Butte**	**44.77**	**315**	P		**P**	**07 20 29.7**	**-1.5**
CPUP	**Villa Florida**	**46.10**	**168**	P		**P**	**07 20 39.6**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=5.3,slow=9.8,SNR=3.7							
CPUP	**Villa Florida**	**46.10**	**168**	IAmb		IAmb	07 20 45.7	
	comp=Z,12nm,1.4s							
NVAR	**Mina Array Bea**	**48.39**	**305**	P		**P**	**07 20 58.9**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=102,slow=6.5,SNR=4.1							
NVAR					PcP	**PcP**	**07 22 28.1**	**+2.1**
	comp=Z,0.3nm,0.7s,baz=103,slow=3.2,SNR=2.8							
NEW	**Newport**	**49.78**	**318**	P		**P**	**07 21 08.5**	**-1.4**
YKA	**Yellowknife Ar**	**54.32**	**335**	P		**P**	**07 21 43.1**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=112,slow=7.2,SNR=17							
ESDC	**Sonseca Array**	**57.34**	**55**	P		**P**	**07 22 07.4**	**+1.9**
	comp=Z,0.8nm,0.5s,baz=277,slow=7.1,SNR=6.8							
ESDC	**Sonseca Array**	**57.34**	**55**	IAmb		IAmb	07 22 08.7	
	comp=Z,0.6nm,0.7s							
TORD	**Torodi Ar. Bea**	**65.75**	**84**	P		**P**	**07 23 02.8**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=277,slow=6.7,SNR=3.8							
TORD	**Torodi Ar. Bea**	**65.75**	**84**	IAmb		IAmb	07 23 06.5	
	comp=Z,0.8nm,1.1s							
ILAR	**Eielson Array**	**68.66**	**333**	P		**P**	**07 23 20.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=108,slow=3.9,SNR=13							
STKA	**Stephens Creek**	**151.46**	**238**	PKPbc		**PKPbc**	**07 32 11.6**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=39,slow=3.5,SNR=4.4							
ASAR	**Alice Springs**	**160.17**	**253**	PKPab		**PKPab**	**07 32 57.2**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=99,slow=4.5,SNR=4.7							

*ISK **13** 07:35:34.7, 39.°39N×28.°10E, h14km, ML1.8/4*
*DDA **13** 07:35:35.0, 39.°43N×28.°18E, h7km±4km, MD2.5*

ISC 13 07:35:35.3±1.2, 39.°43N±0.°04×28.°12E±0.°03, h14km±10km, n11, σ0°62/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
BALB	**Balikesir**	**0.28**	**319**	PG		**Pg**	**07 35 41.4**	**+0.2**
BALB				SG		**Sb**	**07 35 46.9**	**+0.2**
STEP	**BALIKESIR_Sava**	**0.31**	**260**	*iP*		**Pg**	**07 35 41.9**	**+0.1**
STEP				*iS*		**Sb**	**07 35 48.5**	**+0.7**
BALY	**Balya**	**0.49**	**309**	*iP*		**Pg**	**07 35 45.0**	**0.0**
MANT	**Manisa**	**1.00**	**160**	*iP*		**Pn**	**07 35 54.8**	**-0.4**
MANT				*iS*		**Sb**	**07 36 07.6**	**-0.1**
USAK	**Uak-Merkez**	**1.00**	**135**	*iP*		**Pn**	**07 35 55.7**	**+0.6**
USAK				*iS*		**Sb**	**07 36 07.4**	**-0.2**
TVSB	**Tavsanli**	**1.04**	**89**	PG		**Pn**	**07 35 55.6**	**-0.1**
TVSB				SG		**Sn**	**07 36 10.7**	**+0.6**
ULDT	**Uludag**	**1.06**	**48**	*iP*		**Pg**	**07 35 55.3**	**-0.5**
ULDT				*iS*		**Sg**	**07 36 09.1**	**-0.6**
GDZ	**Gediz**	**1.11**	**107**	*iP*		**Pn**	**07 35 56.2**	**-0.5**
GDZ				*iS*		**Sn**	**07 36 12.1**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**1.25**	**285**	*iP*		**Pn**	**07 35 56.7**	**-1.7**
ARMT	**Armutlu**	**1.27**	**27**	PN		**Pb**	**07 35 59.2**	**+0.1**
ARMT				SN		**Sg**	**07 36 16.8**	**+0.5**
LPK	**Lapseki**	**1.40**	**312**	PN		**Pn**	**07 36 00.8**	**+0.3**

*DDA **13** 07:52:49.2, 37.°07N×39.°23E, h7km±1km, MD2.5*
*ISK **13** 07:52:50.5, 37.°22N×39.°25E, h5km, ML2.2/6*

**ISC 13 07:52:48.8±1.5, 37.°08N±0.°07×39.°23E±0.°03, h9km±11

RSPR ***13*** *08:11:55.9, 19°.14N × 66°.86W, h31 km ± 7 km, MD3.1/11*
ISC 13 08:11:55.6±1.6, 19°.06N±0°.07 × 66°.82W±0°.04, h30 km±11 km, n43, σ0961/56, 11C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.64**	**154**	*eS*	**Sb**	**08 12 18.1**	**+1.1**
EMPR	**Esperanza - Ma**	**0.64**	**154**	⇑*eP*	**Pb**	**08 12 08.4**	**+0.1**
AGPR	**Aguadilla, PR**	**0.65**	**205**	*eS*	**Sb**	**08 12 17.7**	**+0.5**
AGPR	**Aguadilla, PR**	**0.65**	**205**	⇑*eP*	**Pb**	**08 12 07.8**	**-0.6**
AGPR	**Aguadilla, PR**	**0.65**	**205**		**Pb**	**08 12 07.8**	**-0.6**
AGPR					**Sb**	**08 12 17.7**	**+0.5**
AOPR	**Arecibo Observ**	**0.71**	**175**	*eS*	**Sn**	**08 12 20.4**	**+0.8**
AOPR	**Arecibo Observ**	**0.71**	**175**	⇑*eP*	**Pb**	**08 12 09.2**	**-0.4**
AOPR	**Arecibo Observ**	**0.71**	**175**		**Pb**	**08 12 09.1**	**-0.4**
AOPR					**Sn**	**08 12 20.3**	**+0.8**
MPR	**Mayaguez**	**0.89**	**200**		**Pn**	**08 12 11.3**	**-0.7**
LSP	**Las Mesas**	**0.91**	**196**	⇑*eP*	**Pn**	**08 12 12.1**	**-0.3**
LSP	**Las Mesas**	**0.91**	**196**	*eS*	**Sb**	**08 12 24.2**	**-0.5**
LSP	**Las Mesas**	**0.91**	**196**		**Pn**	**08 12 12.1**	**-0.3**
LSP					**Sb**	**08 12 24.2**	**-0.5**
CELP	**Cerrillos**	**1.00**	**167**	⇑*eP*	**Pn**	**08 12 13.5**	**-0.1**
CELP				*eS*	**Sn**	**08 12 26.9**	**+0.1**
CELP	**Cerrillos**	**1.00**	**167**		**Pn**	**08 12 13.5**	**-0.1**
CELP					**Sn**	**08 12 26.9**	**+0.1**
GCPR	**Guaynabo City**	**1.02**	**137**		**Pn**	**08 12 13.9**	**0.0**
GCPR				Sn	**Sn**	**08 12 26.7**	**-0.5**
OBIP	**Obispado Ponce**	**1.03**	**168**	⇑*eP*	**Pn**	**08 12 14.0**	**0.0**
OBIP	**Obispado Ponce**	**1.03**	**168**	*eS*	**Sn**	**08 12 27.9**	**+0.5**
OBIP	**Obispado Ponce**	**1.03**	**168**		**Pn**	**08 12 13.9**	**-0.1**
OBIP					**Sn**	**08 12 27.7**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.08**	**183**	⇑*eP*	**Pn**	**08 12 14.9**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.08**	**183**	*eS*	**Sn**	**08 12 29.6**	**+1.0**
GBPR	**Guanica, Bosqu**	**1.08**	**183**		**Pn**	**08 12 14.9**	**+0.2**
GBPR					**Sn**	**08 12 29.6**	**+1.0**
CRPR	**Cabo Rojo, PR**	**1.08**	**195**	⇑*eP*	**Pn**	**08 12 14.5**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.08**	**195**	*eS*	**Sn**	**08 12 28.4**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.08**	**195**		**Pn**	**08 12 14.4**	**-0.2**
CRPR					**Sn**	**08 12 28.2**	**-0.4**
MLPR	**Magueyes Islan**	**1.10**	**191**	⇑*eP*	**Pn**	**08 12 13.8**	**-1.2**
MLPR	**Magueyes Islan**	**1.10**	**191**	*eS*	**Sn**	**08 12 29.3**	**+0.1**
MLPR	**Magueyes Islan**	**1.10**	**191**		**Pn**	**08 12 13.8**	**-1.2**
MLPR					**Sn**	**08 12 29.6**	**+0.4**
SJG	**San Juan**	**1.14**	**146**	Pn	**Pn**	**08 12 15.3**	**-0.2**
ICMP	**Isla Caja de M**	**1.20**	**166**	Pn	**Pn**	**08 12 17.3**	**+1.0**
ICMP				Sn	**Sn**	**08 12 32.5**	**+0.9**
CBYP	**Canovanas**	**1.20**	**130**	Sn	**Sn**	**08 12 30.9**	**-0.9**
IGPR	**InterUniversit**	**1.28**	**148**	⇑*eP*	**Pn**	**08 12 17.4**	**-0.1**
IGPR	**InterUniversit**	**1.28**	**148**	*eS*	**Sn**	**08 12 33.0**	**-0.6**
PDPR	**Patillas Dam,**	**1.28**	**144**		**Pn**	**08 12 18.4**	**+0.9**
HUMP	**Col San Antoni**	**1.30**	**134**	⇑*eP*	**Pn**	**08 12 17.6**	**-0.1**
HUMP	**Col San Antoni**	**1.30**	**134**	*eS*	**Sn**	**08 12 34.2**	**+0.3**
HUMP	**Col San Antoni**	**1.30**	**134**		**Pn**	**08 12 17.5**	**-0.1**
HUMP					**Sn**	**08 12 33.9**	**-0.1**
MTP	**Monte Pirata**	**1.54**	**128**		**Pn**	**08 12 20.6**	**-0.3**
PCDR	**Punta Cana, DR**	**1.57**	**250**	Pn	**Pn**	**08 12 22.3**	**+0.9**
STVI	**Saint Thomas**	**1.91**	**111**	Pn	**Pn**	**08 12 25.5**	**-0.5**
STVI				Sn	**Sn**	**08 12 48.7**	**-0.3**
DR12	**Loma Pena Alta**	**2.44**	**264**		**Pn**	**08 12 34.0**	**+0.6**
BANI	**BANI**	**3.42**	**259**	Pn	**Pn**	**08 12 45.5**	**-1.4**
SEUS	**St. Eustatius**	**3.97**	**112**	Pn	**Pn**	**08 12 54.9**	**+0.5**
SDDR	**Presa de Saban**	**4.22**	**270**	Pn	**Pn**	**08 12 58.6**	**+0.6**

NNC ***13*** *08:18:37.2±2.5, 54°.21N × 87°.51E, h0 km, mb3.6, mpv3.4, Error ellipse: s-maj=20.4km s-min=11.8km az=23.0*
IDC ***13*** *08:18:40.3±1.4, 54°.18N × 87°.21E, h0 km, mb3.2/1, mb1 3.6/4, mb1mx3.3/40, mbtmp3.5/4, ML3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx2.5/31, Error ellipse: s-maj=14.2km s-min=12.8km az=108.0*
ASRS 13 08:18:37.0, 54°.12N × 87°.23E, M2.2, 7C-7D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**1.43**	**264**	⇑*P*	**Pb**	**08 19 05.5**	**+0.9**
	3.0nm,0.5s						
ZAA0				⇓*S*	**Sn**	**08 19 28.6**	**+4.8**
	7.9nm,0.3s						
ZALV	**Zalesovo Beam**	**1.43**	**264**	Pg	**Pb**	**08 19 05.8**	**+1.2**
	13nm,0.3s,baz=84,slow=16,SNR=59						
ZALV				Lg	**Lg**	**08 19 26.1**	
	16nm,0.3s,baz=78,slow=27,SNR=15						
KURK	**Kurchatov**	**6.28**	**241**	⇑*Pn*	**Pn**	**08 20 14.8**	**+4.1**
	4.8nm,0.8s						
KURK				⇑*Sn*	**Sn**	**08 21 27.7**	**+4.6**
	3.5nm,0.5s						
KURK				⇑*Lg*	**Lg**	**08 22 00.9**	
	16nm,0.7s						
KURBB	**Kurchatov Arra**	**6.38**	**240**	Pn	**Pn**	**08 20 16.1**	**+4.0**
	0.4nm,0.3s,baz=56,slow=14,SNR=18						
KURBB				Sn	**Sn**	**08 21 27.7**	**+2.1**
	0.3nm,0.3s,baz=43,slow=16,SNR=4.8						
KURBB				Lg	**Lg**	**08 22 02.4**	
	0.1nm,0.3s,baz=151,slow=27,SNR=4.1						
KURBB	**Kurchatov Arra**	**6.38**	**240**	⇓*Pn*	**Pn**	**08 20 15.7**	**+3.6**
	7.9nm,0.8s						
KURBB				⇑*Sn*	**Sn**	**08 21 32.8**	**+7.2**
	18nm,0.6s						
KURBB				⇓*Lg*	**Lg**	**08 22 02.5**	
	37nm,0.7s						
MK31	**Makanchi Array**	**7.98**	**205**	⇓*Pn*	**Pn**	**08 20 39.4**	**+5.2**
	0.7nm,0.4s,baz=28,slow=14,SNR=22						
MK31				⇓*Sn*	**Sn**	**08 22 09.4**	**+4.3**
	1.7nm,0.5s,baz=26,slow=24,SNR=6.8						
MK31				⇑*Lg*	**Lg**	**08 22 54.9**	
	13nm,0.8s,baz=34,slow=30,SNR=5.2						
MKAR	**Makanchi Array**	**7.98**	**205**	Pn	**Pn**	**08 20 39.0**	**+4.8**
	0.5nm,0.3s,baz=28,slow=14,SNR=15						
MKAR				Sn	**Sn**	**08 22 10.2**	**+5.0**
	0.8nm,0.3s,baz=73,slow=33,SNR=8.0						
MKAR				Lg	**Lg**	**08 22 55.0**	
	0.3nm,0.3s,baz=24,slow=28,SNR=2.7						
MAKZ	**Makanchi**	**8.05**	**207**	⇑*Pn*	**Pn**	**08 20 40.2**	**+5.1**
	0.6nm,0.5s						
MAKZ				⇓*Sn*	**Sn**	**08 22 09.5**	**+2.7**
	5.0nm,1.1s						
MAKZ				⇓*Lg*	**Lg**	**08 22 59.5**	
	19nm,1.3s						
BVAR	**Borovoye Array**	**10.08**	**271**	Pn	**Pn**	**08 21 06.4**	**+3.5**
	0.7nm,0.3s,baz=76,slow=15,SNR=12						
BVAR				Sn	**Sn**	**08 22 52.8**	**-3.8**
	1.1nm,0.3s,baz=74,slow=22,SNR=16						
KIRV	**Kirov**	**21.22**	**297**	LR	**LR**	**08 33 42.5**	
	comp=Z,63nm,20.9s,baz=190,slow=43						
YKA	**Yellowknife Ar**	**62.47**	**11**	P	**P**	**08 29 03.5**	**+2.1**
	0.2nm,0.7s,baz=342,slow=7.6,SNR=5.1						

IDC ***13*** *08:26:59.8±2.0, 19°.30N × 66°.60W, h0 km, mb3.3/2, mb1 3.8/3, mb1mx3.4/36, mbtmp3.6/3, ML2.7/1, Error ellipse: s-maj=66.4km s-min=13.3km az=63.0*
NEIC ***13*** *08:27:06.0±1.4, 19°.08N±0°.06 × 66°.86W±0°.02, h37 km±29 km, Error ellipse: s-maj=9.3km s-min=1.4km az=167.0*
RSPR ***13*** *08:27:06.5, 19°.07N × 66°.87W, h56 km ± 4 km, MD3.2/14*
ISC 13 08:27:04.4±1.3, 19°.08N±0°.04 × 66°.85W±0°.03, h25 km±12 km, n55, σ0969/79, 10C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.66**	**202**		**Pb**	**08 27 17.4**	**+0.1**
AGPR				Sn	**Sb**	**08 27 26.7**	**+0.6**
EMPR	**Esperanza - Ma**	**0.68**	**153**	⇑*eP*	**Pn**	**08 27 19.0**	**+0.6**
EMPR	**Esperanza - Ma**	**0.68**	**153**	*eS*	**Sn**	**08 27 29.4**	**+1.3**
EMPR	**Esperanza - Ma**	**0.68**	**153**		**Pn**	**08 27 19.2**	**+0.9**
EMPR					**Sn**	**08 27 30.4**	**+2.3**
AOPR	**Arecibo Observ**	**0.74**	**173**	⇓*eP*	**Pn**	**08 27 19.9**	**+0.6**
AOPR				*eS*	**Sn**	**08 27 30.4**	**+0.8**
AOPR	**Arecibo Observ**	**0.74**	**173**		**Pn**	**08 27 19.2**	**-0.1**
AOPR					**Sn**	**08 27 30.8**	**+1.1**
MPR	**Mayaguez**	**0.91**	**198**		**Pb**	**08 27 21.2**	**-0.4**
MPR				Sn	**Sn**	**08 27 34.9**	**+1.1**
LSP	**Las Mesas**	**0.93**	**194**	⇑*eP*	**Pn**	**08 27 22.1**	**+0.2**
LSP	**Las Mesas**	**0.93**	**194**	*eS*	**Sn**	**08 27 34.9**	**+0.5**
LSP	**Las Mesas**	**0.93**	**194**		**Pn**	**08 27 22.1**	**+0.2**
LSP					**Sn**	**08 27 34.9**	**+0.5**
CELP	**Cerrillos**	**1.04**	**166**	⇓*eP*	**Pn**	**08 27 24.0**	**+0.6**
CELP				*eS*	**Sn**	**08 27 37.6**	**+0.6**
CELP	**Cerrillos**	**1.04**	**166**		**Pn**	**08 27 24.0**	**+0.6**
CELP					**Sn**	**08 27 37.6**	**+0.6**
GCPR	**Guaynabo City**	**1.06**	**137**		**Pb**	**08 27 23.9**	**-0.2**
GCPR				Sn	**Sn**	**08 27 39.1**	**+1.6**
OBIP	**Obispado Ponce**	**1.06**	**167**	⇑*eP*	**Pb**	**08 27 24.2**	**0.0**
OBIP	**Obispado Ponce**	**1.06**	**167**	*eS*	**Sn**	**08 27 38.6**	**+1.0**
OBIP	**Obispado Ponce**	**1.06**	**167**		**Pb**	**08 27 24.1**	**0.0**
OBIP					**Sn**	**08 27 38.9**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.10**	**193**	⇓*eP*	**Pn**	**08 27 24.1**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.10**	**193**	*eS*	**Sb**	**08 27 38.4**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.10**	**193**		**Pn**	**08 27 24.1**	**-0.1**
CRPR					**Sb**	**08 27 38.6**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.10**	**181**	⇑*eP*	**Pb**	**08 27 24.9**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.10**	**181**	*eS*	**Sn**	**08 27 38.8**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.10**	**181**		**Pb**	**08 27 24.9**	**+0.1**
GBPR					**Sn**	**08 27 38.8**	**+0.1**
MLPR	**Magueyes Islan**	**1.12**	**189**	⇑*eP*	**Pb**	**08 27 24.4**	**-0.1**
MLPR	**Magueyes Islan**	**1.12**	**189**	*eS*	**Sb**	**08 27 39.0**	**-0.4**
MLPR	**Magueyes Islan**	**1.12**	**189**		**Pn**	**08 27 23.6**	**-0.9**
MLPR					**Sb**	**08 27 38.5**	**-0.8**
SJG	**San Juan**	**1.17**	**145**	Pg	**Pn**	**08 27 25.1**	**-0.1**
	20nm,0.3s,baz=320,slow=10,SNR=27						
SJG				Lg	**Lg**	**08 27 39.5**	
	45nm,0.3s,baz=32,slow=21,SNR=21						
SJG	**San Juan**	**1.17**	**145**		**Pb**	**08 27 25.6**	**-0.4**
SJG				Sn	**Sn**	**08 27 41.6**	**+1.2**
ICMP	**Isla Caja de M**	**1.23**	**165**		**Pb**	**08 27 26.9**	**-0.1**
CBYP	**Canovanas**	**1.24**	**130**	⇑*eP*	**Pn**	**08 27 26.5**	**+0.2**
CBYP	**Canovanas**	**1.24**	**130**	*eS*	**Sb**	**08 27 43.3**	**+0.4**
CBYP	**Canovanas**	**1.24**	**130**	Pn	**Sb**	**08 27 26.4**	**+0.2**
CBYP					**Sn**	**08 27 42.3**	**+0.2**
IGPR	**InterUniversit**	**1.32**	**147**	⇑*eP*	**Pn**	**08 27 27.7**	**+0.5**
IGPR				*eS*	**Sb**	**08 27 44.5**	**-0.4**
IGPR	**InterUniversit**	**1.32**	**147**		**Pb**	**08 27 27.9**	**-0.6**
IGPR				Sn	**Sb**	**08 27 44.6**	**-0.4**
PDPR	**Patillas Dam,**	**1.32**	**143**		**Pb**	**08 27 27.9**	**-0.7**
PDPR				Sn	**Sb**	**08 27 44.6**	**-0.4**
HUMP	**Col San Antoni**	**1.33**	**134**	⇑*eP*	**Pb**	**08 27 28.3**	**-0.5**
HUMP				*eS*	**Sn**	**08 27 44.4**	**0.0**
HUMP	**Col San Antoni**	**1.33**	**134**	⇑*eP*	**Pb**	**08 27 28.4**	**-0.5**
HUMP				*eS*	**Sb**	**08 27 45.1**	**-0.3**
HUMP	**Col San Antoni**	**1.33**	**134**		**Pb**	**08 27 28.1**	**-0.6**
HUMP					**Sn**	**08 27 44.7**	**+0.4**
PCDR	**Punta Cana, DR**	**1.56**	**249**	⇓*eP*	**Pn**	**08 27 30.8**	**+0.3**
PCDR	**Punta Cana, DR**	**1.56**	**249**	*eS*	**Sn**	**08 27 50.4**	**+0.5**
PCDR	**Punta Cana, DR**	**1.56**	**249**		**Pn**	**08 27 30.9**	**+0.5**
PCDR					**Sn**	**08 27 50.2**	**+0.4**
MTP	**Monte Pirata**	**1.57**	**128**	⇑*eP*	**Pn**	**08 27 31.1**	**+0.4**
MTP	**Monte Pirata**	**1.57**	**128**	*eS*	**Sn**	**08 27 50.5**	**+0.1**
MTP	**Monte Pirata**	**1.57**	**128**		**Sn**	**08 27 30.9**	**+0.2**
MTP					**Sn**	**08 27 50.6**	**+0.2**
STVI	**Saint Thomas**	**1.94**	**112**	Pn	**Pn**	**08 27 36.3**	**+0.5**
STVI					**Sn**	**08 28 00.1**	**+0.8**
DR12	**Loma Pena Alta**	**2.41**	**263**		**Pn**	**08 27 42.2**	**-0.1**
BANI	**BANI**	**3.39**	**259**	Pn	**Pn**	**08 27 57.0**	**+1.1**
SDDR	**Presa de Saban**	**4.20**	**269**		**Pn**	**08 28 07.8**	**+0.9**
BBSR	**BB Station**	**13.37**	**8**	Pn	**Pn**	**08 30 13.8**	**+1.2**
RUSC	**La Rusia**	**14.45**	**206**	Pn	**Pn**	**08 30 27.4**	**-0.4**
ROSC	**El Rosal**	**15.92**	**208**	Pn	**P**	**08 30 50.6**	**-0.1**
	0.6nm,0.3s,baz=30,slow=20,SNR=3.7						
Y60A	**Bolivia**	**17.98**	**328**	P	**Pn**	**08 31 12.2**	**-0.5**
V62A	**Hyde County Ai**	**18.28**	**336**		**P**	**08 31 16.3**	**0.0**
Y58A	**Scranton**	**18.67**	**325**	Pn	**Pn**	**08 31 21.4**	**+0.4**
TXAR	**Lajitas Array**	**34.97**	**294**	P	**P**	**08 33 54.9**	**+0.1**
	0.9nm,0.8s,baz=112,slow=9.1,SNR=10						
YKA	**Yellowknife Ar**	**54.34**	**335**	P	**P**	**08 36 26.5**	**-2.0**
	0.1nm,0.6s,baz=119,slow=7.6,SNR=3.6						

IDC ***13*** *08:28:22.2±0.8, 19°.08N × 66°.85W, h0 km, mb3.7/6, mb1 4.1/7, mb1mx3.7/36, mbtmp3.8/7, ML3.3/1, MS2.7/1, Ms1 2.7/1, ms1mx2.4/36, Error ellipse: s-maj=34.7km s-min=10.6km az=56.0*
RSPR ***13*** *08:28:28.0, 19°.06N × 66°.74W, h15 km ± 3 km, MD3.3/15*
NEIC ***13*** *08:28:27.7±2.2, 19°.00N±0°.06 × 66°.74W±0°.03, h39 km±11 km, Error ellipse: s-maj=8.6km s-min=4.5km az=178.0*
ISC 13 08:28:25.6±1.3, 19°.07N±0°.04 × 66°.72W±0°.03, h18 km±5 km, n72, σ0997/99, mb3.8/6, 21C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.62**	**163**	⇑*eP*	**Pn**	**08 28 39.4**	**0.0**
EMPR	**Esperanza - Ma**	**0.62**	**163**	*eS*	**Sb**	**08 28 47.6**	**+1.5**
EMPR	**Esperanza - Ma**	**0.62**	**163**		**Pb**	**08 28 39.3**	**+1.5**
EMPR				Sg	**Sn**	**08 28 51.1**	**+2.2**
AGPR	**Aguadilla, PR**	**0.70**	**212**	⇑*eP*	**Pg**	**08 28 39.4**	**0.0**
AGPR	**Aguadilla, PR**	**0.70**	**212**	*eS*	**Sb**	**08 28 49.0**	**+0.5**
AGPR	**Aguadilla, PR**	**0.70**	**212**		**Pg**	**08 28 39.3**	**-0.1**
AGPR				Sg	**Sb**	**08 28 49.1**	**+0.5**
AGPR	**Aguadilla, PR**	**0.70**	**212**		**Pg**	**08 28 39.3**	**-0.1**
AOPR	**Arecibo Observ**	**0.72**	**182**	⇑*eP*	**Pg**	**08 28 40.0**	**+0.2**
AOPR	**Arecibo Observ**	**0.72**	**182**		**Pg**	**08 28 39.8**	**+0.1**
AOPR				Sg	**Sb**	**08 28 49.9**	**+0.8**
UUPR	**Utuado, UPR, P**	**0.81**	**180**		**Pg**	**08 28 41.3**	**-0.2**
MPR	**Mayaguez**	**0.94**	**205**		**Pb**	**08 28 42.5**	**-0.8**
MPR				Sg	**Sb**	**08 28 54.9**	**-0.6**
LSP	**Las Mesas**	**0.95**	**201**	⇑*eP*	**Pb**	**08 28 43.1**	**-0.4**
LSP	**Las Mesas**	**0.95**	**201**		**Pb**	**08 28 43.1**	**-0.4**
GCPR	**Guaynabo City**	**0.97**	**141**	Pg	**Pb**	**08 28 44.2**	**+0.4**
GCPR				Sg	**Sb**	**08 28 57.2**	**+0.9**
CELP	**Cerrillos**	**1.00**	**172**	⇑*eP*	**Pb**	**08 28 44.1**	**-0.2**
CELP				*eS*	**Sb**	**08 28 56.7**	**-0.5**
CELP	**Cerrillos**	**1.00**	**172**		**Pb**	**08 28 44.1**	**-0.2**
CELP					**Sb**	**08 28 56.7**	**-0.5**
OBIP	**Obispado Ponce**	**1.03**	**174**	⇑*eP*	**Pb**	**08 28 44.6**	**-0.2**
OBIP	**Obispado Ponce**	**1.03**	**174**	*eS*	**Sb**	**08 28 57.6**	**-0.4**
OBIP	**Obispado Ponce**	**1.03**	**174**		**Pb**	**08 28 44.7**	**-0.2**
OBIP				Sg	**Sn**	**08 28 59.8**	**+0.8**
SJG	**San Juan**	**1.10**	**150**	Pg	**Pb**	**08 28 45.8**	**-0.2**
	45nm,0.3s,baz=180,slow=19,SNR=8.2						
SJG				Lg	**Lg**	**08 28 59.5**	
	163nm,0.3s,baz=247,slow=19,SNR=10.0						
SJG	**San Juan**	**1.10**	**150**		**Pb**	**08 28 46.5**	**+0.5**
SJG				Sg	**Sn**	**08 29 02.4**	**+1.7**
GBPR	**Guanica, Bosqu**	**1.10**	**188**	⇑*eP*	**Pb**	**08 28 45.8**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.10**	**188**	*eS*	**Sb**	**08 28 59.6**	**-0.4**
GBPR	**Guanica, Bosqu**	**1.10**	**188**		**Pb**	**08 28 45.8**	**-0.3**
GBPR					**Sb**	**08 28 59.6**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.12**	**199**	⇑*eP*	**Pb**	**08 28 45.5**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.12**	**199**	*eS*	**Sb**	**08 28 59.8**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.12**	**199**		**Pb**	**08 28 45.5**	**-0.9**
CRPR				Sn	**Sb**	**08 29 00.6**	**-0.1**
MLPR	**Magueyes Islan**	**1.14**	**196**	⇑*eP*	**Pb**	**08 28 44.6**	**-2.1**
MLPR	**Magueyes Islan**	**1.14**	**196**	*eS*	**Sb**	**08 29 00.1**	**-1.0**
MLPR	**Magueyes Islan**	**1.14**	**196**		**Pb**	**08 28 44.9**	**-1.8**
MLPR				Sn	**Sb**	**08 29 01.7**	**+0.6**
CBYP	**Canovanas**	**1.14**	**134**	⇑*eP*	**Pb**	**08 28 46.4**	**-0.4**
CBYP				*eS*	**Sb**	**08 29 01.2**	**-0.2**
CBYP	**Canovanas**	**1.14**	**134**	⇑*eP*	**Pb**	**08 28 46.4**	**-0.4**
CBYP	**Canovanas**	**1.14**	**134**		**Pb**	**08 28 46.4**	**-0.5**
CBYP				Sn	**Sb**	**08 29 01.3**	**0.0**
ICMP	**Isla Caja de M**	**1.19**	**171**	⇑*eP*	**Pn**	**08 28 47.4**	**+0.1**
ICMP	**Isla Caja de M**	**1.19**	**171**		**Pn**	**08 28 47.6**	**+0.3**
ICMP				Sn	**Sn**	**08 29 04.3**	**+1.2**
HUMP	**Col San Antoni**	**1.24**	**138**	⇑*eP*	**Pn**	**08 28 47.9**	**-0.1**
HUMP	**Col San Antoni**	**1.24**	**138**	*eS*	**Sb**	**08 29 03.1**	**-0.9**
HUMP	**Col San Antoni**	**1.24**	**138**	⇑*eP*	**Pb**	**08 28 47.9**	**-0.1**
HUMP				*eS*	**Sb**	**08 29 04.0**	**-0.1**
HUMP	**Col San Antoni**	**1.24**	**138**		**Pn**	**08 28 48.0**	**0.0**
HUMP				Sn	**Sb**	**08 29 04.8**	**+0.7**
PDPR	**Patillas Dam,**	**1.24**	**147**	Pn	**Pn**	**08 28 48.8**	**+0.8**
PDPR				Sn	**Sb**	**08 29 04.7**	**+0.6**
IGPR	**InterUniversit**	**1.25**	**152**	⇑*eP*	**Pn**	**08 28 48.0**	**0.0**
IGPR				*eS*	**Sb**	**08 29 02.9**	**-1.3**
IGPR	**InterUniversit**	**1.25**	**152**	⇑*eP*	**Pn**	**08 28 48.0**	**0.0**
IGPR	**InterUniversit**	**1.25**	**152**	*eS*	**Sb**	**08 29 03.5**	**-0.7**
IGPR	**InterUniversit**	**1.25**	**152**		**Pn**	**08 28 48.0**	**0.0**
IGPR					**Sb**	**08 29 05.0**	**+0.8**
MTP	**Monte Pirata**	**1.47**	**131**	⇑*eP*	**Pn**	**08 28 50.8**	**-0.4**
MTP	**Monte Pirata**	**1.47**	**131**	*eS*	**Sn**	**08 29 09.6**	**-0.4**
MTP	**Monte Pirata**	**1.47**	**131**		**Pn**	**08 28 50.0**	**-1.2**
MTP				Sn	**Sb**	**08 29 12.4**	**+1.6**
PCDR	**Punta Cana, DR**	**1.67**	**251**	⇑*eP*	**Pn**	**08 28 54.1**	**+0.3**
PCDR	**Punta Cana, DR**	**1.67**	**251**	⇑*eP*	**Pn**	**08 28 54.2**	**+0.3**
PCDR	**Punta Cana, DR**	**1.67**	**251**		**Pn**	**08 28 54.4**	**+0.5**
PCDR				Sn	**Sb**	**08 29 16.1**	**-0.3**
STVI	**Saint Thomas**	**1.82**	**113**	⇑*eP*	**Pn**	**08 28 56.0**	**+0.1**
STVI	**Saint Thomas**	**1.82**	**113**	⇑*eP*	**Pn**	**08 28 56.1**	**+0.1**
STVI				*eS*	**Sn**	**08 29 17.5**	**-1.1**
STVI	**Saint Thomas**	**1.82**	**113**		**Pn**	**08 28 57.2**	**+1.2**
STVI				Sn	**Sn**	**08 29 17.8**	**-0.8**
DR12	**Loma Pena Alta**	**2.53**	**264**	Pn	**Pn**	**08 29 05.4**	**-0.4**
DR12				Sn	**Sn**	**08 29 35.6**	**-0.7**
SDD	**Santo Domingo**	**3.08**	**259**	Pn	**Pn**	**08 29 13.9**	**+0.5**
SDD				Sn	**Sn**	**08 29 51.8**	**+2.0**
BANI	**BANI**	**3.51**	**260**	Pn	**Pn**	**08 29 21.1**	**+1.8**
BANI				Sn	**Sn**	**08 30 02.3**	**+1.8**
SDDR	**Presa de Saban**	**4.32**	**270**	Pn	**Pn**	**08 29 31.3**	**+0.8**
SDDR				Sn	**Sn**	**08 30 22.6**	**+2.2**
PCRV	**Puerto La Cruz**	**9.07**	**167**	Pn	**Pn**	**08 30 35.8**	**+0.1**
	0.3nm,0.3s,baz=347,slow=18,SNR=2.6						
PLCV	**Puerto La Cruz**	**9.09**	**167**			**08 30 35.8**	**-0.2**
SDV	**Santo Domingo**	**10.81**	**201**	LR	LR	**08 35 32.9**	
	comp=Z,45nm,21.2s,baz=60,slow=40						
RUSC	**La Rusia**	**14.49**	**206**	Pn	**Pn**	**08 31 50.2**	**-0.1**
Y60A	**Bolivia**	**18.06**	**328**	Pn	**P**	**08 32 36.5**	**+0.6**
V62A	**Hyde County Ai**	**18.34**	**335**		**P**	**08 32 40.8**	**+1.8**
V62A				IAmb	IAmb	**08 32 43.2**	
	comp=Z,45nm,0.8s						
NHSC	**New Hope**	**18.45**	**322**	P	**Pn**	**08 32 42.3**	**+1.9**
NHSC				IAmb	IAmb	**08 32 47.7**	
	comp=Z,18nm,1.1s						
Y58A	**Scranton**	**18.75**	**325**	P	**Pn**	**08 32 46.3**	**+2.4**
Y58A				IAmb	IAmb	**08 32 53.2**	
	comp=Z,16nm,1.1s						
V61A	**Roper**	**18.79**	**334**	P	**Pn**	**08 32 46.6**	**+2.1**
TXAR	**Lajitas Array**	**35.08**	**294**	P	**P**	**08 35 17.0**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=111,slow=9.6,SNR=14						
PDAR	**Pinedale Array**	**43.08**	**313**	P	**P**	**08 36 23.9**	**-0.9**
	comp=Z,0.4nm,0.8s,baz=110,slow=7.8,SNR=3.0						
YKA	**Yellowknife Ar**	**54.40**	**335**	P	**P**	**08 37 49.0**	**-2.1**
	comp=Z,0.5nm,0.6s,baz=111,slow=7.6,SNR=12						
NOA	**NORSAR Array B**	**67.67**	**31**	P	**P**	**08 39 22.4**	**+1.0**
	comp=Z,0.2nm,0.4s,baz=260,slow=8.

DBBC	**Dabeiba**	**3.14**	**273**	*e*P		**Pn**	**09 03 05.5**	**-0.1**
ARGC	**Ariguani, Magd**	**3.20**	**338**	*e*P		**Pn**	**09 03 07.8**	**+1.6**
ARGC				*e*S		**Sn**	**09 03 46.1**	**+1.1**
ARGC				*i*			09 03 53.3	
	comp=Z,71nm,0.4s							
TOLC	**Tolima**	**3.20**	**225**	*e*P		**Pn**	**09 03 06.9**	**+0.3**
ORTC	**Ortega, Tolima**	**3.66**	**217**	*e*P		**Pn**	**09 03 12.5**	**+0.3**
ORTC				*e*S		**Sn**	**09 03 55.7**	**-0.1**
ORTC				*i*			09 04 02.1	
	comp=Z,62nm,0.3s							
SJCC	**San Jacinto, C**	**3.67**	**325**	*e*P		**Pn**	**09 03 11.4**	**-0.9**
SJCC				*e*S		**Sn**	**09 03 53.0**	**-3.1**
SJCC				*i*			09 03 57.0	
	comp=Z,103nm,0.5s							
PLMC	**San Jos del P**	**3.76**	**239**	*e*P		**Pn**	**09 03 13.7**	**+0.2**
LCBC	**Los crdobas,**	**3.84**	**301**	*e*P		**Pn**	**09 03 14.2**	**-0.2**
QARV	**Quebrada Arrib**	**4.15**	**37**⇑	*i*P		**Pn**	**09 03 19.9**	**+1.4**
QARV				*e*S		**Sn**	**09 04 05.3**	**-1.9**
GUVC	**San Jose del G**	**4.32**	**174**	*e*P		**Pn**	**09 03 20.5**	**-0.2**
YOTC	**Yotoco, Valle**	**4.36**	**229**	*e*P		**Pn**	**09 03 20.5**	**-0.8**
CURV	**Curarigua**	**4.37**	**44**	*e*P		**Pn**	**09 03 22.2**	**+0.8**
CURV				*e*S		**Sn**	**09 04 10.9**	**-1.5**
MACC	**Macarena, Meta**	**4.76**	**190**	*e*P		**Pn**	**09 03 25.1**	**-1.5**
MACC				*e*S		**Sn**	**09 04 17.8**	**-3.6**
MACC				*i*			09 04 23.5	
	comp=Z,27nm,0.6s							
SIQV	**Siquisique**	**4.94**	**40**	*e*P		**Pn**	**09 03 29.4**	**+0.5**
SIQV				*e*S		**Sn**	**09 04 24.4**	**-1.2**
MALC	**Bahia Malaga**	**5.12**	**237**	*e*P		**Pn**	**09 03 32.6**	**+1.4**
BAUV	**El Baul**	**5.37**	**67**	*e*P		**Pn**	**09 03 33.9**	**-0.7**
BAUV				*e*S		**Sn**	**09 04 32.6**	**-3.3**
MAPV	**Macapo**	**5.41**	**57**	*e*P		**Pn**	**09 03 35.5**	**+0.3**
MAPV				*e*S		**Sn**	**09 04 34.6**	**-2.3**
PAYV	**Puerto Ayacuch**	**5.55**	**105**	*e*P		**Pn**	**09 03 36.5**	**-0.4**
PAYV				*e*S		**Sn**	**09 04 36.6**	**-3.6**
PCON	**Cinco Dias**	**5.61**	**217**	*e*P		**Pn**	**09 03 39.3**	**+1.0**
SOTA	**Rioblanco**	**5.89**	**217**	*e*P		**Pn**	**09 03 42.7**	**+0.8**
MONV	**Montecano**	**5.90**	**31**	*e*P		**Pn**	**09 03 41.7**	**+0.1**
MONV				*e*S		**Sn**	**09 04 44.0**	**-4.4**
TURV	**Turiamo**	**6.26**	**55**	*e*P		**Pn**	**09 03 46.8**	**+0.4**
BBAC	**Balboa, Cauca**	**6.38**	**221**	*e*P		**Pn**	**09 03 49.2**	**+1.0**
CUPV	**Cpira**	**7.85**	**66**	*e*P		**Pn**	**09 04 07.1**	**-0.5**
TXAR	**Lajitas Array**	**36.48**	**312**	P		**P**	**09 09 06.9**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=121,slow=11,SNR=3.4							
PDAR	**Pinedale Array**	**48.08**	**324**	P		**P**	**09 10 40.7**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=126,slow=9.1,SNR=2.2							
YKA	**Yellowknife Ar**	**63.24**	**340**	P		**P**	**09 12 28.3**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=132,slow=6.5,SNR=8.1							

IDC ***13*** *09:07:01.3±3.0, 11°.36S×166°.00E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.6/38, mbtmp3.9/4, ML3.2/1, MS2.4/1, Ms1 2.4/1, ms1mx2.2/27, Error ellipse: s-maj=66.2km s-min=41.4km az=91.0*

ISC 13 09:07:06.4±2.3, 11°.5S±0°.2×166°.1E±0°.4, h37km, n7, σ0$19/6, mb4.2/5, 4C, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.35**	**288**	LR	LR	09 10 25.4	
	comp=Z,30nm,19.1s,baz=128,slow=33						
DZM	**Mont Dzumac**	**10.57**	**178**	Pn	**Pn**	**09 09 35.4**	**0.0**
	0.2nm,0.3s,baz=306,slow=19,SNR=7.7						
DZM				Sn	Sn	09 11 23.3	-9.3
	0.1nm,0.3s,baz=176,slow=19,SNR=2.0						
WRA	**Warramunga Arr**	**31.65**	**251**	P	**P**	**09 13 26.3**	**0.0**
	0.3nm,0.3s,baz=81,slow=9.0,SNR=7.6						
ASAR	**Alice Springs**	**32.90**	**244**	P	**P**	**09 13 37.4**	**0.0**
	0.7nm,0.8s,baz=70,slow=9.5,SNR=9.0						
MK31	**Makanchi Array**	**94.03**	**317**	⇑Pn	**P**	**09 20 20.8**	**+0.1**
	0.6nm,0.7s,baz=275,slow=12,SNR=11						
MK31				⇑Lg	Lg	09 21 10.6	
	1.3nm,0.8s,baz=267,slow=28,SNR=5.7						
MKAR	**Makanchi Array**	**94.03**	**317**	P	**P**	**09 20 21.0**	**+0.2**
	0.9nm,0.7s,baz=101,slow=6.2,SNR=11						
MAKZ	**Makanchi**	**94.24**	**317**	⇑Pn	**P**	**09 20 21.5**	**-0.2**
	1.2nm,1.1s						
MAKZ				⇑Lg	Lg	09 21 04.5	
	1.8nm,1.2s						

IDC ***13*** *09:17:40.7±0.9, 5°.23S×78°.54W, h0km, mb3.7/7, mb1 3.9/11, mb1mx3.8/32, mbtmp3.8/11, ML3.0/4, MS3.1/2, Ms1 3.2/2, ms1mx2.7/28, Error ellipse: s-maj=26.6km s-min=11.6km az=85.0*
NEIC ***13*** *09:17:46.8±2.3, 5°.29S±0°.04×78°.5W±0°.1, h50km±8km, mb4.5/5, ML4.2(ARE), Error ellipse: s-maj=16.6km s-min=5.1km az=99.0*

ISC 13 09:17:45.6±0.7, 5°.28S±0°.07×78°.5W±0°.1, h35km, n25, σ1$13/24, mb3.8/6, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**1.84**	**176**	Pg	**Pn**	**09 18 16.2**	**+1.1**
	13nm,0.3s,baz=37,slow=5.3,SNR=119						
ATAH				Lg	Lg	09 18 40.5	
	47nm,0.3s,baz=303,slow=16,SNR=8.7						
OTAV	**Otavalo**	**5.48**	**1**		**Pn**	**09 19 08.1**	**+2.9**
NNA	**Nana**	**6.86**	**166**	Pn	**Pn**	**09 19 24.7**	**+0.8**
	0.6nm,0.3s,baz=321,slow=9.6,SNR=3.1						
NNA				Sn	**Sn**	**09 20 39.1**	**-1.7**
	1.5nm,0.3s,baz=285,slow=20,SNR=2.3						
NNA				Lg	Lg	09 21 15.8	
	2.5nm,0.3s,baz=256,slow=23,SNR=7.4						
NNA				LR	LR	09 21 56.1	
	comp=Z,81nm,18.1s,baz=336,slow=37						
NNA	**Nana**	**6.86**	**166**		**Pn**	**09 19 24.6**	**+0.7**
FLOC	**Florencia**	**7.39**	**23**		**Pn**	**09 19 31.1**	**0.0**
ROSC	**El Rosal**	**10.89**	**23**	Pn	**Pn**	**09 20 19.2**	**-0.2**
	0.7nm,0.3s,baz=212,slow=19,SNR=1.7						
RUSC	**La Rusia**	**12.35**	**26**		**Pn**	**09 20 40.8**	**+1.3**
LPAZ	**La Paz**	**14.94**	**138**	Pn	**Pn**	**09 21 15.3**	**+0.4**
	0.1nm,0.3s,baz=274,slow=6.1,SNR=2.9						
LPAZ				LR	LR	09 27 57.8	
	comp=Z,102nm,18.1s,baz=268,slow=41						
SAML	**Samuel**	**15.64**	**104**	Pn	**Pn**	**09 21 22.7**	**-0.8**
SDV	**Santo Domingo**	**16.12**	**29**	Pn	**Pn**	**09 21 28.9**	**-0.9**
	0.7nm,0.3s,baz=234,slow=16,SNR=5.8						
SDV	**Santo Domingo**	**16.12**	**29**	Pn	**Pn**	**09 21 30.1**	**+0.3**
SDV				IAmb	IAmb	09 21 35.6	
	comp=Z,8.8nm,0.8s						
SIV	**San Ignacio**	**20.15**	**123**	P	**P**	**09 22 17.9**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=312,slow=11,SNR=3.6						
PCRV	**Puerto La Cruz**	**20.66**	**42**	P	**P**	**09 22 21.6**	**-0.9**
	comp=Z,18nm,0.9s,baz=315,slow=1.4,SNR=3.3						
PLCV	**Puerto La Cruz**	**20.68**	**42**	P	**P**	**09 22 21.6**	**-1.1**
SJG	**San Juan**	**26.25**	**27**	P	**P**	**09 23 18.3**	**+0.7**
	comp=Z,19nm,0.3s,baz=307,slow=21,SNR=6.3						
SJG	**San Juan**	**26.25**	**27**	IAmb	IAmb	09 23 24.9	
	comp=Z,31nm,1.1s						
TXAR	**Lajitas Array**	**42.06**	**326**	P	**P**	**09 25 34.4**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=122,slow=6.7,SNR=2.9						
SNOW	**Snow King Moun**	**56.59**	**332**	P	**P**	**09 27 22.9**	**-2.3**
NVAR	**Mina Array Bea**	**57.02**	**323**	P	**P**	**09 27 28.7**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=136,slow=5.7,SNR=3.6						
YKA	**Yellowknife Ar**	**72.99**	**343**	P	**P**	**09 29 10.8**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=137,slow=6.1,SNR=12						
DBIC	**Dimbokro**	**74.46**	**82**	P	**P**	**09 29 21.5**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=227,slow=4.5,SNR=5.3						
DBIC	**Dimbokro**	**74.46**	**82**	IAmb	IAmb	09 29 24.8	
	comp=Z,9.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**81.70**	**76**	P	**P**	**09 30 01.3**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=282,slow=6.2,SNR=7.9						
ASAR	**Alice Springs**	**137.25**	**226**	PKP	**PKPdf**	**09 37 06.2**	**0.0**
	comp=Z,0.3nm,0.8s,baz=113,slow=2.1,SNR=3.1						
WRA	**Warramunga Arr**	**139.12**	**231**	PKP	**PKiKP**	**09 37 11.2**	**-0.8**
	comp=Z,0.6nm,0.6s,baz=143,slow=1.5,SNR=3.2						

ISC 13 09:25:36.3±1.2, 50°.14N±0°.07×19°.06E±0°.04, h0km, n8, σ0$80/14, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.48**	**80**	*e*Pg	**Pg**	**09 25 45.7**	**+0.2**
OJC				*e*Sg	**Sg**	**09 25 51.8**	**0.0**
LANS	**Liptovska Anna**	**1.02**	**165**	*e*PG	**Pg**	**09 25 55.8**	**-0.1**
LANS				*e*SG	**Sg**	**09 26 09.9**	**+0.7**
LANS				*e*LG	Lg	09 26 14.6	
MORC	**Moravsky Berou**	**1.04**	**250**	*e*PG	**Pb**	**09 25 57.3**	**+0.1**
MORC				*e*SG	**Sg**	**09 26 10.4**	**+0.6**
NIE	**Niedzica**	**1.08**	**131**	*e*Pg	**Pg**	**09 25 57.3**	**+0.4**
NIE				*e*Sg	**Sb**	**09 26 12.7**	**+0.2**
JAVC	**Velka Javorina**	**1.57**	**216**	*e*PN	**Pn**	**09 26 05.2**	**-0.2**
JAVC				*e*SG	**Sn**	**09 26 24.3**	**-2.2**
VYHS	**Vyhne**	**1.65**	**185**	*e*PN	**Pn**	**09 26 06.1**	**-0.5**
VYHS				*e*SN	**Sn**	**09 26 28.7**	**+0.2**
VRAC	**Vranov**	**1.80**	**243**	*e*SG	**Sb**	**09 26 33.7**	**+0.4**
KRUC	**Moravsky**	**2.04**	**239**	*e*SG	**Sb**	**09 26 40.9**	**+0.8**

ISK ***13*** *10:23:20.2, 37°.25N×40°.66E, h8km, ML2.0/6*
DDA ***13*** *10:23:21.0, 37°.28N×40°.71E, h3km±12km, MD2.6*

ISC 13 10:23:20.4±1.5, 37°.26N±0°.08×40°.69E±0°.04, h4km±9km, n8, σ0$47/15, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARD	**Mardin**	**0.09**	**51**	*i* P	**Pg**	**10 23 22.0**	**-0.4**
MARD				*i* S	**Sg**	**10 23 24.0**	**+0.3**
MAZI	**Mazidag**	**0.28**	**316**	PG	**Pg**	**10 23 26.1**	**+0.2**
MAZI				SG	**Sg**	**10 23 30.4**	**+0.7**
DYBB	**Diyarbakir**	**0.82**	**328**	PG	**Pg**	**10 23 36.3**	**+0.1**
DYBB				SG	**Sb**	**10 23 48.3**	**-0.4**
SIRT	**Sirnak**	**1.41**	**80**	PN	**Pb**	**10 23 47.3**	**-0.1**
SIRT				SN	**Sn**	**10 24 06.9**	**+0.9**
URFA	**Urfa**	**1.50**	**278**	PN	**Pn**	**10 23 48.0**	**-0.2**
URFA				SN	**Sn**	**10 24 07.9**	**-0.4**
MUSM	**Mu-Merkez**	**1.60**	**24**	*i* P	**Pb**	**10 23 50.2**	**-0.4**
MUSM				*i* S	**Sn**	**10 24 10.8**	**+0.1**
BNGB	**Bingl**	**1.73**	**360**	PN	**Pb**	**10 23 51.5**	**+0.1**
BNGB				SN	**Sb**	**10 24 14.5**	**-0.4**
MALT	**Malatya**	**2.08**	**301**	PN	**Pn**	**10 23 56.4**	**+0.2**

IDC ***13*** *10:24:28.1±1.3, 44°.13N×147°.78E, h0km, mb3.5/7, mb1 3.8/8, mb1mx3.6/28, mbtmp3.6/8, ML2.2/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/36, Error ellipse: s-maj=37.1km s-min=26.8km az=134.0*
JMA ***13*** *10:24:32.9±0.2, 43°.83N×147°.58E, h0km, M4.3*
MOS ***13*** *10:24:33.5±0.8, 44°.09N×147°.70E, h57km, mb3.7/1, Error ellipse: s-maj=16.5km s-min=13.9km az=139.0*
SKHL ***13*** *10:24:34.1±0.4, 44°.00N×147°.80E, h60km±8km, mb4.0/5*

ISC 13 10:24:33.9±1.4, 44°.01N±0°.07×147°.85E±0°.08, h41km±13km, n49, σ1$00/56, mb3.4/8, 1C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.75**	**260**	*d* iPN	**Pn**	**10 24 47.3**	**-0.7**
SHO				*i* S	**Sn**	**10 24 56.8**	**-1.3**
SHO				pmax	pmax		
	comp=N,111μm,0.2s						
SHO				pmax	pmax		
	comp=E,222μm,0.2s						
SHO				pmax	pmax		
	comp=Z,354μm,0.2s						
SHO				smax	smax		
	comp=E,3μm,0.3s						
SHO				smax	smax		
	comp=N,3μm,0.2s						
SHO	**Shikotan**	**0.75**	**260**	*i* P	**Pn**	**10 24 47.3**	**-0.7**
SHO				AMB	AMB	10 24 49.0	
	comp=N,40nm,0.2s						
SHO				*i* S	**Sn**	**10 24 56.9**	**-1.2**
SHO				A	A	10 24 59.0	
	comp=N,320nm,0.2s						
SHO				A	A	10 24 59.0	
	comp=N,250nm,0.2s						
KUR	**Kuril'sk**	**1.23**	**1**	*d* iPN	**Pn**	**10 24 54.0**	**-0.5**
KUR				*i* S	**Sn**	**10 25 08.8**	**-1.1**
KUR				pmax	pmax		
	comp=N,51μm,0.2s						
KUR				pmax	pmax		
	comp=E,110μm,0.2s						
KUR				pmax	pmax		
	comp=Z,258μm,0.2s						
KUR				smax	smax		
	comp=N,2μm,0.2s						
KUR				smax	smax		
	comp=E,2μm,0.5s						
KUR	**Kuril'sk**	**1.23**	**1**	*i* P	**Pn**	**10 24 54.0**	**-0.5**
KUR				AMB	AMB	10 24 56.3	
	comp=E,10.0nm,0.3s						
KUR				AMB	AMB	10 24 56.3	
	comp=E,10.0nm,0.3s						
KUR				AMB	AMB	10 24 56.3	
	comp=E,30nm,0.3s						
KUR				*i* S	**Sn**	**10 25 09.1**	**-0.8**
KUR				A	A	10 25 10.0	
	comp=E,150nm,0.3s						
KUR				A	A	10 25 10.0	
	comp=E,180nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.43**	**272**	*d* iPN	**Pn**	**10 24 57.1**	**-0.3**
YUK				*e*S	**Sn**	**10 25 14.2**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**1.43**	**272**	*i* P	**Pn**	**10 24 57.1**	**-0.3**
YUK				AMB	AMB	10 24 59.0	
	comp=E,70nm,0.2s						
YUK				*i* S	**Sn**	**10 25 14.1**	**-0.9**
YUK				A	A	10 25 16.0	
	comp=E,160nm,0.2s						
YUK				A	A	10 25 16.0	
	comp=E,420nm,0.2s						
GRPR	**Tuman**	**1.50**	**270**	⇓*i* PN	**Pn**	**10 24 57.9**	**-0.4**
GRPR				*i* S	**Sn**	**10 25 15.9**	**-0.7**
GRPR				pmax	pmax		
	comp=Z,389nm,0.2s						
GRPR				pmax	pmax		
	comp=N,152nm,0.1s						
GRPR				pmax	pmax		
	comp=E,82nm,0.1s						
GRPR				smax	smax		
	comp=N,2μm,0.3s						
GRPR				smax	smax		
	comp=E,589nm,0.1s						
GRPR	**Tuman**	**1.50**	**270**	*i* P	**Pn**	**10 24 57.6**	**-0.7**
GRPR				AMB	AMB	10 24 59.0	
	comp=E,40nm,0.2s						
GRPR				*i* S	**Sn**	**10 25 15.0**	**-1.6**
GRPR				A	A	10 25 18.0	
	comp=E,500nm,0.3s						
GRPR				A	A	10 25 18.0	
	comp=E,280nm,0.3s						
NEM2	**Nemuro 2**	**1.66**	**248**	P	**Pn**	**10 24 59.7**	**-0.7**
NEM2				*e*S	**Sn**	**10 25 19.0**	**-1.4**
NMR	**Nemuro--Hokkai**	**1.66**	**248**	⇓*i* PN	**Pn**	**10 24 59.7**	**-0.8**
NMR				*e*S	**Sn**	**10 25 20.1**	**-0.5**
NMR	**Nemuro--Hokkai**	**1.66**	**248**	*i* P	**Pn**	**10 24 59.8**	**-0.8**
NMR				*e*S	**Sn**	**10 25 19.1**	**-1.5**
GLVR	**Golovnino**	**1.71**	**262**	⇓*i* PN	**Pn**	**10 25 01.4**	**+0.3**
GLVR				*e*S	**Sn**	**10 25 22.3**	**+0.7**
GLVR				pmax	pmax		
	comp=Z,655nm,0.2s						
GLVR				smax	smax		
	comp=N,3μm,0.2s						
GLVR				smax	smax		
	comp=E,3μm,0.2s						
GLVR	**Golovnino**	**1.71**	**262**	*i* P	**Pn**	**10 25 00.4**	**-0.7**
GLVR				AMB	AMB	10 25 02.0	
	comp=E,50nm,0.3s						
GLVR				*e*S	**Sn**	**10 25 20.6**	**-1.0**
GLVR				A	A	10 25 29.0	
	comp=E,310nm,0.4s						
GLVR				A	A	10 25 29.0	
	comp=E,330nm,0.4s						
JRA	**Rausu**	**1.97**	**269**	P	**Pn**	**10 25 05.6**	**+0.9**
JRA				*e*S	**Sn**	**10 25 29.4**	**+1.2**
JNSB	**Nemuroshibetsu**	**2.07**	**265**	P	**Pn**	**10 25 06.7**	**+0.6**
JNSB				*e*S	**Sn**	**10 25 31.3**	**+0.7**
JKHN	**Kushirohamanak**	**2.16**	**246**	P	**Pn**	**10 25 07.2**	**-0.1**
JNK	**Nakash**	**2.31**	**261**	P	**Pn**	**10 25 09.8**	**+0.5**
JNK				*e*S	**Sn**	**10 25 36.1**	**-0.3**
JAK	**Akkeshi**	**2.50**	**247**	P	**Pn**	**10 25 12.0**	**-0.1**
JAK				*e*S	**Sn**	**10 25 40.6**	**-0.8**
JTKR	**Abashiri--Toko**	**2.84**	**271**	P	**Pn**	**10 25 17.9**	**+1.2**
JAR	**Ashorobuto**	**3.04**	**258**	P	**Pn**	**10 25 20.5**	**+1.0**
JAR				*e*S	**Sn**	**10 25 56.0**	**+1.3**
JOB	**Onbets**	**3.12**	**251**	P	**Pn**	**10 25 21.2**	**+0.6**
JOB				*e*S	**Sn**	**10 25 57.3**	**+0.7**
JMP	**Maruseppu**	**3.24**	**272**	P	**Pn**	**10 25 23.7**	**+1.5**
JCH	**Churui**	**3.56**	**249**	P	**Pn**	**10 25 27.0**	**+0.5**
JKK2	**Kamakawa 2**	**3.69**	**270**	P	**Pn**	**10 25 30.6**	**+2.3**
JFR	**Furan**	**3.91**	**259**	P	**Pn**	**10 25 33.7**	**+2.3**
JNBK	**Urakawa-nobuka**	**4.11**	**247**	P	**Pn**	**10 25 35.0**	**+0.9**
YSS	**Yuzh-Sakhalins**	**4.64**	**311**	*e*PN	**Pn**	**10 25 41.6**	**+0.2**
YSS	**Yuzh-Sakhalins**	**4.64**	**311**	*e*P	**Pn**	**10 25 41.6**	**+0.2**
SKR	**Severo-Kuril's**	**8.72**	**37**	*e*PN	Pn	10 26 49.0	+12
SKR				*e*S	Sn	10 28 29.0	+15
SKR				pmax	pmax		
	comp=Z,2μm,3.8s						
SKR				pmax	pmax		
	comp=Z,700nm,4.1s						
SKR				MLR	MLR		
	comp=Z,400nm,17.0s						
SKR	**Severo-Kuril's**	**8.72**	**37**	*e*P	**Pn**	**10 26 39.6**	**+2.3**
PEA0B	**Petropavlovsk-**	**11.20**	**32**	*e*PN	Pn	10 27 03.5	-7.7
PETK	**Petropavlovsk-**	**11.20**	**32**	Pn	Pn	10 27 06.4	-4.8
	comp=Z,0.1nm,0.3s,baz=218,slow=11,SNR=3.1						
PETK				LR	LR	10 32 15.9	
	comp=Z,31nm,19.0s,baz=242,slow=42						
PET	**Petropavlovsk**	**11.51**	**35**⇑	*e*PN	Pn	10 27 08.6	-6.9
PET	**Petropavlovsk**	**11.51**	**35**	*e*P	**Pn**	**10 27 16.3**	**+0.8**
KLR	**Kul'dur**	**12.23**	**301**	LR	LR	10 31 39.8	
	comp=Z,54nm,18.6s,baz=88,slow=36						
BILL	**Bilibino**	**25.98**	**16**	*i* P	P	10 29 48.1	-14
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**28.97**	**141**	T	T	11 01 16.5	
	baz=332,slow=76,SNR=154						
H11N1	**WAKE ISLAND Hy**	**28.98**	**141**	T	T	11 01 12.5	
	baz=332,slow=76,SNR=240						
H11N3	**WAKE ISLAND Hy**	**28.99**	**141**	T	T	11 01 17.8	
	baz=332,slow=76,SNR=163						
H11S1	**WAKE ISLAND Hy**	**29.95**	**142**	T	T	11 02 26.1	
	baz=332,slow=76,SNR=712						
H11S3	**WAKE ISLAND Hy**	**29.96**	**142**	T	T	11 02 28.2	
	baz=332,slow=76,SNR=432						
H11S2	**WAKE ISLAND Hy**	**29.97**	**142**	T	T	11 02 25.2	
	baz=332,slow=76,SNR=374						
ILAR	**Eielson Array**	**40.98**	**36**	P	**P**	**10 32 12.2**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=266,slow=8.3,SNR=14						
MKAR	**Makanchi Array**	**44.91**	**298**	P	**P**	**10 32 44.1**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=76,slow=9.3,SNR=3.7						
YKA	**Yellowknife Ar**	**55.31**	**34**	P	**P**	**10 34 02.6**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=297,slow=6.7,SNR=7.8						
ARCES	**ARCESS Array B**	**59.18**	**340**	P	**P**	**10 34 29.3**	**-0.8**
	comp=Z,1.8nm,0.9s,baz=41,slow=8.6,SNR=3.3						
ASAR	**Alice Springs**	**68.54**	**194**	P	**P**	**10 35 32.9**	**+0.7**
	comp=Z,0.2nm,0.8s,baz=8.7,slow=6.7,SNR=3.1						
NOA	**NORSAR Array B**	**69.55**	**339**	P	**P**	**10 35 36.7**	**-1.4**
	comp=Z,0.2nm,0.4s,baz=28,slow=6.5,SNR=2.9						
TXAR	**Lajitas Array**	**82.09**	**57**	P	**P**	**10 36 50.5**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=276,slow=3.2,SNR=3.5						

MAN 13 10:36:48.9, 10°.10N×123°.73E, h15km, mb4.3, ML3.1, MS2.9, 1C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.32**	**47**⇑	*e*P	Pb	10 36 57.0	+0.7
LLP				*i* S	Sn	10 37 06.1	+0.6
MSLP	**Maasin**	**1.11**	**88**	*e*P	Pb	10 37 08.2	-1.7
MSLP				*e*S	Sn	10 37 26.0	+0.9
DCPH	**Dipolog City**	**1.55**	**194**⇓	*i*P	Pn	10 37 08.1	-7.9
DCPH				*i* S	Sn	10 37 23.0	-13

IDC ***13*** *10:49:54.4±0.8, 19°.28N×66°.54W, h0km, mb3.6/7, mb1 4.0/10, mb1mx3.7/51, mbtmp3.8/10, ML3.2/3, MS3.3/4, Ms1 3.3/4, ms1mx2.9/32, Error ellipse: s-maj=23.2km s-min=10.7km az=68.0*
NEIC ***13*** *10:49:59.8±2.1, 19°.08N±0°.05×66°.79W±0°.04, h41km±9km, Error ellipse: s-maj=7.6km s-min=5.2km az=177.0*
RSPR ***13*** *10:50:00.1, 19°.13N×66°.80W, h30km±9km, MD3.5/16*

ISC 13 10:50:00.1±1.1, 19°.07N±0°.06×66°.78W±0°.03, h45km±12km, n83, σ1$16/104, mb3.6/7, MS3.2/3, 22C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.63**	**158**⇑	*e*P	**Pn**	**10 50 12.2**	**-0.5**
EMPR	**Esperanza - Ma**	**0.63**	**158**	*e*S	**Sn**	**10 50 21.8**	**-0.1**
EMPR	**Esperanza - Ma**	**0.63**	**158**		**Pn**	**10 50 12.2**	**-0.5**
EMPR					**Sn**	**10 50 21.8**	**-0.1**
AGPR	**Aguadilla, PR**	**0.67**	**208**⇑	*e*P	**Pn**	**10 50 12.0**	**-1.3**
AGPR	**Aguadilla, PR**	**0.67**	**208**	*e*S	**Sn**	**10 50 21.7**	**-1.1**
AGPR	**Aguadilla, PR**	**0.67**	**208**		**Pn**	**10 50 12.0**	**-1.3**
AGPR					**Sn**	**10 50 21.7**	**-1.1**
AOPR	**Arecibo Observ**	**0.72**	**178**⇑	*e*P	**Pn**	**10 50 13.0**	**-0.9**
AOPR	**Arecibo Observ**	**0.72**	**178**⇑	*e*P	**Pn**	**10 50 13.0**	**-0.9**
AOPR				*e*S	**Sn**	**10 50 24.3**	**+0.5**
AOPR	**Arecibo Observ**	**0.72**	**178**	*e*S	**Sn**	**10 50 23.6**	**-0.2**
AOPR	**Arecibo Observ**	**0.72**	**178**		**Pn**	**10 50 13.0**	**-0.9**
AOPR					**Pn**	**10 50 23.6**	**-0.2**
UUPR	**Utuado, UPR, P**	**0.81**	**176**		**Pn**	**10 50 14.3**	**-0.8**
UUPR					**Sn**	**10 50 25.6**	**-0.5**
MPR	**Mayaguez**	**0.92**	**202**		**Pn**	**10 50

PCRV	**Puerto La Cruz**	**9.08**	**167**	Pn		**Pn**	**10 52 11.0**	**+2.4**
	0.9nm,0.3s,baz=346,slow=11,SNR=4.3							
PCRV				Sn		**Sn**	**10 53 45.0**	**-4.5**
	1.0nm,0.3s,baz=295,slow=19,SNR=3.4							
PLCV	**Puerto La Cruz**	**9.10**	**166**			**Pn**	**10 52 11.0**	**+2.1**
PLCV						**Sn**	**10 53 45.0**	**-5.1**
SDV	**Santo Domingo**	**10.79**	**201**	Pn		**Pn**	**10 52 35.7**	**+3.5**
	0.4nm,0.3s,baz=18,slow=20,SNR=2.7							
SDV				Sn		**Sn**	**10 54 30.3**	**-1.4**
	0.4nm,0.3s,baz=24,slow=20,SNR=2.3							
RUSC	**La Rusia**	**14.46**	**206**	Pn		**Pn**	**10 53 24.2**	**+1.7**
ROSC	**El Rosal**	**15.94**	**208**	Pn		**P**	**10 53 44.9**	**+0.1**
	1.6nm,0.3s,baz=20,slow=11,SNR=5.2							
ROSC				LR		LR	11 00 21.8	
	comp=Z,106nm,18.2s,baz=44,slow=39							
ROSC	**El Rosal**	**15.94**	**208**	Pn		**Pn**	**10 53 40.3**	**-1.4**
FLOC	**Florencia**	**19.43**	**208**	P		**Pn**	**10 54 24.9**	**+0.6**
OTAV	**Otavalo**	**21.94**	**213**	P		**P**	**10 54 51.0**	**+0.6**
CMIG	**Matias Romero**	**26.78**	**270**	LR		LR	11 07 04.3	
	comp=Z,55nm,19.4s,baz=84,slow=38							
TXAR	**Lajitas Array**	**35.03**	**294**	P		**P**	**10 56 49.7**	**+0.9**
	2.0nm,0.8s,baz=114,slow=9.9,SNR=20							
TX31	**Lajitas Ar. Si**	**35.04**	**294**	P		**P**	**10 56 49.2**	**+0.4**
TX32	**Lajitas Array**	**35.04**	**294**	P		**P**	**10 56 49.8**	**+1.0**
SIV	**San Ignacio**	**35.29**	**170**	LR		LR	11 11 26.2	
	comp=Z,43nm,18.4s,baz=309,slow=36							
LPIG	**La Paz**	**40.67**	**285**	LR		LR	11 17 39.4	
	comp=Z,37nm,18.1s,baz=44,slow=41							
PDAR	**Pinedale Array**	**43.04**	**313**	P		**P**	**10 57 56.5**	**+0.8**
	0.6nm,0.9s,baz=109,slow=6.8,SNR=3.9							
NVAR	**Mina Array Bea**	**48.46**	**305**	P		**P**	**10 58 39.3**	**+0.8**
	0.4nm,0.6s,baz=93,slow=5.5,SNR=3.9							
YKA	**Yellowknife Ar**	**54.38**	**335**	P		**P**	**10 59 21.7**	**-0.4**
	0.5nm,0.8s,baz=114,slow=7.8,SNR=5.9							
ESDC	**Sonseca Array**	**57.32**	**55**	P		**P**	**10 59 43.4**	**-0.2**
	0.3nm,0.4s,baz=260,slow=5.0,SNR=3.7							
TORD	**Torodi Ar. Bea**	**65.70**	**84**	P		**P**	**11 00 38.5**	**-2.0**
	0.5nm,0.6s,baz=305,slow=8.1,SNR=3.5							
ILAR	**Eielson Array**	**68.72**	**333**	P		**P**	**11 00 59.0**	**+0.3**
	0.6nm,0.8s,baz=98,slow=4.7,SNR=8.0							

*IDC **13** 10:51:25.4±0.9,39°.77N×26°.02E,h0km,mb3.8/13,*
mb1 3.8/18,mb1mx3.7/69,mbtmp3.7/18,ML3.9/5,MS3.0/12,
Ms1 3.0/12,ms1mx2.8/42,Error ellipse: s-maj=16.8km
s-min=11.6km az=81.0
*ATH **13** 10:51:26.9,39°.77N×26°.09E,h31km±1km,ML3.9/12,Error*
ellipse: s-maj=2.2km s-min=0.7km az=109.0
*ISK **13** 10:51:26.5,39°.78N×26°.13E,h8km,ML4.2/22*
*MOS **13** 10:51:26.7±1.5,39°.79N×26°.16E,h23km,mb4.0/5,Error*
ellipse: s-maj=8.0km s-min=5.5km az=95.0
*DDA **13** 10:51:26.8,39°.81N×26°.14E,h12km±1km,ML4.1*
*THE **13** 10:51:27.8,39°.78N×26°.06E,h12km,ML3.8/10,Error*
ellipse: s-maj=0.9km s-min=0.3km az=82.0
*NEIC **13** 10:51:27.3±1.7,39°.80N±0°.04×26°.19E±0°.07,h10km±1km,*
Error ellipse: s-maj=8.9km s-min=6.4km az=258.0
*SOF **13** 10:51:27.5,39°.92N×26°.09E,h10km,MD3.8*
ISC 13 10:51:27.1±0.7,39°.79N±0°.01×26°.13E±0°.02,h11km±4km,
n256,σ1§16/293,mb3.8/20,MS3.0/5,37C-18D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.07**	**312**	PG	**Pg**	**10 51 29.8**	**+0.2**
BOZC				SG	**Sg**	**10 51 31.4**	**0.0**
BOZC	**Bozcaada**	**0.07**	**312**	⇑*i*P	**Pg**	**10 51 29.7**	**+0.2**
BOZC				IAML		10 51 31.0	
	comp=N,157μm,0.2s						
BOZC				*i* S	**Sg**	**10 51 31.4**	**0.0**
EZN	**Ezine**	**0.16**	**77**	P	**Pg**	**10 51 30.6**	**-0.1**
EZN	**Ezine**	**0.16**	**77**	⇑P	**Pg**	**10 51 31.2**	**+0.5**
EZN				⇑S	**Sg**	**10 51 33.1**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.33**	**99**	⇓*i*P	**Pg**	**10 51 33.7**	**-0.1**
BAYC				*i* S	**Sg**	**10 51 38.4**	**+0.2**
GPNR	**Gulpinar-Canak**	**0.34**	**179**	PG	**Pg**	**10 51 33.8**	**0.0**
GPNR				SG	**Sg**	**10 51 38.6**	**+0.3**
GADA	**Gvkgeada**	**0.44**	**336**	P	**Pg**	**10 51 35.9**	**+0.2**
GADA				S	**Sg**	**10 51 42.2**	**+0.7**
GADA	**Gvkgeada**	**0.44**	**336**	PG	**Pg**	**10 51 35.9**	**+0.2**
GADA				SG	**Sg**	**10 51 41.9**	**+0.4**
PRK	**Paraskevi**	**0.56**	**168**	P	**Pb**	**10 51 38.9**	**+0.1**
PRK				S	**Sb**	**10 51 46.8**	**0.0**
	comp=N,37μm,0.7s						
PRK	**Paraskevi**	**0.56**	**168**	P	**Pb**	**10 51 38.9**	**+0.1**
PRK				S	**Sb**	**10 51 46.8**	**0.0**
PRK				AML	AML	10 51 48.1	
PRK				AML	AML	10 51 49.8	
	comp=E,43973μm,0.8s						
SIGR	**SIGRI**	**0.62**	**200**	P	**Pg**	**10 51 38.9**	**-0.2**
SIGR				S	**Sb**	**10 51 47.9**	**-0.6**
	comp=E,16μm,0.5s						
SIGR	**SIGRI**	**0.62**	**200**	P	**Pg**	**10 51 39.0**	**-0.2**
SIGR				S	**Sg**	**10 51 47.2**	**0.0**
SIGR				AML	AML	10 51 48.2	
	comp=N,38834μm,0.4s						
SIGR				AML	AML	10 51 49.3	
	comp=E,19571μm,0.5s						
SIGR	**SIGRI**	**0.62**	**200**	PG	**Pg**	**10 51 38.9**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.66**	**24**	PG	**Pg**	**10 51 39.9**	**-0.1**
LPK	**Lapseki**	**0.76**	**40**	PG	**Pg**	**10 51 41.3**	**-0.5**
ENZZ	**Sultanice-Enez**	**0.81**	**1**	PG	**Pg**	**10 51 42.9**	**0.0**
SMTH	**Samothraki Isl**	**0.82**	**326**	P	**Pg**	**10 51 42.9**	**0.0**
SMTH				S	**Sb**	**10 51 54.7**	**+0.3**
	comp=E,10μm,0.4s						
SMTH	**Samothraki Isl**	**0.82**	**326**	P	**Pg**	**10 51 43.0**	**0.0**
SMTH				S	**Sb**	**10 51 54.3**	**0.0**
SMTH				AML	AML	10 51 57.1	
	comp=E,15537μm,0.4s						
SMTH				AML	AML	10 51 58.1	
	comp=N,25763μm,0.3s						
EFSA	**Agios Efstrati**	**0.91**	**254**	P	**Pg**	**10 51 44.6**	**-0.1**
EFSA				S	**Sg**	**10 51 56.7**	**+0.1**
EFSA				AML	AML	10 51 59.8	
	comp=N,26620μm,0.5s						
EFSA				AML	AML	10 52 00.2	
	comp=E,17259μm,0.8s						
ERIK	**Erikli-Kesan**	**0.93**	**19**	PG	**Pg**	**10 51 43.9**	**-1.1**
DKL	**Dikili**	**0.94**	**140**	PG	**Pg**	**10 51 44.9**	**-0.3**
DKL				SG	**Sb**	**10 51 58.3**	**+0.5**
ENEZ	**Enez**	**0.94**	**1**	PG	**Pg**	**10 51 45.1**	**-0.2**
KRBG	**Karabiga-Canak**	**1.08**	**56**	PG	**Pb**	**10 51 47.1**	**-0.7**
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pb**	**10 51 47.7**	**-0.5**
ALN				S	**Sn**	**10 52 03.5**	**-0.2**
	comp=E,16μm,0.5s						
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pb**	**10 51 47.9**	**-0.3**
ALN				S	**Sg**	**10 52 03.2**	**+0.4**
ALN				AML	AML	10 52 04.6	
	comp=E,31706μm,0.5s						
ALN				AML	AML	10 52 05.0	
	comp=N,35364μm,0.5s						
ALN	**Alexandroupoli**	**1.11**	**357**	PN	**Pb**	**10 51 47.7**	**-0.5**
ALN	**Alexandroupoli**	**1.11**	**357**	Pg	**Pb**	**10 51 47.9**	**-0.3**
ALN				Sg	**Sg**	**10 52 03.1**	**+0.4**
ZEDA	**zmir-Bergama**	**1.11**	**138**	⇑*i*P	**Pb**	**10 51 47.8**	**-0.5**
ZEDA				*i* S	**Sg**	**10 52 02.9**	**+0.2**
ZEDA				IAML		10 52 05.0	
	comp=N,4μm,0.4s						
KESN	**Edirne-Kesan**	**1.12**	**22**	⇑*i*P	**Pg**	**10 51 47.1**	**-1.5**
KESN				*i* S	**Sg**	**10 52 03.2**	**-0.1**
KESN				IAML		10 52 06.0	
	comp=E,9μm,0.7s						
BALY	**Balya**	**1.15**	**92**	⇓*i*P	**Pb**	**10 51 49.0**	**-0.1**
BALY				*i* S	**Sn**	**10 52 05.0**	**+0.1**
BALY				IAML		10 52 10.0	
	comp=N,4μm,0.6s						
FOCM	**Foa**	**1.18**	**156**	PN	**Pb**	**10 51 48.7**	**-0.7**
KNL	**Balıkesir**	**1.18**	**66**	⇑*i*P	**Pb**	**10 51 49.0**	**-0.5**
KNL				*i* S	**Sn**	**10 52 05.6**	**+0.1**
KNL				IAML		10 52 07.0	
	comp=E,5μm,1.0s						
RKY	**Sarkoy-Tekirda**	**1.20**	**42**	PN	**Pb**	**10 51 49.8**	**-0.1**
RKY				SN	**Sn**	**10 52 06.9**	**+0.7**
SART	**Tekirdag**	**1.21**	**42**	⇑*i*P	**Pn**	**10 51 48.7**	**-1.2**
SART				*i* S	**Sb**	**10 52 05.7**	**+0.1**
SART				IAML		10 52 12.0	
	comp=E,4μm,0.5s						
GONE	**Gonen-Balikesi**	**1.23**	**78**	PN	**Pb**	**10 51 50.2**	**-0.1**
GONE				SN	**Sn**	**10 52 07.8**	**+1.1**
KRBN	**Karaburun**	**1.24**	**164**	PN	**Pn**	**10 51 50.3**	**0.0**
STEP	**BALIKESIR_Sava**	**1.30**	**108**	⇑*i*P	**Pn**	**10 51 51.1**	**-0.1**
STEP				*i* S	**Sg**	**10 52 09.7**	**+0.8**
STEP				IAML		10 52 18.0	
	comp=E,2μm,0.5s						
PSRA	**Psara**	**1.32**	**199**	P	**Pn**	**10 51 51.4**	**-0.1**
THAS	**Thassos island**	**1.35**	**308**	P	**Pn**	**10 51 51.1**	**-0.7**
THAS				S	**Sb**	**10 52 08.5**	**-1.1**
	comp=E,3μm,0.5s						
THAS	**Thassos island**	**1.35**	**308**	P	**Pn**	**10 51 51.1**	**-0.7**
THAS				S	**Sb**	**10 52 08.8**	**-0.9**
THAS				AML	AML	10 52 09.5	
	comp=N,5998μm,0.5s						
THAS				AML	AML	10 52 10.0	
	comp=E,4376μm,0.4s						
BALB	**Balikesir**	**1.36**	**96**	PN	**Pn**	**10 51 51.9**	**-0.1**
UKOP	**Uzunkopru-Edir**	**1.39**	**16**	PN	**Pb**	**10 51 52.9**	**-0.2**
CHOS	**Chios island**	**1.40**	**182**	P	**Pn**	**10 51 51.7**	**-1.0**
CHOS				S	**Sn**	**10 52 10.9**	**-0.3**
	comp=E,2μm,0.4s						
CHOS	**Chios island**	**1.40**	**182**	P	**Pn**	**10 51 51.7**	**-1.0**
CHOS				AML	AML	10 52 19.2	
	comp=N,4598μm,0.3s						
CHOS				AML	AML	10 52 24.0	
	comp=E,5301μm,0.5s						
CHOS	**Chios island**	**1.40**	**182**	PN	**Pn**	**10 51 51.9**	**-0.8**
RDO	**Rodhopi**	**1.43**	**342**	P	**Pn**	**10 51 52.7**	**-0.1**
RDO				S	**Sb**	**10 52 12.0**	**+0.2**
	comp=E,3μm,0.4s						
RDO	**Rodhopi**	**1.43**	**342**	P	**Pn**	**10 51 52.8**	**-0.1**
RDO				S	**Sn**	**10 52 10.9**	**-0.7**
RDO				AML	AML	10 52 15.5	
	comp=N,5740μm,0.5s						
RDO				AML	AML	10 52 15.7	
	comp=E,5084μm,0.4s						
RDO	**Rodhopi**	**1.43**	**342**	PN	**Pn**	**10 51 52.8**	**-0.1**
EDC	**Edincik**	**1.45**	**67**	PN	**Pn**	**10 51 53.3**	**+0.1**
SKY	**Skiros Island**	**1.52**	**232**	P	**Pn**	**10 51 53.3**	**-0.9**
SKY	**Skiros Island**	**1.52**	**234**	P	**Pn**	**10 51 53.3**	**-0.9**
SKY				AML	AML	10 52 18.3	
	comp=N,4775μm,0.6s						
SKY				AML	AML	10 52 24.6	
	comp=E,4942μm,0.5s						
BLCB	**Balcova**	**1.57**	**153**	PN	**Pn**	**10 51 55.1**	**+0.2**
ZEY	**zmir**	**1.58**	**169**	⇑*i*P	**Pn**	**10 51 54.1**	**-0.9**
ZEY				*i* S	**Sg**	**10 52 18.1**	**+0.2**
AKHS	**Akhisar**	**1.59**	**124**	*i* P	**Pn**	**10 51 54.9**	**-0.3**
AKHS				*i* S	**Sg**	**10 52 19.0**	**+0.6**
AKS	**Akhisar**	**1.59**	**124**	PN	**Pn**	**10 51 55.2**	**0.0**
TKR	**Tekirdag**	**1.61**	**42**	PN	**Pb**	**10 51 56.6**	**-0.2**
KAVA	**Kavala**	**1.72**	**315**	P	**Pn**	**10 51 56.7**	**-0.3**
KAVA				S	**Sn**	**10 52 18.0**	**-0.9**
	comp=E,1μm,0.4s						
KAVA	**Kavala**	**1.72**	**315**	P	**Pn**	**10 51 56.8**	**-0.1**
KAVA				AML	AML	10 52 19.3	
	comp=N,2444μm,0.5s						
KAVA				AML	AML	10 52 20.2	
	comp=E,2010μm,0.5s						
OUR	**Ouranopolis**	**1.73**	**289**	P	**Pn**	**10 51 56.5**	**-0.6**
OUR				S	**Sn**	**10 52 17.8**	**-1.3**
	comp=E,2μm,0.5s						
OUR	**Ouranopolis**	**1.73**	**289**	P	**Pn**	**10 51 56.6**	**-0.4**
OUR				AML	AML	10 52 23.3	
	comp=N,5020μm,0.5s						
OUR				AML	AML	10 52 24.9	
	comp=E,4777μm,0.4s						
OUR	**Ouranopolis**	**1.73**	**289**	PN	**Pn**	**10 51 57.0**	**-0.1**
KVLA	**Kavala**	**1.75**	**311**	P	**Pn**	**10 51 57.4**	**0.0**
KCTX	**Karacabey (Bur**	**1.78**	**74**	PN	**Pn**	**10 51 57.7**	**-0.1**
DURS	**Dursunbey**	**1.82**	**95**	⇓*i*P	**Pn**	**10 51 58.4**	**0.0**
DURS				*i* S	**Sn**	**10 52 21.6**	**0.0**
DURS				IAML		10 52 28.0	
	comp=E,1μm,0.6s						
DGB	**zmir**	**1.83**	**161**	⇑*i*P	**Pn**	**10 51 57.6**	**-0.9**
DGB				*i* S	**Sg**	**10 52 25.1**	**-0.9**
AOS	**Alonnisos**	**1.84**	**251**	P	**Pn**	**10 51 58.1**	**-0.5**
AOS	**Alonnisos**	**1.84**	**251**	P	**Pn**	**10 51 58.2**	**-0.5**
AOS				AML	AML	10 52 33.8	
	comp=E,1815μm,0.5s						
AOS				AML	AML	10 52 35.6	
	comp=N,1938μm,0.5s						
PAIG	**Paliouri**	**1.89**	**275**	P	**Pn**	**10 51 58.5**	**-0.7**
PAIG	**Paliouri**	**1.89**	**275**	P	**Pn**	**10 51 58.7**	**-0.6**
EDRB	**Edirne**	**2.11**	**13**	P	**Pn**	**10 52 01.9**	**-0.4**
KIRK	**Kırklareli**	**2.12**	**20**	⇓*i*P	**Pn**	**10 52 02.0**	**-0.5**
KIRK				*i* S	**Sb**	**10 52 32.6**	**+0.7**
PLG	**Polygyros**	**2.14**	**287**	P	**Pn**	**10 52 02.5**	**-0.2**
PLG	**Polygyros**	**2.14**	**287**	P	**Pn**	**10 52 02.7**	**0.0**
SKIA	**Skiathos**	**2.15**	**254**	P	**Pn**	**10 52 02.6**	**-0.3**
SKIA	**Skiathos**	**2.15**	**254**	P	**Pn**	**10 52 02.9**	**0.0**
SMG	**Samos**	**2.15**	**165**	P	**Pn**	**10 52 02.1**	**-0.8**
SMG	**Samos**	**2.15**	**165**	P	**Pn**	**10 52 02.3**	**-0.6**
RZN	**Rozhen**	**2.18**	**331**	P	**Pn**	**10 52 03.8**	**+0.4**
KARY	**Karystos**	**2.20**	**217**	P	**Pn**	**10 52 02.1**	**-1.4**
MRKA	**Markates**	**2.25**	**242**	P	**Pn**	**10 52 03.4**	**-0.8**
MRKA	**Markates**	**2.25**	**242**	P	**Pn**	**10 52 04.0**	**-0.3**
MANT	**Manisa**	**2.29**	**124**		**Pn**	**10 52 04.8**	**-0.3**
NEO	**Neokhori**	**2.29**	**259**	P	**Pn**	**10 52 04.6**	**-0.3**
DIM	**Dimitrovgrad**	**2.30**	**349**	*i* P	**Pn**	**10 52 05.4**	**+0.5**
XOR	**Xorichti**	**2.31**	**260**	P	**Pn**	**10 52 04.3**	**-0.7**
NVR	**Nevrokopi**	**2.32**	**313**	P	**Pn**	**10 52 06.2**	**+0.9**
NVR				S	**Sn**	**10 52 33.1**	**-0.7**
	comp=N,540nm,0.5s						
SRS	**Serrai**	**2.34**	**305**	P	**Pn**	**10 52 05.3**	**-0.2**
SRS	**Serrai**	**2.34**	**305**	P	**Pn**	**10 52 05.7**	**+0.2**
CTYL	**Yalikoy Yolu**	**2.35**	**44**	⇓P	**Pn**	**10 52 07.2**	**+1.5**
CTYL	**Yalikoy Yolu**	**2.35**	**44**	⇑S	**Sn**	**10 52 28.3**	**-6.2**
SOH	**Sokhos**	**2.36**	**297**	P	**Pn**	**10 52 05.9**	**+0.2**
SOH	**Sokhos**	**2.36**	**297**	P	**Pn**	**10 52 05.9**	**+0.2**
HORT	**Hortiatis**	**2.45**	**290**	P	**Pn**	**10 52 07.5**	**+0.4**
HORT	**Hortiatis**	**2.45**	**290**	P	**Pn**	**10 52 07.4**	**+0.3**
PLD	**Plovdiv**	**2.55**	**335**	P	**Pn**	**10 52 09.6**	**+1.3**
MMB	**Musomiste**	**2.56**	**315**	*i* P	**Pn**	**10 52 08.5**	**0.0**
YLV	**Yalova**	**2.61**	**72**	⇓P	**Pn**	**10 52 10.4**	**+1.2**
KLYT	**Kilyos**	**2.66**	**56**	⇑P	**Pn**	**10 52 10.7**	**+0.9**
JMB	**Yambol**	**2.69**	**7**	P	**Pn**	**10 52 10.9**	**+0.6**
VILL	**Villia**	**2.73**	**234**	P	**Pn**	**10 52 10.0**	**-0.9**
APE	**Apeiranthos**	**2.76**	**190**	*ce*P	**Pn**	**10 52 09.3**	**-2.0**
APE	**Apeiranthos**	**2.76**	**190**	P	**Pn**	**10 52 09.8**	**-1.5**
APE	**Apeiranthos**	**2.76**	**190**	⇑P	**Pn**	**10 52 09.7**	**-1.5**
LIT	**Litokhoron**	**2.81**	**277**	P	**Pn**	**10 52 11.9**	**-0.1**
LIT	**Litokhoron**	**2.81**	**277**	P	**Pn**	**10 52 12.8**	**+0.8**
LIT	**Litokhoron**	**2.81**	**277**		**Pn**	**10 52 12.8**	**+0.8**
KNT	**Kendrikon**	**2.82**	**300**	P	**Pn**	**10 52 12.3**	**+0.3**
KNT	**Kendrikon**	**2.82**	**300**	P	**Pn**	**10 52 12.6**	**+0.6**
BODT	**Bodrum**	**2.88**	**161**	P	**Pn**	**10 52 12.6**	**-0.3**
AMGA	**Amorgos Island**	**2.96**	**184**	P	**Pn**	**10 52 12.6**	**-1.4**
AMGA	**Amorgos Island**	**2.96**	**184**	P	**Pn**	**10 52 12.6**	**-1.4**
SILT	**Sile**	**3.01**	**62**	⇑P	**Pn**	**10 52 16.0**	**+1.3**
LTK	**Loutraki**	**3.03**	**235**	P	**Pn**	**10 52 13.5**	**-1.5**
AGG	**Agios Georgios**	**3.04**	**257**	P	**Pn**	**10 52 15.2**	**+0.1**
AGG	**Agios Georgios**	**3.04**	**257**	P	**Pn**	**10 52 15.7**	**+0.6**
AGG	**Agios Georgios**	**3.04**	**257**		**Pn**	**10 52 15.7**	**+0.6**
LOUT	**Loutraki**	**3.05**	**235**	P	**Pn**	**10 52 14.6**	**-0.6**
GRG	**Griva**	**3.07**	**293**	P	**Pn**	**10 52 16.1**	**+0.5**
KKB	**Krupnik**	**3.10**	**313**	P	**Pn**	**10 52 16.5**	**+0.5**
VAY	**Valandovo**	**3.11**	**301**	*i* Pn	**Pn**	**10 52 17.5**	**+1.4**
IOSP	**Ios island**	**3.13**	**192**	P	**Pn**	**10 52 14.8**	**-1.6**
IOSP	**Ios island**	**3.13**	**192**	P	**Pn**	**10 52 14.7**	**-1.6**
ELND	**Elena**	**3.14**	**357**	⇓P	**Pn**	**10 52 16.8**	**+0.3**
YER	**Yerkesik**	**3.15**	**147**	P	**Pn**	**10 52 16.6**	**0.0**
MAKR	**Makrakomi, Fth**	**3.19**	**257**	P	**Pn**	**10 52 17.6**	**+0.4**
DID	**Didima**	**3.21**	**226**	P	**Pn**	**10 52 17.0**	**-0.5**
THR5	**Thira Island,**	**3.42**	**191**	P	**Pn**	**10 52 18.9**	**-1.5**
SERG	**Sergoula**	**3.45**	**248**	P	**Pn**	**10 52 20.9**	**+0.1**
SANT	**Santorini**	**3.46**	**189**	⇑P	**Pn**	**10 52 19.4**	**-1.5**
SANT	**Santorini**	**3.46**	**189**		**Pn**	**10 52 19.3**	**-1.5**
TRIZ	**Trizonia**	**3.46**	**247**	P	**Pn**	**10 52 20.7**	**-0.1**
PVL	**Pavlikeni**	**3.47**	**350**	*i* P	**Pn**	**10 52 21.0**	**0.0**
PRD	**Provadia**	**3.54**	**15**	P	**Pn**	**10 52 21.6**	**-0.3**
STIP	**Stip**	**3.54**	**304**	*i* Pn	**Pn**	**10 52 21.1**	**-0.9**
VTS	**Vitosha**	**3.57**	**323**	P	**Pn**	**10 52 23.5**	**+1.0**
VTS	**Vitosha**	**3.57**	**323**	P	**Pn**	**10 52 23.2**	**+0.7**
VTS	**Vitosha**	**3.57**	**323**	⇓P	**Pn**	**10 52 23.3**	**+0.8**
VTS	**Vitosha**	**3.57**	**323**		**Pn**	**10 52 23.2**	**+0.7**
KPRO	**Kipourio**	**3.67**	**274**	P	**Pn**	**10 52 25.2**	**+1.4**
FNA	**Florina**	**3.77**	**287**	P	**Pn**	**10 52 26.2**	**+1.1**
FNA	**Florina**	**3.77**	**287**		**Pn**	**10 52 26.2**	**+1.1**
PLVB	**Pleven**	**3.77**	**343**	⇑P	**Pn**	**10 52 26.0**	**+0.9**
RAZG	**Razgrad**	**3.78**	**4**	⇑P	**Pn**	**10 52 26.2**	**+0.9**
FETY	**Fethiye**	**3.92**	**143**	P	**Pn**	**10 52 27.7**	**+0.5**
MDUB	**Mudurnu**	**3.95**	**78**		**Pn**	**10 52 28.1**	**+0.5**
VLI	**Veliai**	**3.96**	**220**	P	**Pn**	**10 52 26.9**	**-0.9**
MPEP	**Malo Peshtene**	**3.99**	**334**	P	**Pn**	**10 52 28.7**	**+0.6**
ITM	**Ithomi**	**4.20**	**233**		**Pn**	**10 52 32.6**	**+1.6**
ELL	**Elmali**	**4.25**	**134**	P	**Pn**	**10 52 32.0**	**+0.1**
ELL	**Elmali**	**4.25**	**134**		**Pn**	**10 52 31.9**	**+0.1**
OHR	**Ohrid**	**4.27**	**290**	*e*Pn	Pn	10 52 26.2	-5.9
KARP	**Karpathos**	**4.32**	**169**		**Pn**	**10 52 32.1**	**-0.5**
COPA	**Copaceanca**	**4.39**	**351**	⇓P	**Pn**	**10 52 34.3**	**+0.7**
MANR	**Mangalia**	**4.42**	**24**	⇑P	**Pn**	**10 52 34.8**	**+0.7**
RASA	**Rasa**	**4.49**	**9**	⇑P	Pn	10 52 27.1	-7.8
ICOR	**Ion Corvin**	**4.50**	**16**	⇓P	**Pn**	**10 52 36.0**	**+0.9**
IDI	**Anoyia**	**4.60**	**193**	Pn	**Pn**	**10 52 34.8**	**-1.8**
	comp=N,1.3nm,0.3s,baz=132,slow=11,SNR=14						
HUMR	**Humele**	**4.81**	**350**	⇑P	**Pn**	**10 52 39.8**	**+0.4**
TIRR	**Tirgusor**	**4.96**	**19**	P	**Pn**	**10 52 41.2**	**-0.3**
TIRR	**Tirgusor**	**4.96**	**19**	⇓P	**Pn**	**10 52 41.7**	**+0.2**
TIRR	**Tirgusor**	**4.96**	**19**		**Pn**	**10 52 41.2**	**-0.3**
HARR	**Harsova**	**5.08**	**15**	⇓P	**Pn**	**10 52 43.7**	**+0.6**
BR231	**Keskin MP Arra**	**5.12**	**87**		**Pn**	**10 52 41.1**	**-2.7**
ANTO	**Ankara**	**5.13**	**87**	P	**Pn**	**10 52 40.7**	**-3.2**
ANTO	**Ankara**	**5.13**	**87**	⇑P	**Pn**	**10 52 40.7**	**-3.2**
ANTO	**Ankara**	**5.13**	**87**		**Pn**	**10 52 40.7**	**-3.2**
TOPG	**Topolog**	**5.35**	**17**	⇑P	**Pn**	**10 52 47.7**	**+0.9**
MTUR	**Matau**	**5.49**	**352**	⇑P	**Pn**	**10 52 49.8**	**+1.0**
CFR	**Carcaliu**	**5.58**	**15**	⇓P	**Pn**	**10 52 49.7**	**-0.3**
ARR	**Arges**	**5.68**	**349**	⇓P	**Pn**	**10 52 52.5**	**+1.1**
MLR	**Muntele Rosu**	**5.70**	**359**	Pn	**Pn**	**10 52 52.3**	**+0.5**
	comp=N,6.5nm,0.3s,baz=232,slow=5.2,SNR=34						
MLR				Sn	**Sn**	**10 53 59.3**	**+2.1**
	comp=N,3.3nm,0.3s,baz=324,slow=19,SNR=2.0						
MLR				Lg	Lg	10 54 29.0	
	comp=N,3.0nm,0.3s,baz=74,slow=19,SNR=3.8						
MLR				LR	LR	10 55 11.1	
	comp=N,144nm,20.7s,baz=117,slow=40						
MLR	**Muntele Rosu**	**5.70**	**359**	⇑P	**Pn**	**10 52 53.6**	**+1.9**
MLR	**Muntele Rosu**	**5.70**	**359**		**Pn**	**10 52 52.7**	**+1.0**
MLR					**Sn**	**10 53 58.8**	**+1.6**
VOIR		**5.70**	**352**	⇑P	**Pn**	**10 52 52.5**	**+0.8**
BISRR	**Bisoca**	**5.77**	**4**	⇑P	**Pn**	**10 52 54.7**	**+2.0**
BR131	**Keskin Array S**	**5.79**	**88**		Pn	10 52 45.5	-7.6
BRTR	**Keskin Array B**	**5.79**	**88**	Pn	Pn	10 52 45.6	-7.4
	comp=N,2.7nm,0.3s,baz=285,slow=16,SNR=76						
BRTR				Sn	**Sn**	**10 53 58.0**	**-1.5**
	comp=N,0.8nm,0.3s,baz=278,slow=19,SNR=4.0						
BRTR				Lg	Lg	10 54 33.8	
	baz=264,slow=29,SNR=8.6						
PDG	**Podgorica**	**5.82**	**299**		**Pn**	**10 52 55.0**	**+1.7**
SCTE	**Santa Cesarea**	**5.89**	**275**	Pn	**Pn**	**10 52 56.2**	**+1.9**
MDVR	**Moldovita**	**5.96**	**328**	⇑P	**Pn**	**10 52 55.7**	**+0.4**
PLOR	**Plostina**	**6.07**	**3**	⇑P	**Pn**	**10 52 58.5**	**+1.7**

MK31 pmax pmax
comp=Z,2.0nm,1.5s
MK31 Makanchi Array 40.72 61 P **P** **10 59 08.0 +0.4**
MKAR Makanchi Array 40.72 61 P **P** **10 59 08.2 +0.6**
comp=Z,1.4nm,1.1s,baz=270,slow=6.8,SNR=3.6
ZAA0 Zalesovo Array 41.34 50 P **P**
ZAA0 IAmb IAmb 10 59 14.0
comp=Z,3.5nm,0.6s
ZALV Zalesovo Beam 41.34 50 P **P** **10 59 13.3 +0.7**
comp=Z,2.9nm,0.6s,baz=269,slow=8.7,SNR=13
SONM Songino Array 56.03 53 P **P** **11 01 06.3 +0.5**
SONM pmax pmax
comp=Z,1.0nm,1.3s
SONM Songino Array 56.03 53 P **P** **11 01 06.3 +0.5**
comp=Z,0.4nm,0.6s,baz=292,slow=7.6,SNR=3.0
BILL Bilibino 68.40 15 *i P* **P** **11 02 30.6 +2.4**
BILL pmax pmax
comp=Z,2.0nm,1.2s
YKA Yellowknife Ar 73.28 342 P **P** **11 02 58.0 0.0**
comp=Z,0.4nm,0.8s,baz=32,slow=5.4,SNR=8.1
MSHR Mys Shultsa 73.61 48 *eP* **P** **11 03 00.5 +0.2**
ILAR Eielson Array 75.63 357 P **P** **11 03 11.5 -0.1**
comp=Z,0.3nm,0.7s,baz=359,slow=5.5,SNR=3.3
ULM Lac du Bonnet 76.90 326 *eP* **P** **11 03 18.1 -1.0**

BJI ***13*** *10:55:16.8±0.0,46.12°S×95.49°E,h10km,mB5.2/23, mb4.8/32,Ms5.1/19,Ms7 4.8/19*
IDC ***13*** *10:55:17.8±0.6,45.76°S×96.24°E,h0km,mb4.3/14, mb1 4.3/14,mb1mx4.2/33,mbtmp4.3/14,MS4.6/21, Ms1 4.6/21,ms1mx4.5/29,Error ellipse: s-maj=21.7km s-min=14.8km az=112.0*
NEIC ***13*** *10:55:19.7±1.1,45.8°S±0.1°×95.9°E±0.1°,h10km±1km, mb4.8/27,Error ellipse: s-maj=21.2km s-min=18.1km az=112.0*
GCMT ***13*** *10:55:22.7±0.2,45.68°S±0.01°×95.92°E±0.01°,h12km, MW5.2/122,Moment Tensor Solution. s69,c92; s122,c210; Duration: 1§0 Moment tensor: Scale 10¹⁷ Nm; Mrr0.06±.01; Mθθ-0.73±.01; Mφφ0.67±.01; Mrθ0.10±.03; Mθφ-0.21±.01; Mφr-0.12±.03; Best double couple: M₀0.75400×10¹⁷ NP1:φs217.00000°,δ78.00000°, λ4.00000°. NP2:φs126.00000°,δ86.00000°,λ168.00000°. Principal axes: T 0.7360, Plg11.0000°, Azm81.0000°; N 0.0370, Plg77.0000°, Azm290.0000°; P -0.7730, Plg6.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 13 10:55:20.3±0.4,45.90S±0.07°×96.02E±0.10,h12km,n99, σ1§40/76,mb4.7/29,MS4.7/32,2C-2D,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W2	**Cape Leeuwin H**	**17.59**	**58**	T	T	11 17 16.2	
	baz=226,slow=74,SNR=426						
H01W3	**Cape Leeuwin H**	**17.60**	**58**	T	T	11 17 14.2	
	baz=226,slow=74,SNR=438						
H01W1	**Cape Leeuwin H**	**17.61**	**58**	T	T	11 17 14.3	
	baz=226,slow=74,SNR=478						
NWAO	**Narrogin (SRO)**	**20.81**	**59**	P	**P**	**10 59 57.0**	**-4.4**
	6.9nm,0.9s,baz=218,slow=8.8,SNR=2.7						
NWAO				LR	LR	11 06 07.8	
	comp=Z,2μm,19.9s,baz=234,slow=32						
NWAO	**Narrogin (SRO)**	**20.81**	**59**	IAmb	IAmb	11 00 05.5	
	comp=Z,29nm,1.2s						
CASY	**Casey**	**21.87**	**164**	P	**P**	**11 00 13.1**	**+0.6**
CASY				IAmb	IAmb	11 00 18.8	
	comp=Z,42nm,1.3s						
MAW	**Mawson**	**27.73**	**207**	P	**P**	**11 01 08.9**	**+0.8**
	comp=Z,9.1nm,0.3s,baz=61,slow=9.9,SNR=36						
MAW				LR	LR	11 10 07.6	
	comp=Z,861nm,18.4s,baz=51,slow=32						
MAW	**Mawson**	**27.73**	**207**	P	**P**	**11 01 07.1**	**-1.0**
FORT	**Forrest**	**29.08**	**70**	P	**P**	**11 01 20.9**	**+0.4**
FORT				IAmb	IAmb	11 01 26.3	
	comp=Z,25nm,1.1s						
BBOO	**Buckleboo**	**33.25**	**81**	P	**P**	**11 01 58.0**	**+0.7**
BBOO				IAmb	IAmb	11 02 13.4	
	comp=Z,11nm,1.2s						
SYO	**Syowa Base**	**36.22**	**211**	*i*P	**P**	**11 02 22.0**	**-0.4**
SYO	**Syowa Base**	**36.22**	**211**	*i*pP	pP	11 02 25.3	+0.1
SYO	**Syowa Base**	**36.22**	**211**	*i*sP	sP	11 02 28.8	+2.3
SYO	**Syowa Base**	**36.22**	**211**	*i*ePnPn	PnPn	11 03 45.0	+1.2
FITZ	**Fitzroy Crossi**	**37.02**	**51**	LR	LR	11 16 55.4	
	comp=Z,658nm,18.1s,baz=226,slow=35						
STKA	**Stephens Creek**	**37.62**	**84**	P	**P**	**11 02 32.9**	**-2.0**
	comp=Z,4.0nm,0.8s,baz=232,slow=8.0,SNR=5.2						
STKA				LR	LR	11 14 56.9	
	comp=Z,2μm,21.6s,baz=226,slow=32						
STKA	**Stephens Creek**	**37.62**	**84**	P	**P**	**11 02 35.6**	**+0.8**
ASAR	**Alice Springs**	**37.71**	**67**	P	**P**	**11 02 32.6**	**-3.1**
	comp=Z,3.4nm,0.9s,baz=220,slow=7.3,SNR=17						
ASAR				LR	LR	11 15 47.3	
	comp=Z,2μm,21.9s,baz=230,slow=33						
AS31	**Alice Springs**	**37.72**	**67**	P	**P**	**11 02 36.3**	**+0.6**
VNDA	**Vanda**	**40.47**	**162**	P	**P**	**11 02 58.1**	**0.0**
	comp=Z,1.3nm,1.0s,baz=280,slow=12,SNR=2.7						
VNDA				LR	LR	11 18 29.4	
	comp=Z,2μm,18.1s,baz=284,slow=34						
VNDA	**Vanda**	**40.47**	**162**	P	**P**	**11 02 58.3**	**+0.2**
WRA	**Warramunga Arr**	**40.70**	**63**	P	**P**	**11 02 58.4**	**-2.3**
	comp=Z,7.2nm,1.0s,baz=221,slow=8.3,SNR=17						
WRA				LR	LR	11 17 54.7	
	comp=Z,2μm,20.4s,baz=225,slow=34						
WRA	**Warramunga Arr**	**40.70**	**63**	IAmb	IAmb	11 03 06.3	
	comp=Z,0.9nm,1.4s						
H08S2	**Diego Garcia H**	**43.17**	**325**	T	T	11 49 01.4	
	baz=156,slow=76,SNR=188						
H08S1	**Diego Carcia H**	**43.18**	**325**	T	T	11 49 00.7	
	baz=156,slow=76,SNR=159						
H08S3	**Diego Garcia H**	**43.19**	**325**	T	T	11 49 02.9	
	baz=156,slow=76,SNR=172						
QSPA	**South Pole Qui**	**44.25**	**180**	P	**P**	**11 03 29.2**	**-0.1**
	comp=Z,15nm,1.2s,baz=308,slow=9.5,SNR=14						
QSPA	**South Pole Qui**	**44.25**	**180**	P	**P**	**11 03 29.8**	**+0.6**
QSPA				IAmb	IAmb	11 03 35.0	
	comp=Z,34nm,1.4s						
KAPI	**Kappang**	**45.65**	**34**	LR	LR	11 19 05.1	
	comp=Z,212nm,21.3s,baz=291,slow=31						
SPSI	**Sidrap Palu**	**46.62**	**34**	P	**P**	**11 03 49.9**	**+1.6**
	comp=Z,826nmcomp=Z,14nm,1.8s						
CTA	**Charters Tower**	**48.37**	**75**	LR	LR	11 22 57.5	
	comp=Z,936nm,19.9s,baz=238,slow=34						
CTAO	**Charters Tower**	**48.37**	**75**	P	**P**	**11 04 04.0**	**+2.0**
RPSI	**Rantau Prapat**	**48.45**	**4**	P	**P**	**11 04 01.0**	**-1.5**
PSI	**Prapat**	**48.55**	**4**	P	**P**	**11 04 01.0**	**-2.5**
	comp=Z,1.8nm,0.5s,baz=157,slow=7.7,SNR=2.3						
SNAA	**Sanae**	**49.84**	**204**	P	**P**	**11 04 13.9**	**+1.3**
SNAA	**Sanae**	**49.84**	**204**	P	**P**	**11 04 13.0**	**+0.4**
	comp=Z,8.7nm,0.8s,baz=118,slow=7.5,SNR=14						
SNAA	**Sanae**	**49.84**	**204**	P	**P**	**11 04 12.7**	**+0.1**
SNAA				IAmb	IAmb	11 04 14.5	
	comp=Z,25nm,1.3s						
VNA1	**Neumayer--Stat**	**51.88**	**204**	P	**P**	**11 04 29.5**	**+1.6**
VNA3	**Neumayer Olymp**	**51.97**	**203**	P	**P**	**11 04 29.8**	**+1.2**
PMG	**Port Moresby**	**56.73**	**67**	LR	LR	11 28 03.8	
	comp=Z,599nm,18.4s,baz=192,slow=35						
BOSA	**Boshof**	**57.09**	**261**	LR	LR	11 23 46.2	
	comp=Z,621nm,21.6s,baz=160,slow=30						
JAY	**Jayapura**	**58.18**	**56**	LR	LR	11 29 52.4	
	comp=Z,990nm,19.7s,baz=230,slow=36						
DZM	**Mont Dzumac**	**61.02**	**93**	*e*LR	LR	11 23 41.6	
	comp=Z,1μm,23.8s						
PBKT	**Sadao Pong**	**62.33**	**5**	P	**P**	**11 05 43.0**	**+0.7**
PBKT				IAmb	IAmb	11 05 54.6	
	comp=Z,11nm,1.2s						
LSZ	**Lusaka**	**63.79**	**275**	P	**P**	**11 05 51.2**	**-1.3**
CM31	**Chiang Mai Arr**	**64.10**	**3**	P	**P**	**11 05 53.9**	**-0.3**
CM31				IAmb	IAmb	11 06 10.1	
	comp=Z,12nm,1.2s						
CMAR	**Chiang Mai Arr**	**64.10**	**3**	P	**P**	**11 05 52.3**	**-1.8**
	comp=Z,1.7nm,0.4s,baz=199,slow=5.8,SNR=12						
CMAR				LR	LR	11 28 57.8	
	comp=Z,725nm,21.9s,baz=196,slow=32						
QIZ	**Qiongzhong**	**65.82**	**14**	P	**P**	**11 06 06.5**	**+1.2**
QIZ				S	**S**	**11 14 55.8**	**+4.0**
QIZ				LR	LR		
	comp=Z,510nm,15.0s						
KMBO	**Kilima Mbogo**	**67.91**	**293**	P	**P**	**11 06 19.2**	**0.0**
	comp=Z,0.9nm,0.3s,baz=144,slow=8.5,SNR=3.2						
KMBO	**Kilima Mbogo**	**67.91**	**293**	P	**P**	**11 06 17.9**	**-1.3**
KMBO				IAmb	IAmb	11 06 29.9	
	comp=Z,11nm,1.4s						
KMI	**Kunming**	**70.94**	**6**	P	**P**	**11 06 39.6**	**+2.1**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,200nm,4.6s						
KMI				LR	LR		
	comp=Z,520nm,19.5s						
KMI				LR	LR		
	comp=Z,340nm,16.2s						
KMI				LR	LR		
	comp=Z,600nm,20.5s						
SHL	**Shillong**	**71.22**	**356**	P	**P**	**11 06 38.9**	**-0.2**
YULB	**Yu-li**	**72.68**	**24**	P	**P**	**11 06 48.2**	**+0.5**
LSA	**Lhasa**	**75.37**	**356**	P	**P**	**11 07 04.7**	**+0.8**
LSA				IAmb	IAmb	11 07 08.5	
	comp=Z,12nm,1.5s						
CD2	**Chengdu**	**76.77**	**7**	*e*P	**P**	**11 07 13.0**	**+1.7**
NJ2	**Nanjing**	**80.30**	**20**	*e*P	**P**	**11 07 33.8**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
XAN	**Xi'an**	**80.42**	**11**	P	**P**	**11 07 31.6**	**+0.2**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,210nm,5.1s						
XAN				LR	LR		
	comp=Z,400nm,19.5s						
XAN				LR	LR		
	comp=Z,370nm,20.9s						
XAN				LR	LR		
	comp=Z,360nm,23.3s						
XAN	**Xi'an**	**80.42**	**11**	IAmb	IAmb	11 07 36.6	
	comp=Z,10nm,1.0s						
LZH	**Lanzhou**	**81.91**	**6**	*e*P	**P**	**11 07 40.8**	**+1.4**
LZH				pP	PcP	11 07 44.6	-0.4
LZH				sP	pwP	11 07 49.8	+3.6
LZH				PP	**PP**	**11 10 45.8**	**-1.7**
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,5.4s						
LZH				LR	LR		
	comp=Z,220nm,16.2s						
LZH				LR	LR		
	comp=Z,220nm,16.7s						
LZH				LR	LR		
	comp=Z,250nm,18.3s						
KBL	**Kabul**	**83.70**	**338**	P	**P**	**11 07 48.1**	**-0.8**
KBL				IAmb	IAmb	11 07 53.5	
	comp=Z,6.8nm,1.0s						
GTA	**Gaotai**	**84.99**	**3**	P	**P**	**11 07 55.4**	**+0.2**
GTA				pP	sP	11 07 59.3	0.0
GTA				sP	pwP	11 08 01.5	-0.5
GTA				pmax	pmax		
	comp=Z,86nm,4.6s						
GTA				LR	LR		
	comp=Z,210nm,19.2s						
GTA				LR	LR		
	comp=Z,220nm,18.2s						
GTA				LR	LR		
	comp=Z,240nm,19.9s						
HRA	**Herat**	**85.54**	**333**	P	**P**	**11 07 57.4**	**-0.7**
HRA				IAmb	IAmb	11 07 59.9	
	comp=Z,4.3nm,1.1s						
KSH	**Kashi**	**86.91**	**345**	P	**P**	**11 08 04.8**	**+0.1**
KSH				pP	sP	11 08 09.8	+1.0
KSH				PP	**PP**	**11 11 29.0**	**+0.8**
KSH				S	**S**	**11 18 40.5**	**-2.0**
KSH				sS	ScS	11 18 50.0	-0.2
KSH				SS	**SS**	**11 24 27.8**	**+1.8**
KSH				pmax	pmax		
	comp=Z,160nm,6.5s						
KSH				LR	LR		
	comp=Z,140nm,4.6s						
KSH				LR	LR		
	comp=Z,140nm,5.4s						
KSH				LR	LR		
	comp=Z,590nm,8.3s						
BJI	**Beijing**	**87.44**	**15**	*e*P	**P**	**11 08 06.0**	**-1.0**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**87.47**	**12**	*e*P	**P**	**11 08 08.4**	**+1.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,44nm,6.8s						
HHC				LR	LR		
	comp=Z,260nm,16.4s						
HHC				LR	LR		
	comp=Z,230nm,14.4s						
HHC				LR	LR		
	comp=Z,360nm,14.9s						
CHGR	**Chuyangaron**	**87.56**	**339**	P	**P**	**11 08 06.8**	**-0.9**
GAR	**Garm**	**87.61**	**340**	P	**P**	**11 08 07.4**	**-0.6**
KSRS	**Korea Array**	**87.80**	**25**	LR	LR	11 47 44.2	
	comp=Z,66nm,19.6s,baz=190,slow=36						
TBI	**Tubuai**	**89.10**	**123**	*e*LR	LR	11 36 44.3	
	comp=Z,299nm,33.8s						
WMQ	**Urumqi**	**89.64**	**354**	P	**P**	**11 08 18.9**	**+1.5**
WMQ				pP	pwP	11 08 23.4	-0.8
WMQ				sP	sP	11 08 27.6	+6.0
WMQ				LR	LR		
	comp=Z,240nm,21.3s						
WMQ				LR	LR		
	comp=Z,270nm,20.1s						
WMQ				LR	LR		
	comp=Z,270nm,21.7s						
GEYT	**Alibeck**	**90.14**	**331**	LR	LR	11 43 33.9	
	comp=Z,193nm,20.9s,baz=355,slow=32						
AAK	**Ala-Archa**	**90.21**	**344**	P	**P**	**11 08 19.2**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=105,slow=4.7,SNR=5.0						
AAK	**Ala-Archa**	**90.21**	**344**	P	**P**	**11 08 20.3**	**+0.1**
PLCA	**Paso Flores**	**92.92**	**190**	LR	LR	11 48 21.2	
	comp=Z,589nm,21.9s,baz=192,slow=34						
MKAR	**Makanchi Array**	**93.09**	**351**	P	**P**	**11 08 32.1**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=143,slow=3.6,SNR=3.8						
MKAR				LR	LR	11 48 14.1	
	comp=Z,326nm,19.4s,baz=184,slow=34						
MAKZ	**Makanchi**	**93.14**	**350**	P	**P**	**11 08 33.2**	**-0.3**
MAKZ				IAmb	IAmb	11 08 34.9	
	comp=Z,6.8nm,1.3s						
PPT2	**Papeete2**	**93.45**	**120**	*e*S	**S**	**11 19 44.3**	**+0.2**
	comp=Z,34nm,24.5s						
PPT2	**Papeete2**	**93.45**	**120**	*e*LQ	LQ	11 34 40.9	
PPT2	comp=Z,621nm,34.2s			*e*LR	LR	11 38 39.8	
	comp=Z,248nm,22.8s						
PPT	**Papeete**	**93.47**	**120**	LR	LR	11 42 15.8	
	comp=Z,103nm,21.4s,baz=224,slow=30						
SONM	**Songino Array**	**93.79**	**7**	P	**P**	**11 08 36.6**	**0.0**
SONM	comp=Z,1.2nm,1.0s,baz=196,slow=5.0,SNR=4.2			LR	LR	11 48 34.8	
	comp=Z,263nm,21.9s,baz=194,slow=34						
USRK	**Ussuriysk Ar.**	**95.20**	**25**	LR	LR	11 52 32.0	
	comp=Z,58nm,19.6s,baz=184,slow=36						
ZALV	**Zalesovo Beam**	**99.92**	**353**	LR	LR	11 50 42.2	
	comp=Z,243nm,21.9s,baz=174,slow=33						
TAOE	**Nuku Hiva Isla**	**105.95**	**121**	*e*LR	LR	11 44 37.0	
	comp=Z,219nm,24.1s						
DAWY	**Dawson**	**144.80**	**39**		PKPbc	11 14 55.2	+0.3
INK	**Inuvik**	**146.40**	**31**	PKPbc	**PKPdf**	**11 14 55.5**	**-2.8**
	comp=Z,1.7nm,0.9s,baz=185,slow=4.1,SNR=3.1						
INK	**Inuvik**	**146.40**	**31**		**PKPdf**	**11 14 58.5**	**+0.2**
TULEG	**Thule**	**148.62**	**353**		**PKPdf**	**11 15 02.9**	**+1.0**
C36M	**Paulatuk**	**149.17**	**26**		**PKPdf**	**11 15 03.7**	**+0.8**
CMIG	**Matias Romero**	**149.87**	**159**	PKPbc	**PKPbc**	**11 15 08.8**	**-1.7**
	comp=Z,4.3nm,1.0s,baz=176,slow=8.8,SNR=4.3						
RES	**Resolute Bay**	**150.72**	**6**	PKPbc	**PKPbc**	**11 15 10.2**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=353,slow=4.2,SNR=4.2						
RES	**Resolute Bay**	**150.72**	**6**		**PKPdf**	**11 15 05.3**	**+0.1**
MWC	**Mount Wilson**	**151.64**	**102**		**PKPdf**	**11 15 08.4**	**+0.2**
AFDM	**Forest Hills D**	**152.01**	**91**	PKPdf	**PKPdf**	**11 15 08.5**	**+0.2**
AFDM					**PKiKP**	**11 15 15.2**	**0.0**
BEKR	**Beckworth**	**152.84**	**90**		**PKPbc**	**11 15 16.5**	**-0.5**
NVAR	**Mina Array Bea**	**153.64**	**94**	PKP	**PKPdf**	**11 15 10.7**	**-0.3**
	comp=Z,0.1nm,0.2s,baz=235,slow=3.2,SNR=3.2						
NVAR				PKPbc	**PKiKP**	**11 15 20.1**	**+1.2**
	comp=Z,0.7nm,0.8s,baz=221,slow=3.9,SNR=4.9						
YKA	**Yellowknife Ar**	**155.91**	**35**	PKPbc	PKPbc	11 15 22.2	
	comp=Z,0.6nm,1.0s,baz=307,slow=2.3,SNR=5.3						
TXAR	**Lajitas Array**	**157.37**	**130**	PKPab	**PKPab**	**11 15 47.6**	**+0.1**
	comp=Z,1.4nm,1.1s,baz=193,slow=5.1,SNR=7.3						
MNTX	**Cornudas Mount**	**158.20**	**123**		**PKPdf**	**11 15 16.8**	**-0.2**
ANMO	**Albuquerque**	**159.76**	**115**	PKPab	**PKPab**	**11 15 57.9**	**0.0**
	comp=Z,0.6nm,0.4s,baz=56,slow=3.6,SNR=3.2						

GCG ***13*** *11:04:07.7±0.4,14.19°N×92.52°W,h35km±31km,MD4.2*
UCR ***13*** *11:04:11.7±2.7,14.41°N×91.93°W,h0km±186km,ML3.8*
SNET ***13*** *11:04:11.1±3.2,14.32°N×92.25°W,h32km±999km,ML4.1*
IDC ***13*** *11:04:13.7±1.0,14.53°N×92.01°W,h84km±7km,mb3.5/7, mb1 3.8/10,mb1mx3.5/42,mbtmp3.8/10,MS3.4/2, Ms1 3.4/2,ms1mx2.6/24,Error ellipse: s-maj=16.5km s-min=7.6km az=14.0*

ISC 13 11:04:12.2±0.7,14.45N±0.09×92.18W±0.07,h67km,n35, σ1§81/50,mb3.9/7,3D,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.59**	**91**	*i*P	**Pn**	**11 04 26.2**	**+0.6**
STG3	**Santiaguito 3,**	**0.64**	**66**	*i*P	**Pn**	**11 04 26.7**	**+0.2**
FUG	**Fuego 3**	**1.29**	**90**	*e*P	**Pn**	**11 04 34.6**	**+0.2**
PCG	**Pacaya**	**1.52**	**92**	*e*P	**Pn**	**11 04 38.1**	**+0.6**
APG	**El Apazote**	**1.74**	**71**	P	**Pn**	**11 04 40.5**	**0.0**
	34nm,0.3s,baz=268,slow=9.6,SNR=512						
APG				S	**Sn**	**11 05 00.3**	**-1.7**
	88nm,0.3s,baz=315,slow=21,SNR=13						
NBG	**Las Nubes**	**1.78**	**85**	*e*P	**Pn**	**11 04 42.2**	**+1.2**
NBG				*e*S	**Sn**	**11 05 08.8**	**+6.0**
FAME	**Alcalda de S**	**2.18**	**106**	*e*P	**Pn**	**11 04 45.4**	**-0.9**
FAME				*e*S	**Sn**	**11 05 10.3**	**-1.9**
FAME				IAML		11 05 19.2	
	comp=Z,792nm,0.3s						
MRL	**Marmol**	**2.49**	**75**	*e*P	**Pn**	**11 04 50.9**	**+0.3**
CEVE	**Cerro Verde**	**2.55**	**104**	*e*P	**Pn**	**11 04 52.2**	**+0.7**
CEVE				*e*S	**Sn**	**11 05 23.1**	**+1.5**
CEVE				IAML		11 05 31.8	
	comp=Z,4μm,0.5s						
CEVE	**Cerro Verde**	**2.55**	**104**	*e*P	**Pn**	**11 04 52.2**	**+0.7**
CEVE				*e*S	**Sn**	**11 05 23.1**	**+1.5**
CEVE				IAML		11 05 31.8	
	comp=Z,4μm,0.5s						
BOQS	**Boqueron**	**2.90**	**104**	*e*P	**Pn**	**11 04 56.1**	**0.0**
LFU	**La Fuente**	**3.05**	**103**	*e*P	**Pn**	**11 04 58.2**	**+0.1**
LFU	**La Fuente**	**3.05**	**103**	*e*P	**Pn**	**11 04 58.2**	**+0.1**
LFRS	**El Faro**	**3.13**	**105**	*e*P	**Pn**	**11 05 00.5**	**+1.3**
COEB	**Comit de Eme**	**3.66**	**105**	*e*P	**Pn**	**11 05 06.9**	**+0.4**
COEB				*e*S	**Sn**	**11 05 50.9**	**+2.3**
COEB				IAML		11 06 05.7	
	comp=Z,340nm,0.5s						
ALJI	**Alcalda de J**	**3.67**	**107**	*e*P	**Pn**	**11 05 03.1**	**-3.4**
ALJI				*e*S	**Sn**	**11 05 49.6**	**+0.9**
ALJI				IAML		11 06 00.0	
	comp=Z,485nm,0.4s						
CMIG	**Matias Romero**	**3.70**	**316**	P	**Pn**	**11 05 08.9**	**+2.0**
	comp=Z,7.8nm,0.3s,baz=139,slow=10,SNR=74						
CMIG				S	**Sn**	**11 05 52.4**	**+3.0**
	comp=Z,11nm,0.3s,baz=99,slow=13,SNR=7.7						
LCND	**La Caada**	**4.31**	**105**	*e*P	**Pn**	**11 05 15.8**	**+0.5**
LCND				*e*S	**Sn**	**11 06 06.1**	**+1.7**
LCND				IAML		11 06 19.9	
	comp=Z,313nm,0.5s						
LCND	**La Caada**	**4.31**	**105**	*e*P	**Pn**	**11 05 15.8**	**+0.5**
LCND				*e*S	**Sn**	**11 06 06.1**	**+1.7**
LCND				IAML		11 06 19.9	
	comp=Z,313nm,0.5s						
CRIN	**San Cristobal**	**5.28**	**109**	*e*P	**Pn**	**11 05 29.9**	**+1.3**
BUEV	**Buena Vista**	**7.54**	**118**	*e*P	**Pn**	**11 06 00.8**	**+1.2**
JTS	**Las Juntas de**	**8.18**	**120**	P	**Pn**	**11 06 08.9**	**+0.7**
	comp=Z,3.2nm,0.3s,baz=31,slow=13,SNR=13						
JTS				S	**Sn**	**11 07 42.8**	**+3.5**
	comp=Z,1.0nm,0.3s,baz=41,slow=19,SNR=2.5						
JTS	**Las Juntas de**	**8.18**	**120**	*e*P	**Pn**	**11 06 09.7**	**+1.4**
LCR2	**La Lucha 2**	**9.26**	**119**	*e*P	**Pn**	**11 06 24.1**	**+0.9**
TXAR	**Lajitas Array**	**18.23**	**326**	P	**Pn**	**11 08 21.4**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=149,slow=11,SNR=9.2						
TKL	**Tuckaleechee C**	**22.43**	**18**	P	**P**	**11 09 03.5**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=183,slow=9.1,SNR=2.7						
TKL				LR	LR	11 19 12.2	
	comp=Z,31nm,21.6s,baz=148,slow=40						
ANMO	**Albuquerque**	**24.13**	**330**	P	**P**	**11 09 23.3**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=149,slow=9.8,SNR=5.9						
NVAR	**Mina Array Bea**	**33.22**	**321**	P	**P**	**11 10 44.9**	**+1.8**
	comp=Z,1.6nm,0.8s,baz=130,slow=9.1,SNR=12						
NVAR				pP	**sP**	**11 11 03.6**	**-3.6**
	comp=Z,0.5nm,0.7s,baz=143,slow=10.0,SNR=3.1						
SIV	**San Ignacio**	**43.12**	**133**	P	**P**	**11 12 05.2**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=322,slow=7.0,SNR=11						
SIV				pP	**pP**	**11 12 24.6**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=274,slow=15,SNR=2.2						
YKA	**Yellowknife Ar**	**50.55**	**347**	P	**P**	**11 13 01.9**	**-1.6**
	comp=Z,0.6nm,0.5s,baz=149,slow=7.3,SNR=30						
YKA				pP	**pP**	**11 13 23.7**	**+3.0**
	comp=Z,0.4nm,0.7s,baz=148,slow=7.5,SNR=6.8						
YKA				PcP	**PcP**	**11 14 19.4**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=150,slow=3.7,SNR=6.3						
INK	**Inuvik**	**59.96**	**344**	P	**P**	**11 14 10.2**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=140,slow=6.3,SNR=3.2						
ILAR	**Eielson Array**	**62.36**	**337**	P	**P**	**11 14 27.1**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=134,slow=5.2,SNR=9.5						
ILAR				PcP	**PcP**	**11 15 06.1**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=104,slow=2.9,SNR=2.9						
AKASG	**Malin Array Be**	**97.44**	**33**	LR	LR	12 02 14.9	
	comp=Z,65nm,20.6s,baz=295,slow=36						
MKAR	**Makanchi Array**	**118.84**	**4**	PKP	**PKPdf**	**11 22 50.8**	**-2.3**
	comp=Z,0.2nm,0.6s,baz=35,slow=5.3,SNR=2.5						
CMAR	**Chiang Mai Arr**	**145.51**	**341**	PKPbc	**PKPbc**	**11 23 43.1**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=340,slow=2.9,SNR=7.1						

**IDC 13 11:11:18.9±2.1,8.88S×128.74E,h0km,mb3.2/1, mb1 3.4/4,mb1mx3.3/26,mbtmp3.2/4,ML3.0/3,Error ellipse: s-maj=64.4km s

MATI	**Mati**	**2.06**	**28**	*eP*	**Pn**	**11 46 11.8**	**-1.5**
MATI				*eS*	**Sn**	**11 46 37.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**23.08**	**179**	P	**P**	**11 50 45.3**	**+1.3**
	2.6nm,0.7s,baz=5.7,slow=10,SNR=2.3						
WRA	**Warramunga Arr**	**26.46**	**161**	P	**P**	**11 51 15.0**	**-0.3**
	0.9nm,0.8s,baz=342,slow=10.0,SNR=4.7						
ASAR	**Alice Springs**	**29.83**	**164**	P	**P**	**11 51 45.4**	**-0.1**
	0.3nm,0.7s,baz=342,slow=7.1,SNR=9.4						
STKA	**Stephens Creek**	**39.95**	**158**	P	**P**	**11 53 12.4**	**-0.1**
	1.3nm,0.7s,baz=324,slow=9.4,SNR=4.0						
MKAR	**Makanchi Array**	**55.59**	**325**	P	**P**	**11 55 13.3**	**-0.3**
	0.1nm,0.5s,baz=117,slow=8.4,SNR=3.2						

IDC ***13*** *11:55:42.5±0.7,50°.84N×73°.58E,h0km,mb3.4/2, mb1 3.3/7,mb1mx3.2/45,mbtmp3.1/7,ML2.5/5,MS3.2/2, Ms1 3.2/2,ms1mx2.6/33,Error ellipse: s-maj=13.5km s-min=6.6km az=40.0*

NNC ***13*** *11:55:43.2±1.7,50°.62N×73°.59E,h0km,mb3.6,mpv3.7, Error ellipse: s-maj=22.1km s-min=5.4km az=152.0, Suspected Mining explosion.*

ISC 13 11:55:41.3±0.7,50°.86N±0°.05×73°.51E±0°.04,h0km,n20, σ1s69/23,5C-5D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BRZS	**Berezniki**	**1.03**	**212**	P		**Pb**		**11 56 01.3**	**-0.7**
	30nm,0.2s								
BRZS				S		**Sg**		**11 56 11.2**	**-3.1**
	54nm,0.5s								
BVAR	**Borovoye Array**	**2.91**	**319**	Pn		**Pn**		**11 56 31.4**	**+2.6**
	1.8nm,0.3s,baz=138,slow=16,SNR=21								
BVAR				Pg		**Pb**		**11 56 34.8**	**+0.8**
	1.8nm,0.3s,baz=133,slow=16,SNR=22								
BVAR				Lg		Lg		11 57 16.3	
	2.5nm,0.3s,baz=135,slow=27,SNR=16								
KURBB	**Kurchatov Arra**	**3.20**	**92**	Pn		**Pn**		**11 56 33.1**	**+0.4**
	0.2nm,0.3s,baz=278,slow=14,SNR=44								
KURBB				Pg		**Pb**		**11 56 37.9**	**-1.0**
	0.4nm,0.3s,baz=277,slow=15,SNR=21								
KURBB				Lg		Lg		11 57 18.1	
	0.6nm,0.3s,baz=278,slow=30,SNR=15								
KURBB	**Kurchatov Arra**	**3.20**	**92**	⇓Pn		**Pn**		**11 56 32.9**	**+0.2**
	15nm,0.6s								
KURBB				⇓Lg		Lg		11 57 23.7	
	160nm,0.8s								
KURK	**Kurchatov**	**3.24**	**91**	⇑Pn		**Pn**		**11 56 33.2**	**-0.2**
	12nm,1.0s								
KURK				⇓Lg		Lg		11 57 25.8	
	75nm,1.0s								
SEM	**Semipalatinsk**	**4.31**	**93**	Pg		**Pg**		**11 57 04.8**	**+0.9**
	7.0nm,0.1s								
SEM				Lg		Lg		11 57 60.0	
	40nm,0.5s								
TDK	**Taldyqorghan**	**6.72**	**149**	Pg		**Pb**		**11 57 43.1**	**+4.2**
	30nm,0.3s								
TDK				Lg		Lg		11 59 06.9	
	42nm,0.6s								
MAKZ	**Makanchi**	**6.90**	**123**	⇑Pg		**Pb**		**11 57 43.6**	**+1.6**
	4.5nm,1.4s								
MAKZ				⇓Lg		Lg		11 59 17.6	
	30nm,1.1s								
MK31	**Makanchi Array**	**7.08**	**122**	⇑Pn		**Pn**		**11 57 26.7**	**+0.6**
	0.4nm,0.6s,baz=301,slow=11,SNR=3.6								
MK31				⇓Pg		**Pb**		**11 57 47.0**	**+2.0**
	0.9nm,0.5s,baz=303,slow=13,SNR=4.9								
MK31				⇑Lg		Lg		11 59 25.8	
	16nm,0.8s,baz=313,slow=27,SNR=7.2								
MKAR	**Makanchi Array**	**7.08**	**122**	Pn		**Pn**		**11 57 26.5**	**+0.4**
	0.0nm,0.3s,baz=299,slow=12,SNR=4.9								
MKAR				Pg		**Pb**		**11 57 44.0**	**-1.0**
	0.1nm,0.3s,baz=314,slow=14,SNR=4.6								
MKAR				Sn		**Sn**		**11 58 46.0**	**-1.2**
	0.1nm,0.3s,baz=308,slow=16,SNR=3.0								
MKAR				Lg		Lg		11 59 19.3	
	0.2nm,0.3s,baz=325,slow=32,SNR=6.5								
ZALV	**Zalesovo Beam**	**7.58**	**62**	Pn		**Pn**		**11 57 32.8**	**0.0**
	0.1nm,0.3s,baz=245,slow=17,SNR=3.2								
ZALV				Sn		**Sn**		**11 58 56.7**	**-2.6**
	0.2nm,0.3s,baz=253,slow=25,SNR=3.2								
ZALV				Lg		Lg		11 59 37.8	
	0.2nm,0.3s,baz=244,slow=30,SNR=2.5								
TKM2	**Tokmak 2**	**8.07**	**169**	⇑Lg		Lg		11 59 54.0	
	22nm,0.8s								
AAK	**Ala-Archa**	**8.25**	**175**	Pn		**Pn**		**11 57 41.7**	**-0.6**
	0.3nm,0.3s,baz=7.7,slow=1.6,SNR=4.1								
AAK				Sn		**Sn**		**11 59 15.9**	**-0.5**
	0.1nm,0.3s,baz=184,slow=19,SNR=3.4								
AAK				Lg		Lg		12 00 00.6	
	0.2nm,0.3s,baz=272,slow=4.8,SNR=8.9								
AAK	**Ala-Archa**	**8.25**	**175**	Lg		Lg		11 59 53.8	
	22nm,1.1s								
PDGK	**Podgornoye**	**8.56**	**149**	Lg		Lg		12 00 10.7	
	24nm,1.3s								
AKTO	**Aktyubinsk**	**9.86**	**274**	Sn		**Sn**		**11 59 54.9**	**-0.6**
	0.1nm,0.3s,baz=246,slow=20,SNR=2.0								
AKTO				Lg		Lg		12 00 54.3	
	0.1nm,0.3s,baz=231,slow=6.5,SNR=2.6								
WSAR	**Wadi Sarin**	**29.90**	**208**	LR		LR		12 15 46.7	
	comp=Z,34nm,20.3s,baz=250,slow=40								
YAK	**Yakutsk**	**31.95**	**48**	LR		LR		12 15 50.5	
	comp=Z,51nm,19.5s,baz=284,slow=38								
ILAR	**Eielson Array**	**60.53**	**19**	P		**P**		**12 05 52.1**	**-0.6**
	0.4nm,0.9s,baz=329,slow=4.8,SNR=4.2								
YKA	**Yellowknife Ar**	**66.81**	**4**	P		**P**		**12 06 35.6**	**+1.5**
	0.3nm,0.9s,baz=358,slow=7.0,SNR=6.3								

DJA ***13*** *11:58:07.9±1.8,3°.N±5°×12°.8E±°,h18km±15km,M4.1/7, MLv4.1/7*

IDC ***13*** *11:58:09.3±2.1,2°.56N×128°.51E,h62km±20km,mb3.6/10, mb1 3.8/12,mb1mx3.6/45,mbtmp3.9/12,MS2.8/3, Ms1 2.8/3,ms1mx2.6/27,Error ellipse: s-maj=26.1km s-min=12.4km az=67.0*

NEIC ***13*** *11:58:10.4±1.1,2°.54N±0°.09×128°.51E±0°.07,h67km±3km, mb4.2/15,Error ellipse: s-maj=13.6km s-min=9.7km az=202.0*

ISC 13 11:58:07.4±0.5,2°.67N±0°.06×128°.57E±0°.06,h35km,n48, σ1s60/48,mb4.0/13,Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.24**	**212**	P		**Pn**		**11 58 41.6**	**-0.4**
TNTI				S		**Sn**		**11 59 12.7**	**+4.2**
TNTI	**Ternate**	**2.24**	**212**			**Pn**		**11 58 41.3**	**-0.7**
TNTI					Sn	**Sn**		**11 59 11.9**	**+3.4**
SWI	**Sorong**	**4.43**	**143**	P		**Pn**		**11 59 14.7**	**+2.6**
SIJI	**Sorong**	**4.43**	**142**	P		**Pn**		**11 59 14.8**	**+2.5**
	11nm,0.3s,baz=331,slow=20,SNR=27								
SIJI				S		**Sn**		**12 00 03.6**	**+0.8**
	3.6nm,0.3s,baz=197,slow=19,SNR=3.1								
SIJI				LR		LR		12 01 07.9	
	comp=Z,152nm,19.2s,baz=73,slow=41								
FAKI	**Fak Fak**	**6.66**	**146**	Pn		**Pn**		**11 59 44.3**	**+1.4**
FAKI				Sn		**Sn**		**12 00 58.7**	**+1.0**
LUWI	**Luwuk**	**6.87**	**238**	Pn		**Pn**		**11 59 47.3**	**+1.6**
LUWI				Sn		**Sn**		**12 01 04.9**	**+2.1**
KAPI	**Kappang**	**11.66**	**229**	P		**Pn**		**12 00 51.9**	**+0.5**
	0.5nm,0.3s,baz=66,slow=12,SNR=2.9								
JAY	**Jayapura**	**13.18**	**113**	LR		LR		12 05 33.6	
	comp=Z,75nm,18.5s,baz=220,slow=34								
MTN	**Manton Dam**	**15.63**	**171**			**P**		**12 01 48.0**	**-1.0**
MTN					IAmb	IAmb		12 01 56.8	
	comp=Z,23nm,1.1s								
SBUM	**Sibu**	**16.33**	**270**			**Pn**		**12 01 54.8**	**+0.5**
KNRA	**Kununurra**	**18.23**	**179**	P		**P**		**12 02 17.5**	**-0.3**
KNRA					IAmb	IAmb		12 02 32.4	
	comp=Z,41nm,1.3s								
KSM	**Kuching**	**18.29**	**267**	P		**Pn**		**12 02 18.4**	**-0.2**
KSM					IAmb	IAmb		12 02 19.6	
	comp=Z,15nm,0.8s								
FITZ	**Fitzroy Crossi**	**20.84**	**188**	P		**P**		**12 02 44.3**	**-2.0**
	comp=Z,2.9nm,1.1s,baz=10,slow=11,SNR=1.8								
TPUB	**Ta-pu**	**21.90**	**340**	P		**P**		**12 02 60.0**	**+2.3**
WRA	**Warramunga Arr**	**23.18**	**166**	P		**P**		**12 03 10.7**	**-0.5**
	comp=Z,1.7nm,0.4s,baz=348,slow=9.9,SNR=20								
WRA	**Warramunga Arr**	**23.18**	**166**	P		**P**		**12 03 10.4**	**-0.8**
WR0	**Warramunga Arr**	**23.25**	**166**	P		**P**		**12 03 11.0**	**-0.9**
WR0					IAmb	IAmb		12 03 13.1	
	comp=Z,11nm,1.2s								
PSA00	**Pilbara Seismi**	**25.57**	**199**	P		**P**		**12 03 31.8**	**-1.5**
AS31	**Alice Springs**	**26.69**	**169**	P		**P**		**12 03 42.7**	**-0.8**
ASAR	**Alice Springs**	**26.69**	**169**	P		**P**		**12 03 42.4**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=350,slow=7.8,SNR=13								
ASAR				PcP		**PcP**		**12 07 05.5**	**-1.2**
	comp=Z,0.4nm,0.4s,baz=357,slow=2.0,SNR=14								
ASAR				ScP		**ScP**		**12 10 39.8**	**-4.5**
	comp=Z,0.4nm,0.8s,baz=330,slow=3.5,SNR=4.6								
ASAR	**Alice Springs**	**26.69**	**169**	P		**P**		**12 03 42.1**	**-1.4**
CMAR	**Chiang Mai Arr**	**32.98**	**300**	P		**P**		**12 04 38.0**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=113,slow=6.9,SNR=4.0								
CMAR	**Chiang Mai Arr**	**32.98**	**300**	P		**P**		**12 04 39.1**	**-0.3**
KSAR	**Wonju Array Be**	**34.61**	**359**	P		**P**		**12 04 54.8**	**+1.6**
KSRS	**Korea Array**	**34.62**	**359**	P		**P**		**12 04 52.9**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=175,slow=9.4,SNR=5.4								
KSRS				LR		LR		12 20 31.6	
	comp=Z,4.9nm,19.2s,baz=160,slow=39								
BBOO	**Buckleboo**	**36.00**	**169**	P		**P**		**12 05 04.0**	**-1.2**
BBOO					IAmb	IAmb		12 05 10.6	
	comp=Z,4.9nm,1.1s								
STKA	**Stephens Creek**	**36.52**	**161**	P		**P**		**12 05 06.8**	**-2.9**
	comp=Z,2.5nm,0.5s,baz=331,slow=8.3,SNR=9.5								
STKA	**Stephens Creek**	**36.52**	**161**	P		**P**		**12 05 09.2**	**-0.5**
H11S3	**WAKE ISLAND Hy**	**40.50**	**64**	T		T		12 48 57.6	
	baz=252,slow=75,SNR=28								
H11S2	**WAKE ISLAND Hy**	**40.52**	**64**	T		T		12 48 59.9	
	baz=252,slow=75,SNR=34								
H11S1	**WAKE ISLAND Hy**	**40.52**	**64**	T		T		12 49 00.9	
	baz=252,slow=75,SNR=21								
H11N1	**WAKE ISLAND Hy**	**41.08**	**63**	T		T		12 49 38.8	
	baz=250,slow=75,SNR=122								
H11N2	**WAKE ISLAND Hy**	**41.09**	**63**	T		T		12 49 39.4	
	baz=250,slow=75,SNR=47								
H11N3	**WAKE ISLAND Hy**	**41.09**	**63**	T		T		12 49 39.9	
	baz=250,slow=75,SNR=76								
SONM	**Songino Array**	**48.89**	**340**	P		**P**		**12 06 49.5**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=155,slow=6.7,SNR=3.1								
SONM	**Songino Array**	**48.89**	**340**	P		**P**		**12 06 50.9**	**+0.9**
PETK	**Petropavlovsk-**	**55.73**	**21**	P		**P**		**12 07 40.2**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=302,slow=0.5,SNR=5.1								
PETK	**Petropavlovsk-**	**55.73**	**21**	P		**P**		**12 07 41.2**	**+0.7**
MK31	**Makanchi Array**	**59.47**	**325**	P		**P**		**12 08 06.2**	**-0.8**
MK31					IAmb	IAmb		12 08 16.8	
	comp=Z,0.8nm,0.9s								
MKAR	**Makanchi Array**	**59.47**	**325**	P		**P**		**12 08 06.0**	**-1.0**
	comp=Z,0.5nm,0.4s,baz=113,slow=8.4,SNR=9.1								
MKAR	**Makanchi Array**	**59.47**	**325**	P		**P**		**12 08 05.8**	**-1.1**
ZALV	**Zalesovo Beam**	**62.36**	**333**	P		**P**		**12 08 26.9**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=129,slow=6.1,SNR=3.0								
ZALV	**Zalesovo Beam**	**62.36**	**333**	P		**P**		**12 08 26.3**	**-0.1**
GAR	**Garm**	**63.98**	**312**	P		**P**		**12 08 37.8**	**+0.1**
GAR					IAmb	IAmb		12 08 51.6	
	comp=Z,3.4nm,0.7s								
KKAR	**Karatay Array**	**65.25**	**317**	P		**P**		**12 08 46.8**	**+1.1**
ABKAR	**Akbulak array**	**74.12**	**321**	P		**P**		**12 09 40.7**	**+0.5**
RND	**Reindeer**	**84.29**	**27**	P		**P**		**12 10 35.3**	**-0.3**
ILAR	**Eielson Array**	**85.26**	**25**	P		**P**		**12 10 40.7**	**+0.3**

SOME ***13*** *12:09:48.8,43°.18N×81°.20E,h5km*

NNC ***13*** *12:09:49.5±1.2,43°.19N×81°.23E,h0km,mb3.6,mpv3.5, Error ellipse: s-maj=10.0km s-min=5.3km az=152.0*

ISC 13 12:09:43.9±1.8,43°.10N±0°.07×81°.61E±0°.06,h11km±13km, n41,σ1s70/61,12C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PDGK	**Podgornoye**	**1.57**	**279**	P		**Pg**		**12 10 14.2**	**+0.2**
	19nm,0.1s								
PDGK				S		**Sn**		**12 10 31.6**	**-0.5**
	55nm,0.2s								
PDGK	**Podgornoye**	**1.57**	**279**	⇑P		**Pb**		**12 10 13.3**	**+0.3**
	12nm,0.2s								
PDGK				⇓S		**Sn**		**12 10 31.3**	**-0.8**
	58nm,0.3s								
SHLS	**Shalkode**	**1.57**	**273**	*eP*		**Pn**		**12 10 08.7**	**-3.2**
	76nm,0.1s								
SHLS				*eS*		Sn		12 10 23.3	-9.0
	202nm,0.2s								
SHLS	**Shalkode**	**1.57**	**273**	P		**Pn**		**12 10 09.4**	**-2.5**
	66nm,0.1s								
SHLS				S		Sn		12 10 23.2	-9.0
	143nm,0.3s								
DJR	**Jarkent**	**1.81**	**314**	*eP*		**Pg**		**12 10 18.4**	**-0.1**
	16nm,0.2s								
DJR				*eS*		**Sb**		**12 10 40.0**	**+0.3**
	110nm,0.1s								
DJR	**Jarkent**	**1.81**	**314**	P		**Pg**		**12 10 18.8**	**+0.2**
	14nm,0.3s								
DJR				S		**Sb**		**12 10 40.0**	**+0.3**
	138nm,0.4s								
UZB	**Uzynbulak**	**1.90**	**272**	*eP*		**Pb**		**12 10 19.3**	**+0.7**
	53nm,0.2s								
UZB				*eS*		**Sn**		**12 10 41.5**	**+1.2**
	154nm,0.1s								
UZB	**Uzynbulak**	**1.90**	**272**	P		**Pg**		**12 10 20.0**	**-0.4**
	25nm,0.2s								
UZB				S		**Sn**		**12 10 41.4**	**+1.2**
	195nm,0.5s								
KPKS	**Kokpek**	**2.17**	**281**	*eP*		**Pb**		**12 10 24.2**	**+1.0**
	138nm,0.1s								
KPKS				*eS*		**Sb**		**12 10 50.1**	**0.0**
	317nm,0.2s								
ZHN	**Zhinishke**	**2.33**	**273**	*eP*		**Pb**		**12 10 26.9**	**+1.0**
	26nm,0.1s								
ZHN				*eS*		**Sb**		**12 10 54.6**	**-0.1**
	93nm,0.2s								
MNBS	**Baschi**	**2.53**	**294**	*eP*		**Pb**		**12 10 30.2**	**+0.9**
	45nm,0.2s								
MNBS				*eS*		**Sb**		**12 10 59.7**	**-0.8**
	455nm,0.1s								
KURS	**Kuram**	**2.54**	**280**	*eP*		**Pg**		**12 10 31.4**	**-1.3**
	11nm,0.3s								
KURS				*eS*		**Sb**		**12 11 01.7**	**+0.8**
	69nm,0.4s								
KURS	**Kuram**	**2.54**	**280**	Pg		**Pb**		**12 10 29.9**	**+0.3**
	31nm,0.6s								
KURS				Lg		Lg		12 10 58.7	
	69nm,0.7s								
KAPS	**Kapalarasan**	**2.72**	**324**	*eP*		**Pg**		**12 10 34.8**	**-1.2**
	7.2nm,0.1s								
KAPS				*eS*		**Sb**		**12 11 07.9**	**+2.0**
	59nm,0.1s								
KAPS	**Kapalarasan**	**2.72**	**324**	Pg		**Pg**		**12 10 34.9**	**-1.2**
	6.0nm,0.2s								
KAPS				Lg		Lg		12 11 07.3	
	34nm,0.5s								
ARXS	**Arharly**	**2.96**	**293**	*eP*		**Pb**		**12 10 38.0**	**+1.2**
	8.1nm,0.2s								
ARXS				*eS*		**Sb**		**12 11 13.3**	**+0.4**
	104nm,0.3s								
TDK	**Taldyqorghan**	**2.99**	**311**	*eP*		**Pb**		**12 10 39.0**	**+1.8**
	40nm,0.1s								
TDK				*eS*		**Sb**		**12 11 14.9**	**+1.2**
	115nm,0.3s								
TDK	**Taldyqorghan**	**2.99**	**311**	Pg		**Pg**		**12 10 39.8**	**-1.5**
	56nm,0.5s								
TDK				Lg		Lg		12 11 15.2	
	95nm,0.5s								
KOTS	**Kotyrbulak**	**3.29**	**274**	*eP*		**Pb**		**12 10 44.0**	**+1.5**
	19nm,0.2s								
KOTS				*eS*		**Sb**		**12 11 23.6**	**+1.0**
	105nm,0.2s								
MDOK	**Medeo**	**3.34**	**273**	*eP*		**Pb**		**12 10 44.5**	**+1.2**
	4.5nm,0.1s								
MDOK				*eS*		**Sb**		**12 11 24.1**	**+0.2**
	27nm,0.3s								
MDOK	**Medeo**	**3.34**	**273**	⇑Pg		**Pg**		**12 10 45.8**	**-2.1**
	5.1nm,0.4s								
MDOK				⇑Lg		Lg		12 11 23.9	
	16nm,0.4s								
MDOK	**Medeo**	**3.34**	**273**	Pg		**Pb**		**12 10 43.8**	**+0.5**
	5.0nm,0.5s								
MDOK				Lg		Lg		12 11 22.7	
	14nm,0.3s								
TNSS	**Tian-Shan**	**3.42**	**271**	*eP*		**Pb**		**12 10 46.0**	**+1.3**
	2.1nm,0.1s								
TNSS				*eS*		**Sb**		**12 11 26.9**	**+0.5**
	37nm,0.4s								
TNSS	**Tian-Shan**	**3.42**	**271**	Pg		**Pb**		**12 10 44.9**	**+0.1**
	3.6nm,0.4s								
TNSS				Lg		Lg		12 11 24.4	
	42nm,0.5s								
CHKK	**Chushkaly**	**3.45**	**284**	*eP*		**Pb**		**12 10 46.2**	**+1.2**
	4.7nm,0.1s								
CHKK				*eS*		**Sb**		**12 11 27.4**	**+0.6**
	29nm,0.3s								
CHKK	**Chushkaly**	**3.45**	**284**	Pg		**Pb**		**12 10 46.2**	**+1.2**
	5.8nm,0.6s								
CHKK				Lg		Lg		12 11 26.3	
	28nm,0.4s								
KTBS	**Karatobe**	**3.64**	**281**	*eP*		**Pb**		**12 10 49.7**	**+1.4**
	11nm,0.3s								
KTBS				*eS*		**Sb**		**12 11 33.3**	**+0.8**
	43nm,0.2s								
IZV	**Izvestkoviy**	**3.66**	**271**	*eP*		**Pg**		**12 10 51.8**	**-2.3**
	4.2nm,0.2s								
IZV				*eS*		**Sb**		**12 11 36.7**	**+3.5**
	48nm,0.3s								
MAKZ	**Makanchi**	**3.71**	**4**	⇓Pg		**Pg**		**12 10 55.6**	**+0.5**
	3.1nm,0.8s								
MAKZ				⇑Lg		Lg		12 11 41.8	
	5.2nm,0.5s								
MK31	**Makanchi Array**	**3.72**	**7**	⇑Pn		**Pb**		**12 10 47.7**	**-1.9**
	0.1nm,0.2s,baz=184,slow=13,SNR=73								
MK31				⇑Pg		**Pg**		**12 10 56.2**	**+0.9**
	1.1nm,0.5s,baz=183,slow=14,SNR=17								
MK31				⇑Lg		Lg		12 11 43.0	
	6.1nm,0.4s,baz=194,slow=29,SNR=16								
MTBS	**Maitube**	**3.79**	**272**	*eP*		**Pg**		**12 10 54.0**	**-2.6**
	3.4nm,0.1s								
MTBS				*eS*		**Sb**		**12 11 40.8**	**+3.9**
	28nm,0.2s								
MTBS	**Maitube**	**3.79**	**272**	Pg		**Pb**		**12 10 52.7**	**+1.8**
	4.6nm,0.3s								
MTBS				Lg		Lg		12 11 37.5	
	16nm,0.6s								
KST	**Kastek**	**4.14**	**271**	*eP*		**Pb**		**12 10 59.2**	**+2.4**
	11nm,0.2s								
KST				*eS*		**Sb**		**12 11 49.7**	**+2.9**
	17nm,0.3s								
KST	**Kastek**	**4.14**	**271**	Pg		**Pb**		**12 10 59.8**	**+3.0**
	10nm,0.4s								
KST				Lg		Lg		12 11 49.7	
	10nm,0.9s								
TKM2	**Tokmak 2**	**4.42**	**270**	⇑Pg		**Pb**		**12 11 03.6**	**+2.1**
	1.6nm,0.3s								
TKM2				⇓Lg		Lg		12 11 59.2	
	4.8nm,0.3s								
ZSN	**Zaisan**	**4.92**	**27**	*eP*		**Pg**		**12 11 18.6**	**+0.5**
	1.8nm,0.1s								
ZSN				*eS*		**Sg**		**12 12 22.7**	**+1.0**
	10nm,0.4s								
SGDS	**Sogindy**	**5.11**	**276**	Pg		**Pb**		**12 11 17.2**	**+3.9**
	1.7nm,0.6s								
SGDS				Lg		Lg		12 12 19.7	
	2.4nm,0.5s								
AAK	**Ala-Archa**	**5.25**	**267**	Pg		**Pb**		**12 11 19.4**	**+3.6**
	1.8nm,0.6s								
AAK				⇑Lg		Lg		12 12 26.5	
	4.1nm,0.5s								
KURBB	**Kurchatov Arra**	**7.81**	**345**	⇑Lg		Lg		12 13 53.5	
	8.1nm,0.7s								
KURK	**Kurchatov**	**7.89**	**346**	⇑Lg		Lg		12 13 54.1	
	6.4nm,0.9s								
KK31	**Karatay Array**	**8.12**	**274**	⇑Lg		Lg		12 13 58.6	
	1.5nm,0.7s,baz=88,slow=25,SNR=6.5								

IDC ***13*** *12:11:05.3±7.1,52°.24N×179°.59E,h174km±73km,mb3.0/7, mb1 3.4/9,mb1mx3.1/46,mbtmp3.6/9,MS2.9/1,Ms1 2.9/1, ms1mx2.5/10,Error ellipse: s-maj=55.6km s-min=19.7km az=153.0*

NEIC ***13*** *12:11:06.2±0.7,52°.2N±0°.3×179°.5E±0°.1,h191km±14km, mb4.4/13,Error ellipse: s-maj=41.9km s-min=9.5km az=187.0*

ISC 13 12:11:06.9±0.8,52°.2N±0°.2×179°.51E±0°.05,h200km,n31, σ0s91/33,mb3.3/10,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KIWB	**Kanaga Island**	**2.09**	**98**	Pn		**Pn**		**12 11 45.4**	**-1.0**
KIWB				Sn		**Sn**		**12 12 15.3**	**-1.7**
ADK	**Adak**	**2.37**	**96**	Pn		**Pn**		**12 11 48.3**	**-1.0**
ADK				Sn		**Sn**		**12 12 20.7**	**-1.7**
SMY	**Shemya**	**3.35**	**281**	Pn		**Pn**		**12 11 59.7**	**-0.8**
SMY				Sn		**Sn**		**12 12 40.4**	**-2.3**
UNV	**Unalaska Valle**	**8.59**	**73**	Pn		**Pn**		**12 13 07.0**	**-0.6**
PETK	**Petropavlovsk-**	**13.27**	**283**	P		**Pn**		**12 14 07.6**	**+0.2**
	0.1nm,0.3s,baz=91,slow=17,SNR=2.9								
OHAK	**Old Harbor**	**16.44**	**62**	P		**P**		**12 14 44.4**	**-0.9**
KDAK	**Kodiak Island**	**16.88**	**60**	P		**P**		**12 14 49.6**	**-0.5**
	2.9nm,0.3s,baz=270,slow=7.1,SNR=61								
KDAK	**Kodiak Island**	**16.88**	**60**	P		**P**		**12 14 49.5**	**-0.6**
KDAK					IAmb	IAmb		12 14 57.7	
	comp=Z,12nm,1.0s								
MA2	**Magadan**	**17.61**	**306**	LR		LR		12 21 04.8	
	comp=Z,39nm,18.8s,baz=324,slow=34								
HOM	**Homer**	**17.68**	**54**	P		**P**		**12 14 59.0**	**+0.1**
BRLK	**Bradley Lake**	**18.08**	**54**	P		**P**		**12 15 02.9**	**-0.4**
BRLK				

BSO3	**Boso 3**	**0.87**	**150**	⇑P		**Pn**	**12 44 51.2**	**-2.0**
JIM2	**Oshima 3**	**0.95**	**209**	P		**Pn**	**12 44 52.0**	**-0.7**
JIM2				S		**Sn**	**12 45 05.9**	**-0.5**
JAG	**Ashikaga**	**0.97**	**334**	⇑P		**Pn**	**12 44 52.0**	**-0.8**
JRY	**Ryogami san**	**0.99**	**298**	⇓P		**Pn**	**12 44 53.2**	**+0.1**
JRY				S		**Sn**	**12 45 07.5**	**+0.3**
JFNN	**Fujinakano**	**1.12**	**252**	⇓P		**Pn**	**12 44 54.9**	**+0.2**
JFNN				S		**Sn**	**12 45 10.3**	**+0.3**
JYN	**Shimob**	**1.18**	**267**	⇓P		**Pn**	**12 44 55.5**	**+0.1**
BSO1	**Boso 1**	**1.21**	**138**	P		**Pn**	**12 44 55.0**	**-0.3**
JIZS	**Izushimoda**	**1.24**	**228**	⇓P		**Pn**	**12 44 56.2**	**+0.1**
JIZS				S		**Sn**	**12 45 12.3**	**-0.2**
JKT	**Katashina**	**1.35**	**334**	⇑P		**Pn**	**12 44 56.8**	**-0.8**
MJAR	**Matsushiro Arr**	**1.74**	**305**	Pg		**Pn**	**12 45 02.6**	**-0.1**
	1.0nm,0.3s,baz=153,slow=14,SNR=74							
MJAR				Lg		Lg	12 45 23.0	
	2.7nm,0.3s,baz=315,slow=20,SNR=14							
MAT	**Matsushiro**	**1.75**	**305**	P		**Pn**	**12 45 03.4**	**+0.7**
MAT				S		**Sn**	**12 45 24.7**	**+0.4**
H11N2	**WAKE ISLAND Hy**	**28.45**	**117**	T		T	13 20 13.3	
	baz=308							
H11N1	**WAKE ISLAND Hy**	**28.46**	**117**	T		T	13 20 10.3	
	baz=308							
H11N3	**WAKE ISLAND Hy**	**28.47**	**117**	T		T	13 20 13.3	
	baz=308							
H11S1	**WAKE ISLAND Hy**	**29.09**	**119**	T		T	13 21 02.0	
	baz=308							
H11S3	**WAKE ISLAND Hy**	**29.09**	**119**	T		T	13 21 05.6	
	baz=308							
H11S2	**WAKE ISLAND Hy**	**29.11**	**119**	T		T	13 21 02.0	
	baz=308							
MKAR	**Makanchi Array**	**43.94**	**303**	P		**P**	**12 52 32.2**	**-1.1**
	0.4nm,0.9s,baz=81,slow=9.3,SNR=3.0							
KURBB	**Kurchatov Arra**	**46.02**	**309**	P		**P**	**12 52 49.6**	**-0.1**
	0.2nm,0.5s,baz=89,slow=7.4,SNR=2.7							
WRA	**Warramunga Arr**	**55.45**	**186**	P		**P**	**12 54 01.3**	**+0.4**
	1.0nm,0.7s,baz=1.3,slow=7.5,SNR=8.0							
ASAR	**Alice Springs**	**59.18**	**186**	P		**P**	**12 54 28.2**	**+1.1**
	0.7nm,1.0s,baz=18,slow=10,SNR=4.9							

MAN 13 12:45:25.2, 9.88N×123.87E, h1km, mb4.0, ML2.8, MS2.3, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.44**	**12**	⇓*eP*	Pg	12 45 33.8	+0.1
LLP				*i* S	Sb	12 45 42.0	-1.0
MSLP	**Maasin**	**1.00**	**75**	*eP*	Pb	12 45 45.2	-0.1
MSLP				*eS*	Sn	12 46 01.0	-0.1

*THR **13** 12:50:48.2±0.4, 27.02N×54.40E, h14km±7km, ML3.6*
*DSN **13** 12:50:50.7±1.8, 27.35N×54.72E, h10km, ML3.8/7, Error ellipse: s-maj=26.1km s-min=9.9km az=21.0*
*TEH **13** 12:50:50.7, 27.18N×54.54E, h17km, ML3.8*
*OMAN **13** 12:50:52.4±0.1, 27.37N×54.66E, h30km, ml3.6/13, ms2.3/1, Error ellipse: s-maj=3.7km s-min=2.7km az=247.0*
*IDC **13** 12:50:53.0±2.8, 27.03N×54.57E, h45km±29km, mb3.6/17, mb1 3.7/20, mb1mx3.5/43, mbtmp3.8/20, ML3.7/3, Error ellipse: s-maj=20.8km s-min=14.4km az=173.0*

ISC 13 12:50:50.5±1.5, 27.14N±0.04×54.50E±0.04, h18km±6km, n82, σ1°84/94, mb3.8/17, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LMD1	**Lamerd**	**1.21**	**280**	*e*Pg	**Pg**	**12 51 14.3**	**+0.4**
LMD1				*e*		12 51 39.0	
BNDS	**Bandar-Abbas**	**1.51**	**80**	*e*Pn	**Pb**	**12 51 18.0**	**0.0**
BNDS	**Bandar-Abbas**	**1.51**	**80**	*e*Pg	**Pb**	**12 51 18.0**	**0.0**
BNDS				IAML		12 51 43.7	
	comp=E,707nm,0.5s						
BNDS				IAML		12 51 46.8	
	comp=N,634nm,0.4s						
GENO	**Geno**	**1.51**	**80**	*e*Pn	**Pb**	**12 51 17.5**	**-0.5**
GENO				*e*		12 51 42.0	
JHRM	**Jahrom**	**1.59**	**329**	*e*Pn	**Pb**	**12 51 18.8**	**-0.5**
JHRM				*e*		12 51 21.4	
SHME	**Shamm**	**1.82**	**126**	*e*P	**Pn**	**12 51 21.8**	**+0.8**
	SNR=7.6						
SHME				S	**Sb**	**12 51 46.2**	**+0.4**
SHME	**Shamm**	**1.82**	**126**	*e*Pn	**Pn**	**12 51 21.7**	**+0.8**
BANOM	**Banah**	**2.01**	**127**	*e*P	**Pn**	**12 51 25.0**	**+1.4**
	SNR=32						
BANOM	**Banah**	**2.01**	**127**	P	**Pn**	**12 51 24.9**	**+1.4**
	SNR=32						
BANOM				S	**Sb**	**12 51 50.4**	**-0.9**
NIAN	**Nian**	**2.12**	**78**	*e*Pn	**Pn**	**12 51 26.3**	**+1.4**
NIAN				*e*		12 52 08.5	
MSFE	**Esma-Masafi**	**2.31**	**140**	*e*Pn	**Pn**	**12 51 30.0**	**+2.3**
NAZ	**Nazwa, Dubai**	**2.38**	**154**	P	**Pb**	**12 51 31.7**	**-1.1**
NAZ	**Nazwa, Dubai**	**2.38**	**154**	*e*Pn	**Pb**	**12 51 31.6**	**-1.2**
NAZ	**Nazwa, Dubai**	**2.38**	**154**	P	**Pb**	**12 51 32.5**	**-0.3**
NAZ				S	**Sb**	**12 52 02.1**	**+0.2**
MDH	**Madha**	**2.44**	**138**	P	**Pn**	**12 51 31.2**	**+1.8**
MDH	**Madha**	**2.44**	**138**	*e*Pn	**Pn**	**12 51 31.1**	**+1.7**
MDH	**Madha**	**2.44**	**138**	P	**Pb**	**12 51 34.3**	**+0.5**
MDH				S	**Sb**	**12 52 02.4**	**-1.2**
FAQ	**Al Faqa, Dubai**	**2.58**	**157**	*e*Pn	**Pn**	**12 51 32.9**	**+1.6**
AJN	**Ajban**	**2.60**	**170**	*e*Pn	**Pn**	**12 51 35.0**	**+3.4**
ASUD	**Al Ashush, Dub**	**2.61**	**163**	*e*P	**Pn**	**12 51 35.0**	**+3.2**
	SNR=48						
ASUD	**Al Ashush, Dub**	**2.61**	**163**	*e*Pn	**Pn**	**12 51 34.6**	**+2.9**
ASUD	**Al Ashush, Dub**	**2.61**	**163**	P	**Pb**	**12 51 35.4**	**-1.4**
	SNR=48						
UOSS	**Minazif**	**2.67**	**145**	P	**Pn**	**12 51 34.9**	**+2.3**
UOSS	**Minazif**	**2.67**	**145**	*e*Pn	**Pn**	**12 51 34.8**	**+2.3**
HATD	**Hatta, Dubai**	**2.73**	**147**	P	**Pb**	**12 51 37.2**	**-1.5**
HATD	**Hatta, Dubai**	**2.73**	**147**	*e*Pn	**Pn**	**12 51 36.0**	**+2.6**
HATD	**Hatta, Dubai**	**2.73**	**147**	P	**Pb**	**12 51 38.7**	**0.0**
ASHO	**Ashiyiah**	**2.82**	**150**	P	**Pn**	**12 51 36.6**	**+2.0**
ASHO	**Ashiyiah**	**2.82**	**150**	*e*Pn	**Pn**	**12 51 36.9**	**+2.3**
ASHO	**Ashiyiah**	**2.82**	**150**	P	**Pn**	**12 51 37.1**	**+2.4**
ASHO				S	**Sn**	**12 52 11.4**	**+3.3**
KHNJ	**Kahnooj**	**2.95**	**73**	*e*Pn	**Pn**	**12 51 37.5**	**+1.0**
NGRK	**Negar Kerman**	**3.17**	**38**	*e*Pn	**Pn**	**12 51 41.3**	**+1.5**
NGRK				*e*		12 52 34.7	
ALNE	**Al Ain**	**3.27**	**160**	*e*Pn	**Pn**	**12 51 41.1**	**+0.3**
KRBR	**Kerman**	**3.46**	**34**	*e*Pn	**Pn**	**12 51 46.2**	**+2.5**
KRBR	**Kerman**	**3.46**	**34**	*e*Pn	**Pn**	**12 51 46.2**	**+2.5**
KRBR				*e*Sg	**Sg**	**12 52 40.7**	**-1.0**
KRBR				IAML		12 52 55.0	
	comp=N,94nm,0.6s						
TVBK	**TV Kerman**	**3.46**	**34**	*e*Pn	**Pn**	**12 51 46.1**	**+2.3**
TVBK				*e*		12 52 33.3	
SOHO	**SOHO**	**3.51**	**148**	P	**Pn**	**12 51 47.8**	**+3.7**
SOHO				S	**Sn**	**12 52 29.6**	**+4.4**
KHGB	**Koh Gabri**	**3.66**	**28**	*e*Pn	**Pn**	**12 51 48.3**	**+1.9**
KHGB				*e*		12 52 49.5	
CHMN	**Cheshme madani**	**3.81**	**44**	*e*Pn	**Pn**	**12 51 51.7**	**+3.2**
ARQ	**Araqi**	**4.21**	**154**	P	**Pn**	**12 51 54.6**	**+0.9**
ARQ				S	**Sn**	**12 52 45.7**	**+3.3**
IMEH	**Mehriz**	**4.24**	**1**	*e*Pn	**Pn**	**12 51 56.4**	**+2.1**
IMEH				*e*		12 52 54.4	
HOQ	**Hoqain**	**4.36**	**144**	P	**Pn**	**12 51 59.9**	**+4.1**
HOQ				S	**Sn**	**12 52 47.5**	**+1.3**
IBAF	**Bafgh**	**4.53**	**12**	*e*Pn	**Pn**	**12 52 00.0**	**+1.7**
KLNJ	**Kolanjah**	**4.62**	**327**	*e*Pn	**Pn**	**12 52 00.3**	**+0.6**
ISAD	**Sadrabad**	**4.81**	**352**	*e*Pn	**Pn**	**12 52 04.3**	**+2.1**
IRAM	**Ramesheh**	**5.01**	**339**	*e*Pn	**Pn**	**12 52 06.2**	**+1.3**
ICHK	**Chekchek**	**5.09**	**359**	*e*Pn	**Pn**	**12 52 08.4**	**+2.4**
SMDO	**Samad**	**5.18**	**141**	P	**Pn**	**12 52 09.4**	**+2.3**
SMDO				S	**Sn**	**12 53 09.9**	**+3.4**
	SNR=8.0						
YZKH	**Yazd**	**5.23**	**1**	*e*Pn	**Pn**	**12 52 09.9**	**+2.0**
YZKH	**Yazd**	**5.23**	**1**	*e*Pn	**Pn**	**12 52 09.9**	**+2.0**
WSAR	**Wadi Sarin**	**5.39**	**135**	P	**Pn**	**12 52 09.5**	**-0.5**
	comp=N,1.4nm,0.3s,baz=314,slow=6.7,SNR=13						
WSAR				S	**Sn**	**12 53 06.7**	**-5.0**
	comp=N,1.7nm,0.3s,baz=177,slow=17,SNR=3.7						
WSAR	**Wadi Sarin**	**5.39**	**135**	P	**Pn**	**12 52 11.2**	**+1.2**
	SNR=13						
CHBR	**Chabahar**	**5.58**	**105**	*e*Pn	**Pn**	**12 52 13.9**	**+1.3**
CHBR	**Chabahar**	**5.58**	**105**	*e*Pn	**Pn**	**12 52 13.9**	**+1.3**
ROKH	**ROKH**	**6.00**	**331**	*e*Pn	**Pn**	**12 52 19.2**	**+0.7**
IZEF	**Zefreh**	**6.04**	**342**	*e*Pn	**Pn**	**12 52 19.2**	**+0.1**
WBK	**Wadi Bani Khal**	**6.07**	**137**	P	**Pn**	**12 52 20.2**	**+0.9**
	SNR=11						
TPRV	**Parvadeh(Tabas**	**6.17**	**17**	*e*Pn	**Pn**	**12 52 22.7**	**+2.0**
TKDS	**Kookdasht(Taba**	**6.84**	**19**	*e*Pn	**Pn**	**12 52 31.5**	**+1.6**
MHTO	**MHTO**	**6.89**	**152**	P	**Pn**	**12 52 31.9**	**+1.3**
	SNR=11						

TNSJ	**Nastanj**	**7.04**	**14**	*e*Pn		**Pn**	**12 52 33.9**	**+1.2**
KRSH	**Karshahi**	**7.11**	**344**	*e*Pn		**Pn**	**12 52 33.5**	**-0.2**
WHFO	**Wadi Hawf**	**9.20**	**184**	P		**Pn**	**12 53 01.9**	**-0.5**
	SNR=25							
MMAI	**Mount Meron Ar**	**17.53**	**294**	P		**Pn**	**12 54 54.2**	**+0.2**
	comp=N,0.9nm,0.3s,baz=110,slow=12,SNR=3.7							
KBZ	**Khabaz**	**19.03**	**333**	P		**Pn**	**12 55 13.6**	**+1.5**
	comp=N,0.1nm,0.3s,baz=159,slow=8.6,SNR=2.3							
BRTR	**Keskin Array B**	**21.40**	**311**	P		**P**	**12 55 37.9**	**+0.5**
	comp=N,2.6nm,0.7s,baz=132,slow=13,SNR=10							
AAK	**Ala-Archa**	**22.45**	**41**	P		**P**	**12 55 48.3**	**-0.4**
	comp=N,1.3nm,0.7s,baz=225,slow=7.8,SNR=4.8							
AKTO	**Aktyubinsk**	**23.42**	**6**	P		**P**	**12 55 59.4**	**+1.1**
	comp=N,3.4nm,0.7s,baz=180,slow=11,SNR=11							
IDI	**Anoyia**	**26.52**	**295**	P		**P**	**12 56 27.7**	**+0.6**
	comp=N,3.3nm,0.6s,baz=102,slow=23,SNR=5.7							
BVAR	**Borovoye Array**	**28.44**	**20**	P		**P**	**12 56 44.1**	**+0.1**
	comp=N,1.2nm,0.7s,baz=210,slow=8.6,SNR=10							
BVAR				PcP		**PcP**	**12 59 56.0**	**+0.1**
	comp=N,0.4nm,0.5s,baz=232,slow=3.3,SNR=2.9							
MKAR	**Makanchi Array**	**29.38**	**41**	P		**P**	**12 56 52.1**	**-0.4**
	comp=N,0.3nm,0.5s,baz=227,slow=6.8,SNR=5.6							
KURBB	**Kurchatov Arra**	**29.75**	**32**	P		**P**	**12 56 56.1**	**+0.5**
	comp=N,0.4nm,0.6s,baz=231,slow=8.7,SNR=4.9							
ZALV	**Zalesovo Beam**	**34.84**	**31**	P		**P**	**12 57 40.5**	**+0.2**
	comp=N,1.4nm,0.4s,baz=247,slow=9.4,SNR=12							
FINES	**FINESS Array B**	**39.24**	**339**	P		**P**	**12 58 17.0**	**-0.5**
	comp=N,1.3nm,0.5s,baz=148,slow=8.1,SNR=6.4							
SONM	**Songino Array**	**45.10**	**48**	P		**P**	**12 59 06.2**	**+0.5**
	comp=N,0.6nm,0.8s,baz=256,slow=8.3,SNR=4.6							
ARCES	**ARCESS Array B**	**45.66**	**346**	P		**P**	**12 59 09.9**	**+0.2**
	comp=N,2.3nm,1.0s,baz=124,slow=7.6,SNR=5.8							
ESDC	**Sonseca Array**	**49.59**	**300**	P		**P**	**12 59 40.7**	**0.0**
	comp=N,0.3nm,0.4s,baz=70,slow=6.9,SNR=3.6							
TORD	**Torodi Ar. Bea**	**51.15**	**265**	P		**P**	**12 59 52.1**	**-0.6**
	comp=N,0.7nm,0.5s,baz=55,slow=7.8,SNR=6.2							
DBIC	**Dimbokro**	**59.77**	**262**	P		**P**	**13 00 54.5**	**-0.3**
	comp=N,1.2nm,0.4s,baz=90,slow=7.1,SNR=3.1							
KSRS	**Korea Array**	**61.50**	**60**	P		**P**	**13 01 04.1**	**-2.2**
	comp=N,0.8nm,0.8s,baz=311,slow=7.8,SNR=3.7							
ILAR	**Eielson Array**	**86.89**	**9**	P		**P**	**13 03 32.1**	**-1.6**
	comp=N,0.3nm,0.7s,baz=332,slow=5.4,SNR=4.0							
ASAR	**Alice Springs**	**91.77**	**116**	P		**P**	**13 03 55.7**	**-1.8**
	comp=N,0.3nm,0.9s,baz=304,slow=4.1,SNR=3.6							

*RSPR **13** 12:54:10.8, 19.17N×66.70W, h26km±20km, MD3.1/12*
*NEIC **13** 12:54:10.2±1.4, 19.09N±0.03×66.72W±0.03, h30km±10km, Error ellipse: s-maj=4.5km s-min=4.0km az=124.0*

ISC 13 12:54:09.6±1.6, 19.05N±0.07×66.68W±0.03, h17km±9km, n43, σ0°68/57, 12C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.59**	**166**	⇑*eP*	**Pn**	**12 54 22.7**	**-0.4**
EMPR	**Esperanza - Ma**	**0.59**	**166**	*eS*	**Sn**	**12 54 32.4**	**+0.1**
EMPR	**Esperanza - Ma**	**0.59**	**166**		**Pn**	**12 54 22.8**	**-0.3**
EMPR					**Sn**	**12 54 35.6**	**+3.3**
AOPR	**Arecibo Observ**	**0.71**	**186**	⇑*eP*	**Pn**	**12 54 24.5**	**-0.3**
AOPR	**Arecibo Observ**	**0.71**	**186**	*eS*	**Sn**	**12 54 35.2**	**0.0**
AOPR	**Arecibo Observ**	**0.71**	**186**		**Pn**	**12 54 24.5**	**-0.3**
AOPR					**Sn**	**12 54 35.4**	**+0.1**
AGPR	**Aguadilla, PR**	**0.71**	**215**	⇑*eP*	**Pn**	**12 54 24.6**	**-0.2**
AGPR	**Aguadilla, PR**	**0.71**	**215**	*eS*	**Sg**	**12 54 34.0**	**+1.0**
AGPR	**Aguadilla, PR**	**0.71**	**215**		**Pn**	**12 54 24.6**	**-0.2**
AGPR					**Sg**	**12 54 33.7**	**+0.7**
GCPR	**Guaynabo City**	**0.93**	**142**	Pn	**Pg**	**12 54 27.5**	**-0.2**
GCPR					**Sg**	**12 54 40.1**	**+0.1**
LSP	**Las Mesas**	**0.95**	**204**	⇑*eP*	**Pb**	**12 54 27.7**	**+0.1**
LSP	**Las Mesas**	**0.95**	**204**	*eS*	**Sg**	**12 54 40.4**	**-0.3**
LSP	**Las Mesas**	**0.95**	**204**		**Pb**	**12 54 27.7**	**+0.1**
LSP					**Sg**	**12 54 40.4**	**-0.3**
IDE	**Isla Desecheo**	**1.00**	**229**	⇑*eP*	**Pb**	**12 54 28.1**	**-0.4**
IDE	**Isla Desecheo**	**1.00**	**229**	*eS*	**Sg**	**12 54 41.8**	**-0.4**
IDE	**Isla Desecheo**	**1.00**	**229**		**Pb**	**12 54 28.1**	**-0.4**
IDE					**Sg**	**12 54 41.8**	**-0.4**
OBIP	**Obispado Ponce**	**1.01**	**176**	⇑*eP*	**Pn**	**12 54 28.8**	**-0.1**
OBIP	**Obispado Ponce**	**1.01**	**176**	*eS*	**Sn**	**12 54 42.9**	**+0.3**
OBIP	**Obispado Ponce**	**1.01**	**176**		**Sg**	**12 54 28.8**	**-0.1**
OBIP					**Sg**	**12 54 42.3**	**-0.1**
SJG	**San Juan**	**1.06**	**152**	Pn	**Pg**	**12 54 30.6**	**+0.4**
SJG					**Sg**	**12 54 44.8**	**+0.6**
GBPR	**Guanica, Bosqu**	**1.09**	**190**	⇑*eP*	**Pg**	**12 54 30.4**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.09**	**190**	*eS*	**Sg**	**12 54 45.3**	**+0.4**
GBPR	**Guanica, Bosqu**	**1.09**	**190**		**Pg**	**12 54 30.4**	**-0.3**
GBPR					**Sg**	**12 54 45.3**	**+0.4**
CBYP	**Canovanas**	**1.10**	**135**	⇑*eP*	**Pn**	**12 54 29.4**	**-0.9**
CBYP	**Canovanas**	**1.10**	**135**		**Pn**	**12 54 29.5**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.12**	**201**	⇑*eP*	**Pn**	**12 54 30.1**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.12**	**201**	*eS*	**Sn**	**12 54 45.5**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.12**	**201**		**Pn**	**12 54 30.1**	**-0.3**
CRPR					**Sb**	**12 54 44.9**	**+0.2**
MLPR	**Magueyes Islan**	**1.13**	**198**	⇑*eP*	**Pn**	**12 54 29.4**	**-1.2**
MLPR	**Magueyes Islan**	**1.13**	**198**	*eS*	**Sb**	**12 54 44.8**	**-0.3**
MLPR	**Magueyes Islan**	**1.13**	**198**		**Pn**	**12 54 29.3**	**-1.2**
MLPR					**Sb**	**12 54 45.1**	**+0.1**
HUMP	**Col San Antoni**	**1.20**	**139**	⇑*eP*	**Pb**	**12 54 31.8**	**0.0**
HUMP	**Col San Antoni**	**1.20**	**139**	*eS*	**Sb**	**12 54 45.8**	**-1.3**
HUMP	**Col San Antoni**	**1.20**	**139**		**Pn**	**12 54 31.3**	**-0.2**
HUMP					**Sn**	**12 54 47.8**	**+0.4**
PDPR	**Patillas Dam,**	**1.21**	**149**	Pn	**Pb**	**12 54 31.9**	**0.0**
PDPR					**Sg**	**12 54 48.4**	**-0.2**
IGPR	**InterUniversit**	**1.21**	**153**	Pn	**Pg**	**12 54 33.5**	**+0.5**
IGPR					**Sn**	**12 54 48.4**	**+0.7**
MTP	**Monte Pirata**	**1.43**	**131**	⇑*eP*	**Pn**	**12 54 34.2**	**-0.6**
MTP	**Monte Pirata**	**1.43**	**131**	*eS*	**Sn**	**12 54 52.5**	**-0.7**
MTP	**Monte Pirata**	**1.43**	**131**		**Pn**	**12 54 34.1**	**-0.6**
STVI	**Saint Thomas**	**1.78**	**113**	Pn	**Pn**	**12 54 38.8**	**-0.7**
DR12	**Loma Pena Alta**	**2.57**	**265**	Pn	**Pn**	**12 54 50.5**	**0.0**
SMRT	**St. Maarten**	**3.56**	**106**	Pn	**Pn**	**12 55 04.9**	**+0.8**
SDDR	**Presa de Saban**	**4.36**	**270**	Pn	**Pn**	**12 55 15.2**	**+0.1**

IDC 13 12:57:55.5±8.9, 28.85S×75.11E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/38, mbtmp3.7/4, Error ellipse: s-maj=318.5km s-min=34.8km az=49.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**52.53**	**99**	P	P	13 07 11.1	+0.1
	0.7nm,1.0s,baz=252,slow=6.6,SNR=4.8						
STKA	**Stephens Creek**	**56.63**	**111**	P	P	13 07 40.3	-0.3
	1.7nm,0.8s,baz=282,slow=5.4,SNR=4.6						
MKAR	**Makanchi Array**	**75.57**	**5**	P	P	13 09 41.7	-0.1
	0.6nm,0.9s,baz=176,slow=5.8,SNR=5.2						
KURBB	**Kurchatov Arra**	**79.18**	**2**	P	P	13 10 02.1	+0.2
	0.2nm,0.6s,baz=174,slow=6.2,SNR=3.1						

*IDC **13** 13:00:58.1±0.6, 26.35N×44.47W, h0km, mb4.0/19, mb1 4.2/19, mb1mx4.1/42, mbtmp4.0/19, MS3.6/13, Ms1 3.5/13, ms1mx3.3/29, Error ellipse: s-maj=16.5km s-min=15.7km az=4.0*
*NEIC **13** 13:00:59.3±1.1, 26.27N±0.10×44.14W±0.1, h10km±1km, mb4.8/47, Error ellipse: s-maj=18.6km s-min=16.5km az=270.0*

ISC 13 13:00:59.6±0.5, 26.30N±0.09×44.45W±0.09, h11km, n81, σ0°74/66, mb4.6/34, MS3.6/13, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**22.49**	**202**	LR	LR	13 12 53.2	
	comp=Z,57nm,20.1s,baz=322,slow=32						
BANI	**BANI**	**25.19**	**257**	P	**P**	**13 06 23.3**	**-2.2**
LMN	**Caledonia Moun**	**25.39**	**325**	P	**P**	**13 06 26.6**	**-0.3**
K62A	**Royalston**	**27.95**	**313**	P	**P**	**13 06 52.4**	**+2.4**
SCHQ	**Schefferville**	**32.90**	**336**	LR	LR	13 19 39.7	
	comp=Z,70nm,19.8s,baz=2.0,slow=34						
TKL	**Tuckaleechee C**	**34.79**	**295**	P	**P**	**13 07 50.2**	**-0.2**
	5.7nm,1.0s,baz=99,slow=9.7,SNR=4.8						
ROSC	**El Rosal**	**35.65**	**238**	LR	LR	13 23 21.8	
	comp=Z,60nm,18.3s,baz=126,slow=38						
250A	**Grady**	**36.80**	**289**	P	**P**	**13 08 09.3**	**+1.8**
SAML	**Samuel**	**39.49**	**210**	P	**P**	**13 08 30.3**	**-0.1**
FRB	**Frobisher Bay**	**40.61**	**344**	P	**P**	**13 08 39.4**	**+0.2**
	5.5nm,0.9s,baz=143,slow=7.4,SNR=8.5						
CCM	**Cathedral Cave**	**40.92**	**299**	P	**P**	**13 08 42.6**	**+0.5**
BDFB	**Brasilia**	**41.84**	**185**	P	**P**	**13 08 50.2**	**+0.4**
	2.7nm,0.7s,baz=22,slow=11,SNR=2.0						
BDFB				LR	LR	13 23 42.2	
	comp=Z,66nm,18.1s,baz=176,slow=33						

BDFB	**Brasilia**	**41.84**	**185**		IAmb	IAmb	13 08 57.5		
	comp=Z,12nm,1.1s								
U40A	**Yellville**	**42.17**	**296**	P		**P**	**13 08 52.5**	**+0.1**	
DBIC	**Dimbokro**	**42.44**	**110**	P		**P**	**13 08 55.4**	**+0.6**	
	comp=Z,3.3nm,0.8s,baz=340,slow=8.2,SNR=4.0								
DBIC				LR		LR	13 23 24.0		
	comp=Z,103nm,20.0s,baz=280,slow=32								
DBIC	**Dimbokro**	**42.44**	**110**	IAmb		IAmb	13 09 17.0		
	comp=Z,34nm,1.6s								
TUL1	**Leonard**	**44.56**	**295**	P		**P**	**13 09 11.7**	**0.0**	
TUL1				IAmb		IAmb	13 09 13.6		
	comp=Z,9.0nm,0.9s								
H10N2	**ASCENSION HYDR**	**44.69**	**135**	T		T	13 56 49.9		
	baz=320,slow=75,SNR=499								
H10N3	**ASCENSION HYDR**	**44.69**	**135**	T		T	13 56 50.0		
	baz=320,slow=75,SNR=339								
H10N1	**ASCENSION HYDR**	**44.71**	**135**	T		T	13 56 51.3		
	baz=320,slow=75,SNR=500								
TORD	**Torodi Ar. Bea**	**45.13**	**98**	P		**P**	**13 09 16.5**	**0.0**	
	comp=Z,1.1nm,0.9s,baz=311,slow=6.5,SNR=4.4								
TORD				LR		LR	13 27 30.1		
	comp=Z,94nm,18.8s,baz=280,slow=35								
TORD	**Torodi Ar. Bea**	**45.13**	**98**	IAmb		IAmb	13 09 19.0		
	comp=Z,3.7nm,1.5s								
ULM	**Lac du Bonnet**	**45.80**	**316**	P		**P**	**13 09 21.4**	**+0.2**	
	comp=Z,1.7nm,0.9s,baz=100,slow=11,SNR=3.8								
ULM				LR		LR	13 26 21.7		
	comp=Z,65nm,18.6s,baz=140,slow=33								
ULM	**Lac du Bonnet**	**45.80**	**316**	IAmb		IAmb	13 09 22.6		
	comp=Z,7.7nm,1.2s								
WHTX	**Lake Whitney,**	**46.27**	**290**	P		**P**	**13 09 25.8**	**+0.5**	
WMOK	**Wichita Mounta**	**47.08**	**294**	P		**P**	**13 09 32.2**	**+0.6**	
WMOK				IAmb		IAmb	13 09 34.5		
	comp=Z,10nm,1.1s								
ZCCA	**Zocca**	**47.74**	**53**	P		**P**	**13 09 36.3**	**-0.4**	
LPAZ	**La Paz**	**48.19**	**211**	P		**P**	**13 09 41.8**	**+0.8**	
	comp=Z,4.0nm,0.9s,baz=27,slow=8.4,SNR=8.0								
LPAZ	**La Paz**	**48.19**	**211**	P		**P**	**13 09 40.2**	**-0.8**	
LPAZ				IAmb		IAmb	13 09 44.6		
	comp=Z,8.8nm,1.2s								
AMTX	**Amarillo**	**49.44**	**294**	P		**P**	**13 09 51.1**	**+1.2**	
AMTX				IAmb		IAmb	13 09 57.4		
	comp=Z,26nm,1.5s								
GEC2	**GERESS Array S**	**49.93**	**47**	P		**P**	**13 09 54.0**	**+0.5**	
GEC2				IAmb		IAm

KSDI					AML	AML	13 01 55.3		
	20nm,0.2s								
KSDI					AML	AML	13 01 55.3		
	20nm,0.2s								
KSDI					AML	AML	13 01 55.4		
	25nm,0.3s								
KSDI					AML	AML	13 01 55.4		
	25nm,0.3s								
SHBL	**Chebaa**	**0.42**	**12**	*eP*	**Pg**		**13 01 53.4**	**+0.2**	
SHBL				*eS*	**Sg**		**13 01 59.2**	**+0.3**	
MMLI	**Mount Malkishu**	**0.53**	**200**	P	**Pg**		**13 01 55.3**	**0.0**	
MMLI	**Mount Malkishu**	**0.53**	**200**	P	**Pg**		**13 01 55.1**	**-0.3**	
MMLI				S	**Sb**		**13 02 03.4**	**0.0**	
RCY	**Rachaya**	**0.58**	**16**	*eP*	**Pg**		**13 01 56.2**	**0.0**	
RCY				*eS*	**Sg**		**13 02 04.2**	**+0.2**	
DQRL	**Deir Qamar**	**0.77**	**356**	*eP*	**Pg**		**13 01 59.5**	**-0.2**	
DQRL				*eS*	**Sg**		**13 02 09.8**	**0.0**	
BEYL	**Beirut**	**0.94**	**353**	*eP*	**Pb**		**13 02 02.3**	**-0.4**	
HSUJ	**Al Zarqa**	**0.95**	**151**	P	**Pb**		**13 02 02.9**	**-0.1**	
BHL	**Bhannes**	**0.96**	**1**	*eP*	**Pb**		**13 02 02.7**	**-0.5**	
BHL				*eS*	**Sb**		**13 02 15.2**	**-0.5**	
ASF	**Jabal al Asfar**	**1.31**	**125**	P	**Pn**		**13 02 07.8**	**-0.8**	
HWQ	**Hawqa**	**1.36**	**11**	*eP*	**Pn**		**13 02 09.3**	**0.0**	
HWQ				*eS*	**Sn**		**13 02 26.6**	**-0.5**	
WALJ	**Wala**	**1.38**	**174**	P	**Pn**		**13 02 09.1**	**-0.4**	
AMAZ	**Amatzia**	**1.53**	**204**	P	**Pn**		**13 02 11.9**	**+0.3**	
AMAZ	**Amatzia**	**1.53**	**204**	P	**Pn**		**13 02 12.1**	**+0.5**	
AMAZ				S	**Sg**		**13 02 34.1**	**-0.1**	
AMAZ				AML	AML		13 02 42.5		
	4.9nm,0.4s								
AMAZ				AML	AML		13 02 42.5		
	4.9nm,0.4s								
AMAZ				AML	AML		13 02 43.7		
	4.8nm,0.5s								
AMAZ				AML	AML		13 02 43.7		
	4.8nm,0.5s								
GHAJ	**Ghor Haditha**	**1.63**	**182**	P	**Pn**		**13 02 13.1**	**+0.2**	
SWQJ	**Swaqa**	**1.73**	**168**	P	**Pn**		**13 02 14.3**	**-0.1**	
JDRJ	**Daraweish**	**2.21**	**179**	P	**Pn**		**13 02 20.7**	**-0.3**	
KZIT	**Kziot**	**2.29**	**208**	P	**Pn**		**13 02 22.6**	**+0.7**	
KZIT	**Kziot**	**2.29**	**208**	P	**Pn**		**13 02 22.1**	**+0.2**	
KZIT				AML	AML		13 02 54.4		
	0.9nm,0.6s								
KZIT				AML	AML		13 02 56.9		
	1.1nm,0.4s								
PARAL	**Paralimni**	**2.44**	**327**	P	**Pn**		**13 02 23.3**	**-0.7**	
PARAL				AML	AML		13 02 54.0		
	0.7nm,0.6s								
PARAL				AML	AML		13 02 55.1		
	0.8nm,0.9s								
MVOU	**Mavrovouni**	**2.66**	**322**	P	**Pn**		**13 02 25.8**	**-1.2**	
MVOU				AML	AML		13 02 57.6		
	0.4nm,0.3s								
MVOU				AML	AML		13 02 57.6		
	0.4nm,0.3s								
MVOU				S	**Sn**		**13 02 59.2**	**+0.2**	
MVOU				AML	AML		13 03 00.4		
	0.4nm,0.2s								
MVOU				AML	AML		13 03 00.4		
	0.4nm,0.2s								
ASGA	**Asgata**	**2.71**	**313**	P	**Pn**		**13 02 27.3**	**-0.4**	
ASGA				AML	AML		13 03 00.4		
	0.3nm,0.2s								
ASGA				AML	AML		13 03 01.1		
	0.4nm,0.4s								
AKIN	**Akıncılar- Kıb**	**2.75**	**319**	*eP*	**Pn**		**13 02 27.9**	**-0.4**	
CSS	**Mathiatis**	**2.78**	**317**	P	**Pn**		**13 02 28.4**	**-0.4**	
CSS	**Mathiatis**	**2.78**	**317**	P	**Pn**		**13 02 28.4**	**-0.4**	
CSS	**Mathiatis**	**2.78**	**317**	P	**Pn**		**13 02 28.1**	**-0.7**	
CSS				S	**Sn**		**13 03 03.0**	**+0.8**	
SZAC	**Souni**	**2.92**	**309**	P	**Pn**		**13 02 30.5**	**-0.2**	
SZAC				S	**Sn**		**13 03 06.1**	**+0.6**	
SZAC				AML	AML		13 03 07.0		
	0.9nm,0.4s								
SZAC				AML	AML		13 03 07.0		
	0.9nm,0.4s								
SZAC				AML	AML		13 03 08.8		
	1.4nm,0.3s								
SZAC				AML	AML		13 03 08.8		
	1.4nm,0.3s								
HRFI	**Mount Harif**	**2.94**	**190**	P	**Pn**		**13 02 30.9**	**-0.1**	
NATA	**Nata**	**3.14**	**307**	P	**Pn**		**13 02 34.1**	**+0.3**	
LEF	**Lefka**	**3.15**	**314**	P	**Pn**		**13 02 34.1**	**+0.3**	
AQBJ	**Aqaba**	**3.24**	**189**	P	**Pn**		**13 02 35.5**	**+0.4**	
EIL	**Elat**	**3.31**	**190**	P	**Pn**		**13 02 36.3**	**+0.2**	
ALFC	**Alefka**	**3.35**	**312**	P	**Pn**		**13 02 36.6**	**0.0**	
AKMS	**Akamas**	**3.44**	**308**	P	**Pn**		**13 02 37.7**	**-0.1**	
TISA	**Tisan-Mersin**	**3.60**	**334**	P	**Pn**		**13 02 39.8**	**-0.1**	
KARG	**Kargicak-Mersi**	**3.62**	**334**	P	**Pn**		**13 02 40.2**	**-0.1**	
YESI	**Yesilovacik-Me**	**3.64**	**334**	*eP*	**Pn**		**13 02 40.6**	**+0.1**	
IKL	**Isikli**	**3.66**	**334**	P	**Pn**		**13 02 40.4**	**-0.5**	
YORU	**Yoruktepe-Mers**	**3.70**	**331**	*eP*	**Pn**		**13 02 40.9**	**-0.5**	
SILI	**Silifke-Mersin**	**3.70**	**338**	*eP*	**Pn**		**13 02 41.6**	**+0.3**	
KIZK	**Mersin**	**3.74**	**341**	P	**Pn**		**13 02 41.7**	**-0.2**	
TEKE	**Tekeli-Mersin**	**3.81**	**328**	P	**Pn**		**13 02 42.8**	**-0.1**	
KEBE	**Keben-Mersin**	**3.84**	**336**	P	**Pn**		**13 02 43.5**	**+0.1**	
YURE	**YUREGIR**	**3.88**	**360**	P	**Pn**		**13 02 45.6**	**+1.8**	
TEVE	**Tevekalti-Mers**	**3.93**	**333**	P	**Pn**		**13 02 44.4**	**-0.2**	
BERE	**Bereket-Mersin**	**3.94**	**330**	P	**Pn**		**13 02 44.4**	**-0.4**	
GAZI	**Gazipasa**	**4.28**	**321**	P	**Pn**		**13 02 48.9**	**-0.5**	
KARA	**Karaisali**	**4.34**	**354**	P	**Pn**		**13 02 51.1**	**+1.0**	
CMRD	**Camardi-Nigde**	**4.74**	**354**	P	**Pn**		**13 02 56.9**	**+1.1**	

*IDC **13** 13:23:38.5±4.5, 3°.82N×126°.47E, h52^{km}±45^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.4/32, mbtmp3.7/7, ML3.8/1, Error ellipse: s-maj=47.0km s-min=19.7km az=60.0*
*NEIC **13** 13:23:39.0±1.3, 3°.9N±0°.1×126°.5E±0°.1, h62^{km}±10^{km}, mb4.7/12, Error ellipse: s-maj=26.7km s-min=5.2km az=51.0*

ISC 13 13:23:38.1±0.6, 3°.9N±0°.1×126°.5E±0°.1, h45^{km}, n23, σ1^{s}37/23, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**3.28**	**323**	*eP*		**Pn**	**13 24 28.5**	**+1.5**
SKMP				*eS*		**Sn**	**13 25 07.0**	**+2.2**
KCP	**Kidapawan**	**3.42**	**335**⇑	*eP*		**Pn**	13 24 36.5	+7.6
SIJI	**Sorong**	**6.69**	**135**	P		**Pn**	**13 25 14.6**	**+0.8**
	1.8nm,0.3s,baz=196,slow=18,SNR=5.6							
SIJI				S		**Sn**	**13 26 29.7**	**+1.0**
	1.0nm,0.3s,baz=143,slow=20,SNR=4.2							
FAKI	**Fak Fak**	**8.85**	**140**	Pn		**Pn**	**13 25 45.1**	**+1.6**
TWG	**Pinlang**	**19.55**	**345**	Pn		**Pn**	**13 28 03.5**	**-0.2**
KNRA	**Kununurra**	**19.57**	**174**	P		**P**	**13 28 02.0**	**-0.4**
KNRA				IAmb		IAmb	13 28 17.7	
	comp=Z,146nm,1.8s							
FITZ	**Fitzroy Crossi**	**21.87**	**182**	P		**P**	**13 28 26.8**	**-0.3**
FITZ				IAmb		IAmb	13 28 56.1	
	comp=Z,47nm,1.8s							
KNMB	**Chin-men Tao**	**21.91**	**340**	P		**P**	**13 28 26.0**	**-1.6**
WRA	**Warramunga Arr**	**24.90**	**162**	P		**P**	**13 28 55.8**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=342,slow=11,SNR=8.1							
WR0	**Warramunga Arr**	**24.97**	**162**	P		**P**	**13 28 55.8**	**-1.8**
WR0				IAmb		IAmb	13 29 10.8	
	comp=Z,25nm,1.6s							
ASAR	**Alice Springs**	**28.32**	**166**	P		**P**	**13 29 27.4**	**-0.3**
CMAR	**Chiang Mai Arr**	**30.63**	**300**	P		**P**	**13 29 48.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=110,slow=7.8,SNR=3.0							
KMI	**Kunming**	**31.13**	**315**	P		**P**	**13 29 53.4**	**+0.5**
KMI				IAmb		IAmb	13 29 58.3	
	comp=Z,14nm,0.4s							
BBOO	**Buckleboo**	**37.60**	**167**	P		**P**	**13 30 47.7**	**-0.8**
BBOO				IAmb		IAmb	13 30 48.5	
	comp=Z,8.2nm,1.1s							
STKA	**Stephens Creek**	**38.35**	**159**	P		**P**	**13 30 54.5**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=328,slow=9.2,SNR=7.9							
STKA	**Stephens Creek**	**38.35**	**159**	IAmb		IAmb	13 30 55.3	
	comp=Z,0.9nm,0.8s							
SONM	**Songino Array**	**47.08**	**342**	P		**P**	**13 32 05.2**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=160,slow=8.4,SNR=3.2							
PETK	**Petropavlovsk-**	**55.35**	**22**	P		**P**	**13 33 07.1**	**-0.3**
MK31	**Makanchi Array**	**57.31**	**325**	P		**P**	**13 33 18.4**	**-3.1**
MKAR	**Makanchi Array**	**57.31**	**325**	P		**P**	**13 33 20.7**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=122,slow=7.7,SNR=8.7							
MKAR	**Makanchi Array**	**57.31**	**325**	P		**P**	**13 33 20.5**	**-1.0**
MAKZ	**Makanchi**	**57.50**	**325**	P		**P**	**13 33 20.4**	**-2.4**
MAKZ				IAmb		IAmb	13 35 12.5	
	comp=Z,6.9nm,1.9s							
ILAR	**Eielson Array**	**85.04**	**25**	P		**P**	**13 36 09.4**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=251,slow=5.5,SNR=5.4							

*BJI **13** 13:26:22.0±0.0, 3°.69N×126°.82E, h60^{km}, mB5.0/31, mb4.6/37, Ms4.6/6, Ms7 4.3/4*
*DJA **13** 13:26:24.5±0.4, 4°.N±3°×12°.7E±°, h35^{km}±3^{km}, M4.8/18, mb4.8/18, mB5.3/5, MLv4.7/15, Mw(mB)4.7/5*
*MAN **13** 13:26:25.0, 4°.12N×126°.50E, h4^{km}, mb5.4, ML4.3, MS4.5*
*NEIC **13** 13:26:25.9±2.4, 4°.02N±0°.05×126°.72E±0°.05, h60^{km}±6^{km}, mb4.8/56, Error ellipse: s-maj=7.6km s-min=6.9km az=162.0*
*IDC **13** 13:26:26.0±2.1, 3°.89N×126°.46E, h57^{km}±19^{km}, mb4.0/17, mb1 4.2/20, mb1mx4.1/34, mbtmp4.3/20, ML4.4/3, MS3.4/16, Ms1 3.4/16, ms1mx3.2/41, Error ellipse: s-maj=26.3km s-min=10.9km az=74.0*

ISC 13 13:26:24.8±0.3, 4°.00N±0°.04×126°.70E±0°.06, h45^{km}, n129, σ2^{s}04/138, mb4.7/51, MS3.5/13, 1C-2D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**2.31**	**335**	*eP*		**Pn**	**13 26 59.9**	**-0.5**
DDMP				*eS*		**Sn**	**13 27 23.3**	**-4.4**
GSPH	**General Santos**	**2.71**	**320**⇓	*iP*		**Pn**	**13 27 06.1**	**+0.1**
MATI	**Mati**	**2.96**	**351**	*eP*		**Pn**	**13 27 11.0**	**+1.7**
MATI				*eS*		**Sn**	**13 27 51.0**	**+7.4**
DAV	**Davao City (W)**	**3.25**	**340**	P		**Pn**	**13 27 15.7**	**+2.4**
	74nm,0.3s,baz=120,slow=20,SNR=2.5							
DAV				S		**Sn**	**13 27 50.8**	**0.0**
	78nm,0.3s,baz=228,slow=12,SNR=5.4							
DAV				LR		LR	13 28 46.3	
	comp=Z,562nm,19.4s,baz=224,slow=43							
TNTI	**Ternate**	**3.28**	**168**	P		**Pn**	**13 27 14.6**	**+0.9**
TNTI				S		**Sn**	**13 27 52.3**	**+0.9**
TNTI	**Ternate**	**3.28**	**168**			**Pn**	**13 27 14.5**	**+0.8**
SKMP	**Bagumbayan, Su**	**3.30**	**319**	*eP*		**Pn**	**13 27 15.4**	**+1.4**
SKMP				*eS*		**Sn**	**13 27 52.9**	**+0.9**
KCP	**Kidapawan**	**3.39**	**332**⇑	*eP*		**Pn**	**13 27 18.2**	**+2.9**
KCP				*i*	S	**Sn**	**13 28 01.8**	**+7.5**
CTBH	**Cotabato--PC H**	**4.03**	**323**	*eP*		**Pn**	**13 27 25.5**	**+1.5**
CTBH				*i*	S	**Sn**	**13 28 13.8**	**+3.9**
BUKP	**Musuan**	**4.18**	**337**	*eP*		**Pn**	**13 27 28.5**	**+2.3**
BUKP				*eS*		**Sn**	**13 28 16.0**	**+2.2**
KMSI	**Cibinong**	**4.36**	**219**	P		**Pn**	**13 27 29.9**	**+1.4**
LBMI	**Labuha**	**4.68**	**170**	P		**Pn**	**13 27 34.1**	**+1.2**
CGP	**Cagayan de Oro**	**4.85**	**336**⇓	*eP*		**Pn**	**13 27 38.9**	**+3.5**
CGP				*eS*		**Sn**	**13 28 33.6**	**+3.3**
BUTP	**Butuan**	**5.05**	**348**	*eP*		**Pn**	**13 27 41.2**	**+3.1**
BUTP				*eS*		**Sn**	**13 28 40.0**	**+4.8**
MRSI	**Marisa**	**5.91**	**234**	P		**Pn**	**13 27 51.3**	**+1.5**
	0.9nm2μm238nm,0.7s							
SANI	**Sanana**	**6.05**	**187**	P		**Pn**	**13 27 49.8**	**-2.0**
	0.2nm31nm,1.1s							
LUWI	**Luwuk**	**6.37**	**218**	P		**Pn**	**13 28 00.9**	**+4.8**
	1.3nm4μm473nm,1.0s							
LUWI	**Luwuk**	**6.37**	**218**			**Pn**	**13 27 59.3**	**+3.2**
SWI	**Sorong**	**6.64**	**137**	P		**Pn**	**13 28 01.9**	**+2.0**
	0.2nm57nm,0.8s							
SIJI	**Sorong**	**6.65**	**137**	P		**Pn**	**13 28 02.3**	**+2.3**
	7.4nm,0.3s,baz=324,slow=13,SNR=15							
SIJI				S		**Sn**	**13 29 15.9**	**+1.3**
	6.0nm,0.3s,baz=112,slow=21,SNR=8.3							
SIJI				LR		LR	13 31 03.8	
	comp=Z,186nm,18.9s,baz=250,slow=41							
APSI	**Ampana**	**7.02**	**226**	P		**Pn**	**13 28 09.7**	**+4.6**
	0.4nm1μm129nm,0.9s							
NLAI	**Namlea**	**7.20**	**177**	P		**Pn**	**13 28 08.3**	**+0.7**
	0.2nm36nm,0.7s							
MPSI	**Mapaga**	**7.71**	**242**	P		**Pn**	**13 28 15.5**	**+0.9**
	0.1nm33nm,0.9s							
FAKI	**Fak Fak**	**8.83**	**141**	Pn		**Pn**	**13 28 31.8**	**+1.8**
TTSI	**Tana Toraja**	**9.81**	**225**	P		**Pn**	**13 28 45.4**	**+2.0**
	40nm,1.3s							
KKM	**Kota Kinabalu**	**10.64**	**281**	Pn		**Pn**	**13 28 58.3**	**+3.4**
KAPI	**Kappang**	**11.33**	**218**	LR		LR	13 33 56.1	
	comp=Z,224nm,19.3s,baz=99,slow=41							
TGY	**Tagaytay City**	**11.54**	**331**	LR		LR	13 34 06.6	
	comp=Z,328nm,19.4s,baz=186,slow=40							
SOEI	**Soe**	**13.88**	**190**	Pn		**Pn**	**13 29 41.1**	**+1.9**
SBUM	**Sibu**	**14.54**	**264**			**P**	**13 29 51.4**	**-2.2**
GENI	**Genyem**	**14.97**	**116**	P		**P**	**13 30 01.9**	**+3.6**
WSI	**Waingapu**	**15.00**	**205**	P		Pn	13 29 45.6	-8.4
JAY	**Jayapura**	**15.42**	**115**	P		**P**	**13 30 03.7**	**+0.3**
	0.7nm,0.3s,baz=243,slow=16,SNR=2.4							
JAY				LR		LR	13 35 11.4	
	comp=Z,132nm,20.6s,baz=296,slow=34							
KSM	**Kuching**	**16.56**	**262**	Pn		**Pn**	**13 30 14.2**	**+0.2**
JAGI	**Jajag, Banyuwa**	**17.61**	**225**			**P**	**13 30 29.0**	**+1.3**
JAGI				IAmb		IAmb	13 31 07.9	
	comp=Z,55nm,0.9s							
TWG	**Pinlang**	**19.49**	**344**	P		**P**	**13 30 46.6**	**-1.6**
SMRI	**Semarang**	**19.59**	**236**	P		**Pn**	**13 30 50.4**	**-0.7**
KNRA	**Kununurra**	**19.66**	**174**	P		**P**	**13 30 49.4**	**-0.7**
KNRA				IAmb		IAmb	13 31 02.0	
	comp=Z,61nm,1.2s							
DLV	**T Lat**	**19.68**	**295**	P		**Pn**	**13 30 51.8**	**-0.5**
DLV				IAmb		IAmb	13 30 56.5	
	comp=Z,99nm,1.4s							
YULB	**Yu-li**	**19.97**	**345**	P		**P**	**13 30 51.4**	**-2.1**
YULB				IAmb		IAmb	13 31 49.8	
	comp=Z,144nm,2.0s							
TPUB	**Ta-pu**	**20.06**	**344**	P		**P**	**13 30 53.1**	**-1.4**
SSLB	**Suanglung**	**20.44**	**345**	P		**P**	**13 30 58.3**	**-0.3**
SSLB				IAmb		IAmb	13 31 13.5	
	comp=Z,97nm,1.7s							
YHNB	**Yeheng**	**21.18**	**346**	P		**P**	**13 31 06.5**	**-0.1**
KNMB	**Chin-men Tao**	**21.86**	**339**	P		**P**	**13 31 16.3**	**+2.5**
FITZ	**Fitzroy Crossi**	**21.98**	**183**	P		**P**	**13 31 14.1**	**-1.1**
	comp=Z,9.1nm,0.7s,baz=360,slow=3.4,SNR=11							
FITZ	**Fitzroy Crossi**	**21.98**	**183**	P		**P**	**13 31 13.7**	**-1.5**
FITZ				IAmb		IAmb	13 31 16.2	
	comp=Z,73nm,1.9s							
JOW	**Kunigami**	**22.75**	**4**	P		**P**	**13 31 20.9**	**-2.5**
JOW				IAmb		IAmb	13 32 08.0	
	comp=Z,117nm,1.7s							
UBPT	**Khong Chiam**	**23.71**	**300**	P		**P**	**13 31 31.9**	**-0.9**
UBPT				IAmb		IAmb	13 31 38.1	
	comp=Z,66nm,1.2s							
COEN	**Coen**	**24.20**	**138**	P		**P**	**13 31 35.6**	**-1.8**
COEN				IAmb		IAmb	13 31 53.1	
	comp=Z,70nm,1.8s							
PMG	**Port Moresby**	**24.35**	**123**	LR		LR	13 42 04.0	
	comp=Z,74nm,18.1s,baz=295,slow=38							
PMG	**Port Moresby**	**24.35**	**123**	P		**P**	**13 31 37.7**	**-1.1**
PMG				IAmb		IAmb	13 31 49.4	
	comp=Z,40nm,1.5s							
WRAB	**Tennant Creek**	**24.94**	**163**	P		**P**	**13 31 42.7**	**-1.5**
WRAB				IAmb		IAmb	13 32 04.2	
	comp=Z,33nm,1.4s							
WRA	**Warramunga Arr**	**24.95**	**163**	P		**P**	**13 31 43.6**	**-0.6**
	comp=Z,5.1nm,0.6s,baz=343,slow=11,SNR=19							
WR0	**Warramunga Arr**	**25.03**	**162**	P		**P**	**13 31 43.8**	**-1.0**
KULM	**Kulim**	**26.00**	**274**	P		**P**	**13 31 53.4**	**-0.4**
KULM				IAmb		IAmb	13 31 58.4	
	comp=Z,72nm,1.9s							
PSA00	**Pilbara Seismi**	**26.29**	**195**	P		**P**	**13 31 55.5**	**-0.8**
PSA00				IAmb		IAmb	13 32 18.8	
	comp=Z,113nm,1.8s							
KRVT	**Keravat (AS076**	**26.61**	**108**	LR		LR	13 40 37.5	
	comp=Z,153nm,20.7s,baz=290,slow=32							
SSE	**Sheshan**	**27.45**	**350**	P		**P**	**13 32 06.2**	**-0.4**
SSE				IAmb		IAmb	13 32 11.1	
	comp=Z,18nm,0.7s							
PSI	**Prapat**	**27.75**	**268**	LR		LR	13 45 19.0	
	comp=Z,89nm,19.1s,baz=67,slow=41							
RPSI	**Rantau Prapat**	**27.76**	**268**	P		**P**	**13 32 10.9**	**+1.3**
AS31	**Alice Springs**	**28.38**	**166**	P		**P**	**13 32 14.0**	**-1.1**
ASAR	**Alice Springs**	**28.38**	**166**	P		**P**	**13 32 14.4**	**-0.7**
	comp=Z,2.2nm,0.7s,baz=342,slow=6.6,SNR=20							
NJ2	**Nanjing**	**28.86**	**346**	*eP*		**P**	**13 32 20.4**	**+1.2**
NJ2				pmax		pmax		
	comp=Z,9.0nm,0.5s							
LHMI	**Lhok Sumawe**	**29.68**	**274**	P		**P**	**13 32 25.6**	**-1.2**
CMAR	**Chiang Mai Arr**	**30.71**	**300**	P		**P**	**13 32 35.3**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=117,slow=7.5,SNR=18							
CMAR				LR		LR	13 44 43.1	
	comp=Z,33nm,21.9s,baz=150,slow=36							
CHTO	**Chiang Mai**	**30.86**	**301**	P		**P**	**13 32 35.5**	**-1.6**
KMI	**Kunming**	**31.17**	**315**	P		**P**	**13 32 40.8**	**+0.8**
KMI				pmax		pmax		
	comp=Z,7.0nm,0.6s							
KMI				pmax		pmax		
	comp=Z,150nm,3.8s							
KMI				LR		LR		
	comp=Z,290nm,4.2s							
KMI				LR		LR		
	comp=Z,210nm,5.1s							
KMI				LR		LR		
	comp=Z,190nm,5.1s							
KSRS	**Korea Array**	**33.31**	**2**	P		**P**	**13 32 58.2**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=178,slow=10,SNR=13							
KSRS				LR		LR	13 47 56.8	
	comp=Z,34nm,19.7s,baz=168,slow=39							
MJAR	**Matsushiro Arr**	**34.07**	**17**	LR		LR	13 47 07.7	
	comp=Z,17nm,21.8s,baz=35,slow=36							
MAJO	**Matsushiro**	**34.07**	**17**	P		**P**	**13 33 03.2**	**-1.8**
MJB9	**Matsu-Tunnel**	**34.08**	**17**	P		**P**	**13 33 03.2**	**-1.8**
XAN	**Xi'an**	**34.16**	**333**	P		**P**	**13 33 04.5**	**-1.4**
XAN				pmax		pmax		
	comp=Z,9.0nm,0.9s							
XAN				pmax		pmax		
	comp=Z,180nm,5.4s							
XAN	**Xi'an**	**34.16**	**333**	P		**P**	**13 33 02.5**	**-3.4**
XAN				IAmb		IAmb	13 33 30.8	
	comp=Z,8.8nm,0.9s							
CD2	**Chengdu**	**34.41**	**324**	*eP*		**P**	**13 33 08.0**	**-0.1**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
MORW	**Morawa**	**34.44**	**197**	P		**P**	**13 33 08.1**	**-0.1**
FORT	**Forrest**	**34.61**	**178**	P		**P**	**13 33 08.6**	**-1.1**
FORT				IAmb		IAmb	13 33 33.7	
	comp=Z,19nm,0.9s							
BJI	**Beijing**	**37.12**	**347**	*eP*		**P**	**13 33 31.3**	**+0.3**
BJI				pmax		pmax		
	comp=Z,8.0nm,0.8s							
EIDS	**Eidsvold**	**37.58**	**142**	P		**P**	**13 33 35.2**	**0.0**
BBOO	**Buckleboo**	**37.67**	**167**	P		**P**	**13 33 35.4**	**-0.4**
BBOO				IAmb		IAmb	13 33 36.1	
	comp=Z,11nm,0.9s							
LZH	**Lanzhou**	**38.26**	**329**	*eP*		**P**	**13 33 44.8**	**+3.8**
LZH				pP		sP	13 33 58.0	+0.4
LZH				pmax		pmax		
	comp=Z,16nm,1.1s							
LZH				pmax		pmax		
	comp=Z,63nm,5.4s							
LZH				LR		LR		
	comp=Z,240nm,14.0s							
LZH				LR		LR		
	comp=Z,250nm,13.7s							
LZH				LR		LR		
	comp=Z,310nm,16.9s							
STKA	**Stephens Creek**	**38.39**	**159**	P		**P**	**13 33 42.0**	**0.0**
	comp=Z,11nm,0.7s,baz=336,slow=8.4,SNR=32							
STKA	**Stephens Creek**	**38.39**	**159**	P		**P**	**13 33 41.8**	**-0.1**
HHC	**Hu-ho-hao-te**	**39.13**	**342**	*eP*		**P**	**13 33 49.0**	**+0.8**
HHC				pmax		pmax		
	comp=Z,5.0nm,1.0s							
HHC				pmax		pmax		
	comp=Z,71nm,5.4s							
CN2	**Changchun**	**39.65**	**359**	*eP*		**P**	**13 33 52.3**	**0.0**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
SHL	**Shillong**	**39.69**	**306**	P		**P**	**13 33 51.7**	**-1.5**
SHL				IAmb		IAmb	13 33 58.2	
	comp=Z,17nm,0.7s							
USRK	**Ussuriysk Ar.**	**40.30**	**6**	P		**P**	**13 33 59.8**	**+2.1**
	comp=Z,3.8nm,0.9s,baz=182,slow=5.9,SNR=6.4							
MDJ	**Mudanjiang**	**40.53**	**3**	P		**P**	**13 34 00.1**	**+0.5**
MDJ				pmax		pmax		
	comp=Z,4.0nm,0.6s							
MDJ				pmax		pmax		
	comp=Z,180nm,3.8s							
ARMA	**Armidale**	**41.71**	**147**	P		**P**	**13 34 10.0**	**+0.4**
ARMA				IAmb		IAmb	13 34 11.5	
	comp=Z,11nm,0.7s							
LSA	**Lhasa**	**42.24**	**311**	P		**P**	**13 34 15.3**	**+0.8**
GTA	**Gaotai**	**42.85**	**329**	*eP*		**P**	**13 34 19.4**	**+0.6**
GTA				pP		sP	13 34 35.5	-0.8
GTA				sP		pP	13 34 44.0	+13
GTA				pmax		pmax		
	comp=Z,35nm,4.1s							
GTA				LR		LR		
	comp=Z,100nm,15.1s							
GTA				LR		LR		
	comp=Z,89nm,16.8s							
CAN	**Canberra**	**44.37**	**154**	P		**P**	**13 34 32.2**	**+1.3**
CAN				IAmb		I

comp=Z,1.3nm,0.6s,baz=320,slow=7.8,SNR=6.5
ILAR Eielson Array 84.87 25 P **P** **13 38 55.8 +1.1**
comp=Z,0.5nm,0.5s,baz=242,slow=5.3,SNR=25
ARCES ARCESS Array B 90.19 340 P **P** **13 39 19.5 -0.6**
comp=Z,3.2nm,0.9s,baz=90,slow=4.9,SNR=5.6
FINES FINESS Array B 91.58 332 P **P** **13 39 26.3 -0.4**
comp=Z,1.6nm,0.8s,baz=22,slow=7.8,SNR=2.9
AKASG Malin Array Be 91.67 321 P **P** **13 39 26.2 -1.2**
comp=Z,0.4nm,0.3s,baz=78,slow=3.6,SNR=5.1
NOA NORSAR Array B 98.53 334 P **P** **13 39 58.3 -0.3**
comp=Z,1.3nm,0.9s,baz=66,slow=4.7,SNR=3.0
NOA LR LR 14 30 04.6
comp=Z,28nm,19.3s,baz=280,slow=39
TORD Torodi Ar. Bea 122.81 288 PKP **PKPdf** **13 45 15.9 -1.1**
comp=Z,0.6nm,0.7s,baz=49,slow=2.0,SNR=2.2

*ISK **13** 13:28:01.6, 39°.93N×39°.40E, h5km, ML2.0/9*
*DDA **13** 13:28:02.8, 39°.86N×39°.52E, h7km±3km, MD2.5*
ISC 13 13:28:02.2±1.2, 39°.88N±0°.03×39°.41E±0°.03, h5km±11km, n19, σ1°.00/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.29**	**336**	*i* P		**Pb**	**13 28 10.2**	**+0.1**
KELT				*i* S		**Sb**	**13 28 15.0**	**-0.3**
KELT				IAML			13 28 16.0	
	comp=N,136nm,0.3s							
KELT				IAML			13 28 16.0	
	comp=E,137nm,0.3s							
ERZN	**Erzincan**	**0.38**	**141**	PG		**Pb**	**13 28 10.7**	**-0.9**
ERZN				SG		**Sb**	**13 28 16.5**	**-1.4**
REFA	**Refahiye_ERZN**	**0.70**	**226**	*i* P		**Pg**	**13 28 14.3**	**-1.3**
REFA				*i* S		**Sg**	**13 28 24.0**	**-0.7**
BAYB	**BAYBURT**	**0.75**	**60**	*i* P		**Pg**	**13 28 16.4**	**-0.2**
BAYB				*i* S		**Sg**	**13 28 26.4**	**0.0**
BAYT	**Aydıntepe-Bayb**	**0.76**	**48**	PG		**Pg**	**13 28 16.5**	**-0.3**
BAYT				SG		**Sg**	**13 28 26.5**	**-0.1**
TNCL	**Tunceli-Merkez**	**0.78**	**172**	*i* P		**Pb**	**13 28 18.0**	**-0.3**
TNCL				*i* S		**Sg**	**13 28 28.0**	**+0.8**
ILIC	**ilic-Erzincan**	**0.78**	**237**	PG		**Pg**	**13 28 17.1**	**-0.1**
KEMA	**Kemaliye**	**0.94**	**229**	*i* P		**Pn**	**13 28 21.8**	**-0.3**
KEMA				*i* S		**Sn**	**13 28 35.7**	**-0.3**
KEMA				IAML			13 28 40.0	
	comp=N,36nm,0.3s							
KEMA				IAML			13 28 40.0	
	comp=E,25nm,0.4s							
SUSE	**Susehri**	**0.98**	**290**	*i* P		**Pb**	**13 28 22.0**	**+0.2**
SUSE				IAML			13 28 38.0	
	comp=N,28nm,0.5s							
SUSE				*i* S		**Sn**	**13 28 38.3**	**+1.1**
YEDI	**Yedisu-Bingol**	**0.98**	**117**	PG		**Pg**	**13 28 20.9**	**-0.2**
MACK	**Trabzon**	**1.09**	**14**	*i* P		**Pg**	**13 28 23.1**	**-0.1**
MACK				*i* S		**Sn**	**13 28 38.5**	**-1.3**
MACK				IAML			13 28 39.0	
	comp=E,62nm,0.6s							
MACK				IAML			13 28 40.0	
	comp=N,62nm,0.3s							
ARPR	**Arapgir-MALATY**	**1.15**	**227**	PN		**Pb**	**13 28 24.2**	**-0.4**
KRIK	**Erzurum-spir**	**1.25**	**68**	*i* P		**Pg**	**13 28 26.9**	**+0.7**
KRIK				*i* S		**Sn**	**13 28 46.2**	**+2.3**
BNGB	**Bingl**	**1.33**	**132**	PN		**Pg**	**13 28 27.6**	**-0.1**
ELZG	**Elazig**	**1.42**	**194**	*i* P		**Pg**	**13 28 30.4**	**+0.9**
ELZG				*i* S		**Sg**	**13 28 50.9**	**+3.0**
ELZG				IAML			13 28 54.0	
	comp=N,21nm,0.3s							
ELZG				IAML			13 28 54.0	
	comp=E,25nm,0.6s							
CHOM	**Cayeli-Rize**	**1.59**	**40**	PN		**Pn**	**13 28 30.9**	**-0.2**
MALT	**Malatya**	**1.75**	**206**	PN		**Pb**	**13 28 33.9**	**-0.9**
SVSK	**Karacayir**	**1.86**	**272**	PN		**Pn**	**13 28 34.8**	**+0.1**
DARE	**Darende-Malaty**	**1.99**	**229**	PN		**Pn**	**13 28 37.2**	**+0.6**

*DJA **13** 13:52:24.1±0.4, 3°.5±4°×13°.8E±°, h74km±30km, M4.4/8, mB3.6/1, mb4.2/5, MLv4.5/8, Mw(mB)2.5/1*
*NEIC **13** 13:52:24.2±2.6, 3°.57S±0°.08×137°.68E±0°.06, h81km±9km, mb4.5/12, Error ellipse: s-maj=13.4km s-min=7.4km az=210.0*
*IDC **13** 13:52:25.3±1.9, 3°.45S×137°.77E, h94km±21km, mb3.8/5, mb1 4.1/12, mb1mx3.8/37, mbtmp4.4/12, MS3.4/1, Ms1 3.4/1, ms1mx2.4/25, Error ellipse: s-maj=19.8km s-min=16.9km az=80.0*
ISC 13 13:52:24.4±0.5, 3°.52S±0°.05×137°.74E±0°.04, h100km, n41, σ2.56/52, mb3.8/6, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**1.81**	**33**	P		**Pn**	**13 52 52.9**	**-1.7**
SMPI				S		**Sn**	**13 53 12.3**	**-5.2**
GENI	**Genyem**	**2.60**	**69**	P		**Pn**	**13 53 04.1**	**-0.8**
GENI				S		**Sn**	**13 53 34.0**	**-1.9**
BAKI	**Biak**	**2.83**	**325**	P		**Pn**	**13 53 06.2**	**-1.7**
JAY	**Jayapura**	**3.13**	**71**	P		**Pn**	**13 53 12.1**	**+0.1**
	32nm,0.3s,baz=226,slow=11,SNR=54							
JAY				S		**Sn**	**13 53 44.8**	**-3.9**
	38nm,0.3s,baz=256,slow=8.3,SNR=4.0							
JAY	**Jayapura**	**3.13**	**71**	P		**Pn**	**13 53 11.7**	**-0.3**
JAY				S		**Sn**	**13 53 45.5**	**-3.2**
KMPI	**Kaimana, Papua**	**4.03**	**268**	S		**Sn**	**13 54 11.6**	**+1.4**
RKPI	**Ransiki, Papua**	**4.08**	**299**	P		**Pn**	**13 53 23.8**	**-0.9**
RKPI				S		**Sn**	**13 54 09.6**	**-1.8**
FAKI	**Fak Fak**	**5.51**	**276**	P		**Pn**	**13 53 44.0**	**-0.1**
	0.4nm69nm,1.4s							
FAKI				S		**Sn**	**13 54 43.5**	**-2.7**
	0.4nm69nm,1.4s							
FAKI	**Fak Fak**	**5.51**	**276**	Pn		**Pn**	**13 53 43.2**	**-1.0**
MMPI	**Merauke**	**5.58**	**152**	P		**Pn**	**13 53 48.4**	**+3.4**
	0.1nm58nm2.1nm,0.7s							
MMPI				S		**Sn**	**13 54 49.9**	**+2.1**
	0.1nm58nm2.1nm,0.7s							
SIJI	**Sorong**	**6.98**	**292**	P		**Pn**	**13 54 04.2**	**+0.1**
	7.7nm,0.3s,baz=76,slow=12,SNR=32							
SIJI				S		**Sn**	**13 55 18.5**	**-3.5**
	2.4nm,0.3s,baz=266,slow=20,SNR=5.9							
SWI	**Sorong**	**6.99**	**292**	P		**Pn**	**13 54 04.4**	**+0.2**
	0.2nm55nm,0.5s							
PMG	**Port Moresby**	**11.04**	**122**	P		**Pn**	**13 55 01.0**	**+1.7**
	1.9nm,0.3s,baz=316,slow=7.3,SNR=18							
PMG				S		**Sn**	**13 56 58.2**	**-2.6**
	0.6nm,0.3s,baz=209,slow=19,SNR=3.7							
PMG	**Port Moresby**	**11.04**	**122**	Pn		**Pn**	**13 55 00.7**	**+1.3**
MTN	**Manton Dam**	**11.33**	**215**	Pn		**Pn**	**13 55 03.3**	**0.0**
COEN	**Coen**	**11.68**	**153**	Pn		**Pn**	**13 55 08.4**	**+0.5**
SOEI	**Soe**	**14.74**	**244**	P		**P**	**13 55 49.5**	**-2.1**
KNRA	**Kununurra**	**14.96**	**216**	P		**P**	**13 55 51.5**	**-2.3**
BATI	**Baumata**	**15.46**	**244**	P		**P**	**13 55 59.3**	**-0.2**
WR0	**Warramunga Arr**	**16.63**	**191**	Pn		**Pn**	**13 56 10.5**	**-1.1**
WR0				IAmb		IAmb	13 56 17.6	
	comp=Z,71nm,1.6s							
WRAB	**Tennant Creek**	**16.64**	**191**	P		**P**	**13 56 11.6**	**-0.9**
WRAB				IAmb		IAmb	13 56 17.7	
	comp=Z,24nm,0.7s							
WRA	**Warramunga Arr**	**16.66**	**191**	P		**P**	**13 56 12.1**	**-0.6**
	comp=Z,3.4nm,0.3s,baz=4.7,slow=13,SNR=67							
WRA				S		**Sn**	**13 59 08.6**	**-8.3**
	comp=Z,1.0nm,0.3s,baz=1.4,slow=23,SNR=5.0							
WRA	**Warramunga Arr**	**16.66**	**191**	Pn		**Pn**	**13 56 10.7**	**-1.2**
CTA	**Charters Tower**	**18.45**	**154**	P		**Pn**	**13 56 34.3**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=326,slow=10.0,SNR=6.0							
FITZ	**Fitzroy Crossi**	**18.71**	**218**	P		**Pn**	**13 56 38.2**	**+1.4**
	comp=Z,2.0nm,0.3s,baz=40,slow=14,SNR=24							
FITZ				S		**S**	**13 59 56.5**	**-6.8**
	comp=Z,1.5nm,0.3s,baz=188,slow=14,SNR=5.6							
FITZ	**Fitzroy Crossi**	**18.71**	**218**	P		**Pn**	**13 56 37.9**	**+1.1**
FITZ				IAmb		IAmb	13 56 52.3	
	comp=Z,83nm,1.9s							
AS31	**Alice Springs**	**20.37**	**190**			Pn	13 56 56.5	+0.3
AS31				IAmb		IAmb	13 57 01.8	
	comp=Z,13nm,0.7s							
ASAR	**Alice Springs**	**20.37**	**190**	P		Pn	13 56 56.4	+0.2
	comp=Z,25nm,0.6s,baz=14,slow=9.1,SNR=393							
ASAR				S		**S**	**14 00 34.6**	**-1.5**
	comp=Z,5.5nm,0.6s,baz=11,slow=26,SNR=7.8							
PSA00	**Pilbara Seismi**	**24.98**	**223**	P		**P**	**13 57 40.1**	**+1.1**
EIDS	**Eidsvold**	**25.23**	**151**	P		**P**	**13 57 42.5**	**+1.4**
EIDS				IAmb		IAmb	13 58 10.0	
	comp=Z,26nm,1.4s							
STKA	**Stephens Creek**	**28.44**	**173**	P		**P**	**13 58 10.6**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=342,slow=13,SNR=6.6							
FORT	**Forrest**	**28.61**	**198**	P		**P**	**13 58 13.7**	**+2.3**
CISI	**Cisompet, Garu**	**30.04**	**261**	P		**P**	**13 58 27.4**	**+3.0**
NWAO	**Narrogin (SRO)**	**34.99**	**211**	P		**P**	**13 59 09.6**	**+2.3**
	comp=Z,9.9nm,0.8s,baz=41,slow=9.3,SNR=6.2							
NWAO	**Narrogin (SRO)**	**34.99**	**211**	P		**P**	**13 59 09.2**	**+1.9**
CMAR	**Chiang Mai Arr**	**44.01**	**301**	P		**P**	**14 00 23.5**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=133,slow=6.6,SNR=4.2							
CMAR				pP		**pP**	**14 00 40.8**	**-5.1**
	comp=Z,0.7nm,0.6s,baz=115,slow=6.4,SNR=3.6							
KLR	**Kul'dur**	**52.79**	**355**	LR		LR	14 21 53.0	
	comp=Z,33nm,18.1s,baz=194,slow=34							
MKAR	**Makanchi Array**	**69.84**	**323**	P		**P**	**14 03 26.1**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=108,slow=8.0,SNR=2.6							
MKAR				pP		**PcP**	**14 03 46.0**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=113,slow=7.3,SNR=5.0							
ILAR	**Eielson Array**	**86.97**	**25**	P		**P**	**14 04 59.2**	**+1.0**
	comp=Z,1.0nm,1.0s,baz=283,slow=5.0,SNR=5.7							
ILAR	**Eielson Array**	**86.97**	**25**	P		**P**	**14 04 59.8**	**+1.6**
FYU	**Fort Yukon**	**88.07**	**23**	P		**P**	**14 05 06.5**	**+3.1**

*BJI **13** 13:56:30.0±0.0, 52°.90N×174°.20E, h100km, mB5.1/11, mb4.6/14*
*NEIC **13** 13:56:34.1±1.3, 52°.9N±0°.1×174°.2E±0°.1, h105km±5km, mb4.5/64, Error ellipse: s-maj=17.9km s-min=10.3km az=173.0*
*IDC **13** 13:56:36.3±3.7, 53°.00N×174°.25E, h124km±34km, mb3.6/17, mb1 3.7/19, mb1mx3.6/40, mbtmp4.0/19, Error ellipse: s-maj=21.7km s-min=12.5km az=172.0*
ISC 13 13:56:33.8±0.6, 52°.9N±0°.1×174°.25E±0°.07, h100km, n96, σ1.10/90, mb4.4/48, Near Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**0.20**	**208**			**Pn**	**13 56 48.6**	**+0.7**
SMY					Sn	**Sn**	**13 56 59.9**	**+1.4**
PETK	**Petropavlovsk-**	**9.98**	**278**	P		**Pn**	**13 58 57.2**	**+3.1**
	0.3nm,0.3s,baz=90,slow=20,SNR=15							
PETK				S		**Sn**	**14 00 42.2**	**-1.9**
	0.4nm,0.3s,baz=145,slow=23,SNR=6.5							
BILL	**Bilibino**	**15.66**	**349**	Pn		**Pn**	**14 00 08.4**	**-0.1**
ANM	**Nome**	**15.67**	**34**	P		**P**	**14 00 10.8**	**+0.2**
CHIR	**Chirikof Islan**	**17.73**	**68**	P		**P**	**14 00 33.6**	**+0.2**
SII	**Sitkinak Islan**	**18.50**	**66**	P		**P**	**14 00 41.6**	**-0.3**
RDOG	**Red Dog Mine**	**18.71**	**27**	Pn		**Pn**	**14 00 45.9**	**+0.2**
OHAK	**Old Harbor**	**18.98**	**64**	P		**P**	**14 00 46.8**	**-0.2**
KDAK	**Kodiak Island**	**19.36**	**62**	P		**P**	**14 00 50.5**	**-0.6**
	0.9nm,0.3s,baz=158,slow=1.3,SNR=39							
KDAK	**Kodiak Island**	**19.36**	**62**	P		**P**	**14 00 50.9**	**-0.3**
KDAK				IAmb		IAmb	14 01 21.9	
	comp=Z,56nm,1.5s							
RSO	**Redoubt South**	**19.46**	**54**	P		**P**	**14 00 50.1**	**-2.4**
PPLA	**Purkeypile**	**20.20**	**47**	P		**P**	**14 01 01.8**	**+1.3**
PPLA				IAmb		IAmb	14 01 06.3	
	comp=Z,38nm,1.4s							
SKT	**Skwentna**	**20.30**	**50**	P		**P**	**14 01 02.3**	**+0.9**
BRLK	**Bradley Lake**	**20.32**	**56**	P		**P**	**14 01 01.0**	**-0.6**
SUA	**Susitna One**	**20.58**	**52**	P		**P**	**14 01 04.3**	**-0.2**
SUA				IAmb		IAmb	14 01 10.7	
	comp=Z,22nm,1.6s							
KTH	**Kantishna Hill**	**20.92**	**46**	P		**P**	**14 01 09.3**	**+1.2**
KTH				IAmb		IAmb	14 01 12.4	
	comp=Z,49nm,1.4s							
RC01	**Rabbit Creek A**	**21.02**	**53**	P		**P**	**14 01 10.2**	**+1.1**
RC01				IAmb		IAmb	14 01 28.9	
	comp=Z,39nm,1.7s							
BPAW	**Bear Paw Mtn.**	**21.04**	**44**	P		**P**	**14 01 10.4**	**+1.1**
BPAW				IAmb		IAmb	14 01 45.3	
	comp=Z,33nm,1.8s							
SEW	**Seward**	**21.06**	**56**	P		**P**	**14 01 08.6**	**-0.9**
SEW				IAmb		IAmb	14 01 41.7	
	comp=Z,62nm,1.7s							
TRF	**Thorofare Moun**	**21.17**	**46**	P		**P**	**14 01 11.8**	**+0.9**
PMR	**Palmer**	**21.37**	**52**	P		**P**	**14 01 13.7**	**+0.9**
PMR				IAmb		IAmb	14 01 40.4	
	comp=Z,32nm,1.8s							
MLY	**Manley**	**21.41**	**42**	P		**P**	**14 01 14.3**	**+1.0**
GHO	**Glory Hole Cre**	**21.49**	**51**	P		**P**	**14 01 15.0**	**+0.8**
GHO				IAmb		IAmb	14 01 55.0	
	comp=Z,23nm,1.3s							
KNK	**Knik Glacier**	**21.66**	**52**	P		**P**	**14 01 15.4**	**-0.6**
KNK				IAmb		IAmb	14 01 18.1	
	comp=Z,11nm,0.8s							
BWN	**Browne**	**21.70**	**45**	P		**P**	**14 01 17.6**	**+1.3**
SML	**Sawmill**	**21.77**	**51**	P		**P**	**14 01 16.9**	**-0.3**
SML				IAmb		IAmb	14 01 19.8	
	comp=Z,19nm,0.7s							
RND	**Reindeer**	**21.79**	**47**	P		**P**	**14 01 17.1**	**-0.3**
RND				IAmb		IAmb	14 01 20.0	
	comp=Z,36nm,1.6s							
MCK	**McKinley**	**21.82**	**46**	P		**P**	**14 01 17.7**	**0.0**
MCK				IAmb		IAmb	14 01 19.6	
	comp=Z,48nm,1.6s							
NEA	**Nenana**	**21.96**	**44**	P		**P**	**14 01 20.7**	**+1.6**
SCM	**Sheep Creek Mo**	**22.25**	**51**	P		**P**	**14 01 21.7**	**-0.5**
GLI	**Glacier Island**	**22.28**	**54**	P		**P**	**14 01 20.5**	**-2.0**
GLI				IAmb		IAmb	14 02 13.8	
	comp=Z,31nm,1.2s							
WRH	**Wood River Hil**	**22.35**	**44**	P		**P**	**14 01 23.6**	**+0.5**
WRH				IAmb		IAmb	14 01 25.7	
	comp=Z,9.2nm,0.6s							
COLD	**Coldfoot**	**22.37**	**36**	P		**P**	**14 01 24.6**	**+1.3**
DHY	**Denali Highway**	**22.39**	**48**	P		**P**	**14 01 23.7**	**0.0**
DHY				IAmb		IAmb	14 02 18.8	
	comp=Z,22nm,1.6s							
MDM	**Murphy Dome**	**22.41**	**43**	P		**P**	**14 01 24.6**	**+0.8**
MDM				IAmb		IAmb	14 01 25.9	
	comp=Z,72nm,2.0s							
CCB	**Clear Creek Bu**	**22.51**	**44**	P		**P**	**14 01 24.6**	**-0.2**
CCB				IAmb		IAmb	14 01 27.1	
	comp=Z,9.0nm,0.7s							
COLA	**College**	**22.55**	**43**	P		**P**	**14 01 26.0**	**+0.8**
COLA				IAmb		IAmb	14 01 27.9	
	comp=Z,16nm,0.8s							
HIN	**Hinchinbrook I**	**22.55**	**55**	P		**P**	**14 01 24.7**	**-0.6**
FID	**Port Fidalgo**	**22.57**	**54**	P		**P**	**14 01 24.4**	**-1.1**
FID				IAmb		IAmb	14 02 00.8	
	comp=Z,29nm,1.0s							
HDA	**Harding Lake**	**22.82**	**45**	P		**P**	**14 01 27.3**	**-0.6**
HDA				IAmb		IAmb	14 02 04.7	
	comp=Z,24nm,1.8s							
EYAK	**Cordova Ski Ar**	**22.93**	**55**	P		**P**	**14 01 28.3**	**-0.7**
IL31		**22.93**	**44**	P		**P**	**14 01 28.4**	**-0.5**
ILAR	**Eielson Array**	**22.93**	**44**	P		**P**	**14 01 27.8**	**-1.2**
	comp=Z,0.9nm,0.3s,baz=247,slow=8.2,SNR=28							
PAX	**Paxson**	**23.24**	**48**	P		**P**	**14 01 31.1**	**-0.9**
RAGM	**Ragged Mountai**	**23.45**	**55**	P		**P**	**14 01 33.8**	**-0.2**
RIDG	**Independent Ri**	**23.62**	**47**	P		**P**	**14 01 34.3**	**-1.1**
RIDG				IAmb		IAmb	14 02 02.0	
	comp=Z,35nm,1.7s							
PRP	**Porcupine Dome**	**23.65**	**42**	P		**P**	**14 01 35.3**	**-0.6**
GLB	**Gilahina Butte**	**23.90**	**52**	P		**P**	**14 01 38.2**	**+0.2**
DOT	**Dot Lake**	**23.95**	**47**	P		**P**	**14 01 37.8**	**-0.6**
FYU	**Fort Yukon**	**24.02**	**40**	P		**P**	**14 01 40.2**	**+1.2**
FYU				IAmb		IAmb	14 01 51.7	
	comp=Z,31nm,1.0s							
SCRK	**Sand Creek**	**24.03**	**46**	P		**P**	**14 01 38.1**	**-1.1**
TGL	**Tana Glacier**	**24.36**	**54**	P		**P**	**14 01 40.0**	**-2.3**
TGL				IAmb		IAmb	14 01 41.7	
	comp=Z,45nm,1.5s							
BARN	**Barnard Glacie**	**24.93**	**53**	P		**P**	**14 01 47.8**	**+0.3**
BARN				IAmb		IAmb	14 01 49.1	
	comp=Z,11nm,0.7s							
CTGM	**Chitina Glacie**	**25.09**	**54**	P		**P**	**14 01 49.1**	**+0.1**
HYT	**Haines Junctio**	**26.97**	**54**	P		**P**	**14 02 05.5**	**-0.3**
HYT				IAmb		IAmb	14 02 05.7	
	comp=Z,21nm,1.5s							
INK	**Inuvik**	**28.77**	**38**	P		**P**	**14 02 20.0**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=271,slow=8.8,SNR=4.8							
INK	**Inuvik**	**28.77**	**38**	P		**P**	**14 02 20.1**	**-1.4**
C36M	**Paulatuk**	**32.24**	**36**	P		**P**	**14 02 51.1**	**-1.0**
C36M				IAmb		IAmb	14 02 53.5	
	comp=Z,6.7nm,0.8s							
H11N2	**WAKE ISLAND Hy**	**33.60**	**193**	T		T	14 38 19.2	
	baz=6.5,slow=76							
H11N3	**WAKE ISLAND Hy**	**33.61**	**193**	T		T	14 38 18.8	
	baz=6.5							
H11N1	**WAKE ISLAND Hy**	**33.61**	**193**	T		T	14 38 22.0	
	baz=6.5,slow=76							
H11S1	**WAKE ISLAND Hy**	**34.83**	**193**	T		T	14 39 50.2	
	baz=5.9							
H11S3	**WAKE ISLAND Hy**	**34.84**	**193**	T		T	14 40 17.0	
	baz=5.9,slow=74							
H11S2	**WAKE ISLAND Hy**	**34.84**	**193**	T		T	14 39 51.5	
	baz=5.9,slow=74							
SONM	**Songino Array**	**42.11**	**291**	P		**P**	**14 04 16.0**	**0.0**
	comp=Z,0.8nm,0.7s,baz=60,slow=8.8,SNR=3.0							
HHC	**Hu-ho-hao-te**	**43.17**	**280**	*eP*		**P**	**14 04 22.9**	**-1.7**
HHC					pmax	pmax		
	comp=Z,4.0nm,0.9s							
HHC					pmax	pmax		
	comp=Z,36nm,5.2s							
NJ2	**Nanjing**	**44.58**	**265**	*eP*		**P**	**14 04 34.1**	**-1.6**
NJ2					pmax	pmax		
	comp=Z,16nm,0.5s							
NVAR	**Mina Array Bea**	**47.55**	**79**	P		**P**	**14 05 00.5**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=293,slow=7.4,SNR=2.5							
ZALV	**Zalesovo Beam**	**49.81**	**309**	P		**P**	**14 05 15.3**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=72,slow=4.7,SNR=2.4							
PDAR	**Pinedale Array**	**49.85**	**69**	P		**P**	**14 05 16.7**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=302,slow=3.1,SNR=11							
LZH	**Lanzhou**	**50.87**	**280**	*eP*		**P**	**14 05 24.0**	**-0.5**
LZH					pP	pP	14 05 49.8	+1.5
LZH					pmax	pmax		
	comp=Z,12nm,1.0s							
LZH					pmax	pmax		
	comp=Z,50nm,4.3s							
ULM	**Lac du Bonnet**	**52.35**	**54**	P		**P**	**14 05 34.8**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=324,slow=8.8,SNR=4.2							
ULM	**Lac du Bonnet**	**52.35**	**54**	IAmb		IAmb	14 06 09.8	
	comp=Z,5.4nm,1.3s							
WMQ	**Urumqi**	**54.88**	**298**	*eP*		**P**	**14 05 55.8**	**+2.1**
WMQ					pmax	pmax		
	comp=Z,8.0nm,0.7s							
WMQ					pmax	pmax		
	comp=Z,47nm,4.5s							
MK31	**Makanchi Array**	**55.67**	**304**	P		**P**	**14 05 58.3**	**-1.1**
MKAR	**Makanchi Array**	**55.67**	**304**	P		**P**	**14 05 58.5**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=51,slow=6.6,SNR=27							
ARCES	**ARCESS Array B**	**55.76**	**347**	P		**P**	**14 05 58.6**	**-0.9**
	comp=Z,5.1nm,1.2s,baz=32,slow=6.7,SNR=11							
MAKZ	**Makanchi**	**55.82**	**304**	P		**P**	**14 05 58.9**	**-1.5**
BRVK	**Borovoye**	**56.90**	**316**	P		**P**	**14 06 07.4**	**-0.5**
BRVK				IAmb		IAmb	14 06 31.0	
	comp=Z,12nm,2.0s							
SCHQ	**Schefferville**	**61.35**	**35**	P		**P**	**14 06 37.9**	**-0.7**
	comp=Z,4.7nm,0.5s,baz=308,slow=7.4,SNR=11							
SCHQ	**Schefferville**	**61.35**	**35**	IAmb		IAmb	14 06 39.3	
	comp=Z,33nm,1.6s							
AAK	**Ala-Archa**	**62.53**	**305**	P		**P**	**14 06 46.6**	**-0.3**
AAK				IAmb		IAmb	14 07 07.2	
	comp=Z,9.2nm,1.9s							
TX31	**Lajitas Ar. Si**	**62.57**	**77**	P		**P**	**14 06 47.4**	**+0.1**
TX31				IAmb		IAmb	14 07 13.5	
	comp=Z,12nm,2.0s							
TX32	**Lajitas Array**	**62.57**	**77**	P		**P**	**14 06 47.4**	**+0.1**
TX32				IAmb		IAmb	14 08 45.8	
	comp=Z,5.4nm,1.6s							
TXAR	**Lajitas Array**	**62.57**	**77**	P		**P**	**14 06 47.3**	**0.0**
	comp=Z,0.7nm,0.3s,baz=313,slow=5.6,SNR=9.4							
FINES	**FINESS Array B**	**63.23**	**344**	P		**P**	**14 06 50.1**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=36,slow=7.4,SNR=3.1							
KSH	**Kashi**	**64.10**	**302**	P		**P**	**14 07 01.0**	**+3.8**
NB2	**NORSAR Subarra**	**65.60**	**351**	P		**P**	**14 07 06.1**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=9.8,slow=6.5							
NOA	**NORSAR Array B**	**65.60**	**351**	P		**P**	**14 07 06.0**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=11,slow=6.4,SNR=4.4							
GAR	**Garm**	**67.35**	**305**	P		**P**	**14 07 17.6**	**-0.5**
CHGR	**Chuyangaron**	**68.19**	**305**	P		**P**	**14 07 23.1**	**-0.3**
AKASG	**Malin Array Be**	**72.64**	**338**	P		**P**	**14 07 49.7**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=24,slow=6.2,SNR=3.2							
CLL	**Collm**	**74.97**	**348**	*eP*		**P**	**14 08 06.0**	**+2.4**
WRA	**Warramunga Arr**	**80.36**	**218**	P		**P**	**14 08 33.3**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=30,slow=6.6,SNR=3.9							
BRTR	**Keskin Array B**	**81.64**	**330**	P		**P**	**14 08 40.8**	**0.0**
	comp=Z,0.8nm,0.7s,baz=328,slow=5.1,SNR=3.6							
ASAR	**Alice Springs**	**83.93**	**217**	P		**P**	**14 08 52.4**	**0.0**
	comp=Z,0.3nm,0.8s,baz=27,slow=5.5,SNR=3.2							

**IDC 13 14:56:20.2±1.7, 6°.99S×150°.29E, h0km, mb3.0/3, mb1 3.3/5, mb1mx3.2/27, mbtmp3.2/

ZARC				*e*S		**Sn**	**15 23 36.5**	**-1.3**
ZARC				*i*			15 23 41.6	
	comp=Z,97nm,0.3s							
SMLC	**San Martn de**	**2.20**	**332**	*e*P		**Pn**	**15 23 14.8**	**+1.2**
SMLC				*e*S		**Sn**	**15 23 42.5**	**-0.8**
SMLC				*i*			15 23 44.9	
	comp=Z,67nm,0.3s							
NORC	**Norcasia**	**2.24**	**235**	*e*P		**Pn**	**15 23 14.6**	**+0.4**
NORC				*e*S		**Sn**	**15 23 42.7**	**-1.5**
NORC				*i*			15 23 46.5	
	comp=Z,90nm,0.2s							
CHIC	**Chingaza**	**2.32**	**198**	*e*P		**Pn**	**15 23 16.8**	**+1.3**
CHIC				*e*S		**Sn**	**15 23 46.3**	**-0.2**
CHIC				*i*			15 23 52.2	
	comp=Z,58nm,0.3s							
VIGV	**El Vigia**	**2.57**	**40**	*e*P		**Pn**	**15 23 20.3**	**+2.2**
VIGV				*e*S		**Sn**	**15 23 51.0**	**-0.2**
HELC	**Santa Helena**	**2.58**	**255**	*e*P		**Pn**	**15 23 19.2**	**+0.7**
HELC				*e*S		**Sn**	**15 23 50.2**	**-1.5**
HELC				*i*			15 23 59.0	
	comp=Z,69nm,0.6s							
HELC	**Santa Helena**	**2.58**	**255**	*e*P		**Pn**	**15 23 20.2**	**+1.7**
HELC				*e*S		**Sn**	**15 23 51.5**	**-0.3**
SOCV	**Socops**	**2.58**	**56**	*e*P		**Pn**	**15 23 20.6**	**+2.5**
SOCV				*e*S		**Sn**	**15 23 50.6**	**-0.6**
VILC	**Villavicencio,**	**2.80**	**194**	*e*P		**Pn**	**15 23 21.7**	**+0.7**
VILC				*e*S		**Sn**	**15 23 56.0**	**-0.5**
VILC				*i*			15 24 00.6	
	comp=Z,79nm,0.4s							
RREF	**El Recreo**	**3.02**	**230**	*e*P		**Pn**	**15 23 25.6**	**+1.4**
RREF				*e*S		**Sn**	**15 24 01.7**	**-0.2**
RREF				*i*			15 24 10.7	
	comp=Z,47nm,0.4s							
SDV	**Santo Domingo**	**3.11**	**49**	*e*P		**Pn**	**15 23 27.8**	**+2.8**
SDV				*e*S		**Sn**	**15 24 01.3**	**-2.1**
CBOC	**Ciudad Bolivar**	**3.13**	**252**	*e*P		**Pn**	**15 23 26.4**	**+1.2**
CBOC				*e*S		**Sn**	**15 24 02.5**	**-1.2**
CBOC				*i*			15 24 14.4	
	comp=Z,19nm,0.5s							
ELOV	**Elorza**	**3.52**	**87**	*e*P		**Pn**	**15 23 32.3**	**+2.4**
ORTC	**Ortega, Tolima**	**3.67**	**217**	*e*P		**Pn**	**15 23 32.9**	**+1.0**
ORTC				*e*S		**Sn**	**15 24 15.4**	**-0.3**
ORTC				*i*			15 24 22.8	
	comp=Z,43nm,0.4s							
SJCC	**San Jacinto, C**	**3.70**	**325**	*e*P		**Pn**	**15 23 32.7**	**+0.4**
SJCC				*e*S		**Sn**	**15 24 13.6**	**-3.0**
TEPV	**Terepaima**	**4.89**	**51**	*e*P		**Pn**	**15 23 50.1**	**+2.4**
BAUV	**El Baul**	**5.35**	**67**	*e*P		**Pn**	**15 23 54.5**	**+0.8**
BAUV				*e*S		**Sn**	**15 24 51.7**	**-3.4**
MAPV	**Macapo**	**5.40**	**56**	*e*P		**Pn**	**15 23 56.4**	**+2.0**
MAPV				*e*S		**Sn**	**15 24 53.3**	**-2.9**
PAYV	**Puerto Ayacuch**	**5.52**	**105**	*e*P		**Pn**	**15 23 57.2**	**+1.3**
PAYV				*e*S		**Sn**	**15 24 55.1**	**-4.0**
MONV	**Montecano**	**5.90**	**30**	*e*P		**Pn**	**15 24 02.6**	**+1.7**
MONV				*e*S		**Sn**	**15 25 04.5**	**-3.5**
CUPV	**Cpira**	**7.83**	**66**	*e*P		**Pn**	**15 24 27.8**	**+1.1**

IDC ***13*** *15:25:24.0±0.9, 12°.62N×145°.47E, h37km±7km, mb3.2/6, mb1 3.5/6, mb1mx3.3/33, mbtmp3.5/6, MS2.9/1, Ms1 2.9/1, ms1mx2.6/12, Error ellipse: s-maj=29.9km s-min=14.2km az=87.0*

ISC 13 15:25:23.7±0.9, 12°.6N±0°.1×145°.5E±0°.2, h35km, n8, σ0.674/11, mb3.6/6, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
GUMO	**Guam**	**1.17**	**329**	Pn		**Pn**	**15**	**25**	**43.6 +0.1**
	61nm,0.3s,baz=127,slow=5.8,SNR=36								
GUMO				Sn		**Sn**	**15**	**25**	**59.2 +1.0**
	115nm,0.3s,baz=38,slow=22,SNR=21								
MJAR	**Matsushiro Arr**	**24.73**	**346**	LR		LR	15 40 03.3		
	comp=Z,28nm,18.2s,baz=235,slow=36								
WRA	**Warramunga Ar**	**34.14**	**199**	P		**P**	**15**	**32**	**05.8 +0.2**
	0.7nm,0.9s,baz=23,slow=11,SNR=3.6								
WRA				pP		**sP**	**15**	**32**	**15.9 -0.2**
	0.9nm,0.8s,baz=21,slow=9.2,SNR=2.1								
ASAR	**Alice Springs**	**37.77**	**198**	P		**P**	**15**	**32**	**37.1 +0.5**
	0.5nm,1.1s,baz=9.8,slow=7.1,SNR=3.5								
ASAR				pP		**sP**	**15**	**32**	**47.6 +0.3**
	0.4nm,0.8s,baz=26,slow=6.7,SNR=2.5								
SONM	**Songino Array**	**47.89**	**325**	P		**P**	**15**	**33**	**57.2 -1.4**
	0.2nm,0.4s,baz=122,slow=5.4,SNR=2.4								
MKAR	**Makanchi Array**	**62.63**	**316**	P		**P**	**15**	**35**	**44.3 -0.4**
	0.2nm,0.4s,baz=89,slow=8.6,SNR=5.8								
ILAR	**Eielson Array**	**69.21**	**25**	P		**P**	**15**	**36**	**26.4 -0.3**
	0.4nm,0.6s,baz=254,slow=6.0,SNR=7.1								
ILAR				pP		**sP**	**15**	**36**	**37.9 -0.2**
	0.5nm,0.5s,baz=255,slow=5.6,SNR=3.4								
YKA	**Yellowknife Ar**	**83.46**	**27**	P		**P**	**15**	**37**	**48.4 +0.9**
	0.3nm,0.6s,baz=288,slow=5.2,SNR=3.3								

IDC ***13*** *15:35:31.7±2.5, 53°.79N×162°.02E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.4/39, mbtmp3.6/6, ML2.7/1, MS3.7/2, Ms1 3.8/2, ms1mx2.7/43, Error ellipse: s-maj=66.7km s-min=21.5km az=151.0*

KRSC ***13*** *15:35:33.9±0.9, 53°.58N×162°.08E, h41km±22km, ML3.8*

NEIC ***13*** *15:35:37.1±1.4, 53°.7N±0°.2×162°.0E±0°.2, h41km±8km, mb4.6/7, Error ellipse: s-maj=36.6km s-min=13.4km az=163.0*

ISC 13 15:35:36.6±1.4, 53°.58N±0°.05×162°.08E±0°.05, h41km±14km, n56, σ0.888/66, mb4.1/7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
SPN	**Mys Shipunski**	**1.32**	**249**	*e*P		**Pn**	**15**	**35**	**57.9 -0.7**
SPN				*e*S		**Sn**	**15**	**36**	**13.9 -1.1**
NLC	**Nalytchevo**	**1.69**	**257**	*e*P		**Pn**	**15**	**36**	**03.0 -0.6**
NLC				*e*S		**Sn**	**15**	**36**	**22.3 -1.6**
KZV	**Kizimen**	**1.86**	**327**	*e*P		**Pn**	**15**	**36**	**05.9 -0.2**
KZV				*e*S		**Sn**	**15**	**36**	**27.6 -0.8**
TUMD	**Tumrok D**	**1.90**	**330**	*e*P		**Pn**	**15**	**36**	**05.8 -0.7**
TUMD				*e*S		**Sn**	**15**	**36**	**27.5 -1.7**
SDLR	**Sedlovina**	**1.93**	**262**	*e*P		**Pn**	**15**	**36**	**06.5 -0.6**
UGLR	**Uglovaya**	**1.98**	**261**	*e*P		**Pn**	**15**	**36**	**07.7 -0.1**
SMAR	**Somma**	**1.98**	**262**	*e*P		**Pn**	**15**	**36**	**07.5 -0.4**
KRER	**Koryakskii**	**2.01**	**263**	*e*P		**Pn**	**15**	**36**	**08.2 0.0**
AVH	**Avacha**	**2.02**	**262**	*e*P		**Pn**	**15**	**36**	**08.2 -0.1**
TUMR	**Tumrok**	**2.05**	**327**	*e*P		**Pn**	**15**	**36**	**08.7 +0.1**
TUMR				*e*S		**Sn**	**15**	**36**	**32.7 -0.3**
KRX	**Arik**	**2.06**	**265**	*e*P		**Pn**	**15**	**36**	**32.4 +0.5**
KOK	**Koryaka**	**2.08**	**263**	*e*P		**Pn**	**15**	**36**	**08.7 -0.3**
PET	**Petropavlovsk**	**2.13**	**256**			**Pn**	**15**	**36**	**09.0 -0.6**
KMNR	**Kamenistaya**	**2.43**	**335**	*e*P		**Pn**	**15**	**36**	**14.6 +0.7**
KMNR				*e*S		**Sn**	**15**	**36**	**43.1 +0.7**
RUS	**Russkaya**	**2.44**	**243**	*e*P		**Pn**	**15**	**36**	**14.2 +0.3**
RUS				*e*S		**Sn**	**15**	**36**	**42.5 0.0**
KRMR	**Karymshinskiy**	**2.49**	**254**	*e*P		**Pn**	**15**	**36**	**14.4 -0.2**
KRMR				*e*S		**Sn**	**15**	**36**	**43.7 0.0**
ZLN	**Zelenaya**	**2.55**	**344**	*e*P		**Pn**	**15**	**36**	**16.5 +0.9**
KIRR	**Kirishev**	**2.58**	**338**	*e*P		**Pn**	**15**	**36**	**17.2 +1.2**
MTVR	**Mutnovka**	**2.59**	**247**	*e*P		**Pn**	**15**	**36**	**17.2 +1.0**
KPT	**Kopyto**	**2.62**	**337**	*e*P		**Pn**	**15**	**36**	**17.3 +0.8**
GRL	**Gorelyy**	**2.62**	**249**	*e*P		**Pn**	**15**	**36**	**17.5 +0.9**
GRL				*e*S		**Sn**	**15**	**36**	**47.9 +0.7**
CIRR	**Tsirk**	**2.66**	**344**	*e*P		**Pn**	**15**	**36**	**18.7 +1.7**
PEA0B	**Petropavlovsk-**	**2.67**	**262**			**Pn**	**15**	**36**	**17.7 +0.7**
PETK	**Petropavlovsk-**	**2.67**	**262**	Pn		**Pn**	**15**	**36**	**17.9 +0.8**
	6.2nm,0.3s,baz=82,slow=19,SNR=274								
PETK				Sn		**Sn**	**15**	**36**	**50.0 +1.9**
	7.4nm,0.3s,baz=88,slow=19,SNR=9.0								
PETK	**Petropavlovsk-**	**2.67**	**262**			**Pn**	**15**	**36**	**17.6 +0.5**
KBTR	**Krutoberegovo**	**2.67**	**9**	*e*P		**Pn**	**15**	**36**	**17.5 +0.4**
KBTR				*e*S		**Sn**	**15**	**36**	**48.9 +0.8**
KBG	**Krutoberegovo**	**2.71**	**7**	*e*P		**Pn**	**15**	**36**	**18.2 +0.6**
KRSR	**Krestovskiy**	**2.78**	**342**	*e*P		**Pn**	**15**	**36**	**20.0 +1.3**
KOZ	**Kozyrevsk**	**2.79**	**334**	*e*P		**Pn**	**15**	**36**	**19.5 +0.7**
ASAK	**Asacha**	**2.79**	**246**	*e*P		**Pn**	**15**	**36**	**20.3 +1.4**
BKI	**Bering**	**2.80**	**53**	*e*P		**Pn**	**15**	**36**	**19.1 +0.3**
BKI				*e*S		**Sn**	**15**	**36**	**49.9 -1.4**
KLY	**Klyuchi**	**2.86**	**344**	*e*P		**Pn**	**15**	**36**	**19.4 -0.3**
KDTR	**Khodutka, Kamc**	**3.01**	**236**	*e*P		**Pn**	**15**	**36**	**21.8 +0.1**
KDTR				*e*S		**Sn**	**15**	**36**	**57.2 +0.7**
APC	**Apacha**	**3.03**	**259**	*e*P		**Pn**	**15**	**36**	**23.4 +1.4**
APC				*e*S		**Sn**	**15**	**36**	**58.2 +1.3**
SMKR	**Semkarok**	**3.03**	**354**	P		**Pn**	**15**	**36**	**23.0 +0.9**
BDR	**Baidarnaya**	**3.04**	**351**	*e*P		**Pn**	**15**	**36**	**23.4 +1.2**
ESO	**Esso**	**3.06**	**322**	*e*P		**Pn**	**15**	**36**	**22.6 +0.2**
SRDR	**Sredinnyy**	**3.06**	**335**	*e*P		**Pn**	**15**	**36**	**22.9 +0.4**
SRKR	**Sorokina**	**3.13**	**351**	*e*P		**Pn**	**15**	**36**	**24.0 +0.6**
IMAR	**Indian Mountai**	**24.84**	**43**	P		**P**	**15**	**40**	**54.6 0.0**
KNK	**Knik Glacier**	**27.10**	**53**	P		**P**	**15**	**41**	**14.8 -0.4**
ILAR	**Eielson Array**	**27.62**	**46**	P		**P**	**15**	**41**	**19.3 -0.5**
	0.3nm,0.8s,baz=257,slow=8.2,SNR=3.1								
SUCK	**Suckling Hills**	**29.58**	**55**	P		**P**	**15**	**41**	**37.6 +0.4**
HYT	**Haines Junctio**	**32.43**	**53**	P		**P**	**15**	**42**	**02.8 +0.3**
H11N2	**WAKE ISLAND Hy**	**33.99**	**172**	T		T	16 19 07.1		
	baz=354								
H11N3	**WAKE ISLAND Hy**	**34.00**	**172**	T		T	16 19 07.1		
	baz=354								
H11N1	**WAKE ISLAND Hy**	**34.01**	**172**	T		T	16 19 09.9		
	baz=354								
KURK	**Kurchatov**	**48.48**	**302**	P		**P**	**15**	**44**	**13.6 -1.2**
KURK				IAmb		IAmb	15 45 46.5		
	comp=Z,12nm,1.9s								
E08A	**Dider Farm, El**	**48.71**	**64**	P		**P**	**15**	**44**	**16.7 +0.1**
MK31	**Makanchi Array**	**49.01**	**296**	P		**P**	**15**	**44**	**17.9 -1.0**
MKAR	**Makanchi Array**	**49.01**	**296**	P		**P**	**15**	**44**	**16.9 -2.0**
	comp=Z,0.3nm,0.5s,baz=55,slow=6.4,SNR=7.2								
MAKZ	**Makanchi**	**49.17**	**297**	P		**P**	**15**	**44**	**18.8 -1.3**
MAKZ				IAmb		IAmb	15 44 29.3		
	comp=Z,11nm,2.0s								
CMAR	**Chiang Mai Arr**	**59.44**	**260**	P		**P**	**15**	**45**	**36.0 +0.9**
	comp=Z,1.1nm,0.7s,baz=23,slow=7.3,SNR=8.1								
CMAR				LR		LR	16 12 02.9		
	comp=Z,42nm,18.4s,baz=186,slow=37								
FINES	**FINESS Array B**	**60.14**	**337**	P		**P**	**15**	**45**	**40.0 +0.7**
	comp=Z,1.1nm,0.5s,baz=42,slow=8.6,SNR=8.9								
NOA	**NORSAR Array B**	**63.40**	**345**	P		**P**	**15**	**46**	**01.0 -0.3**
	comp=Z,0.7nm,0.6s,baz=18,slow=6.8,SNR=2.8								
ASAR	**Alice Springs**	**80.70**	**206**	LR		LR	16 19 34.9		
	comp=Z,54nm,21.6s,baz=270,slow=33								

RSPR 13 15:40:58.6, 19°.08N×66°.65W, h45km±6km, MD2.4/3, 1C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
AOPR	**Arecibo Observ**	**0.73**	**188**	⇓*e*P		Pn	15	41	11.7 -1.0
AOPR	**Arecibo Observ**	**0.73**	**188**	*e*S		Sn	15	41	21.9 -1.0
CBYP	**Canovanas**	**1.10**	**137**	⇓*e*P		Pn	15	41	16.8 -0.8
CBYP	**Canovanas**	**1.10**	**137**	*e*S		Sn	15	41	30.4 -1.3
MLPR	**Magueyes Islan**	**1.16**	**199**	⇓*e*P		Pn	15	41	17.2 -1.3
MLPR	**Magueyes Islan**	**1.16**	**199**	*e*S		Sn	15	41	32.3 -0.9

IDC 13 15:49:11.9±3.4, 50°.68S×114°.28E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.7/24, mbtmp3.6/3, MS3.0/2, Ms1 3.1/2, ms1mx2.7/17, Error ellipse: s-maj=95.6km s-min=64.2km az=152.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
H01W2	**Cape Leeuwin H**	**15.78**	**360**	T		T	16	08	21.2
	baz=180,slow=76,SNR=24								
H01W1	**Cape Leeuwin H**	**15.78**	**360**	T		T	16	08	21.7
	baz=180,slow=76,SNR=23								
H01W3	**Cape Leeuwin H**	**15.79**	**360**	T		T	16	08	22.5
	baz=180,slow=76,SNR=23								
ASAR	**Alice Springs**	**30.98**	**37**	P		P	15	55	30.8 -0.1
	0.6nm,1.0s,baz=202,slow=7.0,SNR=3.3								
VNDA	**Vanda**	**32.17**	**162**	LR		LR	16	09	06.5
	comp=Z,32nm,18.5s,baz=276,slow=37								
WRA	**Warramunga Ar**	**34.53**	**35**	P		P	15	56	01.9 0.0
	1.5nm,1.0s,baz=201,slow=10,SNR=3.4								
H08S2	**Diego Garcia H**	**55.10**	**306**	T		T	16	57	41.6
	baz=149,slow=76,SNR=5.5								
H08S1	**Diego Garcia H**	**55.11**	**306**	T		T	16	57	41.1
	baz=149,slow=76,SNR=5.6								
H08S3	**Diego Garcia H**	**55.12**	**306**	T		T	16	57	42.9
	baz=149,slow=76,SNR=7.2								
CMAR	**Chiang Mai Arr**	**70.15**	**345**	P		P	16	00	26.1 0.0
	0.4nm,0.9s,baz=182,slow=6.3,SNR=2.9								
CMAR				LR		LR	16	27	48.5
	comp=Z,7.6nm,19.9s,baz=35,slow=33								
YKA	**Yellowknife Ar**	**151.35**	**47**	PKPbc		PKPbc	16	09	05.9 -0.2
	0.2nm,0.6s,baz=270,slow=1.9,SNR=3.7								

MOS ***13*** *16:02:06.3±2.0, 44°.24N×147°.14E, h79km, mb3.8/2, Error ellipse: s-maj=16.0km s-min=9.9km az=65.8*

SKHL ***13*** *16:02:07.2±0.2, 44°.00N×147°.30E, h83km±7km, mb4.6/5, msha5.3/5*

JMA ***13*** *16:02:07.4±0.2, 43°.88N×147°.34E, h53km, M4.3*

IDC ***13*** *16:02:09.5±5.0, 44°.41N×147°.09E, h81km±45km, mb3.3/8, mb1 3.6/9, mb1mx3.3/52, mbtmp3.7/9, ML2.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.3/22, Error ellipse: s-maj=38.8km s-min=21.9km az=137.0*

ISC 13 16:02:06.4±0.8, 44°.03N±0°.05×147°.35E±0°.05, h62km±7km, n54, σ1.964/70, mb3.5/9, 3C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
SHO	**Shikotan**	**0.41**	**247**	*c* iPN		**Pn**	**16**	**02**	**18.3 +0.7**
SHO				*i* S		**Sn**	**16**	**02**	**26.1 +0.4**
SHO				pmax	pmax				
	comp=N,931μm,0.2s								
SHO				pmax	pmax				
	comp=E,986μm,0.2s								
SHO				pmax	pmax				
	comp=Z,2367μm,0.2s								
SHO				smax	smax				
	comp=N,13μm,0.2s								
SHO				smax	smax				
	comp=E,7μm,0.2s								
SHO	**Shikotan**	**0.41**	**247**	*i* P		**Pn**	**16**	**02**	**18.3 +0.7**
SHO				AMB	AMB		16	02	18.4
	comp=E,240nm,0.3s								
SHO				*i* S		**Sn**	**16**	**02**	**26.5 +0.8**
SHO				A	A		16	02	26.6
	comp=E,328nm,0.3s								
SHO				A	A		16	02	26.6
	comp=E,195nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**1.07**	**271**	*c* iPN		**Pn**	**16**	**02**	**25.9 +0.5**
YUK				*e*S		**Sn**	**16**	**02**	**39.5 -0.1**
YUK	**Yuzh-Kuril'sk**	**1.07**	**271**	*i* P		**Pn**	**16**	**02**	**25.7 +0.3**
YUK				AMB	AMB		16	02	26.0
	comp=E,140nm,0.4s								
YUK				*i* S		**Sn**	**16**	**02**	**39.7 +0.1**
YUK				A	A		16	02	43.0
	comp=E,105nm,0.3s								
YUK				A	A		16	02	43.0
	comp=E,750nm,0.3s								
GRPR	**Tuman**	**1.14**	**269**	*e*PN		**Pn**	**16**	**02**	**26.8 +0.5**
GRPR				*i* S		**Sn**	**16**	**02**	**40.8 -0.3**
GRPR				pmax	pmax				
	comp=N,655nm,0.2s								
GRPR				pmax	pmax				
	comp=Z,1μm,0.2s								
GRPR				pmax	pmax				
	comp=E,344nm,0.1s								
GRPR				smax	smax				
	comp=N,6μm,0.4s								
GRPR				smax	smax				
	comp=E,3μm,0.4s								
GRPR	**Tuman**	**1.14**	**269**	*e*P		**Pn**	**16**	**02**	**26.8 +0.5**
GRPR				AMB	AMB		16	02	27.0
	comp=E,130nm,0.4s								
GRPR				*i* S		**Sn**	**16**	**02**	**40.8 -0.3**
GRPR				A	A		16	02	41.0
	comp=E,168nm,0.4s								
GRPR				A	A		16	02	41.0
	comp=E,720nm,0.4s								
KUR	**Kuril'sk**	**1.26**	**17**	*e*PN		**Pn**	**16**	**02**	**29.1 +1.2**
KUR				*i* S		**Sn**	**16**	**02**	**45.0 +1.1**
KUR				pmax	pmax				
	comp=Z,211μm,0.1s								
KUR				smax	smax				
	comp=N,1μm,0.2s								
KUR				smax	smax				
	comp=E,601nm,0.2s								
KUR	**Kuril'sk**	**1.26**	**17**	*e*P		**Pn**	**16**	**02**	**29.0 +1.2**
KUR				AMB	AMB		16	02	29.3
	comp=E,100nm,0.3s								
KUR				*i* S		**Sn**	**16**	**02**	**45.1 +1.1**
KUR				A	A		16	02	45.6
	comp=E,93nm,0.3s								
KUR				A	A		16	02	45.6
	comp=E,550nm,0.3s								
NEM2	**Nemuro 2**	**1.34**	**241**	P		**Pn**	**16**	**02**	**29.2 +0.2**
NEM2				*e*S		**Sn**	**16**	**02**	**45.6 -0.3**
NMR	**Nemuro--Hokkai**	**1.35**	**241**	*c* iPN		**Pn**	**16**	**02**	**29.3 +0.2**
NMR				*i* S		**Sn**	**16**	**02**	**45.8 -0.3**
NMR	**Nemuro--Hokkai**	**1.35**	**241**	*i* P		**Pn**	**16**	**02**	**29.3 +0.2**
NMR				*i* S		**Sn**	**16**	**02**	**45.7 -0.3**
GLVR	**Golovnino**	**1.36**	**258**	*e*PN		**Pn**	**16**	**02**	**31.2 +2.0**
GLVR				*i* S		**Sn**	**16**	**02**	**48.7 +2.5**
GLVR				pmax	pmax				
	comp=Z,504nm,0.3s								
GLVR				pmax	pmax				
	comp=E,329nm,0.2s								
GLVR				smax	smax				
	comp=N,4μm,0.2s								
GLVR				smax	smax				
	comp=E,8μm,0.3s								
GLVR	**Golovnino**	**1.36**	**258**	*e*P		**Pn**	**16**	**02**	**30.0 +0.8**
GLVR				AMB	AMB		16	02	34.0
	comp=E,150nm,0.3s								
GLVR				*i* S		**Sn**	**16**	**02**	**46.1 -0.1**
GLVR				A	A		16	02	49.2
	comp=E,680nm,0.4s								
GLVR				A	A		16	02	49.2
	comp=E,125nm,0.4s								
JRA	**Rausu**	**1.61**	**267**	P		**Pn**	**16**	**02**	**33.8 +1.2**
JRA				*e*S		**Sn**	**16**	**02**	**53.9 +1.5**
JNSB	**Nemuroshibetsu**	**1.71**	**262**	P		**Pn**	**16**	**02**	**35.3 +1.3**
JNSB				*e*S		**Sn**	**16**	**02**	**55.6 +0.7**
JKHN	**Kushirohamanak**	**1.85**	**240**	P		**Pn**	**16**	**02**	**36.5 +0.7**
JKHN				*e*S		**Sn**	**16**	**02**	**57.9 -0.3**
JNK	**Nakash**	**1.96**	**258**	P		**Pn**	**16**	**02**	**38.1 +0.8**
JNK				*e*S		**Sn**	**16**	**03**	**01.0 +0.2**
JAK	**Akkeshi**	**2.19**	**243**	P		**Pn**	**16**	**02**	**40.9 +0.5**
JAK				*e*S		**Sn**	**16**	**03**	**05.9 -0.5**
JTKR	**Abashiri--Toko**	**2.48**	**270**	P		**Pn**	**16**	**02**	**45.9 +1.5**
JAR	**Ashorobuto**	**2.70**	**255**	P		**Pn**	**16**	**02**	**49.0 +1.6**
JAR				*e*S		**Sn**	**16**	**03**	**19.8 +0.9**
JOB	**Onbets**	**2.80**	**247**	P		**Pn**	**16**	**02**	**49.9 +1.2**
JOB				*e*S		**Sn**	**16**	**03**	**21.4 +0.2**
JMP	**Maruseppu**	**2.88**	**271**	P		**Pn**	**16**	**02**	**51.7 +1.8**
JCH	**Churui**	**3.24**	**245**	P		**Pn**	**16**	**02**	**55.5 +0.8**
JCH				*e*S		**Sn**	**16**	**03**	**31.4 -0.6**
JKK2	**Kamakawa 2**	**3.33**	**269**	P		**Pn**	**16**	**02**	**58.4 +2.4**
ASAJ	**Asahikawa**	**3.43**	**273**	P		**Pn**	**16**	**02**	**59.9 +2.6**
JSE	**Soyaes**	**3.53**	**287**	P		**Pn**	**16**	**03**	**00.8 +2.0**
JFR	**Furan**	**3.56**	**258**	*e*S		**Sn**	**16**	**03**	**42.5 +2.5**
JNBK	**Urakawa-nobuka**	**3.79**	**244**	P		**Pn**	**16**	**03**	**03.1 +0.8**
JWK2	**Keihoku**	**4.10**	**290**	P		**Pn**	**16**	**03**	**09.9 +3.5**
YSS	**Yuzh-Sakhalins**	**4.36**	**314**	*e*PN		**Pn**	**16**	**03**	**12.2 +2.2**
YSS				*e*S		**Sn**	**16**	**03**	**59.1 -0.3**
YSS				smax	smax				
	comp=N,40nm,0.5s								
YSS	**Yuzh-Sakhalins**	**4.36**	**314**	*e*P		**Pn**	**16**	**03**	**12.2 +2.2**
YSS				*e*S		**Sn**	**16**	**03**	**59.1 -0.3**
YSS				A	A		16	04	00.0
	comp=N,40nm,0.5s								
PETK	**Petropavlovsk-**	**11.37**	**33**	P		**Pn**	**16**	**04**	**46.4 +0.6**
	comp=N,0.3nm,0.3s,baz=202,slow=10,SNR=13								
PET	**Petropavlovsk**	**11.70**	**36**	*e*PN		**Pn**	**16**	**04**	**49.0 -1.3**
PET				pmax	pmax				
	comp=Z,92nm,2.0s								
KLR	**Kul'dur**	**11.91**	**301**	*e*PN		**Pn**	**16**	**04**	**49.2 -4.1**
KLR				pmax	pmax				
	comp=Z,3.0nm,1.9s								
KLR	**Kul'dur**	**11.91**	**301**	P		**Pn**	**16**	**04**	**57.4 +4.1**
	comp=Z,0.1nm,0.3s,baz=118,slow=13,SNR=6.5								
EKMR	**Ekimchan**	**13.12**	**319**	*e*P		**Pn**	**16**	**05**	**10.0 +0.2**
YAK	**Yakutsk**	**20.80**	**336**	*e*P		**P**	**16**	**06**	**36.9 -5.3**
YAK				pmax	pmax				
	comp=Z,8.0nm,1.8s								
BILL	**Bilibino**	**26.05**	**16**	*i* P		**P**	**16**	**07**	**31.2 -2.3**
BILL				pmax	pmax				
	comp=Z,2.0nm,1.5s								
H11N2	**WAKE ISLAND Hy**	**29.22**	**140**	T		T	16	38	49.8
	baz=330,slow=75,SN

ICMP				Sn	16 04 13.5	+0.6
IGPR	**InterUniversit**	**1.28 148**	⇑*eP*	**Pn**	**16 03 59.0**	**+0.4**
IGPR	**InterUniversit**	**1.28 148**		**Pn**	**16 03 59.3**	**+0.7**
PDPR	**Patillas Dam,**	**1.28 144**		**Pn**	**16 03 59.0**	**+0.3**
HUMP	**Col San Antoni**	**1.30 135**	⇑*eP*	**Pn**	**16 03 58.9**	**+0.1**
HUMP	**Col San Antoni**	**1.30 135**	*eS*	**Sn**	**16 04 14.0**	**-1.2**
HUMP	**Col San Antoni**	**1.30 135**		**Pn**	**16 03 58.9**	**+0.1**
HUMP				**Sn**	**16 04 14.0**	**-1.2**
MTP	**Monte Pirata**	**1.54 129**	⇑*eP*	**Pn**	**16 04 02.2**	**0.0**
MTP	**Monte Pirata**	**1.54 129**	*eS*	**Sn**	**16 04 21.6**	**+0.4**
MTP	**Monte Pirata**	**1.54 129**		**Pn**	**16 04 02.2**	**0.0**
MTP				**Sn**	**16 04 21.6**	**+0.4**
PCDR	**Punta Cana, DR**	**1.58 250**		**Pn**	**16 04 04.0**	**+1.3**
STVI	**Saint Thomas**	**1.90 112**	⇑*eP*	**Pn**	**16 04 06.8**	**-0.4**
STVI	**Saint Thomas**	**1.90 112**		**Pn**	**16 04 06.8**	**-0.4**
TBVI	**Tortola**	**2.18 107**	⇑*eP*	**Pn**	**16 04 12.1**	**+1.1**
TBVI	**Tortola**	**2.18 107**	*eS*	**Sn**	**16 04 36.2**	**-0.9**
TBVI	**Tortola**	**2.18 107**		**Pn**	**16 04 12.1**	**+1.1**
TBVI				**Sn**	**16 04 36.2**	**-0.9**
DR12	**Loma Pena Alta**	**2.44 264**		**Pn**	**16 04 15.0**	**+0.3**
BANI	**BANI**	**3.42 259**	Pn	**Pn**	**16 04 28.5**	**+0.3**
SMRT	**St. Maarten**	**3.69 105**		**Pn**	**16 04 32.5**	**+0.7**
SC01	**Santiago de lo**	**3.71 276**	Pn	**Pn**	**16 04 33.2**	**+1.1**
SDDR	**Presa de Saban**	**4.23 270**		**Pn**	**16 04 40.7**	**+1.4**
PCRV	**Puerto La Cruz**	**9.08 166**	P	**Pn**	**16 05 47.6**	**+1.6**
	0.7nm,0.3s,baz=15,slow=12,SNR=2.6					
PCRV			S	**Sn**	**16 07 21.7**	**-5.7**
	0.7nm,0.3s,baz=278,slow=13,SNR=3.2					
PLCV	**Puerto La Cruz**	**9.11 166**		**Pn**	**16 05 47.6**	**+1.3**
PLCV				**Sn**	**16 07 21.7**	**-6.2**
SDV	**Santo Domingo**	**10.77 201**	LR	LR	16 10 33.3	
	comp=Z,51nm,20.6s,baz=78,slow=39					
ROSC	**El Rosal**	**15.92 208**	LR	LR	16 14 10.2	
	comp=Z,77nm,18.4s,baz=82,slow=40					
U61A	**Possum Corner**	**19.18 336**	P	**P**	**16 07 56.5**	**-1.5**
TXAR	**Lajitas Array**	**35.01 294**	P	**P**	**16 10 28.1**	**+1.1**
	2.3nm,0.6s,baz=111,slow=10.0,SNR=23					
TXAR			LR	LR	16 27 35.2	
	comp=Z,11nm,21.4s,baz=0.0,slow=41					
PDAR	**Pinedale Array**	**43.02 313**	P	**P**	**16 11 34.1**	**+0.1**
	0.5nm,0.7s,baz=104,slow=9.5,SNR=4.2					
NVAR	**Mina Array Bea**	**48.43 305**	P	**P**	**16 12 17.4**	**+0.6**
	0.5nm,0.8s,baz=102,slow=6.2,SNR=3.7					
NVAR			LR	LR	16 38 11.3	
	comp=Z,45nm,18.3s,baz=330,slow=43					
SFJD	**Kangerlussuaq**	**49.04 8**	P	**P**	**16 12 21.4**	**+0.7**
	12nm,0.8s,baz=202,slow=3.7,SNR=4.4					
YKA	**Yellowknife Ar**	**54.37 335**	P	**P**	**16 12 59.2**	**-1.3**
	0.5nm,0.6s,baz=113,slow=7.6,SNR=8.1					
ESDC	**Sonseca Array**	**57.35 55**	P	**P**	**16 13 22.9**	**+0.5**
	0.5nm,0.5s,baz=274,slow=6.4,SNR=4.9					
ILAR	**Eielson Array**	**68.70 333**	P	**P**	**16 14 37.0**	**-0.3**
	0.6nm,0.6s,baz=104,slow=4.1,SNR=12					
GERES	**GERESS Array B**	**69.72 44**	LR	LR	16 45 20.0	
	comp=Z,41nm,18.0s,baz=322,slow=36					
ASAR	**Alice Springs**	**160.17 253**	PKPab	**PKPab**	**16 24 13.6**	**-0.7**
	0.5nm,1.0s,baz=110,slow=4.1,SNR=4.1					

IDC 13 16:09:30.7±13.0, **4°.62N**×**124°.37E, h558**km±182km,
mb2.6/4, mb1 2.8/4, mb1mx2.5/40, mbtmp3.6/4, Error ellipse: s-maj=227.0km s-min=34.3km az=58.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.30**	**158**	P	P	16 14 23.4	+0.8
	0.1nm,0.3s,baz=341,slow=12,SNR=4.7						
ASAR	**Alice Springs**	**29.61**	**162**	P	P	16 14 50.5	-0.9
	0.1nm,0.3s,baz=344,slow=7.1,SNR=6.5						
MKAR	**Makanchi Array**	**55.50**	**326**	P	P	16 18 13.2	-0.1
	0.3nm,0.4s,baz=117,slow=7.6,SNR=7.5						
ARCES	**ARCESS Array B**	**88.81**	**340**	P	P	16 21 25.1	0.0
	1.2nm,0.9s,baz=65,slow=4.5,SNR=3.1						

*NEIC **13** 16:28:45.8±1.3, 23°.4S±0°.2×176°.9W±0°.2, h160km±10km, mb4.7/10, Error ellipse: s-maj=27.1km s-min=19.3km az=154.0*
*IDC **13** 16:28:46.5±12.0, 23°.28S×177°.13W, h154km±112km, mb3.3/3, mb1 3.6/4, mb1mx3.3/22, mbtmp3.8/4, Error ellipse: s-maj=79.0km s-min=40.3km az=171.0*
ISC 13 16:28:45.4±0.7, **23°.45S**±0°.09×**176°.8W**±0°.1, **h167**km, **n24,** σ1ş**63**/23, **1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**7.43**	**319**	Pn	**Pn**	**16 30 32.4**	**+1.2**
NIUE	**Niue**	**7.78**	**57**	Pn	**Pn**	**16 30 35.5**	**-0.3**
OUZ	**Omahuta**	**14.38**	**213**	Pn	**Pn**	**16 31 58.2**	**-3.1**
FUNA	**Funafuti**	**15.31**	**345**	Pn	**Pn**	**16 32 08.5**	**-4.5**
URZ	**Urewera**	**15.64**	**198**	P	**P**	**16 32 19.7**	**+2.2**
	0.8nm,0.3s,baz=346,slow=19,SNR=5.4						
URZ	**Urewera**	**15.64**	**198**	IAmb	IAmb	16 33 05.7	
	comp=Z,86nm,1.8s						
BFZ	**Birch Farm**	**18.14**	**197**	P	**Pn**	**16 32 46.5**	**-0.2**
LTZ	**Lake Taylor**	**21.29**	**203**	P	**P**	**16 33 19.0**	**+0.2**
BBOO	**Buckleboo**	**42.28**	**246**	P	**P**	**16 36 23.6**	**+1.0**
BBOO				IAmb	IAmb	16 38 00.4	
	comp=Z,42nm,2.0s						
AS31	**Alice Springs**	**44.96**	**259**	P	**P**	**16 36 44.9**	**+0.7**
ASAR	**Alice Springs**	**44.96**	**259**	P	**P**	**16 36 45.1**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=95,slow=7.1,SNR=31						
ASAR				PcP	**PcP**	**16 38 23.3**	**+0.8**
	comp=Z,0.3nm,0.7s,baz=104,slow=4.2,SNR=3.7						
ASAR	**Alice Springs**	**44.96**	**259**	P	**P**	**16 36 44.9**	**+0.8**
WR0	**Warramunga Arr**	**45.14**	**265**	P	**P**	**16 36 45.8**	**+0.3**
WRAB	**Tennant Creek**	**45.32**	**265**	P	**P**	**16 36 46.9**	**-0.1**
WRA	**Warramunga Arr**	**45.33**	**265**	P	**P**	**16 36 47.1**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=103,slow=8.3,SNR=18						
WRA	**Warramunga Arr**	**45.33**	**265**	IAmb	IAmb	16 37 29.4	
	comp=Z,1.0nm,2.0s						
KNRA	**Kununurra**	**51.59**	**268**	P	**P**	**16 37 35.7**	**+0.8**
SYO	**Syowa Base**	**84.10**	**192**	⇑eX	**P**	**16 40 55.0**	**-2.0**
ILAR	**Eielson Array**	**90.94**	**12**	P	**P**	**16 41 31.5**	**+1.8**
	comp=Z,1.0nm,1.2s,baz=220,slow=5.8,SNR=5.0						
ILAR	**Eielson Array**	**90.94**	**12**	P	**P**	**16 41 30.7**	**+1.0**
ARCES	**ARCESS Array B**	**132.00**	**350**	PKP	**PKiKP**	**16 47 41.1**	**+1.8**
	comp=Z,0.5nm,1.0s,baz=90,slow=0.1,SNR=3.6						
ARCES	**ARCESS Array B**	**132.00**	**350**		**PKiKP**	**16 47 39.7**	**+0.4**
AKASG	**Malin Array Be**	**146.09**	**330**	PKPbc	**PKPab**	**16 48 06.6**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=41,slow=3.9,SNR=4.0						
BRTR	**Keskin Array B**	**149.57**	**309**	PKPbc	**PKiKP**	**16 48 17.0**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=72,slow=5.3,SNR=3.3						

*NEIC **13** 16:28:48.4±0.5, 19°.14N±0°.03×66°.63W±0°.03, h22km±11km, Error ellipse: s-maj=5.7km s-min=2.5km az=49.0*
*RSPR **13** 16:28:50.1, 19°.21N×66°.64W, h29km±7km, MD3.2/13*
ISC 13 16:28:47.9±1.5, **19°.17N**±0°.07×**66°.58W**±0°.03, **h28**km, **n41,** σ0ş**90**/52, **6C-8D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.69**	**176**	*eS*	**Sn**	**16 29 12.2**	**+0.6**
EMPR	**Esperanza - Ma**	**0.69**	**176**	⇓*eP*	**Pn**	**16 29 02.5**	**+0.7**
EMPR	**Esperanza - Ma**	**0.69**	**176**		**Pn**	**16 29 02.5**	**+0.7**
EMPR					**Sn**	**16 29 12.2**	**+0.6**
AOPR	**Arecibo Observ**	**0.83**	**191**	*eS*	**Sn**	**16 29 15.5**	**+0.3**
AOPR	**Arecibo Observ**	**0.83**	**191**	⇓*eP*	**Pb**	**16 29 04.0**	**+0.2**
AOPR	**Arecibo Observ**	**0.83**	**191**		**Pb**	**16 29 04.0**	**+0.2**
AOPR					**Sn**	**16 29 15.5**	**+0.3**
CELP	**Cerrillos**	**1.09**	**180**	⇓*eP*	**Pb**	**16 29 07.9**	**-0.2**
CELP	**Cerrillos**	**1.09**	**180**		**Pb**	**16 29 07.9**	**-0.2**
LSP	**Las Mesas**	**1.10**	**206**	⇓*eP*	**Pb**	**16 29 07.7**	**-0.6**
LSP	**Las Mesas**	**1.10**	**206**		**Pb**	**16 29 07.7**	**-0.6**
OBIP	**Obispado Ponce**	**1.12**	**181**	*eS*	**Sb**	**16 29 22.6**	**-0.3**
OBIP	**Obispado Ponce**	**1.12**	**181**	⇑*eP*	**Pb**	**16 29 08.4**	**-0.3**
OBIP	**Obispado Ponce**	**1.12**	**181**		**Pb**	**16 29 08.4**	**-0.3**
OBIP					**Sb**	**16 29 22.6**	**-0.3**
CBYP	**Canovanas**	**1.13**	**142**	*eS*	**Sb**	**16 29 23.4**	**+0.3**
CBYP	**Canovanas**	**1.13**	**142**	⇓*eP*	**Pb**	**16 29 08.8**	**0.0**
CBYP	**Canovanas**	**1.13**	**142**		**Pb**	**16 29 08.8**	**0.0**
CBYP					**Sb**	**16 29 23.4**	**+0.3**
SJG	**San Juan**	**1.13**	**159**		**Pb**	**16 29 08.1**	**-0.7**
IDE	**Isla Desecheo**	**1.15**	**228**	*eS*	**Sb**	**16 29 22.7**	**-1.0**
IDE	**Isla Desecheo**	**1.15**	**228**	⇓*eP*	**Pb**	**16 29 08.3**	**-0.9**
IDE	**Isla Desecheo**	**1.15**	**228**		**Pb**	**16 29 08.3**	**-0.9**
IDE					**Sb**	**16 29 22.7**	**-1.0**
GBPR	**Guanica, Bosqu**	**1.22**	**193**	*eS*	**Sb**	**16 29 25.2**	**-0.5**
GBPR	**Guanica, Bosqu**	**1.22**	**193**	⇓*eP*	**Pb**	**16 29 09.8**	**-0.5**
GBPR	**Guanica, Bosqu**	**1.22**	**193**		**Pb**	**16 29 09.8**	**-0.5**
GBPR					**Sb**	**16 29 25.2**	**-0.5**
HUMP	**Col San Antoni**	**1.23**	**146**	⇑*eP*	**Pb**	**16 29 10.4**	**-0.1**
HUMP	**Col San Antoni**	**1.23**	**146**	*eS*	**Sb**	**16 29 26.4**	**+0.2**
HUMP	**Col San Antoni**	**1.23**	**146**		**Pb**	**16 29 10.4**	**-0.1**
HUMP					**Sb**	**16 29 26.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.26**	**203**	⇓*eP*	**Pb**	**16 29 10.0**	**-1.0**
CRPR	**Cabo Rojo, PR**	**1.26**	**203**	*eS*	**Sb**	**16 29 25.9**	**-1.0**
CRPR	**Cabo Rojo, PR**	**1.26**	**203**		**Pb**	**16 29 10.0**	**-1.0**
CRPR					**Sb**	**16 29 25.9**	**-1.0**
MLPR	**Magueyes Islan**	**1.27**	**200**	*eS*	**Sb**	**16 29 25.5**	**-1.7**
MLPR	**Magueyes Islan**	**1.27**	**200**	⇓*eP*	**Pb**	**16 29 09.4**	**-1.8**
MLPR	**Magueyes Islan**	**1.27**	**200**		**Pb**	**16 29 09.4**	**-1.8**
MLPR					**Sb**	**16 29 25.5**	**-1.7**
IGPR	**InterUniversit**	**1.28**	**159**	⇑*eP*	**Pb**	**16 29 10.9**	**-0.4**
IGPR	**InterUniversit**	**1.28**	**159**	*eS*	**Sb**	**16 29 27.3**	**-0.1**
MTP	**Monte Pirata**	**1.45**	**137**	⇑*eP*	**Pb**	**16 29 13.3**	**-0.9**
MTP	**Monte Pirata**	**1.45**	**137**	*eS*	**Sb**	**16 29 31.4**	**-0.8**
MTP	**Monte Pirata**	**1.45**	**137**		**Pb**	**16 29 13.3**	**-0.9**
MTP					**Sb**	**16 29 31.4**	**-0.8**
STVI	**Saint Thomas**	**1.74**	**118**	⇑*eP*	**Pb**	**16 29 17.8**	**-1.4**
STVI	**Saint Thomas**	**1.74**	**118**	*eS*	**Sb**	**16 29 39.4**	**-1.4**
STVI	**Saint Thomas**	**1.74**	**118**		**Pb**	**16 29 17.8**	**-1.4**
STVI					**Sb**	**16 29 39.4**	**-1.4**
SDDR	**Presa de Saban**	**4.46**	**268**		**Pn**	**16 29 55.8**	**+2.1**

*IDC **13** 16:29:41.5±2.9, 50°.12S×114°.36E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.7/21, mbtmp3.6/3, Error ellipse: s-maj=81.9km s-min=59.1km az=153.0*
*NEIC **13** 16:29:42.7±2.0, 50°.02S±0°.08×114°.3E±0°.5, h10km±2km, mb4.7/8, Error ellipse: s-maj=50.6km s-min=13.4km az=272.0*
ISC 13 16:29:43.5±1.2, **50°.1S**±0°.2×**114°.3E**±0°.3, **h17**km, **n18,** σ0ş**87**/12, **Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**15.17**	**359**	T	T	16 48 43.7	
	baz=180,slow=74,SNR=20						
H01W1	**Cape Leeuwin H**	**15.17**	**359**	T	T	16 48 46.2	
	baz=180,slow=74,SNR=19						
H01W3	**Cape Leeuwin H**	**15.18**	**359**	T	T	16 48 41.9	
	baz=180,slow=74,SNR=18						
MORW	**Morawa**	**21.02**	**4**	P	**P**	**16 34 25.6**	**-0.6**
MORW				IAmb	IAmb	16 34 46.6	
	comp=Z,94nm,1.9s						
ASAR	**Alice Springs**	**30.47**	**37**	P	**P**	**16 35 56.0**	**+0.7**
	comp=Z,1.0nm,1.1s,baz=207,slow=8.1,SNR=4.1						
WRA	**Warramunga Arr**	**34.02**	**35**	P	**P**	**16 36 27.2**	**+0.8**
	comp=Z,1.6nm,1.1s,baz=204,slow=8.7,SNR=4.8						
WRAB	**Tennant Creek**	**34.03**	**35**	P	**P**	**16 36 27.3**	**+0.8**
WR0	**Warramunga Arr**	**34.08**	**35**	P	**P**	**16 36 27.0**	**+0.1**
MTN	**Manton Dam**	**39.60**	**26**	P	**P**	**16 37 13.2**	**-0.8**
QSPA	**South Pole Qui**	**40.05**	**180**	P	**P**	**16 37 17.1**	**-0.3**
QSPA				IAmb	IAmb	16 37 45.1	
	comp=Z,21nm,1.9s						
SOEI	**Soe**	**41.03**	**15**	P	**P**	**16 37 24.5**	**-1.5**
COEN	**Coen**	**43.01**	**43**	P	**P**	**16 37 42.2**	**+0.2**
H08S2	**Diego Garcia H**	**54.77**	**306**	T	T	17 38 08.1	
	baz=148,slow=76,SNR=4.3						
H08S1	**Diego Garcia H**	**54.78**	**306**	T	T	17 38 07.3	
	baz=148,slow=76,SNR=6.0						
H08S3	**Diego Garcia H**	**54.79**	**306**	T	T	17 38 08.9	
	baz=148,slow=76,SNR=4.7						
CMAR	**Chiang Mai Arr**	**69.58**	**344**	P	**P**	**16 40 52.5**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=190,slow=6.8,SNR=4.2						
CMAR	**Chiang Mai Arr**	**69.58**	**344**	P	**P**	**16 40 52.1**	**+0.7**
YKA	**Yellowknife Ar**	**150.91**	**46**	PKPbc	**PKiKP**	**16 49 34.4**	**0.0**
	comp=Z,0.5nm,0.8s,baz=281,slow=2.3,SNR=8.5						

IDC 13 16:35:19.8±5.7, **28°.13S**×**176°.91W, h108**km±67km,
mb3.1/2, mb1 3.4/2, mb1mx3.1/18, mbtmp3.5/2, MS3.5/1, Ms1 3.5/1, ms1mx2.6/7, Error ellipse: s-maj=157.9km s-min=49.8km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.43**	**218**	P	Pn	16 35 45.2	-0.4
	161nm,0.3s,baz=70,slow=13,SNR=6.8						
RAO				S	Sn	16 36 05.3	0.0
	461nm,0.3s,baz=81,slow=18,SNR=10						
RPZ	**Rata Peaks**	**18.32**	**209**	LR	LR	16 45 36.0	
	comp=Z,146nm,21.1s,baz=336,slow=34						
ASAR	**Alice Springs**	**44.24**	**264**	P	P	16 43 18.7	+0.1
	0.3nm,0.7s,baz=103,slow=7.1,SNR=6.6						
WRA	**Warramunga Arr**	**45.03**	**269**	P	P	16 43 24.2	-0.7
	0.3nm,0.4s,baz=110,slow=6.6,SNR=6.1						
AKASG	**Malin Array Be**	**150.02**	**326**	PKPbc	PKPbc	16 54 57.3	0.0
	0.4nm,0.5s,baz=45,slow=4.1,SNR=5.1						

MAN 13 16:37:43.0, 8°.62N×124°.59E, h34km, **mb4.2, ML3.0, MS2.7, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	**Cagayan de Oro**	**0.20**	**147**	⇑*iP*	Pb	16 37 49.7	0.0
CGP				*i* S	Sb	16 37 54.5	+0.3
BUKP	**Musuan**	**0.87**	**147**	*eP*	Pb	16 38 00.6	+0.8
BUKP				*eS*	Sb	16 38 13.9	+2.7

*GUC **13** 16:43:14.8±0.6, 24°.19S×69°.29W, h82km±6km, ML3.2*
*SJA **13** 16:43:14.1±0.6, 24°.05S×69°.45W, h134km±17km, ML2.9, MW3.2*
ISC 13 16:43:16.1±2.0, **24°.17S**±0°.04×**69°.37W**±0°.06, **h84**km±24km, **n16,** σ1ş**12**/27, **5C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	**IPOC Station P**	**0.96**	**354**	⇓*iP*	**Pn**	**16 43 34.6**	**-0.5**
PB15				*i* S	**Sn**	**16 43 49.9**	**+0.5**
GO02	**Mina Guanaco**	**1.01**	**191**	⇑*iP*	**Pn**	**16 43 35.0**	**-0.9**
GO02				*i* S	**Sn**	**16 43 50.3**	**-0.4**
PB14	**IPOC Station P**	**1.05**	**244**	⇑*iP*	**Pn**	**16 43 36.1**	**-0.1**
PB14				*i* S	**Sn**	**16 43 52.2**	**+0.8**
PB14				IAML		16 43 53.5	
	comp=E,481nm,0.5s						
PB10	**IPOC Station P**	**1.27**	**301**	⇑*iP*	**Pn**	**16 43 38.9**	**+0.3**
PB10				*i* S	**Sn**	**16 43 56.7**	**+1.2**
PB10				IAML		16 44 00.3	
	comp=E,457nm,0.3s						
PB06	**IPOC Station P**	**1.47**	**353**	⇓*iP*	**Pn**	**16 43 41.1**	**-0.2**
PB06				*i* S	**Sn**	**16 44 00.8**	**+0.5**
PB06				IAML		16 44 01.8	
	comp=E,403nm,0.4s						
PB06	**IPOC Station P**	**1.47**	**353**	*i* P	**Pn**	**16 43 41.1**	**-0.2**
PB05	**IPOC Station P**	**1.51**	**329**	⇓*iP*	**Pn**	**16 43 42.0**	**+0.1**
PB05				*i* S	**Sn**	**16 44 02.8**	**+1.4**
PB05				IAML		16 44 06.0	
	comp=E,500nm,0.5s						
PB05	**IPOC Station P**	**1.51**	**329**	*i* P	**Pn**	**16 43 42.0**	**+0.1**
PB05				*i* S	**Sn**	**16 44 02.8**	**+1.4**
LVC	**Limon Verde**	**1.60**	**15**	⇑*iP*	**Pn**	**16 43 42.7**	**-0.6**
LVC				*i* S	**Sn**	**16 44 03.2**	**-0.6**
PB04	**IPOC Station P**	**1.96**	**338**	*i* P	**Pn**	**16 43 47.0**	**-0.8**
PB04				IAML		16 44 19.4	
	comp=N,183nm,0.3s						
PB04	**IPOC Station P**	**1.96**	**338**	*i* P	**Pn**	**16 43 47.1**	**-0.6**
PB04				*i* S	**Sn**	**16 44 07.7**	**-4.1**
PB04				IAML		16 44 26.2	
	comp=Z,164nm,0.5s						
PB03	**IPOC Station P**	**2.14**	**350**	*eP*	**Pn**	**16 43 50.0**	**-0.1**
PB03				*i* S	**Sn**	**16 44 16.5**	**+0.5**
PB03				IAML		16 44 21.4	
	comp=E,239nm,0.4s						
PB03	**IPOC Station P**	**2.14**	**350**	*i* P	**Pn**	**16 43 49.5**	**-0.6**
PB03				*i* S	**Sn**	**16 44 16.1**	**+0.1**
PB09	**IPOC Station P**	**2.36**	**3**	⇑*iP*	**Pn**	**16 43 53.5**	**+0.3**
PB09				IAML		16 44 33.6	
	comp=E,128nm,0.4s						
HJA	**Humahuaca**	**3.75**	**76**	*i* P	**Pn**	**16 44 13.5**	**+1.4**
HJA				IAML		16 44 14.5	
	comp=Z,20nm,0.4s						
AZAP	**Zapla**	**3.93**	**92**	*i* P	**Pn**	**16 44 14.0**	**-0.3**
AZAP				IAML		16 44 15.1	
	comp=Z,5.1nm,0.5s						

IDC 13 16:51:38.9±4.2, **20°.14S**×**68°.41E, h0**km, **mb3.4**/4, **mb1 3.6/4, mb1mx3.3**/35, **mbtmp3.4/4, MS3.3/4, Ms1 3.3**/4, **ms1mx3.0**/18, **Error ellipse: s-maj=120.0km s-min=39.2km az=57.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Garcia H**	**13.03**	**18**	T	T	17 08 59.3	
	baz=196,slow=76,SNR=18						
H08S2	**Diego Garcia H**	**13.03**	**18**	T	T	17 08 57.7	
	baz=196,slow=76,SNR=50						
H08S3	**Diego Garcia H**	**13.05**	**18**	T	T	17 08 57.5	
	baz=196,slow=76,SNR=21						
BOSA	**Boshof**	**40.03**	**249**	LR	LR	17 12 10.7	
	comp=Z,43nm,18.8s,baz=172,slow=31						
CMAR	**Chiang Mai Arr**	**48.66**	**40**	P	P	17 00 24.9	-0.1
	0.3nm,0.6s,baz=234,slow=7.7,SNR=2.9						
CMAR				LR	LR	17 17 22.7	
	comp=Z,16nm,21.7s,baz=178,slow=32						
ASAR	**Alice Springs**	**60.40**	**106**	P	P	17 01 50.5	0.0
	0.4nm,1.0s,baz=262,slow=7.1,SNR=3.2						
ASAR				LR	LR	17 24 31.8	
	comp=Z,39nm,20.0s,baz=304,slow=33						
STKA	**Stephens Creek**	**65.73**	**117**	LR	LR	17 28 00.3	
	comp=Z,20nm,18.1s,baz=207,slow=33						
MKAR	**Makanchi Array**	**67.79**	**10**	P	P	17 02 38.1	-0.3
	0.5nm,0.9s,baz=205,slow=5.1,SNR=3.9						
ZALV	**Zalesovo Beam**	**75.12**	**10**	P	P	17 03 22.8	+0.3
	0.2nm,0.4s,baz=184,slow=6.4,SNR=2.4						

*IDC **13** 16:57:03.1±1.4, 11°.54S×164°.84E, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.8/27, mbtmp3.9/7, ML4.4/2, MS2.9/4, Ms1 2.9/4, ms1mx2.7/25, Error ellipse: s-maj=35.5km s-min=29.2km az=120.0*
ISC 13 16:57:08.3±1.2, **11°.6S**±0°.1×**164°.8E**±0°.2, **h34**km, **n9,** σ1ş**02**/8, **mb3.7/5, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.19**	**294**	Pn	**Pn**	**16 58 22.7**	**-0.9**
	19nm,0.3s,baz=30,slow=4.4,SNR=3.6						
HNR				LR	LR	17 00 38.1	
	comp=Z,135nm,19.2s,baz=92,slow=41						
DZM	**Mont Dzumac**	**10.55**	**171**	Pn	**Pn**	**16 59 37.0**	**-0.3**
	2.0nm,0.3s,baz=311,slow=19,SNR=45						
DZM				LR	LR	17 02 51.7	
	comp=Z,62nm,18.1s,baz=52,slow=33						
PMG	**Port Moresby**	**17.44**	**275**	LR	LR	17 07 17.4	
	comp=Z,39nm,19.2s,baz=112,slow=35						
AFI	**Afiamalu**	**23.00**	**98**	LR	LR	17 09 04.7	
	comp=Z,33nm,20.3s,baz=278,slow=32						
WRA	**Warramunga Arr**	**30.39**	**250**	P	**P**	**17 03 17.3**	**-0.2**
	0.8nm,0.6s,baz=81,slow=8.8,SNR=4.0						
ASAR	**Alice Springs**	**31.69**	**244**	P	**P**	**17 03 29.0**	**0.0**
	0.6nm,0.7s,baz=64,slow=10,SNR=11						
ASAR				PcP	**PcP**	**17 06 20.7**	**+0.3**
	0.3nm,0.8s,baz=95,slow=2.4,SNR=3.1						
CMAR	**Chiang Mai Arr**	**71.44**	**294**	P	**P**	**17 08 27.7**	**+1.8**
	0.4nm,0.9s,baz=106,slow=5.7,SNR=3.7						
ILAR	**Eielson Array**	**84.33**	**19**	P	**P**	**17 09 35.7**	**-0.8**
	0.5nm,1.0s,baz=214,slow=6.3,SNR=3.7						
MKAR	**Makanchi Array**	**93.25**	**317**	P	**P**	**17 10 19.8**	**+0.2**
	0.6nm,0.8s,baz=103,slow=6.2,SNR=6.0						

*IDC **13** 17:09:48.6±6.3, 9°.89S×78°.68W, h126km±60km, mb3.1/4, mb1 3.4/5, mb1mx3.3/21, mbtmp3.5/5, Error ellipse: s-maj=99.7km s-min=31.5km az=38.0*
ISC 13 17:09:45.7±1.5, **9°.9S**±0°.4×**78°.8W**±0°.4, **h100**km, **n13,** σ1ş**22**/7, **mb3.4/4, Near coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**12.19**	**122**	P	**Pn**	**17 12 37.2**	**+0.7**
	0.1nm,0.3s,baz=287,slow=11,SNR=3.1						
TXAR	**Lajitas Array**	**45.79**	**329**	P	**P

az=109.0
ISC 13 17:40:21.8±1.0, 32°93N±0°04×97°53W±0°06, h10km, n47, σ0$85/40, Central Texas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHTX	**Lake Whitney,**	**0.94**	**176**		**Pg**	**17 40 39.5**	**-0.3**
WHTX	**Lake Whitney,** baz=354	**0.94**	**176**	*e*P	**Pg**	**17 40 39.4**	**-0.3**
WHTX				S	**Sg**	**17 40 52.5**	**+0.5**
X34A	**Smith Ranch, M**	**1.69**	**352**		**Pn**	**17 40 51.5**	**+0.1**
ABTX	**Abilene, Hawle**	**1.80**	**261**	Pn	**Pn**	**17 40 53.5**	**+0.5**
ABTX	**Abilene, Hawle** baz=79	**1.80**	**261**	P	**Pn**	**17 40 53.1**	**+0.1**
ABTX				S	**Sn**	**17 41 16.6**	**+0.7**
WMOK	**Wichita Mounta**	**2.08**	**330**		**Pn**	**17 40 57.0**	**+0.1**
WMOK	**Wichita Mounta** baz=151	**2.08**	**330**	P	**Pn**	**17 40 56.9**	**+0.1**
WMOK				S	**Sn**	**17 41 23.3**	**+0.4**
435B	**Jarrell**	**2.14**	**181**		**Pn**	**17 40 58.1**	**+0.5**
435B	**Jarrell** baz=0.2	**2.14**	**181**	Sb	**Sg**	**17 41 29.9**	**-0.6**
W35A	**Tecumseh**	**2.29**	**14**		**Pn**	**17 41 00.6**	**+1.0**
FNO	**Franklin**	**2.33**	**3**		**Pn**	**17 41 00.7**	**+0.5**
X37A	**Clayton**	**2.45**	**47**		**Pn**	**17 41 02.7**	**+0.9**
X37A	comp=Z,82nm,0.7s			IAmb_Lg		17 41 42.4	
OKCFA	**Oklahoma City** comp=Z,100nm,0.8s	**2.48**	**2**	IAmb_Lg		17 41 44.5	
NATX	**Nacogdoches** comp=Z,52nm,0.8s	**2.69**	**115**	IAmb_Lg		17 41 51.8	
JCT	**Junction City**	**3.11**	**219**	Pn	**Pn**	**17 41 11.3**	**+0.3**
JCT	comp=Z,48nm,1.0s			IAmb_Lg		17 42 04.9	
JCT	**Junction City** baz=37	**3.11**	**219**	P	**Pn**	**17 41 11.4**	**+0.3**
HKT	**Hockley** comp=Z,9.2nm,1.1s	**3.30**	**153**	IAmb_Lg		17 42 09.9	
TUL1	**Leonard**	**3.31**	**25**		**Pn**	**17 41 12.7**	**-0.9**
TUL1	comp=Z,46nm,0.8s			IAmb_Lg		17 42 08.5	
TUL1	**Leonard** baz=207	**3.31**	**25**	S	**Sn**	**17 41 52.8**	**-0.2**
U32A	**Winter Ranch,**	**3.65**	**341**	Pn	**Pn**	**17 41 17.7**	**-0.7**
U32A	comp=Z,46nm,0.8s			IAmb_Lg		17 42 20.7	
MIAR	**Mount Ida**	**3.67**	**63**		**Pn**	**17 41 16.6**	**-2.0**
MIAR	comp=Z,48nm,0.8s			IAmb_Lg		17 42 24.6	
MIAR	**Mount Ida** baz=245	**3.67**	**63**	P	**Pn**	**17 41 16.5**	**-2.1**
WLAR	**White Oak Lake** comp=Z,52nm,1.1s	**3.78**	**77**	IAmb_Lg		17 42 29.3	
W39A	**Magazine**	**3.85**	**53**		**Pn**	**17 41 22.2**	**+1.1**
AMTX	**Amarillo**	**3.96**	**301**		**Pn**	**17 41 23.2**	**+0.5**
AMTX	**Amarillo** baz=119	**3.96**	**301**	P	**Pn**	**17 41 23.2**	**+0.5**
X40A	**Basin Creek Fa** comp=Z,36nm,1.1s	**4.21**	**67**	IAmb_Lg		17 42 45.6	
MSTX	**Muleshoe**	**4.50**	**285**		**Pn**	**17 41 30.5**	**+0.3**
MSTX	**Muleshoe** baz=102	**4.50**	**285**	P	**Pn**	**17 41 30.6**	**+0.4**
833A	**Chaparral WMA,**	**4.86**	**200**	Pn	**Pn**	**17 41 35.9**	**+0.9**
833A	**Chaparral WMA,** baz=18	**4.86**	**200**	P	**Pn**	**17 41 36.4**	**+1.4**
CCAR	**Cane Creek**	**4.92**	**77**	Pn	**Pn**	**17 41 36.9**	**+1.1**
CCAR	comp=Z,24nm,0.8s			IAmb_Lg		17 42 57.7	
U40A	**Yellville**	**5.16**	**47**	Pn	**Pn**	**17 41 39.9**	**+0.8**
CLNB	**Carlsbad**	**5.40**	**265**	Pn	**Pn**	**17 41 41.8**	**-0.7**
GDL2	**Guadalupe Moun**	**5.81**	**265**	Pn	**Pn**	**17 41 47.0**	**-1.2**
MGMO	**Mountain Grove** comp=Z,27nm,0.8s	**6.04**	**44**	IAmb_Lg		17 43 33.2	
CBKS	**Cedar Bluff**	**6.14**	**344**	Pn	**Pn**	**17 41 51.9**	**-0.7**
CBKS	comp=Z,26nm,0.8s			IAmb_Lg		17 43 53.9	
TX31	**Lajitas Ar. Si**	**6.36**	**237**		**Pn**	**17 41 55.0**	**-0.7**
TX32	**Lajitas Array**	**6.36**	**237**		**Pn**	**17 41 54.5**	**-1.2**
MNTX	**Cornudas Mount**	**6.76**	**262**	Pn	**Pn**	**17 42 00.6**	**-0.5**
MNTX	comp=Z,17nm,0.8s			IAmb_Lg		17 44 03.9	
T25A	**Trinidad**	**7.03**	**309**		**Pn**	**17 42 05.9**	**+0.8**
CCM	**Cathedral Cave** comp=Z,27nm,0.9s	**7.24**	**43**	IAmb_Lg		17 44 20.8	
KSCO	**Kaye Shedlock'** comp=Z,23nm,0.8s	**7.34**	**327**	IAmb_Lg		17 44 23.8	
ANMO	**Albuquerque**	**7.69**	**288**	Pn	**Pn**	**17 42 13.4**	**-0.6**
SDCO	**Great Sand Dun**	**8.09**	**309**	Pn	**Pn**	**17 42 19.2**	**-0.4**
121A	**Cookes Peak, D** comp=Z,12nm,1.0s	**8.65**	**270**	IAmb_Lg		17 45 14.1	
N41A	**Harden Midland** comp=Z,15nm,0.8s	**9.43**	**33**	IAmb_Lg		17 45 26.5	

ISN 13 17:44:32.3±1.3, 30°64N×48°31E, h0km±81km, ML3.4
TEH 13 17:44:34.5, 30°71N×48°25E, h11km, ML3.6
IDC 13 17:44:34.1±6.1, 31°01N×48°12E, h0km, mb3.5/3, mb1 3.5/3, mb1mx3.2/33, mbtmp3.5/3, Error ellipse: s-maj=351.3km s-min=30.7km az=150.0
THR 13 17:44:36.3±0.4, 30°86N×48°09E, h15km±5km, ML3.3
ISC 13 17:44:35.1±1.1, 30°71N±0°07×48°26E±0°04, h10km, n43, σ1$50/49, mb3.5/3, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.47**	**18**	*e*Pn	**Pb**	**17 45 01.8**	**-0.8**
SHGR	**Shooshtar-Gavs**	**1.47**	**18**	*e*Pg	**Pb**	**17 45 01.8**	**-0.8**
SHGR				*e*Sg	**Sn**	**17 45 20.4**	**-0.7**
SHGR	comp=E,446nm,0.4s			IAML		17 45 25.8	
NSR	**Nassriya**	**1.84**	**280**	*e*Pn	**Pn**	**17 45 07.0**	**+0.2**
NSR	comp=Z,124nm,0.4s			AML	AML	17 45 21.2	
NSR				*e*Sn	**Sb**	**17 45 32.0**	**-0.1**
NSR	**Nassriya**	**1.84**	**280**	*e*Pn	**Pn**	**17 45 07.0**	**+0.2**
JHBN	**Jahan bin**	**2.56**	**53**	*e*Pn	**Pn**	**17 45 18.3**	**+1.4**
JHBN				*e*		17 46 12.0	
IKMR	**Kamar-syah**	**2.80**	**2**	*e*Pn	**Pn**	**17 45 21.4**	**+1.4**
IKFM	**Kafar-mosalman**	**2.83**	**353**	*e*Pn	**Pn**	**17 45 21.5**	**+1.1**
ROKH	**ROKH**	**2.88**	**55**	*e*Pn	**Pn**	**17 45 22.4**	**+1.1**
ROKH				*e*		17 46 15.3	
KLNJ	**Kolanjah**	**2.88**	**83**	*e*Pn	**Pn**	**17 45 22.1**	**+0.6**
KLNJ				*e*		17 46 24.2	
IPIR	**Pirpir**	**2.99**	**48**	*e*Pn	**Pn**	**17 45 24.2**	**+1.3**
IPIR				*e*		17 46 15.2	
IDOB	**Doab**	**3.07**	**359**	*e*Pn	**Pn**	**17 45 24.9**	**+1.0**
IBDR	**Badra**	**3.11**	**321**	*e*Pn	**Pn**	**17 45 25.0**	**+0.8**
IBDR	comp=Z,43nm,0.5s			AML	AML	17 45 31.4	
IBDR				*e*Sn	**Sb**	**17 46 05.0**	**-3.4**
IBDR	**Badra**	**3.11**	**321**	*e*Pn	**Pn**	**17 45 25.0**	**+0.8**
IKAZ	**Kazeroun**	**3.24**	**106**	*e*Pn	**Pn**	**17 45 29.0**	**+2.7**
BDRS	**Dareh Seyedi**	**3.28**	**9**	*e*Pn	**Pn**	**17 45 28.6**	**+1.7**
KHMZ	**Khomeyn**	**3.35**	**25**	*e*Pn	**Pn**	**17 45 29.5**	**+1.7**
KHMZ	**Khomeyn**	**3.35**	**25**	*e*Pn	**Pn**	**17 45 29.5**	**+1.7**
HSAM	**Samen**	**3.51**	**5**	*e*Pn	**Pn**	**17 45 31.0**	**+1.1**
IKOM	**Komasi**	**3.51**	**350**	*e*Pn	**Pn**	**17 45 31.3**	**+1.3**
IKOM				*e*		17 46 45.7	
IRAM	**Ramesheh**	**3.70**	**72**	*e*Pn	**Pn**	**17 45 33.6**	**+1.0**
IKLH	**Kolahrood**	**3.84**	**46**	*e*Pn	**Pn**	**17 45 35.6**	**+1.1**
IGHG	**Ghaleghazi**	**3.88**	**339**	*e*Pn	**Pn**	**17 45 36.0**	**+0.9**
QAM	**Ghamsar**	**4.07**	**41**	*e*Pn	**Pn**	**17 45 39.0**	**+1.4**
IZEF	**Zefreh**	**4.10**	**57**	*e*Pn	**Pn**	**17 45 39.1**	**+1.0**
ASAO	**Ashtian**	**4.11**	**21**	*e*Pn	**Pn**	**17 45 39.4**	**+1.2**
ASAO	**Ashtian**	**4.11**	**21**	*e*Pn	**Pn**	**17 45 39.4**	**+1.2**
BHD	**Baghdad**	**4.17**	**309**	*e*Pn	**Pn**	**17 45 40.0**	**+1.2**
BHD	comp=Z,6μm,0.3s			AML	AML	17 45 51.4	
BHD				*e*Sn	**Sn**	**17 46 30.0**	**+2.5**
BHD	**Baghdad**	**4.17**	**309**	*e*Pn	**Pn**	**17 45 40.0**	**+1.2**
HAGD	**Aghdareh**	**4.17**	**10**	*e*Pn	**Pn**	**17 45 40.9**	**+1.9**
HAGD				*e*		17 45 42.1	
IDHR	**Dehrash**	**4.28**	**339**	*e*Pn	**Pn**	**17 45 40.7**	**+0.2**
SNGE	**Sanandaj**	**4.44**	**350**	*e*Pn	**Pn**	**17 45 43.1**	**+0.4**
SNGE	**Sanandaj**	**4.44**	**350**	*e*Pn	**Pn**	**17 45 43.1**	**+0.4**
GHVR	**GHOM**	**4.55**	**33**	*e*Pn	**Pn**	**17 45 46.0**	**+1.9**
GHVR	**GHOM**	**4.55**	**33**	*e*Pn	**Pn**	**17 45 46.0**	**+1.9**
KRSH	**Karshahi**	**4.62**	**44**	*e*Pn	**Pn**	**17 45 45.6**	**+0.4**
IRAZ	**Razeghan**	**4.89**	**16**	*e*Pn	**Pn**	**17 45 50.5**	**+1.6**
IKRK	**Kirkuk**	**5.72**	**326**	*e*Pn	**Pn**	**17 46 02.0**	**+1.9**
IKRK				*e*Sn	**Sn**	**17 47 08.0**	**+2.2**
IKRK	**Kirkuk**	**5.72**	**326**	*e*Pn	**Pn**	**17 46 02.0**	**+1.9**
MSL	**Mosul**	**7.12**	**324**	*e*Pn	**Pn**	**17 46 22.0**	**+2.7**
MSL				*e*Sn	**Sn**	**17 47 40.0**	**-0.3**
MSL	**Mosul**	**7.12**	**324**	*e*Pn	**Pn**	**17 46 22.0**	**+2.7**
MKAR	**Makanchi Array** comp=Z,0.3nm,0.6s,baz=246,slow=8.8,SNR=5.9	**30.73**	**49**	P	**P**	**17 50 49.9**	**-0.5**
ZALV	**Zalesovo Beam** comp=Z,0.4nm,0.4s,baz=251,slow=8.7,SNR=2.8	**35.04**	**38**	P	**P**	**17 51 26.7**	**-1.1**
TORD	**Torodi Ar. Bea** comp=Z,0.3nm,0.6s,baz=70,slow=7.7,SNR=2.7	**46.23**	**258**	P	**P**	**17 53 00.8**	**0.0**

IDC 13 17:47:13.7±0.7, 6°75N×72°94W, h158km±8km, mb3.6/6, mb1 3.9/9, mb1mx3.4/38, mbtmp4.1/9, Error ellipse: s-maj=24.0km s-min=7.7km az=131.0
FUNV 13 17:47:13.4, 6°82N×73°22W, h166km, MW3.6
NEIC 13 17:47:14.2±1.1, 6°73N±0°09×72°97W±0°09, h164km±3km, mb4.5/29, Error ellipse: s-maj=14.9km s-min=10.5km az=131.0
RSNC 13 17:47:15.0±1.1, 6°82N×73°15W, h148km±4km, ML3.8, Mw3.8, Fault plane solution: NP1:φ±58.00000°, δ20.00000°, λ-142.00000°.
ISC 13 17:47:13.7±0.6, 6°85N±0°03×73°08W±0°03, h154km±5km, n105, σ1$41/149, mb4.4/19, 7C-11D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**202**	*i*P	**Pn**	**17 47 35.0**	**+0.1**
BARC				*e*S	**Sn**	**17 47 49.9**	**-1.2**
BARC	comp=Z,3μm,0.3s			*i*		17 47 52.6	
PAMC	**Pamplona, Colo**	**0.61**	**38**	*i*P	**Pn**	**17 47 37.8**	**+1.1**
PAMC				*e*S	**Sn**	**17 47 54.7**	**+0.5**
PAMC	comp=Z,1μm,0.5s			*i*		17 47 56.9	
BRRC	**Barranca, Sant**	**0.68**	**292**	*e*P	**Pn**	**17 47 36.8**	**+0.3**
BRRC				*e*S	**Sn**	**17 47 53.7**	**-0.1**
BRRC	comp=Z,951nm,0.4s			*i*		17 47 56.9	
RUSC	**La Rusia**	**0.95**	**180**	*i*P	**Pn**	**17 47 38.9**	**-0.2**
RUSC				*e*S	**Sn**	**17 47 57.7**	**-0.6**
RUSC	comp=Z,876nm,0.4s			*i*		17 47 58.8	
RUSC	**La Rusia**	**0.95**	**180**	*e*P	**Pn**	**17 47 38.7**	**-0.3**
RUSC				*e*S	**Sn**	**17 47 57.3**	**-1.0**
RUSC	**La Rusia**	**0.95**	**180**		**Pn**	**17 47 38.8**	**-0.2**
TAMC	**Tame, Arauca**	**1.34**	**108**	*i*P	**Pn**	**17 47 43.3**	**+1.3**
TAMC				*e*S	**Sn**	**17 48 04.8**	**+1.1**
TAMC	comp=Z,580nm,1.1s			*i*		17 48 14.4	
OCAC	**Ocana**	**1.40**	**350**	*i*P	**Pn**	**17 47 43.1**	**+0.4**
OCAC				*e*S	**Sn**	**17 48 05.1**	**+0.1**
OCAC	comp=Z,740nm,0.5s			*i*		17 48 12.0	
OCAC	comp=Z,766nm,0.3s			*i*		17 48 12.6	
PTBC	**PUERTO BERRIO,**	**1.40**	**257**	*i*P	**Pn**	**17 47 41.4**	**-1.1**
PTBC				*e*S	**Sn**	**17 48 02.5**	**-2.2**
PTBC	comp=Z,680nm,0.2s			*i*		17 48 05.6	
SPBC	**San Pablo de B**	**1.55**	**220**	*e*P	**Pn**	**17 47 43.8**	**-0.3**
SPBC				*e*S	**Sn**	**17 48 06.4**	**-1.2**
SPBC	comp=Z,806nm,0.3s			*i*		17 48 13.2	
ZARC	**Zaragoza, Cauc**	**1.88**	**290**	*e*P	**Pn**	**17 47 47.6**	**0.0**
ZARC				*e*S	**Sn**	**17 48 12.9**	**-0.8**
ZARC	comp=Z,783nm,0.4s			*i*		17 48 18.4	
SMLC	**San Martn de**	**2.17**	**333**	*e*P	**Pn**	**17 47 51.1**	**0.0**
SMLC				*e*S	**Sn**	**17 48 20.0**	**0.0**
SMLC	comp=Z,588nm,0.1s			*i*		17 48 24.0	
NORC	**Norcasia**	**2.19**	**234**	*i*P	**Pn**	**17 47 51.0**	**-0.4**
NORC				*e*S	**Sn**	**17 48 19.0**	**-1.3**
NORC	comp=Z,597nm,0.5s			*i*		17 48 22.5	
CHIC	**Chingaza**	**2.30**	**196**	*i*P	**Pn**	**17 47 52.9**	**-0.1**
CHIC				*e*S	**Sn**	**17 48 22.2**	**-1.1**
CHIC	comp=Z,377nm,0.6s			*i*		17 48 30.2	
ROSC	**El Rosal** comp=Z,65nm,0.3s,baz=128,slow=19,SNR=102	**2.35**	**212**	P	**Pn**	**17 47 55.0**	**+1.4**
ROSC	comp=Z,50nm,0.3s,baz=109,slow=14,SNR=8.2			S	**Sn**	**17 48 24.6**	**+0.3**
ROSC	**El Rosal**	**2.35**	**212**	*i*P	**Pn**	**17 47 54.9**	**+1.4**
ROSC				*e*S	**Sn**	**17 48 25.8**	**+1.5**
ROSC	comp=Z,724nm,0.5s			*i*		17 48 28.7	
ROSC	**El Rosal**	**2.35**	**212**		**Pn**	**17 47 54.9**	**+1.4**
CVER	**Cruz Verde, Cu**	**2.52**	**203**	*e*P	**Pn**	**17 47 57.5**	**+1.8**
CVER				*e*S	**Sn**	**17 48 30.7**	**+2.7**
CVER	comp=Z,7μm,0.6s			*i*		17 48 38.8	
HELC	**Santa Helena**	**2.52**	**255**	*e*P	**Pn**	**17 47 56.0**	**+0.4**
HELC				*e*S	**Sn**	**17 48 26.7**	**-1.2**
HELC	comp=Z,429nm,0.3s			*i*		17 48 33.1	
HELC	**Santa Helena**	**2.52**	**255**	*e*P	**Pn**	**17 47 55.1**	**-0.5**
HELC				*e*S	**Sn**	**17 48 23.0**	**-4.9**
UREC	**San Jos de Ur**	**2.59**	**290**	*e*P	**Pn**	**17 47 55.2**	**-1.0**
UREC				*e*S	**Sn**	**17 48 27.2**	**-1.8**
UREC	comp=Z,422nm,0.3s			*i*		17 48 39.3	
VIGV	**El Vigia**	**2.61**	**41**	*e*P	**Pn**	**17 47 57.5**	**+1.2**
VIGV				*e*S	**Sn**	**17 48 29.2**	**-0.1**
SOCV	**Socops**	**2.62**	**57**	*e*P	**Pn**	**17 47 57.4**	**+0.9**
SOCV				*e*S	**Sn**	**17 48 29.9**	**+0.2**
VILC	**Villavicencio,**	**2.79**	**193**	*e*P	**Pn**	**17 47 58.4**	**-0.3**
VILC				*e*S	**Sn**	**17 48 32.5**	**-1.0**
VILC	comp=Z,554nm,0.5s			*i*		17 48 38.6	
GUY2C	**Guyana, Caldas**	**2.79**	**235**	*e*P	**Pn**	**17 47 59.1**	**+0.1**
GUY2C				*e*S	**Sn**	**17 48 33.5**	**-0.5**
GUY2C	comp=Z,537nm,1.0s			*i*		17 48 39.6	
GUY2C	comp=Z,383nm,0.6s			*i*		17 48 41.7	
PTGC	**Puerto Gaitan,**	**2.80**	**160**	*i*P	**Pn**	**17 47 58.1**	**-0.6**
PTGC				*e*S	**Sn**	**17 48 31.7**	**-1.8**
PTGC	comp=Z,196nm,0.6s			*i*		17 48 35.9	
RREF	**El Recreo**	**2.97**	**230**	*e*P	**Pn**	**17 48 01.5**	**0.0**
RREF				*e*S	**Sn**	**17 48 38.2**	**-0.2**
RREF	comp=Z,358nm,0.6s			*i*		17 48 44.6	
CBOC	**Ciudad Bolivar**	**3.08**	**252**	*e*P	**Pn**	**17 48 02.9**	**+0.5**
CBOC				*e*S	**Sn**	**17 48 38.1**	**-1.8**
CBOC	comp=Z,121nm,0.7s			*i*		17 48 51.8	
CBOC	comp=Z,138nm,0.9s			*i*		17 48 52.4	
CODC	**Agustn Codazz**	**3.09**	**353**	*e*P	**Pn**	**17 48 02.5**	**+0.2**
CODC				*e*S	**Sn**	**17 48 40.8**	**+0.7**
CODC	comp=Z,123nm,0.6s			*i*		17 48 51.1	
DBBC	**Dabeiba**	**3.11**	**273**	*e*P	**Pn**	**17 48 02.8**	**+0.1**
DBBC				*e*S	**Sn**	**17 48 39.1**	**-1.6**
DBBC	comp=Z,271nm,0.7s			*i*		17 48 57.4	
SDV	**Santo Domingo** comp=Z,65nm,0.3s,baz=221,slow=13,SNR=279	**3.16**	**50**	P	**Pn**	**17 48 04.5**	**+1.1**
SDV	comp=Z,31nm,0.3s,baz=287,slow=17,SNR=10			S	**Sn**	**17 48 41.6**	**-0.3**
SDV	**Santo Domingo**	**3.16**	**50**	*e*P	**Pn**	**17 48 04.3**	**+0.9**
SDV				*e*S	**Sn**	**17 48 41.9**	**0.0**
SDV	**Santo Domingo**	**3.16**	**50**		**Pn**	**17 48 04.3**	**+0.9**
TOLC	**Tolima**	**3.17**	**225**	*e*P	**Pn**	**17 48 04.3**	**+0.7**
TOLC				*e*S	**Sn**	**17 48 39.4**	**-2.9**
TOLC	comp=Z,171nm,0.7s			*i*		17 48 48.6	
ARGC	**Ariguani, Magd**	**3.21**	**339**	*e*P	**Pn**	**17 48 05.5**	**+1.7**
ARGC				*e*S	**Sn**	**17 48 43.5**	**+0.8**
ARGC	comp=Z,141nm,0.5s			*i*		17 48 50.6	
ELOV	**Elorza**	**3.57**	**87**	*e*P	**Pn**	**17 48 09.3**	**+0.8**
ELOV				*e*S	**Sn**	**17 48 50.4**	**-0.6**
ORTC	**Ortega, Tolima**	**3.63**	**217**	*e*P	**Pn**	**17 48 09.3**	**0.0**
ORTC				*e*S	**Sn**	**17 48 51.7**	**-0.9**
ORTC	comp=Z,283nm,0.4s			*i*		17 48 56.3	
SJCC	**San Jacinto, C**	**3.67**	**326**	*i*P	**Pn**	**17 48 09.1**	**-0.8**
SJCC				*e*S	**Sn**	**17 48 50.8**	**-2.8**
SJCC				*i*		17 48 54.3	
PLMC	**San Jos del P** comp=Z,224nm,0.6s	**3.73**	**239**	*e*P	**Pn**	**17 48 11.0**	**+0.4**
PLMC				*e*S	**Sn**	**17 48 52.7**	**-2.1**
PLMC	comp=Z,250nm,0.2s			*i*		17 49 00.8	
LCBC	**Los crdobas,**	**3.82**	**302**	*e*S	**Sn**	**17 48 58.0**	**+1.1**
QARV	**Quebrada Arrib**	**4.18**	**37**	*e*P	**Pn**	**17 48 17.5**	**+1.0**
QARV				*e*S	**Sn**	**17 49 02.7**	**-2.7**
YOTC	**Yotoco, Valle**	**4.32**	**229**	*e*P	**Pn**	**17 48 17.2**	**-1.2**
YOTC				*e*S	**Sn**	**17 49 11.0**	**+2.2**
YOTC	comp=Z,43nm,0.7s			*i*		17 49 20.0	
CURV	**Curarigua**	**4.40**	**44**	*e*P	**Pn**	**17 48 19.8**	**+0.4**
CURV				*e*S	**Sn**	**17 49 08.3**	**-2.3**
SMRC	**Santa Marta, M**	**4.43**	**345**	*e*P	**Pn**	**17 48 19.9**	**+0.2**
SMRC				*e*S	**Sn**	**17 49 08.5**	**-2.7**
SMRC	comp=Z,63nm,0.4s			*i*		17 49 10.6	
PTAC	**Punta Ardita,**	**4.71**	**274**	*e*P	**Pn**	**17 48 22.9**	**-0.4**
MACC	**Macarena, Meta**	**4.74**	**189**	*e*P	**Pn**	**17 48 22.3**	**-1.5**
MACC				*e*S	**Sn**	**17 49 13.3**	**-5.1**
URIC	**Uribia, Colomb**	**4.94**	**12**	Pn	**Pn**	**17 48 25.7**	**-0.6**
SIQV	**Siquisique**	**4.97**	**40**	*e*P	**Pn**	**17 48 26.5**	**-0.3**
SIQV				*e*S	**Sn**	**17 49 20.2**	**-3.7**
BAUV	**El Baul**	**5.41**	**67**	*e*P	**Pn**	**17 48 31.2**	**-1.4**
BAUV				*e*S	**Sn**	**17 49 30.9**	**-3.3**
MAPV	**Macapo**	**5.45**	**57**	*e*P	**Pn**	**17 48 33.1**	**0.0**
PCON	**Cinco Dias**	**5.58**	**217**	*e*P	**Pn**	**17 48 36.1**	**+0.7**
POPC	**Popayan, Colom**	**5.58**	**220**	*e*P	**Pn**	**17 48 34.6**	**-0.6**
FLOC	**Florencia**	**5.83**	**206**		**Pn**	**17 48 37.9**	**-0.4**
MONV	**Montecano**	**5.93**	**31**	*e*P	**Pn**	**17 48 38.8**	**-0.7**
MONV				*e*S	**Sn**	**17 49 41.8**	**-4.8**
BIRV	**Birongo**	**7.63**	**61**	*e*P	**Pn**	**17 49 01.0**	**-1.2**
CUPV	**Cpira**	**7.88**	**66**	*e*P	**Pn**	**17 49 04.3**	**-1.3**
OTAV	**Otavalo**	**8.48**	**219**		**Pn**	**17 49 13.8**	**-0.1**
PCRV	**Puerto La Cruz** comp=Z,0.8nm,0.3s,baz=324,slow=19,SNR=2.9	**8.98**	**68**	P	**Pn**	**17 49 18.1**	**-2.0**
PLCV	**Puerto La Cruz**	**9.02**	**68**		**Pn**	**17 49 18.1**	**-2.5**
SAML	**Samuel**	**18.54**	**148**	P	**P**	**17 51 17.8**	**-0.8**
152A	**Waverly Hall**	**27.88**	**339**	P	**P**	**17 52 51.7**	**+2.6**
152A	comp=Z,11nm,1.2s			IAmb	IAmb	17 53 25.3	
JSC	**Jenkinsville**	**28.33**	**346**	P	**P**	**17 52 52.9**	**-0.1**
JSC	comp=Z,5.1nm,0.8s			IAmb	IAmb	17 52 54.8	
Z50A	**Ashland**	**28.85**	**337**	P	**P**	**17 53 00.1**	**+2.3**
X48A	**Hartselle**	**30.34**	**337**	P	**P**	**17 53 12.8**	**+1.9**
X48A	comp=Z,19nm,1.4s			IAmb	IAmb	17 54 02.0	
U54A	**Nelsons Funny**	**30.60**	**346**	P	**P**	**17 53 15.5**	**+2.3**
U54A	comp=Z,14nm,1.3s			IAmb	IAmb	17 54 11.2	
PLAL	**Pickwick Lake**	**31.22**	**336**	P	**P**	**17 53 19.9**	**+1.3**
V48A	**Smith Brothers**	**31.40**	**338**	P	**P**	**17 53 22.4**	**+2.3**
V48A	comp=Z,7.3nm,0.8s			IAmb	IAmb	17 53 23.1	
WVT	**Waverly**	**32.12**	**337**	P	**P**	**17 53 27.5**	**+1.0**
WVT	comp=Z,12nm,1.2s			IAmb	IAmb	17 53 28.7	
PSUB	**Penn St. - Bra**	**33.00**	**357**	P	**P**	**17 53 33.9**	**-0.1**
P51A	**Williamsport**	**33.71**	**346**	P	**P**	**17 53 40.4**	**+0.2**
P51A	comp=Z,6.6nm,0.8s			IAmb	IAmb	17 53 43.1	
PBMO	**Poplar Bluff**	**33.74**	**334**	P	**P**	**17 53 41.8**	**+1.3**
PBMO	comp=Z,8.4nm,0.8s			IAmb	IAmb	17 53 42.9	
BLO	**Bloomington**	**34.39**	**341**	P	**P**	**17 53 46.1**	**0.0**
U40A	**Yellville**	**34.49**	**331**	P	**P**	**17 53 48.3**	**+1.3**
U40A	comp=Z,9.1nm,0.7s			IAmb	IAmb	17 53 49.0	
P46A	**Rosedale**	**35.01**	**341**	P	**P**	**17 53 52.7**	**+1.2**
CCM	**Cathedral Cave**	**35.16**	**335**	P	**P**	**17 53 53.7**	**+1.0**
CCM	comp=Z,9.0nm,0.7s			IAmb	IAmb	17 53 54.6	
SFIN	**Lafayette**	**35.67**	**341**	P	**P**	**17 53 58.5**	**+1.5**
TXAR	**Lajitas Array** comp=Z,1.0nm,0.6s,baz=124,slow=8.7,SNR=13	**36.48**	**312**	P	**P**	**17 54 05.0**	**+0.9**
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**17 54 04.8**	**+0.6**
TX31	**Lajitas Ar. Si**	**36.48**	**312**	P	**P**	**17 54 04.8**	**+0.6**
TX32	**Lajitas Array**	**36.48**	**312**	P	**P**	**17 54 04.8**	**+0.6**
WMOK	**Wichita Mounta**	**36.48**	**323**	P	**P**	**17 54 04.0**	**-0.1**
JFWS	**Jewell Farm**	**38.98**	**340**	P	**P**	**17 54 25.6**	**+0.7**
JFWS	comp=Z,7.5nm,0.6s			IAmb	IAmb	17 54 26.1	
EYMN	**Ely**	**43.86**	**342**	P	**P**	**17 55 05.1**	**+0.6**
EYMN	comp=Z,7.0nm,0.8s			IAmb	IAmb	17 55 06.2	
X16A	**Lo Mia Camp, P**	**44.74**	**313**	P	**P**	**17 55 13.2**	**+1.1**
PHWY	**Pilot Hill**	**44.79**	**325**	P	**P**	**17 55 12.9**	**+0.4**
ULM	**Lac du Bonnet** comp=Z,3.9nm,0.5s,baz=151,slow=7.7,SNR=9.7	**47.27**	**340**	P	**P**	**17 55 31.2**	**-0.1**
MSU	**Marysvale**	**47.31**	**318**	P	**P**	**17 55 33.6**	**+1.4**
PD31	**Pinedale Array**	**48.08**	**324**	P	**P**	**17 55 37.2**	**-0.8**
PD31	comp=Z,14nm,1.9s			IAmb	IAmb	17 56 45.9	
PDAR	**Pinedale Array** comp=Z,0.5nm,0.5s,baz=126,slow=8.6,SNR=5.6	**48.08**	**324**	P	**P**	**17 55 38.9**	**+0.9**
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**17 55 38.7**	**+0.7**
SCHQ	**Schefferville** comp=Z,3.0nm,0.7s,baz=217,slow=6.4

0.5nm,0.7s,baz=125,slow=5.6,SNR=6.5
SONM Songino Array 70.05 327 P P 18 11 06.7 +0.7
0.1nm,0.4s,baz=128,slow=6.2,SNR=3.9
MKAR Makanchi Array 84.24 318 P P 18 12 24.9 -0.7
0.4nm,0.8s,baz=96,slow=5.8,SNR=3.5

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*SJA **13** 18:01:55.3±0.3,34.97S×71.14W,h90km±9km, ML3.9*
*GUC **13** 18:01:56.1±0.7,35.00S×71.15W,h91km±5km, ML3.2*
ISC 13 18:01:55.2±2.9,35.1S±0.1×71.03W±0.07,h80km±27km, n19,σ1§24/30,3C,Central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.74**	**277**	⇑*iP*			**Pn**	**18 02 11.9**	**+0.6**
GO05				*i*S			**Sn**	**18 02 23.8**	**+0.6**
GO05	**Huala**	**0.74**	**277**	*i*P			**Pn**	**18 02 12.0**	**+0.7**
COIS	**El Sosneado**	**1.18**	**91**	*i*P			**Pn**	**18 02 14.4**	**-2.1**
LMEL	**Las Melosas**	**1.43**	**29**	⇑*eP*			**Pn**	**18 02 20.6**	**+0.9**
LMEL				*e*S			**Sn**	**18 02 39.4**	**+1.3**
LMEL				IAML				18 02 44.1	
	comp=N,338nm,0.3s								
MT03	**Universidad Ad**	**1.66**	**15**	*eP*			**Pn**	**18 02 22.9**	**+0.1**
MT03				*i*S			**Sn**	**18 02 43.4**	**-0.2**
MT05	**Renca**	**1.72**	**8**	*i*S			**Sn**	**18 02 43.9**	**-1.0**
MT05				IAML				18 02 47.7	
	comp=E,562nm,0.2s								
CLCH	**Cerro Calan**	**1.75**	**14**	*eP*			**Pn**	**18 02 24.0**	**+0.1**
CLCH				*e*S			**Sn**	**18 02 45.6**	**+0.1**
CLCH				IAML				18 02 47.4	
	comp=E,522nm,0.3s								
FCH	**Farellones**	**1.87**	**19**	⇑*iP*			**Pn**	**18 02 26.3**	**+0.6**
FCH				*i*S			**Sn**	**18 02 48.7**	**-0.1**
FCH				IAML				18 02 54.0	
	comp=N,239nm,0.4s								
PEL	**Peldehue**	**1.98**	**9**	*eP*			**Pn**	**18 02 26.3**	**-0.5**
PEL				*i*S			**Sn**	**18 02 49.9**	**-1.0**
PEL				IAML				18 02 52.7	
	comp=E,199nm,0.2s								
PEL	**Peldehue**	**1.98**	**9**	*i*P			**Pn**	**18 02 27.2**	**+0.5**
PEL				*i*S			**Sn**	**18 02 50.6**	**-0.2**
ROC1	**El Roble**	**2.12**	**0**	*i*P			**Pn**	**18 02 29.1**	**+0.1**
ROC1				*i*S			**Sn**	**18 02 53.0**	**-1.6**
ROCH	**El Roble**	**2.12**	**1**	*eP*			**Pn**	**18 02 28.8**	**-0.1**
ROCH				*i*S			**Sn**	**18 02 54.0**	**-0.7**
ROCH				IAML				18 02 58.0	
	comp=N,168nm,0.3s								
VA01	**Torpederas**	**2.14**	**346**	*eP*			**Pn**	**18 02 28.5**	**-0.4**
VA01				*i*S			**Sn**	**18 02 52.6**	**-1.9**
VA03	**San Esteban**	**2.37**	**10**	*eP*			**Pn**	**18 02 32.0**	**-0.1**
VA03				*i*S			**Sn**	**18 02 59.6**	**-0.7**
VA03				IAML				18 03 04.8	
	comp=E,144nm,0.2s								
ASAL	**Salagasta**	**3.10**	**37**	*i*P			**Pn**	**18 02 46.5**	**+4.5**
CFA	**Coronel Fontan**	**4.20**	**35**	*i*P			**Pn**	**18 02 57.8**	**+0.9**
RTLL	**Cerro Villicun**	**4.33**	**30**	*i*P			**Pn**	**18 02 59.3**	**+0.6**
AMOG	**MOGNA**	**4.67**	**28**	*i*P			**Pn**	**18 03 03.6**	**+0.3**
AMOG				IAML				18 03 06.0	
	comp=Z,96nm,0.1s								
ACCO	**Cerro Coronel**	**4.80**	**21**	*i*P			**Pn**	**18 03 05.0**	**-0.3**

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*NEIC **13** 18:08:08.3±1.9,2.8S±0.1×139.0E±0.1, h20km±5km, mb4.4/8, Error ellipse: s-maj=16.9km s-min=14.4km az=139.0*
*IDC **13** 18:08:09.8±3.3,2.70S×138.91E, h26km±24km, mb3.7/8, mb1 4.0/11,mb1mx3.8/33,mbtmp4.0/11, ML4.1/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/30, Error ellipse: s-maj=21.7km s-min=15.9km az=121.0*
ISC 13 18:08:07.7±0.6,2.75S±0.09×138.87E±0.08,h10km,n25, σ1§24/25,mb3.9/8,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.85**	**83**	Pn			**Pn**	**18 08 40.1**	**+0.5**
	25nm,0.3s,baz=234,slow=13,SNR=75								
JAY				Pg			**Pb**	**18 08 43.0**	**+1.3**
	33nm,0.3s,baz=281,slow=11,SNR=82								
JAY				Lg			Lg	18 09 06.7	
	30nm,0.3s,baz=148,slow=23,SNR=9.9								
SIJI	**Sorong**	**7.82**	**284**	Pn			**Pn**	**18 10 03.1**	**+1.4**
	1.1nm,0.3s,baz=237,slow=23,SNR=7.9								
BATI	**Baumata**	**16.82**	**243**	Pn			**Pn**	**18 12 05.8**	**+2.3**
	1.7nm,0.3s,baz=166,slow=4.2,SNR=3.1								
WR0	**Warramunga Arr**	**17.62**	**194**				**Pn**	**18 12 13.4**	**-0.1**
WR0				IAmb			IAmb	18 12 24.6	
	comp=Z,100nm,2.0s								
WRAB	**Tennant Creek**	**17.64**	**194**				**Pn**	**18 12 12.9**	**-0.8**
WRAB				IAmb			IAmb	18 12 24.2	
	comp=Z,15nm,0.9s								
WRA	**Warramunga Arr**	**17.65**	**194**	P			**Pn**	**18 12 13.8**	**0.0**
	comp=Z,0.6nm,0.3s,baz=16,slow=12,SNR=15								
WRA	**Warramunga Arr**	**17.65**	**194**	P			**Pn**	**18 12 12.6**	**-1.3**
KAPI	**Kappang**	**19.20**	**263**	LR			LR	18 21 10.9	
	comp=Z,39nm,21.2s,baz=316,slow=41								
FITZ	**Fitzroy Crossi**	**20.02**	**219**	P			**P**	**18 12 41.3**	**+0.5**
	comp=Z,3.7nm,0.8s,baz=35,slow=8.3,SNR=10								
FITZ				LR			LR	18 21 09.3	
	comp=Z,80nm,18.8s,baz=36,slow=39								
FITZ	**Fitzroy Crossi**	**20.02**	**219**	P			**P**	**18 12 40.1**	**-0.7**
FITZ				IAmb			IAmb	18 12 53.8	
	comp=Z,31nm,1.4s								
AS31	**Alice Springs**	**21.34**	**193**	P			**P**	**18 12 54.7**	**-0.5**
ASAR	**Alice Springs**	**21.34**	**193**	P			**P**	**18 12 55.1**	**-0.1**
	comp=Z,4.1nm,0.8s,baz=25,slow=9.8,SNR=26								
ASAR	**Alice Springs**	**21.34**	**193**	P			**P**	**18 12 54.8**	**-0.4**
KLR	**Kul'dur**	**52.14**	**354**	P			**P**	**18 17 18.7**	**+0.5**
	comp=Z,3.0nm,0.6s,baz=179,slow=5.0,SNR=18								
SONM	**Songino Array**	**57.83**	**335**	P			**P**	**18 17 59.8**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=123,slow=5.3,SNR=2.7								
SONM	**Songino Array**	**57.83**	**335**	P			**P**	**18 17 59.1**	**-0.4**
WMQ	**Urumqi**	**65.14**	**322**	P			**P**	**18 18 50.2**	**+1.1**
MKAR	**Makanchi Array**	**69.92**	**322**	P			**P**	**18 19 18.4**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=107,slow=7.9,SNR=9.0								
MKAR	**Makanchi Array**	**69.92**	**322**	P			**P**	**18 19 18.2**	**-0.9**
ZALV	**Zalesovo Beam**	**72.05**	**330**	P			**P**	**18 19 29.6**	**-2.3**
	comp=Z,0.4nm,0.4s,baz=123,slow=5.3,SNR=2.8								
ZALV	**Zalesovo Beam**	**72.05**	**330**	P			**P**	**18 19 29.7**	**-2.2**
VNDA	**Vanda**	**75.72**	**175**	P			**P**	**18 19 54.0**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=347,slow=6.7,SNR=5.1								
MAW	**Mawson**	**82.14**	**202**	P			**P**	**18 20 26.7**	**-1.6**
MAW				IAmb			IAmb	18 20 32.8	
	comp=Z,2.0nm,0.6s								
ILAR	**Eielson Array**	**85.81**	**24**	P			**P**	**18 20 45.6**	**-1.6**
	comp=Z,1.1nm,0.7s,baz=265,slow=4.3,SNR=18								
ILAR	**Eielson Array**	**85.81**	**24**	P			**P**	**18 20 45.7**	**-1.4**

MAN 13 18:12:21.7,7.06N×124.05E,h1km,mb4.1,ML2.9,MS2.5, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKMP	**Bagumbayan, Su**	**0.72**	**138**	*eP*			Pg	18 12 35.9	+0.4
SKMP				*e*S			Sg	18 12 43.4	-1.6
GSPH	**General Santos**	**1.31**	**137**	⇑*eP*			Pg	18 12 39.1	-7.8
GSPH				*i*S			Sg	18 12 49.2	-15

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*TAP **13** 18:12:33.9,24.64N×122.23E,h16km,ML4.4,C*
*JMA **13** 18:12:34.3,24.59N×122.24E,h29km,M3.6*
*IDC **13** 18:12:39.3±5.5,24.72N×122.53E,h59km±55km, mb3.4/7, mb1 3.5/8,mb1mx3.3/51,mbtmp3.6/8, ML3.2/1,MS3.0/5, Ms1 3.1/5,ms1mx2.8/19, Error ellipse: s-maj=32.3km s-min=18.3km az=71.0*
ISC 13 18:12:33.7±0.9,24.62N±0.02×122.28E±0.02,h11km±6km, n144,σ0§80/217,MS2.9/3,7C-24D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.15**	**244**	⇑P			**Pb**	**18 12 37.9**	**-0.6**
	baz=233								
EOS1				S			**Sg**	**18 12 41.2**	**+1.5**
	baz=233								
TWC	**Suao**	**0.39**	**269**	P			**Pg**	**18 12 40.9**	**-0.7**
	baz=264								
TWC				*e*S			**Sg**	**18 12 47.1**	**+0.4**
	baz=264								
TWB1	**Santiao Chiao**	**0.47**	**326**	⇑*iP*			**Pg**	**18 12 42.8**	**-0.2**
	baz=336								
TWB1				S			**Sg**	**18 12 48.4**	**-0.9**
	baz=336								
NTC	**Toucheng**	**0.47**	**300**	*eP*			**Pg**	**18 12 42.7**	**-0.3**
	baz=299								
NTC				S			**Sg**	**18 12 49.6**	**+0.4**
	baz=299								
ILA	**Ilan**	**0.51**	**287**	⇓P			**Pg**	**18 12 43.4**	**-0.2**
	baz=278								
ILA				S			**Sg**	**18 12 50.8**	**+0.4**
	baz=278								
NANB	**Nanao**	**0.52**	**249**	⇑P			**Pg**	**18 12 43.4**	**-0.5**
	baz=249								
NANB				*e*S			**Sg**	**18 12 50.6**	**-0.1**
	baz=249								
ENA	**Nanau**	**0.52**	**249**	⇓P			**Pg**	**18 12 43.5**	**-0.5**
	baz=249								
ENA				*e*S			**Sg**	**18 12 51.1**	**+0.1**
	baz=249								
TIPB	**Shuangxi**	**0.54**	**311**	⇓P			**Pg**	**18 12 44.2**	**-0.2**
	baz=305								
TIPB				*e*S			**Sg**	**18 12 49.8**	**-1.8**
	baz=305								
TWE	**Neicheng**	**0.57**	**281**	⇓*iP*			**Pg**	**18 12 44.2**	**-0.6**
	baz=272								
TWE				*e*S			**Sg**	**18 12 52.5**	**+0.2**
	baz=272								
SLBB	**Yuanshan**	**0.60**	**283**	⇓*iP*			**Pg**	**18 12 44.1**	**-1.3**
	baz=275								
SLBB				*e*S			**Sg**	**18 12 53.2**	**-0.2**
	baz=275								
JYNG	**Yonaguni jima**	**0.63**	**105**	P			**Pb**	**18 12 46.8**	**+0.1**
JYNG				S			**Sb**	**18 12 56.8**	**+1.3**
NWF	**Wu-fen Shan**	**0.64**	**315**	⇑P			**Pg**	**18 12 46.4**	**+0.2**
	baz=311								
NWF				S			**Sb**	**18 12 56.0**	**+0.1**
	baz=311								
WFSB	**Wu-fen Shan**	**0.64**	**315**	*eP*			**Pg**	**18 12 46.4**	**+0.2**
	baz=311								
WFSB				S			**Sg**	**18 12 55.0**	**+0.4**
	baz=311								
ENTT	**Nioudou**	**0.65**	**272**	⇓P			**Pg**	**18 12 45.6**	**-0.7**
	baz=264								
ENTT				*e*S			**Sg**	**18 12 54.5**	**-0.4**
	baz=264								
YOJ	**Yonaguni jima**	**0.69**	**103**	⇓P			**Pb**	**18 12 47.8**	**+0.1**
	baz=104								
YOJ				S			**Sb**	**18 12 57.9**	**+0.7**
	baz=104								
YOJ	**Yonaguni jima**	**0.69**	**103**	P			**Pb**	**18 12 47.7**	**+0.1**
YOJ				*e*S			**Sb**	**18 12 57.8**	**+0.7**
NDT	**Datong Townshi**	**0.70**	**269**	⇓*eP*			**Pg**	**18 12 46.7**	**-0.6**
	baz=266								
NDT				S			**Sg**	**18 12 56.0**	**-0.4**
	baz=266								
NWLT	**Wulai**	**0.72**	**283**	⇓*eP*			**Pg**	**18 12 47.1**	**-0.7**
	baz=281								
NWLT				*e*S			**Sg**	**18 12 56.4**	**-0.9**
	baz=281								
TWA	**Mucha**	**0.73**	**300**	*eP*			**Pg**	**18 12 47.7**	**-0.2**
	baz=288								
TWA				S			**Sg**	**18 12 56.4**	**-1.0**
	baz=288								
NACB	**Ninganchiao**	**0.76**	**235**	⇑P			**Pg**	**18 12 47.9**	**-0.6**
	baz=238								
NACB				*e*S			**Sg**	**18 12 57.3**	**-1.2**
	baz=238								
NHDH	**Xindian Distri**	**0.77**	**297**	⇓*eP*			**Pg**	**18 12 48.8**	**+0.2**
	baz=289								
NHDH				S			**Sg**	**18 12 58.2**	**-0.4**
	baz=289								
TATO	**Taipei**	**0.80**	**297**	P			**Pg**	**18 12 49.1**	**-0.1**
	baz=285								
TATO				*e*S			**Sg**	**18 12 58.7**	**-1.1**
	baz=285								
TAP1	**Taipei**	**0.81**	**302**	⇓P			**Pb**	**18 12 50.0**	**+0.3**
	baz=315								
TAP1				*e*S			**Sg**	**18 12 59.3**	**-0.5**
	baz=315								
TAP	**Taipei**	**0.82**	**301**	⇓P			**Pb**	**18 12 50.0**	**+0.1**
	baz=315								
TAP				*e*S			**Sg**	**18 12 59.7**	**-0.6**
	baz=315								
TWD	**Chiawan**	**0.82**	**230**	*eP*			**Pg**	**18 12 49.2**	**-0.3**
	baz=231								
TWD				*e*S			**Sg**	**18 12 59.9**	**-0.4**
	baz=231								
YHNB	**Yeheng**	**0.82**	**274**	⇓P			**Pg**	**18 12 48.9**	**-0.7**
	baz=267								
YHNB				S			**Sg**	**18 12 59.5**	**-0.9**
	baz=267								
ETLH	**Xiulin Townshi**	**0.83**	**241**	*eP*			**Pg**	**18 12 49.2**	**-0.7**
	baz=244								
ETLH				*e*S			**Sg**	**18 13 00.7**	**0.0**
	baz=244								
YM01	**YM01**	**0.83**	**310**	*eP*			**Pb**	**18 12 50.2**	**0.0**
	baz=309								
YM01				S			**Sg**	**18 12 59.9**	**-0.8**
	baz=309								
NNSH	**Datong**	**0.84**	**257**	⇓P			**Pg**	**18 12 49.2**	**-0.8**
	baz=254								
NNSH				S			**Sg**	**18 13 00.2**	**-0.7**
	baz=254								
YM11	**YM11**	**0.84**	**311**	⇓*eP*			**Pb**	**18 12 50.3**	**-0.1**
	baz=310								
YM11				*e*S			**Sg**	**18 12 59.7**	**-1.4**
	baz=310								
NNS	**Nan Shan**	**0.84**	**258**	⇓*iP*			**Pg**	**18 12 49.1**	**-0.9**
	baz=254								
NNS				S			**Sg**	**18 13 00.5**	**-0.6**
	baz=254								
YM10	**YM10**	**0.84**	**310**	⇓P			**Pb**	**18 12 50.2**	**-0.2**
	baz=309								
YM10				S			**Sg**	**18 13 01.2**	**0.0**
	baz=309								
YM08	**YM08**	**0.85**	**312**	*eP*			**Pg**	**18 12 50.0**	**-0.1**
	baz=312								
YM08				*e*S			**Sg**	**18 13 00.6**	**-0.6**
	baz=312								
HWA	**Hwalien**	**0.88**	**224**	*eP*			**Pn**	**18 12 52.2**	**+0.2**
	baz=221								
ANP	**Anpu**	**0.89**	**310**	*eP*			**Pb**	**18 12 51.4**	**+0.1**
	baz=310								
TWY	**Chenhua**	**0.90**	**317**	*eP*			**Pb**	**18 12 51.4**	**+0.1**
	baz=317								
TWY				S			**Sg**	**18 13 03.1**	**+0.2**
	baz=317								
TWS1	**Kuangyinshan**	**0.92**	**302**	P			**Pn**	**18 12 52.1**	**-0.4**
	baz=315								
TWS1				S			**Sg**	**18 13 03.2**	**-0.2**
	baz=315								
NTST	**Danshui**	**0.93**	**306**	*eP*			**Pb**	**18 12 52.2**	**+0.4**
	baz=305								
NTST				*e*S			**Sb**	**18 13 04.7**	**+0.5**
	baz=305								
ENLB	**Shoufeng**	**0.94**	**221**	*eP*			**Pn**	**18 12 52.4**	**-0.4**
	baz=198								
ENLB				*e*S			**Sn**	**18 13 07.0**	**+0.8**
	baz=198								
WLTB	**Daxi**	**0.96**	**284**	*eP*			**Pb**	**18 12 52.6**	**+0.2**
	baz=275								
WLTB				*e*S			**Sb**	**18 13 05.1**	**0.0**
	baz=275								
WHF	**Hehuan Shan**	**1.04**	**243**	*eP*			**Pg**	**18 12 53.0**	**-0.8**
	baz=239								
WHF				*e*S			**Sg**	**18 13 06.9**	**-0.4**
	baz=239								
NCU	**National Centr**	**1.05**	**290**	⇓P			**Pg**	**18 12 54.1**	**+0.1**
	baz=288								
NCU				S			**Sg**	**18 13 08.3**	**+0.6**
	baz=288								
NCUH	**Zhongli**	**1.05**	**290**	*eP*			**Pn**	**18 12 54.4**	**0.0**
	baz=288								
NCUH				*e*S			**Sn**	**18 13 09.1**	**+0.1**
	baz=288								
TWT	**Tachien**	**1.07**	**250**	⇑P			**Pg**	**18 12 54.4**	**+0.1**
	baz=241								
TWT				S			**Sb**	**18 13 08.4**	**0.0**
	baz=241								
TDCB	**Techi**	**1.08**	**251**	*eP*			**Pb**	**18 12 54.2**	**-0.4**
	baz=241								
TDCB				*e*S			**Sb**	**18 13 07.8**	**-0.9**
	baz=241								
ESL	**Shilin**	**1.11**	**224**	*eP*			**Pg**	**18 12 55.0**	**-0.1**
	baz=211								
ESL				*e*S			**Sg**	**18 13 09.7**	**+0.1**
	baz=211								
CHGB	**Renai**	**1.15**	**241**	⇓P			**Pb**	**18 12 55.3**	**-0.4**
	baz=238								
CHGB				*e*S			**Sb**	**18 13 10.6**	**-0.1**
	baz=238								
LIOB	**Emei**	**1.15**	**272**	*eP*			**Pg**	**18 12 56.2**	**+0.3**
	baz=262								
LIOB				*e*S			**Sn**	**18 13 11.8**	**+0.3**
	baz=262								
NSTT	**Nanjuang**	**1.16**	**271**	P			**Pg**	**18 12 56.1**	**0.0**
	baz=261								
NSTT				S			**Sg**	**18 13 11.2**	**0.0**
	baz=261								
SBCB	**Hsinchu**	**1.19**	**279**	*eP*			**Pn**	**18 12 56.2**	**-0.1**
	baz=297								
OWD	**Renai**	**1.20**	**237**	*eP*			**Pg**	**18 12 56.7**	**-0.2**
	baz=239								
OWD				*e*S			**Sn**	**18 13 12.8**	**-0.2**
	baz=239								
HSN	**Hsinchu**	**1.21**	**279**	*eP*			**Pn**	**18 12 56.2**	**-0.3**
	baz=297								
HSN				*e*S			**Sb**	**18 13 11.7**	**-0.4**
	baz=297								
EGFH	**Guangfu**	**1.22**	**220**	*eP*			**Pb**	**18 12 56.9**	**+0.1**
	baz=202								
WHP	**Taichung City**	**1.26**	**255**	*eP*			**Pb**	**18 12 57.6**	**+0.1**
	baz=253								
VWDT	**VWDT**	**1.35**	**231**	*eP*			**Pb**	**18 12 59.0**	**+0.1**
	baz=210								
VWDT				*e*S			**Sg**	**18 13 17.4**	**+0.3**
	baz=210								
IRIF	**Iriomote-Funau**	**1.35**	**102**	P			**Pn**	**18 12 57.7**	**-0.8**
IRIF				*e*S			**Sb**	**18 13 14.7**	**-1.6**
NMLH	**Miaoli**	**1.36**	**267**	*eP*			**Pg**	**18 13 00.1**	**+0.3**
	baz=264								
NMLH				*e*S			**Sg**	**18 13 18.8**	**+1.4**
	baz=264								
DPDB	**Guoxing**	**1.36**	**245**	P			**Pb**	**18 12 59.3**	**0.0**
	baz=249								
DPDB				S			**Sb**	**18 13 16.6**	**-0.1**
	baz=249								
HGSD	**Ruisui**	**1.36**	**215**	*eP*			**Pn**	**18 12 58.5**	**-0.2**
	baz=200								
NSY	**Sanyi**	**1.40**	**262**	*eP*			**Pg**	**18 13 01.3**	**+0.7**
	baz=272								
NSY				*e*S			**Sg**	**18 13 19.3**	**+0.6**
	baz=272								
EHY	**Hungye**	**1.41**	**219**	*eP*			**Pn**	**18 12 58.9**	**-0.4**
	baz=216								
PTSB	**Yuanli**	**1.44**	**264**	*eP*			**Pg**	**18 13 01.4**	**-0.1**
	baz=281								
SSLB	**Suanglung**	**1.46**	**236**	⇓*eP*			**Pg**	**18 13 01.2**	**+0.2**
	baz=238								
SSLB				*e*S			**Sg**	**18 13 20.2**	**-0.7**
	baz=238								
TYC	**Yuchr**	**1.48**	**242**	*eP*			**Pb**	**18 13 01.6**	**+0.4**
	baz=243								
TYC				*e*S			**Sg**	**18 13 21.2**	**-0.2**
	baz=243								
HATJ	**Hateruma jima**	**1.50**	**111**	P			**Pb**	**18 13 01.2**	**-0.4**
HATJ				*e*S			**Sn**	**18 13 18.3**	**-1.7**
YULB	**Yu-li**	**1.51**	**217**	*eP*			**Pn**	**18 13 00.5**	**-0.3**
	baz=215								
WDJ	**Dajia District**	**1.52**	**260**	*eP*			**Pg**	**18 13 03.1**	**+0.2**
	baz=272								
TCU	**Taichung**	**1.53**	**253**	*eP*			**Pg**	**18 13 03.5**	**+0.3**
	baz=238								
TWF1	**Yuli**	**1.54**	**216**	*eP*			**Pn**	**18 13 01.0**	**-0.2**
	baz=213								
WHYT	**Xinyi Township**	**1.59**	**235**	*eP*			**Pb**	**18 13 03.2**	**+0.1**
	baz=216								
WHYT				*e*S			**Sg**	**18 13 26.3**	**+1.4**
	baz=216								
WJS	**Zhushan**	**1.62**	**241**	*eP*			**Pg**	**18 13 05.1**	**+0.2**
	baz=220								
WJS				*e*S			**Sg**	**18 13 27.8**	**+1.9**
	baz=220								
JKRS	**Kuro-shima**	**1.62**	**103**	P			**Pn**	**18 13 02.0**	**-0.2**
JKRS				S			**Sn**	**18 13 23.1**	**0.0**
WNT	**Mingjian**	**1.63**	**244**	⇓*eP*			**Pg**	**18 13 05.2**	**+0.1**
	baz=240								
WNT				S			**Sg**	**18 13 27.2**	**+1.0**
	baz=240								
YUS	**Yu-Shan**	**1.65**	**228**	⇓*eP*			**Pb**	**18 13 04.2**	**-0.3**
	baz=208								
YUS				*e*S			**Sb**	**18 13 25.6**	**+0.2**
	baz=208								
WCHH	**Zhanghua**	**1.66**	**252**	*eP*			**Pb**	**18 13 04.7**	**+0.4**
	baz=250								
FULB	**Fuli**	**1.67**	**213**	*eP*			**Pn**	**18 13 02.9**	**-0.1**
	baz=196								
JIJ	**Ishigaki jima**	**1.72**	**98**	P			**Pn**	**18 13 02.8**	**-0.7**
JIJ				S			**Sn**	**18 13 24.1**	**-1.3**
CHKT	**Chengkung**	**1.73**	**209**	*eP*			**Pn**	**18 13 02.9**	**-0.7**
	baz=192								
ALS	**Alishan**	**1.74**	**231**	*eP*			**Pb**	**18 13 06.0**	**+0.2**
	baz=213								
CHN5	**Tsauling**	**1.78**	**236**	*eP*			**Pb**	**18 13 07.0**	**+0.6**
	baz=215								
CHN5				*e*S			**Sg**	**18 13 30.5**	**-0.5**
	baz=215								
WGK	**Gukeng**	**1.82**	**240**	⇓*eP*			**Pg**	**18 13 07.9**	**-0.7**
	baz=218								
WGK				*e*S			**Sg**	**18 13 32.0**	**-0.3**
	baz=218								
ELDTW	**Lidau**	**1.83**	**219**	⇓*eP*			**Pn**	**18 13 05.1**	**-0.1**
	baz=204								
WDLH	**Douliu**	**1.84**	**240**	*eP*			**Pb**	**18 13 07.0**	**-0.3**
	baz=238								
JISG	**Ishigakijimahi**	**1.85**	**90**	P			**Pn**	**18 13 04.7**	**-0.6**
RLNB	**Erlin**	**1.89**	**248**	*eP*			**Pb**	**18 13 07.3**	**-1.0**
	baz=246								
CHN2	**Minshiung**	**1.97**	**237**	*eP*			**Pb**	**18 13 09.3**	**-0.3**
	baz=218								
CHN4	**Tsaushan**	**1.99**	**231**	*eP*			**Pb**	**18 13 10.1**	**+0.2**
	baz=212								
CHN4				*e*S			**Sb**	**18 13 35.8**	**+1.1**
	baz=212								
TPUB	**Ta-pu**	**2.00**	**229**	*eP*			**Pb**	**18 13 10.1**	**0.0**
	baz=213								
STYT	**Tauyuan**	**2.01**	**224**	*eP*			**Pb**	**18 13 09.3**	**-0.9**
	baz=205								
STYT				*e*S			**Sb**	**18 13 34.0**	**-1.3**
	baz=205								
CHY	**Chiayi**	**2.03**	**237**	*eP*			**Pb**	**18 13 10.2**	**-0.3**
	baz=216								
CHY				*e*S			**Sb**	**18 13

baz=203
PTTC Pingtan 2.44 292 *e*P Pn 18 13 12.5 -1.0
baz=293
TWM1 Shoushan 2.46 224 *e*P Pn 18 13 14.7 +0.8
baz=221
SGLT Jiouru 2.50 221 *e*P Pn 18 13 14.3 +0.1
baz=206
MASBT Mashibuluo 2.50 217 *e*P Pn 18 13 15.5 +1.2
baz=204
EAST Anshuo 2.58 211 *e*P Pn 18 13 16.0 +0.5
baz=209
VWUC VWUC 2.60 279 *e*P Pn 18 13 14.5 -1.1
baz=280
MATB Ma-tsu 2.61 306 *e*P Pn 18 13 14.2 -1.5
baz=308
SSPT Xinbi 2.64 217 *e*P Pb 18 13 18.8 -2.2
baz=215
JIRB Irabujima 2.64 85 P Pn 18 13 17.4 +1.2
PNG Penghu 2.70 248 *e*P Pn 18 13 17.6 +0.5
baz=246
SCZT Fangliau 2.70 215 *e*P Pn 18 13 18.5 +1.4
baz=200
PHUB P'eng-hu 2.71 247 *e*P Pn 18 13 18.1 +1.0
baz=244
JIKM Ikemajima 2.72 83 P Pn 18 13 18.7 +1.4
JMJ Miyako jima 2 2.75 85 *e*P Pn 18 13 19.4 +1.7
baz=100
JMJ2 Miyako jima3 2.78 87 P Pn 18 13 19.2 +1.1
PTMZ Houxiangcun 2.90 279 *e*P Pn 18 13 19.2 -0.6
baz=280
VCHM Qimei 2.96 242 *e*P Pn 18 13 21.5 +0.8
baz=239
XPSS Dashiqiu 2.98 321 *e*P Pn 18 13 20.0 -0.8
baz=320
LYJJ Jianjiangzhen 2.98 311 *e*P Pn 18 13 21.9 +1.0
baz=311
TWKBT Hengchun 2.98 207 *e*P Pn 18 13 22.1 +1.2
baz=196
TWK1 Hengchun 2.98 207 *e*P Pn 18 13 21.4 +0.4
baz=196
MHZQ Yeshan 3.29 297 *e*P Pn 18 13 24.6 -0.6
baz=299
KNM Kinmen 3.51 268 *e*P Pn 18 13 30.3 +2.2
baz=268
KNMB Chin-men Tao 3.55 268 *e*P Pn 18 13 29.2 +0.5
baz=269
AXDP Jialang 3.93 275 *e*P Pn 18 13 34.1 +0.2
baz=276
ZPLA Ao Xicun 4.19 262 *e*P Pn 18 13 38.4 +0.8
baz=262
JNU Nakatsue 11.34 40 LR LR 18 19 37.5
comp=Z,33nm,19.8s,baz=226,slow=38
KSRS Korea Array 13.68 19 P Pn 18 15 47.7 +0.2
0.1nm,0.3s,baz=201,slow=14,SNR=4.1
KSRS LR LR 18 21 32.9
comp=Z,78nm,19.1s,baz=192,slow=40
CMAR Chiang Mai Arr 22.54 259 P P 18 17 36.9 +3.1
0.8nm,0.7s,baz=66,slow=8.2,SNR=6.2
SONM Songino Array 26.37 335 P P 18 18 10.2 +0.1
1.9nm,1.1s,baz=153,slow=8.3,SNR=6.7
SONM LR LR 18 29 31.3
comp=Z,28nm,21.3s,baz=38,slow=38
KAPI Kappang 29.55 185 LR LR 18 29 44.1
comp=Z,28nm,21.9s,baz=301,slow=34
MKAR Makanchi Array 38.73 315 P P 18 19 58.5 +0.7
0.3nm,0.7s,baz=100,slow=10,SNR=2.2
WRA Warramunga Arr 45.82 164 P P 18 20 55.4 -0.4
2.0nm,0.6s,baz=346,slow=8.7,SNR=11
ASAR Alice Springs 49.30 166 P P 18 21 22.9 +0.1
1.5nm,0.8s,baz=339,slow=7.1,SNR=15
STKA Stephens Creek 59.13 161 P P 18 22 34.2 -0.1
1.6nm,1.0s,baz=332,slow=8.6,SNR=2.9
NOA NORSAR Array B 78.31 332 LR LR 19 01 01.0
comp=Z,27nm,16.6s,baz=310,slow=37
YKA Yellowknife Ar 82.18 23 P P 18 24 52.4 -2.1
0.1nm,0.5s,baz=316,slow=4.1,SNR=2.8

MAN 13 18:52:02.9, 8.49N×122.76E, h13km, mb3.9, ML2.6, MS2.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**2.17**	**33**	⇓*i*P	Pn	18 52 38.8	0.0
LLP				*i*S	Sn	18 52 45.6	-20
MSLP	**Maasin**	**2.64**	**52**	*e*P	Pn	18 52 45.9	+0.6
MSLP				*e*S	Sn	18 52 58.0	-19

IDC 13 19:06:21.0±2.3, 6.52S×130.26E, h0km, mb3.6/1, mb1 3.8/3, mb1mx3.4/31, mbtmp3.6/3, ML4.0/2, Error ellipse: s-maj=140.3km s-min=31.0km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.92**	**164**	Pn	Pn	19 09 40.1	+0.4
WRA	1.0nm,0.3s,baz=347,slow=13,SNR=40			Sn	Sn	19 12 00.5	-15
ASAR	**Alice Springs**	**17.41**	**169**	P	Pn	19 10 25.2	-0.3
ASAR	1.3nm,0.3s,baz=334,slow=22,SNR=11			S	Sn	19 13 25.6	-14
MKAR	**Makanchi Array**	**67.97**	**327**	P	P	19 17 21.9	0.0
	0.3nm,0.5s,baz=123,slow=7.5,SNR=8.5						

*KRNET **13** 19:29:30.1±0.1, 41.10N×71.70E, h10km, mb2.3*
*SOME **13** 19:29:30.0, 41.07N×71.77E, h0km*
*NNC **13** 19:29:31.6±3.3, 40.96N×72.06E, h32km±58km, mb3.0, mpv2.6, Error ellipse: s-maj=40.2km s-min=24.7km az=120.0*

ISC 13 19:29:30.3±1.3, 41.09N±0.04×71.77E±0.03, h10km±12km, n15, σ0.99/27, 15C-7D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.72**	**12**	⇑*i*P	**Pg**	**19 29 43.7**	**-0.7**
ARK	baz=17			⇑*i*S	**Sg**	**19 29 53.6**	**-0.3**
ARSB	**Arslanbob**	**0.95**	**75**	⇑*i*P	**Pb**	**19 29 49.2**	**+0.3**
ARSB	baz=77			⇑*i*S	**Sn**	**19 30 02.8**	**-0.7**
BTK	**Batken**	**1.26**	**215**	⇑*i*P	**Pg**	**19 29 54.0**	**-0.5**
BTK	baz=13			⇑*i*S	**Sn**	**19 30 10.8**	**-0.3**
IUG	**Iuzhnay**	**1.68**	**310**	*e*P	**Pg**	**19 30 02.0**	**-0.6**
IUG	3.4nm,0.1s 51nm,0.2s			*e*S	**Sg**	**19 30 25.6**	**+1.2**
IUG	**Iuzhnay**	**1.68**	**310**	P	**Pg**	**19 30 02.1**	**-0.4**
IUG	2.9nm,0.2s 30nm,0.3s			S	**Sg**	**19 30 25.8**	**+1.5**
AML	**Almayashu**	**1.78**	**54**	⇑*i*P	**Pg**	**19 30 04.4**	**-0.1**
AML	baz=55			⇑*i*S	**Sg**	**19 30 29.1**	**+1.4**
MRKS	**Merke**	**1.98**	**33**	*e*P	**Pg**	**19 30 08.0**	**-0.4**
MRKS	1.8nm,0.3s 3.7nm,0.2s			*e*S	**Sg**	**19 30 35.7**	**+1.6**
MRKS	**Merke**	**1.98**	**33**	Pg	**Pg**	**19 30 08.0**	**-0.4**
MRKS	1.8nm,0.3s 3.3nm,0.3s			Lg	Lg	19 30 35.7	
ARLS	**Aral**	**2.07**	**67**	⇑*e*P	**Pb**	**19 30 08.9**	**+0.8**
ARLS	baz=68			⇑*i*S	**Sg**	**19 30 37.1**	**+0.2**
EKS2	**Erkin-Say**	**2.17**	**43**	⇑*i*P	**Pb**	**19 30 10.5**	**+0.6**
EKS2	baz=44			⇑*i*S	**Sg**	**19 30 39.5**	**-0.7**
KK31	**Karatay Array**	**2.22**	**336**	⇑Pn	**Pb**	**19 30 10.2**	**-0.3**
KK31	1.0nm,0.4s,baz=159,slow=15,SNR=7.3 1.4nm,0.3s,baz=157,slow=30,SNR=10			⇓Sn	**Sb**	**19 30 38.0**	**-0.2**
UCH	**Uchtor**	**2.35**	**60**	⇓*i*P	**Pb**	**19 30 13.0**	**-0.1**
UCH	baz=61			⇓*i*S	**Sb**	**19 30 44.0**	**+1.7**
AAK	**Ala-Archa**	**2.56**	**52**	⇓*i*P	**Pb**	**19 30 15.8**	**-0.6**
	baz=53						
AAK				⇓*i*S	**Sb**	**19 30 48.8**	**+0.8**
	baz=53						
AAK	**Ala-Archa**	**2.56**	**52**	⇓Pg	**Pg**	**19 30 18.4**	**-1.0**
	2.3nm,1.1s						
AAK				⇑Lg	Lg	19 30 52.0	
	1.1nm,0.5s						
TKM2	**Tokmak 2**	**3.39**	**56**	⇑Pg	**Pb**	**19 30 28.4**	**-2.3**
	1.1nm,0.9s						
TKM2				⇓Lg	Lg	19 31 16.9	
	1.4nm,0.8s						

*IDC **13** 19:35:48.0±1.0, 14.92S×166.98E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.9/33, mbtmp3.9/8, ML4.1/1, MS3.2/5, Ms1 3.2/5, ms1mx2.9/28, Error ellipse: s-maj=34.3km s-min=23.1km az=105.0*

ISC 13 19:35:55.5±1.0, 15.02S±0.10×167.0E±0.2, h57km, n12, σ0.95/9, mb3.7/6, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.03**	**184**	Pn	**Pn**	**19 37 35.7**	**-0.3**
	3.4nm,0.3s,baz=303,slow=22,SNR=37						
DZM				Sn	**Sn**	**19 38 54.5**	**-0.1**
	1.7nm,0.3s,baz=139,slow=19,SNR=4.1						
DZM				LR	LR	19 40 04.1	
	comp=Z,255nm,19.8s,baz=18,slow=36						
HNR	**Honiara**	**8.81**	**308**	LR	LR	19 41 06.4	
	comp=Z,96nm,18.7s,baz=168,slow=36						
KRVT	**Keravat (AS076**	**18.14**	**304**	LR	LR	19 47 27.9	
	comp=Z,55nm,18.8s,baz=127,slow=39						
WRA	**Warramunga Arr**	**31.46**	**256**	P	**P**	**19 42 11.1**	**-0.8**
	0.7nm,0.9s,baz=85,slow=9.0,SNR=3.2						
ASAR	**Alice Springs**	**32.28**	**249**	P	**P**	**19 42 18.8**	**-0.4**
	0.8nm,0.8s,baz=71,slow=9.8,SNR=8.7						
ASAR				LR	LR	19 54 40.2	
	comp=Z,66nm,19.9s,baz=106,slow=35						
NWAO	**Narrogin (SRO)**	**48.34**	**229**	LR	LR	20 04 40.3	
	comp=Z,31nm,19.2s,baz=302,slow=36						
VNDA	**Vanda**	**62.57**	**181**	P	**P**	**19 46 13.9**	**+0.8**
	0.5nm,0.7s,baz=30,slow=3.1,SNR=5.4						
CMAR	**Chiang Mai Arr**	**74.79**	**294**	P	**P**	**19 47 31.1**	**+0.9**
	0.5nm,0.6s,baz=115,slow=3.5,SNR=4.4						
ILAR	**Eielson Array**	**86.89**	**18**	P	**P**	**19 48 32.8**	**-1.0**
	0.6nm,0.6s,baz=240,slow=5.2,SNR=14						
MKAR	**Makanchi Array**	**97.20**	**316**	P	Pdif	19 49 24.1	+2.1
	0.5nm,0.7s,baz=103,slow=6.4,SNR=5.3						
YKA	**Yellowknife Ar**	**97.94**	**27**	P	**P**	**19 49 24.5**	**-0.4**
	0.3nm,0.7s,baz=254,slow=4.6,SNR=4.4						
ARCES	**ARCESS Array B**	**120.45**	**345**	PKP	**PKiKP**	**19 54 41.5**	**+1.4**
	2.1nm,0.9s,baz=50,slow=1.5,SNR=3.7						

*DJA **13** 19:47:10.2±0.3, 8.3S×3.12°2E±*, h10km, M4.1/8, mB5.5/2, mb4.5/3, MLv4.0/8, Mw(mB)5.0/2*
*IDC **13** 19:47:13.7±3.0, 8.37S×121.28E, h51km±31km, mb3.4/2, mb1 3.6/6, mb1mx3.2/39, mbtmp3.6/6, ML3.6/4, Error ellipse: s-maj=122.3km s-min=19.6km az=58.0*

ISC 13 19:47:08.8±0.8, 8.04S±0.06×121.80E±0.08, h10km, n16, σ2.11/19, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**0.73**	**144**	P	**Pg**	**19 47 24.0**	**+1.1**
MMRI				S	**Sg**	**19 47 33.4**	**+0.9**
WSI	**Waingapu**	**2.20**	**223**	P	**Pn**	**19 47 47.2**	**+1.8**
BATI	**Baumata**	**2.83**	**140**	P	**Pb**	**19 47 58.6**	**-0.8**
	13nm,0.3s,baz=20,slow=3.4,SNR=9.9						
SOEI	**Soe**	**2.97**	**125**	P	**Pn**	**19 48 00.0**	**+3.9**
BKSI	**Bulukumba**	**3.18**	**328**	P	**Pn**	**19 48 00.0**	**+1.2**
KAPI	**Kappang**	**3.63**	**326**	P	**Pn**	**19 48 07.9**	**+2.7**
	3.3nm,0.3s,baz=153,slow=3.9,SNR=6.5						
KAPI				S	**Sn**	**19 48 47.8**	**-0.3**
	0.3nm,0.3s,baz=90,slow=20,SNR=2.7						
BNSI	**Bone**	**3.99**	**335**	P	**Pn**	**19 48 13.1**	**+3.0**
PLAI	**Plampang**	**4.06**	**259**	P	**Pn**	**19 48 12.3**	**+1.3**
SPSI	**Sidrap Palu**	**4.53**	**333**	P	**Pn**	**19 48 17.7**	**+0.3**
TTSI	**Tana Toraja**	**5.34**	**338**	P	**Pn**	**19 48 27.0**	**-1.6**
	0.3nm1µm61nm,0.9s						
JAGI	**Jajag, Banyuwa**	**7.58**	**266**	P	**Pn**	**19 48 59.7**	**+0.2**
	0.2nm30nm,1.3s						
FITZ	**Fitzroy Crossi**	**10.67**	**160**	P	**Pn**	**19 49 42.1**	**+0.3**
	0.5nm,0.3s,baz=353,slow=9.8,SNR=12						
FITZ				S	**Sn**	**19 51 36.6**	**-4.8**
	0.2nm,0.3s,baz=339,slow=18,SNR=3.4						
WRA	**Warramunga Arr**	**16.95**	**136**	P	**Pn**	**19 51 04.6**	**-1.6**
	0.2nm,0.3s,baz=307,slow=14,SNR=5.7						
ASAR	**Alice Springs**	**19.39**	**145**	P	**P**	**19 51 36.3**	**+1.2**
	0.2nm,0.3s,baz=323,slow=14,SNR=9.1						
STKA	**Stephens Creek**	**30.03**	**145**	P	**P**	**19 53 17.9**	**-0.1**
	0.8nm,0.5s,baz=324,slow=9.4,SNR=3.2						
MKAR	**Makanchi Array**	**64.92**	**331**	P	**P**	**19 57 48.2**	**-0.3**
	0.4nm,0.9s,baz=138,slow=6.7,SNR=2.9						

ROM 13 19:51:48.9±0.1, 43.420N±0.003×12.488E±0.004, h8km, ML2.4/27, Error ellipse: s-maj=0.3km s-min=0.2km az=20.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.07**	**296**	P	Pg	19 51 51.1	+0.2
ATPI				S	Sg	19 51 52.6	+0.2
ATPI				AML	AML		
	comp=E,13200µm,0.5s						
ATPI				AML	AML		
	comp=N,12450µm,0.4s						
ATVO	**AVT- Monte Val**	**0.07**	**237**	P	Pg	19 51 51.1	+0.2
ATVO				S	Sg	19 51 52.5	+0.2
ATVO				AML	AML		
	comp=N,6820µm,1.1s						
ATVO				AML	AML		
	comp=E,6230µm,0.2s						
ATFO	**Monte Foce - G**	**0.08**	**131**	P	Pg	19 51 51.3	+0.2
ATFO				S	Sg	19 51 53.0	+0.4
ATFO				AML	AML		
	comp=E,12650µm,0.6s						
ATFO				AML	AML		
	comp=N,6520µm,0.2s						
MURB	**Monte Urbino**	**0.16**	**170**	P	Pg	19 51 52.9	+0.7
MURB				S	Sg	19 51 56.1	+1.6
MURB				AML	AML		
	comp=N,7080µm,0.2s						
MURB				AML	AML		
	comp=E,5720µm,1.4s						
ATMI	**Monte Miggiano**	**0.18**	**242**	P	Pg	19 51 53.2	+0.6
ATMI				AML	AML		
	comp=N,2060µm,1.0s						
ATMI				AML	AML		
	comp=E,1685µm,0.3s						
ATMI				AML	AML		
	comp=E,1680µm,0.3s						
CDCA	**Citt' di Caste**	**0.19**	**282**	P	Pg	19 51 53.4	+0.7
CDCA				S	Sg	19 51 56.9	+1.6
CDCA				AML	AML		
	comp=E,5835µm,1.3s						
CDCA				AML	AML		
	comp=N,5700µm,0.9s						
CDCA				AML	AML		
	comp=N,2030µm,0.7s						
CDCA				AML	AML		
	comp=E,1400µm,0.5s						
CDCA				AML	AML		
	comp=N,5700µm,0.9s						
BADI	**Badiali**	**0.20**	**297**	P	Pg	19 51 53.5	+0.6
BADI				S	Sg	19 51 57.4	+1.8
BADI				AML	AML		
	comp=E,2900µm,0.5s						
BADI				AML	AML		
	comp=E,2905µm,0.5s						
BADI				AML	AML		
	comp=N,3895µm,0.6s						
FRON	**Frontone**	**0.20**	**60**	P	Pg	19 51 53.5	+0.6
FRON				S	Sg	19 51 57.2	+1.5
FRON				AML	AML		
	comp=E,1575µm,0.3s						
FRON				AML	AML		
	comp=N,3135µm,0.1s						
SSFR	**Montelago di S**	**0.21**	**86**	P	Pg	19 51 53.8	+0.6
SSFR				S	Sg	19 51 57.7	+1.5
SSFR				AML	AML		
	comp=E,5300µm,0.2s						
SSFR				AML	AML		
	comp=N,4735µm,0.2s						
SSFR				AML	AML		
	comp=N,4325µm,0.2s						
SSFR				AML	AML		
	comp=E,5795µm,0.2s						
SSFR				AML	AML		
	comp=E,5300µm,0.2s						
SSFR				AML	AML		
	comp=N,4730µm,0.2s						
FOSV	**Fossato di Vic**	**0.24**	**122**	P	Pg	19 51 54.1	+0.5
FOSV				S	Sg	19 51 58.2	+1.4
FOSV				AML	AML		
	comp=N,867µm,0.4s						
FOSV				AML	AML		
	comp=E,840µm,0.4s						
ATTE	**AVT- Monte Tez**	**0.24**	**204**	P	Pg	19 51 54.2	+0.5
ATTE				S	Sg	19 51 57.9	+0.9
ATTE				AML	AML		
	comp=E,670µm,1.0s						
ATTE				AML	AML		
	comp=N,758µm,0.3s						
ATCC	**AVT- Casa Cast**	**0.26**	**155**	P	Pg	19 51 54.8	+0.8
ATCC				S	Sb	19 51 59.8	-0.6
ATCC				AML	AML		
	comp=E,3135µm,1.1s						
ATCC				AML	AML		
	comp=N,5270µm,0.3s						
ATCC				AML	AML		
	comp=E,3140µm,1.1s						
ATCC				AML	AML		
	comp=N,5275µm,0.3s						
PE3	**Peglio**	**0.28**	**1**	P	Pg	19 51 55.2	+0.8
PE3				S	Sb	19 52 00.7	-0.3
PE3				AML	AML		
	comp=N,1243µm,0.5s						
PE3				AML	AML		
	comp=E,1595µm,0.5s						
PE3				AML	AML		
	comp=N,1242µm,0.5s						
PE3				AML	AML		
	comp=E,1590µm,0.5s						
MPAG	**Monte Paganucc**	**0.29**	**43**	P	Pg	19 51 55.2	+0.6
MPAG				S	Sb	19 52 00.2	-1.2
MPAG				AML	AML		
	comp=E,577µm,0.3s						
MPAG				AML	AML		
	comp=E,577µm,0.3s						
MPAG				AML	AML		
	comp=N,829µm,0.3s						
MPAG				AML	AML		
	comp=E,536µm,0.3s						
MPAG				AML	AML		
	comp=E,535µm,0.3s						
MPAG				AML	AML		
	comp=N,830µm,0.3s						
MPAG				AML	AML		
	comp=N,826µm,0.3s						
PARC	**Parchiule**	**0.29**	**322**	P	Pg	19 51 55.3	+0.6
PARC				S	Sb	19 52 00.6	-0.8
PARC				AML	AML		
	comp=E,876µm,0.8s						
PARC				AML	AML		
	comp=N,1535µm,0.2s						
SSP9	**Sansepolcro**	**0.30**	**301**	P	Pg	19 51 55.4	+0.6
ARVD	**Arcevia**	**0.34**	**77**	P	Pg	19 51 56.1	+0.6
ARVD				S	Sb	19 52 01.9	-0.8
ARVD				AML	AML		
	comp=N,620µm,0.6s						
ARVD				AML	AML		
	comp=E,808µm,0.8s						
FSSB	**Fossombrone**	**0.34**	**38**	P	Pg	19 51 56.2	+0.6
FSSB				S	Sb	19 52 02.1	-0.8
FSSB				AML	AML		
	comp=E,1045µm,0.7s						
FSSB				AML	AML		
	comp=N,1630µm,0.3s						
FSSB				AML	AML		
	comp=E,1046µm,0.7s						
SNTG	**Esanatoglia**	**0.37**	**116**	P	Pg	19 51 56.5	+0.5
SNTG				S	Sb	19 52 02.9	-0.7
SNTG				AML	AML		
	comp=N,1150µm,0.4s						
SNTG				AML	AML		
	comp=E,803µm,0.9s						
ASSB	**Assisi San Ben**	**0.40**	**162**	P	Pg	19 51 57.0	+0.4
ASSB				S	Sb	19 52 03.7	-0.7
ASSB				AML	AML		
	comp=E,492µm,0.7s						
ASSB				AML	AML		
	comp=N,679µm,0.4s						
CPGN	**Carpegna, Ital**	**0.40**	**342**	P	Pb	19 51 57.9	-0.4
CPGN				AML	AML		
	comp=N,332µm,1.5s						
CPGN				AML	AML		
	comp=E,322µm,0.6s						
EL6	**Elcito**	**0.46**	**101**	P	Pg	19 51 58.2	+0.4
EL6				S	Sb	19 52 05.8	-0.4
EL6				AML	AML		
	comp=E,718µm,0.6s						
EL6				AML	AML		
	comp=N,876µm,1.5s						
CESI	**CESI - Serrava**	**0.52**	**144**	P	Pg	19 51 59.3	+0.5
CESI				S	Sb	19 52 07.7	-0.2
CESI				AML	AML		
	comp=N,202µm,0.6s						
CESI				AML	AML		
	comp=E,65µm,0.4s						
CESI				AML	AML		
	comp=E,65µm,0.4s						
CING	**Cingoli**	**0.52**	**95**	AML	AML		
	comp=E,269µm,0.7s						
CING				AML	AML		
	comp=N,388µm,0.9s						
MGAB	**Montegabbione**	**0.58**	**209**	P	Pg	19 52 00.4	+0.5
MGAB				S	Sb	19 52 09.8	+0.2
MGAB				AML	AML		
	comp=E,703µm,0.3s						
MGAB				AML	AML		
	comp=N,1086µm,0.3s						
MGAB				AML	AML		
	comp=N,1058µm,0.3s						
MGAB				AML	AML		
	comp=E,581µm,1.1s						
MGAB				AML	AML		
	comp=N,1084µm,0.3s						
PESA	**Pesaro**	**0.58**	**26**	P	Pb	19 52 00.8	-0.5
PESA				AML	AML		
	comp=E,632µm,0.6s						
PESA				AML	AML		
	comp=N,706µm,0.2s						
FDMO	**Fiordimonte**	**0.58**	**131**	P	Pg	19 52 00.2	+0.1
FDMO				S	Sb	19 52 09.9	+0.2
FDMO				AML	AML		
	comp=N,216µm,0.1s						
FDMO				AML	AML		
	comp=N,216µm,0.1s						
FDMO				AML	AML		
	comp=E,260µm,0.1s						
MOMA	**Monte Martano**	**0.62**	**174**	P	Pg	19 52 01.1	+0.3
MOMA				AML	AML		
	comp=N,305µm,0.9s						
MOMA				AML	AML		
	comp=E,273µm,1.0s						
ASQU	**Asqua**	**0.63**	**307**	AML	AML		
	comp=E,170µm,1.6s						
ASQU				AML	AML		
	comp=N,158µm,1.5s						
SFI	**Santa Sofia**	**0.67**	**316**	P	Pg	19 52 02.0	+0.2
SFI				AML	AML		
	comp=E,120µm,0.5s						
SFI				AML	AML		
	comp=E,120µm,0.5s						
SFI				AML	AML		
	comp=N,90µm,0.6s						
SFI				AML	AML		
	comp=N,90µm,0.6s						
SACS	**San Casciano d**	**0.71**	**217**	AML	AML		
	comp=N,378µm,0.5s						
SACS				AML	AML		
	comp=E,254µm,0.4s						
SACS				AML	AML		
	comp=N,366µm,0.5s						
SACS				AML	AML		
	comp=E,228µm,0.4s						
NRCA	**Norcia**	**0.74**	**142**	AML	AML		
	comp=N,386µm,0.1s						
NRCA				AML	AML		
	comp=E,308µm,1.5s						
CESX	**Cesi**	**0.81**	**175**	AML	AML		

comp=N,182μm,0.8s
CESX AML AML
comp=E,258μm,0.7s
RUFI Rufina 0.82 301 AML AML
comp=E,135μm,0.7s
RUFI AML AML
comp=N,100μm,1.3s

ROM 13 19:52:29.2±0.1, 43°421N±0'.004×12°489E±0'.005, h9km, ML1.5/2, Error ellipse: s-maj=0.3km s-min=0.3km az=341.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.07**	**295**	P	Pg	19 52 31.6	+0.2
ATPI				S	Sg	19 52 33.0	+0.1
ATPI				AML	AML		
	comp=E,606μm,0.5s						
ATPI				AML	AML		
	comp=N,714μm,0.1s						
ATVO	**AVT- Monte Val**	**0.07**	**237**	P	Pg	19 52 31.5	+0.2
ATVO				S	Sg	19 52 33.0	+0.1
ATVO				AML	AML		
	comp=N,438μm,1.1s						
ATVO				AML	AML		
	comp=E,402μm,0.4s						
ATVO				AML	AML		
	comp=N,438μm,1.1s						
ATFO	**Monte Foce - G**	**0.08**	**132**	P	Pg	19 52 31.7	+0.2
ATFO				S	Sg	19 52 33.3	+0.2
PIEI	**Pieia**	**0.12**	**16**	P	Pg	19 52 32.6	+0.5
PIEI				S	Sg	19 52 35.0	+1.0
MURB	**Monte Urbino**	**0.16**	**171**	P	Pg	19 52 33.4	+0.7
MURB				S	Sg	19 52 36.5	+1.5
FRON	**Frontone**	**0.20**	**61**	P	Pg	19 52 33.9	+0.6
FRON				S	Sg	19 52 37.4	+1.3
BADI	**Badiali**	**0.20**	**297**	P	Pg	19 52 34.0	+0.6
BADI				S	Sg	19 52 37.8	+1.6
ARVD	**Arcevia**	**0.34**	**77**	P	Pg	19 52 36.6	+0.7
ARVD				S	Sb	19 52 42.3	-0.8
FSSB	**Fossombrone**	**0.34**	**38**	P	Pg	19 52 36.6	+0.6

IDC 13 20:02:42.5±5.1, 23°24S×113°51W, h0km, mb3.5/2, mb1 3.9/2, mb1mx3.6/17, mbtmp3.5/2, MS3.3/4, Ms1 3.3/4, ms1mx3.0/19, Error ellipse: s-maj=340.4km s-min=58.3km az=108.0, Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**39.95**	**126**	LR	LR	20 21 25.8	
	comp=Z,23nm,20.3s,baz=278,slow=28						
CPUP	**Villa Florida**	**50.77**	**106**	LR	LR	20 27 17.1	
	comp=Z,14nm,21.9s,baz=215,slow=29						
NVAR	**Mina Array Bea**	**61.51**	**356**	P	P	20 13 01.2	-0.2
	0.3nm,0.6s,baz=169,slow=10.0,SNR=3.2						
NVAR				LR	LR	20 34 27.1	
	comp=Z,36nm,21.3s,baz=300,slow=31						
YBH	**Yreka Blue Hor**	**65.20**	**352**	LR	LR	20 35 04.2	
	comp=Z,71nm,19.5s,baz=186,slow=30						
YKA	**Yellowknife Ar**	**85.44**	**359**	P	P	20 15 22.0	+0.4
	0.3nm,0.7s,baz=180,slow=4.3,SNR=2.7						
H11S2	**WAKE ISLAND Hy**	**88.22**	**291**	T	T	21 51 59.2	
	baz=116,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**88.23**	**291**	T	T	21 51 50.9	
	baz=116,slow=75,SNR=7.1						
H11S3	**WAKE ISLAND Hy**	**88.23**	**291**	T	T	21 51 53.0	
	baz=116,slow=75,SNR=8.0						
H11N3	**WAKE ISLAND Hy**	**88.56**	**292**	T	T	21 52 17.4	
	baz=154,slow=74,SNR=6.4						
H11N2	**WAKE ISLAND Hy**	**88.58**	**292**	T	T	21 52 24.3	
	baz=120,slow=74,SNR=13						
CMAR	**Chiang Mai Arr**	**149.34**	**267**	PKPbc	PKPbc	20 22 33.9	-0.3
	1.2nm,1.0s,baz=56,slow=1.1,SNR=7.3						
MKAR	**Makanchi Array**	**153.28**	**335**	PKPbc	PKPbc	20 22 42.0	-0.6
	0.7nm,0.9s,baz=15,slow=2.0,SNR=4.8						

MEX 13 20:26:07.8±0.5, 14°.47N×91°.93W, h81km±5km, MD3.9
GCG 13 20:26:08.6±0.3, 14°.58N×92°.03W, h69km±3km, MD3.9
ISC 13 20:26:09.4±2.0, 14°6N±0°.2×92°0W±0°.1, h69km±12km, n8, σ0s69/14, 1D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.40**	**319**	*e*P	**Pn**	**20 26 20.5**	**-0.7**
THIG				*e*S	**Sn**	**20 26 30.9**	**+1.0**
STG3	**Santiaguito 3,**	**0.42**	**75**	*e*P	**Pn**	**20 26 21.6**	**0.0**
ERG	**Entre ros, C**	**0.44**	**112**	*e*P	**Pn**	**20 26 21.0**	**-0.6**
ERG				*e*S	**Sn**	**20 26 30.6**	**+0.1**
FUG	**Fuego 3**	**1.13**	**98**	*e*P	**Pn**	**20 26 29.7**	**+0.1**
FUG				*e*S	**Sn**	**20 26 44.4**	**-0.2**
IXG	**Ixpaco**	**1.56**	**106**	*e*P	**Pn**	**20 26 35.3**	**0.0**
PCIG		**1.61**	**313**	*e*P	**Pn**	**20 26 35.4**	**-0.5**
PCIG				*e*S	**Sn**	**20 26 56.2**	**+0.4**
TGIG		**2.42**	**333**	*e*P	**Pn**	**20 26 45.8**	**-1.0**
TGIG				*e*S	**Sn**	**20 27 15.8**	**+0.5**
CMIG	**Matias Romero**	**3.72**	**312**	*e*P	**Pn**	**20 27 04.2**	**-0.2**
CMIG				*i* S	**Sn**	**20 27 48.2**	**+1.1**

ISN 13 20:32:41.0±1.2, 37°.35N×43°.53E, h0km±16km, ML3.1
DDA 13 20:32:43.2, 37°.34N×43°.86E, h5km±1km, ML2.5
ISK 13 20:32:43.2, 37°.32N×43°.88E, h2km, ML2.9/8
ISC 13 20:32:43.1±1.2, 37°31N±0°.03×43°87E±0°.03, h1km±11km, n26, σ1s19/43, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOVA	**Hakkari_Yksek**	**0.43**	**50**	*i* P	**Pg**	**20 32 51.8**	**+0.4**
YOVA				*i* S	**Sg**	**20 32 57.9**	**+0.8**
YOVA				IAML		20 32 58.0	
	comp=E,682nm,0.3s						
YOVA				IAML		20 33 00.0	
	comp=N,443nm,0.3s						
MSL	**Mosul**	**1.09**	**214**	*e*Pg	**Pg**	**20 33 04.0**	**0.0**
MSL				AML	AML	20 33 06.2	
	comp=Z,516nm,0.4s						
MSL				*e*Sg	**Sg**	**20 33 18.0**	**-0.2**
SIRT	**Sirnak**	**1.15**	**280**	PN	**Pb**	**20 33 05.4**	**-0.5**
SIRT				SN	**Sn**	**20 33 23.5**	**+0.5**
SIRN	**Sırnak**	**1.17**	**280**	*i* P	**Pg**	**20 33 05.4**	**-0.2**
SIRN				*i* S	**Sn**	**20 33 24.2**	**+0.7**
SIRN				IAML		20 33 27.0	
	comp=E,228nm,0.4s						
GEVA	**Gevas**	**1.19**	**328**	*i* P	**Pg**	**20 33 05.3**	**-0.6**
GEVA				IAML		20 33 26.0	
	comp=E,64nm,0.5s						
GEVA				IAML		20 33 26.0	
	comp=N,66nm,0.5s						
AKDM	**Akdamar-Van**	**1.24**	**326**	PN	**Pn**	**20 33 07.7**	**0.0**
AKDM				SN	**Sn**	**20 33 25.4**	**+0.2**
TVAN	**Van**	**1.27**	**343**	*i* P	**Pn**	**20 33 07.7**	**-0.6**
TVAN				*i* S	**Sn**	**20 33 26.2**	**+0.1**
TVAN				IAML		20 33 28.0	
	comp=N,70nm,0.5s						
TVAN				IAML		20 33 32.0	
	comp=E,67nm,0.8s						
VANB	**Van**	**1.34**	**344**	PN	**Pg**	**20 33 07.9**	**-0.8**
VANB				SN	**Sb**	**20 33 25.9**	**-0.9**
SRTM	**Siirt_Merkez**	**1.69**	**294**	*i* P	**Pb**	**20 33 14.7**	**-0.3**
SRTM				*i* S	**Sg**	**20 33 41.1**	**+3.8**
SRTM				IAML		20 33 46.0	
	comp=N,141nm,0.5s						
SRTM				IAML		20 33 48.0	
	comp=E,88nm,0.7s						
BLIS	**Bitlis-Merkez**	**1.77**	**309**	*i* P	**Pg**	**20 33 16.8**	**-0.2**
BLIS				*i* S	**Sg**	**20 33 42.0**	**+1.9**
BLIS				IAML		20 33 42.0	
	comp=E,55nm,0.5s						
BLIS				IAML		20 33 46.0	
	comp=N,33nm,1.0s						
GURO	**Guroymak-BITLI**	**1.91**	**311**	PN	**Pb**	**20 33 18.0**	**-0.8**
IKRK	**Kirkuk**	**1.94**	**169**	*e*Pn	**Pn**	**20 33 17.0**	**-0.3**
IKRK				AML	AML	20 33 24.1	
	comp=Z,55nm,0.4s						
IKRK				*e*Sn	**Sn**	**20 33 43.0**	**+0.6**
MLAZ	**Malazgirt-MUS**	**2.10**	**331**	PN	**Pb**	**20 33 20.9**	**-1.2**
BTMN	**Batman**	**2.14**	**286**	*i* P	**Pb**	**20 33 21.9**	**-0.9**
BTMN				*i* S	**Sg**	**20 33 52.0**	**0.0**
BTMN				IAML		20 33 59.0	
	comp=N,58nm,0.6s						
BTMN				IAML		20 34 10.0	
	comp=E,81nm,1.2s						

SVAN	**Silvan-Diyarba**	**2.28**	**292**	PN	**Pb**	**20 33 23.3**	**-1.7**
SVAN	**Silvan-Diyarba**	**2.28**	**292**	*i* P	**Pb**	**20 33 24.3**	**-0.7**
SVAN				*i* S	**Sg**	**20 33 55.7**	**-0.6**
SVAN				IAML		20 34 02.0	
	comp=N,28nm,0.5s						
MUSM	**Mu-Merkez**	**2.33**	**308**	*i* P	**Pb**	**20 33 25.8**	**-0.3**
MARD	**Mardin**	**2.46**	**271**	*i* P	**Pb**	**20 33 27.6**	**-0.7**
MARD				*i* S	**Sg**	**20 34 01.3**	**-0.9**
MAZI	**Mazidag**	**2.73**	**274**	PN	**Pn**	**20 33 29.7**	**+1.5**
HANI	**Diyarbakir_Han**	**2.96**	**293**	*i* P	**Pb**	**20 33 35.1**	**-1.5**
HANI				*i* S	**Sg**	**20 34 19.2**	**+1.1**
HANI				IAML		20 34 31.0	
	comp=E,18nm,0.8s						
BNGB	**Bingl**	**3.02**	**305**	PN	**Pn**	**20 33 33.8**	**+1.6**
DYBB	**Diyarbakir**	**3.03**	**283**	PN	**Pn**	**20 33 33.9**	**+1.6**
DIYA	**Diyarbakir**	**3.04**	**283**	*i* P	**Pg**	**20 33 39.9**	**-1.5**
BHD	**Baghdad**	**4.05**	**174**	*e*Pn	**Pn**	**20 33 47.0**	**+0.7**
BHD				AML	AML	20 33 50.0	
	comp=Z,3μm,0.5s						
BHD				*e*Sn	**Sn**	**20 34 33.0**	**-1.4**
IBDR	**Badra**	**4.52**	**157**	*e*Pn	**Pn**	**20 33 54.0**	**+1.3**
IBDR				AML	AML	20 33 56.4	
	comp=Z,15nm,0.5s						
IBDR				*e*Sn	**Sn**	**20 34 46.0**	**+0.2**
NSR	**Nassriya**	**6.56**	**163**	*e*Pn	**Pn**	**20 34 23.0**	**+2.3**
NSR				*e*Sn	**Sn**	**20 35 35.0**	**-1.2**

IDC 13 20:39:02.1±3.4, 48°85S×125°18E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/20, mbtmp3.5/2, MS3.2/3, Ms1 3.1/3, ms1mx2.9/9, Error ellipse: s-maj=85.0km s-min=74.9km az=168.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.16**	**326**	T	T	20 59 24.1	
	baz=159,slow=80,SNR=16						
H01W2	**Cape Leeuwin H**	**16.16**	**326**	T	T	20 59 27.1	
	baz=159,slow=80,SNR=17						
H01W3	**Cape Leeuwin H**	**16.18**	**326**	T	T	20 59 30.5	
	baz=159,slow=80,SNR=14						
STKA	**Stephens Creek**	**20.99**	**42**	LR	LR	20 50 55.0	
	comp=Z,39nm,19.4s,baz=208,slow=34						
ASAR	**Alice Springs**	**26.07**	**18**	P	P	20 44 37.2	-0.1
	0.6nm,0.8s,baz=186,slow=10,SNR=4.7						
ASAR				LR	LR	20 54 27.9	
	comp=Z,71nm,18.5s,baz=188,slow=36						
VNDA	**Vanda**	**31.99**	**166**	LR	LR	20 57 21.8	
	comp=Z,40nm,21.0s,baz=341,slow=34						
CMAR	**Chiang Mai Arr**	**70.97**	**334**	P	P	20 50 21.4	+0.1
	0.2nm,0.3s,baz=188,slow=6.0,SNR=3.3						
YKA	**Yellowknife Ar**	**145.01**	**44**	PKPbc	PKPbc	20 58 38.6	-0.8
	0.5nm,0.8s,baz=262,slow=3.3,SNR=6.7						

IDC 13 20:45:26.5±2.1, 4°.80S×80°.09W, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.6/39, mbtmp3.8/6, ML4.1/2, MS3.1/6, Ms1 3.1/6, ms1mx2.8/36, Error ellipse: s-maj=88.9km s-min=21.1km az=58.0
ARE 13 20:45:29±2.7, 5°.40S±0°.09×80°.72W±0°.07, h38km±8km, ML4.4, mb3.9/5(NEIC), Error ellipse: s-maj=15.4km s-min=5.1km az=214.0
NEIC 13 20:45:32.1±1.4, 5°.17S±0°.05×80°.4W±0°.2, h59km±16km, Error ellipse: s-maj=27.3km s-min=5.4km az=82.0
ISC 13 20:45:28.1±2.1, 5°21S±0°.10×80°9W±0°.3, h42km, n18, σ0s89/15, mb3.7/3, Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.12**	**128**	Pn	**Pn**	**20 46 15.8**	**+0.6**
	41nm,0.3s,baz=325,slow=15,SNR=235						
ATAH				Sn	**Sn**	**20 46 51.8**	**+0.4**
	115nm,0.3s,baz=156,slow=20,SNR=7.5						
ATAH				LR	LR	20 47 38.0	
	comp=Z,286nm,18.5s,baz=276,slow=46						
OTAV	**Otavalo**	**5.92**	**24**	Pn	**Pn**	**20 46 54.2**	**+0.4**
NNA	**Nana**	**7.82**	**150**	Pn	**Pn**	**20 47 19.5**	**0.0**
	2.8nm,0.3s,baz=336,slow=14,SNR=3.9						
NNA				Sn	**Sn**	**20 48 48.5**	**+1.7**
	2.3nm,0.3s,baz=217,slow=20,SNR=2.7						
NNA	**Nana**	**7.82**	**150**		**Pn**	**20 47 19.2**	**-0.3**
JTS	**Las Juntas de**	**15.93**	**345**	LR	LR	20 54 43.0	
	comp=Z,36nm,18.7s,baz=169,slow=35						
LPAZ	**La Paz**	**16.66**	**132**	Pn	**Pn**	**20 49 18.3**	**-0.9**
	0.2nm,0.3s,baz=331,slow=12,SNR=8.2						
LPAZ				LR	LR	20 55 53.6	
	comp=Z,44nm,19.8s,baz=84,slow=38						
LPAZ	**La Paz**	**16.66**	**132**		**Pn**	**20 49 17.9**	**-1.3**
SDV	**Santo Domingo**	**17.33**	**36**	LR	LR	20 57 07.7	
	comp=Z,61nm,18.2s,baz=188,slow=42						
GO01	**Chusmiza**	**18.33**	**143**	P	**P**	**20 49 38.7**	**-0.8**
GO01				IAmb	IAmb	20 50 01.5	
	comp=Z,13nm,1.3s						
URIC	**Uribia, Colomb**	**18.98**	**28**		**P**	**20 49 46.5**	**+0.3**
PB04	**IPOC Station P**	**19.93**	**150**	P	**P**	**20 49 57.0**	**+0.2**
LVC	**Limon Verde**	**20.81**	**147**	P	**P**	**20 50 07.4**	**+0.9**
	comp=Z,4.1nm,0.8s,baz=315,slow=10.0,SNR=3.8						
LVC	**Limon Verde**	**20.81**	**147**	P	**P**	**20 50 06.7**	**+0.2**
LVC				IAmb	IAmb	20 50 08.2	
	comp=Z,7.4nm,1.0s						
SIV	**San Ignacio**	**22.19**	**120**	P	**P**	**20 50 19.7**	**-1.4**
	comp=Z,4.0nm,0.7s,baz=304,slow=11,SNR=16						
CPUP	**Villa Florida**	**30.78**	**136**	LR	LR	21 04 30.8	
	comp=Z,52nm,20.0s,baz=220,slow=38						
YKA	**Yellowknife Ar**	**72.26**	**344**	P	P	20 56 52.6	+3.8
	comp=Z,0.1nm,0.4s,baz=139,slow=4.8,SNR=3.3						
DBIC	**Dimbokro**	**76.78**	**82**	LR	LR	21 28 14.5	
	comp=Z,24nm,20.7s,baz=233,slow=34						
TORD	**Torodi Ar. Bea**	**83.96**	**76**	P	**P**	**20 57 54.6**	**0.0**
	comp=Z,0.6nm,0.9s,baz=258,slow=5.0,SNR=3.8						

ANF 13 21:58:44.8±0.2, 36°96N×83°38W, h0km, ML2.4/27, ML2.2/21, Error ellipse: s-maj=1.9km s-min=1.4km az=137.0, Tennessee

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T52A	**Hallie**	**0.35**	**64**	P	Pg	21 58 52.1	+0.7
	baz=244,SNR=8.1						
T52A				S	Sg	21 58 57.1	+1.2
	baz=244						
TZTN	**Tazewell**	**0.43**	**199**	P	Pg	21 58 53.7	+0.6
	baz=19						
TZTN				S	Sg	21 58 59.1	+0.4
	baz=19						
T51A	**Gray**	**0.46**	**271**	P	Pg	21 58 53.9	+0.4
	baz=91						
T51A				S	Sg	21 59 00.3	+0.9
	baz=91						
U52A	**Thorn Hill**	**0.56**	**179**	P	Pg	21 58 56.2	+0.7
	baz=359						
T53A	**Wise**	**0.67**	**88**	P	Pg	21 58 57.5	-0.2
	baz=268						
U51A	**La Follette**	**0.77**	**222**	S	Sg	21 59 10.5	+0.9
	baz=42						
V52A	**Sevierville**	**1.13**	**189**	P	Pb	21 59 06.7	-0.4
	baz=9.0,SNR=7.0						
S53A	**Williamson**	**1.23**	**54**	P	Pg	21 59 08.3	-0.1
	baz=234						
U54A	**Nelsons Funny**	**1.32**	**109**	P	Pg	21 59 09.8	-0.3
	baz=290,SNR=11						
R51A	**Hillsboro**	**1.35**	**353**	P	Pg	21 59 10.5	-0.1
	baz=173						
V53A	**Saluda**	**1.36**	**160**	P	Pg	21 59 10.6	-0.3
	baz=341						
V51A	**Loudon**	**1.39**	**215**	P	Pn	21 59 11.1	-0.4
	baz=34,SNR=9.8						
T49A	**Edmonton**	**1.73**	**276**	Pb	Pb	21 59 17.6	+0.1
	baz=94						
W53A	**Cullowhee**	**1.79**	**174**	Pb	Pg	21 59 18.8	-0.3
	baz=355,SNR=7.4						
S54A	**Dingess, Beckl**	**1.85**	**62**	Pb	Pb	21 59 19.5	+0.1
	baz=243						
V50A	**Pikeville**	**1.89**	**228**	Pb	Pb	21 59 20.0	-0.2
	baz=47						
U55A	**TA2, Sparta**	**1.92**	**103**	Pb	Pb	21 59 20.7	0.0
	baz=284,SNR=5.6						
Q50A	**Georgetown**	**1.94**	**346**	Pb	Pb	21 59 20.4	-0.6
	baz=166						
R49A	**Shelbyville**	**1.95**	**314**	Pb	Pb	21 59 20.9	-0.3
	baz=133						
U49A	**Red Boiling Sp**	**1.98**	**258**	Pb	Pb	21 59 21.0	-0.7
	baz=76						
V55A	**Taylorsville**	**2.06**	**122**	Pb	Pb	21 59 23.2	+0.1
	baz=303						
T55A	**Pulaski**	**2.08**	**85**	Pb	Pb	21 59 23.4	-0.1
	baz=266						
W54A	**Cherokee Point**	**2.10**	**152**	Pb	Pb	21 59 23.6	-0.1
	baz=333,SNR=9.4						

ANF 13 21:59:34.5±0.1, 37°79N×82°06W, h0km, Error ellipse: s-maj=1.5km s-min=1.1km az=124.0, West Virginia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
S53A	**Williamson**	**0.12**	**209**	P	Pg	21 59 37.0	+0.3
	baz=29						
S53A				S	Sg	21 59 39.0	+0.7
	baz=29						
S54A	**Dingess, Beckl**	**0.59**	**88**	P	Pg	21 59 46.5	+0.7
	baz=269						
S54A				S	Sg	21 59 54.5	+1.0
	baz=269						
T54A	**Tazewell**	**0.82**	**152**	S	Sg	22 00 00.2	-0.5
	baz=332						
S52A	**Salyersville**	**0.82**	**263**	S	Sg	22 00 01.9	+1.1
	baz=82						
T53A	**Wise**	**0.89**	**206**	S	Sg	22 00 02.1	-1.0
	baz=25						
R54A	**Victor**	**0.93**	**65**	P	Pg	21 59 52.7	+0.3
	baz=244						
R54A				S	Sb	22 00 05.4	-1.0
	baz=244						
T52A	**Hallie**	**1.00**	**228**	P	Pg	21 59 53.6	-0.1
	baz=47						
Q53A	**Leroy**	**1.15**	**21**	P	Pg	21 59 56.9	+0.3
	baz=201,SNR=8.2						
Q53A				S	Sb	22 00 12.2	-0.5
	baz=201						
Q52A	**Bidwell**	**1.19**	**352**	P	Pg	21 59 57.0	-0.3
	baz=172						
Q52A				S	Sb	22 00 13.7	-0.1
	baz=172						
S51A	**Beattyville**	**1.23**	**264**	P	Pg	21 59 57.5	-0.5
	baz=83						
S55A	**Lewisburg**	**1.23**	**90**	P	Pg	21 59 58.4	+0.3
	baz=271,SNR=7.4						
U54A	**Nelsons Funny**	**1.28**	**172**	S	Sb	22 00 16.2	-0.3
	baz=352						
R51A	**Hillsboro**	**1.31**	**294**	S	Sb	22 00 17.2	-0.2
	baz=113						
BLA	**Blacksburg**	**1.42**	**113**	P	Pn	22 00 01.6	-0.1
	baz=294,SNR=16						
BLA				S	Sg	22 00 19.1	-1.1
	baz=294						
U55A	**TA2, Sparta**	**1.51**	**148**	P	Pn	22 00 03.1	+0.2
	baz=328						
U55A				S	Sg	22 00 21.9	-1.2
	baz=328						
Q54A	**Coxs Mills**	**1.53**	**38**	P	Pn	22 00 03.3	+0.1
	baz=219,SNR=10						
Q54A				S	Sb	22 00 23.9	+0.1
	baz=219						
R55A	**Marlinton**	**1.61**	**71**	P	Pn	22 00 04.1	-0.2
	baz=252,SNR=8.4						
R55A				S	Sn	22 00 25.4	-0.3
	baz=252						
T51A	**Gray**	**1.71**	**242**	P	Pn	22 00 05.4	-0.2
	baz=61						
T51A				Sb	Sg	22 00 30.5	+0.9
	baz=61						
TZTN	**Tazewell**	**1.72**	**224**	P	Pn	22 00 05.8	0.0
	baz=43,SNR=9.8						
TZTN				Sb	Sg	22 00 30.9	+1.1
	baz=43						
U52A	**Thorn Hill**	**1.74**	**217**	P	Pn	22 00 06.3	+0.3
	baz=36,SNR=12						
U52A				Sb	Sg	22 00 31.1	+0.6
	baz=36						
P53A	**Whipple**	**1.78**	**17**	Pb	Pb	22 00 08.2	+0.2
	baz=197,SNR=9.5						
P53A				Sb	Sg	22 00 32.2	+0.6
	baz=197						
T56A	**Rocky Mt**	**1.78**	**114**	P	Pn	22 00 06.9	+0.4
	baz=296,SNR=5.8						
T56A				Sb	Sg	22 00 32.4	+0.7
	baz=296						
Q50A	**Georgetown**	**1.85**	**306**	Pb	Pb	22 00 08.9	-0.2
	baz=124						
Q50A				Sb	Sg	22 00 34.0	+0.2
	baz=124						
P52A	**Corning**	**1.85**	**358**	P	Pn	22 00 07.3	-0.1
	baz=178						
P52A				Sb	Sg	22 00 34.6	+0.8
	baz=178						
R50A	**Paris**	**1.86**	**286**	Sb	Sg	22 00 34.2	-0.1
	baz=105						
S50A	**Richmond**	**1.86**	**267**	P	Pn	22 00 07.7	0.0
	baz=86						
S50A				Sb	Sg	22 00 34.5	+0.2
	baz=86						
P51A	**Williamsport**	**1.87**	**335**	Sb	Sg	22 00 35.1	+0.5
	baz=155						
Q55A	**Buckhannon**	**1.97**	**51**	P	Pn	22 00 09.4	+0.2
	baz=233						
Q55A				Sb	Sg	22 00 37.5	-0.1
	baz=233						
V54A	**Nebo**	**2.01**	**178**	P	Pn	22 00 10.5	+0.9
	baz=358						
V55A	**Taylorsville**	**2.04**	**161**	P	Pn	22 00 10.8	+0.6
	baz=341						
U51A	**La Follette**	**2.10**	**229**	P	Pn	22 00 11.5	+0.4
	baz=48						
R56A	**Bull Pasture M**	**2.18**	**73**	P	Pn	22 00 12.7	+0.5
	baz=254,SNR=6.9						
P54A	**Burton**	**2.19**	**34**	Pb	Pb	22 00 14.9	-0.1
	baz=215						

IDC 13 22:09:43.3±2.5, 21°.64S×175°.57W, h0km, mb3.8/6, mb1 4.1/6, mb1mx3.9/24, mbtmp3.7/6, Error ellipse: s-maj=146.0km s-min=26.6km az=155.0
NEIC 13 22:09:45.8±0.9, 21°.9S±0°.1×174°.65W±0°.09, h55km±8km, mb4.3/4, Error ellipse: s-maj=15.5km s-min=11.2km az=150.0
ISC 13 22:09:44.5±0.7, 21°91S±0°.09×174°65W±0°.09, h27km, n18, σ2s24/18, mb3.8/7, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.25**	**58**	Pn	**Pn**	**22 11 01.5**	**+0.3**
NIUE					**Sn**	**22 12 00.1**	**-0.8**
MSVF	**Nonsavu**	**8.03**	**300**	Pn	**Pn**	**22 11 42.3**	**+2.9**
AFI	**Afiamalu**	**8.41**	**19**	Pn	**Pn**	**22 11 43.2**	**-1.5**
	3.1nm,0.3s,baz=149,slow=19,SNR=2.4						
AFI				Sn	**Sn**	**22 13 16.9**	**-2.0**
	3.0nm,0.3s,baz=53,slow=22,SNR=2.2						
MXZ	**Matakaoa Point**	**16.75**	**200**	Pn	**Pn**	**22 13 37.1**	**-0.1**
MXZ				IAmb	IAmb	22 13 40.8	
	comp=Z,46nm,1.0s						
URZ	**Urewera**	**17.77**	**202**		**Pn**	**22 13 49.6**	**-0.4**
URZ				IAmb	IAmb	22 14 08.3	
	comp=Z,16nm,1.1s						
TUWZ	**Tuamarina**	**21.71**	**204**	P	**P**	**22 14 34.6**	**+1.1**
BBOO	**Buckleboo**	**44.75**	**245**	P	**P**	**22 17 54.2**	**-1.6**
BBOO				IAmb	IAmb	22 18 03.1	
	comp=Z,5.2nm,1.1s						
ASAR	**Alice Springs**	**47.25**	**258**	P	**P**	**22 18 12.8**	**-2.9**
	comp=Z,0.5nm,0.8s,baz=94,slow=8.7,SNR=4.1						
WRA	**Warramunga Arr**	**47.51**	**263**	P	**P**	**22 18 13.4**	**-4.3**
	comp=Z,0.7nm,0.8s,baz=102,slow=8.5,SNR=4.9						
WRA	**Warramunga Arr**	**47.51

ISC 13 22:22:38.1±0.9, 26°50S±0.03×27°40E±0.04, h11km±6km, n11, σ2§49/23, South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WDLM	**Western Deep L**	**0.08**	**14**	*eP*	**Pg**	**22 22 39.7**	**-1.0**
WDLM				*eS*	**Sg**	**22 22 40.4**	**-2.3**
WDLM				AML	AML	22 22 41.7	
	comp=Z,8μm,0.2s						
KLOF	**Kloof**	**0.24**	**51**	*eP*	**Pg**	**22 22 43.6**	**+0.4**
KLOF				*eS*	**Sg**	**22 22 45.8**	**-0.8**
KLOF				AML	AML	22 22 47.7	
	comp=Z,1μm,0.2s						
PRYS	**Parys**	**0.43**	**185**	*eP*	**Pn**	**22 22 49.1**	**-1.3**
PRYS				*eS*	**Sn**	**22 22 56.5**	**+4.2**
PRYS				AML	AML	22 22 57.4	
	comp=Z,63nm,0.2s						
ERPM	**east rand prop**	**0.77**	**79**	*eP*	**Pb**	**22 22 54.0**	**+0.3**
ERPM				*eS*	**Sb**	**22 23 04.3**	**+0.1**
ERPM				AML	AML	22 23 05.1	
	comp=Z,24nm,0.1s						
KSR	**Koster**	**0.79**	**325**	*eP*	**Pb**	**22 22 52.9**	**-1.1**
KSR				*eS*	**Sb**	**22 23 03.1**	**-1.6**
KSR				AML	AML	22 23 09.8	
	comp=Z,16nm,0.5s						
LBTB	**Lobatse**	**2.20**	**312**	*eP*	**Pn**	**22 23 17.2**	**+2.5**
LBTB				*eS*	**Sn**	**22 23 44.4**	**+2.4**
LBTB				AML	AML	22 23 47.5	
	comp=Z,25nm,0.2s						
LBTB	**Lobatse**	**2.20**	**312**	*i* P	**Pb**	**22 23 18.5**	**+0.5**
LBTB				*i* S	**Sn**	**22 23 44.5**	**+2.6**
BOSA	**Boshof**	**2.84**	**222**	*i*	**Pn**	**22 23 26.0**	**+2.4**
	baz=36,slow=12						
BOSA				*i* P	**Pn**	**22 23 26.0**	**+2.4**
BOSA				*i* S	**Sn**	**22 23 54.5**	**-3.3**
BOSA	**Boshof**	**2.84**	**222**	*i* P	**Pb**	**22 23 27.1**	**-1.8**
BOSA				*i* S	**Sn**	**22 23 58.1**	**+0.3**
MATP	**Matopo**	**6.13**	**10**	*i* P	**Pn**	**22 24 10.8**	**+2.0**
MATP				*i* S	**Sn**	**22 25 22.0**	**+2.9**
MATP	**Matopo**	**6.13**	**10**	*i* P	**Pn**	**22 24 08.9**	**+0.1**
MATP				*i* S	**Sn**	**22 25 13.6**	**-5.4**

IDC 13 22:28:45.4±1.5, 3°81S×127°46E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/36, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=47.3km s-min=29.4km az=70.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.80**	**53**	Pn	Pn	22 29 59.1	+0.1
	2.7nm,0.3s,baz=227,slow=17,SNR=8.2						
SIJI				Sn	Sn	22 30 50.6	-4.7
	2.4nm,0.3s,baz=264,slow=16,SNR=7.8						
WRA	**Warramunga Arr**	**17.38**	**158**	P	Pn	22 32 46.2	-3.5
	0.1nm,0.3s,baz=339,slow=13,SNR=4.4						
WRA				S	Sn	22 35 43.9	-20
	0.2nm,0.3s,baz=338,slow=22,SNR=7.2						
ASAR	**Alice Springs**	**20.70**	**163**	P	P	22 33 27.4	0.0
	2.5nm,0.6s,baz=344,slow=11,SNR=26						
MKAR	**Makanchi Array**	**64.19**	**327**	P		22 39 22.1	+0.1
	0.4nm,0.8s,baz=126,slow=6.2,SNR=4.3						
ZALV	**Zalesovo Beam**	**67.62**	**334**	P	P	22 39 43.9	-0.1
	0.5nm,0.6s,baz=130,slow=4.5,SNR=2.3						

IDC 13 22:35:38.5±1.6, 43°46N×126°73W, h0km, mb3.4/5, mb1 3.8/11, mb1mx3.6/36, mbtmp3.6/11, ML3.4/5, MS3.2/6, Ms1 3.1/6, ms1mx2.8/43, Error ellipse: s-maj=27.6km s-min=11.3km az=54.0

NEIC 13 22:35:38.8±1.7, 43°31N±0°05×126°9W±0°1, h10km±1km, mb3.8/3, Error ellipse: s-maj=14.9km s-min=6.2km az=241.0

ANF 13 22:35:39.3±1.1, 43°29N×126°63W, h0km, ML3.7/13, Error ellipse: s-maj=12.2km s-min=6.4km az=78.0

ISC 13 22:35:39.5±1.3, 43°36N±0°05×126°86W±0°09, h14km, n72, σ1§41/78, mb3.8/5, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**1.91**	**104**		**Pn**	**22 36 09.7**	**-2.1**
KEBM					**Sn**	**22 36 32.4**	**-3.3**
J01E	**Myrtle Point**	**2.15**	**94**	P	**Pn**	**22 36 12.9**	**-2.0**
	baz=275,SNR=52						
J01E				S	**Sn**	**22 36 40.2**	**-1.1**
	baz=275						
I02D	**Swisshome**	**2.31**	**70**	P	**Pn**	**22 36 15.7**	**-1.4**
	baz=249,SNR=562						
I02D				S	**Sn**	**22 36 45.1**	**-0.1**
	baz=249						
K02D	**Willamette Mer**	**2.43**	**105**	P	**Pn**	**22 36 17.0**	**-2.0**
	baz=286,SNR=191						
K02D				S	**Sn**	**22 36 47.0**	**-1.6**
	baz=286						
I03D	**Drain, OR**	**2.57**	**81**	P	**Pn**	**22 36 19.5**	**-1.3**
	baz=262,SNR=252						
I03D				S	**Sn**	**22 36 51.5**	**-0.3**
	baz=262						
COR	**Corvallis**	**2.84**	**63**		**Pn**	**22 36 24.1**	**-0.3**
COR				Sn	**Sn**	**22 36 57.5**	**-1.0**
KRMB	**Red Mountain**	**2.85**	**129**	Pn	**Pn**	**22 36 22.9**	**-1.8**
HUMO	**Hull Mountain**	**2.96**	**103**		**Pn**	**22 36 24.8**	**-1.3**
G03D	**McMinnville, O**	**3.17**	**53**	P	**Pn**	**22 36 28.4**	**-0.6**
	baz=233,SNR=104						
G03D				S	**Sn**	**22 37 07.2**	**+0.5**
	baz=233						
H04D	**Lebanon**	**3.19**	**67**	P	**Pn**	**22 36 29.5**	**+0.2**
	baz=248,SNR=53						
I04A	**Tendick Farm,**	**3.26**	**81**	P	**Pn**	**22 36 30.2**	**-0.1**
	baz=262,SNR=34						
JCC	**Jacoby Creek,**	**3.30**	**139**	Pn	**Pn**	**22 36 29.8**	**-1.0**
KHMM	**Horse Mountain**	**3.41**	**136**	Pn	**Pn**	**22 36 32.0**	**-0.3**
J04D	**Umpqua Nationa**	**3.47**	**90**	P	**Pn**	**22 36 33.4**	**+0.1**
	baz=272,SNR=32						
YBH	**Yreka Blue Hor**	**3.47**	**117**	Pn	**Pn**	**22 36 33.4**	**+0.2**
	2.5nm,0.3s,baz=302,slow=12,SNR=25						
YBH				Sn	**Sn**	**22 37 16.2**	**+2.1**
	1.5nm,0.3s,baz=120,slow=17,SNR=8.2						
YBH				LR	LR	22 37 59.1	
	comp=Z,125nm,19.5s,baz=312,slow=41						
YBH	**Yreka Blue Hor**	**3.47**	**117**		**Pn**	**22 36 33.3**	**+0.2**
YBH					**Sn**	**22 37 09.2**	**-4.9**
F03A	**Seaside**	**3.48**	**41**		**Pn**	**22 36 33.2**	**-0.1**
F03A					**Sn**	**22 37 12.2**	**-2.1**
L04D	**Klamath Falls**	**3.54**	**107**	P	**Pn**	**22 36 34.0**	**-0.2**
	baz=290,SNR=23						
M02C	**Callahan**	**3.56**	**122**	P	**Pn**	**22 36 33.8**	**-0.7**
	baz=306						
F04D	**Rainier, OR**	**3.86**	**44**	P	**Pn**	**22 36 37.9**	**-0.5**
	baz=224,SNR=7.4						
F04D				S	**Sn**	**22 37 25.1**	**+1.5**
	baz=224						
KMRM	**Mail Ridge**	**3.92**	**142**	Pn	**Pn**	**22 36 39.6**	**+0.2**
F04A	**Amboy**	**4.08**	**49**		**Pn**	**22 36 42.1**	**+0.6**
J05D	**Fort Rock, OR**	**4.10**	**89**	P	**Pn**	**22 36 41.4**	**-0.5**
	baz=272,SNR=31						
I05D	**Terrebonne, OR**	**4.11**	**74**	P	**Pn**	**22 36 41.8**	**-0.1**
	baz=256,SNR=14						
PINE	**Pine Mountain**	**4.32**	**82**		**Pn**	**22 36 45.1**	**+0.1**
G05D	**Wamic, OR**	**4.40**	**63**	P	**Pn**	**22 36 46.4**	**+0.5**
	baz=245,SNR=13						
E04D	**Cinebar**	**4.41**	**42**	P	**Pn**	**22 36 46.2**	**+0.1**
	baz=223,SNR=13						
NLWA	**Neilton Lookou**	**4.54**	**27**	Pn	**Pn**	**22 36 47.5**	**-0.4**
NLWA					**Sn**	**22 37 37.0**	**-3.6**
F05D	**White Salmon**	**4.60**	**55**	P	**Pn**	**22 36 49.6**	**+0.9**
	baz=237,SNR=46						
D04E	**Lakebay**	**4.78**	**36**	P	**Pn**	**22 36 51.4**	**+0.3**
	baz=216						
G06A	**Carlson Farm,**	**4.84**	**65**		**Pn**	**22 36 52.2**	**+0.1**
LON	**Longmire**	**4.92**	**45**		**Pn**	**22 36 54.0**	**+0.9**
D03D	**Eldon**	**4.94**	**31**	P	**Pn**	**22 36 52.5**	**-0.8**
	baz=212						
D03D				S	**Sn**	**22 37 49.4**	**-0.8**
	baz=212						
D05A	**Enumclaw**	**5.14**	**40**		**Pn**	**22 36 57.1**	**+1.1**
F07A	**Phinny Hill Vi**	**5.55**	**61**		**Pn**	**22 37 02.5**	**+0.8**
PGC	**Sidney**	**5.79**	**23**	Pn	**Pn**	**22 37 04.9**	**-0.1**
PGC					**Sn**	**22 38 07.1**	**-4.1**
LTY	**Liberty**	**5.85**	**46**		**Pn**	**22 37 06.6**	**+0.8**
E07A	**Sunnyside**	**5.91**	**55**		**Pn**	**22 37 07.7**	**+1.1**
HAWA	**Hanford**	**6.02**	**57**		**Pn**	**22 37 08.9**	**+0.8**
WVOR	**Wild Horse Val**	**6.11**	**96**		**Pn**	**22 37 08.4**	**-1.1**
E08A	**Dider Farm, El**	**6.36**	**58**		**Pn**	**22 37 12.8**	**+0.1**
D08A	**Wollman Farm,**	**6.71**	**54**		**Pn**	**22 37 18.2**	**+0.5**
BMO	**Blue Mountains**	**7.04**	**75**		**Pn**	**22 37 22.4**	**+0.2**
LLLB	**Lillooet**	**8.00**	**23**		**Pn**	**22 37 36.4**	**+1.0**
NVAR	**Mina Array Bea**	**8.14**	**124**	Pn	**Pn**	**22 37 40.0**	**+2.6**
	0.2nm,0.3s,baz=302,slow=14,SNR=4.4						
NEW	**Newport**	**8.38**	**51**	Pn	**Pn**	**22 37 40.8**	**+0.3**
	1.1nm,0.3s,baz=235,slow=9.3,SNR=4.5						
NEW				LR	LR	22 40 46.4	
	comp=Z,172nm,18.6s,baz=250,slow=37						
NEW	**Newport**	**8.38**	**51**	P	**Pn**	**22 37 40.5**	**0.0**
	baz=237						
BBB	**Bella Bella**	**8.87**	**355**	Pn	**Pn**	**22 37 48.5**	**+1.3**
	0.4nm,0.3s,baz=203,slow=13,SNR=2.5						
ELK	**Elko**	**9.03**	**103**	Pn	**Pn**	**22 37 52.6**	**+2.9**
	0.1nm,0.3s,baz=294,slow=19,SNR=4.0						
MSO	**Missoula**	**9.77**	**65**	P	**Pn**	**22 37 59.9**	**+0.2**
	baz=253						
DLMT	**Dillon**	**10.41**	**74**		**Pn**	**22 38 09.2**	**+0.7**
WALA	**Waterton Lakes**	**10.62**	**53**		**Pn**	**22 38 12.8**	**+1.4**
YHL	**Hebgen Lake**	**11.37**	**77**	Pn	**Pn**	**22 38 23.8**	**+2.0**
PDAR	**Pinedale Array**	**12.67**	**87**	Pn	**Pn**	**22 38 41.6**	**+2.2**
	baz=273,slow=12,SNR=7.1						
PDAR				LR	LR	22 43 35.1	
	comp=Z,102nm,19.2s,baz=287,slow=38						
PFO	**Pinyon Flats O**	**12.68**	**137**	LR	LR	22 43 18.5	
	comp=Z,77nm,19.6s,baz=330,slow=36						
SDCO	**Great Sand Dun**	**17.16**	**102**	P	**P**	**22 39 40.6**	**-0.1**
SDCO				IAmb	IAmb	22 39 41.3	
	comp=Z,4.5nm,1.1s						
FFC	**Flin Flon**	**19.76**	**46**	P	**Pn**	**22 40 10.0**	**-0.4**
FFC				IAmb	IAmb	22 40 19.0	
	comp=Z,7.2nm,1.4s						
YKA	**Yellowknife Ar**	**20.47**	**16**	P	**P**	**22 40 17.5**	**+1.0**
	comp=Z,0.8nm,0.9s,baz=205,slow=10,SNR=8.3						
ULM	**Lac du Bonnet**	**22.18**	**61**	P	**P**	**22 40 35.6**	**+0.5**
	comp=Z,4.6nm,0.9s,baz=258,slow=10,SNR=8.2						
ULM				LR	LR	22 49 43.5	
	comp=Z,92nm,21.1s,baz=191,slow=38						
ULM	**Lac du Bonnet**	**22.18**	**61**	P	**P**	**22 40 35.8**	**+0.7**
ULM				IAmb	IAmb	22 40 36.5	
	comp=Z,9.2nm,1.1s						
TXAR	**Lajitas Array**	**23.24**	**119**	P	**P**	**22 40 48.2**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=307,slow=9.2,SNR=3.9						
LPIG	**La Paz**	**23.55**	**139**	P	**P**	**22 40 50.0**	**+0.5**
	comp=Z,50nm,0.3s,baz=46,slow=2.9,SNR=4.5						
LPIG	**La Paz**	**23.55**	**139**	P	**P**	**22 40 50.0**	**+0.5**
ILAR	**Eielson Array**	**24.24**	**339**	P	**P**	**22 40 55.5**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=148,slow=9.1,SNR=14						
INK	**Inuvik**	**25.25**	**354**	P	**P**	**22 41 04.3**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=112,slow=14,SNR=5.3						
PETK	**Petropavlovsk-**	**48.98**	**309**	LR	LR	23 02 21.1	
	comp=Z,34nm,21.4s,baz=246,slow=33						
H11N3	**WAKE ISLAND Hy**	**59.58**	**269**	T	T	23 50 04.8	
	baz=51,slow=75,SNR=47						
H11N2	**WAKE ISLAND Hy**	**59.58**	**269**	T	T	23 50 00.8	
	baz=51,slow=75,SNR=23						
H11N1	**WAKE ISLAND Hy**	**59.59**	**269**	T	T	23 50 05.2	
	baz=51,slow=75,SNR=33						
H11S1	**WAKE ISLAND Hy**	**60.50**	**268**	T	T	23 51 22.2	
	baz=50,slow=75,SNR=150						
H11S2	**WAKE ISLAND Hy**	**60.50**	**268**	T	T	23 51 24.0	
	baz=50,slow=75,SNR=136						
H11S3	**WAKE ISLAND Hy**	**60.52**	**268**	T	T	23 51 10.8	
	baz=50,slow=75,SNR=83						

MAN 13 22:46:58.5, 7°50N×126°22E, h1km, mb4.1, ML2.9, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.55**	**176**	*eP*	Pg	22 47 09.5	+0.4
MATI				*eS*	Sg	22 47 13.3	-2.9
DDMP	**Don Marcelino,**	**1.47**	**200**	*eP*	Pg	22 47 35.7	+8.9
GSPH	**General Santos**	**1.89**	**222**	↑*iP*	Pn	22 47 28.8	-3.2
GSPH				*i* S	Sn	22 47 33.2	-23
SKMP	**Bagumbayan, Su**	**1.93**	**240**	*eP*	Pn	22 47 32.8	+0.2
SKMP				*eS*	Sn	22 47 41.6	-16

MAN 13 23:01:50.8, 10°12N×123°79E, h30km, mb4.5, ML3.3, MS3.1, 1C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.26**	**42**	↓*iP*	Pn	23 01 58.9	+0.3
LLP				*i* S	Sn	23 02 05.9	+2.2
MSLP	**Maasin**	**1.06**	**89**	*eP*	Pn	23 02 03.6	-5.9
MSLP				*eS*	Sn	23 02 13.7	-10
DCPH	**Dipolog City**	**1.59**	**196**	↑*iP*	Pn	23 02 17.2	+0.4
DCPH				*i* S	Sn	23 02 36.8	+0.4

GCMT 13 23:03:40.2±0.4, 14°08N±0°03×91°85W±0°03, h51km±1km, MW4.9/65, Moment Tensor Solution. s23,c26; s65,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.92±.17; $M_{\theta\theta}$1.40±.13; $M_{\phi\phi}$0.51±.13; $M_{r\theta}$0.20±.07; $M_{\theta\phi}$-1.55±.10; $M_{\phi r}$-1.09±.07; Best double couple: M_o2.54900×10^{16} NP1:ϕ_s104.00000°, δ40.00000°, λ-127.00000°. NP2: ϕ_s328.00000°, δ59.00000°, λ-64.00000°. Principal axes: T 2.7180, Plg10.0000°, Azm39.0000°; N -0.3450, Plg22.0000°, Azm134.0000°; P -2.3800, Plg65.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function

IDC 13 23:03:40.7±0.5, 13°92N×91°80W, h59km±4km, mb4.2/28, mb1 4.4/31, mb1mx4.3/42, mbtmp4.5/31, MS3.9/23, Ms1 3.9/23, ms1mx3.8/36 Error ellipse: s-maj=7.6km s-min=6.8km az=173.0

MEX 13 23:03:41.6±0.5, 14°04N×91°73W, h66km±13km, MD5.0

NEIC 13 23:03:41.2±2.9, 14°10N±0°05×91°67W±0°05, h64km±2km, mb4.7/246, Mwr4.8/11, Md5.0/24(MEX), Error ellipse: s-maj=9.2km s-min=5.3km az=218.0. Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}-1.77; $M_{\theta\theta}$1.42; $M_{\phi\phi}$0.35; $M_{r\theta}$-0.61; $M_{\theta\phi}$-0.76; $M_{\phi r}$0.95; Fault plane solution: M_o2.12000×10^{16} NP1:ϕ_s132.32000°, δ61.14000°, λ-75.12000°. NP2:ϕ_s283.48000°, δ32.17000°, λ-114.99000°. Principal axes: T 2.0719, Plg15.0000°, Azm211.0000°; N 0.0904, Plg13.0000°, Azm305.0000°; P -2.1623, Plg70.0000°, Azm74.0000°;

UCR 13 23:03:42.2±0.8, 14°16N×91°37W, h0km±3km, ML4.5, mb4.8(NEIC)

SNET 13 23:03:42.4±0.8, 14°13N×91°38W, h3km±7km, ML4.7

GCG 13 23:03:43.2±0.3, 14°33N×91°60W, h68km±37km, MD5.1

INET 13 23:03:43.4, 14°11N×91°56W, h19km, MD4.2, ML5.2

ISC 13 23:03:40.6±0.4, 14°07N±0°04×91°69W±0°04, h58km±3km, h58km:pP-P, n659, σ1§21/650, mb4.6/119, MS3.9/25, 14C-5D, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**0.39**	**18**	↑*iP*	**Pn**	**23 03 53.2**	**+1.9**
STG3	**Santiaguito 3,**	**0.65**	**10**	↑*iP*	**Pn**	**23 03 55.4**	**+1.0**
FUG	**Fuego 3**	**0.91**	**65**	↑*iP*	**Pn**	**23 03 59.0**	**+1.5**
THIG		**1.00**	**326**	*eP*	**Pn**	**23 03 58.5**	**-0.1**
THIG				*eS*	**Sn**	**23 04 12.6**	**+0.6**
THIG		**1.00**	**326**		**Pn**	**23 03 58.5**	**-0.1**
THIG					**Sn**	**23 04 12.6**	**+0.6**
PCG	**Pacaya**	**1.10**	**73**	↑*eP*	**Pn**	**23 04 02.0**	**+1.9**
IXG	**Ixpaco**	**1.22**	**85**	↓*iP*	**Pn**	**23 04 02.7**	**+1.1**
APG	**El Apazote**	**1.51**	**52**	P	**Pn**	**23 04 07.7**	**+2.1**
	402nm,0.3s,baz=208,slow=11,SNR=1161						
APG				S	**Sn**	**23 04 29.3**	**+4.9**
	1μm,0.3s,baz=68,slow=19,SNR=18						
FAME	**Alcalda de S**	**1.64**	**98**	↑*eP*	**Pn**	**23 04 07.1**	**-0.2**
CEVE	**Cerro Verde**	**2.02**	**96**	↓*iP*	**Pn**	**23 04 13.8**	**+1.2**
CEVE	**Cerro Verde**	**2.02**	**96**	↓*iP*	**Pn**	**23 04 13.8**	**+1.2**
SBLS	**San Blas**	**2.02**	**96**	*eP*	**Pn**	**23 04 13.7**	**+1.1**
SBLS	**San Blas**	**2.02**	**96**	*eP*	**Pn**	**23 04 13.7**	**+1.1**
SNJE	**San Jose**	**2.04**	**95**	↓*iP*	**Pn**	**23 04 14.2**	**+1.5**
SNJE	**San Jose**	**2.04**	**95**	↓*iP*	**Pn**	**23 04 14.2**	**+1.5**
PCIG		**2.20**	**318**	*eP*	**Pn**	**23 04 14.7**	**0.0**
PCIG				*eS*	**Sn**	**23 04 39.9**	**-0.9**
PCIG		**2.20**	**318**		**Pn**	**23 04 14.7**	**0.0**
PCIG					**Sn**	**23 04 39.9**	**-0.9**
MTO3	**Montecristo**	**2.29**	**81**	↑*iP*	**Pn**	**23 04 17.1**	**+1.0**
MTO3	**Montecristo**	**2.29**	**81**	↑*iP*	**Pn**	**23 04 17.1**	**+1.0**
BOQS	**Boqueron**	**2.37**	**98**	*eP*	**Pn**	**23 04 18.5**	**+1.3**
UEES	**Universidad Ev**	**2.41**	**98**	*eP*	**Pn**	**23 04 19.0**	**+1.3**
UEES	**Universidad Ev**	**2.41**	**98**	*eP*	**Pn**	**23 04 19.0**	**+1.3**
SNET	**Serv Nac Est T**	**2.42**	**99**	*eP*	**Pn**	**23 04 19.1**	**+1.2**
SNET				*eS*	**Sn**	**23 04 47.4**	**+1.0**
SNET				AML	AML	23 04 57.9	
	comp=Z,8μm,0.3s						
SNET	**Serv Nac Est T**	**2.42**	**99**	*eP*	**Pn**	**23 04 19.1**	**+1.2**
SNET				*eS*	**Sn**	**23 04 47.4**	**+1.0**
SNET				AML	AML	23 04 57.9	
	comp=Z,8μm,0.3s						
SNET	**Serv Nac Est T**	**2.42**	**99**		**Pn**	**23 04 19.0**	**+1.1**
CUSC	**Alcaldia de Cu**	**2.46**	**98**	*eP*	**Pn**	**23 04 19.7**	**+1.3**
CUSC	**Alcaldia de Cu**	**2.46**	**98**	*eP*	**Pn**	**23 04 19.7**	**+1.3**
LFU	**La Fuente**	**2.52**	**97**	*eP*	**Pn**	**23 04 20.6**	**+1.4**
LFU	**La Fuente**	**2.52**	**97**	↑*eP*	**Pn**	**23 04 20.6**	**+1.4**
LBRS	**Las Brisas**	**2.59**	**97**	↑*eP*	**Pn**	**23 04 21.5**	**+1.3**
LFRS	**El Faro**	**2.59**	**99**	*eP*	**Pn**	**23 04 21.1**	**+0.9**
PAVA	**Las Pavas**	**2.70**	**97**	↑*eP*	**Pn**	**23 04 23.1**	**+1.4**
PAVA	**Las Pavas**	**2.70**	**97**	↑*eP*	**Pn**	**23 04 23.1**	**+1.4**
COEG	**Centro de Oper**	**2.77**	**99**	*eP*	**Pn**	**23 04 24.0**	**+1.4**
COEG				AML	AML	23 05 09.6	
	comp=Z,8μm,0.6s						
TGIG		**3.03**	**333**	*i* P	**Pn**	**23 04 26.8**	**+0.6**
TGIG				*i* S	**Sn**	**23 05 01.2**	**0.0**
TGIG		**3.03**	**333**		**Pn**	**23 04 26.8**	**+0.6**
TGIG					**Sn**	**23 05 01.2**	**0.0**
ALJI	**Alcalda de J**	**3.12**	**103**	*eP*	**Pn**	**23 04 28.9**	**+1.5**
ALJI				AML	AML	23 05 16.4	
	comp=Z,3μm,0.6s						
COEB	**Comit de Eme**	**3.12**	**100**	*eP*	**Pn**	**23 04 28.8**	**+1.3**
COEB				AML	AML	23 05 20.4	
	comp=Z,3μm,0.5s						
TECA	**Tecapa**	**3.15**	**100**	*eP*	**Pn**	**23 04 29.3**	**+1.3**
TECA	**Tecapa**	**3.15**	**100**	*eP*	**Pn**	**23 04 29.3**	**+1.3**
PACA	**Pacayal**	**3.33**	**100**	*eP*	**Pn**	**23 04 31.6**	**+1.2**
PACA	**Pacayal**	**3.33**	**100**	*eP*	**Pn**	**23 04 31.6**	**+1.2**
LCY	**Lacayo**	**3.36**	**101**	*eP*	**Pn**	**23 04 32.5**	**+1.7**
LCY	**Lacayo**	**3.36**	**101**	*eP*	**Pn**	**23 04 32.5**	**+1.7**
JUCU	**Jucuarán**	**3.44**	**103**	*eP*	**Pn**	**23 04 33.0**	**+1.1**
LCND	**La Caada**	**3.77**	**101**	*eP*	**Pn**	**23 04 37.5**	**+1.2**
LCND	**La Caada**	**3.77**	**101**	*eP*	**Pn**	**23 04 37.5**	**+1.2**
CNCH	**Conchagua**	**3.83**	**101**	↑*eP*	**Pn**	**23 04 38.3**	**+1.1**
CNCH	**Conchagua**	**3.83**	**101**	↑*eP*	**Pn**	**23 04 38.3**	**+1.1**
TGUH	**Tegucigalpa,Un**	**4.29**	**90**	*eP*	**Pn**	**23 04 44.1**	**+0.7**
TGUH				*i* S	**Sn**	**23 05 33.4**	**+1.0**
TGUH	**Tegucigalpa,Un**	**4.29**	**90**		**Pn**	**23 04 44.1**	**+0.7**
CMIG	**Matias Romero**	**4.30**	**315**	P	**Pn**	**23 04 44.1**	**+0.6**
	comp=Z,20nm,0.3s,baz=151,slow=12,SNR=88						
CMIG				S	**Sn**	**23 05 33.4**	**+1.0**
	comp=Z,101nm,0.3s,baz=43,slow=15,SNR=9.9						
CMIG	**Matias Romero**	**4.30**	**315**	*eP*	**Pn**	**23 04 44.5**	**+0.9**
CMIG				*i* S	**Sn**	**23 05 32.4**	**-0.1**
CMIG	**Matias Romero**	**4.30**	**315**		**Pn**	**23 04 44.5**	**+0.9**
CMIG					**Sn**	**23 05 32.4**	**-0.1**
HUIG	**Huatulco**	**4.59**	**292**	*i* P	**Pn**	**23 04 46.8**	**-0.7**
HUIG				*i* S	**Sn**	**23 05 39.0**	**-0.6**
HUIG	**Huatulco**	**4.59**	**292**		**Pn**	**23 04 46.8**	**-0.7**
HUIG					**Sn**	**23 05 39.0**	**-0.6**
ESTN	**Estel**	**5.26**	**100**		**Pn**	**23 04 57.6**	**+0.8**
VHO	**Vista Hermosa**	**5.70**	**302**	*i* P	**Pn**	**23 05 03.8**	**+0.9**
VHO				*eS*	**Sn**	**23 06 07.5**	**+0.3**
ACON	**Acoyapa**	**6.69**	**107**		**Pn**	**23 05 16.9**	**+0.7**
TEIG	**Tepich**	**6.94**	**28**	P	**Pn**	**23 05 20.8**	**+1.0**
	comp=Z,76nm,0.3s,baz=139,slow=1.0,SNR=243						
TEIG				LR	LR	23 08 52.4	
	comp=Z,978nm,20.7s,baz=238,slow=44						
TEIG	**Tepich**	**6.94**	**28**		**Pn**	**23 05 20.7**	**+1.0**
TEIG					**Sn**	**23 06 34.6**	**-2.7**
ESPN	**Las Esperanzas**	**7.44**	**104**		**Pn**	**23 05 27.9**	**+1.4**
TLIG	**Tlapa**	**7.47**	**299**		**Pn**	**23 05 28.7**	**+1.6**
TLIG					**Sn**	**23 06 46.3**	**-4.3**
JTS	**Las Juntas de**	**7.58**	**119**	P	**Pn**	**23 05 30.3**	**+1.7**
	comp=Z,3.2nm,0.3s,baz=7.0,slow=8.6,SNR=17						
JTS				S	**Sn**	**23 06 54.4**	**+1.2**
	comp=Z,2.0nm,0.3s,baz=182,slow=24,SNR=1.6						
JTS	**Las Juntas de**	**7.58**	**119**		**Pn**	**23 05 29.6**	**+1.1**
HDC	**Heredia**	**8.44**	**118**		**Pn**	**23 05 41.9**	**+1.5**
HDC					**Sn**	**23 07 10.7**	**-3.7**
UNM	**Universidad Na**	**8.88**	**307**	Pn	**Pn**	**23 05 46.1**	**-0.4**
MOIG	**Morelia**	**10.66**	**303**		**Pn**	**23 06 13.6**	**+2.7**
FSCY	**Frank Sound, G**	**11.34**	**61**	Pn	**Pn**	**23 06 18.5**	**-1.4**
BCIP	**Isla Barro Col**

253A	**Americus**	19.20	20	P		P	23 08 00.8	+1.0
	baz=203							
LRAL	**Lakeview Retre**	19.36	12	P		Pn	23 08 04.1	+1.0
LRAL				IAmb		IAmb	23 08 07.9	
	comp=Z,73nm,1.1s							
LRAL	**Lakeview Retre**	19.36	12	P		P	23 08 03.1	+1.6
	baz=194,SNR=26							
254A	**Abbeville**	19.39	22	P		P	23 08 03.2	+1.4
	baz=205,SNR=14							
ROSC	**El Rosal**	19.42	117	P		Pn	23 08 05.4	+1.1
	comp=Z,2.3nm,0.3s,baz=360,slow=3.2,SNR=11							
ROSC	**El Rosal**	19.42	117	eP		Pn	23 08 05.9	+1.6
WLAR	**White Oak Lake**	19.58	356	P		P	23 08 03.1	-0.7
WLAR				IAmb		IAmb	23 08 21.8	
	comp=Z,40nm,0.9s							
152A	**Waverly Hall**	19.58	18	P		P	23 08 04.9	+1.1
	baz=200							
BARC	**Barichara**	19.66	110	eP		P	23 08 04.0	-1.2
255A	**Hazlehurst**	19.68	24	P		Pn	23 08 09.1	+2.3
255A	**Hazlehurst**	19.68	24	P		P	23 08 05.2	+0.3
	baz=207							
Z50A	**Ashland**	19.81	14	IAmb		IAmb	23 08 18.0	
	comp=Z,37nm,0.8s							
Z50A	**Ashland**	19.81	14	P		P	23 08 07.0	+0.6
	baz=197							
PAMC	**Pamplona, Colo**	19.81	108	eP		P	23 08 05.8	-1.3
153A	**Fort Valley**	19.84	20	P		P	23 08 06.9	+0.2
	baz=203							
ABTX	**Abilene, Hawle**	19.85	340	P		P	23 08 07.2	+0.3
	baz=157							
256A	**Glennville**	19.96	25	P		P	23 08 08.1	0.0
	baz=209							
CHIC	**Chingaza**	20.03	116	eP		P	23 08 10.3	+0.9
RUSC	**La Rusia**	20.03	112	eP		P	23 08 09.7	+0.2
154A	**Montrose**	20.06	22	P		P	23 08 09.5	+0.4
	baz=205							
Z51A	**Franklin**	20.06	16	P		P	23 08 06.8	-2.4
FLOC	**Florencia**	20.13	127	eP		Pn	23 08 12.3	-0.1
FLOC	**Florencia**	20.13	127			Pn	23 08 14.0	+1.6
Z52A	**Williamson**	20.16	18	P		P	23 08 10.7	+0.6
	baz=201,SNR=16							
LPIG	**La Paz**	20.20	302	P		P	23 08 11.8	+1.1
	comp=Z,33nm,0.3s,baz=170,slow=6.0,SNR=4.4							
LPIG				LR		LR	23 14 27.4	
	comp=Z,156nm,21.5s,baz=103,slow=32							
Y49A	**Blount Mountai**	20.28	13	IAmb		IAmb	23 08 19.0	
	comp=Z,38nm,1.0s							
155A	**Kite**	20.30	23	P		P	23 08 11.9	+0.2
	baz=206,SNR=8.8							
257A	**Skidaway Islan**	20.32	27	P		P	23 08 12.8	+0.8
	baz=211							
X40A	**Basin Creek Fa**	20.36	357	P		P	23 08 12.7	+0.4
	baz=177							
MIAR	**Mount Ida**	20.46	356	P		P	23 08 14.0	+0.6
MIAR				IAmb		IAmb	23 08 22.0	
	comp=Z,25nm,1.0s							
MIAR	**Mount Ida**	20.46	356	P		P	23 08 14.9	+1.5
	baz=175,SNR=6.9							
OXF	**Oxford**	20.46	5	P		P	23 08 14.6	+1.2
	baz=186,SNR=10							
Z53A	**Monticello**	20.50	20	P		P	23 08 14.7	+0.8
	baz=203,SNR=13							
UALR	**University of**	20.63	358	P		P	23 08 16.3	+1.1
UALR				IAmb		IAmb	23 08 35.2	
	comp=Z,24nm,0.8s							
Y51A	**Rockmart**	20.64	16	P		P	23 08 16.3	+0.9
	baz=198,SNR=8.4							
GOGA	**Godfrey**	20.66	20	IAmb		IAmb	23 08 33.1	
	comp=Z,35nm,0.9s							
GOGA	**Godfrey**	20.66	20	P		P	23 08 16.0	+0.4
	baz=203,SNR=10							
156A	**Sylvania**	20.71	25	P		P	23 08 17.3	+1.1
	baz=209							
Z54A	**Sparta**	20.71	21	P		P	23 08 17.2	+1.0
	baz=205,SNR=6.2							
X48A	**Hartselle**	20.73	11	IAmb		IAmb	23 08 30.5	
	comp=Z,22nm,0.7s							
SC01	**Santiago de lo**	20.76	72	P		P	23 08 17.6	+0.7
Y52A	**Lilburn**	20.89	18	IAmb		IAmb	23 08 35.7	
	comp=Z,49nm,0.9s							
Y52A	**Lilburn**	20.89	18	P		P	23 08 19.1	+1.0
	baz=201,SNR=9.1							
157A	**Early Branch**	20.94	26	P		P	23 08 19.4	+0.8
	baz=210							
TAMC	**Tame, Arauca**	20.99	109	eP		P	23 08 17.5	-1.9
W41B	**Gary Mavity, V**	21.02	359	P		P	23 08 21.1	+1.6
	baz=178							
Y53A	**Monroe**	21.03	19	P		P	23 08 20.6	+1.0
	baz=202,SNR=13							
PLAL	**Pickwick Lake**	21.08	8	IAmb		IAmb	23 08 28.9	
	comp=Z,61nm,1.2s							
W39A	**Magazine**	21.12	355	P		P	23 08 22.8	+2.2
W39A	**Magazine**	21.12	355	P		P	23 08 21.3	+0.7
	baz=174							
X34A	**Smith Ranch, M**	21.19	346	P		P	23 08 21.5	+0.3
X34A				IAmb		IAmb	23 08 31.2	
	comp=Z,25nm,0.9s							
MACC	**Macarena, Meta**	21.24	122	eP		P	23 08 24.4	+2.3
SDV	**Santo Domingo**	21.26	102	P		P	23 08 20.6	-1.9
	comp=Z,17nm,0.7s,baz=306,slow=6.3,SNR=14							
SDV	**Santo Domingo**	21.26	102	eP		P	23 08 19.9	-2.6
SDV	**Santo Domingo**	21.26	102	eP		P	23 08 20.4	-2.1
SDV	**Santo Domingo**	21.26	102	P		P	23 08 20.2	-2.3
SDV				IAmb		IAmb	23 08 39.5	
	comp=Z,27nm,0.8s							
X51A	**Calhoun**	21.32	16	P		P	23 08 24.8	+2.1
X51A	**Calhoun**	21.32	16	P		P	23 08 22.8	+0.1
	baz=198,SNR=11							
Y54A	**Tignall**	21.33	21	P		P	23 08 23.2	+0.4
	baz=204							
158A	**Hollywood**	21.34	27	P		P	23 08 23.1	+0.2
	baz=212							
Z56A	**Williston**	21.35	24	P		P	23 08 23.1	+0.1
Z56A	**Williston**	21.35	24	P		P	23 08 23.4	+0.4
	baz=208							
LPAR	**Lepanto**	21.48	3	P		P	23 08 24.2	-0.2
RGRS	**Roger Stewart**	21.48	27	P		P	23 08 25.1	+0.7
W35A	**Tecumseh**	21.51	348	P		P	23 08 22.9	-1.8
W49A	**Belvidere**	21.53	12	P		P	23 08 25.7	+0.8
	baz=194							
WMOK	**Wichita Mounta**	21.55	344	P		P	23 08 26.2	+1.0
	baz=161,SNR=5.4							
MNTX	**Cornudas Mount**	21.57	327	IAmb		IAmb	23 08 27.5	
	comp=Z,40nm,1.3s							
MNTX	**Cornudas Mount**	21.57	327	P		P	23 08 26.1	+0.6
	baz=141,SNR=20							
Z57A	**Bowman**	21.60	26	P		P	23 08 25.9	+0.2
	baz=210							
CSU	**Charleston Sou**	21.61	27	P		P	23 08 24.6	-1.1
X52A	**Dahlonega**	21.63	18	P		P	23 08 26.1	+0.1
	baz=201,SNR=11							
NHSC	**New Hope**	21.66	27	P		P	23 08 27.4	+1.1
NHSC	**New Hope**	21.66	27	P		P	23 08 26.4	+0.1
	baz=212							
PTLC	**Puerto Leguiza**	21.69	128	eP		P	23 08 34.8	+8.0
Y55A	**Saluda**	21.70	23	P		P	23 08 26.7	0.0
	baz=206,SNR=6.2							
X53A	**Estanollee**	21.72	19	P		P	23 08 26.6	-0.3
	baz=202,SNR=6.4							
FNO	**Franklin**	21.72	347	P		P	23 08 27.2	+0.3
W50A	**Signal Mountai**	21.82	14	IAmb		IAmb	23 08 46.1	
	comp=Z,41nm,0.8s							
W50A	**Signal Mountai**	21.82	14	P		P	23 08 28.3	+0.3
	baz=197,SNR=9.1							
HODGE	**Hodges**	21.82	21	IAmb		IAmb	23 08 45.1	
	comp=Z,42nm,0.7s							
HALT	**Halls**	21.85	5	P		P	23 08 29.8	+1.5
GNAR	**Gosnell**	21.86	4	P		P	23 08 27.1	-1.3
OKCFA	**Oklahoma City**	21.88	347	P		P	23 08 28.8	+0.1
OKCFA				IAmb		IAmb	23 08 37.2	
	comp=Z,31nm,0.8s							
DR12	**Loma Pena Alta**	21.90	75	P		P	23 08 30.5	+1.3
W51A	**Cleveland**	21.91	15	P		P	23 08 29.2	+0.2
	baz=198,SNR=7.4							
LCAR	**Lake Charles**	21.92	1	P		P	23 08 29.2	+0.2
LCAR				IAmb		IAmb	23 08 41.7	
	comp=Z,42nm,1.4s							
PEBM	**Pemiscott Bayo**	22.02	4	P		P	23 08 30.3	+0.2
Z58A	**St. Stephen**	22.02	27	P		P	23 08 30.1	0.0
	baz=212							
LNXT	**Lenox**	22.03	5	P		P	23 08 29.3	-1.0
TUL1	**Leonard**	22.06	351	P		P	23 08 29.1	-1.6
TUL1	**Leonard**	22.06	351	P		P	23 08 30.9	+0.3
	baz=169							
X54A	**Belton**	22.06	21	P		P	23 08 30.8	+0.2
	baz=205							
W52A	**Murphy**	22.08	17	P		P	23 08 31.9	+1.1
W52A				IAmb		IAmb	23 08 49.2	
	comp=Z,20nm,0.8s							
Z59A	**Georgetown, SC**	22.18	29	P		P	23 08 32.2	+0.3
	baz=213							
HHAR	**Hobbs**	22.21	355	P		P	23 08 32.7	+0.5
GLAT	**Glass**	22.21	5	P		P	23 08 30.9	-1.3
MSTX	**Muleshoe**	22.22	335	P		P	23 08 31.7	-0.8
MSTX	**Muleshoe**	22.22	335	P		P	23 08 32.5	+0.1
	baz=150,SNR=5.2							
U40A	**Yellville**	22.22	358	P		P	23 08 32.5	+0.2
	baz=177							
V49A	**McMinnville**	22.23	13	P		P	23 08 32.6	+0.2
	baz=195							
JSC	**Jenkinsville**	22.23	23	P		P	23 08 31.4	-1.0
WVT	**Waverly**	22.24	8	P		P	23 08 31.7	-0.8
WVT				IAmb		IAmb	23 08 42.1	
	comp=Z,26nm,1.1s							
WVT	**Waverly**	22.24	8	P		P	23 08 32.7	+0.2
	baz=190							
CPCT	**Cooper Cave**	22.25	16	IAmb		IAmb	23 08 42.6	
	comp=Z,58nm,1.2s							
X55A	**Gracelyn & Ava**	22.26	22	P		P	23 08 32.9	+0.1
	baz=206							
BG3	**Lake Jocassee**	22.29	19	P		P	23 08 33.1	+0.1
BG3				IAmb		IAmb	23 08 52.1	
	comp=Z,30nm,0.6s							
V50A	**Pikevile**	22.32	14	P		P	23 08 33.4	+0.1
	baz=197							
Y57A	**Sumter**	22.35	25	P		P	23 08 32.2	-1.5
Y57A				IAmb		IAmb	23 08 43.4	
	comp=Z,64nm,1.2s							
W53A	**Cullowhee**	22.38	19	P		P	23 08 34.1	0.0
	baz=202							
HICK	**Hickman**	22.49	5	P		P	23 08 33.4	-1.8
X56A	**White Oak**	22.51	24	P		P	23 08 35.3	-0.2
	baz=208							
PAULI	**Pauline**	22.51	22	P		P	23 08 36.6	+1.1
PAULI				IAmb		IAmb	23 08 53.7	
	comp=Z,30nm,0.7s							
Y58A	**Scranton**	22.56	27	P		P	23 08 35.9	-0.1
Y58A				IAmb		IAmb	23 08 54.1	
	comp=Z,32nm,0.8s							
Y58A	**Scranton**	22.56	27	P		P	23 08 35.7	-0.4
	baz=212							
PARMO	**Parma**	22.57	4	P		P	23 08 36.4	+0.3
AMTX	**Amarillo**	22.60	338	IAmb		IAmb	23 08 40.1	
	comp=Z,34nm,0.8s							
AMTX	**Amarillo**	22.60	338	P		P	23 08 36.5	-0.1
	baz=154							
W54A	**Cherokee Point**	22.62	21	P		P	23 08 36.5	-0.1
	baz=204							
V51A	**Loudon**	22.63	16	P		P	23 08 36.8	+0.1
V51A				IAmb		IAmb	23 08 46.5	
	comp=Z,49nm,0.9s							
V51A	**Loudon**	22.63	16	P		P	23 08 36.2	-0.5
	baz=199							
HENM	**Henderson Moun**	22.64	5	P		P	23 08 37.7	+0.8
PBMO	**Poplar Bluff**	22.65	3	IAmb		IAmb	23 08 39.6	
	comp=Z,30nm,0.7s							
TKL	**Tuckaleechee C**	22.65	17	P		P	23 08 37.6	+0.6
	comp=Z,5.8nm,0.6s,baz=173,slow=12,SNR=11							
TKL				LR		LR	23 18 19.3	
	comp=Z,519nm,21.4s,baz=202,slow=38							
TKL	**Tuckaleechee C**	22.65	17	IAmb		IAmb	23 08 48.3	
	comp=Z,29nm,1.1s							
V52A	**Sevierville**	22.87	17	IAmb		IAmb	23 08 49.7	
	comp=Z,39nm,1.1s							
V52A	**Sevierville**	22.87	17	P		P	23 08 38.9	-0.3
	baz=200							
V53A	**Saluda**	22.95	19	P		P	23 08 39.5	-0.5
	baz=202							
KMSC	**Kings Mountain**	22.97	22	P		P	23 08 39.6	-0.6
	baz=206							
U49A	**Red Boiling Sp**	22.97	12	P		P	23 08 40.3	+0.1
	baz=195							
Y59A	**Loris**	22.99	28	P		P	23 08 39.9	-0.5
Y59A	**Loris**	22.99	28	P		P	23 08 40.0	-0.5
	baz=213							
MGMO	**Mountain Grove**	23.00	359	IAmb		IAmb	23 08 57.1	
	comp=Z,25nm,1.1s							
U50A	**Jamestown**	23.09	14	P		P	23 08 41.1	-0.3
	baz=197							
T47A	**Sharon Grove**	23.19	9	IAmb		IAmb	23 08 58.5	
	comp=Z,29nm,0.8s							
W56A	**Indian Trail**	23.25	24	P		P	23 08 42.4	-0.6
	baz=208							
U51A	**La Follette**	23.26	16	P		P	23 08 43.2	+0.1
	baz=199,SNR=7.2							
Y60A	**Bolivia**	23.31	29	P		P	23 08 43.0	-0.5
	baz=215							
V54A	**Nebo**	23.32	20	P		P	23 08 43.8	0.0
	baz=204,SNR=8.0							
U52A	**Thorn Hill**	23.45	17	P		P	23 08 44.7	-0.2
	baz=201							
W57A	**Gilead**	23.50	25	P		P	23 08 44.9	-0.4
W57A	**Gilead**	23.50	25	P		P	23 08 45.1	-0.2
	baz=209							
121A	**Cookes Peak, D**	23.53	324	IAmb		IAmb	23 08 49.7	
	comp=Z,52nm,1.1s							
121A	**Cookes Peak, D**	23.53	324	P		P	23 08 46.2	+0.3
	baz=138,SNR=15							
TZTN	**Tazewell**	23.54	17	IAmb		IAmb	23 08 57.6	
	comp=Z,23nm,1.0s							
TZTN	**Tazewell**	23.54	17	P		P	23 08 45.4	-0.3
	baz=200							
T49A	**Edmonton**	23.59	12	P		P	23 08 45.1	-1.1
T49A	**Edmonton**	23.59	12	P		P	23 08 45.7	-0.5
	baz=195							
X59A	**McDuffie Farm,**	23.60	28	P		P	23 08 45.9	-0.3
	baz=213							
V55A	**Taylorsville**	23.65	22	IAmb		IAmb	23 09 05.8	
	comp=Z,37nm,1.2s							
V55A	**Taylorsville**	23.65	22	P		P	23 08 46.2	-0.5
	baz=206,SNR=5.9							
U53A	**Fall Branch**	23.66	19	P		P	23 08 46.4	-0.5
	baz=202,SNR=11							
T50A	**Nancy**	23.66	14	P		P	23 08 46.6	-0.2
	baz=197							
W58A	**Raeford**	23.70	26	P		P	23 08 46.9	-0.2
	baz=211							
T51A	**Gray**	23.83	15	P		P	23 08 48.0	-0.4
	baz=199,SNR=5.1							
V56A	**Mocksville**	23.87	23	P		P	23 08 48.3	-0.4
	baz=208							
X60A	**Albert Glenn T**	23.89	29	P		P	23 08 48.5	-0.4
	baz=214							
CCM	**Cathedral Cave**	23.90	1	P		P	23 08 47.1	-1.8
CCM				IAmb		IAmb	23 09 05.7	
	comp=Z,16nm,0.8s							
CCM	**Cathedral Cave**	23.90	1	P		P	23 08 48.4	-0.6
	baz=181							
U54A	**Nelsons Funny**	24.04	20	IAmb		IAmb	23 09 10.0	
	comp=Z,19nm,0.8s							
U54A	**Nelsons Funny**	24.04	20	P		P	23 08 49.5	-0.9
	baz=204							
USIN	**University of**	24.07	8	IAmb		IAmb	23 09 01.4	
	comp=Z,24nm,0.8s							
BNM	**Barren Site**	24.14	328	P		P	23 08 53.5	+2.0
V57A	**Coltrane Farms**	24.22	24	P		P	23 08 51.2	-0.8
	baz=209,SNR=5.6							
T52A	**Hallie**	24.23	17	P		P	23 08 50.6	-1.3
T52A				IAmb		IAmb	23 09 08.2	
	comp=Z,37nm,1.1s							
T52A	**Hallie**	24.23	17	P		P	23 08 51.3	-0.7
	baz=201							
T53A	**Wise**	24.24	18	P		P	23 08 51.5	-0.7
	baz=202							
U55A	**TA2, Sparta**	24.29	21	P		P	23 08 51.7	-0.9
	baz=206							
S49A	**Springfield**	24.30	12	P		P	23 08 52.1	-0.5
	baz=195							
LENM	**Lemitar**	24.33	328	P		P	23 08 55.3	+2.1
U56A	**King**	24.39	23	P		P	23 08 52.9	-0.6
U56A				IAmb		IAmb	23 09 11.6	
	comp=Z,32nm,1.1s							
S50A	**Richmond**	24.39	14	P		P	23 08 52.6	-0.8
	baz=197							
V58A	**Windy Hill, Pi**	24.41	25	IAmb		IAmb	23 09 12.1	
	comp=Z,15nm,0.8s							
V58A	**Windy Hill, Pi**	24.41	25	P		P	23 08 53.3	-0.3
	baz=211,SNR=6.1							
CNNC	**Cliffs of the**	24.48	28	P		P	23 08 53.7	-0.6
CNNC	**Cliffs of the**	24.48	28	P		P	23 08 53.4	-0.8
	baz=214							
WCI	**Wyandotte Cave**	24.54	10	P		P	23 08 53.9	-0.8
WCI				IAmb		IAmb	23 09 10.3	
	comp=Z,37nm,0.9s							
WCI	**Wyandotte Cave**	24.54	10	P		P	23 08 54.1	-0.6
	baz=193							
S51A	**Beattyville**	24.56	16	P		P	23 08 54.8	-0.2
S51A				IAmb		IAmb	23 09 09.7	
	comp=Z,19nm,0.8s							
S51A	**Beattyville**	24.56	16	P		P	23 08 54.6	-0.4
	baz=199							
T54A	**Tazewell**	24.62	20	P		P	23 08 54.8	-0.8
	baz=204							
ANMO	**Albuquerque**	24.69	330	P		P	23 08 58.0	+1.6
	comp=Z,6.8nm,0.7s,baz=142,slow=11,SNR=21							
ANMO				ScP		ScP	23 16 07.7	+1.1
	comp=Z,3.9nm,0.9s,baz=135,slow=2.9,SNR=5.7							
ANMO	**Albuquerque**	24.69	330	P		P	23 08 58.0	+1.6
ANMO	**Albuquerque**	24.69	330	P		P	23 08 56.1	-0.3
	baz=144							
V59A	**Middlesex**	24.76	27	P		P	23 08 55.7	-1.1
	baz=212							
R49A	**Shelbyville**	24.81	12	P		P	23 08 56.6	-0.6
R49A				IAmb		IAmb	23 09 12.9	
	comp=Z,23nm,1.1s							
R49A	**Shelbyville**	24.81	12	P		P	23 08 56.3	-0.9
	baz=195							
W61A	**Ground Anchor**	24.85	30	P		P	23 08 56.9	-0.7
	baz=216							
ATAH	**Atahualpa**	24.86	147	P		P	23 08 59.2	+0.9
	comp=Z,9.1nm,0.7s,baz=6.8,slow=9.2,SNR=5.8							
SJG	**San Juan**	24.86	77	P		P	23 08 59.1	+1.2
	comp=Z,3.2nm,0.4s,baz=280,slow=9.0,SNR=2.1							
U57A	**Blanch**	24.87	24	P		P	23 08 57.1	-0.8
	baz=210							
T55A	**Pulaski**	24.93	21	P		P	23 08 58.5	0.0
	baz=206							
S53A	**Williamson**	25.01	18	P		P	23 08 59.2	+0.1
	baz=202							
BLA	**Blacksburg**	25.15	22	P		P	23 08 58.6	-1.8
BLA	**Blacksburg**	25.15	22	P		P	23 08 59.8	-0.6
	baz=206							
U58A	**Oxford**	25.16	26	P		P	23 08 60.0	-0.5
	baz=211							
TUC	**Tucson**	25.18	319	P		P	23 09 02.7	+2.0
TUC				IAmb		IAmb	23 09 06.1	
	comp=Z,19nm,0.9s							
TUC	**Tucson**	25.18	319	P		P	23 09 02.6	+1.8
	baz=132							
R51A	**Hillsboro**	25.18	15	P		P	23 09 01.0	+0.4
	baz=199							
V60A	**Jim Taylor Roa**	25.20	28	P		P	23 09 00.2	-0.5
V60A				IAmb		IAmb	23 09 19.4	
	comp=Z,28nm,0.9s							
V60A	**Jim Taylor Roa**	25.20	28	P		P	23 09 00.3	-0.5
	baz=214							
Q48A	**North Vernon**	25.32	11	P		P	23 09 02.3	+0.5
	baz=194							
S54A	**Dingess, Beckl**	25.38	19	P		P	23 09 01.1	-1.4
S54A				IAmb		IAmb	23 09 18.5	
	comp=Z,17nm,0.8s							
S54A	**Dingess, Beckl**	25.38	19	P		P	23 09 02.2	-0.2
	baz=204							
T57A	**Hurt**	25.39	24	P		P	23 09 02.9	+0.4
	baz=209							
BLO	**Bloomington**	25.42	9	P		P	23 09 04.5	+1.7
BLO				IAmb		IAmb	23 09 18.5	
	comp=Z,15nm,0.8s							
U59A	**Littleton**	25.45	27	P		P	23 09 02.3	-0.8
	baz=213							
R52A	**Catlettsburg**	25.47	17	P		P	23 09 03.1	-0.1
	baz=201							
V61A	**Roper**	25.54	29	P		P	23 09 03.8	-0.1
	baz=216							
S55A	**Lewisburg**	25.62	21	P		P	23 09 04.3	-0.3
	baz=206							
T25A	**Trinidad**	25.63	336	P		P	23 09 06.1	+1.1
	baz=150							
R53A	**Hurricane**	25.66	18	P		P	23 09 03.9	-1.1
R53A	**Hurricane**	25.66	18	P		P	23 09 04.4	-0.6
	baz=202							
P46A	**Rosedale**	25.76	8	IAmb		IAmb	23 09 21.8	
	comp=Z,27nm,0.8s							
R54A	**Victor**	25.83	20	P		P	23 09 06.1	-0.5
	baz=204							
U60A	**Pendleton**	25.83	28	P		P	23 09 05.9	-0.6
	baz=214							
S56A	**Natural Bridge**	25.87	22	P		P	23 09 07.2	+0.2
	baz=208							
P48A	**Milroy**	25.89	11	P		P	23 09 05.7	-1.3
P48A	**Milroy**	25.89	11	P		P	23 09 06.8	-0.2
	baz=194							
Q51A	**Peebles**	25.93	15	P		P	23 09 06.6	-0.9
Q51A				IAmb		IAmb	23 09 23.4	
	comp=Z,14nm,0.8s							
Q51A	**Peebles**	25.93	15	P		P	23 09 07.3	-0.1
	baz=199							
U61A	**Possum Corner**	26.04	29	P		P	23 09 09.0	+0.5
	baz=215							
T59A	**Double "B" Far**	26.07	26	IAmb		IAmb	23 09 27.4	
	comp=Z,19nm,1.1s							
T59A	**Double "B" Far**	26.07	26	P		P	23 09 08.2	-0.5
	baz=212							
Q52A	**Bidwell**	26.16	17	P		P	23 09 08.7	-0.8
	baz=201							
R55A	**Marlinton**	26.21	21	P		P	23 09 11.6	+1.6
R55A				IAmb		IAmb	23 09 26.6	
	comp=Z,24nm,1.1s							
R55A	**Marlinton**	26.21	21	P		P	23 09 08.5	-1.5
	baz=206							
X18A	**Snowflake**	26.22	324	P		P	23 09 10.9	+0.6
214A	**Organ Pipe Nat**	26.27	316	IAmb		IAmb	23 09 13.6	
	comp=Z,21nm,0.9s							
214A	**Organ Pipe Nat**	26.27	316	P		P	23 09 11.3	+0.6
	baz=128,SNR=9.5							
Q53A	**Leroy**	26.28	18	P		P	23 09 09.3	-1.3
	baz=203							
S58A	**Poland Farm, P**	26.41	25	P		P	23 09 11.1	-0.6
S58A				IAmb		IAmb	23 09 30.4	
	comp=Z,19nm,1.3s							
HDIL	**Hopedale**	26.47	4	P		P	23 09 11.9	-0.4
	baz=185							
SFIN	**Lafayette**	26.52	8	P		P	23 09 13.1	+0.4
SFIN				IAmb		IAmb	23 09 28.1	
	comp=Z,13nm,0.8s							
SFIN	**Lafayette**	26.52	8	P		P	23 09 12.7	0.0
	baz=190							
W18A	**Petrified Fore**	26.53	325	P

O52A Adamsville 27.35 17 P P 23 09 18.9 -1.3
O52A IAmb IAmb 23 09 36.1
comp=Z,13nm,0.9s
O52A Adamsville 27.35 17 P P 23 09 20.2 0.0
baz=201
113A Mohawk Valley, 27.41 317 IAmb IAmb 23 09 23.8
comp=Z,15nm,1.1s
MVCO Mesa Verde 27.49 330 IAmb IAmb 23 09 24.6
comp=Z,41nm,1.4s
MVCO Mesa Verde 27.49 330 P P 23 09 23.0 +1.2
baz=143,SNR=9.6
Q57A Strasburg 27.50 23 P P 23 09 21.6 +0.1
baz=209
WUAZ Wupatki 27.74 324 P P 23 09 25.5 +1.6
baz=135,SNR=7.8
O54A Avella 27.84 19 P P 23 09 24.5 -0.1
baz=204
N52A McGinn's Farm, 28.04 16 P P 23 09 26.5 +0.1
baz=201
O55A Ligonier 28.22 20 P P 23 09 27.3 -0.7
baz=206
N53A Lisbon 28.28 18 P P 23 09 27.8 -0.7
N53A IAmb IAmb 23 09 44.0
comp=Z,12nm,1.0s
GLA Glamis 28.29 316 P P 23 09 31.0 +2.2
GLA IAmb IAmb 23 09 31.9
comp=Z,36nm,1.2s
GLA Glamis 28.29 316 P P 23 09 30.5 +1.8
baz=126
L48A N Adams 28.48 11 P P 23 09 29.9 -0.4
baz=195
Y12C Blythe 28.51 317 P P 23 09 29.8 -0.9
O56A Blue Knob Stat 28.52 21 P P 23 09 31.4 +0.7
O56A IAmb IAmb 23 09 47.0
comp=Z,12nm,0.9s
N54A Moraine State 28.68 19 P P 23 09 31.4 -0.6
N54A IAmb IAmb 23 09 47.9
comp=Z,14nm,0.9s
N54A Moraine State 28.68 19 P P 23 09 31.6 -0.4
baz=204
JFWS Jewell Farm 28.77 2 P P 23 09 32.4 -0.5
JFWS IAmb IAmb 23 09 47.5
comp=Z,24nm,1.4s
JFWS Jewell Farm 28.77 2 P P 23 09 33.7 +0.8
baz=183
L49A Milan 28.77 12 P P 23 09 32.1 -0.7
baz=196
M52A Chesterland 28.81 16 P P 23 09 33.7 +0.5
baz=201
N55A Marion Center 28.84 20 P P 23 09 32.4 -1.0
baz=206
SWSC Sam W. Stewart 28.89 315 P P 23 09 34.6 +0.6
baz=125
M53A WI Miller and 28.91 17 P P 23 09 33.3 -0.7
baz=202
IKP In-Ko-Pah, Jac 28.94 314 P P 23 09 36.0 +1.4
baz=124
BC3 Big Chuckawall 29.07 316 P P 23 09 37.7 +2.0
baz=126,SNR=12
K47A Vermontville 29.08 10 P P 23 09 35.0 -0.6
baz=193
SSPA Standing Stone 29.09 22 P P 23 09 34.9 -0.8
SSPA Standing Stone 29.09 22 P P 23 09 35.2 -0.5
baz=208
IRM Iron Mountain 29.17 317 P P 23 09 38.5 +2.0
baz=128,SNR=9.0
N56A West Decatur 29.20 21 P P 23 09 36.5 -0.1
baz=207
NEE2 Needles Airpor 29.20 319 P P 23 09 38.9 +2.1
baz=129
MONP2 Monument Peak 29.30 314 P P 23 09 39.3 +1.5
baz=124
N23A Red Feather La 29.48 338 P P 23 09 39.7 +0.2
baz=151
M55A Ridgway 29.53 20 P P 23 09 39.2 -0.4
baz=206
KNB Kanab 29.63 324 P P 23 09 39.9 -0.8
BELC Belle Mtn. Jos 29.64 316 P P 23 09 43.0 +2.2
baz=126
N58A Sunbury 29.71 23 P P 23 09 41.4 +0.2
PFO Pinyon Flats O 29.73 315 P P 23 09 42.7 +1.2
comp=Z,4.7nm,0.9s,baz=119,slow=11,SNR=5.2
PFO Pinyon Flats O 29.73 315 IAmb IAmb 23 09 44.7
comp=Z,6.3nm,1.0s
PFO Pinyon Flats O 29.73 315 P P 23 09 43.2 +1.6
baz=125
M56A Emporium 29.74 21 P P 23 09 41.8 +0.3
M56A Emporium 29.74 21 P P 23 09 41.4 0.0
baz=207
O20A White River Ci 29.75 334 P P 23 09 43.4 +1.6
baz=146
I42A Draeger Farm, 29.82 4 P P 23 09 41.9 -0.2
I42A IAmb IAmb 23 09 54.9
comp=Z,15nm,1.1s
LCMT Little Creek M 29.86 324 P P 23 09 40.6 -2.1
ECSD EROS Data Cent 29.86 353 P P 23 09 43.9 +1.3
ECSD EROS Data Cent 29.86 353 P P 23 09 43.6 +1.0
baz=170
GMRC Granite Mounta 29.89 318 P P 23 09 44.8 +1.8
baz=128,SNR=7.5
SRU San Rafael Swe 29.97 330 P P 23 09 44.5 +0.8
Q16A Castle Valley 30.14 329 P P 23 09 46.5 +1.3
N59A State Game Lan 30.14 24 P P 23 09 45.1 0.0
baz=212
SZCU Shurtz Canyon 30.18 325 P P 23 09 45.5 -0.2
MURC Murrieta 30.23 314 P P 23 09 48.1 +2.2
baz=124
CCUT Cedar City 30.31 324 P P 23 09 46.6 -0.2
CCUT PcP 23 12 48.2 +2.2
MSU Marysvale 30.36 327 P P 23 09 47.0 -0.2
MSU PcP 23 12 47.7 +1.6
HEC Hector,Ludlow 30.36 317 P P 23 09 49.1 +2.1
baz=127
P17A Butcher Ranch, 30.36 330 P P 23 09 48.2 +1.0
TUQ Turquoise Moun 30.46 319 P P 23 09 50.0 +2.0
baz=128
TCRU Three Creeks R 30.57 327 P P 23 09 50.7 +1.6
SHPR Sheep Range 30.66 321 P P 23 09 51.2 +1.4
SHPR IAmb IAmb 23 09 53.1
comp=Z,13nm,1.2s
SHPR PcP 23 12 48.5 +1.6
RDMU Red Mountain 30.68 333 P P 23 09 50.4 +0.3
BFSC Mount Baldy Ra 30.90 315 P P 23 09 53.3 +1.3
baz=124
GSC Goldstone, Bar 30.95 318 P P 23 09 54.3 +2.0
baz=127
M60A Port Jervis 30.96 25 P P 23 09 51.4 -0.8
baz=214
CIS Catalina Islan 30.98 313 P P 23 09 54.1 +1.6
baz=122
SPMN Marine on St. 31.07 358 P P 23 09 53.0 -0.1
SPMN IAmb IAmb 23 09 53.1
comp=Z,7.6nm,0.6s
L58A Harry Jones Me 31.07 23 P P 23 09 53.2 -0.1
baz=211
GLMI Grayling 31.24 10 P P 23 09 55.3 +0.6
baz=193
EDW2 Edwards Air Fo 31.49 316 P P 23 09 58.9 +1.9
baz=125
L59A Walton 31.51 24 P P 23 09 56.5 -0.6
L59A IAmb IAmb 23 10 13.1
comp=Z,12nm,0.9s
TPNV Topopah Spring 31.61 321 P P 23 09 57.1 -1.1
TPNV IAmb IAmb 23 10 02.1
comp=Z,10.0nm,1.1s
LRMC Laurel Mtn Rad 31.63 317 P P 23 10 00.2 +1.8
baz=126,SNR=5.8
FURC Furnace Creek, 31.69 319 P P 23 10 01.1 +2.4
baz=128
RSSD Black Hills 31.76 343 P P 23 10 00.3 +0.8
baz=157
K58A Earlville 31.77 23 P P 23 09 58.6 -0.8
K58A IAmb IAmb 23 10 15.2
comp=Z,14nm,0.8s
K58A Earlville 31.77 23 P P 23 09 58.7 -0.6
baz=210
KSCT Kent School, K 31.77 26 P P 23 09 59.1 -0.2
KSCT IAmb IAmb 23 10 15.0
comp=Z,24nm,1.4s
J56A Wolcott 31.78 21 P 23 09 58.8 -0.6
MPMC Manual Prospec 31.84 318 P P 23 10 02.6 +2.3
baz=127,SNR=14
R11A Troy Canyon, C 32.13 323 P P 23 10 04.7 +1.9
baz=132
SCZ2 Santa Cruz Isl 32.15 313 P P 23 10 04.4 +1.6
baz=121
ARVC Arvin 32.20 315 P P 23 10 05.3 +2.1
baz=124
ISA Isabella, Lake 32.26 317 IAmb IAmb 23 10 07.4
comp=Z,12nm,1.1s
ISA Isabella, Lake 32.26 317 P P 23 10 05.7 +1.8
baz=125,SNR=5.9
GRAC Grapevine Rang 32.34 320 P P 23 10 06.7 +2.3
baz=128
I55A Frankford 32.34 19 P P 23 10 04.7 +0.3
baz=206
H53A Bobcaygeon 32.39 18 P P 23 10 04.0 -0.8
baz=204
SADO Sadowa 32.41 17 P P 23 10 04.4 -0.5
comp=Z,2.1nm,0.3s,baz=248,slow=6.5,SNR=3.8
SADO LR LR 23 24 02.1
comp=Z,245nm,20.8s,baz=216,slow=38
SADO Sadowa 32.41 17 P P 23 10 03.7 -1.2
SADO IAmb IAmb 23 10 19.9
comp=Z,12nm,1.1s
J58A Remsen 32.42 23 P P 23 10 03.8 -1.2
baz=211
HWUT Hardware Ranch 32.42 332 IAmb IAmb 23 10 08.2
comp=Z,12nm,0.9s
CWC Cottonwood Cre 32.45 318 P P 23 10 07.4 +1.7
baz=127
PD31 Pinedale Array 32.48 335 P P 23 10 04.6 -1.3
PD31 PcP PcP 23 12 51.3 -0.4
PDAR Pinedale Array 32.48 335 P P 23 10 05.9 0.0
comp=Z,1.7nm,0.8s,baz=131,slow=11,SNR=10
PDAR PcP PcP 23 12 51.8 0.0
comp=Z,1.1nm,0.7s,baz=145,slow=5.2,SNR=5.1
PDAR pPcP 23 13 08.8
comp=Z,3.5nm,1.0s,baz=129,slow=5.9,SNR=7.3
PDAR ScP ScP 23 16 31.9 +1.1
comp=Z,2.6nm,0.9s,baz=151,slow=3.9,SNR=12
PDAR LR LR 23 24 31.9
comp=Z,121nm,18.6s,baz=134,slow=38
F48A Evansville 32.57 12 P P 23 10 06.8 +0.5
baz=196
L61B Northampton 32.71 27 P P 23 10 06.8 -0.7
baz=216
PKM Mcpherson Peak 32.75 314 P P 23 10 10.4 +2.1
baz=122
VES Vestal, Richgr 32.77 316 P P 23 10 10.5 +2.3
baz=124
TIN Tinemaha, Big 32.92 319 P P 23 10 12.4 +2.8
baz=127
E47A Iron Bridge 33.05 11 P P 23 10 10.7 +0.2
baz=195
K62A Royalston 33.07 27 P P 23 10 10.2 -0.5
baz=216
SMMC Simmler 33.10 315 P P 23 10 10.8 -0.3
baz=123
HVU Hansel Valley 33.12 331 P P 23 10 12.0 +0.6
H56A Elgin 33.14 20 P P 23 10 11.1 -0.2
baz=208
G54A Lake Saint Pet 33.29 18 P P 23 10 12.3 -0.3
baz=204
SNOW Snow King Moun 33.55 335 P P 23 10 14.8 -0.4
G55A Calabogie 33.58 19 P P 23 10 14.2 -0.9
baz=207
ELK Elko 33.60 327 P P 23 10 17.2 +1.6
comp=Z,4.2nm,0.8s,baz=138,slow=5.8,SNR=5.3
ELK Elko 33.60 327 P P 23 10 14.5 -1.1
ELK PcP 23 12 56.2 +1.3
ELK ScP ScP 23 16 37.6 +2.9
J62A Henniker 33.71 27 P P 23 10 16.1 -0.2
baz=216
ALGO Algonquin Park 33.81 17 P P 23 10 16.5 -0.6
baz=204
NVAR Mina Array Bea 33.81 321 P P 23 10 19.7 +2.3
comp=Z,17nm,0.7s,baz=136,slow=8.8,SNR=56
NVAR pP pP 23 10 35.4 +3.3
comp=Z,8.2nm,0.7s,baz=129,slow=8.6,SNR=7.5
NVAR PcP PcP 23 12 56.7 +1.1
comp=Z,2.6nm,0.7s,baz=124,slow=3.9,SNR=8.2
NVAR pPcP 23 13 14.2
comp=Z,1.6nm,0.7s,baz=146,slow=2.7,SNR=3.7
NVAR ScP ScP 23 16 37.6 +2.2
comp=Z,2.5nm,0.9s,baz=144,slow=3.2,SNR=8.5
NVAR LR LR 23 25 15.9
comp=Z,193nm,21.1s,baz=122,slow=38
RYN Ryan 34.07 321 IAmb IAmb 23 10 23.3
comp=Z,8.3nm,0.9s
KVN Kaiserville 34.08 322 IAmb IAmb 23 10 23.2
comp=Z,15nm,1.0s
MDND Maddock 34.32 351 P P 23 10 22.0 +0.5
baz=166
E54A Lac Daplat, Po 34.49 18 P P 23 10 22.1 -0.9
baz=205
WAKR Walker 34.56 320 IAmb IAmb 23 10 28.7
comp=Z,17nm,1.4s
H61A Lyndonville 34.72 25 P P 23 10 23.9 -1.2
baz=215
YERR Yerington 34.73 321 IAmb IAmb 23 10 28.4
comp=Z,10nm,0.9s
CMB Columbia Colle 34.88 318 IAmb IAmb 23 10 29.4
comp=Z,7.5nm,1.1s
E56A St. Veronique 35.27 20 P P 23 10 29.4 -0.3
baz=209
D54A Lac Fusel, La 35.30 18 P P 23 10 29.3 -0.7
baz=206
E57A Chemin Saint G 35.46 21 P P 23 10 30.3 -1.0
baz=210
D55A Sainte-Anne-du 35.55 19 P P 23 10 31.4 -0.7
baz=208
H63A New Sharon 35.63 27 P P 23 10 31.4 -1.4
baz=218
DGMT Dagmar 35.83 346 P P 23 10 34.3 -0.2
baz=159
MFID Camas Ranch 35.84 329 IAmb IAmb 23 10 39.2
comp=Z,16nm,1.1s
G62A West of Eustis 35.86 26 P P 23 10 33.8 -1.0
baz=217
F60A Warwick 35.89 24 P P 23 10 34.5 -0.6
baz=214
BEKR Beckworth 35.95 321 IAmb IAmb 23 10 38.7
comp=Z,7.4nm,0.9s
ULM Lac du Bonnet 36.24 355 P P 23 10 38.2 +0.2
comp=Z,1.3nm,0.4s,baz=227,slow=16,SNR=3.7
ULM PcP PcP 23 13 01.7 -0.4
comp=Z,3.6nm,0.7s,baz=186,slow=2.6,SNR=4.6
ULM ScP ScP 23 16 44.3 +0.6
comp=Z,2.5nm,0.6s,baz=164,slow=4.7,SNR=7.5
ULM LR LR 23 28 38.2
comp=Z,173nm,18.5s,baz=167,slow=41
SAML Samuel 36.37 127 eP P 23 10 38.4 -1.1
SAML Samuel 36.37 127 P P 23 10 37.9 -1.7
SAML IAmb IAmb 23 10 40.4
comp=Z,7.6nm,0.9s
PKME Peaks-Kenny Pk 36.43 27 P P 23 10 38.8 -0.8
baz=218
H65A Eastbrook 36.46 29 P P 23 10 39.2 -0.7
baz=220
D58A Chemin du LacG 36.49 22 P P 23 10 39.4 -0.8
baz=212
WVOR Wild Horse Val 36.60 326 IAmb IAmb 23 10 44.3
comp=Z,19nm,1.3s
F63A Nahmakanta, Br 36.85 27 P P 23 10 42.6 -0.7
baz=218
EGMT Eagleton 37.03 340 P P 23 10 44.7 -0.1
baz=150
D60A Saint Jean D'O 37.07 24 P P 23 10 44.6 -0.5
baz=215
O03E Paynes Creek 37.09 320 P P 23 10 47.0 +1.5
baz=126
G65A Princeton 37.16 29 P P 23 10 44.3 -1.5
G65A Princeton 37.16 29 P P 23 10 45.9 0.0
baz=221
F64A Sherman 37.31 27 P P 23 10 46.8 -0.4
baz=219
MATQ Matagami 37.41 15 P P 23 10 46.3 -1.6
baz=203
D61A St Aubert, Com 37.60 24 P P 23 10 48.3 -1.2
baz=216
MSO Missoula 37.60 335 IAmb IAmb 23 10 52.1
comp=Z,12nm,1.2s
MSO Missoula 37.60 335 P P 23 10 50.0 +0.2
baz=143
BMO Blue Mountains 37.61 330 IAmb IAmb 23 10 51.2
comp=Z,8.5nm,1.1s
O02D Mt. Diablo Mer 37.64 320 P P 23 10 50.0 -0.1
baz=125
E63A Oxbow 37.71 27 P P 23 10 49.6 -0.9
baz=219
D62A Allapoint, All 37.97 25 P P 23 10 51.8 -0.8
D62A Allapoint, All 37.97 25 P P 23 10 52.7 +0.1
baz=217
E64A Bridgewater 37.97 27 P P 23 10 52.7 0.0
baz=220
M04C Macdoel 38.01 322 P P 23 10 54.6 +1.4
baz=128
LPAZ La Paz 38.10 142 P P 23 10 53.6 -1.2
comp=Z,1.8nm,0.6s,baz=325,slow=6.1,SNR=8.5
LPAZ PcP PcP 23 13 08.6 -0.5
comp=Z,2.4nm,0.9s,baz=317,slow=4.5,SNR=5.0
LPAZ LR LR 23 25 24.9
comp=Z,40nm,18.2s,baz=322,slow=34
LPAZ La Paz 38.10 142 eP P 23 10 54.0 -0.9
D63A Stockholm 38.33 26 P P 23 10 55.2 -0.5
baz=219
M02C Callahan 38.38 321 P P 23 10 57.0 +0.6
baz=126
YBH Yreka Blue Hor 38.50 322 P P 23 10 57.4 0.0
comp=Z,1.3nm,0.7s,baz=114,slow=5.6,SNR=2.7
YBH LR LR 23 28 54.1
comp=Z,163nm,18.9s,baz=148,slow=39
L04D Klamath Falls 38.55 323 P P 23 10 58.8 +1.0
baz=128
J05D Fort Rock, OR 38.60 325 P P 23 10 58.8 +0.6
baz=130
J04D Umpqua Nationa 39.07 324 P P 23 11 03.9 +1.7
baz=129,SNR=6.0
I05D Terrebonne, OR 39.34 326 P P 23 11 05.8 +1.5
baz=131
MNMC Minye Minye 39.52 146 IAmb IAmb 23 11 08.3
comp=Z,16nm,1.0s
I04A Tendick Farm, 39.59 325 P P 23 11 07.5 +1.1
baz=129
I03D Drain, OR 40.06 324 P P 23 11 11.4 +1.2
baz=128
NEW Newport 40.07 334 P P 23 11 10.5 +0.2
comp=Z,4.5nm,0.8s,baz=131,slow=8.7,SNR=5.7
NEW PcP PcP 23 13 13.7 -0.3
comp=Z,1.1nm,0.3s,baz=111,slow=8.6,SNR=3.6
NEW Newport 40.07 334 IAmb IAmb 23 11 11.4
comp=Z,7.7nm,1.1s
NEW Newport 40.07 334 P P 23 11 10.5 +0.2
baz=140
J01E Myrtle Point 40.08 323 P P 23 11 11.9 +1.6
baz=126
GO01 Chusmiza 40.18 146 P P 23 11 13.5 +1.6
GO01 IAmb IAmb 23 11 14.9
comp=Z,14nm,1.5s
H04D Lebanon 40.23 325 P P 23 11 12.2 +0.6
baz=129
F05D White Salmon 40.43 328 P P 23 11 15.0 +1.8
baz=132
I02D Swisshome 40.59 324 P P 23 11 15.4 +0.9
baz=128
G03D McMinnville, O 40.95 326 P P 23 11 17.7 +0.2
baz=129
B08A Colville Reser 41.12 332 IAmb IAmb 23 11 20.3
comp=Z,8.6nm,1.0s
LON Longmire 41.19 328 IAmb IAmb 23 11 21.7
comp=Z,14nm,0.9s
E04D Cinebar 41.45 328 P P 23 11 22.0 +0.5
baz=131
B05A Bryant 42.36 330 P P 23 11 29.1 +0.1
baz=133
D03D Eldon 42.36 328 P P 23 11 29.7 +0.7
baz=131
LVC Limon Verde 42.74 148 P P 23 11 31.5 -1.3
comp=Z,3.6nm,0.8s,baz=341,slow=4.8,SNR=3.8
LVC Limon Verde 42.74 148 eP P 23 11 33.1 +0.3
LVC Limon Verde 42.74 148 IAmb IAmb 23 11 34.9
comp=Z,4.0nm,0.8s
CLDB Colider 43.37 123 eP P 23 11 35.5 -2.2
FCC Fort Churchill 44.65 358 IAmb IAmb 23 11 47.4
comp=Z,6.1nm,0.7s
SCHQ Schefferville 45.06 20 P P 23 11 49.0 -1.6
comp=Z,3.9nm,0.6s,baz=230,slow=8.8,SNR=15
SCHQ PcP PcP 23 13 30.4 -0.1
comp=Z,2.4nm,0.6s,baz=236,slow=2.4,SNR=3.4
SCHQ LR LR 23 31 35.8
comp=Z,392nm,20.0s,baz=230,slow=37
SCHQ Schefferville 45.06 20 P P 23 11 49.0 -1.6
SCHQ IAmb IAmb 23 11 50.5
comp=Z,13nm,0.9s
SALV Santo Antonio 46.40 129 eP P 23 12 00.4 -1.2
BBB Bella Bella 47.85 330 LR LR 23 33 00.9
comp=Z,694nm,20.6s,baz=294,slow=37
PP1B Ponte de Pedra 48.06 130 eP P 23 12 13.5 -1.0
PP1B epP pP 23 12 29.3 -0.5
ARAG Araguaiana, MT 49.29 125 eP P 23 12 23.3 -0.7
ARAG epP pP 23 12 37.5 -1.8
AQDB Aquidauana 49.30 133 eP P 23 12 23.5 -0.5
AQDB epP pP 23 12 39.6 +0.3
SMTB Santa Maria do 49.33 115 eP P 23 12 22.3 -2.1
SMTB epP pP 23 12 37.6 -2.1
PEXB Peixe 50.26 119 eP P 23 12 31.1 -0.4
PEXB epP pP 23 12 45.0 -1.8
C2SB Chapadao do Su 50.30 129 eP P 23 12 31.7 0.0
YKA Yellowknife Ar 51.03 347 P P 23 12 35.9 -0.6
comp=Z,4.5nm,0.7s,baz=150,slow=7.4,SNR=49
YKA pP pP 23 12 51.7 -0.1
comp=Z,3.6nm,0.8s,baz=151,slow=7.5,SNR=9.4
YKA PcP PcP 23 13 51.4 -0.4
comp=Z,3.6nm,0.7s,baz=154,slow=3.5,SNR=20
YKA ScP ScP 23 17 43.8 +0.5
comp=Z,0.7nm,0.6s,baz=149,slow=4.6,SNR=8.3
YKA LR LR 23 37 58.1
comp=Z,75nm,18.8s,baz=0.0,slow=40
CPUP Villa Florida 52.24 140 P P 23 12 44.9 -1.1
comp=Z,3.9nm,0.8s,baz=322,slow=7.8,SNR=8.4
CPUP pP pP 23 13 00.6 -0.9
comp=Z,1.9nm,0.8s,baz=251,slow=17,SNR=1.8
CPUP LR LR 23 33 54.1
comp=Z,59nm,20.0s,baz=2.0,slow=35
CPUP Villa Florida 52.24 140 eP P 23 12 44.6 -1.4
CPUP Villa Florida 52.24 140 IAmb IAmb 23 12 45.6
comp=Z,6.8nm,1.0s
BDFB Brasilia 52.31 123 P P 23 12 46.9 +0.1
comp=Z,1.6nm,0.6s,baz=247,slow=5.0,SNR=3.2
BDFB Brasilia 52.31 123 IAmb IAmb 23 13 04.3
comp=Z,8.0nm,1.1s
DLBC Dease Lake 52.72 336 P P 23 12 50.6 +1.3
comp=Z,22nm,0.8s,baz=155,slow=4.5,SNR=16
ITRB Iturama 52.73 129 eP P 23 12 49.5 -0.4
TRCB Terra Rica 52.96 133 eP P 23 12 51.1 -0.5
TAOE Nuku Hiva Isla 53.20 247 eLR LR 23 27 56.6
comp=Z,280nm,29.3s
TAOE Nuku Hiva Isla 53.20 247 eT T 00 09 38.4
comp=Z,24nm,0.2s
PCMB Pacaembu 53.20 131 eP P 23 12 52.9 -0.4
IPMB Ipameri, GO 53.41 125 eP P 23 12 54.2 -0.8
IPMB epP pP 23 13 10.3 -0.1
BB19B Bebedouro 54.92 129 eP P 23 13 04.9 -0.9
BB19B epP pP 23 13 22.1 +0.8
PMNB Patos De Minas 55.12 125 eP P 23 13 06.8 -0.6
PMNB epP pP 23 13 22.8 -0.2
FRTB Fartura 55.51 132 eP P 23 13 08.9 -1.2
FRTB epP pP 23 13 24.4 -1.2
ITAB Concordia 56.21 137 eP P 23 13 14.6 -0.4
RCLB Rio Claro- Sao 56.46 129 eP P 23 13 17.1 +0.3
SPB Sao Paulo 57.22 130 eP P 23 13 21.7 -0.5
BSCB Bom Sucesso 57.77 126 eP P 23 13 25.3 -0.9
PLCA Paso Flores 57.94 161 P P 23 13 27.0 0.0
comp=Z,4.6nm,1.0s,baz=348,slow=5.0,SNR=6.9
PLCA LR LR 23 32 43.4
comp=Z,91nm,21.4s,baz=9.5,slow=30
PLCA Paso Flores 57.94 161 eP P 23 13 27.0 0.0
PLCA Paso Flores 57.94 161 P P 23 13 27.4 +0.3
PLCA IAmb IAmb 23 13 42.2
comp=Z,12nm,1.5s
BSFB Barra de Sao F 59.81 122 eP P 23 13 41.0 +0.7
INK Inuvik 60.46 343 P P 23 13 44.0 0.0
comp=Z,2.5nm,0.5s,baz=122,slow=7.7,SNR=8.0
INK pP pP 23 14 00.2 +0.6
comp=Z,4.2nm,0.9s,baz=103,slow=7.6,SNR=4.1
INK Inuvik 60.46 343 IAmb IAmb 23 13 46.6
comp=Z,5.8nm,1.0s
RES Resolute Bay 60.64 359 IAmb IAmb 23 13 44.0
comp=Z,4.5nm,0.9s
SCRK Sand Creek 61.41 337 IAmb IAmb 23 13 53.1
comp=Z,7.2nm,1.2s
PMR Palmer 62.49 333 P P 23 13 57.2 -0.6
HDA Harding Lake 62.76 336 P P 23 13 59.7 +0.1
baz=116,SNR=5.5
KDAK Kodiak Island 62.82 328 P P 23 14 00.4 +0.4
comp=Z,10nm,0.8s,baz=168,slow=1.6,SNR=4.1
ILAR Eielson Array 62.90 337 P P 23 14 00.7 +0.2
comp=Z,12nm,1.0s,baz=129,slow=4.5,SNR=82
ILAR pP pP 23 14 17.4 +1.2
comp=Z,4.0nm,1.1s,baz=122,slow=4.1,SNR=5.8

ILAR			PcP	**PcP**	**23 14 37.5**	**-0.7**	
	comp=Z,2.7nm,0.9s,baz=158,slow=0.6,SNR=6.3						
ILAR			LR	LR	23 43 31.3		
	comp=Z,89nm,18.9s,baz=139,slow=38						
ILAR	**Eielson Array**	**62.90 337**		**PcP**	**23 14 38.6**	**+0.4**	
CCB	**Clear Creek Bu**	**63.20 336**	IAmb	IAmb	23 14 03.9		
	comp=Z,5.3nm,0.8s						
WRH	**Wood River Hil**	**63.23 336**	IAmb	IAmb	23 14 03.2		
	comp=Z,6.2nm,0.8s						
WRH				**PcP**	**23 14 40.2**	**+0.7**	
POKR	**Poker Plat Res**	**63.26 337**	P	**P**	**23 14 03.0**	**+0.1**	
	baz=116						
TCOL	**CIGO, UAF Yank**	**63.32 337**	P	**P**	**23 14 02.9**	**-0.3**	
	baz=116						
COLD	**Coldfoot**	**65.18 339**	IAmb	IAmb	23 14 17.7		
	comp=Z,5.5nm,1.0s						
PPT	**Papeete**	**65.19 243**	LR	LR	23 34 30.0		
	comp=Z,118nm,21.7s,baz=4.5,slow=28						
PPT2	**Papeete2**	**65.19 243**	*e*LR	LR	23 33 30.0		
	comp=Z,271nm,27.2s						
TBI	**Tubuai**	**67.64 237**	*e*LR	LR	23 34 37.1		
	comp=Z,229nm,29.2s						
ANM	**Nome**	**70.39 334**	IAmb	IAmb	23 14 49.8		
	comp=Z,7.1nm,0.8s						
DAG	**Danmarks Havn**	**72.53 13**	*i* P	**P**	**23 14 58.9**	**-2.0**	
	comp=Z,3.8nm,0.7s						
NOR	**Nord**	**73.99 8**	*i* P	**P**	**23 15 07.8**	**-1.6**	
ESDC	**Sonseca Array**	**79.44 52**	P	**P**	**23 15 38.3**	**-2.7**	
	comp=Z,0.2nm,0.4s,baz=290,slow=4.7,SNR=4.2						
NOA	**NORSAR Array B**	**83.94 28**	P	**P**	**23 16 03.2**	**-1.0**	
	comp=Z,1.1nm,0.7s,baz=288,slow=5.0,SNR=4.8						
NOA			LR	LR	23 52 48.8		
	comp=Z,38nm,18.2s,baz=270,slow=35						
DBIC	**Dimbokro**	**85.35 84**	P	**P**	**23 16 10.6**	**-1.7**	
	comp=Z,1.2nm,0.6s,baz=292,slow=5.4,SNR=2.4						
DBIC			LR	LR	23 50 55.4		
	comp=Z,36nm,19.5s,baz=268,slow=33						
DBIC	**Dimbokro**	**85.35 84**	IAmb	IAmb	23 16 17.8		
	comp=Z,5.6nm,1.1s						
ARCES	**ARCESS Array B**	**85.98 18**	P	**P**	**23 16 13.4**	**-0.9**	
	comp=Z,1.5nm,0.7s,baz=310,slow=4.2,SNR=6.1						
ARCES			LR	LR	23 53 46.0		
	comp=Z,146nm,21.9s,baz=332,slow=35						
SEY	**Seymchan**	**88.81 336**	P	**P**	**23 16 28.3**	**+0.3**	
	comp=Z,5.5nm,0.9s,baz=148,slow=15,SNR=7.9						
GERES	**GERESS Array B**	**89.36 40**	LR	LR	23 52 41.7		
	comp=Z,52nm,21.8s,baz=306,slow=33						
TORD	**Torodi Ar. Bea**	**90.07 77**	P	**P**	**23 16 32.7**	**-2.2**	
	comp=Z,0.6nm,0.9s,baz=280,slow=4.9,SNR=3.7						
TORD			LR	LR	23 53 52.0		
	comp=Z,59nm,21.4s,baz=315,slow=33						
TIXI	**Tiksi**	**90.25 348**	P	**P**	**23 16 33.6**	**-1.0**	
	comp=Z,3.2nm,0.6s,baz=50,slow=5.7,SNR=6.8						
TIXI	**Tiksi**	**90.25 348**	IAmb	IAmb	23 16 35.8		
	comp=Z,4.8nm,0.9s						
FINES	**FINESS Array B**	**90.31 25**	LR	LR	23 57 30.0		
	comp=Z,68nm,18.3s,baz=296,slow=36						
PETK	**Petropavlovsk-**	**90.76 326**	LR	LR	23 58 30.0		
	comp=Z,28nm,18.8s,baz=61,slow=36						
MA2	**Magadan**	**91.17 333**	P	**P**	**23 16 40.0**	**+0.9**	
	comp=Z,5.7nm,0.5s,baz=148,slow=13						
MA2	**Magadan**	**91.17 333**	P	**P**	**23 16 38.8**	**-0.3**	
ZALV	**Zalesovo Beam**	**112.19 2**	PKiKP	**PKiKP**	**23 22 08.9**	**-0.7**	
	comp=Z,0.6nm,0.6s,baz=318,slow=1.9,SNR=3.5						
SONM	**Songino Array**	**116.30 347**	PKP	**PKiKP**	**23 22 18.0**	**+0.1**	
	comp=Z,0.7nm,0.9s,baz=54,slow=2.6,SNR=3.7						
SONM			pPKP	pPKPdf	23 22 34.2	-0.9	
	comp=Z,0.7nm,0.9s,baz=148,slow=0.9,SNR=4.0						
SONM			PKKPbc	**PKKPbc**	**23 32 45.9**	**-2.7**	
	comp=Z,0.2nm,0.4s,baz=202,slow=3.4,SNR=4.4						
SONM	**Songino Array**	**116.30 347**		**PKiKP**	**23 22 17.1**	**-0.8**	
KSRS	**Korea Array**	**116.66 325**	PKP	**PKPdf**	**23 22 18.8**	**+0.2**	
	comp=Z,1.6nm,0.7s,baz=32,slow=1.9,SNR=4.4						
MAKZ	**Makanchi**	**119.14 5**		**PKPdf**	**23 22 22.3**	**-0.9**	
MKAR	**Makanchi Array**	**119.18 5**	PKP	**PKPdf**	**23 22 22.2**	**-1.1**	
	comp=Z,1.1nm,0.7s,baz=342,slow=1.8,SNR=12						
MKAR			SKP		23 25 55.4		
	comp=Z,1.0nm,1.0s,baz=0.0,slow=1.3,SNR=4.9						
BOSA	**Boshof**	**120.11 115**	PKP	**PKPdf**	**23 22 24.2**	**-1.5**	
	comp=Z,4.4nm,0.9s,baz=338,slow=4.7,SNR=4.4						
BOSA			pPKP	**pPKPdf**	**23 22 43.6**	**+0.7**	
	comp=Z,6.9nm,1.1s,baz=182,slow=3.4,SNR=3.2						
GEYT	**Alibeck**	**121.03 28**	PKP	**PKPdf**	**23 22 25.9**	**-1.3**	
	comp=Z,1.9nm,0.6s,baz=158,slow=0.8,SNR=4.7						
HHC	**Hu-ho-hao-te**	**121.26 339**	*e*P	**PKPdf**	**23 22 27.8**	**+0.2**	
WMQ	**Urumqi**	**122.39 1**	*e*P	**PKPdf**	**23 22 30.1**	**+0.5**	
WMQ			pmax	pmax			
	comp=Z,94nm,4.9s						
MAW	**Mawson**	**123.98 169**	PKP	**PKPdf**	**23 22 30.6**	**-1.1**	
	comp=Z,2.1nm,1.0s,baz=180,slow=3.0,SNR=2.4						
NJ2	**Nanjing**	**125.60 328**	*e*P	**PKPdf**	**23 22 36.1**	**+0.1**	
NJ2			pmax	pmax			
	comp=Z,10.0nm,0.6s						
HRA	**Herat**	**125.81 27**		**PKPdf**	**23 22 36.1**	**-0.6**	
LZH	**Lanzhou**	**128.00 344**	*e*PKP	**PKiKP**	**23 22 43.9**	**+2.6**	
LZH			pPKP	pPKPdf	23 22 54.6	-3.3	
LZH			sPKP		23 23 00.4		
XAN	**Xi'an**	**128.29 338**	P	**PKPdf**	**23 22 40.8**	**-0.4**	
XAN			pmax	pmax			
	comp=Z,6.0nm,1.0s						
XAN			pmax	pmax			
	comp=Z,200nm,4.1s						
STKA	**Stephens Creek**	**128.35 240**	PKP	**PKPdf**	**23 22 40.6**	**-0.6**	
	comp=Z,3.8nm,0.8s,baz=31,slow=2.7,SNR=10						
WHN	**Wuhan**	**129.06 331**	P	**PKPdf**	**23 22 41.8**	**-0.8**	
WRA	**Warramunga Arr**	**135.70 256**	PKP	**PKPdf**	**23 22 55.7**	**+0.2**	
	comp=Z,2.6nm,0.9s,baz=82,slow=2.1,SNR=12						
WRA			SKPab	**SKiKP**	**23 26 34.5**	**+6.2**	
	comp=Z,0.8nm,0.8s,baz=84,slow=3.2,SNR=4.7						
ASAR	**Alice Springs**	**135.97 250**	PKP	**PKPdf**	**23 22 56.0**	**+0.2**	
	comp=Z,1.3nm,0.8s,baz=96,slow=2.5,SNR=8.0						
ASAR			pPKP	**pPKPdf**	**23 23 14.3**	**+1.3**	
	comp=Z,0.5nm,0.5s,baz=113,slow=2.6,SNR=2.3						
ASAR			SKPab	**SKiKP**	**23 26 34.3**	**+5.5**	
	comp=Z,1.3nm,0.9s,baz=112,slow=3.1,SNR=5.9						
CHTO	**Chiang Mai**	**145.69 342**		**PKPdf**	**23 23 13.1**	**-0.4**	
CMAR	**Chiang Mai Arr**	**146.02 342**	PKPbc	**PKPdf**	**23 23 15.0**	**+1.0**	
	comp=Z,28nm,0.8s,baz=341,slow=4.0,SNR=120						
CMAR			pPKPbc	**pPKPdf**	**23 23 32.2**	**+1.0**	
	comp=Z,4.6nm,0.4s,baz=345,slow=3.3,SNR=3.3						

WEL 13 23:16:21.0±0.5,31°S±4°×17°8E±°,h33km,M4.6/13, mB5.2/13,ML4.9/8,MLv4.7/12,Mw(mB)4.5/13,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.51**	**64**	P	Pn	23 17 14.5	+1.3
GLKZ				S	Sn	23 17 46.3	-7.2
KUZ	**Kuaotunu**	**6.32**	**200**	P	Pn	23 17 53.6	+1.7
KUZ				S	Sn	23 18 28.0	-35
MXZ	**Matakaoa Point**	**6.71**	**181**	P	Pn	23 18 00.4	+3.2
MXZ				S	Sn	23 19 16.4	+3.9
MKAZ	**Moumakai**	**6.83**	**203**	S	Sn	23 19 23.6	+8.2
HAZ	**Te Kaha**	**6.93**	**184**	P	Pn	23 18 05.1	+4.9
HAZ				S	Sn	23 19 26.4	+8.6
PKGZ	**Pakihiroa**	**7.04**	**182**	P	Pn	23 18 05.2	+3.4
PKGZ				S	Sn	23 19 21.2	+0.4
RUGZ	**Raukumara Rang**	**7.14**	**185**	P	Pn	23 18 05.1	+1.8
RUGZ				S	Sn	23 19 26.3	+3.0
PUZ	**Puketiti**	**7.22**	**181**	P	Sn	23 19 30.1	+4.9
MWZ	**Matawai**	**7.52**	**186**	P	Pn	23 18 09.6	+1.2
RAGZ	**Rawiri**	**7.69**	**186**	P	Pn	23 18 12.1	+1.3
MUGZ	**Murupara**	**7.75**	**190**	P	Pn	23 18 15.0	+3.5
RTZ	**Ruatahuna**	**7.86**	**189**	P	Pn	23 18 14.9	+1.9
HIZ	**Hauiti**	**8.21**	**200**	P	Pn	23 18 29.3	+11
ARHZ	**Aropaoanui**	**8.49**	**188**	P	Pn	23 18 23.5	+1.8
ARHZ				S	Sn	23 19 59.8	+3.4
TWVZ	**Taurewa**	**8.58**	**196**	P	Pn	23 18 27.7	+4.7
TUVZ	**Tukino**	**8.72**	**195**	P	Pn	23 18 29.0	+4.0
TUVZ				S	Sn	23 20 03.1	+0.9
KWHZ	**Kaweka Forest**	**8.73**	**190**	P	Pn	23 18 27.1	+2.1
TRVZ	**Turoa**	**8.78**	**195**	P	Pn	23 18 30.1	+4.4
MOVZ	**Moawhango**	**8.84**	**194**	P	Pn	23 18 27.9	+1.5
BHHZ	**Black Hill Sta**	**8.86**	**192**	P	Pn	23 18 27.9	+1.2
BHHZ				S	Sn	23 20 08.2	+2.8
KRHZ	**Kereru**	**8.95**	**190**	P	Pn	23 18 28.3	+0.2
KRHZ				S	Sn	23 20 09.4	+1.7
KAHZ	**Kahuranaki**	**9.03**	**188**	P	Pn	23 18 28.3	-0.8
PNHZ	**Pukenui**	**9.24**	**191**	P	Pn	23 18 30.7	-1.3
PNHZ				S	Sn	23 20 15.4	+0.5
PXZ	**Pawanui**	**9.27**	**188**	P	Pn	23 18 32.5	+0.2
TSZ	**Takapari Road**	**9.43**	**192**	P	Pn	23 18 34.3	-0.2
TSZ				S	Sn	23 20 19.4	+0.1
DVHZ	**Dannevirke**	**9.63**	**191**	P	Pn	23 18 37.3	+0.1
PRWZ	**Pori Road**	**9.91**	**191**	P	Pn	23 18 40.7	-0.4
BFZ	**Birch Farm**	**9.99**	**190**	P	Pn	23 18 39.3	-2.9
BFZ				S	Sn	23 20 30.6	-2.4
MRZ	**Mangatainoka R**	**10.08**	**193**	P	Pn	23 18 41.8	-1.7
MRZ				S	Sn	23 20 32.2	-3.1
TIWZ	**Tintock**	**10.14**	**191**	P	Pn	23 18 42.2	-2.0
CPWZ	**Castlepoint**	**10.22**	**190**	P	Pn	23 18 41.9	-3.4
OGWZ	**Otaki Gorge**	**10.31**	**194**	P	Pn	23 18 43.0	-3.6
KIW	**Kapiti Island**	**10.41**	**195**	P	Pn	23 18 46.1	-1.8
TMWZ	**Te Maipa**	**10.46**	**191**	P	Pn	23 18 46.3	-2.3
MTW	**Mount Morrison**	**10.58**	**192**	P	Pn	23 18 47.1	-3.1
CAW	**Cannon Point**	**10.61**	**194**	P	Pn	23 18 48.5	-2.2
TRWZ	**Traveller**	**10.78**	**191**	P	Pn	23 18 50.1	-2.8
MSWZ	**Moikau Station**	**10.87**	**193**	P	Pn	23 18 51.5	-2.8
TCW	**Tory Channel**	**10.89**	**197**	P	Pn	23 18 52.7	-1.8
PLWZ	**Palliser**	**11.02**	**193**	P	Pn	23 18 53.3	-3.0
NNZ	**Nelson**	**11.14**	**200**	P	Pn	23 18 57.2	-0.8
TUWZ	**Tuamarina**	**11.18**	**198**	P	Pn	23 18 56.3	-2.2
THZ	**Tophouse**	**11.79**	**201**	P	Pn	23 19 04.6	-2.2
KHZ	**Kahutara**	**12.21**	**197**	P	Pn	23 19 08.1	-4.4
GVZ	**Greta Valley S**	**12.86**	**198**	P	Pn	23 19 16.4	-5.0

IDC 13 23:43:44.8±2.0,31°86S×177°97W,h0km,mb3.7/2, mb1 4.0/2,mb1mx3.6/28,mbtmp3.7/2,Error ellipse: s-maj=72.7km s-min=47.3km az=8.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**7.55**	**211**	Sn	Sn	23 46 56.3	-6.1
	1.3nm,0.3s,baz=125,slow=19,SNR=5.8						
ASAR	**Alice Springs**	**43.08**	**268**	P	P	23 51 46.7	-0.1
	0.6nm,0.6s,baz=108,slow=8.0,SNR=5.8						
WRA	**Warramunga Arr**	**44.20**	**274**	P	P	23 51 55.6	-0.2
	0.9nm,0.6s,baz=114,slow=7.5,SNR=9.3						
FINES	**FINESS Array B**	**146.52**	**339**	PKPbc	PKPbc	00 03 26.8	-0.5
	2.9nm,0.8s,baz=45,slow=3.0,SNR=11						
TORD	**Torodi Ar. Bea**	**161.37**	**179**	PKPab	PKPab	00 04 31.1	-0.8
	0.8nm,1.1s,baz=191,slow=5.4,SNR=2.9						

IDC 13 23:49:33.6±1.8,12°.60N×89°.54W,h0km,mb3.7/6, mb1 4.0/10,mb1mx3.8/34,mbtmp3.8/10,ML3.0/4,MS3.5/3, Ms1 3.5/3,ms1mx2.6/43,Error ellipse: s-maj=50.0km s-min=18.3km az=41.0

UCR 13 23:49:35.4±1.5,12°.40N×90°.06W,h36km±999km,ML3.5, mb4.1(NEIC)

SNET 13 23:49:35.0±1.5,12°.47N×89°.99W,h13km±16km,ML3.6

NEIC 13 23:49:38.3±2.8,12°.48N±0°.07×89°.76W±0°.06,h38km±9km, mb4.1/6,Error ellipse: s-maj=11.6km s-min=7.8km az=207.0

ISC 13 23:49:36.7±0.8,12°36N±0°.07×89°85W±0°.07,h35km,n43, σ1°26/48,mb4.0/9,MS3.8/3,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**1.45**	**24**		**Pn**	**23 49 59.2**	**-1.3**
LFRS	**El Faro**	**1.47**	**31**	*e*P	**Pn**	**23 50 00.6**	**-0.2**
BOQS	**Boqueron**	**1.47**	**22**	*e*P	**Pn**	**23 50 01.6**	**+0.6**
CEVE	**Cerro Verde**	**1.47**	**8**	*e*P	**Pn**	**23 49 59.4**	**-1.6**
CEVE				*e*S	**Sn**	**23 50 20.2**	**+1.0**
CEVE	**Cerro Verde**	**1.47**	**8**	*e*P	**Pn**	**23 49 59.4**	**-1.6**
CEVE				*e*S	**Sn**	**23 50 20.2**	**+1.0**
FAME	**Alcalda de S**	**1.48**	**354**	*e*P	**Pn**	**23 49 59.3**	**-1.6**
FAME				*e*S	**Sn**	**23 50 16.8**	**-2.3**
COEG	**Centro de Oper**	**1.56**	**37**	*e*P	**Pn**	**23 50 01.8**	**-0.3**
COEG				IAML		23 50 37.9	
	comp=Z,389nm,0.5s						
LBRS	**Las Brisas**	**1.57**	**30**	*e*P	**Pn**	**23 50 02.9**	**+0.6**
PAVA	**Las Pavas**	**1.61**	**33**	*e*P	**Pn**	**23 50 03.5**	**+0.8**
PAVA				IAML		23 50 35.2	
	comp=Z,536nm,0.5s						
PAVA	**Las Pavas**	**1.61**	**33**	*e*P	**Pn**	**23 50 03.5**	**+0.8**
PAVA				IAML		23 50 35.2	
	comp=Z,536nm,0.5s						
COEB	**Comit de Eme**	**1.71**	**48**	*e*P	**Pn**	**23 50 05.4**	**+1.2**
PACA	**Pacayal**	**1.85**	**53**	*e*P	**Pn**	**23 50 06.5**	**+0.4**
PACA	**Pacayal**	**1.85**	**53**	*e*P	**Pn**	**23 50 06.5**	**+0.4**
MTO3	**Montecristo**	**2.08**	**13**	*e*P	**Pn**	**23 50 09.1**	**-0.2**
MTO3	**Montecristo**	**2.08**	**13**	*e*P	**Pn**	**23 50 09.1**	**-0.2**
CNCH	**Conchagua**	**2.16**	**65**	*e*P	**Pn**	**23 50 11.3**	**+0.9**
CNCH				IAML		23 50 45.1	
	comp=Z,805nm,0.4s						
CNCH	**Conchagua**	**2.16**	**65**	*e*P	**Pn**	**23 50 11.3**	**+0.9**
CNCH				IAML		23 50 45.1	
	comp=Z,805nm,0.4s						
APG	**El Apazote**	**2.69**	**347**	Pn	**Pn**	**23 50 17.7**	**-0.1**
	comp=Z,1.8nm,0.3s,baz=125,slow=8.5,SNR=8.3						
APG				LR	LR	23 50 40.1	
	comp=Z,48nm,21.4s,baz=186,slow=26						
APG				Sn	**Sn**	**23 50 50.7**	**+1.4**
	comp=Z,4.2nm,0.3s,baz=166,slow=11,SNR=6.9						
TGUH	**Tegucigalpa,Un**	**3.02**	**56**		**Pn**	**23 50 22.2**	**+0.1**
ESTN	**Estel**	**3.47**	**77**		**Pn**	**23 50 28.8**	**+0.4**
ESTN					**Sn**	**23 51 05.8**	**-2.5**
JTS	**Las Juntas de**	**5.22**	**113**	Pn	**Pn**	**23 50 51.8**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=35,slow=8.2,SNR=1.9						
JTS				Sn	**Sn**	**23 51 51.1**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=176,slow=22,SNR=1.9						
JTS	**Las Juntas de**	**5.22**	**113**		**Pn**	**23 50 56.1**	**+3.7**
JTS					**Sn**	**23 51 49.7**	**-1.7**
ESPN	**Las Esperanzas**	**5.42**	**91**	Pn	**Pn**	**23 50 54.5**	**-0.6**
CMIG	**Matias Romero**	**6.77**	**315**	Pn	**Pn**	**23 51 15.2**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=118,slow=8.3,SNR=6.1						
CMIG				Sn	**Sn**	**23 52 29.2**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=35,slow=19,SNR=1.6						
TEIG	**Tepich**	**7.96**	**11**	Pn	**Pn**	**23 51 30.7**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=319,slow=5.4,SNR=2.0						
TLIG	**Tlapa**	**9.88**	**303**	Pn	**Pn**	**23 51 56.7**	**+0.2**
ROSC	**El Rosal**	**17.06**	**115**	Pn	**Pn**	**23 53 32.2**	**-0.9**
	comp=Z,2.5nm,0.3s,baz=193,slow=20,SNR=2.2						
BANI	**BANI**	**19.71**	**70**	P	**P**	**23 54 03.5**	**0.0**
TXAR	**Lajitas Array**	**21.22**	**325**	P	**P**	**23 54 22.2**	**+2.5**
	comp=Z,2.6nm,0.7s,baz=148,slow=11,SNR=23						
Y49A	**Blount Mountai**	**21.63**	**8**	P	**P**	**23 54 24.7**	**+0.8**
Y49A				IAmb	IAmb	23 54 27.5	
	comp=Z,13nm,1.3s						
OXF	**Oxford**	**22.05**	**1**	P	**P**	**23 54 28.1**	**-0.4**
X48A	**Hartselle**	**22.14**	**6**	P	**P**	**23 54 26.8**	**-2.6**
X48A				IAmb	IAmb	23 54 37.8	
	comp=Z,9.0nm,1.4s						
MIAR	**Mount Ida**	**22.34**	**352**	P	**P**	**23 54 31.5**	**-0.1**
WHAR	**Wooly Hollow**	**22.93**	**355**	P	**P**	**23 54 37.5**	**-0.4**
WHAR				IAmb	IAmb	23 54 43.1	
	comp=Z,7.7nm,1.2s						
TKL	**Tuckaleechee C**	**23.84**	**12**	P	**P**	**23 54 46.8**	**+0.2**
	comp=Z,2.6nm,0.7s,baz=171,slow=13,SNR=3.7						
TKL				LR	LR	00 04 36.3	
	comp=Z,35nm,20.9s,baz=158,slow=38						
TKL	**Tuckaleechee C**	**23.84**	**12**	IAmb	IAmb	23 54 58.6	
	comp=Z,10nm,1.3s						
NVAR	**Mina Array Bea**	**36.26**	**321**	P	**P**	**23 56 38.0**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=120,slow=5.3,SNR=3.1						
SCHQ	**Schefferville**	**46.06**	**18**	P	**P**	**23 57 55.2**	**-1.9**
	comp=Z,1.7nm,0.5s,baz=238,slow=10.0,SNR=4.1						
YKA	**Yellowknife Ar**	**53.10**	**346**	P	**P**	**23 58 50.2**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=146,slow=7.5,SNR=6.9						
SFJD	**Kangerlussuaq**	**60.45**	**17**	LR	LR	00 26 42.9	
	comp=Z,61nm,18.8s,baz=142,slow=37						
TORD	**Torodi Ar. Bea**	**88.71**	**77**	P	**P**	**00 02 28.0**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=295,slow=4.8,SNR=3.5						
VRAC	**Vranov**	**91.15**	**39**	LR	LR	00 37 16.6	
	comp=Z,55nm,20.6s,baz=248,slow=32						
CMAR	**Chiang Mai Arr**	**148.17**	**344**	PKPbc	**PKiKP**	**00 09 22.4**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=330,slow=5.3,SNR=4.5						

IDC 13 23:58:38.0±2.4,6°42S×130°13E,h0km,mb3.3/1, mb1 3.6/3,mb1mx3.3/29,mbtmp3.4/3,ML3.5/2,Error ellipse: s-maj=138.9km s-min=32.4km az=70.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.05**	**163**	Pn	Pn	00 01 58.9	+0.4
	0.3nm,0.3s,baz=347,slow=13,SNR=9.8						
WRA				Sn	Sn	00 04 21.1	-14
	0.5nm,0.3s,baz=337,slow=22,SNR=5.8						
ASAR	**Alice Springs**	**17.52**	**168**	P	Pn	00 02 43.7	-0.2
	0.2nm,0.3s,baz=345,slow=9.9,SNR=9.9						
ASAR				S	S	00 06 05.5	-2.8
	0.2nm,0.3s,baz=350,slow=23,SNR=6.0						
MKAR	**Makanchi Array**	**67.82**	**327**	P	P	00 09 38.0	0.0
	0.5nm,1.0s,baz=121,slow=8.1,SNR=4.2						

IDC 14 00:00:44.4±2.1,6°48S×128°93E,h0km,mb3.7/1, mb1 3.8/3,mb1mx3.4/30,mbtmp3.6/3,ML3.5/2,Error ellipse: s-maj=147.9km s-min=30.7km az=67.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.38**	**159**	Pn	Pn	00 04 08.9	-0.5
	0.2nm,0.3s,baz=337,slow=13,SNR=5.0						
WRA				Sn	Sn	00 06 35.7	-14
	0.4nm,0.3s,baz=332,slow=23,SNR=5.8						
ASAR	**Alice Springs**	**17.75**	**165**	P	Pn	00 04 53.4	+0.3
	0.1nm,0.3s,baz=350,slow=9.8,SNR=5.5						
ASAR				S	Sn	00 08 00.8	-11
	0.1nm,0.3s,baz=357,slow=30,SNR=3.8						
MKAR	**Makanchi Array**	**67.21**	**327**	P	P	00 11 40.5	0.0
	0.4nm,0.4s,baz=115,slow=8.2,SNR=14						

ANF 14 00:06:45.8±0.4,36°.87N×113°.76W,h0km,ML2.9/8,Error ellipse: s-maj=4.5km s-min=3.0km az=49.0

NEIC 14 00:06:46.6±2.2,36°.89N±0°.03×113°.69W±0°.04,h13km±5km, Error ellipse: s-maj=5.0km s-min=3.7km az=133.0

UUSS 14 00:06:46.8±2.2,36°.87N±0°.03×113°.69W±0°.04,h19km±6km, ML2.8/11,Error ellipse: s-maj=4.8km s-min=4.1km az=119.0

REN 14 00:06:48.0±2.4,36°.93N±0°.03×113°.68W±0°.04,h13km±5km, Error ellipse: s-maj=5.1km s-min=4.2km az=124.0

ISC 14 00:06:46.2±1.1,36°89N±0°.03×113°70W±0°.02, h16km±11km,n44,σ1°46/64,Western Arizona

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCMT	**Little Creek M**	**0.39**	**72**		**Pb**	**00 06 55.1**	**+0.3**
CCUT	**Cedar City**	**0.71**	**22**		**Pb**	**00 07 01.3**	**+0.8**
CCUT					**Sg**	**00 07 10.1**	**+0.4**
KNB	**Kanab**	**0.72**	**80**		**Pg**	**00 07 00.7**	**+0.4**
SZCU	**Shurtz Canyon**	**0.86**	**35**		**Pb**	**00 07 03.5**	**+0.5**
SZCU					**Sg**	**00 07 14.1**	**-0.3**
U15A	**North Rim**	**1.23**	**112**		**Pn**	**00 07 09.7**	**+0.7**
SHPR	**Sheep Range**	**1.23**	**252**		**Pn**	**00 07 09.1**	**+0.1**
PKCU	**Pink Cliffs**	**1.24**	**63**		**Pg**	**00 07 10.6**	**+0.3**
PKCU					**Sb**	**00 07 24.8**	**-0.7**
PSUT	**Pine Spring**	**1.65**	**356**		**Pn**	**00 07 15.9**	**+1.2**
MTPU	**Mount Pierson**	**1.67**	**46**	Pn	**Pn**	**00 07 15.5**	**+0.3**
W13A	**Hualapai Mount**	**1.79**	**185**		**Pn**	**00 07 17.3**	**+0.5**
TCRU	**Three Creeks R**	**1.98**	**30**	Pn	**Pn**	**00 07 19.1**	**-0.4**
TCRU					**Pb**	**00 07 23.6**	**+1.5**
MSU	**Marysvale**	**2.02**	**36**	Pn	**Pn**	**00 07 19.2**	**-0.7**
MSU					**Pb**	**00 07 24.4**	**+1.6**
TPNV	**Topopah Spring**	**2.04**	**272**		**Pn**	**00 07 20.6**	**+0.5**
TPNV	**Topopah Spring**	**2.04**	**272**	P	**Pn**	**00 07 21.0**	**+0.9**
	baz=90						
TPNV				Sb	**Sb**	**00 07 50.7**	**+2.5**
	baz=90						
R11A	**Troy Canyon, C**	**2.09**	**315**	Pn	**Pn**	**00 07 20.6**	**-0.1**
R11A					**Pb**	**00 07 24.8**	**+0.9**
R11A	**Troy Canyon, C**	**2.09**	**315**	P	**Pn**	**00 07 21.5**	**+0.8**
	baz=133						
R11A				Sb	**Sg**	**00 07 52.5**	**-0.9**
	baz=133						
NEE2	**Needles Airpor**	**2.24**	**200**	Sb	**Sb**	**00 07 56.6**	**+2.7**
	baz=19						
WUAZ	**Wupatki**	**2.33**	**125**	Pn	**Pn**	**00 07 24.1**	**0.0**
WUAZ				Pg	**Pb**	**00 07 29

MLPR	**Magueyes Islan**	**1.33 198**		Pn		00 12 30.9	-1.7
MLPR				Sn		00 12 46.9	-2.3
IGPR	**InterUniversit**	**1.36 159**	⇑*eP*	Pn		00 12 31.8	-1.2
IGPR	**InterUniversit**	**1.36 159**	*eS*	Sn		00 12 47.9	-2.1
IGPR	**InterUniversit**	**1.36 159**	⇓*eP*	Pn		00 12 31.9	-1.1
IGPR	**InterUniversit**	**1.36 159**	*eS*	Sn		00 12 46.5	-3.5
MTP	**Monte Pirata**	**1.52 138**	⇑*eP*	Pn		00 12 33.9	-1.4
MTP	**Monte Pirata**	**1.52 138**	*eS*	Sn		00 12 51.9	-2.2
MTP	**Monte Pirata**	**1.52 138**	⇑*eP*	Pn		00 12 33.8	-1.4
MTP	**Monte Pirata**	**1.52 138**	*eS*	Sn		00 12 52.0	-2.1
MTP	**Monte Pirata**	**1.52 138**		Pn		00 12 33.8	-1.4
MTP				Sn		00 12 52.0	-2.1
STVI	**Saint Thomas**	**1.81 119**	Pn	Pn		00 12 38.5	-0.8
DR12	**Loma Pena Alta**	**2.65 261**	Pn	Pn		00 12 51.3	+0.5

IPEC ***14*** *00:41:11.4±0.2, 51°.53N×16°.28E, h0km, ML2.6/3, Error ellipse: s-maj=1.3km s-min=0.8km az=39.0*
UPP ***14*** *00:41:13.9±2.9, 51°.51N×15°.46E, h0km, ML2.4, Suspected explosion*
IDC ***14*** *00:41:13.2±0.6, 51°.43N×16°.11E, h0km, mb3.3/1, mb1 3.4/9, mb1mx3.2/43, mbtmp3.2/9, ML2.9/8, Error ellipse: s-maj=10.6km s-min=5.9km az=108.0*
VIE ***14*** *00:41:13.8±0.7, 51°.33N×16°.24E, h0km, mb2.5/9, ml2.9/12, Error ellipse: s-maj=5.0km s-min=3.6km az=32.0 60 km WNW of Wroclaw Suspected Mining induced.*
BGR ***14*** *00:41:14.3±0.4, 51°.41N×16°.14E, h1km, ML3.2/16, Error ellipse: s-maj=5.6km s-min=2.2km az=18.0*
LDG ***14*** *00:41:16.8±0.5, 51°.13N×15°.87E, h1km, Ml3.4/2, Error ellipse: s-maj=12.3km s-min=4.2km az=11.0, Suspected Mining induced.*

ISC 14 00:41:11.0±0.6, 51°.51N±0°.03×16°.15E±0°.02, h0km, n93, σ1s67/172, 4C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.68**	**172**	*e*Pg		**Pg**	**00 41 24.9**	**+1.0**
KSP				*e*Sg		**Sg**	**00 41 33.2**	**+0.6**
KSP	**Ksiaz**	**0.68**	**172**	*i* Pg		**Pg**	**00 41 24.8**	**+1.0**
KSP				*e*Sg		**Sg**	**00 41 32.6**	**0.0**
CHVC	**Chvalec**	**0.93**	**184**	*e*PG		**Pg**	**00 41 29.7**	**+1.0**
CHVC				*e*SG		**Sg**	**00 41 40.3**	**-0.4**
	comp=Z,79nm,0.5s							
OSTC	**Ostas**	**0.96**	**177**	*e*PG		**Pg**	**00 41 30.1**	**+0.8**
OSTC				*e*SG		**Sg**	**00 41 41.6**	**-0.1**
	comp=Z,83nm,0.4s							
UPC	**Upice**	**1.01**	**185**	*e*PG		**Pg**	**00 41 31.1**	**+0.8**
UPC				*e*SG		**Sg**	**00 41 42.0**	**-1.4**
	comp=Z,233nm,0.6s							
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*Pg		**Pg**	**00 41 33.8**	**+0.4**
DPC				*e*Sg		**Sg**	**00 41 48.8**	**+0.4**
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*PG		**Pg**	**00 41 33.7**	**+0.4**
DPC				*e*SG		**Sg**	**00 41 48.0**	**-0.5**
	comp=Z,76nm,0.6s							
PVCC	**Panska Ves**	**1.40**	**226**	*e*PG		**Pb**	**00 41 38.8**	**+0.8**
PVCC				*e*SG		**Sg**	**00 41 56.9**	**+0.9**
	comp=Z,387nm,0.3s							
KRLC	**Kraliky**	**1.49**	**164**	*e*PG		**Pn**	**00 41 39.3**	**+0.2**
KRLC				*e*SG		**Sg**	**00 41 58.1**	**-0.8**
	comp=Z,71nm,0.4s							
BRG	**Berggiesshubel**	**1.53**	**246**	PN		**Pn**	**00 41 40.1**	**+0.6**
BRG				PG		**Pg**	**00 41 41.6**	**+1.4**
BRG				SG		**Sb**	**00 42 02.0**	**+1.9**
	154nm,0.5s							
BRG	**Berggiesshubel**	**1.53**	**246**	*e*Pn		**Pn**	**00 41 40.2**	**+0.6**
BRG				*e*Sg		**Sb**	**00 42 02.1**	**+2.1**
ANAC	**Anensky vrch**	**1.64**	**151**	*e*Pn		**Pn**	**00 41 41.2**	**+0.1**
	baz=335							
PRA	**Prague**	**1.81**	**218**	*e*PG		**Pn**	**00 41 44.7**	**+1.4**
PRA				*e*SG		**Sb**	**00 42 08.8**	**+0.7**
	comp=Z,66nm,0.5s							
GOPC	**GO Pecny, Ondr**	**1.82**	**209**	*e*PN		**Pn**	**00 41 44.1**	**+0.6**
GOPC				*e*PG		**Pb**	**00 41 45.6**	**+0.5**
GOPC				*e*SG		**Sn**	**00 42 08.6**	**+1.3**
	comp=Z,56nm,0.2s							
PRU	**Pruhonice**	**1.83**	**214**	*e*PN		**Pn**	**00 41 44.4**	**+0.7**
PRU				*e*PG		**Pb**	**00 41 45.9**	**+0.5**
PRU				*e*SG		**Sb**	**00 42 09.8**	**+0.9**
	comp=Z,70nm,0.5s							
FBE	**Freiberg**	**1.85**	**252**	*e*Pn		**Pg**	**00 41 47.0**	**+0.5**
FBE				*e*Sg		**Sg**	**00 42 11.8**	**+1.3**
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn		**Pn**	**00 41 45.7**	**+0.3**
MORC				*e*Sg		**Sb**	**00 42 12.7**	**+0.4**
MORC	**Moravsky Berou**	**1.95**	**152**	⇑P		**Pn**	**00 41 45.9**	**+0.6**
MORC	**Moravsky Berou**	**1.95**	**152**	⇓S		**Sn**	**00 42 09.5**	**-1.1**
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn		**Pn**	**00 41 45.7**	**+0.3**
MORC				*e*SG		**Sn**	**00 42 11.9**	**+1.3**
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn		**Pn**	**00 41 45.6**	**+0.2**
	baz=336							
MORC				*e*Sg		**Sn**	**00 42 11.8**	**+1.2**
	43nm,0.5s,baz=336							
CLL	**Collm**	**1.98**	**265**	*e*Pn		**Pn**	**00 41 47.0**	**+1.3**
CLL				*e*Pg		**Pg**	**00 41 51.0**	**+2.1**
CLL				*e*Sg		**Sg**	**00 42 17.0**	**+2.5**
	comp=Z,48nm,0.3s							
CLL	**Collm**	**1.98**	**265**	*e*Pn		**Pn**	**00 41 46.9**	**+1.2**
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*Sg		**Sg**	**00 42 18.5**	**0.0**
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*PN		**Pn**	**00 41 47.9**	**+0.5**
OKC				*e*PG		**Pb**	**00 41 49.9**	**-0.1**
OKC				*e*SG		**Sb**	**00 42 17.2**	**+0.6**
	comp=Z,72nm,0.7s							
VRAC	**Vranov**	**2.23**	**172**	Pn		**Pn**	**00 41 49.8**	**+0.7**
	comp=Z,4.4nm,0.3s,baz=344,slow=12,SNR=20							
VRAC				Lg		Lg	00 42 21.1	
	comp=Z,12nm,0.3s,baz=262,slow=20,SNR=11							
VRAC	**Vranov**	**2.23**	**172**	⇓P		**Pn**	**00 41 50.3**	**+1.2**
VRAC	**Vranov**	**2.23**	**172**	⇑S		**Sb**	**00 42 20.7**	**+0.5**
VRAC	**Vranov**	**2.23**	**172**	*e*PN		**Pn**	**00 41 49.8**	**+0.7**
VRAC				*e*SG		**Sb**	**00 42 21.7**	**+1.6**
VRAC	**Vranov**	**2.23**	**172**	*e*Pn		**Pn**	**00 41 49.7**	**+0.6**
	baz=355							
VRAC				*e*Sg		**Sb**	**00 42 21.6**	**+1.5**
	comp=Z,51nm,0.4s,baz=355							
TREC	**Trest**	**2.26**	**191**	*e*PN		**Pn**	**00 41 50.4**	**+0.8**
TREC				*e*PG		**Pb**	**00 41 52.6**	**-0.1**
TREC				*e*SG		**Sb**	**00 42 22.3**	**+1.2**
	comp=Z,65nm,0.3s							
PBCC	**Pribram**	**2.29**	**218**	*e*PG		**Pb**	**00 41 54.2**	**+1.1**
PBCC				*e*SG		**Sg**	**00 42 24.0**	**-0.4**
	comp=Z,12nm,0.5s							
KRUC	**Moravsky**	**2.46**	**176**	*e*PN		**Pn**	**00 41 53.5**	**+1.2**
KRUC				*e*PG		**Pb**	**00 41 56.6**	**+0.5**
KRUC				*e*SG		**Sg**	**00 42 29.4**	**-0.5**
KRUC	**Moravsky**	**2.46**	**176**	*e*Pn		**Pn**	**00 41 53.5**	**+1.2**
	baz=358							
KRUC	**Moravsky**	**2.46**	**176**	*e*Pg		**Pb**	**00 41 56.5**	**+0.5**
	baz=358							
KRUC				*e*Sg		**Sg**	**00 42 29.4**	**-0.5**
	comp=Z,21nm,0.4s,baz=358							
TANN	**Tannenbergstha**	**2.58**	**246**	*e*Pn		**Pn**	**00 41 55.3**	**+1.3**
TANN				*e*Sg		**Sg**	**00 42 33.7**	**0.0**
OJC	**Ojcow**	**2.65**	**118**	*e*Pn		**Pn**	**00 41 55.3**	**+0.4**
OJC				*e*Sg		**Sg**	**00 42 38.5**	**+2.5**
OJC	**Ojcow**	**2.65**	**118**	*e*Pn		**Pn**	**00 41 54.1**	**-0.9**
OJC				*e*Pg		**Pg**	**00 42 03.5**	**+1.7**
OJC				*e*Sn		**Sn**	**00 42 25.1**	**-2.7**
OJC				*e*Sg		**Sg**	**00 42 38.6**	**+2.5**
NKC	**Novy Kostel**	**2.67**	**243**	*e*PN		**Pn**	**00 41 56.8**	**+1.5**
NKC				*e*PG		**Pg**	**00 42 02.2**	**+0.1**
NKC				*e*SG		**Sg**	**00 42 37.4**	**+0.7**
	comp=Z,76nm,0.5s							
KHC	**Kasperske Hory**	**2.90**	**216**	*e*PN		**Pn**	**00 41 59.4**	**+1.0**
KHC				*e*PG		**Pb**	**00 42 05.2**	**+1.7**
KHC				*e*SN		**Sn**	**00 42 34.0**	**+0.1**
KHC				*e*SG		**Sg**	**00 42 42.6**	**-1.4**
	comp=Z,23nm,0.4s							
MANZ	**Manzenberg**	**2.99**	**241**	*e*Pn		**Pn**	**00 42 01.1**	**+1.5**
MOX	**Moxa**	**2.99**	**255**	*e*Pn		**Pn**	**00 42 01.2**	**+1.6**
MOX				*e*Sg		**Sg**	**00 42 48.1**	**+1.2**
ROTZ	**Rotzenmuhle**	**3.06**	**237**	*e*Pn		**Pn**	**00 42 01.7**	**+1.2**
ROTZ				*e*Sg		**Sg**	**00 42 48.9**	**-0.2**
GEC2	**GERESS Array S**	**3.10**	**211**	*e*Pn		**Pn**	**00 42 02.9**	**+1.7**
GERES	**GERESS Array B**	**3.10**	**211**	Pn		**Pn**	**00 42 02.5**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=28,slow=13,SNR=18							
GERES				Pg		**Pb**	**00 42 08.8**	**+1.8**
	comp=Z,5.5nm,0.3s,baz=33,slow=16,SNR=42							
GERES				Sn		**Sn**	**00 42 38.7**	**-0.3**
	comp=Z,4.6nm,0.3s,baz=32,slow=28,SNR=7.1							
GERES				Lg		Lg	00 42 47.0	
	comp=Z,9.8nm,0.3s,baz=25,slow=28,SNR=12							
SMOL	**Smolenice**	**3.11**	**164**	*e*PN		**Pn**	**00 42 04.2**	**+2.9**
SMOL				*e*PG		**Pg**	**00 42 11.2**	**+0.6**
SMOL				*e*SG		**Sg**	**00 42 52.5**	**+1.6**
WET	**Wettzell**	**3.16**	**223**	*e*Pn		**Pn**	**00 42 03.1**	**+1.1**
LANS	**Liptovska Anna**	**3.18**	**137**	*e*PG		**Pg**	**00 42 12.6**	**+0.7**
LANS				*e*SG		**Sg**	**00 42 55.1**	**+2.0**
MODS	**Modra-Piesok**	**3.23**	**166**	*e*PN		**Pn**	**00 42 04.7**	**+1.8**
MODS				*e*PG		**Pg**	**00 42 12.0**	**-0.8**
MODS				*e*SG		**Sg**	**00 42 56.1**	**+1.6**
KOLL	**Kolacno**	**3.28**	**153**	*e*PN		**Pn**	**00 42 05.1**	**+1.6**
KOLL				*e*PG		**Pg**	**00 42 13.4**	**-0.3**
NIE	**Niedzica**	**3.38**	**127**	*e*P		**Pg**	**00 42 17.1**	**+1.4**
NIE				*e*S		**Sg**	**00 42 02.3**	**+2.8**
VYHS	**Vyhne**	**3.48**	**149**	*e*PN		**Pn**	**00 42 06.8**	**+0.4**
VYHS				*e*PG		**Pg**	**00 42 18.3**	**+0.6**
VYHS				*e*SG		**Sg**	**00 43 03.4**	**+0.6**
CONA	**Conrad Observa**	**3.59**	**183**	*e*Pn		**Pn**	**00 42 09.4**	**+1.4**
	comp=Z,0.9nm,0.2s,SNR=5.7							
CONA				Sg		**Sg**	**00 43 05.2**	**-1.1**
	comp=Z,31nm,0.4s							
CLZ	**Clausthal**	**3.61**	**278**	*e*Pn		**Pn**	**00 42 10.6**	**+2.4**
GRF	**Grafenberg Arr**	**3.63**	**242**	*e*Pn		**Pn**	**00 42 10.2**	**+1.8**
GRF				*e*Sg		**Sg**	**00 43 08.8**	**+1.3**
BSD	**Bornholm Skovb**	**3.68**	**349**	*i* P		**Pn**	**00 42 10.3**	**+1.2**
BSD				*i* S		**Sn**	**00 42 52.6**	**-0.6**
MOA	**Molln**	**3.86**	**199**	*e*Pn		**Pn**	**00 42 12.6**	**+1.0**
	comp=Z,2.2nm,0.2s,SNR=7.9							
MOA				*e*Sg		**Sg**	**00 43 15.7**	**+0.6**
	comp=Z,20nm,0.5s							
STHS	**Stebnicka Huta**	**3.87**	**121**	*e*PG		**Pg**	**00 42 27.2**	**+2.0**
STHS				*e*SG		**Sg**	**00 43 21.1**	**+5.8**
ARSA	**Arzberg**	**4.29**	**186**	*e*Pn		**Pn**	**00 42 17.5**	**+0.1**
	comp=Z,1.1nm,0.2s							
ARSA				Sg		**Sg**	**00 43 30.0**	**+1.4**
	comp=Z,33nm,0.8s							
LUNU	**Lund**	**4.43**	**340**	P		**Pn**	**00 42 19.8**	**+0.4**
LUNU				S		**Sn**	**00 43 10.5**	**-1.1**
KOLS	**Kolonicke sedl**	**4.70**	**121**	*e*PN		**Pn**	**00 42 23.9**	**+0.7**
KOLS				*e*PG		**Pg**	**00 42 45.5**	**+4.4**
KBA	**Koelnbreinsper**	**4.80**	**204**	*e*Pn		**Pn**	**00 42 25.1**	**+0.4**
	comp=Z,1.5nm,0.3s							
KBA				Sg		**Sg**	**00 43 46.5**	**+1.3**
	comp=Z,15nm,0.5s							
BLEU	**Blekinge**	**4.81**	**358**	P		**Pn**	**00 42 25.8**	**+1.3**
SOKA	**Soboth**	**4.89**	**189**	Pg		**Pg**	**00 42 43.7**	**-1.0**
	comp=Z,0.4nm,0.1s							
BJUU	**Bjuv**	**4.93**	**339**	P		**Pn**	**00 42 26.5**	**+0.3**
BJUU				S		**Sn**	**00 43 21.8**	**-2.1**
OBKA	**Obir**	**5.12**	**192**	Pg		**Pg**	**00 42 48.4**	**-0.5**
	comp=Z,3.2nm,0.5s							
OBKA				Sg		**Sg**	**00 43 54.1**	**-1.1**
	comp=Z,5.2nm,0.4s							
WATA	**Walderalm**	**5.13**	**217**	*i* Pn		**Pn**	**00 42 31.4**	**+2.1**
	comp=Z,1.2nm,0.2s							
WATA				Sg		**Sg**	**00 43 57.4**	**+1.5**
	comp=Z,119nm,0.0s							
DEL	**Delary**	**5.15**	**346**	P		**Pn**	**00 42 30.1**	**+0.9**
DEL				S		**Sn**	**00 43 27.7**	**-1.5**
WTTA	**Wattenberg**	**5.17**	**216**	*i* Pn		**Pn**	**00 42 31.9**	**+2.2**
	comp=Z,0.7nm,0.2s							
WTTA				*e*Sg		**Sg**	**00 43 58.6**	**+1.6**
	comp=Z,4.7nm,0.4s							
MOTA	**Moosalm**	**5.31**	**220**	*i* Pn		**Pn**	**00 42 33.1**	**+1.5**
	comp=Z,0.4nm,0.1s							
RETA	**Reutte**	**5.34**	**223**	*e*Pn		**Pn**	**00 42 33.0**	**+1.0**
	comp=Z,1.3nm,0.2s,SNR=5.2							
RETA				*i* Sn		**Sn**	**00 43 34.6**	**+0.4**
	comp=Z,1.1nm,0.2s							
TRPA	**Tarpa**	**5.34**	**127**	⇑P		**Pn**	**00 42 30.1**	**-1.9**
SQTA	**Sankt Quirin**	**5.37**	**219**	*e*Pn		**Pn**	**00 42 34.8**	**+2.4**
	comp=Z,1.2nm,0.2s,SNR=5.5							
SQTA				*e*Sn		**Sn**	**00 43 35.4**	**+0.4**
	comp=Z,2.5nm,0.4s							
SQTA				Sg		**Sg**	**00 44 04.3**	**+0.9**
	comp=Z,3.2nm,0.3s							
VXJU	**Vaexsjoe**	**5.47**	**353**	P		**Pn**	**00 42 35.0**	**+1.4**
OSKU	**Oskarshamn**	**5.70**	**360**	P		**Pn**	**00 42 38.3**	**+1.6**
EKSU	**Eksjoe**	**6.09**	**356**	P		**Pn**	**00 42 43.8**	**+1.6**
VSTU	**Vaestervik**	**6.17**	**2**	P		**Pn**	**00 42 45.0**	**+1.8**
DAVOX	**Davos/Dischmat**	**6.27**	**223**	Pn		**Pn**	**00 42 46.8**	**+2.0**
	comp=Z,0.3nm,0.3s,baz=36,slow=11,SNR=5.5							
DAVOX				Sn		**Sn**	**00 43 56.5**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=218,slow=19,SNR=2.7							
DAVOX				Lg		Lg	00 44 29.9	
	comp=Z,0.8nm,0.3s,baz=211,slow=19,SNR=3.7							
SIRR	**Siria**	**6.38**	**143**	⇑P		**Pn**	**00 42 45.1**	**-1.1**
CDF	**Champ du Feu**	**6.51**	**245**	*e*Pn		**Pn**	**00 42 46.8**	**-1.2**
CDF	**Champ du Feu**	**6.51**	**245**	*e*Pg		**Pg**	**00 43 12.0**	**-3.6**
CDF				*e*Sn		Sn	00 43 53.7	-9.3
CDF				*e*Sg		**Sg**	**00 44 35.2**	**-4.7**
	comp=Z,9.9nm,0.6s							
LNKU	**Linkoeping**	**6.74**	**357**	P		**Pn**	**00 42 52.5**	**+1.4**
VIKU	**Vikbolandet**	**7.01**	**2**	P		**Pn**	**00 42 56.5**	**+1.7**
BURAR	**Bucovina Array**	**7.07**	**120**	⇓P		**Pn**	**00 42 51.9**	**-3.8**
HINF	**Hinteralfeld**	**7.07**	**242**	*e*Pn		**Pn**	**00 42 54.5**	**-1.3**
HINF	**Hinteralfeld**	**7.07**	**242**	*e*Pg		**Pg**	**00 43 24.9**	**-1.5**
HINF				*e*Sn		Sn	00 44 06.7	-10
HINF				*e*Sg		**Sg**	**00 44 51.7**	**-6.3**
	comp=Z,5.9nm,0.5s							
AKASG	**Malin Array Be**	**8.27**	**91**	Pn		**Pn**	**00 43 10.7**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=278,slow=12,SNR=3.7							
AKASG				Sn		**Sn**	**00 44 42.0**	**-4.2**
	comp=Z,0.6nm,0.3s,baz=278,slow=22,SNR=3.6							
HFS	**Hagfors**	**8.75**	**352**	Pn		**Pn**	**00 43 18.8**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=162,slow=15,SNR=8.7							
HFS				Sn		**Sn**	**00 44 56.6**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=177,slow=29,SNR=2.6							
NOA	**NORSAR Array B**	**9.93**	**346**	Pn		**Pn**	**00 43 34.3**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=155,slow=13,SNR=4.0							
FINES	**FINESS Array B**	**11.35**	**25**	Pn		**Pn**	**00 43 54.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=206,slow=11,SNR=7.9							
FINES				Sn		**Sn**	**00 45 54.8**	**-6.8**
	comp=Z,0.3nm,0.3s,baz=190,slow=23,SNR=7.5							
EKA	**Eskdalemuir Ar**	**12.13**	**296**	Pn		**Pn**	**00 44 04.5**	**-0.4**
	baz=99,slow=14,SNR=4.1							
ARCES	**ARCESS Array B**	**18.62**	**10**	Pn		**P**	**00 45 26.9**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=192,slow=14,SNR=5.5							
YKA	**Yellowknife Ar**	**59.87**	**336**	P		**P**	**00 51 21.3**	**+3.5**
	comp=Z,0.3nm,0.8s,baz=37,slow=7.6,SNR=3.9							

SSNC 14 00:43:15.1±1.7, 23°.16N×80°.69W, h7km±13km, MD3.7, ML3.1, MW3.5, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MGV	**Manicaragua**	**1.23**	**148**	*e*Pg		Pb	00 43 34.6	-4.1
MGV				*e*Sg		Sg	00 43 52.2	-2.7
MGV				IAML			00 43 54.6	
	comp=N,256nm,0.2s							
MGV				IAML			00 43 55.5	
	comp=E,506nm,0.2s							
SOR	**Soroa**	**2.17**	**261**	*e*P		Pn	00 43 48.5	-3.1
SOR				*e*S		Sn	00 44 14.7	-4.0
CCCC	**Cccc**	**3.34**	**125**	*e*P		Pn	00 44 07.2	-0.5
CCCC				*e*S		Sn	00 44 49.3	+1.7
DWPF	**Disney Wildern**	**4.97**	**352**	*e*P		Pn	00 44 28.8	-1.4
DWPF				*e*S		Sn	00 45 21.9	-6.1
RCC	**Rio Carpintero**	**5.62**	**123**	*e*P		Pn	00 44 35.5	-3.5
RCC				*e*S		Sn	00 45 37.8	-6.1

IDC ***14*** *01:55:37.4±2.8, 39°.41N×106°.56W, h0km, mb2.8/1, mb1 3.2/3, mb1mx3.1/35, mbtmp2.8/3, ML3.1/2, Error ellipse: s-maj=32.2km s-min=18.1km az=94.0*
NEIC ***14*** *01:55:38.3±1.0, 38°.91N±0°.03×107°.59W±0°.04, h1km±6km, ML2.7/70, Error ellipse: s-maj=5.1km s-min=3.8km az=157.0*

ISC 14 01:55:38.2±1.4, 38°.89N±0°.03×107°.59W±0°.03, h3km±12km, n40, σ0s99/46, Colorado

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMCO	**Snowmass**	**0.56**	**59**			**Pg**	**01 55 47.8**	**-1.2**
SMCO				Sg		**Sg**	**01 55 55.4**	**-0.8**
S22A	**4UR Ranch, Cre**	**1.29**	**152**			**Pn**	**01 56 02.2**	**-1.2**
S22A				Sg		**Sg**	**01 56 20.4**	**+0.7**
O20A	**White River Ci**	**1.34**	**338**	Pg		**Pn**	**01 56 02.2**	**-1.9**
O20A				Sn		**Sb**	**01 56 23.5**	**+1.7**
O20A				IAML			01 56 33.2	
	comp=N,70nm,0.6s							
O20A				IAML			01 56 34.5	
	comp=E,68nm,0.7s							
ISCO	**Idaho Springs**	**1.78**	**59**	Pn		**Pn**	**01 56 10.4**	**+0.2**
ISCO				Sn		**Sn**	**01 56 32.7**	**-0.7**
MVCO	**Mesa Verde**	**1.83**	**203**	Pn		**Pb**	**01 56 12.2**	**-0.2**
MVCO				Sg		**Sg**	**01 56 37.5**	**+0.5**
MVCO				IAML			01 56 45.6	
	comp=E,54nm,0.8s							
MVCO				IAML			01 56 50.3	
	comp=E,41nm,0.7s							
Q24A	**Divide**	**1.90**	**87**			**Pn**	**01 56 13.1**	**+1.2**
Q24A				Sg		**Sb**	**01 56 38.9**	**+0.8**
Q24A				IAML			01 56 45.5	
	comp=N,26nm,0.8s							
SDCO	**Great Sand Dun**	**2.00**	**124**			**Pn**	**01 56 14.1**	**+0.9**
RDMU	**Red Mountain**	**2.27**	**318**			**Pn**	**01 56 17.0**	**+0.1**
SRU	**San Rafael Swe**	**2.30**	**276**			**Pn**	**01 56 18.1**	**+0.8**
N23A	**Red Feather La**	**2.37**	**32**	Pn		**Pn**	**01 56 19.8**	**+1.6**
N23A				IAML			01 56 55.3	
	comp=N,22nm,0.7s							
N23A				IAML			01 57 11.7	
	comp=E,20nm,2.9s							
P17A	**Butcher Ranch,**	**2.52**	**284**			**Pn**	**01 56 19.5**	**-0.7**
Q16A	**Castle Valley**	**2.80**	**272**			**Pn**	**01 56 24.0**	**-0.1**
TMUT	**Trail Mountain**	**2.85**	**279**			**Pn**	**01 56 23.1**	**-1.8**
T25A	**Trinidad**	**3.06**	**124**	Pn		**Pn**	**01 56 28.1**	**+0.4**
T25A				IAML			01 58 11.7	
	comp=N,11nm,4.3s							
T25A				IAML			01 58 13.9	
	comp=E,11nm,4.0s							
JLU	**Jordanelle**	**3.43**	**301**			**Pn**	**01 56 33.0**	**+0.1**
MSU	**Marysvale**	**3.61**	**265**			**Pn**	**01 56 35.9**	**+0.6**
NLU	**North Lily Min**	**3.63**	**288**	Pn		**Pn**	**01 56 35.9**	**+0.3**
CTU	**Camp Tracy**	**3.68**	**301**	Pn		**Pn**	**01 56 35.7**	**-0.5**
TCUT	**Toone Canyon**	**3.68**	**308**			**Pn**	**01 56 36.4**	**+0.1**
MTPU	**Mount Pierson**	**3.71**	**258**	Pn		**Pn**	**01 56 37.4**	**+0.6**
K22A	**Casper**	**3.84**	**12**	Pn		**Pn**	**01 56 38.6**	**+0.2**
K22A				IAML			01 58 36.0	
	comp=N,19nm,1.9s							
K22A				IAML			01 58 37.4	
	comp=E,21nm,4.7s							
PKCU	**Pink Cliffs**	**3.99**	**250**	Pn		**Pn**	**01 56 41.1**	**+0.5**
ANMO	**Albuquerque**	**4.04**	**167**	Pn		**Pn**	**01 56 41.9**	**+0.7**
ANMO				IAML			01 57 34.4	
	comp=E,8.3nm,4.8s							
ANMO				IAML			01 58 37.5	
	comp=E,6.2nm,4.9s							
HWUT	**Hardware Ranch**	**4.08**	**313**	Pn		**Pn**	**01 56 41.8**	**+0.2**
HWUT				IAML			01 57 56.4	
	comp=E,21nm,0.9s							
W18A	**Petrified Fore**	**4.14**	**205**	Pn		**Pn**	**01 56 43.0**	**+0.4**
W18A				IAML			01 57 55.9	
	comp=N,17nm,0.7s							
W18A				IAML			01 57 56.7	
	comp=E,20nm,0.8s							
PD31	**Pinedale Array**	**4.15**	**340**			**Pn**	**01 56 42.7**	**-0.1**
PDAR	**Pinedale Array**	**4.15**	**340**	Pn		**Pn**	**01 56 43.4**	**+0.7**
	comp=E,0.3nm,0.3s,baz=140,slow=14,SNR=9.5							
PDAR				Pg		**Pb**	**01 56 52.8**	**+0.8**
	comp=E,1.5nm,0.3s,baz=139,slow=18,SNR=26							
PDAR				Lg		Lg	01 57 46.5	
	comp=E,1.0nm,0.3s,baz=131,slow=31,SNR=6.0							
PDAR	**Pinedale Array**	**4.15**	**340**			**Pn**	**01 56 42.6**	**-0.1**
U15A	**North Rim**	**4.47**	**238**			**Pn**	**01 56 47.5**	**+0.3**
U15A				Sn		**Sn**	**01 57 39.3**	**-0.5**
WUAZ	**Wupatki**	**4.53**	**223**	Pn		**Pn**	**01 56

	baz=99										
RLNB	**Erlin**	**0.78**	**90**	⇑P		**Pn**	**02 21 44.2**	**-0.5**			
	baz=89										
RLNB				S		**Sn**	**02 21 55.6**	**+0.3**			
	baz=89										
WLGB	**Puzi**	**0.84**	**120**	⇓P		**Pb**	**02 21 45.6**	**-0.2**			
	baz=119										
WLGB				*e*S		**Sb**	**02 21 58.0**	**+1.3**			
	baz=119										
CHN8	**Yiju**	**0.85**	**130**	*e*P		**Pb**	**02 21 45.9**	**0.0**			
	baz=120										
CHN8				*e*S		**Sb**	**02 21 58.4**	**+1.5**			
	baz=120										
CHY	**Chiayi**	**0.93**	**115**	⇓P		**Pb**	**02 21 47.2**	**-0.1**			
	baz=114										
CHY				*e*S		**Sb**	**02 22 00.6**	**+1.3**			
	baz=114										
SCLT	**Jiali**	**0.95**	**139**	*e*P		**Pb**	**02 21 47.9**	**+0.2**			
	baz=138										
SCLT				*e*S		**Sb**	**02 22 01.6**	**+1.6**			
	baz=138										
CHN2	**Minshiung**	**0.96**	**112**	⇓P		**Pb**	**02 21 47.6**	**-0.2**			
	baz=120										
CHN2				*e*S		**Sb**	**02 22 01.1**	**+1.0**			
	baz=120										
WDLH	**Douliu**	**0.97**	**102**	*e*P		**Pb**	**02 21 47.5**	**-0.5**			
	baz=101										
WDLH				*e*S		**Sb**	**02 22 01.6**	**+1.2**			
	baz=101										
WCHH	**Zhanghua**	**0.98**	**79**	*e*P		**Pn**	**02 21 47.4**	**0.0**			
	baz=78										
WCHH				*e*S		**Sb**	**02 22 00.8**	**+0.1**			
	baz=78										
WGK	**Gukeng**	**0.99**	**102**	P		**Pb**	**02 21 48.2**	**-0.1**			
	baz=101										
WGK				S		**Sb**	**02 22 02.5**	**+1.5**			
	baz=101										
WNT	**Mingjian**	**1.08**	**91**	P		**Pb**	**02 21 49.3**	**-0.5**			
	baz=90										
WNT				*e*S		**Sb**	**02 22 04.2**	**+0.7**			
	baz=90										
TAI1	**Yung-k'ang**	**1.08**	**142**	*e*P		**Pb**	**02 21 49.9**	**+0.1**			
	baz=141										
TAI1				*e*S		**Sb**	**02 22 05.9**	**+2.4**			
	baz=141										
VWUC	**VWUC**	**1.09**	**357**	*e*P		**Pn**	**02 21 48.1**	**-0.9**			
	baz=358										
VWUC				*e*S		**Sn**	**02 22 02.5**	**-0.6**			
	baz=358										
TCU	**Taichung**	**1.10**	**77**	⇑*e*P		**Pb**	**02 21 49.6**	**-0.6**			
	baz=76										
TCU				*e*S		**Sb**	**02 22 05.2**	**+1.1**			
	baz=76										
KNM	**Kinmen**	**1.11**	**298**	*e*P		**Pb**	**02 21 50.6**	**+0.2**			
	baz=296										
KNM				*e*S		**Sb**	**02 22 07.0**	**+2.6**			
	baz=296										
CHN5	**Tsauling**	**1.11**	**105**	⇓*e*P		**Pn**	**02 21 49.2**	**-0.2**			
	baz=104										
CHN5				S		**Sb**	**02 22 04.4**	**-0.2**			
	baz=104										
WJS	**Zhushan**	**1.12**	**93**	*e*P		**Pb**	**02 21 49.8**	**-0.7**			
	baz=93										
WJS				*e*S		**Sb**	**02 22 05.1**	**+0.3**			
	baz=93										
WDJ	**Dajia District**	**1.13**	**66**	*e*P		**Pn**	**02 21 49.4**	**-0.1**			
	baz=66										
WDJ				*e*S		**Sb**	**02 22 05.5**	**+0.4**			
	baz=66										
SNST	**Tainan City**	**1.13**	**126**	P		**Pb**	**02 21 50.5**	**-0.2**			
	baz=126										
SNST				*e*S		**Sb**	**02 22 06.0**	**+0.9**			
	baz=126										
CHN3	**Shinhua**	**1.13**	**136**	*e*P		**Pb**	**02 21 50.1**	**-0.6**			
	baz=135										
CHN3				*e*S		**Sb**	**02 22 06.6**	**+1.5**			
	baz=135										
CHN4	**Tsaushan**	**1.13**	**118**	⇑P		**Pb**	**02 21 49.9**	**-0.8**			
	baz=118										
CHN4				*e*S		**Sb**	**02 22 05.2**	**0.0**			
	baz=118										
KNMB	**Chin-men Tao**	**1.17**	**299**	*e*P		**Pn**	**02 21 49.3**	**-0.8**			
	baz=300										
KNMB				S		**Sb**	**02 22 05.4**	**-0.8**			
	baz=300										
TPUB	**Ta-pu**	**1.19**	**120**	⇓P		**Pb**	**02 21 50.3**	**-0.1**			
	baz=109										
TPUB				*e*S		**Sb**	**02 22 06.6**	**-0.1**			
	baz=109										
PTMZ	**Houxiangcun**	**1.19**	**343**	⇓*e*P		**Pn**	**02 21 49.5**	**-0.9**			
	baz=343										
PTMZ				S		**Sn**	**02 22 06.0**	**+0.3**			
	baz=343										
WTP	**Ta-pu**	**1.20**	**122**	*e*P		**Pn**	**02 21 50.7**	**0.0**			
	baz=122										
WTP				*e*S		**Sb**	**02 22 07.5**	**+0.3**			
	baz=122										
PTSB	**Yuanli**	**1.22**	**63**	*e*P		**Pn**	**02 21 50.8**	**0.0**			
	baz=63										
PTSB				*e*S		**Sb**	**02 22 08.6**	**+0.9**			
	baz=63										
TYC	**Yuchr**	**1.23**	**89**	⇑*e*P		**Pn**	**02 21 51.1**	**+0.1**			
	baz=97										
TYC				*e*S		**Sb**	**02 22 08.3**	**+0.2**			
	baz=97										
TWQ1	**Liyutan**	**1.24**	**68**	*e*P		**Pn**	**02 21 51.2**	**+0.1**			
	baz=68										
TWQ1				*e*S		**Sb**	**02 22 08.5**	**+0.3**			
	baz=68										
WHYT	**Xinyi Township**	**1.25**	**99**	*e*P		**Pn**	**02 21 50.9**	**-0.3**			
	baz=98										
WHYT				*e*S		**Sb**	**02 22 08.3**	**-0.2**			
	baz=98										
ALS	**Alishan**	**1.25**	**108**	*e*P		**Pn**	**02 21 51.6**	**+0.1**			
	baz=107										
ALS				*e*S		**Sb**	**02 22 08.0**	**-0.8**			
	baz=107										
NSY	**Sanyi**	**1.26**	**65**	*e*P		**Pb**	**02 21 52.3**	**-0.5**			
	baz=65										
SMLT	**Sun Moon Lake**	**1.27**	**90**	*e*P		**Pn**	**02 21 51.8**	**+0.1**			
	baz=90										
SMLT				*e*S		**Sn**	**02 22 08.1**	**+0.2**			
	baz=90										
SGST	**Jiashian**	**1.28**	**129**	*e*P		**Pn**	**02 21 51.3**	**-0.3**			
	baz=129										
SGST				S		**Sb**	**02 22 09.1**	**-0.1**			
	baz=129										
DPDB	**Guoxing**	**1.30**	**84**	*e*P		**Pn**	**02 21 52.2**	**+0.2**			
	baz=83										
SSLB	**Suanglung**	**1.33**	**94**	⇑*e*P		**Pn**	**02 21 52.2**	**-0.1**			
	baz=94										
SSLB				*e*S		**Sn**	**02 22 08.1**	**-1.0**			
	baz=94										
NMLH	**Miaoli**	**1.33**	**61**	*e*P		**Pn**	**02 21 52.5**	**+0.2**			
	baz=61										
NMLH				*e*S		**Sb**	**02 22 11.1**	**+0.2**			
	baz=61										
QZH	**Quanzhou**	**1.34**	**322**	Pn		**Pn**	**02 21 52.1**	**-0.3**			
QZH				*i* Pg		**Pb**	**02 21 53.4**	**-0.8**			
QZH				Sn		**Sb**	**02 22 10.8**	**-0.1**			
QZH				smax		smax					
	comp=N,860nm,0.2s										
QZH				smax		smax					
	comp=E,790nm,0.6s										
TWM1	**Shoushan**	**1.36**	**142**	*e*P		**Pb**	**02 21 54.1**	**-0.5**			
	baz=155										
STYT	**Tauyuan**	**1.36**	**122**	*e*P		**Pn**	**02 21 52.8**	**0.0**			
	baz=122										
STYT				*e*S		**Sb**	**02 22 11.5**	**-0.2**			
	baz=122										
SNJT	**Kaohsiung City**	**1.37**	**146**	*e*P		**Pb**	**02 21 54.6**	**-0.1**			
	baz=146										
WHP	**Taichung City**	**1.37**	**74**	*e*P		**Pn**	**02 21 52.6**	**-0.4**			
	baz=62										
WHP				*e*S		**Sb**	**02 22 11.6**	**-0.3**			
	baz=62										
SLGT	**Liugui**	**1.38**	**130**	*e*P		**Pb**	**02 21 53.5**	**-1.4**			
	baz=130										
YUS	**Yu-Shan**	**1.38**	**107**	⇓*e*P		**Pb**	**02 21 54.0**	**-1.3**			
	baz=106										
YUS				*e*S		**Sb**	**02 22 12.1**	**-0.7**			
	baz=106										
VWDT	**VWDT**	**1.50**	**95**	⇑P		**Pb**	**02 21 55.5**	**-1.5**			
	baz=95										
VWDT				*e*S		**Sb**	**02 22 15.5**	**-0.1**			
	baz=95										
OWD	**Renai**	**1.53**	**87**	*e*P		**Pn**	**02 21 55.4**	**+0.2**			
	baz=87										
OWD				*e*S		**Sb**	**02 22 15.9**	**-0.7**			
	baz=87										
CHGB	**Renai**	**1.53**	**84**	⇑P		**Pn**	**02 21 55.6**	**+0.3**			
	baz=83										
CHGB				*e*S		**Sn**	**02 22 15.1**	**+0.7**			
	baz=83										
SSD	**Sandimen**	**1.54**	**138**	*e*P		**Pb**	**02 21 56.2**	**-1.5**			
	baz=124										
SSD				*e*S		**Sb**	**02 22 16.6**	**-0.2**			
	baz=124										
NSTT	**Nanjuang**	**1.55**	**61**	*e*P		**Pn**	**02 21 55.4**	**+0.1**			
	baz=61										
TDCB	**Techi**	**1.55**	**76**	⇑P		**Pn**	**02 21 55.2**	**-0.3**			
	baz=76										
TDCB				*e*S		**Sb**	**02 22 16.7**	**-0.5**			
	baz=76										
ELDTW	**Lidau**	**1.55**	**117**	*e*P		**Pn**	**02 21 55.6**	**+0.1**			
	baz=116										
LIOB	**Emei**	**1.57**	**61**	*e*P		**Pn**	**02 21 55.6**	**0.0**			
	baz=61										
ZPLA	**Ao Xicun**	**1.61**	**272**	*e*P		**Pn**	**02 21 55.8**	**-0.4**			
	baz=272										
ZPLA				*e*S		**Sn**	**02 22 16.8**	**+0.9**			
	baz=272										
PTTC	**Pingtan**	**1.61**	**8**	*e*P		**Pn**	**02 21 56.9**	**+0.6**			
	baz=9.0										
PTTC				*e*S		**Sn**	**02 22 17.0**	**+0.9**			
	baz=9.0										
SBCB	**Hsinchu**	**1.62**	**56**	*e*P		**Pn**	**02 21 56.7**	**+0.5**			
	baz=56										
SBCB				*e*S		**Sb**	**02 22 19.7**	**+0.7**			
	baz=56										
WHF	**Hehuan Shan**	**1.63**	**81**	*e*P		**Pn**	**02 21 57.1**	**+0.4**			
	baz=80										
MASBT	**Mashibuluo**	**1.64**	**141**	*e*P		**Pn**	**02 21 57.4**	**+0.8**			
	baz=141										
MASBT				*e*S		**Sb**	**02 22 18.1**	**-1.6**			
	baz=141										
EHY	**Hungye**	**1.71**	**103**	*e*P		**Pn**	**02 21 58.5**	**+1.0**			
	baz=102										
EHY				*e*S		**Sn**	**02 22 19.4**	**+1.1**			
	baz=102										
SSPT	**Xinbi**	**1.71**	**145**	*e*P		**Pn**	**02 21 58.1**	**+0.5**			
	baz=145										
YULB	**Yu-li**	**1.72**	**107**	*e*P		**Pn**	**02 21 58.2**	**+0.6**			
	baz=106										
YULB				*e*S		**Sb**	**02 22 20.5**	**-1.3**			
	baz=106										
AXDP	**Jialang**	**1.72**	**306**	*e*P		**Pn**	**02 21 57.3**	**-0.4**			
	baz=306										
TWF1	**Yuli**	**1.73**	**108**	*e*P		**Pn**	**02 21 58.6**	**+0.8**			
	baz=107										
TWF1				*e*S		**Sb**	**02 22 20.9**	**-1.3**			
	baz=107										
WLCH	**Liuqiu**	**1.73**	**152**	*e*P		**Pb**	**02 22 01.0**	**0.0**			
	baz=152										
ESL	**Shilin**	**1.77**	**92**	⇑P		**Pn**	**02 21 59.3**	**+1.0**			
	baz=92										
EGFH	**Guangfu**	**1.77**	**97**	*e*P		**Pb**	**02 21 59.8**	**-1.8**			
	baz=96										
FULB	**Fuli**	**1.78**	**113**	*e*P		**Pb**	**02 22 00.3**	**-1.4**			
	baz=112										
NNS	**Nan Shan**	**1.79**	**72**	*e*P		**Pn**	**02 21 58.5**	**-0.3**			
	baz=72										
NNS				*e*S		**Sn**	**02 22 20.7**	**+0.2**			
	baz=72										
TWG	**Pinlang**	**1.79**	**126**	*e*P		**Pn**	**02 21 59.6**	**+0.9**			
	baz=126										
NNSH	**Datong**	**1.79**	**72**	*e*P		**Pn**	**02 21 59.0**	**+0.2**			
	baz=72										
TWGBT	**Beinan**	**1.80**	**126**	*e*P		**Pn**	**02 21 59.6**	**+0.9**			
	baz=126										
HGSD	**Ruisui**	**1.80**	**102**	*e*P		**Pb**	**02 22 01.0**	**-1.1**			
	baz=102										
ZZJH	**Jiuhuzhen**	**1.81**	**289**	*e*P		**Pn**	**02 21 59.5**	**+0.7**			
	baz=289										
SCZT	**Fangliau**	**1.83**	**146**	*e*P		**Pn**	**02 22 00.2**	**+1.0**			
	baz=145										
ETLH	**Xiulin Townshi**	**1.83**	**80**	*e*P		**Pn**	**02 21 59.6**	**+0.3**			
	baz=79										
ECL	**Taimali**	**1.85**	**134**	*e*P		**Pb**	**02 22 00.8**	**-2.2**			
	baz=145										
WLTB	**Daxi**	**1.85**	**59**	*e*P		**Pn**	**02 21 59.7**	**+0.2**			
	baz=59										
NSK	**Sanguang**	**1.86**	**65**	*e*P		**Pn**	**02 21 59.6**	**-0.1**			
	baz=54										
NCUH	**Zhongli**	**1.86**	**55**	*e*P		**Pn**	**02 21 59.9**	**+0.2**			
	baz=55										
YHNB	**Yeheng**	**1.87**	**65**	⇑P		**Pn**	**02 21 59.6**	**-0.2**			
	baz=54										
TWD	**Chiawan**	**1.92**	**84**	*e*P		**Pn**	**02 22 01.1**	**+0.7**			
	baz=84										
NACB	**Ninganchiao**	**1.93**	**81**	*e*P		**Pn**	**02 22 00.7**	**+0.1**			
	baz=81										
NACB				*e*S		**Sn**	**02 22 25.2**	**+1.4**			
	baz=81										
NDT	**Datong Townshi**	**1.96**	**69**	*e*P		**Pn**	**02 22 01.1**	**0.0**			
	baz=68										
NDT				*e*S		**Sn**	**02 22 24.5**	**-0.1**			
	baz=68										
ENTT	**Nioudou**	**2.02**	**68**	*e*P		**Pn**	**02 22 02.0**	**+0.2**			
	baz=68										
ENTT				*e*S		**Sn**	**02 22 26.2**	**+0.1**			
	baz=68										
NWLT	**Wulai**	**2.02**	**64**	*e*P		**Pn**	**02 22 01.6**	**-0.2**			
	baz=52										
TATO	**Taipei**	**2.10**	**59**	*e*P		**Pn**	**02 22 02.4**	**-0.5**			
	baz=59										
ENA	**Nanau**	**2.11**	**75**	*e*P		**Pn**	**02 22 03.7**	**+0.7**			
	baz=75										
ENA				*e*S		**Sn**	**02 22 28.4**	**+0.2**			
	baz=75										
TWS1	**Kuangyinshan**	**2.11**	**55**	*e*P		**Pn**	**02 22 02.9**	**-0.2**			
	baz=55										
NANB	**Nanao**	**2.12**	**75**	*e*P		**Pn**	**02 22 03.6**	**+0.5**			
	baz=75										
NANB				*e*S		**Sn**	**02 22 29.4**	**+1.0**			
	baz=75										
SLBB	**Yuanshan**	**2.12**	**66**	*e*P		**Pn**	**02 22 02.3**	**-0.9**			
	baz=66										
TWE	**Neicheng**	**2.13**	**67**	*e*P		**Pn**	**02 22 03.8**	**+0.4**			
	baz=67										
TWE				*e*S		**Sn**	**02 22 29.8**	**+0.9**			
	baz=67										
TWH	**Lutao**	**2.16**	**123**	*e*P		**Pn**	**02 22 04.9**	**+1.1**			
	baz=123										
TWA	**Mucha**	**2.18**	**60**	*e*P		**Pn**	**02 22 03.5**	**-0.5**			
	baz=60										
MHZQ	**Yeshan**	**2.24**	**349**	*e*P		**Pn**	**02 22 04.6**	**-0.2**			
	baz=349										
MHZQ				*e*S		**Sn**	**02 22 31.3**	**-0.1**			
	baz=349										
ANP	**Anpu**	**2.24**	**55**	*e*P		**Pn**	**02 22 04.9**	**0.0**			
	baz=55										
TWC	**Suao**	**2.25**	**71**	*e*P		**Pn**	**02 22 05.7**	**+0.7**			
	baz=71										
TWC				*e*S		**Sn**	**02 22 32.5**	**+0.8**			
	baz=71										
YM10	**YM10**	**2.25**	**56**	⇓P		**Pn**	**02 22 05.0**	**0.0**			
	baz=56										
YM01	**YM01**	**2.25**	**56**	*e*P		**Pn**	**02 22 05.0**	**-0.1**			
	baz=56										
YM01				*e*S		**Sn**	**02 22 31.6**	**-0.3**			
	baz=56										
YM11	**YM11**	**2.27**	**56**	*e*P		**Pn**	**02 22 05.2**	**0.0**			
	baz=56										
MATB	**Ma-tsu**	**2.28**	**10**	*e*P		**Pn**	**02 22 05.7**	**+0.3**			
	baz=10.0										
MATB				*e*S		**Sn**	**02 22 31.9**	**-0.6**			
	baz=10.0										
TWK1	**Hengchun**	**2.28**	**148**	*e*P		**Pn**	**02 22 06.0**	**+0.6**			
	baz=148										
TWK1				*e*S		**Sn**	**02 22 33.2**	**+0.7**			
	baz=148										
TWKBT	**Hengchun**	**2.29**	**148**	*e*P		**Pn**	**02 22 04.4**	**-1.1**			
	baz=148										
YM08	**YM08**	**2.29**	**55**	*e*P		**Pn**	**02 22 05.1**	**-0.4**			
	baz=55										
NTC	**Toucheng**	**2.32**	**65**	*e*P		**Pn**	**02 22 06.1**	**+0.2**			
	baz=65										
NWF	**Wu-fen Shan**	**2.38**	**60**	*e*P		**Pn**	**02 22 06.7**	**-0.1**			
	baz=60										
WFSB	**Wu-fen Shan**	**2.38**	**60**	*e*P		**Pn**	**02 22 07.0**	**+0.3**			
	baz=49										
EOS1	**EOS1**	**2.48**	**74**	*e*P		**Pn**	**02 22 10.0**	**+1.9**			
	baz=74										
EOS1				*e*S		**Sn**	**02 22 39.2**	**+1.9**			
	baz=74										
TWB1	**Santiao Chiao**	**2.52**	**63**	*e*P		**Pn**	**02 22 08.8**	**+0.1**			
	baz=64										
TWB1				*e*S		**Sn**	**02 22 38.0**	**-0.3**			
	baz=64										
LYJJ	**Jianjiangzhen**	**2.65**	**5**	*e*P		**Pn**	**02 22 12.8**	**+2.3**			
	baz=5.0										
XPSS	**Dashiqiu**	**3.08**	**11**	*e*P		**Pn**	**02 22 16.4**	**-0.1**			
	baz=12										

ECX ***14*** *02:27:30.5±0.6, 31°.23N×115°.94W, h5km, MD2.7, ML2.9*
MEX ***14*** *02:27:31.3±0.7, 31°.11N×115°.92W, h15km±86km, MD3.5*

ISC 14 02:27:29.0±1.1, 31°.23N±0'.04×115°.94W±0'.04, h13km±11km, n14, σ0s54/24, 1C-5D, Baja California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	**0.45**	**114**	*e*P		**Pg**		**02 27 38.6**	**+0.6**
SPIG				*i* S		**Sg**		**02 27 44.3**	**+0.2**
SPIG	**San Pedro Mart**	**0.45**	**114**	*e*P		**Pg**		**02 27 38.2**	**+0.2**
SPIG				*e*S		**Sg**		**02 27 44.4**	**+0.2**
SPX	**San Pedro Mart**	**0.45**	**115**	*e*P		**Pg**		**02 27 37.5**	**-0.7**
SPX				*i* S		**Sg**		**02 27 43.2**	**-1.1**
SPX	**San Pedro Mart**	**0.45**	**115**	⇓*e*P		**Pg**		**02 27 37.6**	**-0.5**
SPX				*e*S		**Sg**		**02 27 43.6**	**-0.6**
SPX				*e*				02 27 43.9	
SPX				IAML				02 27 43.9	
	comp=E,577nm,0.1s								
SPX				IAML				02 27 44.0	
	comp=N,752nm,0.2s								
SPX				⇓*e*				02 27 44.0	
SQX	**San Quintin**	**0.66**	**175**	⇓*e*P		**Pg**		**02 27 42.1**	**+0.3**
SQX				*e*S		**Sg**		**02 27 51.1**	**+0.6**
ESJX	**Sierra Juarez**	**0.77**	**360**	⇓*e*P		**Pg**		**02 27 44.2**	**+0.2**
ESJX				*e*S		**Sg**		**02 27 54.5**	**+0.3**
ECBX	**El Chinero**	**0.80**	**72**	*e*P		**Pg**		**02 27 44.9**	**+0.4**
ECBX				*e*S		**Sg**		**02 27 55.1**	**+0.1**
VTX	**Valle De La Tr**	**0.85**	**171**	⇑*e*P		Pg		02 27 34.4	-11
VTX				*e*S		Sg		02 27 37.3	-19
CCX	**Cicese**	**0.88**	**316**	⇓*e*P		**Pg**		**02 27 45.6**	**-0.5**
CCX				*e*S		**Sg**		**02 27 57.6**	**-0.2**
SFX	**San Felipe**	**0.96**	**101**	*e*P		**Pg**		**02 27 47.0**	**-0.5**
CBX	**Cerro Bola**	**1.24**	**331**	*e*P		**Pn**		**02 27 52.0**	**-0.2**
CBX				*i* S		**Sb**		**02 28 08.8**	**+0.5**
CBX	**Cerro Bola**	**1.24**	**331**	*e*P		**Pn**		**02 27 52.0**	**-0.2**
ERMX	**Rumorosa**	**1.32**	**357**	*e*P		**Pn**		**02 27 53.9**	**+0.6**
ERMX				*e*S		**Sb**		**02 28 11.0**	**+0.4**
TJIG	**Tijuana**	**1.35**	**333**	*e*P		**Pn**		**02 27 53.7**	**+0.1**
TJIG				*i* S		**Sn**		**02 28 10.5**	**-0.9**

RSPR ***14*** *03:01:09.5, 19°.25N×67°.03W, h50km±6km, MD3.1/12*
NEIC ***14*** *03:01:10.7±2.0, 19°.15N±0'.04×66°.91W±0'.05, h36km±57km, Error ellipse: s-maj=7.5km s-min=5.6km az=137.0*

ISC 14 03:01:09.3±1.5, 19°.18N±0'.07×66°.98W±0'.05, h29km, n40, σ0s72/53, 8C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.82**	**148**	⇑*e*P			**Pn**	**03 01 25.1**	**+0.2**
EMPR	**Esperanza - Ma**	**0.82**	**148**	*e*S			**Sn**	**03 01 37.3**	**+1.3**
EMPR	**Esperanza - Ma**	**0.82**	**148**				**Pn**	**03 01 25.1**	**+0.2**
EMPR							**Sn**	**03 01 37.3**	**+1.3**
AOPR	**Arecibo Observ**	**0.85**	**165**	⇑*e*P			**Pn**	**03 01 25.3**	**-0.1**
AOPR	**Arecibo Observ**	**0.85**	**165**	*e*S			**Sn**	**03 01 38.1**	**+1.2**
AOPR	**Arecibo Observ**	**0.85**	**165**				**Pn**	**03 01 25.3**	**-0.1**
AOPR							**Sn**	**03 01 38.1**	**+1.2**
MPR	**Mayaguez**	**0.97**	**189**				**Pn**	**03 01 27.3**	**+0.3**
MPR						Sn	**Sb**	**03 01 41.2**	**+1.2**
LSP	**Las Mesas**	**1.00**	**186**	⇑*e*P			**Pn**	**03 01 27.7**	**+0.2**
LSP	**Las Mesas**	**1.00**	**186**	*e*S			**Sn**	**03 01 40.7**	**0.0**
LSP	**Las Mesas**	**1.00**	**186**				**Pn**	**03 01 27.7**	**+0.2**
LSP							**Sn**	**03 01 40.7**	**0.0**
CELP	**Cerrillos**	**1.16**	**161**	⇑*e*P			**Pn**	**03 01 29.2**	**-0.4**
CELP				*e*S			**Sn**	**03 01 45.1**	**+0.6**
CELP	**Cerrillos**	**1.16**	**161**				**Pn**	**03 01 29.2**	**-0.4**
CELP							**Sn**	**03 01 45.1**	**+0.6**
CRPR	**Cabo Rojo, PR**	**1.17**	**186**	⇑*e*P			**Pn**	**03 01 29.4**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.17**	**186**	*e*S			**Sn**	**03 01 44.8**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.17**	**186**				**Pn**	**03 01 29.4**	**-0.3**
CRPR							**Sn**	**03 01 44.8**	**+0.1**
OBIP	**Obispado Ponce**	**1.18**	**162**	⇑*e*P			**Pn**	**03 01 30.3**	**+0.4**
OBIP	**Obispado Ponce**	**1.18**	**162**	*e*S			**Sn**	**03 01 46.1**	**+1.0**
OBIP	**Obispado Ponce**	**1.18**	**162**				**Pn**	**03 01 30.3**	**+0.4**
OBIP							**Sn**	**03 01 46.1**	**+1.0**
GBPR	**Guanica, Bosqu**	**1.20**	**175**	⇑*e*P			**Pn**	**03 01 30.6**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.20**	**175**	*e*S			**Sn**	**03 01 46.2**	**+0.8**
GBPR	**Guanica, Bosqu**	**1.20**	**175**				**Pn**	**03 01 30.6**	**+0.5**
GBPR							**Sn**	**03 01 46.2**	**+0.8**
MLPR	**Magueyes Islan**	**1.20**	**183**	⇓*e*P			**Pn**	**03 01 29.6**	**-0.5

comp=Z,3.9nm,0.7s
KKAR Karatay Array 60.24 317 P **P** 03 14 05.3 **+0.3**

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*IDC **14** 03:06:51.3±4.8, 15°.44N×88°.59W, h0km, mb3.3/2, mb1 3.8/4, mb1mx3.4/39, mbtmp3.5/4, ML4.2/2, MS3.0/5, Ms1 3.0/5, ms1mx2.7/22, Error ellipse: s-maj=80.5km s-min=17.6km az=147.0*
*SNET **14** 03:06:54.8±1.5, 15°.74N×88°.83W, h20km±15km, ML4.0*
*MEX **14** 03:06:54.9±0.4, 16°.22N×88°.68W, h83km±32km, MD4.3*
*UCR **14** 03:06:56.4±2.1, 15°.80N×88°.77W, h20km, ML3.9*
*INET **14** 03:07:00.1, 15°.59N×89°.47W, h16km, ML3.6*
*GCG **14** 03:07:14.9±0.4, 15°.13N×89°.99W, h17km±999km, MD4.3*

ISC 14 03:06:53.7±0.8, **15°.72N**±0°.05×**88°.86W**±0°.04, **h6**km, **n40,** σ1§**43**/44, **1C-2D, Honduras**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
APG	**El Apazote**	**1.70**	**246**	Pn		**Pb**		**03 07 25.2**	**-0.4**
APG	97nm,0.3s,baz=73,slow=13,SNR=154				Lg	Lg		03 07 49.9	
NBG	**Las Nubes**	**1.82**	**232**	*eP*		**Pb**		**03 07 27.8**	**+0.2**
RTR	**El Retiro**	**1.96**	**203**	*eP*		**Pb**		**03 07 30.0**	**0.0**
RTR	**El Retiro**	**1.96**	**203**	*eP*		**Pb**		**03 07 30.0**	**0.0**
LFU	**La Fuente**	**1.97**	**187**	*eP*		**Pb**		**03 07 29.8**	**-0.3**
LFU	**La Fuente**	**1.97**	**187**	*eP*		**Pb**		**03 07 29.8**	**-0.3**
LBRS	**Las Brisas**	**1.98**	**185**	*eP*		**Pb**		**03 07 29.9**	**-0.3**
SBLS	**San Blas**	**2.01**	**202**	*eP*		**Pb**		**03 07 30.8**	**0.0**
SBLS	**San Blas**	**2.01**	**202**	*eP*		**Pb**		**03 07 30.8**	**0.0**
BOQS	**Boqueron**	**2.01**	**192**	*eP*		**Pb**		**03 07 30.8**	**0.0**
CEVE	**Cerro Verde**	**2.02**	**202**↓	*eP*		**Pg**		**03 07 31.3**	**-1.2**
CEVE	**Cerro Verde**	**2.02**	**202**↓	*eP*		**Pg**		**03 07 31.3**	**-1.2**
COEG	**Centro de Oper**	**2.08**	**181**	*eP*		**Pb**		**03 07 31.7**	**-0.3**
LFRS	**El Faro**	**2.09**	**185**	*eP*		**Pb**		**03 07 31.8**	**-0.4**
FAGO	**Alcalda de S**	**2.14**	**160**	*eP*		**Pb**		**03 07 32.2**	**-0.7**
IXG	**Ixpaco**	**2.17**	**225**	*eP*		**Pg**		**03 07 34.3**	**-1.0**
FAME	**Alcalda de S**	**2.17**	**211**↑	*eP*		**Pb**		**03 07 33.4**	**0.0**
COEB	**Comit de Eme**	**2.23**	**172**	*eP*		**Pb**		**03 07 34.2**	**-0.2**
COEB	comp=Z,1μm,0.5s				IAML			03 08 07.1	
TECA	**Tecapa**	**2.24**	**171**	*eP*		**Pb**		**03 07 34.2**	**-0.5**
TECA	**Tecapa**	**2.24**	**171**	*eP*		**Pb**		**03 07 34.2**	**-0.5**
TGUH	**Tegucigalpa,Un**	**2.25**	**137**	*eP*		**Pb**		**03 07 33.2**	**-1.7**
TGUH				*i* S		**Sb**		**03 08 03.1**	**0.0**
FUG	**Fuego 3**	**2.29**	**237**	*eP*		**Pb**		**03 07 34.5**	**-1.1**
PACA	**Pacayal**	**2.29**	**167**	*eP*		**Pb**		**03 07 34.8**	**-0.8**
PACA	**Pacayal**	**2.29**	**167**	*eP*		**Pb**		**03 07 34.8**	**-0.8**
ALJI	**Alcalda de J**	**2.39**	**173**	IAML				03 08 17.4	
LCND	comp=Z,545nm,0.4s **La Caada**	**2.57**	**158**	*eP*		**Pb**		**03 07 38.2**	**-2.1**
LCND	comp=Z,819nm,0.3s			IAML				03 08 18.0	
LCND	**La Caada**	**2.57**	**158**	*eP*		**Pb**		**03 07 38.2**	**-2.1**
LCND	comp=Z,819nm,0.3s			IAML				03 08 18.0	
STG3	**Santiaguito 3,**	**2.80**	**249**	*eP*		**Pb**		**03 07 42.6**	**-1.7**
THIG		**3.38**	**257**	*i* P		**Pn**		**03 07 48.2**	**+1.1**
THIG				*i* S		**Sn**		**03 08 31.2**	**+3.7**
PCIG		**4.20**	**270**	*eP*		**Pn**		**03 07 59.0**	**+0.7**
PCIG				*i* S		**Sn**		**03 08 49.0**	**+1.3**
TGIG		**4.23**	**285**	*i* P		**Pn**		**03 07 58.0**	**-0.8**
TGIG				*i* S		**Sn**		**03 08 46.9**	**-1.7**
TEIG	**Tepich**	**4.52**	**7**	Pn		**Pn**		**03 08 04.3**	**+1.6**
TEIG	comp=Z,16nm,0.3s,baz=140,slow=0.3,SNR=93				Sn	**Sn**		**03 08 55.7**	**+0.1**
TEIG	comp=Z,22nm,0.3s,baz=319,slow=24,SNR=13				Lg	Lg		03 09 15.5	
CMIG	comp=Z,48nm,0.3s,baz=139,slow=21,SNR=12 **Matias Romero**	**5.94**	**284**	Pn		**Pn**		**03 08 21.5**	**-0.8**
CMIG	comp=Z,0.8nm,0.3s,baz=102,slow=9.1,SNR=11				Sn	**Sn**		**03 09 27.2**	**-3.5**
CMIG	comp=Z,3.0nm,0.3s,baz=138,slow=24,SNR=7.2				Lg	Lg		03 10 05.5	
CMIG	comp=Z,3.2nm,0.3s,baz=346,slow=13,SNR=5.4				LR	LR		03 11 14.2	
CMIG	comp=Z,100nm,19.4s,baz=96,slow=42 **Matias Romero**	**5.94**	**284**	*eP*		**Pn**		**03 08 21.4**	**-0.9**
CMIG				*i* S		**Sn**		**03 09 28.6**	**-2.2**
SDV	**Santo Domingo**	**19.05**	**109**	LR		LR		03 18 18.7	
TXAR	comp=Z,20nm,18.4s,baz=237,slow=37 **Lajitas Array**	**19.23**	**317**	P		**Pn**		**03 11 22.5**	**+2.8**
TXAR	comp=Z,0.1nm,0.3s,baz=137,slow=12,SNR=12				S	**Sn**		**03 14 52.5**	**-3.1**
TXAR	comp=Z,0.1nm,0.3s,baz=130,slow=25,SNR=3.7				LR	LR		03 21 06.8	
TKL	comp=Z,28nm,20.5s,baz=0.0,slow=44 **Tuckaleechee C**	**20.37**	**12**	LR		LR		03 19 35.2	
PCRV	comp=Z,50nm,18.6s,baz=346,slow=37 **Puerto La Cruz**	**24.23**	**100**	LR		LR		03 22 07.3	
NVAR	comp=Z,208nm,19.9s,slow=38 **Mina Array Bea**	**34.38**	**317**	P		**P**		**03 13 43.5**	**+1.6**
YKA	comp=Z,0.1nm,0.4s,baz=126,slow=9.0,SNR=2.9 **Yellowknife Ar**	**50.12**	**345**	P		**P**		**03 15 50.0**	**+0.5**
	comp=Z,0.3nm,0.8s,baz=144,slow=7.6,SNR=3.6								

IDC 14 03:13:15.1±10.0, **11°.78N**×**142°.75E**, **h0**km, **mb3.6/4, mb1 3.7/4, mb1mx3.5/37, mbtmp3.6/4, Error ellipse: s-maj=280.6km s-min=55.0km az=1.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**47.06**	**327**	P		P		03 21 48.7	0.0
MKAR	0.3nm,0.5s,baz=145,slow=6.5,SNR=4.2 **Makanchi Array**	**61.38**	**317**	P		P		03 23 33.3	+0.3
ZALV	0.5nm,0.5s,baz=97,slow=9.0,SNR=8.5 **Zalesovo Beam**	**61.91**	**325**	P		P		03 23 35.9	-0.5
ILAR	0.6nm,0.4s,baz=93,slow=7.2,SNR=3.0 **Eielson Array**	**71.08**	**25**	P		P		03 24 35.0	+0.1
	0.3nm,0.7s,baz=245,slow=5.6,SNR=4.5								

IDC 14 03:15:55.0±1.6, **4°.48S**×**127°.55E**, **h0**km, **mb3.3**/2, **mb1 3.7**/4, **mb1mx3.5**/36, **mbtmp3.6**/4, **ML3.3**/2, **MS2.9**/1, **Ms1 2.9**/1, **ms1mx2.1**/25, **Error ellipse: s-maj=39.1km s-min=27.2km az=85.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.16**	**46**	Pn		Pn		03 17 14.1	+0.6
SIJI	1.8nm,0.3s,baz=313,slow=18,SNR=3.1				Sn	Sn		03 18 16.0	+2.2
WRA	2.9nm,0.3s,baz=80,slow=21,SNR=6.5 **Warramunga Arr**	**16.73**	**157**	Pn		Pn		03 19 52.0	+1.0
ASAR	0.1nm,0.3s,baz=339,slow=12,SNR=2.9 **Alice Springs**	**20.04**	**163**	P		P		03 20 29.3	-0.5
PMG	1.4nm,0.9s,baz=345,slow=11,SNR=6.6 **Port Moresby**	**20.06**	**105**	LR		LR		03 28 51.7	
MKAR	comp=Z,32nm,20.0s,baz=277,slow=39 **Makanchi Array**	**64.80**	**327**	P		P		03 26 35.5	-0.2
	0.3nm,0.8s,baz=112,slow=6.4,SNR=3.0								

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*IDC **14** 03:32:20.9±20.0, 30°.49N×72°.10E, h0km, mb3.9/3, mb1 3.7/4, mb1mx3.3/55, mbtmp3.7/4, ML3.1/1, MS3.2/3, Ms1 3.2/3, ms1mx2.6/47, Error ellipse: s-maj=398.1km s-min=57.3km az=158.0*
*NNC **14** 03:33:35.1±8.1, 37°.16N×70°.54E, h0km, mb3.5, mpv3.3, Error ellipse: s-maj=64.6km s-min=58.0km az=172.0*

ISC 14 03:33:31.3±2.3, **36°.9N**±0°.2×**70°.3E**±0°.2, **h200**km, **n11,** σ2§**58**/10, **2C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IUG	**luzhnay**	**5.29**	**358**	Pg		**Pn**		**03 34 45.8**	**-3.7**
IUG	1.4nm,0.2s				Lg	Lg		03 35 53.1	
KK31	35nm,0.5s **Karatay Array**	**6.24**	**2**	P		**Pn**		**03 35 04.5**	**+2.9**
KK31	0.2nm,0.2s,baz=177,slow=13,SNR=12				⇓S	**Sn**		**03 36 13.3**	**+0.1**
MRKS	8.7nm,0.8s,baz=177,slow=17 **Merke**	**6.30**	**20**	Pg		**Pn**		**03 34 58.4**	**-4.1**
MRKS	0.5nm,0.1s				Lg	Lg		03 36 15.7	
AAK	8.8nm,0.5s **Ala-Archa**	**6.62**	**28**	⇑P		**Pn**		**03 35 08.4**	**+1.6**
AAK	2.0nm,0.8s				⇑S	**Sn**		**03 36 23.6**	**+1.2**
MKAR	4.3nm,0.5s **Makanchi Array**	**13.36**	**38**	P		**P**		**03 36 34.6**	**-1.2**
	0.1nm,0.3s,baz=204,slow=13,SNR=4.7								

ZALV	**Zalesovo Beam**	**19.84**	**26**	P		**P**		**03 37 47.9**	**+1.1**
	0.7nm,0.4s,baz=212,slow=11,SNR=4.2								
BRTR	**Keskin Array B**	**28.77**	**287**	LR		LR		03 53 26.6	
	comp=Z,39nm,21.6s,baz=230,slow=39								
CMAR	**Chiang Mai Arr**	**31.14**	**118**	LR		LR		03 49 55.6	
	comp=Z,24nm,21.1s,baz=193,slow=39								
ARCES	**ARCESS Array B**	**40.59**	**338**	P		**P**		**03 40 52.1**	**+1.1**
	1.5nm,0.9s,baz=105,slow=6.9,SNR=3.8								
HFS	**Hagfors**	**42.43**	**322**	P		**P**		**03 41 06.1**	**+0.1**
	2.3nm,0.9s,baz=104,slow=10,SNR=2.7								
KLR	**Kul'dur**	**45.40**	**54**	LR		LR		04 01 52.9	
	comp=Z,50nm,18.5s,baz=346,slow=37								

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*IDC **14** 03:37:53.9±10.0, 7°.86S×158°.29E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/31, mbtmp3.8/3, Error ellipse: s-maj=314.4km s-min=42.2km az=116.0*

ISC 14 03:37:54.3±1.7, **8°.0S**±0°.3×**158°.5E**±0°.2, **h10**km, **n10,** σ0§**95**/4, **mb3.6/3, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.99**	**135**	*eP*		**Pn**		**03 38 28.0**	**0.0**
WRA	**Warramunga Arr**	**26.24**	**241**	P		**P**		**03 43 30.6**	**+0.8**
	1.3nm,1.0s,baz=66,slow=9.1,SNR=3.3								
H11S3	**WAKE ISLAND Hy**	**27.56**	**17**	T		T		04 12 37.5	
	baz=194,slow=76								
H11S2	**WAKE ISLAND Hy**	**27.56**	**17**	T		T		04 12 35.6	
	baz=194,slow=76								
H11S1	**WAKE ISLAND Hy**	**27.57**	**17**	T		T		04 12 33.2	
	baz=194,slow=76								
ASAR	**Alice Springs**	**28.25**	**234**	P		**P**		**03 43 47.5**	**-0.4**
	0.5nm,0.4s,baz=61,slow=10.0,SNR=7.2								
H11N1	**WAKE ISLAND Hy**	**28.77**	**17**	T		T		04 14 01.0	
	baz=197,slow=76								
H11N3	**WAKE ISLAND Hy**	**28.78**	**17**	T		T		04 14 02.7	
	baz=197,slow=76								
H11N2	**WAKE ISLAND Hy**	**28.79**	**17**	T		T		04 14 02.2	
	baz=197,slow=76								
MKAR	**Makanchi Array**	**86.49**	**318**	P		**P**		**03 50 37.5**	**-0.1**
	0.9nm,0.6s,baz=94,slow=6.6,SNR=9.8								

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*IDC **14** 03:41:52.3±6.2, 23°.64S×179°.94W, h530km±56km, mb3.6/5, mb1 3.7/7, mb1mx3.3/35, mbtmp4.6/7, Error ellipse: s-maj=66.3km s-min=29.3km az=48.0*
*NEIC **14** 03:41:52.6±1.3, 23°.75S±0°.2×179°.9W±0°.3, h550km±26km, mb4.5/15, Error ellipse: s-maj=35.0km s-min=22.2km az=71.0*

ISC 14 03:41:53.0±1.3, **23°.79S**±0°.09×**179°.9E**±0°.2, **h526**km, **n42,** σ1§**60**/46, **mb4.3**/10, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.78**	**161**	P		**P**		**03 43 29.9**	**+1.5**
GLKZ				S		**S**		**03 44 46.0**	**-0.4**
MSVF	**Nonsavu**	**6.28**	**343**	P		**P**		**03 43 33.6**	**+0.2**
DZM	**Mont Dzumac**	**12.55**	**275**	P		**P**		**03 44 38.4**	**+1.0**
	0.5nm,0.3s,baz=233,slow=20,SNR=4.3								
DZM	**Mont Dzumac**	**12.55**	**275**	P		P		**03 44 38.0**	**+0.5**
KUZ	**Kuaotunu**	**13.41**	**195**	P		P		03 44 54.1	+7.9
MXZ	**Matakaoa Point**	**13.80**	**185**	P		**P**		**03 44 53.2**	**+3.1**
MXZ	**Matakaoa Point**	**13.80**	**185**	P		**P**		**03 44 51.3**	**+1.1**
MKAZ	**Moumakai**	**13.89**	**196**	P		**P**		**03 44 55.0**	**+3.8**
RUGZ	**Raukumara Rang**	**14.26**	**187**	P		**P**		**03 44 57.0**	**+1.8**
PUZ	**Puketiti**	**14.31**	**185**	P		**P**		**03 44 57.0**	**+1.5**
TOZ	**Tahuroa Road**	**14.41**	**194**	P		P		03 45 02.1	+5.6
TWGZ	**Tauwhareparae**	**14.44**	**186**	P		**P**		**03 44 58.2**	**+1.3**
TWGZ				S		**S**		**03 47 29.5**	**+1.0**
URZ	**Urewera**	**14.62**	**189**	P		**P**		**03 44 59.0**	**+0.2**
	9.8nm,0.3s,baz=62,slow=1.8,SNR=34								
URZ				S		**S**		**03 47 30.5**	**-1.5**
	1.0nm,0.3s,baz=62,slow=22,SNR=9.6								
URZ	**Urewera**	**14.62**	**189**	P		**P**		**03 44 58.9**	**+0.1**
URZ				S		**S**		**03 47 27.7**	**-4.3**
URZ	**Urewera**	**14.62**	**189**	P		**P**		**03 44 58.0**	**-0.8**
URZ				S		**S**		**03 47 34.1**	**+2.2**
MWZ	**Matawai**	**14.64**	**187**	P		**P**		**03 44 60.0**	**+0.9**
CNGZ	**Carnagh Statio**	**14.72**	**185**	P		**P**		**03 45 03.2**	**+3.4**
RAGZ	**Rawiri**	**14.82**	**188**	P		**P**		**03 45 01.8**	**+0.9**
RIGZ	**Rimuhau**	**14.98**	**187**	P		**P**		**03 45 03.4**	**+0.8**
RAHZ	**Arahi**	**15.27**	**188**	P		**P**		**03 45 06.4**	**+0.8**
RAHZ				S		**S**		**03 47 40.2**	**-4.0**
BFZ	**Birch Farm**	**17.13**	**190**	P		**P**		**03 45 22.1**	**-1.8**
QRZ	**Quartz Range**	**18.09**	**198**	P		**P**		**03 45 34.2**	**+1.4**
NNZ	**Nelson**	**18.23**	**196**	P		**P**		**03 45 34.9**	**+0.9**
THZ	**Tophouse**	**18.86**	**196**	P		**P**		**03 45 39.9**	**+0.1**
THZ					IAmb	IAmb		03 45 41.7	
	comp=Z,32nm,1.2s								
KHZ	**Kahutara**	**19.32**	**194**	P		**P**		**03 45 43.4**	**-0.5**
KHZ					IAmb	IAmb		03 45 49.9	
	comp=Z,18nm,0.8s								
LTZ	**Lake Taylor**	**19.98**	**197**	P		**P**		**03 45 49.9**	**-0.1**
LTZ					IAmb	IAmb		03 45 57.1	
	comp=Z,15nm,0.9s								
RPZ	**Rata Peaks**	**21.18**	**198**	P		**P**		**03 46 01.3**	**+0.5**
	comp=Z,18nm,0.9s,baz=63,slow=15,SNR=3.1								
ARMA	**Armidale**	**26.00**	**249**	P		**P**		**03 46 45.0**	**+0.8**
EIDS	**Eidsvold**	**26.26**	**261**	P		**P**		**03 46 47.2**	**+0.9**
EIDS					IAmb	IAmb		03 46 47.6	
	comp=Z,4.9nm,0.6s								
CTA	**Charters Tower**	**31.41**	**270**	P		**P**		**03 47 31.8**	**+0.6**
	comp=Z,13nm,0.5s,baz=91,slow=11,SNR=19								
STKA	**Stephens Creek**	**34.71**	**248**	P		**P**		**03 47 59.1**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=98,slow=10,SNR=5.8								
STKA	**Stephens Creek**	**34.71**	**248**	P		**P**		**03 47 58.6**	**-0.3**
BBOO	**Buckleboo**	**39.43**	**247**	P		**P**		**03 48 37.2**	**-0.5**
BBOO					IAmb	IAmb		03 48 37.4	
	comp=Z,11nm,1.1s								
AS31	**Alice Springs**	**41.99**	**261**	P		**P**		**03 48 57.7**	**-0.6**
ASAR	**Alice Springs**	**41.99**	**261**	P		**P**		**03 48 58.0**	**-0.2**
	comp=Z,3.2nm,0.7s,baz=103,slow=7.1,SNR=33								
ASAR	**Alice Springs**	**41.99**	**261**	P		**P**		**03 48 57.7**	**-0.6**
WRA	**Warramunga Arr**	**42.35**	**266**	P		**P**		**03 49 00.4**	**-0.7**
	comp=Z,3.8nm,0.5s,baz=92,slow=8.4,SNR=24								
WRA	**Warramunga Arr**	**42.35**	**266**	P		**P**		**03 48 59.8**	**-1.3**
FORT	**Forrest**	**46.29**	**249**	P		**P**		**03 49 30.5**	**-0.9**
FORT					IAmb	IAmb		03 49 42.9	
	comp=Z,19nm,1.1s								
MTN	**Manton Dam**	**47.38**	**274**	P		**P**		**03 49 38.5**	**-1.3**
MTN					IAmb	IAmb		03 49 52.6	
	comp=Z,10nm,1.0s								
KNRA	**Kununurra**	**48.62**	**270**	P		**P**		**03 49 48.7**	**-0.4**
KNRA					IAmb	IAmb		03 49 48.9	
	comp=Z,12nm,0.8s								
AKASG	**Malin Array Be**	**144.84**	**327**	PKP		**PKPdf**		**04 00 28.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=52,slow=4.6,SNR=7.0								

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*IDC **14** 03:43:03.6±1.3, 79°.07N×124°.69E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.4/64, mbtmp3.4/5, ML5.6/1, MS3.4/13, Ms1 3.4/13, ms1mx3.2/32, Error ellipse: s-maj=53.0km s-min=22.7km az=134.0*
*NEIC **14** 03:43:05.1±1.1, 78°.8N±0°.1×125°.9E±0°.6, h10km±2km, mb4.1/3, Error ellipse: s-maj=20.1km s-min=18.2km az=295.0*

ISC 14 03:43:05.1±0.9, **78°.81N**±0°.08×**126°.0E**±0°.1, **h10**km, **n24,** σ1§**42**/16, **mb3.5/5, MS3.4**/13, **East of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**7.24**	**173**	Pn		**Pn**		**03 44 53.0**	**+2.2**
TIXI	0.3nm,0.3s,baz=18,slow=12,SNR=2.9				Sn	**Sn**		**03 46 10.3**	**-2.6**
TIXI	0.4nm,0.3s,baz=107,slow=14,SNR=1.7 **Tiksi**	**7.24**	**173**			**Pn**		**03 44 51.6**	**+0.8**
TIXI						**Sn**		**03 46 12.4**	**-0.5**
BILL	**Bilibino**	**15.26**	**112**	P		**P**		**03 46 43.7**	**-1.5**
BILL					IAmb	IAmb		03 46 54.5	
	comp=Z,6.0nm,0.8s								
BILL						**Sn**		**03 49 29.4**	**+0.3**
YAK	**Yakutsk**	**16.91**	**174**			**Pn**		**03 47 02.3**	**+0.9**
YAK					IAmb	IAmb		03 47 19.8	
	comp=Z,17nm,0.6s								
RDOG	**Red Dog Mine**	**21.16**	**80**	P		**P**		**03 47 50.1**	**+0.2**
RDOG					IAmb	IAmb		03 47 53.7	
	comp=Z,11nm,1.2s								
IMAR	**Indian Mountai**	**24.73**	**75**	P		**P**		**03 48 26.8**	**+0.8**
ILAR	**Eielson Array**	**27.09**	**70**	P		**P**		**03 48 49.9**	**+2.5**
	comp=Z,1.2nm,1.1s,baz=327,slow=6.5,SNR=7.6								
ILAR	**Eielson Array**	**27.09**	**70**	P		**P**		**03 48 48.6**	**+1.2**
TLY	**Talaya**	**28.36**	**210**	LR		LR		04 00 47.3	
	comp=Z,57nm,21.4s,baz=50,slow=37								

ZALV	**Zalesovo Beam**	**28.60**	**234**	LR		LR		04 01 18.7	
	comp=Z,95nm,19.2s,baz=338,slow=38								
SFJD	**Kangerlussuaq**	**34.39**	**358**	LR		LR		04 03 39.2	
	comp=Z,191nm,18.0s,baz=131,slow=36								
YKA	**Yellowknife Ar**	**34.51**	**46**	P		**P**		**03 49 51.4**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=345,slow=8.1,SNR=4.2								
YKA					LR	LR		04 05 54.7	
	comp=Z,42nm,18.0s,baz=0.0,slow=40								
MKAR	**Makanchi Array**	**35.94**	**234**	P		**P**		**03 50 05.1**	**-0.1**
	comp=Z,0.2nm,0.7s,baz=12,slow=8.1,SNR=3.1								
MKAR					LR	LR		04 06 08.0	
	comp=Z,66nm,20.4s,baz=353,slow=39								
ABKAR	**Akbulak array**	**37.54**	**259**	P		**P**		**03 50 18.5**	**-0.4**
AAK	**Ala-Archa**	**41.27**	**241**	LR		LR		04 09 56.9	
	comp=Z,110nm,18.4s,baz=339,slow=39								
KSRS	**Korea Array**	**41.48**	**178**	LR		LR		04 10 14.3	
	comp=Z,22nm,20.1s,baz=35,slow=39								
KBZ	**Khabaz**	**46.16**	**274**	LR		LR		04 11 31.5	
	comp=Z,59nm,19.6s,baz=21,slow=37								
GEYT	**Alibeck**	**48.81**	**257**	LR		LR		04 15 53.3	
	comp=Z,30nm,18.6s,baz=350,slow=40								
BRTR	**Keskin Array B**	**51.81**	**281**	LR		LR		04 19 14.6	
	comp=Z,14nm,18.9s,baz=308,slow=42								
PDAR	**Pinedale Array**	**54.40**	**48**	LR		LR		04 18 42.4	
	comp=Z,43nm,18.2s,baz=28,slow=39								
NVAR	**Mina Array Bea**	**57.28**	**57**	LR		LR		04 20 33.2	
	comp=Z,50nm,18.1s,baz=348,slow=39								
CMAR	**Chiang Mai Arr**	**61.72**	**209**	LR		LR		04 25 19.7	
	comp=Z,9.4nm,18.2s,baz=75,slow=41								
TXAR	**Lajitas Array**	**68.43**	**46**	P		**P**		**03 54 06.7**	**-0.2**
	comp=Z,0.3nm,0.9s,baz=358,slow=4.5,SNR=2.9								
TXAR	**Lajitas Array**	**68.43**	**46**	P		**P**		**03 54 07.2**	**+0.4**

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*ROM **14** 03:43:41.8±0.1, 38°.393N±0°.006×14°.904E±0°.007, h17km±1km, ML3.7/1, Mw3.9, Error ellipse: s-maj=0.7km s-min=0.2km az=345.0, Moment Tensor Solution. Moment tensor: Scale 10^14 Nm; Mrr=0.52; Mθθ=8.89; Mφφ=8.37; Mrθ=2.00; Mrφ=-1.36; Mθφ=-1.37; Fault plane solution: Mo9.06008×10^14 NP1:φs310.00000°, δ90.00000°, λ-165.00000° NP2:φs220.00000°, δ75.00000°, λ0.00000°.*
*LDG **14** 03:43:41.8±0.3, 38°.28N×14°.96E, h10km, Ml3.3/5 Error ellipse: s-maj=8.6km s-min=3.5km az=1.0*
*MED_RC **14** 03:43:42.0±0.5, 38°.37N×14°.92E, h15km±4km, MW4.1/13, Moment Tensor Solution.Mantle waves: s13,c18; Duration: 1s0 Moment tensor: Scale 10^15 Nm; Mrr=0.16±.26; Mθθ=1.61±.20; Mφφ=1.77±.24; Mrθ=0.06±.26; Mrφ=0.03±.14; Mθφ=0.54±.28; Best double couple: Mo1.76000×10^15 NP1:φs315.00000°, δ78.00000°, λ171.00000° NP2:φs46.00000°, δ81.00000°, λ12.00000°. Principal axes: T 1.9100, Plg15.0000°, Azm271.0000°; N -0.3000, Plg75.0000°, Azm82.0000°; P -1.6100, Plg2.0000°, Azm180.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*IDC **14** 03:43:42.2±0.8, 38°.46N×15°.05E, h0km, mb3.5/6, mb1 3.6/13, mb1mx3.5/58, mbtmp3.5/13, ML3.4/7, MS3.2/6, Ms1 3.2/6, ms1mx2.8/38 Error ellipse: s-maj=20.6km s-min=9.4km az=114.0*
*NEIC **14** 03:43:44.1±1.3, 38°.37N±0°.03×14°.93E±0°.05, h35km±12km, Error ellipse: s-maj=6.5km s-min=2.3km az=124.0*

ISC 14 03:43:42.2±0.7, **38°.37N**±0°.02×**14°.91E**±0°.02, **h16**km±4km, **n182,** σ1§**39**/193, **mb3.5**/5, **10C-4D, Sicily**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VPL	**Vulcano Piano**	**0.06**	**77**	P		**Pg**		**03 43 44.7**	**-0.5**
VPL					S	**Sg**		**03 43 46.4**	**-0.8**
LLI	**Lipari**	**0.09**	**20**	P		**Pg**		**03 43 45.3**	**-0.1**
LLI					S	**Sg**		**03 43 47.5**	**0.0**
MILZ	**Milazzo**	**0.27**	**110**	P		**Pg**		**03 43 48.2**	**+0.2**
MILZ					S	**Sb**		**03 43 52.4**	**-0.6**
MILZ					AML	AML			
	comp=N,45950μm,0.4s								
MILZ					AML	AML			
	comp=E,63100μm,0.5s								
MILZ					AML	AML			
	comp=E,63100μm,0.5s								
MCPD	**Capo d'Orlando**	**0.28**	**210**	P		**Pg**		**03 43 48.1**	**-0.2**
MCPD					S	**Sg**		**03 43 52.1**	**-0.3**
MCPD					AML	AML			
	comp=N,36000μm,0.7s								
MCPD					AML	AML			
	comp=E,36300μm,0.9s								
MCPD					AML	AML			
	comp=E,36300μm,0.9s								

MSCL AML AML
comp=E,36250µm,0.7s
MSCL AML AML
comp=N,23800µm,0.4s
GALF Gagliano Caste 0.71 203 P Pb 03 43 56.5 +0.3
ESML S. M. di Licod 0.75 182 P Pn 03 43 57.7 -0.4
ESML AML AML
comp=E,8945µm,0.7s
ESML AML AML
comp=N,7645µm,0.6s
GMB Gambarie 0.75 105 P Pg 03 43 56.2 -0.6
GMB S Sb 03 44 07.6 +0.6
GMB AML AML
comp=E,45900µm,1.1s
GMB AML AML
comp=N,40650µm,0.9s
GMB AML AML
comp=N,40650µm,0.9s
GMB AML AML
comp=E,45900µm,1.1s
CEL Celeste 0.78 97 P Pg 03 43 56.9 -0.5
CEL S Sb 03 44 08.2 +0.4
CEL AML AML
comp=E,5950µm,1.6s
CEL AML AML
comp=E,5945µm,1.6s
CEL AML AML
comp=N,8525µm,0.6s
CEL AML AML
comp=E,7190µm,1.6s
CEL AML AML
comp=N,10485µm,0.6s
CEL Celeste 0.78 97 Pg 03 43 57.1 -0.3
CEL Sg 03 44 06.2 -1.5
ECNV Catenanuova 0.78 192 P Pn 03 43 58.9 +0.3
ECNV AML AML
comp=E,8730µm,0.9s
ECNV AML AML
comp=N,10240µm,0.8s
GIB Gibilmanna 0.79 242 P Pg 03 43 56.8 -0.8
GIB AML AML
comp=N,29100µm,0.6s
GIB AML AML
comp=E,18300µm,0.6s
GIB AML AML
comp=E,18300µm,0.6s
JOPP Joppolo 0.80 72 P Pb 03 43 57.1 -0.7
JOPP AML AML
comp=E,4500µm,0.3s
JOPP AML AML
comp=N,4365µm,0.6s
CAGR Agira 0.81 204 P Pn 03 43 59.5 +0.5
CAGR AML AML
comp=N,20350µm,1.1s
CAGR AML AML
comp=E,9705µm,1.0s
CAGR AML AML
comp=N,20350µm,1.1s
PETRA Petralia Sopra 0.82 230 P Pg 03 43 58.2 0.0
PETRA S Sb 03 44 09.9 +0.8
PETRA AML AML
comp=E,18300µm,1.3s
PETRA AML AML
comp=N,23000µm,0.7s
SOI Samo 0.95 108 P Pb 03 43 59.5 -0.7
SOI S Sg 03 44 13.3 +0.4
SOI AML AML
comp=E,4605µm,0.4s
SOI AML AML
comp=N,5225µm,1.0s
VAE Valguarnera 0.97 204 Pg Pn 03 44 03.4 +2.2
comp=N,49nm,0.3s,baz=216,slow=20,SNR=228
VAE Lg Lg 03 44 20.2
comp=N,76nm,0.3s,baz=169,slow=5.2,SNR=17
RESU Resuttano 0.98 224 AML AML
comp=E,5050µm,0.6s
RESU AML AML
comp=E,5045µm,0.6s
RESU AML AML
comp=N,6105µm,1.4s
RESU AML AML
comp=N,6100µm,1.4s
HAGA Augusta 1.10 170 P Pb 03 44 02.4 -0.4
HAGA AML AML
comp=N,5510µm,0.5s
HAGA AML AML
comp=E,8345µm,0.5s
ALJA Alia 1.10 236 P Pb 03 44 02.5 -0.4
ALJA AML AML
comp=E,6080µm,1.4s
ALJA AML AML
comp=N,6435µm,1.4s
SOLUN Solunto 1.12 256 AML AML
comp=N,1600µm,1.4s
SOLUN AML AML
comp=E,2580µm,0.6s
AGST Augusta-Monte 1.14 167 P Pb 03 44 03.3 -0.1
AGST AML AML
comp=E,9805µm,0.4s
AGST AML AML
comp=E,9795µm,0.4s
AGST AML AML
comp=N,10450µm,0.2s
HVZN Vizzini 1.20 188 P Pn 03 44 04.3 0.0
HVZN AML AML
comp=E,24050µm,0.4s
HVZN AML AML
comp=N,23300µm,0.5s
PLAC Placanica 1.20 86 P Pn 03 44 03.5 -0.9
PLAC AML AML
comp=N,3450µm,0.5s
PLAC AML AML
comp=E,3520µm,0.6s
PLAC AML AML
comp=N,3000µm,0.6s
PLAC AML AML
comp=E,2935µm,0.6s
MPG Monte Pellegri 1.24 261 P Pn 03 44 02.8 -2.1
MPG AML AML
comp=N,1345µm,0.6s
MPG AML AML
comp=E,1505µm,1.2s
MEU Monte Lauro 1.26 179 P Pn 03 44 04.7 -0.5
MEU AML AML
comp=E,7660µm,1.4s
MEU AML AML
comp=N,9075µm,0.3s
GRI Girifalco 1.27 68 P Pn 03 44 04.1 -1.2
GRI AML AML
comp=E,2830µm,0.5s
GRI AML AML
comp=N,2185µm,0.4s
HBSP Bosco Santo Pi 1.28 195 P Pb 03 44 05.8 -0.1
HBSP AML AML
comp=N,6340µm,0.9s
HBSP AML AML
comp=E,8390µm,1.0s
CAR1 CAROLEI 1.35 48 P Pn 03 44 05.3 -1.1
CAR1 AML AML
comp=E,3565µm,0.4s
CAR1 AML AML
comp=E,3060µm,0.5s
CAR1 AML AML
comp=N,3605µm,0.5s
CAR1 AML AML
comp=N,5405µm,0.5s
CORL Corleone 1.35 250 P Pn 03 44 05.5 -1.0
CORL AML AML
comp=E,3685µm,1.0s
CORL AML AML
comp=N,3630µm,0.5s
CORL Corleone 1.35 250 Pn 03 44 05.8 -0.7
CORL Sn Sb 03 44 24.3 +0.1
USI Ustica 1.40 285 P Pn 03 44 04.8 -2.3
USI AML AML
comp=E,5470µm,0.5s
USI AML AML
comp=N,5865µm,0.5s
HMDC Modica 1.41 184 P Pn 03 44 07.0 -0.2
HMDC AML AML
comp=E,3865µm,1.1s
HMDC AML AML
comp=N,4170µm,0.6s
HAVL Avola 1.41 173 P Pn 03 44 06.8 -0.4
HAVL AML AML
comp=E,8085µm,0.3s
HAVL AML AML
comp=N,6865µm,0.3s
CET2 Cetraro 1.42 35 P Pn 03 44 06.2 -1.1
CET2 AML AML
comp=N,2220µm,1.0s
CET2 AML AML
comp=E,1685µm,0.5s
CLTA Licata 1.42 212 AML AML
comp=N,12200µm,0.9s
CLTA AML AML
comp=E,6080µm,0.7s
FAVR Favara 1.47 222 AML AML
comp=N,3555µm,0.9s
FAVR AML AML
comp=E,3065µm,1.1s
SERS Sersale 1.54 64 P Pn 03 44 08.6 -0.6
SERS AML AML
comp=E,750µm,1.2s
SERS AML AML
comp=N,768µm,0.4s
SERS AML AML
comp=N,804µm,0.8s
SERS AML AML
comp=E,821µm,0.4s
CLTB Caltabellotta 1.55 240 AML AML
comp=N,6770µm,0.7s
CLTB AML AML
comp=E,4755µm,0.6s
CLTB Caltabellotta 1.55 240 Pb 03 44 10.5 -0.1
CLTB Sn Sn 03 44 29.1 0.0
CELI Celico 1.62 50 P Pn 03 44 09.2 -1.1
CELI AML AML
comp=E,808µm,0.6s
CELI AML AML
comp=N,709µm,1.4s
CELI AML AML
comp=E,2000µm,0.6s
CELI AML AML
comp=N,1755µm,1.4s
T0702 Acquaformosa (1.63 34 P Pn 03 44 09.7 -0.7
TIP Timpagrande 1.66 60 ⇑P Pn 03 44 10.3 -0.4
TIP Timpagrande 1.66 60 ⇑S Sn 03 44 28.5 -3.1
TIP Timpagrande 1.66 60 P Pn 03 44 10.1 -0.5
TIP AML AML
comp=N,708µm,1.4s
TIP AML AML
comp=E,709µm,0.6s
TIP AML AML
comp=N,866µm,1.6s
TIP AML AML
comp=E,604µm,1.4s
TIP Timpagrande 1.66 60 Pn 03 44 10.6 0.0
TIP Sn Sn 03 44 31.3 -0.4
MFNL Monte Finestre 1.67 251 P Pn 03 44 10.8 0.0
HPAC Pachino 1.67 174 P Pn 03 44 11.1 +0.3
HPAC AML AML
comp=E,6585µm,0.4s
HPAC AML AML
comp=N,4675µm,1.1s
MMGO Monte Magaggia 1.68 246 P Pn 03 44 11.1 +0.1
MMN Mormanno 1.74 29 P Pn 03 44 11.6 -0.1
MMN AML AML
comp=E,238µm,1.0s
MMN AML AML
comp=N,323µm,1.4s
CUC Castrocucco 1.77 23 P Pn 03 44 11.8 -0.4
CUC AML AML
comp=E,454µm,1.0s
CUC AML AML
comp=E,548µm,1.0s
CUC AML AML
comp=N,498µm,0.6s
CUC AML AML
comp=N,419µm,0.6s
T0721 Laino Castello 1.77 28 P Pn 03 44 11.7 -0.5
T0721 AML AML
comp=E,1200µm,0.8s
T0721 AML AML
comp=N,800µm,0.6s
MGR Morigerati 1.84 16 P Pn 03 44 12.3 -0.8
MGR AML AML
comp=E,717µm,0.7s
MGR AML AML
comp=N,636µm,0.8s
SALB San Lorenzo Be 1.88 36 P Pn 03 44 14.3 +0.5
SALB AML AML
comp=N,346µm,0.7s
SALB AML AML
comp=N,359µm,0.7s
SALB AML AML
comp=E,444µm,0.8s
SALB AML AML
comp=E,423µm,0.7s
SIRI Monte Sirino - 1.96 22 P Pn 03 44 14.6 -0.3
SIRI AML AML
comp=E,620µm,0.7s
SIRI AML AML
comp=N,664µm,0.6s
SIRI AML AML
comp=E,623µm,0.7s
SIRI AML AML
comp=N,672µm,0.6s
CMPR Campora 1.97 9 P Pn 03 44 14.1 -0.9
CMPR AML AML
comp=N,330µm,0.4s
CMPR AML AML
comp=E,441µm,0.7s
MTSN Montesano sull 2.01 19 P Pn 03 44 15.4 -0.1
MTSN AML AML
comp=E,496µm,1.0s
MTSN AML AML
comp=N,640µm,0.9s
SCHR S. Chirico Rap 2.04 26 AML AML
comp=E,258µm,1.6s
SCHR AML AML
comp=N,262µm,0.8s
ORI Oriolo Calabro 2.07 35 AML AML
comp=N,974µm,0.4s
ORI AML AML
comp=E,1019µm,0.4s
MCEL Monticello 2.08 19 P Pn 03 44 16.3 -0.1
MCEL AML AML
comp=N,484µm,0.9s
MCEL AML AML
comp=E,450µm,0.7s
MCEL AML AML
comp=E,444µm,0.7s
MCEL AML AML
comp=N,496µm,0.9s
SLCN Sala Consilina 2.10 15 AML AML
comp=N,726µm,0.6s
SLCN AML AML
comp=E,1040µm,0.6s
CDRU Civita di Ruta 2.14 8 AML AML
comp=E,243µm,0.6s
CDRU AML AML
comp=N,228µm,0.6s
MRLC Muro Lucano 2.43 10 AML AML
comp=N,203µm,0.6s
MRLC AML AML
comp=E,154µm,0.7s
MIGL Miglionico 2.53 27 AML AML
comp=N,851µm,1.4s
MIGL AML AML
comp=E,808µm,1.3s
WDD Wied Dalam 2.54 187 Pn Pn 03 44 21.7 -1.0
WDD Sn Sn 03 44 53.1 -0.3
ACER Acerenza 2.55 18 AML AML
comp=N,414µm,0.6s
ACER AML AML
comp=E,530µm,0.8s
ACER AML AML
comp=N,434µm,0.9s
ACER AML AML
comp=E,532µm,0.8s
ACER Acerenza 2.55 18 Pn 03 44 22.7 -0.2
MATE Matera 2.67 31 ⇓P Pn 03 44 25.8 +1.3
PAOL Paolisi 2.68 354 Pn 03 44 24.6 -0.1
PAOL Sn Sn 03 44 56.6 -0.2
SG1 Sgolgore (BA) 2.82 28 eP Pn 03 44 27.1 +0.4
TAR1 Taranto 2.83 40 eP Pn 03 44 27.7 +0.9
MASS Massafra 2.85 37 eP Pn 03 44 26.9 -0.1
AMUR Altamura 2.85 27 AML AML
comp=E,146µm,1.2s
AMUR AML AML
comp=N,136µm,1.2s
MRVN Minervino Murg 2.87 20 AML AML
comp=N,81µm,0.5s
MRVN AML AML
comp=E,98µm,0.6s
CGL1 Ceglie Messapi 3.03 40 eP Pn 03 44 29.3 -0.1
BAI Bari 3.13 28 eP Pn 03 44 31.6 +0.8
SCTE Santa Cesarea 3.25 57 Pn Pn 03 44 32.1 -0.3
SCTE Sn Sn 03 45 10.0 -0.7
TRIV Trivento 3.41 355 AML AML
comp=E,139µm,1.6s
TRIV AML AML
comp=N,127µm,1.5s
MSAG Monte S. Angel 3.43 13 AML AML
comp=E,106µm,0.9s
MSAG AML AML
comp=N,166µm,1.4s
SGRT San Giovanni R 3.44 10 Pn 03 44 35.1 -0.1
SGRT Sn Sn 03 45 15.7 -0.1
INTR Introdacqua 3.72 348 Pn 03 44 38.5 -0.5
KEK Kerkira 4.04 69 P Sn 03 45 28.0 -2.3
AQU L'Aquila 4.15 344 ePn Pn 03 44 46.6 +1.7
AQU L'Aquila 4.15 344 Pn 03 44 44.6 -0.3
NRCA Norcia 4.67 344 Pn 03 44 52.2 +0.1
TIR Tirane 4.84 50 ⇑P Pn 03 44 54.4 +0.1
TIR Tirane 4.84 50 Pn 03 44 54.2 -0.1
TIR Sn Sn 03 45 48.5 -1.5
HCY Herceg Novi 4.91 33 ePn Pn 03 44 54.9 -0.4
STON Ston 4.98 24 ePn Pn 03 44 55.8 -0.4
DRME Dracevica, Mon 5.02 39 ePn Pn 03 44 56.3 -0.6
TREB Trebinje 5.08 30 ePn Pn 03 44 57.1 -0.5
KEST Kesra 5.17 241 Pn Pn 03 45 01.1 +2.1
comp=N,0.3nm,0.3s,baz=224,slow=15,SNR=8.0
KEST Sn Sn 03 45 58.6 +0.3
comp=N,0.6nm,0.3s,baz=167,slow=22,SNR=3.5
KEST LR LR 03 47 53.8
comp=N,234nm,18.8s,baz=336,slow=47
KEST Kesra 5.17 241 Pn 03 44 59.1 +0.2
MURB Monte Urbino 5.22 340 Pn 03 44 59.9 +0.3
PDG Podgorica 5.24 38 ⇓S Sn 03 45 59.3 -0.6
BRY Bratogost 5.30 30 ePn Pn 03 45 00.4 -0.5
FNA Florina 5.55 62 Pn 03 45 04.2 0.0
FNA Sn Sn 03 46 07.9 +0.3
SERG Sergoula 5.61 87 P Pn 03 45 06.8 +1.8
TRIZ Trizonia 5.63 88 P Pn 03 45 06.6 +1.4
ITM Ithomi 5.68 100 Pn Pn 03 45 05.7 -0.2
ITM Sn Sn 03 46 10.1 -0.8
MAKR Makrakomi, Fth 5.69 81 P Pn 03 45 08.1 +2.1
AGG Agios Georgios 5.84 81 P Pn 03 45 09.8 +1.7
AGG Agios Georgios 5.84 81 Pn 03 45 08.2 +0.1
LIT Litokhoron 6.13 71 Pn 03 45 13.2 +1.0
LIT Sn 03 46 21.6 -0.4
PGF Pioggiola 6.15 315 ePn Pn 03 45 12.5 +0.1
PGF eSn Sn 03 46 19.2 -3.2
comp=N,14nm,0.5s
RUDO Rudo 6.24 31 ePn Pn 03 45 13.8 +0.2
MGRS Mrkonjic Grad 6.26 14 ePn Pn 03 45 15.8 +1.9
BBLS Lazići 6.46 30 ePn Pn 03 45 17.2 +0.6
HAPS Han Pijesak,Bl 6.47 27 ePn Pn 03 45 17.1 +0.2
BLY Banja Luka 6.60 14 ⇑P Pn 03 45 20.1 +1.6
BLY Banja Luka 6.60 14 ePn Pn 03 45 20.0 +1.5
BLY Banja Luka 6.60 14 Pn 03 45 16.3 -2.2
KTHR Kythira 6.78 106 P Pn 03 45 23.7 +2.6
DIVS Divibare 6.89 32 ePn Pn 03 45 22.7 +0.1
AOS Alonnisos 7.05 81 P Pn 03 45 25.2 +0.4
PRMA PARMA 7.26 333 Pn Pn 03 45 27.6 0.0
CRES Cresnjev 7.47 3 ePn Pn 03 45 29.3 -1.1
VTS Vitosha 7.63 54 ⇓P Pn 03 45 33.6 +0.8
VTS Vitosha 7.63 54 ⇑S Sn 03 46 55.5 -3.6
VTS Vitosha 7.63 54 Pn 03 45 31.7 -1.2
SBF Sospel 7.87 317 ePn Pn 03 45 35.4 -0.7
SBF eSn Sn 03 46 59.8 -5.0
comp=N,4.9nm,0.5s
CTI Castel Tesino 8.05 344 Pn Pn 03 45 38.6 +0.1
LMR La Mourre 8.07 311 ePn Pn 03 45 37.3 -1.4
LMR eSn Sn 03 47 05.4 -4.2
comp=N,1.2nm,0.4s
FRF La Foret Royal 8.12 312 ePn Pn 03 45 38.2 -1.2
OBKA Obir 8.14 358 ePn Pn 03 45 39.7 0.0
comp=N,3.5nm,0.6s
SOKA Soboth 8.31 1 ePn Pn 03 45 43.3 +1.3
comp=N,0.3nm,0.2s
ABTA Abfaltersbach 8.56 349 ePn Pn 03 45 47.4 +1.9
comp=N,3.6nm,0.8s
IDI Anoyia 8.57 108 Pn Pn 03 45 47.4 +1.7
comp=N,0.4nm,0.3s,baz=296,slow=14,SNR=7.3
IDI Sn Sn 03 47 19.5 -2.5
comp=N,2.9nm,0.3s,baz=313,slow=20,SNR=15
SANT Santorini 8.63 100 Pn Pn 03 45 46.6 +0.2
KBA Koelnbreinsper 8.78 353 ePn Pn 03 45 51.4 +2.8
comp=N,0.6nm,0.4s
BZS Buzias 8.80 32 ⇑P Pn 03 45 49.8 +1.2
MBDF Montbardon 8.81 319 ePn Pn 03 45 48.0 -1.0
PLVB Pleven 8.90 53 ⇑P Pn 03 45 50.5 +0.4
ALN Alexandroupoli 8.96 70 Pn Pn 03 45 50.6 -0.3
SMRF Simiane la Rot 9.00 311 ePKP1 Pn 03 45 56.8 +5.4
GZR Gura Zlata 9.15 37 ⇓P Pn 03 45 55.0 +1.5
DAVOX Davos/Dischmat 9.19 338 Pn Pn 03 45 57.6 +3.4
comp=N,0.0nm,0.3s,baz=151,slow=19,SNR=2.5
LPG La Plagne 9.36 322 ePKP1 Pn 03 46 01.2 +4.5
LPL La Plagne 9.39 322 ePKP1 Pn 03 46 01.1 +4.2
LPL La Plagne 9.39 322 ePg Pn 03 46 36.4 +39
LPL eSn Sn 03 47 36.9 -5.3
comp=N,0.9nm,0.3s
MOA Molln 9.49 357 *i* Pn Pn 03 46 00.8 +2.6
comp=N,4.0nm,0.6s
CONA Conrad Observa 9.58 4 *i* Pn Pn 03 46 00.8 +1.3
comp=N,2.0nm,0.6s
SENIN Lac Senin/Sane 9.77 327 Pn Pn 03 46 01.8 -0.4
LASF Ste Croix 10.09 308 ePn Pn 03 46 05.2 -1.2
KARP Karpathos 10.20 102 Pn Pn 03 46 06.5 -1.5
VOIR 10.34 44 ⇑P Pn 03 46 11.1 +1.2
GEC2 GERESS Array S 10.51 356 Pn Pn 03 46 12.2 0.0
GERES GERESS Array B 10.51 356 Pn Pn 03 46 12.8 +0.5
comp=N,0.2nm,0.3s,baz=172,slow=12,SNR=14
GERES LR LR 03 51 14.9
comp=N,74nm,20.0s,baz=148,slow=43
VYHS Vyhne 10.52 14 ePN Pn 03 46 15.8 +3.6
KHC Kasperske Hory 10.80 355 eP Pn 03 46 16.5 +0.3
KHC Kasperske Hory 10.80 355 Pn Pn 03 46 16.2 0.0
MTLF Montolieu 10.82 301 ePn Pn 03 46 14.1 -2.3
DOPR Dopca 10.86 42 ⇑P Pn 03 46 18.1 +1.1
MLR Muntele Rosu 10.87 46 Pn Pn 03 46 21.4 +4.3
comp=N,0.2nm,0.3s,baz=180,slow=20,SNR=4.4
VRAC Vranov 11.01 6 LR LR 03 51 19.7
comp=N,132nm,18.3s,baz=178,slow=42
PLOR Plostina 11.48 46 ⇑P Pn 03 46 26.1 +0.7
MORC Moravsky Berou 11.56 9 Pn Pn 03 46 24.7 -1.9
ESDC Sonseca Array 14.73 281 LR LR 03 51 54.4
comp=N,120nm,18.8s,baz=350,slow=33
AKASG Malin Array Be 15.97 35 Pn Pn 03 47 26.7 +0.6
comp=N,0.4nm,0.3s,baz=229,slow=10,SNR=2.8
MDT Midelt 16.81 257 LR LR 03 53 34.7
comp=N,88nm,20.9s,baz=0.0,slow=35
MMAI Mount Meron Ar 17.47 102 Pn P 03 47 45.9 -0.4
comp=N,0.3nm,0.3s,baz=295,slow=14,SNR=2.3
EIL Elat 18.71 112 Pn Pn 03 48 03.4 +2.9
comp=N,0.2nm,0.3s,baz=313,slow=19,SNR=2.6
EKA Eskdalemuir Ar 20.89 330 P Pn 03 48 26.1 +0.1
comp=N,1.8nm,0.9s,baz=124,slow=11,SNR=2.8
HFS Hagfors 21.80 358 P P 03 48 33.9 +0.6
comp=N,1.2nm,0.7s,baz=186,slow=13,SNR=2.8
NOA NORSAR Array B 22.82 355 LR LR 03 59 05.2
comp=N,45nm,20.8s,baz=350,slow=41
FINES FINESS Array B 24.13 13 P P 03 48 56.9 -0.2
comp=N,3.9nm,1.1s,baz=195,slow=10,SNR=3.2
ZALV Zalesovo Beam 48.84 48 P P 03 52 26.8 +0.2
comp=N,0.5nm,0.3s,baz=261,slow=7.2,SNR=2.8
MKAR Makanchi Array 48.94 57 P P 03 52 28.3 +0.8
comp=N,0.2nm,0.5s,baz=314,slow=5.1,SNR=3.0
YKA Yellowknife Ar 71.63 338 P P 03 55 06.6 +4.1
comp=N,0.3nm,0.8s,baz=41,slow=5.6,SNR=4.2

MEX **14** *03:48:42.1±0.7, 16°.40N×98°.50W, h4km±5km, MD4.0*
NEIC **14** *03:48:42.1±1.2, 16°.51N±0°.07×98°.41W±0°.07, h21km±12km,*
Error ellipse: s-maj=13.8km s-min=3.8km az=220.0
ISC 14 03:48:40.7±3.5**, 16°.47N**±0°.09×**98°.43W**±0°.08, **h9**km±26km,
n12, σ0**.85**/23**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.30**	**105**	*i* P		**Pb**	**03 48 48.7**	**+0.4**
PNIG				*e*S		**Sb**	**03 48 53.7**	**+0.2**
PNIG	**Pinotepa**	**0.30**	**105**			**Pb**	**03 48 48.7**	**+0.4**
PNIG						**Sb**	**03 48 53.7**	**+0.2**

TLIG	**Tlapa**	**1.09**	**353**	*eP*	**Pn**	**03 49 01.4**	**-1.0**
TLIG				*eS*	**Sb**	**03 49 15.4**	**-0.8**
TLIG	**Tlapa**	**1.09**	**353**		**Pn**	**03 49 01.5**	**-0.8**
TLIG				Sg	**Sb**	**03 49 15.9**	**-0.4**
TLIG	**Tlapa**	**1.09**	**353**		**Pn**	**03 49 01.4**	**-1.0**
TLIG					**Sb**	**03 49 15.4**	**-0.8**
VHO	**Vista Hermosa**	**1.73**	**70**	*eP*	**Pn**	**03 49 11.6**	**+0.4**
VHO				*eS*	**Sn**	**03 49 33.9**	**+0.3**
HUIG	**Huatulco**	**2.34**	**107**	*eP*	**Pn**	**03 49 18.8**	**-0.5**
HUIG				*eS*	**Sn**	**03 49 47.0**	**-1.3**
HUIG	**Huatulco**	**2.34**	**107**		**Pn**	**03 49 18.8**	**-0.5**
HUIG					**Sn**	**03 49 47.0**	**-1.3**
CMIG	**Matias Romero**	**3.45**	**79**	*eP*	**Pn**	**03 49 34.4**	**-0.3**
CMIG				*eS*	**Sn**	**03 50 17.1**	**+1.3**
CMIG	**Matias Romero**	**3.45**	**79**		**Pn**	**03 49 34.4**	**-0.3**
CMIG					**Sn**	**03 50 17.1**	**+1.3**
MOIG	**Morelia**	**4.13**	**321**	Pn	**Pn**	**03 49 44.7**	**+0.5**
MOIG				Sn	**Sn**	**03 50 33.8**	**+1.0**
TEIG	**Tepich**	**10.34**	**67**	Pn	**Pn**	**03 51 09.3**	**0.0**

DDA 14 04:06:53.5,37.39N×26.95E,h7km±2km,ML1.1,
Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.38**	**36**	*i* P	Pg	04 07 01.5	+0.5
GCAM				*i* S	Sg	04 07 07.4	+1.4
DGB	**zmir**	**0.66**	**356**	*i* P	Pg	04 07 06.3	+0.1
DGB				IAML		04 07 16.0	
	comp=N,7.9nm,0.6s						
DGB				IAML		04 07 18.0	
	comp=E,9.2nm,0.5s						
AYDN	**Tasoluk**	**0.79**	**70**	*i* P	Pg	04 07 08.6	0.0
AYDN				*i* S	Sg	04 07 19.6	+0.6
AYDN				IAML		04 07 20.0	
	comp=E,8.5nm,0.6s						
AYDN				IAML		04 07 25.0	
	comp=N,8.7nm,0.3s						
DAT	**Datca**	**0.83**	**142**	*i* P	Pb	04 07 10.6	+0.3
DAT				*i* S	Sb	04 07 21.8	0.0
DAT				IAML		04 07 22.0	
	comp=N,5.7nm,0.7s						
ZEY	**zmir**	**0.92**	**338**	*i* P	Pb	04 07 11.5	-0.3
ZEY				*i* S	Sb	04 07 23.8	-0.3
ZEY				IAML		04 07 26.0	
	comp=E,11nm,0.7s						
ZEY				IAML		04 07 29.0	
	comp=N,13nm,0.4s						

ATH 14 04:07:57.1,38.05N×21.31E,h24km±2km,ML1.6/2,Error
ellipse: s-maj=3.8km s-min=2.1km az=78.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.13**	**87**	P	Pb	04 08 01.5	-0.4
RLS				S	Sb	04 08 05.2	+0.2
RLS				AML	AML	04 08 05.4	
	comp=N,353µm,0.1s						
RLS				AML	AML	04 08 05.5	
	comp=E,575µm,0.1s						
DRO	**Drossia**	**0.33**	**107**	P	Pb	04 08 04.3	-0.3
DRO				S	Sb	04 08 10.5	+0.8
DRO				AML	AML	04 08 11.4	
	comp=E,360µm,0.3s						
DRO				AML	AML	04 08 11.6	
	comp=N,236µm,0.3s						
PVO	**Paravola**	**0.59**	**17**	P	Pb	04 08 09.1	+0.2
PVO				S	Sn	04 08 18.1	-0.8
AMT	**Artemida-Makis**	**0.61**	**148**	P	Pn	04 08 10.1	-0.3
AMT				S	Sb	04 08 18.0	+0.7
KLV	**Kalavryta, Ach**	**0.67**	**90**	P	Pb	04 08 09.7	-0.5
KLV				S	Sb	04 08 19.7	+0.7
TRIZ	**Trizonia**	**0.68**	**62**	P	Pn	04 08 10.9	-0.4

NCEDC ***14*** *04:18:17.6±1.5,38.099N×122.24W±0.01,*
h8km±3km,Md2.8/165,Error ellipse: s-maj=1.4km
s-min=1.0km az=204.0

NEIC 14 04:18:17.6±0.8,38.10N±0.01×122.25W±0.02,h18km±1km,
Error ellipse: s-maj=2.6km s-min=1.2km az=55.0,
Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLHM	**Lake Herman**	**0.08**	**74**		Pg	04 18 21.8	+0.7
CPIM	**Pinole Ridge**	**0.11**	**167**		Pb	04 18 20.8	+0.4
CSPM	**San Pablo Ridg**	**0.15**	**200**		Pg	04 18 21.7	0.0
NGVM		**0.18**	**8**		Pb	04 18 22.0	-0.1
SNT	**Sears Point**	**0.18**	**298**		Pg	04 18 22.3	+0.1
RFSB	**Richmond Field**	**0.20**	**201**		Pb	04 18 22.1	-0.2
CPMM	**Point Molate**	**0.20**	**221**		Pb	04 18 22.3	-0.1
CVPM	**Vollmer Peak**	**0.21**	**175**		Pg	04 18 22.7	0.0
BL88	**Building 88, L**	**0.22**	**182**		Pg	04 18 22.8	-0.1
VAK	**Adit at Lawren**	**0.22**	**181**		Pg	04 18 22.8	0.0
VAK					Sb	04 18 26.6	+0.2
BKS	**Berkeley--Byer**	**0.22**	**178**		Pg	04 18 22.8	0.0
BL67	**Building 67, L**	**0.22**	**182**		Pg	04 18 22.8	-0.1
BRK	**Berkeley--Havi**	**0.22**	**183**		Pg	04 18 22.8	-0.1
CVS	**Carmenet Viney**	**0.30**	**326**		Pg	04 18 23.8	-0.3
CYBM	**Yerba Buena Is**	**0.30**	**198**		Pg	04 18 24.1	+0.1
CRHM	**Round Hill Res**	**0.31**	**140**		Pb	04 18 24.8	+0.2
BGC	**Bolinger Road**	**0.32**	**153**		Pg	04 18 24.5	+0.1
CMCM	**Mills College**	**0.32**	**170**		Pg	04 18 24.5	+0.1
CRPB	**Russellman Par**	**0.33**	**125**		Pg	04 18 24.1	-0.4
BDM	**Black Diamond**	**0.33**	**115**		Pb	04 18 24.9	-0.1
NAPC	**Atlas Peak**	**0.34**	**359**		Pg	04 18 24.9	+0.1
JPRM	**Presidio of Sa**	**0.35**	**211**		Pb	04 18 25.2	-0.1
CLCB	**Lake Chabot**	**0.39**	**158**		Pb	04 18 25.8	-0.1
J061	**Lakeshore Driv**	**0.42**	**209**		Pb	04 18 26.4	0.0
NOLM	**Olema**	**0.43**	**263**		Pb	04 18 26.6	-0.1
NTYM	**Taylor**	**0.44**	**312**		Pg	04 18 26.6	+0.1
CMOB	**Morgan Territo**	**0.45**	**129**		Pg	04 18 26.7	-0.1
MCCM	**Marconi Confer**	**0.50**	**276**		Pg	04 18 27.7	+0.1
MCCM					Sb	04 18 35.1	+0.3
NSHM	**Saint Helena R**	**0.51**	**326**		Pg	04 18 27.5	-0.3
JCPM	**Coyote Point**	**0.51**	**187**		Pb	04 18 28.1	+0.1
SAC	**San Andreas**	**0.53**	**195**		Pb	04 18 28.5	+0.2
CNIC	**Niles Canyon**	**0.54**	**155**		Pb	04 18 28.4	0.0
CYD1	**Coyote D'meter**	**0.55**	**167**		Pg	04 18 28.5	0.0
CBSNC	**Byron Hot Spri**	**0.55**	**120**		Pb	04 18 28.9	+0.2
CVLM	**Vallecito**	**0.57**	**145**		Pn	04 18 30.0	-0.8
MAC	**Mark West Spri**	**0.59**	**320**		Pb	04 18 29.5	+0.2
WENL	**Wente Vineyard**	**0.61**	**141**		Pn	04 18 30.6	-0.7
OXMT	**Ox Mountain**	**0.61**	**193**		Pg	04 18 29.8	+0.1
NPRM	**Point Reyes**	**0.62**	**261**		Pg	04 18 29.8	0.0
NHSM	**Mount Saint He**	**0.63**	**333**		Pb	04 18 30.1	0.0
JHPM	**Huddart Park**	**0.65**	**184**		Pg	04 18 30.9	+0.4
JRSC	**Jasper Ridge**	**0.69**	**179**		Pg	04 18 31.3	+0.1
JSFB	**Stanford Teles**	**0.69**	**175**		Pg	04 18 31.4	+0.2
NDHM	**Dunnigan Hills**	**0.72**	**21**		Pn	04 18 32.7	-0.1
FARB	**Farallon Islan**	**0.72**	**236**		Pg	04 18 31.7	+0.1
NMCNC	**Mill Creek, So**	**0.72**	**313**		Pb	04 18 31.3	-0.2
NMTM	**Middletown**	**0.72**	**348**		Pb	04 18 31.7	0.0
GAXM	**Alexander Vall**	**0.73**	**327**		Pb	04 18 31.5	-0.3
CALM	**Calaveras Res.**	**0.74**	**151**		Pg	04 18 32.0	0.0
JFP	**Foothills Park**	**0.74**	**177**		Pg	04 18 32.0	0.0
JJRM	**Joaquin Road**	**0.75**	**177**		Pg	04 18 32.5	+0.2
BGH	**Bear Gulch**	**0.76**	**186**		Pg	04 18 32.9	+0.5
GCRM	**Castle Rock Sp**	**0.77**	**332**		Pg	04 18 32.6	0.0
CMLM	**Mount Lewis**	**0.78**	**143**		Pg	04 18 32.9	+0.1
JBMM	**Black Mountain**	**0.78**	**175**		Pg	04 18 32.9	0.0
GBGM	**Boggs Mountain**	**0.79**	**335**		Pg	04 18 33.3	+0.2
MNRC	**McLaughlin Min**	**0.80**	**349**		Pn	04 18 33.9	-0.1
JPC	**Peters Creek,**	**0.83**	**178**		Pb	04 18 33.3	0.0
JSGM	**Saratoga Golf**	**0.83**	**169**		Pg	04 18 33.8	+0.1
GDXM	**Geysers**	**0.83**	**329**		Pg	04 18 33.9	+0.1
GDXM	**Geysers**	**0.83**	**329**	Sg	Sb	04 18 44.0	-0.4
FTR	**Fort Ross**	**0.83**	**301**		Pn	04 18 33.5	-0.1
GSGM	**Seigler Mounta**	**0.85**	**335**		Pn	04 18 34.6	-0.1
GSSM	**Skaggs Springs**	**0.85**	**315**		Pb	04 18 33.6	-0.2
CMMM	**Mount Mocho**	**0.88**	**137**		Pg	04 18 34.6	-0.1
MHC	**Mount Hamilton**	**0.89**	**147**		Pb	04 18 34.7	+0.1
JPSM		**0.90**	**185**		Pb	04 18 34.4	-0.3
GCVM	**Cloverdale**	**0.90**	**318**		Pb	04 18 34.7	0.0
GHCM	**House Creek**	**0.90**	**304**		Pb	04 18 34.4	-0.3
GACM	**Adobe Creek**	**0.91**	**328**		Pg	04 18 35.1	-0.2
JJOM	**Saint Joseph's**	**0.92**	**166**		Pb	04 18 34.7	-0.2
GPMM	**Pine Mountain**	**0.93**	**324**		Pb	04 18 35.4	+0.2
ARN	**Arnold Ranch**	**0.94**	**143**		Pb	04 18 35.4	+0.1
CCOB	**Coe Ranch Numb**	**0.95**	**151**		Pn	04 18 35.9	-0.1
AASM	**Arroyo Seco**	**0.95**	**69**		Pb	04 18 34.5	-1.0
JSTM	**Santa Teresa H**	**0.96**	**158**		Pb	04 18 35.7	+0.1
GMKM	**Mount Konoctai**	**0.97**	**334**		Pg	04 18 37.2	+0.8
GWKM	**Walker Ridge**	**0.97**	**349**		Pg	04 18 36.8	+0.3
JBNB	**Ben Lomond Mou**	**0.97**	**176**		Pb	04 18 35.4	-0.6
JUMM	**Mount Umunhum**	**0.97**	**163**		Pb	04 18 35.8	-0.2
AMC	**Almaden**	**0.99**	**161**		Pb	04 18 36.0	-0.1
JLAB	**Laurel Hill**	**1.03**	**157**		Pb	04 18 36.5	-0.3
GDCM	**Dry Creek**	**1.03**	**311**		Pb	04 18 36.1	-0.8
JHLM	**Holstrom Ranch**	**1.04**	**161**		Pb	04 18 36.5	-0.5
CADM	**Anderson Res.**	**1.05**	**152**		Pb	04 18 37.2	0.0
HOPS	**Hopland Field**	**1.10**	**324**		Pb	04 18 37.9	-0.2
JTGM	**Trout Gulch Ro**	**1.11**	**165**		Pn	04 18 37.8	-0.4
GHLM	**Highland Sprin**	**1.12**	**327**		Pn	04 18 38.0	-0.4
GSNM	**Snow Mountain**	**1.12**	**319**		Pg	04 18 39.4	+0.1
MNHB	**New Hogan Dam**	**1.13**	**87**		Pn	04 18 37.1	-1.4
HSPM	**Sheep**	**1.14**	**149**		Pn	04 18 38.4	-0.3
HLPM	**Lions Peak**	**1.16**	**155**		Pn	04 18 38.5	-0.4
SUTB	**Sutter Butte**	**1.19**	**18**		Pn	04 18 37.9	-1.4
JELB	**Ellicott, Sant**	**1.22**	**164**		Pn	04 18 39.2	-0.4
GFC	**Funks Creek**	**1.23**	**358**		Pn	04 18 40.0	+0.2
CDC	**Canada Road**	**1.23**	**150**		Pn	04 18 39.8	0.0
GGUM	**Gualala**	**1.24**	**308**		Pn	04 18 39.4	-0.7
GTSM	**Trough Springs**	**1.24**	**347**		Pb	04 18 41.0	+0.4
HCOM	**Corn Cob Canyo**	**1.28**	**160**		Pn	04 18 39.8	-0.8
MCUB	**Copperopolis B**	**1.29**	**95**		Pn	04 18 39.9	-0.8
HPCM	**Pacheco Lake**	**1.29**	**143**		Pn	04 18 40.7	0.0
HFEM	**San Felipe**	**1.30**	**149**		Pn	04 18 40.1	-0.7
SLD	**San Luis Dam**	**1.31**	**141**		Pn	04 18 40.9	0.0
AFDM	**Forest Hills D**	**1.31**	**49**		Pn	04 18 40.3	-0.7
OCR	**O'Connell Ranc**	**1.32**	**153**		Pn	04 18 40.6	-0.4
ANZ	**Anzar Road**	**1.32**	**157**		Pn	04 18 40.4	-0.6
SFJWR	**San Luis Fatjo**	**1.35**	**140**		Pn	04 18 41.6	0.0
HTUM	**Tustin Road**	**1.36**	**159**		Pn	04 18 40.8	-0.8
HBTM	**San Juan Bauti**	**1.36**	**156**		Pn	04 18 41.2	-0.5
HERM	**Elkhorn Road**	**1.36**	**162**		Pn	04 18 41.2	-0.5
OHCM	**Honcut**	**1.37**	**26**		Pn	04 18 40.4	-1.4
GHOM	**Hamilton Openi**	**1.39**	**313**		Pn	04 18 41.7	-0.4
MOBB	**Monterey Bay O**	**1.41**	**177**		Pn	04 18 41.9	-0.2
CMB	**Columbia Colle**	**1.47**	**92**		Pn	04 18 43.0	-0.3
FRP	**Fremont Peak**	**1.47**	**156**		Pn	04 18 42.2	-1.0
SAO	**San Andreas Ge**	**1.48**	**154**		Pn	04 18 42.5	-0.7
BVYM	**Vineyard**	**1.50**	**154**		Pn	04 18 43.0	-0.6
HMOM	**Monterey**	**1.52**	**170**		Pn	04 18 43.1	-0.7
BSRM	**Salinas Radio**	**1.54**	**158**		Pn	04 18 43.2	-1.0
BCGM	**Cienega Road**	**1.56**	**152**		Pn	04 18 44.3	-0.1
ORV	**Oroville**	**1.57**	**22**		Pn	04 18 43.7	-0.8
BHRM	**Hodges Ranch**	**1.57**	**150**		Pn	04 18 44.5	-0.1
GASB	**Alder Springs**	**1.60**	**347**		Pn	04 18 45.7	+0.7
BPCNC	**Pine Canyon**	**1.60**	**162**		Pn	04 18 44.3	-0.6
MYLM	**Yosemite Lake**	**1.61**	**116**		Pn	04 18 44.7	-0.4
BLRM	**Lewis Ranch**	**1.63**	**151**		Pn	04 18 45.1	-0.2
SCZ	**Santa Cruz**	**1.64**	**156**		Pn	04 18 44.6	-0.9
BJOM	**Mount Johnson**	**1.64**	**153**		Pn	04 18 44.2	-1.3
GTC	**Three Chop Rid**	**1.65**	**322**		Pn	04 18 45.7	0.0
BEHM	**Elkhorn Ranch**	**1.67**	**149**		Pn	04 18 46.0	+0.1
BJCM	**Johnson Can.**	**1.69**	**156**		Pn	04 18 45.4	-0.8
BRMM	**Rolling Bench**	**1.69**	**138**		Pn	04 18 46.5	+0.2
BEMM	**Emmet**	**1.70**	**147**		Pn	04 18 45.6	-0.7
BAVM	**Antelope Valle**	**1.74**	**146**		Pn	04 18 46.9	0.0
HAST	**Hastings Reser**	**1.79**	**162**		Pn	04 18 46.6	-1.1
BBGB	**Big Mountain B**	**1.80**	**147**		Pn	04 18 47.4	-0.4
BPIM	**Pinnacles**	**1.82**	**151**		Pn	04 18 47.4	-0.6
BSMM	**Soledad Missio**	**1.83**	**159**		Pn	04 18 47.3	-0.9
BBNM	**San Benito**	**1.84**	**149**		Pn	04 18 48.5	+0.3
BMSM	**Mercy Hot Spri**	**1.84**	**141**		Pn	04 18 48.8	+0.4
BSGM	**Shirttail Gulc**	**1.86**	**154**		Pn	04 18 47.8	-0.7
EMB	**Emerald Bay**	**1.90**	**62**		Pb	04 18 50.5	-1.3
RUBR	**Rubicon Trail**	**1.90**	**59**		Pb	04 18 51.1	-0.7
RUBR	**Rubicon Trail**	**1.90**	**59**	Sn	Sn	04 19 13.7	+0.9
BPOM	**Post Ranch**	**1.90**	**168**		Pn	04 18 48.2	-0.9
LRV	**Little Rabbit**	**1.94**	**149**		Pn	04 18 50.2	+0.6
BAPM	**Anderson Peak**	**1.98**	**166**		Pn	04 18 49.4	-0.9
GNO	**Genoa**	**2.05**	**65**		Pb	04 18 53.3	-1.1
MMIM	**Miami Mountain**	**2.10**	**108**		Pn	04 18 52.5	+0.6
WAKR	**Walker**	**2.25**	**79**		Pn	04 18 55.3	+1.3
BEKR	**Beckworth**	**2.30**	**39**		Pn	04 18 55.4	+0.7
PNTR	**Pine Nut**	**2.30**	**64**		Pn	04 18 54.9	+0.1
VCNR	**Virginia City**	**2.36**	**59**		Pn	04 18 56.0	+0.4
YERR	**Yerington**	**2.52**	**68**		Pn	04 18 58.0	+0.2
OMMB	**Old Mammoth Mi**	**2.61**	**100**		Pn	04 18 59.8	+0.6
PAHR	**Pah Rah Range**	**2.75**	**53**	Pn	Pn	04 19 01.5	+0.6
PAHR				Sn	Sn	04 19 34.3	+0.5
RYN	**Ryan**	**2.97**	**79**	Pn	Pn	04 19 04.9	+0.9
NV11	**Mina Array Sit**	**3.24**	**83**	Pn	Pn	04 19 08.7	+1.9
KVN	**Kaiserville**	**3.39**	**72**	Pn	Pn	04 19 10.6	+0.9
KVN				Sn	Sn	04 19 48.7	-0.8

BEO ***14*** *04:34:04.6±0.4,43.83N×18.83E,h0km,ML1.4/6*

RHSSO 14 04:34:04.4±0.3,43.79N×18.86E,h4km±3km,ML1.6/7,1C,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAPS	**Han Pijesak,Bl**	**0.31**	**12**	*e*Pg	Pg	04 34 09.4	-1.0
HAPS				*e*Sg	Sg	04 34 12.8	-1.6
HAPS	**Han Pijesak,Bl**	**0.31**	**12**	*e*Pg	Pg	04 34 09.5	-0.9
HAPS				*e*Sg	Sg	04 34 14.4	0.0
BBLS	**Lazić**	**0.40**	**78**	*e*Pg	Pg	04 34 12.9	+0.8
BBLS				*e*Sg	Sg	04 34 17.2	-0.1
BBLS	**Lazić**	**0.40**	**78**	*e*Pg	Pg	04 34 12.4	+0.3
BBLS				*e*Sg	Sg	04 34 18.2	+0.9
RUDO	**Rudo**	**0.40**	**114**	↑*i*Pg	Pg	04 34 11.6	-0.6
RUDO				*e*Sg	Sg	04 34 17.1	-0.3
DIVS	**Divibare**	**0.87**	**69**	*e*Sg	Sg	04 34 19.9	-1.2
DIVS	**Divibare**	**0.87**	**69**	*e*Pg	Sg	04 34 33.7	+1.3
DIVS	**Divibare**	**0.87**	**69**	*e*Pg	Pg	04 34 20.7	-0.4
DIVS				*e*Sg	Sg	04 34 32.3	-0.1
BRY	**Bratogost**	**0.92**	**195**	*e*Pg	Pg	04 34 21.2	-0.7
BRY				*e*Sg	Sg	04 34 33.5	-0.3
IVAS	**Ivanjica**	**0.96**	**102**	*e*Pg	Pg	04 34 22.0	-0.8
IVAS				*e*Sg	Sb	04 34 36.5	-0.2
SJES	**Sjenica**	**0.96**	**123**	*e*Pg	Pg	04 34 22.5	-0.3
SJES				*e*Sg	Sb	04 34 36.3	-0.6
TREB	**Trebinje**	**1.13**	**200**	*e*Pg	Pg	04 34 25.6	-0.5
TREB				*e*Sg	Sn	04 34 42.7	-0.4
TREB	**Trebinje**	**1.13**	**200**	*e*Pg	Pg	04 34 25.6	-0.5
TREB				*e*Sg	Sg	04 34 40.8	0.0
TRUS	**Trudelj**	**1.20**	**68**	*e*Sg	Pg	04 34 26.7	-0.6
TRUS	**Trudelj**	**1.20**	**68**	*e*Pg	Sg	04 34 43.2	+0.4
STON	**Ston**	**1.25**	**223**	*e*Pg	Pg	04 34 26.2	-2.1
STON				*e*Sg	Sg	04 34 44.4	-0.1
PDG	**Podgorica**	**1.39**	**168**	*e*Sg	Pn	04 34 29.5	-1.0
PDG	**Podgorica**	**1.39**	**168**	*e*Pg	Sg	04 34 49.8	+0.9
PDG	**Podgorica**	**1.39**	**168**	*e*Pg	Pn	04 34 29.6	-0.9
PDG				*e*Sg	Sg	04 34 48.3	-0.6
DRME	**Dracevica, Mon**	**1.62**	**172**	*e*Pn	Pn	04 34 33.2	-0.5
DRME				*e*Sn	Sn	04 34 54.6	-0.4

NEIC ***14*** *04:34:60.0±2.1,38.35N±0.02×14.90E±0.04,h13km±9km,*
Error ellipse: s-maj=5.1km s-min=3.5km az=80.0
ROM ***14*** *04:35:00.5±0.1,38.367N±0.006×14.907E±0.007,*
h11km,ML4.0,Mw3.8,Error ellipse: s-maj=0.6km
s-min=0.6km az=14.0,Moment Tensor Solution. Moment
tensor: Scale 10¹⁴Nm; Mrr0.10; Mθθ-5.36; Mϕϕ5.26;
Mrθ1.44; Mθϕ0.55; Mϕr-1.13; Fault plane solution:
M₀5.63811×10¹⁴ NP1:ϕs318.00000°,δ88.00000°,
λ-161.00000°. NP2:ϕs228.00000°,δ71.00000°,
λ-2.00000°.
MED_RC ***14*** *04:35:00.0±0.7,38.36N×14.94E,h10km,MW4.2/5,*
Moment Tensor Solution.Mantle waves: s5,c10; Duration:
1ı0 Moment tensor: Scale 10¹⁵Nm; Mrr1.01±.35;
Mθθ-2.45±.33; Mϕϕ1.43±.14; Mrθ1.10±.80; Mθϕ-0.18±.24;
Mϕr0.90±.42; Best double couple: M₀2.51000×10¹⁵
NP1:ϕs308.00000°,δ47.00000°,λ159.00000°. NP2:
ϕs52.00000°,δ75.00000°,λ45.00000°. Principal axes: T
2.2100, Plg42.0000°, Azm280.0000°; N 0.5900,
Plg43.0000°, Azm67.0000°; P -2.8100, Plg17.0000°,
Azm174.0000°; nsta1 refers to body waves. nsta2 refers
to surface waves, cutoff=30s.
IDC ***14*** *04:35:01.2±1.0,38.48N×14.91E,h0km,mb3.4/4,*
mb1 3.6/7,mb1mx3.4/49,mbtmp3.4/7,ML3.4/3,MS3.0/5,
Ms1 3.0/5,ms1mx2.6/40 Error ellipse: s-maj=35.1km
s-min=9.5km az=113.0

ISC 14 04:35:00.8±0.7,38.36N±0.02×14.92E±0.02,h13km±4km,
n118,σ1ı17/117,mb3.5/4,9C-2D,Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VPL	**Vulcano Piano**	**0.06**	**67**	P	**Pg**	**04 35 03.1**	**-0.2**
VPL				S	**Sg**	**04 35 04.7**	**-0.4**
VPL				AML	AML		
VPL				AML	AML		
LLI	**Lipari**	**0.09**	**16**	P	**Pg**	**04 35 03.7**	**+0.1**
LLI				S	**Sg**	**04 35 06.0**	**+0.3**
MILZ	**Milazzo**	**0.26**	**109**	P	**Pg**	**04 35 06.5**	**+0.3**
MILZ				S	**Sb**	**04 35 11.2**	**-0.6**
MILZ				AML	AML		
	comp=E,65800µm,0.5s						
MILZ				AML	AML		
	comp=N,38800µm,0.8s						
MILZ				AML	AML		
	comp=E,65800µm,0.5s						
MILZ				AML	AML		
	comp=N,38800µm,0.8s						
MCPD	**Capo d'Orlando**	**0.28**	**212**	P	**Pg**	**04 35 06.4**	**-0.1**
MCPD				S	**Sg**	**04 35 10.6**	**+0.3**
MCPD				AML	AML		
	comp=E,31250µm,0.9s						
MCPD				AML	AML		
	comp=N,21650µm,1.5s						
MCPD				AML	AML		
	comp=N,21650µm,1.5s						
MUCR	**Ucria**	**0.31**	**186**	P	**Pg**	**04 35 07.3**	**+0.1**
MUCR				S	**Sb**	**04 35 12.6**	**-0.8**
MUCR				AML	AML		
	comp=E,44650µm,0.3s						
MUCR				AML	AML		
	comp=N,76700µm,0.4s						
MUCR				AML	AML		
	comp=E,44650µm,0.3s						
MUCR				AML	AML		
	comp=N,76700µm,0.4s						
IFIL	**Filicudi I Eol**	**0.34**	**307**	P	**Pg**	**04 35 07.7**	**-0.1**
IFIL				S	**Sg**	**04 35 12.9**	**+0.5**
IFIL				AML	AML		
	comp=N,81550µm,0.9s						
IFIL				AML	AML		
IFIL				AML	AML		
	comp=N,81550µm,0.9s						
NOV	**Novara**	**0.37**	**152**	P	**Pg**	**04 35 08.5**	**+0.3**
NOV				S	**Sg**	**04 35 14.0**	**+0.8**
NOV				AML	AML		
	comp=N,75950µm,0.3s						
NOV				AML	AML		
	comp=E,80350µm,0.5s						
NOV				AML	AML		
	comp=E,80350µm,0.5s						
MCSR	**Castroreale**	**0.39**	**138**	P	**Pg**	**04 35 08.7**	**0.0**
MCSR				S	**Sg**	**04 35 14.8**	**+0.9**
MCSR				AML	AML		
MCSR				AML	AML		
MPNC	**Port Mandanici**	**0.40**	**121**	P	**Pg**	**04 35 09.0**	**+0.2**
MPNC				S	**Sb**	**04 35 15.7**	**-0.2**
MPNC				AML	AML		
	comp=E,59850µm,0.7s						
MPNC				AML	AML		
	comp=N,64800µm,1.5s						
MPNC				AML	AML		
	comp=N,64750µm,1.5s						
MNO	**Monte Soro**	**0.46**	**202**	P	**Pg**	**04 35 10.3**	**+0.5**
MNO				S	**Sb**	**04 35 17.9**	**+0.3**
MNO				AML	AML		
	comp=E,26850µm,0.9s						
MNO				AML	AML		
	comp=N,22850µm,0.8s						
MNO				AML	AML		
	comp=E,26800µm,0.9s						
MNO				AML	AML		
	comp=N,22900µm,0.8s						
MNO				AML	AML		
	comp=N,22900µm,0.8s						
AIO	**Antillo**	**0.46**	**147**	P	**Pg**	**04 35 10.2**	**+0.4**
AIO				S	**Sb**	**04 35 17.4**	**-0.1**
AIO				AML	AML		
	comp=E,51450µm,0.2s						
AIO				AML	AML		
	comp=N,48950µm,0.2s						
IACL	**Alicudi**	**0.47**	**292**	P	**Pg**	**04 35 09.9**	**-0.2**
IACL				S	**Sb**	**04 35 17.4**	**-0.5**
IACL				AML	AML		
	comp=N,35450µm,0.4s						
IACL				AML	AML		
	comp=E,39250µm,1.4s						
IACL				AML	AML		

JOPP					AML	AML			
	comp=N,4355µm,0.6s								
JOPP					AML	AML			
	comp=E,2825µm,0.7s								
CAGR	**Agira**	**0.80**	**204**		AML	AML			
	comp=N,14600µm,1.0s								
CAGR					AML	AML			
	comp=E,10850µm,0.5s								
PETRA	**Petralia Sopra**	**0.82**	**231**		P	**Pg**	**04 35 16.4**	**-0.2**	
PETRA					AML	AML			
	comp=N,18600µm,0.6s								
PETRA					AML	AML			
	comp=E,16050µm,0.5s								
SOI	**Samo**	**0.94**	**107**		P	**Pb**	**04 35 17.7**	**-1.3**	
SOI					AML	AML			
	comp=N,5065µm,0.8s								
SOI					AML	AML			
	comp=E,3805µm,0.7s								
VAE	**Valguarnera**	**0.96**	**205**		Pg	**Pn**	**04 35 21.6**	**+1.5**	
	comp=E,24nm,0.3s,baz=27,slow=6.8,SNR=65								
VAE					Lg	Lg	04 35 38.7		
	comp=E,53nm,0.3s,baz=150,slow=20,SNR=10								
HAGA	**Augusta**	**1.09**	**170**		P	**Pb**	**04 35 21.0**	**-0.5**	
HAGA					AML	AML			
	comp=N,6160µm,0.7s								
HAGA					AML	AML			
	comp=E,8915µm,0.7s								
HAGA					AML	AML			
	comp=N,6165µm,0.7s								
ALJA	**Alia**	**1.10**	**237**		P	**Pb**	**04 35 20.9**	**-0.8**	
ALJA					AML	AML			
	comp=E,4250µm,1.5s								
ALJA					AML	AML			
	comp=N,5475µm,1.0s								
SOLUN	**Solunto**	**1.12**	**257**		P	**Pb**	**04 35 19.7**	**-2.4**	
SOLUN					AML	AML			
	comp=N,1200µm,0.9s								
SOLUN					AML	AML			
	comp=N,1205µm,0.9s								
SOLUN					AML	AML			
	comp=E,1480µm,0.9s								
AGST	**Augusta-Monte**	**1.12**	**167**		P	**Pb**	**04 35 21.6**	**-0.5**	
AGST					AML	AML			
	comp=N,9115µm,1.2s								
AGST					AML	AML			
	comp=E,8425µm,0.4s								
HVZN	**Vizzini**	**1.19**	**188**		P	**Pn**	**04 35 22.8**	**-0.4**	
HVZN					AML	AML			
	comp=E,19350µm,0.6s								
HVZN					AML	AML			
	comp=N,21450µm,0.5s								
HVZN					AML	AML			
	comp=E,19350µm,0.6s								
HVZN					AML	AML			
	comp=N,21450µm,0.5s								
PLAC	**Placanica**	**1.20**	**85**		P	**Pn**	**04 35 22.0**	**-1.3**	
PLAC					AML	AML			
	comp=E,3510µm,0.6s								
PLAC					AML	AML			
	comp=E,2615µm,1.3s								
PLAC					AML	AML			
	comp=N,3600µm,0.6s								
PLAC					AML	AML			
	comp=N,2575µm,1.3s								
SSY	**Sortino**	**1.21**	**174**		P	**Pn**	**04 35 22.6**	**-0.8**	
SSY					AML	AML			
	comp=N,10800µm,1.0s								
SSY					AML	AML			
	comp=E,5675µm,1.1s								
MPG	**Monte Pellegri**	**1.24**	**261**		P	**Pn**	**04 35 21.8**	**-2.1**	
MPG					AML	AML			
	comp=E,958µm,0.6s								
MPG					AML	AML			
	comp=N,860µm,1.6s								
MEU	**Monte Lauro**	**1.25**	**179**		P	**Pn**	**04 35 23.0**	**-1.1**	
MEU					AML	AML			
	comp=E,5790µm,1.1s								
MEU					AML	AML			
	comp=N,7425µm,0.3s								
GRI	**Girifalco**	**1.27**	**68**		AML	AML			
	comp=E,2685µm,0.6s								
GRI					AML	AML			
	comp=N,1900µm,0.8s								
HBSP	**Bosco Santo Pi**	**1.27**	**195**		P	**Pn**	**04 35 24.0**	**-0.3**	
HBSP					AML	AML			
	comp=E,8045µm,0.5s								
HBSP					AML	AML			
	comp=N,6535µm,0.5s								
CORL	**Corleone**	**1.35**	**251**		AML	AML			
	comp=E,2445µm,0.9s								
CORL					AML	AML			
	comp=N,2930µm,0.5s								
CORL	**Corleone**	**1.35**	**251**			**Pn**	**04 35 24.2**	**-1.3**	
CORL						**Sg**	**04 35 44.0**	**-0.3**	
CAR1	**CAROLEI**	**1.35**	**48**		P	**Pn**	**04 35 23.8**	**-1.7**	
CAR1					AML	AML			
	comp=E,2800µm,0.7s								
CAR1					AML	AML			
	comp=N,4265µm,0.5s								
CAR1					AML	AML			
	comp=E,3505µm,0.6s								
CAR1					AML	AML			
	comp=N,4600µm,0.6s								
HMDC	**Modica**	**1.40**	**184**		P	**Pn**	**04 35 25.5**	**-0.6**	
HMDC					AML	AML			
	comp=E,3155µm,0.6s								
HMDC					AML	AML			
	comp=N,4655µm,0.6s								
HAVL	**Avola**	**1.40**	**173**		P	**Pn**	**04 35 25.4**	**-0.7**	
HAVL					AML	AML			
	comp=E,8695µm,0.8s								
HAVL					AML	AML			
	comp=N,7185µm,0.3s								
USI	**Ustica**	**1.41**	**285**		AML	AML			
	comp=N,3375µm,0.7s								
USI					AML	AML			
	comp=E,3410µm,0.5s								
CLTA	**Licata**	**1.41**	**213**		AML	AML			
	comp=N,7995µm,0.9s								
CLTA					AML	AML			
	comp=E,4460µm,1.2s								
CET2	**Cetraro**	**1.43**	**34**		P	**Pn**	**04 35 24.6**	**-1.8**	
CET2					AML	AML			
	comp=N,1850µm,0.8s								
CET2					AML	AML			
	comp=E,1510µm,0.6s								
FAVR	**Favara**	**1.47**	**223**		AML	AML			
	comp=N,2665µm,0.8s								
FAVR					AML	AML			
	comp=E,2025µm,0.9s								
SERS	**Sersale**	**1.54**	**63**		AML	AML			
	comp=N,870µm,0.5s								
SERS					AML	AML			
	comp=E,870µm,0.6s								
SERS					AML	AML			
	comp=E,944µm,0.5s								
SERS					AML	AML			
	comp=N,868µm,0.7s								
CLTB	**Caltabellotta**	**1.55**	**241**		P	**Pb**	**04 35 28.8**	**-0.6**	
CLTB					AML	AML			
	comp=E,4065µm,0.6s								
CLTB					AML	AML			
	comp=N,6485µm,0.6s								
CLTB	**Caltabellotta**	**1.55**	**241**			**Pb**	**04 35 29.3**	**-0.2**	
CELI	**Celico**	**1.62**	**49**		P	**Pn**	**04 35 27.8**	**-1.5**	
CELI					AML	AML			
	comp=N,646µm,0.8s								
CELI					AML	AML			
	comp=E,2115µm,0.5s								
CELI					AML	AML			
	comp=N,1575µm,0.8s								
CELI					AML	AML			
	comp=E,858µm,0.5s								
T0702	**Acquaformosa (**	**1.64**	**33**		P	**Pn**	**04 35 28.2**	**-1.3**	
TIP	**Timpagrande**	**1.66**	**60**		P	**Pn**	**04 35 28.5**	**-1.2**	
TIP					AML	AML			
	comp=N,709µm,1.4s								
TIP					AML	AML			
	comp=E,623µm,0.8s								
TIP					AML	AML			
	comp=N,903µm,1.4s								
TIP					AML	AML			
	comp=E,539µm,0.8s								
TIP	**Timpagrande**	**1.66**	**60**			**Pn**	**04 35 28.8**	**-0.9**	
TIP					Sn	**Sb**	**04 35 52.9**	**+0.8**	
HPAC	**Pachino**	**1.66**	**175**		P	**Pn**	**04 35 29.9**	**+0.2**	
CUC	**Castrocucco**	**1.78**	**23**		AML	AML			
	comp=N,306µm,0.7s								
CUC					AML	AML			
	comp=E,455µm,1.1s								
CUC					AML	AML			
	comp=N,374µm,0.7s								
CUC					AML	AML			
	comp=E,360µm,1.1s								
MGR	**Morigerati**	**1.85**	**15**		AML	AML			
	comp=N,284µm,0.6s								
MGR					AML	AML			
	comp=E,298µm,0.9s								
SALB	**San Lorenzo Be**	**1.88**	**36**		AML	AML			
	comp=N,409µm,0.6s								
SALB					AML	AML			
	comp=E,316µm,0.3s								
SALB					AML	AML			
	comp=E,338µm,0.3s								
SALB					AML	AML			
	comp=N,420µm,0.6s								
SIRI	**Monte Sirino -**	**1.97**	**22**		AML	AML			
	comp=N,343µm,1.2s								
SIRI					AML	AML			
	comp=E,415µm,1.6s								
CMPR	**Campora**	**1.98**	**9**		AML	AML			
	comp=N,172µm,0.8s								
CMPR					AML	AML			
	comp=E,240µm,0.7s								
MTSN	**Montesano sull**	**2.02**	**19**		AML	AML			
	comp=E,288µm,0.9s								
MTSN					AML	AML			
	comp=N,308µm,0.8s								
SCHR	**S. Chirico Rap**	**2.05**	**26**		AML	AML			
	comp=E,163µm,0.6s								
SCHR					AML	AML			
	comp=N,213µm,1.1s								
CDRU	**Civita di Ruta**	**2.15**	**8**		AML	AML			
	comp=N,87µm,1.1s								
CDRU					AML	AML			
	comp=E,154µm,1.6s								
MRLC	**Muro Lucano**	**2.44**	**10**		AML	AML			
	comp=E,125µm,0.8s								
MRLC					AML	AML			
	comp=N,124µm,0.8s								
WDD	**Wied Dalam**	**2.53**	**187**		Pn	**Pn**	**04 35 40.3**	**-1.3**	
WDD					Sn	**Sn**	**04 36 11.2**	**-1.2**	
MIGL	**Miglionico**	**2.54**	**27**		AML	AML			
	comp=N,632µm,1.0s								
MIGL					AML	AML			
	comp=E,572µm,1.6s								
ACER	**Acerenza**	**2.56**	**18**		AML	AML			
	comp=N,332µm,1.0s								
ACER					AML	AML			
	comp=N,325µm,0.7s								
ACER					AML	AML			
	comp=E,292µm,0.6s								
ACER					AML	AML			
	comp=E,292µm,0.6s								
ACER	**Acerenza**	**2.56**	**18**			**Pn**	**04 35 40.3**	**-1.7**	
CAFE	**Carife**	**2.68**	**5**		AML	AML			
	comp=N,112µm,1.0s								
CAFE					AML	AML			
	comp=E,157µm,0.9s								
SG1	**Sgolgore (BA)**	**2.83**	**28**	*e*	P	**Pn**	**04 35 45.6**	**-0.2**	
TAR1	**Taranto**	**2.84**	**40**	*e*	P	**Pn**	**04 35 45.5**	**-0.3**	
MASS	**Massafra**	**2.85**	**36**	*e*	P	**Pn**	**04 35 45.0**	**-1.1**	
AMUR	**Altamura**	**2.86**	**27**		AML	AML			
	comp=N,102µm,1.3s								
AMUR					AML	AML			
	comp=E,109µm,1.2s								
NOCI	**Noci**	**2.94**	**34**		AML	AML			
	comp=E,114µm,1.3s								
NOCI					AML	AML			
	comp=N,123µm,0.9s								
CGL1	**Ceglie Messapi**	**3.03**	**40**	*e*	P	**Pn**	**04 35 47.7**	**-0.8**	
BAI	**Bari**	**3.14**	**28**	*e*	P	**Pn**	**04 35 51.1**	**+1.2**	
SCTE	**Santa Cesarea**	**3.25**	**57**		Pn	**Pn**	**04 35 48.8**	**-2.7**	
SGRT	**San Giovanni R**	**3.45**	**10**		Pn	**Pn**	**04 35 53.1**	**-1.2**	
INTR	**Introdacqua**	**3.73**	**348**			**Pn**	**04 35 56.6**	**-1.6**	
NRCA	**Norcia**	**4.68**	**344**		Pn	**Pn**	**04 36 08.5**	**-2.7**	
TIR	**Tirane**	**4.84**	**50**			**Pn**	**04 36 11.9**	**-1.5**	
TIR					Sn	**Sn**	**04 37 08.7**	**-0.6**	
KEST	**Kesra**	**5.17**	**241**		Pn	**Pn**	**04 36 20.1**	**+2.1**	
	comp=N,0.5nm,0.3s,baz=48,slow=14,SNR=14								
KEST					Sn	**Sn**	**04 37 15.9**	**-1.5**	
	comp=N,0.4nm,0.3s,baz=197,slow=19,SNR=2.4								
KEST					LR	LR	04 39 02.7		
	comp=N,143nm,20.0s,baz=160,slow=46								
KEST	**Kesra**	**5.17**	**241**			**Pn**	**04 36 18.7**	**+0.8**	
KEST					Sn	**Sn**	**04 37 17.7**	**+0.3**	
PDG	**Podgorica**	**5.25**	**38**	⇑	P	**Pn**	**04 36 19.9**	**+1.0**	
PDG	**Podgorica**	**5.25**	**38**			**Pn**	**04 36 18.4**	**-0.5**	
PDG					Sn	**Sn**	**04 37 19.5**	**+0.2**	
FNA	**Florina**	**5.55**	**62**		Pn	**Pn**	**04 36 20.6**	**-2.5**	
FNA					Sn	**Sn**	**04 37 27.2**	**+0.4**	
ITM	**Ithomi**	**5.68**	**100**		Pn	**Pn**	**04 36 24.4**	**-0.4**	
ITM					Sn	**Sn**	**04 37 27.1**	**-2.9**	
AGG	**Agios Georgios**	**5.84**	**81**			**Pn**	**04 36 28.2**	**+1.1**	
AGG					Sn	**Sn**	**04 37 34.3**	**+0.3**	
LIT	**Litokhoron**	**6.13**	**71**		Pn	**Pn**	**04 36 31.2**	**+0.1**	
LIT						**Sn**	**04 37 40.9**	**-0.3**	
BLY	**Banja Luka**	**6.61**	**14**	⇑	P	**Pn**	**04 36 38.2**	**+0.6**	
VTS	**Vitosha**	**7.64**	**53**	⇓	P	**Pn**	**04 36 52.3**	**+0.5**	
VTS	**Vitosha**	**7.64**	**53**			**Pn**	**04 36 50.6**	**-1.3**	
IDI	**Anoyia**	**8.56**	**108**		Sn	**Sn**	**04 38 37.8**	**-3.3**	
	comp=N,2.3nm,0.3s,baz=348,slow=20,SNR=2.6								
SANT	**Santorini**	**8.63**	**100**	⇑	P	**Pn**	**04 37 04.3**	**-1.0**	
SANT	**Santorini**	**8.63**	**100**		Pn	**Pn**	**04 37 04.6**	**-0.8**	
BZS	**Buzias**	**8.80**	**32**	⇑	P	**Pn**	**04 37 08.9**	**+1.2**	
PLVB	**Pleven**	**8.90**	**53**	⇑	P	**Pn**	**04 37 10.5**	**+1.4**	
ALN	**Alexandroupoli**	**8.96**	**70**		Pn	**Pn**	**04 37 07.3**	**-2.5**	
GZR	**Gura Zlata**	**9.15**	**37**	⇓	P	**Pn**	**04 37 13.4**	**+0.8**	
SIRR	**Siria**	**9.35**	**30**	⇑	P	**Pn**	**04 37 16.8**	**+1.6**	
KARP	**Karpathos**	**10.19**	**102**		Pn	**Pn**	**04 37 26.1**	**-0.7**	
VOIR		**10.34**	**44**	⇑	P	**Pn**	**04 37 29.3**	**+0.4**	
GERES	**GERESS Array B**	**10.52**	**356**		Pn	**Pn**	**04 37 31.4**	**+0.1**	
	comp=N,0.1nm,0.3s,baz=175,slow=13,SNR=4.8								
GERES					LR	LR	04 42 33.1		
	comp=N,78nm,19.0s,baz=177,slow=44								
MLR	**Muntele Rosu**	**10.87**	**46**		Pn	**Pn**	**04 37 38.3**	**+2.1**	
	comp=N,0.1nm,0.3s,baz=270,slow=20,SNR=3.2								
MLR	**Muntele Rosu**	**10.87**	**46**	⇑	P	**Pn**	**04 37 37.8**	**+1.6**	
MLR	**Muntele Rosu**	**10.87**	**46**		Pn	**Pn**	**04 37 35.0**	**-1.2**	
VRAC	**Vranov**	**11.02**	**6**		LR	LR	04 41 50.7		
	comp=N,33nm,18.7s,baz=22,slow=38								
PLOR	**Plostina**	**11.48**	**46**	⇑	P	**Pn**	**04 37 45.1**	**+0.6**	
KWP	**Kalwaria Pacla**	**12.58**	**24**		Pn	**Pn**	**04 37 58.3**	**-1.2**	
HFS	**Hagfors**	**21.81**	**358**		P	**P**	**04 39 54.3**	**+1.8**	
	comp=N,1.3nm,0.7s,baz=194,slow=12,SNR=2.7								
NOA	**NORSAR Array B**	**22.83**	**355**		LR	LR	04 50 23.0		
	comp=N,52nm,19.7s,baz=280,slow=41								
GNI	**Garni**	**23.12**	**76**		LR	LR	04 49 11.7		
	comp=N,50nm,21.2s,baz=344,slow=37								
FINES	**FINESS Array B**	**24.14**	**13**		P	**P**	**04 40 17.6**	**+1.4**	
	comp=N,1.4nm,0.8s,baz=191,slow=13,SNR=2.6								
TORD	**Torodi Ar. Bea**	**27.72**	**209**		P	**P**	**04 40 52.8**	**+3.8**	
	comp=N,0.3nm,0.8s,baz=19,slow=9.2,SNR=3.0								
MKAR	**Makanchi Array**	**48.94**	**57**		P	**P**	**04 43 47.3**	**+0.6**	
	comp=N,0.3nm,0.6s,baz=274,slow=6.9,SNR=3.6								

NCEDC 14 04:50:54.3±1.1, 37°.407N±0°.005×121°.797W±0°.006, h2km±4km, Md2.3/94, Error ellipse: s-maj=1.0km s-min=0.3km az=147.0, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SCCB	**Santa Clara Co**	**0.13**	**204**				Pg	04 50 57.4	+0.6
CMLM	**Mount Lewis**	**0.14**	**59**				Pg	04 50 57.5	+0.5
MHC	**Mount Hamilton**	**0.14**	**118**				Pg	04 50 57.5	+0.4
MHC							Sg	04 51 00.4	+1.5
CCOB	**Coe Ranch Numb**	**0.18**	**146**				Pg	04 51 03.2	+5.4
JSTM	**Santa Teresa H**	**0.20**	**180**				Pg	04 50 58.9	+0.7
WENL	**Wente Vineyard**	**0.22**	**8**				Pg	04 50 59.3	+0.7
ARN	**Arnold Ranch**	**0.22**	**105**				Pg	04 50 58.9	+0.4
CVLM	**Vallecito**	**0.22**	**352**				Pg	04 50 59.5	+0.8
CNIC	**Niles Canyon**	**0.24**	**326**				Pg	04 50 59.6	+0.7
CNIC							Sg	04 51 04.0	+1.9
CMMM	**Mount Mocho**	**0.25**	**78**				Pg	04 50 59.7	+0.6
JJOM	**Saint Joseph's**	**0.25**	**216**				Pg	04 50 59.6	+0.5
AMC	**Almaden**	**0.25**	**189**				Pg	04 50 59.8	+0.7
JLAB	**Laurel Hill**	**0.26**	**169**				Pg	04 50 60.0	+0.7
JUMM	**Mount Umunhum**	**0.26**	**198**				Pg	04 50 59.9	+0.6
CADM	**Anderson Res.**	**0.28**	**151**				Pg	04 51 00.6	+0.9
JHLM	**Holstrom Ranch**	**0.30**	**186**				Pg	04 51 00.7	+0.7
JSFB	**Stanford Teles**	**0.30**	**270**				Pg	04 51 00.7	+0.6
JFP	**Foothills Park**	**0.32**	**262**				Pg	04 51 01.0	+0.6
JJRM	**Joaquin Road**	**0.33**	**259**				Pg	04 51 01.2	+0.6
JRSC	**Jasper Ridge**	**0.35**	**270**				Pg	04 51 01.3	+0.2
JPC	**Peters Creek,**	**0.36**	**248**				Pg	04 51 02.0	+0.8
HSPM	**Sheep**	**0.37**	**142**				Pg	04 51 02.1	+0.8
JTGM	**Trout Gulch Ro**	**0.38**	**190**				Pg	04 51 02.7	+1.0
HLPM	**Lions Peak**	**0.39**	**160**				Pg	04 51 02.4	+0.7
CLCB	**Lake Chabot**	**0.39**	**327**				Pg	04 51 02.8	+0.9
CMOB	**Morgan Territo**	**0.40**	**359**				Pg	04 51 02.2	+0.1
JBNB	**Ben Lomond Mou**	**0.40**	**225**				Pg	04 51 02.5	+0.4
JHPM	**Huddart Park**	**0.40**	**275**				Pg	04 51 02.5	+0.4
GHS	**Gilroy Hot Spr**	**0.42**	**138**				Pg	04 51 03.1	+0.8
CBSNC	**Byron Hot Spri**	**0.43**	**17**				Pb	04 51 04.0	-0.6
BGH	**Bear Gulch**	**0.44**	**262**				Pg	04 51 03.4	+0.7
CDC	**Canada Road**	**0.46**	**147**				Pg	04 51 04.0	+0.9
JCPM	**Coyote Point**	**0.46**	**294**				Pg	04 51 03.2	+0.2
CRHM	**Round Hill Res**	**0.48**	**341**				Pb	04 51 05.3	-0.1
OXMT	**Ox Mountain**	**0.51**	**281**				Pg	04 51 04.1	+0.1
CRPB	**Russellman Par**	**0.51**	**350**				Pb	04 51 05.3	-0.8
SAC	**San Andreas**	**0.52**	**290**				Pg	04 51 04.4	+0.1
HFEM	**San Felipe**	**0.53**	**143**				Pg	04 51 05.2	+0.7
OCR	**O'Connell Ranc**	**0.54**	**155**				Pg	04 51 05.2	+0.5
ANZ	**Anzar Road**	**0.55**	**162**				Pg	04 51 05.7	+0.9
BDM	**Black Diamond**	**0.55**	**354**				Pb	04 51 06.3	-0.4
SLD	**San Luis Dam**	**0.57**	**126**				Pg	04 51 05.4	+0.3
BKS	**Berkeley--Byer**	**0.58**	**324**				Pg	04 51 06.2	+0.7
CVPM	**Vollmer Peak**	**0.58**	**325**				Pg	04 51 06.3	+0.7
HBTM	**San Juan Bauti**	**0.59**	**160**				Pb	04 51 06.5	-0.8
HTUM	**Tustin Road**	**0.59**	**168**				Pg	04 51 06.1	+0.5
VAK	**Adit at Lawren**	**0.59**	**323**				Pg	04 51 06.2	+0.5
CYBM	**Yerba Buena Is**	**0.60**	**312**				Pg	04 51 05.8	-0.1
HERM	**Elkhorn Road**	**0.61**	**174**				Pg	04 51 06.7	+0.7
SFJWR	**San Luis Fatjo**	**0.61**	**125**				Pg	04 51 06.5	+0.4
HLTM	**Lone Tree Road**	**0.65**	**143**				Pg	04 51 07.5	+0.6
JPRM	**Presidio of Sa**	**0.66**	**306**				Pg	04 51 06.9	-0.1
CPIM	**Pinole Ridge**	**0.67**	**330**				Pb	04 51 08.2	-0.5
FRP	**Fremont Peak**	**0.70**	**159**				Pg	04 51 08.2	+0.5
SAO	**San Andreas Ge**	**0.70**	**156**				Pb	04 51 08.6	-0.7
BVYM	**Vineyard**	**0.72**	**155**				Pb	04 51 09.1	-0.5
CPMM	**Point Molate**	**0.73**	**318**				Pg	04 51 08.2	-0.1
BSRM	**Salinas Radio**	**0.77**	**163**				Pg	04 51 09.2	+0.1
MOBB	**Monterey Bay O**	**0.77**	**203**				Pb	04 51 09.9	-0.4
BCGM	**Cienega Road**	**0.79**	**152**				Pb	04 51 10.3	-0.3
BHRM	**Hodges Ranch**	**0.80**	**148**				Pg	04 51 10.2	+0.6
HMOM	**Monterey**	**0.81**	**187**				Pg	04 51 09.9	+0.1
BPCNC	**Pine Canyon**	**0.84**	**171**				Pg	04 51 10.6	+0.1
BLRM	**Lewis Ranch**	**0.85**	**150**				Pb	04 51 11.6	-0.1
SCZ	**Santa Cruz**	**0.87**	**159**				Pg	04 51 10.8	-0.2
BJOM	**Mount Johnson**	**0.87**	**153**				Pg	04 51 11.2	+0.3
BEHM	**Elkhorn Ranch**	**0.89**	**146**				Pg	04 51 11.7	+0.3
BJCM	**Johnson Can.**	**0.92**	**159**				Pg	04 51 11.7	-0.2
BEMM	**Emmet**	**0.93**	**143**				Pg	04 51 12.4	+0.2
SNT	**Sears Point**	**0.93**	**326**				Pg	04 51 12.5	+0.3
NOLM	**Olema**	**1.01**	**309**				Pg	04 51 13.6	-0.1
HAST	**Hastings Reser**	**1.03**	**169**				Pg	04 51 13.8	-0.3
BPIM	**Pinnacles**	**1.04**	**151**				Pg	04 51 13.6	-0.7
BSMM	**Soledad Missio**	**1.06**	**164**				Pg	04 51 14.4	-0.3
BBNM	**San Benito**	**1.07**	**147**				Pg	04 51 15.0	+0.2
CVS	**Carmenet Viney**	**1.07**	**331**				Pg	04 51 14.7	-0.2
BSGM	**Shirttail Gulc**	**1.08**	**156**				Pg	04 51 14.1	-0.9
MCUB	**Copperopolis B**	**1.09**	**58**				Pg	04 51 15.1	-0.2
BMSM	**Mercy Hot Spri**	**1.10**	**133**				Pg	04 51 15.1	-0.2
MCCM	**Marconi Confer**	**1.13**	**311**				Pg	04 51 14.9	-1.1
LRV	**Little Rabbit**	**1.16**	**147**				Pg	04 51 16.2	-0.4
NTYM	**Taylor**	**1.20**	**325**				Pg	04 51 16.4	-0.8
BAPM	**Anderson Peak**	**1.23**	**174**				Pg	04 51 17.4	-0.5
CMB	**Columbia Colle**	**1.28**	**60**				Pg	04 51 18.5	-0.4
CMB						Sg	Sg	04 51 35.5	-0.1
AFDM	**Forest Hills D**	**1.67**	**23**				Sn	04 51 45.9	-0.7
RUBR	**Rubicon Trail**	**2.09**	**38**				Sb	04 51 58.6	-0.9
WAKR	**Walker**	**2.16**	**59**				Lg	04 52 04.4	
PNTR	**Pine Nut**	**2.41**	**45**	Pn		Pn	Pn	04 51 34.3	-0.6
PNTR						Sn	Sn	04 52 03.6	-1.6
YERR	**Yerington**	**2.56**	**51**	Pn		Pn	Pn	04 51 36.4	-0.6

NIED ***14*** *05:11:00, 39°.40N×142°.20E, h38km, Mw3.9 Best double couple: M0 8.42000×10^14 NP1: ϕs 4.00000°, δ 62.00000°, λ -74.00000°. NP2: ϕs 151.00000°, δ 32.00000°, λ -118.00000°.*

JMA ***14*** *05:11:13.1, 39°.44N×142°.16E, h32km, M4.1*

JMA Felt II J1.

IDC ***14*** *05:11:16.2±2.7, 39°.41N×142°.15E, h58km±24km, mb3.5/13, mb1 3.6/16, mb1mx3.5/48, mbtmp3.8/16, ML3.1/3, MS2.8/4, Ms1 2.8/4, ms1mx2.6/31, Error ellipse: s-maj=24.4km s-min=17.7km az=98.0*

NEIC ***14*** *05:11:16.2±1.2, 39°.45N±0°.08×142°.2E±0°.1, h59km±8km, mb4.3/6, Error ellipse: s-maj=15.4km s-min=3.3km az=134.0*

ISC 14 05:11:13.7±1.1, 39°.43N±0°.03×142°.12E±0°.06, h31km±7km, n47, σ1°.49/52, mb3.8/17, 7C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.28**	**303**	⇑	P		**Pb**	**05 11 20.5**	**-0.5**
MIYJ						S	**Sb**	**05 11 25.5**	**-0.4**
OFUJ	**Ofunato**	**0.49**	**225**	⇑	P		**Pb**	**05 11 23.7**	**-0.4**
OFUJ						S	**Sb**	**05 11 30.9**	**-0.3**
JTH	**Tanohata**	**0.55**	**339**		P		**Pb**	**05 11 24.0**	**-1.0**
JTH					*e*S		**Sb**	**05 11 31.7**	**-1.0**
JOM	**Ohasama**	**0.64**	**274**	⇑	P		**Pb**	**05 11 26.0**	**-0.5**
JOM					S		**Sb**	**05 11 35.1**	**-0.1**

comp=Z,3.3nm,0.6s
ZALV **Zalesovo Beam** 40.75 310 P P 05 18 51.4 -0.1
comp=Z,1.7nm,0.4s,baz=90,slow=7.3,SNR=11
SVW2 **Sparrevohn** 43.30 39 P P 05 19 10.4 -1.7
MK31 **Makanchi Array** 43.36 300 P P 05 19 12.7 -0.2
MKAR **Makanchi Array** 43.36 300 P P 05 19 12.3 -0.6
comp=Z,0.7nm,0.6s,baz=85,slow=9.8,SNR=9.3
KURK **Kurchatov** 44.93 306 P P 05 19 24.7 -0.6
KURK IAmb IAmb 05 19 37.1
comp=Z,3.6nm,0.9s
ABKAR **Akbulak array** 56.84 309 P P 05 20 54.6 -0.4
ABKAR IAmb IAmb 05 20 55.3
comp=Z,3.5nm,0.7s
WRA **Warramunga Arr** 59.51 188 P P 05 21 12.8 -1.1
comp=Z,1.0nm,0.7s,baz=3.8,slow=7.1,SNR=4.1
RES **Resolute Bay** 60.15 15 P P 05 21 17.0 -0.6
RES IAmb IAmb 05 21 21.4
comp=Z,2.7nm,1.3s
YKA **Yellowknife Ar** 61.47 31 P P 05 21 26.5 -0.3
comp=Z,0.2nm,0.7s,baz=304,slow=7.0,SNR=3.6
ARCES **ARCESS Array B** 61.96 339 P P 05 21 30.2 +0.2
comp=Z,0.6nm,0.6s,baz=50,slow=8.4,SNR=3.7
ASAR **Alice Springs** 63.23 188 P P 05 21 38.5 -0.5
comp=Z,0.5nm,0.7s,baz=11,slow=6.0,SNR=3.0
FINES **FINESS Array B** 66.96 332 P P 05 22 02.2 -0.6
comp=Z,2.1nm,0.6s,baz=50,slow=9.2,SNR=7.2
NOA **NORSAR Array B** 72.20 337 P P 05 22 34.6 -0.6
comp=Z,0.6nm,0.5s,baz=48,slow=5.4,SNR=6.4
AKASG **Malin Array Be** 72.75 322 P P 05 22 38.0 -0.6
comp=Z,0.1nm,0.3s,baz=46,slow=6.0,SNR=4.4
PDAR **Pinedale Array** 75.60 46 P P 05 22 55.8 +0.1
comp=Z,0.2nm,0.4s,baz=286,slow=3.4,SNR=2.4
BRTR **Keskin Array B** 77.68 312 P P 05 23 07.3 -0.1
comp=Z,1.0nm,0.9s,baz=104,slow=3.5,SNR=4.4

IDC 14 05:15:01.1±3.7, 30.12S×138.73E, h0km, mb1 3.2/3, mb1mx3.1/28, mbtmp2.9/3, ML2.6/3, Error ellipse: s-maj=118.1km s-min=17.8km az=44.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**3.02**	**126**	Pn	Pn	05 15 50.0	-0.2
	0.2nm,0.3s,baz=308,slow=14,SNR=3.0						
STKA				Sn	Sn	05 16 26.4	-0.7
	1.5nm,0.3s,baz=279,slow=19,SNR=3.7						
STKA				Lg	Lg	05 16 37.8	
	1.9nm,0.3s,baz=38,slow=22,SNR=7.3						
ASAR	**Alice Springs**	**7.74**	**325**	Pn	Pn	05 16 54.5	-0.5
	0.1nm,0.3s,baz=149,slow=12,SNR=7.4						
ASAR				Sn	Sn	05 18 20.5	-2.9
	0.2nm,0.3s,baz=154,slow=22,SNR=7.1						
WRA	**Warramunga Arr**	**10.88**	**338**	Pn	Pn	05 17 39.1	+0.8
	0.1nm,0.3s,baz=158,slow=25,SNR=3.5						

*NNC **14** 05:25:08.0±1.4, 41.19N×82.43E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=21.2km s-min=9.1km az=40.0*

SOME 14 05:25:06.0, 41.37N×82.67E, h5km, 2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**2.98**	**308**	*eP*	Pb	05 25 58.2	-1.4
	14nm,0.2s						
SHLS				*eS*	Sb	05 26 35.6	-0.7
	20nm,0.2s						
SHLS	**Shalkode**	**2.98**	**308**	Pg	Pb	05 25 58.2	-1.4
	14nm,0.2s						
SHLS				Lg	Lg	05 26 35.7	
	20nm,0.2s						
PDGK	**Podgornoye**	**3.06**	**311**	Pg	Pg	05 26 04.1	-0.6
	0.4nm,0.1s						
PDGK				Lg	Lg	05 26 45.6	
	4.8nm,0.2s						
PDGK	**Podgornoye**	**3.06**	**311**	⇓Pn	Pg	05 26 04.8	+0.1
	2.1nm,0.8s						
PDGK				⇓Sn	Sg	05 26 44.5	+0.1
	4.8nm,0.4s						
UZB	**Uzynbulak**	**3.24**	**305**	*eP*	Pg	05 26 06.7	-1.4
	0.9nm,0.1s						
UZB				*eS*	Sg	05 26 50.2	+0.2
	9.7nm,0.4s						
UZB	**Uzynbulak**	**3.24**	**305**	Pg	Pg	05 26 06.7	-1.4
	0.9nm,0.1s						
UZB				Lg	Lg	05 26 50.2	
	9.7nm,0.4s						
SATY	**Saty**	**3.59**	**300**	*eP*	Pb	05 26 12.3	+2.3
	2.0nm,0.2s						
SATY				*eS*	Sg	05 26 59.8	-1.4
	9.2nm,0.2s						
KPKS	**Kokpek**	**3.62**	**307**	*eP*	Pb	05 26 12.4	+1.9
	3.5nm,0.2s						
KPKS				*eS*	Sg	05 27 01.1	-1.1
	40nm,0.5s						
ZHN	**Zhinishke**	**3.62**	**301**	*eP*	Pb	05 26 12.4	+1.9
	1.4nm,0.1s						
ZHN				*eS*	Sg	05 27 00.2	-2.0
	5.9nm,0.3s						
ZHN	**Zhinishke**	**3.62**	**301**	Pg	Pb	05 26 12.6	+2.0
	1.4nm,0.1s						
ZHN				Lg	Lg	05 27 00.4	
	5.9nm,0.3s						
KURS	**Kuram**	**3.95**	**304**	*eP*	Pb	05 26 18.8	+2.7
	3.4nm,1.3s						
KURS				*eS*	Sg	05 27 11.4	-1.3
	3.9nm,0.5s						
KURS	**Kuram**	**3.95**	**304**	Pg	Pb	05 26 18.8	+2.7
	3.4nm,1.3s						
KURS				Lg	Lg	05 27 11.4	
	3.9nm,0.5s						
KOTS	**Kotyrbulak**	**4.52**	**296**	*eP*	Pg	05 26 30.2	-2.5
	3.5nm,0.4s						
KOTS				*eS*	Sg	05 27 30.6	-0.7
	12nm,0.5s						
KOTS	**Kotyrbulak**	**4.52**	**296**	Pg	Pg	05 26 30.2	-2.5
	3.1nm,0.4s						
KOTS				Lg	Lg	05 27 30.6	
	4.7nm,0.4s						
ARXS	**Arharly**	**4.56**	**310**	*eP*	Pb	05 26 29.1	+2.7
	1.0nm,0.4s						
ARXS				*eS*	Sg	05 27 29.1	-3.2
	3.4nm,0.3s						
DGS	**Degeres**	**5.45**	**292**	*eP*	Pg	05 26 46.2	-4.0
	1.2nm,0.3s						
DGS				*eS*	Sg	05 27 58.4	-2.4
	2.5nm,0.5s						
DGS	**Degeres**	**5.45**	**292**	Pg	Pg	05 26 46.4	-3.9
	1.2nm,0.3s						
DGS				Lg	Lg	05 27 58.4	
	2.5nm,0.5s						

IDC 14 05:49:20.4±1.3, 15.87N×148.73E, h0km, mb3.6/6, mb1 3.9/6, mb1mx3.6/41, mbtmp3.6/6, MS3.3/2, Ms1 3.3/2, ms1mx2.5/45, Error ellipse: s-maj=51.7km s-min=21.0km az=92.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.37**	**239**	LR	LR	05 52 12.9	
	comp=Z,69nm,18.5s,baz=283,slow=40						
H11S3	**WAKE ISLAND Hy**	**17.36**	**79**	T	T	06 11 46.3	
	baz=268,slow=80						
H11S1	**WAKE ISLAND Hy**	**17.37**	**79**	T	T	06 11 46.3	
	baz=268,slow=80						
H11S2	**WAKE ISLAND Hy**	**17.38**	**79**	T	T	06 11 45.1	
	baz=268,slow=80						
H11N1	**WAKE ISLAND Hy**	**17.71**	**75**	T	T	06 12 10.5	
	baz=261,slow=75						
H11N2	**WAKE ISLAND Hy**	**17.72**	**75**	T	T	06 12 09.8	
	baz=261,slow=75						
H11N3	**WAKE ISLAND Hy**	**17.73**	**75**	T	T	06 12 11.5	
	baz=261,slow=75						
MJAR	**Matsushiro Arr**	**22.62**	**338**	P	P	05 54 21.0	-1.8
	1.5nm,0.6s,baz=149,slow=8.4,SNR=3.5						
WRA	**Warramunga Arr**	**38.29**	**202**	P	P	05 56 42.2	-0.6
	1.7nm,0.7s,baz=25,slow=9.3,SNR=6.3						
ASAR	**Alice Springs**	**41.88**	**201**	P	P	05 57 12.6	0.0
	0.9nm,0.6s,baz=25,slow=8.6,SNR=13						
SONM	**Songino Array**	**47.15**	**322**	P	P	05 57 55.4	+0.7
	0.3nm,0.6s,baz=129,slow=8.1,SNR=3.1						
MKAR	**Makanchi Array**	**62.50**	**315**	P	P	05 59 46.4	+0.6
	0.2nm,0.5s,baz=96,slow=6.4,SNR=3.8						
BBB	**Bella Bella**	**73.46**	**40**	LR	LR	06 24 38.5	
	comp=Z,114nm,21.6s,baz=143,slow=29						
YKA	**Yellowknife Ar**	**79.12**	**28**	P	P	06 01 26.8	+0.2
	0.5nm,0.8s,baz=283,slow=5.7,SNR=7.0						

*REN **14** 06:10:22.9±2.7, 38.57N±0.03×118.44W±0.04, h7km±6km, ML3.8, Mwr3.7/36(NEIC), Error ellipse: s-maj=5.6km s-min=2.6km az=57.0*

*NEIC **14** 06:10:23.6±2.4, 38.56N±0.02×118.49W±0.04, h3km±6km, Error ellipse: s-maj=4.9km s-min=2.6km az=61.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=0.19; $M_{\theta\theta}$=0.97; $M_{\phi\phi}$=1.16; $M_{r\theta}$=0.11; $M_{r\phi}$=3.09; $M_{\theta\phi}$=-2.00; Fault plane solution: M_o=3.84000×10^{14} NP1: ϕ_s=261.03000°, δ58.62000°, λ=-0.10000°. NP2: ϕ_s=351.08000°, δ=89.92000°, λ=-148.62000°. Principal axes: T 3.9821, Plg22.0000°, Azm122.0000°; N -0.3077, Plg59.0000°, Azm351.0000°; P -3.6744, Plg22.0000°, Azm221.0000°;*

*IDC **14** 06:10:23.6±0.7, 38.60N×118.38W, h0km, mb3.0/1, mb1 3.5/6, mb1mx3.4/35, mbtmp3.2/6, ML3.4/5, MS2.8/3, Ms1 2.8/3, ms1mx2.6/14 Error ellipse: s-maj=9.6km s-min=4.4km az=87.0*

*ANF **14** 06:10:23.1±0.4, 38.56N×118.40W, h4km±3km, ML3.8/26, Error ellipse: s-maj=2.8km s-min=2.3km az=109.0*

ISC 14 06:10:23.1±1.2, 38.57N±0.02×118.45W±0.02, h0km±10km, n94, σ1s35/122, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RYN	**Ryan**	**0.08**	**315**	Pg	Pg	06 10 25.3	+0.6
NVAR	**Mina Array Bea**	**0.18**	**141**	Pg	Pg	06 10 26.7	+0.1
	4μm,0.3s,baz=321,slow=16						
NVAR				Lg	Lg	06 10 29.8	
	5μm,0.3s,baz=328,slow=35,SNR=126						
NV11	**Mina Array Sit**	**0.27**	**121**	Pg	Pg	06 10 28.3	+0.1
NV11				Sg	Sg	06 10 32.1	+0.3
KVN	**Kaiserville**	**0.55**	**30**	Pg	Pg	06 10 33.4	-0.2
YERR	**Yerington**	**0.74**	**304**	Pg	Pg	06 10 37.3	0.0
YERR				Sg	Sg	06 10 47.7	+0.7
WAKR	**Walker**	**0.78**	**265**		Pg	06 10 38.1	+0.2
WAKR				Sg	Sg	06 10 48.5	+0.5
MLAC	**Mammoth, Mammo**	**0.99**	**198**	P	Pg	06 10 41.9	-0.1
	baz=18						
PNTR	**Pine Nut**	**1.04**	**300**		Pg	06 10 42.5	-0.4
PNTR				Sg	Sg	06 10 57.1	+0.7
OMMB	**Old Mammoth Mi**	**1.05**	**205**	Pg	Pg	06 10 42.6	-0.6
MDPB	**Devils Postpil**	**1.06**	**208**	Pg	Pg	06 10 42.7	-0.7
MDPB				Sg	Sg	06 10 56.8	-0.4
VCNR	**Virginia City**	**1.18**	**308**		Pb	06 10 45.2	-1.4
VCNR				Sg	Sb	06 11 00.6	-1.8
PAHR	**Pah Rah Range**	**1.35**	**328**		Pn	06 10 48.0	-1.3
PAHR				Sn	Sb	06 11 06.7	-0.4
RUBR	**Rubicon Trail**	**1.42**	**290**		Pn	06 10 49.5	-0.8
RUBR				Sn	Sn	06 11 08.7	-1.0
TIN	**Tinemaha, Big**	**1.52**	**173**	P	Pn	06 10 50.9	-0.8
	baz=354						
TIN				S	Sb	06 11 11.6	-0.6
	baz=354						
CMB	**Columbia Colle**	**1.61**	**251**		Pn	06 10 51.9	-0.9
CMB				Sn	Sn	06 11 12.4	-2.0
GRAC	**Grapevine Rang**	**1.79**	**151**	P	Pn	06 10 54.4	-0.9
	baz=332						
GRAC				Sg	Sg	06 11 22.2	+1.6
	baz=332						
BEKR	**Beckworth**	**1.97**	**312**		Pn	06 10 57.2	-0.6
BEKR				Sn	Sb	06 11 25.1	0.0
AFDM	**Forest Hills D**	**2.01**	**282**		Pn	06 10 57.6	-0.7
AFDM				Sn	Sb	06 11 24.5	-1.5
CWC	**Cottonwood Cre**	**2.15**	**172**	P	Pn	06 10 59.6	-0.7
	baz=353						
CWC				Sb	Sb	06 11 30.4	+0.3
	baz=353						
R11A	**Troy Canyon, C**	**2.26**	**95**	Pn	Pn	06 11 00.2	-1.7
R11A					Sb	06 11 32.4	-1.0
R11A	**Troy Canyon, C**	**2.26**	**95**	P	Pn	06 10 59.9	-1.9
	baz=277						
R11A				Sb	Sb	06 11 33.6	+0.2
	baz=277						
VOG	**Valley Oaks Go**	**2.37**	**199**	Pb	Pb	06 11 06.4	-0.2
	baz=18						
VOG				Sb	Sg	06 11 37.8	-1.2
	baz=18						
TPNV	**Topopah Spring**	**2.38**	**132**	Pn	Pn	06 11 02.4	-1.1
TPNV	**Topopah Spring**	**2.38**	**132**	P	Pn	06 11 02.3	-1.1
	baz=314						
DAC	**Darwin (Calif)**	**2.39**	**163**	Pn	Pb	06 11 05.8	-1.3
FURC	**Furnace Creek,**	**2.45**	**149**	Pb	Pb	06 11 07.3	-0.7
	baz=330						
FURC				Sb	Sg	06 11 40.3	-1.4
	baz=330						
ORV	**Oroville**	**2.57**	**293**		Pn	06 11 05.7	-0.3
ORV				Sn	Sb	06 11 39.5	-2.7
MPMC	**Manual Prospec**	**2.62**	**163**	P	Pn	06 11 06.0	-0.9
	baz=344						
MPMC				Sb	Sg	06 11 46.0	-1.4
	baz=344						
VES	**Vestal, Richgr**	**2.77**	**191**	Pb	Pb	06 11 13.4	0.0
	baz=10						
VES				Sb	Sb	06 11 49.4	+1.5
	baz=10						
ISA	**Isabella, Lake**	**2.90**	**180**		Pn	06 11 11.2	+0.6
ISA					Sb	06 11 52.5	+0.7
ISA	**Isabella, Lake**	**2.90**	**180**	Pb	Pb	06 11 15.6	-0.1
	baz=0.6						
ISA				Sb	Sb	06 11 53.7	+1.9
	baz=0.6						
SAO	**San Andreas Ge**	**2.98**	**234**		Pn	06 11 11.7	0.0
PMPB	**Monarch Peak**	**3.00**	**219**		Pn	06 11 12.5	+0.5
O03E	**Paynes Creek**	**3.11**	**305**	P	Pn	06 11 13.3	-0.3
	baz=122,SNR=11						
O03E				Sb	Sb	06 12 00.3	+2.4
	baz=122						
PAGB	**Antelope Grade**	**3.18**	**207**	Pn	Pn	06 11 15.8	+1.4
SHOC	**Shoshone, Teco**	**3.18**	**146**	Pb	Pb	06 11 19.9	-0.6
	baz=328						
SHOC				Sb	Sb	06 12 02.2	+2.4
	baz=328						
ELK	**Elko**	**3.29**	**48**	Pn	Pn	06 11 15.0	-1.1
	9.1nm,0.3s,baz=236,slow=9.3,SNR=73						
ELK				Sn	Sn	06 11 55.0	-1.2
	7.9nm,0.3s,baz=142,slow=2.8,SNR=7.3						
ELK				Lg	Lg	06 12 05.7	
	50nm,0.3s,baz=56,slow=5.2,SNR=17						
ELK				LR	LR	06 12 49.0	
	comp=Z,110nm,19.4s,baz=259,slow=45						
GDXM	**Geysers**	**3.41**	**275**	Pn	Pn	06 11 18.0	+0.5
ARVC	**Arvin**	**3.45**	**185**	Pb	Pb	06 11 23.6	-1.4
	baz=5.1						
ARVC				Sb	Sb	06 12 10.0	+2.5
	baz=5.1						
SMMC	**Simmler**	**3.48**	**201**	Pb	Pb	06 11 25.5	0.0
	baz=20						
MCCM	**Marconi Confer**	**3.51**	**264**		Pn	06 11 19.1	+0.2
GSC	**Goldstone, Bar**	**3.52**	**158**		Pn	06 11 18.5	-0.6
GSC	**Goldstone, Bar**	**3.52**	**158**	P	Pn	06 11 18.2	-0.8
	baz=339						
MOD	**Modoc Plateau**	**3.62**	**338**		Pn	06 11 21.5	+1.0
EDW2	**Edwards Air Fo**	**3.70**	**174**	Pb	Pb	06 11 29.5	+0.2
	baz=355						
O02D	**Mt. Diablo Mer**	**3.72**	**297**	Pb	Pb	06 11 30.5	+0.7
	baz=114						
O02D				Sb	Sb	06 12 18.6	+3.1
	baz=114						
TUQ	**Turquoise Moun**	**3.73**	**146**	Pb	Pb	06 11 29.5	-0.3
	baz=328						
WDC	**Whiskeytown Da**	**3.74**	**304**		Pn	06 11 23.0	+0.9
PKM	**Mcpherson Peak**	**3.83**	**197**	Pb	Pb	06 11 31.7	-0.1
	baz=16						
WVOR	**Wild Horse Val**	**3.86**	**358**	Pn	Pn	06 11 27.0	+3.2
OSI	**Osito Audit: C**	**3.96**	**183**	Pn	Pn	06 11 27.8	+2.7
OSI	**Osito Audit: C**	**3.96**	**183**	Sb	Sb	06 12 25.5	+3.4
	baz=3.2						
N02D	**Trinity Center**	**4.06**	**308**	P	Pn	06 11 27.2	+0.6
	baz=125						
M04C	**Macdoel**	**4.13**	**322**	P	Pn	06 11 27.1	-0.4
	baz=140,SNR=7.1						
SZCU	**Shurtz Canyon**	**4.34**	**101**		Pn	06 11 29.5	-1.0
MWC	**Mount Wilson**	**4.35**	**176**	Pn	Pn	06 11 28.6	-2.1
MWC				Sn	Sn	06 12 22.2	+0.1
GMRC	**Granite Mounta**	**4.39**	**148**	Pb	Pb	06 11 41.2	0.0
	baz=330						
PASC	**Pasadena Art C**	**4.40**	**177**	Pn	Pn	06 11 24.7	-6.4
YBH	**Yreka Blue Hor**	**4.54**	**315**	Pn	Pn	06 11 35.3	+2.2
	1.0nm,0.3s,baz=131,slow=8.9,SNR=11						
YBH				Lg	Lg	06 12 48.1	
	0.2nm,0.3s,baz=53,slow=20,SNR=2.7						
YBH				LR	LR	06 13 35.3	
	comp=Z,164nm,20.5s,baz=187,slow=42						
YBH	**Yreka Blue Hor**	**4.54**	**315**		Pn	06 11 33.0	-0.1
DUG	**Dugway, Tooele**	**4.66**	**68**		Pn	06 11 35.5	+0.7
DUG	**Dugway, Tooele**	**4.66**	**68**	P	Pn	06 11 34.4	-0.5
	baz=251						
L04D	**Klamath Falls**	**4.68**	**322**	P	Pn	06 11 36.0	+0.8
	baz=140,SNR=5.1						
TCRU	**Three Creeks R**	**4.70**	**88**	Pn	Pn	06 11 35.7	+0.2
KNB	**Kanab**	**4.72**	**107**		Pn	06 11 35.0	-0.7
BGU	**Big Grassy Mou**	**4.79**	**59**		Pn	06 11 36.2	-0.4
MSU	**Marysvale**	**4.92**	**89**		Pn	06 11 38.8	+0.3
MTPU	**Mount Pierson**	**4.96**	**94**	Pn	Pn	06 11 37.8	-1.3
PKCU	**Pink Cliffs**	**4.98**	**101**	Pn	Pn	06 11 39.9	+0.5
W13A	**Hualapai Mount**	**5.04**	**132**		Pn	06 11 38.0	-2.1
PFO	**Pinyon Flats O**	**5.21**	**161**	Pn	Pn	06 11 42.3	0.0
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=3.4						
PFO				Lg	Lg	06 13 08.0	
	0.4nm,0.3s,baz=233,slow=17,SNR=3.2						
PFO				LR	LR	06 13 57.6	
	comp=Z,73nm,20.5s,baz=338,slow=41						
XPFO	**Pion Flat**	**5.21**	**161**	Pn	Pn	06 11 41.4	-0.9
MFID	**Camas Ranch**	**5.23**	**21**	Pn	Pn	06 11 43.3	+0.7
HUMO	**Hull Mountain**	**5.29**	**321**		Pn	06 11 46.5	+3.1
SPUT	**South Promonto**	**5.36**	**57**	Pn	Pn	06 11 44.8	+0.3
HVU	**Hansel Valley**	**5.40**	**52**	Pn	Pn	06 11 46.4	+1.4
PINE	**Pine Mountain**	**5.54**	**341**	Pn	Pn	06 11 50.8	+3.8
CTU	**Camp Tracy**	**5.59**	**66**	Pn	Pn	06 11 50.5	+2.9
TMUT	**Trail Mountain**	**5.69**	**80**		Pn	06 11 50.0	+0.8
Q16A	**Castle Valley**	**5.70**	**84**		Pn	06 11 50.5	+1.3
Y12C	**Blythe**	**5.76**	**145**	Pn	Pn	06 11 50.0	+0.1
109C	**Camp Elliot, M**	**5.78**	**169**	Pn	Pn	06 11 50.8	+0.8
JLU	**Jordanelle**	**5.78**	**67**	Pn	Pn	06 11 50.9	+0.6
TCUT	**Toone Canyon**	**5.99**	**63**		Pn	06 11 53.6	+0.5
P17A	**Butcher Ranch,**	**6.07**	**79**		Pn	06 11 52.9	-1.3
HWUT	**Hardware Ranch**	**6.09**	**58**	Pn	Pn	06 11 56.0	+1.5
SRU	**San Rafael Swe**	**6.21**	**83**		Pn	06 11 57.2	+1.1
Y14A	**Wickenburg**	**6.38**	**135**	Pn	Pn	06 11 59.1	+0.7
113A	**Mohawk Valley,**	**6.93**	**145**	Pn	Pn	06 12 07.5	+1.6
AHID	**Auburn Hatcher**	**6.98**	**51**	Pn	Pn	06 12 05.8	-0.9
X16A	**Lo Mia Camp, P**	**7.00**	**124**	Pn	Pn	06 12 09.7	+2.7
PDAR	**Pinedale Array**	**7.95**	**55**	Pn	Pn	06 12 22.4	+2.3
	0.1nm,0.3s,baz=229,slow=12,SNR=11						
PDAR				Lg	Lg	06 14 31.7	
	0.4nm,0.3s,baz=232,slow=22,SNR=5.6						
TXAR	**Lajitas Array**	**15.33**	**123**	Pn	P	06 14 03.8	-2.0
	0.0nm,0.3s,baz=310,slow=10,SNR=4.8						
YKA	**Yellowknife Ar**	**24.07**	**4**	P	P	06 15 41.9	+2.2
	0.3nm,0.8s,baz=186,slow=9.0,SNR=8.4						

*PAS **14** 06:18:27.5±1.9, 34.37N±0.01×119.72W±0.01, h9km±1km, ML2.3/68, Error ellipse: s-maj=1.9km s-min=1.5km az=195.0*

NEIC 14 06:18:27.0±1.5, 34.37N±0.02×119.732W±0.009, h15km±2km, Error ellipse: s-maj=2.2km s-min=1.1km az=184.0, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBC	**Santa Barbara**	**0.07**	**12**		Pg	06 18 29.6	-0.4
SBC					Sg	06 18 31.8	-0.1
SYP	**Santa Ynez Pea**	**0.26**	**308**		Pg	06 18 32.6	0.0
SYP					Sb	06 18 37.2	-0.6
SCZ2	**Santa Cruz Isl**	**0.38**	**168**		Pg	06 18 34.9	+0.1
SCZ2					Sb	06 18 41.0	-0.2
FIGC	**Figueroa Mtn.**	**0.42**	**329**		Pg	06 18 35.7	+0.3
FIGC					Sb	06 18 42.1	-0.1
RYS	**Reyes Peak**	**0.42**	**49**		Pg	06 18 35.5	+0.1
STCC	**Santa Clara**	**0.46**	**98**		Pb	06 18 37.3	+0.6
PKM	**Mcpherson Peak**	**0.52**	**353**		Pg	06 18 37.2	-0.2
BSM	**San Miguel Isl**	**0.61**	**237**		Pg	06 18 38.6	-0.3
BSM					Sb	06 18 47.9	+0.1
BCW	**Bitter Crk WRg**	**0.63**	**25**		Pg	06 18 39.2	-0.1
ABL	**Mount Abel**	**0.64**	**41**		Pg	06 18 39.1	-0.5
MPI	**Mount Pinos, F**	**0.66**	**47**		Pg	06 18 39.6	-0.3
GATR	**Gnd/Air Tx Cnt**	**0.66**	**286**		Pg	06 18 40.0	+0.1
BCH	**Branch Mountai**	**0.86**	**340**		Pg	06 18 43.4	-0.4
OSI	**Osito Audit: C**	**0.87**	**73**	Pg	Pg	06 18 44.2	+0.4
CARC	**Carrizo Plain**	**0.94**	**354**		Pb	06 18 44.8	-0.3
SMMC	**Simmler**	**0.97**	**347**		Pb	06 18 45.1	-0.4
THC	**Tehachapi Micr**	**1.03**	**58**		Pb	06 18 45.9	-0.8
SNCC	**San Nicolas Is**	**1.13**	**171**	Pg	Pb	06 18 46.8	-1.5
SNCC				Sg	Sb	06 19 03.2	+0.4
PASC	**Pasadena Art C**	**1.30**	**98**	Pn	Pn	06 18 49.2	-1.3
PASC				Sn	Sb	06 19 06.2	-1.4
MWC	**Mount Wilson**	**1.39**	**96**	Pn	Pn	06 18 51.0	-1.0
PAGB	**Antelope Grade**	**1.42**	**343**		Pn	06 18 50.6	-1.7
ISA	**Isabella, Lake**	**1.65**	**38**	Sn	Sn	06 19 15.8	-0.8
PMPB	**Monarch Peak**	**2.04**	**335**	Pn	Pn	06 19 00.8	-0.1
GSC	**Goldstone, Bar**	**2.58**	**68**	Pn	Pn	06 19 07.1	-1.2
DAC	**Darwin (Calif)**	**2.58**	**42**	Pn	Pn	06 19 09.9	+1.5
PFO	**Pinyon Flats O**	**2.82**	**105**	Pn	Pn	06 19 12.1	+0.4
PFO	**Pinyon Flats O**	**2.82**	**105**		Pn	06 19 10.7	-0.9
GRAC	**Grapevine Rang**	**3.25**	**36**		Pn	06 19 19.2	+1.7

*NEIC **14** 07:12:06.3±2.4, 11.1S±0.1×162.5E±0.1, h55km±9km, mb4.5/11, Error ellipse: s-maj=20.4km s-min=11.3km az=55.0*

*IDC **14** 07:12:07.3±3.2, 10.92S×162.41E, h61km±28km, mb3.5/6, mb1 3.8/8, mb1mx3.6/47, mbtmp3.9/8, ML3.8/2, MS3.3/4, Ms1 3.3/4, ms1mx2.8/37, Error ellipse: s-maj=29.8km s-min=22.8km az=81.0*

ISC 14 07:12:05.6±0.7, 11.04S±0.08×162.63E±0.1, h46km, n33, σ1s54/29, mb3.8/10, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**3.08**	**301**	P	Pn	07 12 51.0	-0.8
	16nm,0.3s,baz=182,slow=3.3,SNR=3.7						
HNR				S	Sn	07 13 29.8	+2

comp=Z,7.3nm,1.4s
IMAR Indian Mountai 83.26 17 P **P** **07 24 27.4 +0.5**
HDA Harding Lake 84.24 20 P **P** **07 24 33.0 +1.1**
HDA IAmb IAmb 07 24 36.9
comp=Z,6.9nm,1.3s
ILAR Eielson Array 84.50 19 P **P** **07 24 31.9 -1.3**
comp=Z,0.4nm,0.9s,baz=256,slow=4.9,SNR=4.2
ISA Isabella, Lake 87.50 53 P **P** **07 24 48.3 -0.6**
ISA IAmb IAmb 07 24 48.9
comp=Z,1.6nm,0.6s
YERR Yerington 87.81 50 P **P** **07 24 49.3 -1.1**
YKA Yellowknife Ar 96.38 28 P **P** **07 25 28.2 -1.0**
comp=Z,0.1nm,0.4s,baz=261,slow=4.4,SNR=4.1

RSPR 14 07:15:53.8, 19.˝13N×66.˝79W, h41km±4km, MD3.2/14
NEIC 14 07:15:54.1±2.0, 19.˝04N±0.˝06×66.˝77W±0.˝02, h35km±56km, Error ellipse: s-maj=9.4km s-min=2.2km az=177.0
ISC 14 07:15:53.7±1.5, 19.˝05N±0.˝09×66.˝77W±0.˝03, h54km±20km, n44, σ0s56/61, 10C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.62**	**158**	*eS*		**Sn**	**07 16 15.7**	**-0.4**
EMPR	**Esperanza - Ma**	**0.62**	**158**	*ΠeP*		**Pn**	**07 16 06.2**	**-0.4**
EMPR	**Esperanza - Ma**	**0.62**	**158**			**Pn**	**07 16 07.1**	**+0.4**
EMPR						Sn	07 16 16.9	+0.9
AOPR	**Arecibo Observ**	**0.70**	**179**	*eS*		**Sn**	**07 16 18.2**	**+0.3**
AOPR	**Arecibo Observ**	**0.70**	**179**	*ΠeP*		**Pn**	**07 16 07.3**	**-0.4**
AOPR	**Arecibo Observ**	**0.70**	**179**			**Pn**	**07 16 06.8**	**-1.0**
AOPR						Sn	07 16 18.3	+0.3
MPR	**Mayaguez**	**0.91**	**203**			**Pn**	**07 16 09.3**	**-1.1**
GCPR	**Guaynabo City**	**0.99**	**139**			**Pn**	**07 16 11.0**	**-0.4**
GCPR					Sn	Sn	07 16 24.9	+0.5
CELP	**Cerrillos**	**0.99**	**169**	*⇓eP*		**Pn**	**07 16 11.2**	**-0.2**
CELP				*eS*		Sn	07 16 24.8	+0.3
CELP	**Cerrillos**	**0.99**	**169**			**Pn**	**07 16 11.2**	**-0.2**
CELP						Sn	07 16 24.8	+0.3
OBIP	**Obispado Ponce**	**1.02**	**171**	*⇓eP*		**Sn**	**07 16 11.6**	**-0.2**
OBIP	**Obispado Ponce**	**1.02**	**171**	*eS*		**Sn**	**07 16 25.7**	**+0.5**
OBIP	**Obispado Ponce**	**1.02**	**171**			**Pn**	**07 16 11.7**	**-0.1**
OBIP						Sn	07 16 25.6	+0.5
GBPR	**Guanica, Bosqu**	**1.08**	**186**	*ΠeP*		**Pn**	**07 16 12.8**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.08**	**186**	*eS*		**Sn**	**07 16 27.3**	**+0.7**
GBPR	**Guanica, Bosqu**	**1.08**	**186**			**Pn**	**07 16 12.8**	**+0.2**
GBPR						Sn	07 16 27.3	+0.7
CRPR	**Cabo Rojo, PR**	**1.09**	**197**	*⇓eP*		**Pn**	**07 16 12.6**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.09**	**197**	*eS*		**Sn**	**07 16 26.9**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.09**	**197**			**Pn**	**07 16 11.9**	**-0.8**
CRPR						Sn	07 16 27.2	+0.3
SJG	**San Juan**	**1.11**	**148**			**Pn**	**07 16 13.2**	**+0.2**
SJG					Sn	Sn	07 16 28.6	+1.4
MLPR	**Magueyes Islan**	**1.11**	**194**	*ΠeP*		**Pn**	**07 16 12.3**	**-0.7**
MLPR	**Magueyes Islan**	**1.11**	**194**	*eS*		**Sn**	**07 16 27.6**	**+0.2**
MLPR	**Magueyes Islan**	**1.11**	**194**			**Pn**	**07 16 11.4**	**-1.7**
MLPR						Sn	07 16 26.4	-0.9
CBYP	**Canovanas**	**1.16**	**132**	*ΠeP*		**Pn**	**07 16 13.4**	**-0.4**
CBYP	**Canovanas**	**1.16**	**132**	*ΠeP*		**Pn**	**07 16 13.5**	**-0.4**
CBYP				*eS*		Sn	07 16 29.2	+0.4
CBYP	**Canovanas**	**1.16**	**132**			**Pn**	**07 16 13.4**	**-0.4**
CBYP						Sn	07 16 28.9	+0.1
IGPR	**InterUniversit**	**1.25**	**150**	*ΠeP*		**Pn**	**07 16 15.1**	**+0.2**
IGPR	**InterUniversit**	**1.25**	**150**	*eS*		**Sn**	**07 16 31.1**	**+0.3**
IGPR	**InterUniversit**	**1.25**	**150**	Pn		**Pn**	**07 16 15.2**	**+0.3**
IGPR						Sn	07 16 31.2	+0.4
HUMP	**Col San Antoni**	**1.26**	**136**	*ΠeP*		**Pn**	**07 16 14.8**	**-0.2**
HUMP	**Col San Antoni**	**1.26**	**136**	*eS*		**Sn**	**07 16 31.0**	**+0.1**
HUMP	**Col San Antoni**	**1.26**	**136**			**Pn**	**07 16 14.9**	**-0.2**
HUMP						Sn	07 16 31.0	+0.1
MTP	**Monte Pirata**	**1.50**	**129**	*ΠeP*		**Pn**	**07 16 17.9**	**-0.4**
MTP	**Monte Pirata**	**1.50**	**129**	*eS*		**Sn**	**07 16 36.1**	**-0.7**
MTP	**Monte Pirata**	**1.50**	**129**			**Pn**	**07 16 17.9**	**-0.4**
MTP						Sn	07 16 37.4	+0.7
PCDR	**Punta Cana, DR**	**1.62**	**251**	*ΠeP*		**Pn**	**07 16 19.9**	**0.0**
PCDR	**Punta Cana, DR**	**1.62**	**251**	*eS*		**Sn**	**07 16 38.9**	**-0.8**
PCDR	**Punta Cana, DR**	**1.62**	**251**			**Pn**	**07 16 19.9**	**0.0**
PCDR						Sn	07 16 40.6	+1.0
STVI	**Saint Thomas**	**1.86**	**112**	*⇓eP*		**Pn**	**07 16 22.9**	**-0.3**
STVI	**Saint Thomas**	**1.86**	**112**	*eS*		**Sn**	**07 16 45.3**	**-0.2**
STVI	**Saint Thomas**	**1.86**	**112**			**Pn**	**07 16 22.8**	**-0.3**
STVI						Sn	07 16 45.2	-0.3
DR12	**Loma Pena Alta**	**2.48**	**264**			**Pn**	**07 16 31.3**	**-0.5**
SDD	**Santo Domingo**	**3.04**	**259**	Pn		**Pn**	**07 16 39.0**	**-0.4**
SDDR	**Presa de Saban**	**4.28**	**270**			**Pn**	**07 16 57.1**	**+0.8**

IDC 14 07:22:30.9±31.0, 23.˝70S×174.˝52W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.7/57, mbtmp4.1/4, Error ellipse: s-maj=565.1km s-min=163.8km az=78.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
CTA	**Charters Tower**	**36.50**	**268**	P		P	07 29 38.9	+0.7
	4.1nm,0.5s,baz=100,slow=11,SNR=7.3							
STKA	**Stephens Creek**	**39.46**	**248**	P		P	07 30 02.4	-0.7
	0.5nm,0.4s,baz=105,slow=17,SNR=3.5							
ASAR	**Alice Springs**	**47.01**	**259**	P		P	07 31 03.9	-0.4
	1.1nm,0.6s,baz=85,slow=8.9,SNR=18							
WRA	**Warramunga Ar**	**47.43**	**264**	P		P	07 31 07.4	-0.1
	2.5nm,0.6s,baz=102,slow=8.6,SNR=13							

MAN 14 07:28:10.1, 8.˚19N×122.˚02E, h23km, mb4.4, ML3.2, MS3.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
ZCP	**Zamboanga City**	**1.25**	**177**	*⇓iP*		Pn	07 28 29.9	-2.3
ZCP				*i* S		Sn	07 28 46.3	-1.9
CUYO	**Cuyo Island**	**2.82**	**340**	*eP*		Pn	07 28 55.2	+1.4
CUYO				*eS*		Sn	07 29 28.2	+1.1

IDC 14 07:28:37.3±1.3, 15.˝96N×148.˝34E, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.6/70, mbtmp3.7/7, ML3.7/1, Error ellipse: s-maj=41.8km s-min=20.3km az=102.0
ISC 14 07:28:42.4±1.3, 15.˝9N±0.˝1×148.˝3E±0.˝2, h35km, n7, σ1s27/8, mb3.5/6, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
GUMO	**Guam**	**4.03**	**235**	Pn		**Pn**	**07 29 39.8**	**-1.8**
	4.3nm,0.3s,baz=46,slow=17,SNR=2.8							
GUMO						Sn	**07 30 28.8**	**+1.2**
	9.4nm,0.3s,baz=46,slow=18,SNR=3.2							
MJAR	**Matsushiro Arr**	**22.39**	**338**	P		**P**	**07 33 36.8**	**-1.0**
	1.3nm,0.5s,baz=145,slow=8.9,SNR=3.8							
WRA	**Warramunga Ar**	**38.19**	**201**	P		**P**	**07 35 59.5**	**+0.6**
	1.2nm,0.6s,baz=27,slow=9.1,SNR=5.0							
ASAR	**Alice Springs**	**41.79**	**200**	P		**P**	**07 36 29.3**	**+0.5**
	0.5nm,0.6s,baz=26,slow=7.8,SNR=9.8							
SONM	**Songino Array**	**46.82**	**322**	P		**P**	**07 37 09.8**	**+0.9**
	0.3nm,0.6s,baz=121,slow=7.1,SNR=2.8							
BVAR	**Borovoye Array**	**70.15**	**321**	P		**P**	**07 39 52.1**	**+0.8**
	0.3nm,0.3s,baz=122,slow=5.2,SNR=3.3							
YKA	**Yellowknife Ar**	**79.27**	**28**	P		**P**	**07 40 43.4**	**-0.5**
	0.3nm,0.7s,baz=284,slow=5.6,SNR=4.0							

IDC 14 07:45:52.6±0.9, 13.˚18N×121.˚37E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/47, mbtmp3.7/7, MS2.9/3, Ms1 2.9/3, ms1mx2.6/52, Error ellipse: s-maj=46.9km s-min=9.9km az=66.0
MAN 14 07:45:52.7, 13.˚06N×121.˚12E, h18km, mb4.6, ML3.5, MS3.4
MAN Intensity II - Puerto Galera and Calapan Oriental Mindoro.
NEIC 14 07:45:53.6±0.4, 13.˚21N±0.˚05×121.˚32E±0.˚10, h12km±7km, mb4.1/9, Error ellipse: s-maj=14.2km s-min=7.5km az=91.0
ISC 14 07:45:51.9±1.4, 13.˚15N±0.˚03×121.˚25E±0.˚05, h2km±10km, n34, σ1s06/40, mb3.9/11, 3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
BOAC	**Boac**	**0.65**	**62**	*eP*		**Pn**	**07 46 07.3**	**-1.0**
BOAC				*eS*		**Sn**	**07 46 17.4**	**-1.7**
TGY	**Tagaytay City**	**0.99**	**342**	Pg		**Pn**	**07 46 12.2**	**-0.8**
	882nm,0.3s,baz=174,slow=3.4,SNR=130							
TGY					Lg	Lg	07 46 26.6	
	2μm,0.3s,baz=143,slow=20,SNR=14							
TGY					LR	LR	07 46 34.0	
	comp=Z,449nm,19.8s,baz=60,slow=41							
TGY	**Tagaytay City**	**0.99**	**342**	*⇓iP*		**Pn**	**07 46 12.1**	**-1.0**
TGY				*i* S		**Sg**	**07 46 22.5**	**-1.4**
LQP	**Lukban**	**0.99**	**16**	*eP*		**Pn**	**07 46 12.5**	**-0.6**
LQP				*i* S		**Sn**	**07 46 26.0**	**-1.9**
OTRP	**Odiongan**	**1.08**	**136**	*eP*		**Pb**	**07 46 12.8**	**-0.7**
OTRP				*eS*		**Sn**	**07 46 28.3**	**-1.5**
GQP	**Guinayangan**	**1.38**	**57**	*⇓eP*		**Pg**	**07 46 19.1**	**+0.7**
GQP				*eS*		**Sg**	**07 46 38.4**	**+2.0**
POLP	**Polilio Island**	**1.70**	**23**	*eP*		**Pg**	**07 46 24.4**	**-0.2**
POLP				*eS*		**Sg**	**07 46 47.8**	**+1.1**
RCP	**Roxas**	**2.15**	**137**	*⇓eP*		**Pb**	**07 46 31.3**	**-0.4**
RCP				*eS*		**Sg**	**07 46 59.6**	**-1.5**
CUYO	**Cuyo Island**	**2.30**	**186**	*eP*		**Pn**	**07 46 31.2**	**+0.3**
CUYO				*eS*		**Sn**	**07 46 58.2**	**-1.7**
ENPP	**El Nido**	**2.63**	**223**	*eP*		**Pn**	**07 46 35.4**	**-0.2**
DAV	**Davao City (W)**	**7.39**	**144**	LR		LR	07 51 11.4	
	comp=Z,123nm,19.4s,baz=348,slow=43							
BKB	**Balikpapan**	**14.96**	**197**	Pn		**Pn**	**07 49 23.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**22.10**	**287**	P		**P**	**07 50 51.6**	**+2.9**
	1.0nm,0.3s,baz=96,slow=7.3,SNR=6.5							
CMAR					LR	LR	07 58 22.6	
	comp=Z,19nm,22.0s,baz=115,slow=34							
CMAR	**Chiang Mai Arr**	**22.10**	**287**	P		**P**	**07 50 49.4**	**+0.7**
KSRS	**Korea Array**	**24.93**	**13**	LR		LR	08 01 32.6	
	comp=Z,28nm,20.7s,baz=190,slow=38							
WRA	**Warramunga Ar**	**35.32**	**158**	P		**P**	**07 52 49.6**	**+0.8**
	1.4nm,0.7s,baz=334,slow=9.9,SNR=5.8							
WRA	**Warramunga Ar**	**35.32**	**158**	P		**P**	**07 52 49.2**	**+0.3**
SONM	**Songino Array**	**36.73**	**343**	P		**P**	**07 53 00.7**	**-0.1**
	0.4nm,0.7s,baz=162,slow=7.4,SNR=3.8							
SONM	**Songino Array**	**36.73**	**343**	P		**P**	**07 53 00.4**	**-0.5**
AS31	**Alice Springs**	**38.63**	**161**	P		**P**	**07 53 16.7**	**-0.3**
ASAR	**Alice Springs**	**38.63**	**161**	P		**P**	**07 53 18.0**	**+1.0**
	0.9nm,0.5s,baz=342,slow=6.6,SNR=11							
ASAR	**Alice Springs**	**38.63**	**161**	P		**P**	**07 53 17.1**	**+0.1**
MK31	**Makanchi Array**	**46.79**	**324**	P		**P**	**07 54 23.1**	**0.0**
MK31					IAmb	IAmb	07 54 36.4	
	comp=Z,2.4nm,1.4s							
MKAR	**Makanchi Array**	**46.79**	**324**	P		**P**	**07 54 22.7**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=114,slow=9.6,SNR=3.0							
MKAR	**Makanchi Array**	**46.79**	**324**	P		**P**	**07 54 23.2**	**+0.2**
BBOO	**Buckleboo**	**47.84**	**163**	P		**P**	**07 54 31.8**	**+0.5**
STKA	**Stephens Creek**	**48.83**	**157**	P		**P**	**07 54 39.5**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=336,slow=9.4,SNR=5.9							
STKA	**Stephens Creek**	**48.83**	**157**	P		**P**	**07 54 39.1**	**+0.2**
STKA					IAmb	IAmb	07 54 45.5	
	comp=Z,0.7nm,1.1s							
ZAA0	**Zalesovo Array**	**49.79**	**333**	P		**P**	**07 54 45.2**	**-0.8**
ZAA0					IAmb	IAmb	07 54 49.0	
	comp=Z,8.4nm,1.4s							
ZALV	**Zalesovo Beam**	**49.79**	**333**	P		**P**	**07 54 46.0**	**0.0**
KURK	**Kurchatov**	**50.94**	**326**	P		**P**	**07 54 54.9**	**0.0**
KURK					IAmb	IAmb	07 54 57.5	
	comp=Z,8.0nm,1.5s							
KKAR	**Karatay Array**	**52.74**	**315**	P		**P**	**07 55 08.6**	**+0.1**
KKAR					IAmb	IAmb	07 55 21.9	
	comp=Z,1.0nm,0.6s							
KKAR	**Karatay Array**	**52.74**	**315**	P		**P**	**07 55 08.3**	**-0.2**
YKA	**Yellowknife Ar**	**93.07**	**23**	P		**P**	**07 59 08.8**	**+1.6**
	comp=Z,0.2nm,0.7s,baz=321,slow=4.8,SNR=3.1							

UPA 14 07:45:58.1±1.0, 8.˚37N×77.˚03W, h22km±6km, MW4.4
NEIC 14 07:45:59.5±1.2, 8.˚44N±0.˚06×76.˚98W±0.˚06, h50km±5km, mb4.2/10, Error ellipse: s-maj=10.0km s-min=7.4km az=212.0
RSNC 14 07:45:59.1±1.2, 8.˚33N×77.˚02W, h79km±11km, ML3.6, Mw3.7
IDC 14 07:46:00.4±2.1, 8.˚41N×77.˚06W, h57km±23km, mb3.5/10, mb1 3.9/13, mb1mx3.6/35, mbtmp3.9/13, ML3.0/3, MS2.9/7, Ms1 2.9/7, ms1mx2.7/32, Error ellipse: s-maj=27.2km s-min=13.7km az=43.0
ISC 14 07:45:59.3±0.8, 8.˚39N±0.˚03×77.˚04W±0.˚03, h51km±9km, n100, σ1s31/130, mb3.9/13, 7C-2D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
LCBC	**Los crdobas,**	**0.81**	**55**	*⇓iP*		**Pn**	**07 46 15.2**	**+0.7**
LCBC				*eS*		**Sn**	**07 46 29.3**	**+3.7**
UPD2	**Meteti**	**0.98**	**279**	*ΠiP*		**Pn**	**07 46 15.5**	**-1.3**
UPD2				*eS*		**Sn**	**07 46 28.9**	**-0.8**
PTAC	**Punta Ardita,**	**1.45**	**212**	*eP*		**Pn**	**07 46 21.7**	**-1.5**
PTAC				*eS*		**Sn**	**07 46 40.8**	**-0.3**
PTAC				*i*			07 46 44.7	
	comp=Z,2μm,0.2s							
PTAC	**Punta Ardita,**	**1.45**	**212**	*eP*		**Pn**	**07 46 21.6**	**-1.6**
PTAC				*eS*		**Sn**	**07 46 39.2**	**-1.9**
DBBC	**Dabeiba**	**1.59**	**149**	*ΠeP*		**Pn**	**07 46 24.4**	**-0.8**
DBBC				*i*			07 46 52.9	
	comp=Z,839nm,0.6s							
DBBC	**Dabeiba**	**1.59**	**149**	*eP*		**Pn**	**07 46 24.4**	**-0.8**
UREC	**San Jos de Ur**	**1.62**	**113**	*ΠeP*		**Pn**	**07 46 24.8**	**-0.7**
UREC				*eS*		**Sn**	**07 46 44.7**	**-0.5**
UREC				*i*			07 46 46.3	
	comp=Z,478nm,0.4s							
SOLC	**Bahia Solano**	**2.18**	**190**	*eP*		**Pn**	**07 46 33.3**	**+0.1**
SOLC				*i*			07 47 11.2	
	comp=Z,298nm,1.7s							
CHPO	**Chepo, Panama**	**2.20**	**291**	*eP*		**Pn**	**07 46 32.7**	**-0.7**
CHPO				*eS*		**Sn**	**07 46 59.9**	**+0.5**
ZARC	**Zaragoza, Cauc**	**2.33**	**112**	*ΠiP*		**Pn**	**07 46 35.0**	**-0.3**
ZARC				*eS*		**Sn**	**07 47 01.5**	**-1.3**
ZARC				*i*			07 47 03.8	
	comp=Z,730nm,0.4s							
SJCC	**San Jacinto, C**	**2.37**	**51**	*eP*		**Pn**	**07 46 35.5**	**-0.4**
SJCC				*eS*		**Sn**	**07 47 03.5**	**-0.2**
SJCC				*i*			07 47 05.5	
	comp=Z,134nm,0.6s							
SJCC	**San Jacinto, C**	**2.37**	**51**	*eP*		**Pn**	**07 46 35.4**	**-0.4**
SJCC				*eS*		**Sn**	**07 47 03.6**	**-0.1**
UPA	**Univ. de Panam**	**2.54**	**284**	*⇓iP*		**Pn**	**07 46 38.6**	**+0.5**
UPA				*eS*		**Sn**	**07 47 07.8**	**-0.1**
HELC	**Santa Helena**	**2.64**	**145**	*ΠiP*		**Pn**	**07 46 39.4**	**-0.5**
HELC				*eS*		**Sn**	**07 47 09.7**	**-1.2**
HELC				*i*			07 47 13.5	
	comp=Z,105nm,0.7s							
HELC	**Santa Helena**	**2.64**	**145**	*ΠiP*		**Pn**	**07 46 39.4**	**-0.5**
HELC				*eS*		**Sn**	**07 47 11.6**	**+0.6**
CBOC	**Ciudad Bolivar**	**2.70**	**158**	*eP*		**Pn**	**07 46 41.5**	**+1.0**
CBOC				*eS*		**Sn**	**07 47 14.4**	**+2.2**
CBOC				*i*			07 47 25.0	
	comp=Z,123nm,1.0s							
CHOR3	**La Chorrera**	**2.75**	**281**	*eP*		**Pn**	**07 46 39.9**	**-1.1**
CHOR3				*eS*		**Sn**	**07 47 13.0**	**+0.1**
ZANG	**Zanguenga, Cho**	**2.86**	**282**	*eP*		**Pn**	**07 46 41.6**	**-0.9**
ZANG				*eS*		**Sn**	**07 47 16.3**	**+0.6**
BCIP	**Isla Barro Col**	**2.88**	**286**	*eP*		**Pn**	**07 46 41.8**	**-1.0**
BCIP				*i*			07 47 28.5	
	comp=Z,158nm,1.9s							
BCIP	**Isla Barro Col**	**2.88**	**286**	*eP*		**Pn**	**07 46 42.2**	**-0.5**
BCIP				*eS*		**Sn**	**07 47 16.2**	**+0.1**
BCIP	**Isla Barro Col**	**2.88**	**286**			**Pn**	**07 46 42.3**	**-0.4**
SMLC	**San Martn de**	**2.96**	**82**	*eP*		**Pn**	**07 46 43.6**	**-0.2**
SMLC				*eS*		**Sn**	**07 47 17.1**	**-1.1**
SMLC				*i*			07 47 21.9	
	comp=Z,252nm,0.2s							
VTON	**El Valle, Cocl**	**3.05**	**274**	*eP*		**Pn**	**07 46 44.3**	**-0.9**
ARGC	**Ariguani, Magd**	**3.12**	**62**	*eP*		**Pn**	**07 46 46.3**	**+0.2**
ARGC				*eS*		**Sn**	**07 47 21.5**	**-0.6**
ARGC				*i*			07 47 24.0	
	comp=Z,94nm,0.5s							
PTBC	**PUERTO BERRIO,**	**3.15**	**125**	*ΠiP*		**Pn**	**07 46 45.7**	**-0.8**
PTBC				*eS*		**Sn**	**07 47 20.6**	**-2.3**
PTBC				*i*			07 47 24.0	
	comp=Z,576nm,0.6s							
AZU	**Azuero**	**3.26**	**260**	*eP*		**Pn**	**07 46 47.2**	**-0.8**
AZU				*eS*		**Sn**	**07 47 23.7**	**-1.9**
NORC	**Norcasia**	**3.53**	**142**	*eP*		**Pn**	**07 46 52.6**	**+0.8**
NORC				*i*			07 47 39.6	
	comp=Z,92nm,0.5s							
PLMC	**San Jos del P**	**3.54**	**168**	*eP*		**Pn**	**07 46 50.9**	**-1.0**
PLMC				*i*			07 47 53.2	
	comp=Z,78nm,0.9s							
GUY2C	**Guyana, Caldas**	**3.55**	**152**	*eP*		**Pn**	**07 46 52.9**	**+0.4**
GUY2C				*i*			07 48 03.9	
	comp=Z,58nm,0.6s							
OCAC	**Ocana**	**3.68**	**92**	*eP*		**Pn**	**07 46 54.1**	**+0.2**
OCAC				*eS*		**Sn**	**07 47 35.2**	**-1.0**
OCAC				*i*			07 47 37.8	
	comp=Z,559nm,0.4s							
RREF	**El Recreo**	**3.85**	**154**	*eP*		**Pn**	**07 46 58.2**	**+1.6**
RREF				*i*			07 48 15.5	
	comp=Z,43nm,0.7s							
CODC	**Agustn Codazz**	**3.87**	**66**	*eP*		**Pn**	**07 46 56.7**	**+0.4**
CODC				*eS*		**Sn**	**07 47 39.0**	**-1.5**
CODC				*i*			07 47 43.1	
	comp=Z,134nm,0.5s							
SMRC	**Santa Marta, M**	**3.91**	**45**	*eP*		**Pn**	**07 46 57.3**	**+0.4**
SMRC				*eS*		**Sn**	**07 47 39.7**	**-1.9**
SMRC				*i*			07 48 22.0	
	comp=Z,28nm,0.6s							
CACAO	**El Cacao, Vera**	**3.93**	**255**	*eP*		**Pn**	**07 46 57.9**	**+0.7**
CACAO				*eS*		**Sn**	**07 47 41.3**	**-0.7**
SPBC	**San Pablo de B**	**4.00**	**133**	*eP*		**Pn**	**07 46 58.0**	**-0.3**
SPBC				*eS*		**Sn**	**07 47 43.0**	**-1.1**
SPBC				*i*			07 48 05.0	
	comp=Z,65nm,0.9s							
GMAL	**Guarumal, Vera**	**4.20**	**262**	*eP*		**Pn**	**07 47 02.0**	**+1.1**
GMAL				*eS*		**Sn**	**07 47 50.0**	**+1.2**
PAMC	**Pamplona, Colo**	**4.42**	**103**	*eP*		**Pn**	**07 47 05.3**	**+1.0**
PAMC				*eS*		**Sn**	**07 47 55.4**	**+0.6**
PAMC				*i*			07 47 58.5	
	comp=Z,239nm,0.6s							
PAMC				*i*			07 48 00.7	
	comp=Z,169nm,0.5s							
YOTC	**Yotoco, Valle**	**4.43**	**171**	*eP*		**Pn**	**07 47 02.8**	**-1.3**
YOTC				*eS*		**Sn**	**07 47 51.7**	**-2.8**
YOTC				*i*			07 48 18.7	
	comp=Z,14nm,1.2s							
ROSC	**El Rosal**	**4.44**	**142**	P		**Pn**	**07 47 06.1**	**+1.6**
	comp=Z,6.2nm,0.3s,baz=6.6,slow=23,SNR=15							
ROSC					S	**Sn**	**07 47 58.6**	**+3.5**
	comp=Z,10nm,0.3s,baz=335,slow=23,SNR=6.7							
ROSC	**El Rosal**	**4.44**	**142**	*eP*		**Pn**	**07 47 06.3**	**+1.8**
ROSC				*i*			07 48 18.0	
	comp=Z,59nm,0.8s							
ROSC	**El Rosal**	**4.44**	**142**			**Pn**	**07 47 05.7**	**+1.2**
ROSC						**Sn**	**07 47 56.6**	**+1.5**
RUSC	**La Rusia**	**4.64**	**122**	*eP*		**Pn**	**07 47 06.7**	**-0.7**
RUSC				*i*			07 48 00.9	
	comp=Z,162nm,1.1s							
RUSC	**La Rusia**	**4.64**	**122**			**Pn**	**07 47 07.0**	**-0.4**
RUSC					Sn	**Sn**	**07 47 59.4**	**-0.8**
ORTC	**Ortega, Tolima**	**4.79**	**158**	*eP*		**Pn**	**07 47 11.5**	**+2.4**
ORTC				*i*			07 48 27.8	
	comp=Z,31nm,1.6s							
CVER	**Cruz Verde, Cu**	**4.84**	**142**	*eP*		**Pn**	**07 47 12.7**	**+2.6**
CVER				*i*			07 48 27.5	
	comp=Z,649nm,0.6s							
CHIC	**Chingaza**	**4.97**	**138**	*eP*		**Pn**	**07 47 13.0**	**+1.2**
CHIC				*eS*		**Sn**	**07 48 08.4**	**+0.2**
CHIC				*i*			07 48 14.6	
	comp=Z,53nm,0.6s							
VILC	**Villavicencio,**	**5.39**	**142**	*eP*		**Pn**	**07 47 19.0**	**+1.7**
VILC				*i*			07 48 58.6	
	comp=Z,48nm,0.6s							
TAMC	**Tame, Arauca**	**5.55**	**110**	*eP*		**Pn**	**07 47 20.3**	**+0.9**
TAMC				*i*			07 48 32.3	
	comp=Z,68nm,0.7s							
BRU2	**Volcan**	**5.61**	**275**	*eP*		**Pn**	**07 47 20.5**	**+0.2**
BRU2				*eS*		**Sn**	**07 48 17.3**	**-6.3**
URIC	**Uribia, Colomb**	**5.96**	**56**	*eP*		**Pn**	**07 47 27.2**	**+2.1**
URIC				*i*			07 49 03.1	
	comp=Z,22nm,0.7s							
URIC	**Uribia, Colomb**	**5.96**	**56**	Pn		**Pn**	**07 47 24.6**	**-0.5**
SDV	**Santo Domingo**	**6.35**	**85**	P		**Pn**	**07 47 30.6**	**0.0**
	comp=Z,6.7nm,0.3s,baz=277,slow=9.0,SNR=49							
SDV					S	**Sn**	**07 48 39.7**	**-2.2**
	comp=Z,35nm,0.3s,baz=236,slow=14,SNR=21							
SDV					LR	LR	07 50 54.7	
	comp=Z,81nm,21.7s,baz=270,slow=46							
SDV	**Santo Domingo**	**6.35**	**85**			**Pn**	**07 47 30.6**	**0.0**
SDV					Sn	**Sn**	**07 48 40.2**

mb1 4.2/3, mb1mx3.6/40, mbtmp3.9/3, MS3.4/14, Ms1 3.4/14, ms1mx3.2/40, Error ellipse: s-maj=162.1km s-min=30.9km az=121.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.07**	**189**	LR	LR	08 07 57.1	
	comp=Z,95nm,20.7s,baz=324,slow=36						
JAY	**Jayapura**	**7.43**	**276**	LR	LR	08 08 16.6	
	comp=Z,217nm,18.7s,baz=110,slow=32						
HNR	**Honiara**	**13.22**	**118**	LR	LR	08 13 00.5	
	comp=Z,142nm,19.3s,baz=323,slow=40						
WRA	**Warramunga Arr**	**21.25**	**218**	P	P	08 09 02.9	-0.7
	6.0nm,0.9s,baz=44,slow=11,SNR=12						
WRA				LR	LR	08 18 07.2	
	comp=Z,145nm,18.7s,baz=35,slow=39						
ASAR	**Alice Springs**	**24.40**	**213**	P	P	08 09 36.4	+0.5
	2.4nm,0.9s,baz=38,slow=7.2,SNR=15						
DAV	**Davao City (W)**	**24.75**	**295**	LR	LR	08 19 44.8	
	comp=Z,83nm,18.6s,baz=112,slow=38						
DZM	**Mont Dzumac**	**25.74**	**138**	LR	LR	08 17 19.3	
	comp=Z,80nm,18.9s,baz=28,slow=30						
FITZ	**Fitzroy Crossi**	**26.42**	**235**	LR	LR	08 20 30.7	
	comp=Z,119nm,18.9s,baz=54,slow=37						
H11S3	**WAKE ISLAND Hy**	**28.41**	**39**	T	T	08 40 06.5	
	baz=223,slow=76,SNR=43						
H11S2	**WAKE ISLAND Hy**	**28.42**	**40**	T	T	08 40 06.4	
	baz=223,slow=76,SNR=48						
H11S1	**WAKE ISLAND Hy**	**28.43**	**39**	T	T	08 40 05.1	
	baz=223,slow=76,SNR=46						
STKA	**Stephens Creek**	**29.01**	**191**	LR	LR	08 22 32.0	
	comp=Z,86nm,19.2s,baz=23,slow=38						
H11N1	**WAKE ISLAND Hy**	**29.45**	**38**	T	T	08 41 22.9	
	baz=222,slow=76,SNR=17						
H11N3	**WAKE ISLAND Hy**	**29.47**	**38**	T	T	08 41 23.4	
	baz=222,slow=76,SNR=26						
H11N2	**WAKE ISLAND Hy**	**29.47**	**38**	T	T	08 41 22.9	
	baz=222,slow=76,SNR=29						
KSRS	**Korea Array**	**44.74**	**337**	LR	LR	08 28 22.1	
	comp=Z,44nm,18.5s,baz=215,slow=32						
PETK	**Petropavlovsk-**	**56.85**	**7**	LR	LR	08 35 20.2	
	comp=Z,56nm,20.7s,baz=238,slow=33						
SONM	**Songino Array**	**62.68**	**330**	LR	LR	08 40 50.4	
	comp=Z,28nm,20.6s,baz=39,slow=35						
TLY	**Talaya**	**66.55**	**332**	LR	LR	08 42 50.2	
	comp=Z,38nm,19.7s,baz=91,slow=35						
ZALV	**Zalesovo Beam**	**77.39**	**327**	LR	LR	08 49 45.0	
	comp=Z,26nm,19.3s,baz=43,slow=35						
ILAR	**Eielson Array**	**82.65**	**23**	P	P	08 16 40.6	0.0
	0.4nm,0.8s,baz=232,slow=4.4,SNR=3.4						
KIRV	**Kirov**	**97.39**	**329**	LR	LR	09 03 06.3	
	comp=Z,58nm,21.5s,baz=119,slow=36						

*IDC **14** 08:21:29.5±2.6, 47.60N×152.58E, h169km±23km, mb3.3/13, mb1 3.4/16, mb1mx3.2/47, mbtmp3.8/16, MS3.7/1, Ms1 3.7/1, ms1mx2.5/26, Error ellipse: s-maj=38.4km s-min=16.4km az=154.0*

ISC 14 08:21:27.8±1.5, 47.6N±0.2×152.6E±0.2, h150km, n23, σ1s04/16, mb3.6/12, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**6.42**	**29**	P	**Pn**	**08 23 02.2**	**+2.3**
	0.4nm,0.3s,baz=200,slow=12,SNR=3.2						
ASAJ	**Asahikawa**	**7.79**	**247**	P	**Pn**	**08 23 18.9**	**+0.6**
	1.2nm,0.3s,baz=63,slow=15,SNR=5.3						
USRK	**Ussuriysk Ar.**	**14.74**	**264**	P	**Pn**	**08 24 49.9**	**+1.1**
	baz=78,slow=13,SNR=5.5						
KSRS	**Korea Array**	**20.73**	**250**	P	**P**	**08 25 58.0**	**+1.7**
	2.3nm,0.8s,baz=52,slow=11,SNR=7.4						
H11N2	**WAKE ISLAND Hy**	**30.13**	**152**	T	T	08 59 25.9	
	baz=341,slow=76,SNR=59						
H11N1	**WAKE ISLAND Hy**	**30.14**	**152**	T	T	08 59 23.5	
	baz=341,slow=76,SNR=68						
H11N3	**WAKE ISLAND Hy**	**30.14**	**152**	T	T	08 59 28.9	
	baz=341,slow=76,SNR=45						
SONM	**Songino Array**	**30.73**	**288**	P	**P**	**08 27 27.6**	**-0.9**
	0.3nm,0.5s,baz=101,slow=4.6,SNR=7.1						
H11S1	**WAKE ISLAND Hy**	**31.22**	**153**	T	T	09 00 58.3	
	baz=342,slow=76,SNR=84						
H11S3	**WAKE ISLAND Hy**	**31.23**	**154**	T	T	09 00 49.7	
	baz=342,slow=76,SNR=67						
H11S2	**WAKE ISLAND Hy**	**31.23**	**153**	T	T	09 00 50.3	
	baz=342,slow=76,SNR=71						
ZALV	**Zalesovo Beam**	**41.84**	**305**	P	**P**	**08 29 02.0**	**-0.5**
	0.8nm,0.3s,baz=74,slow=5.1,SNR=3.0						
MKAR	**Makanchi Array**	**46.24**	**296**	P	**P**	**08 29 37.8**	**+0.1**
	0.5nm,0.8s,baz=170,slow=41,SNR=5.1						
KURBB	**Kurchatov Arra**	**46.70**	**303**	P	**P**	**08 29 40.5**	**-0.7**
	1.6nm,0.6s,baz=68,slow=8.3,SNR=12						
YKA	**Yellowknife Ar**	**50.47**	**37**	P	**P**	**08 30 08.9**	**-0.8**
	0.2nm,0.6s,baz=298,slow=7.3,SNR=3.5						
ARCES	**ARCESS Array B**	**56.94**	**340**	P	**P**	**08 30 56.4**	**-0.3**
	2.2nm,0.9s,baz=29,slow=7.5,SNR=3.3						
AKTO	**Aktyubinsk**	**57.90**	**311**	LR	LR	08 58 50.7	
	comp=Z,65nm,20.0s,baz=85,slow=39						
FINES	**FINESS Array B**	**63.13**	**334**	P	**P**	**08 31 38.2**	**-0.7**
	0.9nm,0.3s,baz=35,slow=6.6,SNR=15						
NOA	**NORSAR Array B**	**67.32**	**341**	P	**P**	**08 32 06.2**	**+0.2**
	0.4nm,0.3s,baz=27,slow=6.5,SNR=4.0						
AKASG	**Malin Array Be**	**70.65**	**326**	P	**P**	**08 32 26.0**	**-0.6**
	0.8nm,0.3s,baz=35,slow=6.2,SNR=5.0						
TXAR	**Lajitas Array**	**77.39**	**60**	P	**P**	**08 33 05.6**	**-0.6**
	0.2nm,0.7s,baz=335,slow=4.0,SNR=3.2						
BRTR	**Keskin Array B**	**77.54**	**316**	P	**P**	**08 33 06.1**	**-0.9**
	0.7nm,0.7s,baz=39,slow=5.7,SNR=3.2						
GERES	**GERESS Array B**	**77.55**	**334**	P	**P**	**08 33 07.2**	**+0.4**
	0.3nm,0.4s,baz=97,slow=7.0,SNR=3.3						

*UCR **14** 08:33:02.7±0.7, 12.77N×88.64W, h38km±29km, ML3.8*
*INET **14** 08:33:02.7, 12.76N×88.64W, h30km, MD3.4, ML3.0*
*SNET **14** 08:33:02.6±0.7, 12.78N×88.64W, h40km±24km, ML3.8*

ISC 14 08:33:02.4±2.7, 12.7N±0.2×88.63W±0.07, h43km±54km, n36, σ0.28/45, 2C-18D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.59**	**6**	↓*iP*	**Pn**	**08 33 14.5**	**0.0**
JUCU	**Jucuarɲn**	**0.64**	**36**	↓*iP*	**Pn**	**08 33 14.9**	**-0.2**
JUCU				*eS*	**Sn**	**08 33 24.5**	**+0.2**
JUCU				IAML		08 33 26.6	
	comp=Z,4μm,0.3s						
LCY	**Lacayo**	**0.76**	**25**	*eP*	**Pn**	**08 33 16.8**	**-0.1**
LCY	**Lacayo**	**0.76**	**25**	*eP*	**Pn**	**08 33 16.8**	**-0.1**
COEB	**Comit de Eme**	**0.77**	**7**	↓*eP*	**Pn**	**08 33 16.6**	**-0.3**
COEB				IAML		08 33 17.8	
	comp=Z,3μm,0.5s						
TECA	**Tecapa**	**0.77**	**9**	↓*iP*	**Pn**	**08 33 16.8**	**-0.3**
TECA	**Tecapa**	**0.77**	**9**	↓*iP*	**Pn**	**08 33 16.8**	**-0.3**
PACA	**Pacayal**	**0.79**	**22**	↓*iP*	**Pn**	**08 33 17.1**	**-0.1**
PACA	**Pacayal**	**0.79**	**22**	↓*iP*	**Pn**	**08 33 17.1**	**-0.1**
BLLM	**Bellamira**	**0.80**	**28**	↑*iP*	**Pn**	**08 33 17.3**	**-0.1**
BLLM	**Bellamira**	**0.80**	**28**	↑*iP*	**Pn**	**08 33 17.3**	**-0.1**
UESV	**Universidad de**	**0.91**	**350**	↓*eP*	**Pn**	**08 33 18.7**	**-0.2**
UESV				*eS*	**Sn**	**08 33 30.9**	**+0.1**
UESV	**Universidad de**	**0.91**	**350**	↓*eP*	**Pn**	**08 33 18.7**	**-0.2**
UESV				*eS*	**Sn**	**08 33 30.9**	**+0.1**
COEG	**Centro de Oper**	**0.91**	**344**	↓*iP*	**Pn**	**08 33 18.6**	**-0.4**
COEG				IAML		08 33 37.0	
	comp=Z,3μm,0.5s						
LCND	**La Caada**	**0.92**	**52**	↓*eP*	**Pn**	**08 33 18.5**	**-0.4**
LCND				*eS*	**Sn**	**08 33 31.5**	**+0.5**
LCND				IAML		08 33 34.5	
	comp=Z,4μm,0.3s						
LCND	**La Caada**	**0.92**	**52**	↓*eP*	**Pn**	**08 33 18.5**	**-0.4**
LCND				*eS*	**Sn**	**08 33 31.5**	**+0.5**
LCND				IAML		08 33 34.5	
	comp=Z,4μm,0.3s						
LFRS	**El Faro**	**0.98**	**335**	↓*iP*	**Pn**	**08 33 19.5**	**-0.4**
AEIL	**Aeropuerto Ilo**	**1.07**	**334**	*eP*	**Pn**	**08 33 21.1**	**+0.1**
LBRS	**Las Brisas**	**1.08**	**338**	*eP*	**Pn**	**08 33 21.1**	**0.0**
FAGO	**Alcalda de S**	**1.08**	**28**	↓*iP*	**Pn**	**08 33 21.0**	**-0.1**
LFU	**La Fuente**	**1.11**	**335**	↓*iP*	**Pn**	**08 33 21.6**	**0.0**
LFU				*eS*	**Sn**	**08 33 36.3**	**+0.4**
LFU	**La Fuente**	**1.11**	**335**	↓*iP*	**Pn**	**08 33 21.6**	**0.0**
LFU				*eS*	**Sn**	**08 33 36.3**	**+0.4**
SNET	**Serv Nac Est T**	**1.11**	**328**	↓*iP*	**Pn**	**08 33 21.3**	**-0.4**
SNET				*eS*	**Sn**	**08 33 35.5**	**-0.4**
SNET				IAML		08 33 41.1	
	comp=Z,1μm,0.2s						
SNET	**Serv Nac Est T**	**1.11**	**328**	↓*iP*	**Pn**	**08 33 21.3**	**-0.4**
SNET				*eS*	**Sn**	**08 33 35.5**	**-0.4**
SNET				IAML		08 33 41.1	
	comp=Z,1μm,0.2s						

OPAM	**Oficina de Pla**	**1.12**	**330**	*eP*	**Pn**	**08 33 21.5**	**-0.2**
OPAM	**Oficina de Pla**	**1.12**	**330**	*eP*	**Pn**	**08 33 21.5**	**-0.2**
UESS	**Universidad de**	**1.13**	**330**	*eP*	**Pn**	**08 33 21.6**	**-0.2**
UESS	**Universidad de**	**1.13**	**330**	*eP*	**Pn**	**08 33 21.6**	**-0.2**
UEES	**Universidad Ev**	**1.14**	**329**	*eP*	**Pn**	**08 33 21.8**	**-0.3**
UEES	**Universidad Ev**	**1.14**	**329**	*eP*	**Pn**	**08 33 21.8**	**-0.3**
BOQS	**Boqueron**	**1.18**	**328**	*eP*	**Pn**	**08 33 22.6**	**-0.1**
CEVE	**Cerro Verde**	**1.46**	**318**	*eP*	**Pn**	**08 33 26.7**	**+0.2**
CEVE	**Cerro Verde**	**1.46**	**318**	*eP*	**Pn**	**08 33 26.7**	**+0.2**
SBLS	**San Blas**	**1.46**	**319**	*eP*	**Pn**	**08 33 26.8**	**+0.2**
SBLS	**San Blas**	**1.46**	**319**	*eP*	**Pn**	**08 33 26.8**	**+0.2**
FAME	**Alcalda de S**	**1.74**	**309**	*eP*	**Pn**	**08 33 30.1**	**-0.1**

UPA 14 08:34:59.3±2.3, 8.33N×82.79W, h16km±5km, MW3.7, 1C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DVD	**David**	**0.35**	**73**	↑*iP*	Pg	08 35 06.8	+0.2
DVD				*eS*	Sb	08 35 13.1	+0.5
BCO2	**Palmira**	**0.47**	**34**	↓*iP*	Pb	08 35 09.1	-0.2
BCO2				*eS*	Sb	08 35 17.2	+1.2
BRU2	**Volcan**	**0.47**	**12**	↓*iP*	Pb	08 35 09.1	-0.2
BRU2				*eS*	Sb	08 35 16.8	+0.6
CHGR2	**Aguacate**	**0.88**	**47**	*eP*	Pb	08 35 14.8	-1.5
CHGR2				*eS*	Sb	08 35 27.0	-0.8
CNI2	**El Empalme, Bo**	**1.13**	**16**	↓*iP*	Pn	08 35 19.5	-1.1
CNI2				*eS*	Sb	08 35 35.3	+0.3
GMAL	**Guarumal, Vera**	**1.64**	**110**	*eP*	Pn	08 35 24.4	-3.2
GMAL				*eS*	Sn	08 35 45.7	-2.7
HDC	**Heredia**	**2.11**	**322**	*eP*	Pn	08 35 35.4	+1.2
HDC				*eS*	Sb	08 36 04.2	+0.7
CACAO	**El Cacao, Vera**	**2.15**	**117**	*eP*	Pn	08 35 34.9	+0.4
CACAO				*eS*	Sn	08 36 00.9	+0.1
AZU	**Azuero**	**2.55**	**102**	*eS*	Sb	08 36 14.3	-1.5

*IDC **14** 08:36:05.8±1.0, 8.87N×93.83E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.8/45, mbtmp3.9/14, ML4.0/1, MS2.8/3, Ms1 2.9/3, ms1mx2.6/46, Error ellipse: s-maj=33.4km s-min=23.5km az=67.0*
*NEIC **14** 08:36:07.5±1.6, 8.86N±0.07×93.65E±0.09, h10km±1km, mb4.4/12, Error ellipse: s-maj=17.6km s-min=6.8km az=235.0*
*NDI **14** 08:36:16.3±3.5, 8.71N×93.52E, h31km±55km, ML3.3, mb4.4(NEIC)*

ISC 14 08:36:09.3±0.5, 8.91N±0.05×93.69E±0.07, h23km, n49, σ1s03/44, mb4.1/19, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**1.90**	**173**	*eP*	**Pb**	**08 36 42.9**	**-0.4**
CMBY				*eS*	**Sb**	**08 37 06.9**	**+0.3**
CMBY				IAML		08 37 11.9	
	comp=N,590nm,0.6s						
CMBY				IAML		08 37 12.6	
	comp=E,472nm,0.4s						
PBA	**Port Blair**	**2.89**	**341**	*eP*	Pb	08 37 04.3	+4.1
PBA				*eS*	Sb	08 37 34.8	-0.3
PBA				IAML		08 37 45.9	
	comp=N,139nm,0.4s						
PBA				IAML		08 37 47.0	
	comp=E,84nm,0.9s						
PBA				IAML		08 37 51.1	
	comp=N,151nm,0.4s						
PBA				IAML		08 37 51.3	
	comp=E,115nm,0.2s						
PBA	**Port Blair**	**2.89**	**341**	Pn	Pn	08 36 53.7	-0.3
PBA				Sn	Sn	08 37 30.8	+2.8
DGPR	**DIGLIPUR**	**4.31**	**350**	*eP*	**Pb**	**08 37 22.9**	**-1.5**
LHMI	**Lhok Sumawe**	**4.88**	**138**	Pn	**Pn**	**08 37 21.5**	**+0.2**
KULM	**Kulim**	**7.79**	**117**	Pn	**Pn**	**08 38 02.1**	**+0.8**
PSI	**Prapat**	**7.99**	**139**	LR	LR	08 41 28.7	
	comp=E,76nm,20.5s,baz=241,slow=41						
RPSI	**Rantau Prapat**	**8.07**	**140**	Pn	**Pn**	**08 38 05.4**	**+0.2**
RPSI				Sn	**Sn**	**08 39 35.0**	**-0.9**
IPM	**Ipoh**	**8.51**	**121**	Pn	**Pn**	**08 38 11.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**10.78**	**28**	Pn	**Pn**	**08 38 43.2**	**+0.8**
	comp=E,0.3nm,0.3s,baz=214,slow=15,SNR=3.1						
CMAR				LR	LR	08 43 04.2	
	comp=E,40nm,18.8s,baz=194,slow=39						
PALK	**Pallekele**	**12.96**	**264**	LR	LR	08 43 49.8	
	comp=E,51nm,21.5s,baz=64,slow=35						
PALK	**Pallekele**	**12.96**	**264**	Pn	**Pn**	**08 39 11.2**	**-1.1**
PALK				Sn	**Sn**	**08 41 34.9**	**-1.0**
MNAI	**Manna**	**16.09**	**145**	Pn	**Pn**	**08 39 53.3**	**-1.0**
SHL	**Shillong**	**16.66**	**354**	Pn	**Pn**	**08 39 58.6**	**-3.0**
RAMN	**Ramite**	**19.16**	**340**	*eP*	**Pn**	**08 40 33.5**	**+1.0**
	comp=E,9.0nm,0.3s						
JIRN	**Jiri**	**19.95**	**340**	*eP*	**Pn**	**08 40 41.8**	**-0.3**
	comp=E,11nm,0.3s						
GUN	**Gumba**	**20.29**	**340**	*eP*	Pn	08 40 45.8	-0.2
	comp=E,26nm,0.7s						
LSA	**Lhasa**	**20.82**	**354**	P	**P**	**08 40 50.0**	**+0.1**
LSA				IAmb	IAmb	08 40 52.4	
	comp=Z,7.3nm,0.6s						
GKN	**Gorkha**	**20.83**	**337**	*eP*	Pn	08 40 51.4	-0.7
	comp=Z,20nm,0.4s						
KOLN	**Koldanda**	**21.04**	**334**	*eP*	**P**	**08 40 53.8**	**+1.8**
	comp=Z,17nm,0.8s						
DANN	**Dangsing**	**21.49**	**335**	*eP*	**P**	**08 40 59.0**	**+2.2**
	comp=Z,25nm,0.6s						
H08S3	**Diego Garcia H**	**26.76**	**233**	T	T	09 08 58.1	
	baz=52,slow=76,SNR=20						
H08S2	**Diego Garcia H**	**26.77**	**233**	T	T	09 08 46.1	
	baz=52,slow=76,SNR=25						
H08S1	**Diego Garcia H**	**26.78**	**233**	T	T	09 08 50.3	
	baz=52,slow=76,SNR=15						
NIL	**Nilore**	**31.00**	**326**	P	**P**	**08 42 24.7**	**-0.6**
NIL				IAmb	IAmb	08 42 27.3	
	comp=Z,5.5nm,0.7s						
GAR	**Garm**	**36.57**	**329**	P	**P**	**08 43 14.0**	**+0.3**
BOOM	**Boomskoye usch**	**36.91**	**338**	P	**P**	**08 43 17.0**	**+0.4**
BOOM				IAmb	IAmb	08 43 23.7	
	comp=Z,5.1nm,1.2s						
CHGR	**Chuyangaron**	**36.92**	**327**	P	**P**	**08 43 16.7**	**0.0**
ARSB	**Arslanbob**	**37.13**	**334**	P	**P**	**08 43 19.1**	**+0.7**
ARSB				IAmb	IAmb	08 43 20.7	
	comp=Z,9.3nm,0.7s						
AAK	**Ala-Archa**	**37.59**	**337**	P	**P**	**08 43 23.9**	**+1.5**
	comp=Z,2.0nm,0.7s,baz=117,slow=5.4,SNR=7.1						
AAK	**Ala-Archa**	**37.59**	**337**	P	**P**	**08 43 23.5**	**+1.1**
MKAR	**Makanchi Array**	**38.99**	**348**	P	**P**	**08 43 34.1**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=176,slow=7.9,SNR=5.0						
KK31	**Karatay Array**	**39.65**	**333**	P	**P**	**08 43 40.5**	**+1.0**
KKAR	**Karatay Array**	**39.65**	**333**	P	**P**	**08 43 40.2**	**+0.7**
SONM	**Songino Array**	**40.26**	**13**	P	**P**	**08 43 44.3**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=182,slow=4.3,SNR=3.0						
SONM				PcP	**PcP**	**08 45 47.9**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=202,slow=2.6,SNR=3.4						
GEYT	**Alibeck**	**43.14**	**318**	P	**P**	**08 44 10.2**	**+1.9**
	comp=Z,3.5nm,0.5s,baz=138,slow=7.0,SNR=4.5						
KURBB	**Kurchatov Arra**	**43.44**	**346**	P	**P**	**08 44 11.3**	**+0.9**
	comp=Z,0.7nm,0.7s,baz=162,slow=7.5,SNR=3.3						
ZALV	**Zalesovo Beam**	**45.48**	**353**	P	**P**	**08 44 27.2**	**+0.5**
	comp=Z,4.3nm,0.5s,baz=179,slow=8.9,SNR=10.0						
ABKAR	**Akbulak array**	**49.12**	**331**	P	**P**	**08 44 55.4**	**+0.3**
ABKAR				IAmb	IAmb	08 45 04.4	
	comp=Z,4.9nm,1.4s						
WRA	**Warramunga Arr**	**49.22**	**126**	P	**P**	**08 44 55.4**	**-0.9**
	comp=Z,2.1nm,1.3s,baz=306,slow=8.9,SNR=2.6						
BRTR	**Keskin Array B**	**61.42**	**310**	P	**P**	**08 46 23.8**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=126,slow=8.0,SNR=3.2						
BR131	**Keskin Array S**	**61.42**	**310**	P	**P**	**08 46 23.9**	**-0.3**
BR131				IAmb	IAmb	08 46 27.9	
	comp=Z,2.8nm,1.1s						
FINES	**FINESS Array B**	**71.60**	**332**	P	**P**	**08 47 28.7**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=101,slow=7.2,SNR=5.6						
ARCES	**ARCESS Array B**	**74.15**	**340**	P	**P**	**08 47 43.8**	**+0.1**
	comp=Z,1.8nm,0.8s,baz=92,slow=7.1,SNR=6.6						
GERES	**GERESS Array B**	**76.77**	**318**	P	**P**	**08 48 00.2**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=67,slow=3.5,SNR=4.8						
TORD	**Torodi Ar. Bea**	**89.93**	**283**	P	**P**	**08 49 09.2**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=88,slow=4.9,SNR=3.6						
ILAR	**Eielson Array**	**93.96**	**22**	P	**P**	**08 49 24.2**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=296,slow=4.9,SNR=4.8						
TXAR	**Lajitas Array**	**138.47**	**23**	PKP	**PKiKP**	**08 55 35.4**	**-0.7**
	comp=Z,0.1nm,0.4s,baz=170,slow=0.9,SNR=5.3						
PLCA	**Paso Flores**	**145.35**	**201**	PKPbc	**PKPdf**	**08 55 45.5**	**-0.3**
	comp=Z,2.0nm,0.7s,baz=190,slow=3.8,SNR=9.7						

*NEIC **14** 09:09:31.8±1.1, 19.1N±0.1×66.62W±0.05, h33km±24km, Error ellipse: s-maj=21.3km s-min=5.4km az=165.0*

RSPR 14 09:09:33.4, 19.06N×66.64W, h56km±6km, MD3.1/8, 13C-2D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.59**	**170**	↓*eP*	Pn	09 09 45.0	-1.0
EMPR	**Esperanza - Ma**	**0.59**	**170**	*eS*	Sn	09 09 54.5	-0.7
EMPR	**Esperanza - Ma**	**0.59**	**170**	↑*eP*	Pn	09 09 45.1	-1.0
EMPR	**Esperanza - Ma**	**0.59**	**170**	*eS*	Sn	09 09 54.5	-0.7
EMPR	**Esperanza - Ma**	**0.59**	**170**		Pn	09 09 45.0	-1.0
AOPR	**Arecibo Observ**	**0.71**	**189**	↑*eP*	Pn	09 09 46.5	-1.2
AOPR	**Arecibo Observ**	**0.71**	**189**	*eS*	Sn	09 09 57.0	-1.0
AOPR	**Arecibo Observ**	**0.71**	**189**	↑*eP*	Pn	09 09 46.6	-1.0
AOPR	**Arecibo Observ**	**0.71**	**189**	*eS*	Sn	09 09 57.5	-0.5
AOPR	**Arecibo Observ**	**0.71**	**189**		Pn	09 09 46.2	-1.4
AOPR					Sn	09 09 57.6	-0.4
GCPR	**Guaynabo City**	**0.91**	**145**	Pn	Pn	09 09 49.4	-0.8
GCPR				Sn	Sn	09 10 01.3	-1.1
LSP	**Las Mesas**	**0.97**	**206**	↓*eP*	Pn	09 09 49.9	-1.1
LSP	**Las Mesas**	**0.97**	**206**	*eS*	Sn	09 10 03.7	-0.2
LSP	**Las Mesas**	**0.97**	**206**	↑*eP*	Pn	09 09 49.9	-1.1
LSP	**Las Mesas**	**0.97**	**206**		Pn	09 09 49.9	-1.1
LSP					Sn	09 10 03.7	-0.2
CELP	**Cerrillos**	**0.98**	**177**	↑*eP*	Pn	09 09 50.9	-0.1
CELP				*eS*	Sn	09 10 02.9	-1.2
CELP	**Cerrillos**	**0.98**	**177**		Pn	09 09 50.9	-0.1
CELP					Sn	09 10 02.9	-1.2
CBYP	**Canovanas**	**1.08**	**136**	↑*eP*	Pn	09 09 51.6	-0.7
CBYP	**Canovanas**	**1.08**	**136**	*eS*	Sn	09 10 05.7	-0.8
CBYP	**Canovanas**	**1.08**	**136**	*eS*	Sn	09 10 05.1	-1.4
CBYP	**Canovanas**	**1.08**	**136**	↑*eP*	Pn	09 09 51.6	-0.8
CBYP	**Canovanas**	**1.08**	**136**		Pn	09 09 51.9	-0.5
CBYP					Sn	09 10 05.5	-0.9
GBPR	**Guanica, Bosqu**	**1.10**	**192**	*eS*	Sn	09 10 07.1	+0.2
GBPR	**Guanica, Bosqu**	**1.10**	**192**		Sn	09 10 07.1	+0.2
CRPR	**Cabo Rojo, PR**	**1.14**	**203**	↑*iP*	Pn	09 09 52.3	-0.9
CRPR	**Cabo Rojo, PR**	**1.14**	**203**	*eS*	Sn	09 10 07.4	-0.3
CRPR	**Cabo Rojo, PR**	**1.14**	**203**	*eP*	Pn	09 09 52.2	-0.9
CRPR	**Cabo Rojo, PR**	**1.14**	**203**	*eS*	Sn	09 10 06.9	-0.9
CRPR	**Cabo Rojo, PR**	**1.14**	**203**		Pn	09 09 52.2	-0.9
CRPR					Sn	09 10 07.8	0.0
MLPR	**Magueyes Islan**	**1.15**	**200**	↑*eP*	Pn	09 09 51.6	-1.7
MLPR	**Magueyes Islan**	**1.15**	**200**	*eS*	Sn	09 10 06.5	-1.6
MLPR	**Magueyes Islan**	**1.15**	**200**	↑*eP*	Pn	09 09 51.6	-1.7
MLPR	**Magueyes Islan**	**1.15**	**200**	*eS*	Sn	09 10 06.8	-1.3
MLPR	**Magueyes Islan**	**1.15**	**200**		Pn	09 09 51.6	-1.7
MLPR					Sn	09 10 06.6	-1.4
HUMP	**Col San Antoni**	**1.18**	**140**	Pn	Pn	09 09 54.0	+0.3
HUMP					Sn	09 10 08.0	-0.8
MTP	**Monte Pirata**	**1.40**	**133**	↑*eP*	Pn	09 09 55.5	-1.2
MTP	**Monte Pirata**	**1.40**	**133**	*eS*	Sn	09 10 12.9	-1.3
MTP	**Monte Pirata**	**1.40**	**133**	↑*eP*	Pn	09 09 55.5	-1.2
MTP	**Monte Pirata**	**1.40**	**133**		Pn	09 09 55.9	-0.8
MTP					Sn	09 10 13.3	-0.9
STVI	**Saint Thomas**	**1.74**	**113**	↑*eP*	Pn	09 10 01.0	-0.4
STVI	**Saint Thomas**	**1.74**	**113**	*eS*	Sn	09 10 22.4	-0.1
STVI	**Saint Thomas**	**1.74**	**113**		Pn	09 09 59.9	-1.4
STVI					Sn	09 10 20.

σ1ŝ**70**/176, **mb4.6**/44, **MS3.8**/25, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**2.59**	**86**	P	**Pn**	**10 36 50.0**	**-0.1**
SNSI				S	Sn	10 37 10.1	-10
MLSI	**Meulaboh, Aceh**	**3.34**	**53**	P	**Pn**	**10 37 00.9**	**+0.4**
MLSI				S	**Sn**	**10 37 36.4**	**-2.5**
TPTI		**3.58**	**73**	P	**Pn**	**10 37 03.4**	**-0.4**
TPTI				S	**Sn**	**10 37 41.3**	**-3.6**
GSI	**Gunungsitoli**	**3.94**	**103**	P	**Pn**	**10 37 09.0**	**+0.3**
GSI				S	**Sn**	**10 37 50.4**	**-3.4**
GSI	**Gunungsitoli**	**3.94**	**103**		**Pn**	**10 37 08.9**	**+0.1**
GSI				Sn	**Sn**	**10 37 50.5**	**-3.3**
KCSI	**Kotacane, Aceh**	**4.22**	**72**	P	**Pn**	**10 37 14.3**	**+1.7**
KCSI				S	**Sn**	**10 37 58.3**	**-2.5**
LHMI	**Lhok Sumawe**	**4.37**	**47**	P	**Pn**	**10 37 16.2**	**+1.6**
LHMI	**Lhok Sumawe**	**4.37**	**47**		**Pn**	**10 37 15.3**	**+0.7**
LHMI				Sn	**Sn**	**10 38 05.0**	**+0.6**
CMBY	**CAMPBELL BAY**	**4.75**	**2**	*eP*	**Pn**	**10 37 20.0**	**+0.2**
CMBY				*eS*	**Sn**	**10 38 09.4**	**-4.3**
CMBY				*eS*	**Sn**	**10 38 10.1**	**-3.7**
CMBY				IAML		10 38 12.3	
	comp=E,2μm,0.5s						
PBSI	**Pulau Batu**	**5.07**	**117**	P	**Pn**	**10 37 24.6**	**+0.3**
	comp=E,20nmcomp=E,65μmcomp=E,6μm,0.7s						
RPSI	**Rantau Prapat**	**5.20**	**85**		**Pn**	**10 37 26.9**	**+0.8**
RPSI				Sn	**Sn**	**10 38 21.7**	**-3.1**
RPSI	**Rantau Prapat**	**5.20**	**85**		**Pn**	**10 37 26.8**	**+0.8**
RPSI					Sn	10 38 14.6	-10
PSI	**Prapat**	**5.21**	**84**	Pn	**Pn**	**10 37 26.8**	**+0.5**
	comp=E,12nm,0.3s,baz=297,slow=8.6,SNR=76						
PSI				Sn	Sn	10 38 14.6	-11
	comp=E,5.5nm,0.3s,baz=92,slow=4.4,SNR=4.5						
SISI	**Saibi**	**6.41**	**123**	P	**Pn**	**10 37 42.5**	**-0.2**
	comp=E,1.2nmcomp=E,4μmcomp=E,284nm,0.8s						
PDSI	**Padang**	**7.41**	**115**	P	**Pn**	**10 37 56.7**	**+0.3**
	comp=E,0.5nmcomp=E,5μmcomp=E,104nm,1.0s						
KULM	**Kulim**	**7.53**	**66**		**Pn**	**10 37 58.6**	**+0.5**
KULM				Sn	**Sn**	**10 39 22.2**	**-0.1**
KULM	**Kulim**	**7.53**	**66**	P	**Pn**	**10 37 59.0**	**+0.9**
BKNI	**Bangkinang**	**7.54**	**104**	Pn	**Pn**	**10 37 56.3**	**-1.8**
IPM	**Ipoh**	**7.61**	**73**		**Pn**	**10 37 59.9**	**+0.7**
IPM				Sn	**Sn**	**10 39 19.5**	**-4.7**
IPM	**Ipoh**	**7.61**	**73**	P	**Pn**	**10 38 00.0**	**+0.9**
PPSI	**Pulau Pagai**	**7.99**	**128**	P	**Pn**	**10 38 03.9**	**-0.5**
	comp=E,3μmcomp=E,395nm,0.8s						
SDSI	**Sungai Dareh**	**8.30**	**112**	P	**Pn**	**10 38 09.6**	**+0.9**
	comp=E,47nm,0.7s						
KRJI	**Kerinci**	**8.83**	**119**	P	**Pn**	**10 38 17.6**	**+1.5**
	comp=E,15μmcomp=E,1μm,0.8s						
JRMM	**Jerantut**	**8.88**	**79**	P	**Pn**	**10 38 18.0**	**+1.4**
KSI	**Kapahiang**	**10.60**	**123**	P	**Pn**	**10 38 40.1**	**-0.2**
DGPR	**DIGLIPUR**	**10.90**	**356**	*ex*	**Pn**	10 38 33.4	-11
DGPR				*eS*	**Sn**	**10 40 14.4**	**-7.8**
DGPR				IAML		10 40 42.8	
	comp=N,101nm,0.2s						
DSRI	**Dabo**	**11.16**	**104**	P	Pn	10 38 58.1	+10
MNAI	**Manna**	**11.30**	**125**		**Pn**	**10 38 49.3**	**-0.5**
PMBI	**Palembang**	**12.16**	**115**	Pn	**Pn**	**10 38 59.1**	**-2.5**
MDSI	**Maura Dua**	**12.38**	**123**	P	**Pn**	**10 39 04.9**	**+0.3**
	comp=N,1μmcomp=N,89nm,0.8s						
LWLI	**Liwa**	**12.57**	**125**	P	**Pn**	**10 39 06.7**	**-0.6**
	comp=N,15μmcomp=N,145nm,0.7s						
KASI	**Kota Agung**	**13.22**	**126**	P	**Pn**	**10 39 14.3**	**-1.7**
	comp=N,890nmcomp=N,105nm,0.9s						
PALK	**Pallekele**	**13.92**	**292**	Pn	**Pn**	**10 39 24.4**	**-1.3**
	comp=N,4.9nm,0.3s,baz=83,slow=5.7,SNR=24						
PALK				Sn	Sn	10 41 44.4	-15
	comp=N,11nm,0.3s,baz=201,slow=8.9,SNR=24						
PALK				LR	LR	10 44 10.9	
	comp=N,483nm,18.2s,baz=112,slow=35						
PALK	**Pallekele**	**13.92**	**292**		**Pn**	**10 39 24.5**	**-1.2**
DBJI	**Dramaga**	**15.65**	**124**	P	**P**	**10 39 54.5**	**+2.0**
PBKT	**Sadao Pong**	**15.93**	**26**		**Pn**	**10 39 52.7**	**+0.5**
CNJI	**Cibinong**	**16.38**	**125**	P	**P**	**10 40 01.7**	**+1.1**
LEM	**Lembang**	**16.52**	**123**	Pn	**Pn**	**10 39 59.5**	**-0.5**
	baz=311,slow=20,SNR=2.3						
LEM				LR	LR	10 47 01.0	
	comp=N,247nm,19.3s,baz=284,slow=40						
KSM	**Kuching**	**16.57**	**92**	Pn	**Pn**	**10 40 00.0**	**-0.6**
KSM	**Kuching**	**16.57**	**92**	P	**P**	**10 40 02.0**	**-0.8**
CM31	**Chiang Mai Arr**	**16.91**	**17**	P	**P**	**10 40 07.8**	**+1.3**
CMAR	**Chiang Mai Arr**	**16.91**	**17**	P	**P**	**10 40 05.7**	**-0.8**
	comp=N,0.6nm,0.3s,baz=212,slow=12,SNR=45						
CMAR				LR	LR	10 47 35.8	
	comp=N,103nm,18.2s,baz=194,slow=41						
CISI	**Cisompet, Garu**	**17.08**	**125**	P	**P**	**10 40 10.2**	**+1.8**
CISI	**Cisompet, Garu**	**17.08**	**125**	P	**Pn**	**10 40 03.5**	**-3.4**
MDRS	**Chennai**	**17.15**	**310**	*eP*	**Pn**	**10 40 06.5**	**-1.4**
CHTO	**Chiang Mai**	**17.25**	**17**	P	**Pn**	**10 40 08.6**	**-0.5**
DLV	**T Lat**	**17.51**	**56**	P	**P**	**10 40 13.3**	**-0.1**
DLV				IAmb	IAmb	10 40 26.3	
	comp=Z,66nm,0.8s						
KPJI	**Karang Pucung**	**17.89**	**122**	P	**P**	**10 40 20.7**	**+3.4**
SKHT	**Srikalahasti**	**17.98**	**310**	*eP*	**P**	**10 40 19.5**	**+1.2**
SBUM	**Sibu**	**18.46**	**89**	P	**Pn**	**10 40 25.0**	**+1.0**
CHLP	**Challavanipeta**	**18.75**	**330**	*eP*	**Pn**	**10 40 27.0**	**-0.4**
PVM	**Polavaram**	**19.09**	**322**	*eP*	**Pn**	**10 40 31.9**	**+0.3**
ADKI	**Addanki**	**19.16**	**316**	*eP*	**Pn**	**10 40 33.0**	**+0.7**
MYLAV	**Mylavaram**	**19.35**	**319**	*eP*	**Pn**	**10 40 35.3**	**+0.7**
UGM	**Wanagama**	**19.54**	**121**	P	**P**	**10 40 33.5**	**-2.0**
BWNR	**Bhubaneshwar**	**19.55**	**337**	*ex*	**Pn**	**10 40 39.1**	**+2.1**
BWNR				IAmb	IAmb	10 40 48.9	
	comp=Z,74nm,0.7s						
BWNR				*ex*	x	10 44 00.4	
SRLM	**Srisailam**	**20.09**	**314**	*eP*	Pn	10 40 43.1	-0.4
NJS	**Nagarjunasagar**	**20.11**	**316**	*eP*	Pn	10 40 43.0	-0.6
SAIH	**SAIHA**	**20.15**	**358**	*eP*	Pn	10 40 43.8	-0.4
SAIH				IAmb	IAmb	10 41 00.5	
	comp=Z,15nm,0.6s						
GGR	**Gangavaram**	**20.41**	**320**	*eP*	Pn	10 40 46.9	-0.4
URV	**Uravakonda**	**20.59**	**309**	*eP*	Pn	10 40 48.5	-0.9
KAAM	**Kaadhehdhoo**	**20.81**	**266**	P	**P**	**10 40 48.0**	**-1.3**
HYB	**Hyderabad**	**21.22**	**316**	*i P*	**P**	**10 40 55.0**	**+1.3**
HYB	**Hyderabad**	**21.22**	**316**	*eP*	**P**	**10 40 53.3**	**-0.4**
HYBB	**Hyderabad (bro**	**21.22**	**316**	*eP*	**P**	**10 40 54.4**	**+0.7**
SLVN	**Son La**	**21.41**	**27**	P	**P**	**10 40 56.0**	**+0.2**
SLVN				IAmb	IAmb	10 41 12.4	
	comp=Z,34nm,1.4s						
RPR	**Rampur**	**21.75**	**320**	*eP*	**P**	**10 41 00.5**	**+1.1**
DMPR	**Damasthipur**	**21.87**	**315**	*eP*	**P**	**10 41 01.4**	**+0.7**
SRSP	**Sriramsagar**	**22.42**	**319**	*eP*	**P**	**10 41 07.4**	**+0.8**
KKM	**Kota Kinabalu**	**22.73**	**80**	P	**P**	**10 41 08.8**	**-1.2**
BOK	**Bokaro**	**22.75**	**341**	*eP*	**P**	**10 41 11.6**	**+1.6**
KLRI	**Killari**	**23.03**	**314**	*eP*	**P**	**10 41 14.4**	**+1.3**
SHL	**Shillong**	**23.27**	**356**	*eP*	**P**	**10 41 16.4**	**+0.9**
SHL				IAmb	IAmb	10 41 29.1	
	comp=Z,21nm,0.5s						
SHL	**Shillong**	**23.27**	**356**	P	**P**	**10 41 14.4**	**-1.0**
KOHI	**KOHIMA**	**23.36**	**1**	*eP*	**P**	**10 41 16.4**	**+0.1**
KOHI				IAmb	IAmb	10 41 33.0	
	comp=Z,67nm,0.9s						
KOHI				*eS*	**S**	**10 45 30.2**	**+3.2**
H08S2	**Diego Garcia H**	**23.36**	**245**	T	T	11 06 41.9	
	baz=63,slow=76,SNR=21						
H08S3	**Diego Garcia H**	**23.36**	**245**	T	T	11 06 38.3	
	baz=63,slow=76,SNR=29						
H08S1	**Diego Garcia H**	**23.38**	**245**	T	T	11 06 43.4	
	baz=63,slow=76,SNR=28						
NGP	**Nagpur**	**23.63**	**324**	*ex*	**S**	**10 45 23.8**	**-7.5**
TEZP	**TEZPUR**	**24.26**	**358**	*eP*	**P**	**10 41 24.8**	**+0.2**
TEZP				IAmb	IAmb	10 41 26.7	
	comp=Z,15nm,0.5s						
KMI	**Kunming**	**24.36**	**20**	P	**P**	**10 41 30.6**	**+4.8**
KMI				pP	sP	10 41 35.8	-2.3
KMI				sP	pwP	10 41 38.3	-2.2
KMI				pmax	pmax		
	comp=Z,18nm,1.0s						
KMI				pmax	pmax		
	comp=Z,97nm,3.1s						
KMI				LR	LR		
	comp=Z,250nm,24.8s						
KMI				LR	LR		
	comp=Z,420nm,18.7s						
ODAN	**Odare**	**25.23**	**347**	*eP*	**P**	**10 41 35.3**	**+1.5**
RAMN	**Ramite**	**25.51**	**345**	*eP*	**P**	**10 41 38.4**	**+2.1**
	comp=Z,27nm,0.6s						
TAPN	**Taplejung**	**25.64**	**348**	*eP*	**P**	**10 41 39.1**	**+1.6**
	comp=Z,14nm,0.4s						
JIRN	**Jiri**	**26.30**	**345**	*eP*	**P**	**10 41 45.1**	**+1.5**
	comp=Z,41nm,0.9s						
DMN	**Daman**	**26.55**	**343**	*eP*	**P**	**10 41 47.8**	**+2.1**
	comp=Z,14nm,0.8s						
GUN	**Gumba**	**26.62**	**344**	*eP*	**P**	**10 41 47.8**	**+1.4**
KAPI	**Kappang**	**26.96**	**106**	LR	LR	10 53 48.9	
	comp=Z,225nm,18.4s,baz=121,slow=39						
GKN	**Gorkha**	**27.06**	**342**	*eP*	**P**	**10 41 51.7**	**+1.5**
KOLN	**Koldanda**	**27.18**	**340**	*eP*	**P**	**10 41 52.9**	**+1.5**
LSA	**Lhasa**	**27.43**	**355**	P	**P**	**10 41 54.4**	**+0.5**
LSA				IAmb	IAmb	10 42 12.3	
	comp=Z,16nm,0.7s						
DANN	**Dangsing**	**27.66**	**341**	*eP*	**P**	**10 41 56.5**	**+0.7**
BATI	**Baumata**	**32.25**	**113**	LR	LR	10 56 25.8	
	comp=Z,107nm,20.6s,baz=281,slow=38						
SMLA	**Simla**	**32.73**	**333**	*eP*	**P**	**10 42 42.2**	**+2.0**
SMLA				IAmb	IAmb	10 42 53.8	
	comp=Z,6.8nm,0.6s						
WHN	**Wuhan**	**34.26**	**33**	P	**P**	**10 42 55.9**	**+2.4**
XAN	**Xi'an**	**34.68**	**22**	P	**P**	**10 42 57.9**	**+0.7**
XAN				pP	sP	10 43 09.3	-0.3
XAN				pmax	pmax		
	comp=Z,12nm,0.8s						
XAN				pmax	pmax		
	comp=Z,170nm,6.5s						
XAN	**Xi'an**	**34.68**	**22**	P	**P**	**10 42 57.3**	**+0.2**
XAN				IAmb	IAmb	10 43 10.2	
	comp=Z,12nm,0.7s						
LZH	**Lanzhou**	**34.96**	**14**	*eP*	P	10 43 04.1	+4.4
LZH				pP	sP	10 43 09.9	-2.2
LZH				sP	pwP	10 43 12.8	-1.8
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,68nm,4.1s						
LZH				LR	LR		
	comp=Z,290nm,16.0s						
LZH				LR	LR		
	comp=Z,260nm,14.1s						
LZH				LR	LR		
	comp=Z,290nm,16.3s						
NIL	**Nilore**	**36.67**	**331**	P	**P**	**10 43 14.5**	**+0.3**
NIL				IAmb	IAmb	10 43 27.5	
	comp=Z,15nm,0.8s						
FITZ	**Fitzroy Crossi**	**37.35**	**124**	P	**P**	**10 43 19.8**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=135,slow=1.4,SNR=3.2						
FITZ				LR	LR	11 00 02.2	
	comp=Z,51nm,19.2s,baz=314,slow=38						
FITZ	**Fitzroy Crossi**	**37.35**	**124**	P	**P**	**10 43 18.9**	**-1.2**
GTA	**Gaotai**	**37.42**	**8**	P	**P**	**10 43 21.9**	**+1.3**
GTA				pP	pP	10 43 25.3	-4.1
GTA				sP	sP	10 43 28.0	-5.1
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,130nm,4.6s						
GTA				LR	LR		
	comp=Z,150nm,17.9s						
GTA				LR	LR		
	comp=Z,110nm,16.8s						
NJ2	**Nanjing**	**37.93**	**36**	*eP*	**P**	**10 43 26.6**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KSH	**Kashi**	**40.48**	**339**	P	**P**	**10 43 46.3**	**0.0**
KSH				PP	**PnPn**	**10 45 25.3**	**+1.3**
KSH				S	**S**	**10 49 52.8**	**-0.2**
KSH				ScS	**ScS**	**10 53 55.4**	**+5.6**
KSH				LR	LR		
	comp=Z,250nm,6.8s						
KSH				LR	LR		
	comp=Z,380nm,5.5s						
KSH				LR	LR		
	comp=Z,530nm,6.1s						
NWAO	**Narrogin (SRO)**	**41.43**	**150**	P	**P**	**10 43 54.2**	**+0.2**
	comp=Z,6.0nm,0.7s,baz=326,slow=3.6,SNR=3.9						
NWAO	**Narrogin (SRO)**	**41.43**	**150**	P	**P**	**10 43 54.5**	**+0.5**
NWAO				IAmb	IAmb	10 44 05.4	
	comp=Z,17nm,1.2s						
H01W3	**Cape Leeuwin H**	**41.58**	**154**	T	T	11 28 50.2	
	baz=330						
H01W2	**Cape Leeuwin H**	**41.60**	**154**	T	T	11 29 17.6	
	baz=330						
H01W1	**Cape Leeuwin H**	**41.60**	**154**	T	T	11 28 53.8	
	baz=330						
HHC	**Hu-ho-hao-te**	**41.68**	**20**	*eP*	**P**	**10 43 56.9**	**+0.8**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,58nm,6.1s						
HHC				LR	LR		
	comp=Z,210nm,19.8s						
HHC				LR	LR		
	comp=Z,250nm,20.2s						
HHC				LR	LR		
	comp=Z,130nm,14.1s						
WMQ	**Urumqi**	**41.76**	**353**	*eP*	**P**	**10 43 58.4**	**+1.7**
WMQ				sP	pP	10 44 05.4	-0.2
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.1s						
GAR	**Garm**	**42.38**	**333**	P	**P**	**10 44 01.4**	**-0.5**
CHGR	**Chuyangaron**	**42.65**	**331**	P	**P**	**10 44 03.1**	**-1.0**
CHGR				IAmb	IAmb	10 44 19.8	
	comp=Z,6.8nm,0.6s						
MK31	**Makanchi Array**	**45.49**	**349**	P	**P**	**10 44 27.7**	**+1.0**
MK31				IAmb	IAmb	10 44 28.7	
	comp=Z,4.4nm,0.7s						
MKAR	**Makanchi Array**	**45.49**	**349**	P	**P**	**10 44 27.5**	**+0.8**
	comp=Z,5.1nm,0.5s,baz=169,slow=9.1,SNR=56						
MKAR				LR	LR	11 06 41.8	
	comp=Z,82nm,18.8s,baz=164,slow=40						
MKAR	**Makanchi Array**	**45.49**	**349**	P	**P**	**10 44 27.4**	**+0.7**
WRA	**Warramunga Arr**	**45.52**	**121**	P	**P**	**10 44 27.3**	**+0.1**
	comp=Z,10nm,0.8s,baz=297,slow=8.3,SNR=30						
WRA				PP	**PP**	**10 46 10.1**	**-4.2**
	comp=Z,1.0nm,0.7s,baz=301,slow=9.3,SNR=2.8						
WRA	**Warramunga Arr**	**45.52**	**121**	P	**P**	**10 44 27.4**	**+0.1**
WRAB	**Tennant Creek**	**45.52**	**121**	P	**P**	**10 44 26.4**	**-0.9**
WRAB				IAmb	IAmb	10 44 28.9	
	comp=Z,18nm,0.9s						
MAKZ	**Makanchi**	**45.57**	**349**	P	**P**	**10 44 28.3**	**+1.1**
KKAR	**Karatay Array**	**45.66**	**336**	P	**P**	**10 44 28.7**	**+0.6**
KKAR				IAmb	IAmb	10 44 42.0	
	comp=Z,4.4nm,0.8s						
KKAR	**Karatay Array**	**45.66**	**336**	P	**P**	**10 44 27.7**	**-0.3**
WR0	**Warramunga Arr**	**45.70**	**121**	P	**P**	**10 44 26.9**	**-1.8**
SONM	**Songino Array**	**46.73**	**12**	P	**P**	**10 44 37.8**	**+1.3**
	comp=Z,2.1nm,0.5s,baz=195,slow=8.5,SNR=11						
SONM				LR	LR	11 05 55.1	
	comp=Z,89nm,18.4s,baz=162,slow=38						
SONM	**Songino Array**	**46.73**	**12**	P	**P**	**10 44 36.3**	**-0.1**
ASAR	**Alice Springs**	**46.78**	**126**	P	**P**	**10 44 37.4**	**+0.2**
	comp=Z,12nm,1.1s,baz=295,slow=7.7,SNR=86						
ASAR				PcP	**PcP**	**10 46 10.2**	**0.0**
	comp=Z,0.7nm,1.0s,baz=296,slow=3.0,SNR=2.7						
ASAR	**Alice Springs**	**46.78**	**126**	P	**P**	**10 44 37.0**	**-0.3**
AS31	**Alice Springs**	**46.79**	**126**	P	**P**	**10 44 36.9**	**-0.3**
ULN	**Ulaanbaatar**	**46.89**	**12**	P	**P**	**10 44 38.1**	**+0.3**
ULN				IAmb	IAmb	10 44 52.9	
	comp=Z,7.9nm,1.4s						
KSRS	**Korea Array**	**47.06**	**38**	P	**P**	**10 44 40.3**	**+1.3**
	comp=Z,0.5nm,0.4s,baz=226,slow=7.1,SNR=3.0						
KSRS				LR	LR	11 07 29.8	
	comp=Z,73nm,18.1s,baz=238,slow=40						
GEYT	**Alibeck**	**48.24**	**322**	P	**P**	**10 44 49.0**	**+0.7**
	comp=Z,2.7nm,0.6s,baz=139,slow=7.7,SNR=2.7						
GEYT				LR	LR	11 06 21.9	
	comp=Z,82nm,20.8s,baz=10.0,slow=38						
GEYT	**Alibeck**	**48.24**	**322**	P	**P**	**10 44 49.3**	**+1.0**
GYA0B	**ALIBECK ARRAY**	**48.24**	**322**	P	**P**	**10 44 49.1**	**+0.8**
GYA0B				IAmb	IAmb	10 45 02.7	
	comp=Z,7.2nm,0.7s						
KURK	**Kurchatov**	**49.98**	**347**	P	**P**	**10 45 01.9**	**+0.6**
KURK				IAmb	IAmb	10 45 16.0	
	comp=Z,4.6nm,0.7s						
CN2	**Changchun**	**50.04**	**30**	*eP*	**P**	**10 45 04.3**	**+2.4**
OPO	**Ambohidratompo**	**50.24**	**244**	P	**P**	**10 45 04.4**	**+0.3**
	comp=Z,2.0nm,0.5s,baz=81,slow=4.1,SNR=3.8						
RAYN	**Ar Rayn**	**51.23**	**299**	P	**P**	**10 45 10.7**	**-0.6**
RAYN				IAmb	IAmb	10 45 13.3	
	comp=Z,9.7nm,0.8s						
ZAA0	**Zalesovo Array**	**52.07**	**353**	P	**P**	**10 45 17.9**	**+0.9**
ZAA0				IAmb	IAmb	10 45 18.5	
	comp=Z,6.3nm,0.5s						
ZALV	**Zalesovo Beam**	**52.07**	**353**	P	**P**	**10 45 17.9**	**+0.9**
	comp=Z,6.4nm,0.4s,baz=181,slow=7.3,SNR=34						
ZALV				LR	LR	11 11 42.7	
	comp=Z,51nm,18.3s,baz=126,slow=41						
ZALV	**Zalesovo Beam**	**52.07**	**353**	P	**P**	**10 45 17.7**	**+0.7**
MJAR	**Matsushiro Arr**	**53.33**	**45**	LR	LR	11 10 10.3	
	comp=Z,84nm,19.2s,baz=20,slow=38						
USRK	**Ussuriysk Ar.**	**53.75**	**34**	LR	LR	11 11 50.5	
	comp=Z,98nm,18.1s,baz=225,slow=40						
ABKAR	**Akbulak array**	**55.02**	**334**	P	**P**	**10 45 37.5**	**-1.2**
ABKAR				IAmb	IAmb	10 45 52.0	
	comp=Z,4.3nm,0.8s						
CTA	**Charters Tower**	**56.06**	**116**	LR	LR	11 13 04.9	
	comp=Z,202nm,20.5s,baz=249,slow=40						
KMBO	**Kilima Mbogo**	**56.58**	**267**	LR	LR	11 06 40.5	
	comp=Z,130nm,19.8s,baz=90,slow=32						
STKA	**Stephens Creek**	**56.62**	**131**	P	**P**	**10 45 50.8**	**+0.2**
	comp=Z,4.4nm,0.6s,baz=301,slow=8.1,SNR=13						
STKA				LR	LR	11 11 08.4	
	comp=Z,30nm,20.1s,baz=216,slow=37						
STKA	**Stephens Creek**	**56.62**	**131**	P	**P**	**10 45 50.3**	**-0.2**
KRVT	**Keravat (AS076**	**58.60**	**96**	LR	LR	11 13 34.9	
	comp=Z,51nm,19.4s,baz=188,slow=38						
CMSA	**Cobar Meteorol**	**59.62**	**129**	P	**P**	**10 46 12.3**	**+0.8**
	baz=60,SNR=12						
KBZ	**Khabaz**	**61.05**	**320**	P	**P**	**10 46 21.1**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=126,slow=7.6,SNR=2.7						
MBAR	**Mbarara**	**63.05**	**268**	P	**P**	**10 46 33.6**	**-1.7**
MBAR				IAmb	IAmb	10 46 37.6	
	comp=Z,10nm,1.2s						
CAN	**Canberra**	**63.68**	**131**	P	**P**	**10 46 40.0**	**+1.1**
CAN				IAmb	IAmb	10 46 50.6	
	comp=Z,14nm,1.2s						
ARMA	**Armidale**	**63.94**	**125**	P	**P**	**10 46 42.8**	**+2.1**
	baz=64,SNR=4.6						
ARMA	**Armidale**	**63.94**	**125**	P	**P**	**10 46 41.6**	**+0.9**
BRTR	**Keskin Array B**	**65.87**	**313**	P	**P**	**10 46 53.5**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=116,slow=5.7,SNR=5.1						
BRTR	**Keskin Array B**	**65.87**	**313**	P	**P**	**10 46 51.8**	**-1.4**
ELL	**Elmali**	**67.85**	**309**	P	**P**	**10 47 05.3**	**-0.5**
KARP	**Karpathos**	**69.74**	**307**	P	**P**	**10 47 17.3**	**-0.3**
LBTB	**Lobatse**	**71.26**	**243**	P	**P**	**10 47 27.3**	**+0.2**
BOSA	**Boshof**	**72.32**	**239**	P	**P**	**10 47 33.5**	**+0.1**
	comp=Z,4.6nm,0.7s,baz=48,slow=6.6,SNR=7.0						
BOSA				LR	LR	11 16 48.5	
	comp=Z,40nm,18.4s,baz=27,slow=34						
BOSA	**Boshof**	**72.32**	**239**	P	**P**	**10 47 33.4**	**0.0**
BOSA				IAmb	IAmb	10 47 34.5	
	comp=Z,7.8nm,0.9s						
AKASG	**Malin Array Be**	**72.35**	**323**	P	**P**	**10 47 32.7**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=90,slow=5.3,SNR=3.4						
AKASG	**Malin Array Be**	**72.35**	**323**	P	**P**	**10 47 32.1**	**-0.8**
PETK	**Petropavlovsk-**	**72.82**	**35**	LR	LR	11 24 56.0	
	comp=Z,40nm,18.5s,baz=240,slow=40						
MAW	**Mawson**	**72.97**	**192**	LR	LR	11 13 48.3	
	comp=Z,61nm,21.0s,baz=240,slow=31						
BURAR	**Bucovina Array**	**73.98**	**319**	P	**P**	**10 47 43.0**	**+0.2**
BUR08	**Bucovina Ar. S**	**74.00**	**319**	P	**P**	**10 47 42.7**	**-0.3**
KOLS	**Kolonicke sedl**	**76.20**	**320**	*eP*	**P**	**10 47 57.3**	**+1.8**
NFK	**Norfolk Island**	**77.31**	**120**	P	P	10 47 57.1	-5.1
	baz=77,SNR=3.8						
FINES	**FINESS Array B**	**77.50**	**333**	P	**P**	**10 48 02.4**	**-0.1**
	comp=Z,5.2nm,1.1s,baz=111,slow=8.4,SNR=4.0						
FINES				LR	LR	11 23 06.0	
	comp=Z,36nm,20.4s,baz=262,slow=36						
FINES	**FINESS Array B**	**77.50**	**333**	P	**P**	**10 48 02.7**	**+0.2**
VYHS	**Vyhne**	**78.35**	**319**	*eP*	**P**	**10 48 08.9**	**+1.3**
MODS	**Modra-Piesok**	**79.35**	**319**	*eP*	**P**	**10 48 12.5**	**-0.6**
MODS				*e*		11 06 47.0	
MODS				*e*		11 33 04.9	
GEC2	**GERESS Array S**	**81.77**	**319**	P	**P**	**10 48 26.7**	**+0.6**
GEC2				IAmb	IAmb	10 48 41.2	
	comp=Z,4.1nm,0.8s						
GERES	**GERESS Array B**	**81.77**	**319**	P	**P**	**10 48 26.2**	**+0.1**
	comp=Z,2.2nm,0.8s,baz=101,slow=5.6,SNR=14						
GERES	**GERESS Array B**	**81.77**	**319**	P	**P**	**10 48 25.4**	**-0.7**
NOA	**NORSAR Array B**	**84.43**	**331**	LR	LR	11 30 05.2	
	comp=Z,30nm,18.5s,baz=10.0,slow=38						
TORD	**Torodi Ar. Bea**	**91.49**	**283**	P	**P**	**10 49 15.0**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=88,slow=4.8,SNR=3.7						
TORD				LR	LR	11 29 25.7	
	comp=Z,86nm,18.6s,baz=315,slow=35						
DBIC	**Dimbokro**

*IDC **14** 10:41:56.3±1.9, 15°.06N×123°.72E, h0km, mb3.4/4, mb1 3.7/5, mb1mx3.4/50, mbtmp3.5/5, ML4.4/1, Error ellipse: s-maj=52.5km s-min=24.3km az=47.0*
*MAN **14** 10:42:06.5, 14°.55N×123°.41E, h74km, mb4.7, ML3.6, MS3.5*
ISC 14 10:42:07.9±1.1, 14°.54N±0°.04×123°.34E±0°.06, h85km±12km, n22, σ1s12/27, mb3.5/4, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
GQP	**Guinayangan**	**1.07**	**234**	⇑*iP*		**Pn**	**10 42 27.6**	**-0.5**
GQP				*i* S		**Sn**	**10 42 42.4**	**-1.0**
POLP	**Polilio Island**	**1.36**	**278**	*eP*		**Pn**	**10 42 32.0**	**+0.3**
POLP				*eS*		**Sn**	**10 42 50.5**	**+0.8**
LQP	**Lukban**	**1.79**	**256**	⇓*eP*		**Pn**	**10 42 38.2**	**+0.7**
LQP				*i* S		**Sn**	**10 43 01.4**	**+1.5**
BOAC	**Boac**	**1.81**	**234**	*eP*		**Pn**	**10 42 37.5**	**0.0**
BOAC				*eS*		**Sn**	**10 43 00.4**	**+0.5**
BALP	**Baler**	**2.08**	**305**	*eP*		**Pn**	**10 42 40.7**	**-0.3**
BALP				*eS*		**Sn**	**10 43 04.5**	**-1.7**
TGY	**Tagaytay City**	**2.37**	**260**	Pn		**Pn**	**10 42 43.6**	**-1.3**
	51nm,0.3s,baz=326,slow=1.9,SNR=3.9							
CNP	**Catarman**	**2.40**	**147**	*eP*		**Pn**	**10 42 44.9**	**-0.4**
CNP				*eS*		**Sn**	**10 43 14.3**	**+0.4**
OTRP	**Odiongan**	**2.52**	**211**	*eP*		**Pn**	**10 42 47.2**	**+0.2**
OTRP				*eS*		**Sn**	**10 43 17.1**	**+0.3**
PALP	**Palanan**	**2.65**	**341**	*eP*		**Pn**	**10 42 48.9**	**+0.2**
PALP				*eS*		**Sn**	**10 43 18.9**	**-1.2**
CAUP	**Cauayan**	**2.80**	**329**	*eP*		**Pn**	**10 42 51.5**	**+0.9**
CAUP				*eS*		**Sn**	**10 43 24.8**	**+1.3**
SMPP	**San Manuel, Pa**	**3.02**	**302**	*eP*		**Pn**	**10 42 53.6**	**-0.1**
SMPP				*eS*		**Sn**	**10 43 30.1**	**+1.2**
APYP	**Conner**	**3.86**	**329**	*eP*		**Pn**	**10 43 05.7**	**+0.6**
APYP				*eS*		**Sn**	**10 43 50.5**	**+1.1**
CMAR	**Chiang Mai Arr**	**23.70**	**283**	P		**P**	**10 47 12.6**	**+0.3**
	1.2nm,0.6s,baz=93,slow=8.6,SNR=5.7							
WRA	**Warramunga Arr**	**35.94**	**162**	P		**P**	**10 49 01.7**	**+1.3**
	0.6nm,0.8s,baz=344,slow=9.3,SNR=2.9							
ASAR	**Alice Springs**	**39.36**	**165**	P		**P**	**10 49 31.0**	**+1.7**
	0.2nm,0.3s,baz=337,slow=7.4,SNR=8.2							
H11S3	**WAKE ISLAND Hy 41.68**	**78**		T		T	11 33 55.8	
	baz=271,slow=75,SNR=31							
H11S1	**WAKE ISLAND Hy 41.69**	**78**		T		T	11 33 58.4	
	baz=271,slow=75,SNR=24							
H11S2	**WAKE ISLAND Hy 41.69**	**78**		T		T	11 33 58.3	
	baz=271,slow=75,SNR=28							
H11N1	**WAKE ISLAND Hy 41.85**	**77**		T		T	11 34 07.7	
	baz=268,slow=75,SNR=9.5							
H11N2	**WAKE ISLAND Hy 41.86**	**77**		T		T	11 34 08.4	
	baz=268,slow=75,SNR=11							
H11N3	**WAKE ISLAND Hy 41.87**	**77**		T		T	11 34 08.8	
	baz=268,slow=75,SNR=8.8							
MKAR	**Makanchi Array**	**46.91**	**322**	P		**P**	**10 50 27.2**	**-2.7**
	0.3nm,0.9s,baz=112,slow=6.4,SNR=2.4							

*NIED **14** 10:50:00, 36°.60N×141°.10E, h11km, Mw4.0 Best double couple: M0 9.84000×10^14 NP1:φs323.00000°, δ78.00000°, λ-148.00000°. NP2:φs226.00000°, δ59.00000°, λ-14.00000°.*
*IDC **14** 10:50:07.3±0.7, 36°.48N×141°.07E, h0km, mb3.6/11, mb1 3.9/14, mb1mx3.8/47, mbtmp3.7/14, ML3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/41, Error ellipse: s-maj=18.7km s-min=16.2km az=101.0*
*NEIC **14** 10:50:09.8±1.9, 36°.47N±0°.05×141°.23E±0°.07, h20km±6km, mb4.6/12, Error ellipse: s-maj=8.6km s-min=7.1km az=130.0*
*JMA **14** 10:50:10.7±0.1, 36°.55N×141°.07E, h36km±1km, M4.1*
JMA Felt I J1.
ISC 14 10:50:08.5±1.5, 36°.48N±0°.04×141°.22E±0°.05, h13km±9km, n49, σ1s9/55, mb4.0/17, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.53**	**254**	P		**Pb**	**10 50 20.5**	**+1.0**
JHYU				S		**Sb**	**10 50 27.0**	**0.0**
JHO	**Hitachi**	**0.54**	**284**	P		**Pb**	**10 50 19.9**	**+0.2**
JHO				S		**Sg**	**10 50 26.0**	**-0.1**
ONAJ	**Iwakimizuishiy**	**0.70**	**332**	P		**Pg**	**10 50 22.2**	**0.0**
ONAJ				S		**Sg**	**10 50 30.5**	**-0.9**
JIHU	**Itakohorinouch**	**0.76**	**227**	P		**Pn**	**10 50 24.7**	**-0.1**
JYT	**Yasato**	**0.86**	**253**	P		**Pg**	**10 50 25.0**	**-0.2**
JYT				S		**Sg**	**10 50 35.2**	**-1.3**
JFK	**Kawauchi**	**0.92**	**343**	P		**Pg**	**10 50 25.5**	**-0.8**
JSMT	**Sammumatsuo**	**1.04**	**217**	P		**Pn**	**10 50 29.1**	**+0.4**
JSB	**Shiboa**	**1.15**	**295**	P		**Pb**	**10 50 29.8**	**-0.4**
JFT	**Otama**	**1.25**	**326**	P		**Pn**	**10 50 31.2**	**-0.4**
JFT				S		**Sb**	**10 50 45.2**	**-2.7**
MJAR	**Matsushiro Arr**	**2.42**	**272**	Pn		**Pn**	**10 50 48.2**	**+0.4**
	2.3nm,0.3s,baz=86,slow=8.5,SNR=96							
MJAR				Sn		**Sn**	**10 51 15.2**	**-2.0**
	4.5nm,0.3s,baz=88,slow=16,SNR=12							
MJAR				LR		LR	10 51 19.4	
	comp=Z,60nm,18.3s,baz=90,slow=32							
MAJO	**Matsushiro**	**2.42**	**272**			**Pn**	**10 50 48.8**	**+1.0**
MAJO				Sn		**Sn**	**10 51 16.7**	**-0.6**
MJB9	**Matsu-Tunnel**	**2.43**	**272**			**Pn**	**10 50 48.9**	**+1.1**
JHJ2	**Mitsune**	**3.56**	**199**	Pn		**Pn**	**10 51 02.7**	**-0.6**
JHJ2				Sn		**Sn**	**10 51 44.2**	**-1.0**
INU	**Inuyama**	**3.59**	**253**			**Pn**	**10 51 05.3**	**+1.6**
INU				Sn		**Sn**	**10 51 45.3**	**-0.7**
ERM	**Erimo**	**5.73**	**15**	Pn		**Pn**	**10 51 34.4**	**+1.3**
ERM				Sn		**Sn**	**10 52 37.0**	**-1.6**
ASAJ	**Asahikawa**	**7.70**	**7**	Pn		**Pn**	**10 52 00.9**	**+0.8**
	0.9nm,0.3s,baz=202,slow=19,SNR=5.0							
ASAJ				Sn		**Sn**	**10 53 23.8**	**-3.4**
	0.4nm,0.3s,baz=342,slow=18,SNR=1.8							
JKA	**Kamikawa-asahi**	**7.70**	**7**			**Pn**	**10 52 00.9**	**+0.8**
JKA						**Sn**	**10 53 23.8**	**-3.4**
JNU	**Nakatsue**	**9.14**	**251**	LR		LR	10 56 22.3	
	comp=Z,110nm,18.9s,baz=65,slow=42							
JCJ	**Chichijima**	**9.40**	**175**	Pn		**Pn**	**10 52 23.4**	**-0.2**
	6.1nm,0.3s,baz=257,slow=23,SNR=6.5							
JCJ				Sn		**Sn**	**10 54 02.2**	**-6.8**
	3.0nm,0.3s,baz=290,slow=21,SNR=1.2							
KSRS	**Korea Array**	**10.68**	**279**	Pn		**Pn**	**10 52 43.3**	**+2.3**
	0.4nm,0.3s,baz=92,slow=14,SNR=13							
KSRS				LR		LR	10 56 14.9	
	comp=Z,58nm,18.6s,baz=46,slow=35							
SEY	**Seymchan**	**27.36**	**11**	P		**P**	**10 55 54.0**	**+1.0**
	0.4nm,0.2s,baz=205,slow=19,SNR=1.7							
SONM	**Songino Array**	**27.96**	**305**	P		**P**	**10 55 58.9**	**+0.2**
	0.2nm,0.4s,baz=103,slow=8.5,SNR=2.6							
H11N2	**WAKE ISLAND Hy 28.01**	**120**		T		T	11 25 32.4	
	baz=313,slow=75,SNR=198							
H11N1	**WAKE ISLAND Hy 28.02**	**120**		T		T	11 25 33.1	
	baz=313,slow=75,SNR=218							
H11N3	**WAKE ISLAND Hy 28.03**	**120**		T		T	11 25 33.9	
	baz=313,slow=75,SNR=161							
H11S1	**WAKE ISLAND Hy 28.70**	**122**		T		T	11 26 33.8	
	baz=315,slow=76,SNR=171							
H11S3	**WAKE ISLAND Hy 28.70**	**122**		T		T	11 26 24.3	
	baz=315,slow=76,SNR=135							
H11S2	**WAKE ISLAND Hy 28.72**	**122**		T		T	11 26 10.6	
	baz=315,slow=76,SNR=100							
GAMB	**Gambell**	**39.27**	**31**	P		**P**	**10 57 33.7**	**-2.7**
GAMB					IAmb	IAmb	10 57 39.8	
	comp=Z,10nm,1.2s							
FAKI	**Fak Fak**	**40.08**	**194**	P		**P**	**10 57 43.5**	**-0.2**
FAKI					IAmb	IAmb	10 57 58.7	
	comp=Z,45nm,1.4s							
ZALV	**Zalesovo Beam**	**42.17**	**313**	P		**P**	**10 57 59.8**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=106,slow=6.5,SNR=2.5							
MK31	**Makanchi Array**	**44.28**	**303**	P		**P**	**10 58 17.5**	**-0.2**
MKAR	**Makanchi Array**	**44.28**	**303**	P		**P**	**10 58 17.4**	**-0.3**
	comp=Z,0.2nm,0.6s,baz=80,slow=9.1,SNR=3.4							
KURK	**Kurchatov**	**46.15**	**308**	P		**P**	**10 58 32.9**	**+0.4**
KURK					IAmb	IAmb	10 58 41.1	
	comp=Z,10nm,1.1s							
PPLA	**Purkeypile**	**47.71**	**35**	P		**P**	**10 58 45.2**	**+0.5**
DHY	**Denali Highway**	**49.90**	**34**	P		**P**	**10 59 01.8**	**+0.3**
DHY					IAmb	IAmb	10 59 16.9	
	comp=Z,9.2nm,0.8s							
IL31		**50.04**	**32**	P		**P**	**10 59 01.9**	**-0.4**
ILAR	**Eielson Array**	**50.04**	**32**	P		**P**	**10 59 04.0**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=257,slow=5.2,SNR=5.9							
ARSB	**Arslanbob**	**52.08**	**298**	P		**P**	**10 59 19.3**	**+1.1**
ARSB					IAmb	IAmb	10 59 20.9	
	comp=Z,7.8nm,0.9s							
TGL	**Tana Glacier**	**52.28**	**37**	P		**P**	**10 59 21.1**	**+1.7**
KNRA	**Kununurra**	**53.20**	**195**	P		**P**	**10 59 26.3**	**0.0**
WRA	**Warramunga Arr**	**56.49**	**188**	P		**P**	**10 59 50.7**	**+0.5**
	comp=Z,1.9nm,0.6s,baz=4.0,slow=7.4,SNR=17							
ABKAR	**Akbulak array**	**58.17**	**310**	P		**P**	**11 00 02.4**	**+0.5**
ABKAR					IAmb	IAmb	11 00 09.9	
	comp=Z,3.3nm,1.4s							
AS31	**Alice Springs**	**60.22**	**188**	P		**P**	**11 00 16.2**	**0.0**
ASAR	**Alice Springs**	**60.22**	**188**	P		**P**	**11 00 17.2**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=3.7,slow=7.1,SNR=10							
YKA	**Yellowknife Ar**	**64.36**	**30**	P		**P**	**11 00 45.2**	**+1.7**
	comp=Z,0.2nm,0.6s,baz=305,slow=6.8,SNR=3.6							
FINES	**FINESS Array B**	**69.23**	**332**	P		**P**	**11 01 14.9**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=64,slow=9.4,SNR=3.6							
PDAR	**Pinedale Array**	**78.17**	**45**	P		**P**	**11 02 09.7**	**+2.0**
	comp=Z,0.2nm,0.6s,baz=308,slow=4.4,SNR=2.7							
TXAR	**Lajitas Array**	**90.58**	**52**	P		**P**	**11 03 11.9**	**+1.1**
	comp=Z,0.2nm,0.6s,baz=311,slow=4.5,SNR=3.1							

*SOME **14** 11:15:48.5, 40°.92N×79°.83E, h10km*
*KRNET **14** 11:15:48.4±0.1, 41°.09N×80°.55E, mb3.0*
*NNC **14** 11:15:50.1±1.6, 40°.90N×79°.69E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=10.9km s-min=9.8km az=165.0*
ISC 14 11:15:52.9±2.3, 40°.95N±0°.09×79°.80E±0°.07, h10km, n38, σ1s99/61, 10C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.86**	**326**	⇑*iP*		**Pn**	**11 16 24.3**	**-0.7**
	baz=12							
PRZ				⇑*iS*		**Sb**	**11 16 50.4**	**0.0**
	baz=12							
SHLS	**Shalkode**	**2.22**	**354**	*eP*		**Pn**	**11 16 30.3**	**+0.4**
	18nm,0.4s							
SHLS				*eS*		**Sb**	**11 17 00.3**	**-0.4**
	25nm,0.5s							
SHLS	**Shalkode**	**2.22**	**354**	Pg		**Pn**	**11 16 30.3**	**+0.4**
	18nm,0.4s							
SHLS				Lg		Lg	11 17 00.4	
	25nm,0.5s							
UZB	**Uzynbulak**	**2.27**	**345**	*eP*		**Pb**	**11 16 31.6**	**-2.5**
	6.1nm,0.4s							
UZB				*eS*		**Sb**	**11 17 02.6**	**+0.4**
	8.5nm,0.4s							
UZB	**Uzynbulak**	**2.27**	**345**	Pg		**Pb**	**11 16 31.6**	**-2.5**
	6.1nm,0.4s							
UZB				Lg		Lg	11 17 02.7	
	8.5nm,0.4s							
KDJ	**Kajisay**	**2.29**	**302**	⇑*iP*		**Pb**	**11 16 32.7**	**-1.8**
	baz=94							
KDJ				⇑*iS*		**Sb**	**11 17 04.9**	**+1.9**
	baz=94							
SATY	**Saty**	**2.35**	**334**	*eP*		**Pb**	**11 16 33.3**	**-2.1**
	12nm,0.4s							
SATY				*eS*		**Sb**	**11 17 05.9**	**+1.4**
	14nm,0.5s							
SATY	**Saty**	**2.35**	**334**	Pg		**Pb**	**11 16 33.3**	**-2.1**
	12nm,0.4s							
SATY				Lg		Lg	11 17 05.9	
	14nm,0.5s							
PDGK	**Podgornoye**	**2.39**	**354**	Pg		**Pn**	**11 16 33.2**	**+1.0**
	2.9nm,0.4s							
PDGK				Lg		Lg	11 17 05.4	
	4.3nm,0.6s							
PDGK	**Podgornoye**	**2.39**	**354**	⇓Pn		**Pn**	**11 16 32.0**	**-0.3**
	2.8nm,0.4s							
PDGK				⇓Sn		**Sb**	**11 17 04.7**	**-0.9**
	8.0nm,0.5s							
ANVS	**Anan'yevo**	**2.43**	**320**	⇓*iP*		**Pn**	**11 16 33.0**	**+0.1**
	baz=9.0							
ANVS				⇓*iS*		**Sb**	**11 17 05.4**	**-1.5**
	baz=9.0							
KPKS	**Kokpek**	**2.65**	**342**	*eP*		**Pb**	**11 16 38.4**	**-2.1**
	15nm,0.2s							
KPKS				*eS*		**Sb**	**11 17 14.2**	**+1.2**
	31nm,0.5s							
KURS	**Kuram**	**2.81**	**335**	*eP*		**Pb**	**11 16 40.5**	**-2.8**
	3.7nm,0.6s							
KURS				*eS*		**Sb**	**11 17 18.0**	**+0.3**
	8.1nm,0.4s							
KURS	**Kuram**	**2.81**	**335**	Pg		**Pb**	**11 16 40.5**	**-2.8**
	3.7nm,0.6s							
KURS				Lg		Lg	11 17 18.0	
	8.1nm,0.4s							
NRN	**Naryn**	**2.91**	**281**	⇑*iP*		**Pb**	**11 16 42.4**	**-2.7**
	baz=77							
NRN				⇑*iS*		**Sb**	**11 17 22.6**	**+1.7**
	baz=77							
ULHL	**Ulahol**	**2.97**	**297**	⇓*iP*		**Pn**	**11 16 41.7**	**+1.4**
	baz=91							
ULHL				⇓*iS*		**Sb**	**11 17 21.8**	**-0.6**
	baz=91							
TNSS	**Tian-Shan**	**2.98**	**315**	*eP*		**Pb**	**11 16 44.0**	**-2.4**
	7.0nm,0.6s							
TNSS				*eS*		**Sb**	**11 17 24.1**	**+1.2**
	8.8nm,0.4s							
TNSS	**Tian-Shan**	**2.98**	**315**	Pg		**Pb**	**11 16 44.0**	**-2.4**
	7.0nm,0.6s							
TNSS				Lg		Lg	11 17 24.1	
	8.8nm,0.4s							
MDOK	**Medeo**	**3.02**	**318**	*eP*		**Pb**	**11 16 45.3**	**-1.5**
	2.6nm,0.5s							
MDOK				*eS*		**Sb**	**11 17 26.6**	**+2.9**
	9.8nm,0.5s							
MDOK	**Medeo**	**3.02**	**318**	Pg		**Pb**	**11 16 45.3**	**-1.5**
	2.6nm,0.5s							
MDOK				Lg		Lg	11 17 26.6	
	9.8nm,0.5s							
KOTS	**Kotyrbulak**	**3.04**	**320**	*eP*		**Pb**	**11 16 45.1**	**-2.0**
	9.0nm,0.3s							
KOTS				*eS*		**Sb**	**11 17 26.2**	**+1.9**
	28nm,0.5s							
KOTS	**Kotyrbulak**	**3.04**	**320**	Pg		**Pb**	**11 16 45.1**	**-2.0**
	9.0nm,0.3s							
KOTS				Lg		Lg	11 17 26.2	
	28nm,0.5s							
BOOM	**Boomskoye usch**	**3.27**	**299**	⇑*iP*		**Pn**	**11 16 46.1**	**+1.6**
	baz=94							
BOOM				⇑*iS*		**Sb**	**11 17 29.0**	**-2.2**
	baz=94							
DJR	**Jarkent**	**3.38**	**360**	*eP*		**Pb**	**11 16 51.3**	**-1.7**
	0.6nm,0.1s							
DJR				*eS*		**Sb**	**11 17 35.8**	**+1.7**
	3.4nm,0.3s							
DJR	**Jarkent**	**3.38**	**360**	Pg		**Pb**	**11 16 51.2**	**-1.8**
	0.4nm,0.1s							
DJR				Lg		Lg	11 17 36.0	
	2.9nm,0.2s							
KST	**Kastek**	**3.54**	**307**	*eP*		**Pb**	**11 16 54.4**	**-1.4**
	1.7nm,0.1s							
KST				*eS*		**Sb**	**11 17 42.7**	**+3.8**
	10nm,0.5s							
KST	**Kastek**	**3.54**	**307**	Pg		**Pb**	**11 16 54.4**	**-1.4**
	1.7nm,0.1s							
KST				Lg		Lg	11 17 42.7	
	10nm,0.5s							
ARXS	**Arharly**	**3.57**	**337**	*eP*		**Pb**	**11 16 55.1**	**-1.1**
	3.1nm,0.5s							
ARXS				*eS*		**Sb**	**11 17 42.3**	**+2.7**
	4.4nm,0.4s							
ARXS	**Arharly**	**3.57**	**337**	Pg		**Pb**	**11 16 55.1**	**-1.1**
	3.1nm,0.5s							
ARXS				Lg		Lg	11 17 42.3	
	4.4nm,0.4s							
CHKK	**Chushkaly**	**3.57**	**325**	*eP*		**Pb**	**11 16 55.2**	**-1.0**
	1.3nm,0.1s							
CHKK				*eS*		**Sb**	**11 17 42.8**	**+3.2**
	17nm,0.4s							
CHKK	**Chushkaly**	**3.57**	**325**	Pg		**Pb**	**11 16 55.2**	**-1.0**
	1.3nm,0.1s							
CHKK				Lg		Lg	11 17 42.8	
	17nm,0.4s							
KTBS	**Karatobe**	**3.60**	**321**	*eP*		**Pb**	**11 16 54.7**	**-2.0**
	1.5nm,0.5s							
KTBS				*eS*		**Sb**	**11 17 42.2**	**+1.8**
	7.3nm,0.3s							
KTBS	**Karatobe**	**3.60**	**321**	Pg		**Pb**	**11 16 54.7**	**-2.0**
	1.5nm,0.5s							
KTBS				Lg		Lg	11 17 42.2	
	7.3nm,0.3s							
TKM2	**Tokmak 2**	**3.70**	**303**	⇑*iP*		**Pn**	**11 16 51.7**	**+1.3**
	baz=98							
TKM2				⇑*iS*		**Sn**	**11 17 38.2**	**+4.0**
	baz=98							
KUU	**Kurty**	**3.90**	**320**	*eP*		**Pb**	**11 17 01.5**	**-0.3**
	1.1nm,0.6s							
KUU				*eS*		**Sg**	**11 17 53.9**	**-4.2**
	4.2nm,0.5s							
KUU	**Kurty**	**3.90**	**320**	Pg		**Pb**	**11 17 01.5**	**-0.3**
	1.1nm,0.6s							
KUU				Lg		Lg	11 17 53.9	
	4.2nm,0.5s							
KAPS	**Kapalarasan**	**4.34**	**356**	*eP*		**Pb**	**11 17 08.9**	**-0.5**
	1.5nm,0.8s							
KAPS				*eS*		**Sb**	**11 18 06.2**	**+4.4**
	2.7nm,0.6s							
KAPS	**Kapalarasan**	**4.34**	**356**	Pg		**Pb**	**11 17 08.9**	**-0.5**
	1.5nm,0.8s							
KAPS				Lg		Lg	11 18 06.2	
	2.7nm,0.6s							

*VIE **14** 11:30:21.0±0.2, 46°.69N×10°.81E, h9km±2km, mb1.5/6, ml2.6/13, Error ellipse: s-maj=1.5km s-min=1.1km az=150.0 7 km NNE of Silandro*
*ROM **14** 11:30:21.2±0.1, 46°.688N±0°.004×10°.782E±0°.003, h11km, ML1.9/10, Error ellipse: s-maj=0.4km s-min=0.2km az=349.0*
*ZUR **14** 11:30:21.6, 46°.68N×10°.81E, h10km±1km, MLh2.2/13, Error ellipse: s-maj=3.1km s-min=0.8km az=266.0*
ISC 14 11:30:21.1±0.8, 46°.68N±0°.02×10°.79E±0°.02, h17km±6km, n48, σ0s44/95, 19C-2D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
MOSI	**Grossmontoni**	**0.18**	**248**	⇑Pg		**Pg**	**11 30 25.6**	**-0.2**
	3.4nm,SNR=153							
MOSI				⇑Pg		**Pg**	**11 30 25.6**	**-0.2**
MOSI				Sg		**Sg**	**11 30 28.7**	**-0.4**
MOSI	**Grossmontoni**	**0.18**	**248**	P		**Pg**	**11 30 25.6**	**-0.2**
MOSI				S		**Sg**	**11 30 28.7**	**-0.4**
MOSI				AML		AML		
	comp=E,1735μm,1.1s							
MOSI				AML		AML		
	comp=N,2170μm,0.4s							
CARE	**Lago del Cares**	**0.27**	**194**	⇑*i*Pg		**Pg**	**11 30 27.2**	**0.0**
CARE				*i* Sg		**Sg**	**11 30 30.9**	**-0.5**
STSP	**Tschierv**	**0.32**	**260**	Pg		**Pg**	**11 30 28.0**	**-0.1**
	comp=N,0.8nm,SNR=19							
STSP				Pg		**Pg**	**11 30 28.0**	**-0.1**
STSP				Sg		**Sg**	**11 30 32.4**	**-0.3**
OZOL	**Ozolo**	**0.33**	**147**	⇑*eP*g		**Pg**	**11 30 28.5**	**+0.3**
OZOL				*eS*g		**Sg**	**11 30 33.2**	**+0.2**
FETA	**Feichten**	**0.34**	**353**	*eP*g		**Pg**	**11 30 28.3**	**-0.1**
	comp=N,7.0nm,0.0s,SNR=71							
FETA				*i* Sg		**Sg**	**11 30 32.7**	**-0.6**
	comp=N,83nm,0.1s							
SCUC	**Scuol-Clozza**	**0.35**	**289**	Pg		**Pg**	**11 30 28.7**	**+0.1**
SCUC				Pg		**Pg**	**11 30 28.7**	**+0.1**
	comp=N,1.0nm,SNR=25							
SCUC				Sg		**Sg**	**11 30 33.5**	**-0.1**
BRMO	**Bormio**	**0.35**	**234**	⇑Pg		**Pg**	**11 30 28.5**	**-0.1**
BRMO				⇑Pg		**Pg**	**11 30 28.5**	**-0.1**
	comp=N,1.1nm,SNR=170							
BRMO	**Bormio**	**0.35**	**234**	P		**Pg**	**11 30 28.6**	**-0.1**
BRMO				S		**Sg**	**11 30 34.0**	**+0.3**
BRMO				AML		AML		
	comp=E,244μm,1.2s							
BRMO				AML		AML		
	comp=N,321μm,0.2s							
BORM	**Bormio**	**0.36**	**233**	P		**Pg**	**11 30 28.7**	**+0.1**
BORM				S		**Sg**	**11 30 33.8**	**+0.1**
BORM				AML		AML		
	comp=N,1076μm,0.7s							
BORM				AML		AML		
	comp=E,556μm,0.3s							
APPI	**Appiano**	**0.36**	**124**	P		**Pg**	**11 30 29.0**	**+0.2**
APPI				S		**Sg**	**11 30 34.3**	**+0.3**
APPI				AML		AML		
	comp=E,685μm,0.1s							
APPI				AML		AML		
	comp=N,652μm,0.1s							
ABSI	**Aberstueckl**	**0.37**	**83**	⇑Pg		**Pg**	**11 30 28.8**	**-0.1**
	comp=N,2.3nm,SNR=262							
ABSI				⇑Pg		**Pg**	**11 30 28.8**	**-0.1**
ABSI				Sg		**Sg**	**11 30 34.3**	**+0.2**
ABSI	**Aberstueckl**	**0.37**	**83**	P		**Pg**	**11 30 28.8**	**-0.1**
ABSI				S		**Sg**	**11 30 34.3**	**+0.2**
ABSI				AML		AML		
	comp=N,1650μm,0.4s							
ABSI				AML		AML		
	comp=E,1640μm,0.4s							
FUORN	**Ofenpass-Fuorn**	**0.37**	**260**	⇑Pg		**Pg**	**11 30 28.7**	**-0.2**
FUORN				⇑Pg		**Pg**	**11 30 28.7**	**-0.2**
	comp=E,0.3nm,SNR=35							
FUORN	**Ofenpass-Fuorn**	**0.37**	**260**	P		**Pg**	**11 30 28.7**	**-0.2**
FUORN				S		**Sg**	**11 30 34.2**	**0.0**
FUORN				AML		AML		
	comp=E,146μm,0.6s							
FUORN				AML		AML		
	comp=N,176μm,1.4s							
FUORN				AML		AML		
	comp=E,146μm,0.6s							
FUORN				AML		AML		
	comp=N,176μm,1.4s							
KOSI	**Kohlern**	**0.46**	**118**	⇑Pg		**Pg**	**11 30 30.9**	**+0.4**
	comp=N,0.2nm,SNR=13							
KOSI				⇑Pg		**Pg**	**11 30 30.9**	**+0.4**
KOSI	**Kohlern**	**0.46**	**118**	P		**Pg**	**11 30 30.7**	**+0.2**
KOSI				S		**Sg**	**11 30 37.2**	**+0.4**
KOSI				AML		AML		
	comp=E,129μm,1.0s							
KOSI				AML		AML		
	comp=N,124μm,0.7s							
KOSI				AML		AML		
	comp=E,128μm,1.0s							
KOSI				AML		AML		
	com

WTTA				S		**Sb**	**11 30 47.9**	**+0.1**
WTTA	**Wattenberg**	**0.82**	**45**	*e*Pg		**Pb**	**11 30 36.8**	**-0.2**
	comp=E,2.1nm,0.1s,SNR=7.6							
WTTA				*e*Sg		**Sb**	**11 30 47.9**	**+0.1**
	comp=E,5.9nm,0.1s							
WATA	**Walderalm**	**0.85**	**39**	*e*Pg		**Pb**	**11 30 37.7**	**+0.3**
	comp=E,6.1nm,0.1s,SNR=11							
WATA				*e*Sg		**Sb**	**11 30 48.7**	**+0.2**
	comp=E,12nm,0.2s							
DOSS	**Dosso del Somm**	**0.85**	**161**	*e*Pg		**Pn**	**11 30 38.7**	**+0.3**
DOSS				*e*Sg		**Sn**	**11 30 50.5**	**0.0**
MAGA	**Magasa**	**0.92**	**187**	P		**Pb**	**11 30 38.7**	**+0.1**
MAGA				S		**Sg**	**11 30 51.0**	**0.0**
MAGA				AML	AML			
	comp=E,195μm,1.0s							
MAGA				AML	AML			
	comp=N,161μm,0.4s							
RISI	**Rein**	**0.92**	**73**	⇑Pg		**Pb**	**11 30 38.5**	**-0.2**
RISI				⇑Pg		**Pb**	**11 30 38.5**	**-0.2**
	comp=N,0.3nm,SNR=37							
RISI				Sg		**Sb**	**11 30 50.9**	**+0.1**
RISI	**Rein**	**0.92**	**73**	P		**Pb**	**11 30 38.4**	**-0.4**
RISI				S		**Sg**	**11 30 51.2**	**-0.1**
RISI				AML	AML			
	comp=E,155μm,0.7s							
RISI				AML	AML			
	comp=N,228μm,0.4s							
VDL	**Val di Lei**	**0.95**	**258**	Pg		**Pb**	**11 30 38.9**	**-0.2**
	comp=N,0.1nm,SNR=7.9							
VDL				Pg		**Pb**	**11 30 38.9**	**-0.2**
CGRP	**Cima Grappa**	**1.07**	**139**	P		**Pb**	**11 30 41.3**	**+0.2**
MDI	**Monti di Nese**	**1.18**	**220**	P		**Pb**	**11 30 43.3**	**+0.3**
ABTA	**Abfaltersbach**	**1.19**	**86**	*e*Pg		**Pg**	**11 30 43.8**	**-0.2**
	comp=N,1.4nm,0.1s,SNR=5.2							
ABTA				Sg		**Sb**	**11 30 58.6**	**+0.4**
	comp=N,11nm,0.1s,SNR=11							
FVI	**Forni Avoltri**	**1.37**	**93**	P		**Pb**	**11 30 46.9**	**+0.5**
KBA	**Koelnbreinsper**	**1.80**	**76**	*i* Pg		**Pg**	**11 30 55.0**	**-0.6**
	comp=N,2.3nm,0.2s							
KBA				*e*Sg		**Sg**	**11 31 18.8**	**-0.1**
	comp=N,4.2nm,0.1s							
MYKA	**Terra Mystica**	**1.96**	**91**	Pg		**Pg**	**11 30 58.4**	**-0.4**
	comp=N,1.0nm,0.2s							
MYKA				*e*Sg		**Sg**	**11 31 24.7**	**+0.4**
	comp=N,4.8nm,0.3s							
MOA	**Molln**	**2.64**	**62**	*e*Pg		**Pg**	**11 31 10.6**	**-1.0**
	comp=N,1.0nm,0.2s							
ARVD	**Arcevia**	**3.53**	**154**	S		**Sg**	**11 32 12.0**	**-2.5**
SSM1	**San Severino M**	**3.85**	**153**	P		**Pg**	**11 31 33.1**	**-1.7**
CLL	**Collm**	**4.85**	**17**	*e*Sg		**Sg**	**11 32 58.0**	**+1.3**
CLL				LmH			12 47 00.0	
	comp=N,100nm,21.7s							
CLL				LmH			12 47 00.0	
	comp=E,200nm,18.3s							
CLL				LmV			12 47 00.0	
	comp=Z,200nm,18.5s							

IDC 14 11:33:15.7±2.8, 8°03S×129°36E, h0km, mb3.3/1, mb1 3.4/3, mb1mx3.3/30, mbtmp3.2/3, ML3.4/1, Error ellipse: s-maj=261.3km s-min=34.7km az=67.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.79**	**158**	Pn	Pn	11 36 18.4	-0.5
	0.2nm,0.3s,baz=337,slow=15,SNR=1.8						
WRA				Sn	Sn	11 38 33.6	-8.5
	0.6nm,0.3s,baz=337,slow=22,SNR=5.4						
ASAR	**Alice Springs**	**16.15**	**165**	Pn	Pn	11 37 04.7	+0.6
	baz=342,slow=8.8,SNR=0.5						
ASAR				Sn	Sn	11 39 59.1	-5.0
	0.2nm,0.3s,baz=348,slow=24,SNR=4.5						
MKAR	**Makanchi Array**	**68.74**	**327**	P	P	11 44 21.4	0.0
	0.1nm,0.4s,baz=130,slow=8.0,SNR=2.2						

*IDC **14** 11:40:22.1±1.2,51°30N×177°76W, h0km, mb3.5/7, mb1 3.9/8, mb1mx3.6/41, mbtmp3.6/8, ML3.9/1, Error ellipse: s-maj=38.1km s-min=23.4km az=160.0*
*AEIC **14** 11:40:30.2±1.2,51°21N±0°03×177°73W±0°07, h41km±6km, mb4.5/6(NEIC), Error ellipse: s-maj=7.4km s-min=2.0km az=125.0*
*NEIC **14** 11:40:30.6±1.1,51°31N±0°09×177°78W±0°08, h64km±7km, Error ellipse: s-maj=12.4km s-min=6.9km az=176.0*
ISC 14 11:40:30.1±1.6, 51°3N±0°2×177°76W±0°05, h64km±11km, n41, σ1s14/43, mb3.7/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPA	**Tanaga Point A**	**0.50**	**356**		**Pn**	**11 40 42.6**	**+0.2**
TASE	**Tanaga Southea**	**0.54**	**342**		**Pn**	**11 40 43.5**	**+0.6**
KIMD	**Kanaga Island**	**0.55**	**36**		**Pn**	**11 40 42.7**	**-0.2**
KIMD					**Sn**	**11 40 52.1**	**-0.2**
TAFP	**Tanaga Falls P**	**0.60**	**347**		**Pn**	**11 40 43.9**	**+0.4**
TANO	**Tanaga North**	**0.64**	**340**		**Pn**	**11 40 44.6**	**+0.8**
KIWB	**Kanaga Island**	**0.66**	**35**		**Pn**	**11 40 44.4**	**+0.4**
KIWB					**Sn**	**11 40 55.1**	**+0.8**
KIKV	**Kanaga Island**	**0.67**	**33**		**Pn**	**11 40 44.5**	**+0.2**
KICM	**Kanaga Island**	**0.70**	**30**		**Pn**	**11 40 45.2**	**+0.6**
KICM					**Sn**	**11 40 57.0**	**+1.9**
KINC	**Kanaga Island**	**0.73**	**33**		**Pn**	**11 40 45.5**	**+0.5**
GAEA	**Gareloi East**	**0.77**	**307**		**Pn**	**11 40 45.9**	**+0.5**
GALAA	**Gareloi Lava P**	**0.77**	**305**		**Pn**	**11 40 45.8**	**+0.4**
ADK	**Adak**	**0.88**	**50**		**Pn**	**11 40 47.2**	**+0.5**
ADK				Sn	**Sn**	**11 41 00.1**	**+1.1**
ADAG	**Mount Adagdak**	**0.98**	**47**		**Pn**	**11 40 49.0**	**+1.0**
GSTD	**Great Sitkin T**	**1.25**	**53**		**Pn**	**11 40 52.5**	**+1.0**
GSTD					**Sn**	**11 41 08.8**	**+1.2**
GSMY	**Great Sitkin M**	**1.29**	**55**		**Pn**	**11 40 52.9**	**+0.9**
GSTR	**Great Sitkin T**	**1.31**	**53**		**Pn**	**11 40 53.1**	**+0.7**
GSTR				Sn	**Sn**	**11 41 09.9**	**+0.8**
GSIG	**Igitkin Island**	**1.32**	**59**		**Pn**	**11 40 53.4**	**+0.9**
GSIG					**Sn**	**11 41 10.7**	**+1.3**
ATKA	**Atka Island**	**2.39**	**67**		**Pn**	**11 41 07.4**	**+0.6**
ATKA				Sn	**Sn**	**11 41 35.3**	**+0.4**
ATKA	**Atka Island**	**2.39**	**67**		LR	11 41 36.1	
KOKL	**Mount Kliuchef**	**2.43**	**64**		**Pn**	**11 41 09.4**	**+2.0**
KOFP	**Korovin Flat P**	**2.47**	**66**		**Pn**	**11 41 09.3**	**+1.3**
KDAK	**Kodiak Island**	**15.91**	**56**	Pn	**Pn**	**11 44 06.3**	**-3.4**
	0.4nm,0.3s,baz=263,slow=7.4,SNR=11						
KDAK				Sn	**Sn**	**11 47 03.6**	**-1.4**
	0.1nm,0.3s,baz=60,slow=23,SNR=5.8						
KDAK	**Kodiak Island**	**15.91**	**56**		**Pn**	**11 44 07.2**	**-2.5**
SKT	**Skwentna**	**17.80**	**43**	P	**Pn**	**11 44 32.0**	**-1.1**
SKT				IAmb	IAmb	11 45 13.7	
	comp=Z,59nm,1.8s						
RND	**Reindeer**	**19.52**	**41**	P	**Pn**	**11 44 53.4**	**-0.4**
RND				IAmb	IAmb	11 44 53.7	
	comp=Z,64nm,2.0s						
MLY	**Manley**	**19.57**	**35**	P	**Pn**	**11 44 54.4**	**+0.1**
DHY	**Denali Highway**	**20.00**	**42**	P	**Pn**	**11 44 58.5**	**-1.0**
DHY				IAmb	IAmb	11 44 58.9	
	comp=Z,41nm,1.7s						
ILAR	**Eielson Array**	**20.89**	**38**	P	**P**	**11 45 05.5**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=239,slow=8.7,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**33.76**	**207**	T	T	12 23 47.4	
	baz=18,slow=76,SNR=110						
H11N3	**WAKE ISLAND Hy**	**33.77**	**207**	T	T	12 23 41.7	
	baz=18,slow=76,SNR=79						
H11N1	**WAKE ISLAND Hy**	**33.78**	**207**	T	T	12 23 42.1	
	baz=18,slow=76,SNR=79						
YKA	**Yellowknife Ar**	**34.80**	**47**	P	**P**	**11 47 14.0**	**-0.1**
	comp=Z,0.3nm,0.5s,baz=286,slow=8.0,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**34.98**	**206**	T	T	12 24 52.6	
	baz=17,slow=76,SNR=142						
H11S2	**WAKE ISLAND Hy**	**34.99**	**206**	T	T	12 25 15.6	
	baz=17,slow=76,SNR=102						
H11S3	**WAKE ISLAND Hy**	**34.99**	**206**	T	T	12 25 23.6	
	baz=17,slow=76,SNR=68						
PDAR	**Pinedale Array**	**45.71**	**73**	P	**P**	**11 48 46.1**	**+1.4**
	comp=Z,0.6nm,0.4s,baz=347,slow=2.4,SNR=11						
CCUT	**Cedar City**	**46.53**	**81**	P	**P**	**11 48 50.6**	**-0.6**
TXAR	**Lajitas Array**	**58.02**	**82**	P	**P**	**11 50 15.1**	**-1.3**
	comp=Z,0.6nm,1.0s,baz=325,slow=7.7,SNR=3.6						
ARCES	**ARCESS Array B**	**58.26**	**351**	P	**P**	**11 50 17.5**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=29,slow=8.2,SNR=4.2						
MKAR	**Makanchi Array**	**60.58**	**309**	P	**P**	**11 50 34.4**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=60,slow=6.6,SNR=3.4						
ASAR	**Alice Springs**	**85.89**	**223**	P	**P**	**11 53 03.6**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=23,slow=5.3,SNR=7.4						

*FUNV **14** 11:42:49.4, 10°33N×62°24W, h5km, MW2.6*

*TRN **14** 11:42:51.1, 10°47N×62°11W, h13km, MD2.7*
ISC 14 11:42:46.2±1.3, 10°32N±0°03×62°19W±0°03, h6km±11km, n15, σ1s14/27, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.33**	**354**	*e*P	**Pb**	**11 42 54.8**	**+0.3**
GUIV				*e*S	**Sb**	**11 42 59.5**	**-0.5**
GUIV	**Guiria**	**0.33**	**354**	⇓*e*P	**Pb**	**11 42 54.8**	**+0.3**
GUIV				*e*S	**Sb**	**11 43 00.1**	**+0.1**
GUNV	**Guanoco**	**0.76**	**258**	⇑*e*P	**Pg**	**11 43 01.2**	**+0.4**
GUNV				*e*S	**Sb**	**11 43 13.5**	**+1.1**
TRN	**Trinidad (W)**	**0.84**	**67**	*e*P	**Pn**	**11 43 05.4**	**+0.9**
TRN				*e*S	**Sb**	**11 43 15.5**	**+0.9**
CRUV	**Carupano**	**1.09**	**289**	*e*P	**Pg**	**11 43 06.3**	**-0.8**
CRUV				*e*S	**Sg**	**11 43 20.1**	**-1.2**
ORIV	**Oritupano**	**1.73**	**224**	*e*P	**Pg**	**11 43 19.4**	**0.0**
ORIV				*e*S	**Sg**	**11 43 42.1**	**+0.3**
GRGR	**Grenville**	**1.88**	**16**	*e*	**Pb**	**11 43 20.1**	**-0.8**
GRGR	**Grenville**	**1.88**	**16**	*e*P	**Pg**	**11 43 22.4**	**+0.2**
GRGR				*e*S	**Sg**	**11 43 46.4**	**-0.2**
TOSP	**Speyside**	**1.89**	**59**	*e*P	**Pg**	**11 43 22.2**	**-0.3**
TOSP				*e*S	**Sn**	**11 43 43.5**	**+0.3**
GRHS	**Sauteurs**	**1.97**	**16**	*e*	**Pn**	**11 43 20.8**	**+0.7**
GRSS	**Sisters**	**2.05**	**16**	*e*	**Pn**	**11 43 21.7**	**+0.5**
RIOV	**Rio Grande**	**2.27**	**171**	*e*P	**Pb**	**11 43 27.1**	**-0.4**
RIOV				*e*S	**Sb**	**11 43 55.9**	**+0.1**
PCRV	**Puerto La Cruz**	**2.42**	**267**	*e*P	**Pn**	**11 43 28.1**	**+1.9**
PCRV				*e*S	**Sn**	**11 43 56.3**	**+0.1**
LUEV	**Luepa**	**4.50**	**171**	*e*P	**Pn**	**11 43 55.4**	**+0.2**
LUEV				*e*S	**Sn**	**11 44 46.9**	**-1.1**
BAUV	**El Baul**	**5.93**	**257**	*e*P	**Pn**	**11 44 16.5**	**+1.9**
BAUV				*e*S	**Sn**	**11 45 19.3**	**-3.7**

IDC 14 12:03:58.5±2.2, 27°96S×73°47E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/40, mbtmp3.8/4, MS2.8/1, Ms1 3.0/1, ms1mx2.6/30, Error ellipse: s-maj=62.3km s-min=32.6km az=114.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**20.23**	**357**	T	T	12 28 31.3	
	baz=179,slow=76,SNR=12						
H08S2	**Diego Garcia H**	**20.23**	**357**	T	T	12 28 31.3	
	baz=179,slow=76,SNR=18						
H08S3	**Diego Garcia H**	**20.25**	**357**	T	T	12 28 33.6	
	baz=179,slow=76,SNR=14						
H01W2	**Cape Leeuwin H**	**35.20**	**112**	T	T	12 48 42.3	
	baz=271,slow=74,SNR=9.3						
H01W3	**Cape Leeuwin H**	**35.20**	**112**	T	T	12 48 43.6	
	baz=271,slow=74,SNR=9.0						
H01W1	**Cape Leeuwin H**	**35.21**	**112**	T	T	12 48 44.0	
	baz=271,slow=74,SNR=10						
CMAR	**Chiang Mai Arr**	**52.32**	**31**	P	P	12 13 12.2	0.0
	0.9nm,0.3s,baz=225,slow=10,SNR=5.3						
CMAR				LR	LR	12 32 08.5	
	comp=Z,11nm,21.5s,baz=100,slow=32						
ASAR	**Alice Springs**	**54.10**	**100**	P	P	12 13 25.4	-0.1
	0.7nm,0.8s,baz=249,slow=6.7,SNR=7.2						
WRA	**Warramunga Arr**	**55.72**	**96**	P	P	12 13 37.1	-0.1
	0.7nm,0.9s,baz=250,slow=8.2,SNR=3.3						
QSPA	**South Pole Qui**	**62.18**	**180**	P	P	12 14 21.5	0.0
	2.1nm,1.0s,baz=281,slow=5.2,SNR=9.1						

*THE **14** 12:05:48.9, 41°92N×24°57E, h2km±2km, ML2.5/4, Error ellipse: s-maj=2.8km s-min=1.0km az=202.0*
*SOF **14** 12:05:48.5, 41°92N×24°54E, h18km, MD3.2*
*ATH **14** 12:05:49.2, 41°88N×24°57E, h25km±1km, ML2.4/12, Error ellipse: s-maj=2.9km s-min=1.3km az=183.0*
*BEO **14** 12:05:50.7±1.2, 41°90N×24°45E, h19km±8km, ML2.4/7*
*ISK **14** 12:05:51.1, 41°81N×24°62E, h4km, ML2.6/5*
ISC 14 12:05:48.6±1.0, 41°91N±0°02×24°56E±0°02, h9km±9km, n64, σ0s90/91, 11C-4D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.22**	**29**	P	**Pg**	**12 05 54.7**	**+1.6**
RZN	**Rozhen**	**0.25**	**153**	P	**Pb**	**12 05 54.8**	**-0.6**
MMB	**Musomiste**	**0.70**	**243**	P	**Pg**	**12 06 02.2**	**0.0**
DIM	**Dimitrovgrad**	**0.74**	**79**	P	**Pg**	**12 05 59.6**	**-3.2**
NVR	**Nevrokopi**	**0.77**	**223**	P	**Pb**	**12 06 04.0**	**-0.1**
NVR				S	**Sb**	**12 06 14.7**	**0.0**
	198nm,0.2s						
NVR	**Nevrokopi**	**0.77**	**223**	P	**Pb**	**12 06 04.2**	**+0.1**
NVR				S	**Sb**	**12 06 15.3**	**+0.6**
NVR				AML	AML	12 06 17.2	
	comp=N,346μm,0.2s						
NVR				AML	AML	12 06 18.0	
	comp=E,369μm,0.2s						
KAVA	**Kavala**	**0.92**	**182**	P	**Pb**	**12 06 06.3**	**-0.3**
KAVA				S	**Sb**	**12 06 19.1**	**+0.3**
	comp=E,345nm,0.2s						
KAVA	**Kavala**	**0.92**	**182**	P	**Pb**	**12 06 06.3**	**-0.3**
KAVA				S	**Sb**	**12 06 19.1**	**+0.3**
KAVA				AML	AML	12 06 23.2	
	comp=N,799μm,0.4s						
KAVA				AML	AML	12 06 23.4	
	comp=E,578μm,0.2s						
KVLA	**Kavala**	**0.98**	**188**	P	**Pg**	**12 06 07.3**	**-0.2**
KVLA				S	**Sb**	**12 06 21.1**	**+0.3**
RDO	**Rodhopi**	**1.06**	**136**	P	**Pn**	**12 06 09.3**	**-0.2**
RDO				S	**Sb**	**12 06 23.6**	**+0.6**
	comp=E,340nm,0.2s						
RDO	**Rodhopi**	**1.06**	**136**	P	**Pn**	**12 06 09.4**	**-0.1**
RDO				S	**Sb**	**12 06 23.5**	**+0.6**
RDO				AML	AML	12 06 27.4	
	comp=N,598μm,0.2s						
RDO				AML	AML	12 06 27.5	
	comp=E,752μm,0.2s						
RDO	**Rodhopi**	**1.06**	**136**	PG	**Pn**	**12 06 09.8**	**+0.3**
RDO				SG	**Sn**	**12 06 23.7**	**-0.6**
SRS	**Serrai**	**1.08**	**223**	P	**Pg**	**12 06 09.2**	**-0.1**
SRS				S	**Sn**	**12 06 24.5**	**-0.4**
	comp=E,298nm,0.4s						
SRS	**Serrai**	**1.08**	**223**	P	**Pb**	**12 06 09.4**	**+0.1**
SRS				S	**Sn**	**12 06 24.3**	**-0.6**
SRS				AML	AML	12 06 25.1	
	comp=N,444μm,0.2s						
SRS				AML	AML	12 06 27.2	
	comp=E,733μm,0.6s						
VTS	**Vitosha**	**1.21**	**306**	P	**Pb**	**12 06 10.8**	**-0.9**
VTS	**Vitosha**	**1.21**	**306**	*e*Pg	**Pb**	**12 06 10.8**	**-0.9**
VTS				*e*Sg	**Sn**	**12 06 28.1**	**-0.3**
VTS	**Vitosha**	**1.21**	**306**	⇑P	**Pb**	**12 06 10.6**	**-1.2**
VTS	**Vitosha**	**1.21**	**306**	⇓S	**Sn**	**12 06 29.2**	**+0.8**
VTS	**Vitosha**	**1.21**	**306**	P	**Pb**	**12 06 10.5**	**-1.2**
THAS	**Thassos island**	**1.31**	**175**	P	**Pb**	**12 06 13.2**	**-0.1**
THAS	**Thassos island**	**1.31**	**175**	P	**Pn**	**12 06 13.0**	**+0.1**
THAS				S	**Sn**	**12 06 30.6**	**0.0**
THAS				AML	AML	12 06 34.4	
	comp=N,325μm,0.3s						
THAS				AML	AML	12 06 36.4	
	comp=E,315μm,0.2s						
ELND	**Elena**	**1.41**	**43**	⇓P	**Pb**	**12 06 14.7**	**-0.3**
ELND	**Elena**	**1.41**	**43**	⇑S	**Sg**	**12 06 33.8**	**0.0**
SOH	**Sokhos**	**1.42**	**220**	P	**Pb**	**12 06 15.1**	**-0.1**
SOH	**Sokhos**	**1.42**	**220**	P	**Pb**	**12 06 15.4**	**+0.1**
SOH				S	**Sg**	**12 06 34.5**	**+0.3**
SOH				AML	AML	12 06 36.4	
	comp=N,451μm,0.5s						
SOH				AML	AML	12 06 37.3	
	comp=E,469μm,0.4s						
KNT	**Kendrikon**	**1.46**	**240**	P	**Pb**	**12 06 15.6**	**-0.3**
KNT	**Kendrikon**	**1.46**	**240**	P	**Pb**	**12 06 15.5**	**-0.3**
KNT				S	**Sg**	**12 06 35.8**	**+0.3**
KNT				AML	AML	12 06 37.2	
	comp=N,260μm,0.3s						
KNT				AML	AML	12 06 37.4	
	comp=E,405μm,0.3s						
PLVB	**Pleven**	**1.47**	**2**	⇓P	**Pg**	**12 06 16.9**	**+0.1**
PLVB	**Pleven**	**1.47**	**2**	⇑S	**Sg**	**12 06 36.8**	**+0.8**
ALN	**Alexandroupoli**	**1.51**	**132**	P	**Pb**	**12 06 16.5**	**-0.2**
ALN	**Alexandroupoli**	**1.51**	**132**	P	**Pb**	**12 06 16.7**	**0.0**
ALN				S	**Sg**	**12 06 36.4**	**-0.6**
ALN				AML	AML	12 06 41.3	
	comp=N,84μm,0.5s						
ALN				AML	AML	12 06 42.5	
	comp=E,100μm,0.4s						
ALN	**Alexandroupoli**	**1.51**	**132**	PN	**Pg**	**12 06 17.6**	**+0.1**
ALN				SN	**Sg**	**12 06 37.3**	**+0.3**
VAY	**Valandovo**	**1.61**	**249**	*e*Pg	**Pg**	**12 06 19.3**	**-0.1**
VAY				*e*Sg	**Sn**	**12 06 38.2**	**+0.3**
VAY	**Valandovo**	**1.61**	**249**	*i* Pn	**Pb**	**12 06 17.9**	**-0.4**
VAY				*i* Sn	**Sg**	**12 06 40.6**	**+0.4**
SMTH	**Samothraki Isl**	**1.61**	**153**	P	**Pb**	**12 06 18.6**	**+0.1**
SMTH				S	**Sb**	**12 06 39.6**	**+0.6**
SMTH				AML	AML	12 06 42.6	
	comp=N,157μm,0.6s						
SMTH				AML	AML	12 06 43.4	
	comp=E,87μm,0.4s						
EDRB	**Edirne**	**1.63**	**92**	P	**Pn**	**12 06 17.3**	**-0.1**
OUR	**Ouranopolis**	**1.64**	**196**	P	**Pn**	**12 06 17.5**	**0.0**
OUR				AML	AML	12 06 44.2	
	comp=N,249μm,0.7s						
OUR				AML	AML	12 06 47.0	
	comp=E,228μm,0.4s						
OUR	**Ouranopolis**	**1.64**	**196**	PN	**Pg**	**12 06 19.8**	**-0.2**
OUR				SN	**Sg**	**12 06 41.2**	**0.0**
BOSS	**Bosilegrad**	**1.65**	**291**	*e*Pn	**Pb**	**12 06 19.3**	**+0.1**
BOSS				*e*Sg	**Sg**	**12 06 41.7**	**0.0**
ENEZ	**Enez**	**1.68**	**134**	PN	**Pg**	**12 06 20.6**	**-0.1**
SZH	**Strazhica**	**1.69**	**36**	P	**Pb**	**12 06 19.7**	**-0.1**
HORT	**Hortiatis**	**1.72**	**221**	P	**Pn**	**12 06 18.9**	**+0.3**
HORT				AML	AML	12 06 45.6	
	comp=N,105μm,0.4s						
HORT				AML	AML	12 06 45.7	
	comp=E,152μm,0.5s						
UKOP	**Uzunkopru-Edir**	**1.74**	**116**	PN	**Pg**	**12 06 21.6**	**-0.3**
PLG	**Polygyros**	**1.75**	**209**	P	**Pn**	**12 06 19.4**	**+0.3**
PLG				S	**Sb**	**12 06 43.0**	**0.0**
PLG				AML	AML	12 06 49.3	
	comp=N,154μm,0.7s						
PLG				AML	AML	12 06 49.6	
	comp=E,106μm,0.3s						
GRG	**Griva**	**1.89**	**240**	P	**Pb**	**12 06 22.7**	**-0.4**
ERIK	**Erikli-Kesan**	**1.92**	**130**	PN	**Pb**	**12 06 24.3**	**+0.6**
ZAPS	**Zavoj**	**1.97**	**314**	*e*Pn	**Pb**	**12 06 23.6**	**-1.0**
ZAPS				*e*Sg	**Sg**	**12 06 52.2**	**+0.3**
GELI	**Tayfur-Gelibol**	**2.09**	**136**	PN	**Pb**	**12 06 26.4**	**-0.2**
PAIG	**Paliouri**	**2.09**	**199**	P	**Pn**	**12 06 23.7**	**0.0**
BARS	**Barje**	**2.23**	**295**	*e*Pn	**Pn**	**12 06 25.0**	**-0.6**
BARS				*e*Sg	**Sg**	**12 06 58.6**	**-1.5**
BOZC	**Bozcaada**	**2.36**	**151**	PN	**Pb**	**12 06 29.5**	**-1.7**
ZAGS	**Zajecar**	**2.56**	**319**	*e*Pn	**Pn**	**12 06 29.6**	**-0.5**
ZAGS				*e*Sg	**Sg**	**12 07 10.0**	**-0.7**
BOVS	**Bovan**	**2.72**	**310**	*e*Pn	**Pn**	**12 06 31.9**	**-0.4**
SELS	**Selova**	**2.86**	**298**	*e*Pn	**Pn**	**12 06 35.2**	**+0.9**
SELS				*e*Sg	**Sg**	**12 07 19.8**	**-0.6**
GRUS	**Gruza**	**3.45**	**306**	*e*Pn	**Pn**	**12 06 42.8**	**+0.4**
GRUS				*e*Sg	**Sg**	**12 07 38.1**	**-1.2**
VOIR		**3.54**	**6**	⇑P	**Pn**	**12 06 45.2**	**+1.4**
VOIR		**3.54**	**6**	⇑S	**Sb**	**12 07 31.0**	**-3.5**
GZR	**Gura Zlata**	**3.71**	**340**	⇑P	**Pn**	**12 06 45.9**	**-0.1**
GZR	**Gura Zlata**	**3.71**	**340**	⇑S	**Sn**	**12 07 33.1**	**+3.2**
MLR	**Muntele Rosu**	**3.71**	**15**	⇑P	**Pn**	**12 06 46.7**	**+0.5**
MLR	**Muntele Rosu**	**3.71**	**15**	⇓S	**Sn**	**12 07 32.9**	**+2.8**
VRI	**Vrincioaia**	**4.25**	**21**	⇑P	**Pn**	**12 06 54.5**	**+1.1**
BZS	**Buzias**	**4.27**	**331**	⇑P	**Pn**	**12 06 53.6**	**-0.1**
BZS	**Buzias**	**4.27**	**331**	⇑S	**Sn**	**12 07 45.0**	**+1.3**

*NEIC **14** 12:08:50.0±1.9, 19°01N±0°04×66°89W±0°03, h33km±4km, Error ellipse: s-maj=5.3km s-min=3.8km az=181.0*
*RSPR **14** 12:08:50.2, 19°13N×66°92W, h42km±5km, MD4.2/16*
*IDC **14** 12:08:51.3±1.1, 18°94N×66°90W, h46km±12km, mb4.1/26, mb1 4.3/31, mb1mx4.2/42, mbtmp4.4/31, ML3.9/5, MS3.9/27, Ms1 3.9/27, ms1mx3.7/44, Error ellipse: s-maj=11.3km s-min=9.4km az=30.0*
ISC 14 12:08:49.7±1.0, 18°99N±0°03×66°91W±0°02, h31km±7km, n472, σ1s37/490, mb4.8/67, MS3.9/24, 15C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.56**	**200**		**Pn**	**12 09 01.8**	**+0.3**
AGPR					**Sn**	**12 09 11.3**	**+1.6**
EMPR	**Esperanza - Ma**	**0.63**	**145**	*e*P	**Pn**	**12 09 03.5**	**+1.0**
EMPR	**Esperanza - Ma**	**0.63**	**145**	*e*S	**Sn**	**12 09 13.6**	**+2.2**
EMPR	**Esperanza - Ma**	**0.63**	**145**		**Pn**	**12 09 03.4**	**+1.0**
EMPR				Sn	**Sn**	**12 09 14.1**	**+2.7**
AOPR	**Arecibo Observ**	**0.66**	**167**	⇓*e*P	**Pn**	**12 09 03.5**	**+0.7**
AOPR	**Arecibo Observ**	**0.66**	**167**	⇑*e*P	**Pn**	**12 09 03.6**	**+0.7**
AOPR				*e*S	**Sn**	**12 09 14.2**	**+2.0**
AOPR	**Arecibo Observ**	**0.66**	**167**	*e*S	**Sn**	**12 09 15.2**	**+3.0**
AOPR	**Arecibo Observ**	**0.66**	**167**		**Pn**	**12 09 03.6**	**+0.7**
AOPR			

BANI BANI 3.32 260 Pn 12 09 42.1 +2.4
SC01 Santiago de lo 3.63 277 Pn 12 09 45.2 +1.4
SABA Saba 3.74 111 eP Pn 12 09 46.9 +1.6
SABA Saba 3.74 111 Pn 12 09 45.0 -0.3
SMRT St. Maarten 3.76 104 eP Pn 12 09 45.5 0.0
SMRT St. Maarten 3.76 104 eS Sn 12 10 31.3 +2.5
SMRT St. Maarten 3.76 104 Pn 12 09 46.0 +0.4
SEUS St. Eustatius 4.02 111 eP Pb 12 10 05.3 +5.5
SEUS St. Eustatius 4.02 111 Pn Pn 12 09 49.6 +0.5
SDDR Presa de Saban 4.14 271 eP Pn 12 09 53.6 +2.7
SDDR Presa de Saban 4.14 271 eS Sb 12 10 50.7 -0.9
SDDR Presa de Saban 4.14 271 Pn 12 09 52.9 +2.0
SKI Saint Kitts 4.29 112 eP Pn 12 09 53.8 +0.9
SKI Saint Kitts 4.29 112 eS Sn 12 10 48.2 +6.2
SKI Saint Kitts 4.29 112 Pn 12 09 53.7 +0.7
NEV Hard Times 4.52 113 eP Pn 12 10 00.3 +4.2
NEV Hard Times 4.52 113 eS Sn 12 10 52.0 +4.4
GRTK Grand Turk 4.69 303 Pn 12 09 58.5 +0.2
MLYT Lee's Yard 5.03 116 eP Pn 12 10 08.7 +5.6
MLYT Lee's Yard 5.03 116 eS Sn 12 11 00.8 +0.6
ANWB Willy Bob 5.04 104 eP Pn 12 10 03.4 +0.1
ANWB Willy Bob 5.04 104 eS Sn 12 10 57.1 -3.3
ANWB Willy Bob 5.04 104 Pn Pn 12 10 03.3 +0.1
BPA Boggy Peak 5.18 111 eP Pn 12 10 03.7 -1.5
BPA Boggy Peak 5.18 111 eS Sn 12 10 58.6 -5.3
LGNH Logne 5.42 266 Pn 12 10 10.8 +2.4
MDPO Dominica; Chan 6.22 122 eS Sn 12 11 28.3 -1.3
BBL Barber's Block 6.24 123 eP Pn 12 10 18.8 -0.8
DWS Wesley 6.34 122 eP Pb 12 10 31.5 -7.9
DWS Wesley 6.34 122 eS Sn 12 11 29.2 -3.2
FDF Fort de France 6.95 127 eP Pn 12 10 26.2 -3.3
FDF Fort de France 6.95 127 eS Sn 12 11 44.9 -2.7
FDF Fort de France 6.95 127 Pn Pn 12 10 30.7 +1.2
FDF Sn **Sn** 12 11 43.4 -4.2
SLBI Saint Lucia, B 7.54 130 eP Pn 12 10 38.9 +1.4
SLBI Saint Lucia, B 7.54 130 eS Sn 12 12 03.0 +1.1
GTBY Guantanamo Bay 7.79 278 Pn 12 10 38.4 -2.6
GTBY Sn **Sn** 12 12 04.5 -3.7
SVV Soufriere Volc 7.86 135 eP Pn 12 10 45.0 +3.0
SVV Soufriere Volc 7.86 135 eS Sn 12 12 23.7 +14
SVB Belmont 7.87 135 eP Pn 12 10 42.3 +0.3
SVB Belmont 7.87 135 Pn 12 10 41.5 -0.5
SVCV St. Vincent, C 7.94 135 eP Pn 12 10 43.7 +0.7
GRGR Grenville 8.49 143 eP Pn 12 10 52.0 +1.3
GRGR Grenville 8.49 143 eS Sn 12 12 22.7 -2.8
GRGR Grenville 8.49 143 Pn Pn 12 10 51.8 +1.2
URIC Uribia, Colomb 8.75 215 eP Pn 12 10 54.6 +0.5
URIC Uribia, Colomb 8.75 215 Pn 12 10 55.1 +0.9
URIC Sn **Sn** 12 12 30.0 -1.8
PCRV Puerto La Cruz 9.04 166 P Pn 12 11 00.1 +2.0
4.3nm,0.3s,baz=64,slow=1.7,SNR=15
PCRV S **Sn** 12 12 37.5 -1.3
3.5nm,0.3s,baz=51,slow=20,SNR=1.5
PLCV Puerto La Cruz 9.06 165 Pn 12 11 00.1 +1.7
PLCV Sn 12 12 37.5 -1.9
BBGH Gun Hill 9.15 128 eP Pn 12 11 02.1 +2.5
BBGH Gun Hill 9.15 128 eS Sn 12 12 43.3 +1.7
GUIV Guiria 9.45 151 eP Pn 12 11 06.2 +2.4
GUIV Guiria 9.45 151 eS Sn 12 12 44.1 -4.9
TOSP Speyside 9.81 140 eP Pn 12 11 14.2 +5.5
TOSP Speyside 9.81 140 eS Sn 12 13 15.4 +17
TOSP Speyside 9.81 140 Pn Pn 12 11 07.6 -1.2
TRN Trinidad (W) 9.86 147 eP Pn 12 11 08.5 -0.8
TRN Trinidad (W) 9.86 147 eS Sn 12 12 57.9 -1.1
BAUV El Baul 10.05 186 eP Pn 12 11 15.7 +3.7
BAUV El Baul 10.05 186 eS Sn 12 13 04.6 +0.8
MTDJ Mount Denham 10.10 267 Pn Pn 12 11 12.5 -0.3
ORIV Oritupano 10.43 161 eP Pn 12 11 21.1 +3.8
ORIV Oritupano 10.43 161 eS Sn 12 13 19.1 +6.0
SMRC Santa Marta, M 10.51 223 eP Pn 12 11 15.6 -2.7
SDV Santo Domingo 10.68 200 P Pn 12 11 23.1 +2.3
5.2nm,0.3s,baz=327,slow=4.7,SNR=21
SDV S **Sn** 12 13 16.0 -3.4
2.7nm,0.3s,baz=247,slow=23,SNR=1.6
SDV LR LR 12 15 57.6
comp=Z,733nm,20.9s,baz=50,slow=40
SDV Santo Domingo 10.68 200 Pn 12 11 21.8 +1.0
CODC Agustn Codazz 11.00 216 eP Pn 12 11 24.0 -1.0
SJCC San Jacinto, C 12.07 223 eP Pn 12 11 40.3 +0.6
SMLC San Martn de 12.28 215 eP Pn 12 11 42.0 -0.6
OCAC Ocana 12.37 211 eP Pn 12 11 44.4 +0.5
PAMC Pamplona, Colo 12.88 207 eP Pn 12 11 52.9 +1.8
BBSR BB Station 13.47 8 Pn Pn 12 11 55.8 -2.9
FSCY Frank Sound, G 13.49 274 Pn Pn 12 12 02.1 +3.0
BRRC Barranca, Sant 13.54 210 eP Pn 12 12 00.3 +0.5
ZARC Zaragoza, Cauc 13.80 215 eP Pn 12 12 02.9 -0.4
UREC San Jos de Ur 13.96 218 eP Pn 12 12 08.0 +2.5
RUSC La Rusia 14.34 206 eP Pn 12 12 12.5 +1.3
RUSC La Rusia 14.34 206 Pn 12 12 11.9 +0.7
PTBC PUERTO BERRIO, 14.39 212 eP Pn 12 12 11.8 +0.4
061Z Ochoppi 14.63 300 Pn 12 12 11.3 -3.3
061Z Ochoppi 14.63 300 P Pn 12 12 13.0 -1.5
baz=115
DBBC Dabeiba 14.95 218 eP Pn 12 12 20.7 +1.7
SPBC San Pablo de B 14.98 209 eP Pn 12 12 21.4 +1.9
HELC Santa Helena 15.24 215 eP P 12 12 24.9 -2.8
NORC Norcasia 15.44 211 eP Pn 12 12 26.8 +1.4
CHIC Chingaza 15.75 206 eP P 12 12 31.9 -1.6
CBOC Ciudad Bolivar 15.78 215 eP Pn 12 12 30.6 +0.7
ROSC El Rosal 15.82 208 P Pn 12 12 31.9 +1.3
1.6nm,0.3s,baz=49,slow=19,SNR=9.3
ROSC S **Sn** 12 15 24.0 -1.2
2.5nm,0.3s,baz=98,slow=21,SNR=1.6
ROSC LR LR 12 19 12.0
comp=Z,883nm,20.2s,baz=6.0,slow=39
ROSC El Rosal 15.82 208 eP P 12 12 35.3 +1.1
ROSC El Rosal 15.82 208 Pn 12 12 29.7 -0.9
ROSC IAmb IAmb 12 12 39.9
comp=Z,109nm,1.1s
ROSC Sn **Sn** 12 15 25.0 -0.3
PTAC Punta Ardita, 15.84 223 eP Pn 12 12 30.9 +0.3
BCIP Isla Barro Col 15.88 234 Pn 12 12 31.6 +0.4
BCIP IAmb IAmb 12 12 36.0
comp=Z,111nm,1.4s
GUY2C Guyana, Caldas 15.98 212 eP P 12 12 35.7 -0.4
VILC Villavicencio, 16.21 205 eP P 12 12 36.9 -1.4
RREF El Recreo 16.25 212 eP P 12 12 39.4 +0.2
SOLC Bahia Solano 16.30 220 eP P 12 12 39.5 +0.4
PLMC San Jos del P 16.72 214 eP P 12 12 44.1 +0.2
ORTC Ortega, Tolima 17.06 210 eP P 12 12 48.0 +0.4
YOTC Yotoco, Valle 17.54 213 eP P 12 12 53.8 +0.8
656A Willston 17.59 309 Pn 12 12 52.6 +0.1
Z59A Georgetown, SC 18.00 324 P P 12 12 59.3 +1.5
baz=139
Y60A Bolivia 18.03 328 Pn Pn 12 12 58.5 +0.5
Y60A IAmb IAmb 12 13 13.9
comp=Z,80nm,0.8s
Y60A Bolivia 18.03 328 P Pn 12 12 58.7 +0.8
baz=143
257A Skidaway Islan 18.13 318 P Pn 12 12 59.2 0.0
baz=132
158A Hollywood 18.15 322 P P 12 13 00.3 +0.9
baz=136
RGRS Roger Stewart 18.27 322 P P 12 13 02.0 +1.2
V62A Hyde County Ai 18.34 336 P P 12 13 02.5 +1.0
V62A Hyde County Ai 18.34 336 P Pn 12 13 03.2 +1.5
baz=152
Y59A Loris 18.35 327 P Pn 12 13 05.0 +3.1
Y59A IAmb IAmb 12 13 24.8
comp=Z,62nm,0.6s
Y59A Loris 18.35 327 P P 12 13 01.9 +0.2
baz=141
Z58A St. Stephen 18.36 324 P Pn 12 13 02.9 +1.0
baz=136,SNR=8.9
X60A Albert Glenn T 18.38 330 P Pn 12 13 02.9 +0.8
baz=145
NHSC New Hope 18.40 322 P Pn 12 13 03.4 +0.9
baz=136
W61A Ground Anchor 18.43 333 P Pn 12 13 03.7 +1.0
baz=148
157A Early Branch 18.59 320 P Pn 12 13 05.4 +0.7
baz=134
W60A Pink Hill 18.65 331 P P 12 13 05.9 +1.0
baz=146
X59A McDuffie Farm, 18.68 329 P P 12 13 06.2 +0.9
baz=143
256A Glennville 18.68 317 P Pn 12 13 06.4 +0.5
baz=130
Y58A Scranton 18.71 325 P Pn 12 13 07.9 +1.7
baz=139
V61A Roper 18.79 335 P Pn 12 13 07.9 +0.8
baz=150
Z57A Bowman 18.85 322 P Pn 12 13 10.8 +3.0
baz=136
156A Sylvania 18.88 319 P Pn 12 13 09.2 +1.0
baz=132
CNNC Cliffs of the 18.88 331 P Pn 12 13 10.5 +2.2
baz=146
PCON Cinco Dias 18.99 210 eP Pn 12 13 14.1 +3.8
255A Hazlehurst 19.03 316 P Pn 12 13 11.5 +1.3
baz=139
X58A Rowland 19.04 327 P P 12 13 09.9 +0.7
baz=141
V60A Jim Taylor Roa 19.05 333 P P 12 13 09.7 +0.4
V60A Jim Taylor Roa 19.05 333 P P 12 13 10.1 +0.7
baz=148
Y57A Sumter 19.19 324 P P 12 13 11.6 +0.7
Y57A IAmb IAmb 12 13 34.1
comp=Z,61nm,0.8s
Y57A Sumter 19.19 324 P Pn 12 13 12.7 +0.7
baz=138
U61A Possum Corner 19.21 336 Pn P 12 13 12.2 +1.1
U61A IAmb IAmb 12 13 24.4
comp=Z,47nm,0.7s
U61A Possum Corner 19.21 336 P Pn 12 13 13.6 +1.5
baz=152
Z56A Williston 19.26 321 P Pn 12 13 13.2 +0.4
baz=134
FLOC Florencia 19.31 207 eP Pn 12 13 15.1 +1.6
W58A Raeford 19.35 328 P Pn 12 13 14.2 +0.4
baz=142
X57A Johnson Farm, 19.36 325 P Pn 12 13 17.3 +3.3
baz=139
JTS Las Juntas de 19.47 246 P P 12 13 14.2 +0.1
comp=Z,1.5nm,0.3s,baz=86,slow=3.0,SNR=13
JTS LR LR 12 20 33.2
comp=Z,250nm,18.6s,baz=132,slow=36
JTS Las Juntas de 19.47 246 P Pn 12 13 14.9 -0.6
JTS IAmb IAmb 12 13 19.0
comp=Z,72nm,1.1s
155A Kite 19.47 317 P Pn 12 13 15.5 +0.1
baz=130
V59A Middlesex 19.48 331 P P 12 13 14.7 +0.7
baz=146
Y56A Pelion 19.55 322 P Pn 12 13 16.6 +0.3
baz=135
254A Abbeville 19.59 314 P P 12 13 16.5 +1.2
baz=127
MDP Montagnes des 19.60 133 P P 12 13 15.5 0.0
comp=Z,0.6nm,0.3s,baz=330,slow=14,SNR=3.1
U60A Pendleton 19.61 335 P P 12 13 17.1 +1.7
baz=150
Z55A Blythe 19.66 319 P Pn 12 13 18.9 +1.3
baz=132
BBAC Balboa, Cauca 19.67 212 eP Pn 12 13 17.6 -0.5
U59A Littleton 19.77 333 P Pn 12 13 22.3 +3.4
baz=148
W57A Gilead 19.84 327 P Pn 12 13 22.5 +2.8
baz=141
154A Montrose 19.88 316 P Pn 12 13 20.1 -0.1
baz=129
X56A White Oak 19.90 324 P P 12 13 20.0 +1.3
baz=137,SNR=11
V58A Windy Hill, Pi 19.91 330 P Pn 12 13 20.8 +0.3
baz=144
Y55A Saluda 19.98 321 P P 12 13 19.7 +0.1
baz=134,SNR=11
T60A Surry 20.03 337 P P 12 13 19.9 -0.1
baz=152
Z54A Sparta 20.11 318 P P 12 13 20.4 -0.6
baz=131
W56A Indian Trail 20.13 326 P P 12 13 22.1 +0.9
baz=139
U58A Oxford 20.14 332 P P 12 13 22.2 +0.9
baz=146
TEIG Tepich 20.17 277 P P 12 13 22.3 +0.6
comp=Z,14nm,0.4s,baz=316,slow=0.6,SNR=18
TEIG LR LR 12 21 28.8
comp=Z,356nm,19.1s,baz=51,slow=38
TEIG Tepich 20.17 277 P Pn 12 13 22.8 -0.9
TEIG IAmb IAmb 12 13 28.1
comp=Z,47nm,1.1s
T59A Double "B" Far 20.20 335 P P 12 13 23.1 +1.2
baz=150
X55A Gracelyn & Ava 20.23 323 P P 12 13 22.8 +0.6
baz=136
V57A Coltrane Farms 20.30 329 P P 12 13 24.2 +1.1
baz=143
Y54A Tignall 20.43 320 P P 12 13 25.2 +0.8
baz=132
S60A Water View 20.50 337 P P 12 13 25.9 +0.8
baz=153
U57A Blanch 20.53 330 P P 12 13 26.2 +0.7
baz=144
KMSC Kings Mountain 20.55 324 P Pn 12 13 28.6 +0.6
baz=138
T58A Grand View Acr 20.59 333 P P 12 13 27.1 +0.9
baz=147
Z53A Monticello 20.60 317 P P 12 13 27.5 +1.2
baz=129
V56A Mocksville 20.61 327 P P 12 13 26.3 0.0
baz=141
252A Lumpkin 20.61 312 P P 12 13 27.9 +1.4
baz=124
GOGA Godfrey 20.62 317 P P 12 13 27.7 +1.2
baz=130
R61A Willards 20.62 341 P P 12 13 27.4 +1.0
baz=157
S59A Mechanicsville 20.79 336 P Pn 12 13 30.6 -0.2
baz=151
S58A Poland Farm, P 20.95 335 P Pn 12 13 32.8 +0.1
baz=149
T57A Hurt 20.95 331 P P 12 13 30.8 +0.7
baz=146
Y53A Monroe 20.98 318 P P 12 13 30.3 -0.1
baz=131
W54A Cherokee Point 20.98 323 P P 12 13 31.0 +0.6
baz=136
152A Waverly Hall 20.99 314 P P 12 13 31.2 +0.7
baz=126
R58B Mineral 21.19 335 P P 12 13 32.6 +0.1
baz=150
X53A Estanollee 21.23 320 P P 12 13 33.9 +0.8
baz=132
Y52A Lilburn 21.29 317 P P 12 13 34.7 +1.0
baz=130
T56A Rocky Mt 21.34 330 P P 12 13 34.2 0.0
baz=144
U55A TA2, Sparta 21.42 327 P P 12 13 35.1 -0.1
baz=141
R58A Rapidan 21.53 336 P P 12 13 36.3 +0.1
baz=150
W53A Cullowhee 21.61 321 P P 12 13 37.0 -0.2
baz=134
BLA Blacksburg 21.67 330 P P 12 13 37.9 +0.1
BLA IAmb IAmb 12 14 00.8
comp=Z,23nm,0.6s
BLA Blacksburg 21.67 330 P P 12 13 38.9 +1.1
baz=143
Z51A Franklin 21.68 315 P P 12 13 37.7 -0.3
250A Grady 21.69 310 P P 12 13 37.8 -0.3
V53A Saluda 21.76 323 P P 12 13 39.2 +0.4
V53A IAmb IAmb 12 13 53.2
comp=Z,38nm,1.0s
OTAV Otavalo 21.81 213 P P 12 13 40.1 +0.2
Y51A Rockmart 21.96 316 P P 12 13 40.5 -0.4
baz=128
U53A Fall Branch 22.13 325 P P 12 13 42.8 +0.1
baz=137
Z50A Ashland 22.15 314 P P 12 13 42.9 -0.1
Z50A Ashland 22.15 314 P P 12 13 42.8 -0.3
baz=125
TKL Tuckaleechee C 22.31 322 LR LR 12 22 12.3
comp=Z,192nm,18.7s,baz=142,slow=36
TKL Tuckaleechee C 22.31 322 P P 12 13 45.0 +0.3
TKL IAmb IAmb 12 14 09.5
comp=Z,18nm,0.6s
V52A Sevierville 22.33 322 P P 12 13 45.9 +1.0
V52A IAmb IAmb 12 14 10.2
comp=Z,18nm,0.5s
V51A Loudon 22.75 321 P P 12 13 49.1 -0.2
baz=133
LRAL Lakeview Retre 22.78 312 P P 12 13 49.6 -0.1
LRAL Lakeview Retre 22.78 312 P P 12 13 49.4 -0.3
baz=123
APG El Apazote 22.87 264 P P 12 13 51.9 +0.9
comp=Z,49nm,1.1s,baz=63,slow=23,SNR=6.1
APG LR LR 12 23 07.6
comp=Z,334nm,20.7s,baz=87,slow=37
W50A Signal Mountai 22.94 318 P P 12 13 49.6 -1.8
W50A Signal Mountai 22.94 318 P P 12 13 53.2 +1.8
baz=130
M62A Hamden 22.95 348 P P 12 13 52.8 +1.5
baz=165
N59A State Game Lan 23.13 343 P P 12 13 52.9 -0.4
baz=158
U50A Jamestown 23.45 321 P P 12 13 58.2 +1.7
baz=133
P54A Burton 23.65 333 P P 12 13 59.8 +1.5
baz=146
HRV Adam Dziewonsk 23.77 351 P P 12 13 59.8 +0.4
baz=169
U49A Red Boiling Sp 24.08 320 P P 12 14 03.0 +0.6
baz=131
WVT Waverly 25.12 317 P P 12 14 12.6 +0.8
WVT Waverly 25.12 317 P P 12 14 12.4 +0.5
baz=127
OXF Oxford 25.27 312 P P 12 14 13.4 +0.2
OXF Oxford 25.27 312 P P 12 14 14.1 +0.9
baz=122
CMIG Matias Romero 26.66 270 P P 12 14 25.8 -0.2
comp=Z,7.5nm,1.0s,baz=54,slow=8.7,SNR=3.1
CMIG LR LR 12 25 28.3
comp=Z,161nm,19.4s,baz=74,slow=37
N47A Urbana 27.11 328 P P 12 14 29.1 -0.7
baz=138
W41B Gary Mavity, V 27.61 311 P P 12 14 34.1 -0.3
baz=119
SADO Sadowa 27.66 341 LR LR 12 26 51.2
comp=Z,182nm,19.6s,baz=175,slow=39
WHAR Wooly Hollow 27.70 311 P P 12 14 34.9 -0.2
WHAR IAmb IAmb 12 14 52.8
comp=Z,24nm,0.9s
X40A Basin Creek Fa 27.71 309 P P 12 14 35.5 +0.2
X40A IAmb IAmb 12 14 53.1
comp=Z,20nm,0.8s
X40A Basin Creek Fa 27.71 309 P P 12 14 35.5 +0.2
baz=117
SAML Samuel 28.01 172 P P 12 14 36.7 -1.3
NATX Nacogdoches 28.02 302 P P 12 14 37.8 +0.7
baz=110
ATAH Atahualpa 28.32 205 P P 12 14 41.6 +0.3
comp=Z,32nm,0.9s,baz=25,slow=3.9,SNR=14
HKT Hockley 28.42 298 P P 12 14 43.0 +1.5
CCM Cathedral Cave 28.46 317 P P 12 14 41.0 -0.9
baz=125
U40A Yellville 28.62 313 P P 12 14 42.9 -0.5
U40A Yellville 28.62 313 P P 12 14 43.8 +0.4
baz=120
W39A Magazine 28.73 310 P P 12 14 45.9 +1.5
baz=117
HHAR Hobbs 29.35 311 P P 12 14 50.6 +0.7
HHAR IAmb IAmb 12 15 07.5
comp=Z,22nm,0.8s
TLIG Tlapa 30.07 272 P P 12 14 56.6 0.0
TLIG IAmb IAmb 12 14 59.3
comp=Z,22nm,1.0s
435B Jarrell 30.10 299 P P 12 14 57.2 +0.6
baz=106
WHTX Lake Whitney, 30.34 301 P P 12 14 58.4 -0.3
WHTX IAmb IAmb 12 15 16.6
comp=Z,18nm,0.7s
WHTX Lake Whitney, 30.34 301 P P 12 14 59.4 +0.7
baz=108,SNR=5.3
TUL1 Leonard 30.52 309 P P 12 15 00.1 -0.1
TUL1 IAmb IAmb 12 15 17.4
comp=Z,14nm,0.8s
TUL1 Leonard 30.52 309 P P 12 15 00.0 -0.1
baz=116
F45A CMU Biological 30.76 334 P P 12 15 03.1 +0.9
baz=144
LSQQ Lebel-sur-Quev 31.07 347 P P 12 15 05.5 +0.6
baz=161
833A Chaparral WMA, 31.09 294 P P 12 15 05.7 +0.3
baz=100
JCT Junction City 31.88 297 P P 12 15 12.4 +0.1
JCT IAmb IAmb 12 15 14.4
comp=Z,13nm,0.8s
JCT Junction City 31.88 297 P P 12 15 12.2 -0.1
baz=103,SNR=7.4
WMOK Wichita Mounta 32.30 306 P P 12 15 15.9 -0.1
WMOK Wichita Mounta 32.30 306 P P 12 15 16.1 +0.2
baz=111
ABTX Abilene, Hawle 32.30 301 P P 12 15 16.2 +0.2
ABTX Abilene, Hawle 32.30 301 P P 12 15 16.5 +0.5
baz=107,SNR=13
CBKS Cedar Bluff 34.60 312 P P 12 15 36.2 +0.2
CBKS Cedar Bluff 34.60 312 P P 12 15 36.4 +0.4
baz=115
TXAR Lajitas Array 34.95 294 P P 12 15 39.6 +0.4
comp=Z,12nm,0.8s,baz=111,slow=9.4,SNR=99
TXAR PcP **PcP** 12 18 12.2 +0.8
comp=Z,1.9nm,0.9s,baz=120,slow=5.3,SNR=5.5
TXAR ScP **ScP** 12 21 53.2 -1.5
comp=Z,0.8nm,1.1s,baz=120,slow=5.3,SNR=2.7
TXAR LR LR 12 32 49.7
comp=Z,52nm,20.7s,baz=0.0,slow=41
TX31 Lajitas Ar. Si 34.95 294 P P 12 15 39.5 +0.3
TX31 IAmb IAmb 12 15 42.0
comp=Z,14nm,1.0s
TX32 Lajitas Array 34.95 294 P P 12 15 39.7 +0.5
TX32 IAmb IAmb 12 15 42.0
comp=Z,14nm,1.0s
ECSD EROS Data Cent 35.05 321 P P 12 15 39.4 -0.4
ECSD IAmb IAmb 12 15 58.1
comp=Z,12nm,0.8s
ECSD EROS Data Cent 35.05 321 P P 12 15 39.9 +0.1
baz=125
LPAZ La Paz 35.08 182 P P 12 15 40.2 -0.6
comp=Z,2.1nm,0.5s,baz=15,slow=5.1,SNR=7.9
LPAZ La Paz 35.08 182 P P 12 15 40.6 -0.2
MSTX Muleshoe 35.19 302 P P 12 15 41.2 -0.1
MSTX Muleshoe 35.19 302 P P 12 15 41.3 +0.1
baz=106,SNR=8.0
SIV San Ignacio 35.23 170 P P 12 15 40.5 -1.0
comp=Z,4.9nm,0.6s,baz=11,slow=9.5,SNR=28
SCHQ Schefferville 35.78 0 P P 12 15 45.9 +0.1
comp=Z,2.3nm,0.7s,baz=182,slow=8.2,SNR=4.7
SCHQ LR LR 12 28 29.2
comp=Z,168nm,21.1s,baz=194,slow=33
SCHQ Schefferville 35.78 0 P P 12 15 45.9 +0.1
SCHQ IAmb IAmb 12 16 03.2
comp=Z,8.9nm,0.8s
MNTX Cornudas Mount 36.81 298 P P 12 15 55.1 0.0
MNTX IAmb IAmb 12 16 12.6
comp=Z,9.8nm,0.8s
MNTX Cornudas Mount 36.81 298 P P 12 15 55.0 0.0
baz=101,SNR=12
T25A Trinidad 37.41 307 P P 12 16 00.2 0.0
T25A IAmb IAmb 12 16 18.1
comp=Z,16nm,1.0s
T25A Trinidad 37.41 307 P P 12 16 00.7 +0.5
baz=108
ANMO Albuquerque 38.39 303 P P 12 16 08.4 0.0
ANMO Albuquerque 38.39 303 P P 12 16 08.7 +0.2
baz=104
SDCO Great Sand Dun 38.42 307 P P 12 16 08.7 -0.1
SDCO IAmb IAmb 12 16 27.0
comp=Z,16nm,0.8s
SDCO Great Sand Dun 38.42 307 P P 12 16 09.4 +0.5
baz=108,SNR=11
GO01 Chusmiza 38.49 183 P P 12 16 07.4 -2.3
Q24A Divide 38.56 309 P P 12 16 10.4 +0.4
baz=110
Y22D IRIS PASSCAL I 38.56 301 P P 12 16 10.8 +0.9
baz=102
PB11 IPOC Station P 38.61 184 P P 12 16 07.6 -2.8
PB11 IAmb IAmb 12 16 29.4
comp=Z,18nm,0.8s
ULM Lac du Bonnet 38.78 330 P P 12 16 11.5 +0.1
comp=Z,1.3nm,0.6s,baz=148,slow=7.6,SNR=3.2
121A Cookes Peak, D 38.97 298 P P 12 16 14.2 +0.8
baz=100
ISCO Idaho Springs 39.18 310 P P 12 16 15.2 -0.1
baz=110
S22A 4UR Ranch, Cre 39.42 307 P P 12 16 18.0 +0.8
baz=107
RSSD Black Hills 39.85 317 P P 12 16 21.0 +0.3
baz=117
319A Douglas 40.05 296 P P 12 16 21.7 -0.7
K22A Casper 40.87 314 P P 12 16 29.9 +0.8
baz=113
W18A Petrified Fore 41.05 302 P P 12 16 30.3 -0.4
baz=102
LVC Limon Verde 41.39 183 P P 12 16 32.0 -1.6
comp=Z,6.7nm,0.5s,baz=12,slow=4.9,SNR=6.1

LVC	Limon Verde	41.39 183	P	P	12 16 32.1	-1.6	
TUC	Tucson	41.44 298	P	P	12 16 34.6	+0.8	
	baz=98						
WUAZ	Wupatki	42.44 302	P	P	12 16 43.0	+1.0	
	baz=101,SNR=12						
PD31	Pinedale Array	43.00 313	P	P	12 16 46.0	-0.4	
PDAR	Pinedale Array	43.00 313	P	P	12 16 46.1	-0.4	
	comp=Z,1.4nm,0.6s,baz=84,slow=7.3,SNR=11						
PDAR			PcP	PcP	12 18 36.4	-0.1	
	comp=Z,0.9nm,0.6s,baz=117,slow=5.3,SNR=3.6						
214A	Organ Pipe Nat	43.10 297	P	P	12 16 48.6	+1.3	
	baz=96						
Y14A	Wickenburg	43.51 300	P	P	12 16 50.0	-0.6	
RLMT	Red Lodge	43.66 316	P	P	12 16 50.4	-1.4	
RLMT			IAmb	IAmb	12 17 09.8		
	comp=Z,14nm,0.8s						
RLMT	Red Lodge	43.66 316	P	P	12 16 52.0	+0.3	
	baz=112,SNR=10.0						
KNB	Kanab	43.88 304	P	P	12 16 52.7	-0.9	
GO02	Mina Guanaco	43.97 184	P	P	12 16 53.5	-0.9	
HWUT	Hardware Ranch	44.05 311	P	P	12 16 53.4	-1.5	
REDW	Red Top Meadow	44.09 313	P	P	12 16 55.5	+0.2	
YMP	Mirror Lake Pl	44.10 315	P	P	12 16 54.6	-0.8	
YNE	Yellowstone No	44.10 316	P	P	12 16 53.9	-1.5	
MOOW	Moose Ponds	44.15 314	P	P	12 16 55.1	-0.6	
H17A	Grant Village	44.26 315	P	P	12 16 56.3	-0.3	
	baz=110						
FCC	Fort Churchill	44.38 340	P	P	12 16 56.5	-0.5	
DUG	Dugway, Tooele	44.58 308	P	P	12 16 59.7	+0.6	
	baz=104						
Y12C	Blythe	44.74 299	P	P	12 17 01.4	+1.1	
	baz=97						
YHB	Horse Butte	44.80 315	P	P	12 16 59.6	-1.3	
YHL	Hebgen Lake	44.82 315	P	P	12 16 59.2	-2.0	
BGU	Big Grassy Mou	44.92 309	P	P	12 17 01.9	0.0	
PSUT	Pine Spring	44.98 306	P	P	12 17 01.7	-0.7	
EGMT	Eagleton	45.13 320	P	P	12 17 03.8	+0.4	
	baz=115						
IRM	Iron Mountain	45.30 300	P	P	12 17 06.4	+1.5	
	baz=97,SNR=11						
BC3	Big Chuckawall	45.50 299	P	P	12 17 07.5	+1.0	
	baz=96						
GMRC	Granite Mounta	45.80 300	P	P	12 17 09.8	+0.9	
	baz=97,SNR=8.2						
IKP	In-Ko-Pah, Jac	45.95 297	P	P	12 17 11.0	+1.0	
	baz=95						
CPUP	Villa Florida	46.00 168	P	P	12 17 08.6	-1.7	
	comp=Z,4.2nm,0.8s,baz=357,slow=7.8,SNR=7.7						
CPUP			LR	LR	12 38 59.8		
	comp=Z,97nm,18.4s,baz=354,slow=39						
CPUP	Villa Florida	46.00 168	P	P	12 17 09.1	-1.2	
CPUP			IAmb	IAmb	12 17 14.5		
	comp=Z,9.6nm,0.8s						
TUQ	Turquoise Moun	46.09 301	P	P	12 17 12.8	+1.6	
	baz=97						
MONP2	Monument Peak	46.23 298	P	P	12 17 14.0	+1.5	
	baz=95,SNR=13						
R11A	Troy Canyon, C	46.28 305	P	P	12 17 13.2	+0.5	
	baz=100						
XPFO	Pion Flat	46.32 299	P	P	12 17 11.9	-1.1	
PFO	Pinyon Flats O	46.33 299	P	P	12 17 14.2	+1.1	
	baz=95						
HEC	Hector,Ludlow	46.35 300	P	P	12 17 14.7	+1.5	
	baz=96						
SHOC	Shoshone, Teco	46.44 302	P	P	12 17 15.3	+1.5	
	baz=98						
TPNV	Topopah Spring	46.57 303	P	P	12 17 13.3	-1.6	
TPNV	Topopah Spring	46.57 303	P	P	12 17 16.1	+1.1	
	baz=99						
GSC	Goldstone, Bar	46.79 301	P	P	12 17 16.7	0.0	
GSC			IAmb	IAmb	12 17 35.4		
	comp=Z,11nm,0.8s						
GSC	Goldstone, Bar	46.79 301	P	P	12 17 16.9	+0.3	
	baz=97						
109C	Camp Elliot, M	46.80 298	P	P	12 17 17.3	+0.6	
	baz=94						
MURC	Murrieta	46.94 299	P	P	12 17 18.5	+0.8	
	baz=95						
FURC	Furnace Creek,	46.98 302	P	P	12 17 18.2	+0.3	
	baz=98						
MSO	Missoula	47.31 317	P	P	12 17 19.4	-1.2	
MSO			IAmb	IAmb	12 17 40.8		
	comp=Z,7.3nm,0.8s						
MSO	Missoula	47.31 317	P	P	12 17 20.8	+0.3	
	baz=110						
BFSC	Mount Baldy Ra	47.38 299	P	P	12 17 21.7	+0.4	
	baz=95						
MPMC	Manual Prospec	47.43 302	P	P	12 17 23.1	+1.3	
	baz=97,SNR=5.0						
EDW2	Edwards Air Fo	47.71 300	P	P	12 17 25.2	+1.3	
	baz=96,SNR=9.4						
JTMT	Jette	47.84 318	P	P	12 17 24.6	-0.1	
JTMT			IAmb	IAmb	12 17 42.4		
	comp=Z,10nm,0.7s						
CIS	Catalina Islan	47.94 298	P	P	12 17 27.2	+1.7	
	baz=94						
CWC	Cottonwood Cre	47.95 302	P	P	12 17 26.7	+0.9	
	baz=97						
WALA	Waterton Lakes	48.08 320	P	P	12 17 26.9	+0.4	
WALA			IAmb	IAmb	12 17 43.6		
	comp=Z,10.0nm,0.8s						
ISA	Isabella, Lake	48.18 301	P	P	12 17 28.0	+0.5	
	baz=96						
NV11	Mina Array Sit	48.28 305	P	P	12 17 28.8	+0.5	
NVAR	Mina Array Bea	48.40 305	P	P	12 17 29.8	+0.6	
	comp=Z,3.5nm,0.9s,baz=105,slow=6.9,SNR=16						
NVAR			ScP	ScP	12 22 50.5	+2.5	
	comp=Z,1.1nm,1.0s,baz=116,slow=4.2,SNR=4.6						
ARVC	Arvin	48.42 300	P	P	12 17 29.3	+0.2	
	baz=95						
VES	Vestal, Richgr	48.70 301	P	P	12 17 31.9	+0.6	
	baz=96						
OMMB	Old Mammoth Mi	48.83 304	P	P	12 17 33.9	+1.2	
OMMB			IAmb	IAmb	12 17 51.2		
	comp=Z,13nm,0.8s						
SNCC	San Nicolas Is	48.85 298	P	P	12 17 33.1	+0.6	
	baz=93						
BMO	Blue Mountains	48.97 313	P	P	12 17 32.9	-0.5	
BMO			IAmb	IAmb	12 17 50.2		
	comp=Z,7.7nm,0.8s						
PKM	Mcpherson Peak	49.20 300	P	P	12 17 36.3	+0.8	
	baz=94						
YERR	Yerington	49.21 305	P	P	12 17 36.3	+0.9	
YERR			IAmb	IAmb	12 17 54.1		
	comp=Z,10nm,0.8s						
F10A	Beach Ranch, E	49.22 315	P	P	12 17 35.0	-0.3	
F10A			IAmb	IAmb	12 17 52.2		
	comp=Z,6.8nm,0.7s						
SMMC	Simmler	49.39 301	P	P	12 17 38.6	+1.9	
	baz=95						
NEW	Newport	49.81 318	P	P	12 17 39.9	+0.2	
NEW	Newport	49.81 318	P	P	12 17 39.5	-0.2	
	baz=108,SNR=13						
BEKR	Beckworth	50.19 306	P	P	12 17 43.4	+0.5	
CFA	Coronel Fontan	50.32 181	LR	LR	12 43 11.4		
	comp=Z,167nm,18.2s,baz=38,slow=41						
B08A	Colville Reser	51.25 317	P	P	12 17 50.4	-0.2	
O03E	Paynes Creek	51.35 307	P	P	12 17 51.8	+0.3	
	baz=98						
L04D	Klamath Falls	51.99 309	P	P	12 17 56.6	+0.2	
	baz=99						
F05D	White Salmon	52.06 314	P	P	12 17 58.7	+2.1	
	baz=102						
H04A	Detroit Lake	52.33 312	P	P	12 17 57.2	-1.4	
PGC	Sidney	53.98 317	P	P	12 18 09.0	-1.6	
NLWA	Neilton Lookou	53.99 315	P	P	12 18 11.2	+0.4	
YKA	Yellowknife Ar	54.39 335	P	P	12 18 12.7	-0.7	
	comp=Z,2.1nm,0.7s,baz=112,slow=7.2,SNR=26						
SUMG	Summit	56.01 10	*i* P	P	12 18 26.3	+0.9	
SUMG	Summit	56.01 10	P	P	12 18 26.4	+1.0	
SUMG			IAmb	IAmb	12 18 48.5		
	comp=Z,8.3nm,0.8s						
ESDC	Sonseca Array	57.46 55	P	P	12 18 36.9	+0.9	
	comp=Z,5.4nm,0.7s,baz=272,slow=6.9,SNR=26						
ESDC			LR	LR	12 39 06.5		
	comp=Z,170nm,21.9s,baz=250,slow=32						
ESDC	Sonseca Array	57.46 55	IAmb	IAmb	12 18 38.4		
	comp=Z,5.3nm,0.9s						
ESBB	Sonseca Array	57.46 55	P	P	12 18 36.2	+0.3	
ESBB			IAmb	IAmb	12 18 38.2		
	comp=Z,12nm,0.9s						
RES	Resolute Bay	57.73 352	P	P	12 18 36.1	-1.0	
GO06	Curarrehue	58.42 184	P	P	12 18 41.9	-0.6	
GO06			IAmb	IAmb	12 18 51.6		
	comp=Z,9.4nm,1.4s						
PLCA	Paso Flores	59.51 183	P	P	12 18 49.0	-1.0	
	comp=Z,1.5nm,0.8s,baz=59,slow=12,SNR=4.1						
PLCA			LR	LR	12 47 26.2		
	comp=Z,63nm,18.1s,baz=33,slow=39						
PLCA	Paso Flores	59.51 183	P	P	12 18 49.0	-1.0	
TIC	Toumodi	61.31 93	*e*PKP1	P	12 19 06.5	+3.7	
	comp=Z,4.6nm,0.3s						
LIC	Lamto	61.43 93	*e*PKP1	P	12 19 05.5	+1.9	
	comp=Z,2.9nm,0.3s						
DBIC	Dimbokro	61.46 93	P	P	12 19 03.4	-0.4	
	comp=Z,3.0nm,0.7s,baz=269,slow=9.4,SNR=6.2						
DBIC			LR	LR	12 41 09.1		
	comp=Z,134nm,21.4s,baz=270,slow=32						
DBIC	Dimbokro	61.46 93	P	P	12 19 03.6	-0.1	
DBIC			IAmb	IAmb	12 19 05.6		
	comp=Z,13nm,1.2s						
KIC	Kosan Boka	61.66 93	*e*PKP1	P	12 19 05.9	+0.7	
	comp=Z,2.6nm,0.4s						
DAG	Danmarks Havn	62.62 11	*i* P	P	12 19 10.8	+0.2	
INK	Inuvik	63.90 338	P	P	12 19 18.6	-0.6	
	comp=Z,3.3nm,0.9s,baz=89,slow=6.3,SNR=5.9						
INK	Inuvik	63.90 338	P	P	12 19 18.9	-0.2	
TOA0	Torodi Ar. Sit	65.83 84	P	P	12 19 32.9	+0.2	
TOA0			IAmb	IAmb	12 19 40.5		
	comp=Z,12nm,1.5s						
TORD	Torodi Ar. Bea	65.83 84	P	P	12 19 32.3	-0.4	
	comp=Z,2.2nm,0.6s,baz=293,slow=6.4,SNR=15						
TORD			LR	LR	12 44 10.7		
	comp=Z,222nm,21.6s,baz=290,slow=32						
TORD	Torodi Ar. Bea	65.83 84	IAmb	IAmb	12 19 33.8		
	comp=Z,1.8nm,0.8s						
EGAK	Eagle	66.28 333	P	P	12 19 33.0	-1.6	
MENT	Mentasta	67.27 331	P	P	12 19 40.7	-0.4	
SCRK	Sand Creek	67.44 332	P	P	12 19 42.5	+0.3	
NOA	NORSAR Array B	67.83 31	P	P	12 19 45.5	+0.8	
	comp=Z,0.5nm,0.6s,baz=270,slow=6.5,SNR=3.0						
NOA			LR	LR	12 46 38.3		
	comp=Z,69nm,19.8s,baz=265,slow=33						
PRP	Porcupine Dome	68.17 334	P	P	12 19 46.8	0.0	
IL31		68.72 333	P	P	12 19 49.8	-0.3	
ILAR	Eielson Array	68.72 333	P	P	12 19 49.9	-0.3	
	comp=Z,2.3nm,0.8s,baz=109,slow=4.6,SNR=18						
HDA	Harding Lake	68.75 333	P	P	12 19 49.3	-1.0	
HDA			IAmb	IAmb	12 20 08.6		
	comp=Z,9.9nm,0.8s						
HDA	Harding Lake	68.75 333	P	P	12 19 49.2	-1.0	
	baz=90						
POKR	Poker Plat Res	68.96 333	P	P	12 19 50.8	-0.9	
	baz=90						
CCB	Clear Creek Bu	69.12 333	P	P	12 19 51.5	-1.1	
CCB			IAmb	IAmb	12 20 09.4		
	comp=Z,8.9nm,0.9s						
GHO	Glory Hole Cre	69.69 330	P	P	12 19 55.5	-0.8	
KHC	Kasperske Hory	69.72 44	*e*P	P	12 19 56.5	-0.2	
GERES	GERESS Array B	69.83 44	P	P	12 19 57.5	+0.1	
	comp=Z,0.4nm,0.5s,baz=277,slow=8.6,SNR=4.3						
GERES			LR	LR	12 45 17.7		
	comp=Z,60nm,21.5s,baz=278,slow=31						
COLD	Coldfoot	70.06 336	P	P	12 19 57.1	-1.3	
COLD			IAmb	IAmb	12 20 16.4		
	comp=Z,9.7nm,1.0s						
MLY	Manley	70.36 333	P	P	12 20 00.5	+0.2	
MLY			IAmb	IAmb	12 20 18.2		
	comp=Z,7.7nm,0.9s						
BPAW	Bear Paw Mtn.	70.52 332	P	P	12 20 01.0	-0.3	
SKT	Skwentna	70.91 330	P	P	12 20 03.6	-0.1	
SKT			IAmb	IAmb	12 20 21.0		
	comp=Z,8.0nm,0.8s						
PPLA	Purkeypile	71.14 331	P	P	12 20 03.6	-1.6	
PPLA			IAmb	IAmb	12 20 22.8		
	comp=Z,15nm,1.1s						
SVW2	Sparrevohn	72.94 329	P	P	12 20 15.5	-0.4	
SVW2			IAmb	IAmb	12 20 32.6		
	comp=Z,15nm,0.8s						
ARCES	ARCESS Array B	73.21 22	P	P	12 20 17.8	+0.5	
	comp=Z,2.4nm,0.6s,baz=285,slow=4.1,SNR=18						
ARCES			LR	LR	12 47 25.9		
	comp=Z,40nm,21.6s,baz=340,slow=32						
VYHS	Vyhne	73.25 44	*e*P	P	12 20 19.1	+1.2	
FINES	FINESS Array B	74.93 30	P	P	12 20 28.0	+0.6	
	comp=Z,1.1nm,0.6s,baz=251,slow=5.2,SNR=4.3						
FINES			LR	LR	12 52 50.9		
	comp=Z,66nm,18.7s,baz=290,slow=35						
MLR	Muntele Rosu	78.65 46	P	P	12 20 50.5	+1.6	
MLR			IAmb	IAmb	12 20 51.8		
	comp=Z,11nm,0.9s						
AKASG	Malin Array Be	79.32 40	P	P	12 20 51.9	-0.4	
	comp=Z,0.4nm,0.4s,baz=280,slow=5.4,SNR=4.3						
AKASG			LR	LR	12 54 13.4		
	comp=Z,142nm,20.4s,baz=330,slow=34						
BRTR	Keskin Array B	85.85 49	P	P	12 21 27.4	+0.7	
	comp=Z,0.4nm,0.5s,baz=289,slow=3.6,SNR=3.0						
BRTR			LR	LR	12 58 32.5		
	comp=Z,27nm,19.1s,baz=302,slow=35						
PPT	Papeete	88.96 251	LR	LR	12 54 03.4		
	comp=Z,55nm,21.9s,baz=30,slow=30						
KBZ	Khabaz	90.55 43	LR	LR	12 58 58.6		
	comp=Z,52nm,21.9s,baz=319,slow=33						
SUR	Sutherland	98.08 121	LR	LR	13 02 41.6		
	comp=Z,40nm,18.5s,baz=322,slow=33						
LSZ	Lusaka	99.55 103	LR	LR	12 59 39.2		
	comp=Z,65nm,20.4s,baz=353,slow=31						
LBTB	Lobatse	100.00 113	LR	LR	12 59 43.1		
	comp=Z,75nm,21.7s,baz=275,slow=30						
CMAR	Chiang Mai Arr	140.28 21	PKP	PKPdf	12 28 16.3	-0.1	
	comp=Z,0.5nm,0.3s,baz=343,slow=2.8,SNR=2.9						
STKA	Stephens Creek	151.34 238	PKPbc	PKPbc	12 28 41.1	+0.4	
	comp=Z,3.6nm,0.7s,baz=42,slow=2.8,SNR=7.1						
STKA	Stephens Creek	151.34 238		PKPbc	12 28 41.4	+0.7	
WRA	Warramunga Arr	159.94 264	PKP	PKPdf	12 28 45.5	-1.0	
	comp=Z,1.1nm,1.0s,baz=83,slow=0.7,SNR=2.6						
ASAR	Alice Springs	160.07 253	PKP	PKPdf	12 28 45.3	-1.3	
	comp=Z,0.5nm,0.9s,baz=102,slow=1.3,SNR=3.4						
ASAR			PKPab	PKPab	12 29 26.4	-0.2	
	comp=Z,1.4nm,0.7s,baz=103,slow=4.7,SNR=14						

*RSPR **14** 12:13:57.1,19°.14N×66°.94W,h29km±14km,MD3.2/13*
*NEIC **14** 12:13:58.0±2.2,19°.03N±0°.06×66°.89W±0°.04,h37km±53km, Error ellipse: s-maj=9.2km s-min=5.2km az=185.0*

ISC 14 12:13:58.0±1.5,**19°.01N**±0°.08×**66°.90W**±0°.04,**h54**km±19km, **n45**,σ1**9**04/64,**7C-6D**,**Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
EMPR	Esperanza - Ma	0.63	146	*e*S		Sn	12 14 20.1	-0.4
EMPR	Esperanza - Ma	0.63	146	*e*P		Pn	12 14 09.8	-1.2
EMPR	Esperanza - Ma	0.63	146			Pn	12 14 10.1	-1.0
EMPR					Sn	Sn	12 14 24.8	+4.3
AOPR	Arecibo Observ	0.67	168	*i*P		Pn	12 14 10.3	-1.2
AOPR	Arecibo Observ	0.67	168	*e*S		Sn	12 14 22.1	+0.8
AOPR	Arecibo Observ	0.67	168			Pn	12 14 10.4	-1.2
AOPR					Sn	Sn	12 14 22.2	+0.8
MPR	Mayaguez	0.82	196	Pn		Pn	12 14 12.2	-1.3
MPR					Sn	Sn	12 14 26.4	+1.6
LSP	Las Mesas	0.84	192	*e*P		Pn	12 14 12.7	-1.1
LSP	Las Mesas	0.84	192			Pn	12 14 12.7	-1.1
CELP	Cerrillos	0.97	162	*e*P		Pn	12 14 15.5	0.0
CELP				*e*S		Sn	12 14 28.6	+0.2
CELP	Cerrillos	0.97	162			Pn	12 14 15.5	0.0
CELP						Sn	12 14 28.6	+0.2
OBIP	Obispado Ponce	1.00	164	*i*P		Pn	12 14 15.3	-0.5
OBIP	Obispado Ponce	1.00	164	*e*S		Sn	12 14 29.1	+0.2
OBIP	Obispado Ponce	1.00	164			Pn	12 14 15.4	-0.4
OBIP						Sn	12 14 29.3	+0.4
CRPR	Cabo Rojo, PR	1.01	191	*e*P		Pn	12 14 15.1	-0.9
CRPR	Cabo Rojo, PR	1.01	191	*e*S		Sn	12 14 29.2	-0.1
CRPR	Cabo Rojo, PR	1.01	191			Pn	12 14 15.0	-0.9
CRPR						Sn	12 14 29.3	+0.1
GBPR	Guanica, Bosqu	1.02	179	*e*P		Pn	12 14 15.7	-0.5
GBPR	Guanica, Bosqu	1.02	179	*e*S		Sn	12 14 30.2	+0.7
GBPR	Guanica, Bosqu	1.02	179			Pn	12 14 15.7	-0.5
GBPR						Sn	12 14 30.2	+0.7
GCPR	Guaynabo City	1.04	132	Pn		Pn	12 14 15.3	-1.1
GCPR					Sn	Sn	12 14 30.2	+0.3
MLPR	Magueyes Islan	1.04	188	*i*P		Pn	12 14 14.6	-1.8
MLPR	Magueyes Islan	1.04	188	*e*S		Sn	12 14 29.3	-0.6
MLPR	Magueyes Islan	1.04	188			Pn	12 14 14.6	-1.8
MLPR						Sn	12 14 31.6	+1.7
SJG	San Juan	1.14	141	Pn		Pn	12 14 17.4	-0.3
SJG						Sn	12 14 33.4	+1.1
ICMP	Isla Caja de M	1.17	162	*i*P		Pn	12 14 18.0	-0.1
ICMP	Isla Caja de M	1.17	162	*e*S		Sn	12 14 33.5	+0.6
ICMP	Isla Caja de M	1.17	162			Pn	12 14 18.5	+0.4
ICMP					Sn	Sn	12 14 34.6	+1.6
CBYP	Canovanas	1.23	126	*i*P		Pn	12 14 17.6	-1.4
CBYP	Canovanas	1.23	126	*e*S		Sn	12 14 34.2	-0.4
CBYP	Canovanas	1.23	126			Pn	12 14 17.7	-1.2
CBYP					Sn	Sn	12 14 35.3	+0.7
IGPR	InterUniversit	1.28	144	*i*P		Pn	12 14 19.2	-0.3
IGPR	InterUniversit	1.28	144	*e*S		Sn	12 14 35.9	+0.2
IGPR	InterUniversit	1.28	144	Pn		Pn	12 14 19.9	+0.3
IGPR						Sn	12 14 36.2	+0.6
PDPR	Patillas Dam,	1.29	140	Pn		Pn	12 14 19.0	-0.7
PDPR						Sn	12 14 37.7	+1.9
HUMP	Col San Antoni	1.31	131	*i*P		Pn	12 14 19.3	-0.7
HUMP	Col San Antoni	1.31	131	*e*S		Sn	12 14 36.9	+0.3
HUMP	Col San Antoni	1.31	131			Pn	12 14 19.4	-0.7
HUMP					Sn	Sn	12 14 37.0	+0.5
PCDR	Punta Cana, DR	1.49	251	Pn		Pn	12 14 22.5	+0.1
PCDR					Sn	Sn	12 14 40.8	+0.1
MTP	Monte Pirata	1.56	125	*i*P		Pn	12 14 22.3	-1.2
MTP	Monte Pirata	1.56	125	*e*S		Sn	12 14 42.6	0.0
MTP	Monte Pirata	1.56	125			Pn	12 14 22.3	-1.2
MTP					Sn	Sn	12 14 43.8	+1.2
STVI	Saint Thomas	1.96	109	Pn		Pn	12 14 28.7	-0.1
STVI					Sn	Sn	12 14 52.6	+0.5
DR12	Loma Pena Alta	2.36	265	Pn		Pn	12 14 33.9	-0.4
SDDR	Presa de Saban	4.15	270	Pn		Pn	12 14 58.7	-0.2

*NEIC **14** 12:16:45.0±1.8,22°.01N±0°.08×143°.6E±0°.1,h181km±5km, mb4.6/50, Error ellipse: s-maj=15.8km s-min=10.8km az=107.0*
*MOS **14** 12:16:45.1±0.9,21°.93N×143°.53E,h198km,mb4.7/28, Error ellipse: s-maj=14.7km s-min=5.9km az=119.3*
*IDC **14** 12:16:46.0±1.6,22°.02N×143°.54E,h191km±13km, mb3.8/21,mb1 3.9/24,mb1mx3.8/43,mbtmp4.3/24,Error ellipse: s-maj=13.9km s-min=10.6km az=78.0*
*JMA **14** 12:16:48.0±0.1,22°.42N×144°.03E,h193km±2km*
*BJI **14** 12:16:50.4±0.0,22°.35N×143°.43E,h229km,mB4.9/17, mb4.5/28*

ISC 14 12:16:46.3±0.8,**22°.12N**±0°.07×**143°.63E**±0°.08,**h192**km±5km, **n185**,σ1**9**41/209,**mb4.5**/62,**15C-3D**,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JHH2	Haha-jima-NKT2	4.68	344	P		Pn	12 17 56.7	+0.2
JHH2				*e*S		Sn	12 18 50.0	-1.7
JCJ	Chichijima	5.12	345	P		Pn	12 18 02.1	0.0
	51nm,0.3s,baz=138,slow=11,SNR=28							
JCJ				S		Sn	12 18 59.0	-2.9
	46nm,0.3s,baz=282,slow=23,SNR=8.4							
CBIJ	Chichi jima	5.12	345	P		Pn	12 18 02.0	-0.1
CBIJ				*e*S		Sn	12 18 59.8	-2.1
JOD2	Odawara 2	13.68	344	P		Pn	12 19 52.5	-0.1
JKN2	Miekihoku	13.70	333	P		Pn	12 19 53.9	+1.2
JNY	Yasuok	14.12	340	P		Pn	12 19 58.9	+0.8
JHU	Hanno	14.20	345	P		Pn	12 19 59.2	+0.3
JHU				*e*S		Sn	12 22 30.5	-6.9
INU	Inuyama	14.39	338	Pn		Pn	12 20 00.3	-1.0
JRY	Ryogami san	14.45	344	P		Pn	12 20 01.9	-0.1
JAG	Ashikaga	14.71	347	P		Pn	12 20 05.4	+0.2
JOW	Kunigami	14.74	292			Pn	12 20 05.1	-0.6
MJAR	Matsushiro Arr	15.12	343	P		P	12 20 10.9	-0.1
MJAR				pmax		pmax		
	comp=Z,3.0nm,0.6s							
MJAR	Matsushiro Arr	15.12	343	P		Pn	12 20 10.0	-0.3
	comp=Z,0.2nm,0.3s,baz=145,slow=8.1,SNR=12							
MJAR	Matsushiro Arr	15.12	343			P	12 20 10.8	-0.1
MAJO	Matsushiro	15.12	343	*i*P		P	12 20 12.3	+1.3
MAJO	Matsushiro	15.12	343			Pn	12 20 10.1	-0.3
MJB9	Matsu-Tunnel	15.13	343			Pn	12 20 10.1	-0.3
MJB9				IAmb	IAmb		12 20 16.5	
	comp=Z,28nm,1.4s							
JNU	Nakatsue	15.72	317	P		Pn	12 20 18.1	+0.4
	comp=Z,1.2nm,0.3s,baz=101,slow=6.3,SNR=12							
JNU	Nakatsue	15.72	317			P	12 20 17.7	0.0
JNU				IAmb	IAmb		12 20 23.4	
	comp=Z,16nm,0.8s							
JHS	Saijyo	15.79	327	P		Pn	12 20 21.0	+2.5
TJN	Taejon	20.04	319	*i*P		P	12 21 06.5	+1.9
KSRS	Korea Array	20.43	322	P		P	12 21 08.9	+0.1
	comp=Z,16nm,0.6s,baz=146,slow=8.8,SNR=56							
KSAR	Wonju Array Be	20.44	322	P		P	12 21 10.2	+1.3
KSAR	Wonju Array Be	20.44	322	P		P	12 21 10.2	+1.3
KS19	Wonju Array Si	20.50	322	P		P	12 21 11.2	+1.7
KS19				IAmb	IAmb		12 21 12.9	
	comp=Z,25nm,1.0s							
YHNB	Yeheng	20.58	281	P		P	12 21 08.7	-1.9
YULB	Yu-li	20.63	278	P		P	12 21 07.8	-3.2
YULB				IAmb	IAmb		12 21 13.5	
	comp=Z,41nm,1.2s							
SSLB	Suanglung	20.94	279	P		P	12 21 14.0	-0.5
SSLB				IAmb	IAmb		12 21 16.7	
	comp=Z,25nm,0.7s							
TPUB	Ta-pu	21.25	278	P		P	12 21 17.5	-0.1
MSHR	Mys Shultsa	22.91	336	*i*P		P	12 21 35.5	+2.1
USA0B	Ussuriysk Arra	24.03	339	*i*P		P	12 21 46.2	+2.6
USRK	Ussuriysk Ar.	24.03	339	P		P	12 21 42.3	-1.3
USRK	Ussuriysk Ar.	24.03	339	P		P	12 21 43.

AS31 Alice Springs 46.48 192 P **P** 12 24 51.9 -2.5
ASAR Alice Springs 46.49 192 P **P** 12 24 52.3 -2.1
ASAR Alice Springs 46.49 192 P **P** 12 24 52.7 -1.7
comp=Z,0.4nm,0.4s,baz=8.8,slow=7.0,SNR=12
ASAR PcP **PcP** 12 26 24.8 -0.9
comp=Z,0.3nm,0.7s,baz=14,slow=4.3,SNR=3.1
ASAR ScP **ScP** 12 30 00.4 -0.5
comp=Z,0.7nm,0.8s,baz=19,slow=3.9,SNR=5.3
ASAR Alice Springs 46.49 192 P **P** 12 24 52.3 -2.1
LSA Lhasa 47.47 291 P **P** 12 25 02.6 0.0
LSA pmax pmax
comp=Z,9.0nm,0.7s
LSA Lhasa 47.47 291 P **P** 12 25 02.6 0.0
LSA IAmb IAmb 12 25 04.5
comp=Z,9.1nm,0.7s
GSI Gunungsitoli 49.32 252 P **P** 12 25 16.1 -0.2
TIXI Tiksi 50.27 354⇑ *eP* **P** 12 25 24.9 +2.2
TIXI *i* *PP **pwP** 12 26 07.8 -2.5
TIXI pmax pmax
comp=Z,6.0nm,1.4s
TIXI Tiksi 50.27 354 P **P** 12 25 23.7 +1.0
WMQ Urumqi 50.63 309 P **P** 12 25 25.0 -0.9
WMQ pmax pmax
comp=Z,13nm,0.8s
WMQ Urumqi 50.63 309 P **P** 12 25 25.0 -0.9
WMQ IAmb IAmb 12 25 28.1
comp=Z,13nm,0.8s
TAPN Taplejung 50.71 288 *eP* **P** 12 25 26.8 -0.2
comp=Z,12nm,0.4s
ODAN Odare 51.05 287 *eP* **P** 12 25 29.3 -0.2
comp=Z,34nm,1.0s
RAMN Ramite 51.74 288 *eP* **P** 12 25 33.9 -0.7
comp=Z,15nm,0.8s
JIRN Jiri 52.01 288 *eP* **P** 12 25 36.9 +0.1
comp=Z,52nm,0.7s
GUN Gumba 52.25 289 *eP* **P** 12 25 38.5 0.0
comp=Z,13nm,0.5s
PKI Pulchoki 52.71 288 *eP* **P** 12 25 41.6 -0.3
comp=Z,0.6nm,0.2s
DMN Daman 52.97 289 *eP* **P** 12 25 43.6 -0.1
GKN Gorkha 53.33 289 *eP* **P** 12 25 46.2 0.0
comp=Z,10nm,0.3s
DANN Dangsing 54.05 290 *eP* **P** 12 25 51.7 +0.1
comp=Z,82nm,0.6s
ZAA0 Zalesovo Array 54.14 321 P **P** 12 25 51.5 +0.2
ZALV Zalesovo Beam 54.14 321 *i* P **P** 12 25 51.4 0.0
ZALV pmax pmax
comp=Z,5.0nm,0.4s
ZALV Zalesovo Beam 54.14 321 P **P** 12 25 51.2 -0.2
comp=Z,4.6nm,0.4s,baz=111,slow=8.2,SNR=32
ZALV PcP **PcP** 12 26 53.0 -0.5
comp=Z,2.3nm,0.5s,baz=126,slow=4.5,SNR=7.8
ZALV Zalesovo Beam 54.14 321 P **P** 12 25 50.4 -1.0
ZALV PcP **PcP** 12 26 53.0 -0.5
KOLN Koldanda 54.27 289 *eP* **P** 12 25 53.0 -0.1
comp=Z,4.5nm,0.2s
MK31 Makanchi Array 54.72 312 *i* P **P** 12 25 56.0 +0.2
MK31 Makanchi Array 54.72 312 P **P** 12 25 56.4 +0.6
MK31 PcP **PcP** 12 26 55.6 -0.4
MKAR Makanchi Array 54.72 312 P **P** 12 25 56.4 +0.7
comp=Z,5.4nm,0.7s,baz=92,slow=8.8,SNR=40
MKAR PcP **PcP** 12 26 56.2 +0.2
comp=Z,2.5nm,0.5s,baz=78,slow=3.9,SNR=12
MKAR ScP **ScP** 12 30 34.3 -1.7
comp=Z,0.5nm,0.8s,baz=94,slow=4.3,SNR=3.0
MKAR Makanchi Array 54.72 312 P **P** 12 25 56.5 +0.7
MKAR **PcP** 12 26 55.7 -0.3
MAKZ Makanchi 54.93 312 P **P** 12 25 58.2 +0.9
MAKZ pmax pmax
comp=Z,13nm,1.0s
MAKZ Makanchi 54.93 312 P **P** 12 25 58.2 +0.9
MAKZ IAmb IAmb 12 25 59.0
comp=Z,13nm,1.0s
PDGK Podgornoye 56.55 308 P **P** 12 26 09.2 +0.2
KURK Kurchatov 57.45 317 P **P** 12 26 15.2 +0.2
KURK pmax pmax
comp=Z,17nm,0.9s
KURK Kurchatov 57.45 317 P **P** 12 26 15.2 +0.2
KURK IAmb IAmb 12 26 16.1
comp=Z,16nm,0.9s
KDJ Kajisay 58.27 307 P **P** 12 26 21.2 0.0
KDJ pmax pmax
comp=Z,8.0nm,1.0s
KDJ Kajisay 58.27 307 P **P** 12 26 21.2 0.0
KDJ IAmb IAmb 12 26 23.8
comp=Z,7.5nm,1.0s
ULHL Ulahol 58.97 307 P **P** 12 26 27.2 +1.3
SNR=5.4
KSH Kashi 59.34 304 P **P** 12 26 32.4 +4.0
KSH pP sP 12 27 24.6 -8.0
KSH PP **PP** 12 28 48.8 +7.2
KSH S **S** 12 34 19.3 -2.6
KSH sS ScS 12 35 52.1 -7.5
KSH SS **SS** 12 38 25.8 +6.1
KSH pmax pmax
comp=Z,36nm,0.6s
KSH pmax pmax
comp=Z,490nm,6.2s
KSH LR LR
comp=Z,250nm,4.6s
KSH LR LR
comp=Z,200nm,4.6s
KSH LR LR
comp=Z,370nm,6.8s
TKM2 Tokmak 2 59.41 308 P **P** 12 26 30.0 +1.0
TKM2 Tokmak 2 59.41 308 P **P** 12 26 30.3 +1.3
SNR=26
KZA Kyzart 59.71 307 P **P** 12 26 33.2 +1.9
SNR=20
KBK Karagaybulak 59.90 307 P **P** 12 26 33.5 +1.2
SNR=9.7
USP Ospenovka 60.20 308 P **P** 12 26 35.0 +0.9
SNR=9.7
AAK Ala-Archa 60.24 307 *c i*P **P** 12 26 35.2 +0.6
AAK *i* *PP **PcP** 12 27 17.5 -0.5
AAK pmax pmax
comp=Z,4.0nm,0.5s
AAK Ala-Archa 60.24 307 P **P** 12 26 35.5 +1.0
SNR=7.8
AAK Ala-Archa 60.24 307 P **P** 12 26 35.5 +1.0
AAK IAmb IAmb 12 26 35.8
comp=Z,5.9nm,0.6s
UCH Uchtor 60.25 307 P **P** 12 26 36.7 +1.7
SNR=16
EKS2 Erkin-Say 60.76 307 P **P** 12 26 39.1 +1.1
SNR=5.6
AML Almayashu 60.86 307 P **P** 12 26 40.6 +1.5
SNR=17
ARSB Arslanbob 61.46 306 P **P** 12 26 43.5 +0.7
ILAR Eielson Array 61.48 27 P **P** 12 26 42.8 +0.5
ILAR Eielson Array 61.48 27 P **P** 12 26 41.7 -0.6
comp=Z,0.5nm,0.7s,baz=263,slow=5.0,SNR=7.3
ILAR Eielson Array 61.48 27 P **P** 12 26 42.8 +0.5
NIL Nilore 62.21 297 P **P** 12 26 48.0 +0.2
NIL pmax pmax
comp=Z,18nm,1.3s
NIL Nilore 62.21 297 P **P** 12 26 48.0 +0.2
NIL IAmb IAmb 12 26 49.5
comp=Z,18nm,1.2s
BRVK Borovoye 62.68 319 P **P** 12 26 50.6 +0.1
BRVK Borovoye 62.68 319 P **P** 12 26 51.1 +0.6
KK31 Karatay Array 63.12 308 *i* P **P** 12 26 54.2 +0.6
KK31 Karatay Array 63.12 308 P **P** 12 26 54.7 +1.1
KKAR Karatay Array 63.12 308 P **P** 12 26 54.2 +0.6
KKAR Karatay Array 63.12 308 P **P** 12 26 54.1 +0.6
KKAR Karatay Array 63.12 308 P **P** 12 26 54.2 +0.6
GAR Garm 63.76 304 P **P** 12 26 58.1 0.0
CHGR Chuyangaron 64.70 303 P **P** 12 27 04.1 0.0
INK Inuvik 67.02 24 P **P** 12 27 19.1 +0.9
comp=Z,1.6nm,0.9s,baz=273,slow=3.7,SNR=6.6
ARU Arti 69.17 324 *c i*P **P** 12 27 31.7 -0.1
ARU *PP **pP** 12 28 16.5 +0.3
ARU S **S** 12 36 21.8 +0.1
ARU pmax pmax
comp=Z,7.0nm,0.7s
ARU Arti 69.17 324 P **P** 12 27 32.2 +0.4
ARU IAmb IAmb 12 27 33.4
comp=Z,7.3nm,0.8s
AB31 Akbulak array 69.53 316 *i* P **P** 12 27 33.6 -0.6
ABKAR Akbulak array 69.53 316 P **P** 12 27 34.2 +0.1
ABKAR Akbulak array 69.53 316 P **P** 12 27 34.5 +0.3
HRA Herat 71.01 300 P **P** 12 27 44.3 +0.5
HRA IAmb IAmb 12 27 45.1
comp=Z,6.6nm,0.7s
GEYT Alibeck 73.35 305 P **P** 12 27 57.2 -0.1
comp=Z,7.9nm,0.9s,baz=77,slow=3.2,SNR=10.0
GEYT Alibeck 73.35 305 P **P** 12 27 57.4 +0.1
GYA0B ALIBECK ARRAY 73.35 305 P **P** 12 27 58.6 +1.3
GYA0B IAmb IAmb 12 27 59.5
comp=Z,11nm,0.9s
PRGR Permogore 74.50 331 *eP* **P** 12 28 00.5 -2.9
PRGR pmax pmax
comp=Z,10.0nm,0.6s
YKA Yellowknife Ar 75.89 28 P **P** 12 28 12.2 +0.9
comp=Z,1.5nm,0.4s,baz=292,slow=5.9,SNR=28
RES Resolute Bay 76.57 13 P **P** 12 28 16.4 +1.4
RES pmax pmax
comp=Z,3.0nm,0.8s
RES Resolute Bay 76.57 13 P **P** 12 28 16.4 +1.4
ARCES ARCESS Array B 78.65 342 P **P** 12 28 27.2 +0.6
ARCES ARCESS Array B 78.65 342 P **P** 12 28 26.9 +0.2
comp=Z,3.6nm,0.7s,baz=69,slow=7.7,SNR=25
ARCES ARCESS Array B 78.65 342 P **P** 12 28 27.2 +0.6
VRH Novokhopyorsk 80.17 321 *eP* **P** 12 28 34.6 -0.5
VRH pmax pmax
comp=Z,10.0nm,0.6s
LPSR Galich'ya Gora 81.19 323 *eP* **P** 12 28 39.5 -1.0
LPSR pmax pmax
comp=Z,10.0nm,0.5s
OBN Obninsk 81.36 326⇑ *eP* **P** 12 28 43.2 +1.9
OBN pmax pmax
comp=Z,5.0nm,0.3s
VSR Storozhevoye 81.64 322 *c i*P **P** 12 28 42.6 -0.3
VSR pmax pmax
comp=Z,36nm,1.0s
NCK Nalchik 82.00 314⇑ *eP* **P** 12 28 46.2 +1.2
NCK pmax pmax
comp=Z,16nm,0.4s
KBZ Khabaz 82.37 314 *c i*P **P** 12 28 47.3 +0.5
KBZ Khabaz 82.37 314 P **P** 12 28 46.9 +0.1
comp=Z,13nm,0.8s,baz=82,slow=3.9,SNR=21
KIV Kislovodsk 82.42 314 *eP* **P** 12 28 48.0 +0.7
KIV pmax pmax
comp=Z,45nm,1.1s
KIV Kislovodsk 82.42 314 P **P** 12 28 47.0 -0.2
KIV IAmb IAmb 12 28 50.3
comp=Z,15nm,1.0s
GNI Garni 82.49 310⇓ *eP* **P** 12 28 47.9 +0.1
GNI pmax pmax
comp=Z,67nm,1.4s
NVAR Mina Array Bea 82.56 52 P **P** 12 28 49.4 +1.1
comp=Z,1.1nm,0.7s,baz=274,slow=5.1,SNR=5.9
FIA1 FINESS Array S 82.98 335 P **P** 12 28 49.5 -0.1
FIA1 IAmb IAmb 12 28 49.6
comp=Z,5.9nm,0.5s
FINES FINESS Array B 82.98 335 P **P** 12 28 49.0 -0.6
FINES FINESS Array B 82.98 335 P **P** 12 28 48.7 -0.9
comp=Z,5.4nm,0.5s,baz=68,slow=5.2,SNR=36
FINES FINESS Array B 82.98 335 P **P** 12 28 49.0 -0.6
VSU Vasula 84.37 332⇓ *eP* **P** 12 28 57.1 +0.4
VSU pmax pmax
comp=Z,83nm,1.7s
FFC Flin Flon 85.25 32 P **P** 12 29 02.6 +1.4
FFC pmax pmax
comp=Z,4.0nm,0.9s
FFC Flin Flon 85.25 32 P **P** 12 29 02.6 +1.4
RLMT Red Lodge 85.91 43 P **P** 12 29 07.2 +2.2
PDAR Pinedale Array 86.80 45 P **P** 12 29 09.9 +0.4
comp=Z,0.2nm,0.6s,baz=324,slow=5.6,SNR=3.1
PDAR Pinedale Array 86.80 45 P **P** 12 29 09.2 -0.2
AKASG Malin Array Be 87.40 325 *ceP* **P** 12 29 10.8 -1.0
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 87.40 325 P **P** 12 29 10.3 -1.4
comp=Z,2.5nm,0.4s,baz=51,slow=5.0,SNR=27
AKASG Malin Array Be 87.40 325 P **P** 12 29 10.7 -1.0
AKBB Malin Array Si 87.40 325 P **P** 12 29 10.6 -1.1
AKBB pmax pmax
comp=Z,6.0nm,0.7s
AKBB Malin Array Si 87.40 325 P **P** 12 29 10.6 -1.1
AKBB IAmb IAmb 12 29 11.3
comp=Z,5.8nm,0.7s
RAYN Ar Rayn 88.38 295 P **P** 12 29 16.1 -0.9
RAYN pmax pmax
comp=Z,3.0nm,1.1s
RAYN Ar Rayn 88.38 295 P **P** 12 29 16.1 -0.9
NOA NORSAR Array B 88.70 339 P **P** 12 29 16.8 -0.9
comp=Z,0.8nm,0.7s,baz=46,slow=4.8,SNR=3.5
BR131 Keskin Array S 90.35 314 P **P** 12 29 24.9 -1.2
BR131 pmax pmax
comp=Z,7.0nm,1.5s
BR131 Keskin Array S 90.35 314 P **P** 12 29 24.9 -1.2
BR131 IAmb IAmb 12 29 33.0
comp=Z,7.5nm,1.5s
BRTR Keskin Array B 90.35 314 *ceP* **P** 12 29 25.2 -0.9
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 90.35 314 P **P** 12 29 24.8 -1.3
comp=Z,1.6nm,0.7s,baz=82,slow=5.2,SNR=8.4
TXAR Lajitas Array 97.47 54 P Pdif 12 29 58.8 -0.1
TXAR Lajitas Array 97.47 54 P Pdif 12 29 59.6 +0.8
comp=Z,0.3nm,0.9s,baz=294,slow=2.9,SNR=2.8
TXAR Lajitas Array 97.47 54 P Pdif 12 29 58.8 0.0
TORD Torodi Ar. Bea 128.79 310 PKP **PKPdf** 12 35 31.6 -0.1
comp=Z,0.6nm,0.6s,baz=36,slow=1.8,SNR=4.4
TORD Torodi Ar. Bea 128.79 310 **PKPdf** 12 35 30.9 -0.9
PLCA Paso Flores 145.72 131 PKP2 **PKPdf** 12 36 01.3 -0.8
PLCA Paso Flores 145.72 131 PKPbc **PKPdf** 12 36 02.1 0.0
comp=Z,1.3nm,0.5s,baz=269,slow=4.5,SNR=8.3
PLCA Paso Flores 145.72 131 **PKPdf** 12 36 01.3 -0.8
LPAZ La Paz 149.49 85 PKP2 **PKiKP** 12 36 15.1 -0.3
LPAZ La Paz 149.49 85 PKPbc **PKPbc** 12 36 14.5 +0.1
comp=Z,4.6nm,0.5s,baz=304,slow=2.7,SNR=16
LPAZ La Paz 149.49 85 **PKPdf** 12 36 11.0 +1.3
LPAZ **PKiKP** 12 36 15.1 -0.3
CFA Coronel Fontan 150.13 115 PKPbc **PKPbc** 12 36 14.2 -0.6
comp=Z,2.2nm,0.6s,baz=293,slow=2.6,SNR=4.2
SIV San Ignacio 155.89 80 PKPab **PKPab** 12 36 45.5 -0.7
comp=Z,0.3nm,0.5s,baz=273,slow=18,SNR=2.2

IDC 14 12:24:35.1±12.0**, 21.90N×145.31E, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.3/31, mbtmpg3.6/4, ML3.6/1, Error ellipse: s-maj=449.2km s-min=27.3km az=76.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**5.90**	**332**	Pn	Pn	12 26 02.4	-1.5
JCJ	1.4nm,0.3s,baz=289,slow=18,SNR=1.4			Sn	Sn	12 27 04.2	-8.1
WRA	**Warramunga Arr**	**42.95**	**195**	P	P	12 32 36.0	0.0
	3.3nm,0.3s,baz=329,slow=18,SNR=1.3						
ASAR	**Alice Springs**	**46.63**	**194**	P		12 33 04.8	-0.6
	0.5nm,0.7s,baz=16,slow=8.3,SNR=1.4						
MKAR	**Makanchi Array**	**56.02**	**312**	P	P	12 34 16.1	+0.5
	0.3nm,0.3s,baz=15,slow=7.9,SNR=1.6						
	0.1nm,0.4s,baz=93,slow=10,SNR=2.9						

IDC 14 12:37:03.8±2.5**, 1.85N×126.45E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/41, mbtmpg3.6/3, Error ellipse: s-maj=218.3km s-min=29.0km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.00**	**161**	P	P	12 42 10.2	-0.2
	0.8nm,0.3s,baz=339,slow=10.0,SNR=3.9						
ASAR	**Alice Springs**	**26.38**	**164**	P	P	12 42 41.9	-0.2
	0.6nm,0.3s,baz=336,slow=9.5,SNR=3.7						
MKAR	**Makanchi Array**	**58.94**	**326**	P	P	12 47 05.2	+0.2
	0.1nm,0.3s,baz=125,slow=6.4,SNR=1.7						

*DJA **14** 12:51:26.1±0.3, 1°N±4°×12°6E±°, h10km, M4.7/12, mb4.8/3, MLv4.6/12*
*NEIC **14** 12:51:28.2±2.1, 1°.11N±0°.08×126°.11E±0°.04, h74km±9km, mb4.5/16, Error ellipse: s-maj=12.4km s-min=5.0km az=169.0*
*IDC **14** 12:51:29.5±2.9, 1°.01N×126°.04E, h88km±29km, mb3.8/11, mb1 3.9/14, mb1mx3.7/43, mbtmp4.1/14, Error ellipse: s-maj=27.3km s-min=12.7km az=81.0*
ISC 14 12:51:28.1±0.5, **1°.08N±0°.05×126°.10E±0°.04, h74km, n52, σ1§42/58, mb4.2/17, 1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.30**	**104**	P	**Pn**	**12 51 50.9**	**+0.2**
TNTI					S	**Sn**	**12 52 09.5**	**+1.8**
TNTI	**Ternate**	**1.30**	**104**			**Pn**	**12 51 51.0**	**+0.2**
TNTI					Sn	**Sn**	**12 52 07.5**	**-0.2**
KMSI	**Cibinong**	**2.18**	**257**	P		**Pn**	**12 52 02.2**	**0.0**
KMSI				S		**Sn**	**12 52 29.5**	**+1.2**
LBMI	**Labuha**	**2.21**	**141**	P		**Pn**	**12 52 02.8**	**+0.1**
SANI	**Sanana**	**3.11**	**182**	P		**Pn**	**12 52 13.3**	**-1.6**
LUWI	**Luwuk**	**3.94**	**238**	P		**Pn**	**12 52 28.8**	**+2.6**
LUWI	**Luwuk**	**3.94**	**238**			**Pn**	**12 52 27.9**	**+1.7**
LUWI					Sn	**Sn**	**12 53 10.8**	**-0.5**
MRSI	**Marisa**	**4.20**	**262**	P		**Pn**	**12 52 30.9**	**+1.1**
NLAI	**Namlea**	**4.41**	**167**	P		**Pn**	**12 52 32.2**	**-0.4**
APSI	**Ampana**	**4.87**	**246**	P		**Pn**	**12 52 42.7**	**+3.8**
SIJI	**Sorong**	**5.52**	**111**	P		**Pn**	**12 52 48.8**	**+1.0**
	0.8nm,0.3s,baz=330,slow=20,SNR=2.5							
SKMP	**Bagumbayan, Su**	**5.62**	**344**	*eP*		**Pn**	**12 52 49.4**	**+0.2**
SKMP				*eS*		**Sn**	**12 53 50.2**	**-2.2**
KCP	**Kidapawan**	**5.97**	**350**⇓	*iP*		**Pn**	**12 52 56.7**	**+2.6**
MPSI	**Mapaga**	**6.24**	**263**	P		Pn	12 53 03.4	+5.7
FAKI	**Fak Fak**	**7.32**	**123**	Pn		**Pn**	**12 53 12.8**	**+0.4**
FAKI				S		**Sn**	**12 54 34.6**	**+0.5**
TTSI	**Tana Toraja**	**7.50**	**237**	P		**Pn**	**12 53 17.8**	**+3.0**
	0.4nm106nm,0.9s							
SPSI	**Sidrap Palu**	**8.07**	**232**	P		**Pn**	**12 53 23.6**	**+0.9**
BNSI	**Bone**	**8.09**	**228**	P		Pn	12 53 31.1	+8.1
KAPI	**Kappang**	**8.77**	**226**	P		**Pn**	**12 53 33.7**	**+1.5**
	2.0nm,0.3s,baz=77,slow=14,SNR=5.1							
KAPI				S		**Sn**	**12 55 05.3**	**-4.2**
	baz=265,slow=24,SNR=1.0							
KAPI	**Kappang**	**8.77**	**226**			**Pn**	**12 53 32.7**	**+0.5**
KAPI						**Sn**	**12 55 09.0**	**-0.5**
SOEI	**Soe**	**10.92**	**190**	Pn		**Pn**	**12 54 04.3**	**+2.6**
KKM	**Kota Kinabalu**	**11.03**	**297**	Pn		**Pn**	**12 54 02.5**	**-0.6**
MTN	**Manton Dam**	**14.71**	**160**	Pn		**Pn**	**12 54 51.0**	**-1.3**
KSM	**Kuching**	**15.79**	**272**	Pn		**Pn**	**12 55 06.8**	**+0.6**
KSM				IAmb	IAmb	12 55 10.6		
	comp=Z,30nm,1.1s							
KNRA	**Kununurra**	**16.86**	**171**			**Pn**	**12 55 19.8**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.07**	**181**	P		**P**	**12 55 43.9**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=5.1,slow=8.3,SNR=15							
FITZ	**Fitzroy Crossi**	**19.07**	**181**	P		**P**	**12 55 44.3**	**-0.4**
FITZ				IAmb	IAmb	12 55 44.8		
	comp=Z,27nm,1.5s							
WRAB	**Tennant Creek**	**22.40**	**159**	P		**P**	**12 56 19.9**	**-0.8**
WRAB				IAmb	IAmb	12 56 33.2		
	comp=Z,32nm,1.4s							
WRA	**Warramunga Arr**	**22.40**	**159**	P		**P**	**12 56 19.6**	**-1.1**
	comp=Z,6.5nm,0.4s,baz=335,slow=11,SNR=70							
COEN	**Coen**	**22.57**	**132**	P		**P**	**12 56 22.8**	**+0.2**
YULB	**Yu-li**	**22.66**	**348**	P		**P**	**12 56 22.4**	**-1.0**
TPUB	**Ta-pu**	**22.72**	**347**	P		**P**	**12 56 20.5**	**-3.5**
TPUB				IAmb	IAmb	12 56 27.9		
	comp=Z,47nm,1.3s							
AS31	**Alice Springs**	**25.74**	**163**	P		**P**	**12 56 52.5**	**+0.5**
AS31				IAmb	IAmb	12 56 55.6		
	comp=Z,3.7nm,0.4s							
ASAR	**Alice Springs**	**25.74**	**163**	P		**P**	**12 56 52.0**	**0.0**
	comp=Z,3.0nm,0.3s,baz=345,slow=12,SNR=167							
GSI	**Gunungsitoli**	**28.52**	**271**	P		**P**	**12 57 16.0**	**-0.9**
FORT	**Forrest**	**31.74**	**177**	P		**P**	**12 57 45.8**	**+0.7**
FORT				IAmb	IAmb	12 57 52.1		
	comp=Z,14nm,0.8s							
BBOO	**Buckleboo**	**35.00**	**165**	P		**P**	**12 58 13.8**	**+0.3**
STKA	**Stephens Creek**	**35.92**	**157**	P		**P**	**12 58 21.6**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=330,slow=11,SNR=8.7							
STKA	**Stephens Creek**	**35.92**	**157**	P		**P**	**12 58 22.1**	**+0.7**
KSRS	**Korea Array**	**36.23**	**2**	P		**P**	**12 58 24.6**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=183,slow=8.7,SNR=4.5							
MJAR	**Matsushiro Arr**	**37.02**	**16**	P		**P**	**12 58 31.4**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=186,slow=9.8,SNR=2.7							
USA0B	**Ussuriysk Arra**	**43.25**	**6**	P		**P**	**12 59 23.7**	**+1.5**
USA0B				IAmb	IAmb	12 59 26.3		
	comp=Z,11nm,1.4s							
USRK	**Ussuriysk Ar.**	**43.25**	**6**	P		**P**	**12 59 23.2**	**+1.0**
	comp=Z,3.7nm,0.5s,baz=188,slow=7.5,SNR=16							
SONM	**Songino Array**	**49.61**	**343**	P		**P**	**13 00 12.3**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=150,slow=8.5,SNR=4.7							
PETK	**Petropavlovsk-**	**58.10**	**22**	P		**P**	**13 01 14.6**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=226,slow=5.9,SNR=4.6							
MK31	**Makanchi Array**	**59.38**	**326**	P		**P**	**13 01 22.3**	**-0.5**
MKAR	**Makanchi Array**	**59.38**	**326**	P		**P**	**13 01 22.1**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=119,slow=7.2,SNR=16							
MAKZ	**Makanchi**	**59.56**	**326**	P		**P**	**13 01 24.1**	**+0.1**
MAKZ				IAmb	IAmb	13 01 34.7		
	comp=Z,3.6nm,1.3s							
ZALV	**Zalesovo Beam**	**62.66**	**334**	P		**P**	**13 01 44.7**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=132,slow=8.5,SNR=2.7							
KURK	**Kurchatov**	**63.64**	**328**	P		**P**	**13 01 51.0**	**-0.3**
ABKAR	**Akbulak array**	**73.80**	**321**	P		**P**	**13 02 54.4**	**-0.2**
VNDA	**Vanda**	**80.90**	**173**	P		**P**	**13 03 33.3**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=308,slow=7.9,SNR=3.5							

*KRNET **14** 13:11:08.6±0.1, 42°.03N×72°.16E, h14km, mb2.8*
*NNC **14** 13:11:09.0±0.9, 42°.03N×72°.12E, h0km, mb3.1, mpv3.2, Error ellipse: s-maj=10.7km s-min=3.8km az=178.0*
*SOME **14** 13:11:08.4, 42°.07N×72°.17E, h5km*
*KNET **14** 13:11:10.7±0.4, 42°.10N×72°.31E, h3km±2km, ml2.4, Error ellipse: s-maj=3.6km s-min=2.5km az=165.0*
ISC 14 13:11:08.1±1.1**, 42°.07N**±0°.03×**72°.16E**±0°.02**, h4km**±11km**, n40, σ1§06/70, 33C-21D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.31**	**209**⇓	*iP*	**Pg**	**13 11 14.5**	**+0.5**
ARK	baz=9.0			⇓*iS*	**Sg**	**13 11 18.4**	**+0.4**
	baz=9.0						
ARSB	**Arslanbob**	**0.97**	**140**⇑	*iP*	**Pg**	**13 11 26.1**	**-0.5**
ARSB	baz=39			⇑*iS*	**Sg**	**13 11 38.9**	**-0.2**
	baz=39						
MRKS	**Merke**	**1.04**	**49**⇓	*iP*	**Pn**	**13 11 29.2**	**-0.4**
	29nm,0.3s						
MRKS				⇑*iS*	**Sn**	**13 11 43.9**	**-0.7**
	61nm,0.2s						
MRKS	**Merke**	**1.04**	**49**	P	**Pn**	**13 11 29.2**	**-0.4**
	29nm,0.2s						
MRKS				S	**Sn**	**13 11 43.8**	**-0.8**
	61nm,0.2s						
AML	**Almayashu**	**1.15**	**86**⇑	*iP*	**Pg**	**13 11 30.1**	**+0.1**
AML	baz=84			⇑*iS*	**Sb**	**13 11 45.9**	**-0.1**
	baz=84						
AML	**Almayashu**	**1.15**	**86**	⇓P	**Pg**	**13 11 30.6**	**+0.6**
	16nm,0.2s,SNR=57						
AML				⇑S	**Sb**	**13 11 46.5**	**+0.5**
	22nm,0.1s						
EKS2	**Erkin-Say**	**1.34**	**63**⇓	*iP*	**Pb**	**13 11 33.9**	**+0.1**
EKS2	baz=62			⇓*iS*	**Sg**	**13 11 52.3**	**+1.2**
	baz=62						
EKS2	**Erkin-Say**	**1.34**	**63**	⇓P	**Pg**	**13 11 34.4**	**+0.7**
	3.9nm,0.2s,SNR=9.5						
IUG	**luzhnay**	**1.58**	**274**⇑	*iP*	**Pb**	**13 11 37.8**	**-0.2**
	3.9nm,0.2s						
IUG				⇓*eS*	**Sb**	**13 11 58.3**	**-0.2**
	41nm,0.3s						
IUG	**luzhnay**	**1.58**	**274**	P	**Pb**	**13 11 37.7**	**-0.2**
	3.8nm,0.2s						
IUG				S	**Sb**	**13 11 58.2**	**-0.2**
	26nm,0.2s						
KK31	**Karatay Array**	**1.60**	**311**	Pg	**Pb**	**13 11 37.9**	**-0.3**
	1.1nm,0.3s,baz=135,slow=16,SNR=18						
KK31				⇑S	**Sg**	**13 12 00.3**	**+0.9**
	6.4nm,0.3s,baz=134,slow=26						
ARLS	**Aral**	**1.63**	**97**⇑	*iP*	**Pb**	**13 11 39.3**	**+0.6**
ARLS	baz=95			⇑*iS*	**Sg**	**13 12 00.9**	**+0.6**
	baz=95						
UCH	**Uchtor**	**1.76**	**84**⇓	*eP*	**Pb**	**13 11 41.3**	**+0.1**
UCH	baz=83			⇓*iS*	**Sg**	**13 12 04.7**	**+0.1**
	baz=83						
UCH	**Uchtor**	**1.76**	**84**	⇓P	**Pb**	**13 11 41.6**	**+0.5**
	7.6nm,0.2s,SNR=13						
UCH				⇓S	**Sg**	**13 12 06.8**	**+2.3**
	31nm,0.3s						
AAK	**Ala-Archa**	**1.82**	**71**⇑	*iP*	**Pb**	**13 11 42.5**	**+0.4**
AAK	baz=70			⇑*iS*	**Sg**	**13 12 06.9**	**+0.3**
	baz=70						
AAK	**Ala-Archa**	**1.82**	**71**	⇓P	**Pg**	**13 11 43.1**	**+0.1**
	7.0nm,0.3s,SNR=13						
AAK	**Ala-Archa**	**1.82**	**71**	⇑Pn	**Pg**	**13 11 43.0**	**0.0**

	1.5nm,0.2s									
AAK				⇑Sn		Sg	13 12 07.5	+0.9		
	14nm,0.6s									
BRLS	**Borolday**	**1.97**	**300**	*e*P		**Pb**	**13 11 45.1**	**+0.7**		
	0.6nm,0.2s									
BRLS				*e*S		**Sg**	**13 12 11.4**	**+0.1**		
	24nm,0.6s									
BRLS	**Borolday**	**1.97**	**300**	Pg		**Pb**	**13 11 45.2**	**+0.7**		
	1.3nm,0.2s									
BRLS				Lg		Lg	13 12 11.1			
	4.4nm,0.3s									
FRU1	**Bishkek**	**1.97**	**67**	⇑*e*P		**Pb**	**13 11 45.1**	**+0.5**		
	baz=66									
FRU1				⇑*i*S		**Sg**	**13 12 11.2**	**-0.3**		
	baz=66									
USP	**Ospenovka**	**2.10**	**54**	⇑*i*P		**Pb**	**13 11 46.8**	**0.0**		
	baz=53									
USP				⇑*i*S		**Sb**	**13 12 14.6**	**+1.4**		
	baz=53									
USP	**Ospenovka**	**2.10**	**54**	⇑P		**Pb**	**13 11 47.7**	**+1.0**		
	9.1nm,0.3s,SNR=10.0									
USP				⇑S		**Sg**	**13 12 16.6**	**+1.1**		
	36nm,0.2s									
CHMS	**Chumysh**	**2.13**	**63**	⇑*i*P		**Pb**	**13 11 47.0**	**-0.2**		
	baz=62									
CHMS				⇑*i*S		**Sb**	**13 12 15.2**	**+1.1**		
	baz=62									
CHMS	**Chumysh**	**2.13**	**63**	⇑P		**Pg**	**13 11 48.5**	**-0.4**		
	SNR=6.2									
CHMS				⇓S		**Sg**	**13 12 17.1**	**+0.7**		
	16nm,0.2s									
KBK	**Karagaybulak**	**2.15**	**73**	⇓*i*P		**Pb**	**13 11 47.2**	**-0.5**		
	baz=72									
KBK				⇓*i*S		**Sb**	**13 12 15.6**	**+0.9**		
	baz=72									
KBK	**Karagaybulak**	**2.15**	**73**	⇓P		**Pg**	**13 11 49.2**	**-0.1**		
	5.3nm,0.1s,SNR=11									
BTK	**Batken**	**2.25**	**207**	⇓*i*P		**Pb**	**13 11 47.9**	**-1.4**		
	baz=8.0									
BTK				⇓*i*S		**Sb**	**13 12 16.6**	**-0.9**		
	baz=8.0									
SGDS	**Sogindy**	**2.29**	**52**	Pg		**Pb**	**13 11 50.6**	**+0.7**		
	10nm,0.2s									
SGDS				Lg		Lg	13 12 19.9			
	34nm,0.2s									
KZA	**Kyzart**	**2.30**	**89**	⇑*i*P		**Pb**	**13 11 49.5**	**-0.9**		
	baz=88									
KZA				⇑*i*S		**Sb**	**13 12 19.3**	**0.0**		
	baz=88									
KZA	**Kyzart**	**2.30**	**89**	⇑P		**Pb**	**13 11 51.5**	**+1.1**		
	12nm,0.2s,SNR=26									
TKM2	**Tokmak 2**	**2.68**	**70**	⇑*i*P		**Pb**	**13 11 54.8**	**-2.0**		
	baz=69									
TKM2				⇑*i*S		**Sb**	**13 12 28.3**	**-1.8**		
	baz=69									
TKM2	**Tokmak 2**	**2.68**	**70**	⇓del			13 11 57.6			
	5.5nm,0.2s,SNR=18									
TKM2	**Tokmak 2**	**2.68**	**70**	⇑Pn		**Pb**	**13 11 56.6**	**-0.1**		
	3.9nm,0.3s									
TKM2				⇓Sn		**Sg**	**13 12 32.9**	**-1.3**		
	12nm,0.5s									
BOOM	**Boomskoye usch**	**2.84**	**80**	⇑*i*P		**Pb**	**13 11 57.2**	**-2.2**		
	baz=79									
BOOM				⇑*i*S		**Sb**	**13 12 32.0**	**-2.5**		
	baz=79									
NRN	**Naryn**	**2.94**	**101**	⇑*i*P		**Pn**	**13 11 57.8**	**+1.9**		
	baz=1.0									
NRN				⇑*i*S		**Sn**	**13 12 34.2**	**+2.3**		
	baz=1.0									
KST	**Kastek**	**2.98**	**70**	*e*P		**Pg**	**13 12 04.6**	**-0.5**		
	3.3nm,0.4s									
KST				*e*S		**Sg**	**13 12 43.5**	**-0.1**		
	24nm,0.5s									
KST	**Kastek**	**2.98**	**70**	Pg		**Pg**	**13 12 04.6**	**-0.5**		
	3.2nm,0.2s									
KRBS	**Karabastau**	**3.05**	**57**	*e*P		**Pb**	**13 12 04.0**	**+1.0**		
	2.4nm,0.4s									
KRBS				*e*S		**Sg**	**13 12 43.8**	**-2.3**		
	4.2nm,0.3s									
CHKK	**Chushkaly**	**3.97**	**62**	*e*P		**Pg**	**13 12 21.9**	**-2.1**		
	0.7nm,0.1s									
CHKK				*e*S		**Sg**	**13 13 14.0**	**-1.5**		
	9.0nm,0.4s									
CHKK	**Chushkaly**	**3.97**	**62**	Pg		**Pg**	**13 12 21.9**	**-2.1**		
	0.7nm,0.1s									
CHKK				Lg		Lg	13 13 14.0			
	9.0nm,0.4s									

MAN 14 13:48:12.6, 9.94N×123.86E, h32km, mb3.8, ML2.6, MS2.1, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.39**	**15**	⇓*e*P		Pn	13 48 23.0	+0.9
LLP				*i* S		Sn	13 48 29.8	+1.2
MSLP	**Maasin**	**1.00**	**79**	*e*P		Pn	13 48 30.2	-0.3
MSLP				*e*S		Sn	13 48 42.4	-1.2

*THR **14** 13:54:57.8±0.3, 40.29N×52.73E, h15km, ML5.1*
*TEH **14** 13:54:58.0, 40.24N×52.85E, h10km, ML5.1*
*BJI **14** 13:54:59.2±0.0, 40.29N×52.55E, h48km, mb5.1/48, mb5.1/61, Ms4.6/33, Ms7 4.3/33*
*MOS **14** 13:54:59.6±1.1, 40.30N×52.92E, h38km, mb5.3/65, MS4.2/12, Error ellipse: s-maj=4.0km s-min=3.1km az=30.1*
*NEIC **14** 13:55:02.2±1.9, 40.28N±0.07×52.88E±0.07, h49km±4km, mb5.2/200, Error ellipse: s-maj=10.0km s-min=7.6km az=191.0*
*IDC **14** 13:55:02.7±0.5, 40.23N×52.83E, h52km±4km, mb4.7/40, mb1 4.8/51, mb1mx4.7/62, mbtmp4.9/51, MS4.0/33, Ms1 4.0/33, ms1mx3.8/51, Error ellipse: s-maj=11.0km s-min=7.3km az=175.0*
*GCMT **14** 13:55:03.2±0.3, 40.18N±0.02×52.90E±0.02, h45km, MW5.0/67, Moment Tensor Solution. s46,c54; s67,c102; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr3.72±.17; Mθθ-3.10±.13; Mϕϕ-0.61±.11; Mrθ0.74±.09; Mθϕ1.32±.08; Mϕr-0.73±.07; Best double couple: Mo3.83800×10^16 NP1:ϕs288.00000°, δ38.00000°, λ81.00000°. NP2: ϕs119.00000°, δ53.00000°, λ97.00000°. Principal axes: T 3.8800, Plg81.0000°, Azm60.0000°; N -0.0800, Plg5.0000°, Azm295.0000°; P -3.7960, Plg7.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **14** 13:55:04.2±1.4, 40.05N×52.55E, h46km, mb5.1 Error ellipse: s-maj=21.1km s-min=18.9km az=179.0*
*NNC **14** 13:55:05.1±6.8, 40.61N×53.42E, h17km±51km, mb5.1, Error ellipse: s-maj=36.1km s-min=16.4km az=74.0*

ISC 14 13:55:02.4±0.3, 40.41N±0.03×52.90E±0.03, h49km±2km, h48km: pP-P, n1136, σ1.972/1212, mb5.1/242, MS4.1/40, 116C-36D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GALA	**Gala**	**2.10**	**271**	*e*Pn		**Pn**	**13 55 35.9**	**+0.9**
NDR	**Nardaran**	**2.23**	**275**	*e*Pn		**Pn**	**13 55 40.3**	**+3.5**
GOBA	**Gobu**	**2.42**	**271**	*e*Pn		**Pn**	**13 55 42.4**	**+3.0**
ALIB	**Äli-Bayra**	**3.02**	**263**	*e*Pn		**Pn**	**13 55 50.0**	**+2.4**
GBS	**Qobustan**	**3.02**	**274**	*e*Pn		**Pn**	**13 55 50.2**	**+2.4**
ATGJ	**Altiaghaj**	**3.05**	**280**	*e*Pn		**Pn**	**13 55 49.9**	**+1.7**
SIZA	**Siyzn**	**3.11**	**284**	*e*Pn		**Pn**	**13 55 51.0**	**+1.9**
PQL	**Pirkuli**	**3.30**	**278**	*e*Pn		**Pn**	**13 55 53.0**	**+1.3**
SAAT	**Saatly**	**3.48**	**262**	*e*Pn		**Pn**	**13 55 54.9**	**+1.0**
QUB	**Quba**	**3.58**	**287**	*e*Pn		**Pn**	**13 55 56.1**	**+0.7**
KDMR	**Kurdemir**	**3.60**	**271**	*e*Pn		**Pn**	**13 55 56.9**	**+1.2**
LKRN	**Lenkeran, Azer**	**3.61**	**243**	P		**Pn**	**13 55 54.2**	**-1.5**
LKRN	**Lenkeran, Azer**	**3.61**	**243**	*e*Pn		**Pn**	**13 55 54.2**	**-1.5**
IML	**Ismayilli**	**3.61**	**278**	*e*Pn		**Pn**	**13 55 57.0**	**+1.1**
GLBA	**Clilabad**	**3.66**	**253**	*e*Pn		**Pn**	**13 55 55.6**	**-0.9**
ASTR	**Astara**	**3.67**	**241**	*e*Pn		**Pn**	**13 55 54.6**	**-2.1**
QSAR	**Qusar**	**3.68**	**289**	*e*Pn		**Pn**	**13 55 59.0**	**+2.2**
XNQ	**Khinaliq**	**3.69**	**283**	*e*Pn		**Pn**	**13 55 58.1**	**+1.0**
IMND	**Minoodasht**	**3.70**	**147**	*e*Pn		**Pn**	**13 55 55.7**	**-1.4**
QBL	**Gabala**	**3.89**	**280**	*e*Pn		**Pn**	**13 56 00.0**	**+0.3**
YRD	**Yardimli**	**3.89**	**249**	*e*Pn		**Pn**	**13 55 58.1**	**-1.7**
LRK	**Lerik**	**3.94**	**245**	*e*Pn		**Pn**	**13 55 58.5**	**-2.0**
IGLO	**Ghaloghah**	**3.96**	**169**	*e*Pn		**Pn**	**13 55 58.1**	**-2.8**
IGLO				*e*			13 56 46.5	
ZRD	**Zardab**	**3.99**	**270**	*e*Pn		**Pn**	**13 56 01.5**	**+0.5**
AKT	**Akhty**	**4.06**	**287**	*e*P		**Pn**	**13 56 03.4**	**+1.3**
AKT				*e*S		**Sn**	**13 56 47.3**	**-1.1**
AKT				pmax	pmax			
	comp=Z,461nm,0.2s							
AKT				smax	smax			
	comp=N,4μm,0.4s							
AKT				smax	smax			
	comp=E,5μm,0.3s							
AKT				MLR	MLR			
	comp=Z,2μm,2.0s							
AKT	**Akhty**	**4.06**	**287**	*e*Pn		**Pn**	**13 56 02.7**	**+0.6**
BLQ	**Beylaqan**	**4.16**	**262**	*e*Pn		**Pn**	**13 56 02.3**	**-1.0**
IPRN	**Peran**	**4.18**	**186**	*e*Pn		**Pn**	**13 56 00.3**	**-3.5**
IPRN				*e*			13 56 48.7	
GRMI	**Germi**	**4.18**	**249**	*e*Pn		**Pn**	**13 56 00.3**	**-3.5**
GRMI	**Germi**	**4.18**	**249**	*e*Pn		**Pn**	**13 56 01.1**	**-2.7**
GRMI				IAML			13 56 49.4	
	comp=N,2μm,0.7s							
GRMI	**Germi**	**4.18**	**249**	*e*Pn		**Pn**	**13 56 00.3**	**-3.5**
GRMI				IAML			13 56 49.4	
	comp=N,2μm,0.7s							
IALA	**Alasht**	**4.32**	**181**	*e*Pn		**Pn**	**13 56 03.0**	**-2.8**
QALM	**Alamut, Qazvin**	**4.34**	**205**	*e*Pn		**Pn**	**13 56 02.5**	**-3.6**
QALM				*e*			13 56 56.6	
BRDA	**Brd**	**4.38**	**270**	*e*Pn		**Pn**	**13 56 07.0**	**+0.7**
QRD	**Qoradiz**	**4.39**	**259**	*e*Pn		**Pn**	**13 56 05.9**	**-0.6**
SEKA	**Sheki**	**4.40**	**282**	P		**Pn**	**13 56 07.4**	**+0.7**
SEKA	**Sheki**	**4.40**	**282**	*e*Pn		**Pn**	**13 56 07.4**	**+0.7**
BJRD	**Bojnurd**	**4.43**	**126**	*e*Pn		**Pn**	**13 56 07.2**	**+0.1**
BJRD	**Bojnurd**	**4.43**	**126**	*e*Pn		**Pn**	**13 56 07.3**	**+0.1**
BJRD				IAML			13 57 00.2	
	comp=E,1μm,1.0s							
BJRD	**Bojnurd**	**4.43**	**126**	*e*Pn		**Pn**	**13 56 07.2**	**+0.1**
BJRD				IAML			13 57 00.1	
	comp=E,1μm,1.0s							
MNGR	**Mingechevir, A**	**4.44**	**277**	P		**Pn**	**13 56 10.4**	**+3.2**
MNGR	**Mingechevir, A**	**4.44**	**277**	*e*Pn		**Pn**	**13 56 10.4**	**+3.2**
IGZV	**Ghazvin**	**4.53**	**209**	*e*Pn		**Pn**	**13 56 05.1**	**-3.6**
ISHM	**Shahmirzad**	**4.60**	**176**	*e*Pn		**Pn**	**13 56 08.1**	**-1.6**
CHTH	**Charan**	**4.70**	**198**	*e*Pn		**Pn**	**13 56 08.4**	**-2.7**
GEYT	**Alibeck**	**4.75**	**120**	P		**Pn**	**13 56 10.9**	**-0.6**
	comp=E,28nm,0.3s,baz=320,slow=14,SNR=96							
GEYT				S		**Sn**	**13 56 59.9**	**-5.3**
	comp=E,45nm,0.3s,baz=292,slow=30,SNR=6.9							
GEYT				LR		LR	13 58 31.5	
	comp=E,1μm,21.0s,baz=355,slow=44							
GYA0	**ALIBECK ARRAY**	**4.75**	**120**	*e*Pn		**Pn**	**13 56 11.5**	**0.0**
GYA0B	**ALIBECK ARRAY**	**4.75**	**120**	⇑Pn		**Pn**	**13 56 11.5**	**+0.1**
	baz=305,slow=14							
GYA0B				⇑Lg		Lg	13 57 02.4	
	baz=305,slow=14							
GYA0B	**ALIBECK ARRAY**	**4.75**	**120**			**Pn**	**13 56 10.5**	**-0.9**
IFIR	**Firoozkooh**	**4.76**	**181**	*e*Pn		**Pn**	**13 56 10.1**	**-1.7**
ISRB	**Sarab**	**4.82**	**239**	*e*Pn		**Pn**	**13 56 10.6**	**-2.0**
ISRB				*e*			13 57 07.6	
IHSH	**Hashtrud**	**4.85**	**246**	*e*Pn		Pn	13 56 19.1	+6.0
IDMV	**Damavand**	**4.87**	**188**	*e*Pn		**Pn**	**13 56 11.6**	**-1.8**
IDMV				*e*			13 57 11.4	
ASHT	**Ashkhabad**	**4.92**	**118**	P		**Pn**	**13 56 13.5**	**-0.3**
ASHT	**Ashkhabad**	**4.92**	**118**	*e*Pn		**Pn**	**13 56 14.9**	**+1.1**
ASHT	**Ashkhabad**	**4.92**	**118**			**Pn**	**13 56 13.5**	**-0.3**
ZNJK	**Zanjan**	**4.93**	**223**	*e*Pn		**Pn**	**13 56 11.9**	**-3.0**
IANJ	**Anjilo**	**5.00**	**170**	*e*Pn		**Pn**	**13 56 14.2**	**-0.8**
IHRS	**Heris**	**5.00**	**247**	*e*Pn		**Pn**	**13 56 14.2**	**-0.8**
ILAS	**Lasjerd**	**5.01**	**179**	*e*Pn		**Pn**	**13 56 14.1**	**-1.2**
GANJ	**Ganja**	**5.02**	**275**	P		**Pn**	**13 56 14.2**	**-1.0**
IMHD	**Mahdasht**	**5.03**	**201**	*e*Pn		**Pn**	**13 56 13.8**	**-1.6**
SHRO	**Shahrood**	**5.04**	**150**	*e*Pn		**Pn**	**13 56 14.2**	**-1.4**
SHRO	**Shahrood**	**5.04**	**150**	*e*Pn		**Pn**	**13 56 14.5**	**-1.1**
SHRO	**Shahrood**	**5.04**	**150**	*e*Pn		**Pn**	**13 56 14.2**	**-1.4**
IHSB	**Hasanabad**	**5.12**	**195**	*e*Pn		**Pn**	**13 56 15.3**	**-1.4**
QABG	**Abgarm-Qazvin**	**5.37**	**210**	*e*Pn		**Pn**	**13 56 17.5**	**-2.7**
QABG				*e*			13 56 19.7	
IEMG	**Emamgholi**	**5.39**	**122**	*e*Pn		**Pn**	**13 56 19.9**	**-0.6**
IEMG				*e*			13 57 02.3	
BTLR	**Botlikh**	**5.50**	**296**	⇑*e*P		**Pn**	**13 56 23.8**	**+2.1**
IRAZ	**Razeghan**	**5.52**	**206**	*e*Pn		**Pn**	**13 56 20.1**	**-2.1**
IKRD	**Kardeh**	**5.70**	**128**	*e*Pn		Pn	13 56 32.6	+7.9
IKRD				*e*			13 57 44.9	
IMRD	**Marand**	**5.81**	**255**	*e*Pn		**Pn**	**13 56 25.8**	**-0.4**
IMRD				*e*			13 57 37.3	
NAX	**Nakhchivan**	**5.83**	**260**	P		**Pn**	**13 56 26.9**	**+0.5**
GROC	**Groznyy**	**6.00**	**300**	*e*P		**Pn**	**13 56 30.8**	**+2.3**
GROC				*e*			13 57 39.1	
GROC				pmax	pmax			
	comp=Z,232nm,0.5s							
GROC				smax	smax			
	comp=N,1μm,1.9s							
GROC				smax	smax			
	comp=E,538nm,0.6s							
GROC				smax	smax			
	comp=N,1μm,0.7s							
GROC				MLR	MLR			
	comp=Z,19nm,1.0s							
GHVR	**GHOM**	**6.05**	**193**	*e*Pn		**Pn**	**13 56 27.3**	**-2.1**
GHVR	**GHOM**	**6.05**	**193**	*e*Pn		**Pn**	**13 56 27.1**	**-2.3**
GHVR	**GHOM**	**6.05**	**193**	*e*Pn		**Pn**	**13 56 27.3**	**-2.1**
IPAY	**Payeh**	**6.20**	**128**	*e*Pn		**Pn**	**13 56 30.9**	**-0.7**
IPAY				*e*			13 57 41.5	
GNI	**Garni**	**6.25**	**270**	*d* iP		**Pn**	**13 56 32.8**	**+0.7**
GNI				pmax	pmax			
	comp=Z,325nm,0.7s							
GNI	**Garni**	**6.25**	**270**	P		**Pn**	**13 56 32.7**	**+0.6**
	comp=Z,13nm,0.3s,baz=56,slow=2.1,SNR=55							
GNI				S		**Sn**	**13 57 43.3**	**+1.1**
	comp=Z,26nm,0.3s,baz=312,slow=20,SNR=3.9							
GNI	**Garni**	**6.25**	**270**	*i* Pn		**Pn**	**13 56 32.5**	**+0.4**
	SNR=36							
GNI	**Garni**	**6.25**	**270**	*e*P		**Pn**	**13 56 33.1**	**+1.0**
GNI	**Garni**	**6.25**	**270**			**Pn**	**13 56 32.3**	**+0.2**
ASAO	**Ashtian**	**6.28**	**202**	*e*Pn		**Pn**	**13 56 30.0**	**-2.7**
ASAO	**Ashtian**	**6.28**	**202**	*e*Pn		**Pn**	**13 56 30.5**	**-2.2**
ASAO	**Ashtian**	**6.28**	**202**	*e*Pn		**Pn**	**13 56 30.0**	**-2.7**
TBLG	**Delisi**	**6.31**	**285**	P		**Pn**	**13 56 32.4**	**-0.4**
TBLG	**Delisi**	**6.31**	**285**			**Pn**	**13 56 32.4**	**-0.4**
HSRG	**Sareghieh**	**6.32**	**217**	*e*Pn		**Pn**	**13 56 30.9**	**-2.4**
HAGD	**Aghdareh**	**6.32**	**209**	*e*Pn		**Pn**	**13 56 31.6**	**-1.6**
TASB	**TASBURUN-IGDIR**	**6.65**	**269**	*e*P		**Pn**	**13 56 38.1**	**+0.6**
MAHB	**Mahabad**	**6.71**	**239**	*e*Pn		**Pn**	**13 56 37.3**	**-1.1**
QAM	**Ghamsar**	**6.74**	**190**	*e*Pn		**Pn**	**13 56 36.7**	**-2.2**
IMYA	**Miami**	**6.96**	**123**	*e*Pn		**Pn**	**13 56 40.8**	**-1.1**
IMYA				*e*			13 59 33.7	
CLDR	**Caldiran**	**7.03**	**263**	*e*P		**Pn**	**13 56 43.8**	**+0.8**
KHMZ	**Khomeyn**	**7.06**	**200**	*e*Pn		**Pn**	**13 56 41.2**	**-2.1**
HSAM	**Samen**	**7.07**	**210**	*e*Pn		**Pn**	**13 56 42.2**	**-1.3**
TNSJ	**Nastanj**	**7.08**	**154**	*e*Pn		**Pn**	**13 56 42.4**	**-1.1**
IBZA	**Bozab**	**7.15**	**216**	*e*Pn		**Pn**	**13 56 44.3**	**-0.4**
ZEI	**Tsey**	**7.15**	**292**	*e*P		**Pn**	**13 56 46.7**	**+2.1**
ZEI				pmax	pmax			
	comp=Z,47nm,0.4s							
AKH	**Akhalkalaki**	**7.20**	**281**	P		**Pn**	**13 56 45.4**	**+0.2**
AKH	**Akhalkalaki**	**7.20**	**281**	*e*P		**Pn**	**13 56 41.8**	**+2.9**
AKH	**Akhalkalaki**	**7.20**	**281**			**Pn**	**13 56 45.4**	**+0.2**
ANAR	**Anarak**	**7.23**	**174**	*e*Pn		**Pn**	**13 56 42.9**	**-2.7**
IZEF	**Zefreh**	**7.51**	**184**	*e*Pn		**Pn**	**13 56 47.3**	**-2.3**
TABS	**Tabas**	**7.54**	**152**	*e*Pn		**Pn**	**13 56 48.9**	**-0.9**
TABS	**Tabas**	**7.54**	**152**	*e*Pn		**Pn**	**13 56 49.1**	**-0.7**
TABS	**Tabas**	**7.54**	**152**	*e*Pn		**Pn**	**13 56 48.9**	**-0.9**
TKDS	**Koohdasht(Taba**	**7.57**	**152**	*e*Pn		**Pn**	**13 56 49.3**	**-1.0**
IVIS	**Veis**	**7.59**	**221**	*e*Pn		**Pn**	**13 56 49.3**	**-1.2**
NCK	**Nalchik**	**7.59**	**297**	⇑*e*P		**Pn**	**13 56 49.6**	**-0.8**
AGRB	**Hanur-Agry**	**7.65**	**267**	*e*P		**Pn**	**13 56 53.4**	**+2.0**
IGHG	**Ghaleghazi**	**7.88**	**222**	*e*Pn		**Pn**	**13 56 53.9**	**-0.8**
CUKT	**Cukurca**	**7.91**	**249**	*e*P		**Pn**	**13 56 57.2**	**+2.3**
AKDM	**Akdamar-Van**	**7.96**	**258**	*e*P		**Pn**	**13 56 57.8**	**+2.2**
TPRV	**Parvadeh(Tabas**	**7.96**	**156**	*e*Pn		**Pn**	**13 56 54.4**	**-1.2**
IKFM	**Kafar-mosalman**	**7.97**	**212**	*e*Pn		**Pn**	**13 56 55.1**	**-0.5**
SENK	**Senkaya-Erzuru**	**8.04**	**275**	*e*P		**Pn**	**13 56 59.5**	**+2.7**
YZKH	**Yazd**	**8.12**	**170**	*e*Pn		**Pn**	**13 56 56.3**	**-1.4**
YZKH	**Yazd**	**8.12**	**170**	*e*Pn		**Pn**	**13 56 56.3**	**-1.4**
PYA1	**Pyatigorsk**	**8.14**	**300**	*e*P		**Pn**	**13 56 57.7**	**-0.2**
KBZ	**Khabaz**	**8.15**	**297**	*ce*P		**Pn**	**13 56 57.3**	**-0.7**
KBZ	**Khabaz**	**8.15**	**297**	P		**Pn**	**13 56 57.6**	**-0.4**
	comp=Z,4.7nm,0.3s,baz=108,slow=7.0,SNR=120							
KBZ				S		**Sn**	**13 58 24.7**	**-3.9**
	comp=Z,45nm,0.3s,baz=148,slow=23,SNR=7.6							
ICHK	**Chekchek**	**8.23**	**171**	*e*Pn		**Pn**	**13 56 57.6**	**-1.9**
SHA1	**Shidzhatmaz**	**8.31**	**297**	⇓*e*P		**Pn**	**13 56 59.8**	**-0.7**
KVAR	**Kislovodsk Arr**	**8.37**	**298**	P		**Pn**	**13 57 01.9**	**+0.8**
	baz=90,slow=20,SNR=30							
KVAR				S		**Sn**	**13 58 33.7**	**-0.5**
	baz=203,slow=7.7,SNR=13							
KIV	**Kislovodsk**	**8.37**	**298**	*e*P		**Pn**	**13 57 01.0**	**-0.2**
KIV				*e*S		**Sn**	**13 58 34.2**	**-0.1**
KIV				pmax	pmax			
	comp=Z,484nm,0.9s							
KIV				MLR	MLR			
	comp=Z,153nm,10.0s							
KIV	**Kislovodsk**	**8.37**	**298**	*i* Pn		**Pn**	**13 57 00.9**	**-0.2**
	SNR=51							
KIV	**Kislovodsk**	**8.37**	**298**			**Pn**	**13 57 00.8**	**-0.3**
KIV				Sn		**Sn**	**13 58 28.9**	**-5.4**
IRAM	**Ramesheh**	**8.59**	**183**	*e*Pn		**Pn**	**13 57 02.4**	**-1.9**
GOF	**Gofitskoye**	**8.61**	**306**	⇑*e*P		**Pn**	**13 57 07.2**	**+2.8**
GOF				*e*S		**Sn**	**13 58 37.6**	**-2.5**
GOF				pmax	pmax			
	comp=Z,168nm,0.6s							
GOF				smax	smax			
	comp=N,550nm,0.5s							
GOF				smax	smax			
	comp=E,696nm,0.8s							
SIRT	**Sirnak**	**8.65**	**254**	*e*P		**Pn**	**13 57 05.4**	**+0.4**
ITEG	**Tejag**	**8.84**	**146**	*e*Pn		**Pn**	**13 57 06.8**	**-0.9**
YEDI	**Yedisu-Bingol**	**9.54**	**268**	*e*P		**Pn**	**13 57 20.2**	**+2.9**
HRA	**Herat**	**9.55**	**126**			**Pn**	**13 57 17.8**	**+0.3**
AB31	**Akbulak array**	**10.16**	**27**	P		**Pn**	**13 57 24.4**	**-1.1**
	comp=E,16nm,0.5s,baz=208,slow=14,SNR=717							
AB31				⇑Pg			13 57 36.0	
	comp=E,60nm,0.6s,baz=202,slow=12,SNR=12							
AB31				⇓S		**Sn**	**13 59 12.9**	**-5.0**
	comp=E,200nm,0.5s,baz=210,slow=24							
ABKAR	**Akbulak array**	**10.16**	**27**			**Pn**	**13 57 24.2**	**-1.3**
SOC	**Sochi**	**10.31**	**292**	*e*P		Pn	13 57 36.1	+8.5
SOC				*e*			13 59 30.1	
SOC				pmax	pmax			
	comp=Z,52nm,0.7s							
SOC				MLR	MLR			
	comp=Z,198nm,9.0s							
KHGB	**Koh Gabri**	**10.42**	**163**	*e*Pn		**Pn**	**13 57 29.1**	**-0.3**
AKTO	**Aktyubinsk**	**10.65**	**18**	P		**Pn**	**13 57 31.5**	**-0.7**
	comp=Z,16nm,0.3s,baz=207,slow=12,SNR=145							
AKTO				S		**Sn**	**13 59 23.4**	**-6.5**
	comp=Z,48nm,0.3s,baz=40,slow=24,SNR=14							
AKTO				LR		LR	14 02 58.2	
	comp=Z,933nm,20.4s,baz=196,slow=44							
AKTO	**Aktyubinsk**	**10.65**	**18**	⇓P		**Pn**	**13 57 31.4**	**-0.8**
	comp=Z,94nm,0.8s							
AKTO				⇓Pg			13 57 40.0	
	comp=Z,132nm,0.7s							
AKTO				⇑S		**Sn**	**13 59 23.4**	**-6.5**
	comp=Z,531nm,0.6s							
ANN	**Anapa**	**12.21**	**296**	*e*P		P	13 57 59.3	-5.4
ANN				*e*S		Sn	14 00 19.5	+11
ANN				pmax	pmax			
	comp=Z,100nm,1.4s							
ANN				MLR	MLR			
	comp=Z,234nm,7.0s							
TAS	**Tashkent**	**12.45**	**80**	P		**Pn**	**13 57 54.7**	**-2.1**
TAS	**Tashkent**	**12.45**	**80**	Pn		**Pn**	**13 57 54.7**	**-2.1**
GAZ	**Gaziantep**	**12.66**	**260**	Pn		**Pn**	**13 57 58.0**	**-1.8**
CHGR	**Chuyangaron**	**12.68**	**93**			**Pn**	**13 57 58.6**	**-1.4**
SARI	**SarD1z-Kayseri**	**12.90**	**266**	*e*P		**Pn**	**13 58 04.5**	**+1.3**
BRLS	**Borolday**	**12.92**	**73**	*e*S		Sn	14 00 35.1	+10
IUG	**luzhnay**	**13.01**	**77**	*c i*P		**Pn**	**13 58 02.4**	**-2.1**
IUG				*e

USP	**Ospenovka**	**16.34**	**73**	P		**Pn**	**13 58 48.3**	**-0.1**
	SNR=28							
CSS	**Mathiatis**	**16.41**	**257**	*e*P		**P**	**13 58 50.3**	**-1.1**
CSS	**Mathiatis**	**16.41**	**257**	P		**Pn**	**13 58 47.6**	**-1.7**
FRU1	**Bishkek**	**16.43**	**74**	P		**Pn**	**13 58 49.9**	**+0.4**
FRU1				pmax		pmax		
	comp=Z,66nm,0.7s							
FRU1	**Bishkek**	**16.43**	**74**	Pn		**Pn**	**13 58 49.9**	**+0.4**
SVRH	**Sivrihisar-ESK**	**16.43**	**274**	*e*P		P	13 59 04.9	+13
SGDS	**Sogindy**	**16.45**	**72**	*i* P		**Pn**	**13 58 48.1**	**-1.7**
SGDS				eS		**Sn**	**14 01 55.5**	**+4.1**
ARU	**Arti**	**16.46**	**11**	*d* iP		**Pn**	**13 58 45.6**	**-4.1**
ARU				S		**Sn**	**14 01 43.8**	**-7.5**
ARU				pmax		pmax		
	comp=Z,86nm,0.9s							
ARU				MLR		MLR		
	comp=Z,1μm,17.0s							
ARU	**Arti**	**16.46**	**11**	P		**Pn**	**13 58 47.1**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=186,slow=6.0,SNR=77							
ARU				S		**Sn**	**14 01 41.2**	**-10**
	comp=Z,0.1nm,0.3s,baz=294,slow=23,SNR=11							
ARU				LR		LR	14 06 52.4	
	comp=Z,1μm,18.1s,baz=195,slow=43							
ARU	**Arti**	**16.46**	**11**	P		**Pn**	**13 58 46.5**	**-3.2**
ARU				IAmb		IAmb	13 58 54.6	
	comp=Z,168nm,1.0s							
CEP	**Cherat**	**16.51**	**107**	P		**P**	**13 58 52.3**	**-0.4**
CHMS	**Chumysh**	**16.52**	**74**	P		**Pn**	**13 58 50.1**	**-0.5**
	SNR=30							
MDUB	**Mudurnu**	**16.52**	**277**	*e*P		**P**	**13 58 53.8**	**+1.1**
MDUB	**Mudurnu**	**16.52**	**277**	P		**Pn**	**13 58 50.2**	**-0.5**
MDUB				IAmb		IAmb	13 59 32.6	
	comp=Z,176nm,0.8s							
KBK	**Karagaybulak**	**16.66**	**75**	P		**Pn**	**13 58 52.6**	**+0.1**
	SNR=28							
GAZI	**Gazipasa**	**16.68**	**262**	*e*P		**Pn**	**13 58 48.1**	**-4.5**
BRZS	**Berezniki**	**16.87**	**49**	*c* iP		**Pn**	**13 58 54.5**	**-0.4**
BRZS	**Berezniki**	**16.87**	**49**	⇑*i*P		**Pn**	**13 58 54.6**	**-0.4**
KZA	**Kyzart**	**16.89**	**77**	P		**Pn**	**13 58 55.9**	**+0.2**
	SNR=26							
THW	**Thamme Wali**	**16.91**	**111**	P		**Pn**	**13 58 55.9**	**+0.3**
SRCK	**Saricakaya, Es**	**17.01**	**276**	*e*P		**P**	**13 59 00.1**	**+2.0**
GULT	**Gulveren**	**17.05**	**277**	*e*P		**P**	**13 58 59.1**	**+0.6**
TKM2	**Tokmak 2**	**17.14**	**74**	P		**Pn**	**13 58 58.0**	**-0.5**
	SNR=42							
TKM2	**Tokmak 2**	**17.14**	**74**	⇑P		**Pn**	**13 58 58.3**	**-0.3**
	comp=Z,140nm,1.1s							
BORA	**Eskisehir**	**17.17**	**276**	*e*P		**Pn**	**13 58 58.3**	**-0.5**
SVE	**Sverdlovsk**	**17.19**	**14**	*d* iP		**Pn**	**13 58 57.4**	**-1.5**
SVE				pmax		pmax		
	comp=Z,272nm,1.4s							
BRVK	**Borovoye**	**17.32**	**37**	P		**Pn**	**13 58 59.3**	**-1.2**
BRVK				pmax		pmax		
	comp=Z,325nm,1.3s							
BRVK	**Borovoye**	**17.32**	**37**	⇓P		**Pn**	**13 58 59.6**	**-0.9**
	comp=Z,261nm,1.3s							
BRVK				⇓S		Sn	14 02 00.5	-12
	comp=Z,133nm,1.5s							
BRVK	**Borovoye**	**17.32**	**37**	P		**Pn**	**13 58 59.3**	**-1.2**
BRVK				IAmb		IAmb	13 59 16.6	
	comp=Z,325nm,1.2s							
BVAR	**Borovoye Array**	**17.35**	**37**	P		**Pn**	**13 59 00.0**	**-0.8**
	comp=Z,6.3nm,0.3s,baz=230,slow=12,SNR=110							
BVAR				S		**Sn**	**14 02 03.7**	**-9.2**
	comp=Z,7.8nm,0.3s,baz=232,slow=25,SNR=7.2							
BOOM	**Boomskoye usch**	**17.39**	**76**	P		**Pn**	**13 59 02.0**	**+0.4**
BOOM	**Boomskoye usch**	**17.39**	**76**	P		**Pn**	**13 59 02.0**	**+0.4**
NRN	**Naryn**	**17.48**	**79**	P		**Pn**	**13 59 01.1**	**-1.8**
NRN				pmax		pmax		
	comp=Z,66nm,1.3s							
NRN	**Naryn**	**17.48**	**79**			**Pn**	**13 59 01.1**	**-1.8**
NIL	**Nilore**	**17.57**	**106**	P		**Pn**	**13 59 03.2**	**-0.6**
NIL				pmax		pmax		
	comp=Z,59nm,1.2s							
NIL	**Nilore**	**17.57**	**106**	P		**Pn**	**13 59 03.2**	**-0.6**
CHCP	**Chirah Chowk**	**17.58**	**106**	⇑P		**Pn**	**13 59 04.1**	**+0.2**
ULHL	**Ulahol**	**17.62**	**76**	P		**P**	**13 59 05.5**	**+0.5**
	SNR=15							
HRT	**Hereke**	**17.64**	**279**	*e*P		**Pn**	**13 59 04.7**	**+0.1**
KSH	**Kashi**	**17.71**	**85**	P		**Pn**	**13 59 03.9**	**-1.6**
KSH				PP		**pP**	**13 59 18.1**	**+1.1**
KSH				S		**Sn**	**14 02 15.8**	**-6.1**
KSH				SS		**S**	**14 02 37.1**	**+10**
KSH				pmax		pmax		
	comp=Z,51nm,0.8s							
KSH				pmax		pmax		
	comp=Z,430nm,4.7s							
KSH				LR		LR		
	comp=Z,1μm,6.5s							
KSH				LR		LR		
	comp=Z,800nm,6.1s							
KSH				LR		LR		
	comp=Z,2μm,11.7s							
KUU	**Kurty**	**17.71**	**71**	*i* P		**Pn**	**13 59 04.1**	**-1.3**
KUU				*e*S		**Sn**	**14 02 21.3**	**-0.5**
KUU	**Kurty**	**17.71**	**71**	*i* P		**Pn**	**13 59 04.2**	**-1.3**
KUU				*e*S		**Sn**	**14 02 21.4**	**-0.5**
WSAR	**Wadi Sarin**	**17.79**	**163**	P		**Pn**	**13 59 05.8**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=10,slow=7.9,SNR=8.8							
HRFI	**Mount Harif**	**17.86**	**240**	*e*P		**P**	**13 59 07.8**	**+0.3**
KORT	**Korkueli**	**17.92**	**266**	*e*P		**P**	**13 59 08.1**	**-0.1**
RAYN	**Ar Rayn**	**17.95**	**203**	P		**Pn**	**13 59 05.0**	**-3.5**
RAYN				pmax		pmax		
	comp=Z,298nm,1.1s							
RAYN	**Ar Rayn**	**17.95**	**203**	*i* P		**Pn**	**13 59 05.6**	**-2.9**
	SNR=17							
RAYN	**Ar Rayn**	**17.95**	**203**	P		**Pn**	**13 59 05.0**	**-3.5**
RAYN				IAmb		IAmb	13 59 07.2	
	comp=Z,298nm,1.1s							
TVSB	**Tavsanli**	**18.00**	**275**	*e*P		**P**	**13 59 10.6**	**+1.6**
EIL	**Elat**	**18.15**	**239**	P		**P**	**13 59 10.3**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=17,slow=8.2,SNR=18							
EIL				LR		LR	14 07 45.5	
	comp=Z,146nm,19.2s,baz=47,slow=42							
EIL	**Elat**	**18.15**	**239**	*e*P		**P**	**13 59 09.9**	**-0.8**
CHKK	**Chushkaly**	**18.18**	**71**	*i* P		**P**	**13 59 10.6**	**-0.3**
CHKK	**Chushkaly**	**18.18**	**71**	*i* P		**P**	**13 59 10.6**	**-0.3**
JURR	**Jurilovca**	**18.20**	**292**	⇑P		**Pn**	**13 59 11.5**	**+0.2**
MDOK	**Medeo**	**18.20**	**73**	*i* P		**Pn**	**13 59 11.6**	**+0.1**
MDOK				*e*S		**Sn**	**14 02 34.3**	**+0.4**
MDOK	**Medeo**	**18.20**	**73**	*i* P		**Pn**	**13 59 11.7**	**+0.1**
MDOK				*e*S		**Sn**	**14 02 34.4**	**+0.4**
MDOK	**Medeo**	**18.20**	**73**	⇑P		**P**	**13 59 11.2**	**-0.2**
	comp=Z,66nm,1.2s							
ARMT	**Armutlu**	**18.28**	**278**	*e*P		**Pn**	**13 59 13.3**	**+0.9**
TLCR		**18.29**	**293**	⇑P		**P**	**13 59 11.8**	**-0.2**
OBN	**Obninsk**	**18.29**	**329**	*c* iP		**P**	**13 59 11.2**	**-0.7**
OBN				*e*S		**Sn**	**14 02 29.1**	**-6.3**
OBN				pmax		pmax		
	comp=Z,147nm,0.7s							
OBN				MLR		MLR		
	comp=Z,349nm,19.0s							
OBN	**Obninsk**	**18.29**	**329**	P		**P**	**13 59 11.3**	**-0.6**
	comp=Z,4.9nm,0.3s,baz=105,slow=2.3,SNR=18							
OBN				S		Sn	14 02 24.1	-11
	comp=Z,2.4nm,0.3s,baz=42,slow=22,SNR=3.6							
OBN				LR		LR	14 07 26.3	
	comp=Z,104nm,18.2s,baz=146,slow=40							
OBN	**Obninsk**	**18.29**	**329**	⇑P		**P**	**13 59 11.7**	**-0.3**
OBN	**Obninsk**	**18.29**	**329**	P		**P**	**13 59 10.6**	**-1.4**
OBN				IAmb		IAmb	13 59 14.4	
	comp=Z,155nm,0.6s							
KDJ	**Kajisay**	**18.32**	**77**	P		**Pn**	**13 59 13.4**	**+0.3**
KDJ				pmax		pmax		
	comp=Z,37nm,0.9s							
KDJ	**Kajisay**	**18.32**	**77**	P		**Pn**	**13 59 13.4**	**+0.3**
ELL	**Elmali**	**18.33**	**266**	P		**P**	**13 59 12.3**	**-0.5**
ELL				pmax		pmax		
	comp=Z,193nm,0.7s							
ELL	**Elmali**	**18.33**	**266**	*e*P		**Pn**	**13 59 14.4**	**+1.3**
ELL	**Elmali**	**18.33**	**266**	P		**P**	**13 59 12.3**	**-0.5**
KIRV	**Kirov**	**18.33**	**354**	P		**P**	**13 59 11.8**	**-0.6**
	comp=Z,19nm,0.3s,baz=151,slow=2.4,SNR=24							
KIRV				S		Sn	14 02 24.3	-12
	comp=Z,7.5nm,0.3s,baz=240,slow=20,SNR=4.4							
KIRV				LR		LR	14 07 59.9	
	comp=Z,701nm,18.8s,baz=197,slow=42							
MOS	**Moscow**	**18.36**	**332**	*e*P		**P**	**13 59 11.2**	**-1.5**
MOS				pmax		pmax		
	comp=Z,291nm,1.3s							
CTKS	**Kestanelik-??a**	**18.47**	**281**	*e*P		**Pn**	**13 59 15.1**	**+0.5**
TIRR	**Tirgusor**	**18.50**	**291**	P		**Pn**	**13 59 13.3**	**-1.1**
TIRR				pmax		pmax		
	comp=Z,114nm,0.8s							
TIRR	**Tirgusor**	**18.50**	**291**	⇑P		**Pn**	**13 59 14.9**	**0.0**
TIRR	**Tirgusor**	**18.50**	**291**	P		**P**	**13 59 13.3**	**-1.1**
TIRR				IAmb		IAmb	13 59 27.8	
	comp=Z,114nm,0.8s							
TOPG	**Topolog**	**18.56**	**292**	⇑P		**P**	**13 59 15.0**	**-0.1**
MILM	**Milestii Mici**	**18.56**	**299**	⇑P		**P**	**13 59 14.2**	**-0.8**
KIS	**Kishinev**	**18.58**	**299**	⇓*i*P		**P**	**13 59 15.0**	**-0.2**
	comp=Z,210nm,2.0s							
KIS	**Kishinev**	**18.58**	**299**	*i* PP		Pn	13 59 24.0	+8.1
KIS				*e*S		**Sn**	**14 02 38.0**	**-4.6**
KIS				*e*SS		**S**	**14 02 46.0**	**+1.6**
KIS				LRM		MLR	14 07 40.0	
	comp=Z,400nm,13.0s							
KIS	**Kishinev**	**18.58**	**299**	⇓*i*P		**P**	**13 59 15.0**	**-0.2**
KIS				*e*S		**Sn**	**14 02 38.0**	**-4.6**
KIS				pmax		pmax		
	comp=Z,210nm,2.0s							
KIS				MLR		MLR		
	comp=Z,400nm,13.0s							
CFR	**Carcaliu**	**18.76**	**293**	⇑P		**P**	**13 59 16.5**	**-0.7**
HARR	**Harsova**	**18.86**	**291**	⇑P		**Pn**	**13 59 19.3**	**0.0**
LEOM	**Leova**	**18.86**	**297**	⇑P		**Pn**	**13 59 19.3**	**0.0**
MANT	**Manisa**	**18.89**	**272**	P		**P**	**13 59 16.3**	**-2.6**
MANT				IAmb		IAmb	13 59 39.4	
	comp=Z,124nm,1.3s							
ICOR	**Ion Corvin**	**18.92**	**290**	⇑P		**Pn**	**13 59 20.1**	**+0.1**
FETY	**Fethiye**	**19.00**	**266**	*e*P		**P**	**13 59 20.1**	**+0.1**
SORM	**Soroca**	**19.15**	**302**	⇓P		**P**	**13 59 20.9**	**-0.5**
SATY	**Saty**	**19.20**	**74**	*i* P		**Pn**	**13 59 24.6**	**+1.1**
SATY				*e*S		**Sn**	**14 02 58.6**	**+0.8**
SATY	**Saty**	**19.20**	**74**	*i* P		**Pn**	**13 59 24.7**	**+1.1**
SATY				*e*S		**Sn**	**14 02 58.6**	**+0.8**
VASR	**Vaslui**	**19.20**	**297**	⇑P		**Pn**	**13 59 23.6**	**+0.2**
PRZ	**Przheval'sk**	**19.21**	**75**	P		**P**	**13 59 22.1**	**-0.3**
PRZ				pmax		pmax		
	comp=Z,39nm,1.0s							
PRZ	**Przheval'sk**	**19.21**	**75**	P		**P**	**13 59 22.1**	**-0.3**
GHRR		**19.37**	**295**	⇑P		**Pn**	**13 59 25.3**	**-0.1**
KPKS	**Kokpek**	**19.40**	**72**	*e*P		**Pn**	**13 59 26.0**	**+0.1**
KPKS	**Kokpek**	**19.40**	**72**	*e*P		**Pn**	**13 59 26.0**	**+0.1**
AKASG	**Malin Array Be**	**19.43**	**310**	*c* eP		**P**	**13 59 24.5**	**-0.1**
AKASG				pmax		pmax		
	comp=Z,99nm,0.6s							
AKASG	**Malin Array Be**	**19.43**	**310**	P		**P**	**13 59 24.4**	**-0.1**
	comp=Z,37nm,0.3s,baz=110,slow=11,SNR=189							
AKASG				S		**S**	**14 02 56.3**	**-5.2**
	comp=Z,2.0nm,0.3s,baz=110,slow=23,SNR=6.2							
AKASG	**Malin Array Be**	**19.43**	**310**	IAmb		IAmb	13 59 28.0	
	comp=Z,31nm,1.1s							
AKBB	**Malin Array Si**	**19.43**	**310**	*c* iP		**P**	**13 59 24.2**	**-0.4**
AKBB	**Malin Array Si**	**19.43**	**310**	P		**P**	**13 59 24.2**	**-0.4**
AKBB				IAmb		IAmb	13 59 27.7	
	comp=Z,124nm,0.7s							
KRBG	**Karabiga-Canak**	**19.48**	**278**	*e*P		**Pn**	**13 59 26.5**	**-0.3**
ODBI	**Odobesti**	**19.58**	**294**	⇑P		**Pn**	**13 59 28.1**	**+0.3**
UZB	**Uzynbulak**	**19.65**	**73**	*e*P		**Pn**	**13 59 30.2**	**+1.3**
UZB	**Uzynbulak**	**19.65**	**73**	*e*P		**Pn**	**13 59 30.2**	**+1.3**
VRI	**Vrincioaia**	**19.82**	**295**	⇑P		**Pn**	**13 59 30.5**	**-0.2**
VRI	**Vrincioaia**	**19.82**	**295**	*e*P		**Pn**	**13 59 30.1**	**-0.7**
RAZG	**Razgrad**	**19.84**	**288**	⇑P		**Pn**	**13 59 30.4**	**-0.6**
PLOR	**Plostina**	**19.87**	**295**	⇑P		**Pn**	**13 59 31.1**	**-0.3**
ISR	**Istrita**	**19.88**	**292**	⇑P		**Pn**	**13 59 31.2**	**-0.3**
TESR	**Tescani**	**19.96**	**297**	⇑P		**Pn**	**13 59 31.6**	**-0.8**
SHLS	**Shalkode**	**19.97**	**73**	*i* P		**Pn**	**13 59 36.1**	**+3.5**
SHLS	**Shalkode**	**19.97**	**73**	*i* P		**Pn**	**13 59 36.1**	**+3.5**
PDGK	**Podgornoye**	**19.99**	**73**	⇓P		Pn	13 59 32.0	-0.9
	comp=Z,52nm,1.4s							
SECR		**20.21**	**292**	⇑P		Pn	13 59 34.9	-0.5
ELND	**Elena**	**20.32**	**286**	⇓P		Pn	13 59 35.4	-1.2
MLR	**Muntele Rosu**	**20.33**	**293**	P		**P**	**13 59 35.4**	**+0.9**
MLR				pmax		pmax		
	comp=Z,81nm,0.7s							
MLR	**Muntele Rosu**	**20.33**	**293**	P		Pn	13 59 36.6	-0.3
	comp=Z,73nm,0.7s,baz=84,slow=2.2,SNR=102							
MLR				LR		LR	14 09 48.5	
	comp=Z,242nm,18.1s,baz=117,slow=44							
MLR	**Muntele Rosu**	**20.33**	**293**	⇑P		Pn	13 59 35.9	-1.0
MLR	**Muntele Rosu**	**20.33**	**293**	P		**P**	**13 59 35.4**	**+0.9**
MLR				IAmb		IAmb	13 59 38.1	
	comp=Z,81nm,0.7s							
ALN	**Alexandroupoli**	**20.36**	**280**	P		**P**	**13 59 33.9**	**-0.8**
ALN				pmax		pmax		
	comp=Z,12nm,0.8s							
ALN	**Alexandroupoli**	**20.36**	**280**	P		**P**	**13 59 33.9**	**-0.8**
PRAR	**RASCA**	**20.38**	**299**	⇑P		**P**	**13 59 34.9**	**0.0**
OZUR		**20.50**	**295**	⇑P		**P**	**13 59 36.9**	**+0.7**
KURBB	**Kurchatov Arra**	**20.56**	**52**	P		Pn	13 59 39.3	-0.2
	comp=Z,74nm,1.0s,baz=254,slow=12,SNR=193							
KURBB				S		**S**	**14 03 21.3**	**-2.6**
	comp=Z,7.0nm,1.0s,baz=263,slow=28,SNR=4.0							
KURBB	**Kurchatov Arra**	**20.56**	**52**	⇓P		**P**	**13 59 38.3**	**+1.5**
	comp=Z,120nm,1.4s							
GADA	**Gvkgeada**	**20.57**	**278**	*e*P		Pn	13 59 38.5	-1.2
KURK	**Kurchatov**	**20.65**	**51**	*d* iP		Pn	13 59 40.2	-0.3
KURK				*i* *PP		pP	13 59 50.0	+0.9
KURK				pmax		pmax		
	comp=Z,215nm,1.3s							
KURK				MLR		MLR		
	comp=Z,1μm,18.0s							
KURK	**Kurchatov**	**20.65**	**51**	⇑P		Pn	13 59 39.7	-0.8
	comp=Z,129nm,0.8s							
KURK	**Kurchatov**	**20.65**	**51**	P		Pn	13 59 39.8	-0.6
KURK				IAmb		IAmb	13 59 41.7	
	comp=Z,145nm,0.9s							
KURK	**Kurchatov**	**20.65**	**51**			**S**	**14 03 21.3**	**-4.3**
RDO	**Rodhopi**	**20.71**	**281**	P		**P**	**13 59 34.6**	**-3.9**
DOPR	**Dopca**	**20.76**	**295**	⇓P		**P**	**13 59 40.3**	**+1.2**
SIGR	**SIGRI**	**20.79**	**276**	*e*P		**P**	**13 59 38.7**	**-0.6**
CHOS	**Chios island**	**20.82**	**273**	P		**P**	**13 59 39.6**	**-0.2**
KARP	**Karpathos**	**20.83**	**265**	P		**P**	**13 59 39.5**	**-0.9**
KARP	**Karpathos**	**20.83**	**265**	*e*P		**P**	**13 59 40.1**	**+0.2**
KARP	**Karpathos**	**20.83**	**265**	P		**P**	**13 59 39.5**	**-0.4**
MTUR	**Matau**	**20.93**	**293**	⇑P		**P**	**13 59 42.4**	**+1.4**
VOIR		**20.95**	**293**	⇑P		**P**	**13 59 42.2**	**+1.0**
BURAR	**Bucovina Array**	**21.10**	**299**	⇑P		**P**	**13 59 42.8**	**+0.1**
BUR08	**Bucovina Ar. S**	**21.12**	**299**	P		**P**	**13 59 42.4**	**-0.5**
PLVB	**Pleven**	**21.22**	**287**	⇑P		**P**	**13 59 44.2**	**+0.3**
ARR	**Arges**	**21.24**	**293**	⇓P		**P**	**13 59 45.4**	**+1.1**
VLAD	**Vladila**	**21.37**	**289**	⇑P		**P**	**13 59 46.4**	**+0.9**
SEM	**Semipalatinsk**	**21.54**	**53**	*i* P		**P**	**13 59 48.2**	**+0.7**
SEM				*e*S		**S**	**14 03 44.4**	**+0.8**
SEM	**Semipalatinsk**	**21.54**	**53**	*i* P		**P**	**13 59 48.3**	**+0.7**
SEM				*e*S		**S**	**14 03 44.5**	**+0.8**
APE	**Apeiranthos**	**21.57**	**270**	*de*P		**P**	**13 59 48.5**	**+0.6**
APE	**Apeiranthos**	**21.57**	**270**	⇓P		**P**	**13 59 48.4**	**+0.5**
APE	**Apeiranthos**	**21.57**	**270**	*e*P		**P**	**13 59 47.8**	**-0.1**
ARCR	**ARCALIA**	**21.60**	**297**	⇑P		**P**	**13 59 49.2**	**+1.2**
ZKR	**Zakros**	**21.71**	**264**	P		**P**	**13 59 49.4**	**+0.1**
ZKR	**Zakros**	**21.71**	**264**	*e*P		**P**	**13 59 51.2**	**+1.9**
PRGR	**Permogore**	**21.72**	**351**	⇓*i*P		**S**	**13 59 50.7**	**+1.6**
PRGR				*i* S		**S**	**14 03 40.7**	**-5.8**
PRGR				pmax		pmax		
	comp=Z,163nm,0.7s							
SANT	**Santorini**	**21.85**	**268**	P		**P**	**13 59 49.7**	**-1.1**
LOT	**Lotru**	**21.85**	**293**	⇑P		**P**	**13 59 51.8**	**+0.9**
MICGM	**Minsk**	**21.86**	**319**	*e*P		**P**	**13 59 51.0**	**+0.3**
MICGM				*ep*P		**sP**	**14 00 06.0**	**-2.2**
MICGM				*e*PP		pP	14 00 30.0	+28
MICGM				*e*S		**S**	**14 03 46.0**	**-3.5**
MICGM				*e*sS		**sS**	**14 04 13.0**	**+5.1**
MICGM				*e*SS		SnSn	14 04 35.0	+18
MNK	**Minsk**	**21.86**	**319**	*e*P		**P**	**13 59 51.0**	**+0.3**
MNK				*e**PP		**sP**	**14 00 06.0**	**-2.2**
MNK				*e*			14 00 30.0	
MNK				*e*S		**S**	**14 03 46.0**	**-3.5**
MNK				*e*SS		SnSn	14 04 35.0	+18
IOSP	**Ios island**	**21.86**	**269**	P		**P**	**13 59 51.1**	**+0.2**
MAKZ	**Makanchi**	**21.93**	**63**	P		**P**	**13 59 52.9**	**+1.3**
MAKZ				pmax		pmax		
	comp=Z,69nm,1.2s							
MAKZ	**Makanchi**	**21.93**	**63**	⇓P		**P**	**13 59 53.2**	**+1.7**
	comp=Z,70nm,1.2s							
MAKZ	**Makanchi**	**21.93**	**63**	P		**P**	**13 59 52.9**	**+1.3**
MAKZ				IAmb		IAmb	13 59 56.4	
	comp=Z,70nm,1.1s							
NVR	**Nevrokopi**	**21.94**	**282**	P		**P**	**13 59 53.0**	**+1.3**
OUR	**Ouranopolis**	**22.00**	**279**	P		**P**	**13 59 51.6**	**-0.7**
MK31	**Makanchi Array**	**22.14**	**63**	P		**P**	**13 59 55.2**	**+1.4**
MK31				pmax		pmax		
	comp=Z,43nm,1.0s							
MK31	**Makanchi Array**	**22.14**	**63**	P		**P**	**13 59 55.7**	**+1.9**
	comp=Z,37nm,0.8s,baz=256,slow=11,SNR=213							
MK31	**Makanchi Array**	**22.14**	**63**	P		**P**	**13 59 55.2**	**+1.4**
MKAR	**Makanchi Array**	**22.14**	**63**	P		**P**	**13 59 55.9**	**+2.0**
	comp=Z,14nm,0.6s,baz=257,slow=8.7,SNR=106							
MKAR				S		**S**	**14 03 55.0**	**+0.2**
	comp=Z,4.2nm,0.8s,baz=257,slow=19,SNR=2.4							
MKAR				LR		LR	14 09 28.8	
	comp=Z,455nm,19.0s,baz=246,slow=39							
SRS	**Serrai**	**22.17**	**281**	P		**P**	**13 59 54.3**	**+0.1**
SRE	**Strehaia**	**22.23**	**291**	⇑P		**P**	**13 59 55.4**	**+0.6**
LAST	**Lasithi**	**22.25**	**265**	P		**P**	**13 59 54.6**	**-0.6**
VTS	**Vitosha**	**22.27**	**285**	P		**P**	**13 59 53.2**	**-2.3**
VTS	**Vitosha**	**22.27**	**285**	P		**P**	**13 59 55.0**	**-0.5**
VTS				pmax		pmax		
	comp=Z,25nm,0.7s							
VTS	**Vitosha**	**22.27**	**285**	⇑P		**P**	**13 59 56.1**	**+0.6**
VTS	**Vitosha**	**22.27**	**285**	P		**P**	**13 59 55.0**	**-0.5**
AOS	**Alonnisos**	**22.30**	**276**	*e*P		**P**	**13 59 55.5**	**0.0**
LVV	**L'vov**	**22.32**	**305**	*e*P		**P**	**13 59 55.3**	**-0.4**
LVV				*e**PP		**pP**	**14 00 09.1**	**+2.0**
LVV				*e*S		**S**	**14 03 56.3**	**-1.7**
LVV				pmax		pmax		
	comp=Z,200nm,1.2s							
PLG	**Polygyros**	**22.39**	**280**	P		**P**	**13 59 57.6**	**+1.0**
PUNG	**Punghina**	**22.42**	**290**	⇓P		**P**	**13 59 57.6**	**+0.7**
GZR	**Gura Zlata**	**22.55**	**293**	⇓P		**P**	**13 59 58.0**	**-0.3**
NACGM	**Naroch**	**22.62**	**319**	*e*P		**P**	**14 00 00.0**	**+1.2**
NACGM				PM			14 00 01.0	
	comp=Z,0.5nm,1.0s							
NACGM				*e*S		**S**	**14 04 01.0**	**-2.0**
IDI	**Anoyia**	**22.65**	**266**	P		**P**	**13 59 58.5**	**-0.9**
	comp=Z,19nm,0.6s,baz=42,slow=8.5,SNR=18							
IDI				S		**S**	**14 03 59.4**	**-4.7**
	comp=Z,25nm,0.7s,baz=210,slow=21,SNR=13							
IDI	**Anoyia**	**22.65**	**266**	*e*P		**P**	**13 59 57.9**	**-1.6**
VLY	**Voula,Athens**	**22.68**	**273**	P		**P**	**13 59 59.0**	**-0.7**
KNT	**Kendrikon**	**22.68**	**282**	*e*P		**P**	**13 59 59.8**	**+0.1**
DRGR		**22.68**	**296**	⇓P		**P**	**14 00 00.1**	**+0.4**
VAY	**Valandovo**	**22.91**	**282**	*i* P		**P**	**14 00 02.2**	**+0.2**
TRPA	**Tarpa**	**22.96**	**300**	*e*P		**P**	**14 00 02.3**	**-0.1**
TRPA	**Tarpa**	**22.96**	**300**	⇑P		**P**	**14 00 03.2**	**+0.7**
GRG	**Griva**	**23.08**	**281**	*e*P		**P**	**14 00 02.1**	**-1.7**
IIGN	**Ignalina**	**23.12**	**319**	*e*P		**P**	**14 00 04.4**	**+0.4**
KWP	**Kalwaria Pacla**	**23.12**	**304**	P		**P**	**14 00 03.8**	**-0.2**
KWP				pmax		pmax		
	comp=Z,650nm,0.7s							
KWP	**Kalwaria Pacla**	**23.12**	**304**	*e*P		**P**	**14 00 04.6**	**+0.6**
KWP				*e*S		**S**	**14 04 11.7**	**+0.1**
KWP	**Kalwaria Pacla**	**23.12**	**304**	P		**P**	**14 00 03.8**	**-0.2**
LIT	**Litokhoron**	**23.16**	**279**	P		**P**	**14 00 04.4**	**-0.2**
LIT				pmax		pmax		
	comp=Z,26nm,1.1s							
LIT	**Litokhoron**	**23.16**	**279**	P		**P**	**14 00 04.4**	**-0.2**
DID	**Didima**	**23.20**	**272**	P		**P**	**14 00 03.1**	**-1.9**
UZH	**Uzhgorod**	**23.20**	**301**	*e*P		**P**	**14 00 05.3**	**+0.5**
UZH				*e*			14 00 14.6	
UZH				*i*			14 00 22

BRY Bratogost 25.69 287 *eP* **P 14 00 29.1 +1.1**
SRO Srobarova 25.75 298 *eP* **P 14 00 30.9 +2.6**
SRO pmax pmax
comp=Z,270nm,1.9s
SRO Srobarova 25.75 298 *eP* **P 14 00 30.8 +2.5**
CSKK Cskako 25.76 297 *eP* **P 14 00 31.5 +3.1**
HCY Herceg Novi 25.78 286 *eP* **P 14 00 29.0 +0.4**
TREB Trebinje 25.85 287 *eP* **P 14 00 29.7 +0.5**
DOB Doboj 25.87 291 *eP* **P 14 00 28.2 -1.2**
WMQ Urumqi 25.92 71 P **P 14 00 32.4 +2.4**
WMQ pP pP 14 00 40.0 -2.5
WMQ sP sP 14 00 48.8 +0.5
WMQ pmax pmax
comp=Z,48nm,0.9s
WMQ pmax pmax
comp=Z,190nm,6.7s
WMQ LR LR
comp=Z,300nm,13.5s
WMQ LR LR
comp=Z,340nm,17.7s
WMQ LR LR
comp=Z,360nm,15.5s
WMQ Urumqi 25.92 71 P **P 14 00 30.9 +0.9**
WMQ pmax pmax
comp=Z,58nm,0.9s
WMQ Urumqi 25.92 71 P **P 14 00 30.9 +0.9**
WMQ IAmb IAmb 14 00 55.2
comp=Z,58nm,0.9s
KLNR Kaliningrad 25.97 314⇑ *iP* **P 14 00 31.4 +1.3**
KLNR pmax pmax
comp=Z,91nm,1.0s
TIH Tihany 25.99 296 *eP* **P 14 00 32.3 +1.8**
OKC Ostrava-Krasne 26.07 303 *eP* **P 14 00 32.1 +1.0**
OKC *e* 14 00 40.2
OKC Ostrava-Krasne 26.07 303 *eP* **P 14 00 32.1 +1.0**
OKC *ex* x 14 00 40.2
SLIT Slitere, Latvi 26.12 322 *eP* **P 14 00 31.9 +0.4**
JAVC Velka Javorina 26.26 301 *eP* **P 14 00 34.8 +1.8**
STON Ston 26.31 287 *eP* **P 14 00 33.8 +0.5**
SMOL Smolenice 26.39 300 *eP* **P 14 00 35.6 +1.5**
SMOL pmax pmax
comp=Z,16nm,0.8s
SMOL Smolenice 26.39 300 *eP* **P 14 00 35.6 +1.5**
MORC Moravsky Berou 26.45 303 P **P 14 00 34.9 +0.3**
MORC pmax pmax
comp=Z,23nm,0.8s
MORC Moravsky Berou 26.45 303⇑P **P 14 00 36.0 +1.4**
MORC Moravsky Berou 26.45 303 *eP* **P 14 00 35.7 +1.1**
MORC Moravsky Berou 26.45 303 P **P 14 00 34.9 +0.3**
MODS Modra-Piesok 26.48 299 *eP* **P 14 00 35.9 +1.0**
MODS pmax pmax
comp=Z,62nm,1.2s
MODS Modra-Piesok 26.48 299 *eP* **P 14 00 35.8 +0.9**
BLY Banja Luka 26.52 291⇓P **P 14 00 37.0 +1.8**
BLY Banja Luka 26.52 291⇑*iP* **P 14 00 36.4 +1.2**
BLY Banja Luka 26.52 291 P **P 14 00 35.7 +0.4**
BLY IAmb IAmb 14 00 51.1
comp=Z,43nm,0.7s
ZST Bratislava 26.59 299 *eP* **P 14 00 36.6 +0.8**
ZST pmax pmax
comp=Z,46nm,1.0s
ZST Bratislava 26.59 299 *eP* **P 14 00 36.6 +0.8**
MGRS Mrkonjic Grad 26.61 291 *eP* **P 14 00 38.3 +2.2**
FIA1 FINESS Array S 26.66 331 P **P 14 00 37.0 +0.7**
FINES FINESS Array B 26.66 331 P **P 14 00 37.2 +0.9**
comp=Z,31nm,0.5s,baz=140,slow=11,SNR=210
FINES LR LR 14 12 41.1
comp=Z,287nm,21.6s,baz=133,slow=40
DAMY Dhamar 26.79 199 P **P 14 00 36.2 -2.0**
SOP Sopron 26.93 298⇓*eP* **P 14 00 40.2 +1.3**
KRLC Kraliky 26.97 303 *eP* **P 14 00 40.4 +1.1**
KRLC *e* 14 00 51.8
KRLC Kraliky 26.97 303 *eP* **P 14 00 40.4 +1.1**
KRLC epP **pP 14 00 51.8 -0.1**
VRAC Vranov 27.01 301 P **P 14 00 40.6 +1.0**
comp=Z,5.1nm,0.6s,baz=104,slow=10.0,SNR=6.1
VRAC LR LR 14 12 45.1
comp=Z,169nm,20.4s,baz=92,slow=39
VRAC Vranov 27.01 301⇑P **P 14 00 41.0 +1.4**
VRAC Vranov 27.01 301 *eP* **P 14 00 40.6 +1.0**
KRUC Moravsky 27.12 301 *eP* **P 14 00 41.5 +0.9**
KOGS Kog 27.12 295 *iP* **P 14 00 41.8 +1.1**
DPC Dobruska-Polom 27.30 304 *eP* **P 14 00 43.7 +1.4**
DPC *e* 14 00 56.0
DPC Dobruska-Polom 27.30 304 *eP* **P 14 00 43.7 +1.4**
DPC epP **pP 14 00 56.0 +1.2**
KSP Ksiaz 27.38 305 *eP* **P 14 00 44.4 +1.4**
KSP Ksiaz 27.38 305 *eP* **P 14 00 44.4 +1.4**
OSTC Ostas 27.39 304 *eP* **P 14 00 44.6 +1.5**
OSTC *ex* x 14 00 56.8
CONA Conrad Observa 27.41 298 *iP* **P 14 00 44.1 +0.8**
comp=Z,18nm,1.5s,SNR=5.5
CHVC Chvalec 27.50 304 *eP* **P 14 00 45.6 +1.6**
CHVC *ex* x 14 00 57.8
UPC Upice 27.52 304 *eP* **P 14 00 45.6 +1.4**
UPC *e* 14 00 57.5
UPC Upice 27.52 304 *eP* **P 14 00 45.6 +1.4**
UPC epP **pP 14 00 57.5 +0.8**
ARSA Arzberg 27.62 297 *eP* **P 14 00 46.3 +1.1**
comp=Z,26nm,0.8s,baz=92,slow=8.8
ARSA Arzberg 27.62 297 *iP* **P 14 00 46.4 +1.3**
comp=Z,22nm,0.7s,SNR=9.4
GROS Grobnik 27.64 295 *iP* **P 14 00 46.3 +0.9**
TIP Timpagrande 27.68 279⇑P **P 14 00 45.1 -0.7**
TIP Timpagrande 27.68 279 P **P 14 00 43.8 -2.1**
CRES Cresnjev 27.68 294 *eP* **P 14 00 46.5 +0.8**
SOKA Soboth 27.96 296 *eP* **P 14 00 49.3 +1.0**
comp=Z,28nm,0.7s,SNR=14
DANN Dangsing 28.02 106 *eP* **P 14 00 50.6 +1.4**
comp=Z,106nm,1.1s
KOLN Koldanda 28.23 107 *eP* **P 14 00 51.8 +0.8**
comp=Z,70nm,1.2s
GOPC GO Pecny, Ondr 28.24 302 *eP* **P 14 00 52.3 +1.7**
GOPC *e* 14 01 03.6
GOPC GO Pecny, Ondr 28.24 302 *eP* **P 14 00 52.3 +1.7**
GOPC epP **pP 14 01 03.6 +0.4**
OBKA Obir 28.29 295 *eP* **P 14 00 52.5 +1.2**
comp=Z,12nm,0.8s,baz=92,slow=8.8
OBKA Obir 28.29 295 *eP* **P 14 00 52.1 +0.8**
comp=Z,6.6nm,0.6s,SNR=6.7
LJU Ljubljana 28.32 294 *iP* **P 14 00 52.9 +1.5**
LJU Ljubljana 28.32 294⇑*iP* **P 14 00 52.8 +1.4**
PRU Pruhonice 28.40 303 *eP* **P 14 00 53.4 +1.4**
PRU *e* 14 01 09.3
PRU Pruhonice 28.40 303 *eP* **P 14 00 53.4 +1.4**
PRU *ex* x 14 01 09.3
CEY Cerknica 28.41 294 *eP* **P 14 00 53.2 +1.0**
MOA Molln 28.48 298 *eP* **P 14 00 53.3 +0.6**
comp=Z,8.4nm,0.7s,baz=92,slow=8.8
MOA Molln 28.48 298 *iP* **P 14 00 51.7 -1.1**
comp=Z,9.0nm,0.7s
CRNS Crni Vrh 28.51 294 *iP* **P 14 00 54.2 +1.1**
PBCC Pribram 28.73 302 *eP* **P 14 00 55.8 +0.8**
GKN Gorkha 28.86 105 *eP* **P 14 00 57.3 +0.8**
BRG Berggiesshubel 28.86 304⇑*iP* **P 14 00 57.9 +1.7**
comp=Z,24nm,0.9s
BRG *i* pP **pP 14 01 09.5 +0.8**
comp=Z,13nm,0.8s
BRG *es*P **sP 14 01 15.8 +1.3**
comp=Z,12nm,0.8s
BRG *e*SCP **ScP 14 07 47.2 +5.5**
comp=Z,6.5nm,1.3s
BRG Berggiesshubel 28.86 304⇑*iP* **P 14 00 57.9 +1.7**
BRG *i* *PP **pP 14 01 09.5 +0.8**
BRG *e**SP **sP 14 01 15.8 +1.3**
BRG pmax pmax
comp=Z,24nm,0.9s
BRG pmax pmax
comp=Z,13nm,0.8s
BRG pmax pmax
comp=N,12nm,0.8s
BRG pmax pmax
comp=N,7.0nm,1.3s
BRG Berggiesshubel 28.86 304 *eP* **P 14 00 57.8 +1.7**
comp=N,22nm,0.7s,baz=92,slow=8.8
GEC2 GERESS Array S 28.88 300 *eP* **P 14 00 57.3 +0.8**
comp=N,9.4nm,0.7s,baz=92,slow=8.8
GEC2 GERESS Array S 28.88 300 P **P 14 00 56.0 -0.4**
GERES GERESS Array B 28.88 300 P **P 14 00 57.2 +0.8**
comp=N,5.1nm,0.5s,baz=89,slow=9.1,SNR=42
GERES PcP **PcP 14 04 04.6 -0.1**
comp=N,3.7nm,0.7s,baz=67,slow=3.5,SNR=6.5
GERES LR LR 14 13 53.8
comp=N,187nm,22.0s,baz=96,slow=39

MYKA Terra Mystica 28.91 296 *iP* **P 14 00 57.1 +0.4**
comp=N,7.7nm,0.6s
KHC Kasperske Hory 28.97 301⇓*iP* **P 14 00 58.2 +1.0**
KHC pmax pmax
comp=Z,19nm,0.9s
KHC Kasperske Hory 28.97 301 *eP* **P 14 00 57.8 +0.6**
KHC epP **pP 14 01 09.8 0.0**
KHC Kasperske Hory 28.97 301 P **P 14 00 56.3 -0.8**
BSD Bornholm Skovb 29.04 313⇑*iP* **P 14 00 57.3 -0.3**
BSD pmax pmax
comp=Z,56nm,0.5s
BSD Bornholm Skovb 29.04 313⇑*iP* **P 14 00 57.3 -0.3**
comp=Z,56nm,0.5s
KBA Koelnbreinsper 29.11 297 *eP* **P 14 00 59.6 +1.0**
comp=Z,24nm,0.7s,baz=92,slow=8.8
KBA Koelnbreinsper 29.11 297 *eP* **P 14 00 59.8 +1.2**
comp=Z,19nm,0.5s,SNR=11
RUE Ruedersdorf 29.17 308 *eP* **P 14 00 59.8 +1.0**
comp=Z,64nm,1.2s,baz=92,slow=8.8
INTR Introdacqua 29.21 286 P **P 14 00 59.5 +0.1**
INTR IAmb IAmb 14 01 42.5
comp=Z,45nm,1.2s
FBE Freiberg 29.24 304 *eP* **P 14 01 01.5 +2.0**
comp=Z,24nm,1.0s,baz=92,slow=8.8
APA Apatity 29.25 345⇓*iP* **P 14 00 59.5 +0.1**
APA *i* 14 01 56.0
APA *i* S **S 14 05 42.0 -6.5**
APA pmax pmax
comp=Z,15nm,0.6s
APA MLR MLR
comp=Z,900nm,20.0s
LVZ Lovozero 29.30 346*deP* **P 14 01 01.7 +1.9**
LVZ pmax pmax
comp=Z,120nm,2.5s
LVZ Lovozero 29.30 346 P **P 14 01 01.1 +1.3**
DMN Daman 29.42 106 *eP* **P 14 01 02.6 +1.0**
comp=Z,66nm,1.3s
KKN Kakani 29.45 105 *eP* **P 14 01 02.5 +0.7**
RJOB Jochberg 29.47 298 *eP* **P 14 01 02.4 +0.7**
comp=Z,20nm,0.9s,baz=92,slow=8.8
CLL Collm 29.50 305⇑*iP* **P 14 01 03.0 +1.2**
CLL *e* 14 01 15.0
CLL pmax pmax
comp=Z,22nm,1.1s
CLL Collm 29.50 305⇑*iP* **P 14 01 03.0 +1.2**
comp=Z,22nm,1.1s
CLL epP **pP 14 01 15.0 +0.6**
CLL *es*P **sP 14 01 21.0 +0.9**
CLL *e* 14 01 39.0
CLL *e*PPP PPP 14 02 08.0
CLL *e*S **S 14 05 48.0 -4.8**
CLL LmH 14 13 00.0
comp=N,200nm,21.0s
CLL LmH 14 13 00.0
comp=E,100nm,18.4s
CLL LmV 14 15 00.0
comp=Z,200nm,19.1s
CLL Collm 29.50 305 *eP* **P 14 01 03.0 +1.2**
comp=Z,15nm,0.8s,baz=92,slow=8.8
CLL Collm 29.50 305 P **P 14 01 02.1 +0.3**
STAL STALIGIAL 29.57 295 P **P 14 01 01.9 -0.6**
NRCA Norcia 29.65 288 P **P 14 01 03.9 +0.6**
PKI Pulchoki 29.67 105 *eP* **P 14 01 04.6 +0.7**
ABTA Abfaltersbach 29.69 296 *iP* **P 14 01 04.4 +0.8**
comp=Z,13nm,0.7s,SNR=6.3
ABTA *e*PcP **PcP 14 04 06.5 -0.2**
comp=Z,9.4nm,1.0s
NKC Novy Kostel 29.76 303 *eP* **P 14 01 05.6 +1.4**
NKC *e* 14 01 13.5
NKC Novy Kostel 29.76 303 *eP* **P 14 01 05.6 +1.4**
NKC *ex* x 14 01 13.5
TANN Tannenbergstha 29.77 303 *eP* **P 14 01 05.5 +1.3**
comp=Z,26nm,0.9s,baz=92,slow=8.8
TANN epP **pP 14 01 17.8 +1.0**
RGN Rugen 29.81 312 P **P 14 01 04.8 +0.4**
WERN Wernitzgruen 29.81 303 *eP* **P 14 01 06.1 +1.5**
comp=Z,14nm,0.3s,baz=92,slow=8.8
GUN Gumba 29.83 104 *eP* **P 14 01 06.1 +0.8**
comp=Z,63nm,1.0s
GUNZ Gunzen 29.84 303 *eP* **P 14 01 06.4 +1.5**
comp=Z,11nm,0.8s,baz=92,slow=8.8
ROTZ Rotzenmuhle 29.89 302 *epP* pP 14 01 18.7 +0.8
PLN Plauen 29.96 303 *eP* **P 14 01 07.2 +1.3**
comp=Z,16nm,0.8s,baz=92,slow=8.8
PLN epP **pP 14 01 19.3 +0.7**
MURB Monte Urbino 30.02 289 P **P 14 01 06.8 +0.3**
JIRN Jiri 30.19 105 *eP* **P 14 01 09.7 +1.1**
comp=Z,42nm,0.8s
NEUB Neuenburg 30.26 305 *eP* **P 14 01 10.3 +1.9**
comp=Z,48nm,1.0s,baz=92,slow=8.8
WTTA Wattenberg 30.27 297 *eP* **P 14 01 09.0 +0.1**
comp=Z,48nm,0.7s,baz=92,slow=8.8
WTTA Wattenberg 30.27 297 *eP* **P 14 01 09.3 +0.5**
comp=Z,37nm,0.6s,SNR=13
WTTA *i* PcP **PcP 14 04 08.4 +0.1**
comp=Z,13nm,0.5s
WATA Walderalm 30.30 297 *eP* **P 14 01 09.2 0.0**
comp=Z,19nm,0.6s,SNR=8.1
WATA *i* PcP **PcP 14 04 08.1 -0.3**
comp=Z,14nm,1.1s
MOX Moxa 30.32 304 *eP* **P 14 01 10.8 +1.7**
comp=Z,32nm,0.7s,baz=92,slow=8.8
MOX epP **pP 14 01 22.7 +1.1**
CTI Castel Tesino 30.32 295 P **P 14 01 08.1 -1.2**
CTI pmax pmax
comp=Z,17nm,0.6s
CTI Castel Tesino 30.32 295 P **P 14 01 08.1 -1.2**
TEOL Teolo 30.37 293 P **P 14 01 06.5 -3.0**
FUR Furstenfeldbru 30.48 299 *eP* **P 14 01 11.5 +1.0**
comp=Z,19nm,0.7s,baz=92,slow=8.8
GRA1 Grafenberg Arr 30.53 302 P **P 14 01 08.9 -2.0**
GRF Grafenberg Arr 30.53 302 P **P 14 01 08.9 -2.0**
GRF pmax pmax
comp=Z,12nm,0.7s
GRF Grafenberg Arr 30.53 302 *eP* **P 14 01 11.9 +1.0**
comp=Z,12nm,0.7s,baz=92,slow=8.8
COP Copenhagen 30.55 314 *iP* **P 14 01 12.5 +1.5**
COP Copenhagen 30.55 314 *iP* **P 14 01 12.5 +1.5**
SQTA Sankt Quirin 30.56 297 *eP* **P 14 01 11.5 +0.2**
comp=Z,13nm,0.8s,SNR=5.6
SQTA *e*PcP **PcP 14 04 09.0 0.0**
comp=Z,18nm,0.6s
MOTA Moosalm 30.62 297 *iP* **P 14 01 11.2 -0.8**
comp=Z,15nm,0.7s,SNR=7.0
MOTA *i* PcP **PcP 14 04 09.3 0.0**
comp=Z,17nm,0.7s
CORL Corleone 30.64 278 P **P 14 01 09.6 -2.4**
CORL IAmb IAmb 14 01 37.5
comp=Z,22nm,0.8s
LATE Laterza 30.64 288 P **P 14 01 09.8 -2.2**
RETA Reutte 30.85 297 *eP* **P 14 01 13.5 -0.3**
comp=Z,5.3nm,0.5s
RETA *i* PcP **PcP 14 04 09.8 +0.1**
comp=Z,5.0nm,0.6s
RAMN Ramite 30.89 105 *eP* **P 14 01 15.2 +0.6**
comp=Z,38nm,1.0s
FETA Feichten 30.90 297 *eP* **P 14 01 14.6 +0.2**
comp=Z,19nm,0.8s,SNR=7.4
FETA *e*PcP **PcP 14 04 10.1 +0.1**
comp=Z,5.8nm,0.8s
OSSC Osservatorio P 30.90 290 P **P 14 01 13.9 -0.3**
OSSC IAmb IAmb 14 01 16.7
comp=Z,64nm,1.0s
ZCCA Zocca 30.97 291 P **P 14 01 15.3 +0.4**
ZCCA IAmb IAmb 14 01 37.5
comp=Z,62nm,1.2s
ASSE Asse, Remlinge 31.02 306 *eP* **P 14 01 16.3 +1.2**
comp=Z,17nm,1.1s,baz=92,slow=8.8
SALO Salr 31.15 294 P **P 14 01 14.4 -2.0**
SALO IAmb IAmb 14 01 32.0
comp=Z,94nm,1.6s
CLZ Clausthal 31.18 306 *eP* **P 14 01 18.3 +1.6**
comp=Z,28nm,1.0s,baz=92,slow=8.8
CLZ epP **pP 14 01 30.4 +1.0**
HFS Hagfors 31.23 322 P **P 14 01 17.7 +0.8**
comp=Z,51nm,0.6s,baz=107,slow=9.5,SNR=161
HFS pP **pP 14 01 30.3 +0.8**
comp=Z,12nm,0.4s,baz=120,slow=9.0,SNR=4.8
HFS LR LR 14 15 17.0
comp=Z,255nm,20.0s,baz=110,slow=39
FUORN Ofenpass-Fuorn 31.24 296 P **P 14 01 16.5 -1.0**
UBBA Unterbreizbach 31.35 304 *eP* **P 14 01 19.8 +1.8**
comp=Z,11nm,0.7s,baz=92,slow=8.8
NRDL Niedersach Rie 31.40 307 *eP* **P 14 01 20.2 +1.7**
comp=Z,9.8nm,0.9s,baz=92,slow=8.8
GTTG Gvttingen 31.41 305 *eP* **P 14 01 20.5 +1.8**

comp=Z,54nm,1.0s,baz=92,slow=8.8
DAVA Damuels 31.46 297 *eP* **P 14 01 19.3 0.0**
comp=Z,26nm,0.7s,baz=92,slow=8.8
DAVA Damuels 31.46 297 *eP* **P 14 01 19.3 0.0**
comp=Z,25nm,0.7s,SNR=7.9
DAVA *e*PcP **PcP 14 04 10.0 -1.5**
comp=Z,13nm,0.7s
TAPN Taplejung 31.49 104 *eP* **P 14 01 20.7 +0.8**
comp=Z,23nm,1.0s
ODAN Odare 31.52 105 *eP* **P 14 01 21.3 +1.1**
STU Stuttgart 31.86 300 P **P 14 01 22.4 -0.2**
STU pmax pmax
comp=Z,51nm,0.9s
STU Stuttgart 31.86 300 *eP* **P 14 01 23.8 +1.2**
comp=Z,59nm,1.0s,baz=92,slow=8.8
STU Stuttgart 31.86 300 P **P 14 01 22.4 -0.2**
STU IAmb IAmb 14 01 24.6
comp=Z,51nm,0.9s
RETH Rethem/Aller, 31.88 308 *eP* **P 14 01 24.4 +1.7**
comp=Z,31nm,1.1s,baz=92,slow=8.8
TUE Stuetta 31.88 296 P **P 14 01 22.1 -1.0**
TNS Taunus Mts 32.33 303 *eP* **P 14 01 28.5 +1.7**
comp=Z,27nm,1.1s,baz=92,slow=8.8
NC602 NORSAR Array S 32.44 323 P **P 14 01 26.4 -1.1**
BFO Black Forest 32.45 299 P **P 14 01 27.0 -0.8**
BFO pmax pmax
comp=Z,8.0nm,0.9s
BFO Black Forest 32.45 299 *eP* **P 14 01 29.3 +1.5**
comp=Z,9.2nm,1.1s,baz=92,slow=8.8
BFO Black Forest 32.45 299 P **P 14 01 27.0 -0.8**
NC405 NORSAR Array S 32.49 323 P **P 14 01 27.9 -0.1**
ARCES ARCESS Array B 32.56 342 P **P 14 01 30.1 +1.6**
comp=Z,5.7nm,0.6s,baz=141,slow=11,SNR=63
ARCES LR LR 14 16 53.6
comp=Z,283nm,19.4s,baz=142,slow=40
ARE0 ARCESS Array S 32.56 342 *eP* **P 14 01 30.1 +1.6**
ARE0 ARCESS Array S 32.56 342 P **P 14 01 29.6 +1.1**
NB201 NORSAR Array S 32.66 323 P **P 14 01 29.2 -0.3**
NC303 NORSAR Array S 32.69 324 P **P 14 01 29.4 -0.4**
NB2 NORSAR Subarra 32.69 323 P **P 14 01 29.8 0.0**
baz=114,slow=8.6
NB2 NORSAR Subarra 32.69 323 P **P 14 01 29.8 0.0**
baz=114,slow=8.6
NOA NORSAR Array B 32.69 323 P **P 14 01 30.1 +0.3**
comp=Z,24nm,0.7s,baz=113,slow=8.2,SNR=68
NOA LR LR 14 16 12.0
comp=Z,257nm,19.3s,baz=110,slow=39
KTK1 Kautokeino 32.72 341 *eP* **P 14 01 31.1 +1.3**
NAO01 NORSAR Array S 32.78 323 *eP* **P 14 01 30.6 +0.1**
NAO01 NORSAR Array S 32.78 323 P **P 14 01 30.4 -0.1**
IBBN Ibbenburen 32.83 307 *eP* **P 14 01 32.6 +1.6**
comp=Z,56nm,0.9s,baz=92,slow=8.8
LSA Lhasa 32.85 97 P **P 14 01 30.0 -2.1**
LSA pmax pmax
comp=Z,7.0nm,0.8s
LSA Lhasa 32.85 97 P **P 14 01 30.0 -2.1**
NBO00 NORSAR Array S 32.89 323 P **P 14 01 31.1 -0.5**
NC204 NORSAR Array S 32.98 323 P **P 14 01 32.6 +0.3**
KONO Kongsberg 33.03 320*ceP* **P 14 01 34.0 +1.4**
KONO pmax pmax
comp=Z,122nm,2.5s
KONO Kongsberg 33.03 320 *eP* **P 14 01 34.1 +1.4**
KONO Kongsberg 33.03 320 P **P 14 01 32.3 -0.4**
KONO IAmb IAmb 14 01 35.4
comp=Z,27nm,0.8s
BUG Bochum--Univer 33.09 305 *eP* **P 14 01 35.2 +1.9**
comp=Z,30nm,0.9s,baz=92,slow=8.8
AHRW Bad Neuenahr-A 33.21 303 *eP* **P 14 01 36.6 +2.2**
comp=Z,20nm,0.7s,baz=92,slow=8.8
AHRW *ep*P **pP 14 01 48.5 +1.5**
HOMB Homborsund 33.23 318 *eP* **P 14 01 34.7 +0.2**
ECH Echery 33.23 299 P **P 14 01 34.7 0.0**
ECH pmax pmax
comp=Z,15nm,0.9s
ECH Echery 33.23 299 P **P 14 01 34.7 0.0**
SENIN Lac Senin/Sane 33.30 296 P **P 14 01 35.0 -0.6**
SENIN IAmb IAmb 14 01 36.2
comp=Z,27nm,0.6s
MOR8 Moi Rana 33.60 333 *eP* **P 14 01 39.0 +1.3**
NSS Namsos 33.73 329 *eP* **P 14 01 40.7 +2.0**
HAMF Hammerfest 33.80 343 *eP* **P 14 01 41.1 +1.8**
WLF Walferdange 33.82 302 *eP* **P 14 01 41.4 +1.6**
comp=Z,22nm,0.9s,baz=92,slow=8.8
WLF Walferdange 33.82 302 P **P 14 01 41.7 +2.0**
MEM Membach 33.89 303 P **P 14 01 41.9 +1.6**
comp=Z,29nm,0.8s
MEM pP **pP 14 01 54.3 +1.3**
BNI Bardonecchia 33.91 293 P **P 14 01 40.9 +0.2**
BNI pmax pmax
comp=Z,97nm,1.9s
BNI Bardonecchia 33.91 293 P **P 14 01 40.9 +0.2**
SKAR Skarslia 33.94 322 *eP* **P 14 01 41.8 +1.1**
DOMB Dombas 34.00 324 *eP* **P 14 01 41.8 +0.6**
STOK Stokkvaagen 34.18 333 *eP* **P 14 01 44.0 +1.4**
KONS Konsvik 34.23 333 *eP* **P 14 01 44.0 +1.0**
TRO Tromso 34.26 340 *eP* **P 14 01 44.5 +1.3**
STEI Steigen 34.28 336 *eP* **P 14 01 44.2 +0.7**
KEST Kesra 34.34 276 P **P 14 01 45.1 +0.6**
comp=Z,13nm,0.6s,baz=4.6,slow=1.5,SNR=18
KEST Kesra 34.34 276 P **P 14 01 45.4 +0.8**
KEST IAmb IAmb 14 01 46.7
comp=Z,14nm,0.7s
BLS5 Blasjo 34.52 319 *eP* **P 14 01 46.3 +0.6**
ODD1 Odda 34.55 320 *eP* **P 14 01 47.8 +1.9**
MOY Mondy 34.63 55 *eP* **P 14 01 49.7 +2.8**
MOY pmax pmax
comp=Z,26nm,1.9s
BMRD Maredsous 34.69 303 P **P 14 01 48.8 +1.6**
BMRD pP **pP 14 02 01.1 +1.2**
DOU Dourbes 34.81 303 P **P 14 01 50.2 +1.9**
comp=Z,19nm,1.0s
DOU pP **pP 14 02 02.4 +1.4**
MOL Molde 34.84 325 *eP* **P 14 01 49.3 +0.9**
LOF Lofoten 34.93 335 *eP* **P 14 01 49.9 +0.9**
AKN Aaknes 34.97 324 *eP* **P 14 01 51.1 +1.6**
HYA Hoyanger 35.06 322 *eP* **P 14 01 52.0 +1.7**
SSB Saint Sauveur 35.36 294 P **P 14 01 53.2 0.0**
SSB pmax pmax
comp=Z,27nm,0.6s
SSB Saint Sauveur 35.36 294 P **P 14 01 53.2 0.0**
SSB IAmb IAmb 14 01 54.6
comp=Z,27nm,0.6s
SHL Shillong 35.59 102 P **P 14 01 55.1 -0.3**
SHL pmax pmax
comp=Z,37nm,0.9s
SHL Shillong 35.59 102 P **P 14 01 55.1 -0.3**
SHL IAmb IAmb 14 01 56.5
comp=Z,37nm,0.9s
GTA Gaotai 35.67 76⇑P **P 14 01 58.1 +2.1**
GTA pP pP 14 02 05.5 -3.3
GTA sP sP 14 02 09.9 -4.6
GTA pmax pmax
comp=Z,17nm,1.0s
GTA pmax pmax
comp=Z,200nm,4.4s
GTA LR LR
comp=Z,140nm,13.4s
GTA LR LR
comp=Z,240nm,15.1s
GTA LR LR
comp=Z,230nm,15.5s
ZAK Zakamensk 36.12 57 *eP* **P 14 02 02.4 +2.7**
ZAK *e* 14 02 15.0
ZAK pmax pmax
comp=Z,8.0nm,1.0s
ZAK pmax pmax
comp=Z,11nm,1.0s
TLY Talaya 36.28 55⇑*eP* **P 14 02 03.2 +2.3**
TLY pmax pmax
comp=Z,6.0nm,1.0s
TLY MLR MLR
comp=Z,587nm,19.0s
CLF Chambon-Foret 36.52 299 P **P 14 02 02.0 -0.9**
CLF IAmb IAmb 14 02 18.9
comp=Z,35nm,0.9s
IRK Irkutsk 36.65 54 *eP* **P 14 02 04.8 +0.8**
IRK *e* 14 02 19.4
IRK pmax pmax
comp=Z,42nm,0.7s
GDLE Glaisdale, N Y 38.00 310⇑*eP* **P 14 02 16.2 +0.8**
GDLE IAmb IAmb 14 02 17.2
comp=Z,67nm,0.6s
CWF Charnwood Fore 38.36 307 *eP* **P 14 02 18.7 +0.3**
CWF IAmb IAmb 14 02 19.5
comp=Z,31nm,0.7s

WOL Wolverton 38.41 305⇑ eP P 14 02 20.0 +1.1
WOL IAmb IAmb 14 02 20.6
comp=Z,153nm,0.6s
SONM Songino Array 38.45 61 P P 14 02 20.7 +1.3
comp=Z,2.6nm,0.7s,baz=275,slow=9.5,SNR=27
SONM pP pP **14 02 34.7 +2.4**
comp=Z,2.7nm,0.8s,baz=284,slow=9.8,SNR=8.3
SONM PcP PcP **14 04 32.1 +0.3**
comp=Z,3.1nm,0.9s,baz=269,slow=3.5,SNR=5.7
SONM LR LR 14 19 26.1
comp=Z,236nm,20.0s,baz=296,slow=38
SONM Songino Array 38.45 61 IAmb IAmb 14 02 21.8
comp=Z,2.3nm,0.9s
HPK Haverah Park 38.49 309⇑ eP P 14 02 20.3 +0.8
HPK IAmb IAmb 14 02 21.0
comp=Z,123nm,0.6s
LBWR Ladybower, Pea 38.57 308 eP P 14 02 20.7 +0.5
LBWR IAmb IAmb 14 02 21.5
comp=Z,82nm,0.8s
EDMD Edmundbyers 38.66 311⇑ eP P 14 02 21.7 +0.8
EDMD IAmb IAmb 14 02 22.4
comp=Z,103nm,0.6s
SWN1 Swindon 38.76 305⇑ eP P 14 02 23.0 +1.2
SWN1 IAmb IAmb 14 02 23.6
comp=Z,225nm,0.7s
ULN Ulaanbaatar 38.88 60 *c iP P 14 02 25.2 +2.1*
ULN pmax pmax
comp=Z,47nm,1.7s
ULN MLR MLR
comp=Z,245nm,17.0s
ULN Ulaanbaatar 38.88 60 P P **14 02 24.6 +1.5**
ULN IAmb IAmb 14 02 26.4
comp=Z,25nm,0.9s
DRUM Mains of Drumt 38.94 314 eP P 14 02 23.8 +0.5
ESY Stoneypath 39.01 313 eP P 14 02 25.0 +1.1
EDU Dundee 39.23 314 eP P 14 02 26.4 +0.7
EBL Broad Law 39.25 312 eP P 14 02 27.1 +1.1
KESW Keswick, Cumbr 39.33 310⇑ eP P 14 02 27.5 +0.9
KESW IAmb IAmb 14 02 28.0
comp=Z,52nm,0.7s
HLM1 Long Mynd 39.33 307⇑ eP P 14 02 27.2 +0.6
HLM1 IAmb IAmb 14 02 29.3
comp=Z,21nm,0.8s
EKA Eskdalemuir Ar 39.33 312 P P 14 02 27.1 +0.6
comp=Z,23nm,0.5s,baz=99,slow=8.8,SNR=181
EKA PcP **PcP 14 04 34.4 +0.2**
comp=Z,5.4nm,0.7s,baz=99,slow=4.6,SNR=4.0
ESK Eskdalemuir 39.36 312 eP P 14 02 27.3 +0.6
ESK IAmb IAmb 14 02 27.7
comp=Z,34nm,0.6s
ESK Eskdalemuir 39.36 312 P P 14 02 26.9 +0.1
ESK pmax pmax
comp=Z,37nm,0.8s
ESK Eskdalemuir 39.36 312 P P 14 02 26.9 +0.1
ESK IAmb IAmb 14 02 40.9
comp=Z,36nm,0.8s
MCH1 Michaelchurch 39.45 306⇑ eP P 14 02 27.9 +0.3
MCH1 IAmb IAmb 14 02 29.0
comp=Z,58nm,0.6s
FOEL Foel Wylfa 39.49 308⇑ eP P 14 02 28.8 +0.8
FOEL IAmb IAmb 14 02 29.6
comp=Z,48nm,0.6s
LLW Llanuwychllyn 39.78 308 eP P 14 02 31.2 +0.9
LLW IAmb IAmb 14 02 32.1
comp=Z,25nm,0.6s
LZH Lanzhou 39.79 79 eP P 14 02 32.8 +1.9
LZH pP pP 14 02 45.6 +1.8
LZH sP sP 14 02 51.0 +1.5
LZH PP **PnPn 14 04 09.8 +3.5**
LZH pmax pmax
comp=Z,43nm,1.0s
LZH pmax pmax
comp=Z,160nm,4.1s
LZH LR LR
comp=Z,270nm,13.2s
LZH LR LR
comp=Z,380nm,13.6s
LZH LR LR
comp=Z,380nm,14.8s
EAB Aberfoyle 39.97 313⇑ eP P 14 02 32.5 +0.6
HSPB Hornsund (broa 39.98 348 eP P 14 02 34.2 +2.6
HSPB Hornsund (broa 39.98 348 eP P 14 02 34.2 +2.6
HSPB Hornsund (broa 39.98 348 eP P 14 02 34.3 +2.6
PGBU Glenifferbraes 40.07 312⇑ eP P 14 02 33.6 +1.0
PGBU IAmb IAmb 14 02 34.8
comp=Z,48nm,0.8s
WME Myndd Eilian 40.11 309⇑ eP P 14 02 34.2 +1.1
WLF1 Llynfaes 40.18 308 eP P 14 02 34.4 +0.8
WLF1 IAmb IAmb 14 02 34.7
comp=Z,70nm,0.7s
GAL1 Galloway 40.24 311⇑ eP P 14 02 34.8 +0.7
GAL1 IAmb IAmb 14 02 35.6
comp=Z,37nm,0.8s
YRC Rhoscolyn 40.29 308 eP P 14 02 35.2 +0.7
KAC Achnashellach 40.47 315 eP P 14 02 36.9 +0.9
KPL Plockton 40.67 315⇑ eP P 14 02 38.0 +0.4
KPL IAmb IAmb 14 02 39.4
comp=Z,36nm,0.9s
SPA0 Spitsbergen Ar 40.68 349 eP P 14 02 40.0 +2.5
SPA0 Spitsbergen Ar 40.68 349 P P 14 02 39.2 +1.7
SPITS Spitsbergen Ar 40.68 349 P P 14 02 39.6 +2.1
comp=Z,66nm,0.6s,baz=115,slow=12,SNR=108
SPITS LR LR 14 21 37.0
comp=Z,252nm,21.1s,baz=200,slow=39
CCA1 Carnmenellis 41.08 304⇑ eP P 14 02 41.6 +0.5
CCA1 IAmb IAmb 14 02 42.4
comp=Z,60nm,0.7s
KBS Kingsbay 41.84 349 *ce*P P **14 02 48.9 +1.9**
KBS pmax pmax
comp=Z,235nm,1.0s
KBS Kingsbay 41.84 349 eP P 14 02 48.9 +1.9
KBS Kingsbay 41.84 349 P P 14 02 48.5 +1.5
KBS IAmb IAmb 14 02 50.0
comp=Z,49nm,0.8s
BOD Bodaibo 42.02 44 eP P 14 02 49.8 +1.1
BOD pmax pmax
comp=Z,22nm,1.0s
ESBB Sonseca Array 42.88 288 P P 14 02 55.7 -0.3
ESDC Sonseca Array 42.88 288 P P 14 02 55.9 -0.1
comp=Z,14nm,0.7s,baz=65,slow=8.1,SNR=76
ESDC Sonseca Array 42.88 288 IAmb IAmb 14 02 56.9
comp=Z,12nm,0.9s
PAB San Pablo 43.21 288 P P 14 02 58.1 -0.6
PAB pmax pmax
comp=Z,15nm,0.9s
PAB San Pablo 43.21 288 P P 14 02 58.1 -0.6
KMBO Kilima Mbogo 43.73 203 LR LR 14 24 33.7
comp=Z,112nm,19.8s,baz=90,slow=41
HHC Hu-ho-hao-te 43.78 69 eP P 14 03 08.1 +4.8
HHC pmax pmax
comp=Z,10.0nm,0.8s
HHC pmax pmax
comp=Z,84nm,7.2s
KMI Kunming 44.02 95 P P 14 03 06.8 +1.2
KMI pP pP 14 03 20.5 +1.9
KMI sP sP 14 03 27.5 +3.2
KMI pmax pmax
comp=Z,45nm,1.0s
KMI pmax pmax
comp=Z,160nm,4.1s
KMI LR LR
comp=Z,270nm,30.7s
XAN Xi'an 44.43 80 P P 14 03 09.8 +1.3
XAN pP pP 14 03 23.6 +2.0
XAN sP sP 14 03 28.0 +0.8
XAN pmax pmax
comp=Z,48nm,0.8s
XAN pmax pmax
comp=Z,270nm,3.5s
XAN Xi'an 44.43 80 P P 14 03 09.3 +0.8
XAN pmax pmax
comp=Z,39nm,0.8s
XAN Xi'an 44.43 80 P P 14 03 09.3 +0.8
XAN IAmb IAmb 14 03 10.7
comp=Z,39nm,0.8s
HORN Hornachuelos 44.49 286 P P 14 03 08.9 +0.1
SNR=15
MVO Moncorvo 44.58 291 eP P 14 03 10.2 +0.5
comp=Z,54nm,2.1s
CHTO Chiang Mai 44.84 105 P P 14 03 10.1 -1.8
CHTO pmax pmax
comp=Z,12nm,1.3s
CHTO Chiang Mai 44.84 105 P P 14 03 10.1 -1.8
CMAR Chiang Mai Arr 45.06 105 P P 14 03 13.5 -0.2
comp=Z,8.3nm,1.0s,baz=301,slow=8.1,SNR=42

CMAR PcP PcP **14 04 54.1 +0.3**
comp=Z,2.6nm,0.6s,baz=299,slow=4.8,SNR=8.6
CMAR LR LR 14 24 31.7
comp=Z,36nm,19.9s,baz=290,slow=39
PVIS Viseu 45.35 291 eP P 14 03 16.3 +0.5
PVIS *ep*P **pP 14 03 28.1 -0.7**
PMRV Marv??o 45.45 289 eP P 14 03 17.4 +0.9
comp=Z,57nm,1.2s
PMRV *ep*P **pP 14 03 29.6 0.0**
MBAR Mbarara 45.54 212⇑ eP P 14 03 21.4 +3.8
MBAR pmax pmax
comp=Z,3.0nm,1.0s
PESTR Estremoz 45.80 289 eP P 14 03 19.7 +0.4
comp=Z,68nm,1.0s
PESTR *ep*P **pP 14 03 30.8 -1.6**
PESTR Estremoz 45.80 289 P P 14 03 20.0 +0.7
SNR=8.8
PESTR Estremoz 45.80 289 P P 14 03 18.8 -0.5
PESTR IAmb IAmb 14 03 20.6
comp=Z,31nm,0.9s
LCRM LCR 45.88 281 P P 14 03 22.1 +1.9
SNR=6.5
MDT Midelt 46.08 280 P P 14 03 22.5 +0.8
SNR=6.2
PMTG Montargil 46.19 289 eP P 14 03 22.4 +0.1
PMTG *ep*P **pP 14 03 34.3 -1.1**
PBEJ Beja 46.32 288 eP P 14 03 24.1 +0.7
PVAQ Vaqueiros 46.46 287 eP P 14 03 24.2 -0.2
PVAQ *ep*P **pP 14 03 37.6 0.0**
PVAQ Vaqueiros 46.46 287 P P 14 03 23.9 -0.5
PVAQ IAmb IAmb 14 03 25.5
comp=Z,20nm,0.8s
ENH Enshi 46.56 84 P P 14 03 24.4 -0.9
ENH IAmb IAmb 14 03 27.4
comp=Z,20nm,0.9s
PBDV Barranco-do-Ve 46.68 287 eP P 14 03 26.6 +0.4
HIA Hailar 46.80 56 P P 14 03 28.0 +1.0
HIA pmax pmax
comp=Z,19nm,0.8s
HIA Hailar 46.80 56 P P 14 03 28.0 +1.0
HIA IAmb IAmb 14 03 30.1
comp=Z,20nm,0.8s
DAG Danmarks Havn 46.85 343⇑ *i P P 14 03 28.5 +1.6*
DAG pmax pmax
comp=Z,48nm,0.7s
DAG Danmarks Havn 46.85 343⇑ *i P P 14 03 28.5 +1.6*
comp=Z,48nm,0.7s
SLVN Son La 47.04 98 P P 14 03 28.2 -1.1
SLVN IAmb IAmb 14 03 46.1
comp=Z,27nm,1.4s
NOR Nord 47.33 349⇑ *i P P 14 03 32.4 +1.8*
comp=Z,18nm,0.6s
SCO Scoresbysund 47.53 334 *i P P 14 03 34.9 +2.6*
SCO Scoresbysund 47.53 334 *i P P 14 03 34.9 +2.6*
SCO Scoresbysund 47.53 334 P P 14 03 34.9 +2.6
TZRR Tazzarine 47.74 278 P P 14 03 36.0 +1.3
SNR=8.3
PBKT Sadao Pong 47.75 105 P P 14 03 35.0 +0.2
PBKT IAmb IAmb 14 05 04.5
comp=Z,12nm,0.7s
TIXI Tiksi 47.85 24 *ce*P **P 14 03 36.4 +1.6**
TIXI pmax pmax
comp=Z,40nm,1.3s
TIXI MLR MLR
comp=Z,524nm,18.0s
TIXI Tiksi 47.85 24 P P 14 03 35.7 +0.9
comp=Z,14nm,0.5s,baz=0.0,slow=24,SNR=50
TIXI Tiksi 47.85 24 P P 14 03 35.9 +1.1
TIXI IAmb IAmb 14 03 38.3
comp=Z,40nm,1.2s
OUK Oukaimeden 49.27 279 P P 14 03 49.0 +2.3
SNR=5.9
YAK Yakutsk 49.33 37 *eP* **P 14 03 46.6 +0.4**
YAK *e**PP **pP 14 04 01.7 +2.2**
YAK *e* 14 05 07.2
YAK *e* 14 05 38.2
YAK *e*PPP PPP 14 06 30.2
YAK *eS* **S 14 10 49.2 +0.3**
YAK *eSS* **SS 14 14 13.4 -7.0**
YAK pmax pmax
comp=Z,21nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.8s
YAK pmax pmax
comp=Z,78nm,3.7s
YAK pmax pmax
comp=N,65nm,3.8s
YAK pmax pmax
comp=E,133nm,3.8s
YAK smax smax
comp=N,115nm,4.0s
YAK smax smax
comp=E,200nm,4.3s
YAK Yakutsk 49.33 37 P P 14 03 47.2 +1.0
comp=E,11nm,0.7s,baz=88,slow=1.0,SNR=11
YAK PcP **PcP 14 05 08.3 +0.1**
comp=E,8.2nm,0.4s,baz=206,slow=2.2,SNR=4.6
YAK Yakutsk 49.33 37 P P 14 03 46.6 +0.4
YAK IAmb IAmb 14 03 49.7
comp=Z,18nm,0.7s
TIA Tai'an 49.59 73 P P 14 03 48.9 +0.3
TIA pmax pmax
comp=Z,15nm,1.4s
ZEA Zeya 50.08 48 eP P 14 03 54.8 +2.7
ZEA pmax pmax
comp=Z,15nm,0.8s
ZEA MLR MLR
comp=E,300nm,18.0s
ZEA MLR MLR
comp=Z,500nm,18.0s
WHN Wuhan 50.11 81⇑ P P 14 03 54.0 +1.4
DL2 Dalian 51.68 68 P P 14 04 05.9 +1.5
DL2 pP **pP 14 04 20.3 +2.6**
DL2 sP **sP 14 04 27.8 +4.5**
DL2 *eS* **S 14 11 26.0 +3.8**
DL2 pmax pmax
comp=Z,34nm,0.6s
DL2 LR LR
comp=Z,270nm,16.5s
DL2 LR LR
comp=Z,120nm,13.5s
DL2 LR LR
comp=Z,230nm,15.1s
TORD Torodi Ar. Bea 52.27 254 P P 14 04 07.9 -1.1
comp=Z,1.9nm,0.4s,baz=54,slow=5.9
CN2 Changchun 52.33 61⇑ *i P P 14 04 10.5 +1.4*
CN2 *ep*P pP 14 04 22.9 +0.5
CN2 pmax pmax
comp=Z,30nm,0.7s
SUMG Summit 52.39 338 P P 14 04 11.2 +1.5
SUMG pmax pmax
comp=Z,58nm,0.7s
SUMG Summit 52.39 338 *i P P 14 04 11.7 +2.0*
comp=Z,143nm,0.8s
SUMG Summit 52.39 338 P P 14 04 11.2 +1.5
NJ2 Nanjing 52.76 77 eP P 14 04 12.1 -0.3
NJ2 pmax pmax
comp=Z,26nm,0.7s
KLR Kul'dur 54.24 52 *c iP P 14 04 24.3 +1.2*
KLR pmax pmax
comp=Z,11nm,0.9s
KLR MLR MLR
comp=Z,190nm,18.0s
MDJ Mudanjiang 54.73 58 P P 14 04 30.0 +3.3
MDJ pmax pmax
comp=Z,8.0nm,1.1s
MDJ pmax pmax
comp=Z,140nm,5.6s
PSI Prapat 55.88 120 P P 14 04 32.9 -2.6
PSI pmax pmax
comp=Z,14nm,0.9s
PSI Prapat 55.88 120 LR LR 14 30 22.8
comp=Z,157nm,21.3s,baz=334,slow=38
RPSI Rantau Prapat 55.96 120 P P 14 04 32.9 -3.0
RPSI IAmb IAmb 14 04 34.7
comp=Z,14nm,0.9s
GRNR Gornyy 56.39 49⇓ *i P P 14 04 36.0 -2.6*
GRNR pmax pmax
comp=Z,6.0nm,1.3s
GRNR MLR MLR
comp=Z,210nm,18.0s
USA0B Ussuriysk Arra 56.46 58 *c iP P 14 04 39.6 +0.5*
USA0B Ussuriysk Arra 56.46 58 P P 14 04 39.1 0.0

USA0B IAmb IAmb 14 04 40.8
comp=Z,14nm,0.8s
USRK Ussuriysk Ar. 56.46 58 P P 14 04 39.8 +0.7
comp=Z,12nm,0.7s,baz=286,slow=6.8,SNR=25
USRK pP **pP 14 04 54.0 +1.4**
comp=Z,9.7nm,0.7s,baz=280,slow=6.6,SNR=11
USRK LR LR 14 30 59.5
comp=Z,483nm,19.2s,baz=296,slow=38
KS19 Wonju Array Si 56.71 67 P P 14 04 40.7 -0.3
KS19 IAmb IAmb 14 04 42.8
comp=Z,17nm,0.8s
KSRS Korea Array 56.77 67 P P 14 04 42.2 +0.8
comp=Z,11nm,0.7s,baz=294,slow=6.8,SNR=41
KSRS pP **pP 14 04 56.8 +1.9**
comp=Z,4.1nm,0.6s,baz=294,slow=6.5,SNR=5.8
KSRS PcP **PcP 14 05 36.5 -0.4**
comp=Z,3.2nm,0.8s,baz=300,slow=3.4,SNR=4.4
KSRS LR LR 14 30 24.6
comp=Z,88nm,18.7s,baz=292,slow=37
VLA Vladivostok 56.87 59⇑ *eP* **P 14 04 43.5 +1.5**
VLA pmax pmax
comp=Z,54nm,1.8s
ILULI Ilulissat 57.51 336 P P 14 04 46.8 +0.7
ILULI pmax pmax
comp=Z,36nm,0.7s
ILULI Ilulissat 57.51 336 P P 14 04 46.8 +0.7
TULEG Thule 57.75 346 P P 14 04 48.0 +0.3
SFJD Kangerlussuaq 58.43 333 *i P P 14 04 53.2 +0.6*
SFJD Kangerlussuaq 58.43 333 P P 14 04 53.0 +0.4
baz=58,slow=8.4
SFJD Kangerlussuaq 58.43 333⇑ *i P P 14 04 53.2 +0.6*
SFJD Kangerlussuaq 58.43 333 P P 14 04 52.6 0.0
SFJD IAmb IAmb 14 04 53.9
comp=Z,17nm,0.7s
YHNB Yeheng 58.47 83 P P 14 04 53.0 -0.7
SEY Seymchan 58.90 32⇑ eP P 14 04 58.3 +2.4
SEY Seymchan 58.90 32 P P 14 04 58.0 +2.1
comp=Z,11nm,0.8s,baz=277,slow=6.1,SNR=31
NACB Ninganchiao 58.91 84 P P 14 04 55.2 -1.4
CMLA Cha da Macela 58.99 295 P P 14 04 55.5 -1.5
CMLA pmax pmax
comp=Z,225nm,1.3s
CMLA Cha da Macela 58.99 295 P P 14 04 55.5 -1.5
NRS Narsarsuaq 59.26 326 P P 14 04 58.9 +0.4
NRS pmax pmax
comp=Z,191nm,1.7s
NRS Narsarsuaq 59.26 326 P P 14 04 58.9 +0.4
YOJ Yonaguni jima 59.83 82 P P 14 05 01.9 -1.0
YOJ pmax pmax
comp=Z,329nm,1.3s
YOJ Yonaguni jima 59.83 82 P P 14 05 01.9 -1.0
MA2 Magadan 59.83 36⇑ eP P 14 05 04.1 +1.7
MA2 pmax pmax
comp=Z,22nm,1.7s
MA2 Magadan 59.83 36 P P 14 05 02.6 +0.2
MA2 IAmb IAmb 14 05 29.0
comp=Z,20nm,1.1s
BILL Bilibino 61.03 23 *c iP P 14 05 12.1 +1.6*
BILL *e* 14 05 55.4
BILL pmax pmax
comp=Z,38nm,1.3s
BILL MLR MLR
comp=Z,338nm,20.0s
BILL Bilibino 61.03 23 P P 14 05 11.9 +1.4
BILL IAmb IAmb 14 05 13.6
comp=Z,25nm,0.9s
DBIC Dimbokro 61.37 253 P P 14 05 12.0 -1.5
DBIC *PP **pP 14 05 26.2 -0.9**
DBIC pmax pmax
comp=Z,14nm,0.8s
DBIC Dimbokro 61.37 253 P P 14 05 12.6 -0.9
comp=Z,13nm,0.7s,baz=21,slow=8.5,SNR=18
DBIC pP **pP 14 05 26.2 -0.9**
comp=Z,9.1nm,0.6s,baz=359,slow=8.0,SNR=8.4
DBIC LR LR 14 39 55.1
comp=Z,38nm,18.1s,baz=27,slow=44
DBIC Dimbokro 61.37 253 P P 14 05 12.0 -1.5
DBIC IAmb IAmb 14 05 13.5
comp=Z,14nm,0.8s
YSS Yuzh-Sakhalins 61.85 51 *eP* **P 14 05 15.0 -1.4**
YSS *e* 14 05 33.5
YSS *e* 14 13 47.6
YSS MLR MLR
comp=Z,200nm,19.0s
YSS MLR MLR
comp=E,200nm,16.0s
ASAJ Asahikawa 63.20 54 LR LR 14 35 11.1
comp=E,131nm,19.7s,baz=312,slow=38
RES Resolute Bay 63.21 351 P P 14 05 25.5 +0.5
RES pmax pmax
comp=Z,6.0nm,0.7s
RES Resolute Bay 63.21 351 P P 14 05 26.2 +1.3
comp=Z,6.3nm,0.8s,baz=32,slow=8.7,SNR=22
RES Resolute Bay 63.21 351 P P 14 05 25.5 +0.5
MAJO Matsushiro 64.34 63⇓ *eP* **P 14 05 33.3 +0.3**
MAJO pmax pmax
comp=Z,7.0nm,1.0s
MAT Matsushiro 64.34 63 P P 14 05 32.7 -0.3
MJAR Matsushiro Arr 64.34 63 P P 14 05 33.3 +0.3
comp=Z,5.5nm,1.0s,baz=311,slow=7.3,SNR=8.0
FRB Frobisher Bay 66.35 336 P P 14 05 46.0 +0.5
comp=Z,48nm,0.7s,baz=40,slow=6.9,SNR=95
PETK Petropavlovsk- 66.58 39 P P 14 05 47.5 +0.2
comp=Z,7.9nm,1.1s,baz=29,slow=3.4,SNR=5.5
PETK LR LR 14 37 49.3
comp=Z,213nm,19.1s,baz=244,slow=38
RDOG Red Dog Mine 68.56 14 P P 14 05 59.0 -0.5
RDOG IAmb IAmb 14 06 02.0
comp=Z,20nm,0.8s
LBTB Lobatse 69.87 206 P P 14 06 07.4 -0.8
LBTB pmax pmax
comp=Z,25nm,0.7s
LBTB Lobatse 69.87 206 P P 14 06 07.4 -0.8
LBTB IAmb IAmb 14 06 09.4
comp=Z,25nm,0.7s
GAMB Gambell 70.31 19 P P 14 06 11.1 +0.8
C36M Paulatuk 70.54 359 P P 14 06 12.0 +0.4
C36M IAmb IAmb 14 06 13.1
comp=Z,28nm,0.7s
ANM Nome 71.13 16 P P 14 06 16.7 +1.4
ANM pmax pmax
comp=Z,34nm,1.3s
ANM Nome 71.13 16 P P 14 06 16.7 +1.4
ANM IAmb IAmb 14 06 18.3
comp=Z,34nm,1.3s
COLD Coldfoot 71.26 9 P P 14 06 17.5 +1.5
COLD IAmb IAmb 14 06 19.1
comp=Z,20nm,1.0s
INK Inuvik 71.50 3 P P 14 06 18.1 +0.6
INK pmax pmax
comp=Z,16nm,1.1s
INK Inuvik 71.50 3 P P 14 06 17.9 +0.4
comp=Z,14nm,1.1s,baz=7.6,slow=9.0,SNR=25
INK Inuvik 71.50 3 P P 14 06 18.1 +0.6
SCHQ Schefferville 72.09 328 P P 14 06 21.6 +0.3
comp=Z,21nm,0.7s,baz=45,slow=5.5,SNR=44
SCHQ LR LR 14 38 25.8
comp=Z,78nm,18.8s,baz=1.5,slow=36
SCHQ Schefferville 72.09 328 P P 14 06 21.3 +0.1
MLY Manley 73.28 10 P P 14 06 29.8 +1.6
MLY IAmb IAmb 14 06 31.2
comp=Z,21nm,1.0s
EPYK Eagle Plains 73.30 4 P P 14 06 29.2 +0.9
EPYK IAmb IAmb 14 06 30.3
comp=Z,33nm,1.1s
EPYK Eagle Plains 73.30 4 P P 14 06 29.4 +1.1
baz=352
BOSA Boshof 73.31 205 P P 14 06 27.9 -0.9
comp=Z,7.7nm,0.8s,baz=13,slow=7.1,SNR=9.5
BOSA pP **pP 14 06 42.3 -0.5**
comp=Z,12nm,1.1s,baz=19,slow=8.9,SNR=5.8
BOSA LR LR 14 43 04.0
comp=Z,101nm,18.4s,baz=188,slow=39
POKR Poker Plat Res 73.61 9 P P 14 06 32.2 +2.0
baz=344,SNR=13
MDM Murphy Dome 73.67 9 P P 14 06 32.0 +1.5
MDM IAmb IAmb 14 06 33.5
comp=Z,22nm,1.0s
TCOL CIGO, UAF Yank 73.80 9 P P 14 06 32.8 +1.6
baz=344,SNR=11
COLA College 73.80 9 *c iP P 14 06 32.8 +1.7*
COLA pmax pmax
comp=Z,34nm,1.0s
COLA College 73.80 9 P P 14 06 32.5 +1.3
COLA IAmb IAmb 14 06 34.0
comp=Z,38nm,0.9s

IL31 74.01 9 P P 14 06 33.2 +0.8
ILAR Eielson Array 74.01 9 P P 14 06 33.5 +1.1
comp=Z,6,8nm,0.8s,baz=336,slow=4.5,SNR=55
ILAR LR LR 14 42 34.1
comp=Z,93nm,20.8s,baz=344,slow=38
CCB Clear Creek Bu 74.03 9 P P 14 06 33.1 +0.6
CCB IAmb IAmb 14 06 34.8
comp=Z,41nm,1.4s
BPAW Bear Paw Mtn. 74.13 11 P P 14 06 33.8 +0.6
BPAW IAmb IAmb 14 06 36.9
comp=Z,31nm,1.2s
WRH Wood River Hil 74.16 9 P P 14 06 34.1 +0.9
WRH IAmb IAmb 14 06 35.4
comp=Z,34nm,1.6s
HDA Harding Lake 74.36 9 P P 14 06 34.8 +0.3
HDA IAmb IAmb 14 06 36.1
comp=Z,17nm,1.0s
HDA Harding Lake 74.36 9 P P 14 06 35.0 +0.6
baz=344,SNR=8.6
EGAK Eagle 74.57 6 P P 14 06 36.4 +0.7
EGAK IAmb IAmb 14 06 38.1
comp=Z,19nm,0.9s
KTH Kantishna Hill 74.66 11 P P 14 06 37.5 +1.2
KTH IAmb IAmb 14 06 38.8
comp=Z,28nm,0.9s
MCK McKinley 74.76 10 P P 14 06 37.7 +0.8
MCK McKinley 74.76 10 P P 14 06 37.7 +0.8
MCK IAmb IAmb 14 06 39.1
comp=Z,28nm,1.1s
PPLA Purkeypile 75.10 12 P P 14 06 40.0 +1.1
PPLA IAmb IAmb 14 06 41.1
comp=Z,23nm,1.0s
RIDG Independent Ri 75.24 8 P P 14 06 40.6 +1.0
RIDG IAmb IAmb 14 06 42.0
comp=Z,30nm,1.1s
DOT Dot Lake 75.41 8 P P 14 06 42.1 +1.5
DOT IAmb IAmb 14 06 43.4
comp=Z,26nm,0.9s
DAWY Dawson 75.42 6 P P 14 06 41.3 +0.6
DHY Denali Highway 75.59 9 P P 14 06 42.2 +0.5
DHY IAmb IAmb 14 06 43.2
comp=Z,23nm,1.2s
SKT Skwentna 76.06 12 P P 14 06 45.0 +0.7
MENT Mentasta 76.14 8 P P 14 06 46.2 +1.5
MENT IAmb IAmb 14 06 47.7
comp=Z,22nm,0.8s
GBN Guysborough 76.35 319 P P 14 06 47.3 +1.1
SUA Susitna One 76.68 11 P P 14 06 49.0 +1.0
SML Sawmill 76.69 10 P P 14 06 48.7 +0.7
SML IAmb IAmb 14 06 50.0
comp=Z,28nm,0.8s
YKA Yellowknife Ar 76.95 354 P P 14 06 49.8 +0.5
comp=Z,10.0nm,0.8s,baz=6.9,slow=6.2,SNR=180
YKA LR LR 14 45 28.7
comp=Z,88nm,20.5s,baz=0.0,slow=39
KNK Knik Glacier 77.05 10 P P 14 06 51.4 +1.4
BATG Bathurst New B 77.23 322 P P 14 06 52.0 +0.9
BATG IAmb IAmb 14 06 53.5
comp=Z,28nm,1.0s
FCC Fort Churchill 77.45 343 P P 14 06 53.1 +1.0
FCC pmax pmax
comp=Z,37nm,0.9s
FCC Fort Churchill 77.45 343 P P 14 06 53.0 +1.0
BALM Baldy 78.15 8 P P 14 06 57.5 +1.4
BALM IAmb IAmb 14 06 59.1
comp=Z,40nm,1.3s
D63A Stockholm 78.35 323 P P 14 06 58.5 +1.2
baz=42
PQI Presque Isle 78.58 323 P P 14 06 59.6 +1.0
PQI IAmb IAmb 14 07 00.9
comp=Z,24nm,0.9s
E64A Bridgewater 78.68 323 P P 14 07 00.5 +1.3
baz=42
D62A Allapoint, All 78.74 324 P P 14 07 00.4 +0.9
D62A IAmb IAmb 14 07 02.4
comp=Z,59nm,1.5s
D62A Allapoint, All 78.74 324 P P 14 07 00.8 +1.3
baz=41,SNR=5.7
HYT Haines Junctio 78.76 5 P P 14 07 01.0 +1.4
E63A Oxbow 78.95 323 P P 14 07 01.8 +1.2
baz=42
D61A St Aubert, Com 79.16 324 P P 14 07 03.0 +1.2
baz=41
G65A Princeton 79.46 322 P P 14 07 04.8 +1.3
baz=42
D60A Saint Jean D'O 79.71 325 P P 14 07 05.2 +0.4
baz=40
KDAK Kodiak Island 79.87 14 P P 14 07 06.7 +1.3
comp=Z,24nm,0.8s,baz=312,slow=2.0,SNR=16
G64A Maxfield 79.98 322 P P 14 07 07.6 +1.3
baz=41
D59A Saint-Raymond 80.04 325 P P 14 07 07.6 +1.0
baz=40
LATQ La Tuque 80.15 326 P P 14 07 08.2 +1.0
LATQ La Tuque 80.15 326 P P 14 07 08.2 +1.0
baz=39
MATQ Matagami 80.23 330 P P 14 07 08.5 +0.9
baz=36
E60A Ste Agathe de 80.36 325 P P 14 07 09.0 +0.7
baz=40
D58A Chemin du LacG 80.42 326 P P 14 07 09.8 +1.1
baz=39
F61A St Evariste 80.46 324 P P 14 07 10.1 +1.2
baz=40
G63A Kingsbury 80.49 323 P P 14 07 10.0 +0.9
baz=41
LSQQ Lebel-sur-Quev 80.55 329 P P 14 07 10.5 +1.2
baz=36
F60A Warwick 80.89 325 P P 14 07 12.0 +0.8
baz=39
D57A Chemin Vers le 80.91 326 P P 14 07 12.4 +1.1
baz=38,SNR=12
E58A La Victoria 81.16 326 P P 14 07 13.7 +1.1
baz=39,SNR=9.6
G61A St-Isidore-de- 81.23 324 P P 14 07 14.4 +1.3
baz=40
D56A ZEC Mazanza, M 81.25 327 P P 14 07 13.9 +0.8
baz=38,SNR=6.0
F59A Saint Guilaume 81.35 325 P P 14 07 14.5 +0.9
baz=39
DLBC Dease Lake 81.49 2 P P 14 07 14.8 +0.6
comp=Z,11nm,0.8s,baz=323,slow=8.8,SNR=5.8
VLDQ Val d'Or 81.50 329 P P 14 07 15.8 +1.4
VLDQ IAmb IAmb 14 07 17.1
comp=Z,24nm,1.0s
E57A Chemin Saint G 81.50 326 P P 14 07 15.4 +1.0
baz=38,SNR=8.6
H62A Milan 81.61 323 P P 14 07 16.0 +1.0
baz=40
G60A Masonville 81.73 324 P P 14 07 16.9 +1.2
baz=39
E56A St. Veronique 81.77 327 P P 14 07 16.9 +1.1
baz=38,SNR=6.1
TRQ Mont Tremblant 81.82 326 P P 14 07 16.6 +0.4
H61A Lyndonville 81.99 324 P P 14 07 18.8 +1.8
baz=39
LBNH Lisbon 82.22 323 P P 14 07 20.1 +1.9
baz=39
E55A Montcerf-Lytto 82.27 327 P P 14 07 19.8 +1.3
baz=37
H60A Morristown 82.31 324 P P 14 07 20.2 +1.4
baz=39,SNR=6.4
G58A Ormstown 82.45 325 P P 14 07 20.2 +0.8
baz=38
J63A Strafford 82.57 322 P P 14 07 21.1 +1.0
baz=40
I61A Oroboro, Fairl 82.58 323 P P 14 07 21.4 +1.2
baz=39
H59A Cadyville 82.69 325 P P 14 07 21.7 +1.0
baz=38,SNR=5.9
FFC Flin Flon 82.83 346 P P 14 07 21.2 0.0
FFC pmax pmax
comp=Z,16nm,0.7s
FFC Flin Flon 82.83 346 P P 14 07 21.2 0.0
FFC IAmb IAmb 14 07 22.4
comp=Z,16nm,0.7s
F55A Otter Lake 82.89 327 P P 14 07 22.9 +1.2
baz=37
G57A Newington 82.89 326 P P 14 07 22.8 +1.1
baz=37
J62A Henniker 82.95 323 P P 14 07 23.1 +1.0
baz=39
D51A Lot 18 Range I 83.08 329 P P 14 07 23.5 +0.9
baz=35
H58A Gabriels 83.08 325 P P 14 07 23.6 +0.8
baz=38
LONY Lake Ozonia 83.10 325 P P 14 07 23.7 +0.9
LONY IAmb IAmb 14 07 25.2
comp=Z,27nm,1.0s
LONY Lake Ozonia 83.10 325 P P 14 07 24.0 +1.2
baz=38,SNR=7.2
I60A Shoreham 83.14 324 P P 14 07 24.1 +1.1
baz=38
D50A G1974 Best Tow 83.20 330 P P 14 07 24.1 +0.8
baz=34
HRV Adam Dziewonsk 83.39 322 P P 14 07 25.9 +1.6
baz=39
I59A Olmsteadville 83.44 324 P P 14 07 25.7 +1.1
baz=38
E52A Mattawa 83.46 329 P P 14 07 25.6 +1.0
baz=35,SNR=6.5
ALGO Algonquin Park 83.49 328 P P 14 07 25.7 +1.0
baz=36,SNR=5.7
G55A Calabogie 83.51 327 P P 14 07 26.0 +1.1
baz=36
H57A Richville 83.58 326 P P 14 07 26.5 +1.2
baz=37
K62A Royalston 83.58 323 P P 14 07 26.8 +1.4
baz=39
E51A G1948 Merrick 83.59 329 P P 14 07 26.5 +1.2
baz=35,SNR=5.1
J60A Lant Hill Farm 83.67 324 P P 14 07 27.2 +1.4
baz=38
PLVO Plevna 83.83 327 P P 14 07 27.6 +1.1
PLVO IAmb IAmb 14 07 29.0
comp=Z,23nm,1.1s
H56A Elgin 83.84 326 P P 14 07 27.5 +0.9
baz=36
L63A North Scituate 83.91 322 P P 14 07 27.7 +0.7
baz=39
D48A Paudash Townsh 83.94 331 P P 14 07 27.9 +0.8
baz=33,SNR=6.4
L61B Northampton 83.95 323 P P 14 07 28.2 +1.0
baz=39
G54A Lake Saint Pet 83.96 328 P P 14 07 28.0 +0.8
baz=35,SNR=5.3
J59A Piesco 83.98 324 P P 14 07 28.6 +1.2
baz=38
I58A Old Forge 84.01 325 P P 14 07 29.2 +1.6
baz=37
I57A Carthage 84.11 325 P P 14 07 29.3 +1.3
baz=37
F52A Sundridge 84.13 329 P P 14 07 29.5 +1.4
baz=35,SNR=7.8
F51A Arnstein 84.25 329 P P 14 07 29.9 +1.2
baz=34,SNR=7.5
H55A Tweed 84.27 327 P P 14 07 30.3 +1.6
baz=36
G53A Haliburton 84.40 328 P P 14 07 30.4 +1.0
baz=35
J58A Remsen 84.41 325 P P 14 07 30.7 +1.2
baz=37
DELO Deloro Mine 84.48 327 P P 14 07 30.6 +0.7
DELO IAmb IAmb 14 07 31.5
comp=Z,12nm,0.7s
E48A Lockeyer 84.66 331 P P 14 07 31.9 +1.2
baz=33,SNR=9.4
J57A Williamstown 84.68 325 P P 14 07 31.1 +0.2
J57A Williamstown 84.68 325 P P 14 07 31.8 +0.9
baz=37
I55A Frankford 84.75 327 P P 14 07 32.0 +0.8
baz=36
H53A Bobcaygeon 84.83 327 P P 14 07 32.5 +0.8
baz=35
K58A Earlville 85.05 325 P P 14 07 33.6 +0.8
baz=37
E47A Iron Bridge 85.09 331 P P 14 07 33.9 +1.1
baz=32
J56A Wolcott 85.16 326 P P 14 07 34.2 +0.9
baz=36
F49A Sandfield 85.21 330 P P 14 07 34.0 +0.5
baz=33
F48A Evansville 85.38 331 P P 14 07 35.4 +1.1
baz=32
K57A Scipio Center 85.45 325 P P 14 07 35.5 +0.7
baz=36
E46A Sault Ste Mari 85.54 332 P P 14 07 36.0 +0.8
J55A Hilton 85.58 326 P P 14 07 36.1 +0.8
baz=36
ULM Lac du Bonnet 85.65 341 eP P 14 07 35.8 +0.2
ULM Lac du Bonnet 85.65 341 P P 14 07 35.3 -0.3
comp=Z,14nm,0.8s,baz=28,slow=5.1,SNR=26
ULM LR LR 14 47 58.5
comp=Z,109nm,19.3s,baz=357,slow=37
ULM Lac du Bonnet 85.65 341 P P 14 07 35.3 -0.3
ULM IAmb IAmb 14 07 36.5
comp=Z,17nm,0.8s
K56A Middlesex 85.83 326 P P 14 07 37.2 +0.5
baz=36
K55A Perry 86.12 326 P P 14 07 38.7 +0.6
baz=35
G47A Hillman 86.39 331 P P 14 07 40.8 +1.4
baz=32
I51A Listowel 86.46 328 P P 14 07 40.5 +0.8
baz=33
E43A Lone Tree Farm 86.47 333 P P 14 07 40.1 +0.3
K54A Basiliko Farm, 86.48 326 P P 14 07 40.5 +0.6
baz=35
EYMN Ely 86.53 337 P P 14 07 39.6 -0.4
EYMN IAmb IAmb 14 07 41.7
comp=Z,18nm,1.1s
EYMN Ely 86.53 337 P P 14 07 40.3 +0.3
baz=26,SNR=5.4
F45A CMU Biological 86.56 332 P P 14 07 41.0 +0.8
baz=30
L55A Hinsdale 86.73 326 P P 14 07 41.7 +0.5
baz=35
I49A Point Hope 87.05 330 P P 14 07 43.0 +0.4
baz=32
I48A Sheman Twp 87.17 330 P P 14 07 43.9 +0.7
baz=32
P60A Greenville 87.40 323 P P 14 07 45.5 +1.1
baz=37
ERPA Erie 87.44 327 P P 14 07 44.8 +0.3
baz=34
AGMN Agassiz Nation 87.44 340 P P 14 07 44.1 -0.3
AGMN Agassiz Nation 87.44 340 P P 14 07 44.5 +0.1
baz=23,SNR=12
M55A Ridgway 87.45 326 P P 14 07 44.8 +0.1
baz=35
L53A Girard 87.68 327 P P 14 07 45.8 +0.1
baz=34
E38A The Farm, Brul 87.75 336 P P 14 07 45.8 -0.1
M54A Oil Creek Stat 87.80 326 P P 14 07 46.5 +0.2
baz=34
O57A Amberson 87.99 324 P P 14 07 47.9 +0.7
baz=36
G40A Rib Lake 88.51 335 P P 14 07 49.4 -0.2
O55A Ligonier 88.72 325 P P 14 07 51.0 +0.3
baz=34
MDND Maddock 88.80 342 P P 14 07 51.5 +0.6
baz=21
N53A Lisbon 88.88 327 P P 14 07 51.7 +0.3
baz=34
O54A Avella 89.20 326 P P 14 07 53.0 +0.1
baz=34
DGMT Dagmar 89.21 345 P P 14 07 52.8 -0.1
DGMT Dagmar 89.21 345 P P 14 07 53.7 +0.9
baz=17,SNR=7.7
LLLB Lilloet 89.25 357 P P 14 07 53.2 +0.3
I42A Draeger Farm, 89.31 333 P P 14 07 52.8 -0.5
SPMN Marine on St. 89.37 337 P P 14 07 54.0 +0.4
baz=26
O53A New Philadelph 89.50 327 P P 14 07 54.7 +0.3
baz=33
M49A Liberty Center 89.59 329 P P 14 07 55.5 +0.8
baz=31
P54A Burton 89.73 326 P P 14 07 56.4 +1.0
baz=34
O52A Adamsville 89.87 327 P P 14 07 56.2 +0.1
baz=33
I40A Norwalk 89.88 335 P P 14 07 55.3 -0.7
R58B Mineral 89.92 323 P P 14 07 56.7 +0.4
baz=35
N49A Columbus Grove 90.14 329 P P 14 07 57.7 +0.5
baz=31
P53A Whipple 90.21 326 P P 14 07 57.9 +0.2
baz=33
ACSO Alum Creek Sta 90.25 328 P P 14 07 58.1 +0.3
baz=32
P52A Corning 90.40 327 P P 14 07 58.6 +0.1
baz=33
T59A Double "B" Far 90.58 322 P P 14 07 59.9 +0.5
baz=36
EGMT Eagleton 90.62 348 P P 14 07 59.7 +0.2
EGMT IAmb IAmb 14 08 01.2
comp=Z,12nm,1.0s
EGMT Eagleton 90.62 348 P P 14 07 59.8 +0.4
baz=13,SNR=6.3
JFWS Jewell Farm 90.62 334 P P 14 08 00.0 +0.5
baz=27
N47A Urbana 90.76 330 P P 14 08 00.6 +0.4
baz=30
Q53A Leroy 90.80 326 P P 14 08 00.9 +0.6
baz=33
O49A Covington 90.83 329 P P 14 08 00.7 +0.2
baz=31
Q52A Bidwell 91.02 327 P P 14 08 01.7 +0.3
baz=33
O48A Farmland 91.09 329 P P 14 08 01.7 0.0
baz=31
NEW Newport 91.27 353 P P 14 08 03.1 +0.7
NEW pmax pmax
comp=Z,34nm,1.3s
NEW Newport 91.27 353 P P 14 08 03.8 +1.4
comp=Z,10nm,0.8s,baz=344,slow=4.5,SNR=15
NEW Newport 91.27 353 P P 14 08 03.1 +0.7
NEW Newport 91.27 353 P P 14 08 03.5 +1.1
baz=7.6,SNR=14
LAO LASA Array 91.31 346 P P 14 08 03.1 +0.4
LAO LASA Array 91.31 346 P P 14 08 03.3 +0.6
baz=16
B08A Colville Reser 91.35 355 P P 14 08 03.1 +0.3
Q51A Peebles 91.42 327 P P 14 08 03.7 +0.4
baz=32
R53A Hurricane 91.42 326 P P 14 08 03.7 +0.4
baz=33
JTMT Jette 91.49 351 P P 14 08 04.0 +0.4
U58A Oxford 91.51 323 P P 14 08 03.8 0.0
baz=35
S54A Dingess, Beckl 91.59 325 P P 14 08 04.1 -0.1
baz=33
T56A Rocky Mt 91.67 324 P P 14 08 04.5 +0.1
baz=34
R52A Catlettsburg 91.71 327 P P 14 08 04.6 0.0
baz=32
SFIN Lafayette 91.73 331 P P 14 08 04.7 +0.1
baz=29
W61A Ground Anchor 91.77 321 P P 14 08 05.2 +0.3
baz=36
C09A Chrisman Ranch 91.83 354 P P 14 08 05.3 +0.3
Q50A Georgetown 91.83 328 P P 14 08 05.5 +0.3
baz=32
ECSD EROS Data Cent 91.85 338 P P 14 08 05.1 -0.1
ECSD EROS Data Cent 91.85 338 P P 14 08 05.6 +0.5
baz=23,SNR=13
V59A Middlesex 91.88 322 P P 14 08 05.5 0.0
baz=35
Q49A Aurora 92.06 328 P P 14 08 06.5 +0.3
baz=31
MSO Missoula 92.36 351 P P 14 08 07.2 -0.4
MSO IAmb IAmb 14 08 09.4
comp=Z,5.9nm,0.9s
MSO Missoula 92.36 351 P P 14 08 07.7 +0.1
baz=10.0
V57A Coltrane Farms 92.49 323 P P 14 08 07.8 -0.5
baz=34
S51A Beattyville 92.70 327 P P 14 08 09.1 -0.1
baz=32
GCMT Greycliff 92.78 348 P P 14 08 10.4 +0.8
R49A Shelbyville 92.79 328 P P 14 08 09.6 +0.1
baz=31
T53A Wise 92.80 326 P P 14 08 10.1 +0.3
baz=32
T52A Hallie 92.89 326 P P 14 08 10.4 +0.3
baz=32
E09A Wood Farm, Sta 93.09 354 P P 14 08 11.1 +0.3
E09A IAmb IAmb 14 08 13.1
comp=Z,9.6nm,0.8s
LON Longmire 93.10 356 P P 14 08 11.6 +0.6
LON pmax pmax
comp=Z,9.0nm,0.8s
LON Longmire 93.10 356 P P 14 08 11.6 +0.6
LON IAmb IAmb 14 08 12.8
comp=Z,8.9nm,0.8s
Y60A Bolivia 93.31 321 P P 14 08 12.4 +0.4
baz=35
E04D Cinebar 93.33 357 P P 14 08 12.9 +1.0
baz=3.5
RSSD Black Hills 93.33 344 P P 14 08 12.3 0.0
RSSD pmax pmax
comp=Z,7.0nm,0.8s
RSSD Black Hills 93.33 344 P P 14 08 12.3 0.0
RSSD IAmb IAmb 14 08 14.2
comp=Z,6.8nm,0.8s
RSSD Black Hills 93.33 344 P P 14 08 12.7 +0.5
baz=17
U53A Fall Branch 93.34 325 P P 14 08 12.5 +0.2
baz=32
RLMT Red Lodge 93.36 347 P P 14 08 13.3 +0.9
baz=14,SNR=7.9
T51A Gray 93.42 327 P P 14 08 12.7 +0.2
baz=32
F10A Beach Ranch, E 93.55 353 P P 14 08 13.7 +0.6
YNE Yellowstone No 93.59 348 P P 14 08 13.5 0.0
TZTN Tazewell 93.61 326 P P 14 08 13.7 +0.3
baz=32
U52A Thorn Hill 93.66 326 P P 14 08 13.8 +0.1
baz=32
T50A Nancy 93.74 327 P P 14 08 14.4 +0.4
baz=31
F07A Phinny Hill Vi 93.84 355 P P 14 08 15.1 +0.8
YHL Hebgen Lake 93.93 349 P P 14 08 15.7 +0.5
F05D White Salmon 93.94 356 P P 14 08 15.7 +0.9
baz=4.3
T49A Edmonton 93.95 328 P P 14 08 15.0 0.0
baz=30
YHB Horse Butte 94.03 349 P P 14 08 16.2 +0.7
V52A Sevierville 94.22 326 P P 14 08 16.4 +0.1
baz=32
H17A Grant Village 94.28 348 P P 14 08 18.7 +2.0
baz=13
Z58A St. Stephen 94.62 322 P P 14 08 17.7 -0.4
baz=34
BMO Blue Mountains 94.67 353 P P 14 08 18.4 +0.2
BMO pmax pmax
comp=Z,5.0nm,0.8s
BMO Blue Mountains 94.67 353 P P 14 08 18.4 +0.2
BMO IAmb IAmb 14 08 19.5
comp=Z,4.9nm,0.8s
MOOW Moose Ponds 94.94 348 P P 14 08 20.6 +0.9
NHSC New Hope 94.98 322 P P 14 08 20.4 +0.7
baz=34
CCM Cathedral Cave 95.29 332 P P 14 08 21.2 +0.1
baz=27
REDW Red Top Meadow 95.33 348 P P 14 08 22.4 +0.9
REDW IAmb IAmb 14 08 24.1
comp=Z,8.7nm,1.0s
BW06 Boulder Array 95.70 347 P P 14 08 23.4 +0.2
baz=13
PDAR Pinedale Array 95.70 347 P P 14 08 23.3 +0.1
comp=Z,0.4nm,0.5s,baz=62,slow=5.7,SNR=7.1
PDAR PP PP 14 12 15.5 +1.5
comp=Z,0.2nm,0.5s,baz=36,slow=7.7,SNR=3.8
PDAR LR LR 14 56 30.6
comp=Z,116nm,18.2s,baz=26,slow=38
X51A Calhoun 95.85 326 P P 14 08 23.8 +0.1
baz=31
MFID Camas Ranch 95.94 352 P P 14 08 24.2 +0.1
I04A Tendick Farm, 96.08 357 P P 14 08 25.0 +0.3
baz=3.6
Z54A Sparta 96.09 324 P P 14 08 25.1 +0.2
baz=32
I03D Drain, OR 96.21 357 P P 14 08 25.8 +0.7
baz=2.9
WRA Warramunga Arr 96.43 111 P P 14 08 25.2 -1.2
comp=Z,2.7nm,0.8s,baz=321,slow=4.5,SNR=11
WRA Warramunga Arr 96.43 111 IAmb IAmb 14 08 26.2
comp=Z,0.4nm,0.9s
J05D Fort Rock, OR 96.52 356 P P 14 08 27.9 +1.1
baz=4.5
J04D Umpqua Nationa 96.61 356 P P 14 08 27.4 +0.1
baz=3.9
WVOR Wild Horse Val 97.19 354 P Pdif 14 08 30.4 +0.5
WVOR pmax pmax
comp=Z,8.0nm,0.8s
WVOR Wild Horse Val 97.19 354 P Pdif 14 08 30.4 +0.5
WVOR IAmb IAmb 14 08 32.2
comp=Z,7.7nm,0.8s
U40A Yellville 97.38 333 P P 14 08 30.2 -0.5
baz=26
152A Waverly Hall 97.41 325 P Pdif 14 08 31.3 +0.4

baz=31
SPUT South Promonto 97.58 349 P Pdif 14 08 32.6 +0.9
L04D Klamath Falls 97.64 356 P Pdif 14 08 32.0 +0.1
baz=3.7
MOD Modoc Plateau 97.84 355 P Pdif 14 08 33.8 +1.0
MOD IAmb IAmb 14 08 35.6
comp=Z,6.6nm,0.8s
O20A White River Ci 98.02 346 P Pdif 14 08 34.2 +0.5
baz=14
M04C Macdoel 98.05 356 P Pdif 14 08 34.2 +0.5
baz=4.1
W41B Gary Mavity, V 98.23 332 P **P 14 08 33.4 -1.0**
baz=26
Q24A Divide 98.50 343 P **P 14 08 35.8 -0.2**
baz=17
ELK Elko 98.51 351 P Pdif 14 08 36.6 +0.7
ELK pmax pmax
comp=Z,3.0nm,0.8s
ELK Elko 98.51 351 P Pdif 14 08 36.6 +0.7
ELK IAmb IAmb 14 08 38.8
comp=Z,3.5nm,0.8s
ASAR Alice Springs 98.53 114 P **P 14 08 34.5 -1.4**
comp=Z,1.5nm,1.0s,baz=311,slow=4.8,SNR=6.3
DUG Dugway, Tooele 98.73 349 P Pdif 14 08 37.7 +0.9
baz=11
N02D Trinity Center 98.90 357 P Pdif 14 08 37.7 +0.3
baz=3.4
X40A Basin Creek Fa 99.05 332 P **Pdif 14 08 38.4 +0.3**
baz=26
061Z Ochoppi 101.31 318 P **Pdif 14 08 48.4 +0.1**
baz=34
TXAR Lajitas Array 107.28 339 Pdiff **Pdif 14 09 17.0 +2.0**
comp=Z,0.4nm,0.7s,baz=72,slow=2.9,SNR=4.3
TXAR PP **PP 14 13 36.5 -4.8**
comp=Z,0.6nm,0.8s,baz=30,slow=4.2,SNR=5.1
SYO Syowa Base 109.54 185‖ *eP* **Pdif 14 09 11.0 -13**
SYO Syowa Base 109.54 185‖ *eX* **Pdif 14 09 29.4 +5.8**
CPUP Villa Florida 121.45 261 PKP **PKPdf 14 13 48.9 -1.5**
comp=Z,3.0nm,0.6s,baz=49,slow=1.8,SNR=9.6
LPAZ La Paz 123.92 277 PKP **PKPdf 14 13 55.2 -1.0**
comp=Z,2.5nm,0.7s,baz=126,slow=2.4,SNR=11
LPAZ La Paz 123.92 277 PKPdf 14 13 54.9 -1.3
QSPA South Pole Qui 130.22 180 PKPdf 14 14 05.0 -1.1
PLCA Paso Flores 137.69 250 PKhKP PKPpre 14 14 17.4
comp=Z,5.6nm,1.2s,baz=150,slow=2.7,SNR=2.8
PLCA SKPbc **SKPbc 14 17 49.1 -1.4**
comp=Z,6.1nm,1.0s,baz=95,slow=3.7,SNR=9.9
PLCA Paso Flores 137.69 250 SKPbc 14 17 49.3 -1.2
GO06 Curarrehue 137.98 252 PKPdf 14 14 21.0 -0.5
PPT Papeete 150.09 47 PKPbc **PKiKP 14 14 49.4 +0.6**
comp=Z,34nm,0.9s,baz=278,slow=6.7,SNR=3.8

*IDC **14** 14:18:41.3±0.5, 1.°41S×123.°00E, h0km, mb4.3/22, mb1 4.4/25, mb1mx4.3/44, mbtmp4.4/25, ML4.9/3, MS3.4/11, Ms1 3.5/11, ms1mx3.2/38, Error ellipse: s-maj=16.9km s-min=11.1km az=74.0*
*BJI **14** 14:18:41.0±0.0, 1.°98S×123.°12E, h31km, mB5.0/28, mb4.7/34, Ms4.7/9, Ms7 4.4/9*
*NEIC **14** 14:18:44.7±2.0, 1.°44S±0.°06×123.°01E±0.°03, h26km±4km, mb4.9/51, Error ellipse: s-maj=8.3km s-min=4.6km az=189.0*
*DJA **14** 14:18:45.1±0.4, 2.°S±2.°×12.°3E±.°, h12km±3km, M4.9/25, mB5.3/10, mb5.0/22, MLv5.0/25, Mw(mB)4.7/10*
*KLM **14** 14:18:46.0, 1.°52S×122.°95E, h24km, mb4.8*
ISC 14 14:18:46.2±0.3, **1.°47S**±0.°04×**123.°03E**±0.°04, **h35km, n151,**
σ1**§58**/152, **mb4.7**/48, **MS3.2**/6, **1C-1D, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.50**	**328**	P		**Pn**	**14 18 56.2**	**-0.7**
LUWI				S		**Sn**	**14 19 03.8**	**-0.4**
LUWI	**Luwuk**	**0.50**	**328**			**Pn**	**14 18 56.6**	**-0.3**
APSI	**Ampana**	**1.49**	**292**	P		**Pn**	**14 19 11.5**	**+1.0**
APSI				S		**Sn**	**14 19 32.0**	**+3.2**
MRSI	**Marisa**	**2.22**	**330**	P		**Pn**	**14 19 23.1**	**+2.5**
KMSI	**Cibinong**	**2.24**	**25**	P		**Pn**	**14 19 23.3**	**+2.5**
KDI	**Kendari**	**2.51**	**189**	P		**Pn**	**14 19 23.6**	**-1.0**
SANI	**Sanana**	**3.01**	**101**	P		**Pn**	**14 19 30.8**	**-0.7**
TTSI	**Tana Toraja**	**3.58**	**244**	P		**Pn**	**14 19 39.2**	**0.0**
MPSI	**Mapaga**	**3.61**	**300**	P		**Pn**	**14 19 41.3**	**+1.6**
BBSI	**Bau Bau**	**4.02**	**187**	P		**Pn**	**14 19 45.4**	**0.0**
SPSI	**Sidrap Palu**	**4.10**	**233**	P		**Pn**	**14 19 46.9**	**+0.5**
BNSI	**Bone**	**4.13**	**225**	P		**Pn**	**14 19 46.8**	**-0.1**
NLAI	**Namlea**	**4.43**	**114**	P		**Pn**	**14 19 52.3**	**+1.3**
LBMI	**Labuha**	**4.54**	**80**	P		**Pn**	**14 19 53.1**	**+0.6**
BKSI	**Bulukumba**	**4.81**	**217**	P		**Pn**	**14 19 56.4**	**+0.2**
KAPI	**Kappang**	**4.81**	**223**	Pn		**Pn**	**14 19 56.4**	**+0.1**
	64nm,0.3s,baz=42,slow=4.7,SNR=139							
KAPI				Sn		**Sn**	**14 20 49.8**	**-1.0**
	33nm,0.3s,baz=217,slow=20,SNR=2.9							
KAPI				LR		LR	14 22 08.1	
	comp=Z,1μm,20.3s,baz=23,slow=43							
KAPI	**Kappang**	**4.81**	**223**			**Pn**	**14 19 56.0**	**-0.3**
TNTI	**Ternate**	**4.87**	**63**	P		**Pn**	**14 19 58.6**	**+1.5**
TNTI	**Ternate**	**4.87**	**63**			**Pn**	**14 19 58.1**	**+1.1**
AAI	**Ambon**	**5.61**	**113**	P		**Pn**	**14 20 09.9**	**+2.7**
	1.6nm5μm557nm,1.0s							
SMKI	**Samarinda**	**5.91**	**280**	P		Pn	14 20 22.3	+11
BKB	**Balikpapan**	**6.14**	**272**	P		**Pn**	**14 20 15.5**	**+1.0**
	1.9nm5μm464nm,0.5s							
BKB	**Balikpapan**	**6.14**	**272**			**Pn**	**14 20 16.1**	**+1.6**
MSAI	**Masohi**	**6.18**	**108**	P		**Pn**	**14 20 17.8**	**+2.7**
	0.3nm787nm111nm,0.8s							
KBKI	**Kotabaru**	**7.10**	**255**	P		**Pn**	**14 20 28.4**	**+0.7**
	0.2nm622nm46nm,0.7s							
MMRI	**Maumere**	**7.17**	**186**	P		**Pn**	**14 20 28.3**	**-0.4**
	0.6nm4μm113nm,0.6s							
MMRI	**Maumere**	**7.17**	**186**	Pn		**Pn**	**14 20 28.7**	**+0.1**
SWI	**Sorong**	**8.25**	**86**	P		**Pn**	**14 20 44.8**	**+1.3**
	3μm297nm,0.5s							
SIJI	**Sorong**	**8.25**	**86**	Pn		**Pn**	**14 20 44.5**	**+0.9**
	48nm,0.3s,baz=202,slow=5.0,SNR=137							
SIJI				Sn		**Sn**	**14 22 16.4**	**+0.7**
	baz=106,slow=20,SNR=2.1							
SIJI				LR		LR	14 24 08.7	
	comp=Z,262nm,21.9s,baz=234,slow=40							
SOEI	**Soe**	**8.33**	**172**	P		**Pn**	**14 20 47.2**	**+2.5**
	240nm,0.8s							
SOEI	**Soe**	**8.33**	**172**			**Pn**	**14 20 45.5**	**+0.8**
KCP	**Kidapawan**	**8.66**	**14**‖	*iP*		Pn	14 21 00.6	+11
BATI	**Baumata**	**8.71**	**176**	LR		LR	14 24 03.1	
	comp=Z,515nm,20.9s,slow=37							
DAV	**Davao City (W)**	**8.85**	**17**	LR		LR	14 24 59.0	
	comp=Z,340nm,19.7s,baz=202,slow=43							
SPMM	**Sapulut**	**8.98**	**313**	P		**Pn**	**14 20 56.0**	**+2.4**
FAKI	**Fak Fak**	**9.32**	**99**	P		**Pn**	**14 20 58.0**	**-0.2**
	73nm,0.7s							
FAKI	**Fak Fak**	**9.32**	**99**			**Pn**	**14 20 58.1**	**-0.2**
SAUI	**Saumlaki**	**10.47**	**128**	Pn		**Pn**	**14 21 15.4**	**+1.4**
JAGI	**Jajag, Banyuwa**	**11.25**	**232**	Pn		**Pn**	**14 21 26.1**	**+1.4**
UGM	**Wanagama**	**14.01**	**242**	Pn		**Pn**	**14 22 05.8**	**+3.3**
KNRA	**Kununurra**	**15.21**	**158**	Pn		**Pn**	**14 22 18.8**	**+0.2**
KPJI	**Karang Pucung**	**15.22**	**247**	P		**Pn**	**14 22 20.0**	**+1.3**
	56nm,1.2s							
LEM	**Lembang**	**16.27**	**250**	Pn		**P**	**14 22 35.9**	**+0.8**
	0.7nm,0.3s,baz=3.3,slow=13,SNR=5.2							
LEM				LR		LR	14 28 34.0	
	comp=Z,236nm,20.8s,baz=60,slow=36							
FITZ	**Fitzroy Crossi**	**16.73**	**171**	Pn		**Pn**	**14 22 39.0**	**+1.0**
	1.5nm,0.3s,baz=7.0,slow=8.2,SNR=28							
FITZ				LR		LR	14 29 48.0	
	comp=Z,86nm,18.9s,baz=352,slow=40							
FITZ	**Fitzroy Crossi**	**16.73**	**171**			**Pn**	**14 22 38.5**	**+0.5**
KASI	**Kota Agung**	**18.93**	**257**	P		**Pn**	**14 23 06.4**	**+1.2**
	62nm,1.0s							
MDSI	**Maura Dua**	**19.07**	**261**	P		**Pn**	**14 23 06.5**	**-0.3**
	32nm,1.3s							
LWLI	**Liwa**	**19.27**	**259**	P		**Pn**	**14 23 13.4**	**+4.0**
MYKOM	**Kota Tinggi**	**19.45**	**280**	P		**P**	**14 23 07.2**	**-2.9**
MYKOM				IAmb		IAmb	14 23 07.8	
	comp=Z,77nm,1.6s							
PSA00	**Pilbara Seismi**	**20.23**	**189**	P		**P**	**14 23 18.4**	**-0.1**
PSA00				IAmb		IAmb	14 23 53.6	
	comp=Z,50nm,1.5s							
MNAI	**Manna**	**20.25**	**261**	P		**P**	**14 23 17.0**	**-1.8**
WRAB	**Tennant Creek**	**21.43**	**150**	P		**P**	**14 23 31.3**	**-0.2**
WRAB				IAmb		IAmb	14 23 41.5	
	comp=Z,17nm,0.6s							
WRA	**Warramunga Arr**	**21.44**	**150**	P		**P**	**14 23 31.6**	**0.0**
	comp=Z,4.0nm,0.5s,baz=329,slow=11,SNR=45							
WR0	**Warramunga Arr**	**21.55**	**149**	P		**P**	**14 23 33.9**	**+1.2**
SDSI	**Sungai Dareh**	**21.61**	**271**	P		P	14 23 42.7	+9.3
IPM	**Ipoh**	**22.77**	**285**	P		**P**	**14 23 45.9**	**0.0**
IPM	**Ipoh**	**22.77**	**285**	P		**P**	**14 23 47.0**	**+1.1**
KULM	**Kulim**	**23.34**	**287**	P		**P**	**14 23 53.0**	**+1.3**
UBPT	**Khong Chiam**	**24.05**	**314**	P		**P**	**14 23 58.6**	**+0.2**
UBPT				IAmb		IAmb	14 24 02.8	
	comp=Z,47nm,1.3s							
TWG	**Pinlang**	**24.21**	**356**	P		**P**	**14 23 58.5**	**-1.3**
AS31	**Alice Springs**	**24.45**	**155**	P		**P**	**14 24 01.7**	**-0.4**
RPSI	**Rantau Prapat**	**24.45**	**280**	P		**P**	**14 24 01.7**	**-0.4**
RPSI				IAmb		IAmb	14 24 03.6	
	comp=Z,21nm,0.8s							
RPSI	**Rantau Prapat**	**24.45**	**280**	P		**P**	**14 24 02.5**	**+0.4**
ASAR	**Alice Springs**	**24.46**	**155**	P		**P**	**14 24 02.4**	**+0.3**
	comp=Z,3.9nm,0.6s,baz=344,slow=15,SNR=81							
ASAR				PcP		**PcP**	**14 27 41.2**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=354,slow=1.8,SNR=8.3							
ASAR				LR		LR	14 35 02.3	
	comp=Z,70nm,18.2s,baz=325,slow=40							
PSI	**Prapat**	**24.47**	**280**	P		**P**	**14 24 02.5**	**+0.1**
	comp=Z,21nm,0.9s,baz=94,slow=4.8,SNR=10							
TPUB	**Ta-pu**	**24.73**	**355**	P		**P**	**14 24 03.3**	**-1.2**
YULB	**Yu-li**	**24.77**	**356**	P		**P**	**14 24 04.1**	**-0.7**
YULB				IAmb		IAmb	14 24 17.6	
	comp=Z,72nm,1.3s							
SSLB	**Suanglung**	**25.18**	**356**	P		**P**	**14 24 08.1**	**-0.5**
PMG	**Port Moresby**	**25.26**	**109**	P		**P**	**14 24 10.3**	**+0.9**
	comp=Z,19nm,0.8s,baz=320,slow=1.0,SNR=7.2							
PMG				LR		LR	14 36 06.4	
	comp=Z,58nm,18.4s,baz=254,slow=41							
PMG	**Port Moresby**	**25.26**	**109**	P		**P**	**14 24 10.5**	**+1.1**
PMG				IAmb		IAmb	14 24 18.3	
	comp=Z,22nm,0.7s							
GSI	**Gunungsitoli**	**25.60**	**276**	P		**P**	**14 24 11.3**	**-1.2**
GSI				IAmb		IAmb	14 24 58.7	
	comp=Z,47nm,1.1s							
GUMO	**Guam**	**26.31**	**55**	P		**P**	**14 24 16.8**	**-2.1**
MORW	**Morawa**	**28.25**	**193**	P		**P**	**14 24 35.7**	**-0.5**
JOW	**Kunigami**	**28.58**	**10**	P		**P**	**14 24 36.0**	**-3.2**
JOW				IAmb		IAmb	14 25 05.7	
	comp=Z,51nm,1.1s							
FORT	**Forrest**	**29.54**	**171**	P		**P**	**14 24 47.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**30.88**	**311**	P		**P**	**14 25 00.9**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=139,slow=7.4,SNR=14							
CMAR				PcP		**PcP**	**14 27 58.4**	**+2.2**
	comp=Z,0.6nm,0.5s,baz=168,slow=2.4,SNR=4.5							
CMAR				LR		LR	14 38 55.4	
	comp=Z,61nm,19.5s,baz=148,slow=39							
CHTO	**Chiang Mai**	**31.09**	**312**	P		**P**	**14 25 03.0**	**+1.4**
NWAO	**Narrogin (SRO)**	**31.77**	**189**	P		**P**	**14 25 06.8**	**-0.5**
	comp=Z,7.2nm,0.6s,baz=23,slow=8.3,SNR=8.8							
NWAO	**Narrogin (SRO)**	**31.77**	**189**	P		**P**	**14 25 06.8**	**-0.5**
NWAO				IAmb		IAmb	14 25 37.9	
	comp=Z,44nm,1.8s							
NWAO	**Narrogin (SRO)**	**31.77**	**189**	P		**P**	**14 25 06.6**	**-0.7**
NWAO				IAmb		IAmb	14 25 37.9	
	comp=Z,54nm,1.8s							
GYA	**Guiyang**	**31.94**	**331**	*eP*		P	14 25 16.8	+7.7
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
KMI	**Kunming**	**32.94**	**325**	P		**P**	**14 25 17.5**	**-0.5**
KMI				sP		sP	14 25 34.3	+1.8
KMI				pmax		pmax		
	comp=Z,17nm,1.0s							
BBOO	**Buckleboo**	**33.50**	**160**	P		**P**	**14 25 22.4**	**-0.1**
BBOO				IAmb		IAmb	14 25 26.0	
	comp=Z,32nm,1.6s							
NJ2	**Nanjing**	**33.57**	**354**	*eP*		**P**	**14 25 24.6**	**+1.6**
NJ2				pmax		pmax		
	comp=Z,8.0nm,0.5s							
JCJ	**Chichijima**	**33.86**	**32**	P		**P**	**14 25 25.3**	**-0.4**
	comp=Z,56nm,0.7s,baz=280,slow=9.6,SNR=4.7							
STKA	**Stephens Creek**	**34.95**	**152**	P		**P**	**14 25 35.7**	**+0.6**
	comp=Z,3.0nm,0.7s,baz=316,slow=7.9,SNR=11							
STKA				LR		LR	14 42 24.7	
	comp=Z,60nm,18.4s,baz=22,slow=41							
STKA	**Stephens Creek**	**34.95**	**152**	P		**P**	**14 25 35.4**	**+0.2**
XAN	**Xi'an**	**37.73**	**341**	P		P	14 26 13.8	+15
XAN				pmax		pmax		
	comp=Z,11nm,0.8s							
XAN				pmax		pmax		
	comp=Z,180nm,6.2s							
JHJ2	**Mitsune**	**37.87**	**23**	P		**P**	**14 25 59.2**	**-0.7**
INU	**Inuyama**	**38.89**	**18**	P		**P**	**14 26 07.3**	**-1.1**
INU				IAmb		IAmb	14 26 16.1	
	comp=Z,22nm,0.8s							
KSRS	**Korea Array**	**38.99**	**6**	LR		LR	14 42 34.9	
	comp=Z,26nm,20.0s,baz=256,slow=37							
MAJO	**Matsushiro**	**40.37**	**19**	P		**P**	**14 26 19.5**	**-1.3**
MAJO				IAmb		IAmb	14 26 27.6	
	comp=Z,17nm,0.8s							
MAT	**Matsushiro**	**40.37**	**19**	P		**P**	**14 26 19.1**	**-1.7**
MJAR	**Matsushiro Arr**	**40.37**	**19**	P		**P**	**14 26 19.5**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=197,slow=8.2,SNR=5.1							
MJAR	**Matsushiro Arr**	**40.37**	**19**	IAmb		IAmb	14 26 27.0	
	comp=Z,6.0nm,0.9s							
MJB9	**Matsu-Tunnel**	**40.37**	**19**	P		**P**	**14 26 19.4**	**-1.4**
MJB9				IAmb		IAmb	14 26 27.6	
	comp=Z,17nm,0.8s							
SHL	**Shillong**	**40.38**	**314**	P		**P**	**14 26 19.6**	**-1.6**
LZH	**Lanzhou**	**41.42**	**336**	*eP*		**P**	**14 26 31.8**	**+2.1**
LZH				pP		pP	14 26 42.0	+1.8
LZH				sP		sP	14 26 46.8	+2.4
LZH				PP		PP	14 28 13.8	+8.0
LZH				SS		SS	14 35 43.8	-3.9
LZH				pmax		pmax		
	comp=Z,13nm,1.0s							
LZH				pmax		pmax		
	comp=Z,51nm,4.2s							
LZH				LR		LR		
	comp=Z,210nm,13.0s							
LZH				LR		LR		
	comp=Z,390nm,14.1s							
LZH				LR		LR		
	comp=Z,350nm,14.3s							
CAN	**Canberra**	**41.45**	**147**	P		**P**	**14 26 29.3**	**-0.5**
CAN				IAmb		IAmb	14 26 53.3	
	comp=Z,27nm,1.3s							
HHC	**Hu-ho-hao-te**	**43.39**	**347**	*eP*		**P**	**14 26 46.8**	**+1.2**
HHC				pmax		pmax		
	comp=Z,5.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,88nm,5.6s							
ODAN	**Odare**	**44.41**	**312**	*eP*		**P**	**14 26 56.2**	**+2.0**
TAPN	**Taplejung**	**44.45**	**313**	*eP*		**P**	**14 26 56.2**	**+1.7**
RAMN	**Ramite**	**45.05**	**311**	*eP*		**P**	**14 27 01.3**	**+2.0**
CN2	**Changchun**	**45.12**	**2**	*eP*		**P**	**14 27 00.0**	**+0.8**
JIRN	**Jiri**	**45.74**	**312**	*eP*		**P**	**14 27 05.8**	**+0.9**
	comp=Z,6.3nm,0.4s							
GTA	**Gaotai**	**45.92**	**335**	P		**P**	**14 27 07.4**	**+1.6**
GTA				pP		pP	14 27 18.0	+1.6
GTA				sP		sP	14 27 22.6	+2.0
GTA				pmax		pmax		
	comp=Z,7.0nm,1.2s							
GUN	**Gumba**	**46.11**	**312**	*eP*		**P**	**14 27 08.9**	**+1.1**
USA0B	**Ussuriysk Arra**	**46.16**	**9**	P		**P**	**14 27 06.5**	**-0.9**
USA0B				IAmb		IAmb	14 27 39.5	
	comp=Z,15nm,0.7s							
GKN	**Gorkha**	**47.09**	**311**	*eP*		**P**	**14 27 16.4**	**+1.2**
HYB	**Hyderabad**	**47.67**	**295**	*iP*		**P**	**14 27 19.0**	**-0.7**
KOLN	**Koldanda**	**47.75**	**310**	*eP*		**P**	**14 27 21.2**	**+0.8**
	comp=Z,14nm,0.7s							
DANN	**Dangsing**	**47.93**	**311**	*eP*		**P**	**14 27 22.6**	**+0.7**
	comp=Z,26nm,0.7s							
ASAJ	**Asahikawa**	**48.64**	**19**	P		**P**	**14 27 26.1**	**-0.6**
	comp=Z,11nm,0.9s,baz=235,slow=5.3,SNR=6.3							
JKA	**Kamikawa-asahi**	**48.64**	**19**	P		**P**	**14 27 26.1**	**-0.7**
HMDM	**Hanimaadhoo**	**50.42**	**280**	P		**P**	**14 27 37.3**	**-3.5**
DGAR	**Diego Garcia**	**50.74**	**262**	P		**P**	**14 27 43.0**	**-0.3**
ULN	**Ulaanbaatar**	**51.07**	**346**	P		**P**	**14 27 44.8**	**-0.6**
SONM	**Songino Array**	**51.20**	**346**	P		**P**	**14 27 46.0**	**-0.3**
	comp=Z,3.4nm,0.6s,baz=161,slow=7.7,SNR=30							
SONM	**Songino Array**	**51.20**	**346**	IAmb		IAmb	14 27 48.8	
	comp=Z,2.9nm,0.6s							
WMQ	**Urumqi**	**55.06**	**329**	*eP*		**P**	**14 28 16.3**	**+1.6**
WMQ				pP		pP	14 28 26.3	+0.8
WMQ				pmax		pmax		
	comp=Z,10.0nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,110nm,4.1s							
KSH	**Kashi**	**59.29**	**319**	P		**P**	**14 28 47.3**	**+2.5**
KSH				S		**S**	**14 36 50.4**	**-0.6**
KSH				sS		sS	14 37 15.8	+7.7
KSH				SS		**SS**	**14 40 47.1**	**+0.9**
KSH				pmax		pmax		
	comp=Z,290nm,4.2s							
KSH				LR		LR		
	comp=Z,180nm,6.8s							
KSH				LR		LR		
	comp=Z,240nm,5.2s							
KSH				LR		LR		
	comp=Z,220nm,7.3s							
PRZ	**Przheval'sk**	**59.39**	**323**	P		**P**	**14 28 44.5**	**-1.1**
PRZ				pP		**pP**	**14 28 54.3**	**-2.1**
PRZ				IAmb		IAmb	14 28 55.2	
	comp=Z,11nm,0.7s							
MK31	**Makanchi Array**	**59.87**	**329**	P		**P**	**14 28 47.5**	**-1.0**
MK31				IAmb		IAmb	14 28 50.5	
	comp=Z,6.1nm,1.1s							
MKAR	**Makanchi Array**	**59.87**	**329**	P		**P**	**14 28 48.3**	**-0.3**
	comp=Z,2.6nm,0.5s,baz=123,slow=8.2,SNR=28							
MKAR				PcP		**PcP**	**14 29 35.6**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=148,slow=4.8,SNR=8.4							
MKAR				ScP		**ScP**	**14 33 38.4**	**+5.1**
	comp=Z,0.5nm,0.8s,baz=115,slow=5.1,SNR=3.9							
MAKZ	**Makanchi**	**60.05**	**329**	P		**P**	**14 28 48.0**	**-1.7**
MAKZ				IAmb		IAmb	14 28 52.2	
	comp=Z,15nm,1.6s							
PETK	**Petropavlovsk-**	**61.61**	**23**	P		**P**	**14 29 01.9**	**+1.7**
	comp=Z,4.1nm,1.1s,baz=206,slow=5.4,SNR=4.7							
AAK	**Ala-Archa**	**61.88**	**321**	P		**P**	**14 29 01.7**	**-0.8**
AAK				pP		**pP**	**14 29 10.5**	**-2.9**
KBL	**Kabul**	**61.91**	**311**	P		**P**	**14 29 01.3**	**-1.5**
KBL						**pP**	**14 29 10.9**	**-2.9**
KBL				IAmb		IAmb	14 29 24.3	
	comp=Z,8.1nm,1.0s							
YAK	**Yakutsk**	**63.53**	**3**	P		**P**	**14 29 12.3**	**-0.4**
	comp=Z,5.0nm,0.5s,baz=171,slow=1.7,SNR=5.8							
YAK	**Yakutsk**	**63.53**	**3**	P		**P**	**14 29 11.9**	**-0.9**
YAK				IAmb		IAmb	14 29 22.6	
	comp=Z,12nm,0.7s							
ZALV	**Zalesovo Beam**	**63.65**	**336**	P		**P**	**14 29 13.3**	**-0.5**
	comp=Z,3.1nm,0.8s,baz=131,slow=4.6,SNR=9.0							
KURK	**Kurchatov**	**64.26**	**330**	P		**P**	**14 29 16.8**	**-1.0**
KURK				IAmb		IAmb	14 29 19.2	
	comp=Z,12nm,1.2s							
SEY	**Seymchan**	**67.91**	**14**	P		**P**	**14 29 42.6**	**+1.6**
	comp=Z,1.8nm,0.8s,baz=225,slow=10.0,SNR=3.1							
BRVK	**Borovoye**	**69.82**	**329**	P		**P**	**14 29 51.3**	**-1.9**
TIXI	**Tiksi**	**73.09**	**2**	P		**P**	**14 30 11.6**	**-0.9**
	comp=Z,2.6nm,0.4s,baz=180,slow=24,SNR=13							
TIXI	**Tiksi**	**73.09**	**2**	P		**P**	**14 30 11.2**	**-1.2**
TIXI				IAmb		IAmb	14 30 19.4	
	comp=Z,10nm,1.1s							
ABKAR	**Akbulak array**	**73.90**	**323**	P		**P**	**14 30 16.2**	**-1.6**
VNDA	**Vanda**	**78.80**	**172**	P		**P**	**14 30 45.0**	**0.0**
	comp=Z,1.9nm,0.7s,baz=328,slow=6.7,SNR=11							
KBZ	**Khabaz**	**83.88**	**314**	P		**P**	**14 31 11.8**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=117,slow=9.0,SNR=2.1							
KMBO	**Kilima Mbogo**	**85.75**	**269**	P		**P**	**14 31 23.1**	**+0.1**
	comp=Z,4.7nm,0.9s,baz=60,slow=8.4,SNR=5.3							
KMBO	**Kilima Mbogo**	**85.75**	**269**	P		**P**	**14 31 20.9**	**-2.1**
KMBO				IAmb		IAmb	14 31 25.6	
	comp=Z,5.8nm,1.0s							
SYO	**Syowa Base**	**86.28**	**201**‖	*eX*		P	14 31 18.4	-5.7
BRTR	**Keskin Array B**	**90.46**	**310**	P		**P**	**14 31 44.2**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=78,slow=7.5,SNR=3.7							
ILAR	**Eielson Array**	**91.35**	**25**	P		**P**	**14 31 47.5**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=241,slow=5.8,SNR=3.4							
AKASG	**Malin Array Be**	**93.55**	**321**	P		**P**	**14 31 56.9**	**-1.7**
	comp=Z,0.2nm,0.4s,baz=73,slow=3.8,SNR=2.0							
KOLS	**Kolonicke sedl**	**98.17**	**319**	*eP*	DIFF	Pdif	14 32 26.4	+6.6
VYHS	**Vyhne**	**100.49**	**319**	*eP*	DIFF	**Pdif**	**14 32 37.9**	**+7.8**
SCHQ	**Schefferville**	**126.19**	**7**	PKP		**PKiKP**	**14 37 46.2**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=281,slow=5.2,SNR=3.4							
TXAR	**Lajitas Array**	**127.66**	**53**	PKP		**PKiKP**	**14 37 50.3**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=262,slow=2.6,SNR=3.2							
CPUP	**Villa Florida**	**152.36**	**179**	PKPbc		**PKiKP**	**14 38 40.1**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=114,slow=2.8,SNR=3.9							
LPAZ	**La Paz**	**159.20**	**148**	PKPab		**PKPab**	**14 39 22.0**	**+2.5**
	comp=Z,0.7nm,0.6s,baz=212,slow=8.4,SNR=4.2							

*TAP **14** 14:42:52.0, 24.°27N×122.°66E, h51km, ML3.8, C*
*JMA **14** 14:42:52.4±0.1, 24.°24N×122.°64E, h46km±3km, M3.1*
ISC 14 14:42:53.1±2.0, **24.°24N**±0.°03×**122.°66E**±0.°02, **h38**km±2km,
n107, σ1**§11**/197, **Taiwan region**

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

WFSB				*e*S	**Sn**	**14 43 26.5**	**-0.8**
	baz=314							
NNSH	**Datong**	**1.18 280**	*e*P	**Pn**	**14 43 12.2**	**-0.9**
	baz=268							
NNSH				*e*S	**Sn**	**14 43 27.4**	**-0.7**
	baz=268							
NWLT	**Wulai**	**1.18 297**	P	**Pn**	**14 43 12.8**	**-0.4**
	baz=304							
NWLT				*e*S	**Sn**	**14 43 27.3**	**-0.7**
	baz=304							
NNS	**Nan Shan**	**1.19 280**	*e*P	**Pn**	**14 43 12.6**	**-0.8**
	baz=267							
NNS				*e*S	**Sn**	**14 43 28.4**	**0.0**
	baz=267							
ESL	**Shilin**	**1.20 250**	P	**Pn**	**14 43 12.0**	**-1.3**
	baz=238							
ESL				*e*S	**Sn**	**14 43 27.0**	**-1.4**
	baz=238							
TWA	**Mucha**	**1.23 307**	*e*P	**Pn**	**14 43 13.3**	**-0.4**
	baz=305							
TWA				*e*S	**Sn**	**14 43 28.7**	**-0.4**
	baz=305							
JKRS	**Kuro-shima**	**1.23 90**	P	**Pn**	**14 43 14.1**	**+0.3**
JKRS			S	**Sn**	**14 43 30.0**	**+0.8**
YHNB	**Yeheng**	**1.25 290**	P	**Pn**	**14 43 14.4**	**+0.3**
	baz=276							
YHNB				*e*S	**Sn**	**14 43 29.8**	**+0.1**
	baz=276							
NHDH	**Xindian Distri**	**1.26 305**	*e*P	**Pn**	**14 43 14.6**	**+0.4**
	baz=314							
NHDH				*e*S	**Sn**	**14 43 29.9**	**0.0**
	baz=314							
EGFH	**Guangfu**	**1.26 244**	P	**Pn**	**14 43 13.2**	**-1.0**
	baz=241							
EGFH				S	**Sn**	**14 43 28.9**	**-1.0**
	baz=241							
NSK	**Sanguang**	**1.26 290**	*e*P	**Pn**	**14 43 14.2**	**-0.1**
	baz=276							
NSK				S	**Sn**	**14 43 29.7**	**-0.4**
	baz=276							
WHF	**Hehuan Shan**	**1.28 266**	P	**Pn**	**14 43 14.2**	**-0.6**
	baz=252							
WHF				S	**Sn**	**14 43 30.2**	**-0.7**
	baz=252							
TATO	**Taipei**	**1.29 305**	*e*P	**Pn**	**14 43 14.0**	**-0.7**
	baz=302							
TATO				*e*S	**Sn**	**14 43 30.9**	**+0.1**
	baz=302							
TAP1	**Taipei**	**1.31 308**	*e*P	**Pn**	**14 43 13.7**	**-1.1**
	baz=305							
TAP1				*e*S	**Sn**	**14 43 31.2**	**+0.2**
	baz=305							
YM01	**YM01**	**1.34 313**	*e*P	**Pn**	**14 43 14.8**	**-0.5**
	baz=310							
YM01				*e*S	**Sn**	**14 43 30.5**	**-1.4**
	baz=310							
YM11	**YM11**	**1.35 313**	*e*P	**Pn**	**14 43 14.9**	**-0.6**
	baz=311							
YM11				*e*S	**Sn**	**14 43 31.5**	**-0.8**
	baz=311							
HGSD	**Ruisui**	**1.35 237**	*e*P	**Pn**	**14 43 14.3**	**-1.2**
	baz=235							
HGSD				*e*S	**Sn**	**14 43 30.4**	**-1.8**
	baz=235							
TWT	**Tachien**	**1.35 271**	*e*P	**Pn**	**14 43 15.9**	**+0.3**
	baz=268							
TWT				*e*S	**Sn**	**14 43 32.5**	**0.0**
	baz=268							
YM10	**YM10**	**1.35 313**	*e*P	**Pn**	**14 43 14.6**	**-0.9**
	baz=310							
YM10				*e*S	**Sn**	**14 43 31.6**	**-0.7**
	baz=310							
YM05	**YM05**	**1.36 313**	*e*P	**Pn**	**14 43 14.7**	**-0.9**
	baz=311							
YM08	**YM08**	**1.36 314**	*e*P	**Pn**	**14 43 14.5**	**-1.0**
	baz=301							
JIJ	**Ishigaki jima**	**1.36 84**	P	**Pn**	**14 43 15.0**	**-0.5**
JIJ			S	**Sn**	**14 43 31.3**	**-1.0**
CHGB	**Renai**	**1.37 263**	*e*P	**Pn**	**14 43 15.5**	**-0.4**
	baz=250							
CHGB				*e*S	**Sn**	**14 43 32.2**	**-0.6**
	baz=250							
YM04	**YM04**	**1.37 312**	*e*P	**Pn**	**14 43 15.1**	**-0.7**
	baz=310							
YM04				*e*S	**Sn**	**14 43 31.4**	**-1.3**
	baz=310							
TDCB	**Techi**	**1.37 271**	*e*P	**Pn**	**14 43 15.6**	**-0.3**
	baz=268							
TDCB				*e*S	**Sn**	**14 43 31.9**	**-0.9**
	baz=268							
OWD	**Renai**	**1.39 259**	P	**Pn**	**14 43 15.2**	**-0.9**
	baz=256							
OWD				S	**Sn**	**14 43 31.5**	**-1.7**
	baz=256							
ANP	**Anpu**	**1.40 313**	*e*P	**Pn**	**14 43 14.8**	**-1.4**
	baz=298							
WLTB	**Daxi**	**1.42 296**	*e*P	**Pn**	**14 43 16.6**	**+0.2**
	baz=303							
WLTB				*e*S	**Sn**	**14 43 34.7**	**+0.9**
	baz=303							
EHY	**Hungye**	**1.43 240**	P	**Pn**	**14 43 15.5**	**-1.0**
	baz=249							
VWDT	**VWDT**	**1.47 251**	P	**Pn**	**14 43 16.8**	**-0.3**
	baz=240							
VWDT				*e*S	**Sn**	**14 43 34.1**	**-1.0**
	baz=240							
YULB	**Yu-li**	**1.50 236**	*e*P	**Pn**	**14 43 16.7**	**-0.9**
	baz=247							
YULB				*e*S	**Sn**	**14 43 34.9**	**-1.0**
	baz=247							
TWF1	**Yuli**	**1.53 235**	*i* P	**Pn**	**14 43 17.2**	**-0.7**
	baz=226							
TWF1				*e*S	**Sn**	**14 43 36.8**	**+0.2**
	baz=226							
JISG	**Ishigakijimahi**	**1.54 77**	P	**Pn**	**14 43 17.5**	**-0.6**
JISG			S	**Sn**	**14 43 35.8**	**-1.1**
LIOB	**Emei**	**1.55 286**	*e*P	**Pn**	**14 43 18.7**	**+0.5**
	baz=274							
LIOB				*e*S	**Sn**	**14 43 38.5**	**+1.4**
	baz=274							
NSTT	**Nanjuang**	**1.56 285**	P	**Pn**	**14 43 18.4**	**+0.1**
	baz=275							
NSTT				S	**Sn**	**14 43 37.5**	**+0.2**
	baz=275							
WHP	**Taichung City**	**1.56 272**	*e*P	**Pn**	**14 43 19.4**	**+0.9**
	baz=269							
WHP				*e*S	**Sn**	**14 43 38.6**	**+1.1**
	baz=269							
DPDB	**Guoxing**	**1.60 263**	P	**Pn**	**14 43 18.9**	**+0.1**
	baz=254							
DPDB				*e*S	**Sn**	**14 43 38.1**	**-0.2**
	baz=254							
SSLB	**Suanglung**	**1.62 254**	*e*P	**Pn**	**14 43 19.2**	**0.0**
	baz=252							
SSLB				*e*S	**Sn**	**14 43 38.0**	**-0.9**
	baz=252							
FULB	**Fuli**	**1.62 231**	*e*P	**Pn**	**14 43 17.6**	**-1.6**
	baz=229							
FULB				*e*S	**Sn**	**14 43 38.5**	**-0.4**
	baz=229							
CHKT	**Chengkung**	**1.64 227**	P	**Pn**	**14 43 17.9**	**-1.6**
	baz=225							
CHKT				S	**Sn**	**14 43 37.1**	**-2.2**
	baz=225							
TYC	**Yuchr**	**1.68 259**	P	**Pn**	**14 43 19.6**	**-0.4**
	baz=249							
TYC				S	**Sn**	**14 43 40.1**	**-0.1**
	baz=249							
TWQ1	**Liyutan**	**1.73 274**	P	**Pn**	**14 43 22.3**	**+1.7**
	baz=271							
TWQ1				S	**Sn**	**14 43 41.8**	**+0.4**
	baz=271							
NMLH	**Miaoli**	**1.73 280**	*e*P	**Pn**	**14 43 21.4**	**+0.7**
	baz=277							
NMLH				*e*S	**Sn**	**14 43 42.7**	**+1.2**
	baz=277							
YUS	**Yu-Shan**	**1.73 245**	*e*P	**Pn**	**14 43 21.3**	**+0.2**
	baz=243							
YUS				S	**Sn**	**14 43 41.0**	**-1.3**
	baz=243							
WHYT	**Xinyi Township**	**1.74 252**	*e*P	**Pn**	**14 43 21.3**	**+0.5**
	baz=243							
WHYT				*e*S	**Sn**	**14 43 42.4**	**+0.6**
	baz=243							
NSY	**Sanyi**	**1.74 276**	*e*S	**Sn**	**14 43 42.6**	**+0.8**
	baz=273							
TCU	**Taichung**	**1.81 268**	*e*P	**Pn**	**14 43 22.8**	**+1.0**
	baz=277							
TCU				S	**Sn**	**14 43 45.8**	**+2.3**
	baz=277							
WJS	**Zhushan**	**1.81 257**	P	**Pn**	**14 43 23.2**	**+1.4**
	baz=255							
WJS				S	**Sn**	**14 43 45.9**	**+2.3**
	baz=255							
ELDTW	**Lidau**	**1.83 236**	P	**Pn**	**14 43 21.0**	**-1.2**
	baz=234							
WNT	**Mingjian**	**1.84 259**	P	**Pn**	**14 43 23.6**	**+1.5**
	baz=247							
WNT				S	**Sn**	**14 43 46.2**	**+2.0**
	baz=247							
ALS	**Alishan**	**1.85 247**	P	**Pn**	**14 43 23.6**	**+1.0**
	baz=245							
ALS				S	**Sn**	**14 43 44.6**	**-0.1**
	baz=245							
WDJ	**Dajia District**	**1.85 274**	*e*S	**Sn**	**14 43 45.6**	**+1.3**
	baz=271							
JTJ	**Tarama**	**1.90 77**	P	**Pn**	**14 43 23.2**	**+0.2**
JTJ			*e*S	**Sn**	**14 43 45.3**	**-0.5**
CHN5	**Tsauling**	**1.92 251**	P	**Pn**	**14 43 24.4**	**+1.0**
	baz=249							
CHN5				S	**Sn**	**14 43 47.6**	**+1.3**
	baz=249							
WCHH	**Zhanghua**	**1.93 266**	*e*P	**Pn**	**14 43 24.5**	**+1.2**
	baz=263							
WCHH				S	**Sn**	**14 43 48.2**	**+1.9**
	baz=263							
WGK	**Gukeng**	**2.00 254**	*e*P	**Pn**	**14 43 26.6**	**+2.3**
	baz=242							
WGK				*e*S	**Sn**	**14 43 49.9**	**+1.9**
	baz=242							
WDLH	**Douliu**	**2.02 255**	*e*P	**Pn**	**14 43 25.6**	**+1.0**
	baz=243							
WDLH				*e*S	**Sn**	**14 43 51.1**	**+2.5**
	baz=243							
TWGBT	**Beinan**	**2.02 226**	*e*P	**Pn**	**14 43 23.1**	**-1.6**
	baz=235							
TWGBT				*e*S	**Sn**	**14 43 46.8**	**-2.0**
	baz=235							
TWG	**Pinlang**	**2.03 226**	*e*P	**Pn**	**14 43 23.8**	**-1.0**
	baz=234							
TWG				*e*S	**Sn**	**14 43 47.7**	**-1.1**
	baz=234							
STYT	**Tauyuan**	**2.05 239**	P	**Pn**	**14 43 25.4**	**+0.3**
	baz=230							
STYT				S	**Sn**	**14 43 49.5**	**+0.1**
	baz=230							
TPUB	**Ta-pu**	**2.08 244**	*e*P	**Pn**	**14 43 26.7**	**+1.2**
	baz=242							
TPUB				S	**Sn**	**14 43 51.6**	**+1.4**
	baz=242							
CHN4	**Tsaushan**	**2.09 245**	*e*P	**Pn**	**14 43 26.8**	**+1.2**
	baz=243							
CHN4				S	**Sn**	**14 43 52.5**	**+2.1**
	baz=243							
WTP	**Ta-pu**	**2.12 243**	*i* P	**Pn**	**14 43 27.3**	**+1.3**
	baz=240							
WTP				S	**Sn**	**14 43 52.9**	**+1.7**
	baz=240							
CHN2	**Minshiung**	**2.12 251**	P	**Pn**	**14 43 27.1**	**+1.1**
	baz=249							
CHN2				S	**Sn**	**14 43 52.9**	**+1.8**
	baz=249							
RLNB	**Erlin**	**2.13 261**	*e*P	**Pn**	**14 43 27.0**	**+0.9**
	baz=259							
RLNB				*e*S	**Sn**	**14 43 52.7**	**+1.3**
	baz=259							
CHY	**Chiayi**	**2.17 251**	*e*S	**Sn**	**14 43 54.0**	**+1.5**
	baz=248							
WTCT	**Ta-ch'eng**	**2.21 261**	*e*S	**Sn**	**14 43 54.7**	**+1.5**
	baz=258							
TWK	**Hsinying**	**2.21 245**	P	**Pn**	**14 43 28.9**	**+1.6**
	baz=242							
TWK			*i* S	**Sn**	**14 43 55.1**	**+1.7**
	baz=242							
CHN1	**Nanshi**	**2.22 242**	P	**Pn**	**14 43 29.2**	**+1.9**
	baz=240							
CHN1				S	**Sn**	**14 43 55.1**	**+1.6**
	baz=240							
SLGT	**Liugui**	**2.22 237**	*e*P	**Pn**	**14 43 27.7**	**+0.3**
	baz=229							
SLGT				*e*S	**Sn**	**14 43 55.4**	**+1.7**
	baz=229							
SGST	**Jiashian**	**2.22 239**	P	**Pn**	**14 43 28.4**	**+0.9**
	baz=238							
SGST				S	**Sn**	**14 43 55.0**	**+1.3**
	baz=238							
SNST	**Tainan City**	**2.23 243**	*e*P	**Pn**	**14 43 28.9**	**+1.5**
	baz=241							
SNST				*e*S	**Sn**	**14 43 55.0**	**+1.3**
	baz=241							
ECL	**Taimali**	**2.26 224**	P	**Pn**	**14 43 26.7**	**-1.3**
	baz=232							
ECL				*e*S	**Sn**	**14 43 52.5**	**-2.2**
	baz=232							
WLGB	**Puzi**	**2.29 251**	*e*S	**Sn**	**14 43 57.5**	**+2.3**
	baz=249							
WSF	**Szhu**	**2.31 256**	S	**Sn**	**14 43 58.0**	**+2.2**
	baz=265							
JIRB	**Irabujima**	**2.36 75**	P	**Pn**	**14 43 29.7**	**+0.4**
JIRB			*e*S	**Sn**	**14 43 56.8**	**-0.3**
CHN3	**Shinhua**	**2.40 242**	S	**Sn**	**14 44 01.3**	**+3.3**
	baz=240							
CHN8	**Yiju**	**2.41 249**	*e*P	**Pn**	**14 43 31.5**	**+1.5**
	baz=247							
CHN8				S	**Sn**	**14 44 00.0**	**+1.7**
	baz=247							
MASBT	**Mashibuluo**	**2.47 229**	*e*P	**Pn**	**14 43 30.6**	**-0.1**
	baz=226							
MASBT				*e*S	**Sn**	**14 44 00.2**	**+0.5**
	baz=226							
EAST	**Anshuo**	**2.49 222**	*e*P	**Pn**	**14 43 30.2**	**-0.9**
	baz=228							
EAST				*e*S	**Sn**	**14 43 58.5**	**-1.7**
	baz=228							
SCLT	**Jiali**	**2.50 245**	*e*S	**Sn**	**14 44 02.0**	**+1.7**
	baz=243							
PTTC	**Pingtan**	**2.91 296**	*e*P	**Pn**	**14 43 36.0**	**-0.8**
	baz=293							
VWUC	**VWUC**	**3.02 285**	*e*P	**Pn**	**14 43 38.0**	**-0.4**
	baz=281							
MATB	**Ma-tsu**	**3.11 308**	*e*P	**Pn**	**14 43 40.2**	**+0.6**
	baz=306							

BJI ***14*** *14:59:33.3±0.0, 16°.32S×173°.16W, h6km, mB5.6/34, mb5.3/48, Ms5.3/27, Ms7 4.9/25*

IDC ***14*** *14:59:35.0±0.4, 16°.32S×173°.36W, h0km, mb5.3/33, mb1 5.3/34, mb1mx5.3/40, mbtmp5.2/34, ML4.8/1, MS4.6/29, Ms1 4.6/29, ms1mx4.6/32, Error ellipse: s-maj=15.1km s-min=11.4km az=125.0*

NEIC ***14*** *14:59:35.6±1.5, 16°.41S±0°.06×173°.28W±0°.09, h10km, mb5.4/266, Mwb5.3/24, Error ellipse: s-maj=14.5km s-min=10.2km az=86.0, Moment Tensor Solution. Moment tensor: Scale 10^17 Nm; Mrr 1.05; Mθθ -0.72; Mϕϕ -0.33; Mrθ 0.24; Mθϕ 0.57; Mϕr 0.38; Fault plane solution: M0 1.18000×10^17 NP1:φs 105.70000°, δ48.05000°, λ60.66000°. NP2:φs 325.76000°, δ49.59000°, λ118.60000°. Principal axes: T 1.2256, Plg69.0000°, Azm304.0000°; N -0.0979, Plg21.0000°, Azm126.0000°; P -1.1277, Plg1.0000°, Azm36.0000°;*

BGR ***14*** *14:59:38.5±0.0, 16°.95S×173°.18W, h33km*

MOS ***14*** *14:59:42.2±1.4, 15°.75S×173°.23W, h43km, mb5.5/70, MS5.0/4, Error ellipse: s-maj=8.8km s-min=6.6km az=77.6*

GCMT ***14*** *14:59:43.6±0.1, 16°.30S±0°.01×172°.92W±0°.01, h42km, MW5.3/144, Moment Tensor Solution. s118,c185; s144,c254; Duration: 1s2 Moment tensor: Scale 10^17 Nm; Mrr 0.93±.02; Mθθ 0.08±.02; Mϕϕ -1.01±.02; Mrθ 0.58±.02; Mθϕ -0.32±.01; Mϕr 0.65±.02; Best double couple: M0 1.34300×10^17 NP1:φs 176.00000°, δ29.00000°, λ57.00000°. NP2:φs 33.00000°, δ66.00000°, λ107.00000°. Principal axes: T 1.3170, Plg65.0000°, Azm332.0000°; N 0.0500, Plg15.0000°, Azm206.0000°; P -1.3680, Plg19.0000°, Azm110.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 14 14:59:38.9±0.2,**16°.37S**±0°.04×**173°.23W**±0°.04,**h32km, n1104,**σ1**938**/1114,**mb5.4**/223,**MS4.8**/41,**113C-25D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.82**	**30**	Pn		**Pn**	**15 00 18.9**	**-2.9**
	137nm,0.3s,baz=197,slow=2.8,SNR=59							
AFI				Sn		**Sn**	**15 00 47.1**	**-7.6**
	831nm,0.3s,baz=95,slow=22,SNR=12							
AFI				LR		LR	15 01 11.4	
	comp=Z,3μm,20.6s,baz=237,slow=34							
AFI	**Afiamalu**	**2.82**	**30**			**Pn**	**15 00 18.7**	**-3.1**
NIUE	**Niue**	**4.14**	**131**	P		**Pn**	**15 00 38.1**	**-1.7**
	baz=4.0,SNR=235							
NIUE	**Niue**	**4.14**	**131**			**Pn**	**15 00 37.7**	**-2.2**
NIUE				Sn		**Sn**	**15 01 20.5**	**-6.7**
MSVF	**Nonsavu**	**8.45**	**260**	*d* iP		Pn	15 01 46.1	+6.8
MSVF	**Nonsavu**	**8.45**	**260**			Pn	15 01 46.4	+7.1
GLKZ	**Green Lake**	**13.54**	**198**	P		**Pn**	**15 02 47.0**	**-1.8**
GLKZ				S		**Sn**	**15 05 11.6**	**-6.6**
KNTN	**Kanton**	**13.59**	**6**			**Pn**	**15 02 47.5**	**-2.0**
RAR	**Rarotonga**	**13.62**	**113**	P		**Pn**	**15 02 47.2**	**-2.7**
RAR	**Rarotonga**	**13.62**	**113**	Pn		**Pn**	**15 02 47.1**	**-2.8**
	4.4nm,0.3s,baz=261,slow=6.8,SNR=26							
RAR				Sn		Sn	15 05 08.7	-11
	2.1nm,0.3s,baz=142,slow=19,SNR=3.2							
RAR				LR		LR	15 06 51.1	
	comp=Z,4μm,21.0s,baz=302,slow=32							
RAR	**Rarotonga**	**13.62**	**113**			**Pn**	**15 02 47.2**	**-2.7**
DZM	**Mont Dzumac**	**20.01**	**250**	*e*P		**P**	**15 04 09.0**	**-0.2**
	487nm,1.1s							
DZM	**Mont Dzumac**	**20.01**	**250**	P		**P**	**15 04 08.9**	**-0.2**
	2.7nm,0.3s,baz=102,slow=21,SNR=23							
DZM				LR		LR	15 10 44.4	
	comp=Z,4μm,20.8s,baz=86,slow=34							
DZM	**Mont Dzumac**	**20.01**	**250**	P		**P**	**15 04 09.1**	**-0.1**
DZM				IAmb		IAmb	15 04 18.2	
	comp=Z,181nm,0.8s							
OUZ	**Omahuta**	**22.16**	**210**	P		**P**	**15 04 29.7**	**-2.4**
OUZ	**Omahuta**	**22.16**	**210**	P		**P**	**15 04 31.0**	**-1.2**
TARA	**Tarawa**	**22.30**	**321**	P		**P**	**15 04 33.0**	**-0.8**
MXZ	**Matakaoa Point**	**22.40**	**198**	P		**P**	**15 04 32.2**	**-2.5**
WCZ	**Waipu Caves**	**22.42**	**207**	P		**P**	**15 04 36.7**	**+1.9**
KUZ	**Kuaotunu**	**22.54**	**204**	P		**P**	**15 04 36.7**	**+0.5**
PAE	**Paea**	**22.65**	**97**	*e*P		**P**	**15 04 39.7**	**+2.2**
	comp=Z,22nm,1.2s							
PAE	**Paea**	**22.65**	**97**	*e*T		T	15 27 55.3	
	comp=Z,16nm,0.4s							
PPT	**Papeete**	**22.65**	**96**	P		**P**	**15 04 38.8**	**+1.2**
	comp=Z,36nm,1.1s,baz=34,slow=18,SNR=2.5							
PPT				LR		LR	15 10 58.5	
	comp=Z,2μm,21.1s,baz=242,slow=30							
PPT	**Papeete**	**22.65**	**96**	P		**P**	**15 04 37.3**	**-0.2**
PPT2	**Papeete2**	**22.65**	**97**	*e*P		**P**	**15 04 40.5**	**+2.9**
	comp=Z,167nm,1.2s							
PPT2				*e*LQ		LQ	15 08 44.4	
	comp=Z,1μm,24.5s							
PPT2				*e*LQ		LQ	15 09 16.0	
	comp=Z,2μm,29.8s							
PPT2				*e*LR		LR	15 10 06.2	
	comp=Z,5μm,25.0s,baz=261							
PPT2	**Papeete2**	**22.65**	**97**	*e*T		T	15 27 56.3	
	comp=Z,29nm,0.4s							
PPTF	**Pamatai, Papee**	**22.66**	**97**	P		**P**	**15 04 38.0**	**+0.2**
PPTF				IAmb		IAmb	15 04 54.3	
	comp=Z,171nm,1.1s							
TIAR	**Tiarei**	**22.87**	**96**	*e*P		**P**	**15 04 42.3**	**+2.4**
	comp=Z,33nm,1.1s							
TIAR	**Tiarei**	**22.87**	**96**	*e*T		T	15 28 12.1	
	comp=Z,12nm,0.4s							
TVO	**Taravao**	**22.96**	**97**	*e*P		**P**	**15 04 43.2**	**+2.4**
	comp=Z,61nm,1.3s							
TVO	**Taravao**	**22.96**	**97**	*e*T		T	15 28 18.9	
	comp=Z,10nm,0.4s							
MKAZ	**Moumakai**	**23.07**	**204**	P		**P**	**15 04 41.9**	**+0.2**
TGRZ	**Tauranga**	**23.21**	**202**	P		**P**	**15 04 47.1**	**+3.9**
OPRZ	**Ohinepanea**	**23.21**	**201**	P		**P**	**15 04 47.0**	**+3.9**
CNGZ	**Carnagh Statio**	**23.28**	**197**	P		**P**	**15 04 47.8**	**+4.0**
CNGZ				S		**S**	**15 08 55.1**	**+1.1**
TBI	**Tubuai**	**23.39**	**111**	*e*P		**P**	**15 04 47.5**	**+2.5**
	comp=Z,414nm,1.3s							
TBI				*e*S		**S**	**15 08 55.6**	**-0.4**
	comp=Z,2μm,27.5s							
TBI				*e*LR		LR	15 10 19.6	
	comp=Z,7μm,27.2s,baz=286							
TBI	**Tubuai**	**23.39**	**111**	*e*T		T	15 28 56.5	
	comp=Z,66nm,0.4s							
URZ	**Urewera**	**23.41**	**199**	P		**P**	**15 04 44.2**	**-0.8**
	comp=Z,36nm,0.5s,baz=56,slow=2.4,SNR=26							
URZ				S		**S**	**15 08 52.1**	**-4.0**
	comp=Z,8.4nm,1.0s,baz=198,slow=20,SNR=3.8							
URZ	**Urewera**	**23.41**	**199**	P		**P**	**15 04 44.4**	**-0.6**
URZ				S		**S**	**15 08 52.6**	**-3.5**
URZ	**Urewera**	**23.41**	**199**	P		**P**	**15 04 43.6**	**-1.4**
URZ				IAmb		IAmb	15 05 09.9	
	comp=Z,93nm,1.0s							
KMRZ	**Kaimai**	**23.43**	**202**	P		**P**	**15 04 48.4**	**+3.1**
KARZ	**Kaharoa**	**23.48**	**201**	P		**P**	**15 04 48.2**	**+2.5**
TOZ	**Tahuroa Road**	**23.49**	**203**	P		**P**	**15 04 47.7**	**+1.8**
OMRZ	**Omania**	**23.51**	**201**	P		**P**	**15 04 49.5**	**+3.4**
RAGZ	**Rawiri**	**23.53**	**199**	P		**P**	**15 04 47.2**	**+0.9**
RAGZ				S		**S**	**15 08 55.5**	**-2.7**
RRRZ	**Republican Roa**	**23.67**	**200**	P		**P**	**15 04 51.5**	**+3.9**
MUGZ	**Murupara**	**23.71**	**200**	P		**P**	**15 04 50.4**	**+2.3**
MUGZ				S		**S**	**15 08 58.6**	**-2.5**
HSRZ	**Hossack Road**	**23.74**	**201**	P		**P**	**15 04 51.2**	**+3.0**
HRRZ	**Handcock Road**	**23.80**	**201**	P		**P**	**15 04 52.9**	**+4.1**
SNGZ	**Shannon Statio**	**23.81**	**198**	P		**P**	**15 04 50.7**	**+1.7**
SNGZ				S		**S**	**15 09 03.2**	**+0.6**
GRRZ	**Galatos Road**	**23.82**	**201**	P		**P**	**15 04 53.1**	**+4.0**
KNZ	**Kokohu**	**23.93**	**198**	P		**P**	**15 04 54.4**	**+4.4**
MHGZ	**Mahia Peninsul**	**23.99**	**197**	P		**P**	**15 04 53.1**	**+2.5**
TLZ	**Tolley Road**	**24.00**	**202**	P		**P**	**15 04 52.1**	**+1.3**
RAHZ	**Arahi**	**24.01**	**199**	P		**P**	**15 04 51.6**	**+0.7**
RAHZ				S		**S**	**15 09 08.5**	**+2.6**
MTHZ	**Maungataniwha**	**24.03**	**199**	P		**P**	**15 04 52.2**	**+1.2**
MTHZ				S		**S**	**15 09 09.1**	**+2.9**
XMAS	**Kiritimati**	**24.04**	**42**	P		**P**	**15 04 52.0**	**+0.7**
XMAS				IAmb		IAmb	15 05 16.6	
	comp=Z,96nm,0.8s							
MEH	**Mehetia**	**24.09**	**97**	*e*T		T	15 29 43.5	
	comp=Z,13nm,0.2s							
RATZ	**Rangitukua**	**24.40**	**201**	P		**P**	**15 04 55.4**	**+1.0**
HIZ	**Hauiti**	**24.42**	**203**	P		**P**	**15 04 56.9**	**+2.4**
BKZ	**Black Stump Fm**	**24.43**	**200**	P		**P**	**15 04 54.8**	**+0.1**
BKZ				S		**S**	**15 09 11.7**	**-0.9**
BKZ	**Black Stump Fm**	**24.43**	**200**	P		**P**	**15 04 53.2**	**-1.5**
RITZ	**Rihia Road**	**24.47**	**201**	P		**P**	**15 04 55.6**	**+0.6**
KATZ	**Kakaramea**	**24.52**	**201**	P		**P**	**15 04 57.1**	**+1.5**
MCHZ	**McNeill Hill**	**24.62**	**199**	P		**P**	**15 04 58.1**	**+1.7**
MCHZ				S		**S**	**15 09 21.1**	**+5.5**
WTVZ	**West Tongariro**	**24.68**	**201**	P		**P**	**15 04 59.3**	**+2.2**
KWHZ	**Kaweka Forest**	**24.69**	**199**	P		**P**	**15 04 59.2**	**+2.1**
KWHZ				S		**S**	**15 09 19.6**	**+2.8**
TWVZ	**Taurewa**	**24.70**	**201**	P		**P**	**15 04 57.1**	**-0.1**
NGZ	**Ngauruhoe**	**24.73**	**201**	P		**P**	**15 04 59.0**	**+1.4**
TUVZ	**Tukino**	**24.80**	**201**	P		**P**	**15 04 57.9**	**-0.3**
BHHZ	**Black Hill Sta**	**24.86**	**200**	P		**P**	**15 04 57.8**	**-0.9**
BHHZ				S		**

BHW Baring Head 26.98 200 P P 15 05 17.3 -0.4
PLWZ Palliser 27.00 199 P P 15 05 17.6 -0.3
HNR Honiara 27.02 281 P P 15 05 17.9 -0.5
HNR pmax pmax
comp=Z,209nm,1.0s
HNR Honiara 27.02 281 P P 15 05 16.0 -2.3
comp=Z,46nm,0.7s,baz=153,slow=4.5,SNR=2.6
HNR LR LR 15 14 26.5
comp=Z,8µm,21.0s,baz=126,slow=33
HNR Honiara 27.02 281 P P 15 05 17.9 -0.5
QRZ Quartz Range 27.31 204 P P 15 05 21.4 +0.7
TUWZ Tuamarina 27.32 201 P P 15 05 19.1 -1.6
NNZ Nelson 27.33 202 P P 15 05 19.0 -1.9
NNZ IAmb IAmb 15 06 10.1
comp=Z,78nm,1.0s
CMWZ Cape Campbell 27.51 201 P P 15 05 22.5 +0.1
BSWZ Blackbirch Sta 27.59 201 P P 15 05 23.4 +0.1
THZ Tophouse 27.98 202 P P 15 05 26.1 -0.6
THZ IAmb IAmb 15 05 32.4
comp=Z,42nm,0.6s
KHZ Kahutara 28.33 201 P P 15 05 29.5 -0.2
KHZ IAmb IAmb 15 05 40.0
comp=Z,51nn,0.6s
LTZ Lake Taylor 29.10 202 P P 15 05 35.5 -1.1
LHI Lord Howe Isla 29.36 234 P P 15 05 38.9 -0.2
LHI IAmb IAmb 15 05 39.7
comp=Z,78nm,0.8s
OXZ Oxford 29.66 202 P P 15 05 40.1 -1.5
MQZ McQueen's Vall 29.77 201 P P 15 05 43.4 +0.9
MQZ IAmb IAmb 15 06 18.2
comp=Z,120nm,1.4s
RPZ Rata Peaks 30.35 203 P P 15 05 47.6 -0.2
comp=Z,26nm,0.8s,baz=30,slow=4.5,SNR=19
RPZ Rata Peaks 30.35 203 P P 15 05 47.9 +0.2
RPZ IAmb IAmb 15 05 56.6
comp=Z,42nn,0.6s
FOZ Fox Glacier 30.68 205 P P 15 05 50.1 -0.4
FOZ IAmb IAmb 15 06 00.3
comp=Z,119nm,1.4s
LBZ Lake Benmore 31.25 203 P P 15 05 54.1 -1.6
LBZ IAmb IAmb 15 06 12.2
comp=Z,176nm,2.0s
ODZ Otahua Downs 31.64 202 P P 15 05 60.0 +0.9
ODZ IAmb IAmb 15 06 33.7
comp=Z,86nm,1.4s
WKZ Wanaka 32.07 204 P P 15 06 01.9 -1.0
WKZ IAmb IAmb 15 06 51.8
comp=Z,58nm,1.1s
MLZ Mavora Lakes 32.88 205 P P 15 06 09.6 -0.3
MLZ IAmb IAmb 15 06 14.1
comp=Z,116nm,1.5s
TAOE Nuku Hiva Isla 33.09 81 eT T 15 40 51.8
comp=Z,132nn,0.2s
DCZ Deep Cove 33.35 205 P P 15 06 14.0 +0.1
DCZ IAmb IAmb 15 06 48.7
comp=Z,94nn,1.4s
WHZ Wether Hill Ro 33.38 204 P P 15 06 13.6 -0.7
WHZ IAmb IAmb 15 06 17.9
comp=Z,43nm,0.7s
EIDS Eidsvold 34.44 249 P P 15 06 22.3 -1.5
baz=35,SNR=14
EIDS Eidsvold 34.44 249 P P 15 06 22.3 -1.5
ARMA Armidale 35.00 240 P P 15 06 27.8 -0.8
baz=35,SNR=69
ARMA Armidale 35.00 240 P P 15 06 28.0 -0.7
ARMA IAmb IAmb 15 06 29.0
comp=Z,66nn,0.7s
MGCD Mangrove Creek 36.24 236 P P 15 06 38.6 -0.5
baz=36,SNR=6.8
RMQ Roma 36.67 248 P P 15 06 42.3 -0.7
baz=37,SNR=31
CNB Canberra Magne 38.30 233 P P 15 06 56.1 -0.6
baz=38,SNR=31
CAN Canberra 38.58 233 P P 15 06 57.9 -1.1
CAN pmax pmax
comp=Z,29nn,0.8s
CAN Canberra 38.58 233 P P 15 06 57.9 -1.1
YNG Young 38.73 235 P P 15 06 59.7 -0.5
baz=39,SNR=9.5
MILA Mila 39.07 231 P P 15 07 04.8 +1.6
baz=39,SNR=3.9
PMG Port Moresby 39.18 275 cP P 15 07 05.0 +0.8
PMG pmax pmax
comp=Z,365nm,0.9s
PMG Port Moresby 39.18 275 P P 15 07 05.4 +1.2
KHU Kahuku 39.40 27 P P 15 07 08.5 +2.3
KHU pmax pmax
comp=Z,138nm,1.2s
KHU Kahuku 39.40 27 P P 15 07 08.5 +2.3
KHU IAmb IAmb 15 07 34.0
comp=Z,138nn,1.2s
KHLU Kahalu`u 39.59 26 P P 15 07 09.5 +1.9
KHLU IAmb IAmb 15 07 10.2
comp=Z,84nm,0.8s
MLOA Mauna Loa Obse 39.68 27 P P 15 07 10.1 +1.5
MLOA IAmb IAmb 15 07 43.9
comp=Z,80nm,1.0s
HMH Humu'ula Sheep 39.78 27 P P 15 07 11.9 +2.6
HPAH Hawaii Prepara 40.06 26 P P 15 07 13.4 +1.9
HPAH IAmb IAmb 15 07 14.2
comp=Z,105nm,0.7s
CMSA Cobar Meteorol 40.21 240 P P 15 07 11.6 -1.0
baz=40,SNR=192
KIP Kipapa 40.41 22 P P 15 07 15.7 +1.4
KIP pmax pmax
comp=Z,250nm,1.4s
KIP Kipapa 40.41 22 P P 15 07 15.7 +1.4
MTSU Mount Surprise 40.52 261 P P 15 07 14.9 -0.4
baz=41,SNR=17
WAKE Wake Island 40.58 330 P P 15 07 16.5 +0.8
QLP Quilpie 40.71 248 P P 15 07 15.6 -1.2
baz=41,SNR=18
H11N3 WAKE ISLAND Hy 40.83 331 T T 15 50 29.7
baz=150,slow=76,SNR=100
H11N1 WAKE ISLAND Hy 40.84 331 T T 15 50 38.1
baz=150,slow=76,SNR=106
H11N2 WAKE ISLAND Hy 40.85 331 T T 15 50 31.1
baz=150,slow=76,SNR=122
MANU Manus Island 41.31 286 P P 15 07 22.8 +1.0
TOO Toolangi 41.99 232 P P 15 07 26.2 -1.1
baz=42,SNR=36
TOO Toolangi 41.99 232 P P 15 07 26.1 -1.1
TOO pmax pmax
comp=Z,45nm,0.8s
TOO Toolangi 41.99 232 P P 15 07 26.1 -1.1
COEN Coen 42.09 267 P P 15 07 28.2 -0.1
baz=42,SNR=4.1
COEN Coen 42.09 267 P P 15 07 28.5 +0.2
COEN IAmb IAmb 15 07 32.5
comp=Z,57nm,0.8s
STKA Stephens Creek 43.71 241 P P 15 07 40.5 -0.7
STKA pmax pmax
comp=Z,22nn,0.9s
STKA Stephens Creek 43.71 241 P P 15 07 40.6 -0.5
comp=Z,87nm,0.8s,baz=91,slow=9.3,SNR=188
STKA LR LR 15 25 37.0
comp=Z,1µm,18.1s,baz=70,slow=36
STKA Stephens Creek 43.71 241 P P 15 07 40.5 -0.7
ARPS Mount Arapiles 44.55 234 P P 15 07 47.0 -0.9
baz=45,SNR=18
QIS Mount Isa 44.82 257 P P 15 07 49.7 -0.6
baz=45,SNR=9.7
HTT Hallett 46.19 239 P P 15 08 00.6 -0.4
baz=46,SNR=39
JAY Jayapura 47.34 282 P P 15 08 10.3 +0.1
comp=Z,460nmcomp=Z,23nm,0.9s
BBOO Buckleboo 48.48 241 P P 15 08 17.8 -0.9
baz=49,SNR=102
BBOO Buckleboo 48.48 241 P P 15 08 17.9 -0.9
SMPI Sarmi 49.40 282 P P 15 08 26.0 0.0
comp=Z,48nm,1.0s
WRAB Tennant Creek 49.78 258 ceP P 15 08 27.5 -1.4
WRAB pmax pmax
comp=Z,58nm,1.3s
WRAB Tennant Creek 49.78 258 P P 15 08 28.1 -0.9
WRAB IAmb IAmb 15 08 30.3
comp=Z,31nm,0.7s
WRA Warramunga Arr 49.79 258 P P 15 08 27.7 -1.3
comp=Z,19nm,0.6s,baz=94,slow=6.8,SNR=136
WRA PcP PcP 15 09 50.5 +0.9
comp=Z,26nm,0.9s,baz=89,slow=3.9,SNR=9.6
WRA LR LR 15 29 17.8
comp=Z,887nm,18.0s,baz=105,slow=36
WRA Warramunga Arr 49.79 258 IAmb IAmb 15 08 30.3
comp=Z,2.6nm,0.7s
AS31 Alice Springs 49.98 253 P P 15 08 29.3 -1.1
AS31 IAmb IAmb 15 08 30.6
comp=Z,49nm,0.7s
ASAR Alice Springs 49.98 253 P P 15 08 29.2 -1.1
comp=Z,217nm,0.8s,baz=90,slow=7.9,SNR=1800
ASAR PcP PcP 15 09 51.4 +1.1
comp=Z,27nm,0.9s,baz=97,slow=4.3,SNR=7.1
ASAR ScP ScP 15 13 46.5 +2.7
comp=Z,1.7nm,0.9s,baz=84,slow=5.0,SNR=3.9
ASAR S S 15 15 34.2 -5.1
comp=Z,0.7nm,0.7s,baz=90,slow=16,SNR=3.6
ASAR LR LR 15 28 52.3
comp=Z,1µm,18.4s,baz=96,slow=35
BAKI Biak 52.11 282 P P 15 08 47.3 +0.8
comp=Z,74nm,1.1s
KDU Kakadu 52.57 266 P P 15 08 49.6 -0.2
baz=53,SNR=29
MTN Manton Dam 53.82 266 P P 15 08 58.5 -0.6
RKPI Ransiki, Papua 53.83 280 P P 15 09 00.4 +1.2
comp=Z,69nn,0.7s
WRKA Warakurna 55.03 251 P P 15 09 06.9 -0.9
baz=55,SNR=582
FORT Forrest 55.13 244 P P 15 09 07.1 -1.3
baz=55,SNR=66
FORT Forrest 55.13 244 P P 15 09 07.0 -1.4
KNRA Kununurra 55.59 262 P P 15 09 11.4 -0.5
baz=56,SNR=29
KNRA Kununurra 55.59 262 P P 15 09 12.0 +0.1
SIJI Sorong 56.78 280 P P 15 09 20.8 +0.3
comp=Z,145nm,0.6s,baz=96,slow=3.8,SNR=100
SWI Sorong 56.79 280 P P 15 09 20.7 +0.2
comp=Z,2µmcomp=Z,247nm,0.7s
FITZ Fitzroy Crossi 58.18 259 P P 15 09 30.2 0.0
baz=58,SNR=21
NLAI Namlea 60.02 276 P P 15 09 43.7 +0.6
comp=Z,67nn,1.0s
LBMI Labuha 60.42 279 P P 15 09 46.6 +0.7
comp=Z,284µmcomp=Z,120nm,0.9s
KMBL Kambalda 60.43 243 P P 15 09 44.5 -1.2
baz=60,SNR=6.8
TNTI Ternate 61.00 280 P P 15 09 50.8 +1.0
comp=Z,73nm,1.0s
TNTI Ternate 61.00 280 P P 15 09 50.2 +0.4
SOEI Soe 61.05 268 P P 15 09 51.3 +1.0
SANI Sanana 61.43 277 P P 15 09 52.2 -0.5
comp=Z,88nm,0.9s
VNDA Vanda 62.43 186 P P 15 10 00.9 +2.5
VNDA pmax pmax
comp=Z,20nn,1.1s
VNDA Vanda 62.43 186 P P 15 10 01.4 +3.1
comp=Z,6.6nm,0.9s,baz=9.4,slow=6.6,SNR=15
VNDA LR LR 15 31 57.6
comp=Z,145nm,22.0s,baz=23,slow=31
VNDA Vanda 62.43 186 P P 15 10 00.9 +2.5
PSA00 Pilbara Seismi 63.09 254 P P 15 10 03.1 -0.6
MMRI Maumere 63.26 268 P P 15 10 04.4 -0.6
comp=Z,3µmcomp=Z,250nm,0.8s
MMRI Maumere 63.26 268 P P 15 10 04.3 -0.7
MEEK Meekatharra 63.61 248 P P 15 10 06.2 -0.9
baz=64,SNR=16
KLBR Kellerberrin 63.94 242 P P 15 10 08.6 -0.6
baz=64,SNR=76
KDI Kendari 64.11 274 P P 15 10 10.5 0.0
comp=Z,781nmcomp=Z,54nm,1.1s
KMSI Cibinong 64.14 279 P P 15 10 11.6 +0.8
comp=Z,142nm,0.8s
NWAO Narrogin (SRO) 64.30 241 P P 15 10 11.2 -0.3
baz=64,SNR=11
NWAO Narrogin (SRO) 64.30 241 P P 15 10 10.8 -0.8
NWAO pmax pmax
comp=Z,15nn,0.7s
NWAO Narrogin (SRO) 64.30 241 P P 15 10 10.8 -0.8
NWAO IAmb IAmb 15 10 14.8
comp=Z,15nn,0.7s
NWAO Narrogin (SRO) 64.30 241 P P 15 10 10.7 -0.8
NWAO IAmb IAmb 15 10 14.8
comp=Z,12nn,0.7s
RKGY Rocky Gully 64.42 239 P P 15 10 12.1 -0.2
baz=64,SNR=12
LUWI Luwuk 64.80 277 P P 15 10 15.6 +0.5
comp=Z,1µmcomp=Z,142nm,1.2s
LUWI Luwuk 64.80 277 P P 15 10 13.9 -1.2
WSI Waingapu 64.88 267 P P 15 10 16.6 +1.0
comp=Z,641nm,0.6s
BLDU Ballidu 64.91 243 P P 15 10 14.9 -0.7
baz=65,SNR=49
MUN Mundaring 65.22 242 P P 15 10 17.7 +0.1
baz=65,SNR=26
MORW Morawa 65.63 245 P P 15 10 19.9 -0.3
baz=66,SNR=11
MORW Morawa 65.63 245 P P 15 10 19.2 -1.1
APSI Ampana 65.91 276 P P 15 10 23.4 +1.1
comp=Z,1µmcomp=Z,104nm,1.3s
BNSI Bone 66.39 272 P P 15 10 25.7 +0.3
comp=Z,1µmcomp=Z,113nm,1.2s
KAPI Kappang 66.57 272 P P 15 10 26.3 -0.2
KAPI pmax pmax
comp=Z,29nm,0.8s
KAPI Kappang 66.57 272 P P 15 10 26.2 -0.2
KAPI IAmb IAmb 15 10 27.4
comp=Z,29nm,0.8s
SPSI Sidrap Palu 66.84 273 P P 15 10 27.7 -0.5
comp=Z,46nm,1.0s
TTSI Tana Toraja 67.04 274 P P 15 10 30.4 +0.9
comp=Z,644nmcomp=Z,49nm,1.6s
PLAI Plampang 67.50 267 P P 15 10 31.2 -1.2
comp=Z,154nm,1.0s
MPSI Mapaga 67.95 277 P P 15 10 35.5 +0.2
comp=Z,236nmcomp=Z,105nm,0.8s
KIWB Kanaga Island 68.02 357 P P 15 10 35.6 +0.8
ADK Adak 68.03 358 P P 15 10 35.1 +0.2
ADK pmax pmax
comp=Z,258nm,1.5s
ADK Adak 68.03 358 P P 15 10 35.1 +0.2
GIRL Giralia 68.08 252 P P 15 10 35.3 -0.7
baz=68,SNR=9.8
ATKA Atka Island 68.29 359 P P 15 10 36.6 +0.1
NIKH Nikolski High 69.16 3 P P 15 10 42.0 +0.1
CASY Casey 69.60 205 P P 15 10 44.8 +0.2
CASY IAmb IAmb 15 10 59.2
comp=Z,31nm,1.1s
MJAR Matsushiro Arr 69.78 320 P P 15 10 46.3 +0.1
comp=Z,6.3nm,0.5s,baz=134,slow=6.1,SNR=11
MJAR LR LR 15 35 43.3
comp=Z,571nm,22.0s,baz=135,slow=31
MJAR Matsushiro Arr 69.78 320 IAmb IAmb 15 10 49.7
comp=Z,4.0nm,0.9s
MAJO Matsushiro 69.78 320 ceP P 15 10 47.1 +0.9
MAJO pmax pmax
comp=Z,20nm,1.3s
MAJO Matsushiro 69.78 320 P P 15 10 46.1 -0.1
MAT Matsushiro 69.78 320 P P 15 10 46.6 +0.4
MAT S S 15 19 53.4 0.0
MJB9 Matsu-Tunnel 69.79 320 P P 15 10 46.0 -0.3
UNV Unalaska Valle 70.17 4 P P 15 10 48.0 0.0
KBKI Kotabaru 70.47 272 P P 15 10 52.2 +1.3
comp=Z,274nmcomp=Z,25nm,1.0s
H06S1 SOCORRO T 70.49 63 T T 16 28 16.7
SNR=9.8
ERM Erimo 70.66 327 ceP P 15 10 53.0 +1.6
ERM pmax pmax
comp=Z,75nm,0.9s
KUR Kuril'sk 70.75 332 ceP P 15 10 50.4 -1.4
JAGI Jajag, Banyuwa 71.06 267 P P 15 10 53.2 -1.2
comp=Z,236nm,0.9s
JAGI Jajag, Banyuwa 71.06 267 P P 15 10 53.3 -1.2
TGY Tagaytay City 71.73 291 LR LR 15 37 44.5
comp=Z,1µm,22.0s,baz=118,slow=32
PKM Mcpherson Peak 71.89 44 P P 15 11 01.2 +1.9
baz=234
SAO San Andreas Ge 71.94 42 P P 15 11 00.2 +0.9
SAO pmax pmax
comp=Z,49nm,1.0s
SAO San Andreas Ge 71.94 42 P P 15 11 00.2 +0.9
SAO IAmb IAmb 15 11 16.0
comp=Z,49nm,1.0s
CIS Catalina Islan 71.98 46 P P 15 11 01.1 +1.5
baz=236
SKR Severo-Kuril's 71.99 340 eP P 15 10 58.3 -0.9
SKR eS S 15 20 09.4 -8.9
SKR pmax pmax
comp=Z,116nm,0.8s
SKR pmax pmax
comp=Z,700nm,4.6s
SKR MLR MLR
comp=Z,700nm,16.0s
SKR MLR MLR
comp=Z,300nm,15.0s
SMMC Simmler 72.02 44 P P 15 11 01.8 +2.0
baz=234
PAGB Antelope Grade 72.09 43 P P 15 11 01.7 +1.5
PAGB IAmb IAmb 15 11 24.2
comp=Z,58nm,1.3s
JKA Kamikawa-asahi 72.44 328 P P 15 11 03.9 +1.7
ASAJ Asahikawa 72.45 328 P P 15 11 03.9 +1.7
comp=Z,96nm,0.7s,baz=205,slow=5.6,SNR=49
SPMM Sapulut 72.57 280 P P 15 11 03.0 -0.6
JNU Nakatsue 72.58 313 P P 15 11 03.3 +0.1
comp=Z,27nm,0.7s,baz=130,slow=2.9,SNR=14
JNU Nakatsue 72.58 313 P P 15 11 03.0 -0.2
JNU IAmb IAmb 15 11 08.3
comp=Z,29nm,0.7s
KMRM Mail Ridge 72.72 38 P P 15 11 05.5 +1.6
BAR Barrett 72.80 47 P P 15 11 05.0 +0.4
MURC Murrieta 72.94 46 P P 15 11 06.5 +1.1
baz=236
BFSC Mount Baldy Ra 72.97 46 P P 15 11 06.9 +1.2
baz=236
MONP2 Monument Peak 73.09 47 P P 15 11 07.8 +1.3
baz=237,SNR=12
EDW2 Edwards Air Fo 73.11 45 P P 15 11 07.8 +1.5
baz=235,SNR=15
KHMM Horse Mountain 73.13 37 P P 15 11 08.2 +1.7
IKP In-Ko-Pah, Jac 73.18 48 P P 15 11 08.4 +1.6
baz=237,SNR=9.7
ISA Isabella, Lake 73.23 44 P P 15 11 08.1 +1.0
ISA pmax pmax
comp=Z,45nm,1.3s
ISA Isabella, Lake 73.23 44 P P 15 11 08.1 +1.0
ISA IAmb IAmb 15 11 23.7
comp=Z,45nm,1.2s
ISA Isabella, Lake 73.23 44 P P 15 11 08.7 +1.6
baz=235,SNR=7.2
O02D Mt. Diablo Mer 73.23 38 P P 15 11 09.1 +2.1
baz=230
PET Petropavlovsk 73.25 343 eP P 15 11 07.5 +0.9
PET eS S 15 20 33.4 +0.8
PET pmax pmax
comp=Z,16nm,0.8s
PET pmax pmax
comp=Z,100nm,13.0s
CMB Columbia Colle 73.38 41 P P 15 11 08.9 +1.0
CMB pmax pmax
comp=Z,31nm,1.0s
CMB Columbia Colle 73.38 41 P P 15 11 08.9 +1.0
CMB IAmb IAmb 15 11 24.2
comp=Z,30nm,0.9s
PWJI Pagerwojo 73.42 266 P P 15 11 08.7 +0.1
comp=Z,82nm,1.5s
PFO Pinyon Flats O 73.46 47 ceP P 15 11 09.5 +1.0
PFO pmax pmax
comp=Z,10.0nm,0.9s
PFO Pinyon Flats O 73.46 47 P P 15 11 09.4 +0.9
PFO Pinyon Flats O 73.46 47 P P 15 11 09.8 +1.3
baz=237,SNR=6.1
XPFO Pion Flat 73.46 47 P P 15 11 09.3 +0.8
SWSC Sam W. Stewart 73.56 48 P P 15 11 10.4 +1.5
baz=237
AFDM Forest Hills D 73.57 40 P P 15 11 09.4 +0.5
AFDM IAmb IAmb 15 11 25.1
comp=Z,30nm,1.0s
PEA0B Petropavlovsk- 73.60 342 cP P 15 11 09.4 +0.7
PEA0B Petropavlovsk- 73.60 342 P P 15 11 09.2 +0.5
PETK Petropavlovsk- 73.60 342 P P 15 11 09.6 +0.9
comp=Z,105nm,0.8s,baz=96,slow=9.0,SNR=153
PETK LR LR 15 37 01.9
comp=Z,140nm,21.4s,baz=151,slow=31
ORV Oroville 73.62 39 P P 15 11 09.1 -0.1
ORV pmax pmax
comp=Z,24nm,1.0s
ORV Oroville 73.62 39 P P 15 11 09.1 -0.1
WDC Whiskeytown Da 73.64 38 P P 15 11 10.2 +0.9
WDC pmax pmax
comp=Z,28nm,1.1s
WDC Whiskeytown Da 73.64 38 P P 15 11 10.2 +0.9
LRMC Laurel Mtn Rad 73.65 45 P P 15 11 11.2 +1.5
baz=236,SNR=8.8
QSPA South Pole Qui 73.68 180 P P 15 11 10.5 +1.1
QSPA IAmb IAmb 15 11 17.0
comp=Z,31nm,1.0s
N02D Trinity Center 73.79 37 P P 15 11 12.4 +2.2
baz=230,SNR=6.3
NGJI Ngawi 73.91 267 P P 15 11 23.6 +12
CWC Cottonwood Cre 73.93 44 P P 15 11 13.3 +2.0
baz=235
M02C Callahan 73.97 37 P P 15 11 13.5 +2.2
baz=230
MDPB Devils Postpil 73.97 42 P P 15 11 12.2 +0.5
MDPB IAmb IAmb 15 11 28.0
comp=Z,37nm,1.1s
PCJI Pacitan 73.98 266 P P 15 11 12.8 +1.0
comp=Z,358nm,1.2s
BELC Belle Mtn. Jos 73.99 47 P P 15 11 12.9 +1.2
baz=237
OMMB Old Mammoth Mi 74.01 42 P P 15 11 13.0 +1.1
KEBM Edson Butte 74.09 35 PcP 15 11 27.3 +0.3
MPMC Manual Prospec 74.11 44 P P 15 11 14.1 +1.7
baz=236,SNR=31
GSC Goldstone, Bar 74.15 45 P P 15 11 11.7 -0.8
GSC pmax pmax
comp=Z,56nm,1.4s
GSC Goldstone, Bar 74.15 45 P P 15 11 11.7 -0.8
GSC IAmb IAmb 15 11 28.8
comp=Z,56nm,1.4s
GSC Goldstone, Bar 74.15 45 P P 15 11 13.8 +1.3
baz=236,SNR=7.7
BC3 Big Chuckawall 74.19 47 P P 15 11 14.1 +1.3
baz=237
TIN Tinemaha, Big 74.19 43 P P 15 11 14.0 +1.2
baz=235
HEC Hector,Ludlow 74.21 46 P P 15 11 14.0 +1.1
baz=237,SNR=11
WAKR Walker 74.26 41 P P 15 11 14.5 +1.3
WAKR IAmb IAmb 15 11 29.8
comp=Z,31nm,1.0s
YBH Yreka Blue Hor 74.27 37 P P 15 11 14.9 +1.8
YBH pmax pmax
comp=Z,51nn,1.0s
YBH Yreka Blue Hor 74.27 37 P P 15 11 14.8 +1.8
YBH IAmb IAmb 15 11 30.0
comp=Z,51nn,0.9s
WOJI Wonogiri, Jawa 74.31 266 P P 15 11 14.8 +1.0
comp=Z,103nm,1.2s
GLA Glamis 74.31 48 P P 15 11 12.3 -1.1
GLA pmax pmax
comp=Z,30nn,1.1s
GLA Glamis 74.31 48 P P 15 11 12.3 -1.1
K02D Willamette Mer 74.35 36 P P 15 11 15.6 +2.1
baz=229
YSS Yuzh-Sakhalins 74.40 330 iP P 15 11 14.8 +1.2
YSS e 15 11 24.2
YSS eS S 15 20 48.1 +2.2
YSS e 15 21 35.7
YSS pmax pmax
comp=Z,170nm,0.8s
YSS Yuzh-Sakhalins 74.40 330 P P 15 11 13.7 +0.2
BEKR Beckworth 74.50 40 P P 15 11 15.1 +0.5
BEKR IAmb IAmb 15 11 30.9
comp=Z,31nn,1.0s
J01E Myrtle Point 74.50 35 P P 15 11 15.6 +1.4
baz=229
PNTR Pine Nut 74.50 41 P P 15 11 15.8 +1.1
PNTR IAmb IAmb 15 11 31.2
comp=Z,40nm,0.9s
GMRC Granite Mounta 74.65 46 P P 15 11 16.6 +1.1
baz=237,SNR=8.9
YERR Yerington 74.67 41 P P 15 11 14.8 -0.7
YERR IAmb IAmb 15 11 31.9
comp=Z,35nn,1.0s
IRM Iron Mountain 74.67 47 P P 15 11 17.0 +1.5
baz=238,SNR=5.9
HUMO Hull Mountain 74.69 36 P P 15 11 15.8 +0.4
HUMO IAmb IAmb 15 11 32.0
comp=Z,31nn,0.9s
GRAC Grapevine Rang 74.72 43 P P 15 11 17.5 +1.8
baz=235
FURC Furnace Creek, 74.76 44 P P 15 11 17.7 +1.9
baz=236
M04C Macdoel 74.80 37 P P 15 11 18.0 +1.7
baz=231,SNR=8.8
L04D Klamath Falls 74.81 37 P P 15 11 18.0 +1.8
baz=230,SNR=8.4
TUQ Turquoise Moun 74.82 45 P P 15 11 18.2 +1.7

baz=237
Y12C Blythe 74.89 48 P **P** **15 11 18.0 +1.2**
baz=238
RYN Ryan 74.91 41 P **P** **15 11 17.2 +0.3**
113A Mohawk Valley, 74.92 49 P **P** **15 11 17.9 +1.0**
113A IAmb IAmb 15 11 34.1
comp=Z,51nm,1.5s
NVAR Mina Array Bea 74.94 42 P **P** **15 11 18.8 +1.6**
comp=Z,14nm,0.8s,baz=228,slow=10.0,SNR=89
NVAR LR LR 15 37 55.9
comp=Z,387nm,18.3s,baz=204,slow=31
PAHR Pah Rah Range 75.01 40 P **P** **15 11 18.0 +0.6**
PAHR IAmb IAmb 15 11 34.0
comp=Z,37nm,1.2s
NV11 Mina Array Sit 75.03 42 P **P** **15 11 18.7 +1.1**
NV11 IAmb IAmb 15 11 34.2
comp=Z,58nm,1.1s
I02D Swisshome 75.17 34 P **P** **15 11 20.1 +2.1**
baz=229
I03D Drain, OR 75.17 35 P **P** **15 11 19.8 +1.7**
baz=229
214A Organ Pipe Nat 75.20 50 P **P** **15 11 20.2 +1.5**
baz=240
NEE2 Needles Airpor 75.36 47 P **P** **15 11 21.0 +1.6**
baz=238
K04D Chiloquin, OR 75.38 37 P **P** **15 11 21.4 +1.9**
baz=231
KVN Kaiserville 75.42 41 P **P** **15 11 20.8 +0.9**
KVN pmax pmax
comp=Z,35nm,1.0s
KVN Kaiserville 75.42 41 P **P** **15 11 20.8 +0.9**
KVN IAmb IAmb 15 11 36.2
comp=Z,35nm,1.0s
TPNV Topopah Spring 75.44 44 P **P** **15 11 21.0 +1.0**
TPNV pmax pmax
comp=Z,49nm,1.4s
TPNV Topopah Spring 75.44 44 P **P** **15 11 20.9 +1.0**
TPNV IAmb IAmb 15 11 35.9
comp=Z,49nm,1.4s
TPNV Topopah Spring 75.44 44 P **P** **15 11 21.6 +1.6**
baz=236,SNR=15
J04D Umpqua Nationa 75.57 36 P **P** **15 11 22.5 +1.8**
baz=230,SNR=11
TPUB Ta-pu 75.71 300 P **P** **15 11 20.6 -1.1**
I04A Tendick Farm, 75.75 35 P **P** **15 11 23.0 +1.5**
baz=230,SNR=7.5
MOD Modoc Plateau 75.78 38 P **P** **15 11 23.0 +1.1**
MOD IAmb IAmb 15 11 38.4
comp=Z,37nm,1.1s
KDAK Kodiak Island 75.83 11 P **P** **15 11 22.8 +1.2**
comp=Z,26nm,0.7s,baz=207,slow=3.3,SNR=12
KDAK Kodiak Island 75.83 11 IAmb IAmb 15 11 23.5
comp=Z,296nm,1.7s
SBUM Sibu 75.90 277 P **P** **15 11 23.3 +0.3**
SHPR Sheep Range 75.92 45 P **P** **15 11 23.7 +0.9**
SHPR IAmb IAmb 15 11 39.5
comp=Z,57nm,1.4s
H04D Lebanon 76.05 35 P **P** **15 11 24.8 +1.7**
baz=230,SNR=5.7
W13A Hualapai Mount 76.05 47 P **P** **15 11 24.6 +0.9**
W13A IAmb IAmb 15 11 40.2
comp=Z,35nm,1.4s
Y14A Wickenburg 76.07 48 P **P** **15 11 24.3 +0.7**
J05D Fort Rock, OR 76.09 36 P **P** **15 11 25.6 +2.0**
baz=231,SNR=25
G03D McMinnville, O 76.21 34 P **P** **15 11 25.8 +1.8**
baz=229,SNR=5.5
PINE Pine Mountain 76.58 36 P **P** **15 11 28.1 +1.7**
R11A Troy Canyon, C 76.65 43 P **P** **15 11 27.5 +0.6**
R11A IAmb IAmb 15 11 43.3
comp=Z,37nm,1.2s
R11A Troy Canyon, C 76.65 43 P **P** **15 11 28.1 +1.1**
baz=236,SNR=13
I05D Terrebonne, OR 76.70 35 P **P** **15 11 28.5 +1.6**
baz=231,SNR=7.2
TUC Tucson 76.87 50 P **P** **15 11 28.9 +0.7**
TUC pmax pmax
comp=Z,19nm,1.0s
TUC Tucson 76.87 50 P **P** **15 11 28.9 +0.7**
TUC Tucson 76.87 50 P **P** **15 11 29.9 +1.7**
baz=241
KSRS Korea Array 76.96 316 P **P** **15 11 29.6 +1.2**
comp=Z,11nm,1.0s,baz=125,slow=6.0,SNR=16
KSRS LR LR 15 42 54.8
comp=Z,263nm,18.6s,baz=124,slow=34
WVOR Wild Horse Val 77.08 38 P **P** **15 11 30.4 +1.2**
WVOR pmax pmax
comp=Z,46nm,1.2s
WVOR Wild Horse Val 77.08 38 P **P** **15 11 30.4 +1.2**
WVOR IAmb IAmb 15 11 45.7
comp=Z,46nm,1.1s
F04A Amboy 77.13 34 P **P** **15 11 28.4 -0.8**
F04A IAmb IAmb 15 11 44.8
comp=Z,30nm,0.9s
G05D Wamic, OR 77.28 35 P **P** **15 11 31.6 +1.5**
baz=231,SNR=5.9
NLWA Neilton Lookou 77.33 32 P **P** **15 11 29.7 -0.7**
NLWA IAmb IAmb 15 11 52.6
comp=Z,50nm,1.2s
CISI Cisompet, Garu 77.36 266 P **P** **15 11 29.2 -2.1**
X16A Lo Mia Camp, P 77.43 48 P **P** **15 11 32.1 +0.7**
X16A IAmb IAmb 15 11 47.6
comp=Z,24nm,0.9s
KSM Kuching 77.44 275 P **P** **15 11 31.7 0.0**
KSM Kuching 77.44 275 P **P** **15 11 33.0 +1.3**
E04D Cinebar 77.45 33 P **P** **15 11 32.8 +1.8**
baz=229
LCMT Little Creek M 77.50 45 P **P** **15 11 32.6 +0.9**
319A Douglas 77.55 52 P **P** **15 11 32.1 0.0**
319A IAmb IAmb 15 11 48.2
comp=Z,36nm,0.8s
F05D White Salmon 77.61 34 P **P** **15 11 33.6 +1.6**
baz=230
G06A Carlson Farm, 77.65 35 P **P** **15 11 32.6 +0.4**
VLA Vladivostok 77.67 322⇑ *e*P **P** **15 11 33.1 +0.8**
VLA pmax pmax
comp=Z,29nm,0.8s
CCUT Cedar City 77.70 45 P **P** **15 11 32.7 -0.1**
D04E Lakebay 77.75 33 P **P** **15 11 34.4 +1.8**
baz=229
KNB Kanab 77.78 45 P **P** **15 11 34.1 +0.8**
KNB pmax pmax
comp=Z,120nm,1.7s
KNB Kanab 77.78 45 P **P** **15 11 34.1 +0.8**
MSHR Mys Shultsa 77.78 321⇑ *i*P **P** **15 11 33.8 +0.9**
D03D Eldon 77.82 32 P **P** **15 11 34.9 +1.9**
baz=229
U15A North Rim 77.85 46 P **P** **15 11 34.9 +1.1**
U15A IAmb IAmb 15 11 51.5
comp=Z,41nm,1.1s
INCN Inchon 77.85 315 P **P** **15 11 33.6 +0.1**
INCN pmax pmax
comp=Z,63nm,1.4s
INCN Inchon 77.85 315 P **P** **15 11 33.6 +0.1**
INCN IAmb IAmb 15 11 38.8
comp=Z,63nm,1.4s
PSUT Pine Spring 77.89 44 P **P** **15 11 34.9 +1.0**
SZCU Shurtz Canyon 77.91 45 P **P** **15 11 34.0 -0.1**
LON Longmire 77.98 33 P **P** **15 11 34.6 +0.6**
LON pmax pmax
comp=Z,68nm,1.9s
LON Longmire 77.98 33 P **P** **15 11 34.6 +0.6**
LON IAmb IAmb 15 11 54.1
comp=Z,68nm,1.9s
WUAZ Wupatki 78.03 47 P **P** **15 11 35.2 +0.5**
WUAZ IAmb IAmb 15 11 51.5
comp=Z,42nm,1.4s
WUAZ Wupatki 78.03 47 P **P** **15 11 36.4 +1.7**
baz=240
D05A Enumclaw 78.16 33 P **P** **15 11 36.6 +1.6**
ELK Elko 78.20 41 P **P** **15 11 36.5 +0.9**
ELK pmax pmax
comp=Z,27nm,1.0s
ELK Elko 78.20 41 P **P** **15 11 36.5 +0.9**
ELK IAmb IAmb 15 11 51.9
comp=Z,27nm,1.0s
USA0B Ussuriysk Arra 78.25 323⇑ *e*P **P** **15 11 36.4 +0.9**
USA0B Ussuriysk Arra 78.25 323 P **P** **15 11 36.4 +0.9**
USRK Ussuriysk Ar. 78.25 323 P **P** **15 11 36.8 +1.3**
comp=Z,16nm,0.9s,baz=122,slow=2.9,SNR=33
USRK LR LR 15 39 45.5
comp=Z,492nm,22.0s,baz=122,slow=31
RSO Redoubt South 78.33 10 P **P** **15 11 33.0 -2.8**
PGC Sidney 78.38 31 P **P** **15 11 36.2 +0.2**
X18A Snowflake 78.56 49 P **P** **15 11 37.3 -0.4**
MTPU Mount Pierson 78.75 45 P **P** **15 11 41.0 +2.1**

B05A Bryant 78.81 32 P **P** **15 11 39.9 +1.5**
baz=230,SNR=6.3
TCRU Three Creeks R 78.87 44 P **P** **15 11 39.6 +0.3**
E07A Sunnyside 78.90 34 P **P** **15 11 39.0 -0.1**
E07A IAmb IAmb 15 11 55.5
comp=Z,42nm,1.0s
LTY Liberty 78.90 33 P **P** **15 11 39.4 +0.3**
HAWA Hanford 78.97 35 P **P** **15 11 39.7 +0.2**
MSU Marysvale 79.00 44 P **P** **15 11 41.5 +1.5**
MSU Marysvale 79.00 44 P **P** **15 11 41.5 +1.5**
W18A Petrified Fore 79.00 48 P **P** **15 11 40.1 0.0**
W18A Petrified Fore 79.00 48 P **P** **15 11 41.6 +1.5**
baz=241
C06D Leavenworth 79.20 33 P **P** **15 11 42.0 +1.3**
baz=231
121A Cookes Peak, D 79.22 51 P **P** **15 11 42.4 +1.1**
121A Cookes Peak, D 79.22 51 P **P** **15 11 42.9 +1.6**
baz=243,SNR=7.0
E08A Dider Farm, El 79.29 35 P **P** **15 11 42.1 +1.0**
E08A IAmb IAmb 15 11 56.9
comp=Z,40nm,1.2s
BMO Blue Mountains 79.30 37 P **P** **15 11 42.1 +0.7**
BMO pmax pmax
comp=Z,17nm,1.0s
BMO Blue Mountains 79.30 37 P **P** **15 11 42.1 +0.7**
MFID Camas Ranch 79.33 39 P **P** **15 11 42.3 +0.6**
RC01 Rabbit Creek A 79.45 11 P **P** **15 11 42.6 +0.9**
DUG Dugway, Tooele 79.45 43 P **P** **15 11 43.0 +0.6**
DUG pmax pmax
comp=Z,38nm,1.2s
DUG Dugway, Tooele 79.45 43 P **P** **15 11 43.0 +0.6**
DUG IAmb IAmb 15 11 58.6
comp=Z,38nm,1.1s
DUG Dugway, Tooele 79.45 43 P **P** **15 11 43.8 +1.4**
baz=236
SUA Susitna One 79.61 11 P **P** **15 11 42.9 +0.2**
SUA IAmb IAmb 15 11 44.2
comp=Z,35nm,0.7s
BGU Big Grassy Mou 79.70 42 P **P** **15 11 44.5 +0.7**
E09A Wood Farm, Sta 79.81 35 P **P** **15 11 44.5 +0.6**
NLU North Lily Min 79.81 43 P **P** **15 11 45.5 +1.1**
Q16A Castle Valley 79.88 44 P **P** **15 11 46.1 +1.2**
MDJ Mudanjiang 79.89 322 P **P** **15 11 45.5 +1.0**
MDJ pP PcP 15 11 49.0 -2.9
MDJ sP pP 15 11 50.0 -4.0
MDJ S **S** **15 21 50.6 +4.9**
MDJ sS pS 15 21 56.6 -1.3
MDJ SS **SS** **15 26 55.3 -0.8**
MDJ pmax pmax
comp=Z,24nm,0.9s
MDJ pmax pmax
comp=Z,340nm,6.7s
MDJ LR LR
comp=Z,440nm,19.2s
MDJ LR LR
comp=Z,520nm,24.5s
MDJ LR LR
comp=Z,910nm,29.4s
MDJ Mudanjiang 79.89 322 P **P** **15 11 45.3 +0.8**
GAMB Gambell 79.90 1 P **P** **15 11 45.2 +1.2**
GAMB IAmb IAmb 15 11 47.0
comp=Z,52nm,1.1s
SKT Skwentna 79.96 10 P **P** **15 11 43.8 -0.7**
KNK Knik Glacier 80.00 12 P **P** **15 11 44.8 +0.1**
KNK IAmb IAmb 15 11 59.1
comp=Z,37nm,0.9s
F10A Beach Ranch, E 80.00 36 P **P** **15 11 45.5 +0.4**
PMR Palmer 80.03 11 P **P** **15 11 45.1 +0.3**
PMR pmax pmax
comp=Z,34nm,1.1s
PMR Palmer 80.03 11 P **P** **15 11 45.1 +0.3**
TMUT Trail Mountain 80.05 44 P **P** **15 11 46.9 +1.0**
GRNR Gornyy 80.06 330⇑ *i*P **P** **15 11 46.2 +0.9**
GRNR *i* 15 11 47.2
GRNR *e*S **S** **15 21 54.5 +7.2**
GRNR pmax pmax
comp=Z,30nm,1.0s
GRNR smax smax
comp=N,2.0nm,1.4s
GRNR MLR MLR
comp=Z,150nm,16.0s
TTA Tatalina 80.19 8 P **P** **15 11 46.9 +1.2**
TTA Tatalina 80.19 8 P **P** **15 11 46.9 +1.2**
GHO Glory Hole Cre 80.24 11 P **P** **15 11 46.5 +0.5**
GHO IAmb IAmb 15 11 47.8
comp=Z,45nm,0.8s
SPUT South Promonto 80.28 42 P **P** **15 11 47.5 +0.6**
B08A Colville Reser 80.29 33 P **P** **15 11 46.8 +0.2**
HVU Hansel Valley 80.32 41 P **P** **15 11 47.1 0.0**
HVU pmax pmax
comp=Z,33nm,1.0s
HVU Hansel Valley 80.32 41 P **P** **15 11 47.1 0.0**
CTU Camp Tracy 80.41 43 P **P** **15 11 46.6 -1.0**
SRU San Rafael Swe 80.41 45 P **P** **15 11 48.4 +0.7**
SRU pmax pmax
comp=Z,48nm,1.1s
SRU San Rafael Swe 80.41 45 P **P** **15 11 48.4 +0.7**
LLLB Lillooet 80.43 30 P **P** **15 11 47.8 +0.5**
P17A Butcher Ranch, 80.45 44 P **P** **15 11 49.1 +1.3**
C09A Chrisman Ranch 80.51 34 P **P** **15 11 48.4 +0.7**
JLU Jordanelle 80.56 43 P **P** **15 11 49.0 +0.5**
CRQM Cirque 80.57 14 P **P** **15 11 48.6 +0.6**
CRQM IAmb IAmb 15 12 03.2
comp=Z,55nm,1.1s
SCM Sheep Creek Mo 80.61 12 P **P** **15 11 48.7 +0.7**
SCM pmax pmax
comp=Z,58nm,0.9s
SCM Sheep Creek Mo 80.61 12 P **P** **15 11 48.7 +0.7**
SCM IAmb IAmb 15 11 49.8
comp=Z,58nm,0.9s
TGL Tana Glacier 80.64 15 P **P** **15 11 49.0 +0.7**
TGL IAmb IAmb 15 11 55.2
comp=Z,33nm,1.0s
MNTX Cornudas Mount 80.67 53 P **P** **15 11 49.7 +0.7**
MNTX Cornudas Mount 80.67 53 P **P** **15 11 50.2 +1.2**
baz=244,SNR=9.9
TCUT Toone Canyon 80.85 42 P **P** **15 11 50.9 +0.8**
MVCO Mesa Verde 80.88 47 P **P** **15 11 51.3 +1.0**
baz=241
NJ2 Nanjing 80.88 307 *e*P **P** **15 11 51.4 +1.3**
NJ2 pmax pmax
comp=Z,13nm,0.5s
ANM Nome 80.91 3 P **P** **15 11 51.0 +1.5**
ANM pmax pmax
comp=Z,26nm,1.1s
ANM Nome 80.91 3 P **P** **15 11 51.0 +1.5**
HWUT Hardware Ranch 81.00 42 P **P** **15 11 51.0 +0.2**
BALM Baldy 81.00 15 P **P** **15 11 50.5 +0.3**
BALM IAmb IAmb 15 12 06.0
comp=Z,43nm,1.2s
TX31 Lajitas Ar. Si 81.01 56 P **P** **15 11 51.1 +0.1**
TX31 IAmb IAmb 15 12 09.4
comp=Z,40nm,1.3s
TX32 Lajitas Array 81.01 56 P **P** **15 11 51.4 +0.4**
TX32 IAmb IAmb 15 12 09.4
comp=Z,40nm,1.3s
TXAR Lajitas Array 81.01 56 P **P** **15 11 52.6 +1.7**
comp=Z,5.4nm,1.0s,baz=223,slow=7.6,SNR=22
TXAR LR LR 15 39 41.9
comp=Z,213nm,22.0s,baz=0.0,slow=30
GLB Gilahina Butte 81.01 14 P **P** **15 11 50.6 +0.4**
GLB IAmb IAmb 15 12 09.4
comp=Z,72nm,1.6s
MA2 Magadan 81.13 342 *c i*P **P** **15 11 51.0 +0.2**
MA2 pmax pmax
comp=Z,126nm,1.3s
MA2 Magadan 81.13 342 P **P** **15 11 51.4 +0.7**
comp=Z,68nm,0.8s,baz=151,slow=6.4,SNR=29
MA2 Magadan 81.13 342 P **P** **15 11 51.3 +0.5**
MCARA McCarthy VSAT 81.14 14 P **P** **15 11 51.2 +0.4**
MCARA IAmb IAmb 15 11 57.1
comp=Z,35nm,1.1s
BARN Barnard Glacie 81.19 15 P **P** **15 11 51.9 +0.6**
BARN IAmb IAmb 15 11 53.5
comp=Z,74nm,1.3s
CTGM Chitina Glacie 81.19 15 P **P** **15 11 51.9 +0.7**
CTGM IAmb IAmb 15 11 57.7
comp=Z,34nm,1.0s
ANMO Albuquerque 81.30 50 *ce*P **P** **15 11 54.0 +1.5**
ANMO pmax pmax
comp=Z,7.0nm,1.3s
ANMO Albuquerque 81.30 50 P **P** **15 11 52.7 +0.2**
ANMO Albuquerque 81.30 50 P **P** **15 11 54.0 +1.5**
baz=243

NEW Newport 81.41 34 P **P** **15 11 52.8 +0.2**
NEW pmax pmax
comp=Z,11nm,1.0s
NEW Newport 81.41 34 P **P** **15 11 52.8 +0.2**
NEW Newport 81.41 34 P **P** **15 11 53.3 +0.7**
baz=234
KLR Kul'dur 81.42 327 *c i*P **P** **15 11 53.4 +0.9**
KLR pmax pmax
comp=Z,11nm,1.0s
KLR Kul'dur 81.42 327 P **P** **15 11 53.5 +0.9**
comp=Z,8.9nm,0.9s,baz=118,slow=4.8,SNR=20
KLR LR LR 15 42 44.6
comp=Z,323nm,21.9s,baz=154,slow=32
KTH Kantishna Hill 81.53 10 P **P** **15 11 52.4 -0.6**
KTH IAmb IAmb 15 12 36.6
comp=Z,58nm,1.5s
TRF Thorofare Moun 81.54 10 P **P** **15 11 53.0 0.0**
TRF IAmb IAmb 15 12 15.2
comp=Z,84nm,1.4s
DHY Denali Highway 81.73 12 P **P** **15 11 54.2 +0.1**
RND Reindeer 81.75 11 P **P** **15 11 54.5 +0.4**
RND pmax pmax
comp=Z,50nm,0.9s
RND Reindeer 81.75 11 P **P** **15 11 54.5 +0.4**
RND IAmb IAmb 15 11 56.0
comp=Z,50nm,0.9s
RDMU Red Mountain 81.78 44 P **P** **15 11 54.9 0.0**
AHID Auburn Hatcher 81.89 41 P **P** **15 11 55.4 0.0**
MCMT McKenzie Canyo 81.90 39 P **P** **15 11 56.1 +0.5**
CN2 Changchun 81.93 320⇑ *i*P **P** **15 11 56.1 +0.7**
CN2 *es*P pP 15 12 04.4 -0.5
CN2 *eS* **S** **15 22 09.0 +1.9**
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 LR LR
comp=Z,230nm,20.0s
CN2 LR LR
comp=Z,350nm,20.0s
CN2 LR LR
comp=Z,490nm,22.0s
DL2 Dalian 81.97 314 P **P** **15 11 52.4 -3.3**
DL2 S **S** **15 22 06.9 -0.8**
DL2 pmax pmax
comp=Z,22nm,1.3s
DL2 pmax pmax
comp=Z,190nm,6.4s
DL2 LR LR
comp=Z,200nm,27.7s
DL2 LR LR
comp=Z,310nm,26.0s
DL2 LR LR
comp=Z,460nm,22.8s
PAX Paxson 82.01 12 P **P** **15 11 55.3 -0.2**
PAX pmax pmax
comp=Z,18nm,1.0s
PAX Paxson 82.01 12 P **P** **15 11 55.3 -0.2**
MCK McKinley 82.04 11 P **P** **15 11 55.8 +0.3**
MCK pmax pmax
comp=Z,67nm,0.8s
MCK McKinley 82.04 11 P **P** **15 11 55.8 +0.3**
HYT Haines Junctio 82.08 17 P **P** **15 11 56.9 +1.0**
HYT IAmb IAmb 15 12 11.8
comp=Z,52nm,1.2s
S22A 4UR Ranch, Cre 82.30 47 P **P** **15 11 59.3 +1.5**
S22A IAmb IAmb 15 12 14.8
comp=Z,62nm,1.2s
S22A 4UR Ranch, Cre 82.30 47 P **P** **15 11 59.7 +1.8**
baz=242,SNR=15
BWN Browne 82.35 10 P **P** **15 11 57.3 +0.2**
MENT Mentasta 82.35 13 P **P** **15 11 58.1 +0.9**
MENT IAmb IAmb 15 12 03.2
comp=Z,23nm,0.8s
MSO Missoula 82.36 37 P **P** **15 11 58.0 +0.3**
MSO IAmb IAmb 15 12 13.3
comp=Z,35nm,1.2s
MSO Missoula 82.36 37 P **P** **15 11 58.3 +0.6**
baz=236,SNR=5.2
REDW Red Top Meadow 82.36 41 P **P** **15 11 58.5 +0.5**
REDW IAmb IAmb 15 12 14.4
comp=Z,54nm,1.1s
O20A White River Ci 82.45 44 P **P** **15 11 58.9 +0.5**
O20A IAmb IAmb 15 12 14.2
comp=Z,30nm,1.1s
O20A White River Ci 82.45 44 P **P** **15 11 59.9 +1.4**
baz=241
SNOW Snow King Moun 82.47 41 P **P** **15 11 59.3 +0.8**
SNOW IAmb IAmb 15 12 14.9
comp=Z,44nm,0.9s
DLBC Dease Lake 82.54 21 P **P** **15 11 59.5 +1.2**
comp=Z,11nm,0.9s,baz=221,slow=5.2,SNR=4.1
DLBC Dease Lake 82.54 21 IAmb IAmb 15 12 01.9
comp=Z,27nm,1.2s
MOOW Moose Ponds 82.62 40 P **P** **15 11 59.0 -0.3**
JTMT Jette 82.67 36 P **P** **15 11 58.8 -0.5**
WHY Whitehorse 82.70 18 P **P** **15 11 59.8 +0.6**
WHY IAmb IAmb 15 12 23.2
comp=Z,37nm,1.5s
RIDG Independent Ri 82.83 12 P **P** **15 12 00.1 +0.5**
RIDG IAmb IAmb 15 12 14.8
comp=Z,37nm,1.0s
YHB Horse Butte 82.86 39 P **P** **15 12 01.8 +1.3**
SMCO Snowmass 82.86 46 P **P** **15 12 01.4 +0.5**
SMCO IAmb IAmb 15 12 17.4
comp=Z,46nm,1.1s
WRH Wood River Hil 82.87 11 P **P** **15 12 00.4 +0.6**
BW06 Boulder Array 82.87 42 P **P** **15 12 01.0 +0.3**
BW06 IAmb IAmb 15 12 16.4
comp=Z,34nm,0.9s
BW06 Boulder Array 82.87 42 P **P** **15 12 01.3 +0.7**
baz=240,SNR=22
PD31 Pinedale Array 82.87 42 P **P** **15 12 01.1 +0.4**
PD31 IAmb IAmb 15 12 16.4
comp=Z,31nm,0.9s
PDAR Pinedale Array 82.87 42 P **P** **15 12 01.4 +0.8**
comp=Z,15nm,0.7s,baz=212,slow=3.3,SNR=144
PDAR LR LR 15 43 17.5
comp=Z,325nm,18.8s,baz=248,slow=32
DOT Dot Lake 82.91 13 P **P** **15 12 00.5 +0.4**
YHL Hebgen Lake 82.92 39 P **P** **15 12 02.6 +1.7**
MLY Manley 82.94 9 P **P** **15 12 00.1 -0.1**
MLY IAmb IAmb 15 12 01.6
comp=Z,30nm,1.0s
YMR Madison River 82.96 40 P **P** **15 12 02.4 +1.3**
HDA Harding Lake 83.02 11 P **P** **15 12 00.9 +0.3**
HDA IAmb IAmb 15 12 02.2
comp=Z,38nm,0.8s
HDA Harding Lake 83.02 11 P **P** **15 12 01.2 +0.6**
baz=205
H17A Grant Village 83.06 40 P **P** **15 12 03.3 +1.7**
H17A IAmb IAmb 15 12 18.9
comp=Z,34nm,0.9s
H17A Grant Village 83.06 40 P **P** **15 12 03.9 +2.3**
baz=239,SNR=17
CCB Clear Creek Bu 83.08 11 P **P** **15 12 01.1 +0.3**
YNR Norris Junctio 83.16 40 P **P** **15 12 03.7 +1.6**
SCRK Sand Creek 83.22 13 P **P** **15 12 02.2 +0.5**
SCRK IAmb IAmb 15 12 08.0
comp=Z,26nm,0.9s
SDCO Great Sand Dun 83.24 48 P **P** **15 12 03.5 +0.8**
SDCO IAmb IAmb 15 12 19.0
comp=Z,22nm,1.1s
SDCO Great Sand Dun 83.24 48 P **P** **15 12 03.8 +1.0**
baz=243,SNR=9.0
LKWY Lake 83.25 40 P **P** **15 12 04.5 +1.9**
LKWY pmax pmax
comp=Z,52nm,1.0s
LKWY Lake 83.25 40 P **P** **15 12 04.5 +1.9**
YUF Upper Falls 83.26 40 P **P** **15 12 03.8 +1.2**
TCOL CIGO, UAF Yank 83.28 11 P **P** **15 12 02.9 +1.0**
baz=204
COLA College 83.28 11 *c i*P **P** **15 12 02.2 +0.3**
COLA pmax pmax
comp=Z,62nm,0.9s
COLA College 83.28 11 P **P** **15 12 01.8 0.0**
MDM Murphy Dome 83.29 10 P **P** **15 12 02.2 +0.2**
MDM IAmb IAmb 15 12 21.2
comp=Z,30nm,0.9s
IL31 83.36 11 P **P** **15 12 02.4 +0.1**
IL31 IAmb IAmb 15 12 13.1
comp=Z,49nm,1.4s
ILAR Eielson Array 83.36 11 P **P** **15 12 02.6 +0.3**
comp=Z,9.9nm,0.6s,baz=230,slow=6.3,SNR=183
ILAR LR LR 15 41 36.0
comp=Z,268nm,21.3s,baz=212,slow=30
SEY Seymchan 83.49 345 *c i*P **P** **15 12 03.9 +0.9**

SEY Seymchan 83.49 345 P **P** **15 12 03.6 +0.6**
comp=Z,89nm,0.9s,baz=144,slow=5.5,SNR=113
POKR Poker Plat Res 83.57 11 P **P** **15 12 04.2 +0.7**
baz=205
WALA Waterton Lakes 83.61 35 P **P** **15 12 04.3 +0.2**
MSTX Muleshoe 83.62 52 P **P** **15 12 04.8 +0.2**
MSTX Muleshoe 83.62 52 P **P** **15 12 05.7 +1.1**
baz=245
MYKOM Kota Tinggi 83.71 274 P **P** **15 12 05.0 -0.3**
YNE Yellowstone No 83.72 40 P **P** **15 12 06.0 +1.1**
T25A Trinidad 83.75 49 P **P** **15 12 05.5 +0.2**
T25A IAmb IAmb 15 12 21.4
comp=Z,27nm,1.2s
T25A Trinidad 83.75 49 P **P** **15 12 06.2 +1.0**
baz=244,SNR=5.1
RWWY Rawlins 83.88 43 P **P** **15 12 05.2 -0.7**
TIA Tai'an 83.96 310 P **P** **15 12 07.0 +0.9**
TIA pmax pmax
comp=Z,13nm,1.2s
Q24A Divide 84.03 47 P **P** **15 12 07.0 +0.2**
Q24A Divide 84.03 47 P **P** **15 12 07.0 +0.2**
baz=244
ISCO Idaho Springs 84.08 46 P **P** **15 12 06.9 -0.1**
ISCO pmax pmax
comp=Z,23nm,1.3s
ISCO Idaho Springs 84.08 46 P **P** **15 12 06.9 -0.1**
ISCO Idaho Springs 84.08 46 P **P** **15 12 07.7 +0.6**
baz=243
RLMT Red Lodge 84.23 40 P **P** **15 12 08.0 +0.5**
RLMT Red Lodge 84.23 40 P **P** **15 12 08.9 +1.4**
baz=240,SNR=12
PRP Porcupine Dome 84.28 11 P **P** **15 12 07.8 +0.6**
DAWY Dawson 84.31 14 P **P** **15 12 08.1 +0.8**
N23A Red Feather La 84.35 45 P **P** **15 12 08.6 +0.2**
N23A IAmb IAmb 15 12 24.7
comp=Z,38nm,1.0s
N23A Red Feather La 84.35 45 P **P** **15 12 09.5 +1.1**
baz=243,SNR=5.2
EGAK Eagle 84.52 13 P **P** **15 12 08.3 +0.1**
EGAK IAmb IAmb 15 12 10.4
comp=Z,28nm,0.9s
RDOG Red Dog Mine 84.52 4 P **P** **15 12 09.2 +1.0**
RDOG IAmb IAmb 15 12 24.1
comp=Z,43nm,1.0s
JCT Junction City 84.55 56 P **P** **15 12 10.2 +1.0**
baz=247
K22A Casper 84.78 43 P **P** **15 12 10.0 -0.3**
K22A IAmb IAmb 15 12 26.2
comp=Z,55nm,1.4s
K22A Casper 84.78 43 P **P** **15 12 11.5 +1.2**
baz=242
AMTX Amarillo 84.81 52 P **P** **15 12 10.5 -0.1**
AMTX Amarillo 84.81 52 P **P** **15 12 11.5 +0.9**
baz=246
COLD Coldfoot 85.07 9 P **P** **15 12 11.8 +0.9**
COLD IAmb IAmb 15 12 32.5
comp=Z,27nm,1.2s
FYU Fort Yukon 85.28 11 P **P** **15 12 12.5 +0.5**
FYU IAmb IAmb 15 12 45.6
comp=Z,55nm,1.6s
EGMT Eagleton 85.40 37 P **P** **15 12 13.3 +0.1**
EGMT IAmb IAmb 15 12 32.6
comp=Z,20nm,0.9s
EGMT Eagleton 85.40 37 P **P** **15 12 14.1 +1.0**
baz=239,SNR=6.4
BILL Bilibino 85.49 352 *ce*P **P** **15 12 13.8 +0.8**
BILL *i* 15 12 26.0
BILL *e* 15 15 30.0
BILL pmax pmax
comp=Z,107nm,1.3s
BILL Bilibino 85.49 352 P **P** **15 12 13.4 +0.3**
ABTX Abilene, Hawle 85.49 54 P **P** **15 12 13.9 0.0**
ABTX Abilene, Hawle 85.49 54 P **P** **15 12 15.2 +1.3**
baz=247
JRMM Jerantut 85.62 275 P **P** **15 12 16.0 +1.0**
PDSI Padang 86.21 270 P **P** **15 12 18.1 +0.2**
comp=Z,29nm,1.1s
BJT Baijiatuau 86.25 313 P **P** **15 12 18.0 +0.5**
BJT pmax pmax
comp=Z,39nm,1.2s
BJT Baijiatuau 86.25 313 P **P** **15 12 18.0 +0.5**
BJT IAmb IAmb 15 12 20.0
comp=Z,39nm,1.2s
ZEA Zeya 86.33 329 *e*P **P** **15 12 18.8 +1.3**
ZEA *eS* **S** **15 22 46.0 -4.7**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,57nm,1.2s
ZEA smax smax
comp=N,200nm,12.0s
LAO LASA Array 86.85 39 P **P** **15 12 21.4 +1.1**
baz=242
EPYK Eagle Plains 86.86 14 P **P** **15 12 21.3 +1.4**
baz=215
MAW Mawson 86.93 199 P **P** **15 12 19.6 -0.8**
baz=87,SNR=9.7
MAW Mawson 86.93 199 P **P** **15 12 21.5 +1.2**
comp=N,12nm,0.8s,baz=126,slow=5.8,SNR=17
MAW LR LR 15 47 25.6
comp=N,566nm,21.9s,baz=80,slow=33
MAW Mawson 86.93 199 IAmb IAmb 15 12 22.6
comp=Z,3.1nm,0.8s
WMOK Wichita Mounta 86.95 53 P **P** **15 12 21.2 +0.2**
baz=248
RSSD Black Hills 87.06 42 P **P** **15 12 21.6 0.0**
RSSD pmax pmax
comp=Z,10.0nm,0.9s
RSSD Black Hills 87.06 42 P **P** **15 12 21.6 0.0**
RSSD Black Hills 87.06 42 P **P** **15 12 22.2 +0.6**
baz=244
IPM Ipoh 87.18 275 P **P** **15 12 23.4 +0.8**
IPM Ipoh 87.18 275 P **P** **15 12 24.0 +1.4**
HIA Hailar 88.07 323 P **P** **15 12 26.2 +0.1**
HIA pmax pmax
comp=Z,30nm,1.2s
HIA Hailar 88.07 323 P **P** **15 12 26.2 +0.1**
HIA IAmb IAmb 15 12 28.2
comp=Z,30nm,1.2s
GYA Guiyang 88.64 298 *e*P **P** **15 12 28.3 -1.2**
GYA PP **PP** **15 15 57.6 -0.9**
GYA SKS **SKSac** **15 22 55.8 -1.1**
GYA S **SKKSac** **15 23 11.0 +3.0**
GYA SS **SS** **15 29 03.5 -2.9**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.6s
GYA LR LR
comp=Z,480nm,20.2s
GYA LR LR
comp=Z,540nm,21.8s
GYA LR LR
comp=Z,460nm,22.8s
RPSI Rantau Prapat 88.69 273 P **P** **15 12 28.1 -1.7**
PSI Prapat 88.72 273 P **P** **15 12 28.1 -2.0**
PSI pmax pmax
comp=Z,52nm,1.0s
PSI Prapat 88.72 273 LR LR 15 50 26.9
comp=Z,114nm,21.6s,baz=127,slow=34
PLCA Paso Flores 88.74 132 P **P** **15 12 31.8 +2.1**
comp=Z,4.5nm,1.0s,baz=299,slow=3.6,SNR=6.8
PLCA LR LR 15 43 10.9
comp=Z,690nm,21.6s,baz=280,slow=29
DGMT Dagmar 88.88 38 P **P** **15 12 30.4 +0.4**
DGMT Dagmar 88.88 38 P **P** **15 12 31.4 +1.4**
baz=244
INK Inuvik 89.16 14 P **P** **15 12 30.7 0.0**
INK pmax pmax
comp=Z,11nm,1.0s
INK Inuvik 89.16 14 P **P** **15 12 31.2 +0.4**
comp=Z,9.0nm,0.9s,baz=223,slow=4.5,SNR=21
INK Inuvik 89.16 14 P **P** **15 12 30.7 0.0**
XAN Xi'an 89.33 306 P **P** **15 12 33.1 +0.7**
XAN pmax pmax
comp=Z,20nm,1.4s
XAN pmax pmax
comp=Z,100nm,5.4s
XAN Xi'an 89.33 306 P **P** **15 12 32.5 0.0**
XAN pmax pmax
comp=Z,42nm,1.4s
XAN Xi'an 89.33 306 P **P** **15 12 32.5 0.0**
XAN IAmb IAmb 15 12 34.9
comp=Z,42nm,1.4s
GSI Gunungsitoli 89.59 271 P **P** **15 12 35.2 +1.1**
comp=Z,2µmcomp=Z,168nm,1.0s
GSI Gunungsitoli 89.59 271 P **P** **15 12 31.7 -2.4**
YAK Yakutsk 90.06 337 *e*P **P** **15 12 34.0 -1.1**
YAK *e**PP **pP** **15 12 44.5 -0.3**
YAK *e*PPP PPP 15 18 04.1
YAK *eS* **SKSac** **15 23 01.8 -1.5**
YAK *e**SS **S** **15 23 26.1 +0.3**
YAK pmax pmax
comp=Z,47nm,1.0s
YAK pmax pmax
comp=N,10.0nm,1.2s
YAK pmax pmax
comp=E,13nm,1.1s
YAK pmax pmax
comp=Z,202nm,4.7s
YAK pmax pmax
comp=N,105nm,4.3s
YAK pmax pmax
comp=E,92nm,3.6s
YAK smax smax
comp=N,111nm,4.3s
YAK smax smax
comp=E,131nm,3.2s
YAK Yakutsk 90.06 337 P **P** **15 12 34.7 -0.3**
comp=E,22nm,0.7s,baz=132,slow=0.7,SNR=37
YAK LR LR 15 46 13.9
comp=E,160nm,22.0s,baz=96,slow=31
YAK Yakutsk 90.06 337 P **P** **15 12 34.0 -1.1**
TPTI 90.52 273 P **P** **15 12 40.0 +1.6**
comp=E,231nmcomp=E,26nm,0.9s
PBKT Sadao Pong 90.69 287 P **P** **15 12 38.2 -0.8**
PBKT IAmb IAmb 15 12 42.4
comp=Z,25nm,1.2s
MIAR Mount Ida 90.90 54 P **P** **15 12 40.7 +1.0**
baz=251
YKA Yellowknife Ar 90.92 23 P **P** **15 12 39.6 +0.6**
comp=Z,7.2nm,0.9s,baz=235,slow=4.4,SNR=67
YKA PKKP **PKKPdf** **15 30 04.5 +1.1**
comp=Z,0.7nm,0.6s,baz=35,slow=2.1,SNR=14
YKA LR LR 15 46 25.7
comp=Z,297nm,21.4s,baz=0.0,slow=31
W39A Magazine 90.95 54 P **P** **15 12 40.9 +1.0**
baz=251
JTS Las Juntas de 91.22 80⇓ *e*P **P** **15 12 39.2 -2.4**
JTS pmax pmax
comp=Z,6.0nm,1.1s
KMI Kunming 91.59 296 P **P** **15 12 45.5 +2.1**
KMI pP PcP 15 12 48.1 +3.8
KMI sP pP 15 12 49.5 -3.5
KMI S **S** **15 23 46.3 +4.4**
KMI SS **SS** **15 29 47.3 -2.1**
KMI pmax pmax
comp=Z,25nm,1.1s
KMI pmax pmax
comp=Z,98nm,4.5s
KMI LR LR
comp=Z,240nm,34.2s
KMI LR LR
comp=Z,400nm,20.0s
KMI LR LR
comp=Z,420nm,18.9s
SYO Syowa Base 91.69 191⇑ *e*P **P** **15 12 40.8 -1.9**
SYO Syowa Base 91.69 191⇑ *ep*P **P** **15 12 45.6 +2.9**
SYO Syowa Base 91.69 191⇓ *e*X P 15 12 50.0 +7.3
ECSD EROS Data Cent 91.82 45 P **P** **15 12 44.4 +0.7**
baz=249
VNA3 Neumayer Olymp 91.88 175 P **P** **15 12 45.6 +2.0**
SNAA Sanae 91.94 177 P **P** **15 12 45.8 +1.9**
SNAA Sanae 91.94 177 P **P** **15 12 45.2 +1.2**
SNAA pmax pmax
comp=Z,15nm,1.0s
SNAA Sanae 91.94 177 P **P** **15 12 45.2 +1.2**
SNAA IAmb IAmb 15 12 50.1
comp=Z,15nm,1.0s
U40A Yellville 92.05 53 P **P** **15 12 45.2 +0.2**
baz=251
W41B Gary Mavity, V 92.14 54 P **P** **15 12 46.1 +0.8**
baz=252
C36M Paulatuk 92.24 16 P **P** **15 12 45.9 +0.8**
C36M IAmb IAmb 15 12 46.9
comp=Z,19nm,1.2s
VNA1 Neumayer–Stat 92.58 175 P **P** **15 12 49.1 +2.3**
MGMO Mountain Grove 92.75 52 P **P** **15 12 48.4 +0.2**
MGMO IAmb IAmb 15 13 03.9
comp=Z,26nm,1.1s
FFC Flin Flon 92.82 33 P **P** **15 12 47.7 -0.3**
FFC pmax pmax
comp=Z,10.0nm,1.3s
FFC Flin Flon 92.82 33 P **P** **15 12 47.7 -0.3**
CM31 Chiang Mai Arr 93.08 288 P **P** **15 12 49.8 -0.3**
CM31 IAmb IAmb 15 12 53.1
comp=Z,20nm,0.9s
CMAR Chiang Mai Arr 93.08 288 P **P** **15 12 51.9 +1.8**
comp=Z,13nm,0.9s,baz=93,slow=2.7,SNR=81
CMAR LR LR 15 49 28.8
comp=Z,302nm,21.8s,baz=107,slow=32
CHTO Chiang Mai 93.17 289 P **P** **15 12 50.4 -0.2**
CHTO pmax pmax
comp=Z,24nm,1.1s
CHTO Chiang Mai 93.17 289 P **P** **15 12 50.4 -0.2**
CHTO IAmb IAmb 15 12 53.2
comp=Z,24nm,1.1s
CCM Cathedral Cave 93.80 52 P **P** **15 12 53.5 +0.5**
baz=252
AGMN Agassiz Nation 93.92 41 P **P** **15 12 54.1 +0.9**
baz=250
LZH Lanzhou 93.93 306 *e*P **P** **15 12 54.9 +1.0**
LZH pP pP 15 13 00.0 -3.5
LZH sP pwP 15 13 02.8 -3.2
LZH PP **PP** **15 16 39.1 -1.1**
LZH pmax pmax
comp=Z,17nm,1.1s
LZH pmax pmax
comp=Z,78nm,4.2s
LZH LR LR
comp=Z,290nm,15.2s
LZH LR LR
comp=Z,330nm,16.8s
LZH LR LR
comp=Z,480nm,17.0s
ULM Lac du Bonnet 94.58 39⇓ *i*P **P** **15 12 56.0 -0.3**
ULM Lac du Bonnet 94.58 39 P **P** **15 12 55.7 -0.5**
comp=Z,4.8nm,0.8s,baz=250,slow=6.0,SNR=10
ULM LR LR 15 47 28.2
comp=Z,489nm,21.9s,baz=259,slow=30
ULM Lac du Bonnet 94.58 39 P **P** **15 12 55.5 -0.8**
ULM IAmb IAmb 15 13 10.3
comp=Z,15nm,1.1s
BOD Bodaibo 94.84 329 *e*P **P** **15 12 55.8 -1.5**
BOD pmax pmax
comp=Z,10.0nm,1.0s
L40A Anamosa 95.02 48 P **P** **15 12 58.3 -0.2**
ULN Ulaanbaatar 95.26 318 P **P** **15 12 59.2 -0.5**
SONM Songino Array 95.67 318 P **P** **15 13 01.5 0.0**
comp=Z,3.1nm,0.8s,baz=118,slow=3.2,SNR=12
SONM PP **PP** **15 16 46.0 -7.4**
comp=Z,1.0nm,1.1s,baz=111,slow=7.9,SNR=3.9
SONM LR LR 15 51 11.4
comp=Z,218nm,21.9s,baz=100,slow=32
SONM Songino Array 95.67 318 IAmb IAmb 15 13 05.2
comp=Z,2.6nm,0.8s
TIXI Tiksi 95.98 344*c i*P **P** **15 13 02.2 0.0**
TIXI pmax pmax
comp=Z,27nm,1.1s
TIXI Tiksi 95.98 344 P **P** **15 13 02.4 +0.3**
comp=Z,21nm,1.1s,baz=135,slow=6.4,SNR=24
TIXI Tiksi 95.98 344 P **P** **15 13 01.7 -0.4**
GTA Gaotai 97.91 309 P Pdif 15 13 12.3 +0.4
GTA pP PcP 15 13 16.6 +4.7
GTA sP pP 15 13 19.4 -2.1
GTA PP **PP** **15 17 15.8 +4.9**
GTA pmax pmax
comp=Z,4.0nm,1.2s
GTA pmax pmax
comp=Z,82nm,5.0s
GTA LR LR
comp=Z,210nm,21.0s
GTA LR LR
comp=Z,350nm,19.9s
TLY Talaya 98.49 321⇑ *e*P Pdif 15 13 15.0 +0.9
TLY pmax pmax
comp=Z,5.0nm,0.8s
TLY Talaya 98.49 321 LR LR 15 54 30.3
comp=Z,244nm,19.9s,baz=129,slow=34
LPAZ La Paz 99.33 110 LR LR 15 48 23.4
comp=Z,366nm,21.6s,baz=254,slow=29
N49A Columbus Grove 99.82 50 P **Pdif** **15 13 20.9 +0.7**
baz=257
H57A Richville 106.81 48 P **PKiKP** **15 18 01.5 +0.3**
baz=263
ZALV Zalesovo Beam 110.09 322 Pdiff **Pdif** **15 14 05.2 -0.4**
comp=Z,0.4nm,0.4s,baz=60,slow=3.6,SNR=3.8
ZALV PKiKP **PKiKP** **15 18 07.2 +0.2**
comp=Z,1.4nm,0.6s,baz=158,slow=1.2,SNR=5.6
MKAR Makanchi Array 111.62 314*c i*PKiKP **PKiKP** **15 18 10.1 -0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 111.62 314 Pdiff **Pdif** **15 14 15.0 +2.5**
comp=Z,0.6nm,0.8s,baz=87,slow=3.5,SNR=3.4
MKAR PKiKP **PKiKP** **15 18 10.2 0.0**
comp=Z,2.1nm,0.6s,baz=170,slow=0.4,SNR=25
KURK Kurchatov 113.98 319⇓ *i*PKiKP **PKiKP** **15 18 15.1 +0.6**
KURK pmax pmax
comp=Z,7.0nm,1.7s
NRN Naryn 116.15 308 PKiKP **PKPdf** **15 18 17.9 -1.6**
NRN Naryn 116.15 308 **PKPdf** **15 18 17.9 -1.6**
BOOM Boomskoye usch 116.17 310 PKiKP **PKPdf** **15 18 18.3 -1.0**
BOOM Boomskoye usch 116.17 310 **PKPdf** **15 18 18.3 -1.0**
KSH Kashi 116.18 306 PKP **PKiKP** **15 18 21.6 +2.3**
KSH SKS **SKSdf** **15 25 25.1 -4.3**
KSH LR LR
comp=Z,270nm,5.3s
KSH LR LR
comp=Z,290nm,5.0s
KSH LR LR
comp=Z,640nm,6.3s
AAK Ala-Archa 117.23 310⇓ *i*PKiKP **PKiKP** **15 18 22.1 +0.8**
AAK pmax pmax
comp=Z,5.0nm,1.7s
AAK Ala-Archa 117.23 310 **PKPdf** **15 18 20.2 -1.1**
BRVK Borovoye 118.80 322 PKiKP **PKPdf** **15 18 23.1 -0.7**
BRVK Borovoye 118.80 322 **PKPdf** **15 18 23.1 -0.7**
KK31 Karatay Array 120.12 311 PKiKP **PKPdf** **15 18 26.1 -0.6**
KK31 Karatay Array 120.12 311 **PKPdf** **15 18 26.1 -0.6**
KKAR Karatay Array 120.12 311 PKiKP **PKPdf** **15 18 26.2 -0.5**
KKAR Karatay Array 120.12 311 **PKPdf** **15 18 26.2 -0.5**
BTK Batken 120.13 307 PKiKP **PKPdf** **15 18 25.6 -1.3**
BTK Batken 120.13 307 **PKPdf** **15 18 25.6 -1.3**
GAR Garm 120.58 306 **PKiKP** **15 18 27.9 0.0**
CHGR Chuyangaron 121.51 306 **PKPdf** **15 18 29.0 -0.6**
KBL Kabul 121.79 301 PKiKP **PKPdf** **15 18 29.8 -0.6**
KBL Kabul 121.79 301 **PKPdf** **15 18 29.8 -0.6**
SVE Sverdlovsk 123.04 328 *e*PKiKP **PKiKP** **15 18 31.9 -0.1**
SVE pmax pmax
comp=Z,9.0nm,0.9s
ARU Arti 124.25 328 *i* PKiKP **PKiKP** **15 18 34.7 +0.3**
ARU 15 20 24.2
ARU 15 25 46.0
ARU SS SS 15 37 19.2 +11
ARU Arti 124.25 328 **PKPdf** **15 18 33.8 -0.4**
ARCES ARCESS Array B 125.59 352 PKP **PKiKP** **15 18 37.2 +0.5**
comp=Z,3.6nm,0.6s,baz=5.6,slow=1.1,SNR=25
APA Apatity 126.01 348⇑ *i*PKiKP PKPpre 15 18 28.0
APA pmax pmax
comp=Z,8.0nm,1.0s
APA MLR MLR
comp=Z,500nm,16.0s
ABKAR Akbulak array 126.06 320 **PKPdf** **15 18 37.3 -0.6**
PRGR Permogore 127.09 338 *e*PKiKP **PKPdf** **15 18 37.9 -1.5**
PRGR *e* 15 18 52.3
PRGR pmax pmax
comp=Z,9.0nm,0.8s
HRA Herat 127.41 301 **PKPdf** **15 18 40.7 -0.5**
TMCR Tamitsa 127.69 343 *e*PKiKP **PKPdf** **15 18 40.3 -0.1**
GEYT Ailbeck 130.21 306 PKP **PKiKP** **15 18 47.5 +0.5**
comp=Z,5.0nm,0.8s,baz=137,slow=3.6,SNR=11
BOSA Boshof 131.84 202 PKiKP **PKiKP** **15 18 52.0 +1.2**
BOSA Boshof 131.84 202 PKP **PKiKP** **15 18 52.0 +1.2**
comp=Z,8.7nm,0.7s,baz=159,slow=4.5,SNR=10
BOSA Boshof 131.84 202 **PKPdf** **15 18 48.4 -1.4**
FINES FINESS Array B 132.92 347*c i*PKiKP **PKiKP** **15 18 52.2 +0.6**
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES FINESS Array B 132.92 347 PKhKP PKPpre 15 18 42.7
comp=Z,1.1nm,0.5s,baz=11,slow=1.9,SNR=7.3
FINES PKP **PKiKP** **15 18 51.5 -0.1**
comp=Z,1.9nm,0.4s,baz=30,slow=2.8,SNR=10
OBN Obninsk 135.06 336⇓ *i*PKiKP **PKiKP** **15 18 55.7 -0.4**
OBN *e* 15 19 08.1
OBN *e* 15 21 31.8
OBN pmax pmax
comp=Z,34nm,2.5s
OBN MLR MLR
comp=Z,168nm,19.0s
NB2 NORSAR Subarra 135.28 357 PKP PKPpre 15 18 43.9
comp=Z,0.4nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B 135.28 357 PKhKP PKPpre 15 18 40.0
comp=Z,0.1nm,0.3s,baz=17,slow=4.6,SNR=3.8
NOA PKP **PKiKP** **15 18 57.2 +0.7**
comp=Z,1.2nm,0.7s,baz=18,slow=3.9,SNR=3.3
VSR Storozhevoye 136.68 331⇑ *i*PKiKP **PKPdf** **15 18 56.5 -1.3**
AKT Akhty 136.85 314 *e*PKiKP **PKiKP** **15 19 00.4 0.0**
AKT *e* 15 21 47.0
AKT pmax pmax
comp=Z,17nm,1.1s
KIV Kislovodsk 139.05 320 *i* PKiKP **PKiKP** **15 19 05.7 +0.9**
KIV pmax pmax
comp=Z,22nm,1.0s
KIV MLR MLR
comp=Z,588nm,24.0s
GNI Garni 139.46 313⇓ *i*PKiKP **PKiKP** **15 19 05.4 -0.5**
AKASG Malin Array Be 141.29 337*c i*PKiKP **PKiKP** **15 19 09.8 +0.8**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 141.29 337 PKhKP PKPpre 15 19 00.3
comp=Z,4.8nm,0.6s,baz=39,slow=4.0,SNR=23
AKBB Malin Array Si 141.29 337 PKHKP PKPpre 15 18 58.8
AKBB Malin Array Si 141.29 337 PKPpre 15 18 58.8
BEL Belsk 142.90 346 *e*PKiKP **PKPdf** **15 19 07.8 -1.3**
BEL Belsk 142.90 346 *e*PKP **PKPdf** **15 19 07.8 -1.3**
RAYN Ar Rayn 142.99 287 PKHKP PKPbc 15 19 06.6
RAYN Ar Rayn 142.99 287 PKPpre PKPbc 15 19 06.6
SORM Soroca 143.70 335⇑ PKHKP PKPbc 15 19 08.0 -0.1
SORM Soroca 143.70 335⇑ P PKPbc 15 19 08.0 -0.1
LVV L'vov 143.82 341 *e*PKHKP PKPbc 15 19 08.3 -0.2
RSDY Resadiye-TOKAT 144.31 318 *e*P **PKPdf** **15 19 11.8 -0.2**
KWP Kalwaria Pacla 144.39 342 *e*PKiKP **PKPdf** **15 19 11.2 -0.7**
KWP Kalwaria Pacla 144.39 342 *e*PKP **PKPdf** **15 19 11.2 -0.7**
KWP Kalwaria Pacla 144.39 342 PKPbc 15 19 10.8 +0.5
KIS Kishinev 144.41 334 *e*P **PKiKP** **15 19 20.0 +4.4**
KIS Kishinev 144.41 334 *e*PKiKP **PKiKP** **15 19 20.0 +4.4**
KIS *e* 15 19 31.0
MILM Milestii Mici 144.48 334⇑ P PKPbc 15 19 10.8 +0.3
CLZ Clausthal 144.50 356 *e*PKPbc PKPbc 15 19 11.1 +0.6
baz=6.6,slow=3.1
OJC Ojcow 144.63 346 *e*PKiKP **PKPdf** **15 19 12.1 -0.2**
OJC Ojcow 144.63 346 *e*PKP **PKPdf** **15 19 12.1 -0.2**
OJC Ojcow 144.63 346 PKPbc 15 19 11.4 +0.4
MALT Malatya 144.66 314 *e*P **PKPdf** **15 19 13.8 +1.0**
SNOP Sinop 144.67 322 *e*P **PKPdf** **15 19 12.8 +0.3**
KSP Ksiaz 144.77 350 *e*PKiKP **PKPdf** **15 19 12.6 +0.1**
KSP Ksiaz 144.77 350 *e*PKP **PKPdf** **15 19 12.6 +0.1**
SVSK Karacayir 144.78 318 *e*P **PKPdf** **15 19 13.4 +0.6**
CLL Collm 144.79 353⇑ *i*PKiKP **PKPdf** **15 19 12.0 -0.4**
CLL *i* 15 19 24.5
CLL pmax pmax
comp=Z,41nm,0.9s
CLL Collm 144.79 353⇑ *i*PKPdf **PKPdf** **15 19 12.0 -0.4**
comp=Z,41nm,0.9s
CLL *i* pPKiKP **PKiKP** **15 19 18.9 +2.7**
CLL *i* 15 19 24.5
CLL *e*PKPlp 15 19 25.0
comp=Z,200nm,18.3s
CLL *e*SKPdf **SKPdf** **15 22 43.0 -1.5**
CLL LmV 16 26 00.0
comp=Z,200nm,19.5s
CLL Collm 144.79 353 *e*PKPbc PKPbc 15 19 11.9 +0.5
baz=6.6,slow=3.1
CLL Collm 144.79 353 PKPbc 15 19 11.6 +0.1
URFA Urfa 144.81 313 *e*P **PKPdf** **15 19 13.5 +0.5**
GTTG Gvttingen 144.81 357 *e*PKPbc **PKPdf** **15 19 12.7 +0.2**
baz=6.6,slow=3.1
TOKT Tokat 144.85 319 *e*P **PKPdf** **15 19 13.5 +0.5**
DIKM Dikmen 144.86 322 ⇓P **PKPdf** **15 19 14.3 +1.5**
STHS Stebnicka Huta 145.00 343 *e*PKiKP **PKPdf** **15 19 13.4 +0.5**
STHS Stebnicka Huta 145.00 343 *e*PKP **PKPdf** **15 19 13.4 +0.5**
BUG Bochum--Univer 145.01 359 *e*PKPbc **PKPdf** **15 19 12.9 +0.1**
baz=6.6,slow=3.1
CHVC Chvalec 145.06 350 *e*PKP **PKPdf** **15 19 13.4 +0.4**

OSTC	Ostas	145.06 349	ePKP	PKPdf	15 19 13.4	+0.4
LEOM	Leova	145.07 334	⇓PKIKP	PKPdf	15 19 13.9	+0.8
LEOM	Leova	145.07 334	⇓P	PKPdf	15 19 13.9	+0.8
BRG	Berggiesshubel	145.10 352	ePKP	PKPdf	15 19 13.3	+0.4
	comp=Z,26nm,1.0s					
BRG			i		15 19 28.1	
	comp=Z,23nm,1.1s					
BRG	Berggiesshubel	145.10 352	ePKIKP	PKPdf	15 19 13.4	+0.4
BRG			i		15 19 28.0	
BRG			pmax	pmax		
	comp=Z,26nm,1.0s					
BRG			pmax	pmax		
	comp=Z,23nm,1.1s					
BRG	Berggiesshubel	145.10 352	ePKPbc	PKPdf	15 19 13.2	+0.2
	baz=6.6,slow=3.1					
VASR	Vaslui	145.13 334	⇑P	PKPdf	15 19 14.2	+1.1
FBE	Freiberg	145.13 353	ePKPbc	PKPdf	15 19 13.6	+0.6
	baz=6.6,slow=3.1					
UPC	Upice	145.14 350	ePKIKP	PKPdf	15 19 14.0	+0.9
UPC			e		15 19 27.2	
UPC	Upice	145.14 350	ePKP	PKPdf	15 19 14.0	+0.9
UPC			ex	x	15 19 27.2	
KOLS	Kolonicke sedl	145.14 342	ePKIKP	PKPdf	15 19 13.9	+0.7
KOLS	Kolonicke sedl	145.14 342	ePKP	PKPdf	15 19 13.9	+0.7
PRAR	RASCA	145.16 337	⇓P	PKPdf	15 19 13.7	+0.4
DARE	Darende-Malaty	145.17 315	eP	PKiKP	15 19 15.8	-1.8
DPC	Dobruska-Polom	145.24 349	ePKIKP	PKPdf	15 19 14.5	+1.2
DPC			e		15 19 27.9	
DPC	Dobruska-Polom	145.24 349	ePKP	PKPdf	15 19 14.5	+1.2
DPC			ex	x	15 19 27.9	
NIE	Niedzica	145.25 344	ePKIKP	PKPdf	15 19 14.8	+1.4
NIE	Niedzica	145.25 344	ePKP	PKPdf	15 19 14.8	+1.4
KMBO	Kilima Mbogo	145.25 243	PKPbc	PKPdf	15 19 16.5	+1.8
	comp=Z,65nm,1.0s,baz=81,slow=3.6,SNR=63					
KMBO	Kilima Mbogo	145.25 243		PKPdf	15 19 16.0	+1.3
BUR08	Bucovina Ar. S	145.31 338		PKPdf	15 19 14.2	+0.6
BURAR	Bucovina Array	145.32 338	⇑PKIKP	PKPdf	15 19 15.6	+2.0
BURAR	Bucovina Array	145.32 338	⇑P	PKPdf	15 19 15.6	+2.0
PVCC	Panska Ves	145.35 351	ePKIKP	PKPab	15 19 14.6	+1.2
PVCC			e		15 19 27.9	
PVCC	Panska Ves	145.35 351	ePKP	PKPab	15 19 14.6	+1.2
PVCC			ex	x	15 19 27.9	
OKC	Ostrava-Krasne	145.37 347	ePKIKP	PKPab	15 19 14.4	+0.9
OKC			e		15 19 23.2	
OKC			e		15 19 28.3	
OKC	Ostrava-Krasne	145.37 347	ePKP	PKPab	15 19 14.4	+0.9
OKC			ex	x	15 19 23.2	
OKC			ex	x	15 19 28.3	
UZH	Uzhgorod	145.41 342	ePKHKP	PKPbc	15 19 12.0	-1.5
UZH			i		15 19 15.1	
UZH			e		15 19 23.7	
KRLC	Kraliky	145.42 349	ePKIKP	PKPab	15 19 14.5	+0.7
KRLC			e		15 19 28.3	
KRLC	Kraliky	145.42 349	ePKP	PKPab	15 19 14.5	+0.7
KRLC			ex	x	15 19 28.3	
BIR	Birlad	145.49 334	⇑PKIKP	PKPab	15 19 15.4	+1.3
BIR	Birlad	145.49 334	⇑P	PKPab	15 19 15.4	+1.3
UBBA	Unterbreizbach	145.54 356	ePKPbc	PKPab	15 19 14.5	+0.5
	baz=6.6,slow=3.1					
MORC	Moravsky Berou	145.55 348	⇑PKIKP	PKPab	15 19 15.3	+1.0
MORC	Moravsky Berou	145.55 348	⇑P	PKPab	15 19 15.3	+1.0
MORC	Moravsky Berou	145.55 348	ePKP	PKPab	15 19 15.2	+1.0
MORC	Moravsky Berou	145.55 348		PKPab	15 19 15.0	+0.8
BIZ	Bicaz	145.56 336	⇑P	PKPab	15 19 15.6	+1.2
MOX	Moxa	145.59 355	ePKPbc	PKPab	15 19 14.7	+0.3
	baz=6.6,slow=3.1					
MOX			epPKPbc	sPKPab	15 19 28.7	+1.4
VARL	Varlezi	145.69 334	⇑P	PKPab	15 19 16.3	+1.4
PLN	Plauen	145.69 354	ePKPbc	PKPab	15 19 15.3	+0.6
	baz=6.6,slow=3.1					
TESR	Tescani	145.70 335	⇑P	PKPab	15 19 15.4	+0.6
LANS	Liptovska Anna	145.71 345	ePKIKP	PKiKP	15 19 16.7	-1.5
LANS	Liptovska Anna	145.71 345	ePKP	PKiKP	15 19 16.7	-1.5
TANN	Tannenbergstha	145.73 354	ePKPbc	PKPab	15 19 15.7	+0.7
	baz=6.6,slow=3.1					
GHRR		145.75 334	⇑P	PKiKP	15 19 16.8	-1.6
TRPA	Tarpa	145.78 341	⇑P	PKPab	15 19 15.7	+0.6
GUNZ	Gunzen	145.79 354	ePKPbc	PKPab	15 19 16.0	+0.9
	baz=6.6,slow=3.1					
GUNZ			epPKPbc	sPKPab	15 19 29.6	+1.5
PRA	Prague	145.82 351	ePKIKP	PKPab	15 19 15.9	+0.7
PRA			e		15 19 29.6	
PRA	Prague	145.82 351	ePKP	PKPab	15 19 15.9	+0.7
PRA			ex	x	15 19 29.6	
TLCR		145.82 332	⇑PKIKP	PKPab	15 19 16.3	+1.0
TLCR		145.82 332	⇑P	PKPab	15 19 16.3	+1.0
WERN	Wernitzgruen	145.87 354	ePKPbc	PKPab	15 19 16.4	+1.0
	baz=6.6,slow=3.1					
PRU	Pruhonice	145.88 351	ePKIKP	PKPab	15 19 16.0	+0.6
PRU			e		15 19 27.8	
PRU	Pruhonice	145.88 351	ePKP	PKPab	15 19 16.0	+0.6
PRU			ex	x	15 19 21.6	
PRU			ex	x	15 19 27.8	
NKC	Novy Kostel	145.91 353	ePKIKP	PKPab	15 19 16.1	+0.5
NKC			e		15 19 29.8	
NKC	Novy Kostel	145.91 353	ePKP	PKPab	15 19 16.1	+0.5
NKC			ex	x	15 19 29.8	
AHRW	Bad Neuenahr-A	145.91 360	ePKPbc	PKPab	15 19 16.3	+0.8
	baz=6.6,slow=3.1					
GOPC	GO Pecny, Ondr	145.92 351	ePKIKP	PKPab	15 19 15.9	+0.3
GOPC			e		15 19 29.5	
GOPC	GO Pecny, Ondr	145.92 351	ePKP	PKPab	15 19 15.9	+0.3
GOPC			epPKP	pPKPdf	15 19 21.6	-2.6
GOPC			ex	x	15 19 29.5	
YOZ	Yozgat	146.01 319	eP	PKPab	15 19 17.1	+0.6
TUDR		146.01 333	⇑P	PKiKP	15 19 17.7	-1.2
KECS	Kecovo	146.06 344	ePKIKP	PKPab	15 19 17.3	+1.1
KECS	Kecovo	146.06 344	ePKP	PKPab	15 19 17.3	+1.1
GAZ	Gaziantep	146.06 314	eP	PKPab	15 19 17.8	+1.1
GAZ	Gaziantep	146.06 314	PKPbc	PKPbc	15 19 16.1	0.0
ARCR	ARCALIA	146.08 338	⇓P	PKiKP	15 19 18.6	-0.4
PETR	Petresti	146.09 334	⇑P	PKiKP	15 19 18.0	-1.0
BNN	Bunyan	146.11 317	eP	PKPab	15 19 17.8	+0.9
KMRS	Kahramanmaras	146.11 314	eP	PKPab	15 19 17.6	+0.8
JURR	Jurilovca	146.11 331	⇑P	PKPab	15 19 17.1	+0.7
CORM	Corum	146.13 320	eP	PKiKP	15 19 18.2	-1.3
ODBI	Odobesti	146.13 334	⇓P	PKiKP	15 19 18.4	-0.8
ILGA	Ilgaz	146.15 322	PKPbc	PKPab	15 19 17.2	+0.2
VRAC	Vranov	146.19 348	⇑PKP2	PKPab	15 19 17.4	+0.7
VRAC	Vranov	146.19 348	⇑P	PKPab	15 19 17.4	+0.7
VRAC	Vranov	146.19 348	ePKP	PKPab	15 19 17.3	+0.7
VRI	Vrincioaia	146.19 335	⇑PKP2	PKPab	15 19 17.3	+0.5
VRI	Vrincioaia	146.19 335	⇑P	PKPab	15 19 17.3	+0.5
MANZ	Manzenberg	146.19 354	ePKPbc	PKPab	15 19 17.0	+0.4
	baz=6.6,slow=3.1					
TNS	Taunus Mts	146.21 358	ePKPbc	PKPab	15 19 17.0	+0.3
	baz=6.6,slow=3.1					
TNS			epPKPbc	sPKPab	15 19 30.6	+0.9
PLOR	Plostina	146.23 335	⇑PKP2	PKPab	15 19 17.4	+0.4
PLOR	Plostina	146.23 335	⇑P	PKPab	15 19 17.4	+0.4
PBCC	Pribram	146.26 352	ePKP	PKPab	15 19 17.5	+0.6
PBCC			ex	x	15 19 31.0	
TOPG	Topolog	146.26 332	⇑P	PKPab	15 19 17.8	+0.7
OZUR		146.38 336	⇓P	PKPab	15 19 18.2	+0.7
JAVC	Velka Javorina	146.40 347	ePKP	PKiKP	15 19 18.9	-0.8
ROTZ	Rotzenmuhle	146.40 354	ePKPbc	PKPab	15 19 17.8	+0.4
	baz=6.6,slow=3.1					
TREC	Trest	146.40 350	ePKP2	PKPab	15 19 17.7	+0.2
TREC	Trest	146.40 350	ePKP	PKPab	15 19 17.7	+0.2
TREC			ex	x	15 19 31.0	
KRUC	Moravsky	146.46 349	ePKP	PKPab	15 19 17.7	0.0
VYHS	Vyhne	146.47 345	ePKP2	PKPab	15 19 18.1	+0.3
VYHS	Vyhne	146.47 345	ePKP	PKPab	15 19 18.1	+0.3
CANT	Cankiri	146.48 321	eP	PKPab	15 19 18.9	+0.8
TIRR	Tirgusor	146.56 331	⇑PKP2	PKPab	15 19 18.7	+0.5
TIRR	Tirgusor	146.56 331	⇑P	PKPab	15 19 18.7	+0.5
TIRR	Tirgusor	146.56 331		PKPab	15 19 17.9	-0.3
GRA1	Grafenberg Arr	146.57 355		PKPab	15 19 18.3	+0.2
GRF	Grafenberg Arr	146.57 355	PKP2	PKPab	15 19 18.3	+0.2
GRF	Grafenberg Arr	146.57 355	ePKPbc	PKPab	15 19 18.6	+0.5
	baz=6.6,slow=3.1					
GRF			epPKPbc	sPKPab	15 19 32.0	+0.9
HARR	Harsova	146.60 332	⇑PKP2	PKPab	15 19 19.0	+0.7
HARR	Harsova	146.60 332	⇑P	PKPab	15 19 19.0	+0.7
DOPR	Dopca	146.64 336	⇑P	PKiKP	15 19 19.4	-0.8
CJR	Cluj-Napoca	146.67 339	⇓PKP2	PKPab	15 19 19.1	+0.5
CJR	Cluj-Napoca	146.67 339	⇓P	PKPab	15 19 19.1	+0.5
PSZ	Piszkesteto	146.73 344	⇑PKP2	PKPab	15 19 19.0	+0.1
PSZ	Piszkesteto	146.73 344	⇑P	PKPab	15 19 19.0	+0.1
PSZ	Piszkesteto	146.73 344		PKPbc	15 19 18.1	+0.4
MFTR	Murfatlar	146.77 331	⇑P	PKPab	15 19 19.5	+0.5
SMOL	Smolenice	146.77 347	ePKP2	PKPab	15 19 19.6	+0.7
SMOL	Smolenice	146.77 347	ePKP	PKPab	15 19 19.6	+0.7
WLF	Walferdange	146.79 1	PKP2	PKPab	15 19 18.3	-0.6
WLF	Walferdange	146.79 1	ePKPbc	PKPab	15 19 19.0	+0.1
	baz=6.6,slow=3.1					
WLF	Walferdange	146.79 1		PKPab	15 19 18.3	-0.6
MLR	Muntele Rosu	146.81 335	⇑PKP2	PKPab	15 19 18.8	-0.5
MLR	Muntele Rosu	146.81 335	⇑P	PKPab	15 19 18.8	-0.5
MLR	Muntele Rosu	146.81 335		PKPbc	15 19 18.4	+0.3
KOZT	Kozan	146.86 315	eP	PKPab	15 19 19.4	-0.2
KHC	Kasperske Hory	146.86 352	ePKP2	PKPab	15 19 19.2	-0.1
KHC	Kasperske Hory	146.86 352	ePKP	PKPab	15 19 19.1	-0.2
KHC			ex	x	15 19 32.8	
KHC	Kasperske Hory	146.86 352		PKPab	15 19 18.7	-0.5
ISR	Istrita	146.87 334	⇑PKP2	PKPab	15 19 19.3	-0.1
ISR	Istrita	146.87 334	⇑P	PKPab	15 19 19.3	-0.1
DRGR		146.90 340	⇑PKP2	PKPab	15 19 19.2	-0.4
DRGR		146.90 340	⇑P	PKPab	15 19 19.2	-0.4
AMRR	Amara	146.93 333	⇓PKP2	PKPbc	15 19 18.9	+0.7
AMRR	Amara	146.93 333	⇓P	PKPbc	15 19 18.9	+0.7
WET	Wettzell	146.94 353	ePKPbc	PKPab	15 19 19.0	-0.5
	baz=6.6,slow=3.1					
MODS	Modra-Piesok	146.94 347	ePKP2	PKPab	15 19 19.0	-0.6
MODS	Modra-Piesok	146.94 347	ePKP	PKPab	15 19 19.0	-0.6
BR131	Keskin Array S	147.01 320	ci PKP2	PKPab	15 19 19.8	-0.5
BR131	Keskin Array S	147.01 320	PKPbc	PKPbc	15 19 19.5	+0.7
BRTR	Keskin Array B	147.01 320	ci PKP2	PKPab	15 19 19.8	-0.5
BRTR			pmax	pmax		
	comp=Z,82nm,0.8s					
BRTR	Keskin Array B	147.01 320	PKPbc	PKPab	15 19 19.9	-0.4
	comp=Z,82nm,0.8s,baz=118,slow=2.2,SNR=273					
GEC2	GERESS Array S	147.12 352	ePKPbc	PKPab	15 19 20.0	-0.3
	baz=6.6,slow=3.1					
GEC2	GERESS Array S	147.12 352		PKPbc	15 19 19.6	+0.8
GERES	GERESS Array B	147.12 352	PKPbc	PKPbc	15 19 19.3	+0.5
	comp=Z,24nm,0.8s,baz=29,slow=3.0,SNR=148					
ZST	Bratislava	147.15 347	ePKP2	PKPab	15 19 19.9	-0.4
ZST	Bratislava	147.15 347	ePKP	PKPab	15 19 19.9	-0.4
CEYT	Ceyhan	147.16 314	eP	PKPab	15 19 20.7	-0.1
TAHT	Tahtakopru-Hat	147.17 313	eP	PKPab	15 19 20.7	-0.2
VOIR		147.21 336	⇑PKP2	PKPab	15 19 21.1	+0.3
VOIR		147.21 336	⇑P	PKPab	15 19 21.1	+0.3
PLAR	PLOIESTI	147.25 334	⇑P	PKPab	15 19 20.6	-0.3
PSN	Preselentsi	147.26 331	P	PKPab	15 19 20.7	-0.3
LEHL	Lehliu	147.26 333	⇑P	PKiKP	15 19 21.4	-0.1
CMRD	Camardi-Nigde	147.32 316	eP	PKPab	15 19 20.8	-0.8
YURE	YUREGIR	147.33 314	eP	PKPab	15 19 21.1	-0.4
SULR		147.34 334	⇑P	PKPab	15 19 21.3	+0.1
YAYX	Yaylak	147.37 319	eP	PKPab	15 19 20.8	-0.9
MTUR	Matau	147.38 336	⇓PKP2	PKPab	15 19 21.0	-0.5
MTUR	Matau	147.38 336	⇓P	PKPab	15 19 21.0	-0.5
ANTO	Ankara	147.43 321	⇑PKP2	PKPab	15 19 21.3	-0.6
ANTO	Ankara	147.43 321	⇑P	PKPab	15 19 21.3	-0.6
ANTO	Ankara	147.43 321	eP	PKPab	15 19 21.4	-0.6
ANTO	Ankara	147.43 321		PKPab	15 19 21.4	-0.6
ARR	Arges	147.43 336	⇓P	PKiKP	15 19 22.2	+0.2
BR231	Keskin MP Arra	147.46 321		PKPab	15 19 21.5	-0.6
KARA	Karaisali	147.50 315	eP	PKPab	15 19 21.3	-0.9
SERE	Sereflikochisa	147.52 319	eP	PKPab	15 19 21.3	-1.0
AFSR	Afar-Bala (An	147.53 320	eP	PKPab	15 19 21.8	-0.5
CONA	Conrad Observa	147.65 349	i PKiKP	PKiKP	15 19 21.6	-0.8
	comp=Z,58nm,0.7s,SNR=33					
LOT	Lotru	147.69 337	⇑P	PKPbc	15 19 21.2	+0.7
SIRR	Siria	147.71 341	⇑P	PKiKP	15 19 21.8	-0.6
YUVA	Yuva-Kibriscik	147.75 323	eP	PKiKP	15 19 22.0	-0.8
KULU	Kulu	147.81 320	eP	PKiKP	15 19 22.5	-0.5
MDUB	Mudurnu	147.98 323	eP	PKiKP	15 19 22.6	-0.7
MDUB	Mudurnu	147.98 323		PKiKP	15 19 22.5	-0.8
HUMR	Humele	147.99 335	⇓P	PKiKP	15 19 22.1	-0.9
PRD	Provadia	148.00 331	P	PKiKP	15 19 23.0	0.0
MOA	Molln	148.01 350	i PKiKP	PKiKP	15 19 22.2	-0.8
	comp=Z,35nm,0.9s,SNR=11					
NEF	NEVSHA	148.01 331	P	PKiKP	15 19 22.9	-0.2
FUR	Furstenfeldbru	148.08 354	ePKPbc	PKiKP	15 19 22.7	-0.4
	baz=6.6,slow=3.1					
GZR	Gura Zlata	148.10 338	⇑PKIKP	PKPbc	15 19 22.3	+0.8
GZR	Gura Zlata	148.10 338	⇑P	PKPbc	15 19 22.3	+0.8
BFO	Black Forest	148.10 358	PKP2	PKPbc	15 19 22.0	+0.6
BFO	Black Forest	148.10 358	ePKPbc	PKiKP	15 19 22.6	-0.6
	baz=6.6,slow=3.1					
BFO	Black Forest	148.10 358		PKPbc	15 19 22.0	+0.6
RAZG	Razgrad	148.12 332	⇑P	PKiKP	15 19 22.8	-0.6
CHBY	Cihanbeyli	148.16 319	eP	PKPbc	15 19 22.6	+0.6
CLF	Chambon-Foret	148.21 6		PKPbc	15 19 22.4	+0.8
ECH	Echery	148.24 360	PKP2	PKPbc	15 19 22.2	+0.4
ECH	Echery	148.24 360		PKPbc	15 19 22.2	+0.4
BZS	Buzias	148.30 340	⇑PKIKP	PKPbc	15 19 21.7	-0.2
BZS	Buzias	148.30 340	⇑P	PKPbc	15 19 21.7	-0.2
RJOB	Jochberg	148.33 352	ePKPbc	PKiKP	15 19 23.3	-0.4
	baz=6.6,slow=3.1					
ARSA	Arzberg	148.37 349	i PKiKP	PKiKP	15 19 23.4	-0.4
	comp=Z,26nm,0.8s,SNR=11					
SILT	Sile	148.38 326	⇑P	PKPab	15 19 26.0	+0.5
GULT	Gulveren	148.40 324	eP	PKiKP	15 19 23.6	-0.5
AUSIV	SIVRIHISAR	148.46 322	eP	PKiKP	15 19 23.5	-0.8
SVRH	Sivrihisar-ESK	148.46 322	eP	PKPbc	15 19 23.3	+0.6
KIZK	Mersin	148.53 315	eP	PKiKP	15 19 23.9	-0.5
ZIMR		148.55 334	⇑PKP2	PKiKP	15 19 24.6	+0.5
ZIMR		148.55 334	⇑P	PKiKP	15 19 24.6	+0.5
SRE	Strehaia	148.57 337	⇑PKP2	PKiKP	15 19 24.5	+0.3
SRE	Strehaia	148.57 337	⇑P	PKiKP	15 19 24.5	+0.3
SRCK	Saricakaya, Es	148.60 323	eP	PKiKP	15 19 23.7	-0.7
HRT	Hereke	148.60 325	eP	PKiKP	15 19 23.9	-0.6
SZH	Strazhica	148.61 333	P	PKiKP	15 19 24.1	-0.2
UBR	Ueberruh	148.66 356	ePKPbc	PKiKP	15 19 23.9	-0.4
	baz=6.6,slow=3.1					
BANR	Banloc	148.66 340	⇓P	PKiKP	15 19 25.3	+1.0
VLAD	Vladila	148.66 335	⇑P	PKiKP	15 19 24.4	0.0
LADK	Ladik-KONYA	148.72 319	eP	PKPbc	15 19 24.1	+0.7
KAVV	Kandilli-Istan	148.75 326	eP	PKPab	15 19 33.2	+6.2
CIFT	Cifteler, Eski	148.79 322	eP	PKiKP	15 19 24.6	-0.3
RETA	Reutte	148.79 355	i PKiKP	PKiKP	15 19 24.3	-0.4
	comp=Z,43nm,1.2s,SNR=8.5					
BORA	Eskisehir	148.80 323	eP	PKiKP	15 19 24.7	-0.3
KEBE	Keben-Mersin	148.84 315	eP	PKiKP	15 19 24.4	+0.7
WATA	Walderalm	148.87 354	i PKiKP	PKiKP	15 19 24.4	-0.6
	comp=Z,43nm,1.2s,SNR=8.6					
KONT	Konya--Tatoy	148.87 319	eP	PKPbc	15 19 24.3	+0.6
KBA	Koelnbreinsper	148.90 351	i sPKPdf	PKPbc	15 19 23.4	-0.3
	comp=Z,17nm,0.7s,SNR=11					
MOTA	Moosalm	148.91 354	i PKiKP	PKiKP	15 19 24.7	-0.4
	comp=Z,60nm,1.1s,SNR=17					
ELND	Elena	148.91 332	⇑P	PKiKP	15 19 25.0	0.0
PVL	Pavlikeni	148.92 333	P	PKiKP	15 19 25.2	+0.3
CAVI	Cavuskoy	148.93 324	eP	PKiKP	15 19 24.9	-0.3
WTTA	Wattenberg	148.93 354	i PKiKP	PKiKP	15 19 24.9	-0.2
	comp=Z,26nm,0.6s,SNR=14					
YLV	Yalova	148.94 325	eP	PKiKP	15 19 24.7	-0.5
JMB	Yambol	148.95 331	P	PKiKP	15 19 25.1	+0.1
IKL	Isikli	148.97 315	eP	PKiKP	15 19 24.7	-0.6
KOGS	Kog	148.99 347	i PKPbc	PKPbc	15 19 24.3	+0.6
KOGS			i		15 19 37.8	
MDVR	Moldovita	149.00 339	⇑P	PKiKP	15 19 24.9	-0.2
PUNG	Punghina	149.00 337	⇑P	PKiKP	15 19 24.7	-0.4
SOKA	Soboth	149.01 349	i PKiKP	PKPbc	15 19 24.4	+0.5
	comp=Z,39nm,1.0s,SNR=17					
SQTA	Sankt Quirin	149.02 354	i PKiKP	PKiKP	15 19 25.0	-0.2
	comp=Z,61nm,1.4s,SNR=14					
TEVE	Tevekalti-Mers	149.03 315	eP	PKiKP	15 19 25.5	0.0
PERS	Pernice	149.03 349	i PKPbc	PKPbc	15 19 24.5	+0.6
PERS			i		15 19 38.0	
DAVA	Damuels	149.06 356	i pPKPbc	PKiKP	15 19 25.6	+0.3
	comp=Z,53nm,0.9s,SNR=14					
PLVB	Pleven	149.08 334	⇑P	PKiKP	15 19 25.7	+0.4
AKKU	Akkuyu-Mersin	149.10 315	eP	PKPbc	15 19 24.8	+0.5
SB02	Marmara Sea	149.15 327	eP	PKPab	15 19 29.5	+0.9
ARMT	Armutlu	149.22 326	eP	PKiKP	15 19 25.3	-0.4
BERE	Bereket-Mersin	149.22 315	eP	PKiKP	15 19 25.9	-0.1
KALN	Kalnik	149.24 347	i P	PKiKP	15 19 25.2	-0.4
OBKA	Obir	149.26 349	i PKiKP	PKPbc	15 19 25.0	+0.5
	comp=Z,24nm,1.0s,SNR=5.6					
FETA	Feichten	149.26 355	i PKiKP	PKiKP	15 19 25.8	0.0
	comp=Z,56nm,1.1s,SNR=13					
FRGS	Fruska Gora	149.28 342	⇑P	PKPbc	15 19 24.7	+0.2
MYKA	Terra Mystica	149.29 351	i PKiKP	PKPbc	15 19 24.8	+0.3
	comp=Z,33nm,1.0s,SNR=10					
ABTA	Abfaltersbach	149.34 352	i PKiKP	PKPbc	15 19 25.2	+0.5
	comp=Z,55nm,0.9s,SNR=18					
EDRB	Edirne	149.35 330	P	PKPbc	15 19 25.1	+0.4
EDRB	Edirne	149.35 330	eP	PKiKP	15 19 25.4	-0.5
TEKE	Tekeli-Mersin	149.41 315	eP	PKiKP	15 19 25.7	-0.5
MMLI	Mount Malkishu	149.53 307	eP	PKiKP	15 19 27.1	+0.5
SHUT	Suhut-Afyon	149.61 321	eP	PKiKP	15 19 27.1	+0.4
TVSB	Tavsanli	149.66 324	eP	PKiKP	15 19 27.1	+0.3
MOSL	Moslavina	149.67 346	i P	PKiKP	15 19 26.2	-0.2
FUORN	Ofenpass-Fuorn	149.70 355		PKiKP	15 19 27.1	+0.3
KCTX	Karacabey (Bur	149.70 326	eP	PKPbc	15 19 25.9	+0.2
LJU	Ljubljana	149.71 349	ePKPbc	PKiKP	15 19 26.5	0.0
LJU	Ljubljana	149.71 349	⇑iP	PKiKP	15 19 26.3	-0.2
CRNS	Crni Vrh	149.72 350	i PKPbc	PKiKP	15 19 26.2	-0.4
CRES	Cresnjev	149.75 348	⇑iP	PKiKP	15 19 26.3	-0.3
DIM	Dimitrovgrad	149.76 332	P	PKiKP	15 19 27.0	+0.3
STAL	STALIGIÁL	149.79 352		PKPbc	15 19 25.4	-0.3
MRMT	Marmara Adasi	149.85 327	eP	PKPbc	15 19 26.2	+0.1
CSS	Mathiatis	149.89 313	P	PKiKP	15 19 27.5	+0.2
CSS	Mathiatis	149.89 313	eP	PKiKP	15 19 27.7	+0.4
CSS	Mathiatis	149.89 313		PKPbc	15 19 26.0	-0.4
GAZI	Gazipasa	149.90 316	eP	PKPbc	15 19 25.9	-0.4
TUE	Stuetta	149.91 356	PKPbc	PKPbc	15 19 26.4	+0.1
TEKS	Tekeris	149.91 342	eP	PKPdf	15 19 23.5	+2.3
UKOP	Uzunkopru-Edir	149.95 329	eP	PKiKP	15 19 27.9	+0.8
GEDZ	Gediz	149.96 323	eP	PKiKP	15 19 28.4	+1.0
RKY	Sarkoy-Tekirda	150.01 328	eP	PKiKP	15 19 27.4	0.0
CEY	Cerknica	150.03 349	⇑iP	PKiKP	15 19 26.9	-0.3
SENIN	Lac Senin/Sane	150.09 359		PKPbc	15 19 26.8	+0.1
KDZ	Kurdzhali	150.13 331	P	PKiKP	15 19 27.9	+0.4
KDZ	Kurdzhali	150.13 331	eP	PKiKP	15 19 27.2	-0.3
CTI	Castel Tesino	150.13 353		PKPbc	15 19 26.6	0.0
DIVS	Divibare	150.18 341	⇑iP	PKiKP	15 19 27.9	+0.2
VTS	Vitosha	150.29 335	P	PKiKP	15 19 27.9	-0.1
VTS	Vitosha	150.29 335	P	PKiKP	15 19 28.5	+0.5
VTS	Vitosha	150.29 335		PKPbc	15 19 27.4	+0.1
ERIK	Erikli-Kesan	150.35 329	eP	PKiKP	15 19 27.7	-0.3
BLY	Banja Luka	150.38 345	⇑P	PKiKP	15 19 28.3	+0.4
BLY	Banja Luka	150.38 345	⇑iP	PKiKP	15 19 28.3	+0.4
BLY	Banja Luka	150.38 345		PKPbc	15 19 27.1	0.0
ALN	Alexandroupoli	150.41 330	P	PKiKP	15 19 26.8	-0.5
ALN	Alexandroupoli	150.41 330	eP	PKiKP	15 19 27.9	-0.2
ALN	Alexandroupoli	150.41 330		PKPbc	15 19 27.5	+0.1
RZN	Rozhen	150.41 332	P	PKiKP	15 19 28.3	-0.1
RDO	Rodhopi	150.46 330	P	PKPbc	15 19 27.1	-0.4
RDO	Rodhopi	150.46 330	eP	PKiKP	15 19 28.5	+0.3
HAPS	Han Pijesak,BI	150.51 342	eP	PKiKP	15 19 28.2	-0.2
BBLS	Lazići	150.57 341	⇑iP	PKiKP	15 19 29.0	+0.5
SALO	Salr	150.67 355		PKPbc	15 19 27.7	-0.2
MGRS	Mrkonjic Grad	150.71 345	eP	PKiKP	15 19 28.9	+0.2
KORT	Korkueli	150.72 319	eP	PKiKP	15 19 29.4

SCM	**Sheep Creek Mo**	**19.76**	**50**	P	**P**	15 04 44.7	**+2.1**
ILAR	**Eielson Array**	**20.76**	**42**	P	**P**	15 04 53.8	**+0.5**
	comp=Z,0.4nm,0.6s,baz=253,slow=9.3,SNR=6.7						
GLB	**Gilahina Butte**	**21.35**	**52**	P	**P**	15 05 00.4	**+0.8**
GLB				IAmb	IAmb	15 05 15.5	
	comp=Z,11nm,1.2s						
CTGM	**Chitina Glacie**	**22.49**	**53**	P	**P**	15 05 13.3	**+1.9**
CTGM				IAmb	IAmb	15 05 30.5	
	comp=Z,20nm,1.2s						
BCAR	**Beaver Creek A**	**22.52**	**48**	P	**P**	15 05 13.4	**+1.8**
BMAR	**Burnt Mountain**	**22.60**	**36**	P	**P**	15 05 12.6	**+0.3**
EGAK	**Eagle**	**23.12**	**43**	P	**P**	15 05 18.6	**+1.6**
EGAK				IAmb	IAmb	15 05 46.8	
	comp=Z,7.8nm,1.2s						
HYT	**Haines Junctio**	**24.36**	**54**	P	**P**	15 05 32.6	**+4.1**
HYT				IAmb	IAmb	15 05 53.7	
	comp=Z,14nm,1.3s						
YKA	**Yellowknife Ar**	**34.94**	**48**	P	**P**	15 07 00.8	**-0.8**
	comp=Z,0.2nm,0.5s,baz=285,slow=7.8,SNR=3.8						
PDAR	**Pinedale Array**	**46.74**	**73**	P	**P**	15 08 36.7	**-1.9**
	comp=Z,0.1nm,0.5s,baz=289,slow=5.6,SNR=2.9						
TXAR	**Lajitas Array**	**59.32**	**81**	P	**P**	15 10 08.4	**-2.3**
	comp=Z,0.3nm,0.5s,baz=308,slow=5.7,SNR=7.3						
BFO	**Black Forest**	**79.02**	**354**	P	P	15 12 18.6	+7.1

*IDC **14** 15:06:58.3±0.9,31°.21N×143°.03E, h0km, mb3.6/6, mb1 3.9/8, mb1mx3.7/38, mbtmp3.7/8, ML3.4/2, MS3.7/2, Ms1 3.7/2, ms1mx2.7/46, Error ellipse: s-maj=34.5km s-min=20.2km az=99.0*
*JMA **14** 15:07:00.5±0.2,31°.34N×142°.94E, h54km, M3.9*
ISC 14 15:07:02.4±0.8,31°.26N±0°.06×142°.9E±0°.1, h35km, n25, σ1§88/32, mb3.7/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.18**	**305**	*e*S	**Sn**	**15 08 26.0**	**-0.7**
JHJ2	**Mitsune**	**3.19**	**306**	*e*S	**Sn**	**15 08 26.5**	**-0.4**
BSO1	**Boso 1**	**3.74**	**335**	P	**Pn**	**15 07 56.7**	**-0.5**
BSO1				*e*S	**Sn**	**15 08 39.1**	**-0.7**
JMKN	**Mikurajimanish**	**3.82**	**314**	*e*S	**Sn**	**15 08 41.7**	**-0.8**
BSO3	**Boso 3**	**4.06**	**331**	P	**Pn**	**15 08 01.2**	**-0.5**
CBIJ	**Chichi jima**	**4.20**	**189**	S	**Sn**	**15 08 52.7**	**+1.0**
JCJ	**Chichijima**	**4.20**	**189**	Pn	**Pn**	**15 08 02.6**	**-1.4**
	4.3nm,0.3s,baz=358,slow=20,SNR=7.4						
JCJ				Sn	**Sn**	**15 08 45.3**	**-6.4**
	6.8nm,0.3s,baz=285,slow=20,SNR=3.9						
BSO4	**Boso 4**	**4.29**	**331**	P	**Pn**	**15 08 04.9**	**-0.2**
JOD2	**Odawara 2**	**5.10**	**322**	P	**Pn**	**15 08 15.8**	**-0.6**
JOD2				*e*S	**Sn**	**15 09 11.8**	**-2.3**
JYT	**Yasato**	**5.44**	**336**	P	**Pn**	**15 08 20.8**	**-0.2**
JHU	**Hanno**	**5.48**	**328**	P	**Pn**	**15 08 21.1**	**-0.4**
JHU				*e*S	**Sn**	**15 09 22.3**	**-1.0**
JHO	**Hitachi**	**5.67**	**341**	P	**Pn**	**15 08 22.6**	**-1.6**
JHO				*e*S	**Sn**	**15 09 24.1**	**-4.0**
JRY	**Ryogami san**	**5.79**	**326**	P	**Pn**	**15 08 25.7**	**-0.2**
JRY				*e*S	**Sn**	**15 09 30.4**	**-0.7**
JAG	**Ashikaga**	**5.89**	**332**	P	**Pn**	**15 08 26.8**	**-0.4**
JAG				*e*S	**Sn**	**15 09 31.1**	**-2.3**
MJAR	**Matsushiro Arr**	**6.55**	**325**	Pn	**Pn**	**15 08 36.3**	**+0.1**
	0.3nm,0.3s,baz=137,slow=12,SNR=16						
MJAR				Sn	**Sn**	**15 09 48.7**	**-1.0**
	0.2nm,0.3s,baz=151,slow=21,SNR=4.7						
MAT	**Matsushiro**	**6.55**	**325**	P	**Pn**	**15 08 36.5**	**+0.2**
MAT				S	**Sn**	**15 09 49.7**	**0.0**
ASAJ	**Asahikawa**	**12.84**	**359**	Pn	**Pn**	**15 09 59.1**	**-3.2**
	0.5nm,0.3s,baz=208,slow=15,SNR=8.0						
GUMO	**Guam**	**17.68**	**174**	LR	LR	15 18 06.9	
	comp=Z,73nm,20.0s,baz=166,slow=38						
MKAR	**Makanchi Array**	**48.39**	**307**	P	**P**	**15 15 43.3**	**+2.4**
	0.8nm,0.7s,baz=86,slow=8.2,SNR=5.7						
WRA	**Warramunga Arr**	**51.57**	**190**	P	**P**	**15 16 05.5**	**+0.3**
	1.3nm,0.9s,baz=6.7,slow=7.9,SNR=4.2						
ILAR	**Eielson Array**	**53.79**	**30**	P	**P**	**15 16 21.9**	**+0.8**
	0.4nm,0.6s,baz=255,slow=6.5,SNR=4.0						
ASAR	**Alice Springs**	**55.29**	**190**	P	**P**	**15 16 34.1**	**+1.6**
	0.4nm,0.8s,baz=0.3,slow=6.1,SNR=3.0						
YKA	**Yellowknife Ar**	**68.21**	**29**	P	**P**	**15 17 59.4**	**+0.3**
	0.2nm,0.4s,baz=297,slow=6.3,SNR=4.3						
NVAR	**Mina Array Bea**	**77.49**	**53**	P	**P**	**15 18 56.6**	**+1.8**
	0.9nm,0.7s,baz=293,slow=6.2,SNR=5.6						
SCHQ	**Schefferville**	**90.52**	**17**	LR	LR	16 01 27.1	
	comp=Z,149nm,20.4s,baz=302,slow=36						

ATH 14 15:17:45.9,37°.82N×21°.06E, h21km±7km, ML1.8/4, Error ellipse: s-maj=7.0km s-min=1.2km az=257.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLMS	**Volimes, Zakyn**	**0.32**	**280**	P	Pb	15 17 53.2	+0.3
VLMS				S	Sb	15 17 58.7	+1.1
VLMS				AML	AML	15 18 01.7	
	comp=E,647μm,0.2s						
VLMS				AML	AML	15 18 03.3	
	comp=N,285μm,0.2s						
KFL	**Anninata**	**0.36**	**324**	P	Pb	15 17 53.5	0.0
RLS	**Riolos of Patr**	**0.40**	**54**	P	Pb	15 17 53.6	-0.6
RLS				S	Sb	15 18 01.2	+1.3
RLS				AML	AML	15 18 03.4	
	comp=N,415μm,0.3s						
RLS				AML	AML	15 18 03.6	
	comp=E,578μm,0.4s						
VLS	**Valsamata**	**0.51**	**314**	P	Pb	15 17 55.8	-0.5
VLS				S	Sb	15 18 03.4	+0.1
VLS				AML	AML	15 18 04.9	
	comp=E,88μm,0.2s						
VLS				AML	AML	15 18 07.9	
	comp=N,115μm,0.3s						
DRO	**Drossia**	**0.53**	**75**	P	Pb	15 17 56.1	-0.5
DRO				S	Sb	15 18 04.9	+0.9
DRO				AML	AML	15 18 07.9	
	comp=N,267μm,0.4s						
DRO				AML	AML	15 18 10.1	
	comp=E,316μm,0.2s						
AMT	**Artemida-Makis**	**0.59**	**119**	P	Pb	15 17 57.8	+0.1
PVO	**Paravola**	**0.88**	**25**	P	Pn	15 18 03.6	+0.5
KLV	**Kalavryta, Ach**	**0.89**	**75**	P	Pn	15 18 03.1	-0.1
EFP	**Efpalio**	**0.90**	**48**	P	Pn	15 18 03.3	0.0
EFP				S	Sn	15 18 16.7	+0.9
TRIZ	**Trizonia**	**0.97**	**55**	P	Pb	15 18 04.0	0.0
TRIZ				S	Sn	15 18 17.2	-0.2
SERG	**Sergoula**	**0.99**	**53**	P	Pn	15 18 05.2	+0.7
SERG				S	Sn	15 18 18.1	+0.2
KALE	**Kalithea**	**1.03**	**56**	P	Pn	15 18 05.8	+0.7

*WEL **14** 15:24:22.9, 37°.S±3°×17°.8E±°, h84km±4km, M3.8/93, ML3.8/30, MLv3.8/93, Error ellipse: s-maj=0.0km s-min=0.0km az=4.4*
*IDC **14** 15:24:24.2±1.9, 37°.85S×177°.83E, h126km±7km, mb3.2/2, mb1 3.5/3, mb1mx3.3/25, mbtmp3.8/3, Error ellipse: s-maj=50.2km s-min=27.6km az=126.0*
ISC 14 15:24:21.6±1.1, 37°.16S±0°.06×177°.81E±0°.06, h91km±7km, n105, σ0§98/110, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**0.59**	**182**	P	**Pn**	**15 24 37.1**	**-0.1**
HAZ				S	**Sn**	**15 24 50.0**	**+1.2**
WIZ	**White Island**	**0.61**	**233**	P	**Pn**	**15 24 36.9**	**-0.5**
WIZ				S	**Sn**	**15 24 48.1**	**-1.1**
PKGZ	**Pakihiroa**	**0.76**	**164**	P	**Pn**	**15 24 39.7**	**+0.8**
RUGZ	**Raukumara Rang**	**0.81**	**187**	P	**Pn**	**15 24 39.4**	**-0.1**
WMGZ	**Waiomatatini S**	**0.82**	**144**	P	**Pn**	**15 24 41.0**	**+1.6**
WHRZ	**Whale Island**	**0.96**	**223**	P	**Pn**	**15 24 41.1**	**+0.2**
PUZ	**Puketiti**	**0.98**	**159**	P	**Pn**	**15 24 42.0**	**+0.8**
TWGZ	**Tauwhareparae**	**1.02**	**172**	P	**Pn**	**15 24 43.4**	**+1.6**
MWZ	**Matawai**	**1.19**	**191**	P	**Pn**	**15 24 44.4**	**+0.7**
MWZ				S	**Sn**	**15 24 59.9**	**-0.4**
OPRZ	**Ohinepanea**	**1.21**	**235**	P	**Pn**	**15 24 43.5**	**-0.3**
MARZ	**Manawahe**	**1.22**	**227**	P	**Pn**	**15 24 43.9**	**-0.1**
URZ	**Urewera**	**1.23**	**207**	P	**Pn**	**15 24 44.3**	**+0.2**
	140nm,0.3s,baz=264,slow=3.9,SNR=1115						
URZ				S	**Sn**	**15 25 00.4**	**-0.6**
	233nm,0.3s,baz=319,slow=20,SNR=11						
URZ	**Urewera**	**1.23**	**207**	P	**Pn**	**15 24 44.3**	**+0.2**
EDRZ	**Edgecumbe**	**1.27**	**222**	P	**Pn**	**15 24 44.8**	**+0.1**
TKGZ	**Te Karaka**	**1.28**	**179**	P	**Pn**	**15 24 45.6**	**+1.0**
TGRZ	**Tauranga**	**1.35**	**245**	P	**Pn**	**15 24 45.5**	**-0.1**
CNGZ	**Carnagh Statio**	**1.36**	**167**	P	**Pn**	**15 24 46.8**	**+1.2**
RAGZ	**Rawiri**	**1.37**	**193**	P	**Pn**	**15 24 46.9**	**+1.1**
LIRZ	**Lichensteins R**	**1.41**	**233**	P	**Pn**	**15 24 46.5**	**+0.2**
MKRZ	**Makatiti**	**1.44**	**227**	P	**Pn**	**15 24 47.6**	**+0.8**
OMRZ	**Omania**	**1.48**	**230**	P	**Pn**	**15 24 47.4**	**+0.2**
TARZ	**Mount Tarawera**	**1.49**	**223**	P	**Pn**	**15 24 47.9**	**+0.5**
KARZ	**Kaharoa**	**1.51**	**235**	P	**Pn**	**15 24 47.6**	**+0.1**
RIGZ	**Rimuhau**	**1.54**	**181**	P	**Pn**	**15 24 48.5**	**+0.5**
MUGZ	**Murupara**	**1.55**	**212**	P	**Pn**	**15 24 48.3**	**+0.3**
RRRZ	**Republican Roa**	**1.56**	**221**	P	**Pn**	**15 24 48.6**	**+0.4**
HLRZ	**Highlands Stat**	**1.59**	**226**	P	**Pn**	**15 24 49.0**	**+0.5**
NGRZ	**Ngongotaha**	**1.59**	**233**	P	**Pn**	**15 24 49.0**	**+0.4**
RTZ	**Ruatahuna**	**1.59**	**204**	P	**Pn**	**15 24 49.0**	**+0.3**
UTU	**Utuhina**	**1.63**	**231**	P	**Pn**	**15 24 50.3**	**+1.2**
KMRZ	**Kaimai**	**1.63**	**245**	P	**Pn**	**15 24 49.1**	**-0.1**
SNGZ	**Shannon Statio**	**1.66**	**193**	P	**Pn**	**15 24 50.2**	**+0.8**
HSRZ	**Hossock Road**	**1.69**	**227**	P	**Pn**	**15 24 51.4**	**+1.6**
HRRZ	**Handcock Road**	**1.72**	**224**	P	**Pn**	**15 24 51.1**	**+0.8**
KUZ	**Kuaotunu**	**1.72**	**283**	P	**Pn**	**15 24 49.9**	**-0.3**
PRRZ	**Plateau Road**	**1.74**	**220**	P	**Pn**	**15 24 50.9**	**+0.4**
PRGZ	**Paritu Road**	**1.76**	**178**	P	**Pn**	**15 24 51.0**	**+0.2**
GRRZ	**Galatos Road**	**1.79**	**228**	P	**Pn**	**15 24 51.9**	**+0.7**
ALRZ	**Allen Road**	**1.82**	**219**	P	**Pn**	**15 24 52.3**	**+0.8**
RAHZ	**Arahi**	**1.84**	**198**	P	**Pn**	**15 24 52.6**	**+0.7**
MTHZ	**Maungataniwha**	**1.85**	**204**	P	**Pn**	**15 24 52.3**	**+0.3**
KNZ	**Kokohu**	**1.86**	**183**	P	**Pn**	**15 24 51.9**	**-0.1**
WPRZ	**Whakapapatarin**	**1.88**	**223**	P	**Pn**	**15 24 53.0**	**+0.6**
TOZ	**Tahuroa Road**	**1.92**	**252**	P	**Pn**	**15 24 52.9**	**+0.1**
WHHZ	**Waihua**	**1.96**	**193**	P	**Pn**	**15 24 53.9**	**+0.5**
MHGZ	**Mahia Peninsul**	**1.99**	**178**	P	**Pn**	**15 24 54.0**	**+0.3**
MHGZ				S	**Sn**	**15 25 18.1**	**-0.1**
MRHZ	**Matea Rd**	**2.00**	**213**	P	**Pn**	**15 24 54.3**	**+0.4**
KUTZ	**Kaahu Road**	**2.06**	**229**	P	**Pn**	**15 24 55.3**	**+0.7**
NMHZ	**Naumai**	**2.09**	**202**	P	**Pn**	**15 24 56.0**	**+0.9**
GRZ	**Great Barrier**	**2.10**	**295**	P	**Pn**	**15 24 56.0**	**+0.9**
WHTZ	**Whakaora**	**2.10**	**224**	P	**Pn**	**15 24 56.6**	**+1.4**
MKAZ	**Moumakai**	**2.12**	**271**	P	**Pn**	**15 24 55.5**	**+0.1**
TLZ	**Tolley Road**	**2.14**	**236**	P	**Pn**	**15 24 56.1**	**+0.3**
WIAZ	**Waiheke Island**	**2.17**	**279**	P	**Pn**	**15 24 56.3**	**+0.2**
ARHZ	**Aropaoanui**	**2.19**	**197**	P	**Pn**	**15 24 56.6**	**+0.2**
HATZ	**Hinemaiaia**	**2.19**	**218**	P	**Pn**	**15 24 57.0**	**+0.6**
WATZ	**Wairara**	**2.25**	**226**	P	**Pn**	**15 24 58.1**	**+0.9**
BKZ	**Black Stump Fm**	**2.25**	**207**	P	**Pn**	**15 24 57.4**	**+0.1**
ETAZ	**East Tamaki Re**	**2.31**	**274**	P	**Pn**	**15 24 58.4**	**+0.5**
KBAZ	**Karaka Road Bo**	**2.33**	**271**	P	**Pn**	**15 24 59.0**	**+0.8**
RATZ	**Rangitukua**	**2.34**	**223**	P	**Pn**	**15 24 59.5**	**+1.1**
MBAZ	**Motutapu North**	**2.36**	**279**	P	**Pn**	**15 24 59.0**	**+0.4**
RITZ	**Rihia Road**	**2.38**	**220**	P	**Pn**	**15 25 00.1**	**+1.3**
MCHZ	**McNeill Hill**	**2.44**	**201**	P	**Pn**	**15 24 59.7**	**0.0**
ABAZ	**Army Bay**	**2.45**	**282**	P	**Pn**	**15 25 00.3**	**+0.5**
KATZ	**Kakaramea**	**2.46**	**222**	P	**Pn**	**15 25 01.2**	**+1.1**
EPAZ	**Eden Park BICE**	**2.47**	**276**	P	**Pn**	**15 25 00.8**	**+0.8**
HBAZ	**Herne Bay Bore**	**2.48**	**276**	P	**Pn**	**15 25 01.0**	**+0.8**
KWHZ	**Kaweka Forest**	**2.51**	**205**	P	**Pn**	**15 25 00.5**	**-0.2**
AWAZ	**Awhitu Peninsu**	**2.53**	**271**	P	**Pn**	**15 25 01.5**	**+0.7**
CKHZ	**Cape Kidnapper**	**2.56**	**193**	P	**Pn**	**15 25 00.4**	**-0.8**
KRVZ	**Karewarewa**	**2.58**	**221**	P	**Pn**	**15 25 02.8**	**+1.2**
WTVZ	**West Tongariro**	**2.62**	**221**	P	**Pn**	**15 25 03.3**	**+1.1**
NGZ	**Ngauruhoe**	**2.66**	**220**	P	**Pn**	**15 25 03.7**	**+1.0**
TWVZ	**Taurewa**	**2.67**	**224**	P	**Pn**	**15 25 04.0**	**+1.2**
BHHZ	**Black Hill Sta**	**2.70**	**210**	P	**Pn**	**15 25 02.8**	**-0.4**
HIZ	**Hauiti**	**2.70**	**239**	P	**Pn**	**15 25 04.2**	**+1.1**
TUVZ	**Tukino**	**2.70**	**218**	P	**Pn**	**15 25 03.9**	**+0.6**
KRHZ	**Kereru**	**2.72**	**204**	P	**Pn**	**15 25 02.6**	**-0.8**
KAHZ	**Kahuranaki**	**2.73**	**195**	P	**Pn**	**15 25 02.7**	**-0.8**
FWVZ	**Far West T-bar**	**2.74**	**220**	P	**Pn**	**15 25 04.6**	**+0.6**
WHVZ	**Whangaehu Hut**	**2.75**	**219**	P	**Pn**	**15 25 04.5**	**+0.5**
DRZ	**Dome Shelter**	**2.75**	**219**	P	**Pn**	**15 25 05.6**	**+1.5**
MOVZ	**Moawhango**	**2.76**	**215**	P	**Pn**	**15 25 03.9**	**-0.2**
TRVZ	**Turoa**	**2.78**	**219**	P	**Pn**	**15 25 04.9**	**+0.5**
PKVZ	**Pokaka**	**2.88**	**222**	P	**Pn**	**15 25 06.4**	**+0.9**
MTVZ	**Mangateitei**	**2.88**	**219**	P	**Pn**	**15 25 06.0**	**+0.4**
PXZ	**Pawanui**	**2.96**	**194**	P	**Pn**	**15 25 05.0**	**-1.6**
PNHZ	**Pukenui**	**3.02**	**204**	P	**Pn**	**15 25 06.1**	**-1.4**
WCZ	**Waipu Caves**	**3.04**	**293**	P	**Pn**	**15 25 08.0**	**+0.3**
WPHZ	**Waipukurau**	**3.09**	**200**	P	**Pn**	**15 25 06.7**	**-1.7**
VRZ	**Vera Road**	**3.10**	**230**	P	**Pn**	**15 25 10.2**	**+1.7**
MHEZ	**Mangahewa**	**3.35**	**234**	P	**Pn**	**15 25 14.6**	**+2.8**
WAZ	**Wanganui**	**3.41**	**220**	P	**Pn**	**15 25 12.9**	**+0.3**
LREZ	**Lake Rotokare**	**3.53**	**228**	P	**Pn**	**15 25 16.1**	**+1.8**
PREZ	**Palmer Road**	**3.60**	**232**	P	**Pn**	**15 25 18.3**	**+2.9**
OHWZ	**Ohakea**	**3.61**	**212**	P	**Pn**	**15 25 15.7**	**+0.3**
PKE	**Pukeiti**	**3.63**	**235**	P	**Pn**	**15 25 18.7**	**+3.0**
KHEZ	**Kahui Hut**	**3.67**	**233**	P	**Pn**	**15 25 18.6**	**+2.4**
NBEZ	**Newall Road No**	**3.75**	**235**	P	**Pn**	**15 25 19.4**	**+2.1**
OUZ	**Omahuta**	**3.92**	**298**	P	**Pn**	**15 25 20.2**	**+0.7**
RPZ	**Rata Peaks**	**8.32**	**216**	P	Pn	15 26 14.2	-5.3
	1.4nm,0.3s,baz=281,slow=1.2,SNR=14						
RPZ				S	Sn	15 27 42.0	-10
	2.9nm,0.3s,baz=280,slow=16,SNR=11						
ASAR	**Alice Springs**	**39.84**	**277**	P	**P**	**15 31 46.4**	**+0.1**
	0.8nm,0.8s,baz=122,slow=8.0,SNR=13						
ASAR				PcP	**PcP**	**15 33 49.6**	**-0.9**
	0.2nm,0.7s,baz=124,slow=4.1,SNR=2.8						
WRA	**Warramunga Arr**	**41.46**	**282**	P	**P**	**15 31 59.8**	**+0.1**
	0.3nm,0.4s,baz=119,slow=8.3,SNR=1.7						
FINES	**FINESS Array B**	**149.95**	**333**	PKPbc	**PKPbc**	**15 43 59.9**	**-0.6**
	0.6nm,0.5s,baz=52,slow=3.4,SNR=4.6						

*IDC **14** 15:30:37.6±0.8,28°.43N×105°.17E, h0km, mb3.8/11, mb1 3.9/13, mb1mx3.7/43, mbtmp3.8/13, ML3.8/2, Error ellipse: s-maj=24.8km s-min=16.4km az=62.0*
*BJI **14** 15:30:40.3±0.0,28°.34N×104°.92E, h5km, mb3.4/1, ML3.4/14*
ISC 14 15:30:40.9±0.7,28°.41N±0°.04×105°.13E±0°.07, h19km, n17, σ1§36/22, mb3.8/11, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.76**	**335**	Pn	**Pn**	**15 31 24.0**	**-0.1**
CD2				Pg	**Pb**	**15 31 30.9**	**+1.3**
CD2				Sn	**Sn**	**15 31 59.1**	**+2.1**
CD2				Sg	**Sg**	**15 32 07.3**	**-2.3**
CD2				*s*max	*s*max		
	comp=N,300nm,0.7s						
CD2				*s*max	*s*max		
	comp=E,490nm,0.7s						
KMI	**Kunming**	**3.91**	**214**	Pg	**Pb**	**15 31 50.9**	**+1.6**
KMI				Sg	**Sg**	**15 32 43.5**	**-3.0**
XAN	**Xi'an**	**6.48**	**29**	Pn	**Pn**	**15 32 16.9**	**+1.6**
XAN				Pg	Pg	15 32 40.6	-4.4
XAN				Sn	**Sn**	**15 33 27.8**	**-1.0**
XAN				Sg	**Sg**	**15 34 08.4**	**-0.5**
XAN				*s*max	*s*max		
	comp=N,52nm,1.0s						
XAN				*s*max	*s*max		
	comp=E,89nm,1.2s						
CMAR	**Chiang Mai Arr**	**11.41**	**211**	Pn	**Pn**	**15 33 24.4**	**+1.4**
	0.2nm,0.3s,baz=20,slow=11,SNR=18						
SONM	**Songino Array**	**19.42**	**3**	P	**Pn**	**15 35 06.8**	**-0.4**
	0.2nm,0.3s,baz=185,slow=11,SNR=6.2						
WMQ	**Urumqi**	**20.78**	**322**	*e*P	Pn	15 35 22.3	-1.0
KSRS	**Korea Array**	**21.11**	**59**	P	**P**	**15 35 24.4**	**0.0**
	1.3nm,0.8s,baz=246,slow=10.0,SNR=4.8						
MKAR	**Makanchi Array**	**25.61**	**322**	P	**P**	**15 36 08.4**	**-0.6**
	0.4nm,0.5s,baz=140,slow=9.4,SNR=7.7						
USRK	**Ussuriysk Ar.**	**26.61**	**47**	P	**P**	**15 36 16.8**	**-1.2**
	1.0nm,0.6s,baz=258,slow=8.0,SNR=5.0						
ZALV	**Zalesovo Beam**	**29.53**	**335**	P	**P**	**15 36 43.3**	**-0.6**
	0.8nm,0.7s,baz=131,slow=10,SNR=4.4						
GEYT	**Alibeck**	**40.12**	**296**	P	**P**	**15 38 16.5**	**+1.0**
	1.1nm,0.5s,baz=72,slow=9.6,SNR=3.8						
WRA	**Warramunga Arr**	**55.75**	**146**	P	**P**	**15 40 15.8**	**-0.8**
	0.8nm,0.5s,baz=335,slow=8.4,SNR=14						
ASAR	**Alice Springs**	**58.74**	**149**	P	**P**	**15 40 37.2**	**-0.4**
	0.5nm,0.5s,baz=328,slow=6.8,SNR=25						
ARCES	**ARCESS Array B**	**60.07**	**336**	P	**P**	**15 40 45.6**	**-0.7**
	2.1nm,0.9s,baz=91,slow=8.1,SNR=4.8						
FINES	**FINESS Array B**	**60.30**	**327**	P	**P**	**15 40 46.9**	**-1.0**
	0.5nm,0.5s,baz=81,slow=8.6,SNR=3.6						
NOA	**NORSAR Array B**	**67.40**	**328**	P	**P**	**15 41 33.9**	**-0.9**
	1.5nm,1.1s,baz=74,slow=6.3,SNR=2.0						
YKA	**Yellowknife Ar**	**83.99**	**17**	P	**P**	**15 43 10.1**	**+0.5**
	0.3nm,0.5s,baz=328,slow=5.0,SNR=5.6						

IDC 14 15:40:39.9±7.6, 3°.31N×127°.40E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/56, mbtmp3.7/3, Error ellipse: s-maj=151.8km s-min=120.8km az=78.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.09**	**164**	P	P	15 45 57.2	-0.2
	0.9nm,0.4s,baz=344,slow=10,SNR=8.7						
ASAR	**Alice Springs**	**27.55**	**167**	P	P	15 46 28.8	0.0
	0.2nm,0.5s,baz=347,slow=7.7,SNR=9.8						
STKA	**Stephens Creek**	**37.51**	**160**	P	P	15 47 55.8	+0.1
	1.9nm,1.1s,baz=355,slow=11,SNR=4.4						

*BGR **14** 15:40:54.4±0.0, 35°.23N×72°.10E, h33km, mb5.2*
*MOS **14** 15:41:06.6±1.0, 36°.56N×71°.64E, h99km, mb5.0/62, Error ellipse: s-maj=4.3km s-min=3.1km az=98.5*
*NEIC **14** 15:41:08.8±2.2, 36°.55N±0°.05×71°.52E±0°.08, h107km±5km, mb5.1/125, Error ellipse: s-maj=9.2km s-min=7.5km az=81.0*
*BJI **14** 15:41:08.8±0.0, 36°.75N×71°.78E, h95km, mB5.0/35, mb5.1/52*
*IDC **14** 15:41:09.3±0.8, 36°.47N×71°.55E, h113km±6km, mb4.3/41, mb1 4.4/44, mb1mx4.3/55, mbtmp4.7/44, MS3.3/4, Ms1 3.3/4, ms1mx2.9/42, Error ellipse: s-maj=9.4km s-min=7.3km az=15.0*
*NNC **14** 15:41:10.4±3.0, 36°.94N×71°.09E, h145km±47km, mb4.6, mpv5.2, Error ellipse: s-maj=28.6km s-min=17.2km az=167.0*
ISC 14 15:41:07.4±0.3, 36°.53N±0°.03×71°.62E±0°.03, h98km±3km, h97km:pP-P, n687, σ1§69/732, mb5.0/210, 54C-51D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAR	**Garm**	**2.68**	**338**		**Pn**	**15 41 49.2**	**+0.3**
CEP	**Cherat**	**2.71**	**175**	P	**Pn**	**15 41 51.5**	**+2.2**
CEP				S	**Sn**	**15 42 25.0**	**+3.5**
CHGR	**Chuyangaron**	**2.89**	**318**		**Pn**	**15 41 50.5**	**-1.1**
KBL	**Kabul**	**2.89**	**227**	PN	**Pn**	**15 41 52.4**	**+0.6**
KBL	**Kabul**	**2.89**	**227**		**Pn**	**15 41 52.4**	**+0.6**
CHCP	**Chirah Chowk**	**3.16**	**154**	P	**Pn**	**15 41 58.3**	**+3.0**
NIL	**Nilore**	**3.17**	**155**	PN	**Pn**	**15 41 58.4**	**+3.1**
NIL	**Nilore**	**3.17**	**155**		**Pn**	**15 41 58.4**	**+3.1**
BTK	**Batken**	**3.58**	**350**	PN	**Pn**	**15 42 02.5**	**+1.6**
BTK	**Batken**	**3.58**	**350**		**Pn**	**15 42 02.5**	**+1.6**
THW	**Thamme Wali**	**3.73**	**178**	P	**Pn**	**15 42 03.6**	**+0.7**
FRG	**Fergana**	**4.20**	**2**	P	**Pn**	**15 42 07.1**	**-2.2**
FRG				S	**Sn**	**15 42 49.4**	**-7.9**
ANR	**Andizhan**	**4.26**	**8**	P	**Pn**	**15 42 11.7**	**+1.7**
ANR				S	**Sn**	**15 42 57.2**	**-1.4**
KSH	**Kashi**	**4.55**	**48**	⇓*i*P	**Pn**	**15 42 10.5**	**-3.5**
KSH				S	Sn	15 42 56.3	-10
KSH				LR	LR		
	comp=Z,4μm,4.9s						
PKMR	**Pachkamar**	**4.62**	**297**	*i*P	**Pn**	**15 42 15.4**	**+0.5**
PKMR				*i*S	**Sn**	**15 43 04.5**	**-2.9**
SARP	**Sargodha**	**4.67**	**169**	P	**Pn**	**15 42 16.4**	**+0.7**
SAM	**Samarkand**	**4.82**	**312**	S	**Sn**	**15 43 10.6**	**-1.6**
ARSB	**Arslanbob**	**4.91**	**12**	Pn	**Pn**	**15 42 19.3**	**+0.4**
TAS	**Tashkent**	**5.12**	**340**	PN	**Pn**	**15 42 21.6**	**-0.1**
TAS	**Tashkent**	**5.12**	**340**		**Pn**	**15 42 21.6**	**-0.1**
THN	**Thein Dam**	**5.

comp=Z,215nm,0.5s
PRZ Przheval'sk 7.92 39 PN Pn 15 43 01.2 +1.3
PRZ Przheval'sk 7.92 39 Pn 15 43 01.2 +1.3
HRA Herat 7.95 257 Pn 15 42 60.0 -0.3
KUU Kurty 8.19 25*d i*PN Pn 15 43 02.8 -0.6**
KUU pmax pmax
comp=Z,39nm,0.4s
KUU Kurty 8.19 25⇓*i*P Pn 15 43 02.9 -0.6**
comp=Z,39nm,0.4s
DDI Dehra Dun 8.20 137 *e*P Pn 15 43 03.7 +0.1
DDI eS **Sn 15 44 29.2 -5.3**
DDI IAML 15 44 35.1
comp=E,1μm,0.4s
DDI IAML 15 44 36.0
comp=N,2μm,0.2s
SATY Saty 8.35 37*d i*PN **Pn 15 43 05.9 +0.2**
SATY pmax pmax
comp=Z,94nm,0.9s
SATY Saty 8.35 37⇓*i*P **Pn 15 43 05.9 +0.2**
comp=Z,94nm,0.9s
SATY eS **Sn 15 44 37.0 -1.4**
CHKK Chushkaly 8.39 28⇑*i*PN **Pn 15 43 06.2 +0.1**
CHKK Chushkaly 8.39 28⇑*i*P **Pn 15 43 06.2 +0.1**
ZHN Zhinishke 8.45 36*d i*PN **Pn 15 43 07.1 +0.1**
ZHN pmax pmax
comp=Z,44nm,0.8s
ZHN Zhinishke 8.45 36⇓*i*P **Pn 15 43 07.2 +0.1**
comp=Z,44nm,0.8s
BTLS Baital 8.70 11 *i* PN **Pn 15 43 08.9 -1.4**
BTLS Baital 8.70 11 *i* P **Pn 15 43 08.9 -1.4**
BTLS eS **Sn 15 44 42.5 -4.1**
UZB Uzynbulak 8.72 38*d i*PN **Pn 15 43 10.9 +0.2**
UZB pmax pmax
comp=Z,35nm,0.8s
UZB Uzynbulak 8.72 38⇓*i*P **Pn 15 43 11.0 +0.2**
comp=Z,35nm,0.8s
UZB eS **Sn 15 44 45.2 -2.1**
KPKS Kokpek 8.79 36*d i*PN **Pn 15 43 12.0 +0.4**
KPKS Kokpek 8.79 36⇓*i*P **Pn 15 43 12.1 +0.4**
JOSI Joshimath 8.90 130 *e*P **Pn 15 43 13.3 0.0**
JOSI eS **Sn 15 44 46.7 -5.3**
JOSI IAML 15 44 51.8
comp=E,1μm,0.4s
JOSI IAML 15 44 52.6
comp=N,2μm,0.4s
SHLS Shalkode 8.95 40 *i* P **Pn 15 43 16.9 +3.1**
SHLS eS **Sn 15 44 55.9 +3.0**
SHLS pmax pmax
comp=Z,74nm,1.2s
SHLS Shalkode 8.95 40 *i* P **Pn 15 43 16.9 +3.1**
comp=Z,74nm,1.2s
SHLS eS **Sn 15 44 56.0 +3.0**
PDGK Podgornoye 9.09 39 ⇓P **Pn 15 43 15.3 -0.4**
comp=Z,203nm,0.6s
NDI New Delhi 9.13 147 *ex* **Sn 15 44 52.5 -4.8**
AYAN Aya Nagar 9.27 148 *e*P **Pn 15 43 17.0 -1.1**
AYAN eS **Sn 15 44 53.7 -6.9**
KUDL Kundal 9.31 152 *e*P Pn 15 43 12.0 -6.7
KUDL eS Sn 15 44 44.4 -17
SONA Sohna 9.45 149 eS **Sn 15 44 56.5 -8.5**
JASL Jaisalmer 9.59 184 *e*P **Pn 15 43 21.0 -1.5**
JASL eS Sn 15 44 57.3 -11
TDK Taldyqorghan 9.90 29*c i*P **Pn 15 43 26.1 -0.6**
TDK Taldyqorghan 9.90 29⇑*i*P **Pn 15 43 26.1 -0.6**
ASHT Ashkhabad 10.65 282 P Pn 15 43 31.8 -5.1
ASHT Ashkhabad 10.65 282 Pn Pn 15 43 31.8 -5.1
GEYT Alibeck 10.86 281 P Pn 15 43 34.3 -5.5
comp=Z,32nm,0.3s,baz=109,slow=10,SNR=161
GEYT S Sn 15 45 28.1 -11
comp=Z,33nm,0.3s,baz=106,slow=15,SNR=12
GEYT LR LR 15 49 23.9
comp=Z,178nm,20.2s,baz=220,slow=46
GYA0B ALIBECK ARRAY 10.86 281 ⇑P Pn 15 43 34.3 -5.5
GYA0B ⇓S Sn 15 45 27.9 -11
GYA0B ALIBECK ARRAY 10.86 281 Pn 15 43 34.3 -5.5
MAKZ Makanchi 12.85 34 P **Pn 15 44 05.3 -0.9**
MAKZ Makanchi 12.85 34 ⇑P **Pn 15 44 04.1 -2.2**
comp=Z,117nm,0.8s
MAKZ Makanchi 12.85 34 Pn 15 44 05.3 -0.9
MK31 Makanchi Array 12.98 34 P **Pn 15 44 07.0 -1.0**
MK31 Makanchi Array 12.98 34 P **Pn 15 44 06.8 -1.2**
comp=Z,59nm,1.1s,baz=209,slow=14,SNR=197
MK31 Pg **P 15 44 14.3 -0.4**
comp=Z,13nm,0.5s,baz=206,slow=8.7,SNR=39
MK31 Makanchi Array 12.98 34 Pn 15 44 07.0 -1.0
MKAR Makanchi Array 12.98 34 *i* P **Pn 15 44 06.9 -1.1**
MKAR pmax pmax
comp=Z,29nm,0.9s
MKAR Makanchi Array 12.98 34 P **Pn 15 44 06.8 -1.2**
comp=Z,2.5nm,0.3s,baz=214,slow=13,SNR=109
DANN Dangsing 13.09 125 *e*P **Pn 15 44 06.2 -3.6**
comp=Z,327nm,0.2s
BHUJ Bhuj 13.34 188 *e*P **Pn 15 44 10.4 -2.3**
BHUJ *ex* x 15 46 32.7
BHUJ IAML 15 46 33.0
comp=E,110nm,0.7s
BHUJ IAML 15 46 37.1
comp=N,154nm,0.5s
KOLN Koldanda 13.38 127 *e*P **Pn 15 44 09.9 -3.6**
comp=N,245nm,0.3s
BRZS Berezniki 13.47 3*d i*P **Pn 15 44 11.9 -2.5**
BRZS pmax pmax
comp=Z,12nm,0.6s
BRZS Berezniki 13.47 3⇓*i*P **Pn 15 44 11.9 -2.5**
comp=Z,12nm,0.6s
GKN Gorkha 13.90 124 *e*P **Pn 15 44 16.7 -3.5**
comp=Z,355nm,0.2s
BHPL Bhopal 14.16 158 *e*P **Pn 15 44 21.1 -2.3**
BHPL *i* x x 15 44 29.4
BHPL *ex* x 15 46 49.1
BHPL IAML 15 46 57.1
WMQ Urumqi 14.27 54 *e*P **Pn 15 44 23.8 -1.0**
WMQ pP P 15 44 39.9 +11
WMQ S **Sn 15 47 00.6 -1.4**
WMQ pmax pmax
comp=Z,65nm,0.9s
WMQ pmax pmax
comp=Z,230nm,3.7s
WMQ Urumqi 14.27 54 P **Pn 15 44 23.4 -1.5**
WMQ Urumqi 14.27 54 Pn **Pn 15 44 23.4 -1.5**
KKN Kakani 14.47 123 *e*P **Pn 15 44 23.3 -4.3**
comp=Z,244nm,0.5s
DMN Daman 14.47 124 *e*P **Pn 15 44 23.3 -4.4**
comp=Z,174nm,0.3s
ZSN Zaisan 14.68 38 *e*P **Pn 15 44 28.6 -1.3**
ZSN eS **Sn 15 47 10.4 -1.2**
ZSN Zaisan 14.68 38 *e*P **Pn 15 44 28.6 -1.3**
ZSN eS **Sn 15 47 10.4 -1.2**
PKI Pulchoki 14.70 124 *e*P **Pn 15 44 26.3 -4.4**
comp=Z,26nm,0.4s
GUN Gumba 14.80 121 *e*P **Pn 15 44 27.6 -4.4**
comp=Z,178nm,0.3s
KURBB Kurchatov Arra 14.94 17 P **Pn 15 44 30.1 -3.2**
comp=Z,0.5nm,0.3s,baz=208,slow=12,SNR=52
KURBB S **Sn 15 47 23.4 +5.4**
comp=Z,0.1nm,0.3s,baz=198,slow=25,SNR=3.7
KURBB Kurchatov Arra 14.94 17 ⇑P **Pn 15 44 29.6 -3.7**
comp=Z,11nm,0.5s
KURBB ⇓Pg **P 15 44 36.4 0.0**
comp=Z,131nm,0.7s
KURK Kurchatov 15.05 17 P **P 15 44 37.6 0.0**
KURK 15 47 23.4
KURK pmax pmax
comp=Z,133nm,0.9s
KURK Kurchatov 15.05 17 ⇑P **Pn 15 44 30.5 -4.1**
comp=Z,11nm,1.0s
KURK ⇓Pg **P 15 44 37.6 0.0**
comp=Z,155nm,1.0s
KURK Kurchatov 15.05 17 P **P 15 44 37.6 0.0**
KURK IAmb IAmb 15 44 39.5
comp=Z,133nm,0.9s
JBP Jabalpur 15.15 149 *e*P **Pn 15 44 34.4 -1.7**
JBP AMB AMB 15 44 40.2
comp=Z,42nm,0.7s
JBP *ex* x 15 47 14.1
JIRN Jiri 15.17 122 *e*P **Pn 15 44 32.8 -3.9**
comp=Z,488nm,0.3s
AB31 Akbulak array 15.31 330 P **Pn 15 44 35.0 -2.9**
comp=Z,7.8nm,0.3s,baz=138,slow=13,SNR=348
AB31 ⇓S Sn 15 47 12.1 -15
comp=Z,25nm,0.6s
ABKAR Akbulak array 15.31 330 Pn 15 44 34.7 -3.2
RAMN Ramite 15.90 123 *e*P **Pn 15 44 41.0 -4.8**
comp=Z,290nm,0.5s
TAPN Taplejung 16.42 119 *e*P **Pn 15 44 47.8 -4.4**
comp=Z,226nm,0.4s
ODAN Odare 16.50 121 *e*P **Pn 15 44 49.2 -4.0**
comp=Z,196nm,0.5s
BVAR Borovoye Array 16.52 357 P **Pn 15 44 51.1 -1.9**
comp=Z,1.9nm,0.3s,baz=159,slow=12,SNR=43
BVAR S **Sn 15 47 48.9 -7.1**
comp=Z,0.8nm,0.3s,baz=162,slow=19,SNR=3.9
BRVK Borovoye 16.56 357 P **Pn 15 44 51.7 -1.7**
BRVK pmax pmax
comp=Z,44nm,0.8s
BRVK Borovoye 16.56 357 ⇑P **Pn 15 44 51.0 -2.5**
comp=Z,18nm,0.7s
BRVK Borovoye 16.56 357 P **Pn 15 44 51.6 -1.7**
NGP Nagpur 16.64 155 *e*P **P 15 44 55.6 +0.2**
NGP *ex* x 15 47 48.4
BANOM Banah 16.82 235 *i* P **P 15 44 57.6 +0.1**
SNR=12
BANOM Banah 16.82 235 P **P 15 44 57.8 +0.4**
SNR=13
SHME Shamm 16.84 236 *i* Pn **Pn 15 44 57.3 +0.2**
SNR=8.1
AKTO Aktyubinsk 17.01 329 P **Pn 15 44 57.8 -1.3**
comp=Z,9.1nm,0.3s,baz=135,slow=8.4,SNR=85
AKTO S **Sn 15 47 59.1 -8.7**
comp=Z,0.9nm,0.3s,baz=139,slow=20,SNR=4.1
AKTO LR LR 15 51 56.4
comp=Z,106nm,20.5s,baz=151,slow=38
AKTO Aktyubinsk 17.01 329 ⇓P **Pn 15 44 57.7 -1.3**
comp=Z,84nm,1.0s
AKTO ⇑S Sn 15 47 53.4 -15
comp=Z,53nm,1.1s
GTK Tadong 17.07 118 *e*P **Pn 15 44 57.0 -3.0**
GTK IAmb IAmb 15 45 06.4
comp=Z,56nm,0.5s
GTK *ex* x 15 47 55.8
MDH Madha 17.24 234 P **Pn 15 45 02.1 0.0**
MDH Madha 17.24 234 P **Pn 15 45 01.6 -0.5**
MSFE Esma-Masafi 17.29 234 Pn **Pn 15 45 05.1 +2.5**
WSAR Wadi Sarin 17.36 224 P **Pn 15 45 04.1 +0.5**
comp=Z,1.9nm,0.3s,baz=57,slow=5.5,SNR=18
WSAR S Sn 15 48 05.9 -11
comp=Z,0.1nm,0.3s,baz=112,slow=14,SNR=1.9
WSAR Wadi Sarin 17.36 224 P **Pn 15 45 04.8 +1.3**
UOSS Minazif 17.55 233 P **Pn 15 45 05.9 +0.1**
UOSS Minazif 17.55 233 P **P 15 45 03.5 -2.0**
UOSS Minazif 17.55 233 P **Pn 15 45 07.3 +1.5**
BOK Bokaro 17.67 132 *e*P **P 15 45 04.4 -2.4**
BOK *ex* x 15 48 10.4
WBK Wadi Bani Khal 17.68 222 P **Pn 15 45 11.0 +3.6**
SNR=6.6
HATD Hatta, Dubai 17.68 233 Pn **Pn 15 45 09.4 +2.0**
HATD Hatta, Dubai 17.68 233 P **Pn 15 45 10.0 +2.6**
LSA Lhasa 17.70 107 P **P 15 45 07.3 -0.3**
LSA pmax pmax
comp=Z,67nm,0.8s
LSA Lhasa 17.70 107 P **P 15 45 07.5 -0.1**
LSA Lhasa 17.70 107 P **P 15 45 07.3 -0.3**
LSA IAmb IAmb 15 45 15.1
comp=Z,67nm,0.8s
ASHO Ashiyiah 17.83 233 *i* Pn **Pn 15 45 10.0 +0.7**
SNR=15
ASHO Ashiyiah 17.83 233 P **Pn 15 45 09.9 +0.7**
SNR=15
SMDO Samad 17.83 225 P **Pn 15 45 10.1 +0.8**
HOQ Hoqain 17.86 228 P **Pn 15 45 11.9 +2.4**
SOHO SOHO 17.92 231 P **Pn 15 45 10.1 -0.2**
POO Poona 18.04 173 *ex* **Pn 15 45 12.1 +0.4**
POO IAmb IAmb 15 45 12.9
comp=Z,23nm,0.3s
JMDO Jabal Madar 18.34 223 P **Pn 15 45 16.0 +0.6**
ALNE Al Ain 18.47 232 *i* P **Pn 15 45 16.6 -0.3**
SNR=9.9
SRSP Sriramsagar 18.50 160 *e*P **P 15 45 16.8 +0.8**
SRSP IAmb IAmb 15 45 19.5
comp=Z,9.3nm,0.6s
ARQ Araqi 18.52 229 P **Pn 15 45 18.5 +1.1**
BSY Bisya 18.57 226 P **Pn 15 45 18.8 +0.8**
SNR=7.0
AJN Ajban 18.61 235 *i* P **P 15 45 17.2 +0.1**
SNR=6.3
AJN Ajban 18.61 235 P **P 15 45 17.5 +0.4**
SNR=6.2
RPR Rampur 18.85 157 *e*P **Pn 15 45 21.4 0.0**
RPR IAmb IAmb 15 45 27.5
comp=Z,38nm,0.6s
KLRI Killari 18.90 165 *e*P **P 15 45 21.0 +0.6**
KLRI IAmb IAmb 15 45 23.3
comp=Z,6.9nm,0.5s
AKT Akhty 19.19 292 *e*P **P 15 45 24.4 +0.9**
AKT *e*S **S 15 48 50.8 -5.0**
AKT pmax pmax
comp=Z,47nm,0.4s
AKT smax smax
comp=E,49nm,0.6s
AKT smax smax
comp=N,96nm,0.7s
MHTO MHTO 19.54 221 P **Pn 15 45 28.6 -0.9**
SNR=7.3
ZAA0 Zalesovo Array 19.69 24 P **P 15 45 28.6 0.0**
ZALV Zalesovo Beam 19.69 24 *i* P **P 15 45 28.7 +0.2**
ZALV pmax pmax
comp=Z,136nm,0.6s
ZALV Zalesovo Beam 19.69 24 P **P 15 45 28.8 +0.2**
comp=Z,16nm,0.3s,baz=225,slow=10.0,SNR=612
ZALV S **S 15 49 00.9 -4.2**
baz=215,slow=12,SNR=2.4
DMPR Damasthipur 19.70 163 *e*P **P 15 45 30.1 +1.1**
DMPR IAmb IAmb 15 45 35.5
comp=Z,20nm,0.7s
HYBB Hyderabad (bro 20.00 160 *e*P **P 15 45 33.2 +0.9**
HYBB IAmb IAmb 15 45 37.7
comp=Z,56nm,0.7s
HYB Hyderabad 20.00 160 *i* P **P 15 45 33.0 +0.7**
HYB *e* 15 49 05.0
HYB *e*S Sn 15 49 20.0 -0.1
HYB Hyderabad 20.00 160 *e*P **P 15 45 30.3 -2.0**
HYB IAmb IAmb 15 45 33.9
comp=Z,49nm,0.5s
HYB *i* x x 15 45 37.2
HYB *ex* x 15 45 37.3
GGR Gangavaram 20.11 156 *e*P Pn 15 45 35.1 -1.1
GGR IAmb IAmb 15 45 39.5
comp=Z,92nm,0.6s
BWNR Bhubaneshwar 20.38 139 *ex* Pn 15 45 39.6 +0.4
BWNR IAmb IAmb 15 45 42.4
comp=Z,31nm,0.4s
BWNR *ex* x 15 49 16.9
SHL Shillong 20.47 117 P **P 15 45 37.8 +0.3**
SHL pmax pmax
comp=Z,122nm,1.1s
SHL Shillong 20.47 117 *ex* **P 15 45 38.7 +1.2**
SHL Shillong 20.47 117 P **P 15 45 37.8 +0.3**
SHL IAmb IAmb 15 45 39.9
comp=Z,122nm,1.1s
BTLR Botlikh 20.47 295*de*P Pn 15 45 39.0 -1.3
BTLR pmax pmax
comp=Z,121nm,0.7s
TEZP TEZPUR 20.53 113 *ex* **P 15 45 39.4 +1.4**
TEZP IAmb IAmb 15 45 42.5
comp=Z,89nm,1.1s
DQM DQM 20.63 221 P **P 15 45 40.2 +1.2**
GROC Groznyy 20.87 297 *e*P **P 15 45 42.4 +1.0**
GROC *e**SP **sP 15 46 14.7 +1.2**
GROC *e*S **S 15 49 30.6 +2.0**
GROC *e**SS **sS 15 50 01.0 -0.8**
GROC pmax pmax
comp=Z,450nm,1.8s
NJS Nagarjunasagar 21.03 159 *e*P **P 15 45 44.2 +0.9**
NJS IAmb IAmb 15 45 47.3
comp=Z,40nm,0.8s
CHLP Challavanipeta 21.03 145 *e*P **P 15 45 44.7 +1.4**
CHLP IAmb IAmb 15 45 48.4
comp=Z,23nm,0.8s
PVM Polavaram 21.14 153 *e*P **P 15 45 46.0 +1.5**
PVM IAmb IAmb 15 45 49.8
comp=Z,45nm,0.8s
MYLAV Mylavaram 21.26 156 *e*P **P 15 45 47.4 +1.6**
MYLAV IAmb IAmb 15 45 50.2
comp=Z,33nm,0.6s
SRLM Srisailam 21.35 160 *e*P **P 15 45 47.0 +0.3**
SRLM IAmb IAmb 15 45 50.7
comp=Z,46nm,1.1s
GNI Garni 21.36 288*c i*P **P 15 45 49.5 +2.6**
GNI pmax pmax
comp=Z,878nm,1.8s
GNI Garni 21.36 288 P **P 15 45 49.6 +2.6**
comp=Z,69nm,0.6s,baz=13,slow=1.8,SNR=42
GNI Garni 21.36 288 *i* P **P 15 45 49.0 +2.0**
SNR=22
GNI Garni 21.36 288 P **P 15 45 49.2 +2.3**
TBLG Delisi 21.45 292 P **P 15 45 48.3 +0.6**
TBLG pmax pmax
comp=Z,99nm,0.7s
TBLG Delisi 21.45 292 P **P 15 45 48.3 +0.6**
TBLG IAmb IAmb 15 45 50.9
comp=Z,99nm,0.7s
SVE Sverdlovsk 21.61 343*de*P **P 15 45 49.3 +0.1**
SVE *e*S **S 15 49 45.0 +2.2**
SVE pmax pmax
comp=Z,37nm,1.2s
ARU Arti 21.77 340*c i*P **P 15 45 51.1 +0.2**
ARU 15 46 19.5
ARU S **S 15 49 46.2 +0.3**
ARU SS **SnSn 15 50 24.4 +4.9**
ARU pmax pmax
comp=Z,34nm,1.1s
ARU Arti 21.77 340 P **P 15 45 51.3 +0.4**
comp=Z,6.4nm,0.5s,baz=163,slow=9.2,SNR=21
ARU S **S 15 49 45.6 -0.3**
comp=Z,1.3nm,0.4s,baz=150,slow=20,SNR=2.8
ARU Arti 21.77 340 P **P 15 45 50.1 -0.8**
ADKI Addanki 21.90 158 *e*P **P 15 45 53.5 +1.0**
ADKI IAmb IAmb 15 45 55.6
comp=Z,18nm,0.8s
URV Uravakonda 22.07 165 *e*P **P 15 45 56.0 +1.5**
URV IAmb IAmb 15 45 56.9
comp=Z,42nm,0.9s
ZEI Tsey 22.18 295 *e*P **P 15 45 56.9 +1.2**
ZEI pmax pmax
comp=Z,30nm,0.6s
AKH Akhalkalaki 22.36 291 P **P 15 45 58.5 +1.0**
AKH pmax pmax
comp=Z,85nm,0.8s
AKH Akhalkalaki 22.36 291 ⇑P **P 15 46 00.0 +2.5**
AKH Akhalkalaki 22.36 291 P **P 15 45 58.5 +1.0**
AKH IAmb IAmb 15 46 02.2
comp=Z,85nm,0.8s
GTA Gaotai 22.38 74 ⇓P **P 15 45 59.3 +1.7**
GTA pP pP 15 46 20.8 +2.8
GTA sP sP 15 46 33.8 +3.0
GTA pmax pmax
comp=Z,15nm,1.0s
NCK Nalchik 22.50 297⇑*e*P **P 15 45 58.8 0.0**
NCK pmax pmax
comp=Z,103nm,0.7s
PYA1 Pyatigorsk 22.95 298⇑*e*P **P 15 46 03.5 +0.2**
KBZ Khabaz 23.04 297*c i*P **P 15 46 03.5 -0.5**
KBZ Khabaz 23.04 297 P **P 15 46 03.9 -0.1**
comp=Z,20nm,0.7s,baz=120,slow=4.5,SNR=35
KBZ S **S 15 50 09.0 +2.0**
comp=Z,2.6nm,0.9s,baz=90,slow=20,SNR=2.2
KBZ LR LR 15 56 27.0
comp=Z,79nm,19.2s,baz=86,slow=40
GOF Gofitskoye 23.16 300⇑*e*P **P 15 46 07.1 +1.8**
GOF pmax pmax
comp=Z,180nm,0.8s
SHA1 Shidzhatmaz 23.21 297*c i*P **P 15 46 06.1 +0.1**
KVAR Kislovodsk Arr 23.21 298 P **P 15 46 07.9 +2.0**
comp=Z,10nm,0.6s,baz=253,slow=19,SNR=17
KIV Kislovodsk 23.22 298 *e*P **P 15 46 06.1 +0.1**
KIV *e*S **S 15 50 10.8 +0.5**
KIV pmax pmax
comp=Z,123nm,1.1s
KIV MLR MLR
comp=Z,114nm,14.0s
KIV Kislovodsk 23.22 298 *i* P **P 15 46 06.1 +0.1**
SNR=14
KIV Kislovodsk 23.22 298 P **P 15 46 05.5 -0.4**
KIV IAmb IAmb 15 46 36.8
comp=Z,50nm,0.9s
SKHT Srikalahasti 23.82 160 *e*P **P 15 46 12.7 +1.3**
SKHT IAmb IAmb 15 46 14.6
comp=Z,24nm,0.7s
DMTO DMTO 23.84 223 P **P 15 46 11.9 +0.3**
SNR=15
WHFO Wadi Hawf 24.33 225 P **P 15 46 16.0 -0.1**
SNR=67
WHFO P **P 15 46 16.0 -0.1**
SNR=8.4
RBK Rabkut 24.42 224 P **P 15 46 17.0 +0.1**
SNR=18
RBK P **P 15 46 17.4 +0.5**
RBK P **P 15 46 18.0 +1.1**
SNR=8.9
ABTO Aybut 25.05 225 P **P 15 46 22.5 -0.2**
SNR=10
MOY Mondy 25.73 45 *e*P **P 15 46 31.0 +2.4**
MOY pmax pmax
comp=Z,41nm,1.9s
VRH Novokhopyorsk 25.85 314 *e*P **P 15 46 29.8 +0.3**
VRH pmax pmax
comp=Z,60nm,0.8s
LZH Lanzhou 25.91 81 *e*P **P 15 46 33.9 +3.4**
LZH pP pP 15 46 54.6 +1.3
LZH pmax pmax
comp=Z,68nm,1.0s
LZH pmax pmax
comp=Z,220nm,4.9s
RAYN Ar Rayn 25.97 247 P **P 15 46 29.8 -1.2**
RAYN pmax pmax
comp=Z,14nm,0.8s
RAYN Ar Rayn 25.97 247 *i* P **P 15 46 30.0 -1.0**
SNR=22
RAYN Ar Rayn 25.97 247 P **P 15 46 29.8 -1.2**
KIRV Kirov 26.44 334 P **P 15 46 35.8 +1.0**
comp=Z,32nm,0.5s,baz=134,slow=1.7,SNR=15
ZAK Zakamensk 26.59 49 *e*P **P 15 46 38.2 +1.8**
ZAK pmax pmax
comp=Z,21nm,0.8s
ANN Anapa 27.06 298 *e*P **P 15 46 41.0 +0.5**
ANN *e**PP **pP 15 47 02.2 -0.7**
ANN pmax pmax
comp=Z,62nm,0.8s
VORD Divnogorie 27.19 312 *e*P **P 15 46 41.9 +0.3**
VORD pmax pmax
comp=Z,20nm,1.1s
TLY Talaya 27.26 46 *e*P **P 15 46 48.5 +6.2**
TLY pmax pmax
comp=Z,20nm,0.8s
TLY Talaya 27.26 46 P **P 15 46 44.7 +2.5**
comp=Z,6.3nm,0.7s,baz=258,slow=19,SNR=3.4
TLY Talaya 27.26 46 IAmb IAmb 15 46 49.2
comp=Z,7.8nm,0.8s
VSR Storozhevoye 27.35 313*c i*P **P 15 46 42.6 -0.4**
VSR pmax pmax
comp=Z,49nm,0.8s
SONM Songino Array 27.91 55 P **P 15 46 50.3 +2.1**
comp=Z,4.8nm,0.5s,baz=265,slow=9.6,SNR=24
LPSR Galich'ya Gora 27.98 315 *e*P **P 15 46 49.0 +0.3**
LPSR pmax pmax
comp=Z,60nm,0.7s
ULN Ulaanbaatar 28.35 55*d i*P **P 15 46 53.8 +1.6**
ULN pmax pmax
comp=Z,20nm,1.7s
ULN Ulaanbaatar 28.35 55 P **P 15 46 52.1 0.0**
KMI Kunming 28.92 104 P **P 15 47 00.6 +3.1**
KMI pmax pmax
comp=Z,20nm,1.3s
SEVA Sevastopol 29.71 297 ⇓P **P 15 47 05.1 +1.0**
ILGA Ilgaz 29.73 290 P **P 15 47 02.9 -1.7**
CHTO Chiang Mai 29.79 119 P **P 15 47 05.6 +0.6**
CHTO pmax pmax
comp=Z,9.0nm,1.1s
CHTO Chiang Mai 29.79 119 P **P 15 47 05.6 +0.6**
MMAI Mount Meron Ar 29.85 274 P **P 15 47 07.9 +2.4**
comp=Z,1.2nm,0.5s,baz=55,slow=12,SNR=3.9
BR131 Keskin Array S 29.90 288 P **P 15 47 05.9 -0.1**
BR131 pmax pmax
comp=Z,8.0nm,0.6s
BR131 Keskin Array S 29.90 288 P **P 15 47 05.9 -0.1**
BRTR Keskin Array B 29.90 288*ce*P **P 15 47 07.5 +1.5**
BRTR pmax pmax
comp=Z,7.0nm,0.6s
BRTR Keskin Array B 29.90 288 P **P 15 47 07.2 +1.2**
comp=Z,7.0nm,0.6s,baz=102,slow=8.6,SNR=44
BRTR pP **pP 15 47 30.6 +1.8**
comp=Z,6.7nm,0.7s,baz=105,slow=8.5,SNR=7.8
PRGR Permogore 29.95 335 *e*P **P 15 47 05.9 -0.1**
PRGR pmax pmax
comp=Z,26nm,0.9s

MOS Moscow 29.96 321 *e*P **P** 15 47 05.7 -0.4
MOS *e**PP **pP** 15 47 27.4 -1.6
MOS *e* 15 48 07.0
MOS pmax pmax
comp=Z,72nm,0.7s
CM31 Chiang Mai Arr 30.03 119 P **P** 15 47 10.1 +3.0
CMAR Chiang Mai Arr 30.03 119*ce*P **P** 15 47 08.8 +1.7
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 30.03 119 P **P** 15 47 09.1 +2.0
comp=Z,1.8nm,0.6s,baz=308,slow=9.2,SNR=11
OBN Obninsk 30.25 319*c iP* **P** 15 47 09.5 +0.9
OBN *e* 15 48 09.4
OBN pmax pmax
comp=Z,97nm,0.7s
OBN Obninsk 30.25 319 ⇑P **P** 15 47 09.6 +1.0
OBN Obninsk 30.25 319 P **P** 15 47 09.2 +0.6
PALK Pallekele 30.28 162*de*P **P** 15 47 10.7 +1.4
PALK pmax pmax
comp=Z,15nm,0.8s
PALK Pallekele 30.28 162 P **P** 15 47 10.4 +1.1
comp=Z,15nm,0.6s,baz=340,slow=8.9,SNR=20
PALK Pallekele 30.28 162 P **P** 15 47 10.1 +0.7
PALK Pallekele 30.28 162 lAmb lAmb 15 47 11.6
comp=Z,19nm,0.6s
XAN Xi'an 30.43 83 P **P** 15 47 12.9 +2.3
XAN pmax pmax
comp=Z,17nm,0.8s
XAN pmax pmax
comp=Z,140nm,4.9s
XAN Xi'an 30.43 83 P **P** 15 47 11.5 +0.9
XAN pmax pmax
comp=Z,17nm,1.0s
XAN Xi'an 30.43 83 P **P** 15 47 11.5 +0.9
HHC Hu-ho-hao-te 31.28 70 *e*P **P** 15 47 21.0 +2.9
HHC pmax pmax
comp=Z,6.0nm,0.8s
HHC pmax pmax
comp=Z,90nm,5.8s
EIL Elat 31.34 268 P **P** 15 47 19.2 +0.7
comp=Z,4.2nm,0.9s,baz=103,slow=5.7,SNR=6.7
ENH Enshi 32.07 90 P **P** 15 47 25.1 0.0
ENH lAmb lAmb 15 47 29.0
comp=Z,25nm,1.1s
PBKT Sadao Pong 32.72 120 P **P** 15 47 32.8 +2.0
TLCR 33.19 299 ⇓P **P** 15 47 35.8 +1.3
KIS Kishinev 33.22 302 *e*P **P** 15 47 36.0 +1.1
KIS Kishinev 33.22 302 *e*P **P** 15 47 36.0 +1.1
KIS *e* 15 50 20.0
KIS *e* 15 55 00.0
ELL Elmali 33.28 283 P **P** 15 47 36.7 +1.0
ELL pmax pmax
comp=Z,46nm,0.6s
ELL Elmali 33.28 283 P **P** 15 47 36.7 +1.0
AKASG Malin Array Be 33.32 309*ce*P **P** 15 47 36.2 +0.6
AKASG pmax pmax
comp=Z,22nm,0.5s
AKASG Malin Array Be 33.32 309 P **P** 15 47 36.2 +0.6
comp=Z,23nm,0.6s,baz=80,slow=6.9,SNR=113
AKASG Malin Array Be 33.32 309 lAmb lAmb 15 47 38.1
comp=Z,9.5nm,0.8s
AKBB Malin Array Si 33.32 309*c iP* **P** 15 47 36.0 +0.4
AKBB Malin Array Si 33.32 309 P **P** 15 47 35.8 +0.1
AKBB lAmb lAmb 15 47 37.5
comp=Z,35nm,0.8s
TOPG Topolog 33.50 298 ⇓P **P** 15 47 39.0 +1.7
SORM Soroca 33.60 304 ⇑P **P** 15 47 38.8 +0.7
GHRR 34.17 300 ⇑P **P** 15 47 45.4 +2.2
TMCR Tamitsa 34.24 334 *e*P **P** 15 47 43.6 +0.2
TMCR pmax pmax
comp=Z,21nm,0.6s
VRI Vrincioaia 34.65 300 ⇑P **P** 15 47 49.5 +2.2
TESR Tescani 34.70 301 ⇑P **P** 15 47 49.3 +1.6
PLOR Plostina 34.70 300 ⇑P **P** 15 47 50.1 +2.4
BJT Baijiatuan 34.87 70 P **P** 15 47 50.5 +1.3
BJT pmax pmax
comp=Z,16nm,0.6s
BJT Baijiatuan 34.87 70 P **P** 15 47 50.5 +1.3
BJT lAmb lAmb 15 47 52.5
comp=Z,16nm,0.6s
BOD Bodaibo 35.01 39 *e*P **P** 15 47 50.6 +0.4
BOD pmax pmax
comp=Z,3.0nm,1.4s
BIZ Bicaz 35.08 302 ⇑P **P** 15 47 52.5 +1.5
MLR Muntele Rosu 35.21 299 P **P** 15 47 53.7 +1.5
MLR pmax pmax
comp=Z,78nm,0.9s
MLR Muntele Rosu 35.21 299 ⇑P **P** 15 47 54.9 +2.7
MLR Muntele Rosu 35.21 299 P **P** 15 47 53.7 +1.5
ELND Elena 35.41 295 ⇓P **P** 15 47 55.8 +2.0
ALN Alexandroupoli 35.52 291 P **P** 15 47 54.0 -0.8
ALN pmax pmax
comp=Z,8.0nm,1.0s
ALN Alexandroupoli 35.52 291 P **P** 15 47 54.0 -0.8
DOPR Dopca 35.58 300 ⇑P **P** 15 47 57.2 +1.9
BURAR Bucovina Array 35.69 303 ⇑P **P** 15 47 57.7 +1.5
BUR08 Bucovina Ar. S 35.70 303 P **P** 15 47 57.0 +0.6
BUR08 lAmb lAmb 15 47 58.8
comp=Z,39nm,1.4s
KARP Karpathos 35.73 282 P **P** 15 47 56.1 -0.6
COPA Copaceanca 35.79 297 ⇑P **P** 15 47 59.5 +2.4
MTUR Matau 35.84 299 ⇑P **P** 15 47 59.7 +2.1
VOIR 35.84 299 ⇑P **P** 15 47 59.2 +1.6
KAAM Kaadhehdhoo 35.88 178 P **P** 15 47 59.0 +1.1
WHN Wuhan 35.89 87 ⇓P **P** 15 48 01.4 +3.4
IIGN Ignalina 35.96 316 *e*P **P** 15 47 59.7 +1.4
IIGN lAmb lAmb 15 48 00.7
comp=Z,34nm,0.6s
IZAR Zarasai 36.03 317 *e*P **P** 15 47 59.6 +0.7
IZAR lAmb lAmb 15 48 01.2
comp=Z,20nm,0.6s
ISAL Salakas 36.06 317 *e*P **P** 15 47 59.7 +0.6
ARR Arges 36.13 299 ⇓P **P** 15 48 02.2 +2.1
ARCR ARCALIA 36.28 302 ⇑P **P** 15 48 04.1 +3.0
VSU Vasula 36.48 321*de*P **P** 15 48 03.4 +0.7
VSU pmax pmax
comp=Z,104nm,0.7s
VSU Vasula 36.48 321 *e*P **P** 15 48 03.4 +0.7
LVV L'vov 36.55 307 *e*P **P** 15 48 05.1 +1.7
APE Apeiranthos 36.63 285 ⇓P **P** 15 48 04.1 -0.2
LOT Lotru 36.74 299 ⇑P **P** 15 48 07.3 +2.0
CJR Cluj-Napoca 36.80 301 ⇓P **P** 15 48 08.4 +2.7
SANT Santorini 36.85 284 P **P** 15 48 05.0 -1.2
SANT lAmb lAmb 15 49 21.4
comp=Z,27nm,1.2s
BMR Baia Mare 36.86 303 ⇓P **P** 15 48 08.4 +2.3
PABE Paberze 37.25 316 *e*P **P** 15 48 10.4 +1.2
PABE lAmb lAmb 15 48 11.2
comp=Z,54nm,0.7s
KWP Kalwaria Pacla 37.40 306 P **P** 15 48 11.5 +0.9
KWP pmax pmax
comp=Z,519nm,0.7s
KWP Kalwaria Pacla 37.40 306 *e*P **P** 15 48 12.2 +1.5
KWP Kalwaria Pacla 37.40 306 P **P** 15 48 11.5 +0.9
GZR Gura Zlata 37.44 299 ⇓P **P** 15 48 12.4 +1.3
SUW Suwalki 37.46 313 P **P** 15 48 10.2 -0.9
SUW pmax pmax
comp=Z,51nm,0.9s
SUW Suwalki 37.46 313 *e*P **P** 15 48 11.1 0.0
SUW Suwalki 37.46 313 P **P** 15 48 10.2 -0.9
TRPA Tarpa 37.50 304 ⇓P **P** 15 48 13.4 +2.0
IDI Anoyia 37.58 282 P **P** 15 48 12.1 -0.4
comp=Z,3.1nm,0.4s,baz=84,slow=13,SNR=12
LVZ Lovozero 37.62 338 P **P** 15 48 11.6 -0.7
LVZ pmax pmax
comp=Z,200nm,1.9s
LVZ Lovozero 37.62 338 P **P** 15 48 11.6 -0.7
UZH Uzhgorod 37.66 305 ⇓*iP* **P** 15 48 14.4 +1.6
UZH *e* 15 48 38.1
KOLS Kolonicke sedl 37.67 305 *e*P **P** 15 48 14.6 +1.6
KOLS pmax pmax
comp=Z,15nm,0.8s
KOLS Kolonicke sedl 37.67 305 *e*P **P** 15 48 14.6 +1.6
FIA1 FINESS Array S 37.74 326 P **P** 15 48 13.8 +0.4
FIA1 lAmb lAmb 15 48 15.0
comp=Z,20nm,0.8s
FINES FINESS Array B 37.74 326 P **P** 15 48 14.2 +0.8
comp=Z,11nm,0.5s,baz=119,slow=8.7,SNR=87
FINES pP **pP** 15 48 39.1 +2.3
comp=Z,4.4nm,0.5s,baz=118,slow=11,SNR=3.0
APA Apatity 37.80 337 ⇓*iP* P 15 48 04.9 -8.9
APA *i* *PP pP 15 48 24.0 -13
APA *i* 15 50 06.0
APA pmax pmax
comp=Z,12nm,1.0s
APA MLR MLR
comp=Z,600nm,12.0s
BZS Buzias 38.24 300 ⇑P **P** 15 48 19.7 +1.9
MDVR Moldovita 38.24 298 ⇑P **P** 15 48 19.5 +1.6
LIT Litokhoron 38.33 291 P **P** 15 48 18.2 -0.4
LIT pmax pmax
comp=Z,12nm,1.0s
LIT Litokhoron 38.33 291 P **P** 15 48 18.2 -0.4
STHS Stebnicka Huta 38.35 306 *e*P **P** 15 48 18.9 +0.2
STHS Stebnicka Huta 38.35 306 *e*P **P** 15 48 18.9 +0.2
PBUR Paburg 38.47 317 *e*P **P** 15 48 20.7 +1.2
SLIT Slitere, Latvi 38.56 319 *e*P **P** 15 48 20.5 +0.2
AGG Agios Georgios 38.66 289 P **P** 15 48 21.2 -0.3
AGG pmax pmax
comp=Z,25nm,1.6s
AGG Agios Georgios 38.66 289 P **P** 15 48 21.1 -0.3
AGG lAmb lAmb 15 48 48.9
comp=Z,25nm,1.6s
LHMI Lhok Sumawe 38.85 137 P **P** 15 48 23.5 +0.3
KECS Kecovo 38.86 304 *e*P **P** 15 48 24.6 +1.7
KECS pmax pmax
comp=Z,6.0nm,0.6s
KECS Kecovo 38.86 304 *e*P **P** 15 48 24.6 +1.7
NIE Niedzica 38.97 306 *e*P **P** 15 48 26.1 +2.3
NIE Niedzica 38.97 306 *e*P **P** 15 48 26.1 +2.3
NJ2 Nanjing 38.97 82 *e*P **P** 15 48 26.4 +2.4
NJ2 pmax pmax
comp=Z,12nm,0.7s
FNA Florina 39.04 292 P **P** 15 48 24.4 -0.2
FNA Florina 39.04 292 P **P** 15 48 24.4 -0.2
DL2 Dalian 39.23 71 P **P** 15 48 28.3 +2.2
DL2 pmax pmax
comp=Z,48nm,0.6s
PSZ Piszkesteto 39.28 303 P **P** 15 48 26.1 -0.4
PSZ pmax pmax
comp=Z,23nm,1.2s
PSZ Piszkesteto 39.28 303 P **P** 15 48 26.1 -0.4
PSZ lAmb lAmb 15 48 29.4
comp=Z,23nm,1.2s
OJC Ojcow 39.29 307 P **P** 15 48 26.3 -0.2
OJC pmax pmax
comp=Z,101nm,1.6s
OJC Ojcow 39.29 307 *e*P **P** 15 48 27.6 +1.1
OJC Ojcow 39.29 307 P **P** 15 48 26.3 -0.2
HKPS Hong Kong Po S 39.35 99 P **P** 15 48 27.0 -0.3
ITM Ithomi 39.40 286 P **P** 15 48 26.1 -1.5
ITM lAmb lAmb 15 49 32.8
comp=Z,40nm,1.6s
LANS Liptovska Anna 39.52 305 *e*P **P** 15 48 30.9 +2.5
LANS pmax pmax
comp=Z,6.0nm,0.6s
LANS Liptovska Anna 39.52 305 *e*P **P** 15 48 30.8 +2.4
VYHS Vyhne 39.96 304 *e*P **P** 15 48 33.5 +1.5
VYHS pmax pmax
comp=Z,33nm,1.5s
VYHS Vyhne 39.96 304 *e*P **P** 15 48 33.5 +1.5
SRO Srobarova 40.34 303 *e*P **P** 15 48 37.4 +2.2
SRO pmax pmax
comp=Z,68nm,1.1s
SRO Srobarova 40.34 303 *e*P **P** 15 48 37.4 +2.2
JAVC Velka Javorina 40.71 305 *e*P **P** 15 48 40.4 +2.1
MORC Moravsky Berou 40.75 306 P **P** 15 48 39.2 +0.6
MORC pmax pmax
comp=Z,59nm,1.4s
MORC Moravsky Berou 40.75 306 ⇓P **P** 15 48 40.4 +1.8
MORC Moravsky Berou 40.75 306 *e*P **P** 15 48 40.0 +1.4
MORC Moravsky Berou 40.75 306 P **P** 15 48 39.2 +0.6
MORC lAmb lAmb 15 48 41.3
comp=Z,59nm,1.4s
SMOL Smolenice 40.89 305 *e*P **P** 15 48 41.2 +1.5
SMOL pmax pmax
comp=Z,9.0nm,1.2s
SMOL Smolenice 40.89 305 *e*P **P** 15 48 41.2 +1.5
KULM Kulim 40.92 132 P **P** 15 48 41.6 +1.3
KULM lAmb lAmb 15 48 58.5
comp=Z,62nm,1.7s
GKP Gorka Klasztor 40.93 312 *e*P **P** 15 48 40.9 +1.0
GKP Gorka Klasztor 40.93 312 *e*P **P** 15 48 40.9 +1.0
MODS Modra-Piesok 41.00 304 *e*P **P** 15 48 41.0 +0.4
MODS pmax pmax
comp=Z,21nm,1.2s
MODS Modra-Piesok 41.00 304 *e*P **P** 15 48 41.0 +0.4
ZST Bratislava 41.13 304 *e*P **P** 15 48 42.1 +0.4
ZST pmax pmax
comp=Z,10.0nm,0.8s
ZST Bratislava 41.13 304 *e*P **P** 15 48 42.1 +0.4
CN2 Changchun 41.15 63 *e*P **P** 15 48 43.3 +1.4
SSE Sheshan 41.17 83 P **P** 15 48 44.2 +1.9
SSE lAmb lAmb 15 50 06.9
comp=Z,20nm,0.6s
KRLC Kraliky 41.23 307 *e*P **P** 15 48 43.7 +1.2
KRLC Kraliky 41.23 307 *e*P **P** 15 48 43.7 +1.2
ARCES ARCESS Array B 41.31 337 P **P** 15 48 43.8 +0.9
comp=Z,5.7nm,0.5s,baz=114,slow=8.4,SNR=50
ARCES pP **pP** 15 49 09.3 +2.7
comp=Z,7.3nm,0.6s,baz=111,slow=9.2,SNR=4.5
ARE0 ARCESS Array S 41.31 337 *e*P **P** 15 48 44.2 +1.3
ARE0 ARCESS Array S 41.31 337 P **P** 15 48 43.3 +0.4
STON Ston 41.37 296 *i* P **P** 15 48 44.8 +1.1
VRAC Vranov 41.39 306 *e*P **P** 15 48 45.4 +1.6
BLY Banja Luka 41.45 299 P **P** 15 48 44.8 +0.5
BLY lAmb lAmb 15 48 46.5
comp=Z,41nm,1.4s
BEHE Becsehely 41.51 302 *e*P **P** 15 48 47.0 +2.2
DPC Dobruska-Polom 41.51 307 *e*P **P** 15 48 46.4 +1.5
DPC Dobruska-Polom 41.51 307 *e*P **P** 15 48 46.4 +1.5
KSP Ksiaz 41.52 308 *e*P **P** 15 48 46.1 +1.3
KSP Ksiaz 41.52 308 *e*P **P** 15 48 46.1 +1.3
KRUC Moravsky 41.54 305 *e*P **P** 15 48 46.1 +1.1
OSTC Ostas 41.57 308 *e*P **P** 15 48 47.3 +2.0
CHVC Chvalec 41.67 308 *e*P **P** 15 48 47.3 +1.2
ZEA Zeya 41.68 48 *e*P **P** 15 48 48.6 +2.5
ZEA *e* 15 49 13.0
ZEA pmax pmax
comp=Z,10.0nm,0.8s
UPC Upice 41.71 308 *e*P **P** 15 48 47.7 +1.3
UPC Upice 41.71 308 *e*P **P** 15 48 47.7 +1.3
KALN Kalnik 41.77 301 *i* P **P** 15 48 48.4 +1.4
IPM Ipoh 41.79 133 P **P** 15 48 48.4 +1.0
IPM lAmb lAmb 15 49 17.0
comp=Z,16nm,0.9s
MAKA Makarska 41.79 297 *i* P **P** 15 48 47.7 +0.5
KTK1 Kautokeino 41.79 336 *e*P **P** 15 48 47.3 +0.5
PSI Prapat 41.95 137 P **P** 15 48 49.1 +0.2
comp=Z,9.5nm,0.5s,baz=294,slow=11,SNR=7.3
CONA Conrad Observa 41.98 304 *i* P **P** 15 48 49.9 +1.2
comp=Z,45nm,1.1s,SNR=17
RPSI Rantau Prapat 42.04 137 P **P** 15 48 48.5 -0.9
RPSI Rantau Prapat 42.04 137 P **P** 15 48 49.1 -0.3
KIJV Kijevo 42.11 298 *i* P **P** 15 48 50.7 +0.9
HVAR Hvar 42.22 297 *i* P **P** 15 48 51.3 +0.7
ARSA Arzberg 42.28 303 *i* P **P** 15 48 52.2 +1.1
comp=Z,18nm,1.3s,SNR=5.4
BSD Bornholm Skovb 42.35 315 *i* P **P** 15 48 51.1 -0.4
BSD pmax pmax
comp=Z,13nm,0.5s
BSD Bornholm Skovb 42.35 315 *i* P **P** 15 48 51.1 -0.4
comp=Z,13nm,0.5s
HAMF Hammerfest 42.38 338 *e*P **P** 15 48 53.4 +1.8
GSI Gunungsitoli 42.48 140 P **P** 15 48 54.7 +1.7
GSI lAmb lAmb 15 48 55.7
comp=Z,36nm,0.7s
GOPC GO Pecny, Ondr 42.52 307 *e*P **P** 15 48 54.9 +1.9
GOPC GO Pecny, Ondr 42.52 307 *e*P **P** 15 48 54.9 +1.9
OZLJ Ozalj 42.52 300 *i* P **P** 15 48 54.5 +1.5
MORI Morici 42.63 298 *i* P **P** 15 48 53.6 -0.4
PRU Pruhonice 42.68 307 *e*P **P** 15 48 55.7 +1.5
PRU Pruhonice 42.68 307 *e*P **P** 15 48 55.7 +1.5
SOKA Soboth 42.68 302 *i* P **P** 15 48 56.0 +1.6
comp=Z,38nm,1.2s,SNR=11
BRG Berggiesshubel 43.00 308 *i* P **P** 15 48 58.3 +1.4
comp=Z,30nm,0.7s
BRG *e*pP **pP** 15 49 23.4 +2.8
comp=Z,8.4nm,1.0s
BRG *e*sP **sP** 15 49 33.9 +1.9
comp=Z,7.2nm,1.1s
BRG Berggiesshubel 43.00 308 *i* P **P** 15 48 58.3 +1.4
BRG *e**PP **pP** 15 49 23.4 +2.8
BRG *e**SP **sP** 15 49 33.9 +1.9
BRG pmax pmax
comp=Z,31nm,0.7s
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG pmax pmax
comp=N,7.0nm,1.1s
BRG Berggiesshubel 43.00 308 *e*P **P** 15 48 58.3 +1.4
comp=N,29nm,0.7s,baz=84,slow=7.9
OBKA Obir 43.03 302 *i* P **P** 15 48 58.9 +1.6
comp=N,42nm,1.7s
PBCC Pribram 43.05 307 *e*P **P** 15 48 59.0 +1.7
MOA Molln 43.06 304 *i* P **P** 15 48 58.1 +0.7
comp=N,25nm,0.9s,SNR=7.4
NVLJ Novalja 43.10 299 *i* P **P** 15 48 58.1 +0.4
GEC2 GERESS Array S 43.32 305 *e*P **P** 15 49 00.2 +0.6
comp=N,16nm,1.4s,baz=84,slow=7.9
GEC2 GERESS Array S 43.32 305 P **P** 15 48 59.6 0.0
GERES GERESS Array B 43.32 305 P **P** 15 49 00.2 +0.6
comp=N,2.0nm,0.5s,baz=92,slow=6.9,SNR=22
GERES PP **PP** 15 50 41.6 -0.3
comp=N,2.7nm,0.8s,baz=87,slow=8.1,SNR=3.5
FBE Freiberg 43.37 308 *e*P **P** 15 49 01.5 +1.7
comp=N,35nm,0.8s,baz=84,slow=7.9
KHC Kasperske Hory 43.38 306*ce*P **P** 15 49 01.1 +1.1
KHC pmax pmax
comp=Z,26nm,1.1s
KHC Kasperske Hory 43.38 306 *e*P **P** 15 49 01.0 +1.1
KHC Kasperske Hory 43.38 306 P **P** 15 49 01.0 +1.0
INCN Inchon 43.40 72 P **P** 15 49 01.5 +1.2
INCN pmax pmax
comp=Z,15nm,0.6s
INCN Inchon 43.40 72 P **P** 15 49 01.5 +1.2
INCN lAmb lAmb 15 49 02.3
comp=Z,15nm,0.6s
CLL Collm 43.56 309 ⇑*iP* **P** 15 49 02.2 +0.8
CLL pmax pmax
comp=Z,17nm,0.8s
CLL Collm 43.56 309 ⇑*iP* **P** 15 49 02.2 +0.8
comp=Z,17nm,0.8s
CLL *e* 15 49 14.0
CLL *e*PP **PP** 15 50 44.0 -0.3
CLL Collm 43.56 309 *e*P **P** 15 49 02.3 +1.0
comp=Z,17nm,0.8s,baz=84,slow=7.9
CLL Collm 43.56 309 P **P** 15 49 02.1 +0.7
CLL lAmb lAmb 15 49 03.5
comp=Z,42nm,1.4s
MYKA Terra Mystica 43.64 302 *i* P **P** 15 49 02.0 -0.1
comp=Z,11nm,0.9s
YAK Yakutsk 43.65 35 *e*P **P** 15 49 02.0 +0.1
YAK *e**PP **pP** 15 49 25.8 -0.3
YAK *e*S **S** 15 55 22.6 -1.4
YAK *e**SS **sS** 15 56 01.3 -4.4
YAK pmax pmax
comp=Z,11nm,1.1s
YAK pmax pmax
comp=N,1.0nm,0.9s
YAK pmax pmax
comp=E,2.0nm,1.3s
YAK pmax pmax
comp=Z,88nm,3.5s
YAK pmax pmax
comp=N,70nm,3.5s
YAK pmax pmax
comp=E,142nm,3.8s
YAK smax smax
comp=N,87nm,3.7s
YAK smax smax
comp=E,66nm,3.7s
YAK Yakutsk 43.65 35 P **P** 15 49 02.2 +0.4
comp=E.4.5nm,0.3s,baz=253,slow=3.5,SNR=9.7
YAK Yakutsk 43.65 35 P **P** 15 49 01.7 -0.1
YAK lAmb lAmb 15 49 41.3
comp=Z,20nm,0.8s
MSEY Mahe Island 43.68 204 P **P** 15 49 03.4 +0.7
MSEY pmax pmax
comp=Z,50nm,1.0s
MSEY Mahe Island 43.68 204 P **P** 15 49 03.4 +0.7
MSEY lAmb lAmb 15 50 37.7
comp=Z,50nm,1.0s
KBA Koelnbreinsper 43.77 303 *i* P **P** 15 49 04.2 +0.9
comp=Z,13nm,0.9s,SNR=6.3
WET Wettzell 43.83 306 *e*P **P** 15 49 05.0 +1.5
comp=Z,4.4nm,0.8s,baz=84,slow=7.9
TANN Tannenbergstha 43.98 308 *e*P **P** 15 49 06.0 +1.3
comp=Z,30nm,1.0s,baz=84,slow=7.9
NKC Novy Kostel 44.00 307 *e*P **P** 15 49 06.8 +1.9
NKC Novy Kostel 44.00 307 *e*P **P** 15 49 06.8 +1.9
MOR8 Moi Rana 44.04 331 *e*P **P** 15 49 05.1 +0.1
WERN Wernitzgruen 44.04 308 *e*P **P** 15 49 06.3 +1.0
comp=Z,16nm,1.3s,baz=84,slow=7.9
RJOB Jochberg 44.05 304 *e*P **P** 15 49 06.3 +0.9
comp=Z,20nm,1.0s,baz=84,slow=7.9
GUNZ Gunzen 44.06 308 *e*P **P** 15 49 06.8 +1.4
comp=Z,22nm,1.2s,baz=84,slow=7.9
PLN Plauen 44.16 308 *e*P **P** 15 49 07.4 +1.2
comp=Z,15nm,1.1s,baz=84,slow=7.9
STEI Steigen 44.18 333 *e*P **P** 15 49 07.4 +1.4
ROTZ Rotzenmuhle 44.20 307 *e*P **P** 15 49 08.2 +1.7
comp=Z,39nm,1.3s,baz=84,slow=7.9
MANZ Manzenberg 44.24 307 *e*P **P** 15 49 08.5 +1.6
comp=Z,30nm,1.2s,baz=84,slow=7.9
STAL STALIGIAL 44.33 302 P **P** 15 49 07.2 -0.4
STAL lAmb lAmb 15 49 09.0
comp=Z,33nm,0.9s
KS19 Wonju Array Si 44.34 71 P **P** 15 49 08.9 +1.1
NEUB Neuenburg 44.34 309 *e*P **P** 15 49 08.8 +1.2
comp=Z,47nm,1.2s,baz=84,slow=7.9
ABTA Abfaltersbach 44.39 302 *i* P **P** 15 49 08.5 +0.3
comp=Z,20nm,1.3s
KSRS Korea Array 44.40 71 P **P** 15 49 09.6 +1.4
comp=Z,4.6nm,0.6s,baz=276,slow=6.2,SNR=20
KSRS LR LR 16 10 06.6
comp=Z,26nm,20.2s,baz=280,slow=39
NC405 NORSAR Array S 44.42 323 P **P** 15 49 08.1 0.0
NC405 lAmb lAmb 15 49 09.7
comp=Z,36nm,0.8s
NC602 NORSAR Array S 44.48 323 *e*P **P** 15 49 08.6 +0.1
NC602 NORSAR Array S 44.48 323 P **P** 15 49 07.9 -0.6
MOX Moxa 44.49 308 *e*P **P** 15 49 09.9 +1.1
comp=Z,16nm,0.9s,baz=84,slow=7.9
NC303 NORSAR Array S 44.60 323 P **P** 15 49 09.6 +0.1
NB201 NORSAR Array S 44.62 323 P **P** 15 49 09.7 0.0
KONS Konsvik 44.63 331 *e*P **P** 15 49 10.5 +0.9
NB2 NORSAR Subarra 44.66 323 P **P** 15 49 10.2 +0.1
comp=Z,16nm,0.5s,baz=96,slow=7.9
NB2 NORSAR Subarra 44.66 323 P **P** 15 49 10.2 +0.1
baz=96,slow=7.9
NOA NORSAR Array B 44.66 323 P **P** 15 49 10.2 +0.1
comp=Z,18nm,0.5s,baz=96,slow=7.7,SNR=129
NRCA Norcia 44.69 297 P **P** 15 49 08.5 -2.1
KLR Kul'dur 44.72 54⇑*eP* **P** 15 49 11.7 +1.1
KLR pmax pmax
comp=Z,7.0nm,1.5s
KLR Kul'dur 44.72 54 P **P** 15 49 12.2 +1.5
comp=Z,1.5nm,0.4s,baz=282,slow=8.7,SNR=6.6
NAO01 NORSAR Array S 44.80 323 P **P** 15 49 11.0 -0.1
NAO01 lAmb lAmb 15 49 51.5
comp=Z,56nm,1.2s
GRA1 Grafenberg Arr 44.84 307 P **P** 15 49 11.6 0.0
GRA1 lAmb lAmb 15 49 14.9
comp=Z,42nm,1.2s
GRF Grafenberg Arr 44.84 307 P **P** 15 49 11.6 0.0
GRF pmax pmax
comp=Z,42nm,1.2s
GRF Grafenberg Arr 44.84 307 *e*P **P** 15 49 13.4 +1.7
comp=Z,64nm,1.4s,baz=84,slow=7.9
LOF Lofoten 44.85 333 *e*P **P** 15 49 12.1 +0.8
NBO00 NORSAR Array S 44.87 323 P **P** 15 49 11.6 -0.1
NC204 NORSAR Array S 44.90 323 P **P** 15 49 11.5 -0.5
WTTA Wattenberg 44.90 303 *i* P **P** 15 49 12.7 +0.4
comp=Z,25nm,0.7s,SNR=10
WATA Walderalm 44.93 303 *i* P **P** 15 49 12.8 +0.3
comp=Z,28nm,1.3s,SNR=7.6
FUR Furstenfeldbru 45.01 305 *e*P **P** 15 49 14.5 +1.5
comp=Z,85nm,1.4s,baz=84,slow=7.9
MURB Monte Urbino 45.02 298 P **P** 15 49 14.6 +1.4
BSEG Bad Segeberg 45.04 313 *e*P **P** 15 49 14.6 +1.6
comp=Z,24nm,0.7s,baz=84,slow=7.9
CTI Castel Tesino 45.09 302 P **P** 15 49 14.2 +0.4
CTI pmax pmax
comp=Z,27nm,0.7s
CTI Castel Tesino 45.09 302 P **P** 15 49 14.2 +0.4
CTI lAmb lAmb 15 49 15.3
comp=Z,27nm,0.7s
HOPEN Hopen 45.09 346 *e*P **P** 15 49 16.1 +2.9
CLZ Clausthal 45.16 310 *e*P **P** 15 49 15.3 +1.2
comp=Z,54nm,1.4s,baz=84,slow=7.9
SQTA Sankt Quirin 45.20 303 *i* P **P** 15 49 14.6 0.0

comp=Z,14nm,0.7s,SNR=6.8
TEOL Teolo 45.20 301 P **P 15 49 15.1 +0.6**
MOTA Moosalm 45.25 304 *i* P **P 15 49 15.2 +0.2**
comp=Z,30nm,1.0s,SNR=8.4
NRDL Niedersach Rie 45.27 311 *eP* **P 15 49 16.3 +1.5**
comp=Z,32nm,1.1s,baz=84,slow=7.9
KONO Kongsberg 45.38 321 *deP* **P 15 49 16.0 +0.3**
KONO pmax pmax
comp=Z,12nm,0.7s
KONO Kongsberg 45.38 321 *eP* **P 15 49 16.2 +0.5**
KONO Kongsberg 45.38 321 P **P 15 49 15.8 +0.1**
KONO IAmb IAmb 15 49 16.8
comp=Z,25nm,0.6s
GTTG Gvttingen 45.44 310 *eP* **P 15 49 17.8 +1.5**
comp=Z,60nm,0.8s,baz=84,slow=7.9
RETA Reutte 45.45 304 *i* P **P 15 49 17.0 +0.5**
comp=Z,14nm,1.1s
FETA Feichten 45.55 303 *i* P **P 15 49 17.4 0.0**
comp=Z,23nm,1.1s,SNR=6.8
TIXI Tiksi 45.56 22 *deP* **P 15 49 17.2 +0.3**
TIXI pmax pmax
comp=Z,8.0nm,0.9s
TIXI Tiksi 45.56 22 P **P 15 49 16.8 -0.1**
MYKOM Kota Tinggi 45.62 132 P **P 15 49 19.4 +1.3**
LATE Laterza 45.68 297 P **P 15 49 18.5 +0.2**
LATE IAmb IAmb 15 49 19.7
comp=Z,30nm,0.9s
RETH Rethem/Aller, 45.70 311 *eP* **P 15 49 19.2 +0.9**
comp=Z,44nm,1.6s,baz=84,slow=7.9
USA0B Ussuriysk Arra 45.72 61 P **P 15 49 19.0 +0.4**
USA0B pmax pmax
comp=Z,39nm,2.0s
USA0B Ussuriysk Arra 45.72 61 P **P 15 49 19.0 +0.4**
USA0B IAmb IAmb 15 49 24.1
comp=Z,39nm,1.9s
USRK Ussuriysk Ar. 45.72 61 P **P 15 49 19.7 +1.2**
comp=Z,1.3nm,0.5s,baz=258,slow=8.1,SNR=10.0
DOMB Dombas 45.76 324 *eP* **P 15 49 20.1 +1.3**
UBR Ueberruh 45.86 304 *eP* **P 15 49 20.5 +0.8**
comp=Z,28nm,0.8s,baz=84,slow=7.9
OSSC Osservatorio P 45.87 298 P **P 15 49 19.9 +0.1**
OSSC IAmb IAmb 15 49 22.7
comp=Z,25nm,0.9s
PDSI Padang 45.88 138 P **P 15 49 20.9 +0.7**
comp=Z,23nm,1.2s
ZCCA Zocca 45.88 299 P **P 15 49 20.5 +0.6**
HOMB Homborsund 45.93 319 *eP* **P 15 49 20.7 +0.7**
FUORN Ofenpass-Fuorn 45.94 303 P **P 15 49 20.6 +0.1**
FUORN IAmb IAmb 15 49 28.7
comp=Z,16nm,0.8s
SALO Salr 45.94 301 P **P 15 49 21.0 +0.6**
SKAR Skarslia 46.06 322 *eP* **P 15 49 22.1 +1.0**
DAVA Damuels 46.08 304 *i* P **P 15 49 21.9 +0.3**
comp=Z,48nm,0.6s,SNR=23
VLC Villacollemand 46.34 299 P **P 15 49 24.4 +0.9**
VLC IAmb IAmb 15 49 26.2
comp=Z,24nm,0.8s
TNS Taunus Mts 46.55 308 *eP* **P 15 49 26.3 +1.2**
comp=Z,19nm,1.1s,baz=84,slow=7.9
TUE Stuetta 46.59 303 P **P 15 49 25.1 -0.5**
SNART Snartemo 46.61 319 *eP* **P 15 49 26.4 +1.1**
AKN Aaknes 46.74 324 *eP* **P 15 49 27.6 +1.2**
ODD1 Odda 46.89 321 *eP* **P 15 49 28.9 +1.3**
BFO Black Forest 46.93 305 P **P 15 49 27.8 -0.2**
BFO pmax pmax
comp=Z,19nm,1.1s
BFO Black Forest 46.93 305 *eP* **P 15 49 28.6 +0.6**
comp=Z,18nm,1.0s,baz=84,slow=7.9
BFO Black Forest 46.93 305 P **P 15 49 27.8 -0.2**
BLS5 Blasjo 46.98 321 *eP* **P 15 49 29.7 +1.5**
BUG Bochum--Univer 47.13 310 *eP* **P 15 49 30.8 +1.4**
comp=Z,47nm,1.2s,baz=84,slow=7.9
HSPB Hornsund (broa 47.24 345 *eP* **P 15 49 32.3 +2.3**
AHRW Bad Neuenahr-A 47.38 308 *eP* **P 15 49 32.8 +1.4**
comp=Z,24nm,0.8s,baz=84,slow=7.9
GRNR Gornyy 47.50 51 *eP* **P 15 49 33.9 +1.5**
GRNR MLR MLR
comp=Z,100nm,12.0s
BER Bergen 47.53 322 *eP* **P 15 49 33.1 +0.6**
SPA0 Spitsbergen Ar 47.58 347 P **P 15 49 33.9 +1.3**
SPA0 IAmb IAmb 15 50 19.8
comp=Z,26nm,1.0s
ASK Askoy 47.59 322 *eP* **P 15 49 33.7 +0.7**
KMY Karmoy 47.60 320 *eP* **P 15 49 34.0 +0.9**
ECH Echery 47.72 305 P **P 15 49 34.4 +0.3**
ECH pmax pmax
comp=Z,17nm,1.1s
ECH Echery 47.72 305 P **P 15 49 34.4 +0.3**
SENIN Lac Senin/Sane 47.99 303 P **P 15 49 36.5 0.0**
SENIN IAmb IAmb 15 49 39.4
comp=Z,34nm,0.8s
MEM Membach 48.04 309 P **P 15 49 37.8 +1.3**
comp=Z,21nm,0.9s
JNU Nakatsue 48.10 76 P **P 15 49 39.5 +2.2**
comp=Z,14nm,0.8s,baz=257,slow=5.7,SNR=15
JNU Nakatsue 48.10 76 P **P 15 49 39.5 +2.2**
JNU IAmb IAmb 15 50 22.5
comp=Z,53nm,1.2s
WLF Walferdange 48.11 307 P **P 15 49 38.2 +1.1**
WLF pmax pmax
comp=Z,56nm,1.0s
WLF Walferdange 48.11 307 *eP* **P 15 49 38.8 +1.7**
comp=Z,67nm,1.1s,baz=84,slow=7.9
WLF Walferdange 48.11 307 P **P 15 49 38.8 +1.7**
comp=Z,45nm,1.2s
WLF Walferdange 48.11 307 P **P 15 49 38.2 +1.1**
KBS Kingsbay 48.70 347 P **P 15 49 42.3 +1.1**
KBS pmax pmax
comp=Z,23nm,1.0s
KBS Kingsbay 48.70 347 P **P 15 49 42.3 +1.1**
KBS IAmb IAmb 15 50 19.9
comp=Z,23nm,1.0s
BNI Bardonecchia 48.71 301 P **P 15 49 41.6 -0.4**
BNI pmax pmax
comp=Z,18nm,0.9s
BNI Bardonecchia 48.71 301 P **P 15 49 41.6 -0.4**
BNI IAmb IAmb 15 49 43.6
comp=Z,18nm,0.9s
BMRD Maredsous 48.87 308 P **P 15 49 44.4 +1.5**
comp=Z,20nm,0.9s
DOU Dourbes 49.02 308 P **P 15 49 45.7 +1.6**
comp=Z,18nm,0.0s
DOU pP **pP 15 50 11.0 +2.5**
KMBO Kilima Mbogo 49.22 228 *i* P **P 15 49 47.7 +1.4**
KMBO pmax pmax
comp=Z,6.0nm,0.5s
KMBO Kilima Mbogo 49.22 228 P **P 15 49 47.2 +1.0**
comp=Z,5.8nm,0.5s,baz=34,slow=12,SNR=16
KMBO Kilima Mbogo 49.22 228 *i* P **P 15 49 47.0 +0.7**
SNR=7.1
KMBO Kilima Mbogo 49.22 228 P **P 15 49 47.1 +0.7**
KMBO IAmb IAmb 15 49 49.7
comp=Z,22nm,1.5s
KEST Kesra 49.50 289 P **P 15 49 49.3 +1.2**
comp=Z,3.9nm,0.5s,baz=331,slow=2.9,SNR=16
KEST Kesra 49.50 289 P **P 15 49 49.2 +1.1**
KEST IAmb IAmb 15 51 38.8
comp=Z,41nm,1.7s
KSM Kuching 49.93 125 P **P 15 49 52.7 +1.3**
KSM IAmb IAmb 15 50 56.5
comp=Z,40nm,1.2s
SSB Saint Sauveur 50.12 302 P **P 15 49 53.1 +0.5**
SSB pmax pmax
comp=Z,23nm,0.8s
SSB Saint Sauveur 50.12 302 P **P 15 49 53.1 +0.5**
SSB IAmb IAmb 15 49 54.4
comp=Z,23nm,0.8s
CLF Chambon-Foret 50.96 306 P **P 15 49 58.9 +0.1**
DRUM Mains of Drumt 51.94 318 *eP* **P 15 50 05.8 -0.1**
HPK Haverah Park 52.03 314 *eP* **P 15 50 07.0 +0.4**
HPK IAmb IAmb 15 50 08.4
comp=Z,102nm,1.5s
EDMD Edmundbyers 52.05 315 *eP* **P 15 50 06.7 -0.1**
ESY Stoneypath 52.20 317 *eP* **P 15 50 08.1 +0.2**
LBWR Ladybower, Pea 52.20 313 *eP* **P 15 50 08.2 +0.2**
MCD Coleburn Disti 52.23 319 *eP* **P 15 50 08.5 +0.4**
WOL Wolverton 52.38 311 *eP* **P 15 50 09.7 +0.5**
WOL IAmb IAmb 15 50 10.6
comp=Z,89nm,1.1s
YSS Yuzh-Sakhalins 52.40 55 *eP* **P 15 50 12.6 +3.1**
YSS *e* 15 50 36.8
YSS *e* 15 50 49.9
BIGH Upper Bighouse 52.41 320 *eP* **P 15 50 10.0 +0.6**
EBL Broad Law 52.46 317 *eP* **P 15 50 10.2 +0.4**
MJB9 Matsu-Tunnel 52.47 69 P **P 15 50 11.0 +0.8**
MJB9 IAmb IAmb 15 50 38.3
comp=Z,11nm,0.9s
MAT Matsushiro 52.47 69 P **P 15 50 11.1 +0.9**
MAJO Matsushiro 52.48 69‖ *eP* **P 15 50 11.5 +1.3**
MAJO pmax pmax
comp=Z,8.0nm,0.9s
MAJO Matsushiro 52.48 69 P **P 15 50 11.1 +0.9**
MAJO IAmb IAmb 15 50 38.3
comp=Z,11nm,0.9s
MJAR Matsushiro Arr 52.48 69 P **P 15 50 11.8 +1.5**
comp=Z,5.4nm,0.7s,baz=295,slow=9.6,SNR=10.0
MJAR Matsushiro Arr 52.48 69 IAmb IAmb 15 50 13.4
comp=Z,3.7nm,1.1s
ESK Eskdalemuir 52.65 316 *eP* **P 15 50 11.3 +0.1**
ESK Eskdalemuir 52.65 316 P **P 15 50 11.2 +0.1**
ESK pmax pmax
comp=Z,52nm,1.5s
ESK Eskdalemuir 52.65 316 P **P 15 50 11.2 +0.1**
KESW Keswick, Cumbr 52.74 315 *eP* **P 15 50 12.5 +0.6**
KESW IAmb IAmb 15 50 14.0
comp=Z,103nm,1.5s
MBAR Mbarara 52.93 235 *ceP* **P 15 50 14.1 +0.1**
MBAR pmax pmax
comp=Z,7.0nm,0.8s
MBAR Mbarara 52.93 235 P **P 15 50 13.9 -0.1**
MBAR IAmb IAmb 15 50 14.9
comp=Z,12nm,0.5s
EAB Aberfoyle 53.09 317 *eP* **P 15 50 14.8 +0.4**
ASAJ Asahikawa 53.11 58 P **P 15 50 17.7 +2.9**
comp=Z,16nm,1.1s,baz=239,slow=5.9,SNR=2.6
JKA Kamikawa-asahi 53.12 58 P **P 15 50 17.7 +2.9**
MCH1 Michaelchurch 53.28 312 *eP* **P 15 50 16.2 +0.3**
MCH1 IAmb IAmb 15 50 16.9
comp=Z,61nm,0.8s
KAC Achnashellach 53.33 319 *eP* **P 15 50 16.5 +0.4**
IOMK Kirk Michael 53.65 315 *eP* **P 15 50 19.2 +0.7**
SEY Seymchan 54.12 34 P **P 15 50 23.2 +1.4**
comp=Z,2.4nm,0.9s,baz=245,slow=19,SNR=3.8
DAG Danmarks Havn 54.84 344 *i* P **P 15 50 28.0 +1.1**
DAG pmax pmax
comp=Z,1.0nm,0.4s
DAG Danmarks Havn 54.84 344 *i* P **P 15 50 28.0 +1.1**
comp=Z,1.3nm,0.4s
CCA1 Carnmenellis 55.13 310 *eP* **P 15 50 30.0 +0.7**
CCA1 IAmb IAmb 15 50 30.6
comp=Z,54nm,0.8s
ESBB Sonseca Array 57.89 298 P **P 15 50 49.2 +0.1**
ESBB IAmb IAmb 15 50 50.6
comp=Z,10nm,0.9s
ESDC Sonseca Array 57.89 298 P **P 15 50 49.3 +0.2**
comp=Z,3.6nm,0.5s,baz=57,slow=7.5,SNR=32
ESDC pP **pP 15 51 15.4 +1.3**
comp=Z,1.5nm,0.5s,baz=58,slow=7.6,SNR=3.4
ESDC Sonseca Array 57.89 298 IAmb IAmb 15 50 50.5
comp=Z,3.7nm,0.8s
TAM Tamanrasset 58.03 276 P **P 15 50 50.1 -0.4**
TAM pmax pmax
comp=Z,24nm,1.9s
TAM Tamanrasset 58.03 276 P **P 15 50 50.1 -0.4**
TAM IAmb IAmb 15 50 52.4
comp=Z,24nm,1.9s
PAB San Pablo 58.21 298 P **P 15 50 51.1 -0.4**
PAB pmax pmax
comp=Z,34nm,1.7s
PAB San Pablo 58.21 298 P **P 15 50 51.1 -0.4**
PAB IAmb IAmb 15 51 37.5
comp=Z,34nm,1.6s
BILL Bilibino 58.36 26‖ *eP* **P 15 50 53.5 +1.6**
BILL *i* 15 51 18.7
BILL pmax pmax
comp=Z,2.0nm,1.1s
BILL Bilibino 58.36 26 P **P 15 50 52.4 +0.4**
SKR Severo-Kuril's 59.58 47 *eP* P 15 51 10.4 +10
SKR *e**PP sP 15 51 41.0 +3.7
SKR *eS* S 15 59 22.4 +20
SKR pmax pmax
comp=Z,2μm,4.5s
SKR MLR MLR
comp=Z,1μm,16.0s
SKR MLR MLR
comp=Z,500nm,16.0s
PEA0B Petropavlovsk- 59.60 44 P **P 15 51 00.0 -0.7**
PEA0B Petropavlovsk- 59.60 44 P **P 15 50 60.0 -0.7**
PETK Petropavlovsk- 59.60 44 P **P 15 51 00.2 -0.5**
comp=Z,2.0nm,0.9s,baz=268,slow=7.2,SNR=3.4
ABPO Ambohimpanom 59.86 207 P **P 15 51 03.6 +0.6**
ABPO pmax pmax
comp=Z,15nm,0.7s
ABPO Ambohimpanom 59.86 207 P **P 15 51 03.6 +0.6**
ABPO IAmb IAmb 15 51 04.7
comp=Z,15nm,0.7s
KAPI Kappang 61.04 122 P **P 15 51 11.4 +0.4**
comp=Z,11nm,0.9s,baz=265,slow=19,SNR=3.9
SUMG Summit 61.20 341 *eP* **P 15 51 13.0 +1.2**
SUMG pmax pmax
comp=Z,23nm,0.8s
SUMG Summit 61.20 341 *i* P **P 15 51 13.0 +1.2**
comp=Z,23nm,0.8s
SUMG Summit 61.20 341 P **P 15 51 12.8 +1.0**
SUMG IAmb IAmb 15 51 15.3
comp=Z,15nm,1.0s
LSZ Lusaka 65.84 227 P **P 15 51 40.4 -2.3**
LSZ pmax pmax
comp=Z,11nm,0.8s
LSZ Lusaka 65.84 227 P **P 15 51 40.4 -2.3**
LSZ IAmb IAmb 15 51 43.7
comp=Z,11nm,0.8s
TORD Torodi Ar. Bea 66.22 269 P **P 15 51 42.8 -2.3**
comp=Z,8.6nm,0.5s,baz=49,slow=5.8,SNR=78
MATP Matopo 69.77 223 *i* P **P 15 52 07.0 -0.3**
MATP Matopo 69.77 223 *i* P **P 15 52 07.0 -0.3**
MATP Matopo 69.77 223 *i* P **P 15 52 06.1 -1.2**
INK Inuvik 73.80 9 P **P 15 52 30.5 -0.1**
INK pmax pmax
comp=Z,9.0nm,1.0s
INK Inuvik 73.80 9 P **P 15 52 30.5 -0.1**
C36M Paulatuk 73.80 6 P **P 15 52 29.7 -0.9**
C36M IAmb IAmb 15 52 32.4
comp=Z,14nm,0.4s
COLA College 74.31 16‖ *eP* **P 15 52 35.1 +1.5**
COLA pmax pmax
comp=Z,4.0nm,1.0s
FITZ Fitzroy Crossi 74.50 127 P **P 15 52 35.7 +0.3**
comp=Z,2.1nm,0.6s,baz=290,slow=3.4,SNR=5.1
ILAR Eielson Array 74.61 16 P **P 15 52 34.9 -0.6**
comp=Z,0.6nm,0.4s,baz=324,slow=3.0,SNR=12
LBTB Lobatse 75.04 223 *i* P **P 15 52 38.9 +0.4**
LBTB Lobatse 75.04 223 P **P 15 52 38.3 -0.2**
LBTB pmax pmax
comp=Z,21nm,0.5s
LBTB Lobatse 75.04 223 P **P 15 52 38.3 -0.2**
LBTB IAmb IAmb 15 52 39.2
comp=Z,21nm,0.5s
DBIC Dimbokro 75.20 267 P **P 15 52 37.8 -1.9**
comp=Z,4.1nm,0.5s,baz=29,slow=6.6,SNR=16
DBIC Dimbokro 75.20 267 IAmb IAmb 15 54 33.2
comp=Z,46nm,1.8s
KIC Kosan Boka 75.29 267 *eP* **P 15 52 38.6 -1.6**
comp=Z,11nm,0.4s
KIC Kosan Boka 75.29 267 P **P 15 52 38.6 -1.6**
TIC Toumodi 75.35 267 *eP* **P 15 52 38.4 -2.1**
comp=Z,5.1nm,0.3s
TIC Toumodi 75.35 267 P **P 15 52 38.4 -2.1**
TIC Toumodi 75.35 267 P **P 15 52 38.4 -2.1**
LIC Lamto 75.60 267 *eP* **P 15 52 40.3 -1.6**
comp=Z,19nm,0.4s
LIC Lamto 75.60 267 P **P 15 52 40.3 -1.6**
DAWY Dawson 76.78 13 P **P 15 52 47.9 0.0**
BOSA Boshof 78.09 221 *i* P **P 15 52 55.5 -0.2**
BOSA Boshof 78.09 221 *i* **P 15 52 55.9 +0.2**
baz=21,slow=3.5
BOSA *i* P **P 15 52 55.9 +0.2**
BOSA Boshof 78.09 221 P **P 15 52 54.9 -0.8**
BOSA pmax pmax
comp=Z,14nm,1.0s
BOSA Boshof 78.09 221 P **P 15 52 55.2 -0.5**
comp=Z,5.7nm,0.6s,baz=33,slow=3.9,SNR=11
BOSA Boshof 78.09 221 *i* P **P 15 52 55.7 +0.1**
BOSA Boshof 78.09 221 P **P 15 52 54.9 -0.8**
NWAO Narrogin (SRO) 81.18 143 P **P 15 53 13.5 +1.4**
comp=Z,9.1nm,1.1s,baz=304,slow=7.3,SNR=3.7
NWAO Narrogin (SRO) 81.18 143 IAmb IAmb 15 55 29.4
comp=Z,39nm,1.6s
YKA Yellowknife Ar 81.19 3 P **P 15 53 12.3 +0.4**
comp=Z,1.8nm,0.4s,baz=350,slow=5.4,SNR=51
YKA PKKPbc **PKKPbc 16 11 44.7 -2.2**
comp=Z,0.1nm,0.5s,baz=175,slow=2.5,SNR=5.7
WRA Warramunga Arr 81.58 122 P **P 15 53 14.3 -0.2**
comp=Z,3.5nm,0.5s,baz=324,slow=4.8,SNR=33
WRAB Tennant Creek 81.58 122‖ *eP* **P 15 53 14.5 -0.1**
WRAB pmax pmax
comp=Z,7.0nm,0.9s
SCHQ Schefferville 82.27 337 P **P 15 53 17.9 +0.1**
comp=Z,4.9nm,0.7s,baz=27,slow=5.1,SNR=7.6
AS31 Alice Springs 83.86 125 P **P 15 53 25.4 -0.9**
ASAR Alice Springs 83.86 125 P **P 15 53 26.0 -0.3**
ASAR Alice Springs 83.86 125 P **P 15 53 25.9 -0.3**
comp=Z,4.6nm,0.7s,baz=310,slow=4.9,SNR=118
FFC Flin Flon 88.95 356 P **P 15 53 50.8 0.0**
FFC pmax pmax
comp=Z,4.0nm,0.9s
FFC Flin Flon 88.95 356 P **P 15 53 50.8 0.0**
CTA Charters Tower 90.10 115 P **P 15 53 56.4 -0.2**
comp=Z,7.3nm,0.6s,baz=301,slow=4.0,SNR=14
VLDQ Val d'Or 91.33 340 P **P 15 54 01.9 -0.1**
VLDQ IAmb IAmb 15 54 31.1
comp=Z,31nm,1.6s
ULM Lac du Bonnet 92.89 352 P **P 15 54 09.1 -0.1**
comp=Z,1.4nm,0.5s,baz=344,slow=5.9,SNR=4.3
STKA Stephens Creek 94.40 127 P **P 15 54 14.8 -1.4**
comp=Z,0.8nm,0.5s,baz=350,slow=7.9,SNR=3.9
PDAR Pinedale Array 101.08 1 P **Pdif 15 54 48.4 +1.8**
comp=Z,0.2nm,0.5s,baz=15,slow=3.7,SNR=2.6
TXAR Lajitas Array 114.34 355 PKP **PKiKP 15 59 35.7 -0.4**
comp=Z,0.2nm,0.6s,baz=270,slow=0.2,SNR=2.8
VNDA Vanda 125.39 165 PKP **PKPdf 15 59 54.2 -1.3**
comp=Z,1.2nm,0.8s,baz=86,slow=1.7,SNR=4.3
QSPA South Pole Qui 126.32 180 PKP **PKPdf 15 59 56.2 -1.5**
comp=Z,3.2nm,0.8s,baz=301,slow=1.4,SNR=12
CPUP Villa Florida 135.72 268 PKP **PKPdf 16 00 14.6 -2.0**
comp=Z,1.0nm,0.5s,baz=21,slow=0.6,SNR=4.3
GO02 Mina Guanaco 145.04 278 **PKPbc 16 00 31.9 -1.5**
GO03 Copiap 146.65 274 PKPbc **PKPbc 16 00 37.9 -0.1**
PLCA Paso Flores 150.31 250 PKiKP **PKPbc 16 00 46.0 -1.1**
PLCA Paso Flores 150.31 250 PKPbc **PKPbc 16 00 46.0 -1.1**
comp=Z,3.1nm,0.8s,baz=158,slow=3.2,SNR=7.5
GO06 Curarrehue 150.91 253 **PKPbc 16 00 47.2 -1.4**

JMA ***14*** *15:41:45.5±0.1, 30.44N×140.79E, h171km±2km, M3.8*
IDC ***14*** *15:41:46.5±1.9, 30.43N×140.65E, h151km±30km, mb3.1/2, mb1 3.3/7, mb1mx3.1/62, mbtmp3.8/7, Error ellipse: s-maj=97.9km s-min=15.8km az=78.0*
NEIC ***14*** *15:41:46.1±3.0, 30.30N±0.07×140.5E±0.1, h141km±6km, mb4.9/5, Error ellipse: s-maj=18.9km s-min=9.2km az=74.0*

ISC 14 15:41:45.3±0.7, **30.37N**±0.05×**140.64E**±0.10, **h150**km, **n39**, σ1§**95**/42, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.79**	**345**	S		**Sn**		**15 43 05.3**	**+0.7**
JHJ2	**Mitsune**	**2.82**	**346**	Pn		**Pn**		**15 42 33.0**	**+2.6**
CBIJ	**Chichi jima**	**3.53**	**157**	P		**Pn**		**15 42 40.8**	**+1.3**
JCJ	**Chichijima**	**3.53**	**157**	P		**Pn**		**15 42 41.0**	**+1.4**
	18nm,0.3s,baz=93,slow=22,SNR=17								
JCJ				S		**Sn**		**15 43 20.9**	**-0.6**
	11nm,0.3s,baz=270,slow=20,SNR=5.7								
JMKN	**Mikurajimanish**	**3.62**	**346**	P		**Pn**		**15 42 41.6**	**+0.9**
JMKN				*eS*		**Sn**		**15 43 23.9**	**+0.2**
BSO1	**Boso 1**	**4.28**	**4**	P		**Pn**		**15 42 49.5**	**+0.8**
BSO3	**Boso 3**	**4.42**	**359**	S		**Sn**		**15 43 40.3**	**-1.6**
JOD2	**Odawara 2**	**5.05**	**345**	P		**Pn**		**15 43 00.7**	**+1.3**
JIE	**Ise**	**5.21**	**321**	P		**Pn**		**15 43 03.1**	**+1.6**
JNY	**Yasuok**	**5.50**	**336**	P		**Pn**		**15 43 07.3**	**+1.9**
JHU	**Hanno**	**5.59**	**349**	P		**Pn**		**15 43 07.4**	**+0.9**
JHU				S		**Sn**		**15 44 07.9**	**-2.0**
JAU	**Obara**	**5.65**	**331**	P		**Pn**		**15 43 09.4**	**+1.9**
JRY	**Ryogami san**	**5.82**	**346**	P		**Pn**		**15 43 10.9**	**+1.3**
INU	**Inuyama**	**5.83**	**329**			Pn		15 42 59.5	-10
JYT	**Yasato**	**5.86**	**356**	P		**Pn**		**15 43 10.1**	**+0.1**
JAG	**Ashikaga**	**6.12**	**351**	P		**Pn**		**15 43 13.4**	**-0.2**
JHO	**Hitachi**	**6.23**	**359**	P		**Pn**		**15 43 15.1**	**+0.1**
JHO				S		**Sn**		**15 44 20.4**	**-4.8**
MJAR	**Matsushiro Arr**	**6.48**	**342**	P		**Pn**		**15 43 19.4**	**+1.0**
	0.2nm,0.3s,baz=151,slow=10,SNR=13								
MJAR	**Matsushiro Arr**	**6.48**	**342**	Pn		**Pn**		**15 43 18.9**	**+0.4**
MAJO	**Matsushiro**	**6.49**	**342**	Pn		**Pn**		**15 43 19.7**	**+1.3**
MJB9	**Matsu-Tunnel**	**6.49**	**342**	Pn		**Pn**		**15 43 19.8**	**+1.3**
JFK	**Kawauchi**	**6.98**	**2**	P		**Pn**		**15 43 24.5**	**-0.6**
JMK	**Ichinoseki**	**8.58**	**3**	P		**Pn**		**15 43 46.4**	**+0.1**
JMK				S		**Sn**		**15 45 16.1**	**-5.5**
JNU	**Nakatsue**	**8.75**	**291**	Pn		**Pn**		**15 43 48.4**	**-0.4**
KSAR	**Wonju Array Be**	**12.72**	**307**	Pn		**Pn**		**15 44 36.4**	**-4.5**
KS19	**Wonju Array Si**	**12.76**	**307**	Pn		**Pn**		15 44 36.7	-4.7
JKA	**Kamikawa-asahi**	**13.81**	**6**			**Pn**		**15 44 54.8**	**+0.1**
ASAJ	**Asahikawa**	**13.81**	**6**	P		**Pn**		**15 44 54.8**	**+0.1**
	0.5nm,0.3s,baz=209,slow=21,SNR=9.9								
SARN	**Sarigan**	**14.39**	**160**	Pn		**Pn**		**15 44 59.7**	**-2.6**
USRK	**Ussuriysk Ar.**	**15.41**	**336**	P		**Pn**		**15 45 13.8**	**-0.9**
	baz=160,slow=11,SNR=4.7								
USRK	**Ussuriysk Ar.**	**15.41**	**336**	P		**Pn**		**15 45 15.2**	**+0.5**
TPUB	**Ta-pu**	**19.18**	**253**	P		**Pn**		**15 45 58.7**	**-1.3**
TPUB				IAmb	IAmb			15 46 22.4	
	comp=Z,146nm,1.7s								
KLR	**Kul'dur**	**20.01**	**343**	P		**P**		**15 46 06.9**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=159,slow=12,SNR=5.6								
SLVN	**Son La**	**34.14**	**264**	P		**P**		**15 48 16.1**	**-0.1**
SLVN				IAmb	IAmb			15 48 39.5	
	comp=Z,28nm,1.7s								
BKB	**Balikpapan**	**38.74**	**220**	P		**P**		**15 48 55.7**	**+0.5**
WRA	**Warramunga Arr**	**50.39**	**188**	P		**P**		**15 50 28.5**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=4.5,slow=7.5,SNR=5.7								
WRA	**Warramunga Arr**	**50.39**	**188**	P		**P**		**15 50 28.6**	**+1.2**
OHAK	**Old Harbor**	**52.21**	**39**	P		**P**		**15 50 44.9**	**+4.4**
ASAR	**Alice Springs**	**54.11**	**188**	P		**P**		**15 50 56.4**	**+1.6**
	comp=Z,0.5nm,0.9s,baz=2.3,slow=5.1,SNR=9.5								

DDA ***14*** *15:43:58.0, 42.37N×24.08E, h41km±146km, ML3.2*
SOF ***14*** *15:44:01.5, 41.91N×24.53E, h17km, MD3.1*
ISK ***14*** *15:44:02.9, 41.89N×24.60E, h5km, ML3.4/13*
THE ***14*** *15:44:02.3, 41.91N×24.55E, h3km±2km, ML3.4/5, Error ellipse: s-maj=2.2km s-min=1.1km az=185.0*
ATH ***14*** *15:44:02.7, 41.84N×24.57E, h26km±1km, ML3.2/10, Error ellipse: s-maj=2.9km s-min=1.2km az=185.0*
BEO ***14*** *15:44:05.0±0.5, 42.02N×24.42E, h0km, ML3.2/15*

ISC 14 15:44:02.2±0.9, **41.91N**±0.02×**24.55E**±0.01, **h14**km±7km, **n108**, σ1§**31**/149, **19C-5D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.23**	**30**	P		**Pg**		**15 44 07.8**	**+0.6**
PLD	**Plovdiv**	**0.23**	**30**	PG		**Pg**		**15 44 07.9**	**+0.7**
PLD				SG		**Sb**		**15 44 11.8**	**-0.3**
RZN	**Rozhen**	**0.25**	**150**	P		**Pg**		**15 44 07.8**	**+0.1**
MMB	**Musomiste**	**0.69**	**243**	P		**Pg**		**15 44 15.2**	**-0.5**
KDZ	**Kurdzhali**	**0.70**	**111**	P		**Pg**		**15 44 14.8**	**-1.0**
KDZ	**Kurdzhali**	**0.70**	**111**	PG		**Pg**		**15 44 14.9**	**-0.9**
KDZ				SG		**Sg**		**15 44 23.7**	**-1.3**
DIM	**Dimitrovgrad**	**0.75**	**79**	P		**Pb**		**15 44 17.4**	**+0.4**
NVR	**Nevrokopi**	**0.76**	**223**	P		**Pg**		**15 44 17.2**	**+0.2**
NVR				S		**Sb**		**15 44 27.8**	**+0.3**
	1μm,0.2s								
NVR	**Nevrokopi**	**0.76**	**223**	P		**Pb**		**15 44 17.4**	**+0.1**
NVR				S		**Sg**		**15 44 27.0**	**0.0**
NVR				AML	AML			15 44 29.7	
	comp=E,2291μm,0.2s								
NVR				AML	AML			15 44 31.2	
	comp=N,1888μm,0.1s								
KAVA	**Kavala**	**0.91**	**182**	P		**Pb**		**15 44 19.7**	**-0.1**
KAVA				S		**Sg**		**15 44 32.6**	**+0.9**
	comp=N,3μm,0.6s								
KAVA	**Kavala**	**0.91**	**182**	P		**Pb**		**15 44 19.6**	**-0.2**
KAVA				S		**Sb**		**15 44 31.1**	**-0.7**
KAVA				AML	AML			15 44 35.8	
	comp=E,4805μm,0.4s								
KAVA				AML	AML			15 44 36.5	
	comp=N,5526μm,0.5s								
KVLA	**Kavala**	**0.98**	**187**	P		**Pb**		**15 44 20.8**	**-0.1**
KVLA				S		**Sb**		**15 44 33.5**	**-0.3**
RDO	**Rodhopi**	**1.06**	**135**	P		**Pn**		**15 44 22.7**	**0.0**
RDO				S		**Sg**		**15 44 36.8**	**+0.2**
	comp=N,2μm,0.2s								
RDO	**Rodhopi**	**1.06**	**135**	P		**Pb**		**15 44 22.3**	**-0.1**
RDO				S		**Sb**		**15 44 35.7**	**-0.4**
RDO				AML	AML			15 44 40.6	

	comp=E,3054µm,0.2s							
RDO					AML	AML	15 44 40.7	
	comp=N,3108µm,0.2s							
RDO	**Rodhopi**	**1.06**	**135**	PG	**Pg**	**15 44 23.2**	**+0.5**	
RDO				SG	**Sn**	**15 44 37.3**	**0.0**	
SRS	**Serrai**	**1.07**	**223**	P	**Pb**	**15 44 22.5**	**0.0**	
SRS				S	**Sn**	**15 44 37.5**	**0.0**	
	comp=N,2µm,0.5s							
SRS	**Serrai**	**1.07**	**223**	P	**Pb**	**15 44 22.6**	**0.0**	
SRS				S	**Sn**	**15 44 37.4**	**-0.1**	
SRS				AML	AML	15 44 40.4		
	comp=E,6761µm,0.6s							
SRS				AML	AML	15 44 44.6		
	comp=N,2566µm,0.3s							
VTS	**Vitosha**	**1.21**	**306**	P	**Pn**	**15 44 24.0**	**-0.9**	
VTS	**Vitosha**	**1.21**	**306**	*e*Pg	**Pn**	**15 44 23.9**	**-0.9**	
VTS				*e*Sg	**Sb**	**15 44 40.2**	**-0.3**	
VTS	**Vitosha**	**1.21**	**306**	⇓P	**Pn**	**15 44 24.0**	**-0.9**	
VTS	**Vitosha**	**1.21**	**306**	⇑S	**Sb**	**15 44 39.3**	**-1.2**	
VTS	**Vitosha**	**1.21**	**306**	P	**Pn**	**15 44 23.7**	**-1.1**	
THAS	**Thassos island**	**1.31**	**174**	P	**Pb**	**15 44 26.4**	**-0.1**	
THAS	**Thassos island**	**1.31**	**174**	P	**Pb**	**15 44 26.5**	**-0.1**	
THAS				S	**Sn**	**15 44 43.3**	**0.0**	
THAS				AML	AML	15 44 46.7		
	comp=E,1122µm,0.3s							
THAS				AML	AML	15 44 47.8		
	comp=N,1174µm,0.3s							
SOH	**Sokhos**	**1.41**	**220**	P	**Pn**	**15 44 27.9**	**+0.4**	
SOH				S	**Sg**	**15 44 47.8**	**+0.1**	
	comp=N,1µm,0.6s							
SOH	**Sokhos**	**1.41**	**220**	P	**Pb**	**15 44 28.0**	**-0.3**	
SOH				S	**Sb**	**15 44 46.4**	**+0.1**	
ELND	**Elena**	**1.42**	**43**	⇑P	**Pn**	**15 44 28.0**	**+0.4**	
KNT	**Kendrikon**	**1.45**	**239**	P	**Pn**	**15 44 28.4**	**+0.4**	
KNT	**Kendrikon**	**1.45**	**239**	P	**Pb**	**15 44 28.8**	**-0.1**	
KNT				S	**Sg**	**15 44 48.3**	**-0.5**	
KNT				AML	AML	15 44 50.3		
	comp=E,1528µm,0.3s							
KNT				AML	AML	15 44 50.4		
	comp=N,1363µm,0.6s							
KNT	**Kendrikon**	**1.45**	**239**	PN	**Pg**	**15 44 30.2**	**+0.2**	
PLVB	**Pleven**	**1.48**	**2**	⇓P	**Pn**	**15 44 28.8**	**+0.4**	
PLVB	**Pleven**	**1.48**	**2**	⇑S	**Sn**	**15 44 45.0**	**-2.6**	
ALN	**Alexandroupoli**	**1.51**	**131**	P	**Pb**	**15 44 30.1**	**+0.1**	
ALN	**Alexandroupoli**	**1.51**	**131**	P	**Pb**	**15 44 29.8**	**-0.3**	
ALN				S	**Sn**	**15 44 48.2**	**-0.2**	
ALN				AML	AML	15 44 53.1		
	comp=E,1016µm,0.9s							
ALN				AML	AML	15 44 54.5		
	comp=N,966µm,0.8s							
ALN	**Alexandroupoli**	**1.51**	**131**	PN	**Pb**	**15 44 30.8**	**+0.8**	
ALN				SN	**Sg**	**15 44 51.4**	**+0.5**	
VAY	**Valandovo**	**1.60**	**249**	*e*Pg	**Pg**	**15 44 32.6**	**-0.2**	
VAY				*e*Sg	**Sg**	**15 44 53.6**	**0.0**	
VAY	**Valandovo**	**1.60**	**249**	*i* Pn	**Pb**	**15 44 31.8**	**+0.3**	
SMTH	**Samothraki Isl**	**1.62**	**152**	P	**Pn**	**15 44 30.4**	**+0.1**	
SMTH	**Samothraki Isl**	**1.62**	**152**	P	**Pb**	**15 44 31.2**	**-0.7**	
SMTH				S	**Sb**	**15 44 52.4**	**+0.3**	
SMTH				AML	AML	15 44 55.8		
	comp=N,962µm,0.9s							
SMTH				AML	AML	15 44 56.7		
	comp=E,615µm,0.5s							
OUR	**Ouranopolis**	**1.63**	**195**	P	**Pn**	**15 44 30.6**	**+0.1**	
OUR	**Ouranopolis**	**1.63**	**195**	P	**Pn**	**15 44 30.6**	**+0.1**	
OUR				S	**Sb**	**15 44 52.3**	**-0.1**	
OUR				AML	AML	15 44 57.0		
	comp=E,1542µm,0.5s							
OUR				AML	AML	15 44 57.5		
	comp=N,2179µm,0.6s							
OUR	**Ouranopolis**	**1.63**	**195**	PN	**Pb**	**15 44 32.4**	**+0.4**	
EDRB	**Edirne**	**1.64**	**91**	P	**Pn**	**15 44 31.1**	**+0.5**	
EDRB	**Edirne**	**1.64**	**91**	PN	**Pb**	**15 44 32.6**	**+0.4**	
BOSS	**Bosilegrad**	**1.65**	**292**	*e*Pg	**Pb**	**15 44 32.6**	**+0.3**	
BOSS				*e*Sg	**Sg**	**15 44 54.7**	**-0.5**	
ENEZ	**Enez**	**1.68**	**134**	PN	**Pb**	**15 44 33.7**	**+0.8**	
SZH	**Strazhica**	**1.70**	**37**	P	**Pn**	**15 44 32.2**	**+0.7**	
HORT	**Hortiatis**	**1.71**	**220**	P	**Pn**	**15 44 31.8**	**+0.2**	
HORT	**Hortiatis**	**1.71**	**220**	P	**Pn**	**15 44 32.2**	**+0.6**	
HORT	**Hortiatis**	**1.71**	**220**	PN	**Pb**	**15 44 34.3**	**+0.9**	
PLG	**Polygyros**	**1.75**	**209**	P	**Pn**	**15 44 32.6**	**+0.5**	
PLG	**Polygyros**	**1.75**	**209**	P	**Pn**	**15 44 32.4**	**+0.3**	
PLG				S	**Sb**	**15 44 56.0**	**+0.1**	
PLG				AML	AML	15 45 00.4		
	comp=E,1192µm,0.8s							
PLG				AML	AML	15 45 03.4		
	comp=N,1335µm,0.9s							
UKOP	**Ujunkopru-Edir**	**1.75**	**116**	PN	**Pb**	**15 44 34.4**	**+0.4**	
STIP	**Stip**	**1.78**	**264**	*i* Pn	**Pn**	**15 44 30.3**	**-2.2**	
GRG	**Griva**	**1.87**	**240**	P	**Pb**	**15 44 36.6**	**+0.4**	
GRG	**Griva**	**1.87**	**240**	PN	**Pb**	**15 44 37.0**	**+0.8**	
KIRK	**Kırklareli**	**1.91**	**93**	*i* P	**Pn**	**15 44 34.3**	**-0.1**	
KIRK				*i* S	**Sb**	**15 45 01.1**	**+0.6**	
KIRK				IAML		15 45 07.0		
	comp=N,113nm,0.6s							
ERIK	**Erikli-Kesan**	**1.93**	**129**	PN	**Pb**	**15 44 36.9**	**-0.2**	
KESN	**Edirne-Kesan**	**1.94**	**123**	*i* P	**Pb**	**15 44 38.6**	**+1.1**	
KESN				*i* S	**Sb**	**15 45 03.0**	**+1.4**	
ZAPS	**Zavoj**	**1.96**	**315**	*e*Pn	**Pb**	**15 44 36.6**	**-1.2**	
ZAPS				*e*Sg	**Sb**	**15 45 02.8**	**+0.6**	
GADA	**Gvkgeada**	**2.00**	**149**	P	**Pn**	**15 44 36.7**	**+1.2**	
GADA	**Gvkgeada**	**2.00**	**149**	PN	**Pb**	**15 44 37.7**	**-0.6**	
PAIG	**Paliouri**	**2.09**	**199**	P	**Pn**	**15 44 36.7**	**-0.1**	
PAIG	**Paliouri**	**2.09**	**199**	P	**Pn**	**15 44 36.6**	**-0.1**	
VLAD	**Vladila**	**2.09**	**357**	⇑P	**Pn**	**15 44 37.7**	**+0.9**	
VLAD	**Vladila**	**2.09**	**357**	⇑S	**Sn**	**15 45 01.9**	**-0.7**	
GELI	**Tayfur-Gelibol**	**2.10**	**135**	PN	**Pb**	**15 44 39.6**	**-0.4**	
RAZG	**Razgrad**	**2.20**	**40**	⇑P	**Pn**	**15 44 40.0**	**+1.6**	
BARS	**Barje**	**2.22**	**295**	*e*Pn	**Pb**	**15 44 41.1**	**-1.0**	
BARS	**Barje**	**2.22**	**295**	*e*Pn	Pg	15 44 50.5	+5.7	
BARS				*e*Sg	**Sb**	**15 45 10.7**	**+1.2**	
BARS				*e*Sg	Sg	15 45 30.8	+17	
LPK	**Lapseki**	**2.27**	**132**	PN	**Pb**	**15 44 41.5**	**-1.4**	
COPA	**Copaceanca**	**2.28**	**12**	⇑P	**Pn**	**15 44 41.0**	**+1.6**	
SKO	**Skopje**	**2.32**	**273**	*e*Pn	**Pg**	**15 44 48.8**	**+2.1**	
RKY	**Sarkoy-Tekirda**	**2.33**	**121**	PN	**Pb**	**15 44 43.1**	**-0.9**	
SART	**Tekirdag**	**2.33**	**121**	*i* P	**Pg**	**15 44 46.6**	**-0.2**	
SART				*i* S	**Sg**	**15 45 15.3**	**-1.7**	
BOZC	**Bozcaada**	**2.36**	**151**	PN	**Pb**	**15 44 43.2**	**-1.3**	
BOZC	**Bozcaada**	**2.36**	**151**	*i* P	**Pn**	**15 44 41.5**	**+1.0**	
BOZC				*i* S	**Sg**	**15 45 17.3**	**-0.7**	
BOZC				IAML		15 45 20.0		
	comp=N,133nm,0.7s							
BOZC				IAML		15 45 20.0		
	comp=E,122nm,0.7s							
EZN	**Ezine**	**2.48**	**147**	PN	**Pb**	**15 44 44.9**	**-1.6**	
SGRR	**Singureni**	**2.54**	**24**	⇑P	**Pn**	**15 44 44.5**	**+1.5**	
ZAGS	**Zajecar**	**2.55**	**319**	*e*Pn	**Pb**	**15 44 46.3**	**-1.5**	
ZAGS				*e*Sg	**Sb**	**15 45 20.7**	**+1.6**	
KRBG	**Karabiga-Canak**	**2.57**	**125**	PN	**Pb**	**15 44 46.4**	**-1.7**	
HUMR	**Humele**	**2.64**	**7**	⇑P	**Pn**	**15 44 45.4**	**+1.0**	
MRMT	**Marmara Adasi**	**2.64**	**119**	PN	**Pb**	**15 44 47.0**	**-2.3**	
BAYC	**CANAKKALE_Bayr**	**2.64**	**144**	*i* P	**Pn**	**15 44 45.6**	**+1.2**	
BAYC				*i* S	**Sn**	**15 45 15.4**	**-0.9**	
BAYC				IAML		15 45 29.0		
	comp=N,92nm,0.6s							
BAYC				IAML		15 45 29.0		
	comp=E,50nm,0.8s							
BOVS	**Bovan**	**2.71**	**310**	*e*Pn	**Pb**	**15 44 48.7**	**-1.8**	
BOVS				*e*Sg	**Sb**	**15 45 26.6**	**+2.9**	
KNL	**Balıkesir**	**2.78**	**125**	*i* P	**Pb**	**15 44 53.7**	**+2.0**	
KNL				*i* S	**Sg**	**15 45 30.6**	**-0.9**	
SELS	**Selova**	**2.85**	**298**	*e*Pn	**Pn**	**15 44 48.6**	**+1.2**	
SELS				*e*Sg	**Sb**	**15 45 30.4**	**+2.7**	
BALY	**Balya**	**3.18**	**132**	*i* P	**Pb**	**15 44 56.1**	**-2.5**	
BALY				*i* S	**Sg**	**15 45 42.8**	**-1.5**	
BALY				IAML		15 45 45.0		
	comp=N,45nm,1.0s							
BALY				IAML		15 45 53.0		
	comp=E,47nm,0.6s							
KUBS	**Kucevo**	**3.27**	**321**	*e*Pn	**Pn**	**15 44 54.0**	**+0.9**	
KUBS				*e*Sg	**Sb**	**15 45 43.4**	**+3.7**	
MTUR	**Matau**	**3.34**	**6**	⇑P	**Pn**	**15 44 56.0**	**+1.9**	
GRUS	**Gruza**	**3.44**	**306**	*e*Pn	**Pb**	**15 44 59.6**	**-3.3**	
GRUS				*e*Sg	**Sb**	**15 45 48.5**	**+3.9**	
ARR	**Arges**	**3.46**	**1**	⇑P	**Pn**	**15 44 56.0**	**+0.3**	
ISR	**Istrita**	**3.52**	**24**	⇑P	**Pn**	**15 44 58.5**	**+2.0**	
MDVR	**Moldovita**	**3.54**	**325**	⇓P	**Pn**	**15 44 58.3**	**+1.5**	
VOIR		**3.55**	**6**	⇓P	**Pn**	**15 44 58.0**	**+1.1**	
SJES	**Sjenica**	**3.64**	**293**	*e*Pn	**Pn**	**15 45 01.5**	**+3.3**	
SJES				*e*Sg	**Sg**	**15 45 56.8**	**-2.3**	
IVAS	**Ivanjica**	**3.64**	**299**	*e*Pn	**Pn**	**15 45 01.3**	**+3.1**	
IVAS				*e*Sg	**Sg**	**15 45 55.5**	**-3.6**	
GZR	**Gura Zlata**	**3.71**	**340**	⇑P	**Pn**	**15 44 59.4**	**+0.1**	
HARR	**Harsova**	**3.72**	**40**	⇑P	**Pn**	**15 45 01.1**	**+1.9**	
MLR	**Muntele Rosu**	**3.72**	**15**	⇑P	**Pn**	**15 45 00.4**	**+1.0**	
TIRR	**Tirgusor**	**3.80**	**47**	⇑P	**Pn**	**15 45 03.0**	**+2.7**	
TRUS	**Trudelj**	**3.82**	**309**	*e*Pn	**Pn**	**15 45 01.1**	**+0.5**	
TRUS				*e*Sg	**Sg**	**15 46 02.6**	**-2.1**	
DIVS	**Divibare**	**4.00**	**305**	*e*Pn	**Pn**	**15 45 05.5**	**+2.4**	
DOPR	**Dopca**	**4.10**	**8**	⇑P	**Pn**	**15 45 05.9**	**+1.4**	
PLOR	**Plostina**	**4.22**	**20**	⇓P	**Pn**	**15 45 08.2**	**+2.0**	
BBLS	**Lazići**	**4.26**	**299**	*e*Pn	**Pn**	**15 45 08.7**	**+2.0**	
BBLS				*e*Sg	**Sg**	**15 46 15.8**	**-3.0**	
BZS	**Buzias**	**4.27**	**331**	⇑P	**Pn**	**15 45 07.1**	**+0.3**	
OZUR		**4.28**	**12**	⇑P	**Pn**	**15 45 08.8**	**+1.8**	

*IDC **14** 15:51:00.7±1.3,20°.79N×146°.78E, h0km, mb3.9/9, mb1 3.9/9, mb1mx3.6/50, mbtmp3.9/9, MS2.9/1, Ms1 2.9/1, ms1mx2.4/43, Error ellipse: s-maj=51.8km s-min=22.2km az=82.0*
*NEIC **14** 15:51:02.0±1.1, 20°.8N±0°.2×146°.9E±0°.2, h12km±5km, mb4.6/4, Error ellipse: s-maj=31.3km s-min=22.2km az=85.0*
ISC 14 15:51:06.3±0.9,**20°.8N**±0°.2×**146°.8E**±0°.3,**h40**km,**n13,** σ0.9**67**/13,**mb4.2**/10,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**7.38**	**195**	LR		LR	LR	15 54 54.4	
	comp=Z,88nm,20.7s,baz=120,slow=32								
WRA	**Warramunga Arr**	**42.27**	**198**	P		**P**		**15 58 55.3**	**-0.7**
	1.3nm,0.9s,baz=17,slow=8.6,SNR=1.6								
ASAR	**Alice Springs**	**45.93**	**197**	P		**P**		**15 59 25.3**	**-0.1**
	0.2nm,0.6s,baz=11,slow=10,SNR=1.5								
ASAR				PcP		**PcP**		**16 01 03.4**	**+1.5**
	0.6nm,1.0s,baz=24,slow=3.4,SNR=3.7								
ZALV	**Zalesovo Beam**	**57.03**	**322**	P		**P**		**16 00 47.8**	**-0.2**
	1.0nm,0.4s,baz=96,slow=6.4,SNR=7.1								
MKAR	**Makanchi Array**	**57.80**	**313**	P		**P**		**16 00 53.7**	**0.0**
	0.5nm,0.8s,baz=101,slow=6.4,SNR=4.9								
KURK	**Kurchatov**	**60.45**	**317**	P		**P**		**16 01 11.8**	**0.0**
KURK				IAmb		IAmb		16 01 12.7	
	comp=Z,2.4nm,0.8s								
KURBB	**Kurchatov Arra**	**60.50**	**317**	P		**P**		**16 01 12.3**	**+0.2**
	comp=Z,1.8nm,0.7s,baz=92,slow=7.6,SNR=24								
BVAR	**Borovoye Array**	**65.56**	**320**	P		**P**		**16 01 46.3**	**+0.6**
	comp=Z,2.6nm,0.6s,baz=90,slow=7.3,SNR=25								
ARU	**Arti**	**72.00**	**324**	P		**P**		**16 02 26.1**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=129,slow=6.5,SNR=6.0								
ARU	**Arti**	**72.00**	**324**	P		**P**		**16 02 25.2**	**-0.5**
ARU				IAmb		IAmb		16 04 57.4	
	comp=Z,17nm,1.8s								
YKA	**Yellowknife Ar**	**75.67**	**28**	P		**P**		**16 02 47.7**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=290,slow=6.1,SNR=2.9								
FINES	**FINESS Array B**	**85.44**	**336**	P		**P**		**16 03 39.1**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=64,slow=5.7,SNR=9.7								
P17A	**Butcher Ranch,**	**86.15**	**49**	P		**P**		**16 03 43.0**	**-0.7**

*SOME **14** 15:54:02.9, 43°.10N×78°.20E, h10km*
*NNC **14** 15:54:03.1±0.7, 43°.14N×78°.32E, h9km±7km, mb2.6, mpv2.3, Error ellipse: s-maj=9.8km s-min=6.1km az=135.0*
ISC 14 15:54:02.9±1.1,**43°.14N**±0°.07×**78°.24E**±0°.05,**h11**km±8km, **n9,** σ0.9**51**/18,**6C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.14**	**123**	*i*P		**Pg**		**15 54 06.3**	**-0.1**
	9.3nm,0.1s								
SATY				⇓*i*S		**Sg**		**15 54 09.2**	**+0.3**
	133nm,0.2s								
SATY	**Saty**	**0.14**	**123**	P		**Pg**		**15 54 06.3**	**-0.1**
	9.3nm,0.1s								
SATY				S		**Sg**		**15 54 09.2**	**+0.3**
	133nm,0.2s								
ZHN	**Zhinishke**	**0.14**	**78**	⇑*e*P		**Pg**		**15 54 06.3**	**-0.2**
	5.2nm,0.1s								
ZHN				*e*S		**Sg**		**15 54 08.7**	**-0.2**
	8.6nm,0.1s								
KPKS	**Kokpek**	**0.46**	**44**	⇓*e*P		**Pg**		**15 54 12.1**	**+0.1**
	1.9nm,0.1s								
KPKS				⇑*e*S		**Sg**		**15 54 18.7**	**+0.5**
	3.5nm,0.2s								
UZB	**Uzynbulak**	**0.57**	**89**	⇓*e*P		**Pg**		**15 54 14.2**	**+0.1**
	0.6nm,0.1s								
UZB				⇑*e*S		**Sg**		**15 54 22.1**	**+0.4**
	3.2nm,0.1s								
UZB	**Uzynbulak**	**0.57**	**89**	P		**Pg**		**15 54 14.2**	**+0.1**
	0.6nm,0.1s								
UZB				S		**Sg**		**15 54 22.1**	**+0.4**
	3.2nm,0.1s								
PDGK	**Podgornoye**	**0.93**	**78**	P		**Pg**		**15 54 21.0**	**+0.1**
	0.2nm,0.1s								
PDGK				S		**Sb**		**15 54 34.0**	**+0.4**
	0.5nm,0.2s								
PDGK	**Podgornoye**	**0.93**	**78**	⇑P		**Pg**		**15 54 19.4**	**-1.5**
	46nm,5.4s								
PDGK				⇓S		**Sb**		**15 54 33.3**	**-0.2**
	163nm,5.1s								
TKM2	**Tokmak 2**	**1.95**	**265**	⇓P		**Pb**		**15 54 38.4**	**-0.2**
	2.3nm,1.1s								
TKM2				⇑S		**Sb**		**15 55 03.4**	**+0.3**
	2.6nm,1.1s								

*NEIC **14** 15:58:44.0±0.6, 19°.08N±0°.05×66°.64W±0°.02, h26km±12km, Error ellipse: s-maj=8.0km s-min=1.9km az=170.0*
*RSPR **14** 15:58:45.5, 19°.12N×66°.65W, h40km±2km, MD2.9/6*
ISC 14 15:58:44.5±1.7,**19°.04N**±0°.07×**66°.63W**±0°.03,**h24**km±14km, **n50,** σ0.9**40**/69,**5C-16D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.57**	**171**	⇑*e*P		**Pn**		**15 58 57.2**	**0.0**
EMPR	**Esperanza - Ma**	**0.57**	**171**	*e*S		**Sn**		**15 59 06.4**	**+0.6**
EMPR	**Esperanza - Ma**	**0.57**	**171**			**Pn**		**15 58 57.2**	**0.0**
EMPR						**Sn**		**15 59 06.4**	**+0.6**
AOPR	**Arecibo Observ**	**0.70**	**190**	⇓*e*P		**Pn**		**15 58 58.7**	**-0.3**
AOPR				*e*S		**Sn**		**15 59 09.4**	**+0.3**
AOPR	**Arecibo Observ**	**0.70**	**190**	⇑*e*P		**Pn**		**15 58 58.8**	**-0.3**
AOPR	**Arecibo Observ**	**0.70**	**190**			**Pn**		**15 58 58.8**	**-0.3**
AOPR						**Sn**		**15 59 09.1**	**0.0**
AGPR	**Aguadilla, PR**	**0.73**	**219**	⇓*e*P		**Pb**		**15 58 58.2**	**-0.5**
AGPR	**Aguadilla, PR**	**0.73**	**219**	*e*S		**Sb**		**15 59 08.3**	**0.0**
AGPR	**Aguadilla, PR**	**0.73**	**219**			**Pb**		**15 58 58.2**	**-0.5**
AGPR						**Sb**		**15 59 08.3**	**0.0**
GCPR	**Guaynabo City**	**0.90**	**145**			**Pn**		**15 59 01.2**	**-0.4**
MPR	**Mayaguez**	**0.96**	**210**			**Pn**		**15 59 01.6**	**-0.9**
CELP	**Cerrillos**	**0.96**	**177**	⇓*e*P		**Pb**		**15 59 02.8**	**+0.2**
CELP				*e*S		**Sb**		**15 59 15.6**	**+0.6**
CELP	**Cerrillos**	**0.96**	**177**			**Pb**		**15 59 02.8**	**+0.2**
CELP						**Sb**		**15 59 15.6**	**+0.6**
LSP	**Las Mesas**	**0.97**	**207**	⇓*e*P		**Pn**		**15 59 02.3**	**-0.3**
LSP	**Las Mesas**	**0.97**	**207**			**Pn**		**15 59 02.3**	**-0.3**
OBIP	**Obispado Ponce**	**1.00**	**179**	*e*S		**Sn**		**15 59 16.5**	**+0.1**
OBIP	**Obispado Ponce**	**1.00**	**179**	⇑*e*P		**Pb**		**15 59 03.1**	**0.0**
OBIP	**Obispado Ponce**	**1.00**	**179**			**Pb**		**15 59 03.1**	**0.0**
OBIP						**Sn**		**15 59 16.5**	**+0.1**
SJG	**San Juan**	**1.03**	**154**			**Pb**		**15 59 03.8**	**0.0**
IDE	**Isla Desecheo**	**1.03**	**231**	*e*S		**Sb**		**15 59 16.6**	**-0.4**
IDE	**Isla Desecheo**	**1.03**	**231**	⇓*e*P		**Pn**		**15 59 02.8**	**-0.8**
IDE	**Isla Desecheo**	**1.03**	**231**			**Pn**		**15 59 02.8**	**-0.8**
IDE						**Sb**		**15 59 16.6**	**-0.4**
CBYP	**Canovanas**	**1.06**	**136**	⇓*e*P		**Pn**		**15 59 03.5**	**-0.5**
CBYP				*e*S		**Sn**		**15 59 17.8**	**-0.3**
CBYP	**Canovanas**	**1.06**	**136**	⇓*e*P		**Pn**		**15 59 03.6**	**-0.4**
CBYP	**Canovanas**	**1.06**	**136**			**Pn**		**15 59 03.5**	**-0.5**
GBPR	**Guanica, Bosqu**	**1.09**	**193**	*e*S		**Sb**		**15 59 19.0**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.09**	**193**	⇓*e*P		**Pn**		**15 59 04.0**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.09**	**193**			**Pn**		**15 59 04.0**	**-0.3**
GBPR						**Sb**		**15 59 19.0**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.13**	**204**	*e*S		**Sn**		**15 59 19.6**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.13**	**204**	⇓*e*P		**Pn**		**15 59 04.7**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.13**	**204**			**Pn**		**15 59 04.7**	**-0.2**
CRPR						**Sn**		**15 59 19.6**	**0.0**
MLPR	**Magueyes Islan**	**1.14**	**200**	*e*S		**Sn**		**15 59 19.5**	**-0.4**
MLPR	**Magueyes Islan**	**1.14**	**200**	⇓*e*P		**Pn**		**15 59 04.5**	**-0.5**
MLPR	**Magueyes Islan**	**1.14**	**200**			**Pn**		**15 59 04.5**	**-0.5**
MLPR						**Sn**		**15 59 19.5**	**-0.4**
ICMP	**Isla Caja de M**	**1.16**	**175**	⇓*e*P		**Pn**		**15 59 05.0**	**-0.2**
ICMP	**Isla Caja de M**	**1.16**	**175**			**Pn**		**15 59 05.0**	**-0.2**
HUMP	**Col San Antoni**	**1.16**	**140**	⇓*e*P		**Pn**		**15 59 05.1**	**-0.2**
HUMP	**Col San Antoni**	**1.16**	**140**	⇑*e*P		**Pn**		**15 59 05.3**	**-0.1**
HUMP				*e*S		**Sn**		**15 59 20.5**	**+0.1**
HUMP	**Col San Antoni**	**1.16**	**140**			**Pn**		**15 59 05.3**	**-0.1**
HUMP						**Sn**		**15 59 20.5**	**+0.1**
IGPR	**InterUniversit**	**1.18**	**155**	⇑*e*P		**Pn**		**15 59 05.5**	**-0.1**
IGPR				*e*S		**Sn**		**15 59 21.1**	**+0.2**
IGPR	**InterUniversit**	**1.18**	**155**	⇓*e*P		**Pn**		**15 59 05.3**	**-0.2**
IGPR	**InterUniversit**	**1.18**	**155**			**Pn**		**15 59 05.5**	**-0.1**
IGPR						**Sn**		**15 59 21.2**	**+0.2**
MTP	**Monte Pirata**	**1.39**	**133**	*e*S		**Sn**		**15 59 25.9**	**-0.2**
MTP	**Monte Pirata**	**1.39**	**133**	⇓*e*P		**Pn**		**15 59 08.1**	**-0.4**
MTP	**Monte Pirata**	**1.39**	**133**			**Pn**		**15 59 08.1**	**-0.4**
MTP						**Sn**		**15 59 25.9**	**-0.2**
STVI	**Saint Thomas**	**1.73**	**113**	⇓*e*P		**Pn**		**15 59 12.7**	**-0.5**
STVI	**Saint Thomas**	**1.73**	**113**	⇓*e*P		**Pn**		**15 59 12.9**	**-0.2**
STVI				*e*S		**Sn**		**15 59 34.1**	**-0.3**
STVI	**Saint Thomas**	**1.73**	**113**			**Pn**		**15 59 12.9**	**-0.2**
STVI						**Sn**		**15 59 34.1**	**-0.3**
DR12	**Loma Pena Alta**	**2.62**	**265**			**Pn**		**15 59 25.8**	**+0.4**
SDDR	**Presa de Saban**	**4.41**	**270**			**Pn**		**15 59 51.3**	**+1.3**

*IDC **14** 16:14:41.8±1.1, 38°.29N×27°.98E, h0km, mb3.6/5, mb1 3.7/10, mb1mx3.5/39, mbtmp3.6/10, ML3.5/5, MS3.8/1, Ms1 3.8/1, ms1mx2.6/44, Error ellipse: s-maj=23.1km s-min=15.0km az=132.0*
*DDA **14** 16:14:42.0, 38°.28N×27°.95E, h21km±7km, MW3.7*
*ISK **14** 16:14:42.4, 38°.28N×27°.95E, h10km, ML3.6/37*
*THE **14** 16:14:44.6, 38°.23N×27°.84E, h6km±2km, ML3.6/2, Error ellipse: s-maj=2.5km s-min=0.9km az=82.0*
*ATH **14** 16:14:45.4, 38°.15N×27°.77E, h40km±4km, ML3.5/3, Error ellipse: s-maj=5.7km s-min=1.8km az=239.0*
ISC 14 16:14:42.9±1.0,**38°.26N**±0°.02×**27°.94E**±0°.02,**h14**km±7km, **n132,** σ1.9**35**/146,**mb3.5**/5,**15C-4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GOMA	**Golmarmara-Man**	**0.45**	**357**	PG		**Pg**		**16 14 51.7**	**-0.1**
GOMA				SG		**Sg**		**16 14 57.8**	**0.0**
MANT	**Manisa**	**0.53**	**65**	*i* P		**Pg**		**16 14 53.6**	**0.0**
MANT				*i* S		**Sg**		**16 14 59.9**	**-0.8**
MANT				IAML				16 15 02.0	
	comp=E,2µm,0.2s								
MANT				IAML				16 15 03.0	
	comp=N,2µm,0.2s								
AYDN	**Tasoluk**	**0.60**	**185**	*i* P		**Pb**		**16 14 54.9**	**-0.3**
AYDN				*i* S		**Sg**		**16 15 03.0**	**+0.2**
AYDN				IAML				16 15 07.0	
	comp=E,2µm,0.4s								
AYDN				IAML	

BRDR				IAML		16 15 49.0		
	comp=N,113nm,0.4s							
BRDR				IAML		16 15 55.0		
	comp=E,96nm,1.3s							
NISR	**Nisiros**	**1.77**	**202**	P	**Pn**	**16 15 13.8**	**+0.7**	
NISR	**Nisiros**	**1.77**	**202**	P	**Pn**	**16 15 13.1**	**+0.1**	
GONE	**Gonen-Balikesi**	**1.79**	**354**	PN	**Pn**	**16 15 13.5**	**+0.1**	
BAYC	**CANAKKALE_Bayr**	**1.83**	**324**	*i* P	**Pn**	**16 15 14.4**	**+0.5**	
BAYC				IAML		16 15 41.0		
	comp=E,438nm,0.4s							
BAYC				IAML		16 15 43.0		
	comp=N,347nm,0.5s							
FETY	**Fethiye**	**1.86**	**150**	P	**Pb**	**16 15 16.4**	**-0.3**	
SIGR	**SIGRI**	**1.89**	**301**	P	**Pn**	**16 15 15.1**	**+0.4**	
SIGR				S	**Sn**	**16 15 38.5**	**+0.3**	
	comp=N,1μm,0.6s							
SIGR	**SIGRI**	**1.89**	**301**	P	**Pn**	**16 15 15.3**	**+0.7**	
SIGR	**SIGRI**	**1.89**	**301**	PN	**Pn**	**16 15 15.1**	**+0.4**	
EZN	**Ezine**	**2.01**	**322**	P	**Pn**	**16 15 16.6**	**+0.3**	
EZN	**Ezine**	**2.01**	**322**	⇑P	**Pg**	**16 15 20.1**	**-1.4**	
EZN	**Ezine**	**2.01**	**322**	⇑S	**Sb**	**16 15 43.5**	**-0.4**	
EZN	**Ezine**	**2.01**	**322**	PN	**Pb**	**16 15 18.3**	**-0.8**	
KCTX	**Karacabey (Bur**	**2.02**	**9**	PN	**Pn**	**16 15 17.3**	**+0.7**	
ARG	**Arkhangelos**	**2.05**	**176**	P	**Pn**	**16 15 17.5**	**+0.6**	
ARG	**Arkhangelos**	**2.05**	**176**	P	**Pn**	**16 15 17.5**	**+0.6**	
SHUT	**Suhut-Afyon**	**2.07**	**81**	PN	**Pn**	**16 15 18.5**	**+1.2**	
EDC	**Edincik**	**2.08**	**358**	PN	**Pn**	**16 15 17.5**	**+0.1**	
ULDT	**Uludag**	**2.09**	**26**	*i* P	**Pg**	**16 15 22.2**	**-0.9**	
BOZC	**Bozcaada**	**2.16**	**318**	PN	**Pn**	**16 15 19.7**	**+1.3**	
AMGA	**Amorgos Island**	**2.17**	**229**	P	**Pn**	**16 15 18.4**	**-0.1**	
AMGA	**Amorgos Island**	**2.17**	**229**	P	**Pn**	**16 15 18.5**	**-0.1**	
KRBG	**Karabiga-Canak**	**2.19**	**347**	PN	**Pn**	**16 15 18.8**	**0.0**	
IGD	**Bursa**	**2.22**	**26**	*i* P	**Pg**	**16 15 24.1**	**-1.5**	
MDNY	**Mudanya-Bursa**	**2.23**	**19**	PN	**Pn**	**16 15 20.8**	**+1.5**	
APE	**Apeiranthos**	**2.26**	**239**	P	**Pn**	**16 15 20.0**	**+0.2**	
APE	**Apeiranthos**	**2.26**	**239**	P	**Pn**	**16 15 19.5**	**-0.3**	
APE	**Apeiranthos**	**2.26**	**239**	⇑P	**Pn**	**16 15 19.9**	**+0.1**	
APE	**Apeiranthos**	**2.26**	**239**	⇑S	**Sn**	**16 15 48.7**	**+1.3**	
BAGO	**Egridir - ISPA**	**2.26**	**96**	*i* P	**Pn**	**16 15 20.9**	**+1.0**	
KORT	**Korkueli**	**2.29**	**123**	*i* P	**Pb**	**16 15 22.8**	**-1.2**	
KORT				IAML		16 16 05.0		
	comp=E,78nm,0.6s							
LPK	**Lapseki**	**2.30**	**337**	PN	**Pn**	**16 15 21.2**	**+0.9**	
MRMT	**Marmara Adasi**	**2.35**	**354**	PN	**Pn**	**16 15 22.7**	**+1.5**	
ARMT	**Armutlu**	**2.41**	**17**	PN	**Pn**	**16 15 23.5**	**+1.6**	
GELI	**Tayfur-Gelibol**	**2.42**	**332**	PN	**Pn**	**16 15 23.1**	**+1.1**	
CAVI	**Cavuskoy**	**2.43**	**37**	PN	**Pn**	**16 15 23.5**	**+1.3**	
RKY	**Sarkoy-Tekirda**	**2.49**	**346**	PN	**Pn**	**16 15 24.7**	**+1.6**	
GADA	**Gvkgeada**	**2.50**	**321**	P	**Pn**	**16 15 24.1**	**+1.1**	
GADA	**Gvkgeada**	**2.50**	**321**	PN	**Pn**	**16 15 25.0**	**+2.0**	
YLV	**Yalova**	**2.55**	**25**	PN	**Pn**	**16 15 25.4**	**+1.5**	
ADVT	**Abdulvahap**	**2.58**	**32**	PN	**Pn**	**16 15 25.8**	**+1.7**	
IOSP	**Ios island**	**2.61**	**235**	P	**Pn**	**16 15 24.5**	**-0.1**	
IOSP	**Ios island**	**2.61**	**235**	P	**Pn**	**16 15 24.3**	**-0.3**	
ERIK	**Erikli-Kesan**	**2.65**	**336**	PN	**Pn**	**16 15 26.6**	**+1.5**	
THRB	**Santorini-Mono**	**2.70**	**227**	P	**Pn**	**16 15 25.5**	**-0.2**	
SB02	**Marmara Sea**	**2.73**	**8**	PN	**Pn**	**16 15 27.4**	**+1.2**	
SANT	**Santorini**	**2.74**	**227**	⇑P	**Pn**	**16 15 26.7**	**+0.3**	
BUY	**Buyukada**	**2.74**	**19**	*i* P	**Pg**	**16 15 35.1**	**-0.3**	
THR3	**Thira Island,**	**2.75**	**228**	P	**Pn**	**16 15 27.2**	**+0.7**	
KARP	**Karpathos**	**2.78**	**193**	P	**Pn**	**16 15 27.6**	**+0.6**	
KARP	**Karpathos**	**2.78**	**193**	P	**Pn**	**16 15 27.8**	**+0.7**	
SMTH	**Samothraki Isl**	**2.89**	**320**	P	**Pn**	**16 15 29.3**	**+0.8**	
DOGA	**KONYA_Doganhis**	**2.94**	**92**	*i* P	**Pn**	**16 15 31.0**	**+1.7**	
ALN	**Alexandroupoli**	**3.01**	**331**	P	**Pn**	**16 15 30.9**	**+0.8**	
KLYT	**Kilyos**	**3.10**	**15**	⇑P	**Pb**	**16 15 34.6**	**-3.2**	
SILT	**Sile**	**3.17**	**24**	⇑P	**Pb**	**16 15 36.8**	**-2.1**	
CTYL	**Yalikoy Yolu**	**3.22**	**5**	⇑P	**Pb**	**16 15 37.6**	**-2.2**	
RDO	**Rodhopi**	**3.43**	**328**	P	**Pn**	**16 15 36.5**	**+0.7**	
KONT	**Konya--Tatoy**	**3.50**	**94**	*i* P	**Pn**	**16 15 39.1**	**+2.3**	
IDI	**Anoyia**	**3.85**	**220**	Pn	**Pn**	**16 15 42.6**	**+0.9**	
	comp=E,1.0nm,0.3s,baz=47,slow=15,SNR=10							
IDI				Lg	Lg	16 16 46.6		
	comp=E,1.6nm,0.3s,baz=302,slow=15,SNR=4.1							
GAZI	**Gazipasa**	**4.03**	**119**	*i* P	**Pn**	**16 15 48.3**	**+4.1**	
NVR	**Nevrokopi**	**4.40**	**316**	P	**Pn**	**16 15 51.0**	**+1.7**	
BRTR	**Keskin Array B**	**4.67**	**70**	Pn	**Pn**	**16 15 55.0**	**+2.0**	
	comp=E,1.3nm,0.3s,baz=248,slow=14,SNR=55							
VTS	**Vitosha**	**5.64**	**322**	⇑P	**Pn**	**16 16 08.5**	**+2.1**	
BLKB	**Belogradchik**	**6.68**	**325**	⇓S	**Pn**	**16 16 21.7**	**+1.2**	
CFR	**Carcaliu**	**6.91**	**1**	⇓P	**Pn**	**16 16 25.9**	**+2.2**	
CFR	**Carcaliu**	**6.91**	**1**	⇑S	**Sn**	**16 17 40.9**	**-1.1**	
MLR	**Muntele Rosu**	**7.38**	**349**	Pn	**Pn**	**16 16 31.8**	**+1.7**	
	comp=E,0.2nm,0.3s,baz=221,slow=12,SNR=4.7							
MLR				Sn	**Sn**	**16 17 53.5**	**-0.1**	
	baz=240,slow=20,SNR=1.7							
MLR	**Muntele Rosu**	**7.38**	**349**	⇑P	**Pn**	**16 16 31.9**	**+1.7**	
VOIR		**7.49**	**344**	⇑P	**Pn**	**16 16 33.4**	**+1.7**	
PLOR	**Plostina**	**7.64**	**353**	⇑P	**Pn**	**16 16 36.9**	**+3.1**	
VRI	**Vrincioaia**	**7.65**	**354**	⇑P	Pn	16 16 40.9	+7.1	
MMAI	**Mount Meron Ar**	**8.02**	**129**	Pn	**Pn**	**16 16 38.6**	**-0.3**	
	comp=E,3.0nm,0.3s,baz=314,slow=12,SNR=13							
MMAI				Sn	**Sn**	**16 18 05.9**	**-3.5**	
	comp=E,3.5nm,0.3s,baz=305,slow=24,SNR=10.0							
GZR	**Gura Zlata**	**8.10**	**333**	⇑P	**Pn**	**16 16 41.0**	**+0.9**	
BZS	**Buzias**	**8.73**	**329**	⇓P	**Pn**	**16 16 50.0**	**+1.3**	
ASF	**Jabal al Asfar**	**9.51**	**127**	Sn	**Sn**	**16 18 45.2**	**-1.1**	
	comp=E,0.3nm,0.3s,baz=169,slow=13,SNR=2.3							
BURAR	**Bucovina Array**	**9.56**	**349**	⇓P	Pn	16 17 11.7	+12	
EIL	**Elat**	**10.36**	**144**	Pn	**Pn**	**16 17 11.2**	**+0.3**	
	comp=E,1.0nm,0.3s,baz=321,slow=6.5,SNR=4.2							
EIL				Sn	**Sn**	**16 18 58.7**	**-8.1**	
	comp=E,0.2nm,0.3s,baz=3.4,slow=17,SNR=2.0							
GERES	**GERESS Array B**	**14.76**	**320**	Pn	**P**	**16 18 16.6**	**-0.5**	
	comp=E,0.1nm,0.3s,baz=150,slow=6.8,SNR=2.2							
BRG	**Berggiesshubel**	**16.04**	**326**	*e*(P)	**P**	**16 18 36.4**	**+5.2**	
	comp=E,22nm,1.7s							
GEYT	**Alibeck**	**23.70**	**81**	P	**P**	**16 19 55.8**	**+1.5**	
	comp=E,1.4nm,0.5s,baz=289,slow=8.8,SNR=3.6							
AKTO	**Aktyubinsk**	**24.53**	**51**	P	**P**	**16 20 02.5**	**+0.8**	
	comp=E,0.6nm,0.6s,baz=254,slow=7.6,SNR=3.7							
TORD	**Torodi Ar. Bea**	**34.20**	**230**	P	**P**	**16 21 29.1**	**+1.1**	
	comp=E,0.3nm,0.5s,baz=37,slow=9.5,SNR=4.4							
MKAR	**Makanchi Array**	**40.24**	**60**	P	**P**	**16 22 20.2**	**+1.2**	
	comp=E,0.5nm,0.9s,baz=265,slow=9.0,SNR=3.1							
ZALV	**Zalesovo Beam**	**41.26**	**49**	P	**P**	**16 22 27.9**	**+0.5**	
	comp=E,0.9nm,0.6s,baz=265,slow=9.4,SNR=3.9							
DBIC	**Dimbokro**	**43.24**	**232**	LR	LR	16 44 42.6		
	comp=E,109nm,19.8s,baz=54,slow=42							

*ANF **14** 16:23:56.9±0.2,33°.11N×116°.62W,h15km±2km, ML1.8/11, Error ellipse: s-maj=2.3km s-min=1.3km az=26.0*
*NEIC **14** 16:23:57.2±0.6,33°.104N±0°.009×116°.62W±0°.01, h17km±1km, Error ellipse: s-maj=1.7km s-min=1.3km az=109.0*
*PAS **14** 16:23:58.0±0.7,33°.102N±0°.009×116°.62W±0°.01, h15km±2km, ML2.2/86, Error ellipse: s-maj=1.5km s-min=1.3km az=86.0*

ISC 14 16:23:57.3±0.8,33°.10N±0°.01×116°.63W±0°.02,h18km±7km, n59,σ0°51/93,Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORC	**Borrego Spring**	**0.24**	**46**		**Pb**	**16 24 06.0**	**+2.9**
MONP2	**Monument Peak**	**0.27**	**140**		**Pb**	**16 24 03.5**	**-0.1**
MONP2					**Sg**	**16 24 07.2**	**-0.4**
MONP2	**Monument Peak**	**0.27**	**140**	P	**Pb**	**16 24 03.5**	**-0.1**
	baz=323,SNR=69						
MONP2				S	**Sg**	**16 24 07.1**	**-0.5**
	baz=323						
EML	**El Monte Cty P**	**0.28**	**221**		**Sg**	**16 24 07.9**	**+0.3**
DPP	**Dos Picos Cty**	**0.28**	**249**		**Pb**	**16 24 03.9**	**0.0**
DPP					**Sb**	**16 24 08.3**	**0.0**
HWB	**Hans Werner Br**	**0.29**	**255**		**Pg**	**16 24 03.9**	**+0.2**
HWB					**Sb**	**16 24 08.5**	**0.0**
PLM	**Palomar**	**0.32**	**322**		**Pb**	**16 24 04.6**	**0.0**
CBKC	**Canebrake**	**0.37**	**122**		**Pb**	**16 24 05.2**	**-0.2**
BZNA	**Buzz No.'s Pla**	**0.39**	**355**		**Pg**	**16 24 05.5**	**0.0**
BZNA					**Sg**	**16 24 11.0**	**0.0**
FRD	**Ford Ranch, An**	**0.39**	**3**		**Pb**	**16 24 05.6**	**-0.3**
FRD					**Sg**	**16 24 10.7**	**-0.3**
FRD	**Ford Ranch, An**	**0.39**	**3**		**Pb**	**16 24 05.6**	**-0.3**
FRD					**Sg**	**16 24 10.7**	**-0.3**
BAR	**Barrett**	**0.42**	**185**		**Pg**	**16 24 05.9**	**0.0**
BAR					**Sg**	**16 24 11.8**	**+0.1**
SDRC	**San Diego Road**	**0.45**	**216**		**Pg**	**16 24 06.5**	**0.0**
SDRC					**Sg**	**16 24 12.8**	**+0.2**
SNDA	**J Saunders Pla**	**0.45**	**1**		**Pb**	**16 24 06.7**	**-0.2**
SNDA					**Sg**	**16 24 12.7**	**-0.1**
109C	**Camp Elliot, M**	**0.45**	**242**		**Pg**	**16 24 06.5**	**0.0**
109C	**Camp Elliot, M**	**0.45**	**242**	P	**Pg**	**16 24 06.6**	**0.0**
	baz=61,SNR=5.8						
109C				S	**Sg**	**16 24 12.9**	**+0.2**
	baz=61						
DNR	**Dunn Ranch,Anz**	**0.47**	**360**		**Pb**	**16 24 06.9**	**-0.2**
DNR					**Sg**	**16 24 13.3**	**+0.1**
CRY	**Cary Ranch**	**0.47**	**349**		**Pg**	**16 24 07.0**	**0.0**
CRY					**Sb**	**16 24 13.6**	**-0.3**
GORC	**Green Oak Ranc**	**0.51**	**276**		**Pg**	**16 24 07.4**	**-0.1**
GORC					**Sg**	**16 24 14.4**	**0.0**
PFO	**Pinyon Flats O**	**0.53**	**15**		**Pg**	**16 24 07.7**	**-0.2**
PFO	**Pinyon Flats O**	**0.53**	**15**		**Pg**	**16 24 07.8**	**-0.2**
PFO					**Sg**	**16 24 14.7**	**-0.4**
PFO	**Pinyon Flats O**	**0.53**	**15**	P	**Pg**	**16 24 07.7**	**-0.2**
	baz=195,SNR=55						
PFO				S	**Sg**	**16 24 14.5**	**-0.6**
	baz=195						
XPFO	**Pion Flat**	**0.53**	**16**		**Pg**	**16 24 07.6**	**-0.4**
XPFO	**Pion Flat**	**0.53**	**16**		**Pg**	**16 24 07.7**	**-0.2**
XPFO					**Sg**	**16 24 14.6**	**-0.5**
TKX	**Tecate**	**0.53**	**178**		**Sg**	**16 24 14.9**	**-0.1**
OLP	**Otay Lakes Par**	**0.55**	**208**		**Pg**	**16 24 08.3**	**-0.1**
OLP					**Sg**	**16 24 15.8**	**0.0**
GVDA	**Garner Valley**	**0.57**	**356**		**Pb**	**16 24 08.8**	**0.0**
GVDA					**Sg**	**16 24 16.4**	**+0.1**
CRR	**Carrizo Plain**	**0.59**	**111**		**Pb**	**16 24 09.2**	**+0.1**
BACC	**Bachelor Mtn.**	**0.62**	**326**		**Pg**	**16 24 09.3**	**-0.2**
BACC					**Sg**	**16 24 17.5**	**-0.3**
IKP	**In-Ko-Pah, Jac**	**0.62**	**136**		**Pg**	**16 24 09.7**	**-0.1**
IKP					**Sg**	**16 24 17.9**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**0.62**	**136**	P	**Pb**	**16 24 09.6**	**-0.1**
	baz=317						
IKP				S	**Sg**	**16 24 17.8**	**-0.3**
	baz=317						
DGR	**Domenigoni Val**	**0.64**	**330**		**Pg**	**16 24 09.7**	**-0.2**
DGR					**Sg**	**16 24 17.9**	**-0.5**
POB	**Polly Butte**	**0.64**	**337**		**Pg**	**16 24 09.7**	**-0.3**
RMX	**La Rumorosa**	**0.68**	**137**		**Pn**	**16 24 11.8**	**-0.3**
RMX					**Sb**	**16 24 21.3**	**+1.5**
HMTC	**Hemet**	**0.68**	**333**		**Pg**	**16 24 10.5**	**-0.2**
MURC	**Murrieta**	**0.69**	**316**		**Pg**	**16 24 10.7**	**-0.2**
MURC					**Sb**	**16 24 20.2**	**+0.2**
MURC	**Murrieta**	**0.69**	**316**	P	**Pg**	**16 24 10.5**	**-0.4**
	baz=135,SNR=12						
MURC				S	**Sg**	**16 24 19.9**	**-0.2**
	baz=135						
SWSC	**Sam W. Stewart**	**0.71**	**102**		**Pg**	**16 24 11.0**	**-0.3**
SWSC					**Sb**	**16 24 20.9**	**+0.3**
SWSC	**Sam W. Stewart**	**0.71**	**102**	P	**Pg**	**16 24 11.0**	**-0.3**
	baz=284						
SWSC				S	**Sb**	**16 24 20.6**	**0.0**
	baz=284						
BATC	**Bat Cave Butte**	**0.75**	**61**		**Pb**	**16 24 12.3**	**+0.5**
CTCC	**Cactus City**	**0.77**	**44**		**Pb**	**16 24 12.3**	**+0.2**
CTCC					**Sb**	**16 24 22.4**	**+0.1**
CBX	**Cerro Bola**	**0.79**	**182**		**Pg**	**16 24 12.2**	**-0.5**
CBX					**Sg**	**16 24 22.5**	**-0.6**
COK2	**Cook Ranch 2**	**0.80**	**108**		**Pb**	**16 24 13.1**	**+0.6**
EW2	**E Wide Canyon**	**0.86**	**12**		**Pb**	**16 24 13.7**	**0.0**
EW2					**Sg**	**16 24 25.2**	**-0.2**
PEC	**Perris**	**0.91**	**331**		**Pb**	**16 24 14.3**	**-0.3**
SME	**Santa Rosa Min**	**0.94**	**320**		**Pb**	**16 24 14.8**	**-0.3**
SME					**Sb**	**16 24 27.1**	**-0.3**
BLAC	**Blackrock camp**	**0.99**	**12**		**Pb**	**16 24 16.0**	**0.0**
BLAC					**Sg**	**16 24 29.1**	**-0.4**
BELC	**Belle Mtn. Jos**	**1.04**	**30**	P	**Pb**	**16 24 16.9**	**+0.1**
	baz=210						
BELC				S	**Sb**	**16 24 30.5**	**+0.2**
	baz=210						
TPC	**Twentynine Pal**	**1.11**	**26**		**Pg**	**16 24 18.5**	**-0.3**
BC3	**Big Chuckawall**	**1.13**	**60**	S	**Sg**	**16 24 33.1**	**-0.8**
	baz=241						
CLTC	**Calectric**	**1.15**	**330**		**Pg**	**16 24 19.3**	**-0.1**
BBRC	**Big Bear Solar**	**1.19**	**348**	S	**Sn**	**16 24 35.4**	**+0.4**
	baz=168						
ESJX	**Sierra Juarez**	**1.23**	**152**		**Pb**	**16 24 20.2**	**0.0**
BFSC	**Mount Baldy Ra**	**1.43**	**323**	S	**Sb**	**16 24 41.6**	**+0.3**
	baz=142						
PEM	**Pine Mountain**	**1.49**	**316**		**Pb**	**16 24 24.9**	**+0.5**
IRM	**Iron Mountain**	**1.62**	**49**	Sb	**Sg**	**16 24 48.6**	**-1.1**
	baz=230						
HOLC	**Holcomb Ridge**	**1.69**	**323**		**Pb**	**16 24 28.0**	**0.0**
GMRC	**Granite Mounta**	**1.86**	**25**	Sb	**Sb**	**16 24 55.2**	**+1.3**
	baz=206						
EDW2	**Edwards Air Fo**	**2.11**	**328**	Sb	**Sb**	**16 25 02.5**	**+1.6**
	baz=147						

*IDC **14** 16:25:44.5±2.2, 15°.91S×177°.64W, h427km±26km, mb3.5/8, mb1 3.7/9, mb1mx3.3/38, mbtmp4.2/9, Error ellipse: s-maj=30.2km s-min=13.7km az=139.0*
*NEIC **14** 16:25:44.2±2.4, 15°.85S±0°.1×177°.7W±0°.1, h431km±6km, mb4.7/22, Error ellipse: s-maj=18.5km s-min=14.3km az=151.0*

ISC 14 16:25:45.9±0.5,15°.79S±0°.09×177°.65W±0°.09,h450km, n45,σ1918/45,mb4.4/16,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.55**	**244**	P	**P**	**16 27 06.6**	**+0.4**
AFI	**Afiamalu**	**5.97**	**73**	P	**P**	**16 27 18.5**	**-1.6**
	4.5nm,0.3s,baz=276,slow=9.2,SNR=4.2						
AFI	**Afiamalu**	**5.97**	**73**	P	**P**	**16 27 18.2**	**-1.9**
NIUE	**Niue**	**8.06**	**115**	P	**P**	**16 27 41.5**	**-0.5**
RAO	**Raoul Island**	**13.40**	**181**	P	**P**	**16 28 40.8**	**+1.0**
	106nm,0.3s,baz=53,slow=20,SNR=6.7						
OUZ	**Omahuta**	**20.88**	**200**	P	**P**	**16 29 56.9**	**+1.7**
OUZ				IAmb	IAmb	16 30 54.5	
	comp=Z,39nm,1.5s						
URZ	**Urewera**	**22.86**	**191**	P	**P**	**16 30 11.3**	**-1.7**
	comp=Z,6.5nm,0.4s,baz=38,slow=20,SNR=3.8						
URZ	**Urewera**	**22.86**	**191**	IAmb	IAmb	16 30 36.8	
	comp=Z,44nm,1.4s						
HIZ	**Hauiti**	**23.58**	**195**	P	**P**	**16 30 17.2**	**-2.4**
NNZ	**Nelson**	**26.50**	**195**	P	**P**	**16 30 44.7**	**-0.8**
TUWZ	**Tuamarina**	**26.56**	**194**	P	**P**	**16 30 45.5**	**-0.5**
XMAS	**Kiritimati**	**26.70**	**50**	P	**P**	**16 30 47.4**	**-0.2**
PPT	**Papeete**	**26.94**	**98**	P	**P**	**16 30 50.1**	**+0.4**
PPTF	**Pamatai, Papee**	**26.95**	**98**	P	**P**	**16 30 50.1**	**+0.3**
THZ	**Tophouse**	**27.14**	**196**	P	**P**	**16 30 50.6**	**-0.5**
THZ				IAmb	IAmb	16 31 18.5	
	comp=Z,49nm,1.4s						
KHZ	**Kahutara**	**27.59**	**194**	P	**P**	**16 30 52.6**	**-2.5**
KHZ				IAmb	IAmb	16 31 37.9	
	comp=Z,61nm,1.5s						
LTZ	**Lake Taylor**	**28.25**	**196**	P	**P**	**16 30 59.3**	**-1.7**
LTZ				IAmb	IAmb	16 31 10.8	
	comp=Z,34nm,1.3s						
FOZ	**Fox Glacier**	**29.65**	**199**	P	**P**	**16 31 11.6**	**-1.5**
FOZ				IAmb	IAmb	16 31 16.8	
	comp=Z,54nm,1.1s						
WKZ	**Wanaka**	**31.06**	**199**	P	**P**	**16 31 23.8**	**-1.6**
MLZ	**Mavora Lakes**	**31.83**	**199**	P	**P**	**16 31 31.9**	**-0.1**
DCZ	**Deep Cove**	**32.23**	**200**	P	**P**	**16 31 35.0**	**-0.4**
DCZ				IAmb	IAmb	16 32 46.4	
	comp=Z,51nm,1.4s						
WAKE	**Wake Island**	**38.12**	**336**	P	**P**	**16 32 23.5**	**-1.6**
STKA	**Stephens Creek**	**40.31**	**239**	P	**P**	**16 32 43.5**	**+0.6**
	comp=Z,1.8nm,0.6s,baz=47,slow=1.6,SNR=4.4						
STKA	**Stephens Creek**	**40.31**	**239**	P	**P**	**16 32 41.8**	**-1.1**
MLH	**Mauna Loa**	**41.34**	**33**	P	**P**	**16 32 51.8**	**+0.3**
WRA	**Warramunga Arr**	**45.77**	**257**	P	**P**	**16 33 25.7**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=94,slow=6.1,SNR=9.9						
WRA	**Warramunga Arr**	**45.77**	**257**	P	**P**	**16 33 25.3**	**-0.7**
AS31	**Alice Springs**	**46.10**	**252**	P	**P**	**16 33 28.6**	**+0.1**
AS31				IAmb	IAmb	16 33 32.4	
	comp=Z,3.9nm,0.5s						
ASAR	**Alice Springs**	**46.10**	**252**	P	**P**	**16 33 28.7**	**+0.2**
	comp=Z,9.6nm,0.5s,baz=86,slow=7.9,SNR=150						
ASAR				PcP	**PcP**	**16 34 57.1**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=103,slow=3.7,SNR=2.7						
ASAR	**Alice Springs**	**46.10**	**252**	P	**P**	**16 33 27.9**	**-0.6**
FORT	**Forrest**	**51.59**	**243**	P	**P**	**16 34 08.7**	**-0.7**
FORT				IAmb	IAmb	16 34 13.5	
	comp=Z,16nm,0.8s						
PSA00	**Pilbara Seismi**	**59.17**	**254**	P	**P**	**16 35 02.6**	**0.0**
PETK	**Petropavlovsk-**	**71.84**	**345**	P	**P**	**16 36 22.7**	**+1.0**
	comp=Z,3.5nm,0.9s,baz=114,slow=9.3,SNR=6.2						
NVAR	**Mina Array Bea**	**77.40**	**44**	P	**P**	**16 36 55.8**	**+2.0**
	comp=Z,5.4nm,0.3s,baz=225,slow=9.1,SNR=5.4						
ILAR	**Eielson Array**	**83.67**	**13**	P	**P**	**16 37 26.2**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=226,slow=5.5,SNR=16						
ILAR	**Eielson Array**	**83.67**	**13**	P	**P**	**16 37 24.8**	**-0.9**
TX31	**Lajitas Ar. Si**	**84.25**	**58**	P	**P**	**16 37 28.7**	**-0.8**
TX32	**Lajitas Array**	**84.25**	**58**	P	**P**	**16 37 29.4**	**-0.2**
PDAR	**Pinedale Array**	**85.32**	**43**	P	**P**	**16 37 36.4**	**+1.7**
	comp=Z,0.3nm,0.5s,baz=220,slow=4.0,SNR=3.9						
YKA	**Yellowknife Ar**	**92.11**	**24**	P	**P**	**16 38 07.1**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=246,slow=4.7,SNR=8.9						
BVAR	**Borovoye Array**	**115.66**	**322**	PKP	**PKiKP**	**16 43 36.6**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=139,slow=2.6,SNR=5.3						
ARCES	**ARCESS Array B**	**124.37**	**350**	PKP	**PKiKP**	**16 43 52.9**	**+0.3**
	comp=Z,3.3nm,1.0s,baz=40,slow=1.5,SNR=4.6						
BR131	**Keskin Array S**	**143.77**	**317**		**PKPdf**	**16 44 28.6**	**-0.7**
BRTR	**Keskin Array B**	**143.77**	**317**	PKP	**PKPdf**	**16 44 29.2**	**-0.1**
	comp=Z,3.0nm,0.8s,baz=90,slow=1.7,SNR=14						
GERES	**GERESS Array B**	**145.75**	**347**	PKPbc	**PKiKP**	**16 44 34.9**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=20,slow=4.3,SNR=7.1						

*IDC **14** 16:28:09.0±5.2, 37°.27N×72°.07E, h140km±31km, mb3.4/2, mb1 3.2/8, mb1mx2.9/44, mbtmp3.6/8, MS3.5/1, Ms1 3.5/1, ms1mx2.5/32, Error ellipse: s-maj=59.2km s-min=24.6km az=149.0*
*NNC **14** 16:28:11.6±6.1, 37°.77N×71°.65E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=49.3km s-min=39.8km az=176.0*

ISC 14 16:28:08.5±0.9,37°.22N±0°.08×71°.93E±0°.07,h142km,n30, σ1890/32,3C-4D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.09**	**15**	P	**Pn**	**16 29 24.6**	**+1.3**
	SNR=26						
IUG	**Iuzhnay**	**5.13**	**344**	Pg	**Pn**	**16 29 26.0**	**+2.4**
	1.0nm,0.2s						
IUG				Lg	Lg	16 30 21.3	
	28nm,0.3s						
UCH	**Uchtor**	**5.38**	**21**	P	**Pn**	**16 29 28.3**	**+1.1**
	SNR=23						
KZA	**Kyzart**	**5.49**	**27**	P	**Pn**	**16 29 29.3**	**+0.7**
	SNR=5.7						
MRKS	**Merke**	**5.61**	**10**	Pg	**Pn**	**16 29 31.3**	**+1.4**
	2.4nm,0.2s						
MRKS				Lg	Lg	16 30 30.8	
	11nm,0.4s						
EKS2	**Erkin-Say**	**5.62**	**14**	P	**Pn**	**16 29 32.1**	**+2.1**
	SNR=13						
AAK	**Ala-Archa**	**5.76**	**19**	P	**Pn**	**16 29 33.2**	**+1.2**
	1.6nm,0.3s,baz=158,slow=2.6,SNR=19						
AAK				S	**Sn**	**16 30 34.2**	**-3.0**
	1.2nm,0.3s,baz=106,slow=22,SNR=15						
AAK	**Ala-Archa**	**5.76**	**19**	P	**Pn**	**16 29 33.6**	**+1.6**
	SNR=7.2						

λ-3.00000°.
IDC **14** *16:44:24.3±0.6,23˚.74N×121˚.17E,h0km,mb4.2/21, mb1 4.3/22,mb1mx4.3/37,mbtmp4.2/22,ML3.0/1,MS3.8/13, Ms1 3.9/13,ms1mx3.6/35,Error ellipse: s-maj=19.0km s-min=14.0km az=73.0*
BJI **14** *16:44:25.0±0.0,23˚.85N×121˚.10E,h10km,mB4.7/36, mb4.3/45,ML4.5/10,Ms4.6/49,Ms7 4.4/48*
MOS **14** *16:44:26.8±1.1,23˚.76N×121˚.08E,h29km,mb4.6/10,Error ellipse: s-maj=9.9km s-min=6.6km az=100.4*
JMA **14** *16:44:26.2±0.1,23˚.87N×120˚.98E,h0km,M4.5*
NEIC **14** *16:44:27.2±2.0,23˚.84N±0˚.04×120˚.99E±0˚.02,h17km±4km, mb4.6/37,Mwr4.5/18,ML4.7(TAP),Error ellipse: s-maj=6.2km s-min=1.7km az=166.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr5.19; Mθθ0.33; Mϕϕ-5.53; Mrθ-1.92; Mθϕ0.26; Mϕr-2.60; Fault plane solution: Mo6.27000×10¹⁵ NP1:ϕs340.29000°,δ35.04000°, λ59.81000°. Principal axes: T 6.4032, Plg68.0000°, Azm145.0000°; N -0.2765, Plg17.0000°, Azm6.0000°; P -6.1267, Plg13.0000°, Azm272.0000°;*
TAP **14** *16:44:27.1,23˚.86N×120˚.98E,h15km,ML5.0,B*
ASIES **14** *16:44:27.3,23˚.84N×121˚.01E,h19km,MW4.2*
ISC 14 16:44:27.1±0.6,23˚.85N±0˚.01×121˚.01E±0˚.01,h14km±3km, n290,σt§09/417,mb4.4/51,MS4.1/16,21C-64D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res
SSLB	**Suanglung** baz=201	**0.08**	**219**	⇑	P		**Pg**	**16 44 30.2**	**+0.2**
SSLB					S		**Sg**	**16 44 32.2**	**+0.2**
SSLB	**Suanglung**	**0.08**	**219**		Pg		**Pg**	**16 44 30.0**	**0.0**
SSLB					Sg		**Sg**	**16 44 32.1**	**+0.1**
SMLT	**Sun Moon Lake** baz=287	**0.10**	**289**	⇑	*i* P		**Pg**	**16 44 30.5**	**+0.1**
SMLT					S		**Sb**	**16 44 33.2**	**-0.4**
TYC	**Yuchr** baz=294	**0.15**	**292**	⇑	*i* P		**Pg**	**16 44 30.9**	**+0.1**
TYC					*i* S		**Sg**	**16 44 33.5**	**+0.1**
VWDT	**VWDT** baz=126	**0.15**	**128**	⇓	P		**Pb**	**16 44 32.2**	**+0.4**
VWDT					S		**Sb**	**16 44 35.2**	**+0.3**
OWD	**Renai** baz=61	**0.18**	**55**	⇓	*i* P		**Pb**	**16 44 32.4**	**0.0**
OWD					S		**Sb**	**16 44 35.3**	**-0.6**
DPDB	**Guoxing** baz=349	**0.20**	**338**	⇑	*i* P		**Pg**	**16 44 31.8**	**+0.2**
DPDB					S		**Sg**	**16 44 34.9**	**+0.1**
WHYT	**Xinyi Township** baz=216	**0.21**	**223**	⇑	*i* P		**Pb**	**16 44 32.3**	**-0.4**
WHYT					S		**Sb**	**16 44 36.2**	**-0.3**
CHGB	**Renai** baz=46	**0.26**	**36**	⇓	P		**Pb**	**16 44 33.3**	**-0.4**
CHGB					S		**Sg**	**16 44 37.2**	**+0.6**
WJS	**Zhushan** baz=261	**0.26**	**264**	⇓	*i* P		**Pb**	**16 44 33.5**	**-0.1**
WJS					S		**Sb**	**16 44 38.4**	**+0.5**
WNT	**Mingjian** baz=274	**0.30**	**276**	⇓	*i* P		**Pb**	**16 44 34.1**	**-0.1**
WNT					S		**Sb**	**16 44 39.1**	**+0.1**
YUS	**Yu-Shan** baz=176	**0.36**	**188**	⇓	*i* P		**Pb**	**16 44 35.4**	**-0.2**
YUS					S		**Sb**	**16 44 40.8**	**-0.6**
WHF	**Hehuan Shan** baz=50	**0.38**	**38**	⇓	*i* P		**Pb**	**16 44 35.7**	**-0.1**
WHF					*i* S		**Sb**	**16 44 41.0**	**-0.7**
ALS	**Alishan** baz=197	**0.39**	**209**	⇓	*e* P		**Pb**	**16 44 35.8**	**-0.1**
ALS					S		**Sb**	**16 44 41.8**	**0.0**
ESL	**Shilin** baz=96	**0.39**	**95**	⇓	*i* P		**Pb**	**16 44 36.1**	**+0.3**
ESL					S		**Sb**	**16 44 42.0**	**+0.4**
CHN5	**Tsauling** baz=227	**0.39**	**230**	⇓	P		**Pb**	**16 44 35.8**	**-0.1**
CHN5					S		**Sb**	**16 44 42.3**	**+0.4**
EGFH	**Guangfu** baz=115	**0.42**	**115**	⇓	P		**Pb**	**16 44 36.6**	**+0.3**
EGFH					S		**Sb**	**16 44 43.0**	**+0.4**
TCU	**Taichung** baz=302	**0.42**	**314**	⇓	*e* P		**Pb**	**16 44 36.6**	**+0.2**
TCU					*e* S		**Sb**	**16 44 43.5**	**+0.8**
TDCB	**Techi** baz=25	**0.42**	**19**	⇑	P		**Pg**	**16 44 35.6**	**0.0**
TDCB					S		**Sg**	**16 44 40.6**	**-0.8**
TWT	**Tachien** baz=26	**0.43**	**21**		*e* P		**Pg**	**16 44 35.7**	**0.0**
TWT					S		**Sg**	**16 44 40.9**	**-0.7**
WHP	**Taichung City** baz=359	**0.43**	**352**	⇑	*e* P		**Pg**	**16 44 35.9**	**+0.2**
WHP					*e* S		**Sb**	**16 44 43.0**	**0.0**
WGK	**Gukeng** baz=245	**0.44**	**248**	⇓	P		**Pb**	**16 44 36.8**	**+0.1**
WGK					*e* S		**Sb**	**16 44 43.4**	**+0.3**
EHY	**Hungye** baz=132	**0.45**	**140**	⇓	*i* P		**Pb**	**16 44 37.2**	**+0.4**
EHY					S		**Sb**	**16 44 43.4**	**+0.1**
WDLH	**Douliu** baz=247	**0.46**	**250**	⇓	*i* P		**Pb**	**16 44 37.2**	**+0.2**
WDLH					*e* S		**Sb**	**16 44 44.6**	**+1.0**
WCHH	**Zhanghua** baz=299	**0.47**	**299**	⇓	*i* P		**Pb**	**16 44 37.4**	**+0.2**
WCHH					*e* S		**Sb**	**16 44 45.1**	**+1.1**
HGSD	**Ruisui** baz=129	**0.52**	**133**	⇓	P		**Pb**	**16 44 38.8**	**+0.8**
HGSD					S		**Sb**	**16 44 46.3**	**+0.9**
YULB	**Yu-li** baz=148	**0.53**	**150**	⇓	P		**Pb**	**16 44 38.4**	**+0.3**
YULB					S		**Sb**	**16 44 45.6**	**0.0**
YULB	**Yu-li**	**0.53**	**150**				**Pb**	**16 44 38.4**	**+0.3**
YULB					Sg		**Sb**	**16 44 45.7**	**+0.1**
ENLB	**Shoufeng** baz=85	**0.55**	**84**	⇓	*i* P		**Pg**	**16 44 38.0**	**+0.1**
ENLB					S		**Sb**	**16 44 46.5**	**+0.3**
ETLH	**Xiulin Townshi** baz=50	**0.56**	**50**	⇓	P		**Pb**	**16 44 38.5**	**-0.2**
ETLH					S		**Sg**	**16 44 45.9**	**+0.3**
HWA	**Hwalien** baz=79	**0.56**	**77**	⇓	*i* P		**Pb**	**16 44 39.4**	**+0.7**
HWA					S		**Sb**	**16 44 47.5**	**+0.9**
TWF1	**Yuli** baz=150	**0.56**	**152**	⇓	*i* P		**Pb**	**16 44 39.2**	**+0.5**
TWF1					S		**Sb**	**16 44 47.1**	**+0.5**
CHN2	**Minshiung** baz=235	**0.58**	**237**	⇓	P		**Pb**	**16 44 39.4**	**+0.4**
CHN2					S		**Sb**	**16 44 48.1**	**+0.9**
TWD	**Chiawan** baz=69	**0.58**	**67**	⇓	*i* P		**Pb**	**16 44 39.1**	**0.0**
TWD					S		**Sb**	**16 44 47.3**	**+0.1**
RLNB	**Erlin** baz=273	**0.60**	**274**	⇓	P		**Pb**	**16 44 39.2**	**-0.1**
RLNB					*e* S		**Sb**	**16 44 48.1**	**+0.5**
WDJ	**Dajia District** baz=327	**0.60**	**326**	⇓	*e* P		**Pb**	**16 44 40.0**	**+0.6**
WDJ					*e* S		**Sb**	**16 44 48.7**	**+1.0**
NSY	**Sanyi** baz=340	**0.61**	**338**	⇓	*i* P		**Pb**	**16 44 40.4**	**+0.8**
NSY					S		**Sb**	**16 44 49.5**	**+1.4**
CHN4	**Tsaushan** baz=215	**0.63**	**218**	⇓	*i* P		**Pb**	**16 44 40.1**	**+0.3**
CHN4					S		**Sb**	**16 44 49.4**	**+1.0**
NACB	**Ninganchiao** baz=61	**0.63**	**59**	⇓	P		**Pb**	**16 44 39.6**	**-0.2**
NACB					S		**Sg**	**16 44 47.9**	**+0.2**
NACB	**Ninganchiao**	**0.63**	**59**				**Pb**	**16 44 39.6**	**-0.2**
CHY	**Chiayi** baz=234	**0.64**	**237**	⇓	P		**Pb**	**16 44 40.3**	**+0.3**
CHY					S		**Sb**	**16 44 50.3**	**+1.4**
TPUB	**Ta-pu** baz=210	**0.65**	**213**	⇓	P		**Pb**	**16 44 40.4**	**+0.2**
TPUB					S		**Sb**	**16 44 49.8**	**+0.6**
TPUB	**Ta-pu**	**0.65**	**213**				**Pb**	**16 44 40.3**	**+0.1**
ELDTW	**Lidau** baz=183	**0.66**	**179**	⇓	P		**Pb**	**16 44 40.1**	**-0.3**
ELDTW					*e* S		**Sb**	**16 44 49.4**	**-0.1**
PTSB	**Yuanli** baz=337	**0.66**	**335**		*e* P		**Pb**	**16 44 41.0**	**+0.7**
PTSB					S		**Sb**	**16 44 50.3**	**+0.9**
NNSH	**Datong** baz=37	**0.67**	**31**	⇓	*e* P		**Pg**	**16 44 40.1**	**-0.2**
NNSH					S		**Sg**	**16 44 48.2**	**-0.9**
NNS	**Nan Shan** baz=39	**0.68**	**29**	⇓	*i* P		**Pg**	**16 44 40.1**	**-0.2**
NNS					*e* S		**Sg**	**16 44 48.6**	**-0.6**
FULB	**Fuli** baz=156	**0.70**	**158**	⇓	*i* P		**Pn**	**16 44 42.4**	**-0.2**
FULB					S		**Sn**	**16 44 52.5**	**-0.8**
WTP	**Ta-pu** baz=208	**0.70**	**211**	⇓	*i* P		**Pb**	**16 44 41.3**	**+0.1**
WTP					S		**Sb**	**16 44 51.2**	**+0.5**
NMLH	**Miaoli** baz=345	**0.71**	**344**	⇓	*e* P		**Pn**	**16 44 42.3**	**-0.5**
NMLH					*e* S		**Sn**	**16 44 52.5**	**-1.1**
STYT	**Tauyuan** baz=196	**0.72**	**199**	⇑	*i* P		**Pb**	**16 44 41.8**	**+0.3**
STYT					S		**Sb**	**16 44 51.4**	**+0.2**
WMLT	**Mailiao** baz=266	**0.72**	**267**		*e* P		**Pg**	**16 44 41.1**	**0.0**
WMLT					*e* S		**Sb**	**16 44 51.9**	**+0.7**
WLGB	**Puzi** baz=239	**0.75**	**241**	⇓	P		**Pb**	**16 44 41.8**	**0.0**
WLGB					*e* S		**Sb**	**16 44 53.0**	**+1.0**
TWK	**Hsinying** baz=217	**0.75**	**220**	⇓	*i* P		**Pb**	**16 44 42.1**	**+0.1**
TWK					S		**Sb**	**16 44 52.9**	**+0.7**
WSF	**Szhu** baz=252	**0.75**	**254**		*e* P		**Pg**	**16 44 41.5**	**-0.2**
WSF					S		**Sb**	**16 44 52.6**	**+0.5**
NSTT	**Nanjuang** baz=349	**0.78**	**359**	⇑	P		**Pb**	**16 44 42.5**	**+0.1**
NSTT					S		**Sb**	**16 44 53.3**	**+0.4**
SNST	**Tainan City** baz=215	**0.78**	**217**	⇓	P		**Pb**	**16 44 42.5**	**0.0**
SNST					*e* S		**Sb**	**16 44 53.8**	**+0.8**
LIOB	**Emei** baz=349	**0.79**	**0**	⇑	*e* P		**Pb**	**16 44 43.0**	**+0.3**
LIOB					*e* S		**Sb**	**16 44 53.9**	**+0.6**
CHN1	**Nanshi** baz=223	**0.80**	**214**	⇓	P		**Pb**	**16 44 42.8**	**0.0**
CHN1					S		**Sb**	**16 44 54.3**	**+0.9**
CHKT	**Chengkung** baz=155	**0.81**	**156**	⇑	P		**Pn**	**16 44 44.4**	**+0.2**
CHKT					S		**Sn**	**16 44 56.7**	**+0.7**
SGST	**Jiashian** baz=215	**0.86**	**207**		P		**Pg**	**16 44 43.4**	**-0.3**
SGST					S		**Sb**	**16 44 55.8**	**+0.7**
NDT	**Datong Townshi** baz=24	**0.88**	**31**	⇓	P		**Pg**	**16 44 43.8**	**-0.4**
NDT					S		**Sb**	**16 44 56.0**	**+0.2**
ENA	**Nanau** baz=51	**0.88**	**49**	⇓	P		**Pb**	**16 44 44.2**	**0.0**
ENA					*e* S		**Sg**	**16 44 55.4**	**-0.4**
NSK	**Sanguang** baz=23	**0.88**	**21**	⇓	P		**Pg**	**16 44 43.9**	**-0.3**
NSK					*e* S		**Sg**	**16 44 55.1**	**-0.8**
YHNB	**Yeheng** baz=24	**0.88**	**22**	⇓	P		**Pg**	**16 44 43.8**	**-0.4**
YHNB					*e* S		**Sg**	**16 44 55.2**	**-0.6**
YHNB	**Yeheng**	**0.88**	**22**				**Pg**	**16 44 43.7**	**-0.5**
CHN8	**Yiju** baz=234	**0.89**	**236**	⇓	*e* P		**Pg**	**16 44 44.0**	**-0.2**
CHN8					S		**Sn**	**16 44 57.2**	**-0.6**
NANB	**Nanao** baz=51	**0.89**	**49**	⇓	*i* P		**Pg**	**16 44 44.2**	**-0.1**
NANB					*e* S		**Sg**	**16 44 55.1**	**-0.9**
SLGT	**Liugui** baz=200	**0.92**	**201**		*e* P		**Pn**	**16 44 45.6**	**0.0**
SLGT					*e* S		**Sn**	**16 44 58.1**	**-0.5**
ENTT	**Nioudou** baz=30	**0.94**	**33**	⇓	*i* P		**Pb**	**16 44 44.9**	**-0.3**
ENTT					*e* S		**Sn**	**16 44 58.7**	**-0.4**
SBCB	**Hsinchu**	**0.94**	**359**		*e* P		**Pn**	**16 44 45.9**	**0.0**
SBCB					*e* S		**Sn**	**16 44 59.7**	**+0.5**
HSN	**Hsinchu** baz=2.0	**0.95**	**358**		*e* P		**Pn**	**16 44 46.6**	**+0.6**
HSN					S		**Sn**	**16 45 00.5**	**+1.1**
SCLT	**Jiali** baz=226	**1.00**	**228**		*e* P		**Pn**	**16 44 46.6**	**-0.1**
SCLT					S		**Sn**	**16 45 01.2**	**+0.5**
WLTB	**Daxi** baz=21	**1.02**	**12**		*e* P		**Pn**	**16 44 47.7**	**+0.7**
WLTB					*e* S		**Sn**	**16 45 01.2**	**0.0**
TWG	**Pinlang** baz=166	**1.02**	**177**		*e* P		**Pn**	**16 44 47.4**	**+0.3**
TWG					*e* S		**Sn**	**16 45 02.0**	**+0.8**
TWG	**Pinlang**	**1.02**	**177**				**Pn**	**16 44 47.4**	**+0.3**
NWLT	**Wulai** baz=27	**1.03**	**26**	⇓	*e* P		**Pb**	**16 44 46.6**	**-0.1**
NWLT					*e* S		**Sb**	**16 44 59.7**	**-0.4**
TWGBT	**Beinan** baz=166	**1.03**	**176**	⇑	P		**Pn**	**16 44 47.4**	**+0.2**
TWGBT					S		**Sn**	**16 45 01.4**	**+0.1**
TWE	**Neicheng** baz=47	**1.06**	**35**	⇓	*i* P		**Pb**	**16 44 47.3**	**+0.1**
TWE					*e* S		**Sn**	**16 45 02.0**	**0.0**
SLBB	**Yuanshan** baz=29	**1.07**	**32**		*e* P		**Pb**	**16 44 46.4**	**-1.0**
SLBB					S		**Sg**	**16 45 01.6**	**0.0**
TWC	**Suao** baz=47	**1.08**	**45**	⇓	P		**Pg**	**16 44 47.8**	**-0.1**
TWC					*e* S		**Sb**	**16 45 01.5**	**0.0**
TAI1	**Yung-k'ang** baz=220	**1.08**	**222**		*e* P		**Pg**	**16 44 48.0**	**+0.1**
TAI1					S		**Sn**	**16 45 04.2**	**+1.7**
TTN	**Taitung** baz=172	**1.10**	**173**		*e* P		**Pg**	**16 44 49.3**	**+1.1**
TTN					*e* S		**Sn**	**16 45 05.4**	**+2.4**
NCUH	**Zhongli** baz=353	**1.12**	**8**		*e* P		**Pg**	**16 44 49.2**	**+0.4**
NCUH					*e* S		**Sn**	**16 45 04.1**	**+0.4**
NCU	**National Centr** baz=353	**1.13**	**8**		*e* P		**Pg**	**16 44 48.9**	**0.0**
NCU					*e* S		**Sn**	**16 45 04.1**	**+0.3**
ILA	**Ilan** baz=38	**1.14**	**36**		*e* P		**Pg**	**16 44 48.9**	**-0.1**
ILA					*e* S		**Sn**	**16 45 04.8**	**+0.9**
SSD	**Sandimen** baz=186	**1.15**	**198**		*e* P		**Pg**	**16 44 49.6**	**+0.3**
SSD					S		**Sn**	**16 45 05.4**	**+1.0**
TWM1	**Shoushan** baz=206	**1.16**	**208**		*e* P		**Pg**	**16 44 50.4**	**+1.0**
TWM1					*e* S		**Sn**	**16 45 06.7**	**+2.2**
TATO	**Taipei** baz=26	**1.20**	**21**	⇓	P		**Pg**	**16 44 50.3**	**0.0**
TATO					*e* S		**Sn**	**16 45 05.5**	**-0.2**
TATO	**Taipei**	**1.20**	**21**				**Pg**	**16 44 50.1**	**-0.2**
NHDH	**Xindian Distri** baz=24	**1.21**	**23**		*e* P		**Pg**	**16 44 50.4**	**+0.1**
NHDH					*e* S		**Sg**	**16 45 07.2**	**+1.2**
TWH	**Lutao** baz=144	**1.21**	**159**		P		**Pb**	**16 44 50.0**	**+0.2**
TWH					*e* S		**Sg**	**16 45 06.7**	**+0.4**
SGLT	**Jiouru** baz=201	**1.22**	**203**		*e* P		**Pg**	**16 44 51.3**	**+0.8**
SGLT					S		**Sg**	**16 45 10.2**	**+3.8**
EOS1	**EOS1** baz=49	**1.24**	**55**	⇑	P		**Pg**	**16 44 51.5**	**+0.6**
EOS1					*e* S		**Sg**	**16 45 08.2**	**+1.1**
TWA	**Mucha** baz=41	**1.24**	**25**		*e* P		**Pg**	**16 44 50.8**	**-0.2**
TWA					*e* S		**Sg**	**16 45 08.6**	**+1.4**
ECL	**Taimali** baz=181	**1.25**	**182**	⇑	P		**Pg**	**16 44 51.1**	**0.0**
ECL					S		**Sg**	**16 45 08.5**	**+1.1**
NTC	**Toucheng** baz=38	**1.25**	**37**		*e* P		**Pb**	**16 44 50.6**	**+0.1**
NTC					*e* S		**Sg**	**16 45 08.6**	**+1.2**
SNJT	**Kaohsiung City** baz=208	**1.25**	**210**		*e* P		**Pg**	**16 44 51.3**	**0.0**
SNJT					*e* S		**Sg**	**16 45 09.8**	**+2.2**
TAP	**Taipei** baz=30	**1.27**	**21**		*e* P		**Pg**	**16 44 51.5**	**0.0**
TAP					*e* S		**Sg**	**16 45 09.3**	**+1.2**
TAP1	**Taipei** baz=30	**1.27**	**21**	⇓	*e* P		**Pb**	**16 44 51.2**	**+0.3**
TAP1					S		**Sg**	**16 45 09.6**	**+1.3**
MASBT	**Mashibuluo** baz=194	**1.28**	**196**		*e* P		**Pb**	**16 44 51.2**	**+0.3**
MASBT					*e* S		**Sg**	**16 45 08.6**	**+0.2**
TWS1	**Kuangyinshan** baz=4.0	**1.30**	**17**		*e* P		**Pb**	**16 44 51.6**	**+0.3**
TWS1					*e* S		**Sg**	**16 45 10.0**	**+0.9**
TIPB	**Shuangxi** baz=35	**1.34**	**33**		*e* P		**Pb**	**16 44 52.4**	**+0.4**
TIPB					S		**Sn**	**16 45 09.4**	**+0.2**
PHUB	**P'eng-hu** baz=256	**1.36**	**256**	⇓	P		**Pn**	**16 44 50.9**	**-0.7**
PHUB					*e* S		**Sn**	**16 45 08.1**	**-1.4**
PNG	**Penghu** baz=251	**1.36**	**258**	⇓	*i* P		**Pn**	**16 44 51.0**	**-0.7**
PNG					*e* S		**Sn**	**16 45 09.4**	**-0.2**
NTST	**Danshui** baz=1.0	**1.37**	**17**		*e* P		**Pg**	**16 44 54.1**	**+0.7**
WDGT	**Dungji** baz=244	**1.37**	**245**	⇓	P		**Pn**	**16 44 51.3**	**-0.5**
WDGT					*e* S		**Sn**	**16 45 08.4**	**-1.4**
YM01	**YM01** baz=22	**1.39**	**21**		*e* P		**Pb**	**16 44 52.6**	**-0.3**
YM01					*e* S		**Sg**	**16 45 12.4**	**+0.5**
YM10	**YM10** baz=22	**1.40**	**21**	⇑	P		**Pb**	**16 44 52.7**	**-0.3**
YM10					*e* S		**Sb**	**16 45 11.3**	**+0.6**
NWF	**Wu-fen Shan** baz=43	**1.41**	**30**		*e* P		**Pg**	**16 44 53.9**	**-0.3**
NWF					*e* S		**Sg**	**16 45 12.8**	**+0.4**
WFSB	**Wu-fen Shan** baz=31	**1.41**	**30**		*e* P		**Pg**	**16 44 53.8**	**-0.3**
WFSB					*e* S		**Sg**	**16 45 12.6**	**+0.2**
YM11	**YM11** baz=22	**1.41**	**21**	⇑	P		**Pb**	**16 44 52.9**	**-0.3**
YM11					*e* S		**Sg**	**16 45 12.6**	**+0.1**
ANP	**Anpu** baz=20	**1.41**	**19**		*e* P		**Pb**	**16 44 53.0**	**-0.3**
ANP					*e* S		**Sg**	**16 45 12.6**	**0.0**
SSPT	**Xinbi** baz=195	**1.42**	**197**		*e* P		**Pb**	**16 44 53.6**	**+0.3**
SSPT					*e* S		**Sg**	**16 45 13.5**	**+0.6**
KAU	**Kaohsiung** baz=206	**1.43**	**207**		*e* P		**Pg**	**16 44 54.4**	**-0.1**
YM08	**YM08** baz=22	**1.43**	**22**		*e* P		**Pb**	**16 44 53.4**	**-0.3**
YM08					*e* S		**Sb**	**16 45 12.2**	**+0.4**
TWB1	**Santiao Chiao** baz=49	**1.46**	**38**		*e* P		**Pg**	**16 44 54.5**	**-0.6**
TWB1					*e* S		**Sg**	**16 45 14.2**	**+0.1**
EAST	**Anshuo** baz=177	**1.47**	**186**		*e* P		**Pg**	**16 44 54.7**	**-0.6**
EAST					S		**Sg**	**16 45 14.7**	**+0.3**
TAW	**Tawu** baz=172	**1.49**	**184**		*e* P		**Pg**	**16 44 55.1**	**-0.6**
SCZT	**Fangliau** baz=192	**1.51**	**194**		*e* P		**Pb**	**16 44 54.9**	**0.0**
SCZT					*e* S		**Sg**	**16 45 15.0**	**-0.8**
VCHM	**Qimei** baz=236	**1.58**	**247**		*e* P		**Pn**	**16 44 54.7**	**0.0**
VCHM					*e* S		**Sn**	**16 45 15.3**	**+0.3**
WLCH	**Liuqiu** baz=201	**1.60**	**201**		*e* P		**Pb**	**16 44 56.7**	**+0.3**
VWUC	**VWUC** baz=322	**1.82**	**309**		*e* P		**Pn**	**16 44 56.4**	**-1.6**
HEN	**Hengchun** baz=186	**1.85**	**188**		*e* P		**Pb**	**16 45 00.4**	**-0.3**
JYNG	**Yonagunijimaku**	**1.87**	**71**		P		**Pb**	**16 45 00.3**	**-0.7**
JYNG					*e* S		**Sb**	**16 45 23.9**	**-0.3**
LAY	**Lan-yu** baz=149	**1.87**	**164**		*e* P		**Pn**	**16 44 58.8**	**+0.1**
TWK1	**Hengchun** baz=201	**1.91**	**186**		*e* P		**Pn**	**16 45 00.3**	**+1.1**
TWKBT	**Hengchun** baz=200	**1.91**	**185**		*e* P		**Pb**	**16 45 01.1**	**-0.6**
TWKBT					*e* S		**Sb**	**16 45 25.6**	**+0.3**
YOJ	**Yonaguni jima**	**1.93**	**71**		*e* P		**Pn**	**16 45 00.5**	**+1.1**

baz=84
YOJ eS Sn 16 45 24.2 +0.7
baz=84
YOJ Yonaguni jima 1.93 71 P Pn 16 45 00.6 +1.1
YOJ S Sb 16 45 25.2 -0.8
YOJ Yonaguni jima 1.93 71 P Pn 16 45 00.2 +0.7
YOJ Yonaguni jima 1.93 71 Pn 16 45 00.2 +0.7
TSEB Hengchuen, Pin 1.94 183 eP Pb 16 45 02.6 +0.3
baz=199
PTTC Pingtan 1.99 326|| eP Pn 16 44 59.1 -1.3
baz=326
PTMZ Houxiangcun 2.09 305 eP Pn 16 45 00.6 -1.1
baz=305
KNM Kinmen 2.42 284 eP Pn 16 45 06.9 +0.6
baz=282
QZH Quanzhou 2.46 297 Pn Pn 16 45 06.0 -0.8
QZH Sn Sn 16 45 34.4 -2.2
KNMB Chin-men Tao 2.47 285 eP Pn 16 45 05.8 -1.1
baz=284
KNMB Chin-men Tao 2.47 285 Pn 16 45 05.5 -1.4
MATB Ma-tsu 2.49 337 eP Pn 16 45 05.7 -1.5
baz=337
IRIF Iriomote-Funau 2.53 78 P Pn 16 45 09.3 +1.5
IRIF eS Sn 16 45 40.6 +2.1
HATJ Hateruma jima 2.57 85 P Pn 16 45 09.1 +0.8
HATJ S Sn 16 45 40.6 +1.3
JKRS Kuro-shima 2.77 81 P Pn 16 45 12.7 +1.6
JKRS S Sn 16 45 46.9 +2.6
MHZQ Yeshan 2.87 322 eP Pn 16 45 11.4 -1.0
baz=321
JIJ Ishigaki jima 2.91 79 P Pn 16 45 13.8 +0.8
JIJ eS Sn 16 45 48.4 +0.6
LYJJ Jianjiangzhen 2.92 337 eP Pn 16 45 14.6 +1.5
baz=337
AXDP Jialang 2.96 291 eP Pn 16 45 13.0 -0.7
baz=290
ZPLA Ao Xicun 2.98 272|| eP Pn 16 45 13.2 -0.8
baz=271
JISG Ishigakijimahi 3.10 76 P Pn 16 45 16.6 +1.0
JISG S Sn 16 45 52.6 +0.1
ZZJH Jiuhuzhen 3.15 282 eP Pn 16 45 15.7 -0.6
baz=281
XPSS Dashiqiu 3.16 347 eP Pn 16 45 15.4 -0.9
baz=346
JTJ Tarama 3.46 76 P Pn 16 45 21.9 +1.3
JTJ eS Sn 16 46 03.3 +1.9
JIRB Irabujima 3.92 75 P Pn 16 45 29.3 +2.4
JIKM Ikemajima 4.01 74 P Pn 16 45 30.5 +2.4
JMJ Miyako jima 2 4.03 75 eP Pn 16 45 29.9 +1.6
baz=74
JMJ eS Sn 16 46 17.9 +2.6
baz=74
JMJ2 Miyako jima3 4.04 76 P Pn 16 45 30.4 +1.9
JMJ2 eS Sn 16 46 18.4 +2.7
JOGS Gusukube 4.11 76 S Sn 16 46 20.5 +3.0
HKPS Hong Kong Po S 6.51 257 Pn Pn 16 46 01.5 -1.1
GZH Guangzhou 7.08 265 P Pn 16 46 05.0 -5.3
GZH S Sn 16 47 18.5 -12
GZH smax smax
comp=N,390nm,1.0s
GZH smax smax
comp=E,330nm,1.0s
JOW Kunigami 7.21 64 eP Pn 16 46 12.9 +0.7
baz=66
JOW Kunigami 7.21 64 Pn Pn 16 46 11.7 -0.4
SSE Sheshan 7.22 1 P Pn 16 46 09.8 -2.4
SSE S Sn 16 47 30.1 -3.9
SSE smax smax
comp=N,49nm,1.2s
SSE smax smax
comp=E,94nm,1.2s
SSE LR LR
comp=N,390nm,10.9s
SSE LR LR
comp=E,730nm,7.9s
NJ2 Nanjing 8.39 347 eP Pn 16 46 29.3 +1.0
NJ2 pP Pb 16 46 34.1 -18
NJ2 S Sn 16 48 04.1 +1.3
NJ2 pmax pmax
comp=Z,25nm,0.8s
NJ2 pmax pmax
comp=Z,440nm,4.1s
NJ2 smax smax
comp=N,150nm,1.1s
NJ2 smax smax
comp=E,140nm,1.3s
NJ2 LR LR
comp=N,2μm,8.1s
NJ2 LR LR
comp=E,1μm,8.3s
NJ2 LR LR
comp=Z,2μm,11.8s
WHN Wuhan 8.92 320 P Pn 16 46 39.0 +3.4
WHN S Sn 16 48 17.8 +1.9
WHN LR LR
comp=N,3μm,7.4s
WHN LR LR
comp=E,5μm,8.1s
WHN LR LR
comp=Z,7μm,10.0s
TGY Tagaytay City 9.70 180 LR LR 16 51 26.5
comp=Z,510nm,18.5s,baz=45,slow=44
JNU Nakatsue 12.67 41 Pn Pn 16 47 30.2 +3.3
0.4nm,0.3s,baz=279,slow=19,SNR=6.1
JNU Nakatsue 12.67 41 Pn Pn 16 47 27.8 +0.8
TJN Taejon 13.64 22|| eP Pn 16 47 39.5 -0.6
XAN Xi'an 14.65 317 P P 16 48 01.4 +1.1
XAN pP Pn 16 48 06.3 +12
XAN S Sn 16 50 44.0 +7.7
XAN pmax pmax
comp=Z,11nm,1.0s
XAN pmax pmax
comp=Z,110nm,5.2s
XAN LR LR
comp=N,1μm,8.9s
XAN LR LR
comp=E,1μm,10.8s
XAN LR LR
comp=Z,2μm,9.2s
XAN Xi'an 14.65 317 P P 16 47 59.0 -1.3
XAN Xi'an 14.65 317 P P 16 47 59.0 -1.3
KSRS Korea Array 14.80 22 Pn P 16 47 59.9 -2.0
comp=Z,0.7nm,0.3s,baz=201,slow=12,SNR=25
KSRS LR LR 16 53 53.8
comp=Z,164nm,20.0s,baz=202,slow=38
KS19 Wonju Array Si 14.82 22 P P 16 48 02.1 0.0
SLVN Son La 15.99 264 P P 16 48 14.1 -1.2
KMI Kunming 16.68 278 P P 16 48 22.3 -0.8
KMI pP pP 16 48 26.3 -0.9
KMI sP sP 16 48 29.1 -0.1
KMI S Sn 16 51 25.3 -0.7
KMI pmax pmax
comp=Z,8.0nm,1.1s
KMI pmax pmax
comp=Z,61nm,4.4s
KMI LR LR
comp=Z,600nm,7.0s
KMI LR LR
comp=Z,2μm,9.5s
KMI LR LR
comp=Z,2μm,9.1s
CD2 Chengdu 16.85 298 P Pn 16 48 23.0 +0.3
CD2 S Sn 16 51 31.4 +1.6
CD2 pmax pmax
comp=Z,20nm,0.4s
CD2 LR LR
comp=Z,2μm,11.2s
CD2 LR LR
comp=Z,2μm,10.6s
HHC Hu-ho-hao-te 18.71 337 eP Pn 16 48 46.5 +0.8
HHC S Sn 16 52 12.3 -2.6
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,75nm,5.3s
HHC LR LR
comp=Z,420nm,11.9s
HHC LR LR
comp=Z,420nm,12.9s
HHC LR LR
comp=Z,310nm,16.7s
LZH Lanzhou 19.20 313 eP Pn 16 48 53.6 +1.9
LZH pP sP 16 48 58.9 +2.0
LZH sP pP 16 49 02.3 +7.3
LZH pmax pmax
comp=Z,29nm,1.0s
LZH pmax pmax
comp=Z,220nm,4.1s
LZH LR LR
comp=Z,1μm,10.8s
LZH LR LR
comp=Z,2μm,9.7s
LZH LR LR
comp=Z,2μm,10.9s
MJAR Matsushiro Arr 19.48 46 P P 16 48 52.9 -0.8
MJAR pmax pmax
comp=Z,4.0nm,1.1s
MJAR Matsushiro Arr 19.48 46 P P 16 48 52.9 -0.8
comp=Z,0.1nm,0.3s,baz=214,slow=5.9,SNR=5.1
MJAR LR LR 16 57 02.1
comp=Z,257nm,19.9s,baz=220,slow=39
PBKT Sadao Pong 20.14 253 P P 16 48 59.8 -1.2
PBKT IAmb IAmb 16 49 16.9
comp=Z,35nm,1.7s
CN2 Changchun 20.23 9 eP Pn 16 49 03.9 +0.2
CN2 esP sP 16 49 14.0 +5.8
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=Z,500nm,15.0s
CN2 LR LR
comp=Z,430nm,15.0s
CN2 LR LR
comp=Z,530nm,15.0s
CHTO Chiang Mai 21.15 261 P P 16 49 11.0 -0.9
CHTO pmax pmax
comp=Z,13nm,1.1s
CHTO Chiang Mai 21.15 261 P P 16 49 11.0 -0.9
CHTO IAmb IAmb 16 49 31.8
comp=Z,13nm,1.1s
CM31 Chiang Mai Arr 21.26 260 P P 16 49 12.1 -1.0
CMAR Chiang Mai Arr 21.26 260 P P 16 49 14.6 +1.5
comp=Z,1.8nm,0.9s,baz=60,slow=8.1,SNR=11
CMAR PcP PcP 16 53 18.8 +0.8
comp=Z,0.6nm,0.7s,baz=29,slow=1.3,SNR=7.0
CMAR LR LR 16 58 45.9
comp=Z,81nm,19.9s,baz=63,slow=40
MDJ Mudanjiang 21.87 17 P P 16 49 19.5 0.0
MDJ pP sP 16 49 25.3 -0.6
MDJ sP pP 16 49 28.0 +4.3
MDJ S S 16 53 25.1 +4.3
MDJ pmax pmax
comp=Z,9.0nm,1.0s
MDJ pmax pmax
comp=Z,350nm,4.2s
MDJ LR LR
comp=Z,590nm,13.6s
MDJ LR LR
comp=Z,340nm,13.4s
MDJ LR LR
comp=Z,560nm,13.4s
MDJ Mudanjiang 21.87 17 P P 16 49 19.5 0.0
MDJ IAmb IAmb 16 49 37.7
comp=Z,14nm,1.0s
USA0B Ussuriysk Arra 22.21 21 P P 16 49 23.7 +0.7
USA0B pmax pmax
comp=Z,9.0nm,1.0s
USA0B Ussuriysk Arra 22.21 21 P P 16 49 23.7 +0.7
USRK Ussuriysk Ar. 22.21 21 P P 16 49 24.2 +1.2
comp=Z,2.8nm,0.7s,baz=194,slow=9.3,SNR=5.9
USRK LR LR 16 57 55.7
comp=Z,136nm,19.8s,baz=188,slow=36
GTA Gaotai 23.71 316 P P 16 49 39.0 +0.2
GTA pP pP 16 49 43.6 +0.4
GTA sP sP 16 49 46.1 +1.0
GTA sS sS 16 54 02.8 +1.9
GTA ScP ScP 16 57 00.4 -0.4
GTA pmax pmax
comp=Z,51nm,4.8s
GTA LR LR
comp=Z,480nm,12.4s
GTA LR LR
comp=Z,820nm,13.4s
GTA LR LR
comp=Z,940nm,13.4s
LUWI Luwuk 24.80 176 P P 16 49 50.8 +2.0
comp=Z,2μmcomp=Z,58nm,0.8s
ULN Ulaanbaatar 26.42 339|| eP P 16 50 05.5 +2.1
ULN pmax pmax
comp=Z,7.0nm,1.1s
ULN Ulaanbaatar 26.42 339 P P 16 50 03.4 0.0
ULN IAmb IAmb 16 50 20.6
comp=Z,7.1nm,1.0s
SONM Songino Array 26.61 338 P P 16 50 06.2 +1.0
comp=Z,4.1nm,1.0s,baz=157,slow=7.8,SNR=4.6
SONM LR LR 17 01 40.7
comp=Z,451nm,18.7s,baz=144,slow=39
SONM Songino Array 26.61 338 IAmb IAmb 16 50 11.5
comp=Z,3.8nm,1.0s
KLR Kul'dur 26.71 16 P P 16 50 06.4 +0.6
comp=Z,1.6nm,0.6s,baz=247,slow=5.7,SNR=7.0
KLR PcP PcP 16 53 28.5 -0.6
comp=Z,1.3nm,0.7s,baz=228,slow=4.1,SNR=4.0
ASAJ Asahikawa 26.86 36 P P 16 50 07.8 +0.5
comp=Z,6.2nm,0.9s,baz=209,slow=10,SNR=2.7
JKA Kamikawa-asahi 26.86 36 P P 16 50 07.8 +0.5
NLAI Namlea 27.57 167 P P 16 50 24.8 +11
ZEA Zeya 30.22 7 eP P 16 50 36.8 -0.3
ZEA e 17 01 12.0
ZEA pmax pmax
comp=Z,28nm,1.2s
ZEA MLR MLR
comp=Z,400nm,12.0s
ZEA MLR MLR
comp=N,400nm,11.0s
TLY Talaya 30.83 339 P P 16 50 41.7 -0.9
TLY pmax pmax
comp=Z,6.0nm,0.8s
TLY Talaya 30.83 339 P P 16 50 41.6 -0.9
TLY IAmb IAmb 16 50 58.6
comp=Z,5.9nm,0.8s
WMQ Urumqi 33.77 314 eP P 16 51 08.9 +0.4
WMQ pP sP 16 51 15.0 +0.1
WMQ pmax pmax
comp=Z,9.0nm,0.7s
WMQ pmax pmax
comp=Z,140nm,5.7s
WMQ LR LR
comp=Z,350nm,11.9s
WMQ LR LR
comp=Z,360nm,9.9s
WMQ LR LR
comp=Z,390nm,12.3s
MK31 Makanchi Array 38.47 316 P P 16 51 48.6 0.0
MK31 pmax pmax
comp=Z,6.0nm,1.1s
MK31 Makanchi Array 38.47 316 P P 16 51 48.6 0.0
MKAR Makanchi Array 38.47 316 P P 16 51 49.6 +1.0
comp=Z,3.8nm,0.8s,baz=108,slow=9.9,SNR=20
MKAR PcP PcP 16 54 00.6 -1.0
comp=Z,1.2nm,0.9s,baz=96,slow=4.2,SNR=4.0
MKAR LR LR 17 09 22.5
comp=Z,220nm,19.5s,baz=110,slow=39
YAK Yakutsk 38.62 7 P P 16 51 48.0 -1.6
YAK pmax pmax
comp=Z,5.0nm,0.9s
YAK Yakutsk 38.62 7 P P 16 51 48.0 -1.6
MAKZ Makanchi 38.67 316 P P 16 51 51.0 +0.7
MAKZ pmax pmax
comp=Z,7.0nm,1.0s
MAKZ Makanchi 38.67 316 P P 16 51 51.0 +0.7
MAKZ IAmb IAmb 16 52 06.0
comp=Z,6.8nm,0.9s
KNRA Kununurra 40.01 168 P P 16 51 59.5 -2.1
ZAA0 Zalesovo Array 40.44 327 P P 16 52 04.7 -0.2
ZAA0 IAmb IAmb 16 52 11.0
comp=Z,9.6nm,0.8s
ZALV Zalesovo Beam 40.44 327 P P 16 52 05.1 +0.2
comp=Z,12nm,0.9s,baz=118,slow=8.6,SNR=15
KSH Kashi 40.95 303 P P 16 52 12.3 +2.8
KSH sP sP 16 52 22.1 +6.2
KSH PP PnPn 16 53 48.1 -0.1
KSH S S 16 58 25.5 +4.4
KSH sS sS 16 58 33.4 +4.9
KSH SS SS 17 01 23.1 +0.2
KSH LR LR
comp=Z,220nm,8.4s
KSH LR LR
comp=Z,270nm,5.4s
KSH LR LR
comp=Z,460nm,7.8s
NRN Naryn 41.25 306 P P 16 52 13.3 +1.1
NRN pmax pmax
comp=Z,11nm,1.0s
NRN Naryn 41.25 306 P P 16 52 13.3 +1.1
NRN IAmb IAmb 16 52 22.4
comp=Z,11nm,1.0s
KURK Kurchatov 42.24 320|| eP P 16 52 20.6 +0.8
KURK pmax pmax
comp=Z,2.0nm,1.1s
KURK Kurchatov 42.24 320 P P 16 52 19.9 +0.2
AAK Ala-Archa 42.58 308|| eP P 16 52 22.6 -0.3
AAK pmax pmax
comp=Z,3.0nm,1.3s
AAK Ala-Archa 42.58 308 LR LR 17 11 20.1
comp=Z,145nm,18.3s,baz=95,slow=38
AAK Ala-Archa 42.58 308 P P 16 52 22.9 0.0
H11N1 WAKE ISLAND Hy 42.67 86 T T 17 37 31.5
baz=283,slow=74,SNR=24
H11N2 WAKE ISLAND Hy 42.67 86 T T 17 37 30.4
baz=283,slow=74,SNR=24
H11N3 WAKE ISLAND Hy 42.68 86 T T 17 37 31.5
baz=283,slow=74,SNR=25
H11S3 WAKE ISLAND Hy 42.79 88 T T 17 37 42.4
baz=284,slow=75,SNR=72
H11S1 WAKE ISLAND Hy 42.80 88 T T 17 37 43.0
baz=284,slow=75,SNR=26
H11S2 WAKE ISLAND Hy 42.81 88 T T 17 37 43.6
baz=284,slow=75,SNR=30
COEN Coen 43.38 148 P P 16 52 28.4 -0.9
SEY Seymchan 44.34 20|| eP P 16 52 36.3 -0.3
PSA00 Pilbara Seismi 45.16 182 P P 16 52 41.6 -1.9
WRAB Tennant Creek 45.42 162|| eP P 16 52 44.5 -1.1
WRAB Tennant Creek 45.42 162 P P 16 52 44.8 -0.8
WRA Warramunga Arr 45.42 162 *i* P P 16 52 44.0 -1.7
WRA pmax pmax
comp=Z,4.0nm,0.8s
WRA Warramunga Arr 45.42 162 P P 16 52 43.0 -2.7
comp=Z,2.1nm,0.6s,baz=344,slow=8.5,SNR=9.2
WRA Warramunga Arr 45.42 162 IAmb IAmb 16 52 49.3
comp=Z,0.7nm,1.3s
WR0 Warramunga Arr 45.50 162 P P 16 52 44.8 -1.4
KK31 Karatay Array 45.55 308 P P 16 52 46.0 -0.5
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KK31 Karatay Array 45.55 308 P P 16 52 46.0 -0.5
KKAR Karatay Array 45.55 308 P P 16 52 46.0 -0.5
KKAR pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 45.55 308 P P 16 52 46.0 -0.5
GIRL Giralia 46.68 189 P P 16 52 54.6 -0.9
BRVK Borovoye 47.90 321 P P 16 53 05.5 +0.7
BRVK Borovoye 47.90 321 P P 16 53 05.5 +0.7
TIXI Tiksi 48.04 3 P P 16 53 04.5 -1.0
TIXI pmax pmax
comp=Z,6.0nm,1.1s
TIXI Tiksi 48.04 3 P P 16 53 04.5 -1.0
TIXI IAmb IAmb 16 53 22.7
comp=Z,6.0nm,1.1s
AS31 Alice Springs 48.86 164 P P 16 53 11.2 -1.3
ASAR Alice Springs 48.86 164 P P 16 53 10.9 -1.6
comp=Z,2.6nm,0.9s,baz=343,slow=6.4,SNR=13
BILL Bilibino 52.05 20|| eP P 16 53 35.2 -0.8
BILL pmax pmax
comp=Z,3.0nm,1.2s
MORW Morawa 52.83 185 P P 16 53 40.9 -1.4
MORW IAmb IAmb 16 53 59.1
comp=Z,28nm,1.4s
ABKAR Akbulak array 53.56 315 P P 16 53 48.2 +0.7
ABKAR IAmb IAmb 16 53 54.4
comp=Z,7.0nm,1.1s
SVE Sverdlovsk 54.22 324 eP P 16 53 53.8 +1.6
SVE pmax pmax
comp=Z,14nm,1.4s
FORT Forrest 54.74 173 P P 16 53 55.0 -1.1
GEYT Alibeck 54.83 301 P P 16 53 58.9 +1.9
comp=Z,4.3nm,0.9s,baz=151,slow=3.4,SNR=4.0
GEYT LR LR 17 21 18.8
comp=Z,147nm,18.2s,baz=40,slow=40
GEYT Alibeck 54.83 301 IAmb IAmb 16 54 07.0
comp=Z,4.6nm,0.9s
ARU Arti 55.28 323|| eP P 16 54 00.2 +0.3
ARU pmax pmax
comp=Z,14nm,1.7s
ARU Arti 55.28 323 P P 16 54 00.0 +0.2
ARU IAmb IAmb 16 54 13.2
comp=Z,8.9nm,1.0s
EIDS Eidsvold 56.94 147 P P 16 54 10.9 -1.2
BBOO Buckleboo 58.14 165 P P 16 54 18.9 -1.6
BBOO IAmb IAmb 16 54 25.0
comp=Z,30nm,1.4s
STKA Stephens Creek 58.81 160 P P 16 54 23.5 -1.5
STKA pmax pmax
comp=Z,2.0nm,0.7s
STKA Stephens Creek 58.81 160 P P 16 54 23.6 -1.5
comp=Z,6.6nm,0.6s,baz=335,slow=7.3,SNR=33
STKA Stephens Creek 58.81 160 P P 16 54 23.5 -1.5
STKA IAmb IAmb 16 54 24.5
comp=Z,1.6nm,0.7s
PRGR Permogore 62.38 329 eP P 16 54 48.6 -0.5
PRGR e*PP sP 16 54 56.5 +0.9
PRGR pmax pmax
comp=Z,6.0nm,0.6s
KBZ Khabaz 65.56 309|| eP P 16 55 09.7 -0.7
KBZ Khabaz 65.56 309 P P 16 55 11.7 +1.4
comp=Z,4.8nm,1.2s,baz=135,slow=4.3,SNR=2.5
KIV Kislovodsk 65.67 309 eP P 16 55 09.4 -1.8
KIV pmax pmax
comp=Z,23nm,1.1s
KIV MLR MLR
comp=Z,165nm,17.0s
COLA College 69.16 27|| eP P 16 55 33.3 +0.6
COLA pmax pmax
comp=Z,3.0nm,0.7s
ILAR Eielson Array 69.58 27 P P 16 55 34.3 -1.1
comp=Z,0.4nm,0.7s,baz=300,slow=6.7,SNR=6.4
ILAR LR LR 17 28 01.4
comp=Z,34nm,18.6s,baz=332,slow=38
ARCES ARCESS Array B 69.79 338 P P 16 55 36.4 -0.3
comp=Z,5.1nm,1.0s,baz=72,slow=9.2,SNR=4.8
FINES FINESS Array B 71.65 330 *i* P P 16 55 49.0 +0.9
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 71.65 330 P P 16 55 48.5 +0.4
comp=Z,2.7nm,0.8s,baz=58,slow=4.8,SNR=7.4
FINES LR LR 17 31 18.8
comp=Z,131nm,18.3s,baz=70,slow=39
DAWY Dawson 72.91 27 P P 16 55 55.0 -0.6
DAWY IAmb IAmb 16 56 06.0
comp=Z,9.6nm,1.2s
AKASG Malin Array Be 73.01 318|*ce*P P 16 55 58.0 +1.6
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 73.01 318 P P 16 55 56.5 0.0
comp=Z,0.7nm,0.6s,baz=68,slow=2.2,SNR=5.0
AKASG Malin Array Be 73.01 318 IAmb IAmb 16 56 03.2
comp=Z,3.4nm,1.4s
BRTR Keskin Array B 73.24 306 P P 16 55 59.6 +1.4
comp=Z,1.2nm,1.0s,baz=100,slow=7.6,SNR=4.2
INK Inuvik 73.59 22 P P 16 55 57.4 -2.1
INK pmax pmax
comp=Z,20nm,1.8s
INK Inuvik 73.59 22 P P 16 55 57.4 -2.1
INK IAmb IAmb 16 56 10.5
comp=Z,20nm,1.8s
NB2 NORSAR Subarra 78.44 332 P P 16 56 26.8 -0.6
comp=Z,2.8nm,0.8s,baz=62,slow=5.6
NOA NORSAR Array B 78.44 332 P P 16 56 27.2 -0.2
comp=Z,3.0nm,0.8s,baz=60,slow=5.5,SNR=8.1
NOA LR LR 17 34 60.0
comp=Z,123nm,18.2s,baz=65,slow=39
VYHS Vyhne 80.11 319 eP P 16 56 37.7 +1.0
VYHS Vyhne 80.11 319 eP P 16 56 37.7 +1.0
CLL Collm 82.22 323 eP P 16 56 48.0 +0.2
CLL Collm 82.22 323 eP P 16 56 48.0 +0.2
GERES GERESS Array B 83.00 321 P P 16 56 51.8 -0.3
comp=Z,1.4nm,0.8s,baz=42,slow=6.1,SNR=4.7
GERES LR LR 17 38 15.9
comp=Z,84nm,18.2s,baz=40,slow=39
YKA Yellowknife Ar 83.34 23 P P 16 56 52.8 -0.6
comp=Z,1.9nm,0.8s,baz=313,slow=5.0,SNR=33
ILULI Ilulissat 87.03 357 P P 16 57 12.0 +0.2
ILULI pmax pmax
comp=Z,27nm,0.7s
ILULI Ilulissat 87.03 357 P P 16 57 12.0 +0.2
NVAR Mina Array Bea 96.78 43 P P 16 57 58.4 +0.4
comp=Z,0.3nm,0.6s,baz=279,slow=1.7,SNR=3.3

IDC 14 17:07:09.3±1.3, 25°.69N×100°.79E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/41, mbtmp3.4/4, MS2.8/1, Ms1 2.8/1, ms1mx2.4/39, Error ellipse: s-maj=54.6km s-min=21.9km az=71.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**7.40**	**194**	Pg	Pg	17 09 25.4	-5.8
	0.4nm,0.3s,baz=9.3,slow=17,SNR=13						
CMAR				Lg	Lg	17 10 58.7	
	0.2nm,0.3s,baz=3.7,slow=29,SNR=3.8						
SONM	**Songino Array**	**22.54**	**10**	P	P	17 12 11.5	+0.6
	0.4nm,0.7s,baz=199,slow=9.4,SNR=3.3						
MKAR	**Makanchi Array**	**25.69**	**330**	P	P	17 12 40.7	-0.3
	0.7nm,0.8s,baz=148,slow=8.5,SNR=8.4						
PALK	**Pallekele**		**26.51 230**	LR	LR	17 23 59.0	
	comp=Z,21nm,20.4s,baz=308,slow=38						
WRA	**Warramunga Ar**	**55.86**	**141**	P	P	17 16 48.7	-0.2
	1.5nm,1.1s,baz=329,slow=7.6,SNR=2.8						
ASAR	**Alice Springs**	**58.61**	**144**	P	P	17 17 08.3	0.0
	0.7nm,1.1s,baz=316,slow=6.8,SNR=4.4						

HEL ***14*** *17:17:51.8±0.4, 69°.58N×29°.89E, h0km, ML1.8, Explosion*
NAO ***14*** *17:17:52.7±1.1, 69°.49N×29°.67E, ML2.5*
BER ***14*** *17:17:53.5±2.9, 69°.79N×29°.82E, h0km, ML1.6, ML2.5(NAO), Suspected explosion*

ISC 14 17:17:50.6±1.2, 69°.77N±0°.06×29°.97E±0°.05, h0km, n22, σ0s87/34, Norway-Murmansk border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEV	**Kevo**	**1.03**	**270**	**Pg**	**Pg**	**17 18 10.1**	**-0.2**
KEV				Lg	Lg	17 18 23.9	
KEV				Rg	Rg	17 18 30.3	
KEV	**Kevo**	**1.03**	**270**	**PG**	**Pg**	**17 18 10.4**	**+0.1**
KEV				MSG		17 18 23.2	
	comp=Z,9.0nm,0.2s						
KEV				SB	**Sg**	**17 18 24.2**	**+0.6**
KEV	**Kevo**	**1.03**	**270**	Pg	**Pg**	**17 18 10.1**	**-0.2**
KEV				Sg	**Sg**	**17 18 23.9**	**+0.3**
KEV				Rg	Rg	17 18 30.3	
ARA0	**ARCESS Array S**	**1.58**	**263**	Pg	**Pn**	**17 18 19.7**	**-0.1**
	baz=84,slow=16						
ARA0				Lg	Lg	17 18 40.6	
	baz=87,slow=28						
ARA0				Rg	Rg	17 18 47.5	
	baz=82,slow=37						
ARA0	**ARCESS Array S**	**1.58**	**263**	Pg	**Pn**	**17 18 19.7**	**-0.1**
	baz=84,slow=16						
ARA0				Sg	**Sn**	**17 18 40.6**	**-0.3**
	baz=87,slow=28						
ARA0				Rg	Rg	17 18 47.5	
	baz=82,slow=37						
ARE0	**ARCESS Array S**	**1.58**	**263**	PG	**Pn**	**17 18 19.7**	**-0.1**
	baz=85						
ARE0				SN	**Sg**	**17 18 43.0**	**+1.8**
ARE0	**ARCESS Array S**	**1.58**	**263**	*e*P	**Pn**	**17 18 20.1**	**+0.3**
ARE0				*e*S	**Sn**	**17 18 40.2**	**-0.7**
VRF	**Varrio**	**2.04**	**184**	PG	**Pn**	**17 18 25.1**	**-1.0**
VRF				MSG		17 18 46.7	
	comp=Z,5.2nm,0.2s						
VRF				SN	**Sn**	**17 18 50.4**	**-1.8**
HAMF	**Hammerfest**	**2.31**	**295**	Pn	**Pb**	**17 18 31.7**	**-1.4**
HAMF				Sn	**Sb**	**17 19 02.1**	**0.0**
APA0	**Apatity Array**	**2.44**	**152**	Pn	**Pn**	**17 18 32.2**	**+0.7**
	baz=328,slow=16						
APA0				Lg	Lg	17 19 02.5	
	baz=327,slow=37						
APA0	**Apatity Array**	**2.44**	**152**	Pn	**Pn**	**17 18 32.2**	**+0.7**
	baz=328,slow=16						
KTK1	**Kautokeino**	**2.50**	**255**	*e*P	**Pn**	**17 18 34.0**	**+1.6**
KTK1				*e*S	**Sn**	**17 19 04.6**	**+1.0**
KTK1				IAML		17 19 09.8	
	comp=Z,6.0nm,0.4s						
HEF	**Hetta**	**2.65**	**242**	Pn	**Pn**	**17 18 34.9**	**+0.5**
HEF				Lg	Lg	17 19 09.4	
HEF	**Hetta**	**2.65**	**242**	PB	**Pn**	**17 18 34.9**	**+0.5**
	baz=59						
HEF				MSG		17 19 06.7	
	comp=Z,5.4nm,0.2s						
HEF				SG	**Sb**	**17 19 09.9**	**-1.8**
HEF	**Hetta**	**2.65**	**242**	*e*P	**Pn**	**17 18 35.1**	**+0.7**
HEF				*e*S	**Sn**	**17 19 07.1**	**-0.1**
SGF	**Sodankyl**	**2.66**	**210**	PG	**Pn**	**17 18 36.3**	**+1.7**
SGF				SB	**Sn**	**17 19 06.4**	**-1.1**
KIF	**Kilpisjarvi**	**3.33**	**261**	SG	**Sb**	**17 19 31.2**	**-0.3**
KU6	**Riekki**	**3.76**	**180**	PN	**Pn**	**17 18 50.1**	**+0.3**
KU6				SB	**Sn**	**17 19 34.9**	**+0.1**
MSF	**Maaselka**	**3.90**	**186**	PG	**Pb**	**17 19 00.5**	**+0.5**
	baz=1.0						
TOF	**Tornio**	**4.28**	**213**	PN	**Pn**	**17 18 56.9**	**+0.1**
	baz=33						
SPA0	**Spitsbergen Ar**	**9.20**	**342**	Pn	**Pn**	**17 20 04.7**	**+0.3**
	baz=154,slow=12						
SPA0	**Spitsbergen Ar**	**9.20**	**342**	Pn	**Pn**	**17 20 04.7**	**+0.3**
	baz=154,slow=12						

BJI ***14*** *17:23:47.8±0.0, 31°.91S×177°.54W, h4km, mb4.7/10, Ms5.2/4, Ms7 5.0/4*
IDC ***14*** *17:23:48.8±0.4, 32°.07S×177°.71W, h0km, mb4.6/14, mb1 4.8/17, mb1mx4.6/36, mbtmp4.6/17, ML4.5/3, MS3.8/11, Ms1 3.8/11, ms1mx3.7/20, Error ellipse: s-maj=17.3km s-min=15.6km az=91.0*
NEIC ***14*** *17:23:49.6±2.3, 32°.19S±0°.07×177°.8W±0°.1, h9km±3km, mb5.0/44, Error ellipse: s-maj=14.9km s-min=9.2km az=104.0*

ISC 14 17:23:49.5±0.3, 32°.24S±0°.04×177°.75W±0°.06, h10km, n230, σ2s28/229, mb4.9/32, MS3.8/12, 1C-1D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.98**	**357**	P	**Pn**	**17 24 33.5**	**-3.3**
GLKZ				S	**Sn**	**17 25 07.1**	**-5.4**
RAO	**Raoul Island**	**2.98**	**357**	**Pn**	**Pn**	**17 24 33.9**	**-3.0**
	240nm,0.3s,baz=229,slow=19,SNR=9.7						
RAO				Sn	**Sn**	**17 25 08.2**	**-4.6**
	662nm,0.3s,baz=228,slow=22,SNR=9.8						
RAO				LR	LR	17 26 10.7	
	comp=Z,2μm,18.2s,baz=161,slow=50						
RIZ	**Raoul Island**	**2.99**	**357**	P	**Pn**	**17 24 33.8**	**-3.3**
RIZ				S	**Sn**	**17 25 08.7**	**-4.2**
MXZ	**Matakaoa Point**	**6.22**	**210**	P	**Pn**	**17 25 19.7**	**-1.6**
MXZ				S	**Sn**	**17 26 31.1**	**-1.4**
MXZ	**Matakaoa Point**	**6.22**	**210**		**Pn**	**17 25 19.5**	**-1.8**
WMGZ	**Waiomatatini S**	**6.39**	**208**	P	**Pn**	**17 25 22.7**	**-1.0**
WMGZ				S	**Sn**	**17 26 34.1**	**-2.6**
PKGZ	**Pakihiroa**	**6.59**	**210**	P	**Pn**	**17 25 25.2**	**-1.3**
HAZ	**Te Kaha**	**6.61**	**212**	P	**Pn**	**17 25 25.6**	**-1.1**
PUZ	**Puketiti**	**6.67**	**208**	P	**Pn**	**17 25 25.7**	**-1.9**
PUZ				S	**Sn**	**17 26 42.2**	**-1.5**
RUGZ	**Raukumara Rang**	**6.83**	**212**	P	**Pn**	**17 25 27.9**	**-2.0**
RUGZ				S	**Sn**	**17 26 47.0**	**-0.7**
TWGZ	**Tauwhareparae**	**6.88**	**209**	P	**Pn**	**17 25 27.8**	**-2.6**
TWGZ				S	**Sn**	**17 26 47.6**	**-1.1**
CNGZ	**Carnagh Statio**	**7.05**	**207**	P	**Pn**	**17 25 31.0**	**-1.8**
TKGZ	**Te Karaka**	**7.15**	**209**	P	**Pn**	**17 25 32.2**	**-2.0**
TKGZ				S	**Sn**	**17 26 53.4**	**-2.1**
MWZ	**Matawai**	**7.20**	**211**	P	**Pn**	**17 25 33.3**	**-1.6**
OPRZ	**Ohinepanea**	**7.28**	**218**	P	**Pn**	**17 25 37.2**	**+1.2**
URZ	**Urewera**	**7.33**	**214**	Pn	**Pn**	**17 25 34.4**	**-2.1**
	3.3nm,0.3s,baz=45,slow=18,SNR=38						
URZ				Sn	**Sn**	**17 26 55.9**	**-3.9**
	42nm,0.3s,baz=158,slow=19,SNR=18						
URZ	**Urewera**	**7.33**	**214**	P	**Pn**	**17 25 34.5**	**-2.1**
URZ	**Urewera**	**7.33**	**214**		**Pn**	**17 25 34.3**	**-2.3**
TGRZ	**Tauranga**	**7.36**	**220**	P	**Pn**	**17 25 37.3**	**+0.3**
RAGZ	**Rawiri**	**7.38**	**211**	P	**Pn**	**17 25 35.7**	**-1.7**
RAGZ				S	**Sn**	**17 26 55.2**	**-6.1**
RIGZ	**Rimuhau**	**7.42**	**208**	P	**Pn**	**17 25 35.8**	**-2.0**
WIAZ	**Waiheke Island**	**7.42**	**230**	P	Pn	17 25 45.4	+7.5
PRGZ	**Paritu Road**	**7.55**	**207**	P	**Pn**	**17 25 36.7**	**-3.0**
MBAZ	**Motutapu North**	**7.56**	**231**	P	Pn	17 25 46.7	+6.9
SNGZ	**Shannon Statio**	**7.65**	**210**	P	**Pn**	**17 25 39.5**	**-1.6**
MHGZ	**Mahia Peninsul**	**7.75**	**206**	P	**Pn**	**17 25 40.0**	**-2.3**
TOZ	**Tahuroa Road**	**7.79**	**223**	P	**Pn**	**17 25 45.8**	**+2.9**
OUZ	**Omahuta**	**7.80**	**245**	P	Pn	17 25 49.0	+5.9
OUZ	**Omahuta**	**7.80**	**245**		Pn	17 25 48.2	+5.2
RAHZ	**Arahi**	**7.88**	**211**	P	**Pn**	**17 25 44.1**	**0.0**
MTHZ	**Maungataniwha**	**7.93**	**212**	P	**Pn**	**17 25 43.3**	**-1.6**
NMHZ	**Naumai**	**8.15**	**211**	P	**Pn**	**17 25 49.4**	**+1.5**
ARHZ	**Aropaoanui**	**8.20**	**210**	P	**Pn**	**17 25 46.4**	**-2.2**
BKZ	**Black Stump Fm**	**8.35**	**213**	P	**Pn**	**17 25 49.0**	**-1.6**
BKZ	**Black Stump Fm**	**8.35**	**213**		**Pn**	**17 25 46.7**	**-3.9**
MCHZ	**McNeill Hill**	**8.48**	**211**	P	**Pn**	**17 25 50.6**	**-1.8**
KWHZ	**Kaweka Forest**	**8.59**	**212**	P	**Pn**	**17 25 52.9**	**-1.1**
HIZ	**Hauiti**	**8.69**	**222**	Pn	**Pn**	**17 25 53.5**	**-1.9**
KAHZ	**Kahuranaki**	**8.70**	**209**	P	**Pn**	**17 25 51.2**	**-4.3**
NGZ	**Ngauruhoe**	**8.78**	**216**	P	**Pn**	**17 25 58.1**	**+1.4**
KRHZ	**Kereru**	**8.79**	**211**	P	**Pn**	**17 25 55.0**	**-1.7**
BHHZ	**Black Hill Sta**	**8.80**	**213**	P	**Pn**	**17 25 55.1**	**-1.8**
TUVZ	**Tukino**	**8.82**	**216**	P	**Pn**	**17 25 57.6**	**+0.4**
FWVZ	**Far West T-bar**	**8.86**	**216**	P	**Pn**	**17 25 57.3**	**-0.6**
MOVZ	**Moawhango**	**8.88**	**215**	P	**Pn**	**17 25 56.5**	**-1.5**
TRVZ	**Turoa**	**8.90**	**216**	P	**Pn**	**17 25 58.2**	**-0.1**
PNHZ	**Pukenui**	**9.09**	**211**	P	**Pn**	**17 25 57.2**	**-3.5**
TSZ	**Takapari Road**	**9.31**	**211**	P	**Pn**	**17 26 00.4**	**-3.4**
BFZ	**Birch Farm**	**9.71**	**208**		Pn	17 26 03.8	-5.5
MSWZ	**Moikau Station**	**10.73**	**210**	Pn	**Pn**	**17 26 20.5**	**-2.7**
PLWZ	**Palliser**	**10.86**	**209**		**Pn**	**17 26 21.9**	**-3.1**
SNZO	**South Karori**	**10.88**	**212**	Pn	**Pn**	**17 26 22.5**	**-2.7**
BHW	**Baring Head**	**10.89**	**211**	Pn	**Pn**	**17 26 23.1**	**-2.3**
TUWZ	**Tuamarina**	**11.32**	**214**		**Pn**	**17 26 27.9**	**-3.4**
NNZ	**Nelson**	**11.43**	**216**	Pn	**Pn**	**17 26 29.7**	**-3.2**
NNZ					**Sn**	**17 28 32.9**	**-7.7**
CMWZ	**Cape Campbell**	**11.45**	**212**	Pn	**Pn**	**17 26 30.7**	**-2.4**
CMWZ					**Sn**	**17 28 32.9**	**-8.2**
BSWZ	**Blackbirch Sta**	**11.58**	**213**	Pn	**Pn**	**17 26 30.5**	**-4.4**
BSWZ					Sn	17 28 34.6	-10
QRZ	**Quartz Range**	**11.59**	**220**	Pn	**Pn**	**17 26 32.1**	**-3.0**
THZ	**Tophouse**	**12.08**	**216**	Pn	**Pn**	**17 26 39.0**	**-2.7**
KHZ	**Kahutara**	**12.29**	**212**		**Pn**	**17 26 40.4**	**-4.1**
LTZ	**Lake Taylor**	**13.16**	**214**	Pn	**Pn**	**17 26 52.4**	**-4.0**
OXZ	**Oxford**	**13.69**	**213**		Pn	17 26 57.0	-6.6
MQZ	**McQueen's Vall**	**13.71**	**211**	Pn	Pn	17 26 57.0	-6.9
RPZ	**Rata Peaks**	**14.45**	**214**	Pn	**Pn**	**17 27 10.4**	**-3.6**
	2.5nm,0.3s,baz=322,slow=0.9,SNR=11						
RPZ				Sn	Sn	17 29 39.7	-15
	4.1nm,0.3s,baz=130,slow=22,SNR=16						
RPZ	**Rata Peaks**	**14.45**	**214**	Pn	**Pn**	**17 27 09.6**	**-4.4**
NIUE	**Niue**	**14.88**	**30**	Pn	**Pn**	**17 27 16.1**	**-3.9**
FOZ	**Fox Glacier**	**14.93**	**217**	Pn	**Pn**	**17 27 16.7**	**-3.9**
MSVF	**Nonsavu**	**14.94**	**344**	Pn	**Pn**	**17 27 20.4**	**-0.5**
LBZ	**Lake Benmore**	**15.36**	**214**	Pn	**Pn**	**17 27 22.3**	**-4.0**
LBZ				IAmb	IAmb	17 27 26.5	
	comp=Z,116nm,1.7s						
ODZ	**Otahua Downs**	**15.65**	**212**	Pn	**Pn**	**17 27 25.7**	**-4.4**
ODZ				IAmb	IAmb	17 28 11.9	
	comp=Z,191nm,1.9s						
WKZ	**Wanaka**	**16.25**	**216**	Pn	**Pn**	**17 27 32.8**	**-5.1**
MLZ	**Mavora Lakes**	**17.09**	**216**	Pn	**Pn**	**17 27 42.3**	**-6.1**
DZM	**Mont Dzumac**	**17.32**	**302**	*e*P	P	17 28 02.0	+9.0
	comp=Z,75nm,1.1s						
DZM				*e*LR	LR	17 32 11.7	
	comp=Z,1μm,25.1s						
DZM	**Mont Dzumac**	**17.32**	**302**	P	**P**	**17 27 55.9**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=104,slow=14,SNR=3.7						
DZM				LR	LR	17 32 28.9	
	comp=Z,210nm,20.9s,baz=196,slow=30						
DZM	**Mont Dzumac**	**17.32**	**302**	Pn	**Pn**	**17 27 48.4**	**-3.2**
WHZ	**Wether Hill Ro**	**17.55**	**215**	Pn	**Pn**	**17 27 50.6**	**-3.6**
WHZ				IAmb	IAmb	17 28 42.5	
	comp=Z,276nm,2.0s						
DCZ	**Deep Cove**	**17.64**	**217**	Pn	**Pn**	**17 27 49.5**	**-5.8**
DCZ				IAmb	IAmb	17 28 22.9	
	comp=Z,176nm,1.8s						
PYZ	**Puysegur Point**	**18.36**	**216**		**Pn**	**17 27 58.9**	**-5.3**
AFI	**Afiamalu**	**19.05**	**18**	P	**P**	**17 28 12.1**	**+0.1**
	comp=Z,4.0nm,0.3s,baz=238,slow=21,SNR=3.8						
AFI	**Afiamalu**	**19.05**	**18**	P	**P**	**17 28 11.1**	**-0.9**
RAR	**Rarotonga**	**19.42**	**60**	P	**Pn**	**17 28 17.3**	**+0.1**
	comp=Z,1.6nm,0.3s,baz=233,slow=5.1,SNR=3.7						
RAR	**Rarotonga**	**19.42**	**60**	P	**P**	**17 28 15.4**	**-0.6**
RAR				IAmb	IAmb	17 28 22.5	
	comp=Z,145nm,1.6s						
LHI	**Lord Howe Isla**	**19.70**	**266**	P	**P**	**17 28 16.7**	**-2.4**
LHI				IAmb	IAmb	17 29 04.8	
	comp=Z,128nm,1.2s						
MGCD	**Mangrove Creek**	**26.17**	**259**	P	**P**	**17 29 24.8**	**+0.6**
	baz=26,SNR=4.4						
ARMA	**Armidale**	**26.18**	**266**	P	**P**	**17 29 21.9**	**-2.5**
TBI	**Tubuai**	**26.48**	**78**	*e*LQ	LQ	17 34 35.4	
	comp=Z,306nm,26.0s						
TBI				*e*LR	LR	17 35 49.5	
	comp=Z,366nm,27.2s,baz=246						
TBI	**Tubuai**	**26.48**	**78**	*e*T	T	17 56 49.3	
	comp=Z,9.8nm,0.3s						
CAN	**Canberra**	**27.74**	**254**	P	**P**	**17 29 38.0**	**-0.4**
CAN				IAmb	IAmb	17 30 09.8	
	comp=Z,28nm,1.4s						
EIDS	**Eidsvold**	**28.09**	**276**	P	**P**	**17 29 44.4**	**+2.8**
	baz=28,SNR=4.5						
EIDS	**Eidsvold**	**28.09**	**276**	P	**P**	**17 29 40.7**	**-0.8**
EIDS				IAmb	IAmb	17 29 47.6	
	comp=Z,24nm,1.1s						
PPT2	**Papeete2**	**29.31**	**67**	*e*LQ	LQ	17 35 36.8	
	comp=Z,275nm,24.8s						
PPT2				*e*LR	LR	17 37 13.5	
	comp=Z,216nm,20.8s,baz=237						
PPT2	**Papeete2**	**29.31**	**67**	*e*LR	LR	17 29 11.7	
	comp=Z,73nm,23.2s						
PPT	**Papeete**	**29.32**	**67**	LR	LR	17 40 17.9	
	comp=Z,209nm,18.0s,baz=242,slow=34						
TAU	**Tasmania Unive**	**29.47**	**239**	P	**P**	**17 29 53.0**	**-0.6**
RMQ	**Roma**	**29.67**	**272**	P	**P**	**17 29 58.3**	**+2.7**
	baz=30,SNR=4.6						
TOO	**Toolangi**	**30.48**	**250**	P	**P**	**17 30 01.1**	**-1.5**
CMSA	**Cobar Meteorol**	**30.96**	**261**	P	**P**	**17 30 09.4**	**+2.5**
	baz=31,SNR=34						
ARPS	**Mount Arapiles**	**33.43**	**251**	P	**P**	**17 30 30.4**	**+1.8**
	baz=34,SNR=12						
STKA	**Stephens Creek**	**34.31**	**260**	P	**P**	**17 30 38.7**	**+2.4**
	comp=Z,7.4nm,0.8s,baz=102,slow=10,SNR=15						
STKA				LR	LR	17 43 36.4	
	comp=Z,209nm,20.1s,baz=75,slow=34						
STKA	**Stephens Creek**	**34.31**	**260**	P	**P**	**17 30 35.4**	**-0.9**
HTT	**Hallett**	**36.23**	**256**	P	**P**	**17 30 54.5**	**+1.6**
	baz=36,SNR=12						
MTSU	**Mount Surprise**	**36.89**	**283**	P	**P**	**17 31 00.7**	**+2.1**
	baz=37,SNR=20						
BBOO	**Buckleboo**	**38.71**	**256**	P	**P**	**17 31 14.2**	**+0.4**
	baz=39,SNR=17						
BBOO	**Buckleboo**	**38.71**	**256**	P	**P**	**17 31 14.2**	**+0.4**
BBOO				IAmb	IAmb	17 31 18.0	
	comp=Z,20nm,0.9s						
COEN	**Coen**	**40.01**	**288**	P	**P**	**17 31 25.6**	**+0.8**
AS31	**Alice Springs**	**43.26**	**269**	P	**P**	**17 31 51.7**	**+0.3**
ASAR	**Alice Springs**	**43.26**	**269**	P	**P**	**17 31 51.7**	**+0.3**
	comp=Z,11nm,0.6s,baz=107,slow=7.8,SNR=131						
ASAR				PcP	**PcP**	**17 33 40.8**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=118,slow=4.6,SNR=2.4						
ASAR				S	**S**	**17 38 16.3**	**-2.5**
	comp=Z,1.6nm,1.0s,baz=110,slow=16,SNR=6.0						
ASAR	**Alice Springs**	**43.26**	**269**	P	**P**	**17 31 51.2**	**-0.2**
ASAR					**PcP**	**17 33 41.1**	**+0.6**
WR0	**Warramunga Arr**	**44.23**	**274**	P	**P**	**17 31 59.2**	**0.0**
WR0				IAmb	IAmb	17 32 15.7	
	comp=Z,34nm,1.2s						
WRAB	**Tennant Creek**	**44.41**	**274**	P	**P**	**17 32 00.6**	**-0.1**
WRAB				IAmb	IAmb	17 32 04.7	
	comp=Z,22nm,0.9s						
WRA	**Warramunga Arr**	**44.41**	**274**	P	**P**	**17 32 00.7**	**0.0**
	comp=Z,14nm,0.3s,baz=112,slow=7.9,SNR=150						
WRA	**Warramunga Arr**	**44.41**	**274**	P	**P**	**17 32 00.4**	**-0.3**
FORT	**Forrest**	**45.81**	**257**	P	**P**	**17 32 12.1**	**+0.4**
	baz=46,SNR=14						
FORT	**Forrest**	**45.81**	**257**	P	**P**	**17 32 11.6**	**-0.1**
SBA	**Scott Base**	**46.22**	**184**	P	**P**	**17 32 15.9**	**+1.7**
VNDA	**Vanda**	**46.29**	**186**	P	**P**	**17 32 17.7**	**+2.9**
	comp=Z,1.9nm,0.7s,baz=16,slow=6.3,SNR=11						
VNDA				LR	LR	17 50 43.2	
	comp=Z,66nm,19.6s,baz=138,slow=35						
VNDA	**Vanda**	**46.29**	**186**	P	**P**	**17 32 16.7**	**+1.9**
VNDA				IAmb	IAmb	17 32 30.9	
	comp=Z,28nm,1.7s						
WRKA	**Warakurna**	**47.49**	**264**	P	**P**	**17 32 24.7**	**-0.2**
	baz=48,SNR=43						
KDU	**Kakadu**	**49.47**	**281**	P	**P**	**17 32 41.5**	**+1.2**
	baz=50,SNR=12						
KNRA	**Kununurra**	**51.08**	**276**	P	**P**	**17 32 54.7**	**+2.3**
	baz=51,SNR=6.9						
KNRA	**Kununurra**	**51.08**	**276**	P	**P**	**17 32 53.1**	**+0.6**
CASY	**Casey**	**53.62**	**208**	P	**P**	**17 33 10.1**	**-0.5**
CASY				IAmb	IAmb	17 33 19.6	
	comp=Z,17nm,0.8s						
NWAO	**Narrogin (SRO)**	**53.97**	**251**	P	**P**	**17 33 14.4**	**+0.7**
NWAO				IAmb	IAmb	17 35 00.1	
	comp=Z,17nm,1.1s						
MEEK	**Meekatharra**	**55.00**	**258**	P	**P**	**17 33 24.5**	**+3.1**
	baz=55,SNR=5.4						
SOEI	**Soe**	**57.85**	**279**	P	**P**	**17 33 41.4**	**-0.5**
QSPA	**South Pole Qui**	**57.87**	**180**	P	**P**	**17 33 43.7**	**+2.4**
	comp=Z,15nm,1.0s,baz=329,slow=0.8,SNR=56						
QSPA	**South Pole Qui**	**57.87**	**180**	P	**P**	**17 33 40.9**	**-0.4**
MAW	**Mawson**	**70.67**	**201**	P	**P**	**17 35 07.0**	**+2.1**
	baz=71,SNR=5.1						
MAW	**Mawson**	**70.67**	**201**	P	**P**	**17 35 07.1**	**+2.1**
	comp=Z,9.9nm,1.1s,baz=130,slow=4.6,SNR=7.1						
MAW	**Mawson**	**70.67**	**201**	P	**P**	**17 35 05.2**	**+0.3**
SYO	**Syowa Base**	**75.37**	**193**	*e*P	**P**	**17 35 32.4**	**-0.4**
SYO	**Syowa Base**	**75.37**	**193**	*e*/X	P	17 35 42.0	+9.2
SNAA	**Sanae**	**76.31**	**178**	P	**P**	**17 35 39.2**	**+0.9**
SNAA	**Sanae**	**76.31**	**178**	P	**P**	**17 35 38.4**	**+0.2**
SNAA				IAmb	IAmb	17 35 53.9	
	comp=Z,19nm,1.0s						
VNA3	**Neumayer Olymp**	**76.46**	**176**	P	**P**	**17 35 39.8**	**+0.8**
VNA1	**Neumayer--Stat**	**77.12**	**176**	P	**P**	**17 35 44.0**	**+1.2**
MJAR	**Matsushiro Arr**	**79.88**	**325**	LR	LR	18 07 10.0	
	comp=Z,23nm,20.8s,baz=5.0,slow=33						
PLCA	**Paso Flores**	**81.10**	**133**	P	**P**	**17 36 06.2**	**+1.0**
	comp=Z,5.8nm,0.8s,baz=236,slow=6.2,SNR=14						
PLCA				LR	LR	18 04 55.5	
	comp=Z,134nm,19.4s,baz=244,slow=30						
PLCA	**Paso Flores**	**81.10**	**133**	P	**P**	**17 36 04.7**	**-0.5**
PLCA				IAmb	IAmb	17 36 07.4	
	comp=Z,26nm,1.4s						
EFI	**East Falkland**	**81.13**	**147**	P	**P**	**17 36 04.0**	**-1.0**
KSRS	**Korea Array**	**85.89**	**320**	LR	LR	18 10 04.0	
	comp=Z,29nm,21.0s,baz=104,slow=32						
ISA	**Isabella, Lake**	**87.45**	**44**	P	**P**	**17 36 38.5**	**+1.2**
ISA				IAmb	IAmb	17 36 39.7	
	comp=Z,16nm,1.4s						
ISA	**Isabella, Lake**	**87.45**	**44**	P	**P**	**17 36 38.8**	**+1.5**
	baz=227						
NJ2	**Nanjing**	**87.61**	**311**	*e*P	**P**	**17 36 40.3**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PETK	**Petropavlovsk-**	**87.65**	**345**	P	**P**	**17 36 38.1**	**+0.5**
	comp=Z,4.0nm,0.8s,baz=171,slow=10,SNR=4.7						
PETK				LR	LR	18 14 22.3	
	comp=Z,28nm,18.1s,baz=69,slow=35						
PETK	**Petropavlovsk-**	**87.65**	**345**	P	**P**	**17 36 37.9**	**+0.2**
LRMC	**Laurel Mtn Rad**	**87.80**	**45**	P	**P**	**17 36 40.0**	**+0.9**
	baz=227						
BC3	**Big Chuckawall**	**87.95**	**48**	P	**P**	**17 36 41.5**	**+1.7**
	baz=229						
CFA	**Coronel Fontan**	**87.97**	**126**	P	**P**	**17 36 40.4**	**+0.3**
	comp=Z,5.3nm,0.9s,baz=243,slow=2.3,SNR=9.3						
CMB	**Columbia Colle**	**87.99**	**42**	P	**P**	**17 36 40.6**	**+0.9**
CMB				IAmb	IAmb	17 36 44.9	
	comp=Z,6.4nm,1.1s						
O02D	**Mt. Diablo Mer**	**88.19**	**39**	P	**P**	**17 36 42.8**	**+2.1**
	baz=224						
GSC	**Goldstone, Bar**	**88.21**	**46**	P	**P**	**17 36 42.0**	**+1.0**
GSC				IAmb	IAmb	17 36 46.6	
	comp=Z,14nm,1.4s						
MPMC	**Manual Prospec**	**88.31**	**45**	P	**P**	**17 36 43.0**	**+1.5**
	baz=227						
IRM	**Iron Mountain**	**88.47**	**47**	P	**P**	**17 36 44.2**	**+2.1**
	baz=229						
USRK	**Ussuriysk Ar.**	**88.81**	**326**	P	**P**	**17 36 46.2**	**+2.8**
	comp=Z,1.9nm,0.8s,baz=122,slow=5.2,SNR=2.5						
USRK	**Ussuriysk Ar.**	**88.81**	**326**	P	**P**	**17 36 43.7**	**+0.3**
WAKR	**Walker**	**88.85**	**42**	P	**P**	**17 36 45.2**	**+1.2**
WAKR				IAmb	IAmb	17 36 46.4	
	comp=Z,14nm,1.4s						
NVAR	**

MMAI	**Mount Meron Ar**	**152.13**	**281**	PKPbc	**PKiKP**	**17 43 46.6**	**+0.8**
	comp=Z,1.6nm,0.4s,baz=90,slow=8.3,SNR=5.9						
AKASG	**Malin Array Be**	**152.88**	**321**	PKPbc	**PKiKP**	**17 43 46.8**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=55,slow=2.6,SNR=7.7						
AKASG	**Malin Array Be**	**152.88**	**321**		**PKPbc**	**17 43 46.0**	**-0.5**
BR131	**Keskin Array S**	**153.62**	**295**		**PKPbc**	**17 43 48.3**	**-0.4**
BRTR	**Keskin Array B**	**153.62**	**295**	PKPbc	**PKiKP**	**17 43 50.4**	**+1.6**
	comp=Z,0.6nm,0.5s,baz=150,slow=4.6,SNR=6.6						
BRTR	**Keskin Array B**	**153.62**	**295**		**PKPbc**	**17 43 47.9**	**-0.8**
DBIC	**Dimbokro**	**153.71**	**164**	PKPbc	**PKiKP**	**17 43 50.0**	**+0.5**
	comp=Z,3.9nm,1.0s,baz=197,slow=9.4,SNR=2.9						
DBIC				PKPab	**PKPab**	**17 44 03.9**	**+1.9**
	comp=Z,3.4nm,0.6s,baz=181,slow=4.3,SNR=6.2						
DBIC	**Dimbokro**	**153.71**	**164**		**PKPbc**	**17 43 49.1**	**-0.3**
DBIC					**PKPab**	**17 44 04.2**	**+2.3**
MLR	**Muntele Rosu**	**157.40**	**313**	PKPab	**PKPab**	**17 44 19.6**	**+2.3**
	comp=Z,1.4nm,0.7s,baz=69,slow=18,SNR=3.3						
MLR	**Muntele Rosu**	**157.40**	**313**		**PKPab**	**17 44 19.3**	**+2.0**
KOLS	**Kolonicke sedl**	**157.55**	**324**	*e*	PKPdf	17 43 55.7	+10
DPC	**Dobruska-Polom**	**159.11**	**334**	*e*PKPAB	**PKPab**	**17 44 30.6**	**+6.2**
CLL	**Collm**	**159.37**	**341**	*e*PKPab	**PKPab**	**17 44 27.0**	**+1.6**
BRG	**Berggiesshubel**	**159.48**	**339**	*e*PKP	**PKPab**	**17 44 30.3**	**+4.4**
	comp=Z,5.2nm,1.1s						
VYHS	**Vyhne**	**159.50**	**327**	*e*PKP	**PKPab**	**17 44 26.8**	**+0.7**
VYHS				*e*		17 44 41.3	
TORD	**Torodi Ar. Bea**	**160.99**	**178**	PKPab	**PKPab**	**17 44 33.8**	**+0.6**
	comp=Z,3.4nm,0.7s,baz=179,slow=5.4,SNR=14						
KHC	**Kasperske Hory**	**161.11**	**337**	*e*PKPAB	**PKPab**	**17 44 31.1**	**-2.0**
KHC				*ex*	x	17 44 47.8	
CONA	**Conrad Observa**	**161.24**	**331**	*i* PKPab	**PKPab**	**17 44 33.8**	**0.0**
	comp=Z,10nm,1.4s						
GERES	**GERESS Array B**	**161.31**	**336**	PKPab	**PKPab**	**17 44 33.5**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=44,slow=4.1,SNR=5.3						
GERES	**GERESS Array B**	**161.31**	**336**		**PKPab**	**17 44 33.9**	**-0.1**
MYKA	**Terra Mystica**	**163.18**	**332**	*i* pPKPab	**PKPab**	**17 44 44.0**	**+1.8**
	comp=Z,4.0nm,0.8s						
WATA	**Walderalm**	**163.33**	**337**	*i* PKPab	**PKPab**	**17 44 43.0**	**0.0**
	comp=Z,8.5nm,1.2s						
WTTA	**Wattenberg**	**163.37**	**337**	*i* pPKPab	**PKPab**	**17 44 45.8**	**+2.6**
	comp=Z,6.9nm,1.0s						
RETA	**Reutte**	**163.45**	**339**	*i* PKPab	**PKPab**	**17 44 43.5**	**+0.1**
	comp=Z,11nm,1.3s						
MOTA	**Moosalm**	**163.47**	**338**	*i* PKPab	**PKPab**	**17 44 42.0**	**-1.6**
	comp=Z,8.4nm,1.5s						
ABTA	**Abfaltersbach**	**163.51**	**334**	*i* pPKPab	**PKPab**	**17 44 44.9**	**+1.1**
	comp=Z,6.6nm,0.9s						
SQTA	**Sankt Quirin**	**163.55**	**338**	*i* PKPab	**PKPab**	**17 44 42.4**	**-1.5**
	comp=Z,9.6nm,1.4s						
FETA	**Feichten**	**163.88**	**339**	*i* pPKPab	**PKPab**	**17 44 47.4**	**+2.0**
	comp=Z,5.8nm,1.3s						

*SNET **14** 17:28:45.6±4.2, 13°.11N×89°.64W, h29km±20km, MD2.8, ML3.3*

*GCG **14** 17:28:49.3±0.4, 13°.32N×89°.79W, h8km±29km, MD3.6*

ISC 14 17:28:45.8±1.9**, 13°.11N**±0°.10×**89°.63W**±0°.05**, h21**km±5km**, n15**, σ0°60/23**, 1C-1D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**0.72**	**0**	*e*P		**Pb**	**17 29 00.0**	**+0.2**
SBLS				*e*S		**Sn**	**17 29 10.6**	**-1.1**
SNJE	**San Jose**	**0.75**	**1**	*e*P		**Pn**	**17 29 02.0**	**+0.6**
LFU	**La Fuente**	**0.81**	**38**	*i* P		**Pn**	**17 29 01.6**	**-0.4**
LFU				⇓*e*S		**Sn**	**17 29 13.1**	**-0.3**
FAME	**Alcalda de S**	**0.82**	**332**	*e*P		**Pb**	**17 29 01.1**	**-0.3**
FAME				*e*S		**Sb**	**17 29 11.8**	**-0.2**
COEG	**Centro de Oper**	**0.88**	**55**	*e*P		**Pb**	**17 29 02.6**	**+0.2**
COEG				*e*S		**Sn**	**17 29 14.8**	**-0.5**
PAVA	**Las Pavas**	**0.90**	**48**	*e*P		**Pn**	**17 29 03.3**	**0.0**
PAVA				*e*S		**Sn**	**17 29 15.8**	**+0.1**
TECA	**Tecapa**	**1.16**	**71**	*e*P		**Pn**	**17 29 06.2**	**-0.8**
MTO3	**Montecristo**	**1.31**	**11⇑**	*e*P		**Pb**	**17 29 10.2**	**+0.4**
PACA	**Pacayal**	**1.32**	**74**	*e*P		**Pn**	**17 29 09.3**	**+0.2**
PACA				*e*S		**Sb**	**17 29 26.9**	**+0.6**
IXG	**Ixpaco**	**1.32**	**323**	*e*P		**Pn**	**17 29 08.9**	**-0.2**
VSM	**San Miguel**	**1.35**	**76**	*e*P		Pn	17 29 02.8	-6.9
LCND	**La Caada**	**1.70**	**83**	*e*P		**Pn**	**17 29 14.1**	**-0.1**
LCND				*e*S		**Sn**	**17 29 35.8**	**+0.3**
LCND				IAML			17 29 43.4	
	comp=Z,294nm,0.3s							
CNCH	**Conchagua**	**1.75**	**84**	*e*P		**Pn**	**17 29 15.1**	**0.0**
CNCH				*e*S		**Sb**	**17 29 38.7**	**-0.2**
FUG	**Fuego 3**	**1.78**	**318**	*e*P		**Pb**	**17 29 16.7**	**-1.1**
FUG				*e*S		**Sn**	**17 29 37.8**	**+0.2**
STG3	**Santiaguito 3,**	**2.47**	**310**	*e*P		**Pn**	**17 29 26.4**	**+1.4**

*MDD **14** 17:28:56.1±0.6, 35°.34N×0°.70W, h13km±7km, mb4.0/23, Error ellipse: s-maj=10.5km s-min=4.2km az=171.0, PRXIMO*

*CRAAG **14** 17:28:57.0, 35°.42N×0°.60W, Ml3.5*

*CNRM **14** 17:29:00.5, 35°.54N×0°.85W, h22km*

ISC 14 17:28:56.1±1.3**, 35°.42N**±0°.04×**0°.70W**±0°.03**, h4**km±12km**, n54**, σ1°42/80**, 1D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
OTSS	**Djebel Tessala**	**0.16**	**209**	P		**Pg**	**17 28 59.0**	**-0.3**
OTSS	**Djebel Tessala**	**0.16**	**209**	P		**Pg**	**17 28 59.0**	**-0.3**
USTO	**Oran**	**0.33**	**21**	P		**Pb**	**17 29 04.0**	**-0.6**
USTO	**Oran**	**0.33**	**21**	P		**Pb**	**17 29 04.0**	**-0.6**
ODJA	**Bouhanifia**	**0.46**	**102**	P		**Pg**	**17 29 04.0**	**-0.9**
ODJA	**Bouhanifia**	**0.46**	**102**	P		**Pg**	**17 29 04.0**	**-0.9**
OJBR	**Djebel Berber**	**0.87**	**79**	P		Pg	17 29 00.0	-13
OJGS	**Djebel Guires**	**1.19**	**86**	P		**Pn**	**17 29 21.9**	**+2.3**
OKGL	**Djebel Kef Gue**	**1.25**	**60**	P		Pg	17 29 10.0	-10
OKGL	**Djebel Kef Gue**	**1.25**	**60**	P		**Pg**	**17 29 18.6**	**-1.5**
	47nm,0.1s,SNR=7.9							
OKGL				S		**Sn**	**17 29 37.6**	**-0.2**
	74nm,0.1s,SNR=4.0							
GOG	**Mont Gurugu**	**1.89**	**265**	P		**Pn**	**17 29 28.3**	**-1.0**
GOG				S		**Sn**	**17 29 50.9**	**-2.6**
ENIJ	**Nijar**	**1.97**	**322**	⇓P		**Pn**	**17 29 30.0**	**-0.3**
	20nm,0.2s,SNR=18							
ENIJ				S		**Sn**	**17 29 54.4**	**-1.0**
	42nm,0.2s,SNR=7.9							
CART	**Cartagena**	**2.17**	**354**	*e*P		**Pn**	**17 29 34.0**	**+0.9**
CART				*e*S		**Sn**	**17 29 55.8**	**-4.6**
CART				*e*			17 31 15.9	
CART	**Cartagena**	**2.17**	**354**	P		**Pn**	**17 29 34.0**	**+0.9**
CART				S		**Sn**	**17 29 55.8**	**-4.6**
EBER	**Berja**	**2.30**	**310**	P		**Pn**	**17 29 34.9**	**-0.1**
	12nm,0.3s,SNR=17							
EBER				S		**Sn**	**17 30 04.0**	**+0.1**
	16nm,0.2s,SNR=7.7							
EMUR	**La Murta**	**2.45**	**350**	P		**Pn**	**17 29 36.6**	**-0.3**
	12nm,0.3s,SNR=11							
EMUR				S		**Sn**	**17 30 05.1**	**-2.3**
	14nm,0.2s,SNR=16							
TDRA	**Tendrara**	**2.62**	**205**	P		**Pn**	**17 29 39.3**	**-0.2**
TDRA				S		**Sg**	**17 30 21.6**	**+1.2**
PALE	**Palemas**	**2.66**	**266**	P		**Pn**	**17 29 40.2**	**+0.5**
PALE				S		**Sn**	**17 30 11.5**	**-1.0**
AKLM	**AKL**	**2.75**	**252**	P		**Pn**	**17 29 41.8**	**+0.7**
AKLM				S		**Sn**	**17 30 14.6**	**-0.3**
ELGU	**Los Guajares,**	**2.77**	**302**	P		**Pn**	**17 29 40.8**	**-0.6**
	4.7nm,0.2s,SNR=7.9							
ELGU				S		**Sn**	**17 30 14.3**	**-1.0**
	20nm,0.3s,SNR=7.9							
GORA	**Gorafe**	**2.79**	**318**	P		**Pn**	**17 29 41.6**	**0.0**
	13nm,1.5s,SNR=7.9							
GORA				S		**Sn**	**17 30 16.9**	**+1.2**
	24nm,2.1s,SNR=7.9							
EQUE	**Quentar**	**2.84**	**310**	P		**Pn**	**17 29 42.4**	**+0.1**
	12nm,0.2s,SNR=24							
EQUE				S		**Sn**	**17 30 18.2**	**+1.2**
	1.7nm,0.1s							
EQES	**Quesada**	**3.05**	**322**	P		**Pn**	**17 29 46.1**	**+0.9**
	31nm,0.3s,SNR=75							
EQES				S		**Sn**	**17 30 23.6**	**+1.5**
	58nm,0.3s,SNR=77							
SESP	**Santiago Espad**	**3.07**	**332**	P		**Pn**	**17 29 46.4**	**+0.8**
	24nm,0.2s,SNR=7.9							
SESP				S		**Sn**	**17 30 25.0**	**+2.1**
	32nm,0.2s,SNR=7.9							
SESP	**Santiago Espad**	**3.07**	**332**	P		**Pn**	**17 29 43.9**	**-1.7**
SESP				S		**Sn**	**17 30 24.4**	**+1.6**
EGOR	**Sierra Gorda,**	**3.23**	**302**	P		**Pn**	**17 29 48.3**	**+0.6**
	3.6nm,0.3s,SNR=7.9							
EGOR				S		**Sn**	**17 30 27.6**	**+0.9**
	21nm,0.6s,SNR=7.9							
AFON	**Font Roja**	**3.24**	**2**	P		**Pn**	**17 29 47.5**	**-0.3**
	0.1nm,0.8s,SNR=7.9							
AFON				S		**Sn**	**17 30 28.5**	**+1.7**
	51nm,4.2s,SNR=7.9							
EBEN2	**Beniarda presa**	**3.27**	**7**	P		**Pn**	**17 29 48.4**	**+0.2**
	6.9nm,0.1s,SNR=7.9							
ETOB	**Tobarra**	**3.29**	**348**	P		**Pn**	**17 29 49.1**	**+0.7**
	6.5nm,0.1s,SNR=37							
ETOB				S		**Sn**	**17 30 29.1**	**+1.1**
	5.7nm,0.1s,SNR=162							
FIGM	**Figuig**	**3.32**	**188**	P		**Pg**	**17 29 58.8**	**-0.8**
FIGM				Lg		Lg	17 30 45.4	
EMIJ	**Mijas**	**3.49**	**290**	P		**Pn**	**17 29 50.4**	**-0.8**
	2.3nm,0.2s,SNR=7.9							
EMIJ				S		**Sn**	**17 30 32.2**	**-0.9**
	10nm,0.4s,SNR=7.9							
ECEU	**Ceuta**	**3.84**	**278**	S		**Sn**	**17 30 42.1**	**+0.6**
	38nm,1.7s,SNR=7.9							
LCRM	**LCR**	**3.84**	**244**	P		**Pb**	**17 30 03.0**	**-1.7**
LCRM				Lg		Lg	17 31 05.1	
EIBI	**Ibiza**	**3.95**	**24**	P		**Pn**	**17 29 57.1**	**-0.4**
	5.6nm,0.2s,SNR=7.9							
EIBI				S		**Sn**	**17 30 45.6**	**+1.3**
	19nm,0.3s,SNR=7.9							
IFR	**Ifrane**	**4.12**	**244**	*e*P		**Pg**	**17 30 16.9**	**+1.7**
IFR				*e*S		**Sg**	**17 31 10.4**	**+1.9**
EADA	**Adamuz**	**4.14**	**312**	P		**Pn**	**17 29 59.9**	**-0.3**
	1.3nm,0.2s,SNR=7.9							
EADA				S		**Sn**	**17 30 50.7**	**+1.5**
	0.6nm,0.1s,SNR=7.9							
MDT	**Midelt**	**4.16**	**232**	P		**Pn**	**17 30 01.3**	**+0.8**
MDT				Lg		Lg	17 31 11.0	
MD31	**MD31**	**4.22**	**234**	P		**Pn**	**17 30 01.4**	**0.0**
MD31				Lg		Lg	17 31 14.9	
HORN	**Hornachuelos**	**4.39**	**305**	P		**Pn**	**17 30 04.0**	**+0.4**
HORN				S		**Sn**	**17 30 51.6**	**-3.6**
ECAB	**El Cabril**	**4.62**	**306**	P		**Pn**	**17 30 07.0**	**+0.2**
	1.0nm,0.2s,SNR=7.9							
ECAB				S		**Sn**	**17 31 02.9**	**+2.0**
	0.4nm,0.2s,SNR=7.9							
EMOS	**Mosqueruela**	**4.94**	**2**	P		**Pn**	**17 30 12.4**	**+1.2**
	2.1nm,0.2s,SNR=8.2							
EMOS				S		**Sn**	**17 31 09.3**	**+0.5**
	0.1nm,0.3s,SNR=7.9							
ARF	**Arif**	**4.95**	**217**	Lg		Lg	17 31 35.5	
ESDC	**Sonseca Array**	**4.97**	**330**	P		**Pn**	**17 30 12.1**	**+0.5**
	2.2nm,0.2s,baz=150,slow=13,SNR=9.9							
ESDC				S		**Sn**	**17 31 11.2**	**+1.6**
	6.1nm,0.7s,baz=148,slow=22,SNR=9.9							
PAB	**San Pablo**	**5.03**	**326**	P		**Pn**	**17 30 13.3**	**+0.8**
	5.2nm,0.4s,SNR=7.9							
PAB				S		**Sn**	**17 31 11.4**	**+0.3**
	0.9nm,0.2s,SNR=7.9							
ETOS	**Mallorca**	**5.16**	**32**	P		**Pn**	**17 30 13.8**	**-0.3**
	0.6nm,0.2s,SNR=7.9							
ETOS				S		**Sn**	**17 31 16.1**	**+2.1**
	0.3nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**5.34**	**298**	P		**Pn**	**17 30 16.4**	**-0.3**
	0.4nm,0.2s,SNR=7.9							
EMIN				S		**Sn**	**17 31 19.5**	**+0.9**
	0.3nm,0.2s,SNR=7.9							
EGRO	**El Granado**	**5.86**	**293**	P		**Pn**	**17 30 23.3**	**-0.4**
	9.0nm,1.4s,SNR=7.9							
GUD	**Guadarrama**	**5.88**	**333**	P		**Pn**	**17 30 25.3**	**+1.1**
	1.0nm,0.3s,SNR=7.9							
PVAQ	**Vaqueiros**	**5.99**	**291**	*e*P		**Pn**	**17 30 27.5**	**+1.9**
PVAQ				*e*S		**Sn**	**17 31 32.0**	**-2.7**
PVAQ				A		A	17 31 35.6	
	3.4nm,0.7s							
EBAD	**Badajoz**	**6.04**	**305**	P		**Pn**	**17 30 26.7**	**+0.4**
	0.8nm,0.2s,SNR=5.0							
TZRR	**Tazzarine**	**6.17**	**223**	Lg		Lg	17 32 11.0	
EPLA	**Plasencia**	**6.29**	**319**	P		**Pn**	**17 30 30.3**	**+0.5**
	0.9nm,0.2s,SNR=7.9							
ZGR	**Zagora**	**6.72**	**219**	Lg		Lg	17 32 31.9	
MVO	**Moncorvo**	**7.59**	**321**	P		**Pn**	**17 30 48.5**	**+1.0**
	5.7nm,3.2s,SNR=7.9							

*NIED **14** 17:30:00, 38°.30N×142°.30E, h26km, Mw3.8 Best double couple: M0≈6.47000×10^14 NP1:φs146.00000°, δ71.00000°, λ-52.00000°. NP2:φs258.00000°, δ42.00000°, λ-151.00000°.*

*IDC **14** 17:30:29.8±1.1, 38°.14N×142°.62E, h0km, mb3.5/7, mb1 3.8/10, mb1mx3.6/51, mbtmp3.6/10, ML3.2/3, MS3.1/5, Ms1 3.1/5, ms1mx2.7/34, Error ellipse: s-maj=27.8km s-min=20.7km az=133.0*

*JMA **14** 17:30:33.2±0.1, 38°.26N×142°.35E, h36km±2km, M3.9*

*NEIC **14** 17:30:33.2±1.6, 38°.11N±0°.08×142°.7E±0°.1, h35km±4km, mb4.7/8, Error ellipse: s-maj=14.9km s-min=10.3km az=113.0*

ISC 14 17:30:30.9±1.8**, 38°.22N**±0°.04×**142°.43E**±0°.06**, h11**km±10km**, n56**, σ1°74/61**, mb3.8/12**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.77**	**277**	P		**Pb**	**17 30 46.5**	**+0.2**
JIKH				S		**Sg**	**17 30 55.5**	**-0.3**
JIO	**Ouri**	**0.88**	**286**	P		**Pg**	**17 30 48.3**	**+0.3**
JIO				S		**Sg**	**17 30 58.7**	**-0.8**
JKMT	**Kesennumamotoy**	**0.95**	**308**	P		**Pg**	**17 30 49.5**	**+0.2**
JKMT				S		**Sg**	**17 31 00.9**	**-0.9**
OFUJ	**Ofunato**	**1.05**	**325**	P		**Pb**	**17 30 50.7**	**-0.3**
OFUJ				S		**Sb**	**17 31 03.1**	**-1.7**
JMK	**Ichinoseki**	**1.20**	**308**	P		**Pn**	**17 30 53.1**	**-0.5**
JMM	**Marumori**	**1.34**	**255**	P		**Pn**	**17 30 54.7**	**-0.9**
JMM				S		**Sb**	**17 31 10.3**	**-2.9**
JOU	**Okura**	**1.40**	**276**	P		**Pn**	**17 30 56.3**	**-0.1**
JOU				S		**Sn**	**17 31 13.3**	**-1.6**
JFK	**Kawauchi**	**1.50**	**236**	P		**Pn**	**17 30 56.8**	**-1.0**
JFK				S		**Sn**	**17 31 13.6**	**-3.8**
JOM	**Ohasama**	**1.54**	**325**	P		**Pn**	**17 30 58.3**	**0.0**
JOM				S		**Sn**	**17 31 16.6**	**-1.6**
JYK	**Kaneyama**	**1.77**	**294**	P		**Pn**	**17 31 01.7**	**+0.2**
JYK				*e*S		**Sn**	**17 31 23.5**	**-0.4**
JFT	**Otama**	**1.80**	**248**	P		**Pn**	**17 31 02.5**	**+0.6**
JFT				S		**Sn**	**17 31 23.4**	**-1.4**
JRG	**Rokugo**	**1.83**	**310**	P		**Pn**	**17 31 03.0**	**+0.7**
JYS	**Shirataka**	**1.86**	**271**	eS		**Sn**	**17 31 25.4**	**-0.9**
MJAR	**Matsushiro Arr**	**3.76**	**245**	Pn		**Pn**	**17 31 31.7**	**+2.9**
	0.7nm,0.3s,baz=57,slow=12,SNR=34							
MJAR				Sn		**Sn**	**17 32 18.0**	**+4.9**
	0.5nm,0.3s,baz=357,slow=31,SNR=4.9							
MJAR				LR		LR	17 32 28.9	
	comp=Z,26nm,21.6s,baz=50,slow=31							
MJAR	**Matsushiro Arr**	**3.76**	**245**			**Pn**	**17 31 31.2**	**+2.4**
MAJO	**Matsushiro**	**3.76**	**245**			**Pn**	**17 31 31.9**	**+3.1**
MAT	**Matsushiro**	**3.76**	**245**	P		**Pn**	**17 31 31.8**	**+2.9**
MAT				S		**Sn**	**17 32 17.0**	**+3.9**
MJB9	**Matsu-Tunnel**	**3.76**	**245**			**Pn**	**17 31 32.0**	**+3.1**
ERM	**Erimo**	**3.83**	**8**	Pn		**Pn**	**17 31 30.4**	**+0.6**
ERM						**Sn**	**17 32 14.5**	**-0.3**
INU	**Inuyama**	**5.21**	**238**			**Pn**	**17 31 50.4**	**+1.7**
JHJ2	**Mitsune**	**5.52**	**203**	Pn		**Pn**	**17 31 50.3**	**-2.8**
JKA	**Kamikawa-asahi**	**5.89**	**1**			**Pn**	**17 31 59.6**	**+1.5**
JKA						**Sn**	**17 33 05.2**	**-0.3**
ASAJ	**Asahikawa**	**5.89**	**1**	Pn		**Pn**	**17 31 59.6**	**+1.5**
	0.4nm,0.3s,baz=206,slow=16,SNR=9.0							
ASAJ				Sn		**Sn**	**17 33 05.2**	**-0.4**
	1.3nm,0.3s,baz=298,slow=32,SNR=6.5							
USRK	**Ussuriysk Ar.**	**9.88**	**311**	LR		LR	17 36 11.6	
	comp=Z,93nm,20.0s,baz=21,slow=34							
JNU	**Nakatsue**	**10.68**	**245**	Pn		**Pn**	**17 33 06.7**	**+2.8**
	0.3nm,0.3s,baz=94,slow=7.0,SNR=4.0							
JNU				LR		LR	17 37 23.2	
	comp=Z,93nm,18.9s,baz=73,slow=38							
JNU	**Nakatsue**	**10.68**	**245**			**Pn**	**17 33 05.4**	**+1.4**
KSRS	**Korea Array**	**11.50**	**271**	LR		LR	17 37 50.9	
	comp=Z,31nm,20.5s,baz=346,slow=38							
YAK	**Yakutsk**	**25.10**	**346**	P		**P**	**17 35 56.1**	**+0.8**
YAK				IAmb		IAmb	17 35 57.0	
	comp=Z,3.7nm,0.5s							
SONM	**Songino Array**	**27.82**	**302**	P		**P**	**17 36 23.2**	**+3.0**
	comp=Z,0.3nm,0.5s,baz=101,slow=8.9,SNR=3.1							
SONM	**Songino Array**	**27.82**	**302**	P		**P**	**17 36 21.9**	**+1.7**
H11N2	**WAKE ISLAND Hy**	**28.10**	**124**	T		T	18 06 03.5	
	baz=316,slow=75,SNR=60							
H11N1	**WAKE ISLAND Hy**	**28.11**	**124**	T		T	18 06 11.8	
	baz=316,slow=75,SNR=46							
H11N3	**WAKE ISLAND Hy**	**28.12**	**124**	T		T	18 06 08.5	
	baz=316,slow=75,SNR=35							
H11S1	**WAKE ISLAND Hy**	**28.86**	**126**	T		T	18 07 39.9	
	baz=318,slow=76,SNR=23							
H11S3	**WAKE ISLAND Hy**	**28.87**	**126**	T		T	18 07 39.4	
	baz=318,slow=76,SNR=19							
H11S2	**WAKE ISLAND Hy**	**28.88**	**126**	T		T	18 07 43.0	
	baz=318,slow=76,SNR=19							
TIXI	**Tiksi**	**34.22**	**352**	LR		LR	17 54 33.4	
	comp=Z,24nm,18.2s,baz=161,slow=42							
ZALV	**Zalesovo Beam**	**41.73**	**311**	P		**P**	**17 38 20.6**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=102,slow=6.3,SNR=2.5							
ZALV	**Zalesovo Beam**	**41.73**	**311**	P		**P**	**17 38 20.0**	**+0.4**
MK31	**Makanchi Array**	**44.19**	**301**	P		**P**	**17 38 40.3**	**+0.5**
MKAR	**Makanchi Array**	**44.19**	**301**	P		**P**	**17 38 40.5**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=87,slow=9.4,SNR=5.2							
MKAR	**Makanchi Array**	**44.19**	**301**	P		**P**	**17 38 40.1**	**+0.4**
KURK	**Kurchatov**	**45.85**	**307**	P		**P**	**17 38 52.6**	**-0.3**
KURK				IAmb		IAmb	17 39 04.2	
	comp=Z,3.0nm,0.7s							
HOM	**Homer**	**46.06**	**40**	P		**P**	**17 38 52.6**	**-1.8**
BWN	**Browne**	**46.96**	**34**	P		**P**	**17 38 59.8**	**-1.6**
BWN				IAmb		IAmb	17 39 08.0	
	comp=Z,33nm,1.0s							
ILAR	**Eielson Array**	**48.06**	**33**	P		**P**	**17 39 10.8**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=268,slow=5.9,SNR=5.7							
ILAR	**Eielson Array**	**48.06**	**33**	P		**P**	**17 39 10.2**	**+0.2**
ABKAR	**Akbulak array**	**57.80**	**310**	P		**P**	**17 40 21.7**	**-0.3**
ABKAR	**Akbulak array**	**57.80**	**310**	P		**P**	**17 40 22.4**	**+0.3**
ABKAR				IAmb		IAmb	17 40 57.3	
	comp=Z,3.8nm,1.5s							
WRA	**Warramunga Arr**	**58.35**	**189**	P		**P**	**17 40 25.8**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=2.4,slow=7.4,SNR=3.3							
YKA	**Yellowknife Ar**	**62.38**	**31**	P		**P**	**17 40 53.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=298,slow=6.4,SNR=4.6							
FINES	**FINESS Array B**	**68.14**	**332**	P		**P**	**17 41 30.4**	**-0.2**
NIUE	**Niue**	**72.44**	**133**	P		**P**	**17 41 55.1**	**-2.3**
NIUE				IAmb		IAmb	17 41 56.7	
	comp=Z,329nm,1.6s							
NVAR	**Mina Array Bea**	**73.63**	**54**	LR		LR	18 08 27.1	
	comp=Z,56nm,21.7s,baz=222,slow=31							
TXAR	**Lajitas Array**	**88.76**	**53**	P		**P**	**17 43 25.8**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=298,slow=3.8,SNR=3.3							
TXAR	**Lajitas Array**	**88.76**	**53**	P		**P**	**17 43 24.3**	**-0.7**

*MDD **14** 17:53:08.2±0.8, 36°.39N×1°.52E, h12km±12km, mb4.0/18, Error ellipse: s-maj=13.5km s-min=5.0km az=157.0, PRXIMO*

*CRAAG **14** 17:53:09.3, 36°.63N×1°.46E, Ml3.1*

ISC 14 17:53:07.8±1.1**, 36°.32N**±0°.05×**1°.58E**±0°.04**, h15**km±7km**, n43**, σ1°92/63**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	**0.05**	**232**	P		**Pg**	**17 53 11.6**	**+0.9**
ECHA	**Ech Chlef**	**0.24**	**225**	P		**Pg**	**17 53 13.3**	**+0.2**
ECHF	**Ech Chlef**	**0.25**	**230**	P		**Pg**	**17 53 13.3**	**0.0**
EANR	**'Ain N'Sour**	**0.54**	**226**	P		**Pb**	**17 53 19.6**	**+0.6**
EANR	**'Ain N'Sour**	**0.54**	**226**	P		**Pb**	**17 53 19.6**	**+0.6**
OKGL	**Djebel Kef Gue**	**0.81**	**250**	P		**Pg**	**17 53 22.6**	**-0.9**
	335nm,0.3s,SNR=7.9							
OKGL				S		**Sg**	**17 53 33.1**	**-1.0**
	337nm,0.2s,SNR=7.9							
ETRT	**Tiaret**	**0.95**	**194**	P		**Pb**	**17 53 26.0**	**-0.2**
ETRT	**Tiaret**	**0.95**	**194**	P		**Pb**	**17 53 26.0**	**-0.2**
EMHD	**Djebel Mahouad**	**1.12**	**96**	P

JMA **14** *18:38:10.4±0.1,22.2′.87N×120.0′.99E,h20km±1km,M4.6*
BJI **14** *18:38:11.5±0.0,22.2′.84N×121.1′.20E,h10km,mB4.9/47, mb4.4/57,ML4.7/8,Ms4.7/64,Ms7.4/63*
IDC **14** *18:38:11.2±0.6,22.2′.77N×121.1′.29E,h0km,mb4.2/21, mb1 4.3/21,mb1mx4.3/34,mbtmp4.2/21,MS3.9/17, Ms1 3.9/17,ms1mx3.7/41,Error ellipse: s-maj=19.2km s-min=14.2km az=72.0*
TAP **14** *18:38:13.0,22.2′.89N×121.1′.08E,h8km,ML5.0,C*
ASIES **14** *18:38:12.7,22.2′.86N×121.1′.13E,h23km,MW4.4*
NEIC **14** *18:38:12.6±2.0,22.2′.90N±0.0′.04×121.1′.15E±0.0′.06,h3km±3km, mb4.8/106,ML4.8(TAP),Error ellipse: s-maj=8.1km s-min=6.0km az=78.0*
MOS **14** *18:38:13.3±0.9,22.2′.87N×121.1′.23E,h21km,mb4.9/20,Error ellipse: s-maj=17.5km s-min=7.3km az=121.8*
GCMT **14** *18:38:13.6±0.4,22.2′.90N±0.0′.02×121.1′.18E±0.0′.02,h19km±1km, MW4.7/73,Moment Tensor Solution. s6,c7; s73,c95; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-0.18±.09; Mθθ-0.75±.07; Mϕϕ0.92±.08; Mrθ0.63±.16; Mϕϕ-1.20±.06; Mϕr-0.45±.15; Best double couple: Mo1.64000×10^16^ NP1:ϕs199.00000°,δ64.00000°,λ2.00000°. NP2: ϕs108.00000°,δ88.00000°,λ154.00000°. Principal axes: T 1.8010, Plg20.0000°, Azm60.0000°; N -0.3220, Plg64.0000°, Azm284.0000°; P -1.4790, Plg17.0000°, Azm156.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 14 18:38:13.9±0.6,22.2′.89N±0.0′.01×121.1′.14E±0.0′.02,h10km±3km, n419,σ1ϕ52/498,mb4.7/99,MS4.0/22,41C-50D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWGBT	**Beinan** baz=181	**0.09**	**221**	P			**Pg**	**18 38 15.5**	**-0.8**
TWG	**Pinlang** baz=181	**0.09**	**226**	⇑*i*P			**Pg**	**18 38 15.5**	**-0.8**
TWG	baz=181			S			**Sg**	**18 38 16.9**	**-1.2**
TWG	**Pinlang**	**0.09**	**226**				**Pg**	**18 38 14.4**	**-1.9**
TTN	**Taitung** baz=155	**0.13**	**179**	⇓*i*P			**Pb**	**18 38 17.8**	**+0.9**
TTN	baz=155			S			**Sg**	**18 38 21.2**	**+2.3**
CHKT	**Chengkung** baz=51	**0.29**	**44**	⇑*i*P			**Pb**	**18 38 20.7**	**-0.6**
CHKT	baz=51			S			**Sb**	**18 38 26.4**	**+0.2**
ELDTW	**Lidau** baz=349	**0.32**	**339**	⇓*i*P			**Pg**	**18 38 19.4**	**-1.0**
ELDTW	baz=349			S			**Sg**	**18 38 23.4**	**-1.4**
ECL	**Taimali** baz=201	**0.34**	**211**	⇑*i*P			**Pg**	**18 38 19.2**	**-1.3**
ECL	baz=201			S			**Sg**	**18 38 23.2**	**-1.8**
FULB	**Fuli** baz=20	**0.34**	**24**	⇑*i*P			**Pg**	**18 38 21.1**	**+0.4**
FULB	baz=20			S			**Sb**	**18 38 27.5**	**-0.1**
TWH	**Lutao** baz=122	**0.35**	**120**	⇑*i*P			**Pb**	**18 38 22.3**	**0.0**
TWH	baz=122			S			**Sb**	**18 38 29.3**	**+1.3**
STYT	**Tauyuan** baz=312	**0.45**	**308**	⇓*i*P			**Pg**	**18 38 21.4**	**-1.3**
STYT	baz=312			S			**Sg**	**18 38 27.0**	**-1.7**
SLGT	**Liugui** baz=277	**0.47**	**283**	⇑*e*P			**Pg**	**18 38 21.6**	**-1.5**
SLGT	baz=277			S			**Sg**	**18 38 26.8**	**-2.5**
TWF1	**Yuli** baz=11	**0.48**	**17**	⇑*i*P			**Pg**	**18 38 22.4**	**-0.9**
TWF1	baz=11			S			**Sg**	**18 38 29.5**	**-0.3**
SSD	**Sandimen** baz=250	**0.49**	**254**	⇑*i*P			**Pg**	**18 38 21.6**	**-1.8**
SSD	baz=250			S			**Sg**	**18 38 26.7**	**-3.3**
YULB	**Yu-li** baz=9.0	**0.52**	**16**	⇑P			**Pg**	**18 38 22.9**	**-1.1**
YULB	baz=9.0			*e*S			**Sg**	**18 38 29.9**	**-1.1**
YULB	**Yu-li**	**0.52**	**16**				**Pg**	**18 38 22.9**	**-1.1**
MASBT	**Mashibuluo** baz=231	**0.55**	**240**	⇑P			**Pg**	**18 38 22.8**	**-1.7**
MASBT	baz=231			*e*S			**Sg**	**18 38 28.7**	**-2.9**
SGST	**Jiashian** baz=295	**0.55**	**291**	⇓*i*P			**Pg**	**18 38 22.8**	**-1.8**
SGST	baz=295			S			**Sg**	**18 38 30.1**	**-1.8**
EAST	**Anshuo** baz=211	**0.57**	**209**	⇑*i*P			**Pg**	**18 38 23.9**	**-1.1**
EAST	baz=211			S			**Sg**	**18 38 30.9**	**-1.6**
TAW	**Tawu** baz=199	**0.57**	**204**	⇓*i*P			**Pg**	**18 38 23.8**	**-1.2**
TAW	baz=199			S			**Sg**	**18 38 31.2**	**-1.3**
WTP	**Ta-pu** baz=309	**0.61**	**306**	⇓*i*P			**Pg**	**18 38 24.9**	**-0.7**
WTP	baz=309			S			**Sg**	**18 38 32.8**	**-0.8**
SGLT	**Jiouru** baz=257	**0.62**	**255**	⇑*i*P			**Pg**	**18 38 25.3**	**-0.7**
YUS	**Yu-Shan** baz=341	**0.63**	**344**	⇓*i*P			**Pg**	**18 38 25.0**	**-1.1**
TPUB	**Ta-pu** baz=314	**0.63**	**311**	⇓P			**Pg**	**18 38 25.4**	**-0.7**
TPUB	baz=314			S			**Sg**	**18 38 33.6**	**-0.7**
TPUB	**Ta-pu**	**0.63**	**311**				**Pg**	**18 38 24.4**	**-1.7**
EHY	**Hungye** baz=10.0	**0.64**	**15**	*e*P			**Pg**	**18 38 24.7**	**-1.6**
EHY	baz=10.0			S			**Sg**	**18 38 34.1**	**-0.6**
CHN1	**Nanshi** baz=305	**0.64**	**298**	⇓*i*P			**Pg**	**18 38 25.9**	**-0.4**
CHN1	baz=305			S			**Sg**	**18 38 35.2**	**+0.4**
HGSD	**Ruisui** baz=13	**0.66**	**23**	*e*P			**Pg**	**18 38 25.7**	**-0.9**
HGSD	baz=13			*e*S			**Sg**	**18 38 35.7**	**+0.5**
SSPT	**Xinbi** baz=222	**0.67**	**233**	P			**Pg**	**18 38 25.9**	**-0.9**
SSPT	baz=222			S			**Sg**	**18 38 34.8**	**-0.7**
TWM1	**Shoushan** baz=263	**0.67**	**265**	⇑*i*P			**Pg**	**18 38 26.5**	**-0.3**
SNST	**Tainan City** baz=306	**0.68**	**299**	⇓*i*P			**Pg**	**18 38 26.8**	**-0.3**
SNST	baz=306			S			**Sg**	**18 38 36.5**	**+0.5**
CHN4	**Tsaushan** baz=324	**0.69**	**312**	⇓*i*P			**Pg**	**18 38 26.7**	**-0.5**
CHN4	baz=324			*e*S			**Sg**	**18 38 36.4**	**+0.3**
ALS	**Alishan** baz=331	**0.70**	**333**	⇓P			**Pg**	**18 38 26.5**	**-0.9**
SCZT	**Fangliau** baz=226	**0.70**	**224**	⇑P			**Pg**	**18 38 26.1**	**-1.4**
TWK	**Hsinying** baz=304	**0.71**	**302**	⇓*i*P			**Pg**	**18 38 27.2**	**-0.5**
TWK	baz=304			S			**Sg**	**18 38 37.7**	**+0.7**
CHN3	**Shinhua** baz=285	**0.74**	**285**	⇓*i*P			**Pb**	**18 38 29.2**	**+0.3**
CHN3	baz=285			*e*S			**Sn**	**18 38 41.2**	**-0.6**
SNJT	**Kaohsiung City** baz=259	**0.76**	**260**	⇑*e*P			**Pb**	**18 38 28.9**	**-0.2**
SNJT	baz=259			*e*S			**Sn**	**18 38 41.8**	**-0.4**
EGFH	**Guangfu** baz=22	**0.82**	**18**	*e*P			**Pg**	**18 38 28.8**	**-0.9**
CHN5	**Tsauling** baz=331	**0.83**	**329**	⇓*i*P			**Pg**	**18 38 29.2**	**-0.7**
CHN5	baz=331			*e*S			**Sb**	**18 38 41.4**	**-0.3**
KAU	**Kaohsiung** baz=246	**0.83**	**248**	*e*P			**Pb**	**18 38 30.6**	**+0.2**
KAU	baz=246			*e*S			**Sn**	**18 38 44.3**	**+0.2**
WHYT	**Xinyi Township** baz=345	**0.85**	**342**	⇓*i*P			**Pg**	**18 38 29.6**	**-0.6**
TAI1	**Yung-k'ang** baz=280	**0.86**	**280**	*e*P			**Pb**	**18 38 31.2**	**+0.3**
VWDT	**VWDT** baz=2.0	**0.86**	**360**	⇓P			**Pg**	**18 38 29.2**	**-1.3**
VWDT	baz=2.0			*e*S			**Sg**	**18 38 41.5**	**-0.3**
WLCH	**Liuqiu** baz=223	**0.89**	**233**	⇑*e*P			**Pn**	**18 38 32.7**	**+0.3**
CHN2	**Minshiung** baz=318	**0.89**	**316**	⇓P			**Pg**	**18 38 30.9**	**-0.1**
CHN2	baz=318			*e*S			**Sb**	**18 38 43.9**	**+0.5**
CHY	**Chiayi** baz=314	**0.90**	**313**	⇓*i*P			**Pg**	**18 38 31.0**	**-0.2**
CHY	baz=314			S			**Sb**	**18 38 43.9**	**+0.2**
SSLB	**Suanglung** baz=352	**0.92**	**349**	⇓P			**Pg**	**18 38 29.8**	**-1.7**
SSLB	**Suanglung**	**0.92**	**349**				**Pg**	**18 38 29.8**	**-1.7**
SCLT	**Jiali** baz=288	**0.92**	**288**	*e*P			**Pg**	**18 38 31.7**	**0.0**
SCLT	baz=288			S			**Sn**	**18 38 45.7**	**-0.5**
LAY	**Lan-yu** baz=154	**0.92**	**156**	*e*P			**Pg**	**18 38 29.3**	**-2.3**
HEN	**Hengchun** baz=188	**0.95**	**203**	⇑*e*P			**Pg**	**18 38 31.5**	**-0.7**
WGK	**Gukeng** baz=328	**0.96**	**326**	⇓*i*P			**Pg**	**18 38 32.0**	**-0.4**
WGK	baz=328			*e*S			**Sb**	**18 38 45.7**	**+0.3**
ESL	**Shilin** baz=19	**0.96**	**16**	*e*P			**Pg**	**18 38 29.7**	**-2.7**
CHN8	**Yiju** baz=299	**0.97**	**298**	⇓*i*P			**Pg**	**18 38 32.1**	**-0.5**
CHN8	baz=299			S			**Sn**	**18 38 46.8**	**-0.7**
WDLH	**Douliu** baz=327	**0.97**	**325**	⇓*i*P			**Pg**	**18 38 32.6**	**0.0**
WDLH	baz=327			*e*S			**Sn**	**18 38 47.4**	**-0.2**
WLGB	**Puzi** baz=308	**0.97**	**307**	⇓P			**Pg**	**18 38 32.2**	**-0.4**
WLGB	baz=308			*e*S			**Sb**	**18 38 46.2**	**+0.3**
TWK1	**Hengchun** baz=184	**0.99**	**199**	⇑*e*P			**Pg**	**18 38 32.3**	**-0.6**
TWKBT	**Hengchun** baz=184	**0.99**	**198**	⇑P			**Pg**	**18 38 32.4**	**-0.5**
TSEB	**Hengchuen, Pin** baz=182	**1.01**	**193**	⇑P			**Pg**	**18 38 33.2**	**-0.1**
WJS	**Zhushan** baz=339	**1.01**	**338**	⇓*i*P			**Pg**	**18 38 33.2**	**0.0**
WJS	baz=339			S			**Sn**	**18 38 49.1**	**+0.7**
SMLT	**Sun Moon Lake** baz=357	**1.02**	**347**	⇓*i*P			**Pg**	**18 38 32.3**	**-1.2**
SMLT	baz=357			*e*S			**Sn**	**18 38 48.4**	**-0.4**
TYC	**Yuchr** baz=1.0	**1.05**	**345**	⇓P			**Pb**	**18 38 33.0**	**-1.2**
TYC	baz=1.0			S			**Sn**	**18 38 48.9**	**-0.5**
OWD	**Renai** baz=4.0	**1.06**	**2**	*e*P			**Pb**	**18 38 32.6**	**-1.9**
WNT	**Mingjian** baz=338	**1.07**	**337**	⇓*i*P			**Pb**	**18 38 34.4**	**-0.2**
WNT	baz=338			S			**Sn**	**18 38 50.4**	**+0.3**
ENLB	**Shoufeng** baz=39	**1.10**	**22**	*e*P			**Pb**	**18 38 31.6**	**-3.3**
WSF	**Szhu** baz=313	**1.13**	**312**	⇓P			**Pb**	**18 38 34.4**	**-1.1**
WSF	baz=313			S			**Sg**	**18 38 50.5**	**+0.1**
DPDB	**Guoxing** baz=2.0	**1.16**	**350**	*e*P			**Pb**	**18 38 35.4**	**-0.7**
DPDB	baz=2.0			*e*S			**Sg**	**18 38 51.7**	**+0.4**
HWA	**Hwalien** baz=37	**1.17**	**21**	*e*P			**Pb**	**18 38 35.3**	**-0.8**
CHGB	**Renai** baz=3.0	**1.17**	**1**	*e*P			**Pb**	**18 38 34.3**	**-2.0**
RLNB	**Erlin** baz=325	**1.23**	**324**	*e*P			**Pn**	**18 38 36.0**	**-1.2**
RLNB	baz=325			*e*S			**Sb**	**18 38 52.4**	**-0.9**
WMLT	**Mailiao** baz=318	**1.25**	**317**	*e*P			**Pn**	**18 38 35.7**	**-1.7**
WMLT	baz=318			*e*S			**Sb**	**18 38 53.5**	**-0.2**
WTCT	**Ta-ch'eng** baz=322	**1.26**	**321**	*e*P			**Pn**	**18 38 36.0**	**-1.6**
WTCT	baz=322			*e*S			**Sb**	**18 38 53.5**	**-0.5**
TWD	**Chiawan** baz=36	**1.26**	**19**	*e*P			**Pn**	**18 38 34.5**	**-3.0**
WCHH	**Zhanghua** baz=336	**1.30**	**336**	⇓*e*P			**Pn**	**18 38 37.8**	**-0.4**
WCHH	baz=336			*e*S			**Sg**	**18 38 57.5**	**+1.6**
TCU	**Taichung** baz=330	**1.33**	**341**	⇓*e*P			**Pn**	**18 38 38.4**	**-0.1**
NACB	**Ninganchiao** baz=33	**1.35**	**18**	⇑*e*P			**Pn**	**18 38 35.1**	**-3.6**
NACB	**Ninganchiao**	**1.35**	**18**				**Pn**	**18 38 38.0**	**-0.8**
ETLH	**Xiulin Townshi** baz=32	**1.35**	**13**	*e*P			**Pn**	**18 38 35.9**	**-3.0**
TDCB	**Techi** baz=13	**1.36**	**1**	*e*P			**Pn**	**18 38 38.2**	**-1.0**
TWT	**Tachien** baz=2.0	**1.36**	**1**	*e*P			**Pn**	**18 38 38.0**	**-1.1**
WHP	**Taichung City** baz=5.0	**1.40**	**353**	⇓*e*P			**Pb**	**18 38 39.8**	**-0.4**
WDGT	**Dungji** baz=286	**1.42**	**286**	*e*P			**Pn**	**18 38 37.7**	**-2.0**
WDGT	baz=286			*e*S			**Sn**	**18 38 55.6**	**-2.8**
TWQ1	**Liyutan** baz=330	**1.50**	**347**	⇓*i*P			**Pb**	**18 38 41.6**	**-0.2**
TWQ1	baz=330			S			**Sg**	**18 39 02.7**	**+0.7**
WDJ	**Dajia District** baz=343	**1.53**	**342**	⇓*e*P			**Pb**	**18 38 41.8**	**-0.5**
WDJ	baz=343			*e*S			**Sg**	**18 39 02.5**	**-0.5**
NNSH	**Datong** baz=9.0	**1.55**	**8**	*e*P			**Pn**	**18 38 41.1**	**-0.6**
NNS	**Nan Shan** baz=9.0	**1.56**	**8**	*e*P			**Pn**	**18 38 40.1**	**-1.8**
NSY	**Sanyi** baz=347	**1.56**	**347**	⇓*i*P			**Pb**	**18 38 42.8**	**-0.1**
NSY	baz=347			S			**Sg**	**18 39 05.0**	**+0.8**
PHUB	**P'eng-hu** baz=293	**1.58**	**294**	⇓*e*P			**Pn**	**18 38 40.1**	**-1.8**
PHUB	baz=293			*e*S			**Sn**	**18 38 58.8**	**-3.6**
PTSB	**Yuanli** baz=330	**1.61**	**346**	*e*P			**Pg**	**18 38 45.1**	**+0.5**
PTSB	baz=330			*e*S			**Sg**	**18 39 05.2**	**-0.3**
PNG	**Penghu** baz=295	**1.61**	**295**	⇓*e*P			**Pn**	**18 38 40.8**	**-1.6**
VCHM	**Qimei** baz=282	**1.61**	**282**	⇓P			**Pn**	**18 38 40.6**	**-1.8**
VCHM	baz=282			*e*S			**Sn**	**18 38 60.0**	**-3.3**
ENA	**Nanau** baz=21	**1.63**	**19**	*e*P			**Pn**	**18 38 39.5**	**-3.1**
NANB	**Nanao** baz=21	**1.63**	**20**	*e*P			**Pn**	**18 38 40.5**	**-2.2**
NMLH	**Miaoli** baz=350	**1.68**	**349**	*e*P			**Pn**	**18 38 43.8**	**+0.4**
NDT	**Datong Townshi** baz=26	**1.74**	**11**	*e*P			**Pn**	**18 38 44.5**	**+0.2**
NSTT	**Nanjuang** baz=341	**1.74**	**356**	*e*P			**Pn**	**18 38 44.6**	**+0.4**
NSTT	baz=341			*e*S			**Sg**	**18 39 09.9**	**-0.1**
LIOB	**Emei** baz=341	**1.76**	**356**	⇓*e*P			**Pn**	**18 38 44.8**	**+0.4**
LIOB	baz=341			*e*S			**Sg**	**18 39 10.6**	**+0.2**
ENTT	**Nioudou** baz=30	**1.79**	**12**	*e*P			**Pn**	**18 38 42.8**	**-2.1**
YHNB	**Yeheng** baz=5.0	**1.79**	**7**	⇓*e*P			**Pn**	**18 38 43.8**	**-1.1**
YHNB	baz=5.0			*e*S			**Sg**	**18 39 10.7**	**-0.8**
YHNB	**Yeheng**	**1.79**	**7**				**Pn**	**18 38 43.8**	**-1.1**
NSK	**Sanguang** baz=7.0	**1.79**	**6**	*e*P			**Pn**	**18 38 43.9**	**-1.1**
TWC	**Suao** baz=22	**1.83**	**20**	*e*P			**Pn**	**18 38 45.4**	**0.0**
EOS1	**EOS1** baz=47	**1.89**	**28**	*e*P			**Pn**	**18 38 44.8**	**-1.4**
TWE	**Neicheng** baz=32	**1.89**	**15**	*e*P			**Pn**	**18 38 44.0**	**-2.2**
SBCB	**Hsinchu** baz=356	**1.90**	**356**	*e*P			**Pn**	**18 38 47.1**	**+0.7**
SBCB	baz=356			*e*S			**Sb**	**18 39 13.1**	**+0.5**
NWLT	**Wulai** baz=31	**1.91**	**10**	*e*P			**Pn**	**18 38 46.9**	**+0.3**
SLBB	**Yuanshan** baz=32	**1.91**	**14**	*e*P			**Pn**	**18 38 46.6**	**0.0**
HSN	**Hsinchu** baz=359	**1.92**	**355**	*e*P			**Pn**	**18 38 47.3**	**+0.8**
ILA	**Ilan** baz=31	**1.95**	**16**	*e*P			**Pb**	**18 38 48.7**	**-0.8**
WLTB	**Daxi** baz=5.0	**1.96**	**3**	*e*P			**Pn**	**18 38 48.0**	**+0.8**
NTC	**Toucheng** baz=18	**2.06**	**18**	*e*P			**Pb**	**18 38 50.7**	**-0.7**
NCUH	**Zhongli** baz=3.0	**2.07**	**1**	*e*P			**Pb**	**18 38 51.5**	**-0.1**
NCU	**National Centr** baz=3.0	**2.08**	**1**	*e*P			**Pb**	**18 38 50.3**	**-1.3**
NHDH	**Xindian Distri** baz=352	**2.10**	**9**	*e*P			**Pn**	**18 38 48.5**	**-0.6**
TATO	**Taipei**	**2.10**	**9**				**Pn**	**18 38 48.1**	**-1.1**
TWA	**Mucha** baz=27	**2.12**	**11**	*e*P			**Pn**	**18 38 50.5**	**+1.0**
TIPB	**Shuangxi** baz=30	**2.17**	**17**	*e*P			**Pn**	**18 38 49.4**	**-0.7**
TAP	**Taipei** baz=32	**2.17**	**9**	*e*P			**Pn**	**18 38 51.1**	**+1.0**
TWS1	**Kuangyinshan** baz=7.0	**2.22**	**6**	*e*P			**Pn**	**18 38 52.0**	**+1.2**
TWB1	**Santiao Chiao** baz=20	**2.25**	**20**	*e*P			**Pb**	**18 38 53.3**	**-1.4**
NWF	**Wu-fen Shan** baz=28	**2.25**	**15**	*e*P			**Pn**	**18 38 51.3**	**0.0**
WFSB	**Wu-fen Shan** baz=28	**2.25**	**15**	*e*P			**Pn**	**18 38 50.8**	**-0.5**
YM01	**YM01** baz=31	**2.28**	**10**	*e*P			**Pn**	**18 38 53.2**	**+1.5**
NTST	**Danshui** baz=352	**2.29**	**7**	*e*P			**Pb**	**18 38 54.0**	**-1.3**
YM04	**YM04** baz=31	**2.29**	**9**	*e*P			**Pn**	**18 38 51.8**	**+0.1**
YM10	**YM10** baz=31	**2.29**	**9**	*e*P			**Pn**	**18 38 52.1**	**+0.3**
YM05	**YM05** baz=31	**2.30**	**10**	*e*P			**Pn**	**18 38 52.0**	**0.0**
YM11	**YM11** baz=31	**2.30**	**10**	*e*P			**Pn**	**18 38 52.4**	**+0.3**
ANP	**Anpu** baz=30	**2.32**	**8**	*e*P			**Pn**	**18 38 53.0**	**+0.8**
YOJ	**Yonaguni jima**	**2.32**	**47**	P			**Pn**	**18 38 50.8**	**-1.4**
YOJ				*e*S			**Sn**	**18 39 20.6**	**-0.2**
YOJ	**Yonaguni jima**	**2.32**	**47**				**Pn**	**18 38 51.0**	**-1.2**
YM08	**YM08** baz=31	**2.33**	**10**	*e*P			**Pn**	**18 38 53.0**	**+0.7**
VWUC	**VWUC** baz=326	**2.61**	**324**	*e*P			**Pn**	**18 38 54.4**	**-1.7**
HATJ	**Hateruma jima**	**2.71**	**64**	P			**Pn**	**18 38 56.1**	**-1.4**
HATJ				*e*S			**Sn**	**18 39 29.0**	**-1.3**
IRIF	**Iriomote-Funau**	**2.78**	**58**	P			**Pn**	**18 38 57.5**	**-0.9**
PTMZ	**Houxiangcun** baz=321	**2.83**	**320**	*e*P			**Pn**	**18 38 57.8**	**-1.5**
PTTC	**Pingtan** baz=337	**2.89**	**335**	*e*P			**Pn**	**18 38 58.8**	**-1.1**
KNM	**Kinmen** baz=301	**2.92**	**302**	⇓*e*P			**Pn**	**18 39 00.1**	**-0.2**
JKRS	**Kuro-shima**	**2.95**	**62**	P			**Pn**	**18 38 59.9**	**-1.0**
JKRS				S			**Sn**	**18 39 35.4**	**-1.0**
KNMB	**Chin-men Tao** baz=303	**2.98**	**302**	*e*P			**Pn**	**18 38 59.5**	**-1.7**
KNMB	**Chin-men Tao**	**2.98**	**302**				**Pn**	**18 38 59.5**	**-1.7**
QZH	**Quanzhou**	**3.11**	**312**		Pn		**Pn**	**18 39 01.8**	**-1.2**
QZH					Sn		**Sn**	**18 39 37.9**	**-2.3**
QZH	comp=N,820nm,0.9s				smax	smax			
QZH	comp=E,900nm,1.1s				smax	smax			
QZH	comp=Z,4μm,12.8s				LR	LR			
JIJ	**Ishigaki jima**	**3.12**	**61**		P		**Pn**	**18 39 01.7**	**-1.5**
JIJ					eS		**Sn**	**18 39 37.7**	**-2.8**
ZPLA	**Ao Xicun** baz=290	**3.29**	**289**		eP		**Pn**	**18 39 03.8**	**-1.7**
JISG	**Ishigakijimahi**	**3.36**	**59**		P		**Pn**	**18 39 04.7**	**-1.8**
MATB	**Ma-tsu** baz=345	**3.43**	**342**		⇓eP		**Pn**	**18 39 06.2**	**-1.2**
AXDP	**Jialang** baz=305	**3.53**	**305**		eP		**Pn**	**18 39 07.6**	**-1.2**
ZZJH	**Jiuhuzhen** baz=296	**3.59**	**297**		eP		**Pn**	**18 39 08.9**	**-0.7**
JTJ	**Tarama**	**3.70**	**61**		P		**Pn**	**18 39 09.8**	**-1.3**
JTJ					eS		**Sn**	**18 39 54.2**	**-0.6**
MHZQ	**Yeshan** baz=333	**3.73**	**329**		eP		**Pn**	**18 39 11.1**	**-0.5**
LYJJ	**Jianjiangzhen** baz=345	**3.86**	**341**		⇓eP		**Pn**	**18 39 15.4**	**+2.0**
XPSS	**Dashiqiu** baz=352	**4.12**	**348**		eP		**Pn**	**18 39 16.2**	**-0.7**
JIRB	**Irabujima**	**4.16**	**62**		P		**Pn**	**18 39 15.8**	**-1.7**
JMJ2	**Miyako jima3**	**4.25**	**63**		P		**Pn**	**18 39 17.7**	**-1.0**
JOGS	**Gusukube**	**4.33**	**64**		P		**Pn**	**18 39 19.0**	**-0.8**
VDOS	**Pratas Island** baz=242	**4.64**	**243**		eP		**Pn**	**18 39 24.2**	**+0.1**
SZP	**Santa**	**5.35**	**187**		Pn		**Pn**	**18 39 32.4**	**-1.4**
HKPS	**Hong Kong Po S**	**6.50**	**266**				**Pn**	**18 39 49.5**	**-0.2**
GZH	**Guangzhou**	**7.19**	**273**		Pn		**Pn**	**18 39 54.9**	**-4.2**
GZH					Sn	Sn		18 41 09.8	-11
GZH	comp=N,620nm,1.2s				smax	smax			
GZH	comp=E,620nm,1.2s				smax	smax			
JOW	**Kunigami**	**7.57**	**57**		Pn		**Pn**	**18 40 02.1**	**-2.3**
SSE	**Sheshan**	**8.18**	**0**		P		**Pn**	**18 40 13.6**	**+0.9**
SSE					S		**Sn**	**18 41 50.3**	**+5.1**
SSE	comp=Z,13nm,0.8s				pmax	pmax			
SSE	comp=Z,47nm,4.1s				pmax	pmax			
SSE	comp=N,960nm,14.6s				LR	LR			
SSE	comp=E,2μm,16.6s				LR	LR			
SSE	**Sheshan**	**8.18**	**0**		Pn		**Pn**	**18 40 11.2**	**-1.4**
TGY	**Tagaytay City**	**8.74**	**181**		LR	LR		18 44 23.4	
comp=Z,1μm,18.8s,baz=354,slow=43									
NJ2	**Nanjing**	**9.35**	**348**		eP		**Pn**	**18 40 28.4**	**-0.4**
NJ2					S		**Sn**	**18 42 12.4**	**-1.7**
NJ2	comp=Z,44nm,0.9s				pmax	pmax			
NJ2	comp=Z,710nm,4.5s				pmax	pmax			
NJ2	comp=N,210nm,1.2s				smax	smax			
NJ2	comp=E,260nm,1.6s				smax	smax			
NJ2	comp=N,2μm,5.0s				LR	LR			
NJ2	comp=E,4μm,7.1s				LR	LR			
NJ2	comp=Z,1μm,5.5s				LR	LR			
WHN	**Wuhan**	**9.75**	**323**		⇓P		**Pn**	**18 40 33.3**	**-0.9**
WHN					S		**Sn**	**18 42 26.3**	**+2.5**
WHN	comp=N,7μm,9.7s				LR	LR			
WHN	comp=E,1μm,4.6s				LR	LR			
WHN	comp=Z,5μm,9.9s				LR	LR			
QIZ	**Qiongzhong**	**11.23**	**252**		P		**Pn**	**18 40 55.0**	**+0.4**
QIZ					S		**Sn**	**18 42 59.8**	**-0.6**

QIZ LR LR
comp=N,3μm,19.6s
QIZ LR LR
comp=E,2μm,15.5s
QIZ LR LR
comp=Z,2μm,14.9s
QIZ Qiongzhong 11.23 252 Pn **Pn** **18 40 54.4 -0.2**
ENH Enshi 12.76 308 Pn **Pn** **18 41 14.8 -0.7**
JNU Nakatsue 13.33 38 Pn **Pn** **18 41 22.4 -0.9**
GYA Guiyang 13.64 288⇓ *i*P **Pn** **18 41 27.8 +0.2**
GYA PP **P** **18 41 38.8 +2.3**
GYA S **Sn** **18 44 01.6 +2.3**
GYA SS **S** **18 44 16.8 -5.6**
GYA pmax pmax
comp=Z,20nm,0.7s
GYA pmax pmax
comp=Z,120nm,4.1s
GYA LR LR
comp=N,470nm,6.0s
GYA LR LR
comp=E,1μm,11.0s
GYA LR LR
comp=Z,2μm,12.2s
INCN Inchon 15.30 17 **P** **18 41 53.3 -1.5**
INCN IAmb IAmb 18 42 04.2
comp=Z,90nm,1.6s
XAN Xi'an 15.44 319 P **Pn** **18 41 51.6 -0.3**
XAN pP P 18 41 57.0 +0.5
XAN S **Sn** **18 44 34.8 -8.4**
XAN pmax pmax
comp=Z,7.0nm,0.6s
XAN pmax pmax
comp=Z,190nm,4.3s
XAN LR LR
comp=Z,1μm,7.3s
XAN LR LR
comp=Z,1μm,8.4s
XAN LR LR
comp=Z,2μm,10.8s
XAN Xi'an 15.44 319 P **Pn** **18 41 52.9 +0.9**
XAN IAmb IAmb 18 42 18.7
comp=Z,34nm,1.2s
KSAR Wonju Array Be 15.63 20 Pn **Pn** **18 41 53.4 -0.8**
KSRS Korea Array 15.65 20 Pn **P** **18 41 56.7 -2.0**
comp=Z,0.2nm,0.3s,baz=199,slow=11,SNR=13
KSRS LR LR 18 48 24.0
comp=Z,136nm,18.4s,baz=203,slow=39
KS19 Wonju Array Si 15.68 20 P **P** **18 41 57.4 -1.6**
KS19 IAmb IAmb 18 42 09.1
comp=Z,66nm,1.5s
DL2 Dalian 15.97 1 P **Pn** **18 41 58.6 -0.1**
DL2 *e*S **Sn** **18 44 55.8 -0.1**
DL2 pmax pmax
comp=Z,11nm,1.1s
DL2 pmax pmax
comp=Z,330nm,5.9s
DL2 LR LR
comp=Z,450nm,11.2s
DL2 LR LR
comp=Z,2μm,15.2s
DL2 LR LR
comp=Z,2μm,9.9s
SLVN Son La 16.05 268 P **Pn** **18 42 00.7 +0.8**
DLV T Lat 16.24 230 P **P** **18 42 06.2 +0.6**
DLV IAmb IAmb 18 42 16.1
comp=Z,95nm,1.5s
TIY Taiyuan 16.57 335 *e*P Pn 18 41 56.1 -10
TIY pP sP 18 42 14.5 +1.3
TIY sP pP 18 42 18.1 +6.3
TIY S **Sn** **18 45 06.3 -4.2**
TIY SS **S** **18 45 20.8 -1.4**
TIY pmax pmax
comp=Z,310nm,5.6s
TIY LR LR
comp=N,2μm,9.6s
TIY LR LR
comp=E,2μm,9.8s
TIY LR LR
comp=Z,2μm,10.0s
UBPT Khong Chiam 16.62 246 P **P** **18 42 08.2 -1.4**
UBPT IAmb IAmb 18 42 33.1
comp=Z,88nm,1.8s
KMI Kunming 16.96 281 P **P** **18 42 15.1 +1.5**
KMI sP sP 18 42 23.3 +5.2
KMI S **Sn** **18 45 19.3 -1.2**
KMI SS **SnSn** **18 45 42.1 +8.4**
KMI pmax pmax
comp=Z,8.0nm,1.1s
KMI pmax pmax
comp=Z,200nm,5.1s
KMI LR LR
comp=Z,1μm,16.5s
KMI LR LR
comp=Z,490nm,18.9s
KMI LR LR
comp=Z,840nm,12.9s
KKM Kota Kinabalu 17.41 197 P **P** **18 42 20.4 +2.0**
KKM IAmb IAmb 18 42 28.0
comp=Z,61nm,1.0s
CD2 Chengdu 17.43 301 P **Pn** **18 42 15.6 -1.7**
CD2 S **Sn** **18 45 29.5 -2.0**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 LR LR
comp=Z,1μm,7.5s
CD2 LR LR
comp=Z,2μm,6.9s
CD2 LR LR
comp=Z,2μm,9.4s
BJT Baijiatuau 17.59 347 P **P** **18 42 20.0 -0.3**
INU Inuyama 18.58 45 P **Pn** **18 42 32.0 +0.6**
HHC Hu-ho-hao-te 19.65 338 *e*P **Pn** **18 42 44.4 +0.1**
HHC pmax pmax
comp=Z,110nm,5.8s
HHC LR LR
comp=Z,500nm,13.7s
HHC LR LR
comp=Z,500nm,13.0s
HHC LR LR
comp=Z,430nm,12.0s
LZH Lanzhou 19.95 315 *e*P **Pn** **18 42 48.3 +0.2**
LZH pP sP 18 42 52.8 +2.2
LZH sP pP 18 42 55.8 +6.5
LZH pmax pmax
comp=Z,20nm,1.1s
LZH pmax pmax
comp=Z,150nm,5.4s
LZH LR LR
comp=Z,810nm,10.2s
LZH LR LR
comp=Z,1μm,10.3s
LZH LR LR
comp=Z,1μm,10.8s
PBKT Sadao Pong 19.99 255 P **P** **18 42 46.9 +0.2**
MAJO Matsushiro 20.08 43⇓ *e*P **P** **18 42 46.5 -1.1**
MAJO pmax pmax
comp=Z,41nm,2.6s
MAJO Matsushiro 20.08 43 P Pn 18 42 49.0 -0.3
MAT Matsushiro 20.08 43 P Pn 18 42 48.3 -1.1
MJAR Matsushiro Arr 20.08 44 P **P** **18 42 47.9 +0.3**
comp=Z,15nm,0.9s,baz=234,slow=8.1,SNR=20
MJAR LR LR 18 51 11.3
comp=Z,421nm,20.7s,baz=230,slow=39
MJAR Matsushiro Arr 20.08 44 P **P** **18 42 47.5 -0.1**
MJB9 Matsu-Tunnel 20.08 43 P Pn 18 42 48.3 -1.1
CHTO Chiang Mai 21.13 263 P **P** **18 43 01.0 +1.9**
CN2 Changchun 21.16 9 *e*P **P** **18 43 00.4 +1.2**
CM31 Chiang Mai Arr 21.23 262 P **P** **18 43 03.2 +3.0**
CMAR Chiang Mai Arr 21.23 262 P **P** **18 43 01.8 +1.6**
comp=Z,6.2nm,1.0s,baz=68,slow=8.5,SNR=21
CMAR PcP **PcP** **18 47 05.1 -0.4**
comp=Z,0.5nm,0.7s,baz=46,slow=2.6,SNR=4.3
CMAR LR LR 18 52 08.2
comp=Z,417nm,18.5s,baz=74,slow=39
CMAR Chiang Mai Arr 21.23 262 P **P** **18 43 00.7 +0.5**
SBUM Sibu 22.08 204 P **P** **18 43 12.1 +2.8**
MRSI Marisa 22.29 178 P P 18 43 22.8 +11
MPSI Mapaga 22.45 183 P P 18 43 24.6 +11
MDJ Mudanjiang 22.76 16 P **P** **18 43 18.8 +2.5**
MDJ pP sP 18 43 21.9 +1.2
MDJ sP pP 18 43 23.5 +4.2
MDJ PP **PnPn** **18 43 41.3 +0.9**
MDJ S **S** **18 47 22.0 -3.1**
MDJ sS pS 18 47 25.0 -3.4
MDJ pmax pmax
comp=Z,11nm,1.0s
MDJ pmax pmax
comp=Z,220nm,6.1s
MDJ LR LR
comp=Z,880nm,18.4s
MDJ LR LR
comp=Z,2μm,15.3s
MDJ LR LR
comp=Z,790nm,13.5s
MDJ Mudanjiang 22.76 16 P **P** **18 43 18.3 +2.0**
TNTI Ternate 22.80 164 P **P** **18 43 19.4 +2.5**
TNTI IAmb IAmb 18 43 47.7
comp=Z,22nm,0.8s
USA0B Ussuriysk Arra 23.06 20 P **P** **18 43 16.6 -2.9**
USRK Ussuriysk Ar. 23.06 20 P **P** **18 43 19.5 +0.1**
comp=Z,2.4nm,0.8s,baz=234,slow=12,SNR=2.8
USRK LR LR 18 52 46.1
comp=Z,276nm,19.4s,baz=171,slow=38
USRK Ussuriysk Ar. 23.06 20 P **P** **18 43 17.5 -1.9**
APSI Ampana 23.66 179 P P 18 43 39.4 +14
KSM Kuching 23.74 208 P **P** **18 43 28.9 +2.4**
KSM IAmb IAmb 18 43 37.2
comp=Z,67nm,1.5s
LUWI Luwuk 23.84 176 P **P** **18 43 31.9 +4.5**
LUWI Luwuk 23.84 176 P **P** **18 43 28.7 +1.3**
LUWI IAmb IAmb 18 43 32.6
comp=Z,54nm,0.9s
LBMI Labuha 24.19 164 P **P** **18 43 29.6 -1.1**
comp=Z,38nm,1.2s
GTA Gaotai 24.49 317⇑ P **P** **18 43 34.1 +0.6**
GTA pP sP 18 43 37.8 -0.1
GTA sP pP 18 43 40.4 +3.8
GTA S **S** **18 47 55.5 +1.5**
GTA PcS **PcS** **18 50 50.3 -1.7**
GTA pmax pmax
comp=Z,11nm,1.6s
GTA pmax pmax
comp=Z,68nm,4.2s
GTA LR LR
comp=Z,480nm,11.0s
GTA LR LR
comp=Z,630nm,12.7s
GTA LR LR
comp=Z,640nm,13.4s
STKI Sintang 24.56 204 P **P** **18 43 38.7 +4.6**
comp=Z,17μmcomp=Z,1μmcomp=Z,28nm,0.9s
SANI Sanana 25.23 169 P **P** **18 43 43.4 +3.3**
comp=Z,30nm,0.9s
HIA Hailar 26.35 358 P **P** **18 43 50.6 +0.5**
ERM Erimo 26.49 39 P **P** **18 43 53.9 +2.5**
ERM IAmb IAmb 18 44 01.8
comp=Z,62nm,1.3s
NLAI Namlea 26.61 167 P **P** **18 43 56.5 +3.9**
comp=Z,65nm,0.8s
IPM Ipoh 26.70 230 P **P** **18 43 57.4 +3.8**
IPM IAmb IAmb 18 44 07.8
comp=Z,31nm,1.4s
SHL Shillong 26.79 282 P **P** **18 43 54.6 0.0**
SHL IAmb IAmb 18 44 11.3
comp=Z,22nm,1.1s
ULN Ulaanbaatar 27.36 339 *de*P **P** **18 43 59.0 -0.3**
ULN pmax pmax
comp=Z,11nm,1.5s
ULN Ulaanbaatar 27.36 339 P **P** **18 43 58.4 -0.9**
ULN IAmb IAmb 18 44 01.0
comp=Z,20nm,1.4s
SONM Songino Array 27.55 338 P **P** **18 44 00.8 -0.3**
comp=Z,3.8nm,0.8s,baz=152,slow=8.8,SNR=32
SONM LR LR 18 55 33.5
comp=Z,345nm,18.2s,baz=151,slow=38
SONM Songino Array 27.55 338 P **P** **18 43 59.9 -1.2**
ASAJ Asahikawa 27.57 35 P **P** **18 44 03.8 +2.7**
comp=Z,5.7nm,0.7s,baz=318,slow=4.5,SNR=4.2
KLR Kul'dur 27.60 15⇑ *e*P **P** **18 44 02.6 +1.3**
KLR pmax pmax
comp=Z,2.0nm,0.9s
KLR Kul'dur 27.60 15 P **P** **18 44 01.1 -0.2**
comp=Z,2.6nm,0.8s,baz=249,slow=3.1,SNR=5.9
LSA Lhasa 27.68 291 P **P** **18 44 02.5 -0.3**
LSA IAmb IAmb 18 44 17.7
comp=Z,9.3nm,0.7s
FAKI Fak Fak 27.84 156 P **P** **18 44 04.0 +0.3**
RPSI Rantau Prapat 29.44 230 P **P** **18 44 19.1 +1.1**
RPSI IAmb IAmb 18 44 26.0
comp=Z,11nm,1.0s
YSS Yuzh-Sakhalins 29.65 31 *e*P **P** **18 44 19.6 0.0**
YSS *e**SP **sP** **18 44 24.6 +0.7**
YSS *e* 18 44 28.4
YSS *e* 18 45 16.0
YSS *e*PPP PPP 18 45 29.9
YSS *e*S **S** **18 49 17.5 +2.4**
YSS *e*SSS SSS 18 51 00.2
YSS MLR MLR
comp=Z,500nm,12.0s
YSS Yuzh-Sakhalins 29.65 31 P **P** **18 44 20.1 +0.6**
YSS IAmb IAmb 18 44 29.0
comp=Z,29nm,1.0s
TAPN Taplejung 30.54 285 *e*P **P** **18 44 28.6 +0.5**
comp=Z,19nm,0.9s
ODAN Odare 30.82 284 *e*P **P** **18 44 31.2 +0.7**
comp=Z,20nm,0.8s
ZEA Zeya 31.15 7 *e*P P 18 44 42.0 +9.2
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA MLR MLR
comp=Z,1μm,15.0s
ZEA MLR MLR
comp=E,300nm,14.0s
ZEA MLR MLR
comp=N,600nm,15.0s
RAMN Ramite 31.53 285 *e*P **P** **18 44 37.8 +1.1**
comp=N,15nm,0.5s
JIRN Jiri 31.90 286 *e*P **P** **18 44 40.8 +0.7**
comp=N,19nm,0.6s
GUN Gumba 32.17 286 *e*P **P** **18 44 43.0 +0.5**
comp=N,29nm,1.0s
MOY Mondy 32.68 337 *e*P **P** **18 44 47.1 +0.8**
KKN Kakani 32.70 286 *e*P **P** **18 44 47.4 +0.4**
DMN Daman 32.86 286 *e*P **P** **18 44 48.6 +0.2**
GKN Gorkha 33.28 287 *e*P **P** **18 44 51.4 -0.5**
comp=N,5.6nm,0.4s
DANN Dangsing 34.05 287 *e*P **P** **18 44 59.4 +0.5**
comp=N,20nm,0.7s
KOLN Koldanda 34.19 286 *e*P **P** **18 45 00.3 +0.3**
comp=N,26nm,1.1s
WMQ Urumqi 34.54 315 *e*P **P** **18 45 04.3 +1.7**
WMQ pP sP 18 45 09.8 +2.9
WMQ pmax pmax
comp=N,10.0nm,0.7s
WMQ pmax pmax
comp=N,74nm,4.9s
WMQ LR LR
comp=N,170nm,13.9s
WMQ LR LR
comp=N,180nm,10.7s
WMQ LR LR
comp=N,260nm,11.9s
KNRA Kununurra 39.04 168 P **P** **18 45 40.5 -0.6**
MK31 Makanchi Array 39.25 317 *e*P **P** **18 45 42.7 +0.1**
MK31 Makanchi Array 39.25 317 P **P** **18 45 42.5 -0.1**
MKAR Makanchi Array 39.25 317 P **P** **18 45 43.4 +0.7**
comp=N,8.3nm,0.7s,baz=113,slow=9.8,SNR=103
MKAR PcP **PcP** **18 47 50.3 -1.2**
comp=N,1.4nm,0.8s,baz=110,slow=4.9,SNR=4.2
MKAR LR LR 19 03 41.1
comp=N,156nm,19.1s,baz=93,slow=39
MKAR Makanchi Array 39.25 317 P **P** **18 45 43.0 +0.3**
MKAR **PcP** **18 47 50.5 -1.0**
MAKZ Makanchi 39.45 317 P **P** **18 45 43.3 -1.0**
MAKZ Makanchi 39.45 317 P **P** **18 45 44.6 +0.3**
MAKZ IAmb IAmb 18 45 52.5
comp=Z,17nm,1.1s
YAK Yakutsk 39.56 6⇑ *e*P **P** **18 45 44.9 0.0**
YAK pmax pmax
comp=Z,3.0nm,1.1s
YAK Yakutsk 39.56 6 P **P** **18 45 44.3 -0.6**
PDGK Podgornoye 39.90 311 P **P** **18 45 48.4 +0.2**
PETK Petropavlovsk- 40.96 33 P **P** **18 45 57.0 +0.3**
comp=Z,5.3nm,1.1s,baz=267,slow=2.9,SNR=3.3
PETK LR LR 19 04 20.1
comp=Z,204nm,18.2s,baz=239,slow=38
PETK Petropavlovsk- 40.96 33 P **P** **18 45 56.2 -0.5**
FITZ Fitzroy Crossi 40.97 173 P **P** **18 45 55.6 -1.4**
FITZ IAmb IAmb 18 46 09.8
comp=Z,32nm,1.6s
KDJ Kajisay 41.22 308 P **P** **18 45 59.1 -0.1**
ZAA0 Zalesovo Array 41.32 328 P **P** **18 45 59.1 -0.5**
ZAA0 IAmb IAmb 18 46 06.6
comp=Z,13nm,0.8s
ZALV Zalesovo Beam 41.32 328 P **P** **18 45 59.3 -0.3**
comp=Z,7.7nm,0.7s,baz=113,slow=8.1,SNR=20
ZALV LR LR 19 04 46.4
comp=Z,116nm,20.2s,baz=122,slow=38
ZALV Zalesovo Beam 41.32 328 P **P** **18 45 59.1 -0.5**
KSH Kashi 41.59 304 P **P** **18 46 06.0 +3.8**
KSH PP **PnPn** **18 47 46.4 +3.4**
KSH S **S** **18 52 24.0 +5.5**
KSH SS **SS** **18 55 22.1 -1.2**
KSH pmax pmax
comp=Z,10.0nm,0.6s
KSH pmax pmax
comp=Z,350nm,6.6s
KSH LR LR
comp=Z,270nm,5.4s
KSH LR LR
comp=Z,240nm,4.9s
KSH LR LR
comp=Z,310nm,7.2s
NRN Naryn 41.92 307 P **P** **18 46 06.0 +0.9**
TKM2 Tokmak 2 42.54 309 P **P** **18 46 10.4 +0.3**
H11N1 WAKE ISLAND Hy 42.61 85 T T 19 31 35.0
baz=282,slow=75,SNR=99
H11N2 WAKE ISLAND Hy 42.61 85 T T 19 31 36.7
baz=282,slow=75,SNR=198
H11N3 WAKE ISLAND Hy 42.63 85 T T 19 31 37.9
baz=282,slow=75,SNR=142
H11S3 WAKE ISLAND Hy 42.70 87 T T 19 31 44.6
baz=284,slow=75,SNR=324
H11S1 WAKE ISLAND Hy 42.71 87 T T 19 31 45.4
baz=284,slow=75,SNR=128
H11S2 WAKE ISLAND Hy 42.72 87 T T 19 31 46.0
baz=284,slow=75,SNR=113
KURK Kurchatov 43.07 321 *c i*P **P** **18 46 14.1 +0.2**
KURK pmax pmax
comp=Z,17nm,1.7s
KURK Kurchatov 43.07 321 P **P** **18 46 14.1 +0.2**
NIL Nilore 43.19 295 P **P** **18 46 15.2 0.0**
NIL IAmb IAmb 18 46 23.7
comp=Z,11nm,0.8s
AAK Ala-Archa 43.27 308⇑ *e*P **P** **18 46 17.2 +1.3**
AAK pmax pmax
comp=Z,4.0nm,1.1s
AAK Ala-Archa 43.27 308 P **P** **18 46 17.2 +1.3**
WRAB Tennant Creek 44.47 162⇑ *e*P **P** **18 46 24.6 -0.9**
WRAB pmax pmax
comp=Z,46nm,2.1s
WRA Warramunga Arr 44.47 162 P **P** **18 46 21.8 -3.8**
comp=Z,0.7nm,0.5s,baz=345,slow=8.8,SNR=5.8
WRA Warramunga Arr 44.47 162 P **P** **18 46 24.2 -1.3**
SEY Seymchan 45.21 20⇑ *e*P **P** **18 46 27.4 -3.5**
BTK Batken 45.59 304 P **P** **18 46 34.7 +0.2**
BTK IAmb IAmb 18 46 54.1
comp=Z,8.2nm,1.1s
GAR Garm 45.87 303 P **P** **18 46 36.6 -0.1**
GAR IAmb IAmb 18 46 45.1
comp=Z,19nm,0.9s
KK31 Karatay Array 46.23 308 *i*P **P** **18 46 39.9 +0.5**
KK31 Karatay Array 46.23 308 P **P** **18 46 39.8 +0.4**
KK31 IAmb IAmb 18 46 47.7
comp=Z,7.3nm,1.1s
KK31 **PcP** **18 48 13.7 -1.3**
KKAR Karatay Array 46.23 308 P **P** **18 46 39.4 0.0**
KKAR IAmb IAmb 18 46 47.7
comp=Z,7.3nm,1.1s
KKAR **PcP** **18 48 13.7 -1.3**
KBL Kabul 46.70 296 P **P** **18 46 44.7 +1.3**
KBL IAmb IAmb 18 47 01.5
comp=Z,14nm,0.9s
CHGR Chuyangaron 46.75 302 P **P** **18 46 43.8 +0.3**
CHGR IAmb IAmb 18 46 49.5
comp=Z,19nm,1.2s
ASAR Alice Springs 47.91 164 P **P** **18 46 49.5 -3.1**
comp=Z,0.5nm,0.3s,baz=340,slow=7.9,SNR=8.7
ASAR PcP **PcP** **18 48 20.0 -1.1**
comp=Z,0.8nm,0.8s,baz=343,slow=3.8,SNR=3.1
ASAR LR LR 19 07 37.8
comp=Z,37nm,19.1s,baz=354,slow=37
ASAR Alice Springs 47.91 164 P **P** **18 46 50.8 -1.7**
ASAR **PcP** **18 48 22.1 +1.1**
BRVK Borovoye 48.73 321 P **P** **18 46 58.5 -0.1**
BRVK Borovoye 48.73 321 P **P** **18 46 58.4 -0.1**
BRVK IAmb IAmb 18 47 04.9
comp=Z,9.9nm,0.9s
TIXI Tiksi 48.99 3⇑ *e*P **P** **18 47 00.2 0.0**
TIXI pmax pmax
comp=Z,2.0nm,0.8s
TIXI Tiksi 48.99 3 P **P** **18 47 02.2 +2.0**
HRA Herat 52.31 297 P **P** **18 47 27.0 +0.7**
BILL Bilibino 52.91 20 *e*P **P** **18 47 34.1 +4.2**
BILL *e* 18 48 38.1
BILL pmax pmax
comp=Z,6.0nm,1.3s
BILL Bilibino 52.91 20 P **P** **18 47 31.5 +1.6**
BILL IAmb IAmb 18 47 40.0
comp=Z,8.4nm,1.1s
FORT Forrest 53.77 173 P **P** **18 47 35.3 -1.3**
AB31 Akbulak array 54.32 315 *i*P **P** **18 47 40.6 +0.1**
ABKAR Akbulak array 54.32 315 P **P** **18 47 40.5 0.0**
ABKAR IAmb IAmb 18 47 50.6
comp=Z,5.9nm,0.8s
SVE Sverdlovsk 55.07 324 *e*P **P** **18 47 45.9 +0.1**
SVE pmax pmax
comp=Z,16nm,1.0s
GEYT Alibeck 55.43 301 P **P** **18 47 50.3 +1.5**
comp=Z,3.7nm,0.7s,baz=132,slow=2.1,SNR=7.5
GEYT Alibeck 55.43 301 P **P** **18 47 48.3 -0.5**
GYA0B ALIBECK ARRAY 55.43 301 P **P** **18 47 49.6 +0.8**
GYA0B IAmb IAmb 18 47 57.7
comp=Z,9.3nm,1.1s
ARU Arti 56.12 324 *c i*P **P** **18 47 53.0 -0.4**
ARU 18 49 54.3
ARU S **S** **18 55 43.2 +0.9**
ARU SS **SS** **18 59 34.6 +6.3**
ARU pmax pmax
comp=Z,17nm,1.4s
ARU Arti 56.12 324 P **P** **18 47 52.8 -0.5**
ARU IAmb IAmb 18 48 00.4
comp=Z,7.9nm,0.7s
BBOO Buckleboo 57.19 165 P **P** **18 48 00.2 -1.0**
BBOO IAmb IAmb 18 48 31.1
comp=Z,18nm,1.2s
STKA Stephens Creek 57.86 159 P **P** **18 48 04.9 -1.0**
comp=Z,2.1nm,0.8s,baz=336,slow=4.6,SNR=6.8
STKA LR LR 19 17 49.6
comp=Z,23nm,18.2s,baz=18,slow=41
STKA Stephens Creek 57.86 159 P **P** **18 48 04.8 -1.2**
PRGR Permogore 63.26 329 *e*P **P** **18 48 39.1 -3.4**
PRGR pmax pmax
comp=Z,10.0nm,0.8s
CAN Canberra 63.63 155 P **P** **18 48 44.3 -1.0**
CAN IAmb IAmb 18 49 14.3
comp=Z,16nm,1.2s
TOO Toolangi 64.35 159 P **P** **18 48 49.1 -0.8**
TOO IAmb IAmb 18 48 59.6
comp=Z,23nm,1.6s
SOCY Socotra 64.46 273 P **P** **18 48 49.9 -1.4**
ZEI Tsey 65.69 308 *e*P **P** **18 48 57.8 -1.2**
ZEI pmax pmax
comp=Z,7.0nm,0.8s
VRH Novokhopyorsk 65.98 317 *e*P **P** **18 48 58.3 -2.1**
VRH pmax pmax
comp=Z,7.0nm,0.8s
AKH Akhalkalaki 66.22 307 P **P** **18 49 02.5 0.0**
AKH IAmb IAmb 18 49 12.0
comp=Z,8.3nm,0.8s
KBZ Khabaz 66.26 309 *ce*P **P** **18 49 02.4 +0.1**
KBZ Khabaz 66.26 309 P **P** **18 49 02.7 +0.4**
comp=Z,4.7nm,0.9s,baz=127,slow=4.6,SNR=7.2
KBZ LR LR 19 20 34.1
comp=Z,72nm,19.6s,baz=108,slow=38
KIV Kislovodsk 66.38 309 *e*P **P** **18 49 03.9 +0.7**
KIV pmax pmax
comp=Z,54nm,1.0s
KIV MLR MLR
comp=Z,180nm,17.0s
KIV Kislovodsk 66.38 309⇑ P **P** **18 49 04.0 +0.7**
KIV Kislovodsk 66.38 309 P **P** **18 49 03.3 0.0**
TTA Tatalina 66.65 30 P **P** **18 49 03.8 -0.8**
TMCR Tamitsa 66.67 332 *e*P **P** **18 49 04.2 -0.4**
TMCR pmax pmax
comp=Z,18nm,1.3s

SVW2	Sparrevohn	67.02	32	P		P		18 49 07.0	+0.1
LPSR	Galich'ya Gora	67.50	319	*e*P		P		18 49 09.5	-0.6
LPSR					pmax		pmax		
	comp=Z,10.0nm,0.9s								
VORD	Divnogorie	67.53	317	*e*P		P		18 49 09.3	-1.0
VORD					pmax		pmax		
	comp=Z,10.0nm,1.9s								
VSR	Storozhevoye	67.57	318	*e*P		P		18 49 09.0	-1.5
VSR					pmax		pmax		
	comp=Z,10.0nm,1.9s								
PPLA	Purkeypile	68.39	29	P		P		18 49 15.0	-0.7
OBN	Obninsk	68.50	322	*de*P		P		18 49 15.2	-1.1
OBN				*e*				18 49 39.2	
OBN					pmax		pmax		
	comp=Z,30nm,1.7s								
RAYN	Ar Rayn	68.69	287	P		P		18 49 18.0	-0.2
RAYN					lAmb		lAmb	18 49 21.8	
	comp=Z,4.5nm,1.1s								
MLY	Manley	68.72	27	P		P		18 49 16.7	-0.9
MLY					lAmb		lAmb	18 49 46.4	
	comp=Z,18nm,1.6s								
SKT	Skwentna	68.83	30			P		18 49 19.6	+1.3
SKT					lAmb		lAmb	18 49 45.3	
	comp=Z,16nm,1.3s								
KTH	Kantishna Hill	68.86	29	P		P		18 49 19.1	+0.6
KDAK	Kodiak Island	68.98	35	P		P		18 49 19.5	+0.2
SUA	Susitna One	69.28	31	P		P		18 49 21.4	+0.1
BRLK	Bradley Lake	69.51	33	P		P		18 49 23.8	+1.2
RND	Reindeer	69.80	29	P		P		18 49 23.7	-0.7
WRH	Wood River Hil	69.93	27	P		P		18 49 25.4	+0.4
WRH					lAmb		lAmb	18 49 40.5	
	comp=Z,35nm,1.8s								
KNTN	Kanton	70.17	102	P		P		18 49 28.9	+1.6
KNK	Knik Glacier	70.37	31	P		P		18 49 29.3	+1.4
ILAR	Eielson Array	70.38	27	P		P		18 49 27.6	-0.2
	comp=Z,0.4nm,0.5s,baz=294,slow=6.8,SNR=6.5								
ARCES	ARCESS Array B	70.72	338	P		P		18 49 30.3	+0.4
	comp=Z,2.9nm,0.8s,baz=38,slow=4.6,SNR=5.6								
ARCES					LR		LR	19 23 31.8	
	comp=Z,154nm,19.2s,baz=354,slow=38								
ARCES	ARCESS Array B	70.72	338	P		P		18 49 29.9	+0.1
ARE0	ARCESS Array S	70.72	338			P		18 49 31.5	+1.7
SPA0	Spitsbergen Ar	70.74	348	P		P		18 49 31.4	+1.6
PRP	Porcupine Dome	70.78	26	P		P		18 49 30.5	+0.1
SCM	Sheep Creek Mo	70.81	30	P		P		18 49 30.5	-0.1
SCRK	Sand Creek	71.79	28	P		P		18 49 37.0	+0.4
SCRK					lAmb		lAmb	18 49 49.7	
	comp=Z,9.8nm,1.5s								
SIM	Simferopol'	72.17	312	P		P		18 49 39.0	0.0
SIM					pmax		pmax		
	comp=Z,9.0nm,0.6s								
GLB	Gilahina Butte	72.53	30	P		P		18 49 42.3	+1.3
FIA1	FINESS Array S	72.54	330	P		P		18 49 41.1	+0.2
FINES	FINESS Array B	72.54	330	*i* P		P		18 49 43.0	+2.1
FINES					pmax		pmax		
	comp=Z,5.0nm,0.8s								
FINES	FINESS Array B	72.54	330	P		P		18 49 40.4	-0.5
	comp=Z,1.3nm,0.5s,baz=69,slow=7.6,SNR=6.0								
FINES					LR		LR	19 23 59.6	
	comp=Z,150nm,20.1s,baz=58,slow=38								
FINES	FINESS Array B	72.54	330	P		P		18 49 40.6	-0.3
MCARA	McCarthy VSAT	72.91	30	P		P		18 49 44.3	+1.2
BARN	Barnard Glacie	73.64	30	P		P		18 49 47.2	-0.4
BARN					lAmb		lAmb	18 49 52.4	
	comp=Z,10.0nm,1.0s								
DAWY	Dawson	73.70	27	P		P		18 49 48.5	+0.7
DAWY					lAmb		lAmb	18 50 05.1	
	comp=Z,12nm,1.5s								
AKASG	Malin Array Be	73.81	319	P		P		18 49 47.4	-1.2
	comp=Z,3.3nm,0.8s,baz=60,slow=6.1,SNR=12								
AKASG	Malin Array Be	73.81	319	P		P		18 49 47.2	-1.4
AKBB	Malin Array Si	73.81	319	P		P		18 49 47.7	-0.9
AKBB					lAmb		lAmb	18 49 58.7	
	comp=Z,9.2nm,1.4s								
CTGM	Chitina Glacie	73.82	30	P		P		18 49 49.5	+0.9
CTGM					lAmb		lAmb	18 49 53.9	
	comp=Z,12nm,0.9s								
BR131	Keskin Array S	73.91	307	P		P		18 49 49.1	-0.5
BRTR	Keskin Array B	73.91	307	P		P		18 49 49.6	0.0
	comp=Z,2.0nm,0.9s,baz=109,slow=6.8,SNR=9.9								
BRTR					LR		LR	19 25 20.4	
	comp=Z,32nm,20.7s,baz=8.5,slow=38								
BRTR	Keskin Array B	73.91	307	P		P		18 49 49.3	-0.3
INK	Inuvik	74.44	22	LR		LR		19 26 53.4	
	comp=Z,59nm,19.9s,baz=242,slow=39								
INK	Inuvik	74.44	22	P		P		18 49 51.2	-0.7
INK					lAmb		lAmb	18 50 16.7	
	comp=Z,8.4nm,1.4s								
SORM	Soroca	75.11	316	⇑P		P		18 49 55.6	-0.5
TOPG	Topolog	76.10	313	⇑P		P		18 50 16.4	+14
SUW	Suwalki	76.31	323	*e*P		P		18 50 02.3	-0.6
SUW	Suwalki	76.31	323	*e*P		P		18 50 02.0	-0.9
SUW	Suwalki	76.31	323	P		P		18 50 02.0	-0.9
TESR	Tescani	76.72	315	⇑P		P		18 50 05.1	-0.4
VRI	Vrincioaia	76.88	314	⇑P		P		18 50 07.3	+0.9
PLOR	Plostina	76.94	314	⇑P		P		18 50 06.8	+0.1
BURAR	Bucovina Array	77.27	316	⇑P		P		18 50 09.0	+0.3
BUR08	Bucovina Ar. S	77.27	316	P		P		18 50 08.5	-0.2
BUR08					lAmb		lAmb	18 50 09.4	
	comp=Z,6.3nm,1.1s								
MLR	Muntele Rosu	77.52	314	⇓P		P		18 50 10.4	+0.2
MLR	Muntele Rosu	77.52	314	P		P		18 50 10.0	-0.2
MLR					lAmb		lAmb	18 50 37.1	
	comp=Z,19nm,1.6s								
DOPR	Dopca	77.73	315	⇑P		P		18 50 11.8	+0.7
KWP	Kalwaria Pacla	78.12	319	*e*P		P		18 50 13.5	+0.2
KWP	Kalwaria Pacla	78.12	319	*e*P		P		18 50 13.5	+0.2
KWP	Kalwaria Pacla	78.12	319	P		P		18 50 12.9	-0.3
HUMR	Humele	78.50	313	⇑P		P		18 50 14.5	-0.9
KOLS	Kolonicke sedl	78.64	318	*e*P		P		18 50 19.0	+2.8
KOLS	Kolonicke sedl	78.64	318	*e*P		P		18 50 19.0	+2.8
ALN	Alexandroupoli	79.04	310	P		P		18 50 18.1	-0.4
NC405	NORSAR Array S	79.10	332	P		P		18 50 17.5	-0.9
DRGR		79.16	316	⇓P		P		18 50 19.4	+0.3
NC303	NORSAR Array S	79.20	332	P		P		18 50 16.8	-2.1
NB201	NORSAR Array S	79.31	332	P		P		18 50 19.0	-0.6
NB2	NORSAR Subarra	79.35	332	P		P		18 50 18.1	-1.7
	comp=Z,9.2nm,1.2s,baz=61,slow=5.6								
NOA	NORSAR Array B	79.35	332	P		P		18 50 18.2	-1.7
	comp=Z,2.9nm,0.7s,baz=60,slow=5.4,SNR=9.1								
NOA					LR		LR	19 29 12.3	
	comp=Z,174nm,18.1s,baz=70,slow=38								
NC204	NORSAR Array S	79.43	333	P		P		18 50 18.6	-1.7
OJC	Ojcow	79.64	320	*e*P		P		18 50 21.8	+0.2
OJC	Ojcow	79.64	320	*e*P		P		18 50 21.8	+0.2
OJC	Ojcow	79.64	320	P		P		18 50 21.3	-0.3
OJC					lAmb		lAmb	18 50 33.2	
	comp=Z,7.6nm,0.7s								
NIE	Niedzica	79.66	319	*e*P		P		18 50 22.2	+0.5
NIE	Niedzica	79.66	319	*e*P		P		18 50 22.2	+0.5
RES	Resolute Bay	79.94	9	P		P		18 50 21.8	-1.0
LANS	Liptovska Anna	80.26	319	*e*P		P		18 50 25.1	+0.1
LANS	Liptovska Anna	80.26	319	*e*P		P		18 50 25.1	+0.1
VTS	Vitosha	80.38	312	⇑P		P		18 50 25.6	-0.3
VTS	Vitosha	80.38	312	P		P		18 50 25.0	-0.9
VTS					lAmb		lAmb	18 50 27.1	
	comp=Z,5.8nm,0.8s								
VYHS	Vyhne	80.91	319	*e*P		P		18 50 29.0	+0.5
VYHS					pmax		pmax		
	comp=Z,8.0nm,0.9s								
VYHS	Vyhne	80.91	319	*e*P		P		18 50 29.0	+0.5
KSP	Ksiaz	81.42	322	*e*P		P		18 50 31.5	+0.4
KSP	Ksiaz	81.42	322	*e*P		P		18 50 31.5	+0.4
CLL	Collm	83.06	323	*e*P		P		18 50 39.0	-0.7
CLL	Collm	83.06	323	*e*P		P		18 50 39.0	-0.7
CLL					Lm		MLR	19 32 00.0	
	comp=Z,200nm,18.6s								
KHC	Kasperske Hory	83.76	321	*e*P		P		18 50 43.0	-0.4
KHC	Kasperske Hory	83.76	321	*e*P		P		18 50 43.0	-0.4
SUMG	Summit	83.78	354	P		P		18 50 43.0	-0.5
SUMG					lAmb		lAmb	18 50 57.2	
	comp=Z,8.7nm,1.2s								
GEC2	GERESS Array S	83.82	321	P		P		18 50 43.5	-0.2
GEC2					lAmb		lAmb	18 50 44.2	
	comp=Z,4.9nm,1.1s								
GERES	GERESS Array B	83.82	321	P		P		18 50 43.8	0.0
	comp=Z,1.1nm,0.7s,baz=64,slow=6.4,SNR=11								
GERES	GERESS Array B	83.82	321	P		P		18 50 43.7	-0.1
YKA	Yellowknife Ar	84.17	23	P		P		18 50 42.9	-2.3
	comp=Z,1.5nm,0.9s,baz=312,slow=4.9,SNR=16								
SDV	Santo Domingo	146.38	21				PKPdf	18 57 53.1	-2.0
RUSC	La Rusia	148.19	28				PKPdf	18 57 57.9	-0.5
LPAZ	La Paz	169.07	55				PKPdf	18 58 23.0	0.0

*RSNC **14** 18:44:48.1±2.2, 6°.62N×74°.62W, h0km±7km, ML3.7, Mw3.6, Fault plane solution: NP1:φs88.00000°, δ62.00000°, λ-122.00000°.*
*IDC **14** 18:44:53.7±1.8, 6°.57N×74°.48W, h69km±19km, mb3.5/7, mb1 3.7/9, mb1mx3.5/32, mbtmp3.9/9, MS2.7/2, Ms1 2.7/2, ms1mx2.4/39, Error ellipse: s-maj=24.7km s-min=10.0km az=116.0*

ISC 14 18:44:47.5±0.9, 6°.63N±0°.02×74°.63W±0°.02, h12km±6km, n44, σ1s54/72, mb3.5/7, 4C-9D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PTBC	PUERTO BERRIO,	0.20	118	⇓*i*P		Pg	18 44 52.5	+0.6
PTBC				*e*S		Sg	18 44 55.4	+0.5
PTBC				*i*			18 44 55.5	
	comp=Z,57μm,0.2s							
ZARC	Zaragoza, Cauc	0.88	345	⇑*i*P		Pg	18 45 03.9	-0.8
ZARC				*e*S		Sg	18 45 16.0	-0.2
ZARC				*i*			18 45 18.1	
	comp=Z,4μm,0.2s							
HELC	Santa Helena	0.99	244	⇓*i*P		Pg	18 45 06.6	-0.3
HELC				*e*S		Sg	18 45 19.7	-0.2
HELC				*i*			18 45 20.2	
	comp=Z,4μm,0.2s							
BRRC	Barranca, Sant	1.03	63	*e*P		Pg	18 45 07.0	-0.3
BRRC				*e*S		Sg	18 45 20.8	0.0
BRRC				*i*			18 45 24.9	
	comp=Z,2μm,0.2s							
NORC	Norcasia	1.09	193	*e*P		Pg	18 45 06.8	-1.8
NORC				*e*S		Sg	18 45 21.1	-1.7
NORC				*i*			18 45 23.3	
	comp=Z,2μm,0.2s							
SPBC	San Pablo de B	1.12	150	*e*P		Pg	18 45 08.5	-0.7
SPBC				*e*S		Sb	18 45 23.5	0.0
SPBC				*i*			18 45 25.5	
	comp=Z,925nm,0.2s							
UREC	San Jos de Ur	1.43	321	⇓*i*P		Pn	18 45 13.2	-0.1
UREC				*e*S		Sn	18 45 31.5	-0.5
UREC				*i*			18 45 36.7	
	comp=Z,2μm,0.3s							
CBOC	Ciudad Bolivar	1.57	241	⇓*i*P		Pn	18 45 16.2	+0.8
CBOC				*e*S		Sb	18 45 36.9	+0.4
CBOC				*i*			18 45 43.0	
	comp=Z,473nm,0.6s							
GUY2C	Guyana, Caldas	1.58	208	⇑*i*P		Pn	18 45 16.4	+0.6
GUY2C				*e*S		Sn	18 45 36.2	-0.1
GUY2C				*i*			18 45 38.6	
	comp=Z,1μm,0.4s							
DBBC	Dabeiba	1.61	284	*e*P		Pn	18 45 17.0	+1.1
DBBC				*i*			18 45 46.7	
	comp=Z,558nm,0.5s							
RUSC	La Rusia	1.71	115	⇓*i*P		Pn	18 45 17.8	+0.3
RUSC				*i*			18 45 44.0	
	comp=Z,772nm,1.0s							
ROSC	El Rosal	1.81	170	P		Pb	18 45 21.1	+0.3
	comp=Z,58nm,0.3s,baz=47,slow=20,SNR=32							
ROSC				S		Sb	18 45 43.7	+0.2
	comp=Z,136nm,0.3s,baz=218,slow=19,SNR=5.4							
ROSC	El Rosal	1.81	170	*e*P		Pb	18 45 20.8	0.0
ROSC				*e*S		Sg	18 45 45.1	-0.8
ROSC				*i*			18 45 51.6	
	comp=Z,650nm,0.4s							
RREF	El Recreo	1.86	203	⇑*i*P		Pb	18 45 21.3	-0.6
RREF				*e*S		Sb	18 45 45.1	-0.3
RREF				*i*			18 45 47.2	
	comp=Z,2μm,0.2s							
PAMC	Pamplona, Colo	2.04	70	⇓*i*P		Pn	18 45 23.1	+1.0
PAMC				*e*S		Sn	18 45 49.4	+1.6
PAMC				*i*			18 45 52.7	
	comp=Z,506nm,0.2s							
OCAC	Ocana	2.06	39	⇓*i*P		Pn	18 45 23.4	+1.3
OCAC				*e*S		Sn	18 45 49.3	+1.6
OCAC				*i*			18 45 56.4	
	comp=Z,606nm,0.5s							
TOLC	Tolima	2.15	199	*e*P		Pb	18 45 26.2	-0.4
TOLC				*e*S		Sb	18 45 53.7	+0.5
TOLC				*i*			18 45 57.1	
	comp=Z,325nm,0.8s							
CHIC	Chingaza	2.18	156	*e*P		Pn	18 45 25.8	+1.8
CHIC				*e*S		Sn	18 45 52.5	+1.4
CHIC				*i*			18 45 56.4	
	comp=Z,250nm,0.4s							
SMLC	San Martn de	2.22	14	*e*P		Pn	18 45 24.6	+0.4
SMLC				*e*S		Sn	18 45 54.2	+2.6
SMLC				*i*			18 46 00.1	
	comp=Z,635nm,0.7s							
PLMC	San Jos del P	2.38	224	*e*P		Pb	18 45 30.5	+0.1
PLMC				*e*S		Sb	18 46 01.3	+1.7
PLMC				*i*			18 46 06.7	
	comp=Z,500nm,0.5s							
VILC	Villavicencio,	2.67	160	*e*P		Pn	18 45 33.0	+2.4
VILC				*e*S		Sb	18 46 06.7	-1.5
VILC				*i*			18 46 07.7	
	comp=Z,320nm,0.4s							
ORTC	Ortega, Tolima	2.77	193	*e*P		Pb	18 45 34.7	-2.4
ORTC				*e*S		Sb	18 46 11.2	+0.1
ORTC				*i*			18 46 18.1	
	comp=Z,407nm,0.5s							
SOLC	Bahia Solano	2.79	262	*e*P		Pb	18 45 35.9	-1.4
SOLC				*i*			18 45 46.1	
	comp=Z,103nm,0.4s							
SOLC				*e*S		Sb	18 46 12.9	+1.4
LCBC	Los crdobas,	2.80	322	⇓*i*P		Pn	18 45 35.2	+3.1
LCBC				*e*S		Sb	18 46 11.8	0.0
TAMC	Tame, Arauca	2.83	94	*e*P		Pn	18 45 34.8	+2.2
TAMC				*e*S		Sb	18 46 13.4	+0.7
TAMC				*i*			18 46 23.6	
	comp=Z,165nm,0.8s							
YOTC	Yotoco, Valle	3.14	213	*e*P		Pn	18 45 40.2	+3.3
YOTC				*e*S		Sb	18 46 22.8	+1.2
YOTC				*i*			18 46 37.4	
	comp=Z,52nm,0.4s							
PTAC	Punta Ardita,	3.20	279	*e*P		Pb	18 45 42.2	-2.1
PTAC				*e*S		Sn	18 46 19.6	+3.9
PTAC				*i*			18 46 26.2	
	comp=Z,244nm,0.3s							
SJCC	San Jacinto, C	3.29	351	⇑*i*P		Pn	18 45 41.1	+2.2
SJCC				*e*S		Sn	18 46 19.7	+1.7
SJCC				*i*			18 46 38.6	
	comp=Z,100nm,0.5s							
CODC	Agustn Codazz	3.48	20	⇓*i*P		Pn	18 45 42.8	+1.2
CODC				*e*S		Sn	18 46 24.8	+2.0
CODC				*i*			18 46 39.9	
	comp=Z,141nm,1.3s							
POPC	Popayan, Colom	4.55	207	*e*P		Pn	18 45 59.3	+2.9
POPC				*i*			18 47 19.1	
	comp=Z,21nm,1.1s							
SDV	Santo Domingo	4.55	60	P		Pn	18 45 58.9	+2.5
	comp=Z,13nm,0.3s,baz=286,slow=7.4,SNR=24							
SDV				S		Sn	18 46 50.3	+1.0
	comp=Z,26nm,0.3s,baz=255,slow=20,SNR=8.9							
SDV				LR		LR	18 47 56.6	
	comp=Z,93nm,18.8s,baz=117,slow=41							
PCON	Cinco Dias	4.62	202	*e*P		Pn	18 46 03.0	+5.3
PCON				*e*S		Sb	18 47 07.8	+2.9
PCON				*i*			18 47 20.5	
	comp=Z,38nm,0.5s							
PCRV	Puerto La Cruz	10.49	70	P		Pn	18 47 19.8	+1.9
	comp=Z,1.1nm,0.3s,baz=349,slow=5.2,SNR=4.9							
PCRV				S		Sn	18 49 13.1	-2.4
	comp=Z,0.4nm,0.3s,baz=336,slow=20,SNR=2.4							
SJG	San Juan	14.09	35	LR		LR	18 54 38.5	
	comp=Z,27nm,18.0s,baz=196,slow=42							
SIV	San Ignacio	26.18	149	P		P	18 50 19.9	-2.3
	comp=Z,0.6nm,0.5s,baz=298,slow=3.6,SNR=5.0							
PDAR	Pinedale Array	47.36	325	P		P	18 53 22.0	+0.2
	comp=Z,0.1nm,0.3s,baz=124,slow=7.7,SNR=2.6							
SCHQ	Schefferville	48.47	6	P		P	18 53 30.4	+0.5
	comp=Z,1.2nm,0.6s,baz=214,slow=6.6,SNR=4.1							
YKA	Yellowknife Ar	62.93	340	P		P	18 55 13.0	-0.5
	comp=Z,1.3nm,0.6s,baz=135,slow=6.5,SNR=25							
TORD	Torodi Ar. Bea	75.24	78	P		P	18 56 29.2	-1.7
	comp=Z,0.1nm,0.3s,baz=283,slow=7.1,SNR=3.2							
ILAR	Eielson Array	76.50	335	P		P	18 56 36.4	-0.7
	comp=Z,0.3nm,0.6s,baz=88,slow=5.4,SNR=3.9							
ARCES	ARCESS Array B	87.37	20	P		P	18 57 33.6	-0.7
	comp=Z,2.6nm,1.0s,baz=265,slow=4.5,SNR=3.2							
ASAR	Alice Springs	147.78	235	PKPbc		PKPdf	19 04 31.6	+1.2
	comp=Z,0.4nm,0.8s,baz=109,slow=3.8,SNR=5.2							
WRA	Warramunga Arr	148.93	242	PKPbc		PKPdf	19 04 34.1	+1.7
	comp=Z,1.0nm,1.0s,baz=113,slow=2.7,SNR=2.3							
CMAR	Chiang Mai Arr	154.28	14	PKPab		PKPab	19 05 01.1	-1.2
	comp=Z,0.5nm,0.6s,baz=332,slow=5.9,SNR=6.6							

MAN 14 18:54:38.4, 9°.67N×125°.82E, h180km, mb4.4, ML3.2, MS3.0, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MSLP	Maasin	1.05	296	*e*P		Sn	18 55 22.2	-6.0
MSLP				*e*S			18 55 39.1	
OCLP	Ormoc	1.82	319	*e*P		Pn	18 55 13.6	0.0
OCLP				*e*S		Sn	18 55 27.9	-13
LLP	Lapu-Lapu	1.93	290	⇑*e*P		Pn	18 55 16.2	+1.4
LLP				*i* S		Sn	18 55 24.2	-19
SNPH	Sibulan	2.56	263	⇑*e*P		Pn	18 55 22.1	+0.2
SNPH				*i* S		Sn	18 55 36.0	-20

*NEIC **14** 19:04:05.0±1.9, 43°.68N±0°.04×105°.24W±0°.08, h0km±2km, ML3.6/61, Error ellipse: s-maj=9.4km s-min=6.6km az=265.0*
*IDC **14** 19:04:04.3±1.6, 43°.69N×105°.46W, h0km, mb3.9/1, mb1 3.6/6, mb1mx3.4/50, mbtmp3.4/6, ML2.9/3, MS3.0/2, Ms1 3.0/2, ms1mx2.6/49, Error ellipse: s-maj=42.3km s-min=7.3km az=148.0*

ISC 14 19:04:04.1±0.8, 43°.68N±0°.05×105°.23W±0°.05, h0km, n60, σ1s34/63, Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RSSD	Black Hills	0.97	62			Pb	19 04 24.3	+0.5
PHWY	Pilot Hill	2.38	184			Pn	19 04 46.2	+1.5
RWWY	Rawlins	2.47	217			Pn	19 04 46.7	+0.9
RWWY					IAML		19 05 21.1	
	456nm,0.6s							
RWWY					IAML		19 05 23.0	
	428nm,0.9s							
LAO	LASA Array	3.09	347			Pn	19 04 55.6	+1.5
LAO					IAML		19 05 54.8	
	149nm,0.9s							
LAO					IAML		19 05 55.1	
	203nm,0.9s							
RLMT	Red Lodge	3.24	298			Pn	19 04 57.1	+0.8
BW06	Boulder Array	3.30	255			Pn	19 04 58.1	+0.9
BW06					IAML		19 05 47.8	
	comp=E,98nm,0.3s							
BW06					IAML		19 05 47.8	
	comp=N,95nm,0.3s							
PD31	Pinedale Array	3.30	255			Pn	19 04 57.7	+0.6
PDAR	Pinedale Array	3.30	255	Pn		Pn	19 04 57.9	+0.7
	comp=N,6.4nm,0.3s,baz=79,slow=17,SNR=56							
PDAR					Lg	Lg	19 05 41.6	
	comp=N,58nm,0.3s,baz=77,slow=32,SNR=18							
PDAR					LR	LR	19 06 20.0	
	comp=N,172nm,18.4s,baz=99,slow=43							
OGNE	Ogallala	3.62	138			Pn	19 05 03.8	+2.4
OGNE					IAML		19 06 16.1	
	comp=N,150nm,1.5s							
YNE	Yellowstone No	3.68	293			Pn	19 05 03.0	+0.6
YMP	Mirror Lake Pl	3.70	288			Pn	19 05 04.0	+1.3
GCMT	Greycliff	3.81	305			Pn	19 05 04.4	+0.3
LKWY	Lake	3.83	285			Pn	19 05 05.6	+1.0
LKWY					IAML		19 06 13.4	
	comp=N,82nm,1.4s							
LKWY					IAML		19 06 20.7	
	comp=N,81nm,2.2s							
ISCO	Idaho Springs	3.89	184			Pn	19 05 06.7	+1.4
H17A	Grant Village	3.92	282			Pn	19 05 08.2	+2.3
H17A					IAML		19 06 10.7	
	comp=N,67nm,1.6s							
H17A					IAML		19 06 11.9	
	comp=E,67nm,2.2s							
YUF	Upper Falls	3.94	287			Pn	19 05 08.4	+2.4
FLWY	Flagg Ranch	3.98	278			Pn	19 05 08.4	+1.9
FLWY					IAML		19 06 23.0	
	comp=E,95nm,2.2s							
FLWY					IAML		19 07 04.1	
	comp=E,81nm,2.0s							
MOOW	Moose Ponds	4.00	273			Pn	19 05 08.9	+2.0
SNOW	Snow King Moun	4.03	269			Pn	19 05 08.8	+1.6
SNOW					IAML		19 06 21.5	
	comp=E,99nm,1.8s							
SNOW					IAML		19 06 23.9	
	comp=E,102nm,1.0s							
YNR	Norris Junctio	4.06	287			Pn	19 05 10.1	+2.5
YPP	Pitchstone Pla	4.07	280			Pn	19 05 09.2	+1.4
REDW	Red Top Meadow	4.11	268			Pn	19 05 10.0	+1.8
REDW					IAML		19 06 21.6	
	comp=E,81nm,1.1s							
REDW					IAML		19 06 26.3	
	comp=E,106nm,1.9s							
O20A	White River Ci	4.20	213			Pn	19 05 09.9	+0.4
YMR	Madison River	4.25	285			Pn	19 05 10.0	-0.2
AHID	Auburn Hatcher	4.39	260			Pn	19 05 10.8	-1.4
AHID					IAML		19 06 45.5	
	comp=N,59nm,1.0s							
YHB	Horse Butte	4.42	286			Pn	19 05 12.7	+0.1
YHL	Hebgen Lake	4.44	287			Pn	19 05 13.4	+0.5
RDMU	Red Mountain	4.48	228			Pn	19 05 14.1	+0.7
QLMT

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**0.36**	**310**	Pg	**Pb**	**19 09 48.0**	**-0.2**
	782nm,0.3s,baz=114,slow=2.2,SNR=130						
DAV				Lg	Lg	19 09 54.5	
	562nm,0.3s,baz=19,slow=2.3,SNR=40						
DAV				LR	LR	19 10 20.0	
	comp=Z,2μm,18.8s,baz=96,slow=72						
DAV	**Davao City (W)**	**0.36**	**310**		**Pb**	**19 09 48.5**	**+0.2**
MATI	**Mati**	**0.41**	**75**	*e*P	**Pn**	**19 09 50.2**	**+0.8**
MATI				*e*S	**Sn**	**19 09 58.0**	**+2.2**
DMPH	**Davao City--Mi**	**0.42**	**305**	*i*P	**Pb**	**19 09 49.1**	**0.0**
DDMP	**Don Marcelino,**	**0.74**	**191**	*e*P	**Pb**	**19 09 54.8**	**+0.5**
DDMP				*e*S	**Sn**	**19 10 05.2**	**+1.3**
KCP	**Kidapawan**	**0.78**	**283**	*i*P	**Pn**	**19 09 53.4**	**-0.9**
KCP				*i* S	**Sn**	**19 10 05.1**	**+0.2**
GSPH	**General Santos**	**1.17**	**230**	*i*P	**Pn**	**19 09 59.5**	**-0.3**
GSPH				*i* S	**Sb**	**19 10 15.1**	**-1.3**
BUKP	**Musuan**	**1.30**	**323**	*e*P	**Pn**	**19 10 03.0**	**+1.5**
BUKP				*e*S	**Sb**	**19 10 20.8**	**+0.9**
SKMP	**Bagumbayan, Su**	**1.34**	**256**	*e*P	**Pn**	**19 10 02.9**	**+0.9**
SKMP				*e*S	**Sn**	**19 10 17.5**	**-1.2**
BIPH	**Bislig**	**1.43**	**21**	*i*P	**Pb**	**19 10 05.8**	**+0.1**
BIPH				*i* S	**Sb**	**19 10 24.8**	**+1.2**
CTBH	**Cotabato--PC H**	**1.64**	**283**	*e*P	**Pn**	**19 10 07.2**	**+1.1**
CTBH				*i* S	**Sn**	**19 10 28.2**	**+2.1**
CGP	**Cagayan de Oro**	**1.98**	**324**	*i*P	**Pn**	**19 10 12.9**	**+2.1**
CGP				*i* S	**Sn**	**19 10 37.3**	**+2.9**
BUTP	**Butuan**	**2.13**	**354**	*e*P	**Pb**	**19 10 16.3**	**-1.4**
BUTP				*e*S	**Sb**	**19 10 42.6**	**-1.0**
TNTI	**Ternate**	**6.21**	**166**	Pn	Pn	19 11 13.9	+4.8
LUWI	**Luwuk**	**8.41**	**202**	Pn	Pn	19 11 45.3	+6.0
YULB	**Yu-li**	**17.03**	**346**	Pn	**Pn**	**19 13 30.4**	**-5.0**
YULB				IAmb	IAmb	19 13 42.9	
	comp=Z,44nm,1.3s						
KNRA	**Kununurra**	**22.55**	**173**	P	**P**	**19 14 34.9**	**-2.3**
LEM	**Lembang**	**22.70**	**234**	P	**P**	**19 14 42.1**	**+3.3**
	comp=Z,24nm,0.7s,baz=44,slow=9.5,SNR=5.4						
FITZ	**Fitzroy Crossi**	**24.78**	**180**	P	**P**	**19 14 57.9**	**-0.7**
	comp=Z,4.3nm,1.1s,baz=0.3,slow=11,SNR=5.6						
FITZ	**Fitzroy Crossi**	**24.78**	**180**	P	**P**	**19 14 57.8**	**-0.7**
FITZ				IAmb	IAmb	19 15 24.9	
	comp=Z,19nm,1.3s						
WRA	**Warramunga Arr**	**27.89**	**163**	P	**P**	**19 15 26.6**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=345,slow=9.5,SNR=4.0						
WRA	**Warramunga Arr**	**27.89**	**163**	P	**P**	**19 15 23.1**	**-3.6**
AS31	**Alice Springs**	**31.32**	**166**	P	**P**	**19 15 57.7**	**+0.6**
ASAR	**Alice Springs**	**31.32**	**166**	P	**P**	**19 15 57.5**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=343,slow=6.9,SNR=21						
ASAR				PcP	**PcP**	**19 18 52.0**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=339,slow=2.4,SNR=3.2						
ASAR	**Alice Springs**	**31.32**	**166**	P	**P**	**19 15 57.3**	**+0.2**
ASAR					**PcP**	**19 18 51.4**	**+0.6**
FORT	**Forrest**	**37.46**	**177**	P	**P**	**19 16 50.7**	**+0.6**
FORT				IAmb	IAmb	19 16 57.0	
	comp=Z,27nm,1.2s						
USA0B	**Ussuriysk Arra**	**37.60**	**7**	P	**P**	**19 16 49.1**	**-2.0**
USA0B				IAmb	IAmb	19 16 50.1	
	comp=Z,4.9nm,0.7s						
HNR	**Honiara**	**37.62**	**115**	P	**P**	**19 16 48.4**	**-3.3**
NWAO	**Narrogin (SRO)**	**40.39**	**191**	P	**P**	**19 17 15.5**	**+0.9**
NWAO				IAmb	IAmb	19 17 18.4	
	comp=Z,20nm,1.4s						
NWAO	**Narrogin (SRO)**	**40.39**	**191**	P	**P**	**19 17 15.4**	**+0.8**
NWAO				IAmb	IAmb	19 17 18.4	
	comp=Z,24nm,1.4s						
BBOO	**Buckleboo**	**40.61**	**167**	P	**P**	**19 17 17.7**	**+1.3**
BBOO				IAmb	IAmb	19 17 18.1	
	comp=Z,21nm,1.4s						
STKA	**Stephens Creek**	**41.33**	**160**	P	**P**	**19 17 23.9**	**+1.5**
	comp=Z,4.2nm,0.8s,baz=328,slow=6.8,SNR=12						
STKA				LR	LR	19 38 55.9	
	comp=Z,127nm,18.4s,baz=27,slow=43						
STKA	**Stephens Creek**	**41.33**	**160**	P	**P**	**19 17 24.1**	**+1.7**
SONM	**Songino Array**	**44.09**	**341**	P	**P**	**19 17 45.6**	**+0.8**
	comp=Z,0.6nm,1.0s,baz=145,slow=5.3,SNR=4.1						
SONM	**Songino Array**	**44.09**	**341**	P	**P**	**19 17 44.2**	**-0.5**
PALK	**Pallekele**	**44.80**	**273**	P	**P**	**19 17 53.3**	**+2.4**
MKAR	**Makanchi Array**	**54.53**	**324**	P	**P**	**19 19 05.0**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=126,slow=7.4,SNR=5.3						
MKAR	**Makanchi Array**	**54.53**	**324**	P	**P**	**19 19 04.7**	**+0.2**
KURBB	**Kurchatov Arra**	**58.67**	**327**	P	**P**	**19 19 34.1**	**+0.3**
	comp=Z,0.6nm,1.0s,baz=122,slow=6.2,SNR=7.4						
KURK	**Kurchatov**	**58.67**	**327**	P	**P**	**19 19 33.7**	**0.0**
BVAR	**Borovoye Array**	**64.26**	**326**	P	**P**	**19 20 11.5**	**0.0**
	comp=Z,0.1nm,0.4s,baz=113,slow=7.0,SNR=2.6						
ILAR	**Eielson Array**	**82.69**	**26**	P	**P**	**19 21 57.6**	**-2.1**
	comp=Z,0.5nm,0.7s,baz=244,slow=4.7,SNR=4.8						
ILAR	**Eielson Array**	**82.69**	**26**	P	**P**	**19 21 58.6**	**-1.1**

NEIC ***14*** *19:12:32.8±1.9, 16.74S±0.07×172.14W±0.10, h13km±4km, mb4.6/12, Error ellipse: s-maj=13.8km s-min=10.4km az=78.0*

IDC ***14*** *19:12:33.5±0.7, 16.83S×172.97W, h0km, mb4.1/11, mb1 4.3/11, mb1mx4.1/57, mbtmp4.1/11, MS3.9/9, Ms1 3.9/9, ms1mx3.6/35, Error ellipse: s-maj=31.4km s-min=18.6km az=131.0*

ISC 14 19:12:33.1±0.5, 16.89S±0.06×172.26W±0.09, h10km, n46, σ2s51/38, mb4.2/13, MS3.8/8, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.00**	**9**	Pn	**Pn**	**19 13 18.7**	**-2.1**
	15nm,0.3s,baz=198,slow=20,SNR=5.4						
AFI				Sn	**Sn**	**19 13 53.2**	**-3.7**
	18nm,0.3s,baz=202,slow=19,SNR=3.8						
AFI				LR	LR	19 14 24.9	
	comp=Z,1μm,18.9s,baz=162,slow=36						
AFI	**Afiamalu**	**3.00**	**9**		**Pn**	**19 13 17.4**	**-3.4**
NIUE	**Niue**	**3.11**	**135**		**Pn**	**19 13 20.2**	**-2.0**
NIUE					**Sn**	**19 13 53.5**	**-6.0**
MSVF	**Nonsavu**	**9.29**	**263**		**Pn**	**19 14 48.4**	**+1.1**
RAR	**Rarotonga**	**12.57**	**112**	LR	LR	19 19 51.3	
	comp=Z,306nm,21.4s,baz=292,slow=33						
RAO	**Raoul Island**	**13.36**	**202**	LR	LR	19 20 22.6	
	comp=Z,369nm,18.9s,baz=48,slow=36						
PPT2	**Papeete2**	**21.68**	**95**	*e*LQ	LQ	19 21 44.5	
	447nm,25.2s						
PPT2				*e*LR	LR	19 22 39.4	
	comp=Z,126nm,21.8s						
TBI	**Tubuai**	**22.34**	**110**	*e*LQ	LQ	19 21 55.0	
	435nm,25.2s						
TBI				*e*LR	LR	19 22 57.0	
	comp=Z,260nm,28.5s						
URZ	**Urewera**	**23.24**	**202**	P	**P**	**19 17 41.2**	**+0.6**
	21nm,0.9s,baz=99,slow=9.3,SNR=4.7						
URZ				LR	LR	19 25 42.1	
	comp=Z,242nm,18.3s,baz=22,slow=34						
URZ	**Urewera**	**23.24**	**202**	P	**P**	**19 17 42.6**	**+2.1**
URZ				IAmb	IAmb	19 17 43.7	
	comp=Z,28nm,1.0s						
BKZ	**Black Stump Fm**	**24.27**	**202**	P	**P**	**19 17 51.4**	**+0.8**
BFZ	**Birch Farm**	**25.71**	**200**	P	**P**	**19 18 05.4**	**+1.9**
QRZ	**Quartz Range**	**27.23**	**206**	P	**P**	**19 18 21.0**	**+3.7**
THZ	**Tophouse**	**27.87**	**204**	P	**P**	**19 18 24.5**	**+1.4**
KHZ	**Kahutara**	**28.19**	**203**	P	**P**	**19 18 29.8**	**+3.9**
LTZ	**Lake Taylor**	**28.98**	**204**	P	**P**	**19 18 33.6**	**+0.6**
STKA	**Stephens Creek**	**44.26**	**242**	P	**P**	**19 20 40.9**	**-2.2**
	comp=Z,1.3nm,0.7s,baz=75,slow=16,SNR=2.5						
STKA	**Stephens Creek**	**44.26**	**242**	P	**P**	**19 20 41.0**	**-2.1**
BBOO	**Buckleboo**	**49.03**	**241**	P	**P**	**19 21 18.0**	**-2.4**
WRA	**Warramunga Arr**	**50.58**	**258**	P	P	19 21 27.9	-4.5
	comp=Z,1.8nm,0.8s,baz=97,slow=6.8,SNR=7.9						
AS31	**Alice Springs**	**50.70**	**253**	P	**P**	**19 21 29.9**	**-3.5**
AS31				IAmb	IAmb	19 21 30.8	
	comp=Z,4.5nm,1.2s						
ASAR	**Alice Springs**	**50.70**	**253**	P	**P**	**19 21 29.9**	**-3.4**
	comp=Z,4.4nm,0.8s,baz=85,slow=8.6,SNR=31						
ASAR	**Alice Springs**	**50.70**	**253**	P	**P**	**19 21 30.2**	**-3.2**
SAUI	**Saumlaki**	**55.66**	**272**	P	**P**	**19 22 07.2**	**-2.7**
VNDA	**Vanda**	**62.02**	**186**	P	**P**	**19 22 55.0**	**+1.8**
	comp=Z,2.7nm,1.1s,baz=27,slow=5.9,SNR=3.7						
QSPA	**South Pole Qui**	**73.16**	**180**	P	**P**	**19 24 04.3**	**+0.4**
QSPA				IAmb	IAmb	19 24 08.3	
	comp=Z,12nm,1.1s						
PETK	**Petropavlovsk-**	**74.38**	**342**	P	**P**	**19 24 11.5**	**+0.6**
	comp=Z,6.2nm,0.9s,baz=97,slow=6.1,SNR=3.2						
NVAR	**Mina Array Bea**	**74.71**	**41**	P	P	19 24 18.9	+5.4
	comp=Z,0.9nm,0.8s,baz=229,slow=7.9,SNR=5.4						
KLR	**Kul'dur**	**82.36**	**327**	LR	LR	19 58 56.4	
	comp=Z,27nm,19.9s,baz=154,slow=34						
PDAR	**Pinedale Array**	**82.65**	**41**	P	**P**	**19 24 59.4**	**+2.3**
	comp=Z,0.3nm,0.6s,baz=208,slow=3.7,SNR=3.7						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ILAR	**Eielson Array**	**83.69**	**11**	P	**P**	**19 25 04.1**	**+2.4**
	comp=Z,1.6nm,1.1s,baz=226,slow=6.4,SNR=5.9						
ILAR				LR	LR	19 57 49.7	
	comp=Z,56nm,19.3s,baz=180,slow=32						
MAW	**Mawson**	**86.73**	**198**	LR	LR	20 03 27.0	
	comp=Z,155nm,18.6s,baz=234,slow=35						
PLCA	**Paso Flores**	**87.71**	**132**	LR	LR	19 57 55.0	
	comp=Z,82nm,18.6s,baz=255,slow=31						
YKA	**Yellowknife Ar**	**91.03**	**23**	P	**P**	**19 25 40.8**	**+3.5**
	comp=Z,0.4nm,0.9s,baz=237,slow=5.7,SNR=4.3						
CMAR	**Chiang Mai Arr**	**94.11**	**288**	P	**P**	**19 25 53.3**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=94,slow=4.1,SNR=2.4						
ULM	**Lac du Bonnet**	**94.40**	**39**	LR	LR	20 07 27.0	
	comp=Z,135nm,18.6s,baz=311,slow=35						
AAK	**Ala-Archa**	**118.27**	**310**		**PKPdf**	**19 31 20.4**	**-0.7**
KMBO	**Kilima Mbogo**	**145.83**	**241**	PKPbc	**PKPab**	**19 32 14.6**	**+0.3**
	comp=Z,3.4nm,0.9s,baz=81,slow=6.4,SNR=4.1						
KMBO	**Kilima Mbogo**	**145.83**	**241**		**PKPbc**	**19 32 14.2**	**+0.2**
KHC	**Kasperske Hory**	**147.49**	**353**	*e*PKP	**PKiKP**	**19 32 21.7**	**+2.0**
KHC				*ex*	x	19 32 30.4	
GERES	**GERESS Array B**	**147.76**	**353**	PKPbc	**PKiKP**	**19 32 19.3**	**-1.0**
	comp=Z,0.8nm,0.8s,baz=55,slow=3.1,SNR=4.0						
GERES	**GERESS Array B**	**147.76**	**353**		**PKPbc**	**19 32 18.4**	**+0.1**
BR131	**Keskin Array S**	**147.99**	**321**		**PKPbc**	**19 32 18.4**	**-0.8**
BRTR	**Keskin Array B**	**147.99**	**321**	PKPbc	**PKiKP**	**19 32 20.1**	**-1.0**
	comp=Z,2.9nm,1.0s,baz=73,slow=1.3,SNR=9.6						
BRTR	**Keskin Array B**	**147.99**	**321**		**PKPbc**	**19 32 19.8**	**+0.5**
TORD	**Torodi Ar. Bea**	**173.08**	**122**	PKPab	**PKPab**	**19 34 14.7**	**+3.9**
	comp=Z,0.7nm,0.8s,baz=237,slow=4.7,SNR=2.7						

RSPR 14 19:16:18.0, 19.11N×66.73W, h38km±7km, MD2.9/7, 7C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.66**	**163**	*e*P	Pn	19 16 29.9	-1.0
EMPR	**Esperanza - Ma**	**0.66**	**163**	*e*S	Sn	19 16 39.4	-0.6
EMPR	**Esperanza - Ma**	**0.66**	**163**		Sn	19 16 39.4	-0.6
EMPR	**Esperanza - Ma**	**0.66**	**163**		Pn	19 16 30.7	-0.2
AGPR	**Aguadilla, PR**	**0.73**	**209**	*e*P	Pn	19 16 31.1	-0.8
AGPR	**Aguadilla, PR**	**0.73**	**209**	*e*S	Sn	19 16 40.3	-1.5
AGPR	**Aguadilla, PR**	**0.73**	**209**		Pn	19 16 31.0	-0.9
AGPR					Sn	19 16 39.8	-2.0
AOPR	**Arecibo Observ**	**0.76**	**182**	*e*P	Pn	19 16 30.7	-1.5
AOPR	**Arecibo Observ**	**0.76**	**182**	*e*S	Sn	19 16 41.0	-1.5
AOPR	**Arecibo Observ**	**0.76**	**182**		Pn	19 16 30.7	-1.6
AOPR	**Arecibo Observ**	**0.76**	**182**		Sn	19 16 41.0	-1.5
MPR	**Mayaguez**	**0.97**	**203**	Pn	Pn	19 16 32.9	-2.2
LSP	**Las Mesas**	**0.99**	**200**	*e*P	Pn	19 16 34.0	-1.4
LSP	**Las Mesas**	**0.99**	**200**		Pn	19 16 34.0	-1.4
IDE	**Isla Desecheo**	**1.00**	**224**	*e*P	Pn	19 16 34.4	-1.2
IDE	**Isla Desecheo**	**1.00**	**224**	*e*S	Sn	19 16 47.5	-1.1
IDE	**Isla Desecheo**	**1.00**	**224**		Pn	19 16 34.4	-1.2
IDE					Sn	19 16 47.5	-1.1
GCPR	**Guaynabo City**	**1.01**	**142**	Pn	Pn	19 16 33.6	-2.0
OBIP	**Obispado Ponce**	**1.07**	**174**	*e*P	Pn	19 16 35.5	-0.9
OBIP	**Obispado Ponce**	**1.07**	**174**	*e*S	Sn	19 16 49.1	-1.0
OBIP	**Obispado Ponce**	**1.07**	**174**		Sn	19 16 49.1	-1.0
OBIP	**Obispado Ponce**	**1.07**	**174**		Pn	19 16 35.3	-1.1
SJG	**San Juan**	**1.14**	**151**	Pn	Pn	19 16 36.1	-1.2
GBPR	**Guanica, Bosqu**	**1.14**	**187**	*e*P	Pn	19 16 36.7	-0.7
GBPR	**Guanica, Bosqu**	**1.14**	**187**	*e*S	Sn	19 16 50.9	-0.8
GBPR	**Guanica, Bosqu**	**1.14**	**187**		Pn	19 16 36.7	-0.7
GBPR					Sn	19 16 50.9	-0.8
CRPR	**Cabo Rojo, PR**	**1.15**	**198**	*e*P	Pn	19 16 36.8	-0.8
CRPR	**Cabo Rojo, PR**	**1.15**	**198**	*e*S	Sn	19 16 51.2	-1.0
CRPR	**Cabo Rojo, PR**	**1.15**	**198**		Sn	19 16 51.2	-1.0
CRPR	**Cabo Rojo, PR**	**1.15**	**198**		Pn	19 16 36.5	-1.1
MLPR	**Magueyes Islan**	**1.17**	**195**	*e*P	Pn	19 16 36.7	-1.2
MLPR	**Magueyes Islan**	**1.17**	**195**	*e*S	Sn	19 16 51.0	-1.6
MLPR	**Magueyes Islan**	**1.17**	**195**		Sn	19 16 51.0	-1.6
MLPR	**Magueyes Islan**	**1.17**	**195**		Pn	19 16 36.4	-1.5
CBYP	**Canovanas**	**1.18**	**135**	*e*P	Pn	19 16 36.2	-1.8
CBYP	**Canovanas**	**1.18**	**135**		Pn	19 16 36.1	-1.9
ICMP	**Isla Caja de M**	**1.23**	**171**	Pn	Pn	19 16 37.9	-0.9
HUMP	**Col San Antoni**	**1.27**	**139**	Pn	Pn	19 16 36.7	-2.6
IGPR	**InterUniversit**	**1.28**	**152**	Pn	Pn	19 16 39.2	-0.2
MTP	**Monte Pirata**	**1.50**	**132**	*e*P	Pn	19 16 42.2	-0.3
MTP	**Monte Pirata**	**1.50**	**132**	*e*S	Sn	19 16 59.2	-1.7
MTP	**Monte Pirata**	**1.50**	**132**		Sn	19 16 59.2	-1.7
MTP	**Monte Pirata**	**1.50**	**132**		Pn	19 16 40.4	-2.1
PCDR	**Punta Cana, DR**	**1.67**	**250**	Pn	Pn	19 16 43.4	-1.3
STVI	**Saint Thomas**	**1.85**	**114**	Pn	Pn	19 16 44.3	-2.9
DR12	**Loma Pena Alta**	**2.53**	**263**	Pn	Pn	19 16 54.8	-1.8

MOS ***14*** *19:17:44.2±1.2, 26.86N×101.27E, h22km, mb4.7/24, MS4.0/5, Error ellipse: s-maj=7.3km s-min=4.6km az=107.3*

BJI ***14*** *19:17:46.5±0.0, 26.86N×101.17E, h33km, mB4.8/36, mb4.6/50, ML4.4/14, Ms4.5/54, Ms7 4.2/48*

IDC ***14*** *19:17:47.7±2.3, 26.90N×101.30E, h34km±17km, mb4.2/33, mb1 4.3/34, mb1mx4.2/64, mbtmp4.4/34, ML3.7/1, MS3.7/17, Ms1 3.7/17, ms1mx3.5/45, Error ellipse: s-maj=13.9km s-min=9.3km az=53.0*

NEIC ***14*** *19:17:48.5±2.3, 26.91N±0.06×101.18E±0.07, h45km±5km, mb4.8/79, Error ellipse: s-maj=9.7km s-min=9.0km az=47.0*

ISC 14 19:17:46.6±1.2, 26.86N±0.04×101.24E±0.04, h27km±9km, n273, σ1s63/269, mb4.7/102, MS3.8/22, 10C-6D, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.19**	**142**	Pn	**Pb**	**19 18 23.4**	**-2.3**
KMI				Pg	Pn	19 18 26.8	+5.3
KMI				Sg	**Sb**	**19 18 53.8**	**+1.2**
KMI				smax	smax		
	comp=N,5μm,1.0s						
KMI				smax	smax		
	comp=E,5μm,0.9s						
KMI	**Kunming**	**2.19**	**142**	P	**Pb**	**19 18 23.7**	**-2.0**
KMI	**Kunming**	**2.19**	**142**		**Pb**	**19 18 23.7**	**-2.0**
CD2	**Chengdu**	**4.60**	**28**	*i*Pn	Pb	19 18 58.4	-8.3
CD2				Pg	Pn	19 19 10.3	+16
CD2				Sn	**Sn**	**19 19 51.8**	**+4.7**
CD2				Sg	Sb	19 20 08.8	+7.1
CD2				smax	smax		
	comp=N,1μm,1.0s						
CD2				smax	smax		
	comp=E,2μm,1.0s						
GYA	**Guiyang**	**4.87**	**93**	*e*Pn	Pn	19 19 01.0	+2.8
GYA				Pg	Pb	19 19 13.9	+2.6
GYA				Sn	**Sb**	**19 20 03.8**	**-5.7**
GYA				Sg	Sn	19 20 16.8	+23
GYA				smax	smax		
	comp=N,220nm,0.8s						
GYA				smax	smax		
	comp=E,210nm,0.8s						
SLVN	**Son La**	**6.01**	**156**		**Pn**	**19 19 14.8**	**+0.9**
PAYA	**Payao**	**7.57**	**190**	P	Pn	19 19 38.2	+3.0
PAYA				Pn	Pn	19 19 38.3	+3.1
PAYA				Pg	Pb	19 19 41.5	-16
ENH	**Enshi**	**8.01**	**63**		**Pn**	**19 19 42.4**	**+1.2**
CHTO	**Chiang Mai**	**8.28**	**195**	P	**Pn**	**19 19 47.6**	**+2.6**
CHTO	**Chiang Mai**	**8.28**	**195**		**Pn**	**19 19 47.6**	**+2.6**
CMMT	**Chiang Mai**	**8.28**	**195**	P	Pn	19 19 49.8	+4.8
PHRA	**Phrae**	**8.37**	**187**	P	Pn	19 19 55.0	+8.8
PHRA				Pn	Pn	19 19 55.1	+8.9
PHRA				Pg	Pb	19 20 19.5	+8.6
LAMP	**Lampang**	**8.43**	**190**	P	Pb	19 20 22.2	+10
SHL	**Shillong**	**8.50**	**263**	P	**Pn**	**19 19 46.4**	**-1.7**
SHL	**Shillong**	**8.50**	**263**		**Pn**	**19 19 46.4**	**-1.7**
CM31	**Chiang Mai Arr**	**8.62**	**195**		**Pn**	**19 19 52.1**	**+2.4**
CMAR	**Chiang Mai Arr**	**8.62**	**195**	P	**Pn**	**19 19 51.3**	**+1.6**
CMAR	**Chiang Mai Arr**	**8.62**	**195**	Pn	**Pn**	**19 19 50.4**	**+0.7**
	0.2nm,0.3s,baz=7.5,slow=12,SNR=25						
CMAR				Pg		19 20 25.8	
	1.2nm,0.3s,baz=10,slow=14,SNR=7.2						
CMAR				Lg	Lg	19 22 13.9	
	0.2nm,0.3s,baz=11,slow=29,SNR=3.7						
CMAR				LR	LR	19 23 34.4	
	comp=Z,440nm,19.6s,baz=9.0,slow=40						
CMAR	**Chiang Mai Arr**	**8.62**	**195**		**Pn**	**19 19 51.3**	**+1.6**
UTTA	**Uttaradit**	**9.09**	**184**	P	Pn	19 20 00.5	+4.4
LSA	**Lhasa**	**9.33**	**290**	P	**Pn**	**19 20 00.1**	**+0.3**
LSA	**Lhasa**	**9.33**	**290**		**Pn**	**19 20 00.1**	**+0.3**
LZH	**Lanzhou**	**9.47**	**13**	*e*P	Pn	19 20 05.8	+4.5
LZH				sP		19 20 18.8	
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,4.0s						
LZH				LR	LR		
	comp=N,3μm,10.3s						
LZH				LR	LR		
	comp=E,2μm,11.4s						
LZH				LR	LR		
	comp=Z,3μm,11.8s						
XAN	**Xi'an**	**9.75**	**41**	P	**Pn**	**19 20 05.3**	**+0.2**
XAN				S	**Sn**	**19 21 56.3**	**+2.5**
XAN				pmax	pmax		
	comp=Z,23nm,0.9s						
XAN				smax	smax		
	comp=N,200nm,1.2s						
XAN				smax	smax		
	comp=E,190nm,1.3s						
XAN				LR	LR		
	comp=N,1μm,6.0s						
XAN				LR	LR		
	comp=E,1μm,4.2s						
XAN				LR	LR		
	comp=Z,880nm,8.1s						
XAN	**Xi'an**	**9.75**	**41**	P	**Pn**	**19 20 05.4**	**+0.2**
XAN	**Xi'an**	**9.75**	**41**		**Pn**	**19 20 05.4**	**+0.2**
PBKT	**Sadao Pong**	**10.24**	**181**		Pn	19 20 15.5	+3.7
PBKT	**Sadao Pong**	**10.24**	**181**	P	Pn	19 20 16.7	+4.9
QIZ	**Qiongzhong**	**11.11**	**133**	P	**Pn**	**19 20 25.6**	**+1.8**
QIZ				S	**Sn**	**19 22 29.8**	**+2.6**
QIZ				LR	LR		
	comp=N,1μm,8.2s						
QIZ				LR	LR		
	comp=E,1μm,7.1s						
QIZ				LR	LR		
	comp=Z,2μm,7.8s						
QIZ	**Qiongzhong**	**11.11**	**133**	Pn	**Pn**	**19 20 25.9**	**+2.1**
TAPN	**Taplejung**	**12.06**	**275**	*e*P	**Pn**	**19 20 35.3**	**-1.7**
WHN	**Wuhan**	**12.08**	**69**	P	Pn	19 20 41.0	+4.0
WHN				pP	**P**	**19 20 51.5**	**+2.0**
WHN				S	**Sn**	**19 22 50.5**	**-0.3**
WHN				LR	LR		
	comp=N,2μm,4.8s						
WHN				LR	LR		
	comp=E,2μm,4.9s						
WHN				LR	LR		
	comp=Z,2μm,5.2s						
UBPT	**Khong Chiam**	**12.18**	**160**	Pn	Pn	19 20 41.9	+3.6
ODAN	**Odare**	**12.36**	**273**	*e*P	**Pn**	**19 20 38.6**	**-2.5**
	19nm,0.8s						
GTA	**Gaotai**	**12.58**	**355**	*e*P	**Pn**	**19 20 45.4**	**+1.6**
GTA				pP	P	19 20 49.5	-5.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,4.2s						
GTA				LR	LR		
	comp=N,800nm,7.9s						
GTA				LR	LR		
	comp=E,540nm,10.7s						
GTA				LR	LR		
	comp=Z,890nm,9.6s						
JIRN	**Jiri**	**13.41**	**277**	*e*P	**Pn**	**19 20 53.2**	**-2.3**
GUN	**Gumba**	**13.69**	**278**	*e*P	**Pn**	**19 20 57.1**	**-2.2**
PKI	**Pulchoki**	**14.10**	**276**	*e*P	**Pn**	**19 21 01.7**	**-3.3**
KKN	**Kakani**	**14.22**	**277**	*e*P	**Pn**	**19 21 02.8**	**-3.6**
	64nm,1.0s						
DMN	**Daman**	**14.37**	**277**	*e*P	**Pn**	**19 21 05.0**	**-3.6**
GKN	**Gorkha**	**14.79**	**278**	*e*P	**Pn**	**19 21 10.2**	**-3.9**
DANN	**Dangsing**	**15.57**	**279**	*e*P	**Pn**	**19 21 21.9**	**-2.6**
KOLN	**Koldanda**	**15.71**	**277**	*e*P	**Pn**	**19 21 20.9**	**-5.4**
NJ2	**Nanjing**	**16.19**	**67**	*e*P	**P**	**19 21 32.9**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=N,960nm,7.7s						
NJ2				LR	LR		
	comp=E

comp=Z,29nm,1.4s
TLY Talaya 24.86 4 *e*P **P** **19 23 05.3 -1.4**
TLY pmax pmax
comp=Z,36nm,1.7s
TLY MLR MLR
comp=Z,355nm,8.0s
TLY Talaya 24.86 4 LR LR 19 34 00.8
comp=Z,335nm,20.4s,baz=170,slow=39
KSRS Korea Array 24.86 58 P **P** **19 23 06.2 -0.7**
comp=Z,2.1nm,0.5s,baz=251,slow=9.9,SNR=11
KSRS LR LR 19 32 27.8
comp=Z,112nm,20.1s,baz=245,slow=36
KDJ Kajisay 24.89 314 P **P** **19 23 08.7 +1.4**
KDJ pmax pmax
comp=Z,17nm,1.0s
KDJ Kajisay 24.89 314 P **P** **19 23 08.7 +1.4**
KDJ IAmb IAmb 19 23 14.2
comp=Z,18nm,1.0s
MK31 Makanchi Array 24.90 328 *e*P **P** **19 23 07.7 +0.5**
MK31 Makanchi Array 24.90 328 P **P** **19 23 07.5 +0.3**
MKAR Makanchi Array 24.90 328 P **P** **19 23 08.1 +0.9**
comp=Z,8.3nm,0.8s,baz=134,slow=10,SNR=44
MKAR PcP **PcP** **19 26 41.8 -0.6**
comp=Z,1.7nm,0.8s,baz=128,slow=3.6,SNR=4.5
MKAR ScP **ScP** **19 30 19.1 -0.5**
comp=Z,1.4nm,0.8s,baz=123,slow=4.5,SNR=9.2
MKAR Makanchi Array 24.90 328 P **P** **19 23 07.2 0.0**
NIL Nilore 25.06 292 P **P** **19 23 08.1 -0.7**
NIL pmax pmax
comp=Z,19nm,0.8s
NIL Nilore 25.06 292 P **P** **19 23 08.1 -0.7**
NIL IAmb IAmb 19 23 13.1
comp=Z,19nm,0.8s
MAKZ Makanchi 25.06 328 P **P** **19 23 09.6 +1.0**
MAKZ pmax pmax
comp=Z,9.0nm,1.2s
MAKZ Makanchi 25.06 328 P **P** **19 23 09.6 +1.0**
KKM Kota Kinabalu 25.14 143 P **P** **19 23 09.4 -0.3**
KKM IAmb IAmb 19 23 10.6
comp=Z,67nm,1.2s
NRN Naryn 25.33 311 P **P** **19 23 10.7 -0.8**
NRN pmax pmax
comp=Z,7.0nm,0.8s
NRN Naryn 25.33 311 P **P** **19 23 10.7 -0.8**
IRK Irkutsk 25.46 4 *e*P **P** **19 23 14.9 +2.8**
IRK pmax pmax
comp=Z,61nm,3.1s
ULHL Ulahol 25.55 313 P **P** **19 23 16.4 +3.0**
SNR=6.6
GSI Gunungsitoli 25.65 188 P **P** **19 23 14.3 +0.1**
GSI IAmb IAmb 19 23 14.8
comp=Z,28nm,0.8s
CN2 Changchun 25.86 43 *e*P **P** **19 23 18.0 +2.1**
KZA Kyzart 26.12 312 P **P** **19 23 21.7 +2.9**
SNR=24
TKM2 Tokmak 2 26.30 314 P **P** **19 23 19.6 -0.5**
JNU Nakatsue 26.37 69 P **P** **19 23 21.8 +1.1**
comp=Z,16nm,0.8s,baz=352,slow=1.5,SNR=6.7
JNU LR LR 19 33 34.8
comp=Z,83nm,20.3s,baz=245,slow=36
JNU Nakatsue 26.37 69 P **P** **19 23 22.2 +1.5**
JNU IAmb IAmb 19 23 33.4
comp=Z,26nm,0.9s
HIA Hailar 26.56 28 P **P** **19 23 23.3 +1.1**
HIA pmax pmax
comp=Z,10.0nm,0.7s
HIA Hailar 26.56 28 P **P** **19 23 23.3 +1.1**
HIA IAmb IAmb 19 23 31.1
comp=Z,9.6nm,0.7s
KBK Karagaybulak 26.59 313 P **P** **19 23 25.2 +2.4**
SNR=9.7
AAK Ala-Archa 26.88 313‖ *e*P **P** **19 23 27.0 +1.7**
AAK pmax pmax
comp=Z,8.0nm,0.8s
AAK Ala-Archa 26.88 313 P **P** **19 23 26.6 +1.3**
comp=Z,3.8nm,0.6s,baz=115,slow=6.3,SNR=17
AAK LR LR 19 35 45.8
comp=Z,347nm,18.8s,baz=106,slow=40
AAK Ala-Archa 26.88 313 P **P** **19 23 26.2 +0.9**
SNR=7.9
AAK Ala-Archa 26.88 313 P **P** **19 23 25.6 +0.3**
AAK IAmb IAmb 19 23 31.2
comp=Z,17nm,1.4s
USP Ospenovka 27.17 314 P **P** **19 23 29.5 +1.7**
SNR=13
AML Almayashu 27.19 311 P **P** **19 23 33.4 +5.0**
SNR=8.8
ARSB Arslanbob 27.34 309 P **P** **19 23 30.0 +0.5**
EKS2 Erkin-Say 27.36 312 P **P** **19 23 32.0 +2.3**
SNR=17
PALK Pallekele 27.57 229 LR LR 19 35 25.5
comp=Z,84nm,21.1s,baz=52,slow=38
BTK Batken 28.44 305 P **P** **19 23 39.1 -0.1**
BTK pmax pmax
comp=Z,10.0nm,1.4s
BTK Batken 28.44 305 P **P** **19 23 39.1 -0.1**
GAR Garm 28.50 303 P **P** **19 23 39.1 -0.7**
KBL Kabul 28.64 293 P **P** **19 23 40.4 -0.8**
KBL pmax pmax
comp=Z,8.0nm,1.0s
KBL Kabul 28.64 293 P **P** **19 23 40.4 -0.8**
CHGR Chuyangaron 29.29 302 P **P** **19 23 46.8 0.0**
CHGR IAmb IAmb 19 23 52.0
comp=Z,32nm,1.2s
KURBB Kurchatov Arra 29.39 330 P **P** **19 23 48.0 +0.6**
comp=Z,3.6nm,0.7s,baz=144,slow=8.8,SNR=21
KURBB PcP **PcP** **19 26 51.5 -1.5**
comp=Z,2.0nm,0.8s,baz=130,slow=1.9,SNR=8.2
KURBB ScP **ScP** **19 30 32.1 -0.8**
comp=Z,0.6nm,0.7s,baz=145,slow=3.4,SNR=5.2
KURK Kurchatov 29.41 330 *de*P **P** **19 23 47.4 -0.2**
KURK pmax pmax
comp=Z,9.0nm,0.9s
KURK Kurchatov 29.41 330 P **P** **19 23 47.8 +0.2**
ZAA0 Zalesovo Array 29.66 340 P **P** **19 23 49.0 -0.7**
ZALV Zalesovo Beam 29.66 340 *i* P P 19 23 53.0 +3.2
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 29.66 340 P **P** **19 23 49.8 0.0**
comp=Z,2.5nm,0.6s,baz=150,slow=6.7,SNR=12
ZALV PcP **PcP** **19 26 52.4 -1.2**
comp=Z,0.4nm,0.4s,baz=165,slow=6.0,SNR=3.3
ZALV LR LR 19 36 35.7
comp=Z,87nm,20.3s,baz=136,slow=38
ZALV Zalesovo Beam 29.66 340 P **P** **19 23 48.6 -1.2**
ZALV **PcP** **19 26 52.0 -1.6**
USA0B Ussuriysk Arra 30.19 47 P **P** **19 23 53.8 -0.8**
USA0B pmax pmax
comp=Z,36nm,1.6s
USA0B Ussuriysk Arra 30.19 47 P **P** **19 23 53.8 -0.8**
USA0B IAmb IAmb 19 23 59.2
comp=Z,36nm,1.6s
USRK Ussuriysk Ar. 30.19 47 P **P** **19 23 53.8 -0.7**
comp=Z,6.9nm,0.6s,baz=244,slow=8.5,SNR=20
USRK LR LR 19 35 42.3
comp=Z,125nm,19.4s,baz=277,slow=36
USRK Ussuriysk Ar. 30.19 47 P **P** **19 23 53.3 -1.2**
KLR Kul'dur 32.45 38‖ *e*P **P** **19 24 13.0 -1.4**
KLR pmax pmax
comp=Z,4.0nm,1.0s
ZEA Zeya 33.03 29 *e*P **P** **19 24 20.6 +1.2**
ZEA pmax pmax
comp=Z,12nm,1.0s
BVAR Borovoye Array 34.77 327 P **P** **19 24 35.1 +0.5**
comp=Z,2.0nm,0.7s,baz=116,slow=10,SNR=17
BVAR PcP **PcP** **19 27 06.0 -1.7**
comp=Z,2.2nm,0.8s,baz=130,slow=2.3,SNR=8.7
KPJI Karang Pucung 34.80 167 P **P** **19 24 38.1 +3.0**
BRVK Borovoye 34.85 327 P **P** **19 24 34.9 -0.3**
BRVK Borovoye 34.85 327 P **P** **19 24 35.3 +0.1**
BRVK IAmb IAmb 19 24 39.1
comp=Z,6.9nm,0.8s
GRNR Gornyy 35.83 39 *e*P **P** **19 24 43.6 -0.1**
GRNR pmax pmax
comp=Z,4.0nm,1.2s
GRNR MLR MLR
comp=Z,170nm,12.0s
GEYT Alibeck 37.75 298 P **P** **19 25 02.0 +1.8**
comp=Z,7.0nm,0.8s,baz=121,slow=7.1,SNR=14
GEYT PcP **PcP** **19 27 17.2 +0.3**
comp=Z,1.2nm,0.6s,baz=98,slow=4.4,SNR=2.9
GEYT Alibeck 37.75 298 P **P** **19 24 58.9 -1.4**
GEYT **PcP** **19 27 16.4 -0.5**
GYA0B ALIBECK ARRAY 37.75 298 P **P** **19 24 59.8 -0.5**
GYA0B IAmb IAmb 19 25 14.7
comp=Z,10.0nm,0.9s

YSS Yuzh-Sakhalins 38.23 47 *e*P **P** **19 25 02.3 -1.8**
YSS *e* 19 25 07.3
AB31 Akbulak array 38.81 316 *i* P **P** **19 25 09.3 +0.3**
ABKAR Akbulak array 38.81 316 P **P** **19 25 09.4 +0.4**
ABKAR IAmb IAmb 19 25 13.3
comp=Z,11nm,0.8s
YAK Yakutsk 39.95 20 P **P** **19 25 17.4 -0.9**
comp=Z,1.2nm,0.3s,baz=205,slow=5.1,SNR=4.4
YAK Yakutsk 39.95 20 P **P** **19 25 17.4 -0.9**
YAK IAmb IAmb 19 25 44.7
comp=Z,7.0nm,0.7s
SIJI Sorong 39.95 129 P **P** **19 25 18.8 -0.1**
comp=Z,9.0nm,0.7s,baz=348,slow=16,SNR=5.1
AKTO Aktyubinsk 40.38 317 P **P** **19 25 22.8 +0.7**
comp=Z,6.5nm,0.8s,baz=115,slow=8.2,SNR=17
SVE Sverdlovsk 41.56 327 *e*P **P** **19 25 33.3 +1.6**
SVE pmax pmax
comp=Z,18nm,1.0s
FAKI Fak Fak 42.10 130 P **P** **19 25 36.3 -0.3**
FAKI IAmb IAmb 19 25 43.5
comp=Z,80nm,1.4s
ARU Arti 42.40 326*c i* P **P** **19 25 41.5 +3.0**
ARU 19 27 19.0
ARU S S 19 32 06.9 +8.7
ARU pmax pmax
comp=Z,14nm,1.1s
ARU Arti 42.40 326 P **P** **19 25 38.7 +0.2**
comp=Z,2.1nm,0.8s,baz=147,slow=6.1,SNR=9.8
ARU Arti 42.40 326 P **P** **19 25 39.3 +0.8**
ARU IAmb IAmb 19 25 43.0
comp=Z,13nm,1.1s
BATI Baumata 42.80 146 P **P** **19 25 41.5 -0.7**
comp=Z,34nm,0.7s,baz=350,slow=19,SNR=5.4
MA2 Magadan 47.01 32‖ *e*P **P** **19 26 17.2 +2.0**
MA2 pmax pmax
comp=Z,34nm,1.7s
TIXI Tiksi 47.40 12‖ *e*P **P** **19 26 18.1 0.0**
TIXI pmax pmax
comp=Z,6.0nm,1.3s
TIXI Tiksi 47.40 12 P **P** **19 26 16.8 -1.3**
comp=Z,1.7nm,0.3s,baz=180,slow=24,SNR=7.7
TIXI Tiksi 47.40 12 P **P** **19 26 17.5 -0.6**
SEY Seymchan 49.01 28 P **P** **19 26 30.1 -0.5**
comp=Z,1.4nm,0.6s,baz=264,slow=10,SNR=6.8
SEY PcP **PcP** **19 27 53.4 -0.8**
comp=Z,2.4nm,0.8s,baz=304,slow=3.2,SNR=2.4
KBZ Khabaz 49.50 306 LR LR 19 50 40.3
comp=Z,71nm,19.7s,baz=51,slow=40
KIV Kislovodsk 49.65 306 *e*P P 19 26 39.9 +3.9
KIV pmax pmax
comp=Z,24nm,1.1s
KIV MLR MLR
comp=Z,111nm,16.0s
KIV Kislovodsk 49.65 306 P **P** **19 26 36.1 +0.1**
KIV IAmb IAmb 19 26 41.0
comp=Z,8.8nm,1.1s
PRGR Permogore 50.52 329 *e*P **P** **19 26 44.3 +2.1**
PRGR pmax pmax
comp=Z,8.0nm,1.0s
FITZ Fitzroy Crossi 50.58 149 P **P** **19 26 45.5 +2.4**
FITZ IAmb IAmb 19 26 53.1
comp=Z,49nm,1.8s
VRH Novokhopyorsk 50.62 315 *e*P **P** **19 26 44.2 +1.1**
VRH pmax pmax
comp=Z,9.0nm,0.8s
VORD Divnogorie 52.13 315 *e*P **P** **19 26 55.3 +0.9**
VORD pmax pmax
comp=Z,10.0nm,1.8s
VSR Storozhevoye 52.23 315 *e*P **P** **19 26 55.8 +0.7**
VSR pmax pmax
comp=Z,6.0nm,1.0s
MOS Moscow 53.48 321 *e*P **P** **19 27 05.1 +0.8**
MOS pmax pmax
comp=Z,33nm,0.8s
OBN Obninsk 54.03 320 *ce*P **P** **19 27 10.9 +2.6**
OBN *e* 19 28 15.0
OBN pmax pmax
comp=Z,30nm,1.7s
OBN MLR MLR
comp=Z,45nm,11.0s
TMCR Tamitsa 54.52 331 *e*P **P** **19 27 13.2 +1.5**
BILL Bilibino 56.07 24‖ *e*P **P** **19 27 22.2 -0.7**
BILL *i* 19 28 23.5
BILL pmax pmax
comp=Z,5.0nm,1.0s
BILL MLR MLR
comp=Z,162nm,17.0s
WRA Warramunga Arr 56.52 142 P **P** **19 27 25.6 -1.1**
WRA pmax pmax
comp=Z,1.0nm,1.8s
WRA Warramunga Arr 56.52 142 P **P** **19 27 26.8 +0.1**
comp=Z,5.7nm,0.5s,baz=329,slow=7.8,SNR=10
WRA Warramunga Arr 56.52 142 P **P** **19 27 25.6 -1.1**
LVZ Lovozero 56.61 335 P **P** **19 27 29.2 +2.4**
LVZ pmax pmax
comp=Z,101nm,1.5s
LVZ Lovozero 56.61 335 P **P** **19 27 29.2 +2.4**
WR0 Warramunga Arr 56.64 142 P **P** **19 27 27.7 +0.2**
WR0 IAmb IAmb 19 27 53.9
comp=Z,22nm,1.4s
BRTR Keskin Array B 56.73 301 P **P** **19 27 27.6 -0.6**
comp=Z,0.5nm,0.5s,baz=101,slow=6.0,SNR=3.0
BRTR Keskin Array B 56.73 301 P **P** **19 27 26.7 -1.5**
PMG Port Moresby 57.30 123 P **P** **19 27 32.9 +0.6**
PMG pmax pmax
comp=Z,16nm,0.8s
PMG Port Moresby 57.30 123 P **P** **19 27 33.2 +0.9**
comp=Z,19nm,0.8s,baz=353,slow=10,SNR=6.8
PMG Port Moresby 57.30 123 P **P** **19 27 32.9 +0.6**
PMG IAmb IAmb 19 27 33.7
comp=Z,16nm,0.8s
MORW Morawa 57.39 165 P **P** **19 27 33.8 +1.2**
MORW IAmb IAmb 19 27 51.2
comp=Z,21nm,1.4s
AKASG Malin Array Be 58.52 315 *ce*P P 19 27 43.9 +3.5
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 58.52 315 P **P** **19 27 39.8 -0.7**
comp=Z,1.1nm,0.6s,baz=72,slow=6.3,SNR=4.7
AKASG LR LR 19 53 46.7
comp=Z,59nm,19.8s,baz=105,slow=37
AKASG Malin Array Be 58.52 315 P **P** **19 27 38.6 -1.8**
AKBB Malin Array Si 58.52 315‖ *e*P **P** **19 27 42.0 +1.6**
AS31 Alice Springs 59.32 145 P **P** **19 27 46.4 +0.1**
AS31 IAmb IAmb 19 27 47.4
comp=Z,2.4nm,0.5s
ASAR Alice Springs 59.32 145 P **P** **19 27 46.1 -0.2**
ASAR Alice Springs 59.32 145 P **P** **19 27 47.0 +0.6**
comp=Z,1.9nm,0.5s,baz=327,slow=6.7,SNR=20
ASAR Alice Springs 59.32 145 P **P** **19 27 46.1 -0.2**
VSU Vasula 59.49 324 *de*P **P** **19 27 47.0 0.0**
VSU pmax pmax
comp=Z,57nm,0.7s
FIA1 FINESS Array S 59.73 327 P **P** **19 27 47.5 -1.1**
FIA1 IAmb IAmb 19 27 52.0
comp=Z,24nm,1.1s
FINES FINESS Array B 59.73 327 *i* P **P** **19 27 48.7 +0.1**
FINES pmax pmax
comp=Z,9.0nm,0.9s
FINES FINESS Array B 59.73 327 P **P** **19 27 48.5 -0.2**
comp=Z,8.8nm,0.8s,baz=94,slow=6.1,SNR=13
FINES LR LR 19 55 05.9
comp=Z,80nm,20.0s,baz=62,slow=38
FINES FINESS Array B 59.73 327 P **P** **19 27 47.9 -0.7**
ARCES ARCESS Array B 60.13 337 P **P** **19 27 51.1 -0.2**
comp=Z,0.9nm,0.4s,baz=88,slow=7.6,SNR=12
ARCES ARCESS Array B 60.13 337 P **P** **19 27 50.5 -0.8**
ARE0 ARCESS Array S 60.13 337 P **P** **19 27 51.0 -0.2**
ELL Elmali 60.17 299 P **P** **19 27 52.1 -0.2**
ELL pmax pmax
comp=Z,32nm,1.1s
ELL Elmali 60.17 299 P **P** **19 27 52.1 -0.2**
NWAO Narrogin (SRO) 61.37 165 P **P** **19 28 00.2 +0.1**
NWAO pmax pmax
comp=Z,71nm,1.7s
NWAO Narrogin (SRO) 61.37 165 P **P** **19 28 00.0 -0.1**
NWAO Narrogin (SRO) 61.37 165 P **P** **19 28 00.1 +0.1**
MLR Muntele Rosu 61.38 309 P **P** **19 28 01.7 +1.3**
MLR pmax pmax
comp=Z,12nm,1.2s
MLR Muntele Rosu 61.38 309 P **P** **19 28 01.7 +1.3**
MLR IAmb IAmb 19 28 04.2
comp=Z,12nm,1.2s
SUW Suwalki 61.84 319 P **P** **19 28 02.6 -0.6**
SUW pmax pmax
comp=Z,27nm,1.1s
SUW Suwalki 61.84 319 P **P** **19 28 02.6 -0.6**
KWP Kalwaria Pacla 62.81 314 P **P** **19 28 09.2 -0.5**
KWP pmax pmax
comp=Z,232nm,1.3s
KWP Kalwaria Pacla 62.81 314 P **P** **19 28 09.2 -0.5**
SPITS Spitsbergen Ar 62.86 347 LR LR 19 59 18.5
comp=Z,175nm,19.6s,baz=215,slow=40
KOLS Kolonicke sedl 63.22 314 *e*P **P** **19 28 15.0 +2.5**
KOLS Kolonicke sedl 63.22 314 *e*P **P** **19 28 15.0 +2.5**
VTS Vitosha 63.88 306 P **P** **19 28 17.0 -0.1**
VTS pmax pmax
comp=Z,10.0nm,1.4s
VTS Vitosha 63.88 306 P **P** **19 28 17.0 -0.1**
VTS IAmb IAmb 19 28 23.8
comp=Z,10nm,1.4s
VYHS Vyhne 65.54 314 *e*P **P** **19 28 28.8 +1.1**
VYHS Vyhne 65.54 314 *e*P **P** **19 28 28.8 +1.1**
ITM Ithomi 66.25 301 P **P** **19 28 30.9 -1.6**
NC405 NORSAR Array S 66.44 328 P **P** **19 28 34.7 +0.2**
VRAC Vranov 66.78 315 LR LR 20 01 33.5
comp=Z,65nm,21.1s,baz=86,slow=39
NC303 NORSAR Array S 66.78 328 P **P** **19 28 37.6 +2.2**
NC602 NORSAR Array S 66.81 328 P **P** **19 28 35.2 -0.4**
NB201 NORSAR Array S 66.86 328 P **P** **19 28 33.9 -2.0**
NB2 NORSAR Subarra 66.90 328 P **P** **19 28 35.4 -0.8**
comp=Z,10nm,1.0s,baz=79,slow=6.5
NOA NORSAR Array B 66.90 328 P **P** **19 28 35.3 -0.9**
comp=Z,3.8nm,0.7s,baz=77,slow=6.3,SNR=13
NOA LR LR 19 58 37.6
comp=Z,46nm,20.5s,baz=85,slow=37
NC204 NORSAR Array S 67.05 328 P **P** **19 28 36.2 -1.0**
NA001 NORSAR Array S 67.10 328 P **P** **19 28 38.8 +1.4**
NBO00 NORSAR Array S 67.11 328 P **P** **19 28 35.6 -1.9**
NBO00 IAmb IAmb 19 28 44.4
comp=Z,29nm,1.2s
KMBO Kilima Mbogo 67.48 257 P **P** **19 28 40.1 -0.7**
comp=Z,3.1nm,0.7s,baz=41,slow=12,SNR=3.6
KMBO Kilima Mbogo 67.48 257 P **P** **19 28 40.0 -0.8**
KMBO IAmb IAmb 19 28 54.8
comp=Z,22nm,1.9s
BLY Banja Luka 67.59 310 P **P** **19 28 41.2 +0.4**
CONA Conrad Observa 67.61 314 *i* P **P** **19 28 40.2 -0.7**
comp=Z,4.4nm,0.9s
BBOO Buckleboo 67.96 149 P **P** **19 28 42.5 -0.6**
BBOO IAmb IAmb 19 28 44.5
comp=Z,41nm,1.9s
ARSA Arzberg 68.01 313 *i* P **P** **19 28 40.0 -3.5**
comp=Z,2.1nm,0.6s
CLL Collm 68.46 318 *e*P **P** **19 28 47.0 +0.8**
CLL Collm 68.46 318 *e*P **P** **19 28 47.0 +0.8**
MOA Molln 68.66 314 *i* P **P** **19 28 47.8 +0.3**
comp=Z,4.2nm,0.8s
GEC2 GERESS Array S 68.73 315 P **P** **19 28 48.5 +0.5**
GERES GERESS Array B 68.73 315 P **P** **19 28 47.6 -0.4**
comp=Z,0.9nm,0.7s,baz=66,slow=6.5,SNR=7.1
GERES LR LR 20 04 04.1
comp=Z,68nm,20.4s,baz=17,slow=40
GERES GERESS Array B 68.73 315 P **P** **19 28 47.0 -1.0**
KBA Koelnbreinsper 69.48 313 *i* P **P** **19 28 52.7 -0.2**
comp=Z,5.7nm,1.2s
STKA Stephens Creek 69.94 144 P **P** **19 28 55.6 +0.1**
STKA pmax pmax
comp=Z,1.0nm,0.7s
STKA Stephens Creek 69.94 144 P **P** **19 28 55.5 +0.1**
comp=Z,5.8nm,0.6s,baz=323,slow=6.4,SNR=13
STKA Stephens Creek 69.94 144 P **P** **19 28 55.6 +0.1**
ABTA Abfaltersbach 70.13 313 *i* P **P** **19 28 56.9 +0.2**
comp=Z,5.4nm,0.9s
WTTA Wattenberg 70.53 314 *i* P **P** **19 28 57.5 -1.8**
comp=Z,6.2nm,1.1s
SQTA Sankt Quirin 70.82 314 *i* P **P** **19 28 58.9 -2.1**
comp=Z,6.5nm,0.8s
MOTA Moosalm 70.85 314 *i* P **P** **19 28 59.4 -1.7**
comp=Z,5.5nm,1.0s
JMIC Jan Mayen 71.00 341 LR LR 20 02 54.5
comp=Z,70nm,21.9s,baz=62,slow=38
FETA Feichten 71.20 314 *i* P **P** **19 29 02.0 -1.3**
comp=Z,5.1nm,0.9s
FUORN Ofenpass-Fuorn 71.63 313 P **P** **19 29 06.7 +0.6**
FUORN IAmb IAmb 19 29 07.1
comp=Z,4.6nm,0.9s
ZCCA Zocca 71.93 311 P **P** **19 29 07.5 -0.1**
MLY Manley 73.17 25 P **P** **19 29 13.2 -1.5**
MLY IAmb IAmb 19 29 17.4
comp=Z,21nm,1.6s
BPAW Bear Paw Mtn. 73.50 26 P **P** **19 29 18.0 +1.4**
BPAW IAmb IAmb 19 29 35.3
comp=Z,22nm,1.6s
PPLA Purkeypile 73.58 27 P **P** **19 29 17.7 +0.5**
PPLA IAmb IAmb 19 29 32.4
comp=Z,66nm,1.8s
NEA Nenana 74.01 25 P **P** **19 29 18.3 -1.2**
COLA College 74.32 24‖ *e*P **P** **19 29 24.0 +2.7**
COLA pmax pmax
comp=Z,5.0nm,0.9s
ARMA Armidale 74.60 136 P **P** **19 29 24.9 +1.5**
ARMA IAmb IAmb 19 29 53.6
comp=Z,25nm,1.7s
ILAR Eielson Array 74.73 24 P **P** **19 29 22.9 -0.8**
ILAR Eielson Array 74.73 24 P **P** **19 29 22.7 -1.0**
comp=Z,2.6nm,1.1s,baz=287,slow=4.3,SNR=3.9
ILAR Eielson Array 74.73 24 P **P** **19 29 22.9 -0.8**
SUA Susitna One 74.84 28 P **P** **19 29 24.2 -0.3**
SUA IAmb IAmb 19 29 48.9
comp=Z,70nm,2.0s
SII Sitkinak Islan 75.54 34 P **P** **19 29 28.6 +0.1**
BRLK Bradley Lake 75.59 30 P **P** **19 29 27.9 -0.9**
INK Inuvik 76.97 18 P **P** **19 29 36.2 -0.1**
INK Inuvik 76.97 18 P **P** **19 29 35.8 -0.6**
comp=Z,3.0nm,0.7s,baz=317,slow=6.6,SNR=6.5
INK Inuvik 76.97 18 P **P** **19 29 36.2 -0.1**
INK IAmb IAmb 19 29 39.8
comp=Z,9.3nm,1.1s
RES Resolute Bay 78.16 4 P **P** **19 29 42.7 -0.2**
RES pmax pmax
comp=Z,7.0nm,1.2s
RES Resolute Bay 78.16 4 P **P** **19 29 43.0 +0.1**
comp=Z,3.7nm,0.9s,baz=357,slow=6.4,SNR=12
RES Resolute Bay 78.16 4 P **P** **19 29 42.7 -0.2**
RES IAmb IAmb 19 29 46.4
comp=Z,7.0nm,1.1s
C36M Paulatuk 78.62 15 P **P** **19 29 45.0 -0.5**
C36M IAmb IAmb 19 29 48.6
comp=Z,13nm,1.1s
YKA Yellowknife Ar 86.46 16 P **P** **19 30 25.8 -0.7**
comp=Z,1.4nm,0.7s,baz=325,slow=4.6,SNR=15
TORD Torodi Ar. Bea 92.45 286 P **P** **19 30 56.0 +0.4**
comp=Z,0.8nm,1.0s,baz=50,slow=6.1,SNR=3.4
TXAR Lajitas Array 119.24 25 PKIKP **PKPdf** **19 36 32.1 -1.8**
TXAR Lajitas Array 119.24 25 PKP **PKiKP** **19 36 33.4 -0.5**
comp=Z,0.3nm,0.5s,baz=48,slow=1.3,SNR=3.2
TXAR Lajitas Array 119.24 25 **PKPdf** **19 36 32.1 -1.8**
SDV Santo Domingo 143.60 346 PKPab 19 37 15.5 -1.0
RUSC La Rusia 146.98 350 **PKPdf** **19 37 23.6 -2.6**
ROSC El Rosal 148.20 352 PKPbc **PKiKP** **19 37 31.5 -1.6**
comp=Z,9.5nm,0.3s,baz=81,slow=19,SNR=4.8
ROSC El Rosal 148.20 352 PKPdf **PKPdf** **19 37 26.6 -1.5**
ROSC **PKPbc** **19 37 30.3 -1.0**
BDFB Brasilia 149.33 285 PKPbc **PKiKP** **19 37 34.5 -0.4**
comp=Z,3.2nm,0.6s,baz=104,slow=6.6,SNR=3.8
BDFB Brasilia 149.33 285 **PKiKP** **19 37 34.2 -0.8**
FLOC Florencia 151.57 353 PKPdf **PKPdf** **19 37 30.6 -2.3**
FLOC **PKiKP** **19 37 38.1 -1.5**
PLCA Paso Flores 164.58 204 PKPab **PKPab** **19 38 42.9 -0.1**
comp=Z,1.7nm,0.8s,baz=146,slow=1.2,SNR=4.0
PLCA Paso Flores 164.58 204 **PKPab** **19 38 42.6 -0.4**

PGC ***14*** *19:17:52.8±0.2, 49.04N×127.95W, h10km, MLSn3.1/32, Mw3.7/32, 148km west of Tofino, Bc Vancouver Island, Canada Region*
IDC ***14*** *19:17:52.4±1.1, 49.05N×127.82W, h0km, mb3.8/5, mb1 3.9/11, mb1mx3.6/56, mbtmp3.7/11, ML3.5/6, MS3.3/7, Ms1 3.3/7, ms1mx2.9/67, Error ellipse: s-maj=29.0km s-min=11.3km az=58.0*
NEIC ***14*** *19:17:56.3±2.8, 49.30N±0.07×127.5W±0.1, h13km±5km, mb4.0/14, Error ellipse: s-maj=16.0km s-min=6.6km az=58.0*
ISC 14 19:17:53.4±1.5, 49.18N±0.03×127.64W±0.04, h4km±10km, n128, σ1°76/142, mb4.0/7, MS3.5/5, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NC89	**ODP889**	**0.73**	**134**	P	**Pb**	**19 18 08.3**	**-0.3**
NC89				S	**Sb**	**19 18 18.2**	**-0.5**
ETB	**Estevan Point**	**0.75**	**74**	P	**Pn**	**19 18 10.8**	**0.0**
ETB				S	**Sn**	**19 18 22.5**	**-0.1**
EDB	**Eliza Dome**	**0.78**	**26**	P	**Pn**	**19 18 10.2**	**-1.0**
EDB				S	**Sn**	**19 18 22.4**	**-0.9**
BPBC	**Brooks Peninsu**	**0.99**	**355**	P	**Pg**	**19 18 12.2**	**-0.1**
BPBC				S	**Sb**	**19 18 26.2**	**-0.3**
TOFB	**Tofino**	**1.14**	**90**	P	**Pn**	**19 18 15.5**	**-0.6**
TOFB				S	**Sn**	**19 18 31.9**	**-0.3**
WOSB	**Woss**	**1.21**	**35**	Pn	**Pg**	**19 18 17.2**	**+0.7**
WOSB				Sn	**Sn**	**19 18 33.5**	**-0.6**
GDR	**Gold River**	**1.21**	**59**	Pn	**Pg**	**19 18 17.2**	**+0.6**
GDR				Sn	**Sn**	**19 18 34.3**	**+0.3**
NCBC	**Barkley Canyon**	**1.23**	**127**	P	**Pn**	**19 18 15.2**	**-2.1**
NCBC				S	**Sb**	**19 18 30.1**	**-3.1**
MAYB	**Maynard**	**1.27**	**14**	Pn	**Pb**	**19 18 17.4**	**-0.5**
PACB	**Port Alice, BC**	**1.27**	**4**	Pn	**Pn**	**19 18 16.6**	**-1.3**
PACB				Sn	**Sb**	**19 18 33.1**	**-1.3**
B012	**Ucluelet**	**1.40**	**100**	Pn	**Pn**	**19 18 18.8**	**-0.9**
B012				Sn	**Sb**	**19 18 36.9**	**-1.6**
NC27	**ODP1027**	**1.42**	**183**	P	Pn	19 18 11.4	-8.2
NC27				S	Sn	19 18 25.3	-13
BTB	**Buttle Lake**	**1.42**	**77**	Pn	**Pg**	**19 18 20.3**	**-0.3**
BTB				Sn	**Sg**	**19 18 38.9**	**-0.1**
OZB	**Mount Ozzard**	**1.43**	**98**	Pn	**Pn**	**19 18 19.2**	**-1.0**
OZB				Sn	**Sn**	**19 18 37.9**	**-1.5**
TLCB	**Telegraph Cove**	**1.47**	**21**	Pn	**Pb**	**19 18 20.7**	**-0.6**
TLCB				Sn	**Sb**	**19 18 39.4**	**-0.9**
SPLB	**Strathcona Par**	**1.48**	**60**	Pn	**Pg**	**19 18 21.7**	**-0.1**
SPLB				Sn	**Sg**	**19 18 40.6**	**-0.3**
HOLB	**Holberg**	**1.50**	**348**	Pn	**Pn**	**19 18 18.9**	**-2.3**
HOLB				Sn	**Sn**	**19 18 37.1**	**-4.1**
PHC	**Port Hardy**	**1.54**	**5**	Pn	**Pn**	**19 18 20.7**	**-1.0**
PHC				Sn	**Sn**	**19 18 40.8**	**-1.2**
KEMF	**NEPTUNE Canada**	**1.56**	**219**	P	Pn	19 18 14.3	-7.4
NCRB	**Newcastle Ridg**	**1.60**	**39**	Pn	**Pb**	**19 18 23.4**	**-0.3**
BFSB	**Bamfield**	**1.68**	**101**	Pn	**Pn**	**19 18 22.7**	**-0.9**
BFSB				Sn	**Sn**	**19 18 44.2**	**-1.4**
B928	**Bamfield**	**1.69**	**101**	Pn	**Pn**	**19 18 22.8**	**-0.8**
B928				Sn	**Sn**	**19 18 43.8**	**-1.9**
CBB	**Campbell River**	**1.71**	**59**	Pn	**Pb**	**19 18 24.6**	**-0.9**
CBB				Sn	**Sg**	**19 18 47.7**	**-0.6**
B927	**Port Alberni**	**1.86**	**88**	Pn	**Pb**	**19 18 26.4**	**-1.5**
MGB	**Mount Grey**	**1.95**	**94**	Pn	**Pn**	**19 18 26.8**	**-0.6**
MGB				Sn	**Sn**	**19 18 51.4**	**-1.0**
TXB	**Texada**	**2.16**	**75**	Pn	**Pn**	**19 18 30.9**	**+0.8**
TXB				Sn	**Sn**	**19 18 57.0**	**-0.4**
OCP	**Olym-Cheeka Pk**	**2.18**	**113**	Pn	**Pn**	**19 18 29.9**	**-0.6**
YOUB	**Youbou, Lake C**	**2.24**	**96**	Pn	**Pn**	**19 18 30.8**	**-0.6**
YOUB				Sn	**Sn**	**19 18 59.0**	**-0.5**
B926	**Mesachie Lake**	**2.34**	**97**	Pn	**Pn**	**19 18 31.5**	**-1.1**
B926				Sn	**Sn**	**19 19 01.3**	**-0.5**
NLLB	**Nanaimo Lost L**	**2.40**	**87**	Pn	**Pn**	**19 18 33.7**	**+0.2**
NLLB				Sn	**Sb**	**19 19 04.5**	**-2.5**
SHB	**Sechelt**	**2.50**	**79**	Pn	**Pn**	**19 18 35.7**	**+0.8**
SHB				Sn	**Sn**	**19 19 06.1**	**+0.2**
LZB	**Mount Lazard**	**2.58**	**101**	Pn	**Pn**	**19 18 35.8**	**-0.2**
LZB				Sn	**Sn**	**19 19 06.1**	**-1.8**
BPCB	**Bare Point**	**2.60**	**94**	Pn	**Pn**	**19 18 37.0**	**+0.8**
OBC	**Olympics--Boni**	**2.62**	**114**	Pn	**Pn**	**19 18 36.1**	**-0.5**
GOBB	**Galiano Island**	**2.73**	**93**	Pn	**Pn**	**19 18 38.7**	**+0.8**
SOKB	**Sooke**	**2.74**	**105**	Pn	**Pn**	**19 18 37.2**	**-0.9**
B010	**North Saanich**	**2.81**	**99**	Pn	**Pn**	**19 18 38.7**	**-0.4**
B010				Sn	**Sn**	**19 19 11.9**	**-0.6**
PGC	**Sidney**	**2.81**	**99**	Pn	**Pn**	**19 18 38.9**	**-0.2**
PGC				Sn	**Sn**	**19 19 13.0**	**-0.5**
PGC	**Sidney**	**2.81**	**99**		**Pn**	**19 18 38.4**	**-0.8**
B011	**North Saanich**	**2.81**	**99**	Pn	**Pn**	**19 18 39.2**	**0.0**
BIB	**Bowen Island**	**2.85**	**84**	Pn	**Pn**	**19 18 40.7**	**+1.1**
OSD	**Olympics--Snow**	**2.95**	**116**	Pn	**Pn**	**19 18 40.9**	**-0.4**
VGZ	**Gonzales**	**2.95**	**103**	Pn	**Pn**	**19 18 40.6**	**-0.5**
SNB	**Saturna Island**	**2.97**	**96**	Pn	**Pn**	**19 18 42.2**	**+0.8**
BBB	**Bella Bella**	**3.03**	**354**	Pn	**Pn**	**19 18 41.1**	**-1.0**
	11nm,0.3s,baz=196,slow=6.4,SNR=138						
BBB				Sn	**Sn**	**19 19 15.9**	**-2.9**
	40nm,0.3s,baz=93,slow=19,SNR=17						
BBB				LR	LR	19 20 02.1	
	comp=Z,235nm,20.8s,baz=278,slow=41						
BBB	**Bella Bella**	**3.03**	**354**	Pn	**Pn**	**19 18 41.0**	**-1.1**
BBB				Sn	**Sn**	**19 19 15.7**	**-3.1**
NLWA	**Neilton Lookou**	**3.09**	**124**	Pn	**Pn**	**19 18 42.9**	**-0.1**
BLN	**Blyn Mountain**	**3.31**	**109**	Pn	**Pn**	**19 18 45.9**	**-0.1**
HNBB	**Haney**	**3.32**	**86**	Pn	**Pn**	**19 18 47.1**	**+0.9**
HDW	**Hoodsport**	**3.42**	**115**	Pn	**Pn**	**19 18 47.1**	**-0.5**
VDB	**Vedder Mountai**	**3.64**	**90**	Pn	**Pn**	**19 18 51.6**	**+1.0**
CMW	**Cultus Mountai**	**3.73**	**100**	Pn	**Pn**	**19 18 52.0**	**+0.2**
MBW	**Mount Baker**	**3.80**	**94**	Pn	**Pn**	**19 18 54.1**	**+1.2**
JCW	**Jim Creek**	**3.91**	**102**	Pn	**Pn**	**19 18 54.7**	**+0.5**
LLLB	**Lillooet**	**3.99**	**67**	Pn	**Pn**	**19 18 57.1**	**+1.7**
LLLB	**Lillooet**	**3.99**	**67**		**Pn**	**19 18 57.8**	**+2.4**
HOPB	**Hope**	**4.08**	**85**	Pn	**Pn**	**19 18 57.8**	**+1.2**
D05A	**Enumclaw**	**4.27**	**116**	Pn	**Pn**	**19 19 00.9**	**+1.6**
FMW	**Mount Fremont**	**4.59**	**117**	Pn	**Pn**	**19 19 04.3**	**+0.5**
LON	**Longmire**	**4.61**	**120**	Pn	**Pn**	**19 19 04.5**	**+0.6**
LON	**Longmire**	**4.61**	**120**		**Pn**	**19 19 04.9**	**+1.0**
F04A	**Amboy**	**4.80**	**131**	Pn	**Pn**	**19 19 08.3**	**+1.9**
LTY	**Liberty**	**5.04**	**110**	Pn	**Pn**	**19 19 10.9**	**+1.0**
LTY	**Liberty**	**5.04**	**110**		**Pn**	**19 19 11.5**	**+1.6**
COR	**Corvallis**	**5.47**	**145**	Pn	**Pn**	**19 19 18.2**	**+2.6**
FSB	**Fort Saint Jam**	**5.69**	**20**	Pn	**Pn**	**19 19 20.4**	**+1.7**
H04A	**Detroit Lake**	**5.84**	**138**		**Pn**	**19 19 22.3**	**+1.4**
E07A	**Sunnyside**	**5.86**	**114**	Pn	**Pn**	**19 19 23.0**	**+2.0**
F07A	**Phinny Hill Vi**	**6.17**	**119**	Pn	**Pn**	**19 19 28.0**	**+2.7**
C09A	**Chrisman Ranch**	**6.38**	**99**		**Pn**	**19 19 28.8**	**+0.6**
MNB	**Mounoet Dainar**	**6.62**	**59**	Pn	**Pn**	**19 19 33.9**	**+2.3**
NEW	**Newport**	**7.02**	**93**	LR	LR	19 22 48.4	
	comp=Z,155nm,18.4s,baz=288,slow=42						
NEW	**Newport**	**7.02**	**93**	Pn	**Pn**	**19 19 38.5**	**+1.5**
HUMO	**Hull Mountain**	**7.34**	**152**	Pn	**Pn**	**19 19 44.0**	**+2.6**
YBH	**Yreka Blue Hor**	**8.21**	**153**		**Pn**	**19 19 57.8**	**+4.4**
	0.1nm,0.3s,baz=335,slow=6.2,SNR=4.8						
BMO	**Blue Mountains**	**8.28**	**118**	Pn	**Pn**	**19 19 56.5**	**+2.2**
MOD	**Modoc Plateau**	**8.91**	**142**	Pn	**Pn**	**19 20 07.1**	**+4.1**
JTMT	**Jette**	**8.99**	**94**	Pn	**Pn**	**19 20 05.2**	**+1.1**
WVOR	**Wild Horse Val**	**9.21**	**134**	Pn	**Pn**	**19 20 11.1**	**+3.9**
JIS	**Juneau Island**	**9.95**	**339**	Pn	**Pn**	**19 20 17.4**	**+0.4**
BEKR	**Beckworth**	**10.65**	**148**		Pn	19 20 31.6	+4.6
PAHR	**Pah Rah Range**	**11.15**	**145**	Pn	**Pn**	**19 20 37.8**	**+4.1**
AFDM	**Forest Hills D**	**11.29**	**152**	Pn	**Pn**	**19 20 39.0**	**+3.5**
VCNR	**Virginia City**	**11.41**	**147**	Pn	Pn	19 20 42.5	+5.1
PNTR	**Pine Nut**	**11.61**	**147**	Pn	Pn	19 20 44.7	+4.6
YERR	**Yerington**	**11.83**	**146**	Pn	**Pn**	**19 20 47.3**	**+4.2**
YHL	**Hebgen Lake**	**12.03**	**105**	Pn	**Pn**	**19 20 50.0**	**+4.1**
ELK	**Elko**	**12.16**	**129**	Pn	**Pn**	**19 20 50.3**	**+2.6**
	0.1nm,0.3s,baz=290,slow=12,SNR=3.2						
ELK	**Elko**	**12.16**	**129**		**Pn**	**19 20 51.1**	**+3.5**
KVN	**Kaiserville**	**12.21**	**142**	Pn	**Pn**	**19 20 52.5**	**+4.2**
RYN	**Ryan**	**12.41**	**145**	Pn	**Pn**	**19 20 53.7**	**+2.6**
YKU2	**Yakutat**	**12.48**	**331**	Pn	**Pn**	**19 20 51.8**	**+0.1**
NVAR	**Mina Array Bea**	**12.67**	**144**	Pn	**Pn**	**19 20 56.4**	**+1.8**
	0.0nm,0.3s,baz=321,slow=12,SNR=12						
NV11	**Mina Array Sit**	**12.73**	**144**	Pn	**Pn**	**19 20 59.1**	**+3.9**
SPUT	**South Promonto**	**13.27**	**121**		**Pn**	**19 21 06.3**	**+3.6**
PD31	**Pinedale Array**	**14.10**	**110**	P	**P**	**19 21 18.1**	**-3.8**
PDAR	**Pinedale Array**	**14.10**	**110**	Pn	**P**	**19 21 17.7**	**-4.3**
	0.1nm,0.3s,baz=307,slow=9.8,SNR=8.1						
PDAR				LR	LR	19 27 18.4	
	comp=Z,92nm,19.7s,baz=288,slow=40						
YKA	**Yellowknife Ar**	**15.18**	**24**	Pn	**Pn**	**19 21 27.8**	**-0.6**
	0.2nm,0.3s,baz=214,slow=13,SNR=10						
GSC	**Goldstone, Bar**	**15.99**	**146**	Pn	**P**	**19 21 42.4**	**-0.5**
LCMT	**Little Creek M**	**16.04**	**134**		**P**	**19 21 43.8**	**+0.3**
K22A	**Casper**	**16.05**	**106**	P	**Pn**	**19 21 39.7**	**-0.4**
K22A				IAmb	IAmb	19 21 47.4	
	comp=Z,9.7nm,1.1s						
RWWY	**Rawlins**	**16.15**	**110**		**P**	**19 21 44.5**	**-0.3**
RWWY				IAmb	IAmb	19 21 47.4	
	comp=Z,13nm,1.0s						
PKCU	**Pink Cliffs**	**16.15**	**131**	Pn	**P**	**19 21 43.8**	**-1.1**
FFC	**Flin Flon**	**16.71**	**61**	P	**P**	**19 21 50.6**	**-0.1**
FFC				IAmb	IAmb	19 21 56.5	
	comp=Z,32nm,2.0s						
U15A	**North Rim**	**16.96**	**133**	P	**P**	**19 21 55.9**	**+2.0**
N23A	**Red Feather La**	**17.38**	**110**	P	**P**	**19 21 60.0**	**+1.5**
PHWY	**Pilot Hill**	**17.45**	**108**	P	**P**	**19 22 00.8**	**+1.6**
ILAR	**Eielson Array**	**18.69**	**334**	P	**Pn**	**19 22 14.2**	**+1.5**
	comp=Z,0.0nm,0.3s,baz=144,slow=9.4,SNR=3.9						
ULM	**Lac du Bonnet**	**20.49**	**75**	P	Pn	19 22 34.9	+0.6
	comp=Z,0.6nm,0.3s,baz=281,slow=12,SNR=2.0						
ULM	**Lac du Bonnet**	**20.49**	**75**	IAmb	IAmb	19 22 49.9	
	comp=Z,10nm,1.6s						
FCC	**Fort Churchill**	**21.72**	**51**	P	**P**	**19 22 47.4**	**+2.1**
ECSD	**EROS Data Cent**	**21.96**	**93**	P	**P**	**19 22 50.0**	**+1.9**
ECSD				IAmb	IAmb	19 22 51.1	
	comp=Z,5.7nm,0.9s						
MNTX	**Cornudas Mount**	**24.18**	**128**	P	**P**	**19 23 12.4**	**+1.6**
MNTX				IAmb	IAmb	19 23 20.6	
	comp=Z,7.2nm,1.4s						
TXAR	**Lajitas Array**	**26.96**	**128**	P	**P**	**19 23 34.9**	**-1.2**
	comp=Z,1.6nm,0.9s,baz=318,slow=5.0,SNR=7.8						
TXAR				LR	LR	19 35 30.2	
	comp=Z,62nm,18.1s,baz=0.0,slow=39						
RES	**Resolute Bay**	**29.06**	**17**	LR	LR	19 36 10.7	
	comp=Z,104nm,18.8s,baz=192,slow=38						
TEIG	**Tepich**	**42.63**	**118**	LR	LR	19 46 08.9	
	comp=Z,26nm,20.6s,baz=229,slow=40						
MA2	**Magadan**	**45.70**	**315**	P	**P**	**19 26 15.9**	**+0.8**
	comp=Z,11nm,0.9s,baz=89,slow=12,SNR=3.2						
MA2	**Magadan**	**45.70**	**315**	IAmb	IAmb	19 26 21.5	
	comp=Z,18nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**59.34**	**265**	T	T	20 32 33.5	
	baz=43,slow=75,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**59.34**	**265**	T	T	20 32 36.3	
	baz=43,slow=75,SNR=6.5						
H11N1	**WAKE ISLAND Hy**	**59.35**	**265**	T	T	20 32 34.1	
	baz=43,slow=75,SNR=7.0						
HHC	**Hu-ho-hao-te**	**76.31**	**318**	*e*P	**P**	**19 29 43.8**	**+0.3**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,320nm,5.9s						
HHC				LR	LR		
	comp=N,340nm,12.8s						
HHC				LR	LR		
	comp=E,320nm,15.3s						
HHC				LR	LR		
	comp=Z,240nm,13.2s						
KURK	**Kurchatov**	**77.98**	**343**	P	**P**	**19 29 53.0**	**+0.5**
KURK	**Kurchatov**	**77.98**	**343**	IAmb	IAmb	19 29 54.5	
	comp=Z,8.1nm,1.9s						
KURBB	**Kurchatov Arra**	**78.08**	**343**	P	**P**	**19 29 53.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=19,slow=5.2,SNR=3.5						
MKAR	**Makanchi Array**	**80.94**	**340**	P	**P**	**19 30 09.7**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=11,slow=4.4,SNR=3.3						
WMQ	**Urumqi**	**82.35**	**335**	*e*P	**P**	**19 30 18.6**	**+2.2**
CPUP	**Villa Florida**	**97.73**	**121**	LR	LR	20 22 44.2	
	comp=Z,43nm,18.4s,baz=40,slow=40						

*IDC **14** 19:19:11.9±1.2,23°.25S×179°.89W,h527km±11km, mb3.8/16,mb1 4.0/19,mb1mx3.7/48,mbtmp4.7/19,Error ellipse: s-maj=15.3km s-min=12.6km az=5.0*
*NEIC **14** 19:19:12.2±1.8,23°.36S±0°.10×179°.9W±0°.1,h535km±7km, mb4.6/86,Error ellipse: s-maj=15.3km s-min=13.2km az=140.0*

ISC 14 19:19:11.8±0.4,23°.40S±0°.06×179°.92W±0°.06,h532km, n129,σ1°22/145,mb4.6/50,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.09**	**163**	P	**P**	**19 20 50.7**	**+0.4**
	84nm,0.3s,baz=354,slow=19,SNR=4.5						
RAO				S	**S**	**19 22 11.9**	**+1.0**
	48nm,0.3s,baz=90,slow=23,SNR=4.6						
RAO	**Raoul Island**	**6.09**	**163**	P	**P**	**19 20 50.2**	**0.0**
NIUE	**Niue**	**10.26**	**67**	P	**P**	**19 21 31.2**	**-1.1**
DZM	**Mont Dzumac**	**12.65**	**273**	*e*LR	LR	19 22 06.5	
	comp=Z,301nm,22.2s						
DZM	**Mont Dzumac**	**12.65**	**273**	P	**P**	**19 21 58.2**	**+1.0**
	0.4nm,0.3s,baz=127,slow=20,SNR=3.7						
DZM	**Mont Dzumac**	**12.65**	**273**	P	**P**	**19 21 57.7**	**+0.4**
URZ	**Urewera**	**15.02**	**189**	P	**P**	**19 22 21.9**	**+0.3**
	1.8nm,0.3s,baz=289,slow=3.7,SNR=6.8						
URZ				S	**S**	**19 24 53.9**	**-4.1**
	0.6nm,0.3s,baz=108,slow=20,SNR=4.5						
URZ	**Urewera**	**15.02**	**189**	P	**P**	**19 22 21.2**	**-0.4**
URZ				IAmb	IAmb	19 22 31.4	
	comp=Z,47nm,1.6s						
URZ				S	**S**	**19 24 53.3**	**-4.7**
BKZ	**Black Stump Fm**	**16.01**	**190**	P	**P**	**19 22 30.0**	**-1.8**
BKZ				IAmb	IAmb	19 22 34.2	
	comp=Z,17nm,1.2s						
BKZ				S	**S**	**19 25 12.8**	**-2.8**
BFZ	**Birch Farm**	**17.53**	**190**	P	**P**	**19 22 43.8**	**-2.2**
BHW	**Baring Head**	**18.48**	**192**	P	**P**	**19 22 53.0**	**-1.7**
QRZ	**Quartz Range**	**18.50**	**198**	P	**P**	**19 22 56.3**	**+1.5**
PLWZ	**Palliser**	**18.56**	**191**	P	**P**	**19 22 55.5**	**+0.1**
NNZ	**Nelson**	**18.63**	**196**	P	**P**	**19 22 57.0**	**+0.9**
TUWZ	**Tuamarina**	**18.70**	**195**	P	**P**	**19 22 56.5**	**-0.2**
THZ	**Tophouse**	**19.27**	**196**	P	**P**	**19 23 02.2**	**+0.3**
KHZ	**Kahutara**	**19.73**	**194**	P	**P**	**19 23 04.9**	**-1.1**
KHZ				IAmb	IAmb	19 23 15.4	
	comp=Z,42nm,1.3s						
LTZ	**Lake Taylor**	**20.38**	**197**	P	**P**	**19 23 10.1**	**-1.9**
LTZ				IAmb	IAmb	19 23 28.9	
	comp=Z,28nm,1.3s						
OXZ	**Oxford**	**20.95**	**197**	P	**P**	**19 23 19.4**	**+2.2**
OXZ				IAmb	IAmb	19 23 28.4	
	comp=Z,18nm,1.0s						
RPZ	**Rata Peaks**	**21.58**	**198**	P	**P**	**19 23 25.8**	**+2.9**
	comp=Z,6.5nm,0.4s,baz=63,slow=18,SNR=1.9						
RPZ	**Rata Peaks**	**21.58**	**198**	P	**P**	**19 23 24.3**	**+1.4**
FOZ	**Fox Glacier**	**21.79**	**200**	P	**P**	**19 23 25.8**	**+1.1**
WKZ	**Wanaka**	**23.21**	**200**	P	**P**	**19 23 37.6**	**+0.2**
HNR	**Honiara**	**23.75**	**302**	P	**P**	**19 23 41.5**	**-1.0**
MLZ	**Mavora Lakes**	**23.98**	**201**	P	**P**	**19 23 46.0**	**+1.8**
DCZ	**Deep Cove**	**24.39**	**202**	P	**P**	**19 23 46.0**	**-1.8**
DCZ				IAmb	IAmb	19 24 16.9	
	comp=Z,38nm,1.3s						
PYZ	**Puysegur Point**	**25.16**	**202**	P	**P**	**19 23 51.9**	**-2.8**
ARMA	**Armidale**	**26.27**	**248**	P	**P**	**19 24 06.4**	**+1.6**
ARMA				IAmb	IAmb	19 24 07.9	
	comp=Z,17nm,1.1s						
EIDS	**Eidsvold**	**26.46**	**260**	P	**P**	**19 24 06.5**	**0.0**
EIDS				IAmb	IAmb	19 24 08.7	
	comp=Z,35nm,1.2s						
CAN	**Canberra**	**29.45**	**239**	P	**P**	**19 24 34.0**	**+1.4**
CAN				IAmb	IAmb	19 24 35.3	
	comp=Z,21nm,1.2s						
TOO	**Toolangi**	**32.78**	**236**	P	**P**	**19 25 02.3**	**+1.3**
TOO				IAmb	IAmb	19 25 03.2	
	comp=Z,6.3nm,0.7s						
TAU	**Tasmania Unive**	**33.33**	**226**	P	**P**	**19 25 06.8**	**+1.3**
TAU				IAmb	IAmb	19 25 09.6	
	comp=Z,57nm,1.5s						
XMAS	**Kiritimati**	**33.45**	**44**	P	**P**	**19 25 07.4**	**+0.6**
PMG	**Port Moresby**	**34.41**	**288**	P	**P**	**19 25 15.7**	**+0.8**
	comp=Z,45nm,0.7s,baz=89,slow=6.2,SNR=21						
PMG	**Port Moresby**	**34.41**	**288**	P	**P**	**19 25 15.0**	**+0.1**
STKA	**Stephens Creek**	**34.98**	**247**	P	**P**	**19 25 20.9**	**+1.4**
	comp=Z,9.3nm,0.4s,baz=94,slow=11,SNR=58						
STKA	**Stephens Creek**	**34.98**	**247**	P	**P**	**19 25 20.9**	**+1.4**
COEN	**Coen**	**36.11**	**278**	P	**P**	**19 25 30.4**	**+1.2**
COEN				IAmb	IAmb	19 25 49.5	
	comp=Z,28nm,1.6s						
BBOO	**Buckleboo**	**39.71**	**246**	P	**P**	**19 25 58.7**	**+0.4**
BBOO				IAmb	IAmb	19 25 59.7	
	comp=Z,14nm,1.1s						
TAOE	**Nuku Hiva Isla**	**40.69**	**76**	P	**P**	**19 26 07.1**	**+0.6**
AS31	**Alice Springs**	**42.19**	**260**	P	**P**	**19 26 18.3**	**+0.2**
AS31				IAmb	IAmb	19 26 20.0	
	comp=Z,7.8nm,0.5s						
ASAR	**Alice Springs**	**42.19**	**260**	P	**P**	**19 26 18.9**	**+0.7**
	comp=Z,18nm,0.6s,baz=93,slow=7.4,SNR=192						
ASAR				ScP	**ScP**	**19 31 02.2**	**+2.2**
	comp=Z,1.7nm,0.8s,baz=110,slow=3.6,SNR=6.4						
ASAR				S	**S**	**19 31 59.1**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=97,slow=15,SNR=7.4						
ASAR	**Alice Springs**	**42.19**	**260**	P	**P**	**19 26 18.5**	**+0.3**
ASAR					**ScP**	**19 31 00.6**	**+0.5**
WR0	**Warramunga Arr**	**42.33**	**266**	P	**P**	**19 26 19.3**	**+0.1**
WR0				IAmb	IAmb	19 26 20.0	
	comp=Z,20nm,1.1s						
WRAB	**Tennant Creek**	**42.51**	**266**	P	**P**	**19 26 20.5**	**-0.1**
WRAB				IAmb	IAmb	19 26 21.6	
	comp=Z,26nm,0.9s						
WRA	**Warramunga Arr**	**42.52**	**266**	P	**P**	**19 26 20.6**	**-0.1**
	comp=Z,12nm,0.3s,baz=89,slow=5.8,SNR=359						
WRA				ScP	**ScP**	**19 31 03.9**	**+2.4**
	comp=Z,2.8nm,1.0s,baz=105,slow=4.2,SNR=5.0						
WRA	**Warramunga Arr**	**42.52**	**266**	P	**P**	**19 26 20.2**	**-0.5**
JAY	**Jayapura**	**43.39**	**293**	P	**P**	**19 26 27.1**	**-0.5**
	comp=Z,14nm,0.5s,baz=165,slow=19,SNR=13						
FORT	**Forrest**	**46.55**	**249**	P	**P**	**19 26 51.8**	**+0.1**
KNRA	**Kununurra**	**48.77**	**269**	P	**P**	**19 27 09.1**	**+0.7**
MWH	**Moku'aweowe**	**48.79**	**31**	P	**P**	**19 27 08.4**	**-0.7**
GUMO	**Guam**	**50.38**	**313**	P	**P**	**19 27 18.7**	**-1.6**
FAKI	**Fak Fak**	**50.51**	**286**	P	**P**	**19 27 21.0**	**-0.3**
FITZ	**Fitzroy Crossi**	**50.94**	**265**	P	**P**	**19 27 25.4**	**+1.0**
	comp=Z,10nm,0.5s,baz=110,slow=3.9,SNR=44						
FITZ	**Fitzroy Crossi**	**50.94**	**265**	P	**P**	**19 27 24.6**	**+0.2**
FITZ				IAmb	IAmb	19 27 26.3	
	comp=Z,13nm,0.7s						
SIJI	**Sorong**	**52.35**	**288**	P	**P**	**19 27 34.7**	**+0.1**
	comp=Z,45nm,0.7s,baz=110,slow=7.3,SNR=22						
VNDA	**Vanda**	**54.88**	**185**	P	**P**	**19 27 52.6**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=8.3,slow=6.5,SNR=7.4						
VNDA	**Vanda**	**54.88**	**185**	P	**P**	**19 27 52.4**	**+1.0**
VNDA					**PcP**	**19 28 46.7**	**+1.2**
SOEI	**Soe**	**54.88**	**274**	P	**P**	**19 27 52.9**	**+0.2**
SOEI				IAmb	IAmb	19 28 03.1	
	comp=Z,88nm,1.3s						
PSAD2	**Pilbara Seismi**	**55.21**	**259**	P	**P**	**19 27 53.5**	**-1.2**
PSAD2				IAmb	IAmb	19 27 58.9	
	comp=Z,51nm,1.6s						
PSAC2	**Pilbara Seismi**	**55.28**	**259**	P	**P**	**19 27 55.1**	**-0.1**
PSAC2				IAmb	IAmb	19 27 57.8	
	comp=Z,63nm,1.6s						
PSAB3	**Pilbara Seismi**	**55.31**	**259**	P	**P**	**19 27 55.0**	**-0.5**
PSAB3				IAmb	IAmb	19 27 59.1	
	comp=Z,34nm,1.3s						
PSAA3	**Pilbara Seismi**	**55.32**	**259**	P	**P**	**19 27 54.7**	**-0.8**
PSAA3				IAmb	IAmb	19 27 56.9	
	comp=Z,50nm,1.4s						
PSAB2	**Pilbara Seismi**	**55.32**	**259**	P	**P**	**19 27 55.1**	**-0.4**
PSAB2				IAmb	IAmb	19 28 29.8	
	comp=Z,57nm,1.6s						
PSA00	**Pilbara Seismi**	**55.33**	**259**	P	**P**	**19 27 55.6**	**+0.1**
PSA00				IAmb	IAmb	19 28 29.0	
	comp=Z,56nm,1.6s						
PSAA2	**Pilbara Seismi**	**55.33**	**259**	P	**P**	**19 27 55.4**	**-0.2**
PSAA2				IAmb	IAmb	19 28 28.8	
	comp=Z,48nm,1.6s						
PSAC3	**Pilbara Seismi**	**55.33**	**259**	P	**P**	**19 27 55.7**	**+0.1**
PSAC3				IAmb	IAmb	19 28 02.1	
	comp=Z,38nm,1.4s						
PSAA1	**Pilbara Seismi**	**55.33**	**259**	P	**P**	**19 27 55.5**	**-0.1**
PSAA1				IAmb	IAmb	19 27 55.6	
	comp=Z,35nm,1.3s						
PSAB1	**Pilbara Seismi**	**55.35**	**259**	P	**P**	**19 27 55.5**	**-0.2**
PSAB1				IAmb	IAmb	19 28 18.7	
	comp=Z,49nm,1.6s						
PSAC1	**P

*IDC **14** 19:24:59.8±1.6,59°.44N×154°.01W,h115km±16km, mb3.5/10,mb1 3.7/13,mb1mx3.3/55,mbtmp3.9/13,MS3.4/1, Ms1 3.4/1,ms1mx2.6/52,Error ellipse: s-maj=19.7km s-min=12.3km az=15.0*

*NEIC **14** 19:25:01.0±1.4,59°.37N±0°.03×153°.8W±0°.1,h135km±4km, Error ellipse: s-maj=7.8km s-min=4.9km az=99.0*

*AEIC **14** 19:25:02.5±2.1,59°.33N±0°.04×153°.58W±0°.08, h128km±4km,ML3.5/102,Error ellipse: s-maj=7.1km s-min=3.9km az=127.0*

ISC 14 19:25:01.6±0.7,59°.37N±0°.03×153°.70W±0°.04, h135km±5km,n128,σ1§61/144,mb3.8/10,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AUW	**Augustine West**	**0.12**	**87**		**Pn**	**19 25 19.3**	**-0.6**
AUP	**Augustine Pinn**	**0.14**	**91**		**Pn**	**19 25 19.6**	**-0.5**
AUQ	**Augustine Qik'**	**0.15**	**94**		**Pn**	**19 25 19.4**	**-0.6**
AUQ					**Sn**	**19 25 33.1**	**-0.8**
AUJK	**Augustine Jueg**	**0.15**	**96**		**Pn**	**19 25 19.4**	**-0.6**
AU22	**Augustine Moun**	**0.17**	**88**		**Pn**	**19 25 19.3**	**-0.6**
AU22					**Sn**	**19 25 33.1**	**-0.7**
FOSS	**Fourpeaked Sta**	**0.57**	**180**		**Pn**	**19 25 20.4**	**-1.3**
ILS	**Iliamna Low So**	**0.68**	**28**		**Pn**	**19 25 21.8**	**-0.6**
ILS					**Sn**	**19 25 37.7**	**-0.6**
IVE	**Iliamna Volcan**	**0.74**	**28**		**Pn**	**19 25 22.4**	**-0.5**
IVE					**Sn**	**19 25 38.3**	**-0.8**
ILW	**Iliamna West**	**0.75**	**22**		**Pn**	**19 25 22.4**	**-0.7**
ILW					**Sn**	**19 25 38.8**	**-0.6**
KAHC	**Katmai Hardscr**	**0.99**	**224**		**Pn**	**19 25 25.3**	**+0.3**
HOM	**Homer**	**1.09**	**73**		**Pn**	**19 25 25.8**	**0.0**
HOM	**Homer**	**1.09**	**73**		**Sn**	**19 25 43.7**	**-0.4**
RED	**Redoubt Volcan**	**1.16**	**23**		**Pn**	**19 25 26.0**	**-0.5**
RED					**Sn**	**19 25 44.5**	**-1.0**
RSO	**Redoubt South**	**1.20**	**23**		**Pn**	**19 25 23.7**	**-3.4**
RDWB	**Redoubt West**	**1.21**	**21**		**Pn**	**19 25 26.6**	**-0.5**
RDWB					**Sn**	**19 25 45.0**	**-0.6**
NCT	**North Crescent**	**1.26**	**18**		**Pn**	**19 25 27.0**	**-0.6**
RDJH	**Redoubt Jeurge**	**1.31**	**20**		**Pn**	**19 25 27.5**	**-0.6**
DFR	**Drift River**	**1.33**	**22**		**Pn**	**19 25 27.8**	**-0.5**
BRLK	**Bradley Lake**	**1.49**	**73**	Pn	**Pn**	**19 25 29.4**	**-0.5**
BRLK	**Bradley Lake**	**1.49**	**73**		**Sn**	**19 25 50.0**	**-1.5**
ANCK	**Angle Creek**	**1.50**	**219**		**Pn**	**19 25 30.6**	**+0.5**
BRSE	**Bradley Lake S**	**1.55**	**75**		**Pn**	**19 25 30.1**	**-0.5**
BRSE					**Sn**	**19 25 52.5**	**-0.3**
KDAK	**Kodiak Island**	**1.69**	**159**	P	**Pn**	**19 25 30.2**	**-2.0**
	62nm,0.3s,baz=15,slow=7.6,SNR=350						
KDAK				S	**Sn**	**19 25 51.2**	**-4.3**
	23nm,0.3s,baz=11,slow=23,SNR=5.2						
KDAK	**Kodiak Island**	**1.69**	**159**		**Pn**	**19 25 30.0**	**-2.2**
KDAK	**Kodiak Island**	**1.69**	**159**		**Sn**	**19 25 52.5**	**-2.9**
CANN	**Captain Cook N**	**1.90**	**41**		**Pn**	**19 25 36.3**	**+1.4**
SVW2	**Sparrevohn**	**1.98**	**332**		**Pn**	**19 25 34.6**	**-0.9**
SPCR	**Spurr Chakacha**	**1.99**	**21**		**Pn**	**19 25 35.3**	**-0.4**
SPBG	**Spurr Blockage**	**2.01**	**19**		**Pn**	**19 25 35.9**	**-0.1**
SLKM	**Skilak Lake**	**2.09**	**55**		**Pn**	**19 25 36.2**	**-0.8**
SPCG	**Spurr Capps Gl**	**2.11**	**23**		**Pn**	**19 25 37.5**	**+0.3**
PLK2	**Peulik 2**	**2.11**	**222**		**Pn**	**19 25 38.0**	**+0.8**
PLK5	**Peulik 5**	**2.15**	**232**		**Pn**	**19 25 38.5**	**+0.8**
PLK3	**Peulik 3**	**2.15**	**220**		**Pn**	**19 25 38.2**	**+0.5**
OHAK	**Old Harbor**	**2.16**	**174**		**Pn**	**19 25 35.5**	**-2.2**
OHAK	**Old Harbor**	**2.16**	**174**		**Sn**	**19 26 01.8**	**-3.6**
PLK1	**Peulik 1**	**2.19**	**225**		**Pn**	**19 25 38.7**	**+0.6**
SEW	**Seward**	**2.27**	**69**		**Pn**	**19 25 39.0**	**-0.1**
SUA	**Susitna One**	**2.56**	**34**		**Pn**	**19 25 42.8**	**-0.1**
RC01	**Rabbit Creek A**	**2.63**	**47**		**Pn**	**19 25 43.7**	**+0.2**
SII	**Sitkinak Islan**	**2.83**	**185**	Pn	**Pn**	**19 25 43.9**	**-2.3**
SII					**Sn**	**19 26 16.3**	**-4.2**
SKT	**Skwentna**	**2.83**	**21**	Pn	**Pn**	**19 25 46.1**	**0.0**
SKT	**Skwentna**	**2.83**	**21**		**Sn**	**19 26 21.0**	**+0.4**
PWL	**Port Wells**	**3.08**	**59**		**Pn**	**19 25 48.1**	**-1.2**
PMR	**Palmer**	**3.18**	**43**	Pn	**Pn**	**19 25 50.6**	**0.0**
KNK	**Knik Glacier**	**3.31**	**49**	Pn	**Pn**	**19 25 53.1**	**+0.7**
GHO	**Glory Hole Cre**	**3.38**	**42**	Pn	**Pn**	**19 25 52.6**	**-0.6**
SML	**Sawmill**	**3.61**	**45**	Pn	**Pn**	**19 25 55.3**	**-0.9**
PPLA	**Purkeypile**	**3.62**	**11**		**Pn**	**19 25 57.5**	**+1.0**
PPLA	**Purkeypile**	**3.62**	**11**		**Sn**	**19 26 40.2**	**+1.2**
CHIR	**Chirikof Islan**	**3.70**	**197**	Pn	Pn	19 25 54.8	-2.7
TT01	**Tatalina**	**3.73**	**343**		**Pn**	**19 25 56.7**	**-1.1**
TTA	**Tatalina**	**3.75**	**344**		**Pn**	**19 25 56.6**	**-1.6**
MID	**Middleton Isla**	**3.77**	**86**	Pn	**Pn**	**19 25 57.2**	**-1.0**
SCM	**Sheep Creek Mo**	**4.00**	**49**	Pn	**Pn**	**19 26 00.9**	**-0.6**
EYAK	**Cordova Ski Ar**	**4.17**	**70**	Pn	**Pn**	**19 26 02.8**	**-0.8**
EYAK					**Sn**	**19 26 48.4**	**-3.3**
VNHG	**Veniaminof 1**	**4.30**	**225**		Pn	19 26 04.4	-1.1
WAT6	**Susitna Watana**	**4.34**	**39**		**Pn**	**19 26 04.5**	**-1.6**
WAT2	**Susitna Watana**	**4.38**	**32**		**Pn**	**19 26 05.5**	**-1.0**
KTH	**Kantishna Hill**	**4.41**	**16**	Pn	**Pn**	**19 26 06.2**	**-0.7**
KTH					**Sn**	**19 26 56.0**	**-1.6**
TRF	**Thorofare Moun**	**4.42**	**20**	Pn	**Pn**	**19 26 06.6**	**-0.4**
TRF					**Sn**	**19 26 55.6**	**-2.2**
CHUM	**Lake Minchumin**	**4.58**	**8**		**Pn**	**19 26 08.9**	**-0.1**
RAGM	**Ragged Mountai**	**4.66**	**73**	Pn	**Pn**	**19 26 09.2**	**-1.0**
RAGM					**Sn**	**19 27 02.5**	**-1.0**
GOAT	**Goat Mountain**	**4.67**	**71**		**Pn**	**19 26 10.0**	**-0.3**
RND	**Reindeer**	**4.68**	**28**	Pn	**Pn**	**19 26 09.8**	**-0.6**
DHY	**Denali Highway**	**4.81**	**37**	Pn	**Pn**	**19 26 11.9**	**-0.4**
HMT	**Hamilton**	**4.86**	**74**	Pn	**Pn**	**19 26 12.6**	**-0.2**
BPAW	**Bear Paw Mtn.**	**4.92**	**14**	Pn	**Pn**	**19 26 12.7**	**-0.9**
MCK	**McKinley**	**4.94**	**25**	Pn	**Pn**	**19 26 13.8**	**-0.1**
GLB	**Gilahina Butte**	**5.33**	**63**		**Pn**	**19 26 18.9**	**-0.2**
PAX	**Paxson**	**5.38**	**44**		**Pn**	**19 26 20.0**	**+0.2**
PAX					**Sn**	**19 27 18.9**	**-1.8**
CRQM	**Cirque**	**5.47**	**71**		**Pn**	**19 26 20.7**	**-0.4**
CRQM					**Sn**	**19 27 20.0**	**-3.1**
TGL	**Tana Glacier**	**5.62**	**71**	Pn	**Pn**	**19 26 22.9**	**-0.2**
TGL					**Sn**	**19 27 23.9**	**-2.7**
NEA	**Nenana**	**5.67**	**21**	Pn	**Pn**	**19 26 22.2**	**-1.4**
MCARA	**McCarthy VSAT**	**5.67**	**65**		**Pn**	**19 26 23.8**	**+0.2**
MCARA					**Sn**	**19 27 26.2**	**-1.4**
WRH	**Wood River Hil**	**5.77**	**25**		**Pn**	**19 26 23.3**	**-1.6**
WRH					**Sn**	**19 27 26.0**	**-3.8**
MLY	**Manley**	**5.85**	**12**		**Pn**	**19 26 24.6**	**-1.5**
KIAG	**Kiagna River**	**5.88**	**70**		**Pn**	**19 26 25.5**	**-1.1**
PTPK	**Patty Peak**	**5.88**	**67**		**Pn**	**19 26 26.6**	**-0.1**
BALM	**Baldy**	**5.91**	**69**		**Pn**	**19 26 26.7**	**-0.2**
BALM					**Sn**	**19 27 30.4**	**-3.0**
CCB	**Clear Creek Bu**	**5.98**	**25**		**Pn**	**19 26 26.8**	**-1.0**
HDA	**Harding Lake**	**5.98**	**29**		**Pn**	**19 26 26.7**	**-1.1**
MESA	**MESA**	**5.99**	**77**		**Pn**	**19 26 28.2**	**0.0**
MENT	**Mentasta**	**6.01**	**49**		**Pn**	**19 26 27.8**	**-0.4**
RIDG	**Independent Ri**	**6.09**	**40**	Pn	**Pn**	**19 26 29.6**	**+0.3**
PS08	**TAPS Pump Stn8**	**6.12**	**29**		**Pn**	**19 26 28.8**	**-0.8**
GRNC	**Granite Creek**	**6.14**	**72**		**Pn**	**19 26 30.0**	**-0.1**
MDM	**Murphy Dome**	**6.17**	**22**		**Pn**	**19 26 28.9**	**-1.4**
COLA	**College**	**6.17**	**24**	Pn	**Pn**	**19 26 29.6**	**-0.6**
BARN	**Barnard Glacie**	**6.24**	**69**		**Pn**	**19 26 31.5**	**+0.1**
IL31		**6.30**	**28**		**Pn**	**19 26 30.2**	**-1.8**
IL31					**Sn**	**19 27 37.9**	**-4.7**
ILAR	**Eielson Array**	**6.30**	**28**	P	**Pn**	**19 26 30.2**	**-1.7**
	1.7nm,0.3s,baz=215,slow=14,SNR=21						
ILAR				S	**Sn**	**19 27 34.8**	**-7.8**
	4.1nm,0.3s,baz=218,slow=24,SNR=16						
RKAV	**Rock Avalanche**	**6.30**	**76**		**Pn**	**19 26 32.5**	**+0.2**
CTGM	**Chitina Glacie**	**6.38**	**70**		**Pn**	**19 26 33.1**	**-0.2**
POKR	**Poker Flat Res**	**6.47**	**24**		**Pn**	**19 26 33.0**	**-1.3**
SCRK	**Sand Creek**	**6.54**	**41**	Pn	**Pn**	**19 26 34.5**	**-0.8**
IM03		**6.64**	**360**		**Pn**	**19 26 36.0**	**-0.6**
YUK2	**White River**	**6.78**	**64**		**Pn**	**19 26 38.8**	**+0.1**
BC03		**6.84**	**52**		**Pn**	**19 26 38.5**	**-0.8**
PRP	**Porcupine Dome**	**7.24**	**28**		**Pn**	**19 26 43.9**	**-0.8**
PRP					**Sn**	**19 28 01.1**	**-4.4**
PNL	**Peninsula**	**7.28**	**81**		**Pn**	**19 26 45.0**	**-0.2**
ANM	**Nome**	**7.57**	**318**		**Pn**	**19 26 49.8**	**+0.7**
YUK4	**Talbot Arm**	**7.72**	**69**		**Pn**	**19 26 52.0**	**+0.7**
COLD	**Coldfoot**	**8.05**	**10**	Pn	**Pn**	**19 26 54.9**	**-0.6**
YUK5	**Granite Creek**	**8.07**	**71**		**Pn**	**19 26 55.9**	**-0.1**
FYU	**Fort Yukon**	**8.18**	**24**	Pn	**Pn**	**19 26 56.1**	**-1.1**
DAWY	**Dawson**	**8.26**	**49**		**Pn**	**19 26 58.5**	**+0.1**
AKUT	**Akutan**	**8.45**	**237**	Pn	Pn	19 26 59.4	-1.5
UNV	**Unalaska Valle**	**8.96**	**237**	Pn	Pn	19 27 05.2	-2.6
BM03	**Burnt Mountain**	**9.04**	**23**		**Pn**	**19 27 06.5**	**-2.3**
WHY	**Whitehorse**	**9.51**	**74**		**Pn**	**19 27 14.2**	**-1.0**
INK	**Inuvik**	**12.56**	**36**	P	**Pn**	**19 27 56.2**	**+0.9**
	0.4nm,0.3s,baz=245,slow=15,SNR=9.2						
INK	**Inuvik**	**12.56**	**36**	Pn	**Pn**	**19 27 56.3**	**+1.1**
YKA	**Yellowknife Ar**	**19.05**	**64**	P	**P**	**19 29 13.4**	**+0.5**
	0.5nm,0.3s,baz=275,slow=9.9,SNR=43						
SEY	**Seymchan**	**25.61**	**301**	P	**P**	**19 30 16.1**	**-1.8**
	0.4nm,0.3s,baz=54,slow=19,SNR=4.7						
PETK	**Petropavlovsk-**	**27.20**	**278**	P	**P**	**19 30 31.1**	**-1.2**
	4.2nm,0.9s,baz=69,slow=13,SNR=10						
NVAR	**Mina Array Bea**	**30.74**	**117**	P	**P**	**19 31 06.5**	**+2.5**
	1.0nm,0.8s,baz=302,slow=8.5,SNR=4.1						
PDAR	**Pinedale Array**	**31.60**	**102**	P	**P**	**19 31 12.9**	**+1.3**
	0.3nm,0.6s,baz=309,slow=4.3,SNR=3.2						
PDAR	**Pinedale Array**	**31.60**	**102**	P	**P**	**19 31 12.5**	**+1.0**
ULM	**Lac du Bonnet**	**33.53**	**80**	P	**P**	**19 31 28.4**	**+0.5**
	1.2nm,0.5s,baz=305,slow=16,SNR=2.8						
KLR	**Kul'dur**	**42.43**	**291**	P	P	19 32 41.2	-1.4
	2.8nm,0.5s,baz=39,slow=7.4,SNR=13						
SCHQ	**Schefferville**	**44.21**	**56**	P	**P**	**19 32 57.0**	**+0.2**
	0.8nm,0.4s,baz=319,slow=11,SNR=4.7						
TXAR	**Lajitas Array**	**45.10**	**109**	P	**P**	**19 33 06.1**	**+1.9**
	0.7nm,0.5s,baz=310,slow=7.2,SNR=9.9						
ARCES	**ARCESS Array B**	**51.39**	**0**	LR	LR	20 01 00.8	
	comp=Z,33nm,18.3s,baz=349,slow=42						
SONM	**Songino Array**	**54.88**	**306**	P	P	19 34 16.8	-1.0
	1.6nm,0.7s,baz=38,slow=7.5,SNR=10						
SONM	**Songino Array**	**54.88**	**306**	P	**P**	**19 34 17.6**	**-0.1**
ZALV	**Zalesovo Beam**	**57.67**	**323**	P	**P**	**19 34 36.4**	**-0.9**
	0.4nm,0.3s,baz=23,slow=7.8,SNR=2.3						
QSPA	**South Pole Qui**	**149.16**	**180**	PKPbc	**PKPdf**	**19 44 32.4**	**+4.3**
	4.5nm,0.9s,baz=29,slow=3.7,SNR=5.0						

JMA 14 19:33:22.5,36°.79N×140°.59E,h7km±1km,M3.5,8C,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.18**	**185**	⇑P	Pg	19 33 26.1	0.0
JFFD	**Fukushimafurud**	**0.30**	**356**	⇑P	Pg	19 33 28.5	+0.1
JFFD				S	Sg	19 33 32.7	+0.2
ONAJ	**Iwakimizuishiy**	**0.35**	**28**	⇑P	Pg	19 33 29.4	0.0
ONAJ				S	Sg	19 33 34.4	+0.3
JSB	**Shiboa**	**0.57**	**289**	⇑P	Pg	19 33 34.1	+0.7
JSB				S	Sb	19 33 42.1	-1.0
JFK	**Kawauchi**	**0.62**	**21**	⇑P	Pg	19 33 34.1	-0.3
JFK				S	Sg	19 33 42.5	0.0
JYT	**Yasato**	**0.65**	**210**	⇑P	Pg	19 33 34.6	-0.3
JYT				eS	Sg	19 33 43.5	+0.2
JFT	**Otama**	**0.75**	**345**	⇑P	Pg	19 33 37.0	0.0
JFT				S	Sg	19 33 47.1	+0.2
JFY	**Yanaizu**	**0.94**	**311**	P	Pg	19 33 40.5	0.0
JAG	**Ashikaga**	**0.98**	**249**	⇑P	Pg	19 33 40.4	-1.0
JAG				S	Sg	19 33 53.8	-0.4
MAT	**Matsushiro**	**1.93**	**263**	P	Pn	19 33 56.2	+0.4
MAT				S	Sb	19 34 22.2	-0.2

*IDC **14** 19:34:26.1±1.5,32°.31S×177°.94W,h0km,mb4.1/2, mb1 4.3/3,mb1mx3.8/33,mbtmp4.0/3,ML3.4/1,Error ellipse: s-maj=45.5km s-min=33.0km az=129.0*

ISC 14 19:34:28.7±1.6,32°.3S±0°.2×177°.9W±0°.3,h20km,n7, σ1§67/8,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.21**	**213**	Pn	**Pn**	**19 36 10.8**	**-2.2**
	0.6nm,0.3s,baz=307,slow=20,SNR=2.7						
URZ				Sn	**Sn**	**19 37 36.1**	**+1.9**
	2.1nm,0.3s,baz=117,slow=11,SNR=7.7						
ASAR	**Alice Springs**	**43.13**	**269**	P	**P**	**19 42 28.4**	**+0.4**
	2.7nm,1.0s,baz=106,slow=7.5,SNR=14						
WRA	**Warramunga Arr**	**44.29**	**274**	P	**P**	**19 42 37.2**	**-0.2**
	3.0nm,0.9s,baz=112,slow=7.9,SNR=8.5						
FINES	**FINESS Array B**	**146.96**	**339**	PKPbc	**PKPbc**	**19 54 07.8**	**-1.3**
	2.9nm,0.7s,baz=60,slow=4.6,SNR=8.0						
AKASG	**Malin Array Be**	**152.85**	**321**	PKPbc	**PKiKP**	**19 54 24.3**	**+0.2**
	0.2nm,0.3s,baz=49,slow=3.6,SNR=3.5						
BRTR	**Keskin Array B**	**153.54**	**295**	PKPbc	**PKiKP**	**19 54 27.8**	**+1.7**
	0.4nm,0.6s,baz=48,slow=2.1,SNR=2.6						
TORD	**Torodi Ar. Bea**	**160.93**	**179**	PKPab	**PKPab**	**19 55 11.4**	**+0.9**
	0.7nm,1.0s,baz=181,slow=2.8,SNR=3.0						

*NIED **14** 19:50:00,22°.80N×120°.90E,h5km,Mw4.5 Best double couple: M0 6.86000×10^15 NP1:φs343.00000°,δ67.00000°, λ-78.00000°. NP2:φs134.00000°,δ25.00000°, λ-117.00000°.*

*JMA **14** 19:50:02.2±0.1,22°.83N×120°.94E,h22km±1km,M4.5*

*IDC **14** 19:50:03.2±0.7,22°.86N×121°.41E,h0km,mb4.2/28, mb1 4.3/29,mb1mx4.2/55,mbtmp4.2/29,ML2.7/1,MS3.7/16, Ms1 3.7/16,ms1mx3.5/43,Error ellipse: s-maj=18.8km s-min=15.8km az=65.0*

*BJI **14** 19:50:04.5±0.0,22°.83N×121°.19E,h17km,mB4.7/37, mb4.3/54,ML4.7/8,Ms4.5/55,Ms7 4.2/53*

*NEIC **14** 19:50:05.7±1.7,22°.92N±0°.04×121°.16E±0°.04,h11km±3km, mb4.5/58,ML4.7(TAP),Error ellipse: s-maj=6.3km s-min=5.5km az=47.0*

*ASIES **14** 19:50:05.4,22°.88N×121°.10E,h16km,MW4.2*

*TAP **14** 19:50:05.5,22°.88N×121°.08E,h8km,ML5.1,B*

*MOS **14** 19:50:05.4±0.9,22°.86N×121°.20E,h19km,mb4.9/15, MS4.3/4,Error ellipse: s-maj=9.1km s-min=6.0km az=113.9*

ISC 14 19:50:05.5±0.6,22°.86N±0°.01×121°.16E±0°.02,h10km±3km, n363,σ1§37/448,mb4.5/70,MS3.9/20,35C-55D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWGBT	**Beinan**	**0.08**	**238**	⇑P	**Pg**	**19 50 07.9**	**0.0**
	baz=181						
TWGBT				S	**Sg**	**19 50 09.4**	**-0.3**
	baz=181						
TWG	**Pinlang**	**0.09**	**242**	⇑*i*P	**Pg**	**19 50 07.9**	**-0.1**
	baz=181						
TWG				*i* S	**Sg**	**19 50 09.3**	**-0.4**
	baz=181						
TWG	**Pinlang**	**0.09**	**242**		**Pg**	**19 50 07.7**	**-0.3**
TTN	**Taitung**	**0.11**	**185**	⇓*i*P	**Pb**	**19 50 10.0**	**+0.3**
	baz=153						
TTN				S	**Sb**	**19 50 14.0**	**+3.8**
	baz=153						
CHKT	**Chengkung**	**0.30**	**39**	⇑*i*P	**Pb**	**19 50 13.4**	**+0.3**
	baz=50						
CHKT				*i* S	**Sb**	**19 50 19.2**	**+1.1**
	baz=50						
ECL	**Taimali**	**0.32**	**215**	⇑*i*P	**Pg**	**19 50 11.6**	**-0.3**
	baz=202						
ECL				S	**Sg**	**19 50 15.4**	**-0.9**
	baz=202						
TWH	**Lutao**	**0.33**	**117**	P	**Pn**	**19 50 14.6**	**-1.8**
	baz=121						
TWH				*i* S	**Sn**	**19 50 21.6**	**+5.0**
	baz=121						
ELDTW	**Lidau**	**0.35**	**338**	⇓*i*P	**Pg**	**19 50 12.1**	**-0.4**
	baz=349						
ELDTW				S	**Sg**	**19 50 16.2**	**-1.0**
	baz=349						
FULB	**Fuli**	**0.36**	**21**	⇑*i*P	**Pb**	**19 50 13.8**	**-0.1**
	baz=19						
FULB				S	**Sb**	**19 50 20.7**	**+1.0**
	baz=19						
STYT	**Tauyuan**	**0.47**	**309**	⇓*i*P	**Pg**	**19 50 14.1**	**-0.7**
	baz=313						
STYT				S	**Sg**	**19 50 19.7**	**-1.4**
	baz=313						
SLGT	**Liugui**	**0.49**	**286**	⇑*e*P	**Pg**	**19 50 14.1**	**-1.0**
	baz=278						
SSD	**Sandimen**	**0.50**	**257**	⇑*i*P	**Pg**	**19 50 14.1**	**-1.1**
	baz=252						
SSD				*i* S	**Sg**	**19 50 19.0**	**-2.8**
	baz=252						
TWF1	**Yuli**	**0.50**	**15**	⇑P	**Pg**	**19 50 15.1**	**-0.3**
	baz=11						
TWF1				S	**Sg**	**19 50 22.4**	**+0.4**
	baz=11						
YULB	**Yu-li**	**0.54**	**14**	⇑P	**Pg**	**19 50 15.6**	**-0.5**
	baz=9.0						
YULB				S	**Sg**	**19 50 23.4**	**+0.1**
	baz=9.0						
YULB	**Yu-li**	**0.54**	**14**		**Pg**	**19 50 15.6**	**-0.5**
MASBT	**Mashibuluo**	**0.55**	**243**	⇑P	**Pg**	**19 50 15.2**	**-0.9**
	baz=232						
MASBT				*e*S	**Sg**	**19 50 21.0**	**-2.3**
	baz=232						
EAST	**Anshuo**	**0.56**	**211**	⇑*i*P	**Pg**	**19 50 16.2**	**-0.1**
	baz=212						
EAST				S	**Sg**	**19 50 23.5**	**-0.2**
	baz=212						
TAW	**Tawu**	**0.56**	**206**	⇓*i*P	**Pg**	**19 50 16.2**	**-0.2**
	baz=199						
TAW				*e*S	**Sg**	**19 50 23.1**	**-0.6**
	baz=199						
SGST	**Jiashian**	**0.57**	**292**	⇓*i*P	**Pg**	**19 50 15.4**	**-1.2**
	baz=293						
SGST				*i* S	**Sg**	**19 50 22.5**	**-1.7**
	baz=293						
WTP	**Ta-pu**	**0.63**	**307**	⇓*i*P	**Pg**	**19 50 17.5**	**-0.2**
	baz=315						
WTP				S	**Sg**	**19 50 26.0**	**0.0**
	baz=315						
SGLT	**Jiouru**	**0.63**	**258**	⇑*i*P	**Pg**	**19 50 17.6**	**-0.1**
	baz=258						
YUS	**Yu-Shan**	**0.65**	**343**	⇓*i*P	**Pg**	**19 50 17.8**	**-0.5**
	baz=358						
YUS				S	**Sg**	**19 50 25.6**	**-1.3**
	baz=358						
TPUB	**Ta-pu**	**0.65**	**312**	⇓P	**Pg**	**19 50 18.0**	**-0.2**
	baz=314						
TPUB				S	**Sg**	**19 50 26.4**	**-0.3**
	baz=314						
TPUB	**Ta-pu**	**0.65**	**312**		**Pg**	**19 50 18.0**	**-0.2**
TPUB				Sg	**Sg**	**19 50 26.4**	**-0.3**
EHY	**Hungye**	**0.66**	**13**	*e*P	**Pg**	**19 50 17.6**	**-0.7**
	baz=9.0						
EHY				S	**Sg**	**19 50 27.3**	**+0.4**
	baz=9.0						
CHN1	**Nanshi**	**0.66**	**299**	⇓*i*P	**Pg**	**19 50 18.6**	**+0.2**
	baz=305						
CHN1				*i* S	**Sb**	**19 50 28.1**	**-0.4**
	baz=305						
SSPT	**Xinbi**	**0.66**	**235**	⇑*i*P	**Pg**	**19 50 18.2**	**-0.1**
	baz=225						
SSPT				*e*S	**Sb**	**19 50 27.4**	**-1.0**
	baz=225						
HGSD	**Ruisui**	**0.67**	**21**	⇑*e*P	**Pg**	**19 50 18.5**	**0.0**
	baz=13						
HGSD				S	**Sn**	**19 50 29.3**	**-2.4**
	baz=13						
TWM1	**Shoushan**	**0.68**	**267**	⇑*i*P	**Pb**	**19 50 19.0**	**-0.4**
	baz=264						
SCZT	**Fangliau**	**0.70**	**226**	⇑P	**Pg**	**19 50 18.4**	**-0.5**
	baz=226						
SNST	**Tainan City**	**0.70**	**300**	⇓*i*P	**Pb**	**19 50 19.4**	**-0.5**
	baz=306						
SNST				S	**Sb**	**19 50 29.5**	**-0.1**
	baz=306						
CHN4	**Tsaushan**	**0.71**	**313**	⇓*i*P	**Pg**	**19 50 19.3**	**+0.1**
	baz=325						
CHN4				S	**Sb**	**19 50 29.4**	**-0.5**
	baz=325						
ALS	**Alishan**	**0.72**	**333**	⇓*e*P	**Pg**	**19 50 19.0**	**-0.5**
	baz=331						
TWK	**Hsinying**	**0.74**	**303**	⇓*i*P	**Pg**	**19 50 19.8**	**+0.1**
	baz=305						
TWK				S	**Sb**	**19 50 29.9**	**-0.6**
	baz=305						
CHN3	**Shinhua**	**0.76**	**286**	⇓*i*P	**Pn**	**19 50 21.7**	**-0.6**
	baz=286						
CHN3				S	**Sn**	**19 50 33.4**	**-0.4**
	baz=286						
SNJT	**Kaohsiung City**	**0.77**	**262**	⇑P	**Pn**	**19 50 21.4**	**-1.0**
	baz=263						
KAU	**Kaohsiung**	**0.84**	**250**	*e*P	**Pn**	**19 50 23.6**	**+0.3**
	baz=237						
EGFH	**Guangfu**	**0.84**	**17**	⇓*e*P	**Pb**	**19 50 21.5**	**-0.7**
	baz=20						
EGFH				*e*S	**Sg**	**19 50 33.1**	**+0.5**
	baz=20						
CHN5	**Tsauling**	**0.85**	**329**	⇓*i*P	**Pb**	**19 50 21.8**	**-0.6**
	baz=331						
TAI1	**Yung-k'ang**	**0.87**	**282**	*e*P	**Pn**	**19 50 23.3**	**-0.5**
	baz=281						
TAI1				*e*S	**Sn**	**19 50 36.1**	**-0.5**
	baz=281						
WHYT	**Xinyi Township**	**0.88**	**341**	⇓P	**Pb**	**19 50 22.3**	**-0.6**
	baz=351						
WHYT				*e*S	**Sb**	**19 50 34.0**	**-0.6**
	baz=351						
WLCH	**Liuqiu**	**0.88**	**235**	⇑*e*P	**Pn**	**19 50 25.2**	**+1.2**
	baz=223						
VWDT	**VWDT**	**0.89**	**359**	⇓P	**Pb**

baz=36
WHF Hehuan Shan 1.28 4 *e*P Pn 19 50 28.8 -1.1
baz=5.0
WHF *e*S Sg 19 50 47.4 +0.5
baz=5.0
WTCT Ta-ch'eng 1.28 321 ⇓*i*P Pb 19 50 29.2 -0.5
baz=322
WTCT S Sg 19 50 47.0 +0.2
baz=322
WCHH Zhanghua 1.33 336⇓*e*P Pg 19 50 30.8 -0.2
baz=337
WCHH *e*S Sg 19 50 49.5 +1.2
baz=337
TCU Taichung 1.35 341 *e*P Pg 19 50 31.2 -0.3
baz=342
TCU *e*S Sg 19 50 50.8 +1.7
baz=342
NACB Ninganchiao 1.36 17⇑*e*P Pn 19 50 27.8 -2.9
baz=34
NACB Ninganchiao 1.36 17 Pn 19 50 27.9 -2.7
ETLH Xiulin Townshi 1.37 12 *e*P Pn 19 50 28.7 -2.1
baz=30
ETLH *e*S Sg 19 50 49.7 0.0
baz=30
TDCB Techi 1.38 0⇓*e*P Pb 19 50 30.9 -0.7
baz=12
TWT Tachien 1.38 1 *e*P Pb 19 50 30.9 -0.7
baz=2.0
WHP Taichung City 1.42 352 *e*P Pg 19 50 32.6 -0.2
baz=358
WHP *e*S Sg 19 50 53.0 +1.8
baz=358
WDGT Dungji 1.43 286 ⇓P Pn 19 50 30.4 -1.2
baz=286
WDGT *e*S Sn 19 50 47.7 -2.8
baz=286
TWQ1 Liyutan 1.52 347⇓*i*P Pg 19 50 34.3 -0.4
baz=330
TWQ1 *e*S Sg 19 50 54.9 +0.5
baz=330
WDJ Dajia District 1.55 342 *e*P Pg 19 50 34.7 -0.6
baz=343
WDJ *e*S Sg 19 50 56.4 +1.0
baz=343
NNSH Datong 1.57 8 *e*P Pb 19 50 34.8 0.0
baz=6.0
NNSH *e*S Sg 19 50 55.7 -0.4
baz=6.0
NNS Nan Shan 1.58 7⇓*e*P Pn 19 50 32.7 -1.0
baz=7.0
NNS *e*S Sg 19 50 56.1 -0.4
baz=7.0
NSY Sanyi 1.59 347⇓*e*P Pb 19 50 35.1 +0.1
baz=347
NSY *e*S Sg 19 50 58.6 +1.9
baz=347
PHUB P'eng-hu 1.60 294 ⇓P Pn 19 50 32.5 -1.3
baz=294
PHUB *e*S Sn 19 50 52.0 -2.4
baz=294
VCHM Qimei 1.63 283 *e*P Pn 19 50 33.6 -0.6
baz=282
VCHM *e*S Sn 19 50 52.5 -2.7
baz=282
PTSB Yuanli 1.63 345 *e*P Pn 19 50 34.4 +0.1
baz=346
PTSB *e*S Sg 19 50 57.5 -0.4
baz=346
PNG Penghu 1.63 296⇓*e*P Pn 19 50 33.1 -1.2
baz=296
PNG *e*S Sn 19 50 53.1 -2.3
baz=296
ENA Nanau 1.65 19 *e*P Pn 19 50 32.3 -2.2
baz=21
NANB Nanao 1.65 19 *e*P Pn 19 50 33.9 -0.7
baz=21
NMLH Miaoli 1.70 349 *e*P Pb 19 50 36.8 -0.1
baz=351
NDT Datong Townshi 1.76 11 *e*P Pn 19 50 35.4 -0.7
baz=29
NSTT Nanjuang 1.77 355 *e*P Pb 19 50 37.5 -0.5
baz=341
NSTT *e*S Sg 19 51 02.2 -0.1
baz=341
LIOB Emei 1.78 356 P Pb 19 50 37.6 -0.6
baz=341
LIOB S Sg 19 51 02.2 -0.5
baz=341
ENTT Nioudou 1.81 12 *e*P Pb 19 50 38.8 0.0
baz=30
YHNB Yeheng 1.81 6 *e*P Pn 19 50 36.6 -0.2
baz=6.0
YHNB *e*S Sg 19 51 03.7 0.0
baz=6.0
YHNB Yeheng 1.81 6 Pn 19 50 36.3 -0.5
NSK Sanguang 1.81 6 *e*P Pn 19 50 36.5 -0.4
baz=6.0
NSK *e*S Sb 19 51 02.4 +0.7
baz=6.0
TWC Suao 1.85 20 *e*P Pb 19 50 39.6 +0.2
baz=20
TWC *e*S Sg 19 51 03.7 -1.3
baz=20
EOS1 EOS1 1.90 28 *e*P Pb 19 50 38.6 -1.7
baz=46
TWE Neicheng 1.91 14 *e*P Pn 19 50 37.1 -1.0
baz=33
SBCB Hsinchu 1.93 355 *e*P Pb 19 50 39.9 -0.8
baz=357
SBCB *e*S Sg 19 51 06.6 -0.9
baz=357
NWLT Wulai 1.93 9 *e*P Pb 19 50 40.8 -0.1
baz=32
SLBB Yuanshan 1.93 13 *e*P Pn 19 50 38.4 -0.1
baz=33
HSN Hsinchu 1.94 355 *e*P Pb 19 50 39.8 -1.1
baz=359
ILA Ilan 1.97 16 *e*P Pb 19 50 40.5 -1.0
baz=32
WLTB Daxi 1.98 3 *e*P Pb 19 50 40.9 -0.8
baz=2.0
WLTB *e*S Sg 19 51 07.8 -1.5
baz=2.0
NTC Toucheng 2.08 17 *e*P Pb 19 50 42.6 -0.7
baz=35
NCUH Zhongli 2.10 1 *e*P Pb 19 50 41.8 -1.9
baz=4.0
NCU National Centr 2.10 1 *e*P Pg 19 50 45.1 -0.6
baz=4.0
NHDH Xindian Distri 2.12 9 *e*P Pb 19 50 43.5 -0.5
baz=353
TATO Taipei 2.12 8 Pn 19 50 40.7 -0.4
TWA Mucha 2.14 10 *e*P Pb 19 50 42.9 -1.5
baz=33
TIPB Shuangxi 2.19 16 *e*P Pn 19 50 41.8 -0.1
baz=31
TAP Taipei 2.19 8 *e*P Pb 19 50 45.1 -0.1
baz=33
TAP1 Taipei 2.19 9 *e*P Pb 19 50 44.1 -1.1
baz=33
TWS1 Kuangyinshan 2.24 6 *e*P Pb 19 50 45.0 -1.1
baz=7.0
TWB1 Santiao Chiao 2.27 19 *e*P Pb 19 50 44.6 -2.0
baz=21
NWF Wu-fen Shan 2.27 14 *e*P Pn 19 50 44.2 +1.1
baz=28
WFSB Wu-fen Shan 2.27 14 *e*P Pn 19 50 43.9 +0.8
baz=28
JYNG Yonagunijimaku 2.28 46 P Pn 19 50 42.7 -0.5
JYNG *e*S Sn 19 51 11.5 +0.2
YM01 YM01 2.30 9 *e*P Pb 19 50 45.9 -1.3
baz=33
YM10 YM10 2.31 9 *e*P Pn 19 50 44.5 +0.8
baz=32
YM11 YM11 2.32 9 *e*P Pb 19 50 46.0 -1.5
baz=32
YOJ Yonaguni jima 2.33 47 *e*P Pn 19 50 43.1 -0.7
baz=50
YOJ Yonaguni jima 2.33 47 P Pn 19 50 43.2 -0.7
YOJ *e*S Sn 19 51 12.7 +0.2
YOJ Yonaguni jima 2.33 47 P Pn 19 50 43.4 -0.5
YOJ Yonaguni jima 2.33 47 Pn 19 50 43.4 -0.5
ANP Anpu 2.34 8 *e*P Pb 19 50 46.0 -1.7
baz=31
YM08 YM08 2.35 10 *e*P Pb 19 50 46.0 -2.0
baz=33
TWY Chenhua 2.44 9 *e*P Pb 19 50 47.6 -1.8
baz=32

VWUC VWUC 2.63 324 *e*P Pn 19 50 47.2 -0.8
baz=326
HATJ Hateruma jima 2.71 63 P Pn 19 50 48.6 -0.4
HATJ S Sn 19 51 20.9 -1.0
IRIF Iriomote-Funau 2.78 58 P Pn 19 50 49.7 -0.3
IRIF *e*S Sn 19 51 24.2 +0.6
PTMZ Houxiangcun 2.86 320 *e*P Pn 19 50 50.1 -1.0
baz=321
PTTC Pingtan 2.92 335⇓*e*P Pn 19 50 51.3 -0.6
baz=338
KNM Kinmen 2.94 302⇓*e*P Pn 19 50 52.7 +0.5
baz=301
JKRS Kuro-shima 2.95 62 P Pn 19 50 52.6 +0.2
KNMB Chin-men Tao 3.00 303⇓*e*P Pn 19 50 52.1 -0.9
baz=303
KNMB Chin-men Tao 3.00 303 Pn 19 50 52.0 -1.1
JIJ Ishigaki jima 3.12 61 P Pn 19 50 54.3 -0.4
JIJ *e*S Sn 19 51 30.2 -1.9
QZH Quanzhou 3.13 312 Pn Pn 19 50 54.1 -0.8
QZH Sn Sn 19 51 30.3 -2.0
QZH smax smax
comp=N,580nm,0.8s
QZH smax smax
comp=E,730nm,1.0s
QZH LR LR
comp=E,2μm,5.0s
QZH LR LR
comp=Z,2μm,11.6s
ZPLA Ao Xicun 3.31 289 *e*P Pn 19 50 56.7 -0.5
baz=290
JISG Ishigakijimahi 3.36 59 P Pn 19 50 57.1 -1.0
MATB Ma-tsu 3.46 342⇓*e*P Pn 19 50 58.9 -0.4
baz=345
AXDP Jialang 3.55 305⇓*e*P Pn 19 50 59.8 -0.9
baz=306
ZZJH Jiuhuzhen 3.61 297 *e*P Pn 19 51 00.6 -0.8
baz=298
JTJ Tarama 3.70 61 P Pn 19 51 02.2 -0.5
JTJ *e*S Sn 19 51 46.1 -0.3
MHZQ Yeshan 3.76 329 *e*P Pn 19 51 03.2 -0.4
baz=333
LYJJ Jianjiangzhen 3.88 341⇓*e*P Pn 19 51 07.9 +2.7
baz=345
XPSS Dashiqiu 4.14 348 *e*P Pn 19 51 08.5 -0.3
baz=352
JIRB Irabujima 4.17 61 P Pn 19 51 07.9 -1.2
JIRB S Sn 19 51 57.4 -0.5
JMJ2 Miyako jima3 4.25 63 P Pn 19 51 10.3 0.0
JMJ2 S Sn 19 51 59.4 -0.6
JMJ Miyako jima 2 4.26 62 *e*P Pn 19 51 10.3 -0.1
baz=63
JIKM Ikemajima 4.27 60 P Pn 19 51 10.3 -0.2
JIKM *e*S Sn 19 52 00.0 -0.4
JOGS Gusukube 4.33 63 P Pn 19 51 11.8 +0.5
JOGS *e*S Sn 19 52 02.8 +1.0
HKPS Hong Kong Po S 6.51 266 Pn 19 51 40.1 -1.2
GZH Guangzhou 7.20 273 Pn Pn 19 51 47.3 -3.6
GZH Sn Sn 19 53 02.8 -10
GZH smax smax
comp=N,360nm,1.2s
GZH smax smax
comp=E,380nm,1.2s
JOW Kunigami 7.58 57 Pn Pn 19 51 54.3 -1.7
SSE Sheshan 8.20 0 P Pn 19 52 04.5 0.0
SSE S Sn 19 53 41.0 +3.7
SSE pmax pmax
comp=Z,10.0nm,1.0s
SSE pmax pmax
comp=Z,52nm,3.4s
SSE LR LR
comp=N,580nm,14.2s
SSE LR LR
comp=E,1μm,17.4s
SSE Sheshan 8.20 0 Pn Pn 19 52 04.8 +0.3
NJ2 Nanjing 9.38 348 *e*P Pn 19 52 20.6 -0.1
NJ2 S Sn 19 54 05.1 -1.1
NJ2 smax smax
comp=N,230nm,1.7s
NJ2 smax smax
comp=E,130nm,1.1s
NJ2 LR LR
comp=N,1μm,4.5s
NJ2 LR LR
comp=E,3μm,5.7s
NJ2 LR LR
comp=Z,600nm,6.9s
WHN Wuhan 9.77 323 ⇑P Pn 19 52 26.1 0.0
WHN S Sn 19 54 18.4 +2.5
WHN pmax pmax
comp=Z,44nm,0.8s
WHN LR LR
comp=N,2μm,6.3s
WHN LR LR
comp=E,3μm,8.3s
WHN LR LR
comp=Z,4μm,6.1s
QIZ Qiongzhong 11.24 252 P Pn 19 52 49.8 +3.5
QIZ S Sn 19 54 56.3 +4.3
QIZ LR LR
comp=N,2μm,16.7s
QIZ LR LR
comp=E,1μm,17.1s
QIZ LR LR
comp=Z,1μm,16.5s
QIZ Qiongzhong 11.24 252 Pn Pn 19 52 42.8 -3.4
ENH Enshi 12.78 308 Pn Pn 19 53 04.7 -2.6
GYA Guiyang 13.65 288⇓*i*P Pn 19 53 19.5 +0.1
GYA PP P 19 53 30.4 +2.1
GYA S Sn 19 55 53.5 +2.2
GYA SS S 19 56 10.3 -4.1
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,80nm,4.0s
GYA LR LR
comp=N,330nm,5.3s
GYA LR LR
comp=E,740nm,11.5s
GYA LR LR
comp=Z,1μm,11.7s
XAN Xi'an 15.47 319 P P 19 53 49.5 +1.1
XAN pP sP 19 53 54.9 +2.3
XAN S Sn 19 56 28.5 -6.8
XAN pmax pmax
comp=Z,14nm,1.1s
XAN LR LR
comp=N,600nm,5.7s
XAN LR LR
comp=E,810nm,8.7s
XAN LR LR
comp=Z,1μm,11.4s
XAN Xi'an 15.47 319 P Pn 19 53 45.2 +1.4
XAN pmax pmax
comp=Z,13nm,0.9s
XAN Xi'an 15.47 319 P Pn 19 53 45.2 +1.4
KSRS Korea Array 15.67 20 Pn Pn 19 53 47.4 +1.1
comp=Z,0.2nm,0.3s,baz=199,slow=11,SNR=10
KSRS LR LR 20 00 27.5
comp=Z,99nm,18.4s,baz=203,slow=40
DL2 Dalian 16.00 1 P Pn 19 53 51.1 +0.5
DL2 S Sn 19 56 47.5 -0.5
DL2 pmax pmax
comp=Z,18nm,1.2s
DL2 pmax pmax
comp=Z,230nm,5.2s
DL2 LR LR
comp=Z,290nm,22.8s
DL2 LR LR
comp=Z,1μm,14.9s
DL2 LR LR
comp=Z,1μm,9.5s
KMI Kunming 16.98 281 P P 19 54 04.8 -0.6
KMI pP sP 19 54 12.8 +3.2
KMI sP pP 19 54 17.4 +9.1
KMI S Sn 19 57 08.3 -4.1
KMI sS S 19 57 18.9 -3.7
KMI SS SnSn 19 57 35.3 +10
KMI pmax pmax
comp=Z,7.0nm,1.3s
KMI pmax pmax
comp=Z,170nm,5.8s
KMI LR LR
comp=Z,830nm,15.0s
KMI LR LR
comp=Z,340nm,15.0s

KMI LR LR
comp=Z,550nm,15.0s
CD2 Chengdu 17.45 301 P P 19 54 09.0 -1.4
CD2 S Sn 19 57 22.4 -1.2
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 LR LR
comp=Z,810nm,6.5s
CD2 LR LR
comp=Z,1μm,8.2s
CD2 LR LR
comp=Z,1μm,7.8s
BJT Baijiatuau 17.62 347 P P 19 54 11.1 -1.0
BJT pmax pmax
comp=Z,21nm,1.2s
BJT Baijiatuau 17.62 347 P 19 54 11.1 -1.0
INU Inuyama 18.59 44 P Pn 19 54 24.3 +1.2
HHC Hu-ho-hao-te 19.67 338 *e*P Pn 19 54 37.3 +1.1
HHC pmax pmax
comp=Z,3.0nm,0.6s
HHC pmax pmax
comp=Z,83nm,6.3s
HHC LR LR
comp=Z,250nm,9.3s
HHC LR LR
comp=Z,290nm,10.3s
HHC LR LR
comp=Z,230nm,11.7s
LZH Lanzhou 19.98 315 *e*P Pn 19 54 41.4 +1.5
LZH pP sP 19 54 45.4 +2.9
LZH sP pP 19 54 48.4 +7.3
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,79nm,6.0s
LZH LR LR
comp=Z,650nm,13.0s
LZH LR LR
comp=Z,840nm,10.8s
LZH LR LR
comp=Z,900nm,14.2s
PBKT Sadao Pong 20.00 255 Pn 19 54 43.1 +3.0
MAJO Matsushiro 20.09 43⇑*e*P Pn 19 54 40.9 -0.1
MAJO pmax pmax
comp=Z,27nm,1.1s
MAJO Matsushiro 20.09 43 P Pn 19 54 41.2 +0.2
MAJO IAmb IAmb 19 54 45.9
comp=Z,27nm,1.1s
MAT Matsushiro 20.09 43 P Pn 19 54 40.4 -0.6
MAT *e*S S 19 58 19.3 -5.6
MJB9 Matsu-Tunnel 20.09 43 Pn 19 54 42.9 +1.8
MJB9 IAmb IAmb 19 54 45.8
comp=Z,27nm,1.1s
MJAR Matsushiro Arr 20.09 43 P P 19 54 38.8 -0.4
MJAR pmax pmax
comp=Z,8.0nm,0.9s
MJAR Matsushiro Arr 20.09 43 P P 19 54 38.1 -1.1
comp=Z,0.0nm,0.3s,baz=229,slow=7.4,SNR=7.1
MJAR LR LR 20 03 03.6
comp=Z,259nm,20.9s,baz=230,slow=39
MJAR Matsushiro Arr 20.09 43 P P 19 54 38.8 -0.4
CHTO Chiang Mai 21.14 263 P P 19 54 50.1 -0.7
CHTO pmax pmax
comp=Z,8.0nm,1.0s
CHTO Chiang Mai 21.14 263 P P 19 54 50.1 -0.7
CN2 Changchun 21.18 9 *e*P P 19 54 53.4 +2.4
CM31 Chiang Mai Arr 21.24 262 P P 19 54 50.0 -1.8
CMAR Chiang Mai Arr 21.24 262 P P 19 54 49.3 -2.5
CMAR Chiang Mai Arr 21.24 262 P P 19 54 54.1 +2.3
comp=Z,1.7nm,0.8s,baz=67,slow=10.0,SNR=17
CMAR Chiang Mai Arr 21.24 262 P P 19 54 49.3 -2.5
SBUM Sibu 22.07 204 P P 19 55 01.4 +0.7
TNTI Ternate 22.77 164 P P 19 55 07.7 -0.5
TNTI IAmb IAmb 19 55 26.3
comp=Z,21nm,0.9s
MDJ Mudanjiang 22.78 16 P P 19 55 08.6 +0.5
MDJ pP sP 19 55 13.6 +1.2
MDJ S S 19 59 17.8 +0.8
MDJ sS pS 19 59 22.1 +1.7
MDJ pmax pmax
comp=Z,6.0nm,0.9s
MDJ pmax pmax
comp=Z,180nm,5.5s
MDJ LR LR
comp=Z,600nm,18.5s
MDJ LR LR
comp=Z,1μm,17.5s
MDJ LR LR
comp=Z,510nm,12.5s
MDJ Mudanjiang 22.78 16 P P 19 55 07.5 -0.6
MDJ IAmb IAmb 19 55 21.4
comp=Z,21nm,1.3s
USA0B Ussuriysk Arra 23.08 20 P P 19 55 11.0 -0.2
USA0B pmax pmax
comp=Z,9.0nm,1.2s
USA0B Ussuriysk Arra 23.08 20 P P 19 55 11.0 -0.2
USRK Ussuriysk Ar. 23.08 20 P P 19 55 11.3 +0.1
USRK Ussuriysk Ar. 23.08 20 P P 19 55 11.1 -0.1
comp=Z,2.7nm,0.8s,baz=202,slow=8.8,SNR=5.5
USRK LR LR 20 04 38.0
comp=Z,197nm,18.3s,baz=185,slow=38
USRK Ussuriysk Ar. 23.08 20 P P 19 55 11.3 +0.1
LUWI Luwuk 23.81 176 P P 19 55 19.0 +0.3
GTA Gaotai 24.52 317 P P 19 55 25.8 +0.5
GTA pP pP 19 55 29.8 +1.3
GTA sP sP 19 55 32.3 +2.5
GTA pmax pmax
comp=Z,8.0nm,1.6s
GTA LR LR
comp=Z,260nm,14.1s
GTA LR LR
comp=Z,370nm,13.1s
GTA LR LR
comp=Z,390nm,13.7s
SHL Shillong 26.81 282 P P 19 55 45.8 -0.5
SHL pmax pmax
comp=Z,12nm,1.1s
SHL Shillong 26.81 282 P P 19 55 45.8 -0.5
SHL IAmb IAmb 19 56 03.8
comp=Z,12nm,1.1s
ULN Ulaanbaatar 27.38 339*ce*P P 19 55 51.2 +0.1
ULN pmax pmax
comp=Z,17nm,1.7s
ULN Ulaanbaatar 27.38 339 P P 19 55 50.7 -0.4
ULN IAmb IAmb 19 55 53.4
comp=Z,10nm,1.1s
SONM Songino Array 27.57 338 P P 19 55 53.4 +0.6
SONM pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 27.57 338 P P 19 55 53.3 +0.6
comp=Z,4.1nm,0.7s,baz=154,slow=8.0,SNR=39
SONM LR LR 20 08 26.6
comp=Z,208nm,18.9s,baz=239,slow=40
SONM Songino Array 27.57 338 P P 19 55 53.4 +0.6
KLR Kul'dur 27.62 15⇑*e*P P 19 55 54.9 +1.9
KLR pmax pmax
comp=Z,3.0nm,1.0s
KLR Kul'dur 27.62 15 P P 19 55 52.9 -0.2
comp=Z,2.1nm,0.8s,baz=256,slow=3.1,SNR=7.1
LSA Lhasa 27.70 291 P P 19 55 55.0 +0.4
LSA pmax pmax
comp=Z,7.0nm,0.9s
LSA Lhasa 27.70 291 P P 19 55 55.0 +0.4
LSA IAmb IAmb 19 56 11.1
comp=Z,6.5nm,0.9s
PSI Prapat 29.36 230 P P 19 56 10.8 +1.8
PSI pmax pmax
comp=Z,15nm,1.4s
RPSI Rantau Prapat 29.44 230 P P 19 56 10.8 +1.2
RPSI IAmb IAmb 19 56 26.2
comp=Z,14nm,1.4s
YSS Yuzh-Sakhalins 29.67 31 *e*P P 19 56 11.7 +0.4
YSS *e* 19 56 15.8
YSS MLR MLR
comp=Z,500nm,19.0s
YSS Yuzh-Sakhalins 29.67 31 P P 19 56 11.0 -0.3
ZEA Zeya 31.17 7 *e*P P 19 56 30.4 +5.9
ZEA pmax pmax
comp=Z,10.0nm,0.8s
ZEA MLR MLR
comp=Z,600nm,15.0s
ZEA MLR MLR
comp=E,300nm,13.0s
ZEA MLR MLR
comp=N,500nm,15.0s

TLY Talaya 31.79 339 *e*P P 19 56 38.0 +8.0
TLY pmax pmax
comp=Z,17nm,0.8s
TLY MLR MLR
comp=Z,491nm,10.0s
TLY Talaya 31.79 339 LR LR 20 10 33.4
comp=Z,132nm,18.4s,baz=135,slow=39
WMQ Urumqi 34.56 315 *e*P **P** **19 56 56.8 +2.4**
WMQ sP sP 19 57 03.8 +5.0
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ pmax pmax
comp=Z,41nm,3.9s
WMQ LR LR
comp=Z,300nm,9.5s
WMQ LR LR
comp=Z,220nm,9.3s
WMQ LR LR
comp=Z,330nm,8.5s
MK31 Makanchi Array 39.27 317 P **P** **19 57 35.0 +0.6**
MK31 pmax pmax
comp=Z,6.0nm,0.8s
MK31 Makanchi Array 39.27 317 P **P** **19 57 35.0 +0.6**
MK31 IAmb IAmb 19 57 37.0
comp=Z,6.1nm,0.8s
MKAR Makanchi Array 39.27 317 P **P** **19 57 35.7 +1.3**
comp=Z,6.9nm,0.7s,baz=113,slow=9.9,SNR=72
MKAR PcP **PcP** **19 59 42.5 -0.7**
comp=Z,1.2nm,0.8s,baz=101,slow=4.3,SNR=3.7
MKAR Makanchi Array 39.27 317 P **P** **19 57 35.5 +1.1**
MKAR PcP **PcP** **19 59 42.8 -0.4**
MAKZ Makanchi 39.48 317 P **P** **19 57 37.1 +1.0**
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
MAKZ Makanchi 39.48 317 P **P** **19 57 37.1 +1.0**
MAKZ IAmb IAmb 19 57 38.7
comp=Z,7.7nm,0.8s
PETK Petropavlovsk- 40.98 33 P **P** **19 57 50.2 +1.8**
PETK Petropavlovsk- 40.98 33 P **P** **19 57 47.2 -1.2**
comp=Z,4.1nm,0.9s,baz=206,slow=5.9,SNR=3.1
PETK LR LR 20 14 38.7
comp=Z,129nm,21.8s,baz=242,slow=36
PETK Petropavlovsk- 40.98 33 P **P** **19 57 50.2 +1.8**
KDJ Kajisay 41.24 308 P **P** **19 57 51.4 +0.4**
KDJ pmax pmax
comp=Z,4.0nm,0.8s
KDJ Kajisay 41.24 308 P **P** **19 57 51.4 +0.4**
ZAA0 Zalesovo Array 41.34 328 P **P** **19 57 51.5 +0.2**
ZAA0 IAmb IAmb 19 57 55.0
comp=Z,5.8nm,0.7s
ZALV Zalesovo Beam 41.34 328 P **P** **19 57 51.7 +0.4**
comp=Z,6.2nm,0.7s,baz=114,slow=7.8,SNR=28
ZALV LR LR 20 16 08.3
comp=Z,104nm,19.3s,baz=109,slow=38
ZALV Zalesovo Beam 41.34 328 P **P** **19 57 51.5 +0.2**
KSH Kashi 41.61 304 *e*P P 19 57 58.0 +4.1
KSH *e*pP sP 19 58 02.8 +4.4
KSH *e*PP **PnPn** **19 59 33.6 -1.2**
KSH *e*S **S** **20 04 15.4 +5.1**
KSH *es*S sS 20 04 21.3 +5.0
KSH *e*SS **SS** **20 07 14.4 -0.8**
KSH LR LR
comp=Z,240nm,7.0s
KSH LR LR
comp=Z,200nm,6.2s
KSH LR LR
comp=Z,620nm,6.4s
PALK Pallekele 41.85 255 LR LR 20 14 40.7
comp=Z,91nm,22.0s,baz=71,slow=35
NRN Naryn 41.95 307 P **P** **19 57 57.4 +0.5**
NRN pmax pmax
comp=Z,6.0nm,0.8s
NRN Naryn 41.95 307 P **P** **19 57 57.4 +0.5**
NRN IAmb IAmb 19 57 59.9
comp=Z,5.9nm,0.8s
COEN Coen 42.47 147 P **P** **19 58 02.0 +0.9**
COEN IAmb IAmb 19 58 25.2
comp=Z,19nm,1.1s
H11N1 WAKE ISLAND Hy 42.60 85 T T 20 43 21.1
baz=282,slow=75,SNR=77
H11N2 WAKE ISLAND Hy 42.60 85 T T 20 43 20.9
baz=282,slow=75,SNR=122
H11N3 WAKE ISLAND Hy 42.62 85 T T 20 43 19.7
baz=282,slow=75,SNR=101
H11S3 WAKE ISLAND Hy 42.69 87 T T 20 43 25.7
baz=284,slow=75,SNR=155
H11S1 WAKE ISLAND Hy 42.70 87 T T 20 43 28.8
baz=284,slow=75,SNR=82
H11S2 WAKE ISLAND Hy 42.71 87 T T 20 43 26.8
baz=284,slow=75,SNR=70
KURK Kurchatov 43.09 321⇑ *e*P **P** **19 58 07.1 +1.4**
KURK pmax pmax
comp=Z,12nm,1.7s
KURK Kurchatov 43.09 321 P **P** **19 58 05.8 +0.2**
KURK IAmb IAmb 19 58 11.9
comp=Z,7.7nm,1.1s
KURBB Kurchatov Arra 43.11 321 P **P** **19 58 06.9 +1.1**
comp=Z,3.4nm,0.8s,baz=151,slow=7.1,SNR=19
NIL Nilore 43.21 295 P **P** **19 58 07.0 +0.1**
NIL pmax pmax
comp=Z,11nm,1.2s
NIL Nilore 43.21 295 P **P** **19 58 07.0 +0.1**
NIL IAmb IAmb 19 58 14.7
comp=Z,10nm,1.1s
AAK Ala-Archa 43.30 308⇓ *e*P **P** **19 58 09.5 +1.8**
AAK pmax pmax
comp=Z,7.0nm,2.5s
AAK Ala-Archa 43.30 308 LR LR 20 17 08.9
comp=Z,104nm,18.3s,baz=93,slow=37
AAK Ala-Archa 43.30 308 P **P** **19 58 08.5 +0.9**
ARSB Arslanbob 44.16 306 P **P** **19 58 15.3 +0.7**
ARSB IAmb IAmb 19 58 41.4
comp=Z,5.7nm,1.1s
PSAD3 Pilbara Seismi 44.26 182 P **P** **19 58 16.3 +1.0**
WRA Warramunga Arr 44.45 162 *i* P **P** **19 58 19.5 +2.6**
WRA pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 44.45 162 P **P** **19 58 15.2 -1.7**
comp=Z,0.7nm,0.5s,baz=347,slow=8.6,SNR=4.0
WRA Warramunga Arr 44.45 162 P **P** **19 58 16.6 -0.3**
KK31 Karatay Array 46.26 308 P **P** **19 58 32.8 +1.7**
KK31 20 00 06.0
KK31 pmax pmax
comp=Z,4.0nm,1.0s
KK31 Karatay Array 46.26 308 P **P** **19 58 32.8 +1.7**
KK31 IAmb IAmb 19 58 39.5
comp=Z,3.8nm,0.9s
KK31 PcP **PcP** **20 00 06.0 -0.6**
KKAR Karatay Array 46.26 308 P **P** **19 58 33.0 +1.9**
KKAR 20 00 06.3
KKAR pmax pmax
comp=Z,4.0nm,1.0s
KKAR Karatay Array 46.26 308 P **P** **19 58 33.0 +1.9**
KKAR IAmb IAmb 19 58 39.5
comp=Z,3.8nm,0.9s
KKAR PcP **PcP** **20 00 06.3 -0.3**
ASAR Alice Springs 47.88 164 P **P** **19 58 44.8 +0.9**
ASAR Alice Springs 47.88 164 P **P** **19 58 43.6 -0.3**
comp=Z,0.3nm,0.4s,baz=354,slow=7.6,SNR=3.6
ASAR Alice Springs 47.88 164 P **P** **19 58 44.8 +0.9**
BVAR Borovoye Array 48.68 321 P **P** **19 58 51.0 +1.2**
comp=Z,3.2nm,0.7s,baz=104,slow=8.9,SNR=2.9
BVAR PcP **PcP** **20 00 13.9 -1.1**
comp=Z,0.8nm,0.7s,baz=90,slow=4.9,SNR=2.9
BRVK Borovoye 48.75 321 P **P** **19 58 50.4 +0.1**
BRVK pmax pmax
comp=Z,5.0nm,0.9s
BRVK Borovoye 48.75 321 P **P** **19 58 50.4 +0.1**
BRVK IAmb IAmb 19 58 53.1
comp=Z,5.3nm,0.8s
TIXI Tiksi 49.01 3⇑ *e*P **P** **19 58 50.0 -2.0**
TIXI pmax pmax
comp=Z,4.0nm,1.7s
ABKAR Akbulak array 54.35 315 P **P** **19 59 31.4 -0.8**
ABKAR IAmb IAmb 19 59 39.7
comp=Z,9.5nm,1.6s
SVE Sverdlovsk 55.09 324 *e*P **P** **19 59 38.3 +0.8**
SVE pmax pmax
comp=Z,12nm,0.9s
GEYT Alibeck 55.45 301 P **P** **19 59 41.8 +1.3**
comp=Z,1.6nm,0.8s,baz=78,slow=11,SNR=4.2
GEYT Alibeck 55.45 301 P **P** **19 59 41.1 +0.6**
AKTO Aktyubinsk 55.70 316 P **P** **19 59 43.1 +1.0**
comp=Z,2.0nm,0.9s,baz=111,slow=8.8,SNR=7.5
ARU Arti 56.15 324*c i* P **P** **19 59 45.7 +0.6**
ARU 20 00 42.6
ARU 20 01 49.6
ARU S **S** **20 07 36.4 +2.3**
ARU SS **SS** **20 11 23.3 +3.1**
ARU pmax pmax
comp=Z,7.0nm,0.6s
ARU Arti 56.15 324 P **P** **19 59 45.4 +0.3**
comp=Z,2.4nm,0.5s,baz=95,slow=3.8,SNR=17
ARU Arti 56.15 324 P **P** **19 59 44.0 -1.1**
ARU IAmb IAmb 19 59 46.4
comp=Z,9.0nm,0.7s
STKA Stephens Creek 57.84 159 P **P** **19 59 56.3 -1.0**
STKA pmax pmax
comp=Z,1.0nm,1.5s
STKA Stephens Creek 57.84 159 P **P** **19 59 56.6 -0.7**
comp=Z,1.4nm,0.8s,baz=328,slow=13,SNR=2.5
STKA LR LR 20 25 41.7
comp=Z,23nm,21.8s,baz=218,slow=37
STKA Stephens Creek 57.84 159 P **P** **19 59 56.3 -1.0**
KIRV Kirov 61.28 325 P **P** **20 00 21.0 +0.2**
comp=Z,13nm,0.7s,baz=226,slow=4.6,SNR=6.5
PRGR Permogore 63.29 329 *e*P **P** **20 00 33.7 -0.5**
PRGR pmax pmax
comp=Z,8.0nm,0.6s
ZEI Tsey 65.72 308 *e*P **P** **20 00 51.4 +0.7**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
KBZ Khabaz 66.29 309*de*P **P** **20 00 55.6 +1.5**
KBZ Khabaz 66.29 309 P **P** **20 00 54.8 +0.7**
comp=Z,4.8nm,1.0s,baz=110,slow=4.9,SNR=6.6
KIV Kislovodsk 66.40 309 *e*P **P** **20 00 56.8 +1.8**
KIV pmax pmax
comp=Z,28nm,1.0s
KIV MLR MLR
comp=Z,122nm,17.0s
KIV Kislovodsk 66.40 309 P **P** **20 00 53.6 -1.4**
KIV IAmb IAmb 20 01 05.1
comp=Z,8.1nm,0.9s
PPLA Purkeypile 68.40 29 P **P** **20 01 07.1 -0.3**
OBN Obninsk 68.52 322⇓ *e*P **P** **20 01 08.3 +0.3**
OBN pmax pmax
comp=Z,8.0nm,0.5s
OHAK Old Harbor 68.71 36 P **P** **20 01 10.8 +1.7**
MLY Manley 68.73 27 P **P** **20 01 08.9 -0.4**
MLY IAmb IAmb 20 01 19.3
comp=Z,13nm,1.6s
TRF Thorofare Moun 69.17 29 P **P** **20 01 15.0 +2.8**
SUA Susitna One 69.29 31 P **P** **20 01 12.1 -0.8**
RND Reindeer 69.81 29 P **P** **20 01 16.1 +0.1**
RND pmax pmax
comp=Z,9.0nm,1.1s
RND Reindeer 69.81 29 P **P** **20 01 16.1 +0.1**
RND IAmb IAmb 20 01 30.7
comp=Z,9.4nm,1.1s
GHO Glory Hole Cre 70.09 30 P **P** **20 01 16.5 -1.3**
SML Sawmill 70.36 30 P **P** **20 01 12.8 -6.5**
KNK Knik Glacier 70.38 31 P **P** **20 01 09.8 -10**
ILAR Eielson Array 70.39 27 P **P** **20 01 16.9 -2.6**
ILAR Eielson Array 70.39 27 P **P** **20 01 17.3 -2.2**
comp=Z,0.4nm,0.7s,baz=294,slow=6.8,SNR=3.6
ILAR Eielson Array 70.39 27 P **P** **20 01 16.9 -2.6**
ARCES ARCESS Array B 70.75 338 P **P** **20 01 20.6 -1.0**
ARCES ARCESS Array B 70.75 338 P **P** **20 01 21.4 -0.2**
comp=Z,5.6nm,0.8s,baz=67,slow=7.1,SNR=7.2
ARCES LR LR 20 39 06.2
comp=Z,74nm,18.8s,baz=332,slow=42
ARCES ARCESS Array B 70.75 338 P **P** **20 01 20.6 -1.0**
SPITS Spitsbergen Ar 70.76 348 P **P** **20 01 20.9 -0.7**
comp=Z,9.3nm,0.8s,baz=99,slow=10,SNR=5.7
FINES FINESS Array B 72.57 330 *i* P **P** **20 01 35.9 +3.3**
FINES pmax pmax
comp=Z,3.0nm,0.8s
FINES FINESS Array B 72.57 330 P **P** **20 01 31.7 -0.9**
comp=Z,2.1nm,0.8s,baz=78,slow=6.3,SNR=4.6
FINES LR LR 20 34 53.3
comp=Z,98nm,19.6s,baz=358,slow=37
FINES FINESS Array B 72.57 330 P **P** **20 01 31.4 -1.2**
VSU Vasula 73.07 327⇑ *e*P **P** **20 01 35.6 0.0**
VSU pmax pmax
comp=Z,27nm,1.0s
AKASG Malin Array Be 73.84 319*ce*P **P** **20 01 40.2 -0.1**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 73.84 319 P **P** **20 01 40.0 -0.3**
comp=Z,1.3nm,0.6s,baz=60,slow=6.2,SNR=10
AKASG LR LR 20 34 57.6
comp=Z,71nm,19.7s,baz=340,slow=36
AKASG Malin Array Be 73.84 319 P **P** **20 01 39.8 -0.5**
AKBB Malin Array Si 73.84 319⇑ *e*P **P** **20 01 40.5 +0.2**
BR131 Keskin Array S 73.94 307⇑ *e*P **P** **20 01 42.7 +1.4**
BR131 Keskin Array S 73.94 307 P **P** **20 01 41.0 -0.3**
BRTR Keskin Array B 73.94 307*ce*P **P** **20 01 42.5 +1.2**
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 73.94 307 P **P** **20 01 42.2 +0.9**
comp=Z,1.4nm,0.7s,baz=122,slow=5.2,SNR=9.3
BRTR LR LR 20 41 28.6
comp=Z,22nm,19.6s,baz=7.5,slow=42
BRTR Keskin Array B 73.94 307 P **P** **20 01 41.2 -0.1**
INK Inuvik 74.45 22 P **P** **20 01 43.3 -0.3**
INK pmax pmax
comp=Z,3.0nm,1.1s
INK Inuvik 74.45 22 P **P** **20 01 43.3 -0.3**
SORM Soroca 75.13 316⇓ P **P** **20 01 46.8 -1.1**
SORM Soroca 75.13 316⇓ P **P** **20 01 46.8 -1.1**
SUW Suwalki 76.33 323 P **P** **20 01 54.6 0.0**
SUW pmax pmax
comp=Z,26nm,1.1s
SUW Suwalki 76.33 323 P **P** **20 01 54.6 0.0**
HARR Harsova 76.48 313⇓ P **P** **20 01 57.2 +1.5**
TESR Tescani 76.74 315⇑ P **P** **20 01 57.9 +0.7**
VRI Vrincioaia 76.90 314⇑ P **P** **20 01 59.5 +1.4**
BIZ Bicaz 76.96 316⇑ P **P** **20 01 57.2 -1.1**
BUR08 Bucovina Ar. S 77.30 316 P **P** **20 02 00.7 +0.4**
BUR08 IAmb IAmb 20 02 01.8
comp=Z,2.8nm,0.9s
BURAR Bucovina Array 77.30 316⇓ P **P** **20 02 01.0 +0.7**
MLR Muntele Rosu 77.55 314 P **P** **20 02 02.1 +0.2**
MLR pmax pmax
comp=Z,8.0nm,1.3s
MLR Muntele Rosu 77.55 314 P **P** **20 02 02.7 +0.8**
comp=Z,2.8nm,0.8s,baz=156,slow=0.8,SNR=6.5
MLR Muntele Rosu 77.55 314⇓ P **P** **20 02 02.5 +0.6**
MLR Muntele Rosu 77.55 314 P **P** **20 02 02.1 +0.2**
MLR IAmb IAmb 20 02 31.2
comp=Z,7.9nm,1.3s
KWP Kalwaria Pacla 78.15 319 P **P** **20 02 05.3 +0.3**
KWP pmax pmax
comp=Z,156nm,1.2s
KWP Kalwaria Pacla 78.15 319 P **P** **20 02 05.3 +0.3**
HFS Hagfors 78.70 331 P **P** **20 02 07.0 -0.8**
comp=Z,4.4nm,0.8s,baz=108,slow=4.8,SNR=8.1
NC405 NORSAR Array S 79.13 332 P **P** **20 02 09.3 -0.8**
DRGR 79.19 316⇑ P **P** **20 02 12.0 +1.2**
NB2 NORSAR Subarra 79.38 332 P **P** **20 02 10.9 -0.6**
comp=Z,14nm,1.4s,baz=63,slow=5.3
NOA NORSAR Array B 79.38 332 P **P** **20 02 10.2 -1.3**
comp=Z,1.9nm,0.8s,baz=59,slow=5.4,SNR=7.6
NOA LR LR 20 41 05.4
comp=Z,107nm,18.4s,baz=55,slow=38
OJC Ojcow 79.67 320 P **P** **20 02 13.7 +0.4**
OJC pmax pmax
comp=Z,7.0nm,0.7s
OJC Ojcow 79.67 320 P **P** **20 02 13.7 +0.4**
OJC IAmb IAmb 20 02 14.8
comp=Z,7.4nm,0.7s
VTS Vitosha 80.40 312 P **P** **20 02 18.3 +0.7**
VTS pmax pmax
comp=Z,5.0nm,0.8s
VTS Vitosha 80.40 312⇓ P **P** **20 02 17.5 0.0**
VTS Vitosha 80.40 312 P **P** **20 02 18.3 +0.7**
VTS IAmb IAmb 20 02 19.5
comp=Z,4.7nm,0.8s
VYHS Vyhne 80.94 319 *e*P **P** **20 02 21.2 +1.0**
VYHS pmax pmax
comp=Z,7.0nm,1.0s
VYHS Vyhne 80.94 319 *e*P **P** **20 02 21.2 +1.0**
CLL Collm 83.09 323 *e*P **P** **20 02 31.0 -0.4**
CLL Collm 83.09 323 *e*P **P** **20 02 31.0 -0.4**
KHC Kasperske Hory 83.78 321 *e*P P 20 02 28.5 -6.6
KHC Kasperske Hory 83.78 321 *e*P P 20 02 28.5 -6.6
GERES GERESS Array B 83.84 321 P **P** **20 02 34.9 -0.6**
GERES GERESS Array B 83.84 321 P **P** **20 02 34.0 -1.5**
comp=Z,1.1nm,0.7s,baz=57,slow=4.9,SNR=7.7
GERES GERESS Array B 83.84 321 P **P** **20 02 34.9 -0.6**
YKA Yellowknife Ar 84.19 23 P **P** **20 02 34.7 -2.1**
comp=Z,1.1nm,0.8s,baz=310,slow=4.6,SNR=14
YKA LR LR 20 42 33.0
comp=Z,49nm,19.0s,baz=0.0,slow=38

IDC ***14*** *20:09:45.0±6.3, 36°.95N×71°.62E, h92km±33km, mb3.6/1, mb1 3.2/7, mb1mx2.9/52, mbtmp3.5/7, Error ellipse: s-maj=91.4km s-min=29.0km az=156.0*
NNC ***14*** *20:09:50.2±7.4, 37°.74N×71°.28E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=57.8km s-min=41.4km az=168.0*
ISC 14 20:09:50.3±1.8, 37°.5N±0°.1×71°.26E±0°.08, h109km, n21, σ1957/27, 3C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.02**	**21**	P	**Pn**	**20 11 04.8**	**+1.1**
	SNR=46						
UCH	**Uchtor**	**5.37**	**27**	P	**Pn**	**20 11 09.2**	**+0.7**
	SNR=12						
MRKS	**Merke**	**5.48**	**15**	Pg	**Pn**	**20 11 11.3**	**+1.6**
	3.9nm,0.2s						
MRKS				Lg	Lg	20 12 11.7	
	8.8nm,0.4s						
EKS2	**Erkin-Say**	**5.53**	**20**	P	**Pn**	**20 11 13.3**	**+2.8**
	SNR=14						
KZA	**Kyzart**	**5.53**	**33**	P	**Pn**	**20 11 10.8**	**+0.1**
	SNR=7.3						
KK31	**Karatay Array**	**5.66**	**354**	P	**Pn**	**20 11 14.5**	**+2.5**
	2.5nm,0.2s,baz=177,slow=13,SNR=66						
KK31				⇓S	**Sn**	**20 12 16.8**	**+1.2**
	2.1nm,0.2s,baz=179,slow=23						
AAK	**Ala-Archa**	**5.73**	**25**	P	**Pn**	**20 11 14.0**	**+0.8**
	1.2nm,0.3s,baz=177,slow=6.0,SNR=21						
AAK				S	**Sn**	**20 12 16.5**	**-1.1**
	1.3nm,0.3s,baz=257,slow=15,SNR=15						
AAK	**Ala-Archa**	**5.73**	**25**	P	**Pn**	**20 11 14.2**	**+1.1**
	SNR=7.0						
AAK	**Ala-Archa**	**5.73**	**25**	⇑P	**Pn**	**20 11 13.9**	**+0.8**
	2.3nm,0.5s						
AAK				⇓S	**Sn**	**20 12 17.3**	**-0.3**
	10nm,0.8s						
TKM2	**Tokmak 2**	**6.38**	**30**	P	**Pn**	**20 11 22.3**	**+0.4**
	SNR=6.5						
TKM2	**Tokmak 2**	**6.38**	**30**	⇑P	**Pn**	**20 11 21.5**	**-0.4**
	3.1nm,0.6s						
TKM2				⇑S	**Sn**	**20 12 33.1**	**-0.2**
	1.5nm,0.5s						
SGDS	**Sogindy**	**6.50**	**22**	Pg	**Pn**	**20 11 25.3**	**+1.8**
	1.9nm,0.2s						
SGDS				Lg	Lg	20 12 35.7	
	4.1nm,0.5s						
KST	**Kastek**	**6.63**	**31**	Pg	**Pn**	**20 11 26.5**	**+1.3**
	2.6nm,0.3s						
KST				Lg	Lg	20 12 37.5	
	3.1nm,0.6s						
DGS	**Degeres**	**6.72**	**29**	Pg	**Pn**	**20 11 26.5**	**+0.1**
	2.1nm,0.5s						
DGS				Lg	Lg	20 12 37.5	
	1.2nm,0.6s						
GEYT	**Alibeck**	**10.42**	**277**	P	**Pn**	**20 12 16.2**	**-0.5**
	0.2nm,0.3s,baz=92,slow=13,SNR=3.6						
GEYT				S	**Sn**	**20 14 10.0**	**-1.5**
	1.0nm,0.3s,baz=100,slow=19,SNR=7.3						
MKAR	**Makanchi Array**	**12.39**	**38**	P	**Pn**	**20 12 40.9**	**-2.0**
	0.1nm,0.3s,baz=221,slow=13,SNR=5.8						
AB31	**Akbulak array**	**14.35**	**329**	P	**Pn**	**20 13 08.9**	**+0.7**
	0.3nm,0.3s,baz=165,slow=8.1,SNR=29						
AB31				⇓S	**Sn**	**20 15 42.1**	**-4.2**
	3.4nm,0.9s						
BVAR	**Borovoye Array**	**15.57**	**358**	P	**Pn**	**20 13 24.1**	**+0.5**
	0.0nm,0.3s,baz=165,slow=11,SNR=2.1						
AKTO	**Aktyubinsk**	**16.05**	**328**	P	**P**	**20 13 31.6**	**+0.7**
	0.2nm,0.3s,baz=144,slow=13,SNR=8.0						
ZALV	**Zalesovo Beam**	**18.95**	**25**	P	**P**	**20 14 01.4**	**-1.2**
	0.2nm,0.3s,baz=224,slow=10,SNR=3.7						
ARCES	**ARCESS Array B**	**40.33**	**337**	P	**P**	**20 17 18.3**	**+1.7**
	1.7nm,0.9s,baz=115,slow=10,SNR=3.2						

MAN 14 20:13:14.1, 9°.78N×123°.72E, h9km, mb4.6, ML3.4, MS3.3, 3C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.58**	**24**⇓	*i* P	Pg	20 13 25.1	-0.4
LLP				*i* S	Sg	20 13 33.3	+0.2
SNPH	**Sibulan**	**0.65**	**228**⇑	*i* P	Pb	20 13 27.5	-0.1
SNPH				*i* S	Sb	20 13 38.0	+1.2
MSLP	**Maasin**	**1.18**	**73**	*e*P	Pb	20 13 36.2	-0.4
MSLP				*e*S	Sn	20 13 53.6	+0.7
DCPH	**Dipolog City**	**1.25**	**197**⇑	*e*P	Pn	20 13 36.5	-1.2
DCPH				*e*S	Sn	20 13 54.7	+0.1
OCLP	**Ormoc**	**1.54**	**35**	*e*P	Pn	20 13 41.1	-0.6
OCLP				*e*S	Sb	20 14 02.5	+0.1
CGP	**Cagayan de Oro**	**1.63**	**144**⇑	*e*P	Pn	20 13 42.0	-1.1
CGP				*e*S	Sn	20 14 04.1	0.0
RCP	**Roxas**	**2.01**	**332**⇓	*e*P	Pn	20 13 48.4	+0.1

IDC 14 20:17:04.3±33.0, 20°.44S×178°.23W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/44, mbtmp3.7/3, Error ellipse: s-maj=624.1km s-min=159.5km az=89.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**37.62**	**244**	P	P	20 24 20.2	-0.8
	0.6nm,0.6s,baz=78,slow=9.3,SNR=2.7						
ASAR	**Alice Springs**	**44.32**	**257**	P	P	20 25 16.4	0.0
	1.0nm,0.8s,baz=96,slow=8.0,SNR=9.4						
WRA	**Warramunga Arr**	**44.39**	**262**	P	P	20 25 17.4	+0.4
	1.0nm,0.8s,baz=94,slow=8.3,SNR=8.4						
FITZ	**Fitzroy Crossi**	**52.82**	**262**	P	P	20 26 21.7	-0.2
	baz=96,slow=6.2						

IDC ***14*** *20:21:19.4±15.0, 35°.52S×179°.21E, h225km±155km, mb2.9/2, mb1 3.2/3, mb1mx3.1/41, mbtmp3.6/3, Error ellipse: s-maj=308.7km s-min=52.2km az=10.0*
WEL ***14*** *20:21:28.0, 36°.S±12°×17°.8E±2°.1, h254km±14km, MJ3.6/22, MLv3.6/22, Error ellipse: s-maj=0.0km s-min=0.0km az=92.4*
ISC 14 20:21:29.7±1.3, 36°.4S±0°.1×178°.0E±0°.1, h257km±10km, n40, σ0893/49, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.21**	**169**	P	**Pn**	**20 22 06.1**	**-0.5**
MXZ				S	**S**	**20 22 34.3**	**-1.5**
HAZ	**Te Kaha**	**1.39**	**188**	P	**Pn**	**20 22 07.3**	**-0.5**
HAZ				S	**S**	**20 22 37.0**	**-1.0**
WMGZ	**Waiomatatini S**	**1.48**	**168**	P	**Pn**	**20 22 08.8**	**+0.4**
WMGZ				S	**S**	**20 22 38.1**	**-1.0**
PKGZ	**Pakihiroa**	**1.51**	**178**	P	**Pn**	**20 22 08.9**	**+0.1**
RUGZ	**Raukumara Rang**	**1.61**	**190**	P	**Pn**	**20 22 08.7**	**-0.9**
PUZ	**Puketiti**	**1.70**	**174**	P	**Pn**	**20 22 10.5**	**+0.2**
PUZ				S	**S**	**20 22 42.0**	**-0.3**
TWGZ	**Tauwhareparae**	**1.80**	**181**	P	**Pn**	**20 22 12.0**	**+1.0**
TWGZ				S	**S**	**20 22 45.4**	**+1.6**
MWZ	**Matawai**	**1.99**	**191**	P	**Pn**	**20 22 13.1**	**+0.4**
URZ	**Urewera**	**2.01**	**201**	P	**Pn**	**20 22 12.7**	**-0.2**
	8.2nm,0.3s,baz=303,slow=4.0,SNR=28						
URZ				S	**S**	**20 22 45.3**	**-1.7**
	9.2nm,0.3s,baz=133,slow=19,SNR=16						
URZ	**Urewera**	**2.01**	**201**	P	**Pn**	**20 22 12.6**	**-0.2**
CNGZ	**Carnagh Statio**	**2.11**	**176**	P	**Pn**	**20 22 14.9**	**+1.2**
RAGZ	**Rawiri**	**2.17**	**193**	P	**Pn**	**20 22 15.2**	**+0.8**
RIGZ	**Rimuhau**	**2.33**	**185**	P	**Pn**	**20 22 16.6**	**+0.8**
RTZ	**Ruatahuna**	**2.38**	**200**	P	**Pn**	**20 22 16.5**	**+0.1**
SNGZ	**Shannon Statio**	**2.46**	**192**	P	**Pn**	**20 22 18.0**	**+0.9**
RAHZ	**Arahi**	**2.64**	**196**	P	**Pn**	**20 22 19.6**	**+0.7**
RAHZ				S	**S**	**20 22 58.5**	**+0.7**
MTHZ	**Maungataniwha**	**2.64**	**200**	P	**Pn**	**20 22 19.4**	**+0.5**
MHGZ	**Mahia Peninsul**	**2.77**	**182**	P	**Pn**	**20 22 21.4**	**+1.3**
TLZ	**Tolley Road**	**2.78**	**225**	P	**Pn**	**20 22 21.5**	**+1.2**
NMHZ	**Naumai**	**2.88**	**199**	P	**Pn**	**20 22 23.6**	**+1.2**
BKZ	**Black Stump Fm**	**3.04**	**203**	P	**Pn**	**20 22 23.3**	**+0.3**
BKZ				S	**S**	**20 23 06.5**	**+1.1**
MCHZ	**McNeill Hill**	**3.24**	**198**	P	**Pn**	**20 22 25.1**	**0.0**
KWHZ	**Kaweka Forest**	**3.29**	**202**	P	**Pn**	**20 22 26.1**	**+0.3**
HIZ	**Hauiti**	**3.30**	**229**	P	**Pn**	**20 22 27.6**	**+1.8**
BHHZ	**Black Hill Sta**	**3.47**	**206**	P	**Pn**	**20 22 27.6**	**-0.2**

KRHZ	Kereru	3.51	201	P	Pn	20 22 28.1	-0.1
KAHZ	Kahuranaki	3.53	194	P	Pn	20 22 29.2	+0.8
PNHZ	Pukenui	3.81	202	P	Pn	20 22 31.2	-0.3
TSZ	Takapari Road	4.02	203	P	Pn	20 22 33.3	-0.7
PRHZ	Porangahau	4.03	195	P	Pn	20 22 34.2	+0.1
BFZ	Birch Farm	4.52	197	P	Pn	20 22 39.4	-0.4
MRZ	Mangatainoka R	4.69	203	P	Pn	20 22 40.7	-1.1
MRZ				S	S	20 23 40.1	+0.7
TIWZ	Tintock	4.70	200	P	Pn	20 22 41.6	-0.4
HOWZ	Holdsworth Sta	4.92	203	P	Pn	20 22 43.7	-1.0
KIW	Kapiti Island	5.10	208	P	Pn	20 22 45.4	-1.4
THZ	Tophouse	6.69	215	P	Pn	20 23 06.2	-0.3
KHZ	Kahutara	6.96	209	P	Pn	20 23 08.1	-1.7
ASAR	Alice Springs	39.92	276	P	P	20 28 39.1	-0.2
	0.5nm,0.8s,baz=116,slow=8.0,SNR=6.8						
WRA	Warramunga Arr	41.47	281	P	P	20 28 50.9	-1.0
	0.2nm,0.4s,baz=123,slow=7.9,SNR=5.6						
AKASG	Malin Array Be	153.47	312	PKPbc	PKPdf	20 40 50.7	+1.6
	0.2nm,0.3s,baz=67,slow=2.2,SNR=4.0						

IDC 14 20:26:26.7±1.1, 7.93N×136.50E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/45, mbtmp3.5/6, MS2.8/4, Ms1 2.8/4, ms1mx2.4/37, Error ellipse: s-maj=41.8km s-min=21.0km az=81.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	10.86	266	LR	LR	20 32 45.2	
	comp=Z,17nm,20.3s,baz=211,slow=35						
BATI	Baumata	22.09	216	LR	LR	20 38 54.9	
	comp=Z,76nm,20.9s,baz=292,slow=34						
WRA	Warramunga Arr	27.78	184	P	P	20 32 17.7	+0.1
	0.6nm,1.0s,baz=5.8,slow=11,SNR=3.0						
KSRS	Korea Array	30.40	346	LR	LR	20 43 17.4	
	comp=Z,9.9nm,21.0s,baz=85,slow=33						
ASAR	Alice Springs	31.51	185	P	P	20 32 50.2	-0.4
	0.3nm,0.7s,baz=18,slow=13,SNR=3.3						
CMAR	Chiang Mai Arr	37.95	290	P	P	20 33 47.4	+0.9
	0.3nm,0.3s,baz=106,slow=7.1,SNR=5.9						
DZM	Mont Dzumac	41.85	136	LR	LR	20 46 57.5	
	comp=Z,21nm,21.5s,baz=217,slow=29						
SONM	Songino Array	47.26	333	P	P	20 35 01.5	-0.4
	1.3nm,1.0s,baz=148,slow=8.7,SNR=5.5						
MKAR	Makanchi Array	60.15	320	P	P	20 36 35.4	-0.9
	0.8nm,0.7s,baz=106,slow=8.2,SNR=11						
ILAR	Eielson Array	77.17	25	P	P	20 38 22.6	+0.5
	0.2nm,0.6s,baz=247,slow=5.8,SNR=2.8						

IDC 14 20:49:05.3±0.8, 32.93N×87.24E, h0km, mb3.8/14, mb1 3.9/17, mb1mx3.7/48, mbtmp3.8/17, ML3.0/4, MS3.1/7, Ms1 3.1/7, ms1mx3.0/38, Error ellipse: s-maj=22.0km s-min=15.3km az=38.0

BJI 14 20:49:08.1±0.0, 33.14N×87.24E, h7km, mb4.0/12, Ms3.8/6, Ms7 3.8/6

NEIC 14 20:49:10.8±2.4, 32.95N±0.04×87.12E±0.10, h41km±6km, mb4.0/18, Error ellipse: s-maj=12.1km s-min=5.2km az=90.0

ISC 14 20:49:07.8±0.5, 33.10N±0.06×87.20E±0.06, h10km, n65, σ1s91/65, mb3.9/16, MS3.0/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	4.78	134	P	Pn	20 50 25.1	+4.7
LSA				S	Sg	20 51 47.1	+5.7
LSA				LR	LR		
	comp=N,2μm,7.1s						
LSA				LR	LR		
	comp=E,820nm,6.8s						
LSA				LR	LR		
	comp=Z,3μm,10.3s						
LSA	Lhasa	4.78	134	Pn	Pn	20 50 24.8	+4.4
LSA				Sg	Sg	20 51 40.3	-1.1
LSA				LR	LR		
	comp=Z,1μm,12.5s						
LSA				LR	LR		
	comp=Z,3μm,11.4s						
LSA	Lhasa	4.78	134		Pn	20 50 22.8	+2.4
JOSI	Joshimath	6.98	251	*ex*	Pn	20 50 53.1	+2.7
TEZP	TEZPUR	8.08	142	*ex*	Pn	20 51 07.9	+2.6
SMLA	Simla	8.74	260	*ex*	Pn	20 51 14.2	-0.1
DHRM	DHARAMSHALA	9.23	268	*i* x	Pn	20 51 23.6	+2.4
DHRM				*ex*	x	20 51 27.1	
LKP	Lekhapani	9.43	125	*ex*	Pn	20 51 25.9	+2.2
WMQ	Urumqi	10.71	2	*eP*	Pn	20 51 41.9	+0.5
NIL	Nilore	11.68	277		Pn	20 51 52.2	-2.4
GTA	Gaotai	11.97	55	*eP*	Pn	20 51 59.6	+1.0
GTA				pP		20 52 04.3	
GTA				sP		20 52 06.5	
GTA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NRN	Naryn	12.19	316	Pn	Pn	20 52 06.1	+4.3
BOOM	Boomskoye usch	12.92	320	Pn	Pn	20 52 13.0	+1.3
AAK	Ala-Archa	13.82	317	Pn	Pn	20 52 24.3	+0.4
	comp=Z,0.1nm,0.3s,baz=176,slow=13,SNR=2.1						
MK31	Makanchi Array	14.18	346		Pn	20 52 30.3	+1.6
MKAR	Makanchi Array	14.18	346	Pn	Pn	20 52 27.7	-1.1
	comp=Z,0.0nm,0.3s,baz=150,slow=12,SNR=2.1						
MKAR				LR	LR	20 58 53.4	
	comp=Z,40nm,19.7s,baz=162,slow=41						
MKAR	Makanchi Array	14.18	346		Pn	20 52 31.5	+2.8
MAKZ	Makanchi	14.26	345	Pn	Pn	20 52 30.8	+0.9
GAR	Garm	14.87	298		Pn	20 52 36.4	-1.8
BTK	Batken	14.87	302		Pn	20 52 37.6	-0.6
KBL	Kabul	15.17	280		Pn	20 52 40.3	-2.0
KBL				IAmb	IAmb	20 52 55.7	
	comp=Z,8.9nm,1.2s						
CHGR	Chuyangaron	15.64	296		Pn	20 52 47.0	-1.4
CHGR				IAmb	IAmb	20 52 55.0	
	comp=Z,25nm,0.8s						
KK31	Karatay Array	16.48	312	Pn	Pn	20 52 59.5	+0.4
KKAR	Karatay Array	16.48	312	Pn	Pn	20 52 59.5	+0.4
KKAR	Karatay Array	16.48	312	Pn	Pn	20 52 59.4	+0.3
KKAR				IAmb	IAmb	20 53 04.6	
	comp=Z,2.3nm,0.9s						
CM31	Chiang Mai Arr	17.99	141	Pn	Pn	20 53 14.5	-3.5
CM31				IAmb	IAmb	20 53 28.5	
	comp=Z,6.6nm,1.1s						
CMAR	Chiang Mai Arr	17.99	141	P	Pn	20 53 15.0	-3.1
	comp=Z,0.1nm,0.3s,baz=324,slow=13,SNR=14						
CMAR				LR	LR	21 01 24.6	
	comp=Z,49nm,18.5s,baz=328,slow=41						
CMAR	Chiang Mai Arr	17.99	141	P	Pn	20 53 14.8	-3.3
XAN	Xi'an	18.12	81	P	P	20 53 19.8	-0.3
XAN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KURBB	Kurchatov Arra	18.64	343	P	P	20 53 24.8	-0.8
	comp=Z,0.0nm,0.3s,baz=157,slow=11,SNR=8.9						
KURK	Kurchatov	18.70	343	P	P	20 53 25.2	-1.0
PBKT	Sadao Pong	20.62	140	P	P	20 53 46.1	-1.3
PBKT				IAmb	IAmb	20 53 54.6	
	comp=Z,7.5nm,1.1s						
SONM	Songino Array	20.65	39	P	P	20 53 48.2	+0.4
	comp=Z,1.4nm,0.6s,baz=233,slow=12,SNR=9.2						
SONM				LR	LR	21 02 02.8	
	comp=Z,50nm,18.3s,baz=194,slow=37						
SONM	Songino Array	20.65	39	P	P	20 53 48.0	+0.2
HRA	Herat	20.79	280	P	P	20 53 50.2	+0.8
HRA				IAmb	IAmb	20 53 51.6	
	comp=Z,12nm,0.8s						
ZALV	Zalesovo Beam	20.91	356	P	P	20 53 51.0	+0.7
	comp=Z,0.5nm,0.4s,baz=186,slow=13,SNR=2.7						
ZALV	Zalesovo Beam	20.91	356	P	P	20 53 50.2	-0.1
ULN	Ulaanbaatar	21.02	40	P	P	20 53 52.5	+0.7
ULN				IAmb	IAmb	20 53 57.0	
	comp=Z,5.8nm,1.0s						
TLY	Talaya	22.09	28	LR	LR	21 03 24.0	
	comp=Z,38nm,19.4s,baz=219,slow=39						
GEYT	Alibeck	24.11	290	P	P	20 54 23.0	-0.8
	comp=Z,1.6nm,0.7s,baz=112,slow=9.8,SNR=3.9						
GEYT				LR	LR	21 06 10.4	
	comp=Z,51nm,18.3s,baz=75,slow=42						
GEYT	Alibeck	24.11	290	P	P	20 54 23.0	-0.8
GYA0B	ALIBECK ARRAY	24.11	290	P	P	20 54 23.1	-0.6
GYA0B				IAmb	IAmb	20 54 26.8	
	comp=Z,7.6nm,1.2s						
BJT	Baijiatuau	24.20	65	P	P	20 54 22.6	-2.0
BJT				IAmb	IAmb	20 54 26.1	
	comp=Z,4.3nm,0.5s						
ABKAR	Akbulak array	25.91	317	P	P	20 54 40.2	+0.3
ABKAR				IAmb	IAmb	20 54 47.9	
	comp=Z,3.7nm,1.4s						
ABKAR	Akbulak array	25.91	317	P	P	20 54 40.5	+0.6

KSRS	Korea Array	33.34	71	P	P	20 55 45.4	-0.7
	comp=Z,2.0nm,0.8s,baz=270,slow=8.3,SNR=4.3						
KSRS				LR	LR	21 11 12.4	
	comp=Z,33nm,19.3s,baz=330,slow=40						
USRK	Ussuriysk Ar.	36.28	59	P	P	20 56 12.2	+0.8
	comp=Z,1.1nm,0.7s,baz=264,slow=9.9,SNR=2.6						
MJAR	Matsushiro Arr	41.62	70	P	P	20 56 55.3	-0.9
	comp=Z,2.3nm,0.9s,baz=290,slow=7.7,SNR=4.0						
MJAR	Matsushiro Arr	41.62	70	P	P	20 56 54.6	-1.6
BRTR	Keskin Array B	43.08	295	P	P	20 57 08.8	+0.6
	comp=Z,0.5nm,0.6s,baz=124,slow=4.7,SNR=3.0						
BRTR	Keskin Array B	43.08	295	P	P	20 57 08.0	-0.2
LUWI	Luwuk	47.71	128	P	P	20 57 43.4	-1.5
FIA1	FINESS Array S	47.82	325	P	P	20 57 44.8	-0.4
FINES	FINESS Array B	47.82	325	P	P	20 57 45.6	+0.4
	comp=Z,1.0nm,0.8s,baz=99,slow=9.8,SNR=4.1						
FINES	FINESS Array B	47.82	325	P	P	20 57 45.1	-0.2
MLR	Muntele Rosu	47.91	304	P	P	20 57 48.4	+1.9
PETK	Petropavlovsk-	52.95	45	LR	LR	21 21 55.5	
	comp=Z,46nm,19.9s,baz=60,slow=37						
WRA	Warramunga Arr	69.33	133	P	P	21 00 14.1	-1.7
	comp=Z,2.2nm,0.9s,baz=324,slow=6.4,SNR=8.0						
ASAR	Alice Springs	71.89	135	P	P	21 00 29.4	-1.9
	comp=Z,0.8nm,0.8s,baz=320,slow=5.8,SNR=5.6						
ASAR	Alice Springs	71.89	135	P	P	21 00 29.7	-1.6
ILAR	Eielson Array	73.74	21	P	P	21 00 41.9	+0.1
	comp=Z,0.7nm,0.8s,baz=306,slow=4.2,SNR=7.9						
ILAR	Eielson Array	73.74	21	P	P	21 00 41.3	-0.5
TORD	Torodi Ar. Bea	79.23	279	P	P	21 01 13.8	+0.1
	comp=Z,0.5nm,0.7s,baz=54,slow=5.8,SNR=3.3						
STKA	Stephens Creek	82.52	136	P	P	21 01 28.6	-2.1
	comp=Z,1.2nm,0.7s,baz=285,slow=8.9,SNR=3.0						
YKA	Yellowknife Ar	83.14	10	P	P	21 01 33.3	-0.3
	comp=Z,0.3nm,0.7s,baz=332,slow=5.1,SNR=6.3						

IDC 14 20:58:14.0±6.7, 17.64S×178.36W, h474km±73km, mb3.3/8, mb1 3.5/8, mb1mx3.2/26, mbtmp4.0/8, Error ellipse: s-maj=35.1km s-min=33.4km az=61.0

NEIC 14 20:58:20.6±0.9, 17.75S±0.2×178.76W±0.2, h543km±14km, mb4.3/12, Error ellipse: s-maj=28.8km s-min=24.0km az=101.0

ISC 14 20:58:20.8±0.7, 17.85S±0.1×178.66W±0.1, h550km, n34, σ0s82/35, mb3.8/11, 3C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	8.32	100	P	P	21 00 22.2	+0.5
URZ	Urewera	20.78	190	P	P	21 02 21.9	-1.8
	2.0nm,0.3s,baz=18,slow=20,SNR=3.1						
URZ	Urewera	20.78	190	P	P	21 02 23.7	0.0
STKA	Stephens Creek	38.56	241	P	P	21 04 57.8	+0.8
	1.3nm,0.5s,baz=94,slow=8.2,SNR=6.4						
STKA	Stephens Creek	38.56	241	P	P	21 04 57.5	+0.5
WRA	Warramunga Arr	44.50	259	P	P	21 05 43.1	-0.9
	1.0nm,0.6s,baz=94,slow=7.9,SNR=7.9						
WRA	Warramunga Arr	44.50	259	P	P	21 05 42.6	-1.4
AS31	Alice Springs	44.68	254	P	P	21 05 44.9	-0.5
ASAR	Alice Springs	44.68	254	P	P	21 05 45.6	+0.3
	8.1nm,0.5s,baz=89,slow=8.0,SNR=120						
ASAR				PcP	PcP	21 07 17.1	+1.0
	0.3nm,0.4s,baz=105,slow=4.1,SNR=4.5						
ASAR	Alice Springs	44.68	254	P	P	21 05 45.2	-0.2
ASAR					PcP	21 07 15.9	-0.2
FORT	Forrest	49.93	244	P	P	21 06 24.6	0.0
FORT				IAmb	IAmb	21 06 44.1	
	comp=Z,32nm,1.4s						
KNRA	Kununurra	50.34	264	P	P	21 06 28.0	+0.2
FAKI	Fak Fak	50.39	281	P	P	21 06 27.7	-0.5
FITZ	Fitzroy Crossi	52.89	260	P	P	21 06 45.8	-0.4
FITZ				IAmb	IAmb	21 06 50.6	
	comp=Z,30nm,1.5s						
MJAR	Matsushiro Arr	67.69	323	P	P	21 08 23.1	-0.5
	comp=Z,1.0nm,0.4s,baz=145,slow=5.6,SNR=5.2						
MJAR	Matsushiro Arr	67.69	323	P	P	21 08 21.9	-1.7
MAJO	Matsushiro	67.69	323	P	P	21 08 23.8	+0.2
MAJO				IAmb	IAmb	21 08 24.1	
	comp=Z,4.7nm,0.7s						
MJB9	Matsu-Tunnel	67.69	323	P	P	21 08 23.7	0.0
MJB9				IAmb	IAmb	21 08 24.0	
	comp=Z,4.8nm,0.7s						
UGM	Wanagama	69.49	268	P	P	21 08 35.4	+0.4
ILAR	Eielson Array	85.77	13	P	P	21 10 00.9	-0.8
	comp=Z,0.3nm,0.4s,baz=228,slow=5.1,SNR=8.6						
CMAR	Chiang Mai Arr	88.68	290	P	P	21 10 17.2	+0.8
	comp=Z,0.2nm,0.4s,baz=72,slow=2.9,SNR=3.5						
SONM	Songino Array	93.33	319	P	P	21 10 38.1	+0.8
	comp=Z,0.3nm,0.7s,baz=114,slow=4.4,SNR=2.7						
MKAR	Makanchi Array	108.91	314	PKiKP	PKiKP	21 15 47.7	-0.3
	comp=Z,0.2nm,0.6s,baz=138,slow=0.5,SNR=2.6						
BUR08	Bucovina Ar. S	144.39	332		PKPab	21 16 56.3	+1.2
BURAR	Bucovina Array	144.40	332	⇑P	PKPab	21 16 56.5	+1.3
BIZ	Bicaz	144.49	330	⇑P	PKPab	21 16 56.7	+1.2
TESR	Tescani	144.54	330	⇓P	PKPab	21 16 55.5	-0.1
BRTR	Keskin Array B	144.56	315	PKP	PKPbc	21 16 55.4	-0.1
	comp=Z,1.3nm,0.8s,baz=64,slow=2.9,SNR=6.6						
BRTR	Keskin Array B	144.56	315		PKPdf	21 16 55.3	-0.1
CLL	Collm	145.28	347	*i* PKPbc	PKPab	21 16 57.9	-0.3
	comp=Z,4.0nm,0.7s						
DRGR		146.13	333	⇑P	PKPab	21 17 00.7	-1.2
ARR	Arges	146.34	330	⇓P	PKPab	21 17 02.8	0.0
GERES	GERESS Array B	147.42	345	PKPbc	PKPbc	21 17 03.6	+0.4
	comp=Z,1.1nm,0.5s,baz=28,slow=3.6,SNR=9.5						
GERES	GERESS Array B	147.42	345		PKiKP	21 17 04.0	-0.9

KRSC 14 21:17:25.4±1.5, 54.94N×165.53E, h31km±11km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	0.36	44	*eP*	Pb	21 17 33.5	-0.3
BKI				*eS*	Sb	21 17 38.3	-1.2
KBTR	Krutoberegovo	1.99	311	*eP*	Pn	21 17 58.4	+1.5
KBTR				*eS*	Sn	21 18 22.5	+1.8
ZLN	Zelenaya	2.90	294	*eP*	Pb	21 18 14.3	-2.1
CIRR	Tsirk	2.96	295	*eP*	Pn	21 18 12.5	+2.2
TUMD	Tumrok D	2.96	277	*eP*	Pb	21 18 14.3	-3.1
TUMD				*eS*	Sn	21 18 48.9	+4.3
KZV	Kizimen	3.02	275	*eP*	Pb	21 18 15.4	-3.1
KZV				*eS*	Sn	21 18 49.1	+2.9
TUMR	Tumrok	3.11	278	*eP*	Pb	21 18 17.2	-2.8
KIRR	Kirishev	3.12	291	*eP*	Pb	21 18 17.6	-2.6
KMNR	Kamenistaya	3.13	287	*eP*	Pb	21 18 17.2	-3.1
KPT	Kopyto	3.19	291	*eP*	Pb	21 18 18.3	-3.1
SRDR	Sredinnyy	3.57	295	*eP*	Pb	21 18 24.4	-3.4
SPN	Mys Shipunski	3.74	343	*eP*	Pn	21 18 24.4	+3.6
SPN				*eS*	Sn	21 19 06.3	+2.6
NLC	Nalytchevo	4.05	247	*eS*	Sn	21 19 14.9	+3.4
SDLR	Sedlovina	4.25	250	*eP*	Pn	21 18 33.0	+5.0
SMAR	Somma	4.30	250	*eP*	Pn	21 18 33.7	+4.9
SMAR				*eS*	Sn	21 19 22.6	+4.6
KRER	Koryakskii	4.32	250	*eP*	Pn	21 18 33.9	+5.0
KRER				*eS*	Sn	21 19 21.7	+3.5
UGLR	Uglovaya	4.32	249	*eP*	Pn	21 18 34.0	+5.1
AVH	Avacha	4.34	250	*eP*	Pn	21 18 34.4	+5.3
AVH				*eS*	Sn	21 19 24.3	+5.7
KRX	Arik	4.35	251	*eP*	Pn	21 18 34.4	+5.1
KRX				*eS*	Sn	21 19 22.6	+3.7
KOK	Koryaka	4.38	251	*eP*	Pn	21 18 35.0	+5.2
KRMR	Karymshinskiy	4.86	247	*eP*	Pn	21 18 41.5	+5.2
KRMR				*eS*	Sn	21 19 35.2	+3.8
RUS	Russkaya	4.87	242	*eS*	Sn	21 19 34.0	+2.4
MTVR	Mutnovka	5.01	244	*eP*	Pn	21 18 43.4	+4.9
GRL	Gorelyy	5.03	245	*eP*	Pn	21 18 44.2	+5.5
ASAK	Asacha	5.21	244	*eP*	Pn	21 19 46.6	+5.4
ASAK				*eS*	Sn	21 19 44.5	+4.3
TILK	Tilichiki	5.53	3	*eP*	Pn	21 18 49.5	+4.2

NNC 14 21:20:55.4±8.7, 38.16N×74.67E, h33km±112km, mb3.7, mpv3.2, Error ellipse: s-maj=69.6km s-min=55.8km az=135.0

ISC 14 21:20:52.3±4.4, 38.2N±0.3×75.0E±0.1, h10km, n12, σ2s35/14, 2C-3D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	Kyzart	3.84	3	P	Pn	21 21 53.4	+1.7
	SNR=5.5						
UCH	Uchtor	4.00	355	P	Pn	21 21 56.1	+2.1
	SNR=18						
AML	Almayashu	4.01	346	P	Pn	21 21 56.0	+1.9
	SNR=21						
AAK	Ala-Archa	4.41	355	P	Pn	21 22 03.0	+3.7
	SNR=5.1						
AAK	Ala-Archa	4.41	355	⇓Pn	Pn	21 22 01.2	+1.9
	3.2nm,0.6s						
AAK				Sn	Sn	21 22 52.7	+1.8
	3.2nm,0.5s						
AAK				⇓Lg	Lg	21 23 17.5	
	4.9nm,0.7s						
MRKS	Merke	4.69	344	Pg	Pn	21 22 05.4	+2.1
	4.4nm,0.3s						
MRKS				Lg	Lg	21 23 00.1	
	3.8nm,0.3s						
TKM2	Tokmak 2	4.70	5	P	Pn	21 22 05.6	+2.2
	SNR=6.4						
TKM2	Tokmak 2	4.70	5	⇓P	Pn	21 22 04.5	+1.1
	1.1nm,0.3s						
TKM2				⇑Lg	Lg	21 22 57.1	
	6.0nm,0.6s						
MDOK	Medeo	5.16	17	Pg	Pb	21 22 19.7	-3.0
	1.8nm,0.8s						
MDOK				Lg	Lg	21 23 23.7	
	2.8nm,0.5s						
IUG	Iuzhnay	5.44	317	Pg	Pn	21 22 14.9	+1.3
	0.8nm,0.2s						
IUG				Lg	Lg	21 23 15.9	
	9.9nm,0.3s						
KTBS	Karatobe	5.61	13	Pg	Pb	21 22 28.3	-2.0
	0.6nm,0.4s						
KTBS				Lg	Lg	21 23 38.6	
	6.5nm,0.7s						
KK31	Karatay Array	5.93	326	P	Pn	21 22 21.4	+1.2
	0.5nm,0.2s,baz=139,slow=12,SNR=22						
KK31				⇑S	Sn	21 23 26.5	-1.7
	0.6nm,0.3s,baz=149,slow=27						

KRNET 14 21:26:17.6±0.1, 42.58N×79.58E, h13km, mb2.8

SOME 14 21:26:17.0, 42.55N×79.60E, h5km

NNC 14 21:26:18.4±0.9, 42.63N×79.59E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=5.7km s-min=3.0km az=131.0

ISC 14 21:26:16.5±1.9, 42.53N±0.05×79.60E±0.05, h3km±14km, n54, σ1s19/93, 19C-16D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	0.63	351	⇑*i*P	Pb	21 26 29.6	-0.7
	baz=21						
SHLS				⇑*i*S	Sb	21 26 39.0	-0.7
	baz=21						
SHLS	Shalkode	0.63	351	⇑*i*P	Pb	21 26 29.6	-0.7
	42nm,0.1s						
SHLS				⇑*i*S	Sb	21 26 39.0	-0.7
	101nm,0.2s						
SHLS	Shalkode	0.63	351	P	Pb	21 26 29.6	-0.7
	40nm,0.1s						
SHLS				S	Sb	21 26 39.0	-0.7
	101nm,0.2s						
UZB	Uzynbulak	0.75	326	⇓*i*P	Pg	21 26 31.2	+0.4
	baz=24						
UZB				⇑*i*S	Sb	21 26 41.5	-1.5
	baz=24						
UZB	Uzynbulak	0.75	326	⇓*i*P	Pg	21 26 31.2	+0.4
	3.7nm,0.2s						
UZB				⇑*i*S	Sb	21 26 41.5	-1.5
	36nm,0.2s						
UZB	Uzynbulak	0.75	326	P	Pg	21 26 31.2	+0.4
	3.7nm,0.2s						
UZB				S	Sb	21 26 41.5	-1.5
	25nm,0.1s						
PDGK	Podgornoye	0.80	354	P	Pg	21 26 31.7	-0.1
	4.5nm,0.1s						
PDGK				S	Sg	21 26 42.4	+0.1
	8.9nm,0.2s						
PDGK	Podgornoye	0.80	354	⇓P	Pg	21 26 31.7	-0.1
	1.7nm,0.2s						
PDGK				⇑S	Sg	21 26 42.0	-0.3
	8.7nm,0.4s						
PRZ	Przheval'sk	0.89	267	⇑*e*P	Pb	21 26 34.6	-0.1
	baz=64						
PRZ				⇑*i*S	Sb	21 26 47.0	0.0
	baz=64						
KPKS	Kokpek	1.15	325	⇑*e*P	Pb	21 26 38.4	-0.7
	baz=23						
KPKS				⇑*i*S	Sg	21 26 53.6	+0.2
	baz=23						
KPKS	Kokpek	1.15	325	⇑*e*P	Pb	21 26 38.4	-0.7
	7.1nm,0.1s						
KPKS				⇑*i*S	Sg	21 26 53.7	+0.2
	24nm,0.2s						
KURS	Kuram	1.42	313	*e*P	Pg	21 26 44.2	+0.5
	baz=12						
KURS				*e*S	Sg	21 27 03.2	+1.1
	baz=12						
KURS	Kuram	1.42	313	*e*P	Pg	21 26 44.2	+0.5
	0.6nm,0.1s						
KURS				*e*S	Sg	21 27 03.1	+1.1
	10nm,0.4s						
KURS	Kuram	1.42	313	P	Pg	21 26 44.2	+0.5
	0.5nm,0.1s						
KURS				S	Sg	21 27 03.4	+1.3
	10nm,0.4s						
ANVS	Anan'yevo	1.45	281	⇓*i*P	Pb	21 26 44.4	+0.2
	baz=79						
ANVS				⇓*i*S	Sg	21 27 03.8	+0.8
	baz=79						
DJR	Jarkent	1.81	4	*e*P	Pb	21 26 49.8	-0.4
	2.9nm,0.2s						
DJR				*e*S	Sg	21 27 13.8	-0.6
	12nm,0.2s						
DJR	Jarkent	1.81	4	P	Pb	21 26 49.8	-0.4
	2.9nm,0.2s						
DJR				S	Sg	21 27 13.8	-0.6
	12nm,0.2s						
KDJ	Kajisay	1.84	258	⇓*i*P	Pb	21 26 51.6	+0.7
	baz=56						
KDJ				⇓*i*S	Sg	21 27 16.7	+1.2
	baz=

IZV	**Izvestkoviy**	**2.26 284**	Pg	**Pb**	**21 26 58.3**	**+0.3**
	7.0nm,0.2s					
IZV			Lg	Lg	21 27 28.3	
	7.8nm,0.2s					
KTBS	**Karatobe**	**2.44 300**	*e*P	**Pb**	**21 27 01.8**	**+0.7**
	baz=98					
KTBS			*e*S	**Sg**	**21 27 34.2**	**-0.7**
	baz=98					
KTBS	**Karatobe**	**2.44 300**	*e*P	**Pb**	**21 27 01.8**	**+0.7**
	0.7nm,0.2s					
KTBS			*e*S	**Sg**	**21 27 34.2**	**-0.7**
	20nm,0.4s					
KTBS	**Karatobe**	**2.44 300**	Lg	Lg	21 27 31.7	
	20nm,0.4s					
ULHL	**Ulahol**	**2.50 265**	⇓*i*P	**Pb**	**21 27 01.5**	**-0.7**
	baz=63					
ULHL			⇓*i*S	**Sb**	**21 27 33.4**	**-0.2**
	baz=63					
BOOM	**Boomskoye usch**	**2.71 270**	⇓*i*P	**Pb**	**21 27 03.7**	**-2.0**
	baz=69					
BOOM			⇓*i*S	**Sb**	**21 27 36.8**	**-2.5**
	baz=69					
KST	**Kastek**	**2.73 282**	*e*P	**Pg**	**21 27 08.2**	**-0.5**
	baz=81					
KST			*e*S	**Sg**	**21 27 44.8**	**+0.8**
	baz=81					
KST	**Kastek**	**2.73 282**	*e*P	**Pg**	**21 27 08.2**	**-0.5**
	3.5nm,0.2s					
KST			*e*S	**Sg**	**21 27 44.8**	**+0.8**
	5.3nm,0.5s					
KST	**Kastek**	**2.73 282**	Pg	**Pb**	**21 27 06.8**	**+0.9**
	3.5nm,0.2s					
KST			Lg	Lg	21 27 42.7	
	5.3nm,0.5s					
KUU	**Kurty**	**2.75 301**	*e*P	**Pb**	**21 27 06.7**	**+0.5**
	baz=0.0					
KUU			*e*S	**Sg**	**21 27 42.3**	**-2.4**
	baz=0.0					
KUU	**Kurty**	**2.75 301**	*e*P	**Pb**	**21 27 06.7**	**+0.5**
	0.6nm,0.3s					
KUU			*e*S	**Sg**	**21 27 42.3**	**-2.4**
	4.8nm,0.3s					
KUU	**Kurty**	**2.75 301**	Lg	Lg	21 27 42.5	
	4.8nm,0.2s					
KAPS	**Kapalarasan**	**2.76 356**	*e*P	**Pb**	**21 27 07.4**	**+1.0**
	0.5nm,0.1s					
KAPS			*e*S	**Sg**	**21 27 43.2**	**-1.8**
	3.9nm,0.2s					
NRN	**Naryn**	**2.90 249**	⇑*i*P	**Pb**	**21 27 07.3**	**-1.7**
	baz=48					
NRN			⇑*i*S	**Sb**	**21 27 43.7**	**-1.3**
	baz=48					
DGS	**Degeres**	**2.90 285**	*e*P	**Pb**	**21 27 10.4**	**+1.4**
	baz=85					
DGS			*e*S	**Sg**	**21 27 48.7**	**-1.0**
	baz=85					
DGS	**Degeres**	**2.90 285**	*e*P	**Pb**	**21 27 10.4**	**+1.4**
	1.5nm,0.2s					
DGS			*e*S	**Sg**	**21 27 48.6**	**-1.0**
	8.0nm,0.4s					
DGS	**Degeres**	**2.90 285**	Lg	Lg	21 27 46.8	
	8.0nm,0.4s					
TKM2	**Tokmak 2**	**2.98 279**	⇓*i*P	**Pb**	**21 27 07.4**	**-2.9**
	baz=78					
TKM2			⇓*i*S	**Sb**	**21 27 43.9**	**-3.2**
	baz=78					
TKM2	**Tokmak 2**	**2.98 279**	⇓Pn	**Pb**	**21 27 08.2**	**-2.1**
	1.5nm,0.8s					
TKM2			⇑Sn	**Sg**	**21 27 50.0**	**-2.1**
	1.8nm,0.3s					
KZA	**Kyzart**	**3.26 263**	⇑*e*P	**Pn**	**21 27 11.8**	**+2.9**
	baz=63					
KZA			⇑*e*S	**Sb**	**21 27 51.6**	**-3.9**
	baz=63					
MAKZ	**Makanchi**	**4.60 21**	⇓Pg	**Pn**	**21 27 28.6**	**+1.6**
	0.2nm,0.3s					
MK31	**Makanchi Array**	**4.67 23**	Pg	**Pn**	**21 27 29.4**	**+1.4**
	0.1nm,0.3s,baz=208,slow=13,SNR=8.6					

*IDC **14** 21:38:06.8±2.3, 7.56S×130.90E, h47km±24km, mb3.8/5, mb1 4.2/10, mb1mx3.8/39, mbtmp4.3/10, ML4.4/5, Error ellipse: s-maj=42.2km s-min=23.1km az=88.0*
*NEIC **14** 21:38:09.2±2.3, 7.45S±0.05×130.80E±0.09, h91km±7km, mb4.2/10, Error ellipse: s-maj=13.1km s-min=6.5km az=106.0*

ISC 14 21:38:09.9±0.6, **7.45S**±0.05×**130.76E**±0.06, **h100**km, **n33, σ3§36/38, mb4.1**/11, **Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**0.75**	**135**			**Pn**	**21 38 28.1**	**+0.3**
SAUI				Sn		**Sn**	**21 38 35.4**	**-5.8**
FAKI	**Fak Fak**	**4.74**	**18**			**Pn**	**21 39 18.3**	**-0.9**
FAKI						**Sn**	**21 40 05.9**	**-7.1**
MTN	**Manton Dam**	**5.37**	**176**			**Pn**	**21 39 27.1**	**-0.5**
MTN				Sn		**Sn**	**21 40 25.0**	**-3.2**
SIJI	**Sorong**	**6.56**	**4**	P		**Pn**	**21 39 42.4**	**-1.5**
	4.4nm,0.3s,baz=232,slow=19,SNR=19							
SIJI				S		**Sn**	**21 40 49.8**	**-7.4**
	9.6nm,0.3s,baz=114,slow=20,SNR=12							
SOEI	**Soe**	**6.82**	**250**	Pn		**Pn**	**21 39 46.2**	**-1.3**
SOEI						**Sn**	**21 40 59.4**	**-4.2**
BATI	**Baumata**	**7.53**	**248**	P		**Pn**	**21 39 57.1**	**0.0**
	6.2nm,0.3s,baz=12,slow=0.7,SNR=5.6							
BATI				S		**Sn**	**21 41 16.8**	**-4.1**
	13nm,0.3s,baz=100,slow=16,SNR=6.5							
KNRA	**Kununurra**	**8.40**	**193**			**Pn**	**21 40 07.7**	**-1.2**
KNRA				Sn		**Sn**	**21 41 37.1**	**-5.0**
FITZ	**Fitzroy Crossi**	**11.70**	**205**	P		**Pn**	**21 40 49.7**	**-3.9**
	7.8nm,0.3s,baz=32,slow=11,SNR=94							
FITZ				S		Sn	21 42 48.2	-14
	0.8nm,0.3s,baz=344,slow=20,SNR=2.7							
FITZ	**Fitzroy Crossi**	**11.70**	**205**			**Pn**	**21 40 51.2**	**-2.4**
WRA	**Warramunga Arr**	**12.89**	**165**	P		**Pn**	**21 41 05.0**	**-4.4**
	1.4nm,0.3s,baz=345,slow=13,SNR=31							
WRA				S		Sn	21 43 18.3	-13
	1.1nm,0.3s,baz=342,slow=22,SNR=7.5							
COEN	**Coen**	**13.80**	**119**	Pn		**Pn**	**21 41 21.2**	**-0.1**
AS31	**Alice Springs**	**16.40**	**170**	P		**Pn**	**21 41 53.7**	**-0.5**
ASAR	**Alice Springs**	**16.40**	**170**	P		**Pn**	**21 41 51.9**	**-2.3**
	1.7nm,0.3s,baz=6.5,slow=12,SNR=98							
ASAR				S		Sn	21 44 43.4	-13
	0.4nm,0.3s,baz=352,slow=26,SNR=7.2							
ASAR	**Alice Springs**	**16.40**	**170**	P		**Pn**	**21 41 53.1**	**-1.1**
PSA00	**Pilbara Seismi**	**17.55**	**216**	P		**P**	**21 42 07.4**	**-0.6**
PSA00				IAmb		IAmb	21 42 25.8	
	comp=Z,28nm,1.4s							
FORT	**Forrest**	**23.34**	**186**	P		**P**	**21 43 09.5**	**+0.1**
BBOO	**Buckleboo**	**25.71**	**170**	P		**P**	**21 43 34.1**	**+3.3**
BBOO				IAmb		IAmb	21 43 36.7	
	comp=Z,6.3nm,0.8s							
STKA	**Stephens Creek**	**26.32**	**159**	P		**P**	**21 43 40.4**	**+4.0**
	comp=Z,1.4nm,0.5s,baz=334,slow=12,SNR=4.8							
UBPT	**Khong Chiam**	**33.74**	**312**	P		**P**	**21 44 43.6**	**+1.5**
CMAR	**Chiang Mai Arr**	**40.60**	**310**	P		**P**	**21 45 42.4**	**+2.2**
	comp=Z,0.5nm,0.6s,baz=146,slow=7.2,SNR=4.2							
CMWZ	**Cape Campbell**	**51.38**	**139**	P		**P**	**21 47 06.1**	**+1.6**
SONM	**Songino Array**	**59.11**	**341**	P		**P**	**21 48 04.2**	**+4.3**
	comp=Z,0.5nm,0.5s,baz=159,slow=6.8,SNR=6.9							
MKAR	**Makanchi Array**	**69.02**	**327**	P		**P**	**21 49 08.8**	**+4.1**
	comp=Z,1.5nm,0.3s,baz=115,slow=8.1,SNR=61							
MAKZ	**Makanchi**	**69.20**	**326**	P		**P**	**21 49 09.8**	**+3.9**
MAKZ				IAmb		IAmb	21 49 10.6	
	comp=Z,3.2nm,1.0s							
KDJ	**Kajisay**	**69.40**	**320**	P		P	21 49 12.0	+4.6
KDJ				IAmb		IAmb	21 49 29.4	
	comp=Z,3.5nm,0.8s							
ARSB	**Arslanbob**	**71.73**	**318**	P		**P**	**21 49 22.0**	**+0.4**
ARSB				IAmb		IAmb	21 49 26.7	
	comp=Z,4.2nm,0.7s							
ZALV	**Zalesovo Beam**	**72.32**	**334**	P		**P**	**21 49 27.4**	**+2.8**
	comp=Z,0.7nm,0.6s,baz=115,slow=6.7,SNR=4.1							
ZALV	**Zalesovo Beam**	**72.32**	**334**	P		**P**	**21 49 26.6**	**+2.1**
KURBB	**Kurchatov Arra**	**73.29**	**328**	P		**P**	**21 49 33.6**	**+3.2**
	comp=Z,0.7nm,0.2s,baz=128,slow=4.7,SNR=6.7							
KURK	**Kurchatov**	**73.30**	**328**	P		**P**	**21 49 30.6**	**+0.2**
KURK				IAmb		IAmb	21 49 43.0	
	comp=Z,3.0nm,1.0s							
KEKH	**Kekaha**	**74.10**	**65**	P		**P**	**21 49 33.8**	**-1.9**
FURI	**Furi**	**93.18**	**279**			pP	21 51 38.2	-1.3
TORD	**Torodi Ar. Bea**	**129.64**	**281**	PKP		**PKiKP**	**21 57 13.3**	**+4.2**
	comp=Z,0.3nm,0.5s,baz=97,slow=3.1,SNR=3.7							

IDC 14 21:51:02.7±16.0, **12.54S**×**167.36E**, **h191**km±155km,
mb3.5/5, **mb1 3.8**/5, **mb1mx3.4**/21, **mbtmp3.9**/5, **Error ellipse: s-maj=129.2km s-min=46.9km az=142.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.50**	**253**	P		P	21 57 15.4	-0.3
	0.4nm,0.3s,baz=80,slow=9.0,SNR=4.9							
ASAR	**Alice Springs**	**33.59**	**246**	P		P	21 57 25.1	+0.1
	0.8nm,0.4s,baz=72,slow=9.8,SNR=10							
ILAR	**Eielson Array**	**84.43**	**18**	P		P	22 03 13.3	0.0
	1.6nm,0.6s,baz=239,slow=5.7,SNR=31							
YKA	**Yellowknife Ar**	**95.57**	**27**	P		P	22 04 05.4	-0.4
	0.1nm,0.4s,baz=256,slow=4.4,SNR=3.3							
MKAR	**Makanchi Array**	**95.69**	**317**	P		P	22 04 06.0	-0.7
	0.4nm,0.7s,baz=116,slow=3.4,SNR=3.6							
ARCES	**ARCESS Array B**	**118.16**	**346**	PKP		PKPdf	22 09 26.2	-0.3
	3.3nm,1.0s,baz=54,slow=2.3,SNR=12							
ESDC	**Sonseca Array**	**151.90**	**346**	PKPab		PKPab	22 10 45.5	+0.4
	0.3nm,0.5s,baz=8.1,slow=4.1,SNR=3.0							

*SJA **14** 22:06:34.4±0.9, 23.02S×66.76W, h221km±10km, ML3.2, MW3.2*
*GUC **14** 22:06:35.9±0.7, 23.17S×67.32W, h250km±14km, ML3.7*
ISC 14 22:06:35.0±2.0, **23.17S**±0.07×**66.81W**±0.05, **h216**km±18km, **n20, σ1§12/37, 5C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**1.55**	**51**	*i* P		**Pn**	**22 07 11.3**	**+0.2**
YJA					IAML		22 07 11.9	
	comp=Z,38nm,0.6s							
YJA				*i* S		**S**	**22 07 37.4**	**-1.5**
SLA	**San Lorenzo**	**1.95**	**143**	*i* P		**Pn**	**22 07 15.9**	**+1.6**
SLA					IAML		22 07 17.4	
	comp=Z,66nm,0.7s							
SLA				*i* S		**S**	**22 07 45.0**	**+0.1**
LVC	**Limon Verde**	**2.02**	**286**	*i* P		**Pn**	**22 07 16.0**	**+0.8**
LVC				*i* S		**S**	**22 07 46.6**	**+0.4**
ASTB	**Santa Barbara**	**2.30**	**110**	⇓*i*P		**Pn**	**22 07 18.1**	**+0.3**
ASTB				*i* S		**S**	**22 07 49.2**	**-1.8**
PB15	**IPOC Station P**	**2.45**	**269**	*i* P		**Pn**	**22 07 20.4**	**+0.8**
PB15				*i* S		**S**	**22 07 54.3**	**+0.3**
PB15					IAML		22 07 56.7	
	comp=E,701nm,0.4s							
PB15	**IPOC Station P**	**2.45**	**269**	*i* P		**Pn**	**22 07 20.5**	**+1.0**
PB15				*i* S		**S**	**22 07 54.3**	**+0.3**
PB06	**IPOC Station P**	**2.59**	**280**	⇑*i*P		**Pn**	**22 07 21.7**	**+0.7**
PB06				*i* S		**S**	**22 07 55.9**	**-0.7**
PB06					IAML		22 08 01.5	
	comp=N,108nm,0.4s							
PB03	**IPOC Station P**	**2.94**	**292**	⇑*i*P		**Pn**	**22 07 25.3**	**+0.3**
PB03				*i* S		**S**	**22 08 02.1**	**-1.5**
PB03					IAML		22 08 03.6	
	comp=E,108nm,0.4s							
PB05	**IPOC Station P**	**3.14**	**275**	⇑*i*P		**Pn**	**22 07 27.6**	**+0.4**
PB05				*i* S		**S**	**22 08 06.3**	**-1.5**
PB05					IAML		22 08 09.9	
	comp=N,40nm,0.4s							
PB05	**IPOC Station P**	**3.14**	**275**	*i* P		**Pn**	**22 07 27.8**	**+0.6**
PB05				*i* S		**S**	**22 08 06.8**	**-0.9**
PB04	**IPOC Station P**	**3.19**	**284**	⇑*i*P		**Pn**	**22 07 28.2**	**+0.4**
PB04				*i* S		**S**	**22 08 07.2**	**-1.7**
PB04					IAML		22 08 12.3	
	comp=N,97nm,0.4s							
PB04	**IPOC Station P**	**3.19**	**284**	*i* P		**Pn**	**22 07 28.3**	**+0.4**
PB04				*i* S		**S**	**22 08 07.8**	**-1.2**
GO02	**Mina Guanaco**	**3.22**	**231**	⇑*i*P		**Pn**	**22 07 29.3**	**+1.0**
GO02				*i* S		**S**	**22 08 10.7**	**+0.9**
PB10	**IPOC Station P**	**3.46**	**264**	*i* P		**Pn**	**22 07 31.6**	**+0.8**
PB10				*i* S		**S**	**22 08 12.2**	**-2.1**
PB10	**IPOC Station P**	**3.46**	**264**	*i* P		**Pn**	**22 07 31.6**	**+0.8**
PB10					IAML		22 07 32.2	
	comp=Z,54nm,0.6s							
PB10				*i* S		**S**	**22 08 13.1**	**-1.2**
PB14	**IPOC Station P**	**3.59**	**246**	*i* P		**Pn**	**22 07 33.3**	**+0.6**
PB14					IAML		22 07 35.4	
	comp=Z,54nm,0.4s							
PB14				*i* S		**S**	**22 08 16.3**	**-1.4**
GO03	**Copiap**	**5.38**	**214**	*i* P		**Pn**	**22 07 54.4**	**-0.3**
GO03				*i* S		**S**	**22 08 55.9**	**-1.8**
LPAZ	**La Paz**	**6.96**	**349**	*i* P		**Pn**	**22 08 16.4**	**+1.0**
CFA	**Coronel Fontan**	**8.50**	**188**	*i* P		**Pn**	**22 08 33.2**	**-1.4**
ASAL	**Salagasta**	**9.55**	**190**	*i* P		**Pn**	**22 08 49.4**	**+1.1**

ROM 14 22:10:16.5±0.1, **43.402N**±0.004×**12.500E**±0.004, **h6**km, **Md1.0**/3, **Error ellipse: s-maj=0.5km s-min=0.2km az=197.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.06**	**124**	P		Pg	22 10 18.4	+0.2
ATFO				S		Sg	22 10 19.7	+0.3
ATFO				AML		AML		
	comp=N,264μm,0.4s							
ATFO				AML		AML		
	comp=E,194μm,0.8s							
ATFO				END				
ATVO	**AVT- Monte Val**	**0.07**	**254**	P		Pg	22 10 18.6	+0.3
ATVO				S		Sg	22 10 19.9	+0.4
ATVO				AML		AML		
	comp=N,308μm,0.4s							
ATVO				AML		AML		
	comp=E,378μm,0.3s							
ATVO				END				
MURB	**Monte Urbino**	**0.14**	**173**	P		Pg	22 10 19.8	+0.3
MURB				S		Sg	22 10 22.4	+1.0
MURB				AML		AML		
	comp=N,1190μm,0.7s							
MURB				AML		AML		
	comp=E,1535μm,0.3s							
MURB				END				
CAFE	**Carife**	**3.12**	**138**	P		Pn	22 11 05.4	-1.0

*PRU **14** 22:10:54.9±0.0, 44.16N×11.13E, h0km*
*ROM **14** 22:10:55.8±0.1, 43.995N±0.009×10.883E±0.007, h33km, ML2.8/1, Error ellipse: s-maj=0.9km s-min=0.6km az=357.0*
*GEN **14** 22:10:56.4, 43.98N×10.91E, h30km±1km, Ml2.8*
*BGR **14** 22:10:57.6±1.1, 44.09N×10.89E, h10km, ML3.3/2, Error ellipse: s-maj=24.5km s-min=18.9km az=145.0*
*LDG **14** 22:10:57.2±0.1, 43.99N×10.90E, h25km, Md2.5/2, Ml2.8/36, Error ellipse: s-maj=1.5km s-min=1.2km az=176.0*
*STR **14** 22:11:01.7±1.6, 44°N±3°×1°0E±°, h17km±15km, MLv2.5/7*
ISC 14 22:10:55.9±0.9, **43.99N**±0.02×**10.83E**±0.02, **h33**km±1km, **n163, σ1§68/210, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
POPM	**Popiglio**	**0.07**	**314**	P		**Pb**	**22 11 02.2**	**+0.5**
POPM				S		**Sb**	**22 11 06.1**	**+0.5**
POPM				AML		AML		
	comp=E,23350μm,0.1s							
POPM				AML		AML		
	comp=N,19500μm,0.4s							
POPM				AML		AML		
	comp=E,23350μm,0.1s							
POPM	**Popiglio**	**0.07**	**314**	P		**Pb**	**22 11 02.2**	**+0.5**
POPM				S		**Sb**	**22 11 06.1**	**+0.5**
MTCR	**Monte La Croce**	**0.12**	**75**	P		**Pb**	**22 11 02.2**	**+0.1**
MTCR				S		**Sb**	**22 11 06.2**	**-0.1**
PTF	**Prato**	**0.18**	**101**	P		**Pn**	**22 11 02.3**	**+1.2**
PTF				S		**Sb**	**22 11 06.6**	**-0.2**
BDI	**Bagni Di Lucca**	**0.18**	**292**	P		**Pb**	**22 11 03.0**	**+0.5**
BDI				S		**Sb**	**22 11 07.5**	**+0.5**
BDI				AML		AML		
	comp=E,8515μm,0.4s							
BDI				AML		AML		
	comp=E,10030μm,0.4s							
BDI				AML		AML		
	comp=N,9570μm,1.1s							
BDI				AML		AML		
	comp=N,9670μm,1.1s							
BDI				AML		AML		
	comp=E,8505μm,0.4s							
CARD	**Cardoso**	**0.25**	**277**	P		**Pn**	**22 11 03.7**	**+0.7**
CARD				S		**Sb**	**22 11 08.7**	**+0.6**
CARD				AML		AML		
	comp=E,5800μm,0.1s							
CARD				AML		AML		
	comp=N,5705μm,0.3s							
CARD	**Cardoso**	**0.25**	**277**	P		**Pn**	**22 11 03.7**	**+0.7**
CARD				S		**Sb**	**22 11 08.7**	**+0.6**
MAIM	**Mastiano**	**0.26**	**252**	P		**Pn**	**22 11 04.0**	**+0.9**
MAIM				S		**Sb**	**22 11 09.1**	**+1.0**
MAIM				AML		AML		
	comp=E,1660μm,0.1s							
MAIM				AML		AML		
	comp=N,1765μm,0.1s							
MAIM	**Mastiano**	**0.26**	**252**	P		**Pn**	**22 11 04.0**	**+0.9**
MAIM				S		**Sb**	**22 11 09.1**	**+1.0**
FNVD	**Fontana Vidola**	**0.27**	**50**	P		**Pn**	**22 11 03.3**	**-0.1**
FNVD				S		**Sn**	**22 11 08.1**	**+0.4**
FNVD				AML		AML		
	comp=E,6210μm,0.3s							
FNVD				AML		AML		
	comp=N,8830μm,1.1s							
VLC	**Villacollemand**	**0.36**	**297**	P		**Pb**	**22 11 05.0**	**+0.5**
VLC				AML		AML		
	comp=E,916μm,1.2s							
VLC				AML		AML		
	comp=N,1260μm,1.4s							
VLC				AML		AML		
	comp=E,913μm,1.2s							
VLC				AML		AML		
	comp=N,1255μm,1.4s							
VLC				AML		AML		
	comp=E,926μm,1.2s							
VLC				AML		AML		
	comp=N,1265μm,1.4s							
VLC				AML		AML		
	comp=E,912μm,1.2s							
SARO	**Sassorosso**	**0.36**	**302**	P		**Pb**	**22 11 05.0**	**+0.4**
SARO				S		**Sn**	**22 11 10.9**	**+0.2**
SARO				AML		AML		
	comp=E,458μm,0.8s							
SARO				AML		AML		
	comp=N,715μm,0.5s							
SARO	**Sassorosso**	**0.36**	**302**	P		**Pb**	**22 11 05.0**	**+0.4**
SARO				S		**Sn**	**22 11 10.9**	**+0.2**
ZCCA	**Zocca**	**0.37**	**16**	P		**Pb**	**22 11 05.4**	**+0.7**
ZCCA				AML		AML		
	comp=N,1234μm,0.4s							
ZCCA				AML		AML		
	comp=N,1236μm,0.4s							
ZCCA				AML		AML		
	comp=E,1225μm,1.5s							
ZCCA				AML		AML		
	comp=E,1335μm,1.5s							
ZCCA				AML		AML		
	comp=N,1200μm,0.4s							
ZCCA				AML		AML		
	comp=N,1235μm,0.4s							
SEI	**Scarperia**	**0.38**	**81**	P		**Pb**	**22 11 04.6**	**-0.3**
SEI				S		**Sb**	**22 11 10.0**	**-1.0**
SEI				AML		AML		
	comp=E,2675μm,0.4s							
SEI				AML		AML		
	comp=N,4110μm,0.4s							
BRIS	**BRISIGHELLA**	**0.51**	**72**	P		**Pb**	**22 11 10.1**	**+3.4**
BRIS				AML		AML		
	comp=E,340μm,1.4s							
BRIS				AML		AML		
	comp=N,938μm,0.7s							
BRIS				AML		AML		
	comp=N,939μm,0.7s							
BRIS				AML		AML		
	comp=E,341μm,1.4s							
RUFI	**Rufina**	**0.51**	**107**	P		**Pb**	**22 11 06.3**	**-0.5**
RUFI				S		**Sb**	**22 11 12.9**	**-1.3**
RUFI				AML		AML		
	comp=E,1130μm,0.6s							
RUFI				AML		AML		
	comp=N,852μm,1.1s							
RUFI				AML		AML		
	comp=E,1130μm,0.6s							
RUFI				AML		AML		
	comp=N,854μm,1.1s							
EQUI	**Equi**	**0.52**	**290**	P		**Pb**	**22 11 07.1**	**+0.2**
EQUI				AML		AML		
	comp=E,814μm,1.0s							
EQUI				AML		AML		
	comp=N,680μm,0.1s							
EQUI	**Equi**	**0.52**	**290**	P		**Pb**	**22 11 07.1**	**+0.2**
EQUI				S		**Sb**	**22 11 14.3**	**-0.1**
ERBM	**Eremo**	**0.52**	**325**	P		**Pb**	**22 11 07.7**	**+0.7**
ERBM				AML		AML		
	comp=E,411μm,1.4s							
ERBM				AML		AML		
	comp=N,560μm,0.8s							
ERBM				AML		AML		
	comp=N,559μm,0.8s							
ERBM				AML		AML		
	comp=E,412μm,1.4s							
OSSC	**Osservatorio P**	**0.56**	**147**	P		**Pn**	**22 11 08.0**	**+0.5**
OSSC				S		**Sb**	**22 11 15.8**	**+0.4**
OSSC				AML		AML		
	comp=E,1236μm,0.3s							
OSSC				AML		AML		
	comp=N,1460μm,1.5s							
OSSC				AML		AML		
	comp=N,1415μm,1.5s							
OSSC				AML		AML		
	comp=E,1203μm,0.3s							
FIVI	**Fivizzano**	**0.56**	**296**	P		**Pn**	**22 11 08.0**	**+0.5**
FIVI				AML		AML		
	comp=E,1195μm,0.2s							
FIVI				AML		AML		
	comp=N,1230μm,0.2s							
FIVI				AML		AML		
	comp=E,1200μm,0.2s							
FIVI				AML		AML		
	comp=N,1225μm,0.2s							
MTRZ	**Monterenzio**	**0.60**	**50**	AML		AML		
	comp=E,877μm,0.7s							
MTRZ				AML		AML		
	comp=N,888μm,0.9s							
MTRZ				AML		AML		
	comp=E,887μm,0.7s							
MTRZ				AML		AML		
	comp=N,878μm,0.9s							
CSNT	**Castellina Chi**	**0.62**	**147**	P		**Pn**	**22 11 08.8**	**+0.5**
PLMA	**Palmaria, Port**	**0.71**	**275**	P		**Pn**	**22 11 09.8**	**+0.2**
PLMA				AML		AML		
	comp=N,756μm,0.2s							
PLMA				AML		AML		
	comp=E,398μm,1.3s							
ASQU	**Asqua**	**0.72**	**106**	P		**Pn**	**22 11 08.9**	**-0.9**
ASQU				AML		AML		
	comp=N,514μm,0.3s							
ASQU				AML		AML		
	comp=E,644μm,0.1s							
SFI	**Santa Sofia**	**0.74**	**97**	P		**Pn**	**22 11 08.9**	**-1.2**
SFI				AML		AML		
	comp=E,448μm,0.2s							
SFI				AML		AML		
	comp=N,490μm,0.4s							
SFI				AML		AML		
	comp=E,436μm,1.2s							
SFI				AML		AML		
	comp=E,436μm,1.2s							
SFI				AML		AML		
	comp=N,468μm,0.2s							
GRAM	**Graiana**	**0.74**	**312**	P		**Pn**	**22 11 11.2**	**+1.0**
GRAM				S		**Sb**	**22 11 21.7**	**+1.2**
GRAM				AML		AML		
	comp=E,1094μm,0.8s							
GRAM				AML		AML		
	comp=N,902μm,0.3s							
GRAM	**Graiana**	**0.74**	**312**	P		**Pn**	**22 11 11.2**	**+1.0**
GRAM				S		**Sb**	**22 11 21.7**	**+1.2**
NOVE	**Novellara**	**0.81**	**354**	AML		AML		
	comp=N,1330μm,0.3s							
NOVE				AML		AML		
	comp=E,1780μm,0.8s							
FROS	**Frosini**	**0.82**	**163**	P		**Pn**	**22 11 11.7**	**+0.5**
FROS				AML		AML		
	comp=E,358μm,0.4s							
FROS				AML		AML		
	comp=N,

comp=E,1475µm,0.8s
TRIF Trifonti 0.88 177 P **Pn** **22 11 13.2 +1.2**
TRIF AML AML
comp=E,271µm,0.8s
TRIF AML AML
comp=N,248µm,1.6s
SSP9 Sansepolcro 1.03 114 P **Pn** **22 11 14.4 +0.4**
CAFI Castiglion Fio 1.06 128 P **Pn** **22 11 14.6 +0.2**
CAFI AML AML
comp=N,462µm,0.4s
CAFI AML AML
comp=E,295µm,0.2s
PARC Parchiule 1.08 108 P **Pn** **22 11 14.8 +0.1**
PARC AML AML
comp=N,442µm,0.4s
PARC AML AML
comp=E,278µm,0.3s
BADI Badiali 1.13 115 P **Pn** **22 11 14.8 -0.6**
BADI AML AML
comp=E,482µm,0.7s
BADI AML AML
comp=N,570µm,0.3s
GAZZ Gazzo Veronese 1.14 9 *e*Pg **Pn** **22 11 16.5 +1.0**
CDCA Citt' di Caste 1.15 117 P **Pn** **22 11 15.7 +0.1**
CDCA AML AML
comp=E,4180µm,1.2s
CDCA AML AML
comp=N,2170µm,0.3s
CDCA AML AML
comp=E,406µm,0.8s
CDCA AML AML
comp=N,398µm,0.2s
CDCA AML AML
comp=N,396µm,0.2s
CDCA AML AML
comp=N,2175µm,0.3s
CDCA AML AML
comp=E,410µm,0.8s
CDCA AML AML
comp=E,4185µm,1.2s
ATMI Monte Miggiano 1.23 122 P **Pn** **22 11 16.5 -0.4**
ATMI AML AML
comp=N,970µm,1.6s
ATMI AML AML
comp=N,971µm,1.6s
ATMI AML AML
comp=E,630µm,0.5s
PE3 Peglio 1.24 103 P **Pn** **22 11 17.9 +1.0**
PE3 AML AML
comp=N,606µm,0.4s
PE3 AML AML
comp=E,450µm,0.5s
ATPI Pietralunga - 1.26 115 P **Pn** **22 11 17.0 -0.3**
ATPI AML AML
comp=N,290µm,1.3s
ATPI AML AML
comp=E,229µm,0.6s
ATVO AVT- Monte Val 1.30 118 P **Pn** **22 11 17.2 -0.5**
ATVO AML AML
comp=N,308µm,0.4s
ATVO AML AML
comp=E,378µm,0.3s
ATVO AML AML
comp=N,308µm,0.4s
PIEI Pieia 1.32 110 P **Pn** **22 11 17.6 -0.5**
PIEI AML AML
comp=N,116µm,0.9s
PIEI AML AML
comp=E,221µm,0.4s
NARO Abbazia di Nar 1.32 106 AML AML
comp=N,158µm,0.4s
NARO AML AML
comp=E,111µm,1.5s
ADRI Adria, Italy 1.34 39 *e*Pg **Pn** **22 11 19.4 +1.1**
ATTE AVT- Monte Tez 1.36 125 AML AML
comp=N,448µm,0.4s
ATTE AML AML
comp=E,378µm,0.6s
ATFO Monte Foce - G 1.41 116 AML AML
comp=E,223µm,0.5s
ATFO AML AML
comp=N,264µm,0.4s
ATFO AML AML
comp=N,264µm,0.4s
MGAB Montegabbione 1.43 139 AML AML
comp=E,204µm,1.6s
MGAB AML AML
comp=N,188µm,1.0s
MURB Monte Urbino 1.43 120 AML AML
comp=E,1535µm,0.3s
MURB AML AML
comp=E,1530µm,0.3s
MURB AML AML
comp=N,1190µm,0.7s
FSSB Fossombrone 1.44 101 AML AML
comp=N,780µm,0.3s
FSSB AML AML
comp=E,500µm,1.5s
MPAG Monte Paganucc 1.44 104 AML AML
comp=E,153µm,1.4s
MPAG AML AML
comp=N,198µm,0.4s
TEOL Teolo 1.49 23 AML AML
comp=N,495µm,0.3s
TEOL AML AML
comp=E,437µm,0.3s
TEOL Teolo 1.49 23 *e*Pg **Pn** **22 11 21.1 +0.7**
ATCC AVT- Casa Cast 1.54 121 AML AML
comp=N,355µm,0.4s
ATCC AML AML
comp=E,358µm,0.3s
ARVD Arcevia 1.61 107 AML AML
comp=N,105µm,0.7s
ARVD AML AML
comp=E,107µm,0.5s
ROVR Rover Verones 1.66 6 AML AML
comp=E,214µm,0.2s
ROVR AML AML
comp=E,75µm,0.3s
ROVR AML AML
comp=N,390µm,0.7s
ROVR AML AML
comp=N,162µm,0.7s
MARN Marana (Italy) 1.67 9 *e*Pg **Pn** **22 11 23.0 +0.2**
BALD Monte Baldo 1.69 360 *e*Pg **Pn** **22 11 23.6 +0.3**
MAGA Magasa 1.79 355 AML AML
comp=N,472µm,0.3s
MAGA AML AML
comp=E,869µm,0.4s
FINB Finale Ligure 1.81 277 AML AML
comp=E,67µm,0.2s
FINB AML AML
comp=N,72µm,0.4s
CING Cingoli 1.82 109 AML AML
comp=E,147µm,0.5s
CING AML AML
comp=N,178µm,0.4s
FDMO Fiordimonte 1.90 119 AML AML
comp=N,160µm,0.9s
FDMO AML AML
comp=E,119µm,1.6s
DOSS Dosso del Somm 1.90 8 *e*Pn **Pn** **22 11 26.3 +0.1**
MDI Monti di Nese 1.95 336 AML AML
comp=E,146µm,0.8s
MDI AML AML
comp=N,128µm,0.5s
PGF Pioggiola 1.97 223 *e*Pn **Pn** **22 11 28.4 +1.4**
PGF *e*Sn **Sn** **22 11 50.3 -0.4**
comp=N,21nm,0.3s
PGF Pioggiola 1.97 223 Pn **Pn** **22 11 28.6 +1.5**
PGF Sg **Sn** **22 11 50.2 -0.4**
CGRP Cima Grappa 2.01 20 AML AML
comp=N,109µm,1.5s
CGRP AML AML
comp=E,112µm,1.2s
CGRP Cima Grappa 2.01 20 *e*Pn **Pn** **22 11 27.7 0.0**
CGRP *e*Sn **Sn** **22 11 51.6 0.0**
NRCA Norcia 2.03 124 AML AML
comp=E,176µm,1.5s
NRCA AML AML
comp=N,227µm,0.1s
PANI Panarotta 2.09 10 *e*Pn **Pn** **22 11 28.8 0.0**
GAGG Gaggia 2.09 2 *e*Pn **Pn** **22 11 29.0 +0.2**
SMPL Sampolo 2.21 211 Pn **Pn** **22 11 32.5 +2.2**
SMPL Sg **Sn** **22 11 58.7 +2.2**
SMA1 SAN MARTINO 2.28 126 AML AML
comp=E,216µm,0.3s
SMA1 AML AML
comp=N,256µm,0.4s
BRJN Brijuni 2.28 65 *i* Pn **Pn** **22 11 30.9 -0.2**
BRJN Sn **Sn** **22 11 56.2 -1.9**
SAOF Saorge 2.36 271 Pn **Pn** **22 11 33.4 +1.0**
SAOF Sn **Sn** **22 11 55.6 -4.7**
SAOF Sg 22 12 00.5
SAOF Saorge 2.36 271 AML AML
comp=N,96µm,1.5s
SAOF AML AML
comp=E,79µm,1.4s
SBF Sospel 2.46 268 *e*Pn **Pn** **22 11 34.5 +0.8**
SBF *e*Sn **Sn** **22 12 02.2 -0.4**
comp=E,23nm,0.2s
ENR Entracque 2.47 277 AML AML
comp=N,109µm,0.5s
ENR AML AML
comp=E,63µm,0.2s
TURF col de Turini 2.48 271 Pn **Pn** **22 11 35.0 +0.8**
TURF Sg **Sn** **22 12 03.8 +0.5**
KOSI Kohlern 2.50 9 AML AML
comp=N,68µm,0.4s
KOSI AML AML
comp=E,90µm,1.6s
APPI Appiano 2.50 6 AML AML
comp=E,115µm,0.3s
APPI AML AML
comp=N,93µm,0.4s
ESCA l'Escarene 2.50 267 Pn **Pn** **22 11 35.1 +0.8**
ESCA Sg **Sn** **22 12 03.6 -0.1**
STAL STALIGIAL 2.63 30 AML AML
comp=N,250µm,0.2s
STAL AML AML
comp=E,188µm,1.5s
MOSI Grossmontoni 2.63 356 AML AML
comp=E,128µm,1.6s
MOSI AML AML
comp=N,130µm,0.4s
ISO Isola 2.73 275 Pn **Pn** **22 11 38.6 +1.2**
ISO Sg **Sn** **22 12 10.3 +0.9**
ABSI Aberstueckl 2.76 7 AML AML
comp=E,126µm,0.5s
ABSI AML AML
comp=N,68µm,0.4s
SABO M.te Sabotino 2.79 44 AML AML
comp=N,144µm,1.3s
SABO AML AML
comp=E,154µm,1.5s
CALF Calern 2.84 266 P **Pn** **22 11 37.4 -1.6**
CALF Pn Pn 22 11 40.0 +1.0
DAVOX Davos/Dischmat 2.87 347 AML AML
comp=E,32µm,1.3s
DAVOX AML AML
comp=N,45µm,0.8s
FUSIO Fusio 2.90 329 AML AML
comp=E,50µm,0.8s
FUSIO AML AML
comp=N,46µm,1.3s
SURF Saint Ours 2.93 281 Pn **Pn** **22 11 41.1 +0.8**
NVLJ Novalja 2.96 77 *e*Pn **Pn** **22 11 40.6 +0.2**
NVLJ Sn **Sn** **22 12 12.8 -2.0**
ABTA Abfaltersbach 3.00 23 Pn **Pn** **22 11 42.2 +1.0**
comp=N,1.7nm,0.1s,SNR=5.1
ABTA *i* Sn **Sn** **22 12 15.9 -0.1**
comp=N,3.7nm,0.2s
MBDF Montbardon 3.00 286 *e*Pn **Pn** **22 11 42.0 +0.7**
MBDF *e*Sn **Sn** **22 12 15.6 -0.6**
comp=N,12nm,0.3s
FETA Feichten 3.03 359 *i* Pn **Pn** **22 11 44.1 +2.5**
comp=N,4.5nm,0.3s
FETA *i* Sn **Sn** **22 12 18.9 +2.0**
comp=N,2.1nm,0.4s
DUGI Dugi Otok 3.05 89 *e*Pn **Pn** **22 11 42.1 +0.3**
DUGI Sn **Sn** **22 12 14.8 -2.3**
FRF La Foret Royal 3.06 263 *e*Pn **Pn** **22 11 42.8 +0.9**
FRF *e*Sn **Sn** **22 12 16.6 -0.8**
comp=N,11nm,0.2s
RISI Rein 3.08 16 AML AML
comp=E,158µm,0.5s
RISI AML AML
comp=N,174µm,0.5s
LMR La Mourre 3.20 260 *e*Pn **Pn** **22 11 44.6 +0.7**
LMR *e*Sn **Sn** **22 12 19.6 -1.3**
comp=N,8.9nm,0.2s
SQTA Sankt Quirin 3.24 5 Pn **Pn** **22 11 46.1 +1.6**
comp=N,5.7nm,0.2s,SNR=26
SQTA *i* Sn **Sn** **22 12 22.6 +0.7**
comp=N,7.2nm,0.3s
LPG La Plagne 3.27 299 *e*P **Pn** **22 11 49.3 +4.2**
LPG *e*Sn **Sn** **22 12 22.2 -0.8**
comp=N,2.2nm,0.3s
LPL La Plagne 3.29 299 *e*Pn **Pn** **22 11 46.8 +1.5**
LPL La Plagne 3.29 299 *e*P Pn 22 11 50.5 +5.2
LPL *e*Sn **Sn** **22 12 22.5 -0.9**
comp=N,3.7nm,0.4s
MYKA Terra Mystica 3.30 36 *i* Pn **Pn** **22 11 45.9 +0.6**
comp=N,0.7nm,0.1s
MYKA *i* Sn **Sn** **22 12 22.7 -0.6**
comp=N,5.8nm,0.3s
WTTA Wattenberg 3.32 10 *i* Pn **Pn** **22 11 47.3 +1.6**
comp=N,4.8nm,0.2s,SNR=13
WTTA *i* Sn **Sn** **22 12 25.0 +1.0**
comp=N,5.3nm,0.3s
BNALP Bannalp 3.34 330 AML AML
comp=E,52µm,1.6s
BNALP AML AML
comp=N,42µm,1.6s
MOTA Moosalm 3.36 3 *i* Pn **Pn** **22 11 47.6 +1.4**
comp=N,6.1nm,0.3s,SNR=15
MOTA *i* Sn **Sn** **22 12 26.7 +1.8**
comp=N,10nm,0.3s
DAVA Damuels 3.36 349 *i* Pn **Pn** **22 11 48.9 +2.7**
comp=N,1.7nm,0.1s,SNR=9.3
DAVA *i* Sn **Sn** **22 12 25.8 +0.8**
comp=N,8.9nm,0.4s
WATA Walderalm 3.38 9 *i* Pn **Pn** **22 11 48.7 +2.2**
comp=N,17nm,0.2s,SNR=35
WATA *i* Sn **Sn** **22 12 27.0 +1.4**
comp=N,16nm,0.5s
OBER Oberstdorf 3.43 354 *e*Pn **Pn** **22 11 49.6 +2.4**
RSL Roselend 3.44 301 Pn **Pn** **22 11 50.9 +3.7**
BLAF les Blancs 3.46 271 Pn **Pn** **22 11 48.2 +0.8**
RETA Reutte 3.49 359 *i* Pn **Pn** **22 11 49.9 +1.9**
comp=N,2.1nm,0.3s,SNR=11
RETA *i* Sn **Sn** **22 12 30.8 +2.7**
comp=N,5.2nm,0.4s
MORI Morici 3.52 90 *e*Pn **Pn** **22 11 49.4 +1.1**
MORI Sn **Sn** **22 12 26.9 -1.9**
KBA Koelnbreinsper 3.56 29 *i* Pn **Pn** **22 11 49.4 +0.5**
comp=N,1.8nm,0.5s
KBA *i* Sn **Sn** **22 12 29.3 -0.5**
comp=N,4.0nm,0.3s
GDM Grand'Maison 3.58 291 Pn **Pn** **22 11 52.2 +3.0**
UDBI Udbina 3.58 80 *e*Pn **Pn** **22 11 49.4 +0.2**
UDBI Sn **Sn** **22 12 28.2 -2.2**
OBKA Obir 3.64 45 *i* Pn **Pn** **22 11 50.6 +0.7**
comp=N,1.0nm,0.2s
OBKA *i* Sn **Sn** **22 12 30.9 -0.8**
comp=N,4.1nm,0.3s
ORIF Oris-en-Rattie 3.66 286 *e*Pn **Pn** **22 11 52.8 +2.5**
ORIF Oris-en-Rattie 3.66 286 *e*P Pn 22 11 56.0 +5.7
ORIF *e*Sn **Sn** **22 12 32.0 -0.4**
comp=N,4.0nm,0.3s
OZLJ Ozalj 3.68 62 *e*Pn **Pn** **22 11 50.6 +0.2**
OZLJ Sn **Sn** **22 12 29.9 -2.6**
UBR Ueberruh 3.72 352 *e*Pn **Pn** **22 11 53.1 +2.0**
UBR *e*Sn **Sn** **22 12 35.4 +1.6**
BSTF la Bastide-des 3.75 270 Pn **Pn** **22 11 52.1 +0.7**
SMRF Simiane la Rot 3.79 272 *e*Pn **Pn** **22 11 54.1 +2.1**
SMRF *e*Sn **Sn** **22 12 34.0 -1.5**
comp=N,4.6nm,0.3s
RJOB Jochberg 3.99 19 *e*Pn **Pn** **22 11 56.4 +1.6**
RJOB *e*Sn **Sn** **22 12 42.0 +1.7**
SOKA Soboth 4.00 46 *i* Pn **Pn** **22 11 53.6 -1.3**
comp=N,1.1nm,0.4s
SOKA *i* Sn **Sn** **22 12 39.3 -1.3**
comp=N,1.0nm,0.5s
KIJV Kijevo 4.02 88 *e*Pn **Pn** **22 11 56.7 +1.6**
KIJV Sn **Sn** **22 12 41.2 0.0**
CABF La Chapelle 4.25 310 *e*Pn **Pn** **22 11 58.6 +0.3**
CABF *e*Sn **Sn** **22 12 45.0 -1.8**
comp=N,0.6nm,0.2s
VIVF Saint-Julien-l 4.49 283 *e*Pn **Pn** **22 12 02.5 +0.8**
VIVF *e*Sn **Sn** **22 12 51.0 -1.8**
comp=N,2.5nm,0.3s
MOA Molln 4.54 31 *i* Pn **Pn** **22 12 03.1 +0.9**
comp=N,0.3nm,0.1s,SNR=6.2
MOA *i* Sn **Sn** **22 12 53.7 -0.2**
comp=N,3.1nm,0.3s
ARSA Arzberg 4.63 44 *i* Pn **Pn** **22 12 03.5 0.0**
comp=N,1.3nm,0.2s
ARSA *i* Sn **Sn** **22 12 52.7 -3.4**
comp=N,2.8nm,0.7s
BFO Black Forest 4.67 339 *e*Pn **Pn** **22 12 05.2 +1.1**
BFO *e*Sn **Sn** **22 12 55.2 -1.9**
HINF Hinteralfeld 4.72 325 *e*Pn **Pn** **22 12 05.6 +0.8**
HINF *e*Sn **Sn** **22 12 56.2 -2.3**
comp=N,6.2nm,0.3s
LASF Ste Croix 5.03 273 *e*Pn **Pn** **22 12 09.4 +0.4**
LASF *e*Sn **Sn** **22 13 03.9 -2.0**
comp=N,1.3nm,0.2s
CDF Champ du Feu 5.06 332 *e*Pn **Pn** **22 12 10.2 +0.7**
CDF *e*Sn **Sn** **22 13 04.2 -2.6**
comp=N,1.7nm,0.2s
HAU Haudompre 5.08 324 *e*Pn **Pn** **22 12 11.0 +1.2**
HAU *e*Sn **Sn** **22 13 04.7 -2.6**
comp=N,8.0nm,0.2s
GEC2 GERESS Array S 5.24 21 *e*Sn **Sn** **22 13 08.4 -2.9**
CONA Conrad Observa 5.27 40 *i* Pn **Pn** **22 12 10.7 -1.7**
CONA *i* Sn **Sn** **22 13 10.2 -1.7**
comp=N,2.2nm,0.6s
WET Wettzell 5.34 15 *e*Pn **Pn** **22 12 13.2 -0.1**
WET *e*Sn **Sn** **22 13 10.1 -3.6**
KHC Kasperske Hory 5.48 19 *e*PN **Pn** **22 12 14.8 -0.4**
KHC *e*SN **Sn** **22 13 13.1 -3.9**
SMF Signal de Mont 5.60 301 *e*Pn **Pn** **22 12 16.8 0.0**
SMF *e*Sn **Sn** **22 13 17.6 -2.3**
comp=N,0.8nm,0.2s
PAGF Fort de Pagny 5.77 324 *e*Pn **Pn** **22 12 19.8 +0.6**
PAGF *e*Sn **Sn** **22 13 21.1 -3.1**
comp=N,1.7nm,0.2s
SFTF Sexfontaines 5.83 318 *e*Pn **Pn** **22 12 20.7 +0.8**
baz=138
SFTF *e*Sn **Sn** **22 13 22.5 -3.0**
comp=N,2.3nm,0.3s
ROTZ Rotzenmuhle 5.85 9 *e*Sn **Sn** **22 13 21.1 -5.1**
LOR Lormes 5.88 306 *e*Pn **Pn** **22 12 21.4 +0.7**
baz=124
LOR *e*Sn **Sn** **22 13 24.1 -2.9**
comp=N,1.8nm,0.3s
AVF Avril sur Loir 5.96 301 *e*Pn **Pn** **22 12 22.7 +0.9**
AVF *e*Sn **Sn** **22 13 26.1 -2.8**
comp=N,0.6nm,0.2s
SSF Saint Saulge 5.99 303 *e*Pn **Pn** **22 12 23.0 +0.8**
SSF *e*Sn **Sn** **22 13 26.6 -3.0**
comp=N,0.5nm,0.2s
MEZF Maizieres J'vi 6.03 320 *e*Pn **Pn** **22 12 23.2 +0.5**
MEZF *e*Sn **Sn** **22 13 27.3 -3.2**
comp=N,2.1nm,0.3s
BGF Bois d'Agland 6.19 297 *e*Pn **Pn** **22 12 25.5 +0.6**
BGF *e*Sn **Sn** **22 13 31.5 -3.0**
comp=N,2.3nm,0.4s
MODS Modra-Piesok 6.26 43 *e*PN **Pn** **22 12 25.0 -0.9**
MTLF Montolieu 6.28 267 *e*Pn **Pn** **22 12 27.9 +1.7**
MTLF *e*Sn **Sn** **22 13 33.8 -3.0**
comp=N,0.9nm,0.3s
CAF Calviac 6.34 281 *e*Pn **Pn** **22 12 27.3 +0.2**
CAF *e*Sn **Sn** **22 13 35.3 -3.0**
comp=N,0.3nm,0.2s
TCF Toulx Ste Croi 6.51 294 *e*Pn **Pn** **22 12 30.0 +0.6**
TCF *e*Sn **Sn** **22 13 39.4 -3.1**
comp=N,0.3nm,0.2s
HYF Humbligny 6.61 303 *e*Pn **Pn** **22 12 31.0 +0.3**
HYF *e*Sn **Sn** **22 13 41.7 -3.1**
RJF Les Rejaudoux 6.77 284 *e*Pn **Pn** **22 12 33.2 +0.3**
RJF Les Rejaudoux 6.77 284 *e*Pg Pb 22 13 01.9 +9.1
RJF *e*Sn **Sn** **22 13 45.5 -3.3**
comp=N,0.5nm,0.2s
LFF La Frestale 7.28 281 *e*Pn **Pn** **22 12 40.1 +0.2**
LFF *e*Sn **Sn** **22 13 57.6 -3.7**
comp=N,2.2nm,0.4s
GIVF Givet 7.36 328 *e*Pn **Pn** **22 12 41.0 +0.1**
GIVF *e*Sn **Sn** **22 13 58.7 -4.5**
comp=N,2.2nm,0.2s
BAIF Baives 7.57 326 *e*Pn **Pn** **22 12 43.7 -0.1**
BAIF *e*Sn **Sn** **22 14 04.0 -4.3**
comp=N,0.8nm,0.3s
EPF Esparros 7.69 266 *e*Pn **Pn** **22 12 45.9 +0.4**
EPF Esparros 7.69 266 *e*P Pn 22 12 51.3 +5.8
EPF *e*Sn **Sn** **22 14 07.5 -3.9**
comp=N,0.9nm,0.3s
MFF Saint Martin d 8.17 292 *e*Pn **Pn** **22 12 52.1 +0.1**
MFF *e*Sn **Sn** **22 14 18.6 -4.5**
comp=N,0.3nm,0.2s

NEIC ***14*** *22:33:29.1±1.8, 19.°10N±0.°06·66.°81W±0.°02,h19km±9km, Error ellipse: s-maj=8.4km s-min=2.7km az=188.0*
RSPR ***14*** *22:33:30.3, 19.°15N·66.°86W,h8km±3km,MD3.2/15*
ISC 14 22:33:28.3±1.2,19.°16N±0.°05·66.°81W±0.03,h25km,n54,
σ1§00/66,10C-5D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.73**	**158**	*e*P		**Pn**	**22 33 43.8**	**+0.9**
EMPR					*e*S	**Sn**	**22 33 54.2**	**+1.0**
EMPR	**Esperanza - Ma**	**0.73**	**158**			**Pn**	**22 33 43.8**	**+0.9**
EMPR						**Sn**	**22 33 54.2**	**+1.0**
AGPR	**Aguadilla, PR**	**0.74**	**203**	*e*P		**Pb**	**22 33 41.9**	**-0.7**
AGPR	**Aguadilla, PR**	**0.74**	**203**	*e*S		**Sb**	**22 33 50.9**	**-1.4**
AGPR	**Aguadilla, PR**	**0.74**	**203**			**Pb**	**22 33 41.9**	**-0.7**
AGPR						**Sb**	**22 33 50.9**	**-1.4**
AOPR	**Arecibo Observ**	**0.81**	**176**	*e*P		**Pn**	**22 33 45.1**	**+1.0**
AOPR	**Arecibo Observ**	**0.81**	**176**	*e*S		**Sn**	**22 33 55.7**	**+0.4**
AOPR	**Arecibo Observ**	**0.81**	**176**			**Pb**	**22 33 43.4**	**-0.3**
AOPR	**Arecibo Observ**	**0.81**	**176**			**Sn**	**22 33 55.7**	**+0.4**
MPR	**Mayaguez**	**0.99**	**198**			**Pn**	**22 33 45.5**	**-1.1**
LSP	**Las Mesas**	**1.01**	**195**	*e*P		**Pb**	**22 33 46.9**	**-0.2**
LSP	**Las Mesas**	**1.01**	**195**	*e*S		**Sn**	**22 33 59.6**	**-0.7**
LSP	**Las Mesas**	**1.01**	**195**			**Pb**	**22 33 46.9**	**-0.2**
LSP						**Sn**	**22 33 59.6**	**-0.7**
GCPR	**Guaynabo City**	**1.09**	**141**			**Pb**	**22 33 48.4**	**-0.1**
OBIP	**Obispado Ponce**	**1.12**	**170**	*e*P		**Pb**	**22 33 49.1**	**0.0**
OBIP	**Obispado Ponce**	**1.12**	**170**	*e*S		**Sn**	**22 34 04.0**	**+0.9**
OBIP	**Obispado Ponce**	**1.12**	**170**			**Pb**	**22 33 49.1**	**0.0**
OBIP						**Sn**	**22 34 04.0**	**+0.9**
GBPR	**Guanica, Bosqu**	**1.18**	**183**	*e*P		**Pb**	**22 33 50.1**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.18**	**183**	*e*S		**Sn**	**22 34 04.7**	**+0.4**
GBPR	**Guanica, Bosqu**	**1.18**	**183**			**Pb**	**22 33 50.1**	**+0.1**
GBPR						**Sn**	**22 34 04.7**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.18**	**194**	*e*P		**Pn**	**22 33 49.1**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.18**	**194**	*e*S		**Sn**	**22 34 04.4**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.18**	**194**			**Sn**	**22 33 48.5**	**-0.7**
CRPR	**Cabo Rojo, PR**	**1.18**	**194**			**Sn**	**22 34 04.4**	**0.0**
MLPR	**Magueyes Islan**	**1.20**	**191**	*e*P		**Pn**	**22 33 49.5**	**0.0**
MLPR	**Magueyes Islan**	**1.20**	**191**	*e*S		**Sn**	**22 34 05.1**	**+0.1**
MLPR	**Magueyes Islan**	**1.20**	**191**			**Pn**	**22 33 47.9**	**-1.6**
MLPR	**Magueyes Islan**	**1.20**	**191**			**Sn**	**22 34 05.1**	**+0.1**
SJG	**San Juan**	**1.21**	**149**			**Pb**	**22 33 50.6**	**+0.1**
CBYP	**Canovanas**	**1.26**	**134**	*e*P		**Pb**	**22 33 50.9**	**-0.6**
CBYP	**Canovanas**	**1.26**	**134**	*e*P		**Pb**	**22 33 52.0**	**+0.5**
CBYP					*e*S	**Sb**	**22 34 07.4**	**+0.1**
CBYP	**Canovanas**	**1.26**	**134**			**Pb**	**22 33 51.8**	**+0.3**
CBYP	**Canovanas**	**1.26**	**134**			**Sb**	**22 34 07.4**	**+0.1**
ICMP	**Isla Caja de M**	**1.29**	**168**			**Pb**	**22 33 52.4**	**+0.5**
HUMP	**Col San Antoni**	**1.36**	**138**	*e*P		**Pb**	**22 33 52.3**	**-0.8**
HUMP	**Col San Antoni**	**1.36**	**138**	*e*S		**Sb**	**22 34 10.1**	**+0.1**
HUMP	**Col San Antoni**	**1.36**	**138**			**Pb**	**22 33 52.3**	**-0.8**
HUMP						**Sb**	**22 34 10.1**	**+0.1**
IGPR	**InterUniversit**	**1.36**	**150**	*e*P		**Pb**	**22 33 52.4**	**-0.7**
IGPR	**InterUniversit**	**1.36**	**150**	*e*S		**Sb**	**22 34 11.0**	**+0.9**
IGPR	**InterUniversit**	**1.36**	**150**			**Pb**	**22 33 53.6**	**+0.5**
IGPR	**InterUniversit**	**1.36**	**150**			**Sb**	**22 34 11.0**	**+0.9**
MTP	**Monte Pirata**	**1.59**	**131**	*e*P		**Pb**	**22 33 55.6**	**-1.5**
MTP	**Monte Pirata**	**1.59**	**131**	*e*S		**Sb**	**22 34 16.3**	**-0.4**
MTP	**Monte Pirata**	**1.59**	**131**			**Pb**	**22 33 56.2**	**-0.9**
MTP	**Monte Pirata**	**1.59**	**131**			**Sb**	**22 34 16.3**	**-0.4**
PCDR	**Punta Cana, DR**	**1.62**	**247**	*e*P		**Pb**	**22 33 55.8**	**-1.7**
PCDR	**Punta Cana, DR**	**1.62**	**247**	*e*S		**Sn**	**22 34 15.2**	**0.0**
PCDR	**Punta Cana, DR**	**1.62**	**247**			**Pb**	**22 33 55.8**	**-1.7**
PCDR						**Sn**	**22 34 15.2**	**0.0**
STVI	**Saint Thomas**	**1.93**	**114**	*e*P		**Pb**	**22 34 01.3**	**-1.5**
STVI	**Saint Thomas**	**1.93**	**114**	*e*S		**Sb**	**22 34 24.6**	**-1.9**
STVI	**Saint Thomas**	**1.93**	**114**			**Pb**	**22 34 01.3**	**-1.5**
STVI						**Sb**	**22 34 24.6**	**-1.9**
DR12	**Loma Pena Alta**	**2.46**	**262**			**Pn**	**22 34 07.3**	**+0.4**
BANI	**BANI**	**3.44**	**258**	Pn		**Pn**	**22 34 22.5**	**+2.0**
BANI						**Sn**	**22 35 00.5**	**-0.1**

SDDR	Presa de Saban	4.24 268	Pn	22 34 33.1	+1.8
SDDR			Sn	22 35 23.7	+3.6

JMA **14** *23:06:40.4±0.1,22.˚85N×120.˚99E,h22km±1km,M4.2*
IDC **14** *23:06:41.8±0.8,22.˚82N×121.˚21E,h0km,mb3.9/20,*
mb1 4.0/20,mb1mx3.8/58,mbtmp3.9/20,MS3.2/8,
Ms1 3.3/8,ms1mx3.0/29,Error ellipse: s-maj=30.7km
s-min=16.5km az=60.0
BJI **14** *23:06:42.3±0.0,22.˚80N×121.˚15E,h9km,mB4.3/2,*
mb3.9/6,ML4.0/6,Ms3.8/2,Ms7 3.7/3
TAP **14** *23:06:43.1,22.˚90N×121.˚08E,h8km,ML4.5,C*
NEIC **14** *23:06:43.3±2.2,22.˚94N±0.˚06×121.˚17E±0.˚07,h9km±4km,*
mb4.1/11,ML4.3(TAP),Error ellipse: s-maj=9.5km
s-min=7.8km az=51.0
ASIES **14** *23:06:43.4,22.˚89N×121.˚07E,h20km,MW3.8*
ISC 14 23:06:43.5±0.7,22.˚89N±0.˚01×121.˚14E±0.˚02,h10km±4km, n200,σ1§06/251,mb3.9/23,MS3.3/7,18C-35D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWGBT	**Beinan** baz=182	0.09	218	⇑P	Pg	23 06 45.7	-0.4
TWGBT				S	Sg	23 06 47.2	-0.7
TWG	**Pinlang** baz=182	0.09	223	⇑*i*P	Pg	23 06 45.7	-0.4
TWG				S	Sg	23 06 47.2	-0.7
TWG	**Pinlang** baz=182	0.09	223		Pg	23 06 45.4	-0.7
TTN	**Taitung** baz=155	0.13	178	⇓P	Pg	23 06 47.9	+1.2
TTN				S	Sg	23 06 51.8	+2.9
CHKT	**Chengkung** baz=51	0.29	45	⇑*i*P	Pb	23 06 50.9	0.0
CHKT				S	Sb	23 06 56.6	+0.8
ELDTW	**Lidau** baz=349	0.32	339	⇓*i*P	Pg	23 06 49.5	-0.5
ELDTW				S	Sg	23 06 53.4	-0.9
ECL	**Taimali** baz=201	0.34	211	⇑*i*P	Pg	23 06 49.6	-0.7
ECL				S	Sg	23 06 53.7	-1.1
FULB	**Fuli** baz=20	0.34	25	⇑*i*P	Pb	23 06 51.2	-0.4
FULB				*e*S	Sb	23 06 58.5	+1.3
TWH	**Lutao** baz=122	0.36	120	⇓P	Pb	23 06 52.5	+0.6
TWH				S	Sb	23 06 59.2	+1.5
STYT	**Tauyuan** baz=312	0.45	308	⇓*i*P	Pg	23 06 51.6	-0.7
STYT				S	Sg	23 06 57.0	-1.3
SLGT	**Liugui** baz=277	0.47	283	⇑*i*P	Pg	23 06 51.8	-0.9
SLGT				S	Sg	23 06 57.0	-1.9
TWF1	**Yuli** baz=11	0.48	17	⇑*i*P	Pg	23 06 52.6	-0.4
TWF1				S	Sg	23 06 59.7	+0.3
SSD	**Sandimen** baz=250	0.49	253	⇑*i*P	Pg	23 06 51.9	-1.2
SSD				S	Sg	23 06 57.1	-2.5
YULB	**Yu-li** baz=8.0	0.52	16	⇑P	Pg	23 06 53.1	-0.6
YULB				S	Sg	23 07 00.4	-0.2
YULB	**Yu-li** baz=8.0	0.52	16		Pg	23 06 52.9	-0.9
MASBT	**Mashibuluo** baz=231	0.54	240	⇑P	Pg	23 06 53.1	-1.0
MASBT				*e*S	Sg	23 06 59.0	-2.4
SGST	**Jiashian** baz=295	0.55	291	⇓*i*P	Pg	23 06 53.1	-1.2
SGST				S	Sg	23 07 00.1	-1.4
EAST	**Anshuo** baz=211	0.57	208	⇑*i*P	Pg	23 06 54.1	-0.5
EAST				S	Sg	23 07 01.5	-0.7
TAW	**Tawu** baz=199	0.57	203	⇓*i*P	Pg	23 06 54.1	-0.7
TAW				S	Sg	23 07 01.6	-0.7
WTP	**Ta-pu** baz=309	0.60	306	⇓*i*P	Pg	23 06 55.1	-0.1
WTP				S	Sg	23 07 03.4	+0.2
SGLT	**Jiouru** baz=257	0.62	255	⇑*i*P	Pg	23 06 55.6	0.0
TPUB	**Ta-pu** baz=314	0.62	311	⇓P	Pg	23 06 55.6	-0.1
TPUB				S	Sg	23 07 03.8	-0.1
TPUB	**Ta-pu**	0.62	311		Pg	23 06 55.0	-0.7
EHY	**Hungye** baz=9.0	0.64	15	⇓P	Pg	23 06 55.7	-0.2
EHY				S	Sg	23 07 04.0	-0.3
CHN1	**Nanshi** baz=305	0.64	298	⇓*i*P	Pg	23 06 56.1	+0.2
CHN1				S	Sb	23 07 05.3	-0.4
HGSD	**Ruisui** baz=13	0.65	23	*e*P	Pg	23 06 56.1	-0.1
HGSD				*e*S	Sb	23 07 07.2	+1.0
SSPT	**Xinbi** baz=222	0.67	233	⇑*i*P	Pg	23 06 56.2	-0.2
TWM1	**Shoushan** baz=263	0.67	265	⇑*i*P	Pb	23 06 56.8	-0.5
SNST	**Tainan City** baz=306	0.68	299	⇓*i*P	Pb	23 06 57.1	-0.4
SNST				*e*S	Sb	23 07 06.9	0.0
CHN4	**Tsaushan** baz=324	0.68	312	⇓*i*P	Pg	23 06 56.9	+0.1
CHN4				S	Sb	23 07 06.7	-0.3
ALS	**Alishan** baz=331	0.69	334	⇓*e*P	Pg	23 06 56.6	-0.4
SCZT	**Fangliau** baz=226	0.70	223	⇑P	Pg	23 06 56.3	-0.8
TWK	**Hsinying** baz=304	0.71	302	⇓*i*P	Pb	23 06 57.4	-0.6
TWK				S	Sg	23 07 07.0	+0.4
CHN3	**Shinhua** baz=285	0.74	285	⇓*e*P	Pn	23 06 59.4	-0.6
CHN3				*e*S	Sn	23 07 11.1	-0.2
SNJT	**Kaohsiung City** baz=258	0.76	260	*e*P	Pb	23 06 59.4	+0.6
EGFH	**Guangfu** baz=20	0.82	19	P	Pg	23 06 59.1	-0.3
EGFH				*e*S	Sb	23 07 10.7	-0.3
CHN5	**Tsauling** baz=331	0.82	329	⇓*i*P	Pg	23 06 59.3	-0.2
KAU	**Kaohsiung** baz=245	0.83	248	*e*P	Pn	23 07 01.4	+0.2
WHYT	**Xinyi Township** baz=345	0.85	342	⇓*i*P	Pg	23 06 59.7	-0.2
TAI1	**Yung-k'ang** baz=280	0.85	280	*e*P	Pg	23 06 59.9	-0.1
VWDT	**VWDT** baz=2.0	0.86	0	⇓P	Pg	23 06 59.3	-0.9
VWDT				*e*S	Sb	23 07 11.5	-0.6
WLCH	**Liuqiu** baz=223	0.89	233	*e*P	Pn	23 07 03.1	+1.1
CHN2	**Minshiung** baz=318	0.89	316	⇓*i*P	Pb	23 07 01.1	+0.1
CHN2				*e*S	Sb	23 07 13.6	+0.8
CHY	**Chiayi** baz=314	0.90	313	⇓P	Pb	23 07 01.1	0.0
CHY				S	Sb	23 07 13.8	+0.6
SSLB	**Suanglung** baz=354	0.91	349	⇓P	Pg	23 06 60.0	-1.2
SSLB				*e*S	Sn	23 07 14.6	-1.1
SSLB	**Suanglung**	0.91	349		Pg	23 06 59.6	-1.5
SCLT	**Jiali** baz=288	0.92	288	P	Pn	23 07 01.9	-0.6
SCLT				S	Sn	23 07 16.2	+0.5
LAY	**Lan-yu** baz=155	0.93	156	*e*P	Pg	23 06 59.8	-1.6
HEN	**Hengchun** baz=188	0.95	203	*e*P	Pn	23 07 02.6	-0.3
WGK	**Gukeng** baz=328	0.95	326	⇓*e*P	Pn	23 07 02.4	-0.6
WGK				*e*S	Sn	23 07 16.1	-0.6
ESL	**Shilin** baz=19	0.96	16	⇓*e*P	Pg	23 07 01.2	-0.8
CHN8	**Yiju** baz=299	0.97	298	*e*P	Pb	23 07 02.3	-0.1
CHN8				S	Sn	23 07 16.9	-0.1
WDLH	**Douliu** baz=326	0.97	325	⇓P	Pn	23 07 02.9	-0.3
WDLH				*e*S	Sn	23 07 16.9	-0.1
WLGB	**Puzi** baz=308	0.97	307	⇓P	Pb	23 07 02.4	0.0
WLGB				S	Sn	23 07 16.9	-0.1
TWK1	**Hengchun** baz=184	0.99	198	*e*P	Pg	23 07 02.1	-0.5
TWKBT	**Hengchun** baz=184	0.99	198	⇑P	Pb	23 07 02.4	-0.4
WJS	**Zhushan** baz=339	1.00	338	⇓P	Pn	23 07 03.3	-0.3
WJS				S	Sn	23 07 18.0	+0.2
TSEB	**Hengchuen, Pin** baz=182	1.01	193	*e*P	Pn	23 07 03.6	-0.1
SMLT	**Sun Moon Lake** baz=356	1.01	347	⇓P	Pg	23 07 02.3	-0.8
SMLT				*e*S	Sb	23 07 16.4	-0.3
TYC	**Yuchr** baz=354	1.04	346	⇓*e*P	Pg	23 07 03.1	-0.5
TYC				S	Sn	23 07 19.3	+0.5
OWD	**Renai** baz=4.0	1.06	2	*e*P	Pg	23 07 02.5	-1.5
WNT	**Mingjian** baz=338	1.07	337	⇓*i*P	Pn	23 07 04.5	-0.1
WNT				S	Sn	23 07 19.6	+0.2
ENLB	**Shoufeng** baz=39	1.09	23	*e*P	Pg	23 07 02.6	-2.0
WSF	**Szhu** baz=313	1.13	312	⇑P	Pg	23 07 05.0	-0.2
WSF				S	Sb	23 07 19.9	+0.1
DPDB	**Guoxing** baz=357	1.16	350	⇓*e*P	Pb	23 07 04.8	-0.9
DPDB				S	Sn	23 07 22.1	+0.4
HWA	**Hwalien** baz=37	1.16	21	*e*P	Pn	23 07 05.6	-0.3
CHGB	**Renai** baz=1.0	1.17	1	⇓P	Pg	23 07 04.6	-1.4
CHGB				*e*S	Sb	23 07 21.0	-0.1
RLNB	**Erlin** baz=325	1.23	324	⇓P	Pn	23 07 06.2	-0.5
RLNB				S	Sn	23 07 23.3	-0.1
WTCT	**Ta-ch'eng** baz=322	1.25	321	*e*P	Pn	23 07 06.4	-0.7
WTCT				*e*S	Sn	23 07 24.1	+0.1
WHF	**Hehuan Shan** baz=17	1.25	5	*e*P	Pb	23 07 06.2	-1.4
TWD	**Chiawan** baz=36	1.26	19	*e*P	Pn	23 07 04.5	-2.6
WCHH	**Zhanghua** baz=336	1.30	336	*e*P	Pg	23 07 08.3	-0.3
WCHH				*e*S	Sg	23 07 27.7	+2.3
TCU	**Taichung** baz=342	1.32	341	⇑*e*P	Pg	23 07 09.4	+0.4
TCU				S	Sg	23 07 28.3	+2.1
NACB	**Ninganchiao** baz=31	1.34	18	*e*P	Pn	23 07 05.4	-3.0
NACB				*e*S	Sg	23 07 27.0	+0.2
NACB	**Ninganchiao**	1.34	18		Pn	23 07 05.4	-3.0
ETLH	**Xiulin Townshi** baz=32	1.35	13	*e*P	Pn	23 07 07.4	-1.1
TDCB	**Techi** baz=10.0	1.36	1	*e*P	Pn	23 07 07.8	-0.9
TDCB				*e*S	Sb	23 07 26.3	-0.3
TWT	**Tachien** baz=2.0	1.36	1	*e*P	Pn	23 07 08.5	-0.2
WHP	**Taichung City** baz=357	1.39	353	*e*P	Pg	23 07 10.2	-0.1
WHP				*e*S	Sg	23 07 30.1	+1.7
WDGT	**Dungji** baz=285	1.41	285	*e*P	Pn	23 07 08.2	-1.1
TWQ1	**Liyutan** baz=347	1.49	347	⇓P	Pg	23 07 11.6	-0.6
TWQ1				*e*S	Sg	23 07 33.7	+2.1
WDJ	**Dajia District** baz=344	1.52	343	*e*P	Pg	23 07 12.4	-0.4
NNSH	**Datong** baz=9.0	1.55	8	*e*P	Pb	23 07 12.2	-0.2
NNS	**Nan Shan** baz=9.0	1.56	8	*e*P	Pn	23 07 10.2	-1.2
NSY	**Sanyi** baz=331	1.56	347	⇓P	Pg	23 07 12.9	-0.6
NSY				*e*S	Sg	23 07 34.6	+0.8
PHUB	**P'eng-hu** baz=294	1.57	294	*e*P	Pn	23 07 10.2	-1.3
PHUB				*e*S	Sn	23 07 29.4	-2.4
PTSB	**Yuanli** baz=330	1.60	346	*e*P	Pb	23 07 13.1	-0.1
PNG	**Penghu** baz=295	1.61	295	*e*P	Pn	23 07 11.0	-1.0
VCHM	**Qimei** baz=294	1.61	282	*e*P	Pn	23 07 10.9	-1.1
VCHM				*e*S	Sn	23 07 30.4	-2.4
ENA	**Nanau** baz=21	1.63	20	*e*P	Pn	23 07 09.8	-2.4
NANB	**Nanao** baz=21	1.63	20	*e*P	Pn	23 07 09.8	-2.5
NMLH	**Miaoli** baz=350	1.67	349	*e*P	Pg	23 07 14.8	-0.9
NDT	**Datong Townshi** baz=26	1.74	11	*e*P	Pn	23 07 14.1	+0.3
NSTT	**Nanjuang** baz=341	1.74	356	*e*P	Pb	23 07 14.7	-0.8
LIOB	**Emei** baz=341	1.75	356	*e*P	Pb	23 07 15.1	-0.7
LIOB				*e*S	Sg	23 07 40.8	+0.9
ENTT	**Nioudou** baz=30	1.79	13	*e*P	Pb	23 07 16.3	-0.1
YHNB	**Yeheng** baz=8.0	1.79	7	*e*P	Pn	23 07 13.9	-0.6
YHNB	**Yeheng**	1.79	7		Pn	23 07 13.7	-0.8
NSK	**Sanguang** baz=7.0	1.79	6	*e*P	Pn	23 07 14.0	-0.5
TWC	**Suao** baz=22	1.83	21	*e*P	Pn	23 07 14.4	-0.6
EOS1	**EOS1** baz=47	1.88	29	*e*P	Pn	23 07 15.3	-0.5
TWE	**Neicheng** baz=32	1.89	15	*e*P	Pn	23 07 14.7	-1.1
SBCB	**Hsinchu** baz=358	1.90	356	*e*P	Pb	23 07 17.1	-1.2
NWLT	**Wulai** baz=31	1.91	10	*e*P	Pn	23 07 16.3	+0.1
HSN	**Hsinchu** baz=359	1.91	355	*e*P	Pb	23 07 17.9	-0.5
SLBB	**Yuanshan** baz=32	1.91	14	*e*P	Pn	23 07 14.9	-1.3
ILA	**Ilan** baz=31	1.95	16	*e*P	Pb	23 07 18.4	-0.7
WLTB	**Daxi** baz=14	1.96	3	*e*P	Pb	23 07 18.3	-1.0
NCUH	**Zhongli** baz=3.0	2.07	1	*e*P	Pb	23 07 21.5	+0.3
NCU	**National Centr** baz=3.0	2.07	1	*e*P	Pn	23 07 18.6	+0.2
TATO	**Taipei** baz=351	2.10	9	*e*P	Pb	23 07 20.7	-1.0
TATO	**Taipei**	2.10	9		Pn	23 07 17.5	-1.3
TWA	**Mucha** baz=353	2.12	11	*e*P	Pb	23 07 21.2	-0.8
TIPB	**Shuangxi** baz=30	2.17	17	*e*P	Pn	23 07 18.9	-0.7
TAP	**Taipei** baz=352	2.17	9	*e*P	Pb	23 07 22.9	+0.1
TAP1	**Taipei** baz=352	2.17	9	*e*P	Pb	23 07 22.0	-0.8
TWS1	**Kuangyinshan** baz=7.0	2.22	6	*e*P	Pb	23 07 21.8	-1.9
TWB1	**Santiao Chiao** baz=20	2.25	20	*e*P	Pn	23 07 20.7	-0.1
NWF	**Wu-fen Shan** baz=28	2.25	15	*e*P	Pn	23 07 21.2	+0.3
WFSB	**Wu-fen Shan** baz=28	2.25	15	*e*P	Pn	23 07 20.2	-0.6
YM01	**YM01** baz=354	2.28	10	*e*P	Pn	23 07 22.4	+1.1
YM10	**YM10** baz=354	2.29	10	*e*P	Pn	23 07 22.0	+0.6
YM11	**YM11** baz=354	2.30	10	*e*P	Pn	23 07 22.5	+1.0
ANP	**Anpu** baz=354	2.31	9	*e*P	Pb	23 07 23.4	-2.0
YOJ	**Yonaguni jima** baz=50	2.32	47	*e*P	Pn	23 07 20.0	-1.8
YOJ	**Yonaguni jima**	2.32	47	P	Pn	23 07 21.3	-0.5
YOJ				*e*S	Sn	23 07 50.2	-0.2
YOJ	**Yonaguni jima**	2.32	47	Pn	Pn	23 07 20.9	-0.9
YM08	**YM08** baz=354	2.33	10	*e*P	Pn	23 07 22.6	+0.8
TWY	**Chenhua** baz=355	2.41	10	*e*P	Pb	23 07 24.9	-2.1
VWUC	**VWUC** baz=326	2.60	324	*e*P	Pn	23 07 24.6	-1.1
HATJ	**Hateruma jima**	2.71	64	P	Pn	23 07 26.2	-0.9
HATJ				*e*S	Sn	23 07 59.2	-0.7
IRIF	**Iriomote-Funau**	2.78	58	P	Pn	23 07 27.2	-0.8
IRIF				*e*S	Sn	23 08 00.7	-0.9
PTMZ	**Houxiangcun** baz=321	2.83	320	*e*P	Pn	23 07 28.7	-0.1
PTTC	**Pingtan** baz=337	2.88	335	*e*P	Pn	23 07 29.2	-0.3
KNM	**Kinmen** baz=301	2.91	302	⇓*e*P	Pn	23 07 30.4	+0.5
JKRS	**Kuro-shima**	2.95	62	P	Pn	23 07 29.7	-0.8
JKRS				*e*S	Sn	23 08 05.0	-1.0
KNMB	**Chin-men Tao** baz=303	2.97	302	*e*P	Pn	23 07 29.6	-1.1
KNMB	**Chin-men Tao**	2.97	302		Pn	23 07 29.9	-0.8
QZH	**Quanzhou**	3.10	312	Pn	Pn	23 07 32.0	-0.5
QZH				Sn	Sn	23 08 07.4	-2.2
QZH	comp=N,240nm,0.6s			smax	smax		
QZH	comp=E,230nm,0.8s			smax	smax		
JIJ	**Ishigaki jima**	3.12	61	P	Pn	23 07 31.9	-0.9
JIJ				*e*S	Sn	23 08 08.3	-1.8
ZPLA	**Ao Xicun** baz=289	3.28	289	*e*P	Pn	23 07 34.4	-0.6
JISG	**Ishigakijimahi**	3.36	59	P	Pn	23 07 35.0	-1.1
JISG				*e*S	Sn	23 08 15.7	-0.3
MATB	**Ma-tsu** baz=345	3.43	342	*e*P	Pn	23 07 36.7	-0.3
AXDP	**Jialang** baz=305	3.53	305	*e*P	Pn	23 07 37.6	-0.7
ZZJH	**Jiuhuzhen** baz=296	3.58	297	*e*P	Pn	23 07 38.7	-0.4
JTJ	**Tarama**	3.70	61	P	Pn	23 07 39.8	-0.9
JTJ				S	Sn	23 08 23.2	-1.2
MHZQ	**Yeshan** baz=333	3.73	329	*e*P	Pn	23 07 40.7	-0.5
LYJJ	**Jianjiangzhen** baz=345	3.85	341	*e*P	Pn	23 07 45.7	+2.9
XPSS	**Dashiqiu** baz=352	4.12	348	*e*P	Pn	23 07 46.2	-0.3
JIRB	**Irabujima**	4.17	62	P	Pn	23 07 46.4	-0.7
JIRB				*e*S	Sn	23 08 35.6	-0.3
JMJ2	**Miyako jima3**	4.25	63	P	Pn	23 07 47.8	-0.6
JMJ	**Miyako jima 2** baz=64	4.26	62	*e*P	Pn	23 07 47.8	-0.6
JIKM	**Ikemajima** baz=242	4.27	61	P	Pn	23 07 47.7	-0.9
VDOS	**Pratas Island**	4.64	243	*e*P	Pn	23 07 54.8	+1.1
WHN	**Wuhan**	9.74	323	P	Pn	23 09 09.3	+5.6
JNU	**Nakatsue** comp=Z,76nm,19.8s,baz=226,slow=40	13.33	38	LR	LR	23 15 30.8	
XAN	**Xi'an**	15.44	319	P	P	23 10 43.8	+18
XAN	comp=Z,5.0nm,1.1s			pmax	pmax		
XAN	comp=Z,120nm,4.1s			pmax	pmax		
KSRS	**Korea Array** comp=Z,0.2nm,0.3s,baz=196,slow=11,SNR=4.7	15.65	20	Pn	**P**	23 10 27.4	-0.9
KSRS	comp=Z,26nm,19.8s,baz=200,slow=35			LR	LR	23 15 52.3	
MJAR	**Matsushiro Arr** comp=Z,2.3nm,0.9s,baz=236,slow=8.2,SNR=3.3	20.08	44	P	Pn	23 11 18.0	-0.9
MJAR	comp=Z,77nm,21.9s,baz=230,slow=38			LR	LR	23 19 30.9	
MJAR	**Matsushiro Arr**	20.08	44	P	**P**	23 11 16.3	-0.8
CMAR	**Chiang Mai Arr** comp=Z,70nm,18.4s,baz=45,slow=38	21.23	262	LR	LR	23 20 19.0	
GTA	**Gaotai**	24.49	317	*e*P	**P**	23 12 08.1	+5.1
GTA	comp=Z,3.0nm,1.2s			pmax	pmax		
ULN	**Ulaanbaatar**	27.35	339	P	**P**	23 12 29.2	+0.3
ULN	comp=Z,3.2nm,0.9s			IAmb	IAmb	23 12 31.0	
SONM	**Songino Array** comp=Z,1.5nm,0.8s,baz=156,slow=9.4,SNR=12	27.55	338	P	**P**	23 12 31.2	+0.6
SONM	comp=Z,80nm,18.4s,baz=168,slow=38			LR	LR	23 24 02.7	
SONM	**Songino Array** comp=Z,1.5nm,0.8s	27.55	338	IAmb	IAmb	23 12 32.6	
WMQ	**Urumqi**	34.53	315	*e*P	**P**	23 13 32.1	0.0
WMQ				sP	sP	23 13 40.4	+3.6
WMQ	comp=Z,160nm,29.2s			LR	LR		
WMQ	comp=Z,67nm,24.9s			LR	LR		
MK31	**Makanchi Array**	39.25	317	P	**P**	23 14 12.8	+0.7
MKAR	**Makanchi Array** comp=Z,1.2nm,0.5s,baz=108,slow=11,SNR=25	39.25	317	P	**P**	23 14 13.5	+1.4
MKAR	comp=Z,0.4nm,0.7s,baz=123,slow=1.7,SNR=3.1			PcP	**PcP**	23 16 20.3	-0.8
MAKZ	**Makanchi**	39.45	317	P	**P**	23 14 14.9	+1.0
PETK	**Petropavlovsk-** comp=Z,26nm,20.9s,baz=241,slow=36	40.96	33	LR	LR	23 31 27.3	
ZAA0	**Zalesovo Array**	41.31	328	P	**P**	23 14 29.0	-0.1
ZAA0	comp=Z,2.8nm,0.8s			IAmb	IAmb	23 14 30.2	
ZALV	**Zalesovo Beam** comp=Z,2.9nm,0.8s,baz=113,slow=7.3,SNR=11	41.31	328	P	**P**	23 14 29.3	+0.2
ZALV	comp=Z,45nm,18.6s,baz=47,slow=38			LR	LR	23 33 14.9	
H11N1	**WAKE ISLAND Hy** baz=283,slow=75,SNR=75	42.62	85	T	T	23 59 53.9	
H11N2	**WAKE ISLAND Hy** baz=283,slow=75,SNR=109	42.62	85	T	T	23 59 54.3	
H11N3	**WAKE ISLAND Hy** baz=283,slow=75,SNR=106	42.63	85	T	T	23 59 55.3	
H11S3	**WAKE ISLAND Hy** baz=284,slow=75,SNR=155	42.71	87	T	T	23 59 59.3	
H11S1	**WAKE ISLAND Hy** baz=284,slow=75,SNR=69	42.72	87	T	T	23 59 60.0	
H11S2	**WAKE ISLAND Hy** baz=284,slow=75,SNR=69	42.72	87	T	T	00 00 00.7	
KURK	**Kurchatov**	43.06	321	P	**P**	23 14 44.5	+1.1
KURK	**Kurchatov** comp=Z,2.4nm,0.6s	43.06	321	IAmb	IAmb	23 14 53.2	

KURBB	**Kurchatov Arra**	43.08	321	P		**P**	23 14 44.5	+1.0
	comp=Z,0.8nm,0.3s,baz=114,slow=8.2,SNR=5.6							
WRAB	**Tennant Creek**	44.47	162	P		**P**	23 14 53.6	-1.5
WRA	**Warramunga Arr**	44.48	162	P		**P**	23 14 54.1	-1.0
	comp=Z,0.6nm,0.5s,baz=348,slow=8.6,SNR=3.1							
KKAR	**Karatay Array**	46.23	308	P		**P**	23 15 10.2	+1.3
ASAR	**Alice Springs**	47.91	164	P		**P**	23 15 22.4	+0.2
	comp=Z,0.4nm,0.3s,baz=344,slow=6.8,SNR=3.1							
BVAR	**Borovoye Array**	48.65	321	P		**P**	23 15 28.9	+1.3
	comp=Z,0.6nm,0.4s,baz=114,slow=10,SNR=12							
BVAR				PcP		**PcP**	23 16 51.9	-0.9
	comp=Z,0.3nm,0.6s,baz=102,slow=4.8,SNR=2.7							
ABKAR	**Akbulak array**	54.32	315	P		**P**	23 16 10.8	+0.7
AKTO	**Aktyubinsk**	55.67	316	P		**P**	23 16 20.7	+0.9
	comp=Z,0.5nm,0.6s,baz=113,slow=13,SNR=3.4							
ARU	**Arti**	56.12	324	P		**P**	23 16 23.4	+0.5
	comp=Z,0.6nm,0.4s,baz=127,slow=10,SNR=4.3							
STKA	**Stephens Creek**	57.87	159	P		**P**	23 16 34.5	-1.0
	comp=Z,0.9nm,0.5s,baz=8.4,slow=11,SNR=2.8							
STKA	**Stephens Creek**	57.87	159	IAmb		IAmb	23 18 12.8	
	comp=Z,5.8nm,1.9s							
KIRV	**Kirov**	61.26	325	P		**P**	23 16 59.2	+0.6
KBZ	**Khabaz**	66.26	309	P		**P**	23 17 32.5	+0.6
	comp=Z,3.2nm,0.9s,baz=98,slow=4.5,SNR=5.6							
KVAR	**Kislovodsk Arr**	66.37	309	P		**P**	23 17 33.3	+0.6
	comp=Z,3.2nm,0.9s,baz=135,slow=5.7,SNR=2.4							
ILAR	**Eielson Array**	70.38	27	P		**P**	23 17 59.1	+1.8
	comp=Z,0.2nm,0.6s,baz=278,slow=5.2,SNR=2.9							
ARCES	**ARCESS Array B**	70.72	338	P		**P**	23 17 59.0	-0.4
	comp=Z,1.7nm,0.9s,baz=71,slow=9.8,SNR=3.1							
FINES	**FINESS Array B**	72.54	330	P		**P**	23 18 09.9	-0.5
	comp=Z,0.5nm,0.5s,baz=64,slow=3.2,SNR=4.1							
BRTR	**Keskin Array B**	73.91	307	P		**P**	23 18 19.9	+0.8
	comp=Z,0.8nm,0.8s,baz=100,slow=6.4,SNR=4.7							
NOA	**NORSAR Array B**	79.35	332	P		**P**	23 18 48.4	-1.0
	comp=Z,0.9nm,0.9s,baz=60,slow=5.6,SNR=2.7							
NOA				LR		LR	23 55 52.7	
	comp=Z,23nm,18.4s,baz=320,slow=37							
YKA	**Yellowknife Ar**	84.17	23	P		**P**	23 19 13.2	-1.5
	comp=Z,0.2nm,0.4s,baz=309,slow=4.8,SNR=2.6							

SOME **14** *23:16:38.9, 39.˚53N× 77.˚00E, h10km*
KRNET **14** *23:16:40.1±0.1, 39.˚28N× 77.˚18E, mb3.2*
NNC **14** *23:16:44.0±1.9, 39.˚71N× 76.˚98E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=15.5km s-min=12.3km az=122.0
ISC 14 23:16:42.7±2.6, 39.˚4N±0.˚1× 77.˚09E±0.˚06, h25km, n43, σ2s 03/66, 27C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KDJ	**Kajisay**	**2.77**	**1**	⇑*i*P			**Pn**	**23 17 26.1**	**+0.5**
	baz=0.0								
KDJ				⇑*i*S			**Sn**	**23 17 59.6**	**+1.3**
	baz=0.0								
ULHL	**Ulahol**	**2.96**	**348**	⇑*i*P			**Pn**	**23 17 28.9**	**+0.7**
	baz=47								
ULHL				⇑*i*S			**Sn**	**23 18 04.4**	**+1.4**
	baz=47								
ULHL	**Ulahol**	**2.96**	**348**	P			**Pn**	**23 17 30.5**	**+2.3**
	SNR=21								
KZA	**Kyzart**	**3.06**	**333**	⇑*i*P			**Pn**	**23 17 30.3**	**+0.5**
	baz=33								
KZA				⇑*i*S			**Sn**	**23 18 07.3**	**+1.6**
	baz=33								
KZA	**Kyzart**	**3.06**	**333**	P			**Pn**	**23 17 32.1**	**+2.3**
	SNR=22								
BOOM	**Boomskoye usch**	**3.25**	**345**	⇑*e*P			**Pn**	**23 17 33.3**	**+1.1**
	baz=44								
BOOM				⇑*i*S			**Sn**	**23 18 12.2**	**+2.1**
	baz=44								
ARLS	**Aral**	**3.27**	**321**	⇑*i*P			**Pn**	**23 17 33.5**	**+1.0**
	baz=21								
ARLS				⇑*i*S			**Sn**	**23 18 12.3**	**+1.6**
	baz=21								
ANVS	**Anan'yevo**	**3.45**	**7**	⇑*e*P			**Pn**	**23 17 35.3**	**+0.4**
	baz=6.0								
ANVS				⇑*i*S			**Sn**	**23 18 16.0**	**+0.9**
	baz=6.0								
UCH	**Uchtor**	**3.47**	**326**	⇑*i*P			**Pn**	**23 17 36.2**	**+0.7**
	baz=26								
UCH				⇑*i*S			**Sn**	**23 18 17.4**	**+1.4**
	baz=26								
UCH	**Uchtor**	**3.47**	**326**	P			**Pn**	**23 17 40.0**	**+4.5**
	SNR=9.6								
KBK	**Karagaybulak**	**3.67**	**334**	⇑*e*P			**Pn**	**23 17 39.2**	**+1.2**
	baz=34								
KBK				⇑*i*S			**Sn**	**23 18 21.8**	**+1.2**
	baz=34								
KBK	**Karagaybulak**	**3.67**	**334**	P			**Pb**	**23 17 43.8**	**-3.2**
	SNR=8.3								
TNSS	**Tian-Shan**	**3.68**	**358**	*e*P			**Pb**	**23 17 44.5**	**-2.7**
	4.8nm,0.5s								
TNSS				*e*S			**Sb**	**23 18 31.5**	**+0.1**
	9.2nm,0.3s								
TNSS	**Tian-Shan**	**3.68**	**358**	Pg			**Pb**	**23 17 44.3**	**-2.9**
	4.8nm,0.5s								
TNSS				Lg			Lg	23 18 31.5	
	9.2nm,0.3s								
IZV	**Izvestkoviy**	**3.69**	**355**	*e*P			**Pb**	**23 17 44.0**	**-3.2**
	2.6nm,0.5s								
IZV				*e*S			**Sb**	**23 18 30.9**	**-0.7**
	9.4nm,0.6s								
IZV	**Izvestkoviy**	**3.69**	**355**	Pg			**Pb**	**23 17 44.2**	**-3.1**
	2.6nm,0.5s								
IZV				Lg			Lg	23 18 31.2	
	8.2nm,0.4s								
ARSB	**Arslanbob**	**3.71**	**303**	⇑*e*P			**Pn**	**23 17 39.7**	**+1.3**
	baz=4.0								
ARSB				⇑*e*S			**Sn**	**23 18 22.7**	**+1.3**
	baz=4.0								
TKM2	**Tokmak 2**	**3.73**	**343**	⇑*i*P			**Pn**	**23 17 39.8**	**+0.9**
	baz=42								
TKM2				⇑*i*S			**Sn**	**23 18 23.2**	**+1.0**
	baz=42								
TKM2	**Tokmak 2**	**3.73**	**343**	P			**Pn**	**23 17 39.3**	**+0.4**
	SNR=8.4								
TKM2	**Tokmak 2**	**3.73**	**343**	⇓Pn			**Pn**	**23 17 39.2**	**+0.3**
	2.9nm,0.4s								
TKM2				⇓Lg			Lg	23 18 27.8	
	2.9nm,0.5s								
KST	**Kastek**	**3.78**	**347**	*e*P			**Pb**	**23 17 45.4**	**-3.3**
	2.8nm,0.3s								
KST				*e*S			**Sb**	**23 18 33.3**	**-0.8**
	7.4nm,0.3s								
KST	**Kastek**	**3.78**	**347**	Pg			**Pb**	**23 17 45.4**	**-3.3**
	2.8nm,0.3s								
KST				Lg			Lg	23 18 33.9	
	7.4nm,0.3s								
AML	**Almayashu**	**3.79**	**318**	⇑*i*P			**Pn**	**23 17 40.6**	**+0.8**
	baz=18								
AML				⇑*e*S			**Sn**	**23 18 24.9**	**+1.2**
	baz=18								
AML	**Almayashu**	**3.79**	**318**	P			**Pn**	**23 17 43.4**	**+3.6**
	SNR=7.2								
MDOK	**Medeo**	**3.80**	**359**	Pn			**Pn**	**23 17 41.6**	**+1.8**
	2.4nm,0.6s								
MDOK				⇑Lg			Lg	23 18 32.2	
	15nm,0.8s								
AAK	**Ala-Archa**	**3.82**	**330**	⇑*i*P			**Pn**	**23 17 40.8**	**+0.8**
	baz=30								
AAK				⇑*i*S			**Sn**	**23 18 25.3**	**+1.1**
	baz=30								
AAK	**Ala-Archa**	**3.82**	**330**	⇓Pn			**Pn**	**23 17 39.6**	**-0.5**
	4.3nm,1.0s								
AAK				⇑Lg			Lg	23 18 28.9	
	4.3nm,0.5s								
KOTS	**Kotyrbulak**	**3.87**	**0**	*e*P			**Pb**	**23 17 47.8**	**-2.5**
	8.1nm,0.2s								
KOTS				*e*S			**Sb**	**23 18 37.6**	**+0.8**
	43nm,0.5s								
KOTS	**Kotyrbulak**	**3.87**	**0**	Pg			**Pb**	**23 17 47.9**	**-2.4**
	8.1nm,0.2s								
KOTS				Lg			Lg	23 18 37.6	
	43nm,0.5s								
DGS	**Degeres**	**4.00**	**346**	*e*P			**Pb**	**23 17 49.8**	**-2.7**
	2.7nm,0.6s								
DGS				*e*S			**Sb**	**23 18 40.8**	**+0.2**
	6.3nm,0.5s								
DGS	**Degeres**	**4.00**	**346**	Pg			**Pb**	**23 17 49.8**	**-2.7**
	2.7nm,0.6s								
DGS				Lg			Lg	23 18 40.8	
	5.7nm,0.4s								
UZB	**Uzynbulak**	**4.05**	**20**	*e*P			**Pb**	**23 17 50.8**	**-2.6**
	2.0nm,0.4s								
UZB				*e*S			**Sb**	**23 18 42.5**	**+0.5**
	5.5nm,0.5s								
UZB	**Uzynbulak**	**4.05**	**20**	Pg			**Pb**	**23 17 50.8**	**-2.6**
	2.0nm,0.4s								
UZB				Lg			Lg	23 18 42.5	
	5.5nm,0.5s								
KURS	**Kuram**	**4.20**	**11**	*e*P			**Pb**	**23 17 53.5**	**-2.4**
	1.8nm,0.5s								
KURS				*e*S			**Sb**	**23 18 47.6**	**+1.4**
	6.2nm,0.6s								
KURS	**Kuram**	**4.20**	**11**	Pg			**Pb**	**23 17 53.5**	**-2.4**
	1.8nm,0.6s								
KURS				Lg			Lg	23 18 47.7	
	6.2nm,0.6s								
KPKS	**Kokpek**	**4.27**	**16**	*e*P			**Pb**	**23 17 55.2**	**-1.9**
	2.5nm,0.2s								
KPKS				*e*S			**Sb**	**23 18 50.1**	**+1.8**
	14nm,0.6s								
PDGK	**Podgornoye**	**4.36**	**24**	⇓Pn			**Pb**	**23 17 56.8**	**-1.7**
	2.2nm,0.7s								
PDGK				⇑Lg			Lg	23 18 45.3	
	9.4nm,0.6s								
KTBS	**Karatobe**	**4.36**	**356**	*e*P			**Pb**	**23 17 55.6**	**-2.9**
	1.7nm,0.6s								
KTBS				*e*S			**Sb**	**23 18 50.7**	**0.0**
	18nm,0.8s								
KTBS	**Karatobe**	**4.36**	**356**	Pg			**Pb**	**23 17 55.7**	**-2.9**
	1.7nm,0.6s								
KTBS				Lg			Lg	23 18 51.4	
	18nm,0.8s								
KRBS	**Karabastau**	**4.46**	**347**	*e*P			**Pb**	**23 17 57.5**	**-2.8**
	2.0nm,0.6s								
KRBS				*e*S			**Sb**	**23 18 54.0**	**+0.3**
	4.4nm,0.5s								
MRKS	**Merke**	**4.47**	**320**	*e*P			**Pb**	**23 17 57.6**	**-2.9**
	2.9nm,0.2s								
MRKS				*e*S			**Sb**	**23 18 54.2**	**+0.2**
	5.5nm,0.4s								
MRKS	**Merke**	**4.47**	**320**	Pg			**Pb**	**23 17 57.3**	**-3.2**
	2.1nm,0.3s								
MRKS				Lg			Lg	23 18 54.2	
	5.5nm,0.4s								
SGDS	**Sogindy**	**4.49**	**336**	Pg			**Pb**	**23 17 59.1**	**-1.7**
	2.3nm,0.3s								
SGDS				Lg			Lg	23 18 56.7	
	2.9nm,0.5s								

JMA **14** *23:22:41.6±0.1, 24.˚28N× 122.˚16E, h60km±2km, M2.4*
TAP **14** *23:22:42.6, 24.˚35N× 122.˚13E, h47km, ML3.3, D*
ISC 14 23:22:42.2±1.2, 24.˚37N±0.˚03× 122.˚17E±0.˚02, h54km±7km, n85, σ1s 06/148, 4C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.18**	**347**	P			**Pn**	**23 22 51.1**	**+0.3**
	baz=358								
EOS1				S			**Sn**	**23 22 58.1**	**+1.1**
	baz=358								
TWC	**Suao**	**0.38**	**309**	P			**Pn**	**23 22 52.5**	**+0.1**
	baz=316								
TWC				S			**Sn**	**23 22 59.7**	**-0.1**
	baz=316								
NANB	**Nanao**	**0.39**	**278**	⇑*i*P			**Pn**	**23 22 52.3**	**-0.2**
	baz=283								
NANB				*i* S			**Sn**	**23 23 00.2**	**+0.2**
	baz=283								
ENA	**Nanau**	**0.40**	**278**	⇑*i*P			**Pn**	**23 22 52.3**	**-0.3**
	baz=283								
ENA				S			**Sn**	**23 23 00.1**	**0.0**
	baz=283								
ILA	**Ilan**	**0.55**	**315**	*e*S			**Sn**	**23 23 04.7**	**+1.7**
	baz=320								
NACB	**Ninganchiao**	**0.56**	**250**	P			**Pn**	**23 22 53.8**	**-0.7**
	baz=250								
NACB				S			**Sn**	**23 23 02.9**	**-0.4**
	baz=250								
NTC	**Toucheng**	**0.57**	**327**	*e*P			**Pn**	**23 22 54.8**	**+0.2**
	baz=331								
NTC				*e*S			**Sn**	**23 23 02.9**	**-0.7**
	baz=331								
TWE	**Neicheng**	**0.58**	**307**	⇑*i*P			**Pn**	**23 22 54.9**	**+0.3**
	baz=312								
TWE				S			**Sn**	**23 23 04.1**	**+0.5**
	baz=312								
TWD	**Chiawan**	**0.60**	**241**	P			**Pn**	**23 22 54.6**	**-0.3**
	baz=241								
TWD				*e*S			**Sn**	**23 23 03.7**	**-0.4**
	baz=241								
ENTT	**Nioudou**	**0.61**	**296**	P			**Pn**	**23 22 55.5**	**+0.4**
	baz=299								
ENTT				*i* S			**Sn**	**23 23 05.0**	**+0.6**
	baz=299								
SLBB	**Yuanshan**	**0.62**	**308**	⇑*i*P			**Pn**	**23 22 54.7**	**-0.5**
	baz=311								
SLBB				*i* S			**Sn**	**23 23 04.8**	**+0.2**
	baz=311								
NDT	**Datong Townshi**	**0.64**	**291**	P			**Pn**	**23 22 55.8**	**+0.4**
	baz=294								
NDT				*i* S			**Sn**	**23 23 05.5**	**+0.4**
	baz=294								
HWA	**Hwalien**	**0.65**	**233**	*e*S			**Sn**	**23 23 06.3**	**+1.2**
	baz=232								
ETLH	**Xiulin Townshi**	**0.65**	**256**	P			**Pn**	**23 22 55.3**	**-0.3**
	baz=257								
ETLH				*e*S			**Sn**	**23 23 04.9**	**-0.5**
	baz=257								
TWB1	**Santiao Chiao**	**0.66**	**345**	*e*P			**Pn**	**23 22 56.1**	**+0.5**
	baz=349								
TWB1				*e*S			**Sn**	**23 23 04.3**	**-1.0**
	baz=349								
TIPB	**Shuangxi**	**0.68**	**332**	P			**Pn**	**23 22 55.6**	**-0.3**
	baz=335								
TIPB				*e*S			**Sn**	**23 23 05.7**	**-0.1**
	baz=335								
ENLB	**Shoufeng**	**0.70**	**228**	*e*P			**Pn**	**23 22 54.9**	**-1.3**
	baz=227								
ENLB				S			**Sn**	**23 23 06.3**	**0.0**
	baz=227								
NNSH	**Datong**	**0.72**	**275**	P			**Pn**	**23 22 55.7**	**-0.8**
	baz=276								
NNSH				*e*S			**Sn**	**23 23 06.4**	**-0.6**
	baz=276								
NWLT	**Wulai**	**0.73**	**304**	P			**Pn**	**23 22 57.2**	**+0.6**
	baz=306								
NWLT				*i* S			**Sn**	**23 23 07.5**	**+0.5**
	baz=306								
NNS	**Nan Shan**	**0.73**	**275**	P			**Pn**	**23 22 56.7**	**+0.1**
	baz=277								
NNS				S			**Sn**	**23 23 06.8**	**-0.4**
	baz=277								
YOJ	**Yonaguni jima**	**0.77**	**83**	P			**Pn**	**23 22 57.2**	**+0.2**
NWF	**Wu-fen Shan**	**0.78**	**333**	*e*P			**Pn**	**23 22 57.3**	**+0.1**
	baz=336								
NWF				*e*S			**Sn**	**23 23 08.0**	**-0.3**
	baz=336								
WFSB	**Wu-fen Shan**	**0.78**	**333**	*e*P			**Pn**	**23 22 57.1**	**-0.1**
	baz=336								
WFSB				*e*S			**Sn**	**23 23 07.6**	**-0.5**
	baz=336								
YHNB	**Yeheng**	**0.78**	**292**	P			**Pn**	**23 22 57.1**	**-0.2**
	baz=295								
YHNB				S			**Sn**	**23 23 08.4**	**0.0**
	baz=295								
NSK	**Sanguang**	**0.80**	**292**	P			**Pn**	**23 22 57.8**	**+0.3**
	baz=295								
NSK				*e*S			**Sn**	**23 23 08.6**	**-0.1**
	baz=295								
TWA	**Mucha**	**0.81**	**319**	P			**Pn**	**23 22 58.8**	**+1.2**
	baz=322								
TWA				S			**Sn**	**23 23 09.9**	**+1.1**
	baz=322								
NHDH	**Xindian Distri**	**0.83**	**315**	S			**Sn**	**23 23 10.3**	**+1.1**
	baz=318								
WHF	**Hehuan Shan**	**0.86**	**255**	P			**Pn**	**23 22 58.5**	**-0.1**
	baz=255								
WHF				*e*S			**Sn**	**23 23 09.6**	**-1.0**
	baz=255								
TATO	**Taipei**	**0.87**	**314**	*e*P			**Pn**	**23 22 58.8**	**+0.6**
	baz=317								
TATO				S			**Sn**	**23 23 11.1**	**+1.0**
	baz=317								
ESL	**Shilin**	**0.88**	**231**	*e*P			**Pn**	**23 22 58.3**	**-0.1**
	baz=230								
ESL				*e*S			**Sn**	**23 23 09.9**	**-0.4**
	baz=230								
TWT	**Tachien**	**0.92**	**263**	P			**Pn**	**23 22 59.9**	**+0.8**
	baz=263								
TWT				S			**Sn**	**23 23 11.8**	**+0.3**
	baz=263								
TDCB	**Techi**	**0.93**	**263**	P			**Pn**	**23 22 59.6**	**+0.3**
	baz=264								
TDCB				S			**Sn**	**23 23 11.6**	**-0.2**
	baz=264								
YM01	**YM01**	**0.95**	**325**	*e*P			**Pn**	**23 23 01.2**	**+1.8**
	baz=327								
YM10	**YM10**	**0.96**	**325**	*e*P			**Pn**	**23 22 59.5**	**-0.1**
	baz=327								
YM10				*e*S			**Sn**	**23 23 13.8**	**+1.5**
	baz=327								
YM11	**YM11**	**0.96**	**326**	*e*P			**Pn**	**23 23 00.5**	**+0.9**
	baz=328								
YM11				*e*S			**Sn**	**23 23 13.4**	**+1.0**
	baz=328								
YM05	**YM05**	**0.96**	**325**	P			**Pn**	**23 23 00.6**	**+1.0**
	baz=327								
YM05				*i* S			**Sn**	**23 23 13.8**	**+1.3**
	baz=327								
CHGB	**Renai**	**0.96**	**251**	P			**Pn**	**23 23 00.1**	**+0.3**
	baz=252								
CHGB				S			**Sn**	**23 23 12.5**	**-0.2**
	baz=252								
YM04	**YM04**	**0.97**	**323**	*e*P			**Pn**	**23 23 00.9**	**+1.2**
	baz=326								
YM04				*e*S			**Sn**	**23 23 11.9**	**-0.7**
	baz=326								
YM08	**YM08**	**0.97**	**327**	*e*P			**Pn**	**23 23 01.8**	**+2.1**
	baz=329								
EGFH	**Guangfu**	**0.98**	**224**	*e*P			**Pn**	**23 23 00.5**	**+0.8**
	baz=223								
EGFH				*e*S			**Sn**	**23 23 12.6**	**-0.1**
	baz=223								
TWS1	**Kuangyinshan**	**1.00**	**317**	*e*S			**Sn**	**23 23 14.7**	**+1.5**
	baz=319								
OWD	**Renai**	**1.00**	**246**	P			**Pn**	**23 23 00.2**	**+0.1**
	baz=246								
OWD				*e*S			**Sn**	**23 23 12.5**	**-0.9**
	baz=246								
LIOB	**Emei**	**1.09**	**285**	*e*P			**Pn**	**23 23 01.8**	**+0.6**
	baz=286								
LIOB				*e*S			**Sn**	**23 23 16.2**	**+0.8**
	baz=286								
NSTT	**Nanjuang**	**1.10**	**284**	*e*P			**Pn**	**23 23 02.1**	**+0.8**
	baz=285								
NSTT				*e*S			**Sn**	**23 23 16.1**	**+0.6**
	baz=285								
HGSD	**Ruisui**	**1.11**	**218**	*e*P			**Pn**	**23 23 02.1**	**+0.6**
	baz=217								
HGSD				*e*S			**Sn**	**23 23 15.6**	**-0.3**
	baz=217								
WHP	**Taichung City**	**1.12**	**265**	P			**Pn**	**23 23 02.8**	**+1.0**
	baz=266								
WHP				*e*S			**Sn**	**23 23 16.6**	**+0.3**
	baz=266								
VWDT	**VWDT**	**1.13**	**237**	P			**Pn**	**23 23 02.0**	**+0.3**
	baz=237								
VWDT				S			**Sn**	**23 23 15.8**	**-0.4**
	baz=237								
EHY	**Hungye**	**1.16**	**222**	*e*P			**Pn**	**23 23 01.2**	**-1.0**
	baz=221								
EHY				*e*S			**Sn**	**23 23 15.1**	**-2.0**
	baz=221								
DPDB	**Guoxing**	**1.19**	**254**	*e*P			**Pn**	**23 23 03.0**	**+0.4**
	baz=254								
DPDB				S			**Sn**	**23 23 18.6**	**+0.8**
	baz=254								
SSLB	**Suanglung**	**1.26**	**243**	P			**Pn**	**23 23 03.8**	**+0.2**
	baz=242								
SSLB				S			**Sn**	**23 23 19.5**	**+0.1**
	baz=242								
YULB	**Yu-li**	**1.26**	**220**	*e*P			**Pn**	**23 23 02.3**	**-1.2**
	baz=218								
YULB				*e*S			**Sn**	**23 23 17.7**	**-1.9**
	baz=218								
TWQ1	**Liyutan**	**1.28**	**269**	*e*P			**Pn**	**23 23 04.5**	**+0.7**
	baz=270								
TWQ1				*e*S			**Sn**	**23 23 21.8**	**+1.9**
	baz=270								
TYC	**Yuchr**	**1.29**	**249**	P			**Pn**	**23 23 04.4**	**+0.5**
	baz=249								
TYC				*e*S			**Sn**	**23 23 21.6**	**+1.5**
	baz=249								
TWF1	**Yuli**	**1.29**	**218**	*e*P			**Pn**	**23 23 04.7**	**+0.7**
	baz=217								
TWF1				*e*S			**Sn**	**23 23 19.2**	**-1.1**
	baz=217								
WHYT	**Xinyi Township**	**1.38**	**241**	*e*P			**Pn**	**23 23 05.9**	**+0.7**
	baz=241								
WHYT				*e*S			**Sn**	**23 23 23.7**	**+1.2**
	baz=241								
TCU	**Taichung**	**1.39**	**261**	*e*S			**Sn**	**23 23 24.1**	**+1.6**
	baz=261								
IRIF	**Iriomote-Funau**	**1.42**	**91**	P			**Pn**	**23 23 05.7**	**0.0**
IRIF				*e*S			**Sn**	**23 23 23.5**	**+0.2**
YUS	**Yu-Shan**	**1.42**	**232**	P			**Pn**	**23 23 06.4**	**+0.2**
	baz=231								
YUS				*e*S			**Sn**	**23 23 23.6**	**-0.5**
	baz=231								
WJS	**Zhushan**	**1.43**	**248**	*e*P			**Pn**	**23 23 07.1**	**+1.3**
	baz=247								
WJS				*e*S			**Sn**	**23 23 25.1**	**+1.6**
	baz=247								
WNT	**Mingjian**	**1.45**	**250**	*e*P			**Pn**	**23 23 07.4**	**+1.3**
	baz=250								
ALS	**Alishan**	**1.52**	**236**	P			**Pn**	**23 23 07.9**	**+0.6**
	baz=235								
ALS				*e*S			**Sn**	**23 23 27.0**	**+0.9**
	baz=235								
CHN5	**Tsauling**	**1.57**	**241**	*e*P			**Pn**	**23 23 08.7**	**+0.9**
	baz=240								
CHN5				*e*S			**Sn**	**23 23 29.2**	**+2.1**
	baz=240								
ELDTW	**Lidau**	**1.58**	**222**	*e*S			**Sn**	**23 23 26.7**	**-0.8**
	baz=221								
WDLH	**Douliu**	**1.64**	**246**	*e*P			**Pn**	**23 23 09.8**	**+1.1**
	baz=245								
WDLH				*e*S			**Sn**	**23 23 31.1**	**+2.4**
	baz=245								
JKRS	**Kuro-shima**	**1.68**	**94**	P			**Pn**	**23 23 09.3**	**+0.1**
JKRS				*e*S			**Sn**	**23 23 30.1**	**+0.5**
CHN4	**Tsaushan**	**1.77**	**235**	*e*P			**Pn**	**23 23 11.4**	**+1.0**
	baz=234								
CHN4				*e*S			**Sn**	**23 23 34.4**	**+2.5**
	baz=234								
STYT	**Tauyuan**	**1.77**	**227**	*e*S			**Sn**	**23 23 32.9**	**+1.0**
	baz=226								
TPUB	**Ta-pu**	**1.77**	**233**

AXDP	**Jialang**	**3.86**	**279**	*e*P	**Pn**	**23 23 38.0**	**-1.1**
	baz=278						
AXDP				*e*S	**Sn**	**23 24 20.5**	**-2.7**
	baz=278						

IDC ***14*** *23:50:23.8±1.8, 19°.44N×66°.27W, h0km, mb3.5/4, mb1 4.0/7, mb1mx3.7/34, mbtmp3.8/7, ML3.2/3, MS2.5/1, Ms1 2.5/1, ms1mx2.2/31, Error ellipse: s-maj=57.4km s-min=17.8km az=77.0*
NEIC ***14*** *23:50:30.1±1.2, 19°.06N±0°.04×66°.75W±0°.03, h38km±12km, Error ellipse: s-maj=6.9km s-min=2.4km az=149.0*
RSPR ***14*** *23:50:30.8, 19°.06N×66°.78W, h44km×3km, MD3.4/19*
ISC 14 23:50:30.8±1.2, 19°.07N±0°.07×66°.75W±0°.03, h44km±15km, n64,σ1‰44/87, mb3.5/4, 13C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.62**	**161**	*e*P	**Pn**		**23 50 42.5**	**-0.8**
EMPR	**Esperanza - Ma**	**0.62**	**161**	*e*S	**Sn**		**23 50 51.4**	**-0.9**
EMPR	**Esperanza - Ma**	**0.62**	**161**		**Pn**		**23 50 42.5**	**-0.8**
EMPR					**Sn**		**23 50 51.4**	**-0.9**
AGPR	**Aguadilla, PR**	**0.69**	**210**	*e*P	**Pn**		**23 50 42.0**	**-2.3**
AGPR	**Aguadilla, PR**	**0.69**	**210**	*e*S	**Sn**		**23 50 52.5**	**-1.4**
AGPR	**Aguadilla, PR**	**0.69**	**210**		**Pn**		**23 50 42.0**	**-2.3**
AGPR					**Sn**		**23 50 52.5**	**-1.4**
AOPR	**Arecibo Observ**	**0.72**	**180**	*e*P	**Pn**		**23 50 43.8**	**-0.8**
AOPR	**Arecibo Observ**	**0.72**	**180**	*e*S	**Sn**		**23 50 53.6**	**-1.0**
AOPR	**Arecibo Observ**	**0.72**	**180**		**Pn**		**23 50 43.8**	**-0.8**
AOPR					**Sn**		**23 50 53.6**	**-1.0**
MPR	**Mayaguez**	**0.93**	**204**		**Pn**		**23 50 45.6**	**-1.8**
LSP	**Las Mesas**	**0.94**	**200**	*e*P	**Pn**		**23 50 46.4**	**-1.3**
LSP	**Las Mesas**	**0.94**	**200**	*e*S	**Sn**		**23 50 59.1**	**-1.0**
LSP	**Las Mesas**	**0.94**	**200**		**Pn**		**23 50 46.4**	**-1.3**
LSP					**Sn**		**23 50 59.1**	**-1.0**
GCPR	**Guaynabo City**	**0.98**	**140**		**Pn**		**23 50 47.1**	**-1.1**
OBIP	**Obispado Ponce**	**1.03**	**172**	*e*P	**Pn**		**23 50 48.0**	**-0.8**
OBIP	**Obispado Ponce**	**1.03**	**172**	*e*S	**Sn**		**23 51 01.0**	**-1.1**
OBIP	**Obispado Ponce**	**1.03**	**172**		**Pn**		**23 50 48.0**	**-0.8**
OBIP					**Sn**		**23 51 01.0**	**-1.1**
GBPR	**Guanica, Bosqu**	**1.09**	**187**	*e*P	**Pn**		**23 50 49.1**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.09**	**187**	*e*S	**Sn**		**23 51 02.1**	**-1.6**
GBPR	**Guanica, Bosqu**	**1.09**	**187**		**Pn**		**23 50 49.1**	**-0.6**
GBPR					**Sn**		**23 51 02.1**	**-1.6**
SJG	**San Juan**	**1.11**	**149**	Pn	**Pn**		**23 50 48.9**	**-1.0**
	60nm,0.3s,baz=320,slow=13,SNR=69							
SJG				Sn	**Sn**		**23 51 01.8**	**-2.2**
	144nm,0.3s,baz=324,slow=19,SNR=34							
CRPR	**Cabo Rojo, PR**	**1.11**	**198**	*e*P	**Pn**		**23 50 48.9**	**-1.1**
CRPR				*e*S	**Sn**		**23 51 02.6**	**-1.5**
CRPR	**Cabo Rojo, PR**	**1.11**	**198**		**Pn**		**23 50 48.9**	**-1.1**
CRPR					**Sn**		**23 51 02.6**	**-1.5**
MLPR	**Magueyes Islan**	**1.13**	**194**	*e*P	**Pn**		**23 50 48.5**	**-1.7**
MLPR	**Magueyes Islan**	**1.13**	**194**	*e*S	**Sn**		**23 51 03.0**	**-1.6**
MLPR	**Magueyes Islan**	**1.13**	**194**		**Pn**		**23 50 48.5**	**-1.7**
MLPR					**Sn**		**23 51 03.0**	**-1.6**
CBYP	**Canovanas**	**1.16**	**133**	*e*P	**Pn**		**23 50 49.4**	**-1.2**
CBYP	**Canovanas**	**1.16**	**133**	*e*P	**Pn**		**23 50 49.7**	**-1.0**
CBYP				*e*S	**Sn**		**23 51 05.0**	**-0.4**
CBYP	**Canovanas**	**1.16**	**133**		**Pn**		**23 50 49.7**	**-1.0**
CBYP					**Sn**		**23 51 04.5**	**-0.9**
ICMP	**Isla Caja de M**	**1.20**	**170**	*e*S	**Sn**		**23 51 04.7**	**-1.4**
ICMP	**Isla Caja de M**	**1.20**	**170**		**Pn**		**23 50 50.9**	**-0.2**
ICMP	**Isla Caja de M**	**1.20**	**170**		**Sn**		**23 51 04.7**	**-1.4**
PDPR	**Patillas Dam,**	**1.25**	**146**	Pn	**Pn**		**23 50 51.4**	**-0.5**
IGPR	**InterUniversit**	**1.25**	**151**	*e*P	**Pn**		**23 50 51.3**	**-0.7**
IGPR				*e*S	**Sn**		**23 51 06.7**	**-0.9**
IGPR	**InterUniversit**	**1.25**	**151**	*e*P	**Pn**		**23 50 51.0**	**-0.9**
IGPR	**InterUniversit**	**1.25**	**151**		**Sn**		**23 51 06.6**	**-1.1**
IGPR	**InterUniversit**	**1.25**	**151**	Pn	**Pn**		**23 50 50.9**	**-1.1**
HUMP	**Col San Antoni**	**1.26**	**137**	*e*P	**Pn**		**23 50 51.0**	**-1.0**
HUMP	**Col San Antoni**	**1.26**	**137**	*e*S	**Sn**		**23 51 07.0**	**-0.7**
HUMP	**Col San Antoni**	**1.26**	**137**	*e*P	**Pn**		**23 50 50.9**	**-1.0**
HUMP				*e*S	**Sn**		**23 51 07.2**	**-0.4**
HUMP	**Col San Antoni**	**1.26**	**137**		**Pn**		**23 50 50.9**	**-1.0**
HUMP					**Sn**		**23 51 07.2**	**-0.4**
MTP	**Monte Pirata**	**1.49**	**130**	*e*P	**Pn**		**23 50 54.2**	**-0.9**
MTP	**Monte Pirata**	**1.49**	**130**	*e*S	**Sn**		**23 51 12.3**	**-1.1**
MTP	**Monte Pirata**	**1.49**	**130**		**Pn**		**23 50 54.2**	**-0.9**
MTP					**Sn**		**23 51 12.3**	**-1.1**
PCDR	**Punta Cana, DR**	**1.64**	**251**	*e*P	**Pn**		**23 50 57.0**	**-0.2**
PCDR	**Punta Cana, DR**	**1.64**	**251**	*e*P	**Pn**		**23 50 57.1**	**-0.2**
PCDR				*e*S	**Sn**		**23 51 15.3**	**-1.8**
PCDR	**Punta Cana, DR**	**1.64**	**251**		**Pn**		**23 50 57.1**	**-0.2**
PCDR					**Sn**		**23 51 15.4**	**-1.8**
STVI	**Saint Thomas**	**1.84**	**112**	*e*P	**Pn**		**23 50 59.0**	**-0.9**
STVI	**Saint Thomas**	**1.84**	**112**	*e*S	**Sn**		**23 51 21.5**	**-0.6**
STVI	**Saint Thomas**	**1.84**	**112**		**Pn**		**23 50 59.0**	**-0.9**
STVI					**Sn**		**23 51 21.5**	**-0.6**
TBVI	**Tortola**	**2.12**	**107**	*e*S	**Sn**		**23 51 27.7**	**-1.3**
TBVI	**Tortola**	**2.12**	**107**	*e*P	**Pn**		**23 51 03.3**	**-0.5**
TBVI	**Tortola**	**2.12**	**107**		**Pn**		**23 51 03.3**	**-0.5**
TBVI					**Sn**		**23 51 27.7**	**-1.3**
DR12	**Loma Pena Alta**	**2.51**	**264**		**Pn**		**23 51 08.4**	**-0.7**
BANI	**BANI**	**3.49**	**259**	Pn	**Pn**		**23 51 21.4**	**-1.3**
SDDR	**Presa de Saban**	**4.29**	**270**		**Pn**		**23 51 33.4**	**-0.3**
PCRV	**Puerto La Cruz**	**9.07**	**167**	Pn	**Pn**		**23 52 42.0**	**+2.6**
	0.8nm,0.3s,baz=0.0,slow=7.1,SNR=4.4							
PCRV				Sn	**Sn**		**23 54 16.8**	**-3.5**
	0.7nm,0.3s,baz=288,slow=20,SNR=2.5							
PLCV	**Puerto La Cruz**	**9.10**	**166**		**Pn**		**23 52 42.0**	**+2.3**
PLCV					**Sn**		**23 54 16.8**	**-4.0**
SDV	**Santo Domingo**	**10.80**	**201**	Pn	**Pn**		**23 53 07.6**	**+4.5**
	0.4nm,0.3s,baz=30,slow=16,SNR=2.5							
SDV				Sn	**Sn**		**23 55 04.2**	**+1.4**
	0.3nm,0.3s,baz=37,slow=20,SNR=2.2							
SDV				LR	LR		23 56 59.6	
	comp=Z,25nm,21.3s,baz=22,slow=35							
ROSC	**El Rosal**	**15.96**	**209**	Pn	**P**		**23 54 17.3**	**+1.6**
	2.1nm,0.3s,baz=25,slow=18,SNR=4.1							
TXAR	**Lajitas Array**	**35.06**	**294**	P	**P**		**23 57 20.7**	**+0.8**
	1.0nm,0.6s,baz=110,slow=9.6,SNR=13							
PDAR	**Pinedale Array**	**43.06**	**313**	P	**P**		**23 58 26.8**	**+0.1**
	0.3nm,0.6s,baz=101,slow=9.6,SNR=2.5							
YKA	**Yellowknife Ar**	**54.39**	**335**	P	**P**		**23 59 51.8**	**-1.3**
	0.3nm,0.6s,baz=111,slow=7.3,SNR=5.9							
ILAR	**Eielson Array**	**68.72**	**333**	P	**P**		**00 01 27.6**	**-2.1**
	0.3nm,0.5s,baz=108,slow=4.7,SNR=5.3							

NIC ***14*** *23:51:45.5±0.0, 35°.63N×31°.12E, h30km±14km, Ml2.6/2*
DDA ***14*** *23:51:46.0, 35°.49N×31°.43E, h13km±11km, ML2.0*
ISK ***14*** *23:51:48.9, 35°.53N×31°.66E, h5km, ML2.3/11*
ISC 14 23:51:50.0±1.4, 35°.55N±0°.04×31°.51E±0°.04, h27km±14km, n26,σ1‰69/38, Cyprus region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AKMS	**Akamas**	**0.86**	**128**		P	**Pb**	**23 52 05.4**	**-1.0**
AKMS					S	**Sn**	**23 52 20.9**	**+2.8**
AKMS					AML	AML	23 52 21.7	
	0.7nm,0.5s							
AKMS					AML	AML	23 52 21.7	
	0.7nm,0.5s							
AKMS					AML	AML	23 52 22.2	
	0.5nm,0.3s							
AKMS					AML	AML	23 52 22.2	
	0.5nm,0.3s							
GAZI	**Gazipasa**	**0.95**	**44**		PG	**Pn**	**23 52 06.6**	**-1.1**
GAZI					SG	**Sn**	**23 52 20.5**	**+0.2**
GAZI	**Gazipasa**	**0.95**	**44**	*i* P	Pn		**23 52 06.5**	**-1.1**
GAZI				*i* S	**Sn**		**23 52 20.8**	**+0.5**
GAZI				IAML			23 52 25.0	
	comp=E,32nm,0.7s							
ALFC	**Alefka**	**0.98**	**113**	P	**Pn**		**23 52 07.6**	**-0.3**
ALFC				S	**Sn**		**23 52 23.6**	**+2.7**
ALFC				AML	AML		23 52 25.8	
	comp=E,0.4nm,0.2s							
ALFC				AML	AML		23 52 25.8	
	comp=E,0.4nm,0.2s							
ALFC				AML	AML		23 52 26.5	
	comp=E,0.4nm,0.3s							
ALFC				AML	AML		23 52 26.5	
	comp=E,0.4nm,0.3s							
ALAN	**Alanya-ANTALYA**	**1.09**	**23**		PG	**Pb**	**23 52 10.8**	**+0.5**
NATA	**Nata**	**1.16**	**131**		P	**Pn**	**23 52 09.5**	**-1.0**
LEF	**Lefka**	**1.21**	**110**		PG	**Pn**	**23 52 09.9**	**-1.3**
LEF					SG	**Sn**	**23 52 26.0**	**-0.7**
LEF	**Lefka**	**1.21**	**110**	*i* P	Pn	**Pn**	**23 52 09.3**	**-1.9**
LEF				*i* S	**Sn**	**Sn**	**23 52 26.7**	**0.0**
LEF				IAML			23 52 37.0	
	comp=E,28nm,0.6s							
LEF				IAML			23 52 38.0	
	comp=N,33nm,0.5s							
AKUM	**Antalya-Kumluc**	**1.22**	**310**	*i* P	**Pn**	**Pn**	**23 52 09.4**	**-1.9**
AKUM				*i* S	**Sn**	**Sn**	**23 52 24.9**	**-2.0**
AKUM				IAML			23 52 56.0	
	comp=N,89nm,1.3s							
KEPZ	**Antalya-Kepez**	**1.35**	**3**	*i* P	**Pn**	**Pn**	**23 52 12.1**	**-1.1**
KEPZ				*i* S	**Sb**	**Sb**	**23 52 30.8**	**-0.8**
KEPZ				IAML			23 52 37.0	
	comp=E,19nm,0.5s							
SZAC	**Souni**	**1.38**	**125**	P	**Pn**	**Pn**	**23 52 12.8**	**-0.7**
TEKE	**Tekeli-Mersin**	**1.44**	**65**	PN	**Pn**	**Pn**	**23 52 14.3**	**0.0**
ERMK	**Ermenek**	**1.58**	**46**	*i* P	**Pn**	**Pn**	**23 52 17.3**	**+0.9**
ERMK				*i* S	**Sb**	**Sb**	**23 52 42.8**	**+4.5**
ERMK				IAML			23 52 52.0	
	comp=N,15nm,0.3s							
CSS	**Mathiatis**	**1.60**	**111**	PN	**Pn**	**Pn**	**23 52 17.5**	**+0.9**
CSS	**Mathiatis**	**1.60**	**111**	P	**Pn**	**Pn**	**23 52 16.4**	**-0.3**
ASGA	**Asgata**	**1.62**	**118**	P	**Pn**	**Pn**	**23 52 16.4**	**-0.3**
KORT	**Korkueli**	**1.72**	**328**	PN	**Pb**	**Pb**	**23 52 22.5**	**+1.4**
KORT	**Korkueli**	**1.72**	**328**	*i* P	**Pb**	**Pb**	**23 52 22.0**	**+0.9**
KORT				*i* S	**Sb**	**Sb**	**23 52 44.8**	**+2.5**
ELL	**Elmali**	**1.76**	**313**	PN	**Pb**	**Pb**	**23 52 23.0**	**+1.3**
AKKU	**Akkuyu-Mersin**	**1.77**	**69**	PN	**Pb**	**Pb**	**23 52 20.4**	**-1.4**
TEVE	**Tevekalti-Mers**	**1.80**	**60**	PN	**Pb**	**Pb**	**23 52 21.4**	**-1.0**
IKL	**Isikli**	**1.90**	**68**	PN	**Pb**	**Pb**	**23 52 22.4**	**-1.6**
KEBE	**Keben-Mersin**	**2.00**	**63**	PN	**Pn**	**Pn**	**23 52 23.8**	**+1.7**
KONT	**Konya--Tatoy**	**2.49**	**16**	PN	**Pb**	**Pb**	**23 52 32.4**	**-1.7**
DOGA	**KONYA_Doganhis**	**2.56**	**3**	*i* P	**Pb**	**Pb**	**23 52 32.8**	**-2.4**
DOGA				*i* S	**Sb**	**Sb**	**23 53 05.5**	**-0.8**
DOGA				IAML			23 53 13.0	
	comp=E,6.8nm,0.7s							
DOGA				IAML			23 53 15.0	
	comp=N,8.6nm,0.9s							
KERG	**Konya-Eregli**	**2.81**	**48**	*i* P	**Pn**	**Pn**	**23 52 35.9**	**+2.5**
KERG				*i* S	**Sb**	**Sb**	**23 53 11.3**	**-2.5**

THE ***15*** *00:13:01.9, 35°.19N×22°.88E, h16km±1km, ML3.4/5, Error ellipse: s-maj=1.9km s-min=0.8km az=177.0*
ATH ***15*** *00:13:03.1, 35°.31N×23°.03E, h42km±4km, ML3.3/24, Error ellipse: s-maj=4.7km s-min=1.1km az=54.0*
IDC ***15*** *00:13:05.1±1.8, 35°.47N×23°.05E, h63km±18km, mb3.4/10, mb1 3.4/13, mb1mx3.3/43, mbtmp3.6/13, MS3.2/1, Ms1 3.2/1, ms1mx2.4/22, Error ellipse: s-maj=24.3km s-min=13.6km az=8.0*
ISC 15 00:13:03.2±1.1, 35°.26N±0°.06×23°.03E±0°.05, h52km±10km, n95,σ1‰69/102, mb3.4/10, Crete

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KNDR	**Palaiochora Ch**	**0.54**	**92**	P	**Pn**		**00 13 14.2**	**-0.8**
KNDR				S	**Sn**		**00 13 22.9**	**-0.7**
	5μm,0.5s							
RODP	**Rodopos**	**0.67**	**63**	P	**Pn**		**00 13 16.5**	**-0.2**
RODP				S	**Sn**		**00 13 29.8**	**+3.4**
	1μm,0.5s							
IMMV	**Iera Moni Meta**	**0.81**	**75**	P	**Pn**		**00 13 18.6**	**+0.2**
IMMV				S	**Sn**		**00 13 32.6**	**+3.0**
	5μm,0.8s							
IMMV	**Iera Moni Meta**	**0.81**	**75**	P	**Pn**		**00 13 18.9**	**+0.4**
IMMV				AML	AML		00 13 36.2	
	comp=E,10435μm,0.9s							
IMMV				AML	AML		00 13 37.6	
	comp=N,7753μm,0.8s							
CHAN	**Chania**	**0.87**	**72**	P	**Pn**		**00 13 20.0**	**+0.8**
CHAN				S	**Sn**		**00 13 34.4**	**+3.4**
	comp=N,2μm,0.8s							
GVD	**Gavdhos**	**0.97**	**115**	P	**Pn**		**00 13 21.1**	**+0.6**
GVD	**Gavdhos**	**0.97**	**115**	P	**Pn**		**00 13 21.2**	**+0.7**
GVD				AML	AML		00 13 45.2	
	comp=N,5109μm,0.4s							
GVD				AML	AML		00 13 47.2	
	comp=E,4272μm,0.5s							
GVDS	**Gavdos**	**0.97**	**115**	P	**Pn**		**00 13 20.8**	**+0.3**
VAM	**Vamos**	**0.97**	**81**	P	**Pn**		**00 13 21.9**	**+1.3**
VAM	**Vamos**	**0.97**	**81**	P	**Pn**		**00 13 21.6**	**+1.0**
VAM				AML	AML		00 13 43.5	
	comp=N,4259μm,0.7s							
VAM				AML	AML		00 13 52.4	
	comp=E,4557μm,0.7s							
KTHA	**Kythira Island**	**1.00**	**2**	P	**Pn**		**00 13 21.1**	**+0.1**
KTHA	**Kythira Island**	**1.00**	**2**	P	**Pn**		**00 13 21.3**	**+0.3**
KTHA				AML	AML		00 13 41.7	
	comp=E,4798μm,0.5s							
KTHA				AML	AML		00 13 53.7	
	comp=N,2115μm,0.8s							
KTHR	**Kythira**	**1.00**	**359**	P	**Pn**		**00 13 20.9**	**-0.1**
MNVA	**Monemvasia**	**1.43**	**0**	P	**Pn**		**00 13 27.0**	**+0.3**
VLI	**Veliai**	**1.46**	**357**	P	**Pn**		**00 13 28.2**	**+1.0**
VLI				S	**Sn**		**00 13 48.2**	**+3.0**
	comp=N,960nm,0.7s							
VLI	**Veliai**	**1.46**	**357**	P	**Pn**		**00 13 28.5**	**+1.3**
VLI				AML	AML		00 13 53.8	
	comp=E,1595μm,0.8s							
VLI				AML	AML		00 14 01.3	
	comp=N,2240μm,0.7s							
SIVA	**Sivas**	**1.48**	**99**	P	**Pn**		**00 13 28.9**	**+1.4**
SIVA	**Sivas**	**1.48**	**99**	P	**Pn**		**00 13 29.0**	**+1.4**
SIVA				AML	AML		00 14 03.6	
	comp=N,3174μm,0.6s							
SIVA				AML	AML		00 14 07.7	
	comp=E,4837μm,0.8s							
IDI	**Anoyia**	**1.53**	**88**	P	**Pn**		**00 13 29.5**	**+1.4**
	comp=E,19nm,0.3s,baz=249,slow=10.0,SNR=48							
IDI				S	**Sn**		**00 13 54.5**	**+7.5**
	comp=E,30nm,0.3s,baz=317,slow=19,SNR=6.1							
IDI				LR	LR		00 14 22.2	
	comp=E,142nm,19.9s,baz=276,slow=51							
IDI	**Anoyia**	**1.53**	**88**	P	**Pn**		**00 13 29.6**	**+1.4**
IDI				AML	AML		00 14 03.1	
	comp=N,1435μm,0.8s							
IDI				AML	AML		00 14 03.8	
	comp=E,1218μm,1.1s							
MHLO	**Agia Marina, M**	**1.81**	**38**	P	**Pn**		**00 13 33.2**	**+1.2**
MHLO				AML	AML		00 14 09.6	
	comp=N,4890μm,1.0s							
MHLO				AML	AML		00 14 12.2	
	comp=E,4865μm,0.7s							
MHLA	**Plaka, Milos I**	**1.87**	**37**	P	**Pn**		**00 13 33.9**	**+1.1**
MHLA				AML	AML		00 14 16.9	
	comp=N,3509μm,1.0s							
MHLA				AML	AML		00 14 21.1	
	comp=E,2332μm,1.0s							
PYL	**PYLOS**	**1.94**	**328**	P	**Pn**		**00 13 33.7**	**0.0**
PYL	**PYLOS**	**1.94**	**328**	P	**Pn**		**00 13 34.1**	**+0.4**
LAST	**Lasithi**	**2.01**	**92**	P	**Pn**		**00 13 36.5**	**+1.7**
LAST	**Lasithi**	**2.01**	**92**	P	**Pn**		**00 13 36.5**	**+1.7**
LAST				AML	AML		00 14 23.1	
	comp=N,818μm,0.6s							
LAST				AML	AML		00 14 28.6	
	comp=E,584μm,0.7s							
ITM	**Ithomi**	**2.11**	**335**	P	**Pn**		**00 13 37.0**	**+0.9**
ITM	**Ithomi**	**2.11**	**335**	P	**Pn**		**00 13 36.7**	**+0.6**
ITM				AML	AML		00 14 31.0	
	comp=N,569μm,1.1s							
ITM				AML	AML		00 14 31.6	
	comp=E,476μm,0.7s							
NPS	**Neapolis**	**2.12**	**89**	P	**Pn**		**00 13 38.1**	**+1.9**
NPS	**Neapolis**	**2.12**	**89**	P	**Pn**		**00 13 38.2**	**+1.9**
NPS				AML	AML		00 14 32.0	
	comp=E,867μm,0.8s							
NPS				AML	AML		00 14 36.2	
	comp=N,1088μm,0.9s							
KRND	**KRANIDI**	**2.12**	**3**	P	**Pn**		**00 13 37.5**	**+1.3**
KRND	**KRANIDI**	**2.12**	**3**	P	**Pn**		**00 13 37.5**	**+1.3**
THR6	**Thira Island,**	**2.22**	**60**	P	**Pn**		**00 13 38.6**	**+1.1**
SERI	**Serifos**	**2.24**	**31**	P	**Pn**		**00 13 38.8**	**+1.0**
SERI				AML	AML		00 14 27.0	
	comp=E,499μm,0.8s							
SERI				AML	AML		00 14 30.5	
	comp=N,232μm,0.9s							
DID	**Didima**	**2.25**	**4**	P	**Pn**		**00 13 38.5**	**+0.5**
DID	**Didima**	**2.25**	**4**	P	**Pn**		**00 13 38.6**	**+0.5**
SANT	**Santorini**	**2.27**	**60**	P	**Pn**		**00 13 39.0**	**+0.7**
IOSP	**Ios island**	**2.35**	**51**	P	**Pn**		**00 13 39.8**	**+0.5**
IOSP	**Ios island**	**2.35**	**51**	P	**Pn**		**00 13 39.8**	**+0.5**
AMT	**Artemida-Makis**	**2.50**	**335**	P	**Pn**		**00 13 42.9**	**+1.3**
ZKR	**Zakros**	**2.62**	**92**	P	**Pn**		**00 13 44.9**	**+1.9**
ZKR	**Zakros**	**2.62**	**92**	P	**Pn**		**00 13 44.9**	**+1.9**
VLY	**Voula,Athens**	**2.66**	**13**	P	**Pn**		**00 13 44.6**	**+1.0**
VLY	**Voula,Athens**	**2.66**	**13**	P	**Pn**		**00 13 44.9**	**+1.2**
APE	**Apeiranthos**	**2.72**	**48**	P	**Pn**		**00 13 44.6**	**+0.2**
APE				AML	AML		00 14 30.9	
	comp=N,216μm,0.7s							
APE				AML	AML		00 14 33.4	
	comp=E,263μm,0.6s							
LOUT	**Loutraki**	**2.72**	**359**	P	**Pn**		**00 13 46.1**	**+1.6**
LOUT				AML	AML		00 14 46.0	
	comp=E,61μm,0.8s							
LOUT				AML	AML		00 14 47.6	
	comp=N,108μm,0.7s							
LTK	**Loutraki**	**2.76**	**359**	P	**Pn**		**00 13 46.8**	**+1.8**
ATHU	**Athens Univers**	**2.77**	**13**	P	**Pn**		**00 13 46.2**	**+1.1**
ATHU				AML	AML		00 14 41.6	
	comp=E,69μm,0.6s							
ATHU				AML	AML		00 14 46.8	
	comp=N,99μm,0.7s							
THAL	**Thalero**	**2.79**	**354**	P	**Pn**		**00 13 47.3**	**+2.0**
AMGA	**Amorgos Island**	**2.81**	**55**	P	**Pn**		**00 13 46.2**	**+0.6**
AMGA				AML	AML		00 14 32.7	
	comp=E,445μm,0.8s							
AMGA				AML	AML		00 14 40.9	
	comp=N,466μm,1.1s							
PTL	**Penteli**	**2.87**	**13**	P	**Pn**		**00 13 47.6**	**+1.1**
KLV	**Kalavryta, Ach**	**2.87**	**346**	P	**Pn**		**00 13 48.1**	**+1.6**
DRO	**Drossia**	**2.89**	**339**	P	**Pn**		**00 13 47.8**	**+1.1**
DRO	**Drossia**	**2.89**	**339**	P	**Pn**		**00 13 47.9**	**+1.1**
VIL2	**Platees**	**2.95**	**4**	P	**Pn**		**00 13 47.1**	**-0.6**
KARY	**Karystos**	**2.99**	**22**	P	**Pn**		**00 13 49.1**	**+1.0**
KARY				AML	AML		00 14 32.6	
	comp=E,152μm,1.0s							
KARY				AML	AML		00 14 53.9	
	comp=N,139μm,0.8s							
PROD	**Prodromos**	**3.00**	**358**	P	**Pn**		**00 13 49.1**	**+0.8**
PROD				AML	AML		00 14 46.4	
	comp=E,265μm,0.7s							
PROD				AML	AML		00 14 48.9	
	comp=N,210μm,0.8s							
RLS	**Riolos of Patr**	**3.06**	**336**	P	**Pn**		**00 13 50.2**	**+1.2**
TRIZ	**Trizonia**	**3.19**	**346**	P	**Pn**		**00 13 52.5**	**+1.6**
KALE	**Kalithea**	**3.21**	**347**	P	**Pn**		**00 13 52.8**	**+1.6**
KALE				AML	AML		00 14 56.2	
	comp=E,236μm,0.8s							
KALE				AML	AML		00 14 57.8	
	comp=N,283μm,0.7s							
EREA	**Eretria**	**3.24**	**13**	P	**Pn**		**00 13 52.7**	**+1.2**
EREA	**Eretria**	**3.24**	**13**	P	**Pn**		**00 13 52.9**	**+1.4**
EREA				AML	AML		00 14 51.5	
	comp=E,181μm,0.7s							
EREA				AML	AML		00 14 55.1	
	comp=N,150μm,1.0s							
SERG	**Sergoula**	**3.24**	**346**	P	**Pn**		**00 13 52.4**	**+0.8**
EFP	**Efpalio**	**3.29**	**344**	P	**Pn**		**00 13 52.4**	**+0.2**
LKR	**Lokris**	**3.39**	**360**	P	**Pn**		**00 13 54.8**	**+1.3**
LKR	**Lokris**	**3.39**	**360**	P	**Pn**		**00 13 54.9**	**+1.3**
KARP	**Karpathos**	**3.39**	**84**	P	**Pn**		**00 13 54.2**	**+0.6**
MRKA	**Markates**	**3.47**	**7**	P	**Pn**		**00 13 55.6**	**+0.9**
MRKA				AML	AML		00 14 45.5	
	comp=E,221μm,0.8s							
MRKA				AML	AML		00 15 10.4	
	comp=N,178μm,1.0s							
AXAR	**Agios Charalam**	**3.51**	**355**	P	**Pn**		**00 13 56.4**	**+1.1**
AXAR				AML	AML		00 15 02.1	
	comp=E,464μm,0.8s							
AXAR				AML	AML		00 15 11.6	
	comp=N,568μm,0.9s							
PVO	**Paravola**	**3.56**	**341**	P	**Pn**		**00 13 57.7**	**+1.8**
EVR	**Evrytania**	**3.78**	**345**	P	**Pn**		**00 14 01.6**	**+2.6**
AGG	**Agios Georgios**	**3.80**	**352**	P	**Pn**		**00 14 00.5**	**+1.2**
MAKR	**Makrakomi, Fth**	**3.81**	**349**	P	**Pn**		**00 14 00.9**	**+1.5**
MAKR				AML	AML		00 15 16.6	
	comp=E,181μm,0.7s							
MAKR				AML	AML		00 15 28.8	
	comp=N,175μm,0.9s							
SKIA	**Skiathos**	**3.92**	**5**	P	**Pn**		**00 14 02.1**	**+1.3**
CHOS	**

comp=E,23nm,0.2s
DEMI IAML 00 14 15.0
comp=N,16nm,0.3s
MLSB Milas 0.98 188 PG Pn 00 13 57.1 -0.1
MLSB SG Sn 00 14 11.1 -0.3
STEP BALIKESIR_Sava 1.12 351 *i* P Pn 00 13 59.5 +0.4
STEP *i* S Sn 00 14 14.6 -0.2
STEP IAML 00 14 16.0
comp=N,42nm,0.5s
STEP IAML 00 14 17.0
comp=E,61nm,0.3s
ZEY zmir 1.13 269 *i* P Pn 00 13 59.8 +0.6
ZEY *i* S Sb 00 14 14.3 +0.5
ZEY IAML 00 14 46.0
comp=N,58nm,1.7s
ZEY IAML 00 14 46.0
comp=E,22nm,2.7s
YER Yerkesik 1.17 167 PN Pn 00 14 00.2 +0.4
BODT Bodrum 1.31 203 PN Pb 00 14 01.8 -0.1
BALB Balikesir 1.37 358 PN Pb 00 14 03.0 +0.1
BALB SN Sg 00 14 21.8 +0.8
DURS Dursunbey 1.39 17 *i* P Pg 00 14 05.9 +2.2
CHOS Chios island 1.49 275 PN Pn 00 14 03.9 -0.3
CHOS SN Sn 00 14 23.1 -0.9

MAN 15 00:27:02.7,7˝38N×125°20E,h32km,mb4.4,ML3.2,MS3.0, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**0.39**	**197**	*eP*	Pn	00 27 12.6	+0.5
BUKP	**Musuan**	**0.51**	**344**	*eP*	Pn	00 27 14.6	+0.7
BUKP				*eS*	Sn	00 27 22.3	+0.7
CGP	**Cagayan de Oro**	**1.18**	**335**	*eP*	Pn	00 27 23.6	+0.7
CGP				*i* S	Sn	00 27 38.2	+0.2

MEX 15 00:31:56.7±0.4, 14˚49N×92˚39W, h69km±6km, MD3.9
GCG 15 00:32:00.8±0.5, 15˚41N×91˚75W, h56km±15km, MD3.6

ISC 15 00:31:58.7±1.9, 14˚7N±0˚2×92˚4W±0˚1, h65km±11km, n8, σ1°94/15, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		**0.21**	**30**	*eP*	Pn	**00 32 07.4**	**-1.3**
THIG				*eS*	Sn	**00 32 16.0**	**0.0**
STG3	**Santiaguito 3,**	**0.78**	**91**	*eP*	Pn	**00 32 13.5**	**-0.8**
STG3				*eS*	Sn	**00 32 27.1**	**+1.2**
ERG	**Entre ros, C**	**0.83**	**110**	*eP*	Pn	00 32 19.5	+4.7
ERG				*eS*	Sn	**00 32 32.0**	**+5.3**
PCIG		**1.27**	**320**	*eP*	Pn	**00 32 19.7**	**-0.8**
PCIG				*i* S	Sn	**00 32 37.3**	**+0.6**
FUG	**Fuego 3**	**1.51**	**100**	*eP*	Pn	**00 32 23.0**	**-0.8**
FUG				*eS*	Sn	**00 32 40.8**	**-1.9**
IXG	**Ixpaco**	**1.95**	**106**	*eP*	Pn	**00 32 29.8**	**0.0**
IXG				*eS*	Sn	**00 32 52.0**	**-1.4**
TGIG		**2.16**	**341**	*i* P	Pn	**00 32 32.7**	**+0.2**
TGIG				*i* S	Sn	**00 32 59.8**	**+1.5**
CMIG	**Matias Romero**	**3.37**	**315**	*eP*	Pn	**00 32 48.4**	**-0.5**
CMIG				*i* S	Sn	**00 33 27.8**	**+0.1**

MAN 15 00:38:58.1,5˝71N×125°38E,h19km,mb4.5,ML3.3,MS3.1, 1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.51**	**40**	*eP*	Pb	00 39 09.4	+0.9
DDMP				*eS*	Sn	00 39 19.2	+0.5
GSPH	**General Santos**	**0.57**	**311**	*iP*	Pb	00 39 07.6	-1.9
GSPH				*i* S	Sb	00 39 15.8	-1.4
SKMP	**Bagumbayan, Su**	**1.16**	**314**	*eP*	Pn	00 39 18.2	-1.1
SKMP				*eS*	Sn	00 39 34.7	0.0
KCP	**Kidapawan**	**1.32**	**348**	*eP*	Pn	00 39 21.8	+0.1
KCP				*i* S	Sb	00 39 39.6	+0.6

IDC 15 00:50:30.8±1.0, 24˚00S×66˚63W, h191km±10km, mb3.5/6, mb1 3.7/13, mb1mx3.5/42, mbtmp4.0/13, MS2.7/3, Ms1 2.7/3, ms1mx2.6/20, Error ellipse: s-maj=16.8km s-min=13.0km az=38.0
SJA 15 00:50:30.4±0.5, 24˚05S×66˚32W, h253km±14km, ML3.8, MW4.1
NEIC 15 00:50:30.9±2.0, 24˚06S±0˚07×66˚70W±0˚10, h195km±8km, mb4.0/7, Md4.1(SJA), Error ellipse: s-maj=12.8km s-min=10.1km az=93.0
VAO 15 00:50:31.9±0.4, 24˚03S×66˚87W, h230km±4km, mb4.2
GUC 15 00:50:32.9±0.5, 24˚00S×67˚22W, h227km±8km, ML4.7

ISC 15 00:50:30.9±0.6, 24˚02S±0˚04×66˚76W±0˚05, h205km±7km, n91, σ1°50/101, mb3.7/6, 6C-1D, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.34**	**121**	*i* P	**Pn**	**00 51 05.9**	**+2.1**
SLA				IAML		00 51 07.9	
comp=Z,412nm,0.3s							
AZAP	**Zapla**	**1.56**	**98**	*i* P	**Pn**	**00 51 07.5**	**+1.6**
AZAP				IAML		00 51 08.0	
comp=Z,1μm,0.2s							
YJA	**Yavi**	**2.17**	**32**	*i* P	**Pn**	**00 51 14.4**	**+2.3**
YJA				IAML		00 51 16.2	
comp=Z,67nm,0.6s							
YJA				*i* S	**Sn**	**00 51 47.4**	**+3.4**
LVC	**Limon Verde**	**2.42**	**305**	*eP*	**Pn**	**00 51 16.4**	**+1.8**
LVC				*eS*	**Sn**	**00 51 49.0**	**+0.3**
LVC	**Limon Verde**	**2.42**	**305**	P	**Pn**	**00 51 16.4**	**+1.8**
comp=Z,72nm,0.3s,baz=138,slow=8.0,SNR=86							
LVC				S	**Sn**	**00 51 48.3**	**-0.3**
comp=Z,81nm,0.3s,baz=240,slow=20,SNR=18							
LVC				LR	LR	00 52 06.7	
comp=Z,144nm,19.2s,baz=42,slow=38							
LVC	**Limon Verde**	**2.42**	**305**	*eP*	**Pn**	**00 51 16.0**	**+1.4**
PB15	**IPOC Station P**	**2.61**	**288**	*iP*	**Pn**	**00 51 18.2**	**+1.6**
PB15				*eS*	**Sn**	**00 51 52.1**	**-0.1**
GO02	**Mina Guanaco**	**2.81**	**246**	*iP*	**Pn**	**00 51 20.0**	**+1.1**
GO02				*i* S	**Sn**	**00 51 56.5**	**+0.1**
GO02				IAML		00 51 57.9	
comp=N,2μm,0.2s							
GO02	**Mina Guanaco**	**2.81**	**246**		**Pn**	**00 51 19.7**	**+0.8**
GO02					**Sn**	**00 51 56.3**	**-0.1**
PB06	**IPOC Station P**	**2.90**	**296**	*iP*	**Pn**	**00 51 21.2**	**+1.5**
PB06				*i* S	**Sn**	**00 51 57.3**	**-0.6**
PB06				IAML		00 51 59.7	
comp=N,1μm,0.2s							
PB09	**IPOC Station P**	**3.18**	**314**	*iP*	**Pn**	**00 51 24.9**	**+1.8**
PB09				*eS*	**Sn**	**00 52 04.3**	**+0.2**
PB09				IAML		00 52 06.6	
comp=N,464nm,0.3s							
PB05	**IPOC Station P**	**3.37**	**290**	*eP*	**Pn**	**00 51 26.0**	**+0.7**
PB05				*i* S	**Sn**	**00 52 06.0**	**-1.8**
PB05				IAML		00 52 08.2	
comp=E,625nm,0.2s							
PB03	**IPOC Station P**	**3.38**	**305**	*iP*	**Pn**	**00 51 26.5**	**+1.0**
PB03				*i* S	**Sn**	**00 52 07.1**	**-1.2**
PB03				IAML		00 52 08.8	
comp=E,1μm,0.2s							
PB10	**IPOC Station P**	**3.51**	**278**	*iP*	**Pn**	**00 51 27.7**	**+0.9**
PB10				*i* S	**Sn**	**00 52 09.8**	**-0.9**
PB10	**IPOC Station P**	**3.51**	**278**		**Pn**	**00 51 27.5**	**+0.7**
PB10					**Sn**	**00 52 09.3**	**-1.4**
PB04	**IPOC Station P**	**3.54**	**298**	*eP*	**Pn**	**00 51 28.2**	**+0.8**
PB04				*eS*	**Sn**	**00 52 10.3**	**-1.4**
PB04				IAML		00 52 12.1	
comp=N,1μm,0.4s							
PB04	**IPOC Station P**	**3.54**	**298**		**Pn**	**00 51 28.0**	**+0.6**
PB04					**Sn**	**00 52 09.8**	**-1.9**
CYA	**Choya**	**4.48**	**169**	*i* P	**Pn**	**00 51 39.6**	**+0.8**
GO03	**Copiap**	**4.74**	**221**		**Pn**	**00 51 41.2**	**-0.9**
GO03					**Sn**	**00 52 35.2**	**-3.0**
VCA	**Vinchina**	**4.87**	**195**	*i* P	**Pn**	**00 51 46.6**	**+2.8**
GO01	**Chusmiza**	**4.89**	**332**		**Pn**	**00 51 45.5**	**+1.0**
PB11	**IPOC Station P**	**5.02**	**327**		**Pn**	**00 51 45.8**	**0.0**
MNMC	**Minye Minye**	**5.54**	**331**		**Pn**	**00 51 53.0**	**+0.5**
GO04	**Tololo Observa**	**7.10**	**210**	Pn	Pn	00 52 10.3	-2.3
CFA	**Coronel Fontan**	**7.66**	**189**	P	**Pn**	**00 52 18.7**	**-1.1**
comp=N,1.4nm,0.3s,baz=300,slow=10,SNR=14							
CFA				S		00 53 39.5	
comp=N,3.4nm,0.3s,baz=147,slow=21,SNR=10							
CFA				LR	LR	00 56 03.6	
comp=N,64nm,18.6s,baz=258,slow=43							
LPAZ	**La Paz**	**7.80**	**350**	P	**Pn**	**00 52 23.3**	**+1.1**
comp=N,0.8nm,0.3s,baz=171,slow=5.8,SNR=15							
LPAZ				S	**Sn**	**00 53 49.4**	**-1.4**
comp=N,0.4nm,0.3s,baz=333,slow=14,SNR=6.2							
LPAZ				LR	LR	00 56 15.8	
comp=N,38nm,20.7s,baz=194,slow=44							
LPAZ	**La Paz**	**7.80**	**350**	*eP*	**Pn**	**00 52 23.6**	**+1.4**
LPAZ	**La Paz**	**7.80**	**350**		**Pn**	**00 52 23.0**	**+0.8**
CPUP	**Villa Florida**	**8.85**	**107**	P	**Pn**	**00 52 35.1**	**-0.1**
comp=N,0.1nm,0.3s,baz=296,slow=10,SNR=10							
CPUP	**Villa Florida**	**8.85**	**107**	*eP*	**Pn**	**00 52 35.3**	**+0.2**
CPUP	**Villa Florida**	**8.85**	**107**		**Pn**	**00 52 35.6**	**+0.5**
SIV	**San Ignacio**	**9.61**	**35**	P	**Pn**	**00 52 43.9**	**-1.3**
comp=N,0.6nm,0.3s,baz=220,slow=12,SNR=22							
SIV				S	**Sn**	**00 54 25.3**	**-7.6**
comp=N,0.2nm,0.3s,baz=239,slow=16,SNR=3.2							
ITQB	**Itaqui**	**10.66**	**124**	*eP*	**Pn**	**00 53 01.1**	**+2.6**
AQDB	**Aquidauana**	**10.84**	**73**	*eP*	**P**	**00 53 03.4**	**-3.9**
PP1B	**Ponte de Pedra**	**12.81**	**62**	*eP*	**Pn**	**00 53 25.9**	**-0.1**
TRCB	**Terra Rica**	**13.03**	**87**	*eP*	**P**	**00 53 29.9**	**-1.8**
SALV	**Santo Antonio**	**13.17**	**54**	*eP*	**P**	**00 53 31.1**	**-2.2**
PTGB	**Pitanga**	**13.42**	**96**	*eP*	**P**	**00 53 35.6**	**-0.4**
CPSB	**Cacapava Do Su**	**13.45**	**121**	*eP*	**P**	**00 53 35.7**	**-0.5**
ITAB	**Concordia**	**13.58**	**107**	*eP*	**Pn**	**00 53 35.7**	**+0.3**
PLTB	**Pedras Altas**	**13.95**	**126**	*eP*	**P**	**00 53 41.8**	**0.0**
C2SB	**Chapadao do Su**	**13.98**	**71**	*eP*	**P**	**00 53 41.8**	**-0.5**
PCMB	**Pacaembu**	**14.50**	**84**	*eP*	**P**	**00 53 47.6**	**-0.4**
OGAUY	**Aigu**	**14.70**	**137**	*eP*	**Pn**	**00 53 50.4**	**+1.2**
CNLB	**Canela**	**15.16**	**114**	*eP*	**Pn**	**00 53 54.2**	**-0.7**
SAML	**Samuel**	**15.38**	**13**	*eP*	**P**	**00 53 58.1**	**+0.4**
SAML	**Samuel**	**15.38**	**13**	P	**P**	**00 53 57.9**	**+0.2**
FRTB	**Fartura**	**15.77**	**91**	*eP*	**Pn**	**00 54 03.4**	**+1.0**
ITRB	**Iturama**	**15.82**	**77**	*eP*	**Pn**	**00 54 03.6**	**+0.6**
ARAG	**Araguaiana, MT**	**16.31**	**62**	*eP*	**Pn**	**00 54 09.1**	**+0.3**
CLDB	**Colider**	**16.73**	**40**	*eP*	**Pn**	**00 54 12.2**	**-1.7**
PLCA	**Paso Flores**	**16.96**	**190**	P	**P**	**00 54 17.5**	**+2.5**
comp=N,0.1nm,0.3s,baz=30,slow=8.1,SNR=3.1							
PLCA	**Paso Flores**	**16.96**	**190**	*eP*	**P**	**00 54 13.9**	**-1.1**
PLCA	**Paso Flores**	**16.96**	**190**	IAmb	IAmb	00 54 25.6	
comp=Z,0.7nm,0.4s							
BB19B	**Bebedouro**	**17.10**	**84**	*eP*	**Pn**	**00 54 18.2**	**0.0**
SPB	**Sao Paulo**	**17.70**	**93**	*eP*	**Pn**	**00 54 24.1**	**-1.1**
RCLB	**Rio Claro- Sao**	**17.75**	**89**	*eP*	**Pn**	**00 54 24.1**	**-1.8**
VAO	**Valinhos**	**18.19**	**91**	*eP*	**P**	**00 54 28.9**	**+0.3**
IPMB	**Ipameri, GO**	**18.33**	**74**	*eP*	**Pn**	**00 54 30.9**	**-1.8**
BDFB	**Brasilia**	**19.49**	**68**	P	**P**	**00 54 43.0**	**+0.3**
comp=Z,1.9nm,0.3s,baz=238,slow=12,SNR=63							
BDFB	**Brasilia**	**19.49**	**68**	P	**P**	**00 54 43.2**	**+0.4**
PMNB	**Patos De Minas**	**19.70**	**78**	*eP*	**P**	**00 54 45.5**	**+0.5**
BSCB	**Bom Sucesso**	**20.54**	**86**	*eP*	**P**	**00 54 53.7**	**-0.2**
PEXB	**Peixe**	**21.15**	**59**	*eP*	**P**	**00 54 59.7**	**-0.6**
VAS01	**Vassouras-RJ**	**21.51**	**90**	*eP*	**P**	**00 55 04.6**	**+0.6**
JANB	**Januaria**	**22.94**	**71**	*eP*	**P**	**00 55 17.5**	**0.0**
SMTB	**Santa Maria do**	**23.73**	**54**	*eP*	**P**	**00 55 24.9**	**+0.2**
SJMB	**Sao Joao De Ma**	**24.39**	**82**	*eP*	**P**	**00 55 29.7**	**-0.8**
BSFB	**Barra de Sao F**	**24.66**	**83**	*eP*	**P**	**00 55 32.1**	**-0.9**
NBPN	**Ponto Novo - B**	**28.46**	**67**	*eP*	**P**	**00 56 06.6**	**-0.5**
NBLA	**Lagarto - SE**	**30.44**	**70**	*eP*	**P**	**00 56 23.3**	**-1.2**
NBTA	**Tacaratu-PE**	**31.15**	**66**	*eP*	**P**	**00 56 29.6**	**-1.2**
NBPS	**Pedro II - PI**	**31.24**	**55**	*eP*	**P**	**00 56 31.1**	**-0.5**
NBMA	**Muriti-CE**	**31.53**	**63**	*eP*	**P**	**00 56 34.2**	**+0.1**
NBPB	**Pedra_Branca-C**	**31.95**	**59**	*eP*	**P**	**00 56 37.7**	**0.0**
NBAN	**Anadia - AL**	**32.39**	**69**	*eP*	**P**	**00 56 41.4**	**-0.1**
NBLI	**Livramento-PB**	**33.02**	**65**	*eP*	**P**	**00 56 47.3**	**+0.1**
NBPA	**Parau_RN**	**33.80**	**62**	*eP*	**P**	**00 56 53.5**	**-0.3**
TXAR	**Lajitas Array**	**63.82**	**324**	P	**P**	**01 00 43.4**	**+1.8**
comp=Z,0.4nm,0.7s,baz=148,slow=7.4,SNR=5.1							
DBIC	**Dimbokro**	**67.61**	**71**	P	**P**	**01 01 05.7**	**-0.3**
comp=Z,1.3nm,0.3s,baz=223,slow=5.8,SNR=7.7							
DBIC	**Dimbokro**	**67.61**	**71**	IAmb	IAmb	01 01 21.0	
comp=Z,6.0nm,1.1s							
ANMO	**Albuquerque**	**69.69**	**326**	P	**P**	**01 01 20.9**	**+2.3**
comp=Z,1.3nm,0.7s,baz=145,slow=9.2,SNR=4.6							
ANMO	**Albuquerque**	**69.69**	**326**	IAmb	IAmb	01 01 21.9	
comp=Z,1.7nm,0.8s							
TORD	**Torodi Ar. Bea**	**76.38**	**69**	P	**P**	**01 01 57.8**	**-0.2**
comp=Z,2.9nm,0.8s,baz=267,slow=7.5,SNR=30							
TORD	**Torodi Ar. Bea**	**76.38**	**69**	IAmb	IAmb	01 02 00.9	
comp=Z,2.4nm,0.7s							
ESDC	**Sonseca Array**	**86.27**	**43**	P	**P**	**01 02 51.5**	**+2.0**
comp=Z,0.4nm,0.6s,baz=234,slow=4.2,SNR=3.2							
ESDC	**Sonseca Array**	**86.27**	**43**	IAmb	IAmb	01 02 56.5	
comp=Z,1.1nm,1.1s							
YKA	**Yellowknife Ar**	**94.22**	**340**	P	**P**	**01 03 27.5**	**+1.5**
comp=Z,0.3nm,0.6s,baz=136,slow=4.2,SNR=6.4							
ZALV	**Zalesovo Beam**	**143.31**	**28**	PKP	PKPbc	01 09 39.4	+1.4
comp=Z,0.5nm,0.5s,baz=291,slow=4.0,SNR=3.2							
MKAR	**Makanchi Array**	**146.41**	**40**	PKPbc	**PKPab**	**01 09 48.8**	**-0.1**
comp=Z,1.6nm,0.8s,baz=308,slow=2.8,SNR=18							
CMAR	**Chiang Mai Arr**	**165.57**	**110**	PKPab	**PKPab**	**01 11 12.2**	**+0.8**
comp=Z,0.7nm,0.3s,baz=268,slow=4.5,SNR=4.3							

INET 15 01:24:44.9, 10˚98N×86˚33W, h15km, ML2.4

UCR 15 01:24:44.1±0.9, 11˚10N×86˚30W, h18km±8km, MD3.8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NY14	**Universidad de**	**0.88**	**120**	*i* P	Pb	01 24 60.0	-0.8
NY14				*i* S	Sg	01 25 12.5	-0.3
LAPC	**Finca la Perla**	**0.91**	**111**	*i* P	Pb	01 25 00.3	-1.2
BUEV	**Buena Vista**	**0.93**	**108**	*i* P	Pb	01 25 01.2	-0.5
GPS3	**Bodega del ICE**	**0.98**	**110**	*i* P	Pb	01 25 02.2	-0.4
GPS3				*i* S	Sg	01 25 16.2	0.0
GPS2	**Hotel Rincn d**	**0.99**	**110**	*i* P	Pb	01 25 02.0	-0.8
LIM1	**Limonal**	**1.10**	**111**	*i* P	Pb	01 25 03.5	-1.2
LIM1				*i* S	Sb	01 25 18.4	-0.4
MESS	**Mesas**	**1.14**	**108**	*i* P	Pn	01 25 04.4	-0.9
COLC	**Colonia**	**1.16**	**111**	*i* P	Pn	01 25 04.8	-0.7
HORNC	**Hornillas**	**1.17**	**109**	*i* P	Pn	01 25 04.4	-1.2
CUI	**Cuipilapa**	**1.20**	**111**	*eP*	Pn	01 25 05.2	-0.9
PTEN	**Parque Tenorio**	**1.35**	**106**	*i* P	Pn	01 25 08.2	+0.2

DDA 15 01:35:12.0, 35˚78N×31˚32E, h32km±14km, ML2.0
ISK 15 01:35:13.1, 35˚82N×31˚39E, h5km, ML2.6/16
NIC 15 01:35:15.6±0.0, 36˚07N×31˚71E, h32km±33km, Ml2.3/4

ISC 15 01:35:13.0±1.1, 35˚78N±0˚03×31˚35E±0˚03, h11km±10km, n35, σ1°40/54, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZI	**Gazipasa**	**0.91**	**59**	PG	**Pb**	**01 35 30.5**	**-0.2**
GAZI				SG	**Sn**	**01 35 43.8**	**-1.0**
GAZI	**Gazipasa**	**0.91**	**59**	*i* P	**Pb**	**01 35 30.5**	**-0.2**
GAZI				*i* S	**Sb**	**01 35 42.3**	**-0.5**
GAZI				IAML		01 35 47.0	
comp=N,39nm,0.2s							
GAZI				IAML		01 35 47.0	
comp=E,46nm,0.7s							
ALAN	**Alanya-ANTALYA**	**0.95**	**35**	PG	**Pb**	**01 35 31.4**	**-0.2**
AKUM	**Antalya-Kumluc**	**0.98**	**304**	*i* P	**Pg**	**01 35 30.7**	**-1.2**
AKUM				IAML		01 35 44.0	
comp=N,66nm,0.8s							
AKUM				*i* S	**Sg**	**01 35 45.1**	**+0.3**
AKUM				IAML		01 35 50.0	
comp=E,40nm,0.3s							
AKMS	**Akamas**	**1.10**	**133**	P	**Pg**	**01 35 34.7**	**+0.5**
AKMS				S	**Sn**	**01 35 51.1**	**+1.5**
AKMS				AML	AML	01 35 54.9	
comp=E,0.3nm,0.3s							
AKMS				AML	AML	01 35 54.9	
comp=E,0.3nm,0.3s							
AKMS				AML	AML	01 35 57.7	
comp=E,0.2nm,0.4s							
AKMS				AML	AML	01 35 57.7	
comp=E,0.2nm,0.4s							
KEPZ	**Antalya-Kepez**	**1.14**	**10**	*i* P	**Pg**	**01 35 33.7**	**-1.2**
KEPZ				*i* S	**Sg**	**01 35 48.2**	**-1.7**
KEPZ				IAML		01 35 50.0	
comp=N,52nm,0.5s							
KEPZ				IAML		01 35 52.0	
comp=E,45nm,0.7s							
ALFC	**Alefka**	**1.19**	**121**	P	**Pg**	**01 35 35.4**	**-0.5**
ALFC				S	**Sg**	**01 35 51.7**	**+0.3**
ALFC				AML	AML	01 35 54.2	
comp=E,0.2nm,0.2s							
ALFC				AML	AML	01 35 54.2	
comp=E,0.2nm,0.2s							
ALFC				AML	AML	01 35 55.3	
comp=E,0.2nm,0.3s							
ALFC				AML	AML	01 35 55.3	
comp=E,0.2nm,0.3s							
NATA	**Nata**	**1.41**	**135**	P	**Pn**	**01 35 39.5**	**+0.9**
NATA				S	**Sb**	**01 35 58.4**	**+1.2**
NATA				AML	AML	01 36 03.0	
comp=E,0.2nm,0.2s							
NATA				AML	AML	01 36 03.0	
comp=E,0.2nm,0.2s							
NATA				AML	AML	01 36 09.6	
comp=E,0.4nm,0.8s							
NATA				AML	AML	01 36 09.6	
comp=E,0.4nm,0.8s							
LEF	**Lefka**	**1.42**	**117**	PN	**Pg**	**01 35 40.4**	**+0.2**
LEF	**Lefka**	**1.42**	**117**	*i* P	**Pn**	**01 35 37.3**	**-1.3**
LEF				*i* S	**Sb**	**01 35 54.5**	**-2.9**
LEF				IAML		01 36 03.0	
comp=N,22nm,0.7s							
LEF				IAML		01 36 06.0	
comp=E,25nm,0.9s							
KORT	**Korkueli**	**1.47**	**327**	PN	**Pg**	**01 35 41.8**	**+0.7**
KORT	**Korkueli**	**1.47**	**327**	*i* P	**Pg**	**01 35 42.1**	**+1.0**
KORT				*i* S	**Sg**	**01 36 00.6**	**+0.4**
TEKE	**Tekeli-Mersin**	**1.48**	**75**	PN	**Pg**	**01 35 40.7**	**-0.6**
TEKE				SN	**Sg**	**01 36 01.6**	**+1.1**
ELL	**Elmali**	**1.52**	**310**	PN	**Pg**	**01 35 41.9**	**-0.2**
ELL				SN	**Sg**	**01 36 03.5**	**+1.6**
ELL	**Elmali**	**1.52**	**310**	P	**Pb**	**01 35 41.5**	**+0.3**
ERMK	**Ermenek**	**1.53**	**55**	*i* P	**Pg**	**01 35 42.4**	**0.0**
ERMK				*i* S	**Sg**	**01 36 02.9**	**+0.6**
ERMK				IAML		01 36 11.0	
comp=N,30nm,0.5s							
ERMK				IAML		01 36 11.0	
comp=E,17nm,0.3s							
SZAC	**Souni**	**1.61**	**129**	P	**Pn**	**01 35 42.3**	**+0.9**
SZAC				AML	AML	01 36 13.8	
comp=E,0.1nm,0.5s							
SZAC				AML	AML	01 36 17.5	
comp=E,0.2nm,0.5s							
CSS	**Mathiatis**	**1.81**	**116**	PN	**Pb**	**01 35 46.9**	**+0.8**
CSS	**Mathiatis**	**1.81**	**116**	P	**Pn**	**01 35 43.6**	**-0.5**
CSS				S	**Sn**	**01 36 05.2**	**-1.9**
TEVE	**Tevekalti-Mers**	**1.82**	**68**	PN	**Pb**	**01 35 46.3**	**0.0**
AKKU	**Akkuyu-Mersin**	**1.82**	**77**	PN	**Pb**	**01 35 46.5**	**+0.1**
GULN	**MERSIN_Gulnar**	**1.82**	**76**	*i* P	**Pb**	**01 35 45.9**	**-0.4**
GULN				*i* S	**Sb**	**01 36 08.6**	**-0.6**
GULN				IAML		01 36 20.0	
comp=N,14nm,0.6s							
GULN				IAML		01 36 21.0	
comp=E,13nm,0.7s							
ASGA	**Asgata**	**1.84**	**122**	P	**Pn**	**01 35 44.8**	**+0.3**
IKL	**Isikli**	**1.95**	**76**	PN	**Pb**	**01 35 47.7**	**-0.8**
MVOU	**Mavrovouni**	**2.01**	**111**	P	**Pn**	**01 35 44.6**	**-2.2**
MVOU				S	**Sn**	**01 36 08.5**	**-3.4**
KEBE	**Keben-Mersin**	**2.03**	**70**	PN	**Pb**	**01 35 49.3**	**-0.5**
BAGO	**Egridir - ISPA**	**2.26**	**349**	*i* P	**Pn**	**01 35 47.1**	**-3.2**
BAGO				*i* S	**Sn**	**01 36 18.8**	**+0.6**
KONT	**Konya--Tatoy**	**2.31**	**20**	PN	**Pb**	**01 35 53.1**	**-1.6**
KONT	**Konya--Tatoy**	**2.31**	**20**	*i* P	**Pn**	**01 35 51.8**	**+0.8**
KONT				*i* S	**Sb**	**01 36 23.1**	**-0.2**
DOGA	**KONYA_Doganhis**	**2.34**	**6**	*i* P	**Pn**	**01 35 52.7**	**+1.2**
DOGA				*i* S	**Sn**	**01 36 21.6**	**+1.3**
DOGA				IAML		01 36 23.0	
comp=N,10nm,0.5s							
DOGA				IAML		01 36 26.0	
comp=E,8.0nm,0.8s							
KERG	**Konya-Eregli**	**2.77**	**53**	*i* P	**Pn**	**01 35 58.8**	**+1.4**
KERG				*i* S	**Sn**	**01 36 32.5**	**+1.7**
KERG				IAML		01 36 45.0	
comp=N,10nm,0.7s							
KERG				IAML		01 36 45.0	
comp=E,11nm,0.4s							
MERS	**Mersin**	**2.78**	**66**	PN	**Pn**	**01 35 59.8**	**+2.3**
CHBY	**Cihanbeyli**	**3.06**	**23**	PN	**Pn**	**01 36 02.8**	**+1.4**
CMRD	**Camardi-Nigde**	**3.48**	**56**	PN	**Pn**	**01 36 09.7**	**+2.6**
TAHT	**Tahtakopru-Hat**	**3.96**	**80**	PN	**Pn**	**01 36 16.6**	**+2.9**

IDC 15 01:43:38.5±2.8, 29˚92N×142˚22E, h55km±27km, mb3.3/7, mb1 3.5/9, mb1mx3.3/57, mbtmp3.6/9, ML3.0/2, MS2.8/1, Ms1 2.8/1, ms1mx2.3/23, Error ellipse: s-maj=38.5km s-min=19.0km az=77.0

ISC 15 01:43:34.6±1.1, 29˚83N±0˚08×142˚2E±0˚3, h26km, n10, σ0°66/10, mb3.8/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.72**	**181**	P	**Pb**	**01 44 23.1**	**+0.4**
3.4nm,0.3s,baz=15,slow=20,SNR=2.4							
JCJ				S	**Sn**	**01 44 48.2**	**-0.6**
15nm,0.3s,baz=135,slow=20,SNR=4.0							
MJAR	**Matsushiro Arr**	**7.50**	**334**	P	**Pn**	**01 45 21.7**	**-0.5**
0.2nm,0.3s,baz=159,slow=14,SNR=4.4							
KLR	**Kul'dur**	**20.96**	**341**	P	**P**	**01 48 14.9**	**-0.6**
0.6nm,0.4s,

comp=Z,29nm,21.4s,baz=155,slow=40
SHO Shikotan 13.00 12 *e*P **Pn 01 47 52.4 -3.4**
KSRS Korea Array 13.97 301 Pn **Pn 01 48 10.1 +1.0**
0.2nm,0.3s,baz=111,slow=12,SNR=13
KSRS LR LR 01 53 39.0
comp=Z,48nm,21.0s,baz=110,slow=38
YSS Yuzh-Sakhalins 15.73 359⇑*e*P **Pn 01 48 29.9 -2.7**
YSS *eS* **Sn 01 51 25.8 -0.1**
YSS pmax pmax
comp=Z,150nm,1.0s
YSS pmax pmax
comp=N,90nm,0.8s
YSS pmax pmax
comp=E,110nm,1.3s
YSS smax smax
comp=N,70nm,0.4s
YSS smax smax
comp=E,60nm,0.5s
KLR Kul'dur 19.93 338⇓*e*P **Pn 01 49 24.5 +0.2**
KLR pmax pmax
comp=Z,2.0nm,0.9s
KLR Kul'dur 19.93 338 P **Pn 01 49 23.1 -1.3**
comp=Z,0.2nm,0.3s,baz=94,slow=11,SNR=4.0
BJT Baijiatuau 23.50 299 P **P 01 49 58.9 -1.6**
BJT pmax pmax
comp=Z,13nm,1.0s
BJT Baijiatuau 23.50 299 P **P 01 49 58.9 -1.6**
BJT IAmb IAmb 01 50 01.9
comp=Z,13nm,1.0s
H11N2 WAKE ISLAND Hy 24.31 112 T T 02 15 11.8
baz=304,slow=74,SNR=4.7
H11N1 WAKE ISLAND Hy 24.32 112 T T 02 15 12.3
baz=304,slow=74,SNR=4.9
H11N3 WAKE ISLAND Hy 24.33 112 T T 02 15 09.7
baz=304,slow=74,SNR=4.3
PETK Petropavlovsk- 24.34 22 LR LR 02 00 25.6
comp=Z,33nm,19.7s,baz=240,slow=38
H11S3 WAKE ISLAND Hy 24.83 115 T T 02 15 58.5
baz=310
H11S1 WAKE ISLAND Hy 24.84 115 T T 02 15 59.0
baz=310
H11S2 WAKE ISLAND Hy 24.85 115 T T 02 16 01.3
baz=310
HIA Hailar 25.18 322⇑*e*P **P 01 50 16.5 +0.5**
HIA pmax pmax
comp=Z,15nm,0.8s
ZEA Zeya 25.25 338 *e*P **P 01 50 16.8 +0.3**
ZEA *e* 01 50 25.0
ZEA pmax pmax
comp=Z,12nm,1.0s
ULN Ulaanbaatar 32.02 312⇑*e*P **P 01 51 20.0 +2.9**
ULN pmax pmax
comp=Z,8.0nm,1.7s
ULN Ulaanbaatar 32.02 312 P **P 01 51 16.2 -0.9**
SEY Seymchan 32.31 8 P **P 01 51 19.8 +0.6**
comp=Z,2.9nm,0.9s,baz=127,slow=20,SNR=3.5
SONM Songino Array 32.43 311 P **P 01 51 20.4 -0.3**
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM Songino Array 32.43 311 P **P 01 51 22.7 +2.0**
comp=Z,1.6nm,0.8s,baz=114,slow=8.6,SNR=9.1
SONM Songino Array 32.43 311 P **P 01 51 20.4 -0.3**
BILL Bilibino 39.30 14⇓*e*P **P 01 52 19.4 +0.3**
BILL *e* 01 52 23.7
BILL 01 53 48.0
BILL pmax pmax
comp=Z,2.0nm,0.9s
BILL MLR MLR
comp=Z,36nm,14.0s
TIXI Tiksi 41.23 353⇑*e*P **P 01 52 36.2 +1.2**
TIXI pmax pmax
comp=Z,1.0nm,1.3s
CMAR Chiang Mai Arr 41.74 263 P **P 01 52 39.3 -0.6**
comp=Z,0.8nm,0.3s,baz=58,slow=6.8,SNR=3.4
ZALV Zalesovo Beam 46.97 317 P **P 01 53 21.3 +0.1**
ZALV 01 54 53.8
ZALV Zalesovo Beam 46.97 317 P **P 01 53 21.1 -0.2**
comp=Z,0.7nm,0.3s,baz=120,slow=8.5,SNR=5.6
ZALV PcP **PcP 01 54 53.2 0.0**
comp=Z,0.4nm,0.3s,baz=117,slow=2.3,SNR=3.2
ZALV Zalesovo Beam 46.97 317 P **P 01 53 21.2 +0.1**
ZALV **PcP 01 54 53.8 +0.5**
MK31 Makanchi Array 48.54 307 P **P 01 53 34.5 +0.9**
MK31 01 54 59.0
MK31 pmax pmax
comp=Z,4.0nm,0.9s
MK31 Makanchi Array 48.54 307 P **P 01 53 34.5 +0.9**
MK31 IAmb IAmb 01 53 38.9
comp=Z,4.4nm,0.8s
MK31 PcP **PcP 01 54 59.0 -0.1**
MKAR Makanchi Array 48.54 307 P **P 01 53 34.2 +0.6**
comp=Z,5.7nm,0.7s,baz=86,slow=9.0,SNR=37
MKAR Makanchi Array 48.54 307 P **P 01 53 32.8 -0.8**
MAKZ Makanchi 48.76 307 P **P 01 53 35.7 +0.5**
MAKZ pmax pmax
comp=Z,5.0nm,0.5s
MAKZ Makanchi 48.76 307 P **P 01 53 35.7 +0.5**
KURK Kurchatov 50.73 312⇑*e*P **P 01 53 51.1 +1.0**
KURK pmax pmax
comp=Z,5.0nm,1.0s
KURK Kurchatov 50.73 312 P **P 01 53 50.8 +0.6**
KURK IAmb IAmb 01 53 52.1
comp=Z,3.9nm,0.8s
WRAB Tennant Creek 51.52 190⇑*e*P **P 01 53 55.8 -0.5**
WRAB pmax pmax
comp=Z,39nm,2.5s
WRA Warramunga Arr 51.53 190 P **P 01 53 56.6 +0.2**
WRA Warramunga Arr 51.53 190 P **P 01 53 56.3 -0.1**
comp=Z,2.9nm,0.8s,baz=12,slow=7.8,SNR=9.2
WRA Warramunga Arr 51.53 190 P **P 01 53 56.6 +0.2**
NRN Naryn 53.77 301 P **P 01 54 12.7 -0.6**
NRN pmax pmax
comp=Z,3.0nm,1.0s
NRN Naryn 53.77 301 P **P 01 54 12.7 -0.6**
ILAR Eielson Array 53.77 30 P **P 01 54 12.9 +0.4**
ILAR Eielson Array 53.77 30 P **P 01 54 12.5 0.0**
comp=Z,1.0nm,0.7s,baz=259,slow=5.8,SNR=10.0
ILAR Eielson Array 53.77 30 P **P 01 54 12.9 +0.4**
AAK Ala-Archa 54.62 303*de*P **P 01 54 22.6 +3.3**
AAK pmax pmax
comp=Z,4.0nm,1.7s
AAK Ala-Archa 54.62 303 P **P 01 54 19.4 +0.1**
ASAR Alice Springs 55.25 190 P **P 01 54 25.2 +1.5**
comp=Z,0.3nm,0.4s,baz=1.0,slow=5.7,SNR=5.3
ARSB Arslanbob 56.01 301 P **P 01 54 29.8 +0.6**
ARSB IAmb IAmb 01 54 48.1
comp=Z,7.6nm,1.1s
MLH Mauna Loa 56.22 86 P **P 01 54 29.4 -1.8**
KK31 Karatay Array 57.37 304 P **P 01 54 39.4 +0.7**
KK31 pmax pmax
comp=Z,8.0nm,0.9s
KK31 Karatay Array 57.37 304 P **P 01 54 39.4 +0.7**
KKAR Karatay Array 57.37 304 P **P 01 54 40.0 +1.2**
KKAR pmax pmax
comp=Z,8.0nm,0.9s
KKAR Karatay Array 57.37 304 P **P 01 54 40.0 +1.2**
NIL Nilore 57.92 292 P **P 01 54 43.6 +0.8**
NIL pmax pmax
comp=Z,14nm,0.7s
NIL Nilore 57.92 292 P **P 01 54 43.5 +0.8**
EPYK Eagle Plains 57.97 28 P **P 01 54 44.2 +1.6**
INK Inuvik 59.00 26 P **P 01 54 50.7 +1.0**
comp=Z,1.6nm,0.5s,baz=269,slow=4.7,SNR=15
INK Inuvik 59.00 26 P **P 01 54 50.8 +1.1**
KBL Kabul 60.94 295 P **P 01 55 04.7 +0.9**
KBL pmax pmax
comp=Z,6.0nm,1.0s
KBL Kabul 60.94 295 P **P 01 55 04.7 +0.9**
KBL IAmb IAmb 01 55 15.7
comp=Z,6.1nm,1.0s
ARU Arti 61.69 321*d i*P **P 01 55 09.6 +1.4**
ARU 01 55 50.3
ARU 01 57 20.4
ARU S **S 02 03 33.6 +4.9**
ARU SS **SS 02 07 38.6 +8.7**
ARU pmax pmax
comp=Z,7.0nm,1.0s
ARU Arti 61.69 321 P **P 01 55 08.8 +0.5**
ARU IAmb IAmb 01 55 10.2
comp=Z,5.6nm,1.0s
C36M Paulatuk 62.18 24 P **P 01 55 12.1 +0.7**
C36M IAmb IAmb 01 55 12.3
comp=Z,5.2nm,1.1s
ABKAR Akbulak array 62.82 313 P **P 01 55 15.9 -0.1**
ABKAR IAmb IAmb 01 55 25.9

comp=Z,3.0nm,0.7s
AKTO Aktyubinsk 63.66 315 P **P 01 55 22.7 +1.2**
comp=Z,1.5nm,0.8s,baz=82,slow=13,SNR=4.7
YKA Yellowknife Ar 68.19 29 P **P 01 55 50.8 +0.4**
comp=Z,1.1nm,0.5s,baz=297,slow=6.4,SNR=16
ARCES ARCESS Array B 69.93 341 P **P 01 56 01.6 +0.5**
comp=Z,2.9nm,0.8s,baz=57,slow=6.7,SNR=4.1
ARCES ARCESS Array B 69.93 341 P **P 01 56 01.2 +0.1**
OBN Obninsk 73.61 325⇓*e*P **P 01 56 24.1 +0.7**
OBN *e* 01 56 44.3
OBN pmax pmax
comp=Z,10.0nm,1.2s
VSR Storozhevoye 74.25 321 *e*P **P 01 56 28.8 +1.5**
VSR pmax pmax
comp=E,8.0nm,1.1s
VSR pmax pmax
comp=Z,4.0nm,1.0s
VSR pmax pmax
comp=N,6.0nm,0.8s
FINES FINESS Array B 74.62 334 *i*P **P 01 56 29.7 +0.5**
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 74.62 334 P **P 01 56 29.4 +0.2**
comp=Z,2.1nm,0.8s,baz=44,slow=6.6,SNR=5.0
FINES FINESS Array B 74.62 334 P **P 01 56 28.4 -0.8**
BMO Blue Mountains 74.91 47 P **P 01 56 31.9 +0.5**
BMO pmax pmax
comp=Z,2.0nm,0.6s
BMO Blue Mountains 74.91 47 P **P 01 56 31.9 +0.5**
BEKR Bekworth 75.32 52 IAmb IAmb 01 56 36.0
comp=Z,4.5nm,0.9s
KBZ Khabaz 75.79 313⇑*e*P **P 01 56 38.2 +1.9**
KBZ Khabaz 75.79 313 P **P 01 56 37.7 +1.4**
comp=Z,4.1nm,0.8s,baz=87,slow=5.7,SNR=8.4
CMB Columbia Colle 76.17 54 IAmb IAmb 01 56 40.9
comp=Z,4.7nm,1.0s
YERR Yerington 76.50 53 IAmb IAmb 01 56 43.1
comp=Z,4.8nm,1.0s
RYN Ryan 77.16 53 IAmb IAmb 01 56 46.8
comp=Z,7.4nm,1.2s
KVN Kaiserville 77.24 52 P **P 01 56 45.1 +0.2**
KVN pmax pmax
comp=Z,3.0nm,0.9s
KVN Kaiserville 77.24 52 P **P 01 56 45.1 +0.2**
KVN IAmb IAmb 01 56 46.8
comp=Z,3.4nm,0.9s
NVAR Mina Array Bea 77.41 53 P **P 01 56 47.4 +1.5**
comp=Z,2.6nm,0.7s,baz=289,slow=5.5,SNR=18
NVAR LR LR 02 23 34.7
comp=Z,38nm,21.2s,baz=265,slow=30
NVAR Mina Array Bea 77.41 53 P **P 01 56 45.4 -0.5**
FFC Flin Flon 77.87 33 P **P 01 56 47.8 -0.1**
FFC pmax pmax
comp=Z,4.0nm,0.8s
FFC Flin Flon 77.87 33 P **P 01 56 47.8 -0.1**
FFC IAmb IAmb 01 56 49.6
comp=Z,4.1nm,0.8s
AKASG Malin Array Be 79.77 324*ce*P **P 01 57 00.3 +2.0**
AKASG Malin Array Be 79.77 324 P **P 01 56 58.6 +0.3**
comp=Z,0.4nm,0.4s,baz=46,slow=5.1,SNR=4.3
AKASG Malin Array Be 79.77 324 P **P 01 56 58.5 +0.1**
NB2 NORSAR Subarra 80.09 338 P **P 01 57 00.2 +0.3**
comp=Z,0.9nm,0.6s,baz=40,slow=5.3
NOA NORSAR Array B 80.09 338 P **P 01 57 00.2 +0.3**
comp=Z,0.9nm,0.6s,baz=40,slow=5.3,SNR=4.8
DUG Dugway, Tooele 80.15 49 P **P 01 57 01.3 +0.5**
DUG pmax pmax
comp=Z,2.0nm,0.6s
DUG Dugway, Tooele 80.15 49 P **P 01 57 01.3 +0.5**
PDAR Pinedale Array 80.78 45 P **P 01 57 05.0 +0.8**
comp=Z,0.9nm,0.8s,baz=266,slow=1.9,SNR=6.9
PDAR Pinedale Array 80.78 45 P **P 01 57 04.1 -0.1**
KNB Kanab 81.86 52 P **P 01 57 10.0 0.0**
KNB pmax pmax
comp=Z,6.0nm,1.0s
KNB Kanab 81.86 52 P **P 01 57 10.0 0.0**
BR131 Keskin Array S 83.78 313 P **P 01 57 18.4 -1.5**
BR131 pmax pmax
comp=Z,3.0nm,0.9s
BR131 Keskin Array S 83.78 313 P **P 01 57 18.4 -1.5**
BRTR Keskin Array B 83.78 313 P **P 01 57 20.8 +0.9**
comp=Z,2.4nm,0.9s,baz=103,slow=3.5,SNR=11
BRTR Keskin Array B 83.78 313 P **P 01 57 20.2 +0.4**
RAYN Ar Rayn 84.19 294 P **P 01 57 22.2 0.0**
RAYN pmax pmax
comp=Z,6.0nm,0.9s
RAYN Ar Rayn 84.19 294 P **P 01 57 22.1 0.0**
MMAI Mount Meron Ar 86.49 307 P **P 01 57 34.7 +1.2**
comp=Z,1.2nm,0.8s,baz=45,slow=8.4,SNR=2.9
TXAR Lajitas Array 92.55 53 P **P 01 58 03.3 +1.2**
comp=Z,1.3nm,0.8s,baz=313,slow=2.5,SNR=6.4
TORD Torodi Ar. Bea 122.38 314 PKP **PKiKP 02 03 46.2 -0.1**
comp=Z,0.4nm,0.8s,baz=358,slow=1.4,SNR=5.4
LPAZ La Paz 147.96 70 PKPbc **PKPab 02 04 38.7 -0.9**
comp=Z,2.8nm,0.9s,baz=270,slow=20,SNR=8.2
SIV San Ignacio 153.29 61 PKPbc **PKiKP 02 04 48.4 -0.7**
comp=Z,0.7nm,0.6s,baz=99,slow=1.6,SNR=5.3

IDC 15 01:46:11.9±11.0, 16°50S×173°48W, h0km, mb3.9/2, mb1 4.1/2, mb1mx3.6/46, mbtmp3.9/2, Error ellipse: s-maj=545.8km s-min=40.6km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**49.71**	**253**	P	P		01 55 06.3	+0.1
	1.4nm,0.4s,baz=86,slow=8.2,SNR=13							
ILAR	**Eielson Array**	**83.53**	**11**	P	P		01 58 41.8	+0.4
	0.4nm,0.8s,baz=225,slow=6.0,SNR=6.3							
BRTR	**Keskin Array B**	**146.95**	**320**	PKPbc	PKPdf		02 05 55.6	+0.6
	1.1nm,0.7s,baz=90,slow=2.4,SNR=7.0							
MMAI	**Mount Meron Ar**	**149.19**	**308**	PKPbc	PKPbc		02 06 02.2	-0.8
	0.5nm,0.4s,baz=86,slow=7.4,SNR=3.6							

IDC 15 01:48:58.6±1.0, 31°05N×143°44E, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.5/60, mbtmp3.7/8, ML3.9/1, Error ellipse: s-maj=31.7km s-min=24.1km az=115.0
NEIC 15 01:49:02.7±1.3, 30°99N±0°03×143°3E±0°2, h38km±6km, mb4.2/8, Error ellipse: s-maj=22.4km s-min=3.4km az=80.0
JMA 15 01:49:03.4±0.4, 31°54N×143°01E, h72km, M3.8

ISC 15 01:49:02.8±0.7, 30°98N±0°07×143°2E±0°1, h35km, n28, σ1§16/25, mb3.8/12, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**3.98**	**194**	Pn	Pn	**Pn**	**01 50 01.8**	**+0.4**
	7.6nm,0.3s,baz=18,slow=20,SNR=4.6							
JCJ				Sn	Sn	**Sn**	**01 50 45.9**	**-0.9**
	5.0nm,0.3s,baz=288,slow=20,SNR=2.4							
JOD2	**Odawara 2**	**5.51**	**322**	P	Pn		01 50 16.8	-5.6
JOD2				S	Sn		01 51 12.1	-12
JHU	**Hanno**	**5.88**	**327**	S	Sn		01 51 21.2	-12
JRY	**Ryogami san**	**6.19**	**325**	P	Pn		01 50 26.7	-5.1
JRY				S	Sn		01 51 30.9	-10
JAG	**Ashikaga**	**6.28**	**331**	P	Pn		01 50 27.4	-5.5
JAG				S	Sn		01 51 32.3	-11
MJAR	**Matsushiro Arr**	**6.95**	**324**	Pn	**Pn**		**01 50 42.5**	**+0.3**
KSRS	**Korea Array**	**14.21**	**301**	Pn	**Pn**		**01 52 19.4**	**-2.1**
	0.2nm,0.3s,baz=105,slow=14,SNR=3.8							
MDJ	**Mudanjiang**	**17.33**	**326**			**P**	**01 53 03.0**	**0.0**
SONM	**Songino Array**	**32.69**	**312**	P		**P**	**01 55 33.6**	**+1.7**
	0.8nm,1.6s,baz=92,slow=8.7,SNR=3.4							
PMG	**Port Moresby**	**40.33**	**174**	P		**P**	**01 56 36.8**	**-0.3**
PMG				IAmb	IAmb		01 56 40.5	
	comp=Z,10.0nm,0.8s							
ZALV	**Zalesovo Beam**	**47.23**	**317**	P		**P**	**01 57 31.0**	**-1.2**
MK31	**Makanchi Array**	**48.80**	**307**	P		**P**	**01 57 44.4**	**-0.1**
MK31				IAmb	IAmb		01 57 46.7	
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**48.80**	**307**	P		**P**	**01 57 46.2**	**+1.8**
	comp=Z,1.0nm,0.5s,baz=90,slow=9.8,SNR=6.5							
MKAR	**Makanchi Array**	**48.80**	**307**	P		**P**	**01 57 46.1**	**+1.7**
MAKZ	**Makanchi**	**49.01**	**307**	P		**P**	**01 57 46.6**	**+0.5**
MAKZ				IAmb	IAmb		01 57 48.4	
	comp=Z,1.3nm,0.5s							
IMAR	**Indian Mountai**	**51.18**	**28**	P		**P**	**01 58 02.2**	**0.0**
WRAB	**Tennant Creek**	**51.34**	**191**	P		**P**	**01 58 05.0**	**+1.1**
WRA	**Warramunga Arr**	**51.35**	**191**	P		**P**	**01 58 05.5**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=8.0,slow=7.6,SNR=3.5							
WRA	**Warramunga Arr**	**51.35**	**191**	P		**P**	**01 58 03.2**	**-0.8**
MLY	**Manley**	**52.27**	**29**	P		**P**	**01 58 09.0**	**-1.4**
ILAR	**Eielson Array**	**53.88**	**30**	P		**P**	**01 58 21.3**	**-0.9**
	comp=Z,0.1nm,0.6s,baz=268,slow=7.0,SNR=3.5							
ILAR	**Eielson Array**	**53.88**	**30**	P		**P**	**01 58 21.1**	**-1.2**
KK31	**Karatay Array**	**57.62**	**304**	P		**P**	**01 58 49.9**	**+0.5**
KK31				IAmb	IAmb		01 58 53.0	
	comp=Z,2.1nm,1.0s							
KKAR	**Karatay Array**	**57.62**	**304**	P		**P**	**01 58 49.0**	**-0.4**
KKAR				IAmb	IAmb		01 58 53.0	
	comp=Z,2.1nm,1.0s							
YKA	**Yellowknife Ar**	**68.31**	**29**	P		**P**	**01 59 59.6**	**-0.4**
	comp=Z,0.1nm,0.5s,baz=299,slow=6.4,SNR=4.8							
NVAR	**Mina Array Bea**	**77.42**	**53**	P		**P**	**02 00 56.6**	**+1.8**
	comp=Z,0.5nm,0.6s,baz=305,slow=6.4,SNR=4.5							
NVAR	**Mina Array Bea**	**77.42**	**53**	P		**P**	**02 00 53.8**	**-1.1**
PDAR	**Pinedale Array**	**80.83**	**45**	P		**P**	**02 01 13.4**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=318,slow=1.2,SNR=2.6							

SOME 15 01:52:44.2, 42°30N×82°43E, h15km
NNC 15 01:52:46.0±1.4, 42°34N×82°37E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=11.1km s-min=6.9km az=157.0

ISC 15 01:52:47.6±1.9, 42°45N±0°09×82°31E±0°06, h10km, n42, σ1§94/61, 2C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.21**	**290**	*e*P		**Pn**	**01 53 24.7**	**+0.2**
	35nm,0.3s							
SHLS				*e*S		**Sn**	**01 53 53.6**	**+1.6**
	54nm,0.2s							
SHLS	**Shalkode**	**2.21**	**290**	Pg		**Pn**	**01 53 24.5**	**-0.1**
	35nm,0.3s							
SHLS				Lg		Lg	01 53 53.4	
	59nm,0.4s							
PDGK	**Podgornoye**	**2.25**	**294**	Pg		**Pg**	**01 53 29.7**	**-1.1**
	8.5nm,0.3s							
PDGK				Lg		Lg	01 54 02.6	
	35nm,0.4s							
PDGK	**Podgornoye**	**2.25**	**294**	⇑Pg		**Pg**	**01 53 29.6**	**-1.2**
	6.1nm,0.3s							
PDGK				⇓Lg		Lg	01 54 02.1	
	47nm,0.6s							
UZB	**Uzynbulak**	**2.52**	**287**	*e*P		**Pb**	**01 53 34.2**	**+1.1**
	4.1nm,0.3s							
UZB				*e*S		**Sg**	**01 54 10.3**	**+1.7**
	33nm,0.4s							
UZB	**Uzynbulak**	**2.52**	**287**	Pg		**Pb**	**01 53 34.2**	**+1.1**
	5.0nm,0.3s							
UZB				Lg		Lg	01 54 10.3	
	34nm,0.3s							
DJR	**Jarkent**	**2.63**	**316**	*e*P		**Pb**	**01 53 35.3**	**+0.4**
	4.1nm,0.3s							
DJR				*e*S		**Sg**	**01 54 12.2**	**+0.2**
	20nm,0.5s							
DJR	**Jarkent**	**2.63**	**316**	Pg		**Pb**	**01 53 35.3**	**+0.4**
	4.1nm,0.3s							
DJR				Lg		Lg	01 54 12.2	
	20nm,0.5s							
KPKS	**Kokpek**	**2.85**	**292**	*e*P		**Pb**	**01 53 39.1**	**+0.5**
	9.9nm,0.2s							
KPKS				*e*S		**Sg**	**01 54 18.4**	**-0.8**
	38nm,0.5s							
ZHN	**Zhinishke**	**2.94**	**285**	*e*P		**Pb**	**01 53 41.1**	**+0.8**
	3.9nm,0.1s							
ZHN				*e*S		**Sg**	**01 54 21.4**	**-0.7**
	7.5nm,0.2s							
ZHN	**Zhinishke**	**2.94**	**285**	Pg		**Pb**	**01 53 41.1**	**+0.8**
	3.9nm,0.1s							
ZHN				Lg		Lg	01 54 21.4	
	7.5nm,0.2s							
KURS	**Kuram**	**3.21**	**290**	*e*P		**Pb**	**01 53 45.9**	**+1.1**
	2.4nm,0.4s							
KURS				*e*S		**Sg**	**01 54 30.4**	**-0.4**
	6.9nm,0.6s							
KURS	**Kuram**	**3.21**	**290**	Pg		**Pb**	**01 53 45.9**	**+1.1**
	2.4nm,0.4s							
KURS				Lg		Lg	01 54 30.4	
	6.9nm,0.6s							
KAPS	**Kapalarasan**	**3.55**	**324**	*e*P		**Pb**	**01 53 51.6**	**+1.1**
	4.4nm,0.4s							
KAPS				*e*S		**Sg**	**01 54 40.1**	**-1.4**
	7.1nm,0.3s							
KAPS	**Kapalarasan**	**3.55**	**324**	Pg		**Pb**	**01 53 51.6**	**+1.1**
	4.4nm,0.4s							
KAPS				Lg		Lg	01 54 40.1	
	7.1nm,0.3s							
ARXS	**Arharly**	**3.71**	**300**	*e*P		**Pb**	**01 53 54.8**	**+1.4**
	4.3nm,0.5s							
ARXS				*e*S		**Sg**	**01 54 45.8**	**-1.1**
	11nm,0.7s							
ARXS	**Arharly**	**3.71**	**300**	Pg		**Pb**	**01 53 54.8**	**+1.4**
	4.3nm,0.5s							
ARXS				Lg		Lg	01 54 45.8	
	11nm,0.7s							
TDK	**Taldyqorghan**	**3.81**	**313**	*e*P		**Pb**	**01 53 56.7**	**+1.8**
	33nm,0.3s							
TDK				*e*S		**Sg**	**01 54 48.8**	**-1.2**
	18nm,0.3s							
TDK	**Taldyqorghan**	**3.81**	**313**	Pg		**Pb**	**01 53 56.7**	**+1.8**
	33nm,0.3s							
TDK				Lg		Lg	01 54 48.8	
	18nm,0.3s							
KOTS	**Kotyrbulak**	**3.90**	**283**	*e*P		**Pb**	**01 53 56.1**	**-0.5**
	7.5nm,0.3s							
KOTS				*e*S		**Sb**	**01 54 47.8**	**+3.8**
	11nm,0.5s							
KOTS	**Kotyrbulak**	**3.90**	**283**	Pg		**Pb**	**01 53 56.1**	**-0.5**
	7.5nm,0.3s							
KOTS				Lg		Lg	01 54 47.8	
	11nm,0.5s							
MDOK	**Medeo**	**3.94**	**282**	*e*P		**Pb**	**01 53 58.8**	**+1.6**
	5.3nm,1.6s							
MDOK				⇓*i*S		**Sg**	**01 54 52.6**	**-1.5**
	7.3nm,1.5s							
MDOK	**Medeo**	**3.94**	**282**	Pg		**Pb**	**01 53 58.8**	**+1.6**
	5.3nm,1.6s							
MDOK				Lg		Lg	01 54 52.6	
	7.3nm,1.5s							
TNSS	**Tian-Shan**	**4.00**	**280**	*e*P		**Pb**	**01 53 59.0**	**+0.7**
	4.2nm,0.5s							
TNSS				*e*S		**Sg**	**01 54 52.9**	**-3.0**
	6.6nm,0.8s							
TNSS	**Tian-Shan**	**4.00**	**280**	Pg		**Pb**	**01 53 59.0**	**+0.7**
	4.2nm,0.5s							
TNSS				Lg		Lg	01 54 52.9	
	6.6nm,0.8s							
CHKK	**Chushkaly**	**4.14**	**292**	*e*P		**Pb**	**01 54 02.4**	**+1.8**
	2.2nm,0.1s							
CHKK				*e*S		**Sg**	**01 54 58.6**	**-1.9**
	8.0nm,0.2s							
CHKK	**Chushkaly**	**4.14**	**292**	Pg		**Pb**	**01 54 02.4**	**+1.8**
	2.2nm,0.1s							
CHKK				Lg		Lg	01 54 58.6	
	8.0nm,0.2s							
IZV	**Izvestkoviy**	**4.24**	**280**	*e*P		**Pb**	**01 54 03.6**	**+1.2**
	4.0nm,0.8s							
IZV				*e*S		**Sg**	**01 55 00.5**	**-3.2**
	4.7nm,0.6s							
IZV	**Izvestkoviy**	**4.24**	**280**	Pg		**Pb**	**01 54 03.6**	**+1.2**
	4.0nm,0.8s							
IZV				Lg		Lg	01 55 00.5	
	4.7nm,0.6s							
KTBS	**Karatobe**	**4.31**	**289**	*e*P		**Pg**	**01 54 07.1**	**-3.1**
	4.0nm,0.7s							
KTBS				*e*S		**Sg**	**01 55 06.6**	**+0.5**
	11nm,0.8s							
KTBS	**Karatobe**	**4.31**	**289**	Pg		**Pg**	**01 54 07.1**	**-3.1**
	4.0nm,0.7s							
KTBS				Lg		Lg	01 55 06.6	
	11nm,0.8s							
MK31	**Makanchi Array**	**4.34**	**360**	⇓Pg		**Pb**	**01 54 08.1**	**-2.6**
	0.6nm,0.3s							
MK31				Lg		Lg	01 55 05.4	
	4.1nm,0.6s,baz=174,slow=30,SNR=8.3							
MAKZ	**Makanchi**	**4.36**	**357**	⇓Pg		**Pb**	**01 54 07.5**	**+3.2**
	1.2nm,0.5s							
MAKZ				⇑Lg		Lg	01 55 09.6	
	3.5nm,0.7s							
KUU	**Kurty**	**4.60**	**290**	*e*P		**Pb**	**01 54 11.0**	**+2.6**
	5.1nm,0.5s							
KUU				*e*S		**Sg**	**01 55 13.4**	**-1.9**
	4.4nm,0.2s							
KUU	**Kurty**	**4.60**	**290**	Pg		**Pb**	**01 54 11.0**	**+2.6**
	5.1nm,0.5s							
KUU				Lg		Lg	01 55 13.4	
	4.4nm,0.2s							
KST	**Kastek**	**4.71**	**279**	*e*P		**Pb**	**01 54 12.8**	**+2.3**
	12nm,1.0s							
KST				*e*S		**Sg**	**01 55 16.3**	**-2.7**
	7.0nm,0.6s							

KST	**Kastek**	**4.71**	**279**	Pg	**Pb**	**01 54 12.8**	**+2.3**
	12nm,1.0s							
KST				Lg	Lg	01 55 16.3		
	7.0nm,0.6s							
DGS	**Degeres**	**4.87**	**282**	*eP*	**Pb**	**01 54 15.4**	**+2.3**
	5.8nm,0.8s							
DGS				*eS*	**Sg**	**01 55 20.9**	**-3.2**
	6.7nm,0.9s							
DGS	**Degeres**	**4.87**	**282**	Pg	**Pb**	**01 54 15.4**	**+2.3**
	5.8nm,0.8s							
DGS				Lg	Lg	01 55 20.9		
	6.7nm,0.9s							
TKM2	**Tokmak 2**	**4.97**	**278**	⇓Pg	**Pb**	**01 54 17.4**	**+2.5**
	2.9nm,0.8s							
TKM2				⇓Lg	Lg	01 55 25.2		
	2.8nm,0.6s							
ZSN	**Zaisan**	**5.32**	**19**	*eP*	**Pb**	**01 54 23.2**	**+2.6**
	3.4nm,0.2s							
ZSN				*eS*	**Sg**	**01 55 34.2**	**-4.0**
	4.7nm,0.6s							
ZSN	**Zaisan**	**5.32**	**19**	Pg	**Pb**	**01 54 23.2**	**+2.6**
	3.4nm,0.2s							
ZSN				Lg	Lg	01 55 34.2		
	4.7nm,0.6s							

NEIC ***15*** *02:01:50.4±1.7, 18°.16N±0°.04×101°.8W±0°.1, h37km±63km, Error ellipse: s-maj=17.8km s-min=5.5km az=81.0*
MEX ***15*** *02:01:51.0±0.9, 18°.27N×101°.83W, h19km±39km, MD4.0*
ISC 15 02:01:48.3±1.6, 18°.24N±0°.05×101°.79W±0°.09, h18km±8km, n13, σ1s06/25, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.70**	**154**	*eP*	**Pn**	**02 02 03.2**	**-0.1**
ZIIG				*eS*	**Sg**	**02 02 11.9**	**+0.6**
ZIIG	**Zihuatanejo**	**0.70**	**154**		**Pn**	**02 02 03.2**	**-0.1**
ZIIG					**Sg**	**02 02 11.9**	**+0.6**
ARIG	**Puente Sto Nin**	**1.37**	**88**	*eP*	**Pn**	**02 02 12.7**	**+0.1**
ARIG				*eS*	**Sn**	**02 02 28.4**	**-1.9**
ARIG	**Puente Sto Nin**	**1.37**	**88**		**Pn**	**02 02 12.7**	**+0.1**
ARIG					**Sn**	**02 02 28.4**	**-1.9**
MOIG	**Morelia**	**1.54**	**21**		**Pg**	**02 02 17.2**	**-0.9**
MOIG				Sn	**Sn**	**02 02 33.8**	**-1.1**
CAIG	**El Cayaco**	**1.87**	**129**	*eP*	**Pn**	**02 02 18.8**	**-0.6**
CAIG				*eS*	**Sn**	**02 02 42.4**	**-0.2**
CAIG	**El Cayaco**	**1.87**	**129**		**Pn**	**02 02 18.8**	**-0.6**
CAIG					**Sn**	**02 02 42.4**	**-0.2**
MEIG	**Mezcala**	**2.09**	**98**	*eP*	**Pn**	**02 02 23.1**	**+0.6**
MEIG				*eS*	**Sn**	**02 02 48.3**	**+0.2**
MEIG	**Mezcala**	**2.09**	**98**		**Pn**	**02 02 23.1**	**+0.6**
MEIG					**Sn**	**02 02 48.3**	**+0.2**
TLIG	**Tlapa**	**3.14**	**102**	*eP*	**Pn**	**02 02 38.1**	**+1.0**
TLIG				*i* S	**Sn**	**02 03 14.2**	**0.0**
TLIG	**Tlapa**	**3.14**	**102**		**Pn**	**02 02 39.6**	**+2.5**
TLIG				Sn	**Sn**	**02 03 15.6**	**+1.4**
TLIG	**Tlapa**	**3.14**	**102**		**Pn**	**02 02 38.1**	**+1.0**
TLIG					**Sn**	**02 03 14.2**	**0.0**
ZAIG	**Zacatecas**	**4.57**	**351**		**Pn**	**02 02 58.2**	**+1.3**

NEIC ***15*** *02:04:54.8±1.5, 18°.15N±0°.03×101°.7W±0°.1, h30km±14km, Error ellipse: s-maj=20.7km s-min=4.2km az=86.0*
MEX ***15*** *02:04:55.1±0.5, 18°.24N×101°.80W, h15km±27km, MD4.1*
ISC 15 02:04:54.4±1.6, 18°.21N±0°.06×101°.7W±0°.1, h16km±14km, n17, σ0s96/33, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.62**	**163**	*eP*	**Pg**	**02 05 06.6**	**0.0**
ZIIG				*eS*	**Sg**	**02 05 15.3**	**+0.4**
ZIIG	**Zihuatanejo**	**0.62**	**163**		**Pg**	**02 05 06.6**	**0.0**
ZIIG					**Sg**	**02 05 15.3**	**+0.4**
ARIG	**Puente Sto Nin**	**1.25**	**86**	*eP*	**Pn**	**02 05 16.1**	**-1.1**
ARIG				*eS*	**Sb**	**02 05 32.2**	**-1.2**
ARIG	**Puente Sto Nin**	**1.25**	**86**		**Pn**	**02 05 16.1**	**-1.1**
ARIG					**Sb**	**02 05 32.2**	**-1.2**
MOIG	**Morelia**	**1.53**	**17**		**Pn**	**02 05 20.8**	**-0.5**
MOIG				Sn	**Sn**	**02 05 41.2**	**+0.2**
CAIG	**El Cayaco**	**1.76**	**131**	*i* P	**Pn**	**02 05 23.8**	**-0.4**
CAIG				*eS*	**Sn**	**02 05 45.5**	**-0.8**
CAIG	**El Cayaco**	**1.76**	**131**		**Pn**	**02 05 23.8**	**-0.4**
CAIG					**Sn**	**02 05 45.5**	**-0.8**
MEIG	**Mezcala**	**1.96**	**98**	*eP*	**Pn**	**02 05 26.6**	**-0.5**
MEIG				*eS*	**Sn**	**02 05 51.8**	**+0.4**
MEIG	**Mezcala**	**1.96**	**98**		**Pn**	**02 05 26.6**	**-0.5**
MEIG					**Sn**	**02 05 51.8**	**+0.4**
PLIG	**Platanillo**	**2.06**	**84**	*eP*	**Pn**	**02 05 28.2**	**-0.2**
PLIG				*eS*	**Sn**	**02 05 54.1**	**+0.3**
PLIG	**Platanillo**	**2.06**	**84**		**Pn**	**02 05 28.2**	**-0.2**
PLIG					**Sn**	**02 05 54.1**	**+0.3**
YAIG	**Yautepec**	**2.54**	**75**	*eP*	**Pn**	**02 05 35.3**	**+0.1**
YAIG				*i* S	**Sn**	**02 06 06.2**	**+0.2**
YAIG	**Yautepec**	**2.54**	**75**		**Pn**	**02 05 35.3**	**+0.1**
YAIG					**Sn**	**02 06 06.2**	**+0.2**
TLIG	**Tlapa**	**3.01**	**102**	*eP*	**Pn**	**02 05 41.5**	**-0.1**
TLIG				*i* S	**Sn**	**02 06 18.9**	**+1.4**
TLIG	**Tlapa**	**3.01**	**102**		**Pn**	**02 05 41.5**	**-0.1**
TLIG					**Sn**	**02 06 18.9**	**+1.4**
TLIG	**Tlapa**	**3.01**	**102**	Pn	**Pn**	**02 05 40.6**	**-1.0**
TLIG				Sn	**Sn**	**02 06 20.9**	**+3.4**
KVTX	**Kingsville**	**9.92**	**20**	Pn	**Pn**	**02 07 17.6**	**+1.3**

IDC ***15*** *02:05:17.5±2.7, 23°.17S×68°.76W, h72km±23km, mb3.6/1, mb1 3.5/3, mb1mx3.2/25, mbtmp3.7/3, Error ellipse: s-maj=62.4km s-min=32.4km az=146.0*
GUC ***15*** *02:05:18.9±0.8, 23°.03S×69°.03W, h85km±4km, ML3.1*
ISC 15 02:05:18.3±1.1, 23°.06S±0°.08×68°.95W±0°.07, h89km±8km, n13, σ0s80/23, 5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.45**	**5**	*eP*	**Pn**	**02 05 33.2**	**+0.2**
LVC				*i* S	**Sn**	**02 05 43.7**	**-0.2**
LVC	**Limon Verde**	**0.45**	**5**	P	**Pn**	**02 05 33.1**	**+0.2**
	68nm,0.3s,baz=178,slow=6.1,SNR=964						
LVC				S	**Sn**	**02 05 43.5**	**-0.4**
	413nm,0.3s,baz=66,slow=19,SNR=242						
PB15	**IPOC Station P**	**0.50**	**252**	⇓*i* P	**Pn**	**02 05 33.7**	**+0.5**
PB15				*i* S	**Sn**	**02 05 44.8**	**+0.5**
PB06	**IPOC Station P**	**0.67**	**301**	⇓*i* P	**Pn**	**02 05 34.6**	**0.0**
PB06				*i* S	**Sn**	**02 05 46.5**	**-0.2**
PB06				IAML		02 05 47.1	
	comp=E,3μm,0.3s						
PB05	**IPOC Station P**	**1.17**	**280**	⇓*i* P	**Pn**	**02 05 39.8**	**-0.2**
PB05				*i* S	**Sn**	**02 05 55.8**	**-0.6**
PB05				IAML		02 06 01.1	
	comp=E,450nm,0.3s						
PB03	**IPOC Station P**	**1.25**	**323**	⇓*i* P	**Pn**	**02 05 40.9**	**-0.1**
PB03				*i* S	**Sn**	**02 05 58.1**	**0.0**
PB03				IAML		02 05 59.9	
	comp=N,601nm,0.3s						
PB09	**IPOC Station P**	**1.28**	**348**	⇓*i* P	**Pn**	**02 05 42.4**	**+0.9**
PB09				*i* S	**Sn**	**02 05 59.7**	**+0.8**
PB09				IAML		02 06 03.1	
	comp=E,364nm,0.4s						
PB04	**IPOC Station P**	**1.32**	**303**	*eP*	**Pn**	**02 05 41.8**	**-0.1**
PB04				*eS*	**Sn**	**02 05 59.6**	**0.0**
PB04				IAML		02 06 04.7	
	comp=E,677nm,0.5s						
PB10	**IPOC Station P**	**1.54**	**252**	*eP*	**Pn**	**02 05 44.9**	**+0.3**
PB10				*eS*	**Sn**	**02 06 04.0**	**-0.4**
PB10				IAML		02 06 10.9	
	comp=E,374nm,0.3s						
LPAZ	**La Paz**	**6.78**	**7**	P	**Pn**	**02 06 58.0**	**+2.3**
	comp=E,0.2nm,0.3s,baz=202,slow=5.4,SNR=3.8						
SIV	**San Ignacio**	**10.22**	**48**	P	**Pn**	**02 07 40.6**	**-1.6**
	comp=E,0.8nm,0.3s,baz=243,slow=11,SNR=15						
SIV				S	**Sn**	**02 09 34.0**	**-1.1**
	comp=E,0.1nm,0.3s,baz=333,slow=2.3,SNR=2.9						
TORD	**Torodi Ar. Bea**	**77.92**	**70**	P	**P**	**02 17 07.0**	**+0.1**
	comp=E,0.9nm,0.7s,baz=257,slow=5.2,SNR=11						
MKAR	**Makanchi Array**	**146.90**	**37**	PKPbc	**PKPbc**	**02 24 50.7**	**+0.3**
	comp=E,0.1nm,0.5s,baz=302,slow=2.7,SNR=2.6						

WEL ***15*** *02:32:34.5, 41°.4S±0°.8×17°.4E±°, h23km±1km, ML4.0/21, MLv3.8/71, Error ellipse: s-maj=0.0km s-min=0.0km az=114.3*
NEIC ***15*** *02:32:34.2±1.9, 41°.53S±0°.04×174°.50E±0°.03, h31km±9km, Error ellipse: s-maj=5.7km s-min=2.8km az=161.0*
ISC 15 02:32:34.1±0.9, 41°.51S±0°.03×174°.48E±0°.02, h29km±6km, n107, σ1s04/119, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNZO	**South Karori**	**0.26**	**41**		**Pb**	**02 32 40.4**	**-0.5**
SNZO					**Sb**	**02 32 45.4**	**-0.1**
CMWZ	**Cape Campbell**	**0.31**	**219**	P	**Pn**	**02 32 43.0**	**+0.4**
CMWZ				S	**Sn**	**02 32 48.7**	**+0.4**
CMWZ	**Cape Campbell**	**0.31**	**219**		**Pb**	**02 32 42.1**	**+0.5**
CMWZ				Sg	**Sn**	**02 32 48.4**	**+0.2**
BHW	**Baring Head**	**0.31**	**71**	P	**Pb**	**02 32 41.9**	**+0.3**
BHW				S	**Sb**	**02 32 46.8**	**+0.2**
BHW	**Baring Head**	**0.31**	**71**		**Pb**	**02 32 41.8**	**+0.2**
BHW				Sg	**Sb**	**02 32 46.9**	**+0.2**
WEL	**Wellington**	**0.31**	**44**	P	**Pb**	**02 32 41.8**	**+0.1**
WEL				S	**Sb**	**02 32 46.8**	**0.0**
TCW	**Tory Channel**	**0.33**	**333**	P	**Pb**	**02 32 41.6**	**-0.3**
TCW				S	**Sb**	**02 32 46.1**	**-1.1**
TUWZ	**Tuamarina**	**0.41**	**281**	P	**Pb**	**02 32 42.8**	**-0.2**
TUWZ	**Tuamarina**	**0.41**	**281**	Pg	**Pb**	**02 32 42.6**	**-0.4**
BSWZ	**Blackbirch Sta**	**0.49**	**245**	P	**Pb**	**02 32 45.1**	**+0.7**
BSWZ				S	**Sb**	**02 32 52.2**	**+0.8**
BSWZ	**Blackbirch Sta**	**0.49**	**245**		**Pb**	**02 32 45.0**	**+0.7**
BSWZ					**Sb**	**02 32 52.6**	**+1.2**
PLWZ	**Palliser**	**0.59**	**96**	P	**Pn**	**02 32 47.1**	**+0.6**
PLWZ	**Palliser**	**0.59**	**96**		**Pb**	**02 32 46.4**	**+0.5**
PLWZ					**Sb**	**02 32 53.8**	**-0.2**
MSWZ	**Moikau Station**	**0.59**	**81**	P	**Pn**	**02 32 47.0**	**+0.5**
MSWZ	**Moikau Station**	**0.59**	**81**		**Pb**	**02 32 46.4**	**+0.5**
MSWZ					**Sb**	**02 32 54.2**	**+0.2**
CAW	**Cannon Point**	**0.60**	**48**	P	**Pb**	**02 32 46.3**	**+0.3**
KIW	**Kapiti Island**	**0.73**	**27**	P	**Pn**	**02 32 48.2**	**0.0**
PAWZ	**Paruwai Farm**	**0.73**	**80**	P	**Pn**	**02 32 49.3**	**+0.9**
DUWZ	**D'Urville Isla**	**0.82**	**329**	P	**Pn**	**02 32 50.0**	**+0.3**
MTW	**Mount Morrison**	**0.85**	**66**	P	**Pn**	**02 32 51.0**	**+1.0**
OGW	**Otaki Gorge**	**0.87**	**37**	P	**Pn**	**02 32 51.4**	**+0.4**
NNZ	**Nelson**	**0.88**	**289**	P	**Pb**	**02 32 50.9**	**+0.3**
NNZ	**Nelson**	**0.88**	**289**		**Pb**	**02 32 51.0**	**+0.3**
TRWZ	**Traveller**	**0.92**	**83**	P	**Pb**	**02 32 51.8**	**+0.4**
HOWZ	**Holdsworth Sta**	**0.99**	**52**	P	**Pb**	**02 32 53.1**	**+0.4**
TMWZ	**Te Maipa**	**1.14**	**70**	P	**Pn**	**02 32 54.7**	**+0.6**
KHZ	**Kahutara**	**1.15**	**217**	P	**Pb**	**02 32 55.5**	**+0.3**
KHZ	**Kahutara**	**1.15**	**217**		**Pn**	**02 32 55.0**	**+0.9**
MRZ	**Mangatainoka R**	**1.19**	**45**	P	**Pb**	**02 32 56.0**	**0.0**
THZ	**Tophouse**	**1.20**	**257**	P	**Pn**	**02 32 56.0**	**+1.0**
THZ	**Tophouse**	**1.20**	**257**		**Pn**	**02 32 56.0**	**+1.0**
TIWZ	**Tintock**	**1.29**	**56**	P	**Pn**	**02 32 57.0**	**+0.8**
CPWZ	**Castlepoint**	**1.43**	**66**	P	**Pn**	**02 32 58.9**	**+0.9**
OHWZ	**Ohakea**	**1.45**	**26**	P	**Pb**	**02 33 01.2**	**+0.8**
PRWZ	**Pori Road**	**1.48**	**50**	P	**Pn**	**02 32 59.6**	**+0.9**
POWZ	**Post Office Ro**	**1.48**	**42**	P	**Pb**	**02 33 00.0**	**-0.9**
BFZ	**Birch Farm**	**1.57**	**59**	P	**Pn**	**02 33 00.2**	**+0.2**
BFZ	**Birch Farm**	**1.57**	**59**		**Pb**	**02 33 00.2**	**+0.2**
QRZ	**Quartz Range**	**1.62**	**294**	P	**Pb**	**02 33 02.8**	**-0.5**
QRZ	**Quartz Range**	**1.62**	**294**		**Pb**	**02 33 02.3**	**-1.0**
QRZ				Sn	**Sn**	**02 33 19.4**	**-1.2**
DVHZ	**Dannevirke**	**1.76**	**47**	P	**Pn**	**02 33 02.9**	**+0.3**
WAZ	**Wanganui**	**1.79**	**13**	P	**Pb**	**02 33 06.8**	**+0.5**
TSZ	**Takapari Road**	**1.84**	**38**	P	**Pn**	**02 33 04.6**	**+0.9**
DSZ	**Denniston Nort**	**2.02**	**262**	P	**Pn**	**02 33 08.2**	**+2.1**
PRHZ	**Porangahau**	**2.05**	**54**	P	**Pn**	**02 33 06.8**	**+0.1**
PNHZ	**Pukenui**	**2.06**	**40**	P	**Pn**	**02 33 07.4**	**+0.6**
LTZ	**Lake Taylor**	**2.08**	**231**	P	**Pn**	**02 33 08.1**	**+1.1**
LTZ	**Lake Taylor**	**2.08**	**231**		**Pn**	**02 33 07.9**	**+1.0**
WPHZ	**Waipukurau**	**2.08**	**47**	P	**Pn**	**02 33 07.4**	**+0.5**
NMEZ	**Namu Road**	**2.14**	**347**	P	**Pb**	**02 33 14.7**	**+2.5**
PREZ	**Palmer Road**	**2.18**	**354**	P	**Pb**	**02 33 14.4**	**+1.6**
KHEZ	**Kahui Hut**	**2.24**	**351**	P	**Pb**	**02 33 14.1**	**+0.2**
MTVZ	**Mangateitei**	**2.25**	**20**	P	**Pb**	**02 33 16.1**	**+1.9**
MOVZ	**Moawhango**	**2.31**	**25**	P	**Pn**	**02 33 12.3**	**+2.0**
PKVZ	**Pokaka**	**2.31**	**177**	P	**Pb**	**02 33 14.4**	**+0.2**
PKE	**Pukeiti**	**2.34**	**351**	P	**Pb**	**02 33 15.0**	**-0.6**
BHHZ	**Black Hill Sta**	**2.35**	**31**	P	**Pn**	**02 33 12.1**	**+1.3**
TRVZ	**Turoa**	**2.35**	**21**	P	**Pn**	**02 33 14.2**	**-1.7**
KRHZ	**Kereru**	**2.36**	**38**	P	**Pn**	**02 33 11.2**	**+0.4**
DRZ	**Dome Shelter**	**2.38**	**21**	P	**Pb**	**02 33 17.3**	**+0.9**
WHVZ	**Whangaehu Hut**	**2.38**	**21**	P	**Pb**	**02 33 16.0**	**-0.3**
VRZ	**Vera Road**	**2.39**	**5**	P	**Pb**	**02 33 15.4**	**-1.0**
FWVZ	**Far West T-bar**	**2.40**	**20**	P	**Pb**	**02 33 14.2**	**-2.4**
TUVZ	**Tukino**	**2.41**	**22**	P	**Pb**	**02 33 15.1**	**-1.7**
OKCZ	**Okains Bay**	**2.45**	**205**	P	**Pn**	**02 33 12.1**	**0.0**
NGZ	**Ngauruhoe**	**2.48**	**21**	P	**Pn**	**02 33 15.3**	**+2.6**
KAHZ	**Kahuranaki**	**2.50**	**48**	P	**Pn**	**02 33 13.2**	**+0.4**
WTVZ	**West Tongariro**	**2.54**	**20**	P	**Pn**	**02 33 16.2**	**+2.8**
TWVZ	**Taurewa**	**2.54**	**17**	P	**Pb**	**02 33 18.8**	**-0.3**
KWHZ	**Kaweka Forest**	**2.56**	**36**	P	**Pn**	**02 33 14.3**	**+0.7**
OXZ	**Oxford**	**2.56**	**224**	P	**Pn**	**02 33 13.4**	**-0.2**
OXZ	**Oxford**	**2.56**	**224**		**Pn**	**02 33 13.5**	**-0.1**
INZ	**Inchbonnie**	**2.57**	**241**	P	**Pn**	**02 33 14.8**	**+1.3**
KRVZ	**Karewarewa**	**2.57**	**21**	P	**Pb**	**02 33 19.4**	**-0.1**
MQZ	**McQueen's Vall**	**2.58**	**211**	P	**Pn**	**02 33 13.2**	**-0.6**
MQZ	**McQueen's Vall**	**2.58**	**211**	Pn	**Pn**	**02 33 13.1**	**-0.6**
MQZ				Sn	**Sn**	**02 33 41.1**	**-3.0**
AKCZ	**Akaroa Harbour**	**2.63**	**206**	P	**Pn**	**02 33 14.4**	**-0.1**
MCHZ	**McNeill Hill**	**2.67**	**40**	P	**Pn**	**02 33 15.5**	**+0.4**
KATZ	**Kakaramea**	**2.70**	**21**	P	**Pb**	**02 33 21.5**	**-0.2**
RITZ	**Rihia Road**	**2.74**	**23**	P	**Pb**	**02 33 22.4**	**+0.1**
BKZ	**Black Stump Fm**	**2.80**	**34**	P	**Pb**	**02 33 24.6**	**+1.1**
BKZ	**Black Stump Fm**	**2.80**	**34**	Pn	**Pn**	**02 33 17.6**	**+0.6**
RATZ	**Rangitukua**	**2.82**	**21**	P	**Pb**	**02 33 25.1**	**+1.4**
WATZ	**Wairara**	**2.96**	**19**	P	**Pb**	**02 33 27.2**	**+1.1**
HIZ	**Hauiti**	**3.01**	**6**	P	**Pb**	**02 33 24.5**	**-2.4**
HIZ	**Hauiti**	**3.01**	**6**	Pn	**Pn**	**02 33 20.8**	**+1.1**
WVZ	**Waitaha Valley**	**3.19**	**239**	P	**Pn**	**02 33 23.3**	**+1.2**
MTHZ	**Maungataniwha**	**3.21**	**35**	P	**Pb**	**02 33 30.7**	**+0.2**
TLZ	**Tolley Road**	**3.28**	**15**	P	**Pb**	**02 33 30.7**	**-2.8**
RPZ	**Rata Peaks**	**3.35**	**228**	P	**Pn**	**02 33 24.3**	**-0.2**
RPZ	**Rata Peaks**	**3.35**	**228**	Pn	**Pn**	**02 33 24.7**	**+0.2**
URZ	**Urewera**	**3.83**	**33**	P	**Pn**	**02 33 33.3**	**+2.3**
URZ	**Urewera**	**3.83**	**33**	Pn	**Pn**	**02 33 30.7**	**-0.2**
FOZ	**Fox Glacier**	**3.99**	**238**	P	**Pn**	**02 33 33.7**	**+0.4**
FOZ	**Fox Glacier**	**3.99**	**238**	Pn	**Pn**	**02 33 34.4**	**+1.2**
LBZ	**Lake Benmore**	**4.26**	**226**	P	**Pn**	**02 33 38.0**	**+1.0**
LBZ	**Lake Benmore**	**4.26**	**226**	Pn	**Pn**	**02 33 38.0**	**+1.0**
RUGZ	**Raukumara Rang**	**4.31**	**36**	P	**Pn**	**02 33 37.3**	**-0.5**
MKAZ	**Moumakai**	**4.43**	**7**	P	Pn	02 33 44.8	+5.5
ODZ	**Otahua Downs**	**4.51**	**217**	P	**Pn**	**02 33 39.6**	**-0.7**
ODZ	**Otahua Downs**	**4.51**	**217**	Pn	**Pn**	**02 33 39.7**	**-0.6**
JCZ	**Jackson Bay**	**4.91**	**237**	P	**Pn**	**02 33 46.0**	**+0.1**
WKZ	**Wanaka**	**5.19**	**228**	Pn	**Pn**	**02 33 49.3**	**-0.4**
TUZ	**Tuapeka**	**5.66**	**217**	P	**Pn**	**02 33 56.1**	**-0.1**
MLZ	**Mavora Lakes**	**6.02**	**228**	Pn	**Pn**	**02 33 59.4**	**-1.8**
OUZ	**Omahuta**	**6.32**	**353**	Pn	**Pn**	**02 34 03.6**	**-1.6**
PYZ	**Puysegur Point**	**7.31**	**228**	Pn	**Pn**	**02 34 18.2**	**-0.6**

IDC 15 02:32:50.1±29.0, 17°.77S×178°.91W, h577km±302km, mb3.3/2, mb1 3.3/2, mb1mx2.8/29, mbtmp4.3/2, Error ellipse: s-maj=181.5km s-min=171.6km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.27**	**241**	P	P	02 39 22.4	+0.3
ASAR	**Alice Springs**	**44.37**	**254**	P	P	02 40 09.9	-0.5
	4.4nm,0.6s,baz=88,slow=8.1,SNR=48						
BRTR	**Keskin Array B**	**144.35**	**315**	PKP	PKPbc	02 51 20.0	-1.5
	0.7nm,0.7s,baz=116,slow=3.4,SNR=4.0						
MMAI	**Mount Meron Ar**	**145.67**	**303**	PKPbc	PKPbc	02 51 25.5	0.0
	0.9nm,0.4s,baz=49,slow=4.4,SNR=3.6						
GERES	**GERESS Array B**	**147.36**	**344**	PKPbc	PKPbc	02 51 28.9	-0.7
	0.3nm,0.5s,baz=38,slow=5.2,SNR=3.0						

NNC ***15*** *02:44:54.6±4.8, 38°.79N×70°.80E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=40.7km s-min=23.3km az=40.2*
IDC ***15*** *02:45:00.7±5.5, 38°.94N×70°.56E, h41km±45km, mb3.2/2, mb1 3.4/5, mb1mx3.1/40, mbtmp3.5/5, ML3.2/3, MS2.8/1, Ms1 2.8/1, ms1mx2.2/32, Error ellipse: s-maj=53.0km s-min=29.1km az=157.0*
ISC 15 02:44:57.6±1.4, 38°.93N±0°.08×70°.70E±0°.06, h17km, n34, σ2s69/43, 4C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRG	**Fergana**	**1.99**	**24**	P	**Pn**	**02 45 26.4**	**-4.1**
FRG				S	**Sn**	**02 45 49.8**	**-5.2**
FRG	**Fergana**	**1.99**	**24**	P	**Pn**	**02 45 27.1**	**-3.4**
FRG				S	**Sn**	**02 45 49.8**	**-5.2**

ANR	**Andizhan**	**2.23**	**34**	P	**Pn**	**02 45 35.8**	**+2.0**
ANR				S	**Sb**	**02 46 05.9**	**+1.2**
CHRV	**Charvak**	**2.77**	**348**	*eP*	**Pb**	**02 45 45.4**	**-1.3**
CHRV				S	**Sg**	**02 46 26.9**	**+0.2**
AML	**Almayashu**	**3.93**	**35**	P	**Pn**	**02 45 59.0**	**+1.5**
	SNR=21						
DZA	**Taraz**	**3.99**	**7**	Pg	**Pb**	**02 46 04.4**	**-3.1**
	107nm,0.1s						
DZA				Lg	Lg	02 46 53.5	
	79nm,0.1s						
BRLS	**Borolday**	**4.15**	**351**	Pg	**Pb**	**02 46 06.3**	**-3.9**
	0.6nm,0.1s						
BRLS				Lg	Lg	02 46 56.9	
	6.6nm,0.8s						
KK31	**Karatay Array**	**4.17**	**358**	⇓Pn	**Pn**	**02 46 03.1**	**+2.6**
	2.3nm,0.3s,baz=169,slow=12,SNR=236						
KK31				⇓Sn	**Sn**	**02 46 53.4**	**+4.5**
	3.5nm,0.3s,baz=176,slow=21,SNR=3.8						
MRKS	**Merke**	**4.27**	**26**	Pg	**Pn**	**02 46 06.3**	**+4.4**
	11nm,0.3s						
MRKS				Lg	Lg	02 46 57.0	
	16nm,0.5s						
UCH	**Uchtor**	**4.39**	**40**	P	**Pn**	**02 46 05.5**	**+1.5**
	SNR=16						
EKS2	**Erkin-Say**	**4.40**	**31**	P	**Pn**	**02 46 06.8**	**+3.1**
	SNR=18						
KZA	**Kyzart**	**4.68**	**46**	P	**Pn**	**02 46 10.7**	**+2.8**
	SNR=22						
AAK	**Ala-Archa**	**4.69**	**37**	P	**Pn**	**02 46 09.7**	**+1.9**
	3.9nm,0.3s,baz=213,slow=6.0,SNR=41						
AAK				S	**Sn**	**02 47 05.2**	**+3.3**
	1.5nm,0.3s,baz=327,slow=20,SNR=6.2						
AAK	**Ala-Archa**	**4.69**	**37**	P	**Pn**	**02 46 09.9**	**+2.1**
	SNR=11						
AAK	**Ala-Archa**	**4.69**	**37**	⇑Pn	**Pn**	**02 46 09.6**	**+1.8**
	10nm,0.6s						
AAK				⇓Sn	**Sn**	**02 47 04.0**	**+2.1**
	23nm,0.8s						
KBK	**Karagaybulak**	**4.92**	**40**	P	**Pn**	**02 46 14.2**	**+3.2**
	SNR=7.0						
CHMS	**Chumysh**	**5.09**	**36**	P	**Pn**	**02 46 14.9**	**+1.7**
	SNR=9.4						
USP	**Ospenovka**	**5.20**	**32**	P	**Pn**	**02 46 16.9**	**+2.3**
	SNR=17						
TKM2	**Tokmak 2**	**5.44**	**41**	P	**Pn**	**02 46 20.7**	**+2.5**
	SNR=14						
TKM2	**Tokmak 2**	**5.44**	**41**	⇑Pn	**Pn**	**02 46 19.5**	**+1.3**
	5.0nm,0.6s						
TKM2				⇓Sn	**Sn**	**02 47 24.6**	**+4.1**
	14nm,1.0s						
KST	**Kastek**	**5.72**	**42**	Pg	**Pb**	**02 46 34.6**	**-2.5**
	4.8nm,0.6s						
KST				Lg	Lg	02 47 45.5	
	8.0nm,1.0s						
DGS	**Degeres**	**5.76**	**40**	Pg	Pb	02 46 31.6	-6.2
	6.5nm,0.7s						
DGS				Lg	Lg	02 47 40.2	
	10nm,0.8s						
IZV	**Izvestkoviy**	**6.07**	**46**	Pg	**Pb**	**02 46 40.0**	**-3.0**
	5.7nm,0.5s						
IZV				Lg	Lg	02 47 54.9	
	9.7nm,0.9s						
TNSS	**Tian-Shan**	**6.26**	**47**	Pg	**Pb**	**02 46 44.1**	**-2.2**
	4.1nm,0.7s						
TNSS				Lg	Lg	02 48 02.0	
	6.2nm,0.6s						
KOTS	**Kotyrbulak**	**6.47**	**46**

HANI					IAML		02 58 01.0	
	comp=E,788nm,0.4s							
HOMI	**Horasan**	**1.04**	**50**	*i* P	**Pg**		**02 57 40.2**	**-0.9**
HOMI				*i* S	**Sg**		**02 57 54.2**	**-0.4**
HOMI				IAML			02 57 58.0	
	comp=N,1μm,0.4s							
HOMI				IAML			02 57 58.0	
	comp=E,1μm,0.4s							
TNCL	**Tunceli-Merkez**	**1.06**	**256**	*i* P	**Pg**		**02 57 39.9**	**-1.6**
TNCL				IAML			02 57 58.0	
	comp=N,1μm,0.5s							
TNCL				IAML			02 58 00.0	
	comp=E,2μm,0.6s							
BAYT	**Aydıntepe-Bayb**	**1.15**	**331**	PN	**Pg**		**02 57 42.5**	**-0.8**
GURO	**Guroymak-BITLI**	**1.23**	**132**	PN	**Pb**		**02 57 43.4**	**-1.4**
SVAN	**Silvan-Diyarba**	**1.26**	**168**	PN	**Pn**		**02 57 44.9**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.26**	**168**	*i* P	**Pn**		**02 57 44.7**	**-0.5**
SVAN				IAML			02 58 04.0	
	comp=N,268nm,0.3s							
SVAN				IAML			02 58 07.0	
	comp=E,386nm,0.5s							
MLAZ	**Malazgirt-MUS**	**1.33**	**100**	PN	**Pn**		**02 57 45.5**	**-0.8**
EATA	**Eleskirt**	**1.34**	**69**	*i* P	**Pn**		**02 57 45.6**	**-1.0**
EATA				*i* S	**Sn**		**02 58 06.2**	**+1.3**
EATA				IAML			02 58 11.0	
	comp=E,465nm,0.9s							
EATA				IAML			02 58 12.0	
	comp=N,550nm,0.4s							
BLIS	**Bitlis-Merkez**	**1.37**	**134**	*i* P	**Pn**		**02 57 45.7**	**-1.2**
BLIS				IAML			02 58 07.0	
	comp=N,395nm,0.3s							
BLIS				IAML			02 58 09.0	
	comp=E,366nm,0.6s							
KELT	**Kelkit**	**1.46**	**302**	*i* P	**Pn**		**02 57 47.9**	**-0.1**
KELT				IAML			02 58 14.0	
	comp=E,306nm,0.6s							
KELT				IAML			02 58 15.0	
	comp=N,345nm,1.0s							
TUTA	**Tutak**	**1.51**	**89**	*i* P	**Pb**		**02 57 49.5**	**-0.1**
TUTA				IAML			02 58 17.0	
	comp=N,914nm,0.5s							
BTMN	**Batman**	**1.52**	**168**	*i* P	**Pb**		**02 57 49.7**	**0.0**
BTMN				IAML			02 58 13.0	
	comp=E,2μm,0.4s							
BTMN				IAML			02 58 14.0	
	comp=N,889nm,0.4s							
DYBB	**Diyarbakir**	**1.54**	**202**	PN	**Pn**		**02 57 49.2**	**+0.2**
SRTM	**Siirt_Merkez**	**1.62**	**149**	*i* P	**Pb**		**02 57 51.1**	**-0.2**
SRTM				IAML			02 58 15.0	
	comp=N,636nm,0.6s							
SRTM				IAML			02 58 18.0	
	comp=E,488nm,0.6s							
REFA	**Refahiye_ERZN**	**1.63**	**271**	*i* P	**Pg**		**02 57 53.8**	**+1.5**
REFA				IAML			02 58 20.0	
	comp=E,169nm,1.1s							
SENK	**Senkaya-Erzuru**	**1.64**	**44**	PN	**Pn**		**02 57 50.5**	**-0.1**
DDEM	**Demirkent**	**1.65**	**24**	*i* P	**Pb**		**02 57 51.5**	**-0.5**
DDEM				IAML			02 58 17.0	
	comp=E,857nm,0.4s							
DDEM				IAML			02 58 18.0	
	comp=N,1μm,0.5s							
AGRB	**Hanur-Agry**	**1.66**	**83**	PN	**Pn**		**02 57 51.2**	**+0.4**
ELZG	**Elazig**	**1.71**	**239**	*i* P	**Pb**		**02 57 52.4**	**-0.7**
ELZG				IAML			02 58 29.0	
	comp=N,215nm,0.5s							
ELZG				IAML			02 58 35.0	
	comp=E,252nm,0.9s							
CHOM	**Cayeli-Rize**	**1.71**	**357**	PN	**Pn**		**02 57 51.9**	**+0.5**
DBAD	**Bademkaya**	**1.75**	**21**	*i* P	**Pn**		**02 57 52.4**	**+0.4**
DBAD				IAML			02 58 18.0	
	comp=N,339nm,0.6s							
DBAD				IAML			02 58 21.0	
	comp=E,361nm,0.6s							
MACK	**Trabzon**	**1.77**	**332**	*i* P	**Pb**		**02 57 54.0**	**0.0**
MACK				IAML			02 58 24.0	
	comp=N,210nm,0.5s							
MACK				IAML			02 58 24.0	
	comp=E,236nm,0.7s							
KEMA	**Kemaliye**	**1.84**	**267**	*i* P	**Pb**		**02 57 54.6**	**-0.6**
KEMA				IAML			02 58 27.0	
	comp=N,170nm,0.3s							
KEMA				IAML			02 58 28.0	
	comp=E,169nm,0.5s							
DAGI	**Agillar**	**1.87**	**25**	*i* P	**Pb**		**02 57 54.8**	**-1.0**
DAGI				IAML			02 58 28.0	
	comp=N,135nm,0.8s							
DAGI				IAML			02 58 28.0	
	comp=E,104nm,0.5s							
MAZI	**Mazidag**	**1.95**	**190**	PN	**Pn**		**02 57 54.9**	**+0.2**
AKDM	**Akdamar-Van**	**1.96**	**122**	PN	**Pn**		**02 57 55.2**	**+0.3**
ARPR	**Arapgir-MALATY**	**1.98**	**262**	PN	**Pn**		**02 57 55.5**	**+0.2**
GEVA	**Gevas**	**2.02**	**121**	*i* P	**Pb**		**02 57 57.1**	**-1.2**
GEVA				IAML			02 58 33.0	
	comp=E,126nm,0.8s							
DBOC	**Borcka**	**2.05**	**17**	*i* P	**Pn**		**02 57 57.0**	**+0.9**
DBOC				IAML			02 58 26.0	
	comp=E,227nm,0.4s							
VANB	**Van**	**2.12**	**111**	PN	**Pn**		**02 57 58.3**	**+1.2**
TVAN	**Van**	**2.16**	**113**	*i* P	**Pb**		**02 57 59.8**	**-0.8**
TVAN				IAML			02 58 37.0	
	comp=N,125nm,0.6s							
TVAN				IAML			02 58 37.0	
	comp=E,140nm,0.5s							
MALT	**Malatya**	**2.18**	**241**	PN	**Pn**		**02 57 58.1**	**+0.2**
DIGO	**Kars**	**2.19**	**61**	*i* P	**Pb**		**02 58 00.5**	**-0.7**
DIGO				IAML			02 58 36.0	
	comp=N,144nm,0.7s							
DIGO				IAML			02 58 40.0	
	comp=E,104nm,0.6s							
DYDN	**Diyadin**	**2.19**	**85**	*i* P	**Pb**		**02 58 00.9**	**-0.3**
DYDN				IAML			02 58 39.0	
	comp=N,194nm,0.8s							
DYDN				IAML			02 58 41.0	
	comp=E,126nm,0.8s							
SIRN	**Sirnak**	**2.24**	**147**	*i* P	**Pb**		**02 58 01.6**	**-0.4**
SIRN				IAML			02 58 33.0	
	comp=E,343nm,0.7s							
SIRN				IAML			02 58 35.0	
	comp=N,372nm,0.7s							
SIRT	**Sirnak**	**2.25**	**146**	PN	**Pn**		**02 57 59.4**	**+0.6**
CLDR	**Caldiran**	**2.38**	**95**	PN	**Pn**		**02 58 01.5**	**+0.7**
URFA	**Urfa**	**2.52**	**220**	PN	**Pn**		**02 58 02.8**	**+0.3**
IGDI	**IGDIR**	**2.53**	**78**	*i* P	**Pb**		**02 58 06.3**	**-0.6**
CUKAN	**kangal_SIVAS**	**2.63**	**270**	*i* P	**Pb**		**02 58 07.9**	**-0.8**
CUKAN				IAML			02 58 54.0	
	comp=E,71nm,0.7s							
CUKAN				IAML			02 59 04.0	
	comp=N,64nm,0.6s							
TASB	**TASBURUN-IGDIR**	**2.67**	**76**	PN	**Pn**		**02 58 05.6**	**+1.0**
BGD	**Bogdanovka**	**2.81**	**47**	P	**Pn**		**02 58 07.6**	**+0.9**
AKH	**Akhalkalaki**	**2.85**	**44**	P	**Pn**		**02 58 08.0**	**+0.8**
GNI	**Garni**	**3.08**	**74**	Pn	**Pn**		**02 58 11.5**	**+1.1**
	comp=N,0.9nm,0.3s,baz=293,slow=15,SNR=6.4							
GNI				Pg	**Pb**		**02 58 17.7**	**+1.3**
	comp=N,5.2nm,0.3s,baz=297,slow=4.5,SNR=26							
GNI				LR	LR		02 59 36.2	
	comp=N,40nm,19.6s,baz=286,slow=45							
TRLG	**Trialeti**	**3.28**	**48**	P	**Pn**		**02 58 15.2**	**+2.1**
TKB	**Tkibuli**	**3.38**	**28**	P	**Pn**		**02 58 15.4**	**+1.1**
ONI	**Oni**	**3.75**	**31**	P	**Pn**		**02 58 20.6**	**+1.1**
DGRG	**David-gareji**	**4.01**	**58**	P	**Pn**		**02 58 24.8**	**+1.8**
DDFL	**Dedoflistskaro**	**4.51**	**61**	P	**Pg**		**02 58 46.0**	**-1.4**
KBZ	**Khabaz**	**4.60**	**19**	Pn	**Pn**		**02 58 33.0**	**+2.0**
	comp=N,0.1nm,0.3s,baz=194,slow=12,SNR=3.2							
KBZ				LR	LR		03 00 40.3	
	comp=N,55nm,19.6s,baz=152,slow=44							
BRTR	**Keskin Array B**	**5.59**	**276**	Pn	**Pn**		**02 58 48.5**	**+3.6**
	comp=N,0.1nm,0.3s,baz=85,slow=13,SNR=4.3							
BRTR				Lg	Lg		03 00 20.2	
	baz=96,slow=28,SNR=2.5							
MMAI	**Mount Meron Ar**	**7.74**	**216**	Pn	**Pn**		**02 59 16.2**	**+2.0**
	comp=N,0.5nm,0.3s,baz=36,slow=11,SNR=3.0							
FINES	**FINESS Array B**	**23.90**	**342**	P	**P**		**03 02 35.7**	**+0.6**
	comp=N,1.4nm,0.9s,baz=157,slow=7.5,SNR=2.3							

*RSPR **15** 02:58:56.1, 19.′15N×66.′70W, h14km±2km, MD3.1/19*
*NEIC **15** 02:58:56.9±2.9, 18.′99N±0.′05×66.′71W±0.′03, h30km±10km, Error ellipse: s-maj=7.8km s-min=2.4km az=208.0*
ISC 15 02:58:54.5±1.5, 19.′08N±0.′05×66.′67W±0.′02, h17km±9km, n52, σ1§61/79, 13C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.62**	**168**	*e*S	**Sn**	**02 59 18.1**	**+0.2**
EMPR	**Esperanza - Ma**	**0.62**	**168**	*e*P	**Pn**	**02 59 08.3**	**-0.1**
EMPR	**Esperanza - Ma**	**0.62**	**168**		**Pn**	**02 59 08.3**	**-0.1**
EMPR					**Sn**	**02 59 18.1**	**+0.2**
AOPR	**Arecibo Observ**	**0.74**	**186**	*e*S	**Sn**	**02 59 20.5**	**-0.4**
AOPR	**Arecibo Observ**	**0.74**	**186**	*e*P	**Pn**	**02 59 09.7**	**-0.4**
AOPR	**Arecibo Observ**	**0.74**	**186**		**Pn**	**02 59 09.7**	**-0.4**
AOPR					**Sn**	**02 59 20.5**	**-0.4**
AGPR	**Aguadilla, PR**	**0.74**	**214**	*e*P	**Pb**	**02 59 08.9**	**0.0**
AGPR				*e*S	**Sb**	**02 59 19.3**	**+0.6**
AGPR	**Aguadilla, PR**	**0.74**	**214**		**Pb**	**02 59 08.9**	**0.0**
AGPR					**Sb**	**02 59 19.3**	**+0.6**
GCPR	**Guaynabo City**	**0.95**	**144**		**Pg**	**02 59 12.6**	**-0.3**
GCPR				Sn	**Sg**	**02 59 25.3**	**-0.1**
MPR	**Mayaguez**	**0.97**	**207**		**Pn**	**02 59 12.9**	**-0.5**
MPR				Sn	**Sb**	**02 59 25.4**	**-0.1**
LSP	**Las Mesas**	**0.99**	**204**	*e*P	**Pn**	**02 59 13.2**	**-0.3**
LSP	**Las Mesas**	**0.99**	**204**	*e*S	**Sg**	**02 59 26.3**	**-0.2**
LSP	**Las Mesas**	**0.99**	**204**		**Pn**	**02 59 13.2**	**-0.3**
LSP					**Sg**	**02 59 26.3**	**-0.2**
CELP	**Cerrillos**	**1.01**	**175**	*e*P	**Pn**	**02 59 14.0**	**+0.2**
CELP				*e*S	**Sn**	**02 59 27.4**	**-0.1**
CELP	**Cerrillos**	**1.01**	**175**		**Pn**	**02 59 14.0**	**+0.2**
CELP					**Sn**	**02 59 27.4**	**-0.1**
OBIP	**Obispado Ponce**	**1.04**	**177**	*e*P	**Pn**	**02 59 14.1**	**-0.1**
OBIP	**Obispado Ponce**	**1.04**	**177**	*e*S	**Sn**	**02 59 28.4**	**+0.2**
OBIP	**Obispado Ponce**	**1.04**	**177**		**Pn**	**02 59 14.1**	**-0.1**
OBIP					**Sn**	**02 59 28.4**	**+0.2**
SJG	**San Juan**	**1.08**	**153**		**Pg**	**02 59 15.1**	**-0.3**
SJG				Sn	**Sn**	**02 59 31.9**	**+2.4**
CBYP	**Canovanas**	**1.12**	**136**	*e*P	**Pb**	**02 59 14.8**	**-0.5**
CBYP	**Canovanas**	**1.12**	**136**	*e*P	**Pb**	**02 59 15.1**	**-0.2**
CBYP				*e*S	**Sb**	**02 59 29.8**	**+0.2**
CBYP	**Canovanas**	**1.12**	**136**		**Pb**	**02 59 15.1**	**-0.2**
CBYP					**Sb**	**02 59 29.8**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.12**	**190**	*e*P	**Pg**	**02 59 15.5**	**-0.7**
GBPR	**Guanica, Bosqu**	**1.12**	**190**	*e*S	**Sn**	**02 59 30.4**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.12**	**190**		**Pg**	**02 59 15.5**	**-0.7**
GBPR					**Sn**	**02 59 30.4**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.15**	**201**	*e*P	**Pn**	**02 59 15.5**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.15**	**201**	*e*S	**Sb**	**02 59 30.6**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.15**	**201**		**Pn**	**02 59 15.5**	**-0.3**
CRPR					**Sb**	**02 59 30.6**	**+0.1**
MLPR	**Magueyes Islan**	**1.16**	**198**	*e*P	**Pn**	**02 59 15.6**	**-0.3**
MLPR				*e*S	**Sb**	**02 59 30.8**	**-0.1**
MLPR	**Magueyes Islan**	**1.16**	**198**		**Pn**	**02 59 15.6**	**-0.3**
MLPR					**Sb**	**02 59 30.8**	**-0.1**
ICMP	**Isla Caja de M**	**1.20**	**173**		**Pg**	**02 59 18.4**	**+0.7**
ICMP				Sn	**Sg**	**02 59 35.9**	**+2.6**
HUMP	**Col San Antoni**	**1.22**	**140**	*e*P	**Pn**	**02 59 16.4**	**-0.2**
HUMP	**Col San Antoni**	**1.22**	**140**	*e*P	**Pb**	**02 59 17.0**	**0.0**
HUMP				*e*S	**Sn**	**02 59 33.0**	**+0.3**
HUMP	**Col San Antoni**	**1.22**	**140**		**Pb**	**02 59 17.0**	**0.0**
HUMP					**Sn**	**02 59 33.0**	**+0.3**
IGPR	**InterUniversit**	**1.23**	**154**	*e*P	**Pg**	**02 59 17.6**	**-0.7**
IGPR				*e*S	**Sb**	**02 59 32.4**	**-0.5**
IGPR	**InterUniversit**	**1.23**	**154**	*e*P	**Pb**	**02 59 17.0**	**-0.3**
IGPR	**InterUniversit**	**1.23**	**154**	*e*S	**Sn**	**02 59 33.7**	**+0.6**
IGPR	**InterUniversit**	**1.23**	**154**		**Pg**	**02 59 17.6**	**-0.7**
IGPR					**Sb**	**02 59 32.4**	**-0.5**
MTP	**Monte Pirata**	**1.44**	**133**	*e*P	**Pn**	**02 59 19.5**	**-0.3**
MTP	**Monte Pirata**	**1.44**	**133**	*e*S	**Sn**	**02 59 37.9**	**-0.4**
MTP	**Monte Pirata**	**1.44**	**133**		**Pn**	**02 59 19.5**	**-0.3**
MTP					**Sn**	**02 59 37.9**	**-0.4**
PCDR	**Punta Cana, DR**	**1.72**	**251**	*e*P	**Pn**	**02 59 22.9**	**-0.7**
PCDR	**Punta Cana, DR**	**1.72**	**251**	*e*S	**Sn**	**02 59 43.8**	**-1.3**
PCDR	**Punta Cana, DR**	**1.72**	**251**		**Pn**	**02 59 22.9**	**-0.7**
PCDR					**Sn**	**02 59 43.8**	**-1.3**
STVI	**Saint Thomas**	**1.78**	**114**	*e*P	**Pn**	**02 59 24.3**	**-0.1**
STVI	**Saint Thomas**	**1.78**	**114**	*e*S	**Sn**	**02 59 46.2**	**-0.5**
STVI	**Saint Thomas**	**1.78**	**114**		**Pn**	**02 59 24.3**	**-0.1**
STVI					**Sn**	**02 59 46.2**	**-0.5**
TBVI	**Tortola**	**2.06**	**108**	*e*P	**Pn**	**02 59 28.5**	**+0.3**
TBVI	**Tortola**	**2.06**	**108**	*e*S	**Sn**	**02 59 53.3**	**-0.1**
TBVI	**Tortola**	**2.06**	**108**		**Pn**	**02 59 28.5**	**+0.3**
TBVI					**Sn**	**02 59 53.3**	**-0.1**
DR12	**Loma Pena Alta**	**2.58**	**264**		**Pn**	**02 59 36.5**	**+0.9**
DR12				Sn	**Sn**	**03 00 07.4**	**+0.8**
SDDR	**Presa de Saban**	**4.37**	**269**		**Pn**	**03 00 01.3**	**+1.2**

*IDC **15** 03:04:55.2±1.6, 54.′97N×165.′89E, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.6/45, mbtmp3.6/8, ML2.9/1, MS2.5/1, Ms1 2.5/1, ms1mx2.2/35, Error ellipse: s-maj=61.9km s-min=23.1km az=165.0*
*KRSC **15** 03:04:55.0±1.8, 54.′74N×165.′62E, h40km±14km, ML4.3*
*MOS **15** 03:04:57.2±0.7, 54.′80N×165.′73E, h45km, mb4.0/1, Error ellipse: s-maj=8.8km s-min=6.9km az=156.5*
ISC 15 03:04:56.7±0.8, 54.′77N±0.′05×165.′80E±0.′06, h20km, n78, σ1§49/93, mb3.5/7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.45**	**13**	PN	**Pb**	**03 05 05.3**	**-0.6**
BKI	**Bering**	**0.45**	**13**	*e*P	**Pb**	**03 05 05.3**	**-0.6**
BKI				*e*S	**Sb**	**03 05 11.2**	**-0.9**
KBTR	**Krutoberegovo**	**2.23**	**312**	PN	**Pn**	**03 05 29.3**	**-3.1**
KBTR	**Krutoberegovo**	**2.23**	**312**	*e*P	**Pn**	**03 05 29.3**	**-3.1**
ZLN	**Zelenaya**	**3.11**	**296**	PN	**Pn**	**03 05 45.7**	**+1.0**
ZLN	**Zelenaya**	**3.11**	**296**	*e*P	**Pn**	**03 05 45.7**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**3.14**	**294**	PN	**Pn**	**03 05 45.8**	**+0.7**
BZGR	**Bezymyannyi-Gr**	**3.14**	**294**	*e*P	**Pn**	**03 05 45.8**	**+0.7**
TUMD	**Tumrok D**	**3.14**	**280**	*e*P	**Pn**	**03 05 45.0**	**-0.1**
TUMD				*e*S	**Sn**	**03 06 20.6**	**-1.4**
CIRR	**Tsirk**	**3.18**	**297**	PN	**Pn**	**03 05 46.5**	**+0.8**
CIRR	**Tsirk**	**3.18**	**297**	*e*P	**Pn**	**03 05 46.5**	**+0.8**
KZV	**Kizimen**	**3.19**	**278**	PN	**Pn**	**03 05 45.5**	**-0.4**
KZV				S	**Sn**	**03 06 21.5**	**-2.0**
KZV	**Kizimen**	**3.19**	**278**	*e*P	**Pn**	**03 05 45.5**	**-0.4**
KZV				*e*S	**Sn**	**03 06 21.5**	**-2.0**
TUMR	**Tumrok**	**3.29**	**281**	PN	**Pn**	**03 05 45.0**	**-2.3**
TUMR	**Tumrok**	**3.29**	**281**	*e*P	**Pn**	**03 05 47.4**	**+0.1**
KRSR	**Krestovskiy**	**3.31**	**298**	PN	**Pn**	**03 05 47.7**	**+0.2**
KRSR				S	**Sn**	**03 06 26.0**	**-0.3**
KRSR	**Krestovskiy**	**3.31**	**298**	*e*P	**Pn**	**03 05 47.7**	**+0.2**
KRSR				*e*S	**Sn**	**03 06 26.0**	**-0.3**
KIRR	**Kirishev**	**3.33**	**293**	PN	**Pn**	**03 05 47.1**	**-0.7**
KIRR	**Kirishev**	**3.33**	**293**	*e*P	**Pn**	**03 05 47.1**	**-0.7**
KMNR	**Kamenistaya**	**3.33**	**289**	PN	**Pn**	**03 05 48.1**	**+0.3**
KMNR	**Kamenistaya**	**3.33**	**289**	*e*P	**Pn**	**03 05 48.1**	**+0.3**
KPT	**Kopyto**	**3.40**	**293**	PN	**Pn**	**03 05 49.3**	**+0.6**
KPT	**Kopyto**	**3.40**	**293**	*e*P	**Pn**	**03 05 49.3**	**+0.6**
SRDR	**Sredinnyy**	**3.79**	**297**	PN	**Pn**	**03 05 54.8**	**+0.8**
SRDR	**Sredinnyy**	**3.79**	**297**	*e*P	**Pn**	**03 05 54.8**	**+0.8**
SPN	**Mys Shipunski**	**3.80**	**246**	PN	**Pn**	**03 05 53.0**	**-1.1**
SPN	**Mys Shipunski**	**3.80**	**246**	*e*P	**Pn**	**03 05 53.0**	**-1.1**
SPN				*e*S	**Sn**	**03 06 34.1**	**-4.1**
NLC	**Nalytchevo**	**4.13**	**250**	PN	**Pn**	**03 05 58.4**	**-0.3**
NLC	**Nalytchevo**	**4.13**	**250**	*e*P	**Pn**	**03 05 58.4**	**-0.3**
NLC				*e*S	**Sn**	**03 06 43.0**	**-3.4**
ESO	**Esso**	**4.21**	**289**	PN	**Pn**	**03 06 00.1**	**+0.3**
ESO	**Esso**	**4.21**	**289**	*e*P	**Pn**	**03 06 00.1**	**+0.3**
SDLR	**Sedlovina**	**4.34**	**253**	PN	**Pn**	**03 06 01.8**	**+0.1**
SDLR	**Sedlovina**	**4.34**	**253**	*e*P	**Pn**	**03 06 01.8**	**+0.1**
SDLR				*e*S	**Sn**	**03 06 49.5**	**-2.2**
SMAR	**Somma**	**4.40**	**253**	PN	**Pn**	**03 06 02.7**	**+0.2**
SMAR				S	**Sn**	**03 06 51.6**	**-1.5**
SMAR	**Somma**	**4.40**	**253**	*e*P	**Pn**	**03 06 02.7**	**+0.2**
SMAR				*e*S	**Sn**	**03 06 51.6**	**-1.5**
UGLR	**Uglovaya**	**4.40**	**252**	PN	**Pn**	**03 06 02.8**	**+0.3**
UGLR	**Uglovaya**	**4.40**	**252**	*e*P	**Pn**	**03 06 02.8**	**+0.3**
UGLR				*e*S	**Sn**	**03 06 50.5**	**-2.7**
KRER	**Koryakskii**	**4.41**	**253**	PN	**Pn**	**03 06 02.8**	**+0.2**
KRER	**Koryakskii**	**4.41**	**253**	*e*P	**Pn**	**03 06 02.8**	**+0.2**
KRER				*e*S	**Sn**	**03 06 51.1**	**-2.3**
AVH	**Avacha**	**4.43**	**253**	PN	**Pn**	**03 06 03.6**	**+0.8**
AVH	**Avacha**	**4.43**	**253**	*e*P	**Pn**	**03 06 03.6**	**+0.8**
AVH				*e*S	**Sn**	**03 06 51.6**	**-2.2**
KRX	**Arik**	**4.44**	**254**	PN	**Pn**	**03 06 03.5**	**+0.4**
KRX	**Arik**	**4.44**	**254**	*e*P	**Pn**	**03 06 03.5**	**+0.4**
KRX				*e*S	**Sn**	**03 06 51.7**	**-2.5**
KOK	**Koryaka**	**4.48**	**254**	PN	**Pn**	**03 06 03.9**	**+0.4**
KOK	**Koryaka**	**4.48**	**254**	*e*P	**Pn**	**03 06 03.9**	**+0.4**
KOK				*e*S	**Sn**	**03 06 52.0**	**-3.0**
PET	**Petropavlovsk**	**4.58**	**250**	*e*S	**Sn**	**03 06 53.3**	**-3.9**
RUS	**Russkaya**	**4.93**	**245**	PN	**Pn**	**03 06 09.8**	**+0.2**
RUS	**Russkaya**	**4.93**	**245**	*e*P	**Pn**	**03 06 09.8**	**+0.2**
RUS				*e*S	**Sn**	**03 07 02.1**	**-3.9**
KRMR	**Karymshinskiy**	**4.95**	**250**	PN	**Pn**	**03 06 10.8**	**+1.0**
KRMR	**Karymshinskiy**	**4.95**	**250**	*e*P	**Pn**	**03 06 10.8**	**+1.0**
KRMR				*e*S	**Sn**	**03 07 04.2**	**-2.1**
PEA0B	**Petropavlovsk-**	**5.07**	**254**	*i* PN	**Pn**	**03 06 12.5**	**+1.0**
PETK	**Petropavlovsk-**	**5.07**	**254**	Pn	**Pn**	**03 06 12.5**	**+1.0**
	2.0nm,0.3s,baz=89,slow=18,SNR=26						
PETK				Pg	**Pb**	**03 06 26.7**	**+2.1**
	3.4nm,0.3s,baz=73,slow=16,SNR=12						
PETK				Sn	**Sn**	**03 07 07.8**	**-1.6**
	2.1nm,0.3s,baz=94,slow=19,SNR=4.2						
PETK				LR	LR	03 08 12.3	
	comp=Z,49nm,20.0s,baz=61,slow=38						
MTVR	**Mutnovka**	**5.08**	**246**	PN	**Pn**	**03 06 12.5**	**+0.7**
MTVR	**Mutnovka**	**5.08**	**246**	*e*P	**Pn**	**03 06 12.5**	**+0.7**
GRL	**Gorelyy**	**5.10**	**247**	PN	**Pn**	**03 06 12.9**	**+0.8**
GRL	**Gorelyy**	**5.10**	**247**	*e*P	**Pn**	**03 06 12.9**	**+0.8**
ASAK	**Asacha**	**5.28**	**246**	PN	**Pn**	**03 06 15.7**	**+1.2**
ASAK	**Asacha**	**5.28**	**246**	*e*P	**Pn**	**03 06 15.7**	**+1.2**
ASAK				*e*S	**Sn**	**03 07 12.9**	**-1.8**
APC	**Apacha**	**5.44**	**254**	PN	**Pn**	**03 06 17.6**	**+1.0**
APC	**Apacha**	**5.44**	**254**	*e*P	**Pn**	**03 06 17.6**	**+1.0**
KDTR	**Khodutka, Kamc**	**5.50**	**241**	PN	**Pn**	**03 06 17.0**	**-0.4**
KDTR	**Khodutka, Kamc**	**5.50**	**241**	*e*P	**Pn**	**03 06 17.0**	**-0.4**
TILK	**Tilichiki**	**5.69**	**2**	PN	**Pn**	**03 06 21.5**	**+1.5**
TILK	**Tilichiki**	**5.69**	**2**	*e*P	**Pn**	**03 06 21.5**	**+1.5**
SKR	**Severo-Kuril's**	**7.16**	**239**	*e*PN	**Pn**	**03 06 37.1**	**-3.1**
ILAR	**Eielson Array**	**25.21**	**48**	P	**P**	**03 10 20.1**	**-0.5**
	4.1nm,0.8s,baz=254,slow=8.6,SNR=31						
INK	**Inuvik**	**30.45**	**40**	P	**P**	**03 11 07.0**	**-0.4**
	0.7nm,0.5s,baz=287,slow=5.7,SNR=6.1						
H11N2	**WAKE ISLAND Hy**	**34.99**	**178**	T	T	03 49 22.2	
	baz=359,slow=76,SNR=77						
H11N3	**WAKE ISLAND Hy**	**35.00**	**178**	T	T	03 49 24.0	
	baz=359,slow=76,SNR=59						
H11N1	**WAKE ISLAND Hy**	**35.01**	**178**	T	T	03 49 23.0	
	baz=359,slow=76,SNR=70						
H11S1	**WAKE ISLAND Hy**	**36.20**	**179**	T	T	03 50 46.3	
	baz=360						
H11S3	**WAKE ISLAND Hy**	**36.22**	**179**	T	T	03 50 52.3	
	baz=360						
H11S2	**WAKE ISLAND Hy**	**36.22**	**179**	T	T	03 50 52.3	
	baz=360						
YKA	**Yellowknife Ar**	**39.61**	**46**	P	**P**	**03 12 26.1**	**-0.2**
	0.4nm,0.3s,baz=296,slow=7.7,SNR=9.3						
MKAR	**Makanchi Array**	**50.42**	**298**	P	**P**	**03 13 54.4**	**+2.0**
	0.2nm,0.5s,baz=41,slow=8.5,SNR=2.9						
NVAR	**Mina Array Bea**	**52.02**	**75**	P	**P**	**03 14 06.2**	**+1.4**
	0.4nm,0.8s,baz=302,slow=7.4,SNR=3.4						
PDAR	**Pinedale Array**	**53.75**	**65**	P	**P**	**03 14 17.8**	**+0.2**
	0.3nm,0.6s,baz=308,slow=6.5,SNR=3.5						
TXAR	**Lajitas Array**	**66.89**	**72**	P	**P**	**03 15 48.8**	**+1.4**
	0.3nm,0.6s,baz=316,slow=5.0,SNR=4.3						

*IDC **15** 03:07:46.4±1.6, 17.′96N×120.′84E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/42, mbtmp3.6/5, Error ellipse: s-maj=54.3km s-min=26.2km az=66.0*
*NEIC **15** 03:07

comp=Z,3.7nm,1.1s
PB14 IPOC Station P 3.78 201 *i* P **Pn** **03 24 20.5 -0.4**
PB14 IAML 03 25 11.4
comp=Z,34nm,0.3s

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*IDC **15** 03:26:52.1±0.6,31˚16N×142˚98E,h0km,mb4.1/17, mb1 4.3/21,mb1mx4.2/34,mbtmp4.0/21,ML3.3/4,MS2.7/6, Ms1 2.7/6,ms1mx2.6/30,Error ellipse: s-maj=17.6km s-min=16.3km az=99.0*
*JMA **15** 03:26:54.0±0.2,31˚15N×142˚61E,h58km,M4.1*
*NEIC **15** 03:26:54.1±1.5,31˚16N±0˚02×142˚9E±0˚.1,h16km±4km, mb4.4/20,Error ellipse: s-maj=13.0km s-min=1.8km az=99.0*
ISC 15 03:26:56.1±0.5,31˚20N±0˚05×142˚91E±0˚08,h30km,n70, σ1884/70,mb4.3/26,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.24**	**307**	Pn	**Pn**	**03 27 44.0**	**-0.8**
JHJ2				Sn	**Sn**	**03 28 22.8**	**+0.3**
BSO1	**Boso 1**	**3.81**	**335**	P	**Pn**	**03 27 51.0**	**-1.1**
BSO3	**Boso 3**	**4.12**	**331**	P	**Pn**	**03 27 55.2**	**-1.5**
CBIJ	**Chichi jima**	**4.14**	**189**	S	**Sn**	**03 28 40.6**	**-4.1**
JCJ	**Chichijima**	**4.14**	**189**	Pn	**Pn**	**03 27 55.5**	**-1.8**
	8.6nm,0.3s,baz=72,slow=20,SNR=3.0						
JCJ				Sn	**Sn**	**03 28 39.9**	**-4.8**
	33nm,0.3s,baz=262,slow=23,SNR=5.8						
JOD2	**Odawara 2**	**5.16**	**323**	*e*S	**Sn**	**03 29 06.1**	**-3.8**
JHU	**Hanno**	**5.54**	**328**	*e*S	**Sn**	**03 29 14.6**	**-4.5**
JHO	**Hitachi**	**5.74**	**341**	*e*S	**Sn**	**03 29 19.6**	**-4.3**
JRY	**Ryogami san**	**5.85**	**326**	P	**Pn**	**03 28 19.2**	**-1.6**
JRY				*e*S	**Sn**	**03 29 23.0**	**-3.9**
JAG	**Ashikaga**	**5.95**	**332**	P	**Pn**	**03 28 20.5**	**-1.6**
JFK	**Kawauchi**	**6.38**	**345**	P	**Pn**	**03 28 24.7**	**-3.3**
MJAR	**Matsushiro Arr**	**6.61**	**325**	Pn	**Pn**	**03 28 30.4**	**-0.8**
	0.5nm,0.3s,baz=145,slow=11,SNR=21						
MJAR				Sn	**Sn**	**03 29 42.2**	**-3.2**
	0.2nm,0.3s,baz=126,slow=17,SNR=7.2						
MJAR				LR	LR	03 32 09.1	
	comp=Z,26nm,18.7s,baz=170,slow=48						
MAJO	**Matsushiro**	**6.61**	**325**		**Pn**	**03 28 31.1**	**-0.1**
MAJO				Sn	**Sn**	**03 29 44.7**	**-0.8**
MAT	**Matsushiro**	**6.61**	**325**	P	**Pn**	**03 28 30.7**	**-0.5**
MAT				S	**Sn**	**03 29 42.2**	**-3.3**
MJB9	**Matsu-Tunnel**	**6.61**	**325**		**Pn**	**03 28 30.9**	**-0.4**
MJB9				Sn	**Sn**	**03 29 44.5**	**-1.1**
JMK	**Ichinoseki**	**7.86**	**350**	P	**Pn**	**03 28 45.1**	**-3.1**
JNU	**Nakatsue**	**10.38**	**284**	LR	LR	03 33 04.4	
	comp=Z,49nm,21.7s,baz=162,slow=36						
ASAJ	**Asahikawa**	**12.89**	**359**	Pn	**Pn**	**03 29 53.8**	**-3.4**
	0.5nm,0.3s,baz=43,slow=17,SNR=4.3						
ASAJ				Sn	Sn	03 32 08.8	-11
	0.2nm,0.3s,baz=180,slow=20,SNR=2.3						
KSRS	**Korea Array**	**13.86**	**301**	Pn	**Pn**	**03 30 10.7**	**+0.2**
	0.0nm,0.3s,baz=112,slow=13,SNR=3.1						
KSRS				LR	LR	03 35 18.6	
	comp=Z,33nm,21.4s,baz=95,slow=36						
USRK	**Ussuriysk Ar.**	**15.57**	**329**	Pn	**P**	**03 30 39.6**	**+2.3**
	baz=154,slow=14,SNR=3.4						
KLR	**Kul'dur**	**19.88**	**338**	P	**Pn**	**03 31 27.6**	**+1.0**
	0.1nm,0.3s,baz=143,slow=7.5,SNR=8.6						
KLR				LR	LR	03 40 46.4	
	comp=Z,18nm,18.2s,baz=113,slow=42						
YULB	**Yu-li**	**20.70**	**253**	P	**P**	**03 31 33.9**	**0.0**
YULB				IAmb	IAmb	03 31 52.6	
	comp=Z,21nm,1.0s						
BJT	**Baijiatuao**	**23.39**	**299**	P	**P**	**03 32 01.7**	**-0.6**
PETK	**Petropavlovsk-**	**24.39**	**22**	LR	LR	03 42 41.3	
	comp=Z,21nm,19.8s,baz=237,slow=39						
H11N2	**WAKE ISLAND Hy**	**24.43**	**112**	T	T	03 57 28.6	
	baz=304,slow=74,SNR=4.4						
H11N1	**WAKE ISLAND Hy**	**24.43**	**112**	T	T	03 57 25.9	
	baz=304,slow=74,SNR=5.6						
H11N3	**WAKE ISLAND Hy**	**24.44**	**112**	T	T	03 57 26.7	
	baz=304,slow=74,SNR=3.9						
H11S3	**WAKE ISLAND Hy**	**24.95**	**115**	T	T	03 58 04.7	
	baz=305,slow=74,SNR=4.4						
H11S1	**WAKE ISLAND Hy**	**24.95**	**115**	T	T	03 58 05.5	
	baz=305,slow=74,SNR=6.5						
H11S2	**WAKE ISLAND Hy**	**24.96**	**115**	T	T	03 58 05.8	
	baz=305,slow=74,SNR=4.3						
MA2	**Magadan**	**28.86**	**8**	LR	LR	03 42 58.0	
	comp=Z,22nm,21.1s,baz=136,slow=33						
SONM	**Songino Array**	**32.34**	**311**	P	**P**	**03 33 24.6**	**+2.0**
	comp=Z,1.0nm,0.7s,baz=103,slow=7.0,SNR=6.8						
CMAR	**Chiang Mai Arr**	**41.62**	**263**	P	**P**	**03 34 41.8**	**+0.1**
	comp=Z,1.1nm,0.3s,baz=61,slow=9.8,SNR=3.8						
ZAA0	**Zalesovo Array**	**46.88**	**317**	P	**P**	**03 35 23.6**	**+0.2**
ZALV	**Zalesovo Beam**	**46.88**	**317**	P	**P**	**03 35 24.5**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=92,slow=8.0,SNR=5.2						
ZALV				PcP	**PcP**	**03 36 56.3**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=88,slow=3.3,SNR=4.4						
MK31	**Makanchi Array**	**48.44**	**307**	P	**P**	**03 35 35.2**	**-0.5**
MK31				IAmb	IAmb	03 35 41.5	
	comp=Z,2.5nm,0.7s						
MKAR	**Makanchi Array**	**48.44**	**307**	P	**P**	**03 35 37.6**	**+1.9**
	comp=Z,3.0nm,0.6s,baz=90,slow=9.4,SNR=34						
MKAR				PcP	**PcP**	**03 37 02.7**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=97,slow=5.8,SNR=2.0						
KNRA	**Kununurra**	**48.55**	**198**	P	**P**	**03 35 36.0**	**-0.6**
MAKZ	**Makanchi**	**48.65**	**307**	P	**P**	**03 35 38.2**	**+0.9**
MAKZ				IAmb	IAmb	03 35 43.2	
	comp=Z,3.2nm,0.7s						
KURK	**Kurchatov**	**50.64**	**312**	P	**P**	**03 35 52.4**	**+0.2**
KURK				IAmb	IAmb	03 36 02.9	
	comp=Z,3.4nm,0.8s						
PPLA	**Purkeypile**	**51.34**	**32**	P	**P**	**03 35 58.1**	**+0.6**
WRA	**Warramunga Arr**	**51.51**	**190**	P	**P**	**03 35 59.5**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=8.3,slow=8.0,SNR=7.6						
FITZ	**Fitzroy Crossi**	**51.75**	**201**	P	**P**	**03 35 59.4**	**-1.5**
FITZ				IAmb	IAmb	03 36 08.5	
	comp=Z,4.0nm,0.9s						
ILAR	**Eielson Array**	**53.83**	**30**	P	**P**	**03 36 15.2**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=256,slow=5.7,SNR=9.2						
ASAR	**Alice Springs**	**55.24**	**190**	P	**P**	**03 36 26.7**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=3.4,slow=5.9,SNR=8.0						
NIL	**Nilore**	**57.81**	**292**	P	**P**	**03 36 45.3**	**+0.5**
INK	**Inuvik**	**59.05**	**26**	P	**P**	**03 36 53.2**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=295,slow=5.8,SNR=9.9						
INK	**Inuvik**	**59.05**	**26**	P	**P**	**03 36 53.8**	**+0.9**
ABKAR	**Akbulak array**	**62.73**	**313**	P	**P**	**03 37 18.8**	**+0.6**
ABKAR				IAmb	IAmb	03 37 20.6	
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**68.25**	**29**	P	**P**	**03 37 53.9**	**+0.3**
	comp=Z,1.7nm,0.9s,baz=293,slow=6.2,SNR=12						
PINE	**Pine Mountain**	**73.20**	**49**	P	**P**	**03 38 24.3**	**0.0**
FINES	**FINESS Array B**	**74.56**	**334**	P	**P**	**03 38 32.4**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=79,slow=10,SNR=4.3						
BEKR	**Beckworth**	**75.41**	**52**	P	**P**	**03 38 37.1**	**-0.2**
BEKR				IAmb	IAmb	03 38 39.1	
	comp=Z,3.6nm,1.0s						
KBZ	**Khabaz**	**75.69**	**313**	P	**P**	**03 38 39.6**	**+1.0**
	comp=Z,4.2nm,0.9s,baz=202,slow=4.8,SNR=6.6						
YERR	**Yerington**	**76.60**	**53**	P	**P**	**03 38 44.2**	**+0.1**
YERR				IAmb	IAmb	03 38 46.1	
	comp=Z,3.3nm,0.9s						
KVN	**Kaiserville**	**77.34**	**52**	P	**P**	**03 38 47.6**	**-0.7**
KVN				IAmb	IAmb	03 38 50.7	
	comp=Z,3.9nm,1.0s						
NVAR	**Mina Array Bea**	**77.51**	**53**	P	**P**	**03 38 50.4**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=284,slow=5.7,SNR=13						
AKASG	**Malin Array Be**	**79.69**	**324**	P	**P**	**03 39 00.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=47,slow=6.8,SNR=5.0						
NB2	**NORSAR Subarra**	**80.04**	**339**	P	**P**	**03 39 03.4**	**+0.9**
	comp=Z,1.2nm,1.0s,baz=38,slow=5.9						
NOA	**NORSAR Array B**	**80.04**	**338**	P	**P**	**03 39 03.2**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=39,slow=5.3,SNR=5.0						
PDAR	**Pinedale Array**	**80.87**	**45**	P	**P**	**03 39 08.2**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=325,slow=1.8,SNR=4.4						
TMUT	**Trail Mountain**	**81.77**	**49**	P	**P**	**03 39 08.8**	**-3.7**
BR131	**Keskin Array S**	**83.68**	**313**	P	**P**	**03 39 21.6**	**-0.7**
BR131				IAmb	IAmb	03 39 33.9	
	comp=Z,2.2nm,0.8s						
BRTR	**Keskin Array B**	**83.68**	**313**	P	**P**	**03 39 23.3**	**+1.1**
	comp=Z,2.5nm,1.0s,baz=129,slow=1.8,SNR=9.3						
RAYN	**Ar Rayn**	**84.08**	**294**	P	**P**	**03 39 23.4**	**-1.0**
RAYN				IAmb	IAmb	03 39 27.6	
	comp=Z,4.9nm,0.9s						
VYHS	**Vyhne**	**86.24**	**326**	*e*P	**P**	**03 39 36.3**	**+1.6**
FUORN	**Ofenpass-Fuorn**	**91.53**	**330**	P	**P**	**03 40 00.8**	**+0.7**
TXAR	**Lajitas Array**	**92.64**	**53**	P	**P**	**03 40 07.2**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=321,slow=3.2,SNR=6.2						
TORD	**Torodi Ar. Bea**	**122.29**	**314**	PKP	**PKiKP**	**03 45 49.1**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=1.5,slow=1.7,SNR=5.5						
LPAZ	**La Paz**	**148.08**	**69**	PKPbc	**PKiKP**	**03 46 41.5**	**-0.4**
	comp=Z,3.3nm,0.9s,baz=355,slow=4.4,SNR=9.5						

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*IDC **15** 04:10:10.7±4.4,2˚78S×138˚69E,h76km±51km,mb3.1/3, mb1 3.4/6,mb1mx3.3/27,mbtmp3.5/6,ML3.3/3,Error ellipse: s-maj=51.3km s-min=19.0km az=126.0*
ISC 15 04:10:05.9±1.1,2˚7S±0˚2×138˚65E±0˚09,h32km,n6, σ038/7,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.06**	**85**	P	**Pb**	**04 10 42.6**	**-0.1**
	2.2nm,0.3s,baz=240,slow=14,SNR=16						
JAY				S	**Sb**	**04 11 08.2**	**+0.2**
	2.7nm,0.3s,baz=126,slow=19,SNR=4.4						
WRA	**Warramunga Arr**	**17.66**	**193**	P	**P**	**04 14 10.1**	**-0.2**
	0.2nm,0.3s,baz=12,slow=12,SNR=4.5						
FITZ	**Fitzroy Crossi**	**19.93**	**219**	P	**Pn**	**04 14 37.0**	**0.0**
	0.1nm,0.3s,baz=41,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**21.36**	**192**	P	**P**	**04 14 50.9**	**+0.2**
	0.2nm,0.3s,baz=19,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**69.73**	**322**	P	**P**	**04 21 13.2**	**+0.4**
	0.2nm,0.6s,baz=99,slow=8.9,SNR=2.7						
ILAR	**Eielson Array**	**85.84**	**24**	P	**P**	**04 22 41.5**	**-0.5**
	0.6nm,1.0s,baz=255,slow=3.9,SNR=4.5						

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*MAN **15** 04:16:14.7,16˚33N×120˚28E,h1km,mb5.3,ML4.3,MS4.4*
MAN Intensity III - Dagupan City.
*IDC **15** 04:16:18.8±2.9,16˚26N×120˚49E,h57km±29km,mb3.6/13, mb1 3.7/13,mb1mx3.6/39,mbtmp3.9/13,ML4.4/1,MS3.4/8, Ms1 3.4/8,ms1mx3.1/30,Error ellipse: s-maj=31.0km s-min=15.9km az=68.0*
*NEIC **15** 04:16:19.0±1.6,16˚25N±0˚07×120˚59E±0˚08,h60km±8km, mb4.2/5,Error ellipse: s-maj=10.8km s-min=10.2km az=76.0*
ISC 15 04:16:15.7±0.9,16˚27N±0˚03×120˚26E±0˚03,h26km±7km, n35,σ2912/45,mb3.9/15,MS3.4/7,1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.35**	**288**	*e*P	**Pb**	**04 16 22.2**	**-1.3**
BOLP				*e*S	**Sb**	**04 16 28.6**	**-0.3**
SMPP	**San Manuel, Pa**	**0.42**	**107**	*e*P	**Pb**	**04 16 23.3**	**-1.3**
SMPP				*e*S	**Sb**	**04 16 30.0**	**-0.8**
SCZP	**Santa Cruz**	**0.60**	**214**	*e*P	**Pb**	**04 16 27.8**	**+0.2**
SCZP				*e*S	**Sn**	**04 16 39.4**	**+2.0**
BALP	**Baler**	**1.37**	**113**	*e*P	**Pn**	**04 16 39.3**	**+0.2**
BALP				*e*S	**Sb**	**04 16 58.1**	**+0.4**
CAUP	**Cauayan**	**1.64**	**66**	*e*P	**Pb**	**04 16 45.2**	**0.0**
SIPP	**Brgy, Tapao**	**1.65**	**6**	*i*P	**Pn**	**04 16 42.9**	**-0.1**
SIPP				*e*S	**Sb**	**04 17 11.8**	**+5.9**
APYP	**Conner**	**1.84**	**31**	*e*P	**Pn**	**04 16 45.8**	**+0.3**
APYP				*e*S	**Sb**	**04 17 10.5**	**-0.7**
PALP	**Palanan**	**2.22**	**69**	*e*P	**Pb**	**04 16 53.6**	**-1.5**
PALP				*e*S	**Sb**	**04 17 27.1**	**+5.0**
POLP	**Polilio Island**	**2.23**	**133**	*e*P	**Pn**	**04 16 50.3**	**-0.6**
POLP				*e*S	**Sb**	**04 17 27.6**	**+5.1**
TGY	**Tagaytay City**	**2.25**	**163**	P	**Pn**	**04 16 52.6**	**+1.2**
	103nm,0.3s,baz=358,slow=3.9,SNR=7.1						
TGY				LR	LR	04 18 16.3	
	comp=Z,861nm,19.3s,baz=353,slow=54						
TGY	**Tagaytay City**	**2.25**	**163**	*e*P	**Pb**	**04 16 57.9**	**+2.2**
TGY				*e*S	Sb	04 17 43.8	+21
LQP	**Lukban**	**2.48**	**150**	*e*P	**Pb**	**04 16 58.8**	**-0.8**
LQP				*i* S	**Sb**	**04 17 32.7**	**+2.9**
TPUB	**Ta-pu**	**7.00**	**3**	Pn	**Pn**	**04 17 59.7**	**+3.1**
YULB	**Yu-li**	**7.15**	**8**	Pn	**Pn**	**04 18 00.6**	**+1.9**
SSLB	**Suanglung**	**7.50**	**5**	Pn	**Pn**	**04 18 05.4**	**+1.9**
NACB	**Ninganchiao**	**7.96**	**9**	Pn	**Pn**	**04 18 11.1**	**+1.4**
CMAR	**Chiang Mai Arr**	**20.46**	**279**	P	**P**	**04 20 52.6**	**+1.0**
	1.2nm,0.4s,baz=99,slow=8.8,SNR=4.4						
CMAR				LR	LR	04 28 25.8	
	comp=Z,56nm,19.6s,baz=126,slow=35						
KSRS	**Korea Array**	**22.16**	**16**	P	**P**	**04 21 09.5**	**-0.1**
	1.2nm,0.6s,baz=190,slow=12,SNR=5.0						
KSRS				LR	LR	04 31 05.5	
	comp=Z,33nm,19.9s,baz=179,slow=40						
SOEI	**Soe**	**26.16**	**171**	P	**P**	**04 21 45.0**	**-3.3**
SONM	**Songino Array**	**33.49**	**343**	P	**P**	**04 22 54.0**	**+1.1**
	0.9nm,0.7s,baz=161,slow=8.5,SNR=6.6						
SONM				LR	LR	04 37 53.7	
	comp=Z,70nm,18.6s,baz=194,slow=39						
WRA	**Warramunga Arr**	**38.56**	**158**	P	**P**	**04 23 35.2**	**-1.2**
	2.0nm,0.9s,baz=320,slow=14,SNR=6.7						
ASAR	**Alice Springs**	**41.87**	**161**	P	**P**	**04 24 03.9**	**0.0**
	0.7nm,0.5s,baz=337,slow=6.3,SNR=8.4						
MK31	**Makanchi Array**	**43.73**	**322**	P	**P**	**04 24 20.8**	**+2.0**
MKAR	**Makanchi Array**	**43.73**	**322**	P	**P**	**04 24 20.6**	**+1.7**
	1.3nm,0.7s,baz=126,slow=9.2,SNR=15						
MKAR				PcP	**PcP**	**04 26 06.6**	**+1.2**
	0.4nm,0.6s,baz=120,slow=2.5,SNR=3.7						
ZALV	**Zalesovo Beam**	**46.60**	**332**	P	**P**	**04 24 42.3**	**+1.0**
	0.9nm,0.3s,baz=120,slow=6.0,SNR=4.1						
ZALV				PcP	**PcP**	**04 26 13.0**	**-2.1**
	0.3nm,0.3s,baz=108,slow=3.2,SNR=2.1						
ZALV				LR	LR	04 43 59.7	
	comp=Z,41nm,19.4s,baz=82,slow=36						
KURK	**Kurchatov**	**47.84**	**325**	P	**P**	**04 24 51.8**	**+0.7**
KURK				IAmb	IAmb	04 24 53.3	
	comp=Z,3.1nm,0.7s						
BBOO	**Buckleboo**	**51.09**	**163**	P	**P**	**04 25 13.1**	**-3.0**
BBOO				IAmb	IAmb	04 25 20.7	
	comp=Z,1.4nm,0.9s						
ABKAR	**Akbulak array**	**58.53**	**318**	P	**P**	**04 26 11.1**	**+1.2**
ABKAR				IAmb	IAmb	04 26 12.5	
	comp=Z,1.7nm,0.7s						
AKTO	**Aktyubinsk**	**59.99**	**319**	LR	LR	04 51 49.7	
	comp=Z,37nm,20.4s,baz=105,slow=35						
ARCES	**ARCESS Array B**	**76.55**	**339**	P	**P**	**04 28 04.0**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=56,slow=6.5,SNR=5.0						
ILAR	**Eielson Array**	**76.64**	**26**	P	**P**	**04 28 02.4**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=315,slow=5.0,SNR=5.8						
FINES	**FINESS Array B**	**77.84**	**331**	P	**P**	**04 28 09.4**	**-1.3**
	comp=Z,1.1nm,0.8s,baz=53,slow=5.4,SNR=3.5						
FINES				LR	LR	05 07 28.8	
	comp=Z,44nm,19.9s,baz=306,slow=39						
AKASG	**Malin Array Be**	**78.24**	**320**	P	**P**	**04 28 13.6**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=60,slow=4.6,SNR=2.8						
NOA	**NORSAR Array B**	**84.79**	**332**	P	**P**	**04 28 48.2**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=64,slow=4.7,SNR=3.5						
NOA				LR	LR	05 07 38.4	
	comp=Z,20nm,19.6s,baz=300,slow=36						
YKA	**Yellowknife Ar**	**90.57**	**22**	P	**P**	**04 29 12.5**	**-2.8**
	comp=Z,0.2nm,0.6s,baz=303,slow=4.1,SNR=5.6						

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*NCEDC **15** 04:52:35.7±2.2,36˚857N±0˚008×121˚429W±0˚009, h10km±1km,ML3.2/45,Error ellipse: s-maj=1.2km s-min=1.0km az=163.0*
NEIC 15 04:52:35.6±1.3,36˚846N±0˚005×121˚45W±0˚01, h16km±1km,Error ellipse: s-maj=1.5km s-min=0.7km az=88.0,Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HBTM	**San Juan Bauti**	**0.08**	**273**		Pg	04 52 39.0	+0.2
SAO	**San Andreas Ge**	**0.08**	**178**		Pg	04 52 38.1	-0.7
SAO				Sg	Sg	04 52 40.8	-0.2
OCR	**O'Connell Ranc**	**0.09**	**327**		Pg	04 52 38.4	-0.5
FRP	**Fremont Peak**	**0.10**	**199**		Pg	04 52 38.9	-0.1
BVYM	**Vineyard**	**0.10**	**163**		Pg	04 52 39.0	0.0
BSLM	**Silva Ranch**	**0.11**	**131**		Pg	04 52 38.8	-0.3
ANZ	**Anzar Road**	**0.12**	**289**		Pb	04 52 39.5	0.0
HLTM	**Lone Tree Road**	**0.12**	**71**		Pg	04 52 38.5	-0.7
HFEM	**San Felipe**	**0.14**	**16**		Pg	04 52 39.0	-0.5
HTUM	**Tustin Road**	**0.15**	**263**		Pb	04 52 40.0	-0.1
BCGM	**Cienega Road**	**0.16**	**148**		Pg	04 52 40.0	+0.2
CDC	**Canada Road**	**0.18**	**351**		Pg	04 52 39.7	-0.3
HCAM	**Canada Road**	**0.18**	**351**		Pg	04 52 39.7	-0.3
BSRM	**Salinas Radio**	**0.19**	**197**		Pg	04 52 40.3	+0.2
BHRM	**Hodges Ranch**	**0.19**	**128**		Pg	04 52 40.2	0.0
PACP	**Pacheco Peak**	**0.21**	**39**		Pg	04 52 40.1	-0.4
PACP					Sg	04 52 43.5	-0.4
HERM	**Elkhorn Road**	**0.21**	**257**		Pb	04 52 41.2	+0.1
BLRM	**Lewis Ranch**	**0.23**	**141**		Pb	04 52 41.2	-0.2
HLPM	**Lions Peak**	**0.24**	**323**		Pg	04 52 40.8	-0.2
BJOM	**Mount Johnson**	**0.24**	**153**		Pb	04 52 41.4	-0.2
BJOM					Sb	04 52 45.6	0.0
GHS	**Gilroy Hot Spr**	**0.25**	**1**		Pg	04 52 41.0	-0.2
SCZ	**Santa Cruz**	**0.25**	**171**		Pg	04 52 41.1	0.0
SCZ					Sg	04 52 45.3	+0.4
HPCM	**Pacheco Lake**	**0.26**	**33**		Pg	04 52 41.0	-0.3
HSPM	**Sheep**	**0.27**	**349**		Pg	04 52 41.5	-0.1
BEHM	**Elkhorn Ranch**	**0.29**	**129**		Pg	04 52 41.9	+0.1
SLD	**San Luis Dam**	**0.29**	**39**		Pg	04 52 41.6	-0.3
SLD					Sg	04 52 46.0	-0.3
BJCM	**Johnson Can.**	**0.30**	**171**		Pg	04 52 42.1	+0.1
SFJWR	**San Luis Fatjo**	**0.30**	**48**		Pg	04 52 41.7	-0.3
BPCNC	**Pine Canyon**	**0.31**	**208**		Pb	04 52 42.8	+0.1
JELB	**Ellicott, Sant**	**0.31**	**285**		Pb	04 52 42.7	-0.1
JELB					Sb	04 52 48.1	+0.4
JPLM	**Pleasant Valle**	**0.33**	**293**		Pb	04 52 43.2	+0.1
BEMM	**Emmet**	**0.34**	**123**		Pg	04 52 42.6	0.0
CADM	**Anderson Res.**	**0.35**	**336**		Pg	04 52 42.7	-0.1
JLAB	**Laurel Hill**	**0.38**	**324**		Pg	04 52 43.4	-0.1
JTGM	**Trout Gulch Ro**	**0.39**	**298**		Pb	04 52 44.1	0.0
BAVM	**Antelope Valle**	**0.39**	**120**		Pg	04 52 43.6	0.0
JHLM	**Holstrom Ranch**	**0.40**	**311**		Pg	04 52 43.8	0.0
BPIM	**Pinnacles**	**0.42**	**147**		Pg	04 52 44.1	0.0
BBGB	**Big Mountain B**	**0.42**	**129**		Pb	04 52 44.5	-0.3
AMC	**Almaden**	**0.45**	**315**		Pg	04 52 44.4	-0.1
HMOM	**Monterey**	**0.45**	**237**		Pb	04 52 45.2	+0.1
CCOB	**Coe Ranch Numb**	**0.45**	**337**		Pb	04 52 45.1	0.0
BBNM	**San Benito**	**0.45**	**138**		Pb	04 52 45.3	+0.1
SCKWR	**San Luis Creek**	**0.45**	**42**		Pb	04 52 45.1	-0.1
JSTM	**Santa Teresa H**	**0.46**	**323**		Pg	04 52 44.7	-0.1
BSGM	**Shirttail Guic**	**0.46**	**160**		Pg	04 52 44.8	0.0
BSMM	**Soledad Missio**	**0.46**	**178**		Pb	04 52 45.4	0.0
HAST	**Hastings Reser**	**0.46**	**190**		Pb	04 52 45.3	-0.1
HAST					Sb	04 52 52.2	+0.2
JUMM	**Mount Umunhum**	**0.48**	**311**		Pg	04 52 45.0	-0.1
BRMM	**Rolling Bench**	**0.50**	**91**		Pb	04 52 46.1	+0.1
ARN	**Arnold Ranch**	**0.50**	**353**		Pg	04 52 45.7	0.0
MHC	**Mount Hamilton**	**0.52**	**343**		Pg	04 52 46.0	0.0
MHC					Sb	04 52 53.9	+0.2
LRV	**Little Rabbit**	**0.55**	**140**		Pb	04 52 46.8	0.0
SCCB	**Santa Clara Co**	**0.55**	**323**		Pg	04 52 46.6	+0.1
JJOM	**Saint Joseph's**	**0.55**	**311**		Pg	04 52 46.3	-0.3
BMSM	**Mercy Hot Spri**	**0.56**	**109**		Pg	04 52 46.8	+0.1
MOBB	**Monterey Bay O**	**0.59**	**255**		Pb	04 52 48.0	+0.5
CMMM	**Mount Mocho**	**0.61**	**357**		Pg	04 52 47.7	0.0
JBNB	**Ben Lomond Mou**	**0.63**	**296**		Pg	04 52 47.7	-0.3
JSGM	**Saratoga Golf**	**0.65**	**312**		Pg	04 52 48.1	-0.2
CMLM	**Mount Lewis**	**0.65**	**346**		Pg	04 52 48.5	+0.1
CALM	**Calaveras Res.**	**0.67**	**335**		Pb	04 52 48.8	-0.1
BPOM	**Post Ranch**	**0.67**	**203**		Pb	04 52 49.0	+0.1
LRC	**Lone Oak Road**	**0.68**	**151**		Pn	04 52 50.0	-0.6
BAPM	**Anderson Peak**	**0.69**	**193**		Pb	04 52 49.4	+0.2
JBMM	**Black Mountain**	**0.73**	**310**		Pg	04 52 49.7	-0.3
JPC	**Peters Creek,**	**0.74**	**305**		Pg	04 52 50.0	-0.1
CMJM	**Mission San Jo**	**0.75**	**334**		Pg	04 52 50.3	0.0
JJRM	**Joaquin Road**	**0.78**	**310**		Pb	04 52 50.7	-0.1
JFP	**Foothills Park**	**0.78**	**311**		Pb	04 52 50.5	-0.3
PCCM	**Crazy Canyon**	**0.79**	**

AFDM				Sn	Sn	04 53 37.5	+0.8	
MMLB	**Mammoth Lakes**	**2.13**	**67**		Pb	04 53 12.8	-1.2	
FTR	**Fort Ross**	**2.15**	**321**		Pn	04 53 09.7	-1.2	
MLCM	**Laurel Creek C**	**2.16**	**69**		Pn	04 53 12.6	+1.4	
MEMM	**East Mammoth H**	**2.16**	**67**		Pn	04 53 12.4	+1.2	
LUL	**Lundy Lake**	**2.17**	**56**		Pn	04 53 12.8	+1.5	
MNRC	**McLaughlin Min**	**2.18**	**339**		Pn	04 53 11.4	+0.2	
MGPM	**Gravel Pit**	**2.18**	**68**		Pb	04 53 13.1	-1.6	
LMCR	**Lookout Mounta**	**2.18**	**65**		Pb	04 53 13.6	-1.3	
MCSM	**Casa Diablo Ho**	**2.19**	**68**		Pn	04 53 12.3	+0.8	
MCBM	**Casa Benchmark**	**2.19**	**68**		Pn	04 53 12.6	+1.0	
MCMM	**Convict Lake**	**2.19**	**69**		Pn	04 53 13.3	+1.7	
MCVM	**Convict Lake**	**2.22**	**70**		Pn	04 53 13.4	+1.4	
GDXM	**Geysers**	**2.23**	**332**	Pn	Pn	04 53 10.8	-1.1	
GSSM	**Skaggs Springs**	**2.23**	**327**		Pn	04 53 11.6	-0.2	
MLAC	**Mammoth, Mammo**	**2.23**	**69**		Pb	04 53 14.6	-1.0	
MDRNC	**Doe Ridge**	**2.23**	**68**		Pb	04 53 14.7	-0.9	
GHCM	**House Creek**	**2.24**	**322**		Pn	04 53 10.9	-1.0	
GSGM	**Seigler Mounta**	**2.25**	**334**		Pn	04 53 12.1	0.0	
SCHCA	**Scheelite**	**2.27**	**76**		Pn	04 53 14.3	+1.7	
RCCR	**Rock Creek Can**	**2.27**	**73**		Pn	04 53 14.4	+1.6	
GCVM	**Cloverdale**	**2.29**	**328**		Pn	04 53 12.1	-0.5	
WAKR	**Walker**	**2.30**	**43**		Pn	04 53 13.2	+0.1	
WAKR				Sn	Sn	04 53 41.6	+0.5	
GACM	**Adobe Creek**	**2.31**	**332**		Pn	04 53 13.2	+0.1	
MTUM	**Tungsten Hills**	**2.36**	**77**		Pn	04 53 15.8	+1.9	
ORC	**Owens River**	**2.37**	**70**		Pn	04 53 15.8	+1.8	
EMB	**Emerald Bay**	**2.38**	**26**		Pn	04 53 16.1	+1.9	
SUTB	**Sutter Butte**	**2.39**	**354**		Pn	04 53 13.0	-1.1	
FIGC	**Figueroa Mtn.**	**2.42**	**150**		Pn	04 53 14.8	+0.2	
RUBR	**Rubicon Trail**	**2.43**	**25**		Pn	04 53 14.9	+0.1	
RUBR				Sn	Sn	04 53 44.6	+0.3	
GNO	**Genoa**	**2.43**	**31**		Pn	04 53 16.5	+1.7	
BENR	**Benton**	**2.45**	**68**		Pn	04 53 16.7	+1.5	
MFBM	**Five Bridges**	**2.48**	**76**		Pn	04 53 18.1	-1.8	
OHCM	**Honcut**	**2.49**	**359**		Pn	04 53 15.0	-0.3	
MRCM	**Red Rock Canyo**	**2.49**	**70**		Pb	04 53 19.0	-1.1	
HOPS	**Hopland Field**	**2.50**	**330**	Pn	Pn	04 53 14.8	-0.8	
MCDM	**Chidago Canyon**	**2.50**	**73**		Pb	04 53 19.1	-1.1	
GSNM	**Snow Mountain**	**2.50**	**327**		Pn	04 53 14.9	-0.8	
BFC	**Buffalo Canyon**	**2.51**	**35**		Pn	04 53 17.2	+1.3	
TAHR	**Tahoe**	**2.52**	**23**		Pn	04 53 15.9	-0.1	
GHLM	**Highland Sprin**	**2.52**	**331**		Pn	04 53 15.1	-0.8	
BCW	**Bitter Crk WRg**	**2.52**	**138**		Pn	04 53 17.8	+1.9	
WOFM	**Oak Flat**	**2.57**	**120**		Pn	04 53 17.1	+0.4	
GGUM	**Gualala**	**2.58**	**322**		Pn	04 53 16.0	-0.7	
POCCA	**Poleta Canyon**	**2.59**	**78**		Pb	04 53 19.6	-2.1	
MLNR	**Milner Canyon**	**2.59**	**72**		Pb	04 53 19.9	-1.8	
DONR	**Donner Summit**	**2.66**	**19**		Pn	04 53 18.6	+0.7	
PNTR	**Pine Nut**	**2.67**	**33**		Pn	04 53 18.2	0.0	
ISA	**Isabella, Lake**	**2.68**	**115**		Pn	04 53 19.2	+1.1	
ISA	**Isabella, Lake**	**2.68**	**115**	Pn	Pn	04 53 18.4	+0.3	
MPK	**Martis Peak**	**2.69**	**24**		Pn	04 53 20.0	+1.6	
ORV	**Oroville**	**2.71**	**359**		Pn	04 53 17.9	-0.5	
ORV	**Oroville**	**2.71**	**359**		Pn	04 53 18.4	0.0	
ORV	**Oroville**	**2.71**	**359**		Pn	04 53 18.7	+0.3	
LHV	**Little Huntoon**	**2.73**	**58**		Pb	04 53 21.9	-2.1	
CWC	**Cottonwood Cre**	**2.74**	**97**		Pn	04 53 20.9	+1.8	
IND	**Independence**	**2.74**	**19**		Pn	04 53 20.5	+1.4	
YERR	**Yerington**	**2.76**	**39**		Pn	04 53 19.4	0.0	
VCNR	**Virginia City**	**2.83**	**30**		Pn	04 53 20.1	-0.2	
GNAM	**Navarro Ridge**	**2.91**	**324**		Pn	04 53 20.4	-0.8	
RYN	**Ryan**	**2.92**	**52**		Pn	04 53 22.3	+0.8	
NVAR	**Mina Array Bea**	**2.96**	**57**	Pn	Pn	04 53 21.7	-0.4	
MGL	**Magalia**	**2.96**	**358**		Pn	04 53 22.4	+0.4	
PEAR	**Peavine Mounta**	**3.00**	**23**		Pn	04 53 23.7	+1.1	
GTC	**Three Chop Rid**	**3.04**	**328**		Pn	04 53 22.8	-0.7	
NV11	**Mina Array Sit**	**3.06**	**58**		Pn	04 53 23.5	+1.9	
BEKR	**Beckworth**	**3.14**	**16**		Pn	04 53 24.9	+0.4	
DAC	**Darwin (Calif)**	**3.16**	**99**		Pn	04 53 24.8	0.0	
KFPM	**Farley Peak**	**3.19**	**331**		Pn	04 53 25.4	+0.3	
PAHR	**Pah Rah Range**	**3.29**	**29**		Pn	04 53 27.1	+0.6	
KCPM	**Cahto Peak**	**3.29**	**330**	Pn	Pn	04 53 27.0	+0.3	
KVN	**Kaiserville**	**3.44**	**49**		Pn	04 53 28.5	-0.2	
MWC	**Mount Wilson**	**3.81**	**132**	Pn	Pn	04 53 35.0	+1.2	
WDC	**Whiskeytown Da**	**3.83**	**347**	Pn	Pn	04 53 33.1	-0.7	
SNCC	**San Nicolas Is**	**3.92**	**156**	Pn	Pn	04 53 36.0	+0.8	
GSC	**Goldstone, Bar**	**4.07**	**111**		Pn	04 53 36.5	-0.7	
TPNV	**Topopah Spring**	**4.17**	**87**		Pn	04 53 38.9	+0.2	
JCC	**Jacoby Creek,**	**4.45**	**334**	Pn	Pn	04 53 42.7	+0.4	
KRMB	**Red Mountain**	**5.05**	**339**	Pn	Pn	04 53 48.5	-2.2	
SHPR	**Sheep Range**	**5.07**	**92**		Pn	04 53 46.0	-5.0	
MOD	**Modoc Plateau**	**5.13**	**10**		Pn	04 53 51.2	-0.6	
PFO	**Pinyon Flats O**	**5.21**	**127**	Pn	Pn	04 53 53.6	+0.7	
KPFO	**Pion Flat**	**5.21**	**127**	Pn	Pn	04 53 53.0	0.0	
BAR	**Barrett**	**5.72**	**135**	Pn	Pn	04 54 00.5	+0.6	
KBO	**Bosley Butte**	**5.77**	**339**	Pn	Pn	04 54 00.9	+0.2	
HUMO	**Hull Mountain**	**5.87**	**349**	Pn	Pn	04 54 03.3	+1.4	
WVOR	**Wild Horse Val**	**5.99**	**20**	Pn	Pn	04 54 04.2	+0.6	

IDC 15 04:57:10.8±59.0, 16°49S×176°44W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.7/29, mbtmp4.0/3, MS3.1/1, Ms1 3.0/1, ms1mx2.3/28, Error ellipse: s-maj=1096.0km s-min=179.3km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.97**	**240**	P	P	05 04 55.7	+0.2
	0.8nm,0.4s,baz=68,slow=11,SNR=3.5						
STKA				LR	LR	05 19 49.1	
	comp=Z,20nm,18.2s,baz=200,slow=33						
WRA	**Warramunga Arr**	**46.76**	**258**	P	P	05 05 42.1	-0.2
	0.5nm,0.3s,baz=95,slow=7.1,SNR=8.1						
ASAR	**Alice Springs**	**47.00**	**253**	P	P	05 05 43.8	-0.3
	2.1nm,0.6s,baz=87,slow=8.7,SNR=19						

*THE **15** 05:22:13.6, 34°.68N×25°.47E, h0km±1km, ML3.1/6, Error ellipse: s-maj=2.8km s-min=0.8km az=173.0*
*ISK **15** 05:22:13.8, 34°.73N×25°.50E, h22km, ML3.4/11*
*ATH **15** 05:22:14.8, 34°.86N×25°.46E, h36km±2km, ML3.2/6, Error ellipse: s-maj=3.5km s-min=1.4km az=353.0*
*IDC **15** 05:22:16.4±1.8, 35°.00N×25°.20E, h50km±11km, mb3.5/6, mb1 3.4/8, mb1mx3.2/45, mbtmp3.6/8, ML3.1/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/33, Error ellipse: s-maj=33.8km s-min=19.3km az=142.0*
*DDA **15** 05:22:18.0, 34°.81N×26°.05E, h42km±271km, ML2.6*

ISC 15 05:22:13.6±1.2, 34°73N±0°.05×25°49E±0°.02, h33km±5km, n69, σ1°91/95, mb3.6/6, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRMA	**Ierapetra Chan**	**0.35**	**35**	P	**Pn**	**05 22 23.2**	**+0.8**
FRMA				S	**Sn**	**05 22 31.2**	**+3.1**
	2µm,0.4s						
LAST	**Lasithi**	**0.43**	**359**	P	**Pb**	**05 22 22.9**	**-0.3**
LAST				S	**Sn**	**05 22 30.7**	**+0.3**
	3µm,0.7s						
LAST	**Lasithi**	**0.43**	**359**	P	**Pb**	**05 22 22.8**	**-0.4**
LAST				S	**Sb**	**05 22 28.8**	**-1.1**
LAST				AML	AML	05 22 32.1	
	comp=N,6128µm,1.0s						
LAST				AML	AML	05 22 33.6	
	comp=E,4714µm,0.5s						
NPS	**Neapolis**	**0.54**	**11**	P	**Pb**	**05 22 24.7**	**-0.2**
NPS	**Neapolis**	**0.54**	**11**	P	**Pb**	**05 22 24.7**	**-0.2**
NPS				S	**Sn**	**05 22 32.4**	**-0.6**
NPS				AML	AML	05 22 38.8	
	comp=E,5400µm,0.5s						
NPS				AML	AML	05 22 39.3	
	comp=N,6635µm,0.4s						
SIVA	**Sivas**	**0.63**	**298**	P	**Pn**	**05 22 26.4**	**+0.2**
SIVA	**Sivas**	**0.63**	**298**	P	**Pn**	**05 22 26.5**	**+0.2**
SIVA				S	**Sn**	**05 22 35.4**	**+0.3**
SIVA				AML	AML	05 22 45.3	
	comp=E,10533µm,0.7s						
SIVA				AML	AML	05 22 45.4	
	comp=N,10425µm,0.5s						
HRKL	**Herakleio**	**0.67**	**331**	P	**Pb**	**05 22 28.0**	**+1.2**
HRKL				S	**Sn**	**05 22 39.3**	**+3.3**
	comp=N,5µm,0.8s						
HRKL	**Herakleio**	**0.67**	**331**	PG	**Pb**	**05 22 27.5**	**+0.7**
HRKL				SG	**Sn**	**05 22 37.4**	**+1.4**
KSTL	**Kastelli Herak**	**0.67**	**329**	P	**Pn**	**05 22 23.8**	**-3.0**
IACM	**Heraklion**	**0.67**	**329**	P	**Pb**	**05 22 27.3**	**+0.3**
STIA	**Sitia Lasithi**	**0.68**	**46**	P	**Pb**	**05 22 28.1**	**+1.0**
STIA				S	**Sn**	**05 22 40.2**	**+3.7**
TMBK	**Timbaki Herakl**	**0.69**	**300**	P	**Pb**	**05 22 27.6**	**+0.4**
TMBK				S	**Sn**	**05 22 38.5**	**+1.9**
	comp=N,1µm,0.5s						
ZKR	**Zakros**	**0.71**	**57**	P	**Pb**	**05 22 28.0**	**+0.4**
ZKR				S	**Sn**	**05 22 39.5**	**+2.3**
	comp=N,2µm,0.6s						
ZKR	**Zakros**	**0.71**	**57**	P	**Pb**	**05 22 28.1**	**+0.5**
ZKR				S	**Sn**	**05 22 38.0**	**+0.8**
ZKR				AML	AML	05 22 40.1	
	comp=N,2710µm,0.7s						
ZKR				AML	AML	05 22 47.4	
	comp=E,4731µm,0.5s						
ZKR	**Zakros**	**0.71**	**57**	PG	**Pb**	**05 22 28.3**	**+0.7**
ZKR				SG	**Sn**	**05 22 38.7**	**+1.5**
IDI	**Anoyia**	**0.75**	**319**	P	**Pn**	**05 22 27.8**	**-0.1**
	comp=E,19nm,0.3s,baz=145,slow=18,SNR=75						
IDI				S	**Sn**	**05 22 41.7**	**+3.6**
	comp=E,256nm,0.3s,baz=306,slow=14,SNR=47						
IDI	**Anoyia**	**0.75**	**319**	P	**Pn**	**05 22 27.6**	**-0.3**
IDI				S	**Sb**	**05 22 37.1**	**-1.1**
IDI				AML	AML	05 22 44.6	
	comp=E,2446µm,0.6s						
IDI				AML	AML	05 22 46.6	
	comp=N,2656µm,0.4s						
IDI	**Anoyia**	**0.75**	**319**	PG	**Pn**	**05 22 28.0**	**+0.1**
IDI				SG	**Sn**	**05 22 40.1**	**+2.0**
PRNS	**Prines Rethymn**	**1.03**	**308**	P	**Pb**	**05 22 34.5**	**+1.6**
GVDS	**Gavdos**	**1.16**	**276**	P	**Pb**	**05 22 35.9**	**+0.8**
GVDS	**Gavdos**	**1.16**	**276**	PN	**Pb**	**05 22 35.6**	**+0.5**
GVD	**Gavdhos**	**1.16**	**276**	P	**Pb**	**05 22 35.6**	**+0.5**
GVD	**Gavdhos**	**1.16**	**276**	P	**Pb**	**05 22 35.8**	**+0.7**
GVD				AML	AML	05 23 01.2	
	comp=E,2606µm,0.5s						
GVD				AML	AML	05 23 07.0	
	comp=N,2231µm,0.5s						
GVD	**Gavdhos**	**1.16**	**276**	PN	**Pb**	**05 22 35.6**	**+0.5**
VAM	**Vamos**	**1.26**	**303**	P	**Pb**	**05 22 37.0**	**+0.2**
VAM				S	**Sb**	**05 22 55.7**	**+3.1**
	comp=N,1µm,0.5s						
VAM	**Vamos**	**1.26**	**303**	P	**Pb**	**05 22 37.1**	**+0.4**
IMMV	**Iera Moni Meta**	**1.44**	**301**	P	**Pb**	**05 22 39.7**	**-0.1**
IMMV	**Iera Moni Meta**	**1.44**	**301**	P	**Pb**	**05 22 39.7**	**-0.1**
IMMV	**Iera Moni Meta**	**1.44**	**301**	PN	**Pb**	**05 22 39.5**	**-0.3**
KNDR	**Palaiochora Ch**	**1.57**	**289**	PN	**Pb**	**05 22 42.1**	**+0.2**
KARP	**Karpathos**	**1.59**	**59**	P	**Pb**	**05 22 43.0**	**+0.5**
KARP	**Karpathos**	**1.59**	**59**	P	**Pb**	**05 22 42.9**	**+0.4**
KARP	**Karpathos**	**1.59**	**59**	PN	**Pb**	**05 22 41.4**	**-1.1**
SANT	**Santorini**	**1.64**	**359**	P	**Pn**	**05 22 41.2**	**+1.1**
SANT	**Santorini**	**1.64**	**359**	PN	**Pb**	**05 22 42.0**	**-1.3**
RODP	**Rodopos**	**1.65**	**301**	PN	**Pb**	**05 22 42.3**	**-1.0**
IOSP	**Ios island**	**2.00**	**355**	P	**Pn**	**05 22 46.2**	**+1.1**
AMGA	**Amorgos Island**	**2.13**	**9**	P	**Pn**	**05 22 47.7**	**+0.8**
APE	**Apeiranthos**	**2.34**	**1**	P	**Pn**	**05 22 50.5**	**+0.7**
APE	**Apeiranthos**	**2.34**	**1**	PN	**Pn**	**05 22 51.3**	**+1.5**
SERI	**Serifos**	**2.56**	**342**	P	**Pn**	**05 22 53.2**	**+0.4**
ARG	**Arkhangelos**	**2.61**	**55**	PN	**Pn**	**05 22 55.9**	**+2.4**
DAT	**Datca**	**2.62**	**40**	PN	**Pn**	**05 22 56.0**	**+2.3**
DAT	**Datca**	**2.62**	**40**	*i* P	**Pn**	**05 22 56.3**	**+2.6**
DAT				*i* S	**Sb**	**05 23 33.8**	**+2.0**
DAT				IAML		05 23 45.0	
	comp=N,16nm,0.8s						
BODT	**Bodrum**	**2.76**	**32**	PN	**Pn**	**05 22 57.3**	**+1.8**
VLI	**Veliai**	**2.88**	**314**	P	**Pn**	**05 22 57.6**	**+0.5**
YER	**Yerkesik**	**3.30**	**43**	PN	**Pn**	**05 23 05.4**	**+2.4**
TURN	**Turunc**	**3.31**	**49**	PN	**Pn**	**05 23 01.1**	**-2.1**
TURN	**Turunc**	**3.31**	**49**	*i* P	**Pn**	**05 23 01.0**	**-2.1**
TURN				*i* S	**Sn**	**05 23 34.2**	**-7.1**
TURN				IAML		05 23 51.0	
	comp=N,23nm,0.6s						
TURN				IAML		05 23 51.0	
	comp=E,22nm,0.6s						
FETY	**Fethiye**	**3.49**	**56**	*i* P	**Pn**	**05 23 06.7**	**+1.1**
FETY				*i* S	**Sn**	**05 23 42.1**	**-3.7**
FETY				IAML		05 24 02.0	
	comp=E,10nm,0.7s						
FETY				IAML		05 24 11.0	
	comp=N,11nm,1.4s						
AKAS	**Kas**	**3.68**	**65**	*i* P	**Pn**	**05 23 10.5**	**+2.2**
AKAS				*i* S	**Sn**	**05 23 48.2**	**-2.4**
AKAS				IAML		05 24 01.0	
	comp=E,15nm,0.3s						
AKAS				IAML		05 24 08.0	
	comp=N,27nm,1.1s						
TAVA	**DENIZLI_Tavas**	**3.89**	**44**	*i* P	**Pn**	**05 23 13.7**	**+2.5**
TAVA				*i* S	**Sn**	**05 23 57.0**	**+1.2**
TAVA				IAML		05 24 24.0	
	comp=N,18nm,1.7s						
TAVA				IAML		05 24 24.0	
	comp=E,16nm,1.6s						
GOLH	**Golhisar**	**4.14**	**52**	*i* P	**Pn**	**05 23 17.0**	**+2.3**
GOLH				*i* S	**Sn**	**05 24 02.2**	**+0.2**
GOLH				IAML		05 24 32.0	
	comp=N,42nm,0.9s						
GOLH				IAML		05 25 29.0	
	comp=E,42nm,4.2s						
AKUM	**Antalya-Kumluc**	**4.27**	**67**	*i* P	**Pn**	**05 23 18.0**	**+1.8**
AKUM				*i* S	**Sn**	**05 24 03.7**	**-1.1**
AKUM				IAML		05 24 08.0	
	comp=E,17nm,0.5s						
AKUM				IAML		05 24 17.0	
	comp=N,9.0nm,0.2s						
KORT	**Korkueli**	**4.55**	**59**	*i* P	**Pn**	**05 23 21.1**	**+0.8**
KORT				*i* S	**Sn**	**05 24 12.9**	**+0.8**
KORT				IAML		05 24 18.0	
	comp=E,8.3nm,0.3s						
KORT				IAML		05 24 38.0	
	comp=N,14nm,1.2s						
KHAL	**Karahalli**	**4.86**	**40**	*i* P	**Pn**	**05 23 25.4**	**+0.9**
KHAL				*i* S	**Sn**	**05 24 16.3**	**-3.3**
KHAL				IAML		05 25 32.0	
	comp=E,3.7nm,1.2s						
USAK	**Uak-Merkez**	**4.88**	**34**	*i* P	**Pn**	**05 23 26.8**	**+2.1**
KEPZ	**Antalya-Kepez**	**5.42**	**65**	*i* P	**Pn**	**05 23 34.0**	**+1.8**
KEPZ				*i* S	**Sn**	**05 24 30.0**	**-3.4**
KEPZ				IAML		05 24 35.0	
	comp=N,7.9nm,0.7s						
KEPZ				IAML		05 24 54.0	
	comp=E,8.1nm,0.8s						
BRTR	**Keskin Array B**	**8.19**	**50**	P	**Pn**	**05 24 12.6**	**+2.3**
	comp=E,0.1nm,0.3s,baz=227,slow=15,SNR=2.5						
EIL	**Eiat**	**9.47**	**120**	P	**Pn**	**05 24 26.9**	**-0.7**
	comp=E,0.5nm,0.3s,baz=234,slow=2.7,SNR=7.0						
EIL				S	**Sn**	**05 26 06.9**	**-6.1**
	comp=E,2.0nm,0.3s,baz=198,slow=5.3,SNR=8.8						
MLR	**Muntele Rosu**	**10.76**	**2**	LR	LR	05 29 09.3	
	comp=E,58nm,20.1s,baz=119,slow=39						
AKASG	**Malin Array Be**	**16.20**	**9**	P	**Pn**	**05 25 59.3**	**+0.8**
	comp=E,0.3nm,0.3s,baz=204,slow=11,SNR=4.1						
FINES	**FINESS Array B**	**26.74**	**1**	P	**P**	**05 27 47.2**	**-2.6**
	comp=E,1.2nm,0.7s,baz=172,slow=1.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**30.42**	**231**	P	**P**	**05 28 23.7**	**+0.6**
	comp=E,0.8nm,0.3s,baz=34,slow=8.8,SNR=32						
ARCES	**ARCESS Array B**	**34.86**	**0**	P	**P**	**05 28 59.2**	**-2.1**
	comp=E,0.6nm,0.6s,baz=203,slow=8.8,SNR=4.6						
KURBB	**Kurchatov Arra**	**41.18**	**51**	P	**P**	**05 29 56.9**	**+2.1**
	comp=E,0.5nm,0.5s,baz=274,slow=8.6,SNR=6.3						
MKAR	**Makanchi Array**	**43.79**	**56**	P	**P**	**05 30 16.9**	**+0.8**
	comp=E,0.3nm,0.6s,baz=273,slow=5.1,SNR=3.7						
SCHQ	**Scheffervill**	**63.69**	**320**	P	**P**	**05 32 41.0**	**-0.5**
	comp=E,0.7nm,0.4s,baz=75,slow=8.0,SNR=4.7						

WEL 15 05:28:36.8±0.4, 35°S±5°×17°9E±1°0, h285km±6km, M3.9/27, mB4.3/9, MLv4.4/27, Mw(mB)3.5/9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.06**	**193**	P	Pn	05 29 34.6	+2.5
MXZ				S	S	05 30 16.5	+0.4
WMGZ	**Waiomatatini S**	**3.30**	**190**	P	Pn	05 29 38.9	+4.4
WMGZ				S	S	05 30 22.4	+1.9
HAZ	**Te Kaha**	**3.37**	**199**	P	Pn	05 29 37.1	+2.0
HAZ				S	S	05 30 24.2	+2.4
PKGZ	**Pakihiroa**	**3.42**	**194**	P	Pn	05 29 38.0	+2.1
KUZ	**Kuaotunu**	**3.53**	**231**	P	Pn	05 29 38.9	+1.9
PUZ	**Puketiti**	**3.57**	**191**	P	Pn	05 29 38.0	+0.6
PUZ				S	S	05 30 25.9	0.0
MKAZ	**Moumakai**	**4.10**	**231**	P	Pn	05 29 44.8	+1.5
WHHZ	**Waihua**	**4.75**	**198**	P	Pn	05 29 52.8	+2.1
WHHZ				S	S	05 30 49.8	-0.2
BKZ	**Black Stump Fm**	**5.05**	**204**	P	Pn	05 29 55.1	+0.7
MCHZ	**McNeill Hill**	**5.24**	**201**	P	Pn	05 29 58.5	+2.0
KWHZ	**Kaweka Forest**	**5.31**	**203**	P	Pn	05 29 57.7	+0.2
NGZ	**Ngauruhoe**	**5.40**	**211**	P	Pn	05 30 00.1	+1.5
FWVZ	**Far West T-bar**	**5.49**	**211**	P	Pn	05 30 02.0	+2.3
BHHZ	**Black Hill Sta**	**5.49**	**206**	P	Pn	05 30 01.1	+1.5
BHHZ				S	S	05 31 05.2	-0.9
KAHZ	**Kahuranaki**	**5.52**	**198**	P	Pn	05 30 01.5	+1.6
KAHZ				S	S	05 31 06.9	+0.3
KRHZ	**Kereru**	**5.53**	**203**	P	Pn	05 29 59.4	-0.6
PXZ	**Pawanui**	**5.75**	**198**	P	Pn	05 30 03.5	+1.0
PNHZ	**Pukenui**	**5.83**	**203**	P	Pn	05 30 04.2	+0.7
PNHZ				S	S	05 31 12.9	-0.5
GLKZ	**Green Lake**	**5.85**	**26**	S	S	05 31 06.0	-8.0
WPHZ	**Waipukurau**	**5.89**	**201**	S	S	05 31 15.4	+0.7
TSZ	**Takapari Road**	**6.04**	**204**	P	Pn	05 30 06.8	+0.7
TSZ				S	S	05 31 15.4	-2.5
DVHZ	**Dannevirke**	**6.19**	**202**	P	Pn	05 30 08.2	+0.3
PRWZ	**Pori Road**	**6.48**	**202**	P	Pn	05 30 12.8	+1.4
PRWZ				S	S	05 31 26.5	-1.2
PRWZ	**Pori Road**	**6.48**	**202**	P	Pn	05 30 12.8	+1.3
PRWZ				S	S	05 31 25.0	-2.8
BFZ	**Birch Farm**	**6.52**	**200**	P	Pn	05 30 12.3	+0.4
BFZ				S	S	05 31 26.5	-2.0
MRZ	**Mangatainoka R**	**6.71**	**204**	P	Pn	05 30 14.6	+0.4
MRZ				S	S	05 31 27.4	-5.3
TIWZ	**Tintock**	**6.71**	**202**	P	Pn	05 30 14.4	+0.1
TIWZ				S	S	05 31 30.8	-2.1
TIWZ	**Tintock**	**6.71**	**202**	P	Pn	05 30 16.1	+1.8
TIWZ				S	S	05 31 29.3	-3.7
CPWZ	**Castlepoint**	**6.74**	**199**	P	S	05 31 33.8	+0.2
HOWZ	**Holdsworth Sta**	**6.94**	**203**	P	S	05 30 17.7	+0.6
HOWZ				S	S	05 31 36.0	-2.0
HOWZ	**Holdsworth Sta**	**6.94**	**203**	P	Pn	05 30 17.2	+0.2
HOWZ				S	S	05 31 33.7	-4.3
OGWZ	**Otaki Gorge**	**6.99**	**206**	P	Pn	05 30 17.6	-0.1
OGWZ				S	S	05 31 36.0	-3.0
OGWZ	**Otaki Gorge**	**6.99**	**206**	P	Pn	05 30 17.2	-0.4
OGWZ				S	S	05 31 34.2	-4.8
TMWZ	**Te Maipa**	**7.01**	**201**	P	Pn	05 30 19.0	+1.0
TMWZ				S	S	05 31 36.0	-3.7
TMWZ	**Te Maipa**	**7.01**	**201**	P	Pn	05 30 18.4	+0.4
TMWZ				S	S	05 31 35.3	-4.3
KIW	**Kapiti Island**	**7.12**	**207**	P	Pn	05 30 19.6	+0.3
KIW	**Kapiti Island**	**7.12**	**207**	P	S	05 31 38.3	-3.7
MTW	**Mount Morrison**	**7.18**	**203**	P	S	05 31 35.8	-7.6
CAW	**Cannon Point**	**7.28**	**205**	P	Pn	05 30 21.3	0.0
CAW	**Cannon Point**	**7.28**	**205**	P	Pn	05 30 21.3	+0.1
CAW				S	S	05 31 40.5	-5.1
TRWZ	**Traveller**	**7.34**	**201**	P	S	05 31 42.1	-4.9
PAWZ	**Paruwai Farm**	**7.41**	**202**	P	S	05 31 45.6	-2.9
DUWZ	**D'Urville Isla**	**7.47**	**212**	P	S	05 31 49.1	-0.9
MSWZ	**Moikau Station**	**7.49**	**203**	P	Pn	05 30 24.3	+0.4
MSWZ	**Moikau Station**	**7.49**	**203**	P	S	05 31 47.0	-3.5
BHW	**Baring Head**	**7.61**	**205**	P	S	05 31 50.4	-2.7
PLWZ	**Palliser**	**7.63**	**203**	P	Pn	05 30 25.0	-0.6
PLWZ	**Palliser**	**7.63**	**203**	P	S	05 31 49.6	-4.0
TCW	**Tory Channel**	**7.66**	**209**	P	Pn	05 30 25.0	-1.0
TCW	**Tory Channel**	**7.66**	**209**	P	S	05 31 50.7	-3.6
TUWZ	**Tuamarina**	**7.98**	**209**	P	S	05 31 57.9	-3.5

*NNC **15** 05:29:29.9±1.4, 53°.78N×90°.65E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=10.7km s-min=7.2km az=62.0*
*IDC **15** 05:29:35.9±2.9, 53°.41N×90°.30E, h0km, mb1 3.4/4, mb1mx3.1/51, mbtmp3.4/4, ML3.0/4, Error ellipse

JOM	**Ohasama**	**0.95**	**302**	P	**Pn**	**05 48 05.6**	**+0.1**
JOM				S	**Sb**	**05 48 18.0**	**+0.7**
JTH	**Tanohata**	**1.03**	**339**	P	**Pn**	**05 48 06.1**	**-0.5**
JKZ	**Kuzumaki**	**1.28**	**323**	P	**Pg**	**05 48 10.5**	**0.0**
JKZ				S	**Sg**	**05 48 26.8**	**-0.3**
JRG	**Rokugo**	**1.39**	**288**	P	**Pg**	**05 48 12.6**	**0.0**
JRG				*eS*	**Sg**	**05 48 31.0**	**+0.4**
JOU	**Okura**	**1.44**	**246**	P	**Pb**	**05 48 12.6**	**-0.4**
JOU				*eS*	**Sn**	**05 48 30.8**	**-0.4**
JANG	**Nango**	**1.54**	**336**	P	**Pb**	**05 48 13.6**	**-1.0**
JYK	**Kaneyama**	**1.54**	**269**	P	**Pb**	**05 48 14.3**	**-0.4**
MJAR	**Matsushiro Arr**	**4.07**	**235**	P	**Pn**	**05 48 49.9**	**+1.5**
	0.5nm,0.3s,baz=51,slow=13,SNR=20						
MAT	**Matsushiro**	**4.07**	**235**	P	**Pn**	**05 48 50.8**	**+2.4**
MAT				*eS*	**Sn**	**05 49 40.7**	**+4.5**
ASAJ	**Asahikawa**	**5.14**	**2**	P	**Pn**	**05 49 05.3**	**+2.2**
	2.6nm,0.3s,baz=245,slow=13,SNR=6.5						
ASAJ				S	**Sn**	**05 50 04.0**	**+1.4**
	1.4nm,0.3s,baz=221,slow=20,SNR=3.7						
USRK	**Ussuriysk Ar.**	**9.34**	**307**	P	**Pn**	**05 50 04.1**	**+3.4**
	baz=120,slow=19,SNR=3.4						
KSRS	**Korea Array**	**11.44**	**267**	LR	LR	05 55 05.6	
	comp=Z,25nm,19.1s,baz=135,slow=38						
MA2	**Magadan**	**21.31**	**12**	P	**P**	**05 52 32.8**	**+0.1**
	7.1nm,0.8s,baz=158,slow=12,SNR=4.5						
MA2				LR	LR	06 01 42.2	
	comp=Z,30nm,18.1s,baz=356,slow=39						
SONM	**Songino Array**	**27.37**	**301**	P	**P**	**05 53 31.8**	**+0.4**
	0.2nm,0.4s,baz=102,slow=9.2,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**28.59**	**125**	T	T	06 24 15.0	
	baz=317,slow=75,SNR=237						
H11N1	**WAKE ISLAND Hy**	**28.60**	**125**	T	T	06 24 20.0	
	baz=317,slow=75,SNR=207						
H11N3	**WAKE ISLAND Hy**	**28.61**	**125**	T	T	06 24 20.8	
	baz=317,slow=75,SNR=214						
H11S1	**WAKE ISLAND Hy**	**29.37**	**127**	T	T	06 25 16.6	
	baz=318						
H11S3	**WAKE ISLAND Hy**	**29.37**	**127**	T	T	06 25 16.4	
	baz=318,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.39**	**127**	T	T	06 25 17.3	
	baz=318,slow=74						
ZALV	**Zalesovo Beam**	**41.17**	**311**	P	**P**	**05 55 29.6**	**-0.8**
	0.7nm,0.4s,baz=100,slow=7.7,SNR=3.7						
MKAR	**Makanchi Array**	**43.73**	**301**	P	**P**	**05 55 50.9**	**-0.5**
	1.1nm,0.8s,baz=84,slow=9.9,SNR=7.9						
ILAR	**Eielson Array**	**47.47**	**33**	P	**P**	**05 56 20.6**	**-0.1**
	0.7nm,0.8s,baz=265,slow=6.2,SNR=14						
INK	**Inuvik**	**52.33**	**28**	P	**P**	**05 56 58.2**	**+0.7**
	0.4nm,0.6s,baz=267,slow=7.4,SNR=2.9						
WRA	**Warramunga Arr**	**59.08**	**189**	P	**P**	**05 57 44.7**	**-1.8**
	0.6nm,0.6s,baz=6.1,slow=7.3,SNR=5.8						
YKA	**Yellowknife Ar**	**61.77**	**31**	P	**P**	**05 58 03.7**	**-0.8**
	0.2nm,0.5s,baz=297,slow=6.1,SNR=3.1						
ASAR	**Alice Springs**	**62.81**	**189**	P	**P**	**05 58 10.6**	**-1.2**
	0.2nm,0.6s,baz=5.0,slow=4.5,SNR=4.5						

NIED ***15*** *05:56:00,36.80N×141.40E,h5km,Mw3.5 Best double couple: M0 2.14000×10^14 NP1:φs 199.00000°,δ53.00000°, λ-90.00000°. NP2:φs 20.00000°,δ37.00000°,λ-89.00000°.*
IDC ***15*** *05:56:17.0±1.1,36.71N×141.28E,h0km,mb3.6/8, mb1 3.8/9,mb1mx3.6/37,mbtmp3.5/9,ML2.3/1,Error ellipse: s-maj=30.5km s-min=20.0km az=174.0*
JMA ***15*** *05:56:17.9±0.1,36.82N×141.38E,h34km±1km,M3.5*
ISC 15 05:56:18.7±1.7,**36.82N**±0.04×**141.29E**±0.07,**h12**km±9km, **n25**,σ0≧**97**/28,**mb3.5**/8,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.49**	**306**	P	**Pg**	**05 56 28.7**	**+0.4**
ONAJ				S	**Sb**	**05 56 36.8**	**+0.4**
JHO	**Hitachi**	**0.62**	**251**	P	**Pg**	**05 56 30.9**	**+0.2**
JHO				S	**Sg**	**05 56 40.3**	**+1.5**
JFK	**Kawauchi**	**0.64**	**329**	P	**Pg**	**05 56 30.9**	**-0.3**
JFK				S	**Sg**	**05 56 40.2**	**+0.5**
JFFD	**Fukushimafurud**	**0.65**	**295**	P	**Pg**	**05 56 31.2**	**-0.1**
JFFD				S	**Sg**	**05 56 40.8**	**+1.0**
JHYU	**Hitachinakayam**	**0.74**	**230**	P	**Pg**	**05 56 32.6**	**-0.4**
JFT	**Otama**	**1.04**	**313**	P	**Pb**	**05 56 38.0**	**-0.6**
JFT				S	**Sb**	**05 56 52.0**	**-0.2**
JYT	**Yasato**	**1.06**	**237**	P	**Pb**	**05 56 37.7**	**-1.3**
JYT				S	**Sb**	**05 56 52.3**	**-0.6**
JMM	**Marumori**	**1.12**	**339**	P	**Pb**	**05 56 38.3**	**-1.7**
JMM				*eS*	**Sb**	**05 56 52.9**	**-1.7**
JFY	**Yanaizu**	**1.40**	**295**	P	**Pn**	**05 56 43.6**	**-0.5**
MJAR	**Matsushiro Arr**	**2.49**	**265**	Pn	**Pn**	**05 56 59.1**	**0.0**
	0.7nm,0.3s,baz=88,slow=12,SNR=21						
MJAR				Sn	**Sn**	**05 57 28.8**	**-0.8**
	0.6nm,0.3s,baz=91,slow=15,SNR=6.2						
MAT	**Matsushiro**	**2.50**	**265**	P	**Pn**	**05 56 58.8**	**-0.4**
MAT				S	**Sb**	**05 57 33.4**	**-0.8**
SONM	**Songino Array**	**27.83**	**304**	P	**P**	**06 02 08.3**	**+0.3**
	0.3nm,0.6s,baz=88,slow=7.5,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**28.12**	**120**	T	T	06 31 37.1	
	baz=313,slow=75,SNR=213						
H11N1	**WAKE ISLAND Hy**	**28.13**	**120**	T	T	06 31 36.2	
	baz=313,slow=75,SNR=203						
H11N3	**WAKE ISLAND Hy**	**28.14**	**120**	T	T	06 31 36.9	
	baz=313,slow=75,SNR=126						
H11S1	**WAKE ISLAND Hy**	**28.82**	**122**	T	T	06 32 25.5	
	baz=316,slow=74,SNR=256						
H11S3	**WAKE ISLAND Hy**	**28.82**	**122**	T	T	06 32 27.4	
	baz=316,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.84**	**122**	T	T	06 32 26.1	
	baz=316,SNR=41						
ZALV	**Zalesovo Beam**	**41.99**	**313**	P	**P**	**06 04 09.4**	**-0.1**
	0.7nm,0.5s,baz=82,slow=5.7,SNR=2.9						
MKAR	**Makanchi Array**	**44.15**	**302**	P	**P**	**06 04 26.4**	**-0.8**
	0.5nm,0.7s,baz=89,slow=9.8,SNR=5.9						
ILAR	**Eielson Array**	**49.73**	**32**	P	**P**	**06 05 10.3**	**-0.1**
	0.6nm,0.9s,baz=256,slow=6.8,SNR=5.1						
WRA	**Warramunga Arr**	**56.83**	**188**	P	**P**	**06 06 02.2**	**-0.9**
	0.8nm,0.8s,baz=6.9,slow=7.2,SNR=4.6						
AKASG	**Malin Array Be**	**74.41**	**322**	P	**P**	**06 07 58.7**	**+2.3**
	0.1nm,0.3s,baz=47,slow=6.6,SNR=2.5						
NVAR	**Mina Array Bea**	**75.20**	**53**	P	**P**	**06 08 02.7**	**+1.2**
	0.2nm,0.5s,baz=293,slow=4.7,SNR=2.8						
TXAR	**Lajitas Array**	**90.33**	**52**	P	**P**	**06 09 20.3**	**+0.3**
	0.2nm,0.6s,baz=297,slow=4.0,SNR=2.9						

NIED ***15*** *06:16:00,39.20N×144.60E,h5km,Mw3.7 Best double couple: M0 3.45000×10^14 NP1:φs 226.00000°,δ62.00000°, λ-81.00000°. NP2:φs 28.00000°,δ29.00000°, λ-105.00000°.*
IDC ***15*** *06:16:46.3±1.0,39.07N×145.00E,h0km,mb3.4/5, mb1 3.7/8,mb1mx3.5/32,mbtmp3.5/8,ML3.0/3,MS2.8/3, Ms1 2.8/3,ms1mx2.4/27,Error ellipse: s-maj=29.8km s-min=21.3km az=109.0*
JMA ***15*** *06:16:52.0±0.2,39.25N×144.58E,h57km,M3.6*
ISC 15 06:16:51.2±1.0,**39.22N**±0.06×**144.77E**±0.07,**h35**km,**n29**, σ1≧**52**/41,**mb3.5**/5,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**2.32**	**280**	P	**Pn**	**06 17 26.7**	**-0.2**
MIYJ				S	**Sn**	**06 17 52.2**	**-1.9**
JTH	**Tanohata**	**2.36**	**289**	P	**Pn**	**06 17 27.2**	**-0.3**
JTH				S	**Sn**	**06 17 53.4**	**-1.8**
OFUJ	**Ofunato**	**2.42**	**268**	P	**Pn**	**06 17 27.8**	**-0.5**
JOM	**Ohasama**	**2.71**	**276**	P	**Pn**	**06 17 32.4**	**+0.1**
JOM				*eS*	**Sn**	**06 18 02.5**	**-1.4**
JANG	**Nango**	**2.76**	**296**	P	**Pn**	**06 17 32.3**	**-0.7**
JANG				*eS*	**Sn**	**06 18 03.0**	**-2.1**
JMK	**Ichinoseki**	**2.78**	**266**	P	**Pn**	**06 17 33.1**	**-0.1**
JMK				*eS*	**Sn**	**06 18 04.7**	**-0.8**
JTM	**Tenmabayashi**	**3.25**	**300**	P	**Pn**	**06 17 39.8**	**+0.2**
JTM				*eS*	**Sn**	**06 18 15.7**	**-1.4**
JOU	**Okura**	**3.32**	**256**	P	**Pn**	**06 17 40.3**	**-0.4**
JOU				*eS*	**Sn**	**06 18 17.4**	**-1.6**
JNBK	**Urakawa-nobuka**	**3.42**	**334**	P	**Pn**	**06 17 42.0**	**0.0**
JNBK				*eS*	**Sn**	**06 18 20.7**	**-0.6**
JCH	**Churui**	**3.56**	**343**	P	**Pn**	**06 17 43.2**	**-0.7**
JCH				*eS*	**Sn**	**06 18 21.0**	**-3.6**
JOT	**Ohata**	**3.57**	**308**	P	**Pn**	**06 17 44.2**	**+0.1**
JOT				*eS*	**Sn**	**06 18 23.4**	**-1.7**
JAK	**Akkeshi**	**3.77**	**359**	*eS*	**Sn**	**06 18 26.8**	**-3.2**
JFT	**Otama**	**3.88**	**245**	P	**Pn**	**06 17 48.1**	**-0.3**
JFT				*eS*	**Sn**	**06 18 30.6**	**-2.1**
JKB	**Kayabe**	**3.90**	**314**	P	**Pn**	**06 17 48.9**	**+0.3**
JTKR	**Abashiri--Toko**	**4.79**	**352**	P	**Pn**	**06 18 00.4**	**-0.4**
JTKR				S	**Sn**	**06 18 52.0**	**-3.1**
JOSM	**Okushiri--Mats**	**4.94**	**307**	P	**Pn**	**06 18 04.7**	**+1.8**
JHR	**Hokuryu**	**5.07**	**334**	P	**Pn**	**06 18 06.6**	**+2.0**
JHR				*eS*	**Sn**	**06 19 03.0**	**+1.1**
ASAJ	**Asahikawa**	**5.16**	**342**	Pn	**Pn**	**06 18 06.1**	**+0.3**
	0.9nm,0.3s,baz=133,slow=17,SNR=3.3						
ASAJ				Sn	**Sn**	**06 19 01.7**	**-2.4**
	1.4nm,0.3s,baz=359,slow=23,SNR=6.3						
ASAJ				LR	LR	06 20 25.3	
	comp=Z,44nm,22.0s,baz=160,slow=41						
JRY	**Ryogami san**	**5.65**	**237**	P	**Pn**	**06 18 12.3**	**-0.5**
MJAR	**Matsushiro Arr**	**5.84**	**245**	Pn	**Pn**	**06 18 16.0**	**+0.7**
	0.3nm,0.3s,baz=58,slow=9.4,SNR=8.6						
MAT	**Matsushiro**	**5.84**	**245**	P	**Pn**	**06 18 15.9**	**+0.6**
USRK	**Ussuriysk Ar.**	**10.77**	**302**	Pn	**Pn**	**06 19 25.6**	**+2.7**
	baz=101,slow=15,SNR=6.9						
KLR	**Kul'dur**	**13.67**	**321**	LR	LR	06 25 19.8	
	comp=Z,39nm,18.1s,baz=200,slow=37						
GUMO	**Guam**	**25.53**	**180**	LR	LR	06 29 18.7	
	comp=Z,38nm,19.9s,baz=116,slow=30						
MKAR	**Makanchi Array**	**45.24**	**301**	P	**P**	**06 25 06.7**	**+1.7**
	0.4nm,0.8s,baz=84,slow=7.4,SNR=3.7						
ILAR	**Eielson Array**	**46.22**	**33**	P	**P**	**06 25 13.1**	**+0.6**
	0.5nm,0.8s,baz=248,slow=7.3,SNR=6.1						
WRA	**Warramunga Arr**	**59.66**	**191**	P	**P**	**06 26 51.7**	**-0.3**
	0.8nm,0.8s,baz=9.7,slow=7.3,SNR=2.8						
YKA	**Yellowknife Ar**	**60.57**	**32**	P	**P**	**06 26 58.5**	**+0.7**
	0.3nm,0.8s,baz=301,slow=6.6,SNR=5.6						
ASAR	**Alice Springs**	**63.38**	**191**	P	**P**	**06 27 16.2**	**-0.9**
	0.2nm,0.6s,baz=1.1,slow=5.0,SNR=3.1						

KRSC ***15*** *06:55:06.3±1.3,51.40N×151.16E,h578km±29km,ML5.6*
BJI ***15*** *06:55:07.9±0.0,51.57N×151.01E,h557km,mB4.9/36, mb4.9/58*
SKHL ***15*** *06:55:08.8±0.5,51.40N×151.10E,h558km±8km,mb5.5/19, mbv5.4/6,msh5.3/7,msha5.6/8*
MOS ***15*** *06:55:08.3±0.7,51.59N×150.90E,h547km,mb4.9/41, Error ellipse: s-maj=6.0km s-min=4.0km az=79.5*
NEIC ***15*** *06:55:08.8±1.7,51.61N±0.09×150.9E±0.1,h537km±3km, mb4.6/281,Error ellipse: s-maj=14.4km s-min=11.2km az=139.0*
BGR ***15*** *06:55:10.0±0.0,52.43N×150.66E,h500km,mb5.2*
IDC ***15*** *06:55:10.0±0.5,51.66N×150.86E,h550km±4km,mb4.0/37, mb1 4.1/44,mb1mx4.1/51,mbtmp5.0/44,Error ellipse: s-maj=7.7km s-min=5.2km az=152.0*
ISC 15 06:55:09.0±0.4,**51.52N**±0.04×**150.97E**±0.04,**h551**km±3km, **h549**km:**pP-P,n1077**,σ1≧**21**/1123,**mb4.6**/261,**77C-29D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.35**	**102**	*i*P	**P**	**06 56 26.2**	**0.0**
SKR				*eS*	**S**	**06 57 26.6**	**-2.7**
SKR				pmax	pmax		
	comp=Z,908nm,0.5s						
SKR				pmax	pmax		
	comp=Z,1μm,4.2s						
SKR				smax	smax		
	comp=E,410nm,0.5s						
SKR				smax	smax		
	comp=N,606nm,0.8s						
SKR	**Severo-Kuril's**	**3.35**	**102**	*eP*	**P**	**06 56 25.2**	**-1.0**
SKR				*eS*	**S**	**06 57 29.0**	**-0.3**
SKR	**Severo-Kuril's**	**3.35**	**102**	*i* P	**P**	**06 56 26.0**	**-0.2**
SKR				AMB	AMB	06 56 26.7	
	comp=N,590nm,0.6s						
SKR				AMB	AMB	06 56 27.0	
	comp=N,700nm,2.0s						
SKR				*eS*	**S**	**06 57 26.6**	**-2.7**
SKR				A	A	06 57 30.0	
	comp=N,1μm,2.0s						
SKR				A	A	06 57 30.0	
	comp=N,600nm,2.0s						
SKR				A	A	06 57 36.4	
	comp=N,580nm,0.8s						
SKR				A	A	06 57 36.4	
	comp=N,640nm,0.8s						
PAU	**Pauzhetka**	**3.65**	**89**	P	**P**	**06 56 27.4**	**-0.9**
PAU				S	**S**	**06 57 32.2**	**-0.9**
PAU	**Pauzhetka**	**3.65**	**89**	*eP*	**P**	**06 56 27.4**	**-0.9**
PAU				*eS*	**S**	**06 57 32.2**	**-0.9**
PAU	**Pauzhetka**	**3.65**	**89**	*eP*	**P**	**06 56 27.4**	**-0.9**
PAU				*eS*	**S**	**06 57 32.2**	**-0.9**
ASAK	**Asacha**	**4.38**	**76**	P	**P**	**06 56 33.0**	**-0.7**
ASAK				S	**S**	**06 57 42.5**	**-0.6**
ASAK	**Asacha**	**4.38**	**76**	*eP*	**P**	**06 56 33.0**	**-0.7**
ASAK				*eS*	**S**	**06 57 42.5**	**-0.6**
PEA0B	**Petropavlovsk-**	**4.43**	**66**	*c i*P	**P**	**06 56 34.9**	**+0.9**
PEA0B	**Petropavlovsk-**	**4.43**	**66**	P	**P**	**06 56 34.3**	**+0.3**
PEA0B				S	**S**	**06 57 43.2**	**-0.5**
PETK	**Petropavlovsk-**	**4.43**	**66**	P	**P**	**06 56 34.3**	**+0.2**
	comp=N,13nm,0.3s,baz=272,slow=2.1,SNR=391						
PETK				S	**S**	**06 57 43.6**	**-0.1**
	comp=N,3.2nm,0.3s,baz=152,slow=20,SNR=4.8						
KDTR	**Khodutka, Kamc**	**4.44**	**83**	P	**P**	**06 56 32.6**	**-1.5**
KDTR				S	**S**	**06 57 37.5**	**-6.3**
KDTR	**Khodutka, Kamc**	**4.44**	**83**	*eP*	**P**	**06 56 32.6**	**-1.5**
KDTR				*eS*	**S**	**06 57 37.5**	**-6.3**
GRL	**Gorelyy**	**4.51**	**74**	P	**P**	**06 56 36.0**	**+1.2**
GRL				S	**S**	**06 57 44.5**	**-0.6**
GRL	**Gorelyy**	**4.51**	**74**	*eP*	**P**	**06 56 36.0**	**+1.2**
GRL				*eS*	**S**	**06 57 44.5**	**-0.6**
MTVR	**Mutnovka**	**4.56**	**75**	P	**P**	**06 56 34.7**	**-0.6**
MTVR	**Mutnovka**	**4.56**	**75**	*eP*	**P**	**06 56 34.7**	**-0.6**
KRMR	**Karymshinskiy**	**4.60**	**71**	P	**P**	**06 56 35.4**	**0.0**
KRMR				S	**S**	**06 57 45.6**	**-0.6**
KRMR	**Karymshinskiy**	**4.60**	**71**	*eP*	**P**	**06 56 35.4**	**0.0**
KRMR				*eS*	**S**	**06 57 45.6**	**-0.6**
RUS	**Russkaya**	**4.75**	**76**	P	**P**	**06 56 35.6**	**-1.0**
RUS				S	**S**	**06 57 44.1**	**-4.3**
RUS	**Russkaya**	**4.75**	**76**	*eP*	**P**	**06 56 35.6**	**-1.0**
RUS				*eS*	**S**	**06 57 44.1**	**-4.3**
RUS	**Russkaya**	**4.75**	**76**	*eP*	**P**	**06 56 35.6**	**-1.0**
PET	**Petropavlovsk**	**4.96**	**69**	P	**P**	**06 56 38.7**	**+0.4**
PET				S	**S**	**06 57 47.3**	**-4.2**
PET	**Petropavlovsk**	**4.96**	**69**	*eP*	**P**	**06 56 38.7**	**+0.4**
PET				*eS*	**S**	**06 57 47.3**	**-4.2**
PET	**Petropavlovsk**	**4.96**	**69**	*eP*	**P**	**06 56 38.6**	**+0.3**
PET				AMB	AMB	06 56 39.0	
	comp=N,2μm,2.0s						
PET				AMB	AMB	06 56 39.9	
	comp=N,510nm,0.9s						
PET				*eS*	**S**	**06 57 48.3**	**-3.2**
PET				A	A	06 57 50.5	
	comp=N,2μm,2.0s						
PET				A	A	06 57 50.5	
	comp=N,2μm,2.0s						
PET				A	A	06 57 52.7	
	comp=N,520nm,1.0s						
PET				A	A	06 57 52.7	
	comp=N,660nm,1.0s						
PET	**Petropavlovsk**	**4.96**	**69**	P	**P**	**06 56 37.6**	**-0.7**
PET				S	**S**	**06 57 45.0**	**-6.4**
KRX	**Arik**	**5.05**	**66**	P	**P**	**06 56 39.4**	**+0.1**
KRX				S	**S**	**06 57 52.6**	**-0.6**
KRX	**Arik**	**5.05**	**66**	*eP*	**P**	**06 56 39.4**	**+0.1**
KRX				*eS*	**S**	**06 57 52.6**	**-0.6**
AVH	**Avacha**	**5.07**	**67**	P	**P**	**06 56 39.6**	**+0.2**
AVH				S	**S**	**06 57 53.9**	**+0.5**
AVH	**Avacha**	**5.07**	**67**	*eP*	**P**	**06 56 39.6**	**+0.2**
AVH				*eS*	**S**	**06 57 53.9**	**+0.5**
AVH	**Avacha**	**5.07**	**67**	*eP*	**P**	**06 56 39.6**	**+0.2**
KRER	**Koryakskii**	**5.09**	**66**	P	**P**	**06 56 39.8**	**+0.1**
KRER	**Koryakskii**	**5.09**	**66**	*eP*	**P**	**06 56 39.8**	**+0.1**
UGLR	**Uglovaya**	**5.10**	**68**	P	**P**	**06 56 40.0**	**+0.3**
UGLR				S	**S**	**06 57 53.7**	**-0.3**
UGLR	**Uglovaya**	**5.10**	**68**	*eP*	**P**	**06 56 40.0**	**+0.3**
UGLR				*eS*	**S**	**06 57 53.7**	**-0.3**
SMAR	**Somma**	**5.11**	**67**	P	**P**	**06 56 40.4**	**+0.6**
SMAR				S	**S**	**06 57 52.4**	**-1.9**
SMAR	**Somma**	**5.11**	**67**	*eP*	**P**	**06 56 40.4**	**+0.6**
SMAR				*eS*	**S**	**06 57 52.4**	**-1.9**
SDLR	**Sedlovina**	**5.16**	**67**	P	**P**	**06 56 39.9**	**-0.3**
SDLR	**Sedlovina**	**5.16**	**67**	*eP*	**P**	**06 56 39.9**	**-0.3**
TYV	**Tymovskoe**	**5.27**	**266**	*eP*	**P**	**06 56 41.9**	**+0.9**
TYV				*eS*	**S**	**06 57 56.0**	**-0.4**
TYV				pmax	pmax		
	comp=Z,600nm,2.0s						
TYV				pmax	pmax		
	comp=Z,327nm,0.7s						
TYV				smax	smax		
	comp=N,62nm,1.1s						
TYV				smax	smax		
	comp=N,600nm,3.4s						
TYV	**Tymovskoe**	**5.27**	**266**	*eP*	**P**	**06 56 41.3**	**+0.3**
TYV				AMB	AMB	06 56 42.0	
	comp=N,290nm,0.6s						
TYV				AMB	AMB	06 56 42.2	
	comp=N,600nm,2.0s						
TYV				*eS*	**S**	**06 57 56.6**	**+0.2**
TYV				A	A	06 58 00.4	
	comp=N,70nm,1.0s						
TYV				A	A	06 58 10.8	
	comp=N,600nm,8.0s						
TYV				A	A	06 58 10.8	
	comp=N,5μm,8.0s						
OKH	**Okha**	**5.31**	**296**	*c i*P	**P**	**06 56 42.2**	**+0.9**
OKH				pmax	pmax		
	comp=Z,200nm,6.0s						
OKH				MLR	MLR		
	comp=Z,200nm,6.0s						
OKH	**Okha**	**5.31**	**296**	*i* P	**P**	**06 56 42.2**	**+0.9**
OKH				AMB	AMB	06 56 42.9	
	comp=Z,2μm,0.8s						
OKH				AMB	AMB	06 56 43.4	
	comp=Z,1μm,0.8s						
OKH				*eS*	**S**	**06 57 57.7**	**+0.8**
OKH				A	A	06 58 00.7	
	comp=Z,1μm,4.0s						
OKH				A	A	06 58 00.7	
	comp=Z,1μm,4.0s						
NLC	**Nalytchevo**	**5.40**	**69**	P	**P**	**06 56 41.4**	**-0.6**
NLC				S	**S**	**06 57 55.4**	**-2.9**
NLC	**Nalytchevo**	**5.40**	**69**	*eP*	**P**	**06 56 41.4**	**-0.6**
NLC				*eS*	**S**	**06 57 55.4**	**-2.9**
NLC	**Nalytchevo**	**5.40**	**69**	*eP*	**P**	**06 56 41.4**	**-0.6**
SPN	**Mys Shipunski**	**5.78**	**71**	P	**P**	**06 56 43.2**	**-2.2**
SPN				S	**S**	**06 57 57.5**	**-7.0**
SPN	**Mys Shipunski**	**5.78**	**71**	*eP*	**P**	**06 56 43.2**	**-2.2**
SPN				*eS*	**S**	**06 57 57.5**	**-7.0**
UGL	**Uglegorsk**	**6.20**	**250**	*i* P	**P**	**06 56 50.8**	**+1.4**
UGL				*eS*	**S**	**06 58 13.2**	**+1.6**
UGL				pmax	pmax		
	comp=Z,2μm,1.0s						
UGL				pmax	pmax		
	comp=Z,2μm,0.9s						
UGL				pmax	pmax		
	comp=E,471nm,0.5s						
UGL				pmax	pmax		
	comp=N,614nm,0.5s						
UGL				smax	smax		
	comp=N,800nm,1.5s						
UGL				smax	smax		
	comp=E,2μm,2.0s						
UGL				smax	smax		
	comp=E,376nm,1.3s						
UGL	**Uglegorsk**	**6.20**	**250**	*i* P	**P**	**06 56 50.8**	**+1.4**
UGL				AMB	AMB	06 56 51.0	
	comp=E,2μm,1.0s						
UGL				AMB	AMB	06 56 51.0	
	comp=E,2μm,0.9s						
UGL				*eS*	**S**	**06 58 11.9**	**+0.3**
UGL				A	A	06 58 14.0	
	comp=E,890nm,2.0s						
UGL				A	A	06 58 14.0	
	comp=E,2μm,2.0s						
UGL				A	A	06 58 15.0	
	comp=E,380nm,1.0s						
ESO	**Esso**	**6.37**	**43**	P	**P**	**06 56 51.4**	**+0.6**
ESO	**Esso**	**6.37**	**43**	*eP*	**P**	**06 56 51.4**	**+0.6**
NKL	**Nikolayevsk**	**6.51**	**289**	*c i*P	**P**	**06 56 52.8**	**+0.6**
NKL				pmax	pmax		
	comp=N,5.0nm,0.5s						
NKL				pmax	pmax		
	comp=E,119nm,0.5s						
NKL				pmax	pmax		
	comp=Z,355nm,0.5s						
NKL	**Nikolayevsk**	**6.51**	**289**	*i* P	**P**	**06 56 52.8**	**+0.6**
NKL				AMB	AMB	06 56 53.4	
	comp=Z,6.0nm,0.5s						
NKL				AMB	AMB	06 56 53.4	
	comp=Z,120nm,0.5s						
NKL				AMB	AMB	06 56 53.4	
	comp=Z,360nm,0.5s						
KUR	**Kuril'sk**	**6.62**	**199**	*d* iP	**P**	**06 56 53.3**	**-0.1**
KUR				*i* S	**S**	**06 58 16.9**	**-1.9**
KUR				pmax	pmax		
	comp=E,62nm,0.6s						
KUR				pmax	pmax		
	comp=Z,184nm,0.6s						
KUR				pmax	pmax		
	comp=N,26nm,0.5s						
KUR				smax	smax		
	comp=N,207nm,0.5s						
KUR				smax	smax		
	comp=E,109nm,0.5s						
KUR	**Kuril'sk**	**6.62**	**199**	*eP*	**P**	**06 56 53.3**	**-0.1**
KUR				AMB	AMB	06 56 54.0	
	comp=E,30nm,0.6s						
KUR				AMB	AMB	06 56 54.0	
	comp=E,6μm,0.6s						
KUR				AMB	AMB	06 56 54.0	
	comp=E,180nm,0.6s						
KUR				*eS*	**S**	**06 58 16.9**	**-1.9**
KUR				A	A	06 58 36.6	
	comp=E,210nm,0.5s						
KUR				A	A	06 58 36.6	
	comp=E,110nm,0.5s						
KZV	**Kizimen**	**6.65**	**54**	P	**P**	**06 56 53.9**	**+0.3**
KZV				S	**S**	**06 58 17.9**	**-1.5**
KZV	**Kizimen**	**6.65**	**54**	*eP*	**P**	**06 56 53.9**	**+0.3**
KZV				*eS*	**S**	**06 58 17.9**	**-1.5**
**

KIRR Kirishev 7.12 48 P **P** **06 56 57.5 -0.5**
KIRR Kirishev 7.12 48 *e*P **P** **06 56 57.5 -0.5**
BZMR Bezymyannaya 7.17 48 P **P** **06 56 59.1 +0.5**
BZMR Bezymyannaya 7.17 48 *e*P **P** **06 56 59.1 +0.5**
BZGR Bezymyannyi-Gr 7.27 49 P **P** **06 56 59.1 -0.4**
BZGR Bezymyannyi-Gr 7.27 49 *e*P **P** **06 56 59.1 -0.4**
ZLN Zelenaya 7.37 48 P **P** **06 57 00.1 -0.3**
ZLN S **S** **06 58 28.4 -3.5**
ZLN Zelenaya 7.37 48 *e*P **P** **06 57 00.1 -0.3**
ZLN *e*S **S** **06 58 28.4 -3.5**
KRSR Krestovskiy 7.37 47 P **P** **06 56 59.3 -1.1**
KRSR Krestovskiy 7.37 47 *e*P **P** **06 56 59.3 -1.1**
CIRR Tsirk 7.39 48 P **P** **06 57 00.2 -0.5**
CIRR Tsirk 7.39 48 *e*P **P** **06 57 00.2 -0.5**
KLY Klyuchi 7.47 46 P **P** **06 57 02.5 +1.3**
KLY Klyuchi 7.47 46 *e*P **P** **06 57 02.5 +1.3**
BDR Baidarnaya 7.87 46 P **P** **06 57 04.8 -0.4**
BDR Baidarnaya 7.87 46 *e*P **P** **06 57 04.8 -0.4**
SRKR Sorokina 7.90 45 P **P** **06 57 05.0 -0.5**
SRKR Sorokina 7.90 45 *e*P **P** **06 57 05.0 -0.5**
SMKR Semkarok 7.99 47 P **P** **06 57 08.7 +2.2**
SMKR Semkarok 7.99 47 *e*P **P** **06 57 08.7 +2.2**
MA2 Magadan 8.08 359 *c i*P **P** **06 57 06.8 -0.4**
MA2 pmax pmax
comp=Z,197nm,1.7s
MA2 Magadan 8.08 359 P **P** **06 57 06.7 -0.4**
comp=Z,6.1nm,0.3s,baz=178,slow=10,SNR=44
MA2 S **S** **06 58 42.5 -1.9**
baz=345,slow=22,SNR=7.7
MA2 Magadan 8.08 359 P **P** **06 57 06.9 -0.4**
SHO Shikotan 8.14 202 *e*P P 06 57 03.2 -5.0
SHO *e*S S 06 58 35.8 -10
SHO pmax pmax
comp=Z,201nm,0.4s
SHO pmax pmax
comp=N,58nm,0.5s
SHO pmax pmax
comp=E,72nm,0.4s
SHO Shikotan 8.14 202 *i*P **P** **06 57 04.0 -4.2**
SHO AMB AMB 06 57 06.2
comp=E,110nm,0.4s
SHO *e*S **S** **06 58 40.7 -5.2**
SHO A A 06 58 42.1
comp=E,610nm,0.8s
SHO A A 06 58 42.1
comp=E,760nm,0.8s
YUK Yuzh-Kuril'sk 8.24 207 *e*P **P** **06 57 08.1 -1.0**
YUK *e*S **S** **06 58 44.0 -3.6**
YUK pmax pmax
comp=Z,421nm,0.5s
YUK pmax pmax
comp=N,191nm,0.3s
YUK pmax pmax
comp=E,171nm,0.4s
YUK Yuzh-Kuril'sk 8.24 207 *e*P **P** **06 57 08.1 -1.0**
YUK AMB AMB 06 57 14.0
comp=E,190nm,0.5s
YUK AMB AMB 06 57 14.0
comp=E,170nm,0.5s
YUK AMB AMB 06 57 14.0
comp=E,420nm,0.5s
YUK *e*S **S** **06 58 44.0 -3.6**
GRPR Tuman 8.30 207 *e*P **P** **06 57 08.2 -1.5**
GRPR *e*S **S** **06 58 45.3 -3.5**
GRPR pmax pmax
comp=Z,476nm,0.3s
GRPR pmax pmax
comp=E,177nm,0.1s
GRPR Tuman 8.30 207 *e*P **P** **06 57 08.0 -1.7**
GRPR AMB AMB 06 57 08.8
comp=E,480nm,0.6s
GRPR *e*S **S** **06 58 45.0 -3.8**
KBG Krutoberegovo 8.40 51 P **P** **06 57 08.0 -2.4**
KBG S **S** **06 58 44.2 -6.0**
KBG Krutoberegovo 8.40 51 *e*P **P** **06 57 08.0 -2.4**
KBG *e*S **S** **06 58 44.2 -6.0**
KBTR Krutoberegovo 8.43 52 P **P** **06 57 07.5 -3.2**
KBTR Krutoberegovo 8.43 52 *e*P **P** **06 57 07.5 -3.2**
GLVR Golovnino 8.61 207 *e*P **P** **06 57 11.1 -1.7**
GLVR *e*S **S** **06 58 51.1 -3.3**
GLVR pmax pmax
comp=Z,611nm,0.5s
GLVR pmax pmax
comp=N,208nm,0.3s
GLVR pmax pmax
comp=E,90nm,0.3s
GLVR Golovnino 8.61 207 *e*P **P** **06 57 11.4 -1.4**
GLVR AMB AMB 06 57 12.6
comp=E,610nm,0.7s
GLVR *e*S **S** **06 58 51.0 -3.3**
NMR Nemuro--Hokkai 8.89 206 *e*P **P** **06 57 11.8 -3.8**
NMR *e*S **S** **06 58 51.7 -7.8**
NMR pmax pmax
comp=E,50nm,0.2s
NMR pmax pmax
comp=Z,172nm,0.2s
NMR Nemuro--Hokkai 8.89 206 *e*rx rx 06 57 11.0
PALN Palana 9.15 31 P **P** **06 57 17.9 0.0**
PALN Palana 9.15 31 *e*P **P** **06 57 17.9 0.0**
GRNR Gornyy 9.18 271 ⇓ *i*P **P** **06 57 19.1 +0.7**
GRNR *e*S **S** **06 59 02.5 -2.3**
GRNR pmax pmax
comp=Z,130nm,0.6s
GRNR smax smax
comp=N,30nm,1.0s
GRNR MLR MLR
comp=Z,120nm,11.0s
GRNR Gornyy 9.18 271 *e*P **P** **06 57 19.1 +0.7**
GRNR AMB AMB 06 57 19.6
comp=Z,130nm,0.6s
JKA Kamikawa-asahi 9.30 220 *e*P **P** **06 57 19.6 -0.2**
JKA Kamikawa-asahi 9.30 220 P **P** **06 57 19.6 -0.2**
JKA S **S** **06 59 06.5 -0.6**
ASAJ Asahikawa 9.30 220 P **P** **06 57 19.6 -0.2**
comp=Z,15nm,0.3s,baz=54,slow=4.5,SNR=81
ASAJ S **S** **06 59 06.5 -0.6**
comp=Z,0.6nm,0.3s,baz=193,slow=19,SNR=5.3
BKI Bering 9.70 62 P **P** **06 57 24.0 +0.5**
BKI S **S** **06 59 11.7 -2.5**
BKI Bering 9.70 62 *e*P **P** **06 57 24.0 +0.5**
BKI *e*S **S** **06 59 11.7 -2.5**
OSSR Ossora 10.35 37 P **P** **06 57 29.9 -0.2**
OSSR Ossora 10.35 37 *e*P **P** **06 57 29.9 -0.2**
ERM Erimo 10.90 212 *d i*P **P** **06 57 35.0 -1.2**
ERM Erimo 10.90 212 P **P** **06 57 34.0 -2.2**
EKMR Ekimchan 11.14 285 *e*P **P** **06 57 38.1 -0.4**
EKMR AMB AMB 06 57 39.9
comp=Z,4.0nm,0.6s
SEY Seymchan 11.47 3 P **P** **06 57 41.8 +0.1**
comp=Z,4.2nm,0.3s,baz=182,slow=8.1,SNR=82
SEY S **S** **06 59 46.5 -0.8**
baz=347,slow=21,SNR=9.5
SEY Seymchan 11.47 3 *e*P **P** **06 57 42.0 +0.3**
TILK Tilichiki 12.31 38 P **P** **06 57 49.6 -0.7**
TILK Tilichiki 12.31 38 *e*P **P** **06 57 49.6 -0.7**
KLR Kul'dur 12.48 267 P **P** **06 57 52.9 +0.5**
comp=Z,11nm,0.3s,baz=74,slow=8.1,SNR=330
KLR S **S** **07 00 07.7 +1.0**
baz=329,slow=20,SNR=11
KLR ScP **ScP** **07 05 25.2 +1.3**
comp=Z,0.2nm,0.3s,baz=106,slow=0.0,SNR=5.3
KLR ScS **ScS** **07 08 60.0 -0.1**
comp=Z,0.1nm,0.3s,baz=20,slow=12,SNR=3.5
BMKR Bomnak 13.65 292 *i*P **P** **06 58 03.8 -0.5**
comp=Z,20nm,0.2s
BMKR *i*P **P** **06 58 03.8 -0.5**
comp=Z,30nm,0.2s
BMKR *i*P **P** **06 58 03.8 -0.5**
comp=Z,60nm,0.2s
BMKR AMB AMB 06 58 05.0
comp=Z,30nm,0.2s
BMKR AMB AMB 06 58 05.0
comp=Z,90nm,0.2s
BMKR AMB AMB 06 58 05.0
comp=Z,170nm,0.2s
SMY Shemya 14.25 76 P **P** **06 58 10.7 +0.2**
SMY Shemya 14.25 76 P **P** **06 58 10.7 +0.2**
ZEA Zeya 14.56 288 *e*P **P** **06 58 11.8 -1.8**
ZEA *e*S **S** **07 00 44.0 -1.8**
ZEA pmax pmax
comp=E,42nm,0.8s
ZEA pmax pmax
comp=Z,58nm,1.0s
ZEA smax smax
comp=E,700nm,7.0s
ZEA Zeya 14.56 288 *e*P **P** **06 58 12.0 -1.6**
ZEA AMB AMB 06 58 14.2
comp=E,60nm,1.0s
USA0B Ussuriysk Arra 14.67 247 *d i*P **P** **06 58 13.3 -1.6**
USA0B Ussuriysk Arra 14.67 247 P **P** **06 58 13.2 -1.7**
USRK Ussuriysk Ar. 14.67 247 P **P** **06 58 13.2 -1.7**
baz=59,slow=11,SNR=22
KROS Kirovskiy 14.73 291 *i*P **P** **06 58 14.1 -1.3**
comp=E,10.0nm,0.3s
KROS *i*P **P** **06 58 14.1 -1.3**
comp=E,20nm,0.3s
KROS AMB AMB 06 58 15.0
comp=E,5.0nm,0.4s
KROS AMB AMB 06 58 15.0
comp=E,20nm,0.4s
KROS AMB AMB 06 58 15.0
comp=E,20nm,0.4s
YAK Yakutsk 15.63 321 *d i*P **P** **06 58 22.2 -2.2**
YAK *e*S **S** **07 01 01.1 -3.4**
YAK pmax pmax
comp=Z,92nm,0.9s
YAK pmax pmax
comp=N,40nm,1.1s
YAK pmax pmax
comp=E,46nm,1.3s
YAK smax smax
comp=E,834nm,3.0s
YAK smax smax
comp=N,578nm,2.2s
YAK Yakutsk 15.63 321 P **P** **06 58 22.4 -2.0**
comp=N,1.2nm,0.3s,baz=126,slow=4.0,SNR=33
YAK S **S** **07 01 02.0 -2.4**
comp=N,0.1nm,0.3s,baz=65,slow=11,SNR=8.7
YAK ScS **ScS** **07 09 04.3 -3.2**
comp=N,0.2nm,0.3s,baz=80,slow=0.8,SNR=7.6
YAK Yakutsk 15.63 321 P **P** **06 58 22.4 -2.0**
MDJ Mudanjiang 15.84 253 P **P** **06 58 25.0 -1.8**
MDJ pmax pmax
comp=N,27nm,1.2s
MDJ pmax pmax
comp=N,270nm,7.4s
MDJ Mudanjiang 15.84 253 P **P** **06 58 25.0 -1.8**
MDJ IAmb IAmb 06 58 27.1
comp=Z,21nm,0.9s
MJB9 Matsu-Tunnel 17.52 216 P **P** **06 58 43.0 +0.6**
MAJO Matsushiro 17.52 216 P **P** **06 58 42.8 +0.4**
MAJO pmax pmax
comp=Z,195nm,1.0s
MAJO Matsushiro 17.52 216 P **P** **06 58 42.8 +0.4**
MAT Matsushiro 17.52 216 P **P** **06 58 42.8 +0.4**
MAT S **S** **07 01 36.0 -0.3**
MJAR Matsushiro Arr 17.52 216 P **P** **06 58 43.1 +0.7**
comp=Z,3.7nm,0.3s,baz=9.7,slow=11,SNR=121
MJAR ScP **ScP** **07 05 33.8 +0.3**
comp=Z,0.0nm,0.3s,baz=35,slow=1.7,SNR=5.5
MJAR Matsushiro Arr 17.52 216 IAmb IAmb 06 58 44.6
comp=Z,27nm,0.5s
BILL Bilibino 18.17 19 *c i*P **P** **06 58 47.9 0.0**
BILL *e*S **S** **07 01 45.7 -0.4**
BILL pmax pmax
comp=Z,19nm,0.7s
BILL Bilibino 18.17 19 *e*P **P** **06 58 47.9 0.0**
BILL Bilibino 18.17 19 P **P** **06 58 47.6 -0.3**
BILL IAmb IAmb 06 58 52.0
comp=Z,17nm,0.8s
CN2 Changchun 18.77 256 *e*P **P** **06 58 53.4 -0.4**
CN2 *e*S **S** **07 01 56.0 -0.4**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,100nm,3.0s
HIA Hailar 19.96 276 P **P** **06 59 04.1 -0.4**
HIA pmax pmax
comp=Z,29nm,1.1s
HIA Hailar 19.96 276 P **P** **06 59 04.1 -0.4**
KS19 Wonju Array Si 21.50 238 P **P** **06 59 18.5 -0.1**
KS19 IAmb IAmb 06 59 23.9
comp=Z,24nm,1.0s
KSRS Korea Array 21.51 238 P **P** **06 59 19.8 +1.3**
comp=Z,11nm,0.7s,baz=41,slow=9.6,SNR=34
KSRS PcP **PcP** **07 02 58.7 +0.9**
comp=Z,2.2nm,0.6s,baz=3.8,slow=1.9,SNR=7.7
KSRS ScP **ScP** **07 05 43.2 +0.5**
comp=Z,1.5nm,0.7s,baz=23,slow=4.3,SNR=7.6
BOD Bodaibo 22.07 301 *e*P **P** **06 59 21.9 -1.4**
BOD *e* 07 09 25.3
BOD pmax pmax
comp=Z,21nm,0.8s
TIXI Tiksi 22.49 342 *d i*P **P** **06 59 26.6 -0.3**
TIXI pmax pmax
comp=Z,42nm,1.2s
TIXI Tiksi 22.49 342 P **P** **06 59 26.5 -0.3**
comp=Z,15nm,0.6s,baz=157,slow=8.7,SNR=22
TIXI S **S** **07 02 53.6 -1.0**
comp=Z,1.1nm,0.3s,baz=344,slow=19,SNR=1.9
TIXI PcP **PcP** **07 02 59.5 +0.3**
comp=Z,3.9nm,0.3s,baz=95,slow=3.7,SNR=4.0
TIXI ScS **ScS** **07 09 29.9 -0.4**
comp=Z,2.2nm,0.3s,baz=72,slow=3.2,SNR=3.2
TIXI Tiksi 22.49 342 P **P** **06 59 26.4 -0.5**
GAMB Gambell 23.04 43 IAmb IAmb 06 59 49.6
comp=Z,8.7nm,0.8s
JNU Nakatsue 23.50 226 P **P** **06 59 37.1 +0.7**
comp=Z,12nm,0.7s,baz=347,slow=11,SNR=5.2
JNU Nakatsue 23.50 226 IAmb IAmb 06 59 41.5
comp=Z,15nm,0.9s
NIKH Nikolski High 24.42 71 P **P** **06 59 45.5 +1.2**
UNV Unalaska Valle 25.61 68 P **P** **06 59 53.1 -1.6**
ANM Nome 25.92 43 IAmb IAmb 06 59 59.3
comp=Z,8.3nm,0.7s
RDOG Red Dog Mine 27.59 36 P **P** **07 00 11.8 -0.1**
RDOG IAmb IAmb 07 00 14.6
comp=Z,6.5nm,0.5s
ULN Ulaanbaatar 28.32 280 *d i*P **P** **07 00 19.2 +0.5**
ULN pmax pmax
comp=Z,10.0nm,0.7s
ULN Ulaanbaatar 28.32 280 *e*P **P** **07 00 19.2 +0.5**
ULN Ulaanbaatar 28.32 280 P **P** **07 00 19.3 +0.5**
ULN IAmb IAmb 07 00 20.1
comp=Z,11nm,0.8s
SDPT Sand Point 28.71 63 P **P** **07 00 21.4 -0.4**
SONM Songino Array 28.74 280 P **P** **07 00 22.8 +0.4**
comp=Z,5.9nm,0.5s,baz=65,slow=7.6,SNR=40
SONM PcP **PcP** **07 03 14.8 +0.3**
comp=Z,4.0nm,0.7s,baz=92,slow=1.7,SNR=11
SONM ScP **ScP** **07 06 03.5 -0.1**
comp=Z,1.5nm,0.6s,baz=67,slow=2.3,SNR=8.7
SONM ScS **ScS** **07 09 55.1 -3.4**
comp=Z,0.2nm,0.5s,baz=57,slow=5.3,SNR=2.1
SONM Songino Array 28.74 280 IAmb IAmb 07 00 24.7
comp=Z,3.9nm,0.5s
HHC Hu-ho-hao-te 28.96 264 *e*P **P** **07 00 23.9 -0.5**
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,84nm,6.6s
TLY Talaya 28.99 289 *d i*P **P** **07 00 25.4 +1.0**
TLY pmax pmax
comp=Z,84nm,1.3s
TLY Talaya 28.99 289 P **P** **07 00 25.5 +1.0**
comp=Z,11nm,0.5s,baz=74,slow=5.7,SNR=6.0
TLY Talaya 28.99 289 P **P** **07 00 24.8 +0.4**
TLY IAmb IAmb 07 00 26.5
comp=Z,20nm,0.9s
CNBA Chernabura Isl 29.33 64 P **P** **07 00 27.2 0.0**
ZAK Zakamensk 29.65 287 *e*P **P** **07 00 30.9 +0.7**
ZAK pmax pmax
comp=Z,16nm,1.0s
JOW Kunigami 30.05 224 P **P** **07 00 34.5 +0.7**
SVW2 Sparrevohn 30.32 51 P **P** **07 00 37.0 +1.3**
SVW2 IAmb IAmb 07 00 38.1
comp=Z,12nm,0.7s
NJ2 Nanjing 30.49 243 *e*P **P** **07 00 38.3 +0.8**
NJ2 pmax pmax
comp=Z,17nm,0.5s
MOY Mondy 30.56 290 *e*P **P** **07 00 39.0 +1.0**
MOY pmax pmax
comp=Z,33nm,1.6s
MOY Mondy 30.56 290 *e*P **P** **07 00 39.0 +1.0**
CHIR Chirikof Islan 31.27 61 P **P** **07 00 44.8 +0.9**
PPLA Purkeypile 31.73 47 IAmb IAmb 07 00 53.4
comp=Z,14nm,0.8s
SKT Skwentna 32.14 48 P **P** **07 00 52.1 +0.9**
SKT IAmb IAmb 07 00 55.1
comp=Z,6.7nm,0.7s
BPAW Bear Paw Mtn. 32.15 44 P **P** **07 00 52.7 +1.4**
BPAW IAmb IAmb 07 00 54.2
comp=Z,15nm,0.8s
OHAK Old Harbor 32.17 58 P **P** **07 00 51.4 -0.1**
MLY Manley 32.19 43 IAmb IAmb 07 00 55.8
comp=Z,8.3nm,0.4s
KTH Kantishna Hill 32.23 45 P **P** **07 00 53.3 +1.2**
KTH IAmb IAmb 07 00 55.4
comp=Z,24nm,1.0s
COLD Coldfoot 32.32 39 P **P** **07 00 53.5 +0.8**
KDAK Kodiak Island 32.41 56 P **P** **07 00 53.4 -0.1**
KDAK pmax pmax
comp=Z,59nm,1.3s
KDAK Kodiak Island 32.41 56 P **P** **07 00 53.7 +0.2**
comp=Z,19nm,0.5s,baz=279,slow=6.5,SNR=48
KDAK Kodiak Island 32.41 56 P **P** **07 00 53.4 -0.1**
TRF Thorofare Moun 32.52 46 P **P** **07 00 55.8 +1.1**
TRF IAmb IAmb 07 00 57.2
comp=Z,17nm,1.2s
SUA Susitna One 32.59 49 P **P** **07 00 55.5 +0.4**
SUA IAmb IAmb 07 00 57.0
comp=Z,11nm,0.7s
BWN Browne 32.81 44 P **P** **07 00 58.9 +2.1**
BRLK Bradley Lake 32.83 52 P **P** **07 00 57.2 0.0**
NEA Nenana 32.93 43 IAmb IAmb 07 01 01.1
comp=Z,20nm,0.9s
MCK McKinley 33.09 45 IAmb IAmb 07 01 01.9
comp=Z,21nm,1.0s
RC01 Rabbit Creek A 33.13 50 P **P** **07 01 00.7 +1.1**
RC01 IAmb IAmb 07 01 02.1
comp=Z,21nm,1.0s
RND Reindeer 33.17 46 IAmb IAmb 07 01 01.6
comp=Z,12nm,0.6s
MDM Murphy Dome 33.26 43 IAmb IAmb 07 01 04.0
comp=Z,9.7nm,0.5s
PMR Palmer 33.33 49 P **P** **07 01 02.2 +1.0**
PMR pmax pmax
comp=Z,7.0nm,0.6s
PMR Palmer 33.33 49 P **P** **07 01 02.1 +1.0**
PMR IAmb IAmb 07 01 07.7
comp=Z,6.7nm,0.6s
GHO Glory Hole Cre 33.39 48 P **P** **07 01 02.8 +0.9**
TCOL CIGO, UAF Yank 33.42 43 P **P** **07 01 02.7 +0.7**
baz=277,SNR=6.9
COLA College 33.42 43 *e*P **P** **07 01 03.0 +1.0**
COLA pmax pmax
comp=Z,25nm,0.8s
COLA College 33.42 43 P **P** **07 01 01.9 -0.1**
SEW Seward 33.47 52 P **P** **07 01 02.8 +0.4**
CCB Clear Creek Bu 33.47 43 IAmb IAmb 07 01 05.3
comp=Z,21nm,1.4s
POKR Poker Plat Res 33.57 42 P **P** **07 01 04.2 +0.9**
baz=277,SNR=15
IL31 33.85 43 IAmb IAmb 07 01 07.5
comp=Z,14nm,0.8s
ILAR Eielson Array 33.85 43 P **P** **07 01 05.9 +0.3**
comp=Z,8.8nm,0.6s,baz=256,slow=5.7,SNR=168
ILAR S **S** **07 05 50.7 +0.1**
comp=Z,2.0nm,1.0s,baz=276,slow=16,SNR=7.6
ILAR ScP **ScP** **07 06 20.9 +0.4**
comp=Z,1.2nm,0.9s,baz=284,slow=3.8,SNR=4.8
HDA Harding Lake 33.87 44 P **P** **07 01 05.6 -0.2**
baz=278,SNR=8.0
SCM Sheep Creek Mo 34.13 48 P **P** **07 01 08.7 +0.7**
SCM pmax pmax
comp=Z,14nm,0.6s
SCM Sheep Creek Mo 34.13 48 P **P** **07 01 08.7 +0.7**
SCM IAmb IAmb 07 01 10.2
comp=Z,14nm,0.6s
PAX Paxson 34.75 46 P **P** **07 01 13.7 +0.4**
PAX pmax pmax
comp=Z,3.0nm,0.8s
PAX Paxson 34.75 46 P **P** **07 01 13.7 +0.4**
XAN Xi'an 34.88 257 P **P** **07 01 15.8 +1.1**
XAN pmax pmax
comp=Z,13nm,1.2s
XAN pmax pmax
comp=Z,290nm,4.6s
RIDG Independent Ri 34.89 44 IAmb IAmb 07 01 17.1
comp=Z,29nm,1.3s
SCRK Sand Creek 35.22 44 IAmb IAmb 07 01 18.4
comp=Z,24nm,1.0s
DOT Dot Lake 35.25 44 IAmb IAmb 07 01 18.7
comp=Z,15nm,0.6s
MENT Mentasta 35.54 46 IAmb IAmb 07 01 21.6
comp=Z,9.5nm,0.6s
GLB Gilahina Butte 35.85 48 P **P** **07 01 23.8 +1.4**
GLB IAmb IAmb 07 01 37.3
comp=Z,19nm,1.2s
EGAK Eagle 36.27 42 IAmb IAmb 07 01 27.8
comp=Z,20nm,0.9s
TGL Tana Glacier 36.49 49 P **P** **07 01 29.1 +1.4**
TGL IAmb IAmb 07 01 34.7
comp=Z,26nm,1.0s
LZH Lanzhou 36.66 264 *e*P **P** **07 01 30.8 +1.3**
LZH pP pP 07 03 07.6 +3.8
LZH sP sP 07 04 06.4 -0.2
LZH pmax pmax
comp=Z,28nm,1.1s
LZH pmax pmax
comp=Z,92nm,4.1s
BARN Barnard Glacie 36.95 48 P **P** **07 01 33.2 +1.6**
GTA Gaotai 37.12 271 ⇓ P **P** **07 01 34.3 +1.1**
GTA pP PP 07 03 14.6 -1.0
GTA ScS ScS 07 10 42.1 -0.9
GTA pmax pmax
comp=Z,10.0nm,1.0s
CTGM Chitina Glacie 37.13 48 P **P** **07 01 34.6 +1.6**
EPYK Eagle Plains 37.72 39 P **P** **07 01 38.6 +1.1**
EPYK IAmb IAmb 07 01 40.1
comp=Z,15nm,0.8s
EPYK Eagle Plains 37.72 39 P **P** **07 01 38.4 +0.8**
baz=284
INK Inuvik 38.47 35 P **P** **07 01 44.1 +0.6**
comp=Z,11nm,0.3s,baz=279,slow=6.3,SNR=165
INK PcP **PcP** **07 03 42.8 +0.7**
comp=Z,3.3nm,0.5s,baz=313,slow=4.3,SNR=5.6
INK ScP **ScP** **07 06 38.4 +0.8**
comp=Z,2.1nm,0.9s,baz=272,slow=3.2,SNR=3.7
INK S **S** **07 06 59.0 -0.3**
comp=Z,2.0nm,0.8s,baz=75,slow=20,SNR=14
INK ScS **ScS** **07 10 49.5 -0.1**
comp=Z,1.2nm,1.1s,baz=45,slow=2.9,SNR=11
ZAA0 Zalesovo Array 38.82 300 P **P** **07 01 46.2 -0.4**
ZAA0 IAmb IAmb 07 01 47.1
comp=Z,22nm,0.8s
ZALV Zalesovo Beam 38.82 300 P **P** **07 01 46.4 -0.3**
comp=Z,18nm,0.5s,baz=62,slow=7.1,SNR=94
ZALV PcP **PcP** **07 03 43.6 +0.1**
comp=Z,4.0nm,0.4s,baz=62,slow=2.7,SNR=9.5
ZALV ScP **ScP** **07 06 38.8 -0.4**
comp=Z,2.3nm,0.6s,baz=46,slow=4.3,SNR=9.1
HYT Haines Junctio 38.96 48 P **P** **07 01 50.2 +2.4**
WHY Whitehorse 40.22 47 P **P** **07 01 59.4 +1.5**
WHY IAmb IAmb 07 02 01.2
comp=Z,13nm,0.8s
C36M Paulatuk 41.46 32 P **P** **07 02 07.8 +0.4**
C36M IAmb IAmb 07 02 09.2
comp=Z,20nm,0.8s
C36M Paulatuk 41.46 32 P **P** **07 02 07.8 +0.4**
baz=290,SNR=27
WMQ Urumqi 42.09 285 *e*P **P** **07 02 14.1 +1.2**
WMQ pP pP 07 03 48.8 -1.7
WMQ pmax pmax
comp=Z,26nm,0.9s
WMQ pmax pmax
comp=Z,94nm,3.7s
DLBC Dease Lake 43.39 49 P **P** **07 02 23.6 +0.8**
comp=Z,7.2nm,0.8s,baz=270,slow=6.1,SNR=4.2
MK31 Makanchi Array 43.66 292 *i*P **P** **07 02 25.0 -0.1**
MK31 Makanchi Array 43.66 292 IAmb IAmb 07 02 26.3
comp=Z,30nm,1.0s
MKAR Makanchi Array 43.66 292 P **P** **07 02 25.4 +0.3**
comp=Z,25nm,0.6s,baz=47,slow=5.7,SNR=292
MKAR PcP **PcP** **07 03 59.9 0.0**
comp=Z,1.6nm,0.7s,baz=74,slow=4.6,SNR=4.2
MKAR ScP **ScP** **07 06 58.0 -0.9**
comp=Z,0.6nm,0.6s,baz=57,slow=4.5,SNR=4.1
MKAR S **S** **07 08 15.1 +0.1**
comp=Z,0.8nm,0.8s,baz=53,slow=15,SNR=3.4
MKAR ScS **ScS** **07 11 19.0 -3.4**
comp=Z,2.0nm,1.0s,baz=95,slow=4.6,SNR=8.8
KURK Kurchatov 43.69 299 P **P** **07 02 25.2 +0.1**
KURK pmax pmax
comp=Z,82nm,0.8s
KURK Kurchatov 43.69 299 *e*P **P** **07 02 25.2 +0.1**

KURK Kurchatov 43.69 299 P **P** **07 02 25.2 +0.1**
KURBB Kurchatov Arra 43.78 299 PcP **PcP** **07 04 00.2 +0.1**
baz=62,slow=3.1
KURBB ScP **ScP** **07 06 57.8 -1.4**
comp=Z,3.5nm,0.9s,baz=65,slow=3.5,SNR=8.1
KURBB S **S** **07 08 15.6 -0.8**
comp=Z,1.2nm,0.3s,baz=62,slow=15,SNR=4.1
MAKZ Makanchi 43.84 292 P **P** **07 02 26.7 +0.3**
MAKZ pmax pmax
comp=Z,25nm,0.6s
MAKZ Makanchi 43.84 292 P **P** **07 02 26.7 +0.3**
RES Resolute Bay 46.78 19 P **P** **07 02 48.4 0.0**
comp=Z,14nm,0.9s,baz=320,slow=7.4,SNR=45
RES PcP **PcP** **07 04 10.7 +0.5**
comp=Z,5.0nm,0.7s,baz=286,slow=4.2,SNR=9.0
RES ScP **ScP** **07 07 11.7 +0.4**
comp=Z,0.8nm,0.6s,baz=298,slow=6.2,SNR=4.2
RES Resolute Bay 46.78 19 P **P** **07 02 48.1 -0.3**
RES IAmb IAmb 07 02 49.7
comp=Z,26nm,1.1s
RES PcP **PcP** **07 04 11.1 +0.8**
BVAR Borovoye Array 46.84 305 P **P** **07 02 49.4 +0.2**
comp=Z,66nm,0.8s,baz=58,slow=7.9,SNR=191
BVAR PcP **PcP** **07 04 10.8 -0.1**
comp=Z,6.9nm,0.5s,baz=68,slow=3.1,SNR=7.8
BVAR pP **pP** **07 04 29.6 +0.1**
comp=Z,1.3nm,0.6s,baz=61,slow=12,SNR=1.4
BVAR ScP **ScP** **07 07 11.9 0.0**
comp=Z,3.4nm,0.8s,baz=58,slow=8.9,SNR=5.2
BRVK Borovoye 46.88 305 P **P** **07 02 49.7 +0.2**
BRVK Borovoye 46.88 305 *e*P **P** **07 02 49.7 +0.2**
BRVK Borovoye 46.88 305 P **P** **07 02 49.9 +0.4**
NOR Nord 46.96 358 *i* P **P** **07 02 49.2 -0.5**
PDGK Podgornoye 47.26 290 P **P** **07 02 53.3 +0.6**
KBS Kingsbay 47.56 350*ce*P **P** **07 02 54.1 -0.1**
KBS pmax pmax
comp=Z,447nm,2.5s
KBS Kingsbay 47.56 350 *e*P **P** **07 02 54.5 +0.3**
KBS Kingsbay 47.56 350 P **P** **07 02 54.4 +0.3**
SPA0 Spitsbergen Ar 47.66 349 *e*P **P** **07 02 54.3 -0.7**
SPA0 Spitsbergen Ar 47.66 349 P **P** **07 02 54.2 -0.8**
SPITS Spitsbergen Ar 47.66 349 P **P** **07 02 54.4 -0.7**
comp=Z,14nm,0.7s,baz=62,slow=7.6,SNR=102
SPITS PcP **PcP** **07 04 13.2 -0.3**
comp=Z,3.6nm,0.5s,baz=54,slow=5.7,SNR=5.0
HOPEN Hopen 47.72 345 *e*P **P** **07 02 54.8 -0.6**
YKA Yellowknife Ar 48.00 39 P **P** **07 02 58.2 +0.5**
comp=Z,5.5nm,0.4s,baz=303,slow=6.9,SNR=80
YKA PcP **PcP** **07 04 15.6 +0.7**
comp=Z,2.3nm,0.6s,baz=307,slow=3.6,SNR=9.3
YKA pP **pP** **07 04 40.1 +1.1**
comp=Z,1.8nm,1.0s,baz=301,slow=8.0,SNR=3.3
YKA ScP **ScP** **07 07 18.0 +1.4**
comp=Z,2.5nm,0.8s,baz=301,slow=4.1,SNR=16
YKA S **S** **07 09 15.4 +0.5**
comp=Z,2.6nm,1.1s,baz=302,slow=13,SNR=6.5
HSPB Hornsund (broa 48.72 348 *e*P **P** **07 03 02.7 -0.1**
LSA Lhasa 48.84 267 P **P** **07 03 06.8 +1.8**
SVE Sverdlovsk 49.44 314 *e*P **P** **07 03 09.1 +0.6**
SVE pmax pmax
comp=Z,93nm,0.8s
TULEG Thule 49.72 11 IAmb IAmb 07 03 10.1
comp=Z,10.0nm,0.7s
TKM2 Tokmak 2 49.78 291 P **P** **07 03 11.7 +0.2**
TKM2 Tokmak 2 49.78 291 P **P** **07 03 12.3 +0.8**
SNR=27
ULHL Ulahol 49.82 290 P **P** **07 03 12.8 +1.0**
SNR=6.5
BOOM Boomskoye usch 49.84 291 IAmb IAmb 07 03 13.9
comp=Z,28nm,0.8s
USP Ospenovka 50.21 292 P **P** **07 03 15.2 +0.8**
SNR=43
CHMS Chumysh 50.23 292 P **P** **07 03 14.8 +0.3**
SNR=14
BJO1 Bjornoya 50.23 345 *e*P **P** **07 03 12.7 -1.3**
KZA Kyzart 50.50 291 P **P** **07 03 18.3 +1.3**
SNR=7.7
AAK Ala-Archa 50.60 292 P **P** **07 03 18.0 +0.6**
comp=Z,19nm,0.4s,baz=99,slow=4.7,SNR=72
AAK Ala-Archa 50.60 292 P **P** **07 03 18.2 +0.8**
SNR=25
AAK Ala-Archa 50.60 292 *i* P **P** **07 03 18.3 +0.8**
SNR=12
AAK Ala-Archa 50.60 292 P **P** **07 03 18.1 +0.8**
AAK IAmb IAmb 07 03 19.0
comp=Z,28nm,0.9s
ARU Arti 50.61 314*d i*P **P** **07 03 17.1 +0.1**
ARU 07 04 23.4
ARU 07 05 17.5
ARU S **S** **07 09 50.8 +0.3**
ARU SS **SS** **07 13 35.3 +1.7**
ARU pmax pmax
comp=Z,160nm,0.8s
ARU Arti 50.61 314 *e*P **P** **07 03 17.1 +0.1**
ARU Arti 50.61 314 P **P** **07 03 17.1 +0.1**
EKS2 Erkin-Say 51.00 292 P **P** **07 03 21.1 +0.9**
SNR=9.4
AML Almayashu 51.38 292 P **P** **07 03 24.4 +1.1**
SNR=12
KSH Kashi 51.69 288 P P 07 03 30.1 +4.8
KSH pP pP 07 05 12.3 +3.5
KSH PP **PP** **07 05 35.8 +5.5**
KSH pmax pmax
comp=Z,41nm,0.7s
KSH pmax pmax
comp=Z,250nm,6.1s
DAG Danmarks Havn 51.81 357 *i* P **P** **07 03 24.5 -0.9**
DAG pmax pmax
comp=Z,11nm,0.7s
DAG Danmarks Havn 51.81 357 *i* P **P** **07 03 24.5 -0.9**
comp=Z,11nm,0.7s
LVZ Lovozero 51.84 334*ce*P **P** **07 03 25.1 -0.7**
LVZ pmax pmax
comp=Z,68nm,2.5s
LVZ Lovozero 51.84 334 P **P** **07 03 25.8 0.0**
LVZ IAmb IAmb 07 03 26.8
comp=Z,33nm,0.9s
PGC Sidney 51.95 57 P **P** **07 03 27.9 +1.1**
CMAR Chiang Mai Arr 52.36 251 *i* P **P** **07 03 31.7 +1.5**
CMAR pmax pmax
comp=Z,2.0nm,0.4s
CMAR Chiang Mai Arr 52.36 251 P **P** **07 03 31.8 +1.5**
comp=Z,3.8nm,0.8s,baz=25,slow=6.9,SNR=12
CMAR PcP **PcP** **07 04 33.0 +1.0**
comp=Z,3.2nm,0.6s,baz=12,slow=2.9,SNR=9.9
APA Apatity 52.41 335⇓ *i*P **P** **07 03 28.4 -1.4**
APA *i* 07 04 35.0
APA pmax pmax
comp=Z,27nm,0.7s
APA MLR MLR
comp=Z,500nm,25.0s
HAMF Hammerfest 52.42 340 *e*P **P** **07 03 29.0 -0.8**
KK31 Karatay Array 52.59 295 *i* P **P** **07 03 31.8 +0.2**
KK31 Karatay Array 52.59 295 IAmb IAmb 07 03 32.8
comp=Z,18nm,0.8s
KKAR Karatay Array 52.59 295 IAmb IAmb 07 03 32.8
comp=Z,18nm,0.8s
PRGR Permogore 52.62 325⇓ *i*P **P** **07 03 31.7 +0.3**
PRGR pmax pmax
comp=Z,80nm,0.6s
TAPN Taplejung 52.63 268 *e*P **P** **07 03 33.4 +1.0**
comp=Z,42nm,0.5s
D03D Eldon 52.83 58 P **P** **07 03 35.1 +1.9**
baz=309,SNR=5.8
ARCES ARCESS Array B 52.89 339 P **P** **07 03 33.2 0.0**
comp=Z,15nm,0.6s,baz=27,slow=7.6,SNR=101
ARCES ScP **ScP** **07 07 37.1 -0.6**
comp=Z,1.8nm,0.7s,baz=43,slow=5.5,SNR=3.8
ARE0 ARCESS Array S 52.89 339 *e*P **P** **07 03 33.0 -0.2**
ARE0 ARCESS Array S 52.89 339 P **P** **07 03 33.0 -0.2**
B05A Bryant 52.90 57 P **P** **07 03 34.9 +1.2**
baz=309
ODAN Odare 53.18 268 *e*P **P** **07 03 38.6 +2.3**
comp=Z,31nm,0.5s
JIRN Jiri 53.36 270 *e*P **P** **07 03 38.5 +0.8**
comp=Z,38nm,0.3s
GUN Gumba 53.38 270 *e*P **P** **07 03 38.4 +0.6**
comp=Z,61nm,0.4s
RAMN Ramite 53.61 269 *e*P **P** **07 03 40.0 +0.7**
comp=Z,156nm,0.5s
E04D Cinebar 53.73 59 P **P** **07 03 41.4 +1.9**
baz=310
KTK1 Kautokeino 53.80 339 *e*P **P** **07 03 39.7 0.0**
KKN Kakani 53.84 270 *e*P **P** **07 03 41.8 +0.9**
comp=Z,86nm,0.5s
PKI Pulchoki 53.91 270 *e*P **P** **07 03 42.2 +0.7**
comp=Z,4.0nm,0.4s
PKIN Phulchoki 53.92 270 *e*P **P** **07 03 42.1 +0.6**
comp=Z,26nm,0.5s
DMN Daman 54.08 270 *e*P **P** **07 03 43.7 +1.1**
comp=Z,72nm,0.6s
GKN Gorkha 54.09 271 *e*P **P** **07 03 43.6 +1.0**
comp=Z,71nm,0.3s
F04A Amboy 54.20 59 P **P** **07 03 44.3 +1.4**
F04A IAmb IAmb 07 03 45.2
comp=Z,13nm,0.6s
TRO Tromso 54.21 341 *e*P **P** **07 03 42.3 -0.2**
B08A Colville Reser 54.27 55 P **P** **07 03 44.2 +0.8**
LTY Liberty 54.28 57 P **P** **07 03 44.5 +1.0**
AB31 Akbulak array 54.37 306 *i* P **P** **07 03 44.2 +0.2**
DANN Dangsing 54.40 272 *e*P **P** **07 03 45.8 +0.9**
comp=Z,180nm,0.6s
AKTO Aktyubinsk 54.57 308 P **P** **07 03 44.9 -0.5**
I02D Swisshome 54.60 62 P **P** **07 03 47.5 +1.8**
baz=310
F05D White Salmon 54.75 59 P **P** **07 03 48.4 +1.7**
baz=310
KOLN Koldanda 54.91 272 *e*P **P** **07 03 49.1 +0.8**
comp=Z,98nm,0.6s
H04D Lebanon 54.94 61 P **P** **07 03 49.9 +1.9**
baz=311
I03D Drain, OR 55.14 62 P **P** **07 03 51.5 +2.1**
baz=311
J01E Myrtle Point 55.16 63 P **P** **07 03 51.7 +2.1**
baz=311
NEW Newport 55.46 54 P **P** **07 03 52.8 +1.1**
comp=Z,3.5nm,0.9s,baz=324,slow=6.1,SNR=7.4
NEW Newport 55.46 54 P **P** **07 03 53.0 +1.3**
baz=311
I04A Tendick Farm, 55.59 61 P **P** **07 03 54.9 +2.2**
baz=311
I05D Terrebonne, OR 55.82 60 P **P** **07 03 56.1 +1.8**
baz=311
SUMG Summit 56.03 3 *i* P **P** **07 03 55.7 +0.1**
SUMG pmax pmax
comp=Z,110nm,1.1s
SUMG Summit 56.03 3 *i* P **P** **07 03 55.7 +0.1**
comp=Z,106nm,1.1s
SUMG Summit 56.03 3 P **P** **07 03 55.8 +0.2**
SUMG IAmb IAmb 07 03 56.8
comp=Z,47nm,1.1s
E09A Wood Farm, Sta 56.08 56 P **P** **07 03 57.4 +1.4**
J04D Umpqua Nationa 56.12 62 P **P** **07 03 58.8 +2.3**
baz=312,SNR=6.9
STEI Steigen 56.37 342 *e*P **P** **07 03 57.2 -0.3**
PINE Pine Mountain 56.39 60 P **P** **07 04 01.0 +2.6**
PINE IAmb IAmb 07 04 02.5
comp=Z,18nm,0.9s
LOF Lofoten 56.53 342 *e*P **P** **07 03 58.4 -0.2**
J05D Fort Rock, OR 56.57 61 P **P** **07 04 02.1 +2.6**
baz=312,SNR=12
L04D Klamath Falls 56.69 63 P **P** **07 04 02.6 +2.3**
baz=312,SNR=5.8
K04D Chiloquin, OR 56.72 62 P **P** **07 04 02.9 +2.4**
baz=312
YBH Yreka Blue Hor 56.79 63 P **P** **07 04 03.3 +2.3**
YBH pmax pmax
comp=Z,6.0nm,0.7s
YBH Yreka Blue Hor 56.79 63 P **P** **07 04 03.5 +2.5**
comp=Z,5.4nm,0.7s,baz=357,slow=5.5,SNR=22
YBH Yreka Blue Hor 56.79 63 P **P** **07 04 03.3 +2.3**
M02C Callahan 56.93 64 P **P** **07 04 04.3 +2.3**
baz=312
NIL Nilore 57.21 284 P **P** **07 04 04.5 +0.5**
NIL pmax pmax
comp=Z,72nm,0.8s
NIL Nilore 57.21 284 P **P** **07 04 04.5 +0.5**
JTMT Jette 57.23 53 P **P** **07 04 05.7 +1.7**
KMRM Mail Ridge 57.23 65 P **P** **07 04 06.0 +2.0**
M04C Macdoel 57.24 63 P **P** **07 04 06.0 +1.9**
baz=312,SNR=5.5
N02D Trinity Center 57.30 64 P **P** **07 04 06.8 +2.3**
baz=312,SNR=5.7
BMO Blue Mountains 57.63 57 P **P** **07 04 08.5 +1.8**
BMO pmax pmax
comp=Z,6.0nm,1.1s
BMO Blue Mountains 57.63 57 P **P** **07 04 08.5 +1.8**
O02D Mt. Diablo Mer 57.79 65 P **P** **07 04 10.1 +2.3**
baz=313
MSO Missoula 58.02 54 P **P** **07 04 10.7 +1.3**
MSO Missoula 58.02 54 P **P** **07 04 10.7 +1.3**
baz=313,SNR=13
KONS Konsvik 58.03 342 *e*P **P** **07 04 08.5 -0.4**
MOR8 Moi Rana 58.05 341 *e*P **P** **07 04 07.7 -1.4**
FCC Fort Churchill 58.06 34 P **P** **07 04 09.3 +0.1**
FCC pmax pmax
comp=Z,19nm,0.9s
FCC Fort Churchill 58.06 34 P **P** **07 04 09.2 +0.1**
FCC IAmb IAmb 07 04 09.9
comp=Z,19nm,0.9s
O03E Paynes Creek 58.26 64 P **P** **07 04 12.4 +1.3**
baz=313
WVOR Wild Horse Val 58.55 60 P **P** **07 04 14.9 +1.9**
WVOR pmax pmax
comp=Z,10.0nm,1.0s
WVOR Wild Horse Val 58.55 60 P **P** **07 04 14.9 +1.9**
KBL Kabul 59.13 288 P **P** **07 04 16.4 -0.7**
KBL pmax pmax
comp=Z,22nm,0.8s
KBL Kabul 59.13 288 P **P** **07 04 16.4 -0.7**
KBL IAmb IAmb 07 04 17.2
comp=Z,22nm,0.8s
FIA1 FINESS Array S 59.13 333 P **P** **07 04 16.3 -0.1**
FINES FINESS Array B 59.14 333 *i* P **P** **07 04 16.3 -0.1**
FINES pmax pmax
comp=Z,53nm,0.5s
FINES FINESS Array B 59.14 333 P **P** **07 04 16.5 +0.1**
comp=Z,53nm,0.5s,baz=36,slow=7.8,SNR=421
EGMT Eagleton 59.27 50 P **P** **07 04 19.1 +1.5**
baz=314,SNR=7.0
DLMT Dillon 59.71 54 IAmb IAmb 07 04 24.6
comp=Z,24nm,1.2s
MOS Moscow 59.74 323 *e*P **P** **07 04 19.3 -1.2**
MOS *e* 07 06 38.5
MOS *e*S **S** **07 11 44.8 -4.2**
MOS pmax pmax
comp=Z,39nm,0.6s
NSS Namsos 59.99 341 *e*P **P** **07 04 22.6 +0.5**
YERR Yerington 60.60 63 IAmb IAmb 07 04 29.9
comp=Z,12nm,0.7s
OBN Obninsk 60.61 323*d i*P **P** **07 04 25.9 -0.3**
OBN 07 06 48.0
OBN S **S** **07 11 51.0 -8.8**
OBN pmax pmax
comp=Z,46nm,0.8s
OBN Obninsk 60.61 323 *e*P **P** **07 04 25.8 -0.4**
SFJD Kangerlussuaq 60.69 10 *i* P **P** **07 04 26.0 -0.6**
SFJD Kangerlussuaq 60.69 10 *i* P **P** **07 04 26.0 -0.6**
WAKR Walker 60.82 64 IAmb IAmb 07 04 32.0
comp=Z,22nm,1.5s
VSU Vasula 61.35 330*d i*P **P** **07 04 31.1 +0.1**
VSU pmax pmax
comp=Z,121nm,1.0s
H17A Grant Village 61.41 54 IAmb IAmb 07 04 37.5
comp=Z,20nm,1.3s
H17A Grant Village 61.41 54 P **P** **07 04 35.0 +2.9**
baz=316,SNR=8.6
NVAR Mina Array Bea 61.51 63 P **P** **07 04 34.9 +2.1**
comp=Z,5.9nm,0.7s,baz=300,slow=6.4,SNR=48
RLMT Red Lodge 61.55 53 IAmb IAmb 07 04 36.4
comp=Z,18nm,1.3s
RLMT Red Lodge 61.55 53 P **P** **07 04 34.8 +1.9**
baz=316,SNR=8.9
DGMT Dagmar 61.56 47 IAmb IAmb 07 04 35.1
comp=Z,21nm,0.9s
DGMT Dagmar 61.56 47 P **P** **07 04 33.6 +0.9**
baz=317
LPSR Galich'ya Gora 61.59 320 *e*P **P** **07 04 32.4 -0.4**
LPSR pmax pmax
comp=Z,80nm,0.8s
LPSR pmax pmax
comp=N,40nm,1.7s
LPSR pmax pmax
comp=E,20nm,1.2s
LAO LASA Array 61.91 50 IAmb IAmb 07 04 38.6
comp=Z,22nm,1.3s
LAO LASA Array 61.91 50 P **P** **07 04 35.4 +0.4**
baz=317
SNOW Snow King Moun 61.99 55 IAmb IAmb 07 04 39.7
comp=Z,20nm,1.4s
REDW Red Top Meadow 62.01 55 IAmb IAmb 07 04 40.4
comp=Z,23nm,1.4s
VSR Storozhevoye 62.54 319*d i*P **P** **07 04 38.4 -0.5**
VSR pmax pmax
comp=Z,106nm,0.9s
MOL Molde 62.64 342 *e*P **P** **07 04 39.9 +0.6**
VORD Divnogorie 62.68 319 *e*P **P** **07 04 39.5 -0.3**
VORD pmax pmax
comp=N,40nm,1.0s
VORD pmax pmax
comp=Z,40nm,0.6s
VORD pmax pmax
comp=E,20nm,1.2s
SMMC Simmler 62.75 67 P **P** **07 04 42.3 +1.7**
baz=316
DOMB Dombas 62.81 341 *e*P **P** **07 04 40.4 -0.2**
VES Vestal, Richgr 62.90 66 P **P** **07 04 42.6 +1.2**
baz=316
GEYT Alibeck 63.04 298 P **P** **07 04 43.4 +1.0**
comp=E,30nm,0.6s,baz=29,slow=3.4,SNR=54
GEYT Alibeck 63.04 298 IAmb IAmb 07 04 44.2
comp=Z,24nm,0.7s
CWC Cottonwood Cre 63.04 65 P **P** **07 04 43.9 +1.2**
baz=316
GRAC Grapevine Rang 63.05 64 P **P** **07 04 44.8 +2.2**
baz=316,SNR=5.2
R11A Troy Canyon, C 63.07 62 P **P** **07 04 44.2 +1.3**
baz=316
BW06 Boulder Array 63.10 55 IAmb IAmb 07 04 45.6
comp=Z,12nm,1.1s
BW06 Boulder Array 63.10 55 P **P** **07 04 44.1 +1.1**
baz=316,SNR=10
PDAR Pinedale Array 63.10 55 P **P** **07 04 44.1 +1.2**
comp=Z,5.2nm,0.8s,baz=3.8,slow=2.1,SNR=71
PDAR PcP **PcP** **07 05 13.4 -1.2**
comp=Z,1.2nm,0.6s,baz=300,slow=2.5,SNR=4.9
PDAR pP **pP** **07 06 33.5 +0.8**
comp=Z,1.5nm,0.9s,baz=308,slow=3.0,SNR=2.1
AKN Aaknes 63.10 342 *e*P **P** **07 04 42.9 +0.5**
PKM Mcpherson Peak 63.16 67 P **P** **07 04 44.7 +1.3**
baz=316
HRA Herat 63.23 292 IAmb IAmb 07 04 45.5
comp=Z,20nm,0.8s
DUG Dugway, Tooele 63.25 59 P **P** **07 04 45.8 +1.9**
baz=316,SNR=8.9
NB2 NORSAR Subarra 63.26 339 P **P** **07 04 43.2 -0.3**
comp=Z,21nm,0.6s,baz=25,slow=6.5
NB2 NORSAR Subarra 63.26 339 P **P** **07 04 43.2 -0.3**
baz=25,slow=6.5
NOA NORSAR Array B 63.26 339 P **P** **07 04 43.5 +0.1**
comp=Z,25nm,0.7s,baz=26,slow=6.4,SNR=68
NOA PP **PP** **07 07 09.9 -1.3**
comp=Z,0.4nm,0.6s,baz=27,slow=8.5,SNR=3.4
ISA Isabella, Lake 63.37 66 P **P** **07 04 45.5 +0.8**
baz=316
SLIT Slitere, Latvi 63.38 332 *e*P **P** **07 04 43.7 -0.4**
NAO01 NORSAR Array S 63.51 339 *e*P **P** **07 04 44.9 -0.1**
MPMC Manual Prospec 63.65 65 P **P** **07 04 47.8 +1.2**
baz=316
TPNV Topopah Spring 63.70 63 IAmb IAmb 07 04 50.2
comp=Z,12nm,1.0s
TPNV Topopah Spring 63.70 63 P **P** **07 04 48.7 +1.8**
baz=316,SNR=15
FURC Furnace Creek, 63.71 64 P **P** **07 04 48.7 +2.0**
baz=316,SNR=18
IZAR Zarasai 63.72 329 *e*P **P** **07 04 46.5 +0.1**
ULM Lac du Bonnet 63.84 41 *i* P **P** **07 04 46.6 -0.7**
ULM Lac du Bonnet 63.84 41 P **P** **07 04 47.1 -0.2**
comp=Z,2.5nm,0.3s,baz=318,slow=6.2,SNR=9.2
ULM Lac du Bonnet 63.84 41 IAmb IAmb 07 04 48.6
comp=Z,20nm,1.5s
ISAL Salakas 63.91 329 *e*P **P** **07 04 47.6 0.0**
ISAL IAmb IAmb 07 04 48.9
comp=Z,19nm,0.8s
LRMC Laurel Mtn Rad 63.95 65 P **P** **07 04 49.5 +1.1**
baz=316
IIGN Ignalina 64.06 329 *e*P **P** **07 04 48.3 -0.3**
IIGN IAmb IAmb 07 04 49.8
comp=Z,36nm,0.6s
MDND Maddock 64.08 45 P **P** **07 04 50.2 +1.3**
baz=319
HYA Hoyanger 64.19 342 *e*P **P** **07 04 49.7 +0.4**
EDW2 Edwards Air Fo 64.20 66 P **P** **07 04 51.6 +1.6**
baz=316,SNR=9.1
OSL Oslo 64.36 339 *e*P **P** **07 04 50.7 +0.3**
PABE Paberze 64.65 330 *e*P **P** **07 04 52.1 -0.2**
PABE IAmb IAmb 07 04 53.3
comp=Z,90nm,0.8s
K22A Casper 64.71 53 IAmb IAmb 07 04 56.5
comp=Z,16nm,1.4s
K22A Casper 64.71 53 P **P** **07 04 54.4 +1.3**
baz=318
RSSD Black Hills 64.84 50 P **P** **07 04 54.7 +0.7**
RSSD pmax pmax
comp=Z,20nm,1.1s
RSSD Black Hills 64.84 50 P **P** **07 04 54.7 +0.7**
RSSD IAmb IAmb 07 04 56.4
comp=Z,20nm,1.1s
RSSD Black Hills 64.84 50 P **P** **07 04 54.9 +0.9**
baz=318
PBUR Paburg 64.84 331 *e*P **P** **07 04 53.6 +0.2**
BFSC Mount Baldy Ra 64.86 66 P **P** **07 04 55.5 +1.3**
baz=317
KONO Kongsberg 64.87 340*ce*P **P** **07 04 53.7 +0.1**
KONO pmax pmax
comp=Z,97nm,2.5s
TUQ Turquoise Moun 64.98 64 P **P** **07 04 56.5 +1.6**
baz=317
ASK Askoy 65.01 342 *e*P **P** **07 04 54.8 +0.4**
HEC Hector,Ludlow 65.18 65 P **P** **07 04 57.9 +1.7**
baz=317
ODD1 Odda 65.25 341 *e*P **P** **07 04 55.9 -0.1**
GOF Gofitskoye 65.51 312⇓ *i*P **P** **07 04 58.8 +0.9**
GOF pmax pmax
comp=Z,177nm,0.8s
MURC Murrieta 65.59 66 P **P** **07 05 00.0 +1.4**
baz=317
GMRC Granite Mounta 65.60 64 P **P** **07 05 00.5 +1.7**
baz=317,SNR=6.9
O20A White River Ci 65.69 56 IAmb IAmb 07 05 02.1
comp=Z,9.5nm,0.8s
O20A White River Ci 65.69 56 P **P** **07 05 00.7 +1.3**
baz=318,SNR=6.3
BLS5 Blasjo 65.74 341 *e*P **P** **07 04 59.8 +0.7**
AKT Akhty 65.94 307 *e*P **P** **07 05 01.4 +0.6**
AKT *e* 07 05 26.9
AKT *e**PP **pwP** **07 06 53.4 -0.2**
AKT *e* 07 07 33.3
AKT pmax pmax
comp=Z,64nm,0.8s
BELC Belle Mtn. Jos 65.98 65 P **P** **07 05 01.7 +0.5**
baz=317
PFO Pinyon Flats O 66.00 66 P **P** **07 05 02.2 +0.9**
baz=317
KMY Karmoy 66.17 342 *e*P **P** **07 05 01.5 -0.3**
N23A Red Feather La 66.30 54 P **P** **07 05 04.8 +1.5**
baz=319
IRM Iron Mountain 66.35 65 P **P** **07 05 04.7 +1.4**
baz=317,SNR=5.4
NCK Nalchik 66.44 311⇓ *i*P **P** **07 05 04.4 +0.7**
NCK pmax pmax
comp=Z,53nm,1.0s
KIV Kislovodsk 66.52 312 *e*P **P** **07 05 04.9 +0.6**
KIV pmax pmax
comp=Z,134nm,1.0s
KIV Kislovodsk 66.52 312⇑ P **P** **07 05 05.5 +1.1**
KIV Kislovodsk 66.52 312 *i* P **P** **07 05 05.3 +1.0**
SNR=10
KIV Kislovodsk 66.52 312 *e*P **P** **07 05 04.9 +0.6**
KIV Kislovodsk 66.52 312 P **P** **07 05 05.1 +0.8**
BC3 Big Chuckawall 66.54 65 P **P** **07 05 06.2 +1.6**
baz=317
MONP2 Monument Peak 66.54 66 P **P** **07 05 06.1 +1.3**
baz=317
SNART Snartemo 66.58 340 *e*P **P** **07 05 04.8 +0.6**
KBZ Khabaz 66.59 311*d i*P **P** **07 05 05.4 +0.8**
KBZ Khabaz 66.59 311 P **P** **07 05 05.6 +1.0**
comp=Z,50nm,0.8s,baz=79,slow=2.7,SNR=87
KBZ Khabaz 66.59 311 *e*P **P** **07 05 05.4 +0.8**
AKASG Malin Array Be 66.83 324 *i* P **P** **07 05 05.3 -0.6**
AKASG pmax pmax
comp=Z,15nm,0.4s
AKASG Malin Array Be 66.83 324 P **P** **07 05 05.4 -0.6**
comp=Z,78nm,0.9s,baz=34,slow=6.3,SNR=111
AKASG Malin Array Be 66.83 324 IAmb IAmb 07 05 05.9
comp=Z,4.7nm,0.7s
ZEI Tsey 66.83 310 *e*P **P** **07 05 03.8 -2.6**
ZEI pmax pmax

comp=Z,21nm,0.9s
SWSC Sam W. Stewart 66.86 66 P P 07 05 07.9 +1.4
baz=318
IKP In-Ko-Pah, Jac 66.90 66 P P 07 05 08.1 +1.2
baz=318
Y12C Blythe 66.99 64 IAmb IAmb 07 05 10.8
comp=Z,9.3nm,0.8s
Y12C Blythe 66.99 64 P P 07 05 08.6 +1.3
baz=318,SNR=6.4
NEY Neytrino 67.04 311 *i* P P 07 05 08.5 +0.9
NEY pmax pmax
comp=Z,3.0nm,0.8s
ISCO Idaho Springs 67.29 54 P P 07 05 10.2 +0.8
baz=319
EYMN Ely 67.43 40 IAmb IAmb 07 05 10.9
comp=Z,16nm,0.9s
EYMN Ely 67.43 40 P P 07 05 09.1 -0.7
baz=323,SNR=5.8
WUAZ Wupatki 67.44 61 IAmb IAmb 07 05 14.6
comp=Z,11nm,1.3s
WUAZ Wupatki 67.44 61 P P 07 05 12.6 +2.4
baz=318,SNR=5.7
BSD Bornholm Skovb 67.63 334⇓ *i* P P 07 05 10.8 0.0
BSD pmax pmax
comp=Z,44nm,0.8s
BSD Bornholm Skovb 67.63 334⇓ *i* P P 07 05 10.8 0.0
comp=Z,44nm,0.8s
Y14A Wickenburg 67.71 63 IAmb IAmb 07 05 15.0
comp=Z,13nm,1.2s
MVCO Mesa Verde 67.73 58 IAmb IAmb 07 05 15.0
comp=Z,10nm,1.1s
MVCO Mesa Verde 67.73 58 P P 07 05 13.1 +1.1
baz=319,SNR=5.4
AKH Akhalkalaki 68.08 309 ⇑P P 07 05 15.8 +1.8
Q24A Divide 68.16 55 P P 07 05 15.7 +0.9
baz=320
SOC Sochi 68.17 313 *e*P P 07 05 14.0 -0.3
SOC *e* 07 07 51.7
SOC *e*PPP PPP 07 09 38.3
SOC *e*S S 07 13 30.6 -0.3
SOC *e*SS SS 07 18 05.6 -1.3
SOC pmax pmax
comp=Z,45nm,0.7s
OGNE Ogallala 68.20 51 P P 07 05 14.6 -0.1
baz=320,SNR=5.5
S22A 4UR Ranch, Cre 68.21 57 P P 07 05 16.6 +1.6
baz=319
GNI Garni 68.43 308*c*eP P 07 05 16.8 +0.6
GNI pmax pmax
comp=Z,63nm,0.9s
GNI Garni 68.43 308 *i* P P 07 05 17.6 +1.5
SNR=5.9
GNI Garni 68.43 308 P P 07 05 17.9 +1.8
E38A The Farm, Brul 68.48 41 IAmb IAmb 07 05 17.3
comp=Z,35nm,1.1s
ECSD EROS Data Cent 68.58 46 IAmb IAmb 07 05 18.6
comp=Z,15nm,1.0s
ECSD EROS Data Cent 68.58 46 P P 07 05 16.6 -0.3
baz=322,SNR=15
W18A Petrified Fore 68.63 60 P P 07 05 19.3 +1.8
baz=319
SDCO Great Sand Dun 68.90 56 P P 07 05 20.3 +1.2
baz=320,SNR=6.0
SPMN Marine on St. 69.07 43 P P 07 05 19.2 -0.5
baz=323
SORM Soroca 69.26 323 ⇑P P 07 05 20.4 -0.4
SORM Soroca 69.26 323 ⇑P P 07 05 20.4 -0.4
214A Organ Pipe Nat 69.29 65 P P 07 05 22.8 +1.5
baz=319
SCHQ Schefferville 69.44 22 P P 07 05 21.5 -0.3
comp=Z,7.4nm,0.4s,baz=355,slow=5.9,SNR=44
SCHQ Schefferville 69.44 22 IAmb IAmb 07 05 21.8
comp=Z,11nm,0.5s
MDO Dochfour 69.53 346 *e*P P 07 05 22.1 -0.1
KAC Achnashellach 69.61 347 *e*P P 07 05 22.9 +0.2
KPL Plockton 69.82 347 *e*P P 07 05 24.1 +0.2
KPL IAmb IAmb 07 05 24.6
comp=Z,22nm,0.6s
T25A Trinidad 69.92 55 P P 07 05 26.7 +1.5
baz=320
MILM Milestii Mici 70.09 322 ⇑P P 07 05 25.5 -0.2
TUC Tucson 70.16 63 P P 07 05 28.6 +2.1
baz=319
INVG Invergeldie, C 70.46 346 *e*P P 07 05 27.1 -0.7
ANMO Albuquerque 70.52 58*c*eP P 07 05 30.4 +1.6
ANMO pmax pmax
comp=Z,6.0nm,1.3s
ANMO Albuquerque 70.52 58 P P 07 05 31.4 +2.6
ANMO Albuquerque 70.52 58 P P 07 05 30.8 +2.0
baz=320
ESY Stoneypath 70.72 345 *e*P P 07 05 29.4 +0.2
EAB Aberfoyle 70.73 346 *e*P P 07 05 29.4 +0.1
KOLS Kolonicke sedl 70.77 327 *e*P P 07 05 29.9 +0.1
KOLS pmax pmax
comp=Z,14nm,0.7s
KOLS Kolonicke sedl 70.77 327 *e*P P 07 05 29.9 +0.1
LAWE Loch Awe, Argy 70.82 346 *e*P P 07 05 29.3 -0.5
LAWE IAmb IAmb 07 05 30.6
comp=Z,37nm,0.6s
BUR08 Bucovina Ar. S 70.84 324 P P 07 05 30.4 +0.1
BUR08 IAmb IAmb 07 05 31.1
comp=Z,17nm,0.8s
BURAR Bucovina Array 70.86 324 ⇑P P 07 05 30.7 +0.3
BURAR Bucovina Array 70.86 324 ⇑P P 07 05 30.7 +0.3
EBL Broad Law 70.92 345 *e*P P 07 05 31.1 +0.6
MATQ Matagami 70.95 31 P P 07 05 30.1 -0.7
baz=330
CBKS Cedar Bluff 70.97 51 P P 07 05 31.5 +0.3
baz=322
UZH Uzhgorod 71.02 327⇑ *i* P P 07 05 31.0 -0.2
UZH *e* 07 05 44.7
BIZ Bicaz 71.10 324 ⇑P P 07 05 32.2 +0.5
PGBU Glenifferbraes 71.12 346 *e*P P 07 05 30.6 -1.0
PGBU IAmb IAmb 07 05 32.6
comp=Z,72nm,1.0s
RETH Rethem/Aller, 71.21 336 *e*P P 07 05 32.8 +0.6
comp=Z,38nm,1.1s,baz=25,slow=5.8
NRDL Niedersach Rie 71.25 336 *e*P P 07 05 33.0 +0.6
comp=Z,16nm,1.1s,baz=25,slow=5.8
TESR Tescani 71.25 323 ⇑P P 07 05 32.4 -0.2
OSTC Ostas 71.29 331 *e*P P 07 05 33.2 +0.4
CHVC Chvalec 71.31 332 *e*P P 07 05 33.3 +0.4
OKC Ostrava-Krasne 71.34 330 *e*P P 07 05 33.6 +0.6
OKC Ostrava-Krasne 71.34 330 *e*P P 07 05 33.6 +0.6
TRPA Tarpa 71.37 326 ⇑P P 07 05 34.1 +0.9
ESK Eskdalemuir 71.39 345 *e*P P 07 05 32.6 -0.6
UPC Upice 71.40 332 *e*P P 07 05 33.5 +0.5
UPC Upice 71.40 332 *e*P P 07 05 33.9 +0.5
ASSE Asse, Remlinge 71.43 335 *e*P P 07 05 34.0 +0.6
comp=Z,51nm,1.9s,baz=25,slow=5.8
DPC Dobruska-Polom 71.44 331 *e*P P 07 05 34.3 +0.6
DPC Dobruska-Polom 71.44 331 *e*P P 07 05 34.3 +0.6
DPC *ex* x 07 05 36.6
LANS Liptovska Anna 71.52 329 *e*P P 07 05 35.4 +1.2
LANS pmax pmax
comp=Z,21nm,0.7s
LANS Liptovska Anna 71.52 329 *e*P P 07 05 35.4 +1.2
TLCR 71.53 321 ⇑P P 07 05 34.6 +0.4
TLCR 71.53 321 ⇑P P 07 05 34.6 +0.4
KRLC Kraliky 71.55 331 *e*P P 07 05 34.5 +0.2
KRLC Kraliky 71.55 331 *e*P P 07 05 34.5 +0.2
CLL Collm 71.55 334⇓ *i* P P 07 05 34.1 -0.1
CLL pmax pmax
comp=Z,34nm,0.7s
CLL Collm 71.55 334⇓ *i* P P 07 05 34.1 -0.1
comp=Z,34nm,0.7s
CLL Collm 71.55 334 *e*P P 07 05 34.4 +0.2
comp=Z,34nm,0.7s,baz=25,slow=5.8
MORC Moravsky Berou 71.58 330 ⇑P P 07 05 35.4 +0.9
MORC Moravsky Berou 71.58 330 ⇑P P 07 05 35.4 +0.9
MORC Moravsky Berou 71.58 330 *e*P P 07 05 34.9 +0.4
121A Cookes Peak, D 71.64 61 IAmb IAmb 07 05 39.1
comp=Z,11nm,1.1s
121A Cookes Peak, D 71.64 61 P P 07 05 37.1 +1.7
baz=320
BRG Berggiesshubel 71.67 333 *i* P P 07 05 34.8 -0.2
comp=Z,16nm,1.1s
BRG Berggiesshubel 71.67 333 *i* P P 07 05 34.8 -0.2
BRG pmax pmax
comp=Z,16nm,1.1s
BRG Berggiesshubel 71.67 333 *e*P P 07 05 35.2 +0.2
comp=Z,16nm,1.1s,baz=25,slow=5.8
319A Douglas 71.70 63 IAmb IAmb 07 05 39.0
comp=Z,12nm,1.1s
DIKM Dikmen 71.71 315 ⇑P P 07 05 37.1 +1.7

ODBI Odobesti 71.73 322 ⇑P P 07 05 36.7 +1.4
D48A Paudash Townsh 71.76 35 P P 07 05 35.4 -0.2
baz=329
VRI Vrincioaia 71.77 323 ⇑P P 07 05 36.1 +0.5
VRI Vrincioaia 71.77 323 ⇑P P 07 05 36.1 +0.5
CLZ Clausthal 71.77 336 *e*P P 07 05 36.5 +0.9
comp=Z,35nm,1.3s,baz=25,slow=5.8
LSQQ Lebel-sur-Quev 71.78 31 P P 07 05 35.6 0.0
baz=331
FBE Freiberg 71.80 333 *e*P P 07 05 36.2 +0.6
comp=Z,30nm,1.1s,baz=25,slow=5.8
CFR Carcaliu 71.80 321 ⇑P P 07 05 36.1 +0.3
CFR Carcaliu 71.80 321 ⇑P P 07 05 36.1 +0.3
PVCC Panska Ves 71.80 332 *e*P P 07 05 36.2 +0.5
PVCC Panska Ves 71.80 332 *e*P P 07 05 36.2 +0.5
PLOR Plostina 71.81 323 ⇑P P 07 05 36.0 +0.1
PLOR Plostina 71.81 323 ⇑P P 07 05 36.0 +0.1
JURR Jurilovca 71.85 321 ⇑P P 07 05 36.6 +0.5
OZUR 71.93 323 ⇑P P 07 05 37.7 +1.0
TOPG Topolog 71.95 321 ⇑P P 07 05 37.3 +0.6
NEUB Neuenburg 71.97 334 *e*P P 07 05 37.0 +0.3
comp=Z,39nm,1.3s,baz=25,slow=5.8
JFWS Jewell Farm 72.02 43 P P 07 05 37.1 0.0
baz=325
BISRR Bisoca 72.04 322 ⇑P P 07 05 38.3 +1.0
GAL1 Galloway 72.06 346 *e*P P 07 05 37.0 -0.1
GAL1 IAmb IAmb 07 05 38.3
comp=Z,47nm,1.2s
DOPR Dopca 72.19 323 ⇑P P 07 05 38.8 +0.7
G46A Petoskey 72.20 38 P P 07 05 38.0 -0.1
baz=327
CJR Cluj-Napoca 72.21 325 ⇑P P 07 05 39.3 +1.1
CJR Cluj-Napoca 72.21 325 ⇑P P 07 05 39.3 +1.1
LTVH Ltavrtes, Hu 72.23 326 *e*P P 07 05 45.2 +7.0
KSU1 Kansas State U 72.24 49 P P 07 05 38.4 -0.1
baz=323
VRAC Vranov 72.28 331 ⇑P P 07 05 39.6 +1.0
VRAC Vranov 72.28 331 ⇑P P 07 05 39.6 +1.0
VRAC Vranov 72.28 331 *e*P P 07 05 39.0 +0.4
HARR Harsova 72.29 321 ⇑P P 07 05 39.1 +0.5
HARR Harsova 72.29 321 ⇑P P 07 05 39.1 +0.5
GOPC GO Pecny, Ondr 72.29 332 *e*P P 07 05 38.8 +0.2
GOPC GO Pecny, Ondr 72.29 332 *e*P P 07 05 38.8 +0.2
TIRR Tirgusor 72.29 321 ⇑P P 07 05 39.1 +0.5
TIRR Tirgusor 72.29 321 ⇑P P 07 05 39.1 +0.5
VYHS Vyhne 72.29 329 *e*P P 07 05 39.2 +0.6
VYHS pmax pmax
comp=Z,23nm,0.9s
VYHS Vyhne 72.29 329 *e*P P 07 05 39.2 +0.6
PRU Pruhonice 72.29 332 *e*P P 07 05 39.0 +0.4
PRU Pruhonice 72.29 332 *e*P P 07 05 39.0 +0.4
JAVC Velka Javorina 72.34 330 *e*P P 07 05 40.5 +1.5
MLR Muntele Rosu 72.38 323 ⇑P P 07 05 40.6 +1.3
MLR Muntele Rosu 72.38 323 ⇑P P 07 05 40.6 +1.3
HPK Haverah Park 72.42 343 *e*P P 07 05 38.7 -0.6
HPK IAmb IAmb 07 05 40.8
comp=Z,50nm,0.9s
PSZ Piszkesteto 72.45 328 ⇑P P 07 05 40.6 +1.0
PSZ Piszkesteto 72.45 328 ⇑P P 07 05 40.6 +1.0
PSZ Piszkesteto 72.45 328 IAmb IAmb 07 05 41.2
comp=Z,17nm,1.0s
DRGR 72.45 326 ⇑P P 07 05 40.0 +0.3
DRGR 72.45 326 ⇑P P 07 05 40.0 +0.3
D50A G1974 Best Tow 72.46 34 P P 07 05 38.9 -0.7
baz=330
ISR Istrita 72.47 322 ⇑P P 07 05 40.7 +1.0
ISR Istrita 72.47 322 ⇑P P 07 05 40.7 +1.0
TANN Tannenbergstha 72.50 334 *e*P P 07 05 40.3 +0.5
comp=Z,16nm,0.8s,baz=25,slow=5.8
PLN Plauen 72.52 334 *e*P P 07 05 40.4 +0.5
comp=Z,11nm,0.8s,baz=25,slow=5.8
MOX Moxa 72.53 334 *e*P P 07 05 40.5 +0.5
comp=Z,14nm,0.7s,baz=25,slow=5.8
KRUC Moravsky 72.56 331 *e*P P 07 05 40.5 +0.3
GUNZ Gunzen 72.58 334 *e*P P 07 05 41.0 +0.7
comp=Z,14nm,0.7s,baz=25,slow=5.8
WRA Warramunga Arr 72.63 196 *i* P P 07 05 41.5 +0.7
WRA pmax pmax
comp=Z,5.0nm,0.9s
WRA Warramunga Arr 72.63 196 P P 07 05 42.2 +1.3
comp=Z,4.8nm,0.9s,baz=12,slow=5.9,SNR=7.9
WRA Warramunga Arr 72.63 196 IAmb IAmb 07 05 43.6
comp=Z,0.7nm,1.1s
WERN Wernitzgruen 72.64 334 *e*P P 07 05 41.3 +0.7
comp=Z,25nm,0.7s,baz=25,slow=5.8
NKC Novy Kostel 72.67 334 *e*P P 07 05 41.2 +0.4
NKC Novy Kostel 72.67 334 *e*P P 07 05 41.2 +0.4
D51A Lot 18 Range I 72.69 33 P P 07 05 40.5 -0.4
baz=330
H46A Fife Lake 72.72 38 P P 07 05 41.5 +0.3
baz=327
PBCC Pribram 72.72 332 *e*P P 07 05 41.6 +0.5
PBCC *ex* x 07 05 48.1
SMOL Smolenice 72.72 330 *e*P P 07 05 42.1 +1.0
SMOL pmax pmax
comp=Z,7.0nm,0.9s
SMOL Smolenice 72.72 330 *e*P P 07 05 42.1 +1.0
VOIR 72.76 323 ⇑P P 07 05 42.4 +0.9
VOIR 72.76 323 ⇑P P 07 05 42.4 +0.9
UBBA Unterbreizbach 72.80 335 *e*P P 07 05 41.8 +0.5
comp=Z,10nm,0.8s,baz=25,slow=5.8
ICOR Ion Corvin 72.82 321 ⇑P P 07 05 42.8 +1.1
F49A Sandfield 72.88 36 P P 07 05 41.0 -1.0
baz=329
MODS Modra-Piesok 72.90 330 *e*P P 07 05 42.0 -0.1
MODS pmax pmax
comp=Z,15nm,0.9s
MODS Modra-Piesok 72.90 330 *e*P P 07 05 42.0 -0.1
BUG Bochum--Univer 72.92 337 *e*P P 07 05 42.5 +0.4
comp=Z,23nm,1.1s,baz=25,slow=5.8
SHME Shamm 72.92 290 P P 07 05 42.5 -0.2
BANOM Banah 72.92 290 P P 07 05 42.9 +0.2
LBWR Ladybower, Pea 72.97 343 *e*P P 07 05 42.2 -0.2
LBWR IAmb IAmb 07 05 43.5
comp=Z,34nm,0.8s
ARR Arges 72.97 324 ⇑P P 07 05 44.0 +1.3
MANZ Manzenberg 72.99 334 *e*P P 07 05 43.1 +0.5
comp=Z,12nm,0.9s,baz=25,slow=5.8
AMTX Amarillo 73.06 55 IAmb IAmb 07 05 45.4
comp=Z,28nm,1.4s
AMTX Amarillo 73.06 55 P P 07 05 44.2 +0.8
baz=322
E51A G1948 Merrick 73.13 34 P P 07 05 42.8 -0.7
baz=330
I46A Reed City 73.13 39 P P 07 05 43.6 +0.1
baz=327
ROTZ Rotzenmuhle 73.16 333 *e*P P 07 05 44.3 +0.7
comp=Z,16nm,0.8s,baz=25,slow=5.8
J45A Montague 73.18 40 P P 07 05 44.1 +0.3
baz=327
MSTX Muleshoe 73.21 56 P P 07 05 44.4 +0.1
baz=322
H48A Harrisville 73.31 37 P P 07 05 44.4 -0.1
baz=328
KHC Kasperske Hory 73.34 332 *e*P P 07 05 45.0 +0.3
KHC *e* 07 05 51.4
KHC Kasperske Hory 73.34 332 *e*P P 07 05 45.0 +0.3
KHC *ex* x 07 05 51.4
KHC Kasperske Hory 73.34 332 IAmb IAmb 07 05 46.3
comp=Z,8.1nm,0.8s
MSFE Esma-Masafi 73.43 290 P P 07 05 45.6 0.0
GRF Grafenberg Arr 73.50 334 *e*P P 07 05 46.6 +1.0
comp=Z,42nm,0.7s,baz=25,slow=5.8
F51A Arnstein 73.50 34 P P 07 05 45.0 -0.6
baz=330
CWF Charnwood Fore 73.53 343 *e*P P 07 05 45.9 +0.3
WET Wettzell 73.53 333 *e*P P 07 05 46.7 +1.0
comp=Z,36nm,1.3s,baz=25,slow=5.8
J46A Howard City 73.55 39 P P 07 05 45.9 0.0
baz=327
GEC2 GERESS Array S 73.56 332 *e*P P 07 05 46.4 +0.4
comp=Z,13nm,0.8s,baz=25,slow=5.8
GEC2 GERESS Array S 73.56 332 IAmb IAmb 07 05 46.5
comp=Z,9.4nm,0.7s
GERES GERESS Array B 73.56 332 P P 07 05 46.1 +0.1
comp=Z,6.2nm,0.5s,baz=33,slow=5.9,SNR=48
MNTX Cornudas Mount 73.59 60 P P 07 05 47.5 +1.1
baz=321
E52A Mattawa 73.63 33 P P 07 05 45.3 -1.0
baz=330
GZR Gura Zlata 73.63 325 ⇑P P 07 05 46.8 +0.4
GZR Gura Zlata 73.63 325 ⇑P P 07 05 46.8 +0.4
UOSS Minazif 73.72 290 P P 07 05 47.0 -0.2
UOSS Minazif 73.72 290 P P 07 05 47.1 0.0

UOSS IAmb IAmb 07 05 47.7
comp=Z,22nm,0.9s
FOEL Foel Wylfa 73.72 344 *e*P P 07 05 46.2 -0.5
CONA Conrad Observa 73.73 330 *i* P P 07 05 47.5 +0.5
comp=Z,12nm,0.6s,SNR=7.0
SOP Sopron 73.73 330 *e*P P 07 05 48.2 +1.3
TNS Taunus Mts 73.75 336 *e*P P 07 05 47.6 +0.6
comp=Z,25nm,1.1s,baz=25,slow=5.8
AHRW Bad Neuenahr-A 73.80 337 *e*P P 07 05 47.8 +0.6
comp=Z,42nm,1.3s,baz=25,slow=5.8
COPA Copaceanca 73.80 323 ⇑P P 07 05 46.0 -1.3
F52A Sundridge 73.83 34 P P 07 05 47.0 -0.4
baz=330
HATD Hatta, Dubai 73.85 290 *i* P P 07 05 48.0 0.0
SNR=8.6
BZS Buzias 73.85 326 ⇑P P 07 05 47.8 +0.2
BZS Buzias 73.85 326 ⇑P P 07 05 47.8 +0.2
E53A Dumoine, Ponti 73.89 33 P P 07 05 47.1 -0.7
baz=331
J47A Sumner 73.97 39 P P 07 05 48.4 +0.2
baz=328
MEM Membach 73.99 338 P P 07 05 48.4 +0.2
comp=Z,25nm,0.9s
BR131 Keskin Array S 73.99 315*d* *i* P P 07 05 49.0 +0.4
BR131 Keskin Array S 73.99 315 IAmb IAmb 07 05 50.1
comp=Z,24nm,1.1s
BRTR Keskin Array B 73.99 315 P P 07 05 49.1 +0.4
comp=Z,15nm,0.7s,baz=66,slow=3.0,SNR=67
TIH Tihany 74.00 329 *e*P P 07 05 49.2 +0.8
ASHO Ashiyah 74.00 289 *i* P P 07 05 48.5 -0.3
SNR=7.0
NAZ Nazwa, Dubai 74.00 290 P P 07 05 49.0 +0.2
HLM1 Long Mynd 74.02 344 *e*P P 07 05 48.7 +0.3
K46A Dorr 74.05 40 P P 07 05 48.6 -0.2
baz=327
D55A Sainte-Anne-du 74.05 31 P P 07 05 48.3 -0.3
baz=332
ALGO Algonquin Park 74.13 33 P P 07 05 48.7 -0.4
baz=331
ANTO Ankara 74.25 315 P P 07 05 51.2 +1.2
ANTO pmax pmax
comp=Z,31nm,0.7s
ANTO Ankara 74.25 315 ⇑P P 07 05 51.3 +1.2
ANTO Ankara 74.25 315 P P 07 05 51.2 +1.2
D56A ZEC Mazanza, M 74.25 31 P P 07 05 49.5 -0.4
baz=332
MOA Molln 74.29 331 *i* P P 07 05 50.3 +0.2
comp=Z,9.6nm,0.9s
BCLA Clavier 74.33 338 P P 07 05 50.1 0.0
comp=Z,15nm,0.6s
E55A Montcerf-Lytto 74.36 32 P P 07 05 50.0 -0.4
baz=332
HDIL Hopedale 74.36 43 P P 07 05 50.4 -0.2
baz=326
K47A Vermontville 74.38 39 P P 07 05 50.8 +0.2
baz=328
L46A Eue Claire 74.41 41 P P 07 05 51.0 +0.2
baz=327
GAZ Gaziantep 74.41 311 IAmb IAmb 07 05 53.2
comp=Z,20nm,0.8s
BGES Gesves 74.42 338 P P 07 05 50.7 0.0
comp=Z,20nm,1.3s
ARSA Arzberg 74.44 330 *i* P P 07 05 51.5 +0.6
comp=Z,12nm,1.2s
PUNG Punghina 74.53 324 ⇑P P 07 05 51.4 0.0
MDVR Moldovita 74.54 325 ⇑P P 07 05 51.5 0.0
D57A Chemin Vers le 74.56 30 P P 07 05 51.5 0.0
baz=333
BMRD Maredsous 74.57 338 P P 07 05 51.9 +0.4
comp=Z,23nm,1.0s
LATQ La Tuque 74.57 29 P P 07 05 51.2 -0.3
baz=334
ELND Elena 74.57 321 ⇑P P 07 05 51.7 0.0
G54A Lake Saint Pet 74.60 34 P P 07 05 51.5 -0.3
baz=331
K48A Perry 74.61 39 P P 07 05 51.8 -0.1
baz=328
E56A St. Veronique 74.61 31 P P 07 05 51.6 -0.2
baz=332
H52A Wyevale 74.62 35 P P 07 05 51.1 -0.8
baz=330
WMOK Wichita Mounta 74.65 53 P P 07 05 52.9 +0.6
baz=323,SNR=8.6
G53A Haliburton 74.65 34 P P 07 05 51.8 -0.3
baz=331
PLVB Pleven 74.67 322 ⇑P P 07 05 52.5 +0.4
BEHE Becsehely 74.74 329 *e*P P 07 05 51.5 -1.0
SWN1 Swindon 74.79 343 *e*P P 07 05 53.3 +0.6
SWN1 IAmb IAmb 07 05 53.7
comp=Z,62nm,0.6s
D58A Chemin du LacG 74.80 29 P P 07 05 52.5 -0.4
baz=334
DOU Dourbes 74.80 338 P P 07 05 53.2 +0.4
F55A Otter Lake 74.81 32 P P 07 05 52.5 -0.4
baz=332
RJOB Jochberg 74.82 332 *e*P P 07 05 54.1 +1.0
comp=Z,18nm,1.1s,baz=25,slow=5.8
WOL Wolverton 74.87 342 *e*P P 07 05 53.2 0.0
WOL IAmb IAmb 07 05 54.2
comp=Z,72nm,0.7s
L47A Sherwood 74.88 40 P P 07 05 53.4 0.0
baz=328
FRGS Fruska Gora 74.88 327⇓ *i* P P 07 05 52.4 -1.0
K49A Clarkson 74.88 38 P P 07 05 53.6 +0.1
baz=328
I51A Listowel 74.93 36 P P 07 05 54.4 +0.7
baz=330
SOKA Soboth 75.10 330 *i* P P 07 05 55.1 +0.4
comp=Z,19nm,1.1s,SNR=7.3
PERS Pernice 75.11 330 *i* P P 07 05 55.0 +0.3
H53A Bobcaygeon 75.15 34 P P 07 05 54.6 -0.3
baz=331
GROS Grobnik 75.15 330 *i* P P 07 05 55.1 +0.1
TUL1 Leonard 75.18 50 IAmb IAmb 07 05 57.4
comp=Z,18nm,1.1s
TUL1 Leonard 75.18 50 P P 07 05 55.2 0.0
baz=324
D59A Saint-Raymond 75.19 29 P P 07 05 54.6 -0.5
baz=334
G55A Calabogie 75.19 33 P P 07 05 54.1 -1.0
baz=332
L48A N Adams 75.21 39 P P 07 05 54.2 -1.1
baz=328
M47A Cromwell 75.23 41 P P 07 05 55.5 +0.1
baz=328
KBA Koelnbreinsper 75.26 332 *i* P P 07 05 56.7 +1.1
comp=Z,33nm,0.7s,SNR=17
PLVO Plevna 75.26 33 IAmb IAmb 07 05 56.3
comp=Z,14nm,0.9s
E58A La Victoria 75.32 30 P P 07 05 55.6 -0.2
baz=333
L49A Milan 75.34 39 P P 07 05 55.9 0.0
baz=328
OBKA Obir 75.40 331 *i* P P 07 05 56.4 +0.1
comp=Z,9.0nm,0.6s
I53A Kortright Cn E 75.44 35 P P 07 05 56.6 +0.1
baz=330
D61A St Aubert, Com 75.50 28 P P 07 05 56.7 -0.1
baz=335
BFO Black Forest 75.52 335 P P 07 05 57.2 +0.3
BFO pmax pmax
comp=Z,9.0nm,0.7s
BFO Black Forest 75.52 335 *e*P P 07 05 57.2 +0.3
comp=Z,12nm,0.8s,baz=25,slow=5.8
BFO Black Forest 75.52 335 P P 07 05 57.2 +0.3
BFO IAmb IAmb 07 05 57.5
comp=Z,9.0nm,0.7s
WATA Walderalm 75.54 333 *i* P P 07 05 57.7 +0.5
comp=Z,39nm,1.2s,SNR=7.3
D60A Saint Jean D'O 75.55 28 P P 07 05 56.5 -0.5
baz=335
CCM Cathedral Cave 75.56 46 P P 07 05 57.5 +0.2
CCM pmax pmax
comp=Z,11nm,1.2s
CCM Cathedral Cave 75.56 46 P P 07 05 57.5 +0.2
CCM Cathedral Cave 75.56 46 P P 07 05 57.3 0.0
baz=325
MYKA Terra Mystica 75.57 331 *i* P P 07 05 57.3 0.0
comp=Z,6.4nm,0.5s
WTTA Wattenberg 75.59 333 *i* P P 07 05 58.1 +0.6
comp=Z,35nm,0.6s,SNR=14
N47A Urbana 75.60 41 P P 07 05 57.4 -0.1
baz=328
RETA Reutte 75.63 333 *i* P P 07 05 58.2 +0.6
comp=Z,17nm,1.0s
GCIS Gornji Cirnik 75.64 330 *i* P P 07 05 57.6 0.0
H55A Tweed 75.65 33 P P 07 05 57.2 -0.5

baz=332
MOTA **Moosalm** 75.67 333 *i* P P 07 05 58.5 +0.5
comp=Z,35nm,1.0s,SNR=11
CRES **Cresnjev** 75.73 330 *i* P P 07 05 58.0 -0.1
CRES **Cresnjev** 75.73 330 ⇓*i* P P 07 05 57.8 -0.3
DIVS **Divibare** 75.74 326 ⇓*i* P P 07 05 57.9 -0.4
SQTA **Sankt Quirin** 75.75 333 *i* P P 07 05 59.2 +0.8
comp=Z,32nm,1.1s,SNR=10.0
HHAR **Hobbs** 75.77 49 IAmb IAmb 07 06 00.0
comp=Z,23nm,1.4s
I55A **Frankford** 75.77 34 P P 07 05 57.6 -0.7
baz=331
ABTA **Abfaltersbach** 75.80 332 *i* P P 07 05 58.5 -0.1
comp=Z,19nm,1.2s,SNR=5.5
VTS **Vitosha** 75.85 323 ⇑P P 07 05 59.7 +0.7
VTS **Vitosha** 75.85 323 ⇑P P 07 05 59.7 +0.7
ABTX **Abilene, Hawle** 75.89 55 P P 07 05 59.4 +0.2
baz=323
E60A **Ste Agathe de** 75.89 29 P P 07 05 58.6 -0.3
baz=334
N48A **Decatur** 75.89 40 P P 07 05 59.3 +0.2
baz=328
G57A **Newington** 75.90 32 P P 07 05 58.8 -0.3
baz=333
ECH **Echery** 75.92 336 IAmb IAmb 07 06 00.2
comp=Z,14nm,1.0s
H56A **Elgin** 75.93 33 P P 07 05 58.9 -0.3
baz=332
D62A **Allapoint, All** 75.94 27 P P 07 05 58.8 -0.4
baz=336
F59A **Saint Guilaume** 75.94 30 P P 07 05 58.9 -0.3
baz=334
DAVA **Damuels** 76.06 334 *i* P P 07 06 00.4 +0.3
comp=Z,20nm,0.8s,SNR=5.8
FETA **Feichten** 76.07 333 *i* P P 07 06 00.6 +0.5
comp=Z,18nm,1.0s,SNR=6.7
F60A **Warwick** 76.09 29 P P 07 05 59.6 -0.4
baz=334
BLY **Banja Luka** 76.13 328 ⇑P P 07 06 00.3 0.0
BLY **Banja Luka** 76.13 328 ⇓*i* P P 07 05 59.7 -0.6
CEY **Cerknica** 76.13 330 *e*P P 07 05 59.8 -0.5
BBLS **Lazići** 76.15 326 ⇓*i* P P 07 06 00.7 +0.1
G58A **Ormstown** 76.17 31 P P 07 06 00.1 -0.4
baz=333,SNR=5.8
N49A **Columbus Grove** 76.18 40 P P 07 06 00.6 0.0
baz=328
STAL **STALIGIAL** 76.18 332 IAmb IAmb 07 06 00.6
comp=Z,18nm,1.1s
U40A **Yellville** 76.21 48 IAmb IAmb 07 06 01.4
comp=Z,14nm,0.5s
U40A **Yellville** 76.21 48 P P 07 06 00.9 -0.1
baz=325,SNR=14
M50A **Fremont** 76.22 39 P P 07 06 00.7 -0.1
baz=329
ALN **Alexandroupoli** 76.23 320 IAmb IAmb 07 06 02.0
comp=Z,14nm,1.0s
J54A **Appleton** 76.26 35 P P 07 06 00.9 -0.1
baz=331
H57A **Richville** 76.34 32 P P 07 06 01.3 -0.1
baz=332
AS31 **Alice Springs** 76.35 196 P P 07 06 03.9 +2.2
ASAR **Alice Springs** 76.35 196 P P 07 06 03.7 +2.0
comp=Z,4.9nm,0.6s,baz=7.1,slow=5.2,SNR=97
ASAR pP pwP 07 07 58.9 -0.1
comp=Z,1.2nm,0.8s,baz=11,slow=5.9,SNR=4.7
O48A **Farmland** 76.35 41 P P 07 06 01.0 -0.6
baz=328
TXAR **Lajitas Array** 76.35 60 P P 07 06 03.6 +1.7
comp=Z,2.2nm,0.7s,baz=295,slow=5.1,SNR=26
TXAR pP pP 07 07 59.5 +2.1
comp=Z,1.4nm,0.8s,baz=310,slow=4.8,SNR=7.8
F61A **St Evariste** 76.38 29 P P 07 06 01.6 0.0
baz=335
RUDO **Rudo** 76.38 326 *e*P P 07 06 01.0 -0.7
MGRS **Mrkonjic Grad** 76.46 328 *e*P P 07 06 02.6 +0.4
LONY **Lake Ozonia** 76.46 32 P P 07 06 01.7 -0.4
baz=333
G59A **Clarenceville** 76.50 30 P P 07 06 02.2 -0.2
baz=334
J55A **Hilton** 76.56 34 P P 07 06 02.4 -0.2
baz=331
FUORN **Ofenpass-Fuorn** 76.56 333 P P 07 06 03.9 +0.9
FUORN IAmb IAmb 07 06 04.8
comp=Z,47nm,1.4s
M51A **Elyria** 76.62 38 P P 07 06 02.8 -0.3
baz=329
CTI **Castel Tesino** 76.69 332 IAmb IAmb 07 06 03.9
comp=Z,24nm,1.2s
I57A **Carthage** 76.71 33 P P 07 06 03.4 -0.2
baz=332
N50A **Nevada** 76.72 39 P P 07 06 03.6 0.0
baz=329
W39A **Magazine** 76.72 50 P P 07 06 04.2 +0.5
baz=325
H59A **Cadyville** 76.73 31 P P 07 06 03.1 -0.5
baz=333
O49A **Covington** 76.74 40 P P 07 06 04.4 +0.7
baz=328
S44A **Carbondale** 76.75 45 IAmb IAmb 07 06 04.7
comp=Z,41nm,1.4s
ERPA **Erie** 76.77 36 P P 07 06 03.9 0.0
baz=330
H58A **Gabriels** 76.78 31 P P 07 06 03.4 -0.5
baz=333
L53A **Girard** 76.81 37 P P 07 06 04.1 0.0
baz=330
K54A **Basiliko Farm,** 76.82 35 P P 07 06 04.0 -0.1
baz=331
G61A **St-Isidore-de-** 76.84 29 P P 07 06 04.2 0.0
baz=334
J56A **Wolcott** 76.88 34 P P 07 06 04.1 -0.3
baz=332
E64A **Bridgewater** 76.89 26 P P 07 06 04.0 -0.4
baz=336
N51A **Ashland** 76.90 39 P P 07 06 04.5 -0.1
baz=329
UPM **Unac-Piva** 76.91 326 *e*P P 07 06 04.7 -0.2
P48A **Milroy** 76.91 41 P P 07 06 04.7 0.0
baz=328
L54A **Sinclairville** 76.92 36 P P 07 06 04.1 -0.6
baz=331
K55A **Perry** 76.94 35 P P 07 06 04.4 -0.4
baz=331
TUE **Stuetta** 76.95 334 IAmb IAmb 07 06 06.6
comp=Z,33nm,0.9s
PBMO **Poplar Bluff** 76.98 46 IAmb IAmb 07 06 06.9
comp=Z,14nm,1.0s
STIP **Stip** 77.04 323 *i* P P 07 06 04.2 -1.1
J57A **Williamstown** 77.06 33 P P 07 06 05.1 -0.4
baz=332
O50A **Cable** 77.06 40 P P 07 06 05.4 -0.1
baz=329
M53A **Wi Miller and** 77.10 37 P P 07 06 05.4 -0.3
baz=330
H60A **Morristown** 77.12 30 P P 07 06 05.4 -0.3
baz=334
P49A **Miami Univ. Ec** 77.14 41 P P 07 06 05.3 -0.6
baz=328,SNR=5.0
F63A **Nahmakanta, Br** 77.18 28 P P 07 06 05.8 -0.3
baz=336
VAY **Valandovo** 77.22 323 *i* P P 07 06 06.4 +0.1
K56A **Middlesex** 77.23 34 P P 07 06 05.8 -0.6
baz=332
Q48A **North Vernon** 77.23 42 P P 07 06 06.5 +0.1
baz=328
ACSO **Alum Creek Sta** 77.25 39 P P 07 06 06.1 -0.4
baz=329
F64A **Sherman** 77.25 27 P P 07 06 05.4 -1.0
baz=336
N52A **McGinn's Farm,** 77.25 38 P P 07 06 06.5 -0.1
baz=330
L55A **Hinsdale** 77.28 35 P P 07 06 06.1 -0.6
baz=331
BRY **Bratogost** 77.30 326 *e*P P 07 06 05.9 -1.0
J58A **Remsen** 77.35 33 P P 07 06 06.7 -0.3
baz=333
MIAR **Mount Ida** 77.35 50 P P 07 06 07.4 +0.2
baz=325
WHAR **Wooly Hollow** 77.35 48 IAmb IAmb 07 06 08.9
comp=Z,59nm,1.5s
H61A **Lyndonville** 77.39 30 P P 07 06 07.2 0.0
baz=334
M54A **Oil Creek Stat** 77.42 37 IAmb IAmb 07 06 08.8
comp=Z,36nm,1.2s
M54A **Oil Creek Stat** 77.42 37 P P 07 06 07.0 -0.5
baz=331
I59A **Olmsteadville** 77.43 32 P P 07 06 07.1 -0.3
baz=333
P50A **Jamestown** 77.45 40 P P 07 06 07.3 -0.3
baz=329
W41B **Gary Mavity, V** 77.46 49 P P 07 06 07.8 +0.1
baz=325,SNR=7.6
PDG **Podgorica** 77.46 326 ⇑P P 07 06 07.5 -0.1
PDG **Podgorica** 77.46 326 ⇓*i* P P 07 06 07.1 -0.5
O51A **Pataskala** 77.47 39 P P 07 06 07.6 -0.2
baz=329
WHTX **Lake Whitney,** 77.50 54 P P 07 06 08.6 +0.6
baz=324
JCT **Junction City** 77.50 57 IAmb IAmb 07 06 10.4
comp=Z,13nm,1.1s
JCT **Junction City** 77.50 57 P P 07 06 08.7 +0.6
baz=323
Q49A **Aurora** 77.51 41 P P 07 06 08.6 +0.6
baz=328
J59A **Piesco** 77.52 32 P P 07 06 07.7 -0.2
baz=333
TREB **Trebinje** 77.53 326 *e*P P 07 06 04.8 -3.2
WCI **Wyandotte Cave** 77.58 43 P P 07 06 08.9 +0.5
WCI pmax pmax
comp=Z,29nm,1.3s
WCI **Wyandotte Cave** 77.58 43 P P 07 06 08.9 +0.5
WCI IAmb IAmb 07 06 09.4
comp=Z,29nm,1.2s
WCI **Wyandotte Cave** 77.58 43 P P 07 06 08.4 +0.1
baz=328
N53A **Lisbon** 77.58 38 P P 07 06 08.5 +0.2
baz=330
H62A **Milan** 77.59 29 P P 07 06 08.1 -0.2
baz=335
L56A **Greenwood** 77.64 35 P P 07 06 07.9 -0.7
baz=332
LBNH **Lisbon** 77.66 30 P P 07 06 08.5 -0.1
baz=334
G64A **Maxfield** 77.69 28 P P 07 06 09.0 +0.2
baz=336
DRME **Dracevica, Mon** 77.70 325 ⇓*i* P P 07 06 08.5 -0.4
HCY **Herceg Novi** 77.72 326 *e*P P 07 06 07.0 -2.0
X40A **Basin Creek Fa** 77.75 49 IAmb IAmb 07 06 12.1
comp=Z,18nm,1.4s
X40A **Basin Creek Fa** 77.75 49 P P 07 06 09.8 +0.5
baz=325
K58A **Earlville** 77.75 33 P P 07 06 08.9 -0.3
baz=332
N54A **Moraine State** 77.77 37 IAmb IAmb 07 06 10.9
comp=Z,39nm,1.2s
N54A **Moraine State** 77.77 37 P P 07 06 09.4 0.0
baz=330
M55A **Ridgway** 77.79 36 P P 07 06 09.4 0.0
baz=331
O52A **Adamsville** 77.80 39 IAmb IAmb 07 06 10.2
comp=Z,41nm,1.2s
O52A **Adamsville** 77.80 39 P P 07 06 09.3 -0.2
baz=330
I61A **Oroboro, Fairl** 77.84 30 P P 07 06 09.5 -0.2
baz=334
P51A **Williamsport** 77.85 40 P P 07 06 09.6 -0.2
baz=329
O53A **New Philadelph** 77.92 38 P P 07 06 09.9 -0.3
baz=330
R49A **Shelbyville** 78.00 42 P P 07 06 10.4 -0.2
baz=328
K59A **Cooperstown** 78.01 33 P P 07 06 10.4 -0.2
baz=333
Q50A **Georgetown** 78.03 41 P P 07 06 10.9 +0.1
baz=329
CSS **Mathiatis** 78.03 312 IAmb IAmb 07 06 11.6
comp=Z,24nm,0.6s
J60A **Lant Hill Farm** 78.07 31 P P 07 06 10.4 -0.5
baz=334
P52A **Corning** 78.09 39 P P 07 06 10.3 -0.8
baz=330
H64A **Troy** 78.11 28 P P 07 06 11.2 +0.1
baz=336
Q51A **Peebles** 78.13 40 IAmb IAmb 07 06 12.8
comp=Z,27nm,1.1s
Q51A **Peebles** 78.13 40 P P 07 06 11.1 -0.2
baz=329,SNR=6.5
BINY **Binghamton** 78.14 34 P P 07 06 11.5 +0.2
baz=332
LMN **Caledonia Moun** 78.22 25 P P 07 06 11.8 +0.1
LMN IAmb IAmb 07 06 12.5
comp=Z,18nm,0.7s
I63A **Otisfield** 78.24 29 P P 07 06 12.7 +0.9
I63A IAmb IAmb 07 06 13.3
comp=Z,41nm,1.1s
T47A **Sharon Grove** 78.28 44 IAmb IAmb 07 06 13.3
comp=Z,24nm,1.2s
N55A **Marion Center** 78.30 36 P P 07 06 12.1 -0.1
baz=331
L58A **Harry Jones Me** 78.32 34 P P 07 06 11.9 -0.4
baz=332
R50A **Paris** 78.36 41 P P 07 06 12.1 -0.4
baz=329
S49A **Springfield** 78.38 42 P P 07 06 12.2 -0.5
baz=328,SNR=5.5
N56A **West Decatur** 78.44 36 P P 07 06 12.7 -0.2
baz=331
L59A **Walton** 78.47 33 P P 07 06 13.1 0.0
L59A IAmb IAmb 07 06 13.8
comp=Z,29nm,1.1s
L59A **Walton** 78.47 33 P P 07 06 12.9 -0.2
baz=333
M57A **Sunshine Farm,** 78.49 35 P P 07 06 13.3 +0.2
M57A IAmb IAmb 07 06 13.8
comp=Z,12nm,0.7s
M57A **Sunshine Farm,** 78.49 35 P P 07 06 12.8 -0.4
baz=332
P53A **Whipple** 78.51 39 P P 07 06 13.4 +0.1
baz=330
J62A **Henniker** 78.60 30 P P 07 06 14.4 +0.6
baz=335
Q52A **Bidwell** 78.62 40 P P 07 06 14.0 +0.1
baz=330
R51A **Hillsboro** 78.65 41 P P 07 06 14.5 +0.4
baz=329
WVT **Waverly** 78.68 45 P P 07 06 14.9 +0.6
WVT pmax pmax
comp=Z,8.0nm,0.9s
WVT **Waverly** 78.68 45 P P 07 06 14.9 +0.6
WVT **Waverly** 78.68 45 P P 07 06 14.5 +0.2
baz=327
O55A **Ligonier** 78.69 37 P P 07 06 14.1 -0.2
baz=331
M58A **Price's Panora** 78.70 34 P P 07 06 14.1 -0.3
baz=332
P54A **Burton** 78.76 38 P P 07 06 14.6 -0.1
baz=330
SSPA **Standing Stone** 78.83 36 P P 07 06 14.9 -0.1
baz=332
S50A **Richmond** 78.84 42 P P 07 06 15.7 +0.6
baz=329
N57A **Milly** 78.85 35 P P 07 06 15.0 -0.1
baz=332
T49A **Edmonton** 78.86 43 P P 07 06 15.7 +0.5
baz=328
O56A **Blue Knob Stat** 78.91 36 P P 07 06 15.8 +0.3
O56A IAmb IAmb 07 06 16.3
comp=Z,30nm,1.1s
O56A **Blue Knob Stat** 78.91 36 P P 07 06 15.3 -0.1
baz=331
M59A **Waymart** 78.91 34 P P 07 06 13.8 -1.6
baz=333
L60A **Shokan** 78.92 33 P P 07 06 15.2 -0.3
baz=333
MCWV **Mont Chateau** 78.96 38 P P 07 06 15.9 +0.2
baz=331
L61A **Hillsdale 1, H** 78.97 32 P P 07 06 15.3 -0.4
baz=334
BNI **Bardonecchia** 78.98 335 P P 07 06 16.5 +0.6
BNI pmax pmax
comp=Z,13nm,0.6s
BNI **Bardonecchia** 78.98 335 P P 07 06 16.5 +0.6
BNI IAmb IAmb 07 06 17.3
comp=Z,13nm,0.6s
Q53A **Leroy** 79.00 39 P P 07 06 16.1 +0.2
baz=330,SNR=8.3
R52A **Catlettsburg** 79.00 40 P P 07 06 16.0 0.0
baz=329
N58A **Sunbury** 79.08 35 P P 07 06 16.0 -0.3
baz=332
NATX **Nacogdoches** 79.09 52 P P 07 06 17.7 +1.2
baz=325
P55A **Reedsville** 79.10 38 P P 07 06 16.4 -0.1
baz=331,SNR=6.2
OSSC **Osservatorio P** 79.10 331 IAmb IAmb 07 06 18.9
comp=Z,19nm,0.9s
NRCA **Norcia** 79.16 330 IAmb IAmb 07 06 18.1
comp=Z,46nm,1.1s
Q54A **Coxs Mills** 79.16 39 P P 07 06 17.0 +0.2
baz=330
K63A **Dunstable** 79.18 30 P P 07 06 17.1 +0.3
baz=335
S51A **Beattyville** 79.21 41 P P 07 06 16.7 -0.4
baz=329
T50A **Nancy** 79.22 42 P P 07 06 17.5 +0.4
baz=328
U49A **Red Boiling Sp** 79.25 43 P P 07 06 17.8 +0.6
baz=328
R53A **Hurricane** 79.28 40 P P 07 06 17.3 -0.1
baz=330
O57A **Amberson** 79.30 36 P P 07 06 17.9 +0.4
baz=332
SSB **Saint Sauveur** 79.32 337 IAmb IAmb 07 06 19.1
comp=Z,19nm,0.7s
OXF **Oxford** 79.32 47 P P 07 06 19.5 +1.8
baz=327
HRV **Adam Dziewonsk** 79.33 31 P P 07 06 17.4 -0.2
baz=335
N59A **State Game Lan** 79.35 34 P P 07 06 17.9 +0.2
N59A IAmb IAmb 07 06 19.0
comp=Z,14nm,1.1s
N59A **State Game Lan** 79.35 34 P P 07 06 17.5 -0.3
baz=333
M60A **Port Jervis** 79.38 33 P P 07 06 17.9 0.0
baz=333
833A **Chaparral WMA,** 79.43 58 P P 07 06 19.4 +1.1
baz=324
Q55A **Buckhannon** 79.44 38 P P 07 06 18.0 -0.3
baz=331
P56A **Dayton Farm, R** 79.47 37 P P 07 06 18.5 +0.1
baz=331,SNR=8.0
N60A **Cedar Hill Far** 79.62 34 P P 07 06 19.2 0.0
baz=333
O58A **Lewisberry** 79.64 35 P P 07 06 19.3 0.0
baz=332
T51A **Gray** 79.64 42 P P 07 06 19.6 +0.3
baz=329
M61A **Granite Spring** 79.68 33 P P 07 06 19.1 -0.3
baz=334
U50A **Jamestown** 79.73 43 P P 07 06 19.8 -0.1
baz=329
O59A **Robesonia** 79.73 35 P P 07 06 19.8 0.0
baz=332
Q56A **Snyder Ridge,** 79.75 37 P P 07 06 19.6 -0.3
baz=331
R54A **Victor** 79.80 39 P P 07 06 20.0 -0.2
baz=330
P57A **Homestead Farm** 79.80 36 P P 07 06 19.8 -0.3
baz=332
V49A **McMinnville** 79.83 44 P P 07 06 19.3 -1.0
baz=328
PAL **Palisades** 79.91 33 P P 07 06 20.3 -0.3
baz=334
S54A **Dingess, Beckl** 80.00 40 P P 07 06 20.6 -0.6
baz=330
Q57A **Strasburg** 80.04 37 P P 07 06 21.5 +0.1
baz=331
P58A **Pank, Wackersv** 80.06 36 P P 07 06 21.1 -0.4
baz=332
L64A **Middleborough** 80.08 30 P P 07 06 21.4 -0.1
baz=335
U51A **La Follette** 80.11 42 P P 07 06 21.4 -0.4
baz=329
TZTN **Tazewell** 80.17 42 P P 07 06 22.7 +0.6
TZTN IAmb IAmb 07 06 32.3
comp=Z,19nm,1.4s
TZTN **Tazewell** 80.17 42 P P 07 06 21.7 -0.4
baz=329
T53A **Wise** 80.21 41 P P 07 06 22.4 0.0
baz=330
R56A **Bull Pasture M** 80.22 38 P P 07 06 22.1 -0.3
baz=331
W49A **Belvidere** 80.22 44 P P 07 06 22.9 +0.5
baz=328
V50A **Pikevile** 80.25 43 P P 07 06 22.4 -0.1
baz=328
P59A **Jarrettsville** 80.27 35 P P 07 06 22.4 -0.2
baz=332
KARP **Karpathos** 80.31 317 P P 07 06 22.0 -0.9
KARP IAmb IAmb 07 06 22.8
comp=Z,22nm,0.7s
U52A **Thorn Hill** 80.37 42 P P 07 06 23.5 +0.3
baz=329
Q58A **Fox Den Farm,** 80.40 36 P P 07 06 23.3 +0.1
baz=332
V51A **Loudon** 80.46 43 P P 07 06 23.5 -0.1
baz=329
O61A **Allentown** 80.50 34 P P 07 06 23.8 +0.1
baz=333
T54A **Tazewell** 80.53 40 P P 07 06 24.0 -0.1
baz=330
W50A **Signal Mountai** 80.56 44 P P 07 06 24.2 -0.1
baz=328
R57A **Stanardsville** 80.65 37 P P 07 06 25.1 +0.6
baz=331
U53A **Fall Branch** 80.72 41 P P 07 06 24.9 -0.1
baz=330
V52A **Sevierville** 80.75 42 P P 07 06 25.2 +0.1
baz=329
S56A **Natural Bridge** 80.79 38 P P 07 06 25.2 -0.1
baz=331
P61A **Hammonton** 80.79 34 P P 07 06 24.0 -1.3
baz=333
T55A **Pulaski** 80.80 39 P P 07 06 24.6 -0.8
baz=330
TKL **Tuckaleechee C** 80.83 42 P P 07 06 25.6 0.0
TKL pmax pmax
comp=Z,28nm,1.5s
TKL **Tuckaleechee C** 80.83 42 P P 07 06 25.6 0.0
TKL IAmb IAmb 07 06 26.5
comp=Z,28nm,1.5s
Q59A **Harwood** 80.84 36 P P 07 06 25.1 -0.5
baz=332
U54A **Nelsons Funny** 80.90 41 P P 07 06 25.9 0.0
baz=330
S57A **Dark Hollow, R** 80.95 38 P P 07 06 26.1 0.0
baz=331
RAYN **Ar Rayn** 80.97 296 P P 07 06 26.8 +0.3
RAYN pmax pmax
comp=Z,22nm,1.2s
RAYN **Ar Rayn** 80.97 296 *i* P P 07 06 26.9 +0.3
SNR=10
RAYN **Ar Rayn** 80.97 296 P P 07 06 26.8 +0.3
RAYN IAmb IAmb 07 06 27.8
comp=Z,22nm,1.1s
Q60A **Greensboro** 81.02 35 P P 07 06 26.4 0.0
baz=333
CBN **Corbin Frederi** 81.16 37 P P 07 06 27.3 +0.1
baz=332
R58B **Mineral** 81.18 37 P P 07 06 27.3 0.0
baz=332
V53A **Saluda** 81.22 42 P P 07 06 27.5 -0.1
baz=330
U55A **TA2, Sparta** 81.22 40 P P 07 06 27.5 -0.2
baz=330
W52A **Murphy** 81.25 43 P P 07 06 27.5 -0.3
baz=329
R59A **King George, V** 81.26 36 P P 07 06 27.7 0.0
baz=332
X51A **Calhoun** 81.30 44 P P 07 06 28.2 +0.2
baz=329
R60A **Leonardtown, M** 81.40 36 P P 07 06 28.3 -0.1
baz=332
S58A **Poland Farm, P** 81.43 37 P P 07 06 28.5 -0.1
baz=332
V54A **Nebo** 81.48 41 P P 07 06 28.8 -0.2
baz=330
T57A **Hurt** 81.50 38 P P 07 06 28.4 -0.6
baz=331
S59A **Mechanicsville** 81.58 37 P P 07 06 29.3 0.0
baz=332
U56A **King** 81.62 40 P P 07 06 29.9 +0.2
baz=331
LRAL **Lakeview Retre** 81.65 46 P P 07 06 29.9 +0.1
LRAL **Lakeview Retre** 81.65 46 P P 07 06 29.1 -0.7
baz=328
X52A **Dahlonega** 81.68 43 P P 07 06 29.4 -0.6
baz=329
V55A **Taylorsville** 81.72 40 P P 07 06 29.9 -0.2
V55A IAmb IAmb 07 06 32.5
comp=Z,26nm,1.5s
V55A **Taylorsville** 81.72 40 P P 07 06 29.9 -0.2
baz=330
Y51A **Rockmart** 81.78 44 P P 07 06 30.4 -0.1

baz=329
R61A Willards 81.79 35 P P 07 06 30.3 -0.1
baz=333
T58A Grand View Acr 81.83 38 P P 07 06 30.5 -0.1
baz=332
S60A Water View 81.87 36 P P 07 06 31.0 +0.2
baz=332
Z50A Ashland 81.94 45 IAmb IAmb 07 06 32.2
comp=Z,20nm,1.0s
Z50A Ashland 81.94 45 P P 07 06 30.9 -0.4
baz=328,SNR=6.8
U57A Blanch 81.96 39 P P 07 06 31.0 -0.3
baz=331
W54A Cherokee Point 81.98 42 P P 07 06 31.3 -0.1
baz=330
X53A Estanollee 82.02 43 P P 07 06 31.8 +0.1
baz=329
V56A Mocksville 82.05 40 P P 07 06 31.7 -0.1
baz=331
T59A Double "B" Far 82.18 37 P P 07 06 32.5 +0.1
baz=332
Y52A Lilburn 82.24 43 P P 07 06 32.9 +0.1
baz=329
V57A Coltrane Farms 82.27 39 P P 07 06 33.0 +0.2
baz=331
KMSC Kings Mountain 82.28 41 P P 07 06 33.0 0.0
baz=330
U58A Oxford 82.30 38 P P 07 06 33.2 +0.1
baz=332
T60A Surry 82.34 37 P P 07 06 34.0 +0.8
baz=332
X54A Belton 82.37 42 P P 07 06 33.6 +0.2
baz=330
Y53A Monroe 82.45 43 P P 07 06 33.9 0.0
baz=329
W56A Indian Trail 82.60 40 P P 07 06 34.6 +0.1
baz=331
V58A Windy Hill, Pi 82.61 39 P P 07 06 34.4 -0.2
baz=331
U59A Littleton 82.63 38 P P 07 06 34.7 0.0
baz=332
Z52A Williamson 82.66 44 P P 07 06 34.9 -0.1
baz=329
X55A Gracelyn & Ava 82.74 41 P P 07 06 35.4 +0.1
baz=330
U60A Pendleton 82.77 37 P P 07 06 35.4 0.0
baz=332
W57A Gilead 82.82 40 P P 07 06 35.7 +0.1
baz=331
Y54A Tignall 82.83 42 P P 07 06 35.5 -0.2
baz=330,SNR=6.8
250A Grady 82.87 46 P P 07 06 36.8 +0.8
GOGA Godfrey 82.88 43 P P 07 06 36.3 +0.3
baz=329
Z53A Monticello 82.95 43 P P 07 06 36.3 -0.1
baz=329
X56A White Oak 82.97 41 P P 07 06 36.3 -0.1
baz=330
152A Waverly Hall 82.97 45 P P 07 06 36.3 -0.2
baz=329
V59A Middlesex 82.97 38 P P 07 06 36.7 +0.3
baz=332
Y55A Saluda 83.11 42 P P 07 06 37.0 -0.1
baz=330
U61A Possum Corner 83.16 37 P P 07 06 37.5 +0.1
baz=333
W58A Raeford 83.24 39 P P 07 06 37.9 +0.2
baz=331
Z54A Sparta 83.30 43 P P 07 06 38.4 +0.3
baz=330
X57A Johnson Farm, 83.38 40 P P 07 06 38.8 +0.3
baz=331
STKA Stephens Creek 83.44 188 P P 07 06 40.7 +2.1
comp=Z,2.4nm,0.7s,baz=357,slow=6.0,SNR=5.9
252A Lumpkin 83.54 45 P P 07 06 38.9 -0.4
baz=329
X58A Rowland 83.60 40 P P 07 06 39.8 +0.2
baz=331
154A Montrose 83.72 43 P P 07 06 41.2 +1.0
baz=330
Z56A Williston 83.84 42 P P 07 06 40.8 0.0
baz=330
352A Blakely 83.89 45 P P 07 06 41.7 +0.7
baz=329
254A Abbeville 84.21 44 P P 07 06 43.3 +0.6
baz=330
353A Camilla 84.32 45 P P 07 06 43.8 +0.7
baz=329
FORT Forrest 84.39 200 P P 07 06 45.0 +1.8
FORT IAmb IAmb 07 06 45.3
comp=Z,16nm,0.7s
POLO Lamas de Olo 85.65 344 *e*P P 07 06 48.8 -0.8
PVRL Vila Real 85.73 344 *e*P P 07 06 49.1 -0.8
MTE Manteigas 86.56 344 *e*P P 07 06 53.0 -0.9
ESDC Sonseca Array 86.58 341 P P 07 06 53.3 -0.6
comp=Z,1.1nm,0.5s,baz=8.0,slow=4.7,SNR=11
ESDC Sonseca Array 86.58 341 IAmb IAmb 07 06 54.0
comp=Z,4.5nm,1.0s
KEST Kesra 86.82 330 P P 07 06 55.5 +0.3
comp=Z,14nm,0.7s,baz=313,slow=2.2,SNR=12
KEST Kesra 86.82 330 IAmb IAmb 07 06 56.4
comp=Z,15nm,0.8s
TORD Torodi Ar. Bea 110.29 328 PKiKP **PKiKP** 07 12 38.1 -0.7
comp=Z,0.5nm,0.5s,baz=17,slow=2.1,SNR=5.5
TORD PP **PP** 07 13 22.0 -1.3
comp=Z,1.0nm,0.6s,baz=16,slow=8.5,SNR=5.0
DBIC Dimbokro 118.43 332 PKP **PKPdf** 07 12 53.2 -1.2
comp=Z,2.3nm,0.5s,baz=17,slow=3.4,SNR=7.0
DBIC PP **PP** 07 14 18.0 -1.8
comp=Z,5.6nm,0.9s,baz=350,slow=7.5,SNR=4.6
LPAZ La Paz 133.10 56 PKP **PKPdf** 07 13 22.8 -0.3
comp=Z,1.0nm,0.5s,baz=341,slow=4.0,SNR=6.2
BDFB Brasilia 141.12 30 PKhKP PKPpre 07 13 31.7
comp=Z,2.3nm,0.6s,baz=337,slow=2.8,SNR=5.3
CPUP Villa Florida 146.95 51 PKPbc **PKPbc** 07 13 49.9 +0.1
comp=Z,4.4nm,0.6s,baz=327,slow=3.5,SNR=18
CPUP Villa Florida 146.95 51 **PKPbc** 07 13 50.5 +0.7
PLCA Paso Flores 149.66 86 PKPbc **PKiKP** 07 13 57.2 +0.3
comp=Z,8.1nm,0.6s,baz=317,slow=2.7,SNR=33

*IDC **15** 07:25:32.9±0.7, 50.00N×78.70E, h0km, mb4.2/1, mb1 3.8/5, mb1mx3.4/37, mbtmp3.6/5, ML3.2/4, Error ellipse: s-maj=11.5km s-min=5.8km az=69.0*
*NNC **15** 07:25:32.2±0.3, 49.98N×78.57E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=4.6km s-min=1.3km az=82.0, Suspected Mining explosion.*
ISC 15 07:25:33.0±0.8, 49.98N±0.05×78.61E±0.07, h0km, n19, σ0s94/32, 16C-2D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.61**	**354**	P	**Pg**	**07 25 44.4**	**-0.3**
KUR07				S	**Sb**	**07 25 53.5**	**-2.2**
KUR06	**Kurchatov Arra**	**0.63**	**355**	P	**Pg**	**07 25 44.8**	**-0.2**
KUR06				S	**Sg**	**07 25 53.6**	**+0.4**
KUR14	**Kurchatov Arra**	**0.64**	**359**	P	**Pg**	**07 25 44.7**	**-0.5**
KUR14				S	**Sg**	**07 25 53.8**	**+0.3**
KUR15	**Kurchatov Arra**	**0.64**	**357**	⇑P	**Pg**	**07 25 44.7**	**-0.7**
KUR15				⇓S	**Sg**	**07 25 54.0**	**+0.3**
KURBB	**Kurchatov Arra**	**0.65**	**356**	Pg	**Pg**	**07 25 45.0**	**-0.4**
	8.3nm,0.3s,baz=173,slow=17,SNR=112						
KURBB				Lg	Lg	07 25 52.9	
	8.4nm,0.3s,baz=166,slow=32,SNR=43						
KURBB	**Kurchatov Arra**	**0.65**	**356**	⇑P	**Pg**	**07 25 44.8**	**-0.6**
	39nm,0.2s						
KURBB				⇑S	**Sg**	**07 25 53.9**	**+0.1**
	325nm,0.8s						
KUR16	**Kurchatov Arra**	**0.66**	**354**	⇑P	**Pg**	**07 25 44.9**	**-0.6**
KUR16				⇑S	**Sg**	**07 25 54.0**	**0.0**
KUR17	**Kurchatov Arra**	**0.66**	**352**	⇑P	**Pg**	**07 25 45.1**	**-0.6**
KUR17				⇑S	**Sg**	**07 25 54.6**	**+0.3**
KUR05	**Kurchatov Arra**	**0.67**	**356**	P	**Pg**	**07 25 45.2**	**-0.6**
KUR04	**Kurchatov Arra**	**0.69**	**357**	P	**Pg**	**07 25 45.8**	**-0.4**
MAKZ	**Makanchi**	**3.88**	**143**	⇑Pn	**Pn**	**07 26 34.2**	**+0.2**
	0.3nm,0.2s						
MAKZ				⇓Pg	**Pb**	**07 26 42.1**	**-0.3**
	2.7nm,0.6s						
MAKZ				⇑Lg	Lg	07 27 35.0	
	12nm,0.6s						
MK31	**Makanchi Array**	**4.02**	**141**	⇑Pn	**Pn**	**07 26 35.6**	**-0.2**
	3.0nm,0.2s,baz=322,slow=10,SNR=38						
MK31				Pg	**Pb**	**07 26 46.2**	**+1.6**
	2.3nm,0.2s,baz=324,slow=13,SNR=25						
MK31				⇑Lg	Lg	07 27 40.2	
	6.4nm,0.4s,baz=334,slow=22,SNR=19						
MKAR	**Makanchi Array**	**4.02**	**141**	Pn	**Pn**	**07 26 36.4**	**+0.6**
	1.2nm,0.3s,baz=325,slow=10,SNR=49						
MKAR				Pg	**Pb**	**07 26 43.3**	**-1.4**
	1.7nm,0.3s,baz=322,slow=13,SNR=21						
MKAR				Lg	Lg	07 27 37.1	
	2.7nm,0.3s,baz=330,slow=25,SNR=15						
ZALV	**Zalesovo Beam**	**5.53**	**42**	Pn	**Pn**	**07 26 57.7**	**+1.3**
	2.5nm,0.3s,baz=231,slow=14,SNR=14						
BVAR	**Borovoye Array**	**5.97**	**304**	Pn	**Pn**	**07 27 04.0**	**+1.4**
	0.4nm,0.3s,baz=120,slow=14,SNR=9.1						
BVAR				Sn	**Sn**	**07 28 11.1**	**-0.5**
	1.3nm,0.3s,baz=112,slow=23,SNR=8.5						
BRVK	**Borovoye**	**6.04**	**304**	⇑Pn	**Pn**	**07 27 03.1**	**-0.5**
	0.5nm,0.3s						
BRVK				⇑Pg	**Pb**	**07 27 21.6**	**+2.5**
	2.5nm,1.1s						
BRVK				⇑Sn	**Sn**	**07 28 12.8**	**-0.6**
	2.9nm,0.7s						
BRVK				⇑Lg	Lg	07 28 43.1	
	2.3nm,0.5s						
AAK	**Ala-Archa**	**7.87**	**203**	Pn	**Pn**	**07 27 27.7**	**-1.2**
	0.9nm,0.3s,baz=58,slow=3.4,SNR=10						
AAK				Lg	Lg	07 29 43.3	
	0.1nm,0.3s,baz=316,slow=18,SNR=1.8						
KK31	**Karatay Array**	**8.85**	**222**	⇑Pn	**Pn**	**07 27 41.6**	**-0.5**
	0.1nm,0.2s,baz=32,slow=12,SNR=13						
ARCES	**ARCESS Array B**	**31.66**	**328**	P	**P**	**07 31 57.0**	**-0.5**
	3.6nm,0.9s,baz=93,slow=9.4,SNR=2.7						

NNC 15 07:27:40.5±1.2, 41.75N×78.16E, h0km, mb3.1, mpv2.9, 3C-2D, Error ellipse: s-maj=8.2km s-min=4.6km az=164.0, Suspected Mining explosion., Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**1.32**	**8**	P	Pg	07 28 04.6	-1.1
	1.8nm,0.2s						
SATY				S	Sg	07 28 23.1	+0.2
	10nm,0.2s						
TNSS	**Tian-Shan**	**1.57**	**325**	P	Pn	07 28 10.1	+0.1
	2.8nm,0.1s						
TNSS				S	Sn	07 28 32.8	+1.6
	6.0nm,0.2s						
MDOK	**Medeo**	**1.63**	**330**	Pg	Pn	07 28 08.9	-1.7
	1.8nm,0.2s						
MDOK				Lg	Lg	07 28 30.8	
	4.9nm,0.3s						
PDGK	**Podgornoye**	**1.86**	**31**	⇑Pg	Pn	07 28 14.5	+0.8
	1.0nm,0.3s						
PDGK				⇑Lg	Lg	07 28 40.4	
	3.8nm,0.5s						
MTBS	**Maitube**	**1.88**	**318**	Pg	Pn	07 28 14.7	+0.7
	2.6nm,0.1s						
MTBS				Lg	Lg	07 28 40.5	
	8.4nm,0.2s						
TKM2	**Tokmak 2**	**2.23**	**302**	⇓Pg	Pb	07 28 21.2	-0.6
	0.9nm,0.3s						
TKM2				⇑Lg	Lg	07 28 51.0	
	5.0nm,0.5s						
KTBS	**Karatobe**	**2.24**	**331**	Pg	Pb	07 28 21.2	-0.7
	3.1nm,0.3s						
CHKK	**Chushkaly**	**2.27**	**338**	Pg	Pb	07 28 21.2	-1.1
	8.3nm,0.3s						
DGS	**Degeres**	**2.31**	**311**	Pg	Pb	07 28 22.7	-0.4
	2.2nm,0.2s						
DGS				Lg	Lg	07 28 54.2	
	11nm,0.8s						
KUU	**Kurty**	**2.53**	**329**	Pg	Pb	07 28 25.5	-1.2
	2.5nm,0.2s						
KUU				Lg	Lg	07 28 59.5	
	13nm,0.5s						
AAK	**Ala-Archa**	**2.87**	**289**	Pg	Pb	07 28 33.9	+1.4
	0.7nm,0.6s						
AAK				⇓Lg	Lg	07 29 10.1	
	4.0nm,0.5s						

SOME 15 07:27:58.4, 41.18N×78.43E, h0km, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SATY	**Saty**	**1.88**	**359**	*e*P	Pg	07 28 34.4	0.0
	5.2nm,0.3s						
SATY				*e*S	Sg	07 29 00.1	+1.4
	4.6nm,0.3s						
UZB	**Uzynbulak**	**2.01**	**12**	*e*P	Pg	07 28 36.9	0.0
	2.0nm,0.4s						
UZB				*e*S	Sg	07 29 04.5	+1.5
	4.8nm,0.8s						
TNSS	**Tian-Shan**	**2.16**	**330**	*e*P	Pg	07 28 40.0	+0.2
	2.6nm,0.1s						
TNSS				*e*S	Sg	07 29 09.8	+2.0
	6.2nm,0.2s						
MDOK	**Medeo**	**2.23**	**333**	*e*P	Pg	07 28 40.6	-0.6
	2.4nm,0.4s						
MDOK				*e*S	Sg	07 29 10.7	+0.7
	4.6nm,0.5s						
KST	**Kastek**	**2.61**	**316**	*e*P	Pg	07 28 48.2	-0.3
	4.9nm,0.3s						
KST				*e*S	Sg	07 29 23.7	+1.4
	11nm,0.6s						
KTBS	**Karatobe**	**2.84**	**333**	*e*P	Pg	07 28 51.9	-0.9
	2.3nm,0.3s						
KTBS				*e*S	Sg	07 29 30.7	+1.1
	42nm,0.9s						
KTBS	**Karatobe**	**2.84**	**333**	Pg	Pg	07 28 51.9	-0.9
	2.3nm,0.3s						
KTBS				Lg	Lg	07 28 52.0	
	16nm,0.5s						
CHKK	**Chushkaly**	**2.88**	**339**	*e*P	Pg	07 28 52.2	-1.3
	2.4nm,0.2s						
CHKK				*e*S	Sg	07 29 30.8	0.0
	21nm,0.7s						
CHKK	**Chushkaly**	**2.88**	**339**	Lg	Lg	07 28 52.0	
	9.8nm,0.3s						
CHKK				Pg	Pg	07 28 52.2	-1.3
	2.4nm,0.2s						
KUU	**Kurty**	**3.12**	**331**	*e*P	Pg	07 28 56.7	-1.5
	4.0nm,0.7s						
KUU				*e*S	Sg	07 29 38.6	0.0
	12nm,0.6s						
DJR	**Jarkent**	**3.30**	**17**	*e*P	Pg	07 29 00.3	-1.4
	2.1nm,0.4s						
DJR				*e*S	Sg	07 29 45.1	+0.7
	8.6nm,1.1s						

*WEL **15** 07:37:53.5, 42.52S×174.10E×0.0, h21km×1km, ML4.1/16, MLv4.1/84, Error ellipse: s-maj=0.0km s-min=0.0km az=22.8*
*NEIC **15** 07:37:53.3±1.9, 41.74S±0.03×174.03E±0.03, h18km±2km, Error ellipse: s-maj=4.3km s-min=3.3km az=155.0*
ISC 15 07:37:53.6±1.0, 41.76S±0.02×174.03E±0.02, h19km±3km, n135, σ1s42/144, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSWZ	**Blackbirch Sta**	**0.13**	**291**	P	**Pg**	**07 37 57.3**	**-0.4**
BSWZ				S	**Sg**	**07 38 00.1**	**-0.5**
BSWZ	**Blackbirch Sta**	**0.13**	**291**		**Pg**	**07 37 56.8**	**-1.0**
CMWZ	**Cape Campbell**	**0.14**	**85**	P	**Pg**	**07 37 58.3**	**+0.4**
CMWZ				S	**Sg**	**07 38 02.1**	**+1.4**
CMWZ	**Cape Campbell**	**0.14**	**85**	Pg	**Pg**	**07 37 58.1**	**+0.2**
TUWZ	**Tuamarina**	**0.34**	**348**	P	**Pg**	**07 38 00.2**	**-0.7**
TUWZ				S	**Sg**	**07 38 04.6**	**-1.2**
TUWZ	**Tuamarina**	**0.34**	**348**		**Pg**	**07 38 00.1**	**-0.7**
TUWZ				Sg	**Sg**	**07 38 04.2**	**-1.6**
TCW	**Tory Channel**	**0.58**	**18**	P	**Pg**	**07 38 04.0**	**-1.2**
TCW				S	**Sg**	**07 38 12.2**	**-0.8**
SNZO	**South Karori**	**0.68**	**48**		**Pg**	**07 38 06.4**	**-0.5**
SNZO				Sg	**Sg**	**07 38 15.4**	**-0.5**
BHW	**Baring Head**	**0.72**	**61**	P	**Pb**	**07 38 07.7**	**+0.2**
BHW	**Baring Head**	**0.72**	**61**		**Pb**	**07 38 07.5**	**+0.1**
NNZ	**Nelson**	**0.73**	**318**	P	**Pb**	**07 38 07.1**	**-0.6**
NNZ	**Nelson**	**0.73**	**318**		**Sb**	**07 38 16.0**	**-1.3**
KHZ	**Kahutara**	**0.75**	**209**	P	**Pb**	**07 38 09.2**	**+1.2**
KHZ	**Kahutara**	**0.75**	**209**		**Pb**	**07 38 09.2**	**+1.2**
KHZ					**Sn**	**07 38 21.3**	**+1.4**
THZ	**Tophouse**	**0.84**	**270**	P	**Pb**	**07 38 09.7**	**0.0**
THZ	**Tophouse**	**0.84**	**270**		**Pb**	**07 38 09.7**	**0.0**
PLWZ	**Palliser**	**0.93**	**79**	P	**Pb**	**07 38 11.2**	**0.0**
PLWZ	**Palliser**	**0.93**	**79**		**Pb**	**07 38 11.1**	**-0.1**
PLWZ					**Sg**	**07 38 24.6**	**+0.5**

DUWZ D'Urville Isla 0.96 355 P Pb 07 38 10.7 -1.0
MSWZ Moikau Station 0.97 70 P Pb 07 38 12.0 +0.1
MSWZ Moikau Station 0.97 70 Pb 07 38 12.0 +0.1
CAW Cannon Point 1.01 50 P Pb 07 38 12.3 -0.2
PAWZ Paruwai Farm 1.11 71 P Pb 07 38 13.5 -0.7
KIW Kapiti Island 1.11 37 P Pb 07 38 13.2 -1.0
MTW Mount Morrison 1.26 62 P Pn 07 38 15.5 -0.6
OGWZ Otaki Gorge 1.27 43 P Pn 07 38 16.5 +0.2
TRWZ Traveller 1.29 74 P Pn 07 38 15.8 -0.8
HOWZ Holdsworth Sta 1.41 53 P Pn 07 38 17.6 -0.6
QRZ Quartz Range 1.47 309 P Pn 07 38 19.9 +0.9
QRZ Quartz Range 1.47 309 Pn 07 38 20.0 +1.0
QRZ Sn Sn 07 38 38.1 +0.4
TMWZ Te Maipa 1.54 66 P Pn 07 38 19.1 -0.9
MRZ Mangatainoka R 1.60 47 P Pn 07 38 20.5 -0.4
LTZ Lake Taylor 1.66 231 P Pn 07 38 22.4 +0.7
LTZ Lake Taylor 1.66 231 Pn 07 38 22.7 +1.0
DSZ Denniston Nort 1.67 270 P Pn 07 38 23.3 +1.5
TIWZ Tintock 1.71 55 P Pn 07 38 21.8 -0.5
OHWZ Ohakea 1.83 32 P Pn 07 38 26.0 +2.0
CPWZ Castlepoint 1.84 63 P Pg 07 38 30.4 +1.4
POWZ Post Office Ro 1.90 44 P Pb 07 38 28.0 +0.5
PRWZ Pori Road 1.90 51 P Pn 07 38 24.1 -0.7
BFZ Birch Farm 1.99 58 P Pn 07 38 24.7 -1.5
BFZ Birch Farm 1.99 58 Pn Pn 07 38 25.5 -0.6
OKCZ Okains Bay 2.09 200 P Pn 07 38 27.2 -0.4
WAZ Wanganui 2.13 20 P Pn 07 38 29.7 +1.6
OXZ Oxford 2.15 223 P Pn 07 38 28.1 -0.3
OXZ Oxford 2.15 223 Pn 07 38 28.3 -0.1
INZ Inchbonnie 2.15 243 P Pn 07 38 29.5 +1.1
DVHZ Dannevirke 2.18 49 P Pn 07 38 27.5 -1.3
MQZ McQueen's Vall 2.19 207 P Pn 07 38 27.9 -1.1
MQZ McQueen's Vall 2.19 207 Pn 07 38 27.9 -1.1
MQZ Sn Sn 07 38 54.4 -1.1
TSZ Takapari Road 2.24 41 P Pn 07 38 29.0 -0.7
AKCZ Akaroa Harbour 2.27 201 P Pn 07 38 29.5 -0.5
LREZ Lake Rotokare 2.32 7 P Pb 07 38 35.8 +1.1
NMEZ Namu Road 2.35 357 P Pb 07 38 35.3 0.0
PREZ Palmer Road 2.42 2 P Pn 07 38 34.6 +2.5
PNHZ Pukenui 2.47 42 P Pn 07 38 31.9 -0.9
PKE Pukeiti 2.56 359 P Pn 07 38 37.0 +2.9
DREZ Durham Road 2.57 3 P Pn 07 38 36.9 +2.7
MTVZ Mangateitei 2.61 25 P Pb 07 38 40.1 +0.2
PKVZ Pokaka 2.66 22 P Pn 07 38 37.1 +1.6
MHEZ Mangahewa 2.69 5 P Pb 07 38 39.4 -1.7
MOVZ Moawhango 2.69 30 P Pn 07 38 36.8 +0.9
VRZ Vera Road 2.69 12 P Pn 07 38 38.0 +2.2
TRVZ Turoa 2.72 26 P Pn 07 38 37.9 +1.5
DRZ Dome Shelter 2.74 26 P Pn 07 38 42.3 +0.2
BHHZ Black Hill Sta 2.75 35 P Pn 07 38 37.0 +0.3
WHVZ Whangaehu Hut 2.75 26 P Pn 07 38 40.0 +3.2
FWVZ Far West T-bar 2.76 25 P Pn 07 38 39.4 +2.4
KRHZ Kereru 2.76 41 P Pn 07 38 35.7 -1.1
WVZ Waitaha Valley 2.77 241 P Pb 07 38 41.2 -1.3
TUVZ Tukino 2.78 27 P Pn 07 38 38.2 +1.0
NGZ Ngauruhoe 2.85 25 P Pn 07 38 39.5 +1.4
TWVZ Taurewa 2.89 22 P Pn 07 38 40.3 +1.6
WTVZ West Tongariro 2.90 25 P Pn 07 38 41.1 +2.3
KAHZ Kahuranaki 2.92 49 P Pn 07 38 37.6 -1.4
KRVZ Karewarewa 2.93 25 P Pn 07 38 42.0 +2.7
RPZ Rata Peaks 2.94 227 P Pn 07 38 39.6 +0.3
RPZ Rata Peaks 2.94 227 Pn 07 38 38.8 -0.4
KWHZ Kaweka Forest 2.96 39 P Pb 07 38 45.9 +0.1
KATZ Kakaramea 3.06 25 P Pb 07 38 46.5 -0.9
MCHZ McNeill Hill 3.08 42 P Pb 07 38 49.9 +2.2
RITZ Rihia Road 3.11 27 P Pb 07 38 46.5 -1.8
RATZ Rangitukua 3.18 25 P Pn 07 38 42.8 +4.2
BKZ Black Stump Fm 3.20 37 P Pn 07 38 43.7 +0.8
BKZ Black Stump Fm 3.20 37 Pn 07 38 42.7 -0.2
HATZ Hinemaiaia 3.27 29 P Pb 07 38 49.4 -1.6
HIZ Hauiti 3.31 11 P Pn 07 38 46.4 +2.1
HIZ Hauiti 3.31 11 Pn 07 38 45.2 +0.9
WATZ Wairara 3.31 24 P Pb 07 38 51.9 +0.2
ARHZ Aropaoanui 3.37 43 P Pb 07 38 56.1 +3.5
NMHZ Naumai 3.40 39 P Pb 07 38 54.8 +1.5
WHTZ Whakaora 3.42 26 P Pb 07 38 56.0 +2.4
MRHZ Matea Rd 3.44 33 P Pb 07 38 52.9 -1.1
KUTZ Kaahu Road 3.54 23 P Pb 07 38 55.9 +0.2
FOZ Fox Glacier 3.58 239 P Pn 07 38 49.8 +1.7
FOZ Fox Glacier 3.58 239 Pn Pn 07 38 49.0 +0.9
TLZ Tolley Road 3.62 19 P Pn 07 38 50.7 +2.1
WPRZ Whakapapatarin 3.62 27 P Pb 07 38 59.0 +2.0
WHHZ Waihua 3.63 43 P Pg 07 39 03.1 0.0
ALRZ Allen Road 3.65 30 P Pb 07 38 55.7 -1.8
RAHZ Arahi 3.68 40 P Pb 07 39 00.8 +2.7
PRRZ Plateau Road 3.73 30 P Pb 07 38 59.5 +1.7
HSRZ Hossack Road 3.84 27 P Pb 07 39 02.8 +2.0
LBZ Lake Benmore 3.85 226 P Pn 07 38 52.8 +1.0
LBZ Lake Benmore 3.85 226 Pn Pn 07 38 53.0 +1.2
SNGZ Shannon Statio 3.91 41 P Pg 07 39 06.4 -2.0
RRRZ Republican Roa 3.91 30 P Pb 07 39 03.8 +1.8
UTU Utuhina 3.95 26 P Pb 07 39 04.5 +2.0
TARZ Mount Tarawera 4.00 29 P Pb 07 39 05.8 +2.3
NGRZ Ngongotaha 4.01 25 P Pb 07 39 05.4 +1.8
KARZ Kaharoa 4.11 25 P Pb 07 39 06.7 +1.5
ODZ Otahua Downs 4.11 216 P Pn 07 38 54.4 -0.9
ODZ Otahua Downs 4.11 216 Pn Pn 07 38 54.9 -0.3
KMRZ Kaimai 4.18 21 P Pb 07 39 06.5 0.0
TOZ Tahuroa Road 4.18 16 P Pn 07 38 57.6 +1.4
URZ Urewera 4.22 35 P Pn 07 38 57.8 +0.9
URZ Urewera 4.22 35 Pn Pn 07 38 59.3 +2.5
MWZ Matawai 4.35 39 P Pn 07 39 09.0 -0.3
TGHZ Tauranga 4.38 24 P Pb 07 39 11.6 +1.8
JCZ Jackson Bay 4.49 237 P Pn 07 39 00.3 -0.4
AWAZ Awhitu Peninsu 4.71 6 P Pn 07 39 05.9 +2.3
RUGZ Raukumara Rang 4.71 38 P Pn 07 39 03.9 +0.1
MKAZ Moumakai 4.73 11 P Pn 07 39 04.8 +1.0
WKZ Wanaka 4.77 228 Pn Pn 07 39 05.0 +0.6
ETAZ East Tamaki Re 4.85 8 P Pn 07 39 07.8 +2.3
PUZ Puketiti 4.91 43 P Pb 07 39 19.7 +0.7
HAZ Te Kaha 4.93 37 P Pn 07 39 05.6 -1.0
MBAZ Motutapu North 5.03 8 P Pn 07 39 10.2 +2.3
WIAZ Waiheke Island 5.03 10 P Pn 07 39 10.0 +2.0
KUZ Kuaotunu 5.18 15 P Pb 07 39 21.1 -2.3
MSZ Milford Sound 5.33 235 P Pn 07 39 17.3 +5.3
MXZ Matakaoa Point 5.33 40 P Pb 07 39 25.2 -0.9
MLZ Mavora Lakes 5.61 228 Pn Pn 07 39 15.7 -0.3
OUZ Omahuta 6.54 357 P Pn 07 39 31.3 +2.6
OUZ Omahuta 6.54 357 Pn Pn 07 39 30.0 +1.3

IDC 15 08:09:08.8±2.0, 18.94S×177.64W, h584km±32km, mb2.6/3, mb1 3.0/5, mb1mx2.7/51, mbtmp3.8/5, Error ellipse: s-maj=30.2km s-min=17.9km az=99.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.53**	**49**	P	P	08 11 04.0	+0.8
	3.3nm,0.3s,baz=60,slow=3.3,SNR=4.1						
URZ	**Illewera**	**19.78**	**192**	P	P	08 13 00.2	-0.9
	0.7nm,0.3s,baz=0.0,slow=7.1,SNR=5.1						
URZ				S	S	08 16 10.3	+1.2
	0.5nm,0.3s,baz=321,slow=18,SNR=5.0						
WRA	**Warramunga Arr**	**45.17**	**260**	P	P	08 16 34.5	-0.3
	0.5nm,0.6s,baz=97,slow=6.8,SNR=3.7						
ASAR	**Alice Springs**	**45.22**	**255**	P	P	08 16 35.4	+0.2
	0.5nm,0.6s,baz=86,slow=8.3,SNR=6.8						
ILAR	**Eielson Array**	**86.73**	**13**	P	P	08 20 50.9	-0.2
	0.3nm,0.6s,baz=226,slow=5.2,SNR=6.2						

*NCEDC **15** 08:18:14.9±1.5, 36.75N±0.03×121.04W±0.03, h8km±6km, ML3.0/22, Error ellipse: s-maj=5.2km s-min=1.8km az=219.0*
*ANF **15** 08:18:14.8±0.9, 36.44N×120.96W, h0km, ML3.1/7, Error ellipse: s-maj=8.1km s-min=5.9km az=138.0*
*NEIC **15** 08:18:15.1±1.9, 36.53N±0.03×121.11W±0.04, h18km±6km, Error ellipse: s-maj=5.0km s-min=3.7km az=71.0*
ISC 15 08:18:14.9±0.9, 36.55N±0.02×121.09W±0.02, h20km±4km, n164, σ0s98/170, Central California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBNM	**San Benito**	**0.04**	**166**		**Pg**	**08 18 17.4**	**-1.1**
BBGB	**Big Mountain B**	**0.05**	**54**		**Pg**	**08 18 18.9**	**+0.2**
BPIM	**Pinnacles**	**0.09**	**227**		**Pg**	**08 18 17.9**	**-0.9**
BEHM	**Elkhorn Ranch**	**0.13**	**329**		**Pg**	**08 18 18.6**	**-0.7**
LRV	**Little Rabbit**	**0.14**	**156**		**Pg**	**08 18 18.7**	**

BSGM	**Shirttail Gulc**	**0.19**	**224**			**Pg**	**08 18 19.4**	**-0.5**
BJOM	**Mount Johnson**	**0.20**	**293**			**Pg**	**08 18 19.6**	**-0.5**
BHRM	**Hodges Ranch**	**0.23**	**322**			**Pg**	**08 18 20.2**	**-0.3**
BJCM	**Johnson Can.**	**0.24**	**269**			**Pg**	**08 18 20.4**	**-0.4**
SCZ	**Santa Cruz**	**0.26**	**281**			**Pg**	**08 18 20.6**	**-0.4**
SCZ						**Sg**	**08 18 24.7**	**-0.3**
BCGM	**Cienega Road**	**0.26**	**308**			**Pg**	**08 18 20.9**	**-0.1**
LRC	**Lone Oak Road**	**0.30**	**173**			**Pb**	**08 18 21.3**	**-0.5**
BSLM	**Silva Ranch**	**0.31**	**317**			**Pg**	**08 18 22.2**	**+0.4**
BSMM	**Soledad Missio**	**0.32**	**239**			**Pg**	**08 18 22.1**	**0.0**
BVYM	**Vineyard**	**0.33**	**307**			**Pg**	**08 18 22.0**	**-0.2**
BRMM	**Rolling Bench**	**0.35**	**37**			**Pb**	**08 18 22.6**	**0.0**
SAO	**San Andreas Ge**	**0.36**	**307**	Pg		**Pg**	**08 18 22.3**	**-0.4**
SAO				Sg		**Sg**	**08 18 28.1**	**+0.2**
BSRM	**Salinas Radio**	**0.36**	**289**			**Pg**	**08 18 22.5**	**-0.3**
HLTM	**Lone Tree Road**	**0.38**	**332**			**Pg**	**08 18 22.5**	**-0.4**
FRP	**Fremont Peak**	**0.38**	**302**			**Pg**	**08 18 22.7**	**-0.4**
HAST	**Hastings Reser**	**0.41**	**247**			**Pg**	**08 18 23.5**	**0.0**
PMPB	**Monarch Peak**	**0.41**	**145**			**Pb**	**08 18 23.4**	**-0.1**
BPCNC	**Pine Canyon**	**0.43**	**273**			**Pg**	**08 18 24.0**	**+0.1**
PCCM	**Crazy Canyon**	**0.46**	**188**			**Pb**	**08 18 24.6**	**+0.2**
HBTM	**San Juan Bauti**	**0.48**	**309**			**Pg**	**08 18 24.8**	**+0.1**
PACP	**Pacheco Peak**	**0.48**	**341**			**Pg**	**08 18 24.6**	**-0.3**
OCR	**O'Connell Ranc**	**0.50**	**318**			**Pg**	**08 18 25.2**	**+0.1**
HFEM	**San Felipe**	**0.50**	**330**			**Pg**	**08 18 25.0**	**-0.2**
SFJWR	**San Luis Fatjo**	**0.50**	**352**			**Pg**	**08 18 24.8**	**-0.4**
ANZ	**Anzar Road**	**0.52**	**310**			**Pg**	**08 18 25.4**	**-0.2**
HTUM	**Tustin Road**	**0.52**	**302**			**Pg**	**08 18 25.3**	**-0.3**
HPCM	**Pacheco Lake**	**0.53**	**344**			**Pg**	**08 18 25.3**	**-0.4**
SLD	**San Luis Dam**	**0.53**	**349**			**Pg**	**08 18 25.3**	**-0.5**
PSAM	**San Ardo**	**0.55**	**163**			**Pb**	**08 18 25.7**	**-0.2**
HERM	**Elkhorn Road**	**0.56**	**237**			**Pg**	**08 18 25.7**	**0.0**
CDC	**Canada Road**	**0.57**	**326**			**Pg**	**08 18 26.5**	**0.0**
BAPM	**Anderson Peak**	**0.58**	**230**			**Pg**	**08 18 26.8**	**+0.1**
GHS	**Gilroy Hot Spr**	**0.62**	**332**			**Pg**	**08 18 27.3**	**0.0**
SCKWR	**San Luis Creek**	**0.63**	**1**			**Pg**	**08 18 27.8**	**+0.3**
BPOM	**Post Ranch**	**0.63**	**240**			**Pg**	**08 18 27.6**	**0.0**
HLPM	**Lions Peak**	**0.66**	**319**			**Pg**	**08 18 27.5**	**-0.4**
HSPM	**Sheep**	**0.66**	**329**			**Pg**	**08 18 27.8**	**-0.3**
HMOM	**Monterey**	**0.67**	**275**			**Pg**	**08 18 28.2**	**0.0**
PAPM	**Alder Peak**	**0.67**	**199**			**Pb**	**08 18 28.4**	**+0.4**
JELB	**Ellicott, Sant**	**0.70**	**303**			**Pg**	**08 18 28.5**	**-0.4**
PHSB	**Hesperia Broad**	**0.72**	**178**			**Pb**	**08 18 29.0**	**+0.1**
CADM	**Anderson Res.**	**0.75**	**325**			**Pg**	**08 18 29.5**	**-0.2**
PVCM	**Vineyard Canyo**	**0.77**	**144**			**Pb**	**08 18 29.6**	**-0.1**
PSTM	**Stockdale Moun**	**0.78**	**143**			**Pb**	**08 18 29.6**	**-0.3**
PPO	**Portuguese Can**	**0.78**	**151**			**Pb**	**08 18 30.3**	**+0.4**
PANM	**San Antonio Re**	**0.78**	**169**			**Pb**	**08 18 30.1**	**+0.2**
JTGM	**Trout Gulch Ro**	**0.79**	**307**			**Pg**	**08 18 29.8**	**-0.7**
JLAB	**Laurel Hill**	**0.80**	**320**			**Pg**	**08 18 30.1**	**-0.5**
JHLM	**Holstrom Ranch**	**0.82**	**313**			**Pg**	**08 18 30.1**	**-0.9**
CCOB	**Coe Ranch Numb**	**0.85**	**327**			**Pg**	**08 18 31.4**	**-0.2**
AMC	**Almaden**	**0.86**	**315**			**Pg**	**08 18 30.6**	**-1.1**
CTM	**Castle Mountai**	**0.87**	**135**			**Pb**	**08 18 31.7**	**+0.3**
JSTM	**Santa Teresa H**	**0.87**	**319**			**Pg**	**08 18 31.3**	**-0.6**
PHCM	**Hearst Castle**	**0.87**	**183**			**Pb**	**08 18 31.7**	**+0.3**
ARN	**Arnold Ranch**	**0.87**	**336**			**Pg**	**08 18 31.4**	**-0.7**
JUMM	**Mount Umunhum**	**0.89**	**313**			**Pg**	**08 18 31.1**	**-1.3**
MHC	**Mount Hamilton**	**0.91**	**331**			**Pg**	**08 18 31.8**	**-0.9**
PCMM	**Cholame Hills**	**0.92**	**143**			**Pb**	**08 18 32.7**	**+0.4**
RAMR	**Ramage Ranch**	**0.93**	**169**			**Pb**	**08 18 32.6**	**+0.2**
GHC	**Gold Hill**	**0.93**	**140**			**Pb**	**08 18 32.2**	**-0.2**
PSRM	**Scobie Ranch**	**0.95**	**136**			**Pb**	**08 18 32.6**	**-0.2**
CMMM	**Mount Mocho**	**0.96**	**340**			**Pg**	**08 18 32.8**	**-0.9**
JJOM	**Saint Joseph's**	**0.97**	**313**			**Pg**	**08 18 32.4**	**-1.4**
PKLM	**Kerr Lake**	**0.98**	**142**			**Pb**	**08 18 33.3**	**0.0**
PSNM	**Stone Corral**	**1.00**	**140**			**Pg**	**08 18 33.1**	**-1.2**
PMCM	**McMillan Canyo**	**1.01**	**145**			**Pb**	**08 18 34.0**	**+0.2**
BLDC	**Black Mountain**	**1.02**	**172**			**Pb**	**08 18 34.3**	**+0.2**
BLDC	**Black Mountain**	**1.02**	**172**			**Pb**	**08 18 34.2**	**+0.2**
TCHL	**Shandon**	**1.02**	**147**			**Pb**	**08 18 34.7**	**+0.5**
CMLM	**Mount Lewis**	**1.03**	**334**			**Pg**	**08 18 33.7**	**-1.3**
PMRM	**Maxey Ranch**	**1.03**	**138**			**Pg**	**08 18 33.7**	**-1.3**
JBNB	**Ben Lomond Mou**	**1.03**	**304**			**Pg**	**08 18 33.2**	**-1.8**
PCBM	**Cambria**	**1.03**	**179**			**Pg**	**08 18 34.2**	**-0.8**
JSGM	**Saratoga Golf**	**1.06**	**314**			**Pg**	**08 18 34.5**	**-1.1**
PAGB	**Antelope Grade**	**1.06**	**140**			**Pg**	**08 18 34.5**	**-1.1**
CALM	**Calaveras Res.**	**1.06**	**328**			**Pg**	**08 18 34.3**	**-1.3**
THIS	**South End of C**	**1.08**	**140**			**Pn**	**08 18 35.6**	**+0.6**
ARDC	**Alexander Ranc**	**1.09**	**175**			**Pg**	**08 18 35.0**	**-1.1**
TRAM	**Private Proper**	**1.09**	**143**			**Pn**	**08 18 35.8**	**+0.6**
PTRM	**Twissleman Ran**	**1.14**	**141**			**Pn**	**08 18 36.5**	**+0.6**
JBMM	**Black Mountain**	**1.15**	**312**			**Pb**	**08 18 35.5**	**-0.7**
JPC	**Peters Creek,**	**1.15**	**309**			**Pb**	**08 18 35.5**	**-0.7**
CMJM	**Mission San Jo**	**1.15**	**327**			**Pb**	**08 18 35.8**	**-0.9**
TSCN	**Private Proper**	**1.17**	**149**			**Pb**	**08 18 36.6**	**+0.1**
FRI	**Friant**	**1.19**	**68**			**Pg**	**08 18 35.5**	**-2.6**
JJRM	**Joaquin Road**	**1.19**	**312**			**Pn**	**08 18 36.2**	**-0.4**
PTAM	**Tassajara Cree**	**1.20**	**165**			**Pg**	**08 18 36.5**	**-1.7**
WENL	**Wente Vineyard**	**1.20**	**334**			**Pn**	**08 18 36.1**	**-0.4**
JFP	**Foothills Park**	**1.20**	**313**			**Pn**	**08 18 36.0**	**-0.6**
JSFB	**Stanford Teles**	**1.22**	**315**			**Pn**	**08 18 36.4**	**-0.4**
CVLM	**Vallecito**	**1.23**	**331**			**Pn**	**08 18 37.1**	**+0.1**
JRSC	**Jasper Ridge**	**1.25**	**313**			**Pn**	**08 18 36.5**	**-0.8**
EFD	**Emergency Oper**	**1.26**	**166**			**Pn**	**08 18 37.3**	**-0.2**
LSDC	**Los Osos Digit**	**1.27**	**171**			**Pn**	**08 18 37.7**	**+0.2**
CNIC	**Niles Canyon**	**1.27**	**327**			**Pn**	**08 18 37.6**	**0.0**
PBPM	**Bitterwater Pu**	**1.27**	**139**			**Pb**	**08 18 38.0**	**-0.2**
BGH	**Bear Gulch**	**1.28**	**309**			**Pn**	**08 18 37.6**	**0.0**
JHPM	**Huddart Park**	**1.32**	**313**			**Pn**	**08 18 38.1**	**-0.2**
VPDC	**Valencia Peak**	**1.32**	**172**			**Pn**	**08 18 38.4**	**+0.1**
DPD	**Davis Peak**	**1.34**	**169**			**Pn**	**08 18 38.6**	**+0.1**
DCD	**Diablo Creek**	**1.35**	**171**			**Pn**	**08 18 38.4**	**-0.3**
VOG	**Valley Oaks Go** baz=281	**1.40**	**99**	P		**Pn**	**08 18 38.9**	**-0.4**
VOG	baz=281			S		**Sb**	**08 18 56.3**	**-1.3**
CLCB	**Lake Chabot**	**1.42**	**327**			**Pn**	**08 18 40.0**	**+0.3**
SMMC	**Simmler**	**1.52**	**144**			**Pn**	**08 18 41.4**	**+0.3**
SMMC	**Simmler** baz=326	**1.52**	**144**	P		**Pn**	**08 18 41.4**	**+0.3**
CMB	**Columbia Colle**	**1.58**	**20**			**Pn**	**08 18 42.2**	**+0.3**
CMB	**Columbia Colle**	**1.58**	**20**	Pn		**Pn**	**08 18 41.7**	**-0.3**
CMB	**Columbia Colle**	**1.58**	**20**	Sn		**Sn**	**08 19 01.8**	**-0.1**
BCH	**Branch Mountai**	**1.59**	**149**			**Pn**	**08 18 42.2**	**+0.2**
CARC	**Carrizo Plain**	**1.60**	**140**			**Pn**	**08 18 43.0**	**+0.8**
BRIB	**Briones**	**1.61**	**328**			**Pn**	**08 18 41.9**	**-0.3**
BKS	**Berkeley--Byer**	**1.61**	**326**			**Pn**	**08 18 42.1**	**-0.2**
KCC	**Kaiser Creek**	**1.61**	**61**			**Pn**	**08 18 42.7**	**+0.3**
HELL	**Mitchell Peak,**	**1.67**	**85**			**Pn**	**08 18 42.8**	**-0.4**
CPIM	**Pinole Ridge**	**1.69**	**328**			**Pn**	**08 18 43.5**	**0.0**
PMLM	**Mount Lospe**	**1.70**	**167**			**Pn**	**08 18 43.7**	**+0.2**
CPMM	**Point Molate**	**1.75**	**323**			**Pn**	**08 18 43.8**	**-0.4**
VES	**Vestal, Richgr** baz=296	**1.77**	**113**	P		**Pn**	**08 18 44.1**	**-0.3**
VES	baz=296			S		**Sn**	**08 19 07.0**	**+0.6**
TMB	**Temblor Range**	**1.93**	**139**			**Pn**	**08 18 48.3**	**+1.5**
MRDM	**Red Cones**	**1.93**	**57**			**Pn**	**08 18 48.5**	**+1.6**
MDPB	**Devils Postpil**	**1.94**	**55**			**Pn**	**08 18 48.4**	**+1.4**
PKM	**Mcpherson Peak** baz=330	**1.96**	**148**	P		**Pn**	**08 18 47.5**	**+0.3**
MMPM	**Mammoth Pass**	**1.96**	**57**			**Pn**	**08 18 49.1**	**+1.7**
SNT	**Sears Point**	**1.96**	**327**			**Pn**	**08 18 47.1**	**+0.1**
MINS	**Minaret Summit**	**1.96**	**55**			**Pn**	**08 18 48.5**	**+1.1**
OMMB	**Old Mammoth Mi**	**1.98**	**57**			**Pn**	**08 18 49.5**	**+1.8**
MDYM	**Dry Creek**	**2.00**	**56**			**Pn**	**08 18 49.4**	**+1.5**
MDCM	**Deadman Creek**	**2.00**	**54**			**Pn**	**08 18 49.4**	**+1.5**
MMLB	**Mammoth Lakes**	**2.02**	**56**			**Pb**	**08 18 50.4**	**-0.7**
MLCM	**Laurel Creek C**	**2.04**	**58**			**Pn**	**08 18 50.4**	**+2.0**
MEMM	**East Mammoth H**	**2.05**	**56**			**Pb**	**08 18 50.8**	**-0.8**
MGPM	**Gravel Pit**	**2.05**	**58**			**Pn**	**08 18 50.8**	**+2.2**
MCMM	**Convict Lake**	**2.06**	**59**			**Pn**	**08 18 50.8**	**+2.1**
MCSM	**Casa Diablo Ho**	**2.06**	**57**			**Pn**	**08 18 51.0**	**+2.2**
MCBM	**Casa Benchmark**	**2.06**	**57**			**Pb**	**08 18 51.4**	**-0.5**
LMCR	**Lookout Mounta**	**2.08**	**55**			**Pn**	**08 18 51.0**	**+2.1**
SCHCA	**Scheelite**	**2.08**	**66**			**Pn**	**08 18 50.5**	**+1.5**
MLAC	**Mammoth, Mammo** baz=240	**2.10**	**58**	P		**Pn**	**08 18 51.3**	**+2.1**
RCCR	**Rock Creek Can**	**2.11**	**63**			**Pn**	**08 18 51.6**	**+2.1**
MCCM	**Marconi Confer**	**2.14**	**319**	Pn		**Pn**	**08 18 49.3**	**-0.2**
ISA	**Isabella, Lake**	**2.29**	**112**			**Pn**	**08 18 52.4**	**+0.6**
ISA				Sn		**Sn**	**08 19 21.0**	**+1.6**
ISA	**Isabella, Lake** baz=294	**2.29**	**112**	P		**Pn**	**08 18 52.0**	**+0.3**
ISA	baz=294			S		**Sn**	**08 19 21.7**	**+2.2**
TIN	**Tinemaha, Big** baz=259	**2.35**	**77**	S		**Sb**	**08 19 25.4**	**+0.1**
WAKR	**Walker**	**2.35**	**33**			**Pn**	**08 18 54.8**	**+2.1**
AFDM	**Forest Hills D**	**2.40**	**2**			**Pn**	**08 18 54.4**	**+1.3**
RUBR	**Rubicon Trail**	**2.60**	**16**	Pn		**Pn**	**08 18 58.2**	**+2.1**
PNTR	**Pine Nut**	**2.80**	**24**			**Pn**	**08 19 01.2**	**+2.5**
DAC	**Darwin (Calif)**	**2.83**	**94**	Pn		**Pb**	**08 19 03.4**	**-1.5**
YERR	**Yerington**	**2.84**	**31**			**Pn**	**08 19 00.8**	**+1.4**
RYN	**Ryan**	**2.91**	**44**	Pn		**Pn**	**08 19 03.0**	**+2.8**
VCNR	**Virginia City**	**2.97**	**22**			**Pn**	**08 19 02.4**	**+1.2**
ORV	**Oroville**	**3.02**	**354**			**Pn**	**08 19 03.0**	**+1.4**
BEKR	**Beckworth**	**3.36**	**10**	Pn		**Pn**	**08 19 08.9**	**+2.4**
PAHR	**Pah Rah Range**	**3.43**	**23**	Pn		**Pn**	**08 19 08.4**	**+1.0**
TPNV	**Topopah Spring**	**3.91**	**83**			**Pn**	**08 19 16.0**	**+2.0**
SHPR	**Sheep Range**	**4.78**	**89**	Pn		**Pn**	**08 19 27.3**	**+1.3**
PFO	**Pinyon Flats O**	**4.80**	**126**	Pn		**Pn**	**08 19 27.1**	**+0.9**
XPFO	**Pion Flat**	**4.80**	**126**	Pn		**Pn**	**08 19 27.3**	**+1.1**

IDC ***15*** *08:36:14.3±0.8,9.°03N×138.°36E, h0km, mb4.1/10, mb1 4.4/12, mb1mx4.1/41, mbtmp4.2/12, ML4.7/2, MS3.4/18, Ms1 3.4/18, ms1mx3.1/59, Error ellipse: s-maj=29.3km s-min=15.6km az=85.0*

NEIC ***15*** *08:36:16.6±1.2, 8.°98N±0.°03×138.°3E±0.°2, h13km±5km, mb4.5/7, Error ellipse: s-maj=21.6km s-min=2.5km az=97.0*

ISC 15 08:36:19.6±0.7, 8.°93N±0.°07×138.°4E±0.°1, h35km, n37, σ1§11/22, mb4.3/15, MS3.4/15, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**7.86**	**53**	LR		LR	08 41 03.6	
	comp=Z,135nm,19.4s,baz=182,slow=37							
JAY	**Jayapura**	**11.60**	**168**	Pn		**Pn**	**08 39 04.1**	**+1.3**
	8.6nm,0.3s,baz=153,slow=16,SNR=20							
JAY				Sn		**Sn**	**08 41 08.3**	**-2.9**
	1.8nm,0.3s,baz=90,slow=20,SNR=3.8							
SIJI	**Sorong**	**12.05**	**216**	Pn		**Pn**	**08 39 09.4**	**+0.5**
	2.4nm,0.3s,baz=22,slow=17,SNR=4.6							
DAV	**Davao City (W)**	**12.83**	**263**	LR		LR	08 43 10.3	
	comp=Z,100nm,21.2s,baz=104,slow=32							
FAKI	**Fak Fak**	**13.27**	**208**	Pn		**Pn**	**08 39 27.8**	**+2.2**
KRVT	**Keravat (AS076**	**18.91**	**134**	LR		LR	08 46 28.4	
	comp=Z,117nm,21.6s,baz=305,slow=32							
PMG	**Port Moresby**	**20.20**	**154**	LR		LR	08 47 49.8	
	comp=Z,141nm,21.5s,baz=309,slow=34							
HNR	**Honiara**	**28.16**	**130**	LR		LR	08 52 05.8	
	comp=Z,78nm,21.3s,baz=304,slow=34							
WRA	**Warramunga Arr**	**28.97**	**188**	P		**P**	**08 42 15.9**	**-0.1**
	1.0nm,0.8s,baz=6.2,slow=9.5,SNR=5.0							
H11S3	**WAKE ISLAND Hy**	**29.04**	**68**	T		T	09 12 49.1	
	baz=254,slow=75,SNR=6.9							
H11S1	**WAKE ISLAND Hy**	**29.06**	**68**	T		T	09 12 48.6	
	baz=254,slow=75,SNR=3.5							
H11S2	**WAKE ISLAND Hy**	**29.06**	**68**	T		T	09 12 47.4	
	baz=254,slow=75,SNR=8.1							
KSRS	**Korea Array**	**29.94**	**343**	LR		LR	08 54 06.7	
	comp=Z,41nm,18.2s,baz=165,slow=36							
ASAR	**Alice Springs**	**32.69**	**188**	P		**P**	**08 42 49.5**	**+0.7**
	2.6nm,0.5s,baz=16,slow=12,SNR=68							
CMAR	**Chiang Mai Arr**	**39.41**	**288**	P		**P**	**08 43 45.5**	**-0.9**
	1.3nm,0.3s,baz=99,slow=7.0,SNR=5.8							
CMAR				LR		LR	08 58 34.6	
	comp=Z,41nm,21.4s,baz=66,slow=34							
KLR	**Kul'dur**	**40.55**	**353**	LR		LR	08 59 42.5	
	comp=Z,30nm,18.5s,baz=170,slow=35							
STKA	**Stephens Creek**	**40.69**	**176**	P		**P**	**08 43 56.9**	**+0.1**
	1.8nm,0.7s,baz=319,slow=6.8,SNR=6.5							
STKA				LR		LR	09 00 49.1	
	comp=Z,67nm,20.5s,baz=25,slow=36							
FORT	**Forrest**	**40.71**	**194**	P		**P**	**08 43 57.9**	**+1.0**
FORT				IAmb		IAmb	08 44 06.7	
	comp=Z,13nm,1.1s							
DZM	**Mont Dzumac**	**41.30**	**139**	LR		LR	08 58 12.1	
	comp=Z,114nm,19.4s,baz=230,slow=32							
BBOO	**Buckleboo**	**41.57**	**183**	P		**P**	**08 44 04.3**	**+0.3**
SONM	**Songino Array**	**47.27**	**331**	P		**P**	**08 44 49.2**	**-0.5**
	comp=Z,4.5nm,0.9s,baz=146,slow=8.4,SNR=19							
SONM				LR		LR	09 04 02.2	
	comp=Z,45nm,22.0s,baz=346,slow=35							
TLY	**Talaya**	**51.24**	**333**	LR		LR	09 08 49.4	
	comp=Z,35nm,18.2s,baz=113,slow=38							
AFI	**Afiamalu**	**54.40**	**114**	LR		LR	09 05 24.9	
	comp=Z,60nm,18.4s,baz=78,slow=32							
MKAR	**Makanchi Array**	**60.62**	**319**	P		**P**	**08 46 26.8**	**-0.2**
	comp=Z,5.9nm,0.8s,baz=106,slow=9.1,SNR=48							
MKAR				LR		LR	09 11 56.6	
	comp=Z,28nm,21.0s,baz=62,slow=35							
MAKZ	**Makanchi**	**60.83**	**319**	P		**P**	**08 46 28.5**	**+0.1**
ZALV	**Zalesovo Beam**	**61.89**	**327**	P		**P**	**08 46 33.9**	**-1.5**
	comp=Z,1.7nm,0.8s,baz=96,slow=4.1,SNR=5.7							
ZALV				LR		LR	09 15 09.7	
	comp=Z,27nm,18.5s,baz=147,slow=38							
KURK	**Kurchatov**	**64.20**	**322**	P		**P**	**08 46 50.3**	**-0.5**
KURK				IAmb		IAmb	08 46 51.3	
	comp=Z,7.5nm,1.0s							
PPLA	**Purkeypile**	**72.77**	**27**	P		**P**	**08 47 44.5**	**+0.1**
MLY	**Manley**	**73.91**	**25**	P		**P**	**08 47 51.9**	**+1.0**
MLY				IAmb		IAmb	08 47 55.0	
	comp=Z,5.1nm,1.1s							
ILAR	**Eielson Array**	**75.47**	**25**	P		**P**	**08 47 59.3**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=245,slow=5.9,SNR=15							
ABKAR	**Akbulak array**	**75.75**	**319**	P		**P**	**08 48 01.3**	**-0.5**
ABKAR				IAmb		IAmb	08 48 01.5	
	comp=Z,2.7nm,0.8s							
PPT	**Papeete**	**75.84**	**111**	LR		LR	09 16 42.3	
	comp=Z,22nm,20.2s,baz=136,slow=32							
DOT	**Dot Lake**	**76.52**	**27**	P		**P**	**08 48 06.9**	**+1.0**
DOT				IAmb		IAmb	08 48 07.5	
	comp=Z,3.8nm,1.0s							
YKA	**Yellowknife Ar**	**89.86**	**26**	P		**P**	**08 49 14.9**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=287,slow=5.2,SNR=6.5							
NVAR	**Mina Array Bea**	**94.76**	**50**	P		**P**	**08 49 38.8**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=255,slow=6.4,SNR=4.1							
AKASG	**Malin Array Be**	**95.01**	**323**	LR		LR	09 34 26.0	
	comp=Z,23nm,19.7s,baz=65,slow=37							
NOA	**NORSAR Array B**	**98.97**	**337**	LR		LR	09 36 02.8	
	comp=Z,18nm,21.9s,baz=260,slow=36							

VAO ***15*** *08:38:07.4±0.5, 31.°24S×68.°17W, h90km±4km, mb5.4*

MOS ***15*** *08:38:07.3±1.2, 31.°17S×68.°12W, h99km, mb5.2/13, Error ellipse: s-maj=13.3km s-min=7.0km az=91.7*

SJA ***15*** *08:38:07.6±0.8, 31.°13S×68.°21W, h116km±4km, ML5.5, MW5.2*

IDC ***15*** *08:38:08.6±0.2, 31.°16S×68.°13W, h102km±2km, mb4.8/25, mb1 4.8/30, mb1mx4.8/36, mbtmp5.1/30, MS3.7/8, Ms1 3.7/8, ms1mx3.5/21, Error ellipse: s-maj=11.5km s-min=6.3km az=97.0*

GUC ***15*** *08:38:08.3±0.7, 31.°10S×68.°36W, h142km±30km, ML5.7*

NEIC ***15*** *08:38:08.8±2.0, 31.°14S±0.°05×68.°12W±0.°08, h105km±3km, mb5.2/282, Md5.6(SJA), Error ellipse: s-maj=9.6km s-min=6.8km az=86.0*

GCMT ***15*** *08:38:13.8±0.2, 31.°27S±0.°01×68.°25W±0.°02, h123km±1km, MW5.2/95, Moment Tensor Solution. s57,c68; s95,c137; Duration: 1§0 Moment tensor: Scale 10^16 Nm; Mrr-3.61±.17; Mθθ2.38±.24; Mϕϕ1.23±.31; Mrθ-1.64±.13; Mθϕ7.95±.20; Mϕr-0.45±.20; Best double couple: M08.17200×10^16 NP1:ϕs182.00000°, δ74.00000°, λ-173.00000°. NP2:ϕs90.00000°, δ83.00000°, λ-16.00000°. Principal axes: T 9.9440, Plg6.0000°, Azm137.0000°; N -3.5450, Plg72.0000°, Azm248.0000°; P -6.3990, Plg17.0000°, Azm45.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 15 08:38:08.5±0.3, 31.°13S±0.°03×68.°18W±0.°04, h103km±2km, h103km:pP-P, n867, σ1§10/841, mb5.2/157, 8C-13D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RTLL	**Cerro Villicun**	**0.32**	**231**	||iP	**Pn**	**08 38 24.2**	**+0.6**
RTLL				*e*S		**Sn**	**08 38 35.4**	**+0.4**
RTLL	**Cerro Villicun**	**0.32**	**231**	*i* P		**Pn**	**08 38 24.8**	**+1.1**
RTLL				*i* S		**Sn**	**08 38 37.4**	**+2.4**
AMOG	**MOGNA**	**0.33**	**305**	*i* P		**Pn**	**08 38 25.0**	**+1.3**
CFA	**Coronel Fontan**	**0.48**	**186**	P		**Pn**	**08 38 26.1**	**+1.5**
	13μm,0.3s,baz=351,slow=6.9							
CFA				S		**Sn**	**08 38 37.8**	**+1.2**
	10μm,0.3s,baz=282,slow=20,SNR=132							
CFA	**Coronel Fontan**	**0.48**	**186**	*i* P		**Pn**	**08 38 25.2**	**+0.6**
CFA				*i* S		**Sn**	**08 38 39.0**	**+2.4**
SJA	**San Juan**	**0.51**	**219**	*i* P		**Pn**	**08 38 25.8**	**+1.0**
SJA				*i* S		**Sn**	**08 38 39.1**	**+2.0**
ZON	**Zonda**	**0.59**	**226**	*i* P		**Pn**	**08 38 26.0**	**+0.6**
ZON				*i* S		**Sn**	**08 38 40.4**	**+2.3**
RTCV	**Cerro Valdivia**	**0.79**	**203**	*i* P		**Pn**	**08 38 27.4**	**+0.2**
RTLS	**Leoncito**	**1.16**	**235**	*i* P		**Pn**	**08 38 32.5**	**+1.2**
RTLS				*i* S		**Sn**	**08 38 50.9**	**+2.5**
RTLS				IAML			08 38 51.8	
	comp=Z,60μm,0.5s							
ACAN	**Cantantal**	**1.42**	**144**	*i* P		**Pn**	**08 38 35.4**	**+1.4**
ASAL	**Salagasta**	**1.56**	**201**	*i* P		**Pn**	**08 38 36.4**	**+0.6**
VCA	**Vinchina**	**2.38**	**359**	IAML			08 39 19.6	
	comp=Z,30μm,0.4s							
CO02	**Combarbal**	**2.42**	**268**	⇑P		**Pn**	**08 38 46.9**	**+0.2**
CO02				*i* S		**Sn**	**08 39 16.4**	**+0.3**
GO04	**Tololo Observa**	**2.45**	**292**	⇑*e*P		**Pn**	**08 38 47.9**	**+0.6**
GO04				*i* S		**Sn**	**08 39 17.8**	**+0.8**
GO04	**Tololo Observa**	**2.45**	**292**			**Pn**	**08 38 48.2**	**+1.0**
GO04				Sn		**Sn**	**08 39 18.0**	**+1.0**
VA03	**San Esteban**	**2.59**	**230**	⇓*e*P		**Pn**	**08 38 49.6**	**+0.6**
VA03				*e*S		**Sn**	**08 39 21.2**	**+1.2**
VA03				IAML			08 39 24.8	
	comp=E,31μm,0.5s							
FCH	**Farellones**	**2.83**	**219**	⇓*i* P		**Pn**	**08 38 53.5**	**+1.2**
FCH				*i* S		**Pn**	**08 39 28.1**	**+2.1**
LSCH	**La Serena**	**2.91**	**294**	*e*P		**Pn**	**08 38 53.0**	**-0.1**
LSCH				*e*S		**Sn**	**08 39 25.7**	**-1.8**
PEL	**Peldehue**	**2.92**	**226**	P		**Pn**	**08 38 53.5**	**+0.2**
PEL						**Sn**	**08 39 26.6**	
PEL	**Peldehue**	**2.92**	**226**	⇓*i* P		**Pn**	**08 38 53.3**	**0.0**
PEL				*i* S		**Sn**	**08 39 27.7**	**-0.2**
PEL				IAML			08 39 29.9	
	comp=E,13μm,0.4s							
PEL	**Peldehue**	**2.92**	**226**			**Pn**	**08 38 53.5**	**+0.2**
PEL				Sn		**Sn**	**08 39 26.6**	**-1.3**
CLCH	**Cerro Calan**	**3.02**	**221**	⇓*i* P		**Pn**	**08 38 55.2**	**+0.6**
CLCH				*e*S		**

SJMB Sao Joao De Ma 27.35 69 eP P 08 43 43.1 -0.9
BSFB Barra de Sao F 27.56 70 eP P 08 43 45.9 +0.1
SMTB Santa Maria do 29.31 45 eP P 08 44 02.5 +1.1
NBIT Itapeh - BA 30.85 65 eP P 08 44 15.8 +0.7
PTLC Puerto Leguiza 31.76 347 eP P 08 44 21.5 -1.5
HOPE Hope Point 32.38 145 P P 08 44 27.8 -0.2
HOPE pmax pmax
comp=Z,125nm,1.2s
HOPE Hope Point 32.38 145 P P 08 44 27.8 -0.2
OTAV Otavalo 32.68 341 P P 08 44 33.8 +2.2
OTAV pmax pmax
comp=Z,21nm,1.0s
OTAV Otavalo 32.68 341 eP P 08 44 33.4 +1.8
OTAV Otavalo 32.68 341 P P 08 44 33.8 +2.2
NBPN Ponto Novo - B 32.85 58 eP P 08 44 32.3 -0.3
FLOC Florencia 33.30 346 eP P 08 44 38.3 +1.9
FLOC Florencia 33.30 346 P P 08 44 38.3 +1.9
CRUC La Cruz 33.57 344 eP P 08 44 42.6 +3.4
PMSA Palmer Station 33.77 177 P P 08 44 40.3 +0.4
comp=Z,26nm,0.8s,baz=19,slow=17,SNR=3.1
PMSA LR LR 08 57 14.8
comp=Z,234nm,21.5s,baz=332,slow=34
PMSA Palmer Station 33.77 177 P P 08 44 40.0 +0.1
SOTA Rioblanco 34.04 345 eP P 08 44 46.2 +2.9
BBAC Balboa, Cauca 34.08 344 eP P 08 44 46.0 +2.6
PCON Cinco Dias 34.18 345 eP P 08 44 48.1 +3.5
NBLA Lagarto - SE 34.54 61 eP P 08 44 47.2 0.0
ORTC Ortega, Tolima 35.49 348 eP P 08 44 57.4 +2.0
NBTA Tacaratu-PE 35.56 58 eP P 08 44 56.1 +0.1
YOTC Yotoco, Valle 35.77 346 eP P 08 44 59.1 +1.2
CHIC Chingaza 35.95 351 eP P 08 45 00.8 +1.1
ROSC El Rosal 36.24 350 P P 08 45 03.4 +1.2
comp=Z,11nm,0.4s,baz=124,slow=9.3,SNR=8.7
NBMA Muriti-CE 36.25 55 eP P 08 45 02.9 +1.0
RREF El Recreo 36.48 348 eP P 08 45 06.8 +2.4
NBAN Anadia - AL 36.52 61 eP P 08 45 04.1 -0.1
NBPS Pedro II - PI 36.60 49 eP P 08 45 05.3 +0.4
GUY2C Guyana, Caldas 36.79 348 eP P 08 45 08.2 +1.2
NBPB Pedra_Branca-C 36.98 52 eP P 08 45 10.2 +2.1
SPBC San Pablo de B 37.00 351 eP P 08 45 09.2 +0.9
RUSC La Rusia 37.11 352 eP P 08 45 10.3 +0.6
RUSC La Rusia 37.11 352 P P 08 45 10.4 +0.8
TAMC Tame, Arauca 37.51 354 eP P 08 45 12.2 -0.3
CBOC Ciudad Bolivar 37.54 347 eP P 08 45 14.9 +2.0
NBLI Livramento-PB 37.55 58 eP P 08 45 13.0 0.0
HELC Santa Helena 37.77 348 eP P 08 45 15.6 +0.5
PTBC PUERTO BERRIO, 37.93 350 eP P 08 45 14.9 -1.1
SOLC Bahia Solano 38.18 345 eP P 08 45 20.4 +2.3
NBMO Morrinhos-CE 38.33 49 eP P 08 45 20.2 +0.8
PAMC Pamplona, Colo 38.49 353 eP P 08 45 21.1 -0.2
NBPA Parau_RN 38.55 55 eP P 08 45 21.9 +0.6
DBBC Dabeiba 38.70 347 eP P 08 45 24.2 +1.7
ZARC Zaragoza, Cauc 38.93 349 eP P 08 45 23.9 -0.5
MDP Montagnes des 38.97 25 P P 08 45 25.4 +0.7
comp=Z,25nm,0.8s,baz=194,slow=9.0,SNR=9.8
MDP pP pP 08 45 48.4 -0.3
comp=Z,23nm,0.7s,baz=212,slow=9.5,SNR=2.6
UREC San Jos de Ur 39.30 348 eP P 08 45 27.7 +0.2
RCBR Riachuelo 39.36 57 P P 08 45 28.4 +0.4
comp=Z,168nm,0.8s,baz=308,slow=0.3,SNR=2.2
RCBR Riachuelo 39.36 57 eP P 08 45 28.8 +0.8
NBPV Pedro Velho 39.40 58 eP P 08 45 29.5 +1.2
OCAC Ocana 39.45 352 eP P 08 45 27.5 -1.4
SDV Santo Domingo 39.86 356 P P 08 45 31.6 -0.7
comp=Z,11nm,0.3s,baz=196,slow=6.2,SNR=14
SDV Santo Domingo 39.86 356 eP P 08 45 32.8 +0.5
SMLC San Martn de 40.10 351 eP P 08 45 32.3 -1.8
ARGC Ariguani, Magd 41.10 351 eP P 08 45 43.8 +0.9
PLCV Puerto La Cruz 41.20 5 pP 08 46 08.0 +0.8
PCRV Puerto La Cruz 41.21 5 P P 08 45 43.4 +0.1
comp=Z,12nm,0.6s,baz=156,slow=5.4,SNR=6.6
PCRV pP pP 08 46 08.0 +0.7
comp=Z,19nm,0.9s,baz=231,slow=3.2,SNR=2.9
SJCC San Jacinto, C 41.34 350 eP P 08 45 43.6 -0.7
TOSP Speyside 42.82 11 P P 08 45 56.9 +0.7
GRGR Grenville 43.47 9 P P 08 46 01.4 -0.1
JTS Las Juntas de 44.22 336 P P 08 46 08.5 +1.0
JTS pmax pmax
comp=Z,15nm,0.9s
JTS Las Juntas de 44.22 336 P P 08 46 08.6 +1.0
comp=Z,12nm,0.7s,baz=208,slow=2.1,SNR=11
JTS Las Juntas de 44.22 336 P P 08 46 08.5 +1.0
SVB Belmont 44.64 10 P P 08 46 10.8 -0.1
ESPN Las Esperanzas 45.77 338 P P 08 46 21.1 +1.3
MLPR Magueyes Islan 48.83 1 P P 08 46 42.9 -0.5
MLPR IAmb IAmb 08 47 09.9
comp=Z,48nm,0.8s
PDPR Patillas Dam, 48.91 3 IAmb IAmb 08 46 44.4
comp=Z,36nm,0.8s
SJG San Juan 49.00 3 P P 08 46 44.3 -0.4
comp=Z,25nm,0.7s,baz=136,slow=3.0,SNR=8.3
SJG pP pP 08 47 09.9 +0.5
comp=Z,28nm,0.7s,baz=262,slow=4.6,SNR=2.7
MTP Monte Pirata 49.01 3 P P 08 46 43.9 -0.9
MTP IAmb IAmb 08 47 21.3
comp=Z,25nm,0.9s
CBYP Canovanas 49.17 3 P P 08 46 45.7 -0.4
CBYP IAmb IAmb 08 47 13.0
comp=Z,46nm,0.9s
GCPR Guaynabo City 49.20 3 P P 08 46 45.6 -0.6
AOPR Arecibo Observ 49.21 2 P P 08 46 45.7 -0.7
BANI BANI 49.28 357 P P 08 46 43.6 -3.4
STVI Saint Thomas 49.29 4 P P 08 46 45.8 -1.2
STVI IAmb IAmb 08 47 40.4
comp=Z,29nm,0.8s
DR12 Loma Pena Alta 49.64 359 P P 08 46 49.5 -0.3
MTDJ Mount Denham 49.89 348 P P 08 46 52.3 +0.6
SDDR Presa de Saban 49.91 356 P P 08 46 52.3 +0.6
SDDR IAmb IAmb 08 47 38.3
comp=Z,24nm,0.8s
VNA3 Neumayer Olymp 50.83 159 P P 08 46 58.7 +0.6
VNA1 Neumayer--Stat 51.08 158 P P 08 47 00.8 +0.9
GTBY Guantanamo Bay 51.20 352 P P 08 46 58.6 -2.7
SNAA Sanae 53.05 159 P P 08 47 14.9 +0.3
SNAA Sanae 53.05 159 P P 08 47 14.5 -0.1
SNAA pmax pmax
comp=Z,88nm,1.2s
SNAA Sanae 53.05 159 P P 08 47 14.8 +0.2
comp=Z,9.7nm,0.3s,baz=282,slow=6.2,SNR=45
SNAA pP pP 08 47 39.1 -0.7
comp=Z,25nm,0.9s,baz=251,slow=9.4,SNR=4.3
SNAA Sanae 53.05 159 P P 08 47 14.5 -0.1
TEIG Tepich 54.59 337 P P 08 47 26.6 +0.3
NVL N'lazarevskaya 57.68 157 eP P 08 47 46.7 -1.0
NVL e*PP pP 08 48 09.5 -3.7
NVL e 08 48 26.9
NVL eS S 08 55 43.1 +5.2
NVL pmax pmax
comp=Z,40nm,0.9s
060A Indiantown 59.00 347 P P 08 47 56.8 -0.5
baz=168
QSPA South Pole Qui 59.10 180 P P 08 47 58.2 +0.3
DWPF Disney Wildern 60.25 347 P P 08 48 05.0 -0.8
baz=167
656A Willston 61.70 346 P P 08 48 16.1 +0.5
553A Crawfordville 62.91 344 P P 08 48 24.4 +0.7
TIGA Tifton 63.92 345 P P 08 48 30.0 -0.3
baz=165
353A Camilla 63.97 345 P P 08 48 30.5 -0.2
baz=165,SNR=7.3
256A Glennville 64.10 347 P P 08 48 31.0 -0.5
baz=167
255A Hazlehurst 64.16 347 P P 08 48 31.5 -0.4
baz=166
352A Blakely 64.26 344 P P 08 48 32.0 -0.5
baz=164,SNR=9.2
254A Abbeville 64.34 346 P P 08 48 33.1 -0.1
baz=166,SNR=5.3
BRAL Brewton 64.49 342 P P 08 48 34.2 +0.1
baz=162
158A Hollywood 64.53 349 P P 08 48 34.7 +0.4
baz=169
157A Early Branch 64.61 348 P P 08 48 34.4 -0.4
baz=168
253A Americus 64.64 345 P P 08 48 34.7 -0.3
baz=165
156A Sylvania 64.68 348 P P 08 48 35.8 +0.5
baz=167
252A Lumpkin 64.71 344 P P 08 48 35.1 -0.4
baz=164
155A Kite 64.83 347 P P 08 48 36.3 +0.1
baz=166
NHSC New Hope 64.89 349 P P 08 48 37.2 +0.5
baz=169
154A Montrose 64.95 346 P P 08 48 36.6 -0.4
baz=166,SNR=7.8
Z58A St. Stephen 65.05 349 P P 08 48 37.6 0.0
baz=169,SNR=6.0
153A Fort Valley 65.14 345 P P 08 48 37.9 -0.4
baz=165
Z57A Bowman 65.16 348 P P 08 48 38.8 +0.4
baz=168,SNR=10
Z56A Williston 65.31 348 P P 08 48 39.6 +0.3
baz=168,SNR=6.5
Z55A Blythe 65.35 347 P P 08 48 39.4 -0.2
baz=167
152A Waverly Hall 65.35 345 P P 08 48 39.4 -0.3
baz=164,SNR=8.0
Y60A Bolivia 65.47 351 P P 08 48 40.5 +0.1
baz=170
Z54A Sparta 65.50 347 P P 08 48 40.5 -0.1
baz=166,SNR=6.1
Y59A Loris 65.55 350 P P 08 48 40.9 0.0
baz=170
Y58A Scranton 65.59 350 P P 08 48 41.3 +0.2
baz=169
Z53A Monticello 65.69 346 P P 08 48 41.5 -0.3
baz=166,SNR=5.5
Y56A Pelion 65.75 348 P P 08 48 41.5 -0.7
baz=168
Z52A Williamson 65.79 345 P P 08 48 42.0 -0.4
baz=165,SNR=8.1
GOGA Godfrey 65.80 346 P P 08 48 42.4 -0.1
baz=166,SNR=5.9
Y57A Sumter 65.81 349 P P 08 48 42.3 -0.3
baz=168
Y55A Saluda 65.99 348 P P 08 48 44.0 +0.2
baz=167,SNR=6.6
X60A Albert Glenn T 66.00 351 P P 08 48 43.7 -0.1
baz=171
Y54A Tignall 66.08 347 P P 08 48 44.2 -0.1
baz=166,SNR=6.7
X59A McDuffie Farm, 66.08 351 P P 08 48 44.4 +0.1
baz=170,SNR=5.3
X58A Rowland 66.17 350 P P 08 48 45.3 +0.4
baz=170,SNR=11
833A Chaparral WMA, 66.19 330 P P 08 48 46.4 +1.3
baz=151,SNR=32
HKT Hockley 66.19 334 P P 08 48 45.5 +0.5
HKT pmax pmax
comp=Z,38nm,1.3s
HKT Hockley 66.19 334 P P 08 48 45.5 +0.5
HKT IAmb IAmb 08 48 47.8
comp=Z,38nm,1.3s
Z50A Ashland 66.19 344 P P 08 48 45.1 +0.1
Z50A IAmb IAmb 08 48 46.2
comp=Z,36nm,0.8s
Z50A Ashland 66.19 344 P P 08 48 45.0 -0.1
baz=163,SNR=13
X57A Johnson Farm, 66.20 349 P P 08 48 45.6 +0.5
baz=169
LRAL Lakeview Retre 66.25 343 IAmb IAmb 08 48 46.6
comp=Z,30nm,1.4s
LRAL Lakeview Retre 66.25 343 P P 08 48 45.3 -0.1
baz=162,SNR=5.1
Y53A Monroe 66.25 346 P P 08 48 45.3 -0.1
baz=166,SNR=9.0
Y52A Lilburn 66.36 346 IAmb IAmb 08 48 47.3
comp=Z,32nm,0.8s
Y52A Lilburn 66.36 346 P P 08 48 46.1 -0.1
baz=165,SNR=12
X56A White Oak 66.39 348 P P 08 48 46.4 +0.2
baz=168,SNR=6.2
BIRD Birdtown, Kers 66.44 349 IAmb IAmb 08 48 48.2
comp=Z,17nm,0.7s
W60A Pink Hill 66.44 351 P P 08 48 47.1 +0.6
baz=171
VBMS Vicksburg 66.46 339 P P 08 48 47.5 +0.8
baz=159,SNR=8.5
X55A Gracelyn & Ava 66.47 348 P P 08 48 47.2 +0.4
baz=167,SNR=5.8
Y51A Rockmart 66.61 345 P P 08 48 47.8 0.0
baz=164
W58A Raeford 66.62 350 P P 08 48 48.3 +0.6
baz=170,SNR=9.5
CNNC Cliffs of the 66.65 351 P P 08 48 48.8 +0.9
baz=171
W59A Clinton 66.65 351 P P 08 48 48.4 +0.6
baz=170
X54A Belton 66.68 347 P P 08 48 48.4 +0.3
baz=167,SNR=5.2
X53A Estanollee 66.82 346 P P 08 48 49.3 +0.3
baz=166,SNR=6.4
PAULI Pauline 66.84 348 P P 08 48 49.7 +0.5
W57A Gilead 66.86 349 IAmb IAmb 08 48 50.8
comp=Z,26nm,0.7s
W57A Gilead 66.86 349 P P 08 48 49.5 +0.3
baz=169,SNR=7.9
Y49A Blount Mountai 66.89 344 P P 08 48 49.5 0.0
Y49A IAmb IAmb 08 48 50.6
comp=Z,24nm,1.1s
W56A Indian Trail 66.94 349 P P 08 48 49.5 -0.3
baz=168
X52A Dahlonega 67.04 346 P P 08 48 50.5 +0.1
baz=165,SNR=11
KMSC Kings Mountain 67.07 348 P P 08 48 50.6 0.0
baz=168
W54A Cherokee Point 67.17 348 P P 08 48 51.6 +0.4
baz=167,SNR=8.0
X51A Calhoun 67.21 345 P P 08 48 51.7 +0.3
baz=164,SNR=17
V59A Middlesex 67.21 351 P P 08 48 52.3 +0.9
baz=171,SNR=5.7
SYO Syowa Base 67.32 158 ||iP P 08 48 50.3 -1.5
SYO Syowa Base 67.32 158 ||iPP PP 08 49 15.0 -3.1
SYO Syowa Base 67.32 158 ||iPcP PcP 08 49 17.4 -1.4
W58A Windy Hill, Pi 67.36 350 IAmb IAmb 08 48 54.0
comp=Z,28nm,0.7s
V58A Windy Hill, Pi 67.36 350 P P 08 48 52.7 +0.3
baz=170,SNR=7.2
NATX Nacogdoches 67.39 336 P P 08 48 53.8 +1.1
baz=156,SNR=6.6
W53A Cullowhee 67.44 347 P P 08 48 53.1 0.0
baz=166,SNR=9.4
W52A Murphy 67.52 346 IAmb IAmb 08 48 54.9
comp=Z,26nm,0.8s
W52A Murphy 67.52 346 P P 08 48 53.7 +0.2
baz=165,SNR=11
VNDA Vanda 67.53 190 P P 08 48 54.3 +1.3
VNDA pmax pmax
comp=Z,49nm,1.8s
VNDA Vanda 67.53 190 P P 08 48 53.8 +0.8
comp=Z,5.6nm,0.8s,baz=137,slow=6.0,SNR=17
VNDA pP pP 08 49 18.6 -0.4
comp=Z,6.4nm,0.7s,baz=162,slow=4.0,SNR=8.0
VNDA Vanda 67.53 190 P P 08 48 54.3 +1.3
VNDA IAmb IAmb 08 49 23.6
comp=Z,48nm,1.8s
V57A Coltrane Farms 67.55 350 P P 08 48 53.3 -0.2
baz=169
U61A Possum Corner 67.55 353 P P 08 48 54.6 +1.0
baz=172
V56A Mocksville 67.58 349 P P 08 48 54.3 +0.5
baz=168,SNR=10
435B Jarrell 67.61 333 P P 08 48 54.5 +0.4
baz=153,SNR=5.1
X48A Hartselle 67.61 343 IAmb IAmb 08 48 55.5
comp=Z,44nm,1.1s
U59A Littleton 67.73 352 IAmb IAmb 08 48 56.9
comp=Z,35nm,1.1s
U59A Littleton 67.73 352 P P 08 48 55.3 +0.6
baz=171,SNR=6.0
V55A Taylorsville 67.74 349 IAmb IAmb 08 48 56.5
comp=Z,25nm,0.8s
V55A Taylorsville 67.74 349 P P 08 48 55.4 +0.5
baz=168,SNR=8.0
W51A Cleveland 67.76 345 P P 08 48 55.1 +0.1
baz=165,SNR=9.9
U60A Pendleton 67.77 352 P P 08 48 55.5 +0.5
baz=172,SNR=5.8
V54A Nebo 67.80 348 P P 08 48 54.9 -0.3
baz=167,SNR=12
V53A Saluda 67.85 347 IAmb IAmb 08 48 56.8
comp=Z,23nm,0.8s
V53A Saluda 67.85 347 P P 08 48 55.4 -0.2
baz=166,SNR=9.4
U58A Oxford 67.87 351 P P 08 48 56.1 +0.5
baz=170,SNR=7.1
W50A Signal Mountai 67.92 345 P P 08 48 55.9 -0.1
baz=164,SNR=18
HPIG 67.93 324 IAmb IAmb 08 48 59.2
comp=Z,32nm,0.9s
CPCT Cooper Cave 67.99 346 IAmb IAmb 08 48 57.6
comp=Z,30nm,0.7s
U57A Blanch 68.02 350 P P 08 48 56.9 +0.4
baz=170,SNR=6.9
W49A Belvidere 68.06 344 P P 08 48 56.6 -0.3
baz=163,SNR=12
U56A King 68.09 349 P P 08 48 57.3 +0.3
baz=169,SNR=6.5
Z41A Richland Creek 68.14 338 P P 08 48 58.1 +0.8
baz=157,SNR=5.8
V52A Sevierville 68.17 347 IAmb IAmb 08 48 58.4
comp=Z,28nm,0.8s
V52A Sevierville 68.17 347 P P 08 48 56.9 -0.6
baz=166,SNR=8.2
JCT Junction City 68.24 331 P P 08 48 58.7 +0.6
baz=151,SNR=23
OXF Oxford 68.29 341 IAmb IAmb 08 48 59.1
comp=Z,24nm,0.7s
OXF Oxford 68.29 341 P P 08 48 57.9 -0.3
baz=160,SNR=7.2
V51A Loudon 68.29 346 P P 08 48 57.9 -0.4
V51A IAmb IAmb 08 48 59.2
comp=Z,22nm,0.8s
V51A Loudon 68.29 346 P P 08 48 58.0 -0.2
baz=165,SNR=5.7
T59A Double "B" Far 68.31 352 IAmb IAmb 08 49 00.4
comp=Z,34nm,1.1s
T59A Double "B" Far 68.31 352 P P 08 48 58.9 +0.6
baz=171,SNR=6.1
V50A Pikevile 68.32 345 P P 08 48 58.5 +0.1
baz=164,SNR=22
U55A TA2, Sparta 68.35 349 P P 08 48 58.7 0.0
baz=168
T60A Surry 68.38 353 P P 08 48 59.5 +0.8
baz=172,SNR=6.0
T58A Grand View Acr 68.41 351 P P 08 48 59.6 +0.6
baz=170,SNR=17
U53A Fall Branch 68.48 348 P P 08 48 59.1 -0.4
baz=167,SNR=6.0
U54A Nelsons Funny 68.50 348 IAmb IAmb 08 49 00.9
comp=Z,46nm,0.8s
U54A Nelsons Funny 68.50 348 P P 08 48 59.6 0.0
baz=167,SNR=14
T57A Hurt 68.56 350 IAmb IAmb 08 49 01.7
comp=Z,21nm,0.8s
T57A Hurt 68.56 350 P P 08 49 00.3 +0.4
baz=170,SNR=6.0
V49A McMinnville 68.59 345 P P 08 48 60.0 -0.2
baz=164,SNR=24
WHTX Lake Whitney, 68.63 334 P P 08 49 00.9 +0.4
baz=153,SNR=7.5
U52A Thorn Hill 68.66 347 P P 08 49 00.3 -0.3
baz=166
T56A Rocky Mt 68.70 350 P P 08 49 01.6 +0.8
baz=169,SNR=7.8
X43A Marvell 68.71 340 P P 08 49 01.3 +0.5
baz=159,SNR=10.0
U51A La Follette 68.78 346 P P 08 49 01.3 0.0
baz=165,SNR=9.7
S61A Accomac 68.81 354 P P 08 49 02.2 +0.8
baz=173
TZTN Tazewell 68.84 347 IAmb IAmb 08 49 02.6
comp=Z,98nm,1.9s
TZTN Tazewell 68.84 347 P P 08 49 01.2 -0.5
baz=166
T55A Pulaski 68.91 349 P P 08 49 02.7 +0.6
baz=168,SNR=7.2
S60A Water View 68.94 353 P P 08 49 02.4 +0.3
baz=172
BLA Blacksburg 68.94 350 P P 08 49 02.7 +0.4
baz=169
TXAR Lajitas Array 68.96 327 P P 08 49 03.7 +1.0
comp=Z,12nm,0.8s,baz=149,slow=8.2,SNR=99
U50A Jamestown 68.98 346 P P 08 49 02.3 -0.3
baz=165,SNR=6.9
T54A Tazewell 68.98 349 P P 08 49 02.6 0.0
baz=168,SNR=8.8
S58A Poland Farm, P 69.00 352 IAmb IAmb 08 49 04.9
comp=Z,43nm,0.8s
S58A Poland Farm, P 69.00 352 P P 08 49 03.4 +0.8
baz=171,SNR=10
S59A Mechanicsville 69.06 352 P P 08 49 03.8 +0.8
baz=172,SNR=6.6
T53A Wise 69.08 348 P P 08 49 03.2 0.0
baz=167,SNR=5.7
S57A Dark Hollow, R 69.27 351 IAmb IAmb 08 49 06.3
comp=Z,35nm,0.7s
S57A Dark Hollow, R 69.27 351 P P 08 49 04.7 +0.4
baz=170,SNR=11
S56A Natural Bridge 69.27 350 P P 08 49 04.7 +0.4
baz=170,SNR=8.9
X40A Basin Creek Fa 69.28 338 P P 08 49 05.2 +0.8
baz=158
T52A Hallie 69.28 347 P P 08 49 03.9 -0.5
baz=166
U49A Red Boiling Sp 69.28 345 P P 08 49 03.9 -0.5
baz=164,SNR=7.8
R58B Mineral 69.33 352 IAmb IAmb 08 49 07.1
comp=Z,39nm,1.0s
R58B Mineral 69.33 352 P P 08 49 05.6 +1.0
baz=171,SNR=9.8
T51A Gray 69.33 347 P P 08 49 04.6 -0.1
baz=166,SNR=13
WVT Waverly 69.40 343 P P 08 49 04.8 -0.3
WVT pmax pmax
comp=Z,96nm,0.7s
WVT Waverly 69.40 343 P P 08 49 04.8 -0.3
WVT Waverly 69.40 343 P P 08 49 04.9 -0.2
baz=162
R61A Willards 69.42 354 P P 08 49 06.8 +1.6
baz=173
R59A King George, V 69.47 352 P P 08 49 06.4 +1.0
baz=172,SNR=6.6
R60A Leonardtown, M 69.48 353 P P 08 49 06.6 +1.1
baz=172
S55A Lewisburg 69.50 350 P P 08 49 06.4 +0.6
baz=169,SNR=11
CBN Corbin Frederi 69.51 352 P P 08 49 06.4 +0.7
baz=172
T50A Nancy 69.57 346 P P 08 49 06.0 -0.2
baz=165,SNR=5.4
MIAR Mount Ida 69.57 338 P P 08 49 07.0 +0.8
baz=157,SNR=10
S54A Dingess, Beckl 69.66 349 IAmb IAmb 08 49 08.1
comp=Z,34nm,0.8s
S54A Dingess, Beckl 69.66 349 P P 08 49 07.0 +0.2
baz=168,SNR=7.4
R58A Rapidan 69.68 352 P P 08 49 07.2 +0.4
baz=171,SNR=8.8
W41B Gary Mavity, V 69.73 339 P P 08 49 07.8 +0.7
baz=158,SNR=13
R57A Stanardsville 69.74 351 P P 08 49 08.1 +0.9
baz=170,SNR=19
T49A Edmonton 69.80 345 IAmb IAmb 08 49 08.4
comp=Z,25nm,0.7s
T49A Edmonton 69.80 345 P P 08 49 07.0 -0.6
baz=164,SNR=12
WHAR Wooly Hollow 69.85 339 P P 08 49 08.4 +0.5
WHAR IAmb IAmb 08 49 09.6
comp=Z,36nm,1.1s
S52A Salyersville 69.85 347 P P 08 49 07.5 -0.4
baz=166,SNR=6.3
S51A Beattyville 69.91 347 IAmb IAmb 08 49 09.4
comp=Z,26nm,0.8s
S51A Beattyville 69.91 347 P P 08 49 07.7 -0.6
baz=166,SNR=6.5
R56A Bull Pasture M 69.97 351 P P 08 49 09.1 +0.5
baz=170
R54A Victor 69.98 349 P P 08 49 08.6 -0.1
baz=168,SNR=8.7
T47A Sharon Grove 70.04 344 IAmb IAmb 08 49 10.0
comp=Z,31nm,0.9s
ABTX Abilene, Hawle 70.05 332 IAmb IAmb 08 49 11.3
comp=Z,63nm,1.1s
ABTX Abilene, Hawle 70.05 332 P P 08 49 09.6 +0.3
baz=152,SNR=18
Q59A Harwood 70.08 353 P P 08 49 09.9 +0.7
baz=172
S50A Richmond 70.11 346 P P 08 49 09.3 -0.1
baz=165,SNR=7.7
Q60A Greensboro 70.14 354 P P 08 49 10.6 +1.1
baz=173
W39A Magazine 70.23 338 P P 08 49 10.9 +0.7
baz=157,SNR=21
Q58A Fox Den Farm, 70.27 352 P P 08 49 10.8 +0.5
baz=171
R53A Hurricane 70.29 349 IAmb IAmb 08 49 11.7
comp=Z,31nm,0.8s

R53A	**Hurricane** baz=167,SNR=5.1	70.29	349	P	P	08 49 11.0	+0.5
S49A	**Springfield** baz=164	70.40	346	P	P	08 49 10.6	-0.6
R52A	**Catlettsburg** baz=167	70.41	348	P	P	08 49 11.5	+0.2
Q57A	**Strasburg** baz=171,SNR=15	70.45	352	P	P	08 49 12.7	+1.2
R51A	**Hillsboro** baz=166,SNR=9.8	70.55	347	P	P	08 49 12.0	-0.1
Q56A	**Snyder Ridge,** comp=Z,26nm,0.8s	70.56	351	IAmb	IAmb	08 49 14.7	
Q56A	**Snyder Ridge,** baz=170	70.56	351	P	P	08 49 12.8	+0.7
Q55A	**Buckhannon** baz=169,SNR=6.6	70.64	350	P	P	08 49 13.5	+0.8
R50A	**Paris** baz=165,SNR=7.3	70.68	347	P	P	08 49 12.7	-0.1
Q53A	**Leroy** baz=168,SNR=5.0	70.73	349	P	P	08 49 13.5	+0.4
Q54A	**Coxs Mills** comp=Z,28nm,0.7s	70.74	350	IAmb	IAmb	08 49 14.4	
Q54A	**Coxs Mills** baz=168,SNR=8.7	70.74	350	P	P	08 49 13.2	0.0
LIC	**Lamto** comp=Z,25nm,0.8s	70.75	70 *e*	P	P	08 49 14.0	+0.1
P58A	**Pank, Wackersv** baz=172,SNR=5.4	70.77	353	P	P	08 49 14.4	+1.0
P59A	**Jarrettsville** baz=172,SNR=13	70.80	353	P	P	08 49 14.9	+1.4
P57A	**Homestead Farm**	70.85	352	P	P	08 49 14.3	+0.5
P57A	comp=Z,43nm,0.8s			IAmb	IAmb	08 49 16.5	
P57A	**Homestead Farm** baz=171,SNR=15	70.85	352	P	P	08 49 15.1	+1.3
R49A	**Shelbyville** comp=Z,21nm,0.8s	70.86	346	IAmb	IAmb	08 49 14.8	
R49A	**Shelbyville** baz=165,SNR=8.1	70.86	346	P	P	08 49 13.6	-0.4
P60A	**Greenville** baz=173	70.92	354	P	P	08 49 15.3	+1.1
Q52A	**Bidwell** baz=167,SNR=7.6	70.96	348	P	P	08 49 14.5	0.0
P56A	**Dayton Farm, R** baz=170,SNR=7.5	70.97	351	P	P	08 49 15.9	+1.3
TIC	**Toumodi**	71.01	70 *e*	P	P	08 49 15.6	+0.1
U40A	**Yellville** comp=Z,38nm,0.7s	71.01	339	IAmb	IAmb	08 49 16.5	
U40A	**Yellville** baz=158,SNR=21	71.01	339	P	P	08 49 15.2	+0.3
WCI	**Wyandotte Cave**	71.04	345	P	P	08 49 14.6	-0.5
WCI	comp=Z,41nm,0.8s			pmax	pmax		
WCI	**Wyandotte Cave**	71.04	345	P	P	08 49 14.6	-0.5
WCI	comp=Z,41nm,0.8s			IAmb	IAmb	08 49 15.7	
WCI	**Wyandotte Cave** baz=164	71.04	345	P	P	08 49 14.8	-0.3
KIC	**Kosan Boka** comp=Z,63nm,1.1s	71.06	70 *e*	P	P	08 49 15.6	-0.2
P55A	**Reedsville** baz=169,SNR=6.1	71.11	350	P	P	08 49 16.2	+0.7
O61A	**Allentown** baz=174,SNR=5.2	71.11	355	P	P	08 49 15.8	+0.4
DBIC	**Dimbokro** comp=Z,7.3nm,0.5s,baz=211,slow=7.0,SNR=22	71.15	70	P	P	08 49 17.0	+0.7
DBIC	comp=Z,21nm,0.9s,baz=201,slow=6.9,SNR=6.9			pP	pP	08 49 42.6	0.0
DBIC	comp=Z,49nm,18.0s,baz=208,slow=35			LR	LR	09 19 52.1	
Q50A	**Georgetown** baz=166,SNR=5.1	71.15	347	P	P	08 49 15.3	-0.4
Q51A	**Peebles** comp=Z,34nm,0.9s	71.21	348	IAmb	IAmb	08 49 17.3	
Q51A	**Peebles** baz=166,SNR=7.5	71.21	348	P	P	08 49 15.7	-0.3
S44A	**Carbondale** comp=Z,39nm,0.8s	71.24	342	IAmb	IAmb	08 49 17.3	
MCWV	**Mont Chateau** baz=169,SNR=6.1	71.26	351	P	P	08 49 16.7	+0.4
HHAR	**Hobbs** comp=Z,33nm,0.8s	71.28	338	IAmb	IAmb	08 49 18.2	
P54A	**Burton** baz=169,SNR=9.6	71.29	350	P	P	08 49 16.9	+0.3
P53A	**Whipple** comp=Z,52nm,1.2s	71.32	349	IAmb	IAmb	08 49 18.3	
P53A	**Whipple** baz=168,SNR=6.8	71.32	349	P	P	08 49 17.0	+0.2
O58A	**Lewisberry** baz=172	71.36	353	P	P	08 49 17.6	+0.7
O60A	**Telford** baz=173	71.40	354	P	P	08 49 17.5	+0.4
O59A	**Robesonia** baz=173	71.47	354	P	P	08 49 17.8	+0.2
Q49A	**Aurora** baz=165,SNR=14	71.49	346	P	P	08 49 17.3	-0.5
O57A	**Amberson** baz=171	71.52	352	P	P	08 49 18.5	+0.6
TUL1	**Leonard** comp=Z,47nm,0.8s	71.55	337	IAmb	IAmb	08 49 20.3	
TUL1	**Leonard** baz=155,SNR=19	71.55	337	P	P	08 49 18.5	+0.3
MGMO	**Mountain Grove** comp=Z,42nm,1.1s	71.57	340	IAmb	IAmb	08 49 20.1	
WMOK	**Wichita Mounta** baz=153,SNR=18	71.57	334	P	P	08 49 18.5	+0.1
P52A	**Corning** baz=167,SNR=7.7	71.59	349	P	P	08 49 18.1	-0.3
Q48A	**North Vernon** baz=164,SNR=13	71.59	346	P	P	08 49 18.1	-0.2
P51A	**Williamsport** baz=166	71.60	348	P	P	08 49 18.3	-0.1
O56A	**Blue Knob Stat** comp=Z,26nm,0.8s	71.69	352	IAmb	IAmb	08 49 21.1	
O56A	**Blue Knob Stat** baz=171,SNR=7.2	71.69	352	P	P	08 49 19.7	+0.8
O55A	**Ligonier** baz=170,SNR=5.7	71.72	351	P	P	08 49 19.9	+0.7
MNTX	**Cornudas Mount** comp=Z,28nm,0.8s	71.75	327	IAmb	IAmb	08 49 20.8	
MNTX	**Cornudas Mount** baz=147,SNR=45	71.75	327	P	P	08 49 19.2	-0.3
FVM	**French Village**	71.83	342	P	P	08 49 19.9	+0.1
FVM	comp=Z,54nm,0.8s			pmax	pmax		
FVM	**French Village**	71.83	342	P	P	08 49 19.9	+0.1
FVM	comp=Z,54nm,0.8s			IAmb	IAmb	08 49 21.3	
O54A	**Avella** baz=169	71.85	350	P	P	08 49 19.8	-0.1
P50A	**Jamestown** baz=166,SNR=7.5	71.86	347	P	P	08 49 19.6	-0.4
N60A	**Cedar Hill Far** baz=174	71.92	354	P	P	08 49 20.8	+0.5
OLIL	**Olney** comp=Z,44nm,0.9s	71.94	344	IAmb	IAmb	08 49 21.1	
P49A	**Miami Univ. Ec** baz=165,SNR=8.3	71.97	347	P	P	08 49 20.5	-0.1
SSPA	**Standing Stone**	71.97	352	P	P	08 49 21.5	+0.9
SSPA	**Standing Stone** baz=171	71.97	352	P	P	08 49 21.2	+0.6
O52A	**Adamsville** comp=Z,33nm,0.8s	72.01	349	IAmb	IAmb	08 49 22.0	
O52A	**Adamsville** baz=168,SNR=5.8	72.01	349	P	P	08 49 20.3	-0.6
N59A	**State Game Lan** comp=Z,27nm,0.8s	72.03	354	IAmb	IAmb	08 49 23.6	
N59A	**State Game Lan** baz=173,SNR=6.5	72.03	354	P	P	08 49 21.9	+0.9
P48A	**Milroy** comp=Z,40nm,0.8s	72.04	346	IAmb	IAmb	08 49 21.6	
P48A	**Milroy** baz=164,SNR=8.7	72.04	346	P	P	08 49 20.1	-0.9
O53A	**New Philadelph** baz=168	72.04	350	P	P	08 49 20.6	-0.5
N58A	**Sunbury**	72.04	353	P	P	08 49 21.7	+0.7
N58A	**Sunbury** baz=172	72.04	353	P	P	08 49 21.7	+0.7
N57A	**Milroy** baz=172	72.05	353	P	P	08 49 21.5	+0.5
CCM	**Cathedral Cave**	72.12	341	P	P	08 49 21.8	+0.3
CCM	comp=Z,56nm,1.1s			pmax	pmax		
CCM	**Cathedral Cave**	72.12	341	P	P	08 49 21.8	+0.3
CCM	comp=Z,56nm,1.1s			IAmb	IAmb	08 49 23.1	
CCM	**Cathedral Cave** baz=159	72.12	341	P	P	08 49 21.3	-0.2
O51A	**Pataskala** baz=167,SNR=12	72.17	348	P	P	08 49 21.4	-0.4
N55A	**Marion Center** baz=170,SNR=12	72.25	351	P	P	08 49 22.6	+0.3
M61A	**Granite Spring** baz=175	72.26	356	P	P	08 49 22.8	+0.5
N56A	**West Decatur** baz=171	72.29	352	P	P	08 49 22.9	+0.3
ACSO	**Alum Creek Sta** baz=167,SNR=11	72.32	348	P	P	08 49 22.3	-0.3
M60A	**Port Jervis** baz=174	72.34	355	P	P	08 49 22.9	+0.1
M62A	**Hamden** baz=176	72.34	356	P	P	08 49 23.6	+0.8
O50A	**Cable** baz=166,SNR=9.5	72.35	348	P	P	08 49 22.9	0.0
MSTX	**Muleshoe** baz=149,SNR=48	72.51	330	P	P	08 49 24.2	+0.1
O49A	**Covington** comp=Z,45nm,0.8s	72.52	347	IAmb	IAmb	08 49 25.0	
O49A	**Covington** baz=166,SNR=7.2	72.52	347	P	P	08 49 23.5	-0.4
N53A	**Lisbon** baz=169	72.53	350	P	P	08 49 24.1	+0.2
M58A	**Price's Panora** baz=172	72.55	353	P	P	08 49 24.8	+0.8
N54A	**Moraine State** comp=Z,35nm,0.8s	72.56	351	IAmb	IAmb	08 49 25.9	
N54A	**Moraine State** baz=169,SNR=8.5	72.56	351	P	P	08 49 24.8	+0.7
P46A	**Rosedale** comp=Z,56nm,1.1s	72.57	345	IAmb	IAmb	08 49 24.9	
M57A	**Sunshine Farm,**	72.58	353	P	P	08 49 25.0	+0.8
M57A	**Sunshine Farm,** baz=172	72.58	353	P	P	08 49 25.0	+0.8
M59A	**Waymart** baz=173,SNR=5.4	72.62	354	P	P	08 49 25.7	+1.2
KSCT	**Kent School, K**	72.66	356	P	P	08 49 26.1	+1.5
N52A	**McGinn's Farm,** baz=168	72.67	349	P	P	08 49 24.6	-0.1
L63A	**North Scituate** baz=177	72.70	357	P	P	08 49 25.6	+0.7
L64A	**Middleborough** baz=178	72.75	358	P	P	08 49 25.8	+0.7
O48A	**Farmland** baz=166,SNR=6.1	72.75	346	P	P	08 49 24.9	-0.4
AMTX	**Amarillo** comp=Z,66nm,1.0s	72.84	332	IAmb	IAmb	08 49 28.1	
AMTX	**Amarillo** baz=150	72.84	332	P	P	08 49 26.4	+0.4
N50A	**Nevada** baz=167,SNR=9.8	72.87	348	P	P	08 49 25.5	-0.4
N51A	**Ashland** comp=Z,42nm,0.9s	72.88	349	IAmb	IAmb	08 49 27.1	
N51A	**Ashland** baz=167	72.88	349	P	P	08 49 25.4	-0.6
M55A	**Ridgway** comp=Z,41nm,0.8s	72.89	352	IAmb	IAmb	08 49 27.9	
M55A	**Ridgway** baz=170,SNR=6.6	72.89	352	P	P	08 49 26.4	+0.3
M54A	**Oil Creek Stat** baz=170	73.05	351	P	P	08 49 27.1	+0.1
M53A	**Wi Miller and** baz=169	73.12	350	P	P	08 49 27.8	+0.3
P43A	**Skaggs, Pawnee** comp=Z,50nm,0.8s	73.15	343	IAmb	IAmb	08 49 28.6	
L58A	**Harry Jones Me** baz=173	73.15	354	P	P	08 49 28.4	+0.8
N49A	**Columbus Grove** baz=166,SNR=10	73.20	347	P	P	08 49 27.8	-0.1
L57A	**Andrews Acres** baz=172	73.20	353	P	P	08 49 28.4	+0.4
L59A	**Walton** comp=Z,38nm,0.9s	73.23	355	IAmb	IAmb	08 49 31.1	
L59A	**Walton** baz=174,SNR=5.6	73.23	355	P	P	08 49 29.0	+0.9
M51A	**Elyria** baz=167	73.25	349	P	P	08 49 28.0	-0.2
SFIN	**Lafayette**	73.28	345	P	P	08 49 28.2	-0.1
SFIN	**Lafayette** baz=163	73.28	345	P	P	08 49 27.3	-1.0
N48A	**Decatur** baz=165,SNR=5.4	73.31	347	P	P	08 49 28.2	-0.3
BINY	**Binghamton** baz=173	73.32	354	P	P	08 49 29.4	+0.8
M52A	**Chesterland** baz=168	73.33	350	P	P	08 49 29.1	+0.4
L61B	**Northampton** baz=176	73.33	357	P	P	08 49 29.3	+0.7
HRV	**Adam Dziewonsk** baz=177	73.34	357	P	P	08 49 29.0	+0.3
O44A	**Mansfield** comp=Z,40nm,0.7s	73.38	344	IAmb	IAmb	08 49 29.4	
L56A	**Greenwood** baz=172,SNR=5.9	73.41	353	P	P	08 49 30.1	+0.9
N47A	**Urbana** comp=Z,41nm,0.8s	73.46	346	IAmb	IAmb	08 49 30.0	
N47A	**Urbana** baz=164	73.46	346	P	P	08 49 28.9	-0.5
M50A	**Fremont** comp=Z,49nm,0.8s	73.47	348	IAmb	IAmb	08 49 30.6	
M50A	**Fremont** baz=167	73.47	348	P	P	08 49 29.0	-0.4
L55A	**Hinsdale** baz=171,SNR=6.7	73.56	352	P	P	08 49 30.8	+0.7
K60A	**Five Rivers En** baz=175	73.57	356	P	P	08 49 30.6	+0.6
121A	**Cookes Peak, D** comp=Z,58nm,0.9s	73.57	326	IAmb	IAmb	08 49 33.8	
121A	**Cookes Peak, D** baz=145,SNR=27	73.57	326	P	P	08 49 31.9	+1.4
K61A	**Williamstown** baz=175	73.58	356	P	P	08 49 31.1	+1.0
ERPA	**Erie** baz=169	73.69	351	P	P	08 49 31.0	+0.2
M49A	**Liberty Center** baz=166,SNR=6.0	73.70	348	P	P	08 49 30.5	-0.3
L54A	**Sinclairville** baz=170,SNR=9.6	73.72	351	P	P	08 49 31.5	+0.6
K59A	**Cooperstown** baz=174	73.80	355	P	P	08 49 32.1	+0.8
WVNY	**West Valley, N** comp=Z,37nm,0.8s	73.80	352	IAmb	IAmb	08 49 33.9	
M48A	**Edgerton** comp=Z,52nm,0.8s	73.85	347	IAmb	IAmb	08 49 32.5	
M48A	**Edgerton** baz=165,SNR=5.1	73.85	347	P	P	08 49 31.5	-0.1
K58A	**Earlville** comp=Z,32nm,0.9s	73.85	354	IAmb	IAmb	08 49 34.2	
K58A	**Earlville** baz=173,SNR=5.2	73.85	354	P	P	08 49 32.7	+1.0
K57A	**Scipio Center** baz=172	73.90	354	P	P	08 49 32.3	+0.3
PPT	**Papeete** comp=Z,50nm,0.8s,baz=94,slow=3.8,SNR=6.3	73.94	259	P	P	08 49 33.7	+0.9
K56A	**Middlesex** baz=172	73.94	353	P	P	08 49 32.6	+0.3
HDIL	**Hopedale** baz=161,SNR=6.5	73.96	343	P	P	08 49 32.2	-0.1
K54A	**Basiliko Farm,** baz=171,SNR=6.0	74.01	352	P	P	08 49 33.2	+0.6
L50A	**Kingsville** baz=167	74.05	349	P	P	08 49 33.4	+0.6
K55A	**Perry** baz=171	74.06	352	P	P	08 49 33.1	+0.2
J62A	**Henniker** baz=177	74.07	357	P	P	08 49 34.2	+1.2
J61A	**Chester** baz=176	74.22	357	P	P	08 49 34.8	+1.0
L48A	**N Adams** baz=166	74.24	347	P	P	08 49 33.4	-0.6
L49A	**Milan** baz=166	74.28	348	P	P	08 49 33.9	-0.2
L47A	**Sherwood** baz=165,SNR=5.1	74.42	347	P	P	08 49 34.3	-0.6
K52A	**Tillsonburg** baz=169	74.44	350	P	P	08 49 34.9	-0.2
J59A	**Piesco**	74.46	355	P	P	08 49 36.4	+1.2
J59A	**Piesco** baz=174	74.46	355	P	P	08 49 35.6	+0.4
J56A	**Wolcott** comp=Z,50nm,0.9s	74.47	353	IAmb	IAmb	08 49 37.1	
J56A	**Wolcott** baz=172,SNR=5.8	74.47	353	P	P	08 49 35.3	+0.1
K51A	**Iona Station** baz=168	74.50	350	P	P	08 49 35.6	+0.1
J57A	**Williamstown** comp=Z,26nm,0.9s	74.52	354	IAmb	IAmb	08 49 37.8	
J57A	**Williamstown** baz=173	74.52	354	P	P	08 49 36.2	+0.7
J55A	**Hilton** baz=171	74.56	353	P	P	08 49 36.2	+0.5
HNH	**Hanover**	74.57	357	P	P	08 49 37.8	+2.0
L46A	**Eue Claire** baz=164	74.67	346	P	P	08 49 35.5	-0.9
KSU1	**Kansas State U** baz=155,SNR=9.7	74.71	337	P	P	08 49 36.8	0.0
I58A	**Old Forge** baz=174	74.72	355	P	P	08 49 37.1	+0.4
K50A	**Casco** baz=167,SNR=5.3	74.73	349	P	P	08 49 36.0	-0.7
I59A	**Olmsteadville** baz=175	74.74	356	P	P	08 49 37.3	+0.4
I60A	**Shoreham** baz=175	74.76	356	P	P	08 49 37.8	+0.9
I61A	**Oroboro, Fairl** baz=176	74.79	357	P	P	08 49 38.2	+1.1
I63A	**Otisfield** baz=178	74.85	358	P	P	08 49 39.0	+1.6
J52A	**Paris** baz=169	74.86	351	P	P	08 49 37.5	0.0
TUC	**Tucson** baz=143	74.88	324	P	P	08 49 39.1	+1.1
ANMO	**Albuquerque**	74.95	328 *d i*	P	P	08 49 40.0	+1.5
ANMO	comp=Z,47nm,1.5s			pmax	pmax		
ANMO	**Albuquerque**	74.95	328	P	P	08 49 39.7	+1.2
ANMO	comp=Z,59nm,1.4s			IAmb	IAmb	08 49 41.3	
ANMO	**Albuquerque** baz=147	74.95	328	P	P	08 49 39.6	+1.2
MAW	**Mawson** comp=Z,22nm,0.9s,baz=232,slow=6.7,SNR=13	74.97	163	P	P	08 49 38.1	+0.2
MAW	comp=Z,21nm,0.8s,baz=244,slow=4.4,SNR=6.2			pP	pP	08 50 04.6	-0.1
MAW	comp=Z,80nm,21.4s,baz=240,slow=35			LR	LR	09 21 43.2	
K48A	**Perry** baz=166	75.01	348	P	P	08 49 38.2	-0.2
I57A	**Carthage** baz=173	75.02	354	P	P	08 49 38.8	+0.5
LBNH	**Lisbon**	75.08	357	P	P	08 49 40.5	+1.7
LBNH	comp=Z,87nm,1.6s			pmax	pmax		
LBNH	**Lisbon**	75.08	357	P	P	08 49 40.5	+1.7
LBNH	comp=Z,87nm,1.6s			IAmb	IAmb	08 51 18.8	
LBNH	**Lisbon** baz=177	75.08	357	P	P	08 49 40.1	+1.3
I53A	**Kortright Cn E** baz=170,SNR=5.2	75.32	351	P	P	08 49 39.8	-0.3
H61A	**Lyndonville** baz=177	75.38	357	P	P	08 49 41.9	+1.4
H58A	**Gabriels** baz=175	75.38	356	P	P	08 49 41.0	+0.5
J48A	**Bridge Port** comp=Z,64nm,0.9s	75.44	348	IAmb	IAmb	08 49 41.8	
J48A	**Bridge Port** baz=166,SNR=5.2	75.44	348	P	P	08 49 40.5	-0.3
H63A	**New Sharon** baz=178	75.45	359	P	P	08 49 42.7	+1.9
H65A	**Eastbrook** baz=180	75.46	360	P	P	08 49 42.2	+1.4
EMMW	**East Machias**	75.48	1	P	P	08 49 43.0	+2.1
I55A	**Frankford** baz=172	75.48	353	P	P	08 49 41.5	+0.5
I51A	**Listowel** baz=169	75.49	350	P	P	08 49 41.2	+0.1
H57A	**Richville** baz=174	75.52	355	P	P	08 49 41.9	+0.7
CBKS	**Cedar Bluff** baz=152,SNR=16	75.54	335	P	P	08 49 42.2	+0.6
J47A	**Sunmer** baz=165	75.56	348	P	P	08 49 41.5	0.0
H59A	**Cadyville** baz=175	75.58	356	P	P	08 49 42.3	+0.7
LONY	**Lake Ozonia** baz=174	75.61	355	P	P	08 49 42.5	+0.7
214A	**Organ Pipe Nat** comp=Z,32nm,1.0s	75.65	322	IAmb	IAmb	08 49 45.5	
214A	**Organ Pipe Nat** baz=142,SNR=14	75.65	322	P	P	08 49 43.8	+1.5
H56A	**Elgin** baz=173,SNR=5.2	75.72	354	P	P	08 49 43.0	+0.6
FRNY	**Flat Rock** comp=Z,30nm,1.1s	75.76	356	IAmb	IAmb	08 49 45.3	
H55A	**Tweed** baz=172	75.76	353	P	P	08 49 43.2	+0.6
J46A	**Howard City** baz=165	75.83	347	P	P	08 49 42.8	-0.2
G63A	**Kingsbury** baz=179	75.89	359	P	P	08 49 43.8	+0.4
T25A	**Trinidad** comp=Z,51nm,0.8s	75.91	331	IAmb	IAmb	08 49 46.9	
T25A	**Trinidad** baz=148,SNR=42	75.91	331	P	P	08 49 45.3	+1.4
H53A	**Bobcaygeon** baz=171	75.94	352	P	P	08 49 44.2	+0.6
G60A	**Masonville** baz=176	75.96	357	P	P	08 49 45.2	+1.5
G59A	**Clarenceville** baz=176	75.98	356	P	P	08 49 44.6	+0.7
G62A	**West of Eustis**	76.02	358	P	P	08 49 45.9	+1.8
G62A	comp=Z,28nm,0.8s			IAmb	IAmb	08 49 46.7	
G62A	**West of Eustis** baz=178	76.02	358	P	P	08 49 45.3	+1.2
G64A	**Maxfield** baz=179	76.02	360	P	P	08 49 45.2	+1.1
PKME	**Peaks-Kenny Pk**	76.04	359	P	P	08 49 45.6	+1.4
PKME	**Peaks-Kenny Pk** baz=179	76.04	359	P	P	08 49 45.2	+1.0
G58A	**Ormstown** baz=175	76.10	356	P	P	08 49 45.4	+0.8
G61A	**St-Isidore-de-** baz=177	76.11	358	P	P	08 49 45.3	+0.7
G57A	**Newington** baz=174	76.12	355	P	P	08 49 45.0	+0.4
H52A	**Wyevale** baz=170	76.16	351	P	P	08 49 45.0	+0.1
SCIA	**State Center** baz=158	76.25	341	P	P	08 49 45.5	0.0
I47A	**Gladwin** baz=166,SNR=5.5	76.26	348	P	P	08 49 45.3	-0.2
I48A	**Sherman Twp** baz=166	76.28	349	P	P	08 49 45.1	-0.4
I46A	**Reed City** baz=165	76.36	347	P	P	08 49 45.2	-0.8
G55A	**Calabogie** baz=172	76.42	354	P	P	08 49 46.4	+0.1
JFWS	**Jewell Farm**	76.42	344	P	P	08 49 46.8	+0.4
JFWS	comp=Z,38nm,1.1s			pmax	pmax		
JFWS	**Jewell Farm**	76.42	344	P	P	08 49 46.8	+0.4
JFWS	comp=Z,38nm,1.1s			IAmb	IAmb	08 49 47.8	
JFWS	**Jewell Farm** baz=161	76.42	344	P	P	08 49 46.8	+0.4
F63A	**Nahmakanta, Br** baz=179	76.47	359	P	P	08 49 47.3	+0.6
G53A	**Haliburton** baz=171,SNR=6.7	76.48	352	P	P	08 49 47.2	+0.5
W18A	**Petrified Fore** baz=144,SNR=7.5	76.62	326	P	P	08 49 49.1	+1.2
F64A	**Sherman** baz=180	76.63	360	P	P	08 49 48.8	+1.4
LMN	**Caledonia Moun**	76.68	2	P	P	08 49 48.5	+0.7
LMN	comp=Z,48nm,1.2s			IAmb	IAmb	08 49 50.7	
G54A	**Lake Saint Pet** baz=171	76.69	353	P	P	08 49 48.4	+0.4
H48A	**Harrisville** baz=167	76.72	349	P	P	08 49 48.6	+0.6
H47A	**Mio** baz=166	76.77	348	P	P	08 49 48.6	+0.2
KSCO	**Kaye Shedlock'** baz=150,SNR=11	76.79	333	P	P	08 49 50.6	+1.8
F60A	**Warwick** baz=177	76.81	357	P	P	08 49 49.3	+0.8
SDCO	**Great Sand Dun** baz=148,SNR=25	76.88	330	P	P	08 49 50.6	+1.1
X16A	**Lo Mia Camp, P** comp=Z,47nm,0.9s	76.89	324	IAmb	IAmb	08 49 53.2	
H46A	**Fife Lake** baz=165	76.89	348	P	P	08 49 49.3	+0.3
F55A	**Otter Lake**	76.96	354	P	P	08 49 50.2	+0.8

baz=173
I42A Draeger Farm, 77.03 345 P P 08 49 50.7 +0.9
I42A IAmb IAmb 08 52 09.3
comp=Z,93nm,1.5s
GLMI Grayling 77.06 348 P P 08 49 50.4 +0.4
baz=166
E64A Bridgewater 77.19 0 P P 08 49 51.7 +1.1
baz=180
E63A Oxbow 77.19 360 P P 08 49 52.3 +1.7
E63A Oxbow 77.19 360 P P 08 49 51.7 +1.1
baz=180
E60A Ste Agathe de 77.19 358 P P 08 49 51.3 +0.7
baz=177
F52A Sundridge 77.23 352 P P 08 49 51.3 +0.4
baz=170
ALGO Algonquin Park 77.24 353 P P 08 49 51.2 +0.2
baz=171,SNR=7.2
E58A La Victoria 77.28 356 P P 08 49 51.7 +0.6
baz=175
BGNE Belgrade 77.30 337 P P 08 49 52.1 +0.7
baz=154,SNR=7.0
Y14A Wickenburg 77.30 323 IAmb IAmb 08 49 54.5
comp=Z,31nm,1.1s
PQI Presque Isle 77.44 0 P P 08 49 52.6 +0.6
PQI IAmb IAmb 08 49 54.5
comp=Z,39nm,1.1s
S22A 4UR Ranch, Cre 77.45 330 P P 08 49 53.7 +1.0
baz=147,SNR=27
E56A St. Veronique 77.56 355 P P 08 49 53.4 +0.7
baz=174,SNR=6.4
E53A Dumoine, Ponti 77.62 353 P P 08 49 54.0 +0.9
baz=172
D60A Saint Jean D'O 77.72 358 P P 08 49 54.4 +0.8
baz=178
WUAZ Wupatki 77.73 325 IAmb IAmb 08 49 57.3
comp=Z,41nm,0.9s
WUAZ Wupatki 77.73 325 P P 08 49 55.7 +1.5
baz=143,SNR=26
MVCO Mesa Verde 77.75 328 IAmb IAmb 08 49 57.0
comp=Z,41nm,1.0s
MVCO Mesa Verde 77.75 328 P P 08 49 55.5 +1.2
baz=146,SNR=24
Q24A Divide 77.76 331 P P 08 49 55.5 +1.0
baz=148,SNR=42
D63A Stockholm 77.80 0 P P 08 49 55.5 +1.4
baz=180
D59A Saint-Raymond 77.84 357 P P 08 49 55.5 +1.2
baz=177
D62A Allapoint, All 77.85 359 IAmb IAmb 08 50 25.3
comp=Z,34nm,0.9s
D62A Allapoint, All 77.85 359 P P 08 49 55.9 +1.6
baz=179
Y12C Blythe 77.95 322 P P 08 49 56.9 +1.7
baz=141,SNR=8.4
D57A Chemin Vers le 77.95 356 P P 08 49 55.8 +0.9
baz=175
IKP In-Ko-Pah, Jac 77.96 320 P P 08 49 57.2 +1.8
baz=140,SNR=9.0
E51A G1948 Merrick 77.97 352 P P 08 49 55.6 +0.6
baz=170
D58A Chemin du LacG 77.98 357 P P 08 49 55.6 +0.6
baz=176,SNR=12
SWSC Sam W. Stewart 78.02 321 P P 08 49 56.9 +1.3
baz=140,SNR=6.9
D55A Sainte-Anne-du 78.06 355 P P 08 49 55.8 +0.4
baz=174,SNR=7.0
LATQ La Tuque 78.26 357 P P 08 49 57.6 +1.0
baz=176
E48A Lockeyer 78.28 350 P P 08 49 57.1 +0.4
baz=168
BAR Barrett 78.30 320 P P 08 49 59.0 +1.8
BAR IAmb IAmb 08 50 00.0
comp=Z,29nm,1.1s
MONP2 Monument Peak 78.32 320 P P 08 49 58.9 +1.4
baz=139,SNR=9.5
BC3 Big Chuckawall 78.37 321 P P 08 49 58.9 +1.2
baz=140,SNR=7.4
E47A Iron Bridge 78.42 349 P P 08 49 57.8 +0.3
baz=167
BOSA Boshof 78.47 116 P P 08 49 58.6 +0.1
comp=Z,8.1nm,0.7s,baz=242,slow=5.2,SNR=15
BOSA pP **pP 08 50 25.5 -0.1**
comp=Z,12nm,0.7s,baz=257,slow=4.3,SNR=5.4
BOSA LR LR 09 22 29.3
comp=Z,46nm,18.3s,baz=210,slow=34
E46A Sault Ste Mari 78.50 349 P P 08 49 57.9 -0.1
E46A IAmb IAmb 08 50 37.6
comp=Z,46nm,1.1s
D51A Lot 18 Range I 78.51 352 P P 08 49 58.2 +0.2
baz=170
IRM Iron Mountain 78.59 322 P P 08 50 00.1 +1.3
baz=140,SNR=14
D50A G1974 Best Tow 78.64 352 P P 08 49 59.0 +0.4
baz=170,SNR=5.2
ISCO Idaho Springs 78.66 331 IAmb IAmb 08 50 02.0
comp=Z,27nm,0.8s
ISCO Idaho Springs 78.66 331 P P 08 50 00.8 +1.4
baz=148,SNR=17
109C Camp Elliot, M 78.69 320 P P 08 50 00.3 +1.0
baz=139
SMCO Snowmass 78.71 330 P P 08 50 01.8 +2.0
SMCO IAmb IAmb 08 50 02.9
comp=Z,45nm,0.8s
XPFO Pion Flat 78.88 321 P P 08 50 02.6 +2.1
XPFO IAmb IAmb 08 50 03.7
comp=Z,29nm,1.1s
PFO Pinyon Flats O 78.88 321 P P 08 50 02.2 +1.7
PFO pmax pmax
comp=Z,27nm,1.1s
PFO Pinyon Flats O 78.88 321 P P 08 50 02.2 +1.7
PFO Pinyon Flats O 78.88 321 P P 08 50 02.3 +1.8
baz=139,SNR=24
D48A Paudash Townsh 78.90 351 P P 08 50 00.5 +0.4
baz=168
ECSD EROS Data Cent 78.92 339 IAmb IAmb 08 50 01.8
comp=Z,42nm,0.8s
ECSD EROS Data Cent 78.92 339 P P 08 50 00.2 -0.1
baz=155,SNR=28
BELC Belle Mtn. Jos 78.93 321 P P 08 50 02.0 +1.3
baz=140
SPMN Marine on St. 79.22 343 P P 08 50 01.8 -0.1
baz=159
MURC Murrieta 79.28 320 P P 08 50 04.2 +1.7
baz=139,SNR=12
GMRC Granite Mounta 79.34 322 P P 08 50 04.6 +1.6
baz=140,SNR=23
SCI2 San Clemente I 79.57 319 P P 08 50 05.7 +1.7
baz=138
BBRC Big Bear Solar 79.62 321 P P 08 50 05.8 +1.2
baz=139
N23A Red Feather La 79.72 332 IAmb IAmb 08 50 07.8
comp=Z,30nm,1.1s
N23A Red Feather La 79.72 332 P P 08 50 06.5 +1.5
baz=148,SNR=13
HEC Hector,Ludlow 79.74 321 P P 08 50 06.6 +1.6
baz=140,SNR=14
CIS Catalina Islan 79.81 319 P P 08 50 06.9 +1.5
baz=138
PHWY Pilot Hill 79.87 332 IAmb IAmb 08 50 08.3
comp=Z,35nm,0.8s
TUQ Turquoise Moun 79.98 322 P P 08 50 08.0 +1.5
baz=140,SNR=8.6
BFSC Mount Baldy Ra 80.01 320 P P 08 50 07.9 +1.3
baz=139,SNR=9.0
O20A White River Ci 80.04 330 P P 08 50 08.2 +1.4
baz=146,SNR=20
TOA0 Torodi Ar. Sit 80.15 68 P P 08 50 07.7 +0.1
TOA0 IAmb IAmb 08 50 39.1
comp=Z,26nm,0.6s
TORD Torodi Ar. Bea 80.15 68 P P 08 50 08.5 +0.9
comp=Z,6.8nm,0.5s,baz=284,slow=6.4,SNR=95
TORD pP **pP 08 50 33.2 -1.2**
comp=Z,17nm,0.6s,baz=269,slow=5.2,SNR=8.7
LSQQ Lebel-sur-Quev 80.21 354 P P 08 50 07.8 +0.6
baz=172
SUSD Miller 80.28 338 P P 08 50 07.7 +0.1
baz=154,SNR=5.3
SNCC San Nicolas Is 80.32 318 P P 08 50 09.1 +0.9
baz=157
GSC Goldstone, Bar 80.35 321 P P 08 50 09.7 +1.4
baz=139,SNR=14
DECC Green Verdugo 80.39 320 P P 08 50 09.7 +1.2
baz=138
LBTB Lobatse 80.50 113 P P 08 50 10.0 +0.4
LBTB pmax pmax
comp=Z,63nm,1.5s
LBTB Lobatse 80.50 113 P P 08 50 10.0 +0.4
LBTB IAmb IAmb 08 50 39.6
comp=Z,63nm,1.4s
SHOC Shoshone, Teco 80.52 322 P P 08 50 10.4 +1.3
baz=140
EDW2 Edwards Air Fo 80.67 320 P P 08 50 11.3 +1.2
baz=138,SNR=12
OSI Osito Audit: C 80.88 320 P P 08 50 12.7 +1.6
baz=138
SCZ2 Santa Cruz Isl 80.93 319 P P 08 50 12.8 +1.4
baz=137,SNR=5.3
LRMC Laurel Mtn Rad 80.95 321 P P 08 50 12.6 +1.0
baz=139,SNR=12
FURC Furnace Creek, 81.26 322 P P 08 50 14.5 +1.5
baz=139,SNR=14
MPMC Manual Prospec 81.28 322 P P 08 50 14.3 +0.9
baz=139,SNR=15
SBC Santa Barbara 81.30 319 P P 08 50 14.8 +1.6
baz=137
TPNV Topopah Spring 81.31 323 P P 08 50 14.9 +1.4
baz=140,SNR=20
ARVC Arvin 81.31 320 P P 08 50 14.7 +1.3
baz=138
K22A Casper 81.44 332 IAmb IAmb 08 50 16.7
comp=Z,53nm,0.9s
K22A Casper 81.44 332 P P 08 50 15.3 +1.2
baz=148,SNR=25
EYMN Ely 81.45 344 P P 08 50 13.8 +0.1
baz=160,SNR=8.4
ISA Isabella, Lake 81.52 321 P P 08 50 16.0 +1.5
baz=138,SNR=14
PKM Mcpherson Peak 81.68 319 P P 08 50 17.0 +1.4
baz=137,SNR=9.6
RSSD Black Hills 81.74 335 P P 08 50 16.7 +1.0
RSSD pmax pmax
comp=Z,24nm,1.0s
RSSD Black Hills 81.74 335 P P 08 50 16.7 +1.0
RSSD Black Hills 81.74 335 P P 08 50 16.7 +1.0
baz=150
CWC Cottonwood Cre 81.88 321 P P 08 50 17.7 +1.2
baz=139
GRAC Grapevine Rang 81.92 322 P P 08 50 18.1 +1.5
baz=139,SNR=6.5
VES Vestal, Richgr 81.98 320 P P 08 50 18.2 +1.3
baz=138,SNR=13
R11A Troy Canyon, C 82.04 324 P P 08 50 18.7 +1.4
baz=140,SNR=36
SMMC Simmler 82.10 320 P P 08 50 19.1 +1.6
baz=137,SNR=8.6
DUG Dugway, Tooele 82.14 327 P P 08 50 18.9 +1.1
baz=143,SNR=22
TIN Tinemaha, Big 82.42 322 P P 08 50 20.5 +1.2
baz=138
PAGB Antelope Grade 82.54 320 P P 08 50 21.6 +1.7
PAGB IAmb IAmb 08 50 22.8
comp=Z,34nm,1.0s
HWUT Hardware Ranch 82.70 329 IAmb IAmb 08 50 22.6
comp=Z,26nm,0.8s
BW06 Boulder Array 82.77 331 P P 08 50 21.7 +0.5
baz=145,SNR=24
PDAR Pinedale Array 82.77 331 P P 08 50 21.4 +0.3
comp=Z,13nm,0.8s,baz=130,slow=7.6,SNR=66
PDAR pP **pP 08 50 48.9 +0.8**
comp=Z,5.7nm,0.7s,baz=132,slow=6.6,SNR=4.7
AGMN Agassiz Nation 82.87 342 P P 08 50 21.9 +0.8
AGMN IAmb IAmb 08 50 22.6
comp=Z,23nm,0.9s
CASY Casey 82.90 179 P P 08 50 22.2 +1.0
CASY IAmb IAmb 08 50 47.2
comp=Z,24nm,0.6s
MLAC Mammoth, Mammo 83.17 322 P P 08 50 25.2 +1.8
baz=138
OMMB Old Mammoth Mi 83.25 322 IAmb IAmb 08 50 26.3
comp=Z,25nm,0.9s
NVAR Mina Array Bea 83.49 323 P P 08 50 25.9 +1.0
comp=Z,12nm,0.8s,baz=159,slow=5.5,SNR=77
NVAR pP **pP 08 50 52.3 +0.2**
comp=Z,4.8nm,0.9s,baz=155,slow=5.0,SNR=3.6
MDND Maddock 83.53 339 P P 08 50 25.8 +1.2
baz=153
ELK Elko 83.72 326 IAmb IAmb 08 50 28.0
comp=Z,20nm,0.8s
SAO San Andreas Ge 83.95 320 P P 08 50 29.6 +2.6
SAO pmax pmax
comp=Z,13nm,1.1s
SAO San Andreas Ge 83.95 320 P P 08 50 29.6 +2.6
WAKR Walker 84.14 322 IAmb IAmb 08 50 31.3
comp=Z,24nm,1.0s
FLWY Flagg Ranch 84.33 331 P P 08 50 30.0 +1.0
FLWY IAmb IAmb 08 50 31.4
comp=Z,29nm,0.9s
YERR Yerington 84.39 322 IAmb IAmb 08 50 32.2
comp=Z,19nm,0.8s
H17A Grant Village 84.53 331 P P 08 50 31.7 +1.6
baz=144,SNR=5.1
RLMT Red Lodge 84.59 332 IAmb IAmb 08 50 32.4
comp=Z,21nm,0.7s
RLMT Red Lodge 84.59 332 P P 08 50 30.9 +0.6
baz=146,SNR=22
ULM Lac du Bonnet 84.66 343 P P 08 50 30.1 -0.2
comp=Z,20nm,0.8s,baz=158,slow=5.1,SNR=37
ULM Lac du Bonnet 84.66 343 IAmb IAmb 08 50 31.4
comp=Z,30nm,0.9s
LAO LASA Array 84.73 335 P P 08 50 31.5 +0.7
baz=148,SNR=6.6
PAHR Pah Rah Range 85.00 323 IAmb IAmb 08 50 35.2
comp=Z,31nm,1.1s
AFDM Forest Hills D 85.28 321 P P 08 50 34.1 +0.4
DGMT Dagmar 85.55 337 P P 08 50 35.4 +0.6
DGMT Dagmar 85.55 337 P P 08 50 35.5 +0.7
baz=150,SNR=12
SCHQ Schefferville 85.62 1 P P 08 50 33.6 -1.3
comp=Z,6.5nm,0.6s,baz=175,slow=4.7,SNR=17
SCHQ LR LR 09 32 04.9
comp=Z,24nm,18.3s,baz=278,slow=38
SCHQ Schefferville 85.62 1 P P 08 50 34.4 -0.5
SCHQ IAmb IAmb 08 50 36.3
comp=Z,36nm,1.2s
BEKR Beckworth 85.62 322 IAmb IAmb 08 50 38.0
comp=Z,19nm,1.0s
ORV Oroville 86.00 322 IAmb IAmb 08 50 39.8
comp=Z,27nm,1.1s
DLMT Dillon 86.16 330 IAmb IAmb 08 50 40.5
comp=Z,31nm,1.2s
O03E Paynes Creek 86.69 322 P P 08 50 40.9 +0.2
baz=136,SNR=11
MOD Modoc Plateau 87.09 324 IAmb IAmb 08 50 45.0
comp=Z,28nm,0.8s
O02D Mt. Diablo Mer 87.14 321 P P 08 50 43.2 +0.4
baz=136,SNR=6.3
EGMT Eagleton 87.17 334 IAmb IAmb 08 50 44.3
comp=Z,29nm,0.9s
EGMT Eagleton 87.17 334 P P 08 50 43.2 +0.4
baz=145,SNR=10.0
WDC Whiskeytown Da 87.29 322 IAmb IAmb 08 50 44.5
comp=Z,14nm,0.8s
N02D Trinity Center 87.66 322 P P 08 50 45.9 +0.6
baz=136,SNR=9.4
M04C Macdoel 87.79 323 P P 08 50 46.4 +0.4
baz=136,SNR=26
MSO Missoula 87.89 331 P P 08 50 46.9 +0.6
baz=142,SNR=7.1
M02C Callahan 88.04 322 P P 08 50 47.4 +0.3
baz=136,SNR=7.2
L04D Klamath Falls 88.34 323 P P 08 50 48.8 +0.2
baz=136,SNR=7.6
K04D Chiloquin, OR 88.35 324 P P 08 50 49.5 +0.9
baz=136
J05D Fort Rock, OR 88.57 324 P P 08 50 50.8 +1.1
baz=137,SNR=24
JTMT Jette 88.76 331 IAmb IAmb 08 50 52.4
comp=Z,19nm,0.8s
L02E Cave Junction 88.98 322 P P 08 50 52.8 +1.4
baz=135
J04D Umpqua Nationa 88.98 324 P P 08 50 52.6 +1.0
baz=136,SNR=14
I05D Terrebonne, OR 89.39 325 P P 08 50 54.4 +1.0
baz=137,SNR=16
K02D Willamette Mer 89.39 323 P P 08 50 54.3 +0.9
baz=135
I04A Tendick Farm, 89.53 324 P P 08 50 54.2 +0.2
baz=136,SNR=10
G05D Wamic, OR 90.03 326 P P 08 50 57.5 +1.2
baz=137,SNR=10
H04D Lebanon 90.22 324 P P 08 50 58.2 +1.1
baz=136
F05D White Salmon 90.57 326 P P 08 51 00.3 +1.5
baz=137
LTY Liberty 91.20 327 IAmb IAmb 08 51 03.2
comp=Z,12nm,0.8s
B08A Colville Reser 91.41 329 IAmb IAmb 08 51 03.8
comp=Z,29nm,1.8s
E04D Cinebar 91.59 326 P P 08 51 05.9 +2.5
baz=136
ESDC Sonseca Array 92.25 44 P P 08 51 07.4 +0.7
comp=Z,0.6nm,0.5s,baz=246,slow=4.4,SNR=3.8
ESDC pP **pP 08 51 33.5 -0.6**
comp=Z,0.3nm,0.4s,baz=186,slow=4.4,SNR=2.0
D03D Eldon 92.54 326 P P 08 51 08.8 +1.0
baz=135
B05A Bryant 92.59 327 P P 08 51 08.4 +0.4
baz=136
YKA Yellowknife Ar 100.44 340 P Pdif 08 51 42.8 -0.4
comp=Z,1.6nm,0.7s,baz=140,slow=4.4,SNR=30
YKA pP **pPdif 08 52 08.4 -2.2**
comp=Z,0.6nm,0.7s,baz=142,slow=4.4,SNR=2.7
ILAR Eielson Array 113.13 333 PKIKP PKiKP 08 56 32.1 -0.8
comp=Z,0.3nm,0.6s,baz=124,slow=1.1,SNR=5.8
BRTR Keskin Array B 117.58 58 PKP PKPdf 08 56 42.2 -0.2
comp=Z,1.2nm,0.7s,baz=207,slow=1.4,SNR=6.9
AKASG Malin Array Be 117.86 46 PKP PKPdf 08 56 41.5 -0.9
comp=Z,0.7nm,0.3s,baz=267,slow=2.8,SNR=4.2
ARCES ARCESS Array B 120.06 24 PKP PKPdf 08 56 46.0 -0.1
comp=Z,1.2nm,0.7s,baz=270,slow=3.6,SNR=6.9
ARCES PKKPbc **PKKPab 09 06 55.0 +0.8**
comp=Z,2.1nm,0.9s,baz=65,slow=5.8,SNR=6.9
ASAR Alice Springs 121.55 204 PKP PKPdf 08 56 49.4 -1.1
comp=Z,3.5nm,0.4s,baz=135,slow=1.7,SNR=65
ASAR pPKP **pPKPdf 08 57 17.4 -1.7**
comp=Z,2.1nm,0.6s,baz=140,slow=2.0,SNR=5.6
ASAR PKKPbc **PKKPbc 09 06 50.3 +0.1**
comp=Z,0.4nm,0.5s,baz=347,slow=3.4,SNR=9.4
ASAR PKKP **PKKPdf 09 07 22.6 -1.3**
comp=Z,0.3nm,0.6s,baz=338,slow=3.0,SNR=4.8
OBN Obninsk 123.13 42 *j i* PKIKP **PKiKP 08 56 53.2 +0.7**
OBN pmax pmax
comp=Z,8.0nm,0.6s
WRA Warramunga Arr 124.81 206 PKP PKPdf 08 56 55.9 -1.0
comp=Z,11nm,0.5s,baz=165,slow=1.7,SNR=96
WRA pPKP **pPKPdf 08 57 25.0 -0.4**
comp=Z,5.4nm,0.6s,baz=167,slow=1.7,SNR=6.9
WRAB Tennant Creek 124.81 206 *c i* PKIKP **PKPdf 08 56 56.4 -0.4**
WRAB pmax pmax
comp=Z,30nm,2.5s
KIV Kislovodsk 125.20 56 *i* PKIKP **PKiKP 08 56 57.7 +0.5**
KIV pmax pmax
comp=Z,14nm,0.9s
GNI Garni 125.90 61 *c i* PKIKP **PKiKP 08 57 00.3 +1.5**
GNI pmax pmax
comp=Z,38nm,2.5s
PRGR Permogore 128.12 34 *e* PKIKP **PKPdf 08 57 00.3 -1.4**
PRGR pmax pmax
comp=Z,9.0nm,0.6s
BILL Bilibino 131.62 336 *j e* PKIKP **PKiKP 08 57 09.4 +0.2**
BILL *e* 08 57 39.7
BILL *e* 08 57 49.2
BILL pmax pmax
comp=Z,9.0nm,1.1s
BILL pmax pmax
comp=Z,2.0nm,0.9s
ARU Arti 135.46 39 *i* PKIKP **PKiKP 08 57 17.3 0.0**
ARU 08 59 52.6
ARU Arti 135.46 39 PKP **PKPdf 08 57 15.5 -0.3**
comp=Z,1.8nm,0.4s,baz=280,slow=3.8,SNR=7.6
GEYT Alibeck 135.75 66 PKP **PKPdf 08 57 15.7 -1.2**
comp=Z,2.4nm,0.6s,baz=162,slow=0.9,SNR=4.9
TIXI Tiksi 138.38 352 *c i* PKIKP **PKiKP 08 57 22.9 +0.1**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
SEY Seymchan 139.06 333 PKhKP PKPpre 08 57 13.7
comp=Z,1.4nm,0.6s,baz=75,slow=9.0,SNR=6.1
SEY PKP **PKPdf 08 57 22.4 +0.2**
comp=Z,5.4nm,0.6s,baz=88,slow=2.5,SNR=17
SEY pPKP pPKPdf 08 57 50.4 -0.4
comp=Z,5.5nm,0.7s,baz=141,slow=5.2,SNR=4.0
PETK Petropavlovsk- 140.38 317 PKhKP PKPpre 08 57 17.8
comp=Z,3.3nm,0.7s,baz=86,slow=5.3,SNR=5.6
PETK PKP **PKPdf 08 57 24.6 -0.4**
comp=Z,4.9nm,0.9s,baz=74,slow=11,SNR=4.2
PETK pPKP pPKPdf 08 57 53.9 +0.4
comp=Z,3.5nm,0.7s,baz=64,slow=6.6,SNR=2.5
BRVK Borovoye 142.90 42 PKIKP **PKPdf 08 57 27.9 -1.5**
BRVK Borovoye 142.90 42 PKPdf 08 57 27.9 -1.5
BVAR Borovoye Array 142.97 42 PKP **PKPdf 08 57 27.4 -2.2**
comp=Z,1.5nm,0.4s,baz=304,slow=2.6,SNR=12
BVAR pPKP **pPKPdf 08 57 57.8 -0.3**
comp=Z,1.4nm,0.7s,baz=290,slow=6.1,SNR=2.6
KBL Kabul 144.09 73 PKIKP **PKPdf 08 57 32.5 +0.1**
KBL Kabul 144.09 73 PKPdf 08 57 32.5 +0.1
GUMO Guam 144.99 248 PKPbc **PKPab 08 57 33.8 +0.1**
comp=Z,320nm,1.2s,baz=214,slow=2.3,SNR=5.6
KK31 Karatay Array 145.29 58 *i* PKIKP **PKPbc 08 57 34.0 0.0**
KLRI Killari 145.59 104 *e* PKiKP **PKPab 08 57 36.4 +0.4**
SKHT Srikalahasti 145.82 113 *e* PKiKP **PKPab 08 57 38.0 +1.1**
DMPR Damasthipur 146.24 106 *e* PKPab **PKPdf 08 57 36.7 +0.4**
SRLM Srisailam 146.48 109 *e* PKiKP **PKPab 08 57 39.3 -0.1**
HYB Hyderabad 146.89 107 *i* PKP **PKPbc 08 57 40.0 +0.5**
HYB *ep* PKP pPKPab 08 58 09.0 -0.3
HYB *es* PKP 08 58 20.0
HYBB Hyderabad (bro 146.89 107 *e* PKPab **PKPbc 08 57 39.3 -0.1**
YAK Yakutsk 146.98 345 *e* PKP2 **PKPbc 08 57 38.5 +0.2**
YAK *e* 09 01 07.3
YAK *es* SS SS 09 19 59.4 +4.4
YAK pmax pmax
comp=Z,56nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=Z,95nm,3.0s
YAK pmax pmax
comp=E,80nm,3.3s
YAK pmax pmax
comp=N,73nm,3.5s
NJS Nagarjunasagar 147.06 109 *e* PKPab **PKPbc 08 57 39.7 -0.2**
ADKI Addanki 147.21 110 *e* PKiKP **PKPbc 08 57 41.3 +1.0**
GSI Gunungsitoli 147.41 153 PKPbc 08 57 42.1 +1.0
SRSP Sriramsagar 147.45 104 *e* PKiKP **PKPbc 08 57 41.6 +0.7**
NIL Nilore 147.46 75 PKP2 **PKPbc 08 57 39.5 -1.1**
NIL Nilore 147.46 75 PKPbc 08 57 39.5 -1.1
EKS2 Erkin-Say 147.73 58 P **PKPbc 08 57 41.0 -0.2**
SNR=17
AML Almayashu 147.74 59 P **PKPbc 08 57 41.3 -0.3**
SNR=12
USP Ospenovka 148.16 57 P **PKiKP 08 57 43.4 -0.4**
SNR=8.3
RPR Rampur 148.21 105 *e* PKiKP **PKPbc 08 57 43.4 +0.4**
MYLAV Mylavaram 148.24 110 *e* PKPbc **PKPdf 08 57 41.3 +1.7**
MYLAV *e* PKPab **PKiKP 08 57 44.6 0.0**
AAK Ala-Archa 148.25 58 PKP2 **PKPbc 08 57 41.8 -0.8**
AAK Ala-Archa 148.25 58 PKPbc **PKPbc 08 57 41.3 -1.4**
comp=N,20nm,0.4s,baz=201,slow=2.1,SNR=48
AAK Ala-Archa 148.25 58 P **PKiKP 08 57 44.2 0.0**
SNR=16
AAK Ala-Archa 148.25 58 PKPbc 08 57 41.5 -1.1
UCH Uchtor 148.33 59 P **PKiKP 08 57 44.8 0.0**
SNR=30
CHMS Chumysh 148.38 58 P **PKiKP 08 57 44.1 -0.2**
SNR=11
GGR Gangavaram 148.44 107 *e* PKPbc **PKPbc 08 57 42.1 -1.5**
GGR *e* PKiKP **PKiKP 08 57 44.3 -0.9**
KURBB Kurchatov Arra 148.56 42 PKPbc **PKPdf 08 57 40.9 +1.8**
comp=N,12nm,0.6s,baz=303,slow=3.3,SNR=68
KURBB pPKPbc **pPKPbc 08 58 10.7 -0.7**
comp=N,16nm,0.7s,baz=296,slow=3.2,SNR=11
KURK Kurchatov 148.57 42 PKiKP **PKPdf 08 57 40.5 +1.4**
KURK Kurchatov 148.57 42 PKPdf 08 57 41.0 +1.8
KBK Karagaybulak 148.58 58 P **PKiKP 08 57 44.9 -0.1**
SNR=18
KZA Kyzart 148.89 59 P **PKiKP 08 57 46.3 +0.4**
SNR=15
TKM2 Tokmak 2 149.01 57 PKP2 **PKPbc 08 57 44.1 -0.5**
TKM2 Tokmak 2 149.01 57 P **PKPbc 08 57 45.3 +0.7**
SNR=20
RPSI Rantau Prapat 149.21 154 PKPbc 08 57 45.9 +0.2
PVM Polavaram 149.30 110 *e* PKPbc **PKPdf 08 57 43.4 +2.1**
PSI Prapat 149.31 154 PKP2 **PKPbc 08 57 45.9 -0.2**
ULHL Ulahol 149.59 59 P **PKiKP 08 57 47.6 +0.6**
SNR=13
KSH Kashi 149.74 64 PKPbc PKPdf 08 57 43.0 +1.4
KSH sPKP 08 58 16.0
KSH SKS **SKSdf 09 04 35.1 -5.2**
KSH SKKS **SKKSac 09 07 58.8 -3.4**
KSH SS **SS 09 20 21.9 -6.8**

KSH					AMB	AMB			
	comp=N,650nm,5.5s								
KSH					LR	LR			
	comp=N,160nm,6.2s								
KSH					LR	LR			
	comp=N,170nm,4.7s								
KSH					LR	LR			
	comp=N,440nm,7.3s								
ZAA0	**Zalesovo Array**	**150.06**	**33**			**PKPbc**	**08 57 47.0**	**+0.4**	
ZALV	**Zalesovo Beam**	**150.06**	**33**		PKPbc	**PKPbc**	**08 57 47.0**	**+0.5**	
	comp=N,31nm,0.6s,baz=317,slow=0.8,SNR=92								
ZALV					pPKPbc	**pPKPbc**	**08 58 14.7**	**-0.2**	
	comp=N,20nm,0.7s,baz=297,slow=3.0,SNR=7.9								
KDJ	**Kajisay**	**150.30**	**59**		PKIKP	**PKiKP**	**08 57 49.3**	**+0.8**	
KDJ	**Kajisay**	**150.30**	**59**			**PKiKP**	**08 57 49.3**	**+0.8**	
JBP	**Jabalpur**	**150.66**	**98**	*i* P		**PKiKP**	**08 57 49.7**	**+0.1**	
JBP				*e*S		**pPKPbc**	**08 58 19.7**	**+2.4**	
YSS	**Yuzh-Sakhalins**	**151.48**	**312**		PKIKP	**PKPbc**	**08 57 49.8**	**-0.2**	
YSS	**Yuzh-Sakhalins**	**151.48**	**312**			**PKPbc**	**08 57 49.8**	**-0.2**	
IPM	**Ipoh**	**151.61**	**157**			**PKPbc**	**08 57 51.5**	**+0.1**	
PDGK	**Podgornoye**	**151.70**	**55**		PKIKP	**PKiKP**	**08 57 51.4**	**+0.1**	
CHLP	**Challavanipeta**	**151.93**	**110**	*e*	PKiKP	**PKPbc**	**08 57 51.5**	**-0.4**	
MAKZ	**Makanchi**	**152.22**	**47**		PKIKP	**PKiKP**	**08 57 52.3**	**+0.2**	
MAKZ	**Makanchi**	**152.22**	**47**		PKPdf	**PKPdf**	**08 57 45.0**	**0.0**	
MAKZ						**PKPbc**	**08 57 51.6**	**-0.2**	
MK31	**Makanchi Array**	**152.43**	**47**	*i*	PKIKP	**PKPbc**	**08 57 52.3**	**0.0**	
MK31	**Makanchi Array**	**152.43**	**47**		PKPbc	**PKPbc**	**08 57 52.3**	**0.0**	
MK31					PKPab	**PKPab**	**08 58 03.7**	**+0.8**	
MKAR	**Makanchi Array**	**152.43**	**47**		PKP	**PKPdf**	**08 57 44.8**	**-0.5**	
	comp=N,1.0nm,0.7s,baz=359,slow=0.2,SNR=11								
MKAR					PKPbc	**PKPbc**	**08 57 52.3**	**0.0**	
	comp=N,13nm,0.7s,baz=302,slow=1.9,SNR=84								
MKAR					PKPab	**PKPab**	**08 58 03.6**	**+0.7**	
	comp=N,7.7nm,0.5s,baz=284,slow=2.9,SNR=26								
MKAR					pPKPbc	**pPKPbc**	**08 58 19.5**	**-1.3**	
	comp=N,14nm,0.7s,baz=306,slow=2.2,SNR=9.7								
BOD	**Bodaibo**	**153.27**	**357**	*e*	PKIKP	**PKPdf**	**08 57 45.5**	**-0.6**	
BOD					pmax	pmax			
	comp=Z,10.0nm,1.2s								
KLR	**Kul'dur**	**156.48**	**326**		PKPab	**PKPab**	**08 58 19.9**	**-0.1**	
	comp=Z,2.3nm,0.6s,baz=53,slow=3.2,SNR=9.4								
WMQ	**Urumqi**	**157.14**	**50**	*e*	PKP	**PKPdf**	**08 57 51.8**	**-0.2**	
WMQ					LR	LR			
	comp=Z,420nm,29.2s								
WMQ					LR	LR			
	comp=Z,680nm,28.9s								
MJAR	**Matsushiro Arr**	**157.46**	**291**		PKPab	**PKPab**	**08 58 24.6**	**-0.1**	
	comp=Z,9.2nm,0.7s,baz=97,slow=3.3,SNR=16								
MJAR					pPKPab	**pPKPab**	**08 58 51.6**	**-0.7**	
	comp=Z,4.5nm,0.8s,baz=105,slow=2.6,SNR=3.0								
USRK	**Ussuriysk Ar.**	**159.45**	**315**		PKPab	**PKPab**	**08 58 33.2**	**+0.2**	
	comp=Z,7.9nm,0.7s,baz=89,slow=3.1,SNR=15								
SONM	**Songino Array**	**162.81**	**12**		PKP	**PKPdf**	**08 57 57.9**	**-0.3**	
	comp=Z,0.7nm,0.9s,baz=77,slow=0.9,SNR=4.1								
SONM					PKPab	**PKPab**	**08 58 47.7**	**+0.1**	
	comp=Z,2.4nm,0.7s,baz=332,slow=5.3,SNR=11								
SONM					pPKPab	**pPKPab**	**08 59 15.8**	**+0.6**	
	comp=Z,1.3nm,0.7s,baz=332,slow=4.9,SNR=3.6								
CMAR	**Chiang Mai Arr**	**162.82**	**134**		PKP	**PKPdf**	**08 57 58.6**	**-0.3**	
	comp=Z,1.6nm,0.5s,baz=242,slow=3.0,SNR=8.2								
CMAR					pPKP	**pPKPdf**	**08 58 27.9**	**+0.1**	
	comp=Z,1.8nm,0.6s,baz=258,slow=2.0,SNR=2.4								
KSRS	**Korea Array**	**165.28**	**300**		PKP	**PKPdf**	**08 57 59.5**	**-1.1**	
	comp=Z,1.6nm,0.8s,baz=214,slow=0.9,SNR=5.8								
KSRS					pPKP	**pPKPdf**	**08 58 28.8**	**-0.5**	
	comp=Z,0.9nm,0.7s,baz=66,slow=1.5,SNR=2.0								
KSRS					PKPab	**PKPab**	**08 59 00.1**	**+1.2**	
	comp=Z,2.6nm,0.9s,baz=81,slow=4.6,SNR=4.8								
GTA	**Gaotai**	**167.19**	**47**	∥	PKP	**PKPdf**	**08 58 03.8**	**+1.5**	
GTA					PKPab	**PKPab**	**08 59 09.0**	**+1.7**	
GTA					PP	**PP**	**09 02 56.9**	**+1.2**	
HHC	**Hu-ho-hao-te**	**170.30**	**1**	*e*	PKP	**PKPdf**	**08 58 02.9**	**-1.3**	
LZH	**Lanzhou**	**171.71**	**51**	*e*	PKP	**PKPdf**	**08 58 04.3**	**-0.9**	
LZH					pPKP	pPKPdf	08 58 30.4	-3.6	
LZH					sPKP		08 58 41.4		
CD2	**Chengdu**	**173.08**	**90**		PKP	**PKPdf**	**08 58 05.5**	**-0.3**	
NJ2	**Nanjing**	**173.93**	**281**	*e*	PKP	**PKPdf**	**08 58 07.0**	**+1.0**	

IDC 15 08:43:32.5±3.5, 49°.39S×122°.35E, h0km, mb3.4/2, mb1 3.6/2, mb1mx3.5/39, mbtmp3.5/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/16, Error ellipse: s-maj=149.6km s-min=68.4km az=124.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**15.69**	**334**	T	T	09 04 15.2	
	baz=159,slow=79						
H01W2	**Cape Leeuwin H**	**15.69**	**334**	T	T	09 04 12.3	
	baz=159,slow=79						
H01W3	**Cape Leeuwin H**	**15.71**	**334**	T	T	09 04 15.2	
	baz=159,slow=79						
NWAO	**Narrogin (SRO)**	**16.88**	**345**	LR	LR	08 52 45.6	
	comp=Z,42nm,20.8s,baz=261,slow=33						
STKA	**Stephens Creek**	**22.68**	**47**	P	P	08 48 35.2	-0.2
	1.7nm,0.8s,baz=219,slow=13,SNR=4.0						
ASAR	**Alice Springs**	**27.23**	**24**	P	P	08 49 18.1	0.0
	0.4nm,0.8s,baz=186,slow=8.1,SNR=4.1						
JAY	**Jayapura**	**49.26**	**25**	LR	LR	09 12 20.4	
	comp=Z,47nm,20.1s,baz=165,slow=35						
YKA	**Yellowknife Ar**	**146.70**	**45**	PKPbc	PKPbc	09 03 14.2	-0.7
	0.6nm,0.9s,baz=279,slow=1.2,SNR=3.3						

IDC 15 09:04:03.6±2.0, 26°.14S×70°.78E, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/39, mbtmp3.8/4, MS3.4/2, Ms1 3.5/2, ms1mx2.8/35, Error ellipse: s-maj=70.7km s-min=31.1km az=88.0, Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**18.46**	**5**	T	T	09 27 20.8	
	baz=185,slow=76						
H08S2	**Diego Garcia H**	**18.47**	**5**	T	T	09 27 20.1	
	baz=185,slow=76						
H08S3	**Diego Garcia H**	**18.48**	**5**	T	T	09 27 24.0	
	baz=185,slow=76						
PALK	**Pallekele**	**34.58**	**18**	LR	LR	09 21 47.6	
	comp=Z,59nm,19.8s,baz=215,slow=31						
H01W2	**Cape Leeuwin H**	**38.11**	**114**	T	T	09 51 42.5	
	baz=271,slow=75						
H01W3	**Cape Leeuwin H**	**38.11**	**114**	T	T	09 51 43.0	
	baz=271,slow=75						
H01W1	**Cape Leeuwin H**	**38.12**	**114**	T	T	09 51 44.6	
	baz=271,slow=75						
CMAR	**Chiang Mai Arr**	**52.10**	**35**	P	P	09 13 16.9	+1.3
	1.0nm,0.3s,baz=218,slow=8.0,SNR=6.7						
CMAR				LR	LR	09 33 11.5	
	comp=Z,30nm,18.9s,baz=232,slow=34						
ASAR	**Alice Springs**	**56.80**	**102**	P	P	09 13 49.1	-1.0
	0.4nm,0.8s,baz=243,slow=6.1,SNR=4.2						
VNDA	**Vanda**	**64.91**	**166**	P	P	09 14 44.9	+0.5
	1.4nm,1.0s,baz=274,slow=4.6,SNR=5.2						
MKAR	**Makanchi Array**	**73.33**	**8**	P	P	09 15 36.0	-0.9
	0.6nm,0.8s,baz=197,slow=5.0,SNR=5.3						

JMA 15 09:09:12.2±0.3, 31°.52N×142°.70E, h0km, M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOD2	**Odawara 2**	**4.80**	**322**	*e*S	Sn	09 11 24.5	+2.3
JRY	**Ryogami san**	**5.49**	**326**	P	Pn	09 10 38.0	+2.8
JRY				*e*S	Sn	09 11 42.4	+3.3
JAG	**Ashikaga**	**5.59**	**332**	P	Pn	09 10 38.6	+2.0
JAG				*e*S	Sn	09 11 43.1	+1.6

*ATH **15** 09:25:27.8, 40°.30N×25°.85E, h18km±6km, ML1.9/4, Error ellipse: s-maj=6.6km s-min=1.4km az=310.0*
*ISK **15** 09:25:27.4, 40°.29N×25°.86E, h8km, ML2.5/15*
*DDA **15** 09:25:28.4, 40°.25N×25°.93E, h7km±3km, ML2.4*
ISC 15 09:25:28.0±0.9, 40°29N±0°02×25°85E±0°02, h12km±7km, n38, σ0°50/53, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	**Gvkgeada**	**0.11**	**160**	PG	**Pg**	**09 25 30.8**	**-0.1**
GADA				SG	**Sg**	**09 25 32.9**	**-0.1**
SMTH	**Samothraki Isl**	**0.30**	**306**	P	**Pg**	**09 25 34.2**	**0.0**
SMTH				S	**Sg**	**09 25 38.5**	**+0.1**
SMTH				AML	AML	09 25 43.2	
	comp=N,601μm,0.1s						
SMTH				AML	AML	09 25 43.9	
	comp=E,489μm,0.1s						
ENZZ	**Sultanice-Enez**	**0.39**	**35**	PG	**Pg**	**09 25 35.8**	**+0.1**
ENZZ				SG	**Sb**	**09 25 41.7**	**-0.9**
BOZC	**Bozcaada**	**0.47**	**161**	PG	**Pg**	**09 25 37.2**	**-0.1**
BOZC				SG	**Sg**	**09 25 43.7**	**+0.1**
BOZC	**Bozcaada**	**0.47**	**161**	*i* P		**09 25 37.0**	**-0.3**
BOZC				*i* S	**Sg**	**09 25 43.4**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.49**	**77**	PG	**Pg**	**09 25 37.5**	**0.0**
GELI				SG	**Sg**	**09 25 44.5**	**+0.5**
ENEZ	**Enez**	**0.50**	**27**	PG	**Pg**	**09 25 37.7**	**-0.1**
EZN	**Ezine**	**0.59**	**142**	PG	**Pg**	**09 25 39.4**	**-0.1**
EZN				SG	**Sg**	**09 25 47.2**	**-0.1**
ALN	**Alexandroupoli**	**0.62**	**14**	P	**Pg**	**09 25 39.9**	**-0.2**
ALN				S	**Sg**	**09 25 48.2**	**-0.1**
ALN				AML	AML	09 25 48.8	
	comp=N,236μm,0.6s						
ALN				AML	AML	09 25 49.1	
	comp=E,138μm,0.6s						
ALN	**Alexandroupoli**	**0.62**	**14**	PG	**Pg**	**09 25 39.7**	**-0.4**
ALN				SG	**Sg**	**09 25 48.5**	**+0.1**
ERIK	**Erikli-Kesan**	**0.63**	**53**	PG	**Pg**	**09 25 39.7**	**-0.6**
ERIK				SG	**Sg**	**09 25 48.8**	**+0.2**
LPK	**Lapseki**	**0.70**	**83**	PG	**Pg**	**09 25 41.1**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.77**	**136**	*i* P	**Pg**	**09 25 42.6**	**-0.2**
KESN	**Edirne-Kesan**	**0.83**	**49**	*i* P	**Pg**	**09 25 43.9**	**-0.2**
KESN				*i* S	**Sb**	**09 25 56.0**	**+0.3**
KESN				IAML		09 25 57.0	
	comp=N,116nm,0.2s						
RDO	**Rodhopi**	**0.89**	**344**	P	**Pg**	**09 25 44.6**	**-0.6**
RDO				S	**Sg**	**09 25 56.5**	**-0.2**
RDO				AML	AML	09 25 56.9	
	comp=N,103μm,0.4s						
RDO				AML	AML	09 25 57.4	
	comp=E,99μm,0.3s						
RDO	**Rodhopi**	**0.89**	**344**	PG	**Pg**	**09 25 44.5**	**-0.6**
THAS	**Thassos island**	**0.92**	**290**	P	**Pg**	**09 25 45.5**	**-0.2**
THAS				S	**Sg**	**09 25 57.4**	**-0.4**
EFSA	**Agios Efstrati**	**1.00**	**222**	P	**Pg**	**09 25 47.7**	**0.0**
UKOP	**Uzunkopru-Edir**	**1.03**	**35**	PG	**Pg**	**09 25 47.4**	**-0.3**
SIGR	**SIGRI**	**1.08**	**180**	P	**Pg**	**09 25 47.7**	**-1.0**
SIGR				AML	AML	09 26 03.9	
	comp=N,676μm,0.5s						
SIGR				AML	AML	09 26 04.5	
	comp=E,349μm,0.4s						
SIGR	**SIGRI**	**1.08**	**180**	PN	**Pg**	**09 25 48.1**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.09**	**68**	PG	**Pn**	**09 25 49.1**	**+0.1**
SART	**Tekirdag**	**1.09**	**68**	*i* P	**Pg**	**09 25 48.1**	**-0.9**
SART				*i* S	**Sb**	**09 26 03.2**	**+0.2**
PRK	**Paraskevi**	**1.09**	**163**	P	**Pg**	**09 25 48.8**	**-0.1**
KRBG	**Karabiga-Canak**	**1.11**	**84**	PN	**Pg**	**09 25 48.4**	**-0.9**
KAVA	**Kavala**	**1.24**	**305**	P	**Pb**	**09 25 51.6**	**+0.3**
KNL	**Balıkesir**	**1.28**	**90**	*i* P	**Pn**	**09 25 50.2**	**+0.4**
KNL				*i* S	**Sn**	**09 26 09.1**	**+0.4**
KNL				IAML		09 26 11.0	
	comp=N,87nm,0.4s						
MRMT	**Marmara Adasi**	**1.37**	**76**	PN	**Pn**	**09 25 52.2**	**-0.7**
KDZ	**Kurdzhali**	**1.40**	**346**	PN	**Pn**	**09 25 53.6**	**+0.3**
GONE	**Gonen-Balikesi**	**1.43**	**99**	PN	**Pb**	**09 25 54.3**	**-0.2**
BALY	**Balya**	**1.46**	**111**	*i* P	**Pn**	**09 25 53.1**	**-1.1**
EDC	**Edincik**	**1.54**	**87**	PN	**Pn**	**09 25 55.8**	**+0.6**
BALB	**Balikesir**	**1.69**	**112**	PN	**Pn**	**09 25 57.7**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.70**	**122**	*i* P	**Pn**	**09 25 57.9**	**+0.4**
CHOS	**Chios island**	**1.91**	**175**	PN	**Pn**	**09 26 00.3**	**-0.1**
KCTX	**Karacabey (Bur**	**1.92**	**90**	PN	**Pn**	**09 26 00.9**	**+0.5**
DURS	**Dursunbey**	**2.13**	**108**	*i* P	**Pn**	**09 26 04.8**	**+1.3**
ARMT	**Armutlu**	**2.31**	**82**	PN	**Pn**	**09 26 06.9**	**+1.0**

*DJA **15** 09:26:11.9±0.2, 7°.5S×107°.7E±°, h121km±2km, M5.0/30, mb5.0/30, mB5.5/15, MLv4.9/29, Mw(mB)5.0/15, Mwp5.9/1*
*NEIC **15** 09:26:11.2±2.0, 6°.39S±0°.08×106°.90E±0°.06, h125km±5km, mb4.5/40, Error ellipse: s-maj=12.4km s-min=7.1km az=213.0*
*KLM **15** 09:26:12.0, 6°.73S×106°.77E, h138km, mb5.0*
*IDC **15** 09:26:12.3±0.4, 6°.40S×106°.83E, h133km±3km, mb4.1/24, mb1 4.2/25, mb1mx4.0/46, mbtmp4.5/25, MS3.7/4, Ms1 3.7/4, ms1mx2.9/38, Error ellipse: s-maj=11.9km s-min=6.6km az=50.0*
*BJI **15** 09:26:14.9±0.0, 6°.28S×106°.80E, h125km, mB5.0/8, mb4.7/16*
ISC 15 09:26:11.7±0.4, 6°62S±0°05×106°75E±0°04, h129km±3km, n180, σ1°43/210, mb4.5/42, 8C-2D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBJI	**Dramaga**	**0.06**	**2**	P	**Pn**	**09 26 30.1**	**+0.8**
DBJI				S	**Sn**	**09 26 43.0**	**+0.4**
CBJI	**Citeko**	**0.22**	**28**	P	**Pn**	**09 26 29.8**	**+0.2**
SKJI	**Sukabumi**	**0.43**	**206**	P	**Pn**	**09 26 29.8**	**-0.6**
SKJI				S	**Sn**	**09 26 42.4**	**-2.1**
TNG	**Tangerang**	**0.45**	**347**	P	**Pn**	**09 26 31.4**	**+0.9**
CNJI	**Cibinong**	**0.79**	**151**	P	**Pn**	**09 26 31.8**	**-0.9**
CNJI				S	**Sn**	**09 26 46.9**	**-1.7**
SBJI	**Serang**	**0.79**	**309**	P	**Pn**	**09 26 33.3**	**+0.6**
SBJI				S	**Sn**	**09 26 49.6**	**+1.0**
LEM	**Lembang**	**0.89**	**104**	P	**Pn**	**09 26 35.0**	**+1.3**
	347nm,0.3s,baz=350,slow=4.6,SNR=141						
LEM				S	**Sn**	**09 26 52.1**	**+1.7**
	526nm,0.3s,baz=342,slow=21,SNR=9.3						
LEM	**Lembang**	**0.89**	**104**	P	**Pn**	**09 26 34.4**	**+0.7**
CISI	**Cisompet, Garu**	**1.41**	**131**	P	**Pn**	**09 26 38.5**	**-0.4**
CISI				S	**Sn**	**09 26 58.6**	**-0.9**
CISI	**Cisompet, Garu**	**1.41**	**131**		**Pn**	**09 26 38.5**	**-0.4**
CISI				Sn	**Sn**	**09 26 59.0**	**-0.5**
CMJI	**Cimerak**	**2.05**	**125**	P	**Pn**	**09 26 46.1**	**-0.2**
CMJI				S	**Sn**	**09 27 11.3**	**-1.4**
KPJI	**Karang Pucung**	**2.28**	**108**	P	**Pn**	**09 26 50.0**	**+0.9**
KPJI				S	**Sn**	**09 27 18.3**	**+0.5**
KASI	**Kota Agung**	**2.49**	**296**	P	**Pn**	**09 26 53.2**	**+1.4**
KASI				S	**Sn**	**09 27 22.4**	**-0.1**
LWLI	**Liwa**	**3.11**	**301**	P	**Pn**	**09 27 00.6**	**+0.7**
MDSI	**Maura Dua**	**3.32**	**309**	P	**Pn**	**09 27 04.6**	**+2.1**
SMRI	**Semarang**	**3.69**	**97**	P	**Pn**	**09 27 09.1**	**+1.6**
SMRI	**Semarang**	**3.69**	**97**		**Pn**	**09 27 09.1**	**+1.6**
SMRI				Sn	**Sn**	**09 27 47.1**	**-3.5**
YOGI	**Yogyakarta**	**3.72**	**109**	P	**Pn**	**09 27 08.1**	**+0.4**
YOGI				S	**Sn**	**09 27 52.3**	**+1.2**
TPI	**Tanjungpandan**	**3.94**	**13**	P	**Pn**	**09 27 13.0**	**+2.3**
UGM	**Wanagama**	**3.96**	**109**	P	**Pn**	**09 27 11.3**	**+0.2**
UGM				S	**Sn**	**09 27 58.0**	**+1.0**
UGM	**Wanagama**	**3.96**	**109**		**Pn**	**09 27 11.2**	**+0.2**
UGM				Sn	**Sn**	**09 27 58.9**	**+1.9**
UWJI	**Ujung Watu**	**4.18**	**88**	P	**Pn**	**09 27 15.9**	**+2.0**
WOJI	**Wonogiri, Jawa**	**4.32**	**107**	P	**Pn**	**09 27 16.2**	**+0.5**
MNAI	**Manna**	**4.39**	**301**	P	**Pn**	**09 27 17.8**	**+1.1**
MNAI	**Manna**	**4.39**	**301**		**Pn**	**09 27 17.1**	**+0.4**
MNAI				Sn	**Sn**	**09 28 06.8**	**-0.4**
PCJI	**Pacitan**	**4.66**	**110**	P	**Pn**	**09 27 21.3**	**+1.0**
NGJI	**Ngawi**	**4.74**	**99**	P	**Pn**	**09 27 24.1**	**+2.8**
KSI	**Kapahiang**	**5.08**	**305**	P	**Pn**	**09 27 27.4**	**+1.4**
	1.4nm437nm,0.8s						
PWJI	**Pagerwojo**	**5.21**	**106**	P	**Pn**	**09 27 28.4**	**+0.8**
	1.3nm3μm278nm,0.9s						
MASI	**Maura Aman, Be**	**5.66**	**307**	P	**Pn**	**09 27 35.6**	**+1.8**
	1.6nm5μm481nm,1.0s						
GRJI	**Gresik**	**5.70**	**93**	P	**Pn**	**09 27 36.6**	**+2.4**
	2.3nm5μm723nm,0.7s						
GMJI	**Gumukmas**	**6.84**	**104**	P	**Pn**	**09 27 51.6**	**+2.0**
	0.8nm4μm219nm,0.5s						
KMMI	**Kalianget**	**7.18**	**94**	P	**Pn**	**09 27 55.9**	**+1.7**
	0.7nm243nm,1.1s						
JAGI	**Jajag, Banyuwa**	**7.57**	**105**	P	**Pn**	**09 28 00.3**	**+0.9**
	1.5nm6μm425nm,0.9s						
JAGI	**Jajag, Banyuwa**	**7.57**	**105**		**Pn**	**09 27 59.9**	**+0.4**
PPSI	**Pulau Pagai**	**7.73**	**299**	P	**Pn**	**09 28 00.7**	**-0.9**
	1.1nm7μm198nm,0.7s						
SDSI	**Sungai Dareh**	**7.75**	**317**	P	**Pn**	**09 28 02.2**	**+0.3**
	0.3nm46μm3μm14nm,1.3s						
STKI	**Sintang**	**8.14**	**36**	P	**Pn**	**09 28 10.8**	**+3.6**
	38nm,0.7s						
PDSI	**Padang**	**8.45**	**312**	P	**Pn**	**09 28 10.5**	**-0.9**
SRBI	**Singaraja**	**8.52**	**100**	P	**Pn**	**09 28 14.4**	**+2.1**
	3μm215nm,0.8s						
IGBI	**Denpasar**	**8.61**	**105**	P	**Pn**	**09 28 12.8**	**-0.6**
	5μm200nm,0.6s						
SISI	**Saibi**	**9.27**	**304**	P	**Pn**	**09 28 20.4**	**-2.0**
	1μm47nm,1.3s						
PLAI	**Plampang**	**11.15**	**102**	P	**Pn**	**09 28 46.7**	**-0.8**
	182nm,1.3s						
GSI	**Gunungsitoli**	**12.07**	**310**	P	**Pn**	**09 28 55.1**	**-4.6**
GSI	**Gunungsitoli**	**12.07**	**310**		**Pn**	**09 28 55.9**	**-3.8**
KAPI	**Kappang**	**13.04**	**84**	P	**Pn**	**09 29 13.0**	**+0.7**
	0.7nm,0.3s,baz=253,slow=20,SNR=1.8						
KAPI	**Kappang**	**13.04**	**84**		**Pn**	**09 29 09.7**	**-2.5**
SPSI	**Sidrap Palu**	**13.23**	**79**	P	**P**	**09 29 18.3**	**-1.5**
	32nm,0.7s						
KULM	**Kulim**	**13.30**	**333**	P	**Pn**	**09 29 13.0**	**-2.7**
BKSI	**Bulukumba**	**13.37**	**85**	P	**P**	**09 29 19.0**	**-2.3**
	32nm,1.2s						
TTSI	**Tana Toraja**	**13.50**	**75**	P	P	09 29 31.5	+8.7
MPSI	**Mapaga**	**14.83**	**63**	P	**P**	**09 29 36.9**	**-0.7**
	32nm,1.3s						
SPMM	**Sapulut**	**14.85**	**41**	P	**P**	**09 29 40.0**	**+2.1**
MMRI	**Maumere**	**15.48**	**98**		**Pn**	**09 29 42.3**	**-1.0**
KKM	**Kota Kinabalu**	**15.73**	**37**	Pn	**Pn**	**09 29 41.4**	**-5.0**
BATI	**Baumata**	**17.11**	**103**	P	**Pn**	**09 30 03.1**	**-0.2**
	29nm,0.3s,baz=333,slow=1.4,SNR=13						
BATI				S	**S**	**09 33 14.9**	**+0.1**
	6.0nm,0.3s,baz=108,slow=20,SNR=4.2						
BATI	**Baumata**	**17.11**	**103**	P	**Pn**	**09 30 03.7**	**+0.5**
	2μm109nm,0.8s						
GIRL	**Giralia**	**17.49**	**156**	P	**P**	**09 30 07.0**	**0.0**
	baz=18,SNR=5.3						
GIRL	**Giralia**	**17.49**	**156**	P	**Pn**	**09 30 09.1**	**+1.3**
SOEI	**Soe**	**17.62**	**101**	P	**Pn**	**09 30 09.5**	**0.0**
	253nm,0.8s						
SOEI	**Soe**	**17.62**	**101**	P	**P**	**09 30 07.7**	**-0.9**
PSAD1	**Pilbara Seismi**	**19.43**	**141**	P	**P**	**09 30 28.9**	**+0.6**
PSAB1	**Pilbara Seismi**	**19.51**	**141**	P	**P**	**09 30 29.9**	**+0.8**
PSAB1				IAmb	IAmb	09 30 33.7	
	comp=Z,20nm,0.9s						
PSAA2	**Pilbara Seismi**	**19.52**	**141**	P	**P**	**09 30 29.9**	**+0.6**
PSAA2				IAmb	IAmb	09 30 33.8	
	comp=Z,20nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.67**	**123**	P	**P**	**09 30 52.6**	**+0.4**
	baz=22,SNR=24						
FITZ	**Fitzroy Crossi**	**21.67**	**123**	P	**P**	**09 30 52.3**	**0.0**
	comp=Z,18nm,0.5s,baz=304,slow=7.1,SNR=44						
FITZ				S	**S**	**09 34 46.8**	**+2.5**
	comp=Z,3.1nm,0.8s,baz=14,slow=8.3,SNR=2.4						
FITZ	**Fitzroy Crossi**	**21.67**	**123**	P	**P**	**09 30 52.7**	**+0.4**
FITZ				IAmb	IAmb	09 30 54.1	
	comp=Z,20nm,0.7s						
MEEK	**Meekatharra**	**22.89**	**152**	P	**P**	**09 31 04.8**	**+0.2**
	baz=23,SNR=5.5						
KNRA	**Kununurra**	**23.38**	**114**	P	**P**	**09 31 09.1**	**+0.1**
	baz=24,SNR=19						
KNRA	**Kununurra**	**23.38**	**114**	P	**P**	**09 31 09.2**	**+0.1**
MTN	**Manton Dam**	**24.80**	**106**	P	**P**	**09 31 21.8**	**-0.3**
TGY	**Tagaytay City**	**24.94**	**34**	LR	LR	09 42 42.5	
	comp=Z,254nm,18.3s,baz=68,slow=40						
SIJI	**Sorong**	**25.11**	**78**	P	**P**	**09 31 24.1**	**-0.7**
	comp=Z,24nm,0.8s,baz=272,slow=7.2,SNR=6.1						
FAKI	**Fak Fak**	**25.67**	**83**	P	**P**	**09 31 30.8**	**+0.8**
FAKI				IAmb	IAmb	09 31 39.5	
	comp=Z,13nm,0.8s						
KDU	**Kakadu**	**26.05**	**105**	P	**P**	**09 31 33.1**	**-0.2**
	baz=26,SNR=9.3						
CMAR	**Chiang Mai Arr**	**26.08**	**343**	P	**P**	**09 31 32.9**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=185,slow=8.6,SNR=4.7						
CMAR				pP	**pP**	**09 32 01.6**	**+0.6**
	comp=Z,3.1nm,0.8s,baz=174,slow=9.3,SNR=3.3						
CMAR	**Chiang Mai Arr**	**26.08**	**343**	P	**P**	**09 31 32.4**	**-1.1**
NWAO	**Narrogin (SRO)**	**27.94**	**161**	P	**P**	**09 31 50.2**	**+0.3**
	comp=Z,4.0nm,0.6s,baz=336,slow=5.2,SNR=6.3						
NWAO	**Narrogin (SRO)**	**27.94**	**161**	P	**P**	**09 31 51.7**	**+1.8**
NWAO				IAmb	IAmb	09 32 04.6	
	comp=

comp=Z,1.8nm,0.7s,baz=176,slow=6.5,SNR=4.8
SONM ScP **ScP** **09 40 11.6 -1.5**

USRK Ussuriysk Ar. 55.47 22 P **P** **09 35 32.5 -0.6**
comp=Z,1.0nm,0.5s,baz=200,slow=5.3,SNR=9.1
USRK pP **pP** **09 36 02.0 -1.6**
comp=Z,1.3nm,0.5s,baz=196,slow=6.2,SNR=4.1

MK31 Makanchi Array 57.44 340 P **P** **09 35 44.7 -2.3**
MKAR Makanchi Array 57.44 340 P **P** **09 35 45.2 -1.8**
comp=Z,1.7nm,0.5s,baz=151,slow=8.5,SNR=20
MKAR pP **pP** **09 36 18.6 +0.9**
comp=Z,2.4nm,0.9s,baz=119,slow=7.5,SNR=4.9

MKAR Makanchi Array 57.44 340 P **P** **09 35 44.7 -2.3**
UOSS Minazif 58.33 305 P **P** **09 35 52.5 -1.1**
UOSS IAmb IAmb 09 35 55.9
comp=Z,4.4nm,0.7s

OPO Ambohidratompo 59.09 252 P **P** **09 36 01.4 +2.1**
comp=Z,9.2nm,0.7s,baz=68,slow=4.3,SNR=10

KLR Kul'dur 59.75 19 P **P** **09 36 01.7 -1.2**
comp=Z,1.0nm,0.5s,baz=213,slow=2.3,SNR=5.6
KLR pP **pP** **09 36 33.5 -0.4**
comp=Z,4.1nm,0.8s,baz=210,slow=6.6,SNR=11

KURBB Kurchatov Arra 62.01 340 P **P** **09 36 16.2 -1.9**
comp=Z,1.6nm,0.6s,baz=153,slow=6.1,SNR=7.0

KURK Kurchatov 62.06 340 P **P** **09 36 16.0 -2.4**
KURK IAmb IAmb 09 36 17.3
comp=Z,3.2nm,0.8s

ZALV Zalesovo Beam 63.10 346 P **P** **09 36 23.3 -2.1**
comp=Z,0.8nm,0.3s,baz=173,slow=9.5,SNR=2.2

ZALV Zalesovo Beam 63.10 346 P **P** **09 36 23.0 -2.3**
RAYN Ar Rayn 66.84 299 P **P** **09 36 49.6 -0.6**
RAYN IAmb IAmb 09 36 51.0
comp=Z,7.4nm,1.3s

BVAR Borovoye Array 66.92 337 P **P** **09 36 48.3 -1.8**
comp=Z,2.0nm,0.5s,baz=141,slow=9.0,SNR=16

BRVK Borovoye 66.98 337 P **P** **09 36 49.0 -1.5**
MAW Mawson 67.66 197 P **P** **09 36 56.2 +1.7**
comp=Z,13nm,0.5s,baz=55,slow=5.3,SNR=27

MAW Mawson 67.66 197 P **P** **09 36 56.5 +2.0**
MAW IAmb IAmb 09 36 56.9
comp=Z,3.4nm,0.6s

ABKAR Akbulak array 68.96 329 P **P** **09 37 01.3 -1.6**
KMBO Kilima Mbogo 69.50 271 P **P** **09 37 08.8 +1.5**
comp=Z,1.3nm,0.3s,baz=154,slow=6.8,SNR=4.2

AKTO Aktyubinsk 70.67 329 P **P** **09 37 12.0 -1.4**
comp=Z,0.4nm,0.3s,baz=102,slow=9.3,SNR=2.6

SYO Syowa Base 75.77 200⇑ *e*P **P** **09 37 45.4 +2.4**
SYO Syowa Base 75.77 200⇑ *e*PcP **PcP** **09 37 54.8 -0.3**
VNDA Vanda 76.39 169 P **P** **09 37 47.5 +1.1**
comp=Z,3.1nm,0.5s,baz=320,slow=7.0,SNR=25

VNDA Vanda 76.39 169 P **P** **09 37 47.6 +1.3**
VNDA IAmb IAmb 09 37 48.7
comp=Z,6.7nm,1.1s

LSZ Lusaka 77.28 256 P **P** **09 37 53.6 +0.9**
LSZ IAmb IAmb 09 37 55.0
comp=Z,7.3nm,0.8s

LBTB Lobatse 79.23 246 P **P** **09 38 04.1 +0.8**
LBTB IAmb IAmb 09 38 05.0
comp=Z,5.3nm,0.7s

BOSA Boshof 79.41 242 P **P** **09 38 05.0 +0.8**
comp=Z,2.3nm,0.5s,baz=115,slow=3.7,SNR=8.6

BOSA Boshof 79.41 242 P **P** **09 38 05.8 +1.5**
BR131 Keskin Array S 81.39 312 P **P** **09 38 13.5 -1.0**
BR131 IAmb IAmb 09 38 14.7
comp=Z,6.2nm,0.7s

BRTR Keskin Array B 81.39 312 P **P** **09 38 13.8 -0.8**
comp=Z,5.6nm,0.7s,baz=138,slow=6.9,SNR=31
BRTR pP **pP** **09 38 46.5 -0.8**
comp=Z,1.4nm,0.8s,baz=142,slow=8.3,SNR=2.9

BRTR Keskin Array B 81.39 312 P **P** **09 38 13.5 -1.0**
QSPA South Pole Qui 83.37 180 P **P** **09 38 25.0 +0.6**
QSPA IAmb IAmb 09 38 26.3
comp=Z,9.7nm,1.0s

AKASG Malin Array Be 87.24 322 P **P** **09 38 42.5 -1.1**
comp=Z,1.9nm,0.5s,baz=84,slow=4.5,SNR=8.5

VRI Vrincioaia 87.80 316⇓P **P** **09 38 47.5 +1.0**
TESR Tescani 87.98 317⇑P **P** **09 38 47.6 +0.3**
MLR Muntele Rosu 88.26 316⇓P **P** **09 38 49.6 +0.8**
MLR Muntele Rosu 88.26 316 P **P** **09 38 48.9 +0.1**
VOIR 88.87 316⇑P **P** **09 38 51.6 0.0**
BURAR Bucovina Array 89.16 318⇑P **P** **09 38 53.7 +0.8**
BURAR Bucovina Array 89.16 318 P **P** **09 38 53.2 +0.3**
BUR08 Bucovina Ar. S 89.17 318 P **P** **09 38 53.6 +0.6**
BUR08 IAmb IAmb 09 38 54.8
comp=Z,3.8nm,0.9s

VTS Vitosha 89.68 313⇑P **P** **09 38 55.9 +0.3**
SNAA Sanae 89.82 197 P **P** **09 38 57.7 +2.2**
SNAA Sanae 89.82 197 P **P** **09 38 56.6 +1.1**
SNAA IAmb IAmb 09 38 58.2
comp=Z,4.8nm,0.9s

GZR Gura Zlata 90.44 316⇑P **P** **09 39 00.7 +1.8**
DRGR 90.70 317⇑P **P** **09 39 02.2 +2.1**
KOLS Kolonicke sedl 91.32 319 *e*P **P** **09 39 03.8 +1.0**
FINES FINESS Array B 91.32 332 P **P** **09 39 00.6 -1.9**
comp=Z,1.4nm,0.7s,baz=106,slow=10,SNR=3.0
FINES LR LR 10 25 51.7
comp=Z,54nm,18.5s,baz=342,slow=39

ARCES ARCESS Array B 93.09 340 P **P** **09 39 09.3 -1.2**
comp=Z,1.5nm,0.9s,baz=108,slow=5.9,SNR=2.7

VRAC Vranov 95.06 319 LR LR 10 28 41.9
comp=Z,50nm,18.1s,baz=324,slow=40

YKA Yellowknife Ar 116.59 20 PKP **PKPdf** **09 44 39.1 -1.1**
comp=Z,0.3nm,0.6s,baz=320,slow=2.9,SNR=8.7

SCHQ Schefferville 131.65 355 PKP **PKPdf** **09 45 09.6 +0.3**
comp=Z,2.3nm,0.7s,baz=329,slow=3.3,SNR=5.3
SCHQ SKPbc **SKPbc** **09 48 21.3 -1.8**
comp=Z,2.2nm,0.8s,baz=22,slow=10.0,SNR=3.7

PDAR Pinedale Array 131.83 36 PKP **PKPdf** **09 45 10.3 0.0**
comp=Z,0.3nm,0.7s,baz=305,slow=3.2,SNR=3.0
PDAR SKPbc **SKPbc** **09 48 23.0 -1.5**
comp=Z,1.5nm,1.0s,baz=228,slow=1.8,SNR=6.0

PDAR Pinedale Array 131.83 36 **PKiKP** **09 45 11.4 0.0**
ULM Lac du Bonnet 132.57 20 SKPbc **SKPbc** **09 48 23.9 -2.6**
comp=Z,4.7nm,0.8s,baz=7.0,slow=6.0,SNR=7.4

CFA Coronel Fontan 141.69 187 PKhKP PKPpre 09 45 23.7
baz=201,slow=3.0

TXAR Lajitas Array 143.50 48 PKP PKPbc 09 45 29.8 +0.2
comp=Z,0.8nm,0.9s,baz=318,slow=1.2,SNR=6.0
TXAR SKPbc **SKPbc** **09 48 57.4 -1.3**
comp=Z,1.6nm,0.8s,baz=262,slow=0.8,SNR=8.6

TXAR Lajitas Array 143.50 48 **PKPdf** **09 45 30.8 -1.2**
CPUP Villa Florida 143.79 205 PKP **PKPdf** **09 45 31.6 -0.9**
comp=Z,5.9nm,0.5s,baz=154,slow=2.3,SNR=19

BDFB Brasilia 146.62 228 PKPbc **PKPbc** **09 45 39.9 +0.5**
comp=Z,5.3nm,0.8s,baz=136,slow=10,SNR=5.7

BDFB Brasilia 146.62 228 **PKPab** **09 45 40.9 +0.2**
TKL Tuckaleechee C 149.52 17 PKPbc **PKPbc** **09 45 46.1 -0.3**
comp=Z,5.5nm,0.5s,baz=146,slow=5.4,SNR=17

TKL Tuckaleechee C 149.52 17 **PKPbc** **09 45 46.5 +0.1**
LVC Limon Verde 150.64 188 PKPbc **PKiKP** **09 45 51.9 +1.3**
comp=Z,10nm,0.6s,baz=334,slow=7.1,SNR=1.8

SIV San Ignacio 154.50 208 PKP **PKPdf** **09 45 50.6 +0.8**
comp=Z,0.3nm,0.6s,baz=193,slow=3.7,SNR=4.2
SIV PKPbc **PKiKP** **09 45 58.9 +0.6**
comp=Z,1.7nm,0.6s,baz=145,slow=2.6,SNR=11
SIV PKPab **PKPab** **09 46 14.0 +1.1**
comp=Z,4.8nm,0.7s,baz=162,slow=5.1,SNR=19

LPAZ La Paz 156.69 193 PKPab **PKPab** **09 46 23.9 +1.0**
comp=Z,2.1nm,0.7s,baz=193,slow=5.8,SNR=5.1

LPAZ La Paz 156.69 193 PKPdf **PKPdf** **09 45 50.6 -2.8**
LPAZ **PKPab** **09 46 22.9 0.0**

IDC 15 09:26:11.1±6.8,**9.29N**×**138.62E,h0**km,**mb3.7**/4,
mb1 3.9/4,**mb1mx3.6**/53,**mbtmp3.7**/4,**Error ellipse:**
s-maj=171.5km s-min=59.9km az=26.0,Western
Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**40.22**	**353**	P	P	09 33 49.7	+0.3
	1.1nm,0.8s,baz=187,slow=16,SNR=3.3						
SONM	**Songino Array**	**47.07**	**331**	P	P	09 34 44.4	-0.4
	1.1nm,0.5s,baz=138,slow=8.1,SNR=6.4						
ILAR	**Eielson Array**	**75.05**	**25**	P	P	09 37 53.9	-0.5
	0.4nm,0.6s,baz=240,slow=5.0,SNR=7.8						
YKA	**Yellowknife Ar**	**89.44**	**26**	P	P	09 39 10.5	+0.8
	0.3nm,0.8s,baz=290,slow=5.1,SNR=4.4						

MAN 15 09:26:17.2,9.87N×**124.01E,h4**km,**mb4.8,ML3.7,MS3.7,**
4C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.45**	**354**	⇓*i*P	Pb	09 26 26.9	-0.9
LLP				*i* S	Sb	09 26 33.4	-1.4
MSLP	**Maasin**	**0.88**	**72**	*e*P	Pg	09 26 34.0	-0.1
MSLP				*e*S	Sb	09 26 46.5	-0.5
SNPH	**Sibulan**	**0.93**	**236**	⇑*i*P	Pn	09 26 37.7	+0.7
SNPH				*i* S	Sn	09 26 52.5	+1.7
OCLP	**Ormoc**	**1.32**	**26**	*e*P	Pn	09 26 41.9	-0.5
OCLP				*e*S	Sb	09 26 59.8	+0.1
DCPH	**Dipolog City**	**1.43**	**207**⇑	*e*P	Pg	09 26 44.9	+0.2
CGP	**Cagayan de Oro**	**1.56**	**154**⇓	*e*P	Pn	09 26 44.8	-0.9
CGP				*e*S	Sn	09 27 04.0	-2.3
RCP	**Roxas**	**2.09**	**324**⇑	*e*P	Pn	09 26 54.2	+1.1
RCP				*e*S	Sb	09 27 21.6	-0.6
BUKP	**Musuan**	**2.23**	**152**	*e*P	Pn	09 26 55.8	+0.8
BUKP				*e*S	Sb	09 27 25.8	-0.4
KCP	**Kidapawan**	**3.03**	**159**⇑	*i*P	Pn	09 27 04.5	-1.6
KCP				*i* S	Sn	09 27 43.8	+0.9

PAS ***15*** *09:35:18.9*±*1.8,34.˙143N*×*0.˙008*×*117.˙443W*±*0.˙009,*
h4km±*3km, Mwr4.4/6,mb4.3/8(NEIC),Error ellipse:*
s-maj=1.1km s-min=1.0km az=176.0
IDC ***15*** *09:35:18.4*±*0.8,34.˙07N*×*117.˙40W,h0km,mb4.2/8,*
mb1 4.3/16,mb1mx4.0/56,mbtmp4.1/16,ML3.9/8,MS3.8/17,
Ms1 3.8/17,ms1mx3.5/48,Error ellipse: s-maj=15.1km
s-min=6.1km az=46.0
SCEDC ***15*** *09:35:18.9,34.˙14N*×*117.˙44W,h4km*
ANF ***15*** *09:35:18.6*±*0.2,34.˙11N*×*117.˙44W,h0km,ML4.8/47,Error*
ellipse: s-maj=3.0km s-min=2.1km az=20.0
NEIC ***15*** *09:35:19.1,34.˙14N*×*117.˙45W,h8km,Moment Tensor*
Solution. Moment tensor: Scale 10^{15}*Nm; Mrr1.02;*
Mθθ-5.80; Mϕϕ4.79; Mrθ1.06; Mrϕ-0.95; Mθϕ0.65; Fault
plane solution: M$_0$*5.59000×10*^{15} *NP1:*ϕ_s*310.17000°,*
δ77.76000°,λ-179.54000°. NP2:ϕ_s*220.07000°,*
δ89.55000°,λ-12.24000°. Principal axes: T 4.9513,
Plg8.0000°, Azm266.0000°; N 1.1109, Plg78.0000°,
Azm38.0000°; P -6.0622, Plg9.0000°, Azm174.0000°;

ISC 15 09:35:19.5±0.7,**34.14N**±0.01×**117.45W**±0.01,**h11**km±4km,
n344,σ1**38**/395,**mb4.3**/10,**MS3.9**/10,**Southern**
California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FON	**Fontana**	**0.04**	**171**		**Pg**	**09 35 21.2**	**-0.3**
SS2	**San Sevaine**	**0.08**	**326**		**Pg**	**09 35 20.6**	**-1.3**
CLTC	**Calectric**	**0.12**	**115**		**Pg**	**09 35 21.5**	**-1.0**
CFSC	**Central Fire S**	**0.14**	**105**		**Sg**	**09 35 24.6**	**-0.5**
CFSC	**Central Fire S**	**0.14**	**105**		**Pg**	**09 35 21.9**	**-0.9**
RVR	**Riverside**	**0.16**	**158**		**Pg**	**09 35 24.5**	**+1.4**
MLSC	**Mira Loma**	**0.17**	**214**		**Pg**	**09 35 22.2**	**-0.9**
MLSC					**Sg**	**09 35 25.0**	**-0.7**
CSP	**Cedar Springs**	**0.17**	**26**		**Pg**	**09 35 22.2**	**-1.2**
HLNC	**Highland**	**0.19**	**97**		**Pg**	**09 35 22.8**	**-0.8**
HLNC					**Sg**	**09 35 26.3**	**-0.1**
RSBC	**Riverside Bore**	**0.20**	**150**		**Pg**	**09 35 22.5**	**-1.2**
RSBC	**Riverside Bore**	**0.20**	**150**		**Pg**	**09 35 22.6**	**-1.0**
RSBC					**Sg**	**09 35 25.6**	**-0.9**
BFSC	**Mount Baldy Ra**	**0.20**	**299**		**Pg**	**09 35 22.6**	**-1.2**
BFSC					**Sg**	**09 35 25.5**	**-1.3**
BFSC	**Mount Baldy Ra**	**0.20**	**299**	P	**Pg**	**09 35 22.6**	**-1.2**
	baz=118,SNR=1000						
BFSC				S	**Sg**	**09 35 25.6**	**-1.3**
	baz=118						
SSK	**Sunset Peak**	**0.21**	**288**		**Pg**	**09 35 23.2**	**-0.9**
CHNC	**Chino**	**0.24**	**233**		**Pg**	**09 35 27.6**	**+3.2**
SVD	**Seven Oaks Dam**	**0.29**	**97**		**Pg**	**09 35 24.7**	**-0.8**
SVD					**Sg**	**09 35 29.5**	**+0.1**
CFT	**Crafton Hills**	**0.30**	**111**		**Pg**	**09 35 24.9**	**-0.6**
CFT					**Sg**	**09 35 29.8**	**+0.2**
PSRC	**Puddingstone R**	**0.30**	**260**		**Pg**	**09 35 24.9**	**-0.7**
PSRC					**Sg**	**09 35 29.5**	**-0.2**
SME	**Santa Rosa Min**	**0.33**	**166**		**Pg**	**09 35 24.9**	**-1.1**
PEC	**Perris**	**0.35**	**136**		**Pg**	**09 35 25.3**	**-1.1**
PEC					**Sg**	**09 35 30.3**	**-0.7**
PEM	**Pine Mountain**	**0.35**	**274**		**Pg**	**09 35 25.7**	**-0.8**
XTL	**Crystal Lake,**	**0.38**	**294**		**Pg**	**09 35 25.9**	**-1.2**
BTL	**Butler Peak**	**0.39**	**73**		**Pg**	**09 35 26.5**	**-0.8**
ADO	**Adelanto Recei**	**0.41**	**2**		**Pg**	**09 35 26.7**	**-0.9**
ADO					**Sg**	**09 35 33.2**	**+0.2**
VTV	**Victorville**	**0.43**	**13**		**Pg**	**09 35 26.8**	**-1.2**
VTV					**Sg**	**09 35 32.8**	**-0.9**
BBSC	**Beaumont Base**	**0.45**	**120**		**Pg**	**09 35 27.7**	**-0.6**
BBSC					**Sg**	**09 35 34.6**	**+0.4**
BBRC	**Big Bear Solar**	**0.45**	**75**		**Pg**	**09 35 27.6**	**-0.9**
BBRC					**Sg**	**09 35 34.2**	**-0.2**
BBRC	**Big Bear Solar**	**0.45**	**75**	P	**Pg**	**09 35 27.2**	**-1.2**
	baz=255,SNR=1000						
BBRC				S	**Sg**	**09 35 33.8**	**-0.7**
	baz=255						
FULC	**Fullerton**	**0.48**	**236**		**Pg**	**09 35 28.9**	**0.0**
MWC	**Mount Wilson**	**0.51**	**279**		**Pg**	**09 35 28.6**	**-0.9**
MWC				Sg	**Sg**	**09 35 35.8**	**-0.6**
CHFC	**Chilao Flat St**	**0.52**	**292**		**Pg**	**09 35 28.2**	**-1.4**
CACC	**Caltech Cellar**	**0.56**	**270**		**Pg**	**09 35 29.5**	**-0.9**
GSA	**Caltech--GSA**	**0.56**	**270**		**Pg**	**09 35 29.6**	**-0.9**
GSA	**Caltech--GSA**	**0.56**	**270**		**Pg**	**09 35 29.7**	**-0.9**
GVRC	**Garvey Reservo**	**0.57**	**261**		**Pg**	**09 35 29.9**	**-0.7**
SANC	**Santa Ana**	**0.57**	**220**		**Pg**	**09 35 30.3**	**-0.3**
MURC	**Murrieta**	**0.58**	**159**		**Pg**	**09 35 29.4**	**-1.4**
MURC					**Sg**	**09 35 37.6**	**-0.9**
MURC	**Murrieta**	**0.58**	**159**	P	**Pg**	**09 35 29.5**	**-1.4**
	baz=339,SNR=1000						
MURC				S	**Sg**	**09 35 37.2**	**-1.2**
	baz=339						
DGR	**Domenigoni Val**	**0.61**	**143**		**Pg**	**09 35 29.8**	**-1.6**
DGR					**Sg**	**09 35 38.0**	**-1.4**
PASC	**Pasadena Art C**	**0.61**	**273**		**Pg**	**09 35 30.3**	**-1.1**
PASC				Sg	**Sg**	**09 35 38.8**	**-0.7**
DLAC	**Del Amo**	**0.61**	**242**		**Pb**	**09 35 31.6**	**-0.6**
SBB	**Saddle Back Bu**	**0.63**	**330**		**Pg**	**09 35 30.4**	**-1.3**
SBB					**Sg**	**09 35 38.9**	**-1.1**
BACC	**Bachelor Mtn.**	**0.63**	**147**		**Pg**	**09 35 30.0**	**-1.7**
BACC					**Sg**	**09 35 38.8**	**-1.1**
POB	**Polly Butte**	**0.63**	**136**		**Pg**	**09 35 30.2**	**-1.5**
WTT2	**Watts, South G**	**0.70**	**254**		**Pb**	**09 35 33.1**	**-0.6**
USC	**University of**	**0.71**	**260**		**Pg**	**09 35 32.6**	**-0.5**
GR2C	**Griffith Obs.**	**0.71**	**268**		**Pg**	**09 35 31.8**	**-1.4**
DECC	**Green Verdugo**	**0.74**	**279**		**Pg**	**09 35 32.8**	**-1.0**
DECC					**Sg**	**09 35 39.4**	**-0.3**
DECC	**Green Verdugo**	**0.74**	**279**	P	**Pg**	**09 35 32.8**	**-1.0**
	baz=98,SNR=1000						
DECC				S	**Sg**	**09 35 43.3**	**-0.3**
	baz=98						
DEVC	**Devers**	**0.75**	**106**		**Pg**	**09 35 33.3**	**-0.7**
DEVC					**Sg**	**09 35 43.7**	**-0.1**
HLLC	**North Hollywoo**	**0.76**	**273**		**Pg**	**09 35 33.0**	**-1.2**
BHPC	**Baldwin Hills**	**0.77**	**259**		**Pg**	**09 35 34.1**	**-0.3**
LCGC	**La Cienega, Cu**	**0.79**	**260**		**Pg**	**09 35 34.3**	**-0.4**
GVDA	**Garner Valley**	**0.80**	**126**		**Pg**	**09 35 33.4**	**-1.6**
RRX	**Edison Barstow**	**0.82**	**27**		**Pg**	**09 35 34.2**	**-1.1**
RRX					**Sg**	**09 35 45.7**	**-0.3**
RRX	**Edison Barstow**	**0.82**	**27**	P	**Pg**	**09 35 34.2**	**-1.1**
	baz=207,SNR=406						
RRX				S	**Sg**	**09 35 45.5**	**-0.6**
	baz=207						
CRY	**Cary Ranch**	**0.82**	**134**		**Pg**	**09 35 33.9**	**-1.6**
CRY					**Sg**	**09 35 44.8**	**-1.4**
FMP	**Fort Macarthur**	**0.82**	**239**		**Pg**	**09 35 34.2**	**-1.3**
FMP	**Fort Macarthur**	**0.82**	**239**	P	**Pg**	**09 35 34.1**	**-1.3**
	baz=58,SNR=232						
FMP				S	**Sb**	**09 35 47.0**	**0.0**
	baz=58						
IR2C	**Iron Canyon**	**0.83**	**287**		**Pg**	**09 35 33.8**	**-1.7**
DJJ	**Donna J Jenkin**	**0.84**	**268**		**Pg**	**09 35 34.0**	**-1.6**
DJJ	**Donna J Jenkin**	**0.84**	**268**		**Pg**	**09 35 34.0**	**-1.6**
LEOC	**Leona Valley**	**0.86**	**305**		**Pg**	**09 35 34.6**	**-1.5**
EDW2	**Edwards Air Fo**	**0.86**	**329**		**Pg**	**09 35 34.8**	**-1.4**
EDW2					**Sg**	**09 35 46.4**	**-1.1**
EDW2	**Edwards Air Fo**	**0.86**	**329**	P	**Pg**	**09 35 34.7**	**-1.4**
	baz=148,SNR=1000						
EDW2				S	**Sg**	**09 35 46.3**	**-1.1**
	baz=148						
BLAC	**Blackrock camp**	**0.88**	**94**		**Pg**	**09 35 35.4**	**-1.1**
EW2	**E Wide Canyon**	**0.89**	**103**		**Pg**	**09 35 35.4**	**-1.2**
ALPC	**Antelope**	**0.89**	**308**		**Pg**	**09 35 35.1**	**-1.5**
DNR	**Dunn Ranch,Anz**	**0.89**	**130**		**Pg**	**09 35 35.3**	**-1.4**
DNR					**Sb**	**09 35 48.6**	**-0.4**
RPV	**Rancho Palos V**	**0.89**	**244**		**Pg**	**09 35 35.3**	**-1.3**
SNDA	**J Saunders Pla**	**0.91**	**130**		**Pg**	**09 35 35.6**	**-1.5**
SNDA					**Sg**	**09 35 48.4**	**-0.6**
BZNA	**Buzz No.'s Pla**	**0.92**	**135**		**Pg**	**09 35 35.6**	**-1.6**
BZNA					**Sg**	**09 35 47.9**	**-1.3**
PLM	**Palomar**	**0.93**	**148**		**Pg**	**09 35 35.5**	**-1.9**
PLM					**Sg**	**09 35 48.4**	**-1.0**
FRD	**Ford Ranch, An**	**0.96**	**132**		**Pg**	**09 35 36.3**	**-1.6**
FRD					**Sg**	**09 35 49.0**	**-1.3**
FRD	**Ford Ranch, An**	**0.96**	**132**		**Pg**	**09 35 36.2**	**-1.6**
PFO	**Pinyon Flats O**	**0.98**	**123**	Pg	**Pg**	**09 35 36.2**	**-2.2**
	389nm,0.3s,baz=291,slow=15,SNR=2837						
PFO				Lg	Lg	09 35 49.4	
	465nm,0.3s,baz=185,slow=12,SNR=27						
PFO				LR	LR	09 35 57.0	
	comp=Z,629nm,21.1s,baz=123,slow=42						
PFO	**Pinyon Flats O**	**0.98**	**123**		**Pg**	**09 35 36.6**	**-1.8**
PFO					**Sg**	**09 35 50.1**	**-1.0**
PFO	**Pinyon Flats O**	**0.98**	**123**		**Pg**	**09 35 36.7**	**-1.6**
PFO				Sg	**Sg**	**09 35 50.4**	**-0.7**
PFO	**Pinyon Flats O**	**0.98**	**123**	P	**Pg**	**09 35 36.6**	**-1.8**
	baz=303,SNR=1000						
PFO				S	**Sg**	**09 35 49.6**	**-1.5**
	baz=303						
XPFO	**Pion Flat**	**0.98**	**122**		**Pg**	**09 35 36.6**	**-1.8**
XPFO	**Pion Flat**	**0.98**	**122**		**Pg**	**09 35 36.7**	**-1.7**
XPFO				Sg	**Sg**	**09 35 50.2**	**-1.0**
I57US	**PINON FLAT INF**	**0.98**	**123**	Pg	**Pg**	**09 35 36.6**	**-1.9**
	baz=297,slow=28,SNR=1.5						
OAT	**Oat Mountain**	**0.99**	**282**		**Pg**	**09 35 37.8**	**-0.7**
GORC	**Green Oak Ranc**	**1.00**	**169**		**Pg**	**09 35 36.6**	**-2.2**
BLCC	**Black Canyon**	**1.02**	**276**		**Pg**	**09 35 37.9**	**-1.2**
BTPC	**Burnt Peak**	**1.08**	**300**		**Pg**	**09 35 39.8**	**-0.5**
CIAC	**Catalina I. Ai**	**1.09**	**228**		**Pg**	**09 35 38.8**	**-1.7**
CIS	**Catalina Islan**	**1.09**	**228**	P	**Pg**	**09 35 38.8**	**-1.8**
	baz=47,SNR=1000						
CIS				S	**Sg**	**09 35 53.8**	**-0.9**
	baz=47						
AGOC	**Agoura**	**1.09**	**271**		**Pg**	**09 35 38.7**	**-1.8**
HEC	**Hector,Ludlow**	**1.15**	**53**		**Pg**	**09 35 40.1**	**-1.4**
HEC	**Hector,Ludlow**	**1.15**	**53**	P	**Pg**	**09 35 40.1**	**-1.4**
	baz=233,SNR=1000						
HEC				S	**Sg**	**09 35 55.7**	**-0.8**
	baz=233						
PYR	**Pyramid**	**1.15**	**292**		**Pg**	**09 35 39.6**	**-2.1**
OSI	**Osito Audit: C**	**1.16**	**294**		**Pg**	**09 35 40.6**	**-1.1**
OSI				Sg	**Sg**	**09 35 56.3**	**-0.4**
OSI	**Osito Audit: C**	**1.16**	**294**	P	**Pg**	**09 35 39.5**	**-2.2**
	baz=114,SNR=1000						
OSI				S	**Sb**	**09 35 57.0**	**+0.4**
	baz=114						
TPC	**Twentynine Pal**	**1.16**	**91**		**Pg**	**09 35 40.4**	**-1.4**
HWB	**Hans Werner Br**	**1.19**	**160**		**Pg**	**09 35 39.5**	**-2.8**
BELC	**Belle Mtn. Jos**	**1.21**	**96**		**Pg**	**09 35 41.3**	**-1.5**
BELC	**Belle Mtn. Jos**	**1.21**	**96**	P	**Pg**	**09 35 41.2**	**-1.5**
	baz=277,SNR=1000						
BELC				S	**Sg**	**09 35 58.0**	**-0.5**
	baz=277						
DPP	**Dos Picos Cty**	**1.22**	**160**		**Pg**	**09 35 40.0**	**-2.9**
DPP					**Sg**	**09 35 55.9**	**-2.8**
BORC	**Borrego Spring**	**1.22**	**135**		**Pg**	**09 35 40.9**	**-2.1**
BORC					**Sg**	**09 35 57.1**	**-1.9**
THC	**Tehachapi Micr**	**1.26**	**308**		**Pg**	**09 35 42.1**	**-1.6**
GSC	**Goldstone, Bar**	**1.27**	**24**		**Pg**	**09 35 42.4**	**-1.6**
GSC				Sg	**Sg**	**09 35 59.3**	**-1.1**
GSC	**Goldstone, Bar**	**1.27**	**24**	P	**Pg**	**09 35 42.3**	**-1.6**
	baz=204,SNR=1000						
GSC				S	**Sg**	**09 35 59.4**	**-1.1**
	baz=204						
109C	**Camp Elliot, M**	**1.28**	**167**		**Pg**	**09 35 41.2**	**-2.9**
109C				Sn	**Sg**	**09 36 00.1**	**-0.7**
109C	**Camp Elliot, M**	**1.28**	**167**	P	**Pg**	**09 35 41.2**	**-2.9**
	baz=347,SNR=886						
CTCC	**Cactus City**	**1.31**	**111**		**Pg**	**09 35 42.7**	**-1.9**
BLG	**Laguna Peak, P**	**1.34**	**269**		**Pn**	**09 35 42.4**	**-1.8**
BLG	**Laguna Peak, P**	**1.34**	**269**	P	**Pn**	**09 35 42.4**	**-1.8**
	baz=88,SNR=47						
EML	**El Monte Cty P**	**1.35**	**158**		**Pn**	**09 35 42.1**	**-2.2**
LRMC	**Laurel Mtn Rad**	**1.35**	**352**		**Pn**	**09 35 43.5**	**-1.0**
LRMC	**Laurel Mtn Rad**	**1.35**	**352**	P	**Pn**	**09 35 43.4**	**-1.0**
	baz=172,SNR=1000						
CCCA	**Chr Cany lake**	**1.38**	**3**		**Pn**	**09 35 44.2**	**-0.6**
TJR	**Tejon Ranch**	**1.39**	**310**		**Pn**	**09 35 44.2**	**-0.6**
STCC	**Santa Clara**	**1.45**	**277**		**Pn**	**09 35 45.1**	**-0.6**
SDRC	**San Diego Road**	**1.47**	**163**		**Pn**	**09 35 44.0**	**-1.9**
SBI	**Santa Barbara**	**1.47**	**244**		**Pn**	**09 35 44.4**	**-1.6**
SCI2	**San Clemente I**	**1.48**	**219**	P	**Pn**	**09 35 44.6**	**-1.5**
	baz=38,SNR=292						
DSCC	**Desert Studies**	**1.49**	**48**		**Pn**	**09 35 45.2**	**-1.0**
TEJ	**El Tejon**	**1.49**	**317**		**Pn**	**09 35 45.3**	**-1.0**
BATC	**Bat Cave Butte**	**1.50**	**117**		**Pn**	**09 35 45.0**	**-1.4**
ARVC	**Arvin**	**1.50**	**311**		**Pn**	**09 35 45.9**	**-0.6**
ARVC	**Arvin**	**1.50**	**311**	P	**Pn**	**09 35 45.7**	**-0.7**
	ba

DAC	Darwin (Calif)	2.13	357			Pb	09 35 57.7	-0.6
VES	Vestal, Richgr	2.16	322			Pn	09 35 55.4	-0.1
VES	Vestal, Richgr baz=141,SNR=587	2.16	322	P		Pn	09 35 55.2	-0.3
FIGC	Figueroa Mtn.	2.18	286			Pn	09 35 55.4	-0.4
CARC	Carrizo Plain	2.29	301			Pn	09 35 56.6	-0.7
SPG2	Springville 2	2.32	333			Pn	09 35 57.5	-0.2
CWC	Cottonwood Cre baz=167	2.35	347	P		Pn	09 35 57.9	-0.4
CWC					Sb	Sg	09 36 33.4	-1.6
CCX	Cicese baz=167	2.36	164			Pn	09 35 56.7	-1.5
FURC	Furnace Creek, baz=192,SNR=393	2.37	11	P		Pn	09 35 57.6	-0.6
SMMC	Simmler	2.40	300			Pn	09 35 58.2	-0.6
SMMC	Simmler baz=118,SNR=316	2.40	300	P		Pn	09 35 58.3	-0.6
BCH	Branch Mountai	2.41	296			Pn	09 35 58.6	-0.4
CGO	Cerro Gordo	2.42	353			Pn	09 35 59.1	-0.3
NEE2	Needles Airpor baz=256,SNR=23	2.42	74	P		Pn	09 35 58.3	-0.7
GLA	Glamis	2.44	116			Pn	09 35 58.9	-0.5
GLA	Glamis baz=297,SNR=64	2.44	116	P		Pn	09 35 57.8	-1.5
GLA					Sb	Sb	09 36 35.4	+1.8
BLYC	Blythe baz=297	2.46	98			Pn	09 35 58.3	-1.3
Y12C	Blythe	2.46	98			Pn	09 35 58.0	-1.6
Y12C	Blythe baz=280,SNR=175	2.46	98	P		Pn	09 35 58.2	-1.4
Y12C					Sb	Sb	09 36 36.0	+1.9
ESJX	Sierra Juarez baz=280	2.48	149			Pn	09 35 59.7	-0.3
AMDNV	Amargosa	2.49	22			Pn	09 35 59.5	-0.5
GATR	Gnd/Air Tx Cnt	2.56	280			Pn	09 36 00.0	-1.0
VOG	Valley Oaks Go	2.69	324			Pn	09 36 02.6	-0.1
VOG	Valley Oaks Go baz=143,SNR=34	2.69	324	P		Pn	09 36 02.5	-0.1
VOG					Sb	Sg	09 36 43.3	-2.6
PAGB	Antelope Grade	2.79	305			Pn	09 36 03.3	-1.0
GRAC	Grapevine Rang	2.85	1			Pn	09 36 05.5	+0.5
GRAC	Grapevine Rang baz=181,SNR=123	2.85	1	P		Pn	09 36 05.4	+0.5
TPNV	Topopah Spring	2.96	19			Pn	09 36 06.5	-0.2
TPNV	Topopah Spring baz=199,SNR=238	2.96	19	P		Pn	09 36 06.9	+0.2
TIN	Tinemaha, Big baz=167,SNR=22	2.97	348	P		Pn	09 36 07.0	+0.2
DCD	Diablo Creek	2.99	292			Pn	09 36 06.3	-0.6
SHPR	Sheep Range	3.01	38			Pn	09 36 07.8	+0.5
VPDC	Valencia Peak	3.02	292			Pn	09 36 07.2	-0.2
W13A	Hualapai Mount	3.09	71			Pn	09 36 08.1	-0.3
BLDC	Black Mountain	3.17	297			Pn	09 36 08.1	-1.3
113A	Mohawk Valley,	3.37	113			Pn	09 36 10.8	-1.3
FRI	Friant	3.39	328			Pn	09 36 12.3	0.0
PMPB	Monarch Peak	3.44	308			Pn	09 36 12.2	-0.9
PMPB					Sn	Sn	09 36 53.0	-0.9
MLAC	Mammoth, Mammo baz=162,SNR=103	3.66	342	P		Pn	09 36 16.8	+0.6
BENR	Benton	3.68	346			Pn	09 36 17.7	+1.1
OMMB	Old Mammoth Mi	3.69	340			Pn	09 36 18.6	+1.9
Y14A	Wickenburg	3.69	92			Pn	09 36 16.1	-0.5
MDPB	Devils Postpil	3.73	340			Pn	09 36 19.0	+1.8
SAO	San Andreas Ge	4.18	310			Pn	09 36 22.9	-0.4
NVAR	Mina Array Bea 3.4nm,0.3s,baz=176,slow=16,SNR=57	4.33	351	Pn		Pn	09 36 26.8	+1.2
NVAR					Pg	Pg	09 36 39.2	-3.3
	15nm,0.3s,baz=170,slow=11,SNR=60							
NVAR					Lg	Lg	09 37 34.0	
	6.6nm,0.3s,baz=225,slow=10,SNR=2.7							
R11A	Troy Canyon, C	4.46	19			Pn	09 36 27.3	+0.1
R11A	Troy Canyon, C baz=200,SNR=16	4.46	19	P		Pn	09 36 28.1	+0.8
214A	Organ Pipe Nat	4.46	118			Pn	09 36 26.6	-0.5
214A	Organ Pipe Nat baz=301	4.46	118	P		Pn	09 36 27.1	0.0
LCMT	Little Creek M	4.46	49			Pn	09 36 28.0	+0.8
CMB	Columbia Colle	4.55	329			Pn	09 36 29.6	+1.2
RYN	Ryan	4.56	349			Pn	09 36 30.6	+2.0
WAKR	Walker	4.64	340			Pn	09 36 32.6	+2.8
KNB	Kanab	4.74	51			Pn	09 36 31.9	+0.9
CCUT	Cedar City	4.75	43			Pn	09 36 33.1	+1.8
U15A	North Rim	4.79	60			Pn	09 36 33.2	+1.3
KVN	Kaiserville	4.93	354			Pn	09 36 35.1	+1.4
SZCU	Shurtz Canyon	4.94	45			Pn	09 36 34.6	+0.7
X16A	Lo Mia Camp, P	4.98	85			Pn	09 36 34.9	+0.4
YERR	Yerington	5.04	344			Pn	09 36 37.7	+2.4
WUAZ	Wupatki	5.18	73			Pn	09 36 38.8	+1.7
WUAZ	Wupatki baz=256,SNR=35	5.18	73	P		Pn	09 36 37.5	+0.3
PNTR	Pine Nut	5.23	341			Pn	09 36 41.2	+3.3
PSUT	Pine Spring	5.25	32			Pn	09 36 40.5	+2.4
PKCU	Pink Cliffs	5.32	50			Pn	09 36 41.0	+1.8
RUBR	Rubicon Trail	5.36	337			Pn	09 36 42.8	+3.1
VCNR	Virginia City	5.44	342			Pn	09 36 44.6	+3.9
AFDM	Forest Hills D	5.57	330			Pn	09 36 44.2	+1.9
PAHR	Pah Rah Range	5.76	345			Pn	09 36 48.8	+3.6
MTPU	Mount Pierson	5.77	46			Pn	09 36 47.3	+1.9
TUC	Tucson	5.88	106			Pn	09 36 45.5	-1.1
TUC	Tucson baz=290	5.88	106	P		Pn	09 36 45.5	-1.1
MCCM	Marconi Confer	5.94	314			Pn	09 36 47.7	+0.3
TCRU	Three Creeks R	6.01	41			Pn	09 36 50.9	+2.3
MSU	Marysvale	6.09	43			Pn	09 36 52.2	+2.5
BEKR	Beckworth	6.17	339			Pn	09 36 53.4	+2.7
X18A	Snowflake	6.21	84			Pn	09 36 51.8	+0.4
BMN	Battle Mountai	6.28	2			Pn	09 36 54.2	+2.0
ORV	Oroville	6.30	330			Pn	09 36 53.1	+0.7
GDXM	Geysers	6.34	319			Pn	09 36 52.1	-0.9
W18A	Petrified Fore	6.43	79			Pn	09 36 55.9	+1.5
W18A	Petrified Fore baz=264,SNR=35	6.43	79	P		Pn	09 36 54.8	+0.4
HOPS	Hopland Field	6.63	319			Pn	09 36 56.5	-0.4
ELK	Elko 1.1nm,0.3s,baz=194,slow=7.7,SNR=34	6.82	14	Pn		Pn	09 37 01.4	+1.7
ELK					Pg	Pg	09 37 25.6	-4.5
	1.8nm,0.3s,baz=220,slow=15,SNR=5.1							
ELK					Lg	Lg	09 38 52.1	
	4.2nm,0.3s,baz=293,slow=9.4,SNR=7.1							
ELK	Elko	6.82	14			Pn	09 36 59.8	0.0
Q16A	Castle Valley	6.94	45	Pn		Pn	09 37 01.0	-0.4
O03E	Paynes Creek baz=149,SNR=7.6	7.05	332	P		Pn	09 37 04.2	+1.4
DUG	Dugway, Tooele baz=213,SNR=9.6	7.08	30	P		Pn	09 37 05.2	+1.9
MVCO	Mesa Verde baz=250,SNR=12	7.90	65	P		Pn	09 37 14.4	-0.1
N02D	Trinity Center baz=147	7.99	330	P		Pn	09 37 17.5	+1.8
121A	Cookes Peak, D	8.24	99			Pn	09 37 19.0	-0.3
121A	Cookes Peak, D baz=284,SNR=42	8.24	99	P		Pn	09 37 19.4	+0.2
M04C	Macdoel baz=154,SNR=6.2	8.38	337	P		Pn	09 37 22.4	+1.4
M02C	Callahan baz=148	8.40	331	P		Pn	09 37 23.4	+2.0
YBH	Yreka Blue Hor 0.6nm,0.3s,baz=169,slow=9.5,SNR=18	8.64	333	Pn		Pn	09 37 27.8	+3.3
YBH					Lg	Lg	09 39 44.9	
	0.1nm,0.3s,baz=234,slow=11,SNR=3.4							
YBH					LR	LR	09 40 30.8	
	comp=Z,378nm,18.2s,baz=170,slow=36							
L04D	Klamath Falls baz=153	8.92	336	P		Pn	09 37 30.4	+2.0
ANMO	Albuquerque 0.9nm,0.3s,baz=266,slow=12,SNR=52	9.10	82	Pn		Pn	09 37 32.3	+1.3
ANMO					Lg	Lg	09 39 59.9	
	0.1nm,0.3s,baz=18,slow=19,SNR=2.3							
ANMO					LR	LR	09 41 31.4	
	comp=Z,412nm,18.7s,baz=274,slow=41							
ANMO	Albuquerque	9.10	82			Pn	09 37 31.4	+0.4
ANMO	Albuquerque baz=268	9.10	82	P		Pn	09 37 32.3	+1.3
S22A	4UR Ranch, Cre baz=250	9.33	64	P		Pn	09 37 34.9	+0.7
O20A	White River Ci baz=234	9.47	48	P		Pn	09 37 36.9	+0.8
J05D	Fort Rock, OR baz=161,SNR=9.9	9.59	343	P		Pn	09 37 38.0	+0.4
K02D	Willamette Mer baz=148	9.83	332	P		Pn	09 37 42.1	+1.2
SDCO	Great Sand Dun baz=253	10.33	66	P		Pn	09 37 47.0	-0.9
I04A	Tendick Farm, baz=157	10.38	340	P		Pn	09 37 50.7	+2.3
MNTX	Cornudas Mount	10.43	100			Pn	09 37 48.7	-0.4
MNTX	Cornudas Mount baz=287,SNR=13	10.43	100	P		Pn	09 37 49.4	+0.3
BW06	Boulder Array baz=218	10.60	33	P		Pn	09 37 53.3	+1.8
PDAR	Pinedale Array 0.1nm,0.3s,baz=220,slow=12,SNR=13	10.60	33	Pn		Pn	09 37 55.4	+3.9
PDAR					Lg	Lg	09 40 51.2	
	0.1nm,0.3s,baz=212,slow=28,SNR=4.2							
PDAR					LR	LR	09 42 15.7	
	comp=Z,418nm,20.6s,baz=232,slow=39							
I05D	Terrebonne, OR baz=162	10.62	345	P		Pn	09 37 55.9	+4.3
T25A	Trinidad baz=258	11.02	71	P		Pn	09 37 56.4	-0.9
G05D	Wamic, OR baz=164	11.48	346	P		Pn	09 38 03.8	+0.5
LPIG	La Paz comp=Z,312nm,20.2s,baz=7.0,slow=37	11.79	146	LR		LR	09 42 27.7	
K22A	Casper baz=229	12.06	42	P		Pn	09 38 10.1	-1.3
F05D	White Salmon baz=164	12.12	347	P		Pn	09 38 17.8	+5.6
MSTX	Muleshoe baz=275	12.17	87	P		Pn	09 38 17.1	+4.1
RLMT	Red Lodge baz=212	12.64	27	P		Pn	09 38 24.7	+5.3
TX31	Lajitas Ar. Si	12.67	108			Pn	09 38 20.9	+1.2
TX32	Lajitas Array	12.67	108			Pn	09 38 20.9	+1.2
TXAR	Lajitas Array 0.6nm,0.3s,baz=290,slow=13,SNR=17	12.67	108	Pn		Pn	09 38 20.4	+0.6
TXAR					Lg	Lg	09 41 53.0	
	0.1nm,0.3s,baz=289,slow=28,SNR=3.1							
TXAR					LR	LR	09 42 47.7	
	comp=Z,138nm,21.2s,baz=0.0,slow=36							
TXAR	Lajitas Array	12.67	108			Pn	09 38 20.0	+0.2
E04D	Cinebar baz=161	12.99	344	P		Pn	09 38 26.6	+2.5
AMTX	Amarillo baz=271	13.03	82	P		Pn	09 38 25.5	+0.9
D03D	Eldon baz=160	14.04	344	P		Pn	09 38 41.3	+3.1
NEW	Newport 0.1nm,0.3s,baz=159,slow=14,SNR=4.5	14.11	1	Pn		Pn	09 38 41.6	+2.3
NEW					LR	LR	09 44 42.8	
	comp=Z,608nm,18.6s,baz=183,slow=40							
NEW	Newport baz=181	14.11	1	P		Pn	09 38 40.9	+1.6
RSSD	Black Hills baz=231	14.39	42	P		Pn	09 38 44.9	+1.6
B05A	Bryant baz=164	14.53	348	P		P	09 38 50.6	-1.0
ABTX	Abilene, Hawle baz=281	14.96	91	P		Pn	09 38 50.5	-0.4
A04D	Lummi Island baz=163	15.08	347	P		Pn	09 38 52.9	+0.5
WALA	Waterton Lakes	15.13	9			Pn	09 38 52.5	-0.8
JCT	Junction City	15.36	99			Pn	09 38 56.4	+0.1
JCT					IAmb	IAmb	09 39 03.5	
	comp=Z,9.1nm,1.1s							
WMOK	Wichita Mounta	15.42	83			Pn	09 38 57.1	+0.1
WMOK	Wichita Mounta baz=273	15.42	83	P		Pn	09 38 56.4	-0.6
833A	Chaparral WMA, baz=295	16.49	106	P		Pn	09 39 09.9	-0.9
WHTX	Lake Whitney, baz=283	16.90	92	P		P	09 39 17.7	-0.3
ZAIG	Zacatecas	17.29	127	P		Pn	09 39 19.4	-1.8
DGMT	Dagmar	17.40	31	P		Pn	09 39 19.1	-3.1
DGMT					IAmb	IAmb	09 39 38.2	
	comp=Z,43nm,1.5s							
KSU1	Kansas State U baz=260	17.43	67	P		P	09 39 23.9	0.0
SUSD	Miller baz=240	17.59	49	P		P	09 39 27.2	+1.7
TUL1	Leonard baz=271	17.82	78	P		P	09 39 28.8	+0.5
ECSD	EROS Data Cent baz=246,SNR=6.8	18.78	53	P		Pn	09 39 39.8	+0.6
W39A	Magazine baz=274	19.49	80	P		P	09 39 46.1	-0.4
BBB	Bella Bella comp=Z,0.6nm,0.3s,baz=138,slow=12,SNR=2.8	19.60	340	P		Pn	09 39 50.5	+1.6
BBB					LR	LR	09 48 06.5	
	comp=Z,443nm,20.3s,baz=173,slow=39							
MIAR	Mount Ida baz=276	19.71	82	P		P	09 39 49.5	+0.5
U40A	Yellville baz=271	20.20	77	P		P	09 39 54.8	+0.5
UALR	University of comp=Z,38nm,1.8s	20.70	81	P		P	09 39 59.7	-0.1
UALR					IAmb	IAmb	09 40 43.9	
W41B	Gary Mavity, V baz=274	20.74	80	P		P	09 40 00.5	+0.3
AGMN	Agassiz Nation	21.43	42	P		P	09 40 08.4	+0.9
AGMN					IAmb	IAmb	09 40 12.6	
	comp=Z,14nm,0.8s							
ULM	Lac du Bonnet comp=Z,6.5nm,0.8s,baz=225,slow=12,SNR=8.1	22.56	38	P		P	09 40 20.2	+0.7
DLBC	Dease Lake comp=Z,9.1nm,0.9s,baz=158,slow=11,SNR=3.4	25.72	345	P		P	09 40 52.7	+2.9
CMIG	Matias Romero comp=Z,190nm,18.5s,baz=268,slow=37	26.40	124	LR		LR	09 51 40.8	
Z51A	Franklin	26.80	83	P		P	09 41 00.0	+0.4
TKL	Tuckaleechee C comp=Z,141nm,20.4s,baz=283,slow=39	27.59	77	LR		LR	09 53 04.5	
YKA	Yellowknife Ar comp=Z,1.4nm,0.8s,baz=182,slow=8.9,SNR=18	28.43	3	P		P	09 41 15.2	+1.3
YKA					PcP	PcP	09 44 25.5	-0.3
	comp=Z,0.2nm,0.6s,baz=178,slow=2.8,SNR=5.2							
YKA					LR	LR	09 53 13.1	
	comp=Z,322nm,18.4s,baz=0.0,slow=38							
TEIG	Tepich comp=Z,123nm,20.2s,baz=316,slow=39	29.30	111	LR		LR	09 54 19.6	
ILAR	Eielson Array	35.48	339	P		P	09 42 17.5	+1.7
	comp=Z,2.6nm,0.7s,baz=156,slow=8.0,SNR=37							
ILAR	Eielson Array	35.48	339	P		P	09 42 16.0	+0.3
SCHQ	Schefferville comp=Z,175nm,18.5s,baz=281,slow=35	40.52	43	LR		LR	09 58 46.7	
SEY	Seymchan comp=Z,1.8nm,0.6s,baz=97,slow=5.6,SNR=12	60.29	328	P		P	09 45 28.3	+0.6
PETK	Petropavlovsk- comp=Z,3.3nm,0.8s,baz=79,slow=7.5,SNR=6.6	60.62	316	P		P	09 45 30.8	+0.6
ARCES	ARCESS Array B	73.13	13	LR		LR	10 21 27.0	
	comp=Z,122nm,18.3s,baz=298,slow=38							
NOA	NORSAR Array B comp=Z,59nm,19.1s,baz=320,slow=35	76.36	23	LR		LR	10 20 04.3	
CFA	Coronel Fontan comp=Z,1.4nm,0.5s,baz=331,slow=3.8,SNR=4.2	80.16	139	P		P	09 47 30.4	+0.6
PLCA	Paso Flores comp=Z,1.6nm,0.9s,baz=339,slow=6.1,SNR=4.4	86.13	146	P		P	09 48 01.1	+0.6
PLCA					LR	LR	10 18 44.4	
	comp=Z,72nm,18.1s,baz=292,slow=30							
MODS	Modra-Piesok	88.44	28	eP		P	09 48 14.0	+2.2
GUMO	Guam comp=Z,31nm,21.2s,baz=101,slow=30	88.70	285	LR		LR	10 18 58.8	
ZALV	Zalesovo Beam comp=Z,43nm,18.4s,baz=26,slow=40	90.17	347	LR		LR	10 35 55.7	
HHC	Hu-ho-hao-te	92.79	325	eP		P	09 48 30.9	-1.4
HHC					pmax	pmax		
	comp=Z,3.0nm,0.7s							
HHC					pmax	pmax		
	comp=Z,49nm,6.6s							
ASAR	Alice Springs comp=Z,0.5nm,0.7s,baz=63,slow=2.6,SNR=4.1	117.79	259	PKP		PKiKP	09 54 07.2	+0.8

KRSC ***15*** *09:35:22.6±2.1,54.88N×165.75E,h36km±14km,ML3.8*
IDC ***15*** *09:35:23.3±1.9,55.04N×165.81E,h0km,mb3.3/3,*
mb1 3.7/4,mb1mx3.2/52,mbtmp3.4/4,ML2.9/1,Error
ellipse: s-maj=100.0km s-min=30.5km az=153.0

ISC 15 09:35:25.7±0.9,54.93N±0.06×165.78E±0.07,h26km,n32,
σ1ϑ52/40,mb3.4/3,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.30	21	eP	Pb	09 35 31.3	-1.4
BKI				eS	Sb	09 35 35.6	-1.9
KBTR	Krutoberegovo	2.12	309	eP	Pn	09 35 57.1	-2.2
KBG	Krutoberegovo	2.20	309	eP	Pn	09 36 01.1	+0.7
ZLN	Zelenaya	3.04	293	eP	Pn	09 36 14.3	+2.2
ZLN				eS	Sn	09 36 49.3	+1.7
BZGR	Bezymyannyi-Gr	3.07	291	eP	Pn	09 36 13.8	+1.3
BZGR				eS	Sn	09 36 49.6	+1.1
TUMD	Tumrok D	3.11	277	eP	Pn	09 36 13.6	+0.6
KZV	Kizimen	3.17	276	eP	Pn	09 36 13.9	0.0
KLY	Klyuchi	3.22	298	eS	Sn	09 36 49.9	-2.1
KRSR	Krestovskiy	3.23	296	eP	Pn	09 36 15.7	+0.9
TUMR	Tumrok	3.26	279	eP	Pn	09 36 15.9	+0.8
KMNR	Kamenistaya	3.27	287	eP	Pn	09 36 16.6	+1.3
KMNR				eS	Sn	09 36 53.8	+0.3
SPN	Mys Shipunski	3.86	244	eP	Pn	09 36 22.7	-0.6
SPN				eS	Sn	09 37 04.5	-3.3
NLC	Nalytchevo	4.18	248	eS	Sn	09 37 13.0	-2.7
SMAR	Somma	4.44	251	eP	Pn	09 36 32.7	+1.3
UGLR	Uglovaya	4.45	250	eP	Pn	09 36 32.6	+1.1
UGLR				eS	Sn	09 37 21.6	-0.8
KRER	Koryakskii	4.45	251	eP	Pn	09 36 32.9	+1.4
KRER				eS	Sn	09 37 21.2	-1.3
AVH	Avacha	4.47	251	eP	Pn	09 36 33.3	+1.6
AVH				eS	Sn	09 37 21.8	-1.1
KOK	Koryaka	4.51	252	eP	Pn	09 36 33.6	+1.2
OSSR	Ossora	4.58	342	eP	Pn	09 36 32.9	-0.2
KRMR	Karymshinskiy	4.99	248	eP	Pn	09 36 40.0	+1.2
KRMR				eS	Sn	09 37 34.2	-1.4
RUS	Russkaya	4.99	243	eS	Sn	09 37 32.9	-2.7
PETK	Petropavlovsk- 2.3nm,0.3s,baz=71,slow=16,SNR=29	5.10	252	Pn	Pn	09 36 41.3	+0.9
PETK				Sn	Sn	09 37 37.5	-0.9
	1.0nm,0.3s,baz=95,slow=28,SNR=4.3						
MTVR	Mutnovka	5.14	245	eP	Pn	09 36 41.8	+0.8
GRL	Gorelyy	5.16	246	eP	Pn	09 36 42.6	+1.4
ASAK	Asacha	5.34	245	eP	Pn	09 36 45.1	+1.5
ASAK				eS	Sn	09 37 44.0	-0.2
TILK	Tilichiki	5.54	2	eP	Pn	09 36 48.2	+2.0
ILAR	Eielson Array 0.8nm,0.8s,baz=252,slow=8.1,SNR=11	25.11	48	P	P	09 40 47.9	-0.1
H11N2	WAKE ISLAND Hy baz=359,slow=76	35.15	178	T	T	10 19 47.4	
H11N3	WAKE ISLAND Hy baz=359,slow=76	35.16	178	T	T	10 19 48.5	
H11N1	WAKE ISLAND Hy baz=359,slow=76	35.17	178	T	T	10 19 49.0	
YKA	Yellowknife Ar 0.1nm,0.4s,baz=294,slow=7.7,SNR=2.9	39.50	46	P	P	09 42 54.3	+0.7
TXAR	Lajitas Array 0.2nm,0.4s,baz=327,slow=6.5,SNR=2.9	66.85	72	P	P	09 46 17.2	+2.0

MAN 15 10:00:14.0,6.60N×126.72E,h104km,mb4.5,ML3.3,
MS3.1,1C-2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.58	307	eP	Pn	10 00 31.8	+1.0
MATI				eS	Sn	10 00 46.1	+2.7
DDMP	Don Marcelino,	1.12	244	eP	Pn	10 00 35.8	-0.2
DDMP				eS	Sn	10 00 53.5	+0.8
DMPH	Davao City--Mi	1.30	292	‖ iP	Pn	10 00 48.6	+10
BIPH	Bislig	1.62	347	‖ iP	Pn	10 00 43.0	+1.1
BIPH				i S	Sn	10 01 04.2	+1.0
GSPH	General Santos	1.83	254	‖ iP	Pn	10 00 43.1	-1.7
BUKP	Musuan	2.08	308	eP	Pn	10 00 48.0	+0.1
BUKP				eS	Sn	10 01 16.0	+2.2

PAS 15 10:07:08.8±1.2,34.137N±0.008×117.445W±0.009,
h4km±4km,ML2.3/161,Error ellipse: s-maj=1.4km
s-min=0.9km az=221.0,Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FON	Fontana	0.04	172		Pg	10 07 09.9	+0.1
SS2	San Sevaine	0.08	327		Pg	10 07 10.6	0.0
CLTC	Calectric	0.12	112		Pg	10 07 11.3	+0.2
CFSC	Central Fire S	0.14	103		Pg	10 07 11.7	+0.1
RVR	Riverside	0.15	158		Pg	10 07 14.1	+2.3
MLSC	Mira Loma	0.16	216		Pg	10 07 12.1	+0.1
MLSC					Sg	10 07 14.7	+0.5
CSP	Cedar Springs	0.18	24		Pg	10 07 12.2	-0.2
HLNC	Highland	0.19	95		Pg	10 07 12.7	+0.2
RSBC	Riverside Bore	0.19	149		Pg	10 07 12.5	-0.1
RSBC					Sg	10 07 15.2	+0.2
RSBC	Riverside Bore	0.19	149		Pg	10 07 12.4	-0.1
RSBC					Sg	10 07 15.3	+0.2
BFSC	Mount Baldy Ra	0.20	300		Pg	10 07 12.6	-0.2
BFSC					Sg	10 07 15.7	+0.1
SSK	Sunset Peak	0.22	290		Pg	10 07 13.2	0.0
CHNC	Chino	0.24	235		Pg	10 07 13.7	+0.3
SVD	Seven Oaks Dam	0.29	96		Pg	10 07 14.8	+0.3
SVD					Sg	10 07 19.0	+0.8
CFT	Crafton Hills	0.29	110		Pg	10 07 14.8	+0.2
PSRC	Puddingstone R	0.30	262		Sg	10 07 19.3	+0.7
SME	Santa Rosa Min	0.32	167		Sg	10 07 19.5	+0.1
PEC	Perris	0.34	136		Sg	10 07 19.9	+0.1
PEM	Pine Mountain	0.35	275		Pg	10 07 15.7	+0.1
XTL	Crystal Lake,	0.38	295		Pg	10 07 16.0	-0.3
BTL	Butler Peak	0.39	72		Pg	10 07 16.5	+0.1
VTV	Victorville	0.43	13		Pg	10 07 16.8	-0.4
VTV					Sg	10 07 22.8	-0.1
BBSC	Beaumont Base	0.44	119		Pg	10 07 17.7	+0.3
BBRC	Big Bear Solar	0.45	74		Pg	10 07 17.5	0.0
BBRC					Sg	10 07 24.2	+0.7
MWC	Mount Wilson	0.52	280		Pg	10 07 18.5	-0.2
MWC					Sg	10 07 25.8	+0.3
CHFC	Chilao Flat St	0.52	292		Pg	10 07 18.6	-0.3
GVRC	Garvey Reservo	0.57	261		Pg	10 07 19.9	+0.2
MURC	Murrieta	0.57	159		Pg	10 07 19.3	-0.5
MURC					Sg	10 07 27.0	-0.3
DGR	Domenigoni Val	0.61	143		Pg	10 07 19.9	-0.6
DGR					Sg	10 07 27.9	-0.4
PASC	Pasadena Art C	0.61	273		Sg	10 07 29.0	+0.3
PASC	Pasadena Art C	0.61	273	Pg	Pg	10 07 20.1	-0.5
PASC				Sg	Sg	10 07 28.7	+0.1
BACC	Bachelor Mtn.	0.62	147		Pg	10 07 20.3	-0.5
BACC	

SDRC					Sb	10 07 53.0	-2.5
CBKC	**Canebrake**	**1.59**	**141**		Pb	10 07 38.3	-0.5
BAR	**Barrett**	**1.59**	**156**		Pn	10 07 36.0	-1.8
BAR				Sn	Sn	10 07 56.8	-2.0
GMRC	**Granite Mounta**	**1.61**	**66**		Sn	10 07 58.9	-0.6
ISA	**Isabella, Lake**	**1.74**	**331**		Pn	10 07 39.6	-0.3
ISA				Sn	Sb	10 08 03.3	-0.4
SNCC	**San Nicolas Is**	**1.95**	**243**	Pn	Pn	10 07 41.9	-0.8
DAC	**Darwin (Calif)**	**2.14**	**357**	Pn	Pg	10 07 52.3	+2.5
Y12C	**Blythe**	**2.46**	**98**	Pn	Pg	10 07 55.0	-1.0
Y12C					LR	10 08 27.4	
GVN	**Grapevine**	**2.86**	**2**		Pn	10 07 56.7	+1.4
TPNV	**Topopah Spring**	**2.97**	**19**		Pg	10 08 04.2	-1.6
TPNV					LR	10 08 43.8	

JMA 15 10:19:32.7±0.5, 31°36N×142°46E, h0km, M3.8,
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.51**	**340**	P	Pn	10 20 30.2	+2.1
BSO3	**Boso 3**	**3.80**	**335**	P	Pn	10 20 34.3	+2.0
JOD2	**Odawara 2**	**4.81**	**325**	P	Pn	10 20 48.8	+2.4
JHU	**Hanno**	**5.21**	**330**	P	Pn	10 20 54.2	+2.4
JHU				*e*S	Sn	10 21 54.8	+2.2
JRY	**Ryogami san**	**5.51**	**328**	P	Pn	10 20 58.7	+2.7
JAG	**Ashikaga**	**5.64**	**334**	P	Pn	10 20 59.9	+2.1

SKHL ***15*** *10:25:15.0±0.6, 46°.80N×152°.50E, h129km±5km, mb5.0/9, mbv5.2/3, msh5.1/5, msha5.5/8*
MOS ***15*** *10:25:15.7±1.4, 47°.04N×152°.10E, h131km, mb4.2/16, Error ellipse: s-maj=7.5km s-min=5.5km az=70.6*
BJI ***15*** *10:25:16.1±0.0, 47°.31N×152°.18E, h140km, mB4.9/23, mb4.5/31*
NEIC ***15*** *10:25:16.6±1.4, 47°.17N±0°.06×151°.9E±0°.1, h116km±5km, mb4.5/76, Error ellipse: s-maj=14.7km s-min=2.4km az=122.0*
IDC ***15*** *10:25:16.1±0.9, 47°.26N×151°.91E, h109km±7km, mb3.7/21, mb1 3.9/26, mb1mx3.9/41, mbtmp4.2/26, MS3.0/6, Ms1 3.0/6, ms1mx2.8/29, Error ellipse: s-maj=15.3km s-min=10.1km az=152.0*
JMA ***15*** *10:25:17.0±0.3, 45°.91N×152°.67E, h124km, M3.8*
ISC 15 10:25:15.0±0.5, 47°.07N±0°.05×152°.25E±0°.04, h107km±4km, h107km:pP-P, n249, σ1°.72/269, mb4.4/77, 12C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.56**	**241**	*e*PN	**Pn**	**10 26 10.8**	**+2.5**
KUR				*e*S	**Sn**	**10 26 53.8**	**+4.3**
KUR				pmax	pmax		
	comp=E,50nm,0.4s						
KUR				pmax	pmax		
	comp=Z,129nm,0.4s						
KUR				smax	smax		
	comp=N,151nm,0.5s						
KUR				smax	smax		
	comp=E,348nm,0.6s						
KUR	**Kuril'sk**	**3.56**	**241**	*e*P	**Pn**	**10 26 10.6**	**+2.3**
KUR				AMB	AMB	10 26 12.0	
	comp=E,50nm,0.5s						
KUR				AMB	AMB	10 26 12.0	
	comp=E,30nm,0.5s						
KUR				AMB	AMB	10 26 12.0	
	comp=E,230nm,0.5s						
KUR				AMB	AMB	10 26 12.8	
	comp=E,700nm,2.0s						
KUR				*e*S	**Sn**	**10 26 51.8**	**+2.3**
KUR				A	A	10 26 55.0	
	comp=E,320nm,0.7s						
KUR				A	A	10 26 55.0	
	comp=E,700nm,0.7s						
KUR				A	A	10 26 56.0	
	comp=E,1μm,2.0s						
KUR				A	A	10 26 56.0	
	comp=E,600nm,2.0s						
SKR	**Severo-Kuril's**	**4.43**	**34**	*e*PN	**Pn**	**10 26 21.9**	**+2.0**
SKR				*e*S	**Sn**	**10 27 12.0**	**+1.6**
SKR				pmax	pmax		
	comp=Z,119nm,0.5s						
SKR				smax	smax		
	comp=N,132nm,0.2s						
SKR				smax	smax		
	comp=E,228nm,0.3s						
SKR	**Severo-Kuril's**	**4.43**	**34**	*e*P	**Pn**	**10 26 21.9**	**+2.0**
SKR				AMB	AMB	10 26 26.2	
	comp=E,400nm,2.0s						
SKR				AMB	AMB	10 26 28.0	
	comp=E,120nm,0.5s						
SKR				*e*S	**Sn**	**10 27 12.0**	**+1.6**
SKR				A	A	10 27 14.2	
	comp=E,400nm,2.0s						
SKR				A	A	10 27 14.2	
	comp=E,700nm,2.0s						
SKR				A	A	10 27 27.0	
	comp=E,130nm,0.6s						
SKR				A	A	10 27 27.0	
	comp=E,230nm,0.6s						
SHO	**Shikotan**	**4.98**	**232**	*e*PN	**Pn**	**10 26 26.7**	**-0.7**
SHO				*e*S	**Sn**	**10 27 21.8**	**-1.9**
SHO				pmax	pmax		
	comp=Z,19nm,0.5s						
SHO				pmax	pmax		
	comp=N,9.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,20nm,0.2s						
SHO				smax	smax		
	comp=N,104nm,0.5s						
SHO				smax	smax		
	comp=E,25nm,0.3s						
SHO	**Shikotan**	**4.98**	**232**	*e*P	**Pn**	**10 26 27.1**	**-0.3**
SHO				AMB	AMB	10 26 29.0	
	comp=E,200nm,2.0s						
SHO				AMB	AMB	10 26 29.0	
	comp=E,20nm,0.3s						
SHO				*e*S	**Sn**	**10 27 23.0**	**-0.7**
SHO				A	A	10 27 25.0	
	comp=E,200nm,3.0s						
SHO				A	A	10 27 25.0	
	comp=E,300nm,3.0s						
SHO				A	A	10 27 45.0	
	comp=E,100nm,0.5s						
SHO				A	A	10 27 45.0	
	comp=E,30nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.42**	**238**	*e*PN	**Pn**	**10 26 35.0**	**+1.7**
YUK				*e*S	**Sn**	**10 27 35.3**	**+0.9**
YUK				pmax	pmax		
	comp=E,40nm,0.2s						
YUK				pmax	pmax		
	comp=Z,98nm,0.2s						
YUK				pmax	pmax		
	comp=N,15nm,0.1s						
YUK				smax	smax		
	comp=N,222nm,0.7s						
YUK				smax	smax		
	comp=E,175nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**5.42**	**238**	*e*P	**Pn**	**10 26 35.0**	**+1.7**
YUK				AMB	AMB	10 26 36.0	
	comp=E,100nm,0.3s						
YUK				*e*S	**Sn**	**10 27 35.3**	**+0.9**
YUK				A	A	10 27 40.0	
	comp=E,900nm,3.0s						
YUK				A	A	10 27 40.0	
	comp=E,700nm,3.0s						
YUK				A	A	10 27 50.0	
	comp=E,220nm,0.7s						
YUK				A	A	10 27 50.0	
	comp=E,180nm,0.7s						
GRPR	**Tuman**	**5.49**	**238**	*e*PN	**Pn**	**10 26 35.9**	**+1.5**
GRPR				*e*S	**Sn**	**10 27 37.0**	**+0.7**
GRPR				pmax	pmax		
	comp=N,72nm,0.7s						
GRPR				pmax	pmax		
	comp=E,40nm,0.7s						
GRPR				pmax	pmax		
	comp=Z,97nm,0.7s						
GRPR				smax	smax		
	comp=N,161nm,0.5s						
GRPR				smax	smax		
	comp=E,121nm,0.4s						
GRPR	**Tuman**	**5.49**	**238**	*e*P	**Pn**	**10 26 35.9**	**+1.5**
GRPR				AMB	AMB	10 26 36.0	
	comp=E,100nm,0.7s						
GRPR				*e*S	**Sn**	**10 27 37.0**	**+0.7**
GRPR				A	A	10 27 50.0	
	comp=E,160nm,0.6s						
GRPR				A	A	10 27 50.0	
	comp=E,120nm,0.6s						
GLVR	**Golovnino**	**5.79**	**237**	*e*PN	**Pn**	**10 26 40.1**	**+1.7**
GLVR				*e*S	**Sn**	**10 27 44.5**	**+1.0**
GLVR				pmax	pmax		
	comp=E,118nm,0.7s						
GLVR				pmax	pmax		
	comp=Z,301nm,0.7s						
GLVR				pmax	pmax		
	comp=N,165nm,0.6s						
GLVR				smax	smax		
	comp=N,386nm,0.9s						
GLVR				smax	smax		
	comp=E,144nm,0.9s						
GLVR	**Golovnino**	**5.79**	**237**	*e*P	**Pn**	**10 26 40.1**	**+1.7**
GLVR				AMB	AMB	10 26 41.0	
	comp=E,230nm,0.7s						
GLVR				*e*S	**Sn**	**10 27 44.5**	**+1.0**
GLVR				A	A	10 28 00.0	
	comp=E,190nm,0.9s						
GLVR				A	A	10 28 00.0	
	comp=E,140nm,0.9s						
NEM2	**Nemuro 2**	**5.90**	**234**	P	**Pn**	**10 26 38.5**	**-1.4**
NEM2				*e*S	**Sn**	**10 27 41.8**	**-4.4**
NMR	**Nemuro--Hokkai**	**5.91**	**234**	*e*PN	**Pn**	**10 26 38.5**	**-1.5**
NMR				*e*S	**Sn**	**10 27 44.0**	**-2.3**
NMR	**Nemuro--Hokkai**	**5.91**	**234**	*i*P	**Pn**	**10 26 38.8**	**-1.2**
JNK	**Nakash**	**6.35**	**239**	P	**Pn**	**10 26 46.4**	**+0.4**
YSS	**Yuzh-Sakhalins**	**6.50**	**272**	*e*PN	Pn	10 26 51.3	+3.3
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS	**Yuzh-Sakhalins**	**6.50**	**272**	*e*P	Pn	10 26 51.3	+3.3
YSS				AMB	AMB	10 26 53.5	
	comp=Z,30nm,0.7s						
YSS				*e*S	**Sn**	**10 28 05.1**	**+4.5**
YSS				A	A	10 28 09.0	
	comp=Z,20nm,1.0s						
YSS				A	A	10 28 09.0	
	comp=Z,40nm,1.0s						
YSS	**Yuzh-Sakhalins**	**6.50**	**272**		**Pn**	**10 26 46.0**	**-2.0**
JTKR	**Abashiri--Toko**	**6.63**	**245**	P	**Pn**	**10 26 51.4**	**+1.6**
JAK	**Akkeshi**	**6.72**	**236**	P	**Pn**	**10 26 49.9**	**-1.2**
JAK				*e*S	**Sn**	**10 28 02.0**	**-4.1**
PEA0B	**Petropavlovsk-**	**6.99**	**28**	PN	**Pn**	**10 26 56.6**	**+2.0**
PEA0B	**Petropavlovsk-**	**6.99**	**28**	Pn	**Pn**	**10 26 56.6**	**+2.0**
PETK	**Petropavlovsk-**	**6.99**	**28**	P	**Pn**	**10 26 56.3**	**+1.7**
	comp=Z,1.3nm,0.3s,baz=200,slow=15,SNR=12						
PETK				LR	LR	10 28 59.1	
	comp=Z,28nm,20.3s,baz=73,slow=32						
JAR	**Ashorobuto**	**7.08**	**241**	P	**Pn**	**10 26 56.6**	**+0.7**
UGL	**Uglegorsk**	**7.12**	**290**	*e*PN	**Pn**	**10 26 54.2**	**-2.1**
UGL				pmax	pmax		
	comp=Z,100nm,1.2s						
UGL	**Uglegorsk**	**7.12**	**290**	*e*P	Pn	10 27 00.0	+3.7
UGL				AMB	AMB	10 27 01.0	
	comp=Z,100nm,0.7s						
UGL				*e*S	**Sn**	**10 28 20.5**	**+4.9**
UGL				A	A	10 28 25.0	
	comp=Z,400nm,3.0s						
UGL				A	A	10 28 25.0	
	comp=Z,900nm,3.0s						
PET	**Petropavlovsk**	**7.25**	**32**	*e*P	**Pn**	**10 26 59.8**	**+1.7**
PET				*e*S	**Sn**	**10 28 18.7**	**0.0**
PET				A	A	10 28 30.2	
	comp=Z,60nm,0.6s						
PET				A	A	10 28 30.2	
	comp=Z,60nm,0.6s						
PET	**Petropavlovsk**	**7.25**	**32**	Pn	**Pn**	**10 27 00.1**	**+2.0**
PET				Sn	**Sn**	**10 28 21.1**	**+2.4**
JOB	**Onbets**	**7.28**	**238**	P	**Pn**	**10 26 58.4**	**-0.1**
TYV	**Tymovskoe**	**7.37**	**305**	*e*PN	**Pn**	**10 27 02.7**	**+2.9**
TYV				*e*S	**Sn**	**10 28 20.5**	**-1.2**
TYV				pmax	pmax		
	comp=Z,27nm,0.8s						
TYV				pmax	pmax		
	comp=Z,300nm,5.9s						
TYV				smax	smax		
	comp=E,11nm,0.8s						
TYV	**Tymovskoe**	**7.37**	**305**	*i*P	**Pn**	**10 27 02.9**	**+3.1**
TYV				AMB	AMB	10 27 03.4	
	comp=E,30nm,0.8s						
TYV				AMB	AMB	10 27 03.7	
	comp=E,300nm,6.0s						
TYV				*e*S	**Sn**	**10 28 25.5**	**+3.8**
TYV				A	A	10 28 27.5	
	comp=E,20nm,0.8s						
TYV				A	A	10 28 27.5	
	comp=E,10.0nm,0.8s						
ASAJ	**Asahikawa**	**7.39**	**250**	P	**Pn**	**10 27 03.1**	**+3.0**
JKK2	**Kamakawa 2**	**7.41**	**248**	P	**Pn**	**10 27 02.1**	**+1.8**
JCH	**Churui**	**7.73**	**238**	P	**Pn**	**10 27 03.7**	**-1.0**
JCH				*e*S	**Sn**	**10 28 24.7**	**-5.8**
JBT2	**Biratori 2**	**8.22**	**242**	P	**Pn**	**10 27 11.4**	**0.0**
ERM	**Erimo**	**8.23**	**235**	*e*PN	**Pn**	**10 27 11.3**	**-0.2**
ERM	**Erimo**	**8.23**	**235**		**Pn**	**10 27 11.2**	**-0.2**
JKB	**Kayabe**	**9.54**	**241**	P	**Pn**	**10 27 27.5**	**-1.8**
MA2	**Magadan**	**12.56**	**357**	*i* PN	**P**	**10 28 12.8**	**-4.1**
MA2	**Magadan**	**12.56**	**357**	P	**Pn**	**10 28 10.9**	**+1.2**
	comp=E,0.8nm,0.3s,baz=163,slow=11,SNR=5.2						
MA2	**Magadan**	**12.56**	**357**	*e*P	**P**	**10 28 12.8**	**-4.1**
MA2	**Magadan**	**12.56**	**357**	Pn	**Pn**	**10 28 09.5**	**-0.2**
EKMR	**Ekimchan**	**13.76**	**303**	*e*P	**Pn**	**10 28 27.0**	**+1.7**
EKMR				AMB	AMB	10 28 33.5	
	comp=E,10.0nm,0.7s						
KLR	**Kul'dur**	**13.86**	**287**	*e*P	**P**	**10 28 29.0**	**-2.3**
KLR				pmax	pmax		
	comp=Z,15nm,1.5s						
KLR	**Kul'dur**	**13.86**	**287**	P	**Pn**	**10 28 27.6**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=93,slow=13,SNR=14						
KLR				LR	LR	10 33 18.4	
	comp=Z,60nm,21.3s,baz=92,slow=36						
KLR	**Kul'dur**	**13.86**	**287**	*e*P	**P**	**10 28 29.0**	**-2.3**
USA0B	**Ussuriysk Arra**	**14.46**	**266**	*e*P	**Pn**	**10 28 34.4**	**0.0**
USA0B	**Ussuriysk Arra**	**14.46**	**266**		**Pn**	**10 28 33.6**	**-0.8**
USRK	**Ussuriysk Ar.**	**14.46**	**266**	P	**Pn**	**10 28 34.1**	**-0.3**
	baz=66,slow=12,SNR=19						
MJAR	**Matsushiro Arr**	**14.82**	**230**	P	**Pn**	**10 28 37.9**	**-1.2**
	comp=Z,0.0nm,0.3s,baz=29,slow=13,SNR=6.5						
MJB9	**Matsu-Tunnel**	**14.82**	**230**		**Pn**	**10 28 38.6**	**-0.4**
MAJO	**Matsushiro**	**14.82**	**230**	*i* P	**Pn**	**10 28 36.9**	**-2.1**
MAJO	**Matsushiro**	**14.82**	**230**		**Pn**	**10 28 38.4**	**-0.6**
MAT	**Matsushiro**	**14.82**	**230**	P	**P**	**10 28 43.7**	**+1.6**
SMY	**Shemya**	**15.15**	**60**	P	**P**	**10 28 44.1**	**-1.5**
SMY				pmax	pmax		
	comp=Z,203nm,1.2s						
SMY	**Shemya**	**15.15**	**60**	Pn	**P**	**10 28 44.1**	**-1.5**
SEY	**Seymchan**	**15.90**	**0**	*i* P	**P**	**10 28 52.9**	**-1.0**
SEY	**Seymchan**	**15.90**	**0**	P	**P**	**10 28 52.1**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=171,slow=9.1,SNR=15						
SEY	**Seymchan**	**15.90**	**0**	*e*P	**P**	**10 28 52.9**	**-1.0**
MDJ	**Mudanjiang**	**15.97**	**269**		**Pn**	**10 28 51.4**	**-2.0**
MDJ				IAmb	IAmb	10 28 56.9	
	comp=Z,19nm,0.9s						
BMKR	**Bomnak**	**16.58**	**306**	*e*P	**Pn**	**10 29 00.2**	**-0.6**
BMKR				AMB	AMB	10 29 04.7	
	comp=Z,80nm,0.8s						
KROS	**Kirovskiy**	**17.55**	**304**	*e*P	**Pn**	**10 29 12.0**	**-0.6**
KROS				AMB	AMB	10 29 15.0	
	comp=Z,10.0nm,1.0s						
KROS				AMB	AMB	10 29 15.0	
	comp=Z,10.0nm,1.0s						
KROS				AMB	AMB	10 29 15.0	
	comp=Z,10.0nm,1.0s						
CN2	**Changchun**	**19.06**	**270**	*e*P	**P**	**10 29 26.1**	**-2.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK	**Yakutsk**	**19.74**	**328**	*e*P	**Pn**	**10 29 39.4**	**+1.0**
YAK				pmax	pmax		
	comp=Z,48nm,0.9s						
YAK				pmax	pmax		
	comp=N,21nm,1.2s						
YAK				pmax	pmax		
	comp=E,25nm,1.2s						
YAK	**Yakutsk**	**19.74**	**328**	P	**P**	**10 29 35.2**	**-0.7**
	comp=E,0.1nm,0.3s,baz=141,slow=1.4,SNR=3.3						
YAK	**Yakutsk**	**19.74**	**328**	*e*P	**Pn**	**10 29 37.9**	**-0.5**
YAK	**Yakutsk**	**19.74**	**328**	P	**Pn**	**10 29 36.8**	**-1.6**
KSRS	**Korea Array**	**20.34**	**251**	P	**P**	**10 29 44.0**	**+1.5**
	comp=E,2.3nm,0.5s,baz=53,slow=11,SNR=8.9						
KSRS				LR	LR	10 36 42.4	
	comp=E,26nm,20.0s,baz=54,slow=34						
HIA	**Hailar**	**21.71**	**288**	P	**P**	**10 29 55.8**	**-1.4**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HIA	**Hailar**	**21.71**	**288**	P	**P**	**10 29 55.8**	**-1.4**
BILL	**Bilibino**	**22.22**	**14**	*e*P	**P**	**10 30 02.0**	**-0.4**
BILL				*e**PP	**sP**	**10 30 31.1**	**-3.8**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BILL	**Bilibino**	**22.22**	**14**	*e*P	**P**	**10 30 02.0**	**-0.4**
BILL	**Bilibino**	**22.22**	**14**	P	**P**	**10 30 04.0**	**+1.6**
BOD	**Bodaibo**	**25.33**	**309**	*e*P	**P**	**10 30 29.3**	**-2.2**
ANM	**Nome**	**28.79**	**37**	P	**P**	**10 31 02.2**	**-0.1**
ANM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ANM	**Nome**	**28.79**	**37**	P	**P**	**10 31 02.2**	**-0.1**
HHC	**Hu-ho-hao-te**	**29.69**	**273**	*e*P	**P**	**10 31 10.3**	**-0.4**
HHC				pmax	pmax		
	comp=E,8.0nm,0.6s						
HHC				pmax	pmax		
	comp=E,55nm,7.6s						
H11N2	**WAKE ISLAND Hy**	**29.77**	**151**	T	T	11 03 01.6	
	baz=341,slow=76						
H11N1	**WAKE ISLAND Hy**	**29.79**	**151**	T	T	11 02 56.5	
	baz=341,slow=76						
H11N3	**WAKE ISLAND Hy**	**29.79**	**151**	T	T	11 02 54.3	
	baz=341,slow=76						
SDPT	**Sand Point**	**30.23**	**56**	P	**P**	**10 31 16.7**	**+1.5**
ULN	**Ulaanbaatar**	**30.24**	**288**	P	**P**	**10 31 15.0**	**-0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ULN	**Ulaanbaatar**	**30.24**	**288**	*e*P	**P**	**10 31 15.0**	**-0.5**
ULN	**Ulaanbaatar**	**30.24**	**288**	P	**P**	**10 31 15.0**	**-0.5**
SONM	**Songino Array**	**30.67**	**289**	P	**P**	**10 31 17.7**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=59,slow=8.8,SNR=5.8						
SONM				LR	LR	10 43 05.9	
	comp=Z,38nm,19.1s,baz=328,slow=35						
SONM	**Songino Array**	**30.67**	**289**	IAmb	IAmb	10 31 25.5	
	comp=Z,1.8nm,1.1s						
RDOG	**Red Dog Mine**	**30.85**	**31**	P	**P**	**10 31 21.7**	**+1.2**
H11S1	**WAKE ISLAND Hy**	**30.86**	**153**	T	T	11 04 38.6	
	baz=342,slow=76						
H11S3	**WAKE ISLAND Hy**	**30.86**	**153**	T	T	11 04 38.4	
	baz=342,slow=76						
H11S2	**WAKE ISLAND Hy**	**30.87**	**153**	T	T	11 04 36.1	
	baz=342,slow=76						
ZAK	**Zakamensk**	**32.01**	**294**	*e*P	**P**	**10 31 29.9**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
YOJ	**Yonaguni jima**	**32.42**	**236**	P	**P**	**10 31 33.7**	**-1.0**
YOJ				pmax	pmax		
	comp=E,208nm,1.2s						
YOJ	**Yonaguni jima**	**32.42**	**236**	P	**P**	**10 31 33.7**	**-1.0**
SVW2	**Sparrevohn**	**32.69**	**45**	P	**P**	**10 31 39.0**	**+2.3**
SVW2				IAmb	IAmb	10 31 49.5	
	comp=E,16nm,1.5s						
TATO	**Taipei**	**32.91**	**239**	P	**P**	**10 31 38.1**	**-0.8**
PPLA	**Purkeypile**	**34.32**	**42**	P	**P**	**10 31 52.3**	**+1.3**
KDAK	**Kodiak Island**	**34.36**	**51**	P	**P**	**10 31 52.1**	**+0.9**
KDAK				pmax	pmax		
	comp=E,38nm,1.4s						
KDAK	**Kodiak Island**	**34.36**	**51**	P	**P**	**10 31 52.1**	**+0.9**
SKT	**Skwentna**	**34.63**	**44**	P	**P**	**10 31 55.9**	**+2.4**
SKT				IAmb	IAmb	10 31 56.2	
	comp=E,12nm,1.3s						
BPAW	**Bear Paw Mtn.**	**34.89**	**40**	P	**P**	**10 31 57.9**	**+2.2**
BPAW				IAmb	IAmb	10 32 05.5	
	comp=Z,7.9nm,1.1s						
KTH	**Kantishna Hill**	**34.91**	**41**	P	**P**	**10 31 58.2**	**+2.3**
KTH				IAmb	IAmb	10 31 58.8	
	comp=E,6.2nm,0.9s						
XAN	**Xi'an**	**34.96**	**264**	P	**P**	**10 31 56.8**	**+0.1**
XAN				pmax	pmax		
	comp=E,8.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,130nm,6.2s						
SUA	**Susitna One**	**35.02**	**45**	P	**P**	**10 31 58.4**	**+1.4**
SUA				IAmb	IAmb	10 32 11.5	
	comp=Z,5.5nm,0.8s						
MLY	**Manley**	**35.03**	**38**	P	**P**	**10 31 59.4**	**+2.4**
TRF	**Thorofare Moun**	**35.19**	**41**	P	**P**	**10 32 00.3**	**+1.8**
RC01	**Rabbit Creek A**	**35.52**	**45**	P	**P**	**10 32 03.0**	**+1.8**
BWN	**Browne**	**35.56**	**40**	P	**P**	**10 32 04.5**	**+3.1**
NEA	**Nenana**	**35.73**	**39**	P	**P**	**10 32 04.6**	**+1.7**
NEA				IAmb	IAmb	10 32 05.7	
	comp=Z,6.3nm,0.9s						
MDM	**Murphy Dome**	**36.09**	**39**	P	**P**	**10 32 08.1**	**+2.0**
MDM				IAmb	IAmb	10 32 08.9	
	comp=Z,5.3nm,0.7s						
SML	**Sawmill**	**36.15**	**44**	P	**P**	**10 32 08.3**	**+1.7**
WRH	**Wood River Hil**	**36.16**	**39**	P	**P**	**10 32 08.3**	**+1.8**
WRH				IAmb	IAmb	10 32 23.4	
	comp=Z,9.8nm,1.4s						
CCB	**Clear Creek Bu**	**36.28**	**39**	P	**P**	**10 32 09.5**	**+2.0**
CCB				IAmb	IAmb	10 32 10.5	
	comp=Z,4.3nm,0.8s						
DHY	**Denali Highway**	**36.52**	**42**	P	**P**	**10 32 11.3**	**+1.5**
DHY				IAmb	IAmb	10 32 11.4	
	comp=Z,5.4nm,0.6s						
HDA	**Harding Lake**	**36.65**	**39**	P	**P**	**10 32 12.0**	**+1.2**
IL31		**36.67**	**39**	P	**P**	**10 32 12.0**	**+1.2**
IL31				IAmb	IAmb	10 32 19.3	
	comp=Z,6.1nm,1.2s						
ILAR	**Eielson Array**	**36.67**	**39**	P	**P**	**10 32 11.8**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=260,slow=7.1,SNR=50						
ILAR				pP	**pwP**	**10 32 35.9**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=259,slow=8.8,SNR=2.0						
ILAR				PcP	**PcP**	**10 34 30.0**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=280,slow=3.5,SNR=4.0						
PRP	**Porcupine Dome**	**37.23**	**38**	P	**P**	**10 32 17.9**	**+2.1**
PRP				IAmb	IAmb	10 32 18.6	
	comp=Z,4.4nm,0.8s						
FYU	**Fort Yukon**	**37.33**	**36**	P	**P**	**10 32 18.7**	**+2.3**
FYU				IAmb	IAmb	10 32 19.3	
	comp=Z,11nm,1.1s						
PAX	**Paxson**	**37.39**	**42**	P	**P**	**10 32 19.7**	**+2.6**
PAX				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PAX	**Paxson**	**37.39**	**42**	P	**P**	**10 32 19.7**	**+2.6**
PAX				IAmb	IAmb	10 32 26.4	
	comp=Z,9.5nm,1.3s						
RIDG	**Independent Ri**	**37.61**	**40**	P	**P**	**10 32 19.9**	**+0.9**
RIDG				IAmb	IAmb	10 32 20.4	
	comp=E,6.1nm,0.8s						
DOT	**Dot Lake**	**37.97**	**41**	P	**P**	**10 32 22.4**	**+0.5**
DOT				IAmb	IAmb	10 32 25.6	
	comp=Z,3.8nm,0.8s						
SCRK	**Sand Creek**	**37.97**	**40**	P	**P**	**10 32 22.9**	**+0.8**
SCRK				IAmb	IAmb	10 32 24.8	
	comp=Z,11nm,1.5s						
GTA	**Gaotai**	**38.34**	**278**	*e*P	**P**	**10 32 25.3**	**-0.1**
GTA				pP	sP	10 32 57.3	-3.3
GTA				sP	pwP	10 33 14.3	+21
GTA				PcP	**PcP**	**10 34 38.4**	**+1.4**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
EGAK	**Eagle**	**39.12**	**39**	P	**P**	**10 32 32.6**	**+1.2**
EGAK				IAmb	IAmb	10 32 34.5	
	comp=Z,4.5nm,0.7s						
DAWY	**Dawson**	**39.97**	**40**	P	**P**	**10 32 40.4**	**+1.8**
HYT	**Haines Junctio**	**41.46**

C36M	**Paulatuk**	**44.84**	**30**	P	**P**	**10 33 19.3 +1.5**
C36M				IAmb	IAmb	10 33 20.2			
	comp=Z,9.3nm,1.1s								
MK31	**Makanchi Array**	**46.27**	**297**	P	**P**	**10 33 28.4 -1.1**
MK31				pmax	pmax				
	comp=Z,4.0nm,0.9s								
MK31	**Makanchi Array**	**46.27**	**297**	P	**P**	**10 33 28.4 -1.1**
MKAR	**Makanchi Array**	**46.27**	**297**	P	**P**	**10 33 26.2 -3.3**
	comp=Z,2.8nm,0.7s,baz=69,slow=7.8,SNR=26								
MKAR				pP	**pP**	**10 33 52.4 -1.1**			
	comp=Z,0.8nm,0.7s,baz=79,slow=6.3,SNR=3.1								
MKAR				PcP	**PcP**	**10 35 02.9 -0.2**			
	comp=Z,1.5nm,0.6s,baz=77,slow=2.3,SNR=12								
MKAR				ScP	**ScP**	**10 38 43.4 -3.1**			
	comp=Z,0.9nm,1.0s,baz=52,slow=2.4,SNR=3.8								
MAKZ	**Makanchi**	**46.46**	**297**	P	**P**	**10 33 28.9 -2.0**
MAKZ				pmax	pmax				
	comp=Z,4.0nm,1.1s								
MAKZ	**Makanchi**	**46.46**	**297**	P	**P**	**10 33 28.9 -2.0**
KURK	**Kurchatov**	**46.70**	**303**	P	**P**	**10 33 30.6 -2.1**
KURK				pmax	pmax				
	comp=Z,5.0nm,0.9s								
KURK	**Kurchatov**	**46.70**	**303**	P	**P**	**10 33 30.6 -2.1**
KURK				IAmb	IAmb	10 33 32.3			
	comp=Z,5.4nm,0.8s								
BRVK	**Borovoye**	**50.24**	**309**	P	**P**	**10 33 58.4 -1.4**
BRVK				pmax	pmax				
	comp=Z,7.0nm,1.3s								
BRVK	**Borovoye**	**50.24**	**309**	P	**P**	**10 33 58.4 -1.4**
BRVK				IAmb	IAmb	10 33 59.3			
	comp=Z,6.8nm,1.2s								
RES	**Resolute Bay**	**50.72**	**18**	P	**P**	**10 34 04.0 +0.9**
RES				pmax	pmax				
	comp=Z,10.0nm,1.5s								
RES	**Resolute Bay**	**50.72**	**18**	P	**P**	**10 34 04.0 +0.9**
RES				IAmb	IAmb	10 34 04.4			
	comp=Z,10nm,1.4s								
YKA	**Yellowknife Ar**	**51.02**	**37**	P	**P**	**10 34 06.4 +0.9**
	comp=Z,1.8nm,0.6s,baz=299,slow=7.1,SNR=26								
YKA				pP	**pP**	**10 34 31.6 +0.8**			
	comp=Z,1.3nm,0.8s,baz=297,slow=7.3,SNR=3.7								
YKA				PcP	**PcP**	**10 35 20.2 +0.3**			
	comp=Z,0.9nm,0.6s,baz=300,slow=3.7,SNR=9.7								
CHTO	**Chiang Mai**	**51.62**	**256**	P	**P**	**10 34 08.8 -1.8**
CHTO				pmax	pmax				
	comp=Z,6.0nm,0.7s								
CHTO	**Chiang Mai**	**51.62**	**256**	P	**P**	**10 34 08.8 -1.8**
SHL	**Shillong**	**51.79**	**268**	P	**P**	**10 34 11.8 -0.2**
SHL				pmax	pmax				
	comp=Z,14nm,0.5s								
SHL	**Shillong**	**51.79**	**268**	P	**P**	**10 34 11.8 -0.2**
CMAR	**Chiang Mai Arr**	**51.88**	**255**	P	**P**	**10 34 13.5 +1.1**
	comp=Z,2.1nm,0.3s,baz=34,slow=7.2,SNR=15								
AAK	**Ala-Archa**	**53.16**	**296**	*i* P	**P**	**10 34 20.9 -1.0**
AAK				pmax	pmax				
	comp=Z,2.0nm,0.7s								
AAK	**Ala-Archa**	**53.16**	**296**	*e*P	**P**	**10 34 20.9 -1.0**
TAPN	**Taplejung**	**53.49**	**272**	*e*P	**P**	**10 34 25.4 +0.7**
	comp=Z,6.2nm,0.5s								
KSH	**Kashi**	**53.99**	**292**	P	**P**	**10 34 31.3 +3.4**
KSH				pmax	pmax				
	comp=Z,190nm,5.1s								
JIRN	**Jiri**	**54.34**	**274**	*e*P	**P**	**10 34 31.0 +0.1**
	comp=Z,24nm,0.6s								
ARU	**Arti**	**54.38**	**317**	*d* iP	**P**	**10 34 28.1 -2.2**
ARU				*PP	**sP**	**10 35 00.6 -5.9**			
ARU						10 36 32.0			
ARU				S	**S**	**10 41 54.8 -5.2**			
ARU				SS	**SS**	**10 45 40.9 -2.0**			
ARU				pmax	pmax				
	comp=Z,9.0nm,1.3s								
ARU	**Arti**	**54.38**	**317**	P	**P**	**10 34 28.7 -1.6**
GUN	**Gumba**	**54.39**	**274**	*e*P	**P**	**10 34 32.0 +0.8**
	comp=Z,8.0nm,0.5s								
RAMN	**Ramite**	**54.51**	**273**	*e*P	**P**	**10 34 32.0 0.0**
	comp=Z,40nm,0.8s								
KKN	**Kakani**	**54.87**	**274**	*e*P	**P**	**10 34 35.4 +0.8**
PKI	**Pulchoki**	**54.92**	**274**	*e*P	**P**	**10 34 35.9 +0.8**
PKIN	**Phulchoki**	**54.93**	**274**	*e*P	**P**	**10 34 35.1 0.0**
DMN	**Daman**	**55.11**	**274**	*e*P	**P**	**10 34 37.0 +0.7**
GKN	**Gorkha**	**55.18**	**275**	*e*P	**P**	**10 34 36.6 -0.1**
KK31	**Karatay Array**	**55.33**	**298**	P	**P**	**10 34 36.5 -0.9**
KK31				pmax	pmax				
	comp=Z,2.0nm,0.9s								
KK31	**Karatay Array**	**55.33**	**298**	P	**P**	**10 34 36.5 -0.9**
KKAR	**Karatay Array**	**55.33**	**298**	P	**P**	**10 34 36.5 -0.9**
KKAR				pmax	pmax				
	comp=Z,2.0nm,0.9s								
KKAR	**Karatay Array**	**55.33**	**298**	P	**P**	**10 34 36.5 -0.9**
DANN	**Dangsing**	**55.55**	**276**	*e*P	**P**	**10 34 39.4 -0.1**
KOLN	**Koldanda**	**56.03**	**276**	*e*P	**P**	**10 34 42.8 -0.1**
BTK	**Batken**	**56.91**	**295**	P	**P**	**10 34 48.3 -0.5**
BTK				pmax	pmax				
	comp=Z,8.0nm,1.3s								
BTK	**Batken**	**56.91**	**295**	P	**P**	**10 34 48.3 -0.5**
BTK				IAmb	IAmb	10 34 48.8			
	comp=Z,8.2nm,1.3s								
ARCES	**ARCESS Array B**	**57.36**	**340**	P	**P**	**10 34 50.0 -1.4**
	comp=Z,1.2nm,0.8s,baz=24,slow=7.0,SNR=3.7								
ABKAR	**Akbulak array**	**57.77**	**309**	P	**P**	**10 34 53.3 -1.2**
SUMG	**Summit**	**60.42**	**4**	P	**P**	**10 35 12.5 -0.5**
SUMG				pmax	pmax				
	comp=Z,20nm,1.1s								
SUMG	**Summit**	**60.42**	**4**	*i* P	**P**	**10 35 13.2 +0.2**
	comp=Z,27nm,0.7s								
SUMG	**Summit**	**60.42**	**4**	P	**P**	**10 35 12.5 -0.5**
NVAR	**Mina Array Bea**	**62.81**	**62**	P	**P**	**10 35 31.3 +1.9**
	comp=Z,0.6nm,0.5s,baz=301,slow=7.1,SNR=7.7								
FINES	**FINESS Array B**	**63.50**	**334**	P	**P**	**10 35 33.0 -0.2**
FINES	**FINESS Array B**	**63.50**	**334**	P	**P**	**10 35 33.0 -0.2**
	comp=Z,2.8nm,0.4s,baz=32,slow=7.2,SNR=23								
FINES				LR	LR	11 08 14.2			
	comp=Z,22nm,18.4s,baz=244,slow=41								
PDAR	**Pinedale Array**	**65.03**	**54**	P	**P**	**10 35 45.5 +1.6**
	comp=Z,0.4nm,0.6s,baz=209,slow=1.0,SNR=6.4								
RDMU	**Red Mountain**	**66.50**	**55**	P	**P**	**10 35 55.1 +1.9**
ULM	**Lac du Bonnet**	**66.67**	**40**	P	**P**	**10 35 53.9 0.0**
	comp=Z,0.8nm,0.4s,baz=321,slow=7.1,SNR=3.1								
NB2	**NORSAR Subarra**	**67.74**	**341**	P	**P**	**10 36 00.6 +0.1**
	comp=Z,1.2nm,0.5s,baz=26,slow=6.5								
NOA	**NORSAR Array B**	**67.74**	**341**	P	**P**	**10 35 59.8 -0.8**
	comp=Z,1.6nm,0.5s,baz=27,slow=6.3,SNR=8.2								
WRAB	**Tennant Creek**	**68.61**	**198**	P	**P**	**10 36 04.3 -2.0**
WRAB				pmax	pmax				
	comp=Z,25nm,0.9s								
WRAB	**Tennant Creek**	**68.61**	**198**	P	**P**	**10 36 04.3 -2.0**
WRA	**Warramunga Arr**	**68.62**	**198**	P	**P**	**10 36 07.1 +0.7**
	comp=Z,1.4nm,0.8s,baz=15,slow=7.3,SNR=4.9								
WRA	**Warramunga Arr**	**68.62**	**198**	IAmb	IAmb	10 36 15.7			
	comp=Z,0.4nm,1.2s								
AKASG	**Malin Array Be**	**70.95**	**326**	P	**P**	**10 36 18.6 -1.8**
	comp=Z,2.4nm,0.4s,baz=36,slow=6.3,SNR=10.0								
AKASG	**Malin Array Be**	**70.95**	**326**	IAmb	IAmb	10 36 21.7			
	comp=Z,2.6nm,1.4s								
ASAR	**Alice Springs**	**72.33**	**198**	P	**P**	**10 36 30.7 +1.8**
	comp=Z,2.9nm,0.8s,baz=7.7,slow=5.6,SNR=30								
SCHQ	**Schefferville**	**73.24**	**22**	P	**P**	**10 36 34.3 +0.2**
	comp=Z,1.3nm,0.4s,baz=323,slow=5.4,SNR=17								
SCHQ	**Schefferville**	**73.24**	**22**	IAmb	IAmb	10 36 35.4			
	comp=Z,12nm,1.4s								
I42A	**Draeger Farm,**	**74.58**	**41**	P	**P**	**10 36 42.4 +0.3**
BUR08	**Bucovina Ar. S**	**74.98**	**326**	P	**P**	**10 36 44.0 -0.4**
BUR08				IAmb	IAmb	10 36 45.6			
	comp=Z,4.3nm,0.7s								
BURAR	**Bucovina Array**	**75.00**	**326**	⇓P	**P**	**10 36 44.6 +0.1**
BURAR	**Bucovina Array**	**75.00**	**326**	⇓P	**P**	**10 36 44.6 +0.1**
BIZ	**Bicaz**	**75.21**	**325**	⇑P	**P**	**10 36 46.3 +0.7**
TESR	**Tescani**	**75.35**	**325**	⇑P	**P**	**10 36 46.6 +0.2**
TLCR		**75.54**	**322**	⇑P	**P**	**10 36 47.7 +0.2**
TLCR		**75.54**	**322**	⇑P	**P**	**10 36 47.7 +0.2**
TRPA	**Tarpa**	**75.57**	**328**	⇑P	**P**	**10 36 48.5 +0.9**
LANS	**Liptovska Anna**	**75.78**	**330**	*e*P	**P**	**10 36 48.0 -0.9**
LANS				pmax	pmax				
	comp=Z,2.0nm,0.7s								
LANS	**Liptovska Anna**	**75.78**	**330**	*e*P	**P**	**10 36 48.0 -0.9**
CLL	**Collm**	**75.93**	**335**	*i* P	**P**	**10 36 49.5 -0.1**
CLL	**Collm**	**75.93**	**335**	*i* P	**P**	**10 36 49.5 -0.1**
MLR	**Muntele Rosu**	**76.47**	**324**	⇑P	**P**	**10 36 54.0 +1.1**
MLR	**Muntele Rosu**	**76.47**	**324**	⇑P	**P**	**10 36 54.0 +1.1**
VYHS	**Vyhne**	**76.56**	**330**	*e*P	**P**	**10 36 51.5 -1.8**
VYHS	**Vyhne**	**76.56**	**330**	*e*P	**P**	**10 36 51.5 -1.8**
VOIR		**76.86**	**325**	⇑P	**P**	**10 36 56.2 +1.1**
VOIR		**76.86**	**325**	⇑P	**P**	**10 36 56.2 +1.1**
KHC	**Kasperske Hory**	**77.69**	**334**	*e*P	**P**	**10 36 59.8 +0.2**
KHC				*e*	x	10 37 03.5			
KHC	**Kasperske Hory**	**77.69**	**334**	*e*P	**P**	**10 36 59.8 +0.2**
KHC				*e*	x	10 37 03.5			
BRTR	**Keskin Array B**	**77.75**	**316**	P	**P**	**10 37 00.3 +0.1**
	comp=Z,1.0nm,0.8s,baz=54,slow=3.0,SNR=4.7								
TX31	**Lajitas Ar. Si**	**77.85**	**60**	P	**P**	**10 37 01.2 +0.4**
TX32	**Lajitas Array**	**77.85**	**60**	P	**P**	**10 37 01.9 +1.1**
TXAR	**Lajitas Array**	**77.85**	**60**	P	**P**	**10 37 02.2 +1.4**
	comp=Z,0.9nm,0.5s,baz=294,slow=4.4,SNR=15								
GERES	**GERESS Array B**	**77.91**	**333**	P	**P**	**10 37 00.7 -0.2**
	comp=Z,0.9nm,0.6s,baz=46,slow=5.8,SNR=4.4								
U40A	**Yellville**	**78.55**	**48**	P	**P**	**10 37 04.0 -0.5**
BFO	**Black Forest**	**79.93**	**336**	*c*eP	**P**	**10 37 12.2 +0.4**
BFO				pmax	pmax				
	comp=Z,2.0nm,1.7s								
O56A	**Blue Knob Stat**	**81.98**	**37**	P	**P**	**10 37 23.8 +0.9**
O56A				IAmb	IAmb	10 37 24.1			
	comp=Z,6.0nm,0.8s								
S51A	**Beattyville**	**82.00**	**42**	P	**P**	**10 37 23.9 +0.9**
S51A				IAmb	IAmb	10 37 39.4			
	comp=Z,11nm,1.2s								
Q54A	**Coxs Mills**	**82.11**	**39**	P	**P**	**10 37 24.5 +1.0**
SWET	**Sewanee**	**82.88**	**45**	P	**P**	**10 37 28.2 +0.6**
SWET				IAmb	IAmb	10 37 40.9			
	comp=Z,12nm,1.4s								
TZTN	**Tazewell**	**82.92**	**42**	P	**P**	**10 37 29.1 +1.3**
W50A	**Signal Mountai**	**83.19**	**44**	P	**P**	**10 37 30.4 +1.1**
W50A				IAmb	IAmb	10 37 42.4			
	comp=Z,4.3nm,0.8s								
V52A	**Sevierville**	**83.47**	**43**	P	**P**	**10 37 31.8 +1.1**
V52A				IAmb	IAmb	10 37 32.1			
	comp=Z,11nm,1.2s								
Y49A	**Blount Mountai**	**83.75**	**46**	P	**P**	**10 37 32.6 +0.6**
Y49A				IAmb	IAmb	10 37 37.0			
	comp=Z,4.8nm,0.9s								
LRAL	**Lakeview Retre**	**84.12**	**47**	P	**P**	**10 37 35.0 +1.0**
LRAL				IAmb	IAmb	10 37 51.1			
	comp=Z,11nm,1.5s								
Z50A	**Ashland**	**84.47**	**46**	P	**P**	**10 37 36.5 +0.7**
250A	**Grady**	**85.34**	**47**	P	**P**	**10 37 41.5 +1.4**
TORD	**Torodi Ar. Bea**	**114.52**	**328**	PKP	**PKiKP**	**10 43 42.2 -0.5**
	comp=Z,0.7nm,0.4s,baz=12,slow=1.7,SNR=10								
DBIC	**Dimbokro**	**122.78**	**333**	PKIKP	**PKPdf**	**10 43 58.9 +0.3**
DBIC	**Dimbokro**	**122.78**	**333**	PKP	**PKPdf**	**10 43 58.3 -0.3**
	comp=Z,2.1nm,0.6s,baz=53,slow=3.8,SNR=5.3								
DBIC	**Dimbokro**	**122.78**	**333**		**PKPdf**	**10 43 58.9 +0.3**
BDFB	**Brasilia**	**144.43**	**35**	PKIKP	PKPbc	10 44 38.4 +0.7
BDFB	**Brasilia**	**144.43**	**35**	PKP	**PKPab**	**10 44 37.8 +0.4**
	comp=Z,2.7nm,0.5s,baz=115,slow=1.9,SNR=4.0								
BDFB	**Brasilia**	**144.43**	**35**		PKPbc	10 44 38.4 +0.7
CPUP	**Villa Florida**	**148.81**	**59**	PKP2	**PKPbc**	**10 44 50.9 +1.0**
CPUP	**Villa Florida**	**148.81**	**59**	PKPbc	**PKPbc**	**10 44 50.6 +0.8**
	comp=Z,1.6nm,0.5s,baz=229,slow=3.4,SNR=5.2								
CPUP	**Villa Florida**	**148.81**	**59**		**PKPbc**	**10 44 50.9 +1.0**
PLCA	**Paso Flores**	**148.82**	**94**	PKPbc	**PKPbc**	**10 44 51.0 +1.5**
	comp=Z,1.9nm,0.8s,baz=313,slow=4.2,SNR=6.2								
PLCA	**Paso Flores**	**148.82**	**94**		**PKiKP**	**10 44 51.5 +0.6**
SNAA	**Sanae**	**152.69**	**197**	PKPdf	**PKPbc**	**10 44 58.2 +0.5**
VNA1	**Neumayer--Stat**	**154.54**	**195**	PKPdf	**PKPab**	**10 45 21.5 +4.8**

JMA ***15*** *10:31:11.4*s*0.1,23°.60N*x*121°.55E,h0km,M3.2*
TAP ***15*** *10:31:13.2,23°.64N*x*121°.39E,h19km,ML3.6,B*
ISC 15 10:31:13.3±0.8**,23°.63N**±0°.01×**121°.44E**±0°.02**,h17**km±5km**,**n119,**s0s76/197,13C-17D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.04**	**344**	⇓*i*P		**Pg**	**10 31 16.6**	**+0.2**
	baz=48							
EGFH				S		**Sg**	**10 31 18.7**	**+0.2**
	baz=48							
HGSD	**Ruisui**	**0.14**	**186**	⇓P		**Pg**	**10 31 18.2**	**+0.9**
	baz=167							
HGSD				*e*S		**Sg**	**10 31 21.1**	**+1.1**
	baz=167							
EHY	**Hungye**	**0.17**	**220**	⇑*i*P		**Pb**	**10 31 17.5**	**-0.5**
	baz=194							
EHY				S		**Sb**	**10 31 20.1**	**-1.0**
	baz=194							
ESL	**Shilin**	**0.18**	**358**	⇑*i*P		**Pb**	**10 31 18.0**	**-0.2**
	baz=23							
ESL				S		**Sb**	**10 31 20.8**	**-0.7**
	baz=23							
YULB	**Yu-li**	**0.27**	**209**	⇓P		**Pg**	**10 31 19.1**	**-0.3**
	baz=193							
YULB				S		**Sb**	**10 31 22.9**	**-1.2**
	baz=193							
VWDT	**VWDT**	**0.30**	**294**	⇑P		**Pg**	**10 31 19.5**	**-0.3**
	baz=297							
VWDT				S		**Sg**	**10 31 23.4**	**-0.7**
	baz=297							
ENLB	**Shoufeng**	**0.31**	**29**	*e*P		**Pg**	**10 31 19.7**	**-0.2**
	baz=31							
TWF1	**Yuli**	**0.31**	**205**	⇓*i*P		**Pg**	**10 31 19.7**	**-0.3**
	baz=198							
TWF1				S		**Sg**	**10 31 24.3**	**-0.2**
	baz=198							
HWA	**Hwalien**	**0.38**	**24**	*e*P		**Pg**	**10 31 21.7**	**+0.6**
	baz=26							
HWA				*e*S		**Sb**	**10 31 27.7**	**+0.6**
	baz=26							
OWD	**Renai**	**0.40**	**323**	⇓P		**Pg**	**10 31 21.2**	**-0.4**
	baz=329							
OWD				*e*S		**Sg**	**10 31 25.7**	**-1.6**
	baz=329							
FULB	**Fuli**	**0.45**	**197**	*e*P		**Pg**	**10 31 22.7**	**+0.2**
	baz=197							
FULB				*e*S		**Sb**	**10 31 30.0**	**+0.7**
	baz=197							
TWD	**Chiawan**	**0.47**	**18**	*e*P		**Pg**	**10 31 22.7**	**-0.1**
	baz=20							
TWD				*e*S		**Sg**	**10 31 29.3**	**+0.2**
	baz=20							
YUS	**Yu-Shan**	**0.47**	**252**	⇑*i*P		**Pg**	**10 31 22.6**	**-0.3**
	baz=247							
YUS				S		**Sg**	**10 31 28.3**	**-1.2**
	baz=247							
SSLB	**Suanglung**	**0.47**	**289**	⇓P		**Pg**	**10 31 21.9**	**-0.9**
	baz=298							
SSLB				*e*S		**Sg**	**10 31 27.2**	**-2.1**
	baz=298							
CHGB	**Renai**	**0.49**	**330**	⇓P		**Pg**	**10 31 23.0**	**-0.2**
	baz=345							
CHGB				*e*S		**Sg**	**10 31 28.8**	**-1.2**
	baz=345							
WHF	**Hehuan Shan**	**0.53**	**343**	⇓*i*P		**Pg**	**10 31 23.7**	**-0.4**
	baz=350							
WHF				*e*S		**Sg**	**10 31 30.5**	**-1.0**
	baz=350							
CHKT	**Chengkung**	**0.54**	**187**	*e*P		**Pb**	**10 31 23.9**	**-0.3**
	baz=167							
WHYT	**Xinyi Township**	**0.54**	**277**	*e*P		**Pb**	**10 31 23.6**	**-0.7**
	baz=273							
WHYT				*e*S		**Sg**	**10 31 30.2**	**-1.2**
	baz=273							
SMLT	**Sun Moon Lake**	**0.55**	**297**	⇓*i*P		**Pb**	**10 31 23.6**	**-1.0**
	baz=306							
SMLT				S		**Sb**	**10 31 30.4**	**-2.0**
	baz=306							
NACB	**Ninganchiao**	**0.56**	**15**	⇑P		**Pb**	**10 31 23.6**	**-1.0**
	baz=20							
NACB				S		**Sb**	**10 31 31.3**	**-1.0**
	baz=20							
ETLH	**Xiulin Townshi**	**0.57**	**4**	⇓*e*P		**Pb**	**10 31 24.2**	**-0.8**
	baz=10.0							
ETLH				S		**Sb**	**10 31 32.2**	**-0.7**
	baz=10.0							
ELDTW	**Lidau**	**0.59**	**221**	⇑*i*P		**Pb**	**10 31 24.1**	**-1.1**
	baz=210							
ELDTW				S		**Sb**	**10 31 31.9**	**-1.4**
	baz=210							
ALS	**Alishan**	**0.59**	**258**	⇑P		**Pb**	**10 31 24.9**	**-0.5**
	baz=254							
ALS				S		**Sb**	**10 31 32.1**	**-1.6**
	baz=254							
TYC	**Yuchr**	**0.60**	**297**	⇓*i*P		**Pb**	**10 31 24.3**	**-1.0**
	baz=306							
TYC				S		**Sb**	**10 31 31.7**	**-1.8**
	baz=306							
DPDB	**Guoxing**	**0.62**	**310**	⇓P		**Pb**	**10 31 25.0**	**-0.6**
	baz=319							
DPDB				S		**Sb**	**10 31 32.4**	**-1.6**
	baz=319							
TWT	**Tachien**	**0.66**	**339**	⇓P		**Pb**	**10 31 26.2**	**-0.3**
	baz=335							
TWT				S		**Sb**	**10 31 34.1**	**-1.4**
	baz=335							
TDCB	**Techi**	**0.67**	**337**	⇓P		**Pb**	**10 31 26.3**	**-0.3**
	baz=335							
TDCB				S		**Sb**	**10 31 34.0**	**-1.7**
	baz=335							
WJS	**Zhushan**	**0.68**	**286**	*e*P		**Pb**	**10 31 27.1**	**+0.4**
	baz=287							
WJS				S		**Sg**	**10 31 37.0**	**+1.3**
	baz=287							
CHN5	**Tsauling**	**0.70**	**267**	⇑*i*P		**Pb**	**10 31 27.0**	**-0.1**
	baz=261							
CHN5				S		**Sb**	**10 31 35.8**	**-0.7**
	baz=261							
WNT	**Mingjian**	**0.73**	**290**	⇓*i*P		**Pb**	**10 31 28.2**	**+0.5**
	baz=291							
WNT				S		**Sg**	**10 31 38.7**	**+1.2**
	baz=291							
STYT	**Tauyuan**	**0.78**	**233**	P		**Pb**	**10 31 28.1**	**-0.4**
	baz=228							
STYT				S		**Sb**	**10 31 38.6**	**-0.3**
	baz=228							
WHP	**Taichung City**	**0.79**	**325**	*e*P		**Pb**	**10 31 28.2**	**-0.3**
	baz=333							
WHP				*e*S		**Sb**	**10 31 38.0**	**-0.9**
	baz=333							
NNSH	**Datong**	**0.79**	**356**	P		**Pb**	**10 31 28.3**	**-0.5**
	baz=12							
NNSH				*e*S		**Sb**	**10 31 38.7**	**-0.6**
	baz=12							
NNS	**Nan Shan**	**0.81**	**356**	P		**Pb**	**10 31 28.4**	**-0.5**
	baz=12							
NNS				*e*S		**Sb**	**10 31 39.3**	**-0.4**
	baz=12							
WGK	**Gukeng**	**0.81**	**274**	*e*P		**Pb**	**10 31 29.2**	**+0.4**
	baz=273							
WGK				S		**Sg**	**10 31 40.5**	**+0.8**
	baz=273							
TPUB	**Ta-pu**	**0.81**	**246**	⇑P		**Pb**	**10 31 29.0**	**0.0**
	baz=242							
TPUB				S		**Sb**	**10 31 39.3**	**-0.4**
	baz=242							
CHN4	**Tsaushan**	**0.83**	**250**	⇑*i*P		**Pb**	**10 31 29.5**	**+0.2**
	baz=247							
CHN4				*e*S		**Sb**	**10 31 39.4**	**-0.6**
	baz=247							
WDLH	**Douliu**	**0.83**	**274**	*e*P		**Pb**	**10 31 29.5**	**+0.3**
	baz=273							
WDLH				*e*S		**Sg**	**10 31 41.0**	**+0.5**
	baz=273							
ENA	**Nanau**	**0.84**	**19**	*e*P		**Pb**	**10 31 28.2**	**-1.2**
	baz=24							
ENA				*e*S		**Sb**	**10 31 40.5**	**+0.1**
	baz=24							
NANB	**Nanao**	**0.84**	**20**	⇑P		**Pb**	**10 31 28.1**	**-1.3**
	baz=24							
NANB				S		**Sb**	**10 31 40.5**	**0.0**
	baz=24							
WTP	**Ta-pu**	**0.85**	**243**	⇑*i*P		**Pb**	**10 31 29.7**	**+0.1**
	baz=239							
WTP				S		**Sb**	**10 31 40.7**	**-0.1**
	baz=239							
TCU	**Taichung**	**0.87**	**306**	*e*P		**Pb**	**10 31 30.3**	**+0.4**
	baz=310							
TCU				*e*S		**Sb**	**10 31 41.9**	**+0.7**
	baz=310							
TWG	**Pinlang**	**0.88**	**203**	*e*P		**Pb**	**10 31 29.4**	**-0.7**
	baz=183							
TWG				*e*S		**Sb**	**10 31 41.3**	**-0.2**
	baz=183							
TWGBT	**Beinan**	**0.88**	**202**	*e*P		**Pb**	**10 31 29.2**	**-0.9**
	baz=184							
TWGBT				*e*S		**Sb**	**10 31 40.9**	**-0.6**
	baz=184							
CHN2	**Minshiung**	**0.89**	**264**	*e*P		**Pb**	**10 31 31.1**	**+0.8**
	baz=261							
CHN2				*e*S		**Sb**	**10 31 42.7**	**+0.8**
	baz=261							
TWH	**Lutao**	**0.92**	**178**	*e*P		**Pb**	**10 31 28.4**	**-2.4**
	baz=171							
WCHH	**Zhanghua**	**0.92**	**299**	*e*P		**Pb**	**10 31 31.3**	**+0.4**
	baz=301							
WCHH				*e*S		**Sg**	**10 31 44.2**	**+0.8**
	baz=301							
TWQ1	**Liyutan**	**0.94**	**320**	P		**Pb**	**10 31 31.8**	**+0.7**
	baz=333							
TWQ1				S		**Sg**	**10 31 44.7**	**+0.8**
	baz=333							
CHY	**Chiayi**	**0.94**	**262**	*e*P		**Pb**	**10 31 31.3**	**+0.2**
	baz=270							
CHY				*e*S		**Sb**	**10 31 43.8**	**+0.5**
	baz=270							
TWK	**Hsinying**	**0.95**	**248**	⇑P		**Pb**	**10 31 31.4**	**+0.1**
	baz=243							
TWK				*e*S		**Sb**	**10 31 44.1**	**+0.5**
	baz=243							
CHN1	**Nanshi**	**0.95**	**242**	⇓P		**Pb**	**10 31 31.8**	**+0.5**
	baz=238							
CHN1				*e*S		**Sg**	**10 31 44.7**	**+0.4**
	baz=238							
SNST	**Tainan City**	**0.96**	**245**	*e*P		**Pb**	**10 31 31.6**	**+0.1**
	baz=241							
SNST				*e*S		**Sb**	**10 31 44.6**	**+0

WSF	**Szhu**	**1.12**	**271**	*eP*	**Pn**	**10 31 33.1**	**-1.1**
	baz=268								
WSF				*eS*	**Sb**	**10 31 48.7**	**+0.3**
	baz=268								
ECL	**Taimali**	**1.12**	**204**	*eP*	**Pn**	**10 31 33.6**	**-0.6**
	baz=190								
ECL				*eS*	**Sb**	**10 31 47.3**	**-1.3**
	baz=190								
SLBB	**Yuanshan**	**1.13**	**9**	*eP*	**Pn**	**10 31 33.4**	**-1.0**
	baz=28								
CHN3	**Shinhua**	**1.13**	**241**	*eP*	**Pg**	**10 31 35.5**	**+0.3**
	baz=235								
CHN3				*eS*	**Sg**	**10 31 51.7**	**+1.7**
	baz=235								
NWLT	**Wulai**	**1.14**	**3**	*eP*	**Pn**	**10 31 34.3**	**-0.2**
	baz=18								
NWLT				*eS*	**Sb**	**10 31 48.4**	**-0.8**
	baz=18								
SSD	**Sandimen**	**1.15**	**220**	*eP*	**Pn**	**10 31 34.3**	**-0.4**
	baz=214								
SSD				*eS*	**Sb**	**10 31 49.7**	**+0.3**
	baz=214								
CHN8	**Yiju**	**1.16**	**256**	*eP*	**Pn**	**10 31 34.5**	**-0.2**
	baz=251								
CHN8				*eS*	**Sn**	**10 31 51.0**	**+0.8**
	baz=251								
SBCB	**Hsinchu**	**1.23**	**340**	*eP*	**Pb**	**10 31 36.5**	**+0.5**
	baz=345								
SBCB				*eS*	**Sg**	**10 31 53.4**	**+0.4**
	baz=345								
WLTB	**Daxi**	**1.23**	**352**	*eP*	**Pn**	**10 31 35.7**	**0.0**
	baz=350								
TWM1	**Shoushan**	**1.23**	**229**	*eP*	**Pg**	**10 31 37.3**	**+0.1**
	baz=213								
MASBT	**Mashibuluo**	**1.26**	**216**	*eP*	**Pn**	**10 31 36.3**	**+0.2**
	baz=208								
MASBT				*eS*	**Sb**	**10 31 52.4**	**-0.1**
	baz=208								
NTC	**Toucheng**	**1.27**	**16**	*eP*	**Pn**	**10 31 36.6**	**+0.3**
	baz=24								
NHDH	**Xindian Distri**	**1.33**	**3**	*eP*	**Pb**	**10 31 38.8**	**+1.0**
	baz=19								
TATO	**Taipei**	**1.34**	**2**	*eP*	**Pn**	**10 31 37.5**	**+0.3**
	baz=23								
TWA	**Mucha**	**1.35**	**6**	*eP*	**Pn**	**10 31 38.2**	**+0.8**
	baz=25								
TWA				*eS*	**Sb**	**10 31 56.0**	**+0.9**
	baz=25								
NCUH	**Zhongli**	**1.35**	**350**	*eP*	**Pb**	**10 31 38.5**	**+0.3**
	baz=355								
NCUH				*eS*	**Sg**	**10 31 58.0**	**+1.0**
	baz=355								
NCU	**National Centr**	**1.35**	**350**	*eP*	**Pn**	**10 31 37.4**	**0.0**
	baz=339								
EAST	**Anshuo**	**1.36**	**204**	*eP*	**Pn**	**10 31 38.0**	**+0.4**
	baz=185								
SSPT	**Xinbi**	**1.40**	**215**	*eP*	**Pb**	**10 31 39.7**	**+0.8**
	baz=209								
SSPT				*eS*	**Sg**	**10 31 58.6**	**+0.1**
	baz=209								
TAP	**Taipei**	**1.40**	**2**	*eP*	**Pn**	**10 31 37.8**	**-0.3**
	baz=24								
TWB1	**Santiao Chiao**	**1.46**	**20**	*eP*	**Pn**	**10 31 39.4**	**+0.6**
	baz=28								
TWS1	**Kuangyinshan**	**1.46**	**359**	*eP*	**Pn**	**10 31 39.1**	**+0.2**
	baz=30								
SCZT	**Fangliau**	**1.46**	**211**	*eP*	**Pb**	**10 31 40.5**	**+0.4**
	baz=203								
NWF	**Wu-fen Shan**	**1.47**	**12**	*eP*	**Pn**	**10 31 38.8**	**-0.3**
	baz=31								
WFSB	**Wu-fen Shan**	**1.47**	**12**	*eP*	**Pn**	**10 31 38.9**	**-0.1**
	baz=31								
YM01	**YM01**	**1.51**	**5**	*eP*	**Pn**	**10 31 39.7**	**+0.1**
	baz=33								
YM10	**YM10**	**1.52**	**4**	*eP*	**Pn**	**10 31 40.3**	**+0.5**
	baz=33								
YM11	**YM11**	**1.53**	**5**	*eP*	**Pn**	**10 31 40.2**	**+0.2**
	baz=33								
ANP	**Anpu**	**1.55**	**3**	*eP*	**Pn**	**10 31 41.2**	**+1.0**
	baz=32								
YM08	**YM08**	**1.55**	**5**	*eP*	**Pn**	**10 31 40.4**	**+0.2**
	baz=34								
YOJ	**Yonaguni jima**	**1.66**	**60**	P	**Pn**	**10 31 42.0**	**+0.4**
PHUB	**P'eng-hu**	**1.72**	**266**	*eP*	**Pn**	**10 31 42.2**	**-0.2**
	baz=263								
VCHM	**Qimei**	**1.89**	**258**	*eP*	**Pn**	**10 31 44.6**	**-0.3**
	baz=253								
HATJ	**Hateruma jima**	**2.21**	**79**	P	**Pn**	**10 31 48.7**	**-0.5**
IRIF	**Iriomote-Funau**	**2.21**	**71**	P	**Pn**	**10 31 50.0**	**+0.8**
VWUC	**VWUC**	**2.26**	**307**	*eP*	**Pn**	**10 31 49.5**	**-0.4**
	baz=309								
PTTC	**Pingtan**	**2.40**	**321**	*eP*	**Pn**	**10 31 51.9**	**+0.1**
	baz=325								
PTTC				*eS*	**Sn**	**10 32 19.6**	**-1.2**
	baz=325								
JKRS	**Kuro-shima**	**2.43**	**75**	P	**Pn**	**10 31 53.0**	**+0.8**
PTMZ	**Houxiangcun**	**2.54**	**304**	*eP*	**Pn**	**10 31 53.2**	**-0.5**
	baz=304								
JIJ	**Ishigaki jima**	**2.58**	**73**	P	**Pn**	**10 31 54.5**	**+0.2**
JIJ				*eS*	**Sn**	**10 32 25.3**	**+0.1**
JISG	**Ishigakijimahi**	**2.79**	**70**	P	**Pn**	**10 31 57.1**	**-0.1**
JISG				*eS*	**Sn**	**10 32 31.1**	**+0.6**
MATB	**Ma-tsu**	**2.85**	**332**	*eP*	**Pn**	**10 31 57.6**	**-0.4**
	baz=336								
KNM	**Kinmen**	**2.86**	**286**	*eP*	**Pn**	**10 31 59.9**	**+1.8**
	baz=285								
KNMB	**Chin-men Tao**	**2.91**	**287**	*eP*	**Pn**	**10 31 58.2**	**-0.6**
	baz=285								
JTJ	**Tarama**	**3.15**	**71**	P	**Pn**	**10 32 02.4**	**+0.3**
LYJJ	**Jianjiangzhen**	**3.28**	**333**	*eP*	**Pn**	**10 32 06.3**	**+2.4**
	baz=335								
MHZQ	**Yeshan**	**3.29**	**319**	*eP*	**Pn**	**10 32 04.4**	**+0.3**
	baz=321								
AXDP	**Jialang**	**3.41**	**292**	*eP*	**Pn**	**10 32 05.6**	**-0.1**
	baz=291								
XPSS	**Dashiqiu**	**3.47**	**341**	*eP*	**Pn**	**10 32 06.1**	**-0.5**
	baz=348								

IDC 15 10:41:37.0±75.0, 21°20S×177°60W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/21, mbtmp3.9/3, Error ellipse: s-maj=1366.0km s-min=174.1km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.82**	**245**	P	P	10 48 54.5	-1.0
	0.6nm,0.4s,baz=110,slow=12,SNR=4.0						
ASAR	**Alice Springs**	**44.72**	**257**	P	P	10 49 52.3	-0.1
	1.0nm,0.7s,baz=100,slow=7.0,SNR=14						
WRA	**Warramunga Arr**	**44.88**	**263**	P	P	10 49 54.0	+0.4
	1.3nm,0.5s,baz=92,slow=8.4,SNR=23						

*IDC **15** 11:00:35.9±1.6, 60°10N×151°99W, h96km±25km, mb3.8/7, mb1 3.8/12, mb1mx3.4/47, mbtmp4.1/12, Error ellipse: s-maj=29.2km s-min=12.9km az=129.0*

*AEIC **15** 11:00:37.0±1.3, 60°16N±0°03×152°20W±0°05, h90km±4km, ML3.8/109, Error ellipse: s-maj=4.7km s-min=3.7km az=206.0*

ISC 15 11:00:36.0±0.7, 60°15N±0°03×152°09W±0°04, h96km±6km, n126, σ0s85/143, mb4.2/7, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RED	**Redoubt Volcan**	**0.43**	**309**		**Pn**	**11 00 50.4**	**-0.7**
RED					**Sn**	**11 01 01.1**	**-1.2**
RSO	**Redoubt South**	**0.46**	**314**		Pn	11 00 47.5	-3.9
IVE	**Iliamna Volcan**	**0.48**	**255**		**Pn**	**11 00 50.7**	**-0.7**
RDWB	**Redoubt West**	**0.51**	**313**		**Pn**	**11 00 51.0**	**-0.6**
RDWB					**Sn**	**11 01 01.6**	**-1.7**
ILS	**Iliamna Low So**	**0.52**	**249**		**Pn**	**11 00 51.2**	**-0.5**
ILW	**Iliamna West**	**0.53**	**261**		**Pn**	**11 00 51.4**	**-0.5**
DFR	**Drift River**	**0.54**	**327**		**Pn**	**11 00 51.2**	**-0.6**
DFR					**Sn**	**11 01 02.1**	**-1.5**
HOM	**Homer**	**0.54**	**155**	Pn	**Pn**	**11 00 52.2**	**+0.5**
HOM				Sn	**Sn**	**11 01 04.0**	**+0.7**
HOM					Sn	11 01 04.1	+0.7
RDJH	**Redoubt Jeurge**	**0.57**	**322**		**Pn**	**11 00 51.5**	**-0.6**
RDJH					**Sn**	**11 01 02.8**	**-1.3**
BRLK	**Bradley Lake**	**0.72**	**122**		**Pn**	**11 00 53.3**	**0.0**
BRLK					Pn	11 00 53.4	+0.1
BRLK					**Sn**	**11 01 05.9**	**-0.4**
BRLK				Sn	Sn	11 01 06.3	+0.1
CAPN	**Captain Cook N**	**0.78**	**36**		**Pn**	**11 00 55.3**	**+1.5**
BRSE	**Bradley Lake S**	**0.79**	**120**		**Pn**	**11 00 54.0**	**+0.1**
BRSE					**Sn**	**11 01 07.1**	**-0.4**
SLKM	**Skilak Lake**	**1.00**	**68**		**Pn**	**11 00 55.8**	**-0.3**
SLKM					**Sn**	**11 01 10.9**	**-0.4**
AU22	**Augustine Moun**	**1.01**	**220**		**Pn**	**11 00 56.2**	**0.0**
AU22					**Sn**	**11 01 10.7**	**-0.6**
AUW	**Augustine West**	**1.04**	**222**		**Pn**	**11 00 56.7**	**+0.1**
SPCR	**Spurr Chakacha**	**1.06**	**357**		**Pn**	**11 00 56.7**	**-0.2**
SPCR					**Sn**	**11 01 11.6**	**-1.0**
SPBG	**Spurr Blockage**	**1.12**	**353**		**Pn**	**11 00 57.6**	**0.0**
SPBG					**Sn**	**11 01 13.2**	**-0.7**
SEW	**Seward**	**1.32**	**91**		**Pn**	**11 00 59.7**	**-0.1**
SEW	**Seward**	**1.32**	**91**		**Sn**	**11 01 17.5**	**-0.3**
SEW	**Seward**	**1.32**	**91**	Sn	**Sn**	**11 01 17.7**	**-0.1**
FIS	**Fire Island**	**1.36**	**42**		**Pn**	**11 01 01.6**	**+1.3**
SUA	**Susitna One**	**1.48**	**26**	Pn	**Pn**	**11 01 02.4**	**+0.5**
SUA					Pn	11 01 02.4	+0.5
SUA					**Sn**	**11 01 21.6**	**+0.2**
SUA					Sn	11 01 22.4	+0.9
RC01	**Rabbit Creek A**	**1.50**	**50**		**Pn**	**11 01 02.5**	**+0.5**
FOSS	**Fourpeaked Sta**	**1.58**	**212**		**Pn**	**11 01 03.0**	**-0.1**
SKT	**Skwentna**	**1.86**	**8**		**Pn**	**11 01 06.7**	**+0.1**
SKT					**Sn**	**11 01 29.4**	**-0.6**
SVW2	**Sparrevohn**	**1.97**	**301**		**Pn**	**11 01 07.2**	**-0.8**
PWL	**Port Wells**	**1.99**	**67**		**Pn**	**11 01 07.8**	**-0.6**
PMR	**Palmer**	**2.05**	**44**		**Pn**	**11 01 08.8**	**-0.2**
KNK	**Knik Glacier**	**2.19**	**53**		**Pn**	**11 01 10.7**	**-0.2**
GHO	**Glory Hole Cre**	**2.25**	**42**		**Pn**	**11 01 11.6**	**-0.1**
GHO					**Sn**	**11 01 37.6**	**-1.4**
KDAK	**Kodiak Island**	**2.38**	**186**	P	**Pn**	**11 01 12.6**	**-0.8**
	14nm,0.3s,baz=50,slow=6.5,SNR=988						
KDAK				S	**Sn**	**11 01 41.4**	**-0.7**
	91nm,0.3s,baz=150,slow=20,SNR=32						
KDAK	**Kodiak Island**	**2.38**	**186**		**Pn**	**11 01 12.8**	**-0.7**
SML	**Sawmill**	**2.48**	**46**		**Pn**	**11 01 14.6**	**-0.2**
PPLA	**Purkeypile**	**2.76**	**359**		**Pn**	**11 01 19.2**	**+0.7**
SCM	**Sheep Creek Mo**	**2.87**	**52**		**Pn**	**11 01 19.8**	**-0.2**
OHAK	**Old Harbor**	**3.00**	**193**		**Pn**	**11 01 20.6**	**-1.0**
HUR	**Hurricane**	**3.08**	**21**		**Pn**	**11 01 24.0**	**+1.3**
EYAK	**Cordova Ski Ar**	**3.18**	**80**		**Pn**	**11 01 22.6**	**-1.4**
WAT1	**Susitna Watana**	**3.18**	**31**		**Pn**	**11 01 24.3**	**+0.2**
WAT2	**Susitna Watana**	**3.22**	**39**		**Pn**	**11 01 24.6**	**-0.1**
CAST	**Castle Rocks**	**3.28**	**0**		**Pn**	**11 01 25.7**	**+0.2**
WAT2	**Susitna Watana**	**3.29**	**29**		**Pn**	**11 01 25.8**	**+0.2**
TT01	**Tatalina**	**3.35**	**328**		**Pn**	**11 01 26.1**	**-0.2**
TTA	**Tatalina**	**3.36**	**328**		**Pn**	**11 01 26.2**	**-0.4**
TRF	**Thorofare Moun**	**3.42**	**14**		**Pn**	**11 01 27.2**	**-0.3**
KTH	**Kantishna Hill**	**3.46**	**9**		**Pn**	**11 01 27.9**	**+0.1**
RND	**Reindeer**	**3.62**	**24**		**Pn**	**11 01 30.0**	**+0.1**
GOAT	**Goat Mountain**	**3.69**	**80**		**Pn**	**11 01 29.7**	**-1.2**
DHY	**Denali Highway**	**3.70**	**35**		**Pn**	**11 01 31.6**	**+0.4**
RAGM	**Ragged Mountai**	**3.70**	**83**		**Sn**	**11 02 11.5**	**-2.3**
RAGM	**Ragged Mountai**	**3.70**	**83**		**Pn**	**11 01 30.3**	**-0.8**
CHUM	**Lake Minchumin**	**3.75**	**359**		**Pn**	**11 01 31.8**	**+0.2**
PS11	**TAPS Pump St11**	**3.75**	**56**		**Pn**	**11 01 32.0**	**+0.3**
SII	**Sitkinak Islan**	**3.76**	**198**		**Sn**	**11 02 11.3**	**-3.9**
SII	**Sitkinak Islan**	**3.76**	**198**		**Pn**	**11 01 31.6**	**-0.4**
MCK	**McKinley**	**3.90**	**21**		**Pn**	**11 01 34.3**	**+0.6**
BPAW	**Bear Paw Mtn.**	**4.00**	**7**		**Pn**	**11 01 34.5**	**-0.6**
BWN	**Browne**	**4.22**	**16**		**Pn**	**11 01 39.1**	**+1.0**
PAX	**Paxson**	**4.25**	**45**		**Pn**	**11 01 38.9**	**+0.4**
GLB	**Gilahina Butte**	**4.26**	**69**		**Pn**	**11 01 38.0**	**-0.7**
PS10	**TAPS Pump St10**	**4.45**	**40**		**Pn**	**11 01 42.3**	**+1.1**
MCARA	**McCarthy VSAT**	**4.62**	**71**		**Pn**	**11 01 42.9**	**-0.5**
TGL	**Tana Glacier**	**4.63**	**78**		**Pn**	**11 01 42.4**	**-1.3**
NEA	**Nenana**	**4.66**	**16**		**Pn**	**11 01 44.1**	**+0.1**
KULT	**Kultieth River**	**4.68**	**85**		**Pn**	**11 01 44.4**	**+0.1**
WRH	**Wood River Hil**	**4.72**	**22**		**Pn**	**11 01 44.8**	**-0.1**
PTPK	**Patty Peak**	**4.85**	**73**		**Pn**	**11 01 46.2**	**-0.5**
KIAG	**Kiagna River**	**4.87**	**77**		**Pn**	**11 01 46.1**	**-0.9**
MENT	**Mentasta**	**4.89**	**51**		**Pn**	**11 01 46.8**	**-0.3**
BALM	**Baldy**	**4.89**	**75**		**Pn**	**11 01 46.0**	**-1.2**
HDA	**Harding Lake**	**4.91**	**27**		**Pn**	**11 01 47.6**	**+0.3**
CCB	**Clear Creek Bu**	**4.94**	**22**		**Pn**	**11 01 47.5**	**-0.2**
MLY	**Manley**	**4.94**	**7**		**Pn**	**11 01 48.3**	**+0.4**
RIDG	**Independent Ri**	**4.97**	**40**		**Pn**	**11 01 48.8**	**+0.6**
PS08	**TAPS Pump Stn8**	**5.05**	**27**		**Pn**	**11 01 49.5**	**+0.2**
TCOL	**CIGO, UAF Yank**	**5.13**	**21**		**Pn**	**11 01 50.8**	**+0.4**
COLA	**College**	**5.13**	**21**		**Pn**	**11 01 50.6**	**+0.3**
MDM	**Murphy Dome**	**5.15**	**19**		**Pn**	**11 01 50.7**	**0.0**
DOT	**Dot Lake**	**5.17**	**44**		**Pn**	**11 01 50.7**	**-0.2**
BARN	**Barnard Glacie**	**5.22**	**75**		**Pn**	**11 01 52.7**	**+0.9**
IL31		**5.23**	**25**		**Pn**	**11 01 51.7**	**+0.1**
ILAR	**Eielson Array**	**5.23**	**25**	P	**Pn**	**11 01 51.7**	**0.0**
	5.7nm,0.3s,baz=212,slow=13,SNR=218						
ILAR				S	**Sn**	**11 02 47.4**	**-3.2**
	8.8nm,0.3s,baz=207,slow=21,SNR=5.2						
CTGM	**Chitina Glacie**	**5.37**	**77**		**Pn**	**11 01 54.7**	**+0.9**
SCRK	**Sand Creek**	**5.41**	**41**		**Pn**	**11 01 54.1**	**-0.2**
POKR	**Poker Plat Res**	**5.43**	**21**		**Pn**	**11 01 54.6**	**+0.2**
YUK2	**White River**	**5.72**	**68**		**Pn**	**11 01 58.3**	**-0.2**
BC03		**5.72**	**55**		**Pn**	**11 01 58.5**	**+0.1**
YUK3	**Moose Creek**	**5.90**	**69**		**Pn**	**11 02 00.9**	**0.0**
IM03		**5.91**	**353**		**Pn**	**11 02 00.5**	**-0.3**
PCA	**Pinnacle**	**5.92**	**85**		**Pn**	**11 02 01.9**	**+0.7**
PCA					**Sn**	**11 01 07.0**	**-0.5**
PRP	**Porcupine Dome**	**6.17**	**26**		**Pn**	**11 02 04.8**	**+0.2**
PNL	**Peninsula**	**6.41**	**89**		**Pn**	**11 02 08.0**	**+0.3**
CNBA	**Chernabura Isl**	**6.69**	**220**	Pn	**Pn**	**11 02 11.4**	**-0.2**
YUK6	**Outpost Mounta**	**6.82**	**77**		**Pn**	**11 02 14.1**	**+0.6**
EGAK	**Eagle**	**6.87**	**43**		**Pn**	**11 02 13.8**	**-0.1**
YUK5	**Granite Creek**	**7.07**	**76**		**Pn**	**11 02 17.3**	**+0.4**
DHAK	**Deception Hill**	**7.12**	**93**	Pn	**Pn**	**11 02 18.2**	**+0.8**
DAWY	**Dawson**	**7.13**	**51**		**Pn**	**11 02 17.6**	**0.0**
FYU	**Fort Yukon**	**7.14**	**23**		**Pn**	**11 02 17.6**	**0.0**
COLD	**Coldfoot**	**7.16**	**6**		**Pn**	**11 02 18.7**	**+0.8**
HYT	**Haines Junctio**	**7.24**	**78**		**Pn**	**11 02 19.7**	**+0.5**
ANM	**Nome**	**7.59**	**311**		**Pn**	**11 02 24.1**	**+0.3**
PLBC	**Pleasant Camp**	**7.96**	**88**		**Pn**	**11 02 30.6**	**+1.7**
BM03	**Burnt Mountain**	**8.01**	**21**		**Pn**	**11 02 28.9**	**-0.5**
FALS	**False Pass**	**8.07**	**234**	Pn	**Pn**	**11 02 30.8**	**+0.4**
SKAG	**Skagway**	**8.48**	**87**	Pn	**Pn**	**11 02 37.0**	**+1.1**
WHY	**Whitehorse**	**8.54**	**79**		**Pn**	**11 02 36.7**	**0.0**
BESE	**Bessie Mountai**	**8.94**	**93**	Pn	**Pn**	**11 02 43.9**	**+1.6**
JIS	**Juneau Island**	**9.27**	**94**	Pn	**Pn**	**11 02 47.8**	**+1.2**
EPYK	**Eagle Plains**	**9.30**	**41**		**Pn**	**11 02 47.0**	**-0.1**
UNV	**Unalaska Valle**	**10.07**	**238**	Pn	**Pn**	**11 02 57.3**	**-0.2**
DLBC	**Dease Lake**	**11.40**	**89**	P	**Pn**	**11 03 16.6**	**+1.0**
	0.9nm,0.3s,baz=241,slow=13,SNR=4.6						
DLBC				S	**Sn**	**11 05 20.1**	**-0.6**
	0.9nm,0.3s,baz=296,slow=27,SNR=4.4						
DLBC	**Dease Lake**	**11.40**	**89**		**Pn**	**11 03 16.5**	**+0.9**
INK	**Inuvik**	**11.45**	**37**	P	**Pn**	**11 03 16.1**	**+0.1**
	0.5nm,0.3s,baz=243,slow=14,SNR=29						
INK	**Inuvik**	**11.45**	**37**		**Pn**	**11 03 15.8**	**-0.2**
DIB	**Dawson Inlet,**	**12.80**	**114**	Pn	**Pn**	**11 03 35.4**	**+1.3**
ATKA	**Atka Island**	**14.60**	**247**		**Pn**	**11 03 57.7**	**+0.2**
C36M	**Paulatuk**	**14.94**	**40**		**Pn**	**11 03 59.4**	**-2.3**
YKA	**Yellowknife Ar**	**17.98**	**66**	P	**Pn**	**11 04 39.7**	**+0.4**
	0.4nm,0.3s,baz=275,slow=10.0,SNR=63						
ARCES	**ARCESS Array B**	**50.60**	**1**	P	**P**	**11 09 23.4**	**-0.9**
	4.1nm,1.0s,baz=10,slow=7.4,SNR=7.0						
KSRS	**Korea Array**	**53.59**	**283**	P	**P**	**11 09 48.0**	**+1.2**
	1.0nm,0.5s,baz=41,slow=5.3,SNR=4.1						
SONM	**Songino Array**	**55.07**	**306**	P	**P**	**11 09 59.0**	**+1.4**
	2.4nm,0.5s,baz=40,slow=7.1,SNR=17						
ZALV	**Zalesovo Beam**	**57.52**	**324**	P	**P**	**11 10 15.3**	**+0.6**
	3.7nm,0.6s,baz=24,slow=6.4,SNR=9.0						
FINES	**FINESS Array B**	**58.73**	**1**	P	**P**	**11 10 22.7**	**-0.3**
	1.5nm,0.7s,baz=359,slow=7.6,SNR=5.0						
MKAR	**Makanchi Array**	**64.60**	**322**	P	**P**	**11 11 02.6**	**-0.2**
	0.8nm,0.7s,baz=38,slow=5.1,SNR=4.9						
AKASG	**Malin Array Be**	**69.50**	**359**	P	**P**	**11 11 33.0**	**-0.6**
	1.2nm,0.5s,baz=0.7,slow=5.8,SNR=1.8						

*ATH **15** 11:00:45.4, 36°99N×22°07E, h21km, ML3.7/22, Error ellipse: s-maj=0.8km s-min=0.6km az=224.0*

*THE **15** 11:00:46.0, 36°96N×22°09E, h7km, ML3.6/18, Error ellipse: s-maj=0.9km s-min=0.6km az=233.0*

*IDC **15** 11:00:48.3±2.1, 37°05N×22°10E, h40km±19km, mb3.6/14, mb1 3.8/18, mb1mx3.6/54, mbtmp3.8/18, ML3.5/4, MS2.9/3, Ms1 2.9/3, ms1mx2.5/34, Error ellipse: s-maj=18.8km s-min=16.2km az=18.0*

ISC 15 11:00:45.5±0.7, 37°00N±0°02×22°09E±0°02, h18km±2km, n99, σ1s20/148, mb3.9/13, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLMT	**Kalamata**	**0.07**	**342**	P	**Pg**	**11 00 49.0**	**0.0**
KLMT				S	**Sg**	**11 00 51.3**	**0.0**
	46μm,0.2s						

ITM	**Ithomi**	**0.22**	**325**	P	**Pb**	**11 00 50.9**	**+0.1**
ITM				S	**Sb**	**11 00 54.6**	**+0.3**
	18μm,0.2s						
ITM	**Ithomi**	**0.22**	**325**	P	**Pb**	**11 00 50.9**	**+0.1**
ITM				S	**Sb**	**11 00 54.6**	**+0.3**
ITM				AML	AML	11 00 54.9	
	comp=N,48953μm,0.2s						
ITM				AML	AML	11 01 03.9	
	comp=E,42555μm,0.4s						
PYL	**PYLOS**	**0.29**	**250**	P	**Pg**	**11 00 51.4**	**-0.6**
PYL				S	**Sg**	**11 00 55.7**	**-0.7**
	comp=E,20μm,0.3s						
PYL	**PYLOS**	**0.29**	**250**	P	**Pg**	**11 00 51.6**	**-0.4**
VLX	**Vlachokerasia**	**0.44**	**32**	P	**Pg**	**11 00 54.9**	**+0.3**
VLX				S	**Sb**	**11 01 02.0**	**+0.7**
	comp=E,30μm,0.5s						
VLX	**Vlachokerasia**	**0.44**	**32**	P	**Pg**	**11 00 54.9**	**+0.3**
VLX				S	**Sb**	**11 01 01.6**	**+0.4**
VLX				AML	AML	11 01 02.5	
	comp=E,56292μm,0.6s						
VLX				AML	AML	11 01 03.0	
	comp=N,59942μm,0.5s						
AMT	**Artemida-Makis**	**0.61**	**331**	P	**Pb**	**11 00 57.8**	**+0.1**
AMT				S	**Sn**	**11 01 07.7**	**-1.1**
	comp=N,37μm,0.4s						
AMT	**Artemida-Makis**	**0.61**	**331**	P	**Pb**	**11 00 57.9**	**+0.1**
AMT				S	**Sb**	**11 01 06.2**	**+0.2**
AMT				AML	AML	11 01 10.2	
	comp=E,53131μm,0.3s						
AMT				AML	AML	11 01 10.6	
	comp=N,87436μm,0.5s						
VLI	**Velíai**	**0.74**	**112**	P	**Pb**	**11 00 59.8**	**0.0**
VLI				S	**Sb**	**11 01 09.6**	**+0.1**
	comp=N,4μm,0.6s						
VLI	**Velíai**	**0.74**	**112**	P	**Pb**	**11 00 59.7**	**0.0**
VLI				S	**Sn**	**11 01 11.0**	**-0.8**
VLI				AML	AML	11 01 13.2	
	comp=E,11917μm,0.5s						
VLI				AML	AML	11 01 14.7	
	comp=N,12479μm,0.7s						
MNVA	**Monemvasia**	**0.82**	**112**	P	**Pb**	**11 01 01.4**	**+0.2**
MNVA				S	**Sg**	**11 01 13.2**	**+0.6**
MNVA				AML	AML	11 01 21.0	
	comp=E,4611μm,0.5s						
MNVA				AML	AML	11 01 21.2	
	comp=N,4811μm,0.5s						
KRND	**KRANIDI**	**0.93**	**65**	P	**Pn**	**11 01 03.7**	**0.0**
KRND				S	**Sn**	**11 01 18.3**	**+1.7**
	comp=N,5μm,0.4s						
KRND	**KRANIDI**	**0.93**	**65**	P	**Pn**	**11 01 03.8**	**+0.1**
KRND				S	**Sn**	**11 01 16.7**	**+0.1**
KRND				AML	AML	11 01 19.9	
	comp=E,11569μm,0.5s						
KRND				AML	AML	11 01 20.1	
	comp=N,6448μm,0.4s						
DRO	**Drossia**	**1.00**	**343**	P	**Pn**	**11 01 04.7**	**0.0**
DRO				S	**Sn**	**11 01 20.7**	**+2.3**
	comp=N,9μm,0.5s						
DRO	**Drossia**	**1.00**	**343**	P	**Pn**	**11 01 04.8**	**+0.1**
DRO				S	**Sg**	**11 01 18.4**	**+0.2**
DRO				AML	AML	11 01 24.5	
	comp=N,15522μm,0.3s						
DRO				AML	AML	11 01 24.7	
	comp=E,19870μm,0.6s						
KTHR	**Kythira**	**1.04**	**134**	P	**Pn**	**11 01 05.2**	**0.0**
KLV	**Kalavryta, Ach**	**1.05**	**3**	P	**Pb**	**11 01 04.7**	**-0.5**
KLV				S	**Sg**	**11 01 21.8**	**+2.1**
	comp=E,2μm,0.7s						
KLV	**Kalavryta, Ach**	**1.05**	**3**	P	**Pb**	**11 01 05.1**	**-0.1**
KLV				S	**Sg**	**11 01 20.2**	**+0.4**
KLV				AML	AML	11 01 24.7	
	comp=E,3220μm,0.6s						
KLV				AML	AML	11 01 30.6	
	comp=N,3101μm,0.8s						
DID	**Didima**	**1.05**	**61**	P	**Pb**	**11 01 05.4**	**+0.2**
DID				S	**Sg**	**11 01 20.8**	**+1.0**
	comp=N,

VIL2	**Platees**	1.54	37	P	**Pb**	**11 01 13.4**	**-0.1**
VIL2				S	**Sg**	**11 01 34.7**	**-0.5**
VIL2				AML	AML	11 01 42.4	
	comp=E,6322µm,0.6s						
VIL2				AML	AML	11 01 44.4	
	comp=N,5159µm,0.7s						
VLY	**Voula,Athens**	1.61	57	P	**Pb**	**11 01 14.6**	**-0.1**
VLY				S	**Sg**	**11 01 36.3**	**-1.1**
	comp=N,1µm,0.4s						
VLY	**Voula,Athens**	1.61	57	P	**Pb**	**11 01 14.8**	**+0.2**
VLY				S	**Sb**	**11 01 36.1**	**+1.5**
VLY				AML	AML	11 01 41.9	
	comp=E,3049µm,0.4s						
VLY				AML	AML	11 01 43.9	
	comp=N,2758µm,0.5s						
ATH	**Athens Observa**	1.62	53	P	**Pb**	**11 01 15.0**	**+0.1**
ATH				S	**Sb**	**11 01 36.4**	**+1.3**
	comp=N,2µm,0.8s						
ATH	**Athens Observa**	1.62	53	P	**Pb**	**11 01 15.4**	**+0.4**
ATH				S	**Sg**	**11 01 36.9**	**-1.1**
ATH				AML	AML	11 01 42.8	
	comp=E,4747µm,0.9s						
ATH				AML	AML	11 01 44.8	
	comp=N,1813µm,0.6s						
ATHU	**Athens Univers**	1.66	54	P	**Pb**	**11 01 15.2**	**-0.4**
ATHU				S	**Sb**	**11 01 37.8**	**+1.6**
	comp=N,370nm,0.7s						
VLS	**Valsamata**	1.68	315	P	**Pb**	**11 01 15.5**	**-0.3**
PVO	**Paravola**	1.68	345	P	**Pg**	**11 01 17.4**	**-0.4**
PTL	**Penteli**	1.76	53	P	**Pb**	**11 01 16.7**	**-0.6**
PTL				S	**Sb**	**11 01 39.9**	**+0.8**
	comp=N,948nm,0.7s						
PTL	**Penteli**	1.76	53	P	**Pb**	**11 01 17.1**	**-0.3**
LKR	**Lokris**	1.80	23	P	**Pb**	**11 01 17.8**	**-0.2**
LKR	**Lokris**	1.80	23	P	**Pb**	**11 01 17.9**	**-0.2**
AXAR	**Agios Charalam**	1.83	14	P	**Pb**	**11 01 18.0**	**-0.4**
MHLO	**Agia Marina, M**	1.88	99	P	**Pb**	**11 01 18.6**	**-0.8**
MHLA	**Plaka, Milos I**	1.89	97	P	**Pb**	**11 01 19.2**	**-0.3**
SERI	**Serifos**	1.93	84	P	**Pn**	**11 01 18.8**	**+1.4**
SERI				S	**Sb**	**11 01 43.6**	**-0.2**
	comp=N,582nm,0.6s						
SERI	**Serifos**	1.93	84	P	**Pb**	**11 01 18.9**	**-1.2**
EVGI	**Lefkada island**	1.98	326	P	**Pb**	**11 01 21.5**	**+0.5**
EREA	**Eretria**	2.04	45	P	**Pb**	**11 01 20.8**	**-1.3**
EREA				S	**Sb**	**11 01 47.4**	**+0.3**
	comp=N,688nm,0.7s						
EREA	**Eretria**	2.04	45	P	**Pb**	**11 01 21.4**	**-0.7**
MRKA	**Markates**	2.08	34	P	**Pb**	**11 01 21.6**	**-1.2**
IMMV	**Iera Moni Meta**	2.17	134	P	**Pb**	**11 01 23.4**	**-0.8**
IOSP	**Ios island**	2.58	95	P	**Pn**	**11 01 28.4**	**+2.0**
AOS	**Alonnisos**	2.59	33	P	**Pn**	**11 01 28.5**	**+2.0**
IDI	**Anoyia**	2.84	126	Pn	**Pn**	**11 01 32.2**	**+2.2**
	comp=N,6.0nm,0.3s,baz=309,slow=17,SNR=25						
IDI				Sn	**Sb**	**11 02 11.1**	**+1.0**
	comp=N,18nm,0.3s,baz=15,slow=2.4,SNR=7.1						
IDI				LR	LR	11 02 44.1	
	comp=N,117nm,18.4s,baz=247,slow=40						
VAE	**Valguarnera**	6.14	277	Pn	**Pn**	**11 02 18.6**	**+3.2**
	comp=N,2.2nm,0.3s,baz=176,slow=16,SNR=3.2						
VAE				Sn	**Sn**	**11 03 31.6**	**+6.4**
	comp=N,7.3nm,0.3s,baz=82,slow=11,SNR=5.2						
DBRK	**Dubrovnik**	6.43	333	*e*Pn	**Pn**	**11 02 18.9**	**-0.3**
MAKA	**Makarska**	7.38	330	*e*Pn	**Pn**	**11 02 32.6**	**+0.3**
MAKA				Sn	**Sn**	**11 03 52.3**	**-3.4**
HVAR	**Hvar**	7.54	327	*e*Pn	**Pn**	**11 02 33.5**	**-1.0**
HVAR				Sn	**Sn**	**11 03 55.5**	**-3.8**
KIJV	**Kijevo**	8.23	330	*e*Pn	**Pn**	**11 02 42.7**	**-1.3**
KIJV				Sn	**Sn**	**11 04 14.6**	**-1.8**
ZIRJ	**Zirje**	8.27	326	*e*Pn	**Pn**	**11 02 44.0**	**-0.5**
ZIRJ				Sn	**Sn**	**11 04 13.3**	**-4.1**
MORI	**Morici**	8.41	327	*e*Pn	**Pn**	**11 02 46.3**	**-0.1**
MORI				Sn	**Sn**	**11 04 17.8**	**-3.1**
MLR	**Muntele Rosu**	8.97	18	Pn	Pn	11 03 00.9	+6.6
	comp=N,0.4nm,0.3s,baz=159,slow=13,SNR=4.2						
BRTR	**Keskin Array B**	9.47	70	Pn	**Pn**	**11 03 05.7**	**+4.5**
	comp=N,1.0nm,0.3s,baz=253,slow=15,SNR=29						
GERES	**GERESS Array B**	13.33	335	Pn	**Pn**	**11 03 53.4**	**-0.4**
	comp=N,0.1nm,0.3s,baz=144,slow=14,SNR=2.8						
GERES				LR	LR	11 10 13.7	
	comp=N,67nm,19.7s,baz=312,slow=43						
KHC	**Kasperske Hory**	13.62	336	*e*PN	**P**	**11 04 08.0**	**+1.5**
ESDC	**Sonseca Array**	20.59	285	P	**P**	**11 05 23.9**	**+0.4**
	comp=N,0.6nm,0.5s,baz=76,slow=8.1,SNR=3.0						
HFS	**Hagfors**	23.77	350	P	**P**	**11 05 56.1**	**-0.7**
	comp=N,4.4nm,0.5s,baz=158,slow=9.6,SNR=16						
FINES	**FINESS Array B**	24.60	5	P	**P**	**11 06 04.2**	**-0.1**
	comp=N,3.6nm,0.8s,baz=159,slow=11,SNR=5.2						
FINES				PcP	**PcP**	**11 09 41.4**	**-0.2**
	comp=N,3.0nm,1.0s,baz=180,slow=3.8,SNR=4.0						
NB2	**NORSAR Subarra**	25.03	347	P	**P**	**11 06 07.5**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=156,slow=9.3						
NOA	**NORSAR Array B**	25.03	347	P	**P**	**11 06 07.8**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=157,slow=9.0,SNR=6.9						
NOA				LR	LR	11 17 11.4	
	comp=Z,27nm,20.0s,baz=265,slow=39						
EKA	**Eskdalemuir Ar**	25.11	325	P	**P**	**11 06 09.3**	**+0.3**
	comp=Z,2.1nm,0.6s,baz=126,slow=11,SNR=3.9						
TORD	**Torodi Ar. Bea**	29.95	223	P	**P**	**11 06 52.3**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=65,slow=5.7,SNR=3.4						
ARCES	**ARCESS Array B**	32.65	2	P	**P**	**11 07 15.6**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=186,slow=9.6,SNR=11						
MKAR	**Makanchi Array**	44.87	58	P	**P**	**11 08 57.2**	**-1.5**
	comp=Z,0.5nm,0.5s,baz=280,slow=6.7,SNR=6.7						
ZALV	**Zalesovo Beam**	45.56	47	P	**P**	**11 09 03.1**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=278,slow=9.5,SNR=6.2						
INK	**Inuvik**	73.44	351	P	**P**	**11 12 15.9**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=346,slow=5.8,SNR=3.8						
YKA	**Yellowknife Ar**	74.92	341	P	**P**	**11 12 24.9**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=33,slow=5.4,SNR=11						
ILAR	**Eielson Array**	78.20	355	P	**P**	**11 12 43.5**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=334,slow=3.3,SNR=4.1						
KSRS	**Korea Array**	79.11	51	P	**P**	**11 12 48.1**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=311,slow=5.8,SNR=3.0						
MJAR	**Matsushiro Arr**	85.91	46	P	**P**	**11 13 24.0**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=10,slow=4.1,SNR=3.6						
ASAR	**Alice Springs**	120.80	98	PKP	**PKPdf**	**11 19 36.0**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=306,slow=1.7,SNR=11						

IDC ***15*** *11:13:47.3±1.3,22.92N×121.59E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/36, mbtmp3.5/4, Error ellipse: s-maj=92.0km s-min=26.0km az=70.0*
TAP ***15*** *11:13:49.5,22.75N×121.02E, h15km, ML3.6, B*
ISC 15 11:13:49.6±0.8, 22.73N±0.02×121.08E±0.02, h18km±2km, n89, σ0s80/156, mb3.4/4, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TTN	**Taitung**	**0.07**	**70**	*i* P		**Pg**	**11 13 53.9**	**+0.9**
	baz=80							
TTN				S		**Sg**	**11 13 57.8**	**+2.6**
	baz=80							
TWGBT	**Beinan**	**0.09**	**359**	*e*P		**Pg**	**11 13 52.8**	**-0.4**
	baz=37							
TWGBT				*e*S		**Sg**	**11 13 55.2**	**-0.4**
	baz=37							
TWG	**Pinlang**	**0.09**	**355**	*i* P		**Pg**	**11 13 52.8**	**-0.4**
	baz=38							
TWG				S		**Sg**	**11 13 55.3**	**-0.4**
	baz=38							
ECL	**Taimali**	**0.18**	**221**	*i* P		**Pb**	**11 13 53.6**	**-0.4**
	baz=199							
ECL				S		**Sb**	**11 13 56.8**	**0.0**
	baz=199							
TWH	**Lutao**	**0.37**	**93**	*e*P		**Pb**	**11 13 58.1**	**+0.5**
	baz=100							
TWH				*e*S		**Sn**	**11 14 04.5**	**-2.3**
	baz=100							
EAST	**Anshuo**	**0.41**	**212**	P		**Pg**	**11 13 57.5**	**-0.5**
	baz=194							
EAST				S		**Sg**	**11 14 03.6**	**-0.2**
	baz=194							
TAW	**Tawu**	**0.41**	**205**	P		**Pg**	**11 13 57.5**	**-0.5**
	baz=194							
TAW				S		**Sg**	**11 14 03.4**	**-0.4**
	baz=194							
SSD	**Sandimen**	**0.41**	**272**	P		**Pg**	**11 13 57.0**	**-1.2**
	baz=269							
SSD				*e*S		**Sg**	**11 14 01.7**	**-2.2**
	baz=269							
MASBT	**Mashibuluo**	**0.43**	**254**	*e*P		**Pg**	**11 13 57.6**	**-0.8**
	baz=244							
MASBT				*e*S		**Sg**	**11 14 02.6**	**-1.8**
	baz=244							
CHKT	**Chengkung**	**0.45**	**36**	*e*P		**Pg**	**11 13 58.6**	**-0.2**
	baz=45							
CHKT				*e*S		**Sb**	**11 14 05.8**	**+0.3**
	baz=45							
ELDTW	**Lidau**	**0.46**	**353**	P		**Pg**	**11 13 58.7**	**-0.3**
	baz=9.0							
ELDTW				*e*S		**Sg**	**11 14 05.0**	**-0.4**
	baz=9.0							
SLGT	**Liugui**	**0.48**	**303**	*e*P		**Pg**	**11 13 58.6**	**-0.7**
	baz=306							
SLGT				*e*S		**Sg**	**11 14 05.4**	**-0.4**
	baz=306							
FULB	**Fuli**	**0.50**	**23**	P		**Pg**	**11 13 59.2**	**-0.6**
	baz=32							
FULB				*e*S		**Sb**	**11 14 08.4**	**+1.3**
	baz=32							
STYT	**Tauyuan**	**0.52**	**325**	P		**Pg**	**11 13 59.8**	**-0.4**
	baz=335							
STYT				*e*S		**Sg**	**11 14 06.5**	**-0.7**
	baz=335							
SSPT	**Xinbi**	**0.53**	**243**	*e*P		**Pg**	**11 14 00.1**	**-0.2**
	baz=233							
SSPT				*e*S		**Sb**	**11 14 08.2**	**+0.5**
	baz=233							
SGLT	**Jiouru**	**0.55**	**269**	*e*P		**Pg**	**11 14 00.4**	**-0.1**
	baz=267							
SGLT				*e*S		**Sg**	**11 14 08.1**	**+0.2**
	baz=267							
SCZT	**Fangliau**	**0.56**	**230**	P		**Pg**	**11 14 00.2**	**-0.5**
	baz=219							
SCZT				*e*S		**Sg**	**11 14 08.4**	**+0.2**
	baz=219							
SGST	**Jiashian**	**0.58**	**307**	*e*P		**Pb**	**11 14 00.3**	**-0.9**
	baz=311							
SGST				*e*S		**Sg**	**11 14 09.1**	**+0.2**
	baz=311							
TWM1	**Shoushan**	**0.61**	**279**	P		**Pg**	**11 14 02.3**	**+0.4**
	baz=278							
TWM1				*e*S		**Sg**	**11 14 11.4**	**+1.3**
	baz=278							
TWF1	**Yuli**	**0.65**	**18**	P		**Pb**	**11 14 02.2**	**-0.3**
	baz=18							
TWF1				*e*S		**Sg**	**11 14 11.7**	**+0.5**
	baz=18							
WTP	**Ta-pu**	**0.67**	**320**	P		**Pb**	**11 14 03.0**	**+0.2**
	baz=325							
WTP				*e*S		**Sg**	**11 14 12.6**	**+0.7**
	baz=325							
CHN1	**Nanshi**	**0.68**	**312**	P		**Pb**	**11 14 03.3**	**+0.3**
	baz=315							
CHN1				*e*S		**Sn**	**11 14 14.1**	**-0.5**
	baz=315							
YULB	**Yu-li**	**0.69**	**17**	*e*P		**Pb**	**11 14 01.0**	**-2.1**
	baz=34							
YULB				*e*S		**Sg**	**11 14 12.3**	**-0.1**
	baz=34							
SNJT	**Kaohsiung City**	**0.69**	**272**	*e*P		**Pg**	**11 14 03.7**	**+0.5**
	baz=270							
SNJT				*e*S		**Sn**	**11 14 14.9**	**+0.2**
	baz=270							
TPUB	**Ta-pu**	**0.70**	**324**	*e*P		**Pb**	**11 14 03.5**	**+0.2**
	baz=328							
TPUB				*e*S		**Sg**	**11 14 13.9**	**+1.0**
	baz=328							
SNST	**Tainan City**	**0.72**	**312**	P		**Pb**	**11 14 04.0**	**+0.2**
	baz=327							
SNST				S		**Sg**	**11 14 14.3**	**+0.8**
	baz=327							
KAU	**Kaohsiung**	**0.73**	**257**	*e*P		**Pg**	**11 14 04.7**	**+0.7**
	baz=249							
KAU				*e*S		**Sn**	**11 14 16.3**	**+0.6**
	baz=249							
CHN3	**Shinhua**	**0.74**	**298**	*e*P		**Pn**	**11 14 05.3**	**+0.1**
	baz=299							
CHN3				*e*S		**Sn**	**11 14 15.9**	**-0.2**
	baz=299							
WLCH	**Liuqiu**	**0.75**	**240**	*e*P		**Pb**	**11 14 06.7**	**+1.4**
	baz=230							
WLCH				*e*S		**Sn**	**11 14 18.6**	**+2.4**
	baz=230							
TWK	**Hsinying**	**0.76**	**314**	P		**Pb**	**11 14 04.5**	**+0.1**
	baz=329							
TWK				*e*S		**Sg**	**11 14 15.8**	**+1.0**
	baz=329							
YUS	**Yu-Shan**	**0.76**	**351**	P		**Pb**	**11 14 04.1**	**-0.6**
	baz=6.0							
YUS				*e*S		**Sb**	**11 14 15.2**	**+0.2**
	baz=6.0							
HEN	**Hengchun**	**0.79**	**204**	*e*P		**Pn**	**11 14 05.8**	**0.0**
	baz=189							
HEN				*e*S		**Sn**	**11 14 17.1**	**-0.1**
	baz=189							
EHY	**Hungye**	**0.80**	**16**	P		**Pb**	**11 14 04.9**	**-0.2**
	baz=32							
EHY				*e*S		**Sb**	**11 14 15.2**	**-0.4**
	baz=32							
LAY	**Lan-yu**	**0.81**	**148**	*e*P		**Pn**	**11 14 06.7**	**+0.4**
	baz=143							
ALS	**Alishan**	**0.82**	**342**	P		**Pb**	**11 14 05.2**	**-0.3**
	baz=348							
ALS				*e*S		**Sb**	**11 14 16.6**	**+0.3**
	baz=348							
HGSD	**Ruisui**	**0.82**	**23**	P		**Pg**	**11 14 05.3**	**-0.4**
	baz=45							
HGSD				*e*S		**Sn**	**11 14 17.9**	**-0.1**
	baz=45							
TWK1	**Hengchun**	**0.82**	**198**	*e*P		**Pn**	**11 14 05.9**	**-0.5**
	baz=182							
TWK1				*e*S		**Sn**	**11 14 17.9**	**-0.1**
	baz=182							
TWKBT	**Hengchun**	**0.83**	**198**	*e*P		**Pg**	**11 14 05.8**	**0.0**
	baz=182							
TWKBT				*e*S		**Sn**	**11 14 17.6**	**-0.5**
	baz=182							
SCLT	**Jiali**	**0.93**	**299**	*e*P		**Pn**	**11 14 07.8**	**+0.1**
	baz=302							
SCLT				*e*S		**Sn**	**11 14 21.3**	**+0.7**
	baz=302							
CHN5	**Tsauling**	**0.94**	**337**	P		**Pn**	**11 14 07.9**	**-0.1**
	baz=349							
CHN5				*e*S		**Sg**	**11 14 20.8**	**+0.5**
	baz=349							
CHN2	**Minshiung**	**0.97**	**325**	*e*P		**Pg**	**11 14 09.2**	**+0.6**
	baz=330							
CHY	**Chiayi**	**0.97**	**322**	*e*P		**Pn**	**11 14 08.6**	**+0.2**
	baz=327							
CHY				*e*S		**Sg**	**11 14 22.1**	**+0.7**
	baz=327							
WHYT	**Xinyi Township**	**0.98**	**348**	P		**Pb**	**11 14 08.1**	**-0.1**
	baz=353							
WHYT				*e*S		**Sn**	**11 14 22.2**	**+0.1**
	baz=353							
EGFH	**Guangfu**	**0.99**	**19**	*e*P		**Pn**	**11 14 08.3**	**-0.3**
	baz=41							
VWDT	**VWDT**	**1.02**	**3**	*e*P		**Pb**	**11 14 08.6**	**-0.1**
	baz=12							
VWDT				*e*S		**Sg**	**11 14 23.1**	**+0.3**
	baz=12							
SSLB	**Suanglung**	**1.06**	**354**	*e*P		**Pb**	**11 14 09.2**	**-0.2**
	baz=360							
SSLB				*e*S		**Sg**	**11 14 24.6**	**+0.5**
	baz=360							
WDLH	**Douliu**	**1.08**	**332**	*e*P		**Pg**	**11 14 10.4**	**-0.1**
	baz=338							
WDLH				*e*S		**Sb**	**11 14 24.2**	**+0.8**
	baz=338							
ESL	**Shilin**	**1.12**	**17**	*e*P		**Pn**	**11 14 09.8**	**-0.7**
	baz=38							
WJS	**Zhushan**	**1.13**	**343**	*e*P		**Pg**	**11 14 11.7**	**+0.1**
	baz=350							
WJS				*e*S		**Sn**	**11 14 26.4**	**+0.7**
	baz=350							
SMLT	**Sun Moon Lake**	**1.16**	**352**	*e*P		**Pg**	**11 14 11.8**	**-0.3**
	baz=358							
SMLT				*e*S		**Sg**	**11 14 29.0**	**+1.7**
	baz=358							
TYC	**Yuchr**	**1.19**	**350**	*e*P		**Pg**	**11 14 12.4**	**-0.1**
	baz=358							
TYC				*e*S		**Sg**	**11 14 28.4**	**+0.3**
	baz=358							
WNT	**Mingjian**	**1.20**	**342**	*e*P		**Pn**	**11 14 11.6**	**+0.1**
	baz=336							
WNT				*e*S		**Sg**	**11 14 29.3**	**+0.8**
	baz=336							
WSF	**Szhu**	**1.20**	**319**	*e*P		**Pn**	**11 14 11.2**	**-0.2**
	baz=325							
WSF				*e*S		**Sg**	**11 14 28.6**	**+0.1**
	baz=325							
OWD	**Renai**	**1.22**	**4**	*e*P		**Pn**	**11 14 11.6**	**-0.3**
	baz=21							
OWD				*e*S		**Sg**	**11 14 29.7**	**+0.4**
	baz=21							
DPDB	**Guoxing**	**1.30**	**354**	*e*P		**Pb**	**11 14 13.6**	**0.0**
	baz=1.0							
DPDB				*e*S		**Sg**	**11 14 31.9**	**0.0**
	baz=1.0							
CHGB	**Renai**	**1.32**	**4**	*e*P		**Pn**	**11 14 13.4**	**0.0**
	baz=21							
CHGB				*e*S		**Sb**	**11 14 31.3**	**+0.4**
	baz=21							
RLNB	**Erlin**	**1.33**	**330**	*e*S		**Sb**	**11 14 31.7**	**+1.0**
	baz=336							
WDGT	**Dungji**	**1.41**	**292**	*e*P		**Pn**	**11 14 13.3**	**-1.1**
	baz=294							
WHF	**Hehuan Shan**	**1.42**	**7**	*e*P		**Pn**	**11 14 14.6**	**-0.3**
	baz=14							
WHF				*e*S		**Sb**	**11 14 34.2**	**+0.5**
	baz=14							
TCU	**Taichung**	**1.46**	**345**	*e*S		**Sg**	**11 14 36.2**	**-0.6**
	baz=353							
NACB	**Ninganchiao**	**1.51**	**18**	*e*P		**Pn**	**11 14 13.9**	**-1.9**
	baz=40							
NACB				*e*S		**Sb**	**11 14 35.8**	**-0.2**
	baz=40							
ETLH	**Xiulin Townshi**	**1.51**	**14**	*e*P		**Pn**	**11 14 16.1**	**+0.2**
	baz=37							
ETLH				*e*S		**Sb**	**11 14 36.4**	**+0.3**
	baz=37							
TDCB	**Techi**	**1.52**	**3**	*e*P		**Pb**	**11 14 16.9**	**-0.4**
	baz=21							
WHP	**Taichung City**	**1.54**	**355**	*e*P		**Pb**	**11 14 18.1**	**+0.4**
	baz=10.0							
WHP				*e*S		**Sg**	**11 14 38.9**	**-0.7**
	baz=10.0							
PHUB	**P'eng-hu**	**1.59**	**300**	*e*P		**Pn**	**11 14 15.3**	**-1.6**
	baz=303							
PHUB				*e*S		**Sn**	**11 14 36.5**	**-0.5**
	baz=303							
VCHM	**Qimei**	**1.59**	**288**	*e*P		**Pn**	**11 14 15.2**	**-1.7**
	baz=290							
VCHM				*e*S		**Sn**	**11 14 35.6**	**-1.5**
	baz=290							
TWQ1	**Liyutan**	**1.63**	**350**	*e*P		**Pb**	**11 14 19.7**	**+0.4**
	baz=342							
TWQ1				*e*S		**Sg**	**11 14 42.0**	**-0.4**
	baz=342							
WDJ	**Dajia District**	**1.66**	**346**	*e*S		**Sb**	**11 14 40.7**	**+0.5**
	baz=354							
NSY	**Sanyi**	**1.70**	**350**	*e*P		**Pb**	**11 14 20.4**	**0.0**
	baz=343							
NSY				*e*S		**Sg**	**11 14 44.1**	**-0.5**
	baz=343							
NNSH	**Datong**	**1.71**	**9**	*e*P		**Pb**	**11 14 20.3**	**-0.4**
	baz=18							
NNS	**Nan Shan**	**1.72**	**9**	*e*P		**Pb**	**11 14 20.8**	**-0.1**
	baz=22							
NNS				*e*S		**Sb**	**11 14 41.5**	**-0.6**
	baz=22							
PTSB	**Yuanli**	**1.74**	**349**	*e*S		**Sg**	**11 14 45.2**	**-0.6**
	baz=357							
ENA	**Nanau**	**1.79**	**20**	*e*S		**Sb**	**11 14 43.6**	**-0.5**
	baz=41							
NANB	**Nanao**	**1.80**	**20**	*e*P		**Pn**	**11 14 20.1**	**+0.4**
	baz=41							
NANB				*e*S		**Sb**	**11 14 43.8**	**-0.4**
	baz=41							
NSTT	**Nanjuang**	**1.89**	**358**	*e*P		**Pb**	**11 14 22.8**	**-0.9**
	baz=6.0							
NSTT				*e*S		**Sb**	**11 14 48.0**	**+1.1**
	baz=6.0							
NDT	**Datong Townshi**	**1.90**	**12**	*e*P		**Pb**	**11 14 22.7**	**-1.2**
	baz=29							
NDT				*e*S		**Sb**	**11 14 48.2**	**+0.9**
	baz=29							
LIOB	**Emei**	**1.91**	**358**	*e*P		**Pb**	**11 14 22.9**	**-1.1**
	baz=6.0							
LIOB				*e*S		**Sb**	**11 14 47.0**	**-0.4**
	baz=6.0							
YHNB	**Yeheng**	**1.95**	**8**	*e*P		**Pb**	**11 14 23.4**	**-1.2**
	baz=16							
YHNB				*e*S		**Sb**	**11 14 49.3**	**+0.6**
	baz=16							
ENTT	**Nioudou**	**1.95**	**13**	P		**Pn**	**11 14 22.6**	**+0.7**
	baz=37							
NSK	**Sanguang**	**1.95**	**7**	*e*P		**Pb**	**11 14 24.3**	**-0.4**
	baz=16							
NSK				*e*S		**Sb**	**11 14 49.0**	**+0.3**
	baz=16							
EOS1	**EOS1**	**2.05**	**28**	*e*S		**Sn**	**11 14 48.9**	**+0.7**
	baz=46							
TWE	**Neicheng**	**2.05**	**15**	*e*P		**Pb**	**11 14 25.9**	**-0.4**
	baz=38							
NWLT	**Wulai**	**2.07**	**11**	*e*P		**Pb**	**11 14 25.5**	**-1.2**
	baz=36							
TATO	**Taipei**	**2.26**	**9**	*e*S		**Sb**	**11 14 57.1**	**-0.6**
	baz=1.0							
WFSB	**Wu-fen Shan**	**2.42**	**15**	*e*S		**Sn**	**11 14 59.3**	**+2.0**
	baz=35							
SONM	**Songino Array**	**27.67**	**338**	P		**P**	**11 19 38.4**	**+1.8**
	0.2nm,0.3s,baz=151,slow=9.1,SNR=2.8							
ZALV	**Zalesovo Beam**	**41.41**	**328**	P		**P**	**11 21 34.8**	**-0.1**
	0.7nm,0.5s,baz=138,slow=11,SNR=4.6							
ASAR	**Alice Springs**	**47.78**	**164**	P		**P**	**11 22 26.9**	**+1.0**
	0.3nm,0.7s,baz=334,slow=8.2,SNR=3.6							
YKA	**Yellowknife Ar**	**84.34**	**23**	P		**P**	**11 26 18.8**	**-1.6**
	0.1nm,0.6s,baz=318,slow=5.3,SNR=4.0							

IDC ***15*** *11:37:07.9±2.4, 11.95N×142.62E, h100km±26km, mb3.4/7, mb1 3.7/8, mb1mx3.4/35, mbtmp3.8/8, MS3.3/10, Ms1 3.3/10, ms1mx3.1/29, Error ellipse: s-maj=28.4km s-min=16.3km az=106.0*
NEIC ***15*** *11:37:07.2±1.6, 11.9N±0.1×142.6E±0.2, h94km±6km, mb4.4/6, Error ellipse: s-maj=26.3km s-min=15.3km az=130.0*
ISC 15 11:37:07.5±0.9, 11.9N±0.1×142.6E±0.1, h100km, n23, σ0s87/17, mb4.0/11, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.75**	**52**	P		**Pn**	**11 37 49.5**	**-0.5**
	8.4nm,0.3s,baz=180,slow=20,SNR=2.6							
GUMO				S		**Sn**	**11 38 23.3**	**+0.6**
	7.8nm,0.3s,baz=0

MAKZ Makanchi 61.41 317 P P 11 47 13.8 +0.5
MAKZ IAmb IAmb 11 47 14.5
comp=Z,2.8nm,0.8s
ILAR Eielson Array 71.01 25 P P 11 48 13.6 -0.7
comp=Z,0.5nm,1.0s,baz=248,slow=4.8,SNR=2.7
YKA Yellowknife Ar 85.34 27 P P 11 49 34.6 +1.3
comp=Z,0.1nm,0.4s,baz=289,slow=5.7,SNR=3.7

MAN 15 11:51:05.6, 9.88N×123.86E, h1km, mb3.9, ML2.6, MS2.2, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.45**	**13**	*e*P	Pg	11 51 14.3	0.0
LLP				*i* S	Sb	11 51 23.0	-0.5
MSLP	**Maasin**	**1.02**	**75**	*e*P	Pb	11 51 25.9	-0.1
MSLP				*e*S	Sn	11 51 42.0	0.0

IDC ***15*** *11:54:59.9±0.6, 85.86N×21.57E, h0km, mb3.7/13, mb1 3.9/16, mb1mx3.7/50, mbtmp3.7/16, ML3.9/3, MS3.5/22, Ms1 3.5/22, ms1mx3.3/36, Error ellipse: s-maj=17.0km s-min=14.3km az=66.0*
NEIC ***15*** *11:55:00.6±1.7, 85.78N±0.08×2°1E±°, h10km±1km, mb4.2/8, Error ellipse: s-maj=15.2km s-min=14.1km az=73.0*
IEPN ***15*** *11:55:04.0, 85.64N×26.03E, h20km*
ISC 15 11:55:00.6±0.5, 85.62N±0.05×22.51E±0.06, h10km, n61, σ2s76/72, mb3.6/12, MS3.5/19, 1C, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZFI2	**Zemlya Franca-**	**5.58**	**135**	*e*P	**Pn**	**11 56 25.1**	**+1.7**
ZFI2				*e*S	**Sn**	**11 57 24.4**	**-3.1**
	22nm,0.5s						
NOR	**Nord**	**5.75**	**248**	*i* P	**Pn**	**11 56 29.5**	**+3.7**
KBS	**Kingsbay**	**6.86**	**197**	Pn	**Pn**	**11 56 42.1**	**+1.0**
KBS				Sn	**Sn**	**11 57 58.9**	**-0.1**
KBS	**Kingsbay**	**6.86**	**197**	*e*P	**Pn**	**11 56 42.0**	**+1.0**
KBS				*e*S	**Sn**	**11 57 57.8**	**-1.2**
KBS				IAML		11 58 01.7	
	comp=Z,13nm,0.5s						
KBS	**Kingsbay**	**6.86**	**197**	*e*P	**Pn**	**11 56 41.7**	**+0.7**
KBS				*e*S	**Sn**	**11 57 57.0**	**-2.0**
KBS	**Kingsbay**	**6.86**	**197**		**Pn**	**11 56 42.4**	**+1.3**
KBS				Sn	**Sn**	**11 58 01.6**	**+2.6**
SPA0	**Spitsbergen Ar**	**7.53**	**190**	Pn	**Pn**	**11 56 51.7**	**+1.5**
	baz=30,slow=12						
SPA0				Sn	**Sn**	**11 58 12.7**	**-2.8**
	baz=38,slow=16						
SPA0	**Spitsbergen Ar**	**7.53**	**190**	*e*P	**Pn**	**11 56 51.4**	**+1.2**
SPA0				*e*S	**Sn**	**11 58 11.9**	**-3.5**
SPA0				IAML		11 58 21.7	
	comp=Z,7.4nm,0.8s						
SPA0	**Spitsbergen Ar**	**7.53**	**190**	⇑*i* P	**Pn**	**11 56 51.6**	**+1.4**
SPA0				*e*S	**Sn**	**11 58 12.5**	**-3.0**
SPA0	**Spitsbergen Ar**	**7.53**	**190**	Pn	**Pn**	**11 56 52.1**	**+1.8**
SPA0				Sn	**Sn**	**11 58 19.5**	**+4.0**
SPITS	**Spitsbergen Ar**	**7.53**	**190**	Pn	**Pn**	**11 56 51.8**	**+1.5**
	baz=31,slow=15,SNR=148						
SPITS				Sn	**Sn**	**11 58 13.2**	**-2.3**
	baz=28,slow=20,SNR=2.9						
SPITS				LR	LR	11 59 39.8	
	comp=Z,247nm,18.0s,baz=330,slow=36						
BRBB	**Barentsburg B**	**7.65**	**193**	Pn	**Pn**	**11 56 54.1**	**+2.3**
BRBB				Sn	**Sn**	**11 58 20.1**	**+1.8**
BRBB	**Barentsburg B**	**7.65**	**193**	Pn	**Pn**	**11 56 54.1**	**+2.3**
BRBB				Sn	**Sn**	**11 58 20.1**	**+1.8**
BRBA	**Barentsburg A**	**7.68**	**193**	Pn	**Pn**	**11 56 54.9**	**+2.6**
BRBA				Sn	**Sn**	**11 58 20.3**	**+1.1**
BRBA	**Barentsburg A**	**7.68**	**193**	Pn	**Pn**	**11 56 54.9**	**+2.6**
BRBA				Sn	**Sn**	**11 58 20.3**	**+1.1**
HSPB	**Hornsund (broa**	**8.72**	**190**	Pn	**Pn**	**11 57 09.0**	**+2.5**
HSPB	**Hornsund (broa**	**8.72**	**190**	Pn	**Pn**	**11 57 09.0**	**+2.5**
HSPB	**Hornsund (broa**	**8.72**	**190**	*e*P	**Pn**	**11 57 09.0**	**+2.5**
HSPB				*e*S	**Sn**	**11 58 43.7**	**-1.0**
HOPEN	**Hopen**	**9.18**	**176**	Pn	**Pn**	**11 57 13.6**	**+0.9**
HOPEN				Sn	**Sn**	**11 58 50.8**	**-5.0**
HOPEN	**Hopen**	**9.18**	**176**	*e*P	**Pn**	**11 57 11.4**	**-1.3**
HOPEN				*e*S	**Sn**	**11 58 48.1**	**-7.7**
HOPEN				IAML		11 59 10.9	
	comp=Z,5.4nm,1.0s						
HOPEN	**Hopen**	**9.18**	**176**	*e*P	**Pn**	**11 57 14.0**	**+1.3**
HOPEN				*e*S	**Sn**	**11 58 50.5**	**-5.3**
DAG	**Danmarks Havn**	**10.40**	**237**	*i* P	**Pn**	**11 57 33.5**	**+4.0**
BJO1	**Bjornoya**	**11.20**	**185**	*e*P	**Pn**	**11 57 39.4**	**-1.0**
BJO1				*e*S	Sn	11 59 36.5	-8.9
BJO1	**Bjornoya**	**11.20**	**185**	*e*P	**Pn**	**11 57 41.5**	**+1.1**
BJO1				*e*S	**Sn**	**11 59 39.9**	**-5.5**
SUMG	**Summit**	**15.86**	**255**	*i* P	**P**	**11 58 46.6**	**-1.0**
SUMG	**Summit**	**15.86**	**255**		**Pn**	**11 58 42.8**	**-1.0**
SUMG				IAmb	IAmb	11 58 50.9	
	comp=Z,21nm,1.1s						
ARA0	**ARCESS Array S**	**16.19**	**176**	Pn	**Pn**	**11 58 48.1**	**+0.4**
	baz=354,slow=11						
ARA0				Sn	**Sn**	**12 01 40.4**	**-6.7**
	baz=355,slow=22						
ARA0	**ARCESS Array S**	**16.19**	**176**	Pn	**Pn**	**11 58 48.1**	**+0.4**
	baz=354,slow=11						
ARA0				Sn	**Sn**	**12 01 40.4**	**-6.7**
	baz=355,slow=22						
ARCES	**ARCESS Array B**	**16.19**	**176**	Pn	**Pn**	**11 58 48.0**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=355,slow=9.8,SNR=21						
ARCES				Sn	**Sn**	**12 01 40.9**	**-6.1**
	comp=Z,0.3nm,0.3s,baz=1.1,slow=18,SNR=4.7						
ARCES				LR	LR	12 04 46.1	
	comp=Z,129nm,20.1s,baz=334,slow=36						
ARE0	**ARCESS Array S**	**16.19**	**176**	Pn	**P**	**11 58 50.2**	**-0.7**
RES	**Resolute Bay**	**17.86**	**310**	P	**Pn**	**11 59 05.8**	**-2.8**
	comp=Z,0.1nm,0.3s,baz=49,slow=9.3,SNR=3.4						
RES				LR	LR	12 05 28.7	
	comp=Z,161nm,21.1s,baz=350,slow=36						
RES	**Resolute Bay**	**17.86**	**310**	P	**Pn**	**11 59 06.5**	**-2.2**
LVZ	**Lovozero**	**17.95**	**165**	P	**P**	**11 59 10.6**	**+0.2**
ILULI	**Ilulissat**	**20.10**	**265**	P	**P**	**11 59 30.1**	**-3.7**
ILULI				IAmb	IAmb	11 59 45.2	
	comp=Z,27nm,1.4s						
TIXI	**Tiksi**	**20.14**	**62**	P	Pn	11 59 36.3	+0.1
	comp=Z,1.9nm,0.3s,baz=0.0,slow=24,SNR=4.5						
TIXI				LR	LR	12 06 33.5	
	comp=Z,42nm,21.6s,baz=199,slow=34						
TIXI	**Tiksi**	**20.14**	**62**	P	**P**	**11 59 35.0**	**+0.8**
TIXI				IAmb	IAmb	11 59 45.7	
	comp=Z,11nm,1.2s						
FINES	**FINESS Array B**	**24.32**	**176**	LR	LR	12 08 52.5	
	comp=Z,85nm,21.8s,baz=356,slow=34						
C36M	**Paulatuk**	**24.57**	**332**	P	**P**	**12 00 18.8**	**-1.3**
NOA	**NORSAR Array B**	**24.81**	**193**	LR	LR	12 09 26.7	
	comp=Z,31nm,20.6s,baz=340,slow=35						
HFS	**Hagfors**	**25.68**	**190**	LR	LR	12 09 27.2	
	comp=Z,115nm,19.9s,baz=12,slow=34						
INK	**Inuvik**	**25.91**	**340**	P	**P**	**12 00 31.7**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=356,slow=11,SNR=7.9						
INK				LR	LR	12 11 40.1	
	comp=Z,117nm,19.5s,baz=39,slow=39						
INK	**Inuvik**	**25.91**	**340**	P	**P**	**12 00 30.9**	**-1.2**
INK				IAmb	IAmb	12 00 46.3	
	comp=Z,9.5nm,1.4s						
FRB	**Frobisher Bay**	**26.83**	**280**	P	**P**	**12 00 39.0**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=72,slow=9.6,SNR=3.6						
FRB				LR	LR	12 10 03.5	
	comp=Z,129nm,18.4s,baz=332,slow=34						
KIRV	**Kirov**	**27.72**	**149**	LR	LR	12 14 28.2	
	comp=Z,60nm,21.7s,baz=314,slow=42						
ILAR	**Eielson Array**	**29.72**	**351**	P	**P**	**12 01 06.0**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=0.7,slow=6.9,SNR=6.6						
ILAR				LR	LR	12 12 35.9	
	comp=Z,65nm,20.3s,baz=336,slow=36						
YKA	**Yellowknife Ar**	**31.03**	**322**	P	**P**	**12 01 16.2**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=4.1,slow=8.2,SNR=9.0						
YKA				PcP	**PcP**	**12 04 12.8**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=347,slow=3.1,SNR=8.1						
YKA				LR	LR	12 13 24.5	
	comp=Z,101nm,20.6s,baz=0.0,slow=36						
ZALV	**Zalesovo Beam**	**34.38**	**112**	P	**P**	**12 01 49.8**	**+2.6**
	comp=Z,0.6nm,0.6s,baz=355,slow=8.8,SNR=2.3						
ZALV				LR	LR	12 18 24.5	
	comp=Z,51nm,19.6s,baz=23,slow=41						
AKASG	**Malin Array Be**	**35.11**	**173**	LR	LR	12 16 28.5	
	comp=Z,116nm,18.4s,baz=340,slow=36						
GERES	**GERESS Array B**	**36.99**	**190**	P	**P**	**12 02 13.9**	**+4.1**
	comp=Z,0.5nm,0.7s,baz=15,slow=5.7,SNR=3.9						
MKAR	**Makanchi Array**	**41.32**	**116**	LR	LR	12 22 28.2	
	comp=Z,68nm,20.6s,baz=10,slow=40						
SONM	**Songino Array**	**42.07**	**91**	P	**P**	**12 02 53.1**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=343,slow=8.6,SNR=5.5						
ULM	**Lac du Bonnet**	**42.18**	**303**	LR	LR	12 18 29.5	
	comp=Z,57nm,18.2s,baz=344,slow=34						
KBZ	**Khabaz**	**42.35**	**158**	LR	LR	12 21 58.5	
	comp=Z,108nm,18.2s,baz=7.0,slow=38						
KLR	**Kul'dur**	**42.58**	**66**	P	**P**	**12 02 55.3**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=0.0,slow=11						
BRTR	**Keskin Array B**	**46.14**	**168**	LR	LR	12 24 31.9	
	comp=Z,49nm,18.1s,baz=344,slow=38						
ESDC	**Sonseca Array**	**46.60**	**208**	P	**P**	**12 03 31.2**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=356,slow=11,SNR=3.5						
PDAR	**Pinedale Array**	**50.46**	**315**	P	**P**	**12 03 56.5**	**-1.8**
	comp=Z,0.3nm,0.7s,baz=333,slow=1.7,SNR=4.1						
PDAR				LR	LR	12 24 25.8	
	comp=Z,66nm,18.0s,baz=12,slow=35						
NVAR	**Mina Array Bea**	**55.23**	**323**	LR	LR	12 28 03.6	
	comp=Z,58nm,20.2s,baz=334,slow=36						
TXAR	**Lajitas Array**	**63.49**	**308**	LR	LR	12 33 32.4	
	comp=Z,43nm,18.1s,baz=0.0,slow=36						
CMAR	**Chiang Mai Arr**	**70.68**	**102**	P	**P**	**12 06 16.9**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=353,slow=8.9,SNR=5.6						
CMAR				LR	LR	12 39 59.8	
	comp=Z,39nm,19.0s,baz=12,slow=38						
TORD	**Torodi Ar. Bea**	**72.82**	**201**	P	**P**	**12 06 31.1**	**+2.1**
	comp=Z,1.2nm,0.7s,baz=357,slow=6.7,SNR=7.8						

NIED ***15*** *12:04:00, 35.90N×140.90E, h47km, Mw4.2 Best double couple: M0 2.10000×10^15 NP1:φs 12.00000°, δ 75.00000°, λ 83.00000°. NP2:φs 217.00000°, δ 16.00000°, λ 113.00000°.*
JMA ***15*** *12:04:38.6±0.1, 35.90N×140.86E, h42km±1km, M3.7*
JMA Felt I J1.
IDC ***15*** *12:04:40.3±2.9, 35.82N×140.70E, h51km±24km, mb3.7/15, mb1 3.8/18, mb1mx3.7/51, mbtmp3.9/18, ML2.9/3, MS3.3/7, Ms1 3.3/7, ms1mx2.9/50, Error ellipse: s-maj=18.8km s-min=17.0km az=94.0*
NEIC ***15*** *12:04:41.5±1.8, 36.07N±0.06×140.80E±0.09, h55km±7km, mb4.5/19, Error ellipse: s-maj=11.1km s-min=8.8km az=120.0*
ISC 15 12:04:39.6±0.8, 35.94N±0.04×140.92E±0.06, h41km±7km, n65, σ1s28/67, mb4.2/25, MS3.5/3, 1C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.25**	**192**	⇑P	**Pn**	**12 04 46.1**	**-1.3**
CHOJ				*e*S	**Sn**	**12 04 51.6**	**-1.2**
JIHU	**Itakohorinouch**	**0.32**	**274**	⇓P	**Pn**	**12 04 47.5**	**-0.7**
JIHU				*e*S	**Sn**	**12 04 53.6**	**-0.6**
JHYU	**Hitachinakayam**	**0.48**	**325**	⇓P	**Pn**	**12 04 49.7**	**-0.4**
JHYU				S	**Sn**	**12 04 57.7**	**+0.2**
JSMT	**Sammumatsuo**	**0.49**	**232**	⇓P	**Pn**	**12 04 49.2**	**-1.0**
JSMT				*e*S	**Sn**	**12 04 55.8**	**-1.9**
JYT	**Yasato**	**0.66**	**296**	⇓P	**Pn**	**12 04 51.1**	**-1.3**
JYT				*e*S	**Sn**	**12 04 59.9**	**-1.7**
JHO	**Hitachi**	**0.72**	**337**	⇓P	**Pn**	**12 04 53.0**	**-0.4**
JHO				S	**Sn**	**12 05 03.5**	**+0.2**
BSO3	**Boso 3**	**1.19**	**197**	P	**Pn**	**12 04 58.7**	**-0.8**
MJAR	**Matsushiro Ar**	**2.27**	**286**	P	**Pn**	**12 05 14.5**	**-0.1**
	5.5nm,0.3s,baz=92,slow=9.8,SNR=131						
MJAR				S	**Sn**	**12 05 38.2**	**-3.2**
	3.0nm,0.3s,baz=107,slow=19,SNR=6.1						
MJAR				LR	LR	12 06 14.9	
	comp=Z,442nm,19.9s,baz=115,slow=45						
MAJO	**Matsushiro**	**2.28**	**286**		**Pn**	**12 05 14.6**	**-0.1**
MAT	**Matsushiro**	**2.28**	**286**	P	**Pn**	**12 05 14.8**	**+0.1**
MAT				S	**Sn**	**12 05 43.4**	**+1.9**
MJB9	**Matsu-Tunnel**	**2.28**	**286**		**Pn**	**12 05 14.8**	**0.0**
JHJ2	**Mitsune**	**2.97**	**198**	Pn	**Pn**	**12 05 27.1**	**+2.9**
INU	**Inuyama**	**3.24**	**261**		**Pn**	**12 05 28.8**	**+1.0**
ERM	**Erimo**	**6.31**	**15**	Pn	**Pn**	**12 06 09.6**	**-0.3**
ERM					**Sn**	**12 07 19.6**	**-1.1**
JKA	**Kamikawa-asahi**	**8.26**	**8**		**Pn**	**12 06 36.1**	**-0.7**
JKA					**Sn**	**12 08 06.2**	**-2.6**
ASAJ	**Asahikawa**	**8.26**	**8**	P	**Pn**	**12 06 36.1**	**-0.7**
	2.8nm,0.3s,baz=215,slow=9.2,SNR=26						
ASAJ				S	**Sn**	**12 08 06.2**	**-2.6**
	0.4nm,0.3s,baz=180,slow=20,SNR=2.2						
JNU	**Nakatsue**	**8.75**	**254**	LR	LR	12 10 23.9	
	comp=Z,300nm,18.7s,baz=45,slow=40						
JNU	**Nakatsue**	**8.75**	**254**	Pn	**Pn**	**12 06 45.1**	**+1.5**
KSRS	**Korea Array**	**10.55**	**282**	P	**Pn**	**12 07 10.2**	**+2.1**
	0.2nm,0.3s,baz=99,slow=14,SNR=3.3						
KSRS				LR	LR	12 11 13.6	
	comp=Z,92nm,20.1s,baz=92,slow=38						
USRK	**Ussuriysk Ar.**	**10.71**	**323**	P	**Pn**	**12 07 12.5**	**+2.2**
	baz=135,slow=14,SNR=6.6						
USRK				LR	LR	12 11 02.0	
	comp=Z,104nm,19.4s,baz=143,slow=36						
YSS	**Yuzh-Sakhalins**	**11.09**	**7**	Pn	**Pn**	**12 07 15.7**	**+0.3**
KLR	**Kul'dur**	**14.88**	**336**	P	**Pn**	**12 08 09.4**	**+2.4**
	0.2nm,0.3s,baz=152,slow=11,SNR=4.4						
TPUB	**Ta-pu**	**21.63**	**240**	P	**P**	**12 09 25.4**	**-0.9**
ULN	**Ulaanbaatar**	**27.66**	**306**	P	**P**	**12 10 21.0**	**-2.5**
H11N2	**WAKE ISLAND Hy**	**27.95**	**118**	T	T	12 39 38.9	
	baz=311,slow=75,SNR=52						
H11N1	**WAKE ISLAND Hy**	**27.96**	**118**	T	T	12 39 39.5	
	baz=311,slow=75,SNR=48						
H11N3	**WAKE ISLAND Hy**	**27.97**	**118**	T	T	12 39 40.3	
	baz=311,slow=75,SNR=60						
SONM	**Songino Array**	**28.08**	**306**	P	**P**	**12 10 26.3**	**-1.0**
	1.4nm,0.6s,baz=102,slow=9.1,SNR=8.1						
H11S1	**WAKE ISLAND Hy**	**28.62**	**121**	T	T	12 40 18.5	
	baz=313,slow=75,SNR=69						
H11S3	**WAKE ISLAND Hy**	**28.62**	**121**	T	T	12 40 21.9	
	baz=313,slow=75,SNR=45						
H11S2	**WAKE ISLAND Hy**	**28.64**	**121**	T	T	12 40 24.0	
	baz=313,slow=75,SNR=35						
ZAA0	**Zalesovo Array**	**42.36**	**313**	P	**P**	**12 12 29.3**	**-0.1**
ZALV	**Zalesovo Beam**	**42.36**	**313**	P	**P**	**12 12 29.2**	**-0.3**
	1.4nm,0.4s,baz=106,slow=8.4,SNR=7.0						
ZALV				PcP	**PcP**	**12 14 21.4**	**-0.8**
	0.5nm,0.4s,baz=104,slow=5.2,SNR=2.5						
MK31	**Makanchi Array**	**44.37**	**303**	P	**P**	**12 12 45.6**	**-0.2**
MK31				IAmb	IAmb	12 12 46.2	
	comp=Z,4.4nm,0.8s						
MKAR	**Makanchi Array**	**44.37**	**303**	P	**P**	**12 12 45.4**	**-0.4**
	comp=Z,4.5nm,0.6s,baz=90,slow=9.9,SNR=62						
MAKZ	**Makanchi**	**44.58**	**303**	P	**P**	**12 12 47.2**	**-0.3**
MAKZ				IAmb	IAmb	12 12 48.0	
	comp=Z,5.4nm,0.8s						
KURK	**Kurchatov**	**46.30**	**309**	P	**P**	**12 13 00.4**	**-0.6**
KURK				IAmb	IAmb	12 13 01.0	
	comp=Z,8.3nm,0.8s						
ILAR	**Eielson Array**	**50.62**	**32**	P	**P**	**12 13 34.9**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=264,slow=5.6,SNR=12						
AAK	**Ala-Archa**	**50.66**	**299**	P	**P**	**12 13 34.5**	**-0.5**
RPSI	**Rantau Prapat**	**50.97**	**239**	P	**P**	**12 13 36.6**	**-0.7**
BRVK	**Borovoye**	**51.08**	**313**	P	**P**	**12 13 38.2**	**+0.5**
BRVK				IAmb	IAmb	12 13 50.0	
	comp=Z,1.8nm,0.7s						
RIDG	**Independent Ri**	**51.57**	**33**	P	**P**	**12 13 42.2**	**+1.0**
RIDG				IAmb	IAmb	12 13 44.6	
	comp=Z,9.0nm,1.3s						
SCRK	**Sand Creek**	**51.93**	**33**	P	**P**	**12 13 45.3**	**+1.3**
KK31	**Karatay Array**	**53.33**	**301**	P	**P**	**12 13 53.8**	**-0.8**
KK31				IAmb	IAmb	12 13 55.0	
	comp=Z,3.8nm,1.1s						
KKAR	**Karatay Array**	**53.33**	**301**	P	**P**	**12 13 53.9**	**-0.7**
KKAR				IAmb	IAmb	12 13 55.0	
	comp=Z,3.8nm,1.1s						
INK	**Inuvik**	**55.53**	**27**	P	**P**	**12 14 11.5**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=298,slow=6.8,SNR=8.7						
INK	**Inuvik**	**55.53**	**27**	P	**P**	**12 14 11.6**	**+1.4**
INK				IAmb	IAmb	12 14 13.8	
	comp=Z,8.4nm,1.5s						
FITZ	**Fitzroy Crossi**	**55.66**	**198**	P	**P**	**12 14 11.5**	**0.0**
FITZ				IAmb	IAmb	12 14 21.5	
	comp=Z,6.2nm,1.1s						
WRA	**Warramunga Arr**	**55.93**	**187**	P	**P**	**12 14 11.5**	**-2.0**
	comp=Z,1.0nm,0.3s,baz=2.7,slow=7.4,SNR=9.1						
ARU	**Arti**	**56.92**	**319**	P	**P**	**12 14 19.9**	**-0.3**
ABKAR	**Akbulak array**	**58.34**	**311**	P	**P**	**12 14 29.7**	**-0.6**
ABKAR				IAmb	IAmb	12 14 30.0	
	comp=Z,2.7nm,0.5s						
ASAR	**Alice Springs**	**59.66**	**187**	P	**P**	**12 14 38.6**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=8.9,slow=8.3,SNR=10						
ARCES	**ARCESS Array B**	**64.88**	**339**	P	**P**	**12 15 14.3**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=32,slow=7.1,SNR=4.4						
YKA	**Yellowknife Ar**	**64.95**	**30**	P	**P**	**12 15 15.1**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=302,slow=7.0,SNR=3.5						
AFI	**Afiamalu**	**66.75**	**129**	LR	LR	12 38 42.7	
	comp=Z,13nm,21.2s,baz=60,slow=31						
ARMA	**Armidale**	**66.78**	**170**	P	**P**	**12 15 29.0**	**+2.2**
ARMA				IAmb	IAmb	12 15 47.6	
	comp=Z,11nm,1.2s						
FORT	**Forrest**	**67.46**	**192**	P	**P**	**12 15 30.5**	**-0.5**
FINES	**FINESS Array B**	**69.59**	**332**	P	**P**	**12 15 42.9**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=87,slow=6.1,SNR=3.9						
KBZ	**Khabaz**	**71.31**	**311**	P	**P**	**12 15 54.5**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=32,slow=4.9,SNR=3.8						
AKASG	**Malin Array Be**	**74.92**	**322**	P	**P**	**12 16 15.5**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=51,slow=5.9,SNR=4.4						
NOA	**NORSAR Array B**	**75.04**	**337**	P	**P**	**12 16 16.3**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=58,slow=11,SNR=2.4						
PDAR	**Pinedale Array**	**78.71**	**45**	P	**P**	**12 16 38.4**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=226,slow=4.8,SNR=2.6						
BRTR	**Keskin Array B**	**79.28**	**311**	P	**P**	**12 16 41.4**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=63,slow=5.7,SNR=3.8						
MLR	**Muntele Rosu**	**79.96**	**320**	LR	LR	12 54 41.6	
	comp=Z,22nm,18.1s,baz=115,slow=38						
DAVOX	**Davos/Dischmat**	**86.66**	**329**	LR	LR	12 59 22.4	
	comp=Z,24nm,20.6s,baz=56,slow=38						

IDC ***15*** *12:30:49.2±2.9, 17.70S×178.33W, h547km±35km, mb3.2/12, mb1 3.4/12, mb1mx3.2/38, mbtmp4.0/12, Error ellipse: s-maj=30.1km s-min=15.5km az=146.0*
NEIC ***15*** *12:30:53.9±0.9, 17.6S±0.1×178.6W±0.2, h596km±4km, mb4.4/37, Error ellipse: s-maj=25.3km s-min=16.5km az=121.0*
ISC 15 12:30:54.1±0.6, 17.6S±0.1×178.5W±0.1, h600km, n49, σ1s23/51, mb4.1/25, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.29**	**267**	P	**P**	**12 32 14.4**	**-0.6**
OUZ	**Omahuta**	**18.92**	**200**	P	**P**	**12 34 39.6**	**+1.7**
URZ	**Urewera**	**20.95**	**190**	P	**P**	**12 34 51.6**	**-4.5**
	3.1nm,0.3s,baz=29,slow=16,SNR=7.7						
URZ	**Urewera**	**20.95**	**190**	P	**P**	**12 34 54.6**	**-1.6**
URZ				IAmb	IAmb	12 35 21.6	
	comp=Z,26nm,1.3s						
BKZ	**Black Stump Fm**	**21.94**	**190**	P	**P**	**12 35 04.5**	**-0.6**
SNZO	**South Karori**	**24.36**	**192**	P	**P**	**12 35 24.0**	**-2.3**
MLZ	**Mavora Lakes**	**29.87**	**199**	P	**P**	**12 36 14.4**	**-0.1**
COEN	**Coen**	**37.01**	**270**	P	**P**	**12 37 13.9**	**-0.9**
TOO	**Toolangi**	**37.30**	**230**	P	**P**	**12 37 16.8**	**-0.1**
TOO				IAmb	IAmb	12 38 52.9	
	comp=Z,25nm,1.7s						
TAU	**Tasmania Unive**	**38.42**	**222**	P	**P**	**12 37 25.9**	**+0.2**
STKA	**Stephens Creek**	**38.71**	**241**	P	**P**	**12 37 29.0**	**+0.8**
	comp=Z,0.9nm,0.5s,baz=107,slow=13,SNR=4.2						
STKA	**Stephens Creek**	**38.71**	**241**	P	**P**	**12 37 28.7**	**+0.4**
BBOO	**Buckleboo**	**43.48**	**241**	P	**P**	**12 38 05.4**	**-0.5**
BBOO				IAmb	IAmb	12 38 19.8	
	comp=Z,39nm,1.9s						
WRA	**Warramunga Arr**	**44.60**	**259**	P	**P**	**12 38 13.9**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=93,slow=7.3,SNR=6.6						
AS31	**Alice Springs**	**44.79**	**254**	P	**P**	**12 38 16.2**	**0.0**
ASAR	**Alice Springs**	**44.79**	**254**	P	**P**	**12 38 16.0**	**-0.1**
	comp=Z,3.1nm,0.5s,baz=89,slow=7.7,SNR=107						
ASAR				ScP	**ScP**	**12 42 45.2**	**+4.4**
	comp=Z,0.6nm,1.0s,baz=89,slow=4.8,SNR=4.1						
ASAR				S	**S**	**12 44 11.6**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=82,slow=15,SNR=4.4						
FORT	**Forrest**	**50.06**	**244**	P	**P**	**12 38 54.9**	**-0.4**
FORT				IAmb	IAmb	12 39 50.9	
	comp=Z,16nm,0.9s						
SBA	**Scott Base**	**60.73**	**184**	P	**P**	**12 40 08.8**	**+0.6**
SBA				IAmb	IAmb	12 41 49.8	
	comp=Z,64nm,1.8s						
VNDA	**Vanda**	**60.76**	**185**	P	**P**	**12 40 08.6**	**+0.1**
VNDA				IAmb	IAmb	12 41 34.2	
	comp=Z,13nm,1.8s						
QSPA	**South Pole Qui**	**72.47**	**180**	P	**P**	**12 41 21.2**	**+0.5**
QSPA				IAmb	IAm

comp=Z,0.3nm,0.6s,baz=13,slow=6.6,SNR=6.3
ASAR Alice Springs 44.55 195 P **P** **13 09 06.7 +0.7**
ILAR Eielson Array 62.83 26 P **P** **13 11 17.8 -0.6**
comp=Z,0.6nm,1.1s,baz=232,slow=5.3,SNR=4.5
YKA Yellowknife Ar 77.19 28 P **P** **13 12 46.4 +0.5**
comp=Z,0.2nm,0.6s,baz=284,slow=5.5,SNR=3.1
ARCES ARCESS Array B 81.56 342 P **P** **13 13 10.3 +0.8**
comp=Z,3.2nm,1.0s,baz=74,slow=7.6,SNR=3.8
FINES FINESS Array B 85.98 335 P **P** **13 13 31.6 -0.5**
comp=Z,1.1nm,0.3s,baz=65,slow=4.1,SNR=15

*IDC **15** 13:02:21.9±0.5,35˚.20S×78˚.66E, h0km, mb4.4/18, mb1 4.5/18,mb1mx4.3/40, mbtmp4.4/18,MS4.3/21, Ms1 4.3/21,ms1mx4.1/31,Error ellipse: s-maj=18.6km s-min=13.6km az=3.0*
*NEIC **15** 13:02:23.3±1.6,35˚.1S±0˚.1×78˚.6E±0˚.1, h10km±1km, mb4.9/39,Error ellipse: s-maj=18.6km s-min=17.5km az=194.0*
*GCMT **15** 13:02:26.3±0.2,35˚.28S±0˚.01×78˚.62E±0˚.01, h20km±1km, MW5.2/122,Moment Tensor Solution. s50,c65; s122,c184; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr-1.01±.18; Mθθ-6.04±.16; Mϕϕ7.05±.17; Mrθ1.51±.34; Mθϕ0.64±.15; Mϕr0.27±.29; Best double couple: M06.78900×10^16^ NP1:ϕs319.00000°,δ77.00000°, λ-171.00000°. NP2:ϕs227.00000°,δ81.00000°, λ-13.00000°. Principal axes: T 7.0970, Plg3.0000°, Azm273.0000°; N -0.6160, Plg74.0000°, Azm12.0000°; P -6.4810, Plg15.0000°, Azm182.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 15 13:02:23.4±0.4,35˚.16S±0˚.08×78˚.66E±0˚.08,h10km,n95, σ1s11/66,mb4.8/39,MS4.4/27,1D,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**27.96**	**347**	T	T	13 37 20.9	
	baz=170,slow=76,SNR=156						
H08S1	**Diego Garcia H**	**27.96**	**347**	T	T	13 37 23.6	
	baz=170,slow=76,SNR=154						
H08S3	**Diego Garcia H**	**27.98**	**347**	T	T	13 37 21.5	
	baz=170,slow=76,SNR=180						
H01W2	**Cape Leeuwin H**	**28.96**	**100**	T	T	13 38 38.0	
	baz=259,slow=74,SNR=72						
H01W3	**Cape Leeuwin H**	**28.98**	**100**	T	T	13 38 38.8	
	baz=259,slow=74,SNR=75						
H01W1	**Cape Leeuwin H**	**28.98**	**100**	T	T	13 38 38.0	
	baz=259,slow=74,SNR=129						
H08N1	**Diego Garcia H**	**29.53**	**344**	T	T	13 39 35.6	
	baz=140						
H08N3	**Diego Garcia H**	**29.53**	**344**	T	T	13 39 39.9	
	baz=140,slow=74,SNR=6.3						
H08N2	**Diego Garcia H**	**29.55**	**344**	T	T	13 39 27.9	
	baz=140,slow=74,SNR=7.7						
NWAO	**Narrogin (SRO)**	**31.91**	**97**	P	**P**	**13 08 48.8**	**-0.3**
NWAO				IAmb	IAmb	13 08 57.9	
	comp=Z,24nm,1.4s						
MAW	**Mawson**	**33.73**	**191**	LR	LR	13 20 07.0	
	comp=Z,689nm,19.2s,baz=30,slow=32						
CASY	**Casey**	**36.32**	**159**	P	**P**	**13 09 27.5**	**+0.6**
CASY				IAmb	IAmb	13 09 29.8	
	comp=Z,10.0nm,0.7s						
UGM	**Wanagama**	**39.85**	**55**	P	**P**	**13 09 56.0**	**-1.3**
SYO	**Syowa Base**	**40.19**	**201**	*e*P	**P**	**13 10 00.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**44.87**	**80**	P	**P**	**13 10 38.0**	**-0.1**
	comp=Z,9.0nm,1.1s,baz=241,slow=13,SNR=3.1						
FITZ	**Fitzroy Crossi**	**44.87**	**80**	P	**P**	**13 10 38.4**	**+0.2**
FITZ				IAmb	IAmb	13 10 47.3	
	comp=Z,22nm,1.2s						
BOSA	**Boshof**	**45.36**	**263**	P	**P**	**13 10 42.1**	**-0.1**
	comp=Z,7.0nm,1.1s,baz=91,slow=7.4,SNR=7.9						
BOSA	**Boshof**	**45.36**	**263**	P	**P**	**13 10 40.9**	**-1.3**
MATP	**Matopo**	**46.27**	**275**	P	**P**	**13 10 49.3**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=114,slow=5.7,SNR=7.8						
LBTB	**Lobatse**	**46.54**	**267**	P	**P**	**13 10 50.3**	**-1.2**
	comp=Z,7.6nm,0.6s,baz=124,slow=7.0,SNR=13						
LBTB	**Lobatse**	**46.54**	**267**	P	**P**	**13 10 51.0**	**-0.5**
KSM	**Kuching**	**46.95**	**46**	P	**P**	**13 10 53.0**	**-1.6**
BBOO	**Buckleboo**	**47.09**	**104**	P	**P**	**13 10 53.0**	**-2.5**
BBOO				IAmb	IAmb	13 10 58.7	
	comp=Z,20nm,1.3s						
SUR	**Sutherland**	**47.59**	**256**	P	**P**	**13 11 00.5**	**+0.8**
	comp=Z,11nm,0.7s,baz=107,slow=11,SNR=16						
SUR	**Sutherland**	**47.59**	**256**	P	**P**	**13 10 59.9**	**+0.2**
KNRA	**Kununurra**	**48.69**	**80**	P	**P**	**13 11 08.8**	**+0.7**
SBUM	**Sibu**	**48.87**	**47**	P	**P**	**13 11 10.2**	**+0.8**
SBUM				IAmb	IAmb	13 11 12.7	
	comp=Z,23nm,1.5s						
ASAR	**Alice Springs**	**48.92**	**92**	P	**P**	**13 11 10.2**	**+0.2**
	comp=Z,3.4nm,0.8s,baz=244,slow=6.2,SNR=18						
ASAR				LR	LR	13 29 35.2	
	comp=Z,329nm,20.4s,baz=257,slow=33						
AS31	**Alice Springs**	**48.92**	**92**	P	**P**	**13 11 09.6**	**-0.3**
LSZ	**Lusaka**	**49.20**	**280**	P	**P**	**13 11 11.4**	**-0.7**
LSZ				IAmb	IAmb	13 11 13.5	
	comp=Z,10nm,0.7s						
WRA	**Warramunga Arr**	**51.03**	**88**	P	**P**	**13 11 26.5**	**+0.6**
	comp=Z,12nm,1.0s,baz=241,slow=7.9,SNR=12						
WRA				LR	LR	13 30 53.0	
	comp=Z,549nm,21.2s,baz=250,slow=34						
WRA	**Warramunga Arr**	**51.03**	**88**	IAmb	IAmb	13 11 30.5	
	comp=Z,2.1nm,1.4s						
WRAB	**Tennant Creek**	**51.04**	**88**	P	**P**	**13 11 26.1**	**+0.1**
WR0	**Warramunga Arr**	**51.18**	**88**	P	**P**	**13 11 27.1**	**+0.1**
KMBO	**Kilima Mbogo**	**51.27**	**302**	P	**P**	**13 11 28.6**	**+0.6**
	comp=Z,1.2nm,0.4s,baz=144,slow=8.7,SNR=2.7						
KMBO				LR	LR	13 30 07.7	
	comp=Z,167nm,18.4s,baz=100,slow=32						
STKA	**Stephens Creek**	**51.80**	**105**	P	**P**	**13 11 31.4**	**-0.1**
	comp=Z,5.4nm,1.0s,baz=149,slow=8.4,SNR=6.8						
STKA				LR	LR	13 29 52.7	
	comp=Z,591nm,20.5s,baz=227,slow=32						
STKA	**Stephens Creek**	**51.80**	**105**	P	**P**	**13 11 31.6**	**+0.1**
TOO	**Toolangi**	**52.83**	**114**	P	**P**	**13 11 39.4**	**+0.2**
TOO				IAmb	IAmb	13 11 43.4	
	comp=Z,15nm,1.3s						
SNAA	**Sanae**	**54.40**	**203**	P	**P**	**13 11 51.3**	**+1.1**
VNDA	**Vanda**	**54.51**	**165**	P	**P**	**13 11 50.4**	**-0.5**
	comp=Z,3.3nm,0.8s,baz=277,slow=4.9,SNR=9.2						
VNDA				LR	LR	13 33 09.0	
	comp=Z,318nm,18.7s,baz=274,slow=34						
VNDA	**Vanda**	**54.51**	**165**	P	**P**	**13 11 50.6**	**-0.2**
VNDA				IAmb	IAmb	13 12 02.5	
	comp=Z,9.6nm,1.2s						
QSPA	**South Pole Qui**	**54.99**	**180**	P	**P**	**13 11 54.4**	**-0.3**
	comp=Z,8.7nm,0.9s,baz=177,slow=0.7,SNR=28						
QSPA	**South Pole Qui**	**54.99**	**180**	P	**P**	**13 11 54.4**	**-0.3**
QSPA				IAmb	IAmb	13 11 58.4	
	comp=Z,20nm,1.2s						
PBKT	**Sadao Pong**	**55.63**	**26**	P	**P**	**13 12 00.1**	**+0.5**
PBKT				IAmb	IAmb	13 12 04.2	
	comp=Z,7.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**56.69**	**23**	P	**P**	**13 12 08.1**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=205,slow=7.1,SNR=6.2						
CMAR				LR	LR	13 32 25.3	
	comp=Z,75nm,21.8s,baz=194,slow=32						
ATD	**Arta Tunnel**	**57.49**	**317**	P	**P**	**13 12 12.2**	**-0.8**
KMI	**Kunming**	**64.15**	**24**	P	P	13 13 04.3	+6.0
KMI				pP	pwP	13 13 07.0	+2.2
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
KMI				LR	LR		
	comp=Z,250nm,19.0s						
KMI				LR	LR		
	comp=Z,200nm,28.6s						
KMI				LR	LR		
	comp=Z,230nm,30.3s						
JAY	**Jayapura**	**65.88**	**75**	LR	LR	13 42 39.7	
	comp=Z,83nm,18.0s,baz=230,slow=37						
RAYN	**Ar Rayn**	**66.29**	**327**	P	**P**	**13 13 10.4**	**-1.6**
RAYN				IAmb	IAmb	13 13 25.3	
	comp=Z,7.2nm,1.1s						
KBL	**Kabul**	**69.92**	**352**	P	**P**	**13 13 34.0**	**-0.8**
KBL				IAmb	IAmb	13 13 38.9	
	comp=Z,12nm,1.0s						
KRVT	**Keravat (AS076**	**73.94**	**84**	LR	LR	13 46 11.2	
	comp=Z,429nm,18.9s,baz=237,slow=36						
KSH	**Kashi**	**74.34**	**358**	P	**P**	**13 14 03.1**	**+2.0**
KSH				sP	pwP	13 14 10.1	+3.0
KSH				PP	**PP**	**13 16 50.4**	**+2.7**
KSH				pmax	pmax		
	comp=Z,670nm,6.8s						
XAN	**Xi'an**	**74.44**	**26**	P	**P**	**13 14 01.8**	**+0.1**
XAN				pP	pwP	13 14 08.0	-0.2
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,210nm,4.1s						
XAN	**Xi'an**	**74.44**	**26**	P	**P**	**13 14 00.9**	**-0.8**
XAN				IAmb	IAmb	13 14 12.5	
	comp=Z,9.5nm,0.9s						
LZH	**Lanzhou**	**74.67**	**21**	*e*P	**P**	**13 14 06.9**	**+3.8**
LZH				pP	pwP	13 14 12.1	+2.5
LZH				sP	PcP	13 14 14.8	-2.5
LZH				pmax	pmax		
	comp=Z,12nm,1.4s						
LZH				pmax	pmax		
	comp=Z,62nm,4.3s						
LZH				LR	LR		
	comp=Z,210nm,13.6s						
LZH				LR	LR		
	comp=Z,160nm,12.5s						
LZH				LR	LR		
	comp=Z,260nm,15.2s						
URZ	**Urewera**	**75.01**	**126**	LR	LR	13 41 44.8	
	comp=Z,155nm,19.1s,baz=226,slow=32						
GEYT	**Alibeck**	**75.17**	**343**	P	**P**	**13 14 07.5**	**+1.6**
	comp=Z,1.2nm,0.5s,baz=178,slow=14,SNR=2.4						
GEYT				LR	LR	13 43 19.5	
	comp=Z,80nm,20.0s,baz=355,slow=33						
GEYT	**Alibeck**	**75.17**	**343**	IAmb	IAmb	13 14 15.3	
	comp=Z,3.8nm,1.1s						
BTK	**Batken**	**75.19**	**354**	P	**P**	**13 14 05.5**	**-0.5**
BTK				IAmb	IAmb	13 14 09.8	
	comp=Z,7.4nm,1.0s						
DZM	**Mont Dzumac**	**75.91**	**107**	*e*S	**S**	**13 23 55.0**	**+1.3**
	comp=Z,81nm,23.8s						
DZM	**Mont Dzumac**	**75.91**	**107**	*e*LR	LR	13 37 29.9	
	comp=Z,497nm,23.8s						
DZM	**Mont Dzumac**	**75.91**	**107**	LR	LR	13 42 23.9	
	comp=Z,320nm,19.9s,baz=214,slow=32						
NRN	**Naryn**	**76.26**	**358**	P	**P**	**13 14 11.3**	**-1.0**
GTA	**Gaotai**	**76.73**	**17**	*e*P	**P**	**13 14 15.6**	**+0.8**
GTA				pP	sP	13 14 18.8	+0.7
GTA				sP	pwP	13 14 21.4	+0.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NJ2	**Nanjing**	**76.78**	**34**	*e*P	**P**	**13 14 16.3**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
HNR	**Honiara**	**77.54**	**93**	LR	LR	13 46 05.1	
	comp=Z,258nm,20.2s,baz=206,slow=34						
KK31	**Karatay Array**	**78.24**	**354**	P	**P**	**13 14 23.1**	**+0.1**
KK31				IAmb	IAmb	13 14 27.4	
	comp=Z,12nm,0.9s						
KKAR	**Karatay Array**	**78.24**	**354**	P	**P**	**13 14 22.9**	**-0.2**
KKAR				IAmb	IAmb	13 14 27.5	
	comp=Z,12nm,0.9s						
WMQ	**Urumqi**	**79.03**	**7**	*e*P	**P**	**13 14 28.8**	**+1.3**
WMQ				pP	sP	13 14 30.9	+0.2
WMQ				sP	pwP	13 14 34.3	+0.8
WMQ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.3s						
WMQ				LR	LR		
	comp=Z,570nm,23.1s						
WMQ				LR	LR		
	comp=Z,880nm,29.1s						
WMQ				LR	LR		
	comp=Z,780nm,27.5s						
HHC	**Hu-ho-hao-te**	**81.47**	**25**	*e*P	**P**	**13 14 42.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,76nm,6.6s						
MK31	**Makanchi Array**	**81.64**	**3**	P	**P**	**13 14 40.2**	**-1.2**
MKAR	**Makanchi Array**	**81.64**	**3**	P	**P**	**13 14 40.1**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=168,slow=6.2,SNR=14						
MKAR				LR	LR	13 48 35.4	
	comp=Z,141nm,20.6s,baz=181,slow=34						
RAO	**Raoul Island**	**83.54**	**121**	LR	LR	13 44 16.2	
	comp=Z,175nm,18.2s,baz=170,slow=30						
KBZ	**Khabaz**	**85.00**	**335**	LR	LR	13 51 03.4	
	comp=Z,50nm,18.1s,baz=156,slow=34						
BR131	**Keskin Array S**	**85.31**	**327**	P	**P**	**13 14 59.6**	**-0.9**
BR131				IAmb	IAmb	13 15 09.6	
	comp=Z,5.8nm,1.2s						
BRTR	**Keskin Array B**	**85.31**	**327**	P	**P**	**13 15 01.8**	**+1.2**
	comp=Z,2.1nm,0.8s,baz=157,slow=7.1,SNR=10.0						
BRTR				LR	LR	13 48 41.9	
	comp=Z,58nm,21.8s,baz=118,slow=33						
KURK	**Kurchatov**	**85.50**	**360**	P	**P**	**13 15 00.1**	**-0.9**
KURK				IAmb	IAmb	13 15 11.7	
	comp=Z,17nm,1.4s						
ABKAR	**Akbulak array**	**85.67**	**348**	P	**P**	**13 15 02.2**	**+0.2**
ABKAR				IAmb	IAmb	13 15 06.4	
	comp=Z,7.2nm,1.4s						
SONM	**Songino Array**	**86.27**	**18**	P	**P**	**13 15 05.1**	**0.0**
	comp=Z,1.9nm,0.8s,baz=223,slow=4.6,SNR=10						
SONM				LR	LR	13 52 22.8	
	comp=Z,136nm,20.3s,baz=208,slow=35						
SONM	**Songino Array**	**86.27**	**18**	IAmb	IAmb	13 15 12.3	
	comp=Z,2.1nm,0.8s						
ULN	**Ulaanbaatar**	**86.47**	**19**	P	**P**	**13 15 06.1**	**0.0**
TORD	**Torodi Ar. Bea**	**87.11**	**288**	P	**P**	**13 15 09.0**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=127,slow=3.8,SNR=5.7						
TORD				LR	LR	13 51 22.6	
	comp=Z,624nm,21.2s,baz=80,slow=34						
TORD	**Torodi Ar. Bea**	**87.11**	**288**	IAmb	IAmb	13 15 17.2	
	comp=Z,2.6nm,0.9s						
DBIC	**Dimbokro**	**88.52**	**279**	LR	LR	13 50 02.2	
	comp=Z,409nm,21.8s,baz=106,slow=32						
ZALV	**Zalesovo Beam**	**88.90**	**4**	P	**P**	**13 15 17.7**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=191,slow=7.2,SNR=6.0						
ZALV				LR	LR	13 53 16.5	
	comp=Z,96nm,20.9s,baz=204,slow=34						
TBI	**Tubuai**	**106.07**	**135**	*e*Sdif	Sdif	13 28 31.9	-2.9
	comp=Z,88nm,34.2s						
TBI	**Tubuai**	**106.07**	**135**	*e*LQ	LQ	13 47 03.8	
	comp=Z,348nm,36.2s						
TBI				*e*LR	LR	13 51 35.8	
	comp=Z,179nm,31.8s						
PPT2	**Papeete2**	**110.39**	**131**	*e*LR	LR	13 53 29.7	
	comp=Z,155nm,30.8s						
TAOE	**Nuku Hiva Isla**	**122.91**	**132**	*e*LR	LR	13 59 27.6	
	comp=Z,152nm,28.3s						
FRB	**Frobisher Bay**	**145.06**	**335**	PKPbc	**PKPbc**	**13 21 58.5**	**-1.0**
	comp=Z,3.6nm,0.7s,baz=63,slow=8.2,SNR=5.4						
SCHQ	**Schefferville**	**149.12**	**320**	PKPbc	**PKiKP**	**13 22 12.7**	**0.0**
	comp=Z,3.9nm,0.9s,baz=103,slow=5.8,SNR=4.1						
YKA	**Yellowknife Ar**	**151.40**	**13**	PKPbc	**PKPbc**	**13 22 16.2**	**-0.3**
	comp=Z,1.7nm,0.9s,baz=327,slow=3.0,SNR=16						
H06S1	**SOCORRO T**	**161.55**	**150**	T	T	16 24 51.5	
	SNR=24						
H06E1	**SOCORRO T-PHAS**	**161.61**	**150**	T	T	16 25 17.8	
	SNR=9.4						
NVAR	**Mina Array Bea**	**166.02**	**72**	PKPab	**PKPab**	**13 23 27.1**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=298,slow=1.9,SNR=3.8						

*NCEDC **15** 13:21:42.7±0.7,38˚.105N±0˚.006×122˚.24W±0˚.01, h9km±2km,Md2.3/79,Error ellipse: s-maj=1.5km s-min=0.9km az=88.0*
NEIC 15 13:21:42.8±0.5,38˚.103N±0˚.006×122˚.24W±0˚.02, h16km±1km,Error ellipse: s-maj=2.0km s-min=0.7km az=76.0,Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLHM	**Lake Herman**	**0.08**	**78**		Pg	13 21 47.0	+1.0
CPIM	**Pinole Ridge**	**0.12**	**169**		Pg	13 21 46.0	-0.4
CSPM	**San Pablo Ridg**	**0.15**	**200**		Pg	13 21 46.9	0.0
NGVM		**0.18**	**7**		Pg	13 21 47.1	-0.1
SNT	**Sears Point**	**0.18**	**296**		Pg	13 21 47.5	+0.2
BRIB	**Briones**	**0.20**	**158**		Pg	13 21 47.4	-0.1
CPMM	**Point Molate**	**0.20**	**220**		Pg	13 21 47.5	-0.1
RFSB	**Richmond Field**	**0.20**	**201**		Pg	13 21 47.4	-0.2
CVPM	**Vollmer Peak**	**0.22**	**175**		Pg	13 21 47.9	0.0
BL88	**Building 88, L**	**0.23**	**182**		Pg	13 21 48.0	0.0
VAK	**Adit at Lawren**	**0.23**	**181**		Pg	13 21 48.0	0.0
VAK					Sb	13 21 52.0	-0.5
BKS	**Berkeley--Byer**	**0.23**	**178**		Pg	13 21 48.0	0.0
BL67	**Building 67, L**	**0.23**	**182**		Pg	13 21 48.0	0.0
BL67					Sg	13 21 51.9	+0.3
BRK	**Berkeley--Havi**	**0.23**	**183**		Pg	13 21 48.0	0.0
CVS	**Carmenet Viney**	**0.29**	**325**		Pg	13 21 49.0	-0.1
CVS					Sg	13 21 53.7	+0.3
CYBM	**Yerba Buena Is**	**0.31**	**198**		Pg	13 21 49.4	+0.1
CRHM	**Round Hill Res**	**0.32**	**141**		Pb	13 21 50.0	-0.1
CMCM	**Mills College**	**0.33**	**170**		Pg	13 21 49.7	+0.1
CRPB	**Russellman Par**	**0.33**	**126**		Pg	13 21 49.5	-0.2
BDM	**Black Diamond**	**0.33**	**116**		Pg	13 21 50.1	+0.3
NAPC	**Atlas Peak**	**0.34**	**359**		Pg	13 21 50.1	+0.2
CLCB	**Lake Chabot**	**0.39**	**159**		Pg	13 21 51.0	+0.2
NTYM	**Taylor**	**0.44**	**311**		Pg	13 21 51.7	+0.1
NOLM	**Olema**	**0.44**	**262**		Pg	13 21 51.8	+0.2
MCCM	**Marconi Confer**	**0.50**	**275**		Sb	13 22 00.4	0.0
MCCM	**Marconi Confer**	**0.50**	**275**	Pg	Pg	13 21 52.7	-0.1
MCCM				Sg	Sb	13 22 00.1	-0.3
NSHM	**Saint Helena R**	**0.50**	**326**		Pg	13 21 52.8	-0.1
JCPM	**Coyote Point**	**0.52**	**187**		Pg	13 21 53.3	+0.2
SAC	**San Andreas**	**0.54**	**195**		Pg	13 21 53.7	+0.2
CNIC	**Niles Canyon**	**0.54**	**156**		Pg	13 21 53.6	+0.1
NBPM	**Berryessa Peak**	**0.56**	**4**		Pb	13 21 55.3	+0.9
MAC	**Mark West Spri**	**0.58**	**320**		Pb	13 21 54.7	0.0
WENL	**Wente Vineyard**	**0.62**	**141**		Pb	13 21 56.0	+0.8
NPRM	**Point Reyes**	**0.62**	**260**		Pg	13 21 55.0	0.0
OXMT	**Ox Mountain**	**0.62**	**193**		Pg	13 21 55.0	0.0
CMJM	**Mission San Jo**	**0.65**	**153**		Pb	13 21 55.8	0.0
JHPM	**Huddart Park**	**0.66**	**184**		Pb	13 21 56.1	+0.1
JRSC	**Jasper Ridge**	**0.70**	**180**		Pg	13 21 56.4	-0.1
NMTM	**Middletown**	**0.72**	**347**		Pb	13 21 57.1	+0.1
FARB	**Farallon Islan**	**0.72**	**236**		Pb	13 21 57.0	0.0
GAXM	**Alexander Vall**	**0.73**	**327**		Pg	13 21 56.8	-0.3
CALM	**Calaveras Res.**	**0.74**	**151**		Pg	13 21 57.2	-0.1
JFP	**Foothills Park**	**0.74**	**177**		Pg	13 21 57.4	0.0
JJRM	**Joaquin Road**	**0.76**	**177**		Pb	13 21 57.8	+0.1
BGH	**Bear Gulch**	**0.76**	**186**		Pb	13 21 58.0	+0.3
GCRM	**Castle Rock Sp**	**0.76**	**331**		Pb	13 21 57.8	0.0
CMLM	**Mount Lewis**	**0.78**	**143**		Pg	13 21 58.2	0.0
JBMM	**Black Mountain**	**0.79**	**175**		Pg	13 21 58.2	0.0
MNRC	**McLaughlin Min**	**0.79**	**349**		Pn	13 21 58.9	-0.5
GDXM	**Geysers**	**0.82**	**329**		Pb	13 21 58.0	-0.9
GDXM				Sg	Sb	13 22 09.5	-0.3
JPC	**Peters Creek,**	**0.83**	**178**		Pb	13 21 58.8	-0.1
FTR	**Fort Ross**	**0.83**	**300**		Pb	13 21 58.7	-0.3
JSGM	**Saratoga Golf**	**0.83**	**169**		Pg	13 21 59.2	+0.1
GSGM	**Seigler Mounta**	**0.84**	**335**		Pn	13 22 00.6	+0.5
CMMM	**Mount Mocho**	**0.88**	**137**		Pb	13 21 59.8	0.0
MHC	**Mount Hamilton**	**0.90**	**148**		Pb	13 21 59.8	-0.3
GCVM	**Cloverdale**	**0.90**	**318**		Pn	13 22 00.6	-0.3
JPSM		**0.91**	**185**		Pb	13 22 00.2	0.0
GACM	**Adobe Creek**	**0.91**	**328**		Pg	13 22 00.6	+0.1
JJOM	**Saint Joseph's**	**0.92**	**167**		Pb	13 22 00.0	-0.4
ARN	**Arnold Ranch**	**0.94**	**143**		Pb	13 22 00.6	-0.2
CCOB	**Coe Ranch Numb**	**0.96**	**152**		Pg	13 22 01.5	+0.1
JSTM	**Santa Teresa H**	**0.96**	**158**		Pb	13 22 01.0	-0.2
JUMM	**Mount Umunhum**	**0.98**	**164**		Pb	13 22 01.0	-0.5
AMC	**Almaden**	**0.99**	**161**		Pb	13 22 01.2	-0.5
GDCM	**Dry Creek**	**1.02**	**311**		Pn	13 22 02.6	-0.1
JLAB	**Laurel Hill**	**1.03**	**157**		Pb	13 22 01.8	-0.5
JHLM	**Holstrom Ranch**	**1.04**	**162**		Pb	13 22 01.8	-0.8
HOPS	**Hopland Field**	**1.10**	**324**	Pg	Pb	13 22 03.5	0.0
GSNM	**Snow Mountain**	**1.12**	**319**		Pg	13 22 04.6	+0.1
HLPM	**Lions Peak**	**1.17**	**155**		Pn	13 22 03.8	-0.7
AFDM	**Forest Hills D**	**1.31**	**49**	Pn	Pn	13 22 05.5	-1.0
CMB	**Columbia Colle**	**1.47**	**92**	Pn	Pn	13 22 08.2	-0.5
SAO	**San Andreas Ge**	**1.48**	**154**	Pn	Pn	13 22 07.7	-1.2
ORV	**Oroville**	**1.56**	**22**	Pn	Pn	13 22 09.0	-1.0
PMPB	**Monarch Peak**	**2.21**	**148**	Pn	Pn	13 22 19.9	+0.9
WAKR	**Walker**	**2.24**	**79**	Pn	Pn	13 22 20.4	+0.8
BEKR	**Beckworth**	**2.29**	**39**	Pn	Pn	13 22 21.0	+0.8
PNTR	**Pine Nut**	**2.29**	**64**	Pn	Pn	13 22 20.6	+0.4
YERR	**Yerington**	**2.51**	**69**	Pn	Pn	13 22 24.7	+1.4
MDPB	**Devils Postpil**	**2.55**	**100**	Pn	Pn	13 22 25.6	+1.8
PAHR	**Pah Rah Range**	**2.75**	**53**	Pn	Pn	13 22 26.5	+0.1

*SJA **15** 13:29:24.2±0.8,31˚.42S×72˚.05W, h30km, ML3.2, MW3.4*
*GUC **15** 13:29:26.6±0.6,31˚.52S×71˚.54W, h44km±3km, ML3.5*
ISC 15 13:29:25.3±2.2,31˚.50S±0˚.03×71˚.61W±0˚.07,h9km±14km, n29,σ1s29/46,1C-4D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CO02	**Combarbal**	**0.59**	**61**	*i*P	**Pn**	**13 29 39.4**	**-0.7**
CO02				*i*S	**Sn**	**13 29 48.8**	**-1.2**
CO02				IAML		13 29 52.2	
	comp=E,4µm,0.3s						
GO04	**Tololo Observa**	**1.49**	**28**	*i*P	**Pb**	**13 29 53.2**	**0.0**
GO04				*i*S	**Sg**	**13 30 13.7**	**+0.5**
GO04				IAML		13 30 18.5	
	comp=N,3µm,0.2s						
GO04	**Tololo Observa**	**1.49**	**28**	*e*P	**Pb**	**13 29 53.3**	**0.0**
GO04				*i*S	**Sg**	**13 30 15.2**	**+1.9**
VA03	**San Esteban**	**1.55**	**145**	*e*P	**Pn**	**13 29 53.2**	**+0.1**

Ms1 3.6/19,ms1mx3.5/35,Error ellipse: s-maj=27.6km s-min=14.3km az=69.0
*BJI **15** 13:46:31.8±0.0,7.63S×127.84E,h75km,mB5.1/14, mb4.5/22,Ms4.8/2,Ms7 4.6/1*
ISC 15 13:46:23.5±0.4,8.42S±0.05×128.13E±0.06,h35km,n94, σ2§47/86,mb4.5/22,MS3.6/14,Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.17**	**82**	P		**Pn**	**13 47 13.1 +2.2**
SAUI	**Saumlaki**	**3.17**	**82**			Pn	13 47 15.7 +4.8
SOEI	**Soe**	**4.04**	**250**	P		**Pn**	**13 47 27.7 +4.6**
SOEI	**Soe**	**4.04**	**250**			**Pn**	**13 47 27.8 +4.6**
BNDI	**Bandanaira**	**4.25**	**25**	P		**Pn**	**13 47 24.9 -0.9**
AAI	**Ambon**	**4.70**	**1**	P		**Pn**	**13 47 33.0 +1.0**
NLAI	**Namlea**	**5.25**	**349**	P		**Pn**	**13 47 41.9 +2.4**
	0.2nm62nm,0.6s						
MTN	**Manton Dam**	**5.30**	**146**			**Pn**	**13 47 43.2 +3.0**
KDU	**Kakadu**	**6.02**	**135**	P		**Pn**	**13 47 51.3 +1.2**
	baz=6.1,SNR=107						
SANI	**Sanana**	**6.67**	**341**	P		**Pn**	**13 47 59.6 +0.4**
	0.1nm27nm,1.0s						
FAKI	**Fak Fak**	**6.83**	**37**	P		**Pn**	**13 48 01.6 +0.3**
	0.4nm74nm,0.8s						
FAKI	**Fak Fak**	**6.83**	**37**	Pn		**Pn**	**13 48 03.1 +1.9**
KNRA	**Kununurra**	**7.24**	**175**	P		**Pn**	**13 48 09.0 +2.0**
	baz=7.3,SNR=106						
KNRA	**Kununurra**	**7.24**	**175**			**Pn**	**13 48 09.0 +2.0**
SIJI	**Sorong**	**8.12**	**23**	P		Pn	13 48 22.7 +3.7
	4.1nm,0.3s,baz=299,slow=6.0,SNR=12						
SIJI				S		Sn	13 49 56.0 +6.3
	1.1nm,0.3s,baz=287,slow=19,SNR=2.7						
SIJI				LR		LR	13 52 01.4
	comp=Z,549nm,19.8s,baz=218,slow=42						
SWI	**Sorong**	**8.12**	**23**	P		**Pn**	**13 48 19.5 +0.4**
	0.2nm55nm,1.0s						
BKSI	**Bulukumba**	**8.53**	**291**	P		**Pn**	**13 48 28.1 +3.5**
	79nm,0.9s						
BNSI	**Bone**	**8.92**	**296**	P		**Pn**	**13 48 33.0 +3.0**
	2µm123nm,1.3s						
KAPI	**Kappang**	**8.98**	**292**	P		**Pn**	**13 48 34.3 +3.4**
	1.2nm,0.3s,baz=107,slow=14,SNR=3.1						
KAPI				LR		LR	13 52 03.5
	comp=Z,646nm,18.1s,baz=300,slow=39						
SPSI	**Sidrap Palu**	**9.42**	**298**	P		**Pn**	**13 48 40.5 +3.7**
	53nm,1.5s						
TTSI	**Tana Toraja**	**9.84**	**302**	P		**Pn**	**13 48 46.2 +3.6**
FITZ	**Fitzroy Crossi**	**9.93**	**194**	P		**Pn**	**13 48 43.8 0.0**
	baz=9.9,SNR=61						
FITZ	**Fitzroy Crossi**	**9.93**	**194**	P		**Pn**	**13 48 43.8 0.0**
	2.7nm,0.3s,baz=15,slow=10.0,SNR=51						
FITZ				S		**Sn**	**13 50 29.3 -4.7**
	15nm,0.3s,baz=120,slow=22,SNR=9.5						
FITZ				LR		LR	13 53 20.6
	comp=Z,408nm,20.1s,baz=15,slow=41						
WRAB	**Tennant Creek**	**12.94**	**153**			**Pn**	**13 49 22.6 -2.4**
WRA	**Warramunga Arr**	**12.94**	**153**	P		**Pn**	**13 49 23.2 -1.8**
	9.6nm,0.3s,baz=318,slow=13,SNR=144						
WRA				S		**Sn**	**13 51 40.0 -7.9**
	10nm,0.3s,baz=332,slow=22,SNR=7.4						
WR0	**Warramunga Arr**	**13.04**	**152**			**Pn**	**13 49 25.6 -0.9**
JAGI	**Jajag, Banyuwa**	**13.83**	**269**			**Pn**	**13 49 38.0 +0.8**
PSA00	**Pilbara Seismi**	**15.33**	**210**	P		**Pn**	**13 49 55.8 -1.6**
PSA00				IAmb		IAmb	13 50 16.5
	comp=Z,57nm,1.1s						
DAV	**Davao City (W)**	**15.59**	**351**	LR		LR	13 56 13.9
	comp=Z,161nm,20.8s,baz=182,slow=38						
COEN	**Coen**	**15.75**	**112**			**Pn**	**13 50 02.2 -0.6**
AS31	**Alice Springs**	**16.14**	**161**			**Pn**	**13 50 06.0 -1.9**
AS31				IAmb		IAmb	13 50 15.9
	comp=Z,25nm,0.7s						
ASAR	**Alice Springs**	**16.14**	**161**	P		**Pn**	**13 50 05.7 -2.2**
	comp=Z,6.6nm,0.3s,baz=332,slow=9.4,SNR=219						
ASAR				S		**Sn**	**13 53 00.1 -5.8**
	comp=Z,4.7nm,0.3s,baz=329,slow=19,SNR=9.4						
ASAR				LR		LR	13 57 02.1
	comp=Z,246nm,18.9s,baz=349,slow=39						
MTSU	**Mount Surprise**	**18.46**	**123**	P		**Pn**	**13 50 36.9 +0.1**
	baz=19,SNR=7.7						
PMG	**Port Moresby**	**18.82**	**94**	P		**Pn**	**13 50 45.3 +4.1**
	comp=Z,0.7nm,0.3s,baz=284,slow=7.5,SNR=3.8						
PMG				LR		LR	13 59 19.9
	comp=Z,266nm,18.2s,baz=264,slow=40						
PMG	**Port Moresby**	**18.82**	**94**			**Pn**	**13 50 43.1 +1.9**
PMG				IAmb		IAmb	13 51 04.5
	comp=Z,41nm,1.0s						
SBUM	**Sibu**	**19.19**	**304**	Pn		**Pn**	**13 50 45.4 -0.2**
GIRL	**Giralia**	**19.45**	**222**	P		**P**	**13 50 48.2 +0.9**
CISI	**Cisompet, Garu**	**20.14**	**271**	P		**P**	**13 50 53.7 -1.3**
MEEK	**Meekatharra**	**20.25**	**205**	P		**P**	**13 50 57.5 +1.5**
	baz=20,SNR=12						
KSM	**Kuching**	**20.30**	**298**	P		**P**	**13 50 54.5 -2.2**
KSM				IAmb		IAmb	13 51 28.4
	comp=Z,24nm,1.0s						
LEM	**Lembang**	**20.39**	**273**	LR		LR	14 00 16.5
	comp=Z,290nm,19.3s,baz=206,slow=41						
CTA	**Charters Tower**	**21.02**	**125**	P		**P**	**13 51 08.6 +4.2**
	comp=Z,14nm,0.8s,baz=303,slow=13,SNR=11						
FORT	**Forrest**	**22.25**	**180**	P		**P**	**13 51 20.2 +2.8**
	baz=22,SNR=19						
FORT	**Forrest**	**22.25**	**180**	P		**P**	**13 51 20.1 +2.6**
MORW	**Morawa**	**23.48**	**207**	P		**P**	**13 51 31.2 +1.0**
MORW				IAmb		IAmb	13 51 47.4
	comp=Z,19nm,0.9s						
QLP	**Quilpie**	**23.66**	**142**	P		**P**	**13 51 34.6 +2.6**
	baz=24,SNR=5.8						
KRVT	**Keravat (AS076**	**24.09**	**82**	LR		LR	14 01 35.5
	comp=Z,129nm,21.9s,baz=254,slow=37						
BBOO	**Buckleboo**	**25.36**	**164**	P		**P**	**13 51 50.4 +2.9**
	baz=26,SNR=26						
BBOO	**Buckleboo**	**25.36**	**164**	P		**P**	**13 51 49.5 +2.1**
BBOO				IAmb		IAmb	13 52 01.9
	comp=Z,18nm,0.7s						
NWAO	**Narrogin (SRO)**	**26.40**	**201**	P		**P**	**13 51 58.8 +2.0**
	comp=Z,16nm,0.9s,baz=23,slow=4.9,SNR=5.6						
NWAO				LR		LR	14 03 41.5
	comp=Z,186nm,18.5s,baz=30,slow=39						
NWAO	**Narrogin (SRO)**	**26.40**	**201**	P		**P**	**13 51 58.8 +2.0**
NWAO				IAmb		IAmb	13 52 47.5
	comp=Z,24nm,1.0s						
STKA	**Stephens Creek**	**26.49**	**154**	P		**P**	**13 52 00.6 +2.9**
	comp=Z,7.9nm,0.7s,baz=327,slow=9.4,SNR=20						
STKA				LR		LR	14 03 32.8
	comp=Z,126nm,18.9s,baz=1.7,slow=38						
STKA	**Stephens Creek**	**26.49**	**154**	P		**P**	**13 51 60.0 +2.3**
STKA				IAmb		IAmb	13 52 18.5
	comp=Z,26nm,1.9s						
HTT	**Hallett**	**26.82**	**160**	P		**P**	**13 52 05.2 +4.5**
	baz=27,SNR=8.3						
CMSA	**Cobar Meteorol**	**28.22**	**147**	P		**P**	**13 52 16.6 +3.4**
	baz=28,SNR=7.5						
ARPS	**Mount Arapiles**	**30.85**	**158**	P		**P**	**13 52 40.3 +3.8**
	baz=31,SNR=10						
CMAR	**Chiang Mai Arr**	**39.28**	**313**	P		**P**	**13 53 48.5 -0.8**
	comp=Z,0.7nm,0.7s,baz=147,slow=7.2,SNR=5.2						
CMAR				LR		LR	14 11 02.8
	comp=Z,76nm,21.8s,baz=174,slow=38						
NJ2	**Nanjing**	**41.20**	**348**	*e*P		**P**	**13 54 05.3 +0.3**
NJ2				pmax		pmax	
	comp=Z,5.0nm,0.6s						
KSRS	**Korea Array**	**45.63**	**360**	P		**P**	**13 54 40.6 +0.1**
	comp=Z,1.4nm,0.8s,baz=181,slow=8.8,SNR=3.4						
KSRS				LR		LR	14 11 55.3
	comp=Z,34nm,22.0s,baz=180,slow=34						
PALK	**Pallekele**	**49.78**	**287**	LR		LR	14 16 43.3
	comp=Z,58nm,19.6s,baz=114,slow=37						
HHC	**Hu-ho-hao-te**	**51.34**	**344**	*e*P		**P**	**13 55 25.5 +0.8**
HHC				pmax		pmax	
	comp=Z,3.0nm,0.7s						
HHC				pmax		pmax	
	comp=Z,58nm,6.6s						
ODAN	**Odare**	**52.82**	**313**	*e*P		**P**	**13 55 34.2 -1.9**
	comp=Z,7.9nm,0.6s						
TAPN	**Taplejung**	**52.88**	**314**	*e*P		**P**	**13 55 33.6 -3.0**
	comp=Z,5.0nm,0.5s						
RAMN	**Ramite**	**53.45**	**313**	*e*P		**P**	**13 55 39.3 -1.4**
	comp=Z,17nm,0.7s						
GTA	**Gaotai**	**54.35**	**333**	*e*P		**P**	**13 55 45.3 -1.7**
GTA				pP		sP	13 56 05.3 +4.1
GTA				sP		pP	13 56 13.5 +16
GTA				pmax		pmax	
	comp=Z,2.0nm,0.9s						
GUN	**Gumba**	**54.52**	**313**	*e*P		**P**	**13 55 47.0 -1.7**
	comp=Z,14nm,0.8s						
DANN	**Dangsing**	**56.31**	**312**	*e*P		**P**	**13 55 57.8 -3.7**
	comp=Z,13nm,0.7s						
SONM	**Songino Array**	**59.22**	**343**	P		**P**	**13 56 20.2 -1.2**
	comp=Z,0.5nm,0.5s,baz=162,slow=9.4,SNR=5.5						
SONM	**Songino Array**	**59.22**	**343**	IAmb		IAmb	13 56 23.4
	comp=Z,1.1nm,0.9s						
WMQ	**Urumqi**	**63.59**	**328**	*e*P		**P**	**13 56 50.8 -0.2**
WMQ				pP		sP	13 57 06.8 +1.3
WMQ				pmax		pmax	
	comp=Z,7.0nm,1.1s						
WMQ				pmax		pmax	
	comp=Z,120nm,3.8s						
WMQ				LR		LR	
	comp=Z,270nm,28.9s						
WMQ				LR		LR	
	comp=Z,770nm,29.1s						
PETK	**Petropavlovsk-**	**66.25**	**19**	P		**P**	**13 57 07.8 -0.2**
	comp=Z,2.1nm,0.8s,baz=236,slow=15,SNR=4.5						
PETK				LR		LR	14 26 36.5
	comp=Z,16nm,20.3s,baz=243,slow=36						
KSH	**Kashi**	**67.83**	**319**	P		P	13 57 24.1 +5.6
MK31	**Makanchi Array**	**68.41**	**328**	P		**P**	**13 57 19.1 -2.7**
MKAR	**Makanchi Array**	**68.41**	**328**	P		**P**	**13 57 21.0 -0.8**
	comp=Z,0.7nm,0.5s,baz=121,slow=7.9,SNR=21						
MKAR				LR		LR	14 28 23.2
	comp=Z,41nm,21.2s,baz=118,slow=37						
VNDA	**Vanda**	**71.28**	**173**	LR		LR	14 29 29.6
	comp=Z,75nm,18.1s,baz=351,slow=36						
ZAA0	**Zalesovo Array**	**72.05**	**335**	P		**P**	**13 57 41.6 -2.2**
ZALV	**Zalesovo Beam**	**72.05**	**335**	P		**P**	**13 57 42.3 -1.6**
	comp=Z,1.2nm,0.4s,baz=131,slow=4.3,SNR=10						
KURK	**Kurchatov**	**72.77**	**330**	P		**P**	**13 57 47.3 -1.0**
KURK				IAmb		IAmb	13 57 47.9
	comp=Z,5.4nm,0.9s						
MAW	**Mawson**	**72.97**	**201**	LR		LR	14 28 19.2
	comp=Z,77nm,19.8s,baz=250,slow=34						
GEYT	**Alibeck**	**79.72**	**311**	LR		LR	14 38 34.5
	comp=Z,29nm,21.4s,baz=60,slow=39						
TIXI	**Tiksi**	**79.90**	**0**	P		**P**	**13 58 26.6 -1.7**
TIXI				IAmb		IAmb	13 59 19.5
	comp=Z,5.1nm,0.4s						
QSPA	**South Pole Qui**	**81.57**	**180**	P		**P**	**13 58 40.0 +2.4**
GNI	**Garni**	**90.35**	**310**	LR		LR	14 47 30.6
	comp=Z,9.0nm,19.3s,baz=88,slow=41						
LANS	**Liptovska Anna**	**108.52**	**319**	*e*PDIFF		**Pdif**	**14 00 43.7 +0.6**
YKA	**Yellowknife Ar**	**109.83**	**26**	PKiKP		**PKiKP**	**14 04 51.0 +0.4**
	comp=Z,0.4nm,0.7s,baz=293,slow=2.3,SNR=6.6						
YKA				PKKPbc		**PKKPbc**	**14 15 56.5 +0.1**
	comp=Z,0.4nm,0.9s,baz=103,slow=3.4,SNR=4.9						
PDAR	**Pinedale Array**	**119.19**	**45**	PKP		**PKiKP**	**14 05 09.9 +0.3**
	comp=Z,0.9nm,0.7s,baz=279,slow=1.0,SNR=11						
ULM	**Lac du Bonnet**	**124.63**	**33**	PKP		**PKPdf**	**14 05 18.9 -0.5**
	comp=Z,1.9nm,0.8s,baz=1.5,slow=4.1,SNR=3.3						
TXAR	**Lajitas Array**	**127.24**	**60**	PKP		**PKiKP**	**14 05 27.5 +1.8**
	comp=Z,0.6nm,0.7s,baz=270,slow=1.3,SNR=4.7						
TORD	**Torodi Ar. Bea**	**127.25**	**280**	PKP		**PKiKP**	**14 05 25.9 -0.1**
	comp=Z,0.5nm,0.5s,baz=118,slow=1.8,SNR=3.8						
PLCA	**Paso Flores**	**128.15**	**162**	PKP		**PKiKP**	**14 05 27.8 +0.5**
	comp=Z,1.8nm,0.9s,baz=248,slow=5.2,SNR=3.9						
TKL	**Tuckaleechee C**	**140.21**	**42**	PKP		**PKiKP**	**14 05 50.0 -1.7**
	comp=Z,2.3nm,0.5s,baz=173,slow=4.3,SNR=5.0						
CPUP	**Villa Florida**	**145.06**	**171**	PKPbc		**PKiKP**	**14 06 00.1 -1.8**
	comp=Z,8.8nm,0.7s,baz=203,slow=1.7,SNR=23						
CPUP	**Villa Florida**	**145.06**	**171**			**PKiKP**	**14 05 59.9 -2.0**
LPAZ	**La Paz**	**150.65**	**147**	PKPbc		**PKiKP**	**14 06 16.1 +1.7**
	comp=Z,2.7nm,0.6s,baz=277,slow=1.7,SNR=10						

*FUNV **15** 13:50:39.8,10.68N×60.72W,h22km,MW2.7*
*TRN **15** 13:50:42.5,10.97N×60.94W,h7km,MD2.8*
ISC 15 13:50:38.9±1.8,10.73N±0.05×60.74W±0.06,h17km±12km, n11,σ1§54/22,1C,Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBH	**Brigand Hill**	**0.41**	**233**	*e*P		**Pn**	**13 50 51.8 +1.8**
TBH				*e*S		**Sn**	**13 51 00.2 +3.0**
TOSP	**Speyside**	**0.60**	**19**	*i*P		**Pn**	**13 50 52.0 -0.6**
TOSP				*e*S		**Sb**	**13 51 00.9 +1.8**
TOSP	**Speyside**	**0.60**	**19**	*e*P		**Pb**	**13 50 51.7 +0.8**
TOSP				*e*S		**Sn**	**13 51 01.2 -0.7**
TRN	**Trinidad (W)**	**0.66**	**263**	*e*P		**Pn**	**13 50 52.9 -0.6**
TRN				*e*S		**Sb**	**13 51 02.0 +1.2**
TRN	**Trinidad (W)**	**0.66**	**263**	*e*P		**Pn**	**13 50 52.5 -1.0**
TRN				*e*S		**Sb**	**13 51 02.0 +1.2**
GUIV	**Guiria**	**1.46**	**267**	*e*P		**Pg**	**13 51 06.5 -0.6**
GUIV				*e*S		**Sg**	**13 51 25.9 -0.3**
GUIV	**Guiria**	**1.46**	**267**	*e*P		**Pn**	**13 51 04.5 0.0**
GUIV				*e*S		**Sn**	**13 51 23.1 -0.1**
GRGR	**Grenville**	**1.66**	**327**	*e*P		**Pn**	**13 51 07.4 +0.2**
GRGR				*e*S		**Sn**	**13 51 27.2 -1.0**
GUNV	**Guanoco**	**2.24**	**256**	*e*P		**Pn**	**13 51 15.8 +0.6**
GUNV				*e*S		**Sn**	**13 51 41.4 -1.1**
CRUV	**Carupano**	**2.46**	**269**	*e*P		**Pn**	**13 51 17.6 -0.6**
CRUV				*e*S		**Sn**	**13 51 45.0 -2.8**
RIOV	**Rio Grande**	**2.85**	**202**	*e*P		**Pn**	**13 51 22.7 -0.9**
RIOV				*e*S		**Sn**	**13 51 54.5 -3.1**

IDC 15 14:04:16.6±2.5,4.87S×129.75E,h198km±37km,mb2.9/1, mb1 3.1/5,mb1mx3.0/33,mbtmpg3.6/5,Error ellipse: s-maj=68.8km s-min=15.3km az=86.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.25**	**21**	P		Pn	14 05 22.7 +1.2
	baz=204,slow=20						
SIJI				S		Sn	14 06 12.2 -0.3
	1.7nm,0.3s,baz=215,slow=24,SNR=5.9						
FITZ	**Fitzroy Crossi**	**13.75**	**197**	P		Pn	14 07 24.3 +0.7
	0.3nm,0.3s,baz=344,slow=7.4,SNR=4.6						
WRA	**Warramunga Arr**	**15.64**	**164**	P		P	14 07 45.2 -1.5
	0.1nm,0.3s,baz=342,slow=13,SNR=3.5						
WRA				S		S	14 10 30.1 -10
	0.1nm,0.3s,baz=341,slow=24,SNR=2.6						
ASAR	**Alice Springs**	**19.12**	**168**	P		P	14 08 24.9 +0.2
	0.2nm,0.3s,baz=349,slow=11,SNR=19						
MKAR	**Makanchi Array**	**66.32**	**326**	P		P	14 14 43.8 -0.1
	0.2nm,0.4s,baz=126,slow=7.3,SNR=2.9						

*TAP **15** 14:05:13.0,23.48N×122.00E,h21km,ML2.8,D*
*JMA **15** 14:05:12.5±0.1,23.40N×122.00E,h53km,M2.7*
ISC 15 14:05:12.3±1.2,23.42N±0.03×122.03E±0.03,h25km±13km, n71,σ0§55/103,1D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HGSD	**Ruisui**	**0.56**	**277**	P		**Pb**	**14 05 24.1 +0.4**
	baz=271						
HGSD				*i* S		**Sn**	**14 05 32.4 -0.8**
	baz=271						
EGFH	**Guangfu**	**0.61**	**294**	*e*P		**Pn**	**14 05 25.3 -0.1**
	baz=289						
ENLB	**Shoufeng**	**0.62**	**321**	*e*P		**Pb**	**14 05 24.4 -0.2**
	baz=318						
ENLB				*e*S		**Sn**	**14 05 33.7 -1.0**
	baz=318						
EHY	**Hungye**	**0.66**	**277**	P		**Pb**	**14 05 25.8 +0.6**
	baz=272						
EHY				*e*S		**Sn**	**14 05 35.2 -0.4**
	baz=272						
ESL	**Shilin**	**0.68**	**305**	*i* P		**Pb**	**14 05 25.6 +0.1**
	baz=302						
ESL				*i* S		**Sn**	**14 05 34.7 -1.3**
	baz=302						
YULB	**Yu-li**	**0.68**	**268**	*e*P		**Pb**	**14 05 25.9 +0.3**
	baz=262						
YULB				S		**Sn**	**14 05 36.2 +0.1**
	baz=262						
HWA	**Hwalien**	**0.68**	**325**	*e*P		**Pn**	**14 05 25.8 -0.5**
	baz=323						
TWF1	**Yuli**	**0.68**	**264**	*i*P		**Pb**	**14 05 25.9 +0.4**
	baz=258						
TWF1				*i* S		**Sn**	**14 05 36.0 -0.1**
	baz=258						
CHKT	**Chengkung**	**0.69**	**243**	*e*P		**Pb**	**14 05 25.6 -0.2**
	baz=236						
FULB	**Fuli**	**0.72**	**252**	*e*P		**Pb**	**14 05 26.0 -0.2**
	baz=246						
FULB				*e*S		**Sb**	**14 05 35.3 -0.3**
	baz=246						
TWD	**Chiawan**	**0.77**	**329**	*e*P		**Pn**	**14 05 27.3 -0.3**
	baz=328						
TWD				*i* S		**Sn**	**14 05 37.3 -1.0**
	baz=328						
NACB	**Ninganchiao**	**0.85**	**332**	P		**Pb**	**14 05 28.3 -0.2**
	baz=331						
NACB				*e*S		**Sn**	**14 05 39.6 -0.8**
	baz=331						
VWDT	**VWDT**	**0.88**	**292**	*e*P		**Pn**	**14 05 29.5 +0.4**
	baz=288						
VWDT				*e*S		**Sn**	**14 05 41.4 +0.3**
	baz=288						
ETLH	**Xiulin Townshi**	**0.93**	**327**	*i* P		**Pn**	**14 05 29.7 -0.2**
	baz=326						
ETLH				*e*S		**Sn**	**14 05 41.4 -1.1**
	baz=326						
OWD	**Renai**	**0.95**	**304**	*i* P		**Pn**	**14 05 30.2 0.0**
	baz=301						
OWD				*e*S		**Sb**	**14 05 42.0 -0.4**
	baz=301						
ELDTW	**Lidau**	**0.96**	**256**	*e*P		**Pb**	**14 05 29.7 -0.7**
	baz=251						
YUS	**Yu-Shan**	**1.00**	**274**	*i* P		**Pb**	**14 05 31.4 +0.2**
	baz=270						
YUS				*e*S		**Sb**	**14 05 44.3 +0.2**
	baz=270						
WHF	**Hehuan Shan**	**1.01**	**316**	P		**Pn**	**14 05 31.1 -0.1**
	baz=314						
WHF				*i* S		**Sn**	**14 05 44.1 -0.8**
	baz=314						
CHGB	**Renai**	**1.01**	**309**	*e*P		**Pn**	**14 05 31.5 +0.4**
	baz=307						
CHGB				*i* S		**Sn**	**14 05 44.5 -0.2**
	baz=307						
NANB	**Nanao**	**1.03**	**346**	*i* P		**Pn**	**14 05 31.4 +0.2**
	baz=346						
NANB				*i* S		**Sn**	**14 05 44.9 0.0**
	baz=346						
ENA	**Nanau**	**1.04**	**345**	*i* P		**Pn**	**14 05 31.4 +0.1**
	baz=346						
ENA				S		**Sn**	**14 05 44.8 -0.2**
	baz=346						
SSLB	**Suanglung**	**1.05**	**290**	P		**Pn**	**14 05 31.9 +0.4**
	baz=287						
SSLB				*i* S		**Sn**	**14 05 46.0 +0.5**
	baz=287						
TWGBT	**Beinan**	**1.06**	**236**	*e*P		**Pn**	**14 05 31.2 -0.4**
	baz=232						
TWG	**Pinlang**	**1.07**	**236**	*e*P		**Pn**	**14 05 31.2 -0.5**
	baz=232						
WHYT	**Xinyi Township**	**1.12**	**284**	*e*P		**Pb**	**14 05 33.3 +0.3**
	baz=281						
EOS1	**EOS1**	**1.13**	**4**	*e*P		**Pb**	**14 05 33.2 +0.1**
	baz=6.0						
EOS1				*e*S		**Sn**	**14 05 47.4 +0.3**
	baz=6.0						
ALS	**Alishan**	**1.13**	**275**	*e*P		**Pb**	**14 05 33.7 +0.3**
	baz=271						
SMLT	**Sun Moon Lake**	**1.14**	**294**	P		**Pb**	**14 05 33.4 0.0**
	baz=291						
TWT	**Tachien**	**1.14**	**317**	*e*P		**Pb**	**14 05 34.0 +0.5**
	baz=314						
TWT				*i* S		**Sn**	**14 05 47.9 +0.1**
	baz=314						
TDCB	**Techi**	**1.15**	**316**	*e*P		**Pb**	**14 05 34.0 +0.3**
	baz=314						
TDCB				*i* S		**Sn**	**14 05 48.0 -0.1**
	baz=314						
NNSH	**Datong**	**1.17**	**329**	*e*P		**Pb**	**14 05 33.6 -0.3**
	baz=328						
NNSH				S		**Sn**	**14 05 48.1 -0.2**
	baz=328						
NNS	**Nan Shan**	**1.18**	**329**	*e*P		**Pb**	**14 05 33.9 -0.3**
	baz=329						
NNS				*i* S		**Sn**	**14 05 48.5 -0.2**
	baz=329						
TYC	**Yuchr**	**1.18**	**294**	*e*P		**Pb**	**14 05 34.2 +0.2**
	baz=292						
DPDB	**Guoxing**	**1.18**	**301**	*e*P		**Pb**	**14 05 34.1 0.0**
	baz=299						
DPDB				*e*S		**Sn**	**14 05 49.4 +0.7**
	baz=299						
TWC	**Suao**	**1.19**	**352**	*e*P		**Pb**	**14 05 34.2 -0.1**
	baz=353						
STYT	**Tauyuan**	**1.20**	**258**	*e*P		**Pn**	**14 05 34.2 +0.6**
	baz=254						
CHN5	**Tsauling**	**1.26**	**278**	P		**Pb**	**14 05 36.0 +0.7**
	baz=275						
WJS	**Zhushan**	**1.26**	**289**	*e*P		**Pb**	**14 05 36.1 +0.6**
	baz=286						
NDT	**Datong Townshi**	**1.27**	**338**	P		**Pb**	**14 05 35.0 -0.6**
	baz=338						
NDT				*i* S		**Sn**	**14 05 50.8 +0.1**
	baz=338						
ENTT	**Nioudou**	**1.29**	**341**	*e*P		**Pb**	**14 05 35.3 -0.5**
	baz=341						
ENTT				*i* S		**Sn**	**14 05 51.2 +0.1**
	baz=341						
ECL	**Taimali**	**1.29**	**231**	*e*P		**Pn**	**14 05 33.9 -0.8**
	baz=227						
TPUB	**Ta-pu**	**1.30**	**265**	*e*P		**Pb**	**14 05 36.2 +0.2**
	baz=261						
WHP	**Taichung City**	**1.31**	**311**	*e*P		**Pb**	**14 05 37.7 +1.4**
	baz=309						
WTP	**Ta-pu**	**1.32**	**263**	*e*P		**Pb**	**14 05 36.6 +0.2**
	baz=259						
JYNG	**Yonagunijimaku**	**1.32**	**39**	P		**Pb**	**14 05 36.8 +0.4**
JYNG				*e*S		**Sn**	**14 05 52.5 +0.5**
CHN4	**Tsaushan**	**1.33**	**267**	*e*P		**Pb**	**14 05 37.0 +0.5**
	baz=264						
TWE	**Neicheng**	**1.34**	**346**	*e*P		**Pb**	**14 05 36.3 -0.4**
	baz=346						
SLGT	**Liugui**	**1.35**	**252**	*e*P		**Pn**	**14 05 36.5 +1.0**
	baz=248						
YOJ	**Yonaguni jima**	**1.37**	**41**	P		**Pn**	**14 05 36.4 +0.6**
YOJ				*e*S		**Sn**	**14 05 53.7 +0.6**
SLBB	**Yuanshan**	**1.38**	**345**	*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.23**	**325**	P	**Pn**	**14 06 03.5**	**-0.8**
KPJI	**Karang Pucung**	**0.72**	**29**	P	**Pn**	**14 06 08.1**	**+0.5**
CISI	**Cisompet, Garu**	**0.86**	**298**	P	**Pn**	**14 06 09.3**	**+0.2**
CISI				S	**Sn**	**14 06 22.4**	**-1.0**
CISI	**Cisompet, Garu**	**0.86**	**298**	Pn	**Pn**	**14 06 09.0**	**0.0**
LEM	**Lembang**	**1.48**	**320**	P	**Pn**	**14 06 19.6**	**+3.3**
	78nm,0.3s,baz=238,slow=19,SNR=21						
LEM				S	**Sn**	**14 06 40.6**	**+4.5**
	86nm,0.3s,baz=1.7,slow=17,SNR=24						
LEM	**Lembang**	**1.48**	**320**	P	**Pn**	**14 06 19.1**	**+2.9**
CNJI	**Cibinong**	**1.58**	**294**	P	**Pn**	**14 06 18.1**	**+0.8**
CNJI				S	**Sn**	**14 06 38.3**	**+0.3**
YOGI	**Yogyakarta**	**1.71**	**85**	P	**Pn**	**14 06 19.0**	**+0.2**
UGM	**Wanagama**	**1.93**	**88**	P	**Pn**	**14 06 21.4**	**-0.2**
UGM	**Wanagama**	**1.93**	**88**	Pn	**Pn**	**14 06 21.9**	**+0.2**
SMRI	**Semarang**	**2.06**	**64**	P	**Pn**	**14 06 24.8**	**+1.5**
SMRI	**Semarang**	**2.06**	**64**	Pn	**Pn**	**14 06 24.9**	**+1.5**
SKJI	**Sukabumi**	**2.23**	**295**	P	**Pn**	**14 06 27.6**	**+2.1**
DBJI	**Dramaga**	**2.30**	**308**	P	**Pn**	**14 06 28.4**	**+1.9**
WOJI	**Wonogiri, Jawa**	**2.33**	**87**	P	**Pn**	**14 06 27.1**	**+0.3**
PCJI	**Pacitan**	**2.58**	**95**	P	**Pn**	**14 06 30.9**	**+0.7**
UWJI	**Ujung Watu**	**2.81**	**57**	P	**Pn**	**14 06 34.2**	**+1.0**
NGJI	**Ngawi**	**2.92**	**78**	P	**Pn**	**14 06 36.6**	**+2.0**
PWJI	**Pagerwojo**	**3.19**	**91**	P	**Pn**	**14 06 39.0**	**+0.7**
GRJI	**Gresik**	**4.01**	**75**	P	**Pn**	**14 06 50.8**	**+1.5**
KASI	**Kota Agung**	**4.73**	**301**	P	**Pn**	**14 07 02.1**	**+3.0**
GMJI	**Gumukmas**	**4.82**	**94**	P	**Pn**	**14 07 02.1**	**+1.8**
JAGI	**Jajag, Banyuwa**	**5.54**	**96**	P	**Pn**	**14 07 11.6**	**+1.6**
	0.5nm40nm,0.6s						
JAGI	**Jajag, Banyuwa**	**5.54**	**96**	Pn	**Pn**	**14 07 13.1**	**+3.0**
MDSI	**Maura Dua**	**5.58**	**308**	P	**Pn**	**14 07 13.5**	**+2.9**
	0.1nm12nm,0.7s						
MNAI	**Manna**	**6.64**	**302**	Pn	**Pn**	**14 07 22.3**	**-2.8**
GSI	**Gunungsitoli**	**14.33**	**310**	Pn	**Pn**	**14 09 04.4**	**-3.9**
KULM	**Kulim**	**15.37**	**329**	Pn	**Pn**	**14 09 20.7**	**-0.7**
GIRL	**Giralia**	**15.57**	**160**	Pn	**Pn**	**14 09 22.0**	**-1.9**
SOEI	**Soe**	**15.60**	**98**	Pn	**Pn**	**14 09 24.0**	**-0.5**
SOEI				IAmb	IAmb	14 10 10.6	
	comp=Z,44nm,1.0s						
KKM	**Kota Kinabalu**	**15.87**	**29**	Pn	**Pn**	**14 09 25.9**	**-2.0**
KKM				IAmb	IAmb	14 09 46.9	
	comp=Z,74nm,1.3s						
PSA00	**Pilbara Seismi**	**17.35**	**142**	P	**Pn**	**14 09 47.6**	**+1.7**
PSA00				IAmb	IAmb	14 10 15.7	
	comp=Z,69nm,1.8s						
FITZ	**Fitzroy Crossi**	**19.41**	**123**	P	**Pn**	**14 10 11.3**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=304,slow=7.3,SNR=4.2						
TNTI	**Ternate**	**20.65**	**66**	P	**P**	**14 10 21.8**	**0.0**
KNRA	**Kununurra**	**21.17**	**113**	P	**P**	**14 10 28.9**	**+1.5**
KNRA				IAmb	IAmb	14 10 34.4	
	comp=Z,54nm,1.3s						
MTN	**Manton Dam**	**22.70**	**104**	P	**P**	**14 10 44.1**	**+0.6**
MTN				IAmb	IAmb	14 11 31.0	
	comp=Z,68nm,1.2s						
FAKI	**Fak Fak**	**24.08**	**79**	P	**P**	**14 10 55.9**	**-0.5**
NWAO	**Narrogin (SRO)**	**26.10**	**163**	LR	LR	14 22 31.9	
	comp=Z,30nm,19.4s,baz=234,slow=38						
WRA	**Warramunga Arr**	**27.64**	**118**	P	**P**	**14 11 29.9**	**+1.5**
	comp=Z,1.0nm,0.6s,baz=287,slow=11,SNR=4.2						
WRA				PcP	**PcP**	**14 14 44.6**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=306,slow=1.9,SNR=2.9						
CMAR	**Chiang Mai Arr**	**27.93**	**340**	P	**P**	**14 11 30.9**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=173,slow=9.2,SNR=9.4						
CMAR				PcP	**PcP**	**14 14 43.9**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=184,slow=2.4,SNR=4.5						
CMAR	**Chiang Mai Arr**	**27.93**	**340**	P	**P**	**14 11 29.9**	**-1.1**
ASAR	**Alice Springs**	**28.85**	**126**	P	**P**	**14 11 41.5**	**+2.2**
	comp=Z,0.9nm,0.6s,baz=300,slow=8.7,SNR=15						
ASAR				PcP	**PcP**	**14 14 48.2**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=295,slow=2.2,SNR=6.5						
COEN	**Coen**	**34.45**	**103**	P	**P**	**14 12 29.1**	**+0.6**
BBOO	**Buckleboo**	**35.48**	**138**	P	**P**	**14 12 39.1**	**+2.0**
BBOO				IAmb	IAmb	14 13 56.0	
	comp=Z,22nm,1.6s						
H08S2	**Diego Garcia H**	**35.75**	**268**	T	T	14 50 04.1	
	baz=93,slow=76,SNR=41						
H08S3	**Diego Garcia H**	**35.76**	**268**	T	T	14 50 31.8	
	baz=93,slow=76,SNR=42						
H08S1	**Diego Carcia H**	**35.77**	**268**	T	T	14 50 05.4	
	baz=93,slow=76,SNR=37						
STKA	**Stephens Creek**	**38.83**	**132**	P	**P**	**14 13 07.9**	**+2.5**
	comp=Z,2.2nm,0.4s,baz=315,slow=6.3,SNR=13						
STKA	**Stephens Creek**	**38.83**	**132**	P	**P**	**14 13 07.6**	**+2.2**
TOO	**Toolangi**	**44.53**	**137**	P	**P**	**14 13 51.1**	**-0.8**
TOO				IAmb	IAmb	14 14 45.2	
	comp=Z,35nm,1.9s						
INU	**Inuyama**	**50.76**	**30**	P	**P**	**14 14 40.1**	**+0.2**
MAJO	**Matsushiro**	**52.29**	**30**	P	**P**	**14 14 49.6**	**-1.8**
MAJO				IAmb	IAmb	14 16 16.9	
	comp=Z,15nm,1.3s						
MJAR	**Matsushiro Arr**	**52.29**	**30**	P	**P**	**14 14 49.5**	**-1.8**
	comp=Z,1.4nm,0.7s,baz=214,slow=8.1,SNR=6.7						
MJB9	**Matsu-Tunnel**	**52.29**	**30**	P	**P**	**14 14 49.6**	**-1.8**
MJB9				IAmb	IAmb	14 16 16.8	
	comp=Z,15nm,1.3s						
SONM	**Songino Array**	**55.59**	**358**	P	**P**	**14 15 15.5**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=176,slow=7.7,SNR=4.7						
USRK	**Ussuriysk Ar.**	**56.08**	**20**	P	**P**	**14 15 17.6**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=177,slow=6.5,SNR=4.4						
WSAR	**Wadi Sarin**	**57.85**	**304**	P	**P**	**14 15 31.7**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=213,slow=3.4,SNR=4.3						
MK31	**Makanchi Array**	**59.33**	**339**	P	**P**	**14 15 40.4**	**-1.1**
MK31				IAmb	IAmb	14 15 43.1	
	comp=Z,1.8nm,0.5s						
MKAR	**Makanchi Array**	**59.33**	**339**	P	**P**	**14 15 40.4**	**-1.1**
	comp=Z,2.7nm,0.4s,baz=149,slow=8.0,SNR=40						
MKAR	**Makanchi Array**	**59.33**	**339**	P	**P**	**14 15 40.2**	**-1.3**
ZALV	**Zalesovo Beam**	**64.87**	**345**	P	**P**	**14 16 17.0**	**-1.3**
	comp=Z,1.9nm,0.3s,baz=156,slow=6.3,SNR=11						
ZALV	**Zalesovo Beam**	**64.87**	**345**	P	**P**	**14 16 16.7**	**-1.6**
GEYT	**Alibeck**	**65.53**	**318**	P	**P**	**14 16 23.1**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=116,slow=5.0,SNR=3.6						
GEYT	**Alibeck**	**65.53**	**318**	P	**P**	**14 16 22.5**	**-0.5**
ABKAR	**Akbulak array**	**71.05**	**329**	P	**P**	**14 16 56.4**	**-0.8**
PETK	**Petropavlovsk-**	**73.69**	**28**	P	**P**	**14 17 13.2**	**+0.4**
	comp=Z,3.6nm,1.1s,baz=185,slow=4.8,SNR=6.3						
PETK	**Petropavlovsk-**	**73.69**	**28**	P	**P**	**14 17 12.5**	**-0.3**
SYO	**Syowa Base**	**75.14**	**200**	⇑eX	P	14 17 15.0	-5.9
SYO	**Syowa Base**	**75.14**	**200**	⇑ePcP	**PcP**	**14 17 33.6**	**-0.4**
KBZ	**Khabaz**	**78.42**	**318**	P	**P**	**14 17 40.1**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=174,slow=6.5,SNR=4.4						
BRTR	**Keskin Array B**	**83.64**	**311**	P	**P**	**14 18 08.1**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=144,slow=7.4,SNR=4.7						
BRTR	**Keskin Array B**	**83.64**	**311**	P	**P**	**14 18 06.6**	**-1.3**
ARCES	**ARCESS Array B**	**94.99**	**339**	P	**P**	**14 19 00.3**	**-0.6**
	comp=Z,4.5nm,1.1s,baz=99,slow=4.1,SNR=7.0						
YKA	**Yellowknife Ar**	**117.21**	**21**	PKP	**PKiKP**	**14 24 24.0**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=357,slow=2.1,SNR=8.1						
TXAR	**Lajitas Array**	**143.00**	**51**	PKhKP	PKPpre	14 25 09.8	
	comp=Z,0.3nm,0.5s,baz=289,slow=2.8,SNR=3.5						

*BJI **15** 14:06:48.6±0.0,36°.42N×70°.23E,h203km,mB4.5/4, mb4.0/7*
*NNC **15** 14:06:57.3±3.0,37°.06N×70°.32E,h203km±34km,mb3.0, mpv4.1,Error ellipse: s-maj=28.1km s-min=17.5km az=16.0*
ISC 15 14:06:53.0±1.2,36°.71N±0°.08×70°.5E±0°.1,h200km,n31, σ1s65/34,8C-4D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANR	**Andizhan**	**4.29**	**19**	P	**Sn**	**14 08 50.3**	**+0.3**
KSH	**Kashi**	**5.15**	**55**	P	**Pn**	**14 08 05.8**	**-3.5**
KSH				S	Sn	14 09 01.3	-8.3
AML	**Almayashu**	**5.95**	**24**	P	**Pn**	**14 08 21.6**	**+1.6**
	SNR=148						
UCH	**Uchtor**	**6.33**	**28**	P	**Pn**	**14 08 26.4**	**+1.6**
	SNR=68						
KK31	**Karatay Array**	**6.39**	**0**	⇓P	**Pn**	**14 08 26.0**	**+0.8**
	1.9nm,0.3s,baz=180,slow=6.0,SNR=54						
KK31				⇑S	**Sn**	**14 09 34.2**	**-4.2**
	24nm,0.7s						
EKS2	**Erkin-Say**	**6.46**	**22**	P	**Pn**	**14 08 28.2**	**+1.9**
	SNR=7.8						
KZA	**Kyzart**	**6.50**	**33**	P	**Pn**	**14 08 28.3**	**+1.2**
	SNR=15						
AAK	**Ala-Archa**	**6.67**	**26**	P	**Pn**	**14 08 31.0**	**+1.9**
	SNR=18						
AAK	**Ala-Archa**	**6.67**	**26**	⇓P	**Pn**	**14 08 30.3**	**+1.3**
	7.3nm,0.5s						
AAK				⇑S	**Sn**	**14 09 45.8**	**+0.5**
	32nm,0.6s						
KBK	**Karagaybulak**	**6.86**	**29**	P	**Pn**	**14 08 33.6**	**+2.1**
	SNR=13						
ULHL	**Ulahol**	**7.09**	**37**	P	**Pn**	**14 08 36.9**	**+2.3**
	SNR=8.8						
USP	**Ospenovka**	**7.23**	**24**	P	**Pn**	**14 08 37.6**	**+1.4**
	SNR=24						
TKM2	**Tokmak 2**	**7.34**	**31**	P	**Pn**	**14 08 39.8**	**+2.0**
	SNR=12						
TKM2	**Tokmak 2**	**7.34**	**31**	⇑P	**Pn**	**14 08 39.1**	**+1.3**
	20nm,0.5s						
TKM2				⇑S	**Sn**	**14 10 00.3**	**-0.7**
	8.9nm,0.8s						
MDOK	**Medeo**	**8.17**	**36**	⇑P	**Pn**	**14 08 49.4**	**+0.8**
	9.5nm,1.0s						
MAKZ	**Makanchi**	**13.22**	**37**	⇓P	**Pn**	**14 09 54.0**	**+0.9**
	7.2nm,1.1s						
MK31	**Makanchi Array**	**13.36**	**37**	⇑P	**P**	**14 09 56.9**	**-0.7**
	3.3nm,0.8s,baz=216,slow=13,SNR=21						
DANN	**Dangsing**	**13.94**	**123**	*e*P	**P**	**14 10 04.6**	**+0.1**
AB31	**Akbulak array**	**14.71**	**332**	P	**P**	**14 10 10.6**	**-1.9**
	0.2nm,0.3s,baz=146,slow=10,SNR=14						
WMQ	**Urumqi**	**14.91**	**56**	*e*P	**P**	**14 10 16.3**	**+1.4**
WMQ				LR	LR		
	comp=N,490nm,16.1s						
WMQ				LR	LR		
	comp=E,1μm,17.1s						
WMQ				LR	LR		
	comp=Z,170nm,15.7s						
KURBB	**Kurchatov Arra**	**15.06**	**20**	⇓P	**Pn**	**14 10 15.1**	**-0.7**
	2.7nm,0.8s						
KKN	**Kakani**	**15.33**	**121**	*e*P	**P**	**14 10 20.6**	**+0.8**
	5.9nm,0.3s						
PKIN	**Phulchoki**	**15.54**	**122**	*e*P	**P**	**14 10 23.2**	**+1.0**
	6.8nm,0.5s						
PKI	**Pulchoki**	**15.56**	**122**	*e*P	**P**	**14 10 23.5**	**+1.1**
GUN	**Gumba**	**15.67**	**120**	*e*P	**Pn**	**14 10 24.9**	**+1.2**
	8.2nm,0.5s						
JIRN	**Jiri**	**16.04**	**120**	*e*P	**Pn**	**14 10 29.1**	**+0.9**
	22nm,0.5s						
BRVK	**Borovoye**	**16.35**	**360**	⇑P	**Pn**	**14 10 32.6**	**+1.3**
	3.1nm,0.7s						
AKTO	**Aktyubinsk**	**16.40**	**331**	⇑P	**Pn**	**14 10 32.3**	**+0.3**
	3.5nm,0.9s						
RAMN	**Ramite**	**16.77**	**121**	*e*P	**Pn**	**14 10 35.9**	**-0.9**
	8.1nm,1.6s						
TAPN	**Taplejung**	**17.30**	**118**	*e*P	**Pn**	**14 10 41.2**	**-1.9**
HHC	**Hu-ho-hao-te**	**32.07**	**70**	*e*P	**P**	**14 13 01.5**	**+0.4**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,58nm,6.6s						

*MDD **15** 14:15:38.4±1.2,37°.31N×9°.65W,h67km±7km,mb3.3/11, Error ellipse: s-maj=8.1km s-min=4.3km az=60.0,PRXIMO*
*IGIL **15** 14:15:39.1,37°.27N×9°.72W,h19km,ML2.4*
*INMG **15** 14:15:39.3±1.2,37°.26N×9°.70W,h20km±3km,MD2.1, ML2.2,Error ellipse: s-maj=5.3km s-min=2.7km az=53.0*
*CNRM **15** 14:15:40.4±2.3,36°.85N×9°.49W,h43km±46km,Error ellipse: s-maj=21.1km s-min=9.7km az=112.0*
ISC 15 14:15:35.5±1.5,37°.16N±0°.04×9°.84W±0°.07,h63km±12km, n68,σ1s58/109,5D,Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**0.81**	**92**	⇓*i*P	**Pn**	**14 15 52.2**	**+0.9**
PFVI				*e*S	**Sn**	**14 16 02.1**	**-0.9**
PFVI				A	A	14 16 03.6	
	34nm,0.1s						
PFVI	**Vila Bisbo**	**0.81**	**92**	⇓P	**Pn**	**14 15 52.2**	**+0.9**
	86nm,0.1s,SNR=18						
PFVI				S	**Sn**	**14 16 02.8**	**-0.2**
	88nm,0.1s,SNR=12						
PFVI	**Vila Bisbo**	**0.81**	**92**	P	**Pn**	**14 15 52.1**	**+0.7**
PFVI				S	**Sn**	**14 16 01.9**	**-1.1**
MORF	**Marmelete**	**0.96**	**81**	*e*P	**Pn**	**14 15 54.2**	**+0.9**
MORF				*e*S	**Sn**	**14 16 05.3**	**-1.1**
MORF				AML	AML	14 16 06.6	
	comp=N,102nm,0.1s						
MORF	**Marmelete**	**0.96**	**81**	⇓*i*P	**Pn**	**14 15 54.2**	**+0.9**
MORF				*e*S	**Sn**	**14 16 05.4**	**-1.1**
MORF				A	A	14 16 06.4	
	comp=N,70nm,0.1s						
MORF	**Marmelete**	**0.96**	**81**	P	**Pn**	**14 15 54.2**	**+0.9**
MORF				S	**Sn**	**14 16 05.3**	**-1.1**
	comp=N,102nm,0.1s						
PTEO	**Sao Teotonio**	**0.97**	**66**	*e*P	**Pn**	**14 15 54.3**	**+1.0**
PTEO				*e*S	**Sn**	**14 16 06.0**	**-0.5**
PTEO				A	A	14 16 06.2	
	comp=N,31nm,0.2s						
PTEO	**Sao Teotonio**	**0.97**	**66**	P	**Pn**	**14 15 54.3**	**+1.0**
PTEO				S	**Sn**	**14 16 06.0**	**-0.5**
	comp=N,16nm,0.2s						
PNCL	**Nicolau / Gran**	**1.41**	**47**	*e*P	**Pn**	**14 16 00.2**	**+1.1**
PNCL				*e*S	**Sn**	**14 16 16.1**	**-0.7**
PNCL				A	A	14 16 18.1	
	comp=N,18nm,0.3s						
PNCL	**Nicolau / Gran**	**1.41**	**47**	P	**Pn**	**14 16 00.2**	**+1.1**
PNCL				S	**Sn**	**14 16 16.1**	**-0.7**
	comp=N,18nm,0.3s						
PCVE	**Castro Verde**	**1.51**	**71**	⇓*e*P	**Pn**	**14 16 01.8**	**+1.4**
PCVE				*e*S	**Sn**	**14 16 18.6**	**-0.6**
PCVE				A	A	14 16 19.1	
	comp=N,19nm,0.4s						
PCVE	**Castro Verde**	**1.51**	**71**	P	**Pn**	**14 16 01.8**	**+1.4**
PCVE				S	**Sn**	**14 16 18.6**	**-0.6**
	comp=N,19nm,0.4s						
PBDV	**Barranco-do-Ve**	**1.53**	**86**	⇓*e*P	**Pn**	**14 16 02.4**	**+1.7**
PBDV				*e*S	**Sn**	**14 16 19.7**	**0.0**
PBDV				A	A	14 16 26.9	
	comp=N,11nm,0.4s						
PBDV	**Barranco-do-Ve**	**1.53**	**86**	P	**Pn**	**14 16 02.4**	**+1.7**
PBDV				S	**Sn**	**14 16 19.7**	**0.0**
	comp=N,11nm,0.4s						
PVAQ	**Vaqueiros**	**1.71**	**81**	*e*P	**Pn**	**14 16 04.8**	**+1.7**
PVAQ				*e*S	**Sn**	**14 16 23.9**	**-0.2**
PVAQ				A	A	14 16 25.1	
	comp=N,16nm,0.2s						
PVAQ	**Vaqueiros**	**1.71**	**81**	P	**Pn**	**14 16 04.8**	**+1.7**
PVAQ				S	**Sn**	**14 16 23.9**	**-0.2**
	comp=N,16nm,0.2s						
PVAQ	**Vaqueiros**	**1.71**	**81**	P	**Pn**	**14 16 04.8**	**+1.7**
PVAQ				S	**Sn**	**14 16 24.1**	**0.0**
PBEJ	**Beja**	**1.79**	**61**	*e*S	**Sn**	**14 16 25.1**	**-0.9**
PBEJ				A	A	14 16 42.0	
	comp=N,6.9nm,0.3s						
PBEJ	**Beja**	**1.79**	**61**	S	**Sn**	**14 16 25.1**	**-0.9**
	comp=N,3.5nm,0.3s						
PMAFR	**Mafra**	**1.84**	**14**	*e*Pn	**Pn**	**14 16 06.6**	**+1.6**
PMAFR				*e*Sn	**Sn**	**14 16 27.3**	**0.0**
PMAFR				A	A	14 16 28.8	
	comp=N,46nm,0.2s						
PMAFR	**Mafra**	**1.84**	**14**	P	**Pn**	**14 16 06.2**	**+1.3**
	comp=N,4.9nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**14 16 26.8**	**-0.5**
	comp=N,31nm,0.1s,SNR=16						
EGRO	**El Granado**	**1.92**	**78**	P	**Pn**	**14 16 06.9**	**+1.0**
	comp=N,1.3nm,0.1s,SNR=17						
EGRO				S	**Sn**	**14 16 27.9**	**-1.0**
	comp=N,8.7nm,0.1s,SNR=12						
PMTG	**Montargil**	**2.29**	**33**	*e*Pn	**Pn**	**14 16 12.0**	**+1.0**
PMTG				*e*Sn	**Sn**	**14 16 36.5**	**-1.6**
PMTG				A	A	14 16 38.9	
	comp=N,5.9nm,0.1s						
PMTG	**Montargil**	**2.29**	**33**	P	**Pn**	**14 16 12.0**	**+1.0**
PMTG				S	**Sn**	**14 16 36.5**	**-1.6**
	comp=N,5.9nm,0.1s						
PBAR	**Barrancos**	**2.44**	**65**	*e*Sn	**Sn**	**14 16 40.8**	**-1.0**
PBAR	**Barrancos**	**2.44**	**65**	S	**Sn**	**14 16 40.8**	**-1.0**
PESTR	**Estremoz**	**2.46**	**46**	*e*Sn	**Sn**	**14 16 41.6**	**-0.7**
PESTR				A	A	14 17 01.6	
	comp=N,5.2nm,0.6s						
EMIN	**Mina Concepcio**	**2.59**	**76**	P	**Pn**	**14 16 16.3**	**+1.1**
	comp=N,1.9nm,0.1s,SNR=24						
EMIN				S	**Sn**	**14 16 44.3**	**-1.2**
	comp=N,3.2nm,0.1s,SNR=11						
PTOM	**Tomar**	**2.70**	**24**	*e*Sn	**Sn**	**14 16 47.3**	**-0.7**
PTOM				A	A	14 16 48.6	
	comp=N,8.3nm,0.5s						
PTOM	**Tomar**	**2.70**	**24**	S	**Sn**	**14 16 47.3**	**-0.7**
	comp=N,4.2nm,0.5s						
EBAD	**Badajoz**	**2.75**	**54**	P	**Pn**	**14 16 18.1**	**+0.9**
	comp=N,1.0nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**14 16 47.5**	**-1.6**
	comp=N,2.4nm,0.1s,SNR=112						
PMRV	**Marv??o**	**2.97**	**40**	*e*Pn	**Pn**	**14 16 21.6**	**+1.3**
PMRV				*e*Sn	**Sn**	**14 16 53.0**	**-1.8**
PMRV				A	A	14 16 54.6	
	comp=N,4.1nm,0.2s						
PMRV	**Marv??o**	**2.97**	**40**	P	**Pn**	**14 16 21.6**	**+1.3**
PMRV				S	**Sn**	**14 16 53.0**	**-1.8**
	comp=N,4.1nm,0.2s						
PCAS	**Casmilo, Conde**	**3.07**	**20**	*e*Sn	**Sn**	**14 16 56.2**	**-1.0**
PCAS	**Casmilo, Conde**	**3.07**	**20**	S	**Sn**	**14 16 56.2**	**-1.0**
PCBR	**Castelo Branco**	**3.25**	**34**	*e*Sn	**Sn**	**14 17 01.0**	**-0.6**
PCBR	**Castelo Branco**	**3.25**	**34**	S	**Sn**	**14 17 01.0**	**-0.6**
ECAB	**El Cabril**	**3.63**	**74**	P	**Pn**	**14 16 30.7**	**+1.4**
	comp=N,2.7nm,0.1s,SNR=9.8						
ECAB				S	**Sn**	**14 17 09.7**	**-1.2**
	comp=N,6.9nm,0.2s						
HORN	**Hornachuelos**	**3.71**	**78**	P	**Pn**	**14 16 31.7**	**+1.4**
HORN				S	**Sn**	**14 17 11.6**	**-1.2**
PVIS	**Viseu**	**3.86**	**23**	*e*Sn	**Sn**	**14 17 15.2**	**-1.4**
PVIS	**Viseu**	**3.86**	**23**	S	**Sn**	**14 17 15.2**	**-1.4**
EMIJ	**Mijas**	**4.11**	**97**	P	**Pn**	**14 16 37.8**	**+2.0**
	comp=N,0.4nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**4.13**	**44**	S	**Sn**	**14 17 22.0**	**-1.3**
	comp=N,2.0nm,0.1s,SNR=8.1						
EADA	**Adamuz**	**4.30**	**75**	P	**Pn**	**14 16 39.7**	**+1.2**
	comp=N,1.3nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**14 17 26.0**	**-1.2**
	comp=N,4.0nm,0.2s,SNR=12						
PVRL	**Vila Real**	**4.43**	**21**	*e*Sn	**Sn**	**14 17 28.5**	**-2.0**
PVRL				A	A	14 17 30.9	
	comp=N,7.7nm,0.5s						
PVRL	**Vila Real**	**4.43**	**21**	S	**Sn**	**14 17 28.5**	**-2.0**
	comp=N,3.8nm,0.5s						
ZHG	**ZHG**	**4.54**	**144**	P	**Pn**	**14 16 42.8**	**+1.0**
ZHG				S	**Sn**	**14 17 31.5**	**-1.8**
MVO	**Moncorvo**	**4.56**	**28**	*e*Pn	**Pn**	**14 16 43.5**	**+1.5**
MVO				*e*Sn	**Sn**	**14 17 31.0**	**-2.7**
MVO				A	A	14 17 33.3	
	comp=N,4.6nm,0.5s						
MVO	**Moncorvo**	**4.56**	**28**	P	**Pn**	**14 16 43.5**	**+1.5**
	comp=N,1.1nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**14 17 32.2**	**-1.5**
	comp=N,1.6nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.58**	**89**	P	**Pn**	**14 16 44.3**	**+1.8**
	comp=N,0.8nm,0.2s,SNR=7.9						
PCAB	**Cabril**	**4.75**	**17**	*e*Sn	**Sn**	**14 17 37.0**	**-1.5**
PCAB	**Cabril**	**4.75**	**17**	S	**Sn**	**14 17 37.0**	**-1.5**
ELOB	**Lobios**	**4.90**	**16**	S	**Sn**	**14 17 40.5**	**-1.5**
	comp=N,1.0nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**4.93**	**59**	P	**Pn**	**14 16 47.6**	**+0.4**
	comp=N,0.6nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**14 17 41.3**	**-1.6**
	comp=N,1.7nm,0.4s,SNR=7.9						
SRHM	**Skhour des Reh**	**4.95**	**161**	S	**Sn**	**14 17 41.8**	**-1.5**
ELGU	**Los Guajares,**	**4.98**	**92**	P	**Pn**	**14 16 50.0**	**+2.1**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**14 17 45.6**	**+1.4**
	comp=N,2.0nm,0.4s,SNR=4.0						
PBRG	**Braganca**	**5.22**	**26**	*e*Pn	**Pn**	**14 16 52.2**	**+1.1**
PBRG				*e*Sn	**Sn**	**14 17 47.9**	**-2.0**
PBRG				A	A	14 17 48.2	
	comp=N,2.3nm,0.5s						
PBRG	**Braganca**	**5.22**	**26**	P	**Pn**	**14 16 52.2**	**+1.1**
PBRG				S	**Sn**	**14 17 47.9**	**-2.0**
	comp=N,1.2nm,0.5s						
ECAL	**Calabor**	**5.34**	**26**	P	**Pn**	**14 16 53.5**	**+0.7**
	comp=N,1.6nm,1.7s,SNR=7.9						
ECAL				S	**Sn**	**14 17 52.1**	**-0.8**
	comp=N,7.6nm,0.4s,SNR=7.9						
EQES	**Quesada**	**5.42**	**81**	P	**Pn**	**14 16 55.5**	**+1.6**
	comp=N,0.7nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**14 17 55.1**	**0.0**
	comp=N,1.3nm,0.2s,SNR=7.9						
EBER	**Berja**	**5.57**	**91**	P	**P

0.1nm,0.3s,baz=113,slow=6.9,SNR=3.0
PDAR Pinedale Array 49.68 314 P **P** **14 58 56.1 +0.1**
0.3nm,0.5s,baz=122,slow=9.8,SNR=4.7
H10N3 ASCENSION HYDR 51.54 113 T T 15 54 47.0
baz=296
H10N2 ASCENSION HYDR 51.55 113 T T 15 54 46.5
baz=296
H10N1 ASCENSION HYDR 51.56 113 T T 15 54 50.4
baz=296
H10S3 ASCENSION HYDR 51.89 114 T T 15 55 11.5
baz=270
H10S2 ASCENSION HYDR 51.91 114 T T 15 55 16.7
baz=310
NVAR Mina Array Bea 55.15 306 P **P** **14 59 37.6 +1.2**
0.1nm,0.3s,baz=81,slow=7.4,SNR=2.2
YKA Yellowknife Ar 60.27 335 P **P** **15 00 11.2 -0.2**
0.3nm,0.4s,baz=105,slow=7.3,SNR=6.5
TORD Torodi Ar. Bea 60.80 83 P **P** **15 00 16.6 +0.8**
0.4nm,0.5s,baz=288,slow=7.5,SNR=5.3

NEIC ***15*** *14:52:01.8±1.6, 16°.1S±0°.3×175°.8W±0°.2, h366km±15km, mb4.0/6, Error ellipse: s-maj=48.7km s-min=14.2km az=153.0*

IDC ***15*** *14:52:01.9±1.4, 16°.25S×175°.76W, h359km±42km, mb3.3/4, mb1 3.5/5, mb1mx3.1/37, mbtmp4.1/5, Error ellipse: s-maj=148.6km s-min=24.0km az=140.0*

ISC 15 14:52:01.7±0.8, 16°.2S±0°.3×175°.8W±0°.2, h350km, n14, σ1s29/16, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.50**	**60**	P		**Pn**		**14 53 16.8**	**+0.8**
	11nm,0.3s,baz=142,slow=18,SNR=15								
AFI				S		**S**		**14 54 17.4**	**+1.4**
	2.5nm,0.3s,baz=84,slow=18,SNR=2.4								
AFI	**Afiamalu**	**4.50**	**60**			**Pn**		**14 53 16.5**	**+0.5**
AFI				S		**S**		**14 54 15.0**	**-1.0**
MSVF	**Nonsavu**	**6.08**	**254**	Pn		**Pn**		**14 53 36.4**	**+2.8**
OUZ	**Omahuta**	**21.20**	**205**	P		**P**		**14 56 20.9**	**+0.4**
ARMA	**Armidale**	**32.96**	**239**	P		**P**		**14 58 04.1**	**-1.0**
ARMA				IAmb		IAmb		14 59 02.2	
	comp=Z,35nm,1.6s								
STKA	**Stephens Creek**	**41.65**	**240**	P		**P**		**14 59 16.6**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=81,slow=9.5,SNR=6.0								
BBOO	**Buckleboo**	**46.42**	**240**	P		**P**		**14 59 53.5**	**-1.2**
BBOO				IAmb		IAmb		15 01 41.2	
	comp=Z,23nm,1.8s								
WRA	**Warramunga Arr**	**47.42**	**258**	P		**P**		**15 00 01.8**	**-0.7**
	comp=Z,2.2nm,0.5s,baz=94,slow=6.6,SNR=26								
WRA	**Warramunga Arr**	**47.42**	**258**	P		**P**		**15 00 01.1**	**-1.5**
AS31	**Alice Springs**	**47.67**	**253**	P		**P**		**15 00 03.6**	**-0.8**
AS31				IAmb		IAmb		15 00 04.3	
	comp=Z,1.2nm,0.7s								
ASAR	**Alice Springs**	**47.67**	**253**	P		**P**		**15 00 03.8**	**-0.7**
	comp=Z,3.5nm,0.4s,baz=88,slow=7.9,SNR=85								
ASAR	**Alice Springs**	**47.67**	**253**	P		**P**		**15 00 03.0**	**-1.4**
ILAR	**Eielson Array**	**83.68**	**12**	P		**P**		**15 03 50.9**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=214,slow=5.1,SNR=6.2								
ILAR	**Eielson Array**	**83.68**	**12**	P		**P**		**15 03 50.5**	**-0.9**

BGR ***15*** *15:44:31.7±0.0, 36°.47N×71°.59E, h33km, mb5.1*

MOS ***15*** *15:44:36.0±1.1, 36°.41N×71°.48E, h93km, mb5.1/39, Error ellipse: s-maj=4.7km s-min=3.2km az=94.4*

IDC ***15*** *15:44:36.7±1.9, 36°.29N×71°.44E, h93km±16km, mb4.3/28, mb1 4.4/30, mb1mx4.4/34, mbtmp4.7/30, MS3.3/14, Ms1 3.4/14, ms1mx3.2/44, Error ellipse: s-maj=13.6km s-min=9.7km az=176.0*

NEIC ***15*** *15:44:38.3±2.0, 36°.47N±0°.04×71°.35E±0°.08, h102km±4km, mb4.9/92, Error ellipse: s-maj=9.7km s-min=6.6km az=98.0*

NNC ***15*** *15:44:38.5±2.1, 36°.67N×70°.99E, h115km±25km, mb4.8, mpv5.4, Error ellipse: s-maj=18.8km s-min=11.3km az=166.0*

BJI ***15*** *15:44:39.0±0.0, 36°.60N×71°.61E, h98km, mB4.8/32, mb4.6/39*

ISC 15 15:44:36.0±0.4, 36°.40N±0°.03×71°.45E±0°.03, h86km±3km, h86km:pP-P, n574, σ2s17/645, mb4.9/168, 43C-26D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.60**	**172**	P		**Pn**		**15 45 20.0**	**+3.8**
CEP				S		**Sn**		**15 45 53.0**	**+6.0**
KBL	**Kabul**	**2.70**	**227**	PN		**Pn**		**15 45 19.7**	**+2.0**
KBL	**Kabul**	**2.70**	**227**			**Pn**		**15 45 19.7**	**+2.0**
KBL	**Kabul**	**2.70**	**227**	P		**Pn**		**15 45 19.8**	**+2.0**
	SNR=135								
KBL				S		**Sn**		**15 45 53.6**	**+3.9**
CHCP	**Chirah Chowk**	**3.11**	**151**	P		**Pn**		**15 45 27.3**	**+4.3**
NIL	**Nilore**	**3.12**	**151**	PN		**Pn**		**15 45 27.5**	**+4.4**
NIL	**Nilore**	**3.12**	**151**			**Pn**		**15 45 27.5**	**+4.4**
THW	**Thamme Wali**	**3.60**	**176**	P		**Pn**		**15 45 32.3**	**+2.6**
BTK	**Batken**	**3.69**	**352**	PN		**Pn**		**15 45 32.7**	**+1.9**
BTK	**Batken**	**3.69**	**352**			**Pn**		**15 45 32.7**	**+1.9**
FRG	**Fergana**	**4.34**	**3**	P		**Pn**		**15 45 38.1**	**-1.5**
FRG				S		**Sn**		**15 46 23.8**	**-5.1**
SARP	**Sargodha**	**4.58**	**167**	P		**Pn**		**15 45 44.3**	**+1.4**
KSH	**Kashi**	**4.74**	**48**	P		**Pn**		**15 45 44.1**	**-1.0**
KSH				S		**Sn**		**15 46 31.1**	**-7.7**
KSH				smax		smax			
	comp=N,14μm,0.6s								
KSH				smax		smax			
	comp=E,11μm,0.8s								
SAM	**Samarkand**	**4.80**	**314**	*i* P		**Pn**		**15 45 45.7**	**-0.3**
SAM				*i* S		**Sn**		**15 46 36.6**	**-3.8**
ARSB	**Arslanbob**	**5.06**	**13**			**Pn**		**15 45 50.5**	**+1.0**
TAS	**Tashkent**	**5.20**	**342**	PN		**Pn**		**15 45 51.5**	**+0.2**
TAS	**Tashkent**	**5.20**	**342**			**Pn**		**15 45 51.5**	**+0.2**
TAS	**Tashkent**	**5.20**	**342**	P		**Pn**		**15 45 51.7**	**+0.4**
CHRV	**Charvak**	**5.36**	**348**	P		**Pn**		**15 45 53.8**	**+0.2**
DHRM	**DHARAMSHALA**	**5.76**	**135**	*e*P		**Pn**		**15 46 02.2**	**+3.0**
DHRM				*e*S		**Sn**		**15 47 04.9**	**+0.8**
DHRM				IAML				15 47 08.8	
	comp=N,6μm,0.5s								
DHRM				IAML				15 47 09.6	
	comp=E,8μm,0.4s								
IUG	**luzhnay**	**5.84**	**350**	*d i* PN		**Pn**		**15 46 00.6**	**+0.4**
IUG				pmax		pmax			
	comp=Z,2.0nm,0.1s								
IUG	**luzhnay**	**5.84**	**350**	⇓*i* P		**Pn**		**15 46 00.6**	**+0.4**
	comp=Z,1.6nm,0.1s								
IUG				*e*S		**Sn**		**15 47 03.2**	**-2.6**
AML	**Almayashu**	**5.98**	**16**	P		**Pn**		**15 46 03.9**	**+1.6**
	SNR=1019								
JBG	**Jabagly**	**6.06**	**354**	*d i* PN		**Pn**		**15 46 03.7**	**+0.6**
CHM	**Chimkent**	**6.08**	**347**	*e*PN		**Pn**		**15 46 02.6**	**-0.7**
CHM	**Chimkent**	**6.08**	**347**	*e*P		**Pn**		**15 46 02.6**	**-0.7**
CHM				*e*S		**Sn**		**15 47 09.6**	**-1.8**
NUT	**Nurota**	**6.14**	**314**	*i* P		**Pn**		**15 46 02.6**	**-1.5**
NUT				*i* S		**Sn**		**15 47 05.3**	**-7.6**
NRN	**Naryn**	**6.15**	**34**	PN		**Pn**		**15 46 05.7**	**+1.1**
NRN	**Naryn**	**6.15**	**34**			**Pn**		**15 46 05.7**	**+1.1**
UCH	**Uchtor**	**6.29**	**21**	P		**Pn**		**15 46 08.2**	**+1.7**
	SNR=358								
KZA	**Kyzart**	**6.39**	**26**	P		**Pn**		**15 46 09.3**	**+1.5**
	SNR=186								
DZA	**Taraz**	**6.49**	**359**	*e*PN		**Pn**		**15 46 10.1**	**+1.3**
DZA	**Taraz**	**6.49**	**359**	*e*P		**Pn**		**15 46 10.2**	**+1.3**
DZA				*e*S		**Sn**		**15 47 20.8**	**-0.5**
EKS2	**Erkin-Say**	**6.51**	**15**	P		**Pn**		**15 46 10.9**	**+1.7**
	SNR=420								
AAK	**Ala-Archa**	**6.66**	**20**	PN		**Pn**		**15 46 13.1**	**+1.8**
AAK	**Ala-Archa**	**6.66**	**20**	P		**Pn**		**15 46 13.3**	**+2.0**
	comp=Z,71nm,0.3s,baz=179,slow=6.9,SNR=1202								
AAK				S		**Sn**		**15 47 26.5**	**+0.7**
	comp=Z,17nm,0.3s,baz=328,slow=21,SNR=7.6								
AAK	**Ala-Archa**	**6.66**	**20**	P		**Pn**		**15 46 13.4**	**+2.0**
	SNR=452								
AAK	**Ala-Archa**	**6.66**	**20**	*i* P		**Pn**		**15 46 13.4**	**+2.0**
	SNR=629								
AAK	**Ala-Archa**	**6.66**	**20**	⇑P		**Pn**		**15 46 13.2**	**+1.8**
	comp=Z,320nm,0.6s								
AAK				⇑S		**Sn**		**15 47 26.4**	**+0.7**
	comp=Z,542nm,0.8s								
AAK	**Ala-Archa**	**6.66**	**20**			**Pn**		**15 46 13.2**	**+1.9**
AAK	**Ala-Archa**	**6.66**	**20**	P		**Pn**		**15 46 13.6**	**+2.3**
KK31	**Karatay Array**	**6.74**	**354**	*i* PN		**Pn**		**15 46 12.6**	**+0.4**
KK31	**Karatay Array**	**6.74**	**354**	P		**Pn**		**15 46 11.7**	**-0.5**
	comp=Z,106nm,0.4s,baz=184,slow=13,SNR=1542								
KK31				⇑S		**Sn**		**15 47 23.7**	**-3.7**
	comp=Z,271nm,0.7s								
KK31	**Karatay Array**	**6.74**	**354**			**Pn**		**15 46 12.4**	**+0.1**
KKAR	**Karatay Array**	**6.74**	**354**	PN		**Pn**		**15 46 12.4**	**+0.2**
KKAR	**Karatay Array**	**6.74**	**354**			**Pn**		**15 46 12.4**	**+0.2**
KBK	**Karagaybulak**	**6.81**	**22**	P		**Pn**		**15 46 15.5**	**+2.2**
	SNR=42								
FRU1	**Bishkek**	**6.86**	**20**	PN		**Pn**		**15 46 16.3**	**+2.4**
FRU1	**Bishkek**	**6.86**	**20**			**Pn**		**15 46 16.3**	**+2.4**
ULHL	**Ulahol**	**6.92**	**31**	P		**Pn**		**15 46 17.4**	**+2.5**
	SNR=64								
SMLA	**Simla**	**7.09**	**136**	*e*P		**Pn**		**15 46 18.8**	**+1.8**
SMLA				*e*S		**Sn**		**15 47 34.2**	**-1.9**
SMLA				IAML				15 47 38.3	
	comp=N,2μm,0.3s								
SMLA				IAML				15 47 40.9	
	comp=E,2μm,0.4s								
KDJ	**Kajisay**	**7.24**	**36**	PN		**Pn**		**15 46 21.1**	**+1.8**
KDJ	**Kajisay**	**7.24**	**36**			**Pn**		**15 46 21.1**	**+1.8**
USP	**Ospenovka**	**7.25**	**18**	P		**Pn**		**15 46 20.4**	**+1.1**
	SNR=66								
TKM2	**Tokmak 2**	**7.25**	**25**	PN		**Pn**		**15 46 21.3**	**+1.9**
TKM2	**Tokmak 2**	**7.25**	**25**	P		**Pn**		**15 46 21.6**	**+2.1**
	SNR=121								
TKM2	**Tokmak 2**	**7.25**	**25**	⇑P		**Pn**		**15 46 21.4**	**+1.9**
	comp=E,409nm,1.1s								
SGDS	**Sogindy**	**7.45**	**18**	⇓*i* P		**Pn**		**15 46 23.0**	**+0.9**
	comp=E,76nm,0.6s								
SGDS				*e*S		**Sn**		**15 47 41.6**	**-3.4**
MTBS	**Maitube**	**7.74**	**28**	⇓*i* PN		**Pn**		**15 46 28.4**	**+2.4**
MTBS	**Maitube**	**7.74**	**28**	⇓*i* P		**Pn**		**15 46 28.4**	**+2.4**
MTBS				*e*S		**Sn**		**15 47 48.7**	**-3.2**
HRA	**Herat**	**7.78**	**258**			**Pn**		**15 46 28.4**	**+1.6**
TNSS	**Tian-Shan**	**7.86**	**31**	⇓*i* PN		**Pn**		**15 46 29.8**	**+1.9**
TNSS	**Tian-Shan**	**7.86**	**31**	⇓*i* P		**Pn**		**15 46 29.9**	**+1.9**
TNSS				*e*S		**Sn**		**15 47 51.6**	**-3.9**
AAA	**Alma-Ata**	**7.99**	**30**	*e*PN		**Pn**		**15 46 33.6**	**+4.2**
AAA				pmax		pmax			
	comp=Z,172nm,0.7s								
AAA	**Alma-Ata**	**7.99**	**30**	*e*P		**Pn**		**15 46 32.5**	**+3.1**
MDOK	**Medeo**	**8.01**	**31**	*i* PN		**Pn**		**15 46 31.6**	**+1.9**
MDOK	**Medeo**	**8.01**	**31**	*i* P		**Pn**		**15 46 31.6**	**+1.9**
MDOK				*e*S		**Sn**		**15 47 56.1**	**-2.6**
MDOK	**Medeo**	**8.01**	**31**	⇓P		**Pn**		**15 46 32.5**	**+2.8**
	comp=Z,98nm,0.7s								
PRZ	**Przheval'sk**	**8.11**	**39**	PN		**Pn**		**15 46 33.6**	**+2.5**
PRZ	**Przheval'sk**	**8.11**	**39**			**Pn**		**15 46 33.6**	**+2.5**
DDI	**Dehra Dun**	**8.20**	**136**	*e*P		**Pn**		**15 46 32.4**	**+0.2**
DDI				*e*S		**Sn**		**15 48 01.0**	**-2.3**
DDI				IAML				15 48 12.1	
	comp=E,2μm,0.4s								
DDI				IAML				15 48 14.1	
	comp=N,1μm,0.4s								
SATY	**Saty**	**8.54**	**37**	*i* PN		**Pn**		**15 46 38.3**	**+1.4**
SATY				pmax		pmax			
	comp=Z,42nm,0.7s								
SATY	**Saty**	**8.54**	**37**	*i* P		**Pn**		**15 46 38.4**	**+1.4**
	comp=Z,42nm,0.7s								
SATY				*e*S		Sn		15 48 33.8	+22
CHKK	**Chushkaly**	**8.56**	**28**	*i* PN		**Pn**		**15 46 38.0**	**+0.8**
CHKK	**Chushkaly**	**8.56**	**28**	*i* P		**Pn**		**15 46 38.0**	**+0.8**
ZHN	**Zhinishke**	**8.63**	**36**	*i* PN		**Pn**		**15 46 39.9**	**+1.7**
ZHN				pmax		pmax			
	comp=Z,18nm,0.7s								
ZHN	**Zhinishke**	**8.63**	**36**	*i* P		**Pn**		**15 46 39.9**	**+1.7**
	comp=Z,18nm,0.7s								
BTLS	**Baital**	**8.85**	**12**	*d i* PN		**Pn**		**15 46 41.0**	**0.0**
BTLS	**Baital**	**8.85**	**12**	⇓*i* P		**Pn**		**15 46 41.1**	**0.0**
BTLS				*e*S		**Sn**		**15 48 14.4**	**-4.7**
UZB	**Uzynbulak**	**8.90**	**39**	*i* PN		**Pn**		**15 46 42.8**	**+0.9**
UZB				pmax		pmax			
	comp=Z,15nm,0.5s								
UZB	**Uzynbulak**	**8.90**	**39**	*i* P		**Pn**		**15 46 42.9**	**+0.9**
	comp=Z,15nm,0.5s								
UZB				*e*S		**Sn**		**15 48 18.0**	**-2.6**
JOSI	**Joshimath**	**8.93**	**128**	*e*P		**Pn**		**15 46 43.6**	**+1.2**
JOSI				*e*S		**Sn**		**15 48 18.5**	**-2.9**
JOSI				IAML				15 48 23.4	
	comp=N,2μm,0.4s								
JOSI				IAML				15 48 24.2	
	comp=E,1μm,0.7s								
BHGR	**Bahadurgarh**	**8.97**	**147**	*e*P		**Pn**		**15 46 42.9**	**+0.2**
KPKS	**Kokpek**	**8.98**	**36**	*ce*PN		**Pn**		**15 46 44.7**	**+1.9**
KPKS				pmax		pmax			
	comp=Z,64nm,1.0s								
KPKS	**Kokpek**	**8.98**	**36**	⇑*e*P		**Pn**		**15 46 44.7**	**+1.9**
	comp=Z,64nm,1.0s								
KPKS				*e*S		**Sn**		**15 48 19.5**	**-2.7**
NDI	**New Delhi**	**9.10**	**146**	*e*P		**Pn**		**15 46 45.5**	**+1.0**
NDI				*e*S		**Sn**		**15 48 20.0**	**-5.3**
AYAN	**Aya Nagar**	**9.23**	**147**	*e*P		**Pn**		**15 46 46.0**	**-0.4**
AYAN				*ex*		x		15 48 22.6	
KUDL	**Kundal**	**9.27**	**151**	*e*P		Pn		15 46 40.5	-6.3
KUDL				*ex*		x		15 48 18.0	
PDGK	**Podgornoye**	**9.27**	**39**	P		**Pn**		**15 46 47.3**	**+0.4**
PDGK	**Podgornoye**	**9.27**	**39**	⇓P		**Pn**		**15 46 47.4**	**+0.4**
	comp=Z,159nm,1.0s								
SONA	**Sohna**	**9.42**	**148**	*e*S		**Sn**		**15 48 28.2**	**-4.7**
JASL	**Jaisalmer**	**9.46**	**183**	*e*P		**Pn**		**15 46 48.7**	**-0.7**
JASL				*e*S		**Sn**		**15 48 28.6**	**-5.4**
TDK	**Taldyqorghan**	**10.08**	**29**	*i* P		**Pn**		**15 46 58.7**	**+0.9**
TDK	**Taldyqorghan**	**10.08**	**29**	*i* P		**Pn**		**15 46 58.7**	**+0.9**
GEYT	**Alibeck**	**10.75**	**282**	P		Pn		15 47 02.4	-4.7
	comp=Z,3.8nm,0.3s,baz=104,slow=12,SNR=29								
GEYT				S		Sn		15 48 56.7	-8.8
	comp=Z,25nm,0.3s,baz=27,slow=14,SNR=14								
GEYT				LR		LR		15 52 46.2	
	comp=Z,183nm,18.4s,baz=75,slow=46								
GYA0B	**ALIBECK ARRAY**	**10.75**	**282**	⇑P		**Pn**		**15 47 03.8**	**-3.2**
GYA0B				⇓S		**Sn**		**15 48 57.5**	**-8.0**
GYA0B	**ALIBECK ARRAY**	**10.75**	**282**			Pn		15 47 02.1	-4.9
MAKZ	**Makanchi**	**13.03**	**34**	P		**Pn**		**15 47 36.9**	**-0.8**
MAKZ	**Makanchi**	**13.03**	**34**	⇑P		**Pn**		**15 47 36.6**	**-1.0**
	comp=Z,77nm,0.9s								
MAKZ	**Makanchi**	**13.03**	**34**			**Pn**		**15 47 36.9**	**-0.8**
DANN	**Dangsing**	**13.13**	**124**	*e*P		**Pn**		**15 47 37.1**	**-2.3**
	comp=Z,284nm,0.5s								
MK31	**Makanchi Array**	**13.16**	**35**	P		**Pn**		**15 47 38.7**	**-0.7**
MK31	**Makanchi Array**	**13.16**	**35**	⇑P		**Pn**		**15 47 38.6**	**-0.8**
	comp=Z,24nm,0.7s,baz=190,slow=9.1,SNR=196								
MK31	**Makanchi Array**	**13.16**	**35**			**Pn**		**15 47 38.7**	**-0.7**
MKAR	**Makanchi Array**	**13.16**	**35**	*i* P		**Pn**		**15 47 39.2**	**-0.2**
MKAR				pmax		pmax			
	comp=Z,22nm,0.8s								
MKAR	**Makanchi Array**	**13.16**	**35**	P		**Pn**		**15 47 38.6**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=223,slow=12,SNR=149								
MKAR				LR		LR		15 53 16.7	
	comp=Z,188nm,20.6s,baz=218,slow=39								
BHUJ	**Bhuj**	**13.19**	**187**	*e*P		**Pn**		**15 47 38.3**	**-1.7**
BHUJ				*ex*		x		15 49 55.1	
BHUJ				IAML				15 50 17.0	
	comp=N,132nm,0.8s								
BHUJ				IAML				15 50 19.6	
	comp=E,66nm,0.4s								
KOLN	**Koldanda**	**13.41**	**126**	*e*P		**Pn**		**15 47 40.5**	**-2.5**
	comp=Z,146nm,0.5s								
BRZS	**Berezniki**	**13.61**	**3**	*i* P		**Pn**		**15 47 42.9**	**-2.3**
BRZS				pmax		pmax			
	comp=Z,28nm,0.6s								
BRZS	**Berezniki**	**13.61**	**3**	*i* P		**Pn**		**15 47 42.9**	**-2.3**
	comp=Z,28nm,0.6s								
GKN	**Gorkha**	**13.94**	**123**	*e*P		**Pn**		**15 47 47.5**	**-2.4**
	comp=Z,178nm,0.3s								
BHPL	**Bhopal**	**14.10**	**157**	*e*P		**Pn**		**15 47 49.6**	**-2.2**
BHPL				*ex*		x		15 50 18.5	
BHPL				IAML				15 50 21.9	
	comp=E,103nm,1.1s								
BHPL				IAML				15 50 23.4	
	comp=N,84nm,0.0s								
WMQ	**Urumqi**	**14.46**	**54**	*e*P		**Pn**		**15 47 57.0**	**+0.6**
WMQ				pP		P		15 48 11.0	+10
WMQ				sP				15 48 28.3	
WMQ				S		**Sn**		**15 50 34.5**	**-0.9**
WMQ				sS		S		15 50 56.1	+6.4
WMQ				PcP		**PcP**		**15 53 09.3**	**+3.8**
WMQ				pmax		pmax			
	comp=N,27nm,1.1s								
WMQ				pmax		pmax			
	comp=N,86nm,3.9s								
WMQ				LR		LR			
	comp=N,550nm,17.5s								
WMQ				LR		LR			
	comp=N,200nm,19.7s								
WMQ				LR		LR			
	comp=N,100nm,19.7s								
WMQ	**Urumqi**	**14.46**	**54**	P		**Pn**		**15 47 56.6**	**+0.3**
WMQ	**Urumqi**	**14.46**	**54**			**Pn**		**15 47 56.6**	**+0.3**
DMN	**Daman**	**14.51**	**123**	*e*P		**Pn**		**15 47 54.9**	**-2.5**
	comp=N,74nm,0.3s								
KKN	**Kakani**	**14.52**	**122**	*e*P		**Pn**		**15 47 54.3**	**-3.1**
	comp=N,107nm,0.5s								
PKIN	**Phulchoki**	**14.73**	**123**	*e*P		**Pn**		**15 47 56.6**	**-3.6**
	comp=N,152nm,0.6s								
PKI	**Pulchoki**	**14.74**	**123**	*e*P		**Pn**		**15 47 57.8**	**-2.6**
	comp=N,18nm,0.6s								
GUN	**Gumba**	**14.85**	**121**	*e*P		**Pn**		**15 47 58.6**	**-3.2**
	comp=N,97nm,0.4s								
ZSN	**Zaisan**	**14.86**	**38**	*i* P		**Pn**		**15 48 00.4**	**-1.0**
ZSN				*e*S		**Sn**		**15 50 45.8**	**+0.7**
ZSN	**Zaisan**	**14.86**	**38**	*i* P		**Pn**		**15 48 00.5**	**-1.0**
ZSN				*e*S		**Sn**		**15 50 45.8**	**+0.7**
KURBB	**Kurchatov Arra**	**15.10**	**18**	P		**Pn**		**15 48 01.5**	**-3.0**
	comp=N,0.2nm,0.3s,baz=214,slow=12,SNR=43								
KURBB	**Kurchatov Arra**	**15.10**	**18**	⇑P		**Pn**		**15 48 04.8**	**+0.3**
	comp=N,44nm,0.7s								
JBP	**Jabalpur**	**15.11**	**148**	*ex*	P			**15 48 09.6**	**+1.6**
JBP				*ex*	x			15 50 43.9	
KURK	**Kurchatov**	**15.21**	**18**	P		**P**		**15 48 08.4**	**-0.5**
KURK				pmax		pmax			
	comp=Z,40nm,0.9s								
KURK	**Kurchatov**	**15.21**	**18**	P		**P**		**15 48 08.4**	**-0.5**
KURK				IAmb		IAmb		15 48 10.6	
	comp=Z,40nm,0.8s								
JIRN	**Jiri**	**15.22**	**121**	*e*P		**Pn**		**15 48 03.9**	**-2.7**
	comp=Z,355nm,0.4s								
AB31	**Akbulak array**	**15.35**	**330**	*e*P		**Pn**		**15 48 04.3**	**-3.3**
AB31	**Akbulak array**	**15.35**	**330**	⇓P		**Pn**		**15 48 03.6**	**-4.1**
	comp=Z,22nm,0.5s,baz=140,slow=12,SNR=440								
AB31				⇑S		**Sn**		**15 50 47.2**	**-10**
	comp=Z,30nm,0.7s								
ABKAR	**Akbulak array**	**15.35**	**330**			**Pn**		**15 48 04.1**	**-3.5**
ABKAR				IAmb		IAmb		15 48 14.2	
	comp=Z,43nm,0.7s								
RAMN	**Ramite**	**15.95**	**122**	*e*P		**Pn**		**15 48 12.1**	**-3.5**
	comp=Z,136nm,0.5s								
TAPN	**Taplejung**	**16.48**	**119**	*e*P		**Pn**		**15 48 20.3**	**-1.9**
	comp=Z,210nm,0.6s								
ODAN	**Odare**	**16.55**	**121**	*e*P		**Pn**		**15 48 20.6**	**-2.5**
	comp=Z,149nm,0.6s								
NGP	**Nagpur**	**16.58**	**154**	*e*P		**Pn**		**15 48 23.1**	**-0.1**
NGP				*ex*		x		15 51 16.1	
BANOM	**Banah**	**16.63**	**235**	*i* P		**P**		**15 48 25.4**	**+0.6**
	SNR=30								
BANOM	**Banah**	**16.63**	**235**	P		**Pn**		**15 48 24.0**	**+0.1**
BANOM				S		**Sn**		**15 51 31.3**	**+3.2**
BVAR	**Borovoye Array**	**16.64**	**358**	P		**Pn**		**15 48 21.3**	**-2.5**
	comp=Z,2.9nm,0.3s,baz=168,slow=12,SNR=101								
BVAR				S		**Sn**		**15 51 20.5**	**-7.5**
	comp=Z,0.5nm,0.3s,baz=156,slow=22,SNR=3.0								
SHME	**Shamm**	**16.65**	**236**	P		**P**		**15 48 26.2**	**+1.1**
BRVK	**Borovoye**	**16.68**	**358**	P		**Pn**		**15 48 21.5**	**-2.7**
BRVK	**Borovoye**	**16.68**	**358**	⇑P		**Pn**		**15 48 21.5**	**-2.7**
	comp=Z,32nm,0.7s								
BRVK	**Borovoye**	**16.68**	**358**	P		**Pn**		**15 48 21.8**	**-2.4**
AKTO	**Aktyubinsk**	**17.05**	**330**	P		**Pn**		**15 48 26.6**	**-2.2**
AKTO	**Aktyubinsk**	**17.05**	**330**	P		**Pn**		**15 48 26.9**	**-1.9**
	comp=Z,4.5nm,0.3s,baz=142,slow=13,SNR=93								
AKTO				S		Sn		15 51 22.9	-15
	comp=Z,0.6nm,0.3s,baz=18,slow=20,SNR=3.0								
AKTO	**Aktyubinsk**	**17.05**	**330**	⇓P		**Pn**		**15 48 26.7**	**-2.2**
	comp=Z,147nm,0.7s								
AKTO				⇑S		Sn		15 51 26.9	-11
	comp=Z,64nm,1.1s								
MDH	**Madha**	**17.06**	**234**	P		**Pn**		**15 48 28.3**	**-0.7**
MSFE	**Esma-Masafi**	**17.11**	**234**	P		**P**		**15 48 30.9**	**+0.8**
WSAR	**Wadi Sarin**	**17.18**

PVM IAmb IAmb 15 49 20.5
comp=Z,33nm,1.0s
MYLAV Mylavaram 21.20 155 *e*P **P 15 49 17.5 +2.8**
MYLAV IAmb IAmb 15 49 18.0
comp=Z,17nm,0.7s
GNI Garni 21.27 288 *ce*P **P 15 49 18.3 +2.8**
GNI pmax pmax
comp=Z,766nm,1.3s
GNI Garni 21.27 288 P **P 15 49 18.3 +2.8**
comp=Z,59nm,0.9s,baz=140,slow=1.7,SNR=35
GNI Garni 21.27 288 *i* P **P 15 49 19.6 +4.1**
SNR=70
GNI Garni 21.27 288 P **P 15 49 17.6 +2.1**
SRLM Srisailam 21.27 160 *e*P **P 15 49 16.7 +1.2**
SRLM IAmb IAmb 15 49 22.1
comp=Z,16nm,0.9s
VIS Vishakhapatnam 21.37 147 *i* P **P 15 49 16.7 +0.2**
VIS *i* S **S 15 53 02.5 -6.4**
VIS *i* S **S 15 53 04.5 -4.4**
TBLG Delisi 21.37 293 P **P 15 49 15.1 -1.3**
TBLG pmax pmax
comp=Z,116nm,1.1s
TBLG Delisi 21.37 293 P **P 15 49 15.1 -1.3**
TBLG IAmb IAmb 15 49 24.7
comp=Z,116nm,1.1s
SVE Sverdlovsk 21.69 344 *ce*P **P 15 49 19.4 -0.2**
SVE *e*S **S 15 53 16.2 +1.5**
SVE pmax pmax
comp=Z,56nm,0.9s
ADKI Addanki 21.83 157 *e*P **P 15 49 23.2 +1.8**
ADKI IAmb IAmb 15 49 28.4
comp=Z,9.6nm,1.1s
ARU Arti 21.85 341 *c i*P **P 15 49 21.5 +0.2**
ARU 15 49 57.4
ARU S **S 15 53 15.1 -2.5**
ARU SS **SnSn 15 53 56.0 +6.0**
ARU pmax pmax
comp=Z,66nm,0.7s
ARU Arti 21.85 341 P **P 15 49 21.4 +0.1**
comp=Z,25nm,0.8s,baz=157,slow=8.1,SNR=57
ARU Arti 21.85 341 P **P 15 49 20.4 -0.9**
URV Uravakonda 21.98 165 *e*P **P 15 49 24.4 +1.3**
URV IAmb IAmb 15 49 29.4
comp=Z,16nm,0.7s
ZEI Tsey 22.11 295 *e*P **P 15 49 23.9 -0.6**
ZEI pmax pmax
comp=Z,37nm,0.9s
AKH Akhalkalaki 22.28 292 P **P 15 49 27.1 +0.9**
AKH pmax pmax
comp=Z,87nm,1.0s
AKH Akhalkalaki 22.28 292 P **P 15 49 27.1 +0.9**
AKH IAmb IAmb 15 49 32.7
comp=Z,87nm,1.0s
GTA Gaotai 22.54 74 ⇑P **P 15 49 32.5 +3.5**
GTA pP pP 15 49 53.4 +6.0
GTA sP sP 15 50 05.8 +7.2
GTA pmax pmax
comp=Z,38nm,0.8s
PYA1 Pyatigorsk 22.88 298 *i* P **P 15 49 32.9 +0.5**
KBZ Khabaz 22.97 297 *c i*P **P 15 49 33.8 +0.6**
KBZ Khabaz 22.97 297 P **P 15 49 33.2 +0.1**
comp=Z,20nm,0.9s,baz=123,slow=7.3,SNR=31
KBZ S **S 15 53 45.4 +8.7**
comp=Z,7.1nm,0.9s,baz=189,slow=13,SNR=3.0
NEY Neytrino 23.03 296 *i* P **P 15 49 36.6 +2.6**
NEY pmax pmax
comp=Z,8.0nm,0.9s
GOF Gofitskoye 23.11 301 ⇑*e*P **P 15 49 36.1 +1.6**
GOF *e*S **S 15 53 42.1 +3.2**
GOF pmax pmax
comp=Z,89nm,0.6s
GOF smax smax
comp=E,23nm,0.9s
GOF smax smax
comp=N,27nm,0.8s
SHA1 Shidzhatmaz 23.14 297 *c i*P **P 15 49 36.0 +0.9**
KVAR Kislovodsk Arr 23.15 298 P **P 15 49 36.8 +1.7**
comp=N,6.6nm,0.7s,baz=127,slow=20,SNR=8.4
KVAR S **S 15 53 48.7 +8.9**
comp=N,26nm,0.9s,baz=192,slow=12,SNR=6.2
KIV Kislovodsk 23.16 298 *e*P **P 15 49 35.9 +0.8**
KIV *e*S **S 15 53 38.5 -1.4**
KIV pmax pmax
comp=Z,76nm,1.1s
KIV MLR MLR
comp=Z,155nm,14.0s
KIV Kislovodsk 23.16 298 *i* P **P 15 49 36.3 +1.2**
SNR=8.8
KIV Kislovodsk 23.16 298 P **P 15 49 33.9 -1.2**
KIV IAmb IAmb 15 50 30.6
comp=Z,38nm,0.7s
DMTO DMTO 23.65 222 P **P 15 49 40.0 +0.3**
SKHT Srikalahasti 23.75 160 *e*P **P 15 49 42.8 +2.3**
SKHT IAmb IAmb 15 49 43.8
comp=Z,7.8nm,1.0s
ARXR Arkhyz 24.11 297 *i* P **P 15 49 46.3 +2.5**
WHFO Wadi Hawf 24.14 225 P **P 15 49 43.9 -0.2**
SNR=33
RBK Rabkut 24.23 224 P **P 15 49 45.2 +0.2**
SNR=6.2
SIMRM Sittwe 24.79 125 P **P 15 49 50.5 +0.5**
ABTO Aybut 24.86 225 P **P 15 49 52.2 +1.5**
SNR=5.9
SOC Sochi 25.24 296 *e*P **P 15 49 56.4 +2.5**
SOC *e* 15 50 30.3
SOC *e*S **S 15 54 14.3 +1.2**
SOC pmax pmax
comp=Z,38nm,1.0s
RAYN Ar Rayn 25.80 247 P **P 15 49 58.0 -1.2**
RAYN pmax pmax
comp=Z,15nm,0.8s
RAYN Ar Rayn 25.80 247 *i* P **P 15 49 58.2 -0.9**
SNR=22
RAYN Ar Rayn 25.80 247 P **P 15 49 58.0 -1.2**
VRH Novokhopyorsk 25.84 314 *e*P **P 15 50 00.8 +1.6**
VRH pmax pmax
comp=Z,30nm,0.8s
VRH pmax pmax
comp=N,10.0nm,0.6s
VRH pmax pmax
comp=E,20nm,1.3s
MOY Mondy 25.92 45 *e*P **P 15 50 05.9 +5.8**
LZH Lanzhou 26.06 81 *e*P **P 15 50 06.6 +5.0**
LZH pP pP 15 50 28.6 +6.4
LZH sP sP 15 50 40.8 +8.0
LZH pmax pmax
comp=E,19nm,1.1s
KIRV Kirov 26.49 334 P **P 15 50 06.4 +1.5**
comp=E,63nm,0.7s,baz=229,slow=0.6,SNR=17
ZAK Zakamensk 26.78 49 *e*P **P 15 50 10.3 +2.5**
ZAK pmax pmax
comp=Z,7.0nm,0.8s
ANN Anapa 27.00 299 *e*P **P 15 50 11.3 +1.6**
ANN pmax pmax
comp=Z,102nm,1.5s
VSR Storozhevoye 27.34 313 *e*P **P 15 50 13.8 +1.1**
VSR pmax pmax
comp=E,80nm,1.2s
VSR pmax pmax
comp=Z,60nm,1.4s
VSR pmax pmax
comp=N,10.0nm,0.8s
CD2 Chengdu 27.36 92 *e*P **P 15 50 14.0 +0.8**
CD2 pmax pmax
comp=N,10.0nm,0.5s
LPSR Galich'ya Gora 27.98 316 *e*P **P 15 50 20.2 +1.9**
LPSR pmax pmax
comp=Z,40nm,0.9s
LPSR pmax pmax
comp=N,5.0nm,0.7s
LPSR pmax pmax
comp=E,20nm,1.0s
SONM Songino Array 28.09 55 P **P 15 50 21.1 +1.5**
comp=E,2.5nm,0.7s,baz=278,slow=9.1,SNR=14
SONM LR LR 16 03 00.5
comp=E,55nm,20.0s,baz=151,slow=39
ULN Ulaanbaatar 28.53 55 *ce*P **P 15 50 25.8 +2.2**
ULN pmax pmax
comp=Z,2.0nm,0.8s
KMI Kunming 29.02 104 P **P 15 50 30.8 +2.6**
KMI pmax pmax
comp=Z,11nm,1.1s
MMAI Mount Meron Ar 29.72 274 P **P 15 50 34.5 +0.4**
comp=Z,1.3nm,0.4s,baz=60,slow=8.5,SNR=5.2
MMAI PcP **PcP 15 53 36.4 +0.2**
comp=Z,1.1nm,0.5s,baz=79,slow=5.2,SNR=3.8
BR131 Keskin Array S 29.81 288 P **P 15 50 34.8 -0.2**
BR131 pmax pmax
comp=Z,5.0nm,0.8s
BR131 Keskin Array S 29.81 288 P **P 15 50 34.8 -0.2**
BRTR Keskin Array B 29.81 288 P **P 15 50 35.9 +1.0**
comp=Z,4.4nm,0.7s,baz=105,slow=9.0,SNR=27
BRTR PcP **PcP 15 53 35.3 -1.0**
comp=Z,1.7nm,0.9s,baz=81,slow=4.5,SNR=4.5
BRTR ScP **ScP 15 57 07.9 -2.7**
comp=Z,0.9nm,0.8s,baz=123,slow=4.6,SNR=4.8
BRTR LR LR 16 05 36.2
comp=Z,36nm,21.9s,baz=41,slow=42
CHTO Chiang Mai 29.85 119 P **P 15 50 36.4 +1.1**
CHTO pmax pmax
comp=Z,15nm,1.2s
CHTO Chiang Mai 29.85 119 P **P 15 50 36.4 +1.1**
MOS Moscow 29.97 321 *e*P **P 15 50 36.4 +0.5**
MOS *e**PP **sP 15 51 06.9 +0.1**
MOS *e* 15 51 39.9
MOS pmax pmax
comp=Z,52nm,0.8s
PRGR Permogore 30.01 335 *e*P **P 15 50 36.0 -0.3**
PRGR pmax pmax
comp=Z,51nm,0.9s
CMAR Chiang Mai Arr 30.09 119 *i* P **P 15 50 41.7 +4.3**
CMAR pmax pmax
comp=Z,2.0nm,0.8s
CMAR Chiang Mai Arr 30.09 119 P **P 15 50 40.3 +2.9**
comp=Z,1.9nm,0.8s,baz=306,slow=8.6,SNR=10.0
CMAR LR LR 16 05 06.4
comp=Z,39nm,21.6s,baz=280,slow=41
OBN Obninsk 30.25 319 *de*P **P 15 50 39.5 +1.1**
OBN *e**PP **sP 15 51 09.7 +0.3**
OBN *e* 15 51 39.6
OBN *e* 15 51 51.6
OBN pmax pmax
comp=Z,48nm,0.6s
OBN Obninsk 30.25 319 LR LR 16 04 45.4
comp=Z,15nm,19.1s,baz=180,slow=40
OBN Obninsk 30.25 319 P **P 15 50 38.5 0.0**
XAN Xi'an 30.58 83 P **P 15 50 43.6 +1.9**
XAN pmax pmax
comp=Z,7.0nm,1.0s
XAN pmax pmax
comp=Z,88nm,6.0s
HHC Hu-ho-hao-te 31.46 69 *e*P **P 15 50 50.6 +1.2**
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,58nm,7.6s
PBKT Sadao Pong 32.78 119 P **P 15 51 03.9 +2.9**
PBKT IAmb IAmb 15 51 29.3
comp=Z,47nm,1.8s
MILM Milestii Mici 33.17 302 ⇑P **P 15 51 05.8 +1.6**
KIS Kishinev 33.17 302 ⇑*i*P **P 15 51 06.0 +1.8**
comp=Z,110nm,1.1s
KIS Kishinev 33.17 302 ⇑*i*P **P 15 51 06.0 +1.8**
KIS pmax pmax
comp=Z,110nm,1.1s
ELL Elmali 33.18 283 P **P 15 51 04.6 +0.1**
ELL pmax pmax
comp=Z,94nm,0.9s
ELL Elmali 33.18 283 P **P 15 51 04.6 +0.1**
AKASG Malin Array Be 33.29 309 P **P 15 51 06.0 +0.8**
AKASG Malin Array Be 33.29 309 P **P 15 51 06.0 +0.8**
comp=Z,39nm,0.6s,baz=81,slow=7.0,SNR=111
AKASG ScP **ScP 15 57 20.4 -1.5**
comp=Z,0.4nm,0.3s,baz=67,slow=2.7,SNR=4.4
AKASG LR LR 16 06 35.4
comp=Z,45nm,19.2s,baz=60,slow=40
AKASG Malin Array Be 33.29 309 IAmb IAmb 15 51 07.8
comp=Z,13nm,0.8s
AKBB Malin Array Si 33.29 309 P **P 15 51 05.8 +0.6**
AKBB pmax pmax
comp=Z,39nm,0.7s
AKBB Malin Array Si 33.29 309 P **P 15 51 05.8 +0.6**
SORM Soroca 33.56 304 ⇓P **P 15 51 09.1 +1.6**
TMCR Tamitsa 34.29 335 *e*P **P 15 51 14.8 +1.1**
VRI Vrincioaia 34.59 300 ⇑P **P 15 51 20.1 +3.6**
PLOR Plostina 34.65 300 ⇑P **P 15 51 20.0 +3.0**
TESR Tescani 34.65 301 ⇑P **P 15 51 19.0 +2.0**
PRAR RASCA 34.95 303 ⇑P **P 15 51 21.5 +1.9**
BIZ Bicaz 35.03 302 ⇑P **P 15 51 22.6 +2.3**
MLR Muntele Rosu 35.15 299 ⇓P **P 15 51 24.9 +3.4**
BOD Bodaibo 35.20 39 *e*P **P 15 51 22.1 +0.6**
BOD pmax pmax
comp=Z,9.0nm,1.3s
OZUR 35.25 300 ⇑P **P 15 51 24.4 +2.2**
DOPR Dopca 35.53 300 ⇓P **P 15 51 26.9 +2.3**
BURAR Bucovina Array 35.65 303 ⇓P **P 15 51 28.1 +2.4**
BUR08 Bucovina Ar. S 35.66 303 P **P 15 51 25.8 0.0**
BUR08 IAmb IAmb 15 51 29.0
comp=Z,12nm,0.8s
VOIR 35.78 299 ⇑P **P 15 51 29.0 +2.2**
IIGN Ignalina 35.95 316 *e*P **P 15 51 29.1 +1.1**
IIGN IAmb IAmb 15 51 31.3
comp=Z,20nm,0.7s
IZAR Zarasai 36.03 317 *e*P **P 15 51 30.2 +1.6**
ISAL Salakas 36.06 317 *e*P **P 15 51 30.0 +1.1**
ISAL IAmb IAmb 15 51 32.3
comp=Z,19nm,1.1s
ARR Arges 36.08 299 ⇑P **P 15 51 31.4 +2.0**
ARCR ARCALIA 36.23 302 ⇓P **P 15 51 34.9 +4.3**
VSU Vasula 36.49 322 *ce*P **P 15 51 33.6 +1.1**
VSU pmax pmax
comp=Z,285nm,2.5s
VSU Vasula 36.49 322 *e*P **P 15 51 34.0 +1.5**
VSU IAmb IAmb 15 51 35.3
comp=Z,101nm,0.7s
LVV L'vov 36.51 307 *e*P **P 15 51 34.4 +1.5**
LVV *e* 15 53 19.3
LVV *e*S **S 15 57 09.4 +0.7**
PABE Paberze 37.24 316 *e*P **P 15 51 40.6 +1.6**
VTS Vitosha 37.31 295 ⇑P **P 15 51 42.8 +2.9**
KWP Kalwaria Pacla 37.36 306 P **P 15 51 39.6 -0.5**
KWP pmax pmax
comp=Z,457nm,0.8s
KWP Kalwaria Pacla 37.36 306 *e*P **P 15 51 42.5 +2.4**
KWP Kalwaria Pacla 37.36 306 P **P 15 51 39.6 -0.5**
GZR Gura Zlata 37.38 299 ⇑P **P 15 51 42.1 +1.7**
SUW Suwalki 37.45 314 P **P 15 51 39.5 -1.3**
SUW pmax pmax
comp=Z,65nm,1.0s
SUW Suwalki 37.45 314 *e*P **P 15 51 42.1 +1.3**
SUW Suwalki 37.45 314 P **P 15 51 39.5 -1.3**
TRPA Tarpa 37.45 304 ⇑P **P 15 51 43.9 +3.1**
UZH Uzhgorod 37.62 305 ⇓*e*P **P 15 51 44.3 +2.1**
UZH *e* 15 52 10.5
KOLS Kolonicke sedl 37.63 305 *e*P **P 15 51 44.9 +2.5**
KOLS pmax pmax
comp=Z,14nm,0.8s
KOLS Kolonicke sedl 37.63 305 *e*P **P 15 51 44.9 +2.5**
KOLS *e**PP **PnPn 15 53 14.2 +2.6**
LVZ Lovozero 37.69 338 *ce*P **P 15 51 44.4 +1.7**
LVZ pmax pmax
comp=Z,48nm,1.7s
LVZ Lovozero 37.69 338 P **P 15 51 43.5 +0.9**
FIA1 FINESS Array S 37.77 326 P **P 15 51 44.0 +0.6**
FIA1 IAmb IAmb 15 51 46.5
comp=Z,22nm,0.7s
FINES FINESS Array B 37.77 326 P **P 15 51 44.6 +1.2**
comp=Z,8.4nm,0.3s,baz=120,slow=8.8,SNR=88
FINES PP **PP 15 53 12.1 +1.1**
comp=Z,9.7nm,0.7s,baz=113,slow=15,SNR=4.3
APA Apatity 37.87 337 ⇓*i*P **P 15 51 44.4 +0.3**
APA pmax pmax
comp=Z,8.0nm,0.8s
APA MLR MLR
comp=Z,300nm,10.0s
MDVR Moldovita 38.18 298 ⇑P **P 15 51 50.1 +3.0**
BZS Buzias 38.18 300 ⇓P **P 15 51 48.6 +1.6**
LIT Litokhoron 38.24 291 P **P 15 51 46.4 -1.3**
LIT pmax pmax
comp=Z,35nm,1.6s
LIT Litokhoron 38.24 291 P **P 15 51 46.4 -1.3**
LIT IAmb IAmb 15 52 40.4
comp=Z,35nm,1.6s
PBUR Paburg 38.47 317 *e*P **P 15 51 50.0 +0.7**
SLIT Slitere, Latvi 38.57 319 *e*P **P 15 51 50.5 +0.5**
AGG Agios Georgios 38.58 289 P **P 15 51 50.0 -0.5**
AGG pmax pmax
comp=Z,48nm,1.8s
AGG Agios Georgios 38.58 289 P **P 15 51 50.0 -0.5**
AGG IAmb IAmb 15 53 18.7
comp=Z,48nm,1.8s
BEL Belsk 38.68 310 *e*P **P 15 51 53.2 +2.1**
BEL Belsk 38.68 310 *e*P **P 15 51 53.2 +2.1**
KECS Kecovo 38.82 304 *e*P **P 15 51 54.9 +2.5**
KECS pmax pmax
comp=Z,5.0nm,0.7s
KECS Kecovo 38.82 304 *e*P **P 15 51 54.9 +2.5**
NIE Niedzica 38.93 306 *e*P **P 15 51 56.4 +3.1**
NIE Niedzica 38.93 306 *e*P **P 15 51 56.4 +3.1**
FNA Florina 38.96 292 P **P 15 51 53.6 -0.1**
FNA pmax pmax
comp=Z,36nm,1.8s
FNA Florina 38.96 292 P **P 15 51 53.6 -0.1**
FNA IAmb IAmb 15 52 24.1
comp=Z,36nm,1.8s
NJ2 Nanjing 39.13 82 *e*P **P 15 51 56.3 +1.2**
NJ2 pmax pmax
comp=Z,7.0nm,0.8s
KLNR Kaliningrad 39.25 314 *i* P **P 15 51 56.8 +1.0**
KLNR pmax pmax
comp=Z,109nm,0.9s
OJC Ojcow 39.26 307 P **P 15 51 56.1 +0.1**
OJC pmax pmax
comp=Z,41nm,1.0s
OJC Ojcow 39.26 307 *e*P **P 15 51 57.9 +1.9**
OJC Ojcow 39.26 307 P **P 15 51 56.1 +0.1**
LANS Liptovska Anna 39.48 306 *e*P **P 15 52 01.2 +3.3**
LANS pmax pmax
comp=Z,4.0nm,0.8s
LANS Liptovska Anna 39.48 306 *e*P **P 15 52 01.2 +3.3**
LANS *e*PP **PnPn 15 53 35.2 +1.6**
VYHS Vyhne 39.91 305 *e*P **P 15 52 04.1 +2.6**
VYHS pmax pmax
comp=Z,11nm,1.1s
VYHS Vyhne 39.91 305 *e*P **P 15 52 04.1 +2.6**
VYHS *e*PP **PnPn 15 53 42.9 +4.1**
JAVC Velka Javorina 40.67 305 *e*P **P 15 52 11.1 +3.3**
MORC Moravsky Berou 40.72 307 P **P 15 52 08.8 +0.7**
MORC pmax pmax
comp=Z,20nm,0.8s
MORC Moravsky Berou 40.72 307 ⇓P **P 15 52 10.9 +2.7**
MORC Moravsky Berou 40.72 307 *e*P **P 15 52 10.5 +2.4**
MORC Moravsky Berou 40.72 307 P **P 15 52 08.8 +0.7**
MORC IAmb IAmb 15 52 11.6
comp=Z,20nm,0.8s
GKP Gorka Klasztor 40.91 312 *e*P **P 15 52 11.7 +2.1**
GKP Gorka Klasztor 40.91 312 *e*P **P 15 52 11.7 +2.1**
MODS Modra-Piesok 40.96 304 *e*P **P 15 52 11.6 +1.5**
MODS *e* 15 53 49.8
MODS Modra-Piesok 40.96 304 *e*P **P 15 52 11.6 +1.5**
MODS *e*PP **PnPn 15 53 49.8 -1.1**
KRLC Kraliky 41.20 307 *e*P **P 15 52 14.1 +2.0**
KRLC Kraliky 41.20 307 *e*P **P 15 52 14.1 +2.0**
VRAC Vranov 41.35 306 ⇑P **P 15 52 15.9 +2.6**
VRAC Vranov 41.35 306 *e*P **P 15 52 16.1 +2.8**
ARCES ARCESS Array B 41.38 338 P **P 15 52 14.6 +1.3**
comp=Z,27nm,0.7s,baz=113,slow=8.3,SNR=81
ARCES LR LR 16 10 02.8
comp=Z,139nm,18.7s,baz=120,slow=37
ARE0 ARCESS Array S 41.38 338 *e*P **P 15 52 14.7 +1.4**
ARE0 ARCESS Array S 41.38 338 P **P 15 52 14.4 +1.2**
DPC Dobruska-Polom 41.48 307 *e*P **P 15 52 16.7 +2.3**
DPC Dobruska-Polom 41.48 307 *e*P **P 15 52 16.7 +2.3**
KSP Ksiaz 41.48 308 *e*P **P 15 52 15.9 +1.5**
KSP Ksiaz 41.48 308 *e*P **P 15 52 15.9 +1.5**
KRUC Moravsky 41.50 306 *e*P **P 15 52 17.1 +2.6**
OSTC Ostas 41.54 308 *e*P **P 15 52 17.5 +2.6**
CHVC Chvalec 41.65 308 *e*P **P 15 52 17.8 +2.1**
UPC Upice 41.67 308 *e*P **P 15 52 18.2 +2.3**
UPC Upice 41.67 308 *e*P **P 15 52 18.2 +2.3**
KTK1 Kautokeino 41.85 336 *e*P **P 15 52 18.2 +1.0**
CONA Conrad Observa 41.94 304 *i* P **P 15 52 20.1 +1.9**
comp=Z,20nm,0.9s,SNR=11
CONA *i* PcP **PcP 15 54 07.4 -4.7**
comp=Z,15nm,1.2s
TREC Trest 42.08 306 *e*P **P 15 52 21.5 +2.3**
TREC Trest 42.08 306 *e*P **P 15 52 21.5 +2.3**
ARSA Arzberg 42.23 303 *i* P **P 15 52 21.6 +1.1**
comp=Z,8.3nm,1.1s
BSD Bornholm Skovb 42.34 315 *i* P **P 15 52 22.9 +1.7**
BSD pmax pmax
comp=Z,3.0nm,0.4s
BSD Bornholm Skovb 42.34 315 *i* P **P 15 52 22.9 +1.7**
comp=Z,2.9nm,0.4s
HAMF Hammerfest 42.45 339 *e*P **P 15 52 23.9 +1.9**
GSI Gunungsitoli 42.48 139 P **P 15 52 24.9 +2.2**
GSI IAmb IAmb 15 52 52.1
comp=Z,20nm,0.7s
GOPC GO Pecny, Ondr 42.49 307 *e*P **P 15 52 24.7 +2.1**
GOPC GO Pecny, Ondr 42.49 307 *e*P **P 15 52 24.7 +2.1**
GOPC *ex* x 15 52 33.7
PERS Pernice 42.58 302 *i* P **P 15 52 24.9 +1.5**
PVCC Panska Ves 42.59 308 *e*P **P 15 52 26.0 +2.6**
PVCC Panska Ves 42.59 308 *e*P **P 15 52 26.0 +2.6**
SOKA Soboth 42.63 302 *i* P **P 15 52 25.1 +1.2**
comp=Z,14nm,0.8s,SNR=5.3
PRU Pruhonice 42.65 307 *e*P **P 15 52 26.0 +2.2**
PRU Pruhonice 42.65 307 *e*P **P 15 52 26.0 +2.2**
BRG Berggiesshubel 42.97 308 *i* P **P 15 52 28.4 +2.0**
comp=Z,42nm,1.2s
BRG *es*P **sP 15 53 00.0 +2.0**
comp=Z,7.3nm,1.2s
BRG *e*PP **PP 15 54 09.7 +2.1**
comp=Z,11nm,1.3s
BRG Berggiesshubel 42.97 308 *i* P **P 15 52 28.4 +2.0**
BRG *e**SP **sP 15 53 00.0 +2.0**
BRG *e* 15 54 09.7
BRG pmax pmax
comp=Z,42nm,1.2s
BRG pmax pmax
comp=N,7.0nm,1.2s
BRG pmax pmax
comp=Z,11nm,1.3s
BRG Berggiesshubel 42.97 308 *e*P **P 15 52 29.1 +2.7**
comp=Z,42nm,1.2s,baz=85,slow=7.9
OBKA Obir 42.98 302 *i* P **P 15 52 27.2 +0.5**
comp=Z,9.5nm,1.4s
OBKA *i* PP **PP 15 54 09.6 +1.7**
comp=Z,6.2nm,1.0s
RUE Ruedersdorf 43.00 311 *e*P **P 15 52 28.9 +2.3**
comp=Z,56nm,1.0s,baz=85,slow=7.9
MOA Molln 43.01 304 *i* P **P 15 52 28.2 +1.4**
comp=Z,13nm,0.8s,SNR=5.6
MOA *i* PcP **PcP 15 54 16.0 +0.4**
comp=Z,7.8nm,1.3s
PBCC Pribram 43.02 307 *e*P **P 15 52 29.5 +2.7**
GEC2 GERESS Array S 43.28 305 *e*P **P 15 52 31.4 +2.3**
comp=Z,9.0nm,1.1s,baz=85,slow=7.9
GEC2 GERESS Array S 43.28 305 P **P 15 52 29.4 +0.3**
GEC2 IAmb IAmb 15 52 31.6
comp=Z,20nm,1.6s
GERES GERESS Array B 43.28 305 P **P 15 52 30.6 +1.5**
comp=Z,2.4nm,0.7s,baz=87,slow=6.8,SNR=19
GERES PP **PP 15 54 10.5 -0.5**
comp=Z,3.4nm,1.0s,baz=76,slow=11,SNR=6.6
GERES ScP **ScP 15 57 59.2 -0.9**
comp=Z,0.6nm,0.6s,baz=101,slow=5.1,SNR=5.5
KHC Kasperske Hory 43.34 306 *i* P **P 15 52 31.3 +1.8**
KHC pmax pmax
comp=Z,11nm,1.0s
KHC Kasperske Hory 43.34 306 *e*P **P 15 52 32.0 +2.5**
KHC *e*PP **PP 15 54 14.0 +2.4**
KHC *ex* x 15 54 36.5
KHC Kasperske Hory 43.34 306 P **P 15 52 28.8 -0.7**
FBE Freiberg 43.34 308 *e*P **P 15 52 32.3 +2.9**
comp=Z,46nm,1.0s,baz=85,slow=7.9
TRO Tromso 43.51 336 *e*P **P 15 52 31.6 +1.1**
CLL Collm 43.54 309 P **P 15 52 31.3 +0.3**
CLL pmax pmax
comp=Z,18nm,0.8s
CLL Collm 43.54 309 ⇓*i*P **P 15 52 32.9 +1.9**
comp=Z,20nm,0.9s
CLL *e*PP **PP 15 54 14.0 +0.4**
CLL *e* 15 54 23.0
CLL *es*PP 15 54 47.0
CLL Collm 43.54 309 *e*P **P 15 52 33.1 +2.1**
comp=Z,20nm,0.9s,baz=85,slow=7.9
CLL Collm 43.54 309 P **P 15 52 31.3 +0.3**
CLL IAmb IAmb 15 52 33.8
comp=Z,18nm,0.8s
MYKA Terra Mystica 43.59 302 *i* P **P 15 52 32.9 +1.4**
comp=Z,6.4nm,1.0s
MYKA *i* PP **PcP 15 54 21.7 +4.0**

comp=Z,15nm,1.6s
KBA Koelnbreinsper 43.73 303 *i* P **P** 15 52 29.4 -3.3
comp=Z,5.6nm,0.8s
KBA *i* PcP **PP** 15 54 16.7 +0.8
comp=Z,6.6nm,1.0s
ROBS Robic 43.73 302 *i* P **P** 15 52 33.6 +1.0
YAK Yakutsk 43.84 35 *e*P **P** 15 52 33.0 -0.2
YAK *e**PP **pP** 15 52 54.7 -0.5
YAK *e* 15 54 22.7
YAK *e*S **S** 15 58 55.8 -1.6
YAK *e**SS **sS** 15 59 38.6 +3.6
YAK *e*SS **SS** 16 02 08.0 -8.1
YAK *e* 16 02 21.7
YAK pmax pmax
comp=Z,12nm,0.8s
YAK pmax pmax
comp=N,2.0nm,1.1s
YAK pmax pmax
comp=Z,185nm,5.6s
YAK pmax pmax
comp=N,111nm,5.7s
YAK pmax pmax
comp=E,104nm,5.3s
YAK smax smax
comp=N,119nm,4.3s
YAK smax smax
comp=E,55nm,3.8s
YAK Yakutsk 43.84 35 P **P** 15 52 33.4 +0.3
YAK IAmb IAmb 15 52 35.4
comp=Z,14nm,0.7s
TANN Tannenbergstha 43.95 308 *e*P **P** 15 52 37.0 +2.6
comp=Z,31nm,1.1s,baz=85,slow=7.9
NKC Novy Kostel 43.97 308 *e*P **P** 15 52 37.3 +2.8
NKC Novy Kostel 43.97 308 *e*P **P** 15 52 37.3 +2.8
RJOB Jochberg 44.01 304 *e*P **P** 15 52 36.8 +1.9
comp=Z,28nm,1.7s,baz=85,slow=7.9
MOR8 Moi Rana 44.08 331 *e*P **P** 15 52 35.7 +0.5
PLN Plauen 44.13 308 *e*P **P** 15 52 38.4 +2.6
comp=Z,13nm,1.0s,baz=85,slow=7.9
ROTZ Rotzenmuhle 44.17 307 *e*P **P** 15 52 39.0 +2.9
comp=Z,30nm,1.4s,baz=85,slow=7.9
MANZ Manzenberg 44.21 307 *e*P **P** 15 52 39.3 +2.9
comp=Z,27nm,1.3s,baz=85,slow=7.9
STEI Steigen 44.23 333 *e*P **P** 15 52 37.7 +1.5
STAL STALIGIAL 44.28 302 P **P** 15 52 35.9 -1.1
STAL IAmb IAmb 15 52 38.7
comp=Z,32nm,1.5s
NEUB Neuenburg 44.31 309 *e*P **P** 15 52 39.7 +2.5
comp=Z,44nm,1.0s,baz=85,slow=7.9
ABTA Abfaltersbach 44.34 303 *i* P **P** 15 52 37.9 +0.3
comp=Z,4.0nm,0.7s
ABTA *i* PP **PP** 15 54 26.5 +4.1
comp=Z,3.9nm,0.8s
NC405 NORSAR Array S 44.44 323 P **P** 15 52 38.8 +0.7
MOX Moxa 44.46 308 *e*P **P** 15 52 41.0 +2.6
comp=Z,29nm,1.4s,baz=85,slow=7.9
NC602 NORSAR Array S 44.49 323 *e*P **P** 15 52 39.8 +1.3
NC602 NORSAR Array S 44.49 323 P **P** 15 52 38.3 -0.2
KS19 Wonju Array Si 44.51 71 P **P** 15 52 40.3 +1.3
KS19 IAmb IAmb 15 53 08.9
comp=Z,26nm,1.3s
KSRS Korea Array 44.57 71 P **P** 15 52 40.2 +0.9
comp=Z,3.7nm,0.6s,baz=273,slow=6.9,SNR=18
KSRS LR LR 16 12 27.0
comp=Z,33nm,18.9s,baz=45,slow=38
NC303 NORSAR Array S 44.62 323 P **P** 15 52 40.3 +0.8
NB201 NORSAR Array S 44.64 323 P **P** 15 52 40.1 +0.5
KONS Konsvik 44.68 331 *e*P **P** 15 52 41.2 +1.4
NB2 NORSAR Subarra 44.68 323 P **P** 15 52 40.5 +0.5
comp=Z,59nm,0.9s,baz=93,slow=7.9
NB2 NORSAR Subarra 44.68 323 P **P** 15 52 40.5 +0.5
baz=93,slow=7.9
NOA NORSAR Array B 44.68 323 P **P** 15 52 40.7 +0.7
comp=Z,46nm,0.9s,baz=96,slow=7.7,SNR=84
NOA PP **PP** 15 54 27.2 +1.6
comp=Z,2.2nm,0.7s,baz=94,slow=7.3,SNR=3.7
NOA LR LR 16 13 11.1
comp=Z,26nm,20.3s,baz=230,slow=38
GRA1 Grafenberg Arr 44.81 307 P **P** 15 52 41.5 +0.3
GRF Grafenberg Arr 44.81 307 P **P** 15 52 41.5 +0.3
GRF pmax pmax
comp=Z,89nm,1.7s
GRF Grafenberg Arr 44.81 307 *e*P **P** 15 52 44.4 +3.2
comp=Z,40nm,1.3s,baz=85,slow=7.9
NAO01 NORSAR Array S 44.82 323 P **P** 15 52 40.9 -0.2
OSL Oslo 44.84 321 *e*P **P** 15 52 42.6 +1.4
WTTA Wattenberg 44.86 303 *i* P **P** 15 52 41.5 -0.2
comp=Z,10nm,0.9s
WTTA *i* PP **PP** 15 54 29.6 +1.7
comp=Z,17nm,1.2s
WATA Walderalm 44.89 304 *i* P **P** 15 52 40.9 -1.0
comp=Z,18nm,1.5s
WATA *i* PP **PP** 15 54 29.7 +1.5
comp=Z,8.8nm,1.1s
NBO00 NORSAR Array S 44.89 323 P **P** 15 52 41.9 +0.3
LOF Lofoten 44.90 333 *e*P **P** 15 52 42.6 +1.1
KLR Kul'dur 44.91 54 *i* P **P** 15 52 43.7 +1.8
KLR pmax pmax
comp=Z,3.0nm,1.0s
NC204 NORSAR Array S 44.92 323 P **P** 15 52 41.9 0.0
MURB Monte Urbino 44.95 298 P **P** 15 52 42.4 -0.1
MURB IAmb IAmb 15 52 46.9
comp=Z,31nm,1.0s
BSEG Bad Segeberg 45.03 313 *e*P **P** 15 52 45.6 +2.8
comp=Z,42nm,0.9s,baz=85,slow=7.9
CTI Castel Tesino 45.04 302 P **P** 15 52 42.9 -0.3
CTI pmax pmax
comp=Z,68nm,2.0s
CTI Castel Tesino 45.04 302 P **P** 15 52 42.9 -0.3
CTI IAmb IAmb 15 52 45.5
comp=Z,68nm,2.0s
CLZ Clausthal 45.14 310 *e*P **P** 15 52 46.3 +2.6
comp=Z,57nm,1.5s,baz=85,slow=7.9
SQTA Sankt Quirin 45.15 303 *i* P **P** 15 52 44.3 +0.3
comp=Z,7.0nm,0.6s
SQTA *i* PcP **PcP** 15 54 24.0 +1.0
comp=Z,7.5nm,0.8s
HOPEN Hopen 45.18 346 *e*P **P** 15 52 46.2 +2.5
MOTA Moosalm 45.20 304 *i* P **P** 15 52 44.7 +0.2
comp=Z,8.2nm,0.8s
MOTA *i* PP **PP** 15 54 27.9 -3.6
comp=Z,11nm,1.3s
NRDL Niedersach Rie 45.24 311 *e*P **P** 15 52 47.3 +2.8
comp=Z,34nm,1.0s,baz=85,slow=7.9
KONO Kongsberg 45.39 321 *e*P **P** 15 52 47.5 +1.9
RETA Reutte 45.41 304 *i* P **P** 15 52 45.3 -0.8
comp=Z,2.7nm,0.8s
GTTG Gvttingen 45.41 310 *e*P **P** 15 52 48.6 +2.6
comp=Z,73nm,1.0s,baz=85,slow=7.9
BJO1 Bjornoya 45.47 343 *e*P **P** 15 52 47.4 +1.4
FETA Feichten 45.51 303 *i* P **P** 15 52 47.1 +0.2
comp=Z,13nm,1.3s
FETA *i* PcP **PcP** 15 54 24.3 0.0
comp=Z,8.4nm,0.9s
RETH Rethem/Aller, 45.68 311 *e*P **P** 15 52 50.7 +2.7
comp=Z,21nm,1.0s,baz=85,slow=7.9
TIXI Tiksi 45.73 22*c*e**P** **P** 15 52 48.4 +0.3
TIXI pmax pmax
comp=Z,7.0nm,0.8s
TIXI Tiksi 45.73 22 LR LR 16 13 13.3
comp=Z,51nm,18.3s,baz=20,slow=38
TIXI Tiksi 45.73 22 P **P** 15 52 47.9 -0.2
DOMB Dombas 45.79 324 *e*P **P** 15 52 50.7 +2.0
FUORN Ofenpass-Fuorn 45.89 303 P **P** 15 52 49.7 -0.3
FUORN IAmb IAmb 15 52 51.4
comp=Z,24nm,1.6s
SALO Salr 45.89 301 P **P** 15 52 49.8 0.0
SALO IAmb IAmb 15 54 34.5
comp=Z,16nm,0.7s
USRK Ussuriysk Ar. 45.90 61 P **P** 15 52 50.2 +0.4
comp=Z,1.2nm,0.7s,baz=289,slow=9.0,SNR=3.8
HOMB Homborsund 45.93 319 *e*P **P** 15 52 51.4 +1.5
DAVA Damuels 46.03 304 *i* P **P** 15 52 50.3 -0.7
comp=Z,11nm,0.5s,SNR=7.1
SKAR Skarslia 46.08 322 *e*P **P** 15 52 51.9 +0.8
MOL Molde 46.53 325 *e*P **P** 15 52 56.5 +2.0
IBBN Ibbenburen 46.70 311 *e*P **P** 15 52 58.5 +2.5
comp=Z,71nm,1.4s,baz=85,slow=7.9
BFO Black Forest 46.89 305 P **P** 15 52 58.2 +0.6
BFO pmax pmax
comp=Z,16nm,1.4s
BFO Black Forest 46.89 305 P **P** 15 52 58.2 +0.6
ODD1 Odda 46.90 321 *e*P **P** 15 52 59.9 +2.4
BLS5 Blasjo 46.99 321 *e*P **P** 15 53 00.9 +2.7
BUG Bochum--Univer 47.10 310 *e*P **P** 15 53 01.6 +2.5
comp=Z,36nm,1.3s,baz=85,slow=7.9

HSPB Hornsund (broa 47.33 345 *e*P **P** 15 53 03.3 +2.8
AHRW Bad Neuenahr-A 47.35 309 *e*P **P** 15 53 03.7 +2.7
comp=Z,23nm,1.0s,baz=85,slow=7.9
BER Bergen 47.54 322 *e*P **P** 15 53 04.6 +2.2
ASK Askoy 47.61 322 *e*P **P** 15 53 03.7 +0.8
SPA0 Spitsbergen Ar 47.67 347 *e*P **P** 15 53 05.3 +2.0
SPA0 Spitsbergen Ar 47.67 347 P **P** 15 53 04.6 +1.3
ECH Echery 47.68 305 P **P** 15 53 03.8 +0.1
ECH pmax pmax
comp=Z,40nm,1.8s
ECH Echery 47.68 305 P **P** 15 53 03.8 +0.1
ECH IAmb IAmb 15 54 15.3
comp=Z,40nm,1.8s
GRNR Gornyy 47.69 51 *e*P **P** 15 53 10.8 +7.1
GRNR MLR MLR
comp=Z,50nm,11.0s
SENIN Lac Senin/Sane 47.95 303 P **P** 15 53 06.1 +0.1
SENIN IAmb IAmb 15 53 09.6
comp=Z,12nm,0.8s
MEM Membach 48.01 309 P **P** 15 53 08.2 +2.0
comp=Z,14nm,0.9s
WLF Walferdange 48.08 307 *e*P **P** 15 53 09.3 +2.6
comp=Z,43nm,1.0s,baz=85,slow=7.9
WLF Walferdange 48.08 307 P **P** 15 53 08.6 +1.9
comp=Z,32nm,1.4s
KBS Kingsbay 48.79 347 P **P** 15 53 13.3 +1.5
KBS pmax pmax
comp=Z,27nm,0.8s
KBS Kingsbay 48.79 347 *e*P **P** 15 53 14.2 +2.5
KBS Kingsbay 48.79 347 P **P** 15 53 13.3 +1.5
KBS IAmb IAmb 15 53 15.0
comp=Z,27nm,0.8s
BMRD Maredsous 48.84 309 P **P** 15 53 13.6 +1.0
comp=Z,15nm,1.2s
KMBO Kilima Mbogo 49.03 228 P **P** 15 53 13.7 -1.0
KMBO pmax pmax
comp=Z,16nm,1.7s
KMBO Kilima Mbogo 49.03 228 P **P** 15 53 13.7 -1.0
comp=Z,0.8nm,0.4s,baz=34,slow=15,SNR=2.6
KMBO Kilima Mbogo 49.03 228 IAmb IAmb 15 53 23.5
comp=Z,16nm,1.6s
KEST Kesra 49.41 289 P **P** 15 53 17.3 +0.1
comp=Z,3.2nm,0.6s,baz=74,slow=2.6,SNR=3.8
KEST Kesra 49.41 289 IAmb IAmb 15 54 23.6
comp=Z,54nm,1.9s
HPK Haverah Park 52.02 314 *e*P **P** 15 53 37.8 +1.3
HPK IAmb IAmb 15 53 38.9
comp=Z,54nm,0.7s
EDMD Edmundbyers 52.04 315 *e*P **P** 15 53 37.7 +1.1
EDMD IAmb IAmb 15 53 38.6
comp=Z,207nm,1.5s
ESY Stoneypath 52.19 317 *e*P **P** 15 53 38.7 +1.0
MCD Coleburn Disti 52.24 319 *e*P **P** 15 53 39.3 +1.3
EDI Edinburgh 52.51 317 *e*P **P** 15 53 41.4 +1.4
EDI IAmb IAmb 15 53 42.4
comp=Z,33nm,0.7s
ESK Eskdalemuir 52.64 316 *e*P **P** 15 53 42.4 +1.4
ESK IAmb IAmb 15 53 43.5
comp=Z,24nm,1.1s
MAT Matsushiro 52.65 69 P **P** 15 53 41.6 +0.2
MJAR Matsushiro Arr 52.65 69 P **P** 15 53 42.3 +0.9
comp=Z,3.0nm,0.7s,baz=295,slow=9.2,SNR=7.3
KESW Keswick, Cumbr 52.74 315 *e*P **P** 15 53 43.5 +1.8
KESW IAmb IAmb 15 53 44.4
comp=Z,47nm,0.9s
MBAR Mbarara 52.75 235 P **P** 15 53 42.3 -0.2
MBAR pmax pmax
comp=Z,7.0nm,0.7s
MBAR Mbarara 52.75 235 P **P** 15 53 42.3 -0.2
MBAR IAmb IAmb 15 53 49.1
comp=Z,7.5nm,0.7s
INVG Invergeldie, C 52.88 318 *e*P **P** 15 53 43.9 +1.2
INVG IAmb IAmb 15 53 45.1
comp=Z,13nm,1.1s
RSC Scourie 53.10 320 *e*P **P** 15 53 46.5 +2.2
MCH1 Michaelchurch 53.27 312 *e*P **P** 15 53 46.5 +0.8
MCH1 IAmb IAmb 15 53 47.9
comp=Z,62nm,0.9s
KAC Achnashellach 53.33 319 *e*P **P** 15 53 47.0 +1.0
LLW Llanuwchllyn 53.46 313 *e*P **P** 15 53 48.6 +1.5
LLW IAmb IAmb 15 53 49.4
comp=Z,9.5nm,0.7s
KPL Plockton 53.55 319 *e*P **P** 15 53 48.7 +1.1
KPL IAmb IAmb 15 53 49.7
comp=Z,24nm,0.7s
LAWE Loch Awe, Argy 53.65 318 *e*P **P** 15 53 50.1 +1.7
NOR Nord 53.97 350 *i* P **P** 15 53 50.6 +0.2
DAG Danmarks Havn 54.93 344⇑ *i* P **P** 15 53 58.7 +1.3
DAG pmax pmax
comp=Z,27nm,0.9s
DAG Danmarks Havn 54.93 344⇑ *i* P **P** 15 53 58.7 +1.3
comp=Z,27nm,0.9s
ESDC Sonseca Array 57.83 298 P **P** 15 54 19.0 +0.4
comp=Z,1.9nm,0.6s,baz=54,slow=7.7,SNR=11
BILL Bilibino 58.54 26 *i* P **P** 15 54 24.2 +1.2
BILL *e**PP **sP** 15 54 52.3 -4.0
BILL *e* 15 54 58.7
BILL *e* 15 55 20.7
BILL *e* 15 56 37.0
BILL pmax pmax
comp=Z,7.0nm,1.6s
BILL Bilibino 58.54 26 P **P** 15 54 23.3 +0.3
BILL IAmb IAmb 15 55 08.2
comp=Z,21nm,1.8s
PETK Petropavlovsk- 59.79 44 P **P** 15 54 31.1 -0.8
comp=Z,5.7nm,1.0s,baz=308,slow=7.1,SNR=4.2
PETK LR LR 16 22 29.8
comp=Z,36nm,20.1s,baz=35,slow=38
SUMG Summit 61.27 341 P **P** 15 54 43.8 +1.6
SUMG pmax pmax
comp=Z,33nm,0.7s
SUMG Summit 61.27 341 *i* P **P** 15 54 44.2 +2.0
comp=Z,86nm,0.8s
SUMG Summit 61.27 341 P **P** 15 54 43.8 +1.6
TULEG Thule 64.60 350 P **P** 15 55 02.4 -1.3
TULEG IAmb IAmb 15 55 05.8
comp=Z,45nm,1.7s
LSZ Lusaka 65.65 227 P **P** 15 55 11.1 -0.3
LSZ pmax pmax
comp=Z,5.0nm,0.7s
LSZ Lusaka 65.65 227 P **P** 15 55 11.1 -0.3
TOA0 Torodi Ar. Sit 66.08 269 P **P** 15 55 11.6 -2.5
TOA0 IAmb IAmb 15 55 15.2
comp=Z,17nm,1.1s
TORD Torodi Ar. Bea 66.08 269 P **P** 15 55 12.0 -2.2
comp=Z,8.2nm,0.5s,baz=47,slow=5.6,SNR=68
TORD Torodi Ar. Bea 66.08 269 IAmb IAmb 15 55 14.8
comp=Z,7.1nm,0.6s
ILULI Ilulissat 66.62 341 *i* P **P** 15 55 18.4 +1.7
ILULI pmax pmax
comp=Z,38nm,0.7s
ILULI Ilulissat 66.62 341 *i* P **P** 15 55 18.4 +1.7
comp=Z,38nm,0.7s
ILULI Ilulissat 66.62 341 P **P** 15 55 17.9 +1.2
MATP Matopo 69.58 223 *i* P **P** 15 55 33.5 -2.5
COLD Coldfoot 71.97 16 P **P** 15 55 50.5 +0.7
MLY Manley 73.67 17 P **P** 15 56 00.4 +0.5
C36M Paulatuk 73.94 6 P **P** 15 56 01.5 +0.2
C36M IAmb IAmb 15 56 02.6
comp=Z,11nm,0.7s
INK Inuvik 73.94 9 P **P** 15 56 02.3 +0.9
INK pmax pmax
comp=Z,8.0nm,1.0s
INK Inuvik 73.94 9 P **P** 15 56 02.2 +0.9
NEA Nenana 74.44 17 P **P** 15 56 04.6 +0.2
COLA College 74.47 16 P **P** 15 56 04.7 +0.2
COLA pmax pmax
comp=Z,30nm,0.3s
COLA College 74.47 16 P **P** 15 56 04.7 +0.2
IL31 74.78 16 P **P** 15 56 05.8 -0.5
ILAR Eielson Array 74.78 16 P **P** 15 56 06.3 0.0
comp=Z,2.9nm,0.9s,baz=316,slow=4.8,SNR=28
KTH Kantishna Hill 74.85 18 P **P** 15 56 07.6 +0.7
KTH IAmb IAmb 15 56 49.2
comp=Z,46nm,1.7s
LBTB Lobatse 74.85 222 P **P** 15 56 07.7 +0.3
LBTB pmax pmax
comp=Z,11nm,0.8s
LBTB Lobatse 74.85 222 P **P** 15 56 07.7 +0.3
LBTB IAmb IAmb 15 56 09.6
comp=Z,11nm,0.8s
DBIC Dimbokro 75.06 267 P **P** 15 56 06.8 -1.9
DBIC pmax pmax
comp=Z,32nm,1.8s
DBIC Dimbokro 75.06 267 P **P** 15 56 06.8 -1.9
comp=Z,2.6nm,0.6s,baz=41,slow=7.3,SNR=8.5
DBIC LR LR 16 34 09.6
comp=Z,50nm,18.9s,baz=70,slow=40
DBIC Dimbokro 75.06 267 IAmb IAmb 15 58 16.7
comp=Z,32nm,1.8s
KIC Kosan Boka 75.14 267 *e*P **P** 15 56 07.4 -1.9
comp=Z,7.2nm,0.7s
KIC Kosan Boka 75.14 267 P **P** 15 56 07.4 -1.9
TIC Toumodi 75.20 267 *e*P **P** 15 56 07.6 -2.0
TIC Toumodi 75.20 267 P **P** 15 56 07.6 -2.0
TIC Toumodi 75.20 267 P **P** 15 56 07.6 -2.0
LIC Lamto 75.45 267 *e*P **P** 15 56 08.9 -2.2
comp=Z,4.3nm,0.4s
LIC Lamto 75.45 267 P **P** 15 56 08.9 -2.2
SKT Skwentna 75.99 19 P **P** 15 56 12.8 -0.6
SKT IAmb IAmb 15 57 08.2
comp=Z,14nm,1.2s
SCRK Sand Creek 76.10 15 P **P** 15 56 14.0 0.0
DHY Denali Highway 76.12 17 P **P** 15 56 14.1 -0.2
DAWY Dawson 76.94 13 P **P** 15 56 18.9 +0.2
BOSA Boshof 77.91 220 *i* P **P** 15 56 25.1 +0.5
BOSA *i* 15 56 25.1
baz=327,slow=6.2
BOSA Boshof 77.91 220 P **P** 15 56 24.6 0.0
BOSA pmax pmax
comp=Z,17nm,0.9s
BOSA Boshof 77.91 220 P **P** 15 56 23.9 -0.7
comp=Z,15nm,0.8s,baz=36,slow=6.8,SNR=21
BOSA Boshof 77.91 220 P **P** 15 56 24.6 0.0
BOSA IAmb IAmb 15 56 25.6
comp=Z,18nm,0.8s
YKA Yellowknife Ar 81.33 3 P **P** 15 56 43.1 +0.6
comp=Z,9.4nm,0.7s,baz=347,slow=5.3,SNR=106
YKA PKKPbc **PKKPbc** 16 15 13.2 -3.4
comp=Z,0.2nm,0.6s,baz=166,slow=2.6,SNR=3.7
WRA Warramunga Arr 81.63 122 P **P** 15 56 44.6 -0.2
WRA pmax pmax
comp=Z,1.0nm,1.2s
WRA Warramunga Arr 81.63 122 P **P** 15 56 44.5 -0.2
comp=Z,2.2nm,0.6s,baz=323,slow=5.0,SNR=19
SCHQ Schefferville 82.33 337 P **P** 15 56 48.6 +0.6
comp=Z,3.2nm,0.6s,baz=0.8,slow=7.3,SNR=7.3
SCHQ Schefferville 82.33 337 IAmb IAmb 15 56 49.8
comp=Z,49nm,1.6s
AS31 Alice Springs 83.90 125 P **P** 15 56 56.5 -0.1
ASAR Alice Springs 83.90 125 P **P** 15 56 56.2 -0.3
comp=Z,2.6nm,0.5s,baz=310,slow=4.9,SNR=70
FCC Fort Churchill 84.43 352 P **P** 15 56 58.9 +0.3
FCC pmax pmax
comp=Z,23nm,1.3s
FCC Fort Churchill 84.43 352 P **P** 15 56 58.9 +0.3
FCC IAmb IAmb 15 57 00.7
comp=Z,23nm,1.3s
FFC Flin Flon 89.06 356 P **P** 15 57 21.5 +0.2
FFC pmax pmax
comp=Z,10.0nm,1.0s
FFC Flin Flon 89.06 356 P **P** 15 57 21.5 +0.2
FFC IAmb IAmb 15 57 23.0
comp=Z,9.7nm,1.0s
ULM Lac du Bonnet 93.00 352 P **P** 15 57 39.4 -0.2
ULM pmax pmax
comp=Z,20nm,1.7s
ULM Lac du Bonnet 93.00 352 P **P** 15 57 39.4 -0.2
comp=Z,3.4nm,0.6s,baz=29,slow=4.9,SNR=9.2
ULM Lac du Bonnet 93.00 352 P **P** 15 57 39.4 -0.2
ULM IAmb IAmb 16 01 02.1
comp=Z,20nm,1.7s
EYMN Ely 94.66 349 P **P** 15 57 47.9 +0.6
EYMN IAmb IAmb 15 57 49.2
comp=Z,9.8nm,1.1s
TXAR Lajitas Array 114.45 355 PKP **PKiKP** 16 03 05.4 -0.9
comp=Z,0.2nm,0.6s,baz=344,slow=2.0,SNR=3.1
GO04 Tololo Observa 147.99 270 **PKPbc** 16 04 10.4 -1.5
PLCA Paso Flores 150.13 250 PKPbc **PKPbc** 16 04 16.1 -0.6
comp=Z,5.2nm,0.8s,baz=193,slow=2.3,SNR=11
PLCA Paso Flores 150.13 250 **PKPbc** 16 04 15.8 -1.0
GO06 Curarrehue 150.74 252 **PKPbc** 16 04 17.2 -1.1

ISN ***15*** *15:59:34.6*±*1.2,32.4*′*43N*×*49.9*′*92E, h0km*±*29km, ML3.8*
TEH ***15*** *15:59:37.4,32.4*′*48N*×*49.9*′*70E,h11km, ML3.9*
THR ***15*** *15:59:38.5*±*0.3,32.4*′*49N*×*49.7*′*75E, h29km*±*2km, ML4.0*
IDC ***15*** *15:59:39.8*±*1.9,32.4*′*28N*×*49.6*′*3E, h47km*±*18km, mb3.5/15, mb1 3.6/21,mb1mx3.5/42, mbtmp3.7/21,ML3.7/6,MS3.3/9, Ms1 3.3/9,ms1mx3.0/37,Error ellipse: s-maj=22.4km s-min=15.1km az=178.0*
DSN ***15*** *15:59:47.4*±*2.0,31.4*′*41N*×*49.7*′*82E, h10km, ML4.2/7, Error ellipse: s-maj=29.3km s-min=11.6km az=12.0*

ISC 15 15:59:37.4±0.5,**32.3**′**7N**±0.′04×**49.7**′**4E**±0.′03,**h19km,n100,**
σ2$23/104,mb3.6/17,MS3.3/5,Western Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JHBN	**Jahan bin**	**0.79**	**100**	*e*Pg	**Pn**		**15 59 53.9**	**0.0**
JHBN				*e*			16 00 15.6	
SHGR	**Shooshtar-Gavs**	**0.84**	**252**	*e*Pn	**Pn**		**15 59 55.2**	**+1.0**
SHGR	**Shooshtar-Gavs**	**0.84**	**252**	*e*Pg	**Pn**		**15 59 55.2**	**+1.0**
SHGR				*e*Sg	**Sn**		**16 00 07.6**	**+1.6**
IBRJ	**Brojen**	**1.37**	**109**	*e*			16 00 29.4	
IBRJ				*e*Pg	**Pg**		**16 00 05.5**	**+1.6**
KHMZ	**Khomeyn**	**1.38**	**8**	*e*Pg	**Pn**		**16 00 01.6**	**-0.3**
KHMZ	**Khomeyn**	**1.38**	**8**	*e*Pg	**Pn**		**16 00 01.6**	**-0.3**
KHMZ				*e*Sg	**Sn**		**16 00 18.7**	**-1.1**
BMDN	**Meydan**	**1.51**	**330**	*e*			16 00 39.9	
BMDN				*e*Pg	**Pb**		**16 00 04.4**	**-0.6**
IKMR	**Kamar-syah**	**1.62**	**315**	*e*			16 00 31.4	
IKMR				*e*Pg	**Pb**		**16 00 06.6**	**-0.1**
BDRS	**Dareh Seyedi**	**1.74**	**336**	*e*			16 00 09.6	
BDRS				*e*Pn	**Pn**		**16 00 07.8**	**+0.9**
IKLH	**Kolahrood**	**1.81**	**58**	*e*Pn	**Pb**		**16 00 10.4**	**+0.2**
IKLH				*e*			16 00 14.2	
IDOB	**Doab**	**1.93**	**318**	*e*Pn	**Pn**		**16 00 10.6**	**+1.1**
IDOB				*e*			16 00 53.1	
IKFM	**Kafar-mosalman**	**1.97**	**306**	*e*Pg	**Pb**		**16 00 12.3**	**-0.3**
IKFM				*e*			16 00 47.9	
HSAM	**Samen**	**2.07**	**333**	*e*Pn	**Pn**		**16 00 12.9**	**+1.5**
HSAM				*e*			16 00 52.9	
KLNJ	**Kolanjah**	**2.08**	**130**	*e*Pn	**Pb**		**16 00 15.3**	**+0.6**
KLNJ				*e*			16 00 49.3	
GHVR	**GHOM**	**2.48**	**31**	IAML			16 01 00.8	
	comp=E,640nm,0.6s							
HAGD	**Aghdareh**	**2.50**	**349**	*e*Pn	**Pb**		**16 00 19.7**	**-2.1**
HAGD				*e*			16 01 05.2	
KRSH	**Karshahi**	**2.57**	**51**	*e*Pn	**Pb**		**16 00 21.6**	**-1.3**
KRSH				*e*			16 01 00.1	
IKOM	**Komasi**	**2.60**	**315**	*e*Pn	**Pn**		**16 00 20.6**	**+2.1**
IKOM				*e*			16 01 13.7	
IBZA	**Bozab**	**2.62**	**324**	*e*Pn	**Pn**		**16 00 18.5**	**+1.5**
IBZA				*e*			16 01 18.7	
KCHF	**Cheshme Sefid,**	**2.96**	**311**	*e*Pn	**Pn**		**16 00 24.9**	**+1.4**
KCHF				*e*			16 01 23.2	
HSRG	**Sareghieh**	**3.12**	**337**	*e*Pn	**Pn**		**16 00 28.0**	**+2.2**
HSRG				*e*			16 01 32.4	
IKAZ	**Kazeroun**	**3.15**	**145**	*e*Pn	**Pn**		**16 00 29.6**	**+3.4**
IBDR	**Badra**	**3.30**	**284**	*e*Pn	**Pn**		**16 00 31.0**	**+3.0**
IBDR				*e*Sn	**Sb**		**16 01 12.0**	**-3.0**
IGHG	**Ghaleghazi**	**3.30**	**307**	*e*Pn	**Pn**		**16 00 29.8**	**+1.5**
IGHG				*e*			16 01 42.8	
IHSB	**Hasanabad**	**3.32**	**22**	*e*Pn	**Pn**		**16 00 30.1**	**+1.7**
NSR	**Nassriya**	**3.35**	**247**	*e*Pn	**Pn**		**16 00 32.0**	**+3.2**
NSR				*e*Sn	**Sb**		**16 01 13.0**	**-3.7**
SNGE	**Sanandaj**	**3.37**	**324**	*e*Pn	**Pn**		**16 00 30.3**	**+1.0**
SNGE	**Sanandaj**	**3.37**	**324**	*e*Pn	**Pn**		**16 00 30.3**	**+1.0**
ILIN	**Lien**	**3.44**	**318**	*e*Pn	**Pn**		**16 00 31.2**	**+0.9**
ANAR	**Anarak**	**3.46**	**75**	*e*Pn	**Pn**		**16 00 33.4**	**+3.0**
IDHR	**Dehrash**	**3.64**	**311**	*e*Pn	**Pn**		**16 00 33.6**	**+0.6**
IDHR				*e*			16 01 23.0	
IDMV	**Damavand**	**3.73**	**30**	*e*Pn	**Pn**		**16 00 36.4**	**+2.2**
ICHK	**Chekchek**	**3.95**	**91**	*e*Pn	**Pn**		**16 00 40.8**	**+3.6**
ICHK				*e*			16 01 56.5	
ILAS	**Lasjerd**	**4.03**	**41**	*e*Pn	**Pn**		**16 00 41.6**	**+3.3**
IGZV	**Ghazvin**	**4.03**	**5**	*e*Pn	**Pn**		**16 00 39.9**	**+1.6**
YZKH	**Yazd**	**4.10**	**88**	*e*Pn	**Pn**		**16 00 41.7**	**+2.5**
YZKH	**Yazd**	**4.10**	**88**	*e*Pn	**Pn**		**16 00 41.7**	**+2.5**
IFIR	**Firoozkooh**	**4.11**	**37**	*e*Pn	**Pn**		**16 00 42.4**	**+2.9**
ZNJK	**Zanjan**	**4.38**	**349**	*e*Pn	**Pn**		**16 00 43.9**	**+0.8**
ZNJK	**Zanjan**	**4.38**	**349**	*e*Pn	**Pn**		**16 00 43.9**	**+0.8**
IALA	**Alasht**	**4.49**	**34**	*e*Pn	**Pn**		**16 00 48.2**	**+3.4**
BHD	**Baghdad**	**4.60**	**283**	*e*Pn	**Pn**		**16 00 49.0**	**+3.0**
BHD				*e*Sn	**Sn**		**16 01 44.0**	**+5.1**
IANJ	**Anjilo**	**4.65**	**47**	*e*Pn	**Pn**		**16 00 48.9**	**+2.1**
IBAF	**Bafgh**	**5.01**	**97**	*e*Pn	**Pn**		**16 00 55.0**	**+3.3**

IGLO	**Ghaloghah**	**5.33**	**38**	*e*Pn	**Pn**	**16 00 59.7**	**+3.5**
IKRK	**Kirkuk**	**5.42**	**305**	*e*Pn	**Pn**	**16 01 00.0**	**+2.8**
IKRK				*e*Sn	**Sn**	**16 02 03.0**	**+4.0**
IHRS	**Heris**	**6.33**	**340**	*e*Pn	**Pn**	**16 01 10.2**	**+0.2**
MSL	**Mosul**	**6.80**	**308**	*e*Pn	**Pn**	**16 01 19.0**	**+2.9**
MSL				AML	AML	16 01 40.2	
	comp=Z,164nm,0.3s						
MSL				*e*Sn	**Sn**	**16 02 36.0**	**+3.0**
GENO	**Geno**	**7.46**	**130**	*e*Pn	**Pn**	**16 01 27.2**	**+1.8**
IKOO	**Kooshah**	**7.83**	**87**	*e*Pn	**Pn**	**16 01 33.2**	**+2.6**
AFRZ	**Afriz**	**7.87**	**80**	*e*Pn	**Pn**	**16 01 33.8**	**+2.8**
SHME	**Shamm**	**8.42**	**137**	P	**Pn**	**16 01 40.4**	**+2.0**
IAKL	**Akhelmad**	**8.56**	**58**	*e*Pn	**Pn**	**16 01 43.4**	**+2.9**
BANOM	**Banah**	**8.61**	**137**	*i* P	**Pn**	**16 01 41.8**	**+0.8**
	SNR=33						
BANOM				S	**Sn**	**16 03 12.9**	**-4.7**
BANOM	**Banah**	**8.61**	**137**	P	**Pn**	**16 01 42.0**	**+1.0**
	SNR=30						
GNI	**Garni**	**8.75**	**334**	LR	LR	16 05 39.6	
	comp=Z,110nm,18.2s,baz=142,slow=41						
GEYT	**Alibeck**	**8.82**	**49**	P	**Pn**	**16 01 47.2**	**+3.3**
	comp=Z,2.6nm,0.3s,baz=237,slow=15,SNR=21						
GEYT				LR	LR	16 05 43.1	
	comp=Z,391nm,18.1s,baz=245,slow=41						
IEMG	**Emamgholi**	**8.88**	**53**	*e*Pn	**Pn**	**16 01 48.4**	**+3.4**
MSFE	**Esma-Masafi**	**8.96**	**140**	P	**Pn**	**16 01 47.1**	**+1.2**
MDH	**Madha**	**9.09**	**139**	P	**Pn**	**16 01 47.4**	**-0.2**
MDH	**Madha**	**9.09**	**139**	P	**Pn**	**16 01 48.4**	**+0.8**
	SNR=8.7						
ASUD	**Al Ashush, Dub**	**9.14**	**146**	*i* P	**Pn**	**16 01 50.7**	**+2.3**
	SNR=13						
ASUD	**Al Ashush, Dub**	**9.14**	**146**	P	**Pn**	**16 01 51.6**	**+3.3**
	SNR=14						
UOSS	**Minazif**	**9.32**	**141**	P	**Pn**	**16 01 50.6**	**-0.1**
HATD	**Hatta, Dubai**	**9.38**	**142**	P	**Pn**	**16 01 52.9**	**+1.3**
ASHO	**Ashiyiah**	**9.46**	**142**	*i* P	**Pn**	**16 01 52.6**	**0.0**
	SNR=13						
ASHO	**Ashiyiah**	**9.46**	**142**	P	**Pn**	**16 01 53.3**	**+0.6**
	SNR=13						
RAYN	**Ar Rayn**	**9.57**	**204**	*i* P	**Pn**	**16 01 54.0**	**-0.3**
	SNR=32						
ASF	**Jabal al Asfar**	**10.88**	**272**	P	**Pn**	**16 02 11.2**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=45,slow=8.6,SNR=3.3						
WSAR	**Wadi Sarin**	**12.02**	**137**	P	**Pn**	**16 02 28.1**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=268,slow=22,SNR=14						
WSAR				S	**Sn**	**16 04 34.2**	**-7.1**
	comp=Z,0.4nm,0.3s,baz=106,slow=15,SNR=4.4						
WSAR				LR	LR	16 07 46.6	
	comp=Z,35nm,21.3s,baz=40,slow=40						
WSAR	**Wadi Sarin**	**12.02**	**137**	P	**Pn**	**16 02 28.5**	**+0.8**
	SNR=8.9						
JMDO	**Jabal Madar**	**12.42**	**141**	P	**Pn**	**16 02 34.5**	**+1.3**
	SNR=5.7						
WBK	**Wadi Bani Khal**	**12.70**	**138**	P	**Pn**	**16 02 36.9**	**-0.2**
	SNR=8.5						
KVAR	**Kislovodsk Arr**	**12.82**	**336**	P	**Pn**	**16 02 39.9**	**+1.1**
	baz=292,slow=19,SNR=2.7						
EIL	**Elat**	**12.97**	**262**	LR	LR	16 09 03.7	
	comp=Z,134nm,18.7s,baz=102,slow=44						
MHTO	**MHTO**	**13.50**	**145**	P	**Pn**	**16 02 47.7**	**-0.3**
	SNR=6.2						
BRTR	**Keskin Array B**	**14.94**	**304**	P	**Pn**	**16 03 08.8**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=114,slow=13,SNR=2.5						
AKTO	**Aktyubinsk**	**19.07**	**16**	P	**Pn**	**16 03 59.3**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=193,slow=7.8,SNR=6.1						
IDI	**Anoyia**	**20.84**	**285**	P	**P**	**16 04 18.6**	**+0.5**
	comp=Z,4.3nm,0.5s,baz=73,slow=11,SNR=5.3						
ATD	**Arta Tunnel**	**21.69**	**199**	LR	LR	16 13 33.8	
	comp=Z,112nm,19.3s,baz=108,slow=39						
AAK	**Ala-Archa**	**22.08**	**55**	P	**P**	**16 04 35.9**	**+4.4**
	comp=Z,1.2nm,0.8s,baz=201,slow=14,SNR=3.6						
AAK				LR	LR	16 14 30.4	
	comp=Z,169nm,19.3s,baz=260,slow=40						
MLR	**Muntele Rosu**	**22.58**	**312**	P	**P**	**16 04 39.6**	**+2.9**
	comp=Z,2.6nm,0.7s,baz=153,slow=11,SNR=2.4						
AKASG	**Malin Array Be**	**23.77**	**326**	P	**P**	**16 04 46.5**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=135,slow=8.7,SNR=3.8						
ARU	**Arti**	**24.83**	**12**	P	**P**	**16 04 58.9**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=162,slow=9.3,SNR=3.9						
BVAR	**Borovoye Array**	**25.45**	**30**	P	**P**	**16 05 04.4**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=230,slow=7.4,SNR=11						
BVAR				ScP	**ScP**	**16 12 09.9**	**-3.9**
	comp=Z,0.4nm,0.8s,baz=253,slow=1.5,SNR=4.0						
KIRV	**Kirov**	**26.22**	**360**	LR	LR	16 18 05.6	
	comp=Z,74nm,19.4s,baz=271,slow=42						
KOLS	**Kolonicke sedl**	**26.41**	**317**	*e*P	**P**	**16 05 16.0**	**+3.3**
KURBB	**Kurchatov Arra**	**27.98**	**41**	P	**P**	**16 05 27.5**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=241,slow=9.8,SNR=6.5						
MKAR	**Makanchi Array**	**28.69**	**50**	P	**P**	**16 05 34.1**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=250,slow=9.5,SNR=5.4						
MKAR				LR	LR	16 18 53.1	
	comp=Z,70nm,20.4s,baz=267,slow=40						
GERES	**GERESS Array B**	**31.57**	**312**	P	**P**	**16 06 00.6**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=119,slow=8.0,SNR=5.8						
FINES	**FINESS Array B**	**32.89**	**339**	P	**P**	**16 06 08.9**	**-1.1**
	comp=Z,2.0nm,0.9s,baz=139,slow=9.1,SNR=4.7						
ZALV	**Zalesovo Beam**	**32.95**	**39**	P	**P**	**16 06 10.8**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=252,slow=9.8,SNR=4.5						
NOA	**NORSAR Array B**	**38.04**	**331**	P	**P**	**16 06 52.4**	**-1.8**
	comp=Z,0.6nm,0.7s,baz=122,slow=8.4,SNR=2.3						
ARCES	**ARCESS Array B**	**39.63**	**347**	P	**P**	**16 07 07.0**	**-0.5**
	comp=Z,5.3nm,1.1s,baz=173,slow=8.0,SNR=3.7						
TLY	**Talaya**	**43.34**	**47**	LR	LR	16 27 22.5	
	comp=Z,52nm,19.5s,baz=278,slow=38						
SONM	**Songino Array**	**45.00**	**53**	P	**P**	**16 07 51.6**	**0.0**
	comp=Z,0.3nm,0.5s,baz=258,slow=8.0,SNR=3.8						
CMAR	**Chiang Mai Arr**	**46.17**	**95**	P	**P**	**16 07 59.6**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=290,slow=7.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**47.82**	**258**	P	**P**	**16 08 12.4**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=50,slow=8.0,SNR=4.9						
ILAR	**Eielson Array**	**82.31**	**7**	P	**P**	**16 11 56.1**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=314,slow=4.2,SNR=6.8						
YKA	**Yellowknife Ar**	**84.63**	**353**	P	**P**	**16 12 08.8**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=7.2,slow=4.8,SNR=8.2						

IDC 15 16:24:41.2±2.5, 5.94S×130.87E, h0km, mb3.8/1, mb1 4.1/3, mb1mx3.6/29, mbtmp3.9/3, ML4.1/2, Error ellipse: s-maj=163.4km s-min=30.0km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.32**	**167**	Pn	Pn	16 28 03.9	-1.5
	0.9nm,0.3s,baz=350,slow=13,SNR=26						
WRA				Sn	Sn	16 30 30.2	-15
	0.2nm,0.3s,baz=344,slow=23,SNR=2.7						
ASAR	**Alice Springs**	**17.87**	**171**	P	P	16 28 52.5	+0.4
	0.7nm,0.3s,baz=349,slow=14,SNR=57						
ASAR				S	Sn	16 32 00.0	-11
	0.1nm,0.3s,baz=358,slow=27,SNR=4.3						
MKAR	**Makanchi Array**	**67.82**	**326**	P	P	16 35 41.2	0.0
	0.4nm,0.3s,baz=114,slow=7.8,SNR=16						

IDC 15 16:32:46.9±2.1, 11.15S×163.05E, h0km, mb3.6/4, mb1 3.9/5, mb1mx3.7/32, mbtmp3.8/5, ML3.5/1, MS3.3/4, Ms1 3.2/4, ms1mx2.8/31, Error ellipse: s-maj=52.3km s-min=32.4km az=99.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**11.34**	**164**	Pn	Pn	16 35 30.3	0.0
	0.3nm,0.3s,baz=325,slow=16,SNR=6.7						
STKA	**Stephens Creek**	**28.59**	**221**	LR	LR	16 50 13.6	
	comp=Z,41nm,20.4s,baz=29,slow=37						
WRA	**Warramunga Arr**	**28.96**	**249**	P	P	16 38 48.0	-0.4
	0.2nm,0.3s,baz=80,slow=8.5,SNR=2.7						
H11S2	**WAKE ISLAND Hy**	**29.67**	**7**	T	T	17 10 01.5	
	baz=188,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**29.68**	**7**	T	T	17 10 01.4	
	baz=188,slow=76,SNR=13						
H11S1	**WAKE ISLAND Hy**	**29.69**	**7**	T	T	17 09 44.6	
	baz=188,slow=76,SNR=8.6						
ASAR	**Alice Springs**	**30.39**	**242**	P	P	16 39 01.3	+0.3
	0.6nm,0.5s,baz=65,slow=10,SNR=16						
H11N1	**WAKE ISLAND Hy**	**30.90**	**7**	T	T	17 11 30.2	
	baz=188,slow=76,SNR=7.0						
H11N3	**WAKE ISLAND Hy**	**30.91**	**7**	T	T	17 11 33.6	
	baz=188,slow=76,SNR=9.1						
H11N2	**WAKE ISLAND Hy**	**30.92**	**7**	T	T	17 11 42.2	
	baz=188,slow=76,SNR=5.3						
KSRS	**Korea Array**	**58.51**	**328**	LR	LR	17 04 35.2	
	comp=Z,7.0nm,21.9s,baz=120,slow=33						
PETK	**Petropavlovsk-**	**64.17**	**356**	LR	LR	17 05 45.1	
	comp=Z,23nm,21.6s,baz=62,slow=31						
SONM	**Songino Array**	**77.20**	**325**	P	P	16 44 43.1	+0.2
	0.3nm,0.6s,baz=124,slow=6.0,SNR=3.5						
MKAR	**Makanchi Array**	**91.79**	**317**	P	P	16 45 56.5	-0.3
	0.3nm,0.8s,baz=102,slow=6.1,SNR=3.2						
ANMO	**Albuquerque**	**96.69**	**56**	LR	LR	17 24 55.1	
	comp=Z,48nm,18.2s,baz=24,slow=32						

IDC 15 16:50:29.4±1.3, 11.55S×166.97E, h0km, mb3.6/7, mb1 3.9/8, mb1mx3.7/37, mbtmp3.7/8, ML3.7/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/26, Error ellipse: s-maj=44.4km s-min=25.2km az=129.0
NEIC 15 16:50:34.4±1.8, 11.80S±0.09×167.1E±0.2, h35km±8km, mb4.3/3, Error ellipse: s-maj=25.4km s-min=11.5km az=107.0

ISC 15 16:50:34.3±0.9, 11.8S±0.1×167.1E±0.2, h35km, n20, σ1s19/10, mb3.6/7, MS3.3/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.41**	**288**	LR	LR	16 55 07.9	
	comp=Z,102nm,21.8s,baz=100,slow=39						
DZM	**Mont Dzumac**	**10.26**	**183**	Pn	**Pn**	**16 52 59.3**	**+0.2**
	0.5nm,0.3s,baz=309,slow=14,SNR=5.2						
DZM	**Mont Dzumac**	**10.26**	**183**			**16 52 57.8**	**-1.4**
KRVT	**Keravat (AS076**	**16.66**	**295**	LR	LR	17 01 14.3	
	comp=Z,48nm,19.0s,baz=115,slow=39						
PMG	**Port Moresby**	**19.74**	**275**	LR	LR	17 03 01.7	
	comp=Z,54nm,18.2s,baz=89,slow=38						
EIDS	**Eidsvold**	**20.30**	**226**	Pn	Pn	16 55 09.6	+0.2
EIDS				IAmb	IAmb	16 55 35.7	
	comp=Z,99nm,1.9s						
AFI	**Afiamalu**	**20.70**	**98**	LR	LR	17 02 00.5	
	comp=Z,36nm,19.3s,baz=106,slow=33						
BHW	**Baring Head**	**30.30**	**168**	P	**P**	**16 56 42.2**	**0.0**
STKA	**Stephens Creek**	**30.86**	**226**	P	**P**	**16 56 48.3**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=45,slow=7.1,SNR=2.4						
STKA	**Stephens Creek**	**30.86**	**226**	IAmb	IAmb	16 57 39.8	
	comp=Z,3.1nm,1.6s						
WRA	**Warramunga Arr**	**32.49**	**251**	P	**P**	**16 57 03.0**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=81,slow=9.1,SNR=3.1						
WRA	**Warramunga Arr**	**32.49**	**251**	IAmb	IAmb	16 57 04.4	
	comp=Z,1.1nm,2.0s						
RAR	**Rarotonga**	**33.06**	**111**	LR	LR	17 08 19.9	
	comp=Z,67nm,19.4s,baz=248,slow=32						
ASAR	**Alice Springs**	**33.67**	**245**	P	**P**	**16 57 12.7**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=69,slow=9.4,SNR=8.9						
PPT	**Papeete**	**42.24**	**103**	LR	LR	17 13 09.5	
	comp=Z,36nm,19.6s,baz=44,slow=32						
CMAR	**Chiang Mai Arr**	**73.62**	**293**	P	**P**	**17 02 02.5**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=131,slow=3.7,SNR=2.3						
RPN	**Rapa Nui**	**79.06**	**116**	LR	LR	17 27 33.7	
	comp=Z,77nm,21.6s,baz=343,slow=28						
ILAR	**Eielson Array**	**83.78**	**18**	P	**P**	**17 03 00.4**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=249,slow=4.7,SNR=3.6						
NVAR	**Mina Array Bea**	**85.48**	**49**	P	**P**	**17 03 09.2**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=240,slow=7.2,SNR=3.0						
MKAR	**Makanchi Array**	**94.96**	**317**	P	**P**	**17 03 53.0**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=77,slow=6.4,SNR=2.7						

NEIC 15 17:25:27.1±2.0, 14.51N±0.09×92.22W±0.04, h82km±4km, Error ellipse: s-maj=13.3km s-min=1.6km az=200.0
UCR 15 17:25:28.4±1.9, 14.52N×92.22W, h77km±14km, ML4.0, mb4.3(NEIC)
SNET 15 17:25:28.3±1.8, 14.52N×92.22W, h78km±13km, ML4.1
MEX 15 17:25:28.3±0.6, 14.60N×92.06W, h85km±5km, MD3.9
IDC 15 17:25:30.4±1.4, 14.80N×92.09W, h97km±10km, mb3.6/7, mb1 3.8/11, mb1mx3.6/39, mbtmp3.9/11, MS3.0/1, Ms1 3.0/1, ms1mx2.4/29, Error ellipse: s-maj=22.4km s-min=8.3km az=23.0
GCG 15 17:25:34.5±0.3, 14.66N×91.80W, h48km±20km, MD4.1

ISC 15 17:25:28.5±0.7, 14.69N±0.07×92.17W±0.04, h84km±5km, n65, σ1s11/83, mb4.3/16, 3D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.23**	**337**	*e*P	**Pn**	**17 25 40.5**	**-0.4**
THIG				*e*S	**Sn**	**17 25 49.7**	**-0.4**
THIG		**0.23**	**337**			**17 25 40.5**	**-0.4**
THIG					**Sn**	**17 25 49.7**	**-0.4**
STG3	**Santiaguito 3,**	**0.58**	**88**	*e*P	**Pn**	**17 25 43.4**	**-0.1**
ERG	**Entre ros, C**	**0.63**	**113**	*e*P	**Pn**	**17 25 43.5**	**-0.3**
FUG	**Fuego 3**	**1.31**	**100**	*e*P	**Pn**	**17 25 52.0**	**+0.3**
PCIG		**1.43**	**315**	*e*P	**Pn**	**17 25 53.5**	**+0.5**
PCIG				*e*S	**Sn**	**17 26 12.5**	**+0.8**
PCIG		**1.43**	**315**		**Pn**	**17 25 53.5**	**+0.5**
PCIG					**Sn**	**17 26 12.5**	**+0.8**
PCG	**Pacaya**	**1.54**	**101**	*e*P	**Pn**	**17 25 55.7**	**+1.0**
APG	**El Apazote**	**1.68**	**79**	P	**Pn**	**17 25 57.1**	**+0.6**
	55nm,0.3s,baz=323,slow=9.8,SNR=45						
APG				S	**Sn**	**17 26 18.9**	**+1.2**
	159nm,0.3s,baz=303,slow=3.2,SNR=33						
APG				LR	LR	17 26 19.1	
	comp=Z,30nm,19.2s,baz=90,slow=31						
APG	**El Apazote**	**1.68**	**79**		**Pn**	**17 25 57.1**	**+0.6**
APG					**Sn**	**17 26 18.9**	**+1.2**
IXG	**Ixpaco**	**1.75**	**107**	*e*P	**Pn**	**17 25 58.2**	**+0.8**
NBG	**Las Nubes**	**1.77**	**93**	*e*P	**Pn**	**17 25 59.9**	**+2.2**
FAME	**Alcalda de S**	**2.25**	**112**	*e*P	**Pn**	**17 26 03.9**	**0.0**
FAME				*e*S	**Sn**	**17 26 30.0**	**-0.9**
FAME				IAML		17 26 33.4	
	comp=Z,536nm,0.3s						
TGIG		**2.27**	**336**	*i* P	**Pn**	**17 26 04.2**	**+0.1**
TGIG				*i* S	**Sn**	**17 26 32.2**	**+0.8**
TGIG		**2.27**	**336**			**17 26 03.5**	**-0.7**
MRL	**Marmol**	**2.43**	**81**	*e*P	**Pn**	**17 26 08.0**	**+1.5**
SBLS	**San Blas**	**2.61**	**109**	*e*P	**Pn**	**17 26 09.8**	**+0.9**
SBLS	**San Blas**	**2.61**	**109**	*e*P	**Pn**	**17 26 09.8**	**+0.9**
CEVE	**Cerro Verde**	**2.61**	**109**	*e*P	**Pn**	**17 26 09.2**	**+0.2**
CEVE				*e*S	**Sn**	**17 26 41.9**	**+2.0**
CEVE				IAML		17 26 51.8	
	comp=Z,2μm,0.3s						
CEVE	**Cerro Verde**	**2.61**	**109**	*e*P	**Pn**	**17 26 09.2**	**+0.2**
CEVE				*e*S	**Sn**	**17 26 41.9**	**+2.0**
CEVE				IAML		17 26 51.8	
	comp=Z,2μm,0.3s						
SNJE	**San Jose**	**2.62**	**108**	*e*P	**Pn**	**17 26 09.0**	**+0.1**
SNJE	**San Jose**	**2.62**	**108**	*e*P	**Pn**	**17 26 09.0**	**+0.1**
BQQS	**Boqueron**	**2.96**	**108**	*e*P	**Pn**	**17 26 14.5**	**+1.0**
LFRS	**El Faro**	**3.19**	**109**	*e*P	**Pn**	**17 26 18.5**	**+1.8**
CMIG	**Matias Romero**	**3.54**	**313**	P	**Pn**	**17 26 22.0**	**+0.8**
	comp=Z,4.3nm,0.3s,baz=138,slow=12,SNR=32						
CMIG				S	**Sn**	**17 27 03.7**	**+1.7**
	comp=Z,14nm,0.3s,baz=304,slow=20,SNR=6.9						
CMIG	**Matias Romero**	**3.54**	**313**	*e*P	**Pn**	**17 26 21.5**	**+0.3**
CMIG				*e*S	**Sn**	**17 27 03.5**	**+1.5**
CMIG	**Matias Romero**	**3.54**	**313**		**Pn**	**17 26 21.5**	**+0.3**
CMIG					**Sn**	**17 27 01.1**	**-0.9**
HUIG	**Huatulco**	**3.95**	**286**		Pn	17 26 32.0	+5.2
TGUH	**Tegucigalpa,Un**	**4.79**	**97**	Pn	**Pn**	**17 26 37.1**	**-1.2**
TEIG	**Tepich**	**6.64**	**33**	P	**Pn**	**17 27 03.6**	**+0.2**
	comp=Z,26nm,0.3s,baz=317,slow=0.4,SNR=147						
TEIG				S	**Sn**	**17 28 15.4**	**-2.3**
	comp=Z,18nm,0.3s,baz=319,slow=22,SNR=13						
TEIG	**Tepich**	**6.64**	**33**		**Pn**	**17 27 04.2**	**+0.8**
JTS	**Las Juntas de**	**8.29**	**121**	P	**Pn**	**17 27 28.4**	**+2.3**
	comp=Z,0.8nm,0.3s,baz=332,slow=17,SNR=3.1						
JTS	**Las Juntas de**	**8.29**	**121**		**Pn**	**17 27 24.3**	**-1.8**
TXAR	**Lajitas Array**	**18.04**	**326**	P	**Pn**	**17 29 34.9**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=156,slow=14,SNR=4.4						
TXAR				PcP	**PcP**	**17 34 03.4**	**-0.9**
	baz=142,slow=4.6,SNR=3.3						
MNTX	**Cornudas Mount**	**20.80**	**327**	P	**P**	**17 30 04.0**	**+1.0**
SDV	**Santo Domingo**	**21.85**	**103**	P	**P**	**17 30 13.7**	**-0.9**
	comp=Z,4.1nm,0.3s,baz=315,slow=10,SNR=4.0						
CLTN	**Cedars of Leba**	**21.94**	**13**	P	**P**	**17 30 14.5**	**-0.7**
CLTN				IAmb	IAmb	17 30 16.1	
	comp=Z,7.3nm,0.8s						
TKL	**Tuckaleechee C**	**22.20**	**18**	P	**P**	**17 30 18.3**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=197,slow=11,SNR=5.8						
TKL				LR	LR	17 38 40.0	
	comp=Z,42nm,20.1s,baz=282,slow=36						
T47A	**Sharon Grove**	**22.66**	**11**	P	**P**	**17 30 22.5**	**-0.3**
T47A				IAmb	IAmb	17 30 22.7	
	comp=Z,20nm,1.5s						
121A	**Cookes Peak, D**	**22.76**	**324**	P	**P**	**17 30 24.9**	**+0.8**
U54A	**Nelsons Funny**	**23.62**	**21**	P	**P**	**17 30 29.4**	**-2.7**
ANMO	**Albuquerque**	**23.92**	**330**	P	**P**	**17 30 36.6**	**+1.7**
	comp=Z,0.9nm,0.5s,baz=166,slow=15,SNR=3.5						
U56A	**King**	**24.00**	**24**	P	**P**	**17 30 34.9**	**-0.5**
U56A				IAmb	IAmb	17 30 50.3	
	comp=Z,11nm,0.9s						
WCI	**Wyandotte Cave**	**24.02**	**11**	P	**P**	**17 30 34.4**	**-1.1**
WCI				IAmb	IAmb	17 30 36.2	
	comp=Z,12nm,0.8s						
P46A	**Rosedale**	**25.21**	**9**	P	**P**	**17 30 45.4**	**-0.9**
P46A				IAmb	IAmb	17 30 45.7	
	comp=Z,8.5nm,0.6s						
K58A	**Earlville**	**31.38**	**24**	P	**P**	**17 31 40.5**	**-0.9**
PDAR	**Pinedale Array**	**31.73**	**335**	P	**P**	**17 31 45.4**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=145,slow=6.5,SNR=3.3						
PDAR				PcP	**PcP**	**17 34 33.9**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=130,slow=6.0,SNR=3.6						
NVAR	**Mina Array Bea**	**33.03**	**321**	P	**P**	**17 31 58.4**	**+2.3**
	comp=Z,2.4nm,0.7s,baz=135,slow=8.8,SNR=19						
NVAR				PcP	**PcP**	**17 34 39.3**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=157,slow=2.8,SNR=4.1						
NVAR	**Mina Array Bea**	**33.03**	**321**	P	**P**	**17 31 57.8**	**+1.7**
SAML	**Samuel**	**37.12**	**127**	P	**P**	**17 32 28.8**	**-2.4**
SAML				IAmb	IAmb	17 32 30.1	
	comp=Z,4.1nm,1.1s						
YKA	**Yellowknife Ar**	**50.32**	**347**	P	**P**	**17 34 15.5**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=151,slow=7.4,SNR=15						
YKA				pP	**pP**	**17 34 38.3**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=149,slow=7.4,SNR=5.4						
YKA				PcP	**PcP**	**17 35 32.7**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=154,slow=3.8,SNR=6.9						
GLB	**Gilahina Butte**	**59.36**	**334**	P	**P**	**17 35 23.2**	**+1.4**
INK	**Inuvik**	**59.73**	**343**	P	**P**	**17 35 23.7**	**-0.4**
IL31		**62.14**	**337**	P	**P**	**17 35 40.4**	**0.0**
ILAR	**Eielson Array**	**62.14**	**337**	P	**P**	**17 35 40.6**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=170,slow=4.9,SNR=13						
ILAR	**Eielson Array**	**62.14**	**337**	P	**P**	**17 35 40.4**	**-0.2**
BMAR	**Burnt Mountain**	**62.59**	**340**	P	**P**	**17 35 44.0**	**+0.4**
MLY	**Manley**	**63.74**	**336**	P	**P**	**17 35 51.5**	**+0.3**
MLY				IAmb	IAmb	17 35 52.3	
	comp=Z,6.9nm,0.9s						
TTA	**Tatalina**	**65.21**	**333**	P	**P**	**17 36 00.7**	**-0.2**
TTA				IAmb	IAmb	17 36 01.2	
	comp=Z,3.3nm,0.8s						
IMAR	**Indian Mountai**	**65.26**	**337**	P	**P**	**17 36 00.8**	**-0.2**
BILL	**Bilibino**	**80.76**	**338**	P	**P**	**17 37 33.4**	**+1.0**
BILL				IAmb	IAmb	17 37 33.7	
	comp=Z,3.5nm,0.6s						
MKAR	**Makanchi Array**	**118.60**	**4**	PKP	**PKPdf**	**17 44 05.1**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=28,slow=1.4,SNR=2.6						
ASAR	**Alice Springs**	**135.74**	**251**	PKP	**PKPdf**	**17 44 40.2**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=106,slow=2.2,SNR=2.5						
CMAR	**Chiang Mai Arr**	**145.29**	**341**	PKPbc	**PKPbc**	**17 44 57.1**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=336,slow=3.3,SNR=20						
CMAR	**Chiang Mai Arr**	**145.29**	**341**	PKPdf	**PKPbc**	**17 44 57.0**	**-0.3**

IDC 15 17:48:09.6±2.6, 36.02N×139.34E, h110km±14km, mb2.9/2, mb1 3.2/2, mb1mx2.8/49, mbtmp3.3/2, MS2.9/1, Ms1 2.9/1, ms1mx2.1/13, Error ellipse: s-maj=55.8km s-min=28.2km az=60.0
JMA 15 17:48:10.1±0.1, 36.03N×139.48E, h97km±1km, M2.8

ISC 15 17:48:09.2±1.1, 36.01N±0.05×139.40E±0.08, h107km±7km, n15, σ0s57/23, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHU	**Hanno**	**0.19**	**211**	P	**Pn**	**17 48 24.7**	**+0.5**
JHU				S	**Sn**	**17 48 35.1**	**-0.3**
JRY	**Ryogami san**	**0.40**	**271**	P	**Pn**	**17 48 25.5**

PB08				S		**S**	**18 13 39.0 +0.6**	
PB08	**IPOC Station P**	**1.94**	**234**	*i* P		**Pn**	**18 13 07.3 +1.3**	
PB08				*i* S		**S**	**18 13 39.0 +0.6**	
MNMC	**Minye Minye**	**2.00**	**266**	⇑*i* P		**Pn**	**18 13 07.3 +0.9**	
MNMC				*i* S		**S**	**18 13 38.1 -1.0**	
MNMC	**Minye Minye**	**2.00**	**266**	P		**Pn**	**18 13 07.3 +0.9**	
MNMC				S		**S**	**18 13 39.4 +0.3**	
MNMCX	**Minye Minye**	**2.00**	**266**	*i* P		**Pn**	**18 13 07.4 +1.0**	
MNMCX				*i* S		**S**	**18 13 39.3 +0.2**	
PB16	**IPOC Station P**	**2.02**	**288**	⇑*i* P		**Pn**	**18 13 08.3 +1.3**	
PB16				*i* S		**S**	**18 13 40.7 +0.7**	
PB16	**IPOC Station P**	**2.02**	**288**	*i* P		**Pn**	**18 13 08.4 +1.4**	
PB16				*i* S		**S**	**18 13 41.3 +1.3**	
BS05	**Cuyupaya**	**2.03**	**15**	P		**Pn**	**18 13 07.2 +0.2**	
BS05				S		**S**	**18 13 38.3 -1.8**	
BBOJ	**La Paz, Jacaqu**	**2.11**	**341**	P		**Pn**	**18 13 09.5 +1.7**	
BBOJ				S		**S**	**18 13 39.6 -2.0**	
PB11	**IPOC Station P**	**2.19**	**249**	*i* P		**Pn**	**18 13 08.6 +0.6**	
PB11				*i* S		**S**	**18 13 41.4 -0.7**	
BBOE	**La Paz, Chanca**	**2.21**	**348**	P		**Pn**	**18 13 10.3 +1.5**	
PSGC	**Pisagua**	**2.56**	**256**	P		**Pn**	**18 13 11.9 +0.1**	
BBOD	**La Paz, Gloria**	**2.57**	**335**	P		**Pn**	**18 13 13.7 +1.3**	
LPAZ	**La Paz**	**2.75**	**347**	P		**Pn**	**18 13 14.8 +0.4**	
	comp=N,19nm,0.3s,baz=130,slow=11,SNR=344							
LPAZ				S		**S**	**18 13 51.2 -2.3**	
	comp=N,4.3nm,0.3s,baz=343,slow=17,SNR=11							
LPAZ	**La Paz**	**2.75**	**347**	P		**Pn**	**18 13 15.2 +0.8**	
LPAZ				S		**S**	**18 13 50.2 -3.3**	
LPAZ				AML		AML	18 13 50.7	
	comp=N,70nm,0.5s							
AP01	**Chacalluta**	**2.77**	**282**	⇓*i* P		**Pn**	**18 13 14.6 +0.7**	
AP01				*i* S		**S**	**18 13 50.6 -2.0**	
MOCB	**Mochara**	**2.84**	**143**	P		**Pn**	**18 13 16.5 +1.4**	
MOCB				S		**S**	**18 13 55.0 +0.2**	
BBOB	**La Paz, Bander**	**2.90**	**348**	P		**Pn**	**18 13 16.5 +0.6**	
BBOB				S		**S**	**18 13 53.8 -2.3**	
TA01	**Diego Aracena**	**2.98**	**238**	⇓*i* P		**Pn**	**18 13 16.7 +0.6**	
TA01				*i* S		**S**	**18 13 54.1 -2.6**	
BS09	**Huarina**	**2.98**	**339**	P		**Pn**	**18 13 18.4 +1.6**	
PATCX	**Punta Patache**	**3.10**	**234**	⇑*i* P		**Pn**	**18 13 18.5 +1.0**	
PATCX				*i* S		**S**	**18 13 57.1 -2.2**	
PATCX				IAML			18 13 58.8	
	comp=E,423nm,0.3s							
PATCX	**Punta Patache**	**3.10**	**234**	*e*P		**Pn**	**18 13 18.6 +1.0**	
PATCX				*i* S		**S**	**18 13 57.0 -2.3**	
PB09	**IPOC Station P**	**3.24**	**210**	*e*P		**Pn**	**18 13 21.3 +2.1**	
PB09				IAML			18 13 23.6	
	comp=Z,90nm,0.2s							
PB09				*i* S		**S**	**18 14 02.6 +0.2**	
YJA	**Yavi**	**3.67**	**150**	P		**Pn**	**18 13 25.7 +1.3**	
YJA	**Yavi**	**3.67**	**150**	P		**Pn**	**18 14 09.7 -2.0**	
YJA				S		**S**	**18 14 10.0 -1.7**	
YJA	**Yavi**	**3.67**	**150**	*i* P		**Pn**	**18 13 25.8 +1.3**	
YJA				*i* S		**S**	**18 14 11.3 -0.4**	
YJA				IAML			18 14 16.6	
	comp=Z,9.7nm,0.4s							
PB03	**IPOC Station P**	**3.71**	**215**	*e*P		**Pn**	**18 13 26.2 +1.6**	
PB03				*i* S		**S**	**18 14 10.3 -1.8**	
LVC	**Limon Verde**	**3.84**	**200**	P		**Pn**	**18 13 27.7 +1.3**	
	comp=Z,20nm,0.3s,baz=28,slow=11,SNR=71							
LVC				S		**S**	**18 14 14.6 -0.6**	
	comp=Z,7.5nm,0.3s,baz=188,slow=19,SNR=16							
LVC	**Limon Verde**	**3.84**	**200**	*i* P		**Pn**	**18 13 27.7 +1.3**	
LVC				*i* S		**S**	**18 14 14.8 -0.3**	
PB04	**IPOC Station P**	**4.16**	**216**	P		**Pn**	**18 13 31.0 +1.1**	
PB04				S		**S**	**18 14 18.3 -3.4**	
PB06	**IPOC Station P**	**4.18**	**207**	P		**Pn**	**18 13 31.6 +1.4**	
PB06				S		**S**	**18 14 19.6 -2.5**	
PB06	**IPOC Station P**	**4.18**	**207**	*e*P		**Pn**	**18 13 31.0 +0.8**	
PB06				*i* S		**S**	**18 14 19.8 -2.4**	
PB10	**IPOC Station P**	**5.33**	**212**	P		**Pn**	**18 13 44.4 +0.2**	
PB10				S		**S**	**18 14 43.4 -4.1**	
PB10				AML		AML	18 14 46.2	
	comp=Z,98nm,0.4s							
SLA	**San Lorenzo**	**6.00**	**162**	P		**Pn**	**18 13 54.4 +1.8**	
SIV	**San Ignacio**	**6.81**	**65**	P		**Pn**	**18 14 01.0 -1.8**	
	comp=Z,6.8nm,0.3s,baz=257,slow=14,SNR=81							
CPUP	**Villa Florida**	**11.88**	**130**	P		**P**	**18 15 09.5 -1.1**	
	comp=Z,0.4nm,0.3s,baz=317,slow=12,SNR=5.0							
CFA	**Coronel Fontan**	**12.58**	**183**	P		**Pn**	**18 15 17.3 +1.6**	
	comp=Z,0.3nm,0.3s,baz=317,slow=9.5,SNR=9.6							
CFA				S		**S**	**18 17 29.6 -5.7**	
	comp=Z,0.7nm,0.3s,baz=175,slow=15,SNR=4.0							
TORD	**Torodi Ar. Bea**	**75.26**	**70**	P		**P**	**18 23 42.4 +0.4**	
	comp=Z,0.5nm,0.4s,baz=239,slow=5.2,SNR=6.8							
YKA	**Yellowknife Ar**	**89.28**	**340**	P		**P**	**18 24 55.7 +2.4**	
	comp=Z,0.1nm,0.3s,baz=137,slow=5.4,SNR=4.0							

*IDC **15** 18:14:37.2±2.7,7.°08S×107.°30E,h116km±15km,mb3.2/4, mb1 3.4/4,mb1mx3.1/36,mbtmp3.6/4,Error ellipse: s-maj=86.1km s-min=21.9km az=51.0*
*DJA **15** 18:14:37.9±0.4,8.°5S×6.°10°7E±.°,h70km±7km,M3.6/13, mB5.2/1,mb3.2/2,MLv3.9/13,Mw(mB)4.6/1*
ISC 15 18:14:37.1±1.1,**7.°61S**±0.°09×**107.°37E**±0.°06,**h78**km,**n20,** σ**0°79**/20,**mb3.4**/4,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNJI	**Cibinong**	**0.39**	**322**	P	**Pn**	**18 14 50.5**	**+0.7**
CISI	**Cisompet, Garu**	**0.44**	**83**	P	**Pn**	**18 14 51.4**	**+1.1**
LEM	**Lembang**	**0.82**	**17**	P	**Pn**	**18 14 54.5**	**+0.3**
	745nm,0.3s,baz=90,slow=20,SNR=393						
LEM				S	**Sn**	**18 15 08.9**	**+2.2**
	157nm,0.3s,baz=153,slow=23,SNR=13						
LEM				LR	LR	18 15 11.3	
	comp=Z,86nm,19.9s,baz=206,slow=85						
LEM	**Lembang**	**0.82**	**17**	P	**Pn**	**18 14 54.1**	**0.0**
LEM				S	**Sn**	**18 15 05.6**	**-1.1**
SKJI	**Sukabumi**	**1.01**	**307**	P	**Pn**	**18 14 56.8**	**+0.6**
CMJI	**Cimerak**	**1.08**	**99**	P	**Pn**	**18 14 57.5**	**+0.5**
CMJI				S	**Sn**	**18 15 12.4**	**+0.5**
DBJI	**Dramaga**	**1.22**	**330**	P	**Pn**	**18 14 58.9**	**+0.1**
DBJI				S	**Sn**	**18 15 15.2**	**+0.1**
KPJI	**Karang Pucung**	**1.57**	**80**	P	**Pn**	**18 15 03.5**	**+0.2**
UGM	**Wanagama**	**3.14**	**96**	P	**Pn**	**18 15 24.3**	**0.0**
WOJI	**Wonogiri, Jawa**	**3.53**	**94**	P	**Pn**	**18 15 29.1**	**-0.5**
KASI	**Kota Agung**	**3.53**	**306**	P	**Pn**	**18 15 29.8**	**+0.1**
PCJI	**Pacitan**	**3.81**	**99**	P	**Pn**	**18 15 34.4**	**+0.9**
MDSI	**Maura Dua**	**4.44**	**314**	P	**Pn**	**18 15 42.2**	**+0.1**
WRA	**Warramunga Arr**	**28.86**	**118**	P	**P**	**18 20 28.1**	**-0.4**
	0.6nm,0.7s,baz=306,slow=9.0,SNR=4.4						
ASAR	**Alice Springs**	**30.04**	**125**	P	**P**	**18 20 38.6**	**-0.4**
	0.2nm,0.5s,baz=298,slow=8.8,SNR=7.8						
H08S2	**Diego Garcia H**	**34.56**	**268**	T	T	18 58 26.8	
	baz=91,slow=76,SNR=4.2						
H08S3	**Diego Garcia H**	**34.57**	**268**	T	T	18 58 26.7	
	baz=91						
H08S1	**Diego Carcia H**	**34.58**	**268**	T	T	18 58 27.8	
	baz=91,slow=76,SNR=4.1						
STKA	**Stephens Creek**	**39.96**	**132**	P	**P**	**18 22 03.6**	**-0.5**
	1.2nm,0.4s,baz=305,slow=9.5,SNR=6.2						
MKAR	**Makanchi Array**	**58.59**	**340**	P	P	18 24 18.6	-7.2
	0.2nm,0.4s,baz=159,slow=8.4,SNR=6.0						

*NEIC **15** 18:19:05.9±0.8,17.°0S±0.°1×174.°2W±0.°1,h119km±10km, mb4.7/7,Error ellipse: s-maj=20.6km s-min=14.9km az=81.0*
*IDC **15** 18:19:06.5±3.3,16.°85S×174.°30W,h118km±29km,mb4.0/6, mb1 4.2/7,mb1mx3.7/38,mbtmp4.4/7,MS3.2/1,Ms1 3.2/1, ms1mx2.6/32,Error ellipse: s-maj=104.3km s-min=18.2km az=138.0*
ISC 15 18:19:04.2±0.7,**16.°95S**±0.°07×**174.°19W**±0.°09,**h100**km, **n22,** σ**1°37**/24,**mb4.6**/10,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.82**	**38**	P	**Pn**	**18 20 03.6**	**+2.5**
	14nm,0.3s,baz=195,slow=1.5,SNR=8.8						
AFI				S	**Sn**	**18 20 44.3**	**-0.8**
	91nm,0.3s,baz=52,slow=22,SNR=27						
AFI	**Afiamalu**	**3.82**	**38**		**Pn**	**18 20 03.0**	**+2.0**
AFI					**Sn**	**18 20 42.4**	**-2.6**
NIUE	**Niue**	**4.58**	**118**		**Pn**	**18 20 13.6**	**+2.5**
NIUE				Sn	**Sn**	**18 21 00.8**	**-2.4**
URZ	**Urewera**	**22.56**	**198**	LR	LR	18 31 53.9	
	comp=Z,57nm,19.8s,baz=166,slow=34						
ARMA	**Armidale**	**33.90**	**240**	P	**P**	**18 25 38.8**	**+1.0**
STKA	**Stephens Creek**	**42.61**	**241**	P	**P**	**18 26 51.1**	**+0.4**
	2.6nm,0.7s,baz=101,slow=11,SNR=6.5						
STKA	**Stephens Creek**	**42.61**	**241**	P	**P**	**18 26 49.5**	**-1.2**

WRA	**Warramunga Arr**	**48.76**	**258**	P		**P**	**18 27 38.8**	**-0.6**
	0.8nm,0.4s,baz=96,slow=6.9,SNR=22							
WRA	**Warramunga Arr**	**48.76**	**258**	P		**P**	**18 27 38.5**	**-0.9**
AS31	**Alice Springs**	**48.92**	**253**	P		**P**	**18 27 40.2**	**-0.3**
AS31				IAmb		IAmb	18 27 41.2	
	comp=Z,4.2nm,0.6s							
ASAR	**Alice Springs**	**48.92**	**253**	P		**P**	**18 27 40.2**	**-0.3**
	comp=Z,14nm,0.6s,baz=87,slow=8.8,SNR=360							
ASAR	**Alice Springs**	**48.92**	**253**	P		**P**	**18 27 40.0**	**-0.6**
QSPA	**South Pole Qui**	**73.10**	**180**	P		**P**	**18 30 23.1**	**-0.3**
QSPA				IAmb		IAmb	18 31 39.6	
	comp=Z,24nm,2.0s							
PETK	**Petropavlovsk-**	**73.88**	**343**	P		**P**	**18 30 27.8**	**-0.1**
	comp=Z,3.8nm,0.9s,baz=122,slow=8.8,SNR=4.7							
DLBC	**Dease Lake**	**83.42**	**22**	P		**P**	**18 31 20.2**	**0.0**
	comp=Z,8.2nm,0.8s,baz=214,slow=3.2,SNR=6.4							
HDA	**Harding Lake**	**83.77**	**12**	P		**P**	**18 31 21.4**	**-0.4**
HDA				IAmb		IAmb	18 32 11.5	
	comp=Z,30nm,1.9s							
CCB	**Clear Creek Bu**	**83.83**	**11**	P		**P**	**18 31 21.6**	**-0.4**
CCB				IAmb		IAmb	18 34 18.1	
	comp=Z,24nm,1.9s							
ILAR	**Eielson Array**	**84.11**	**11**	P		**P**	**18 31 22.9**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=240,slow=6.1,SNR=9.9							
ILAR	**Eielson Array**	**84.11**	**11**	P		**P**	**18 31 22.1**	**-1.4**
IMAR	**Indian Mountai**	**84.11**	**8**	P		**P**	**18 31 23.7**	**+0.2**
CLL	**Collm**	**145.25**	**352**	*e*PKPbc		**PKPbc**	**18 38 29.0**	**-0.9**
BRTR	**Keskin Array B**	**146.85**	**319**	PKPbc		**PKPdf**	**18 38 34.7**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=162,slow=1.7,SNR=5.9							

MAN 15 18:28:10.8,9.°68N×123.°80E,h34km,mb3.7,ML2.4,MS1.9, 2C,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.65**	**239**	⇑*i* P	Pb	18 28 24.4	+0.5
SNPH				*i* S	Sb	18 28 34.0	+1.2
LLP	**Lapu-Lapu**	**0.65**	**14**	⇑*i* P	Pb	18 28 24.7	+0.7
LLP				*i* S	Sb	18 28 34.0	+1.1
MSLP	**Maasin**	**1.14**	**66**	*e*P	Pn	18 28 25.3	-5.0
MSLP				*e*S	Sb	18 28 53.8	+7.3

IDC 15 18:36:28.0±5.3,**4.°96S**×**152.°93E**,**h0**km,**mb3.2**/3, **mb1 3.4**/3,**mb1mx3.2**/24,**mbtmp3.2**/3,**Error ellipse: s-maj=153.5km s-min=36.0km az=106.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.44**	**229**	P	P	18 41 40.0	+0.8
	1.1nm,1.1s,baz=55,slow=10,SNR=3.0						
ASAR	**Alice Springs**	**26.12**	**223**	P	P	18 42 03.6	-0.3
	0.1nm,0.4s,baz=55,slow=9.3,SNR=7.4						
SONM	**Songino Array**	**66.53**	**328**	P	P	18 47 19.7	-0.2
	0.1nm,0.4s,baz=130,slow=5.8,SNR=2.9						

*ATH **15** 18:46:53.0,36.°99N×22.°07E,h21km,ML3.7/39,Error ellipse: s-maj=1.1km s-min=0.7km az=221.0*
*THE **15** 18:46:53.7,36.°98N×22.°10E,h0km±1km,ML3.8/4,Error ellipse: s-maj=1.5km s-min=0.6km az=231.0*
*ISK **15** 18:46:54.4,37.°16N×22.°34E,h5km,ML3.9/22*
*IDC **15** 18:46:56.1±1.6,37.°03N×22.°18E,h42km±16km,mb3.7/15, mb1 3.8/23,mb1mx3.6/55,mbtmp3.8/23,ML3.5/8,MS2.9/1, Ms1 2.9/1,ms1mx2.3/42,Error ellipse: s-maj=15.0km s-min=13.3km az=36.0*
ISC 15 18:46:53.2±0.6,**36.°97N**±0.°03×**22.°07E**±0.°02,**h18**km±1km, **n168,**σ1°**77**/183,**mb3.9**/14,**7C-7D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLMT	**Kalamata**	**0.10**	**354**	P	**Pb**	**18 46 56.5**	**-0.4**
KLMT				S	**Sb**	**18 46 57.7**	**-1.5**
	75μm,0.3s						
ITM	**Ithomi**	**0.24**	**331**	P	**Pb**	**18 46 58.7**	**-0.1**
ITM				S	**Sb**	**18 47 02.5**	**0.0**
	29μm,0.2s						
ITM	**Ithomi**	**0.24**	**331**	P	**Pb**	**18 46 58.7**	**-0.1**
ITM				S	**Sb**	**18 47 02.3**	**-0.2**
ITM				AML	AML	18 47 03.4	
	comp=E,52006μm,0.2s						
ITM				AML	AML	18 47 03.5	
	comp=N,64422μm,0.1s						
PYL	**PYLOS**	**0.27**	**255**	P	**Pb**	**18 46 59.2**	**-0.2**
PYL				S	**Sb**	**18 47 04.0**	**+0.4**
	comp=N,27μm,0.4s						
PYL	**PYLOS**	**0.27**	**255**	P	**Pb**	**18 46 59.3**	**-0.2**
PYL				S	**Sb**	**18 47 03.9**	**+0.2**
PYL				AML	AML	18 47 04.0	
	comp=N,42028μm,0.5s						
PYL				AML	AML	18 47 04.6	
	comp=E,62145μm,0.3s						
VLX	**Vlachokerasia**	**0.47**	**31**	P	**Pb**	**18 47 02.5**	**-0.5**
VLX				S	**Sb**	**18 47 09.1**	**-0.6**
	comp=E,30μm,0.4s						
VLX	**Vlachokerasia**	**0.47**	**31**	P	**Pb**	**18 47 02.7**	**-0.3**
VLX				AML	AML	18 47 10.3	
	comp=N,56922μm,0.7s						
VLX				AML	AML	18 47 10.3	
	comp=E,66210μm,0.6s						
AMT	**Artemida-Makis**	**0.63**	**333**	P	**Pb**	**18 47 05.7**	**0.0**
AMT				S	**Sb**	**18 47 15.2**	**+1.1**
AMT	**Artemida-Makis**	**0.63**	**333**	P	**Pb**	**18 47 05.7**	**0.0**
AMT				S	**Sb**	**18 47 13.9**	**-0.2**
AMT				AML	AML	18 47 18.4	
	comp=N,77981μm,0.6s						
AMT				AML	AML	18 47 18.4	
	comp=E,45228μm,0.5s						
VLI	**Veliai**	**0.74**	**109**	P	**Pb**	**18 47 07.7**	**+0.3**
VLI	**Veliai**	**0.74**	**109**	P	**Pb**	**18 47 07.7**	**+0.3**
VLI				S	**Sb**	**18 47 17.9**	**+0.7**
VLI				AML	AML	18 47 18.1	
	comp=N,13495μm,0.5s						
VLI				AML	AML	18 47 21.2	
	comp=E,14064μm,0.6s						
KRND	**KRANIDI**	**0.96**	**64**	P	**Pb**	**18 47 11.6**	**+0.4**
KRND				AML	AML	18 47 27.8	
	comp=E,15800μm,0.6s						
KRND				AML	AML	18 47 27.9	
	comp=N,8267μm,0.4s						
DRO	**Drossia**	**1.02**	**344**	P	**Pb**	**18 47 12.4**	**+0.1**
DRO				AML	AML	18 47 32.2	
	comp=N,17847μm,0.4s						
DRO				AML	AML	18 47 36.6	
	comp=E,17196μm,0.4s						
KTHA	**Kythira Island**	**1.07**	**131**	P	**Pn**	**18 47 13.6**	**+0.4**
KTHA				AML	AML	18 47 34.5	
	comp=E,9448μm,0.4s						
KTHA				AML	AML	18 47 37.0	
	comp=N,7541μm,0.5s						
DID	**Didima**	**1.07**	**60**	P	**Pb**	**18 47 13.4**	**+0.2**
DID				AML	AML	18 47 32.9	
	comp=E,10051μm,0.3s						
DID				AML	AML	18 47 33.0	
	comp=N,9726μm,0.5s						
KLV	**Kalavryta, Ach**	**1.08**	**3**	P	**Pb**	**18 47 12.5**	**-0.7**
KLV				AML	AML	18 47 33.5	
	comp=E,4178μm,0.4s						
KLV				AML	AML	18 47 40.7	
	comp=N,4056μm,0.9s						
THAL	**Thalero**	**1.17**	**24**	P	**Pn**	**18 47 14.7**	**+0.2**
THAL				AML	AML	18 47 40.3	
	comp=N,21979μm,0.9s						
THAL				AML	AML	18 47 40.8	
	comp=E,21663μm,0.6s						
RLS	**Riolos of Patr**	**1.19**	**336**	P	**Pb**	**18 47 15.4**	**+0.2**
RLS				AML	AML	18 47 38.0	
	comp=N,4482μm,0.6s						
RLS				AML	AML	18 47 43.4	
	comp=E,5636μm,0.6s						
LOUT	**Loutraki**	**1.25**	**35**	P	**Pb**	**18 47 16.2**	**+0.1**
LOUT				AML	AML	18 47 44.7	
	comp=N,1498μm,0.5s						
LOUT				AML	AML	18 47 45.4	
	comp=E,1431μm,0.7s						
LTK	**Loutraki**	**1.27**	**34**	P	**Pb**	**18 47 16.8**	**+0.2**
LTK				AML	AML	18 47 37.2	
	comp=E,9344μm,0.5s						
LTK				AML	AML	18 47 37.6	
	comp=N,7354μm,0.6s						
LAKA	**Lakka**	**1.27**	**357**	P	**Pn**	**18 47 16.0**	**0.0**
LAKA				AML	AML	18 47 42.0	
	comp=N,5045μm,0.8s						
LAKA				AML	AML	18 47 43.5	
	comp=E,3971μm,1.0s						
UPR	**University Cam**	**1.33**	**350**	P	**Pb**	**18 47 18.6**	**+1.0**
TRIZ	**Trizonia**	**1.40**	**0**	P	**Pb**	**18 47 18.4**	**-0.3**
KALE	**Kalithea**	**1.42**	**2**	P	**Pn**	**18 47 18.6**	**+0.4**
KALE				AML	AML	18 47 46.8	
	comp=N,4357μm,0.5s						
KALE				AML	AML	18 47 50.7	
	comp=E,3940μm,0.7s						
VLMS	**Volimes, Zakyn**	**1.44**	**309**	P	**Pn**	**18 47 19.0**	**+0.7**
VLMS				AML	AML	18 47 48.5	
	comp=E,4907μm,0.5s						
VLMS				AML	AML	18 47 53.7	
	comp=N,2960μm,0.7s						
SERG	**Sergoula**	**1.44**	**360**	P	**Pb**	**18 47 19.2**	**-0.3**
EFP	**Efpalio**	**1.46**	**355**	P	**Pb**	**18 47 19.6**	**-0.2**
EFP				AML	AML	18 47 47.4	
	comp=E,2970μm,0.5s						
EFP				AML	AML	18 47 52.3	
	comp=N,3219μm,0.6s						
KFL	**Anninata**	**1.53**	**319**	P	**Pb**	**18 47 21.1**	**+0.1**
KFL				AML	AML	18 47 50.0	
	comp=N,3514μm,0.3s						
KFL				AML	AML	18 47 50.8	
	comp=E,3959μm,0.4s						
VIL2	**Platees**	**1.56**	**37**	P	**Pb**	**18 47 21.3**	**-0.2**
VIL2				AML	AML	18 47 50.2	
	comp=E,6963μm,0.7s						
VIL2				AML	AML	18 47 52.3	
	comp=N,5438μm,0.8s						
VLY	**Voula,Athens**	**1.63**	**57**	P	**Pb**	**18 47 22.6**	**-0.1**
VLY				AML	AML	18 47 45.4	
	comp=E,4072μm,0.4s						
VLY				AML	AML	18 47 50.7	
	comp=N,3389μm,0.4s						
ATH	**Athens Observa**	**1.65**	**52**	P	**Pb**	**18 47 22.6**	**-0.4**
ATH				AML	AML	18 47 50.7	
	comp=E,5905μm,0.9s						
ATH				AML	AML	18 47 55.4	
	comp=N,2822μm,1.0s						
VLS	**Valsamata**	**1.69**	**316**	P	**Pn**	**18 47 22.8**	**+1.0**
VLS				AML	AML	18 47 53.6	
	comp=E,1968μm,0.4s						
VLS				AML	AML	18 47 56.2	
	comp=N,2235μm,0.5s						
ATHU	**Athens Univers**	**1.69**	**53**	P	**Pb**	**18 47 23.2**	**-0.4**
ATHU				AML	AML	18 47 52.1	
	comp=E,802μm,0.6s						
ATHU				AML	AML	18 47 52.4	
	comp=N,942μm,0.7s						
PVO	**Paravola**	**1.70**	**345**	P	**Pb**	**18 47 24.0**	**+0.1**
PVO				AML	AML	18 48 03.3	
	comp=E,1944μm,0.4s						
PVO				AML	AML	18 48 08.9	
	comp=N,3576μm,1.0s						
PTL	**Penteli**	**1.79**	**52**	P	**Pn**	**18 47 24.3**	**+1.1**
PTL				AML	AML	18 47 53.8	
	comp=N,2765μm,0.7s						
PTL				AML	AML	18 47 55.1	
	comp=E,2705μm,0.5s						
LKR	**Lokris**	**1.83**	**23**	P	**Pb**	**18 47 25.7**	**-0.5**
LKR				AML	AML	18 47 55.6	
	comp=N,1935μm,0.5s						
LKR				AML	AML	18 47 55.6	
	comp=E,2088μm,0.6s						
AXAR	**Agios Charalam**	**1.85**	**14**	P	**Pb**	**18 47 26.1**	**-0.5**
AXAR				AML	AML	18 48 04.0	
	comp=E,4212μm,0.6s						
AXAR				AML	AML	18 48 07.7	
	comp=N,4824μm,0.7s						
MHLO	**Agia Marina, M**	**1.89**	**98**	P	**Pb**	**18 47 26.1**	**-0.9**
MHLO				AML	AML	18 48 04.7	
	comp=N,7919μm,0.5s						
MHLO				AML	AML	18 48 04.8	
	comp=E,10483μm,0.6s						
MHLA	**Plaka, Milos I**	**1.90**	**96**	P	**Pb**	**18 47 27.0**	**-0.2**
MHLA				AML	AML	18 47 58.9	
	comp=E,3131μm,1.1s						
MHLA				AML	AML	18 48 21.8	
	comp=N,3103μm,1.2s						
SERI	**Serifos**	**1.94**	**84**	P	**Pn**	**18 47 26.7**	**+1.5**
SERI				AML	AML	18 47 59.5	
	comp=N,1620μm,0.4s						
SERI				AML	AML	18 48 00.7	
	comp=E,1431μm,0.6s						
AGG	**Agios Georgios**	**2.06**	**6**	P	**Pb**	**18 47 29.4**	**-0.7**
AGG				AML	AML	18 48 07.6	
	comp=E,1387μm,0.6s						
AGG				AML	AML	18 48 09.1	
	comp=N,1214μm,0.6s						
EREA	**Eretria**	**2.07**	**45**	P	**Pb**	**18 47 28.8**	**-1.4**
EREA				AML	AML	18 47 56.9	
	comp=E,1850μm,0.6s						
EREA				AML	AML	18 48 00.7	
	comp=N,1381μm,0.4s						
MRKA	**Markates**	**2.11**	**34**	P	**Pb**	**18 47 29.5**	**-1.4**
MRKA				AML	AML	18 48 08.1	
	comp=N,1651μm,0.5s						
MRKA				AML	AML	18 48 19.7	
	comp=E,1628μm,0.8s						
LKD2	**Lefkada island**	**2.14**	**329**	P	**Pb**	**18 47 30.1**	**-1.2**
LKD2				AML	AML	18 48 16.9	
	comp=N,2337μm,0.6s						
LKD2				AML	AML	18 48 18.1	
	comp=E,2287μm,0.6s						
IMMV	**Iera Moni Meta**	**2.15**	**134**	P	**Pb**	**18 47 30.2**	**-1.4**
VAM	**Vamos**	**2.32**	**132**	P	**Pb**	**18 47 33.2**	**-1.2**
VAM				AML	AML	18 48 21.3	
	comp=E,2539μm,0.7s						
VAM				AML	AML	18 48 23.4	
	comp=N,2626μm,0.6s						
SKIA	**Skiathos**	**2.46**	**26**	P	**Pn**	**18 47 34.5**	**+2.2**
SKIA				AML	AML	18 48 21.7	
	comp=E,793μm,0.8s						
SKIA				AML	AML	18 48 22.4	
	comp=N,1333μm,0.8s						
NEO	**Neokhori**	**2.51**	**21**	P	**Pn**	**18 47 35.0**	**+2.1**
NE

AYDB	**Zeytinkoy-Aydi**	**4.73**	**76**	PN	**Pn**	**18 48 06.1**	**+2.4**
TIP	**Timpagrande**	**4.74**	**299**	⇓P	**Pn**	**18 48 04.5**	**+0.8**
TIP	**Timpagrande**	**4.74**	**299**	⇑S	**Sn**	**18 48 59.3**	**+1.1**
MMB	**Musomiste**	**4.79**	**15**	*eP*	**Pn**	**18 48 07.8**	**+3.4**
GELI	**Tayfur-Gelibol**	**4.86**	**44**	PN	**Pn**	**18 48 07.3**	**+2.0**
ARG	**Arkhangelos**	**4.93**	**97**	PN	**Pn**	**18 48 09.7**	**+3.4**
RDO	**Rodhopi**	**4.97**	**32**	PN	**Pn**	**18 48 09.1**	**+2.3**
ALN	**Alexandroupoli**	**5.00**	**37**	PN	**Pn**	**18 48 08.7**	**+1.5**
ERIK	**Erikli-Kesan**	**5.07**	**42**	PN	**Pn**	**18 48 09.9**	**+1.7**
BALB	**Balikesir**	**5.29**	**58**	PN	**Pn**	**18 48 13.4**	**+2.2**
MASS	**Massafra**	**5.31**	**315**	*ePn*	**Pn**	**18 48 12.6**	**+1.1**
MATE	**Matera**	**5.58**	**313**	⇓P	**Pn**	**18 48 15.6**	**+0.5**
FETY	**Fethiye**	**5.64**	**91**	PN	**Pn**	**18 48 19.8**	**+3.8**
DRME	**Dracevica, Mon**	**5.67**	**338**	*ePn*	**Pn**	**18 48 16.9**	**+0.5**
SG1	**Sgolgore (BA)**	**5.71**	**314**	*ePn*	**Pn**	**18 48 17.7**	**+0.6**
VTS	**Vitosha**	**5.71**	**9**	⇑P	**Pn**	**18 48 20.3**	**+3.1**
VTS	**Vitosha**	**5.71**	**9**	*eP*	**Pn**	**18 48 20.3**	**+3.1**
BAI	**Bari**	**5.78**	**317**	*ePn*	**Pn**	**18 48 19.1**	**+1.2**
PDG	**Podgorica**	**5.87**	**339**	⇓P	**Pn**	**18 48 21.4**	**+2.3**
AKAS	**Kas**	**6.11**	**95**	PN	Pn	18 48 26.6	+4.1
HCY	**Herceg Novi**	**6.13**	**334**	*ePn*	**Pn**	**18 48 22.0**	**-0.7**
VAE	**Valguarnera**	**6.13**	**277**	P	**Pn**	**18 48 25.6**	**+2.8**
	comp=N,1.6nm,0.3s,baz=163,slow=4.5,SNR=5.5						
VAE				S	**Sn**	**18 49 32.3**	**-0.3**
	comp=N,3.6nm,0.3s,baz=198,slow=3.2,SNR=3.0						
ARMT	**Armutlu**	**6.41**	**54**	PN	**Pn**	**18 48 29.4**	**+2.8**
TREB	**Trebinje**	**6.42**	**335**	*ePn*	**Pn**	**18 48 26.1**	**-0.6**
DBRK	**Dubrovnik**	**6.45**	**333**	*ePn*	**Pn**	**18 48 27.0**	**-0.1**
DBRK				Sn	Sn	**18 49 37.7**	**-2.5**
BRY	**Bratogost**	**6.52**	**336**	*ePn*	**Pn**	**18 48 26.7**	**-1.5**
KORT	**Korkueli**	**6.63**	**87**	PN	**Pn**	**18 48 33.5**	**+3.8**
UPM	**Unac-Piva**	**6.69**	**340**	*ePn*	**Pn**	**18 48 32.3**	**+1.8**
PLVB	**Pleven**	**6.70**	**16**	⇑P	**Pn**	**18 48 33.3**	**+2.7**
STON	**Ston**	**6.79**	**332**	*ePn*	**Pn**	**18 48 29.4**	**-2.4**
RUDO	**Rudo**	**6.96**	**344**	*ePn*	**Pn**	**18 48 33.4**	**-0.7**
BBLS	**Lazići**	**7.18**	**344**	*ePn*	**Pn**	**18 48 36.8**	**-0.5**
DIVS	**Divibare**	**7.30**	**348**	*ePn*	**Pn**	**18 48 38.3**	**-0.6**
HAPS	**Han Pijesak,BI**	**7.50**	**342**	*ePn*	**Pn**	**18 48 40.3**	**-1.3**
HVAR	**Hvar**	**7.55**	**327**	*ePn*	**Pn**	**18 48 42.0**	**-0.2**
KIJV	**Kijevo**	**8.25**	**330**	*ePn*	**Pn**	**18 48 51.6**	**-0.2**
KIJV				Sn	**Sn**	**18 50 21.5**	**-3.0**
FRGS	**Fruska Gora**	**8.36**	**349**	*ePn*	**Pn**	**18 48 51.9**	**-1.4**
MORI	**Morici**	**8.43**	**327**	*ePn*	**Pn**	**18 48 54.2**	**0.0**
VOIR		**8.75**	**14**	⇓P	**Pn**	**18 49 02.1**	**+3.3**
DUGI	**Dugi Otok**	**8.82**	**325**	*ePn*	**Pn**	**18 49 00.2**	**+0.6**
UDBI	**Udbina**	**8.94**	**330**	*ePn*	**Pn**	**18 49 01.8**	**+0.4**
MLR	**Muntele Rosu**	**9.00**	**18**	P	Pn	18 49 07.7	+5.5
	comp=N,0.3nm,0.3s,baz=212,slow=9.5,SNR=6.3						
MLR				LR	LR	18 53 04.3	
	comp=N,83nm,21.5s,baz=170,slow=41						
MLR	**Muntele Rosu**	**9.00**	**18**	⇑P	**Pn**	**18 49 04.9**	**+2.7**
NVLJ	**Novalja**	**9.35**	**327**	*ePn*	**Pn**	**18 49 07.5**	**+0.7**
BRTR	**Keskin Array B**	**9.49**	**70**	P	**Pn**	**18 49 13.6**	**+4.5**
	comp=N,1.5nm,0.3s,baz=253,slow=15,SNR=58						
PLOR	**Plostina**	**9.52**	**20**	⇓P	**Pn**	**18 49 12.6**	**+3.4**
OZUR		**9.54**	**16**	⇑P	**Pn**	**18 49 13.4**	**+3.9**
VRI	**Vrincioaia**	**9.55**	**20**	⇓P	**Pn**	**18 49 13.5**	**+3.8**
CRES	**Cresnjev**	**10.15**	**333**	*ePn*	**Pn**	**18 49 16.6**	**-1.2**
KEST	**Kesra**	**10.34**	**267**	P	**Pn**	**18 49 24.1**	**+3.6**
	comp=N,0.1nm,0.3s,baz=72,slow=14,SNR=3.1						
KEST				S	**Sn**	**18 51 11.9**	**-4.1**
	comp=N,0.1nm,0.3s,baz=259,slow=17,SNR=2.8						
CEY	**Cerknica**	**10.47**	**329**	*ePn*	**Pn**	**18 49 20.4**	**-1.9**
SOKA	**Soboth**	**11.03**	**334**	*i Pn*	**Pn**	**18 49 29.3**	**-0.6**
	comp=N,0.4nm,0.3s						
OBKA	**Obir**	**11.06**	**332**	*i* Pn	**Pn**	**18 49 29.7**	**-0.7**
	comp=N,0.4nm,0.2s						
MMAI	**Mount Meron Ar**	**11.62**	**106**	P	**Pn**	**18 49 37.0**	**-1.1**
	comp=N,1.2nm,0.3s,baz=307,slow=12,SNR=8.9						
MMAI				S	**Sn**	**18 51 42.5**	**-5.0**
	comp=N,1.1nm,0.3s,baz=305,slow=26,SNR=3.8						
VYHS	**Vyhne**	**11.76**	**349**	*ePN*	Pn	18 49 47.8	+7.9
ABTA	**Abfaltersbach**	**12.09**	**327**	*i Pn*	**Pn**	**18 49 45.5**	**+1.1**
	comp=N,1.0nm,0.5s						
MOA	**Molln**	**12.30**	**335**	*i* Pn	**Pn**	**18 49 50.1**	**+2.8**
	comp=N,0.2nm,0.2s						
WTTA	**Wattenberg**	**12.87**	**326**	*i Pn*	**Pn**	**18 49 57.8**	**+2.6**
	comp=N,1.4nm,0.5s						
EIL	**Elat**	**12.99**	**120**	P	**Pn**	**18 49 55.5**	**-1.3**
	comp=N,0.3nm,0.3s,baz=306,slow=14,SNR=4.3						
EIL				S	Sn	18 52 08.5	-12
	comp=N,0.5nm,0.3s,baz=108,slow=6.4,SNR=2.3						
FETA	**Feichten**	**13.10**	**324**	*i Pn*	**Pn**	**18 50 01.6**	**+3.2**
	comp=N,0.2nm,0.3s						
MOTA	**Moosalm**	**13.17**	**325**	*i Pn*	**Pn**	**18 50 01.1**	**+1.9**
	comp=N,0.2nm,0.3s						
GERES	**GERESS Array B**	**13.35**	**335**	P	**Pn**	**18 50 02.0**	**+0.3**
	comp=N,0.2nm,0.3s,baz=150,slow=12,SNR=2.7						
RETA	**Reutte**	**13.43**	**325**	*i Pn*	**Pn**	**18 50 04.0**	**+1.2**
	comp=N,0.4nm,0.2s						
KHC	**Kasperske Hory**	**13.64**	**336**	*eP*	**P**	**18 50 16.5**	**+2.1**
DAVA	**Damuels**	**13.70**	**323**	*i Pn*	**P**	**18 50 16.5**	**+1.4**
	comp=N,3.2nm,0.5s						
AKASG	**Malin Array Be**	**14.66**	**18**	P	**Pn**	**18 50 21.1**	**+1.7**
	comp=N,0.2nm,0.3s,baz=213,slow=10,SNR=3.5						
KBZ	**Khabaz**	**17.23**	**60**	P	**P**	**18 50 54.2**	**+0.1**
	comp=N,0.1nm,0.3s,baz=260,slow=12,SNR=1.8						
ESDC	**Sonseca Array**	**20.58**	**286**	P	**P**	**18 51 31.5**	**+0.4**
	comp=N,0.4nm,0.4s,baz=81,slow=10,SNR=3.8						
HFS	**Hagfors**	**23.80**	**350**	P	**P**	**18 52 03.5**	**-1.0**
	comp=N,4.3nm,0.5s,baz=163,slow=10,SNR=21						
FINES	**FINESS Array B**	**24.63**	**5**	P	**P**	**18 52 11.2**	**-1.0**
	comp=N,2.8nm,0.8s,baz=176,slow=9.6,SNR=8.6						
FINES				PcP	**PcP**	**18 55 48.9**	**-0.4**
	comp=N,0.5nm,0.4s,baz=150,slow=3.1,SNR=6.4						
NB2	**NORSAR Subarra**	**25.05**	**347**	P	**P**	**18 52 15.6**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=154,slow=9.3						
NOA	**NORSAR Array B**	**25.05**	**347**	P	**P**	**18 52 15.3**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=156,slow=8.8,SNR=7.4						
EKA	**Eskdalemuir Ar**	**25.13**	**325**	P	**P**	**18 52 16.9**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=122,slow=8.6,SNR=6.5						
TORD	**Torodi Ar. Bea**	**29.92**	**223**	P	**P**	**18 53 00.9**	**+0.8**
	comp=Z,0.1nm,0.4s,baz=179,slow=4.4,SNR=3.4						
ARCES	**ARCESS Array B**	**32.68**	**2**	P	**P**	**18 53 23.3**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=194,slow=11,SNR=13						
ARCES				PcP	**PcP**	**18 56 08.8**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=193,slow=2.8,SNR=5.6						
MKAR	**Makanchi Array**	**44.90**	**58**	P	**P**	**18 55 05.6**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=276,slow=6.9,SNR=13						
ZALV	**Zalesovo Beam**	**45.59**	**47**	P	**P**	**18 55 10.7**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=271,slow=9.2,SNR=9.7						
BOSA	**Boshof**	**65.30**	**177**	P	**P**	**18 57 34.1**	**+0.1**
	comp=Z,1.8nm,0.9s,baz=0.0,slow=9.1,SNR=3.4						
CMAR	**Chiang Mai Arr**	**66.83**	**82**	P	**P**	**18 57 54.8**	**-1.9**
	comp=Z,0.6nm,0.6s,baz=299,slow=8.3,SNR=6.1						
YKA	**Yellowknife Ar**	**74.94**	**341**	P	**P**	**18 58 32.2**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=34,slow=5.3,SNR=7.5						
USRK	**Ussuriysk Ar.**	**77.31**	**44**	P	**P**	**18 58 45.4**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=329,slow=2.5,SNR=3.4						
ILAR	**Eielson Array**	**78.22**	**355**	P	**P**	**18 58 51.3**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=348,slow=4.1,SNR=5.2						
KSRS	**Korea Array**	**79.14**	**51**	P	**P**	**18 58 55.8**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=311,slow=4.4,SNR=3.6						
ASAR	**Alice Springs**	**120.80**	**98**	PKP	**PKPdf**	**19 05 43.6**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=308,slow=1.7,SNR=12						

*JMA **15** 18:50:39.9,25.81N×126.67E,h54km±2km,M3.7*
JMA Felt I J1.
*IDC **15** 18:50:39.6±3.5,25.82N×126.61E,h53km±31km,mb3.8/20, mb1 3.9/23,mb1mx3.7/45,mbtmp4.0/23,ML3.2/3,MS3.3/4, Ms1 3.3/4,ms1mx2.9/26,Error ellipse: s-maj=21.1km s-min=14.9km az=67.0*
*NEIC **15** 18:50:40.2±1.5,25.84N±0.09×126.64E±0.05,h58km±7km, mb4.6/24,Error ellipse: s-maj=13.8km s-min=6.5km az=168.0*

ISC 15 18:50:40.2±0.9,25.84N±0.06×126.64E±0.05,h58km±7km, n91,σ0973/96,mb4.3/37,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.50**	**16**	P	**Pn**	**18 50 51.8**	**-0.2**
JKE				S	**Sn**	**18 51 00.4**	**-0.2**
JAGN	**Aguni-jima**	**0.92**	**36**	P	**Pn**	**18 50 57.1**	**-0.1**
JAGN				eS	**Sn**	**18 51 09.8**	**+0.2**
JJT3	**Tamagusuku3**	**1.08**	**74**	P	**Pn**	**18 50 59.2**	**0.0**
JNTH	**Nagotoyohara**	**1.42**	**61**	P	**Pn**	**18 51 03.5**	**-0.2**
JOGS	**Gusukube**	**1.55**	**226**	P	**Pn**	**18 51 06.1**	**+0.6**
JOGS				eS	**Sn**	**18 51 25.0**	**+0.4**
JIKM	**Ikemajima**	**1.55**	**234**	P	**Pn**	**18 51 05.7**	**+0.1**
JIKM				eS	**Sn**	**18 51 25.4**	**+0.7**
JMJ2	**Miyako jima3**	**1.61**	**227**	P	**Pn**	**18 51 06.4**	**0.0**
JMJ2				eS	**Sn**	**18 51 27.5**	**+1.3**
JIRB	**Irabujima**	**1.67**	**233**	P	**Pn**	**18 51 07.0**	**-0.1**
JIRB				eS	**Sn**	**18 51 27.4**	**0.0**
JIH	**Iheya**	**1.68**	**45**	P	**Pn**	**18 51 07.3**	**0.0**
JIH				eS	**Sn**	**18 51 28.1**	**+0.3**
JOW	**Kunigami**	**1.77**	**56**	P	**Pn**	**18 51 08.9**	**+0.4**
JOW				S	**Sn**	**18 51 31.1**	**+1.1**
JOW	**Kunigami**	**1.77**	**56**		**Pn**	**18 51 08.9**	**+0.4**
JYRO	**Yoronjima**	**2.01**	**54**	P	**Pn**	**18 51 12.1**	**+0.4**
JYRO				eS	**Sn**	**18 51 35.8**	**0.0**
JTJ	**Tarama**	**2.12**	**236**	P	**Pn**	**18 51 13.1**	**-0.2**
JTJ				eS	**Sn**	**18 51 38.5**	**0.0**
JOKE	**Okinoerabujima**	**2.30**	**48**	P	**Pn**	**18 51 15.6**	**-0.1**
NACB	**Ninganchiao**	**4.87**	**251**	Pn	**Pn**	**18 51 51.1**	**+0.2**
YHNB	**Yeheng**	**4.90**	**257**	Pn	**Pn**	**18 51 51.5**	**+0.1**
YULB	**Yu-li**	**5.44**	**244**	Pn	**Pn**	**18 51 56.4**	**-2.3**
SSLB	**Suanglung**	**5.55**	**250**	Pn	**Pn**	**18 52 01.8**	**+1.4**
TPUB	**Ta-pu**	**6.03**	**246**	Pn	**Pn**	**18 52 08.2**	**+1.4**
JNU	**Nakatsue**	**8.14**	**26**	P	**Pn**	**18 52 36.6**	**+0.9**
	0.7nm,0.3s,baz=181,slow=2.3,SNR=3.1						
JNU	**Nakatsue**	**8.14**	**26**		**Pn**	**18 52 36.0**	**+0.3**
KSRS	**Korea Array**	**11.63**	**5**	P	**Pn**	**18 53 23.1**	**-0.3**
	0.1nm,0.3s,baz=182,slow=13,SNR=2.8						
KSRS				LR	LR	18 57 53.5	
	comp=Z,38nm,20.9s,baz=159,slow=37						
USRK	**Ussuriysk Ar.**	**18.82**	**12**	P	**P**	**18 54 55.4**	**+0.2**
	baz=188,slow=9.1,SNR=4.5						
GUMO	**Guam**	**21.02**	**122**	LR	LR	19 01 01.1	
	comp=Z,40nm,20.5s,baz=224,slow=30						
ASAJ	**Asahikawa**	**22.37**	**31**	P	**P**	**18 55 32.9**	**-0.6**
	6.6nm,0.8s,baz=216,slow=8.7,SNR=4.6						
JKA	**Kamikawa-asahi**	**22.37**	**31**	P	**P**	**18 55 32.9**	**-0.6**
SONM	**Songino Array**	**27.12**	**329**	P	**P**	**18 56 18.0**	**+0.2**
	0.8nm,0.5s,baz=145,slow=9.5,SNR=13						
TAPN	**Taplejung**	**34.75**	**281**	*eP*	**P**	**18 57 26.3**	**+0.9**
	8.5nm,0.9s						
ODAN	**Odaejeong**	**35.09**	**281**	*eP*	**P**	**18 57 28.8**	**+0.5**
	7.5nm,0.5s						
GUN	**Gumba**	**36.30**	**283**	*eP*	**P**	**18 57 39.4**	**+0.6**
	4.8nm,0.4s						
PKIN	**Phulchoki**	**36.76**	**282**	*eP*	**P**	**18 57 42.9**	**+0.3**
	3.5nm,0.4s						
KKN	**Kakani**	**36.84**	**282**	*eP*	**P**	**18 57 43.5**	**+0.3**
	5.0nm,0.5s						
DMN	**Daman**	**37.01**	**282**	*eP*	**P**	**18 57 44.9**	**+0.1**
GKN	**Gorkha**	**37.38**	**283**	*eP*	**P**	**18 57 48.3**	**+0.6**
	6.1nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**37.51**	**91**	T	T	19 37 45.7	
	baz=283						
H11N2	**WAKE ISLAND Hy**	**37.51**	**91**	T	T	19 37 42.6	
	baz=283						
H11N3	**WAKE ISLAND Hy**	**37.52**	**91**	T	T	19 37 46.2	
	baz=283,SNR=4.4						
H11S3	**WAKE ISLAND Hy**	**37.69**	**93**	T	T	19 37 58.8	
	baz=289,slow=74,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**37.70**	**93**	T	T	19 37 57.9	
	baz=289,slow=74,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**37.71**	**93**	T	T	19 37 57.3	
	baz=289,slow=74,SNR=4.4						
DANN	**Dangsing**	**38.11**	**284**	*eP*	**P**	**18 57 54.8**	**+0.8**
	11nm,0.5s						
MKAR	**Makanchi Array**	**40.73**	**313**	P	**P**	**18 58 15.1**	**-0.2**
	2.1nm,0.5s,baz=97,slow=10,SNR=52						
MKAR				PcP	**PcP**	**19 00 15.5**	**-0.3**
	0.2nm,0.5s,baz=137,slow=2.8,SNR=2.5						
MAKZ	**Makanchi**	**40.94**	**313**	P	**P**	**18 58 16.5**	**-0.6**
ZAA0	**Zalesovo Array**	**41.70**	**324**	P	**P**	**18 58 22.4**	**-0.7**
ZALV	**Zalesovo Beam**	**41.70**	**324**	P	**P**	**18 58 22.3**	**-0.8**
	2.1nm,0.4s,baz=114,slow=9.0,SNR=14						
ZALV	**Zalesovo Beam**	**41.70**	**324**	P	**P**	**18 58 22.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**43.69**	**181**	P	**P**	**18 58 39.0**	**-0.6**
KURK	**Kurchatov**	**44.12**	**317**	P	**P**	**18 58 42.9**	**+0.1**
KURK				IAmb	IAmb	18 58 43.2	
	comp=Z,4.5nm,0.4s						
AAK	**Ala-Archa**	**45.52**	**305**	P	**P**	**18 58 53.5**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=108,slow=6.4,SNR=2.6						
AAK	**Ala-Archa**	**45.52**	**305**	P	**P**	**18 58 53.4**	**-0.8**
AAK				IAmb	IAmb	18 59 55.6	
	comp=Z,7.8nm,1.6s						
TIXI	**Tiksi**	**45.86**	**1**	P	**P**	**18 58 54.9**	**-1.4**
WRA	**Warramunga Arr**	**46.12**	**170**	P	**P**	**18 58 58.2**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=355,slow=9.2,SNR=4.0						
BRVK	**Borovoye**	**49.68**	**319**	P	**P**	**18 59 26.3**	**+0.2**
BRVK				IAmb	IAmb	18 59 26.7	
	comp=Z,3.5nm,0.4s						
ASAR	**Alice Springs**	**49.72**	**171**	P	**P**	**18 59 26.8**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=351,slow=7.0,SNR=6.7						
ASAR				PcP	**PcP**	**19 00 47.0**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=356,slow=3.8,SNR=2.5						
ASAR	**Alice Springs**	**49.72**	**171**	P	**P**	**18 59 26.6**	**-0.1**
ABKAR	**Akbulak array**	**55.87**	**313**	P	**P**	**19 00 12.2**	**+0.4**
ABKAR				IAmb	IAmb	19 00 12.9	
	comp=Z,4.3nm,0.7s						
ARU	**Arti**	**56.81**	**322**	P	**P**	**19 00 17.6**	**-0.8**
ARU				IAmb	IAmb	19 00 18.9	
	comp=Z,3.7nm,0.8s						
GEYT	**Ailbeck**	**58.24**	**300**	P	**P**	**19 00 29.1**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=97,slow=6.1,SNR=4.3						
STKA	**Stephens Creek**	**59.15**	**165**	P	**P**	**19 00 34.2**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=357,slow=5.4,SNR=2.8						
WSAR	**Wadi Sarin**	**61.28**	**283**	P	**P**	**19 00 48.6**	**-1.3**
	comp=Z,5.7nm,0.8s,baz=32,slow=8.6,SNR=5.1						
IMAR	**Indian Mountai**	**62.48**	**27**	P	**P**	**19 00 55.4**	**-1.9**
BPAW	**Bear Paw Mtn.**	**63.77**	**29**	P	**P**	**19 01 07.5**	**+1.7**
BPAW				IAmb	IAmb	19 03 22.8	
	comp=Z,25nm,1.8s						
MLY	**Manley**	**63.79**	**28**	P	**P**	**19 01 07.8**	**+1.8**
MLY				IAmb	IAmb	19 01 55.7	
	comp=Z,10nm,1.6s						
SUA	**Susitna One**	**64.16**	**32**	P	**P**	**19 01 09.4**	**+0.9**
RND	**Reindeer**	**64.79**	**30**	P	**P**	**19 01 13.2**	**+0.6**
RND				IAmb	IAmb	19 02 22.9	
	comp=Z,24nm,1.6s						
IL31		**65.45**	**28**	P	**P**	**19 01 16.5**	**-0.2**
ILAR	**Eielson Array**	**65.45**	**28**	P	**P**	**19 01 16.1**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=262,slow=5.2,SNR=4.8						
ILAR	**Eielson Array**	**65.45**	**28**	P	**P**	**19 01 16.4**	**-0.4**
SCRK	**Sand Creek**	**66.83**	**29**	P	**P**	**19 01 25.7**	**-0.1**
SCRK				IAmb	IAmb	19 02 40.5	
	comp=Z,13nm,1.8s						
KBZ	**Khabaz**	**68.29**	**309**	P	**P**	**19 01 35.9**	**+0.7**
	comp=Z,2.8nm,0.9s,baz=113,slow=2.7,SNR=5.8						
SPA0	**Spitsbergen Ar**	**68.91**	**348**	P	**P**	**19 01 38.6**	**+0.2**
INK	**Inuvik**	**69.81**	**23**	P	**P**	**19 01 43.8**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=339,slow=9.3,SNR=3.7						
INK	**Inuvik**	**69.81**	**23**	P	**P**	**19 01 43.7**	**-0.4**
INK				IAmb	IAmb	19 03 10.6	
	comp=Z,15nm,1.8s						
ARCES	**ARCESS Array B**	**69.84**	**338**	P	**P**	**19 01 44.2**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=67,slow=7.8,SNR=22						
ARE0	**ARCESS Array S**	**69.84**	**338**	P	**P**	**19 01 43.2**	**-1.1**
FIA1	**FINESS Array S**	**72.49**	**330**	P	**P**	**19 02 00.5**	**0.0**
FINES	**FINESS Array B**	**72.49**	**330**	P	**P**	**19 02 00.1**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=62,slow=6.1,SNR=12						
FINES	**FINESS Array B**	**72.49**	**330**	P	**P**	**19 02 00.4**	**0.0**
C36M	**Paulatuk**	**72.56**	**21**	P	**P**	**19 02 01.9**	**+1.1**
C36M				IAmb	IAmb	19 04 33.2	
	comp=Z,17nm,1.9s						
RAYN	**Ar Rayn**	**72.57**	**288**	P	**P**	**19 02 02.8**	**+1.1**
RAYN				IAmb	IAmb	19 02 03.0	
	comp=Z,4.1nm,1.1s						
AKASG	**Malin Array Be**	**74.89**	**319**	P	**P**	**19 02 14.7**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=64,slow=6.2,SNR=3.8						
BR131	**Keskin Array S**	**76.14**	**308**		**P**	**19 02 23.4**	**+1.1**
BRTR	**Keskin Array B**	**76.14**	**308**	P	**P**	**19 02 23.2**	**+1.0**
	comp=Z,1.0nm,0.4s,baz=126,slow=3.0,SNR=9.9						
BURAR	**Bucovina Array**	**78.55**	**317**	P	**P**	**19 02 35.1**	**-0.4**
NC405	**NORSAR Array S**	**78.78**	**333**	P	**P**	**19 02 36.2**	**-0.2**
NB2	**NORSAR Subarra**	**79.02**	**333**	P	**P**	**19 02 37.7**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=57,slow=5.3						
NOA	**NORSAR Array B**	**79.02**	**333**	P	**P**	**19 02 37.4**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=56,slow=5.2,SNR=4.6						
NOA				LR	LR	19 44 13.5	
	comp=Z,20nm,18.6s,baz=240,slow=41						
NC204	**NORSAR Array S**	**79.07**	**334**	P	**P**	**19 02 38.1**	**0.0**
YKA	**Yellowknife Ar**	**79.47**	**24**	P	**P**	**19 02 41.1**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=299,slow=5.5,SNR=15						
CLL	**Collm**	**83.64**	**325**	*eP*	**P**	**19 03 03.0**	**+0.6**
GERES	**GERESS Array B**	**84.64**	**322**	P	**P**	**19 03 08.5**	**+0.9**
	comp=Z,0.2nm,0.2s,baz=67,slow=3.3,SNR=3.5						
GERES				LR	LR	19 44 52.9	
	comp=Z,108nm,20.2s,baz=287,slow=38						

*IDC **15** 18:56:24.4±1.1,23.70N×44.91W,h0km,mb3.6/7, mb1 3.9/7,mb1mx3.6/34,mbtmp3.6/7,MS3.6/17,*
Ms1 3.6/17,ms1mx3.5/29,Error ellipse: s-maj=33.7km s-min=28.1km az=15.0
*NEIC **15** 18:56:25.1±1.8,23.7N±0.2×45.0W±0.2,h10km±1km, mb4.4/12,Error ellipse: s-maj=27.2km s-min=23.9km az=168.0*

ISC 15 18:56:26.0±0.8,23.7N±0.2×45.0W±0.1,h15km,n40, σ1949/23,mb3.7/9,MS3.6/16,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MDP	**Montagnes des**	**19.87**	**203**	LR	LR	19 05 58.9	
	comp=Z,37nm,20.5s,baz=38,slow=29						
SJG	**San Juan**	**20.50**	**258**	LR	LR	19 07 13.7	
	comp=Z,145nm,21.5s,baz=78,slow=32						
SDV	**Santo Domingo**	**28.57**	**243**	LR	LR	19 11 55.7	
	comp=Z,112nm,21.9s,baz=70,slow=32						
RUSC	**La Rusia**	**32.27**	**241**	P	**P**	**19 02 55.1**	**+0.2**
ROSC	**El Rosal**	**33.88**	**241**	LR	LR	19 15 51.9	
	comp=Z,106nm,21.9s,baz=47,slow=34						
BDFB	**Brasilia**	**39.17**	**185**	LR	LR	19 18 31.6	
	comp=Z,67nm,19.9s,baz=332,slow=34						
DBIC	**Dimbokro**	**42.09**	**107**	LR	LR	19 19 03.0	
	comp=Z,162nm,19.9s,baz=274,slow=32						
H10N2	**ASCENSION HYDR**	**43.23**	**133**	T	T	19 50 15.1	
	baz=317,slow=75,SNR=7.4						
H10N3	**ASCENSION HYDR**	**43.23**	**133**	T	T	19 50 14.8	
	baz=317,slow=75,SNR=9.6						
H10N1	**ASCENSION HYDR**	**43.25**	**133**	T	T	19 50 16.1	
	baz=317,slow=75,SNR=8.9						
H10S3	**ASCENSION HYDR**	**43.94**	**134**	T	T	19 51 17.1	
	baz=316,slow=74,SNR=13						
H10S2	**ASCENSION HYDR**	**43.96**	**134**	T	T	19 51 17.5	
	baz=264,slow=74,SNR=11						
TORD	**Torodi Ar. Bea**	**45.36**	**95**	P	**P**	**19 04 44.2**	**+0.2**
	0.6nm,0.8s,baz=292,slow=8.9,SNR=3.1						
TORD				LR	LR	19 21 15.9	
	comp=Z,150nm,21.6s,baz=265,slow=33						
TORD	**Torodi Ar. Bea**	**45.36**	**95**	P	**P**	**19 04 43.8**	**-0.2**
**LPAZ

comp=Z,0.6nm,0.7s,baz=247,slow=2.3,SNR=5.6

SONM	**Songino Array**	**149.92**	**90**		**PKPbc**	**19 37 52.9**	**-0.3**
DOT	**Dot Lake**	**151.06**	**306**		**PKiKP**	**19 37 56.9**	**+1.0**
ILAR	**Eielson Array**	**152.57**	**307**	PKPbc	**PKiKP**	**19 38 00.1**	**+1.2**
	comp=Z,2.0nm,0.8s,baz=139,slow=4.5,SNR=18						
ILAR	**Eielson Array**	**152.57**	**307**		**PKiKP**	**19 37 59.8**	**+0.9**

*IDC **15** 19:22:44.6±0.6, 18°.95N×120°.58E, h0km, mb3.8/11, mb1 4.0/12, mb1mx3.8/38, mbtmp3.8/12, ML3.4/1, MS3.3/6, Ms1 3.4/6, ms1mx2.9/39, Error ellipse: s-maj=28.0km s-min=14.6km az=76.0*

*NEIC **15** 19:22:46.0±1.3, 18°.96N±0°.05×120°.3E±0°.1, h11km±5km, mb4.2/10, Error ellipse: s-maj=19.0km s-min=7.7km az=84.0*

ISC 15 19:22:45.8±0.6, **18°.97N**±0°.06×**120°.21E**±0°.10, **h10**km, **n39, σ1s06/35, mb4.0**/13, **MS3.3**/4, **Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SZP	**Santa**	**1.43**	**171**	Pn	**Pn**	**19 23 11.8**	**0.0**
KNMB	**Chin-men Tao**	**5.72**	**343**		**Pn**	**19 24 09.1**	**-1.7**
YOJ	**Yonaguni jima**	**6.05**	**25**	Pn	**Pn**	**19 24 14.4**	**-1.0**
HKPS	**Hong Kong Po S**	**6.57**	**301**		**Pn**	**19 24 20.5**	**-1.9**
QIZ	**Qiongzhong**	**9.81**	**272**	Pn	**Pn**	**19 25 04.8**	**-2.2**
ENH	**Enshi**	**14.88**	**321**		**Pn**	**19 26 17.6**	**+1.3**
JNU	**Nakatsue**	**17.02**	**32**	LR	LR	19 33 41.0	
	comp=Z,63nm,19.4s,baz=238,slow=39						
XAN	**Xi'an**	**18.07**	**328**	P	**P**	**19 26 58.3**	**+0.9**
KSRS	**Korea Array**	**19.61**	**19**	P	**P**	**19 27 14.1**	**-0.2**
	0.1nm,0.3s,baz=205,slow=10,SNR=7.9						
KSRS				LR	LR	19 35 49.7	
	comp=Z,63nm,18.5s,baz=209,slow=40						
CMAR	**Chiang Mai Arr**	**20.15**	**272**	P	Pn	19 27 25.9	+3.6
	1.2nm,0.7s,baz=79,slow=8.6,SNR=10						
CMAR				PcP	**PcP**	**19 31 36.5**	**+1.2**
	0.6nm,0.7s,baz=26,slow=2.3,SNR=6.7						
CMAR	**Chiang Mai Arr**	**20.15**	**272**	P	Pn	19 27 25.5	+3.2
BJT	**Baijiatuan**	**21.26**	**351**	P	**P**	**19 27 31.8**	**-0.4**
BJT				IAmb	IAmb	19 27 37.9	
	comp=Z,9.2nm,0.7s						
USRK	**Ussuriysk Ar.**	**27.02**	**19**	P	**P**	**19 28 28.5**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=196,slow=9.4,SNR=3.2						
USRK	**Ussuriysk Ar.**	**27.02**	**19**	P	**P**	**19 28 29.0**	**+1.0**
LSA	**Lhasa**	**28.48**	**298**	P	**P**	**19 28 42.5**	**+0.8**
SONM	**Songino Array**	**30.91**	**342**	P	**P**	**19 29 03.3**	**+0.5**
	comp=Z,1.6nm,0.8s,baz=158,slow=10,SNR=12						
SONM				LR	LR	19 42 11.6	
	comp=Z,68nm,19.4s,baz=141,slow=38						
SONM	**Songino Array**	**30.91**	**342**	P	**P**	**19 29 03.0**	**+0.2**
ASAJ	**Asahikawa**	**31.30**	**32**	LR	LR	19 43 13.3	
	comp=Z,57nm,18.3s,baz=220,slow=40						
KLR	**Kul'dur**	**31.59**	**14**	P	**P**	**19 29 08.4**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=193,slow=7.8,SNR=2.2						
WRA	**Warramunga Arr**	**41.08**	**160**	P	**P**	**19 30 28.3**	**-1.6**
	comp=Z,1.4nm,0.7s,baz=340,slow=8.9,SNR=7.2						
WRA				PcP	**PcP**	**19 32 30.0**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=335,slow=3.5,SNR=4.5						
WRA	**Warramunga Arr**	**41.08**	**160**	P	**P**	**19 30 28.9**	**-1.0**
MKAR	**Makanchi Array**	**41.61**	**321**	P	**P**	**19 30 35.9**	**+1.9**
	comp=Z,3.5nm,1.1s,baz=120,slow=9.0,SNR=12						
MKAR				PcP	**PcP**	**19 32 31.6**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=117,slow=5.0,SNR=2.5						
MKAR				LR	LR	19 48 50.3	
	comp=Z,43nm,21.8s,baz=340,slow=37						
MAKZ	**Makanchi**	**41.80**	**320**	P	**P**	**19 30 36.7**	**+1.1**
MAKZ				IAmb	IAmb	19 30 38.5	
	comp=Z,11nm,1.6s						
H11S3	**WAKE ISLAND Hy**	**43.92**	**83**	T	T	20 16 24.3	
	baz=276						
H11S1	**WAKE ISLAND Hy**	**43.93**	**83**	T	T	20 16 30.0	
	baz=276						
H11S2	**WAKE ISLAND Hy**	**43.93**	**83**	T	T	20 16 22.5	
	baz=276						
ZALV	**Zalesovo Beam**	**44.22**	**331**	P	**P**	**19 30 56.1**	**+1.1**
	comp=Z,1.8nm,0.8s,baz=116,slow=6.8,SNR=9.2						
ZALV	**Zalesovo Beam**	**44.22**	**331**	P	**P**	**19 30 55.8**	**+0.7**
ASAR	**Alice Springs**	**44.44**	**162**	P	**P**	**19 30 56.6**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=342,slow=6.8,SNR=25						
ASAR				PcP	**PcP**	**19 32 40.9**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=348,slow=4.1,SNR=3.0						
ASAR	**Alice Springs**	**44.44**	**162**	P	**P**	**19 30 55.8**	**-1.3**
KURK	**Kurchatov**	**45.62**	**324**	P	**P**	**19 31 07.8**	**+1.6**
BBOO	**Buckleboo**	**53.67**	**163**	P	**P**	**19 32 07.5**	**-0.2**
STKA	**Stephens Creek**	**54.56**	**158**	P	**P**	**19 32 13.0**	**-1.2**
	comp=Z,2.8nm,0.7s,baz=340,slow=8.8,SNR=7.4						
STKA	**Stephens Creek**	**54.56**	**158**	P	**P**	**19 32 14.3**	**0.0**
STKA				IAmb	IAmb	19 32 36.6	
	comp=Z,3.4nm,1.7s						
ABKAR	**Akbulak array**	**56.52**	**317**	P	**P**	**19 32 28.3**	**+0.1**
ABKAR				IAmb	IAmb	19 32 30.5	
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	**74.25**	**26**	P	**P**	**19 34 22.1**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=271,slow=5.0,SNR=2.4						
NOA	**NORSAR Array B**	**82.39**	**332**	LR	LR	20 14 03.7	
	comp=Z,33nm,18.9s,baz=255,slow=37						
YKA	**Yellowknife Ar**	**88.11**	**22**	P	**P**	**19 35 36.9**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=314,slow=4.4,SNR=11						
TXAR	**Lajitas Array**	**115.98**	**42**	PKP	**PKiKP**	**19 41 29.2**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=102,slow=1.8,SNR=3.8						

TAP 15 19:23:42.5, 22°.89N×121°.04E, h22km, ML2.4, B, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**0.07**	**153**	P	Pb	19 23 46.1	-0.4
	baz=149						
TWG				S	Sb	19 23 49.3	+0.1
	baz=149						
TWG	**Pinlang**	**0.07**	**153**		Pb	19 23 46.0	-0.6
TWGBT	**Beinan**	**0.08**	**149**	P	Pb	19 23 46.0	-0.5
	baz=149						
TWGBT				S	Sb	19 23 49.5	+0.1
	baz=149						
TTN	**Taitung**	**0.17**	**142**	*e*S	Sb	19 23 52.2	+0.4
	baz=140						
ECL	**Taimali**	**0.30**	**195**	*e*S	Sb	19 23 52.8	-1.1
	baz=193						
ELDTW	**Lidau**	**0.30**	**357**	*e*P	Pb	19 23 48.7	-0.7
	baz=358						
ELDTW				S	Sb	19 23 54.0	-0.2
	baz=358						
CHKT	**Chengkung**	**0.37**	**55**	*i* P	Pb	19 23 50.4	0.0
	baz=56						
SLGT	**Liugui**	**0.37**	**287**	*e*P	Pb	19 23 49.0	-1.5
	baz=286						
STYT	**Tauyuan**	**0.38**	**317**	*e*P	Pb	19 23 49.8	-0.7
	baz=317						
FULB	**Fuli**	**0.39**	**38**	*e*P	Pb	19 23 50.9	+0.2
	baz=37						
FULB				*e*S	Sb	19 23 55.6	-0.7
	baz=37						
SGST	**Jiashian**	**0.46**	**295**	*e*P	Pb	19 23 50.6	-1.3
	baz=295						
TWF1	**Yuli**	**0.52**	**27**	*e*P	Pb	19 23 52.6	-0.5
	baz=28						
WTP	**Ta-pu**	**0.53**	**313**	*e*P	Pb	19 23 51.6	-1.5
	baz=313						
WTP				*e*S	Sb	19 23 59.2	-1.2
	baz=313						
CHN1	**Nanshi**	**0.55**	**303**	*e*P	Pb	19 23 52.1	-1.5
	baz=302						
CHN1				S	Sb	19 24 01.5	+0.3
	baz=302						
TPUB	**Ta-pu**	**0.56**	**318**	*e*P	Pb	19 23 52.8	-0.9
	baz=317						
TPUB	**Ta-pu**	**0.56**	**318**		Pb	19 23 50.8	-2.8
YULB	**Yu-li**	**0.56**	**26**	*e*P	Pb	19 23 53.3	-0.4
	baz=25						
YULB	**Yu-li**	**0.56**	**26**		Pb	19 23 54.0	+0.3
YUS	**Yu-Shan**	**0.60**	**353**	*e*P	Pb	19 23 54.7	0.0
	baz=352						
CHN4	**Tsaushan**	**0.62**	**319**	*e*P	Pb	19 23 53.1	-1.6
	baz=318						
ALS	**Alishan**	**0.66**	**341**	*e*P	Pb	19 23 55.1	-0.4
	baz=341						
EHY	**Hungye**	**0.67**	**23**	*e*P	Pb	19 23 55.1	-0.5
	baz=23						
HGSD	**Ruisui**	**0.70**	**31**	*e*P	Pb	19 23 55.7	-0.4
	baz=30						
CHN5	**Tsauling**	**0.78**	**335**	P	Pb	19 23 56.7	-0.7
	baz=335						
WHYT	**Xinyi Township**	**0.82**	**348**	*e*P	Pb	19 23 57.7	-0.4
	baz=348						
EGFH	**Guangfu**	**0.86**	**25**	*e*P	Pb	19 23 58.5	-0.2
	baz=24						
VWDT	**VWDT**	**0.87**	**6**	*e*P	Pb	19 23 58.9	0.0
	baz=6.0						
SSLB	**Suanglung**	**0.90**	**355**	P	Pb	19 23 58.9	-0.5
	baz=355						
SSLB	**Suanglung**	**0.90**	**355**		Pb	19 23 58.4	-1.0
WJS	**Zhushan**	**0.97**	**343**	*e*P	Pb	19 24 00.4	-0.3
	baz=343						
ESL	**Shilin**	**0.99**	**22**	P	Pb	19 24 01.0	0.0
	baz=22						
SMLT	**Sun Moon Lake**	**1.00**	**353**	P	Pb	19 23 59.5	-1.6
	baz=353						
TYC	**Yuchr**	**1.02**	**351**	P	Pb	19 24 00.7	-0.9
	baz=351						
OWD	**Renai**	**1.07**	**7**	*e*P	Pn	19 24 01.9	-0.5
	baz=6.0						
CHGB	**Renai**	**1.18**	**6**	P	Pn	19 24 03.6	-0.3
	baz=6.0						
WHF	**Hehuan Shan**	**1.27**	**10**	P	Pn	19 24 05.3	0.0
	baz=9.0						
TDCB	**Techi**	**1.36**	**5**	P	Pn	19 24 06.2	-0.2
	baz=4.0						
TWT	**Tachien**	**1.37**	**5**	*e*P	Pn	19 24 06.6	+0.2
	baz=4.0						
ETLH	**Xiulin Townshi**	**1.38**	**17**	*e*P	Pn	19 24 06.3	-0.2
	baz=17						
NACB	**Ninganchiao**	**1.38**	**22**	*e*P	Pn	19 24 05.6	-0.9
	baz=21						
NACB	**Ninganchiao**	**1.38**	**22**	Pn	Pn	19 24 05.4	-1.0
TWQ1	**Liyutan**	**1.47**	**351**	*e*P	Pn	19 24 07.2	-0.6
	baz=350						
NNSH	**Datong**	**1.57**	**12**	*e*P	Pn	19 24 09.1	-0.1
	baz=11						
NNS	**Nan Shan**	**1.58**	**11**	P	Pn	19 24 09.3	0.0
	baz=11						
NSTT	**Nanjuang**	**1.74**	**359**	*e*P	Pn	19 24 11.0	-0.4
	baz=359						
LIOB	**Emei**	**1.75**	**359**	*e*P	Pn	19 24 11.0	-0.6
	baz=359						
NDT	**Datong Townshi**	**1.76**	**14**	*e*P	Pn	19 24 12.7	+1.0
	baz=14						
YHNB	**Yeheng**	**1.80**	**10**	*e*P	Pn	19 24 12.0	-0.3
	baz=9.0						
YHNB	**Yeheng**	**1.80**	**10**		Pn	19 24 13.0	+0.7
NSK	**Sanguang**	**1.81**	**9**	*e*P	Pn	19 24 12.6	+0.2
	baz=9.0						
ENTT	**Nioudou**	**1.81**	**15**	*e*P	Pn	19 24 12.5	+0.1
	baz=15						
TATO	**Taipei**	**2.12**	**11**	Pn	Pn	19 24 15.0	-1.6
YM08	**YM08**	**2.35**	**12**	P	Pn	19 24 20.4	+0.6
	baz=12						

*IDC **15** 20:00:10.1±1.8, 52°.09N×170°.71W, h0km, mb3.8/8, mb1 3.9/10, mb1mx3.5/50, mbtmp3.8/10, ML2.9/2, Error ellipse: s-maj=47.1km s-min=23.0km az=153.0*

*AEIC **15** 20:00:17.5±2.8, 52°.4N±0°.2×171°.2W±0°.1, h26km±6km, ML3.0/16, Error ellipse: s-maj=29.0km s-min=3.0km az=162.0*

*NEIC **15** 20:00:18.6±1.4, 52°.36N±0°.07×171°.14W±0°.07, h45km±9km, Error ellipse: s-maj=10.7km s-min=5.8km az=177.0*

ISC 15 20:00:18.0±1.3, **52°.3N**±0°.2×**171°.09W**±0°.08, **h48**km, **n31, σ1s19/29, mb3.8/8, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**1.53**	**62**		**Pn**	**20 00 42.0**	**-0.8**
NIKH					**Sn**	**20 01 01.7**	**+0.2**
KOFP	**Korovin Flat P**	**1.85**	**271**		**Pn**	**20 00 47.4**	**+0.1**
KOKL	**Mount Kliuchef**	**1.91**	**272**		**Pn**	**20 00 48.8**	**+0.6**
ATKA	**Atka Island**	**1.91**	**269**		**Pn**	**20 00 48.3**	**+0.2**
ATKA					**Sn**	**20 01 10.2**	**-0.7**
OKSP	**Okmok Steeple**	**1.96**	**59**		**Pn**	**20 00 48.7**	**-0.1**
OKSP					**Sn**	**20 01 12.2**	**0.0**
OKWE	**Okmok W'ng Wal**	**2.10**	**54**		**Pn**	**20 00 52.0**	**+1.3**
OKFG	**Magazine Ridge**	**2.23**	**58**		**Pn**	**20 00 53.6**	**+1.1**
OKFG					**Sn**	**20 01 21.6**	**+2.7**
GSMY	**Great Sitkin M**	**3.07**	**268**		**Pn**	**20 01 04.8**	**+0.8**
MSW	**Makushin Switc**	**3.07**	**56**		**Pn**	**20 01 05.1**	**+1.2**
GSTD	**Great Sitkin T**	**3.12**	**268**		**Pn**	**20 01 05.5**	**+0.7**
UNV	**Unalaska Valle**	**3.18**	**59**		**Pn**	**20 01 06.4**	**+1.0**
ADK	**Adak**	**3.47**	**266**		**Pn**	**20 01 09.7**	**+0.2**
KIWB	**Kanaga Island**	**3.77**	**266**		**Pn**	**20 01 14.2**	**+0.7**
KDAK	**Kodiak Island**	**11.94**	**55**	Pn	**Pn**	**20 03 03.3**	**-2.1**
	0.1nm,0.3s,baz=276,slow=9.2,SNR=3.1						
SVW2	**Sparrevohn**	**12.24**	**38**		**Pn**	**20 03 06.0**	**-3.5**
PETK	**Petropavlovsk-**	**18.86**	**285**	P	**Pn**	**20 04 35.4**	**+0.5**
	0.2nm,0.3s,baz=89,slow=15,SNR=6.7						
INK	**Inuvik**	**24.00**	**34**	P	**P**	**20 05 28.2**	**+0.5**
	0.7nm,0.5s,baz=214,slow=4.4,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**36.74**	**216**	T	T	20 46 28.7	
	baz=16						
H11N3	**WAKE ISLAND Hy**	**36.75**	**216**	T	T	20 46 31.5	
	baz=16						
H11N1	**WAKE ISLAND Hy**	**36.76**	**216**	T	T	20 46 31.3	
	baz=16						
H11S1	**WAKE ISLAND Hy**	**37.94**	**216**	T	T	20 48 10.6	
	baz=22,slow=76,SNR=9.2						
H11S2	**WAKE ISLAND Hy**	**37.95**	**216**	T	T	20 48 13.5	
	baz=22,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**37.95**	**216**	T	T	20 48 10.8	
	baz=22,slow=76,SNR=8.8						
ARCES	**ARCESS Array B**	**57.89**	**353**	P	**P**	**20 10 04.5**	**+0.1**
	2.4nm,0.9s,baz=6.3,slow=9.1,SNR=3.1						
KURK	**Kurchatov**	**61.73**	**317**	P	**P**	**20 10 32.5**	**+1.5**
KURBB	**Kurchatov Arra**	**61.84**	**317**	P	**P**	**20 10 32.5**	**+0.8**
	0.2nm,0.4s,baz=43,slow=6.7,SNR=3.6						
BVAR	**Borovoye Array**	**63.15**	**323**	P	**P**	**20 10 40.7**	**+0.2**
	0.3nm,0.3s,baz=52,slow=8.0,SNR=3.0						
AKTO	**Aktyubinsk**	**69.55**	**329**	P	**P**	**20 11 22.2**	**+0.8**
	0.7nm,0.4s,baz=54,slow=8.8,SNR=2.9						
AAK	**Ala-Archa**	**69.81**	**314**	P	**P**	**20 11 23.8**	**+0.4**
	0.6nm,0.4s,baz=21,slow=5.7,SNR=4.4						
CMAR	**Chiang Mai Arr**	**75.60**	**281**	P	**P**	**20 11 58.5**	**+0.6**
	0.2nm,0.4s,baz=16,slow=7.5,SNR=4.4						
ASAR	**Alice Springs**	**89.54**	**229**	P	**P**	**20 13 09.4**	**-0.6**
	0.2nm,0.5s,baz=24,slow=5.5,SNR=5.8						

*REN **15** 20:02:04.3±0.6, 37°.929N±0°.006×118°.54W±0°.02, h8km±4km, Error ellipse: s-maj=2.4km s-min=0.7km az=74.0*

*NCEDC **15** 20:02:04.1±0.4, 37°.94N±0°.01×118°.54W±0°.01, h9km±3km, Md2.3/37, Error ellipse: s-maj=2.0km s-min=1.4km az=128.0*

NEIC 15 20:02:04.3±0.4, **37°.94N**±0°.01×**118°.54W**±0°.01, **h9**km±5km, **Error ellipse: s-maj=1.9km s-min=1.3km az=138.0, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANTCA	**Antelope Range**	**0.03**	**231**		Pg	20 02 06.0	-0.2
HCK	**Huntoon Valley**	**0.14**	**342**		Pg	20 02 07.7	+0.3
MGNR	**McGee Canyon**	**0.18**	**226**		Pg	20 02 08.2	+0.1
BONR	**Boundary Peak**	**0.19**	**84**		Pg	20 02 08.6	+0.3
BENR	**Benton**	**0.22**	**188**		Pg	20 02 08.9	-0.1
MRCM	**Red Rock Canyo**	**0.26**	**175**		Pg	20 02 09.7	+0.1
BCKR	**Birch Creek**	**0.27**	**151**		Pg	20 02 09.9	+0.1
LHV	**Little Huntoon**	**0.32**	**5**		Pg	20 02 10.7	+0.2
ORC	**Owens River**	**0.32**	**198**		Pg	20 02 10.6	-0.1
MLHM	**Little Hot Cre**	**0.34**	**221**		Pg	20 02 11.2	+0.2
MLNR	**Milner Canyon**	**0.38**	**156**		Pg	20 02 11.7	0.0
MDRNC	**Doe Ridge**	**0.38**	**219**		Pg	20 02 12.1	+0.2
LMCR	**Lookout Mounta**	**0.39**	**238**		Pg	20 02 12.1	+0.2
MLAC	**Mammoth, Mammo**	**0.39**	**218**		Pg	20 02 12.1	+0.1
MCDM	**Chidago Canyon**	**0.40**	**169**		Pg	20 02 12.4	+0.3
MCSM	**Casa Diablo Ho**	**0.41**	**226**		Pg	20 02 12.4	+0.1
MCBM	**Casa Benchmark**	**0.41**	**225**		Pg	20 02 12.5	+0.1
MCVM	**Convict Lake**	**0.42**	**214**		Pg	20 02 12.5	0.0
MEMM	**East Mammoth H**	**0.42**	**230**		Pg	20 02 12.7	+0.2
MCMM	**Convict Lake**	**0.42**	**219**		Pg	20 02 12.6	0.0
MGPM	**Gravel Pit**	**0.42**	**223**		Pg	20 02 12.9	+0.2
MLCM	**Laurel Creek C**	**0.44**	**223**		Pg	20 02 13.1	+0.1
MMLB	**Mammoth Lakes**	**0.45**	**232**		Pg	20 02 13.2	+0.1
MDCM	**Deadman Creek**	**0.46**	**241**		Pg	20 02 13.2	-0.2
MDYM	**Dry Creek**	**0.47**	**234**		Pg	20 02 13.6	+0.1
OMMB	**Old Mammoth Mi**	**0.49**	**229**		Pg	20 02 13.7	-0.1
MINS	**Minaret Summit**	**0.50**	**236**		Pg	20 02 14.0	-0.1
MINS					Sg	20 02 20.8	+0.1
MMPM	**Mammoth Pass**	**0.51**	**230**		Pg	20 02 14.2	0.0
MFBM	**Five Bridges**	**0.51**	**170**		Pg	20 02 14.5	+0.3
MDPB	**Devils Postpil**	**0.53**	**235**		Pg	20 02 14.4	-0.1
MDPB					Sg	20 02 21.5	0.0
MRDM	**Red Cones**	**0.54**	**231**		Pg	20 02 14.7	-0.1
NV11	**Mina Array Sit**	**0.58**	**31**		Pg	20 02 15.3	-0.2
MTUM	**Tungsten Hills**	**0.58**	**182**		Pg	20 02 15.5	-0.1
SCHCA	**Scheelite**	**0.59**	**192**		Pg	20 02 15.5	-0.3
POCCA	**Poleta Canyon**	**0.61**	**160**		Pg	20 02 15.8	-0.3
RYN	**Ryan**	**0.69**	**1**		Pg	20 02 17.6	-0.1
KCC	**Kaiser Creek**	**0.87**	**226**		Pg	20 02 20.6	-0.5
WAKR	**Walker**	**0.91**	**309**		Pg	20 02 21.4	-0.4
MMIM	**Miami Mountain**	**1.09**	**242**		Pg	20 02 24.5	-0.7
KVN	**Kaiserville**	**1.16**	**17**		Pg	20 02 25.6	-1.1
YERR	**Yerington**	**1.18**	**332**		Pg	20 02 26.3	-0.7
BFC	**Buffalo Canyon**	**1.27**	**319**		Pn	20 02 28.0	-0.4
HELL	**Mitchell Peak,**	**1.31**	**197**		Pn	20 02 28.5	-0.5
MHDM	**Hidden Dam**	**1.36**	**233**		Pn	20 02 29.4	0.0
PNTR	**Pine Nut**	**1.42**	**324**		Pn	20 02 30.5	-0.1
CMB	**Columbia Colle**	**1.47**	**274**		Pn	20 02 30.5	-0.5
EMB	**Emerald Bay**	**1.61**	**311**		Pb	20 02 34.4	+0.1
VCNR	**Virginia City**	**1.61**	**328**		Pb	20 02 34.0	-0.4
TPNV	**Topopah Spring**	**2.07**	**118**		Pb	20 02 42.2	0.0
R11A	**Troy Canyon, C**	**2.36**	**79**		Pb	20 02 47.0	-0.1
BEKR	**Beckworth**	**2.40**	**324**		Pb	20 02 47.6	-0.1

IDC 15 20:17:56.8±2.2, **6°.56S**×**130°.24E**, **h0**km, **mb3.2**/1, **mb1 3.5**/3, **mb1mx3.3**/21, **mbtmp3.3**/3, **ML3.3**/2, **Error ellipse: s-maj=80.6km s-min=34.3km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.88**	**164**	Pn	Pn	20 21 15.4	+0.4
	0.2nm,0.3s,baz=344,slow=14,SNR=1.7						
WRA				Sn	Sn	20 23 35.9	-14
	0.4nm,0.3s,baz=335,slow=22,SNR=4.5						
ASAR	**Alice Springs**	**17.37**	**169**	P	Pn	20 22 00.6	-0.3
	0.1nm,0.3s,baz=342,slow=9.3,SNR=3.7						
ASAR				S	Sn	20 24 56.4	-18
	0.1nm,0.3s,baz=355,slow=30,SNR=1.5						
MKAR	**Makanchi Array**	**67.99**	**327**	P	P	20 28 57.9	0.0
	0.1nm,0.4s,baz=134,slow=7.1,SNR=2.0						

*NEIC **15** 20:52:29.6±2.1, 8°.52S±0°.09×119°.39E±0°.08, h178km±10km, mb4.2/11, Error ellipse: s-maj=14.5km s-min=9.9km az=213.0*

*IDC **15** 20:52:32.3±1.6, 8°.34S×119°.70E, h197km±14km, mb3.5/8, mb1 3.6/12, mb1mx3.5/31, mbtmp4.1/12, Error ellipse: s-maj=32.9km s-min=7.9km az=55.0*

ISC 15 20:52:28.8±0.5, **8°.58S**±0°.07×**119°.41E**±0°.07, **h170**km, **n44, σ1s37/49, mb4.2**/20, **Flores region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.56**	**5**	P	**Pn**	**20 53 25.2**	**+1.2**
	1.7nm,0.3s,baz=170,slow=11,SNR=4.6						
KAPI	**Kappang**	**3.56**	**5**		**Pn**	**20 53 25.1**	**+1.0**
BATI	**Baumata**	**4.50**	**111**	P	**Pn**	**20 53 38.2**	**+2.1**
	30nm,0.3s,baz=269,slow=2.3,SNR=24						
BATI				S	**Sn**	**20 54 25.8**	**-2.9**
	33nm,0.3s,baz=270,slow=8.2,SNR=6.3						
SOEI	**Soe**	**4.93**	**104**		**Pn**	**20 53 43.3**	**+1.4**
JAGI	**Jajag, Banyuwa**	**5.20**	**271**	Pn	**Pn**	**20 53 46.0**	**+0.7**
JAGI					**Sn**	**20 54 42.5**	**-2.7**
FITZ	**Fitzroy Crossi**	**11.23**	**148**	P	**Pn**	**20 55 06.3**	**+1.7**
	0.5nm,0.3s,baz=330,slow=11,SNR=15						
FITZ				S	**Sn**	**20 57 04.7**	**-4.6**
	2.2nm,0.3s,baz=195,slow=20,SNR=10						
FITZ	**Fitzroy Crossi**	**11.23**	**148**		**Pn**	**20 55 06.0**	**+1.4**
KNRA	**Kununurra**	**11.54**	**129**	Pn	**Pn**	**20 55 08.7**	**0.0**
MTN	**Manton Dam**	**12.27**	**111**		**Pn**	**20 55 18.4**	**+0.3**
WRA	**Warramunga Arr**	**18.34**	**130**	P	**Pn**	**20 56 31.9**	**-0.6**
	1.4nm,0.3s,baz=301,slow=12,SNR=46						
WRA				S	**S**	**20 59 50.6**	**-0.7**
	0.4nm,0.3s,baz=298,slow=23,SNR=6.1						
WRA	**Warramunga Arr**	**18.34**	**130**	P	**P**	**20 56 31.6**	**+1.1**
WRAB	**Tennant Creek**	**18.34**	**130**	P	**P**	**20 56 31.8**	**+1.3**
WR0	**Warramunga Arr**	**18.50**	**129**	P	**Pn**	**20 56 33.8**	**-0.7**
WR0				IAmb	IAmb	20 56 36.2	
	comp=Z,32nm,1.6s						
AS31	**Alice Springs**	**20.44**	**139**	P	**P**	**20 56 55.3**	**+2.2**
ASAR	**Alice Springs**	**20.44**	**139**	P	**P**	**20 56 54.9**	**+1.8**
	comp=Z,2.0nm,0.3s,baz=312,slow=9.1,SNR=31						

	SNR=64								
KZA	**Kyzart**	**2.18**	**327**	⇑*iP*		**Pg**		**21 18 45.2**	**+0.1**
	baz=25								
KZA				⇑*iS*		**Sg**		**21 19 14.0**	**+0.7**
	baz=25								
KZA	**Kyzart**	**2.18**	**327**	P		**Pg**		**21 18 46.1**	**+1.0**
	SNR=13								
BOOM	**Boomskoye usch**	**2.33**	**343**	⇓*iP*		**Pg**		**21 18 47.5**	**-0.5**
	baz=43								
BOOM				⇓*iS*		**Sb**		**21 19 16.8**	**+1.2**
	baz=43								
ARLS	**Aral**	**2.48**	**311**	⇓*eP*		**Pb**		**21 18 49.6**	**+0.7**
	baz=9.0								
ARLS				⇓*iS*		**Sb**		**21 19 21.4**	**+1.3**
	baz=9.0								
ANVS	**Anan'yevo**	**2.60**	**14**	⇑*iP*		**Pb**		**21 18 51.3**	**+0.4**
	baz=14								
ANVS				⇑*iS*		**Sb**		**21 19 23.7**	**+0.3**
	baz=14								
UCH	**Uchtor**	**2.63**	**319**	⇓*iP*		**Pb**		**21 18 51.6**	**0.0**
	baz=17								
UCH				⇓*iS*		**Sb**		**21 19 24.8**	**+0.1**
	baz=17								
UCH	**Uchtor**	**2.63**	**319**	P		**Pg**		**21 18 54.2**	**+0.4**
	SNR=9.5								
TNSS	**Tian-Shan**	**2.78**	**2**	*eP*		**Pg**		**21 18 57.2**	**+0.6**
	6.7nm,0.4s								
TNSS				*eS*		**Sg**		**21 19 33.4**	**+0.7**
	12nm,0.5s								
TNSS	**Tian-Shan**	**2.78**	**2**	Pg		**Pg**		**21 18 57.2**	**+0.6**
	6.7nm,0.4s								
TNSS				Lg		Lg		21 19 33.4	
	12nm,0.5s								
IZV	**Izvestkoviy**	**2.78**	**357**	*eP*		**Pg**		**21 18 57.1**	**+0.4**
	6.2nm,0.5s								
IZV				*eS*		**Sg**		**21 19 33.2**	**+0.5**
	16nm,0.5s								
IZV	**Izvestkoviy**	**2.78**	**357**	Pg		**Pg**		**21 18 57.1**	**+0.4**
	6.2nm,0.5s								
IZV				Lg		Lg		21 19 33.2	
	16nm,0.5s								
KBK	**Karagaybulak**	**2.79**	**330**	⇑*iP*		**Pb**		**21 18 54.1**	**+0.1**
	baz=29								
KBK				⇑*iS*		**Sb**		**21 19 27.9**	**-0.8**
	baz=29								
KBK	**Karagaybulak**	**2.79**	**330**	P		**Pg**		**21 18 57.1**	**+0.3**
	SNR=13								
TKM2	**Tokmak 2**	**2.82**	**341**	⇑*iP*		**Pb**		**21 18 54.1**	**-0.5**
	baz=40								
TKM2				⇑*iS*		**Sb**		**21 19 28.7**	**-1.0**
	baz=40								
TKM2	**Tokmak 2**	**2.82**	**341**	P		**Pg**		**21 18 57.4**	**0.0**
	SNR=6.9								
TKM2	**Tokmak 2**	**2.82**	**341**	⇑Pn		**Pb**		**21 18 54.5**	**-0.1**
	4.3nm,0.5s								
TKM2				⇑Lg		Lg		21 19 33.0	
	3.7nm,0.3s								
KST	**Kastek**	**2.86**	**347**	*eP*		**Pg**		**21 18 58.4**	**+0.2**
	11nm,0.3s								
KST				*eS*		**Sg**		**21 19 35.5**	**+0.2**
	11nm,0.4s								
KST	**Kastek**	**2.86**	**347**	Pg		**Pg**		**21 18 58.4**	**+0.2**
	11nm,0.3s								
KST				Lg		Lg		21 19 35.5	
	11nm,0.4s								
MTBS	**Maitube**	**2.89**	**354**	*eP*		**Pg**		**21 18 59.0**	**+0.4**
	2.9nm,0.1s								
MTBS				*eS*		**Sg**		**21 19 36.4**	**+0.2**
	8.9nm,0.2s								
MTBS	**Maitube**	**2.89**	**354**	Pg		**Pg**		**21 18 59.1**	**+0.4**
	2.9nm,0.1s								
MTBS				Lg		Lg		21 19 36.3	
	8.9nm,0.2s								
MDOK	**Medeo**	**2.91**	**3**	*eP*		**Pg**		**21 18 59.1**	**0.0**
	5.6nm,0.3s								
MDOK				*eS*		**Sg**		**21 19 36.8**	**0.0**
	12nm,0.3s								
MDOK	**Medeo**	**2.91**	**3**	⇑Pn		**Pb**		**21 18 56.1**	**0.0**
	13nm,0.8s								
MDOK				Lg		Lg		21 19 36.4	
	13nm,0.6s								
MDOK	**Medeo**	**2.91**	**3**	Pg		**Pg**		**21 18 59.1**	**0.0**
	5.6nm,0.3s								
MDOK				Lg		Lg		21 19 36.8	
	12nm,0.3s								
AAK	**Ala-Archa**	**2.96**	**324**	⇑*iP*		**Pb**		**21 18 56.2**	**-0.8**
	baz=23								
AAK				⇑*iS*		**Sb**		**21 19 32.5**	**-1.2**
	baz=23								
AAK	**Ala-Archa**	**2.96**	**324**	P		**Pg**		**21 18 59.9**	**-0.1**
	SNR=8.9								
AAK	**Ala-Archa**	**2.96**	**324**	⇑Pn		**Pb**		**21 18 58.7**	**+1.7**
	10nm,0.9s								
AAK				⇓Lg		Lg		21 19 37.0	
	16nm,0.8s								
KOTS	**Kotyrbulak**	**2.98**	**4**	*eP*		**Pg**		**21 19 01.3**	**+0.8**
	9.6nm,0.2s								
KOTS				*eS*		**Sg**		**21 19 40.2**	**+1.0**
	63nm,0.4s								
KOTS	**Kotyrbulak**	**2.98**	**4**	Pg		**Pg**		**21 19 01.3**	**+0.8**
	9.6nm,0.2s								
KOTS				Lg		Lg		21 19 40.2	
	63nm,0.4s								
SATY	**Saty**	**3.04**	**22**	*eP*		**Pg**		**21 19 02.3**	**+0.7**
	8.4nm,0.4s								
SATY				⇓*iS*		**Sg**		**21 19 41.7**	**+0.7**
	22nm,0.6s								
SATY	**Saty**	**3.04**	**22**	Pg		**Pg**		**21 19 02.3**	**+0.7**
	8.4nm,0.4s								
SATY				Lg		Lg		21 19 41.7	
	22nm,0.6s								
DGS	**Degeres**	**3.09**	**345**	*eP*		**Pg**		**21 19 02.4**	**-0.1**
	8.0nm,0.6s								
DGS				*eS*		**Sg**		**21 19 42.6**	**0.0**
	13nm,0.5s								
DGS	**Degeres**	**3.09**	**345**	Pg		**Pg**		**21 19 02.4**	**-0.1**
	8.0nm,0.6s								
DGS				Lg		Lg		21 19 42.6	
	13nm,0.5s								
ARSB	**Arslanbob**	**3.11**	**291**	⇑*iP*		**Pb**		**21 19 00.3**	**+0.7**
	baz=89								
ARSB				⇑*iS*		**Sb**		**21 19 38.5**	**+0.4**
	baz=89								
ZHN	**Zhinishke**	**3.15**	**22**	*eP*		**Pg**		**21 19 04.1**	**+0.4**
	2.6nm,0.2s								
ZHN				*eS*		**Sg**		**21 19 45.3**	**+0.9**
	4.8nm,0.3s								
ZHN	**Zhinishke**	**3.15**	**22**	Pg		**Pg**		**21 19 04.1**	**+0.4**
	2.6nm,0.2s								
ZHN				Lg		Lg		21 19 45.3	
	4.8nm,0.3s								
UZB	**Uzynbulak**	**3.32**	**29**	*eP*		**Pg**		**21 19 06.6**	**-0.4**
	1.9nm,0.3s								
UZB				*eS*		**Sg**		**21 19 49.3**	**-0.7**
	6.1nm,0.6s								
UZB	**Uzynbulak**	**3.32**	**29**	Pg		**Pg**		**21 19 06.6**	**-0.4**
	1.9nm,0.3s								
UZB				Lg		Lg		21 19 49.3	
	6.1nm,0.6s								
KTBS	**Karatobe**	**3.45**	**358**	*eP*		**Pg**		**21 19 09.0**	**-0.6**
	2.7nm,0.5s								
KTBS				*eS*		**Sg**		**21 19 53.5**	**-0.9**
	11nm,0.5s								
KTBS	**Karatobe**	**3.45**	**358**	Pg		**Pg**		**21 19 09.0**	**-0.6**
	2.7nm,0.5s								
KTBS				Lg		Lg		21 19 53.5	
	11nm,0.5s								
KRBS	**Karabastau**	**3.54**	**346**	*eP*		**Pg**		**21 19 10.4**	**-0.8**
	5.2nm,0.3s								
KRBS				*eS*		**Sg**		**21 19 56.0**	**-1.2**
	4.5nm,0.6s								
CHKK	**Chushkaly**	**3.60**	**2**	*eP*		**Pg**		**21 19 11.8**	**-0.4**
	4.2nm,0.3s								
CHKK				*eS*		**Sg**		**21 19 58.1**	**-0.8**
	11nm,0.2s								
CHKK	**Chushkaly**	**3.60**	**2**	Pg		**Pg**		**21 19 11.8**	**-0.4**
	4.2nm,0.3s								
CHKK				Lg		Lg		21 19 58.1	
	11nm,0.2s								
KUU	**Kurty**	**3.65**	**354**	*eP*		**Pg**		**21 19 11.7**	**-1.7**
	3.7nm,0.3s								
KUU				*eS*		**Sg**		**21 19 58.0**	**-2.7**
	7.4nm,0.4s								
KUU	**Kurty**	**3.65**	**354**	Pg		**Pg**		**21 19 11.7**	**-1.7**
	3.7nm,0.3s								
KUU				Lg		Lg		21 19 58.0	
	7.4nm,0.4s								
PDGK	**Podgornoye**	**3.66**	**32**	Pg		**Pg**		**21 19 13.2**	**-0.2**
	0.8nm,0.3s								
PDGK				Lg		Lg		21 20 00.7	
	3.0nm,0.6s								
PDGK	**Podgornoye**	**3.66**	**32**	⇓Pn		**Pb**		**21 19 07.7**	**-1.2**
	6.4nm,0.9s								
PDGK				⇑Lg		Lg		21 20 00.9	
	9.2nm,0.7s								
MRKS	**Merke**	**3.68**	**314**	*eP*		**Pg**		**21 19 12.4**	**-1.4**
	1.4nm,0.1s								
MRKS				*eS*		**Sg**		**21 19 59.8**	**-1.8**
	5.5nm,0.4s								
MRKS	**Merke**	**3.68**	**314**	Pg		**Pg**		**21 19 12.4**	**-1.4**
	1.4nm,0.1s								
MRKS				Lg		Lg		21 19 59.7	
	5.5nm,0.4s								
ARXS	**Arharly**	**4.02**	**10**	*eP*		**Pg**		**21 19 20.6**	**+0.2**
	2.6nm,0.5s								
ARXS				*eS*		**Sg**		**21 20 13.4**	**+0.9**
	7.0nm,0.7s								
ARXS	**Arharly**	**4.02**	**10**	Pg		**Pg**		**21 19 20.6**	**+0.2**
	2.6nm,0.5s								
ARXS				Lg		Lg		21 20 13.4	
	7.0nm,0.7s								
KAPS	**Kapalarasan**	**5.36**	**19**	*eP*		**Pg**		**21 19 44.8**	**-1.2**
	1.3nm,0.5s								
KAPS				*eS*		**Sg**		**21 20 55.1**	**-0.3**
	2.5nm,1.0s								
KAPS	**Kapalarasan**	**5.36**	**19**	Pg		**Pg**		**21 19 44.8**	**-1.2**
	1.3nm,0.5s								
KAPS				Lg		Lg		21 20 55.1	
	2.5nm,1.0s								
KK31	**Karatay Array**	**5.52**	**303**	⇑Pg		**Pg**		**21 19 49.4**	**+0.2**
	0.2nm,0.3s,baz=132,slow=38,SNR=5.9								
KK31				⇓Lg		Lg		21 21 01.0	
	0.5nm,0.3s,baz=113,slow=23,SNR=3.6								

IDC ***15*** *21:36:27.6±0.7, 6°.07S×103°.18E, h0km, mb4.1/20, mb1 4.2/20, mb1mx4.1/47, mbtmp4.1/20, MS3.3/7, Ms1 3.3/7, ms1mx2.9/36, Error ellipse: s-maj=24.4km s-min=13.3km az=47.0*

BJI ***15*** *21:36:29.1±0.0, 6°.61S×102°.86E, h35km, mB5.0/12, mb4.4/23, Ms4.4/3, Ms7 4.1/2*

NEIC ***15*** *21:36:30.3±1.4, 6°.10S±0°.07×103°.15E±0°.07, h19km±4km, mb4.6/20, Error ellipse: s-maj=10.9km s-min=8.2km az=46.0*

DJA ***15*** *21:36:33.0±0.6, 6°S±2°×10°3E±°, h34km±10km, M4.8/18, mB5.2/6, mb4.9/14, MLv4.8/18, Mw(mB)4.6/6*

ISC 15 21:36:32.3±0.5, 6°.18S±0°.06×103°.18E±0°.05, h33km, n96, σ1§44/91, mb4.3/32, MS3.3/8, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LWLI	**Liwa**	**1.45**	**37**			P	**Pn**	**21 36 56.2**	**-0.1**
LWLI						S	**Sn**	**21 37 14.6**	**+0.4**
KASI	**Kota Agung**	**1.46**	**63**			P	**Pn**	**21 36 56.2**	**-0.2**
KASI						S	**Sn**	**21 37 13.5**	**-0.9**
MNAI	**Manna**	**1.82**	**353**			P	**Pn**	**21 37 02.2**	**+0.8**
MNAI	**Manna**	**1.82**	**353**				**Pn**	**21 37 01.6**	**+0.2**
MDSI	**Maura Dua**	**1.96**	**30**	P		P	**Pn**	**21 37 03.4**	**+0.2**
MDSI						S	**Sn**	**21 37 28.1**	**+1.5**
CGJI	**Cibinong**	**2.53**	**100**	P		P	**Pn**	**21 37 10.6**	**-0.5**
KSI	**Kapahiang**	**2.58**	**347**	P		P	**Pn**	**21 37 12.2**	**+0.3**
SKJI	**Sukabumi**	**3.45**	**104**	P		P	**Pn**	**21 37 25.1**	**+1.4**
DBJI	**Dramaga**	**3.56**	**96**	P		P	**Pn**	**21 37 26.3**	**+1.0**
PMBI	**Palembang**	**3.60**	**26**	Pn		P	**Pn**	**21 37 25.4**	**-0.4**
CBJI	**Citeko**	**3.65**	**94**	P		P	**Pn**	**21 37 29.6**	**+3.1**
CNJI	**Cibinong**	**4.08**	**106**	P		P	**Pn**	**21 37 31.9**	**-0.4**
KRJI	**Kerinci**	**4.41**	**337**	P		P	**Pn**	**21 37 38.1**	**+1.0**
LEM	**Lembang**	**4.45**	**99**	Pn		P	**Pn**	**21 37 39.9**	**+2.2**
	22nm,0.3s,baz=309,slow=15,SNR=12								
LEM						Sn	**Sn**	**21 38 28.9**	**+0.5**
	12nm,0.3s,baz=116,slow=23,SNR=3.5								
LEM	**Lembang**	**4.45**	**99**	P		P	**Pn**	**21 37 39.6**	**+1.9**
PPSI	**Pulau Pagai**	**4.64**	**317**	P		P	**Pn**	**21 37 40.4**	**+0.3**
CISI	**Cisompet, Garu**	**4.80**	**107**	P		P	**Pn**	**21 37 41.8**	**-0.5**
CISI	**Cisompet, Garu**	**4.80**	**107**				**Pn**	**21 37 41.7**	**-0.7**
CISI						Sn	**Sn**	**21 38 31.1**	**-5.7**
CMJI	**Cimerak**	**5.46**	**107**	P		P	**Pn**	**21 37 51.1**	**-0.3**
	0.6nm2μm127nm,0.6s								
SDSI	**Sungai Dareh**	**5.50**	**341**	P		P	**Pn**	**21 37 52.6**	**+0.6**
	0.3nm2μm32nm,0.7s								
KPJI	**Karang Pucung**	**5.82**	**102**	P		P	**Pn**	**21 37 58.0**	**+1.7**
	0.3nm60nm,0.8s								
DSRI	**Dabo**	**5.83**	**14**	P		P	**Pn**	**21 37 57.3**	**+0.8**
	0.1nm6.6nm,0.8s								
RGRI	**Rengat**	**5.86**	**352**	P		P	**Pn**	**21 37 57.5**	**+0.7**
	7.4nm122μm302nm,0.4s								
PDSI	**Padang**	**5.90**	**332**	P		P	**Pn**	**21 37 56.9**	**-0.5**
SISI	**Saibi**	**6.32**	**320**	P		P	**Pn**	**21 38 02.3**	**-0.9**
	0.3nm1μm55nm,0.6s								
BKNI	**Bangkinang**	**6.81**	**342**	Pn			**Pn**	**21 38 06.1**	**-3.9**
UGM	**Wanagama**	**7.48**	**104**	P		P	**Pn**	**21 38 20.7**	**+1.5**
	1.3nm202nm,0.6s								
UGM	**Wanagama**	**7.48**	**104**				**Pn**	**21 38 20.4**	**+1.2**
WOJI	**Wonogiri, Jawa**	**7.86**	**103**	P		P	**Pn**	**21 38 25.4**	**+1.1**
	0.4nm56nm,1.4s								
PCJI	**Pacitan**	**8.18**	**105**	P		P	**Pn**	**21 38 29.3**	**+0.6**
	11nm,0.9s								
COCO	**West Island**	**8.65**	**226**	Pn		P	**Pn**	**21 38 35.4**	**+0.2**
GSI	**Gunungsitoli**	**9.31**	**323**	P		P	**Pn**	**21 38 42.4**	**-1.9**
	23nm,0.9s								
GSI	**Gunungsitoli**	**9.31**	**323**				**Pn**	**21 38 42.2**	**-2.1**
GSI							Sn	21 40 16.5	-11
GMJI	**Gumukmas**	**10.39**	**102**	P		P	**Pn**	**21 39 01.1**	**+2.0**
JAGI	**Jajag, Banyuwa**	**11.11**	**102**	P		P	**Pn**	**21 39 09.6**	**+0.6**
	56nm,0.6s								
JAGI	**Jajag, Banyuwa**	**11.11**	**102**				**Pn**	**21 39 09.4**	**+0.4**
JAGI							**Sn**	**21 41 08.8**	**-3.5**
SRBI	**Singaraja**	**12.09**	**100**	P		P	**Pn**	**21 39 23.5**	**+1.2**
	56nm,0.6s								
LHMI	**Lhok Sumawe**	**12.93**	**331**	Pn		P	**Pn**	**21 39 31.6**	**-2.3**
BATI	**Baumata**	**20.66**	**103**	P		P	**P**	**21 41 10.1**	**+0.6**
	45nm,0.6s,baz=213,slow=5.1,SNR=5.8								
SOEI	**Soe**	**21.18**	**101**	P		P		21 41 28.2	+13
SOEI	**Soe**	**21.18**	**101**	P		P	**P**	**21 41 14.6**	**-0.7**
PSA00	**Pilbara Seismi**	**22.23**	**135**	P		P	**P**	**21 41 27.1**	**+0.8**
PSA00						IAmb	IAmb	21 41 39.1	
	comp=Z,23nm,1.2s								
PBKT	**Sadao Pong**	**22.71**	**354**	P		P	**P**	**21 41 27.9**	**-3.5**
CMAR	**Chiang Mai Arr**	**24.84**	**350**	LR		LR		21 53 21.0	
	comp=Z,41nm,18.9s,baz=200,slow=41								
FITZ	**Fitzroy Crossi**	**24.91**	**120**	P			**P**	**21 41 52.6**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=302,slow=9.6,SNR=1.9								
FITZ						LR	LR	21 52 23.2	
	comp=Z,67nm,20.6s,baz=284,slow=38								
FITZ	**Fitzroy Crossi**	**24.91**	**120**			IAmb	IAmb	21 41 53.3	
	comp=Z,21nm,1.4s								
CHTO	**Chiang Mai**	**25.19**	**351**	P		P	**P**	**21 41 53.8**	**-1.2**
CHTO						IAmb	IAmb	21 42 09.8	
	comp=Z,4.0nm,0.6s								
DAV	**Davao City (W)**	**25.93**	**60**	LR		LR		21 52 58.7	
	comp=Z,92nm,18.7s,baz=138,slow=38								
PALK	**Pallekele**	**26.11**	**300**	LR		LR		21 52 23.5	
	comp=Z,34nm,18.2s,baz=114,slow=37								
KNRA	**Kununurra**	**26.80**	**113**	P		P	**P**	**21 42 12.4**	**+2.8**
KNRA						IAmb	IAmb	21 42 17.9	
	comp=Z,69nm,1.4s								
SLVN	**Son La**	**27.36**	**1**	P		P	**P**	**21 42 13.4**	**-1.2**
SLVN						IAmb	IAmb	21 42 14.6	
	comp=Z,3.5nm,0.4s								
MTN	**Manton Dam**	**28.33**	**106**	P		P	**P**	**21 42 24.3**	**+0.9**
H01W3	**Cape Leeuwin H**	**30.30**	**162**	T		T		22 14 39.3	
	baz=339,slow=76,SNR=7.0								
H01W2	**Cape Leeuwin H**	**30.31**	**162**	T		T		22 14 23.5	
	baz=339,slow=76,SNR=6.0								
H01W1	**Cape Leeuwin H**	**30.31**	**162**	T		T		22 14 40.3	
	baz=339,slow=76,SNR=5.4								
H08S2	**Diego Garcia H**	**30.50**	**265**	T		T		22 14 39.9	
	baz=89,slow=75,SNR=52								
H08S3	**Diego Garcia H**	**30.51**	**265**	T		T		22 14 46.7	
	baz=89,slow=75,SNR=141								
H08S1	**Diego Garcia H**	**30.52**	**265**	T		T		22 14 44.7	
	baz=89,slow=75,SNR=120								
WRA	**Warramunga Arr**	**33.20**	**117**	P		P	**P**	**21 43 06.1**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=286,slow=9.5,SNR=8.1								
MNCI	**Minicoy**	**33.30**	**295**	P		P	**P**	**21 43 06.1**	**-1.1**
ASAR	**Alice Springs**	**34.27**	**124**	P		P	**P**	**21 43 16.2**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=297,slow=7.4,SNR=10								
ASAR						PP	**PnPn**	**21 44 30.8**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=302,slow=11,SNR=4.1								
TAPN	**Taplejung**	**36.54**	**337**	*eP*			**P**	**21 43 36.0**	**+0.6**
	comp=Z,13nm,0.8s								
ENH	**Enshi**	**36.75**	**9**	P		P	**P**	**21 43 36.4**	**-0.4**
ENH						IAmb	IAmb	21 43 42.5	
LSA	**Lhasa**	**37.50**	**343**	P		P	**P**	**21 43 44.3**	**+0.6**
GKN	**Gorkha**	**38.42**	**333**	*eP*		P	**P**	**21 43 51.4**	**+0.3**
KOLN	**Koldanda**	**38.70**	**332**	*eP*		P	**P**	**21 43 54.1**	**+0.6**
DANN	**Dangsing**	**39.11**	**332**	*eP*		P	**P**	**21 43 57.3**	**+0.2**
XAN	**Xi'an**	**40.37**	**7**	P		P	**P**	**21 44 06.6**	**-0.6**
XAN					pmax	pmax			
	comp=Z,5.0nm,0.9s								
XAN					pmax	pmax			
	comp=Z,160nm,4.9s								
NJ2	**Nanjing**	**40.85**	**21**	*eP*		P	**P**	**21 44 13.1**	**+2.0**
NJ2					pmax	pmax			
	comp=Z,10.0nm,0.7s								
STKA	**Stephens Creek**	**44.02**	**130**	P		P	**P**	**21 44 37.8**	**+0.8**
	comp=Z,6.2nm,0.5s,baz=306,slow=8.1,SNR=28								
STKA					LR	LR		22 04 27.8	
	comp=Z,32nm,18.9s,baz=12,slow=38								
STKA	**Stephens Creek**	**44.02**	**130**	P		P	**P**	**21 44 37.9**	**+0.8**
HHC	**Hu-ho-hao-te**	**47.43**	**9**	*eP*		P	**P**	**21 45 07.3**	**+3.5**
HHC					pmax	pmax			
	comp=Z,4.0nm,0.8s								
HHC					pmax	pmax			
	comp=Z,65nm,6.6s								
KSRS	**Korea Array**	**49.17**	**26**	P		P	**P**	**21 45 16.5**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=220,slow=6.8,SNR=3.1								
WMQ	**Urumqi**	**51.70**	**346**	*eP*		P	**P**	**21 45 37.6**	**+1.3**
WMQ						pP	sP	21 45 48.6	-1.0
WMQ						sP	pP	21 45 52.9	+7.1
WMQ					pmax	pmax			
	comp=Z,8.0nm,0.9s								
WMQ					LR	LR			
	comp=Z,400nm,22.9s								
KSH	**Kashi**	**51.96**	**333**	P		P	**P**	**21 45 40.3**	**+1.9**
KSH						pP	sP	21 45 52.9	+1.2
MJAR	**Matsushiro Arr**	**53.68**	**35**	P		P	**P**	**21 45 51.7**	**+0.7**
	comp=Z,0.5nm,0.4s,baz=228,slow=6.4,SNR=3.0								
SONM	**Songino Array**	**53.86**	**3**	P		P	**P**	**21 45 52.6**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=180,slow=8.4,SNR=24								
MKAR	**Makanchi Array**	**55.91**	**343**	P		P	**P**	**21 46 06.8**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=150,slow=9.1,SNR=52								
USRK	**Ussuriysk Ar.**	**56.48**	**25**	P		P	**P**	**21 46 10.2**	**-0.8**
	comp=Z,2.4nm,0.7s,baz=204,slow=5.5,SNR=12								
KURBB	**Kurchatov Arra**	**60.45**	**342**	P		P	**P**	**21 46 37.9**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=160,slow=6.4,SNR=11								
KURK	**Kurchatov**	**60.51**	**342**	P		P	**P**	**21 46 38.3**	**-0.7**
KURK						IAmb	IAmb	21 46 55.5	
	comp=Z,2.6nm,0.8s								
KLR	**Kul'dur**	**60.55**	**21**	P		P	**P**	**21 46 37.6**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=292,slow=5.3,SNR=5.4								
GEYT	**Alibeck**	**60.67**	**320**	P		P	**P**	**21 46 39.8**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=132,slow=4.1,SNR=3.5								
ZAA0	**Zalesovo Array**	**61.87**	**348**	P		P	**P**	**21 46 47.4**	**-0.8**
ZAA0						IAmb	IAmb	21 47 00.3	
	comp=Z,5.0nm,0.6s								
ZALV	**Zalesovo Beam**	**61.87**	**348**	P		P	**P**	**21 46 47.6**	**-0.6**
	comp=Z,2.7nm,0.4s,baz=158,slow=5.5,SNR=14								
ZALV						LR	LR	22 16 44.6	
	comp=Z,50nm,19.7s,baz=232,slow=39								
BVAR	**Borovoye Array**	**65.19**	**339**	P		P	**P**	**21 47 09.8**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=141,slow=8.5,SNR=8.8								
ABKAR	**Akbulak array**	**66.81**	**331**	P		P	**P**	**21 47 19.6**	**-1.1**
ABKAR						IAmb	IAmb	21 47 37.5	
	comp=Z,3.0nm,0.6s								
AKTO	**Aktyubinsk**	**68.53**	**331**	P		P	**P**	**21 47 31.3**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=149,slow=5.9,SNR=2.3								
KBZ	**Khabaz**	**73.53**	**319**	P		P	**P**	**21 48 02.0**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=101,slow=14,SNR=4.4								
LSZ	**Lusaka**	**73.95**	**256**	P		P	**P**	**21 48 05.2**	**0.0**
	comp=Z,0.7nm,0.3s,baz=45,slow=2.9,SNR=3.3								
BRTR	**Keskin Array B**	**78.47**	**312**	P		P	**P**	**21 48 30.4**	**0.0**
	comp=Z,0.7nm,0.7s,baz=138,slow=6.1,SNR=4.6								
BRTR						LR	LR	22 25 02.2	
	comp=Z,14nm,19.6s,baz=153,slow=37								
AKASG	**Malin Array Be**	**84.71**	**322**	P		P	**P**	**21 49 02.9**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=93,slow=4.1,SNR=5.5								
AKASG	**Malin Array Be**	**84.71**	**322**			IAmb	IAmb	21 49 04.3	
	comp=Z,2.7nm,1.5s								
YKA	**Yellowknife Ar**	**117.36**	**19**	PKP			**PKiKP**	**21 55 14.1**	**0.0**
	comp=Z,0.2nm,0.7s,baz=306,slow=2.4,SNR=2.8								
TXAR	**

USRK	**Ussuriysk Ar.**	**56.38**	**12**	LR	LR	22 36 13.0		
	comp=Z,12nm,18.5s,baz=327,slow=37							
MKAR	**Makanchi Array**	**65.56**	**334**	P	P	22 11 53.5	-0.1	
	0.2nm,0.5s,baz=147,slow=7.1,SNR=8.4							

*GCG **15** 22:22:21.0±0.6, 13°.11N×89°.76W, h3km±20km, MD3.8*
*SNET **15** 22:22:23.2±0.9, 13°.21N×89°.69W, h34km±2km, ML3.4*

ISC 15 22:22:21.5±2.1, 13°.12N±0°.10×89°.72W±0°.04, h18km±4km, n18, σ0s57/28, El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CEVE	**Cerro Verde**	**0.71**	**7**	*i* P			**Pg**	**22 22 36.1**	**+0.4**
CEVE				*e*S			**Sn**	**22 22 46.8**	**-0.8**
CEVE				IAML				22 22 49.4	
	comp=Z,3μm,0.3s								
SBLS	**San Blas**	**0.72**	**7**	*e*P			**Pg**	**22 22 36.2**	**+0.3**
SNET	**Serv Nac Est T**	**0.74**	**40**	*e*P			**Pg**	**22 22 36.4**	**+0.3**
SNET				*e*S			**Sg**	**22 22 46.2**	**+0.3**
SNET				IAML				22 22 48.1	
	comp=Z,1μm,0.2s								
SNJE	**San Jose**	**0.76**	**8**	*e*P			**Pg**	**22 22 36.6**	**+0.1**
UEES	**Universidad Ev**	**0.76**	**38**	*e*P			**Pg**	**22 22 36.6**	**+0.1**
UEES				*e*S			**Sg**	**22 22 46.8**	**+0.2**
UEES				IAML				22 22 49.3	
	comp=Z,2μm,0.2s								
FAME	**Alcalda de S**	**0.78**	**338**	*e*P			**Pg**	**22 22 36.7**	**-0.2**
FAME				*e*S			**Sg**	**22 22 47.1**	**-0.1**
FAME				IAML				22 22 48.8	
	comp=Z,644nm,0.3s								
RTR	**El Retiro**	**0.78**	**5**	*e*P			**Pg**	**22 22 37.0**	**+0.1**
LFU	**La Fuente**	**0.86**	**43**	*i* P			**Pg**	**22 22 38.3**	**-0.1**
COEG	**Centro de Oper**	**0.96**	**58**	*e*P			**Pb**	**22 22 39.6**	**0.0**
COEG				*e*S			**Sb**	**22 22 51.9**	**-0.1**
COEG				IAML				22 22 52.9	
	comp=Z,1μm,0.3s								
PAVA	**Las Pavas**	**0.96**	**52**	*e*P			**Pb**	**22 22 40.0**	**+0.3**
PAVA				*e*S			**Sb**	**22 22 52.5**	**+0.3**
PAVA				IAML				22 22 55.0	
	comp=Z,780nm,0.2s								
TECA	**Tecapa**	**1.24**	**72**	*e*P			**Pn**	**22 22 43.8**	**-0.3**
IXG	**Ixpaco**	**1.26**	**326**	*e*P			**Pn**	**22 22 44.4**	**-0.1**
JUCU	**Jucuarɹn**	**1.44**	**84**	*e*P			**Pn**	**22 22 46.5**	**-0.2**
JUCU				*e*S			**Sn**	**22 23 03.9**	**-1.3**
NBG	**Las Nubes**	**1.59**	**337**	*e*P			**Pb**	**22 22 50.3**	**-0.2**
FUG	**Fuego 3**	**1.72**	**321**	*e*P			**Pn**	**22 22 51.4**	**+0.7**
FUG				*e*S			**Sg**	**22 23 15.6**	**-1.5**
LCND	**La Caada**	**1.79**	**84**	*e*P			**Pn**	**22 22 51.7**	**+0.2**
LCND				*e*S			**Sn**	**22 23 13.9**	**+0.1**
LCND				IAML				22 23 17.4	
	comp=Z,369nm,0.4s								
CNCH	**Conchagua**	**1.84**	**85**	*e*P			**Pn**	**22 22 52.4**	**+0.1**
CNCH				*e*S			**Sn**	**22 23 15.7**	**+0.5**
CNCH				IAML				22 23 22.0	
	comp=Z,876nm,0.3s								
STG3	**Santiaguito 3,**	**2.40**	**312**	*e*P			**Pn**	**22 23 01.4**	**+1.3**

*NEIC **15** 22:44:03.5±0.8, 14°.3S±0°.1×171°.1E±0°.2, h629km±10km, mb4.1/4, Error ellipse: s-maj=29.0km s-min=5.3km az=129.0*
*IDC **15** 22:44:05.0±3.7, 14°.27S×170°.99E, h652km±52km, mb3.1/8, mb1 3.4/9, mb1mx3.0/41, mbtmp4.2/9, Error ellipse: s-maj=39.9km s-min=24.2km az=172.0*

ISC 15 22:44:04.9±0.8, 14°.3S±0°.1×171°.0E±0°.2, h650km, n16, σ0s73/16, mb3.9/10, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.88**	**209**	P			**P**	**22 46 14.9**	**+0.7**
	0.9nm,0.3s,baz=173,slow=18,SNR=5.8								
DZM	**Mont Dzumac**	**8.88**	**209**	P			**P**	**22 46 12.8**	**-1.3**
BKZ	**Black Stump Fm**	**25.23**	**170**	P			**P**	**22 48 43.0**	**+0.2**
BKZ				IAmb		IAmb		22 48 59.8	
	comp=Z,7.3nm,1.1s								
BHW	**Baring Head**	**27.21**	**174**	P			**P**	**22 48 59.9**	**-0.1**
KHZ	**Kahutara**	**28.10**	**176**	P			**P**	**22 49 07.2**	**-0.3**
KHZ				IAmb		IAmb		22 49 12.7	
	comp=Z,5.3nm,0.7s								
RPZ	**Rata Peaks**	**29.32**	**180**	P			**P**	**22 49 18.0**	**0.0**
	comp=Z,13nm,1.0s,baz=309,slow=17,SNR=3.2								
STKA	**Stephens Creek**	**32.09**	**232**	P			**P**	**22 49 42.2**	**+0.3**
	comp=Z,4.4nm,0.4s,baz=67,slow=9.0,SNR=18								
STKA	**Stephens Creek**	**32.09**	**232**	P			**P**	**22 49 43.1**	**+1.3**
STKA				IAmb		IAmb		22 49 43.5	
	comp=Z,1.0nm,0.6s								
WRA	**Warramunga Ar**	**35.47**	**256**	P			**P**	**22 50 09.3**	**-0.8**
	comp=Z,0.7nm,0.4s,baz=80,slow=5.9,SNR=8.7								
ASAR	**Alice Springs**	**36.24**	**249**	P			**P**	**22 50 16.1**	**-0.3**
	comp=Z,1.7nm,0.3s,baz=76,slow=9.1,SNR=20								
CMAR	**Chiang Mai Arr**	**78.14**	**293**	P			**P**	**22 55 00.0**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=122,slow=4.4,SNR=3.5								
NVAR	**Mina Array Bea**	**84.24**	**48**	P			**P**	**22 55 30.9**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=230,slow=5.6,SNR=3.0								
ILAR	**Eielson Array**	**85.03**	**17**	P			**P**	**22 55 32.4**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=238,slow=5.2,SNR=9.3								
YKA	**Yellowknife Ar**	**95.51**	**27**	P			**P**	**22 56 22.4**	**+0.6**
	comp=Z,0.3nm,0.4s,baz=255,slow=5.1,SNR=6.8								
ARCES	**ARCESS Array B**	**120.72**	**347**	PKP			**PKiKP**	**23 01 44.0**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=66,slow=2.9,SNR=7.3								
FUORN	**Ofenpass-Fuorn**	**143.97**	**337**				**PKPdf**	**23 02 28.9**	**+0.3**

*IDC **15** 22:49:52.7±2.0, 38°.16N×69°.62E, h0km, mb3.7/6, mb1 3.7/14, mb1mx3.5/52, mbtmp3.6/14, ML3.1/8, MS3.0/1, Ms1 3.0/1, ms1mx2.2/53, Error ellipse: s-maj=36.3km s-min=12.2km az=154.0*
*NNC **15** 22:49:56.0±1.8, 38°.52N×69°.32E, h0km, mb4.3, mpv4.1, Error ellipse: s-maj=14.3km s-min=12.5km az=22.0*

ISC 15 22:49:56.3±1.0, 38°.41N±0°.08×69°.29E±0°.05, h12km, n42, σ1s85/48, mb3.6/6, 11C-3D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SAM	**Samarkand**	**2.19**	**306**	*i* P			**Pg**	**22 50 38.4**	**+0.1**
SAM				*i* S			**Sg**	**22 51 09.6**	**+2.9**
TAS	**Tashkent**	**2.91**	**0**	*e*P			**Pb**	**22 50 47.3**	**-0.8**
TAS				*e*S			**Sb**	**22 51 25.3**	**+1.6**
FRG	**Fergana**	**3.02**	**39**	P			**Pn**	**22 50 42.4**	**-1.5**
FRG				S			**Sn**	**22 51 19.8**	**-0.2**
CHRV	**Charvak**	**3.27**	**9**	P			**Pn**	**22 50 48.0**	**+0.6**
CHRV				S			**Sn**	**22 51 28.3**	**+2.1**
DZA	**Taraz**	**4.74**	**18**	Pg			**Pn**	**22 51 09.2**	**+1.6**
	78nm,0.4s								
DZA				Lg			Lg	22 52 02.3	
	43nm,0.3s								
KK31	**Karatay Array**	**4.78**	**11**	Pn			**Pn**	**22 51 08.2**	**0.0**
	0.9nm,0.2s,baz=93,slow=24,SNR=23								
KK31					⇓	Pg	**Pb**	**22 51 20.1**	**+0.1**
	6.4nm,0.4s,baz=184,slow=10.0,SNR=6.5								
KK31					⇑	Sn	**Sn**	**22 52 04.3**	**+0.9**
	5.4nm,0.5s,baz=192,slow=16,SNR=18								
KK31					⇓	Lg	Lg	22 52 24.5	
	29nm,0.7s,baz=199,slow=40,SNR=5.0								
AML	**Almayashu**	**5.02**	**41**	P			**Pn**	**22 51 14.2**	**+2.5**
	SNR=8.3								
MRKS	**Merke**	**5.27**	**33**	Pg			**Pn**	**22 51 16.6**	**+1.7**
	25nm,0.6s								
MRKS				Lg			Lg	22 52 14.8	
	27nm,0.5s								
EKS2	**Erkin-Say**	**5.45**	**37**	P			**Pn**	**22 51 19.8**	**+2.4**
	SNR=18								
UCH	**Uchtor**	**5.52**	**45**	P			**Pn**	**22 51 20.0**	**+1.3**
	SNR=14								
AAK	**Ala-Archa**	**5.79**	**42**	Pn			**Pn**	**22 51 21.4**	**-0.8**
	3.2nm,0.3s,baz=174,slow=6.2,SNR=22								
AAK						Sn	**Sn**	**22 52 29.0**	**+0.4**
	1.0nm,0.3s,baz=306,slow=10,SNR=2.1								
AAK						Lg	Lg	22 52 53.3	
	1.4nm,0.3s,baz=319,slow=20,SNR=2.5								
AAK	**Ala-Archa**	**5.79**	**42**	P			**Pn**	**22 51 25.3**	**+3.2**
	SNR=12								
AAK	**Ala-Archa**	**5.79**	**42**	⇑Pn			**Pn**	**22 51 22.9**	**+0.8**
	14nm,0.8s								
AAK					⇑	Pg	**Pb**	**22 51 39.6**	**+2.2**
	19nm,0.8s								
AAK					⇓	Lg	Lg	22 52 56.9	
	38nm,1.1s								
KZA	**Kyzart**	**5.85**	**49**	P			**Pn**	**22 51 23.2**	**0.0**
	SNR=13								
KBK	**Karagaybulak**	**6.05**	**44**	P			**Pn**	**22 51 26.0**	**+0.3**
	SNR=11								
USP	**Ospenovka**	**6.26**	**37**	P			**Pn**	**22 51 30.5**	**+2.0**

	SNR=14							
SGDS	**Sogindy**	**6.46**	**37**	Pg		Pn	22 51 36.6	+5.4
	9.6nm,0.5s							
TKM2	**Tokmak 2**	**6.58**	**45**	⇑Pn		**Pn**	**22 51 31.6**	**-1.4**
	9.2nm,0.5s							
TKM2				⇑Sn		**Sn**	**22 52 49.2**	**+1.1**
	22nm,0.7s							
KST	**Kastek**	**6.86**	**45**	Pg		Pn	22 51 45.5	+8.7
	12nm,1.0s							
DGS	**Degeres**	**6.89**	**43**	Pg		Pn	22 51 45.0	+7.8
	8.0nm,0.6s							
MDOK	**Medeo**	**7.56**	**49**	Pn		**Pn**	**22 51 46.4**	**-0.1**
	9.2nm,0.8s							
MDOK				Lg		Lg	22 53 53.6	
	12nm,0.8s							
KOTS	**Kotyrbulak**	**7.64**	**48**	Pg		Pb	22 51 59.5	-9.3
	15nm,0.5s							
KTBS	**Karatobe**	**7.70**	**44**	Pg		Pb	22 52 01.0	-8.6
	3.6nm,0.7s							
GEYT	**Alibeck**	**8.81**	**270**	Pn		**Pn**	**22 52 04.1**	**+0.5**
	0.2nm,0.3s,baz=93,slow=12,SNR=3.2							
GEYT						Sn	**Sn**	**22 53 39.1**	**-3.7**
	baz=113,slow=22,SNR=2.3							
MAKZ	**Makanchi**	**12.55**	**44**	⇑Pn		**Pn**	**22 52 53.2**	**-1.4**
	1.7nm,0.8s							
MK31	**Makanchi Array**	**12.71**	**45**	Pn		**Pn**	**22 52 54.8**	**-2.0**
	1.1nm,0.6s,baz=233,slow=13,SNR=9.9							
MKAR	**Makanchi Array**	**12.71**	**45**	Pn		**Pn**	**22 52 55.2**	**-1.6**
	0.1nm,0.3s,baz=222,slow=12,SNR=9.0							
AB31	**Akbulak array**	**12.76**	**331**	⇑Pn		**Pn**	**22 52 56.5**	**-0.9**
	1.1nm,0.5s,baz=162,slow=8.9,SNR=41							
AB31				⇑Sn		**Sn**	**22 55 17.5**	**-1.7**
	1.5nm,0.5s,baz=150,slow=23,SNR=4.8							
KURBB	**Kurchatov Arra**	**13.86**	**25**	Pn		**Pn**	**22 53 08.8**	**-3.6**
	0.0nm,0.3s,baz=213,slow=11,SNR=3.5							
AKTO	**Aktyubinsk**	**14.45**	**330**	Pn		**Pn**	**22 53 20.5**	**0.0**
	0.2nm,0.3s,baz=136,slow=17,SNR=4.4							
AKTO	**Aktyubinsk**	**14.45**	**330**	⇑Pn		**Pn**	**22 53 22.3**	**+1.8**
	3.3nm,0.7s							
AKTO				⇑Sn		**Sn**	**22 55 55.7**	**-4.9**
	6.6nm,1.6s							
BVAR	**Borovoye Array**	**14.64**	**3**	Pn		**Pn**	**22 53 20.7**	**-2.4**
	0.1nm,0.3s,baz=178,slow=12,SNR=3.5							
BRVK	**Borovoye**	**14.67**	**2**	⇑Pn		**P**	**22 53 27.6**	**-2.1**
	3.2nm,0.7s							
ZALV	**Zalesovo Beam**	**18.83**	**29**	P		**P**	**22 54 13.4**	**-2.4**
	0.7nm,0.3s,baz=222,slow=12,SNR=13							
ARU	**Arti**	**19.39**	**342**	P		**P**	**22 54 21.8**	**-0.1**
	0.0nm,0.3s,baz=185,slow=14,SNR=3.0							
BRTR	**Keskin Array B**	**27.60**	**284**	P		**P**	**22 55 46.1**	**+2.5**
	0.3nm,0.6s,baz=93,slow=8.1,SNR=3.1							
EIL	**Elat**	**29.62**	**263**	LR		LR	23 09 10.7	
	comp=Z,29nm,18.2s,baz=162,slow=39							
FINES	**FINESS Array B**	**35.14**	**325**	P		**P**	**22 56 48.7**	**-0.7**
	2.7nm,1.0s,baz=134,slow=8.2,SNR=4.0							
ARCES	**ARCESS Array B**	**38.86**	**337**	P		**P**	**22 57 21.5**	**+0.5**
	1.1nm,0.8s,baz=110,slow=7.9,SNR=2.8							
NOA	**NORSAR Array B**	**42.04**	**322**	P		**P**	**22 57 47.6**	**+0.2**
	0.3nm,0.7s,baz=102,slow=7.0,SNR=2.3							
ESDC	**Sonseca Array**	**55.38**	**296**	P		**P**	**22 59 31.8**	**+1.5**
	0.3nm,0.5s,baz=52,slow=7.6,SNR=4.6							
YKA	**Yellowknife Ar**	**79.39**	**2**	P		**P**	**23 02 01.6**	**-0.2**
	0.6nm,0.5s,baz=350,slow=5.7,SNR=14							

MAN 15 23:04:27.2, 9°.73N×123°.66E, h1km, mb3.7, ML2.4, MS1.8, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.66**	**27**	⇑*e*P			Pg	23 04 40.4	+0.4
LLP				*i* S			Sb	23 04 50.7	-0.7
MSLP	**Maasin**	**1.25**	**71**	*e*P			Pg	23 04 50.7	-0.6
MSLP				*e*S			Sn	23 05 09.2	-0.2

*NEIC **15** 23:05:23.1±2.0, 19°.4S±0°.2×177°.6W±0°.2, h568km±9km, mb4.2/5, Error ellipse: s-maj=30.5km s-min=6.8km az=138.0*
*IDC **15** 23:05:25.9±5.9, 19°.47S×177°.81W, h591km±66km, mb3.0/7, mb1 3.3/7, mb1mx3.1/42, mbtmp4.0/7, Error ellipse: s-maj=84.3km s-min=28.6km az=152.0*

ISC 15 23:05:22.1±0.7, 19°.6S±0°.2×177°.6W±0°.1, h550km, n20, σ1s35/21, mb3.8/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.54**	**294**	P			**P**	**23 06 51.0**	**+2.8**
NIUE	**Niue**	**7.25**	**87**	P			**P**	**23 07 12.8**	**+0.2**
AFI	**Afiamalu**	**7.94**	**45**	P			**P**	**23 07 21.0**	**+1.5**
AFI				S			**S**	**23 08 55.6**	**0.0**
OUZ	**Omahuta**	**17.39**	**205**	P			**P**	**23 08 56.7**	**+2.4**
COEN	**Coen**	**37.92**	**272**	P			**P**	**23 11 52.3**	**-0.9**
STKA	**Stephens Creek**	**38.53**	**243**	P			**P**	**23 11 57.5**	**-0.4**
	0.4nm,0.3s,baz=98,slow=15,SNR=3.5								
STKA	**Stephens Creek**	**38.53**	**243**	IAmb		IAmb		23 11 60.0	
	comp=Z,0.8nm,1.1s								
ASAR	**Alice Springs**	**45.11**	**256**	P			**P**	**23 12 49.8**	**-0.1**
	comp=Z,3.7nm,0.7s,baz=90,slow=7.7,SNR=34								
ASAR				PcP			**PcP**	**23 14 17.5**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=89,slow=4.0,SNR=4.1								
WRA	**Warramunga Arr**	**45.12**	**261**	P			**P**	**23 12 49.4**	**-0.6**
	comp=Z,1.6nm,0.3s,baz=98,slow=7.5,SNR=27								
WRA				PcP			**PcP**	**23 14 17.3**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=76,slow=3.5,SNR=2.7								
FITZ	**Fitzroy Crossi**	**53.53**	**262**	P			**P**	**23 13 51.7**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=60,slow=4.2,SNR=6.7								
FITZ	**Fitzroy Crossi**	**53.53**	**262**	IAmb		IAmb		23 14 04.1	
	comp=Z,28nm,1.4s								
AFDM	**Forest Hills D**	**78.72**	**42**	P			**P**	**23 16 26.5**	**-1.3**
AFDM				IAmb		IAmb		23 16 29.2	
	comp=Z,5.6nm,0.9s								
TXAR	**Lajitas Array**	**86.25**	**57**	P			**P**	**23 17 07.4**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=214,slow=5.5,SNR=4.1								
ILAR	**Eielson Array**	**87.37**	**13**	P			**P**	**23 17 09.2**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=227,slow=5.4,SNR=6.3								
PDAR	**Pinedale Array**	**88.05**	**43**	P			**P**	**23 17 14.6**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=206,slow=6.0,SNR=3.2								
BVAR	**Borovoye Array**	**118.65**	**320**	PKP			**PKPdf**	**23 23 06.3**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=114,slow=3.6,SNR=4.7								
ARCES	**ARCESS Array B**	**128.12**	**350**	PKP			**PKPdf**	**23 23 24.4**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=29,slow=2.8,SNR=4.4								
BRTR	**Keskin Array B**	**146.52**	**314**	PKPbc			**PKPdf**	**23 24 01.6**	**+1.6**
	comp=Z,0.9nm,0.6s,baz=158,slow=4.0,SNR=4.8								
CLL	**Collm**	**147.29**	**348**	*e*PKPbc			**PKPbc**	**23 24 03.0**	**-0.9**
GERES	**GERESS Array B**	**149.45**	**345**	PKPbc			**PKPbc**	**23 24 08.5**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=29,slow=3.0,SNR=7.5								

*NIED **15** 23:11:00, 42°.00N×142°.30E, h62km, Mw4.1 Best double couple: M0=1.57000×10^15 NP1:φs=21.00000°, δ70.00000°, λ83.00000°. NP2:φs=219.00000°, δ21.00000°, λ107.00000°.*
*BJI **15** 23:11:38.7±0.0, 41°.99N×142°.32E, h68km, mB5.0/25, mb4.4/34, Ms4.3/3, Ms7 4.1/2*
*MOS **15** 23:11:39.6±1.1, 41°.97N×142°.32E, h71km, mb4.7/5, Error ellipse: s-maj=7.9km s-min=6.5km az=79.1*
*JMA **15** 23:11:40.9±0.2, 41°.93N×142°.31E, h56km±4km, M4.0 Broadband fault plane solution: P waves. NP1: φs=189.00000°, δ17.00000°, λ79.00000°. NP2:φs=21.00000°, δ73.00000°, λ93.00000°. Principal axes: T Plg62.0000°, Azm296.0000°; N Plg3.0000°, Azm200.0000°; P Plg28.0000°, Azm108.0000°;*
JMA Felt I J1.
*NEIC **15** 23:11:40.7±1.8, 41°.95N±0°.07×142°.40E±0°.09, h66km±6km, mb4.5/30 Error ellipse: s-maj=10.4km s-min=8.7km az=136.0*
*IDC **15** 23:11:42.0±0.7, 42°.02N×142°.30E, h77km±5km, mb3.8/25, mb1 3.9/30, mb1mx3.8/56, mbtmp4.1/30, MS2.8/6, Ms1 2.8/6, ms1mx2.6/41, Error ellipse: s-maj=12.0km s-min=7.9km az=109.0*

ISC 15 23:11:41.2±0.6, 41°.95N±0°.03×142°.34E±0°.03, h70km±5km, n170, σ1s23/190, mb4.3/68, 13C-19D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.45**	**42**	⇑P			**Pn**	**23 11 51.9**	**-1.6**
JNBK				*e*S			**Sn**	**23 11 59.9**	**-2.6**
JSHD	**Hidakashinhida**	**0.47**	**11**	⇑P			**Pn**	**23 11 52.8**	**-0.9**
ERM	**Erimo**	**0.61**	**83**	*e*P			**Pn**	**23 11 54.2**	**-0.8**
ERM					pmax		pmax		
	comp=Z,2μm,0.5s								
ERM	**Erimo**	**0.61**	**83**				**Pn**	**23 11 54.5**	**-0.5**
JEM	**Erimo**	**0.61**	**83**	⇑P			**Pn**	**23 11 54.4**	**-0.6**
JEM				*e*S			**Sn**	**23 12 04.0**	**-1.2**
JIAM	**Iburiatsuma**	**0.75**	**335**	⇓P			**Pn**	**23 11 56.4**	**-0.1**
JIAM				*e*S			**Sn**	**23 12 08.4**	**+0.5**
JBT2	**Biratori 2**	**0.83**	**1**	⇓P			**Pn**	**23 11 56.5**	**-1.1**
JKB	**Kayabe**	**0.98**	**267**	⇓P			**Pn**	**23 11 58.0**	**-1.3**
JKB				*e*S			**Sn**	**23 12 10.7**	**-2.2**
JCH	**Churui**	**1.01**	**48**	⇑P			**Pn**	**23 11 59.3**	**-0.4**
JNB	**Noboribetsu**	**1.10**	**299**	⇓P			**Pn**	**23 11 59.2**	**-1.7**
JNB				*e*S			**Sn**	**23 12 13.3**	**-2.3**
JEW	**Eniwo**	**1.11**	**324**	⇓P			**Pn**	**23 12 00.4**	**-0.7**
JEW				*e*S			**Sn**	**23 12 14.9**	**-1.0**
JOT	**Ohata**	**1.12**	**240**	⇓P			**Pn**	**23 12 00.0**	**-1.2**
JOT				*e*S			**Sn**	**23 12 14.1**	**-2.0**
JFR	**Furan**	**1.23**	**9**	⇓P			**Pn**	**23 12 01.6**	**-1.0**
JFR				*e*S			**Sn**	**23 12 17.3**	**-1.4**
JOB	**Onbets**	**1.46**	**49**	P			**Pn**	**23 12 06.0**	**+0.4**
JYM2	**Yakumo 2**	**1.48**	**277**	⇓P			**Pn**	**23 12 04.5**	**-1.3**
JISS	**Ishikarishitsu**	**1.50**	**333**	⇓P			**Pn**	**23 12 05.4**	**-0.6**
JISS				*e*S			**Sn**	**23 12 23.9**	**-0.9**
JSR	**Shiriuchi**	**1.50**	**255**	⇓P			**Pn**	**23 12 04.9**	**-1.2**
JSR				*e*S			**Sn**	**23 12 23.3**	**-1.6**
JTM	**Tenmabayashi**	**1.50**	**220**	⇓P			**Pn**	**23 12 05.5**	**-0.6**
JANG	**Nango**	**1.69**	**202**	⇑P			**Pn**	**23 12 08.0**	**-0.6**
JANG				*e*S			**Sn**	**23 12 28.5**	**-0.9**
JAR	**Ashorobuto**	**1.71**	**37**	P			**Pn**	**23 12 08.4**	**-0.5**
JAR				*e*S			**Sn**	**23 12 29.4**	**-0.6**
ASAJ	**Asahikawa**	**2.18**	**5**	P			**Pn**	**23 12 15.2**	**0.0**
	comp=Z,30nm,0.3s,baz=218,slow=12,SNR=73								
ASAJ				S			**Sn**	**23 12 41.1**	**-0.1**
	comp=Z,27nm,0.3s,baz=240,slow=20,SNR=14								
JKA	**Kamikawa-asahi**	**2.18**	**5**				**Pn**	**23 12 15.2**	**0.0**
JKA							**Sn**	**23 12 41.1**	**-0.1**
NMR	**Nemuro--Hokkai**	**2.87**	**59**	⇓*i* P			**Pn**	**23 12 23.3**	**-1.3**
NMR				*i* S			**Sn**	**23 12 55.7**	**-2.3**
GLVR	**Golovnino**	**2.94**	**51**	*d* iP			**Pn**	**23 12 26.3**	**+0.8**
GLVR				*e*S			**Sn**	**23 12 59.1**	**-0.6**
GLVR				pmax			pmax		
	comp=Z,205nm,0.4s								
GLVR				smax			smax		
	comp=E,440nm,0.2s								
GLVR				smax			smax		
	comp=N,1μm,0.3s								
GRPR	**Tuman**	**3.24**	**50**	*e*P			**Pn**	**23 12 30.1**	**+0.5**
GRPR				*e*S			**Sn**	**23 13 07.6**	**+0.6**
GRPR				smax			smax		
	comp=N,255nm,0.3s								
GRPR				smax			smax		
	comp=E,646nm,0.3s								
YUK	**Yuzh-Kuril'sk**	**3.32**	**50**	*c* iP			**Pn**	**23 12 31.1**	**+0.4**
YUK				*i* S			**Sn**	**23 13 08.0**	**-0.9**
YUK				pmax			pmax		
	comp=E,175nm,0.3s								
YUK				pmax			pmax		
	comp=Z,267nm,0.3s								
YUK				smax			smax		
	comp=N,118nm,0.2s								
YUK				smax			smax		
	comp=E,750nm,0.4s								
YUK				MLR			MLR		
	comp=Z,32nm,8.0s								
SHO	**Shikotan**	**3.82**	**58**	*c* iP			**Pn**	**23 12 36.2**	**-1.2**
SHO				*i* S			**Sn**	**23 13 17.1**	**-3.9**
SHO				pmax			pmax		
	comp=Z,93nm,0.4s								
SHO				pmax			pmax		
	comp=N,22nm,0.2s								
SHO				pmax			pmax		
	comp=E,84nm,0.4s								
SHO				smax			smax		
	comp=N,345nm,0.3s								
SHO				smax			smax		
	comp=E,323nm,0.3s								
SHO				MLR			MLR		
	comp=Z,50nm,8.0s								
YSS	**Yuzh-Sakhalins**	**5.02**	**3**	*e*P			**Pn**	**23 12 55.4**	**+1.6**
YSS				pmax			pmax		
	comp=Z,30nm,0.7s								
KUR	**Kuril'sk**	**5.18**	**49**	*e*P			**Pn**	**23 12 57.4**	**+1.3**
KUR

H11S3	**WAKE ISLAND Hy**	**31.24**	**131**	T	T	23 51 26.8		
	baz=323,slow=76,SNR=3.9							
H11S2	**WAKE ISLAND Hy**	**31.25**	**131**	T	T	23 51 28.5		
	baz=323,slow=76,SNR=61							
GTA	**Gaotai**	**32.12**	**280**	*e*P	**P**	**23 17 59.1**	**-2.8**	
GTA				pmax	pmax			
	comp=Z,2.0nm,1.5s							
KMI	**Kunming**	**36.66**	**255**	P	**P**	**23 18 43.8**	**+2.4**	
KMI				pmax	pmax			
	comp=Z,9.0nm,0.9s							
ANM	**Nome**	**37.09**	**35**	P	**P**	**23 18 43.9**	**-0.4**	
ANM				pmax	pmax			
	comp=Z,3.0nm,1.2s							
ANM	**Nome**	**37.09**	**35**	P	**P**	**23 18 43.9**	**-0.4**	
RDOG	**Red Dog Mine**	**38.84**	**29**	P	**P**	**23 18 57.6**	**-1.4**	
RDOG				IAmb	IAmb	23 19 07.3		
	comp=Z,4.2nm,0.6s							
ZAA0	**Zalesovo Array**	**39.29**	**308**	P	**P**	**23 19 03.2**	**+0.2**	
ZAA0				IAmb	IAmb	23 19 03.4		
	comp=Z,4.2nm,0.7s							
ZALV	**Zalesovo Beam**	**39.29**	**308**	P	**P**	**23 19 02.8**	**-0.2**	
	comp=Z,4.0nm,0.7s,baz=88,slow=9.1,SNR=17							
ZALV				PcP	**PcP**	**23 21 10.5**	**+0.2**	
	comp=Z,0.9nm,0.5s,baz=100,slow=2.3,SNR=4.1							
WMQ	**Urumqi**	**39.48**	**292**	*e*P	**P**	**23 19 05.4**	**+0.7**	
WMQ				pmax	pmax			
	comp=Z,6.0nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,88nm,3.7s							
WMQ				LR	LR			
	comp=Z,260nm,28.9s							
MKAR	**Makanchi Array**	**42.29**	**298**	P	**P**	**23 19 27.6**	**-0.2**	
	comp=Z,3.0nm,0.7s,baz=84,slow=9.4,SNR=34							
MKAR				pP	**pP**	**23 19 44.9**	**+0.2**	
	comp=Z,1.4nm,0.7s,baz=82,slow=8.7,SNR=4.8							
MKAR				PcP	**PcP**	**23 21 19.6**	**-0.7**	
	comp=Z,0.3nm,0.4s,baz=61,slow=4.3,SNR=3.0							
MAKZ	**Makanchi**	**42.49**	**298**	P	**P**	**23 19 29.2**	**-0.2**	
MAKZ				pmax	pmax			
	comp=Z,4.0nm,0.8s							
MAKZ	**Makanchi**	**42.49**	**298**	P	**P**	**23 19 29.2**	**-0.2**	
MAKZ				IAmb	IAmb	23 19 30.0		
	comp=Z,4.5nm,0.8s							
CHTO	**Chiang Mai**	**43.37**	**251**	P	**P**	**23 19 36.9**	**+0.1**	
CHTO				pmax	pmax			
	comp=Z,8.0nm,1.4s							
CHTO	**Chiang Mai**	**43.37**	**251**	P	**P**	**23 19 36.9**	**+0.1**	
CMAR	**Chiang Mai Arr**	**43.61**	**251**	P	**P**	**23 19 38.8**	**+0.1**	
	comp=Z,0.9nm,0.4s,baz=41,slow=7.3,SNR=5.2							
CMAR				LR	LR	23 37 15.0		
	comp=Z,12nm,20.3s,baz=100,slow=35							
KURK	**Kurchatov**	**43.62**	**304**	P	**P**	**23 19 37.5**	**-0.8**	
KURK				pmax	pmax			
	comp=Z,9.0nm,0.9s							
KURK	**Kurchatov**	**43.62**	**304**	P	**P**	**23 19 37.5**	**-0.8**	
KURK				IAmb	IAmb	23 19 38.7		
	comp=Z,8.5nm,0.8s							
KURBB	**Kurchatov Arra**	**43.69**	**304**	P	**P**	**23 19 38.5**	**-0.4**	
	comp=Z,7.7nm,0.7s,baz=77,slow=8.6,SNR=32							
ILAR	**Eielson Array**	**45.01**	**35**	P	**P**	**23 19 48.2**	**-1.1**	
	comp=Z,1.7nm,1.0s,baz=264,slow=5.4,SNR=11							
TAPN	**Taplejung**	**46.50**	**270**	*e*P	**P**	**23 20 02.3**	**+0.5**	
ODAN	**Odare**	**47.00**	**270**	*e*P	**P**	**23 20 05.5**	**-0.2**	
JIRN	**Jiri**	**47.46**	**271**	*e*P	**P**	**23 20 09.6**	**+0.1**	
	comp=Z,8.8nm,0.4s							
RAMN	**Ramite**	**47.54**	**270**	*e*P	**P**	**23 20 09.9**	**0.0**	
	comp=Z,13nm,0.6s							
GUN	**Gumba**	**47.56**	**272**	*e*P	**P**	**23 20 10.2**	**0.0**	
	comp=Z,24nm,0.5s							
BVAR	**Borovoye Array**	**47.91**	**309**	P	**P**	**23 20 12.2**	**0.0**	
	comp=Z,3.8nm,0.3s,baz=78,slow=9.1,SNR=68							
BVAR				PcP	**PcP**	**23 21 40.0**	**+0.5**	
	comp=Z,0.8nm,0.7s,baz=80,slow=3.3,SNR=3.8							
BRVK	**Borovoye**	**47.96**	**309**	P	**P**	**23 20 12.7**	**+0.2**	
BRVK				pmax	pmax			
	comp=Z,3.0nm,0.5s							
BRVK	**Borovoye**	**47.96**	**309**	P	**P**	**23 20 12.7**	**+0.2**	
BRVK				IAmb	IAmb	23 20 13.0		
	comp=Z,3.1nm,0.5s							
KKN	**Kakani**	**48.07**	**272**	*e*P	**P**	**23 20 14.3**	**+0.3**	
	comp=Z,14nm,0.7s							
PKI	**Pulchoki**	**48.09**	**272**	*e*P	**P**	**23 20 14.1**	**-0.2**	
	comp=Z,1.0nm,0.5s							
PKIN	**Phulchoki**	**48.10**	**272**	*e*P	**P**	**23 20 14.1**	**-0.2**	
	comp=Z,6.9nm,0.6s							
DMN	**Daman**	**48.30**	**272**	*e*P	**P**	**23 20 15.9**	**+0.1**	
	comp=Z,10nm,0.5s							
GKN	**Gorkha**	**48.44**	**273**	*e*P	**P**	**23 20 16.7**	**0.0**	
	comp=Z,16nm,0.5s							
DANN	**Dangsing**	**48.91**	**274**	*e*P	**P**	**23 20 20.9**	**+0.4**	
	comp=Z,44nm,0.6s							
AAK	**Ala-Archa**	**48.93**	**295**	P	**P**	**23 20 19.8**	**-0.5**	
	comp=Z,1.9nm,0.3s,baz=121,slow=5.0,SNR=10							
AAK	**Ala-Archa**	**48.93**	**295**	P	**P**	**23 20 20.1**	**-0.2**	
AAK				IAmb	IAmb	23 20 22.1		
	comp=Z,7.6nm,1.4s							
KSH	**Kashi**	**49.21**	**291**	P	**P**	**23 20 25.5**	**+3.1**	
KSH				PP	**PP**	**23 22 20.1**	**+3.6**	
KSH				pmax	pmax			
	comp=Z,400nm,5.0s							
KOLN	**Koldanda**	**49.34**	**273**	*e*P	**P**	**23 20 23.8**	**+0.1**	
	comp=Z,9.3nm,0.4s							
INK	**Inuvik**	**49.72**	**29**	P	**P**	**23 20 24.6**	**-1.1**	
	comp=Z,0.6nm,0.5s,baz=321,slow=8.2,SNR=6.2							
INK	**Inuvik**	**49.72**	**29**	IAmb	IAmb	23 20 33.9		
	comp=Z,0.8nm,0.6s							
ARSB	**Arslanbob**	**50.50**	**294**	P	**P**	**23 20 33.1**	**+0.9**	
KKAR	**Karatay Array**	**51.41**	**297**	P	**P**	**23 20 38.3**	**-0.6**	
KKAR				pmax	pmax			
	comp=Z,5.0nm,0.6s							
KKAR	**Karatay Array**	**51.41**	**297**	P	**P**	**23 20 38.3**	**-0.6**	
SVE	**Sverdlovsk**	**52.02**	**316**	*e*P	**P**	**23 20 43.6**	**+0.4**	
SVE				pmax	pmax			
	comp=Z,7.0nm,0.8s							
ARU	**Arti**	**53.23**	**316**	*c i*P	**P**	**23 20 51.9**	**-0.2**	
ARU				*PP	**pP**	**23 21 09.9**	**+0.2**	
ARU						23 21 58.2		
ARU						23 22 52.9		
ARU				S	**S**	**23 28 18.9**	**+1.2**	
ARU				SS	**SS**	**23 31 58.6**	**+1.1**	
ARU				pmax	pmax			
	comp=Z,6.0nm,0.8s							
ARU	**Arti**	**53.23**	**316**	P	**P**	**23 20 51.3**	**-0.8**	
	comp=Z,0.8nm,0.4s,baz=260,slow=0.7,SNR=9.0							
ARU	**Arti**	**53.23**	**316**	P	**P**	**23 20 51.7**	**-0.5**	
ARU				IAmb	IAmb	23 20 52.8		
	comp=Z,5.1nm,0.8s							
NIL	**Nilore**	**53.89**	**285**	P	**P**	**23 20 56.8**	**-0.5**	
NIL				pmax	pmax			
	comp=Z,5.0nm,0.7s							
NIL	**Nilore**	**53.89**	**285**	P	**P**	**23 20 56.8**	**-0.5**	
ABKAR	**Akbulak array**	**55.41**	**308**	P	**P**	**23 21 07.9**	**-0.1**	
ABKAR				IAmb	IAmb	23 21 09.2		
	comp=Z,3.6nm,0.6s							
YKA	**Yellowknife Ar**	**59.23**	**32**	P	**P**	**23 21 34.6**	**-0.1**	
	comp=Z,0.5nm,0.5s,baz=304,slow=6.9,SNR=11							
ARCES	**ARCESS Array B**	**59.67**	**339**	P	**P**	**23 21 37.0**	**-0.7**	
	comp=Z,1.0nm,0.6s,baz=52,slow=7.9,SNR=4.4							
WRA	**Warramunga Arr**	**62.02**	**189**	P	**P**	**23 21 53.4**	**-0.7**	
	comp=Z,0.7nm,0.5s,baz=5.7,slow=7.0,SNR=7.1							
GEYT	**Alibeck**	**62.16**	**297**	P	**P**	**23 21 53.2**	**-1.9**	
	comp=Z,1.8nm,0.6s,baz=50,slow=7.9,SNR=5.6							
GEYT	**Alibeck**	**62.16**	**297**	IAmb	IAmb	23 21 56.2		
	comp=Z,2.1nm,0.7s							
FINES	**FINESS Array B**	**64.83**	**332**	*i* P	**P**	**23 22 11.8**	**-0.4**	
FINES				pmax	pmax			
	comp=Z,3.0nm,0.4s							
FINES	**FINESS Array B**	**64.83**	**332**	P	**P**	**23 22 11.6**	**-0.6**	
	comp=Z,3.2nm,0.4s,baz=54,slow=7.2,SNR=51							
FINES				LR	LR	23 53 19.1		
	comp=Z,28nm,19.6s,baz=359,slow=39							
ASAR	**Alice Springs**	**65.75**	**188**	P	**P**	**23 22 18.8**	**+0.2**	
	comp=Z,0.7nm,0.8s,baz=6.9,slow=6.9,SNR=4.3							
ASAR				pP	**pP**	**23 22 38.0**	**+1.5**	
	comp=Z,0.6nm,0.6s,baz=8.1,slow=7.9,SNR=2.3							
KIV	**Kislovodsk**	**68.27**	**310**	*e*P	**P**	**23 22 33.1**	**-1.5**	
KIV				pmax	pmax			
	comp=Z,22nm,1.0s							
KIV	**Kislovodsk**	**68.27**	**310**	P	**P**	**23 22 35.0**	**+0.4**	
KIV				IAmb	IAmb	23 22 36.3		
	comp=Z,6.1nm,0.8s							
KBZ	**Khabaz**	**68.29**	**310**	P	**P**	**23 22 35.0**	**+0.4**	
KBZ	**Khabaz**	**68.29**	**310**	P	**P**	**23 22 35.0**	**+0.4**	
	comp=Z,2.2nm,0.9s,baz=20,slow=6.4,SNR=6.0							
NB2	**NORSAR Subarra**	**69.94**	**337**	P	**P**	**23 22 44.2**	**-0.4**	
	comp=Z,1.0nm,0.5s,baz=35,slow=6.5							
NOA	**NORSAR Array B**	**69.94**	**337**	P	**P**	**23 22 44.1**	**-0.5**	
	comp=Z,1.3nm,0.6s,baz=30,slow=4.9,SNR=10							
NOA				pP	**PcP**	**23 23 05.7**	**-0.9**	
	comp=Z,0.8nm,0.8s,baz=42,slow=6.0,SNR=2.1							
AKASG	**Malin Array Be**	**70.87**	**322**	P	**P**	**23 22 49.9**	**-0.5**	
	comp=Z,1.2nm,0.4s,baz=44,slow=6.0,SNR=16							
AKASG	**Malin Array Be**	**70.87**	**322**	IAmb	IAmb	23 22 50.6		
	comp=Z,0.8nm,0.7s							
NVAR	**Mina Array Bea**	**71.52**	**55**	P	**P**	**23 22 55.3**	**+0.5**	
	comp=Z,0.5nm,0.7s,baz=297,slow=6.0,SNR=3.6							
NVAR				pP	**PcP**	**23 23 16.3**	**+2.4**	
	comp=Z,0.5nm,0.6s,baz=298,slow=6.4,SNR=3.8							
SORM	**Soroca**	**73.07**	**320**	⇓P	**P**	**23 23 03.1**	**-0.4**	
PDAR	**Pinedale Array**	**73.75**	**47**	P	**P**	**23 23 08.6**	**+0.7**	
	comp=Z,1.3nm,0.7s,baz=276,slow=4.2,SNR=8.5							
LEOM	**Leova**	**74.29**	**319**	⇑P	**P**	23 23 18.9	+8.2	
BUR08	**Bucovina Ar. S**	**74.90**	**321**	P	**P**	**23 23 14.0**	**-0.4**	
BUR08				IAmb	IAmb	23 23 25.0		
	comp=Z,7.0nm,1.4s							
BURAR	**Bucovina Array**	**74.92**	**321**	⇓P	**P**	**23 23 14.9**	**+0.4**	
OJC	**Ojcow**	**75.37**	**326**	P	**P**	**23 23 17.1**	**+0.1**	
OJC				pmax	pmax			
	comp=Z,5.0nm,0.8s							
OJC	**Ojcow**	**75.37**	**326**	P	**P**	**23 23 17.1**	**+0.1**	
OJC				IAmb	IAmb	23 23 18.6		
	comp=Z,4.8nm,0.8s							
OZUR		**75.75**	**320**	⇓P	**P**	**23 23 20.4**	**+1.2**	
TRPA	**Tarpa**	**75.76**	**323**	⇓P	**P**	**23 23 20.0**	**+0.8**	
BRTR	**Keskin Array B**	**76.15**	**311**	*c e*P	**P**	**23 23 21.8**	**+0.1**	
BRTR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
BRTR	**Keskin Array B**	**76.15**	**311**	P	**P**	**23 23 21.9**	**+0.2**	
	comp=Z,0.8nm,0.7s,baz=76,slow=5.2,SNR=5.5							
LANS	**Liptovska Anna**	**76.33**	**325**	*e*P	**P**	**23 23 23.9**	**+1.5**	
LANS				pmax	pmax			
	comp=Z,2.0nm,0.7s							
LANS	**Liptovska Anna**	**76.33**	**325**	*e*P	**P**	**23 23 23.9**	**+1.5**	
W13A	**Hualapai Mount**	**76.38**	**55**	P	**P**	**23 23 25.4**	**+2.3**	
MORC	**Moravsky Berou**	**76.64**	**327**	⇓P	**P**	**23 23 24.9**	**+0.7**	
VYHS	**Vyhne**	**77.10**	**325**	*e*P	**P**	**23 23 27.6**	**+0.8**	
VYHS	**Vyhne**	**77.10**	**325**	*e*P	**P**	**23 23 27.6**	**+0.8**	
WUAZ	**Wupatki**	**77.61**	**53**	P	**P**	**23 23 32.2**	**+2.1**	
KHC	**Kasperske Hory**	**78.74**	**329**	*e*P	**P**	**23 23 35.5**	**-0.4**	
KHC	**Kasperske Hory**	**78.74**	**329**	*e*P	**P**	**23 23 35.5**	**-0.4**	
GERES	**GERESS Array B**	**78.92**	**328**	P	**P**	**23 23 36.9**	**-0.1**	
	comp=Z,0.4nm,0.4s,baz=35,slow=5.8,SNR=6.3							
VTS	**Vitosha**	**79.55**	**319**	P	**P**	**23 23 40.9**	**+0.3**	
VTS				pmax	pmax			
	comp=Z,4.0nm,0.8s							
VTS	**Vitosha**	**79.55**	**319**	⇑P	**P**	**23 23 40.5**	**-0.1**	
VTS	**Vitosha**	**79.55**	**319**	P	**P**	**23 23 40.9**	**+0.3**	
VTS				IAmb	IAmb	23 23 42.1		
	comp=Z,3.6nm,0.8s							
SOKA	**Soboth**	**80.12**	**326**	*i* P	**P**	**23 23 43.6**	**+0.1**	
	comp=Z,2.4nm,0.7s							
SCHQ	**Schefferville**	**80.43**	**17**	P	**P**	**23 23 44.8**	**-0.1**	
	comp=Z,1.9nm,1.0s,baz=286,slow=7.4,SNR=3.1							
SCHQ	**Schefferville**	**80.43**	**17**	IAmb	IAmb	23 23 48.3		
	comp=Z,4.7nm,1.2s							
OBKA	**Obir**	**80.45**	**326**	*i* P	**P**	**23 23 45.0**	**-0.3**	
	comp=Z,1.3nm,0.7s							
KBA	**Koelnbreinsper**	**80.49**	**327**	*i* P	**P**	**23 23 46.0**	**+0.4**	
	comp=Z,4.5nm,1.2s							
WATA	**Walderalm**	**80.98**	**329**	*i* P	**P**	**23 23 45.9**	**-2.2**	
	comp=Z,6.0nm,1.4s							
WTTA	**Wattenberg**	**81.01**	**328**	*i* P	**P**	**23 23 48.7**	**+0.4**	
	comp=Z,1.9nm,0.6s							
ABTA	**Abfaltersbach**	**81.09**	**328**	*i* PcP	**PcP**	**23 23 54.0**	**-0.9**	
	comp=Z,7.5nm,1.6s							
MOTA	**Moosalm**	**81.15**	**329**	*i* P	**P**	**23 23 48.9**	**-0.2**	
	comp=Z,5.3nm,0.9s							
RETA	**Reutte**	**81.17**	**329**	*i* P	**P**	**23 23 48.8**	**-0.2**	
	comp=Z,4.2nm,1.0s							
DAVA	**Damuels**	**81.67**	**329**	*i* P	**P**	**23 23 51.0**	**-0.8**	
	comp=Z,9.1nm,1.2s							
TXAR	**Lajitas Array**	**86.58**	**53**	P	**P**	**23 24 16.8**	**-0.2**	
	comp=Z,0.3nm,0.6s,baz=299,slow=3.1,SNR=5.1							
QSPA	**South Pole Qui**	**131.68**	**180**	PKP	**PKiKP**	**23 30 46.1**	**+0.2**	
	comp=Z,2.0nm,1.1s,baz=1.2,slow=1.6,SNR=3.9							
SNAA	**Sanae**	**145.64**	**199**	PKPbc	**PKPdf**	**23 31 10.4**	**+0.2**	
	baz=214,slow=15							
SNAA	**Sanae**	**145.64**	**199**		**PKPbc**	**23 31 10.6**	**0.0**	

WEL 15 23:21:20.6,40°S±1°×17°4E±°, h86km±3km, ML3.7/17, MLv3.4/62, Error ellipse: s-maj=0.0km s-min=0.0km az=52.7, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.56**	**205**	P	P	23 21 36.0	+0.6
DUWZ				S	Sn	23 21 47.3	+0.9
KIW	**Kapiti Island**	**0.76**	**138**	P	P	23 21 37.6	+0.2
KIW				S	Sn	23 21 49.3	-0.5
WAZ	**Wanganui**	**0.79**	**47**	P	Pn	23 21 38.2	+0.5
WAZ				S	Sn	23 21 51.0	+0.6
OHWZ	**Ohakea**	**0.83**	**84**	P	Pn	23 21 38.7	+0.7
OHWZ				S	Sn	23 21 51.6	+0.5
LREZ	**Lake Rotokare**	**0.85**	**9**	P	Pn	23 21 38.9	+0.6
LREZ				S	Sn	23 21 54.0	+2.5
OGWZ	**Otaki Gorge**	**0.88**	**126**	P	Pn	23 21 39.0	+0.4
OGWZ				S	Sn	23 21 51.7	-0.4
TCW	**Tory Channel**	**0.91**	**178**	P	Pn	23 21 39.6	+0.7
TCW				S	Sn	23 21 52.5	-0.2
NMEZ	**Namu Road**	**0.93**	**343**	P	Pn	23 21 39.3	+0.2
NMEZ				S	Sn	23 21 52.2	-0.8
PREZ	**Palmer Road**	**0.96**	**356**	P	Pn	23 21 39.9	+0.3
PREZ				S	Sn	23 21 53.6	-0.1
CAW	**Cannon Point**	**1.02**	**142**	P	Pn	23 21 41.4	+1.1
NBEZ	**Newall Road No**	**1.07**	**345**	P	Pn	23 21 41.1	+0.3
MRZ	**Mangatainoka R**	**1.09**	**110**	P	Pn	23 21 41.3	+0.3
MRZ				S	Sn	23 21 55.2	-1.1
PKE	**Pukeiti**	**1.12**	**350**	P	Pn	23 21 41.7	+0.2
NNZ	**Nelson**	**1.12**	**215**	P	Pn	23 21 42.0	+0.5
HOWZ	**Holdsworth Sta**	**1.14**	**122**	P	Pn	23 21 43.8	+2.0
TUWZ	**Tuamarina**	**1.15**	**191**	P	Pn	23 21 42.2	+0.4
BHW	**Baring Head**	**1.21**	**157**	P	Pn	23 21 44.7	+2.3
VRZ	**Vera Road**	**1.24**	**19**	P	Pn	23 21 43.0	+0.1
MTW	**Mount Morrison**	**1.29**	**132**	P	Pn	23 21 43.7	+0.2
MTW				S	Sn	23 21 59.7	-1.1
MTVZ	**Mangateitei**	**1.32**	**47**	P	Pn	23 21 44.3	+0.4
PKVZ	**Pokaka**	**1.32**	**41**	P	Pn	23 21 44.0	0.0
TSZ	**Takapari Road**	**1.34**	**80**	P	Pn	23 21 43.6	-0.6
PRWZ	**Pori Road**	**1.35**	**101**	P	Pn	23 21 44.3	+0.1
MSWZ	**Moikau Station**	**1.35**	**146**	P	Pn	23 21 47.3	+3.0
QRZ	**Quartz Range**	**1.40**	**247**	P	Pn	23 21 44.6	-0.3
PAWZ	**Paruwai Farm**	**1.41**	**140**	P	Pn	23 21 48.6	+3.6
TRVZ	**Turoa**	**1.42**	**46**	P	Pn	23 21 45.2	-0.2
BSWZ	**Blackbirch Sta**	**1.44**	**191**	P	Pn	23 21 46.4	+1.0
CMWZ	**Cape Campbell**	**1.45**	**181**	P	Pn	23 21 48.2	+2.7
DRZ	**Dome Shelter**	**1.45**	**45**	P	Pn	23 21 46.6	+0.8
FWVZ	**Far West T-bar**	**1.46**	**45**	P	Pn	23 21 45.5	-0.3
WHVZ	**Whangaehu Hut**	**1.46**	**46**	P	Pn	23 21 45.8	0.0
MOVZ	**Moawhango**	**1.47**	**53**	P	Pn	23 21 45.4	-0.5
DVHZ	**Dannevirke**	**1.48**	**91**	P	Pn	23 21 45.2	-0.7
PLWZ	**Palliser**	**1.48**	**149**	P	Pn	23 21 47.0	+1.0
TMWZ	**Te Maipa**	**1.50**	**123**	P	Pn	23 21 46.2	+0.1
TUVZ	**Tukino**	**1.50**	**47**	P	Pn	23 21 46.8	+0.4
NGZ	**Ngauruhoe**	**1.54**	**44**	P	Pn	23 21 46.7	-0.1
TWVZ	**Taurewa**	**1.54**	**37**	P	Pn	23 21 46.6	-0.2
PNHZ	**Pukenui**	**1.56**	**76**	P	Pn	23 21 46.5	-0.4
WTVZ	**West Tongariro**	**1.58**	**42**	P	Pn	23 21 47.1	-0.2
BHHZ	**Black Hill Sta**	**1.62**	**61**	P	Pn	23 21 47.0	-0.8
KRHZ	**Kereru**	**1.77**	**69**	P	Pn	23 21 48.7	-0.9
THZ	**Tophouse**	**1.77**	**214**	P	Pn	23 21 50.5	+0.7
HIZ	**Hauiti**	**1.85**	**15**	P	Pn	23 21 50.3	-0.4
RATZ	**Turangitukua**	**1.86**	**40**	P	Pn	23 21 51.4	-0.6
WATZ	**Wairara**	**1.97**	**37**	P	Pn	23 21 52.8	+0.5
BKZ	**Black Stump Fm**	**2.08**	**58**	P	Pn	23 21 52.3	-1.4
KAHZ	**Kahuranaki**	**2.09**	**77**	P	Pn	23 21 53.0	-0.9
KHZ	**Kahutara**	**2.18**	**194**	P	Pn	23 21 55.5	+0.5
TLZ	**Tolley Road**	**2.21**	**28**	P	Pn	23 21 55.5	0.0
DSZ	**Denniston Nort**	**2.34**	**231**	P	Pn	23 21 57.2	0.0
MTHZ	**Maungataniwha**	**2.48**	**55**	P	Pn	23 21 57.3	-1.8
RAHZ	**Arahi**	**2.60**	**59**	P	Pn	23 22 03.7	+3.0
TOZ	**Tahuroa Road**	**2.75**	**21**	P	Pn	23 22 02.4	-0.2
GVZ	**Greta Valley S**	**2.81**	**198**	P	Pn	23 22 03.2	-0.3
LTZ	**Lake Taylor**	**2.88**	**210**	P	Pn	23 22 03.9	-0.6
URZ	**Urewera**	**3.02**	**49**	P	Pn	23 22 06.0	-0.3
AMCZ	**Amberley**	**3.11**	**202**	P	Pn	23 22 06.7	-0.8
INZ	**Inchbonnie**	**3.20**	**220**	P	Pn	23 22 08.9	+0.1
MWZ	**Matawai**	**3.22**	**54**	P	Pn	23 22 09.8	+0.8
AWAZ	**Awhitu Peninsu**	**3.25**	**6**	P	Pn	23 22 09.3	-0.1
MKAZ	**Moumakai**	**3.27**	**13**	P	Pn	23 22 09.4	-0.3
ETAZ	**East Tamaki Re**	**3.39**	**9**	P	Pn	23 22 11.4	+0.2
OXZ	**Oxford**	**3.44**	**208**	P	Pn	23 22 10.0	-2.0
OKCZ	**Okains Bay**	**3.53**	**194**	P	Pn	23 22 11.8	-1.4
RUGZ	**Raukumara Rang**	**3.55**	**50**	P	Pn	23 22 11.4	-2.2
WIAZ	**Waiheke Island**	**3.57**	**12**	P	Pn	23 22 13.8	0.0
KUZ	**Kuaotunu**	**3.74**	**19**	P	Pn	23 22 15.2	-0.7
FOZ	**Fox Glacier**	**4.61**	**224**	P	Pn	23 22 26.4	-1.5
ODZ	**Otahua Downs**	**5.43**	**208**	P	Pn	23 22 37.6	-1.3
JCZ	**Jackson Bay**	**5.53**	**225**	P	Pn	23 22 38.8	-1.7
WKZ	**Wanaka**	**5.94**	**219**	P	Pn	23 22 46.1	+0.1

ROM 15 23:21:35.9±0.2, 43°393N±0°004×12°494E±0°006, h5km±1km, Md1.0/6, Error ellipse: s-maj=0.5km s-min=0.2km az=61.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**115**	P	Pg	23 21 37.4	-0.1
ATFO				S	Sg	23 21 38.7	+0.1
ATFO				END			
ATVO	**AVT- Monte Val**	**0.07**	**261**	P	Pg	23 21 37.5	0.0
ATVO				S	Sg	23 21 38.8	+0.3
ATVO				END			
ATPI	**Pietralunga -**	**0.09**	**311**	P	Pg	23 21 38.0	+0.2
ATPI				S	Sg	23 21 39.8	+0.7
ATPI				END			
MURB	**Monte Urbino**	**0.13**	**170**	P	Pg	23 21 39.0	+0.4
MURB				S	Sg	23 21 41.6	+1.2
MURB				END			
PIEI	**Pieia**	**0.15**	**12**	P	Pg	23 21 39.2	+0.4
PIEI				S	Sg	23 21 42.1	+1.3
PIEI				END			
ATCC	**AVT- Casa Cast**	**0.23**	**153**	P	Pg	23 21 41.0	+0.5
ATCC				S	Sg	23 21 45.3	+1.8
ATCC				END			

LJU 15 23:21:47.4, 46°11N×14°83E, h11km, ML0.3, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDS	**Vrh nad Dolski**	**0.09**	**267**	⇑*i* Pg	Pg	23 21 50.2	+0.2
VNDS				*i* Sg	Sg	23 21 52.0	+0.2
	comp=Z,17nm,0.1s						
PDKS	**Podkum**	**0.12**	**111**	*i* Pg	Pg	23 21 50.6	+0.2
PDKS				*i* Sg	Sg	23 21 52.6	0.0
	comp=Z,2.0nm,0.1s						
GBAS	**Gorenja Brezov**	**0.32**	**238**	*e*Pg	Pg	23 21 54.0	+0.1
GBAS				*i* Sg	Sg	23 21 58.2	+0.1
MOZS	**Mozjanca**	**0.33**	**305**	*i* Pg	Pg	23 21 54.0	0.0
MOZS				*i* Sg	Sg	23 21 58.6	+0.2
	comp=Z,1.0nm,0.1s						
CRNS	**Crni Vrh**	**0.40**	**267**	*i* Pg	Pg	23 21 55.4	+0.1
CRNS				*e*Sg	Sg	23 22 01.6	+1.0
	comp=Z,1.0nm,0.1s						

IDC 15 23:28:23.5±11.0, 56°03S×100°91E, h0km, Error ellipse: s-maj=27.5km s-min=12.3km az=160.0, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**

*TEH **15** 23:57:16.1,29˚42.N×51˚31.E,h9km,ML4.5*
*IDC **15** 23:57:17.8±2.2,29˚39N×51˚28E,h19km±13km,mb4.2/33, mb1 4.3/40,mb1mx4.2/58,mbtmp4.3/40,ML4.0/7,MS3.7/20, Ms1 3.7/20,ms1mx3.5/42,Error ellipse: s-maj=11.7km s-min=9.7km az=141.0*
*DSN **15** 23:57:17.9±0.7,29˚32N×51˚36E,h10km,mb4.5/3,ML5.0/6, Error ellipse: s-maj=10.3km s-min=6.6km az=54.0*
*OMAN **15** 23:57:26.2±0.2,28˚70N×51˚46E,h25km,ml4.8/3,ms3.5/2, Error ellipse: s-maj=5.0km s-min=3.0km az=11.0*
ISC 15 23:57:16.9±1.4,29˚30N±0˚04×51˚31E±0˚04,h16km±8km, n362,σ1§44/383,mb4.5/98,MS3.8/14,32C-30D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SHI	**Shiraz**	**1.10**	**72**	*e*Pg		**Pb**	**23 57 36.6**	**-1.1**
ISRV	**Sarvestan**	**1.57**	**87**	*e*Pn		**Pb**	**23 57 46.1**	**+0.2**
ISRV				*e*			23 58 26.6	
JHRM	**Jahrom**	**2.14**	**111**	*e*Pn		**Pb**	**23 57 55.6**	**+0.2**
JHRM				*e*			23 58 49.3	
LMD1	**Lamerd**	**2.55**	**140**	*e*Pn		**Pb**	**23 58 01.2**	**-1.1**
LMD1				*e*			23 59 05.2	
IBRJ	**Brojen**	**2.60**	**359**	*e*Pn		**Pn**	**23 57 59.7**	**+1.1**
IRAM	**Ramesheh**	**2.67**	**20**	*e*Pn		**Pn**	**23 58 00.0**	**+0.5**
JHBN	**Jahan bin**	**2.97**	**349**	*e*Pn		**Pn**	**23 58 04.3**	**+0.5**
ROKH	**ROKH**	**3.04**	**356**	*e*Pn		**Pn**	**23 58 05.1**	**+0.4**
ISAD	**Sadrabad**	**3.31**	**38**	*e*Pn		**Pn**	**23 58 10.1**	**+1.7**
IMEH	**Mehriz**	**3.53**	**53**	*e*Pn		**Pn**	**23 58 13.5**	**+2.1**
SHGR	**Shooshtar-Gavs**	**3.54**	**323**	*e*Pn		**Pn**	**23 58 11.9**	**+0.6**
SHGR	**Shooshtar-Gavs**	**3.54**	**323**	*e*Pn		**Pn**	**23 58 11.9**	**+0.6**
SHGR					IAML		23 59 18.3	
	comp=E,1μm,0.6s							
SHGR					IAML		23 59 30.1	
	comp=N,843nm,0.6s							
YZKH	**Yazd**	**4.17**	**42**	*e*Pn		**Pn**	**23 58 21.6**	**+1.5**
YZKH	**Yazd**	**4.17**	**42**	*e*Pn		**Pn**	**23 58 21.6**	**+1.5**
IBAF	**Bafgh**	**4.33**	**57**	*e*Pn		**Pn**	**23 58 23.7**	**+1.5**
KHMZ	**Khomeyn**	**4.57**	**346**	*e*Pn		**Pn**	**23 58 26.4**	**+0.7**
KHMZ	**Khomeyn**	**4.57**	**346**	*e*Pn		**Pn**	**23 58 26.4**	**+0.7**
KHMZ				*e*S		**Sn**	**23 59 17.8**	**-0.9**
KHMZ					IAML		23 59 22.4	
	comp=E,234nm,0.5s							
GENO	**Geno**	**4.68**	**113**	*e*Pn		**Pn**	**23 58 30.7**	**+3.5**
GENO				*e*			00 00 20.4	
GENO	**Geno**	**4.68**	**113**	Pn		**Pn**	**23 58 30.6**	**+3.4**
NGRK	**Negar Kerman**	**4.74**	**85**	*e*Pn		**Pn**	**23 58 31.2**	**+3.1**
NGRK				*e*			23 59 31.2	
KRBR	**Kerman**	**4.79**	**81**		IAML		23 59 36.5	
	comp=E,132nm,0.7s							
TVBK	**TV Kerman**	**4.79**	**80**	*e*Pn		**Pn**	**23 58 30.6**	**+1.8**
TVBK				*e*			23 59 32.2	
NIAN	**Nian**	**5.16**	**108**	*e*Pn		**Pn**	**23 58 35.6**	**+2.0**
NIAN				*e*			23 59 55.6	
GHVR	**GHOM**	**5.16**	**360**	*e*Pn		**Pn**	**23 58 34.5**	**+0.8**
GHVR	**GHOM**	**5.16**	**360**	*e*Pn		**Pn**	**23 58 34.5**	**+0.8**
GHVR	**GHOM**	**5.16**	**360**	Pn		**Pn**	**23 58 34.4**	**+0.8**
IDOB	**Doab**	**5.21**	**330**	*e*Pn		**Pn**	**23 58 33.8**	**-0.7**
SHME	**Shamm**	**5.37**	**126**	P		**Pn**	**23 58 38.5**	**+2.0**
SHME				S		**Sn**	**23 59 38.9**	**+0.9**
SHME	**Shamm**	**5.37**	**126**	*e*Pn		**Pn**	**23 58 38.8**	**+2.3**
HSAM	**Samen**	**5.41**	**335**	*e*Pn		**Pn**	**23 58 37.4**	**+0.1**
CHMN	**Cheshme madani**	**5.45**	**83**	*e*Pn		**Pn**	**23 58 39.9**	**+2.0**
CHMN				*e*			00 00 28.7	
CHMN	**Cheshme madani**	**5.45**	**83**	Pn		**Pn**	**23 58 39.9**	**+2.0**
BANOM	**Banah**	**5.56**	**126**	*i*P		**Pn**	**23 58 41.1**	**+2.0**
	SNR=38							
BANOM	**Banah**	**5.56**	**126**	P		**Pn**	**23 58 40.9**	**+1.8**
	SNR=38							
BANOM				S		**Sn**	**23 59 46.2**	**+3.5**
NAZ	**Nazwa, Dubai**	**5.78**	**137**	*i*P		**Pn**	**23 58 44.6**	**+2.5**
	SNR=9.2							
NAZ	**Nazwa, Dubai**	**5.78**	**137**	*e*Pn		**Pn**	**23 58 44.8**	**+2.7**
NAZ	**Nazwa, Dubai**	**5.78**	**137**	P		**Pn**	**23 58 44.9**	**+2.8**
	SNR=9.2							
HAGD	**Aghdareh**	**5.81**	**342**	*e*Pn		**Pn**	**23 58 43.0**	**+0.4**
MSFE	**Esma-Masafi**	**5.83**	**131**	*i*P		**Pn**	**23 58 44.2**	**+1.4**
	SNR=14							
MSFE	**Esma-Masafi**	**5.83**	**131**	*e*Pn		**Pn**	**23 58 44.6**	**+1.8**
ASUD	**Al Ashush, Dub**	**5.88**	**141**	*i*P		**Pn**	**23 58 46.4**	**+3.0**
	SNR=62							
ASUD	**Al Ashush, Dub**	**5.88**	**141**	*e*Pn		**Pn**	**23 58 46.6**	**+3.2**
ASUD	**Al Ashush, Dub**	**5.88**	**141**	Pn		**Pn**	**23 58 46.6**	**+3.2**
ASUD	**Al Ashush, Dub**	**5.88**	**141**	P		**Pn**	**23 58 47.1**	**+3.7**
	SNR=62							
TPRV	**Parvadeh(Tabas**	**5.92**	**50**	*e*Pn		**Pn**	**23 58 45.1**	**+1.1**
FAQ	**Al Faqa, Dubai**	**5.93**	**139**	*e*Pn		**Pn**	**23 58 46.8**	**+2.6**
FAQ	**Al Faqa, Dubai**	**5.93**	**139**	Pn		**Pn**	**23 58 46.7**	**+2.6**
IBZA	**Bozab**	**5.93**	**331**	*e*Pn		**Pn**	**23 58 43.7**	**-0.7**
MDH	**Madha**	**5.96**	**131**	*e*Pn		**Pn**	**23 58 46.3**	**+1.7**
MDH	**Madha**	**5.96**	**131**	P		**Pn**	**23 58 46.3**	**+1.7**
	SNR=6.8							
MDH				S		**Sn**	**23 59 50.0**	**-2.6**
	SNR=6.6							
UOSS	**Minazif**	**6.15**	**134**	*i*P		**Pn**	**23 58 49.5**	**+2.3**
	SNR=18							
UOSS	**Minazif**	**6.15**	**134**	*e*Pn		**Pn**	**23 58 50.1**	**+2.9**
UOSS	**Minazif**	**6.15**	**134**	Pn		**Pn**	**23 58 49.7**	**+2.5**
UOSS				Sn		**Sn**	**23 59 56.1**	**-1.1**
HATD	**Hatta, Dubai**	**6.19**	**135**	*i*P		**Pn**	**23 58 50.3**	**+2.6**
	SNR=7.2							
HATD	**Hatta, Dubai**	**6.19**	**135**	*e*Pn		**Pn**	**23 58 50.7**	**+3.0**
HATD	**Hatta, Dubai**	**6.19**	**135**	P		**Pn**	**23 58 50.3**	**+2.6**
	SNR=6.3							
HATD				S		**Sn**	**23 59 58.2**	**0.0**
ASHO	**Ashiyiah**	**6.25**	**136**	*i*P		**Pn**	**23 58 51.0**	**+2.4**
	SNR=54							
ASHO	**Ashiyiah**	**6.25**	**136**	*e*Pn		**Pn**	**23 58 51.0**	**+2.4**
ASHO	**Ashiyiah**	**6.25**	**136**	Pn		**Pn**	**23 58 51.0**	**+2.4**
ASHO	**Ashiyiah**	**6.25**	**136**	P		**Pn**	**23 58 50.9**	**+2.4**
	SNR=5.9							
ASHO				S		**Sn**	**00 00 00.3**	**+0.6**
IGHG	**Ghaleghazi**	**6.44**	**322**	*e*Pn		**Pn**	**23 58 51.0**	**-0.3**
TNSJ	**Nastanj**	**6.48**	**43**	*e*Pn		**Pn**	**23 58 52.9**	**+1.1**
TKDS	**Koohdasht(Taba**	**6.57**	**48**	*e*Pn		**Pn**	**23 58 53.7**	**+0.7**
TABS	**Tabas**	**6.59**	**47**	*e*Pn		**Pn**	**23 58 54.8**	**+1.5**
TABS	**Tabas**	**6.59**	**47**	*e*Pn		**Pn**	**23 58 54.8**	**+1.5**
IDHR	**Dehrash**	**6.82**	**323**	*e*Pn		**Pn**	**23 58 55.8**	**-0.7**
SOHO	**SOHO**	**6.95**	**137**	P		**Pn**	**23 58 59.8**	**+1.7**
	SNR=17							
SOHO				S		**Sn**	**00 00 17.9**	**+1.0**
ARQ	**Araqi**	**7.56**	**141**	P		**Pn**	**23 59 08.8**	**+2.3**
	SNR=29							
RAYN	**Ar Rayn**	**7.76**	**223**	*i*P		**Pn**	**23 59 10.6**	**+1.3**
	SNR=86							
RAYN	**Ar Rayn**	**7.76**	**223**	Pn		**Pn**	**23 59 10.7**	**+1.4**
RAYN						**Sn**	**00 00 36.1**	**-0.9**
HOQ	**Hoqain**	**7.83**	**135**	P		**Pn**	**23 59 12.2**	**+1.9**
	SNR=15							
HOQ				S		**Sn**	**00 00 35.3**	**-3.3**
NHDN	**Nehbandan**	**7.83**	**72**	*e*Pn		**Pn**	**23 59 12.9**	**+2.5**
BSY	**Bisya**	**8.40**	**140**	P		**Pn**	**23 59 19.7**	**+1.6**
	SNR=8.5							
BSY				S		**Sn**	**00 00 50.9**	**-1.9**
	SNR=13							
SMDO	**Samad**	**8.67**	**134**	P		**Pn**	**23 59 23.5**	**+1.6**
	SNR=6.2							
SMDO				S		**Sn**	**00 00 56.2**	**-3.3**
WSAR	**Wadi Sarin**	**8.92**	**131**	Pn		**Pn**	**23 59 25.9**	**+0.7**
	comp=E,2.0nm,0.3s,baz=328,slow=8.5,SNR=27							
WSAR				Sn		**Sn**	**00 01 02.0**	**-3.4**
	comp=E,1.7nm,0.3s,baz=311,slow=19,SNR=3.2							
WSAR				LR		LR	00 03 41.5	
	comp=E,651nm,20.5s,baz=334,slow=43							
WSAR	**Wadi Sarin**	**8.92**	**131**	P		**Pn**	**23 59 25.6**	**+0.4**
	SNR=20							
WSAR				S		**Sn**	**00 01 01.6**	**-3.8**
WBK	**Wadi Bani Khal**	**9.58**	**132**	P		**Pn**	**23 59 34.9**	**+0.6**
	SNR=21							
WBK				S		**Sn**	**00 01 17.6**	**-4.1**
MHTO	**MHTO**	**10.24**	**142**	P		**Pn**	**23 59 45.0**	**+1.8**
	SNR=40							
MHTO				S		**Sn**	**00 01 33.5**	**-4.3**
GEYT	**Alibeck**	**10.30**	**32**	Pn		**Pn**	**23 59 44.4**	**+0.2**
	comp=E,0.3nm,0.3s,baz=216,slow=15,SNR=12							
GEYT				LR		LR	00 04 26.0	
	comp=E,484nm,21.0s,baz=195,slow=42							
GYA0B	**ALIBECK ARRAY**	**10.30**	**32**			**Pn**	**23 59 44.1**	**-0.1**
HRA	**Herat**	**10.59**	**59**			**Pn**	**23 59 49.6**	**+1.4**
DQM	**DQM**	**10.91**	**147**	P		**Pn**	**23 59 53.3**	**+0.8**
	SNR=16							
WHFO	**Wadi Hawf**	**11.55**	**168**	P		**Pn**	**00 00 01.9**	**+0.6**
	SNR=16							
SHAO	**Shalim**	**11.90**	**160**	*i*P		**Pn**	**00 00 06.7**	**+0.6**
	SNR=40							
SHAO	**Shalim**	**11.90**	**160**	P		**Pn**	**00 00 06.6**	**+0.6**
	SNR=40							
DMTO	**DMTO**	**12.00**	**163**	P		**Pn**	**00 00 07.9**	**+0.4**
	SNR=60							
ABTO	**Aybut**	**12.03**	**171**	P		**Pn**	**00 00 07.8**	**0.0**
	SNR=64							
RBK	**Rabkut**	**12.04**	**167**	P		**Pn**	**00 00 07.9**	**-0.1**
	SNR=13							
GNI	**Garni**	**12.09**	**335**	*i*P		**Pn**	**00 00 08.5**	**-0.2**
GNI	**Garni**	**12.09**	**335**	Pn		**Pn**	**00 00 08.0**	**-0.7**
	comp=E,0.2nm,0.3s,baz=116,slow=4.1,SNR=4.4							
GNI					LR	LR	00 05 21.2	
	comp=E,569nm,19.5s,baz=150,slow=40							
GNI	**Garni**	**12.09**	**335**	Pn		**Pn**	**00 00 09.8**	**+1.0**
ASF	**Jabal al Asfar**	**12.73**	**287**	Pn		**Pn**	**00 00 15.3**	**-2.1**
	comp=E,4.9nm,0.3s,baz=35,slow=6.2,SNR=21							
ASF					Sn	Sn	00 02 28.7	-10
	comp=E,0.9nm,0.3s,baz=63,slow=2.3,SNR=3.3							
MMAI	**Mount Meron Ar**	**14.12**	**289**		Pn	**Pn**	**00 00 34.3**	**-2.1**
	comp=E,2.5nm,0.3s,baz=95,slow=15,SNR=14							
MMAI					Sn	Sn	00 03 02.6	-10
	comp=E,0.6nm,0.3s,baz=121,slow=17,SNR=2.9							
MMAI					LR	LR	00 07 15.4	
	comp=E,225nm,19.6s,baz=90,slow=42							
GAZ	**Gaziantep**	**14.16**	**307**	Pn		**Pn**	**00 00 37.2**	**+0.3**
EIL	**Elat**	**14.26**	**275**	Pn		**Pn**	**00 00 38.7**	**+0.5**
	comp=E,0.4nm,0.3s,baz=63,slow=18,SNR=3.0							
EIL					LR	LR	00 07 07.9	
	comp=E,204nm,21.2s,baz=98,slow=42							
GROC	**Groznyy**	**14.56**	**344**	*e*P		**P**	**00 00 49.1**	**+0.3**
ZEI	**Tsey**	**14.72**	**338**	*e*P		**P**	**00 00 50.7**	**-0.1**
ZEI					pmax	pmax		
	comp=Z,10.0nm,0.6s							
NEY	**Neytrino**	**15.53**	**336**	*i*P		**Pn**	**00 00 55.6**	**+0.1**
KBZ	**Khabaz**	**15.89**	**337**	*i*P		**Pn**	**00 01 01.3**	**+1.4**
KBZ	**Khabaz**	**15.89**	**337**	Pn		**Pn**	**00 01 00.2**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=146,slow=11,SNR=13							
KBZ					LR	LR	00 07 49.9	
	comp=Z,358nm,20.6s,baz=152,slow=40							
KBL	**Kabul**	**15.93**	**66**	P		**Pn**	**00 00 58.3**	**-2.4**
KBL					pmax	pmax		
	comp=Z,10.0nm,1.0s							
KBL	**Kabul**	**15.93**	**66**			**Pn**	**00 00 58.3**	**-2.4**
SHA1	**Shidzhatmaz**	**15.98**	**337**	*i*P		**Pn**	**00 01 02.7**	**+1.4**
DAMY	**Dhamar**	**15.99**	**205**			**Pn**	**00 01 02.3**	**+0.6**
DAMY					IAmb	IAmb	00 01 05.7	
	comp=Z,23nm,0.6s							
KIV	**Kislovodsk**	**16.17**	**337**	*e*P		**Pn**	**00 01 04.3**	**+0.8**
KIV				*e*S		**Sn**	**00 04 06.1**	**+3.5**
KIV					pmax	pmax		
	comp=Z,133nm,1.1s							
KIV					MLR	MLR		
	comp=Z,398nm,13.0s							
KIV	**Kislovodsk**	**16.17**	**337**	*i*P		**P**	**00 01 05.4**	**-1.3**
	SNR=12							
KIV	**Kislovodsk**	**16.17**	**337**	P		**Pn**	**00 01 03.0**	**-0.6**
KIV					IAmb	IAmb	00 01 10.9	
	comp=Z,34nm,0.9s							
CSS	**Mathiatis**	**16.24**	**295**	P		**Pn**	**00 01 05.3**	**+0.9**
CSS					IAmb	IAmb	00 01 21.2	
	comp=Z,30nm,0.9s							
SOC	**Sochi**	**17.01**	**330**	*e*P		**P**	**00 01 18.6**	**+2.7**
SOC					pmax	pmax		
	comp=Z,42nm,0.9s							
SOC					MLR	MLR		
	comp=Z,122nm,7.0s							
GOF	**Gofitskoye**	**17.04**	**340**	*e*P		**P**	**00 01 16.1**	**-0.1**
GOF					pmax	pmax		
	comp=Z,41nm,1.4s							
SOCY	**Socotra**	**17.21**	**171**	P		**Pn**	**00 01 14.9**	**-2.0**
SOCY					IAmb	IAmb	00 01 30.7	
	comp=Z,86nm,1.5s							
THW	**Thamme Wali**	**17.85**	**74**	P		**P**	**00 01 25.6**	**+0.3**
BR131	**Keskin Array S**	**17.87**	**310**	*i*P		**P**	**00 01 25.9**	**+0.4**
BR131	**Keskin Array S**	**17.87**	**310**	P		**P**	**00 01 26.0**	**+0.4**
BRTR	**Keskin Array B**	**17.87**	**310**	P		**P**	**00 01 25.6**	**0.0**
	comp=Z,0.3nm,0.3s,baz=133,slow=14,SNR=15							
CEP	**Cherat**	**18.12**	**70**	P		**P**	**00 01 29.3**	**+0.9**
NIL	**Nilore**	**19.20**	**71**	P		**Pn**	**00 01 40.7**	**-0.5**
NIL					pmax	pmax		
	comp=Z,12nm,0.7s							
NIL	**Nilore**	**19.20**	**71**	P		**Pn**	**00 01 40.7**	**-0.5**
BTK	**Batken**	**19.26**	**51**	P		**P**	**00 01 41.0**	**+0.1**
BTK					pmax	pmax		
	comp=Z,15nm,0.7s							
BTK	**Batken**	**19.26**	**51**	P		**P**	**00 01 41.0**	**+0.1**
BTK					IAmb	IAmb	00 01 47.1	
	comp=Z,15nm,0.7s							
ATD	**Arta Tunnel**	**19.36**	**206**		LR	LR	00 09 57.8	
	comp=Z,315nm,19.9s,baz=17,slow=39							
ELL	**Elmali**	**19.40**	**298**	P		**Pn**	**00 01 44.3**	**+0.7**
ELL					pmax	pmax		
	comp=Z,124nm,1.5s							
ELL	**Elmali**	**19.40**	**298**	P		**Pn**	**00 01 44.3**	**+0.7**
MDUB	**Mudurnu**	**19.86**	**309**	P		**P**	**00 01 48.0**	**+0.5**
KK31	**Karatay Array**	**20.66**	**43**	P		**P**	**00 01 54.2**	**-1.9**
KK31					pmax	pmax		
	comp=Z,7.0nm,0.7s							
KK31	**Karatay Array**	**20.66**	**43**	P		**P**	**00 01 54.2**	**-1.9**
KKAR	**Karatay Array**	**20.66**	**43**	P		**P**	**00 01 54.3**	**-1.8**
KKAR					pmax	pmax		
	comp=Z,7.0nm,0.7s							
KKAR	**Karatay Array**	**20.66**	**43**	P		**P**	**00 01 54.2**	**-1.8**
MANT	**Manisa**	**20.95**	**302**	P		**P**	**00 01 58.9**	**-0.5**
ABKAR	**Akbulak array**	**20.99**	**16**	P		**P**	**00 01 59.4**	**-0.1**
ARSB	**Arslanbob**	**21.30**	**50**	P		**P**	**00 02 02.4**	**-0.7**
ARSB					IAmb	IAmb	00 02 09.6	
	comp=Z,26nm,0.9s							
AKTO	**Aktyubinsk**	**21.71**	**12**	P		**P**	**00 02 06.9**	**-0.3**
	comp=Z,15nm,0.7s,baz=202,slow=11,SNR=40							
AKTO					LR	LR	00 11 46.1	
	comp=Z,155nm,21.6s,baz=180,slow=40							
KSH	**Kashi**	**22.69**	**57**	P		**P**	**00 02 14.8**	**-3.2**
KSH				pP		pP	00 02 19.5	-3.1
KSH				PP		**PnPn**	**00 02 40.5**	**-1.3**
KSH				S		S	00 06 12.8	-13
KSH				sS		pS	00 06 20.6	-11
KSH				SS		**SnSn**	**00 06 54.9**	**-1.0**
KSH					pmax	pmax		
	comp=Z,36nm,0.6s							
KSH					pmax	pmax		
	comp=Z,450nm,4.3s							
KSH					LR	LR		
	comp=N,190nm,4.5s							
KSH					LR	LR		
	comp=E,180nm,4.8s							
KSH					LR	LR		
	comp=Z,350nm,6.3s							
AAK	**Ala-Archa**	**22.91**	**48**	*i*P		**P**	**00 02 21.8**	**+1.5**
AAK					pmax	pmax		
	comp=Z,3.0nm,0.7s							
AAK	**Ala-Archa**	**22.91**	**48**	P		**P**	**00 02 21.7**	**+1.3**
	comp=Z,5.8nm,0.8s,baz=222,slow=8.9,SNR=15							
AAK				PcP		**PcP**	**00 06 11.4**	**+0.9**
	comp=Z,1.7nm,0.5s,baz=156,slow=3.2,SNR=4.9							
AAK					LR	LR	00 11 50.3	
	comp=Z,266nm,18.8s,baz=252,slow=38							
AAK	**Ala-Archa**	**22.91**	**48**	P		**P**	**00 02 21.2**	**+0.9**
AAK	**Ala-Archa**	**22.91**	**48**	P		**P**	**00 02 20.1**	**-0.3**
IDI	**Anoyia**	**23.08**	**292**	P		**P**	**00 02 22.5**	**+0.4**
	comp=Z,18nm,0.6s,baz=88,slow=13,SNR=10							
NRN	**Naryn**	**23.40**	**52**	P		**P**	**00 02 25.2**	**-0.3**
NRN					pmax	pmax		
	comp=Z,10.0nm,1.1s							
NRN	**Naryn**	**23.40**	**52**	P		**P**	**00 02 25.2**	**-0.3**
VORD	**Divnogorie**	**23.45**	**341**	*e*P		**P**	**00 02 24.8**	**-0.7**
VORD					pmax	pmax		
	comp=N,60nm,1.4s							
VORD					pmax	pmax		
	comp=Z,30nm,0.9s							
VORD					pmax	pmax		
	comp=E,50nm,0.8s							
MFTR	**Murfatlar**	**23.49**	**315**	§P		**P**	**00 02 28.0**	**+2.0**
TIRR	**Tirgusor**	**23.65**	**316**	P		**P**	**00 02 28.8**	**+1.4**
TIRR	**Tirgusor**	**23.65**	**316**	P		**P**	**00 02 28.8**	**+1.4**
TIRR	**Tirgusor**	**23.65**	**316**	P		**P**	**00 02 27.3**	**-0.1**
VSR	**Storozhevoye**	**23.71**	**341**	*e*P		**P**	**00 02 25.1**	**-2.9**
VSR				*e*S		**S**	**00 06 38.3**	**-4.1**
VSR					pmax	pmax		
	comp=Z,20nm,1.0s							
VSR					pmax	pmax		
	comp=N,10.0nm,0.7s							
VSR					pmax	pmax		
	comp=E,10.0nm,0.9s							
VSR					smax	smax		
	comp=E,100nm,1.6s							
VSR					smax	smax		
	comp=Z,30nm,1.4s							
VSR					smax	smax		
	comp=N,80nm,0.9s							
TLCR		**23.80**	**318**	§P		**P**	**00 02 29.9**	**+1.0**
TLCR		**23.80**	**318**	§P		**P**	**00 02 29.9**	**+1.0**
ICOR	**Ion Corvin**	**23.84**	**315**	§P		**P**	**00 02 31.1**	**+1.8**
TOPG	**Topolog**	**23.89**	**317**	§P		**P**	**00 02 31.3**	**+1.5**
HARR	**Harsova**	**24.06**	**316**	§P		**P**	**00 02 32.9**	**+1.5**
HARR	**Harsova**	**24.06**	**316**	§P		**P**	**00 02 32.9**	**+1.5**
RAZG	**Razgrad**	**24.40**	**312**	§P		**P**	**00 02 36.5**	**+1.9**
MILM	**Milestii Mici**	**24.82**	**321**	§P		**P**	**00 02 38.0**	**-0.3**
KIS	**Kishinev**	**24.86**	**321**	*e*		**P**	**00 02 39.0**	**+0.3**
LEOM	**Leova**	**24.86**	**320**	§P		**P**	**00 02 38.7**	**0.0**
LEOM	**Leova**	**24.86**	**320**	§P		**P**	**00 02 38.7**	**0.0**
LPSR	**Galich'ya Gora**	**25.02**	**342**	*e*P		**P**	**00 02 39.4**	**-0.6**
LPSR				*e*S		**S**	**00 07 06.6**	**+3.3**
LPSR					pmax	pmax		
	comp=N,10.0nm,0.7s							
LPSR					pmax	pmax		
	comp=Z,30nm,0.7s							
LPSR					pmax	pmax		
	comp=E,20nm,0.9s							
LPSR					smax	smax		
	comp=E,90nm,1.3s							
LPSR					smax	smax		
	comp=Z,30nm,2.6s							
LPSR					smax	smax		
	comp=N,70nm,1.6s							
PETR	**Petresti**	**25.03**	**317**	§P		**P**	**00 02 41.7**	**+1.5**
SULR		**25.09**	**315**	§P		**P**	**00 02 42.8**	**+2.1**
BIR	**Birlad**	**25.10**	**319**	§P		**P**	**00 02 41.9**	**+1.0**
BIR	**Birlad**	**25.10**	**319**	§P		**P**	**00 02 41.9**	**+1.0**
GHRR		**25.11**	**318**	§P		**P**	**00 02 42.0**	**+1.1**
ODBI	**Odobesti**	**25.16**	**317**	§P		**P**	**00 02 42.7**	**+1.3**
VASR	**Vaslui**	**25.22**	**320**	§P		**P**	**00 02 43.0**	**+1.1**
BISRR	**Bisoca**	**25.25**	**317**	§P		**P**	**00 02 43.9**	**+1.6**
SECR		**25.38**	**315**	§P		**P**	**00 02 45.1**	**+1.7**
VRI	**Vrincioaia**	**25.40**	**317**	§P		**P**	**00 02 44.9**	**+1.2**
VRI	**Vrincioaia**	**25.40**	**317**	§P		**P**	**00 02 44.9**	**+1.2**
PLOR	**Plostina**	**25.44**	**317**	§P		**P**	**00 02 45.7**	**+1.7**
PLOR	**Plostina**	**25.44**	**317**	§P		**P**	**00 02 45.7**	**+1.7**
COPA	**Copaceanca**	**25.49**	**313**	§P		**P**	**00 02 46.6**	**+2.3**
IAS	**Iasi**	**25.67**	**321**	§P		**P**	**00 02 46.3**	**+0.3**
IAS	**Iasi**	**25.67**	**321**	§P		**P**	**00 02 46.3**	**+0.3**
MLR	**Muntele Rosu**	**25.68**	**316**	§P		**P**	**00 02 47.9**	**+1.6**
MLR	**Muntele Rosu**	**25.68**	**316**	P		**P**	**00 02 46.9**	**+0.6**
	comp=N,6.7nm,0.7s,baz=65,slow=19,SNR=18							
MLR	**Muntele Rosu**	**25.68**	**316**	§P		**P**	**00 02 47.9**	**+1.6**
ITM	**Ithomi**	**25.73**	**295**	P		**P**	**00 02 47.2**	**+0.5**
AGG	**Agios Georgios**	**25.78**	**300**	P		**P**	**00 02 47.8**	**+0.6**
AGG					pmax	pmax		
	comp=Z,26nm,1.4s							
AGG	**Agios Georgios**	**25.78**	**300**	P		**P**	**00 02 47.8**	**+0.6**
AGG					IAmb	IAmb	00 03 03.9	
	comp=Z,26nm,1.4s							
TESR	**Tescani**	**25.80**	**319**	§P		**P**	**00 02 47.5**	**+0.3**
SORM	**Soroca**	**25.81**	**323**	§P		**P**	**00 02 46.2**	**-1.0**
SORM	**Soroca**	**25.81**	**323**	§P		**P**	**00 02 46.2**	**-1.0**
HUMR	**Humele**	**25.82**	**313**	§P		**P**	**00 02 49.6**	**+2.2**
LIT	**Litokhoron**	**25.93**	**302**	P		**P**	**00 02 49.5**	**+1.0**
LIT					pmax	pmax		
	comp=Z,19nm,1.1s							
LIT	**Litokhoron**	**25.93**	**302**	P		**P**	**00 02 49.5**	**+1.0**
LIT					IAmb	IAmb	00 03 01.8	
	comp=Z,19nm,1.1s							
VLAD	**Vladila**	**25.95**	**312**	§P		**P**	**00 02 50.1**	**+1.5**
OZUR		**26.08**	**317**	§P		**P**	**00 02 50.7**	**+0.8**
GIRR	**Girov**	**26.13**	**319**	§P		**P**	**00 02 50.8**	**+0.

	comp=Z,3.0nm,0.9s							
KURK	**Kurchatov**	**29.63**	**36**	P		**P**	**00 03 21.5**	**+0.1**
KURK				IAmb		IAmb	00 03 23.3	
	comp=Z,7.5nm,1.2s							
DMN	**Daman**	**29.70**	**85**	*e*P		**P**	**00 03 23.1**	**+0.4**
	comp=Z,22nm,0.7s							
MKAR	**Makanchi Array**	**29.74**	**45**	P		**P**	**00 03 22.8**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=237,slow=6.8,SNR=13							
MKAR				PcP		**PcP**	**00 06 26.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=234,slow=3.9,SNR=5.3							
MKAR				ScP		**ScP**	**00 10 06.4**	**-1.2**
	comp=Z,1.1nm,0.9s,baz=253,slow=3.7,SNR=6.9							
KKN	**Kakani**	**29.82**	**85**	*e*P		**P**	**00 03 23.9**	**+0.2**
	comp=Z,18nm,0.5s							
PKIN	**Phulchoki**	**29.96**	**85**	*e*P		**P**	**00 03 25.0**	**0.0**
	comp=Z,17nm,0.7s							
PKI	**Pulchoki**	**29.97**	**85**	*e*P		**P**	**00 03 25.2**	**0.0**
	comp=Z,3.2nm,0.8s							
TIP	**Timpagrande**	**30.06**	**298**	P		**P**	**00 03 24.5**	**-1.0**
TIP				IAmb		IAmb	00 03 31.6	
	comp=Z,13nm,1.2s							
GUN	**Gumba**	**30.32**	**84**	*e*P		**P**	**00 03 28.7**	**+0.5**
	comp=Z,36nm,0.7s							
PSZ	**Piszkesteto**	**30.49**	**316**	P		**P**	**00 03 29.3**	**0.0**
PSZ				pmax		pmax		
	comp=Z,4.0nm,0.9s							
PSZ	**Piszkesteto**	**30.49**	**316**	P		**P**	**00 03 29.3**	**0.0**
JIRN	**Jiri**	**30.64**	**84**	*e*P		**P**	**00 03 31.3**	**+0.2**
	comp=Z,24nm,0.6s							
RAMN	**Ramite**	**31.14**	**86**	*e*P		**P**	**00 03 35.0**	**-0.4**
	comp=Z,11nm,0.5s							
OJC	**Ojcow**	**31.63**	**320**	P		**P**	**00 03 39.6**	**+0.5**
OJC				pmax		pmax		
	comp=Z,10.0nm,0.9s							
OJC	**Ojcow**	**31.63**	**320**	*e*P		**P**	**00 03 39.0**	**-0.1**
OJC	**Ojcow**	**31.63**	**320**	P		**P**	**00 03 39.5**	**+0.5**
OJC				IAmb		IAmb	00 03 41.8	
	comp=Z,10nm,0.9s							
ODAN	**Odare**	**31.85**	**86**	*e*P		**P**	**00 03 41.3**	**-0.3**
	comp=Z,6.0nm,0.6s							
TAPN	**Taplejung**	**32.02**	**85**	*e*P		**P**	**00 03 43.0**	**-0.2**
	comp=Z,6.4nm,0.6s							
JAVC	**Velka Javorina**	**32.24**	**317**	*e*P		**P**	**00 03 45.2**	**+0.6**
OKC	**Ostrava-Krasne**	**32.38**	**319**	*e*P		**P**	**00 03 45.7**	**-0.1**
OKC				*e*			00 03 47.8	
OKC	**Ostrava-Krasne**	**32.38**	**319**	*e*P		**P**	**00 03 45.7**	**-0.1**
OKC				*ex*		x	00 03 47.8	
PRGR	**Permogore**	**32.56**	**355**	*e*P		**P**	**00 03 45.4**	**-1.7**
PRGR				pmax		pmax		
	comp=Z,10.0nm,0.6s							
INTR	**Introdacqua**	**32.68**	**303**	P		**P**	**00 03 49.1**	**+0.6**
INTR				IAmb		IAmb	00 03 60.0	
	comp=Z,10nm,1.2s							
MORC	**Moravsky Berou**	**32.71**	**318**	⇓P		**P**	**00 03 48.9**	**+0.2**
MORC	**Moravsky Berou**	**32.71**	**318**	⇓P		**P**	**00 03 48.9**	**+0.2**
MORC	**Moravsky Berou**	**32.71**	**318**	*e*P		**P**	**00 03 48.5**	**-0.2**
MORC	**Moravsky Berou**	**32.71**	**318**	P		**P**	**00 03 45.9**	**-2.8**
MORC				IAmb		IAmb	00 03 51.1	
	comp=Z,9.4nm,0.9s							
ARSA	**Arzberg**	**32.95**	**313**	*i* pP		**P**	**00 03 52.2**	**+1.4**
	comp=Z,4.3nm,1.0s							
CONA	**Conrad Observa**	**32.98**	**314**	*i* pP		**P**	**00 03 52.5**	**+1.4**
	comp=Z,4.1nm,1.1s							
VRAC	**Vranov**	**33.07**	**317**	⇑P		**P**	**00 03 52.1**	**+0.3**
VRAC	**Vranov**	**33.07**	**317**	⇑P		**P**	**00 03 52.1**	**+0.3**
VRAC	**Vranov**	**33.07**	**317**	*e*P		**P**	**00 03 51.8**	**0.0**
SOKA	**Soboth**	**33.08**	**312**	*i* pP		**P**	**00 03 54.5**	**+2.5**
	comp=Z,3.9nm,1.2s							
KRUC	**Moravsky**	**33.09**	**316**	*e*P		**P**	**00 03 51.9**	**0.0**
KMBO	**Kilima Mbogo**	**33.11**	**206**	LR		LR	00 18 03.5	
	comp=Z,212nm,18.5s,baz=72,slow=38							
KRLC	**Kraliky**	**33.28**	**318**	*e*P		**P**	**00 03 53.1**	**-0.6**
KRLC				*e*			00 04 02.0	
KRLC	**Kraliky**	**33.28**	**318**	*e*P		**P**	**00 03 53.1**	**-0.6**
KRLC				*ex*		x	00 04 02.0	
OBKA	**Obir**	**33.34**	**311**	*i* pP		**P**	**00 03 57.2**	**+2.9**
	comp=Z,7.0nm,1.3s							
NRCA	**Norcia**	**33.41**	**304**	P		**P**	**00 03 52.0**	**-2.9**
NRCA				IAmb		IAmb	00 04 08.4	
	comp=Z,8.9nm,1.1s							
DPC	**Dobruska-Polom**	**33.67**	**318**	*e*P		**P**	**00 03 56.7**	**-0.3**
DPC	**Dobruska-Polom**	**33.67**	**318**	*e*P		**P**	**00 03 56.7**	**-0.3**
OSTC	**Ostas**	**33.82**	**319**	*e*P		**P**	**00 03 58.4**	**+0.1**
KSP	**Ksiaz**	**33.90**	**319**	*e*P		**P**	**00 03 59.1**	**+0.2**
KSP	**Ksiaz**	**33.90**	**319**	*e*P		**P**	**00 03 59.1**	**+0.2**
UPC	**Upice**	**33.91**	**319**	*e*P		**P**	**00 04 00.8**	**+1.7**
UPC	**Upice**	**33.91**	**319**	*e*P		**P**	**00 04 00.8**	**+1.7**
CHVC	**Chvalec**	**33.92**	**319**	*e*P		**P**	**00 03 59.1**	**-0.1**
CHVC				*ex*		x	00 04 01.1	
MOA	**Molln**	**33.96**	**313**	*i* pP		**P**	**00 03 59.7**	**+0.1**
	comp=Z,8.3nm,1.1s,SNR=6.3							
KBA	**Koelnbreinsper**	**34.30**	**312**	*i* pP		**P**	**00 04 03.0**	**+0.3**
	comp=Z,8.7nm,0.8s,SNR=9.2							
ZAA0	**Zalesovo Array**	**34.59**	**35**	P		**P**	**00 04 03.5**	**-1.4**
ZAA0				IAmb		IAmb	00 04 11.4	
	comp=Z,5.6nm,0.8s							
ZALV	**Zalesovo Beam**	**34.59**	**35**	P		**P**	**00 04 05.2**	**+0.2**
	comp=Z,3.5nm,0.4s,baz=250,slow=9.3,SNR=15							
ZALV				LR		LR	00 19 45.9	
	comp=Z,166nm,18.4s,baz=254,slow=39							
GERES	**GERESS Array B**	**34.65**	**315**	P		**P**	**00 04 04.9**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=96,slow=8.2,SNR=5.1							
GERES				LR		LR	00 20 01.6	
	comp=Z,50nm,20.7s,baz=112,slow=39							
ABTA	**Abfaltersbach**	**34.76**	**311**	*i* pP		**P**	**00 04 08.6**	**+2.0**
	comp=Z,7.7nm,1.6s							
KHC	**Kasperske Hory**	**34.83**	**315**	*e*P		**P**	**00 04 07.0**	**-0.1**
KHC	**Kasperske Hory**	**34.83**	**315**	*e*P		**P**	**00 04 07.0**	**-0.1**
BRG	**Berggiesshubel**	**35.26**	**318**	*e*P		**P**	**00 04 12.0**	**+1.2**
	comp=Z,7.6nm,0.9s							
BRG	**Berggiesshubel**	**35.26**	**318**	*e*P		**P**	**00 04 12.0**	**+1.2**
BRG				pmax		pmax		
	comp=Z,8.0nm,0.9s							
WTTA	**Wattenberg**	**35.47**	**311**	*i* pP		**P**	**00 04 12.4**	**-0.5**
	comp=Z,8.8nm,0.6s							
WATA	**Walderalm**	**35.53**	**312**	*i* pP		**P**	**00 04 12.9**	**-0.5**
	comp=Z,14nm,1.0s							
MBAR	**Mbarara**	**35.65**	**217**	P		**P**	**00 04 14.5**	**-0.1**
MBAR				pmax		pmax		
	comp=Z,12nm,1.4s							
MBAR	**Mbarara**	**35.65**	**217**	P		**P**	**00 04 15.7**	**+1.1**
	comp=Z,2.7nm,0.2s,baz=70,slow=9.8,SNR=4.5							
MBAR	**Mbarara**	**35.65**	**217**	P		**P**	**00 04 14.5**	**-0.1**
MBAR				IAmb		IAmb	00 04 19.2	
	comp=Z,12nm,1.4s							
SQTA	**Sankt Quirin**	**35.74**	**311**	*i* pP		**P**	**00 04 14.6**	**-0.5**
	comp=Z,4.1nm,0.4s,SNR=5.6							
MOTA	**Moosalm**	**35.84**	**311**	*i* pP		**P**	**00 04 15.4**	**-0.6**
	comp=Z,5.8nm,0.6s,SNR=6.4							
CLL	**Collm**	**35.98**	**319**	P		**P**	**00 04 15.7**	**-1.2**
CLL				pmax		pmax		
	comp=Z,17nm,1.2s							
CLL	**Collm**	**35.98**	**319**	*e*P		**P**	**00 04 16.0**	**-0.9**
	comp=Z,16nm,1.1s							
CLL				*e*PP		**PP**	**00 05 40.0**	**+1.4**
CLL	**Collm**	**35.98**	**319**	P		**P**	**00 04 15.7**	**-1.2**
CLL				IAmb		IAmb	00 04 20.7	
	comp=Z,16nm,1.2s							
FETA	**Feichten**	**36.01**	**311**	*i* pP		**P**	**00 04 18.2**	**+0.8**
	comp=Z,10.0nm,0.9s							
SHL	**Shillong**	**36.08**	**86**	P		**P**	**00 04 15.9**	**-2.4**
SHL				pmax		pmax		
	comp=Z,6.0nm,0.7s							
SHL	**Shillong**	**36.08**	**86**	P		**P**	**00 04 15.9**	**-2.4**
SHL				IAmb		IAmb	00 04 21.6	
	comp=Z,6.2nm,0.7s							
RETA	**Reutte**	**36.11**	**312**	*i* pP		**P**	**00 04 17.5**	**-0.7**
	comp=Z,2.4nm,0.4s,SNR=10							
FINES	**FINESS Array B**	**36.23**	**340**	*i* P		**P**	**00 04 18.8**	**-0.1**
FINES				pmax		pmax		
	comp=Z,2.0nm,0.5s							
FINES	**FINESS Array B**	**36.23**	**340**	P		**P**	**00 04 17.8**	**-1.1**
	comp=Z,2.3nm,0.5s,baz=141,slow=10,SNR=9.2							
FINES				PcP		**PcP**	**00 06 43.2**	**-0.6**
	comp=Z,1.8nm,0.7s,baz=129,slow=2.0,SNR=3.0							
MSSA	**Maissana**	**36.25**	**306**	P		**P**	**00 04 19.2**	**-0.3**
MSSA				IAmb		IAmb	00 04 33.9	
	comp=Z,12nm,1.1s							
DAVA	**Damuels**	**36.63**	**311**	*i* pP		**P**	**00 04 22.2**	**-0.5**
	comp=Z,8.9nm,0.6s							
SENIN	**Lac Senin/Sane**	**38.16**	**309**	P		**P**	**00 04 34.8**	**-1.0**
SENIN				IAmb		IAmb	00 04 52.3	
	comp=Z,13nm,1.5s							
BNI	**Bardonecchia**	**38.37**	**307**	P		**P**	**00 04 37.1**	**-0.4**
BNI				pmax		pmax		
	comp=Z,9.0nm,0.9s							
BNI	**Bardonecchia**	**38.37**	**307**	P		**P**	**00 04 37.1**	**-0.4**
BNI				IAmb		IAmb	00 04 42.0	
	comp=Z,9.1nm,0.9s							
LVZ	**Lovozero**	**39.88**	**350**	P		**P**	**00 04 49.7**	**0.0**
LVZ				pmax		pmax		
	comp=Z,30nm,1.3s							
LVZ	**Lovozero**	**39.88**	**350**	P		**P**	**00 04 49.7**	**0.0**
GTA	**Gaotai**	**40.87**	**62**	⇑P		**P**	**00 04 59.6**	**+1.2**
GTA				pP		sP	00 05 03.6	-2.0
GTA				sP		pP	00 05 06.6	+3.1
GTA				ScP		**ScP**	**00 10 48.4**	**+0.3**
GTA				pmax		pmax		
	comp=Z,7.0nm,1.0s							
GTA				pmax		pmax		
	comp=Z,110nm,5.4s							
GTA				LR		LR		
	comp=N,100nm,17.2s							
GTA				LR		LR		
	comp=E,150nm,16.2s							
GTA				LR		LR		
	comp=Z,100nm,16.5s							
NC405	**NORSAR Array S**	**41.20**	**332**	P		**P**	**00 04 59.6**	**-1.0**
NB2	**NORSAR Subarra**	**41.36**	**332**	P		**P**	**00 05 00.7**	**-1.3**
	comp=Z,1.7nm,0.4s,baz=124,slow=8.6							
NOA	**NORSAR Array B**	**41.36**	**332**	P		**P**	**00 05 00.6**	**-1.5**
	comp=Z,1.3nm,0.4s,baz=127,slow=9.0,SNR=15							
ARCES	**ARCESS Array B**	**42.92**	**347**	P		**P**	**00 05 14.1**	**-0.4**
	comp=Z,2.8nm,0.6s,baz=152,slow=7.1,SNR=14							
CMAR	**Chiang Mai Arr**	**44.61**	**93**	P		**P**	**00 05 28.9**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=284,slow=8.3,SNR=3.9							
CMAR				PcP		**PcP**	**00 07 12.0**	**+0.4**
	comp=Z,0.5nm,0.4s,baz=285,slow=5.4,SNR=2.9							
KMI	**Kunming**	**45.63**	**82**	P		**P**	**00 05 38.1**	**+0.9**
KMI				pP		pP	00 05 40.8	-1.5
KMI				sP		sP	00 05 42.4	-2.0
KMI				pmax		pmax		
	comp=Z,7.0nm,0.6s							
SONM	**Songino Array**	**45.84**	**50**	P		**P**	**00 05 38.6**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=267,slow=5.9,SNR=5.4							
SONM				PcP		**PcP**	**00 07 15.5**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=267,slow=4.0,SNR=3.5							
SONM	**Songino Array**	**45.84**	**50**	IAmb		IAmb	00 05 46.6	
	comp=Z,0.9nm,0.8s							
ESDC	**Sonseca Array**	**46.08**	**298**	P		**P**	**00 05 41.0**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=76,slow=7.2,SNR=7.0							
ESDC	**Sonseca Array**	**46.08**	**298**	IAmb		IAmb	00 05 42.9	
	comp=Z,2.7nm,1.4s							
ULN	**Ulaanbaatar**	**46.29**	**50**	*i* P		**P**	**00 05 42.4**	**+0.5**
ULN				pmax		pmax		
	comp=Z,2.0nm,1.1s							
MDT	**Midelt**	**47.56**	**289**	P		**P**	**00 05 53.1**	**+1.1**
	comp=Z,0.9nm,0.4s,baz=273,slow=6.2,SNR=7.7							
TOA0	**Torodi Ar. Sit**	**48.60**	**262**	P		**P**	**00 06 00.6**	**+0.4**
TORD	**Torodi Ar. Bea**	**48.60**	**262**	P		**P**	**00 06 00.5**	**+0.3**
	comp=Z,5.0nm,0.4s,baz=59,slow=8.7,SNR=71							
TORD				ScP		**ScP**	**00 11 20.3**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=40,slow=3.0,SNR=3.2							
TORD	**Torodi Ar. Bea**	**48.60**	**262**	IAmb		IAmb	00 06 03.0	
	comp=Z,7.0nm,1.1s							
XAN	**Xi'an**	**48.71**	**69**	P		**P**	**00 06 00.6**	**-0.3**
XAN				pP		pP	00 06 03.5	-2.6
XAN				pmax		pmax		
	comp=Z,5.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**49.76**	**60**	*e*P		**P**	**00 06 09.8**	**+1.0**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,87nm,7.6s							
MATP	**Matopo**	**54.11**	**207**	P		**P**	**00 06 42.0**	**+0.6**
	comp=Z,5.4nm,1.1s,baz=23,slow=11,SNR=3.7							
DBIC	**Dimbokro**	**57.37**	**258**	P		**P**	**00 07 05.7**	**+0.8**
DBIC				pmax		pmax		
	comp=Z,13nm,0.9s							
DBIC	**Dimbokro**	**57.37**	**258**	P		**P**	**00 07 05.4**	**+0.5**
	comp=Z,14nm,0.9s,baz=33,slow=7.1,SNR=17							
DBIC	**Dimbokro**	**57.37**	**258**	P		**P**	**00 07 05.7**	**+0.8**
KIC	**Kosan Boka**	**57.43**	**258**	*e*P		**P**	**00 07 05.7**	**+0.4**
	comp=Z,12nm,0.8s							
TIC	**Toumodi**	**57.52**	**259**	*e*P		**P**	**00 07 06.2**	**+0.2**
LIC	**Lamto**	**57.74**	**258**	*e*P		**P**	**00 07 07.7**	**+0.2**
	comp=Z,16nm,0.7s							
TSUM	**Tsumeb**	**58.17**	**218**	P		**P**	**00 07 10.1**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=12,slow=8.9,SNR=3.0							
TSUM	**Tsumeb**	**58.17**	**218**	IAmb		IAmb	00 07 16.3	
	comp=Z,6.7nm,1.2s							
TIXI	**Tiksi**	**58.57**	**21**	*i* P		**P**	**00 07 14.2**	**+1.8**
TIXI				pmax		pmax		
	comp=Z,5.0nm,1.6s							
LBTB	**Lobatse**	**59.39**	**207**	P		**P**	**00 07 20.4**	**+1.6**
LBTB				pmax		pmax		
	comp=Z,6.0nm,1.2s							
LBTB	**Lobatse**	**59.39**	**207**	P		**P**	**00 07 20.4**	**+1.6**
	comp=Z,2.3nm,0.5s,baz=8.4,slow=9.3,SNR=8.4							
LBTB	**Lobatse**	**59.39**	**207**	IAmb		IAmb	00 07 35.6	
	comp=Z,5.8nm,1.1s							
SUMG	**Summit**	**62.27**	**340**	*i* P		**P**	**00 07 38.6**	**+0.4**
SUMG	**Summit**	**62.27**	**340**	*i* P		**P**	**00 07 38.6**	**+0.4**
BOSA	**Boshof**	**62.75**	**206**	P		**P**	**00 07 42.2**	**+0.6**
BOSA				pmax		pmax		
	comp=Z,10.0nm,1.2s							
BOSA	**Boshof**	**62.75**	**206**	P		**P**	**00 07 42.2**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=53,slow=6.5,SNR=8.2							
BOSA				LR		LR	00 36 37.4	
	comp=Z,83nm,18.7s,baz=316,slow=38							
BOSA	**Boshof**	**62.75**	**206**	IAmb		IAmb	00 07 44.4	
	comp=Z,9.6nm,1.2s							
KSRS	**Korea Array**	**62.88**	**60**	P		**P**	**00 07 41.6**	**-0.8**
	comp=Z,1.3nm,0.5s,baz=282,slow=6.4,SNR=5.0							
KSRS				LR		LR	00 37 29.5	
	comp=Z,67nm,19.5s,baz=295,slow=38							
SEY	**Seymchan**	**69.13**	**29**	P		**P**	**00 08 22.0**	**-0.1**
SEY	**Seymchan**	**69.13**	**29**	P		**P**	**00 08 22.0**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=252,slow=20,SNR=2.9							
MJAR	**Matsushiro Arr**	**70.93**	**58**	LR		LR	00 42 30.3	
	comp=Z,40nm,18.2s,baz=160,slow=38							
BILL	**Bilibino**	**71.79**	**21**	*e*P		**P**	**00 08 39.0**	**+0.7**
BILL				*e*			00 08 52.5	
BILL				*e*			00 11 13.7	
BILL				pmax		pmax		
	comp=Z,3.0nm,1.0s							
PETK	**Petropavlovsk-**	**76.12**	**37**	LR		LR	00 45 49.0	
	comp=Z,7.1nm,18.3s,baz=257,slow=38							
SCHQ	**Schefferville**	**80.87**	**329**	P		**P**	**00 09 28.6**	**-1.5**
	comp=Z,2.8nm,0.6s,baz=57,slow=4.2,SNR=11							
SCHQ	**Schefferville**	**80.87**	**329**	P		**P**	**00 09 30.0**	**-0.1**
SCHQ				IAmb		IAmb	00 09 36.1	
	comp=Z,13nm,1.4s							
ILAR	**Eielson Array**	**85.17**	**8**	P		**P**	**00 09 51.7**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=324,slow=4.3,SNR=9.3							
ILAR				LR		LR	00 53 50.9	
	comp=Z,24nm,19.3s,baz=321,slow=40							
BPAW	**Bear Paw Mtn.**	**85.27**	**10**	P		**P**	**00 09 53.2**	**+0.5**
SCRK	**Sand Creek**	**86.25**	**7**	P		**P**	**00 09 58.5**	**+0.8**
DOT	**Dot Lake**	**86.57**	**7**	P		**P**	**00 09 59.8**	**+0.7**
YKA	**Yellowknife Ar**	**87.83**	**354**	P		**P**	**00 10 05.2**	**0.0**
	comp=Z,1.2nm,0.7s,baz=11,slow=5.2,SNR=24							
WRA	**Warramunga Arr**	**93.75**	**111**	P		**P**	**00 10 33.8**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=310,slow=4.1,SNR=3.1							
ASAR	**Alice Springs**	**95.23**	**114**	P		**P**	**00 10 39.7**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=296,slow=4.0,SNR=4.4							
ULM	**Lac du Bonnet**	**95.62**	**340**	LR		LR	00 55 18.3	
	comp=Z,40nm,18.5s,baz=88,slow=36							

WEL 16 00:21:50.7,39°S±7.°×17°6E±1.°0,h150km±7km,M2.8/5, MLv2.8/5,Error ellipse: s-maj=0.0km s-min=0.0km az=94.7,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.42**	**198**	P	Pn	00 22 12.7	+0.9
WTVZ	**West Tongariro**	**0.45**	**181**	P	Pn	00 22 12.6	+0.6
NGZ	**Ngauruhoe**	**0.51**	**180**	P	Pn	00 22 13.2	+1.0
TRVZ	**Turoa**	**0.63**	**184**	P	Pn	00 22 14.0	+1.0
MOVZ	**Moawhango**	**0.75**	**171**	P	Pn	00 22 14.2	+0.6
MOVZ	**Moawhango**	**0.75**	**171**	P	Pn	00 22 14.0	+0.4
MOVZ				S	Sn	00 22 30.6	-0.6
RRRZ	**Republican Roa**	**0.79**	**66**	P	Pn	00 22 22.3	+8.4
BKZ	**Black Stump Fm**	**0.85**	**126**	P	Pn	00 22 14.5	+0.2
BKZ	**Black Stump Fm**	**0.85**	**126**	P	Pn	00 22 14.3	-0.1
BKZ				S	Sn	00 22 31.3	-1.1
BHHZ	**Black Hill Sta**	**0.90**	**157**	P	Pn	00 22 15.0	+0.4
NMHZ	**Naumai**	**1.03**	**115**	P	Pn	00 22 15.8	-0.1
RTZ	**Ruatahuna**	**1.08**	**88**	P	Pn	00 22 15.7	-0.5
KRHZ	**Kereru**	**1.14**	**149**	P	Pn	00 22 17.4	+0.7
ARHZ	**Aropaoanui**	**1.24**	**119**	P	Pn	00 22 18.1	+0.5
URZ	**Urewera**	**1.25**	**72**	P	Pn	00 22 16.3	-1.4
TSZ	**Takapari Road**	**1.42**	**169**	P	Pn	00 22 19.9	+0.5
TSZ	**Takapari Road**	**1.42**	**169**	P	Pn	00 22 19.7	+0.2
TSZ				S	Sn	00 22 40.6	-0.9
KAHZ	**Kahuranaki**	**1.50**	**139**	P	Pn	00 22 20.8	+0.6
KAHZ	**Kahuranaki**	**1.50**	**139**	P	Pn	00 22 20.5	+0.2
KAHZ				S	Sn	00 22 42.6	-0.4
MWZ	**Matawai**	**1.55**	**78**	P	Pn	00 22 19.7	-1.0
MWZ	**Matawai**	**1.55**	**78**	S	Sn	00 22 42.6	-1.2
RIGZ	**Rimuhau**	**1.69**	**92**	P	Pn	00 22 21.7	-0.6
RUGZ	**Raukumara Rang**	**1.78**	**67**	P	Pn	00 22 21.4	-1.9
RUGZ	**Raukumara Rang**	**1.78**	**67**	S	Sn	00 22 42.6	-5.8
MHGZ	**Mahia Peninsul**	**1.86**	**106**	P	Pn	00 22 23.9	-0.3
MRZ	**Mangatainoka R**	**1.99**	**181**	P	Pn	00 22 25.4	-0.2
MRZ	**Mangatainoka R**	**1.99**	**181**	P	Pn	00 22 25.2	-0.5
MRZ				S	Sn	00 22 50.6	-2.1
BFZ	**Birch Farm**	**2.07**	**166**	P	Pn	00 22 23.0	-3.6
PUZ	**Puketiti**	**2.17**	**75**	S	Sn	00 22 51.6	-4.7
OGWZ	**Otaki Gorge**	**2.17**	**189**	P	Pn	00 22 27.7	-0.1
KIW	**Kapiti Island**	**2.26**	**193**	P	Pn	00 22 25.9	-3.0
WMGZ	**Waiomatatini S**	**2.37**	**70**	P	Pn	00 22 28.4	-1.8
CAW	**Cannon Point**	**2.47**	**189**	P	Pn	00 22 30.6	-0.8
DUWZ	**D'Urville Isla**	**2.50**	**211**	P	Pn	00 22 31.2	-0.6
TCW	**Tory Channel**	**2.74**	**201**	P	Pn	00 22 34.0	-0.7
MSWZ	**Moikau Station**	**2.76**	**186**	P	Pn	00 22 33.7	-1.3
PLWZ	**Palliser**	**2.91**	**185**	P	Pn	00 22 35.4	-1.6
TUWZ	**Tuamarina**	**3.04**	**204**	P	Pn	00 22 37.6	-0.9
NNZ	**Nelson**	**3.07**	**213**	P	Pn	00 22 37.7	-1.1
KHZ	**Kahutara**	**4.06**	**202**	P	Pn	00 22 50.2	-1.5

NEIC ***16*** *00:24:54.6±2.5,26.°7N±0.°1×110.°99W±0.°03,h10km±2km, Md4.1/6(MEX),Error ellipse: s-maj=18.6km s-min=4.7km az=183.0*

MEX ***16*** *00:24:56.4±0.3,26.°74N×110.°91W,h6km±7km,MD4.0*

ISC 16 00:24:54.7±1.5,26.°76N±0.°09×110.°98W±0.°05,h10km,n16, σ1§63/23,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUYB	**Guaymas**	**1.14**	**5**	*e*P	**Pb**	**00 25 15.2**	**-1.1**
GUYB				*e*S	**Sb**	**00 25 30.0**	**-1.2**
SRIG	**Santa Rosalia**	**1.25**	**297**	*e*P	**Pn**	**00 25 17.7**	**-0.5**
SRIG				*i* S	**Sb**	**00 25 34.2**	**-0.4**
SRIG	**Santa Rosalia**	**1.25**	**297**		**Pn**	**00 25 17.7**	**-0.5**
SRIG					**Sb**	**00 25 35.0**	**+0.4**
HSIG		**2.25**	**1**		**Pn**	**00 25 32.4**	**+0.5**
CGIG		**4.46**	**36**	*i* P	**Pn**	**00 26 02.6**	**+0.1**
CGIG				*i* S	**Sn**	**00 26 53.5**	**-1.0**
CGIG		**4.46**	**36**		Pn	00 26 06.3	+3.9
HPIG		**4.75**	**87**	*e*P	**Pn**	**00 26 05.8**	**-0.7**
HPIG				*i* S	**Sn**	**00 26 59.1**	**-2.8**
HPIG		**4.75**	**87**		**Pn**	**00 26 06.7**	**+0.1**
HPIG		**4.75**	**87**	Pn	**Pn**	**00 26 06.8**	**+0.3**
319A	**Douglas**	**4.83**	**18**	Pn	**Pn**	**00 26 10.0**	**+2.4**
319A					**Sn**	**00 27 00.1**	**-3.5**
TUC	**Tucson**	**5.53**	**2**	Pn	**Pn**	**00 26 17.8**	**+0.6**
TUC					**Sn**	**00 27 19.7**	**-1.1**
MNTX	**Cornudas Mount**	**6.94**	**44**	Pn	**Pn**	**00 26 37.2**	**+0.9**
MNTX				Sn	**Sn**	**00 27 56.5**	**+1.2**
TX31	**Lajitas Ar. Si**	**6.95**	**67**

comp=Z,1.7nm,0.4s,baz=17,slow=11,SNR=22
MKAR Makanchi Array 69.18 323 P P 00 55 54.2 -0.3
comp=Z,0.5nm,1.0s,baz=97,slow=7.4,SNR=2.7

NIED ***16*** *01:12:00,40.°10N×142.°70E,h35km,Mw5.0 Best double couple: M₀4.05000×10¹⁶ NP1:φ₈23.00000°,δ65.00000°, λ100.00000°. NP2:φ₈180.00000°,δ27.00000°,λ69.00000°. BJI* ***16*** *01:12:13.0±0.0,39.°97N×142.°76E,h31km,mB5.1/58, mb5.2/81,Ms4.8/80,Ms7 4.6/76*
JMA ***16*** *01:12:15.4±0.1,40.°06N×142.°72E,h28km±1km,M5.1 Broadband fault plane solution: P waves. NP1: φ₈183.00000°,δ36.00000°,λ90.00000°. NP2:φ₈3.00000°, δ54.00000°,λ90.00000°. Principal axes: T Plg81.0000°, Azm273.0000°; N Plg0.0000°, Azm3.0000°; P Plg9.0000°, Azm93.0000°;*
JMA Felt III J1.
MOS ***16*** *01:12:15.4±0.9,40.°13N×142.°77E,h40km,mb5.4/57, MS4.6/10 Error ellipse: s-maj=5.7km s-min=3.7km az=101.8*
IDC ***16*** *01:12:17.0±0.5,40.°07N×142.°73E,h37km±4km,mb4.7/39, mb1 4.8/45,mb1mx4.8/55,mbtmp4.9/45,ML4.2/6,MS4.3/35, Ms1 4.3/35,ms1mx4.1/48,Error ellipse: s-maj=10.7km s-min=9.7km az=125.0*
NEIC ***16*** *01:12:17.7±1.4,40.°12N±0.°06×142.°8E±0.°1,h52km±5km, mb5.1/223,Error ellipse: s-maj=14.2km s-min=7.2km az=119.0*
GCMT ***16*** *01:12:17.7±0.2,40.°17N±0.°01×142.°84E±0.°02,h37km, MW5.1/115,Moment Tensor Solution. s71,c86; s115,c167; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr4.09±.17; Mθθ-0.33±.11; Mφφ-3.75±.11; Mrθ1.57±.10; Mθφ-1.16±.07; Mφr3.04±.11; Best double couple: M₀5.33900×10¹⁶ NP1:φ₈191.00000°,δ26.00000°, λ78.00000°. NP2:φ₈24.00000°,δ65.00000°,λ96.00000°. Principal axes: T 5.3570, Plg70.0000°, Azm305.0000°; N -0.0300, Plg5.0000°, Azm201.0000°; P -5.3200, Plg20.0000°, Azm109.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***16*** *01:12:20.9±0.0,40.°74N×143.°14E,h33km,mb5.3,Ms4.5*
ISC 16 01:12:15.4±0.4, 40.°08N±0.°03×142.°76E±0.°03, h28km±2km, h28km:pP-P,n878,σ1$28/847,mb5.2/247,MS4.6/56, 91C-46D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.71**	**259**	⇓P		**Pb**	**ISC**	**01 12 28.5**	**-0.6**
JTH				S		**Sb**	**ISC**	**01 12 37.6**	**-0.9**
JKEN	**Kujiedanarisaw**	**0.82**	**279**	⇓P		**Pb**	**ISC**	**01 12 29.9**	**-1.1**
MIYJ	**Miyakonagasawa**	**0.89**	**236**	⇓P		**Pb**	**ISC**	**01 12 31.0**	**-1.0**
MIYJ				eS		**Sb**	**ISC**	**01 12 42.3**	**-1.3**
JANG	**Nango**	**1.00**	**287**	⇓P		**Pn**		**01 12 32.9**	**-0.7**
JKZ	**Kuzumaki**	**1.10**	**265**	⇓P		**Pn**		**01 12 34.7**	**-0.4**
JKZ				eS		**Sn**		**01 12 48.6**	**-0.8**
JOM	**Ohasama**	**1.29**	**242**	⇓P		**Pn**		**01 12 37.4**	**-0.1**
JOM				eS		**Sn**		**01 12 53.8**	**0.0**
OFUJ	**Ofunato**	**1.31**	**221**	P		**Pn**		**01 12 37.5**	**-0.3**
OFUJ				eS		**Sn**		**01 12 54.0**	**-0.4**
JARK	**Aomorirokkasho**	**1.41**	**311**	⇓P		**Pn**		**01 12 39.6**	**+0.4**
JSZI	**Iwateshizukuis**	**1.43**	**257**	⇓P		**Pn**		**01 12 40.4**	**+0.9**
JTM	**Tenmabayashi**	**1.47**	**299**	⇓P		**Pn**		**01 12 40.7**	**+0.6**
JTM				eS		**Sn**		**01 12 59.4**	**+1.0**
JAHD	**Aomorihigashid**	**1.60**	**318**	⇓P		**Pn**		**01 12 42.5**	**+0.6**
JKMT	**Kesennumamotoy**	**1.61**	**219**	⇓P		**Pn**		**01 12 42.5**	**+0.5**
JAH	**Hinai**	**1.64**	**274**	⇓P		**Pn**		**01 12 43.2**	**+0.9**
JAH				eS		**Sn**		**01 13 03.4**	**+1.0**
JMK	**Ichinoseki**	**1.64**	**227**	⇓P		**Pn**		**01 12 43.1**	**+0.7**
JMK				eS		**Sn**		**01 13 03.6**	**+1.0**
JRG	**Rokugo**	**1.78**	**248**	⇓P		**Pn**		**01 12 45.0**	**+0.7**
JOT	**Ohata**	**1.84**	**315**	⇓P		**Pn**		**01 12 46.1**	**+1.0**
JHHS	**Hirosakihyakuz**	**1.92**	**288**	⇓P		**Pn**		**01 12 48.0**	**+1.7**
ERM	**Erimo**	**1.96**	**9**	*c* iP		**Pn**		**01 12 47.8**	**+1.1**
ERM	**Erimo**	**1.96**	**9**			**Pn**		**01 12 47.4**	**+0.7**
ERM					Sn	**Sn**		**01 13 08.5**	**-1.8**
JIO	**Ouri**	**1.96**	**215**	⇑P		**Pn**		**01 12 47.2**	**+0.4**
JNTW	**Noshirotokiwa**	**2.00**	**276**	P		**Pn**		**01 12 48.6**	**+1.3**
JSI2	**Shiura 2**	**2.04**	**299**	⇓P		**Pn**		**01 12 49.2**	**+1.3**
JIW	**Iwasaki**	**2.17**	**285**	⇓P		**Pn**		**01 12 51.2**	**+1.6**
JKB	**Kayabe**	**2.23**	**325**	⇑P		**Pn**		**01 12 51.7**	**+1.2**
JOU	**Okura**	**2.37**	**224**	P		**Pn**		**01 12 53.4**	**+1.0**
JYM2	**Yakumo 2**	**2.72**	**319**	⇑P		**Pn**		**01 12 58.9**	**+1.7**
JMST	**Minamisoumatoc**	**2.77**	**212**	⇑P		**Pn**		**01 12 57.9**	**0.0**
JAW	**Awa shima**	**3.17**	**240**	P		**Pn**		**01 13 05.2**	**+1.7**
JHST	**Hiyamasetana**	**3.19**	**318**	P		**Pn**		**01 13 05.9**	**+2.2**
JAR	**Ashorobuto**	**3.30**	**13**	⇑P		**Pn**		**01 13 05.5**	**+0.3**
JNS	**Sasagawa**	**3.51**	**231**	P		**Pn**		**01 13 09.9**	**+1.8**
JFY	**Yanaizu**	**3.58**	**223**	P		**Pn**		**01 13 11.0**	**+1.9**
NMR	**Nemuro--Hokkai**	**3.96**	**33**	⇓*i*P		**Pn**		**01 13 13.9**	**-0.4**
NMR				eS		**Sn**		**01 13 56.0**	**-3.8**
ASAJ	**Asahikawa**	**4.03**	**358**	Pn		**Pn**		**01 13 16.9**	**+1.7**
	30nm,0.3s,baz=217,slow=9.2,SNR=105								
ASAJ					Sn	**Sn**		**01 14 03.9**	**+2.4**
	80nm,0.3s,baz=213,slow=32,SNR=6.3								
JKA	**Kamikawa-asahi**	**4.03**	**358**			**Pn**		**01 13 16.9**	**+1.7**
JKA						**Sn**		**01 14 03.9**	**+2.4**
JSD	**Sado**	**4.06**	**241**	P		**Pn**		**01 13 17.1**	**+1.5**
JIZZ	**Izumozaki**	**4.06**	**232**	P		**Pn**		**01 13 18.5**	**+2.8**
JHK	**Hiroka**	**4.07**	**227**	P		**Pn**		**01 13 17.7**	**+1.9**
GLVR	**Golovnino**	**4.19**	**28**	*e*P		**Pn**		**01 13 18.2**	**+0.8**
GLVR				eS		**Sn**		**01 14 03.6**	**-1.9**
GLVR					pmax	pmax			
	comp=Z,729nm,0.4s								
GLVR					pmax	pmax			
	comp=N,409nm,0.3s								
GLVR					pmax	pmax			
	comp=E,270nm,0.3s								
GLVR					smax	smax			
	comp=N,3μm,0.8s								
GLVR					smax	smax			
	comp=E,3μm,0.7s								
JAG	**Ashikaga**	**4.49**	**217**	⇑P		**Pn**		**01 13 22.8**	**+1.3**
GRPR	**Tuman**	**4.50**	**29**	*e*P		**Pn**		**01 13 22.4**	**+0.7**
GRPR				eS		**Sn**		**01 14 11.0**	**-2.2**
GRPR					pmax	pmax			
	comp=Z,847nm,0.4s								
GRPR					pmax	pmax			
	comp=N,363nm,0.2s								
GRPR					smax	smax			
	comp=N,4μm,0.5s								
GRPR					smax	smax			
	comp=E,2μm,0.4s								
GRPR					MLR	MLR			
	comp=Z,3μm,9.0s								
GRPR					MLR	MLR			
	comp=N,4μm,13.0s								
YUK	**Yuzh-Kuril'sk**	**4.57**	**29**	*c* iP		**Pn**		**01 13 23.1**	**+0.4**
YUK				*i* S		**Sn**		**01 14 12.5**	**-2.3**
YUK					pmax	pmax			
	comp=E,664nm,0.6s								
YUK					pmax	pmax			
	comp=Z,931nm,0.6s								
YUK					pmax	pmax			
	comp=N,230nm,0.5s								
YUK					smax	smax			
	comp=N,3μm,0.5s								
YUK					smax	smax			
	comp=E,3μm,0.5s								
YUK					smax	smax			
	comp=N,7μm,0.9s								
YUK					smax	smax			
	comp=E,7μm,1.1s								
YUK					MLR	MLR			
	comp=Z,1μm,15.0s								
YUK					MLR	MLR			
	comp=E,1μm,11.0s								
YUK					MLR	MLR			
	comp=N,873nm,16.0s								
JJN	**Nakama**	**4.67**	**232**	P		**Pn**		**01 13 26.8**	**+2.7**
JGK	**Kuni**	**4.78**	**224**	⇑P		**Pn**		**01 13 28.4**	**+2.8**
SHO	**Shikotan**	**4.85**	**37**	*d* iP		**Pn**		**01 13 25.4**	**-1.0**
SHO				*i* S		**Sn**		**01 14 16.7**	**-4.9**
SHO					pmax	pmax			
	comp=Z,117nm,0.4s								
SHO					pmax	pmax			
	comp=N,48nm,0.3s								
SHO					pmax	pmax			
	comp=E,112nm,0.3s								
SHO					smax	smax			
	comp=N,1μm,0.7s								
SHO					smax	smax			
	comp=E,621nm,0.4s								
SHO					MLR	MLR			
	comp=Z,1μm,15.0s								
SHO					MLR	MLR			
	comp=E,710nm,9.0s								
SHO					MLR	MLR			
	comp=N,274nm,6.0s								
JSZ	**Suzu**	**4.97**	**240**	P		**Pn**		**01 13 30.0**	**+1.8**
MJAR	**Matsushiro Arr**	**5.03**	**227**	Pn		**Pn**		**01 13 31.6**	**+2.6**
	comp=N,4.9nm,0.3s,baz=31,slow=13,SNR=438								
MJAR					LR	LR		01 15 41.3	
	comp=N,5μm,19.8s,baz=65,slow=41								
MJB9	**Matsu-Tunnel**	**5.03**	**227**			**Pn**		**01 13 31.5**	**+2.4**
MAJO	**Matsushiro**	**5.03**	**227**	⇑*i*P		**Pn**		**01 13 31.6**	**+2.6**
MAJO	**Matsushiro**	**5.03**	**227**			**Pn**		**01 13 31.6**	**+2.6**
MAJO					Sn	**Sn**		**01 14 28.9**	**+2.6**
MAT	**Matsushiro**	**5.03**	**227**	P		**Pn**		**01 13 31.5**	**+2.5**
MAT	**Matsushiro**	**5.03**	**227**	P		**Pn**		**01 13 31.6**	**+2.5**
MAT				eS		**Sn**		**01 14 27.6**	**+1.4**
JHG	**Hegura jima**	**5.07**	**246**	⇓P		**Pn**		**01 13 31.8**	**+2.3**
JNG	**Nsakai**	**5.19**	**226**	⇑P		**Pn**		**01 13 33.8**	**+2.5**
JNT	**Takato**	**5.57**	**222**	P		**Pn**		**01 13 38.5**	**+2.0**
JGN	**Niukaw**	**5.77**	**230**	P		**Pn**		**01 13 42.1**	**+2.9**
JHTM	**Izuhatsuma**	**5.92**	**211**	P		**Pn**		**01 13 41.2**	**0.0**
JNY	**Yasuok**	**6.11**	**221**	P		**Pn**		**01 13 45.8**	**+1.9**
SHZ3	**Shizuoka 3**	**6.17**	**217**	P		**Pn**		**01 13 45.8**	**+1.0**
JGF	**Kuroka**	**6.19**	**225**	P		**Pn**		**01 13 47.4**	**+2.5**
JKG	**Kaga**	**6.33**	**235**	P		**Pn**		**01 13 50.0**	**+3.2**
KUR	**Kuril'sk**	**6.38**	**34**	*c* iP		**Pn**		**01 13 48.0**	**+0.6**
KUR				*i* S		**Sn**		**01 14 57.3**	**-1.9**
KUR					pmax	pmax			
	comp=E,116nm,0.4s								
KUR					pmax	pmax			
	comp=Z,340nm,0.4s								
KUR					pmax	pmax			
	comp=N,107nm,0.2s								
KUR					pmax	pmax			
	comp=Z,1μm,3.2s								
KUR					smax	smax			
	comp=N,703nm,1.1s								
KUR					smax	smax			
	comp=E,560nm,1.1s								
INU	**Inuyama**	**6.56**	**226**			**Pn**		**01 13 51.5**	**+1.4**
TEY	**Ternei**	**6.72**	**319**	⇑*e*P		**Pn**		**01 13 54.6**	**+2.4**
TEY					pmax	pmax			
	comp=E,250nm,0.7s								
TEY					pmax	pmax			
	comp=N,280nm,0.6s								
TEY					pmax	pmax			
	comp=Z,290nm,0.6s								
TEY					MLR	MLR			
	comp=E,150nm,16.0s								
TEY					MLR	MLR			
	comp=N,100nm,19.0s								
TEY					MLR	MLR			
	comp=Z,300nm,16.0s								
YSS	**Yuzh-Sakhalins**	**6.87**	**360**	⇑*e*P		**Pn**		**01 13 55.7**	**+1.5**
YSS				*e*S		**Sn**		**01 15 13.5**	**+2.1**
YSS					pmax	pmax			
	comp=Z,150nm,0.7s								
YSS					smax	smax			
	comp=N,170nm,1.0s								
YSS					MLR	MLR			
	comp=Z,2μm,11.0s								
YSS					MLR	MLR			
	comp=N,2μm,16.0s								
YSS					MLR	MLR			
	comp=E,900nm,16.0s								
YSS	**Yuzh-Sakhalins**	**6.87**	**360**			**Pn**		**01 13 54.3**	**+0.1**
JFM	**Mihama**	**7.03**	**232**	P		**Pn**		**01 13 59.5**	**+3.0**
VLA	**Vladivostok**	**8.70**	**294**	*i* P		**Pn**		**01 14 21.4**	**+2.1**
USA0B	**Ussuriysk Arra**	**9.00**	**301**	*c i*P		**Pn**		**01 14 26.5**	**+3.1**
USA0B	**Ussuriysk Arra**	**9.00**	**301**			**Pn**		**01 14 26.2**	**+2.8**
USRK	**Ussuriysk Ar.**	**9.00**	**301**	Pn		**Pn**		**01 14 25.8**	**+2.4**
	baz=112,slow=14,SNR=83								
USRK					LR	LR		01 17 47.5	
	comp=E,4μm,18.7s,baz=110,slow=37								
MSHR	**Mys Shultsa**	**9.08**	**290**	*i* P		**Pn**		**01 14 26.4**	**+1.9**
MDJ	**Mudanjiang**	**10.75**	**299**	P		**Pn**		**01 14 50.8**	**+3.4**
MDJ				pP				01 14 58.6	
MDJ				sP				01 15 05.5	
MDJ				S		**Sn**		**01 16 50.5**	**+3.8**
MDJ				sS				01 17 00.5	
MDJ					pmax	pmax			
	comp=E,150nm,1.0s								
MDJ					pmax	pmax			
	comp=E,350nm,4.4s								
MDJ					LR	LR			
	comp=E,1μm,16.4s								
MDJ					LR	LR			
	comp=E,4μm,15.7s								
MDJ					LR	LR			
	comp=E,5μm,17.8s								
MDJ	**Mudanjiang**	**10.75**	**299**			**Pn**		**01 14 48.9**	**+1.5**
TYV	**Tymovskoe**	**10.78**	**360**	*e*P		**Pn**		**01 14 48.9**	**+1.1**
TYV				*e*S		**Sn**		**01 16 48.7**	**+1.2**
TYV					pmax	pmax			
	comp=Z,21nm,1.0s								
TYV					smax	smax			
	comp=N,18nm,1.1s								
TYV					MLR	MLR			
	comp=Z,3μm,21.0s								
GRNR	**Gornyy**	**11.57**	**340**	⇓*i*P		**Pn**		**01 15 00.5**	**+1.9**
GRNR				*e*S		**Sn**		**01 17 09.7**	**+2.8**
GRNR					pmax	pmax			
	comp=Z,10.0nm,0.9s								
GRNR					smax	smax			
	comp=N,6.0nm,1.0s								
GRNR					MLR	MLR			
	comp=Z,870nm,13.0s								
JNU	**Nakatsue**	**11.80**	**238**	Pn		**Pn**		**01 15 02.9**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=96,slow=7.3,SNR=13								
JNU					LR	LR		01 19 34.1	
	comp=Z,2μm,21.9s,baz=40,slow=37								
KSRS	**Korea Array**	**11.88**	**262**	Pn		**Pn**		**01 15 05.4**	**+2.6**
	comp=Z,2.4nm,0.3s,baz=76,slow=13,SNR=65								
KSRS					LR	LR		01 19 13.3	
	comp=Z,2μm,20.1s,baz=74,slow=35								
KS19	**Wonju Array Si**	**11.91**	**262**			**Pn**		**01 15 06.5**	**+3.2**
KLR	**Kul'dur**	**12.04**	**323**	*i* P		**Pn**		**01 15 06.3**	**+1.3**
KLR					pmax	pmax			
	comp=Z,19nm,0.9s								
KLR	**Kul'dur**	**12.04**	**323**	Pn		**Pn**		**01 15 05.9**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=133,slow=13,SNR=24								
KLR					LR	LR		01 19 56.9	
	comp=Z,3μm,18.2s,baz=138,slow=38								
TJN	**Taejon**	**12.66**	**258**	*c*eP		**Pn**		**01 15 16.7**	**+3.2**
CN2	**Changchun**	**13.41**	**292**	*e*P		**Pn**		**01 15 26.8**	**+3.0**
CN2				*e*S		**Sn**		**01 17 55.3**	**+3.4**
CN2					pmax	pmax			
	comp=Z,20nm,1.3s								
CN2					pmax	pmax			
	comp=Z,200nm,4.0s								
CN2					LR	LR			
	comp=Z,980nm,19.0s								
CN2					LR	LR			
	comp=Z,1μm,19.0s								
CN2					LR	LR			
	comp=Z,2μm,18.0s								
SNY	**Shenyang**	**14.61**	**283**	⇑P		**Pn**		**01 15 39.1**	**-0.9**
SNY					pmax	pmax			
	comp=Z,21nm,0.6s								
SNY					pmax	pmax			
	comp=Z,270nm,5.7s								
SNY					LR	LR			
	comp=Z,760nm,15.9s								
SNY					LR	LR			
	comp=Z,2μm,18.6s								
SNY					LR	LR			
	comp=Z,3μm,19.4s								
DL2	**Dalian**	**16.36**	**273**	P		**Pn**		**01 16 02.8**	**-0.2**
DL2				pP		**pP**		**01 16 12.5**	**-0.3**
DL2				S		**Sn**		**01 19 02.9**	**-0.7**
DL2				SS		**SnSn**		**01 19 22.8**	**+6.3**
DL2					pmax	pmax			
	comp=Z,52nm,0.6s								
DL2					pmax	pmax			
	comp=Z,250nm,4.5s								
DL2					LR	LR			
	comp=Z,440nm,14.4s								
DL2					LR	LR			
	comp=Z,890nm,15.9s								
DL2					LR	LR			
	comp=Z,1μm,17.4s								
PEA0B	**Petropavlovsk-**	**16.54**	**33**	P		**Pn**		**01 16 03.0**	**-2.2**
PEA0B					pmax	pmax			
	comp=Z,23nm,1.1s								
PEA0B	**Petropavlovsk-**	**16.54**	**33**	Pn		**Pn**		**01 16 03.0**	**-2.2**
PETK	**Petropavlovsk-**	**16.54**	**33**	Pn		**Pn**		**01 16 03.1**	**-2.1**
	comp=Z,0.5nm,0.3s,baz=207,slow=12,SNR=6.6								
PETK					LR	LR		01 22 54.1	
	comp=Z,447nm,21.1s,baz=227,slow=38								
PET	**Petropavlovsk**	**16.89**	**35**	*e*P		**P**		**01 16 11.9**	**+0.5**
PET				*e*S		**Sn**		**01 19 17.5**	**+1.3**
PET					MLR	MLR			
	comp=Z,1μm,17.0s								
PET					MLR	MLR			
	comp=Z,2μm,17.0s								
ZEA	**Zeya**	**17.23**	**328**	*e*P		**Pn**		**01 16 12.5**	**-1.4**
ZEA					pmax	pmax			
	comp=N,79nm,1.2s								
ZEA					pmax	pmax			
	comp=Z,81nm,0.9s								
ZEA					MLR	MLR			
	comp=Z,2μm,17.0s								
ZEA					MLR	MLR			
	comp=E,700nm,15.0s								
ZEA					MLR	MLR			
	comp=N,2μm,18.0s								
HIA	**Hailar**	**18.71**	**307**	*c* iP		**P**		**01 16 29.6**	**-1.9**
HIA					pmax	pmax			
	comp=Z,306nm,0.8s								
HIA	**Hailar**	**18.71**	**307**	P		**P**		**01 16 29.7**	**-1.9**
SSE	**Sheshan**	**19.67**	**250**	P		**P**		**01 16 41.1**	**-1.0**
SSE					IAmb	IAmb		01 16 49.3	
	comp=Z,71nm,0.8s								
MA2	**Magadan**	**20.16**	**12**	*c*eP		**P**		**01 16 47.1**	**-0.1**
MA2					pmax	pmax			
	comp=Z,24nm,0.7s								
MA2	**Magadan**	**20.16**	**12**	P		**P**		**01 16 47.1**	**-0.1**
	comp=Z,22nm,0.6s,baz=198,slow=11,SNR=12								
MA2	**Magadan**	**20.16**	**12**	P		**P**		**01 16 47.2**	**-0.1**
MA2					IAmb	IAmb		01 16 58.9	
	comp=Z,48nm,0.8s								
BJI	**Beijing**	**20.33**	**279**	P		**P**		**01 16 47.4**	**-1.9**
BJI				S		Sn		01 20 39.8	+0.3
BJI					pmax	pmax			
	comp=Z,29nm,1.4s								
BJI					LR	LR			
	comp=Z,610nm,14.2s								
BJI					LR	LR			
	comp=Z,1μm,16.4s								
BJI					LR	LR			
	comp=Z,980nm,22.3s								
BJT	**Baijiatuau**	**20.34**	**278**	P		**P**		**01 16 47.3**	**-2.1**
BJT					pmax	pmax			
	comp=Z,40nm,0.8s								
BJT	**Baijiatuau**	**20.34**	**278**	P		**P**		**01 16 47.3**	**-2.1**
BJT					IAmb	IAmb		01 16 53.5	
	comp=Z,40nm,0.8s								
TIA	**Tai'an**	**20.51**	**267**	P		**P**		**01 16 49.8**	**-1.5**
TIA				S		**S**		**01 20 34.8**	**-4.5**
TIA					pmax	pmax			
	comp=Z,34nm,0.8s								
TIA					LR	LR			
	comp=Z,520nm,14.6s								
TIA					LR	LR			
	comp=Z,1μm,17.2s								
TIA					LR	LR			
	comp=Z,2μm,16.9s								
NJ2	**Nanjing**	**20.88**	**255**	*e*P		**P**		**01 16 54.0**	**-1.3**
NJ2				pP		**sP**		**01 17 04.8**	**-1.2**
NJ2				sP		pP		01 17 11.8	+9.2
NJ2				S		**S**		**01 20 45.9**	**-0.8**
NJ2					pmax	pmax			
	comp=Z,100nm,1.1s								
NJ2					LR	LR			
	comp=Z,910nm,17.1s								
NJ2					LR	LR			
	comp=Z,710nm,11.4s								
NJ2					LR	LR			
	comp=Z,1μm,17.7s								
CIT	**Chita**	**23.36**	**310**	*e*P		**P**		**01 17 21.3**	**-0.1**
CIT				*e*				01 17 29.4	
CIT				*e*				01 17 55.7	
YAK	**Yakutsk**	**23.38**	**344**	*c i*P		**P**		**01 17 19.1**	**-2.3**
YAK				*e**PP		**pP**		**01 17 28.7**	**-0.2**
YAK				*e*				01 17 50.3	
YAK				*e*				01 21 05.2	
YAK				eS		**S**		**01 21 28.7**	**-3.6**
YAK				*e*SS		**SnSn**		**01 22 09.6**	**+1.2**
YAK					pmax	pmax			
	comp=Z,33nm,0.8s								
YAK					pmax	pmax			
	comp=E,9.0nm,1.0s								
YAK					pmax	pmax			
	comp=N,17nm,1.1s								
YAK					pmax	pmax			
	comp=Z,63nm,0.9s								
YAK					pmax	pmax			
	comp=N,44nm,1.0s								
YAK					pmax	pmax			
	comp=E,24nm,1.0s								
YAK					smax	smax			
	comp=N,394nm,1.8s								
YAK					smax	smax			
	comp=E,232nm,2.0s								
YAK	**Yakutsk**	**23.38**	**344**	P		**P**		**01 17 19.3**	**-2.1**
	comp=E,41nm,0.4s,baz=326,slow=0.4,SNR=32								
YAK					LR	LR		01 28 07.0	
	comp=E,355nm,18.2s,baz=148,slow=41								
YAK	**Yakutsk**	**23.38**	**344**	P		**P**		**01 17 19.1**	**-2.3**
SEY	**Seymchan**	**23.60**	**11**	*i* P		**P**		**01 17 23.2**	**-0.4**
SEY	**Seymchan**	**23.60**	**11**	P		**P**		**01 17 22.9**	**-0.7**
	comp=E,62nm,0.8s,baz=192,slow=7.1,SNR=22								
YHNB	**Yeheng**	**23.63**	**236**	P		**P**		**01 17 23.8**	**-0.5**
YHNB					IAmb	IAmb		01 17 36.1	
	comp=Z,33nm,0.8s								
HHC	**Hu-ho-hao-te**	**23.69**	**282**	*e*P		**P**		**01 17 22.3**	**-2.5**
HHC				pP		sP		01 17 34.3	-1.6
HHC				S		**S**		**01 21 33.3**	**-4.8**
HHC				sS		pS		01 21 48.1	+1.7
HHC					pmax	pmax			
	comp=Z,12nm,1.2s								
HHC					pmax	pmax			
	comp=Z,88nm,5.5s								
HHC					LR	LR			
	comp=Z,250nm,13.0s								
HHC					LR	LR			
	comp=Z,890nm,16.3s								
HHC					LR	LR			
	comp=Z,1μm,15.7s								
NACB	**Ninganchiao**	**23.85**	**235**	P		**P**		**01 17 22.9**	**-3.4**
NACB					IAmb	IAmb		01 17 24.1	
	comp=Z,23nm,0.6s								
SSLB	**Suanglung**	**24.53**	**235**	P		**P**		**01 17 29.6**	**-3.0**
SSLB					IAmb	IAmb		01 17 31.9	
	comp=Z,23nm,0.8s								
YULB	**Yu-li**	**24.60**	**234**	P		**P**		**01 17 32.1**	**-1.2**
YULB					IAmb	IAmb		01 17 47.0	
	comp=Z,27nm,0.8s								
WHN	**Wuhan**	**24.97**	**256**	⇓P		**P**		**01 17 36.0**	**-0.6**
WHN					pmax	pmax			
	comp=Z,160nm,0.6s								
WHN					LR	LR			
	comp=Z,3μm,19.4s								
WH

comp=Z,94nm,3.5s
XAN LR LR
comp=Z,300nm,13.8s
XAN LR LR
comp=Z,910nm,17.4s
XAN LR LR
comp=Z,930nm,14.9s
XAN Xi'an 27.56 268 P P 01 17 58.6 -1.4
XAN pmax pmax
comp=Z,18nm,0.6s
XAN Xi'an 27.56 268 P P 01 17 58.5 -1.4
XAN IAmb IAmb 01 18 02.2
comp=Z,18nm,0.6s
ENH Enshi 28.76 261 P P 01 18 10.2 -0.5
ENH IAmb IAmb 01 18 12.2
comp=Z,73nm,1.0s
IRK Irkutsk 28.95 308 *eP* **P 01 18 12.3 +0.1**
IRK pmax pmax
comp=Z,75nm,2.4s
H11N2 WAKE ISLAND Hy 28.98 127 T T 01 48 59.6
baz=318,slow=75,SNR=6234
H11N1 WAKE ISLAND Hy 28.99 127 T T 01 49 03.5
baz=318,slow=75,SNR=3109
H11N3 WAKE ISLAND Hy 28.99 127 T T 01 49 04.0
baz=318,slow=75,SNR=5380
TLY Talaya 29.25 306 *eP* **P 01 18 15.5 +0.7**
TLY *e* 01 19 24.7
TLY pmax pmax
comp=Z,85nm,1.3s
TLY MLR MLR
comp=Z,3µm,18.0s
TLY Talaya 29.25 306 LR LR 01 30 41.5
comp=Z,1µm,18.4s,baz=100,slow=38
TLY Talaya 29.25 306 P **P 01 18 12.6 -2.3**
TLY Talaya 29.25 306 P **P 01 18 17.3 +2.4**
ZAK Zakamensk 29.33 304 *eP* **P 01 18 15.3 -0.4**
ZAK pmax pmax
comp=Z,37nm,1.1s
H11S1 WAKE ISLAND Hy 29.80 129 T T 01 50 04.1
baz=320,slow=76,SNR=308
H11S3 WAKE ISLAND Hy 29.80 129 T T 01 50 07.6
baz=320,slow=76,SNR=255
H11S2 WAKE ISLAND Hy 29.81 129 T T 01 50 01.0
baz=320,slow=76,SNR=290
LZH Lanzhou 30.73 275 *eP* **P 01 18 28.1 -0.1**
LZH pP sP 01 18 39.5 +0.1
LZH sP pP 01 18 45.0 +8.9
LZH pmax pmax
comp=Z,29nm,1.1s
LZH pmax pmax
comp=Z,160nm,6.0s
LZH LR LR
comp=Z,810nm,9.2s
LZH LR LR
comp=Z,930nm,10.0s
LZH LR LR
comp=Z,1µm,10.8s
BILL Bilibino 30.81 17*c i*P **P 01 18 28.7 +0.4**
BILL *e**PP **sP 01 18 42.6 +3.1**
BILL *e* 01 19 34.4
BILL *e* 01 21 26.1
BILL pmax pmax
comp=Z,29nm,1.2s
BILL MLR MLR
comp=Z,464nm,19.0s
BILL Bilibino 30.81 17 P **P 01 18 28.8 +0.4**
BILL IAmb IAmb 01 18 30.2
comp=Z,17nm,0.9s
MOY Mondy 30.89 306 *eP* **P 01 18 29.8 +0.4**
MOY pmax pmax
comp=Z,55nm,2.1s
TIXI Tiksi 32.41 352*c i*P **P 01 18 42.2 -0.2**
TIXI pmax pmax
comp=Z,24nm,1.7s
TIXI Tiksi 32.41 352 P **P 01 18 42.1 -0.2**
comp=Z,6.8nm,0.5s,baz=180,slow=24,SNR=17
TIXI LR LR 01 34 31.5
comp=Z,287nm,18.3s,baz=156,slow=41
TIXI Tiksi 32.41 352 P **P 01 18 41.7 -0.7**
TIXI IAmb IAmb 01 18 54.9
comp=Z,19nm,0.7s
GTA Gaotai 32.80 283 ⇑P **P 01 18 46.1 -0.2**
GTA pP sP 01 18 58.8 +1.3
GTA sP pP 01 19 03.5 +9.3
GTA PcP **PcP 01 21 31.9 +0.9**
GTA S **S 01 23 58.1 -3.6**
GTA sS sS 01 24 19.3 +4.5
GTA PcS **PcS 01 25 17.0 +0.7**
GTA pmax pmax
comp=Z,22nm,1.3s
GTA pmax pmax
comp=Z,170nm,8.4s
GTA LR LR
comp=Z,520nm,20.6s
GTA LR LR
comp=Z,2µm,18.7s
GTA LR LR
comp=Z,2µm,17.5s
CD2 Chengdu 32.83 266 P **P 01 18 45.5 -1.1**
CD2 S **S 01 24 00.1 -2.1**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,280nm,5.1s
CD2 LR LR
comp=Z,1µm,14.7s
CD2 LR LR
comp=Z,720nm,13.7s
CD2 LR LR
comp=Z,1µm,13.7s
QIZ Qiongzhong 35.20 243 P **P 01 19 07.4 +0.2**
QIZ S **S 01 24 38.8 -0.1**
QIZ LR LR
comp=Z,520nm,18.2s
QIZ LR LR
comp=Z,480nm,13.5s
QIZ LR LR
comp=Z,670nm,12.9s
KMI Kunming 36.54 258 P **P 01 19 19.0 +0.1**
KMI pP sP 01 19 32.4 +2.2
KMI S **S 01 24 59.5 -0.4**
KMI pmax pmax
comp=Z,97nm,1.1s
KMI pmax pmax
comp=Z,290nm,4.2s
KMI LR LR
comp=Z,650nm,14.4s
KMI LR LR
comp=Z,870nm,15.4s
KMI LR LR
comp=Z,1µm,18.0s
KMI Kunming 36.54 258 P **P 01 19 19.1 +0.1**
KMI pmax pmax
comp=Z,75nm,0.8s
KMI Kunming 36.54 258 P **P 01 19 19.1 +0.1**
SLVN Son La 37.91 252 P **P 01 19 29.1 -1.2**
SLVN IAmb IAmb 01 19 34.5
comp=Z,30nm,0.8s
ANM Nome 38.46 33 P **P 01 19 34.6 +0.2**
ANM pmax pmax
comp=Z,20nm,0.9s
ANM Nome 38.46 33 P **P 01 19 34.6 +0.2**
ANM IAmb IAmb 01 19 50.3
comp=Z,20nm,0.9s
RDOG Red Dog Mine 40.32 28 P **P 01 19 49.2 -0.7**
WMQ Urumqi 40.49 294 *eP* **P 01 19 52.5 +0.8**
WMQ pP sP 01 20 03.4 +0.4
WMQ sP pP 01 20 10.0 +10
WMQ pmax pmax
comp=Z,49nm,0.9s
WMQ pmax pmax
comp=Z,30nm,3.6s
WMQ LR LR
comp=Z,280nm,16.5s
WMQ LR LR
comp=Z,360nm,20.3s
WMQ LR LR
comp=Z,480nm,20.3s
WMQ Urumqi 40.49 294 P **P 01 19 51.9 +0.1**
WMQ pmax pmax
comp=Z,72nm,0.9s
WMQ Urumqi 40.49 294 P **P 01 19 51.9 +0.1**
ZAA0 Zalesovo Array 40.71 310 P **P 01 19 53.5 +0.2**
ZALV Zalesovo Beam 40.71 310 *i* P **P 01 19 53.2 -0.1**
ZALV pmax pmax
comp=Z,70nm,0.5s
ZALV Zalesovo Beam 40.71 310 P **P 01 19 53.3 0.0**
comp=Z,70nm,0.5s,baz=90,slow=7.7,SNR=294
ZALV PcP **PcP 01 21 54.5 +0.2**
comp=Z,9.8nm,0.7s,baz=100,slow=2.9,SNR=3.7
ZALV LR LR 01 37 34.8
comp=Z,1µm,18.8s,baz=99,slow=37
LSA Lhasa 43.06 273 P **P 01 20 14.3 +1.0**
LSA Lhasa 43.06 273 P **P 01 20 13.4 0.0**
LSA pmax pmax
comp=Z,31nm,1.0s
LSA Lhasa 43.06 273 P **P 01 20 14.4 +1.0**
LSA Lhasa 43.06 273 P **P 01 20 13.4 0.0**
LSA IAmb IAmb 01 20 16.9
comp=Z,31nm,1.0s
LSA Lhasa 43.06 273 P **P 01 20 14.4 +1.1**
PBKT Sadao Pong 43.09 249 P **P 01 20 12.8 -0.3**
PBKT IAmb IAmb 01 20 14.3
comp=Z,34nm,1.2s
CHTO Chiang Mai 43.12 254 P **P 01 20 13.4 0.0**
CHTO pmax pmax
comp=Z,19nm,0.8s
CHTO Chiang Mai 43.12 254 P **P 01 20 13.4 0.0**
CHTO IAmb IAmb 01 20 17.4
comp=Z,19nm,0.8s
CHTO Chiang Mai 43.12 254 P **P 01 20 13.4 0.0**
CMAR Chiang Mai Arr 43.34 253 P **P 01 20 15.5 +0.3**
comp=Z,6.6nm,0.5s,baz=44,slow=7.2,SNR=35
CMAR PcP **PcP 01 22 04.4 +0.7**
comp=Z,2.0nm,0.3s,baz=353,slow=3.0,SNR=5.0
CMAR LR LR 01 38 01.9
comp=Z,160nm,18.8s,baz=46,slow=96
MK31 Makanchi Array 43.47 300 P **P 01 20 15.7 -0.2**
MK31 pmax pmax
comp=Z,36nm,0.9s
MK31 Makanchi Array 43.47 300 P **P 01 20 15.7 -0.2**
MK31 IAmb IAmb 01 20 17.1
comp=Z,36nm,0.8s
MKAR Makanchi Array 43.47 300 P **P 01 20 16.1 +0.1**
comp=Z,37nm,0.8s,baz=84,slow=9.7,SNR=330
MKAR LR LR 01 39 11.2
comp=Z,1µm,19.8s,baz=80,slow=37
MAKZ Makanchi 43.67 300 P **P 01 20 17.5 -0.1**
MAKZ Makanchi 43.67 300 P **P 01 20 17.4 -0.1**
MAKZ IAmb IAmb 01 20 20.9
comp=Z,45nm,0.8s
PPLA Purkeypile 44.08 37 P **P 01 20 19.4 -1.4**
KDAK Kodiak Island 44.15 44 P **P 01 20 20.2 -1.0**
KDAK pmax pmax
comp=Z,43nm,1.1s
KDAK Kodiak Island 44.15 44 P **P 01 20 22.3 +1.1**
comp=Z,16nm,0.9s,baz=300,slow=8.1,SNR=3.1
KDAK Kodiak Island 44.15 44 P **P 01 20 20.2 -1.0**
KDAK IAmb IAmb 01 20 35.9
comp=Z,43nm,1.1s
SHL Shillong 44.56 267 P **P 01 20 24.5 -0.6**
SHL pmax pmax
comp=Z,24nm,0.8s
SHL Shillong 44.56 267 P **P 01 20 24.5 -0.6**
SHL IAmb IAmb 01 20 27.0
comp=Z,24nm,0.8s
KTH Kantishna Hill 44.65 36 IAmb IAmb 01 20 41.3
comp=Z,39nm,1.0s
SUA Susitna One 44.80 39 IAmb IAmb 01 20 43.5
comp=Z,26nm,1.0s
KURK Kurchatov 44.95 306 P **P 01 20 27.6 -0.1**
KURK Kurchatov 44.95 306 P **P 01 20 27.4 -0.2**
KURK Kurchatov 44.95 306 P **P 01 20 27.8 +0.2**
COLD Coldfoot 44.98 30 P **P 01 20 27.9 +0.2**
KURBB Kurchatov Arra 45.02 306 P **P 01 20 28.3 0.0**
comp=Z,146nm,0.7s,baz=80,slow=8.3,SNR=622
BWN Browne 45.28 35 IAmb IAmb 01 20 45.7
comp=Z,47nm,0.8s
RND Reindeer 45.58 36 IAmb IAmb 01 20 47.1
comp=Z,34nm,1.2s
GHO Glory Hole Cre 45.65 38 IAmb IAmb 01 20 47.9
comp=Z,30nm,1.0s
COLA College 45.95 34 *i* P **P 01 20 37.0 +1.6**
COLA pmax pmax
comp=Z,16nm,0.8s
POKR Poker Plat Res 46.12 33 P **P 01 20 39.2 +2.5**
baz=273
PDGK Podgornoye 46.35 296 P **P 01 20 38.7 -0.3**
HDA Harding Lake 46.36 34 IAmb IAmb 01 20 53.0
comp=Z,24nm,1.1s
HDA Harding Lake 46.36 34 P **P 01 20 35.4 -3.3**
baz=274
ILAR Eielson Array 46.37 34 P **P 01 20 39.1 +0.3**
comp=Z,4.2nm,0.8s,baz=265,slow=6.3,SNR=40
ILAR pP **sP 01 20 48.9 -1.2**
comp=Z,11nm,0.8s,baz=277,slow=7.5,SNR=18
ILAR LR LR 01 42 00.7
comp=Z,154nm,19.8s,baz=292,slow=38
TAPN Taplejung 46.84 272 *eP* **P 01 20 43.6 +0.3**
comp=Z,75nm,0.8s
PRP Porcupine Dome 46.90 33 IAmb IAmb 01 20 54.5
comp=Z,19nm,1.0s
FYU Fort Yukon 46.95 31 IAmb IAmb 01 21 01.8
comp=Z,26nm,1.0s
ODAN Odare 47.34 272 *eP* **P 01 20 47.2 +0.1**
comp=Z,89nm,0.8s
RIDG Independent Ri 47.34 35 IAmb IAmb 01 20 58.9
comp=Z,17nm,1.1s
SCRK Sand Creek 47.69 35 IAmb IAmb 01 21 02.5
comp=Z,32nm,1.2s
DOT Dot Lake 47.70 35 P **P 01 20 48.0 -1.1**
DOT IAmb IAmb 01 21 03.5
comp=Z,11nm,1.0s
JIRN Jiri 47.85 273 *eP* **P 01 20 51.5 +0.2**
comp=Z,93nm,0.5s
RAMN Ramite 47.90 272 *eP* **P 01 20 51.6 +0.1**
comp=Z,155nm,0.8s
GUN Gumba 47.96 274 *eP* **P 01 20 52.3 +0.2**
comp=Z,256nm,0.6s
KSM Kuching 48.43 226 P **P 01 20 57.0 +1.7**
KKN Kakani 48.48 274 *eP* **P 01 20 56.1 +0.1**
comp=Z,239nm,0.7s
PKI Pulchoki 48.49 274 *eP* **P 01 20 56.0 -0.2**
comp=Z,9.7nm,0.8s
PKIN Phulchoki 48.50 274 *eP* **P 01 20 56.0 -0.1**
comp=Z,39nm,0.5s
DMN Daman 48.71 274 *eP* **P 01 20 57.8 +0.1**
comp=Z,101nm,0.8s
EGAK Eagle 48.81 34 IAmb IAmb 01 21 09.1
comp=Z,13nm,0.9s
GKN Gorkha 48.87 274 *eP* **P 01 20 58.8 0.0**
comp=Z,102nm,0.7s
TKM2 Tokmak 2 49.17 297 P **P 01 21 01.7 +0.7**
TKM2 Tokmak 2 49.17 297 P **P 01 21 01.9 +0.9**
SNR=72
BVAR Borovoye Array 49.35 311 P **P 01 21 02.4 +0.4**
comp=Z,56nm,0.5s,baz=73,slow=8.6,SNR=577
DANN Dangsing 49.37 275 *eP* **P 01 21 03.4 +0.6**
comp=Z,461nm,0.7s
BRVK Borovoye 49.40 311 P **P 01 21 02.4 0.0**
BRVK Borovoye 49.40 311 P **P 01 21 02.7 +0.3**
BRVK Borovoye 49.40 311 P **P 01 21 03.1 +0.7**
NRN Naryn 49.43 295 IAmb IAmb 01 21 07.4
comp=Z,17nm,0.8s
KBK Karagaybulak 49.71 296 P **P 01 21 05.8 +0.7**
SNR=133
KZA Kyzart 49.71 296 P **P 01 21 06.9 +1.5**
SNR=8.2
CHMS Chumysh 49.72 297 P **P 01 21 05.2 +0.2**
SNR=18
KOLN Koldanda 49.78 275 *eP* **P 01 21 06.0 +0.1**
comp=Z,122nm,0.9s
USP Ospenovka 49.79 297 P **P 01 21 05.4 -0.2**
SNR=49
AAK Ala-Archa 50.02 297 *i* P **P 01 21 07.4 -0.1**
AAK pmax pmax
comp=Z,22nm,0.5s
AAK Ala-Archa 50.02 297 P **P 01 21 07.7 +0.2**
comp=Z,24nm,0.4s,baz=98,slow=5.8,SNR=18
AAK Ala-Archa 50.02 297 P **P 01 21 07.8 +0.4**
SNR=13
AAK Ala-Archa 50.02 297 *i* P **P 01 21 07.8 +0.2**
SNR=19
AAK Ala-Archa 50.02 297 P **P 01 21 07.2 -0.3**
AAK Ala-Archa 50.02 297 P **P 01 21 07.7 +0.2**
UCH Uchtor 50.16 296 P **P 01 21 09.4 +0.5**
SNR=14
KSH Kashi 50.18 292 P **P 01 21 12.8 +4.1**
KSH sP sP 01 21 26.4 +6.4
KSH PP **PP 01 23 08.5 +4.7**
KSH S **S 01 28 21.4 +2.5**
KSH sS sS 01 28 42.1 +10
KSH ScS **ScS 01 30 58.4 +0.4**
KSH SS **SS 01 31 52.3 +0.2**
KSH pmax pmax
comp=Z,72nm,0.8s
KSH pmax pmax
comp=Z,500nm,5.3s
KSH LR LR
comp=Z,210nm,4.5s
KSH LR LR
comp=Z,170nm,4.1s
KSH LR LR
comp=Z,380nm,6.3s
EPYK Eagle Plains 50.37 31 IAmb IAmb 01 21 24.1
comp=Z,21nm,0.9s
EPYK Eagle Plains 50.37 31 P **P 01 21 11.8 +2.2**
baz=281
EKS2 Erkin-Say 50.51 297 P **P 01 21 11.4 +0.3**
SNR=10
AML Almayashu 50.76 296 P **P 01 21 14.3 +0.9**
SNR=48
INK Inuvik 51.20 28 P **P 01 21 17.2 +1.5**
comp=Z,6.7nm,0.5s,baz=288,slow=6.7,SNR=43
INK LR LR 01 47 03.2
comp=Z,245nm,18.8s,baz=290,slow=41
INK Inuvik 51.20 28 IAmb IAmb 01 21 18.3
comp=Z,15nm,0.9s
KULM Kulim 51.28 239 P **P 01 21 16.9 -0.1**
KULM IAmb IAmb 01 21 19.2
comp=Z,26nm,1.0s
KULM Kulim 51.28 239 P **P 01 21 18.0 +1.0**
IPM Ipoh 51.64 238 P **P 01 21 20.0 +0.2**
MYKOM Kota Tinggi 51.93 233 P **P 01 21 23.0 +1.1**
BTK Batken 53.59 295 IAmb IAmb 01 21 35.7
comp=Z,27nm,0.8s
SVE Sverdlovsk 53.59 317*d i*P **P 01 21 34.6 +0.9**
SVE pmax pmax
comp=Z,122nm,1.0s
SVE MLR MLR
comp=Z,2µm,16.0s
C36M Paulatuk 54.23 26 IAmb IAmb 01 21 56.6
comp=Z,12nm,0.7s
C36M Paulatuk 54.23 26 P **P 01 21 39.5 +1.4**
baz=289
PSI Prapat 54.28 238 P **P 01 21 38.9 -0.4**
PSI pmax pmax
comp=Z,25nm,1.0s
RPSI Rantau Prapat 54.35 238 P **P 01 21 38.9 -0.9**
RPSI IAmb IAmb 01 21 40.2
comp=Z,24nm,1.0s
CHLP Challavanipeta 54.51 265 *eP* **P 01 21 40.6 -0.3**
CHLP IAmb IAmb 01 21 41.8
comp=Z,10nm,0.8s
NIL Nilore 54.71 287 P **P 01 21 41.5 -0.7**
NIL pmax pmax
comp=Z,74nm,0.8s
NIL Nilore 54.71 287 P **P 01 21 41.5 -0.7**
NIL Nilore 54.71 287 P **P 01 21 43.2 +1.0**
ARU Arti 54.81 317*c i*P **P 01 21 42.9 +0.4**
ARU *PP **sP 01 21 53.6 -0.3**
ARU 01 22 46.0
ARU 01 23 46.5
ARU S **S 01 29 21.0 -0.4**
ARU pmax pmax
comp=Z,133nm,1.2s
ARU MLR MLR
comp=Z,2µm,16.0s
ARU Arti 54.81 317 P **P 01 21 42.9 +0.4**
comp=Z,15nm,0.7s,baz=65,slow=4.3,SNR=75
ARU Arti 54.81 317 P **P 01 21 42.5 0.0**
BKNI Bangkinang 54.81 235 P **P 01 21 42.7 -0.3**
AB31 Akbulak array 56.82 309 *i* P **P 01 21 57.0 0.0**
PVM Polavaram 57.12 265 *eP* **P 01 21 59.7 +0.1**
PVM IAmb IAmb 01 22 00.1
comp=Z,9.5nm,0.8s
KBL Kabul 57.35 290 P **P 01 22 00.9 -0.4**
KBL pmax pmax
comp=Z,170nm,0.9s
KBL Kabul 57.35 290 P **P 01 22 00.8 -0.4**
KBL Kabul 57.35 290 P **P 01 22 00.9 -0.4**
AKTO Aktyubinsk 57.45 311 P **P 01 22 01.6 +0.1**
comp=Z,33nm,0.8s,baz=75,slow=7.8,SNR=82
SPA0 Spitsbergen Ar 57.74 349 *eP* **P 01 22 03.6 +0.5**
SPITS Spitsbergen Ar 57.74 349 P **P 01 22 04.0 +0.8**
SPITS Spitsbergen Ar 57.74 349 P **P 01 22 04.0 +0.8**
comp=Z,7.8nm,0.7s,baz=95,slow=10,SNR=7.0
GGR Gangavaram 57.87 267 *eP* **P 01 22 04.6 -0.3**
GGR IAmb IAmb 01 22 05.5
comp=Z,12nm,1.0s
RPR Rampur 57.95 268 *eP* **P 01 22 05.4 -0.1**
RPR IAmb IAmb 01 22 06.1
comp=Z,15nm,0.9s
NOR Nord 58.08 357⇑ *i*P **P 01 22 05.9 +0.4**
comp=Z,19nm,1.0s
MYLAV Mylavaram 58.17 265 *eP* **P 01 22 07.6 +0.6**
MYLAV IAmb IAmb 01 22 08.0
comp=Z,17nm,0.7s
KIRV Kirov 58.48 322 P **P 01 22 09.1 +0.6**
comp=Z,43nm,0.5s,baz=72,slow=3.0,SNR=33
SRSP Sriramsagar 58.64 269 *eP* **P 01 22 10.0 -0.3**
SRSP IAmb IAmb 01 22 10.7
comp=Z,26nm,1.0s
PRGR Permogore 58.80 326⇑ *i*P **P 01 22 11.1 +0.4**
PRGR *e**PP **sP 01 22 23.5 +1.3**
PRGR pmax pmax
comp=Z,62nm,1.0s
ADKI Addanki 59.23 265 *eP* **P 01 22 14.3 0.0**
ADKI IAmb IAmb 01 22 15.1
comp=Z,6.2nm,0.8s
NJS Nagarjunasagar 59.31 266 *eP* **P 01 22 14.5 -0.4**
NJS IAmb IAmb 01 22 14.9
comp=Z,7.2nm,1.1s
HYB Hyderabad 59.37 267 *i* P **P 01 22 15.0 -0.4**
HYBB Hyderabad (bro 59.37 267 *eP* **P 01 22 15.0 -0.4**
HYBB IAmb IAmb 01 22 15.3
comp=Z,11nm,0.9s
RES Resolute Bay 59.39 15 IAmb IAmb 01 22 16.1
comp=Z,22nm,0.8s
DMPR Damasthipur 59.96 268 *eP* **P 01 22 19.0 -0.5**
DMPR IAmb IAmb 01 22 19.2
comp=Z,12nm,1.0s
WR0 Warramunga Arr 60.22 189 P **P 01 22 20.4 -0.5**
WRA Warramunga Arr 60.23 189 *i* P **P 01 22 20.3 -0.7**
WRA pmax pmax
comp=Z,6.0nm,0.6s
WRA Warramunga Arr 60.23 189 P **P 01 22 20.1 -0.9**
comp=Z,6.0nm,0.6s,baz=4.4,slow=6.8,SNR=50
WRA pP **sP 01 22 32.5 0.0**
comp=Z,51nm,0.8s,baz=4.8,slow=7.0,SNR=28
WRA LR LR 01 49 16.1
comp=Z,67nm,19.4s,baz=300,slow=37
APA Apatity 60.35 335⇓ *i*P **P 01 22 20.4 -1.0**
APA pmax pmax
comp=Z,14nm,0.7s
APA MLR MLR
comp=Z,600nm,18.0s
KLRI Killari 60.48 269 *eP* **P 01 22 22.5 -0.6**
KLRI IAmb IAmb 01 22 23.1
comp=Z,33nm,1.1s
TMCR Tamitsa 60.59 331 *eP* **P 01 22 21.8 -1.2**
TMCR pmax pmax
comp=Z,45nm,0.8s
YKA Yellowknife Ar 60.65 31 P **P 01 22 24.1 +0.7**
comp=Z,3.2nm,0.7s,baz=301,slow=6.6,SNR=56
YKA LR LR 01 50 01.0
comp=Z,92nm,20.7s,baz=0.0,slow=37
SKHT Srikalahasti 60.71 263 *eP* **P 01 22 25.0 +0.5**
SKHT IAmb IAmb 01 22 25.8
comp=Z,17nm,0.8s
HAMF Hanmerfest 61.30 341 *eP* **P 01 22 27.7 0.0**
ARCES ARCESS Array B 61.52 339 P **P 01 22 29.7 +0.4**
comp=Z,8.7nm,0.6s,baz=50,slow=8.0,SNR=62
ARCES LR LR 01 54 53.6
comp=Z,243nm,18.4s,baz=42,slow=42
ARE0 ARCESS Array S 61.52 339 *eP* **P 01 22 30.1 +0.7**
TULEG Thule 61.94 8 IAmb IAmb 01 22 33.0
comp=Z,25nm,0.9s
HRA Herat 62.29 293 IAmb IAmb 01 22 36.8
comp=Z,27nm,1.1s
POO Poona 62.32 272 *eP* **P 01 22 33.5 -2.0**
KTK1 Kautokeino 62.48 339 *eP* **P 01 22 36.2 +0.4**
DAG Danmarks Havn 62.83 355 *i* P **P 01 22 38.0 +0.1**
DAG pmax pmax
comp=Z,30nm,0.9s
DAG Danmarks Havn 62.83 355 *i* P **P 01 22 38.0 +0.1**
comp=Z,30nm,0.9s
TRO Tromso 63.18 341 *eP* **P 01 22 40.5 +0.2**

GEYT **Alibeck** 63.31 298 P **P** 01 22 41.9 +0.1
comp=Z,31nm,0.8s,baz=28,slow=3.5,SNR=70
GEYT pP **sP** 01 22 53.2 -0.1
comp=Z,18nm,0.8s,baz=83,slow=3.6,SNR=9.9
GEYT LR LR 01 52 13.6
comp=Z,293nm,18.1s,baz=10.0,slow=38
GEYT **Alibeck** 63.31 298 IAmb IAmb 01 22 42.9
comp=Z,28nm,0.9s
AS31 **Alice Springs** 63.95 189 P **P** 01 22 45.9 0.0
AS31 IAmb IAmb 01 23 00.6
comp=Z,7.1nm,0.7s
ASAR **Alice Springs** 63.95 189 P **P** 01 22 45.6 -0.4
comp=Z,4.0nm,0.7s,baz=3.6,slow=5.3,SNR=33
ASAR pP **sP** 01 22 57.8 +0.3
comp=Z,20nm,0.8s,baz=12,slow=6.5,SNR=25
ASAR LR LR 01 51 57.1
comp=Z,50nm,18.9s,baz=6.5,slow=37
D03D **Eldon** 64.27 49 P **P** 01 22 50.2 +2.3
baz=302
B05A **Bryant** 64.45 48 P **P** 01 22 50.0 +0.9
baz=302
STEI **Steigen** 65.34 341 *e*P **P** 01 22 54.5 0.0
MOS **Moscow** 65.44 323 *e*P **P** 01 22 54.9 -0.5
MOS *e* 01 23 07.1
MOS *e* 01 25 18.2
MOS pmax pmax
comp=Z,47nm,0.9s
MOS MLR MLR
comp=Z,700nm,17.0s
DZM **Mont Dzumac** 65.66 156 *e*S **S** 01 31 43.5 +2.2
comp=Z,82nm,25.0s
DZM **Mont Dzumac** 65.66 156 *e*LR LR 01 42 39.9
comp=Z,420nm,22.1s
DZM **Mont Dzumac** 65.66 156 LR LR 01 47 55.6
comp=Z,276nm,20.6s,baz=24,slow=33
VRH **Novokhopyorsk** 66.04 317 *e*P **P** 01 22 59.2 -0.1
VRH pmax pmax
comp=Z,80nm,0.6s
VRH pmax pmax
comp=N,10.0nm,0.4s
VRH pmax pmax
comp=E,30nm,0.6s
OBN **Obninsk** 66.30 323 *e*P **P** 01 23 00.9 0.0
OBN *e**PP **sP** 01 23 13.2 +0.8
OBN *e* 01 25 24.3
OBN *e*PPP PPP 01 26 59.8
OBN pmax pmax
comp=Z,79nm,1.7s
OBN MLR MLR
comp=Z,758nm,16.0s
OBN **Obninsk** 66.30 323 P **P** 01 23 01.1 +0.2
comp=Z,7.7nm,0.5s,baz=0.5,slow=8.3,SNR=7.5
H04A **Detroit Lake** 66.34 51 IAmb IAmb 01 23 16.8
comp=Z,17nm,1.1s
FINES **FINESS Array B** 66.62 332 P **P** 01 23 02.9 +0.1
comp=Z,42nm,0.7s,baz=51,slow=6.7,SNR=104
FINES LR LR 01 54 35.9
comp=Z,657nm,18.1s,baz=45,slow=38
LPSR **Galich'ya Gora** 66.65 320 *e*P **P** 01 23 03.5 +0.3
LPSR pmax pmax
comp=Z,90nm,0.8s
LPSR pmax pmax
comp=N,20nm,1.3s
LPSR pmax pmax
comp=E,10.0nm,0.6s
C09A **Chrisman Ranch** 66.85 46 IAmb IAmb 01 23 19.6
comp=Z,10nm,0.9s
MOR8 **Moi Rana** 66.88 340 *e*P **P** 01 23 03.5 -0.9
F07A **Phinny Hill Vi** 66.99 49 IAmb IAmb 01 23 21.6
comp=Z,11nm,0.8s
NEW **Newport** 67.22 46 P **P** 01 23 08.8 +1.8
baz=305
VSR **Storozhevoye** 67.35 319 *e*P **P** 01 23 07.5 -0.1
VSR pmax pmax
comp=Z,50nm,0.6s
VSR pmax pmax
comp=N,20nm,0.7s
VSR pmax pmax
comp=E,20nm,0.9s
MAK **Makhachkala** 67.43 308 *e*P **P** 01 23 07.7 -0.6
MAK *e* 01 25 35.6
MAK *e*PPP PPP 01 27 14.3
MAK *e*S **S** 01 32 02.3 0.0
MAK *e*SS **SS** 01 36 21.8 -0.1
MAK pmax pmax
comp=Z,135nm,1.6s
MAK MLR MLR
comp=Z,283nm,17.0s
VORD **Divnogorie** 67.43 318 *e*P **P** 01 23 08.3 +0.2
VORD pmax pmax
comp=N,50nm,1.5s
VORD pmax pmax
comp=Z,30nm,0.7s
VORD pmax pmax
comp=E,30nm,1.2s
SUMG **Summit** 67.64 0 P **P** 01 23 09.2 -0.4
SUMG pmax pmax
comp=Z,39nm,0.8s
SUMG **Summit** 67.64 0 *i* P **P** 01 23 10.0 +0.4
comp=Z,96nm,0.8s
SUMG **Summit** 67.64 0 P **P** 01 23 09.2 -0.4
L04D **Klamath Falls** 67.64 53 P **P** 01 23 11.8 +1.9
baz=304
J05D **Fort Rock, OR** 67.69 52 P **P** 01 23 12.3 +2.1
baz=305
AKT **Akhty** 68.12 306 *e*P **P** 01 23 12.8 -0.1
AKT *e* 01 23 36.4
AKT *e* 01 25 42.2
AKT pmax pmax
comp=Z,48nm,0.8s
GROC **Groznyy** 68.32 309 *e*P **P** 01 23 12.5 -1.4
GROC *e* 01 23 38.1
GROC *e* 01 25 43.4
GROC pmax pmax
comp=Z,18nm,0.6s
VSU **Vasula** 68.37 329 *ce*P **P** 01 23 14.3 +0.4
VSU pmax pmax
comp=Z,111nm,1.0s
VSU **Vasula** 68.37 329 *e*P **P** 01 23 13.9 0.0
NSS **Namsos** 68.81 339 *e*P **P** 01 23 16.9 +0.3
GOF **Gofitskoye** 68.86 311⇑ *e*P **P** 01 23 17.9 +0.6
GOF pmax pmax
comp=Z,101nm,0.8s
JTMT **Jette** 69.07 45 IAmb IAmb 01 23 34.1
comp=Z,13nm,1.0s
ZEI **Tsey** 69.69 309 *e*P **P** 01 23 20.5 -2.2
ZEI pmax pmax
comp=Z,22nm,0.7s
KIV **Kislovodsk** 69.72 311 *e*P **P** 01 23 23.5 +0.8
KIV pmax pmax
comp=Z,283nm,1.0s
KIV MLR MLR
comp=Z,1µm,18.0s
KIV **Kislovodsk** 69.72 311 ⇑P **P** 01 23 23.6 +0.8
KIV **Kislovodsk** 69.72 311 *i* P **P** 01 23 23.6 +0.9
SNR=32
KIV **Kislovodsk** 69.72 311 P **P** 01 23 22.9 +0.1
KIV **Kislovodsk** 69.72 311 P **P** 01 23 23.5 +0.8
KBZ **Khabaz** 69.73 310 P **P** 01 23 23.5 +0.9
comp=Z,36nm,0.8s,baz=57,slow=5.5,SNR=78
KBZ LR LR 01 56 38.6
comp=Z,385nm,20.4s,baz=38,slow=38
MSO **Missoula** 69.81 45 P **P** 01 23 24.5 +1.2
baz=307
TBLG **Delisi** 69.81 308 IAmb IAmb 01 23 24.6
comp=Z,33nm,0.8s
NEY **Neytrino** 70.12 310⇑ *i*P **P** 01 23 26.1 +0.8
NEY pmax pmax
comp=Z,5.0nm,0.6s
TBLU **Trondheim** 70.28 339 *e*P **P** 01 23 25.0 -0.7
IZAR **Zarasai** 70.41 328 *e*P **P** 01 23 26.8 +0.2
IZAR IAmb IAmb 01 23 28.3
comp=Z,23nm,0.6s
MICGM **Minsk** 70.57 326⇓ *e*P **P** 01 23 27.0 -0.6
MICGM PM 01 23 28.0
comp=Z,0.2nm,0.5s
MNK **Minsk** 70.57 326⇓ *e*P **P** 01 23 27.0 -0.6
MNK pmax pmax
comp=Z,220nm,0.5s
FFC **Flin Flon** 70.58 34 P **P** 01 23 27.6 -0.1
FFC pmax pmax
comp=Z,12nm,0.8s
FFC **Flin Flon** 70.58 34 P **P** 01 23 27.6 -0.1
FFC IAmb IAmb 01 23 29.3
comp=Z,12nm,0.8s
ISAL **Salakas** 70.58 327 *e*P **P** 01 23 27.9 +0.2
ISAL IAmb IAmb 01 23 29.6
comp=Z,35nm,0.7s
SLIT **Slitere, Latvi** 70.65 331 *e*P **P** 01 23 27.6 -0.5
SLIT IAmb IAmb 01 23 28.7
comp=Z,301nm,0.6s
IIGN **Ignalina** 70.69 327 *e*P **P** 01 23 28.8 +0.5
GNI **Garni** 70.74 306 P **P** 01 23 28.6 -0.6
GNI pmax pmax
comp=Z,23nm,0.9s
GNI **Garni** 70.74 306 *i* P **P** 01 23 30.4 +1.3
SNR=10
GNI **Garni** 70.74 306 P **P** 01 23 28.6 -0.6
GNI IAmb IAmb 01 23 37.5
comp=Z,23nm,0.8s
GNI **Garni** 70.74 306 P **P** 01 23 29.9 +0.8
AKH **Akhalkalaki** 70.75 308 ⇑P **P** 01 23 30.6 +1.4
AKH **Akhalkalaki** 70.75 308 IAmb IAmb 01 23 31.5
comp=Z,22nm,0.8s
NACGM **Naroch** 70.77 327 *e* **P** 01 23 29.0 +0.2
NACGM *e*LQ LQ 02 11 12.0
NACGM *e*LR LR 02 16 14.0
FCC **Fort Churchill** 70.81 28 IAmb IAmb 01 23 46.5
comp=Z,16nm,0.9s
WSAR **Wadi Sarin** 71.11 285 P **P** 01 23 31.9 +0.5
WBK **Wadi Bani Khal** 71.23 284 P **P** 01 23 32.8 +0.6
SNR=9.3
BANOM **Banah** 71.25 288 *i* P **P** 01 23 32.4 +0.1
SNR=15
BANOM **Banah** 71.25 288 P **P** 01 23 32.5 +0.2
SNR=6.7
SHME **Shamm** 71.29 289 *i* P **P** 01 23 32.5 -0.1
SNR=5.7
BIDO **Bidbid** 71.32 285 P **P** 01 23 34.0 +1.3
SNR=5.6
YERR **Yerington** 71.42 55 IAmb IAmb 01 23 48.9
comp=Z,14nm,1.2s
DLMT **Dillon** 71.45 46 IAmb IAmb 01 23 49.1
comp=Z,11nm,0.8s
PABE **Paberze** 71.51 328 *e*P **P** 01 23 33.7 +0.5
PABE IAmb IAmb 01 23 34.8
comp=Z,80nm,0.8s
MOL **Molde** 71.56 340 *e*P **P** 01 23 34.8 +1.4
DOMB **Dombas** 71.59 339 *e*P **P** 01 23 34.1 +0.4
STKA **Stephens Creek** 71.61 181 P **P** 01 23 34.3 +0.3
comp=Z,0.9nm,0.4s,baz=342,slow=7.5,SNR=4.3
STKA LR LR 01 54 23.2
comp=Z,73nm,21.9s,baz=22,slow=35
SMDO **Samad** 71.65 285 P **P** 01 23 34.6 -0.2
SNR=7.1
SOC **Sochi** 71.66 312 *e*P P 01 23 44.6 +10
SOC *e* 01 26 11.5
SOC *e*PPP PPP 01 28 04.0
SOC *e*S **SKiKP** 01 33 12.9 +1.9
SOC pmax pmax
comp=Z,29nm,0.8s
SOC MLR MLR
comp=Z,594nm,20.0s
MSFE **Esma-Masafi** 71.68 288 *i* P **P** 01 23 35.1 +0.2
SNR=7.4
HFS **Hagfors** 71.75 336 P **P** 01 23 34.6 -0.1
comp=Z,42nm,0.6s,baz=45,slow=6.5,SNR=193
NB2 **NORSAR Subarra** 71.78 337 P **P** 01 23 34.9 0.0
comp=Z,36nm,0.7s,baz=37,slow=6.2
NB2 **NORSAR Subarra** 71.78 337 P **P** 01 23 34.9 0.0
baz=37,slow=6.2
NOA **NORSAR Array B** 71.78 337 P **P** 01 23 35.1 +0.2
comp=Z,30nm,0.7s,baz=38,slow=6.1,SNR=118
NOA LR LR 01 59 54.8
comp=Z,248nm,18.5s,baz=30,slow=40
CLDR **Caldiran** 71.85 306 *e*P **P** 01 23 37.2 +1.2
HOQ **Hoqain** 71.88 286 P **P** 01 23 36.1 0.0
SNR=7.9
UOSS **Minazif** 71.89 288 *i* P **P** 01 23 36.0 -0.2
SNR=16
UOSS **Minazif** 71.89 288 P **P** 01 23 35.7 -0.4
UOSS IAmb IAmb 01 23 48.2
comp=Z,33nm,0.8s
UOSS **Minazif** 71.89 288 P **P** 01 23 35.3 -0.9
NC602 **NORSAR Array S** 71.93 337 *e*P **P** 01 23 35.6 -0.1
PBUR **Paburg** 71.94 330 *e*P **P** 01 23 36.0 +0.1
SENK **Senkaya-Erzuru** 71.95 308 *e*P **P** 01 23 37.8 +1.3
JMDO **Jabal Madar** 72.01 284 P **P** 01 23 36.6 -0.3
SNR=6.0
HATD **Hatta, Dubai** 72.02 288 *i* P **P** 01 23 37.2 +0.4
SNR=18
HATD **Hatta, Dubai** 72.02 288 P **P** 01 23 37.3 +0.4
SNR=12
NAO01 **NORSAR Array S** 72.04 337 IAmb IAmb 01 23 37.5
comp=Z,40nm,0.8s
SOHO **SOHO** 72.13 287 P **P** 01 23 37.5 0.0
SNR=9.3
ASHO **Ashiyiah** 72.15 287 *i* P **P** 01 23 37.8 +0.1
SNR=15
ASHO **Ashiyiah** 72.15 287 P **P** 01 23 37.8 +0.1
SNR=11
AGRB **Hanur-Agry** 72.16 307 *e*P **P** 01 23 39.2 +1.4
NAZ **Nazwa, Dubai** 72.26 288 P **P** 01 23 38.4 0.0
NVAR **Mina Array Bea** 72.34 55 P **P** 01 23 40.2 +1.4
comp=Z,1.6nm,0.8s,baz=286,slow=5.9,SNR=9.1
NVAR LR LR 01 48 32.3
comp=Z,110nm,21.5s,baz=312,slow=30
BSY **Bisya** 72.46 285 P **P** 01 23 39.8 +0.2
SNR=5.9
AKASG **Malin Array Be** 72.54 322 P **P** 01 23 39.5 0.0
comp=Z,24nm,0.6s,baz=45,slow=6.1,SNR=106
AKASG LR LR 01 59 07.4
comp=Z,156nm,20.8s,baz=40,slow=39
AKASG **Malin Array Be** 72.54 322 IAmb IAmb 01 23 40.1
comp=Z,5.5nm,0.7s
AKBB **Malin Array Si** 72.54 322 IAmb IAmb 01 23 40.5
comp=Z,38nm,0.8s
KOPR **Koprukoy-ERZUR** 72.60 308 *e*P **P** 01 23 41.7 +1.3
ARQ **Aragi** 72.61 286 P **P** 01 23 41.0 +0.6
SNR=6.6
ASUD **Al Ashush, Dub** 72.72 288 *i* P **P** 01 23 41.4 +0.3
SNR=7.9
ALNE **Al Ain** 72.75 287 *i* P **P** 01 23 41.2 0.0
SNR=9.1
OSL **Oslo** 72.82 337 *e*P **P** 01 23 41.9 +1.0
SUW **Suwalki** 72.89 328 IAmb IAmb 01 23 42.0
comp=Z,55nm,1.1s
YNR **Norris Junctio** 72.91 46 P **P** 01 23 41.2 -1.0
YNR **PcP** 01 23 57.6 -1.6
SKAR **Skarslia** 72.92 338 *e*P **P** 01 23 42.7 +1.0
MHTO **MHTO** 72.94 283 P **P** 01 23 42.6 +0.2
SNR=17
HYA **Hoyanger** 73.09 340 *e*P **P** 01 23 43.1 +0.5
H17A **Grant Village** 73.17 46 P **P** 01 23 46.8 +3.0
baz=310
CUKT **Cukurca** 73.20 305 *e*P **P** 01 23 44.1 +0.2
GURO **Guroymak-BITLI** 73.38 306 *e*P **P** 01 23 46.2 +1.3
KONO **Kongsberg** 73.39 337 P **P** 01 23 44.3 -0.1
KONO pmax pmax
comp=Z,48nm,1.2s
KONO **Kongsberg** 73.39 337 *e*P **P** 01 23 44.0 -0.4
KONO **Kongsberg** 73.39 337 P **P** 01 23 44.3 -0.1
KONO IAmb IAmb 01 23 46.2
comp=Z,48nm,1.1s
KARO **Karliova-Bingo** 73.51 308 *e*P **P** 01 23 46.6 +0.8
CWC **Cottonwood Cre** 73.69 56 P **P** 01 23 48.2 +1.4
baz=308
SIRT **Sirnak** 73.78 305 *e*P **P** 01 23 47.9 +0.7
GRAC **Grapevine Rang** 73.80 55 P **P** 01 23 49.3 +1.9
baz=308
SIM **Simferopol'** 73.90 316 *e*P **P** 01 23 48.5 +0.8
SIM 01 24 05.0
SIM pmax pmax
comp=Z,46nm,0.8s
SIM MLR MLR
comp=Z,220nm,14.4s
ASK **Askoy** 73.93 340 *e*P **P** 01 23 48.3 +0.8
BNGB **Bingl** 73.94 308 *e*P **P** 01 23 49.5 +1.3
BER **Bergen** 73.98 340 *e*P **P** 01 23 48.9 +1.1
ODD1 **Odda** 74.02 339 *e*P **P** 01 23 48.9 +0.7
R11A **Troy Canyon, C** 74.07 53 P **P** 01 23 50.5 +1.5
baz=309
SVAN **Silvan-Diyarba** 74.14 307 *e*P **P** 01 23 50.4 +1.1
MPMC **Manual Prospec** 74.30 56 P **P** 01 23 51.7 +1.2
baz=308
SEVA **Sevastopol** 74.41 315 ⇑P **P** 01 23 50.8 +0.2
FURC **Furnace Creek,** 74.44 55 P **P** 01 23 52.9 +1.9
baz=309
TPNV **Topopah Spring** 74.53 55 P **P** 01 23 53.5 +1.7
baz=309
DUG **Dugway, Tooele** 74.58 50 P **P** 01 23 51.9 0.0
DUG **Dugway, Tooele** 74.58 50 P **P** 01 23 51.9 0.0
baz=310
DUG **Dugway, Tooele** 74.58 50 P **P** 01 23 53.7 +1.8
baz=310
EDW2 **Edwards Air Fo** 74.70 57 P **P** 01 23 54.3 +1.7
baz=308
SORM **Soroca** 74.71 321 ⇑P **P** 01 23 52.2 -0.1
BW06 **Boulder Array** 74.79 47 P **P** 01 23 54.3 +1.0
baz=311
PDAR **Pinedale Array** 74.79 47 P **P** 01 23 54.0 +0.8
comp=Z,1.5nm,0.6s,baz=284,slow=1.7,SNR=18
PDAR LR LR 01 53 18.7
comp=Z,71nm,21.9s,baz=334,slow=33
SNART **Snartemo** 75.17 338 *e*P **P** 01 23 55.7 +0.9
GSC **Goldstone, Bar** 75.21 56 P **P** 01 23 57.0 +1.4
baz=309
KIS **Kishinev** 75.26 320 *e*P **P** 01 23 55.0 -0.5
KIS *e*L L 01 51 26.0
KIS LRM MLR 02 00 12.0
comp=Z,800nm,18.0s
KIS **Kishinev** 75.26 320 *e*P **P** 01 23 55.0 -0.5
KIS *e* 01 24 04.0
KIS MLR MLR
comp=Z,800nm,18.0s
KIS MLR MLR
comp=N,500nm,18.0s
KIS **Kishinev** 75.26 320 ⇑P **P** 01 23 55.5 0.0
MILM **Milestii Mici** 75.32 320 ⇑P **P** 01 23 55.7 -0.1
DIKM **Dikmen** 75.42 312 ⇑P **P** 01 23 58.0 +1.4
BEL **Belsk** 75.47 327 *e*P **P** 01 23 57.8 +1.1
BEL **Belsk** 75.47 327 *e*P **P** 01 23 57.8 +1.1
LVV **L'vov** 75.54 324 *e*P **P** 01 23 57.6 +0.5
LVV MLR MLR
comp=Z,500nm,18.0s
TOKT **Tokat** 75.55 311 *e*P **P** 01 23 58.4 +1.0
MALT **Malatya** 75.73 308 *e*P **P** 01 24 00.1 +1.6
IAS **Iasi** 75.74 320 ⇑P **P** 01 23 58.8 +0.5
HEC **Hector,Ludlow** 75.80 56 P **P** 01 24 00.7 +1.7
baz=309
GKP **Gorka Klasztor** 75.82 330 *e*P **P** 01 23 58.8 +0.2
GKP **Gorka Klasztor** 75.82 330 *e*P **P** 01 23 58.8 +0.2
LEOM **Leova** 75.91 320 ⇑P **P** 01 23 59.8 +0.6
BZK **Bozkurt** 75.93 313 ⇓P **P** 01 24 00.7 +1.3
VASR **Vaslui** 76.02 320 ⇑P **P** 01 24 00.8 +0.9
DARE **Darende-Malaty** 76.13 309 *e*P **P** 01 24 02.7 +1.9
GMRC **Granite Mounta** 76.26 56 P **P** 01 24 03.2 +1.6
baz=310
KWP **Kalwaria Pacla** 76.27 325 *e*P **P** 01 24 02.4 +1.1
KWP **Kalwaria Pacla** 76.27 325 *e*P **P** 01 24 02.4 +1.1
PRAR **RASCA** 76.27 321 ⇑P **P** 01 24 01.9 +0.5
BIR **Birlad** 76.36 320 ⇓P **P** 01 24 03.1 +1.2
ULM **Lac du Bonnet** 76.39 34 P **P** 01 24 01.7 -0.2
comp=Z,5.1nm,0.8s,baz=305,slow=6.3,SNR=12
ULM **Lac du Bonnet** 76.39 34 P **P** 01 24 01.3 -0.6
ULM **sP** 01 24 13.0 -0.5
SHAO **Shalim** 76.49 282 P **P** 01 24 02.9 -0.1
TLCR 76.52 318 ⇑P **P** 01 24 03.3 +0.6
K22A **Casper** 76.54 45 **PcP** 01 24 12.3 -2.4
BUR08 **Bucovina Ar. S** 76.56 322 IAmb IAmb 01 24 04.8
comp=Z,26nm,0.8s
BURAR **Bucovina Array** 76.57 322 ⇓P **P** 01 24 03.7 +0.6
KNB **Kanab** 76.61 53 P **P** 01 24 02.5 -1.2
KNB 01 24 15.1
KNB pmax pmax
comp=Z,6.0nm,1.0s
KNB **Kanab** 76.61 53 P **P** 01 24 02.5 -1.2
KNB **PcP** 01 24 15.1 0.0
GHRR 76.61 320 ⇓P **P** 01 24 04.8 +1.5
BIZ **Bicaz** 76.63 321 ⇑P **P** 01 24 04.4 +1.0
TESR **Tescani** 76.67 320 ⇑P **P** 01 24 04.0 +0.4
JURR **Jurilovca** 76.77 318 ⇑P **P** 01 24 04.2 +0.1
RSSD **Black Hills** 76.86 43 P **P** 01 24 03.8 -1.3
RSSD pmax pmax
comp=Z,6.0nm,0.9s
RSSD **Black Hills** 76.86 43 P **P** 01 24 03.8 -1.3
SARI **SarD1z-Kayseri** 76.87 309 *e*P **P** 01 24 06.5 +1.4
BNN **Bunyan** 76.92 310 *e*P **P** 01 24 06.4 +1.1
PETR **Petresti** 76.94 320 ⇑P **P** 01 24 07.2 +2.1
TOPG **Topolog** 76.95 318 ⇑P **P** 01 24 05.9 +0.7
KOLS **Kolonicke sedl** 76.97 324 *e*P **P** 01 24 06.0 +0.7
KOLS pmax pmax
comp=Z,12nm,0.9s
KOLS **Kolonicke sedl** 76.97 324 *e*P **P** 01 24 06.0 +0.7
IRM **Iron Mountain** 76.99 56 P **P** 01 24 07.0 +1.4
baz=310
ODBI **Odobesti** 77.00 320 ⇑P **P** 01 24 07.6 +2.2
VRI **Vrincioaia** 77.09 320 ⇑P **P** 01 24 07.0 +1.0
OJC **Ojcow** 77.10 326 *e*P **P** 01 24 06.8 +0.9
OJC **Ojcow** 77.10 326 *e*P **P** 01 24 06.8 +0.9
PLOR **Plostina** 77.14 320 ⇑P **P** 01 24 06.9 +0.6
KMRS **Kahramanmaras** 77.17 308 *e*P **P** 01 24 07.9 +1.3
UZH **Uzhgorod** 77.19 324⇓ *i*P **P** 01 24 05.7 -0.7
UZH *i* 01 24 16.5
UZH *e* 01 24 25.0
TIRR **Tirgusor** 77.23 318 ⇑P **P** 01 24 07.3 +0.5
O20A **White River Ci** 77.27 48 P **P** 01 24 07.0 -0.3
baz=312
HARR **Harsova** 77.31 318 ⇑P **P** 01 24 07.4 +0.2
BMR **Baia Mare** 77.34 323 ⇑P **P** 01 24 08.1 +0.8
OZUR 77.39 321 ⇓P **P** 01 24 09.1 +1.5
MFTR **Murfatlar** 77.42 318 ⇑P **P** 01 24 08.1 +0.3
TRPA **Tarpa** 77.44 324 ⇑P **P** 01 24 09.0 +1.1
NIE **Niedzica** 77.48 326 *e*P **P** 01 24 09.5 +1.3
NIE **Niedzica** 77.48 326 *e*P **P** 01 24 09.5 +1.3
BR131 **Keskin Array S** 77.62 312 IAmb IAmb 01 24 10.3
comp=Z,9.7nm,0.8s
BR131 **Keskin Array S** 77.62 312 P **P** 01 24 09.7 +0.4
SNR=8.6
BRTR **Keskin Array B** 77.62 312 *ce*P **P** 01 24 09.6 +0.4
BRTR pmax pmax
comp=Z,8.0nm,0.6s
BRTR **Keskin Array B** 77.62 312 P **P** 01 24 09.5 +0.2
comp=Z,11nm,0.8s,baz=97,slow=3.4,SNR=52
BRTR PP **PP** 01 27 03.6 -0.3
comp=Z,3.2nm,1.1s,baz=78,slow=4.9,SNR=3.4
BRTR LR LR 02 03 04.6
comp=Z,144nm,19.2s,baz=14,slow=39
PGOR **Pogoanele** 77.64 319 ⇑P **P** 01 24 10.5 +1.5
Y12C **Blythe** 77.64 56 P **P** 01 24 11.5 +2.2
AMRR **Amara** 77.67 319 ⇑P **P** 01 24 10.5 +1.3
DOPR **Dopca** 77.67 321 ⇓P **P** 01 24 10.4 +1.1
MLR **Muntele Rosu** 77.74 320 ⇑P **P** 01 24 10.1 +0.3
MLR **Muntele Rosu** 77.74 320 IAmb IAmb 01 24 23.5
comp=Z,9.9nm,0.9s
RUE **Ruedersdorf** 77.75 331 *e*P **P** 01 24 10.5 +1.1
comp=Z,42nm,1.2s,baz=35,slow=5.4
ICOR **Ion Corvin** 77.78 318 ⇑P **P** 01 24 11.0 +1.2
BSEG **Bad Segeberg** 77.82 333 *e*P **P** 01 24 11.0 +1.2
comp=Z,39nm,1.0s,baz=35,slow=5.4
KOZT **Kozan** 77.83 309 *e*P **P** 01 24 11.3 +1.0
AGMN **Agassiz Nation** 77.84 36 P **P** 01 24 10.0 -0.1
baz=318
CJR **Cluj-Napoca** 77.99 322 ⇓P **P** 01 24 12.6 +1.5
SECR 78.00 320 ⇑P **P** 01 24 12.2 +1.1
ANTO **Ankara** 78.01 312 P **P** 01 24 10.8 -0.5
ANTO pmax pmax
comp=Z,58nm,0.9s
ANTO **Ankara** 78.01 312 ⇓P **P** 01 24 12.2 +0.9
ANTO **Ankara** 78.01 312 P **P** 01 24 10.8 -0.5
ANTO **Ankara** 78.01 312 P **P** 01 24 11.4 +0.6
LANS **Liptovska Anna** 78.04 326 *e*P **P** 01 24 13.0 +1.7
LANS pmax pmax
comp=Z,13nm,1.0s
LANS **Liptovska Anna** 78.04 326 *e*P **P** 01 24 13.0 +1.7
KSP **Ksiaz** 78.06 329 *e*P **P** 01 24 12.1 +0.8
KSP **Ksiaz** 78.06 329 *e*P **P** 01 24 12.2 +0.8
OKC **Ostrava-Krasne** 78.08 327 *e*P **P** 01 24 12.1 +0.7
OKC *e* 01 24 27.3
OKC **Ostrava-Krasne** 78.08 327 *e*P **P** 01 24 12.1 +0.7
OKC *ex* x 01 24 27.3
KECS **Kecovo** 78.10 325 *e*P **P** 01 24 12.6 +1.0
KECS pmax pmax
comp=Z,6.0nm,1.0s
KECS **Kecovo** 78.10 325 *e*P **P** 01 24 12.6 +1.0
AFSR **Afar-Bala (An** 78.13 312 *e*P **P** 01 24 13.1 +1.1
SULR 78.17 319 ⇓P **P** 01 24 13.0 +1.1
CEYT **Ceyhan** 78.19 309 *e*P **P** 01 24 14.1 +1.9
VOIR 78.22 320 ⇑P **P** 01 24 13.9 +1.5
LTVH **Ltavrtes, Hu** 78.28 323 *e*P **P** 01 24 12.4 -0.2
OSTC **Ostas** 78.32 328 *e*P **P** 01 24 13.5 +0.7
TAHT **Tahtakopru-Hat** 78.34 308 *e*P **P** 01 24 14.3 +1.2
CHVC **Chvalec** 78.36 329 *e*P **P** 01 24 13.5 +0.5
CHVC *ex* x 01 24 18.8
MORC **Moravsky Berou** 78.38 327 ⇑P **P** 01 24 14.2 +1.1
MORC **Moravsky Berou** 78.38 327 *e*P **P** 01 24 14.0 +0.9

MORC Moravsky Berou 78.38 327 IAmb IAmb 01 24 15.1
comp=Z,32nm,0.9s
DPC Dobruska-Polom 78.44 328 *eP* **P 01 24 14.5 +1.1**
DPC *e* 01 24 23.8
DPC Dobruska-Polom 78.44 328 *eP* **P 01 24 14.5 +1.1**
DPC *ePCP* **PcP 01 24 23.8 +1.2**
UPC Upice 78.44 329 *eP* **P 01 24 14.0 +0.6**
UPC *e* 01 24 19.9
UPC Upice 78.44 329 *eP* **P 01 24 14.0 +0.6**
UPC *ex* x 01 24 19.9
KULU Kulu 78.44 312 *eP* **P 01 24 14.9 +1.1**
KRLC Kraliky 78.46 328 *eP* **P 01 24 14.3 +0.7**
KRLC Kraliky 78.46 328 *eP* **P 01 24 14.3 +0.7**
ARR Arges 78.47 321 ⇑P **P 01 24 15.2 +1.4**
WUAZ Wupatki 78.47 53 P **P 01 24 15.4 +1.3**
baz=311
MDUB Mudurnu 78.49 314 *eP* **P 01 24 14.8 +0.8**
SULT Sultanhani-AKS 78.72 311 *eP* **P 01 24 15.9 +0.6**
PSZ Piszkesteto 78.79 325 ⇓P **P 01 24 16.4 +0.9**
PSZ Piszkesteto 78.79 325 IAmb IAmb 01 24 17.6
comp=Z,28nm,1.0s
VYHS Vyhne 78.81 326 *eP* **P 01 24 16.5 +1.0**
VYHS pmax pmax
comp=Z,18nm,0.9s
VYHS Vyhne 78.81 326 *eP* **P 01 24 16.5 +1.0**
CHBY Cihanbeyli 78.82 311 *eP* **P 01 24 16.1 +0.2**
LOT Lotru 78.83 321 ⇓P **P 01 24 15.9 +0.1**
RAZG Razgrad 78.83 318 ⇓P **P 01 24 16.4 +0.7**
GULT Gulveren 78.90 314 *eP* **P 01 24 16.7 +0.5**
HUMR Humele 78.91 320 ⇓P **P 01 24 16.0 -0.1**
DEV Deva 78.92 322 ⇑P **P 01 24 17.1 +0.9**
BRG Berggiesshubel 78.96 330 *eP* **P 01 24 16.8 +0.5**
comp=Z,15nm,0.9s
BRG *ePP* **PP 01 27 13.9 -0.6**
comp=Z,6.6nm,0.9s
BRG Berggiesshubel 78.96 330 *eP* **P 01 24 16.8 +0.5**
BRG *e* 01 27 13.9
BRG pmax pmax
comp=Z,15nm,0.9s
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG Berggiesshubel 78.96 330 *eP* **P 01 24 17.1 +0.8**
comp=Z,15nm,0.9s,baz=35,slow=5.4
CLL Collm 78.97 331 ⇑*iP* **P 01 24 16.4 +0.1**
CLL *i* 01 24 29.0
CLL pmax pmax
comp=Z,29nm,0.9s
CLL Collm 78.97 331 ⇑*iP* **P 01 24 16.4 +0.1**
comp=Z,29nm,0.9s
CLL *i* PcP **PcP 01 24 22.6 -2.2**
CLL *i* (pP) **sP 01 24 29.0 +1.0**
CLL *es*P pP 01 24 37.0 +12
CLL *ePP* **PP 01 27 11.0 -3.6**
CLL Collm 78.97 331 *eP* **P 01 24 16.9 +0.6**
comp=Z,29nm,0.9s,baz=35,slow=5.4
CLL Collm 78.97 331 IAmb IAmb 01 24 17.6
comp=Z,29nm,0.9s
PVCC Panska Ves 78.99 329 *eP* **P 01 24 17.3 +0.9**
PVCC Panska Ves 78.99 329 *eP* **P 01 24 17.3 +0.9**
SVRH Sivrihisar-ESK 79.01 313 *eP* **P 01 24 17.1 +0.2**
MERS Mersin 79.02 309 *eP* **P 01 24 17.5 +0.8**
JAVC Velka Javorina 79.03 327 *eP* **P 01 24 18.6 +1.8**
NRDL Niedersach Rie 79.07 333 *eP* **P 01 24 17.8 +1.1**
comp=Z,148nm,2.7s,baz=35,slow=5.4
COPA Copaceanca 79.07 319 ⇑P **P 01 24 17.1 +0.2**
MVCO Mesa Verde 79.08 50 P **P 01 24 19.0 +1.5**
baz=312
BSZH Besenyszg 79.09 324 *eP* **P 01 24 17.7 +0.7**
RETH Rethem/Aller, 79.13 333 *eP* **P 01 24 18.1 +1.0**
comp=Z,29nm,0.9s,baz=35,slow=5.4
VRAC Vranov 79.13 327 ⇓P **P 01 24 18.3 +1.1**
VRAC Vranov 79.13 327 *eP* **P 01 24 18.3 +1.1**
KAC Achnashellach 79.14 340 *eP* **P 01 24 17.8 +0.6**
FBE Freiberg 79.15 330 *eP* **P 01 24 18.4 +1.2**
comp=Z,24nm,0.9s,baz=35,slow=5.4
SIRR Siria 79.22 323 ⇑P **P 01 24 18.5 +0.7**
ZIMR 79.34 319 ⇑P **P 01 24 19.2 +0.8**
GZR Gura Zlata 79.35 322 ⇑P **P 01 24 18.8 +0.3**
KPL Plockton 79.37 343 *eP* **P 01 24 19.2 +0.9**
GOPC GO Pecny, Ondr 79.39 329 *eP* **P 01 24 19.3 +0.6**
GOPC *e* 01 24 38.5
GOPC GO Pecny, Ondr 79.39 329 *eP* **P 01 24 19.3 +0.6**
GOPC *ex* x 01 24 38.5
SMOL Smolenice 79.40 327 *eP* **P 01 24 20.2 +1.5**
SMOL pmax pmax
comp=Z,14nm,1.2s
SMOL Smolenice 79.40 327 *eP* **P 01 24 20.2 +1.5**
KRUC Moravsky 79.41 327 *eP* **P 01 24 19.7 +1.0**
PRA Prague 79.41 329 *eP* **P 01 24 19.4 +0.7**
PRA Prague 79.41 329 *eP* **P 01 24 19.4 +0.7**
PRU Pruhonice 79.43 329 *eP* **P 01 24 19.8 +1.0**
PRU *e* 01 24 23.8
PRU Pruhonice 79.43 329 *eP* **P 01 24 19.8 +1.0**
PRU *ex* x 01 24 23.8
CTKS Kestanelik-??a 79.43 316 *eP* **P 01 24 19.4 +0.4**
CLZ Clausthal 79.51 332 *eP* **P 01 24 20.4 +1.1**
comp=Z,33nm,1.0s,baz=35,slow=5.4
NEUB Neuenburg 79.51 331 *eP* **P 01 24 20.1 +0.8**
comp=Z,32nm,0.9s,baz=35,slow=5.4
KONT Konya--Tatoy 79.56 311 *eP* **P 01 24 20.3 +0.5**
SRO Srobarova 79.56 326 *eP* **P 01 24 21.0 +1.4**
SRO pmax pmax
comp=Z,46nm,1.0s
SRO Srobarova 79.56 326 *eP* **P 01 24 21.0 +1.4**
MODS Modra-Piesok 79.57 326 *eP* **P 01 24 20.1 +0.4**
MODS pmax pmax
comp=Z,22nm,1.1s
MODS Modra-Piesok 79.57 326 *eP* **P 01 24 20.1 +0.4**
VLAD Vladila 79.58 320 ⇑P **P 01 24 20.0 +0.3**
TREC Trest 79.60 328 *eP* **P 01 24 20.5 +0.7**
TREC *e* 01 24 25.5
TREC Trest 79.60 328 *eP* **P 01 24 20.5 +0.7**
TREC *ePCP* **PcP 01 24 25.5 -2.1**
ELND Elena 79.61 318 ⇑P **P 01 24 20.6 +0.7**
S22A 4UR Ranch, Cre 79.70 49 P **P 01 24 22.9 +2.0**
baz=313
BZS Buzias 79.73 322 ⇑P **P 01 24 20.9 +0.4**
ZST Bratislava 79.78 326 *eP* **P 01 24 21.1 +0.3**
ZST pmax pmax
comp=Z,18nm,1.1s
ZST Bratislava 79.78 326 *eP* **P 01 24 21.1 +0.3**
Q24A Divide 79.82 47 P **P 01 24 23.1 +1.5**
baz=314
INVG Invergeldie, C 79.83 342 *eP* **P 01 24 21.4 +0.5**
PBCC Pribram 79.89 329 *eP* **P 01 24 21.8 +0.5**
TANN Tannenbergstha 79.90 330 *eP* **P 01 24 22.3 +0.8**
comp=Z,22nm,1.1s,baz=35,slow=5.4
GTTG Gyttingen 79.90 332 *eP* **P 01 24 22.3 +1.0**
comp=Z,33nm,0.9s,baz=35,slow=5.4
PLVB Pleven 79.91 319 ⇑P **P 01 24 22.4 +0.8**
EDRB Edirne 79.93 317 P **P 01 24 20.5 -1.2**
EDRB Edirne 79.93 317 *eP* **P 01 24 22.6 +0.9**
PLN Plauen 79.96 330 *eP* **P 01 24 22.5 +0.8**
comp=Z,34nm,1.8s,baz=35,slow=5.4
GUNZ Gunzen 79.99 330 *eP* **P 01 24 22.9 +1.0**
comp=Z,16nm,0.9s,baz=35,slow=5.4
EYMN Ely 80.01 34 P **P 01 24 22.6 +0.5**
baz=321
MOX Moxa 80.03 331 *eP* **P 01 24 22.9 +0.8**
comp=Z,18nm,1.2s,baz=35,slow=5.4
MOX *eL* L 02 02 49.1
comp=Z,249nm,18.2s
WERN Wernitzgruen 80.03 330 *eP* **P 01 24 23.2 +1.1**
comp=Z,19nm,0.9s,baz=35,slow=5.4
IBBN Ibbenburen 80.03 334 *eP* **P 01 24 22.9 +0.8**
comp=Z,42nm,1.1s,baz=35,slow=5.4
NKC Novy Kostel 80.05 330 *eP* **P 01 24 22.8 +0.6**
NKC Novy Kostel 80.05 330 *eP* **P 01 24 22.8 +0.6**
AKKU Akkuyu-Mersin 80.07 309 *eP* **P 01 24 22.9 +0.3**
BAIL Bailesti 80.08 320 ⇑P **P 01 24 23.9 +1.5**
PUNG Punghina 80.09 321 ⇓P **P 01 24 23.3 +0.8**
BANR Banloc 80.13 322 ⇑P **P 01 24 23.6 +0.9**
TVSB Tavsanli 80.16 314 *eP* **P 01 24 23.8 +0.7**
SHUT Suhut-Afyon 80.17 313 *eP* **P 01 24 24.1 +0.8**
EBL Broad Law 80.18 341 *eP* **P 01 24 23.4 +0.6**
EAU Auchinoon 80.22 341 *eP* **P 01 24 23.8 +0.9**
LAWE Loch Awe, Argy 80.30 343 *eP* **P 01 24 24.1 +0.8**
LAWE IAmb IAmb 01 24 25.9
comp=Z,25nm,0.9s
MDVR Moldovita 80.31 322 ⇑P **P 01 24 23.7 -0.1**
MANZ Manzenberg 80.38 330 *eP* **P 01 24 24.9 +0.9**
comp=Z,164nm,2.8s,baz=35,slow=5.4
MPLH Magyarpolny 80.39 326 *eP* **P 01 24 24.7 +0.6**
MPLH Magyarpolny 80.39 326 *eP* P 01 24 16.3 -7.8
SOP Sopron 80.41 326 *eP* **P 01 24 25.8 +1.6**
SDCO Great Sand Dun 80.46 48 P **P 01 24 26.7 +1.7**
baz=314
GEDZ Gediz 80.47 314 *eP* **P 01 24 25.5 +0.7**
RAYN Ar Rayn 80.47 293 P **P 01 24 24.3 -0.7**
RAYN pmax pmax
comp=Z,13nm,0.8s
RAYN Ar Rayn 80.47 293 *iP* **P 01 24 24.7 -0.3**
SNR=17
RAYN Ar Rayn 80.47 293 P **P 01 24 24.3 -0.7**
RAYN IAmb IAmb 01 24 25.4
comp=Z,12nm,0.8s
KHC Kasperske Hory 80.49 329 *eP* **P 01 24 25.4 +0.7**
KHC *e* 01 24 38.1
KHC Kasperske Hory 80.49 329 *eP* **P 01 24 25.4 +0.7**
KHC *ex* x 01 24 29.4
KHC *ex* x 01 24 38.1
KHC Kasperske Hory 80.49 329 IAmb IAmb 01 24 26.6
comp=Z,13nm,0.9s
PGBU Glenifferbraes 80.50 342 *eP* **P 01 24 25.1 +0.7**
PGBU IAmb IAmb 01 24 26.8
comp=Z,121nm,1.1s
CONA Conrad Observa 80.52 327 *i* PcP **P 01 24 26.0 +1.1**
comp=Z,25nm,1.0s,SNR=9.6
ROTZ Rotzenmuhle 80.52 330 *eP* **P 01 24 26.0 +1.2**
comp=Z,19nm,1.0s,baz=35,slow=5.4
ESK Eskdalemuir 80.63 341 *eP* **P 01 24 25.8 +0.6**
GEC2 GERESS Array S 80.67 329 *eP* **P 01 24 26.4 +0.7**
comp=Z,18nm,1.1s,baz=35,slow=5.4
GEC2 GERESS Array S 80.67 329 IAmb IAmb 01 24 27.0
comp=Z,16nm,1.0s
GERES GERESS Array B 80.67 329 P **P 01 24 26.0 +0.3**
comp=Z,8.7nm,0.8s,baz=36,slow=5.4,SNR=45
GERES LR LR 02 03 38.0
comp=Z,397nm,18.7s,baz=43,slow=38
WET Wettzell 80.76 329 *eP* **P 01 24 27.4 +1.3**
comp=Z,24nm,1.0s,baz=35,slow=5.4
ECSD EROS Data Cent 80.88 39 P **P 01 24 27.2 +0.4**
baz=318
FRGS Fruska Gora 80.91 323 ⇑*iP* **P 01 24 26.5 -0.5**
BUG Bochum--Univer 80.93 334 *eP* **P 01 24 27.5 +0.6**
comp=Z,31nm,1.0s,baz=35,slow=5.4
GRF Grafenberg Arr 80.95 331 *eP* **P 01 24 28.4 +1.4**
comp=Z,52nm,0.9s,baz=35,slow=5.4
GRF *eL* L 02 00 23.3
comp=Z,239nm,21.9s
CSS Mathiatis 81.01 308 IAmb IAmb 01 24 28.6
comp=Z,20nm,0.7s
RZN Rozhen 81.10 318 P **P 01 24 28.5 +0.3**
VTS Vitosha 81.17 319 P **P 01 24 28.3 -0.2**
VTS Vitosha 81.17 319 ⇑P **P 01 24 29.6 +1.0**
VTS Vitosha 81.17 319 P **P 01 24 29.1 +0.6**
VTS Vitosha 81.17 319 IAmb IAmb 01 24 30.6
comp=Z,34nm,0.9s
ARSA Arzberg 81.19 327 *i* PcP **P 01 24 28.9 +0.5**
comp=Z,10nm,0.8s
MOA Molln 81.24 328 *i* PcP **P 01 24 29.5 +0.9**
comp=Z,6.7nm,0.8s
BEHE Becsehely 81.26 326 *eP* **P 01 24 29.1 +0.3**
SOCY Socotra 81.34 279 P **P 01 24 26.3 -3.4**
SOCY IAmb IAmb 01 24 28.4
comp=Z,26nm,0.7s
GAL1 Galloway 81.41 342 *eP* **P 01 24 29.6 +0.3**
GAL1 IAmb IAmb 01 24 31.1
comp=Z,54nm,1.0s
T25A Trinidad 81.51 48 IAmb IAmb 01 24 45.8
comp=Z,14nm,1.1s
T25A Trinidad 81.51 48 P **P 01 24 31.8 +1.2**
baz=314
TNS Taunus Mts 81.53 332 *eP* **P 01 24 31.0 +0.8**
comp=Z,15nm,1.0s,baz=35,slow=5.4
CLGH Cloghs, Cushen 81.54 343 *eP* **P 01 24 30.8 +0.8**
CLGH IAmb IAmb 01 24 32.1
comp=Z,45nm,1.0s
DIVS Divibare 81.63 322 ⇑*iP* **P 01 24 30.8 -0.1**
KALN Kalnik 81.67 326 *iP* **P 01 24 30.9 0.0**
MMB Musomiste 81.68 318 P **P 01 24 31.7 +0.6**
AHRW Bad Neuenahr-A 81.75 333 *eP* **P 01 24 32.0 +0.8**
baz=35,slow=5.4
GROS Grobnik 81.82 326 *iP* **P 01 24 32.0 +0.2**
ANMO Albuquerque 81.83 51 *ceP* **P 01 24 32.9 +0.7**
ANMO pmax pmax
comp=Z,4.0nm,0.8s
ANMO Albuquerque 81.83 51 P **P 01 24 33.7 +1.4**
comp=Z,3.6nm,1.0s,baz=307,slow=6.7,SNR=8.5
ANMO Albuquerque 81.83 51 P **P 01 24 33.8 +1.6**
baz=314
PERS Pernice 81.84 327 *iP* **P 01 24 32.4 +0.5**
SOKA Soboth 81.85 327 *i* PcP **P 01 24 31.9 0.0**
SNR=32
RJOB Jochberg 81.92 328 *eP* **P 01 24 33.6 +1.3**
baz=35,slow=5.4
LBWR Ladybower, Pea 81.97 339 *eP* **P 01 24 32.9 +0.5**
LBWR IAmb IAmb 01 24 33.9
comp=Z,80nm,1.0s
PTJ Puntijarka 82.05 326 P **P 01 24 33.0 0.0**
MEM Membach 82.06 334 P **P 01 24 32.9 0.0**
BBLS Lazići 82.08 322 ⇑*iP* **P 01 24 33.9 +0.7**
SCHQ Schefferville 82.12 17 P **P 01 24 33.9 +0.7**
comp=Z,6.8nm,0.7s,baz=355,slow=6.8,SNR=9.5
SCHQ LR LR 02 03 21.9
comp=Z,152nm,20.9s,baz=340,slow=37
SCHQ Schefferville 82.12 17 IAmb IAmb 01 24 34.6
comp=Z,7.9nm,0.8s
HAPS Han Pijesak,Bl 82.13 323 *eP* **P 01 24 33.1 -0.4**
FUR Furstenfeldbru 82.17 330 *eP* **P 01 24 34.7 +1.1**
comp=Z,580nm,2.6s,baz=35,slow=5.4
OBKA Obir 82.19 327 *i* PcP **P 01 24 33.9 +0.1**
comp=Z,16nm,0.7s,SNR=8.0
KBA Koelnbreinsper 82.23 328 *i* PcP **P 01 24 34.5 +0.4**
comp=Z,26nm,1.0s,SNR=18
GMM Mts of Mourne 82.28 342 *eP* **P 01 24 34.5 +0.6**
RUDO Rudo 82.29 322 *eP* **P 01 24 33.6 -0.6**
CRES Cresnjev 82.34 326 ⇑*iP* **P 01 24 34.4 -0.1**
STIP Stip 82.38 319 *iP* **P 01 24 34.4 -0.4**
BLY Banja Luka 82.42 324 ⇑P **P 01 24 35.3 +0.4**
BLY Banja Luka 82.42 324 *eP* **P 01 24 34.9 0.0**
BLY Banja Luka 82.42 324 IAmb IAmb 01 24 39.3
comp=Z,12nm,1.0s
VNDS Vrh nad Dolski 82.44 326 *iP* **P 01 24 34.8 -0.2**
CWF Charnwood Fore 82.45 339 *eP* **P 01 24 35.1 +0.3**
CWF IAmb IAmb 01 24 36.1
comp=Z,15nm,0.8s
BCLA Clavier 82.45 334 P **P 01 24 34.7 -0.3**
VAY Valandovo 82.46 319 *iP* **P 01 24 35.8 +0.6**
MYKA Terra Mystica 82.47 327 *i* PcP **P 01 24 35.2 0.0**
comp=Z,16nm,0.7s,SNR=6.3
STU Stuttgart 82.47 331 *eP* **P 01 24 35.9 +0.8**
baz=35,slow=5.4
STU Stuttgart 82.47 331 IAmb IAmb 01 24 36.6
comp=Z,34nm,0.8s
SKO Skopje 82.54 320 *iP* **P 01 24 36.8 +1.2**
LJU Ljubljana 82.56 327 ⇑*iP* **P 01 24 35.7 +0.1**
121A Cookes Peak, D 82.68 53 P **P 01 24 38.6 +1.9**
baz=313
PLG Polygyros 82.72 318 P **P 01 24 34.0 -2.6**
MGRS Mrkonjic Grad 82.72 324 ⇑*iP* **P 01 24 37.5 +1.0**
BMRD Maredsous 82.73 334 P **P 01 24 36.9 +0.5**
comp=Z,22nm,1.0s
WATA Walderalm 82.73 329 *i* PcP **P 01 24 37.0 +0.4**
comp=Z,24nm,1.2s,SNR=5.1
WTTA Wattenberg 82.77 329 *i* PcP **P 01 24 37.6 +0.7**
comp=Z,20nm,0.9s,SNR=5.6
FOEL Foel Wylfa 82.82 340 *eP* **P 01 24 37.8 +0.9**
FOEL IAmb IAmb 01 24 39.4
comp=Z,51nm,0.7s
UPM Unac-Piva 82.83 322 *eP* **P 01 24 36.9 -0.4**
ABTA Abfaltersbach 82.83 328 *i* PcP **P 01 24 36.8 -0.3**
comp=Z,18nm,1.1s,SNR=6.6
CEY Cennica 82.85 326 ⇑*iP* **P 01 24 36.8 -0.3**
CBKS Cedar Bluff 82.90 44 P **P 01 24 37.7 +0.1**
baz=317
MOTA Moosalm 82.91 329 *i* PcP **P 01 24 38.1 +0.5**
comp=Z,45nm,1.0s,SNR=17
RETA Reutte 82.93 329 *i* PcP **P 01 24 38.1 +0.5**
comp=Z,24nm,0.8s,SNR=8.2
SQTA Sankt Quirin 82.97 329 *i* PcP **P 01 24 38.2 +0.3**
comp=Z,23nm,1.1s,SNR=5.6
STAL STALIGIAL 83.15 328 IAmb IAmb 01 24 38.7
comp=Z,32nm,0.8s
BFO Black Forest 83.15 331 P **P 01 24 38.3 -0.4**
BFO pmax pmax
comp=Z,17nm,0.9s
BFO Black Forest 83.15 331 *eP* **P 01 24 39.4 +0.7**
baz=35,slow=5.4
BFO Black Forest 83.15 331 P **P 01 24 38.2 -0.4**
BFO IAmb IAmb 01 24 40.0
comp=Z,17nm,0.9s
UDBI Udbina 83.23 325 *i* P **P 01 24 38.9 -0.2**
BRY Bratogost 83.23 322 *eP* **P 01 24 38.7 -0.6**
PHP Peshkopia 83.25 320 P **P 01 24 37.1 -2.2**
PDG Podgorica 83.25 322 ⇑P **P 01 24 39.7 +0.5**
PDG Podgorica 83.25 322 ⇑*iP* **P 01 24 39.4 +0.2**
FETA Feichten 83.32 329 *i* PcP **P 01 24 40.1 +0.4**
comp=Z,22nm,0.9s,SNR=8.0
KIJV Kijevo 83.35 324 *iP* **P 01 24 39.9 +0.1**
E44A Grand Marais A 83.37 31 P **P 01 24 40.4 +0.7**
baz=325
LIT Litokhoron 83.41 318 IAmb IAmb 01 24 41.0
comp=Z,32nm,1.0s
DAVA Damuels 83.44 330 *i* PcP **P 01 24 40.8 +0.5**
comp=Z,39nm,1.1s,SNR=10.0
TREB Trebinje 83.46 322 *eP* P 01 24 31.9 -8.4
DRME Dracevica, Mon 83.47 321 ⇑*iP* **P 01 24 40.4 0.0**
STRD Stroud 83.55 339 *eP* **P 01 24 40.9 +0.3**
STRD IAmb IAmb 01 24 42.0
comp=Z,83nm,0.8s
MCH1 Michaelchurch 83.58 340 *eP* **P 01 24 41.2 +0.5**
MCH1 IAmb IAmb 01 24 42.7
comp=Z,28nm,1.0s
MAKA Makarska 83.63 323 *iP* **P 01 24 40.3 -0.9**
STON Ston 83.64 323 *eP* P 01 24 29.2 -12
ECH Echery 83.68 332 IAmb IAmb 01 24 42.6
comp=Z,15nm,0.8s
SWN1 Swindon 83.68 339 *eP* **P 01 24 41.1 -0.1**
WOL Wolverton 83.70 338 *eP* **P 01 24 41.7 +0.4**
MATQ Matagami 83.73 25 P **P 01 24 41.7 +0.2**
baz=330
CTI Castel Tesino 83.75 328 IAmb IAmb 01 24 42.2
comp=Z,22nm,1.0s
MORI Morici 83.77 325 *iP* **P 01 24 39.2 -2.6**
TIR Tirane 83.78 321 ⇓P **P 01 24 42.4 +0.4**
FUORN Ofenpass-Fuorn 83.84 329 P **P 01 24 41.9 -0.6**
NEST Nestorio 83.90 319 P **P 01 24 40.7 -2.1**
HVAR Hvar 83.98 324 *iP* **P 01 24 41.9 -1.1**
APE Apeiranthos 84.03 314 ⇓P **P 01 24 42.4 -1.0**
LKR Lokris 84.22 317 P **P 01 24 40.7 -3.6**
AGG Agios Georgios 84.29 318 IAmb IAmb 01 25 00.8
comp=Z,21nm,1.0s
TEOL Teolo 84.30 328 IAmb IAmb 01 24 46.4
comp=Z,28nm,0.8s
TUE Stuetta 84.31 330 IAmb IAmb 01 24 46.5
comp=Z,25nm,1.0s
LSQQ Lebel-sur-Quev 84.55 25 P **P 01 24 46.1 +0.4**
baz=331
AMTX Amarillo 84.66 48 IAmb IAmb 01 24 57.0
comp=Z,9.9nm,1.1s
MSTX Muleshoe 84.69 49 P **P 01 24 43.7 -3.2**
MSTX Muleshoe 84.69 49 P **P 01 24 48.1 +1.2**
baz=316
MNTX Cornudas Mount 84.73 53 P **P 01 24 48.4 +1.4**
baz=315
PPT Papeete 85.08 118 LR LR 01 54 37.1
comp=Z,297nm,21.8s,baz=317,slow=30
PPT2 Papeete2 85.09 118 *eS* **S 01 35 25.4 +8.6**
comp=Z,65nm,24.5s
PPT2 Papeete2 85.09 118 *eLR* LR 01 51 35.9
comp=Z,609nm,22.2s,baz=317
PPT2 Papeete2 85.09 118 *eT* T 02 59 06.9
comp=Z,7.8nm,0.3s
PAE Paea 85.14 118 *eT* T 02 59 18.4
comp=Z,1.7nm,0.3s
SENIN Lac Senin/Sane 85.19 331 IAmb IAmb 01 24 50.0
comp=Z,17nm,0.9s
VLDQ Val d'Or 85.22 26 IAmb IAmb 01 25 01.8
comp=Z,9.9nm,0.8s
TIAR Tiarei 85.23 118 *eT* T 02 59 14.7
comp=Z,3.3nm,0.3s
ZCCA Zocca 85.41 328 IAmb IAmb 01 25 00.5
comp=Z,22nm,1.1s
TVO Taravao 85.45 118 *eT* T 02 59 30.2
comp=Z,1.2nm,0.4s
MATE Matera 85.84 322 ⇓P **P 01 24 52.6 +0.3**
TAOE Nuku Hiva Isla 85.91 105 *eLR* LR 01 52 12.2
comp=Z,544nm,21.5s
OSSC Osservatorio P 85.98 327 IAmb IAmb 01 25 09.1
comp=Z,8.8nm,0.8s
AQU L'Aquila 86.00 325 *eP* **P 01 24 49.5 -3.7**
AQU L'Aquila 86.00 325 IAmb IAmb 01 24 54.8
comp=Z,15nm,0.9s
INTR Introdacqua 86.05 324 IAmb IAmb 01 25 09.0
comp=Z,17nm,0.9s
MEH Mehetia 86.32 117 *eT* T 03 00 15.4
comp=Z,27nm,0.3s
WMOK Wichita Mounta 86.40 47 P **P 01 24 56.0 +0.7**
baz=318
LATE Laterza 86.48 326 IAmb IAmb 01 25 12.0
comp=Z,11nm,0.9s
BNI Bardonecchia 86.53 330 IAmb IAmb 01 25 06.2
comp=Z,11nm,1.0s
D55A Sainte-Anne-du 86.83 25 P **P 01 24 54.8 -2.3**
baz=332
D56A ZEC Mazanza, M 87.03 25 P **P 01 24 58.5 +0.4**
baz=332
D57A Chemin Vers le 87.33 24 P **P 01 25 00.0 +0.5**
baz=333
E56A St. Veronique 87.39 25 P **P 01 24 59.9 +0.1**
baz=332
TX32 Lajitas Array 87.44 53 P **P 01 24 59.5 -1.0**
TX32 IAmb IAmb 01 25 15.8
comp=Z,6.7nm,1.1s
TXAR Lajitas Array 87.44 53 P **P 01 25 01.1 +0.6**
comp=Z,1.4nm,0.9s,baz=287,slow=3.1,SNR=11
TXAR LR LR 02 03 23.4
comp=Z,29nm,19.7s,baz=0.0,slow=35
CCM Cathedral Cave 87.84 40 P **P 01 25 01.1 -1.1**
CCM pmax pmax
comp=Z,14nm,0.9s
CCM Cathedral Cave 87.84 40 P **P 01 25 01.1 -1.1**
CCM IAmb IAmb 01 25 03.6
comp=Z,14nm,0.8s
CCM Cathedral Cave 87.84 40 P **P 01 25 02.7 +0.6**
baz=322
SFIN Lafayette 87.94 36 P **P 01 25 03.4 +0.8**
baz=324
D60A Saint Jean D'O 88.32 22 P **P 01 25 04.3 +0.1**
baz=335
U40A Yellville 88.35 42 IAmb IAmb 01 25 05.9
comp=Z,13nm,0.8s
U40A Yellville 88.35 42 P **P 01 25 05.0 +0.3**
baz=321
N49A Columbus Grove 88.76 34 P **P 01 25 06.8 +0.3**
baz=326
O48A Farmland 88.89 35 P **P 01 25 07.6 +0.5**
baz=325
S44A Carbondale 89.09 39 IAmb IAmb 01 25 09.7
comp=Z,14nm,0.7s
F61A St Evariste 89.15 23 P **P 01 25 09.1 +0.9**
baz=335
TBI Tubuai 89.20 122 *eS* **S 01 36 00.3 +4.3**
comp=Z,115nm,30.5s
TBI Tubuai 89.20 122 *eLR* LR 01 53 18.5
comp=Z,354nm,27.2s,baz=318
TBI Tubuai 89.20 122 *eT* T 03 04 11.0
comp=Z,20nm,0.3s
PBMO Poplar Bluff 89.24 40 IAmb IAmb 01 25 19.9
comp=Z,17nm,1.1s
O49A Covington 89.31 34 P **P 01 25 09.6 +0.5**
baz=326
MIAR Mount Ida 89.37 43 IAmb IAmb 01 25 21.2
comp=Z,11nm,1.1s
MIAR Mount Ida 89.37 43 P **P 01 25 10.5 +1.0**
baz=320
WHAR Wooly Hollow 89.47 42 IAmb IAmb 01 25 23.9
comp=Z,23nm,1.2s
L53A Girard 89.50 31 P **P 01 25 11.2 +1.3**
baz=329
W41B Gary Mavity, V 89.58 42 P **P 01 25 11.0 +0.6**
baz=321
O50A Cable 89.65 34 P **P 01 25 11.6 +0.9**
baz=326
Q48A North Vernon 89.73 36 P **P 01 25 12.1 +1.0**
baz=325
M53A WI Miller and 89.77 31 P **P 01 25 12.2 +1.0**
baz=328
X40A Basin Creek Fa 89.81 43 P **P 01 25 12.7 +1.2**
baz=321
ACSO Alum Creek Sta 89.84 33 P **P 01 25 12.5 +0.9**
baz=327
M54A Oil Creek Stat 90.11 30 P **P 01 25 13.5 +0.7**
baz=329
L56A Greenwood 90.37 29 P **P 01 25 15.0 +1.0**

	baz=330						
H62A	**Milan**	**90.37**	**24**	P	**P**	**01 25 15.4**	**+1.4**
	baz=335						
O52A	**Adamsville**	**90.42**	**33**	P	**P**	**01 25 14.7**	**+0.4**
	baz=328						
M55A	**Ridgway**	**90.49**	**30**	IAmb	IAmb	01 25 16.6	
	comp=Z,13nm,0.9s						
M55A	**Ridgway**	**90.49**	**30**	P	**P**	**01 25 15.7**	**+1.1**
	baz=330						
H63A	**New Sharon**	**90.63**	**23**	P	**P**	**01 25 16.7**	**+1.6**
	baz=336						
Q51A	**Peebles**	**90.69**	**34**	P	**P**	**01 25 16.6**	**+1.0**
	baz=327						
L57A	**Andrews Acres**	**90.75**	**28**	P	**P**	**01 25 17.0**	**+1.2**
	baz=331						
S49A	**Springfield**	**90.86**	**36**	P	**P**	**01 25 17.5**	**+1.1**
	baz=325						
O54A	**Avella**	**90.96**	**32**	P	**P**	**01 25 17.7**	**+0.9**
	baz=328						
L58A	**Harry Jones Me**	**91.07**	**28**	P	**P**	**01 25 17.8**	**+0.6**
	baz=332						
M57A	**Sunshine Farm,**	**91.22**	**29**	P	**P**	**01 25 19.1**	**+1.2**
	baz=331						
L59A	**Walton**	**91.22**	**27**	P	**P**	**01 25 19.0**	**+1.0**
	baz=332						
M58A	**Price's Panora**	**91.44**	**28**	P	**P**	**01 25 20.0**	**+1.0**
	baz=331						
SSPA	**Standing Stone**	**91.54**	**30**	P	**P**	**01 25 20.4**	**+0.9**
	baz=330						
N57A	**Milroy**	**91.57**	**29**	P	**P**	**01 25 21.1**	**+1.5**
	baz=330						
N58A	**Sunbury**	**91.81**	**29**	P	**P**	**01 25 21.3**	**+0.6**
	baz=331						
W49A	**Belvidere**	**92.59**	**38**	P	**P**	**01 25 24.6**	**+0.2**
	baz=325						
KEST	**Kesra**	**93.22**	**324**	P	**P**	**01 25 27.3**	**-0.1**
	comp=Z,6.9nm,1.1s,baz=313,slow=4.6,SNR=5.1						
KEST				LR	LR	02 12 02.2	
	comp=Z,336nm,18.8s,baz=260,slow=38						
KEST	**Kesra**	**93.22**	**324**	IAmb	IAmb	01 25 30.0	
	comp=Z,16nm,1.1s						
TKL	**Tuckaleechee C**	**93.30**	**36**	P	**P**	**01 25 27.8**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=282,slow=11,SNR=4.4						
TKL	**Tuckaleechee C**	**93.30**	**36**	IAmb	IAmb	01 25 37.2	
	comp=Z,9.0nm,1.1s						
Y51A	**Rockmart**	**94.15**	**38**	P	**P**	**01 25 31.9**	**+0.3**
	baz=325						
Z50A	**Ashland**	**94.27**	**39**	IAmb	IAmb	01 25 46.9	
	comp=Z,10nm,1.0s						
Z50A	**Ashland**	**94.27**	**39**	P	**P**	**01 25 32.5**	**+0.3**
	baz=325						
ESDC	**Sonseca Array**	**95.01**	**335**	P	**P**	**01 25 35.4**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=17,slow=3.7,SNR=12						
ESDC				PP	**PP**	**01 29 22.7**	**-1.2**
	comp=Z,3.0nm,1.0s,baz=29,slow=7.1,SNR=5.1						
ESDC				LR	LR	02 15 38.3	
	comp=Z,132nm,18.5s,baz=20,slow=40						
ESDC	**Sonseca Array**	**95.01**	**335**	IAmb	IAmb	01 25 36.4	
	comp=Z,2.1nm,0.8s						
Y54A	**Tignall**	**95.29**	**37**	P	**P**	**01 25 36.6**	**-0.3**
	baz=327						
MDT	**Midelt**	**101.43**	**332**	PP	**PP**	**01 30 14.7**	**+1.4**
	comp=Z,2.9nm,0.9s,baz=301,slow=5.5,SNR=4.7						
KMBO	**Kilima Mbogo**	**102.57**	**279**	*i* P	**Pdif**	**01 26 11.3**	**+1.2**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**115.88**	**317**	PKP	**PKiKP**	**01 30 55.1**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=31,slow=1.4,SNR=14						
SDV	**Santo Domingo**	**122.31**	**40**	PKP	**PKiKP**	**01 31 08.8**	**+0.1**
	comp=Z,5.1nm,0.3s,baz=302,slow=3.9,SNR=7.9						
DBIC	**Dimbokro**	**124.72**	**320**	PKP	**PKPdf**	**01 31 12.1**	**-0.8**
	comp=Z,4.2nm,0.7s,baz=45,slow=3.4,SNR=8.8						
TIC	**Toumodi**	**124.83**	**320**	*e*PKP1	**PKPdf**	**01 31 12.2**	**-0.9**
	comp=Z,2.1nm,0.3s						
TIC	**Toumodi**	**124.83**	**320**	PKIKP	**PKPdf**	**01 31 12.2**	**-0.9**
TIC	**Toumodi**	**124.83**	**320**		**PKPdf**	**01 31 12.2**	**-0.9**
KIC	**Kosan Boka**	**124.93**	**319**	*e*PKP1	**PKPdf**	**01 31 12.5**	**-0.8**
	comp=Z,7.3nm,0.7s						
LIC	**Lamto**	**125.19**	**320**	*e*PKP1	**PKPdf**	**01 31 13.1**	**-0.7**
	comp=Z,17nm,0.7s						
LIC	**Lamto**	**125.19**	**320**		**PKPdf**	**01 31 13.1**	**-0.7**
LBTB	**Lobatse**	**125.98**	**266**	PKIKP	**PKPdf**	**01 31 14.5**	**-0.6**
LBTB	**Lobatse**	**125.98**	**266**		**PKPdf**	**01 31 14.5**	**-0.6**
BOSA	**Boshof**	**128.11**	**262**	PKP	**PKPdf**	**01 31 18.8**	**-0.2**
	comp=Z,5.7nm,0.9s,baz=233,slow=3.7,SNR=6.3						
SNAA	**Sanae**	**143.97**	**198**	PKPdf	PKPab	01 31 44.4	0.0
SNAA	**Sanae**	**143.97**	**198**	PKIKP	PKPab	01 31 44.3	-0.1
SNAA	**Sanae**	**143.97**	**198**		PKPab	01 31 44.3	-0.1
LPAZ	**La Paz**	**144.20**	**57**	PKP	PKPbc	01 31 48.5	+0.6
	comp=Z,3.1nm,0.8s,baz=35,slow=9.5,SNR=7.8						
VNA3	**Neumayer Olymp**	**145.78**	**195**	PKPdf	**PKPdf**	**01 31 50.2**	**+0.1**
VNA1	**Neumayer--Stat**	**145.93**	**197**	PKPdf	**PKPbc**	**01 31 50.9**	**-0.1**
LVC	**Limon Verde**	**148.05**	**66**	PKP2	**PKPbc**	**01 31 57.7**	**-1.3**
LVC	**Limon Verde**	**148.05**	**66**	PKPbc	**PKPbc**	**01 31 57.6**	**-1.3**
GO02	**Mina Guanaco**	**149.15**	**71**		**PKPdf**	**01 31 54.7**	**-2.8**
GO04	**Tololo Observa**	**150.97**	**81**		**PKPbc**	**01 32 04.7**	**-1.1**
BDFB	**Brasilia**	**153.90**	**24**	PKIKP	**PKPbc**	**01 32 11.1**	**-1.5**
BDFB	**Brasilia**	**153.90**	**24**	PKPbc	**PKiKP**	**01 32 13.1**	**+0.5**
	comp=Z,5.1nm,0.9s,baz=238,slow=2.7,SNR=8.2						
BDFB	**Brasilia**	**153.90**	**24**		**PKPbc**	**01 32 11.1**	**-1.5**

*NEIC **16** 01:15:44.9±1.7, 13°.82N±0°.08×90°.45W±0°.05, h90km±5km, Error ellipse: s-maj=12.7km s-min=5.7km az=202.0*
*UCR **16** 01:15:45.0±1.1, 13°.83N×90°.50W, h80km±6km, ML4.3, mb4.1(NEIC)*
*SNET **16** 01:15:45.0±1.1, 13°.82N×90°.49W, h81km±5km, ML4.4*
*INET **16** 01:15:47.5, 13°.71N×90°.40W, h50km, ML4.1*
*MEX **16** 01:15:47.5±0.4, 13°.68N×90°.42W, h76km±34km, MD4.2*
*IDC **16** 01:15:47.9±1.9, 13°.94N×90°.24W, h104km±9km, mb3.7/3, mb1 3.9/5, mb1mx3.3/39, mbtmp4.2/5, Error ellipse: s-maj=28.6km s-min=18.1km az=36.0*
*GCG **16** 01:15:49.9±0.7, 13°.87N×90°.52W, h56km±23km, MD4.2*
ISC 16 01:15:45.6±0.8, **13°.79N**±0°.07×**90°.40W**±0°.04, **h92**km±6km, **n103**, σ1§**16**/125, **mb4.1**/10, **3D**, **Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcalda de S**	**0.37**	**82**	*e*P	**Pn**	**01 15 59.0**	**-0.7**
FAME				*e*S	**Sn**	**01 16 08.8**	**-1.4**
IXG	**Ixpaco**	**0.38**	**353**	*e*P	**Pn**	**01 16 00.3**	**+0.3**
RTR	**El Retiro**	**0.74**	**82**	*e*P	**Pn**	**01 16 02.9**	**+0.1**
RTR	**El Retiro**	**0.74**	**82**	*e*P	**Pn**	**01 16 02.9**	**+0.1**
CEVE	**Cerro Verde**	**0.75**	**87**	*e*P	**Pn**	**01 16 03.0**	**0.0**
CEVE				*e*S	**Sn**	**01 16 17.6**	**+1.6**
CEVE				IAML		01 16 18.6	
	comp=Z,16μm,0.3s						
CEVE	**Cerro Verde**	**0.75**	**87**	*e*P	**Pn**	**01 16 03.0**	**0.0**
CEVE				*e*S	**Sn**	**01 16 17.6**	**+1.6**
CEVE				IAML		01 16 18.6	
	comp=Z,16μm,0.3s						
SBLS	**San Blas**	**0.75**	**86**	*e*P	**Pn**	**01 16 03.1**	**0.0**
SBLS				⇓*e*S	**Sn**	**01 16 16.8**	**+0.8**
SBLS	**San Blas**	**0.75**	**86**	*e*P	**Pn**	**01 16 03.1**	**0.0**
SBLS				⇓*e*S	**Sn**	**01 16 16.8**	**+0.8**
SNJE	**San Jose**	**0.77**	**84**	*e*P	**Pn**	**01 16 03.3**	**+0.1**
SNJE	**San Jose**	**0.77**	**84**	*e*P	**Pn**	**01 16 03.3**	**+0.1**
FUG	**Fuego 3**	**0.78**	**326**	*e*P	**Pn**	**01 16 04.1**	**+0.8**
NBG	**Las Nubes**	**0.79**	**3**	*e*P	**Pn**	**01 16 05.4**	**+1.9**
UNIC	**Universidad Ca**	**0.84**	**77**	*e*P	**Pn**	**01 16 03.8**	**0.0**
UNIC	**Universidad Ca**	**0.84**	**77**	*e*P	**Pn**	**01 16 03.8**	**0.0**
BOQS	**Boqueron**	**1.09**	**93**	*e*P	**Pn**	**01 16 06.9**	**+0.2**
BOQS				*e*S	**Sn**	**01 16 24.9**	**+2.4**
UEES	**Universidad Ev**	**1.13**	**94**	*e*P	**Pn**	**01 16 07.2**	**+0.3**
UEES				IAML		01 16 30.1	
	comp=Z,6μm,0.1s						
UEES	**Universidad Ev**	**1.13**	**94**	*e*P	**Pn**	**01 16 07.2**	**+0.3**
UEES				IAML		01 16 30.1	
	comp=Z,6μm,0.1s						
SNET	**Serv Nac Est T**	**1.14**	**95**	*e*P	**Pn**	**01 16 07.2**	**+0.1**
SNET				IAML		01 16 08.8	
	comp=Z,4μm,0.2s						
SNET				*e*S	**Sn**	**01 16 24.6**	**+1.4**
SNET	**Serv Nac Est T**	**1.14**	**95**	*e*P	**Pn**	**01 16 07.2**	**+0.1**
SNET				IAML		01 16 08.8	
	comp=Z,4μm,0.2s						
SNET				*e*S	**Sn**	**01 16 24.6**	**+1.4**
SNET	**Serv Nac Est T**	**1.14**	**95**		**Pn**	**01 16 06.9**	**-0.2**
SNET				Sn	**Sn**	**01 16 23.8**	**+0.5**
UESS	**Universidad de**	**1.16**	**93**	*e*P	**Pn**	**01 16 07.7**	**+0.4**
UESS	**Universidad de**	**1.16**	**93**	*e*P	**Pn**	**01 16 07.7**	**+0.4**
OPAM	**Oficina de Pla**	**1.17**	**94**	*e*P	**Pn**	**01 16 07.9**	**+0.5**
OPAM				*e*S	**Sn**	**01 16 26.6**	**+2.8**
OPAM				IAML		01 16 27.9	
	comp=Z,4μm,0.2s						
OPAM	**Oficina de Pla**	**1.17**	**94**	*e*P	**Pn**	**01 16 07.9**	**+0.5**
OPAM				*e*S	**Sn**	**01 16 26.6**	**+2.8**
OPAM				IAML		01 16 27.9	
	comp=Z,4μm,0.2s						
MTO3	**Montecristo**	**1.17**	**59**	*e*P	**Pn**	**01 16 08.1**	**+0.4**
MTO3				*e*S	**Sn**	**01 16 25.0**	**+0.8**
MTO3	**Montecristo**	**1.17**	**59**	*e*P	**Pn**	**01 16 08.1**	**+0.4**
MTO3				*e*S	**Sn**	**01 16 25.0**	**+0.8**
CUSC	**Alcaldia de Cu**	**1.18**	**93**	*e*P	**Pn**	**01 16 07.9**	**+0.3**
CUSC				*e*S	**Sn**	**01 16 25.4**	**+1.2**
CUSC	**Alcaldia de Cu**	**1.18**	**93**	*e*P	**Pn**	**01 16 07.9**	**+0.3**
CUSC				*e*S	**Sn**	**01 16 25.4**	**+1.2**
APG	**El Apazote**	**1.21**	**357**	P	**Pn**	**01 16 09.2**	**+1.2**
	comp=Z,45nm,0.3s,baz=149,slow=8.8,SNR=52						
APG				LR	LR	01 16 22.4	
	comp=Z,81nm,21.8s,baz=154,slow=32						
APG				S	**Sn**	**01 16 26.5**	**+1.6**
	comp=Z,104nm,0.3s,baz=25,slow=9.8,SNR=97						
AEIL	**Aeropuerto Ilo**	**1.25**	**94**	*e*P	**Pn**	**01 16 08.9**	**+0.6**
AEIL				IAML		01 16 11.7	
	comp=Z,5μm,0.4s						
LFU	**La Fuente**	**1.25**	**92**	*e*P	**Pn**	**01 16 08.6**	**+0.3**
LFU	**La Fuente**	**1.25**	**92**	*e*P	**Pn**	**01 16 08.6**	**+0.3**
ERG	**Entre ros, C**	**1.31**	**300**	*e*P	**Pn**	**01 16 10.3**	**+1.3**
LFRS	**El Faro**	**1.31**	**97**	*e*P	**Pn**	**01 16 09.1**	**-0.1**
LBRS	**Las Brisas**	**1.31**	**92**	⇓*e*P	**Pn**	**01 16 09.7**	**+0.5**
PAVA	**Las Pavas**	**1.42**	**93**	*e*P	**Pn**	**01 16 11.1**	**+0.5**
PAVA	**Las Pavas**	**1.42**	**93**	*e*P	**Pn**	**01 16 11.1**	**+0.5**
LLGN	**La Laguna**	**1.46**	**75**	*e*P	**Pn**	**01 16 11.3**	**+0.4**
LLGN	**La Laguna**	**1.46**	**75**	*e*P	**Pn**	**01 16 11.3**	**+0.4**
STG3	**Santiaguito 3,**	**1.46**	**309**	*e*P	**Pn**	**01 16 12.2**	**+1.1**
COEG	**Centro de Oper**	**1.48**	**96**	*e*P	**Pn**	**01 16 12.1**	**+0.8**
ALJI	**Alcalda de J**	**1.83**	**104**	*e*P	**Pn**	**01 16 16.2**	**+0.6**
ALJI				IAML		01 16 17.4	
	comp=Z,2μm,0.2s						
COEB	**Comit de Eme**	**1.84**	**99**	*e*P	**Pn**	**01 16 16.5**	**+0.7**
TECA	**Tecapa**	**1.86**	**99**	*e*P	**Pn**	**01 16 17.0**	**+0.7**
TECA	**Tecapa**	**1.86**	**99**	*e*P	**Pn**	**01 16 17.0**	**+0.7**
PACA	**Pacayal**	**2.04**	**99**	*e*P	**Pn**	**01 16 19.2**	**+0.7**
PACA	**Pacayal**	**2.04**	**99**	*e*P	**Pn**	**01 16 19.2**	**+0.7**
LCY	**Lacayo**	**2.08**	**100**	*e*P	**Pn**	**01 16 19.7**	**+0.8**
LCY	**Lacayo**	**2.08**	**100**	*e*P	**Pn**	**01 16 19.7**	**+0.8**
VSM	**San Miguel**	**2.10**	**100**	*e*P	**Pn**	**01 16 20.2**	**+0.8**
VSM	**San Miguel**	**2.10**	**100**	*e*P	**Pn**	**01 16 20.2**	**+0.8**
THIG		**2.12**	**302**	*e*P	**Pn**	**01 16 20.6**	**+1.1**
THIG				*i* S	**Sn**	**01 16 45.6**	**+0.3**
THIG		**2.12**	**302**		**Pn**	**01 16 20.6**	**+1.1**
BLLM	**Bellamira**	**2.13**	**99**	*e*P	**Pn**	**01 16 20.3**	**+0.7**
BLLM	**Bellamira**	**2.13**	**99**	*e*P	**Pn**	**01 16 20.3**	**+0.7**
JUCU	**Jucuar¡n**	**2.16**	**104**	*e*P	**Pn**	**01 16 20.2**	**+0.2**
FAGO	**Alcalda de S**	**2.23**	**92**	*e*P	**Pn**	**01 16 20.9**	**0.0**
LCND	**La Caada**	**2.48**	**101**	*e*P	**Pn**	**01 16 25.0**	**+0.8**
LCND	**La Caada**	**2.48**	**101**	*e*P	**Pn**	**01 16 25.0**	**+0.8**
TGUH	**Tegucigalpa,Un**	**3.04**	**85**	*i* P	**Pn**	**01 16 32.9**	**+1.1**
TGUH	**Tegucigalpa,Un**	**3.04**	**85**		**Pn**	**01 16 32.5**	**+0.6**
PCIG		**3.33**	**305**	*e*P	**Pn**	**01 16 36.9**	**+1.4**
PCIG				*i* S	**Sn**	**01 17 15.0**	**+0.8**
PCIG		**3.33**	**305**		**Pn**	**01 16 36.9**	**+1.4**
ESTN	**Estel**	**3.98**	**99**		**Pn**	**01 16 42.4**	**-2.0**
ESTN				Sn	**Sn**	**01 17 29.1**	**-1.0**
ACON	**Acoyapa**	**5.41**	**109**		**Pn**	**01 17 03.3**	**-0.5**
CMIG	**Matias Romero**	**5.43**	**308**	P	**Pn**	**01 17 05.1**	**+1.0**
	comp=Z,2.7nm,0.3s,baz=101,slow=11,SNR=27						
CMIG				S	**Sn**	**01 18 09.4**	**+4.1**
	comp=Z,2.2nm,0.3s,baz=108,slow=21,SNR=3.7						
CMIG	**Matias Romero**	**5.43**	**308**	*i* P	**Pn**	**01 17 06.3**	**+2.2**
CMIG				*i* S	**Sn**	**01 18 08.3**	**+3.0**
ESPN	**Las Esperanzas**	**6.15**	**104**	Pn	**Pn**	**01 17 15.1**	**+1.2**
JTS	**Las Juntas de**	**6.36**	**123**	P	**Pn**	**01 17 18.3**	**+1.5**
	comp=Z,16nm,0.3s,baz=7.0,slow=20,SNR=36						
JTS	**Las Juntas de**	**6.36**	**123**		**Pn**	**01 17 16.8**	**0.0**
TEIG	**Tepich**	**6.71**	**17**	P	**Pn**	**01 17 23.7**	**+2.1**
	comp=Z,8.0nm,0.3s,baz=141,slow=0.8,SNR=41						
TEIG	**Tepich**	**6.71**	**17**		**Pn**	**01 17 20.1**	**-1.4**
TLIG	**Tlapa**	**8.71**	**297**		**Pn**	**01 17 46.9**	**-2.1**
FLOC	**Florencia**	**18.97**	**129**	P	**P**	**01 20 00.7**	**+0.8**
TXAR	**Lajitas Array**	**19.76**	**324**	P	**Pn**	**01 20 12.1**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=140,slow=10,SNR=4.6						
Y49A	**Blount Mountai**	**20.30**	**10**	P	**P**	**01 20 15.2**	**+1.1**
Y49A				IAmb	IAmb	01 20 20.2	
	comp=Z,4.0nm,0.7s						
GOGA	**Godfrey**	**20.52**	**17**	P	**P**	**01 20 17.7**	**+1.2**
GOGA				IAmb	IAmb	01 20 35.3	
	comp=Z,5.8nm,1.1s						
X48A	**Hartselle**	**20.79**	**8**	P	**P**	**01 20 18.9**	**-0.5**
X48A				IAmb	IAmb	01 20 24.1	
	comp=Z,4.7nm,0.7s						
HODGE	**Hodges**	**21.64**	**19**	P	**P**	**01 20 29.0**	**+0.5**
SWET	**Sewanee**	**21.71**	**10**	P	**P**	**01 20 29.4**	**+0.1**
SWET				IAmb	IAmb	01 20 32.2	
	comp=Z,7.2nm,0.8s						
W35A	**Tecumseh**	**22.06**	**346**	P	**P**	**01 20 31.4**	**-1.5**
WMOK	**Wichita Mounta**	**22.19**	**341**	P	**P**	**01 20 32.1**	**-2.3**
CPCT	**Cooper Cave**	**22.20**	**13**	P	**P**	**01 20 33.3**	**-1.2**
CPCT				IAmb	IAmb	01 20 35.9	
	comp=Z,6.5nm,1.1s						
FNO	**Franklin**	**22.29**	**345**	P	**P**	**01 20 33.6**	**-1.7**
WVT	**Waverly**	**22.36**	**5**	P	**P**	**01 20 35.9**	**-0.2**
CLTN	**Cedars of Leba**	**22.50**	**9**	P	**P**	**01 20 37.8**	**+0.2**
TKL	**Tuckaleechee C**	**22.57**	**14**	P	**P**	**01 20 39.7**	**+1.4**
	comp=Z,2.9nm,0.6s,baz=190,slow=13,SNR=6.5						
TKL	**Tuckaleechee C**	**22.57**	**14**	P	**P**	**01 20 38.0**	**-0.4**
TKL				IAmb	IAmb	01 20 43.7	
	comp=Z,3.2nm,0.8s						
ADOK	**Arcadia Dam**	**22.65**	**345**	P	**P**	**01 20 36.1**	**-3.1**
T47A	**Sharon Grove**	**23.29**	**7**	P	**P**	**01 20 44.5**	**-0.8**
TZTN	**Tazewell**	**23.47**	**14**	P	**P**	**01 20 46.7**	**-0.3**
TZTN				IAmb	IAmb	01 20 49.9	
	comp=Z,4.3nm,0.9s						
T49A	**Edmonton**	**23.62**	**10**	P	**P**	**01 20 48.0**	**-0.4**
T49A				IAmb	IAmb	01 20 50.6	
	comp=Z,9.1nm,0.9s						
U54A	**Nelsons Funny**	**23.90**	**17**	P	**P**	**01 20 51.9**	**+0.9**
U54A				IAmb	IAmb	01 20 54.6	
	comp=Z,9.0nm,0.6s						
S51A	**Beattyville**	**24.51**	**13**	P	**P**	**01 20 56.7**	**+0.3**
S51A				IAmb	IAmb	01 21 08.4	
	comp=Z,7.3nm,1.1s						
WCI	**Wyandotte Cave**	**24.61**	**8**	P	**P**	**01 20 56.9**	**-0.3**
WCI				IAmb	IAmb	01 20 59.9	
	comp=Z,11nm,0.8s						
ULM	**Lac du Bonnet**	**36.63**	**354**	P	**P**	**01 22 42.0**	**-1.0**
	comp=Z,1.4nm,0.5s,baz=171,slow=9.5,SNR=4.5						
ULM	**Lac du Bonnet**	**36.63**	**354**	P	**P**	**01 22 41.7**	**-1.3**
ULM				IAmb	IAmb	01 22 42.5	
	comp=Z,4.8nm,1.1s						
PINE	**Pine Mountain**	**39.71**	**325**	P	**P**	**01 23 08.6**	**-0.6**
E09A	**Wood Farm, Sta**	**40.08**	**330**	P	**P**	**01 23 11.2**	**-0.8**
SCHQ	**Schefferville**	**44.89**	**19**	P	**P**	**01 23 50.0**	**-0.9**
	comp=Z,1.8nm,0.6s,baz=237,slow=6.2,SNR=4.5						
SCHQ	**Schefferville**	**44.89**	**19**	P	**P**	**01 23 49.9**	**-1.0**
BWN	**Browne**	**64.42**	**335**	P	**P**	**01 26 11.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**146.66**	**344**	PKPbc	**PKPdf**	**01 35 17.9**	**+2.0**
	comp=Z,1.7nm,0.5s,baz=329,slow=3.2,SNR=4.1						
CMAR				pPKPbc	**pPKPdf**	**01 35 40.8**	**-0.7**
	comp=Z,0.8nm,0.3s,baz=61,slow=6.7,SNR=4.5						

*DDA **16** 01:47:56.4, 39°.82N×26°.17E, h7km±1km, ML2.8*
*ISK **16** 01:47:56.5, 39°.83N×26°.16E, h7km, ML2.9/25*
*THE **16** 01:47:56.0, 39°.79N×26°.13E, h7km±1km, ML2.7/4, Error ellipse: s-maj=1.2km s-min=0.5km az=88.0*
*ATH **16** 01:47:56.0, 39°.78N×26°.08E, h30km±1km, ML2.8/4, Error ellipse: s-maj=2.1km s-min=0.8km az=234.0*
ISC 16 01:47:56.2±0.8, **39°.79N**±0°.02×**26°.13E**±0°.02, **h12**km±5km, **n82**, σ0§**86**/105, **8C-7D**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.08**	**312**	*i* P	**Pg**	**01 47 58.9**	**+0.1**
BOZC				IAML		01 48 00.0	
	comp=N,5μm,0.5s						
BOZC				*i* S	**Sg**	**01 48 00.6**	**-0.1**
EZN	**Ezine**	**0.16**	**77**	P	**Pg**	**01 47 59.6**	**-0.2**
EZN				S	**Sg**	**01 48 01.6**	**-0.8**
	comp=N,6μm,0.2s						
EZN	**Ezine**	**0.16**	**77**	PG	**Pg**	**01 47 59.8**	**0.0**
EZN				SG	**Sg**	**01 48 02.0**	**-0.4**
BAYC	**CANAKKALE_Bayr**	**0.33**	**99**	*i* P	**Pg**	**01 48 02.8**	**-0.1**
BAYC				*i* S	**Sg**	**01 48 07.1**	**-0.2**
GADA	**Gvkgeada**	**0.44**	**336**	P	**Pg**	**01 48 04.9**	**+0.1**
GADA				S	**Sg**	**01 48 11.0**	**+0.4**
GADA	**Gvkgeada**	**0.44**	**336**	PG	**Pg**	**01 48 05.1**	**+0.3**
GADA				SG	**Sg**	**01 48 11.4**	**+0.8**
PRK	**Paraskevi**	**0.56**	**168**	P	**Pg**	**01 48 08.0**	**+1.0**
PRK				S	**Sb**	**01 48 16.2**	**+0.5**
PRK				AML	AML	01 48 16.3	
	comp=N,4631μm,0.4s						
PRK				AML	AML	01 48 17.9	
	comp=E,3259μm,0.5s						
SIGR	**SIGRI**	**0.61**	**200**	P	**Pg**	**01 48 07.9**	**-0.3**
SIGR				S	**Sg**	**01 48 16.4**	**+0.1**
	comp=E,1μm,0.3s						
SIGR	**SIGRI**	**0.61**	**200**	P	**Pg**	**01 48 08.0**	**-0.1**
SIGR				S	**Sg**	**01 48 17.0**	**+0.7**
SIGR				AML	AML	01 48 17.8	
	comp=N,4007μm,0.7s						
SIGR				AML	AML	01 48 18.6	
	comp=E,1940μm,0.4s						
GELI	**Tayfur-Gelibol**	**0.66**	**24**	PG	**Pb**	**01 48 09.2**	**-0.5**
GELI				SG	**Sb**	**01 48 18.0**	**-0.8**
LPK	**Lapseki**	**0.76**	**40**	PG	**Pg**	**01 48 10.6**	**-0.3**
SMTH	**Samothraki Isl**	**0.82**	**326**	P	**Pg**	**01 48 12.0**	**0.0**
SMTH				S	**Sb**	**01 48 23.3**	**0.0**
	comp=E,525nm,0.2s						
SMTH	**Samothraki Isl**	**0.82**	**326**	P	**Pg**	**01 48 12.0**	**0.0**
SMTH				S	**Sg**	**01 48 22.8**	**+0.1**
SMTH				AML	AML	01 48 24.7	
	comp=N,1169μm,0.2s						
SMTH				AML	AML	01 48 25.1	
	comp=E,898μm,0.2s						
EFSA	**Agios Efstrati**	**0.91**	**254**	P	**Pg**	**01 48 13.9**	**+0.1**
EFSA				S	**Sg**	**01 48 25.9**	**+0.2**
ENEZ	**Enez**	**0.94**	**1**	PG	**Pb**	**01 48 14.4**	**-0.1**
KRBG	**Karabiga-Canak**	**1.08**	**56**	PG	**Pg**	**01 48 16.3**	**-0.7**
ZEDA	**zmir-Bergama**	**1.10**	**138**	*i* P	**Pg**	**01 48 17.5**	**+0.1**
ZEDA				*i* S	**Sg**	**01 48 31.8**	**0.0**
ZEDA				IAML		01 48 35.0	
	comp=N,421nm,0.2s						
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pg**	**01 48 16.8**	**-0.7**
ALN				S	**Sb**	**01 48 32.4**	**+0.8**
	comp=N,308nm,0.5s						
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pg**	**01 48 16.9**	**-0.6**
ALN				S	**Sb**	**01 48 32.5**	**+0.8**
ALN				AML	AML	01 48 33.1	
	comp=E,418μm,0.4s						
ALN				AML	AML	01 48 33.9	
	comp=N,562μm,0.6s						
ALN	**Alexandroupoli**	**1.11**	**357**	PG	**Pg**	**01 48 17.1**	**-0.4**
ALN				SG	**Sn**	**01 48 32.7**	**+0.1**
KESN	**Edirne-Kesan**	**1.12**	**22**	*i* P	**Pb**	**01 48 17.5**	**-0.1**
BALY	**Balya**	**1.15**	**92**	*i* P	**Pb**	**01 48 18.2**	**+0.2**
BALY				*i* S	**Sb**	**01 48 32.9**	**0.0**
BALY				IAML		01 48 34.0	
	comp=N,363nm,0.6s						
KNL	**Balıkesir**	**1.18**	**66**	*i* P	**Pg**	**01 48 18.0**	**-0.8**
KNL				*i* S	**Sg**	**01 48 33.3**	**-0.9**
KNL				IAML		01 48 38.0	
	comp=N,190nm,0.4s						
RKY	**Sarkoy-Tekirda**	**1.20**	**42**	PN	**Pb**	**01 48 18.9**	**0.0**
SART	**Tekirdag**	**1.21**	**42**	*i* P	**Pg**	**01 48 18.6**	**-0.8**
SART				*i* S	**Sb**

baz=39
ANVS Anan'yevo 3.08 2⇑*e*P Pn 01 49 04.3 +0.5
baz=1.0
ANVS ⇑*i*S Sb 01 49 46.3 -1.2
baz=1.0
ARLS Aral 3.23 313⇑*e*P Pn 01 49 04.8 -1.0
baz=17
ARLS ⇑*i*S Sn 01 49 46.3 +2.4
baz=17
TNSS Tian-Shan 3.35 353 *e*P Pb 01 49 13.5 -1.5
39nm,0.5s
TNSS *e*S Sg 01 50 01.5 -2.0
38nm,0.8s
TNSS Tian-Shan 3.35 353 Pg Pb 01 49 13.5 -1.5
39nm,0.5s
TNSS Lg Lg 01 50 01.5
38nm,0.8s
UCH Uchtor 3.38 319⇓*i*P Pn 01 49 07.0 -1.2
baz=22
UCH ⇓*i*S Sn 01 49 51.2 +3.1
baz=22
IZV Izvestkoviy 3.39 349 *e*P Pb 01 49 14.3 -1.2
14nm,0.9s
IZV *e*S Sg 01 50 02.9 -1.8
42nm,0.7s
IZV Izvestkoviy 3.39 349 Pg Pb 01 49 14.3 -1.2
14nm,0.9s
IZV Lg Lg 01 50 03.1
42nm,0.7s
SATY Saty 3.42 11 *e*P Pb 01 49 14.9 -1.1
81nm,1.0s
SATY *e*S Sg 01 50 03.8 -1.8
79nm,1.0s
SATY Saty 3.42 11 Pg Pb 01 49 14.9 -1.1
81nm,1.0s
SATY Lg Lg 01 50 03.8
79nm,1.0s
MDOK Medeo 3.47 355 *e*P Pb 01 49 15.7 -1.2
19nm,0.8s
MDOK *e*S Sg 01 50 05.1 -2.1
33nm,0.8s
MDOK Medeo 3.47 355 ⇑Pn Pb 01 49 15.2 -1.6
30nm,1.0s
MDOK ⇑Lg Lg 01 50 05.1
65nm,1.2s
MDOK Medeo 3.47 355 Pg Pb 01 49 15.7 -1.2
19nm,0.8s
MDOK Lg Lg 01 50 05.8
33nm,0.8s
TKM2 Tokmak 2 3.51 337⇑*i*P Pn 01 49 09.9 +0.1
baz=38
TKM2 ⇑*i*S Sn 01 49 56.2 +5.1
baz=38
TKM2 Tokmak 2 3.51 337 ⇑Pn Pn 01 49 09.5 -0.3
1.7nm,0.6s
TKM2 ⇑Pg Pb 01 49 17.1 -0.5
4.7nm,0.6s
TKM2 ⇓Lg Lg 01 50 05.5
46nm,1.2s
KBK Karagaybulak 3.52 328⇓*i*P Pn 01 49 09.3 -0.5
baz=30
KBK ⇓*i*S Sn 01 49 55.2 +4.1
baz=30
KST Kastek 3.52 341 *e*P Pb 01 49 16.6 -1.2
14nm,1.2s
KST *e*S Sg 01 50 06.5 -2.5
30nm,0.8s
KST Kastek 3.52 341 Pg Pb 01 49 16.6 -1.2
14nm,1.2s
KST Lg Lg 01 50 07.4
30nm,0.8s
KNDC Almaty 3.53 354 ⇑Pn Pn 01 49 13.1 +3.2
24nm,0.6s
KNDC ⇓Lg Lg 01 50 08.3
99nm,0.8s
KOTS Kotyrbulak 3.54 356 *e*P Pb 01 49 16.8 -1.2
43nm,0.5s
KOTS *e*S Sg 01 50 07.1 -2.2
114nm,0.9s
KOTS Kotyrbulak 3.54 356 Pg Pb 01 49 16.8 -1.2
43nm,0.5s
KOTS Lg Lg 01 50 07.6
114nm,0.9s
UZB Uzynbulak 3.62 18 *e*P Pb 01 49 17.4 -2.1
12nm,1.1s
UZB *e*S Sb 01 50 08.3 +5.1
28nm,1.2s
UZB Uzynbulak 3.62 18 Pg Pb 01 49 17.4 -2.1
12nm,1.1s
UZB Lg Lg 01 50 08.3
28nm,1.2s
AAK Ala-Archa 3.70 323⇓*i*P Pn 01 49 11.6 -0.7
baz=26
AAK ⇓*i*S Sn 01 49 59.1 +3.5
baz=26
AAK Ala-Archa 3.70 323 ⇑Pn Pn 01 49 15.0 +2.7
8.3nm,0.8s
AAK ⇓Lg Lg 01 50 10.5
65nm,0.8s
AML Almayashu 3.76 311⇓*i*P Pn 01 49 11.6 -1.8
baz=15
AML ⇓*i*S Sn 01 49 59.1 +1.7
baz=15
DGS Degeres 3.76 340 *e*P Pb 01 49 21.0 -0.8
9.4nm,0.6s
DGS *e*S Sg 01 50 14.4 -2.1
37nm,0.7s
DGS Degeres 3.76 340 Pg Pb 01 49 21.0 -0.8
9.4nm,0.6s
DGS Lg Lg 01 50 14.4
37nm,0.7s
FRU1 Bishkek 3.77 326⇑*e*P Pn 01 49 12.5 -0.8
baz=28
FRU1 ⇑*e*S Sn 01 50 01.0 +3.7
baz=28
ARSB Arslanbob 3.80 297⇑*i*P Pn 01 49 10.2 -3.4
baz=1.0
ARSB ⇑*i*S Sn 01 49 56.7 -1.3
baz=1.0
KURS Kuram 3.81 7 *e*P Pb 01 49 21.9 -0.8
5.7nm,1.0s
KURS *e*S Sg 01 50 15.6 -2.6
35nm,1.0s
KPKS Kokpek 3.86 13 *e*P Pb 01 49 23.3 -0.2
8.6nm,0.8s
KPKS *e*S Sg 01 50 17.9 -1.9
63nm,1.2s
PDGK Podgornoye 3.92 22 ⇑Pg Pg 01 49 30.1 -0.7
9.5nm,0.6s
PDGK ⇑Lg Lg 01 50 24.4
84nm,1.0s
KTBS Karatobe 4.05 352 *e*P Pb 01 49 25.9 -0.7
13nm,0.8s
KTBS *e*S Sg 01 50 22.8 -2.9
25nm,0.8s
KTBS Karatobe 4.05 352 Pg Pb 01 49 25.9 -0.7
13nm,0.8s
KTBS Lg Lg 01 50 23.2
25nm,0.8s
EKS2 Erkin-Say 4.07 318⇓*i*P Pn 01 49 16.0 -1.4
baz=20
EKS2 ⇓*i*S Sn 01 50 07.0 +2.3
baz=20
CHKK Chushkaly 4.16 355 *e*P Pb 01 49 29.2 +0.7
6.3nm,1.2s
CHKK *e*S Sg 01 50 27.9 -1.5
15nm,0.9s
USP Ospenovka 4.21 329⇑*i*P Pn 01 49 18.8 -0.4
baz=31
USP ⇑*i*S Sn 01 50 11.6 +3.7
baz=31
KUU Kurty 4.27 349 *e*P Pb 01 49 30.1 -0.4
5.6nm,1.0s
KUU *e*S Sg 01 50 29.4 -3.4
29nm,0.7s
MNBS Baschi 4.42 9 *e*P Pb 01 49 33.3 +0.3
21nm,0.9s
MNBS *e*S Sg 01 50 35.5 -2.2
30nm,0.9s
MNBS Baschi 4.42 9 Pg Pb 01 49 33.3 +0.3
21nm,0.9s
MNBS Lg Lg 01 50 35.6
30nm,0.9s
ARXS Arharly 4.51 3 *e*P Pb 01 49 34.4 -0.1
7.5nm,0.8s
ARXS *e*S Sg 01 50 37.1 -3.4
22nm,0.8s
ARXS Arharly 4.51 3 Pg Pb 01 49 34.4 -0.1
7.5nm,0.8s
ARXS Lg Lg 01 50 37.8
22nm,0.8s
DJR Jarkent 4.93 20 *e*P Pb 01 49 41.6 0.0
1.1nm,1.0s
DJR *e*S Sg 01 50 49.2 -4.7
19nm,1.1s
IUG luzhnay 6.15 296 Pg Pb 01 50 02.2 -0.3
0.6nm,0.3s
IUG Lg Lg 01 51 25.9
KK31 Karatay Array 6.25 305 ⇓Pg Pb 01 50 04.4 +0.3
0.7nm,0.6s,baz=128,slow=16,SNR=5.4
KK31 ⇓Lg Lg 01 51 27.0
11nm,0.8s,baz=123,slow=30
WMQ Urumqi 8.66 58 *e*P Pn 01 50 14.0 -6.4
WMQ smax smax
comp=N,17nm,1.5s
WMQ smax smax
comp=E,10.0nm,1.5s

IDC ***16*** *01:54:40.9±1.4,0°.74S×135°.19E, h0km, mb3.7/3, mb1 4.1/5, mb1mx3.8/33, mbtmp3.9/5, ML4.0/2, Error ellipse: s-maj=41.9km s-min=24.3km az=84.0*
DJA ***16*** *01:54:43.2±0.5, 1°.5S×13°.5E±°, h10km, M4.1/7, MLv4.1/7*
ISC 16 01:54:46.4±0.9, 0.79S±0.08×135.01E±0.05, h35km, n12, σ1s19/16, mb4.0/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.10**	**229**	P		**Pn**	**01 55 02.9**	**-2.4**
BAKI	**Biak**	**1.16**	**110**	P		**Pn**	**01 55 04.5**	**-1.7**
SRPI	**Serui, Papua**	**1.63**	**131**	P		**Pn**	**01 55 12.3**	**-0.3**
SRPI				S		**Sn**	**01 55 34.5**	**+2.2**
KMPI	**Kaimana, Papua**	**3.14**	**205**	P		**Pn**	**01 55 32.5**	**-0.8**
KMPI				S		**Sn**	**01 56 10.7**	**+1.2**
FAKI	**Fak Fak**	**3.48**	**233**	P		**Pn**	**01 55 37.9**	**-0.1**
SlJI	**Sorong**	**3.75**	**269**	Pn		**Pn**	**01 55 42.5**	**+0.8**
	4.8nm,0.3s,baz=282,slow=21,SNR=9.4							
SWI	**Sorong**	**3.75**	**269**	P		**Pn**	**01 55 41.0**	**-0.8**
SMPI	**Sarmi**	**3.88**	**108**	P		**Pn**	**01 55 42.9**	**-0.7**
WRA	**Warramunga Arr**	**19.04**	**182**	P		**P**	**01 59 05.4**	**-0.2**
	0.6nm,0.3s,baz=0.5,slow=12,SNR=29							
ASAR	**Alice Springs**	**22.76**	**183**	P		**P**	**01 59 45.7**	**-0.2**
	11nm,0.8s,baz=9.9,slow=11,SNR=66							
MKAR	**Makanchi Array**	**66.04**	**323**	P		**P**	**02 05 30.2**	**+0.5**
	0.1nm,0.4s,baz=113,slow=7.7,SNR=3.3							
MKAR				pP		**pP**	**02 05 39.9**	**-0.4**
	0.7nm,0.6s,baz=108,slow=8.3,SNR=7.8							
MKAR				sP		**sP**	**02 05 45.1**	**+0.9**
	0.4nm,0.4s,baz=107,slow=8.7,SNR=4.9							
ILAR	**Eielson Array**	**85.64**	**25**	P		**P**	**02 07 20.4**	**-0.7**
	0.4nm,0.7s,baz=255,slow=4.9,SNR=4.2							

DDA ***16*** *02:01:10.9, 42°.20N×26°.31E, h17km±1km, ML2.9*
ATH ***16*** *02:01:10.9, 42°.26N×26°.12E, h12km±3km, ML3.0/4, Error ellipse: s-maj=5.2km s-min=1.8km az=114.0*
SOF ***16*** *02:01:10.1, 42°.22N×26°.24E, h20km, MD3.0*
ISK ***16*** *02:01:10.9, 42°.21N×26°.26E, h5km, ML3.1/21*
THE ***16*** *02:01:12.7, 42°.15N×26°.31E, h8km±1km, ML2.8/3, Error ellipse: s-maj=2.4km s-min=0.3km az=45.0*
ISC 16 02:01:11.3±1.1, 42.19N±0.02×26.24E±0.02, h3km±10km, n109, σ0s78/126, 20C-25D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JMB	**Yambol**	**0.38**	**43**	*i* Pg		**Pg**	**02 01 18.1**	**-0.5**
EDRB	**Edirne**	**0.51**	**132**	P		**Pg**	**02 01 21.0**	**-0.1**
EDRB				S		**Sg**	**02 01 27.8**	**+0.1**
	1μm,0.2s							
EDRB	**Edirne**	**0.51**	**132**	PG		**Pg**	**02 01 21.2**	**+0.1**
EDRB				SG		**Sg**	**02 01 28.3**	**+0.6**
DIM	**Dimitrovgrad**	**0.54**	**255**	*i* Pg		**Pg**	**02 01 21.9**	**+0.2**
KIRK	**Kırklareli**	**0.76**	**122**	*i* P		**Pg**	**02 01 24.9**	**-1.0**
KIRK				*i* S		**Sg**	**02 01 35.5**	**-0.3**
KIRK				IAML			02 01 37.0	
	comp=N,484nm,0.7s							
ELND	**Elena**	**0.78**	**340**	⇓P		**Pg**	**02 01 25.8**	**-0.5**
ELND	**Elena**	**0.78**	**340**	⇓S		**Sg**	**02 01 36.7**	**+0.3**
KDZ	**Kurdzhali**	**0.82**	**229**	*i* Pg		**Pb**	**02 01 28.1**	**0.0**
KDZ	**Kurdzhali**	**0.82**	**229**	PG		**Pb**	**02 01 28.6**	**+0.5**
KDZ				SG		**Sn**	**02 01 41.5**	**-0.8**
SZH	**Strazhica**	**1.10**	**348**	*i* Pg		**Pg**	**02 01 32.2**	**-0.1**
UKOP	**Uzunkopru-Edir**	**1.10**	**164**	PN		**Pg**	**02 01 32.7**	**+0.3**
PHSR	**Pinarhisar**	**1.11**	**120**	⇓P		**Pg**	**02 01 32.2**	**-0.4**
PHSR	**Pinarhisar**	**1.11**	**120**	⇓S		**Sg**	**02 01 47.2**	**+0.1**
PHSR	**Pinarhisar**	**1.11**	**120**	PN		**Pg**	**02 01 31.7**	**-0.9**
PHSR				SN		**Sg**	**02 01 47.6**	**+0.6**
PLD	**Plovdiv**	**1.14**	**266**	*i* Pg		**Pg**	**02 01 32.2**	**-1.0**
PLD	**Plovdiv**	**1.14**	**266**	PN		**Pg**	**02 01 32.7**	**-0.5**
PLD				SN		**Sn**	**02 01 50.2**	**-0.2**
RDO	**Rodhopi**	**1.17**	**207**	P		**Pg**	**02 01 34.1**	**+0.4**
RDO				S		**Sn**	**02 01 50.9**	**-0.1**
	comp=N,878nm,0.4s							
RDO	**Rodhopi**	**1.17**	**207**	P		**Pg**	**02 01 34.1**	**+0.4**
RDO				S		**Sg**	**02 01 49.8**	**+1.0**
RDO				AML	AML		02 01 52.8	
	comp=E,1853μm,0.3s							
RDO				AML	AML		02 01 54.1	
	comp=N,1500μm,0.4s							
RDO	**Rodhopi**	**1.17**	**207**	PN		**Pg**	**02 01 34.2**	**+0.5**
RDO				SN		**Sn**	**02 01 50.9**	**-0.1**
PVL	**Pavlikeni**	**1.22**	**327**	*i* Pg		**Pg**	**02 01 34.6**	**-0.1**
RZN	**Rozhen**	**1.24**	**247**	*i* Pg		**Pg**	**02 01 34.6**	**-0.5**
ALN	**Alexandroupoli**	**1.30**	**186**	P		**Pn**	**02 01 36.0**	**-0.4**
ALN				S		**Sb**	**02 01 53.7**	**+0.2**
	comp=N,225nm,0.7s							
ALN	**Alexandroupoli**	**1.30**	**186**	P		**Pn**	**02 01 36.2**	**-0.1**
ALN				S		**Sn**	**02 01 55.4**	**+1.1**
ALN				AML	AML		02 01 56.7	
	comp=E,490μm,0.9s							
ALN				AML	AML		02 01 57.5	
	comp=N,471μm,0.5s							
ALN	**Alexandroupoli**	**1.30**	**186**	PN		**Pn**	**02 01 36.3**	**-0.1**
RAZG	**Razgrad**	**1.39**	**8**	⇓P		**Pn**	**02 01 37.2**	**-0.4**
RAZG	**Razgrad**	**1.39**	**8**	⇓S		**Sg**	**02 01 55.9**	**0.0**
KESN	**Edirne-Kesan**	**1.41**	**166**	*i* P		**Pn**	**02 01 37.6**	**-0.5**
KESN				*i* S		**Sb**	**02 01 57.1**	**+0.3**
KESN				IAML			02 01 58.0	
	comp=E,594nm,0.5s							
ENEZ	**Enez**	**1.46**	**182**	PN		**Pn**	**02 01 38.8**	**+0.3**
ERIK	**Erikli-Kesan**	**1.53**	**172**	PN		**Pn**	**02 01 39.5**	**0.0**
CRLT	**Corlu**	**1.55**	**133**	PN		**Pn**	**02 01 40.3**	**+0.6**
ZIMR		**1.60**	**337**	⇓S		**Sg**	**02 02 03.5**	**+0.8**
SART	**Tekirdag**	**1.66**	**154**	*i* P		**Pb**	**02 01 42.5**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.66**	**154**	PN		**Pn**	**02 01 42.1**	**+0.7**
PLVB	**Pleven**	**1.69**	**316**	⇓P		**Pb**	**02 01 42.3**	**-0.6**
PLVB	**Pleven**	**1.69**	**316**	⇓S		**Sg**	**02 02 06.0**	**+0.6**
CTYL	**Yalikoy Yolu**	**1.69**	**114**	⇑P		**Pb**	**02 01 42.9**	**-0.2**
CTYL	**Yalikoy Yolu**	**1.69**	**114**	⇑S		**Sb**	**02 02 04.9**	**+0.1**
CTYL	**Yalikoy Yolu**	**1.69**	**114**	PN		**Pn**	**02 01 41.4**	**-0.4**
KAVA	**Kavala**	**1.76**	**228**	P		**Pn**	**02 01 42.9**	**+0.2**
KAVA				S		**Sn**	**02 02 06.2**	**+0.7**
KAVA	**Kavala**	**1.76**	**228**	P		**Pn**	**02 01 42.9**	**+0.2**
KAVA				S		**Sb**	**02 02 06.7**	**0.0**
KAVA				AML	AML		02 02 12.2	
	comp=N,1288μm,0.6s							
KAVA				AML	AML		02 02 12.6	
	comp=E,1094μm,0.8s							
SLVT	**Silivri**	**1.76**	**122**	PN		**Pn**	**02 01 42.7**	**0.0**
SMTH	**Samothraki Isl**	**1.80**	**197**	P		**Pb**	**02 01 44.7**	**-0.2**
SMTH				AML	AML		02 02 13.0	
	comp=N,349μm,0.7s							
SMTH				AML	AML		02 02 13.1	
	comp=E,410μm,0.6s							
GELI	**Tayfur-Gelibol**	**1.80**	**174**	PN		**Pn**	**02 01 43.3**	**+0.1**
LPK	**Lapseki**	**1.86**	**168**	PN		**Pn**	**02 01 44.8**	**+0.7**
MRMT	**Marmara Adasi**	**1.89**	**147**	PN		**Pn**	**02 01 44.2**	**-0.3**
ELBA	**Catalca**	**1.95**	**122**	*i* P		**Pn**	**02 01 45.5**	**+0.2**
ELBA				*i* S		**Sn**	**02 02 08.6**	**-1.7**
CTKS	**Kestanelik-??a**	**1.95**	**119**	PN		**Pn**	**02 01 45.2**	**-0.1**
KRBG	**Karabiga-Canak**	**1.97**	**156**	PN		**Pn**	**02 01 46.1**	**+0.6**
SGRR	**Singureni**	**2.04**	**355**	⇓P		**Pb**	**02 01 47.5**	**-1.5**
SGRR	**Singureni**	**2.04**	**355**	⇓S		**Sb**	**02 02 14.7**	**-0.1**
SB02	**Marmara Sea**	**2.06**	**126**	PN		**Pn**	**02 01 47.1**	**+0.3**
COPA	**Copaceanca**	**2.08**	**339**	⇑P		**Pn**	**02 01 47.2**	**+0.2**
COPA	**Copaceanca**	**2.08**	**339**	⇑S		**Sb**	**02 02 15.7**	**-0.2**
RASA	**Rasa**	**2.13**	**18**	⇓P		**Pb**	**02 01 49.0**	**-1.5**
RASA	**Rasa**	**2.13**	**18**	⇓S		**Sb**	**02 02 16.1**	**-1.2**
BGKT	**Bogazkoy**	**2.15**	**117**	PN		**Pn**	**02 01 48.5**	**+0.4**
EDC	**Edincik**	**2.21**	**146**	PN		**Pn**	**02 01 48.9**	**0.0**
ICOR	**Ion Corvin**	**2.24**	**30**	⇓P		**Pn**	**02 01 50.1**	**+0.8**
ICOR	**Ion Corvin**	**2.24**	**30**	⇓S		**Sb**	**02 02 19.2**	**-1.3**
VLAD	**Vladila**	**2.25**	**324**	⇑P		**Pn**	**02 01 50.5**	**+1.1**
SRS	**Serrai**	**2.25**	**242**	P		**Pn**	**02 01 49.7**	**+0.2**
SRS	**Serrai**	**2.25**	**242**	P		**Pn**	**02 01 49.2**	**-0.3**
VTS	**Vitosha**	**2.26**	**282**	⇓P		**Pn**	**02 01 49.9**	**+0.2**
VTS	**Vitosha**	**2.26**	**282**	⇓S		**Sn**	**02 02 18.2**	**0.0**
KLYT	**Kilyos**	**2.30**	**113**	⇓P		**Pn**	**02 01 49.7**	**-0.4**
KLYT	**Kilyos**	**2.30**	**113**	⇓S		**Sb**	**02 02 22.1**	**-0.1**
EZN	**Ezine**	**2.37**	**178**	P		**Pn**	**02 01 50.8**	**-0.2**
MANR	**Mangalia**	**2.37**	**46**	⇑S		**Sb**	**02 02 23.6**	**-0.6**
ISK	**Istanbul-Kandi**	**2.40**	**117**	P		**Pn**	**02 01 50.5**	**-0.9**
ISK	**Istanbul-Kandi**	**2.40**	**117**	PN		**Pn**	**02 01 51.7**	**+0.3**
KAVV	**Kandilli-Istan**	**2.40**	**117**	PN		**Pn**	**02 01 51.7**	**+0.2**
BAYC	**CANAKKALE_Bayr**	**2.46**	**174**	*i* P		**Pn**	**02 01 52.2**	**-0.2**
BAYC				*i* S		**Sn**	**02 02 23.5**	**+0.6**
KCTX	**Karacabey (Bur**	**2.50**	**140**	PN		**Pn**	**02 01 53.4**	**+0.5**
HUMR	**Humele**	**2.51**	**339**	⇓P		**Pn**	**02 01 53.9**	**+0.9**
OUR	**Ouranopolis**	**2.52**	**223**	P		**Pn**	**02 01 53.5**	**+0.5**
AMRR	**Amara**	**2.55**	**18**	⇓P		**Pn**	**02 01 54.0**	**+0.5**
AMRR	**Amara**	**2.55**	**18**	⇓S		**Sb**	**02 02 27.9**	**-1.5**
MFTR	**Murfatlar**	**2.55**	**38**	⇓P		**Pn**	**02 01 54.6**	**+1.1**
MFTR	**Murfatlar**	**2.55**	**38**	⇓S		**Sb**	**02 02 29.5**	**+0.1**
ARMT	**Armutlu**	**2.56**	**129**	PN		**Pn**	**02 01 54.2**	**+0.5**
SOH	**Sokhos**	**2.56**	**239**	P		**Pn**	**02 01 53.9**	**+0.2**
SOH	**Sokhos**	**2.56**	**239**	P		**Pn**	**02 01 54.7**	**+1.0**
BALY	**Baliya**	**2.66**	**156**	*i* P		**Pn**	**02 01 55.7**	**+0.5**
KNT	**Kendrikon**	**2.70**	**249**	P		**Pn**	**02 01 56.0**	**+0.3**
KNT	**Kendrikon**	**2.70**	**249**	P		**Pn**	**02 01 55.9**	**+0.2**
TIRR	**Tirgusor**	**2.77**	**34**	⇑P		**Pn**	**02 01 56.4**	**-0.1**
PLG	**Polygyros**	**2.78**	**230**	P		**Pn**	**02 01 57.4**	**+0.7**
PLG	**Polygyros**	**2.78**	**230**	P		**Pn**	**02 01 57.0**	**+0.2**
PRK	**Paraskevi**	**2.94**	**179**	P		**Pb**	**02 02 02.2**	**-2.1**
PAIG	**Paliouri**	**2.98**	**221**	P		**Pn**	**02 01 58.5**	**-0.9**
STIP	**Stip**	**3.06**	**262**	*i* Pn		**Pn**	**02 01 58.3**	**-2.2**
DURS	**Dursunbey**	**3.10**	**146**	*i* P		**Pn**	**02 02 02.2**	**+1.1**
TOPG	**Topolog**	**3.10**	**29**	⇑P		**Pn**	**02 02 02.0**	**+0.8**
KAND	**Kocaeli-Kandir**	**3.16**	**109**	*i* P		**Pb**	**02 02 09.8**	**+1.8**
KAND				*i* S		**Sn**	**02 02 39.2**	**-0.9**
KAND				IAML			02 02 55.0	
	comp=N,27nm,0.7s							
ADVT	**Abdulvahap**	**3.17**	**122**	PN		**Pn**	**02 02 02.4**	**+0.3**
ZEDA	**zmir-Bergama**	**3.29**	**168**	*i* P		**Pg**	**02 02 13.6**	**-0.6**
CFR	**Carcaliu**	**3.29**	**24**	⇓P		**Pb**	**02 02 11.5**	**+1.2**
CFR	**Carcaliu**	**3.29**	**24**	⇓S		**Sn**	**02 02 45.3**	**+2.1**
MLR	**Muntele Rosu**	**3.31**	**356**	⇓P		**Pn**	**02 02 04.2**	**+0.2**
VOIR		**3.36**	**346**	⇓P		**Pn**	**02 02 05.6**	**+0.9**
ARR	**Arges**	**3.38**	**340**	⇑P		**Pg**	**02 02 19.2**	**+3.1**
ARR	**Arges**	**3.38**	**340**	⇑S		**Sg**	**02 02 57.7**	**-2.1**
VRI	**Vrincioaia**	**3.69**	**5**	⇓P		**Pn**	**02 02 09.8**	**+0.6**
DOPR	**Dopca**	**3.82**	**351**	⇑P		**Pn**	**02 02 11.9**	**+0.9**
GZR	**Gura Zlata**	**4.06**	**323**	⇓P		**Pn**	**02 02 14.1**	**-0.3**
MDVR	**Moldovita**	**4.19**	**310**	⇑P		**Pn**	**02 02 15.9**	**-0.1**
BIZ	**Bicaz**	**4.75**	**359**	⇑P		**Pn**	**02 02 24.5**	**+0.7**
BZS	**Buzias**	**4.78**	**317**	⇓P		**Pn**	**02 02 23.8**	**-0.4**
DRGR		**5.24**	**332**	⇑P		**Pn**	**02 02 30.8**	**+0.1**

NEIC ***16*** *02:45:52.7±1.7, 16°.98N×0°.07×95°.06W±0°.05, h117km±4km, Error ellipse: s-maj=10.9km s-min=7.0km az=189.0*
MEX ***16*** *02:45:53.1±1.4, 16°.91N×95°.04W, h125km±11km, MD4.3*
IDC ***16*** *02:45:54.2±0.6, 17°.28N×94°.88W, h103km±7km, mb3.4/5, mb1 3.8/9, mb1mx3.4/44, mbtmp3.9/9, Error ellipse: s-maj=20.2km s-min=10.6km az=18.0*
ISC 16 02:45:52.4±0.7, 16.92N±0.07×95.04W±0.04, h116km, n34, σ1s37/45, mb3.8/6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.23**	**40**	LR		LR	02 45 57.7	
	comp=Z,16nm,21.1s,baz=76,slow=19							
CMIG				P		**Pn**	**02 46 09.5**	**+0.9**
	846nm,0.3s,baz=234,slow=5.8							
CMIG				S		**Sn**	**02 46 21.2**	**+0.3**
	393nm,0.3s,baz=343,slow=19,SNR=78							
CMIG	**Matias Romero**	**0.23**	**40**	*e*P		**Pn**	**02 46 09.5**	**+0.9**
CMIG				*e*S		**Sn**	**02 46 21.1**	**+0.3**
HUIG	**Huatulco**	**1.54**	**222**	*e*P		**Pn**	**02 46 19.4**	**-0.7**
HUIG				*e*S		**Sn**	**02 46 41.0**	**0.0**
HUIG	**Huatulco**	**1.54**	**222**			**Pn**	**02 46 19.4**	**-0.7**
HUIG						**Sn**	**02 46 41.0**	**0.0**
OXBJ	**Oaxaca**	**1.62**	**276**	*e*P		**Pn**	**02 46 21.8**	**+0.6**
OXBJ				*e*S		**Sn**	**02 46 42.7**	**-0.5**
OXBJ	**Oaxaca**	**1.62**	**276**			**Pn**	**02 46 21.8**	**+0.6**
OXBJ						**Sn**	**02 46 42.7**	**-0.5**
VHO	**Vista Hermosa**	**1.63**	**276**	*e*P		**Pn**	**02 46 21.5**	**+0.2**
VHO				*e*S		**Sn**	**02 46 43.7**	**+0.3**
TLIG	**Tlapa**	**3.43**	**281**	*e*P		**Pn**	**02 46 44.7**	**+0.3**
TLIG				*i* S		**Sn**	**02 47 23.2**	**-1.4**
TLIG	**Tlapa**	**3.43**	**281**			**Pn**	**02 46 44.8**	**+0.3**
TLIG	**Tlapa**	**3.43**	**281**			**Pn**	**02 46 44.7**	**+0.3**
TLIG						**Sn**	**02 47 21.5**	**-3.2**
APG	**El Apazote**	**4.79**	**113**	P		**Pn**	**02 47 05.5**	**+2.8**
	2.9nm,0.3s,baz=333,slow=18,SNR=8.0							
APG				S		**Sn**	**02 47 57.2**	**-0.1**
	32nm,0.3s,baz=14,slow=14,SNR=14							
TEIG	**Tepich**	**7.21**	**62**	P		**Pn**	**02 47 34.0**	**-1.1**
	10nm,0.3s,baz=124,slow=0.0,SNR=58							
TEIG				S		**Sn**	**02 48 51.4**	**-4.0**
	21nm,0.3s,baz=319,slow=18,SNR=26							
TEIG	**Tepich**	**7.21**	**62**			**Pn**	**02 47 34.0**	**-1.1**
TEIG						**Sn**	**02 48 52.1**	**-3.4**
JTS	**Las Juntas de**	**11.81**	**123**	P		**Pn**	**02 48 39.6**	**+2.4**
	1.3nm,0.3s,baz=4.1,slow=20,SNR=6.1							
JTS	**Las Juntas de**	**11.81**	**123**			**Pn**	**02 48 38.5**	**+1.2**
TXAR	**Lajitas Array**	**14.68**	**329**	P		**Pn**	**02 49 14.0**	**-0.4**
	0.1nm,0.3s,baz=148,slow=13,SNR=6.7							
WMOK	**Wichita Mounta**	**18.06**	**350**	P		**P**	**02 49 53.0**	**-1.8**
Z50A	**Ashland**	**18.22**	**25**	P		**P**	**02 49 56.9**	**+0.3**
121A	**Cookes Peak, D**	**19.36**	**326**	P		**P**	**02 50 07.6**	**-1.6**
121A				IAmb	IAmb	IAmb	02 50 12.1	
	comp=Z,6.3nm,0.8s							
GOGA	**Godfrey**	**19.45**	**30**	P		**P**	**02 50 09.0**	**-0.9**
GOGA				IAmb	IAmb	IAmb	02 50 22.5	
	comp=Z,3.9nm,0.6s							
U40A	**Yellville**	**19.46**	**5**	P		**P**	**02 50 10.5**	**+0.5**
U40A				IAmb	IAmb	IAmb	02 50 11.6	
	comp=Z,6.4nm,0.7s							
HENM	**Henderson Moun**	**20.33**	**13**	P		**P**	**02 50 18.9**	**-0.4**
TKL	**Tuckaleechee C**	**21.19**	**26**	P		**P**	**02 50 26.8**	**-1.8**
V52A	**Sevierville**	**21.42**	**26**	P		**P**	**02 50 31.1**	**0.0**
V55A	**Taylorsville**	**22.51**	**30**	P		**P**	**02 50 41.4**	**-1.1**
V55A				IAmb	IAmb	IAmb	02 50 56.1	
	comp=Z,6.7nm,1.1s							
NVAR	**Mina Array Bea**	**29.57**	**321**	P		**P**	**02 51 48.9**	**+2.3**
	comp=Z,1.2nm,0.7s,baz=135,slow=9.0,SNR=12							
LPAZ	**La Paz**	**42.34**	**140**	P		P	02 53 42.0	+6.1
	comp=Z,1.7nm,0.7s,baz=298,slow=5.5,SNR=5.5							
LPAZ	**La Paz**	**42.34**	**140**	P		**P**	**02 53 35.6**	**-0.3**
LPAZ				IAmb	IAmb	IAmb

19nm,1.6s,SNR=7.9
EIBI Ibiza 2.83 356 P **Pn 02 52 16.6 +0.7**
1.4nm,0.2s,SNR=7.9
EIBI S **Sn 02 52 48.2 -0.6**
2.1nm,0.2s,SNR=7.9
EBEN2 Beniarda presa 2.86 330 P **Pn 02 52 17.3 +0.9**
2.7nm,0.5s,SNR=7.9
EBEN2 S **Sn 02 52 49.2 -0.5**
3.5nm,0.1s,SNR=7.9
ETOB Tobarra 3.51 315 P **Pn 02 52 26.4 +1.0**
1.1nm,6.8s,SNR=7.9
ETOB S **Sn 02 53 06.0 +0.2**
0.3nm,0.2s,SNR=7.9
ETOS Mallorca 3.68 14 P **Pn 02 52 28.7 +1.0**
12nm,2.2s,SNR=7.9
ETOS S **Sn 02 53 08.8 -1.2**
40nm,3.7s,SNR=7.9
EQES Quesada 4.08 294 P **Pn 02 52 34.0 +0.7**
1.4nm,0.8s,SNR=7.9
EQES S **Sn 02 53 19.4 -0.6**
0.1nm,0.2s,SNR=7.9
EMOS Mosqueruela 4.47 339 P **Pn 02 52 40.1 +1.4**
1.8nm,0.3s,SNR=7.9
EMOS S **Sn 02 53 27.7 -1.9**
0.4nm,0.2s,SNR=7.9

*IPEC **16** 03:00:54.9±0.2,50°.08N×18°.46E,h1km±2km,ML2.4/3, Error ellipse: s-maj=1.9km s-min=1.1km az=163.0*
*IDC **16** 03:00:55.4±1.7,49°.98N×18°.45E,h0km,mb1 3.6/2, mb1mx3.1/46,mbtmp3.5/2,ML2.6/3,Error ellipse: s-maj=30.5km s-min=10.3km az=136.0*
*PRU **16** 03:00:55.7±0.0,50°.08N×18°.37E,h0km*
*BGR **16** 03:00:55.0±0.3,50°.11N×18°.41E,h1km,ML3.0/12,Error ellipse: s-maj=5.6km s-min=3.3km az=2.0*

ISC 16 03:00:53.7±0.7,50°.07N±0°.03×18°.40E±0°.02,h0km,n66, σ1§14/109,9C-3D,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.29**	**215**	*e*Pg	**Pb**	**03 01 01.5**	**-0.3**
OKC				*e*Sg	**Sb**	**03 01 06.4**	**-0.7**
OKC	**Ostrava-Krasne**	**0.29**	**215**	*e*PG	**Pb**	**03 01 01.5**	**-0.3**
OKC				*e*SG	**Sb**	**03 01 05.6**	**-1.5**
	comp=Z,280nm,0.5s						
MORC	**Moravsky Berou**	**0.63**	**242**	*e*Pg	**Pb**	**03 01 07.6**	**-0.1**
MORC				*e*Sg	**Sb**	**03 01 17.0**	**-0.1**
MORC	**Moravsky Berou**	**0.63**	**242**	⇑P	**Pb**	**03 01 07.6**	**-0.1**
MORC				⇓S	**Sb**	**03 01 16.8**	**-0.3**
MORC	**Moravsky Berou**	**0.63**	**242**	*e*PG	**Pb**	**03 01 07.5**	**-0.1**
MORC				*e*SG	**Sg**	**03 01 15.7**	**+1.7**
MORC	**Moravsky Berou**	**0.63**	**242**	*e*Pg	**Pb**	**03 01 07.5**	**-0.1**
	baz=63						
MORC				*e*Sg	**Sg**	**03 01 15.6**	**+1.6**
	84nm,0.3s,baz=63						
OJC	**Ojcow**	**0.91**	**80**	*e*Pg	**Pg**	**03 01 11.5**	**+0.4**
OJC				*e*Sg	**Sg**	**03 01 23.6**	**+0.7**
OJC	**Ojcow**	**0.91**	**80**	*e*Pg	**Pg**	**03 01 11.4**	**+0.3**
OJC				*e*Sg	**Sg**	**03 01 23.5**	**+0.6**
KRLC	**Kraliky**	**1.04**	**271**	*e*PG	**Pg**	**03 01 14.5**	**+0.7**
KRLC				*e*SG	**Sg**	**03 01 28.2**	**+0.9**
	comp=Z,96nm,0.6s						
LANS	**Liptovska Anna**	**1.15**	**143**	*e*PG	**Pb**	**03 01 17.1**	**+0.5**
LANS				*e*SG	**Sg**	**03 01 30.2**	**-0.6**
LANS				*e*LG	Lg	03 01 37.5	
JAVC	**Velka Javorina**	**1.31**	**202**	*e*PG	**Pn**	**03 01 20.2**	**+0.9**
JAVC	**Velka Javorina**	**1.31**	**202**	*e*Pg	**Pn**	**03 01 20.2**	**+0.9**
	baz=23						
DPC	**Dobruska-Polom**	**1.37**	**283**	*e*PG	**Pb**	**03 01 20.7**	**+0.5**
DPC				*e*SG	**Sn**	**03 01 39.2**	**+0.3**
	comp=Z,93nm,0.4s						
NIE	**Niedzica**	**1.39**	**117**	*e*Pg	**Pb**	**03 01 21.1**	**+0.4**
NIE				*e*Sg	**Sn**	**03 01 40.6**	**+1.1**
VRAC	**Vranov**	**1.40**	**238**	Pg	**Pb**	**03 01 21.5**	**+0.6**
	5.6nm,0.3s,baz=56,slow=12,SNR=33						
VRAC				Lg	Lg	03 01 40.1	
	13nm,0.3s,baz=68,slow=14,SNR=18						
VRAC	**Vranov**	**1.40**	**238**	⇑P	**Pb**	**03 01 21.5**	**+0.6**
VRAC	**Vranov**	**1.40**	**238**	⇑S	**Sn**	**03 01 40.1**	**+0.3**
VRAC	**Vranov**	**1.40**	**238**	*e*PG	**Pb**	**03 01 21.4**	**+0.6**
VRAC				*e*SG	**Sb**	**03 01 39.9**	**+0.7**
VRAC	**Vranov**	**1.40**	**238**	*e*Pg	**Pb**	**03 01 21.4**	**+0.6**
	baz=57						
VRAC				*e*Sg	**Sb**	**03 01 39.8**	**+0.6**
	49nm,0.3s,baz=57						
OSTC	**Ostas**	**1.48**	**290**	*e*PG	**Pn**	**03 01 22.0**	**+0.3**
OSTC				*e*SG	**Sn**	**03 01 42.9**	**+1.1**
	comp=Z,54nm,0.6s						
KSP	**Ksiaz**	**1.55**	**301**	*e*Pn	**Pn**	**03 01 23.2**	**+0.5**
KSP				*e*Sg	**Sg**	**03 01 45.3**	**+1.6**
KSP	**Ksiaz**	**1.55**	**301**	*e*Pg	**Pn**	**03 01 23.1**	**+0.5**
KSP				*e*Sg	**Sg**	**03 01 45.1**	**+1.4**
CHVC	**Chvalec**	**1.59**	**290**	*e*PG	**Pn**	**03 01 23.9**	**+0.7**
CHVC				*e*SG	**Sg**	**03 01 46.5**	**+1.7**
	comp=Z,41nm,0.4s						
UPC	**Upice**	**1.59**	**287**	*e*PG	**Pb**	**03 01 24.4**	**+0.3**
UPC				*e*SG	**Sg**	**03 01 45.6**	**+0.7**
	comp=Z,44nm,0.4s						
VYHS	**Vyhne**	**1.61**	**170**	*e*PG	**Pn**	**03 01 23.8**	**+0.4**
VYHS				*e*SG	**Sn**	**03 01 45.1**	**+0.3**
KRUC	**Moravsky**	**1.65**	**233**	*e*PN	**Pb**	**03 01 25.5**	**+0.4**
KRUC				*e*SG	**Sg**	**03 01 47.7**	**+0.9**
KRUC	**Moravsky**	**1.65**	**233**	*e*Pn	**Pb**	**03 01 25.4**	**+0.4**
	baz=52						
KRUC				*e*Sg	**Sg**	**03 01 47.7**	**+0.9**
	26nm,0.2s,baz=52						
SMOL	**Smolenice**	**1.69**	**203**	*e*PG	**Pn**	**03 01 25.1**	**+0.6**
SMOL				*e*SG	**Sn**	**03 01 46.0**	**-0.8**
SMOL				*e*LG	Lg	03 01 50.3	
MODS	**Modra-Piesok**	**1.85**	**204**	*e*PG	**Pn**	**03 01 26.8**	**0.0**
MODS				*e*SG	**Sn**	**03 01 51.0**	**+0.1**
MODS				*e*LG	Lg	03 02 00.4	
STHS	**Stebnicka Huta**	**1.96**	**109**	*e*PN	**Pb**	**03 01 31.2**	**+1.0**
STHS				*e*SN	**Sb**	**03 01 55.3**	**+0.2**
STHS				*e*LG	Lg	03 02 00.1	
TREC	**Trest**	**2.05**	**249**	*e*PN	**Pn**	**03 01 30.3**	**+0.8**
TREC				*e*SG	**Sg**	**03 01 59.4**	**-0.1**
	comp=Z,35nm,0.4s						
ZST	**Bratislava**	**2.06**	**205**	*e*PN	**Pn**	**03 01 29.3**	**-0.3**
ZST				*e*SN	**Sn**	**03 01 54.0**	**-2.0**
KECS	**Kecovo**	**2.10**	**139**	*e*PN	**Pn**	**03 01 30.3**	**+0.2**
KECS				*e*SN	**Sn**	**03 01 56.0**	**-0.8**
KECS				*e*LG	Lg	03 02 06.3	
GOPC	**GO Pecny, Ondr**	**2.34**	**267**	*e*PG	**Pb**	**03 01 37.3**	**+0.5**
GOPC				*e*SG	**Sg**	**03 02 08.5**	**-0.4**
	comp=Z,33nm,0.8s						
PSZ	**Piszkesteto**	**2.37**	**155**	⇑P	**Pn**	**03 01 36.1**	**+2.2**
PSZ	**Piszkesteto**	**2.37**	**155**	⇑S	**Sb**	**03 02 08.9**	**+1.8**
PRU	**Pruhonice**	**2.49**	**270**	*e*SG	**Sg**	**03 02 13.1**	**-0.7**
	comp=Z,21nm,0.6s						
PVCC	**Panska Ves**	**2.50**	**282**	*e*SG	**Sg**	**03 02 14.1**	**+0.1**
	comp=Z,38nm,0.3s						
PRA	**Prague**	**2.56**	**271**	*e*SG	**Sg**	**03 02 14.9**	**-1.0**
	comp=Z,24nm,0.4s						
CONA	**Conrad Observa**	**2.72**	**219**	*i* Pn	**Pn**	**03 01 39.1**	**+0.4**
	0.4nm,0.2s						
CONA				*i* Sg	**Sg**	**03 02 22.0**	**+0.8**
	7.6nm,0.4s						
KOLS	**Kolonicke sedl**	**2.77**	**113**	*e*PN	**Pn**	**03 01 40.1**	**+0.8**
KOLS				*e*SN	**Sn**	**03 02 13.9**	**+0.5**
KOLS				*e*LG	Lg	03 02 30.1	
PBCC	**Pribram**	**2.88**	**264**	*e*SG	**Sg**	**03 02 26.4**	**+0.3**
	comp=Z,4.4nm,0.4s						
BRG	**Berggiesshubel**	**2.96**	**287**	PG	**Pg**	**03 01 49.7**	**-0.7**
BRG				SG	**Sg**	**03 02 28.7**	**-0.1**
	15nm,0.4s						
BRG	**Berggiesshubel**	**2.96**	**287**	*e*Pg	**Pg**	**03 01 50.0**	**-0.5**
BRG				*e*Sg	**Sg**	**03 02 28.9**	**+0.1**
KHC	**Kasperske Hory**	**3.28**	**255**	*e*PN	**Pn**	**03 01 47.3**	**+0.9**
KHC				*e*PG	**Pg**	**03 01 56.0**	**-0.5**
KHC				*e*SG	**Sg**	**03 02 38.6**	**-0.4**
	comp=Z,20nm,0.4s						
GEC2	**GERESS Array S**	**3.31**	**250**	*e*Pg	**Pg**	**03 01 56.5**	**-0.6**
GEC2				*e*Sg	**Sg**	**03 02 39.0**	**-0.9**
GERES	**GERESS Array B**	**3.31**	**250**	Pn	**Pn**	**03 01 48.4**	**+1.6**
	0.2nm,0.3s,baz=67,slow=14,SNR=5.4						
GERES				Pg	**Pg**	**03 01 56.0**	**-1.0**
	1.2nm,0.3s,baz=66,slow=17,SNR=18						
GERES				Lg	Lg	03 02 39.7	
	5.1nm,0.3s,baz=65,slow=28,SNR=21						
FBE	**Freiberg**	**3.33**	**287**	*e*Sg	**Sg**	**03 02 41.6**	**+0.8**
TRPA	**Tarpa**	**3.34**	**124**	⇑P	**Pn**	**03 01 47.1**	**-0.1**
ARSA	**Arzberg**	**3.41**	**215**	*i* Pn	**Pn**	**03 01 49.3**	**+1.1**
	0.9nm,0.2s						
ARSA				*i* Sg	**Sg**	**03 02 42.1**	**-1.1**
	1.4nm,0.3s						
MOA	**Molln**	**3.52**	**232**	*i* Pn	**Pn**	**03 01 50.7**	**+1.0**
	0.2nm,0.1s						
MOA				*i* Sg	**Sg**	**03 02 44.9**	**-1.9**
	2.3nm,0.2s						
CLL	**Collm**	**3.65**	**292**	*e*Pg	**Pg**	**03 02 05.0**	**+1.3**
CLL				*e*Sg	**Sg**	**03 02 50.0**	**-0.9**
	comp=Z,17nm,0.7s						
WET	**Wettzell**	**3.71**	**258**	*e*Sg	**Sg**	**03 02 52.1**	**-0.8**
TANN	**Tannenbergstha**	**3.83**	**277**	*e*Pg	**Pg**	**03 02 06.4**	**-0.7**
TANN				*e*Sg	**Sg**	**03 02 55.3**	**-1.4**
NKC	**Novy Kostel**	**3.83**	**275**	*e*SG	**Sg**	**03 02 57.2**	**+0.4**
	comp=Z,18nm,0.6s						
MANZ	**Manzenberg**	**4.06**	**271**	*e*Sg	**Sg**	**03 03 03.0**	**-1.1**
DRGR		**4.36**	**137**	⇑P	**Pn**	**03 02 02.0**	**+0.8**
DRGR		**4.36**	**137**	⇑S	**Sn**	**03 02 49.7**	**-3.1**
MOX	**Moxa**	**4.38**	**280**	*e*Sg	**Sg**	**03 03 15.9**	**+1.4**
OBKA	**Obir**	**4.40**	**217**	*i* Pn	**Pn**	**03 02 03.2**	**+1.4**
	comp=Z,0.5nm,0.2s						
OBKA				*i* Sg	**Sg**	**03 03 19.6**	**+4.6**
	comp=Z,0.4nm,0.2s						
KBA	**Koelnbreinsper**	**4.50**	**230**	*i* Pn	**Pn**	**03 02 05.5**	**+2.2**
	comp=Z,0.3nm,0.2s						
KBA				*i* Sg	**Sb**	**03 03 12.7**	**+4.2**
	comp=Z,4.1nm,0.5s						
BZS	**Buzias**	**4.96**	**153**	⇓P	**Pn**	**03 02 10.3**	**+0.9**
BURAR	**Bucovina Array**	**5.13**	**116**	⇑P	**Pn**	**03 02 12.5**	**+0.6**
GZR	**Gura Zlata**	**5.53**	**146**	⇓P	**Pn**	**03 02 18.2**	**+0.8**
FINES	**FINESS Array B**	**12.28**	**18**	Pn	**Pn**	**03 03 45.7**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=200,slow=11,SNR=11						
ARCES	**ARCESS Array B**	**19.82**	**7**	Pn	**P**	**03 05 24.3**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=194,slow=14,SNR=5.9						

IDC 16 03:18:50.4±1.9,3°.50S×149°.17E,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.7/26,mbtmp3.8/4,MS3.4/6,Ms1 3.4/6, ms1mx3.0/41,Error ellipse: s-maj=80.4km s-min=27.4km az=113.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**12.22**	**119**	LR	LR	03 26 49.8	
	comp=Z,67nm,19.4s,baz=346,slow=39						
GUMO	**Guam**	**17.51**	**346**	LR	LR	03 27 57.5	
	comp=Z,97nm,20.0s,baz=174,slow=31						
WRA	**Warramunga Arr**	**21.83**	**220**	P	P	03 23 44.0	-0.5
	3.5nm,1.0s,baz=42,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**24.89**	**215**	P	P	03 24 15.2	0.0
	3.3nm,1.0s,baz=52,slow=7.4,SNR=17						
H11S3	**WAKE ISLAND Hy**	**27.85**	**38**	T	T	03 53 55.5	
	baz=220,slow=76,SNR=60						
H11S2	**WAKE ISLAND Hy**	**27.86**	**38**	T	T	03 53 52.3	
	baz=220,slow=76,SNR=61						
H11S1	**WAKE ISLAND Hy**	**27.87**	**38**	T	T	03 53 53.1	
	baz=220,slow=76,SNR=49						
H11N1	**WAKE ISLAND Hy**	**28.91**	**36**	T	T	03 55 13.7	
	baz=219,slow=76,SNR=26						
H11N3	**WAKE ISLAND Hy**	**28.92**	**36**	T	T	03 55 06.7	
	baz=219,slow=76,SNR=26						
H11N2	**WAKE ISLAND Hy**	**28.92**	**36**	T	T	03 55 12.7	
	baz=219,slow=76,SNR=59						
KAPI	**Kappang**	**29.37**	**266**	LR	LR	03 36 57.7	
	comp=Z,34nm,18.4s,baz=299,slow=37						
JCJ	**Chichijima**	**31.16**	**348**	LR	LR	03 35 47.4	
	comp=Z,54nm,18.9s,baz=251,slow=33						
MKAR	**Makanchi Array**	**76.98**	**320**	P	P	03 30 44.6	-0.5
	0.7nm,1.0s,baz=110,slow=6.3,SNR=3.3						
YBH	**Yreka Blue Hor**	**90.90**	**48**	LR	LR	04 04 06.5	
	comp=Z,98nm,21.1s,baz=272,slow=30						
ARU	**Arti**	**93.23**	**326**	LR	LR	04 12 10.9	
	comp=Z,41nm,19.5s,baz=76,slow=34						
YKA	**Yellowknife Ar**	**95.97**	**28**	P	P	03 32 18.8	-0.4
	0.2nm,0.6s,baz=271,slow=4.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	**146.46**	**289**	PKPbc	PKPab	03 38 35.4	-0.2
	0.6nm,0.7s,baz=60,slow=4.0,SNR=4.8						

IDC 16 03:30:22.5±6.3,3°.28S×148°.01E,h0km,mb3.6/3, mb1 3.9/3,mb1mx3.6/30,mbtmp3.7/3,MS3.3/6,Ms1 3.3/6, ms1mx2.9/36,Error ellipse: s-maj=221.9km s-min=31.7km az=100.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.15**	**188**	LR	LR	03 34 28.1	
	comp=Z,101nm,19.0s,baz=334,slow=40						
GUMO	**Guam**	**17.05**	**356**	LR	LR	03 40 11.3	
	comp=Z,39nm,19.5s,baz=94,slow=34						
WRA	**Warramunga Arr**	**21.27**	**218**	P	P	03 35 11.2	+0.5
	3.0nm,0.9s,baz=40,slow=11,SNR=4.4						
ASAR	**Alice Springs**	**24.43**	**213**	P	P	03 35 42.7	-0.4
	1.4nm,0.7s,baz=45,slow=8.0,SNR=9.6						
FITZ	**Fitzroy Crossi**	**26.40**	**234**	LR	LR	03 46 39.1	
	comp=Z,59nm,18.4s,baz=88,slow=37						
KAPI	**Kappang**	**28.23**	**266**	LR	LR	03 50 11.2	
	comp=Z,32nm,18.0s,baz=298,slow=42						
H11S3	**WAKE ISLAND Hy**	**28.40**	**40**	T	T	04 05 11.5	
	baz=220,slow=76,SNR=64						
H11S2	**WAKE ISLAND Hy**	**28.41**	**40**	T	T	04 05 15.7	
	baz=220,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**28.42**	**40**	T	T	04 05 22.3	
	baz=220,slow=76,SNR=36						
H11N1	**WAKE ISLAND Hy**	**29.43**	**38**	T	T	04 06 37.7	
	baz=219,slow=76,SNR=12						
H11N3	**WAKE ISLAND Hy**	**29.45**	**38**	T	T	04 06 43.7	
	baz=219,slow=76,SNR=11						
H11N2	**WAKE ISLAND Hy**	**29.45**	**38**	T	T	04 06 43.9	
	baz=219,slow=76,SNR=21						
PPT	**Papeete**	**62.74**	**108**	LR	LR	04 04 00.7	
	comp=Z,105nm,21.6s,baz=240,slow=32						
TLY	**Talaya**	**66.43**	**332**	LR	LR	04 06 54.2	
	comp=Z,32nm,20.7s,baz=147,slow=33						
MKAR	**Makanchi Array**	**76.07**	**320**	P	P	03 42 12.0	0.0
	0.3nm,0.7s,baz=104,slow=6.1,SNR=3.3						
TORD	**Torodi Ar. Bea**	**145.30**	**288**	PKPbc	PKPbc	03 50 02.4	-0.7
	0.7nm,0.8s,baz=50,slow=3.9,SNR=3.8						

*BJI **16** 03:32:38.0±0.0,28°.00S×66°.90W,h183km,mB5.3/2*
*NEIC **16** 03:32:39.5±2.0,27°.94S±0°.06×66°.93W±0°.08,h178km±7km, Error ellipse: s-maj=10.9km s-min=8.2km az=98.0*
*SJA **16** 03:32:39.9±0.7,27°.92S×66°.91W,h174km±3km,ML4.3, MW4.4*
*IDC **16** 03:32:40.3±1.4,27°.82S×66°.73W,h147km±14km,mb4.3/9, mb1 4.3/15,mb1mx3.9/36,mbtmp4.7/15,Error ellipse: s-maj=18.9km s-min=11.7km az=100.0*
*VAO **16** 03:32:43.1±0.5,27°.75S×66°.69W,h169km±4km,mb4.6*

ISC 16 03:32:40.1±0.6,27°.90S±0°.04×66°.94W±0°.04,h167km±6km, n148,σ1§38/162,mb4.5/14,10C-8D,Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	**Choya**	**1.14**	**118**	⇓*i*P	**Pn**	**03 33 09.0**	**+1.2**
CYA	**Choya**	**1.14**	**118**	*i* P	**Pn**	**03 33 08.9**	**+1.2**
CYA				IAML		03 33 09.1	
	comp=Z,1μm,0.2s						
CYA				*e*S	**Sn**	**03 33 29.1**	**+0.1**
VCA	**Vinchina**	**1.39**	**233**	⇑*i*P	**Pn**	**03 33 11.9**	**+1.8**
VCA	**Vinchina**	**1.39**	**233**	*i* P	**Pn**	**03 33 11.7**	**+1.5**
VCA				IAML		03 33 13.4	
	comp=Z,10μm,0.2s						
VCA				*e*S	**Sn**	**03 33 34.3**	**+0.9**
ACLC	**CERRO LA CRUZ**	**1.52**	**180**	*i* P	**Pn**	**03 33 12.3**	**+0.8**
AHML	**Horco Molle**	**1.81**	**52**	⇑*i*P	**Pn**	**03 33 15.2**	**+0.9**
AHML	**Horco Molle**	**1.81**	**52**	*i* P	**Pn**	**03 33 15.0**	**+0.6**
AHML				IAML		03 33 16.2	
	comp=Z,587nm,0.2s						
AHML				*e*S	**Sn**	**03 33 40.7**	**0.0**
GO03	**Copiap**	**2.94**	**275**	⇑*i*P	**Pn**	**03 33 28.8**	**+1.2**
GO03	**Copiap**	**2.94**	**275**		**Pn**	**03 33 28.0**	**+0.5**
GO03				Sn	**Sn**	**03 34 03.9**	**-0.4**
GO03	**Copiap**	**2.94**	**275**	*i* P	**Pn**	**03 33 28.7**	**+1.2**
GO03				*e*S	**Sn**	**03 34 04.3**	**0.0**
ACDV	**Cuesta del Vie**	**2.96**	**220**	*i* P	**Pn**	**03 33 29.1**	**+1.2**
AROD	**Rodeo**	**3.16**	**224**	*i* P	**Pn**	**03 33 32.2**	**+1.6**
ACCO	**Cerro Coronel**	**3.26**	**214**	*i* P	**Pn**	**03 33 33.0**	**+1.2**
SLA	**San Lorenzo**	**3.42**	**22**	⇑*i*P	**Pn**	**03 33 35.7**	**+2.0**
SLA	**San Lorenzo**	**3.42**	**22**	*i* P	**Pn**	**03 33 35.2**	**+1.5**
SLA				*e*S	**Sn**	**03 34 14.9**	**-0.4**
GO02	**Mina Guanaco**	**3.62**	**318**	⇓*i*P	**Pn**	**03 33 38.5**	**+2.1**
GO02	**Mina Guanaco**	**3.62**	**318**		**Pn**	**03 33 37.7**	**+1.3**
GO02				Sn	**Sn**	**03 34 21.0**	**+1.0**
RTLL	**Cerro Villicun**	**3.67**	**201**	⇑*i*P	**Pn**	**03 33 37.3**	**+0.7**
CFA	**Coronel Fontan**	**3.86**	**197**	P	**Pn**	**03 33 39.6**	**+0.6**
	baz=24,slow=14						
CFA				S	**Sn**	**03 34 23.5**	**-1.6**
	comp=Z,345nm,0.3s,baz=211,slow=18,SNR=29						
CFA	**Coronel Fontan**	**3.86**	**197**	*i* P	**Pn**	**03 33 39.7**	**+0.6**
TCA	**Tanti**	**3.98**	**150**	⇓*i*P	**Pn**	**03 33 41.2**	**+0.5**
TCA	**Tanti**	**3.98**	**150**	*i* P	**Pn**	**03 33 41.1**	**+0.4**
AZAP	**Zapla**	**4.03**	**25**	⇓*i*P	**Pn**	**03 33 42.8**	**+1.3**
AZAP				IAML		03 33 43.6	
	comp=Z,312nm,0.9s						
GO04	**Tololo Observa**	**4.07**	**235**	⇑*i*P	**Pn**	**03 33 42.4**	**+0.5**
GO04	**Tololo Observa**	**4.07**	**235**		**Pn**	**03 33 42.0**	**0.0**
GO04				Sn	**Sn**	**03 34 30.0**	**-0.2**
GO04	**Tololo Observa**	**4.07**	**235**	*i* P	**Pn**	**03 33 42.6**	**+0.6**
LSCH	**La Serena**	**4.27**	**241**	⇑*i*P	**Pn**	**03 33 44.0**	**-0.3**
PB14	**IPOC Station P**	**4.51**	**316**	⇓*i*P	**Pn**	**03 33 49.2**	**+1.4**
PB14	**IPOC Station P**	**4.51**	**316**	*i* P	**Pn**	**03 33 49.3**	**+1.4**
CO02	**Combarbal**	**4.83**	**226**	⇑*i*P	**Pn**	**03 33 51.8**	**0.0**
ASAL	**Salagasta**	**4.95**	**199**	*i* P	**Pn**	**03 33 53.7**	**+0.4**
PB15	**IPOC Station P**	**5.21**	**333**	⇑*i*P	**Pn**	**03 33 58.2**	**+1.4**
ARCO	**CERRO ARCO**	**5.21**	**199**	*i* P	**Pn**	**03 33 57.2**	**+0.4**
ARCO				IAML		03 34 58.6	
	comp=Z,332nm,0.2s						
AAGR	**Agrelo**	**5.42**	**197**	*i* P	**Pn**	**03 34 00.2**	**+0.8**
PB10	**IPOC Station P**	**5.45**	**322**	⇓*i*P	**Pn**	**03 34 00.5**	**+0.6**
PB10	**IPOC Station P**	**5.45**	**322**		**Pn**	**03 34 00.3**	**+0.4**
PB10				Sn	**Sn**	**03 34 59.8**	**-2.5**
PB10	**IPOC Station P**	**5.45**	**322**	*i* P	**Pn**	**03 34 00.7**	**+0.8**
LVC	**Limon Verde**	**5.56**	**341**	P	**Pn**	**03 34 02.9**	**+1.2**
	comp=Z,320nm,0.3s,baz=167,slow=9.4,SNR=178						
LVC				S	**Sn**	**03 35 04.2**	**-1.3**
	comp=Z,24nm,0.3s,baz=294,slow=24,SNR=15						
LVC	**Limon Verde**	**5.56**	**341**	*e*P	**Pn**	**03 34 02.7**	**+1.0**
LVC	**Limon Verde**	**5.56**	**341**		**Pn**	**03 34 01.4**	**-0.2**
LVC				Sn	**Sn**	**03 35 04.7**	**-0.8**
LVC	**Limon Verde**	**5.56**	**341**	⇓*i*P	**Pn**	**03 34 02.9**	**+1.2**
VA03	**San Esteban**	**5.76**	**212**	⇓*i*P	**Pn**	**03 34 04.3**	**+0.3**
PB05	**IPOC Station P**	**5.83**	**329**	⇑P	**Pn**	**03 34 05.3**	**+0.3**
VJA	**Yavi**	**5.85**	**13**	⇑*i*P	**Pn**	**03 34 08.1**	**+2.6**
PEL	**Peldehue**	**6.14**	**211**		**Pn**	**03 34 08.5**	**-0.4**
PEL	**Peldehue**	**6.14**	**211**	*i* P	**Pn**	**03 34 09.2**	**+0.3**
ROC1	**El Roble**	**6.16**	**214**		**Pn**	**03 34 08.4**	**-1.0**
ROC1				Sn	**Sn**	**03 35 16.6**	**-2.8**
ROC1	**El Roble**	**6.16**	**214**	*i* P	**Pn**	**03 34 08.0**	**-1.3**
PB04	**IPOC Station P**	**6.26**	**332**		**Pn**	**03 34 10.8**	**+0.1**
PB04				Sn	**Sn**	**03 35 20.8**	**-1.0**
PB04	**IPOC Station P**	**6.26**	**332**	*i* P	**Pn**	**03 34 11.1**	**+0.4**
PB09	**IPOC Station P**	**6.43**	**341**	*i* P	**Pn**	**03 34 13.4**	**+0.5**
COIS	**El Sosneado**	**7.53**	**197**	*i* P	Pn	03 34 21.9	-5.3
PUMA	**Malargue**	**7.87**	**195**	*i* P	**Pn**	**03 34 31.7**	**0.0**
EDS3	**Malargue**	**8.12**	**194**	*i* P	**Pn**	**03 34 35.3**	**+0.1**
GO05	**Huala**	**8.27**	**210**		**Pn**	**03 34 34.1**	**-2.9**
GO05				Sn	**Sn**	**03 36 05.5**	**-3.8**
CPUP	**Villa Florida**	**8.70**	**82**	P	**Pn**	**03 34 41.2**	**-1.6**
	comp=Z,1.0nm,0.3s,baz=266,slow=12,SNR=38						
CPUP	**Villa Florida**	**8.70**	**82**	*e*P	**Pn**	**03 34 42.1**	**-0.7**
CPUP	**Villa Florida**	**8.70**	**82**		**Pn**	**03 34 41.5**	**-1.3**
CPUP				Sn	**Sn**	**03 36 18.4**	**-1.4**
ITQB	**Itaqui**	**9.22**	**103**	*e*P	**Pn**	**03 34 49.5**	**-0.1**
LPAZ	**La Paz**	**11.61**	**354**	P	**Pn**	**03 35 21.4**	**-0.2**
	comp=Z,2.3nm,0.3s,baz=147,slow=9.1,SNR=47						
LPAZ	**La Paz**	**11.61**	**354**	*e*P	**Pn**	**03 35 22.5**	**+1.0**
LPAZ	**La Paz**	**11.61**	**354**		**Pn**	**03 35 20.7**	**-0.9**
CPSB	**Cacapava Do Su**	**12.06**	**105**	*e*P	**Pn**	**03 35 25.3**	**-1.3**
PLTB	**Pedras Altas**	**12.20**	**112**	*e*P	**Pn**	**03 35 27.1**	**-1.4**
OGAUY	**Aigu**	**12.28**	**124**	*e*P	**P**	**03 35 32.2**	**-2.6**
AQDB	**Aquidauana**	**12.64**	**57**

LBTB	**Lobatse**	**80.78**	**113**	P		**P**	**03 44 36.9**	**+1.4**
	comp=Z,6.0nm,0.6s,baz=247,slow=6.5,SNR=13							
LBTB	**Lobatse**	**80.78**	**113**	P		**P**	**03 44 33.0**	**-2.5**
LBTB				IAmb		IAmb	03 44 38.6	
	comp=Z,7.0nm,0.7s							
ASAR	**Alice Springs**	**124.93**	**203**	PKP		**PKiKP**	**03 51 22.4**	**+1.2**
	comp=Z,3.9nm,0.9s,baz=104,slow=2.2,SNR=2.7							
WRA	**Warramunga Arr**	**128.17**	**206**	PKP		**PKiKP**	**03 51 29.3**	**+1.5**
	comp=Z,1.9nm,0.5s,baz=154,slow=2.0,SNR=6.9							
ZALV	**Zalesovo Beam**	**146.76**	**31**	PKPbc		**PKPab**	**03 52 03.3**	**-0.2**
	comp=Z,1.9nm,0.4s,baz=294,slow=1.5,SNR=5.8							
KSH	**Kashi**	**147.26**	**60**	PKPbc		**PKPdf**	**03 51 59.5**	**-1.9**
KSH				pPKP		pPKPdf	03 52 43.3	-2.6
MAKZ	**Makanchi**	**149.20**	**44**	PKPbc		**PKPdf**	**03 52 05.9**	**+1.7**
MKAR	**Makanchi Array**	**149.40**	**44**	PKPbc		**PKiKP**	**03 52 11.7**	**+1.5**
	comp=Z,1.2nm,0.7s,baz=297,slow=2.7,SNR=13							
WMQ	**Urumqi**	**154.16**	**45**	*e*PKPbc		**PKPdf**	**03 52 08.6**	**-3.3**
HHC	**Hu-ho-hao-te**	**167.03**	**5**	*e*PKP		**PKPdf**	**03 52 24.0**	**-1.9**
NJ2	**Nanjing**	**173.50**	**311**	*e*PKP		**PKPdf**	**03 52 25.6**	**-4.0**

SOME ***16*** *03:33:51.1,41.72N×81.47E,h10km*
NNC ***16*** *03:33:54.6±1.4,41.84N×81.42E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=10.4km s-min=7.1km az=160.0*

ISC 16 03:33:58.8±3.5,**41.9N**±0.1×**81.21E**±0.0,**8,h10**km±19km, **n33,σ1°28/53,10C-4D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDGK	**Podgornoye**	**1.88**	**318**	Pg	**Pn**	**03 34 32.3**	**+1.2**
	42nm,0.5s						
PDGK				Lg	Lg	03 35 02.7	
	101nm,0.3s						
PDGK	**Podgornoye**	**1.88**	**318**	⇑Pn	**Pn**	**03 34 32.2**	**+1.0**
	61nm,0.6s						
PDGK				⇓Lg	Lg	03 35 01.7	
	114nm,0.4s						
UZB	**Uzynbulak**	**2.02**	**307**	*e*P	**Pn**	**03 34 34.2**	**+1.1**
	16nm,0.3s						
UZB				*e*S	**Sg**	**03 35 05.4**	**+1.8**
	98nm,0.5s						
UZB	**Uzynbulak**	**2.02**	**307**	Pg	**Pn**	**03 34 34.2**	**+1.1**
	16nm,0.3s						
UZB				Lg	Lg	03 35 05.8	
	98nm,0.5s						
SATY	**Saty**	**2.36**	**299**	*e*P	**Pn**	**03 34 39.1**	**+1.5**
	32nm,0.4s						
SATY				*e*S	**Sg**	**03 35 14.2**	**-0.2**
	77nm,0.2s						
SATY	**Saty**	**2.36**	**299**	Pg	**Pn**	**03 34 39.1**	**+1.5**
	32nm,0.4s						
SATY				Lg	Lg	03 35 14.7	
	77nm,0.2s						
ZHN	**Zhinishke**	**2.39**	**302**	*e*P	**Pn**	**03 34 40.3**	**+2.2**
	13nm,0.1s						
ZHN				*e*S	**Sg**	**03 35 16.3**	**+0.8**
	28nm,0.2s						
ZHN	**Zhinishke**	**2.39**	**302**	Pg	**Pn**	**03 34 40.3**	**+2.2**
	13nm,0.1s						
ZHN				Lg	Lg	03 35 17.2	
	28nm,0.2s						
KPKS	**Kokpek**	**2.41**	**310**	*e*P	**Pb**	**03 34 42.2**	**0.0**
	52nm,0.3s						
KPKS				*e*S	**Sg**	**03 35 19.2**	**+3.1**
	211nm,0.7s						
DJR	**Jarkent**	**2.61**	**337**	*e*P	**Pb**	**03 34 44.5**	**-1.1**
	2.0nm,0.2s						
DJR				*e*S	**Sg**	**03 35 23.1**	**+0.6**
	74nm,0.5s						
DJR	**Jarkent**	**2.61**	**337**	Pg	**Pb**	**03 34 44.5**	**-1.1**
	2.0nm,0.2s						
DJR				Lg	Lg	03 35 23.6	
	74nm,0.5s						
KURS	**Kuram**	**2.72**	**306**	*e*P	**Pb**	**03 34 46.3**	**-1.3**
	4.4nm,0.4s						
KURS				*e*S	**Sg**	**03 35 26.0**	**-0.2**
	32nm,0.8s						
KOTS	**Kotyrbulak**	**3.29**	**294**	*e*P	**Pb**	**03 34 57.0**	**-0.3**
	16nm,0.5s						
KOTS				*e*S	**Sg**	**03 35 44.9**	**+0.5**
	78nm,0.5s						
KOTS	**Kotyrbulak**	**3.29**	**294**	Pg	**Pb**	**03 34 57.0**	**-0.3**
	16nm,0.5s						
KOTS				Lg	Lg	03 35 44.9	
	78nm,0.5s						
MDOK	**Medeo**	**3.31**	**293**	*e*P	**Pb**	**03 34 56.8**	**-0.9**
	3.7nm,0.3s						
MDOK				*e*S	**Sg**	**03 35 44.0**	**-1.0**
	16nm,0.7s						
MDOK	**Medeo**	**3.31**	**293**	Pn	**Pn**	**03 34 51.2**	**+0.4**
	12nm,1.0s						
MDOK				Lg	Lg	03 35 43.9	
	14nm,0.6s						
TNSS	**Tian-Shan**	**3.34**	**291**	*e*P	**Pb**	**03 34 56.4**	**-1.9**
	6.7nm,0.5s						
TNSS				*e*S	**Sg**	**03 35 43.4**	**-2.6**
	27nm,0.6s						
ARXS	**Arharly**	**3.36**	**314**	*e*P	**Pb**	**03 34 57.4**	**-1.1**
	2.2nm,0.4s						
ARXS				*e*S	**Sg**	**03 35 45.5**	**-1.3**
	24nm,0.5s						
ARXS	**Arharly**	**3.36**	**314**	Pg	**Pb**	**03 34 57.4**	**-1.1**
ARXS				Lg	Lg	03 35 45.5	
KAPS	**Kapalarasan**	**3.60**	**339**	*e*P	**Pb**	**03 35 02.5**	**-0.1**
	5.4nm,0.5s						
KAPS				*e*S	**Sg**	**03 35 54.1**	**-0.3**
	34nm,0.7s						
KAPS	**Kapalarasan**	**3.60**	**339**	Pg	**Pb**	**03 35 02.5**	**-0.1**
	5.4nm,0.5s						
KAPS				Lg	Lg	03 35 54.1	
	34nm,0.7s						
KTBS	**Karatobe**	**3.77**	**299**	*e*P	**Pb**	**03 35 06.3**	**+0.8**
	7.2nm,0.5s						
KTBS				*e*S	**Sg**	**03 36 00.6**	**+0.7**
	25nm,0.5s						
KTBS	**Karatobe**	**3.77**	**299**	Pg	**Pb**	**03 35 06.3**	**+0.8**
	7.2nm,0.5s						
KTBS				Lg	Lg	03 35 60.0	
	25nm,0.5s						
KST	**Kastek**	**4.04**	**288**	*e*P	**Pb**	**03 35 09.7**	**-0.4**
	14nm,0.8s						
KST				*e*S	**Sg**	**03 36 06.0**	**-2.3**
	19nm,0.6s						
KUU	**Kurty**	**4.08**	**300**	*e*P	**Pb**	**03 35 11.2**	**+0.6**
	5.4nm,1.0s						
KUU				*e*S	**Sg**	**03 36 08.7**	**-0.9**
	17nm,0.6s						
DGS	**Degeres**	**4.22**	**290**	*e*P	**Pb**	**03 35 13.4**	**+0.3**
	7.1nm,0.6s						
DGS				*e*S	**Sg**	**03 36 12.7**	**-1.6**
	25nm,0.6s						
DGS	**Degeres**	**4.22**	**290**	Pg	**Pb**	**03 35 13.4**	**+0.3**
	7.1nm,0.6s						
DGS				Lg	Lg	03 36 12.7	
	25nm,0.6s						
TKM2	**Tokmak 2**	**4.27**	**285**	⇑Pn	**Pn**	**03 35 04.3**	**+0.2**
	5.1nm,0.2s						
TKM2				⇑Lg	Lg	03 36 13.0	
	8.3nm,0.5s						
KRBS	**Karabastau**	**4.43**	**295**	*e*P	**Pb**	**03 35 17.0**	**+0.2**
KRBS				*e*S	**Sg**	**03 36 18.5**	**-2.6**
	5.2nm,0.5s						
MAKZ	**Makanchi**	**4.90**	**6**	⇑Pn	**Pn**	**03 35 12.0**	**-0.5**
	2.6nm,0.5s						
MAKZ				⇓Sn	**Sn**	**03 36 09.4**	**+0.2**
	3.7nm,0.5s						
MAKZ				⇑Lg	Lg	03 36 32.1	
	5.4nm,0.8s						
MK31	**Makanchi Array**	**4.91**	**9**	⇑Pn	**Pn**	**03 35 12.1**	**-0.6**
	0.4nm,0.2s,baz=187,slow=13						
MK31				⇑Pg	**Pb**	**03 35 25.8**	**+0.9**
	1.2nm,0.5s,baz=187,slow=14						
MK31				⇓Sn	**Sn**	**03 36 08.5**	**-1.1**
	1.4nm,0.3s,baz=183,slow=24						
MK31				⇑Lg	Lg	03 36 32.2	
	8.0nm,0.6s,baz=187,slow=31						
AAK	**Ala-Archa**	**5.03**	**280**	⇑Pn	**Pn**	**03 35 14.3**	**-0.2**
	1.1nm,0.5s						
AAK				⇓Pg	**Pb**	**03 35 29.2**	**+2.2**
	5.5nm,0.9s						
AAK				⇑Lg	Lg	03 36 37.6	
	6.1nm,0.6s						
ZSN	**Zaisan**	**6.09**	**24**	Pg	**Pb**	**03 35 45.1**	**+0.2**
	5.6nm,0.3s						
ZSN				Lg	Lg	03 37 07.8	
	7.9nm,0.7s						

NEIC ***16*** *03:35:56.6±1.3,52.48S×0.09×26.2E±0.2,h10km±1km, mb4.8/16,Error ellipse: s-maj=24.1km s-min=12.8km az=70.0*
IDC ***16*** *03:35:56.0±0.7,52.52S×26.16E,h0km,mb4.5/13, mb1 4.6/13,mb1mx4.4/32,mbtmp4.5/13,MS3.9/15, Ms1 3.9/15,ms1mx3.8/27,Error ellipse: s-maj=26.9km s-min=14.0km az=85.0*

ISC 16 03:35:56.7±0.5,**52.51S**±0.08×**26.3E**±0.1,**h10**km,**n50, σ0°92/40,mb4.8**/15,**MS4.0**/15,**1C,South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYO	**Syowa Base**	**17.71**	**164**	*e*Pn	**Pn**	**03 40 01.4**	**-1.7**
SUR	**Sutherland**	**20.50**	**347**	P	Pn	03 40 37.5	+0.4
	22nm,1.1s,baz=164,slow=9.5,SNR=5.6						
SUR				LR	LR	03 46 50.1	
	comp=Z,685nm,19.8s,baz=176,slow=32						
SUR	**Sutherland**	**20.50**	**347**	P	**P**	**03 40 34.1**	**-0.8**
SUR				IAmb	IAmb	03 41 00.9	
	comp=Z,124nm,1.9s						
SNAA	**Sanae**	**23.10**	**203**	P	**P**	**03 41 04.5**	**+2.2**
	comp=Z,16nm,1.1s,baz=56,slow=6.9,SNR=13						
SNAA	**Sanae**	**23.10**	**203**	P	**P**	**03 41 01.5**	**-0.8**
SNAA				IAmb	IAmb	03 41 12.5	
	comp=Z,38nm,1.1s						
MAW	**Mawson**	**23.21**	**145**	P	**P**	**03 41 05.3**	**+1.9**
	comp=Z,35nm,1.0s,baz=280,slow=8.8,SNR=13						
MAW				LR	LR	03 48 15.7	
	comp=Z,199nm,20.6s,baz=252,slow=32						
MAW	**Mawson**	**23.21**	**145**	P	**P**	**03 41 03.0**	**-0.3**
BOSA	**Boshof**	**23.88**	**358**	P	**P**	**03 41 11.2**	**+0.8**
	comp=Z,5.2nm,0.8s,baz=174,slow=11,SNR=11						
BOSA				LR	LR	03 48 45.9	
	comp=Z,502nm,21.6s,baz=132,slow=32						
BOSA	**Boshof**	**23.88**	**358**	P	**P**	**03 41 10.5**	**0.0**
BOSA				IAmb	IAmb	03 41 18.0	
	comp=Z,16nm,1.0s						
LBTB	**Lobatse**	**27.46**	**359**	P	**P**	**03 41 45.3**	**+2.4**
	comp=Z,7.9nm,0.8s,baz=170,slow=9.0,SNR=5.5						
LBTB				LR	LR	03 51 12.7	
	comp=Z,470nm,18.7s,baz=174,slow=33						
LBTB	**Lobatse**	**27.46**	**359**	P	**P**	**03 41 42.5**	**-0.4**
QSPA	**South Pole Qui**	**37.71**	**180**	P	**P**	**03 43 12.4**	**+0.3**
	comp=Z,13nm,0.7s,baz=252,slow=2.8,SNR=12						
QSPA	**South Pole Qui**	**37.71**	**180**	P	**P**	**03 43 12.3**	**+0.2**
QSPA				IAmb	IAmb	03 43 14.3	
	comp=Z,18nm,0.9s						
VNDA	**Vanda**	**47.35**	**168**	P	**P**	**03 44 30.1**	**0.0**
	comp=Z,2.6nm,0.7s,baz=237,slow=6.0,SNR=7.9						
VNDA				LR	LR	04 03 59.2	
	comp=Z,239nm,19.8s,baz=206,slow=36						
KMBO	**Kilima Mbogo**	**52.02**	**14**	LR	LR	04 05 39.8	
	comp=Z,215nm,19.4s,baz=170,slow=34						
H10S2	**ASCENSION HYDR**	**54.63**	**308**	T	T	04 44 41.4	
	baz=149,slow=74,SNR=29						
H10S3	**ASCENSION HYDR**	**54.64**	**307**	T	T	04 44 42.4	
	baz=71,slow=74,SNR=29						
PLCA	**Paso Flores**	**62.65**	**238**	P	**P**	**03 46 21.8**	**+0.5**
	comp=Z,8.4nm,1.1s,baz=149,slow=9.0,SNR=5.7						
PLCA				LR	LR	04 09 14.3	
	comp=Z,34nm,21.1s,baz=176,slow=32						
PLCA	**Paso Flores**	**62.65**	**238**	P	**P**	**03 46 21.7**	**+0.5**
PLCA				IAmb	IAmb	03 46 24.3	
	comp=Z,12nm,1.2s						
DBIC	**Dimbokro**	**64.63**	**325**	P	**P**	**03 46 34.8**	**+0.4**
	comp=Z,6.5nm,0.9s,baz=132,slow=8.1,SNR=7.2						
DBIC				LR	LR	04 09 42.7	
	comp=Z,90nm,18.5s,baz=160,slow=31						
DBIC	**Dimbokro**	**64.63**	**325**	P	**P**	**03 46 33.8**	**-0.6**
CPUP	**Villa Florida**	**65.77**	**258**	P	**P**	**03 46 42.3**	**+0.5**
	comp=Z,6.1nm,0.8s,baz=123,slow=6.1,SNR=13						
CPUP				LR	LR	04 09 42.0	
	comp=Z,55nm,21.7s,baz=143,slow=31						
CPUP	**Villa Florida**	**65.77**	**258**	P	**P**	**03 46 41.6**	**-0.2**
BDFB	**Brasilia**	**68.18**	**273**	P	**P**	**03 46 59.0**	**+1.6**
	comp=Z,4.5nm,0.7s,baz=145,slow=2.6,SNR=5.2						
BDFB				LR	LR	04 10 40.1	
	comp=Z,77nm,20.2s,baz=91,slow=31						
BDFB	**Brasilia**	**68.18**	**273**	P	**P**	**03 46 56.6**	**-0.8**
TOA0	**Torodi Ar. Sit**	**68.74**	**334**	P	**P**	**03 47 00.6**	**0.0**
TOA0				IAmb	IAmb	03 47 02.7	
	comp=Z,5.7nm,1.1s						
TORD	**Torodi Ar. Bea**	**68.74**	**334**	P	**P**	**03 47 01.0**	**+0.5**
	comp=Z,5.6nm,1.2s,baz=166,slow=4.3,SNR=9.9						
BBOO	**Buckleboo**	**75.38**	**125**	P	**P**	**03 47 40.1**	**-0.3**
TAM	**Tamanrasset**	**77.13**	**340**	P	**P**	**03 47 50.0**	**-0.4**
RAYN	**Ar Rayn**	**77.55**	**18**	P	**P**	**03 47 52.0**	**-0.5**
GO01	**Chusmiza**	**77.87**	**254**	P	**P**	**03 47 54.7**	**-0.5**
GO01				IAmb	IAmb	03 47 60.0	
	comp=Z,21nm,1.6s						
LPAZ	**La Paz**	**79.88**	**257**	LR	LR	04 21 26.6	
	comp=Z,21nm,19.1s,baz=145,slow=34						
WSAR	**Wadi Sarin**	**80.54**	**30**	LR	LR	04 17 47.3	
	comp=Z,54nm,20.5s,baz=203,slow=31						
SAML	**Samuel**	**82.63**	**265**	P	**P**	**03 48 19.3**	**-1.0**
SAML				IAmb	IAmb	03 48 22.0	
	comp=Z,15nm,1.6s						
URZ	**Urewera**	**86.11**	**157**	LR	LR	04 24 27.1	
	comp=Z,159nm,21.3s,baz=194,slow=34						
KEST	**Kesra**	**89.10**	**346**	LR	LR	04 28 50.1	
	comp=Z,191nm,21.7s,baz=284,slow=36						
BRTR	**Keskin Array B**	**92.08**	**6**	P	**P**	**03 49 06.0**	**+0.3**
	comp=Z,1.2nm,1.0s,baz=152,slow=3.6,SNR=5.5						
BRTR				LR	LR	04 31 38.4	
	comp=Z,25nm,18.6s,baz=154,slow=36						
KSH	**Kashi**	**101.30**	**37**	SS	SS	04 08 26.8	-1.4
KSH				pmax	pmax		
	comp=Z,290nm,4.5s						
KSH				LR	LR		
	comp=N,150nm,4.3s						
KSH				LR	LR		
	comp=E,190nm,4.3s						
ULM	**Lac du Bonnet**	**144.64**	**290**	P	**PKPab**	**03 55 31.0**	**-0.2**
ULM	**Lac du Bonnet**	**144.64**	**290**	PKP	**PKPab**	**03 55 31.0**	**-0.2**
	comp=E,1.5nm,0.4s,baz=166,slow=2.6,SNR=6.2						
ULM	**Lac du Bonnet**	**144.64**	**290**		PKPbc	03 55 31.3	0.0
RES	**Resolute Bay**	**147.89**	**335**		**PKPbc**	**03 55 39.2**	**-1.1**
PD31	**Pinedale Array**	**149.12**	**270**	PKPdf	**PKPdf**	**03 55 40.1**	**-0.5**
PDAR	**Pinedale Array**	**149.12**	**270**	PKPbc	**PKPbc**	**03 55 43.4**	**-1.4**
	comp=E,3.1nm,1.0s,baz=108,slow=3.3,SNR=8.2						
FFC	**Flin Flon**	**149.78**	**295**		**PKPdf**	**03 55 41.5**	**+0.6**
SEY	**Seymchan**	**150.30**	**48**	PKPbc	**PKiKP**	**03 55 48.2**	**+0.8**
	comp=E,5.4nm,0.8s,baz=152,slow=1.9,SNR=3.9						
YHL	**Hebgen Lake**	**151.22**	**272**		**PKPbc**	**03 55 49.5**	**-0.4**
NVAR	**Mina Array Bea**	**151.76**	**254**	PKPbc	**PKiKP**	**03 55 52.1**	**+0.5**
	comp=E,1.9nm,0.7s,baz=147,slow=3.1,SNR=3.8						
YKA	**Yellowknife Ar**	**157.09**	**311**	PKPab	**PKPab**	**03 56 22.4**	**+0.6**
	comp=E,1.9nm,0.9s,baz=79,slow=5.2,SNR=8.4						
INK	**Inuvik**	**161.44**	**336**	PKPab	**PKPab**	**03 56 41.0**	**+0.4**
	comp=E,2.7nm,1.1s,baz=52,slow=4.1,SNR=3.5						

BJI ***16*** *03:41:45.8±0.0,11.52S×166.81E,h139km,mB5.3/42, mb5.3/72*
NEIC ***16*** *03:41:46.8±1.8,11.93S±0.07×166.63E±0.08,h150km±4km, mb5.0/210,Error ellipse: s-maj=11.4km s-min=10.2km az=75.0*
IDC ***16*** *03:41:46.5±0.4,11.95S×166.69E,h141km±3km,mb4.7/30, mb1 4.9/32,mb1mx4.8/39,mbtmp5.1/32,MS3.9/14, Ms1 3.9/14,ms1mx3.7/25,Error ellipse: s-maj=10.4km s-min=8.5km az=105.0*
GCMT ***16*** *03:41:47.8±0.1,12.06S±0.01×166.58E±0.01,h148km±1km, MW5.3/142,Moment Tensor Solution. s101,c145; s142,c216; Duration: 1s1 Moment tensor: Scale 10¹⁷ Nm; Mrr1.02±.01; Mθθ-0.49±.02; Mφφ-0.52±.02; Mrθ-0.22±.02; Mrφ0.42±.02; Mθφ-0.24±.02; Best double couple: M₀1.02100×10¹⁷ NP1:φs302.00000°,δ46.00000°, λ69.00000°. NP2:φs151.00000°,δ48.00000°,λ111.00000°. Principal axes: T 1.1090, Plg75.0000°, Azm133.0000°; N -0.1760, Plg15.0000°, Azm317.0000°; P -0.9330, Plg1.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***16*** *03:41:48.5±1.4,11.90S×166.58E,h165km,mb5.2/30 Error ellipse: s-maj=8.3km s-min=7.3km az=134.1*

ISC 16 03:41:46.8±0.3,**11.99S**±0.04×**166.71E**±0.04,**h149**km±2km, **h149**km:**pP-P,n788,**σ**1°16/826,mb5.1**/196,**39C-19D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.11**	**290**	P	**Pn**	**03 43 29.7**	**+1.2**
	39nm,0.3s,baz=2.1,slow=2.8,SNR=7.4						
HNR				LR	LR	03 46 41.5	
	comp=Z,738nm,18.9s,baz=108,slow=42						
HNR	**Honiara**	**7.11**	**290**		**Pn**	**03 43 25.0**	**-3.4**
DZM	**Mont Dzumac**	**10.03**	**181**	*e*Pn	**Pn**	**03 44 08.5**	**+1.2**
	343nm,1.3s						
DZM				*e*Sn	**Sn**	**03 45 54.9**	**-3.5**
	266nm,1.2s						
DZM				*e*LR	LR	03 46 09.4	
	comp=Z,1μm,28.7s						
DZM	**Mont Dzumac**	**10.03**	**181**	P	**Pn**	**03 44 09.6**	**+2.3**
	33nm,0.3s,baz=301,slow=15,SNR=102						
DZM				S	**Sn**	**03 45 57.8**	**-0.6**
	13nm,0.3s,baz=148,slow=21,SNR=7.0						
DZM				LR	LR	03 46 43.5	
	comp=Z,475nm,18.5s,baz=14,slow=30						
DZM	**Mont Dzumac**	**10.03**	**181**		**Pn**	**03 44 08.1**	**+0.8**
DZM				Sn	**Sn**	**03 45 59.4**	**+1.0**
MSVF	**Nonsavu**	**12.36**	**119**	*i* P	**P**	**03 44 43.5**	**-0.4**
MSVF	**Nonsavu**	**12.36**	**119**		**Pn**	**03 44 38.4**	**+0.5**
FUNA	**Funafuti**	**12.76**	**76**	Pn	**Pn**	**03 44 41.1**	**-2.0**
TARA	**Tarawa**	**14.63**	**25**		**Pn**	**03 45 07.0**	**+0.3**
PMG	**Port Moresby**	**19.38**	**276**	*ce*P	**Pn**	**03 46 03.2**	**-0.8**
PMG				pmax	pmax		
	comp=Z,335nm,1.3s						
PMG	**Port Moresby**	**19.38**	**276**	P	**P**	**03 46 00.0**	**-1.3**
PMG				IAmb	IAmb	03 46 11.0	
	comp=Z,70nm,0.9s						
LHI	**Lord Howe Isla**	**20.68**	**199**	P	Pn	03 46 17.3	-1.8
	baz=21,SNR=9.8						
LHI	**Lord Howe Isla**	**20.68**	**199**	P	**P**	**03 46 16.1**	**+1.0**
AFI	**Afiamalu**	**21.05**	**98**	P	**P**	**03 46 19.2**	**-0.1**
AFI				pmax	pmax		
	comp=Z,186nm,1.1s						
AFI	**Afiamalu**	**21.05**	**98**	P	**P**	**03 46 20.9**	**+1.5**
	comp=Z,118nm,1.0s,baz=352,slow=17,SNR=7.4						
AFI	**Afiamalu**	**21.05**	**98**	P	**P**	**03 46 19.2**	**-0.1**
CTA	**Charters Tower**	**21.23**	**245**	P	**P**	**03 46 23.5**	**+2.4**
	comp=Z,66nm,0.8s,baz=68,slow=12,SNR=18						
MANU	**Manus Island**	**21.57**	**296**	P	**P**	**03 46 24.6**	**-0.2**
MANU				IAmb	IAmb	03 46 27.1	
	comp=Z,95nm,0.9s						
RMQ	**Roma**	**22.21**	**227**	P	**P**	**03 46 32.6**	**+1.3**
	baz=22,SNR=6.7						
MTSU	**Mount Surprise**	**22.46**	**252**	P	**P**	**03 46 34.4**	**+0.7**
	baz=23,SNR=28						
COEN	**Coen**	**23.01**	**263**	P	**P**	**03 46 39.7**	**+0.7**
	baz=23,SNR=10						
COEN	**Coen**	**23.01**	**263**	P	**P**	**03 46 38.5**	**-0.5**
COEN				IAmb	IAmb	03 46 41.5	
	comp=Z,33nm,1.0s						
ARMA	**Armidale**	**23.06**	**215**	P	**P**	**03 46 40.9**	**+1.6**
	baz=23,SNR=59						
ARMA	**Armidale**	**23.06**	**215**	P	**P**	**03 46 40.0**	**+0.7**
ARMA				IAmb	IAmb	03 46 41.6	
	comp=Z,109nm,0.9s						
KNTN	**Kanton**	**23.25**	**68**	P	**P**	**03 46 42.9**	**+1.7**
NIUE	**Niue**	**23.57**	**110**	P	**P**	**03 46 45.2**	**+1.1**
	baz=24,SNR=3.5						
NIUE	**Niue**	**23.57**	**110**	P	**P**	**03 46 43.9**	**-0.1**
OUZ	**Omahuta**	**23.95**	**166**	P	**P**	**03 46 47.7**	**+0.4**
OUZ				IAmb	IAmb	03 46 51.2	
	comp=Z,45nm,0.8s						
MGCD	**Mangrove Creek**	**25.50**	**212**	P	**P**	**03 47 03.1**	**+1.7**
	baz=26,SNR=7.1						
QLP	**Quilpie**	**25.64**	**232**	P	**P**	**03 47 03.8**	**+1.1**
	baz=26,SNR=9.4						
MMPI	**Merauke**	**26.14**	**275**	P	**P**	**03 47 10.1**	**+2.8**
	comp=Z,156μmcomp=Z,5μm,0.8s						
TOZ	**Tahuroa Road**	**26.81**	**164**	P	**P**	**03 47 15.9**	**+2.8**
QIS	**Mount Isa**	**27.34**	**248**	P	**P**	**03 47 18.2**	**+0.1**
	baz=27,SNR=6.3						
HIZ	**Hauiti**	**27.39**	**166**	P	**P**	**03 47 19.9**	**+1.6**
HIZ	**Hauiti**	**27.39**	**166**	P	**P**	**03 47 20.0**	**+1.8**
CMSA	**Cobar Meteorol**	**27.46**	**222**	P	**P**	**03 47 19.5**	**+0.5**
	baz=28,SNR=34						
MXZ	**Matakaoa Point**	**27.50**	**160**	P	**P**	**03 47 20.8**	**+1.5**
MXZ				IAmb	IAmb	03 47 22.1	
	comp=Z,78nm,1.2s						
RUGZ	**Raukumara Rang**	**27.66**	**161**	P	**P**	**03 47 22.6**	**+1.7**
PKGZ	**Pakihiroa**	**27.72**	**160**	P	**P**	**03 47 23.0**	**+1.7**
URZ	**Urewera**	**27.76**	**162**	P	**P**	**03 47 23.2**	**+1.7**
	comp=Z,24nm,0.5s,baz=274,slow=4.1,SNR=19						
URZ	**Urewera**	**27.76**	**162**	P	**P**	**03 47 23.0**	**+1.4**
URZ	**Urewera**	**27.76**	**162**	P	**P**	**03 47 20.6**	**-0.9**
URZ				IAmb	IAmb	03 47 24.5	
	comp=Z,93nm,1.2s						
YNG	**Young**	**27.77**	**214**	P	**P**	**03 47 22.9**	**+1.1**
	baz=28,SNR=15						
PUZ	**Puketiti**	**27.95**	**160**	P	**P**	**03 47 25.3**	**+2.1**
VRZ	**Vera Road**	**27.95**	**167**	P	**P**	**03 47 29.1**	**+5.9**
MWZ	**Matawai**	**27.95**	**162**	P	**P**	**03 47 23.8**	**+0.4**
CNB	**Canberra Magne**	**28.04**	**211**	P	**P**	**03 47 25.4**	**+1.2**
	baz=28,SNR=9.0						
TWVZ	**Taurewa**	**28.06**	**165**	P	**P**	**03 47 26.7**	**+2.4**
KRVZ	**Karewarewa**	**28.14**	**165**	P	**P**	**03 47 27.8**	**+2.8**
WTVZ	**West Tongariro**	**28.14**	**165**	P	**P**	**03 47 28.0**	**+2.9**
MTHZ	**Maungataniwha**	**28.23**	**163**	P	**P**	**03 47 28.0**	**+2.3**
CAN	**Canberra**	**28.23**	**212**	P	**P**	**03 47 24.8**	**-1.1**
CAN				pmax	pmax		
	comp=Z,31nm,1.1s						
CAN	**Canberra**	**28.23**	**212**	P	**P**	**03 47 24.8**	**-1

WRAB IAmb IAmb 03 48 00.2
comp=Z,63nm,1.1s
WRA Warramunga Arr 32.06 252 P **P** **03 47 59.2 -0.6**
comp=Z,40nm,1.0s,baz=83,slow=8.7,SNR=84
WRA PcP **PcP** **03 50 46.8 +0.8**
comp=Z,26nm,0.8s,baz=81,slow=3.0,SNR=26
WRA PKiKP **PKiKP** **03 58 13.3 -0.7**
comp=Z,2.8nm,0.8s,baz=339,slow=0.5,SNR=12
WRA LR LR 04 00 40.0
comp=Z,348nm,19.3s,baz=95,slow=35
WRA Warramunga Arr 32.06 252 IAmb IAmb 03 48 00.2
comp=Z,3.6nm,1.0s
LBZ Lake Benmore 32.42 175 IAmb IAmb 03 48 05.5
comp=Z,49nm,0.8s
HTT Hallett 33.17 225 P **P** **03 48 10.1 +0.8**
baz=33,SNR=15
AS31 Alice Springs 33.23 245 P **P** **03 48 09.4 -0.6**
AS31 IAmb IAmb 03 48 10.5
comp=Z,16nm,0.7s
ASAR Alice Springs 33.23 245 P **P** **03 48 08.9 -1.1**
comp=Z,55nm,0.7s,baz=74,slow=9.5,SNR=358
ASAR PcP **PcP** **03 50 49.5 +0.3**
comp=Z,29nm,0.8s,baz=78,slow=2.5,SNR=26
ASAR PKiKP **PKiKP** **03 58 13.9 -0.9**
comp=Z,1.1nm,0.7s,baz=95,slow=1.1,SNR=6.7
ASAR LR LR 04 01 41.1
comp=Z,344nm,18.7s,baz=79,slow=36
ARPS Mount Arapiles 33.30 218 P **P** **03 48 11.4 +1.1**
baz=34,SNR=9.2
KDU Kakadu 33.44 265 P **P** **03 48 11.8 0.0**
baz=34,SNR=22
WHZ Wether Hill Ro 33.80 178 IAmb IAmb 03 48 16.2
comp=Z,62nm,0.9s
RKPI Ransiki, Papua 33.89 285 P **P** **03 48 17.6 +1.8**
comp=Z,11µcomp=Z,80nm,1.0s
MOO Moorlands 34.77 206 P **P** **03 48 24.3 +1.3**
baz=35,SNR=5.1
BBOO Buckleboo 34.90 229 P **P** **03 48 24.6 +0.4**
baz=35,SNR=57
BBOO Buckleboo 34.90 229 P **P** **03 48 24.6 +0.4**
TAU Tasmania Unive 35.10 205 P **P** **03 48 26.8 +1.1**
TAU pmax pmax
comp=Z,34nm,1.0s
TAU Tasmania Unive 35.10 205 P **P** **03 48 26.8 +1.1**
TAU IAmb IAmb 03 48 27.1
comp=Z,34nm,1.0s
FAKI Fak Fak 35.30 282 P **P** **03 48 30.5 +2.7**
comp=Z,39nm,1.6s
FAKI Fak Fak 35.30 282 P **P** **03 48 26.5 -1.4**
FAKI IAmb IAmb 03 48 30.1
comp=Z,24nm,1.0s
SWI Sorong 36.86 285 P **P** **03 48 41.4 +0.3**
comp=Z,136nm,1.1s
KNRA Kununurra 36.99 260 P **P** **03 48 42.4 +0.2**
baz=37,SNR=25
WRKA Warakurna 38.52 245 P **P** **03 48 54.6 -0.5**
baz=39,SNR=43
FITZ Fitzroy Crossi 40.06 256 P **P** **03 49 07.9 +0.1**
baz=40,SNR=22
FITZ Fitzroy Crossi 40.06 256 P **P** **03 49 07.8 +0.1**
comp=Z,95nm,0.9s,baz=90,slow=8.6,SNR=44
FITZ Fitzroy Crossi 40.06 256 P **P** **03 49 06.3 -1.5**
FITZ **PcP** **03 51 09.0 -0.9**
NLAI Namlea 40.16 279 P **P** **03 49 09.7 +1.0**
comp=Z,188nm,0.9s
FORT Forrest 40.29 236 P **P** **03 49 10.0 +0.5**
baz=40,SNR=52
FORT Forrest 40.29 236 P **P** **03 49 09.4 -0.2**
LBMI Labuha 40.50 283 P **P** **03 49 13.2 +1.7**
comp=Z,3µcomp=Z,192nm,1.0s
SANI Sanana 41.54 281 P **P** **03 49 20.4 +0.4**
comp=Z,1µcomp=Z,97nm,0.9s
SOEI Soe 41.71 269 P **P** **03 49 20.6 -0.9**
comp=Z,97nm,1.5s
SOEI Soe 41.71 269 IAmb IAmb 03 49 23.4
comp=Z,106nm,1.1s
BATI Baumata 42.25 268 P **P** **03 49 28.1 +2.3**
comp=Z,168nm,1.1s
PPT2 Papeete2 42.56 103 *e*LQ LQ 03 59 43.0
comp=Z,602nm,24.5s
PPT2 *e*LR LR 04 01 42.0
comp=Z,614nm,34.8s
TIAR Tiarei 42.78 103 *e*P **P** **03 49 32.4 +2.4**
comp=Z,16nm,0.9s
TVO Taravao 42.88 103 *e*P **P** **03 49 33.3 +2.5**
comp=Z,14nm,0.9s
TBI Tubuai 43.11 111 *e*P **P** **03 49 34.9 +2.3**
comp=Z,42nm,1.1s
TBI *e*pP **pwP** **03 50 08.0 -0.3**
comp=Z,142nm,1.4s
TBI *e*LQ LQ 03 59 56.5
comp=Z,600nm,27.0s
TBI *e*LR LR 04 01 51.7
comp=Z,277nm,37.0s
KMSI Cibinong 44.22 283 P **P** **03 49 43.1 +1.5**
comp=Z,37µcomp=Z,290nm,0.5s
LUWI Luwuk 44.91 281 P **P** **03 49 43.0 -4.1**
comp=Z,4µcomp=Z,155nm,1.1s
KMBL Kambalda 45.53 238 P **P** **03 49 51.9 +0.1**
baz=46,SNR=34
MRSI Marisa 46.14 282 P P 03 50 08.5 +12
BNSI Bone 46.68 275 P **P** **03 50 02.0 +1.0**
comp=Z,196nm,1.0s
KAPI Kappang 46.90 274 P **P** **03 50 02.3 -0.4**
KAPI pmax pmax
comp=Z,61nm,0.9s
KAPI Kappang 46.90 274 P **P** **03 50 03.2 +0.5**
comp=Z,48nm,0.8s,baz=163,slow=7.1,SNR=5.9
KAPI Kappang 46.90 274 P **P** **03 50 02.3 -0.4**
KAPI IAmb IAmb 03 50 04.2
comp=Z,61nm,0.9s
MEEK Meekatharra 47.39 245 P **P** **03 50 06.9 +0.5**
baz=48,SNR=59
MPSI Mapaga 48.05 281 P **P** **03 50 11.6 0.0**
comp=Z,145nm,0.9s
KLBR Kellerberrin 49.01 238 P **P** **03 50 18.4 -0.3**
baz=49,SNR=27
BLDU Ballidu 49.70 240 P **P** **03 50 19.8 -4.1**
baz=50,SNR=5.0
NWAO Narrogin (SRO) 49.73 237 P **P** **03 50 24.2 +0.1**
baz=50,SNR=3.7
NWAO Narrogin (SRO) 49.73 237 P **P** **03 50 23.7 -0.4**
NWAO pmax pmax
comp=Z,131nm,1.2s
NWAO Narrogin (SRO) 49.73 237 P **P** **03 50 23.6 -0.5**
NWAO Narrogin (SRO) 49.73 237 P **P** **03 50 23.7 -0.4**
NWAO IAmb IAmb 03 50 25.2
comp=Z,131nm,1.1s
MORW Morawa 50.01 242 P **P** **03 50 26.7 +0.4**
baz=50,SNR=14
MORW Morawa 50.01 242 P **P** **03 50 25.8 -0.5**
MORW IAmb IAmb 03 50 27.1
comp=Z,63nm,0.8s
RKGY Rocky Gully 50.33 235 P **P** **03 50 29.6 +1.0**
baz=50,SNR=5.9
MUN Mundaring 50.38 238 P **P** **03 50 29.6 +0.6**
baz=50,SNR=4.7
SMKI Samarinda 50.43 279 P **P** **03 50 31.6 +2.0**
comp=Z,9µcomp=Z,146nm,1.0s
GIRL Giralia 50.98 251 P **P** **03 50 34.8 +1.2**
baz=51,SNR=4.2
TSM Tawau 51.18 286 P **P** **03 50 36.0 +0.8**
JAGI Jajag, Banyuwa 51.78 269 P **P** **03 50 39.9 +0.2**
comp=Z,157nm,1.1s
TAOE Nuku Hiva Isla 52.30 92 *e*LR LR 04 06 24.3
comp=Z,255nm,27.7s
KKM Kota Kinabalu 53.31 287 P **P** **03 50 49.8 -1.3**
PCJI Pacitan 54.73 268 P **P** **03 51 01.9 +0.6**
comp=Z,184nm,1.0s
INU Inuyama 54.83 330 P **P** **03 51 00.2 -1.4**
INU IAmb IAmb 03 51 03.8
comp=Z,19nm,0.9s
WOJI Wonogiri, Jawa 55.03 269 P **P** **03 51 04.4 +0.9**
comp=Z,53nm,1.3s
MJAR Matsushiro Arr 55.24 332 P **P** **03 51 03.9 -0.6**
comp=Z,15nm,0.8s,baz=155,slow=8.0,SNR=30
MJAR Matsushiro Arr 55.24 332 IAmb IAmb 03 51 05.1
comp=Z,6.8nm,0.8s
MAJO Matsushiro 55.24 332*c i*P **P** **03 51 02.2 -2.3**
MAJO pmax pmax
comp=Z,27nm,1.1s
MAJO Matsushiro 55.24 332 P **P** **03 51 02.5 -2.1**
MAJO IAmb IAmb 03 51 05.3
comp=Z,33nm,1.1s
MAT Matsushiro 55.24 332 P **P** **03 51 04.1 -0.4**
MJB9 Matsu-Tunnel 55.25 332 P **P** **03 51 02.5 -2.1**
MJB9 IAmb IAmb 03 51 05.2
comp=Z,34nm,1.1s
SBUM Sibu 56.01 281 P **P** **03 51 08.3 -2.1**
SBUM IAmb IAmb 03 51 12.2
comp=Z,22nm,1.1s
SBUM Sibu 56.01 281 P **P** **03 51 12.0 +1.6**
YULB Yu-li 56.66 308 IAmb IAmb 03 51 16.1
comp=Z,37nm,1.1s
KPJI Karang Pucung 57.06 269 P **P** **03 51 19.0 +1.1**
comp=Z,119nm,1.0s
SSLB Suanglung 57.14 309 IAmb IAmb 03 51 23.4
comp=Z,30nm,0.9s
YHNB Yeheng 57.31 310 P **P** **03 51 18.8 -0.7**
KSM Kuching 57.59 279 P **P** **03 51 22.0 +0.4**
CISI Cisompet, Garu 58.12 269 P **P** **03 51 24.8 -0.6**
comp=Z,202nm,1.0s
CISI Cisompet, Garu 58.12 269 P **P** **03 51 23.7 -1.7**
CNJI Cibinong 58.83 269 P **P** **03 51 30.0 -0.2**
comp=Z,2µcomp=Z,202nm,1.0s
DBJI Dramaga 59.33 269 P **P** **03 51 34.5 +0.8**
comp=Z,24µcomp=Z,60nm,0.6s
SKJI Sukabumi 59.44 269 P **P** **03 51 34.3 -0.1**
comp=Z,207nm,1.0s
JKA Kamikawa-asahi 59.99 340 P **P** **03 51 38.6 +1.0**
ASAJ Asahikawa 60.00 340 P **P** **03 51 38.6 +1.0**
comp=Z,27nm,0.7s,baz=210,slow=7.1,SNR=9.0
ASAJ LR LR 04 13 54.9
comp=Z,93nm,20.9s,baz=344,slow=32
TJN Taejon 60.74 324*ce*P **P** **03 51 42.9 +0.1**
KSRS Korea Array 61.19 325 P **P** **03 51 46.4 +0.6**
comp=Z,12nm,0.8s,baz=138,slow=7.0,SNR=43
KSRS PcP **PcP** **03 52 27.8 +0.8**
comp=Z,2.7nm,0.9s,baz=133,slow=3.0,SNR=4.4
KSRS LR LR 04 16 26.9
comp=Z,37nm,19.7s,baz=139,slow=34
KS19 Wonju Array Si 61.25 325 IAmb IAmb 03 51 47.0
comp=Z,21nm,0.9s
KASI Kota Agung 61.72 270 P **P** **03 51 49.1 -0.8**
comp=Z,115nm,0.8s
MDSI Maura Dua 62.22 271 P **P** **03 51 52.3 -0.9**
comp=Z,40nm,1.5s
YSS Yuzh-Sakhalins 62.47 342⇑*i*P **P** **03 51 55.4 +1.2**
YSS *e* 03 52 28.1
YSS *e**SP **sP** **03 52 48.3 +2.7**
YSS *e*S **S** **04 00 14.3 +4.8**
YSS *e*PS PnS 04 00 29.3 -20
YSS pmax pmax
comp=Z,40nm,1.2s
YSS Yuzh-Sakhalins 62.47 342 P **P** **03 51 54.1 0.0**
YSS IAmb IAmb 03 51 56.5
comp=Z,53nm,1.1s
NJ2 Nanjing 63.35 315⇑*i*P **P** **03 52 01.1 +0.8**
NJ2 pP **PcP** **03 52 37.4 +1.4**
NJ2 sP **sP** **03 52 52.8 +1.5**
NJ2 pmax pmax
comp=Z,98nm,0.8s
MYKOM **Kota Tinggi 63.91 278** PKPdf **P** **03 52 05.6 +1.2**
KSI Kapahiang 63.94 272 P **P** **03 52 04.8 +0.2**
USA0B Ussuriysk Arra 64.21 333*i* P **P** **03 52 04.4 -1.3**
USA0B Ussuriysk Arra 64.21 333 IAmb IAmb 03 52 07.5
comp=Z,45nm,1.1s
USRK Ussuriysk Ar. 64.21 333 P **P** **03 52 06.7 +1.0**
comp=Z,27nm,1.0s,baz=144,slow=6.1,SNR=31
USRK pP **PcP** **03 52 39.1 -0.2**
comp=Z,7.3nm,0.9s,baz=150,slow=8.6,SNR=2.9
PET Petropavlovsk 65.12 355 *e*P **P** **03 52 13.3 +1.9**
PET *e**PP **pP** **03 52 53.9 +7.2**
PET *e*S **S** **04 00 39.3 -2.7**
PET pmax pmax
comp=Z,100nm,15.7s
PETK Petropavlovsk- 65.30 354 P **P** **03 52 13.4 +0.8**
comp=Z,10nm,0.8s,baz=147,slow=8.3,SNR=8.2
VNDA Vanda 65.57 181 P **P** **03 52 15.0 +0.9**
VNDA pmax pmax
comp=Z,27nm,1.0s
VNDA Vanda 65.57 181 P **P** **03 52 14.9 +0.9**
comp=Z,15nm,0.8s,baz=347,slow=7.2,SNR=32
VNDA Vanda 65.57 181 P **P** **03 52 15.0 +0.9**
VNDA IAmb IAmb 03 52 16.5
comp=Z,27nm,0.9s
MDJ Mudanjiang 65.62 332 P **P** **03 52 15.9 +1.1**
MDJ pmax pmax
comp=Z,47nm,1.1s
MDJ pmax pmax
comp=Z,270nm,5.4s
MDJ Mudanjiang 65.62 332 **P** **03 52 16.1 +1.3**
SDSI Sungai Dareh 65.64 274 P **P** **03 52 15.7 +0.1**
comp=Z,3µcomp=Z,17nm,1.0s
WHN Wuhan 65.72 311⇑P **P** **03 52 15.9 +0.2**
JRMM Jerantut 65.76 280 P **P** **03 52 18.0 +1.6**
DL2 Dalian 65.80 323 P **P** **03 52 16.9 +0.8**
DL2 pmax pmax
comp=Z,67nm,1.0s
CASY Casey 65.85 202 P **P** **03 52 16.2 +0.2**
BKNI Bangkinang 66.30 276 P **P** **03 52 21.0 +1.2**
comp=Z,3µcomp=Z,249nm,0.9s
UBPT Dong Chiam 66.40 293 IAmb IAmb 03 52 22.4
comp=Z,56nm,1.1s
PDSI Padang 66.59 274 P **P** **03 52 21.9 +0.2**
SNY Shenyang 66.64 326⇑P **P** **03 52 20.1 -1.2**
SNY S **S** **04 01 05.4 +4.5**
SNY pmax pmax
comp=Z,20nm,1.4s
SNY pmax pmax
comp=Z,260nm,4.5s
SNY LR LR
comp=Z,220nm,4.6s
SNY LR LR
comp=Z,200nm,4.3s
SNY LR LR
comp=Z,290nm,4.9s
TIA Tai'an 66.94 318 P **P** **03 52 23.6 +0.1**
TIA pmax pmax
comp=Z,32nm,1.0s
CN2 Changchun 67.03 329 *e*P **P** **03 52 24.4 +0.6**
CN2 pmax pmax
comp=Z,60nm,1.0s
IPM Ipoh 67.31 280 P **P** **03 52 26.0 -0.2**
SISI Saibi 67.84 273 P **P** **03 52 30.8 +1.3**
comp=Z,31nm,1.1s
GRNR Gornyy 67.85 340⇑*i*P **P** **03 52 29.9 +1.1**
GRNR *e*S **S** **04 01 16.6 +1.5**
GRNR pmax pmax
comp=Z,20nm,1.3s
GRNR smax smax
comp=N,3.0nm,1.0s
KULM Kulim 67.88 281 IAmb IAmb 03 52 30.7
comp=Z,35nm,1.0s
KULM Kulim 67.88 281 P **P** **03 52 30.0 +0.2**
KLR Kul'dur 68.30 336*c i*P **P** **03 52 29.3 -2.3**
KLR pmax pmax
comp=Z,28nm,1.0s
PBSI Pulau Batu 68.90 275 P **P** **03 52 37.6 +1.4**
comp=Z,161nm,2.0s
RPSI Rantau Prapat 68.91 278 P **P** **03 52 35.4 -0.8**
PSI Prapat 68.93 278 P **P** **03 52 35.4 -1.1**
PSI pmax pmax
comp=Z,80nm,0.9s
BJT Baijiatuau 69.80 321 IAmb IAmb 03 52 43.0
comp=Z,38nm,1.0s
BJI Beijing 69.81 321 P **P** **03 52 41.8 +0.7**
BJI pmax pmax
comp=Z,40nm,1.0s
GSI Gunungsitoli 69.89 276 P **P** **03 52 42.6 +0.3**
comp=Z,167nm,1.3s
SLVN Son La 69.98 298 IAmb IAmb 03 52 44.6
comp=Z,28nm,1.0s
PBKT Sadao Pong 70.91 292 P **P** **03 52 48.3 0.0**
PBKT IAmb IAmb 03 52 50.6
comp=Z,39nm,0.9s
XAN Xi'an 71.45 312 P **P** **03 52 52.0 +0.7**
XAN pP pP 03 53 25.0 -2.0
XAN pmax pmax
comp=Z,59nm,1.1s
XAN pmax pmax
comp=Z,350nm,3.7s
MLSI Meulaboh, Aceh 71.72 279 P **P** **03 52 53.3 0.0**
comp=Z,226nm,1.0s
KMI Kunming 72.42 301 P **P** **03 52 59.0 +1.5**
KMI pP pP 03 53 33.8 +1.0
KMI pmax pmax
comp=Z,120nm,1.2s
KMI LR LR
comp=Z,140nm,7.1s
KMI LR LR
comp=Z,150nm,5.2s
KMI LR LR
comp=Z,120nm,7.6s
HHC Hu-ho-hao-te 73.16 319 *e*P **P** **03 53 02.8 +1.4**
HHC S **SKiKP** **04 02 23.6 +5.1**
HHC pmax pmax
comp=Z,23nm,1.0s
HHC pmax pmax
comp=Z,78nm,5.6s
CMAR Chiang Mai Arr 73.35 294 P **P** **03 53 04.3 +1.5**
comp=Z,50nm,0.9s,baz=119,slow=4.4,SNR=134
CMAR pP **pP** **03 53 38.8 +0.6**
comp=Z,8.2nm,0.8s,baz=118,slow=4.5,SNR=2.5
CHTO Chiang Mai 73.47 294 P **P** **03 53 03.4 -0.1**
CHTO IAmb IAmb 03 53 05.1
comp=Z,41nm,0.8s
CHTO **pP** **03 53 38.7 -0.2**
ZEA Zeya 73.58 337 *e*P **P** **03 53 05.1 +1.7**
ZEA pmax pmax
comp=E,64nm,1.8s
ZEA pmax pmax
comp=N,74nm,1.4s
ZEA pmax pmax
comp=Z,74nm,1.4s
HIA Hailar 73.66 330 IAmb IAmb 03 53 05.9
comp=Z,29nm,0.9s
CD2 Chengdu 73.92 307 *e*P **P** **03 53 06.5 +0.5**
BTO Baotou 74.02 319 P **P** **03 53 07.5 +1.1**
SEY Seymchan 75.52 353 *i* P **P** **03 53 14.2 -0.2**
SEY Seymchan 75.52 353 P **P** **03 53 14.8 +0.5**
comp=Z,14nm,0.9s,baz=161,slow=5.9,SNR=19
LZH Lanzhou 76.09 312 *e*P **P** **03 53 20.3 +1.8**
LZH pP pP 03 53 53.5 -1.2
LZH PP **PP** **03 56 11.3 -0.2**
LZH pmax pmax
comp=Z,27nm,1.0s
LZH pmax pmax
comp=Z,96nm,4.9s
GAMB Gambell 77.33 10 P **P** **03 53 25.1 +0.6**
GAMB IAmb IAmb 03 53 26.5
comp=Z,41nm,1.2s
GAMB **pP** **03 54 02.0 +1.1**
QSPA South Pole Qui 78.02 180 P **P** **03 53 29.4 +0.7**
SVW2 Sparrevohn 78.72 18 IAmb IAmb 03 53 35.1
comp=Z,17nm,1.1s
ANM Nome 79.21 12 P **P** **03 53 35.7 +0.8**
ANM IAmb IAmb 03 53 38.0
comp=Z,17nm,1.1s
ANM **pP** **03 54 11.7 +0.3**
YAK Yakutsk 79.27 343 *e*P **P** **03 53 33.8 -1.4**
YAK *e* 03 53 41.7
YAK *e**PP **pP** **03 54 10.3 -1.5**
YAK *e* 03 56 35.1
YAK *e*PPP PPP 03 58 28.2
YAK *e*S **S** **04 03 19.2 -3.6**
YAK *e* 04 03 39.4
YAK *e**SS sS 04 04 35.4 +9.4
YAK *e*SS **SS** **04 08 35.3 +2.1**
YAK *e*SSS SSS 04 11 57.5
YAK pmax pmax
comp=Z,29nm,0.9s
YAK pmax pmax
comp=N,14nm,1.3s
YAK pmax pmax
comp=E,9.0nm,1.2s
YAK pmax pmax
comp=Z,35nm,3.3s
YAK pmax pmax
comp=N,61nm,3.2s
YAK pmax pmax
comp=E,27nm,2.5s
YAK smax smax
comp=N,58nm,2.7s
YAK smax smax
comp=E,75nm,2.5s
YAK Yakutsk 79.27 343 P **P** **03 53 35.4 +0.2**
YAK IAmb IAmb 03 53 36.4
comp=Z,45nm,0.9s
ULN Ulaanbaatar 79.62 324*ce*P **P** **03 53 38.1 +0.4**
ULN pmax pmax
comp=Z,54nm,1.0s
ULN Ulaanbaatar 79.62 324 P **P** **03 53 37.9 +0.2**
ULN IAmb IAmb 03 53 39.8
comp=Z,53nm,0.8s
BILL Bilibino 79.82 360 *e*P **P** **03 53 38.4 +0.3**
BILL *e* 03 53 45.8
BILL *e**PP **pP** **03 54 17.1 +2.4**
BILL *e**SP **sP** **03 54 33.0 +2.7**
BILL *e* 03 56 45.2
BILL pmax pmax
comp=Z,43nm,1.2s
BILL Bilibino 79.82 360 P **P** **03 53 37.9 -0.3**
BILL IAmb IAmb 03 53 39.3
comp=Z,36nm,1.1s
SONM Songino Array 79.98 324 P **P** **03 53 40.3 +0.6**
comp=Z,14nm,0.7s,baz=145,slow=6.0,SNR=50
SONM Songino Array 79.98 324 IAmb IAmb 03 53 41.0
comp=Z,21nm,1.1s
TTA Tatalina 80.06 16 IAmb IAmb 03 53 41.7
comp=Z,24nm,1.0s
GTA Gaotai 80.39 314⇑P **P** **03 53 43.4 +1.4**
GTA pP pP 03 54 17.3 -1.2
GTA sP sP 03 54 35.1 +1.0
GTA pmax pmax
comp=Z,37nm,0.9s
GTA pmax pmax
comp=Z,260nm,8.7s
GTA LR LR
comp=Z,170nm,16.2s
GTA LR LR
comp=Z,170nm,19.0s
GTA LR LR
comp=Z,120nm,20.0s
KNK Knik Glacier 81.21 20 IAmb IAmb 03 53 47.4
comp=Z,40nm,1.1s
SML Sawmill 81.54 20 IAmb IAmb 03 53 49.2
comp=Z,44nm,1.0s
BOD Bodaibo 81.78 335 *e*P **P** **03 53 48.5 -0.3**
BOD pmax pmax
comp=Z,30nm,1.6s
SHL Shillong 81.79 298 P **P** **03 53 48.3 -1.5**
SHL *PP **pP** **03 54 24.9 -1.1**
SHL pmax pmax
comp=Z,59nm,0.9s
SHL Shillong 81.79 298 P **P** **03 53 48.3 -1.5**
SHL IAmb IAmb 03 53 51.4
comp=Z,59nm,0.9s
SHL pP **pP** **03 54 24.9 -1.1**
KTH Kantishna Hill 82.00 18 IAmb IAmb 03 53 54.4
comp=Z,19nm,1.0s
RND Reindeer 82.53 19 P **P** **03 53 52.0 -0.6**
RND IAmb IAmb 03 53 53.8
comp=Z,30nm,1.0s
RND **pP** **03 54 29.5 +0.3**
HOPS Hopland Field 82.61 48 P **P** **03 53 53.5 -0.1**
HOPS **pP** **03 54 30.6 +0.4**
MCK McKinley 82.74 18 IAmb IAmb 03 53 54.7
comp=Z,27nm,1.0s
DHY Denali Highway 82.76 19 P **P** **03 53 54.1 +0.2**
DHY IAmb IAmb 03 53 55.0
comp=Z,14nm,1.1s
DHY **pP** **03 54 30.8 +0.2**
RDOG Red Dog Mine 82.76 11 IAmb IAmb 03 53 56.0
comp=Z,38nm,1.1s
BWN Browne 82.90 18 IAmb IAmb 03 53 56.9
comp=Z,52nm,0.8s
SAO San Andreas Ge 83.00 50 P **P** **03 53 54.9 -0.7**
SAO pmax pmax
comp=Z,5.0nm,1.0s
SAO San Andreas Ge 83.00 50 P **P** **03 53 54.9 -0.7**
SAO **pP** **03 54 30.6 -1.7**
ZAK Zakamensk 83.01 325 *e*P **P** **03 53 54.9 -0.6**
ZAK pmax pmax
comp=Z,30nm,1.3s
O02D Mt. Diablo Mer 83.25 47 P **P** **03 53 58.4 +1.5**
baz=248,SNR=7.7
SNCC San Nicolas Is 83.31 54 P **P** **03 53 58.5 +1.2**
baz=251
IRK Irkutsk 83.36 327 *e*P **P** **03 53 56.4 -0.7**
IRK pmax pmax
comp=Z,65nm,2.4s
BARN Barnard Glacie 83.39 23 IAmb IAmb 03 53 59.2
comp=Z,40nm,1.0s
TLY Talaya 83.43 326*c i*P **P** **03 53 57.9 +0.4**
TLY pmax pmax
comp=Z,173nm,1.6s
TLY Talaya 83.43 326 P **P** **03 53 57.3 -0.2**

TLY IAmb IAmb 03 53 59.2
comp=Z,40nm,1.0s
TLY pP pP 03 54 31.6 -2.8
CTGM Chitina Glacie 83.46 23 IAmb IAmb 03 53 59.3
comp=Z,55nm,1.0s
SCZ2 Santa Cruz Isl 83.46 53 P P 03 53 59.1 +1.1
baz=251
WRH Wood River Hil 83.53 18 P P 03 53 56.8 -0.8
WRH IAmb IAmb 03 53 58.6
comp=Z,24nm,1.0s
WRH pP 03 54 34.8 +0.4
SBC Santa Barbara 83.55 53 P P 03 53 59.7 +1.2
baz=251
WDC Whiskeytown Da 83.57 46 P P 03 53 58.0 -0.5
WDC *PP pP 03 54 35.4 +0.2
WDC pmax pmax
comp=Z,4.0nm,1.1s
WDC Whiskeytown Da 83.57 46 P P 03 53 58.0 -0.5
WDC pP 03 54 35.4 +0.2
J01E Myrtle Point 83.59 44 P P 03 53 59.6 +1.2
baz=247
N02D Trinity Center 83.60 46 P P 03 53 60.0 +1.3
baz=248,SNR=5.6
PKM Mcpherson Peak 83.62 52 P P 03 54 00.3 +1.2
baz=251
SMMC Simmler 83.62 52 P P 03 54 00.3 +1.4
baz=251
LSA Lhasa 83.65 302 P P 03 54 00.8 +1.1
LSA pmax pmax
comp=Z,120nm,0.9s
LSA Lhasa 83.65 302 IAmb IAmb 03 54 02.2
comp=Z,24nm,0.8s
M02C Callahan 83.66 46 P P 03 54 00.5 +1.5
baz=248
CCB Clear Creek Bu 83.74 18 IAmb IAmb 03 53 59.5
comp=Z,12nn,0.9s
HDA Harding Lake 83.83 18 P P 03 53 58.8 -0.4
HDA pP pP 03 54 36.1 +0.1
HDA Harding Lake 83.83 18 P P 03 53 59.4 +0.1
baz=226
MDM Murphy Dome 83.84 18 P P 03 53 59.5 +0.2
MDM IAmb IAmb 03 54 00.3
comp=Z,44nm,1.1s
MDM pP 03 54 36.2 +0.2
MENT Mentasta 83.88 20 IAmb IAmb 03 54 01.5
comp=Z,28nm,1.0s
YBH Yreka Blue Hor 83.88 45 P P 03 54 01.2 +1.1
comp=Z,7.8nm,1.0s,baz=272,slow=5.5,SNR=7.2
YBH pP pP 03 54 36.2 -0.7
comp=Z,16nm,0.9s,baz=190,slow=2.2,SNR=10
YBH Yreka Blue Hor 83.88 45 P P 03 54 00.4 +0.3
TCOL CIGO, UAF Yank 83.89 18 P P 03 53 59.3 -0.2
baz=225
COLA College 83.89 18 *eP P 03 53 59.4 0.0
COLA pmax pmax
comp=Z,32nm,1.0s
COLA College 83.89 18 P P 03 53 59.5 +0.1
COLA IAmb IAmb 03 54 00.5
comp=Z,46nm,1.1s
COLA pP 03 54 36.6 +0.5
O03E Paynes Creek 84.00 47 P P 03 54 01.2 +0.5
baz=249,SNR=5.7
I02D Swisshome 84.01 43 P P 03 54 01.7 +1.2
baz=247
HUMO Hull Mountain 84.04 44 IAmb IAmb 03 54 02.8
comp=Z,13nm,1.1s
IL31 84.11 18 IAmb IAmb 03 54 01.6
comp=Z,53nm,1.1s
ILAR Eielson Array 84.11 18 P P 03 54 00.2 -0.4
comp=Z,29nm,0.9s,baz=230,slow=5.8,SNR=148
ILAR pP pP 03 54 37.2 -0.2
comp=Z,14nm,0.9s,baz=227,slow=5.7,SNR=5.3
ILAR LR LR 04 27 02.2
comp=Z,62nm,19.3s,baz=208,slow=32
AFDM Forest Hills D 84.12 48 P P 03 54 01.9 +0.6
AFDM pP 03 54 38.0 0.0
I03D Drain, OR 84.19 43 P P 03 54 01.6 +0.1
baz=248
POKR Poker Plat Res 84.19 18 P P 03 54 00.8 -0.2
baz=225
MAW Mawson 84.20 202 P P 03 54 01.6 +0.5
comp=Z,54nm,1.0s,baz=103,slow=5.4,SNR=21
MAW LR LR 04 25 00.0
comp=Z,119nm,21.1s,baz=194,slow=31
MAW Mawson 84.20 202 IAmb IAmb 03 54 02.8
comp=Z,16nm,1.1s
CMB Columbia Colle 84.23 49 P P 03 54 01.6 -0.4
CMB pP 03 54 37.9 -0.8
CIS Catalina Islan 84.24 54 P P 03 54 02.3 +0.3
baz=252
DOT Dot Lake 84.24 20 IAmb IAmb 03 54 03.1
comp=Z,58nn,1.0s
L04D Klamath Falls 84.34 45 P P 03 54 03.1 +0.7
baz=248
SCRK Sand Creek 84.48 20 P P 03 54 02.5 -0.1
SCRK IAmb IAmb 03 54 04.5
comp=Z,45nm,1.0s
SCRK pP 03 54 39.5 -0.5
VES Vestal, Richgr 84.49 52 P P 03 54 03.6 +0.5
baz=251
M04C Macdoel 84.51 45 P P 03 54 04.2 +0.9
baz=249,SNR=7.1
G03D McMinnville, O 84.82 42 P P 03 54 04.9 +0.2
baz=248
I04A Tendick Farm, 84.85 43 P P 03 54 05.4 +0.5
baz=248
J04D Umpqua Nationa 84.85 44 P P 03 54 06.1 +1.0
baz=248,SNR=6.0
HYT Haines Junctio 84.86 24 IAmb IAmb 03 54 06.3
comp=Z,17nm,1.0s
K04D Chiloquin, OR 84.87 45 P P 03 54 05.8 +0.7
baz=249
MOY Mondy 84.89 325 *eP P 03 54 05.2 +0.2
MOY pmax pmax
comp=Z,61nm,2.4s
ISA Isabella, Lake 84.90 52 P P 03 54 06.1 +0.8
baz=252,SNR=6.2
H04D Lebanon 84.91 43 P P 03 54 05.9 +0.8
baz=248
EDW2 Edwards Air Fo 85.03 53 P P 03 54 07.0 +1.0
baz=252,SNR=9.5
PRP Porcupine Dome 85.04 18 IAmb IAmb 03 54 06.9
comp=Z,14nm,1.2s
BFSC Mount Baldy Ra 85.09 54 P P 03 54 07.2 +0.8
baz=252,SNR=5.4
WAKR Walker 85.10 49 IAmb IAmb 03 54 08.3
comp=Z,17nm,1.2s
109C Camp Elliot, M 85.12 55 P P 03 54 07.1 +0.7
baz=252
PNTR Pine Nut 85.17 49 P P 03 54 05.9 -0.9
PNTR pP 03 54 43.5 -0.1
MLAC Mammoth, Mammo 85.26 50 P P 03 54 08.1 +0.8
baz=251
MURC Murrieta 85.27 54 P P 03 54 08.3 +1.1
baz=252
F04D Rainier, OR 85.32 41 P P 03 54 08.0 +0.9
baz=248
CWC Cottonwood Cre 85.45 51 P P 03 54 09.0 +0.8
baz=252
LRMC Laurel Mtn Rad 85.46 52 P P 03 54 09.1 +0.9
baz=252,SNR=5.8
J05D Fort Rock, OR 85.46 44 P P 03 54 09.4 +1.3
baz=249
TIN Tinemaha, Big 85.53 51 P P 03 54 09.4 +0.8
baz=252
MONP2 Monument Peak 85.67 55 P P 03 54 10.5 +1.1
baz=253,SNR=7.3
BBRC Big Bear Solar 85.68 54 P P 03 54 10.0 +0.5
baz=252
I05D Terrebonne, OR 85.77 43 P P 03 54 10.1 +0.7
baz=249
E04D Cinebar 85.79 41 P P 03 54 10.3 +0.9
baz=248
MPMC Manual Prospec 85.79 52 P P 03 54 10.6 +0.7
baz=252,SNR=7.4
D03D Eldon 85.83 40 P P 03 54 10.4 +0.8
baz=247
PINE Pine Mountain 85.84 44 IAmb IAmb 03 54 11.9
comp=Z,15nm,1.1s
FYU Fort Yukon 85.85 17 IAmb IAmb 03 54 12.0
comp=Z,19nm,1.1s
IKP In-Ko-Pah, Jac 85.86 56 P P 03 54 11.5 +1.3
baz=253
PFO Pinyon Flats O 85.86 55 P P 03 54 09.8 -0.4
PFO pmax pmax
comp=Z,4.0nm,1.0s
PFO Pinyon Flats O 85.86 55 P P 03 54 09.8 -0.4
baz=253
XPFO Pion Flat 85.86 55 P P 03 54 10.3 +0.1
TAPN Taplejung 85.89 299 *eP P 03 54 11.2 +0.5
comp=Z,130nm,1.1s
D04E Lakebay 85.89 40 P P 03 54 11.2 +1.3
baz=248
NVAR Mina Array Bea 85.91 50 P P 03 54 11.3 +0.8
comp=Z,2.9nm,0.7s,baz=231,slow=7.9,SNR=20
NVAR pP pP 03 54 46.6 -0.7
comp=Z,14nm,0.9s,baz=233,slow=7.5,SNR=18
NVAR LR LR 04 30 21.3
comp=Z,98nm,18.7s,baz=324,slow=34
EGAK Eagle 85.94 20 IAmb IAmb 03 54 11.8
comp=Z,37nm,0.9s
ODAN Odare 86.03 298 *eP P 03 54 11.5 +0.2
comp=Z,368nm,1.3s
GSC Goldstone, Bar 86.09 53 P P 03 54 12.2 +0.9
baz=252
DAWY Dawson 86.10 21 P P 03 54 11.2 +0.6
DAWY IAmb IAmb 03 54 12.1
comp=Z,11nm,0.9s
G05D Wamic, OR 86.11 42 P P 03 54 12.0 +0.9
baz=249
GRAC Grapevine Rang 86.17 51 P P 03 54 12.7 +1.1
baz=252
SWSC Sam W. Stewart 86.19 55 P P 03 54 12.7 +1.0
baz=253
F05D White Salmon 86.25 42 P P 03 54 12.7 +1.0
baz=249
HEC Hector,Ludlow 86.31 53 P P 03 54 13.1 +0.7
baz=253
BELC Belle Mtn. Jos 86.34 54 P P 03 54 13.3 +0.7
baz=253
D05A Enumclaw 86.39 40 IAmb IAmb 03 54 15.8
comp=Z,22nm,1.2s
FURC Furnace Creek, 86.39 52 P P 03 54 13.4 +0.9
baz=252,SNR=6.4
A04D Lummi Island 86.52 39 P P 03 54 14.0 +1.1
baz=248
BC3 Big Chuckawall 86.67 55 P P 03 54 15.2 +1.1
baz=253
SHOC Shoshone, Teco 86.68 52 P P 03 54 14.5 +0.4
baz=253
B05A Bryant 86.72 39 P P 03 54 14.7 +0.8
baz=248
RAMN Ramite 86.73 298 *eP P 03 54 14.8 0.0
comp=Z,119nm,1.1s
TUQ Turquoise Moun 86.81 53 P P 03 54 15.9 +1.1
baz=253
GMRC Granite Mounta 86.83 54 P P 03 54 15.7 +0.7
baz=253,SNR=7.3
CHLP Challavanipeta 86.92 290 *eP P 03 54 15.4 -0.1
CHLP IAmb IAmb 03 54 16.6
comp=Z,16nm,0.9s
GLA Glamis 87.00 55 P P 03 54 17.3 +1.6
baz=254
TPNV Topopah Spring 87.01 51 P P 03 54 16.5 +0.7
baz=253,SNR=7.2
IRM Iron Mountain 87.06 54 P P 03 54 17.0 +1.0
baz=254,SNR=8.0
TIXI Tiksi 87.19 349 *ceP P 03 54 15.3 -0.4
TIXI pmax pmax
comp=Z,16nm,1.2s
TIXI Tiksi 87.19 349 P P 03 54 15.2 -0.4
comp=Z,7.9nm,1.0s,baz=180,slow=24,SNR=24
TIXI pP pP 03 54 52.0 -0.9
comp=Z,6.0nm,1.0s,baz=0.1,slow=24,SNR=3.1
TIXI Tiksi 87.19 349 P P 03 54 14.8 -0.9
TIXI pP 03 54 51.3 -1.6
JIRN Jiri 87.27 299 *eP P 03 54 17.8 +0.3
comp=Z,187nm,1.1s
Y12C Blythe 87.44 55 IAmb IAmb 03 54 19.7
comp=Z,13nm,1.1s
Y12C Blythe 87.44 55 P P 03 54 18.9 +1.2
baz=254,SNR=5.7
E07A Sunnyside 87.53 41 IAmb IAmb 03 54 19.4
comp=Z,9.7nm,1.1s
GUN Gumba 87.60 299 *eP P 03 54 19.2 +0.1
comp=Z,101nm,0.9s
PALK Pallekele 87.61 278 P P 03 54 18.3 -0.7
PALK pmax pmax
comp=Z,30nm,1.0s
PALK Pallekele 87.61 278 P P 03 54 18.3 -0.7
PALK IAmb IAmb 03 54 21.3
comp=Z,30nm,0.9s
NEE2 Needles Airpor 87.65 54 P P 03 54 20.0 +1.3
baz=254
HAWA Hanford 87.69 42 IAmb IAmb 03 54 20.2
comp=Z,9.5nm,1.0s
G08A Pilot Rock 87.69 43 IAmb IAmb 03 54 22.2
comp=Z,12nn,1.1s
SHPR Sheep Range 87.72 52 P P 03 54 19.3 +0.1
SHPR pP 03 54 56.2 -0.1
113A Mohawk Valley, 87.78 56 IAmb IAmb 03 54 21.4
comp=Z,12nn,1.1s
PKI Pulchoki 87.92 299 *eP P 03 54 20.4 -0.2
comp=Z,21nn,1.0s
R11A Troy Canyon, C 87.92 50 P P 03 54 21.0 +0.8
baz=253,SNR=11
PKIN Phulchoki 87.93 299 *eP P 03 54 20.1 -0.4
comp=Z,119nm,1.0s
KKN Kakani 88.08 299 *eP P 03 54 21.2 0.0
comp=Z,112nm,0.9s
DMN Daman 88.19 299 *eP P 03 54 22.0 +0.3
comp=Z,284nm,0.9s
D08A Wollman Farm, 88.31 41 IAmb IAmb 03 54 22.9
comp=Z,8.9nm,1.1s
214A Organ Pipe Nat 88.35 57 IAmb IAmb 03 54 26.9
comp=Z,8.3nm,1.1s
214A Organ Pipe Nat 88.35 57 P P 03 54 23.3 +1.1
baz=255,SNR=6.2
EPYK Eagle Plains 88.38 20 IAmb IAmb 03 54 26.3
comp=Z,11nn,1.1s
EPYK Eagle Plains 88.38 20 P P 03 54 21.6 +0.1
baz=235
GKN Gorkha 88.69 299 *eP P 03 54 23.7 -0.3
comp=Z,210nm,0.9s
ELK Elko 88.87 48 IAmb IAmb 03 54 26.3
comp=Z,10nm,1.1s
PVM Polavaram 88.89 288 *eP P 03 54 24.4 -0.5
PVM IAmb IAmb 03 54 25.7
comp=Z,21nm,1.3s
MFID Camas Ranch 89.23 45 IAmb IAmb 03 54 27.6
comp=Z,8.6nm,1.1s
DANN Dangsing 89.52 299 *eP P 03 54 27.4 -0.6
comp=Z,173nm,0.8s
KOLN Koldanda 89.52 298 *eP P 03 54 27.3 -0.6
comp=Z,125nm,1.0s
MYLAV Mylavaram 89.71 287 *eP P 03 54 28.1 -0.7
MYLAV IAmb IAmb 03 54 30.0
comp=Z,27nm,1.2s
NEW Newport 89.84 40 P P 03 54 29.4 +0.6
comp=Z,5.5nm,0.9s,baz=176,slow=4.6,SNR=6.6
NEW pP pP 03 55 05.5 -0.6
comp=Z,5.4nm,1.0s,baz=238,slow=4.9,SNR=3.9
NEW Newport 89.84 40 P P 03 54 28.2 -0.6
NEW IAmb IAmb 03 54 30.5
comp=Z,7.9nm,1.0s
NEW pP 03 55 04.6 -1.5
NEW Newport 89.84 40 P P 03 54 29.4 +0.6
baz=252
U15A North Rim 89.92 53 P P 03 54 28.4 -1.3
U15A IAmb IAmb 03 54 31.9
comp=Z,13nm,1.0s
U15A pP 03 55 06.0 -0.9
SKHT Srikalahasti 89.94 284 *eP P 03 54 29.7 -0.1
SKHT IAmb IAmb 03 54 31.2
comp=Z,15nm,1.1s
TUC Tucson 90.10 57 P P 03 54 30.5 +0.1
TUC pmax pmax
comp=Z,8.0nm,1.2s
TUC Tucson 90.10 57 P P 03 54 30.5 +0.1
TUC IAmb IAmb 03 54 32.6
comp=Z,8.3nm,1.1s
TUC pP 03 55 05.5 -2.2
TUC Tucson 90.10 57 P P 03 54 31.9 +1.5
baz=256
ADKI Addanki 90.14 286 *eP P 03 54 30.9 +0.2
ADKI IAmb IAmb 03 54 32.8
comp=Z,6.7nm,0.9s
GGR Gangavaram 90.34 288 *eP P 03 54 30.8 -0.9
GGR IAmb IAmb 03 54 32.5
comp=Z,20nm,1.1s
WUAZ Wupatki 90.41 54 IAmb IAmb 03 54 33.9
comp=Z,6.1nm,0.9s
WUAZ Wupatki 90.41 54 P P 03 54 33.0 +1.1
baz=256
WMQ Urumqi 90.43 315 P P 03 54 32.0 +0.4
WMQ pP pP 03 55 07.1 -1.9
WMQ pmax pmax
comp=Z,40nm,1.1s
WMQ pmax pmax
comp=Z,130nm,4.7s
WMQ LR LR
comp=Z,630nm,28.8s
WMQ LR LR
comp=Z,2µm,29.3s
WMQ LR LR
comp=Z,180nm,29.2s
INK Inuvik 90.48 19 P P 03 54 30.8 -0.4
comp=Z,1.4nm,1.0s,baz=216,slow=5.8,SNR=4.4
INK PKKP PKKPdf 04 11 57.2 -0.3
comp=Z,1.4nm,1.0s,baz=47,slow=4.3,SNR=4.2
DUG Dugway, Tooele 90.50 49 P P 03 54 32.1 -0.1
DUG pmax pmax
comp=Z,6.0nm,1.1s
DUG Dugway, Tooele 90.50 49 P P 03 54 32.1 -0.1
DUG pP 03 55 08.2 -1.4
DUG Dugway, Tooele 90.50 49 P P 03 54 32.9 +0.7
baz=255
BGU Big Grassy Mou 90.53 48 P P 03 54 32.4 +0.1
BGU pP 03 55 09.0 -0.7
NJS Nagarjunasagar 90.91 287 *eP P 03 54 33.5 -0.8
NJS IAmb IAmb 03 54 35.4
comp=Z,41nm,1.1s
HVU Hansel Valley 90.94 48 P P 03 54 34.8 +0.6
HVU pP 03 55 10.9 -0.7
319A Douglas 91.12 58 IAmb IAmb 03 54 49.6
comp=Z,7.6nm,1.1s
SYO Syowa Base 91.16 197 ⇑*i*P P 03 54 33.0 -1.4
SYO Syowa Base 91.16 197 ⇑*i*PcP P 03 54 34.2 -0.2
SRLM Srisailam 91.21 286 *eP P 03 54 35.3 -0.5
SRLM IAmb IAmb 03 54 36.8
comp=Z,39nm,1.0s
RPR Rampur 91.41 289 *eP P 03 54 35.8 -0.8
RPR IAmb IAmb 03 54 37.2
comp=Z,38nm,0.8s
CTU Camp Tracy 91.41 49 P P 03 54 36.4 0.0
CTU pP 03 55 12.5 -1.4
W18A Petrified Fore 91.62 55 IAmb IAmb 03 54 39.3
comp=Z,5.9nm,0.9s
W18A Petrified Fore 91.62 55 P P 03 54 38.7 +1.2
baz=257
HYB Hyderabad 91.80 287 *i* P P 03 54 38.0 -0.5
HYBB Hyderabad (bro 91.80 287 *eP P 03 54 37.8 -0.7
HYBB IAmb IAmb 03 54 39.0
comp=Z,26nm,1.0s
DLMT Dillon 92.00 44 P P 03 54 39.2 +0.2
DLMT IAmb IAmb 03 54 41.1
comp=Z,6.6nm,0.9s
DLMT pP 03 55 14.8 -1.6
SRSP Sriramsagar 92.30 289 *eP P 03 54 39.2 -1.6
SRSP IAmb IAmb 03 54 41.2
comp=Z,37nm,1.0s
URV Uravakonda 92.51 285 *eP P 03 54 41.3 -0.6
URV IAmb IAmb 03 54 42.7
comp=Z,31nm,1.0s
DMPR Damasthipur 92.60 287 *eP P 03 54 41.4 -0.8
DMPR IAmb IAmb 03 54 42.8
comp=Z,32nm,1.1s
121A Cookes Peak, D 92.62 57 P P 03 54 43.4 +1.2
baz=258
H17A Grant Village 93.15 45 P P 03 54 46.5 +2.0
baz=256
BW06 Boulder Array 93.50 47 P P 03 54 47.4 +1.3
baz=257
PDAR Pinedale Array 93.50 47 P P 03 54 46.5 +0.5
comp=Z,1.3nm,0.9s,baz=244,slow=2.8,SNR=7.2
PDAR pP pP 03 55 24.5 +1.0
comp=Z,3.0nm,0.9s,baz=264,slow=3.0,SNR=10
PDAR PKKP PKKPdf 04 11 50.9 -0.8
comp=Z,0.5nm,0.7s,baz=108,slow=5.6,SNR=5.3
PDAR LR LR 04 28 03.5
comp=Z,26nm,20.7s,baz=343,slow=30
KLRI Killari 93.75 288 *eP P 03 54 46.4 -1.1
KLRI IAmb IAmb 03 54 47.1
comp=Z,16nm,1.1s
O20A White River Ci 93.89 50 P P 03 54 48.5 +0.6
baz=258
C36M Paulatuk 94.01 19 IAmb IAmb 03 54 47.6
comp=Z,8.0nm,0.9s
C36M Paulatuk 94.01 19 P P 03 54 46.5 -0.9
baz=247
ANMO Albuquerque 94.21 55 *i* P P 03 54 49.0 -0.4
ANMO pmax pmax
comp=Z,2.0nm,1.1s
ANMO Albuquerque 94.21 55 P P 03 54 49.9 +0.4
ANMO pP 03 55 24.6 -2.2
ANMO Albuquerque 94.21 55 P P 03 54 50.5 +1.1
baz=258
MNTX Cornudas Mount 94.45 59 P P 03 54 50.9 +0.5
baz=259
S22A 4UR Ranch, Cre 94.47 53 P P 03 54 51.4 +0.7
baz=258
MKAR Makanchi Array 94.85 317 P P 03 54 52.0 +0.1
comp=Z,41nm,0.8s,baz=97,slow=6.4,SNR=194
MKAR pP pP 03 55 26.7 -2.7
comp=Z,9.8nm,0.9s,baz=100,slow=6.3,SNR=4.1
MKAR pP PP 03 58 40.6 -2.3
comp=Z,0.8nm,0.8s,baz=97,slow=4.9,SNR=3.6
MKAR PKiKP PKiKP 03 59 33.1 0.0
comp=Z,1.0nm,0.7s,baz=63,slow=0.8,SNR=3.6
MKAR PKKP PKKPdf 04 11 46.9 -2.3
comp=Z,2.1nm,0.8s,baz=298,slow=2.6,SNR=12
ZAA0 Zalesovo Array 94.87 324 IAmb IAmb 03 54 52.1
comp=Z,22nm,1.1s
ZALV Zalesovo Beam 94.87 324 P P 03 54 51.2 -0.6
comp=Z,9.2nm,0.8s,baz=110,slow=3.9,SNR=25
ZALV pP pP 03 55 26.6 -2.7
comp=Z,3.5nm,0.9s,baz=130,slow=6.4,SNR=3.2
ZALV LR LR 04 36 45.1
comp=Z,31nm,20.4s,baz=149,slow=35
MAKZ Makanchi 95.07 317 P P 03 54 52.3 -0.6
MAKZ pmax pmax
comp=Z,54nm,1.1s
MAKZ Makanchi 95.07 317 P P 03 54 52.3 -0.6
MAKZ PcP 03 54 53.0 -0.1
MAKZ pP pP 03 55 27.1 -3.2
YKA Yellowknife Ar 95.38 27 P P 03 54 52.6 -1.3
comp=Z,3.1nm,0.9s,baz=255,slow=4.8,SNR=37
YKA pP pP 03 55 30.0 -1.6
comp=Z,1.1nm,0.6s,baz=254,slow=4.8,SNR=4.4
YKA LR LR 04 32 36.3
comp=Z,39nm,20.5s,baz=0.0,slow=32
TXAR Lajitas Array 95.45 61 P P 03 54 55.6 +0.4
comp=Z,0.7nm,0.9s,baz=244,slow=5.4,SNR=6.7
TXAR pP pP 03 55 31.8 -0.7
comp=Z,1.6nm,0.8s,baz=230,slow=5.4,SNR=6.6
TXAR PKKP PKKPdf 04 11 47.9 +0.3
comp=Z,0.5nm,0.6s,baz=110,slow=4.8,SNR=7.1
TXAR LR LR 04 33 00.6
comp=Z,36nm,19.1s,baz=0.0,slow=32
NVL N'lazarevskaya 95.67 188 *eP P 03 54 54.3 -0.9
NVL pmax pmax
comp=Z,27nm,1.0s
SNAA Sanae 96.23 183 P P 03 54 57.2 -0.6
SNAA Sanae 96.23 183 P P 03 54 55.9 -1.9
SNAA pmax pmax
comp=Z,10.0nm,0.9s
SNAA Sanae 96.23 183 P P 03 54 55.9 -1.9
SNAA IAmb IAmb 03 55 04.8
comp=Z,10nm,0.9s
VNA3 Neumayer Olymp 96.92 181 P P 03 55 00.5 -0.4
MSTX Muleshoe 97.02 57 P Pdif 03 55 03.8 +1.5
baz=260
VNA1 Neumayer--Stat 97.48 182 P P 03 55 03.2 -0.1
KURK Kurchatov 97.97 320 *ceP P 03 55 04.5 -1.3
KURK pmax pmax
comp=Z,6.0nm,1.1s
KURK Kurchatov 97.97 320 P P 03 55 03.8 -2.0
KURK IAmb IAmb 03 55 07.3
comp=Z,6.5nm,1.1s
KSH Kashi 98.08 309 P Pdif 03 55 10.4 +3.6
KSH pP pP 03 55 47.0 +2.6
KSH PP PP 03 59 13.1 +5.1
KSH SKS SKSac 04 05 28.1 -2.7
KSH S S 04 06 18.9 -2.4
KSH SS SS 04 13 12.3 +4.9
KSH LR LR
comp=Z,280nm,5.0s
KSH LR LR
comp=Z,170nm,6.9s

KSH LR LR
comp=Z,560nm,5.6s
AAK Ala-Archa 99.63 312 *i* P **Pdif 03 55 13.1 -0.6**
AAK pmax pmax
comp=Z,3.0nm,0.9s
FCC Fort Churchill 104.94 32 P **Pdif 03 55 35.4 -1.2**
FCC Fort Churchill 104.94 32 **Pdif 03 55 35.4 -1.2**
ARU Arti 109.93 326 PKKPbc PKKPbc 04 11 03.2 -2.2
comp=Z,1.2nm,0.3s,baz=139,slow=11,SNR=3.0
ARU PKKPab **PKKPab 04 11 15.4 +0.9**
comp=Z,1.0nm,0.3s,baz=296,slow=3.7,SNR=7.9
AKTO Aktyubinsk 111.05 320 PKKPbc PKKPbc 04 10 59.9 -1.7
comp=Z,0.3nm,0.4s,baz=217,slow=6.2,SNR=4.6
U50A Jamestown 111.83 56 PKiKP **PKiKP 04 00 04.7 +0.2**
baz=271
GEYT Alibeck 111.90 306 PKiKP **PKiKP 04 00 05.5 +0.9**
comp=Z,4.5nm,0.8s,baz=242,slow=3.2,SNR=7.6
152A Waverly Hall 111.95 60 PKiKP **PKiKP 04 00 04.7 -0.1**
baz=270
O49A Covington 112.10 51 PKiKP **PKiKP 04 00 04.8 0.0**
baz=273
G47A Hillman 112.10 46 PKiKP **PKiKP 04 00 04.5 -0.2**
baz=275
K48A Perry 112.10 49 PKiKP **PKiKP 04 00 04.1 -0.6**
baz=274
S50A Richmond 112.15 54 PKiKP **PKiKP 04 00 04.8 -0.2**
baz=272
V51A Loudon 112.23 56 PKiKP **PKiKP 04 00 05.8 +0.5**
baz=271
P50A Jamestown 112.54 52 PKiKP **PKiKP 04 00 06.4 +0.6**
baz=273
J49A Marlette 112.78 48 PKiKP **PKiKP 04 00 07.0 +1.0**
baz=275
V52A Sevierville 112.85 56 PKiKP **PKiKP 04 00 07.0 +0.5**
baz=272
Z53A Monticello 112.91 59 PKiKP **PKiKP 04 00 06.8 +0.2**
baz=271
U52A Thorn Hill 113.02 56 PKiKP **PKiKP 04 00 07.4 +0.6**
baz=272
X55A Gracelyn & Ava 114.50 58 PKiKP **PKiKP 04 00 10.1 +0.5**
baz=272
V55A Taylorsville 114.78 56 PKiKP **PKiKP 04 00 10.4 +0.3**
baz=273
Q54A Coxs Mills 114.88 53 PKiKP **PKiKP 04 00 10.1 -0.1**
baz=275
U55A TA2, Sparta 114.88 55 PKiKP PKPdf 04 00 10.3 -0.1
baz=274
PRGR Permogore 115.00 333 *e*PKiKP **PKiKP 04 00 07.2 -2.5**
PRGR pmax pmax
comp=Z,7.0nm,0.4s
Z57A Bowman 115.31 59 PKiKP **PKPdf 04 00 10.8 -0.4**
baz=272
E52A Mattawa 115.57 44 PKiKP **PKiKP 04 00 12.2 +0.9**
baz=280
P55A Reedsville 115.61 52 PKiKP **PKiKP 04 00 11.9 +0.2**
baz=276
T56A Rocky Mt 115.66 55 PKiKP **PKiKP 04 00 11.9 +0.1**
baz=274
W57A Gilead 115.81 57 PKiKP **PKPdf 04 00 11.9 -0.2**
baz=274
V57A Coltrane Farms 115.94 56 PKiKP **PKPdf 04 00 12.3 0.0**
baz=274
P56A Dayton Farm, R 116.37 52 PKiKP **PKiKP 04 00 13.6 +0.5**
baz=276
W58A Raeford 116.44 57 PKiKP **PKiKP 04 00 13.6 +0.3**
baz=274
O56A Blue Knob Stat 116.49 51 PKiKP **PKiKP 04 00 13.7 +0.3**
baz=277
P57A Homestead Farm 117.01 52 PKiKP **PKiKP 04 00 15.0 +0.7**
baz=277
S58A Poland Farm, P 117.18 54 PKiKP **PKiKP 04 00 15.6 +0.9**
baz=276
Q58A Fox Den Farm, 117.33 52 PKiKP **PKiKP 04 00 15.5 +0.6**
baz=277
ARCES ARCESS Array B 117.48 346 PKP **PKPdf 04 00 14.2 -0.2**
comp=Z,8.9nm,0.5s,baz=82,slow=2.2,SNR=98
ARCES PKKPbc **PKKPbc 04 10 39.2 -0.9**
comp=Z,2.1nm,0.9s,baz=308,slow=4.5,SNR=3.6
D55A Sainte-Anne-du 117.58 43 PKiKP **PKPdf 04 00 15.1 0.0**
baz=283
T59A Double "B" Far 117.64 55 PKiKP **PKiKP 04 00 15.7 +0.1**
baz=276
N58A Sunbury 117.81 50 PKiKP **PKiKP 04 00 15.9 0.0**
baz=278
L58A Harry Jones Me 118.27 49 PKiKP **PKiKP 04 00 16.8 +0.1**
baz=280
J58A Remsen 118.45 47 PKiKP **PKiKP 04 00 17.4 +0.4**
baz=281
D57A Chemin Vers le 118.64 43 PKiKP **PKiKP 04 00 17.6 +0.3**
baz=284
M59A Waymart 118.66 49 PKiKP **PKiKP 04 00 17.7 +0.2**
baz=280
L59A Walton 118.84 48 PKiKP **PKPdf 04 00 17.7 -0.1**
baz=280
O60A Telford 118.88 51 PKiKP **PKPdf 04 00 17.7 -0.2**
baz=279
G58A Ormstown 118.95 45 PKiKP **PKiKP 04 00 18.6 +0.7**
baz=283
M60A Port Jervis 119.30 49 PKiKP **PKPdf 04 00 18.4 -0.2**
baz=280
AKT Akhty 119.50 311 *e*PKiKP **PKPdf 04 00 19.2 0.0**
AKT *e* 04 00 57.6
AKT *e* 04 01 48.6
AKT pmax pmax
comp=Z,23nm,0.8s
F59A Saint Guilaume 119.66 44 PKiKP **PKiKP 04 00 19.6 +0.3**
baz=284
I60A Shoreham 119.77 46 PKiKP **PKPdf 04 00 19.4 0.0**
baz=283
M61A Granite Spring 119.94 49 PKiKP **PKPdf 04 00 19.8 -0.1**
baz=281
H60A Morristown 120.02 45 PKiKP **PKiKP 04 00 20.8 +0.8**
baz=284
K61A Williamstown 120.03 48 PKiKP **PKiKP 04 00 20.3 +0.2**
baz=282
F60A Warwick 120.19 44 PKiKP **PKiKP 04 00 20.6 +0.3**
baz=285
SCHQ Schefferville 120.32 33 PKP **PKPdf 04 00 20.0 -0.2**
comp=Z,3.1nm,0.9s,baz=252,slow=3.5,SNR=4.3
SCHQ PKKPbc **PKKPab 04 10 28.0 -0.7**
comp=Z,4.1nm,1.1s,baz=54,slow=4.2,SNR=4.1
J61A Chester 120.40 47 PKiKP **PKiKP 04 00 21.0 +0.2**
baz=283
L61B Northampton 120.50 48 PKiKP **PKPdf 04 00 20.9 -0.1**
baz=282
I61A Oroboro, Fairl 120.51 46 PKiKP **PKiKP 04 00 21.0 0.0**
baz=284
F61A St Evariste 120.84 43 PKiKP **PKPdf 04 00 21.5 0.0**
baz=286
J62A Henniker 120.95 47 PKiKP **PKPdf 04 00 21.8 +0.1**
baz=284
D61A St Aubert, Com 121.03 42 PKiKP **PKiKP 04 00 21.9 0.0**
baz=287
E61A Lac Etchemin 121.05 43 PKiKP **PKiKP 04 00 22.2 +0.2**
baz=286
H62A Milan 121.09 45 PKiKP **PKiKP 04 00 22.6 +0.5**
baz=285
G62A West of Eustis 121.35 44 PKiKP **PKPdf 04 00 22.6 +0.1**
baz=286
L63A North Scituate 121.41 48 PKiKP **PKPdf 04 00 22.5 -0.2**
baz=283
I63A Otisfield 121.62 45 PKiKP **PKiKP 04 00 23.2 0.0**
baz=285
D62A Allapoint, All 121.80 42 PKiKP **PKPdf 04 00 23.1 -0.2**
baz=288
LPSR Galich'ya Gora 121.95 325 *e*PKiKP **PKiKP 04 00 24.1 +0.6**
LPSR pmax pmax
comp=Z,30nm,1.0s
LPSR pmax pmax
comp=N,20nm,1.7s
LPSR pmax pmax
comp=E,8.0nm,0.8s
GNI Garni 121.98 310 *i* PKiKP **PKiKP 04 00 24.6 +0.4**
GNI Garni 121.98 310 **PKiKP 04 00 24.9 +0.6**
G63A Kingsbury 122.00 44 PKiKP **PKiKP 04 00 23.9 0.0**
baz=286
ZEI Tsey 122.00 313 *i* PKiKP **PKiKP 04 00 24.2 -0.1**
ZEI pmax pmax
comp=Z,12nm,0.9s
OBN Obninsk 122.10 329 *e*PKiKP **PKPdf 04 00 23.3 -0.2**
OBN *e* 04 01 58.5
OBN pmax pmax
comp=Z,17nm,1.0s
F63A Nahmakanta, Br 122.18 43 PKiKP **PKiKP 04 00 24.2 0.0**
baz=287
VSR Storozhevoye 122.38 324 *e*PKiKP **PKPdf 04 00 23.9 -0.3**
VSR pmax pmax
comp=Z,20nm,0.6s
VSR pmax pmax
comp=N,8.0nm,1.6s
VSR pmax pmax
comp=E,9.0nm,0.8s
H64A Troy 122.40 44 PKiKP **PKPdf 04 00 24.6 +0.1**
baz=286
E63A Oxbow 122.42 42 PKiKP **PKiKP 04 00 24.6 -0.1**
baz=288
D63A Stockholm 122.43 41 PKiKP **PKPdf 04 00 24.0 -0.5**
baz=289
KBZ Khabaz 122.47 314 PKP **PKiKP 04 00 25.2 +0.4**
comp=E,5.4nm,0.8s,baz=178,slow=0.9,SNR=10
G64A Maxfield 122.55 44 PKiKP **PKPdf 04 00 24.8 +0.1**
baz=287
KIV Kislovodsk 122.56 315 *i* PKIKP **PKPdf 04 00 23.0 -2.0**
KIV pmax pmax
comp=Z,39nm,1.1s
KIV MLR MLR
comp=Z,180nm,22.0s
M66A Nantucket 122.62 49 PKiKP **PKPdf 04 00 24.5 -0.4**
baz=284
AKH Akhalkalaki 122.63 312 ⇑P **PKiKP 04 00 26.6 +1.1**
F64A Sherman 122.64 43 PKiKP **PKPdf 04 00 24.7 -0.2**
baz=288
CPUP Villa Florida 122.70 132 PKP **PKPdf 04 00 25.4 -0.3**
comp=Z,2.4nm,0.7s,baz=241,slow=2.4,SNR=7.2
CPUP PKKPbc **PKKPbc 04 10 19.0 -0.8**
comp=Z,1.3nm,0.6s,baz=46,slow=3.9,SNR=4.5
NEY Neytrino 122.72 314 *i* PKiKP **PKiKP 04 00 26.2 +0.6**
E64A Bridgewater 122.81 42 PKiKP **PKPdf 04 00 25.1 -0.1**
baz=289
CLDR Caldiran 122.81 309 *e*P **PKiKP 04 00 26.9 +0.9**
FINES FINESS Array B 122.99 339 PKP **PKiKP 04 00 25.3 0.0**
comp=Z,12nm,0.8s,baz=47,slow=2.6,SNR=33
RAYN Ar Rayn 123.18 290 PKIKP **PKPdf 04 00 26.1 -0.6**
RAYN Ar Rayn 123.18 290 **PKPdf 04 00 26.1 -0.6**
AGRB Hanur-Agry 123.42 310 *e*P **PKiKP 04 00 28.1 +1.0**
CUKT Cukurca 123.42 307 *e*P **PKiKP 04 00 27.3 +0.2**
SDVT Santo Domingo 123.60 87 **PKPdf 04 00 27.9 0.0**
SENK Senkaya-Erzuru 123.67 311 *e*P **PKiKP 04 00 28.7 +1.1**
HEL Helsinki 124.26 338 PKIKP PKPpre 04 00 16.9
GURO Guroymak-BITLI 124.38 309 *e*P **PKiKP 04 00 30.2 +1.2**
VSU Vasula 124.71 336 *e*P **PKiKP 04 00 28.8 0.0**
SOC Sochi 124.72 315 *i* PKIKP **PKiKP 04 00 29.6 +0.3**
KARO Karliova-Bingo 124.94 310 *e*P **PKiKP 04 00 31.4 +1.2**
BOSA Boshof 125.06 222 PKP **PKPdf 04 00 29.8 -0.5**
comp=Z,5.3nm,0.7s,baz=149,slow=1.9,SNR=12
BNGB Bingl 125.30 309 *e*P **PKiKP 04 00 31.7 +0.9**
SAML Samuel 126.22 111 PKIKP **PKPdf 04 00 31.8 -0.9**
SAML Samuel 126.22 111 **PKPdf 04 00 31.8 -0.9**
IZAR Zarasai 126.65 333 *e*P **PKPdf 04 00 32.4 +0.1**
ILIC ilic-Erzincan 126.76 311 *e*P **PKPdf 04 00 29.1 -4.1**
ISAL Salakas 126.81 333 *e*P **PKPdf 04 00 32.8 +0.2**
ISAL IAmb IAmb 04 00 35.0
comp=Z,14nm,1.1s
IIGN Ignalina 126.91 333 *e*P **PKiKP 04 00 33.9 +0.5**
IIGN IAmb IAmb 04 00 35.3
comp=Z,16nm,1.0s
LBTB Lobatse 127.17 226 PKIKP **PKPdf 04 00 33.4 -1.0**
LBTB Lobatse 127.17 226 **PKPdf 04 00 33.4 -1.0**
PABE Paberze 127.79 334 *e*P **PKiKP 04 00 35.3 +0.3**
DARE Darende-Malaty 127.82 310 *e*P **PKiKP 04 00 36.4 +0.6**
NB2 NORSAR Subarra 127.85 345 PKPdf **PKPdf 04 00 34.6 +0.1**
comp=Z,23nm,1.4s,baz=31,slow=1.9
NB2 NORSAR Subarra 127.85 345 PKPdf **PKPdf 04 00 34.6 +0.1**
baz=31,slow=1.9
NOA NORSAR Array B 127.85 345 PKP **PKPdf 04 00 34.6 +0.1**
comp=Z,4.5nm,0.8s,baz=34,slow=2.1,SNR=10
KMBO Kilima Mbogo 128.14 259 PKP **PKiKP 04 00 38.3 +0.9**
comp=Z,9.4nm,0.9s,baz=45,slow=4.3,SNR=17
KMBO Kilima Mbogo 128.14 259 PKPdf **PKPdf 04 00 35.1 -1.6**
AKASG Malin Array Be 128.17 327 PKP **PKPdf 04 00 35.2 -0.1**
comp=Z,8.3nm,0.9s,baz=58,slow=2.2,SNR=28
AKASG PP **PP 04 02 39.6 -0.8**
comp=Z,1.6nm,0.8s,baz=48,slow=6.4,SNR=6.1
AKBB Malin Array Si 128.17 327 PKIKP **PKPdf 04 00 35.6 +0.3**
AKBB Malin Array Si 128.17 327 **PKPdf 04 00 35.6 +0.3**
PBUR Paburg 128.29 336 *e*P **PKiKP 04 00 35.9 -0.1**
PBUR IAmb IAmb 04 00 37.2
comp=Z,69nm,1.1s
SARI SarD1z-Kayseri 128.67 310 *e*P **PKiKP 04 00 37.7 +0.1**
SJG San Juan 128.73 76 PKIKP **PKPdf 04 00 36.9 -0.5**
SJG San Juan 128.73 76 **PKPdf 04 00 36.9 -0.5**
GCPR Guaynabo City 128.80 76 **PKPdf 04 00 36.8 -0.7**
BNN Bunyan 128.96 311 *e*P **PKiKP 04 00 37.9 -0.2**
HUMP Col San Antoni 129.02 76 **PKPdf 04 00 37.4 -0.5**
SUW Suwalki 129.13 333 *e*PKIKP **PKiKP 04 00 37.9 +0.1**
SUW Suwalki 129.13 333 *e*PKP **PKiKP 04 00 37.9 +0.1**
SORM Soroca 130.02 324 ⇑PKIKP **PKiKP 04 00 40.2 +0.4**
SORM Soroca 130.02 324 ⇑P **PKiKP 04 00 40.2 +0.4**
BRTR Keskin Array B 130.29 312 PKP **PKPdf 04 00 39.9 -0.1**
comp=Z,3.9nm,0.9s,baz=144,slow=5.6,SNR=16
BRTR pPKP **pPKPdf 04 01 16.6 -2.4**
comp=Z,2.7nm,1.0s,baz=175,slow=4.3,SNR=3.1
BRTR PP **PP 04 02 55.5 +0.4**
comp=Z,1.6nm,0.8s,baz=103,slow=6.1,SNR=4.4
BRTR SKPab **SKPbc 04 03 51.6 +2.1**
comp=Z,1.6nm,0.9s,baz=48,slow=1.8,SNR=4.4
MILM Milestii Mici 130.38 323 ⇓P **PKiKP 04 00 40.5 0.0**
AFSR Afar-Bala (An 130.80 312 *e*P **PKiKP 04 00 41.5 -0.3**
ANTO Ankara 130.85 313 ⇑PKIKP **PKiKP 04 00 41.5 -0.3**
ANTO Ankara 130.85 313 ⇑P **PKiKP 04 00 41.5 -0.3**
ANTO Ankara 130.85 313 **PKPdf 04 00 40.7 -0.2**
KULU Kulu 131.00 312 *e*P **PKiKP 04 00 41.8 -0.4**
TLCR 131.25 321 ⇑PKIKP **PKiKP 04 00 42.9 +0.6**
TLCR 131.25 321 ⇑P **PKiKP 04 00 42.9 +0.6**
LVV L'vov 131.40 328 *e*PKIKP **PKiKP 04 00 42.4 -0.1**
GHRR 131.66 323 ⇓P **PKiKP 04 00 43.7 +0.6**
CFR Carcaliu 131.67 321 ⇓PKIKP **PKiKP 04 00 43.2 0.0**
CFR Carcaliu 131.67 321 ⇓P **PKiKP 04 00 43.2 0.0**
LADK Ladik-KONYA 131.76 311 *e*P **PKPdf 04 00 42.1 -0.6**
BIZ Bicaz 131.95 324 ⇑P **PKiKP 04 00 43.8 +0.1**
MFTR Murfatlar 131.98 320 ⇑P **PKiKP 04 00 44.2 +0.4**
HARR Harsova 132.04 321 ⇑PKIKP **PKiKP 04 00 44.1 +0.2**
HARR Harsova 132.04 321 ⇑P **PKiKP 04 00 44.1 +0.2**
BUR08 Bucovina Ar. S 132.06 325 **PKPdf 04 00 43.2 +0.2**
BURAR Bucovina Array 132.07 325 ⇑PKIKP **PKiKP 04 00 44.6 +0.5**
BURAR Bucovina Array 132.07 325 ⇑P **PKiKP 04 00 44.6 +0.5**
KWP Kalwaria Pacla 132.19 329 *e*PKIKP **PKiKP 04 00 43.9 -0.2**
KWP Kalwaria Pacla 132.19 329 *e*PKP **PKiKP 04 00 43.9 -0.2**
CIFT Ciftele, Eski 132.28 313 *e*P **PKPdf 04 00 40.4 -3.2**
SRCK Saricakaya, Es 132.33 314 *e*P **PKPdf 04 00 43.7 +0.1**
BISRR Bisoca 132.34 322 ⇑P **PKiKP 04 00 45.2 +0.5**
MLR Muntele Rosu 132.83 323 ⇑PKIKP **PKiKP 04 00 45.3 -0.4**
MLR Muntele Rosu 132.83 323 ⇑P **PKiKP 04 00 45.3 -0.4**
KOLS Kolonicke sedl 132.85 328 *e*PKIKP **PKiKP 04 00 45.7 +0.2**
KOLS Kolonicke sedl 132.85 328 *e*PKP **PKiKP 04 00 45.7 +0.2**
DOPR Dopca 132.90 323 ⇑P **PKiKP 04 00 45.3 -0.4**
UZH Uzhgorod 133.03 328 *e*PKHKP PKPpre 04 00 30.7
TRPA Tarpa 133.21 327 ⇑P **PKiKP 04 00 46.1 0.0**
OJC Ojcow 133.22 331 *e*PKIKP **PKiKP 04 00 46.0 -0.2**
OJC Ojcow 133.22 331 *e*PKP **PKiKP 04 00 46.0 -0.2**
NIE Niedzica 133.52 330 *e*PKIKP **PKiKP 04 00 46.8 -0.1**
NIE Niedzica 133.52 330 *e*PKP **PKiKP 04 00 46.8 -0.1**
HUMR Humele 133.92 322 ⇓P **PKPdf 04 00 46.7 +0.3**
DRGR 133.94 326 ⇑PKIKP **PKPdf 04 00 47.1 +0.6**
DRGR 133.94 326 ⇑P **PKPdf 04 00 47.1 +0.6**
LANS Liptovska Anna 134.10 330 *i* P **Pdif 03 57 45.3 -1.4**
LANS *e* 04 00 48.0
LANS Liptovska Anna 134.10 330 *e*PDIFF **Pdif 03 57 45.3 -1.4**
LANS Liptovska Anna 134.10 330 *e*PKP **PKiKP 04 00 48.0 -0.1**
BSEG Bad Segeberg 134.16 341 *e*PKPdf **PKiKP 04 00 49.0 +1.1**
baz=37,slow=2.0
ELND Elena 134.21 320 ⇑P **PKiKP 04 00 47.8 -0.6**
OKC Ostrava-Krasne 134.25 332 *e*PKIKP **PKPdf 04 00 47.4 +0.5**
OKC Ostrava-Krasne 134.25 332 *e*PKPDF **PKPdf 04 00 47.4 +0.5**
KSP Ksiaz 134.36 334 *e*PKIKP **PKiKP 04 00 48.4 -0.1**
KSP Ksiaz 134.36 334 *e*PKP **PKiKP 04 00 48.4 -0.1**
MORC Moravsky Berou 134.57 332 ⇓PKIKP **PKiKP 04 00 48.7 -0.3**
MORC Moravsky Berou 134.57 332 ⇓P **PKiKP 04 00 48.7 -0.3**
MORC Moravsky Berou 134.57 332 *e*PKP **PKPdf 04 00 48.0 +0.4**
OSTC Ostas 134.60 334 *e*PKPDF **PKPdf 04 00 48.0 +0.4**
CHVC Chvalec 134.65 334 *e*PKPDF **PKPdf 04 00 48.2 +0.5**
KRLC Kraliky 134.70 333 *e*PKIKP **PKiKP 04 00 48.6 -0.7**
KRLC Kraliky 134.70 333 *e*PKPDF **PKiKP 04 00 48.6 -0.7**
DPC Dobruska-Polom 134.71 334 *e*PKIKP **PKiKP 04 00 49.3 0.0**
DPC Dobruska-Polom 134.71 334 *e*PKPDF **PKiKP 04 00 49.3 0.0**
PSZ Piszkesteto 134.72 329 ⇓PKIKP **PKiKP 04 00 49.0 -0.4**
PSZ Piszkesteto 134.72 329 ⇓P **PKiKP 04 00 49.0 -0.4**
UPC Upice 134.72 334 *e*PKIKP **PKiKP 04 00 50.1 +0.9**
UPC Upice 134.72 334 *e*PKPDF **PKiKP 04 00 50.1 +0.9**
GZR Gura Zlata 134.73 324 ⇓PKIKP **PKiKP 04 00 48.8 -0.7**
GZR Gura Zlata 134.73 324 ⇓P **PKiKP 04 00 48.8 -0.7**
PLVB Pleven 134.75 321 ⇓P **PKiKP 04 00 49.0 -0.5**
SIRR Siria 134.83 326 ⇓P **PKiKP 04 00 49.3 -0.3**
VYHS Vyhne 134.86 330 *i* P **Pdif 03 57 50.4 +0.3**
VYHS *e* 04 00 48.8
VYHS Vyhne 134.86 330 *e*PDIFF **Pdif 03 57 50.4 +0.3**
VYHS Vyhne 134.86 330 *e*PKP **PKPdf 04 00 48.8 +0.7**
JAVC Velka Javorina 135.16 331 *e*PKP **PKiKP 04 00 50.3 +0.1**
BZS Buzias 135.25 325 ⇓PKIKP **PKPdf 04 00 49.4 +0.5**
BZS Buzias 135.25 325 ⇓P **PKPdf 04 00 49.4 +0.5**
BRG Berggiesshubel 135.31 336 *e*PDIFF **Pdif 03 57 51.1 -0.9**
comp=Z,5.1nm,0.9s
BRG Berggiesshubel 135.31 336 *e*PKP **PKPdf 04 00 49.3 +0.5**
comp=Z,11nm,0.8s
BRG *e*pPKP **pPKPdf 04 01 27.9 0.0**
comp=Z,6.0nm,1.2s
BRG *e*SKP 04 04 09.7
comp=Z,8.2nm,1.2s
BRG Berggiesshubel 135.31 336 *e*P **Pdif 03 57 51.1 -0.9**
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG Berggiesshubel 135.31 336 *e*PKPdf **PKiKP 04 00 51.5 +1.1**
baz=37,slow=2.0
PVCC Panska Ves 135.32 335 *e*PKIKP **PKiKP 04 00 50.3 -0.1**
PVCC Panska Ves 135.32 335 *e*PKPDF **PKiKP 04 00 50.3 -0.1**
CLL Collm 135.34 337 *e*PKIKP **PKPdf 04 00 48.0 -0.9**
CLL Collm 135.34 337 *e*PKPpre PKPpre 04 00 46.0
CLL *e*PKPdf **PKPdf 04 00 48.0 -0.9**
CLL *e*PKiKP **PKiKP 04 00 50.0 -0.4**
CLL ⇓*i* 04 00 51.2
comp=Z,15nm,0.8s
CLL *e*PP **PP 04 03 24.0 -2.2**
CLL *e*SKPdf **SKPdf 04 04 10.0 -0.2**
CLL Collm 135.34 337 *e*PKPdf **PKiKP 04 00 51.4 +1.0**
baz=37,slow=2.0
VRAC Vranov 135.34 332 ⇓PKIKP **PKiKP 04 00 50.0 -0.5**
VRAC Vranov 135.34 332 ⇓P **PKiKP 04 00 50.0 -0.5**
VRAC Vranov 135.34 332 *e*PKP **PKPdf 04 00 49.4 +0.4**
NRDL Niedersach Rie 135.43 340 *e*PKPdf **PKiKP 04 00 51.7 +1.2**
baz=37,slow=2.0
FBE Freiberg 135.51 336 *e*PKPdf **PKiKP 04 00 52.2 +1.4**
baz=37,slow=2.0
SMOL Smolenice 135.52 331 *e*PKIKP **PKiKP 04 00 50.9 0.0**
SMOL Smolenice 135.52 331 *e*PKP **PKiKP 04 00 50.9 0.0**
ASSE Asse, Remlinge 135.54 339 *e*PKPdf **PKiKP 04 00 51.8 +1.1**
baz=37,slow=2.0
KRUC Moravsky 135.61 332 *e*PKP **PKPdf 04 00 50.0 +0.5**
MODS Modra-Piesok 135.69 331 *i* P **Pdif 03 57 53.0 -0.8**
MODS *e* 04 00 50.1
MODS Modra-Piesok 135.69 331 *e*PDIFF **Pdif 03 57 53.0 -0.8**
MODS Modra-Piesok 135.69 331 *e*PKP **PKPdf 04 00 50.1 +0.4**
GOPC GO Pecny, Ondr 135.69 334 *e*PKIKP **PKPdf 04 00 49.9 +0.3**
GOPC GO Pecny, Ondr 135.69 334 *e*PKPDF **PKPdf 04 00 49.9 +0.3**
MDVR Moldovita 135.70 324 ⇓P **PKPdf 04 00 50.5 +0.6**
PRA Prague 135.72 335 *e*PKIKP **PKiKP 04 00 52.1 +0.9**
PRA Prague 135.72 335 *e*PKPDF **PKiKP 04 00 52.1 +0.9**
PRU Pruhonice 135.74 334 *e*PKIKP **PKiKP 04 00 50.5 -0.8**
PRU Pruhonice 135.74 334 *e*PKPDF **PKiKP 04 00 50.5 -0.8**
TREC Trest 135.85 333 *e*PKIKP **PKPdf 04 00 50.0 +0.1**
TREC Trest 135.85 333 *e*PKPDF **PKPdf 04 00 50.0 +0.1**
CLZ Clausthal 135.88 339 *e*PKPdf **PKiKP 04 00 52.9 +1.3**
baz=37,slow=2.0
ZST Bratislava 135.90 331 *e*PKIKP **PKPdf 04 00 50.4 +0.4**
ZST Bratislava 135.90 331 *e*PKP **PKPdf 04 00 50.4 +0.4**
BDFB Brasilia 136.01 128 PKP **PKPdf 04 00 51.7 +0.4**
comp=Z,3.6nm,0.7s,baz=256,slow=3.7,SNR=7.9
BDFB Brasilia 136.01 128 **PKPdf 04 00 51.1 -0.2**
VTS Vitosha 136.03 321 ⇑PKIKP **PKiKP 04 00 51.7 -0.6**
VTS Vitosha 136.03 321 ⇑P **PKiKP 04 00 51.7 -0.6**
PBCC Pribram 136.20 335 *e*PKPDF **PKiKP 04 00 51.7 -0.6**
GTTG Gvttingen 136.27 339 *e*PKPdf **PKiKP 04 00 53.5 +1.2**
baz=37,slow=2.0
PLN Plauen 136.32 337 *e*PKPdf **PKiKP 04 00 53.5 +1.0**
baz=37,slow=2.0
GUNZ Gunzen 136.35 336 *e*PKPdf **PKiKP 04 00 53.8 +1.2**
baz=37,slow=2.0
IBBN Ibbenburen 136.35 341 *e*PKPdf **PKiKP 04 00 53.3 +0.9**
baz=37,slow=2.0
MOX Moxa 136.40 337 *e*PKPdf **PKiKP 04 00 53.4 +0.8**
baz=37,slow=2.0
NKC Novy Kostel 136.41 336 *e*PKIKP **PKiKP 04 00 52.1 -0.6**
NKC Novy Kostel 136.41 336 *e*PKPDF **PKiKP 04 00 52.1 -0.6**
CONA Conrad Observa 136.67 331 *i* PKiKP **PKiKP 04 00 54.0 +0.6**
comp=Z,9.7nm,0.7s
CONA *i* SKPab **SKiKP 04 04 14.3 -1.4**
comp=Z,7.1nm,1.0s
MANZ Manzenberg 136.74 336 *e*PKPdf **PKiKP 04 00 54.6 +1.2**
baz=37,slow=2.0
KHC Kasperske Hory 136.80 334 *e*PKIKP **PKPdf 04 00 52.2 +0.5**
KHC Kasperske Hory 136.80 334 *e*PKPDF **PKPdf 04 00 52.2 +0.5**
UBBA Unterbreizbach 136.86 338 *e*PKPdf **PKiKP 04 00 54.4 +1.0**
baz=37,slow=2.0
ROTZ Rotzenmuhle 136.87 336 *e*PKPdf **PKiKP 04 00 54.6 +0.9**
baz=37,slow=2.0
GEC2 GERESS Array S 136.97 334 *e*PKPdf **PKiKP 04 00 54.8 +0.9**
baz=37,slow=2.0
GERES GERESS Array B 136.97 334 PKP **PKPdf 04 00 52.5 +0.4**
comp=Z,6.3nm,0.8s,baz=48,slow=2.0,SNR=27
GERES SKP 04 04 14.8
comp=Z,1.0nm,0.8s,baz=333,slow=1.5,SNR=5.2
GRF Grafenberg Arr 137.32 337 *e*PKPdf **PKiKP 04 00 55.3 +0.8**
baz=37,slow=2.0
ARSA Arzberg 137.32 331 *i* PKiKP **PKiKP 04 00 53.7 -0.9**
comp=Z,6.2nm,1.1s
ARSA *i* SKPab **SKiKP 04 04 16.5 -0.5**
comp=Z,2.7nm,0.7s
MOA Molln 137.47 333 *i* PKiKP **PKiKP 04 00 54.9 0.0**
comp=Z,6.4nm,0.9s
MOA *i* SKPab **SKiKP 04 04 16.5 -0.7**
comp=Z,6.7nm,1.4s
SOKA Soboth 137.97 331 *i* PKiKP **PKiKP 04 00 56.1 +0.1**
comp=Z,14nm,1.1s
SOKA *i* SKPab **SKiKP 04 04 18.4 0.0**
comp=Z,5.3nm,1.2s
AHRW Bad Neuenahr-A 138.09 341 *e*PKPdf **PKiKP 04 00 57.1 +1.1**
baz=37,slow=2.0
RJOB Jochberg 138.20 334 *e*PKPdf **PKiKP 04 00 57.1 +0.6**
baz=37,slow=2.0
OBKA Obir 138.32 331 *i* PKiKP **PKiKP 04 00 57.2 +0.4**
comp=Z,5.0nm,1.3s
MEM Membach 138.38 342 PKPdf **PKPdf 04 00 55.4 +0.9**
MEM PKiKP **PKiKP 04 00 57.5 +0.9**
KBA Koelnbreinsper 138.46 332 *i* PKiKP **PKPdf 04 00 55.8 +0.7**
comp=Z,8.0nm,1.7s
MYKA Terra Mystica 138.66 332 *i* PKiKP **PKiKP 04 00 57.1 -0.4**
comp=Z,7.8nm,0.9s
STU Stuttgart 138.84 337 *e*PKPdf **PKiKP 04 00 58.6 +0.9**
baz=37,slow=2.0
WATA Walderalm 139.04 334 *i* PKiKP **PKPdf 04 00 55.3 -0.7**
comp=Z,17nm,1.0s
WTTA Wattenberg 139.07 334 *i* PKiKP **PKPdf 04 00 56.3 +0.1**
comp=Z,26nm,0.9s,SNR=4.4
ABTA Abfaltersbach 139.08 333 *i* PKiKP **PKPdf 04 00 55.8 -0.2**
comp=Z,6.7nm,0.9s
ABTA *i* SKPab **SKiKP 04 04 19.5 -1.2**
comp=Z,8.3nm,1.2s
WLF Walferdange 139.15 341 *e*PKPdf **PKiKP 04 00 59.9 +1.6**
baz=37,slow=2.0
MOTA Moosalm 139.23 335 *i* PKiKP **PKPdf 04 00 57.4 +0.9**
comp=Z,9.8nm,0.7s
MOTA *i* SKPbc **SKPbc 04 04 17.7 -0.2**
comp=Z,17nm,1.7s
RETA Reutte 139.26 335 *i* PKiKP **PKPdf 04 00 55.8 -0.6**
comp=Z,6.4nm,0.9s
RETA *i* SKPab **SKPab 04 04 27.1 -1.0**
comp=Z,6.2nm,1.4s
SQTA Sankt Quirin 139.28 334 *i* PKiKP **PKiKP 04 00 58.7 -0.1**
comp=Z,5.9nm,1.0s
UBR Ueberruh 139.37 336 *e*PKPdf **PKiKP 04 00 59.2 +0.3**
baz=37,slow=2.0
BFO Black Forest 139.53 338 PKiKP **PKPdf 04 00 57.8 +1.0**
BFO Black Forest 139.53 338 *e*PKPdf **PKiKP 04 00 59.6 +0.5**
baz=37,slow=2.0
BFO Black Forest 139.53 338 **PKPdf 04 00 57.8 +1.0**
FETA Feichten 139.64 335 *i* PKiKP **PKPdf 04 00 57.7 +0.5**
comp=Z,13nm,1.0s,SNR=11
FETA *i* SKPdf **SKPdf 04 04 15.1 -3.1**
comp=Z,4.9nm,1.1s
DAVA Damuels 139.78 335 *i* PKiKP **PKiKP 04 00 59.0 -0.8**
comp=Z,7.6nm,0.7s
DAVA *i* SKPab **SKiKP 04 04 24.7 +2.5**
comp=Z,10nm,1.3s
INTR Introdacqua 141.83 327 **PKPdf 04 01 00.6 -0.6**
WDD Wied Dalam 145.44 318 **PKPdf 04 01 06.6 -0.9**
KEST Kesra 148.74 323 PKPbc **PKiKP 04 01 18.0 -0.5**

comp=Z,73nm,0.9s,baz=263,slow=1.5,SNR=50

CKFL	**Kef-Lekhel**	**149.74 327**	P	**PKiKP**	**04 01 21.8**	**+1.2**
PBRG	**Braganca**	**149.75 350**	*e*PKPbc	**PKiKP**	**04 01 20.0**	**-0.4**
PBRG	**Braganca**	**149.75 350**	*e*PKPab	**PKPab**	**04 01 25.6**	**+0.5**
CASM	**Ain Smara**	**149.97 327**	P	**PKiKP**	**04 01 22.6**	**+1.6**
DFRA	**Djebel Bou Aff**	**150.07 328**	P	**PKiKP**	**04 01 23.4**	**+2.1**
CTEI	**Djebel Teioual**	**150.16 327**	P	**PKiKP**	**04 01 23.0**	**+1.5**
PVRL	**Vila Real**	**150.42 351**	*e*PKPbc	**PKiKP**	**04 01 22.0**	**+0.2**
MVO	**Moncorvo**	**150.42 350**	*e*PKPbc	**PKiKP**	**04 01 22.1**	**+0.3**
SET	**Setif**	**150.58 328**	P	**PKPdf**	**04 01 17.0**	**+0.9**
PVIS	**Viseu**	**151.00 352**	*e*PKPbc	**PKiKP**	**04 01 23.0**	**0.0**
ESDC	**Sonseca Array**	**151.22 345**	PKP	**PKPdf**	**04 01 17.7**	**+0.7**

comp=Z,1.9nm,0.8s,baz=354,slow=2.6,SNR=6.1

ESDC			PKPbc	**PKiKP**	**04 01 23.8**	**+0.3**

comp=Z,16nm,0.9s,baz=18,slow=2.3,SNR=43

SHEL	**Horse Pasture**	**151.24 195**	PKIKP	**PKPbc**	**04 01 22.2**	**-1.5**
SHEL	**Horse Pasture**	**151.24 195**		**PKPbc**	**04 01 22.2**	**-1.5**
MTE	**Manteigas**	**151.25 351**	*e*PKPbc	**PKiKP**	**04 01 23.6**	**+0.1**
MTE	**Manteigas**	**151.25 351**	*e*PKPab	**PKPab**	**04 01 29.6**	**-1.8**
RCBR	**Riachuelo**	**151.38 127**	PKIKP	**PKPbc**	**04 01 22.9**	**-1.2**
RCBR	**Riachuelo**	**151.38 127**		**PKPbc**	**04 01 22.9**	**-1.2**
PAB	**San Pablo**	**151.43 345**	PKIKP	**PKPbc**	**04 01 22.7**	**-0.8**
PAB	**San Pablo**	**151.43 345**		**PKPbc**	**04 01 22.7**	**-0.8**
COI	**Coimbra**	**151.57 352**	*e*PKPbc	**PKiKP**	**04 01 24.7**	**+0.6**
COI	**Coimbra**	**151.57 352**	*e*PKPab	**PKPab**	**04 01 34.0**	**+1.4**
PCAS	**Casmilo, Conde**	**151.73 352**	*e*PKPdf	**PKPdf**	**04 01 17.5**	**-0.1**
PCAS	**Casmilo, Conde**	**151.73 352**	*e*PKPbc	**PKiKP**	**04 01 24.4**	**-0.1**
PCBR	**Castelo Branco**	**151.79 351**	*e*PKPbc	**PKiKP**	**04 01 25.1**	**+0.5**
PTOM	**Tomar**	**152.15 352**	*e*PKPbc	**PKiKP**	**04 01 26.1**	**+0.8**
PMRV	**Marv??o**	**152.18 350**	*e*PKPbc	**PKiKP**	**04 01 26.1**	**+0.7**
PMTG	**Montargil**	**152.66 351**	*e*PKPbc	**PKPbc**	**04 01 25.7**	**-0.5**
EVO	**Evora**	**153.15 351**	*e*PKPbc	**PKiKP**	**04 01 28.0**	**+0.6**
EVO	**Evora**	**153.15 351**	*e*PKPab	**PKPab**	**04 01 39.6**	**+0.3**
PBEJ	**Beja**	**153.62 350**	*e*PKPdf	**PKPdf**	**04 01 22.0**	**+1.5**
PBEJ	**Beja**	**153.62 350**	*e*PKPbc	**PKiKP**	**04 01 29.1**	**+0.7**
PBEJ	**Beja**	**153.62 350**	*e*PKPab	**PKPab**	**04 01 42.8**	**+1.5**
PCVE	**Castro Verde**	**154.04 350**	*e*PKPbc	**PKiKP**	**04 01 30.2**	**+0.9**
TAM	**Tamanrasset**	**159.10 303**	PKIKP	**PKPdf**	**04 01 26.4**	**-1.8**
TAM	**Tamanrasset**	**159.10 303**		**PKPdf**	**04 01 26.4**	**-1.8**
TOA0	**Torodi Ar. Sit**	**165.32 276**		**PKPdf**	**04 01 33.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**165.32 276**	PKP	**PKPdf**	**04 01 34.4**	**-0.1**

comp=Z,24nm,0.9s,baz=18,slow=1.6,SNR=93

TORD			pPKP	**pPKPdf**	**04 02 11.9**	**-1.8**

comp=Z,3.9nm,0.9s,baz=88,slow=3.1,SNR=2.5

TORD			PKPab	**PKPab**	**04 02 33.3**	**+0.3**

comp=Z,9.6nm,0.9s,baz=63,slow=5.1,SNR=10.0

KIC	**Kosan Boka**	**169.87 237**	*e*PKIKP	**PKPdf**	**04 01 37.3**	**-0.4**

comp=Z,112nm,1.3s

KIC	**Kosan Boka**	**169.87 237**	*e*PKP2	**PKPab**	**04 02 53.1**	**0.0**

comp=Z,108nm,1.0s

LIC	**Lamto**	**170.03 236**	*e*PKIKP	**PKPdf**	**04 01 37.3**	**-0.5**

comp=Z,69nm,1.1s

LIC	**Lamto**	**170.03 236**	*e*PKP2	**PKPab**	**04 02 53.5**	**-0.3**

comp=Z,133nm,1.3s

DBIC	**Dimbokro**	**170.14 238**	PKP	**PKPdf**	**04 01 37.9**	**0.0**

comp=Z,14nm,1.0s,baz=103,slow=2.3,SNR=11

DBIC			PKPab	**PKPab**	**04 02 54.7**	**+0.5**

comp=Z,29nm,0.9s,baz=101,slow=5.3,SNR=21

DBIC	**Dimbokro**	**170.14 238**		**PKPdf**	**04 01 32.7**	**-5.2**
DBIC				**PKPab**	**04 02 52.7**	**-1.5**
TIC	**Toumodi**	**170.26 238**	*e*PKIKP	**PKPdf**	**04 01 37.4**	**-0.6**

comp=Z,0.6nm,0.2s

TIC	**Toumodi**	**170.26 238**	*e*PKP2	**PKPab**	**04 02 54.7**	**-0.1**

comp=Z,151nm,1.1s

DDA 16 03:58:18.2, 40.03N×35.42E, h7km±2km, ML1.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COAL	**Corum-Alaca**	**0.40**	**304**	*i* P	Pg	03 58 26.2	+0.2
SIRC	**Yozgat**	**0.73**	**197**	*i* P	Pg	03 58 32.1	-0.1
SIRC				*i* S	Sb	03 58 43.2	-0.3
SIRC				IAML		03 58 50.0	

comp=N,13nm,0.5s

CDAG	**Cicekdag**	**0.91**	**244**	*i* P	Pb	03 58 36.2	-0.2
CDAG				*i* S	Sb	03 58 48.9	+0.3
CDAG				IAML		03 58 55.0	

comp=E,15nm,0.5s

AVNS	**Nevsehir-Avano**	**1.30**	**200**	*i* P	Pg	03 58 43.8	+0.6
AVNS				*i* S	Sb	03 58 58.8	-1.3
AVNS				IAML		03 59 06.0	

comp=E,7.2nm,0.2s

KIRS	**Kirehir-Merke**	**1.47**	**233**	*i* P	Pb	03 58 45.9	0.0
KIRS				*i* S	Sg	03 59 06.3	+0.9

MAN **16** *04:11:52.1, 6.48N×126.07E, h50km, MS3.4*
IDC **16** *04:11:54.6±1.2, 6.68N×126.11E, h68km±11km, mb3.7/9, mb1 3.9/9, mb1mx3.6/44, mbtmp4.0/9, Error ellipse: s-maj=35.7km s-min=14.3km az=71.0*
NEIC **16** *04:11:54.3±1.4, 6.6N±0.1×126.0E±0.2, h72km±7km, mb4.2/6, Error ellipse: s-maj=31.9km s-min=12.1km az=54.0*

ISC 16 04:11:53.9±0.8, 6.47N±0.04×126.01E±0.05, h62km±7km, n29, σ1ş28/41, mb3.9/11, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.47**	**219**	*e*P	**Pn**	**04 12 05.3**	**-0.4**
DDMP				*e*S	**Sn**	**04 12 15.1**	**+0.9**
MATI	**Mati**	**0.53**	**28**	*e*P	**Pn**	**04 12 04.8**	**-1.6**
MATI				*e*S	**Sn**	**04 12 14.8**	**-0.7**
DAV	**Davao City (W)**	**0.73**	**324**	P	**Pn**	**04 12 09.4**	**+0.7**

158nm,0.3s,baz=122,slow=1.8,SNR=23

DAV				S	**Sn**	**04 12 21.1**	**+1.6**

424nm,0.3s,baz=269,slow=20,SNR=48

DAV	**Davao City (W)**	**0.73**	**324**		**Pn**	**04 12 09.4**	**+0.7**
DAV					**Sn**	**04 12 18.6**	**-0.8**
KCP	**Kidapawan**	**1.06**	**300**	⇓*iP*	**Pn**	**04 12 13.0**	**+0.2**
KCP				*i* S	**Sn**	**04 12 26.9**	**+0.1**
GSPH	**General Santos**	**1.12**	**250**	⇓*iP*	**Pn**	**04 12 12.7**	**-1.0**
GSPH				*i* S	**Sn**	**04 12 27.6**	**-0.8**
SKMP	**Bagumbayan, Su**	**1.46**	**272**	*e*P	**Pn**	**04 12 17.2**	**-0.9**
SKMP				*e*S	**Sn**	**04 12 36.9**	**+0.7**
BUKP	**Musuan**	**1.68**	**326**	*e*P	**Pn**	**04 12 20.6**	**-0.6**
BUKP				*e*S	**Sn**	**04 12 41.7**	**-0.1**
CTBH	**Cotabato--PC H**	**1.90**	**293**	*e*P	**Pn**	**04 12 24.0**	**0.0**
CTBH				*i* S	**Sn**	**04 12 49.4**	**+2.4**
CGP	**Cagayan de Oro**	**2.36**	**327**	⇑*e*P	**Pn**	**04 12 29.9**	**-0.4**
CGP				*i* S	**Sn**	**04 12 57.6**	**-0.6**
BUTP	**Butuan**	**2.51**	**351**	*e*P	**Pn**	**04 12 33.4**	**+1.0**
BUTP				*e*S	**Sn**	**04 13 04.0**	**+2.1**
PAGZ	**Pagadian**	**2.94**	**298**	*e*P	**Pn**	**04 12 37.6**	**-0.7**
PAGZ				*e*S	**Sn**	**04 13 09.4**	**-3.0**
MTN	**Manton Dam**	**19.85**	**165**	P	**P**	**04 16 20.4**	**+0.4**
KNRA	**Kununurra**	**22.17**	**173**	P	**P**	**04 16 45.5**	**+0.5**
KNRA				IAmb	IAmb	04 16 54.6	

comp=Z,12nm,0.7s

FITZ	**Fitzroy Crossi**	**24.42**	**181**	P	**P**	**04 17 09.6**	**+2.8**

comp=Z,1.7nm,0.5s,baz=352,slow=7.1,SNR=5.2

FITZ	**Fitzroy Crossi**	**24.42**	**181**	P	**P**	**04 17 07.2**	**+0.4**
FITZ				IAmb	IAmb	04 17 25.2	

comp=Z,6.0nm,1.0s

WRA	**Warramunga Arr**	**27.50**	**163**	P	**P**	**04 17 37.0**	**+2.3**

comp=Z,0.4nm,0.4s,baz=344,slow=10,SNR=4.2

CMAR	**Chiang Mai Arr**	**28.93**	**297**	P	**P**	**04 17 48.7**	**+1.1**

comp=Z,0.8nm,0.3s,baz=119,slow=7.5,SNR=6.4

ASAR	**Alice Springs**	**30.93**	**166**	P	**P**	**04 18 06.5**	**+1.3**

comp=Z,1.0nm,0.6s,baz=339,slow=6.7,SNR=12

ASAR				PcP	**PcP**	**04 21 00.4**	**-0.2**

comp=Z,0.7nm,0.6s,baz=350,slow=2.2,SNR=5.2

BBOO	**Buckleboo**	**40.22**	**167**	P	**P**	**04 19 25.5**	**+0.9**
BBOO				IAmb	IAmb	04 19 29.2	

comp=Z,4.1nm,0.8s

STKA	**Stephens Creek**	**40.93**	**160**	P	**P**	**04 19 31.3**	**+0.8**

comp=Z,1.7nm,0.4s,baz=333,slow=11,SNR=2.6

STKA	**Stephens Creek**	**40.93**	**160**	P	**P**	**04 19 30.6**	**+0.1**
MK31	**Makanchi Array**	**54.91**	**325**	P	**P**	**04 21 17.1**	**-1.3**
MK31				IAmb	IAmb	04 21 17.4	

comp=Z,0.7nm,0.6s

MKAR	**Makanchi Array**	**54.91**	**325**	P	**P**	**04 21 17.1**	**-1.4**

comp=Z,0.8nm,0.5s,baz=125,slow=8.1,SNR=11

ILAR	**Eielson Array**	**82.95**	**26**	P	**P**	**04 24 10.9**	**-1.1**

comp=Z,1.3nm,0.8s,baz=244,slow=5.0,SNR=12

INK	**Inuvik**	**87.89**	**21**	P	**P**	**04 24 36.0**	**-0.4**

comp=Z,1.1nm,0.8s,baz=305,slow=3.9,SNR=5.7

INK	**Inuvik**	**87.89**	**21**	P	**P**	**04 24 34.8**	**-1.7**
YKA	**Yellowknife Ar**	**97.31**	**24**	P	Pdif	04 25 19.5	-0.6

comp=Z,0.6nm,0.8s,baz=298,slow=4.7,SNR=11

TORD	**Torodi Ar. Bea**	**121.36**	**290**	PKP	**PKPdf**	**04 30 39.9**	**-1.4**

comp=Z,0.7nm,0.8s,baz=86,slow=1.8,SNR=4.0

BJI **16** *04:48:48.5±0.0, 1.03N×126.43E, h27km, mB5.2/45, mb5.0/68, Ms4.6/29, Ms7 4.3/31*
IDC **16** *04:48:49.4±0.4, 1.35N×126.23E, h0km, mb4.9/22, mb1 4.9/24, mb1mx4.9/30, mbtmp4.8/24, ML4.5/2, MS3.8/13, Ms1 3.8/13, ms1mx3.6/26, Error ellipse: s-maj=19.4km s-min=10.4km az=70.0*
MOS **16** *04:48:52.0±1.0, 1.36N×126.28E, h32km, mb5.2/30, Error ellipse: s-maj=10.6km s-min=5.4km az=110.4*
NEIC **16** *04:48:54.1±1.7, 1.39N±0.06×126.48E±0.05, h45km±5km, mb5.0/94, Error ellipse: s-maj=9.3km s-min=6.6km az=208.0*
DJA **16** *04:48:54.9±0.2, 1°N±2'×12'6E±', h55km±3km, M4.9/30, mb5.1/30, mB5.4/12, MLv5.1/18, Mw(mB)4.8/12, Mwp5.1/4*
KLM **16** *04:48:55.0, 1.46N×126.61E, h59km, mb5.1*
GCMT **16** *04:48:57.1±0.2, 1.48N±0.02×126.38E±0.02, h29km, MW5.0/92, Moment Tensor Solution. s59,c70; s92,c119; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.69±.17; Mθθ0.36±.11; Mϕϕ-4.05±.12; Mrθ0.04±.21; Mϕϕ-1.03±.10; Mrϕ0.21±.18; Best double couple: M₀3.99000×10¹⁶ NP1:ϕs193.00000°, δ43.00000°, λ90.00000°. NP2: ϕs12.00000°, δ47.00000°, λ90.00000°. Principal axes: T 3.6960, Plg88.0000°, Azm280.0000°; N 0.5910, Plg0.0000°, Azm13.0000°; P -4.2850, Plg2.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 04:48:54.3±0.2, 1.37N±0.04×126.43E±0.04, h39km±3km, h39km:pP-P, n372, σ1ş42/371, mb5.0/125, MS4.2/21, 22C-11D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.11**	**122**	P	**Pn**	**04 49 13.4**	**0.0**
TNTI				S	**Sn**	**04 49 28.7**	**+1.2**
TNTI	**Ternate**	**1.11**	**122**		**Pn**	**04 49 13.4**	**0.0**
TNTI				Sn	**Sn**	**04 49 26.1**	**-1.3**
LBMI	**Labuha**	**2.26**	**152**	P	**Pn**	**04 49 29.8**	**+0.6**
LBMI				S	**Sn**	**04 49 57.8**	**+1.9**
KMSI	**Cibinong**	**2.57**	**252**	P	**Pn**	**04 49 33.8**	**+0.4**
KMSI				S	**Sn**	**04 50 04.1**	**+0.6**
SANI	**Sanana**	**3.42**	**187**	P	**Pn**	**04 49 45.2**	**0.0**
LUWI	**Luwuk**	**4.37**	**237**	P	**Pn**	**04 50 00.4**	**+2.2**
LUWI	**Luwuk**	**4.37**	**237**		**Pn**	**04 49 59.7**	**+1.5**
LUWI				Sn	**Sn**	**04 50 49.3**	**+1.4**
MRSI	**Marisa**	**4.57**	**259**	P	**Pn**	**04 50 02.7**	**+1.7**
NLAI	**Namlea**	**4.62**	**172**	P	**Pn**	**04 50 03.4**	**+1.7**
GSPH	**General Santos**	**4.92**	**343**	⇑*iP*	**Pn**	**04 50 06.7**	**+0.9**
APSI	**Ampana**	**5.29**	**245**	P	**Pn**	**04 50 13.3**	**+2.5**

5.1nm13μm1μm,1.3s

MSAI	**Masohi**	**5.31**	**152**	P	**Pn**	**04 50 10.7**	**-0.4**

0.6nm1μm73nm,1.1s

SWI	**Sorong**	**5.32**	**115**	P	**Pn**	**04 50 12.5**	**+1.3**

0.4nm4μm120nm,1.0s

AAI	**Ambon**	**5.32**	**161**	P	**Pn**	**04 50 13.1**	**+1.8**

1.0nm264nm,0.8s

SIJI	**Sorong**	**5.32**	**115**	Pn	**Pn**	**04 50 13.1**	**+1.7**

5.3nm,0.3s,baz=312,slow=7.9,SNR=17

SIJI				LR	LR	04 52 43.2	

comp=Z,3μm,18.5s,baz=272,slow=42

DAV	**Davao City (W)**	**5.73**	**352**	LR	LR	04 52 52.0	

comp=Z,1μm,19.1s,baz=172,slow=42

DAV	**Davao City (W)**	**5.73**	**352**	Pn	**Pn**	**04 50 13.8**	**-3.2**
KCP	**Kidapawan**	**5.76**	**347**	⇑*eP*	**Pn**	**04 50 19.9**	**+2.4**
KCP				*i* S	Sn	04 51 39.8	+17
KDI	**Kendari**	**6.51**	**216**	P	**Pn**	**04 50 29.7**	**+2.0**

0.8nm15μm254nm,0.8s

MPSI	**Mapaga**	**6.61**	**261**	P	**Pn**	**04 50 30.5**	**+1.5**

0.8nm2μm216nm,0.9s

FAKI	**Fak Fak**	**7.21**	**126**	P	**Pn**	**04 50 38.6**	**+1.3**

0.7nm3μm2μm171nm,1.1s

FAKI	**Fak Fak**	**7.21**	**126**		**Pn**	**04 50 36.5**	**-0.8**
TTSI	**Tana Toraja**	**7.93**	**236**	P	**Pn**	**04 50 47.8**	**+0.7**

1.6nm4μm5μm400nm,0.9s

RKPI	**Ransiki, Papua**	**8.26**	**110**	P	Pn	04 51 08.9	+17
SPSI	**Sidrap Palu**	**8.50**	**231**	P	**Pn**	**04 50 57.3**	**+2.3**

3μm326nm,0.7s

BNSI	**Bone**	**8.53**	**228**	P	**Pn**	**04 50 57.4**	**+2.1**

0.9nm3μm260nm,0.8s

BKSI	**Bulukumba**	**9.15**	**223**	P	**Pn**	**04 51 02.1**	**-1.8**

2μm170nm,0.8s

KAPI	**Kappang**	**9.20**	**226**	P	**Pn**	**04 51 05.8**	**+1.3**
KAPI	**Kappang**	**9.20**	**226**		**Pn**	**04 51 05.8**	**+1.3**
BAKI	**Biak**	**10.01**	**105**	P	Pn	04 51 24.3	+8.6
KKM	**Kota Kinabalu**	**11.20**	**295**		**Pn**	**04 51 32.3**	**+0.3**
KBKI	**Kotabaru**	**11.25**	**246**	P	Pn	04 51 44.0	+11
SOEI	**Soe**	**11.26**	**191**	P	Pn	04 51 42.7	+10
PLAI	**Plampang**	**13.30**	**220**	P	**P**	**04 52 12.6**	**+2.9**
SBUM	**Sibu**	**14.24**	**275**		**Pn**	**04 52 14.7**	**+1.2**
SBUM	**Sibu**	**14.24**	**275**	P	**P**	**04 52 20.0**	**-0.2**
MTN	**Manton Dam**	**14.87**	**162**		**Pn**	**04 52 21.3**	**-0.7**
KMMI	**Kalianget**	**14.98**	**236**	P	P	04 52 36.8	+8.4
DNP	**Denpasar**	**14.98**	**228**	P	P	04 52 35.9	+7.5
KDU	**Kakadu**	**15.20**	**157**	P	**Pn**	**04 52 26.3**	**0.0**

baz=15,SNR=15

JAGI	**Jajag, Banyuwa**	**15.66**	**231**	P	**P**	**04 52 40.1**	**+4.1**
JAGI	**Jajag, Banyuwa**	**15.66**	**231**		**Pn**	**04 52 31.4**	**-1.0**
JAGI				IAmb	IAmb	04 52 49.0	

comp=Z,113nm,0.9s

GMJI	**Gumukmas**	**16.10**	**233**	P	**P**	**04 52 40.9**	**+0.1**

comp=Z,126nm,0.9s

KSM	**Kuching**	**16.11**	**271**	P	**Pn**	**04 52 37.8**	**-0.4**
KSM				IAmb	IAmb	04 52 50.3	

comp=Z,121nm,1.0s

KSM	**Kuching**	**16.11**	**271**	P	**P**	**04 52 42.0**	**+1.0**
KNRA	**Kununurra**	**17.09**	**172**	P	**Pn**	**04 52 51.1**	**+0.7**

baz=17,SNR=14

KNRA	**Kununurra**	**17.09**	**172**	P	**Pn**	**04 52 49.3**	**-1.1**
KNRA				IAmb	IAmb	04 52 59.1	

comp=Z,127nm,0.9s

NGJI	**Ngawi**	**17.27**	**240**	P	P	04 53 01.4	+7.6
PCJI	**Pacitan**	**17.93**	**238**	P	**Pn**	**04 53 00.5**	**-0.3**

comp=Z,109nm,0.7s

WOJI	**Wonogiri, Jawa**	**17.96**	**239**	P	P	04 53 09.9	+8.4
FITZ	**Fitzroy Crossi**	**19.36**	**182**	P	**P**	**04 53 16.3**	**-0.4**

baz=20,SNR=10

FITZ	**Fitzroy Crossi**	**19.36**	**182**	P	**P**	**04 53 16.2**	**-0.4**

comp=Z,1.1nm,0.3s,baz=20,slow=6.9,SNR=28

FITZ	**Fitzroy Crossi**	**19.36**	**182**	P	**P**	**04 53 16.4**	**-0.4**
KPJI	**Karang Pucung**	**19.48**	**243**	P	**P**	**04 53 17.8**	**-0.3**

comp=Z,92nm,0.8s

CISI	**Cisompet, Garu**	**20.57**	**244**	P	Pn	04 53 31.9	-0.6

comp=Z,78nm,1.0s

TWG	**Pinlang**	**21.95**	**347**	P	**P**	**04 53 43.1**	**-1.7**
WB9	**Warramunga Arr**	**22.43**	**160**	P	**P**	**04 53 49.2**	**-0.8**

baz=22

YULB	**Yu-li**	**22.45**	**348**	P	**P**	**04 53 47.9**	**-2.3**
YULB				IAmb	IAmb	04 53 57.8	

comp=Z,40nm,0.8s

TPUB	**Ta-pu**	**22.52**	**346**	P	**P**	**04 53 50.1**	**-0.8**
COEN	**Coen**	**22.52**	**133**	P	**P**	**04 53 50.3**	**-0.7**

baz=22,SNR=12

COEN	**Coen**	**22.52**	**133**	P	**P**	**04 53 49.6**	**-1.4**
WRAB	**Tennant Creek**	**22.55**	**160**	P	**P**	**04 53 50.5**	**-0.8**
WRAB					**S**	**04 57 55.5**	**-0.6**
WRA	**Warramunga Arr**	**22.55**	**160**	P	**P**	**04 53 50.5**	**-0.8**

comp=Z,92nm,0.7s,baz=337,slow=11,SNR=174

WRA				S	**S**	**04 57 54.8**	**-1.4**

comp=Z,7.9nm,1.0s,baz=340,slow=17,SNR=7.0

WRA	**Warramunga Arr**	**22.55**	**160**	IAmb	IAmb	04 53 56.5	

comp=Z,4.0nm,0.8s

WR0	**Warramunga Arr**	**22.64**	**160**	P	**P**	**04 53 51.8**	**-0.4**
WR0				IAmb	IAmb	04 53 56.3	

comp=Z,111nm,1.0s

SSLB	**Suanglung**	**22.91**	**347**	P	**P**	**04 53 54.1**	**-0.9**
SSLB				IAmb	IAmb	04 54 03.2	

comp=Z,68nm,0.9s

KASI	**Kota Agung**	**22.95**	**252**	P	**P**	**04 53 54.6**	**-0.9**

comp=Z,64nm,0.9s

MDSI	**Maura Dua**	**22.98**	**255**	P	**P**	**04 53 52.8**	**-3.0**

comp=Z,19nm,0.9s

PMG	**Port Moresby**	**23.26**	**118**	*ce*P	**P**	**04 54 00.4**	**+1.8**
PMG				pmax	pmax		

comp=Z,736nm,2.5s

PMG	**Port Moresby**	**23.26**	**118**	P	**P**	**04 53 56.7**	**-1.9**
PMG				IAmb	IAmb	04 54 04.1	

comp=Z,60nm,1.1s

YHNB	**Yeheng**	**23.68**	**348**	P	**P**	**04 54 00.8**	**-1.8**
PSA00	**Pilbara Seismi**	**23.69**	**195**	P	**P**	**04 54 02.0**	**-0.6**
QIZ	**Qiongzhong**	**23.92**	**318**	P	**P**	**04 54 04.4**	**-0.5**
QIZ				S	**S**	**04 58 22.3**	**+3.4**
QIZ				sS	**sS**	**04 58 33.3**	**-2.3**
QIZ				LR	LR		

comp=Z,620nm,16.9s

SDSI	**Sungai Dareh**	**25.10**	**265**	P	**P**	**04 54 11.2**	**-4.5**

comp=Z,3μmcomp=Z,29nm,1.3s

QIS	**Mount Isa**	**25.32**	**150**	P	**P**	**04 54 18.2**	**+0.6**

baz=25,SNR=27

JOW	**Kunigami**	**25.38**	**4**	IAmb	IAmb	04 54 22.0	

comp=Z,63nm,1.0s

AS31	**Alice Springs**	**25.92**	**164**	P	**P**	**04 54 22.7**	**-0.4**
ASAR	**Alice Springs**	**25.92**	**164**	P	**P**	**04 54 23.0**	**-0.1**

comp=Z,20nm,0.6s,baz=345,slow=6.5,SNR=150

ASAR				PcP	**PcP**	**04 57 52.1**	**+0.8**

comp=Z,3.7nm,0.7s,baz=309,slow=1.6,SNR=4.6

ASAR				S	**S**	**04 58 53.5**	**+2.6**

comp=Z,4.9nm,0.9s,baz=345,slow=23,SNR=5.7

PDSI	**Padang**	**26.06**	**265**	P	**P**	**04 54 21.9**	**-2.6**

comp=Z,21nm,0.9s

MTSU	**Mount Surprise**	**26.18**	**139**	P	**P**	**04 54 26.4**	**+0.9**

baz=26,SNR=5.0

WRKA	**Warakurna**	**26.31**	**176**	P	**P**	**04 54 27.1**	**+0.5**

baz=26,SNR=33

GIRL	**Giralia**	**26.66**	**206**	P	**P**	**04 54 32.2**	**+2.5**

baz=27,SNR=3.7

SISI	**Saibi**	**27.46**	**265**	P	**P**	**04 54 35.5**	**-1.6**
RPSI	**Rantau Prapat**	**27.52**	**273**	P	**P**	**04 54 36.1**	**-1.4**
RPSI	**Rantau Prapat**	**27.52**	**273**	P	**P**	**04 54 36.8**	**-0.8**
PSI	**Prapat**	**27.52**	**273**	P	**P**	**04 54 36.8**	**-1.0**

comp=Z,9.5nm,0.7s,baz=91,slow=4.5,SNR=6.8

MEEK	**Meekatharra**	**28.84**	**195**	P	**P**	**04 54 48.9**	**-0.

LZH	**Lanzhou**	**40.40**	**331**	⇑P	**P**	**04 56 29.5**	**+0.5**
LZH				pP	pP	04 56 37.3	-2.3
LZH				sP	sP	04 56 42.3	-1.7
LZH				PcP	**PcP**	**04 58 33.3**	**+1.7**
LZH				SS	SS	05 05 29.5	-5.4
LZH				pmax	pmax		
	comp=Z,28nm,1.1s						
LZH				pmax	pmax		
	comp=Z,93nm,4.3s						
LZH				LR	LR		
	comp=Z,210nm,11.9s						
LZH				LR	LR		
	comp=Z,390nm,12.5s						
ARPS	**Mount Arapiles**	**40.56**	**161**	P	**P**	**04 56 31.4**	**+1.4**
	baz=41,SNR=9.9						
YNG	**Young**	**41.04**	**152**	P	**P**	**04 56 35.6**	**+1.5**
	baz=41,SNR=8.1						
SHL	**Shillong**	**41.07**	**309**	P	**P**	**04 56 33.2**	**-1.4**
SHL				IAmb	IAmb	04 56 36.9	
	comp=Z,19nm,0.8s						
SHL				PcP	**PcP**	**04 58 33.2**	**-0.9**
HHC	**Hu-ho-hao-te**	**41.55**	**343**	*e*P	**P**	**04 56 39.3**	**+1.0**
HHC				sP	sP	04 56 51.4	-1.9
HHC				S	**S**	**05 02 57.6**	**+6.0**
HHC				sS	sS	05 03 05.5	-3.4
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,47nm,6.9s						
CAN	**Canberra**	**42.16**	**152**	P	**P**	**04 56 42.2**	**-1.1**
CAN				pmax	pmax		
	comp=Z,17nm,0.9s						
CAN	**Canberra**	**42.16**	**152**	P	**P**	**04 56 42.2**	**-1.1**
CN2	**Changchun**	**42.26**	**359**	*e*P	**P**	**04 56 43.0**	**-0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TOO	**Toolangi**	**42.57**	**157**	P	**P**	**04 56 48.3**	**+1.7**
	baz=43,SNR=4.4						
TOO	**Toolangi**	**42.57**	**157**	P	**P**	**04 56 45.8**	**-0.8**
TOO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TOO	**Toolangi**	**42.57**	**157**	P	**P**	**04 56 45.8**	**-0.8**
USA0B	**Ussuriysk Arra**	**42.94**	**6**	*i* P	**P**	**04 56 49.3**	**-0.1**
USA0B	**Ussuriysk Arra**	**42.94**	**6**	P	**P**	**04 56 47.2**	**-2.2**
USA0B				IAmb	IAmb	04 56 57.2	
	comp=Z,26nm,1.0s						
USRK	**Ussuriysk Ar.**	**42.94**	**6**	P	**P**	**04 56 50.8**	**+1.4**
	comp=Z,13nm,0.7s,baz=186,slow=6.9,SNR=16						
USRK				LR	LR	05 15 50.7	
	comp=Z,50nm,19.8s,baz=164,slow=38						
MDJ	**Mudanjiang**	**43.16**	**3**	P	**P**	**04 56 52.8**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,41nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,290nm,3.7s						
MDJ	**Mudanjiang**	**43.16**	**3**	P	**P**	**04 56 49.3**	**-1.9**
MDJ				IAmb	IAmb	04 56 56.7	
	comp=Z,40nm,1.0s						
LSA	**Lhasa**	**43.80**	**313**	P	**P**	**04 56 58.0**	**+0.8**
LSA				pmax	pmax		
	comp=Z,81nm,0.7s						
LSA	**Lhasa**	**43.80**	**313**	P	**P**	**04 56 55.8**	**-1.4**
LSA				pmax	pmax		
	comp=Z,19nm,0.9s						
LSA	**Lhasa**	**43.80**	**313**	P	**P**	**04 56 55.8**	**-1.4**
TEY	**Ternei**	**44.41**	**10**⇑	*e*P	**P**	**04 57 02.1**	**+0.9**
TEY				pmax	pmax		
	comp=Z,50nm,0.8s						
TEY				pmax	pmax		
	comp=N,20nm,2.3s						
CHLP	**Challavanipeta**	**44.90**	**295**	*e*P	**P**	**04 57 04.3**	**-1.3**
CHLP				IAmb	IAmb	04 57 08.1	
	comp=Z,2.6nm,0.7s						
GTA	**Gaotai**	**44.98**	**331**	⇓P	**P**	**04 57 05.9**	**-0.1**
GTA				pP	pP	04 57 12.9	-3.9
GTA				sP	sP	04 57 15.8	-5.4
GTA				PcP	**PcP**	**04 58 47.4**	**+0.6**
GTA				ScP	**ScP**	**05 02 36.4**	**0.0**
GTA				PcS	**PcS**	**05 02 39.5**	**-1.1**
GTA				S	**S**	**05 03 43.8**	**+1.8**
GTA				sS	sS	05 03 55.3	-3.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,8.4s						
GTA				LR	LR		
	comp=Z,220nm,18.7s						
GTA				LR	LR		
	comp=Z,260nm,17.1s						
GTA				LR	LR		
	comp=Z,330nm,18.4s						
ODAN	**Odare**	**45.22**	**308**	*e*P	**P**	**04 57 07.4**	**-0.9**
DZM	**Mont Dzumac**	**45.46**	**123**	P	**P**	**04 57 08.9**	**-1.2**
DZM				IAmb	IAmb	04 57 13.8	
	comp=Z,27nm,0.9s						
RAMN	**Ramite**	**45.89**	**307**	*e*P	**P**	**04 57 12.9**	**-0.7**
	comp=Z,56nm,1.1s						
JIRN	**Jiri**	**46.54**	**308**	*e*P	**P**	**04 57 18.3**	**-0.6**
	comp=Z,56nm,0.8s						
PVM	**Polavaram**	**46.78**	**292**	*e*P	**P**	**04 57 20.5**	**0.0**
PVM				IAmb	IAmb	04 57 25.3	
	comp=Z,3.6nm,0.9s						
GUN	**Gumba**	**46.90**	**308**	*e*P	**P**	**04 57 20.8**	**-0.8**
	comp=Z,39nm,0.7s						
PKI	**Pulchoki**	**47.12**	**307**	*e*P	**P**	**04 57 22.5**	**-0.8**
PKIN	**Phulchoki**	**47.13**	**307**	*e*P	**P**	**04 57 22.5**	**-0.9**
	comp=Z,8.6nm,0.5s						
KKN	**Kakani**	**47.32**	**308**	*e*P	**P**	**04 57 23.8**	**-1.0**
	comp=Z,13nm,0.5s						
DMN	**Daman**	**47.38**	**307**	*e*P	**P**	**04 57 24.6**	**-0.7**
MYLAV	**Mylavaram**	**47.57**	**291**	*e*P	**P**	**04 57 25.1**	**-1.5**
MYLAV				IAmb	IAmb	04 57 35.1	
	comp=Z,4.2nm,0.9s						
YSS	**Yuzh-Sakhalins**	**47.59**	**15**⇑	*i* P	**P**	**04 57 28.1**	**+1.9**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,20.0s						
YSS	**Yuzh-Sakhalins**	**47.59**	**15**	P	**P**	**04 57 24.8**	**-1.4**
YSS				IAmb	IAmb	04 57 32.3	
	comp=Z,23nm,0.8s						
SKHT	**Srikalahasti**	**47.81**	**287**	*e*P	**P**	**04 57 27.6**	**-0.9**
SKHT				IAmb	IAmb	04 57 29.3	
	comp=Z,5.6nm,0.9s						
KLR	**Kul'dur**	**47.90**	**5**	*i* P	**P**	**04 57 27.8**	**-0.8**
KLR				pmax	pmax		
	comp=Z,25nm,1.2s						
GKN	**Gorkha**	**47.92**	**307**	*e*P	**P**	**04 57 28.4**	**-1.0**
ADKI	**Addanki**	**47.99**	**290**	*e*P	**P**	**04 57 30.0**	**+0.2**
ADKI				IAML		04 57 32.7	
	comp=Z,1.5nm,0.7s						
GGR	**Gangavaram**	**48.24**	**293**	*e*P	**P**	**04 57 31.0**	**-0.9**
GGR				IAmb	IAmb	04 57 33.0	
	comp=Z,5.1nm,1.2s						
KOLN	**Koldanda**	**48.65**	**307**	*e*P	**P**	**04 57 34.0**	**-1.1**
	comp=Z,52nm,0.8s						
NJS	**Nagarjunasagar**	**48.77**	**291**	*e*P	**P**	**04 57 35.6**	**-0.3**
NJS				IAML		04 57 38.7	
	comp=Z,2.4nm,0.7s						
DANN	**Dangsing**	**48.77**	**307**	*e*P	**P**	**04 57 34.7**	**-1.4**
	comp=Z,72nm,0.7s						
SRLM	**Srisailam**	**49.05**	**290**	*e*P	**P**	**04 57 37.6**	**-0.5**
SRLM				IAmb	IAmb	04 57 43.9	
	comp=Z,4.3nm,0.9s						
ULN	**Ulaanbaatar**	**49.27**	**343**	*ce*P	**P**	**04 57 38.8**	**-0.6**
ULN				pmax	pmax		
	comp=Z,18nm,1.3s						
ULN	**Ulaanbaatar**	**49.27**	**343**	P	**P**	**04 57 38.4**	**-1.0**
ULN				IAmb	IAmb	04 57 41.2	
	comp=Z,11nm,0.8s						
RPR	**Rampur**	**49.33**	**294**	*e*P	**P**	**04 57 39.4**	**-0.8**
RPR				IAmb	IAmb	04 57 41.5	
	comp=Z,3.4nm,0.8s						
SONM	**Songino Array**	**49.44**	**342**	P	**P**	**04 57 40.6**	**-0.1**
	comp=Z,8.2nm,0.9s,baz=160,slow=8.0,SNR=29						
SONM				PcP	**PcP**	**04 59 03.8**	**+1.3**
	comp=Z,4.5nm,0.8s,baz=152,slow=3.4,SNR=4.8						
SONM				LR	LR	05 20 20.1	
	comp=Z,64nm,18.8s,baz=157,slow=38						
SONM	**Songino Array**	**49.44**	**342**	IAmb	IAmb	04 57 42.9	
	comp=Z,8.1nm,1.0s						
HYB	**Hyderabad**	**49.66**	**292**	*i* P	**P**	**04 57 41.0**	**-1.8**
HYBB	**Hyderabad (bro**	**49.67**	**292**	*e*P	**P**	**04 57 41.6**	**-1.2**
HYBB				IAmb	IAmb	04 57 49.7	
	comp=Z,8.6nm,0.9s						
GRNR	**Gornyy**	**49.95**	**8**	*e*P	**P**	**04 57 46.0**	**+1.7**
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
SRSP	**Sriramsagar**	**50.22**	**294**	*e*P	**P**	**04 57 46.9**	**-0.1**
SRSP				IAmb	IAmb	04 57 47.6	
	comp=Z,4.1nm,0.9s						
URV	**Uravakonda**	**50.36**	**288**	*e*P	**P**	**04 57 47.2**	**-0.9**
URV				IAmb	IAmb	04 57 54.4	
	comp=Z,11nm,0.7s						
DMPR	**Damasthipur**	**50.47**	**292**	*e*P	**P**	**04 57 48.1**	**-0.8**
DMPR				IAmb	IAmb	04 57 55.2	
	comp=Z,4.1nm,0.8s						
CIT	**Chita**	**51.62**	**350**	*e*P	**P**	**04 57 59.2**	**+2.2**
CIT				*e*		04 58 07.9	
CIT				*e*		04 58 14.5	
CIT				pmax	pmax		
	comp=Z,277nm,1.3s						
KLRI	**Killari**	**51.63**	**292**	*e*P	**P**	**04 57 55.1**	**-2.5**
KLRI				IAmb	IAmb	04 58 01.2	
	comp=Z,8.0nm,1.0s						
ZEA	**Zeya**	**52.20**	**1**	*e*P	**P**	**04 58 01.9**	**+0.7**
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZAK	**Zakamensk**	**52.65**	**342**	*e*P	**P**	**04 58 04.5**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TLY	**Talaya**	**53.67**	**343**	*i* P	**P**	**04 58 12.9**	**+0.8**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MSVF	**Nonsavu**	**54.24**	**113**	*i* P	**P**	**04 58 18.9**	**+2.0**
MSVF				pmax	pmax		
	comp=Z,30nm,0.9s						
MSVF	**Nonsavu**	**54.24**	**113**	P	**P**	**04 58 16.5**	**-0.4**
WMQ	**Urumqi**	**54.49**	**326**	*e*P	**P**	**04 58 18.4**	**+0.1**
WMQ				pP	pP	04 58 27.6	-1.6
WMQ				sP	sP	04 58 34.6	+1.0
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,75nm,3.7s						
WMQ				LR	LR		
	comp=Z,320nm,25.9s						
WMQ				LR	LR		
	comp=Z,1μm,22.9s						
WMQ				LR	LR		
	comp=Z,200nm,19.7s						
WMQ	**Urumqi**	**54.49**	**326**	IAmb	IAmb	04 58 21.2	
	comp=Z,14nm,0.8s						
MOY	**Mondy**	**54.49**	**341**	*e*P	**P**	**04 58 18.9**	**+0.7**
MOY				pmax	pmax		
	comp=Z,20nm,1.7s						
BOD	**Bodaibo**	**57.15**	**352**	*e*P	**P**	**04 58 37.5**	**+0.6**
BOD				pmax	pmax		
	comp=Z,41nm,1.4s						
PETK	**Petropavlovsk-**	**57.72**	**22**	P	**P**	**04 58 43.0**	**+1.9**
	comp=Z,15nm,0.9s,baz=194,slow=6.3,SNR=12						
PDGK	**Podgornoye**	**59.05**	**322**	P	**P**	**04 58 50.0**	**-0.7**
MK31	**Makanchi Array**	**59.33**	**326**	*e*P	**P**	**04 58 51.6**	**-0.9**
MK31	**Makanchi Array**	**59.33**	**326**	P	**P**	**04 58 52.2**	**-0.3**
MK31				IAmb	IAmb	04 58 53.4	
	comp=Z,10nm,0.9s						
MKAR	**Makanchi Array**	**59.33**	**326**	P	**P**	**04 58 51.7**	**-0.7**
	comp=Z,11nm,0.8s,baz=122,slow=8.0,SNR=101						
MKAR				PcP	**PcP**	**04 59 40.6**	**+0.4**
	comp=Z,13nm,0.9s,baz=116,slow=5.5,SNR=7.0						
MAKZ	**Makanchi**	**59.51**	**326**	P	**P**	**04 58 52.8**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,17nm,1.0s						
MAKZ	**Makanchi**	**59.51**	**326**	P	**P**	**04 58 52.8**	**-0.9**
MAKZ				IAmb	IAmb	04 58 55.1	
	comp=Z,17nm,0.9s						
KSH	**Kashi**	**59.51**	**316**	P	**P**	**04 58 56.1**	**+2.1**
KSH				pP	pP	04 59 05.1	0.0
KSH				PP	**PP**	**05 01 10.5**	**+4.8**
KSH				S	**S**	**05 07 03.3**	**+2.1**
KSH				sS	sS	05 07 18.5	-0.5
KSH				pmax	pmax		
	comp=Z,36nm,0.8s						
KSH				pmax	pmax		
	comp=Z,310nm,4.0s						
KSH				LR	LR		
	comp=Z,190nm,5.2s						
KSH				LR	LR		
	comp=Z,130nm,5.4s						
KSH				LR	LR		
	comp=Z,560nm,5.9s						
NRN	**Naryn**	**60.36**	**318**	IAmb	IAmb	04 59 01.3	
	comp=Z,8.8nm,0.8s						
YAK	**Yakutsk**	**60.56**	**2**	*e*P	**P**	**04 59 01.3**	**+0.7**
YAK				*e**PP	**pP**	**04 59 12.0**	**+0.3**
YAK				*e*		04 59 45.1	
YAK				*e*		05 01 15.1	
YAK				*e*S	**S**	**05 07 14.4**	**+0.8**
YAK				*e**SS	**sS**	**05 07 33.1**	**+1.3**
YAK				*e*		05 08 49.5	
YAK				*e*SS	**SS**	**05 11 08.3**	**-4.1**
YAK				pmax	pmax		
	comp=Z,32nm,0.9s						
YAK				pmax	pmax		
	comp=N,22nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,31nm,1.6s						
YAK				pmax	pmax		
	comp=N,54nm,1.7s						
YAK				pmax	pmax		
	comp=E,38nm,1.8s						
YAK				smax	smax		
	comp=N,42nm,3.0s						
YAK				smax	smax		
	comp=E,53nm,2.8s						
YAK	**Yakutsk**	**60.56**	**2**	P	**P**	**04 58 59.5**	**-1.1**
BOOM	**Boomskoye usch**	**60.90**	**319**	IAmb	IAmb	04 59 07.1	
	comp=Z,11nm,1.1s						
BKZ	**Black Stump Fm**	**61.05**	**137**	P	**P**	**04 59 02.8**	**-1.7**
MA2	**Magadan**	**61.06**	**14**	*ce*P	**P**	**04 59 05.6**	**+1.6**
MA2				pmax	pmax		
	comp=Z,16nm,0.7s						
MA2	**Magadan**	**61.06**	**14**	P	**P**	**04 59 04.1**	**+0.1**
KZA	**Kyzart**	**61.16**	**319**	P	**P**	**04 59 06.5**	**+0.9**
	SNR=16						
TKM2	**Tokmak 2**	**61.32**	**320**	P	**P**	**04 59 06.0**	**-0.4**
TKM2	**Tokmak 2**	**61.32**	**320**	P	**P**	**04 59 06.9**	**+0.5**
	SNR=20						
UCH	**Uchtor**	**61.71**	**318**	P	**P**	**04 59 10.3**	**+0.9**
	SNR=25						
AAK	**Ala-Archa**	**61.91**	**319**	*ce*P	**P**	**04 59 10.6**	**+0.3**
AAK				pmax	pmax		
	comp=Z,15nm,1.7s						
AAK	**Ala-Archa**	**61.91**	**319**	P	**P**	**04 59 11.1**	**+0.7**
	SNR=7.8						
AAK	**Ala-Archa**	**61.91**	**319**	P	**P**	**04 59 09.2**	**-1.1**
AAK				IAmb	IAmb	04 59 20.7	
	comp=Z,9.3nm,0.9s						
USP	**Ospenovka**	**62.19**	**319**	P	**P**	**04 59 12.4**	**+0.3**
	SNR=20						
AML	**Almayashu**	**62.22**	**318**	P	**P**	**04 59 13.5**	**+0.8**
	SNR=21						
ARSB	**Arslanbob**	**62.35**	**317**	IAmb	IAmb	04 59 14.4	
	comp=Z,16nm,1.0s						
EKS2	**Erkin-Say**	**62.40**	**319**	P	**P**	**04 59 14.4**	**+0.9**
	SNR=12						
ZAA0	**Zalesovo Array**	**62.55**	**334**	IAmb	IAmb	04 59 15.1	
	comp=Z,13nm,1.1s						
ZALV	**Zalesovo Beam**	**62.55**	**334**	*i* P	**P**	**04 59 14.3**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZALV	**Zalesovo Beam**	**62.55**	**334**	P	**P**	**04 59 13.8**	**-0.4**
	comp=Z,5.8nm,0.7s,baz=128,slow=5.6,SNR=19						
ZALV				LR	LR	05 27 52.2	
	comp=Z,68nm,19.9s,baz=82,slow=38						
KBL	**Kabul**	**62.73**	**309**	P	**P**	**04 59 13.5**	**-2.5**
KBL				pmax	pmax		
	comp=Z,16nm,0.8s						
KBL	**Kabul**	**62.73**	**309**	P	**P**	**04 59 13.5**	**-2.5**
KBL				IAmb	IAmb	04 59 17.5	
	comp=Z,16nm,0.8s						
BTK	**Batken**	**63.35**	**315**	IAmb	IAmb	04 59 30.0	
	comp=Z,15nm,0.9s						
KURK	**Kurchatov**	**63.57**	**328**	*ce*P	**P**	**04 59 20.1**	**-0.9**
KURK				pmax	pmax		
	comp=Z,60nm,0.8s						
KURK	**Kurchatov**	**63.57**	**328**	P	**P**	**04 59 19.0**	**-1.9**
KK31	**Karatay Array**	**64.76**	**318**	*i* P	**P**	**04 59 28.7**	**-0.3**
KK31	**Karatay Array**	**64.76**	**318**	IAmb	IAmb	04 59 30.1	
	comp=Z,15nm,0.9s						
KKAR	**Karatay Array**	**64.76**	**318**	IAmb	IAmb	04 59 30.1	
	comp=Z,15nm,0.9s						
BRVK	**Borovoye**	**69.20**	**328**	P	**P**	**04 59 56.6**	**-0.4**
BRVK	**Borovoye**	**69.20**	**328**	P	**P**	**04 59 56.3**	**-0.7**
BRVK				IAmb	IAmb	04 59 59.9	
	comp=Z,22nm,1.1s						
TIXI	**Tiksi**	**70.19**	**1**	*d* *i* P	**P**	**05 00 03.0**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,20nm,1.2s						
TIXI	**Tiksi**	**70.19**	**1**	P	**P**	**05 00 02.9**	**+0.2**
BILL	**Bilibino**	**71.90**	**15**	*ce*P	**P**	**05 00 14.8**	**+1.6**
BILL				*e*		05 00 29.6	
BILL				*e*		05 02 59.9	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.7s						
GEYT	**Alibeck**	**72.14**	**309**	P	**P**	**05 00 15.4**	**+0.1**
	comp=Z,11nm,0.8s,baz=141,slow=5.7,SNR=17						
GEYT	**Alibeck**	**72.14**	**309**	IAmb	IAmb	05 00 17.0	
	comp=Z,9.2nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**72.14**	**309**	IAmb	IAmb	05 00 19.2	
	comp=Z,14nm,0.8s						
AB31	**Akbulak array**	**73.78**	**321**	*i* P	**P**	**05 00 24.1**	**-0.6**
ABKAR	**Akbulak array**	**73.78**	**321**	IAmb	IAmb	05 00 28.5	
	comp=Z,15nm,0.9s						
SVE	**Sverdlovsk**	**75.81**	**329**	*ce*P	**P**	**05 00 36.6**	**+0.3**
SVE				pmax	pmax		
	comp=Z,66nm,0.9s						
ARU	**Arti**	**76.77**	**328**	*d* *i* P	**P**	**05 00 41.1**	**-0.6**
ARU						05 03 31.7	
ARU				S	**S**	**05 10 23.6**	**-2.4**
ARU				pmax	pmax		
	comp=Z,48nm,0.9s						
ARU	**Arti**	**76.77**	**328**	P	**P**	**05 00 41.2**	**-0.5**
AKT	**Akhty**	**80.63**	**312**	*e*P	**P**	**05 01 03.8**	**+0.4**
AKT				*e*		05 01 10.9	
AKT				pmax	pmax		
	comp=Z,30nm,1.1s						
RAYN	**Ar Rayn**	**81.13**	**293**	P	**P**	**05 01 05.1**	**-1.3**
RAYN				pmax	pmax		
	comp=Z,15nm,1.1s						
RAYN	**Ar Rayn**	**81.13**	**293**	P	**P**	**05 01 05.1**	**-1.3**
VNDA	**Vanda**	**81.14**	**173**	P	**P**	**05 01 05.2**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,14nm,0.9s						
VNDA	**Vanda**	**81.14**	**173**	P	**P**	**05 01 06.2**	**+1.0**
	comp=Z,12nm,0.8s,baz=324,slow=6.1,SNR=27						
VNDA	**Vanda**	**81.14**	**173**	P	**P**	**05 01 05.2**	**-0.1**
VNDA				IAmb	IAmb	05 01 10.4	
	comp=Z,14nm,0.9s						
MAW	**Mawson**	**81.45**	**200**	P	**P**	**05 01 06.4**	**-0.6**
MAW				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MAW	**Mawson**	**81.45**	**200**	P	**P**	**05 01 08.3**	**+1.3**
	comp=Z,4.2nm,0.7s,baz=63,slow=8.1,SNR=6.5						
MAW				LR	LR	05 33 06.9	
	comp=Z,44nm,19.3s,baz=285,slow=33						
MAW	**Mawson**	**81.45**	**200**	P	**P**	**05 01 06.4**	**-0.6**
GROC	**Groznyy**	**82.23**	**313**	*e*P	**P**	**05 01 12.5**	**+0.8**
GROC				*e*		05 01 18.6	
GROC				pmax	pmax		
	comp=Z,35nm,0.6s						
GNI	**Garni**	**82.76**	**310**	P	**P**	**05 01 13.6**	**-1.2**
GNI				pmax	pmax		
	comp=Z,21nm,1.0s						
GNI	**Garni**	**82.76**	**310**	P	**P**	**05 01 13.6**	**-1.2**
GNI				IAmb	IAmb	05 01 26.6	
	comp=Z,21nm,0.9s						
ZEI	**Tsey**	**83.58**	**313**	*e*P	**P**	**05 01 18.0**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,31nm,0.7s						
AKH	**Akhalkalaki**	**83.79**	**311**	⇑P	**P**	**05 01 22.4**	**+2.3**
GOF	**Gofitskoye**	**84.36**	**315**⇑	*e*P	**P**	**05 01 23.1**	**+0.4**
KBZ	**Khabaz**	**84.38**	**314**	P	**P**	**05 01 23.5**	**+0.7**
	comp=Z,10nm,0.8s,baz=150,slow=4.5,SNR=18						
PRGR	**Permogore**	**84.43**	**332**	*e*P	**P**	**05 01 19.9**	**-2.7**
PRGR				pmax	pmax		
	comp=Z,49nm,0.9s						
NEY	**Neytrino**	**84.48**	**313**	*i* P	**P**	**05 01 23.8**	**+0.3**
NEY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIV	**Kislovodsk**	**84.54**	**314**	*e*P	**P**	**05 01 24.1**	**+0.3**
KIV				pmax	pmax		
	comp=Z,43nm,1.0s						
KIV				MLR	MLR		
	comp=Z,138nm,19.0s						
PPT	**Papeete**	**84.69**	**108**	LR	LR	05 36 30.8	
	comp=Z,34nm,19.9s,baz=294,slow=34						
SKT	**Skwentna**	**85.05**	**28**	IAmb	IAmb	05 01 29.0	
	comp=Z,16nm,1.2s						
COLA	**College**	**86.95**	**25**	*i* P	**P**	**05 01 36.5**	**+1.4**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VORD	**Divnogorie**	**87.14**	**321**	*e*P	**P**	**05 01 35.6**	**-0.7**
VORD				pmax	pmax		
	comp=E,60nm,0.9s						
VORD				pmax	pmax		
	comp=N,8.0nm,1.0s						
VORD				pmax	pmax		
	comp=Z,40nm,1.0s						
VSR	**Storozhevoye**	**87.22**	**321**	*i* P	**P**	**05 01 35.7**	**-1.0**
VSR				pmax	pmax		
	comp=Z,50nm,0.9s						
HDA	**Harding Lake**	**87.31**	**26**	IAmb	IAmb	05 01 38.5	
	comp=Z,7.9nm,1.0s						
ILAR	**Eielson Array**	**87.36**	**25**	P	**P**	**05 01 36.4**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=252,slow=4.4,SNR=34						
LPSR	**Galich'ya Gora**	**87.40**	**322**	*e*P	**P**	**05 01 38.1**	**+0.6**
LPSR				pmax	pmax		
	comp=Z,60nm,1.0s						
LPSR				pmax	pmax		
	comp=N,6.0nm,0.6s						
LPSR				pmax	pmax		
	comp=E,10.0nm,1.3s						
TMCR	**Tamitsa**	**88.08**	**334**	*e*P	**P**	**05 01 38.3**	**-2.2**
MOS	**Moscow**	**88.20**	**326**	*e*P	**P**	**05 01 39.7**	**-1.6**
MOS				pmax	pmax		
	comp=Z,31nm,0.9s						
OBN	**Obninsk**	**88.81**	**325**	*e*P	**P**	**05 01 43.6**	**-0.5**
OBN				*e*		05 05 11.5	
OBN				*e*PPP	PPP	05 07 08.1	
OBN				pmax	pmax		
	comp=Z,45nm,1.3s						
KMBO	**Kilima Mbogo**	**89.20**	**269**	P	**P**	**05 01 42.8**	**-4.4**
KMBO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMBO	**Kilima Mbogo**	**89.20**	**269**	P	**P**	**05 01 48.2**	**+1.0**
	comp=Z,4.1nm,0.8s,baz=40,slow=6.0,SNR=7.2						
KMBO	**Kilima Mbogo**	**89.20**	**269**	P	**P**	**05 01 42.8**	**-4.4**
KMBO				IAmb	IAmb	05 01 56.8	
	comp=Z,7.6nm,0.9s						
SYO	**Syowa Base**	**90.12**	**201**⇓	*e*X	P	05 01 42.0	-8.0
BRTR	**Keskin Array B**	**91.28**	**310**	*i* P	**P**	**05 01 55.5**	**-0.8**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRTR	**Keskin Array B**	**91.28**	**310**	P	**P**	**05 01 54.9**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=126,slow=5.5,SNR=14						
BRTR				LR	LR	05 48 33.7	
	comp=Z,23nm,18.3s,baz=56,slow=39						
QSPA	**South Pole Qui**	**91.29**	**

BURAR	Bucovina Array	96.55	318	⇓P		P	05 02 20.6	+0.4
DOPR	Dopca	96.69	316	⇑P		P	05 02 21.9	+1.0
TRPA	Tarpa	98.23	319	⇑P		Pdif	05 02 28.2	+0.6
KOLS	Kolonicke sedl	98.25	320	*e*P		Pdif	05 02 29.4	+1.6
KOLS	Kolonicke sedl	98.25	320	*e*PDIFF		Pdif	05 02 29.4	+1.6
UZH	Uzhgorod	98.29	319	⇓*i*P		P	05 02 27.0	-0.9
DRGR		98.38	318	⇑P		Pdif	05 02 28.9	+0.4
DRGR		98.38	318	⇑P		Pdif	05 02 28.9	+0.4
SIRR	Siria	99.19	317	⇑P		Pdif	05 02 32.5	+0.4
MDVR	Moldovita	99.45	316	⇓P		Pdif	05 02 33.6	+0.3
NB2	NORSAR Subarra	100.75	333	P		Pdif	05 02 37.1	-1.6
	comp=Z,5.5nm,1.1s,baz=71,slow=4.8							
NOA	NORSAR Array B	100.75	333	P		Pdif	05 02 37.1	-1.6
	comp=Z,1.2nm,0.8s,baz=72,slow=4.5,SNR=3.5							
YKA	Yellowknife Ar	101.76	25	P		Pdif	05 02 43.7	+0.7
	comp=Z,0.7nm,0.6s,baz=298,slow=4.5,SNR=9.6							
YKA				PKiKP		PKiKP	05 07 07.5	+1.3
	comp=Z,0.9nm,0.9s,baz=301,slow=1.8,SNR=8.7							
YKA				PKKPbc		PKKPbc	05 18 49.2	-2.3
	comp=Z,0.4nm,0.8s,baz=104,slow=2.4,SNR=6.6							
GERES	GERESS Array B	103.73	321	Pdiff		Pdif	05 02 53.9	+1.6
	comp=Z,0.2nm,0.3s,baz=98,slow=2.0,SNR=5.2							
NVAR	Mina Array Bea	108.69	49	PKKPab	PKKPab		05 18 43.0	+0.6
	comp=Z,1.0nm,0.8s,baz=129,slow=5.5,SNR=6.4							
PDAR	Pinedale Array	113.32	42	PKKPbc	PKKPbc		05 18 13.6	-1.4
	comp=Z,0.4nm,0.7s,baz=126,slow=2.6,SNR=4.1							
PDAR				PKKPab	PKKPab		05 18 22.0	+0.1
	comp=Z,1.1nm,0.8s,baz=123,slow=5.5,SNR=7.9							
O20A	White River Ci	115.34	44			PKPdf	05 07 34.7	+2.2
ULM	Lac du Bonnet	117.16	29	PKP		PKiKP	05 07 36.1	+0.6
	comp=Z,2.0nm,0.6s,baz=213,slow=1.0,SNR=5.0							
121A	Cooke's Peak, D	118.76	51	P		PKiKP	05 07 41.3	+2.0
	baz=292							
ANMO	Albuquerque	118.82	48	PKIKP		PKPdf	05 07 38.4	-1.0
ANMO	Albuquerque	118.82	48			PKPdf	05 07 38.4	-1.0
ANMO	Albuquerque	118.82	48	P		PKiKP	05 07 41.4	+1.9
	baz=295							
ECSD	EROS Data Cent	120.89	35			PKPdf	05 07 40.9	-2.0
ECSD	EROS Data Cent	120.89	35	P		PKiKP	05 07 43.6	+0.6
	baz=307							
MNTX	Cornudas Mount	120.97	51			PKPdf	05 07 42.3	-1.0
MNTX	Cornudas Mount	120.97	51	P		PKiKP	05 07 45.0	+1.5
	baz=294							
MSTX	Muleshoe	121.99	48	P		PKiKP	05 07 46.8	+1.3
	baz=297							
SPMN	Marine on St.	122.04	32	P		PKiKP	05 07 45.9	+0.7
	baz=312							
SCHQ	Schefferville	122.93	9	PKP		PKiKP	05 07 47.5	+0.8
	comp=Z,3.9nm,0.8s,baz=1.9,slow=3.9,SNR=6.5							
SCHQ	Schefferville	122.93	9			PKPdf	05 07 45.7	-0.7
TXAR	Lajitas Array	123.26	53	PKP		PKiKP	05 07 49.2	+1.0
	comp=Z,0.9nm,0.7s,baz=216,slow=1.3,SNR=12							
TOA0	Torodi Ar. Sit	123.33	287			PKPdf	05 07 46.5	-1.8
TORD	Torodi Ar. Bea	123.33	287	PKP		PKiKP	05 07 48.9	+0.3
	comp=Z,9.4nm,0.8s,baz=54,slow=2.2,SNR=46							
TORD				PKKPab	PKKPab		05 17 39.6	+1.6
	comp=Z,1.5nm,0.8s,baz=278,slow=3.7,SNR=7.7							
KSU1	Kansas State U	123.62	40	P		PKiKP	05 07 49.2	+0.7
	baz=305							
JFWS	Jewell Farm	124.96	32	P		PKiKP	05 07 51.1	+0.1
	baz=313							
D46A	Sault St. Mari	125.01	25	P		PKiKP	05 07 51.8	+0.8
	baz=322							
D48A	Paudash Townsh	125.70	23	P		PKiKP	05 07 52.9	+0.5
	baz=324							
JCT	Junction City	125.81	50	P		PKiKP	05 07 53.8	+0.7
	baz=297							
U40A	Yellville	127.64	40	P		PKiKP	05 07 57.4	+0.8
	baz=307							
W39A	Magazine	127.71	42	P		PKiKP	05 07 57.3	+0.6
	baz=305							
MIAR	Mount Ida	128.23	42	P		PKiKP	05 07 59.6	+1.9
	baz=305							
SFIN	Lafayette	128.42	33	P		PKiKP	05 07 58.2	+0.2
	baz=315							
LATQ	La Tuque	128.62	17	P		PKiKP	05 07 58.5	+0.4
	baz=335							
L48A	N Adams	128.64	29	P		PKiKP	05 07 59.5	+1.1
	baz=319							
Q48A	North Vernon	130.19	33	P		PKiKP	05 08 02.6	+1.0
	baz=316							
P49A	Miami Univ. Ec	130.29	32	P		PKiKP	05 08 02.6	+0.8
	baz=317							
ACSO	Alum Creek Sta	130.66	30	P		PKiKP	05 08 03.1	+0.6
	baz=320							
DBIC	Dimbokro	130.73	280	PKP		PKiKP	05 08 04.6	+1.2
	comp=Z,7.1nm,1.0s,baz=73,slow=6.3,SNR=5.2							
DBIC	Dimbokro	130.73	280	PKPdf		PKPdf	05 08 00.2	-2.2
O51A	Pataskala	130.91	29	P		PKiKP	05 08 03.5	+0.5
	baz=320							
T50A	Nancy	132.05	34	P		PKiKP	05 08 05.5	+0.1
	baz=316							
U50A	Jamestown	132.48	35	P		PKiKP	05 08 06.3	0.0
	baz=315							
R56A	Bull Pasture M	133.81	28	P		PKiKP	05 08 09.4	+0.4
	baz=323							
W52A	Murphy	133.94	35	P		PKiKP	05 08 09.9	+0.6
	baz=316							
BLA	Blacksburg	134.26	30	P		PKiKP	05 08 10.6	+0.7
	baz=321							
X52A	Dahlonega	134.31	36	P		PKiKP	05 08 10.2	+0.1
	baz=315							
W53A	Cullowhee	134.32	34	P		PKiKP	05 08 10.6	+0.4
	baz=316							
U55A	TA2, Sparta	134.48	31	P		PKiKP	05 08 10.7	+0.3
	baz=320							
PLCA	Paso Flores	137.90	161	PKP		PKiKP	05 08 17.5	+0.2
	comp=Z,4.7nm,1.0s,baz=246,slow=1.1,SNR=5.7							
PLCA	Paso Flores	137.90	161	PKPdf		PKPdf	05 08 13.8	-1.5
PEL	Peldehue	144.54	155	PKIKP		PKPab	05 08 25.7	-0.1
PEL	Peldehue	144.54	155			PKPab	05 08 25.6	-0.1
JTS	Las Juntas de	146.69	69	PKIKP		PKPdf	05 08 29.6	-1.9
JTS	Las Juntas de	146.69	69	PKPdf		PKPdf	05 08 29.6	-1.9
CFA	Coronel Fontan	146.88	157	PKP		PKPbc	05 08 33.1	-0.2
	comp=Z,25nm,1.0s,baz=248,slow=3.3,SNR=28							
CFA				PKPbc		PKPab	05 08 34.2	-0.4
	comp=Z,25nm,1.0s,baz=189,slow=3.0,SNR=28							
PB10	IPOC Station P	152.51	144			PKPdf	05 08 43.9	+3.4
LVC	Limon Verde	154.15	146	PKIKP		PKPdf	05 08 41.2	-2.1
LVC	Limon Verde	154.15	146	PKPbc		PKiKP	05 08 53.3	+1.7
	comp=Z,2.3nm,0.5s,baz=100,slow=12,SNR=3.5							
LVC	Limon Verde	154.15	146	PKPdf		PKPdf	05 08 41.2	-2.1
CPUP	Villa Florida	154.92	172	PKP		PKPdf	05 08 45.1	+1.3
	comp=Z,4.7nm,1.0s,baz=77,slow=1.3,SNR=7.4							
CPUP				PKPbc		pPKPdf	05 08 54.1	-1.6
	comp=Z,6.6nm,1.0s,baz=202,slow=1.9,SNR=9.0							
CPUP	Villa Florida	154.92	172			PKPdf	05 08 42.4	-1.4
ROSC	El Rosal	158.38	73	PKP		PKPdf	05 08 51.1	+1.9
	comp=Z,5.2nm,0.7s,baz=87,slow=22,SNR=4.1							
RUSC	La Rusia	159.23	70			PKPdf	05 08 45.8	-4.5
LPAZ	La Paz	159.37	137	PKP		PKPdf	05 08 52.4	+1.9
	comp=Z,2.7nm,0.8s,baz=310,slow=1.7,SNR=8.6							
LPAZ				PKPab		PKPab	05 09 30.3	+2.3
	comp=Z,3.2nm,0.8s,baz=281,slow=3.2,SNR=3.6							
SDV	Santo Domingo	160.18	59			PKPdf	05 08 50.1	-0.8
SAML	Samuel	167.82	129	PKIKP		PKPdf	05 08 56.3	-1.4
SAML	Samuel	167.82	129			PKPdf	05 08 56.3	-1.4

IDC 16 05:08:22.0±1.9, 1°02.N×125°56.E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.4/29, mbtmp3.4/3, Error ellipse: s-maj=183.0km s-min=24.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.54	158	P	P	05 13 23.4	-0.4
	0.9nm,0.5s,baz=336,slow=11,SNR=8.4						
ASAR	Alice Springs	25.84	162	P	P	05 13 55.6	+0.2
	0.4nm,0.5s,baz=340,slow=8.4,SNR=4.1						
MKAR	Makanchi Array	59.14	327	P	P	05 18 24.5	0.0
	0.1nm,0.4s,baz=130,slow=7.2,SNR=3.9						

IDC 16 05:18:29.2±6.5, 8°60.N×98°07.E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/32, mbtmp3.4/3, Error ellipse: s-maj=410.3km s-min=28.5km az=58.0, Malay Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	9.83	5	Lg	Lg	05 23 28.3	
	0.9nm,0.3s,baz=186,slow=33,SNR=12						
MKAR	Makanchi Array	40.38	343	P	P	05 26 08.7	-0.2
	0.3nm,0.6s,baz=161,slow=8.2,SNR=4.7						
WRA	Warramunga Arr	45.60	129	P	P	05 26 51.6	+0.1
	0.4nm,0.7s,baz=307,slow=9.8,SNR=2.9						
ASAR	Alice Springs	47.49	133	P	P	05 27 06.0	-0.3
	0.4nm,0.6s,baz=315,slow=8.2,SNR=5.6						

IDC 16 05:48:19.9±1.3, 19°05N×66°61W×0°03, h28km±10km, n65, σ0°82/97, mb3.4/4, 14C-8D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	Esperanza - Ma	0.57	172	⇑*i*P	Pn	05 48 32.3	+0.1
EMPR	Esperanza - Ma	0.57	172	*e*S	Sn	05 48 41.4	+0.7
EMPR	Esperanza - Ma	0.57	172		Pn	05 48 32.2	+0.1
EMPR					Pn	05 48 32.3	+0.1
EMPR					Sn	05 48 41.2	+0.6
EMPR					Sb	05 48 41.7	+2.4
AOPR	Arecibo Observ	0.71	191	⇑*e*P	Pb	05 48 33.8	+0.1
AOPR	Arecibo Observ	0.71	191	⇑*e*P	Pb	05 48 33.9	+0.1
AOPR	Arecibo Observ	0.71	191	*e*S	Sn	05 48 44.1	0.0
AOPR	Arecibo Observ	0.71	191	Pn	Pb	05 48 34.1	+0.3
AOPR				Sn	Sb	05 48 44.6	+1.4
AOPR					Sn	05 48 44.0	0.0
AGPR	Aguadilla, PR	0.75	220	⇑*e*P	Pb	05 48 33.4	-1.2
AGPR	Aguadilla, PR	0.75	220	*e*S	Sb	05 48 43.5	-0.7
AGPR	Aguadilla, PR	0.75	220		Pn	05 48 33.2	-1.3
AGPR					Pb	05 48 33.6	-0.8
AGPR					Sb	05 48 43.5	-0.7
GCPR	Guaynabo City	0.89	146		Pn	05 48 36.4	-0.1
GCPR				Sn	Sb	05 48 49.4	+1.1
CELP	Cerrillos	0.97	178	⇑*e*P	Pn	05 48 37.6	0.0
CELP	Cerrillos	0.97	178		Pn	05 48 37.6	0.0
MPR	Mayaguez	0.97	211		Pn	05 48 36.9	-0.7
LSP	Las Mesas	0.98	208	⇑*e*P	Pb	05 48 37.8	-0.4
LSP	Las Mesas	0.98	208		Pb	05 48 37.8	-0.4
OBIP	Obispado Ponce	1.00	180	⇑*e*P	Pn	05 48 38.1	+0.1
OBIP	Obispado Ponce	1.00	180	*e*S	Sb	05 48 50.7	-0.7
OBIP	Obispado Ponce	1.00	180		Pn	05 48 38.1	+0.1
OBIP					Pb	05 48 38.3	-0.3
OBIP					Sb	05 48 51.0	-0.4
OBIP				Sn	Sn	05 48 51.5	+0.3
SJG	San Juan	1.03	155	Pg	Pn	05 48 38.8	+0.4
	21nm,0.3s,baz=351,slow=12,SNR=33						
SJG				LR	LR	05 48 52.4	
	comp=Z,20nm,18.7s,baz=298,slow=32						
SJG				Lg	Lg	05 48 53.3	
	110nm,0.3s,baz=303,slow=17,SNR=22						
SJG	San Juan	1.03	155		Pn	05 48 38.6	+0.2
CBYP	Canovanas	1.05	137	⇓*e*P	Pn	05 48 38.8	0.0
CBYP	Canovanas	1.05	137	⇓*e*P	Pn	05 48 38.8	0.0
CBYP				*e*S	Sb	05 48 53.1	+0.2
CBYP	Canovanas	1.05	137	*e*S	Sn	05 48 52.2	-0.4
CBYP	Canovanas	1.05	137	Pn	Pn	05 48 38.5	-0.3
CBYP					Pb	05 48 38.8	0.0
CBYP					Sn	05 48 52.5	-0.1
GBPR	Guanica, Bosqu	1.10	193	⇑*e*P	Pb	05 48 39.6	-0.7
GBPR	Guanica, Bosqu	1.10	193	*e*S	Sb	05 48 53.1	-1.1
GBPR	Guanica, Bosqu	1.10	193		Pb	05 48 39.6	-0.7
GBPR					Sb	05 48 53.1	-1.1
CRPR	Cabo Rojo, PR	1.14	205	⇓*e*P	Pn	05 48 39.9	-0.1
CRPR	Cabo Rojo, PR	1.14	205	*e*S	Sn	05 48 54.0	-0.6
CRPR	Cabo Rojo, PR	1.14	205		Pn	05 48 39.9	-0.1
CRPR					Sn	05 48 54.1	-0.6
CRPR				Sn	Sn	05 48 54.8	+0.2
MLPR	Magueyes Islan	1.15	201	⇓*e*P	Pn	05 48 39.1	-0.9
MLPR	Magueyes Islan	1.15	201	*e*S	Sn	05 48 54.0	-0.8
MLPR	Magueyes Islan	1.15	201		Pn	05 48 39.2	-0.9
MLPR					Pb	05 48 39.5	-1.7
MLPR					Sn	05 48 54.0	-0.8
HUMP	Col San Antoni	1.15	141	⇓*e*P	Pn	05 48 40.2	+0.1
HUMP	Col San Antoni	1.15	141	⇓*e*P	Pn	05 48 40.3	+0.1
HUMP				*e*S	Sb	05 48 55.5	-0.3
HUMP	Col San Antoni	1.15	141	Pn	Pn	05 48 40.7	+0.5
HUMP					Pb	05 48 40.9	-0.4
HUMP					Sb	05 48 55.9	+0.1
HUMP					Sn	05 48 56.5	+1.6
ICMP	Isla Caja de M	1.16	176	⇑*e*P	Pn	05 48 40.0	-0.2
ICMP	Isla Caja de M	1.16	176	*e*S	Sn	05 48 53.9	-1.2
ICMP	Isla Caja de M	1.16	176		Pb	05 48 41.1	-0.2
ICMP					Pn	05 48 41.4	+1.2
ICMP					Sb	05 48 55.3	-0.6
PDPR	Patillas Dam,	1.17	151	⇑*e*P	Pn	05 48 40.7	+0.4
PDPR	Patillas Dam,	1.17	151		Pb	05 48 41.0	-0.4
IGPR	InterUniversit	1.18	156	⇓*e*P	Pn	05 48 40.9	+0.4
IGPR	InterUniversit	1.18	156	*e*S	Sb	05 48 56.2	-0.3
IGPR	InterUniversit	1.18	156		Pb	05 48 42.8	+1.2
IGPR					Pb	05 48 42.9	+1.2
IGPR				Sn	Sb	05 48 56.3	-0.2
MTP	Monte Pirata	1.38	133	*e*P	Pn	05 48 40.1	-0.1
MTP	Monte Pirata	1.38	133	*e*S	Sn	05 48 60.0	-0.6
MTP	Monte Pirata	1.38	133	Pn	Pn	05 48 43.6	+0.3
STVI	Saint Thomas	1.72	114	⇑*e*P	Pn	05 48 47.9	0.0
STVI				*e*S	Sn	05 49 08.9	+0.1
STVI	Saint Thomas	1.72	114	⇑*e*P	Pn	05 48 47.9	0.0
STVI	Saint Thomas	1.72	114		Pn	05 48 48.1	+0.2
STVI					Pb	05 48 48.2	-2.5
STVI					Sn	05 49 08.9	+0.1
STVI					Sb	05 49 09.1	-2.8
PCDR	Punta Cana, DR	1.76	253	⇑*e*P	Pn	05 48 49.2	+0.7
PCDR	Punta Cana, DR	1.76	253	⇑*e*P	Pn	05 48 49.4	+1.0
PCDR	Punta Cana, DR	1.76	253		Pn	05 48 49.8	+1.4
TBVI	Tortola	1.99	108	⇑*e*P	Pn	05 48 51.9	+0.2
TBVI	Tortola	1.99	108	*e*S	Sn	05 49 15.4	-0.3
TBVI	Tortola	1.99	108		Pn	05 48 51.9	+0.2
TBVI					Sn	05 49 15.4	-0.3
DR12	Loma Pena Alta	2.63	265		Pn	05 49 01.3	+0.7
SMRT	St. Maarten	3.50	106	Pn	Pn	05 49 12.9	+0.4
SABA	Saba	3.50	113	Pn	Pn	05 49 13.4	+1.0
SDV	Santo Domingo	10.83	202	LR	LR	05 55 12.9	
	comp=Z,25nm,18.5s,baz=82,slow=38						
TXAR	Lajitas Array	35.19	294	P	P	05 55 12.1	+0.3
	0.4nm,0.8s,baz=112,slow=10.0,SNR=6.1						
TXAR				PcP	PcP	05 57 43.9	+1.3
	0.3nm,0.8s,baz=123,slow=4.6,SNR=3.9						
SIV	San Ignacio	35.24	171	P	P	05 55 11.3	-0.8
	0.8nm,0.9s,baz=1.2,slow=10,SNR=4.4						
PDAR	Pinedale Array	43.17	313	P	P	05 56 20.2	+1.7
	0.2nm,0.6s,baz=105,slow=10,SNR=2.9						
ILAR	Eielson Array	68.80	333	P	P	05 59 20.4	-0.9
	0.2nm,0.6s,baz=99,slow=3.8,SNR=3.1						

NEIC 16 05:56:59.3±0.9, 30°96S×0°07×178°0W±0°2, h35km±3km, mb4.2/3, Error ellipse: s-maj=28.2km s-min=7.7km az=103.0

IDC 16 05:57:02.7±6.4, 30°78S×178°09W, h60km±45km, mb3.6/3, mb1 3.8/3, mb1mx3.5/31, mbtmp3.9/3, Error ellipse: s-maj=75.3km s-min=30.3km az=129.0

ISC 16 05:56:59.1±2.0, 30°99S±0°10×177°8W±0°3, h46km, n12, σ0°62/16, mb4.0/6, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.73	356	P	Pn	05 57 27.0	+0.2
	117nm,0.3s,baz=252,slow=20,SNR=4.9						
RAO				S	Sn	05 57 46.7	-0.9
	466nm,0.3s,baz=267,slow=22,SNR=8.4						
RAO	Raoul Island	1.73	356		Pn	05 57 26.8	0.0
RAO					Sn	05 57 47.6	-0.1
URZ	Urewera	8.38	209	Pn	Pn	05 58 57.9	-0.1
URZ					Sn	06 00 30.4	-0.9
BKZ	Black Stump Fm	9.41	208	Pn	Pn	05 59 11.5	-0.6
BKZ					Sn	06 00 57.0	+0.5
STKA	Stephens Creek	34.53	258	P	P	06 03 44.5	+1.3
	0.7nm,0.4s,baz=108,slow=14,SNR=3.9						
BBOO	Buckleboo	38.99	255	P	P	06 04 21.4	+0.3
BBOO					IAmb	06 04 27.1	
	comp=Z,5.7nm,1.1s						
AS31	Alice Springs	43.26	267	P	P	06 04 56.4	0.0
AS31					IAmb	06 05 04.2	
	comp=Z,2.1nm,1.4s						
ASAR	Alice Springs	43.26	267	P	P	06 04 56.2	-0.2
	comp=Z,0.6nm,0.5s,baz=106,slow=7.2,SNR=9.1						
WR0	Warramunga Arr	44.12	273	P	P	06 05 02.8	-0.5
WR0					IAmb	06 05 11.5	
	comp=Z,19nm,1.5s						
WRA	Warramunga Arr	44.30	273	P	P	06 05 04.1	-0.7
	comp=Z,1.3nm,0.4s,baz=110,slow=8.1,SNR=13						
FINES	FINESS Array B	145.76	340	PKPbc	PKPbc	06 16 32.5	+0.2
	comp=Z,3.1nm,0.5s,baz=67,slow=4.9,SNR=13						
NB2	NORSAR Subarra	149.36	351	PKP	PKPab	06 16 47.4	+0.3
	comp=Z,0.6nm,0.5s,baz=15,slow=2.6						

NNC 16 06:00:59.5±3.6, 54°10N×86°49E, h0km, mb3.7, mpv3.0, 8C-6D, Error ellipse: s-maj=32.0km s-min=15.5km az=15.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	0.99	262	⇓P	Pg	06 01 18.4	-0.2
	0.5nm,0.5s						
ZAA0				⇓S	Sg	06 01 32.3	+0.8
	4.8nm,0.9s						
KURK	Kurchatov	5.89	238	⇑Pn	Pn	06 02 30.1	+2.1
	2.6nm,0.8s						
KURK				⇑Sn	Sn	06 03 40.2	+4.2
	3.0nm,1.2s						
KURK				⇑Lg	Lg	06 04 03.9	
	5.5nm,0.8s						
KURBB	Kurchatov Arra	5.99	238	⇑Pn	Pn	06 02 30.8	+1.5
	3.3nm,0.7s						
KURBB				⇑Sn	Sn	06 03 39.6	+1.0
	3.9nm,0.6s						
KURBB				⇓Lg	Lg	06 04 10.9	
	6.9nm,0.7s						
MK31	Makanchi Array	7.79	202	⇑Pn	Pn	06 02 54.0	0.0
	0.4nm,0.5s,baz=25,slow=13						
MK31				⇓Sn	Sn	06 04 23.1	+0.2
	0.6nm,0.6s,baz=23,slow=22,SNR=3.8						
MK31				⇓Lg	Lg	06 05 03.9	
	4.8nm,1.1s,baz=28,slow=30,SNR=3.9						
MAKZ	Makanchi	7.84	203	⇓Pn	Pn	06 02 57.0	+2.1
	2.6nm,1.3s						
MAKZ				⇑Sn	Sn	06 04 25.4	+1.1
	2.7nm,1.4s						
MAKZ				⇑Lg	Lg	06 05 05.5	
	3.6nm,1.3s						

NEIC 16 06:02:49.9±1.7, 12°15S±0°08×166°47E±0°04, h55km±8km, mb4.6/20, Error ellipse: s-maj=11.6km s-min=3.8km az=163.0

IDC 16 06:02:50.6±5.9, 12°22S×166°52E, h62km±54km, mb4.0/9, mb1 4.2/10, mb1mx3.8/38, mbtmp4.3/10, ML4.1/1, MS3.4/12, Ms1 3.4/12, ms1mx3.2/31, Error ellipse: s-maj=31.2km s-min=25.4km az=154.0

ISC 16 06:02:52.6±0.6, 12°21S±0°07×166°44E±0°08, h83km, n44, σ1°44/38, mb4.5/17, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.95	293	LR	LR	06 07 39.8	
	comp=Z,128nm,18.5s,baz=13,slow=41						
HNR	Honiara	6.95	293	Pn	Pn	06 04 29.1	-2.8
HNR				Sn	Sn	06 05 45.3	-4.2
DZM	Mont Dzumac	9.80	180	*e*Pn	Pn	06 05 09.7	-1.1
	9.6nm,0.3s						
DZM				*e*Sn	Sn	06 06 45.8	-13
	7.5nm,0.3s						
DZM				*e*LR	LR	06 07 19.2	
	comp=Z,424nm,25.3s						
DZM	Mont Dzumac	9.80	180	P	Pn	06 05 09.8	-1.1
	1.5nm,0.3s,baz=23,slow=17,SNR=20						
DZM				S	Sn	06 06 57.8	-1.5
	1.1nm,0.3s,baz=129,slow=23,SNR=3.1						
DZM				LR	LR	06 08 48.2	
	comp=Z,285nm,18.4s,baz=30,slow=36						
DZM	Mont Dzumac	9.80	180	Pn	Pn	06 05 09.4	-1.5
DZM					Sn	06 06 58.1	-1.1
MSVF	Nonsavu	12.48	117		Pn	06 05 44.9	-2.4
KRVT	Keravat (AS076	16.28	298	LR	LR	06 13 29.9	
	comp=Z,40nm,19.9s,baz=120,slow=39						
PMG	Port Moresby	19.14	276	LR	LR	06 13 53.1	
	comp=Z,125nm,22.0s,baz=154,slow=34						
EIDS	Eidsvold	19.54	226	P	P	06 07 12.6	-1.0
AFI	Afiamalu	21.29	97	LR	LR	06 14 09.9	
	comp=Z,86nm,19.5s,baz=64,slow=32						
ARMA	Armidale	22.73	215	P	P	06 07 49.4	+1.5
ARMA				IAmb	IAmb	06 07 50.7	
	comp=Z,11nm,0.8s						
COEN	Coen	22.73	263	P	P	06 07 48.5	+0.6
URZ	Urewera	27.63	162	LR	LR	06 17 54.2	
	comp=Z,91nm,20.2s,baz=328,slow=33						
STKA	Stephens Creek	30.09	225	P	P	06 08 55.8	+1.5
	comp=Z,6.6nm,0.7s,baz=34,slow=8.2,SNR=18						
STKA				LR	LR	06 20 01.3	
	comp=Z,106nm,21.6s,baz=28,slow=34						
STKA	Stephens Creek	30.09	225	P	P	06 08 55.3	+0.9
TOO	Toolangi	31.45	213	P	P	06 09 07.2	+0.9
WR0	Warramunga Arr	31.56	252	P	P	06 09 07.0	-0.4
WR0				IAmb	IAmb	06

LVC				IAML		06 57 54.4	
	comp=Z,850nm,0.1s						
LVC				*e*S	**Sn**	**06 57 54.4**	**-1.0**
PB09	**IPOC Station P**	**0.78**	**321**⇑	*i*P	**Pn**	**06 57 45.0**	**+0.1**
PB09				*e*S	**Sn**	**06 58 00.7**	**+0.3**
PB09				IAML		06 58 02.1	
	comp=E,1μm,0.7s						
PB09	**IPOC Station P**	**0.78**	**321**	*i* P	**Pn**	**06 57 44.9**	**+0.1**
PB09				*e*S	**Sn**	**06 58 00.7**	**+0.3**
PB06	**IPOC Station P**	**0.85**	**249**⇑	*i*P	**Pn**	**06 57 45.7**	**+0.3**
PB06				*e*S	**Sn**	**06 58 01.6**	**+0.3**
PB06				IAML		06 58 03.3	
	comp=E,1μm,0.2s						
PB06	**IPOC Station P**	**0.85**	**249**	*i* P	**Pn**	**06 57 45.5**	**+0.1**
PB06				*e*S	**Sn**	**06 58 01.7**	**+0.3**
PB06				IAML		06 58 05.3	
	comp=Z,818nm,0.5s						
PB03	**IPOC Station P**	**1.03**	**290**⇑	*i*P	**Pn**	**06 57 47.3**	**+0.4**
PB03				*e*S	**Sn**	**06 58 04.7**	**+0.4**
PB03				IAML		06 58 05.8	
	comp=N,2μm,0.3s						
PB15	**IPOC Station P**	**1.06**	**221**⇓	*i*P	**Pn**	**06 57 47.9**	**+0.5**
PB15				*e*S	**Sn**	**06 58 06.1**	**+1.1**
PB15	**IPOC Station P**	**1.06**	**221**	*i* P	**Pn**	**06 57 48.2**	**+0.8**
PB15				*e*S	**Sn**	**06 58 05.0**	**-0.1**
PB15				IAML		06 58 08.1	
	comp=Z,4μm,0.2s						
PB04	**IPOC Station P**	**1.33**	**273**⇑	*i*P	**Pn**	**06 57 50.8**	**+0.7**
PB04				*e*S	**Sn**	**06 58 10.7**	**+0.8**
PB04				IAML		06 58 13.5	
	comp=N,1μm,0.2s						
PB04	**IPOC Station P**	**1.33**	**273**	*i* P	**Pn**	**06 57 50.9**	**+0.7**
PB05	**IPOC Station P**	**1.45**	**252**⇑	*i*P	**Pn**	**06 57 52.0**	**+0.6**
PB05				*e*S	**Sn**	**06 58 12.8**	**+0.7**
PB05				IAML		06 58 19.2	
	comp=E,369nm,0.4s						
PB05	**IPOC Station P**	**1.45**	**252**	*i* P	**Pn**	**06 57 52.0**	**+0.6**
PB10	**IPOC Station P**	**2.02**	**237**	*e*P	**Pn**	**06 57 59.0**	**+0.9**
PB10				*e*S	**Sn**	**06 58 23.1**	**-1.0**
PATCX	**Punta Patache**	**2.07**	**319**⇑	*i*P	**Pn**	**06 57 58.8**	**0.0**
PATCX				*e*S	**Sn**	**06 58 25.1**	**-0.1**
PATCX				IAML		06 58 32.2	
	comp=E,562nm,0.2s						
TA01	**Diego Aracena**	**2.28**	**323**⇓	*i*P	**Pn**	**06 58 01.0**	**-0.4**
TA01				*e*S	**Sn**	**06 58 29.7**	**-0.2**
TA01				IAML		06 58 35.3	
	comp=E,340nm,0.2s						
PB08	**IPOC Station P**	**2.29**	**350**⇑	*i*P	**Pn**	**06 58 02.5**	**+0.6**
PB08				*e*S	**Sn**	**06 58 31.3**	**+0.6**
PB08				IAML		06 58 36.1	
	comp=E,233nm,0.2s						
PB11	**IPOC Station P**	**2.77**	**341**⇓	*i*P	**Pn**	**06 58 07.2**	**-0.6**
PB11				*e*S	**Sn**	**06 58 40.6**	**-0.8**
PB11				IAML		06 58 44.6	
	comp=E,291nm,0.2s						
YJA	**Yavi**	**2.97**	**86**⇓	*i*P	**Pn**	**06 58 11.0**	**+0.4**
YJA				IAML		06 58 11.8	
	comp=Z,5.4nm,0.7s						
PSGC	**Pisagua**	**3.09**	**335**⇑	*i*P	**Pn**	**06 58 10.2**	**-1.7**
PSGC				*e*S	**Sn**	**06 58 47.4**	**-1.3**
PSGC				IAML		06 58 57.2	
	comp=E,122nm,0.4s						
MNMC	**Minye Minye**	**3.36**	**346**⇑	*i*P	**Pn**	**06 58 14.9**	**-0.7**
MNMC				*e*S	**Sn**	**06 58 54.7**	**-0.6**
SLA	**San Lorenzo**	**3.74**	**129**⇓	*i*P	**Pn**	**06 58 20.6**	**+0.1**
AZAP	**Zapla**	**3.81**	**119**⇑	*i*P	**Pn**	**06 58 21.0**	**-0.5**
AHML	**Horco Molle**	**5.34**	**145**	*i* P	**Pn**	**06 58 42.0**	**+0.3**
GO03	**Copiap**	**5.35**	**195**	*i* P	**Pn**	**06 58 40.4**	**-1.5**
LPAZ	**La Paz**	**6.11**	**5**	*i* P	**Pn**	**06 58 53.9**	**+1.1**
VCA	**Vinchina**	**6.32**	**176**	*i* P	**Pn**	**06 58 55.3**	**+0.2**
ACLC	**CERRO LA CRUZ**	**7.17**	**168**	*i* P	**Pn**	**06 59 07.0**	**+0.4**
GO04	**Tololo Observa**	**7.96**	**193**	*i* P	**Pn**	**06 59 13.4**	**-3.8**
APLL	**PUNTA DE LOS L**	**8.20**	**167**	*i* P	**Pn**	**06 59 18.8**	**-1.5**
AMOG	**MOGNA**	**8.50**	**179**	*i* P	**Pn**	**06 59 22.0**	**-2.4**
RTLL	**Cerro Villicun**	**8.89**	**179**	*i* P	**Pn**	**06 59 27.7**	**-2.0**
TCA	**Tanti**	**9.63**	**158**	*i* P	**Pn**	**06 59 37.4**	**-2.2**
ARCO	**CERRO ARCO**	**10.40**	**181**	*i* P	**Pn**	**06 59 53.1**	**+3.0**

IDC ***16*** *07:01:15.2±1.5,2°.78S×128°.75E,h0km,mb3.5/2, mb1 3.9/4,mb1mx3.6/42,mbtmp3.7/4,ML3.8/2,Error ellipse: s-maj=34.0km s-min=24.6km az=90.0*

DJA ***16*** *07:01:17.8±0.7,3°.5±.5×12°.9E±°,h11km±7km,M3.5/9, MLv3.5/9*

ISC 16 07:01:17.1±0.9,2.70S±0°.06×128°.83E±0°.05,h10km,n12, σ1§58/15,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.65**	**172**	P	**Pg**	**07 01 29.5**	**-0.2**
MSAI				S	**Sb**	**07 01 40.0**	**+0.4**
AAI	**Ambon**	**1.17**	**213**	P	**Pg**	**07 01 40.2**	**+0.6**
NLAI	**Namlea**	**1.81**	**253**	P	**Pn**	**07 01 49.0**	**+0.6**
NLAI				S	**Sn**	**07 02 12.0**	**+0.6**
LBMI	**Labuha**	**2.44**	**327**	P	**Pn**	**07 01 57.5**	**+0.4**
SANI	**Sanana**	**2.92**	**283**	P	**Pn**	**07 02 02.7**	**-0.9**
SWI	**Sorong**	**3.04**	**53**	P	**Pn**	**07 02 06.5**	**+1.3**
SIJI	**Sorong**	**3.04**	**53**	Pn	**Pn**	**07 02 06.9**	**+1.6**
	16nm,0.3s,baz=220,slow=22,SNR=35						
SIJI					Sn	**07 02 43.9**	**+2.1**
	8.9nm,0.3s,baz=49,slow=16,SNR=10						
FAKI	**Fak Fak**	**3.42**	**94**	P	**Pn**	**07 02 11.9**	**+1.4**
SRPI	**Serui, Papua**	**7.45**	**84**	P	**Pn**	**07 03 02.1**	**-3.8**
WRA	**Warramunga Arr**	**17.96**	**163**	P	**Pn**	**07 05 25.7**	**-1.4**
	0.3nm,0.3s,baz=346,slow=12,SNR=9.5						
ASAR	**Alice Springs**	**21.41**	**167**	P	**P**	**07 06 04.7**	**-0.7**
	3.0nm,0.8s,baz=347,slow=11,SNR=24						
MKAR	**Makanchi Array**	**64.02**	**326**	P	**P**	**07 11 50.7**	**-0.3**
	0.3nm,0.8s,baz=131,slow=8.1,SNR=2.7						

IDC 16 07:04:37.3±3.6,10°.55S×167°.11E,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.6/40,mbtmp3.8/4,Error ellipse: s-maj=152.9km s-min=30.9km az=136.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**32.91**	**250**	P	P	07 11 14.5	+0.8
	0.3nm,0.3s,baz=79,slow=8.5,SNR=6.7						
ASAR	**Alice Springs**	**34.21**	**243**	P	P	07 11 23.9	-1.1
	0.5nm,0.6s,baz=69,slow=9.1,SNR=8.5						
ILAR	**Eielson Array**	**82.62**	**18**	P	P	07 17 02.0	-0.1
	0.4nm,0.6s,baz=245,slow=5.5,SNR=7.0						
MKAR	**Makanchi Array**	**94.08**	**317**	P	P	07 17 58.0	+0.3
	0.5nm,0.5s,baz=89,slow=5.9,SNR=10						

NNC ***16*** *07:23:22.0±1.1,41°.70N×78°.25E,h0km,mb3.1,mpv2.7, Error ellipse: s-maj=7.7km s-min=4.7km az=174.0, Suspected Mining explosion.*

KRNET ***16*** *07:23:24.7±0.1,42°.07N×78°.17E,h13km,mb2.4*

ISC 16 07:23:25.9±1.4,42°.03N±0°.07×78°.15E±0°.05,h0km,n19, σ1§28/31,13C-11D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRZ	**Przheval'sk**	**0.49**	**22**⇓	*i*P	**Pg**	**07 23 33.8**	**-1.6**
	baz=24						
PRZ				⇓	*i*S	**Sg**	**07 23 40.3**	**-1.5**
	baz=24						
KDJ	**Kajisay**	**0.73**	**279**⇑	*i*P	**Pg**	**07 23 38.8**	**-1.2**
	baz=75						
KDJ				⇑	*i*S	**Sg**	**07 23 49.2**	**-0.3**
	baz=75						
ANVS	**Anan'yevo**	**0.84**	**335**⇑	*i*P	**Pg**	**07 23 40.2**	**-1.8**
	baz=33						
ANVS				⇑	*i*S	**Sg**	**07 23 51.9**	**-1.0**
	baz=33						
MDOK	**Medeo**	**1.40**	**325**	P	**Pg**	**07 23 52.6**	**-0.1**
	5.0nm,0.7s						
MDOK				S	**Sn**	**07 24 16.6**	**+4.4**
	4.5nm,0.7s						
MDOK	**Medeo**	**1.40**	**325**	Pg	**Pb**	**07 23 53.5**	**+0.4**
	2.8nm,0.6s						
MDOK				Lg	Lg	07 24 15.6	
	7.2nm,0.7s						
PDGK	**Podgornoye**	**1.63**	**37**	P	**Pn**	**07 23 56.1**	**0.0**
	1.4nm,0.6s						
PDGK				S	**Sg**	**07 24 20.1**	**+1.6**
	3.0nm,0.9s						
BOOM	**Boomskoye usch**	**1.71**	**287**⇑	*i*P	**Pn**	**07 23 56.5**	**-0.6**
	baz=85						
BOOM				⇑	*i*S	**Sn**	**07 24 19.5**	**-0.3**
	baz=85						
NRN	**Naryn**	**1.72**	**251**⇑	*i*P	**Pn**	**07 23 58.0**	**+0.6**
	baz=49						
NRN				⇑	*i*S	**Sg**	**07 24 22.3**	**+1.2**
	baz=49						
KST	**Kastek**	**1.91**	**303**	Pg	**Pb**	**07 24 01.9**	**+0.1**
	4.5nm,0.5s						
KST				Lg	Lg	07 24 30.2	
	6.6nm,0.9s						
CHKK	**Chushkaly**	**2.02**	**335**	Pg	**Pg**	**07 24 05.2**	**+0.6**
	8.2nm,0.5s						
CHKK				Lg	Lg	07 24 35.8	
	16nm,0.7s						
TKM2	**Tokmak 2**	**2.09**	**296**⇓	*i*P	**Pn**	**07 24 02.8**	**+0.3**
	baz=95						
TKM2				⇓	*i*S	**Sb**	**07 24 30.4**	**-1.1**
	baz=95						
TKM2	**Tokmak 2**	**2.09**	**296**	⇑Pg	**Pb**	**07 24 04.3**	**-0.6**
	2.5nm,0.6s						
TKM2				⇓Lg	Lg	07 24 35.5	
	4.1nm,0.6s						
KZA	**Kyzart**	**2.16**	**272**⇑	*i*P	**Pn**	**07 24 04.5**	**+0.9**
	baz=71						
KZA				⇑	*i*S	**Sb**	**07 24 33.3**	**-0.4**
	baz=71						
KUU	**Kurty**	**2.29**	**325**	Pg	**Pg**	**07 24 09.6**	**-0.3**
	3.1nm,0.3s						
KUU				Lg	Lg	07 24 43.3	
	8.8nm,1.4s						
DJR	**Jarkent**	**2.60**	**27**	Pg	**Pb**	**07 24 13.5**	**0.0**
	1.2nm,0.3s						
DJR				Lg	Lg	07 24 50.2	
	8.7nm,1.3s						
UCH	**Uchtor**	**2.71**	**275**⇓	*i*P	**Pn**	**07 24 12.1**	**+0.8**
	baz=75						
UCH				⇓	*i*S	**Sn**	**07 24 46.4**	**+1.4**
	baz=75						
AAK	**Ala-Archa**	**2.78**	**284**⇓	*i*P	**Pn**	**07 24 12.5**	**+0.6**
	baz=83						
AAK				⇓	*i*S	**Sn**	**07 24 47.4**	**+1.2**
	baz=83						
AAK	**Ala-Archa**	**2.78**	**284**	⇓Pg	**Pb**	**07 24 14.9**	**-1.7**
	4.9nm,1.3s						
AAK				⇓Lg	Lg	07 24 54.0	
	6.5nm,0.8s						
USP	**Ospenovka**	**2.97**	**296**⇑	*i*P	**Pn**	**07 24 14.6**	**+0.3**
	baz=95						
USP				⇑	*i*S	**Sn**	**07 24 51.1**	**+0.4**
	baz=95						

IDC ***16*** *07:32:41.6±1.1,42°.27N×137°.91E,h275km±14km,mb3.1/6, mb1 3.1/10,mb1mx2.9/40,mbtmp3.6/10,Error ellipse: s-maj=19.1km s-min=14.2km az=52.0*

JMA ***16*** *07:32:42.7±0.4,42°.20N×137°.93E,h267km,M3.4*

ISC 16 07:32:42.1±0.8,42°.17N±0°.07×138°.22E±0°.08,h300km,n28, σ1§27/33,mb3.3/6,Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOSM	**Okushiri--Mats**	**0.94**	**95**	P	**Pn**	**07 33 20.2**	**-1.9**
JHST	**Hiyamasetana**	**1.25**	**78**	P	**Pn**	**07 33 22.6**	**-1.1**
JSH	**Shimam**	**1.43**	**70**	P	**Pn**	**07 33 24.0**	**-0.7**
JOMM	**Oshimamatsumae**	**1.48**	**115**	P	**Pn**	**07 33 24.1**	**-1.0**
JKB	**Kayabe**	**2.11**	**97**	P	**Pn**	**07 33 29.6**	**-0.1**
JOT	**Ohata**	**2.25**	**110**	P	**Pn**	**07 33 30.7**	**-0.2**
JEW	**Eniwo**	**2.48**	**73**	P	**Pn**	**07 33 33.4**	**+0.6**
JANG	**Nango**	**3.06**	**125**	P	**Pn**	**07 33 38.1**	**-0.4**
JNBK	**Urakawa-nobuka**	**3.37**	**87**	P	**Pn**	**07 33 41.8**	**+0.3**
JNBK				*e*S	**S**	**07 34 29.0**	**+0.1**
JFR	**Furan**	**3.37**	**71**	P	**Pn**	**07 33 41.9**	**+0.4**
JFR				*e*S	**S**	**07 34 28.8**	**-0.3**
JOM	**Ohasama**	**3.56**	**138**	P	**Pn**	**07 33 44.0**	**+0.4**
JYK	**Kaneyama**	**3.64**	**153**	P	**Pn**	**07 33 44.4**	**0.0**
JKK2	**Kamakawa 2**	**3.73**	**61**	P	**Pn**	**07 33 46.2**	**+0.9**
JKK2				*e*S	**S**	**07 34 35.2**	**-0.6**
ASAJ	**Asahikawa**	**3.74**	**57**	P	**Pn**	**07 33 46.4**	**+1.0**
	2.3nm,0.3s,baz=250,slow=17,SNR=6.8						
ASAJ				S	**S**	**07 34 35.8**	**-0.4**
	1.4nm,0.3s,baz=8.7,slow=26,SNR=9.1						
JCH	**Churui**	**3.83**	**82**	P	**Pn**	**07 33 46.5**	**+0.1**
JCH				*e*S	**S**	**07 34 35.9**	**-2.0**
JMK	**Ichinoseki**	**3.94**	**144**	P	**Pn**	**07 33 47.0**	**-0.7**
JWK2	**Keihoku**	**4.12**	**39**	P	**Pn**	**07 33 50.7**	**+1.3**
JTKR	**Abashiri--Toko**	**4.54**	**65**	P	**Pn**	**07 33 55.2**	**+1.0**
USRK	**Ussuriysk Ar.**	**4.99**	**296**	P	Pn	07 33 54.0	-5.3
	baz=106,slow=11,SNR=19						
MJAR	**Matsushiro Arr**	**5.62**	**180**	P	**Pn**	**07 34 07.9**	**+0.8**
	0.1nm,0.3s,baz=354,slow=11,SNR=4.2						
NEM2	**Nemuro 2**	**5.66**	**75**	P	**Pn**	**07 34 07.0**	**-0.3**
NEM2				*e*S	**S**	**07 35 12.2**	**-3.6**
KLR	**Kul'dur**	**8.38**	**330**	P	**Pn**	**07 34 38.6**	**-1.5**
	0.1nm,0.3s,baz=147,slow=12,SNR=3.6						
SONM	**Songino Array**	**23.10**	**295**	P	**P**	**07 37 20.9**	**-1.2**
	0.6nm,0.5s,baz=76,slow=9.1,SNR=5.0						
ZALV	**Zalesovo Beam**	**36.73**	**307**	P	**P**	**07 39 20.2**	**-0.7**
	1.1nm,0.4s,baz=91,slow=9.4,SNR=3.9						
MKAR	**Makanchi Array**	**39.46**	**296**	P	**P**	**07 39 43.2**	**-0.6**
	0.9nm,0.5s,baz=84,slow=9.4,SNR=10						
WRA	**Warramunga Arr**	**61.91**	**184**	P	**P**	**07 42 32.2**	**+1.9**
	0.4nm,0.6s,baz=360,slow=7.1,SNR=4.0						
FINES	**FINESS Array B**	**63.13**	**330**	P	**P**	**07 42 38.8**	**+0.9**
	0.5nm,0.4s,baz=46,slow=14,SNR=5.1						
ASAR	**Alice Springs**	**65.63**	**184**	P	**P**	**07 42 57.4**	**+2.9**
	0.2nm,0.6s,baz=5.4,slow=6.5,SNR=4.0						

AEIC ***16*** *07:33:05.4±2.3,50°.91N±0°.06×179°.51W±0°.08,h9km±2km, Error ellipse: s-maj=9.9km s-min=5.9km az=153.0*

BJI ***16*** *07:33:09.9±0.0,51°.24N×179°.40W,h39km,mB5.6/63, mb5.8/83,Ms5.3/82,Ms7 5.1/78*

NEIC ***16*** *07:33:09.7±2.3,51°.17N±0°.08×179°.23W±0°.06,h27km±1km, mb5.8/574,Ms_20 5.1/473,Mwb5.5/77,ML5.4/28(AEIC), Mwc5.6(GCMT),Error ellipse: s-maj=14.3km s-min=5.7km az=164.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.52; $M_{\theta\theta}$-1.62; $M_{\phi\phi}$0.10; $M_{r\theta}$0.81; $M_{\theta\phi}$-0.44; $M_{r\theta}$0.75; Fault plane solution: $M_0$1.97000×10^{17} NP1:ϕ_s273.58000°,δ32.10000°,λ119.39000°. NP2: ϕ_s59.95000°,δ62.42000°,λ72.89000°. Principal axes: T 1.9438, Plg68.0000°, Azm296.0000°; N 0.0580, Plg15.0000°, Azm68.0000°; P -2.0017, Plg16.0000°, Azm162.0000°;*

MOS ***16*** *07:33:09.6±0.9,51°.40N×179°.14W,h33km,mb6.0/118, MS5.2/53 Error ellipse: s-maj=6.5km s-min=4.5km az=108.0*

IDC ***16*** *07:33:10.5±1.4,51°.37N×179°.10W,h27km±8km,mb5.3/34, mb1 5.4/38,mb1mx5.3/45,mbtmp5.4/38,ML4.6/4,MS5.0/38, Ms1 5.0/38,ms1mx4.9/51,Error ellipse: s-maj=13.8km s-min=8.5km az=166.0*

GCMT ***16*** *07:33:12.7±0.1,51°.19N±0°.01×179°.10W±0°.01,h32km, MW5.6/159,Moment Tensor Solution. s139,c249; s159,c288; Duration: 1§5 Moment tensor: Scale 10^{17} Nm; M_{rr}2.11±.04; $M_{\theta\theta}$-2.15±.03; $M_{\phi\phi}$0.04±.03; $M_{r\theta}$1.46±.04; $M_{\theta\phi}$-0.87±.02; $M_{\phi r}$1.26±.04; Best double couple: M_o2.99900×10^{17} NP1:ϕ_s267.00000°,δ28.00000°, λ118.00000°. NP2:ϕ_s56.00000°,δ66.00000°,λ76.00000°. Principal axes: T 2.9060, Plg67.0000°, Azm301.0000°; N 0.1910, Plg13.0000°, Azm62.0000°; P -3.0920, Plg19.0000°, Azm157.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *07:33:13,51°.13N×179°.11W,h34km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.11; $M_{\theta\theta}$-2.29; $M_{\phi\phi}$0.18; $M_{r\theta}$1.43; $M_{\theta\phi}$-0.71; $M_{\phi r}$1.30; Fault plane solution: M_o3.02000×10^{17} NP1:ϕ_s274.00000°, δ29.00000°,λ123.00000°. NP2:ϕ_s57.00000°,δ66.00000°, λ73.00000°. Principal axes: T 2.9564, Plg65.0000°, Azm298.0000°; N 0.1172, Plg16.0000°, Azm64.0000°; P -3.0737, Plg19.0000°, Azm160.0000°;*

BGR ***16*** *07:33:15.6±0.0,51°.68N×179°.17E,h33km,mb5.9, mB_BB6.1,Ms5.0*

ISC 16 07:33:11.7±0.3,51°.22N±0°.04×179°.18W±0°.02,h41km±2km, h40km:pP-P,n1965,σ1§22/1788,mb5.8/537,MS5.1/327, 81C-78D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAEA	**Gareloi East**	**0.63**	**26**		**Pn**	**07 33 24.5**	**+0.3**
TASE	**Tanaga Southea**	**0.95**	**49**		**Pn**	**07 33 28.6**	**+0.1**
TANO	**Tanaga North**	**0.96**	**43**		**Pn**	**07 33 29.3**	**+0.5**
TAFP	**Tanaga Falls P**	**1.01**	**47**		**Pn**	**07 33 29.8**	**+0.3**
TAPA	**Tanaga Point A**	**1.05**	**54**		**Pn**	**07 33 30.1**	**+0.2**
KIMD	**Kanaga Island**	**1.33**	**65**		**Pn**	**07 33 33.6**	**-0.2**
KIKV	**Kanaga Island**	**1.42**	**61**		**Pn**	**07 33 35.3**	**+0.3**
KIWB	**Kanaga Island**	**1.42**	**63**	Pn	**Pn**	**07 33 35.1**	**+0.1**
KICM	**Kanaga Island**	**1.43**	**60**		**Pn**	**07 33 35.7**	**+0.6**
KIRH	**Kanaga Island**	**1.47**	**62**		**Pn**	**07 33 36.1**	**+0.4**
ADK	**Adak**	**1.70**	**66**	P	**Pn**	**07 33 38.7**	**-0.1**
ADK						07 34 00.9	
ADK	**Adak**	**1.70**	**66**	Pn	**Pn**	**07 33 38.6**	**-0.1**
ADK				Sn	**Sn**	**07 34 00.8**	**+1.6**
ADAG	**Mount Adagdak**	**1.78**	**64**		**Pn**	**07 33 41.0**	**+1.0**
GSTD	**Great Sitkin T**	**2.07**	**65**		**Pn**	**07 33 45.1**	**+1.1**
GSMY	**Great Sitkin M**	**2.12**	**66**		**Pn**	**07 33 45.8**	**+1.2**
GSTR	**Great Sitkin T**	**2.14**	**64**		**Pn**	**07 33 45.6**	**+0.8**
GSTR				Sn	**Sn**	**07 34 12.3**	**+2.2**
ATKA	**Atka Island**	**3.26**	**70**		**Pn**	**07 34 01.4**	**+1.2**
ATKA				Sn	**Sn**	**07 34 38.1**	**+0.5**
ATKA	**Atka Island**	**3.26**	**70**		**Sn**	**07 34 44.8**	**+7.1**
KOKL	**Mount Kliuchef**	**3.29**	**68**		**Pn**	**07 34 02.4**	**+1.7**
KOFP	**Korovin Flat P**	**3.33**	**69**		**Pn**	**07 34 03.2**	**+1.9**
KONE	**Korovin Northe**	**3.36**	**67**		**Sn**	**07 34 46.7**	**+6.5**
SMY	**Shemya**	**4.42**	**293**	P	**Pn**	**07 34 16.8**	**+0.6**
SMY						07 35 06.1	
SMY	**Shemya**	**4.42**	**293**	Pn	**Pn**	**07 34 16.8**	**+0.6**
SMY				Sn	**Sn**	**07 35 06.1**	**-0.2**
NIKH	**Nikolski High**	**6.60**	**71**		**Pn**	**07 34 48.0**	**+1.9**
OKSP	**Okmok Steeple**	**7.00**	**69**		**Pn**	**07 34 54.3**	**+2.7**
SPIA	**Saint Paul Isl**	**7.94**	**38**	Pn	**Pn**	**07 35 00.2**	**-4.2**
MREP	**Makushin Rep't**	**8.02**	**66**		**Pn**	**07 35 07.7**	**+2.1**
MSW	**Makushin Switc**	**8.03**	**66**		**Pn**	**07 35 08.7**	**+3.1**
UNV	**Unalaska Valle**	**8.17**	**66**		**Pn**	**07 35 08.8**	**+1.3**
UNV	**Unalaska Valle**	**8.17**	**66**		**Sn**	**07 36 45.5**	**+7.1**
AKMO	**Akutan Morgan**	**8.51**	**65**		**Pn**	**07 35 15.2**	**+2.9**
FALS	**False Pass**	**10.17**	**63**		**Pn**	**07 35 36.7**	**+1.8**
SDPT	**Sand Point**	**11.93**	**62**		**Pn**	**07 35 59.4**	**+0.5**
CNBA	**Chernabura Isl**	**12.33**	**65**		**Pn**	**07 36 03.5**	**-1.0**
GAMB	**Gambell**	**13.20**	**15**		**Pn**	**07 36 18.9**	**+2.6**
PET	**Petropavlovsk**	**13.73**	**286**	*e*P	**Pn**	**07 36 24.8**	**+1.3**
PET				*e*S	**Sn**	**07 38 56.6**	**+2.2**
PET				pmax	pmax		
	comp=Z,1μm,10.6s						
PET				pmax	pmax		
	comp=Z,1μm,10.2s						
PET				pmax	pmax		
	comp=Z,304nm,1.0s						
PET				MLR	MLR		
	comp=Z,7μm,19.0s						
PET				MLR	MLR		
	comp=Z,6μm,19.0s						
PEA0B	**Petropavlovsk-**	**14.30**	**287***c*	*i*P	**Pn**	**07 36 31.5**	**+0.2**
PEA0B	**Petropavlovsk-**	**14.30**	**287**	Pn	**Pn**	**07 36 31.7**	**+0.3**
PETK	**Petropavlovsk-**	**14.30**	**287**	Pn	**Pn**	**07 36 32.2**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=100,slow=12,SNR=27						
PETK				LR	LR	07 41 51.6	
	comp=Z,10μm,21.7s,baz=92,slow=36						
CHIR	**Chirikof Islan**	**14.72**	**63**	Pn	**Pn**	**07 36 35.0**	**-1.9**
ANM	**Nome**	**15.21**	**23**	P	**Pn**	**07 36 44.9**	**+1.6**
ANM				pmax	pmax		
	comp=Z,139nm,1.0s						
ANM	**Nome**	**15.21**	**23**		**Pn**	**07 36 44.9**	**+1.6**
SKR	**Severo-Kuril's**	**15.56**	**278**	*e*P	**P**	**07 36 52.5**	**+0.9**
SKR				*e*S	**Sn**	**07 39 41.0**	**+2.0**
SKR				pmax	pmax		
	comp=Z,485nm,0.9s						
SKR				pmax	pmax		
	comp=Z,800nm,5.1s						
SKR				MLR	MLR		
	comp=Z,1μm,15.0s						
SII	**Sitkinak Islan**	**15.63**	**60**		**Pn**	**07 36 48.0**	**-0.8**
SII				IAmb	IAmb	07 37 03.8	
	comp=Z,366nm,0.8s						
OHAK	**Old Harbor**	**16.23**	**58**		**Pn**	**07 36 54.2**	**-2.3**
SVW2	**Sparrevohn**	**16.36**	**44**		**Pn**	**07 36 59.2**	**+1.2**
KDAK	**Kodiak Island**	**16.71**	**57**	P	**Pn**	**07 37 00.8**	**-1.8**
KDAK				pmax	pmax		
	comp=Z,176nm,1.1s						
KDAK	**Kodiak Island**	**16.71**	**57**	Pn	**Pn**	**07 37 00.1**	**-2.5**
	comp=Z,3.4nm,0.3s,baz=263,slow=2.8,SNR=39						
KDAK	**Kodiak Island**	**16.71**	**57**		**Pn**	**07 37 00.8**	**-1.8**
RSO	**Redoubt South**	**17.38**	**48**	Pn	**Pn**	**07 37 09.2**	**-1.8**
HOM	**Homer**	**17.65**	**51**		**Pn**	**07 37 13.6**	**-0.5**
BRLK	**Bradley Lake**	**18.05**	**51**		**Pn**	**07 37 17.9**	**-1.2**
BILL	**Bilibino**	**18.31**	**343***c*	*i*P	**Pn**	**07 37 23.8**	**+1.6**
BILL				pmax	pmax		
	comp=Z,620nm,1.7s						
BILL				MLR	MLR		
	comp=Z,12μm,17.0s						
BILL	**Bilibino**	**18.31**	**343**		**Pn**	**07 37 23.5**	**+1.3**
BILL				IAmb	IAmb	07 37 31.0	
	comp=

comp=Z,518nm,0.9s
DHY S Sn 07 41 39.7 -3.1
EYAK Cordova Ski Ar 20.73 50 P P 07 37 49.5 +1.2
EYAK IAMs_20 IAMs_20 07 46 10.9
comp=Z,8μm,22.0s
WRH Wood River Hil 20.92 39 P P 07 37 49.6 -0.8
MDM Murphy Dome 21.08 37 P P 07 37 52.4 +0.2
MDM IAmb IAmb 07 38 01.5
comp=Z,326nm,0.9s
CCB Clear Creek Bu 21.11 38 P P 07 37 51.4 -1.1
TCOL CIGO, UAF Yank 21.18 38 P P 07 37 52.4 -0.8
baz=245,SNR=30
COLA College 21.19 38 *d i*P P **07 37 54.1 +0.9**
COLA pmax pmax
comp=Z,145nm,0.9s
COLA College 21.19 38 P P 07 37 54.2 +0.9
COLA IAmb IAmb 07 38 04.3
comp=Z,310nm,0.9s
HDA Harding Lake 21.35 40 P P **07 37 54.2 -0.9**
HDA IAMs_20 IAMs_20 07 47 10.8
comp=Z,6μm,19.0s
HDA Harding Lake 21.35 40 P P 07 37 54.2 -0.9
baz=247,SNR=60
HMT Hamilton 21.41 51 IAMs_20 IAMs_20 07 47 52.0
comp=Z,6μm,19.0s
POKR Poker Plat Res 21.45 38 P P **07 37 55.9 -0.2**
baz=245,SNR=72
PAX Paxson 21.47 44 P P **07 37 56.0 -0.5**
PAX pmax pmax
comp=Z,347nm,1.0s
PAX MLR MLR
comp=Z,6μm,19.0s
PAX Paxson 21.47 44 P P **07 37 56.0 -0.5**
PAX IAmb IAmb 07 38 05.7
comp=Z,347nm,1.0s
PAX IAMs_20 IAMs_20 07 47 30.8
comp=Z,6μm,19.0s
COLD Coldfoot 21.52 31 P P **07 37 58.1 +1.4**
COLD IAMs_20 IAMs_20 07 45 51.1
comp=Z,6μm,20.0s
IL31 21.52 39 P P **07 37 55.9 -0.9**
IL31 IAmb IAmb 07 38 14.2
comp=Z,352nm,1.1s
ILAR Eielson Array 21.52 39 P P **07 37 54.2 -2.6**
comp=Z,11nm,0.5s,baz=235,slow=8.1,SNR=124
ILAR PcP PcP **07 41 57.9 +0.1**
comp=Z,6.3nm,0.7s,baz=275,slow=3.3,SNR=7.9
ILAR ScP ScP **07 45 30.9 -0.4**
comp=Z,8.4nm,0.8s,baz=284,slow=3.1,SNR=18
ILAR P3KPbc 08 11 50.5
comp=Z,1.7nm,1.0s,baz=48,slow=3.9,SNR=13
SUCK Suckling Hills 21.61 52 IAMs_20 IAMs_20 07 47 24.2
comp=Z,7μm,20.0s
GLB Gilahina Butte 21.84 48 P P **07 37 59.4 -0.9**
RIDG Independent Ri 21.98 42 P P **07 38 00.9 -1.0**
RIDG IAMs_20 IAMs_20 07 47 53.3
comp=Z,7μm,20.0s
CRQM Cirque 22.03 50 P P **07 38 03.2 +0.6**
TGL Tana Glacier 22.18 50 P P **07 38 04.4 +0.3**
MCARA McCarthy VSAT 22.20 49 P P **07 38 04.8 +0.7**
MCARA IAmb IAmb 07 38 25.8
comp=Z,283nm,0.9s
MENT Mentasta 22.23 45 P P **07 38 03.8 -0.8**
DOT Dot Lake 22.28 43 P P **07 38 02.6 -2.5**
DOT IAmb IAmb 07 38 06.8
comp=Z,319nm,1.0s
DOT IAMs_20 IAMs_20 07 48 10.2
comp=Z,6μm,20.0s
PRP Porcupine Dome 22.35 37 P P **07 38 04.5 -1.4**
SCRK Sand Creek 22.42 42 P P **07 38 04.8 -1.8**
SCRK IAMs_20 IAMs_20 07 48 07.8
comp=Z,6μm,19.0s
BALM Baldy 22.46 50 P P **07 38 07.0 -0.1**
KUR Kuril'sk 22.62 268 *c i*P P **07 38 09.5 +0.7**
KUR *e* 07 38 21.1
KUR *e*PPP PPP 07 38 36.3
KUR S S **07 42 15.0 +1.4**
KUR pmax pmax
comp=Z,3μm,3.9s
KUR pmax pmax
comp=E,2μm,3.8s
KUR pmax pmax
comp=N,1μm,4.0s
KUR pmax pmax
comp=Z,941nm,1.3s
KUR pmax pmax
comp=E,192nm,1.2s
KUR pmax pmax
comp=N,89nm,1.1s
KUR smax smax
comp=E,2μm,25.0s
BARN Barnard Glacie 22.79 50 P P **07 38 10.6 -0.1**
FYU Fort Yukon 22.89 35 P P **07 38 10.9 -0.5**
FYU IAmb IAmb 07 38 33.6
comp=Z,322nm,1.1s
CTGM Chitina Glacie 22.94 50 P P **07 38 12.1 0.0**
PCA Pinnacle 23.37 53 P P **07 38 15.7 -0.6**
TYV Tymovskoe 23.82 284 *e*P P **07 38 22.1 +1.5**
TYV *e*S S **07 42 39.1 +5.7**
TYV pmax pmax
comp=Z,3μm,3.1s
TYV pmax pmax
comp=Z,294nm,1.1s
TYV smax smax
comp=N,13nm,2.1s
TYV MLR MLR
comp=E,4μm,18.0s
TYV MLR MLR
comp=Z,3μm,18.0s
EGAK Eagle 23.83 41 P P **07 38 19.6 -0.9**
EGAK IAmb IAmb 07 38 22.1
comp=Z,501nm,1.1s
EGAK IAMs_20 IAMs_20 07 48 54.2
comp=Z,6μm,18.0s
DHAK Deception Hill 24.36 55 IAMs_20 IAMs_20 07 48 04.6
comp=Z,6μm,20.0s
DAWY Dawson 24.39 43 P P **07 38 25.3 -0.5**
DAWY IAMs_20 IAMs_20 07 49 22.0
comp=Z,6μm,20.0s
YUK Yuzh-Kuril'sk 24.45 267 *e*P P **07 38 26.7 +0.3**
YUK *e*PPP PPP 07 39 05.3
YUK *e*S S **07 42 45.4 +1.9**
YUK *e*SSS SSS 07 43 44.7
YUK pmax pmax
comp=N,965nm,1.1s
YUK pmax pmax
comp=E,355nm,1.1s
YUK pmax pmax
comp=Z,1μm,1.1s
NKL Nikolayevsk 24.46 290 *e*P P **07 38 26.1 -0.3**
NKL pmax pmax
comp=E,278nm,1.0s
NKL pmax pmax
comp=Z,1μm,1.0s
NKL pmax pmax
comp=N,5.0nm,1.1s
HYT Haines Junctio 24.78 51 P P **07 38 29.7 +0.2**
YSS Yuzh-Sakhalins 25.09 275 *α i*P P **07 38 34.0 +1.7**
YSS *e* 07 38 38.1
YSS *e**SP **sP** **07 38 47.9 +0.9**
YSS *e* 07 39 07.6
YSS *e* 07 42 05.7
YSS *e*S S **07 42 54.0 +0.2**
YSS pmax pmax
comp=N,190nm,1.0s
YSS pmax pmax
comp=Z,730nm,1.0s
YSS pmax pmax
comp=E,400nm,0.9s
YSS smax smax
comp=E,700nm,4.4s
YSS MLR MLR
comp=Z,3μm,18.0s
YSS MLR MLR
comp=N,2μm,19.0s
YSS MLR MLR
comp=E,2μm,18.0s
YSS Yuzh-Sakhalins 25.09 275 P P **07 38 33.9 +1.7**
SKAG Skagway 25.84 54 IAMs_20 IAMs_20 07 49 04.8
comp=Z,5μm,20.0s
EPYK Eagle Plains 26.04 38 P P **07 38 39.3 -1.4**
EPYK Eagle Plains 26.04 38 P P **07 38 39.5 -1.2**
baz=255
WHY Whitehorse 26.06 52 IAMs_20 IAMs_20 07 49 44.9
comp=Z,5μm,22.0s
JIS Juneau Island 26.38 57 P P **07 38 43.9 +0.2**

JKA Kamikawa-asahi 26.46 270 P P **07 38 46.2 +1.5**
ASAJ Asahikawa 26.46 270 P P **07 38 46.2 +1.5**
comp=Z,377nm,1.0s,baz=44,slow=5.8,SNR=60
ASAJ LR LR 07 49 15.8
comp=Z,2μm,20.4s,baz=74,slow=36
ERM Erimo 27.19 265 *ce*P P **07 38 52.3 +1.1**
ERM pmax pmax
comp=Z,204nm,1.3s
ERM Erimo 27.19 265 P P **07 38 46.8 -4.5**
ERM IAmb IAmb 07 38 53.8
comp=Z,193nm,1.1s
GRNR Gornyy 27.63 287 *i*P P **07 38 55.8 +0.7**
GRNR *e* 07 39 48.6
GRNR *e*S S **07 43 38.0 +4.2**
GRNR pmax pmax
comp=Z,230nm,1.1s
GRNR smax smax
comp=N,8.0nm,1.0s
GRNR MLR MLR
comp=Z,2μm,18.0s
INK Inuvik 27.73 35 P P **07 38 55.3 -0.5**
comp=Z,46nm,1.0s,baz=241,slow=9.4,SNR=50
INK PcP PcP **07 42 12.0 +0.7**
comp=Z,10.0nm,0.6s,baz=323,slow=7.3,SNR=5.3
INK ScP ScP **07 45 49.0 +0.5**
baz=274,slow=13
INK LR LR 07 51 05.0
comp=Z,4μm,19.1s,baz=241,slow=39
INK Inuvik 27.73 35 P P **07 38 55.5 -0.3**
INK PcP PcP **07 42 11.5 +0.2**
INK Inuvik 27.73 35 IAMs_20 IAMs_20 07 50 54.3
comp=Z,4μm,19.0s
DIB Dawson Inlet, 28.30 67 P P **07 39 02.2 +1.2**
YAK Yakutsk 29.34 311 *eP* P **07 39 08.5 -1.7**
YAK *e**PP **pP** **07 39 19.3 -1.9**
YAK *e*PPP PPP 07 40 09.6
YAK *e* 07 42 15.0
YAK *e*S S **07 43 59.6 -0.9**
YAK *e**SS **sS** **07 44 18.7 +0.3**
YAK *e*SS SnSn **07 45 25.9 -2.9**
YAK *e* 07 45 55.6
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK pmax pmax
comp=Z,47nm,0.9s
YAK pmax pmax
comp=E,26nm,1.1s
YAK pmax pmax
comp=Z,86nm,1.5s
YAK pmax pmax
comp=N,48nm,1.4s
YAK pmax pmax
comp=E,60nm,1.5s
YAK smax smax
comp=N,131nm,1.8s
YAK smax smax
comp=E,84nm,2.0s
YAK Yakutsk 29.34 311 P P **07 39 08.8 -1.4**
comp=E,21nm,0.6s,baz=263,slow=4.8,SNR=10
YAK PcP PcP **07 42 16.3 +0.8**
comp=E,16nm,0.5s,baz=68,slow=1.8,SNR=5.8
YAK Yakutsk 29.34 311 P P **07 39 09.7 -0.5**
YAK PcP PcP **07 42 15.2 -0.3**
YAK IAMs_20 IAMs_20 07 50 30.7
comp=Z,4μm,20.0s
TEY Ternei 29.79 276 *i*P P **07 39 14.8 +0.5**
TEY pmax pmax
comp=Z,300nm,2.3s
TEY pmax pmax
comp=Z,310nm,1.0s
TEY pmax pmax
comp=E,300nm,1.7s
TEY pmax pmax
comp=E,200nm,0.9s
TEY pmax pmax
comp=N,80nm,1.0s
TEY MLR MLR
comp=Z,100nm,17.0s
TIXI Tiksi 30.66 331 *ce*P P **07 39 20.9 -0.8**
TIXI pmax pmax
comp=Z,21nm,1.0s
TIXI MLR MLR
comp=Z,8μm,16.0s
TIXI Tiksi 30.66 331 P P **07 39 20.6 -1.1**
comp=Z,16nm,0.8s,baz=0.1,slow=24,SNR=17
TIXI PcP PcP **07 42 18.9 +0.2**
comp=Z,82nm,0.9s,baz=80,slow=1.4,SNR=17
TIXI ScP ScP **07 45 57.8 0.0**
baz=124,slow=4.7
TIXI LR LR 07 52 18.4
comp=Z,4μm,18.9s,baz=92,slow=38
TIXI Tiksi 30.66 331 P P **07 39 20.3 -1.4**
TIXI PcP **07 42 18.4 -0.3**
TIXI ScP **07 45 57.4 -0.3**
TIXI IAMs_20 IAMs_20 07 52 16.3
comp=Z,4μm,18.0s
KLR Kul'dur 30.99 286 *c i*P P **07 39 25.4 +0.5**
KLR pmax pmax
comp=Z,708nm,1.0s
KLR Kul'dur 30.99 286 P P **07 39 25.4 +0.5**
comp=Z,477nm,1.0s,baz=63,slow=8.4,SNR=870
BBB Bella Bella 31.14 68 P P **07 39 26.9 +0.8**
C36M Paulatuk 31.29 34 P P **07 39 26.8 -0.5**
C36M IAMs_20 IAMs_20 07 52 52.5
comp=Z,3μm,20.0s
C36M Paulatuk 31.29 34 P P **07 39 26.8 -0.5**
baz=263,SNR=44
ZEA Zeya 32.08 296 *ce*P P **07 39 34.2 -0.2**
ZEA *e* 07 40 44.0
ZEA *e*S S **07 44 40.0 -3.5**
ZEA *e* 07 45 00.5
ZEA pmax pmax
comp=E,170nm,1.0s
ZEA pmax pmax
comp=Z,380nm,1.0s
ZEA pmax pmax
comp=Z,1μm,6.0s
ZEA pmax pmax
comp=E,400nm,5.0s
ZEA pmax pmax
comp=Z,400nm,8.0s
ZEA smax smax
comp=E,600nm,6.0s
ZEA smax smax
comp=N,800nm,5.0s
ZEA MLR MLR
comp=E,2μm,15.0s
ZEA MLR MLR
comp=Z,3μm,15.0s
ZEA MLR MLR
comp=N,2μm,16.0s
USA0B Ussuriysk Arra 33.08 277 P P **07 39 42.6 -0.6**
USA0B 07 42 26.5
USA0B pmax pmax
comp=Z,65nm,1.0s
USA0B Ussuriysk Arra 33.08 277 P P **07 39 42.6 -0.6**
USA0B PcP **07 42 26.5 +0.8**
USRK Ussuriysk Ar. 33.08 277 P P **07 39 43.4 +0.2**
comp=Z,37nm,0.7s,baz=59,slow=7.8,SNR=78
USRK PcP PcP **07 42 26.9 +1.1**
comp=Z,33nm,0.9s,baz=63,slow=2.2,SNR=12
USRK ScP ScP **07 46 07.5 +1.0**
comp=Z,8.1nm,1.1s,baz=49,slow=5.8,SNR=6.8
USRK LR LR 07 52 01.6
comp=Z,2μm,21.4s,baz=55,slow=34
H11N2 WAKE ISLAND Hy 33.28 204 T T 08 14 59.6
baz=16,slow=76,SNR=804
H11N3 WAKE ISLAND Hy 33.29 204 T T 08 15 00.3
baz=16,slow=76,SNR=848
H11N1 WAKE ISLAND Hy 33.30 204 T T 08 15 01.0
baz=16,slow=76,SNR=696
MJAR Matsushiro Arr 33.52 261 P P **07 39 48.3 +1.1**
comp=Z,48nm,0.9s,baz=51,slow=8.6,SNR=67
MJAR PcP PcP **07 42 28.0 +0.8**
comp=Z,17nm,0.9s,baz=57,slow=1.1,SNR=10
MJAR ScP ScP **07 46 09.8 +1.7**
comp=Z,14nm,1.1s,baz=25,slow=2.1,SNR=14
MJAR LR LR 07 51 22.9
comp=Z,3μm,21.9s,baz=65,slow=32
MJAR Matsushiro Arr 33.52 261 IAmb IAmb 07 39 49.1
comp=Z,48nm,1.0s
MAJO Matsushiro 33.52 261 *c i*P P **07 39 48.3 +1.1**
MAJO pmax pmax
comp=Z,213nm,1.3s
MAJO Matsushiro 33.52 261 P P **07 39 45.0 -2.2**
MAJO IAmb IAmb 07 39 49.7
comp=Z,172nm,1.1s
MAJO Matsushiro 33.52 261 IAMs_20 IAMs_20 07 50 49.7
comp=Z,3μm,22.0s
MAT Matsushiro 33.52 261 P P **07 39 48.2 +1.0**
MAT S S **07 45 07.2 +0.9**
MJB9 Matsu-Tunnel 33.52 261 P P **07 39 44.2 -3.0**
MJB9 IAmb IAmb 07 39 49.7
comp=Z,169nm,1.1s
MJB9 IAMs_20 IAMs_20 07 50 38.7
comp=Z,3μm,22.0s
VLA Vladivostok 33.69 276 *c i*P P **07 39 49.5 +0.9**
MDJ Mudanjiang 34.36 279 P P **07 39 54.1 -0.3**
MDJ pP pP 07 40 05.1 -0.3
MDJ sP sP 07 40 09.3 -0.8
MDJ PP PP **07 41 08.5 -4.0**
MDJ S S **07 45 18.4 -0.7**
MDJ sS sS 07 45 37.1 0.0
MDJ PcS PcS **07 46 16.6 +0.9**
MDJ SS SnSn **07 47 30.3 -0.8**
MDJ ScS ScS **07 50 14.8 +1.3**
MDJ pmax pmax
comp=Z,180nm,0.9s
MDJ pmax pmax
comp=Z,600nm,6.5s
MDJ LR LR
comp=Z,1μm,21.4s
MDJ LR LR
comp=Z,2μm,19.9s
MDJ LR LR
comp=Z,3μm,20.6s
MDJ Mudanjiang 34.36 279 P P **07 39 52.9 -1.5**
MDJ IAmb IAmb 07 39 55.8
comp=Z,136nm,0.9s
MDJ IAMs_20 IAMs_20 07 52 33.3
comp=Z,3μm,21.0s
MSHR Mys Shultsa 34.43 275 *c i*P P **07 39 56.2 +1.2**
H11S1 WAKE ISLAND Hy 34.50 204 T T 08 16 31.0
baz=15,slow=76,SNR=1187
H11S2 WAKE ISLAND Hy 34.52 204 T T 08 16 32.3
baz=15,slow=76,SNR=747
H11S3 WAKE ISLAND Hy 34.52 204 T T 08 16 35.4
baz=15,slow=76,SNR=701
INU Inuyama 35.03 260 P P **07 40 00.8 +0.6**
PGC Sidney 35.24 72 P P **07 40 03.5 +1.7**
PGC IAmb IAmb 07 40 04.8
comp=Z,98nm,1.2s
LLLB Lillooet 35.34 68 P P **07 40 04.2 +1.3**
LLLB IAmb IAmb 07 40 05.6
comp=Z,86nm,1.1s
YKA Yellowknife Ar 35.52 46 P P **07 40 03.5 -0.6**
comp=Z,66nm,0.8s,baz=282,slow=8.5,SNR=442
YKA PcP PcP **07 42 33.1 +0.6**
comp=Z,26nm,1.0s,baz=286,slow=2.9,SNR=13
YKA ScP ScP **07 46 15.2 +0.4**
comp=Z,9.9nm,0.7s,baz=291,slow=3.3,SNR=27
YKA ScS ScS **07 50 19.1 0.0**
comp=Z,0.9nm,0.9s,baz=306,slow=5.3,SNR=3.4
YKA LR LR 07 56 02.5
comp=Z,3μm,19.9s,baz=0.0,slow=39
YKA P3KPbc 08 10 47.5
comp=Z,0.6nm,0.8s,baz=102,slow=5.3,SNR=9.2
NLWA Neilton Lookou 35.55 74 P P **07 40 04.8 +0.1**
NLWA IAmb IAmb 07 40 23.2
comp=Z,96nm,1.0s
NLWA IAMs_20 IAMs_20 07 51 27.2
comp=Z,3μm,22.0s
A04D Lummi Island 35.65 71 P P **07 40 06.3 +0.8**
baz=296,SNR=5.7
D03D Eldon 35.95 73 P P **07 40 09.7 +1.6**
baz=297,SNR=60
E03A Lebam 36.13 75 P P **07 40 11.1 +1.5**
B05A Bryant 36.22 72 P P **07 40 11.5 +1.2**
baz=297,SNR=78
D04E Lakebay 36.31 74 P P **07 40 13.1 +2.0**
baz=298,SNR=11
F03A Seaside 36.43 76 P P **07 40 14.4 +2.2**
F03A IAmb IAmb 07 40 25.1
comp=Z,192nm,1.1s
F03A IAMs_20 IAMs_20 07 51 50.2
comp=Z,3μm,21.0s
B06A Marblemount 36.47 71 P P **07 40 13.3 +0.9**
B06A IAmb IAmb 07 40 14.8
comp=Z,133nm,1.2s
F04D Rainier, OR 36.69 75 P P **07 40 15.9 +1.5**
baz=299,SNR=12
E04D Cinebar 36.73 74 P P **07 40 16.4 +1.8**
baz=299,SNR=71
D05A Enumclaw 36.78 73 P P **07 40 16.4 +1.4**
D05A IAmb IAmb 07 40 27.7
comp=Z,246nm,1.2s
G03D McMinnville, O 36.96 77 P P **07 40 17.8 +1.1**
baz=300,SNR=6.3
C06D Leavenworth 37.09 72 P P **07 40 18.9 +1.1**
baz=298,SNR=10
LON Longmire 37.09 74 P P **07 40 18.8 +0.9**
LON pmax pmax
comp=Z,53nm,0.7s
LON Longmire 37.09 74 P P **07 40 18.8 +0.9**
F04A Amboy 37.12 75 P P **07 40 18.8 +0.8**
F04A IAmb IAmb 07 40 22.1
comp=Z,161nm,0.8s
I02D Swisshome 37.16 79 P P **07 40 21.0 +2.7**
baz=301
COR Corvallis 37.25 78 P P **07 40 20.9 +1.8**
COR pmax pmax
comp=Z,138nm,1.1s
COR Corvallis 37.25 78 P P **07 40 20.9 +1.8**
COR IAmb IAmb 07 40 36.6
comp=Z,138nm,1.1s
COR Corvallis 37.25 78 IAMs_20 IAMs_20 07 51 35.9
comp=Z,4μm,22.0s
CN2 Changchun 37.34 281 *eP* P **07 40 19.0 -0.9**
CN2 *e*PP **PnPn** **07 41 47.8 +1.5**
CN2 *e*S S **07 46 06.6 +1.9**
CN2 *e*SS SnSn **07 48 37.5 -5.6**
CN2 pmax pmax
comp=Z,100nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,1μm,19.0s
CN2 LR LR
comp=Z,560nm,19.0s
CN2 LR LR
comp=Z,1μm,22.0s
KEBM Edson Butte 37.51 81 P P **07 40 22.2 +0.7**
KEBM IAmb IAmb 07 40 38.0
comp=Z,218nm,1.0s
LTY Liberty 37.54 72 P P **07 40 22.2 +0.5**
J01E Myrtle Point 37.61 80 P P **07 40 23.7 +1.5**
baz=302
H04D Lebanon 37.63 78 P P **07 40 24.1 +1.7**
baz=301,SNR=13
I03D Drain, OR 37.68 79 P P **07 40 24.4 +1.6**
baz=302
F05D White Salmon 37.73 75 P P **07 40 24.7 +1.5**
baz=300,SNR=14
B08A Colville Reser 37.82 70 P P **07 40 24.9 +0.9**
B08A IAmb IAmb 07 40 26.3
comp=Z,189nm,1.1s
BOD Bodaibo 37.88 307 *eP* P **07 40 23.0 -1.3**
BOD *e* 07 46 10.9
BOD pmax pmax
comp=Z,141nm,1.7s
H04A Detroit Lake 37.89 77 P P **07 40 26.1 +1.5**
H04A IAmb IAmb 07 40 47.0
comp=Z,228nm,1.1s
K02D Willamette Mer 38.02 81 P P **07 40 27.4 +1.6**
baz=303,SNR=13
HIA Hailar 38.12 292 P P **07 40 26.1 -0.4**
HIA pmax pmax
comp=Z,280nm,1.1s
HIA MLR MLR
comp=Z,3μm,20.0s
HIA Hailar 38.12 292 P P **07 40 26.1 -0.4**
HIA IAmb IAmb 07 40 27.6
comp=Z,280nm,1.1s
HIA Hailar 38.12 292 IAMs_20 IAMs_20 07 56 55.6
comp=Z,3μm,20.0s
G05D Wamic, OR 38.13 76 P P **07 40 28.0 +1.4**
baz=301,SNR=38
I04A Tendick Farm, 38.21 78 P P **07 40 28.8 +1.5**
baz=302,SNR=43
L02E Cave Junction 38.35 81 P P **07 40 29.9 +1.4**
baz=304,SNR=12
E07A Sunnyside 38.36 73 P P **07 40 29.9 +1.3**

E07A IAmb IAmb 07 40 39.7
comp=Z,191nm,1.5s
HUMO Hull Mountain 38.51 80 P **P** **07 40 30.1 +0.3**
HUMO IAMs_20 IAMs_20 07 52 22.9
comp=Z,3μm,22.0s
KRMB Red Mountain 38.51 82 IAMs_20 IAMs_20 07 54 07.8
comp=Z,2μm,19.0s
G06A Carlson Farm, 38.55 75 P **P** **07 40 30.4 +0.1**
I05D Terrebonne, OR 38.59 77 P **P** **07 40 31.8 +1.3**
baz=302,SNR=46
HAWA Hanford 38.64 73 P **P** **07 40 31.1 +0.3**
HAWA IAmb IAmb 07 40 48.4
comp=Z,144nm,1.1s
F07A Phinny Hill Vi 38.65 74 P **P** **07 40 32.3 +1.4**
F07A IAmb IAmb 07 40 48.7
comp=Z,102nm,0.9s
F07A IAMs_20 IAMs_20 07 53 13.2
comp=Z,3μm,22.0s
D08A Wollman Farm, 38.68 72 P **P** **07 40 31.8 +0.6**
J04D Umpqua Nationa 38.69 79 P **P** **07 40 33.0 +1.4**
baz=303,SNR=48
C09A Chrisman Ranch 38.71 70 P **P** **07 40 32.2 +0.8**
C09A IAmb IAmb 07 40 33.5
comp=Z,142nm,1.1s
C09A **S** **07 46 27.9 +2.6**
E08A Dider Farm, El 38.88 73 P **P** **07 40 33.7 +0.9**
PINE Pine Mountain 39.12 77 P **P** **07 40 36.9 +1.8**
L04D Klamath Falls 39.13 80 P **P** **07 40 36.4 +1.3**
baz=304,SNR=39
YBH Yreka Blue Hor 39.14 81 P **P** **07 40 36.0 +0.8**
YBH pmax pmax
comp=Z,58nm,1.0s
YBH Yreka Blue Hor 39.14 81 P **P** **07 40 36.0 +0.8**
YBH IAMs_20 IAMs_20 07 53 04.6
comp=Z,3μm,22.0s
NEW Newport 39.17 69 P **P** **07 40 35.7 +0.4**
NEW pmax pmax
comp=Z,173nm,1.1s
NEW Newport 39.17 69 P **P** **07 40 35.7 +0.4**
NEW IAmb IAmb 07 40 37.1
comp=Z,173nm,1.1s
NEW Newport 39.17 69 P **P** **07 40 35.8 +0.4**
baz=299,SNR=116
J05D Fort Rock, OR 39.21 78 P **P** **07 40 37.7 +1.9**
baz=303,SNR=58
M02C Callahan 39.24 82 P **P** **07 40 37.9 +1.9**
baz=304,SNR=11
K04D Chiloquin, OR 39.24 79 P **P** **07 40 37.5 +1.4**
baz=303,SNR=17
KMRM Mail Ridge 39.38 84 IAMs_20 IAMs_20 07 52 38.7
comp=Z,3μm,22.0s
KSRS Korea Array 39.40 271 P **P** **07 40 38.9 +1.6**
comp=Z,106nm,1.0s,baz=60,slow=8.3,SNR=204
KSRS PcP **PcP** **07 42 45.8 +1.0**
comp=Z,18nm,0.9s,baz=64,slow=3.0,SNR=13
KSRS ScP **ScP** **07 46 32.7 +2.9**
comp=Z,2.5nm,0.9s,baz=58,slow=4.7,SNR=5.7
KSRS LR LR 07 55 53.3
comp=Z,828nm,21.4s,baz=56,slow=34
E09A Wood Farm, Sta 39.41 72 IAmb IAmb 07 40 39.5
comp=Z,181nm,1.3s
SNY Shenyang 39.56 279 ⇑P **P** **07 40 38.0 -0.6**
SNY S **S** **07 46 40.0 +1.8**
SNY pmax pmax
comp=Z,310nm,1.2s
SNY LR LR
comp=Z,2μm,19.8s
SNY LR LR
comp=Z,1μm,22.6s
SNY LR LR
comp=Z,3μm,21.6s
N02D Trinity Center 39.57 82 P **P** **07 40 40.3 +1.5**
baz=305,SNR=9.5
M04C Macdoel 39.66 81 P **P** **07 40 40.9 +1.3**
baz=304,SNR=17
KCPM Cahto Peak 39.77 85 IAMs_20 IAMs_20 07 53 50.7
comp=Z,2μm,20.0s
WDC Whiskeytown Da 39.90 83 P **P** **07 40 41.8 +0.4**
WDC pmax pmax
comp=Z,56nm,1.1s
WDC MLR MLR
comp=Z,1μm,19.0s
WDC Whiskeytown Da 39.90 83 P **P** **07 40 41.8 +0.4**
O02D Mt. Diablo Mer 39.98 83 P **P** **07 40 43.7 +1.6**
baz=306,SNR=25
RES Resolute Bay 39.99 24 IAMs_20 IAMs_20 07 59 22.1
comp=Z,2μm,21.0s
INCN Inchon 40.19 272 P **P** **07 40 44.4 +0.5**
INCN MLR MLR
comp=Z,700nm,19.0s
INCN Inchon 40.19 272 P **P** **07 40 44.4 +0.5**
F10A Beach Ranch, E 40.23 72 P **P** **07 40 44.7 +0.5**
JNU Nakatsue 40.31 263 P **P** **07 40 46.5 +1.5**
comp=Z,280nm,0.9s,baz=36,slow=8.3,SNR=109
JNU Nakatsue 40.31 263 P **P** **07 40 46.1 +1.2**
JNU IAMs_20 IAMs_20 07 55 51.8
comp=Z,3μm,21.0s
CIT Chita 40.41 298 *e*P **P** **07 40 46.2 +0.7**
CIT *e* 07 40 56.7
CIT *e* 07 40 59.8
CIT pmax pmax
comp=Z,758nm,1.1s
TJN Taejon 40.42 270 *de*P **P** **07 40 46.7 +1.0**
HOPS Hopland Field 40.49 85 P **P** **07 40 47.2 +0.9**
HOPS IAMs_20 IAMs_20 07 54 31.9
comp=Z,3μm,20.0s
O03E Paynes Creek 40.52 83 P **P** **07 40 47.3 +0.6**
baz=306,SNR=28
MOD Modoc Plateau 40.54 79 IAMs_20 IAMs_20 07 54 23.7
comp=Z,3μm,21.0s
WALA Waterton Lakes 40.66 67 IAmb IAmb 07 40 49.5
comp=Z,128nm,1.1s
BMO Blue Mountains 40.77 74 IAMs_20 IAMs_20 07 54 20.4
comp=Z,2μm,22.0s
GDXM Geysers 40.78 85 IAMs_20 IAMs_20 07 54 20.4
comp=Z,3μm,20.0s
MCCM Marconi Confer 41.12 86 IAMs_20 IAMs_20 07 56 54.4
comp=Z,2μm,18.0s
WVOR Wild Horse Val 41.27 78 IAMs_20 IAMs_20 07 55 03.2
comp=Z,2μm,20.0s
MSO Missoula 41.75 69 IAmb IAmb 07 40 58.4
comp=Z,206nm,1.1s
MSO Missoula 41.75 69 P **P** **07 40 56.8 0.0**
baz=301,SNR=130
AFDM Forest Hills D 41.83 84 P **P** **07 40 55.1 -2.3**
DL2 Dalian 42.47 277 ⇑*i*P **P** **07 41 02.8 +0.3**
DL2 sP **pwP** **07 41 16.0 -0.7**
DL2 PP **PP** **07 42 41.6 +0.4**
DL2 PcP **PcP** **07 42 54.8 +0.1**
DL2 S **S** **07 47 19.8 -1.6**
DL2 pmax pmax
comp=Z,140nm,1.1s
DL2 pmax pmax
comp=Z,740nm,7.5s
DL2 LR LR
comp=Z,1μm,16.6s
DL2 LR LR
comp=Z,510nm,17.3s
DL2 LR LR
comp=Z,1μm,19.2s
PNTR Pine Nut 42.61 82 P **P** **07 41 05.2 +1.3**
PNTR IAmb IAmb 07 41 23.8
comp=Z,107nm,0.8s
WAKR Walker 43.06 83 IAMs_20 IAMs_20 07 56 02.0
comp=Z,2μm,21.0s
BMN Battle Mountai 43.29 79 IAMs_20 IAMs_20 07 55 44.5
comp=Z,2μm,21.0s
KVN Kaiserville 43.56 81 IAMs_20 IAMs_20 07 55 47.6
comp=Z,2μm,21.0s
EGMT Eagleton 43.56 66 P **P** **07 41 11.2 -0.2**
baz=302,SNR=31
NVAR Mina Array Bea 43.81 82 P **P** **07 41 14.2 +0.6**
comp=Z,28nm,0.9s,baz=297,slow=5.1,SNR=51
NVAR ScP **ScP** **07 46 48.2 +0.5**
comp=Z,4.2nm,0.7s,baz=279,slow=4.0,SNR=6.2
NVAR LR LR 07 56 15.6
comp=Z,1μm,21.6s,baz=285,slow=32
MDPB Devils Postpil 43.81 84 IAMs_20 IAMs_20 07 55 15.9
comp=Z,2μm,22.0s
OMMB Old Mammoth Mi 43.88 84 IAMs_20 IAMs_20 07 59 24.6
comp=Z,2μm,18.0s
MLAC Mammoth, Mammo 43.97 84 P **P** **07 41 16.0 +1.0**
baz=308
ELK Elko 44.33 78 IAMs_20 IAMs_20 07 56 18.1
comp=Z,2μm,22.0s
FFC Flin Flon 44.43 54 P **P** **07 41 16.5 -1.6**

FFC 07 43 01.0
FFC pmax pmax
comp=Z,75nm,1.1s
FFC MLR MLR
comp=Z,2μm,19.0s
FFC Flin Flon 44.43 54 P **P** **07 41 16.5 -1.6**
FFC PcP **PcP** **07 43 01.0 -0.1**
FFC Flin Flon 44.43 54 IAMs_20 IAMs_20 08 01 05.5
comp=Z,2μm,19.0s
VOG Valley Oaks Go 44.44 85 P **P** **07 41 19.1 +0.7**
baz=309
YMR Madison River 44.67 70 P **P** **07 41 20.5 +0.1**
YNM Yellowstone No 44.79 70 P **P** **07 41 21.2 -0.2**
YNR Norris Junctio 44.81 70 P **P** **07 41 22.6 +1.0**
H17A Grant Village 45.05 71 IAmb IAmb 07 41 27.5
comp=Z,267nm,1.1s
H17A Grant Village 45.05 71 P **P** **07 41 25.2 +1.7**
baz=304,SNR=159
LKWY Lake 45.06 70 IAmb IAmb 07 41 34.9
comp=Z,119nm,1.0s
FLWY Flagg Ranch 45.15 71 IAmb IAmb 07 41 27.6
comp=Z,153nm,1.1s
BJI Beijing 45.17 282 P **P** **07 41 25.0 +0.8**
BJI S **S** **07 47 57.5 -3.3**
BJI pmax pmax
comp=Z,120nm,1.0s
BJI pmax pmax
comp=Z,800nm,3.7s
BJI LR LR
comp=Z,930nm,20.4s
BJI LR LR
comp=Z,1μm,20.4s
CWC Cottonwood Cre 45.18 84 P **P** **07 41 25.3 +0.8**
baz=309
BJT Baijiatuau 45.19 282 IAmb IAmb 07 41 26.4
comp=Z,98nm,0.9s
GRAC Grapevine Rang 45.28 83 P **P** **07 41 25.9 +0.7**
baz=309
IRK Irkutsk 45.32 303 *e*P **P** **07 41 24.9 -0.4**
IRK pmax pmax
comp=Z,239nm,1.7s
RLMT Red Lodge 45.41 69 P **P** **07 41 27.0 +0.7**
baz=304,SNR=358
ISA Isabella, Lake 45.43 86 IAMs_20 IAMs_20 07 59 52.4
comp=Z,2μm,18.0s
REDW Red Top Meadow 45.47 72 IAmb IAmb 07 41 44.2
comp=Z,103nm,1.2s
SNOW Snow King Moun 45.47 72 IAmb IAmb 07 41 37.1
comp=Z,192nm,1.5s
R11A Troy Canyon, C 45.55 81 IAMs_20 IAMs_20 07 57 35.3
comp=Z,2μm,20.0s
R11A Troy Canyon, C 45.55 81 P **P** **07 41 28.0 +0.5**
baz=308
DAC Darwin (Calif) 45.59 84 IAMs_20 IAMs_20 07 59 48.9
comp=Z,3μm,22.0s
AHID Auburn Hatcher 45.66 73 IAmb IAmb 07 41 46.4
comp=Z,105nm,1.1s
AHID IAMs_20 IAMs_20 07 57 19.0
comp=Z,2μm,22.0s
TLY Talaya 45.95 302 *c*P **P** **07 41 30.6 +0.4**
TLY *e* 07 43 07.7
TLY *e* 07 43 21.8
TLY *e*S **S** **07 48 18.4 +6.6**
TLY pmax pmax
comp=Z,595nm,2.0s
TLY MLR MLR
comp=Z,4μm,17.0s
TLY Talaya 45.95 302 P **P** **07 41 31.1 +0.9**
comp=Z,35nm,0.6s,baz=42,slow=7.2,SNR=72
TLY Talaya 45.95 302 P **P** **07 41 31.1 +0.9**
TLY IAmb IAmb 07 41 32.4
comp=Z,185nm,1.3s
TLY IAMs_20 IAMs_20 08 00 37.2
comp=Z,3μm,21.0s
TPNV Topopah Spring 46.01 83 IAMs_20 IAMs_20 07 56 55.1
comp=Z,2μm,21.0s
TPNV Topopah Spring 46.01 83 P **P** **07 41 32.0 +1.0**
baz=309
HWUT Hardware Ranch 46.06 74 IAmb IAmb 07 41 35.0
comp=Z,97nm,1.1s
ULN Ulaanbaatar 46.12 296 *c*P **P** **07 41 32.5 +0.7**
ULN pmax pmax
comp=Z,261nm,1.0s
ULN Ulaanbaatar 46.12 296 P **P** **07 41 32.8 +1.0**
DUG Dugway, Tooele 46.14 77 IAmb IAmb 07 41 39.0
comp=Z,133nm,1.1s
DUG Dugway, Tooele 46.14 77 P **P** **07 41 33.0 +0.9**
baz=307,SNR=104
JOW Kunigami 46.30 259 P **P** **07 41 33.1 -0.2**
JOW IAMs_20 IAMs_20 08 04 15.9
comp=Z,2μm,20.0s
LAO LASA Array 46.31 66 P **P** **07 41 33.7 +0.5**
baz=304,SNR=12
TCUT Toone Canyon 46.45 75 P **P** **07 41 35.2 +0.7**
DGMT Dagmar 46.47 62 IAmb IAmb 07 41 35.4
comp=Z,127nm,1.2s
DGMT Dagmar 46.47 62 IAMs_20 IAMs_20 08 01 40.1
comp=Z,2μm,18.0s
DGMT Dagmar 46.47 62 P **P** **07 41 34.0 -0.4**
baz=303
CTU Camp Tracy 46.49 75 P **P** **07 41 35.3 +0.5**
SONM Songino Array 46.50 297 P **P** **07 41 35.9 +1.1**
comp=Z,128nm,0.9s,baz=53,slow=11,SNR=489
SONM PcP **PcP** **07 43 09.1 +0.4**
comp=Z,14nm,0.9s,baz=64,slow=3.4,SNR=3.0
SONM ScP **ScP** **07 47 01.0 +2.5**
comp=Z,17nm,1.0s,baz=64,slow=2.7,SNR=14
SONM LR LR 08 02 23.1
comp=Z,5μm,19.0s,baz=59,slow=38
SONM Songino Array 46.50 297 IAmb IAmb 07 41 37.2
comp=Z,153nm,1.1s
BW06 Boulder Array 46.59 72 IAmb IAmb 07 41 45.9
comp=Z,255nm,1.4s
BW06 Boulder Array 46.59 72 P **P** **07 41 36.0 +0.4**
baz=306,SNR=78
PD31 Pinedale Array 46.59 72 IAmb IAmb 07 41 45.9
comp=Z,252nm,1.4s
PDAR Pinedale Array 46.59 72 P **P** **07 41 36.1 +0.4**
comp=Z,42nm,0.6s,baz=304,slow=3.7,SNR=496
PDAR ScP **ScP** **07 47 02.0 +2.9**
comp=Z,7.7nm,0.9s,baz=59,slow=0.2,SNR=8.8
PDAR LR LR 07 58 46.7
comp=Z,1μm,21.2s,baz=314,slow=33
ZAK Zakamensk 46.83 301 *e*P **P** **07 41 37.8 +0.5**
ZAK *e* 07 43 10.7
ZAK pmax pmax
comp=Z,201nm,1.2s
ZAK pmax pmax
comp=Z,44nm,1.2s
TIA Tai'an 46.94 277 P **P** **07 41 38.8 +0.6**
TIA S **S** **07 48 31.4 +5.0**
TIA pmax pmax
comp=Z,130nm,0.9s
TIA pmax pmax
comp=Z,540nm,2.6s
TIA LR LR
comp=Z,870nm,19.6s
TIA LR LR
comp=Z,950nm,17.5s
TIA LR LR
comp=Z,1μm,21.6s
NOR Nord 47.09 3 *i*P **P** **07 41 38.6 -0.2**
comp=Z,30nm,1.0s
MOY Mondy 47.35 304 *e*P **P** **07 41 42.1 +0.8**
MOY pmax pmax
comp=Z,252nm,1.6s
HHC Hu-ho-hao-te 47.50 286 *e*P **P** **07 41 43.9 +1.3**
HHC S **S** **07 48 34.4 0.0**
HHC sS sS 07 48 53.8 +0.8
HHC pmax pmax
comp=Z,83nm,1.3s
HHC pmax pmax
comp=Z,290nm,6.9s
HHC LR LR
comp=Z,1μm,17.3s
HHC LR LR
comp=Z,2μm,17.3s
HHC LR LR
comp=Z,2μm,17.8s
K22A Casper 48.46 70 IAmb IAmb 07 41 51.5
comp=Z,208nm,1.4s
K22A Casper 48.46 70 P **P** **07 41 49.5 -0.6**
baz=307,SNR=52
NJ2 Nanjing 48.58 272 ⇑*i*P **P** **07 41 51.1 +0.2**
NJ2 pP **pP** **07 42 02.0 +0.3**
NJ2 sP **sP** **07 42 07.9 +1.7**
NJ2 S **S** **07 48 50.5 +1.0**

NJ2 pmax pmax
comp=Z,62nm,0.9s
NJ2 pmax pmax
comp=Z,300nm,5.5s
NJ2 LR LR
comp=Z,990nm,22.1s
NJ2 LR LR
comp=Z,890nm,23.0s
NJ2 LR LR
comp=Z,2μm,22.5s
BTO Baotou 48.58 287 P **P** **07 41 52.4 +1.4**
BTO S **S** **07 48 48.8 -0.9**
RWWY Rawlins 48.63 72 IAmb IAmb 07 42 06.7
comp=Z,87nm,0.9s
KULLO Kullorsuaq 48.70 18 *i*P **P** **07 41 50.9 -0.3**
KULLO pmax pmax
comp=Z,71nm,1.0s
KULLO Kullorsuaq 48.70 18 *i*P **P** **07 41 50.9 -0.3**
comp=Z,70nm,1.0s
KULLO Kullorsuaq 48.70 18 *i*P **ScP** **07 47 07.0 -0.1**
comp=Z,52nm,1.1s
U15A North Rim 48.80 80 IAMs_20 IAMs_20 07 58 56.2
comp=Z,2μm,22.0s
TIY Taiyuan 48.90 282 *e*P **P** **07 41 53.3 -0.1**
TIY pP **sP** **07 42 09.1 -0.5**
TIY PP **PP** **07 43 48.8 +2.0**
TIY S **S** **07 48 50.8 -3.4**
TIY sS **sS** **07 49 15.8 +2.9**
TIY pmax pmax
comp=Z,780nm,5.7s
TIY LR LR
comp=Z,1μm,13.9s
TIY LR LR
comp=Z,1μm,19.7s
TIY LR LR
comp=Z,1μm,17.2s
O20A White River Ci 48.96 74 P **P** **07 41 54.2 +0.2**
baz=308,SNR=212
RSSD Black Hills 49.04 67 P **P** **07 41 53.1 -1.5**
RSSD pmax pmax
comp=Z,126nm,1.2s
RSSD Black Hills 49.04 67 P **P** **07 41 53.1 -1.5**
RSSD IAmb IAmb 07 41 55.7
comp=Z,126nm,1.2s
RSSD Black Hills 49.04 67 P **P** **07 41 54.1 -0.5**
baz=307
MDND Maddock 49.36 61 P **P** **07 41 57.0 +0.2**
MDND IAmb IAmb 07 41 58.5
comp=Z,195nm,1.1s
MDND IAMs_20 IAMs_20 08 05 28.7
comp=Z,2μm,18.0s
MDND Maddock 49.36 61 P **P** **07 41 56.0 -0.7**
baz=306
N23A Red Feather La 49.87 72 IAmb IAmb 07 42 11.5
comp=Z,224nm,1.6s
N23A IAMs_20 IAMs_20 08 00 33.4
comp=Z,2μm,22.0s
N23A Red Feather La 49.87 72 P **P** **07 42 01.6 +0.5**
baz=308,SNR=32
KBS Kingsbay 49.95 357 *ce*P **P** **07 42 01.7 +0.9**
KBS pmax pmax
comp=Z,1μm,1.3s
KBS Kingsbay 49.95 357 *e*P **P** **07 42 01.3 +0.5**
KBS Kingsbay 49.95 357 P **P** **07 42 01.3 +0.5**
KBS Kingsbay 49.95 357 IAMs_20 IAMs_20 08 06 45.5
comp=Z,2μm,18.0s
WUAZ Wupatki 49.95 81 IAMs_20 IAMs_20 07 59 29.7
comp=Z,2μm,22.0s
WUAZ Wupatki 49.95 81 P **P** **07 42 02.2 +0.6**
baz=311
ULM Lac du Bonnet 49.97 56 P **P** **07 41 59.6 -1.7**
comp=Z,11nm,0.9s,baz=300,slow=8.5,SNR=12
ULM ScP **ScP** **07 47 14.3 +1.3**
comp=Z,5.0nm,0.7s,baz=316,slow=7.1,SNR=4.9
ULM LR LR 08 04 13.3
comp=Z,1μm,19.0s,baz=298,slow=37
ULM Lac du Bonnet 49.97 56 IAMs_20 IAMs_20 08 02 57.0
comp=Z,1μm,20.0s
SPA0 Spitsbergen Ar 50.52 356 *e*P **P** **07 42 04.7 -0.4**
SPA0 Spitsbergen Ar 50.52 356 P **P** **07 42 04.7 -0.4**
MVCO Mesa Verde 50.64 77 IAMs_20 IAMs_20 08 00 34.2
comp=Z,2μm,21.0s
MVCO Mesa Verde 50.64 77 P **P** **07 42 07.1 +0.3**
baz=310
ISCO Idaho Springs 50.75 73 P **P** **07 42 08.3 +0.5**
baz=309,SNR=46
AGMN Agassiz Nation 51.13 58 P **P** **07 42 08.6 -1.4**
baz=307,SNR=7.3
W18A Petrified Fore 51.23 80 IAMs_20 IAMs_20 08 00 24.6
comp=Z,2μm,22.0s
W18A Petrified Fore 51.23 80 P **P** **07 42 11.6 +0.3**
baz=311
YOJ Yonaguni jima 51.28 261 IAmb IAmb 07 42 13.2
comp=Z,143nm,0.8s
S22A 4UR Ranch, Cre 51.31 75 P **P** **07 42 12.8 +0.9**
baz=310,SNR=100
214A Organ Pipe Nat 51.41 85 P **P** **07 42 12.5 +0.1**
baz=313
Q24A Divide 51.55 73 P **P** **07 42 14.3 +0.5**
baz=310,SNR=29
HOPEN Hopen 51.61 353 *e*P **P** **07 42 13.0 -0.3**
DAG Danmarks Havn 51.68 6 ⇑*i*P **P** **07 42 12.7 -1.1**
DAG pmax pmax
comp=Z,37nm,1.1s
DAG Danmarks Havn 51.68 6 ⇑*i*P **P** **07 42 12.7 -1.1**
comp=Z,36nm,1.1s
DAG Danmarks Havn 51.68 6 *i*P **ScP** **07 47 19.5 -0.4**
comp=Z,24nm,1.1s
HSPB Hormsund (broa 51.71 356 *e*P **P** **07 42 13.9 -0.1**
SUSD Miller 51.76 64 IAmb IAmb 07 42 15.5
comp=Z,138nm,0.8s
SUSD IAMs_20 IAMs_20 08 04 23.9
comp=Z,1μm,18.0s
SUSD Miller 51.76 64 P **P** **07 42 14.1 -0.8**
baz=308
SDCO Great Sand Dun 52.12 75 P **P** **07 42 18.5 +0.5**
baz=310,SNR=126
YHNB Yeheng 52.15 263 IAmb IAmb 07 42 19.6
comp=Z,63nm,0.8s
YHNB IAMs_20 IAMs_20 08 03 05.2
comp=Z,2μm,21.0s
OGNE Ogallala 52.16 69 P **P** **07 42 18.5 +0.5**
baz=309,SNR=15
NACB Ninganchiao 52.37 262 IAmb IAmb 07 42 20.2
comp=Z,76nm,0.7s
WHN Wuhan 52.43 274 ⇑P **P** **07 42 19.8 -0.1**
WHN S **S** **07 49 41.8 -1.2**
WHN pmax pmax
comp=Z,370nm,1.1s
WHN LR LR
comp=Z,1μm,12.3s
WHN LR LR
comp=Z,2μm,16.3s
WHN LR LR
comp=Z,4μm,28.5s
TUC Tucson 52.44 83 P **P** **07 42 20.3 +0.1**
baz=313
KSCO Kaye Shedlock' 53.04 72 IAMs_20 IAMs_20 08 02 46.2
comp=Z,2μm,22.0s
KSCO Kaye Shedlock' 53.04 72 P **P** **07 42 25.3 +0.7**
baz=310,SNR=21
YULB Yu-li 53.13 262 IAmb IAmb 07 42 34.8
comp=Z,119nm,1.0s
T25A Trinidad 53.17 74 IAmb IAmb 07 42 29.6
comp=Z,179nm,1.1s
T25A Trinidad 53.17 74 P **P** **07 42 26.4 +0.7**
baz=311,SNR=129
ANMO Albuquerque 53.36 78 *c*P **P** **07 42 27.4 +0.3**
ANMO pmax pmax
comp=Z,63nm,1.7s
ANMO Albuquerque 53.36 78 P **P** **07 42 27.3 +0.3**
ANMO Albuquerque 53.36 78 IAMs_20 IAMs_20 08 02 03.3
comp=Z,1μm,22.0s
ANMO Albuquerque 53.36 78 P **P** **07 42 27.5 +0.3**
baz=312
XAN Xi'an 53.45 281 P **P** **07 42 27.8 +0.2**
XAN pP pP 07 42 41.6 +3.2
XAN PP **PP** **07 44 30.1 +2.1**
XAN pmax pmax
comp=Z,110nm,1.1s
XAN pmax pmax
comp=Z,640nm,3.5s
XAN LR LR
comp=Z,1μm,22.1s
XAN LR LR
comp=Z,1μm,23.1s
XAN LR LR

comp=Z,1μm,24.5s
XAN Xi'an 53.45 281 IAmb IAmb 07 42 28.9
comp=Z,146nm,1.1s
XAN Xi'an 53.45 281 IAMs_20 IAMs_20 08 04 01.9
comp=Z,1μm,21.0s
SUMG Summit 53.51 14 P **P** **07 42 27.8 -0.1**
SUMG pmax pmax
comp=Z,169nm,1.0s
SUMG Summit 53.51 14 *i* P **P** **07 42 27.5 -0.4**
comp=Z,436nm,1.0s
SUMG Summit 53.51 14 *i* P **ScP** **07 47 29.0 +0.6**
comp=Z,109nm,1.2s
SUMG Summit 53.51 14 P **P** **07 42 27.8 -0.1**
SUMG IAmb IAmb 07 42 30.0
comp=Z,169nm,1.0s
ECSD EROS Data Cent 53.52 63 P **P** **07 42 26.9 -1.0**
ECSD EROS Data Cent 53.52 63 IAMs_20 IAMs_20 08 08 14.5
comp=Z,1μm,19.0s
ECSD EROS Data Cent 53.52 63 P **P** **07 42 27.0 -1.0**
baz=309,SNR=30
TPUB Ta-pu 53.61 262 P **P** **07 42 28.8 0.0**
TPUB IAmb IAmb 07 42 33.9
comp=Z,107nm,0.8s
TPUB IAMs_20 IAMs_20 08 04 05.9
comp=Z,2μm,21.0s
Y22D IRIS PASSCAL I 53.66 79 IAMs_20 IAMs_20 08 02 50.0
comp=Z,2μm,20.0s
EYMN Ely 53.66 57 P **P** **07 42 28.1 -0.8**
EYMN IAmb IAmb 07 42 29.9
comp=Z,95nm,1.2s
EYMN Ely 53.66 57 P **P** **07 42 27.6 -1.3**
baz=309,SNR=20
QZH Quanzhou 53.69 265⇑ *i* P **P** **07 42 30.3 +1.0**
QZH S **S** **07 50 03.6 +3.3**
QZH sS **sS** **07 50 19.4 +1.2**
QZH pmax pmax
comp=Z,170nm,1.1s
QZH pmax pmax
comp=Z,530nm,5.2s
QZH LR LR
comp=Z,740nm,15.2s
QZH LR LR
comp=Z,630nm,17.1s
QZH LR LR
comp=Z,950nm,21.3s
ZAA0 Zalesovo Array 53.97 313 IAmb IAmb 07 43 37.6
comp=Z,105nm,0.9s
ZAA0 IAMs_20 IAMs_20 08 06 43.9
comp=Z,2μm,20.0s
ZALV Zalesovo Beam 53.97 313 P **P** **07 42 30.1 -0.8**
comp=Z,10nm,0.9s,baz=72,slow=6.4,SNR=19
ZALV PcP **PcP** **07 43 36.3 +0.5**
comp=Z,93nm,0.8s,baz=36,slow=3.5,SNR=38
ZALV ScP **ScP** **07 47 31.4 +1.2**
comp=Z,5.7nm,0.8s,baz=49,slow=4.5,SNR=5.2
ZALV LR LR 08 07 03.5
comp=Z,2μm,18.8s,baz=54,slow=38
ILULI Ilulissat 54.00 20 *i* P **P** **07 42 29.7 -1.3**
ILULI pmax pmax
comp=Z,52nm,0.9s
ILULI Ilulissat 54.00 20 *i* P **P** **07 42 29.7 -1.3**
comp=Z,52nm,0.9s
ILULI Ilulissat 54.00 20 IAmb IAmb 07 42 31.3
comp=Z,62nm,1.0s
319A Douglas 54.01 83 IAmb IAmb 07 42 49.0
comp=Z,69nm,1.0s
319A IAMs_20 IAMs_20 08 05 43.0
comp=Z,1μm,18.0s
BGNE Belgrade 54.12 66 P **P** **07 42 32.3 -0.1**
baz=310,SNR=13
121A Cookes Peak, D 54.16 81 P **P** **07 42 33.3 +0.4**
baz=313
KNMB Chin-men Tao 54.16 265 IAmb IAmb 07 42 34.7
comp=Z,153nm,1.1s
E38A The Farm, Brul 54.47 58 IAmb IAmb 07 42 35.5
comp=Z,118nm,1.1s
E38A IAMs_20 IAMs_20 08 08 16.0
comp=Z,1μm,18.0s
SPMN Marine on St. 54.68 60 IAMs_20 IAMs_20 08 07 24.4
comp=Z,1μm,18.0s
SPMN Marine on St. 54.68 60 P **P** **07 42 35.6 -0.7**
baz=310,SNR=14
CBKS Cedar Bluff 54.88 70 P **P** **07 42 38.1 +0.2**
baz=311,SNR=43
SRIG Santa Rosalia 54.97 89 IAMs_20 IAMs_20 07 59 57.6
comp=Z,1μm,21.0s
LZH Lanzhou 55.20 286 *e*P **P** **07 42 40.8 +0.4**
LZH sP sP 07 42 57.8 +1.2
LZH PP **PP** **07 44 40.3 -3.5**
LZH S **S** **07 50 22.3 +1.5**
LZH sS pS 07 50 36.8 +2.9
LZH SS **SS** **07 54 05.8 +1.1**
LZH pmax pmax
comp=Z,160nm,1.2s
LZH pmax pmax
comp=Z,1μm,6.6s
LZH LR LR
comp=Z,3μm,17.4s
LZH LR LR
comp=Z,2μm,16.3s
LZH LR LR
comp=Z,3μm,18.4s
GTA Gaotai 55.40 292 ⇑P **P** **07 42 42.8 +1.0**
GTA pP pP 07 42 53.9 +0.7
GTA sP sP 07 42 58.6 +0.7
GTA ScP **ScP** **07 47 38.4 +1.4**
GTA PcS **PcS** **07 47 41.1 -0.8**
GTA S **S** **07 50 23.1 -0.3**
GTA sS sS 07 50 41.8 -0.6
GTA ScS **ScS** **07 52 25.9 -1.6**
GTA SS **SS** **07 54 10.1 +2.3**
GTA pmax pmax
comp=Z,190nm,1.0s
GTA pmax pmax
comp=Z,870nm,8.6s
GTA LR LR
comp=Z,2μm,17.1s
GTA LR LR
comp=Z,2μm,16.5s
GTA LR LR
comp=Z,3μm,16.5s
ENH Enshi 55.66 277 IAmb IAmb 07 42 44.8
comp=Z,220nm,1.3s
D41A Chassel 55.75 56 IAmb IAmb 07 42 45.0
comp=Z,70nm,1.1s
D41A IAMs_20 IAMs_20 08 07 36.9
comp=Z,2μm,20.0s
SFJD Kangerlussuaq 55.89 22 P **P** **07 42 43.7 -0.9**
SFJD pmax pmax
comp=Z,50nm,1.1s
SFJD Kangerlussuaq 55.89 22 *i* P **P** **07 42 43.0 -1.6**
SFJD Kangerlussuaq 55.89 22 P **P** **07 42 43.7 -0.9**
G40A Rib Lake 56.06 58 IAMs_20 IAMs_20 08 09 24.9
comp=Z,1μm,18.0s
MNTX Cornudas Mount 56.22 80 IAmb IAmb 07 42 52.6
comp=Z,79nm,1.1s
MNTX Cornudas Mount 56.22 80 P **P** **07 42 47.9 +0.4**
baz=314
MSTX Muleshoe 56.27 76 IAmb IAmb 07 42 51.9
comp=Z,202nm,1.3s
MSTX Muleshoe 56.27 76 P **P** **07 42 48.0 -0.1**
baz=313,SNR=72
AMTX Amarillo 56.32 75 IAmb IAmb 07 42 51.3
comp=Z,91nm,1.1s
AMTX Amarillo 56.32 75 P **P** **07 42 48.5 +0.1**
baz=313
KSU1 Kansas State U 56.52 68 P **P** **07 42 49.2 -0.4**
baz=312,SNR=45
SCIA State Center 56.61 63 IAmb IAmb 07 42 51.3
comp=Z,330nm,1.9s
SCIA IAMs_20 IAMs_20 08 07 46.2
comp=Z,1μm,20.0s
SCIA State Center 56.61 63 P **P** **07 42 49.9 -0.3**
baz=312,SNR=5.3
I40A Norwalk 56.73 60 IAMs_20 IAMs_20 08 09 27.7
comp=Z,2μm,18.0s
F42A Maple Grove Fa 56.83 57 IAmb IAmb 07 42 52.6
comp=Z,81nm,1.1s
E43A Lone Tree Farm 57.02 56 IAmb IAmb 07 42 53.8
comp=Z,101nm,1.3s
E43A IAMs_20 IAMs_20 08 08 43.4
comp=Z,2μm,20.0s
HAMF Hammerfest 57.33 351 *e*P **P** **07 42 54.9 +0.1**
E44A Grand Marais A 57.41 55 IAmb IAmb 07 42 57.1
comp=Z,103nm,1.1s
E44A Grand Marais A 57.41 55 P **P** **07 42 55.7 -0.1**
baz=312
SCO Scoresbysund 57.50 9 *i* P **P** **07 42 55.4 -0.6**
SCO pmax pmax
comp=Z,46nm,1.1s
SCO Scoresbysund 57.50 9 *i* P **P** **07 42 55.4 -0.6**
comp=Z,46nm,1.1s
JFWS Jewell Farm 57.59 60 IAmb IAmb 07 42 57.2
comp=Z,79nm,0.9s
JFWS Jewell Farm 57.59 60 P **P** **07 42 56.0 -1.0**
baz=312,SNR=13
L40A Anamosa 57.62 62 IAmb IAmb 07 42 57.8
comp=Z,96nm,1.3s
L40A IAMs_20 IAMs_20 08 08 37.0
comp=Z,2μm,19.0s
I42A Draeger Farm, 57.66 59 IAmb IAmb 07 42 58.3
comp=Z,74nm,1.0s
I42A IAMs_20 IAMs_20 08 10 15.2
comp=Z,1μm,19.0s
H43A Windswept, Lux 57.88 58 IAmb IAmb 07 42 59.8
comp=Z,153nm,1.1s
WMOK Wichita Mounta 58.17 73 IAmb IAmb 07 43 04.0
comp=Z,64nm,0.9s
WMOK Wichita Mounta 58.17 73 IAMs_20 IAMs_20 08 05 51.1
comp=Z,1μm,21.0s
WMOK Wichita Mounta 58.17 73 P **P** **07 43 01.6 +0.3**
baz=313,SNR=70
D46A Sault St. Mari 58.19 53 P **P** **07 43 00.8 -0.5**
baz=313,SNR=6.4
ARCES ARCESS Array B 58.21 350 P **P** **07 43 00.2 -0.8**
comp=Z,49nm,0.8s,baz=26,slow=5.9,SNR=60
ARCES PcP **PcP** **07 43 50.7 -1.3**
comp=Z,22nm,0.8s,baz=16,slow=5.3,SNR=5.0
ARCES ScP **ScP** **07 47 49.8 +1.2**
comp=Z,9.8nm,0.9s,baz=352,slow=7.4,SNR=6.5
ARE0 ARCESS Array S 58.21 350 *e*P **P** **07 43 01.2 +0.2**
ZSN Zaisan 58.22 307 *c* *i* P **P** **07 43 01.0 -0.4**
ZSN *e*S **S** **07 51 01.0 +1.0**
ZSN pmax pmax
comp=Z,46nm,1.0s
ZSN Zaisan 58.22 307⇑ *i* P **P** **07 43 01.1 -0.4**
comp=Z,46nm,1.0s
ZSN *e*S **S** **07 51 01.1 +1.0**
F45A CMU Biological 58.25 55 P **P** **07 43 01.0 -0.6**
baz=313
E46A Sault Ste Mari 58.41 54 IAmb IAmb 07 43 55.0
comp=Z,128nm,0.9s
HKPS Hong Kong Po S 58.42 267 IAMs_20 IAMs_20 08 06 04.7
comp=Z,1μm,21.0s
OKCFA Oklahoma City 58.51 71 P **P** **07 43 03.8 +0.2**
OKCFA IAmb IAmb 07 43 14.0
comp=Z,89nm,0.9s
L42A Oliver, Polo 58.51 61 P **P** **07 43 02.9 -0.7**
L42A IAmb IAmb 07 43 03.7
comp=Z,143nm,1.1s
OKCSW OKLAHOMA CITY 58.52 71 P **P** **07 43 04.2 +0.4**
LVZ Lovozero 58.54 346 *c* *i* P **P** **07 43 02.2 -1.2**
LVZ pmax pmax
comp=Z,148nm,1.0s
LVZ Lovozero 58.54 346 P **P** **07 43 01.8 -1.6**
LVZ IAmb IAmb 07 43 05.1
comp=Z,125nm,0.9s
G45A Suttons Bay 58.61 56 IAMs_20 IAMs_20 08 09 33.5
comp=Z,2μm,20.0s
G45A Suttons Bay 58.61 56 P **P** **07 43 03.8 -0.4**
baz=313
H45A Beulah 58.69 57 P **P** **07 43 03.4 -1.3**
baz=313
N41A Harden Midland 58.73 63 IAMs_20 IAMs_20 08 09 10.4
comp=Z,1μm,19.0s
TRO Tromso 58.74 353 *e*P **P** **07 43 04.9 +0.2**
CD2 Chengdu 58.77 282 ⇑P **P** **07 43 05.8 +0.2**
CD2 sP sP 07 43 22.4 +1.5
CD2 PP **PP** **07 45 16.5 +1.0**
CD2 S **S** **07 51 09.8 +2.0**
CD2 sS sS 07 51 27.4 +1.2
CD2 SS **SS** **07 55 01.1 +0.2**
CD2 pmax pmax
comp=Z,250nm,0.8s
CD2 pmax pmax
comp=Z,720nm,6.5s
CD2 LR LR
comp=Z,1μm,12.8s
CD2 LR LR
comp=Z,1μm,14.7s
CD2 LR LR
comp=Z,2μm,19.6s
K43A Burlington 58.77 60 IAmb IAmb 07 43 05.9
comp=Z,171nm,1.1s
K43A IAMs_20 IAMs_20 08 06 58.6
comp=Z,1μm,21.0s
X34A Smith Ranch, M 58.84 72 IAmb IAmb 07 43 25.4
comp=Z,66nm,0.9s
X34A IAMs_20 IAMs_20 08 06 32.6
comp=Z,1μm,21.0s
E47A Iron Bridge 58.87 53 P **P** **07 43 05.5 -0.5**
baz=313,SNR=9.6
TX31 Lajitas Ar. Si 58.92 81 IAmb IAmb 07 43 11.4
comp=Z,55nm,0.9s
TX32 Lajitas Array 58.92 81 IAmb IAmb 07 43 11.4
comp=Z,56nm,0.9s
TXAR Lajitas Array 58.92 81 P **P** **07 43 06.5 -0.2**
comp=Z,35nm,0.9s,baz=303,slow=5.0,SNR=66
TXAR ScP **ScP** **07 47 56.0 +3.4**
comp=Z,3.3nm,1.0s,baz=297,slow=6.0,SNR=4.0
TXAR LR LR 08 07 03.7
comp=Z,419nm,20.7s,baz=0.0,slow=35
TXAR PKPPKP **P'P'df** **08 12 39.6 -3.9**
comp=Z,0.8nm,0.9s,baz=168,slow=4.6,SNR=3.5
KTK1 Kautokeino 58.95 351 *e*P **P** **07 43 05.8 -0.4**
KURK Kurchatov 58.96 314 *c* *i* P **P** **07 43 05.5 -1.0**
KURK pmax pmax
comp=Z,203nm,1.1s
KURK Kurchatov 58.96 314 P **P** **07 43 05.8 -0.7**
I45A Fountain 58.99 57 P **P** **07 43 06.3 -0.5**
baz=313
APA Apatity 59.03 346⇓ *i* P **P** **07 43 04.2 -2.6**
APA pmax pmax
comp=Z,18nm,0.7s
KURBB Kurchatov Arra 59.06 313 PKPPKP **P'P'df** **08 12 38.3 -7.2**
comp=Z,1.5nm,1.1s,baz=257,slow=3.5,SNR=4.8
KURBB P4KPbc 08 20 15.6
comp=Z,1.7nm,1.0s,baz=42,slow=4.6,SNR=8.0
ABTX Abilene, Hawle 59.10 75 IAMs_20 IAMs_20 08 06 30.5
comp=Z,1μm,21.0s
ABTX Abilene, Hawle 59.10 75 P **P** **07 43 08.0 +0.1**
baz=314,SNR=61
D48A Paudash Townsh 59.11 52 P **P** **07 43 06.8 -0.9**
baz=314,SNR=13
TUL1 Leonard 59.15 70 IAmb IAmb 07 43 18.6
comp=Z,82nm,0.8s
TUL1 Leonard 59.15 70 P **P** **07 43 08.1 0.0**
baz=314,SNR=24
H46A Fife Lake 59.19 56 P **P** **07 43 07.6 -0.6**
baz=313,SNR=12
WMQ Urumqi 59.23 303 P **P** **07 43 09.3 +0.7**
WMQ pP pwP 07 43 22.0 -0.1
WMQ sP sP 07 43 26.3 +1.8
WMQ PcP **PcP** **07 43 58.3 +1.7**
WMQ S **S** **07 51 17.0 +3.6**
WMQ sS sS 07 51 33.1 +0.4
WMQ SS **SS** **07 55 09.6 +2.1**
WMQ pmax pmax
comp=Z,140nm,1.1s
WMQ pmax pmax
comp=Z,540nm,4.3s
WMQ LR LR
comp=Z,1μm,20.1s
WMQ LR LR
comp=Z,1μm,21.5s
WMQ LR LR
comp=Z,4μm,21.5s
GLMI Grayling 59.30 56 P **P** **07 43 08.3 -0.7**
baz=313,SNR=9.7
MATQ Matagami 59.33 48 P **P** **07 43 07.5 -1.6**
baz=314,SNR=15
L44A Lake County Fo 59.35 60 IAMs_20 IAMs_20 08 10 16.1
comp=Z,1μm,18.0s
L44A Lake County Fo 59.35 60 P **P** **07 43 08.7 -0.7**
baz=313,SNR=7.5
E48A Lockeyer 59.41 53 P **P** **07 43 09.1 -0.6**
baz=313,SNR=10
G47A Hillman 59.45 55 P **P** **07 43 09.4 -0.7**
baz=314
I46A Reed City 59.47 57 P **P** **07 43 09.7 -0.5**
baz=313,SNR=11
F48A Evansville 59.63 54 P **P** **07 43 10.9 -0.3**
baz=314,SNR=6.2
H47A Mio 59.67 56 P **P** **07 43 10.9 -0.7**
baz=314,SNR=7.7
HDIL Hopedale 59.70 62 IAMs_20 IAMs_20 08 09 23.2
comp=Z,1μm,18.0s
HDIL Hopedale 59.70 62 P **P** **07 43 11.3 -0.5**
baz=313,SNR=26
J46A Howard City 59.77 57 P **P** **07 43 11.9 -0.4**
baz=314,SNR=8.1
ANGG Annassalik, Gr 59.81 17 IAmb IAmb 07 43 11.6
comp=Z,78nm,1.0s
I47A Gladwin 59.91 56 IAmb IAmb 07 43 15.0
comp=Z,112nm,1.1s
I47A IAMs_20 IAMs_20 08 10 34.8
comp=Z,1μm,20.0s
I47A Gladwin 59.91 56 P **P** **07 43 13.2 +0.1**
baz=314,SNR=8.5
MK31 Makanchi Array 59.94 308 *i* P **P** **07 43 12.6 -0.8**
MKAR Makanchi Array 59.94 308 P **P** **07 43 12.4 -1.0**
comp=Z,25nm,0.7s,baz=50,slow=6.5,SNR=164
MKAR PcP **PcP** **07 43 59.5 +0.2**
comp=Z,15nm,0.7s,baz=50,slow=6.5,SNR=4.6
MKAR LR LR 08 10 19.4
comp=Z,2μm,20.0s,baz=36,slow=37
MKAR PKPPKP 08 12 39.6
comp=Z,0.6nm,1.0s,baz=270,slow=2.9,SNR=4.0
MKAR PKP2bc 08 12 48.8
comp=Z,0.9nm,1.0s,baz=211,slow=4.2,SNR=3.7
MKAR P4KPbc 08 20 19.2
comp=Z,0.7nm,1.0s,baz=51,slow=4.8,SNR=3.9
F49A Sandfield 59.97 53 P **P** **07 43 13.0 -0.6**
baz=314,SNR=11
LQP Lukban 59.99 254⇓ *e*P **P** **07 43 12.9 -1.4**
H48A Harrisville 60.05 55 IAmb IAmb 07 43 15.3
comp=Z,104nm,1.1s
H48A Harrisville 60.05 55 P **P** **07 43 14.2 0.0**
baz=314,SNR=5.4
D50A G1974 Best Tow 60.09 51 P **P** **07 43 13.2 -1.2**
baz=314,SNR=21
MAKZ Makanchi 60.09 308 P **P** **07 43 13.4 -1.0**
MAKZ pmax pmax
comp=Z,39nm,0.7s
MAKZ MLR MLR
comp=Z,3μm,22.0s
MAKZ Makanchi 60.09 308 P **P** **07 43 13.4 -1.0**
MAKZ IAmb IAmb 07 43 15.5
comp=Z,39nm,0.7s
LSQQ Lebel-sur-Quev 60.12 48 P **P** **07 43 13.1 -1.5**
baz=315
K46A Dorr 60.15 58 P **P** **07 43 13.9 -0.9**
baz=314
P43A Skaggs, Pawnee 60.21 63 IAMs_20 IAMs_20 08 12 22.5
comp=Z,1μm,18.0s
I48A Sherman Twp 60.21 56 P **P** **07 43 14.7 -0.5**
baz=314,SNR=6.3
SCHQ Schefferville 60.28 38 P **P** **07 43 14.8 -0.8**
comp=Z,114nm,0.9s,baz=328,slow=7.4,SNR=87
SCHQ LR LR 08 10 56.9
comp=Z,3μm,19.2s,baz=322,slow=38
J47A Sunmer 60.28 57 IAmb IAmb 07 43 16.8
comp=Z,126nm,0.9s
J47A Sunmer 60.28 57 P **P** **07 43 15.5 -0.3**
baz=314,SNR=17
CCM Cathedral Cave 60.32 65 P **P** **07 43 15.1 -1.0**
CCM pmax pmax
comp=Z,144nm,1.4s
CCM Cathedral Cave 60.32 65 P **P** **07 43 15.1 -1.0**
CCM IAmb IAmb 07 43 16.4
comp=Z,144nm,1.4s
CCM Cathedral Cave 60.32 65 P **P** **07 43 14.8 -1.3**
baz=314
L46A Eue Claire 60.34 59 IAMs_20 IAMs_20 08 11 47.3
comp=Z,2μm,19.0s
L46A Eue Claire 60.34 59 P **P** **07 43 15.8 -0.3**
baz=314,SNR=9.5
MGMO Mountain Grove 60.36 67 P **P** **07 43 15.1 -1.3**
MGMO IAmb IAmb 07 43 16.9
comp=Z,98nm,0.9s
MGMO IAMs_20 IAMs_20 08 10 00.3
comp=Z,1μm,19.0s
TGY Tagaytay City 60.37 255 P **P** **07 43 18.2 +1.5**
comp=Z,424nm,0.4s,baz=187,slow=1.4,SNR=14
D51A Lot 18 Range I 60.37 51 P **P** **07 43 15.0 -1.3**
baz=315,SNR=14
O44A Mansfield 60.44 62 IAmb IAmb 07 43 17.6
comp=Z,165nm,1.2s
JCT Junction City 60.50 77 P **P** **07 43 16.1 -1.4**
JCT pmax pmax
comp=Z,111nm,1.2s
JCT Junction City 60.50 77 P **P** **07 43 16.1 -1.4**
JCT IAmb IAmb 07 43 21.5
comp=Z,111nm,1.1s
JCT Junction City 60.50 77 P **P** **07 43 16.7 -0.8**
baz=315,SNR=46
U40A Yellville 60.57 68 P **P** **07 43 16.6 -1.2**
U40A IAmb IAmb 07 43 18.2
comp=Z,93nm,1.0s
U40A Yellville 60.57 68 P **P** **07 43 16.8 -1.1**
baz=314,SNR=42
VLDQ Val d'Or 60.57 49 IAmb IAmb 07 43 16.3
comp=Z,71nm,1.1s
VLDQ IAMs_20 IAMs_20 08 10 03.2
comp=Z,2μm,21.0s
K47A Vermontville 60.58 58 P **P** **07 43 17.4 -0.4**
baz=314,SNR=8.2
STEI Steigen 60.68 354 *e*P **P** **07 43 18.0 -0.1**
E51A G1948 Merrick 60.70 51 P **P** **07 43 17.3 -1.3**
baz=315,SNR=12
J48A Bridge Port 60.79 56 IAmb IAmb 07 44 04.4
comp=Z,78nm,1.1s
J48A IAMs_20 IAMs_20 08 11 04.0
comp=Z,2μm,20.0s
J48A Bridge Port 60.79 56 P **P** **07 43 18.8 -0.4**
baz=314,SNR=8.0
W39A Magazine 60.83 69 IAmb IAmb 07 43 29.6
comp=Z,114nm,1.1s
W39A Magazine 60.83 69 P **P** **07 43 19.4 -0.2**
baz=314,SNR=28
I49A Point Hope 60.84 55 IAmb IAmb 07 43 20.7
comp=Z,78nm,0.9s
I49A Point Hope 60.84 55 P **P** **07 43 19.4 -0.2**
baz=314
FVM French Village 60.84 65 IAmb IAmb 07 43 20.4
comp=Z,160nm,1.1s
BVAR Borovoye Array 60.86 320 P4KPbc 08 20 23.1
comp=Z,0.8nm,0.8s,baz=66,slow=8.3,SNR=4.3
WHTX Lake Whitney, 60.87 74 IAmb IAmb 07 43 34.5
comp=Z,58nm,0.8s
WHTX IAMs_20 IAMs_20 08 07 01.4
comp=Z,1μm,20.0s
WHTX Lake Whitney, 60.87 74 P **P** **07 43 20.2 +0.3**
baz=315,SNR=23
BRVK Borovoye 60.87 320 P **P** **07 43 18.9 -0.7**
BRVK pmax pmax
comp=Z,60nm,0.8s
BRVK MLR MLR
comp=Z,3μm,22.0s
BRVK Borovoye 60.87 320 P **P** **07 43 18.9 -0.7**
BRVK IAmb IAmb 07 43 22.5
comp=Z,60nm,0.8s
F51A Arnstein 60.92 52 P **P** **07 43 18.9 -1.1**
baz=315
K48A Perry 60.95 57 P **P** **07 43 20.1 -0.3**
baz=314,SNR=11
L47A Sherwood 60.96 58 P **P** **07 43 19.6 -0.8**
baz=314,SNR=21
SFIN Lafayette 61.04 61 P **P** **07 43 20.9 0.0**
baz=314,SNR=50
J49A Marlette 61.08 56 P **P** **07 43 20.7 -0.5**
baz=315,SNR=10
M47A Cromwell 61.16 59 P **P** **07 43 21.2 -0.6**
baz=314,SNR=19
E52A Mattawa 61.28 51 P **P** **07 43 21.4 -1.2**
baz=315,SNR=14
IVI Ivigtut 61.28 25 IAmb IAmb 07 43 23.1
comp=Z,112nm,1.0s
F52A Sundridge 61.30 52 P **P** **07 43 22.1 -0.6**
baz=315,SNR=16
K49A Clarkson 61.32 57 P **P** **07 43 22.9 +0.1**
baz=315,SNR=14
TMCR Tamitsa 61.35 342 *e*P **P** **07 43 20.4 -2.3**
TMCR pmax pmax
comp=Z,132nm,0.9s
L48A N Adams 61.39 58 P **P** **07 43 23.1 -0.3**
baz=315,SNR=14
MIAR Mount Ida 61.41 70 IAmb IAmb 07 43 26.3
comp=Z,153nm,1.2s
MIAR Mount Ida 61.41 70 P **P** **07 43 23.5 -0.1**
baz=315,SNR=51
N47A Urbana 61.45 59 IAmb IAmb 07 43 24.1

	comp=Z,119nm,0.9s								
N47A					IAMs_20	IAMs_20	08 09 05.7		
	comp=Z,2µm,21.0s								
N47A	**Urbana**	**61.45**	**59**	P	**P**		**07 43 22.9**	**-0.9**	
	baz=315,SNR=19								
P46A	**Rosedale**	**61.51**	**61**	IAMs_20	IAMs_20		08 10 49.0		
	comp=Z,1µm,20.0s								
M48A	**Edgerton**	**61.56**	**58**	IAMs_20	IAMs_20		08 12 34.4		
	comp=Z,1µm,19.0s								
M48A	**Edgerton**	**61.56**	**58**	P	**P**		**07 43 24.0**	**-0.4**	
	baz=315								
SVE	**Sverdlovsk**	**61.60**	**327**⇓	*eP*	**P**		**07 43 24.3**	**-0.2**	
SVE				*eS*	**S**		**07 51 41.9**	**-1.3**	
SVE				pmax	pmax				
	comp=Z,35nm,1.0s								
SVE				MLR	MLR				
	comp=Z,3µm,19.0s								
L49A	**Milan**	**61.63**	**57**	P	**P**		**07 43 24.8**	**-0.1**	
	baz=315,SNR=22								
OLIL	**Olney**	**61.63**	**63**	IAMs_20	IAMs_20		08 13 32.2		
	comp=Z,1µm,18.0s								
D54A	**Lac Fusel, La**	**61.63**	**49**	P	**P**		**07 43 23.1**	**-1.8**	
	baz=316,SNR=10								
WHAR	**Wooly Hollow**	**61.64**	**68**	IAmb	IAmb		07 43 26.0		
	comp=Z,190nm,1.5s								
435B	**Jarrell**	**61.64**	**75**	IAmb	IAmb		07 43 29.2		
	comp=Z,135nm,1.1s								
435B				IAMs_20	IAMs_20		08 10 31.7		
	comp=Z,1µm,20.0s								
435B	**Jarrell**	**61.64**	**75**	P	**P**		**07 43 25.4**	**+0.2**	
	baz=315,SNR=11								
W41B	**Gary Mavity, V**	**61.74**	**68**	P	**P**		**07 43 25.3**	**-0.5**	
	baz=315,SNR=30								
LCAR	**Lake Charles**	**61.75**	**67**	IAmb	IAmb		07 43 26.1		
	comp=Z,65nm,1.0s								
K50A	**Casco**	**61.76**	**56**	IAmb	IAmb		07 43 26.7		
	comp=Z,66nm,0.8s								
K50A	**Casco**	**61.76**	**56**	P	**P**		**07 43 25.4**	**-0.4**	
	baz=315,SNR=6.6								
ALGO	**Algonquin Park**	**61.82**	**51**	P	**P**		**07 43 24.7**	**-1.4**	
	baz=316,SNR=12								
N48A	**Decatur**	**61.83**	**59**	P	**P**		**07 43 25.2**	**-1.1**	
	baz=315,SNR=22								
H52A	**Wyevale**	**61.84**	**53**	P	**P**		**07 43 25.4**	**-0.9**	
	baz=315,SNR=13								
I51A	**Listowel**	**61.86**	**54**	P	**P**		**07 43 26.5**	**0.0**	
	baz=315,SNR=16								
X40A	**Basin Creek Fa**	**61.88**	**69**	IAmb	IAmb		07 43 29.1		
	comp=Z,87nm,1.3s								
X40A				IAMs_20	IAMs_20		08 12 46.5		
	comp=Z,1µm,19.0s								
X40A	**Basin Creek Fa**	**61.88**	**69**	P	**P**		**07 43 26.2**	**-0.5**	
	baz=315,SNR=21								
M49A	**Liberty Center**	**61.96**	**58**	P	**P**		**07 43 26.5**	**-0.7**	
	baz=315,SNR=19								
PRGR	**Permogore**	**61.97**	**338**⇑	*iP*	**P**		**07 43 26.7**	**-0.1**	
PRGR				*eS*	**S**		**07 51 46.3**	**-1.3**	
PRGR				pmax	pmax				
	comp=Z,135nm,0.8s								
UALR	**University of**	**61.97**	**69**	IAmb	IAmb		07 43 38.7		
	comp=Z,41nm,0.8s								
UALR				IAMs_20	IAMs_20		08 13 38.8		
	comp=Z,1µm,19.0s								
H06E1	**SOCORRO T-PHAS**	**62.00**	**95**	T	T		08 50 54.7		
	SNR=16								
H06S1	**SOCORRO T**	**62.01**	**95**	T	T		08 50 59.2		
	SNR=6.0								
SADO	**Sadowa**	**62.12**	**53**	IAmb	IAmb		07 43 28.7		
	comp=Z,71nm,1.1s								
SADO				IAMs_20	IAMs_20		08 12 01.5		
	comp=Z,1µm,19.0s								
G53A	**Haliburton**	**62.13**	**52**	P	**P**		**07 43 27.8**	**-0.5**	
	baz=316,SNR=29								
BRZS	**Berezniki**	**62.14**	**316**	*eP*	**P**		**07 43 27.9**	**-0.3**	
BRZS				pmax	pmax				
	comp=Z,88nm,1.2s								
BRZS	**Berezniki**	**62.14**	**316**	*eP*	**P**		**07 43 27.9**	**-0.3**	
	comp=Z,88nm,1.2s								
L50A	**Kingsville**	**62.18**	**57**	P	**P**		**07 43 28.1**	**-0.5**	
	baz=315,SNR=10								
O48A	**Farmland**	**62.18**	**60**	P	**P**		**07 43 27.7**	**-1.0**	
	baz=315,SNR=37								
G54A	**Lake Saint Pet**	**62.20**	**51**	P	**P**		**07 43 27.5**	**-1.2**	
	baz=316,SNR=8.0								
KONS	**Konsvik**	**62.24**	**354**	*eP*	**P**		**07 43 28.7**	**+0.1**	
N49A	**Columbus Grove**	**62.24**	**59**	IAmb	IAmb		07 43 29.8		
	comp=Z,128nm,1.0s								
N49A				IAMs_20	IAMs_20		08 11 34.5		
	comp=Z,1µm,19.0s								
N49A	**Columbus Grove**	**62.24**	**59**	P	**P**		**07 43 28.6**	**-0.4**	
	baz=315,SNR=27								
833A	**Chaparral WMA,**	**62.27**	**79**	IAmb	IAmb		07 43 34.0		
	comp=Z,93nm,1.1s								
833A	**Chaparral WMA,**	**62.27**	**79**	P	**P**		**07 43 29.5**	**0.0**	
	baz=316,SNR=22								
WLAR	**White Oak Lake**	**62.28**	**70**	IAmb	IAmb		07 43 42.9		
	comp=Z,97nm,0.8s								
D55A	**Sainte-Anne-du**	**62.29**	**49**	P	**P**		**07 43 27.7**	**-1.5**	
	baz=316,SNR=26								
K51A	**Iona Station**	**62.38**	**56**	P	**P**		**07 43 30.1**	**+0.2**	
	baz=316,SNR=7.4								
E55A	**Montcerf-Lytto**	**62.42**	**49**	P	**P**		**07 43 28.6**	**-1.5**	
	baz=316,SNR=9.8								
MOR8	**Moi Rana**	**62.48**	**354**	*eP*	**P**		**07 43 28.4**	**-1.9**	
M50A	**Fremont**	**62.51**	**57**	IAmb	IAmb		07 43 31.5		
	comp=Z,66nm,1.0s								
M50A	**Fremont**	**62.51**	**57**	P	**P**		**07 43 30.2**	**-0.6**	
	baz=315,SNR=10								
H53A	**Bobcaygeon**	**62.54**	**52**	P	**P**		**07 43 30.4**	**-0.6**	
	baz=316,SNR=14								
LPAR	**Lepanto**	**62.58**	**67**	P	**P**		**07 43 31.2**	**-0.1**	
P48A	**Milroy**	**62.60**	**60**	P	**P**		**07 43 29.1**	**-2.3**	
P48A				IAMs_20	IAMs_20		08 11 58.9		
	comp=Z,2µm,18.0s								
P48A	**Milroy**	**62.60**	**60**	P	**P**		**07 43 30.6**	**-0.8**	
	baz=315,SNR=88								
D56A	**ZEC Mazanza, M**	**62.60**	**48**	P	**P**		**07 43 29.6**	**-1.8**	
	baz=317,SNR=24								
ARU	**Arti**	**62.61**	**328**	*c iP*	**P**		**07 43 30.7**	**-0.6**	
ARU							07 44 08.9		
ARU				S	**S**		**07 51 58.8**	**+2.8**	
ARU				pmax	pmax				
	comp=Z,42nm,0.8s								
ARU				MLR	MLR				
	comp=Z,2µm,21.0s								
ARU	**Arti**	**62.61**	**328**	LR	LR		08 13 05.9		
	comp=Z,2µm,20.6s,baz=20,slow=38								
ARU	**Arti**	**62.61**	**328**	P	**P**		**07 43 30.5**	**-0.8**	
ARU				IAmb	IAmb		07 44 10.8		
	comp=Z,39nm,0.8s								
O49A	**Covington**	**62.68**	**59**	IAmb	IAmb		07 43 32.7		
	comp=Z,63nm,0.8s								
O49A	**Covington**	**62.68**	**59**	P	**P**		**07 43 31.4**	**-0.5**	
	baz=315,SNR=18								
NATX	**Nacogdoches**	**62.72**	**73**	IAmb	IAmb		07 43 35.9		
	comp=Z,125nm,1.2s								
NATX				IAMs_20	IAMs_20		08 08 13.4		
	comp=Z,1µm,21.0s								
NATX	**Nacogdoches**	**62.72**	**73**	P	**P**		**07 43 32.5**	**+0.2**	
	baz=315,SNR=11								
F55A	**Otter Lake**	**62.73**	**50**	P	**P**		**07 43 30.3**	**-1.9**	
	baz=316,SNR=9.7								
K52A	**Tillsonburg**	**62.75**	**55**	P	**P**		**07 43 32.1**	**-0.3**	
	baz=316,SNR=10.0								
Z41A	**Richland Creek**	**62.77**	**70**	P	**P**		**07 43 32.9**	**+0.2**	
	baz=315,SNR=8.3								
Q48A	**North Vernon**	**62.81**	**61**	P	**P**		**07 43 32.2**	**-0.6**	
	baz=315,SNR=29								
E56A	**St. Veronique**	**62.84**	**49**	P	**P**		**07 43 31.3**	**-1.6**	
	baz=317,SNR=14								
N50A	**Nevada**	**62.90**	**58**	P	**P**		**07 43 33.2**	**-0.2**	
	baz=316,SNR=36								
P49A	**Miami Univ. Ec**	**62.93**	**60**	P	**P**		**07 43 32.8**	**-0.8**	
	baz=315,SNR=32								
PLVO	**Plevna**	**62.95**	**51**	IAMs_20	IAMs_20		08 12 16.5		
	comp=Z,2µm,19.0s								
G55A	**Calabogie**	**62.97**	**51**	P	**P**		**07 43 32.7**	**-1.1**	
	baz=317,SNR=14								
WCI	**Wyandotte Cave**	**62.99**	**62**	P	**P**		**07 43 34.1**	**0.0**	
WCI				pmax	pmax				
	comp=Z,208nm,1.0s								
WCI				MLR	MLR				
	comp=Z,1µm,19.0s								
WCI	**Wyandotte Cave**	**62.99**	**62**	P	**P**		**07 43 34.1**	**0.0**	
WCI	**Wyandotte Cave**	**62.99**	**62**	IAMs_20	IAMs_20		08 11 44.2		
	comp=Z,1µm,19.0s								
WCI	**Wyandotte Cave**	**62.99**	**62**	P	**P**		**07 43 34.0**	**-0.1**	
	baz=315								
X43A	**Marvell**	**63.00**	**68**	P	**P**		**07 43 34.1**	**0.0**	
	baz=315,SNR=9.4								
M51A	**Elyria**	**63.01**	**57**	P	**P**		**07 43 33.4**	**-0.8**	
	baz=316,SNR=10								
D57A	**Chemin Vers le**	**63.03**	**48**	P	**P**		**07 43 32.5**	**-1.8**	
	baz=317,SNR=22								
DELO	**Deloro Mine**	**63.06**	**52**	IAmb	IAmb		07 43 35.1		
	comp=Z,63nm,1.0s								
DELO				IAMs_20	IAMs_20		08 10 35.4		
	comp=Z,1µm,21.0s								
O50A	**Cable**	**63.09**	**59**	P	**P**		**07 43 34.3**	**-0.4**	
	baz=316,SNR=36								
TDK	**Taldyqorghan**	**63.13**	**309**	*eP*	**P**		**07 43 34.5**	**-0.4**	
TDK	**Taldyqorghan**	**63.13**	**309**	*eP*	**P**		**07 43 34.5**	**-0.4**	
N51A	**Ashland**	**63.21**	**57**	IAMs_20	IAMs_20		08 14 11.1		
	comp=Z,1µm,19.0s								
N51A	**Ashland**	**63.21**	**57**	P	**P**		**07 43 34.9**	**-0.6**	
	baz=316,SNR=23								
Q49A	**Aurora**	**63.21**	**61**	P	**P**		**07 43 34.9**	**-0.6**	
	baz=316,SNR=12								
I55A	**Frankford**	**63.25**	**52**	P	**P**		**07 43 35.0**	**-0.6**	
	baz=316,SNR=6.9								
H55A	**Tweed**	**63.25**	**52**	P	**P**		**07 43 34.9**	**-0.8**	
	baz=317,SNR=10								
LATQ	**La Tuque**	**63.28**	**47**	IAmb	IAmb		07 43 35.6		
	comp=Z,50nm,1.0s								
LATQ	**La Tuque**	**63.28**	**47**	P	**P**		**07 43 34.2**	**-1.6**	
	baz=318,SNR=29								
HKT	**Hockley**	**63.30**	**75**	P	**P**		**07 43 36.7**	**+0.6**	
HKT				pmax	pmax				
	comp=Z,76nm,1.3s								
HKT	**Hockley**	**63.30**	**75**	P	**P**		**07 43 36.7**	**+0.6**	
HKT				IAmb	IAmb		07 43 42.4		
	comp=Z,76nm,1.2s								
HKT	**Hockley**	**63.30**	**75**	IAMs_20	IAMs_20		08 08 16.2		
	comp=Z,1µm,22.0s								
M52A	**Chesterland**	**63.30**	**56**	IAmb	IAmb		07 43 37.0		
	comp=Z,91nm,1.0s								
M52A	**Chesterland**	**63.30**	**56**	P	**P**		**07 43 35.8**	**-0.3**	
	baz=316,SNR=8.6								
ACSO	**Alum Creek Sta**	**63.37**	**58**	IAMs_20	IAMs_20		08 13 49.5		
	comp=Z,1µm,19.0s								
ACSO	**Alum Creek Sta**	**63.37**	**58**	P	**P**		**07 43 36.3**	**-0.3**	
	baz=316,SNR=14								
P50A	**Jamestown**	**63.38**	**59**	P	**P**		**07 43 36.3**	**-0.3**	
	baz=316,SNR=51								
T47A	**Sharon Grove**	**63.42**	**63**	IAMs_20	IAMs_20		08 14 40.4		
	comp=Z,2µm,18.0s								
D58A	**Chemin du LacG**	**63.44**	**47**	P	**P**		**07 43 35.3**	**-1.7**	
	baz=318,SNR=35								
J54A	**Appleton**	**63.45**	**53**	IAMs_20	IAMs_20		08 10 53.6		
	comp=Z,1µm,20.0s								
J54A	**Appleton**	**63.45**	**53**	P	**P**		**07 43 36.8**	**-0.3**	
	baz=316,SNR=13								
KMI	**Kunming**	**63.51**	**278**	P	**P**		**07 43 38.4**	**+0.4**	
KMI				pP	pwP		07 43 51.5	-1.2	
KMI				sP	sP		07 43 55.8	+2.4	
KMI				S	**S**		**07 52 08.3**	**-0.2**	
KMI				SS	**SS**		**07 56 12.3**	**-3.3**	
KMI				pmax	pmax				
	comp=Z,120nm,1.1s								
KMI				pmax	pmax				
	comp=Z,600nm,3.2s								
KMI				LR	LR				
	comp=Z,420nm,18.1s								
KMI				LR	LR				
	comp=Z,630nm,23.2s								
KMI				LR	LR				
	comp=Z,960nm,24.4s								
QIZ	**Qiongzhong**	**63.52**	**268**	P	**P**		**07 43 38.3**	**+0.5**	
QIZ				pP	**pP**		**07 43 50.1**	**+1.1**	
QIZ				S	**S**		**07 52 08.8**	**+0.6**	
QIZ				sS	**sS**		**07 52 28.8**	**+2.3**	
QIZ				pmax	pmax				
	comp=Z,57nm,1.5s								
QIZ				LR	LR				
	comp=Z,790nm,11.6s								
QIZ				LR	LR				
	comp=Z,760nm,17.3s								
QIZ				LR	LR				
	comp=Z,710nm,19.4s								
QIZ	**Qiongzhong**	**63.52**	**268**	IAmb	IAmb		07 43 40.6		
	comp=Z,132nm,1.4s								
KCP	**Kidapawan**	**63.52**	**246**⇑	*iP*	**P**		**07 43 38.8**	**+0.8**	
F57A	**Harrington**	**63.54**	**49**	P	**P**		**07 43 36.8**	**-0.8**	
	baz=317								
R49A	**Shelbyville**	**63.57**	**61**	IAmb	IAmb		07 43 39.2		
	comp=Z,96nm,1.1s								
R49A				IAMs_20	IAMs_20		08 12 21.5		
	comp=Z,2µm,20.0s								
R49A	**Shelbyville**	**63.57**	**61**	P	**P**		**07 43 37.7**	**-0.2**	
	baz=316,SNR=20								
L53A	**Girard**	**63.57**	**55**	P	**P**		**07 43 37.6**	**-0.3**	
	baz=316,SNR=16								
ERPA	**Erie**	**63.59**	**55**	IAmb	IAmb		07 43 39.1		
	comp=Z,143nm,1.0s								
ERPA					**PcP**		**07 44 15.1**	**+0.9**	
ERPA	**Erie**	**63.59**	**55**	P	**P**		**07 43 37.9**	**-0.2**	
	baz=316,SNR=16								
KIRV	**Kirov**	**63.61**	**334**	LR	LR		08 13 36.2		
	comp=Z,3µm,20.6s,baz=20,slow=38								
WVT	**Waverly**	**63.62**	**65**	P	**P**		**07 43 38.4**	**+0.1**	
WVT				pmax	pmax				
	comp=Z,154nm,1.0s								
WVT				MLR	MLR				
	comp=Z,800nm,20.0s								
WVT	**Waverly**	**63.62**	**65**	P	**P**		**07 43 38.4**	**+0.1**	
WVT	**Waverly**	**63.62**	**65**	P	**P**		**07 43 38.3**	**+0.1**	
	baz=316								
MEDO	**Medina**	**63.62**	**53**	IAMs_20	IAMs_20		08 11 19.2		
	comp=Z,1µm,20.0s								
O51A	**Pataskala**	**63.64**	**58**	P	**P**		**07 43 37.9**	**-0.4**	
	baz=316,SNR=38								
N52A	**McGinn's Farm,**	**63.65**	**57**	P	**P**		**07 43 37.8**	**-0.6**	
	baz=316,SNR=8.7								
H56A	**Elgin**	**63.67**	**51**	P	**P**		**07 43 37.4**	**-1.1**	
	baz=317,SNR=8.7								
GENI	**Genyem**	**63.78**	**226**	P	**P**		**07 43 39.4**	**-0.1**	
	comp=Z,130nm,0.6s								
E58A	**La Victoria**	**63.79**	**48**	P	**P**		**07 43 37.5**	**-1.7**	
	baz=318,SNR=13								
PDGK	**Podgornoye**	**63.80**	**307**	P	**P**		**07 43 39.3**	**-0.3**	
Q50A	**Georgetown**	**63.83**	**60**	P	**P**		**07 43 39.7**	**+0.1**	
	baz=316,SNR=23								
L54A	**Sinclairville**	**63.86**	**55**	P	**P**		**07 43 39.7**	**-0.1**	
	baz=316,SNR=21								
OXF	**Oxford**	**63.86**	**67**	P	**P**		**07 43 39.6**	**-0.3**	
	baz=316,SNR=56								
S49A	**Springfield**	**63.87**	**62**	P	**P**		**07 43 39.6**	**-0.2**	
	baz=316,SNR=47								
P51A	**Williamsport**	**63.87**	**59**	IAmb	IAmb		07 43 40.0		
	comp=Z,40nm,0.8s								
P51A				IAMs_20	IAMs_20		08 13 55.6		
	comp=Z,1µm,18.0s								
P51A	**Williamsport**	**63.87**	**59**	P	**P**		**07 43 39.2**	**-0.6**	
	baz=316								
J55A	**Hilton**	**63.87**	**53**	IAmb	IAmb		07 43 40.6		
	comp=Z,163nm,1.1s								
J55A				IAMs_20	IAMs_20		08 13 03.7		
	comp=Z,1µm,20.0s								
J55A	**Hilton**	**63.87**	**53**	P	**P**		**07 43 39.2**	**-0.6**	
	baz=317,SNR=11								
K54A	**Basiliko Farm,**	**63.91**	**54**	P	**P**		**07 43 39.8**	**-0.3**	
	baz=317,SNR=25								
F58A	**St-Lin Laurent**	**63.91**	**49**	P	**P**		**07 43 37.9**	**-2.2**	
	baz=318								
G57A	**Newington**	**63.92**	**50**	P	**P**		**07 43 38.3**	**-1.8**	
	baz=317,SNR=8.9								
SMPI	**Sarmi**	**63.93**	**228**	P	**P**		**07 43 38.1**	**-2.3**	
	comp=Z,7µmcomp=Z,372nm,0.7s								
D59A	**Saint-Raymond**	**63.99**	**47**	P	**P**		**07 43 39.0**	**-1.5**	
	baz=318,SNR=24								
R50A	**Paris**	**64.04**	**61**	IAmb	IAmb		07 43 42.5		
	comp=Z,159nm,1.1s								
R50A	**Paris**	**64.04**	**61**	P	**P**		**07 43 41.1**	**+0.1**	
	baz=316,SNR=41								
Q51A	**Peebles**	**64.04**	**60**	IAmb	IAmb		07 43 42.3		
	comp=Z,150nm,1.1s								
Q51A				IAMs_20	IAMs_20		08 12 20.1		
	comp=Z,1µm,19.0s								
Q51A	**Peebles**	**64.04**	**60**	P	**P**		**07 43 41.3**	**+0.3**	
	baz=316,SNR=36								
O52A	**Adamsville**	**64.07**	**58**	IAMs_20	IAMs_20		08 13 20.9		
	comp=Z,1µm,19.0s								
O52A	**Adamsville**	**64.07**	**58**	P	**P**		**07 43 40.7**	**-0.4**	
	baz=316,SNR=59								
E59A	**St. Maurice**	**64.07**	**47**	P	**P**		**07 43 39.5**	**-1.5**	
	baz=318								
N53A	**Lisbon**	**64.10**	**57**	IAmb	IAmb		07 43 42.2		
	comp=Z,84nm,1.0s								
N53A	**Lisbon**	**64.10**	**57**	P	**P**		**07 43 41.0**	**-0.4**	
	baz=316,SNR=15								
KPKS	**Kokpek**	**64.11**	**308***c*	*iP*	**P**		**07 43 41.3**	**-0.2**	
KPKS				pmax	pmax				
	comp=Z,99nm,1.5s								
KPKS	**Kokpek**	**64.11**	**308**⇑	*iP*	**P**		**07 43 41.4**	**-0.2**	
	comp=Z,99nm,1.5s								
K55A	**Perry**	**64.13**	**53**	P	**P**		**07 43 41.4**	**-0.2**	
	baz=317,SNR=16								
UZB	**Uzunbulak**	**64.17**	**307**	*eP*	**P**		**07 43 40.9**	**-1.1**	
UZB				pmax	pmax				
	comp=Z,50nm,1.5s								
UZB	**Uzunbulak**	**64.17**	**307**	*eP*	**P**		**07 43 40.9**	**-1.1**	
	comp=Z,50nm,1.5s								
H57A	**Richville**	**64.19**	**51**	P	**P**		**07 43 40.7**	**-1.2**	
	baz=317,SNR=11								
M54A	**Oil Creek Stat**	**64.20**	**55**	IAmb	IAmb		07 43 42.9		
	comp=Z,80nm,1.0s								
M54A	**Oil Creek Stat**	**64.20**	**55**	P	**P**		**07 43 41.6**	**-0.5**	
	baz=317,SNR=16								
T49A	**Edmonton**	**64.21**	**62**	IAMs_20	IAMs_20		08 12 10.6		
	comp=Z,1µm,19.0s								
T49A	**Edmonton**	**64.21**	**62**	P	**P**		**07 43 42.4**	**+0.2**	
	baz=316,SNR=69								
P52A	**Corning**	**64.26**	**58**	P	**P**		**07 43 41.7**	**-0.8**	
	baz=316,SNR=11								
NSS	**Namsos**	**64.27**	**355**	*eP*	**P**		**07 43 41.6**	**-0.4**	
O53A	**New Philadelph**	**64.30**	**57**	P	**P**		**07 43 42.0**	**-0.7**	
	baz=316,SNR=31								
ZAIG	**Zacatecas**	**64.31**	**85**	P	**P**		**07 43 43.4**	**+0.1**	
G58A	**Ormstown**	**64.33**	**49**	P	**P**		**07 43 41.0**	**-1.8**	
	baz=318,SNR=13								
J56A	**Wolcott**	**64.34**	**52**	IAmb	IAmb		07 43 43.5		
	comp=Z,121nm,0.9s								
J56A				IAMs_20	IAMs_20		08 11 17.2		
	comp=Z,1µm,20.0s								
J56A	**Wolcott**	**64.34**	**52**	P	**P**		**07 43 42.3**	**-0.6**	
	baz=317,SNR=6.8								
L55A	**Hinsdale**	**64.34**	**54**	P	**P**		**07 43 42.8**	**-0.2**	
	baz=317,SNR=15								
F59A	**Saint Guilaume**	**64.41**	**48**	P	**P**		**07 43 41.9**	**-1.4**	
	baz=318,SNR=23								
N54A	**Moraine State**	**64.43**	**56**	IAmb	IAmb		07 43 44.3		
	comp=Z,133nm,1.1s								
N54A	**Moraine State**	**64.43**	**56**	P	**P**		**07 43 42.9**	**-0.6**	
	baz=317,SNR=19								
S50A	**Richmond**	**64.43**	**61**	P	**P**		**07 43 43.5**	**-0.1**	
	baz=316,SNR=33								
R51A	**Hillsboro**	**64.43**	**60**	P	**P**		**07 43 43.7**	**+0.1**	
	baz=316,SNR=54								
I57A	**Carthage**	**64.45**	**51**	P	**P**		**07 43 42.5**	**-1.1**	
	baz=318,SNR=5.7								
LONY	**Lake Ozonia**	**64.47**	**50**	P	**P**		**07 43 42.1**	**-1.6**	
	baz=318,SNR=11								
D60A	**Saint Jean D'O**	**64.47**	**46**	P	**P**		**07 43 42.3**	**-1.4**	
	baz=319,SNR=28								
BAKI	**Biak**	**64.48**	**231**	P	**P**		**07 43 44.0**	**-0.1**	
	comp=Z,966µmcomp=Z,106nm,1.0s								
U49A	**Red Boiling Sp**	**64.50**	**63**	P	**P**		**07 43 44.2**	**+0.2**	
	baz=316,SNR=83								
K56A	**Middlesex**	**64.53**	**53**	P	**P**		**07 43 44.1**	**-0.1**	
	baz=317								
SATY	**Saty**	**64.54**	**308***c*	*iP*	**P**		**07 43 44.2**	**-0.2**	
SATY				*eS*	**S**		**07 52 21.5**	**+0.9**	
SATY				pmax	pmax				
	comp=Z,71nm,1.2s								
SATY	**Saty**	**64.54**	**308**⇑	*iP*	**P**		**07 43 44.2**	**-0.2**	
	comp=Z,71nm,1.2s								
SATY				*eS*	**S**		**07 52 21.6**	**+0.9**	
D61A	**St Aubert, Com**	**64.59**	**46**	P	**P**		**07 43 43.4**	**-1.1**	
	baz=319,SNR=12								
E60A	**Ste Agathe de**	**64.64**	**47**	P	**P**		**07 43 43.3**	**-1.5**	
	baz=319,SNR=22								
CHKK	**Chushkaly**	**64.66**	**309**	*i P*	**P**		**07 43 44.1**	**-0.9**	
CHKK	**Chushkaly**	**64.66**	**309**	*i P*	**P**		**07 43 44.1**	**-0.9**	
T50A	**Nancy**	**64.66**	**62**	P	**P**		**07 43 45.3**	**+0.2**	
	baz=316,SNR=64								
J57A	**Williamstown**	**64.67**	**52**	IAMs_20	IAMs_20		08 13 36.9		
	comp=Z,2µm,18.0s								
J57A	**Williamstown**	**64.67**	**52**	P	**P**		**07 43 44.2**	**-0.9**	
	baz=318,SNR=6.1								
Q52A	**Bidwell**	**64.67**	**59**	P	**P**		**07 43 44.7**	**-0.4**	
	baz=316,SNR=14								
M55A	**Ridgway**	**64.70**	**55**	IAmb	IAmb		07 43 46.4		
	comp=Z,129nm,1.0s								
M55A	**Ridgway**	**64.70**	**55**	P	**P**		**07 43 45.2**	**-0.1**	
	baz=317,SNR=27								
F60A	**Warwick**	**64.71**	**47**	P	**P**		**07 43 43.6**	**-1.6**	
	baz=318,SNR=16								
P53A	**Whipple**	**64.76**	**58**	IAmb	IAmb		07 43 46.6		
	comp=Z,76nm,0.9s								
P53A				IAMs_20	IAMs_20		08 15 01.2		
	comp=Z,1µm,20.0s								
P53A	**Whipple**	**64.76**	**58**	P	**P**		**07 43 45.1**	**-0.6**	
	baz=317,SNR=23						

T51A	**Gray**	65.20	61	P		**P**		07 43 48.5	-0.1
	baz=317,SNR=31								
W49A	**Belvidere**	65.23	64	P		**P**		07 43 48.8	0.0
	baz=316,SNR=80								
X48A	**Hartselle**	65.27	65	IAmb		IAmb		07 43 49.8	
	comp=Z,102nm,0.9s								
L57A	**Andrews Acres**	65.28	53	P		**P**		07 43 48.8	-0.3
	baz=318,SNR=50								
TNSS	**Tian-Shan**	65.28	308	*i* P		**P**		07 43 50.2	+0.7
TNSS	**Tian-Shan**	65.28	308	*i* P		**P**		07 43 50.2	+0.7
R53A	**Hurricane**	65.30	59	IAMs_20		IAMs_20		08 10 49.4	
	comp=Z,2µm,20.0s								
R53A	**Hurricane**	65.30	59	P		**P**		07 43 49.3	+0.1
	baz=317,SNR=19								
K58A	**Earlville**	65.32	52	IAMs_20		IAMs_20		08 10 56.1	
	comp=Z,1µm,20.0s								
K58A	**Earlville**	65.32	52	P		**P**		07 43 48.6	-0.7
	baz=318,SNR=14								
O55A	**Ligonier**	65.34	56	P		**P**		07 43 48.8	-0.7
	baz=317,SNR=8.7								
N56A	**West Decatur**	65.34	55	P		**P**		07 43 49.2	-0.3
	baz=317,SNR=20								
J59A	**Piesco**	65.36	51	IAMs_20		IAMs_20		08 13 38.2	
	comp=Z,2µm,19.0s								
J59A	**Piesco**	65.36	51	P		**P**		07 43 48.3	-1.3
	baz=318,SNR=12								
H60A	**Morristown**	65.41	49	P		**P**		07 43 48.4	-1.5
	baz=319,SNR=11								
I59A	**Olmsteadville**	65.42	50	P		**P**		07 43 48.7	-1.3
	baz=318,SNR=16								
G61A	**St-Isidore-de-**	65.42	48	P		**P**		07 43 48.6	-1.3
	baz=319,SNR=17								
Q54A	**Coxs Mills**	65.42	58	IAmb		IAmb		07 43 51.1	
	comp=Z,66nm,0.9s								
Q54A	**Coxs Mills**	65.42	58	P		**P**		07 43 49.8	-0.2
	baz=317,SNR=19								
MCWV	**Mont Chateau**	65.45	57	P		**P**		07 43 49.9	-0.3
	baz=317,SNR=18								
MTBS	**Maitube**	65.47	309	*i* P		**P**		07 43 51.0	+0.7
MTBS	**Maitube**	65.47	309	*i* P		**P**		07 43 51.1	+0.7
V50A	**Pikevile**	65.49	63	P		**P**		07 43 50.4	-0.1
	baz=317,SNR=57								
SLVN	**Son La**	65.55	274	IAmb		IAmb		07 43 53.5	
	comp=Z,108nm,1.1s								
VT1	**Waterbury**	65.56	49	IAmb		IAmb		07 43 51.4	
	comp=Z,76nm,1.2s								
VT1				IAMs_20		IAMs_20		08 12 53.7	
	comp=Z,2µm,20.0s								
BINY	**Binghamton**	65.57	53	IAMs_20		IAMs_20		08 13 59.7	
	comp=Z,1µm,19.0s								
BINY	**Binghamton**	65.57	53	P		**P**		07 43 50.6	-0.3
	baz=318,SNR=47								
P55A	**Reedsville**	65.57	57	P		**P**		07 43 50.7	-0.4
	baz=317,SNR=13								
U51A	**La Follette**	65.58	62	P		**P**		07 43 51.1	0.0
	baz=317,SNR=32								
T52A	**Hallie**	65.62	61	P		**P**		07 43 51.9	+0.5
	baz=317,SNR=30								
M57A	**Sunshine Farm,**	65.63	54	IAmb		IAmb		07 43 52.4	
	comp=Z,147nm,1.1s								
M57A				IAMs_20		IAMs_20		08 12 32.3	
	comp=Z,2µm,20.0s								
M57A	**Sunshine Farm,**	65.63	54	P		**P**		07 43 51.0	-0.3
	baz=318,SNR=38								
D63A	**Stockholm**	65.64	44	P		**P**		07 43 50.1	-1.2
	baz=320,SNR=20								
I60A	**Shoreham**	65.67	50	P		**P**		07 43 50.1	-1.3
	baz=319,SNR=9.7								
S53A	**Williamson**	65.67	60	P		**P**		07 43 51.7	+0.1
	baz=317,SNR=7.1								
O56A	**Blue Knob Stat**	65.68	56	P		**P**		07 43 51.1	-0.6
	baz=317,SNR=9.6								
K59A	**Cooperstown**	65.70	52	P		**P**		07 43 51.0	-0.8
	baz=318,SNR=16								
W50A	**Signal Mountai**	65.71	64	IAMs_20		IAMs_20		08 15 34.1	
	comp=Z,2µm,20.0s								
W50A	**Signal Mountai**	65.71	64	P		**P**		07 43 51.9	-0.1
	baz=317,SNR=71								
RKPI	**Ransiki, Papua**	65.71	233	P		**P**		07 43 52.0	-0.1
	comp=Z,112nm,1.1s								
TZTN	**Tazewell**	65.72	62	P		**P**		07 43 52.4	+0.5
	baz=317,SNR=27								
L58A	**Harry Jones Me**	65.75	53	P		**P**		07 43 51.7	-0.4
	baz=318,SNR=45								
SSPA	**Standing Stone**	65.76	55	P		**P**		07 43 51.9	-0.2
SSPA				IAmb		IAmb		07 43 53.0	
	comp=Z,90nm,0.9s								
SSPA	**Standing Stone**	65.76	55	IAMs_20		IAMs_20		08 13 58.6	
	comp=Z,2µm,19.0s								
SSPA	**Standing Stone**	65.76	55	P		**P**		07 43 51.9	-0.2
	baz=318								
H61A	**Lyndonville**	65.80	48	P		**P**		07 43 51.4	-1.0
	baz=319,SNR=15								
V51A	**Loudon**	65.81	63	IAMs_20		IAMs_20		08 13 00.9	
	comp=Z,1µm,20.0s								
V51A	**Loudon**	65.81	63	P		**P**		07 43 52.5	-0.1
	baz=317,SNR=40								
Q55A	**Buckhannon**	65.81	58	P		**P**		07 43 52.5	-0.1
	baz=317,SNR=23								
KDJ	**Kajisay**	65.84	308	IAmb		IAmb		07 43 55.8	
	comp=Z,91nm,0.9s								
KDJ				IAMs_20		IAMs_20		08 12 47.4	
	comp=Z,2µm,22.0s								
N57A	**Milroy**	65.84	55	P		**P**		07 43 52.3	-0.4
	baz=318,SNR=18								
FINES	**FINESS Array B**	65.89	347	P		**P**		07 43 51.6	-1.0
	comp=Z,100nm,0.8s,baz=23,slow=6.4,SNR=119								
FINES				PKPPKP		P'P'df		08 12 27.4	-7.9
	comp=Z,4.3nm,0.9s,baz=131,slow=7.6,SNR=3.0								
FINES				LR		LR		08 18 28.4	
	comp=Z,2µm,18.3s,baz=13,slow=41								
R54A	**Victor**	65.92	59	P		**P**		07 43 53.3	0.0
	baz=317,SNR=29								
U52A	**Thorn Hill**	65.93	62	P		**P**		07 43 53.7	+0.3
	baz=317,SNR=33								
G62A	**West of Eustis**	65.93	47	IAmb		IAmb		07 43 53.5	
	comp=Z,132nm,1.1s								
G62A	**West of Eustis**	65.93	47	P		**P**		07 43 52.3	-0.9
	baz=319,SNR=22								
M58A	**Price's Panora**	65.94	54	P		**P**		07 43 53.1	-0.3
	baz=318,SNR=38								
T53A	**Wise**	65.96	61	P		**P**		07 43 54.1	+0.5
	baz=317,SNR=24								
E63A	**Oxbow**	65.97	45	P		**P**		07 43 52.1	-1.3
E63A				IAmb		IAmb		07 43 53.1	
	comp=Z,132nm,0.9s								
E63A	**Oxbow**	65.97	45	P		**P**		07 43 52.1	-1.3
	baz=320,SNR=29								
LBNH	**Lisbon**	66.02	49	IAMs_20		IAMs_20		08 13 25.7	
	comp=Z,1µm,20.0s								
LBNH	**Lisbon**	66.02	49	P		**P**		07 43 52.7	-1.0
	baz=319,SNR=17								
S54A	**Dingess, Beckl**	66.03	59	IAmb		IAmb		07 43 55.3	
	comp=Z,103nm,1.1s								
S54A				IAMs_20		IAMs_20		08 15 11.7	
	comp=Z,1µm,19.0s								
S54A	**Dingess, Beckl**	66.03	59	P		**P**		07 43 54.1	+0.1
	baz=317,SNR=12								
TKM2	**Tokmak 2**	66.03	309	P		**P**		07 43 54.1	0.0
TKM2	**Tokmak 2**	66.03	309	P		**P**		07 43 55.6	+1.5
	SNR=146								
L59A	**Walton**	66.05	52	IAMs_20		IAMs_20		08 14 14.3	
	comp=Z,2µm,18.0s								
L59A	**Walton**	66.05	52	P		**P**		07 43 53.4	-0.6
	baz=318,SNR=28								
W51A	**Cleveland**	66.05	63	P		**P**		07 43 54.0	-0.1
	baz=317,SNR=47								
J60A	**Lant Hill Farm**	66.05	50	P		**P**		07 43 53.0	-1.0
	baz=319,SNR=30								
Y49A	**Blount Mountai**	66.06	65	IAmb		IAmb		07 43 55.1	
	comp=Z,140nm,1.1s								
P56A	**Dayton Farm, R**	66.10	56	P		**P**		07 43 54.1	-0.2
	baz=318,SNR=23								
SGDS	**Sogindy**	66.10	310⇑	*i* P		**P**		07 43 54.1	-0.3
	comp=Z,70nm,1.1s								
I61A	**Oroboro, Fairl**	66.12	49	P		**P**		07 43 53.5	-0.9
	baz=319,SNR=16								
H62A	**Milan**	66.13	48	P		**P**		07 43 53.6	-0.8
	baz=319,SNR=34								
BOOM	**Boomskoye usch**	66.18	309	IAMs_20		IAMs_20		08 14 05.5	
	comp=Z,1µm,19.0s								
O57A	**Amberson**	66.20	55	P		**P**		07 43 54.7	-0.4
	baz=318,SNR=18								
V52A	**Sevierville**	66.20	62	IAMs_20		IAMs_20		08 15 50.3	
	comp=Z,1µm,18.0s								
V52A	**Sevierville**	66.20	62	P		**P**		07 43 55.1	0.0
	baz=317,SNR=30								
N58A	**Sunbury**	66.21	54	IAMs_20		IAMs_20		08 12 58.6	
	comp=Z,1µm,20.0s								
N58A	**Sunbury**	66.21	54	P		**P**		07 43 54.7	-0.3
	baz=318,SNR=22								
F63A	**Nahmakanta, Br**	66.22	46	IAmb		IAmb		07 43 55.1	
	comp=Z,102nm,0.9s								
F63A	**Nahmakanta, Br**	66.22	46	P		**P**		07 43 53.8	-1.2
	baz=320,SNR=21								
ULHL	**Ulahol**	66.22	308	P		**P**		07 43 57.0	+1.6
	SNR=57								
E64A	**Bridgewater**	66.24	45	P		**P**		07 43 53.9	-1.2
	baz=320,SNR=38								
TKL	**Tuckaleechee C**	66.24	62	IAMs_20		IAMs_20		08 13 36.2	
	comp=Z,1µm,20.0s								
Q56A	**Snyder Ridge,**	66.25	57			**PcP**		07 44 25.8	+0.6
Q56A	**Snyder Ridge,**	66.25	57	P		**P**		07 43 55.0	-0.3
	baz=318								
K60A	**Five Rivers En**	66.30	51	P		**P**		07 43 54.7	-0.8
	baz=319,SNR=6.5								
USP	**Ospenovka**	66.30	310	P		**P**		07 43 57.4	+1.7
	SNR=6.8								
LRAL	**Lakeview Retre**	66.32	66	IAmb		IAmb		07 43 56.6	
	comp=Z,98nm,1.1s								
LRAL	**Lakeview Retre**	66.32	66	P		**P**		07 43 55.0	-0.8
	baz=317,SNR=27								
TRY	**Troy**	66.32	51	IAmb		IAmb		07 43 56.5	
	comp=Z,123nm,1.4s								
M59A	**Waymart**	66.33	53	P		**P**		07 43 55.3	-0.5
	baz=318,SNR=34								
BATG	**Bathurst New B**	66.35	43	IAmb		IAmb		07 43 56.8	
	comp=Z,103nm,1.2s								
CHMS	**Chumysh**	66.38	310	P		**P**		07 43 57.8	+1.6
	SNR=60								
U53A	**Fall Branch**	66.39	61	P		**P**		07 43 56.3	0.0
	baz=317,SNR=26								
J61A	**Chester**	66.39	50	P		**P**		07 43 55.4	-0.8
	baz=319,SNR=20								
T54A	**Tazewell**	66.43	60	P		**P**		07 43 56.8	+0.2
	baz=317,SNR=25								
X51A	**Calhoun**	66.43	64	IAMs_20		IAMs_20		08 16 06.1	
	comp=Z,1µm,20.0s								
X51A	**Calhoun**	66.43	64	P		**P**		07 43 56.5	0.0
	baz=317,SNR=29								
G63A	**Kingsbury**	66.43	47	P		**P**		07 43 55.3	-1.1
	baz=320,SNR=13								
F64A	**Sherman**	66.43	45	IAmb		IAmb		07 43 56.4	
	comp=Z,116nm,0.9s								
F64A	**Sherman**	66.43	45	P		**P**		07 43 55.2	-1.2
	baz=320,SNR=25								
MOL	**Molde**	66.43	357	*e*P		**P**		07 43 55.8	-0.3
PKME	**Peaks-Kenny Pk**	66.47	46	IAmb		IAmb		07 43 56.8	
	comp=Z,82nm,1.1s								
PKME	**Peaks-Kenny Pk**	66.47	46	P		**P**		07 43 55.5	-1.0
	baz=320,SNR=11								
S55A	**Lewisburg**	66.49	59	P		**P**		07 43 56.8	-0.1
	baz=318,SNR=8.8								
P57A	**Homestead Farm**	66.54	56	P		**P**		07 43 56.5	-0.6
	baz=318,SNR=8.9								
KBK	**Karagaybulak**	66.54	309	P		**P**		07 43 59.0	+1.6
	SNR=74								
K61A	**Williamstown**	66.56	51	P		**P**		07 43 56.4	-0.9
	baz=319,SNR=13								
W52A	**Murphy**	66.56	63	IAMs_20		IAMs_20		08 13 34.8	
	comp=Z,1µm,20.0s								
W52A	**Murphy**	66.56	63	P		**P**		07 43 57.4	-0.1
	baz=317,SNR=32								
I62A	**Tamworth**	66.57	49	P		**P**		07 43 56.3	-1.0
	baz=319,SNR=9.8								
H63A	**New Sharon**	66.58	47	P		**P**		07 43 56.3	-1.0
	baz=320,SNR=11								
L60A	**Shokan**	66.60	52	P		**P**		07 43 56.9	-0.6
	baz=319,SNR=14								
R56A	**Bull Pasture M**	66.61	58	P		**P**		07 43 57.3	-0.4
	baz=318,SNR=6.7								
N59A	**State Game Lan**	66.63	53	IAMs_20		IAMs_20		08 11 26.7	
	comp=Z,1µm,21.0s								
N59A	**State Game Lan**	66.63	53	P		**P**		07 43 57.5	-0.3
	baz=318,SNR=26								
O58A	**Lewisberry**	66.63	55	P		**P**		07 43 57.3	-0.5
	baz=318,SNR=13								
SWI	**Sorong**	66.65	236	P		**P**		07 43 58.0	-0.1
	comp=Z,4µmcomp=Z,476nm,1.0s								
PAGS	**Pennsylvania G**	66.66	55	IAmb		IAmb		07 43 58.6	
	comp=Z,62nm,1.1s								
PAGS				IAMs_20		IAMs_20		08 14 45.5	
	comp=Z,1µm,21.0s								
Q57A	**Strasburg**	66.67	56	P		**P**		07 43 57.6	-0.4
	baz=318,SNR=10								
U54A	**Nelsons Funny**	66.69	60	IAmb		IAmb		07 43 60.0	
	comp=Z,111nm,1.1s								
U54A				IAMs_20		IAMs_20		08 13 35.1	
	comp=Z,1µm,18.0s								
U54A	**Nelsons Funny**	66.69	60	P		**P**		07 43 58.6	+0.4
	baz=317,SNR=14								
G64A	**Maxfield**	66.72	46	P		**P**		07 43 57.3	-0.9
	baz=320,SNR=9.5								
FFD	**Franklin Falls**	66.73	49	IAmb		IAmb		07 43 58.6	
	comp=Z,87nm,1.2s								
FFD				IAMs_20		IAMs_20		08 13 48.5	
	comp=Z,2µm,20.0s								
V53A	**Saluda**	66.77	62	IAmb		IAmb		07 44 00.4	
	comp=Z,138nm,1.1s								
V53A				IAMs_20		IAMs_20		08 14 22.1	
	comp=Z,2µm,19.0s								
V53A	**Saluda**	66.77	62	P		**P**		07 43 59.1	+0.3
	baz=317,SNR=24								
Z50A	**Ashland**	66.78	66	IAMs_20		IAMs_20		08 16 48.2	
	comp=Z,807nm,18.0s								
Z50A	**Ashland**	66.78	66	P		**P**		07 43 58.5	-0.3
	baz=317,SNR=59								
L61A	**Hillsdale 1, H**	66.78	51	P		**P**		07 43 58.1	-0.5
	baz=319,SNR=14								
AAK	**Ala-Archa**	66.78	310	*c* *i* P		**P**		07 43 58.9	0.0
AAK				pmax		pmax			
	comp=Z,152nm,0.8s								
AAK	**Ala-Archa**	66.78	310	P		**P**		07 43 59.2	+0.4
	SNR=120								
AAK	**Ala-Archa**	66.78	310	*i* P		**P**		07 43 58.8	0.0
	SNR=173								
AAK	**Ala-Archa**	66.78	310	P		**P**		07 43 59.1	+0.3
I63A	**Otisfield**	66.80	48	IAMs_20		IAMs_20		08 13 58.2	
	comp=Z,2µm,20.0s								
I63A	**Otisfield**	66.80	48	P		**P**		07 43 58.1	-0.6
	baz=320,SNR=15								
Y51A	**Rockmart**	66.80	65	P		**P**		07 43 58.3	-0.6
	baz=317,SNR=36								
T55A	**Pulaski**	66.81	59	P		**P**		07 43 59.1	0.0
	baz=318,SNR=8.3								
PUL	**Pulkovo**	66.82	344↓	*e*P		**P**		07 43 59.5	+0.9
PUL				pmax		pmax			
	comp=Z,139nm,1.0s								
KZA	**Kyzart**	66.83	309	P		**P**		07 44 00.4	+0.9
	SNR=66								
WVL	**Waterville**	66.83	47	IAmb		IAmb		07 43 58.9	
	comp=Z,61nm,1.0s								
J62A	**Henniker**	66.84	49	P		**P**		07 43 58.2	-0.8
	baz=319,SNR=17								
AKN	**Aaknes**	66.84	357	*e*P		**P**		07 43 58.7	0.0
O59A	**Robesonia**	66.87	54	P		**P**		07 43 58.7	-0.6
	baz=318,SNR=20								
DOMB	**Dombas**	66.90	356	*e*P		**P**		07 43 58.5	-0.6
M60A	**Port Jervis**	66.90	52	P		**P**		07 43 58.8	-0.6
	baz=319,SNR=25								
P58A	**Pank, Wackersv**	66.91	55	P		**P**		07 43 58.9	-0.6
	baz=318,SNR=5.2								
W53A	**Cullowhee**	66.94	62	P		**P**		07 43 59.9	0.0
	baz=317,SNR=36								
BLA	**Blacksburg**	66.94	59	IAmb		IAmb		07 44 00.6	
	comp=Z,60nm,0.9s								
BLA				IAMs_20		IAMs_20		08 14 09.9	
	comp=Z,1µm,19.0s								
BLA	**Blacksburg**	66.94	59	P		**P**		07 43 59.8	-0.1
	baz=318,SNR=10								
X52A	**Dahlonega**	66.94	63	P		**P**		07 43 59.8	-0.1
	baz=317,SNR=71								
NRN	**Naryn**	66.94	308	IAmb		IAmb		07 44 30.4	
	comp=Z,66nm,0.9s								
NRN				IAMs_20		IAMs_20		08 13 24.1	
	comp=Z,2µm,21.0s								
H64A	**Troy**	66.97	47	P		**P**		07 43 58.8	-1.0
	baz=320,SNR=7.2								
N60A	**Cedar Hill Far**	67.00	53	P		**P**		07 43 59.5	-0.6
	baz=319,SNR=39								
L61B	**Northampton**	67.01	50	P		**P**		07 43 59.1	-1.0
	baz=319,SNR=8.9								
S56A	**Natural Bridge**	67.06	58	P		**P**		07 44 00.5	-0.1
	baz=318,SNR=12								
K62A	**Royalston**	67.06	50	IAmb		IAmb		07 44 00.9	
	comp=Z,81nm,1.1s								
K62A	**Royalston**	67.06	50	P		**P**		07 43 59.7	-0.8
	baz=319,SNR=12								
UCH	**Uchtor**	67.08	309	P		**P**		07 44 02.9	+1.7
	SNR=82								
EKS2	**Erkin-Say**	67.11	310	P		**P**		07 44 02.7	+1.8
	SNR=6.1								
Q58A	**Fox Den Farm,**	67.12	56	P		**P**		07 44 00.3	-0.5
	baz=318,SNR=16								
U55A	**TA2, Sparta**	67.12	60	P		**P**		07 44 00.9	-0.1
	baz=316,SNR=15								
J63A	**Strafford**	67.15	49	P		**P**		07 44 00.1	-0.9
	baz=320,SNR=6.4								
R57A	**Stanardsville**	67.15	57	P		**P**		07 44 01.1	+0.1
	baz=318,SNR=15								
Z51A	**Franklin**	67.16	65	IAmb		IAmb		07 44 01.9	
	comp=Z,150nm,1.0s								
V54A	**Nebo**	67.16	61	P		**P**		07 44 01.5	+0.2
	baz=318,SNR=32								
O60A	**Telford**	67.26	54	P		**P**		07 44 01.4	-0.3
	baz=319,SNR=25								
P59A	**Jarrettsville**	67.27	55	P		**P**		07 44 01.2	-0.5
	baz=318,SNR=17								
LSA	**Lhasa**	67.27	289	P		**P**		07 44 04.0	+1.5
LSA	**Lhasa**	67.27	289	P		**P**		07 44 04.2	+1.7
T56A	**Rocky Mt**	67.29	59	P		**P**		07 44 01.4	-0.6
	baz=318,SNR=6.0								
G65A	**Princeton**	67.30	45	IAmb		IAmb		07 44 02.1	
	comp=Z,127nm,1.1s								
G65A	**Princeton**	67.30	45	P		**P**		07 44 00.9	-0.9
	baz=321,SNR=14								
QUA2	**Belchertown**	67.30	50	IAmb		IAmb		07 44 03.5	
	comp=Z,134nm,1.4s								
S57A	**Dark Hollow, R**	67.32	58	P		**P**		07 44 02.1	0.0
	baz=318,SNR=9.0								
L62A	**Suffield**	67.33	51	P		**P**		07 44 01.1	-1.1
	baz=319								
I64A	**Bootbay**	67.34	48	P		**P**		07 44 01.0	-1.1
	baz=320,SNR=6.6								
M61A	**Granite Spring**	67.34	52	P		**P**		07 44 01.6	-0.6
	baz=319,SNR=7.3								
X53A	**Estanollee**	67.35	63	P		**P**		07 44 02.6	+0.2
	baz=318,SNR=43								
H65A	**Eastbrook**	67.38	46	P		**P**		07 44 01.2	-1.1
	baz=321,SNR=11								
K63A	**Dunstable**	67.38	50	P		**P**		07 44 01.6	-0.9
	baz=320,SNR=15								
Y52A	**Lilburn**	67.39	64	IAMs_20		IAMs_20		08 17 03.5	
	comp=Z,1µm,18.0s								
Y52A	**Lilburn**	67.39	64	P		**P**		07 44 02.6	0.0
	baz=318,SNR=43								
R58A	**Rapidan**	67.42	57	P		**P**		07 44 02.5	-0.3
	baz=318,SNR=13								
N61A	**South Mountain**	67.49	53	P		**P**		07 44 02.7	-0.5
	baz=319,SNR=12								
PAL	**Palisades**	67.50	52	P		**P**		07 44 02.5	-0.7
	baz=319,SNR=21								
HRV	**Adam Dziewonsk**	67.51	50	P		**P**		07 44 02.3	-1.0
HRV				pmax		pmax			
	comp=Z,65nm,1.0s								
HRV	**Adam Dziewonsk**	67.51	50	P		**P**		07 44 02.3	-1.0
HRV				IAmb		IAmb		07 44 03.7	
	comp=Z,65nm,1.0s								
HRV	**Adam Dziewonsk**	67.51	50	P		**P**		07 44 02.3	-1.0
	baz=320								
250A	**Grady**	67.51	67	P		**P**		07 44 03.0	-0.4
250A				IAMs_20		IAMs_20		08 11 41.6	
	comp=Z,960nm,21.0s								
V55A	**Taylorsville**	67.51	61	IAmb		IAmb		07 44 05.0	
	comp=Z,108nm,1.1s								
V55A	**Taylorsville**	67.51	61	P		**P**		07 44 03.7	+0.3
	baz=318,SNR=20								
P60A	**Greenville**	67.52	54	IAMs_20		IAMs_20		08 15 33.4	
	comp=Z,1µm,18.0s								
P60A	**Greenville**	67.52	54	P		**P**		07 44 02.8	-0.5
	baz=319,SNR=5.7								
PSUB	**Penn St. - Bra**	67.53	54	IAMs_20		IAMs_20		08 19 29.6	
	comp=Z,1µm,19.0s								
W54A	**Cherokee Point**	67.54	62	P		**P**		07 44 03.8	+0.2
	baz=318,SNR=19								
AML	**Almayashu**	67.55	310	P		**P**		07 44 04.7	+0.6
	SNR=178								
NC204	**NORSAR Array S**	67.58	355	IAmb		IAmb		07 44 06.3	
	comp=Z,111nm,1.1s								
NC303	**NORSAR Array S**	67.59	354	P		**P**		07 44 03.5	+0.1
NC303				IAmb		IAmb		07 44 05.6	
	comp=Z,115nm,1.0s								
U56A	**King**	67.60	60	P		**P**		07 44 04.2	+0.2
U56A				IAmb		IAmb		07 44 05.3	
	comp=Z,81nm,1.1s								
U56A				IAMs_20		IAMs_20		08 14 30.3	
	comp=Z,2µm,19.0s								
U56A	**King**	67.60	60	P		**P**		07 44 03.8	-0.1
	baz=318,SNR=9.6								
BRAL	**Brewton**	67.64	68	P		**P**		07 44 04.5	+0.3
	baz=317								
WSPT	**Westport, CT**	67.66	52	IAmb		IAmb		07 44 04.5	
	comp=Z,84nm,1.0s								
WSPT			

comp=Z,2μm,21.0s
KMSC Kings Mountain 67.97 61 P **P** **07 44 06.5 +0.2**
KMSC Kings Mountain 67.97 61 P **P** **07 44 06.5 +0.2**
baz=318,SNR=49
L63A North Scituate 67.97 50 P **P** **07 44 05.3 -0.8**
baz=320,SNR=7.5
NAO01 NORSAR Array S 68.00 355 IAmb IAmb 07 44 09.3
comp=Z,107nm,1.3s
Q60A Greensboro 68.02 55 IAMs_20 IAMs_20 08 16 07.6
comp=Z,1μm,18.0s
Q60A Greensboro 68.02 55 P **P** **07 44 06.1 -0.4**
baz=319
P61A Hammonton 68.06 54 IAMs_20 IAMs_20 08 14 16.5
comp=Z,878nm,20.0s
P61A Hammonton 68.06 54 P **P** **07 44 06.3 -0.4**
baz=319
GOGA Godfrey 68.06 64 P **P** **07 44 06.6 -0.2**
GOGA pmax pmax
comp=Z,163nm,1.1s
GOGA MLR MLR
comp=Z,1μm,19.0s
GOGA Godfrey 68.06 64 P **P** **07 44 06.6 -0.2**
GOGA Godfrey 68.06 64 IAMs_20 IAMs_20 08 17 15.2
comp=Z,1μm,19.0s
GOGA Godfrey 68.06 64 P **P** **07 44 06.2 -0.6**
baz=318,SNR=55
NC602 NORSAR Array S 68.07 354 *e*P **P** **07 44 06.3 -0.1**
NC602 NORSAR Array S 68.07 354 P **P** **07 44 06.2 -0.3**
NC602 IAmb IAmb 07 44 06.7
comp=Z,157nm,1.3s
Z53A Monticello 68.09 64 P **P** **07 44 06.4 -0.6**
baz=318,SNR=54
DZA Taraz 68.09 312 *e*P **P** **07 44 06.7 -0.3**
DZA Taraz 68.09 312 *e*P **P** **07 44 06.8 -0.3**
U57A Blanch 68.10 59 P **P** **07 44 06.9 -0.2**
baz=318,SNR=22
M63A Gales Ferry 68.11 51 P **P** **07 44 06.1 -0.9**
baz=320,SNR=31
HODGE Hodges 68.13 62 P **P** **07 44 07.5 +0.3**
T58A Grand View Acr 68.15 58 P **P** **07 44 06.6 -0.8**
baz=318,SNR=11
Y54A Tignall 68.16 63 P **P** **07 44 07.2 -0.3**
baz=318,SNR=41
S59A Mechanicsville 68.20 57 P **P** **07 44 07.3 -0.4**
baz=319,SNR=12
DRLN Deer Lake 68.23 37 P **P** **07 44 07.1 -0.6**
V57A Coltrane Farms 68.27 60 P **P** **07 44 07.8 -0.3**
baz=316,SNR=10
L64A Middleborough 68.29 50 P **P** **07 44 07.1 -1.1**
baz=320,SNR=12
SKAR Skarslia 68.29 356 *e*P **P** **07 44 08.2 +0.3**
X55A Gracelyn & Ava 68.30 62 P **P** **07 44 08.6 +0.2**
baz=318,SNR=36
KK31 Karatay Array 68.31 312 P **P** **07 44 08.1 -0.3**
KK31 pmax pmax
comp=Z,131nm,0.9s
KK31 Karatay Array 68.31 312 P **P** **07 44 08.1 -0.3**
KK31 IAmb IAmb 07 44 10.6
comp=Z,131nm,0.9s
KKAR Karatay Array 68.31 312 P **P** **07 44 08.1 -0.3**
KKAR pmax pmax
comp=Z,131nm,0.9s
KKAR Karatay Array 68.31 312 P **P** **07 44 08.1 -0.3**
KKAR IAmb IAmb 07 44 10.6
comp=Z,131nm,0.9s
252A Lumpkin 68.38 66 P **P** **07 44 08.3 -0.6**
baz=318,SNR=15
W56A Indian Trail 68.39 61 P **P** **07 44 08.7 -0.2**
baz=318,SNR=11
KSH Kashi 68.40 306⇑ *i*P **P** **07 44 12.9 +3.8**
KSH pP pwP 07 44 24.1 +3.4
KSH sP PcP 07 44 32.0 -2.3
KSH S **S** **07 53 08.8 +1.3**
KSH sS sS 07 53 32.3 +5.1
KSH SS **SS** **07 57 36.4 +5.7**
KSH pmax pmax
comp=Z,630nm,1.1s
KSH LR LR
comp=Z,810nm,8.5s
KSH LR LR
comp=Z,2μm,15.5s
KSH LR LR
comp=Z,890nm,14.9s
M64A Tiverton 68.40 50 P **P** **07 44 08.0 -0.8**
baz=320,SNR=10
153A Fort Valley 68.41 65 P **P** **07 44 08.5 -0.6**
baz=318,SNR=18
ARSB Arslanbob 68.51 310 P **P** **07 44 10.5 +0.7**
Z54A Sparta 68.54 64 P **P** **07 44 09.6 -0.3**
baz=318,SNR=44
U58A Oxford 68.55 58 P **P** **07 44 09.5 -0.4**
baz=319,SNR=6.0
Y55A Saluda 68.57 62 P **P** **07 44 10.5 +0.5**
baz=318,SNR=48
S60A Water View 68.58 56 P **P** **07 44 09.3 -0.7**
baz=319
ASK Askoy 68.60 358 *e*P **P** **07 44 08.8 -0.9**
X56A White Oak 68.62 61 P **P** **07 44 10.5 +0.2**
baz=318,SNR=27
352A Blakely 68.65 66 P **P** **07 44 10.3 -0.2**
baz=318,SNR=7.9
JSC Jenkinsville 68.65 62 P **P** **07 44 10.5 0.0**
JSC Jenkinsville 68.65 62 P **P** **07 44 10.5 0.0**
VSU Vasula 68.65 346 *c*e**P** **P** **07 44 09.6 -0.6**
VSU pmax pmax
comp=Z,551nm,0.9s
VSU Vasula 68.65 346 *e*P **P** **07 44 09.5 -0.6**
T59A Double "B" Far 68.65 57 IAmb IAmb 07 44 11.8
comp=Z,82nm,0.9s
T59A Double "B" Far 68.65 57 P **P** **07 44 10.4 -0.1**
baz=319,SNR=19
TAOE Nuku Hiva Isla 68.66 138 *e*LR LR 08 04 48.8
comp=Z,4μm,22.4s
TAOE Nuku Hiva Isla 68.66 138 *e*T T 08 58 52.4
comp=Z,64nm,0.2s
M65A Busby, Falmout 68.67 50 P **P** **07 44 10.5 0.0**
baz=320
253A Americus 68.67 65 P **P** **07 44 10.2 -0.5**
baz=318,SNR=6.9
V58A Windy Hill, Pi 68.70 59 IAmb IAmb 07 44 12.2
comp=Z,120nm,1.1s
V58A IAMs_20 IAMs_20 08 15 23.3
comp=Z,2μm,20.0s
V58A Windy Hill, Pi 68.70 59 P **P** **07 44 10.5 -0.3**
baz=318,SNR=21
W57A Gilead 68.70 60 P **P** **07 44 10.8 0.0**
W57A IAmb IAmb 07 44 12.0
comp=Z,51nm,1.0s
W57A IAMs_20 IAMs_20 08 15 05.3
comp=Z,1μm,18.0s
W57A Gilead 68.70 60 P **P** **07 44 10.6 -0.3**
baz=318,SNR=12
BIRD Birdtown, Kers 68.82 61 P **P** **07 44 11.5 -0.1**
BIRD IAmb IAmb 07 44 12.9
comp=Z,85nm,1.0s
JBG Jabagly 68.83 312 *e*P **P** **07 44 11.8 +0.1**
JBG pmax pmax
comp=Z,79nm,1.2s
154A Montrose 68.85 64 IAMs_20 IAMs_20 08 17 40.2
comp=Z,1μm,20.0s
154A Montrose 68.85 64 P **P** **07 44 11.5 -0.3**
baz=318,SNR=22
MMPI Merauke 68.91 223 P **P** **07 44 13.1 +0.9**
OSL Oslo 68.91 355 *e*P **P** **07 44 11.8 +0.1**
Z55A Blythe 68.94 63 P **P** **07 44 12.4 0.0**
baz=318,SNR=13
T60A Surry 68.96 57 P **P** **07 44 12.3 -0.1**
baz=319
Y56A Pelion 68.98 62 P **P** **07 44 13.0 +0.3**
baz=318,SNR=11
U59A Littleton 68.99 58 P **P** **07 44 12.8 +0.2**
U59A Littleton 68.99 58 P **P** **07 44 12.6 0.0**
baz=319,SNR=10
UBPT Khong Chiam 69.07 268 IAmb IAmb 07 44 14.5
comp=Z,90nm,1.1s
MOS Moscow 69.12 339 *e*P **P** **07 44 10.5 -2.6**
MOS *e* 07 44 22.9
MOS *e* 07 44 34.6
MOS pmax pmax
comp=Z,246nm,1.2s
MOS MLR MLR
comp=Z,3μm,17.0s
ODD1 Odda 69.13 357 *e*P **P** **07 44 13.8 +0.6**
M66A Nantucket 69.14 50 P **P** **07 44 13.2 -0.2**
baz=321
353A Camilla 69.15 66 P **P** **07 44 13.4 -0.3**
baz=318
X57A Johnson Farm, 69.15 61 P **P** **07 44 14.0 +0.3**
baz=318,SNR=11
V59A Middlesex 69.19 59 P **P** **07 44 14.0 +0.2**
baz=319,SNR=26
155A Kite 69.20 64 P **P** **07 44 13.9 -0.1**
baz=318,SNR=16
W58A Raeford 69.21 60 P **P** **07 44 14.0 0.0**
baz=319,SNR=20
U60A Pendleton 69.24 57 P **P** **07 44 14.3 +0.1**
baz=319,SNR=10.0
254A Abbeville 69.24 65 P **P** **07 44 14.1 -0.1**
baz=318,SNR=6.9
KONO Kongsberg 69.26 355 *c*e**P** **P** **07 44 13.8 -0.1**
KONO pmax pmax
comp=Z,111nm,1.3s
KONO Kongsberg 69.26 355 *e*P **P** **07 44 13.6 -0.3**
KONO Kongsberg 69.26 355 P **P** **07 44 13.6 -0.3**
KONO IAmb IAmb 07 44 16.1
comp=Z,54nm,0.8s
IUG luzhnay 69.28 312 *i* P **P** **07 44 15.2 +0.7**
IUG pmax pmax
comp=Z,14nm,1.0s
IUG luzhnay 69.28 312 *i* P **P** **07 44 15.3 +0.7**
comp=Z,14nm,1.0s
Z56A Williston 69.30 62 P **P** **07 44 15.2 +0.6**
Z56A Williston 69.30 62 P **P** **07 44 14.9 +0.4**
baz=318,SNR=21
Y57A Sumter 69.32 61 IAmb IAmb 07 44 16.2
comp=Z,130nm,0.9s
Y57A Sumter 69.32 61 P **P** **07 44 14.8 +0.1**
baz=319,SNR=14
CHM Chimkent 69.34 312 *e*P **P** **07 44 14.0 -0.8**
CHM Chimkent 69.34 312 *e*P **P** **07 44 14.0 -0.8**
TIGA Tifton 69.44 65 IAmb IAmb 07 44 16.8
comp=Z,175nm,1.2s
TIGA Tifton 69.44 65 P **P** **07 44 15.5 0.0**
baz=318,SNR=5.9
HAL Halifax 69.48 43 IAmb IAmb 07 44 15.8
comp=Z,134nm,1.1s
X58A Rowland 69.50 60 P **P** **07 44 16.2 +0.4**
X58A IAmb IAmb 07 44 17.3
comp=Z,79nm,0.9s
X58A Rowland 69.50 60 P **P** **07 44 16.0 +0.2**
baz=319,SNR=10
W59A Clinton 69.53 59 P **P** **07 44 16.1 +0.2**
baz=319,SNR=7.9
BLS5 Blasjo 69.62 357 *e*P **P** **07 44 16.0 -0.2**
Z57A Bowman 69.69 62 P **P** **07 44 17.5 +0.5**
baz=319,SNR=37
V60A Jim Taylor Roa 69.71 58 IAmb IAmb 07 44 18.4
comp=Z,89nm,1.0s
V60A Jim Taylor Roa 69.71 58 P **P** **07 44 16.9 -0.2**
baz=319,SNR=10
255A Hazlehurst 69.72 64 IAMs_20 IAMs_20 08 18 35.2
comp=Z,1μm,19.0s
255A Hazlehurst 69.72 64 P **P** **07 44 17.4 +0.2**
baz=318,SNR=13
U61A Possum Corner 69.72 57 P **P** **07 44 17.0 -0.1**
baz=319,SNR=7.4
156A Sylvania 69.73 63 P **P** **07 44 18.0 +0.7**
baz=319,SNR=13
GBN Guysborough 69.75 42 IAmb IAmb 07 44 18.4
comp=Z,164nm,1.2s
CNNC Cliffs of the 69.77 59 P **P** **07 44 17.1 -0.3**
CNNC IAmb IAmb 07 44 19.0
comp=Z,70nm,1.0s
CNNC IAMs_20 IAMs_20 08 16 04.8
comp=Z,2μm,20.0s
CNNC Cliffs of the 69.77 59 P **P** **07 44 17.4 0.0**
baz=319,SNR=8.4
Y58A Scranton 69.81 61 P **P** **07 44 18.2 +0.5**
Y58A Scranton 69.81 61 P **P** **07 44 17.8 +0.1**
baz=319,SNR=8.3
SHL Shillong 69.86 286⇑ *i*P **P** **07 44 18.2 -0.2**
SHL IAmb IAmb 07 44 22.0
comp=Z,99nm,0.7s
SHL Shillong 69.86 286 IAMs_20 IAMs_20 08 17 00.5
comp=Z,1μm,20.0s
SHL Shillong 69.86 286 P **P** **07 44 18.7 +0.3**
SNR=135
X59A McDuffie Farm, 69.89 60 P **P** **07 44 18.1 -0.1**
baz=319
OBN Obninsk 69.93 339 *c i*P **P** **07 44 17.6 -0.5**
OBN *e* 07 44 38.4
OBN *e* 07 46 54.2
OBN *e*PPP PPP 07 48 33.3
OBN *e*S **S** **07 53 26.3 +1.6**
OBN *e*SS **SS** **07 57 56.4 +3.4**
OBN pmax pmax
comp=Z,326nm,1.3s
OBN MLR MLR
comp=Z,2μm,17.0s
OBN Obninsk 69.93 339 LR LR 08 19 07.7
comp=Z,488nm,18.0s,baz=8.5,slow=40
MSAI Masohi 69.97 237 P **P** **07 44 18.9 0.0**
comp=Z,893nmcomp=Z,35nm,0.9s
157A Early Branch 69.99 63 P **P** **07 44 19.6 +0.7**
baz=319,SNR=12
W60A Pink Hill 70.01 59 P **P** **07 44 19.1 +0.2**
baz=319,SNR=7.9
256A Glennville 70.01 64 P **P** **07 44 19.2 +0.2**
baz=319,SNR=6.2
V61A Roper 70.06 58 P **P** **07 44 19.4 +0.2**
baz=319,SNR=7.4
SLIT Slitere, Latvi 70.09 348 *e*P **P** **07 44 17.8 -1.2**
NHSC New Hope 70.12 62 P **P** **07 44 20.6 +0.9**
NHSC IAMs_20 IAMs_20 08 16 07.0
comp=Z,1μm,19.0s
NHSC New Hope 70.12 62 P **P** **07 44 20.6 +0.9**
baz=319,SNR=16
Z58A St. Stephen 70.15 61 P **P** **07 44 20.3 +0.5**
baz=319,SNR=10
Y59A Loris 70.18 60 P **P** **07 44 20.0 0.0**
baz=319
X60A Albert Glenn T 70.22 59 P **P** **07 44 20.1 -0.1**
baz=319
TAS Tashkent 70.27 312 P **P** **07 44 21.4 +0.9**
TAS pmax pmax
comp=Z,190nm,0.7s
TAS Tashkent 70.27 312 P **P** **07 44 21.4 +0.9**
W61A Ground Anchor 70.30 58 P **P** **07 44 20.8 +0.1**
baz=319,SNR=7.9
158A Hollywood 70.39 62 P **P** **07 44 22.0 +0.7**
baz=319
SANI Sanana 70.46 240 P **P** **07 44 20.7 -1.2**
comp=Z,2μmcomp=Z,109nm,1.2s
257A Skidaway Islan 70.50 63 IAMs_20 IAMs_20 08 15 54.9
comp=Z,2μm,20.0s
257A Skidaway Islan 70.50 63 P **P** **07 44 22.5 +0.5**
baz=319
Z59A Georgetown, SC 70.52 61 P **P** **07 44 21.6 -0.4**
baz=319
CHTO Chiang Mai 70.52 276 P **P** **07 44 21.2 -1.1**
CHTO pmax pmax
comp=Z,76nm,1.1s
CHTO MLR MLR
comp=Z,700nm,19.0s
CHTO Chiang Mai 70.52 276 P **P** **07 44 21.2 -1.1**
CHTO IAmb IAmb 07 44 23.7
comp=Z,76nm,1.1s
GTK Tadong 70.53 289⇑ *i*P **P** **07 44 23.0 +0.6**
GTK IAmb IAmb 07 44 29.7
comp=Z,127nm,0.8s
BTK Batken 70.53 310 P **P** **07 44 22.4 +0.2**
BTK pmax pmax
comp=Z,227nm,0.9s
BTK MLR MLR
comp=Z,2μm,20.0s
BTK Batken 70.53 310 P **P** **07 44 22.4 +0.2**
BIGH Upper Bighouse 70.58 3 *e*P **P** **07 44 22.2 +0.2**
MRSI Marisa 70.64 245 P **P** **07 44 22.5 -0.5**
comp=Z,2μmcomp=Z,219nm,1.0s
AAI Ambon 70.65 237 P **P** **07 44 23.3 +0.3**
comp=Z,5μmcomp=Z,302nm,1.1s
SNART Snartemo 70.68 356 *e*P **P** **07 44 22.4 -0.3**
RSC Scourie 70.69 3 *e*P **P** **07 44 22.7 0.0**
AZL Aizawl 70.73 284 *e*P **P** **07 44 24.3 +0.7**
AZL IAmb IAmb 07 44 26.6
comp=Z,176nm,1.2s
CM31 Chiang Mai Arr 70.79 276 P **P** **07 44 24.0 +0.1**
CM31 IAmb IAmb 07 44 25.7
comp=Z,70nm,1.0s
CM31 Chiang Mai Arr 70.79 276 P **P** **07 44 24.5 +0.6**
SNR=16
CMAR Chiang Mai Arr 70.79 276 P **P** **07 44 24.4 +0.4**
comp=Z,36nm,0.8s,baz=26,slow=7.0,SNR=121
CMAR LR LR 08 19 22.8
comp=Z,568nm,18.7s,baz=46,slow=39
NLAI Namlea 70.85 238 P **P** **07 44 24.4 +0.1**
comp=Z,36nm,1.1s
456A Hilliard 70.87 65 P **P** **07 44 24.9 +0.7**
PBKT Sadao Pong 70.93 273 P **P** **07 44 23.4 -1.3**
TAPN Taplejung 71.03 290 *e*P **P** **07 44 26.9 +1.2**
comp=Z,898nm,0.9s
RRR Rubha Reidh 71.15 4 *e*P **P** **07 44 25.5 0.0**
IZAR Zarasai 71.33 345 *e*P **P** **07 44 26.4 -0.3**
IZAR IAmb IAmb 07 44 28.2
comp=Z,47nm,0.8s
LUWI Luwuk 71.41 244 P **P** **07 44 26.7 -1.0**
comp=Z,6μmcomp=Z,319nm,1.0s
SAIH SAIHA 71.47 283 *e*P **P** **07 44 28.4 +0.2**
SAIH IAmb IAmb 07 44 31.7
comp=Z,211nm,1.0s
AGT Agartala 71.50 285 *e*P **P** **07 44 29.9 +1.8**
AGT IAmb IAmb 07 44 33.5
comp=Z,95nm,0.7s
MCD Coleburn Disti 71.51 2 *e*P **P** **07 44 27.6 -0.1**
ISAL Salakas 71.52 345 *e*P **P** **07 44 27.3 -0.4**
ISAL IAmb IAmb 07 44 29.6
comp=Z,58nm,1.1s
ODAN Odare 71.59 290 *e*P **P** **07 44 30.1 +1.1**
comp=Z,308nm,0.8s
IDID Didziasalis 71.67 345 *e*P **P** **07 44 29.2 +0.6**
KPL Plockton 71.68 4 *e*P **P** **07 44 28.3 -0.4**
LPSR Galich'ya Gora 71.68 337 *e*P **P** **07 44 28.2 -0.6**
LPSR pmax pmax
comp=Z,100nm,1.2s
LPSR pmax pmax
comp=N,40nm,1.4s
LPSR pmax pmax
comp=E,20nm,1.4s
LPSR MLR MLR
comp=N,2μm,18.0s
LPSR MLR MLR
comp=Z,2μm,17.0s
LPSR MLR MLR
comp=E,270nm,15.0s
GUN Gumba 71.69 292 *e*P **P** **07 44 31.0 +1.3**
comp=E,720nm,0.7s
JIRN Jiri 71.70 291 *e*P **P** **07 44 31.1 +1.3**
comp=E,856nm,0.8s
PBUR Paburg 71.70 348 *e*P **P** **07 44 27.6 -1.2**
PBUR IAmb IAmb 07 44 30.2
comp=Z,191nm,0.9s
IIGN Ignalina 71.72 345 *e*P **P** **07 44 27.9 -1.0**
IIGN IAmb IAmb 07 44 30.7
comp=Z,84nm,1.0s
BELO BELONIA 71.85 285 *e*P **P** **07 44 31.0 +0.7**
PABE Paberze 71.92 346 *e*P **P** **07 44 28.5 -1.6**
PABE IAmb IAmb 07 44 31.2
comp=Z,261nm,1.0s
MPSI Mapaga 71.93 247 P **P** **07 44 30.2 -0.6**
comp=Z,2μmcomp=Z,154nm,1.3s
APSI Ampana 71.94 245 P **P** **07 44 30.4 -0.4**
comp=Z,93nm,1.2s
RAMN Ramite 71.99 291 *e*P **P** **07 44 32.4 +1.0**
comp=Z,725nm,0.8s
NACGM Naroch 72.05 345 *e*P **P** **07 44 30.0 -1.0**
NACGM PM 07 44 32.0
comp=Z,0.5nm,1.0s
NACGM *e*LQ LQ 08 07 06.0
NACGM *e*LR LR 08 14 20.0
KKN Kakani 72.13 292 *e*P **P** **07 44 33.3 +1.1**
comp=Z,174nm,0.6s
PKI Pulchoki 72.22 292 *e*P **P** **07 44 33.8 +0.9**
comp=Z,58nm,1.1s
PKIN Phulchoki 72.22 292 *e*P **P** **07 44 33.4 +0.6**
comp=Z,158nm,0.7s
VRH Novokhopyorsk 72.22 334 *e*P **P** **07 44 31.0 -1.1**
VRH pmax pmax
comp=Z,110nm,1.5s
VRH pmax pmax
comp=N,70nm,1.0s
VRH pmax pmax
comp=E,40nm,1.0s
VRH MLR MLR
comp=N,3μm,22.0s
VRH MLR MLR
comp=Z,3μm,19.0s
VRH MLR MLR
comp=E,1μm,17.0s
MICGM Minsk 72.25 344⇓ *i*P **P** **07 44 32.0 -0.2**
MICGM PM 07 44 33.0
comp=Z,0.8nm,1.0s
MICGM PM 07 44 33.0
comp=N,0.3nm,1.0s
MICGM *e*PcP **pP** **07 44 45.0 +1.1**
MICGM *e*PP **PP** **07 47 06.0 -6.3**
MICGM *e*PPP PPP 07 48 28.0
MICGM *e*S **S** **07 53 52.0 +0.4**
MICGM *e*LR LR 08 14 56.0
MNK Minsk 72.25 344⇓ *i*P **P** **07 44 32.0 -0.2**
MNK *e* 07 44 45.0
MNK *e*S **S** **07 53 52.0 +0.4**
MNK pmax pmax
comp=N,260nm,1.0s
MNK pmax pmax
comp=Z,750nm,1.0s
GKN Gorkha 72.35 293 *e*P **P** **07 44 34.4 +1.0**
comp=Z,515nm,1.0s
DMN Daman 72.37 292 *e*P **P** **07 44 34.8 +1.1**
comp=Z,527nm,1.3s
MUD Monsted U'grnd 72.47 355 *i* P **P** **07 44 33.8 +0.4**
MUD pmax pmax
comp=Z,110nm,1.1s
MUD Monsted U'grnd 72.47 355 *i* P **P** **07 44 33.8 +0.4**
comp=Z,113nm,1.1s
EDU Dundee 72.55 2 *e*P **P** **07 44 33.6 -0.4**
DANN Dangsing 72.59 294 *e*P **P** **07 44 36.0 +1.0**
comp=Z,550nm,0.9s
INVG Invergeldie, C 72.65 3 *e*P **P** **07 44 33.9 -0.6**
COEN Coen 72.71 218 IAMs_20 IAMs_20 08 13 04.6
comp=Z,848nm,21.0s
LAWE Loch Awe, Argy 72.77 4 *e*P **P** **07 44 35.3 +0.1**
LAWE IAmb IAmb 07 44 36.2
comp=Z,116nm,1.1s
VSR Storozhevoye 72.89 336 *e*P **P** **07 44 35.3 -0.7**
VSR pmax pmax
comp=Z,140nm,1.2s
VSR pmax pmax
comp=N,120nm,1.1s
VSR pmax pmax
comp=E,40nm,0.9s
VSR MLR MLR
comp=Z,2μm,28.0s
VSR MLR MLR
comp=N,1μm,21.0s
VSR MLR MLR
comp=E,640nm,21.0s
VORD Divnogorie 73.08 336 *e*P **P** **07 44 36.6 -0.6**
VORD pmax pmax
comp=Z,110nm,1.1s
VORD pmax pmax
comp=N,80nm,0.8s
VORD pmax pmax
comp=E,30nm,0.9s
KOLN Koldanda 73.12 293 *e*P **P** **07 44 39.0 +0.9**
DWPF Disney Wildern 73.17 66 P **P** **07 44 38.8 +0.7**
DWPF IAmb IAmb 07 44 41.3
comp=Z,111nm,0.8s
DWPF Disney Wildern 73.17 66 P **P** **07 44 38.6 +0.6**
baz=320
ESY Stoneypath 73.19 2 *e*P **P** **07 44 37.5 -0.2**
PPT Papeete 73.24 151 LR LR 08 08 43.3
comp=Z,632nm,21.4s,baz=324,slow=29
EAU Auchinoon 73.25 3 *e*P **P** **07 44 38.2 +0.1**
PGBU Glenifferbraes 73.25 3 *e*P **P** **07 44 38.2 +0.2**
PGBU IAmb IAmb 07 44 39.1
comp=Z,93nm,1.2s
PPT2 Papeete2 73.26 151 *e*S **SKiKP** **07 54 07.0 +0.5**
comp=Z,3μm,28.8s
PPT2 *e*SS **SS** **07 58 50.0 +3.2**
comp=Z,508nm,25.5s
PPT2 *e*LR LR 08 06 58.4
comp=Z,3μm,28.5s,baz=346
PPT2 Papeete2 73.26 151 *e*T T 09 04 40.5
comp=Z,8.3nm,0.2s
TIAR Tiarei 73.30 150 *e*T T 09 04 43.2
comp=Z,3.5nm,0.3s
KLNR Kaliningrad 73.31 348 *c i*P **P** **07 44 37.7 -0.7**
KLNR pmax pmax
comp=Z,218nm,1.2s

PAE **Paea** 73.33 151 *e*T T 09 04 45.2
comp=Z,1.8nm,0.3s
EBL **Broad Law** 73.33 2 *e*P **P** **07 44 38.6 0.0**
BSD **Bornholm Skovb** 73.39 352 *e*P **P** **07 44 35.5 -3.4**
BSD pmax pmax
comp=Z,50nm,0.9s
BSD **Bornholm Skovb** 73.39 352 *i* P **P** **07 44 35.5 -3.4**
comp=Z,50nm,0.9s
SUW **Suwalki** 73.48 346 *e*P **P** **07 44 38.4 -1.0**
SUW **Suwalki** 73.48 346 *e*P **P** **07 44 38.4 -1.0**
SUW **Suwalki** 73.48 346 P **P** **07 44 38.4 -1.0**
TVO **Taravao** 73.54 150 *e*T T 09 05 01.2
comp=Z,1.1nm,0.3s
DHRM **DHARAMSHALA** 73.78 301⇑*i*P **P** **07 44 42.2 +0.3**
ESK **Eskdalemuir** 73.78 2 *e*P **P** **07 44 41.0 -0.2**
ESK **Eskdalemuir** 73.78 2 P **P** **07 44 41.0 -0.2**
ESK pmax pmax
comp=Z,85nm,1.3s
ESK **Eskdalemuir** 73.78 2 P **P** **07 44 41.0 -0.2**
ESK IAmb IAmb 07 44 42.5
comp=Z,85nm,1.3s
KDI **Kendari** 73.90 242 P **P** **07 44 41.9 -0.5**
comp=Z,1µmcomp=Z,79nm,1.4s
CLGH **Cloghs, Cushen** 73.91 4 *e*P **P** **07 44 41.8 -0.2**
CLGH IAmb IAmb 07 44 43.0
comp=Z,119nm,1.1s
MEH **Mehetia** 74.00 149 *e*T T 09 05 35.4
comp=Z,6.5nm,0.3s
DZM **Mont Dzumac** 74.06 194 *e*S **S** **07 54 17.8 +5.0**
comp=Z,1µm,29.6s
DZM **Mont Dzumac** 74.06 194 *e*LR LR 08 07 21.8
comp=Z,3µm,23.3s
SMKI **Samarinda** 74.12 249 P **P** **07 44 44.4 +0.6**
comp=Z,5µmcomp=Z,118nm,1.1s
SMLA **Simla** 74.18 300 *e*P **P** **07 44 44.8 +0.9**
GAL1 **Galloway** 74.19 3 *e*P **P** **07 44 43.2 -0.3**
GAL1 IAmb IAmb 07 44 43.8
comp=Z,98nm,1.2s
EDMD **Edmundbyers** 74.30 2 *e*P **P** **07 44 44.1 -0.2**
EDMD IAmb IAmb 07 44 45.1
comp=Z,88nm,1.3s
NIL **Nilore** 74.31 304 P **P** **07 44 45.7 +1.0**
NIL pmax pmax
comp=Z,414nm,0.9s
NIL MLR MLR
comp=Z,3µm,21.0s
NIL **Nilore** 74.31 304 P **P** **07 44 45.7 +1.0**
DDI **Dehra Dun** 74.31 299 *e*P **P** **07 44 45.7 +0.9**
KESW **Keswick, Cumbr** 74.51 2 *e*P **P** **07 44 45.6 +0.1**
KESW IAmb IAmb 07 44 46.0
comp=Z,66nm,1.1s
060A **Indiantown** 74.61 66 IAMs_20 IAMs_20 08 16 23.6
comp=Z,1µm,20.0s
TTSI **Tana Toraja** 74.72 245 P **P** **07 44 46.8 -0.4**
comp=Z,2µmcomp=Z,123nm,1.7s
GMM **Mts of Mourne** 74.76 4 *e*P **P** **07 44 46.6 -0.3**
BOK **Bokaro** 74.79 289 *e*P **P** **07 44 48.7 +1.1**
BOK IAmb IAmb 07 44 50.4
comp=Z,98nm,0.7s
SBUM **Sibu** 74.79 255 P **P** **07 44 46.3 -1.4**
SBUM **Sibu** 74.79 255 P **P** **07 44 49.0 +1.3**
IOMK **Kirk Michael** 74.80 3 *e*P **P** **07 44 46.5 -0.6**
IOMK IAmb IAmb 07 44 48.0
comp=Z,287nm,1.2s
HLG **Helgoland** 74.80 356 *e*P **P** **07 44 47.9 +0.8**
comp=Z,420nm,1.2s,baz=7.6,slow=5.5
WIM **Isle of Man** 74.91 3 *e*P **P** **07 44 47.4 -0.4**
BSEG **Bad Segeberg** 74.92 354 *e*P **P** **07 44 48.3 +0.5**
comp=Z,210nm,1.1s,baz=7.6,slow=5.5
BKB **Balikpapan** 74.96 248 P **P** **07 44 48.7 +0.1**
comp=Z,98nm,0.8s
GKP **Gorka Klasztor** 74.97 350 *e*P **P** **07 44 47.9 -0.2**
GKP **Gorka Klasztor** 74.97 350 *e*P **P** **07 44 47.9 -0.2**
061Z **Ochoppi** 75.18 67 IAMs_20 IAMs_20 08 22 11.8
comp=Z,868nm,18.0s
061Z **Ochoppi** 75.18 67 P **P** **07 44 50.5 +0.7**
baz=320
AKASG **Malin Array Be** 75.63 342 P **P** **07 44 51.4 -0.5**
comp=Z,170nm,0.8s,baz=22,slow=6.1,SNR=284
AKBB **Malin Array Si** 75.63 342 IAMs_20 IAMs_20 08 21 25.3
comp=Z,1µm,20.0s
BNSI **Bone** 75.67 244 P **P** **07 44 52.9 +0.3**
comp=Z,71nm,1.0s
WME **Myndd Eilian** 75.67 3 *e*P **P** **07 44 52.1 -0.1**
LBWR **Ladybower, Pea** 75.73 2 *e*P **P** **07 44 52.2 -0.3**
LBWR IAmb IAmb 07 44 53.9
comp=Z,65nm,1.0s
DSB **Dublin** 75.73 4 P **P** **07 44 53.2 +0.6**
DSB IAmb IAmb 07 44 54.0
comp=Z,101nm,1.0s
KBL **Kabul** 75.75 308 P **P** **07 44 52.6 -0.6**
KBL pmax pmax
comp=Z,219nm,0.9s
KBL MLR MLR
comp=Z,1µm,21.0s
KBL **Kabul** 75.75 308 P **P** **07 44 52.6 -0.6**
KBL IAMs_20 IAMs_20 08 20 44.5
comp=Z,1µm,21.0s
BEL **Belsk** 75.94 347 *e*P **P** **07 44 53.9 +0.2**
BEL **Belsk** 75.94 347 *e*P **P** **07 44 53.9 +0.2**
RUE **Ruedersdorf** 76.10 352 *e*P **P** **07 44 54.6 0.0**
comp=Z,192nm,1.2s,baz=7.6,slow=5.5
RUE **Ruedersdorf** 76.10 352 *e*P **P** **07 44 54.5 -0.1**
RETH **Rethem/Aller,** 76.17 355 *e*P **P** **07 44 55.3 +0.3**
comp=Z,165nm,1.1s,baz=7.6,slow=5.5
FOEL **Foel Wylfa** 76.21 3 *e*P **P** **07 44 55.4 +0.1**
FOEL IAmb IAmb 07 44 56.4
comp=Z,107nm,1.2s
LLW **Llanuwchllyn** 76.24 3 *e*P **P** **07 44 54.8 -0.7**
LLW IAmb IAmb 07 44 57.0
comp=Z,65nm,1.2s
NRDL **Niedersach Rie** 76.37 354 *e*P **P** **07 44 56.2 +0.2**
comp=Z,136nm,1.1s,baz=7.6,slow=5.5
CWF **Charnwood Fore** 76.40 1 *e*P **P** **07 44 56.0 -0.3**
BKSI **Bulukumba** 76.41 243 P **P** **07 44 57.3 +0.4**
BKSI pP **PcP** **07 45 09.3 +0.8**
WACR **West Acre** 76.43 0 *e*P **P** **07 44 56.5 0.0**
WACR IAmb IAmb 07 44 57.2
comp=Z,228nm,1.1s
HLM1 **Long Mynd** 76.59 2 *e*P **P** **07 44 57.3 -0.2**
HLM1 IAmb IAmb 07 44 59.1
comp=Z,101nm,1.4s
IBBN **Ibbenburen** 76.68 356 *e*P **P** **07 44 58.4 +0.5**
comp=Z,323nm,1.1s,baz=7.6,slow=5.5
ASSE **Asse, Remlinge** 76.69 354 *e*P **P** **07 44 58.2 +0.3**
comp=Z,158nm,1.3s,baz=7.6,slow=5.5
KSM **Kuching** 76.72 256 P **P** **07 44 56.7 -2.0**
KSM IAmb IAmb 07 45 00.7
comp=Z,130nm,1.2s
KSM **Kuching** 76.72 256 P **P** **07 45 00.0 +1.3**
MTN **Manton Dam** 76.99 230 IAmb IAmb 07 45 01.4
comp=Z,188nm,1.2s
CLZ **Clausthal** 77.00 354 *e*P **P** **07 45 00.2 +0.4**
comp=Z,210nm,1.1s,baz=7.6,slow=5.5
KBKI **Kotabaru** 77.03 248 P **P** **07 45 00.2 -0.2**
comp=Z,24nm,1.7s
MCH1 **Michaelchurch** 77.11 2 *e*P **P** **07 45 00.2 -0.2**
MCH1 IAmb IAmb 07 45 00.6
comp=Z,112nm,1.2s
STKI **Sintang** 77.13 254 P **P** **07 45 01.2 +0.2**
comp=Z,26µmcomp=Z,133nm,0.6s
MONM **Monmouth** 77.27 2 *e*P **P** **07 45 01.2 0.0**
MONM IAmb IAmb 07 45 02.8
comp=Z,98nm,1.1s
GTTG **Gvttingen** 77.32 354 *e*P **P** **07 45 01.8 +0.3**
comp=Z,287nm,1.1s,baz=7.6,slow=5.5
CLL **Collm** 77.33 352⇑*i*P **P** **07 45 01.0 -0.6**
CLL *e* 07 45 16.0
CLL *e* 07 47 49.0
CLL *i* (S) **S** **07 54 54.5 +6.2**
CLL *e*PS 07 55 31.0
CLL *e*SS **SS** **07 59 42.0 -3.6**
CLL LmH 08 24 00.0
comp=N,300nm,20.0s
CLL LmH 08 24 00.0
comp=E,1µm,18.6s
CLL LmV 08 27 00.0
comp=Z,1µm,18.7s
CLL **Collm** 77.33 352 *e*P **P** **07 45 01.1 -0.5**
comp=Z,74nm,1.1s,baz=7.6,slow=5.5
CLL **Collm** 77.33 352 P **P** **07 45 00.3 -1.3**
CLL IAmb IAmb 07 45 02.3
comp=Z,66nm,1.0s
CLL IAMs_20 IAMs_20 08 22 33.5
comp=Z,976nm,21.0s
GOF **Gofitskoye** 77.39 331⇑*e*P **P** **07 45 02.3 +0.3**
GOF pmax pmax
comp=Z,473nm,1.4s
LVV **L'vov** 77.41 345 *e*P **P** **07 45 01.9 -0.2**
LVV *e*S **S** **07 54 50.0 +0.7**
KSP **Ksiaz** 77.47 350 *e*P **P** **07 45 02.2 -0.2**
KSP **Ksiaz** 77.47 350 *e*P **P** **07 45 02.2 -0.2**
BWNR **Bhubaneshwar** 77.50 287 *e*P **P** **07 45 04.0 +1.0**
BWNR IAmb IAmb 07 45 06.5
comp=Z,97nm,0.6s
NEUB **Neuenburg** 77.53 353 *e*P **P** **07 45 02.7 0.0**
comp=Z,226nm,1.0s,baz=7.6,slow=5.5
BUG **Bochum–Univer** 77.57 356 *e*P **P** **07 45 02.9 0.0**
comp=Z,127nm,1.1s,baz=7.6,slow=5.5
OJC **Ojcow** 77.66 348 *e*P **P** **07 45 03.3 -0.2**
OJC **Ojcow** 77.66 348 *e*P **P** **07 45 03.3 -0.2**
OJC **Ojcow** 77.66 348 P **P** **07 45 03.3 -0.2**
OJC IAmb IAmb 07 45 04.7
comp=Z,132nm,1.1s
BRG **Berggiesshubel** 77.68 352 *i* P **P** **07 45 03.3 -0.3**
comp=Z,80nm,1.1s
BRG *e*PP **PP** **07 47 57.3 -0.9**
comp=Z,13nm,1.4s
BRG SS SS 07 59 46.0 -4.9
BRG **Berggiesshubel** 77.68 352 *i* P **P** **07 45 03.3 -0.3**
BRG *e* 07 47 57.3
BRG SS SS 07 59 46.0 -4.9
BRG pmax pmax
comp=Z,80nm,1.1s
BRG pmax pmax
comp=Z,13nm,1.4s
BRG **Berggiesshubel** 77.68 352 *e*P **P** **07 45 03.2 -0.3**
comp=Z,80nm,1.1s,baz=7.6,slow=5.5
FBE **Freiberg** 77.68 352 *e*P **P** **07 45 03.7 +0.2**
comp=Z,139nm,1.1s,baz=7.6,slow=5.5
CHVC **Chvalec** 77.75 350 *e*P **P** **07 45 03.5 -0.5**
CHVC AMS AMS 08 23 50.0
comp=Z,2µm,20.7s
OSTC **Ostas** 77.76 350 *e*P **P** **07 45 03.8 -0.3**
OSTC AMS AMS 08 24 40.0
comp=Z,2µm,22.0s
MAK **Makhachkala** 77.81 327 *e*P **P** **07 45 03.0 -1.4**
MAK *e* 07 47 58.5
MAK *e*S **S** **07 54 53.3 -0.4**
MAK *e*SS **SS** **07 59 54.9 +1.6**
MAK pmax pmax
comp=Z,215nm,1.5s
MAK MLR MLR
comp=Z,3µm,18.0s
KWP **Kalwaria Pacla** 77.81 346 *e*P **P** **07 45 04.8 +0.5**
KWP **Kalwaria Pacla** 77.81 346 *e*P **P** **07 45 04.8 +0.5**
UPC **Upice** 77.83 350 *e*P **P** **07 45 04.2 -0.2**
UPC MLR MLR
comp=Z,2µm,20.5s
UPC **Upice** 77.83 350 *e*P **P** **07 45 04.2 -0.2**
UPC AMS AMS 08 24 40.0
comp=Z,2µm,20.5s
BMOL **Mol** 77.88 357 P **P** **07 45 08.5 +3.9**
DPC **Dobruska-Polom** 77.95 350 *e*P **P** **07 45 05.2 0.0**
DPC *e* 07 45 17.5
DPC MLR MLR
comp=Z,2µm,15.6s
DPC **Dobruska-Polom** 77.95 350 *e*P **P** **07 45 05.2 0.0**
DPC *ex* x 07 45 17.5
DPC AMS AMS 08 26 00.0
comp=Z,2µm,15.6s
PVCC **Panska Ves** 77.96 351 *e*P **P** **07 45 04.8 -0.3**
PVCC MLR MLR
comp=Z,1µm,17.5s
PVCC **Panska Ves** 77.96 351 *e*P **P** **07 45 04.8 -0.3**
PVCC AMS AMS 08 28 00.0
comp=Z,1µm,17.5s
GEYT **Alibeck** 78.04 317 P **P** **07 45 05.8 -0.1**
comp=Z,40nm,1.0s,baz=354,slow=3.0,SNR=44
GEYT LR LR 08 22 33.8
comp=Z,3µm,19.8s,baz=20,slow=38
GEYT **Alibeck** 78.04 317 IAmb IAmb 07 45 08.3
comp=Z,37nm,1.0s
UBBA **Unterbreizbach** 78.04 354 *e*P **P** **07 45 05.7 +0.3**
comp=Z,123nm,1.6s,baz=7.6,slow=5.5
MOX **Moxa** 78.10 353 *e*P **P** **07 45 05.9 0.0**
comp=Z,86nm,1.1s,baz=7.6,slow=5.5
MOX *e*L L 08 28 45.0
comp=Z,750nm,19.2s
GROC **Groznyy** 78.17 328 *e*P **P** **07 45 06.7 +0.3**
GROC *e* 07 45 15.5
GROC *e* 07 48 01.8
GROC pmax pmax
comp=Z,66nm,1.2s
KRLC **Kraliky** 78.17 350 *e*P **P** **07 45 06.2 -0.2**
KRLC MLR MLR
comp=Z,2µm,20.5s
KRLC **Kraliky** 78.17 350 *e*P **P** **07 45 06.2 -0.2**
KRLC AMS AMS 08 25 40.0
comp=Z,2µm,20.5s
PLN **Plauen** 78.22 353 *e*P **P** **07 45 06.4 -0.1**
comp=Z,54nm,1.0s,baz=7.6,slow=5.5
STHS **Stebnicka Huta** 78.24 347 *e*P **P** **07 45 07.0 +0.3**
STHS pmax pmax
comp=Z,129nm,1.0s
STHS **Stebnicka Huta** 78.24 347 *e*P **P** **07 45 07.0 +0.3**
OKC **Ostrava-Krasne** 78.24 349 *e*P **P** **07 45 06.8 +0.1**
OKC *e* 07 45 19.0
OKC MLR MLR
comp=Z,1µm,19.5s
OKC **Ostrava-Krasne** 78.24 349 *e*P **P** **07 45 06.8 +0.1**
OKC *ex* x 07 45 19.0
OKC AMS AMS 08 26 20.0
comp=Z,1µm,19.5s
SORM **Soroca** 78.25 342 ⇓P **P** **07 45 07.0 +0.3**
TANN **Tannenbergstha** 78.26 352 *e*P **P** **07 45 06.9 0.0**
comp=Z,168nm,1.4s,baz=7.6,slow=5.5
BEBN **Eben Emael** 78.28 357 P **P** **07 45 06.8 -0.1**
GUNZ **Gunzen** 78.32 352 *e*P **P** **07 45 07.3 +0.1**
comp=Z,85nm,1.2s,baz=7.6,slow=5.5
NIE **Niedzica** 78.37 347 *e*P **P** **07 45 08.0 +0.5**
NIE **Niedzica** 78.37 347 *e*P **P** **07 45 08.0 +0.5**
MORC **Moravsky Berou** 78.38 349 P **P** **07 45 07.2 -0.3**
MORC pmax pmax
comp=Z,49nm,1.0s
MORC **Moravsky Berou** 78.38 349 ⇓P **P** **07 45 07.9 +0.4**
MORC **Moravsky Berou** 78.38 349 *e*P **P** **07 45 07.2 -0.3**
MORC **Moravsky Berou** 78.38 349 P **P** **07 45 07.2 -0.3**
WERN **Wernitzgruen** 78.39 352 *e*P **P** **07 45 07.7 +0.1**
comp=Z,123nm,1.0s,baz=7.6,slow=5.5
PRA **Prague** 78.42 351 *e*P **P** **07 45 08.0 +0.3**
PRA MLR MLR
comp=Z,1µm,19.8s
PRA **Prague** 78.42 351 *e*P **P** **07 45 08.0 +0.3**
PRA AMS AMS 08 20 30.0
comp=Z,1µm,19.8s
BLCH **La Chartreuse** 78.44 357 P **P** **07 45 08.1 +0.3**
comp=Z,126nm,1.2s
NKC **Novy Kostel** 78.44 352 *e*P **P** **07 45 07.7 -0.1**
NKC MLR MLR
comp=Z,1µm,20.1s
NKC **Novy Kostel** 78.44 352 *e*P **P** **07 45 07.7 -0.1**
NKC AMS AMS 08 27 40.0
comp=Z,1µm,20.1s
MEM **Membach** 78.45 357 P **P** **07 45 07.8 -0.1**
comp=Z,148nm,1.1s
MEM **Membach** 78.45 357 P **P** **07 45 07.9 +0.1**
comp=Z,125nm,1.1s
BTNL **Ternell** 78.47 357 P **P** **07 45 08.1 +0.1**
comp=Z,114nm,1.2s
BTNL pP **pP** **07 45 19.5 -0.3**
AHRW **Bad Neuenahr-A** 78.48 356 *e*P **P** **07 45 08.3 +0.4**
comp=Z,161nm,1.0s,baz=7.6,slow=5.5
KVAR **Kislovodsk Arr** 78.49 331 LR LR 08 23 03.8
comp=Z,2µm,21.9s,baz=256,slow=38
KIV **Kislovodsk** 78.49 331 *e*P **P** **07 45 08.2 -0.1**
KIV *e*S **S** **07 55 02.2 +0.9**
KIV 08 03 24.5
KIV pmax pmax
comp=Z,265nm,1.1s
KIV pmax pmax
comp=Z,259nm,4.7s
KIV MLR MLR
comp=Z,3µm,19.0s
KIV **Kislovodsk** 78.49 331 ⇓P **P** **07 45 09.2 +0.8**
KIV **Kislovodsk** 78.49 331 *i* P **P** **07 45 08.2 -0.1**
SNR=9.1
KIV **Kislovodsk** 78.49 331 P **P** **07 45 08.6 +0.3**
KIV **Kislovodsk** 78.49 331 P **P** **07 45 06.6 -1.7**
KIV IAmb IAmb 07 45 10.4
comp=Z,75nm,1.0s
KIV IAMs_20 IAMs_20 08 22 46.8
comp=Z,1µm,22.0s
PRU **Pruhonice** 78.50 351 *e*P **P** **07 45 07.6 -0.5**
PRU MLR MLR
comp=Z,1µm,19.2s
PRU **Pruhonice** 78.50 351 *e*P **P** **07 45 07.6 -0.5**
PRU AMS AMS 08 25 50.0
comp=Z,1µm,19.2s
BSTI **Sart Tilman** 78.50 357 P **P** **07 45 08.4 +0.4**
BRQR **Ronquire** 78.51 358 P **P** **07 45 08.1 -0.1**
comp=Z,95nm,1.1s
BATI **Baumata** 78.53 238 P **P** **07 45 08.7 0.0**
comp=Z,87nm,1.0s
DGPR **DIGLIPUR** 78.54 277 *e*P **P** **07 45 09.0 +0.1**
DGPR IAmb IAmb 07 45 12.8
comp=Z,130nm,0.8s
KOLS **Kolonicke sedl** 78.55 346 *e*P **P** **07 45 09.0 +0.5**
KOLS pmax pmax
comp=Z,116nm,1.0s
KOLS **Kolonicke sedl** 78.55 346 *e*P **P** **07 45 09.0 +0.5**
SNF **Seneffe** 78.61 358 P **P** **07 45 09.1 +0.4**
comp=Z,104nm,1.1s
KBZ **Khabaz** 78.63 330 P **P** **07 45 09.4 +0.5**
comp=Z,37nm,0.9s,baz=70,slow=1.7,SNR=39
KBZ LR LR 08 23 39.0
comp=Z,2µm,22.0s,baz=19,slow=39
BCLA **Clavier** 78.67 357 P **P** **07 45 09.0 -0.1**
comp=Z,80nm,1.1s
BGES **Gesves** 78.71 357 P **P** **07 45 09.1 -0.2**
comp=Z,82nm,1.1s
BHOU **Houvegnez** 78.71 357 P **P** **07 45 09.6 +0.3**
MANZ **Manzenberg** 78.72 353 *e*P **P** **07 45 09.2 -0.1**
comp=Z,60nm,1.1s,baz=7.6,slow=5.5
TBI **Tubuai** 78.72 152 *e*S **S** **07 55 06.2 +2.5**
comp=Z,1µm,32.8s
TBI *e*SS **SS** **08 00 10.3 +1.0**
comp=Z,336nm,25.5s
TBI *e*LR LR 08 09 32.1
comp=Z,2µm,23.0s,baz=339
TBI **Tubuai** 78.72 152 *e*T T 09 11 29.8
comp=Z,6.4nm,0.3s
TNS **Taunus Mts** 78.73 355 *e*P **P** **07 45 09.5 0.0**
comp=Z,101nm,1.0s,baz=7.6,slow=5.5
BBOU **Bougnies** 78.74 358 P **P** **07 45 09.8 +0.5**
comp=Z,141nm,1.1s
LANS **Liptovska Anna** 78.75 348 *e*P **P** **07 45 10.9 +1.3**
LANS pmax pmax
comp=Z,113nm,1.1s
LANS **Liptovska Anna** 78.75 348 *e*P **P** **07 45 10.9 +1.3**
BMRD **Maredsous** 78.80 357 P **P** **07 45 09.9 +0.1**
comp=Z,143nm,1.2s
BBSR **BB Station** 78.83 52 IAMs_20 IAMs_20 08 19 48.8
comp=Z,1µm,22.0s
UZH **Uzhgorod** 78.84 346⇓*i*P **P** **07 45 08.8 -1.2**
UZH *i* 07 45 18.8
UZH *e**PP **pP** **07 45 21.5 -0.4**
UZH *e*S **S** **07 54 58.7 -6.0**
UZH *e* 07 55 10.3
UZH *e*SP **SPn** **07 55 40.4 -4.4**
UZH *e*SSS SSS 08 03 23.8
PBCC **Pribram** 78.85 351 *e*P **P** **07 45 10.0 -0.1**
PBCC *ex* x 07 45 22.1
ROTZ **Rotzenmuhle** 78.92 353 *e*P **P** **07 45 10.6 +0.1**
comp=Z,82nm,1.1s,baz=7.6,slow=5.5
RCHB **Rochefort** 78.93 357 P **P** **07 45 10.3 -0.2**
comp=Z,72nm,1.1s
VRAC **Vranov** 78.95 350 LR LR 08 21 38.6
comp=Z,608nm,20.5s,baz=13,slow=37
VRAC **Vranov** 78.95 350 ⇑P **P** **07 45 11.2 +0.5**
VRAC **Vranov** 78.95 350 *e*P **P** **07 45 10.8 +0.2**
LKLB **Kalborn** 78.96 357 P **P** **07 45 11.0 +0.4**
DOU **Dourbes** 79.01 358 P **P** **07 45 10.9 0.0**
comp=Z,76nm,1.3s
DOU *ex* x 07 45 25.6
AKT **Akhty** 79.03 326 *e*P **P** **07 45 11.3 -0.1**
AKT *e* 07 45 18.1
AKT pmax pmax
comp=Z,110nm,1.0s
GRA1 **Grafenberg Arr** 79.08 353 P **P** **07 45 11.6 +0.2**
GRA1 IAmb IAmb 07 45 13.0
comp=Z,176nm,1.0s
GRF **Grafenberg Arr** 79.08 353 P **P** **07 45 11.6 +0.2**
GRF pmax pmax
comp=Z,176nm,1.0s
GRF **Grafenberg Arr** 79.08 353 *e*P **P** **07 45 11.7 +0.4**
comp=Z,201nm,1.1s,baz=7.6,slow=5.5
GRF *e*L L 08 22 35.3
comp=Z,720nm,21.3s
TREC **Trest** 79.08 350 *e*P **P** **07 45 11.3 -0.1**
TREC MLR MLR
comp=Z,2µm,18.0s
TREC **Trest** 79.08 350 *e*P **P** **07 45 11.3 -0.1**
TREC AMS AMS 08 27 10.0
comp=Z,2µm,18.0s
NEY **Neytrino** 79.12 330*d i*P **P** **07 45 13.1 +1.2**
NEY pmax pmax
comp=Z,13nm,1.1s
LVIA **Vianden** 79.12 356 P **P** **07 45 11.9 +0.4**
comp=Z,106nm,1.1s
HRA **Herat** 79.14 312 IAmb IAmb 07 45 14.6
comp=Z,56nm,0.8s
ZEI **Tsey** 79.16 329 *e*P **P** **07 45 08.5 -3.7**
ZEI pmax pmax
comp=Z,108nm,1.1s
PBKI **Pangkalan Bun** 79.21 252 P **P** **07 45 12.2 -0.3**
comp=Z,199nm,0.6s
KRUC **Moravsky** 79.22 350 *e*P **P** **07 45 12.0 -0.1**
KIS **Kishinev** 79.24 341⇑*i*P **P** **07 45 12.0 -0.2**
comp=Z,720nm,1.6s
KIS *e*S **S** **07 55 00.0 -8.9**
KIS *e*ScS **SKSac** **07 55 25.0 +0.3**
KIS **Kishinev** 79.24 341⇑*i*P **P** **07 45 12.0 -0.2**
KIS *e* 07 45 25.0
KIS *e* 07 50 10.0
KIS *e*S **S** **07 55 00.0 -8.9**
KIS *e* 07 55 25.0
KIS *e*PS 07 55 45.0
KIS pmax pmax
comp=Z,720nm,1.6s
KIS MLR MLR
comp=Z,3µm,18.0s
KIS MLR MLR
comp=N,2µm,18.0s
ANN **Anapa** 79.25 334 *e*P **P** **07 45 10.2 -2.1**
ANN *e**PP **PcP** **07 45 19.9 -0.6**
ANN *e*S **S** **07 55 08.3 -0.8**
ANN *e*SS **SS** **08 00 16.5 +1.8**
ANN pmax pmax
comp=Z,155nm,1.2s
KECS **Kecovo** 79.26 347 *e*P **P** **07 45 13.1 +0.8**
KECS pmax pmax
comp=Z,77nm,1.0s
KECS **Kecovo** 79.26 347 *e*P **P** **07 45 13.1 +0.8**
JAVC **Velka Javorina** 79.26 349 *e*P **P** **07 45 13.5 +1.1**
IAS **Iasi** 79.31 342 ⇓P **P** **07 45 13.2 +0.6**
BUR08 **Bucovina Ar. S** 79.31 343 P **P** **07 45 13.2 +0.4**
MILM **Milestii Mici** 79.32 341 ⇓P **P** **07 45 12.8 +0.2**
BURAR **Bucovina Array** 79.34 343 ⇓P **P** **07 45 13.7 +0.8**
WLF **Walferdange** 79.39 356 P **P** **07 45 13.4 +0.4**
WLF pmax pmax
comp=Z,105nm,1.0s
WLF **Walferdange** 79.39 356 *e*P **P** **07 45 13.5 +0.4**
comp=Z,114nm,1.0s,baz=7.6,slow=5.5
WLF **Walferdange** 79.39 356 P **P** **07 45 13.5 +0.5**
comp=Z,82nm,1.2s
WLF **Walferdange** 79.39 356 P **P** **07 45 13.4 +0.4**
WLF IAmb IAmb 07 45 14.7
comp=Z,105nm,1.0s
PRAR **RASCA** 79.40 343 ⇓P **P** **07 45 13.3 +0.2**
KHC **Kasperske Hory** 79.44 352 *e*P **P** **07 45 13.3 0.0**
KHC *e* 07 45 25.5
KHC MLR MLR
comp=Z,2µm,19.9s
KHC **Kasperske Hory** 79.44 352 *e*P **P** **07 45 13.3 0.0**
KHC *ex* x 07 45 25.5
KHC AMS AMS 08 26 50.0

comp=Z,2µm,19.9s
VYHS Vyhne 79.47 348 *e*P **P 07 45 14.0 +0.5**
VYHS pmax pmax
comp=Z,106nm,1.1s
VYHS Vyhne 79.47 348 *e*P **P 07 45 14.0 +0.5**
ONI Oni 79.48 329 P **P 07 45 14.5 +0.8**
WET Wettzell 79.49 352 *e*P **P 07 45 13.8 +0.2**
comp=Z,50nm,1.1s,baz=7.6,slow=5.5
BMR Baia Mare 79.58 345 ⇓P **P 07 45 15.1 +1.0**
SMOL Smolenice 79.63 349 *e*P **P 07 45 15.3 +0.9**
SMOL pmax pmax
comp=Z,56nm,1.1s
SMOL Smolenice 79.63 349 *e*P **P 07 45 15.3 +0.9**
JRMM Jerantut 79.68 263 P **P 07 45 16.0 +0.9**
GEC2 GERESS Array S 79.71 351 *e*P **P 07 45 14.7 -0.2**
comp=Z,72nm,1.3s,baz=7.6,slow=5.5
GEC2 GERESS Array S 79.71 351 IAMs_20 IAMs_20 08 27 25.3
comp=Z,1µm,20.0s
GERES GERESS Array B 79.71 351 P **P 07 45 14.6 -0.3**
comp=Z,24nm,0.8s,baz=24,slow=4.5,SNR=125
GERES LR LR 08 25 30.7
comp=Z,499nm,18.5s,baz=22,slow=40
SOC Sochi 79.72 332 *e*P **P 07 45 14.3 -0.6**
SOC *e* 07 48 16.5
SOC *e*PPP PPP 07 50 06.6
SOC *e*S **S 07 55 12.2 -2.0**
SOC pmax pmax
comp=Z,83nm,0.9s
SOC MLR MLR
comp=Z,3µm,21.0s
KULM Kulim 79.74 266 P **P 07 45 16.0 +0.6**
VASR Vaslui 79.79 341 ⇓P **P 07 45 16.3 +1.0**
MODS Modra-Piesok 79.79 349 *e*P **P 07 45 15.1 -0.1**
MODS pmax pmax
comp=Z,145nm,1.2s
MODS Modra-Piesok 79.79 349 *e*P **P 07 45 15.1 -0.1**
PBA Port Blair 79.82 276 IAMs_20 IAMs_20 08 20 44.7
comp=Z,781nm,22.0s
BIZ Bicaz 79.83 343 ⇓P **P 07 45 16.6 +1.1**
TBLG Delisi 79.83 328 P **P 07 45 16.1 +0.5**
TBLG pmax pmax
comp=Z,192nm,1.1s
TBLG Delisi 79.83 328 P **P 07 45 16.2 +0.6**
TBLG Delisi 79.83 328 P **P 07 45 16.1 +0.5**
TBLG IAmb IAmb 07 45 17.4
comp=Z,192nm,1.1s
LEOM Leova 79.86 341 ⇓P **P 07 45 16.4 +0.8**
LEOM Leova 79.86 341 P **P 07 45 16.1 +0.5**
PSZ Piszkesteto 79.89 347 ⇓P **P 07 45 17.0 +1.1**
PSZ Piszkesteto 79.89 347 IAmb IAmb 07 45 18.5
comp=Z,136nm,1.0s
PSZ IAMs_20 IAMs_20 08 22 10.8
comp=Z,1µm,22.0s
JVM Valle D.L. Mar 79.91 2 *e*P **P 07 45 16.2 +0.4**
CHLP Challavanipeta 79.92 287 *e*P **P 07 45 15.2 -1.2**
CHLP IAmb IAmb 07 45 18.2
comp=Z,61nm,1.0s
JSA Saint Aubin 79.94 2 *e*P **P 07 45 16.1 +0.1**
JSA IAmb IAmb 07 45 16.9
comp=Z,212nm,1.0s
SIM Simferopol' 79.97 337 *d i*P **P 07 45 16.6 +0.3**
SIM S **S 07 55 16.0 -0.8**
SIM pmax pmax
comp=Z,52nm,1.0s
SIM MLR MLR
comp=Z,1µm,19.6s
ZST Bratislava 79.98 349 *e*P **P 07 45 16.2 -0.1**
ZST pmax pmax
comp=Z,142nm,1.1s
ZST Bratislava 79.98 349 *e*P **P 07 45 16.2 -0.1**
ARCR ARCALIA 80.00 344 ⇓P **P 07 45 18.1 +1.7**
IPM Ipoh 80.13 265 P **P 07 45 18.0 +0.5**
TESR Tescani 80.14 342 ⇓P **P 07 45 17.6 +0.5**
BHPL Bhopal 80.15 295 *i*P **P 07 45 17.9 +0.2**
BHPL IAmb IAmb 07 45 22.9
comp=Z,260nm,1.3s
BIR Birlad 80.18 341 ⇓P **P 07 45 18.8 +1.5**
TGUH Tegucigalpa,Un 80.37 80 IAmb IAmb 07 45 40.3
comp=Z,142nm,1.1s
TGUH IAMs_20 IAMs_20 08 16 20.5
comp=Z,786nm,22.0s
CONA Conrad Observa 80.39 350 *i*P **P 07 45 18.8 +0.2**
SNR=46
GHRR 80.42 342 ⇓P **P 07 45 20.2 +1.5**
SEVA Sevastopol 80.47 337 ⇓P **P 07 45 19.2 +0.3**
CJR Cluj-Napoca 80.49 344 ⇓P **P 07 45 20.2 +1.1**
AKH Akhalkalaki 80.53 329 ⇓P **P 07 45 20.7 +1.1**
AKH Akhalkalaki 80.53 329 P **P 07 45 20.5 +0.9**
AKH Akhalkalaki 80.53 329 IAmb IAmb 07 45 21.5
comp=Z,92nm,1.1s
DRGR 80.56 345 ⇓P **P 07 45 20.1 +0.6**
KNRA Kununurra 80.57 230 P **P 07 45 16.6 -3.1**
KNRA IAmb IAmb 07 45 21.2
comp=Z,147nm,1.4s
FUR Furstenfeldbru 80.59 353 *e*P **P 07 45 19.6 0.0**
comp=Z,126nm,1.1s,baz=7.6,slow=5.5
PLAI Plampang 80.60 243 P **P 07 45 18.3 -1.7**
comp=Z,2µmcomp=Z,105nm,1.4s
BFO Black Forest 80.62 355 P **P 07 45 19.5 -0.2**
BFO pmax pmax
comp=Z,65nm,1.1s
BFO Black Forest 80.62 355 *e*P **P 07 45 19.7 -0.1**
comp=Z,92nm,1.3s,baz=7.6,slow=5.5
BFO Black Forest 80.62 355 P **P 07 45 19.5 -0.2**
BGD Bogdanovka 80.63 329 P **P 07 45 21.4 +1.3**
MOA Molln 80.64 351 *i*P **P 07 45 19.8 0.0**
SNR=11
CSKK Cskako 80.66 348 *e*P **P 07 45 20.5 +0.6**
OZUR 80.70 343 ⇓P **P 07 45 21.6 +1.4**
VRI Vrincioaia 80.74 342 ⇓P **P 07 45 21.3 +0.9**
VRI Vrincioaia 80.74 342 P **P 07 45 20.9 +0.5**
PLOR Plostina 80.77 342 ⇓P **P 07 45 21.5 +0.9**
ODBI Odobesti 80.78 342 ⇓P **P 07 45 22.5 +2.0**
PETR Petresti 80.78 342 ⇓P **P 07 45 22.4 +1.9**
ECH Echery 80.80 356 IAmb IAmb 07 45 22.2
comp=Z,66nm,1.0s
TUDR 80.82 341 ⇓P **P 07 45 21.8 +1.1**
NGP Nagpur 80.84 292 *e*P **P 07 45 21.7 +0.4**
NGP IAmb IAmb 07 45 26.3
comp=Z,39nm,0.8s
RJOB Jochberg 80.89 352 *e*P **P 07 45 21.3 +0.1**
comp=Z,55nm,0.8s,baz=7.6,slow=5.5
DOPR Dopca 80.90 343 ⇓P **P 07 45 22.9 +1.6**
MDB Medias 80.91 344 ⇓P **P 07 45 23.1 +1.8**
TLCR 80.97 340 ⇓P **P 07 45 22.1 +0.6**
BISRR Bisoca 81.05 342 ⇓P **P 07 45 23.4 +1.2**
ARSA Arzberg 81.10 350 *i*P **P 07 45 22.9 +0.6**
SNR=30
CFR Carcaliu 81.12 341 ⇓P **P 07 45 22.9 +0.5**
CLF Chambon-Foret 81.13 359 P **P 07 45 23.1 +0.7**
GRER 81.16 342 ⇑P **P 07 45 24.0 +1.4**
UBR Ueberruh 81.16 354 *e*P **P 07 45 22.7 0.0**
comp=Z,73nm,1.2s,baz=7.6,slow=5.5
SIRR Siria 81.24 346 ⇓P **P 07 45 23.9 +0.9**
GNI Garni 81.25 327 *c i*P **P 07 45 24.2 +0.8**
GNI pmax pmax
comp=Z,305nm,1.3s
GNI Garni 81.25 327 LR LR 08 26 35.7
comp=Z,2µm,18.7s,baz=25,slow=40
GNI Garni 81.25 327 *i*P **P 07 45 24.4 +1.0**
SNR=17
GNI Garni 81.25 327 P **P 07 45 24.5 +1.1**
GNI Garni 81.25 327 P **P 07 45 24.1 +0.6**
GNI IAmb IAmb 07 45 28.0
comp=Z,150nm,1.4s
MLR Muntele Rosu 81.25 342 P **P 07 45 24.1 +0.8**
MLR pmax pmax
comp=Z,181nm,0.9s
MLR MLR MLR
comp=Z,1µm,22.0s
MLR Muntele Rosu 81.25 342 LR LR 08 26 40.9
comp=Z,812nm,18.3s,baz=6.5,slow=40
MLR Muntele Rosu 81.25 342 ⇑P **P 07 45 25.0 +1.8**
MLR Muntele Rosu 81.25 342 P **P 07 45 24.1 +0.8**
MLR IAMs_20 IAMs_20 08 23 44.2
comp=Z,1µm,22.0s
RETA Reutte 81.30 353 *i*P **P 07 45 23.5 0.0**
SNR=16
JURR Jurilovca 81.36 340 ⇓P **P 07 45 24.3 +0.7**
TOPG Topolog 81.36 341 ⇓P **P 07 45 24.3 +0.6**
WATA Walderalm 81.39 353 *i*P **P 07 45 24.2 +0.2**
SNR=37
DEV Deva 81.42 345 ⇓P **P 07 45 24.8 +0.8**
MOTA Moosalm 81.42 353 *i*P **P 07 45 24.2 +0.1**
SNR=42
WTTA Wattenberg 81.46 353 *i*P **P 07 45 24.8 +0.4**
SNR=50
VOIR 81.47 343 ⇓P **P 07 45 25.7 +1.4**
KBA Koelnbreinsper 81.49 351 *i* PcP **P 07 45 25.3 +0.8**
SNR=154
ISR Istrita 81.50 342 ⇓P **P 07 45 25.3 +0.8**
SQTA Sanki Quirin 81.53 353 *i*P **P 07 45 25.0 +0.3**
SNR=33
DAVA Damuels 81.57 354 *i*P **P 07 45 25.4 +0.4**
SNR=12
ARR Arges 81.61 343 ⇓P **P 07 45 26.5 +1.4**
HARR Harsova 81.63 341 ⇓P **P 07 45 25.6 +0.5**
WR0 Warramunga Arr 81.66 223 P **P 07 45 23.5 -2.0**
SECR 81.67 342 ⇓P **P 07 45 26.7 +1.4**
SENK Senkaya-Erzuru 81.67 329 P **P 07 45 26.5 +0.8**
WR8 Warramunga Arr 81.67 223 IAMs_20 IAMs_20 08 21 44.1
comp=Z,690nm,20.0s
MTUR Matau 81.67 343 ⇓P **P 07 45 27.0 +1.6**
TPI Tanjungpandan 81.67 255 P **P 07 45 25.5 -0.2**
comp=Z,1µmcomp=Z,75nm,1.2s
LOT Lotru 81.69 344 ⇓P **P 07 45 25.7 +0.1**
WR4 Warramunga Arr 81.71 224 IAMs_20 IAMs_20 08 16 18.0
comp=Z,716nm,20.0s
WC1 Warramunga Arr 81.71 224 IAMs_20 IAMs_20 08 21 36.2
comp=Z,773nm,19.0s
WRAB Tennant Creek 81.72 224 P **P 07 45 22.4 -3.3**
WRAB pmax pmax
comp=Z,94nm,1.4s
WRAB MLR MLR
comp=Z,700nm,19.0s
WRAB Tennant Creek 81.72 224 P **P 07 45 22.4 -3.3**
WRAB IAmb IAmb 07 45 26.8
comp=Z,94nm,1.4s
WRAB Tennant Creek 81.72 224 IAMs_20 IAMs_20 08 21 45.1
comp=Z,699nm,19.0s
SOKA Soboth 81.72 350 *i*P **P 07 45 26.0 +0.4**
SNR=109
WC3 Warramunga Arr 81.73 224 IAMs_20 IAMs_20 08 21 44.6
comp=Z,754nm,19.0s
WRA Warramunga Arr 81.73 224 P **P 07 45 25.5 -0.3**
comp=Z,32nm,1.1s,baz=33,slow=6.0,SNR=63
WRA LR LR 08 21 39.2
comp=Z,337nm,19.1s,baz=325,slow=36
TIRR Tirgusor 81.75 340 P **P 07 45 25.5 -0.2**
TIRR pmax pmax
comp=Z,234nm,0.8s
TIRR MLR MLR
comp=Z,5µm,18.0s
TIRR Tirgusor 81.75 340 ⇓P **P 07 45 26.4 +0.7**
TIRR Tirgusor 81.75 340 *i*P **P 07 45 25.7 0.0**
TIRR Tirgusor 81.75 340 P **P 07 45 25.5 -0.2**
PERS Pernice 81.75 350 *i*P **P 07 45 26.0 +0.2**
FETA Feichten 81.77 353 *i*P **P 07 45 26.3 +0.3**
SNR=58
GROS Grobnik 81.88 350 *i*P **P 07 45 26.6 +0.1**
BZS Buzias 81.89 345 ⇓P **P 07 45 27.0 +0.6**
ABTA Abfaltersbach 81.90 352 *i*P **P 07 45 26.6 0.0**
SNR=53
MYKA Terra Mystica 81.91 351 *i*P **P 07 45 26.4 -0.3**
SNR=22
GZR Gura Zlata 81.91 345 ⇓P **P 07 45 27.6 +0.9**
OBKA Obir 81.94 350 *i*P **P 07 45 27.0 +0.1**
SNR=50
SULR 81.97 342 ⇓P **P 07 45 27.4 +0.5**
MFTR Murfatlar 82.01 340 ⇓P **P 07 45 27.9 +0.8**
LEHL Lehliu 82.06 342 ⇓P **P 07 45 27.9 +0.5**
GOLR 82.06 343 ⇓P **P 07 45 28.5 +1.1**
DAVOX Davos/Dischmat 82.07 354 LR LR 08 21 07.2
comp=Z,569nm,21.9s,baz=10,slow=35
LHMI Lhok Sumawe 82.11 269 P **P 07 45 28.2 +0.2**
comp=Z,5µmcomp=Z,470nm,1.2s
PPBI Pangkal Pinang 82.13 257 P **P 07 45 28.1 0.0**
comp=Z,28µmcomp=Z,107nm,1.2s
BANR Banloc 82.19 346 ⇓P **P 07 45 29.3 +1.3**
FUORN Ofenpass-Fuorn 82.20 353 P **P 07 45 28.8 +0.4**
FUORN IAmb IAmb 07 45 30.1
comp=Z,73nm,0.9s
ICOR Ion Corvin 82.20 341 ⇓P **P 07 45 29.2 +1.1**
CADS Cadrg 82.30 351 *i*P **P 07 45 27.6 -1.0**
MANR Mangalia 82.32 340 ⇓P **P 07 45 29.8 +1.1**
KOPR Koprukoy-ERZUR 82.34 329 P **P 07 45 29.9 +0.7**
PVM Polavaram 82.35 288 *e*P **P 07 45 29.3 +0.1**
PVM IAmb IAmb 07 45 30.9
comp=Z,99nm,0.9s
AGRB Hanur-Agry 82.35 328 P **P 07 45 30.3 +1.1**
HUMR Humele 82.36 343 ⇓P **P 07 45 28.9 0.0**
STAL STALIGIAL 82.36 352 P **P 07 45 27.6 -1.4**
LJU Ljubljana 82.40 350 ⇑*i*P **P 07 45 28.7 -0.4**
TUE Stuetta 82.41 354 P **P 07 45 29.8 +0.3**
TUE IAmb IAmb 07 45 31.0
comp=Z,89nm,0.9s
CLDR Caldiran 82.43 328 P **P 07 45 30.6 +0.9**
SGRR Singureni 82.47 342 ⇓P **P 07 45 29.3 -0.2**
RPR Rampur 82.48 291 *e*P **P 07 45 29.7 -0.3**
RPR IAmb IAmb 07 45 31.4
comp=Z,96nm,1.1s
CRES Cresnjev 82.51 350 ⇑*i*P **P 07 45 29.3 -0.4**
SRE Strehaia 82.55 344 ⇓P **P 07 45 30.3 +0.3**
JAVS Javornik 82.59 351 *i*P **P 07 45 29.4 -0.9**
FRGS Fruska Gora 82.61 347 ⇑*i*P **P 07 45 29.6 -0.7**
SENIN Lac Senin/Sane 82.64 355 P **P 07 45 30.2 -0.5**
CTI Castel Tesino 82.66 352 P **P 07 45 29.6 -1.1**
CTI pmax pmax
comp=Z,65nm,1.0s
CTI Castel Tesino 82.66 352 P **P 07 45 29.6 -1.1**
CTI IAmb IAmb 07 45 31.2
comp=Z,65nm,1.0s
MDVR Moldovita 82.68 345 ⇓P **P 07 45 31.2 +0.5**
COPA Copaceanca 82.70 343 ⇓P **P 07 45 30.9 +0.2**
CEY Cerknica 82.71 350 ⇑*i*P **P 07 45 30.1 -0.7**
PSI Prapat 82.74 265 P **P 07 45 30.9 -0.6**
PSI pmax pmax
comp=Z,171nm,0.9s
GGR Gangavaram 82.75 289 *e*P **P 07 45 26.8 -4.7**
GGR IAmb IAmb 07 45 32.2
comp=Z,54nm,1.1s
RPSI Rantau Prapat 82.82 265 P **P 07 45 30.9 -0.9**
MLAZ Malazgirt-MUS 82.89 329 P **P 07 45 33.1 +1.1**
KCSI Kotacane, Aceh 82.91 267 P **P 07 45 30.0 -2.2**
comp=Z,572nmcomp=Z,18nm,0.9s
PUNG Punghina 82.97 344 ⇓P **P 07 45 32.3 +0.2**
VLAD Vladila 82.98 343 ⇓P **P 07 45 32.9 +0.7**
SRSP Sriramsagar 82.99 291 *e*P **P 07 45 31.3 -1.3**
SRSP IAmb IAmb 07 45 33.4
comp=Z,60nm,1.0s
RAZG Razgrad 82.99 341 ⇑P **P 07 45 32.4 +0.1**
VANB Van 83.10 328 P **P 07 45 33.9 +0.8**
RIY Rijeka 83.11 350 ⇑*i*P **P 07 45 32.3 -0.5**
NEF NEVSHA 83.13 341 *i*P **P 07 45 33.3 +0.3**
GTBY Guantanamo Bay 83.14 67 P **P 07 45 32.4 -0.9**
GTBY IAmb IAmb 07 45 36.8
comp=Z,49nm,0.9s
PRD Provadia 83.16 341 *i*P **P 07 45 33.7 +0.6**
SALO Salr 83.18 353 P **P 07 45 33.0 -0.2**
MLSI Meulaboh, Aceh 83.19 268 P **P 07 45 32.5 -1.2**
comp=Z,73nm,1.1s
VRTB Varto-Mus 83.23 329 P **P 07 45 34.8 +1.1**
TEKS Tekeris 83.25 347 ⇑*i*P **P 07 45 33.6 0.0**
YEDI Yedisu-Bingol 83.26 330 P **P 07 45 34.5 +0.6**
DOB Doboj 83.26 348 *e*P **P 07 45 32.6 -1.0**
MYLAV Mylavaram 83.33 288 *e*P **P 07 45 33.7 -0.6**
MYLAV IAmb IAmb 07 45 36.1
comp=Z,101nm,1.1s
BKNI Bangkinang 83.34 262 P **P 07 45 34.5 +0.1**
comp=Z,27µmcomp=Z,222nm,1.0s
TEOL Teolo 83.35 352 P **P 07 45 34.2 +0.2**
RSDY Resadiye-TOKAT 83.35 333 P **P 07 45 34.9 +0.7**
BLY Banja Luka 83.37 348 ⇑*i*P **P 07 45 33.8 -0.4**
BLY Banja Luka 83.37 348 P **P 07 45 33.4 -0.8**
SZH Strazhica 83.40 342 *i*P **P 07 45 34.0 -0.3**
AKDM Akdamar-Van 83.48 328 P **P 07 45 35.6 +0.5**
TPTI 83.48 267 P **P 07 45 33.4 -1.8**
comp=Z,10nm,0.9s
PLVB Pleven 83.53 343 ⇓P **P 07 45 35.7 +0.7**
PVL Pavlikeni 83.56 342 *i*P **P 07 45 35.5 +0.3**
PMBI Palembang 83.57 257 P **P 07 45 35.8 +0.2**
comp=Z,57µmcomp=Z,345nm,0.6s
GURO Guroymak-BITLI 83.59 329 P **P 07 45 36.4 +0.8**
DIVS Divibare 83.62 346 ⇑*i*P **P 07 45 35.7 +0.1**
BNGB Bingl 83.63 330 P **P 07 45 36.6 +0.8**
ESPN Las Esperanzas 83.64 79 P **P 07 45 35.0 -0.9**
ESPN IAmb IAmb 07 45 53.4
comp=Z,57nm,1.0s
TOKT Tokat 83.64 333 P **P 07 45 36.5 +0.8**
MGRS Mrkonjic Grad 83.71 348 ⇑*i*P **P 07 45 36.6 +0.6**
ILGA Ilgaz 83.73 336 P **P 07 45 35.7 -0.7**
ELND Elena 83.73 342 ⇓P **P 07 45 36.2 +0.2**
WOJI Wonogiri, Jawa 83.75 249 P **P 07 45 36.4 0.0**
comp=Z,35nm,1.1s
HAPS Han Pijesak,Bl 83.78 347 *e*P **P 07 45 35.8 -0.7**
SSB Saint Sauveur 83.83 357 P **P 07 45 35.9 -0.7**
SSB pmax pmax
comp=Z,75nm,1.0s
SSB Saint Sauveur 83.83 357 P **P 07 45 35.9 -0.7**
SSB IAmb IAmb 07 45 38.1
comp=Z,75nm,1.0s
ILIC ilic-Erzincan 83.86 332 P **P** 07 45 31.9 -5.0
SVSK Karacayir 83.89 333 P **P 07 45 37.7 +0.8**
BBLS Lazići 83.93 347 ⇑*i*P **P 07 45 37.8 +0.6**
BNI Bardonecchia 83.98 356 P **P 07 45 38.0 +0.5**
BNI pmax pmax
comp=Z,123nm,1.0s
BNI Bardonecchia 83.98 356 P **P 07 45 38.0 +0.5**
BNI IAmb IAmb 07 45 39.9
comp=Z,122nm,1.0s
JMB Yambol 84.04 341 *i*P **P 07 45 37.5 -0.1**
HYB Hyderabad 84.04 290 *i*P **P 07 45 38.0 -0.1**
HYB Hyderabad 84.04 290 *e*P **P 07 45 38.3 +0.2**
HYB IAmb IAmb 07 45 40.2
comp=Z,115nm,0.8s
HYBB Hyderabad (bro 84.04 290 *e*P **P 07 45 36.0 -2.1**
HYBB IAmb IAmb 07 45 39.1
comp=Z,116nm,1.0s
KDZE Karadeniz Ereo 84.05 337 ⇓P **P 07 45 37.7 -0.1**
SDSI Sungai Dareh 84.07 261 P **P 07 45 37.4 -0.8**
comp=Z,2µmcomp=Z,60nm,1.2s
CANT Cankiri 84.17 336 P **P 07 45 39.5 +1.1**
RUDO Rudo 84.18 347 ⇑*i*P **P 07 45 38.0 -0.4**
SVAN Silvan-Diyarba 84.23 329 P **P 07 45 39.5 +0.7**
CUKT Cukurca 84.25 327 P **P 07 45 38.9 -0.1**
NJS Nagarjunasagar 84.27 289 *e*P **P 07 45 38.2 -1.0**
NJS IAmb IAmb 07 45 39.7
comp=Z,48nm,1.1s
SIRT Sirnak 84.41 328 P **P 07 45 40.1 +0.3**
PGB Panagyurishte 84.42 343 *i*P **P 07 45 39.8 +0.1**
ADKI Addanki 84.43 288 *e*P **P 07 45 39.5 -0.5**
ADKI IAmb IAmb 07 45 41.0
comp=Z,45nm,1.1s
BHUJ Bhuj 84.47 300 *e*P **P 07 45 40.5 +0.4**
DMPR Damasthipur 84.47 291 *e*P **P 07 45 38.4 -1.9**
DMPR IAmb IAmb 07 45 40.5
comp=Z,43nm,1.0s
KPJI Karang Pucung 84.53 251 P **P 07 45 39.7 -0.7**
comp=Z,87nm,1.0s
VTS Vitosha 84.53 344 P **P 07 45 39.6 -0.8**
VTS pmax pmax
comp=Z,79nm,0.9s
VTS Vitosha 84.53 344 ⇓P **P 07 45 40.7 +0.3**
VTS Vitosha 84.53 344 *i*P **P 07 45 39.9 -0.4**
VTS Vitosha 84.53 344 P **P 07 45 39.5 -0.8**
VTS IAmb IAmb 07 45 41.5
comp=Z,79nm,0.9s
MSSA Maissana 84.55 354 P **P 07 45 39.8 -0.5**
EDRB Edirne 84.60 341 P **P 07 45 39.4 -1.1**
EDRB Edirne 84.60 341 P **P 07 45 40.6 +0.1**
YOZ Yozgat 84.62 334 P **P 07 45 41.1 +0.3**
CTYL Yalikoy Yolu 84.63 340 P **P 07 45 40.6 0.0**
SILT Sile 84.63 339 P **P 07 45 40.8 +0.2**
PHSR Pinarhisar 84.64 340 P **P 07 45 41.0 +0.3**
VLC Villacollemand 84.64 353 P **P 07 45 40.8 0.0**
VLC IAmb IAmb 07 45 50.4
comp=Z,57nm,0.9s
VLC IAMs_20 IAMs_20 08 28 43.0
comp=Z,1µm,18.0s
UPM Unac-Piva 84.65 347 ⇑*i*P **P 07 45 40.4 -0.6**
PDSI Padang 84.66 262 P **P 07 45 39.6 -1.6**
KLYT Kilyos 84.67 339 P **P 07 45 40.8 0.0**
SNSI Sinabang, Aceh 84.67 267 P **P 07 45 41.2 0.0**
comp=Z,3µmcomp=Z,206nm,1.2s
KLRI Killari 84.68 292 *e*P **P 07 45 40.5 -0.8**
KLRI IAmb IAmb 07 45 42.1
comp=Z,183nm,1.4s
GSI Gunungsitoli 84.75 266 P **P 07 45 41.3 -0.3**
comp=Z,2µmcomp=Z,158nm,2.0s
DYBB Diyarbakir 84.75 330 P **P 07 45 42.1 +0.7**
PLD Plovdiv 84.75 342 *i*P **P 07 45 40.8 -0.5**
PLD Plovdiv 84.75 342 P **P 07 45 41.3 0.0**
BGKT Bogazkoy 84.80 339 P **P 07 45 41.7 +0.2**
ORH Orhaniye 84.81 338 P **P** 07 45 34.1 -7.5
ISK Istanbul-Kandi 84.84 339 P **P 07 45 41.4 -0.3**
KAVV Kandilli-Istan 84.85 339 P **P 07 45 41.3 -0.4**
YUVA Yuva-Kibriscik 84.86 337 P **P 07 45 42.2 +0.2**
SRLM Srisailam 84.87 289 *e*P **P** 07 45 36.6 -5.6
SRLM IAmb IAmb 07 45 43.1
comp=Z,62nm,1.3s
MDUB Mudurnu 84.91 337 P **P 07 45 42.3 +0.1**
MDUB Mudurnu 84.91 337 P **P 07 45 41.8 -0.4**
HRT Hereke 84.94 338 P **P 07 45 42.4 +0.1**
MALT Malatya 84.95 331 P **P 07 45 43.1 +0.6**
KRJI Kerinci 84.95 260 P **P 07 45 42.5 -0.2**
comp=Z,11µmcomp=Z,200nm,0.9s
DARE Darende-Malaty 84.99 332 P **P 07 45 43.8 +1.1**
BR131 Keskin Array S 84.99 335 P **P 07 45 42.5 -0.2**
BR131 pmax pmax
comp=Z,81nm,0.9s
BR131 Keskin Array S 84.99 335 P **P 07 45 42.5 -0.2**
BR131 IAmb IAmb 07 45 43.8
comp=Z,81nm,0.8s
BR131 Keskin Array S 84.99 335 P **P 07 45 42.5 -0.2**
SNR=40
BRTR Keskin Array B 84.99 335 P **P 07 45 42.5 -0.2**
comp=Z,78nm,0.8s,baz=53,slow=2.8,SNR=276
BRY Bratogost 85.00 347 ⇑*i*P **P 07 45 41.9 -0.8**
KDZ Kurdzhali 85.06 342 *i*P **P 07 45 42.8 0.0**
KDZ Kurdzhali 85.06 342 P **P 07 45 43.1 +0.3**
ANTO Ankara 85.08 336 P **P 07 45 41.8 -1.2**
ANTO pmax pmax
comp=Z,144nm,1.0s
ANTO MLR MLR
comp=Z,2µm,21.0s
ANTO Ankara 85.08 336 ⇓P **P 07 45 44.0 +0.9**
ANTO Ankara 85.08 336 P **P 07 45 43.5 +0.5**
ANTO Ankara 85.08 336 P **P 07 45 41.8 -1.2**
SB02 Marmara Sea 85.08 339 P **P 07 45 43.3 +0.4**
MAZI Mazidag 85.10 329 P **P 07 45 43.5 +0.2**
BR231 Keskin MP Arra 85.11 336 P **P 07 45 43.9 +0.6**
GULT Gulveren 85.11 338 P **P 07 45 43.4 +0.2**
STON Ston 85.15 348 ⇑*i*P **P 07 45 42.1 -1.1**
MDSI Maura Dua 85.15 257 P **P 07 45 41.7 -1.9**
comp=Z,1µmcomp=Z,73nm,1.2s
RZN Rozhen 85.16 342 *i*P **P 07 45 43.3 -0.2**
AS31 Alice Springs 85.20 222 P **P 07 45 39.2 -4.4**
BNN Bunyan 85.20 333 P **P 07 45 44.2 +0.4**
ASAR Alice Springs 85.20 222 P **P 07 45 44.0 +0.4**
comp=Z,20nm,0.9s,baz=26,slow=5.6,SNR=128
ASAR LR LR 08 21 30.1
comp=Z,498nm,19.5s,baz=32,slow=34
OSSC Osservatorio P 85.20 352 P **P 07 45 42.5 -1.1**
OSSC IAMs_20 IAMs_20 08 27 14.9
comp=Z,955nm,21.0s
TREB Trebinje 85.21 347 *e*P **P 07 45 42.8 -0.7**
DBJI Dramaga 85.22 253 P **P 07 45 42.4 -1.5**
comp=Z,7µmcomp=Z,58nm,0.7s
SBJI Serang 85.25 254 P **P 07 45 43.2 -0.8**
comp=Z,94nm,0.7s
YLV Yalova 85.25 339 P **P 07 45 43.5 -0.4**
KKB Krupnik 85.28 344 *i*P **P 07 45 43.9 -0.1**
ADVT Abdulvahap 85.29 338 P **P 07 45 43.9 -0.1**
MASI Maura Aman, Be 85.29 259 P **P 07 45 43.2 -1.2**
comp=Z,3µmcomp=Z,182nm,1.2s
PDG Podgorica 85.36 346 ⇑*i*P **P 07 45 43.9 -0.4**
PDG Podgorica 85.36 346 P **P 07 45 43.8 -0.4**
ARMT Armutlu 85.37 339 P **P 07 45 44.0 -0.4**
AFSR Afar-Bala (An 85.40 336 P **P 07 45 45.2 +0.5**
MMB Musomiste 85.44 343 *i*P **P 07 45 44.7 -0.1**
HCY Herceg Novi 85.45 347 *e*P **P 07 45 43.7 -1.1**
SARI SarD1z-Kayseri 85.45 333 P **P 07 45 45.7 +0.6**
SKO Skopje 85.47 345 *i*P **P 07 45 45.9 +1.1**
KSI Kapahiang 85.47 259 P **P 07 45 43.6 -1.7**
CAVI Cavuskoy 85.49 338 P **P 07 45 45.0 0.0**
RDO Rodhopi 85.52 342 P **P 07 45 43.8 -1.3**
RDO Rodhopi 85.52 342 P **P 07 45 45.2 +0.1**
MDNY Mudanya-Bursa 85.55 339 P **P 07 45 45.1 -0.2**
DRME Dracevica, Mon 85.61 346 ⇑*i*P **P 07 45 45.2 -0.3**
STIP Stip 85.61 344 *i*P **P 07 45 44.9 -0.6**
MRMT Marmara Adasi 85.61 340 P **P 07 45 45.6 -0.1**

URFA	Urfa	85.63	331	P		P		07 45 46.7	+0.9	
LWLI	Liwa	85.64	257	P		P		07 45 44.6	-1.6	
	comp=Z,9μmcomp=Z,72nm,0.7s									
BORA	Eskisehir	85.65	338	P		P		07 45 45.9	0.0	
ALN	Alexandroupoli	85.65	341	IAMs_20	IAMs_20			08 29 25.6		
	comp=Z,1μm,18.0s									
YAYX	Yaylak	85.68	335	P		P		07 45 46.3	+0.2	
NRCA	Norcia	85.72	351	P		P		07 45 46.1	-0.1	
SERE	Sereflikochisa	85.74	335	P		P		07 45 46.6	+0.2	
KCTX	Karacabey (Bur	85.77	339	P		P		07 45 46.3	-0.1	
KASI	Kota Agung	85.77	256	P		P		07 45 45.0	-1.7	
	comp=Z,61nm,1.0s									
AUSIV	SIVRIHISAR	85.80	337	P		P		07 45 46.2	-0.5	
KULU	Kulu	85.80	335	P		P		07 45 47.0	+0.3	
SISI	Saibi	85.84	263	P		P		07 45 46.5	-0.5	
	comp=Z,1μmcomp=Z,83nm,1.1s									
KRBG	Karabiga-Canak	85.88	340	P		P		07 45 46.7	-0.2	
CGJI	Cibinong	85.90	254	P		P		07 45 45.3	-2.0	
	comp=Z,1μmcomp=Z,41nm,1.4s									
POO	Poona	85.90	295	*e*P		P		07 45 47.2	-0.2	
VAY	Valandovo	85.91	344	*i* P		P		07 45 47.2	+0.2	
PHP	Peshkopia	85.91	345	P		P		07 45 45.1	-2.0	
SRS	Serrai	85.92	343	P		P		07 45 42.3	-4.8	
CASP	Castiglione de	85.96	353	P		P		07 45 46.8	-0.5	
CASP				IAmb	IAmb			07 45 47.9		
	comp=Z,89nm,0.9s									
CASP				IAMs_20	IAMs_20			08 31 54.0		
	comp=Z,862nm,19.0s									
CIFT	Cifteler, Eski	85.99	337	P		P		07 45 47.2	-0.4	
KNT	Kendrikon	86.00	343	P		P		07 45 46.1	-1.4	
KNT	Kendrikon	86.00	343	P		P		07 45 47.6	+0.1	
SC01	Santiago de lo	86.03	64	P		P		07 45 47.5	-0.5	
SC01				IAMs_20	IAMs_20			08 21 54.5		
	comp=Z,1μm,21.0s									
LATE	Laterza	86.06	352	P		P		07 45 47.4	-0.5	
SDDR	Presa de Saban	86.07	65	P		P		07 45 48.7	+0.5	
SDDR				IAmb	IAmb			07 45 50.0		
	comp=Z,56nm,1.0s									
SDDR				IAMs_20	IAMs_20			08 25 41.4		
	comp=Z,708nm,21.0s									
KMRS	Kahramanmaras	86.15	332	P		P		07 45 48.8	+0.4	
AQU	L'Aquila	86.17	351	P		P		07 45 48.4	0.0	
AQU				pmax	pmax					
	comp=Z,195nm,1.0s									
AQU	L'Aquila	86.17	351 ⇑	*i* P		P		07 45 48.6	+0.2	
AQU	L'Aquila	86.17	351	P		P		07 45 48.4	0.0	
AQU				IAMs_20	IAMs_20			08 29 32.1		
	comp=Z,1μm,20.0s									
SKHT	Srikalahasti	86.23	287	*e*P		P		07 45 45.9	-3.1	
SKHT				IAmb	IAmb			07 45 49.8		
	comp=Z,31nm,0.9s									
GRG	Griva	86.29	344	P		P		07 45 46.2	-2.8	
GRG	Griva	86.29	344	P		P		07 45 48.7	-0.3	
TVSB	Tavsanli	86.29	338	P		P		07 45 48.7	-0.4	
TIR	Tirane	86.33	346	IAmb	IAmb			07 45 55.2		
	comp=Z,68nm,1.0s									
GAZ	Gaziantep	86.37	332	P		P		07 45 50.1	+0.6	
GAZ	Gaziantep	86.37	332	P		P		07 45 49.0	-0.4	
GAZ				IAMs_20	IAMs_20			08 31 48.4		
	comp=Z,743nm,19.0s									
OHR	Ohrid	86.41	345	*i* P		P		07 45 49.8	+0.2	
MDRS	Chennai	86.43	286	*e*P		P		07 45 50.6	+0.6	
INTR	Introdacqua	86.45	350	P		P		07 45 48.7	-1.1	
SULT	Sultanhani-AKS	86.46	335	P		P		07 45 49.9	0.0	
KOZT	Kozan	86.49	333	P		P		07 45 50.2	+0.2	
SGRT	San Giovanni R	86.50	349	P		P		07 45 48.9	-1.1	
CMRD	Camardi-Nigde	86.56	333	P		P		07 45 51.2	+0.7	
OUR	Ouranopolis	86.60	342	P		P		07 45 47.4	-3.1	
OUR	Ouranopolis	86.60	342	P		P		07 45 49.7	-0.8	
FNA	Florina	86.63	345	P		P		07 45 48.2	-2.5	
FNA	Florina	86.63	345	P		P		07 45 49.9	-0.8	
URV	Uravakonda	86.75	290	*e*P		P		07 45 50.5	-1.0	
URV				IAmb	IAmb			07 45 52.1		
	comp=Z,124nm,1.1s									
LADK	Ladik-KONYA	86.76	336	P		P		07 45 51.2	-0.2	
YESY	Yesilyurt	86.79	334	P		P		07 45 51.4	-0.2	
SHUT	Suhut-Afyon	86.88	337	P		P		07 45 52.0	0.0	
BANI	BANI	87.07	64	P		P		07 45 51.8	-1.4	
LIT	Litokhoron	87.10	344	P		P		07 45 52.1	-0.9	
LIT				pmax	pmax					
	comp=Z,26nm,0.9s									
LIT				MLR	MLR					
	comp=Z,1μm,22.0s									
LIT	Litokhoron	87.10	344	P		P		07 45 52.1	-0.9	
LIT				IAMs_20	IAMs_20			08 27 36.2		
	comp=Z,982nm,22.0s									
PBRG	Braganca	87.12	6	*e*P		P		07 45 52.6	-0.5	
PCAB	Cabril	87.13	7	*e*P		P		07 45 52.9	-0.2	
DR12	Loma Pena Alta	87.31	63	P		P		07 45 55.2	+0.9	
PAOL	Paolisi	87.35	350	P		P		07 45 52.8	-1.4	
PAOL				IAmb	IAmb			07 45 54.8		
	comp=Z,75nm,1.4s									
TAHT	Tahtakopru-Hat	87.41	332	P		P		07 45 54.7	+0.2	
MANT	Manisa	87.42	339	P		P		07 45 53.8	-1.0	
MANT				IAmb	IAmb			07 45 54.4		
	comp=Z,44nm,0.9s									
ACER	Acerenza	87.43	349	P		P		07 45 54.2	-0.3	
KPRO	Kipourio	87.44	344	P		P		07 45 52.2	-2.5	
PVRL	Vila Real	87.58	6	*e*P		P		07 45 55.0	-0.3	
	comp=Z,100nm,1.4s									
MVO	Moncorvo	87.74	6	*e*P		P		07 45 55.7	-0.4	
	comp=Z,72nm,0.9s									
SCTE	Santa Cesarea	87.79	347	P		P		07 45 55.9	-0.3	
PVIS	Viseu	88.13	7	*e*P		P		07 45 57.4	-0.5	
AGG	Agios Georgios	88.18	343	P		P		07 45 56.7	-1.4	
AGG				pmax	pmax					
	comp=Z,16nm,1.0s									
AGG				MLR	MLR					
	comp=Z,1μm,22.0s									
AGG	Agios Georgios	88.18	343	P		P		07 45 56.7	-1.4	
AGG				IAMs_20	IAMs_20			08 26 53.7		
	comp=Z,1μm,22.0s									
GOA	Goa	88.33	293	*e*P		P		07 45 58.6	-0.5	
GOA				IAmb	IAmb			07 46 00.6		
	comp=Z,46nm,0.7s									
MTE	Manteigas	88.47	6	*e*P		P		07 45 59.1	-0.4	
	comp=Z,156nm,1.2s									
MTE	Manteigas	88.47	6	P		P		07 45 58.9	-0.6	
MTE				IAmb	IAmb			07 46 00.0		
	comp=Z,77nm,0.9s									
COI	Coimbra	88.59	7	*e*P		P		07 46 00.0	0.0	
	comp=Z,144nm,1.1s									
COI	Coimbra	88.59	7	P		P		07 45 59.7	-0.3	
COI				pmax	pmax					
	comp=Z,105nm,1.1s									
COI	Coimbra	88.59	7	P		P		07 45 59.7	-0.3	
BCIP	Isla Barro Col	88.73	77	IAMs_20	IAMs_20			08 23 18.2		
	comp=Z,583nm,21.0s									
PCAS	Casmilo, Conde	88.74	7	*e*P		P		07 46 00.3	-0.5	
	comp=Z,140nm,1.4s									
ELL	Elmali	88.75	337	P		P		07 46 00.4	-0.6	
ELL				pmax	pmax					
	comp=Z,68nm,0.9s									
ELL				MLR	MLR					
	comp=Z,3μm,22.0s									
ELL	Elmali	88.75	337	P		P		07 46 00.4	-0.6	
ELL				IAmb	IAmb			07 46 01.2		
	comp=Z,68nm,0.9s									
EFP	Efpalio	88.83	344	P		P		07 45 57.0	-4.2	
EVGI	Lefkada island	88.86	345	P		P		07 45 57.4	-3.9	
TIP	Timpagrande	88.90	348	P		P		07 46 01.2	-0.4	
TIP				IAmb	IAmb			07 46 02.4		
	comp=Z,74nm,1.1s									
TIP				IAMs_20	IAMs_20			08 31 55.2		
	comp=Z,888nm,20.0s									
BANOM	Banah	89.02	312	*i* P		P		07 46 01.5	-0.9	
	SNR=6.9									
BANOM	Banah	89.02	312	P		P		07 46 01.4	-0.9	
	SNR=5.9									
PCBR	Castelo Branco	89.03	6	*e*P		P		07 46 01.4	-0.7	
	comp=Z,85nm,1.4s									
AOPR	Arecibo Observ	89.12	61	P		P		07 46 02.7	-0.2	
AOPR				IAmb	IAmb			07 46 06.6		
	comp=Z,69nm,0.9s									
EMPR	Esperanza - Ma	89.14	61	P		P		07 46 03.9	+1.0	
KLV	Kalavryta, Ach	89.16	343	P		P		07 45 58.9	-3.9	
PTOM	Tomar	89.18	7	*e*P		P		07 46 02.4	-0.4	
	comp=Z,87nm,1.1s									
MLPR	Magueyes Islan	89.27	62	P		P		07 46 03.4	-0.1	
MLPR				IAmb	IAmb			07 46 05.3		
	comp=Z,65nm,1.1s									
ESBB	Sonseca Array	89.39	4	P		P		07 46 03.1	-0.7	
ESBB				IAmb	IAmb			07 46 04.3		
	comp=Z,57nm,1.0s									
ESDC	Sonseca Array	89.39	4	P		P		07 46 03.1	-0.7	
	comp=Z,35nm,0.9s,baz=355,slow=4.3,SNR=82									
ESDC	Sonseca Array	89.39	4	IAmb	IAmb			07 46 04.3		
	comp=Z,43nm,1.0s									
PMRV	Marv??o	89.45	6	*e*P		P		07 46 03.4	-0.7	
	comp=Z,77nm,1.2s									
OBIP	Obispado Ponce	89.45	61	P		P		07 46 04.9	+0.5	
PAB	San Pablo	89.50	4	P		P		07 46 03.9	-0.5	
PAB				pmax	pmax					
	comp=Z,31nm,1.0s									
PAB	San Pablo	89.50	4	P		P		07 46 03.9	-0.5	
HIZ	Hauiti	89.51	185	IAMs_20	IAMs_20			08 21 59.7		
	comp=Z,977nm,20.0s									
GCPR	Guaynabo City	89.52	61	P		P		07 46 04.8	+0.1	
CSS	Mathiatis	89.55	334	P		P		07 46 03.7	-0.9	
CSS				IAmb	IAmb			07 46 06.1		
	comp=Z,48nm,1.0s									
CSS				IAMs_20	IAMs_20			08 30 13.8		
	comp=Z,1μm,22.0s									
MDH	Madha	89.55	312	P		P		07 46 03.0	-1.7	
MSFE	Esma-Masafi	89.56	312	P		P		07 46 03.7	-1.2	
ICMP	Isla Caja de M	89.62	61	P		P		07 46 05.5	+0.4	
SJG	San Juan	89.65	61	P		P		07 46 05.6	+0.3	
SJG				pmax	pmax					
	comp=Z,100nm,1.1s									
SJG				MLR	MLR					
	comp=Z,900nm,19.0s									
SJG	San Juan	89.65	61	P		P		07 46 05.5	+0.3	
SJG				IAmb	IAmb			07 46 07.2		
	comp=Z,100nm,1.1s									
SJG	San Juan	89.65	61	IAMs_20	IAMs_20			08 28 53.2		
	comp=Z,910nm,19.0s									
STKA	Stephens Creek	89.66	213	P		P		07 46 06.0	+1.2	
	comp=Z,57nm,1.0s,baz=0.2,slow=5.9,SNR=83									
STKA				LR	LR			08 23 47.1		
	comp=Z,985nm,19.9s,baz=17,slow=34									
CBYP	Canovanas	89.68	61	P		P		07 46 05.2	-0.3	
CBYP				IAmb	IAmb			07 46 06.2		
	comp=Z,37nm,0.9s									
PMTG	Montargil	89.74	7	*e*P		P		07 46 03.5	-1.9	
	comp=Z,51nm,1.2s									
PMAFR	Mafra	89.77	8	*e*P		P		07 46 05.1	-0.5	
HUMP	Col San Antoni	89.79	61	P		P		07 46 06.1	+0.1	
HUMP				IAmb	IAmb			07 46 09.0		
	comp=Z,95nm,1.1s									
PDPR	Patillas Dam,	89.79	61	P		P		07 46 06.2	+0.3	
UOSS	Minazif	89.90	312	*i* P		P		07 46 04.9	-1.5	
	SNR=8.6									
UOSS	Minazif	89.90	312	P		P		07 46 05.4	-1.0	
UOSS				IAmb	IAmb			07 46 06.5		
	comp=Z,34nm,0.9s									
UOSS	Minazif	89.90	312	IAMs_20	IAMs_20			08 30 24.7		
	comp=Z,896nm,22.0s									
CEL	Celeste	89.92	348	P		P		07 46 04.8	-1.6	
CEL				IAmb	IAmb			07 46 06.5		
	comp=Z,62nm,0.9s									
MTP	Monte Pirata	89.99	61	P		P		07 46 07.4	+0.5	
PESTR	Estremoz	89.99	7	P		P		07 46 05.7	-0.9	
	SNR=7.4									
PESTR	Estremoz	89.99	7	P		P		07 46 05.4	-1.3	
LIS	Lisbon	90.02	8	*e*P		P		07 46 06.6	-0.1	
LIS				AMb	AMB			07 46 08.5		
	comp=Z,206nm,1.2s									
LIS	Lisbon	90.02	8	*e*P		P		07 46 06.6	-0.1	
HATD	Hatta, Dubai	90.03	312	*i* P		P		07 46 06.0	-1.0	
	SNR=6.9									
HATD	Hatta, Dubai	90.03	312	P		P		07 46 06.2	-0.9	
	SNR=6.1									
ITM	Ithomi	90.04	343	P		P		07 46 04.9	-2.0	
ITM				IAMs_20	IAMs_20			08 32 40.0		
	comp=Z,875nm,21.0s									
STVI	Saint Thomas	90.11	60	P		P		07 46 07.9	+0.5	
WSAR	Wadi Sarin	90.18	309	P		P		07 46 07.6	-0.1	
	SNR=14									
BIDO	Bidbid	90.19	309	P		P		07 46 07.4	-0.3	
	SNR=7.5									
ASHO	Ashiyiah	90.19	312	*i* P		P		07 46 06.6	-1.2	
	SNR=11									
ASHO	Ashiyiah	90.19	312	P		P		07 46 06.7	-1.2	
	SNR=6.8									
EVO	Evora	90.29	7	*e*P		P		07 46 07.0	-1.0	
	comp=Z,59nm,1.3s									
SOHO	SOHO	90.43	311	P		P		07 46 07.1	-1.8	
	SNR=7.0									
HOQ	Hoqain	90.53	310	P		P		07 46 08.2	-1.1	
	SNR=6.4									
WBK	Wadi Bani Khal	90.54	308	P		P		07 46 09.6	+0.1	
	SNR=12									
KARP	Karpathos	90.55	339	IAMs_20	IAMs_20			08 27 29.9		
	comp=Z,615nm,20.0s									
ASUD	Al Ashush, Dub	90.58	312	*i* P		P		07 46 08.8	-0.7	
	SNR=9.4									
CORL	Corleone	90.59	350	P		P		07 46 09.4	-0.1	
CORL				IAmb	IAmb			07 46 10.6		
	comp=Z,43nm,1.0s									
CAN	Canberra	90.60	206	P		P		07 46 07.3	-1.9	
CAN				pmax	pmax					
	comp=Z,43nm,1.3s									
CAN	Canberra	90.60	206	P		P		07 46 07.3	-1.9	
CAN				IAmb	IAmb			07 46 11.8		
	comp=Z,43nm,1.3s									
SMDO	Samad	90.61	309	P		P		07 46 10.0	+0.1	
	SNR=8.9									
PALK	Pallekele	90.68	282	P		P		07 46 10.4	+0.2	
PALK				pmax	pmax					
	comp=Z,76nm,1.4s									
PALK				MLR	MLR					
	comp=Z,400nm,20.0s									
PALK	Pallekele	90.68	282	LR	LR			08 30 15.5		
	comp=Z,313nm,20.2s,baz=35,slow=38									
PALK	Pallekele	90.68	282	*i* P		P		07 46 10.6	+0.4	
	SNR=7.8									
PALK	Pallekele	90.68	282	P		P		07 46 10.3	+0.2	
PALK				IAmb	IAmb			07 46 12.2		
	comp=Z,76nm,1.4s									
PBEJ	Beja	90.81	7	*e*P		P		07 46 10.1	-0.3	
	comp=Z,59nm,1.2s									
ALNE	Al Ain	90.87	312	*i* P		P		07 46 10.2	-0.7	
	SNR=6.4									
VAE	Valguarnera	90.88	349	LR	LR			08 31 52.5		
	comp=Z,646nm,18.2s,baz=21,slow=39									
CLTB	Caltabellotta	90.91	350	P		P		07 46 11.0	0.0	
CLTB				IAmb	IAmb			07 46 16.1		
	comp=Z,61nm,1.1s									
ARQ	Araqi	91.12	311	P		P		07 46 11.3	-0.8	
	SNR=16									
HORN	Hornachuelos	91.15	5	P		P		07 46 11.5	-0.5	
	SNR=11									
JMDO	Jabal Madar	91.17	309	P		P		07 46 11.7	-0.7	
	SNR=12									
PCVE	Castro Verde	91.18	7	*e*P		P		07 46 11.4	-0.8	
	comp=Z,49nm,1.4s									
BSY	Bisya	91.29	310	P		P		07 46 12.3	-0.6	
	SNR=15									
LAST	Lasithi	91.29	340	P		P		07 46 09.6	-3.2	
SMRT	St. Maarten	91.37	59	P		P		07 46 14.0	+0.6	
SMRT				IAMs_20	IAMs_20			08 32 54.9		
	comp=Z,638nm,20.0s									
PVAQ	Vaqueiros	91.44	7	*e*P		P		07 46 12.8	-0.5	
	comp=Z,66nm,1.5s									
MORF	Marmelete	91.46	8	*e*P		P		07 46 13.4	-0.2	
MORF				AMb	AMB			07 46 14.6		
	comp=Z,64nm,1.5s									
MORF				*e*S		SKSac		07 56 42.5	-0.2	
MORF	Marmelete	91.46	8	*e*P		P		07 46 13.1	-0.4	
	comp=Z,61nm,1.5s									
MORF	Marmelete	91.46	8	*e*P		P		07 46 13.3	-0.2	
MORF				*e*S		SKSac		07 56 42.4	-0.2	
CART	Cartagena	91.56	1	P		P		07 46 13.0	-0.9	
CART				IAmb	IAmb			07 46 13.6		
	comp=Z,41nm,0.9s									
PBDV	Barranco-do-Ve	91.58	7	*e*P		P		07 46 13.6	-0.4	
MHTO	MHTO	92.41	308	P		P		07 46 17.5	-0.6	
	SNR=18									
BBOO	Buckleboo	92.47	216	P		P		07 46 16.5	-1.4	
BBOO				IAmb	IAmb			07 46 19.3		
	comp=Z,27nm,1.1s									
BBOO				IAMs_20	IAMs_20			08 24 33.1		
	comp=Z,710nm,22.0s									
WDD	Wied Dalam	92.48	349	IAMs_20	IAMs_20			08 35 44.1		
	comp=Z,640nm,19.0s									
KEST	Kesra	93.10	353	P		P		07 46 20.6	-0.5	
	comp=Z,32nm,0.9s,baz=316,slow=2.1,SNR=21									
KEST	Kesra	93.10	353	P		P		07 46 20.6	-0.5	
KEST				IAmb	IAmb			07 46 21.9		
	comp=Z,44nm,1.0s									
DQM	DQM	93.51	308	P		P		07 46 22.2	-0.9	
TOO	Toolangi	93.69	207	IAMs_20	IAMs_20			08 23 04.3		
	comp=Z,727nm,21.0s									
OXZ	Oxford	94.47	186	IAMs_20	IAMs_20			08 15 53.9		
	comp=Z,851nm,19.0s									
SDV	Santo Domingo	94.50	70	P		P		07 46 28.4	+0.3	
FDF	Fort de France	95.14	59	IAMs_20	IAMs_20			08 28 12.7		
	comp=Z,704nm,20.0s									
RUSC	La Rusia	95.41	74	P		P		07 46 32.4	-0.2	
ROSC	El Rosal	95.49	75	LR	LR			08 30 00.7		
	comp=Z,187nm,21.9s,baz=8.5,slow=36									
RAYN	Ar Rayn	95.85	320	P		P		07 46 32.8	-1.1	
RAYN				pmax	pmax					
	comp=Z,18nm,0.9s									
RAYN	Ar Rayn	95.85	320	*i* P		P		07 46 33.1	-0.8	
	SNR=15									
RAYN	Ar Rayn	95.85	320	P		P		07 46 32.8	-1.1	
TDRA	Tendrara	96.07	2	P		P		07 46 36.0	+1.0	
	SNR=13									
MDT	Midelt	96.19	5	P		P		07 46 35.0	-0.4	
	SNR=16									
FIGM	Figuig	96.99	2	P		P		07 46 39.0	-0.1	
	SNR=14									
GRGR	Grenville	97.00	61	IAMs_20	IAMs_20			08 32 39.2		
	comp=Z,904nm,21.0s									
WHFO	Wadi Hawf	97.06	310	P		P		07 46 37.8	-1.7	
	SNR=5.2									
GOLM	Goulmima	97.28	5	P		Pdif		07 46 41.0	+0.5	
	SNR=10									
OUK	Oukaimeden	97.58	7	P		P		07 46 42.0	0.0	
	SNR=12									
TZRR	Tazzarine	98.16	6	P		P		07 46 44.1	-0.2	
	SNR=17									
ZGR	Zagora	98.82	6	P		P		07 46 47.0	-0.3	
	SNR=18									
SOCY	Socotra	101.86	307	IAMs_20	IAMs_20			08 37 52.7		
	comp=Z,781nm,20.0s									
TAM	Tamanrasset	106.20	355	IAMs_20	IAMs_20			08 42 55.1		
	comp=Z,520nm,20.0s									
TOC1	Torodi Ar. Sit	115.88	359	IAMs_20	IAMs_20			08 46 32.9		
	comp=Z,584nm,18.0s									
TOC7	Torodi Ar. Sit	115.89	359	IAMs_20	IAMs_20			08 46 45.1		
	comp=Z,720nm,22.0s									
TOC2	Torodi Ar. Sit	115.89	359	IAMs_20	IAMs_20			08 46 46.3		
	comp=Z,693nm,22.0s									
TOA0	Torodi Ar. Sit	115.90	359		PKiKP			07 51 49.0	-1.0	
TOA0				IAMs_20	IAMs_20			08 47 13.5		
	comp=Z,525nm,22.0s									
TOA2	Torodi Ar. Sit	115.90	359	IAMs_20	IAMs_20			08 44 24.5		
	comp=Z,490nm,21.0s									
TORD	Torodi Ar. Bea	115.90	359	PKP	PKiKP			07 51 49.3	-0.8	
	comp=Z,5.0nm,0.7s,baz=350,slow=2.4,SNR=22									
TORD				PKKPbc	PKKPbc			08 02 19.8	+0.6	
	comp=Z,1.9nm,0.8s,baz=178,slow=2.9,SNR=7.5									
TOA3	Torodi Ar. Sit	115.91	359	IAMs_20	IAMs_20			08 44 28.7		
	comp=Z,521nm,22.0s									
TOB4	Torodi Ar. Sit	115.91	359	IAMs_20	IAMs_20			08 47 13.8		
	comp=Z,491nm,22.0s									
TOB3	Torodi Ar. Sit	115.91	359	IAMs_20	IAMs_20			08 51 47.8		
	comp=Z,473nm,20.0s									
TOC3	Torodi Ar. Sit	115.91	359	IAMs_20	IAMs_20			08 46 34.8		
	comp=Z,522nm,18.0s									
TOC5	Torodi Ar. Sit	115.92	359	IAMs_20	IAMs_20			08 46 39.0		
	comp=Z,631nm,19.0s									
TOC4	Torodi Ar. Sit	115.93	359	IAMs_20	IAMs_20			08 51 47.2		
	comp=Z,506nm,20.0s									
SIV	San Ignacio	119.86	78	PKP		PKPdf		07 51 56.7	-0.9	
	comp=Z,1.7nm,0.8s,baz=306,slow=3.2,SNR=7.1									
SIV				PKKPbc	PKKPbc			08 02 06.8	+1.8	
	comp=Z,1.6nm,1.0s,baz=112,slow=9.1,SNR=4.6									
KMBO	Kilima Mbogo	121.40	316	PKiKP		PKPdf		07 52 01.0	0.0	
KMBO	Kilima Mbogo	121.40	316	PKP		PKiKP		07 52 01.8	+0.7	
	comp=Z,4.5nm,0.9s,baz=5.8,slow=4.2,SNR=8.3									
KMBO	Kilima Mbogo	121.40	316			PKPdf		07 52 01.0	0.0	
DBIC	Dimbokro	122.14	7	PKiKP		PKPdf		07 52 01.5	-0.6	
DBIC	Dimbokro	122.14	7	PKP		PKPdf		07 52 01.7	-0.4	
	comp=Z,39nm,1.0s,baz=352,slow=2.4,SNR=24									
DBIC	Dimbokro	122.14	7			PKPdf		07 52 01.5	-0.6	
TIC	Toumodi	122.15	7	*e*PKiKP		PKPdf		07 52 01.5	-0.6	
	comp=Z,80nm,1.0s									
KIC	Kosan Boka	122.45	7	*e*PKiKP		PKPdf		07 52 02.1	-0.6	
	comp=Z,52nm,0.8s									
LIC	Lamto	122.57	7	*e

KRSR				eS	Sn	07 35 22.5	+4.2		
TUMD	**Tumrok D**	**2.93**	**269**	*eP*	Pn	07 34 48.5	+3.9		
TUMD				eS	Sn	07 35 22.3	+3.8		
KIRR	**Kirishev**	**2.98**	**283**	*eP*	Pn	07 34 49.2	+3.7		
KIRR				eS	Sn	07 35 23.9	+3.8		
KZV	**Kizimen**	**3.00**	**267**	*eP*	Pn	07 34 49.4	+3.7		
KZV				eS	Sn	07 35 24.2	+3.8		
KMNR	**Kamenistaya**	**3.02**	**279**	*eP*	Pn	07 34 50.3	+4.4		
KMNR				eS	Sn	07 35 25.8	+5.0		
KPT	**Kopyto**	**3.05**	**283**	*eP*	Pn	07 34 50.1	+3.7		
KPT				eS	Sn	07 35 25.8	+4.1		
TUMR	**Tumrok**	**3.07**	**270**	*eP*	Pn	07 34 51.0	+4.4		
TUMR				eS	Sn	07 35 26.3	+4.3		
KOZ	**Kozyrevsk**	**3.26**	**284**	*eP*	Pn	07 34 52.5	+3.6		
KOZ				eS	Sn	07 35 30.3	+3.6		
SRDR	**Sredinnyy**	**3.40**	**288**	*eP*	Pn	07 34 55.0	+3.9		
ESO	**Esso**	**3.90**	**281**	*eP*	Pn	07 35 02.4	+4.5		
SPN	**Mys Shipunski**	**3.95**	**237**	*eP*	Pn	07 35 01.9	+3.3		
SPN				eS	Sn	07 35 47.0	+3.4		
OSSR	**Ossora**	**4.10**	**342**	*eP*	Pn	07 35 02.6	+2.0		
NLC	**Nalytchevo**	**4.24**	**241**	*eP*	Pn	07 35 06.1	+3.6		
NLC				eS	Sn	07 35 54.2	+3.5		
SMAR	**Somma**	**4.46**	**244**	*eP*	Pn	07 35 10.3	+4.4		
KRER	**Koryakskii**	**4.47**	**245**	*eP*	Pn	07 35 10.8	+4.9		
UGLR	**Uglovaya**	**4.48**	**244**	*eP*	Pn	07 35 10.4	+4.4		
KRX	**Arik**	**4.49**	**246**	*eP*	Pn	07 35 11.1	+4.9		
AVH	**Avacha**	**4.50**	**245**	*eP*	Pn	07 35 11.2	+5.0		
AVH				eS	Sn	07 36 01.6	+4.4		
KOK	**Koryaka**	**4.54**	**245**	*eP*	Pn	07 35 11.5	+4.8		
PALN	**Palana**	**4.78**	**323**	*eP*	Pn	07 35 14.2	+4.2		
KRMR	**Karymshinskiy**	**5.04**	**243**	*eP*	Pn	07 35 17.7	+4.2		
RUS	**Russkaya**	**5.08**	**237**	*eP*	Pn	07 35 18.3	+4.2		
RUS				eS	Sn	07 36 14.5	+3.1		
MTVR	**Mutnovka**	**5.21**	**239**	*eP*	Pn	07 35 20.5	+4.5		
GRL	**Gorelyy**	**5.22**	**240**	*eP*	Pn	07 35 20.9	+4.7		
ASAK	**Asacha**	**5.41**	**239**	*eP*	Pn	07 35 23.5	+4.8		
APC	**Apacha**	**5.49**	**247**	*eP*	Pn	07 35 24.4	+4.7		
KDTR	**Khodutka, Kamc**	**5.69**	**234**	*eP*	Pn	07 35 25.6	+3.2		
PAU	**Pauzhetka**	**6.51**	**237**	*eP*	Pn	07 35 37.2	+3.5		
SKR	**Severo-Kuril's**	**7.36**	**234**	*eP*	Pn	07 35 50.3	+5.0		

RSPR ***16*** *07:38:10.7, 19.15N×66.67W, h37km±5km, MD3.6/16*
NEIC ***16*** *07:38:10.3±1.7, 19.09N±0.04×66.65W±0.02, h35km±8km, Error ellipse: s-maj=6.1km s-min=2.2km az=205.0*

ISC 16 07:38:09.2±1.2, 19.11N±0.04×66.64W±0.03, h25km±11km, n110, σ1912/142, mb4.1/6, 21C-1D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.64**	**171**	*eP*	**Pb**	**07 38 22.7**	**+1.0**
EMPR	**Esperanza - Ma**	**0.64**	**171**	*eS*	**Sn**	**07 38 32.2**	**+0.1**
EMPR	**Esperanza - Ma**	**0.64**	**171**		**Pb**	**07 38 22.6**	**+0.8**
EMPR				Sn	**Sb**	**07 38 31.7**	**+1.3**
AOPR	**Arecibo Observ**	**0.77**	**188**	*eP*	**Pb**	**07 38 24.3**	**+0.3**
AOPR	**Arecibo Observ**	**0.77**	**188**	*eP*	**Pb**	**07 38 24.5**	**+0.5**
AOPR				*eS*	**Sn**	**07 38 35.7**	**+0.4**
AOPR	**Arecibo Observ**	**0.77**	**188**		**Pb**	**07 38 24.2**	**+0.3**
AOPR				Sn	**Sb**	**07 38 33.9**	**-0.2**
AGPR	**Aguadilla, PR**	**0.78**	**215**	*eP*	**Pb**	**07 38 23.9**	**-0.3**
AGPR	**Aguadilla, PR**	**0.78**	**215**	*eS*	**Sb**	**07 38 34.6**	**+0.2**
AGPR	**Aguadilla, PR**	**0.78**	**215**		**Pb**	**07 38 24.1**	**-0.2**
AGPR					**Sb**	**07 38 34.8**	**+0.4**
AGPR	**Aguadilla, PR**	**0.78**	**215**		**Pn**	**07 38 24.0**	**-0.2**
AGPR				Sn	**Sb**	**07 38 33.5**	**-0.9**
UUPR	**Utuado, UPR, P**	**0.86**	**185**		**Pn**	**07 38 25.7**	**0.0**
UUPR					**Sb**	**07 38 36.7**	**+0.1**
GCPR	**Guaynabo City**	**0.96**	**147**		**Pn**	**07 38 26.9**	**-0.1**
GCPR				Sn	**Sb**	**07 38 36.9**	**-2.5**
MPR	**Mayaguez**	**1.02**	**208**		**Pn**	**07 38 27.5**	**-0.3**
MPR				Sn	**Sn**	**07 38 40.2**	**-1.1**
LSP	**Las Mesas**	**1.03**	**205**	*eP*	**Pn**	**07 38 27.9**	**-0.1**
LSP	**Las Mesas**	**1.03**	**205**		**Pn**	**07 38 27.9**	**-0.1**
CELP	**Cerrillos**	**1.03**	**177**	*eP*	**Pn**	**07 38 28.1**	**0.0**
CELP	**Cerrillos**	**1.03**	**177**		**Pn**	**07 38 28.1**	**0.0**
OBIP	**Obispado Ponce**	**1.07**	**178**	*eP*	**Pn**	**07 38 28.5**	**0.0**
OBIP	**Obispado Ponce**	**1.07**	**178**		**Pn**	**07 38 28.7**	**+0.2**
OBIP				Sn	**Sn**	**07 38 41.4**	**-1.1**
SJG	**San Juan**	**1.10**	**155**		**Pn**	**07 38 29.1**	**+0.1**
SJG				Sn	**Sn**	**07 38 43.4**	**0.0**
CBYP	**Canovanas**	**1.12**	**138**	*eP*	**Pn**	**07 38 29.2**	**0.0**
CBYP				*eS*	**Sn**	**07 38 43.4**	**-0.5**
CBYP	**Canovanas**	**1.12**	**138**	*eP*	**Pn**	**07 38 29.3**	**0.0**
CBYP	**Canovanas**	**1.12**	**138**		**Pn**	**07 38 28.9**	**-0.3**
CBYP				Sn	**Sn**	**07 38 42.6**	**-1.3**
GBPR	**Guanica, Bosqu**	**1.16**	**192**	*eP*	**Pn**	**07 38 30.3**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.16**	**192**	*eS*	**Sn**	**07 38 44.6**	**-0.1**
GBPR	**Guanica, Bosqu**	**1.16**	**192**		**Pn**	**07 38 30.3**	**+0.5**
GBPR					**Sn**	**07 38 44.6**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.19**	**202**	*eP*	**Pn**	**07 38 30.4**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.19**	**202**	*eS*	**Sn**	**07 38 45.2**	**-0.4**
CRPR	**Cabo Rojo, PR**	**1.19**	**202**		**Pn**	**07 38 30.4**	**+0.2**
CRPR				Sn	**Sn**	**07 38 43.4**	**-2.2**
MLPR	**Magueyes Islan**	**1.20**	**199**	*eP*	**Pn**	**07 38 29.9**	**-0.5**
MLPR	**Magueyes Islan**	**1.20**	**199**	*eS*	**Sn**	**07 38 44.8**	**-1.1**
MLPR	**Magueyes Islan**	**1.20**	**199**		**Pn**	**07 38 29.6**	**-0.8**
MLPR					**Sn**	**07 38 45.5**	**-0.4**
HUMP	**Col San Antoni**	**1.22**	**142**	*eP*	**Pn**	**07 38 30.6**	**-0.1**
HUMP	**Col San Antoni**	**1.22**	**142**	*eP*	**Pn**	**07 38 31.1**	**+0.4**
HUMP				*eS*	**Sn**	**07 38 46.6**	**+0.2**
HUMP	**Col San Antoni**	**1.22**	**142**		**Pn**	**07 38 31.1**	**+0.4**
HUMP				Sn	**Sn**	**07 38 47.0**	**+0.6**
ICMP	**Isla Caja de M**	**1.23**	**175**	*eP*	**Pn**	**07 38 31.4**	**+0.7**
ICMP	**Isla Caja de M**	**1.23**	**175**	*eS*	**Sn**	**07 38 46.2**	**-0.2**
ICMP	**Isla Caja de M**	**1.23**	**175**		**Pn**	**07 38 31.2**	**+0.5**
ICMP				Sn	**Sn**	**07 38 46.0**	**-0.5**
PDPR	**Patillas Dam,**	**1.24**	**152**	*eP*	**Pn**	**07 38 31.2**	**+0.3**
PDPR	**Patillas Dam,**	**1.24**	**152**	*eP*	**Pn**	**07 38 31.9**	**+1.1**
PDPR				*eS*	**Sn**	**07 38 47.4**	**+0.7**
PDPR	**Patillas Dam,**	**1.24**	**152**		**Pn**	**07 38 31.2**	**+0.3**
PDPR				Sn	**Sb**	**07 38 48.2**	**+0.8**
IGPR	**InterUniversit**	**1.25**	**156**	*eP*	**Pn**	**07 38 31.4**	**+0.4**
IGPR	**InterUniversit**	**1.25**	**156**	*eS*	**Sn**	**07 38 46.9**	**-0.1**
IGPR	**InterUniversit**	**1.25**	**156**		**Pn**	**07 38 31.7**	**+0.7**
IGPR				Sn	**Sn**	**07 38 46.5**	**-0.5**
MTP	**Monte Pirata**	**1.44**	**134**	*eP*	**Pn**	**07 38 33.6**	**-0.1**
MTP	**Monte Pirata**	**1.44**	**134**	*eS*	**Sn**	**07 38 52.3**	**+0.5**
MTP	**Monte Pirata**	**1.44**	**134**		**Pn**	**07 38 33.6**	**-0.1**
MTP					**Sn**	**07 38 51.7**	**-0.2**
PCDR	**Punta Cana, DR**	**1.76**	**250**		**Pb**	**07 38 40.2**	**-0.5**
PCDR				Sn	**Sn**	**07 38 59.5**	**-0.1**
STVI	**Saint Thomas**	**1.77**	**115**	*eP*	**Pn**	**07 38 38.3**	**+0.2**
STVI	**Saint Thomas**	**1.77**	**115**	*eP*	**Pn**	**07 38 38.4**	**+0.2**
STVI				*eS*	**Sn**	**07 39 00.1**	**+0.3**
STVI	**Saint Thomas**	**1.77**	**115**	*eS*	**Sn**	**07 38 59.4**	**-0.5**
STVI	**Saint Thomas**	**1.77**	**115**		**Pn**	**07 38 38.2**	**0.0**
STVI				Sn	**Sn**	**07 38 59.2**	**-0.6**
TBVI	**Tortola**	**2.04**	**110**	*eP*	**Pn**	**07 38 42.3**	**+0.4**
TBVI	**Tortola**	**2.04**	**110**	*eS*	**Sn**	**07 39 06.6**	**+0.2**
TBVI	**Tortola**	**2.04**	**110**		**Pn**	**07 38 42.3**	**+0.4**
TBVI					**Sn**	**07 39 06.6**	**+0.2**
DR12	**Loma Pena Alta**	**2.62**	**263**		**Pn**	**07 38 51.5**	**+1.6**
SDD	**Santo Domingo**	**3.17**	**259**	Pn	**Pn**	**07 39 00.2**	**+2.7**
SDD				Sn	**Sn**	**07 39 36.5**	**+2.0**
BANI	**BANI**	**3.60**	**259**	Pn	**Pn**	**07 39 05.0**	**+1.5**
BANI				Sn	**Sn**	**07 39 44.7**	**-0.6**
SC01	**Santiago de lo**	**3.88**	**275**	Pn	**Pn**	**07 39 07.5**	**+0.3**
SC01				Sn	**Sn**	**07 39 51.8**	**-0.2**
SKI	**Saint Kitts**	**4.11**	**115**	Pn	**Pn**	**07 39 12.0**	**+1.6**
SDDR	**Presa de Saban**	**4.40**	**269**		**Pn**	**07 39 17.3**	**+2.8**
SDDR				Sn	**Sn**	**07 40 09.3**	**+4.3**
GRTK	**Grand Turk**	**4.85**	**300**	Pn	**Pn**	**07 39 19.6**	**-0.9**
GRTK				Sn	**Sn**	**07 40 11.8**	**-4.0**
LGNH	**Logne**	**5.69**	**265**	Pn	**Pn**	**07 39 32.4**	**+0.4**
GTBY	**Guantanamo Bay**	**8.03**	**277**	Pn	**Pn**	**07 40 03.7**	**-0.6**
GTBY				Sn	**Sn**	**07 41 33.3**	**-1.1**
URIC	**Uribia, Colomb**	**9.00**	**216**	Pn	**Pn**	**07 40 17.4**	**-0.1**
URIC				Sn	**Sn**	**07 41 57.5**	**-0.7**
SMLC	**San Martn de**	**12.53**	**216**	*eP*	**Pn**	**07 41 02.1**	**-3.8**
OCAC	**Ocana**	**12.61**	**212**	*eP*	**Pn**	**07 41 08.4**	**+1.3**
PAMC	**Pamplona, Colo**	**13.10**	**208**	*eP*	**Pn**	**07 41 14.4**	**+0.2**
BBSR	**BB Station**	**13.32**	**7**	Pn	**Pn**	**07 41 15.6**	**-1.0**
ZARC	**Zaragoza, Cauc**	**14.04**	**216**	*eP*	**Pn**	**07 41 29.1**	**+2.4**
UREC	**San Jos de Ur**	**14.22**	**219**	*eP*	**Pn**	**07 41 30.2**	**+1.1**
RUSC	**La Rusia**	**14.56**	**206**	*eP*	**Pn**	**07 41 33.7**	**-0.5**
RUSC	**La Rusia**	**14.56**	**206**	Pn	**Pn**	**07 41 33.7**	**-0.5**
PTBC	**PUERTO BERRIO,**	**14.63**	**212**	*eP*	**Pn**	**07 41 35.7**	**+1.0**
061Z	**Ochoppi**	**14.79**	**300**	Pn	**Pn**	**07 41 35.6**	**-1.2**
SPBC	**San Pablo de B**	**15.22**	**209**	*eP*	**Pn**	**07 41 44.1**	**+1.5**
HELC	**Santa Helena**	**15.49**	**215**	*eP*	**Pn**	**07 41 48.3**	**+1.9**
NORC	**Norcasia**	**15.68**	**212**	*eP*	**Pn**	**07 41 46.3**	**-2.3**
CHIC	**Chingaza**	**15.97**	**207**	*eP*	**Pn**	**07 41 53.5**	**+0.7**
CBOC	**Ciudad Bolivar**	**16.03**	**216**	*eP*	**P**	**07 41 55.9**	**-0.6**
ROSC	**El Rosal**	**16.05**	**209**	*eP*	**P**	**07 41 56.3**	**-0.6**
GUY2C	**Guyana, Caldas**	**16.22**	**213**	*eP*	**P**	**07 41 58.9**	**0.0**
RREF	**El Recreo**	**16.48**	**212**	*eP*	**Pn**	**07 42 00.9**	**+1.4**
ORTC	**Ortega, Tolima**	**17.30**	**210**	*eP*	**Pn**	**07 42 10.2**	**+1.1**
656A	**Willston**	**17.71**	**308**		**Pn**	**07 42 13.4**	**-0.7**
656A					IAmb	IAmb	07 42 20.6		
	comp=Z,55nm,1.1s								
456A	**Hilliard**	**18.10**	**313**		**Pn**	**07 42 18.1**	**-0.8**
Y58A	**Scranton**	**18.76**	**324**	P	**P**	**07 42 26.9**	**+0.5**
V61A	**Roper**	**18.79**	**334**	P	**P**	**07 42 26.8**	**+0.1**
V61A					IAmb	IAmb	07 42 35.7		
	comp=Z,22nm,0.5s								
X58A	**Rowland**	**19.07**	**326**	P	**P**	**07 42 27.8**	**-2.1**
U61A	**Possum Corner**	**19.20**	**335**	P	**P**	**07 42 30.7**	**-0.5**
FLOC	**Florencia**	**19.53**	**208**	*eP*	**P**	**07 42 35.9**	**+0.9**
BIRD	**Birdtown, Kers**	**19.75**	**324**	P	**P**	**07 42 36.0**	**-1.2**
BIRD					IAmb	IAmb	07 42 39.3		
	comp=Z,9.3nm,1.3s								
W57A	**Gilead**	**19.88**	**326**	P	**P**	**07 42 37.8**	**-0.8**
W57A					IAmb	IAmb	07 42 44.9		
	comp=Z,14nm,1.4s								
BBAC	**Balboa, Cauca**	**19.91**	**213**	*eP*	**P**	**07 42 39.3**	**-0.1**
V58A	**Windy Hill, Pi**	**19.93**	**329**	P	**P**	**07 42 38.6**	**-0.6**
JSC	**Jenkinsville**	**19.94**	**322**	P	**P**	**07 42 40.2**	**+1.0**
T59A	**Double "B" Far**	**20.20**	**334**	P	**P**	**07 42 43.5**	**+1.3**
T59A					IAmb	IAmb	07 42 49.8		
	comp=Z,11nm,1.4s								
GOGA	**Godfrey**	**20.71**	**317**	P	Pn	07 42 49.8	-0.3		
R58B	**Mineral**	**21.19**	**335**	P	**P**	**07 42 53.3**	**+0.6**
BG3	**Lake Jocassee**	**21.42**	**321**	P	**P**	**07 42 57.0**	**+1.8**
BLA	**Blacksburg**	**21.70**	**329**	P	**P**	**07 42 57.6**	**-0.7**
BLA					IAmb	IAmb	07 43 03.8		
	comp=Z,6.2nm,0.9s								
OTAV	**Otavalo**	**22.05**	**213**	P	**P**	**07 43 04.0**	**+1.3**
OTAV					IAmb	IAmb	07 43 10.8		
	comp=Z,5.6nm,0.8s								
SDMD	**Soldier's Deli**	**22.07**	**339**	P	**P**	**07 43 03.2**	**+1.0**
SDMD					IAmb	IAmb	07 43 06.1		
	comp=Z,13nm,1.5s								
P57A	**Homestead Farm**	**22.55**	**337**	P	**P**	**07 43 09.3**	**+1.9**
P57A					IAmb	IAmb	07 43 10.8		
	comp=Z,18nm,1.3s								
KSCT	**Kent School, K**	**23.28**	**347**	P	**P**	**07 43 13.3**	**-1.6**
KSCT					IAmb	IAmb	07 43 21.2		
	comp=Z,5.1nm,1.1s								
HRV	**Adam Dziewonsk**	**23.69**	**351**	P	**P**	**07 43 19.5**	**+0.7**
LONY	**Lake Ozonia**	**26.28**	**347**	P	**P**	**07 43 40.2**	**-2.3**
FRNY	**Flat Rock**	**26.29**	**349**	P	**P**	**07 43 44.1**	**+1.5**
KVN	**Kaiserville**	**48.48**	**306**	P	**P**	**07 46 49.8**	**-0.4**
KVN					IAmb	IAmb	07 46 53.8		
	comp=Z,9.3nm,1.2s								
RYN	**Ryan**	**48.74**	**305**	P	**P**	**07 46 53.0**	**+0.9**

NEIC ***16*** *07:40:05.5±1.2, 33.832N±0.009×117.67W±0.01, h19km±1km, Error ellipse: s-maj=1.3km s-min=1.3km az=207.0*
ANF ***16*** *07:40:05.2±0.2, 33.82N×117.69W, h13km±1km, ML3.8/42, Error ellipse: s-maj=1.3km s-min=1.0km az=7.0*
SCEDC ***16*** *07:40:06.1, 33.83N×117.69W, h10km*
PAS ***16*** *07:40:06.1±1.4, 33.829N±0.007×117.687W±0.009, h10km±1km, Mwr3.5/6, Error ellipse: s-maj=1.0km s-min=1.0km az=165.0*

ISC 16 07:40:05.5±0.8, 33.82N±0.01×117.69W±0.01, h19km±1km, n196, σ1902/290, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHNC	**Chino**	**0.18**	**1**		**Pg**	**07 40 09.7**	**-0.6**
CHNC					**Sg**	**07 40 12.6**	**-0.8**
SANC	**Santa Ana**	**0.20**	**236**		**Pg**	**07 40 10.8**	**+0.2**
FULC	**Fullerton**	**0.20**	**285**		**Pg**	**07 40 10.9**	**+0.3**
FULC					**Sg**	**07 40 14.8**	**+0.7**
MLSC	**Mira Loma**	**0.21**	**29**		**Pb**	**07 40 10.1**	**-0.2**
MLSC					**Sb**	**07 40 13.0**	**-0.4**
SME	**Santa Rosa Min**	**0.28**	**89**		**Pb**	**07 40 11.4**	**-0.5**
PSRC	**Puddingstone R**	**0.29**	**340**		**Sb**	**07 40 15.7**	**-0.9**
RVR	**Riverside**	**0.31**	**56**		**Pg**	**07 40 11.8**	**-0.5**
RVR					**Sg**	**07 40 16.2**	**-0.8**
RSBC	**Riverside Bore**	**0.34**	**63**		**Pg**	**07 40 12.3**	**-0.4**
RSBC					**Sg**	**07 40 16.8**	**-0.9**
RSBC	**Riverside Bore**	**0.34**	**63**		**Pg**	**07 40 12.4**	**-0.4**
RSBC					**Sg**	**07 40 16.9**	**-0.7**
DLAC	**Del Amo**	**0.34**	**275**		**Pb**	**07 40 13.6**	**+0.4**
FON	**Fontana**	**0.35**	**36**		**Pg**	**07 40 12.5**	**-0.4**
PEM	**Pine Mountain**	**0.38**	**336**		**Pg**	**07 40 13.3**	**-0.2**
SSK	**Sunset Peak**	**0.39**	**359**		**Pg**	**07 40 13.5**	**-0.3**
CLTC	**Calectric**	**0.41**	**48**		**Pb**	**07 40 14.0**	**-0.4**
CLTC					**Sb**	**07 40 19.7**	**-0.5**
SS2	**San Sevaine**	**0.42**	**22**		**Pg**	**07 40 13.8**	**-0.4**
BFSC	**Mount Baldy Ra**	**0.42**	**3**		**Pg**	**07 40 13.7**	**-0.5**
BFSC					**Sg**	**07 40 19.3**	**-0.8**
BFSC	**Mount Baldy Ra**	**0.42**	**3**	P	**Pg**	**07 40 13.7**	**-0.5**
	baz=183,SNR=368						
BFSC				S	**Sg**	**07 40 19.2**	**-1.0**
	baz=183						
GVRC	**Garvey Reservo**	**0.43**	**303**		**Pb**	**07 40 14.5**	**-0.1**
CFSC	**Central Fire S**	**0.44**	**50**		**Sb**	**07 40 20.8**	**-0.2**
CFSC	**Central Fire S**	**0.44**	**50**		**Pb**	**07 40 14.4**	**-0.4**
PEC	**Perris**	**0.44**	**81**		**Pg**	**07 40 14.3**	**-0.3**
PEC					**Sg**	**07 40 20.3**	**-0.4**
MURC	**Murrieta**	**0.46**	**118**		**Pb**	**07 40 15.0**	**-0.2**
MURC					**Sg**	**07 40 21.3**	**-0.1**
MURC	**Murrieta**	**0.46**	**118**	P	**Pb**	**07 40 15.0**	**-0.2**
	baz=299,SNR=585						
MURC				S	**Sg**	**07 40 21.2**	**-0.2**
	baz=299						
CACC	**Caltech Cellar**	**0.48**	**311**		**Pg**	**07 40 15.0**	**-0.3**
CACC					**Sg**	**07 40 21.5**	**-0.4**
GSA	**Caltech--GSA**	**0.48**	**311**		**Pg**	**07 40 15.2**	**-0.2**
GSA					**Sg**	**07 40 21.8**	**-0.3**
GSA	**Caltech--GSA**	**0.48**	**311**		**Pg**	**07 40 15.2**	**-0.2**
GSA					**Sg**	**07 40 21.7**	**-0.3**
CBCC	**Caltech Broad**	**0.49**	**311**		**Pg**	**07 40 21.8**	**-0.3**
CBCC	**Caltech Broad**	**0.49**	**311**		**Sg**	**07 40 14.9**	**-0.5**
HLNC	**Highland**	**0.49**	**52**		**Pb**	**07 40 15.3**	**-0.3**
HLNC					**Sb**	**07 40 22.2**	**-0.3**
WTT2	**Watts, South G**	**0.49**	**285**		**Pb**	**07 40 15.8**	**+0.3**
WTT2					**Sn**	**07 40 24.3**	**-1.3**
XTL	**Crystal Lake,**	**0.50**	**343**		**Pg**	**07 40 15.2**	**-0.4**
MWC	**Mount Wilson**	**0.51**	**323**		**Pg**	**07 40 15.2**	**-0.7**
MWC				Sg	**Sg**	**07 40 22.2**	**-0.7**
FMP	**Fort Macarthur**	**0.52**	**258**		**Pb**	**07 40 15.5**	**-0.5**
FMP	**Fort Macarthur**	**0.52**	**258**	P	**Pb**	**07 40 15.5**	**-0.5**
	baz=77,SNR=29						
FMP				S	**Sb**	**07 40 22.6**	**-0.5**
	baz=77						
CFT	**Crafton Hills**	**0.52**	**66**		**Pb**	**07 40 15.9**	**-0.2**
CFT					**Sb**	**07 40 23.5**	**+0.1**
PASC	**Pasadena Art C**	**0.54**	**310**	Pg	**Pb**	**07 40 15.7**	**-0.7**
PASC				Sg	**Sb**	**07 40 22.8**	**-1.0**
CSP	**Cedar Springs**	**0.55**	**30**		**Pb**	**07 40 16.1**	**-0.5**
SVD	**Seven Oaks Dam**	**0.57**	**60**		**Pg**	**07 40 16.6**	**-0.3**
SVD					**Sg**	**07 40 24.6**	**+0.1**
BACC	**Bachelor Mtn.**	**0.58**	**111**		**Pb**	**07 40 16.6**	**-0.4**
BACC					**Sb**	**07 40 24.2**	**-0.6**
CHFC	**Chilao Flat St**	**0.58**	**331**		**Pb**	**07 40 16.6**	**-0.7**
CHFC					**Sb**	**07 40 24.3**	**-0.8**
DGR	**Domenigoni Val**	**0.59**	**107**		**Pb**	**07 40 17.0**	**-0.2**
DGR					**Sb**	**07 40 24.6**	**-0.6**
GR2C	**Griffith Obs.**	**0.59**	**300**		**Pb**	**07 40 16.8**	**-0.4**
GR2C					**Sb**	**07 40 24.4**	**-0.8**
BBSC	**Beaumont Base**	**0.59**	**80**		**Pg**	**07 40 17.5**	**0.0**
BBSC					**Sg**	**07 40 26.1**	**+0.6**
LCVC	**La Cienega, Cu**	**0.60**	**288**		**Pn**	**07 40 18.7**	**-0.4**
RPV	**Rancho Palos V**	**0.60**	**263**		**Pb**	**07 40 16.9**	**-0.5**
POB	**Polly Butte**	**0.65**	**102**		**Pb**	**07 40 18.0**	**-0.3**
HOLC	**Holcomb Ridge**	**0.65**	**348**		**Pb**	**07 40 17.8**	**-0.5**
HLLC	**North Hollywoo**	**0.66**	**303**		**Pb**	**07 40 18.3**	**-0.2**
HLLC					**Sb**	**07 40 27.3**	**0.0**
DECC	**Green Verdugo**	**0.69**	**309**		**Pb**	**07 40 18.3**	**-0.7**
DECC					**Sb**	**07 40 28.0**	**-0.2**
DECC	**Green Verdugo**	**0.69**	**309**	P	**Pb**	**07 40 18.3**	**-0.7**
	baz=128,SNR=41						
DECC				S	**Sb**	**07 40 27.9**	**-0.2**
	baz=128						
DJJ	**Donna J Jenkin**	**0.70**	**294**		**Pb**	**07 40 18.6**	**-0.5**
DJJ					**Sb**	**07 40 27.9**	**-0.5**
DJJ	**Donna J Jenkin**	**0.70**	**294**		**Pb**	**07 40 18.6**	**-0.5**
BTL	**Butler Peak**	**0.71**	**52**		**Pg**	**07 40 19.4**	**-0.4**
CIAC	**Catalina I. Ai**	**0.74**	**236**		**Pb**	**07 40 19.5**	**-0.3**
CIS	**Catalina Islan**	**0.74**	**236**	P	**Pb**	**07 40 19.5**	**-0.3**
	baz=55,SNR=326						
CIS				S	**Sb**	**07 40 29.5**	**-0.1**
	baz=55						
ADO	**Adelanto Recei**	**0.76**	**16**		**Pb**	**07 40 20.0**	**-0.2**
ADO					**Sb**	**07 40 29.8**	**-0.4**
LRRC	**Littlerock Res**	**0.76**	**338**		**Pb**	**07 40 19.8**	**-0.4**
GORC	**Green Oak Ranc**	**0.77**	**150**		**Pb**	**07 40 20.1**	**-0.2**
GORC					**Sb**	**07 40 30.3**	**0.0**
BBRC	**Big Bear Solar**	**0.77**	**55**		**Pb**	**07 40 20.3**	**-0.3**
BBRC	**Big Bear Solar**	**0.77**	**55**	P	**Pb**	**07 40 20.3**	**-0.3**
	baz=236,SNR=320						
BBRC				S	**Sg**	**07 40 30.7**	**-0.4**
	baz=236						
VTV	**Victorville**	**0.80**	**22**		**Pb**	**07 40 20.3**	**-0.6**
VTV					**Sb**	**07 40 30.7**	**-0.6**
IR2C	**Iron Canyon**	**0.82**	**314**		**Pb**	**07 40 20.7**	**-0.5**
CRY	**Cary Ranch**	**0.83**	**108**		**Pb**	**07 40 21.2**	**-0.2**
CRY					**Sb**	**07 40 32.0**	**-0.3**
PLM	**Palomar**	**0.83**	**124**		**Pb**	**07 40 21.1**	**-0.4**
PLM					**Sb**	**07 40 32.3**	**-0.1**
GVDA	**Garner Valley**	**0.86**	**100**		**Pb**	**07 40 21.8**	**-0.1**
GVDA					**Sg**	**07 40 33.1**	**-0.6**
SBB	**Saddle Back Bu**	**0.87**	**352**		**Pb**	**07 40 21.9**	**-0.2**
SBB					**Sb**	**07 40 33.0**	**-0.5**
BZNA	**Buzz No.'s Pla**	**0.91**	**111**		**Pb**	**07 40 22.8**	**-0.1**
BZNA					**Sb**	**07 40 34.6**	**0.0**
DNR	**Dunn Ranch,Anz**	**0.92**	**106**		**Pg**	**07 40 23.0**	**-0.4**
DNR					**Sg**	**07 40 35.2**	**-0.3**
DEVC	**Devers**	**0.93**	**83**		**Pn**	**07 40 23.4**	**-0.3**
DEVC					**Sb**	**07 40 35.0**	**0.0**
OAT	**Oat Mountain**	**0.93**	**304**		**Pn**	**07 40 23.5**	**-0.3**
SNDA	**J Saunders Pla**	**0.93**	**106**		**Pg**	**07 40 23.3**	**-0.4**
SNDA					**Sg**	**07 40 35.5**	**-0.6**
AGOC	**Agoura**	**0.96**	**290**		**Pb**	**07 40 23.3**	**-0

LRMC				S		Sb	07 40 55.9 -0.2
	baz=180						
HAY	Hayfield	1.67	93			Pb	07 40 35.8 0.0
CRR	Carrizo Plain	1.71	122			Pb	07 40 36.8 +0.3
CBX	Cerro Bola	1.73	150			Pn	07 40 35.6 +0.8
CBX	Cerro Bola	1.73	150			Pn	07 40 35.7 +0.9
IKP	In-Ko-Pah, Jac	1.76	131			Pb	07 40 36.5 -0.9
IKP	In-Ko-Pah, Jac	1.76	131	P		Pb	07 40 36.6 -0.7
	baz=312,SNR=140						
IKP				S		Sb	07 40 58.9 -0.2
	baz=312						
SBC	Santa Barbara	1.79	291	P		Pn	07 40 36.1 +0.7
	baz=110,SNR=8.0						
SBC				S		Sb	07 40 59.5 -0.4
	baz=110						
SWSC	Sam W. Stewart	1.80	118	P		Pn	07 40 35.7 +0.1
	baz=300						
SWSC				Sb		Sg	07 41 02.4 -1.3
	baz=300						
BCW	Bitter Crk WRg	1.81	309			Pn	07 40 36.3 +0.4
DSCC	Desert Studies	1.86	44			Pn	07 40 37.3 +0.9
BC3	Big Chuckawall	1.87	94	P		Pn	07 40 37.0 +0.3
	baz=276,SNR=52						
BC3				Sb		Sg	07 41 04.3 -1.5
	baz=276						
WOFM	Oak Flat	1.91	334			Pb	07 40 38.6 -1.3
GMRC	Granite Mounta	1.93	60			Pn	07 40 38.4 +0.8
GMRC	Granite Mounta	1.93	60	P		Pn	07 40 38.3 +0.8
	baz=241,SNR=285						
GMRC				Sg		Sg	07 41 09.2 +1.3
	baz=241						
ISA	Isabella, Lake	1.95	341			Pn	07 40 38.5 +0.8
ISA	Isabella, Lake	1.95	341	P		Pn	07 40 38.4 +0.7
	baz=160,SNR=222						
ISA				Sb		Sg	07 41 06.5 -1.9
	baz=160						
WHFM	Hanning Flat	1.95	344			Pb	07 40 39.0 -1.6
PKM	Mcpherson Peak	2.06	302	P		Pn	07 40 39.9 +0.5
	baz=120,SNR=26						
PKM				S		Sn	07 41 05.6 +1.0
	baz=120						
IRM	Iron Mountain	2.14	80	P		Pn	07 40 40.9 +0.6
	baz=262,SNR=449						
IRM				Sb		Sg	07 41 12.1 -2.3
	baz=262						
TUQ	Turquoise Moun	2.17	42	P		Pn	07 40 41.8 +1.0
	baz=223,SNR=72						
TUQ				Sb		Sg	07 41 13.5 -2.0
	baz=223						
MPMC	Manual Prospec	2.24	4			Pn	07 40 43.3 +1.5
MPMC	Manual Prospec	2.24	4	P		Pn	07 40 43.1 +1.3
	baz=184,SNR=223						
VES	Vestal, Richgr	2.32	331	P		Pn	07 40 43.8 +1.0
	baz=150,SNR=82						
SHOC	Shoshone, Teco	2.38	29	P		Pn	07 40 44.8 +1.3
	baz=210,SNR=71						
SHOC				Sb		Sg	07 41 19.6 -2.5
	baz=210						
SMMC	Simmler	2.42	309	P		Pn	07 40 44.9 +0.7
	baz=127,SNR=12						
GATR	Gnd/Air Tx Cnt	2.45	288			Pn	07 40 44.7 +0.1
GLA	Glamis	2.51	107			Pn	07 40 46.7 +1.3
GLA	Glamis	2.51	107	P		Pn	07 40 46.5 +1.1
	baz=289						
CWC	Cottonwood Cre	2.63	353	P		Pn	07 40 48.3 +1.1
	baz=173						
CWC				Sb		Sg	07 41 27.1 -3.1
	baz=173						
Y12C	Blythe	2.63	91			Pn	07 40 47.8 +0.7
Y12C				Sn		Sb	07 41 23.8 -0.4
Y12C	Blythe	2.63	91	P		Pn	07 40 47.6 +0.6
	baz=273,SNR=14						
Y12C				Sb		Sg	07 41 27.0 -3.2
	baz=273						
NEE2	Needles Airpor	2.71	69	P		Pn	07 40 48.8 +0.7
	baz=251,SNR=12						
NEE2				S		Sn	07 41 21.8 +1.4
	baz=251						
FURC	Furnace Creek,	2.73	14	S		Sn	07 41 23.2 +2.5
	baz=195						
PAGB	Antelope Grade	2.84	313			Pn	07 40 51.3 +1.3
GRAC	Grapevine Rang	3.18	5	P		Pn	07 40 56.8 +2.2
	baz=185,SNR=12						
TIN	Tinemaha, Big	3.26	352	P		Pn	07 40 57.5 +1.7
	baz=172						
TPNV	Topopah Spring	3.33	20			Pn	07 40 59.1 +2.2
TPNV	Topopah Spring	3.33	20	P		Pn	07 40 59.1 +2.2
	baz=201,SNR=14						
TPNV				S		Sn	07 41 37.4 +1.3
	baz=201						
SPIG	San Pedro Mart	3.34	145			Pn	07 40 59.4 +2.3
SPX	San Pedro Mart	3.35	145			Pn	07 40 59.1 +1.8
SHPR	Sheep Range	3.38	37			Pn	07 40 59.7 +2.1
W13A	Hualapai Mount	3.39	67			Pn	07 40 59.1 +1.5
PMPB	Monarch Peak	3.50	314			Pn	07 40 59.6 +0.5
Y14A	Wickenburg	3.90	87			Pn	07 41 05.8 +1.3
OMMB	Old Mammoth Mi	3.93	345	Pn		Pn	07 41 08.4 +3.2
MDPB	Devils Postpil	3.97	344	Pn		Pn	07 41 08.7 +3.0
SAO	San Andreas Ge	4.25	315	Pn		Pn	07 41 10.0 +0.6
214A	Organ Pipe Nat	4.50	113	Pn		Pn	07 41 14.5 +1.7
LCMT	Little Creek M	4.83	47			Pn	07 41 19.6 +2.2
KNB	Kanab	5.09	50			Pn	07 41 23.6 +2.5
CCUT	Cedar City	5.12	42			Pn	07 41 24.5 +3.0
U15A	North Rim	5.13	58			Pn	07 41 24.0 +2.4
X16A	Lo Mia Camp, P	5.21	82			Pn	07 41 24.4 +1.7
X16A				Sn		Sn	07 42 19.7 -2.8
SZCU	Shurtz Canyon	5.31	43			Pn	07 41 26.9 +2.8
WUAZ	Wupatki	5.47	70			Pn	07 41 29.2 +3.0
WUAZ	Wupatki	5.47	70	P		Pn	07 41 28.2 +2.0
	baz=254,SNR=14						
PSUT	Pine Spring	5.63	32			Pn	07 41 31.4 +2.9
PKCU	Pink Cliffs	5.68	49	Pn		Pn	07 41 33.0 +3.8
MTPU	Mount Pierson	6.14	45	Pn		Pn	07 41 39.0 +3.4
TCRU	Three Creeks R	6.38	40	Pn		Pn	07 41 42.5 +3.6
X18A	Snowflake	6.45	82			Pn	07 41 42.4 +2.7

BJI ***16*** *07:45:36.0±0.0,51°.30N×179°.10W,h53km,mB5.3/26, mb4.8/41,Ms5.0/13,Ms7 4.9/12*

IDC ***16*** *07:45:37.1±2.3,51°.33N×179°.20W,h31km±15km,mb4.3/23, mb1 4.5/24,mb1mx4.4/41,mbtmp4.5/24,ML4.7/1,MS4.1/1, Ms1 4.1/1,ms1mx3.4/50,Error ellipse: s-maj=18.8km s-min=11.4km az=164.0*

MOS ***16*** *07:45:37.4±0.9,51°.35N×179°.08W,h47km,mb5.0/59, Error ellipse: s-maj=8.6km s-min=5.9km az=90.3*

AEIC ***16*** *07:45:37.1±2.5,51°.11N±0°.03×179°.12W±0°.07,h25km±4km, ML4.8/31,mb5.0/264(NEIC),Error ellipse: s-maj=7.0km s-min=3.1km az=112.0*

NEIC ***16*** *07:45:40.0±2.0,51°.39N±0°.08×179°.06W±0°.07,h53km±5km, Error ellipse: s-maj=11.3km s-min=6.4km az=176.0*

GCMT ***16*** *07:45:40.1±0.5,51°.36N±0°.03×179°.07W±0°.05,h13km±4km, MW5.0/75,Moment Tensor Solution. s5,c6; s75,c104; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.28±.29; Mθθ-1.48±.22; Mφφ0.20±.12; Mrθ1.98±.76; Mφθ-0.57±.08; Mφr3.10±1.14; Best double couple: Mo3.96100×10^16 NP1:φs277.00000°,δ17.00000°,λ149.00000°. NP2: φs37.00000°,δ81.00000°,λ75.00000°. Principal axes: T 4.1430, Plg51.0000°, Azm290.0000°; N -0.3610, Plg14.0000°, Azm39.0000°; P -3.7800, Plg35.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 07:45:38.9±0.4,51°.33N±0°.07×179°.07W±0°.03,h44km, n801,σ1$03/767,mb4.9/188,17C-22D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	0.47	23		Pn	07 45 50.3	+1.0
GAEA	Gareloi East	0.49	24		Pn	07 45 50.8	+1.1
TASE	Tanaga Southea	0.82	52		Pn	07 45 54.8	+0.8
TANO	Tanaga North	0.83	45		Pn	07 45 55.1	+1.0
TAFP	Tanaga Falls P	0.88	49		Pn	07 45 55.8	+0.9
TAPA	Tanaga Point A	0.92	58		Pn	07 45 55.9	+0.5
KIMD	Kanaga Island	1.22	69		Pn	07 45 59.4	-0.1
KIWB	Kanaga Island	1.30	66		Pn	07 46 00.7	+0.2
KIWB					Sn	07 46 17.6	+0.8
KICM	Kanaga Island	1.31	63		Pn	07 46 01.7	+1.1
KIRH	Kanaga Island	1.35	64		Pn	07 46 01.9	+0.6
ADK	Adak	1.58	69		Pn	07 46 04.8	+0.4
ADK				Sn	Sn	07 46 25.5	+1.9
ADAG	Mount Adagdak	1.67	66		Pn	07 46 06.7	+1.2
GSTD	Great Sitkin T	1.96	67		Pn	07 46 10.9	+1.3
GSMY	Great Sitkin M	2.00	68		Pn	07 46 11.8	+1.6
GSTR	Great Sitkin T	2.02	67		Pn	07 46 11.8	+1.4
GSIG	Igitkin Island	2.06	70		Pn	07 46 12.2	+1.2
ATKA	Atka Island	3.15	72		Pn	07 46 27.0	+1.2
ATKA				Sn	Sn	07 47 02.8	+0.7
ATKA	Atka Island	3.15	72		Sn	07 47 05.5	+3.4
KOKL	Mount Kliuchef	3.18	70		Pn	07 46 28.2	+1.8
KOFP	Korovin Flat P	3.23	71		Pn	07 46 29.0	+2.0
KONE	Korovin Northe	3.25	69		Pn	07 46 28.9	+1.7
KOSE	Korovin Southe	3.27	70		Pn	07 46 29.3	+1.7
SMY	Shemya	4.45	291		Pn	07 46 45.8	+2.2
SMY				Sn	Sn	07 47 37.2	+3.2
NIKH	Nikolski High	6.50	71		Pn	07 47 14.8	+3.0
OKTU	Okmok Mt. Tuli	7.06	69		Pn	07 47 21.7	+2.2
OKFG	Magazine Ridge	7.14	69		Pn	07 47 23.5	+2.9
SPIA	Saint Paul Isl	7.80	38		Pn	07 47 26.9	-2.8
SPIA				Sn	Sn	07 48 52.7	-3.8
MSW	Makushin Switc	7.91	66		Pn	07 47 34.0	+2.8
UNV	Unalaska Valle	8.05	67		Sn	07 49 08.0	+5.2
UNV	Unalaska Valle	8.05	67		Pn	07 47 34.1	+1.0
AKUT	Akutan	8.54	66	Pn	Pn	07 47 39.6	-0.2
AKUT				Sn	Sn	07 49 14.2	-0.5
FALS	False Pass	10.05	63	Pn	Pn	07 48 02.7	+2.3
FALS				Sn	Sn	07 49 53.0	+1.3
SDPT	Sand Point	11.81	63	Pn	Pn	07 48 25.3	+0.9
CNBA	Chernabura Isl	12.21	66	Pn	Pn	07 48 28.4	-1.5
GAMB	Gambell	13.07	15		Pn	07 48 41.0	-0.6
PET	Petropavlovsk	13.77	286	*e*P	Pn	07 48 50.4	-0.8
PET				*e*S	Sn	07 51 22.8	+0.4
PET				MLR	MLR		
	comp=Z,2μm,14.0s						
PET				MLR	MLR		
	comp=Z,2μm,15.0s						
PEA0B	Petropavlovsk-	14.34	286	P	Pn	07 49 01.0	+2.1
PEA0B	Petropavlovsk-	14.34	286	Pn	Pn	07 49 01.0	+2.1
PETK	Petropavlovsk-	14.34	286	LR	LR	07 54 08.2	
	comp=Z,889nm,21.9s,baz=70,slow=36						
CHIR	Chirikof Islan	14.60	63	Pn	Pn	07 49 01.6	-0.9
ANM	Nome	15.07	23	P	Pn	07 49 09.1	+0.5
ANM				pmax	pmax		
	comp=Z,34nm,1.3s						
ANM	Nome	15.07	23	Pn	Pn	07 49 09.1	+0.5
SII	Sitkinak Islan	15.51	61	Pn	P	07 49 16.6	-1.4
SII				IAmb	IAmb	07 49 19.2	
	comp=Z,108nm,1.0s						
OHAK	Old Harbor	16.11	58	Pn	Pn	07 49 22.1	+0.2
SVW2	Sparrevohn	16.22	44	P	P	07 49 26.6	+0.7
KDAK	Kodiak Island	16.59	57	P	Pn	07 49 27.1	-0.9
KDAK				pmax	pmax		
	comp=Z,221nm,1.9s						
KDAK	Kodiak Island	16.59	57	Pn	Pn	07 49 25.5	-2.5
	comp=Z,2.9nm,0.3s,baz=244,slow=6.3,SNR=30						
KDAK	Kodiak Island	16.59	57		Pn	07 49 27.1	-0.9
KDAK				IAmb	IAmb	07 49 39.9	
	comp=Z,221nm,1.9s						
TTA	Tatalina	16.95	38	P	P	07 49 36.0	+2.0
TTA	Tatalina	16.95	38	P	P	07 49 36.0	+2.0
RSO	Redoubt South	17.24	48	P	Pn	07 49 35.8	-0.6
HOM	Homer	17.52	51	P	Pn	07 49 39.1	-0.4
BRLK	Bradley Lake	17.92	51	P	P	07 49 45.3	+0.7
BRLK				IAmb	IAmb	07 50 40.8	
	comp=Z,73nm,1.0s						
BILL	Bilibino	18.23	342	*e*P	Pn	07 49 50.4	+2.3
BILL				pmax	pmax		
	comp=Z,89nm,1.7s						
BILL				MLR	MLR		
	comp=Z,1μm,17.0s						
BILL	Bilibino	18.23	342	P	P	07 49 45.7	-2.3
SKT	Skwentna	18.35	44	P	Pn	07 49 51.3	+1.5
SKT				IAmb	IAmb	07 49 56.5	
	comp=Z,150nm,1.2s						
PPLA	Purkeypile	18.46	41	P	Pn	07 49 52.2	+1.0
PPLA				IAmb	IAmb	07 50 04.3	
	comp=Z,74nm,1.0s						
SUA	Susitna One	18.51	46	P	Pn	07 49 51.9	+0.1
SEW	Seward	18.70	51	P	Pn	07 49 53.9	0.0
RC01	Rabbit Creek A	18.85	47	P	Pn	07 49 55.5	-0.1
SEY	Seymchan	19.17	318	*e*P	Pn	07 50 02.1	+2.6
KTH	Kantishna Hill	19.27	40	P	Pn	07 50 00.3	-0.5
KTH				IAmb	IAmb	07 50 10.5	
	comp=Z,65nm,0.8s						
PMR	Palmer	19.28	46	P	Pn	07 50 00.7	-0.2
PMR				pmax	pmax		
	comp=Z,85nm,1.9s						
PMR	Palmer	19.28	46	P	Pn	07 50 00.7	-0.2
GHO	Glory Hole Cre	19.43	46	P	P	07 50 01.8	+0.4
BPAW	Bear Paw Mtn.	19.49	38	P	P	07 50 01.5	-0.3
BPAW				IAmb	IAmb	07 50 08.6	
	comp=Z,56nm,0.8s						
KNK	Knik Glacier	19.53	47	P	P	07 50 02.6	+0.3
SML	Sawmill	19.71	46	P	P	07 50 04.4	+0.1
MLY	Manley	20.03	36	P	Pn	07 50 09.2	-0.6
RND	Reindeer	20.05	41	P	P	07 50 08.7	+0.7
RND				pmax	pmax		
	comp=Z,26nm,0.6s						
RND	Reindeer	20.05	41	P	P	07 50 08.7	+0.7
RND				IAmb	IAmb	07 50 12.9	
	comp=Z,26nm,0.6s						
BWN	Browne	20.12	39	P	P	07 50 09.3	+0.7
MCK	McKinley	20.14	40	P	P	07 50 09.4	+0.4
MCK				pmax	pmax		
	comp=Z,27nm,1.0s						
MCK	McKinley	20.14	40	P	P	07 50 09.4	+0.4
SCM	Sheep Creek Mo	20.17	46	P	P	07 50 09.2	-0.2
SCM				pmax	pmax		
	comp=Z,45nm,1.0s						
SCM	Sheep Creek Mo	20.17	46	P	P	07 50 09.2	-0.2
SCM				IAmb	IAmb	07 50 38.2	
	comp=Z,45nm,1.0s						
NEA	Nenana	20.45	38	P	P	07 50 12.4	+0.2
NEA				IAmb	IAmb	07 50 18.4	
	comp=Z,104nm,1.0s						
DHY	Denali Highway	20.55	43	P	P	07 50 13.9	+0.4
DHY				IAmb	IAmb	07 50 18.8	
	comp=Z,59nm,0.8s						
WRH	Wood River Hil	20.79	39	P	P	07 50 15.7	-0.2
MDM	Murphy Dome	20.94	38	P	P	07 50 17.5	-0.1
MDM				IAmb	IAmb	07 50 29.6	
	comp=Z,33nm,0.9s						
CCB	Clear Creek Bu	20.97	39	P	P	07 50 17.8	-0.1
CCB				IAmb	IAmb	07 50 31.8	
	comp=Z,34nm,1.0s						
TCOL	CIGO, UAF Yank	21.05	38	P	P	07 50 19.3	+0.6
	baz=245						
COLA	College	21.05	38	iP	P	07 50 20.5	+1.8
COLA				pmax	pmax		
	comp=Z,25nm,0.8s						
COLA	College	21.05	38	P	P	07 50 19.6	+1.0
COLA				IAmb	IAmb	07 50 33.8	
	comp=Z,52nm,1.1s						
HDA	Harding Lake	21.22	40	P	P	07 50 22.5	+2.0
HDA	Harding Lake	21.22	40	P	P	07 50 21.1	+0.6
	baz=247						
POKR	Poker Plat Res	21.32	38	P	P	07 50 23.1	+1.5
	baz=245,SNR=5.6						
PAX	Paxson	21.34	44	P	P	07 50 23.1	+1.2
PAX				pmax	pmax		
	comp=Z,27nm,0.9s						
PAX	Paxson	21.34	44	P	P	07 50 23.1	+1.2
IL31		21.38	39	P	P	07 50 22.0	-0.2
IL31				IAmb	IAmb	07 50 39.9	
	comp=Z,35nm,1.0s						
ILAR	Eielson Array	21.38	39	P	P	07 50 22.5	+0.2
	comp=Z,2.7nm,0.5s,baz=242,slow=8.5,SNR=34						
ILAR				ScP	ScP	07 57 56.7	-0.6
	comp=Z,1.0nm,0.8s,baz=279,slow=3.5,SNR=12						
GLB	Gilahina Butte	21.70	49	P	P	07 50 23.6	-2.2
GLB				IAmb	IAmb	07 50 38.3	
	comp=Z,32nm,0.9s						
RIDG	Independent Ri	21.84	42	P	P	07 50 26.9	-0.3
MCARA	McCarthy VSAT	22.06	49	P	P	07 50 33.4	+3.8
MCARA				IAmb	IAmb	07 50 46.6	
	comp=Z,37nm,0.9s						
MENT	Mentasta	22.10	45	P	P	07 50 31.1	+1.2
DOT	Dot Lake	22.15	43	P	P	07 50 29.7	-0.8
DOT				IAmb	IAmb	07 50 33.0	
	comp=Z,53nm,0.9s						
PRP	Porcupine Dome	22.21	38	P	P	07 50 28.5	-2.8
SCRK	Sand Creek	22.28	42	P	P	07 50 31.8	-0.2
FYU	Fort Yukon	22.76	35	P	P	07 50 37.5	+0.6
FYU				IAmb	IAmb	07 50 49.6	
	comp=Z,50nm,1.0s						
EGAK	Eagle	23.69	41	P	P	07 50 46.4	+0.2
EGAK				IAmb	IAmb	07 50 48.4	
	comp=Z,60nm,1.1s						
TYV	Tymovskoe	23.87	284	*e*P	P	07 50 47.9	0.0
TYV				pmax	pmax		
	comp=Z,14nm,0.9s						
DAWY	Dawson	24.25	43	P	P	07 50 51.4	0.0
HYT	Haines Junctio	24.65	51	P	P	07 50 54.7	-0.4
YSS	Yuzh-Sakhalins	25.16	275	*e*P	P	07 51 00.2	+0.5
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
EPYK	Eagle Plains	25.90	38	P	P	07 51 06.2	-0.1
EPYK	Eagle Plains	25.90	38	P	P	07 51 05.4	-0.9
	baz=255						
WHY	Whitehorse	25.93	52	P	P	07 51 05.9	-0.8
INK	Inuvik	27.59	35	P	P	07 51 20.5	-0.9
INK				pmax	pmax		
	comp=Z,13nm,1.1s						
INK	Inuvik	27.59	35	P	P	07 51 21.8	+0.4
	comp=Z,5.8nm,0.8s,baz=242,slow=8.2,SNR=8.8						
INK	Inuvik	27.59	35	P	P	07 51 20.5	-0.9
GRNR	Gornyy	27.67	287	iP	P	07 51 17.0	-5.3
GRNR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,300nm,16.0s						
DLBC	Dease Lake	28.52	56	P	P	07 51 29.7	-0.2
	comp=Z,21nm,1.0s,baz=252,slow=0.7,SNR=4.2						
DLBC	Dease Lake	28.52	56	P	P	07 51 29.6	-0.2
DLBC				IAmb	IAmb	07 52 02.1	
	comp=Z,32nm,1.1s						
TIXI	Tiksi	30.59	331	eP	P	07 51 46.8	-1.2
TIXI	Tiksi	30.59	331	PcP	PcP	07 54 45.1	-0.2
	comp=Z,1.7nm,0.4s,baz=43,slow=1.8,SNR=5.3						
KLR	Kul'dur	31.03	286	*c* iP	P	07 51 51.5	-0.6
KLR				pmax	pmax		
	comp=Z,18nm,0.8s						
C36M	Paulatuk	31.16	34	P	P	07 51 53.3	+0.3
	baz=263,SNR=5.3						
ZEA	Zeya	32.10	296	*e*P	P	07 52 00.5	-0.9
ZEA				pmax	pmax		
	comp=Z,23nm,0.8s						
USRK	Ussuriysk Ar.	33.13	277	P	P	07 52 09.7	-0.9
	comp=Z,2.7nm,0.8s,baz=49,slow=8.2,SNR=5.2						
H11N2	WAKE ISLAND Hy	33.43	205	T	T	08 29 17.9	
	baz=18,slow=76,SNR=22						
H11N3	WAKE ISLAND Hy	33.43	204	T	T	08 29 13.4	
	baz=18,slow=76,SNR=26						
H11N1	WAKE ISLAND Hy	33.44	205	T	T	08 29 19.5	
	baz=18,slow=76,SNR=21						
H11S1	WAKE ISLAND Hy	34.64	204	T	T	08 28 58.1	
	baz=16,slow=76,SNR=60						
H11S2	WAKE ISLAND Hy	34.66	204	T	T	08 28 56.3	
	baz=16,slow=76,SNR=48						
H11S3	WAKE ISLAND Hy	34.66	204	T	T	08 28 56.3	
	baz=16,slow=76,SNR=32						
LLLB	Lillooet	35.23	68	P	P	07 52 30.6	+1.9
YKA	Yellowknife Ar	35.38	46	P	P	07 52 29.6	-0.2
	comp=Z,11nm,0.8s,baz=282,slow=8.5,SNR=61						
YKA				PcP	PcP	07 54 59.4	+0.6
	comp=Z,0.9nm,0.8s,baz=298,slow=3.2,SNR=3.9						
YKA				ScP	ScP	07 58 41.9	+1.1
	comp=Z,2.1nm,0.8s,baz=290,slow=3.3,SNR=18						
NLWA	Neilton Lookou	35.45	74	P	P	07 52 33.0	+2.4
NLWA				IAmb	IAmb	07 52 34.1	
	comp=Z,10nm,0.8s						
D03D	Eldon	35.85	74	P	P	07 52 36.4	+2.4
	baz=297,SNR=11						
B05A	Bryant	36.11	72	P	P	07 52 36.9	+0.7
	baz=297,SNR=8.8						
D04E	Lakebay	36.21	74	P	P	07 52 36.7	-0.3
	baz=298						
F03A	Seaside	36.33	76	P	P	07 52 40.5	+2.4
E04D	Cinebar	36.62	75	P	P	07 52 42.3	+1.7
	baz=299,SNR=12						
D05A	Enumclaw	36.67	73	P	P	07 52 44.2	+3.1
MLH	Mauna Loa	36.84	141	P	P	07 52 44.1	+1.1
UWE	Uwekahuna	36.94	141	P	P	07 52 42.2	-1.5
UWB	Uwekahuna B	36.94	141	P	P	07 52 41.4	-2.3
SBLHI	Steaming Bluff	36.95	141	P	P	07 52 42.4	-1.3
WRMHI	West Rim	36.95	141	P	P	07 52 42.1	-1.7
HATHI	Halema'uma'u T	36.95	141	P	P	07 52 42.4	-1.4
BYL	Byron's Ledge	36.96	141	P	P	07 52 42.9	-1.0
RIM	Rim	36.97	141	P	P	07 52 43.9	-0.1
KKO	Keanakako`i	36.97	141	P	P	07 52 43.0	-1.0
LON	Longmire	36.99	74	P	P	07 52 44.8	+0.9
LON				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LON	Longmire	36.99	74	P	P	07 52 44.8	+0.9
LON				IAmb	IAmb	07 52 47.7	
	comp=Z,10nm,0.8s						
PUH	Pauahi	37.02	141	P	P	07 52 43.0	-1.3
F04A	Amboy	37.02	76	P	P	07 52 42.3	-1.7
F04A				IAmb	IAmb	07 52 47.8	
	comp=Z,26nm,1.1s						
LTY	Liberty	37.43	73	P	P	07 52 48.3	+0.7
H04D	Lebanon	37.53	78	P	P	07 52 49.4	+1.0
	baz=301						
I03D	Drain, OR	37.59	79	P	P	07 52 50.3	+1.4
	baz=302						
F05D	White Salmon	37.62	75	P	P	07 52 50.1	+0.9
	baz=300						
B08A	Colville Reser	37.71	70	P	P	07 52 49.6	-0.3
B08A				IAmb	IAmb	07 52 52.6	
	comp=Z,19nm,1.0s						
H04A	Detroit Lake	37.79	77	P	P	07 52 51.5	+0.9
H04A				IAmb	IAmb	07 52 55.4	
	comp=Z,39nm,1.1s						
BOD	Bodaibo	37.87	307	*e*P	P	07 52 50.0	-1.1
BOD				pmax	pmax		
	comp=Z,7.0nm,2.1s						
G05D	Wamic, OR	38.03	76	P	P	07 52 54.2	+1.6
	baz=301						
I04A	Tendick Farm,	38.12	79	P	P	07 52 54.8	+1.5
	baz=302						
E07A	Sunnyside	38.26	73	P	P	07 52 55.9	+1.3
E07A				IAmb	IAmb	07 53 05.3	
	comp=Z,32nm,1.4s						
G06A	Carlson Farm,	38.45	75	P	P	07 52 56.4	+0.2
I05D	Terrebonne, OR	38.49	77	P	P	07 52 57.9	+1.4
	baz=302,SNR=7.0						
HAWA	Hanford	38.53	73	P	P	07 52 58.0	+1.2
HAWA				IAmb	IAmb	07 53 07.5	
	comp=Z,21nm,1.0s						

WVOR pmax pmax
comp=Z,9.0nm,0.8s
WVOR Wild Horse Val 41.17 78 P **P** 07 53 20.2 +1.3
MSO Missoula 41.64 70 P **P** 07 53 23.1 +0.5
MSO IAmb IAmb 07 53 25.8
comp=Z,18nm,1.1s
MSO Missoula 41.64 70 P **P** 07 53 22.8 +0.2
baz=301,SNR=14
PAHR Pah Rah Range 42.28 82 P **P** 07 53 28.3 +0.3
PNTR Pine Nut 42.52 83 P **P** 07 53 31.6 +1.5
PNTR IAmb IAmb 07 53 42.6
comp=Z,17nm,0.7s
YERR Yerington 42.80 83 P **P** 07 53 33.8 +1.5
WAKR Walker 42.97 83 P **P** 07 53 35.0 +1.3
MCMT McKenzie Canyo 43.35 72 P **P** 07 53 36.6 -0.2
EGMT Eagleton 43.45 66 P **P** 07 53 37.1 -0.2
EGMT IAmb IAmb 07 53 40.1
comp=Z,16nm,0.8s
EGMT Eagleton 43.45 66 P **P** 07 53 36.4 -0.9
baz=301,SNR=6.1
RYN Ryan 43.47 82 P **P** 07 53 39.0 +1.3
NVAR Mina Array Bea 43.72 83 P **P** 07 53 40.9 +1.1
comp=Z,3.8nm,0.9s,baz=289,slow=7.7,SNR=18
NVAR ScP **ScP** 07 59 15.1 +1.3
comp=Z,1.1nm,1.0s,baz=311,slow=1.8,SNR=3.7
PAGB Antelope Grade 44.19 87 P **P** 07 53 44.4 +1.1
PAGB IAmb IAmb 07 54 14.0
comp=Z,27nm,1.7s
ELK Elko 44.23 78 P **P** 07 53 44.6 +0.8
ELK pmax pmax
comp=Z,8.0nm,1.0s
ELK Elko 44.23 78 P **P** 07 53 44.6 +0.8
YHL Hebgen Lake 44.33 71 P **P** 07 53 44.9 +0.2
YHB Horse Butte 44.38 71 P **P** 07 53 45.8 +0.9
GCMT Greycliff 44.70 69 P **P** 07 53 47.8 +0.4
YNR Norris Junctio 44.70 70 P **P** 07 53 49.1 +1.6
YUF Upper Falls 44.80 70 P **P** 07 53 49.0 +0.6
VES Vestal, Richgr 44.85 86 P **P** 07 53 48.3 -0.2
baz=310
YPP Pitchstone Pla 44.88 71 P **P** 07 53 50.7 +1.7
YNE Yellowstone No 44.93 70 P **P** 07 53 49.9 +0.5
H17A Grant Village 44.94 71 P **P** 07 53 51.6 +2.1
H17A IAmb IAmb 07 53 54.4
comp=Z,16nm,0.8s
H17A Grant Village 44.94 71 P **P** 07 53 51.6 +2.1
baz=304,SNR=16
LKWY Lake 44.95 70 P **P** 07 53 49.9 +0.3
LKWY pmax pmax
comp=Z,16nm,1.0s
LKWY Lake 44.95 70 P **P** 07 53 49.9 +0.3
LKWY IAmb IAmb 07 53 54.2
comp=Z,16nm,0.9s
YMP Mirror Lake Pl 44.99 70 P **P** 07 53 51.2 +1.2
FLWY Flagg Ranch 45.04 71 P **P** 07 53 52.3 +2.0
FLWY IAmb IAmb 07 53 54.4
comp=Z,23nm,1.1s
CWC Cottonwood Cre 45.10 85 P **P** 07 53 51.0 +0.3
baz=309
HVU Hansel Valley 45.12 75 P **P** 07 53 51.3 +0.5
HVU pmax pmax
comp=Z,28nm,1.3s
HVU Hansel Valley 45.12 75 P **P** 07 53 51.3 +0.5
GRAC Grapevine Rang 45.19 83 P **P** 07 53 51.9 +0.6
baz=309
MOOW Moose Ponds 45.21 72 P **P** 07 53 53.5 +1.9
TPAW Teton Pass 45.23 72 P **P** 07 53 53.0 +1.1
RLMT Red Lodge 45.30 69 P **P** 07 53 53.1 +0.8
RLMT Red Lodge 45.30 69 P **P** 07 53 53.5 +1.2
baz=304,SNR=32
ISA Isabella, Lake 45.34 86 P **P** 07 53 52.8 +0.3
baz=310
SNOW Snow King Moun 45.37 72 P **P** 07 53 54.7 +1.8
R11A Troy Canyon, C 45.46 81 P **P** 07 53 54.2 +0.6
R11A Troy Canyon, C 45.46 81 P **P** 07 53 54.8 +1.2
baz=308,SNR=6.7
BGU Big Grassy Mou 45.47 76 P **P** 07 53 52.9 -0.8
AHID Auburn Hatcher 45.56 73 IAmb IAmb 07 53 58.3
comp=Z,12nm,0.9s
MPMC Manual Prospec 45.71 85 P **P** 07 53 55.5 -0.1
baz=310
FURC Furnace Creek, 45.84 84 P **P** 07 53 57.0 +0.7
baz=309,SNR=5.9
TPNV Topopah Spring 45.92 83 IAmb IAmb 07 54 03.0
comp=Z,15nm,0.9s
TPNV Topopah Spring 45.92 83 P **P** 07 53 56.7 -0.5
baz=309,SNR=12
TLY Talaya 45.95 302⇓*e*P **P** 07 53 57.6 +0.5
DUG Dugway, Tooele 46.04 77 P **P** 07 53 57.3 -0.8
DUG pmax pmax
comp=Z,19nm,1.0s
DUG Dugway, Tooele 46.04 77 P **P** 07 53 57.3 -0.8
DUG IAmb IAmb 07 54 03.1
comp=Z,18nm,0.9s
DUG Dugway, Tooele 46.04 77 P **P** 07 53 58.5 +0.4
baz=307,SNR=20
ULN Ulaanbaatar 46.13 296*ce*P **P** 07 53 58.6 -0.1
ULN pmax pmax
comp=Z,15nm,1.3s
ULN Ulaanbaatar 46.13 296 P **P** 07 53 58.7 -0.1
ULN IAmb IAmb 07 53 59.8
comp=Z,12nm,1.1s
CTU Camp Tracy 46.39 76 P **P** 07 54 00.8 -0.1
PSUT Pine Spring 46.41 79 P **P** 07 54 01.6 +0.5
BW06 Boulder Array 46.48 72 IAmb IAmb 07 54 04.2
comp=Z,22nm,0.8s
BW06 Boulder Array 46.48 72 P **P** 07 54 01.8 +0.2
baz=306,SNR=26
PD31 Pinedale Array 46.48 72 P **P** 07 54 01.6 -0.1
PD31 IAmb IAmb 07 54 04.2
comp=Z,20nm,0.8s
PDAR Pinedale Array 46.48 72 P **P** 07 54 02.2 +0.6
comp=Z,20nm,0.7s,baz=303,slow=3.7,SNR=129
PDAR ScP **ScP** 07 59 27.4 +2.3
comp=Z,0.9nm,0.9s,baz=321,slow=4.2,SNR=4.0
SONM Songino Array 46.52 296 P **P** 07 54 02.0 +0.3
SONM Songino Array 46.52 296 P **P** 07 54 02.0 +0.3
comp=Z,6.6nm,0.9s,baz=52,slow=8.5,SNR=27
SONM Songino Array 46.52 296 IAmb IAmb 07 54 02.5
comp=Z,5.7nm,1.0s
SHOC Shoshone, Teco 46.57 84 P **P** 07 54 02.2 +0.1
baz=310
GSC Goldstone, Bar 46.62 85 P **P** 07 54 01.9 -0.7
GSC pmax pmax
comp=Z,6.0nm,0.9s
GSC Goldstone, Bar 46.62 85 P **P** 07 54 01.9 -0.7
GSC Goldstone, Bar 46.62 85 P **P** 07 54 02.6 0.0
baz=310
JLU Jordanelle 46.63 76 P **P** 07 54 03.3 +0.4
NLU North Lily Min 46.64 77 P **P** 07 54 03.6 +0.8
HEC Hector,Ludlow 47.22 85 P **P** 07 54 07.0 -0.3
baz=311
CCUT Cedar City 47.33 80 P **P** 07 54 08.3 0.0
HHC Hu-ho-hao-te 47.54 286*e*P **P** 07 54 10.1 +0.3
HHC pmax pmax
comp=Z,9.0nm,1.0s
HHC pmax pmax
comp=Z,110nm,8.1s
GMRC Granite Mounta 47.67 85 P **P** 07 54 10.5 -0.4
baz=311
LCMT Little Creek M 47.74 81 P **P** 07 54 11.0 -0.4
RDMU Red Mountain 47.79 74 P **P** 07 54 12.1 +0.3
PFO Pinyon Flats O 47.94 86 P **P** 07 54 12.6 -0.4
baz=311
K22A Casper 48.35 70 IAmb IAmb 07 54 18.8
comp=Z,18nm,1.0s
K22A Casper 48.35 70 P **P** 07 54 16.3 +0.2
baz=307,SNR=8.9
IRM Iron Mountain 48.40 85 P **P** 07 54 15.9 -0.5
baz=311
MONP2 Monument Peak 48.44 87 P **P** 07 54 16.0 -0.9
baz=312
NJ2 Nanjing 48.65 272*e*P **P** 07 54 18.9 +0.7
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
U15A North Rim 48.70 81 IAmb IAmb 07 54 32.0
comp=Z,14nm,0.8s
SWSC Sam W. Stewart 48.79 87 P **P** 07 54 19.0 -0.4
baz=312
IKP In-Ko-Pah, Jac 48.79 87 P **P** 07 54 18.6 -0.8
baz=312
O20A White River Ci 48.85 74 P **P** 07 54 20.1 +0.1
baz=308,SNR=27
RSSD Black Hills 48.93 67 P **P** 07 54 19.2 -1.4
RSSD pmax pmax
comp=Z,10.0nm,1.1s
RSSD Black Hills 48.93 67 P **P** 07 54 19.2 -1.4
RSSD IAmb IAmb 07 54 29.9
comp=Z,9.9nm,1.1s
RSSD Black Hills 48.93 67 P **P** 07 54 20.3 -0.3
baz=306
Y12C Blythe 49.06 85 P **P** 07 54 20.8 -0.5
baz=312
N23A Red Feather La 49.76 72 IAmb IAmb 07 54 37.3
comp=Z,28nm,1.4s
N23A Red Feather La 49.76 72 P **P** 07 54 26.9 -0.1
baz=308
WUAZ Wupatki 49.86 81 P **P** 07 54 27.3 -0.4
WUAZ IAmb IAmb 07 54 41.1
comp=Z,10nm,0.9s
WUAZ Wupatki 49.86 81 P **P** 07 54 27.1 -0.6
baz=311
SMCO Snowmass 50.22 74 P **P** 07 54 30.3 -0.3
MVCO Mesa Verde 50.54 77 IAmb IAmb 07 54 36.5
comp=Z,11nm,1.1s
MVCO Mesa Verde 50.54 77 P **P** 07 54 33.8 +0.9
baz=310,SNR=5.5
ISCO Idaho Springs 50.64 73 P **P** 07 54 35.1 +1.3
baz=309,SNR=6.8
AGMN Agassiz Nation 51.01 59 P **P** 07 54 36.2 +0.2
baz=307
S22A 4UR Ranch, Cre 51.21 76 P **P** 07 54 38.2 +0.1
S22A IAmb IAmb 07 54 42.0
comp=Z,11nm,1.0s
S22A 4UR Ranch, Cre 51.21 76 P **P** 07 54 39.3 +1.3
baz=310,SNR=13
Q24A Divide 51.45 73 P **P** 07 54 39.7 -0.2
baz=310
DAG Danmarks Havn 51.56 6 *i* P **P** 07 54 38.9 -0.8
DAG pmax pmax
comp=Z,3.0nm,1.0s
DAG Danmarks Havn 51.56 6 *i* P **P** 07 54 38.9 -0.8
comp=Z,2.9nm,1.0s
SDCO Great Sand Dun 52.02 75 IAmb IAmb 07 54 47.7
comp=Z,12nm,1.0s
SDCO Great Sand Dun 52.02 75 P **P** 07 54 44.8 +0.8
baz=310,SNR=16
OGNE Ogallala 52.05 69 P **P** 07 54 43.8 -0.1
baz=309
TUC Tucson 52.35 83 P **P** 07 54 45.3 -1.0
TUC pmax pmax
comp=Z,6.0nm,1.1s
TUC Tucson 52.35 83 P **P** 07 54 45.3 -1.0
TUC Tucson 52.35 83 P **P** 07 54 46.4 0.0
baz=313
KSCO Kaye Shedlock' 52.93 72 P **P** 07 54 48.8 -1.8
KSCO IAmb IAmb 07 54 53.8
comp=Z,17nm,0.9s
KSCO Kaye Shedlock' 52.93 72 P **P** 07 54 50.0 -0.6
baz=310
T25A Trinidad 53.07 75 P **P** 07 54 52.2 +0.4
T25A IAmb IAmb 07 54 56.0
comp=Z,29nm,1.0s
T25A Trinidad 53.07 75 P **P** 07 54 53.0 +1.2
baz=311,SNR=19
ANMO Albuquerque 53.27 78⇓*e*P **P** 07 54 54.7 +1.5
ANMO pmax pmax
comp=Z,8.0nm,1.3s
ANMO Albuquerque 53.27 78 P **P** 07 54 53.8 +0.6
baz=312
SUMG Summit 53.38 14 *i* P **P** 07 54 54.0 +0.3
SUMG pmax pmax
comp=Z,63nm,1.1s
SUMG Summit 53.38 14 *i* P **P** 07 54 54.0 +0.3
comp=Z,63nm,1.1s
ECSD EROS Data Cent 53.40 64 IAmb IAmb 07 54 55.0
comp=Z,12nm,1.4s
ECSD EROS Data Cent 53.40 64 P **P** 07 54 53.2 -0.6
baz=309,SNR=5.2
EYMN Ely 53.53 57 IAmb IAmb 07 56 05.5
comp=Z,15nm,1.2s
EYMN Ely 53.53 57 P **P** 07 54 54.1 -0.7
baz=309
ZALV Zalesovo Beam 53.94 313 PcP **PcP** 07 56 02.5 +0.1
comp=Z,5.6nm,0.8s,baz=38,slow=4.0,SNR=12
BGNE Belgrade 54.01 67 P **P** 07 54 58.1 -0.3
baz=310
E38A The Farm, Brul 54.35 58 P **P** 07 54 59.6 -1.1
CBKS Cedar Bluff 54.77 70 P **P** 07 55 04.2 +0.3
baz=311,SNR=7.8
LZH Lanzhou 55.24 286*e*P **P** 07 55 07.5 0.0
LZH pP pP 07 55 18.1 -1.5
LZH sP sP 07 55 23.1 -1.5
LZH pmax pmax
comp=Z,15nm,0.9s
GTA Gaotai 55.43 292⇑P **P** 07 55 08.6 -0.2
GTA pP pP 07 55 18.3 -2.7
GTA pmax pmax
comp=Z,11nm,0.8s
MNTX Cornudas Mount 56.12 80 IAmb IAmb 07 55 18.9
comp=Z,9.0nm,0.9s
MNTX Cornudas Mount 56.12 80 P **P** 07 55 14.4 +0.7
baz=314,SNR=11
MSTX Muleshoe 56.18 76 P **P** 07 55 14.2 +0.1
MSTX IAmb IAmb 07 55 20.0
comp=Z,18nm,1.2s
MSTX Muleshoe 56.18 76 P **P** 07 55 14.4 +0.3
baz=313
AMTX Amarillo 56.22 75 P **P** 07 55 14.2 -0.3
AMTX IAmb IAmb 07 55 25.9
comp=Z,10nm,0.9s
AMTX Amarillo 56.22 75 P **P** 07 55 15.1 +0.6
baz=313
KSU1 Kansas State U 56.41 68 P **P** 07 55 15.3 -0.4
baz=312
U32A Winter Ranch, 56.82 72 IAmb IAmb 07 55 21.4
comp=Z,30nm,1.1s
E44A Grand Marais A 57.28 55 P **P** 07 55 20.8 -0.9
baz=312
JFWS Jewell Farm 57.46 61 P **P** 07 55 22.5 -0.5
baz=312
WMOK Wichita Mounta 58.07 73 IAmb IAmb 07 55 30.9
comp=Z,11nm,1.1s
WMOK Wichita Mounta 58.07 73 P **P** 07 55 27.7 +0.2
baz=313,SNR=10
ARCES ARCESS Array B 58.11 350 P **P** 07 55 26.7 -0.4
comp=Z,7.5nm,0.9s,baz=28,slow=8.7,SNR=18
LVZ Lovozero 58.44 346⇑*e*P **P** 07 55 31.6 +2.0
LVZ pmax pmax
comp=Z,63nm,2.0s
N41A Harden Midland 58.61 63 P **P** 07 55 30.5 -0.6
E47A Iron Bridge 58.74 54 P **P** 07 55 31.4 -0.5
baz=313
CD2 Chengdu 58.82 282*e*P **P** 07 55 32.3 -0.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
TX31 Lajitas Ar. Si 58.83 81 P **P** 07 55 32.5 -0.3
TX31 IAmb IAmb 07 55 37.8
comp=Z,12nm,1.1s
TX32 Lajitas Array 58.83 81 P **P** 07 55 32.5 -0.3
TX32 IAmb IAmb 07 55 37.2
comp=Z,10nm,1.1s
TXAR Lajitas Array 58.83 81 P **P** 07 55 32.8 -0.1
comp=Z,6.8nm,0.9s,baz=310,slow=5.4,SNR=27
W35A Tecumseh 58.92 71 P **P** 07 55 33.6 +0.3
KURK Kurchatov 58.93 314*ce*P **P** 07 55 33.3 +0.2
KURK pmax pmax
comp=Z,9.0nm,1.3s
ABTX Abilene, Hawle 59.00 75 P **P** 07 55 34.7 +0.8
ABTX Abilene, Hawle 59.00 75 P **P** 07 55 33.4 -0.5
baz=314,SNR=8.1
TUL1 Leonard 59.04 70 P **P** 07 55 33.5 -0.6
TUL1 IAmb IAmb 07 55 44.5
comp=Z,13nm,0.9s
TUL1 Leonard 59.04 70 P **P** 07 55 34.0 -0.2
baz=314
WMQ Urumqi 59.23 303*e*P **P** 07 55 35.8 +0.4
WMQ pP sP 07 55 50.4 -2.0
WMQ sP pP 07 55 58.5 +11
WMQ pmax pmax
comp=Z,14nm,1.3s
WMQ pmax pmax
comp=Z,55nm,3.7s
WMQ LR LR
comp=Z,390nm,9.7s
WMQ LR LR
comp=Z,270nm,14.5s
WMQ LR LR
comp=Z,750nm,17.7s
HDIL Hopedale 59.59 62 P **P** 07 55 37.0 -0.8
baz=313
MK31 Makanchi Array 59.93 308 P **P** 07 55 38.8 -1.3
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MK31 Makanchi Array 59.93 308 P **P** 07 55 38.8 -1.3
MKAR Makanchi Array 59.93 308 *i* P **P** 07 55 39.2 -1.0
MKAR pmax pmax
comp=Z,1.0nm,0.3s
MKAR Makanchi Array 59.93 308 P **P** 07 55 38.6 -1.5
comp=Z,1.4nm,0.3s,baz=46,slow=6.6,SNR=38
D50A G1974 Best Tow 59.95 51 P **P** 07 55 38.9 -1.3
baz=314
LSQQ Lebel-sur-Quev 59.99 48 P **P** 07 55 39.4 -1.1
baz=315
MAKZ Makanchi 60.08 308 P **P** 07 55 39.8 -1.3
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
MAKZ Makanchi 60.08 308 P **P** 07 55 39.8 -1.3
P43A Skaggs, Pawnee 60.09 63 P **P** 07 55 40.8 -0.5
SCHQ Schefferville 60.14 38 P **P** 07 55 41.2 -0.2
comp=Z,18nm,1.0s,baz=325,slow=6.9,SNR=12
SCHQ Schefferville 60.14 38 P **P** 07 55 41.0 -0.5
J47A Sumner 60.16 57 P **P** 07 55 41.3 -0.4
baz=314
CCM Cathedral Cave 60.21 65 P **P** 07 55 41.1 -1.1
CCM pmax pmax
comp=Z,9.0nm,1.0s
CCM Cathedral Cave 60.21 65 P **P** 07 55 41.1 -1.1
CCM IAmb IAmb 07 55 42.2
comp=Z,8.7nm,0.9s
CCM Cathedral Cave 60.21 65 P **P** 07 55 41.0 -1.1
baz=314
D51A Lot 18 Range I 60.24 51 P **P** 07 55 41.2 -1.0
baz=315
MGMO Mountain Grove 60.24 67 P **P** 07 55 41.0 -1.4
MGMO IAmb IAmb 07 55 43.8
comp=Z,16nm,1.2s
JCT Junction City 60.40 77 P **P** 07 55 43.1 -0.5
JCT pmax pmax
comp=Z,10.0nm,0.9s
JCT Junction City 60.40 77 P **P** 07 55 43.1 -0.5
JCT IAmb IAmb 07 55 47.8
comp=Z,9.9nm,0.9s
JCT Junction City 60.40 77 P **P** 07 55 43.6 0.0
baz=315,SNR=6.2
K47A Vermontville 60.46 58 P **P** 07 55 42.5 -1.3
baz=314
U40A Yellville 60.46 68 IAmb IAmb 07 55 45.3
comp=Z,18nm,1.2s
U40A Yellville 60.46 68 P **P** 07 55 42.9 -1.0
baz=314
E51A G1948 Merrick 60.57 51 P **P** 07 55 43.4 -1.1
baz=315
W39A Magazine 60.72 69 P **P** 07 55 45.0 -0.6
baz=314
WHTX Lake Whitney, 60.77 74 IAmb IAmb 07 55 49.2
comp=Z,11nm,0.8s
WHTX Lake Whitney, 60.77 74 P **P** 07 55 45.8 -0.2
baz=315
K48A Perry 60.83 57 P **P** 07 55 45.9 -0.4
baz=314
L47A Sherwood 60.83 58 P **P** 07 55 45.7 -0.6
baz=314
BRVK Borovoye 60.83 320 P **P** 07 55 45.4 -0.7
BRVK pmax pmax
comp=Z,6.0nm,1.2s
BRVK Borovoye 60.83 320 P **P** 07 55 45.4 -0.7
SFIN Lafayette 60.92 61 P **P** 07 55 46.6 -0.4
SFIN Lafayette 60.92 61 P **P** 07 55 46.3 -0.6
baz=314,SNR=8.2
M47A Cromwell 61.04 59 P **P** 07 55 47.4 -0.4
baz=314
F52A Sundridge 61.17 52 P **P** 07 55 46.5 -2.1
baz=315
K49A Clarkson 61.19 57 P **P** 07 55 48.5 -0.3
baz=315,SNR=6.8
L48A N Adams 61.27 58 P **P** 07 55 49.0 -0.3
baz=315
TMCR Tamitsa 61.27 342*e*P **P** 07 55 48.0 -0.9
MIAR Mount Ida 61.30 70 P **P** 07 55 48.2 -1.4
MIAR pmax pmax
comp=Z,21nm,1.2s
MIAR Mount Ida 61.30 70 P **P** 07 55 48.2 -1.4
MIAR IAmb IAmb 07 56 00.3
comp=Z,21nm,1.2s
MIAR Mount Ida 61.30 70 P **P** 07 55 48.7 -0.8
baz=315,SNR=8.0
N47A Urbana 61.33 60 P **P** 07 55 48.6 -1.2
baz=314
M48A Edgerton 61.44 59 P **P** 07 55 49.9 -0.5
baz=315
L49A Milan 61.50 57 P **P** 07 55 50.7 -0.2
baz=315
435B Jarrell 61.54 75 IAmb IAmb 07 55 56.0
comp=Z,11nm,0.8s
PBMO Poplar Bluff 61.56 66 P **P** 07 55 50.7 -0.6
PBMO IAmb IAmb 07 55 51.7
comp=Z,16nm,0.9s
S44A Carbondale 61.59 64 P **P** 07 55 51.1 -0.4
S44A IAmb IAmb 07 55 52.1
comp=Z,15nm,0.8s
W41B Gary Mavity, V 61.63 68 P **P** 07 55 51.1 -0.7
baz=315
ALGO Algonquin Park 61.69 51 P **P** 07 55 50.8 -1.2
baz=316
N48A Decatur 61.71 59 P **P** 07 55 51.1 -1.2
baz=315
I51A Listowel 61.73 54 P **P** 07 55 50.7 -1.7
baz=315
E54A Lac Daplat, Po 61.76 50 P **P** 07 55 51.1 -1.4
baz=316
X40A Basin Creek Fa 61.77 69 P **P** 07 55 52.5 -0.3
baz=315
M49A Liberty Center 61.84 58 P **P** 07 55 52.9 -0.3
baz=315
PRGR Permogore 61.89 338*e*P **P** 07 55 51.7 -1.4
PRGR pmax pmax
comp=Z,8.0nm,0.6s
H06E1 SOCORRO T-PHAS 61.93 95 T T 09 03 21.0
SNR=11
G53A Haliburton 62.00 52 P **P** 07 55 54.0 -0.2
baz=316
O48A Farmland 62.06 60 P **P** 07 55 52.8 -1.9
baz=315,SNR=5.4
N49A Columbus Grove 62.12 59 IAmb IAmb 07 55 55.5
comp=Z,12nm,0.8s
N49A Columbus Grove 62.12 59 P **P** 07 55 53.8 -1.2
baz=315
D55A Sainte-Anne-du 62.16 49 P **P** 07 55 53.9 -1.3
baz=316,SNR=6.0
E55A Montcerf-Lytto 62.29 50 P **P** 07 55 55.1 -1.0
baz=316
M50A Fremont 62.38 58 P **P** 07 55 56.4 -0.4
baz=315
H53A Bobcaygeon 62.41 52 P **P** 07 55 56.7 -0.3
baz=316
D56A ZEC Mazanza, M 62.47 48 P **P** 07 55 55.6 -1.7
baz=317
P48A Milroy 62.48 61 P **P** 07 55 56.9 -0.6
baz=315,SNR=12
O49A Covington 62.55 59 P **P** 07 55 57.2 -0.7
baz=315
ARU Arti 62.55 328 *i* P **P** 07 55 59.2 +1.5
ARU pmax pmax
comp=Z,18nm,2.6s
F55A Otter Lake 62.60 50 P **P** 07 55 57.2 -1.0
baz=316
Q48A North Vernon 62.69 61 P **P** 07 55 58.4 -0.5
baz=315
E56A St. Veronique 62.71 49 P **P** 07 55 57.3 -1.6
baz=317
N50A Nevada 62.78 58 P **P** 07 55 59.2 -0.3
baz=316,SNR=6.2
P49A Miami Univ. Ec 62.81 60 P **P** 07 55 59.0 -0.7
baz=315
G55A Calabogie 62.84 51 P **P** 07 55 58.6 -1.2
baz=316
WCI Wyandotte Cave 62.87 62 P **P** 07 55 59.8 -0.3
WCI pmax pmax
comp=Z,24nm,0.9s
WCI Wyandotte Cave 62.87 62 P **P** 07 55 59.8 -0.3
WCI Wyandotte Cave 62.87 62 P **P** 07 55 59.9 -0.3
baz=315
D57A Chemin Vers le 62.90 48 P **P** 07 55 58.9 -1.2
baz=317
O50A Cable 62.97 59 P **P** 07 56 00.5 -0.3
baz=316,SNR=7.1
N51A Ashland 63.08 58 P **P** 07 56 01.1 -0.4
baz=316
Q49A Aurora 63.09 61 P **P** 07 56 01.3 -0.2

baz=316
LATQ La Tuque 63.14 47 IAmb IAmb 07 56 01.4
comp=Z,6.0nm,0.9s
LATQ La Tuque 63.14 47 P **P** **07 56 00.1 -1.6**
baz=318
M52A Chesterland 63.17 56 P **P** **07 56 01.6 -0.5**
baz=316
ACSO Alum Creek Sta 63.25 58 P **P** **07 56 02.1 -0.5**
baz=316
P50A Jamestown 63.26 59 P **P** **07 56 02.0 -0.6**
baz=316,SNR=6.5
D58A Chemin du LacG 63.31 47 P **P** **07 56 01.8 -1.1**
baz=318
J54A Appleton 63.32 54 P **P** **07 56 02.4 -0.6**
baz=316
L53A Girard 63.45 55 P **P** **07 56 02.7 -1.2**
baz=316
R49A Shelbyville 63.45 61 P **P** **07 56 03.2 -0.7**
baz=316
ERPA Erie 63.47 55 P **P** **07 56 03.6 -0.4**
baz=316
WVT Waverly 63.50 65 P **P**
WVT pmax pmax **07 56 04.3 0.0**
comp=Z,13nm,0.8s
WVT Waverly 63.50 65 P **P** **07 56 04.3 0.0**
WVT IAmb IAmb 07 56 05.4
comp=Z,12nm,0.8s
WVT Waverly 63.50 65 P **P** **07 56 04.2 0.0**
baz=316
O51A Pataskala 63.51 58 P **P** **07 56 03.8 -0.5**
baz=316
N52A McGinn's Farm, 63.52 57 P **P** **07 56 03.5 -0.8**
baz=316
E58A La Victoria 63.66 48 P **P** **07 56 03.9 -1.3**
baz=318
Q50A Georgetown 63.70 60 P **P** **07 56 05.3 -0.3**
baz=316
L54A Sinclairville 63.73 55 P **P** **07 56 05.7 -0.1**
baz=316
P51A Williamsport 63.74 59 P **P** **07 56 05.0 -0.8**
baz=316
S49A Springfield 63.74 62 P **P** **07 56 05.9 0.0**
baz=316,SNR=6.8
OXF Oxford 63.75 67 P **P** **07 56 06.4 +0.4**
baz=316,SNR=7.4
K54A Basiliko Farm, 63.78 54 P **P** **07 56 05.9 -0.2**
baz=317
D59A Saint-Raymond 63.85 47 P **P** **07 56 05.3 -1.2**
baz=318
Q51A Peebles 63.92 60 P **P** **07 56 07.0 0.0**
baz=316
R50A Paris 63.92 61 IAmb IAmb 07 56 08.8
comp=Z,14nm,0.9s
R50A Paris 63.92 61 P **P** **07 56 06.7 -0.3**
baz=316
O52A Adamsville 63.94 58 P **P** **07 56 06.8 -0.4**
baz=316,SNR=8.6
N53A Lisbon 63.97 57 P **P** **07 56 07.0 -0.4**
baz=316
K55A Perry 64.00 54 P **P** **07 56 07.0 -0.5**
baz=317
H57A Richville 64.06 51 P **P** **07 56 06.6 -1.3**
baz=317
M54A Oil Creek Stat 64.08 55 P **P** **07 56 07.7 -0.3**
baz=317
T49A Edmonton 64.09 63 P **P** **07 56 07.9 -0.3**
T49A IAmb IAmb 07 56 09.3
comp=Z,13nm,0.8s
T49A Edmonton 64.09 63 P **P** **07 56 08.2 0.0**
baz=316,SNR=7.9
P52A Corning 64.13 58 P **P** **07 56 07.8 -0.6**
baz=316
O53A New Philadelph 64.18 57 P **P** **07 56 08.3 -0.4**
baz=316
PLAL Pickwick Lake 64.18 66 P **P** **07 56 08.2 -0.6**
G58A Ormstown 64.20 49 P **P** **07 56 07.3 -1.4**
baz=318
L55A Hinsdale 64.22 54 P **P** **07 56 08.5 -0.4**
baz=317
F59A Saint Guilaume 64.28 48 P **P** **07 56 08.2 -1.0**
baz=318
N54A Moraine State 64.30 56 P **P** **07 56 08.9 -0.6**
baz=317
S50A Richmond 64.31 61 P **P** **07 56 09.7 +0.1**
baz=316
R51A Hillsboro 64.31 60 P **P** **07 56 09.7 +0.1**
baz=316,SNR=9.8
D60A Saint Jean D'O 64.34 46 P **P** **07 56 08.7 -0.9**
baz=319
V48A Smith Brothers 64.35 64 IAmb IAmb 07 56 11.3
comp=Z,15nm,0.9s
U49A Red Boiling Sp 64.38 63 P **P** **07 56 09.6 -0.4**
baz=316,SNR=8.8
K56A Middlesex 64.40 53 P **P** **07 56 09.4 -0.8**
baz=317
D61A St Aubert, Com 64.46 46 P **P** **07 56 08.4 -2.0**
baz=319
E60A Ste Agathe de 64.51 47 P **P** **07 56 09.8 -1.0**
baz=318
T50A Nancy 64.54 62 P **P** **07 56 11.1 0.0**
baz=316,SNR=9.5
Q52A Bidwell 64.55 59 P **P** **07 56 10.2 -0.9**
baz=316
M55A Ridgway 64.57 55 IAmb IAmb 07 56 12.7
comp=Z,20nm,1.1s
M55A Ridgway 64.57 55 P **P** **07 56 10.8 -0.4**
baz=317
F60A Warwick 64.58 48 P **P** **07 56 09.2 -2.0**
baz=318
P53A Whipple 64.64 58 P **P** **07 56 11.4 -0.2**
baz=317
O54A Avella 64.67 57 P **P** **07 56 11.5 -0.4**
baz=317
L56A Greenwood 64.69 54 P **P** **07 56 12.4 +0.3**
L56A Greenwood 64.69 54 P **P** **07 56 11.8 -0.3**
baz=317,SNR=10
H59A Cadyville 64.75 50 P **P** **07 56 11.5 -0.9**
baz=318
K57A Scipio Center 64.78 53 P **P** **07 56 11.6 -1.0**
baz=317
S51A Beattyville 64.78 61 P **P** **07 56 12.3 -0.3**
baz=316
R52A Catlettsburg 64.80 60 P **P** **07 56 12.7 0.0**
baz=316
V49A McMinnville 64.85 64 P **P** **07 56 13.2 0.0**
baz=316,SNR=12
E61A Lac Etchemin 64.90 46 P **P** **07 56 12.2 -1.1**
baz=319
J58A Remsen 64.93 51 P **P** **07 56 13.0 -0.5**
baz=318
N55A Marion Center 64.96 56 P **P** **07 56 13.0 -0.8**
baz=317
U50A Jamestown 64.97 63 P **P** **07 56 13.6 -0.4**
baz=316
F61A St Evariste 65.02 47 P **P** **07 56 13.5 -0.5**
baz=319
Q53A Leroy 65.02 59 P **P** **07 56 14.1 -0.1**
baz=317,SNR=9.9
P54A Burton 65.03 57 P **P** **07 56 13.7 -0.6**
baz=317
D62A Allapoint, All 65.05 45 P **P**
D62A IAmb IAmb 07 56 14.5 **07 56 13.2 -1.1**
comp=Z,20nm,1.0s
D62A Allapoint, All 65.05 45 P **P** **07 56 13.9 -0.4**
baz=320,SNR=6.8
T51A Gray 65.08 62 P **P** **07 56 14.5 -0.1**
baz=316
W49A Belvidere 65.11 65 P **P** **07 56 14.7 -0.2**
baz=316,SNR=7.9
X48A Hartselle 65.15 66 P **P**
X48A IAmb IAmb 07 56 21.6 **07 56 13.6 -1.5**
comp=Z,29nm,1.6s
L57A Andrews Acres 65.15 53 P **P** **07 56 15.0 -0.1**
baz=318,SNR=7.2
R53A Hurricane 65.17 59 P **P** **07 56 14.9 -0.4**
baz=317
N56A West Decatur 65.21 55 P **P** **07 56 14.7 -0.8**
baz=317
J59A Piesco 65.23 51 P **P** **07 56 14.2 -1.3**
baz=318
H60A Morristown 65.28 49 P **P** **07 56 14.5 -1.3**
baz=318
G61A St-Isidore-de- 65.29 48 P **P** **07 56 14.5 -1.3**
baz=319
I59A Olmsteadville 65.29 50 P **P** **07 56 14.6 -1.3**
baz=318
Q54A Coxs Mills 65.30 58 P **P** **07 56 15.9 -0.1**
baz=317
MCWV Mont Chateau 65.33 57 P **P** **07 56 15.9 -0.2**
baz=317
V50A Pikevile 65.37 63 P **P** **07 56 16.3 -0.2**
baz=317,SNR=8.3
BINY Binghamton 65.44 53 P **P** **07 56 16.3 -0.6**
baz=318
P55A Reedsville 65.45 57 P **P** **07 56 16.4 -0.6**
baz=317
U51A La Follette 65.46 62 P **P** **07 56 17.2 +0.1**
baz=317,SNR=6.0
M57A Sunshine Farm, 65.50 54 IAmb IAmb 07 56 19.7
comp=Z,25nm,1.2s
M57A Sunshine Farm, 65.50 54 P **P** **07 56 17.2 0.0**
baz=318
T52A Hallie 65.50 61 IAmb IAmb 07 56 19.0
comp=Z,14nm,0.9s
T52A Hallie 65.50 61 P **P** **07 56 17.2 -0.1**
baz=317
D63A Stockholm 65.51 45 P **P** **07 56 15.7 -1.5**
baz=320
I60A Shoreham 65.53 50 P **P** **07 56 16.3 -1.2**
baz=318
O56A Blue Knob Stat 65.55 56 P **P** **07 56 17.1 -0.5**
baz=317
W50A Signal Mountai 65.59 64 P **P** **07 56 17.9 -0.1**
baz=317,SNR=7.3
TZTN Tazewell 65.60 62 P **P** **07 56 17.8 -0.2**
baz=317
L58A Harry Jones Me 65.62 53 P **P** **07 56 17.5 -0.5**
baz=318
SSPA Standing Stone 65.63 55 P **P** **07 56 17.7 -0.4**
SSPA IAmb IAmb 07 56 19.3
comp=Z,13nm,0.9s
SSPA Standing Stone 65.63 55 P **P** **07 56 17.5 -0.6**
baz=318
H61A Lyndonville 65.67 49 P **P** **07 56 17.5 -0.8**
baz=319
Q55A Buckhannon 65.69 58 P **P** **07 56 18.6 0.0**
baz=317
V51A Loudon 65.69 63 IAmb IAmb 07 56 20.6
comp=Z,15nm,0.8s
V51A Loudon 65.69 63 P **P** **07 56 17.9 -0.6**
baz=317,SNR=5.7
ACCN Adirondack Com 65.70 50 P **P** **07 56 17.4 -1.2**
ACCN IAmb IAmb 07 56 19.1
comp=Z,15nm,1.1s
N57A Milroy 65.72 55 P **P** **07 56 18.5 -0.1**
baz=318
FINES FINESS Array B 65.79 347 P **P** **07 56 18.2 -0.5**
comp=Z,9.3nm,0.9s,baz=7.1,slow=6.9,SNR=15
G62A West of Eustis 65.80 47 P **P** **07 56 18.0 -1.1**
baz=319
R54A Victor 65.80 59 P **P** **07 56 19.0 -0.3**
baz=317,SNR=5.6
U52A Thorn Hill 65.81 62 P **P** **07 56 19.6 +0.2**
baz=317
M58A Price's Panora 65.81 54 P **P** **07 56 18.8 -0.5**
baz=318
E63A Oxbow 65.84 45 IAmb IAmb 07 56 18.9
comp=Z,15nm,0.9s
E63A Oxbow 65.84 45 P **P** **07 56 18.2 -1.2**
baz=320
T53A Wise 65.84 61 P **P** **07 56 19.6 0.0**
baz=317
CPCT Cooper Cave 65.85 63 IAmb IAmb 07 56 21.6
comp=Z,16nm,1.1s
LBNH Lisbon 65.89 49 P **P** **07 56 18.9 -0.9**
baz=319
FPAL Fort Paine 65.90 65 P **P** **07 56 20.0 0.0**
FPAL IAmb IAmb 07 56 20.9
comp=Z,14nm,0.9s
S54A Dingess, Beckl 65.91 59 P **P** **07 56 19.7 -0.3**
baz=317
L59A Walton 65.92 52 P **P** **07 56 19.2 -0.8**
baz=318
J60A Lant Hill Farm 65.92 50 P **P** **07 56 19.3 -0.6**
baz=319,SNR=5.4
W51A Cleveland 65.93 63 P **P** **07 56 19.8 -0.3**
baz=317,SNR=5.5
P56A Dayton Farm, R 65.97 56 P **P** **07 56 20.0 -0.4**
baz=318
I61A Oroboro, Fairl 65.99 49 P **P** **07 56 19.5 -0.8**
baz=319
H62A Milan 66.00 48 P **P** **07 56 19.2 -1.2**
H62A Milan 66.00 48 P **P** **07 56 19.8 -0.6**
baz=319
KSPA Keystone Colle 66.03 53 P **P** **07 56 20.1 -0.6**
O57A Amberson 66.07 55 P **P** **07 56 20.8 -0.2**
baz=318
N58A Sunbury 66.08 54 P **P** **07 56 20.0 -1.0**
N58A IAmb IAmb 07 56 21.7
comp=Z,15nm,1.0s
N58A Sunbury 66.08 54 P **P** **07 56 20.7 -0.2**
baz=318
F63A Nahmakanta, Br 66.08 46 P **P** **07 56 20.1 -0.9**
baz=320
V52A Sevierville 66.08 62 P **P** **07 56 21.4 +0.2**
baz=317
E64A Bridgewater 66.10 45 P **P** **07 56 19.9 -1.2**
baz=320,SNR=6.6
Q56A Snyder Ridge, 66.13 57 P **P** **07 56 21.2 -0.2**
baz=318
BOOM Boomskoye usch 66.17 309 IAmb IAmb 07 56 23.7
comp=Z,7.1nm,1.1s
LRAL Lakeview Retre 66.20 67 IAmb IAmb 07 56 25.0
comp=Z,10nm,1.1s
LRAL Lakeview Retre 66.20 67 P **P** **07 56 21.3 -0.6**
baz=317
M59A Waymart 66.20 53 P **P** **07 56 21.3 -0.5**
baz=318
J61A Chester 66.26 50 P **P** **07 56 21.3 -0.8**
baz=319
U53A Fall Branch 66.27 61 P **P** **07 56 22.4 +0.1**
baz=317
F64A Sherman 66.30 46 P **P** **07 56 21.5 -0.8**
baz=320,SNR=5.7
T54A Tazewell 66.30 60 P **P** **07 56 22.7 +0.1**
baz=317,SNR=5.1
X51A Calhoun 66.31 64 P **P** **07 56 21.7 -0.8**
baz=317
S55A Lewisburg 66.36 59 P **P** **07 56 22.0 -1.0**
baz=317
P57A Homestead Farm 66.42 56 P **P** **07 56 21.9 -1.3**
baz=318
K61A Williamstown 66.43 51 P **P** **07 56 22.4 -0.9**
baz=319
I62A Tamworth 66.44 49 P **P** **07 56 22.7 -0.6**
baz=319
W52A Murphy 66.45 63 IAmb IAmb 07 56 25.6
comp=Z,24nm,1.2s
W52A Murphy 66.45 63 P **P** **07 56 23.0 -0.5**
baz=317
H63A New Sharon 66.45 47 P **P** **07 56 22.6 -0.7**
baz=320
L60A Shokan 66.47 52 P **P** **07 56 22.1 -1.4**
baz=319
R56A Bull Pasture M 66.48 58 P **P** **07 56 23.2 -0.6**
baz=318
N59A State Game Lan 66.50 54 P **P** **07 56 23.4 -0.3**
baz=318,SNR=6.7
O58A Lewisberry 66.50 55 P **P** **07 56 23.0 -0.7**
baz=318
Q57A Strasburg 66.54 57 P **P** **07 56 22.6 -1.4**
baz=318
U54A Nelsons Funny 66.57 61 P **P** **07 56 23.9 -0.4**
baz=317
G64A Maxfield 66.58 46 P **P** **07 56 23.1 -1.1**
baz=320
V53A Saluda 66.64 62 IAmb IAmb 07 56 27.2
comp=Z,17nm,1.1s
V53A Saluda 66.64 62 P **P** **07 56 24.3 -0.5**
baz=317
L61A Hillsdale 1, H 66.65 51 P **P** **07 56 23.9 -0.7**
baz=319
Z50A Ashland 66.66 66 P **P** **07 56 24.3 -0.5**
baz=317,SNR=8.2
I63A Otisfield 66.66 48 P **P** **07 56 23.6 -1.1**
baz=320
Y51A Rockmart 66.68 65 P **P** **07 56 24.7 -0.3**
baz=317
T55A Pulaski 66.69 59 P **P** **07 56 24.7 -0.4**
baz=318
J62A Henniker 66.71 49 P **P** **07 56 24.4 -0.6**
baz=319
O59A Robesonia 66.74 54 P **P** **07 56 25.0 -0.3**
baz=318
AAK Ala-Archa 66.76 310 *de*P **P** **07 56 26.0 +0.4**
AAK pmax pmax
comp=Z,8.0nm,1.3s
AAK Ala-Archa 66.76 310 P **P** **07 56 25.4 -0.2**
AAK IAmb IAmb 07 56 27.3
comp=Z,8.6nm,0.9s
M60A Port Jervis 66.77 53 P **P** **07 56 25.1 -0.3**
baz=319
W53A Cullowhee 66.82 62 P **P** **07 56 26.2 +0.2**
baz=317
BLA Blacksburg 66.82 59 P **P** **07 56 25.7 -0.2**
baz=318
X52A Dahlonega 66.82 63 P **P** **07 56 26.0 +0.1**
baz=317,SNR=9.4
H64A Troy 66.84 47 P **P** **07 56 25.4 -0.4**
baz=320
N60A Cedar Hill Far 66.87 53 P **P** **07 56 25.8 -0.2**
baz=319,SNR=7.0
K62A Royalston 66.93 50 P **P** **07 56 25.5 -1.0**
baz=319
S56A Natural Bridge 66.93 58 P **P** **07 56 26.4 -0.1**
baz=318
Q58A Fox Den Farm, 66.99 56 P **P** **07 56 26.5 -0.3**
baz=318
U55A TA2, Sparta 67.00 60 P **P** **07 56 26.8 -0.3**
baz=318
R57A Stanardsville 67.03 57 P **P** **07 56 27.0 -0.1**
baz=318
V54A Nebo 67.04 61 P **P** **07 56 27.6 +0.3**
baz=318,SNR=6.6
BG3 Lake Jocassee 67.08 62 IAmb IAmb 07 56 29.3
comp=Z,15nm,1.0s
O60A Telford 67.13 54 P **P** **07 56 27.0 -0.7**
baz=319
P59A Jarrettsville 67.14 55 P **P** **07 56 27.0 -0.8**
baz=318
G65A Princeton 67.16 46 P **P** **07 56 27.0 -0.8**
baz=321
T56A Rocky Mt 67.16 59 P **P** **07 56 27.3 -0.7**
baz=318
S57A Dark Hollow, R 67.20 58 P **P** **07 56 27.5 -0.7**
baz=318
M61A Granite Spring 67.21 52 P **P** **07 56 27.5 -0.7**
baz=319
X53A Estanollee 67.23 63 P **P** **07 56 28.4 -0.1**
baz=318
H65A Eastbrook 67.24 46 P **P** **07 56 27.2 -1.2**
baz=320
K63A Dunstable 67.25 50 P **P** **07 56 27.3 -1.1**
baz=320
Y52A Lilburn 67.27 64 IAmb IAmb 07 56 30.2
comp=Z,20nm,1.0s
Y52A Lilburn 67.27 64 P **P** **07 56 28.5 -0.2**
baz=317,SNR=5.0
LSA Lhasa 67.30 289 IAmb IAmb 07 56 31.4
comp=Z,8.4nm,0.5s
R58A Rapidan 67.30 57 P **P** **07 56 28.8 0.0**
baz=318
PAL Palisades 67.37 52 P **P** **07 56 28.5 -0.7**
baz=319
HRV Adam Dziewonsk 67.38 50 P **P** **07 56 28.5 -0.7**
baz=320
V55A Taylorsville 67.39 61 IAmb IAmb 07 56 31.2
comp=Z,10nm,1.0s
V55A Taylorsville 67.39 61 P **P** **07 56 29.3 -0.1**
baz=318
P60A Greenville 67.39 54 P **P** **07 56 28.6 -0.8**
baz=319
W54A Cherokee Point 67.42 62 P **P** **07 56 29.6 -0.1**
baz=318
U56A King 67.48 60 P **P** **07 56 29.9 -0.1**
baz=318
Y53A Monroe 67.55 64 P **P** **07 56 30.3 -0.2**
baz=318,SNR=5.2
Z52A Williamson 67.56 65 P **P** **07 56 30.1 -0.5**
baz=318
H66A Whiting 67.59 46 P **P** **07 56 30.0 -0.6**
baz=321
T57A Hurt 67.60 59 P **P** **07 56 30.2 -0.6**
baz=318
R58B Mineral 67.61 57 P **P** **07 56 30.0 -0.8**
baz=318
N62A Caumsett State 67.64 52 P **P** **07 56 30.2 -0.7**
baz=319
NB2 NORSAR Subarra 67.68 355 P **P** **07 56 30.8 -0.1**
comp=Z,2.4nm,0.8s,baz=7.2,slow=6.5
NOA NORSAR Array B 67.68 355 P **P** **07 56 30.5 -0.4**
comp=Z,3.0nm,0.8s,baz=6.9,slow=6.3,SNR=8.9
X54A Belton 67.71 62 P **P** **07 56 31.8 +0.3**
baz=318,SNR=7.8
O61A Allentown 67.73 53 P **P** **07 56 31.4 -0.1**
baz=319
S58A Poland Farm, P 67.78 57 P **P** **07 56 31.2 -0.7**
baz=318
V56A Mocksville 67.81 60 P **P** **07 56 31.6 -0.5**
baz=318
L63A North Scituate 67.84 50 P **P** **07 56 31.6 -0.6**
baz=320
KMSC Kings Mountain 67.85 61 P **P** **07 56 31.9 -0.4**
baz=318,SNR=7.7
LMN Caledonia Moun 67.86 43 IAmb IAmb 07 56 32.9
comp=Z,20nm,0.9s
ABKAR Akbulak array 67.87 323 P **P** **07 56 30.7 -1.6**
ABKAR IAmb IAmb 07 58 51.5
comp=Z,13nm,2.0s
GOGA Godfrey 67.94 64 IAmb IAmb 07 56 33.6
comp=Z,12nm,0.9s
GOGA Godfrey 67.94 64 P **P** **07 56 32.5 -0.4**
baz=318
Z53A Monticello 67.98 64 P **P** **07 56 32.3 -0.8**
baz=318,SNR=6.1
M63A Gales Ferry 67.98 51 P **P** **07 56 32.8 -0.2**
baz=320
U57A Blanch 67.98 59 P **P** **07 56 32.9 -0.2**
baz=318
HODGE Hodges 68.01 63 IAmb IAmb 07 56 34.5
comp=Z,17nm,0.9s
T58A Grand View Acr 68.03 58 P **P** **07 56 33.1 -0.3**
baz=318
Y54A Tignall 68.04 63 P **P** **07 56 32.7 -0.8**
baz=318,SNR=5.4
V57A Coltrane Farms 68.15 60 P **P** **07 56 34.0 -0.2**
baz=318
L64A Middleborough 68.16 50 P **P** **07 56 33.9 -0.2**
baz=320
X55A Gracelyn & Ava 68.18 62 P **P** **07 56 34.8 +0.4**
baz=318
KK31 Karatay Array 68.29 312 P **P** **07 56 34.4 -0.6**
KK31 pmax pmax
comp=Z,8.0nm,1.0s
KK31 Karatay Array 68.29 312 P **P** **07 56 34.4 -0.6**
KK31 IAmb IAmb 07 56 36.4
comp=Z,7.9nm,1.0s
KKAR Karatay Array 68.29 312 P **P** **07 56 34.3 -0.7**
KKAR pmax pmax
comp=Z,8.0nm,1.0s
KKAR Karatay Array 68.29 312 P **P** **07 56 34.3 -0.7**
KKAR IAmb IAmb 07 56 36.4
comp=Z,7.9nm,1.0s
153A Fort Valley 68.29 65 P **P** **07 56 34.9 -0.2**
baz=318
KSH Kashi 68.39 307 P **P** **07 56 39.9 +4.1**
KSH pP pP 07 56 49.0 +0.8
KSH PP **PP** **07 59 11.8 +5.2**
KSH S **S** **08 05 40.4 +6.5**
KSH sS sS 08 06 01.1 +6.2
KSH SS **SS** **08 09 59.0 +1.9**
KSH pmax pmax
comp=Z,22nm,0.7s
KSH pmax pmax
comp=Z,250nm,4.6s
KSH LR LR
comp=Z,310nm,5.0s
KSH LR LR
comp=Z,220nm,4.6s
KSH LR LR
comp=Z,470nm,5.3s
Z54A Sparta 68.42 64 P **P** **07 56 35.5 -0.5**
baz=318
Y55A Saluda 68.45 62 P **P** **07 56 36.2 +0.1**
baz=318
ARSB Arslanbob 68.49 310 P **P** **07 56 36.0 -0.5**
ARSB IAmb IAmb 07 56 38.3
comp=Z,8.8nm,0.8s
X56A White Oak 68.50 62 P **P** **07 56 36.8 +0.4**
baz=318
JSC Jenkinsville 68.53 62 IAmb IAmb 07 56 37.9
comp=Z,6.2nm,0.7s
T59A Double "B" Far 68.53 57 P **P** **07 56 36.9 +0.4**
T59A Double "B" Far 68.53 57 P **P** **07 56 36.5 -0.1**

baz=319
VSU Vasula 68.56 346⇓*e*P P 07 56 36.0 -0.3
VSU pmax pmax
comp=Z,58nm,0.9s
V58A Windy Hill, Pi 68.57 59 P P 07 56 37.0 +0.2
baz=318
W57A Gilead 68.58 60 P P 07 56 36.9 +0.1
baz=318
154A Montrose 68.73 64 P P 07 56 37.6 -0.2
baz=318
U59A Littleton 68.86 58 P P 07 56 38.0 -0.6
baz=319
X57A Johnson Farm, 69.03 61 P P 07 56 40.0 +0.3
baz=318
353A Camilla 69.04 66 P P 07 56 39.6 -0.2
baz=318
V59A Middlesex 69.07 59 P P 07 56 39.4 -0.5
baz=319
155A Kite 69.09 64 P P 07 56 39.3 -0.8
baz=318
W58A Raeford 69.09 60 P P 07 56 39.2 -0.8
baz=319
U60A Pendleton 69.11 58 P P 07 56 38.5 -1.6
baz=319
254A Abbeville 69.12 65 P P 07 56 39.0 -1.4
baz=318
Z56A Williston 69.18 63 P P 07 56 41.1 +0.4
baz=318
Y57A Sumter 69.20 61 P P 07 56 41.0 +0.2
baz=318
Z57A Bowman 69.57 62 P P 07 56 43.3 +0.2
baz=319
V60A Jim Taylor Roa 69.59 58 P P 07 56 43.0 -0.2
baz=319
U61A Possum Corner 69.59 57 P P 07 56 42.3 -0.8
baz=319
255A Hazlehurst 69.60 64 P P 07 56 42.7 -0.6
baz=318
156A Sylvania 69.61 63 P P 07 56 43.6 +0.3
baz=318
Y58A Scranton 69.69 61 P P 07 56 43.7 0.0
baz=319
OBN Obninsk 69.85 339 *e*P P 07 56 44.3 -0.1
OBN *e* 07 57 08.2
OBN *e* 07 59 16.6
OBN *e*PPP PPP 08 01 03.7
OBN pmax pmax
comp=Z,19nm,0.4s
OBN MLR MLR
comp=Z,1μm,19.0s
V61A Roper 69.93 58 P P 07 56 45.4 +0.2
baz=319
NHSC New Hope 70.00 62 P P 07 56 45.6 -0.1
baz=319
Z58A St. Stephen 70.03 62 P P 07 56 45.7 -0.2
baz=319
158A Hollywood 70.27 62 P P 07 56 46.6 -0.8
baz=319
257A Skidaway Islan 70.38 63 P P 07 56 47.4 -0.7
baz=319
BTK Batken 70.51 310 P P 07 56 49.5 +0.6
BTK pmax pmax
comp=Z,11nm,0.9s
BTK Batken 70.51 310 P P 07 56 49.5 +0.6
BTK IAmb IAmb 07 56 50.6
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 70.85 276 P P 07 56 50.1 -1.0
comp=Z,0.9nm,0.4s,baz=28,slow=6.6,SNR=5.2
TAPN Taplejung 71.06 290 *e*P P 07 56 52.8 +0.1
comp=Z,55nm,1.0s
ODAN Odare 71.62 290 *e*P P 07 56 56.2 +0.2
GUN Gumba 71.72 292 *e*P P 07 56 57.0 +0.3
comp=Z,35nm,0.4s
JIRN Jiri 71.72 291 *e*P P 07 56 57.2 +0.5
comp=Z,52nm,0.8s
RAMN Ramite 72.02 291 *e*P P 07 56 58.4 +0.1
comp=Z,56nm,0.8s
KKN Kakani 72.16 292 *e*P P 07 56 59.3 +0.2
comp=Z,19nm,0.5s
PKI Pulchoki 72.25 292 *e*P P 07 56 59.8 0.0
PKIN Phulchoki 72.25 292 *e*P P 07 56 59.7 -0.1
comp=Z,11nm,0.4s
GKN Gorkha 72.37 293 *e*P P 07 57 00.5 +0.2
comp=Z,19nm,0.4s
DMN Daman 72.39 292 *e*P P 07 57 00.9 +0.3
DANN Dangsing 72.61 294 *e*P P 07 57 02.2 +0.2
comp=Z,36nm,0.8s
KOLN Koldanda 73.14 293 *e*P P 07 57 04.9 -0.1
NIL Nilore 74.30 304 P P 07 57 11.0 -0.5
NIL pmax pmax
comp=Z,19nm,0.6s
NIL Nilore 74.30 304 P P 07 57 10.9 -0.5
AKASG Malin Array Be 75.54 342 *i* P P 07 57 17.5 -0.8
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 75.54 342 P P 07 57 17.4 -0.9
comp=Z,4.1nm,0.4s,baz=22,slow=6.1,SNR=30
AKASG Malin Array Be 75.54 342 IAmb IAmb 07 57 18.5
comp=Z,3.0nm,0.9s
AKBB Malin Array Si 75.54 342 P P 07 57 17.3 -1.0
AKBB pmax pmax
comp=Z,27nm,1.2s
AKBB Malin Array Si 75.54 342 P P 07 57 17.3 -1.0
AKBB IAmb IAmb 07 57 18.6
comp=Z,27nm,1.1s
KBL Kabul 75.73 308 P P 07 57 18.7 -1.2
KBL pmax pmax
comp=Z,11nm,0.9s
KBL Kabul 75.73 308 P P 07 57 18.7 -1.2
KBL IAmb IAmb 07 57 20.2
comp=Z,11nm,0.8s
CLL Collm 77.22 352 *e*P P 07 57 27.0 -0.8
CLL Collm 77.22 352 *e*P P 07 57 27.0 -0.8
OJC Ojcow 77.56 348 IAmb IAmb 07 57 30.5
comp=Z,10nm,0.9s
KWP Kalwaria Pacla 77.71 346 P P 07 57 30.8 +0.2
KWP pmax pmax
comp=Z,407nm,1.0s
KWP Kalwaria Pacla 77.71 346 P P 07 57 30.8 +0.2
DPC Dobruska-Polom 77.85 350 *e*P P 07 57 31.8 +0.4
DPC Dobruska-Polom 77.85 350 *e*P P 07 57 31.8 +0.4
SORM Soroca 78.16 342 ⇑P P 07 57 32.7 -0.3
NKC Novy Kostel 78.34 352 *e*P P 07 57 34.5 +0.4
NKC Novy Kostel 78.34 352 *e*P P 07 57 34.5 +0.4
KIV Kislovodsk 78.43 331 *e*P P 07 57 34.9 +0.1
KIV pmax pmax
comp=Z,25nm,1.0s
KOLS Kolonicke sedl 78.46 346 *e*P P 07 57 35.0 +0.3
KOLS pmax pmax
comp=Z,11nm,1.0s
KOLS Kolonicke sedl 78.46 346 *e*P P 07 57 35.0 +0.3
LANS Liptovska Anna 78.65 348 *e*P P 07 57 36.9 +1.1
LANS pmax pmax
comp=Z,10.0nm,1.1s
LANS Liptovska Anna 78.65 348 *e*P P 07 57 36.9 +1.1
UZH Uzhgorod 78.75 346⇓*i*P P 07 57 36.0 -0.3
UZH *i* 07 57 39.0
VRAC Vranov 78.85 350 ⇑P P 07 57 37.9 +1.0
ZEI Tsey 79.10 329 *e*P P 07 57 37.5 -1.1
ZEI pmax pmax
comp=Z,6.0nm,0.8s
KECS Kecovo 79.16 347 *e*P P 07 57 39.0 +0.4
KECS pmax pmax
comp=Z,5.0nm,0.9s
KECS Kecovo 79.16 347 *e*P P 07 57 39.0 +0.4
BUR08 Bucovina Ar. S 79.22 344 P P 07 57 39.4 +0.3
BUR08 IAmb IAmb 07 57 40.8
comp=Z,23nm,0.9s
BURAR Bucovina Array 79.25 344 ⇓P P 07 57 39.7 +0.5
KHC Kasperske Hory 79.33 352⇑*e*P P 07 57 39.2 -0.3
KHC pmax pmax
comp=Z,22nm,1.1s
KHC Kasperske Hory 79.33 352 *e*P P 07 57 39.3 -0.3
KHC *ex* x 07 57 44.8
KHC Kasperske Hory 79.33 352 P P 07 57 39.0 -0.6
VYHS Vyhne 79.38 348 *e*P P 07 57 39.9 +0.1
VYHS pmax pmax
comp=Z,10.0nm,1.2s
VYHS Vyhne 79.38 348 *e*P P 07 57 39.9 +0.1
SMOL Smolenice 79.53 349 *e*P P 07 57 41.3 +0.7
SMOL pmax pmax
comp=Z,6.0nm,1.2s
SMOL Smolenice 79.53 349 *e*P P 07 57 41.3 +0.7
GERES GERESS Array B 79.61 351 P P 07 57 40.7 -0.4
comp=Z,1.7nm,0.7s,baz=19,slow=4.5,SNR=12
MODS Modra-Piesok 79.69 349 *e*P P 07 57 41.0 -0.5
MODS pmax pmax
comp=Z,19nm,1.4s
MODS Modra-Piesok 79.69 349 *e*P P 07 57 41.0 -0.5
BIZ Bicaz 79.74 343⇓P P 07 57 42.5 +0.7
PSZ Piszkesteto 79.80 347 P P 07 57 41.2 -1.0
PSZ pmax pmax
comp=Z,13nm,1.0s
PSZ Piszkesteto 79.80 347 P P 07 57 41.1 -1.0
PSZ IAmb IAmb 07 57 43.8
comp=Z,13nm,1.0s
ARCR ARCALIA 79.91 344⇑P P 07 57 44.0 +1.3
TESR Tescani 80.05 342⇓P P 07 57 43.0 -0.4
CONA Conrad Observa 80.29 350 *i* P P 07 57 45.1 +0.3
comp=Z,6.1nm,0.9s
DRGR 80.47 345⇓P P 07 57 46.0 +0.2
MOA Molln 80.54 351 *i* P P 07 57 45.9 -0.2
comp=Z,8.7nm,1.4s
PLOR Plostina 80.68 342⇓P P 07 57 47.5 +0.6
DOPR Dopca 80.81 343⇓P P 07 57 48.7 +1.1
BISRR Bisoca 80.96 342⇓P P 07 57 49.2 +0.8
ARSA Arzberg 81.00 350 *i* P P 07 57 48.6 0.0
comp=Z,6.8nm,1.1s
CFR Carcaliu 81.03 341⇓P P 07 57 48.9 +0.2
SIRR Siria 81.15 346⇓P P 07 57 50.0 +0.6
MLR Muntele Rosu 81.16 342 P P 07 57 50.6 +1.0
MLR pmax pmax
comp=Z,11nm,0.7s
MLR Muntele Rosu 81.16 342⇓P P 07 57 49.8 +0.2
MLR Muntele Rosu 81.16 342 P P 07 57 50.6 +1.0
MLR IAmb IAmb 07 57 52.2
comp=Z,11nm,0.7s
GNI Garni 81.19 328⇑*e*P P 07 57 51.2 +1.3
GNI pmax pmax
comp=Z,38nm,1.7s
WATA Walderalm 81.29 353 *i* P P 07 57 50.1 -0.1
comp=Z,9.9nm,0.7s
MOTA Moosalm 81.31 353 *i* P P 07 57 51.1 +0.7
comp=Z,8.9nm,1.1s
WTTA Wattenberg 81.35 353 *i* P P 07 57 50.9 +0.3
comp=Z,15nm,1.1s
VOIR 81.38 343⇓P P 07 57 51.6 +0.9
KBA Koelnbreinsper 81.39 351 *i* P P 07 57 51.2 +0.4
comp=Z,36nm,1.1s
SQTA Sankt Quirin 81.43 353 *i* P P 07 57 50.6 -0.3
comp=Z,5.7nm,0.8s
ARR Arges 81.53 343⇓P P 07 57 52.5 +1.1
HARR Harsova 81.54 341⇓P P 07 57 51.6 +0.2
SOKA Soboth 81.62 350 *i* P P 07 57 52.2 +0.3
comp=Z,20nm,1.1s
FETA Feichten 81.66 353 *i* P P 07 57 52.3 0.0
comp=Z,14nm,1.1s
BZS Buzias 81.79 345⇑P P 07 57 52.9 +0.2
ABTA Abfaltersbach 81.79 352 *i* P P 07 57 52.6 -0.2
comp=Z,8.5nm,1.0s
MYKA Terra Mystica 81.81 351 *i* P P 07 57 52.6 -0.3
comp=Z,1.8nm,0.5s
GZR Gura Zlata 81.82 345⇓P P 07 57 53.4 +0.4
OBKA Obir 81.83 351 *i* P P 07 57 53.3 +0.3
comp=Z,11nm,1.1s
WRA Warramunga Arr 81.86 224 *i* P P 07 57 52.7 -0.6
WRA pmax pmax
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 81.86 224 P P 07 57 51.5 -1.8
comp=Z,1.7nm,0.7s,baz=33,slow=5.8,SNR=11
FUORN Ofenpass-Fuorn 82.10 354 P P 07 57 55.0 +0.4
FUORN IAmb IAmb 07 57 55.9
comp=Z,11nm,1.1s
MDVR Moldovita 82.59 345⇓P P 07 57 57.2 +0.2
PLVB Pleven 83.44 343⇑P P 07 58 01.7 +0.3
BNI Bardonecchia 83.87 356 P P 07 58 03.1 -0.6
BNI pmax pmax
comp=Z,21nm,1.4s
BNI Bardonecchia 83.87 356 P P 07 58 03.1 -0.6
BNI IAmb IAmb 07 58 06.9
comp=Z,21nm,1.4s
VTS Vitosha 84.44 344 P P 07 58 06.3 -0.4
VTS pmax pmax
comp=Z,7.0nm,1.0s
VTS Vitosha 84.44 344⇓P P 07 58 06.5 -0.2
VTS Vitosha 84.44 344 P P 07 58 06.3 -0.4
VTS IAmb IAmb 07 58 07.2
comp=Z,6.5nm,1.0s
BR131 Keskin Array S 84.92 335 P P 07 58 08.7 -0.4
BR131 pmax pmax
comp=Z,6.0nm,0.9s
BR131 Keskin Array S 84.92 335 P P 07 58 08.7 -0.4
BR131 IAmb IAmb 07 58 09.6
comp=Z,6.3nm,0.8s
BRTR Keskin Array B 84.92 335 *i* P P 07 58 09.0 -0.1
BRTR pmax pmax
comp=Z,5.0nm,0.8s
BRTR Keskin Array B 84.92 335 P P 07 58 08.9 -0.1
comp=Z,5.2nm,0.8s,baz=52,slow=3.1,SNR=20
YLV Yalova 85.17 339⇓P P 07 58 06.7 -3.6
MURB Monte Urbino 85.25 352 P P 07 58 10.6 0.0
ASAR Alice Springs 85.34 222 P P 07 58 09.8 -1.3
comp=Z,2.0nm,0.8s,baz=25,slow=5.6,SNR=21
NRCA Norcia 85.62 351 P P 07 58 13.0 +0.5
ESDC Sonseca Array 89.27 4 P P 07 58 28.9 -1.2
comp=Z,2.4nm,0.8s,baz=2.0,slow=4.9,SNR=7.6
STKA Stephens Creek 89.80 213 P P 07 58 32.4 +0.2
STKA pmax pmax
comp=Z,1.0nm,0.9s
STKA Stephens Creek 89.80 213 P P 07 58 32.1 -0.1
comp=Z,1.2nm,0.5s,baz=7.5,slow=5.8,SNR=8.6
STKA Stephens Creek 89.80 213 P P 07 58 32.4 +0.2
PLCA Paso Flores 131.12 107 PKP **PKPdf** 08 04 45.4 +0.2
comp=Z,2.1nm,0.9s,baz=222,slow=4.1,SNR=4.5
TSUM Tsumeb 145.35 332 PKPbc **PKPbc** 08 05 11.3 -0.5
comp=Z,5.4nm,0.9s,baz=120,slow=1.6,SNR=8.3
TSUM Tsumeb 145.35 332 PKPbc **PKPbc** 08 05 11.4 -0.4
LBTB Lobatse 147.64 315 PKP2 **PKPbc** 08 05 19.2 +0.8
LBTB Lobatse 147.64 315 **PKPbc** 08 05 19.2 +0.8
BOSA Boshof 150.88 312 PKPbc **PKiKP** 08 05 26.8 -0.3
comp=Z,4.3nm,0.7s,baz=16,slow=2.9,SNR=6.2
SYO Syowa Base 154.55 212⇑*e*PKPdf **PKPdf** 08 05 26.0 +1.4

VAO ***16*** *07:53:13.3±1.6, 22.°23S×70.°35W, h172km±6km, mb3.9*
IDC ***16*** *07:53:24.6±0.8, 22.°15S×68.°42W, h105km±12km, mb3.7/2, mb1 3.6/5, mb1mx3.4/38, mbtmp3.9/5, MS3.4/1, Ms1 3.4/1, ms1mx2.6/25, Error ellipse: s-maj=36.6km s-min=23.4km az=107.0*
GUC ***16*** *07:53:25.1±0.6, 21.°96S×68.°83W, h116km±3km, ML3.7*
ISC 16 07:53:24.5±0.7, 22.°01S±0.°05×68.°69W±0.°07, h114km±8km, n37, σ1°23/47, 7C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
PB09	**IPOC Station P**	**0.56**	**292**	⇑	*i*P	**Pn**		**07 53 42.6**	**+0.2**
PB09					*i*S	**Sn**		**07 53 55.7**	**-0.1**
PB09					IAML			07 53 57.2	
comp=N,5μm,0.3s									
LVC	**Limon Verde**	**0.64**	**199**		*e*P	**Pn**		**07 53 43.4**	**+0.3**
LVC					*e*S	**Sn**		**07 53 56.9**	**-0.3**
LVC	**Limon Verde**	**0.64**	**199**		P	**Pn**		**07 53 43.7**	**+0.5**
baz=40,slow=10									
LVC					LR	LR		07 53 50.1	
comp=N,40nm,21.4s,baz=248,slow=39									
LVC					S	**Sn**		**07 53 57.0**	**-0.3**
comp=N,473nm,0.3s,baz=128,slow=19,SNR=217									
LVC	**Limon Verde**	**0.64**	**199**		*e*P	**Pn**		**07 53 43.5**	**+0.3**
PB03	**IPOC Station P**	**0.99**	**267**	⇑	*i*P	**Pn**		**07 53 46.1**	**0.0**
PB03					*i*S	**Sn**		**07 54 02.3**	**-0.1**
PB03					IAML			07 54 03.0	
comp=N,3μm,0.2s									
PB06	**IPOC Station P**	**1.08**	**229**	⇑	*i*P	**Pn**		**07 53 47.6**	**+0.6**
PB06					*i*S	**Sn**		**07 54 04.5**	**+0.5**
PB06					IAML			07 54 06.0	
comp=N,3μm,0.7s									
PB04	**IPOC Station P**	**1.40**	**256**	⇑	*i*P	**Pn**		**07 53 50.6**	**+0.1**
PB04					*i*S	**Sn**		**07 54 10.0**	**-0.2**
PB04					IAML			07 54 16.4	
comp=N,1μm,0.2s									
PB15	**IPOC Station P**	**1.40**	**211**	⇑	*i*P	**Pn**		**07 53 51.5**	**+0.8**
PB15					*i*S	**Sn**		**07 54 12.2**	**+1.8**
PB05	**IPOC Station P**	**1.64**	**239**	⇑	*i*P	**Pn**		**07 53 53.5**	**+0.2**
PB05					*i*S	**Sn**		**07 54 14.9**	**-0.3**
PB05					IAML			07 54 19.6	
comp=N,594nm,0.5s									
PB08	**IPOC Station P**	**1.91**	**347**	⇑	*i*P	**Pn**		**07 53 58.0**	**+1.1**
PB08					*i*S	**Sn**		**07 54 22.6**	**+1.0**
PB08					IAML			07 54 27.0	
comp=N,361nm,0.3s									
TA01	**Diego Aracena**	**2.00**	**316**		*e*P	**Pn**		**07 53 57.2**	**-0.5**
TA01					*e*S	**Sn**		**07 54 21.7**	**-1.3**
TA01					IAML			07 54 23.7	
comp=N,909nm,0.4s									
PB10	**IPOC Station P**	**2.29**	**229**		*e*P	**Pn**		**07 54 01.2**	**-0.1**
PB10					IAML			07 54 39.8	
comp=N,236nm,0.5s									
PB11	**IPOC Station P**	**2.41**	**338**		*e*P	**Pn**		**07 54 02.9**	**-0.2**
PB11					*i*S	**Sn**		**07 54 31.6**	**-1.1**
PB11					IAML			07 54 41.0	
comp=N,524nm,0.3s									
LPAZ	**La Paz**	**5.71**	**5**		P	**Pn**		**07 54 50.2**	**+2.6**
comp=N,0.6nm,0.3s,baz=210,slow=5.8,SNR=10.0									
SIV	**San Ignacio**	**9.36**	**52**		P	**Pn**		**07 55 33.7**	**-2.8**
comp=N,1.0nm,0.3s,baz=248,slow=10.0,SNR=22									
CFA	**Coronel Fontan**	**9.57**	**178**		P	**Pn**		**07 55 36.7**	**-2.5**
comp=N,0.4nm,0.3s,baz=352,slow=14,SNR=3.5									
NNA	**Nana**	**12.65**	**321**		LR	LR		08 01 41.1	
comp=N,176nm,20.1s,baz=167,slow=38									
SALV	**Santo Antonio**	**13.71**	**66**		*e*P	**P**		**07 56 39.8**	**+0.9**
PP1B	**Ponte de Pedra**	**13.71**	**74**		*e*P	**P**		**07 56 39.0**	**0.0**
TRCB	**Terra Rica**	**14.87**	**96**		*e*P	**P**		**07 56 53.3**	**+1.4**
C2SB	**Chapadao do Su**	**15.20**	**81**		*e*P	**P**		**07 56 57.9**	**+2.3**
PTGB	**Pitanga**	**15.50**	**103**		*e*P	**P**		**07 57 00.5**	**+1.5**
ITAB	**Concordia**	**15.92**	**112**		*e*P	**P**		**07 57 03.5**	**0.0**
CPSB	**Cacapava Do Su**	**16.02**	**125**		*e*P	**Pn**		**07 57 01.8**	**-1.6**
PCMB	**Pacaembu**	**16.19**	**92**		*e*P	**P**		**07 57 08.5**	**+2.0**
CLDB	**Colider**	**16.58**	**50**		*e*P	**Pn**		**07 57 09.9**	**-0.5**
ARAG	**Araguaiana, MT**	**17.15**	**71**		*e*P	**Pn**		**07 57 18.6**	**+1.3**
ITRB	**Iturama**	**17.28**	**86**		*e*P	**Pn**		**07 57 20.4**	**+1.5**
CNLB	**Canela**	**17.64**	**118**		*e*P	**P**		**07 57 20.8**	**-1.7**
FRTB	**Fartura**	**17.70**	**98**		*e*P	**Pn**		**07 57 23.6**	**-0.4**
IPMB	**Ipameri, GO**	**19.65**	**82**		*e*P	**P**		**07 57 44.5**	**0.0**
VAO	**Valinhos**	**20.09**	**97**		*e*P	**P**		**07 57 49.3**	**0.0**
PMNB	**Patos De Minas**	**21.15**	**85**		*e*P	**P**		**07 57 59.6**	**-1.1**
PEXB	**Peixe**	**21.81**	**66**		*e*P	**P**		**07 58 06.2**	**-1.5**
BSCB	**Bom Sucesso**	**22.27**	**92**		*e*P	**P**		**07 58 10.8**	**-1.7**
TORD	**Torodi Ar. Bea**	**77.33**	**70**		P	**P**		**08 05 07.7**	**+0.5**
comp=N,1.1nm,0.5s,baz=257,slow=5.3,SNR=16									
YKA	**Yellowknife Ar**	**91.73**	**341**		P	**P**		**08 06 20.2**	**+1.6**
comp=N,0.3nm,0.6s,baz=136,slow=4.1,SNR=8.4									

SOME ***16*** *08:03:29.4, 40.°07N×77.°02E, h0km*
KRNET ***16*** *08:03:40.2±0.1, 40.°38N×76.°87E, h18km, mb3.9*
NNC ***16*** *08:03:40.6±3.5, 40.°43N×77.°06E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=26.7km s-min=19.5km az=146.0*
ISC 16 08:03:39.0±1.8, 40.°31N±0.°08×76.°90E±0.°04, h10km, n52, σ2s16/79, 27C-20D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
								h m s	ISC
NRN	**Naryn**	**1.32**	**329**	⇑	*i*P	**Pg**		**08 04 04.4**	**+0.1**
baz=27									
NRN				⇑	*i*S	**Sb**		**08 04 21.1**	**0.0**
baz=27									
KDJ	**Kajisay**	**1.83**	**7**	⇑	*i*P	**Pg**		**08 04 13.2**	**-1.0**
baz=8.0									
KDJ				⇑	*i*S	**Sb**		**08 04 36.5**	**+0.6**
baz=8.0									
ULHL	**Ulahol**	**2.00**	**346**	⇓	*i*P	**Pb**		**08 04 16.0**	**+0.4**
baz=46									
ULHL				⇓	*i*S	**Sb**		**08 04 42.2**	**+1.5**
baz=46									
ULHL	**Ulahol**	**2.00**	**346**		P	**Pb**		**08 04 16.1**	**+0.4**
SNR=41									
KZA	**Kyzart**	**2.16**	**325**	⇑	*i*P	**Pb**		**08 04 18.5**	**0.0**
baz=25									
KZA				⇑	*i*S	**Sb**		**08 04 46.9**	**+1.3**
baz=25									
KZA	**Kyzart**	**2.16**	**325**		P	**Pb**		**08 04 19.2**	**+0.6**
SNR=40									
BOOM	**Boomskoye usch**	**2.30**	**342**	⇓	*i*P	**Pb**		**08 04 20.4**	**-0.3**
baz=42									
BOOM				⇓	*i*S	**Sb**		**08 04 49.9**	**+0.7**
baz=42									
PRZ	**Przheval'sk**	**2.45**	**27**	⇑	*i*P	**Pb**		**08 04 23.3**	**0.0**
baz=29									
PRZ				⇑	*i*S	**Sb**		**08 04 54.1**	**+0.5**
baz=29									
ARLS	**Aral**	**2.49**	**309**	⇓	*i*P	**Pb**		**08 04 23.6**	**-0.3**
baz=9.0									
ARLS				⇓	*i*S	**Sb**		**08 04 55.2**	**+0.5**
baz=9.0									
ANVS	**Anan'yevo**	**2.54**	**13**	⇑	*i*P	**Pb**		**08 04 23.9**	**-0.9**
baz=14									
ANVS				⇑	*i*S	**Sb**		**08 04 55.4**	**-0.8**
baz=14									
UCH	**Uchtor**	**2.63**	**318**	⇓	*i*P	**Pb**		**08 04 24.9**	**-1.6**
baz=17									
UCH				⇓	*i*S	**Sb**		**08 04 58.0**	**-1.0**
baz=17									
UCH	**Uchtor**	**2.63**	**318**		P	**Pb**		**08 04 25.8**	**-0.7**
SNR=11									
KBK	**Karagaybulak**	**2.77**	**329**	⇑	*e*P	**Pb**		**08 04 26.6**	**-2.1**
baz=28									
KBK				⇑	*i*S	**Sb**		**08 05 00.9**	**-1.8**
baz=28									
KBK	**Karagaybulak**	**2.77**	**329**		P	**Pg**		**08 04 30.9**	**-1.2**
SNR=8.9									
TKM2	**Tokmak 2**	**2.79**	**340**	⇓	*i*P	**Pb**		**08 04 27.0**	**-2.1**
baz=40									
TKM2				⇓	*i*S	**Sb**		**08 05 01.8**	**-1.6**
baz=40									
TKM2	**Tokmak 2**	**2.79**	**340**		P	**Pb**		**08 04 28.4**	**-0.6**
SNR=39									
TKM2	**Tokmak 2**	**2.79**	**340**	⇓	Pn	**Pb**		**08 04 28.3**	**-0.7**
26nm,0.6s									
TKM2				⇓	Lg	Lg		08 05 07.2	
63nm,0.8s									
MTBS	**Maitube**	**2.84**	**353**		*e*P	**Pb**		**08 04 26.9**	**-3.0**
16nm,0.5s									
MTBS					*e*S	**Sg**		**08 05 09.0**	**-1.3**
95nm,0.6s									
MTBS	**Maitube**	**2.84**	**353**		Pg	**Pb**		**08 04 26.9**	**-3.0**
16nm,0.5s									
MTBS					Lg	Lg		08 05 09.0	
95nm,0.6s									
MDOK	**Medeo**	**2.86**	**2**		*e*P	**Pb**		**08 04 27.1**	**-3.1**
52nm,0.6s									
MDOK					*e*S	**Sg**		**08 05 09.3**	**-1.5**
96nm,0.5s									
MDOK	**Medeo**	**2.86**	**2**	⇓	Pg	**Pg**		**08 04 31.8**	**-2.0**
38nm,0.5s									
MDOK				⇑	Lg	Lg		08 05 09.8	
104nm,0.6s									
MDOK	**Medeo**	**2.86**	**2**		Pg	**Pb**		**08 04 27.1**	**-3.1**
52nm,0.6s									
MDOK					Lg	Lg		08 05 09.3	
96nm,0.5s									
AAA	**Alma-Ata**	**2.90**	**0**		*e*P	**Pb**		**08 04 29.0**	**-1.8**
17nm,0.1s									
AAA					*e*S	**Sg**		**08 05 12.5**	**+0.3**
116nm,0.6s									
AAA	**Alma-Ata**	**2.90**	**0**		Pg	**Pb**		**08 04 29.0**	**-1.8**
17nm,0.1s									
AAA					Lg	Lg		08 05 12.5	
116nm,0.6s									
AAK	**Ala-Archa**	**2.95**	**323**	⇑	*i*P	**Pb**		**08 04 29.1**	**-2.6**
baz=22									
AAK				⇑	*i*S	**Sn**		**08 05 04.9**	**+3.3**
baz=22									
AAK	**Ala-Archa**	**2.95**	**323**		P	**Pb**		**08 04 31.4**	**-0.3**
SNR=19									
AAK	**Ala-Archa**	**2.95**	**323**	⇑	Pn	**Pb**		**08 04 30.9**	**-0.8**
53nm,0.6s									
AAK				⇑	Lg	Lg		08 05 10.6	
74nm,0.7s									
SATY	**Saty**	**2.97**	**22**		*e*P	**Pb**		**08 04 29.9**	**-2.2**
30nm,0.4s									
SATY					*e*S	**Sg**		**08 05 14.4**	**-0.1**
183nm,0.8s									
SATY	**Saty**	**2.97**	**22**		Pg	**Pb**		**08 04 29.9**	**-2.2**
30nm,0.4s									
SATY					Lg	Lg		08 05 14.4	
183nm,0.8s									
FRU1	**Bishkek**	**3.03**	**326**	⇑	*i*P	**Pb**		**08 04 30.3**	**-2.7**
baz=26									
FRU1				⇑	*i*S	**Sn**		**08 05 06.5**	**+3.1**
baz=26									
AML	**Almayashu**	**3.03**	**308**	⇑	*e*P	**Pn**		**08 04 30.1**	**+2.7**
baz=7.0									
AML				⇑	*i*S	**Sn**		**08 05 07.5**	**+3.6**
baz=7.0									
AML	**Almayashu**	**3.03**	**308**		P	**Pb**		**08 04 31.7**	**-1.5**
SNR=32									
CHMS	**Chumysh**	**3.13**	**330**	⇑	*i*P	**Pb**		**08 04 31.4**	**-3.4**

	baz=29								
CHMS				⇑	*i*	S	**Sn**	08 05 09.4	**+3.4**
	baz=29								
CHMS	**Chumysh**	**3.13**	**330**		P		**Pb**	08 04 33.2	**-1.6**
	SNR=15								
ARSB	**Arslanbob**	**3.14**	**290**	⇓	*e*	P	**Pb**	08 04 32.3	**-2.7**
	baz=89								
ARSB				⇓	*i*	S	**Sb**	08 05 10.6	**-2.8**
	baz=89								
EKS2	**Erkin-Say**	**3.32**	**316**	⇑	*i*	P	**Pn**	08 04 34.3	**+3.1**
	baz=15								
EKS2				⇑	*i*	S	**Sn**	08 05 13.8	**+3.0**
	baz=15								
EKS2	**Erkin-Say**	**3.32**	**316**		P		**Pb**	08 04 36.1	**-2.0**
	SNR=10								
KPKS	**Kokpek**	**3.43**	**22**		*e*	P	**Pb**	08 04 37.6	**-2.2**
	10nm,0.4s								
KPKS					*e*	S	**Sg**	08 05 27.4	**-1.7**
	186nm,0.5s								
USP	**Ospenovka**	**3.46**	**330**	⇓	*i*	P	**Pn**	08 04 36.2	**+3.2**
	baz=29								
USP				⇓	*i*	S	**Sn**	08 05 17.1	**+3.1**
	baz=29								
USP	**Ospenovka**	**3.46**	**330**		P		**Pb**	08 04 37.1	**-3.3**
	SNR=8.0								
CHKK	**Chushkaly**	**3.55**	**1**		*e*	P	**Pb**	08 04 39.4	**-2.5**
	11nm,0.5s								
CHKK					*e*	S	**Sg**	08 05 30.4	**-2.5**
	64nm,0.2s								
CHKK	**Chushkaly**	**3.55**	**1**		Pg		**Pb**	08 04 39.3	**-2.5**
	11nm,0.5s								
CHKK					Lg		Lg	08 05 30.4	
	64nm,0.2s								
SGDS	**Sogindy**	**3.57**	**332**		Pg		**Pb**	08 04 38.9	**-3.4**
	28nm,0.8s								
SGDS					Lg		Lg	08 05 29.7	
	27nm,0.9s								
PDGK	**Podgornoye**	**3.59**	**32**		Pg		**Pb**	08 04 41.5	**-1.1**
	0.9nm,0.4s								
PDGK					Lg		Lg	08 05 34.1	
	20nm,0.8s								
PDGK	**Podgornoye**	**3.59**	**32**	⇑	Pg		**Pg**	08 04 47.1	**-0.6**
	16nm,0.5s								
PDGK				⇑	Lg		Lg	08 05 31.9	
	64nm,1.0s								
KUU	**Kurty**	**3.61**	**354**		*e*	P	**Pb**	08 04 40.2	**-2.7**
	4.3nm,0.4s								
KUU					*e*	S	**Sg**	08 05 32.1	**-2.8**
	84nm,0.6s								
KUU	**Kurty**	**3.61**	**354**		Pg		**Pb**	08 04 40.2	**-2.7**
	4.3nm,0.4s								
KUU					Lg		Lg	08 05 32.1	
	84nm,0.6s								
MRKS	**Merke**	**3.68**	**313**		*e*	P	**Pb**	08 04 41.6	**-2.5**
	9.1nm,0.6s								
MRKS					*e*	S	**Sg**	08 05 34.3	**-2.8**
	40nm,0.5s								
MRKS	**Merke**	**3.68**	**313**		Pg		**Pb**	08 04 41.7	**-2.5**
	9.1nm,0.6s								
MRKS					Lg		Lg	08 05 34.3	
	40nm,0.5s								
DJR	**Jarkent**	**4.56**	**27**		*e*	P	**Pb**	08 04 57.4	**-1.7**
	0.6nm,0.4s								
DJR					*e*	S	**Sg**	08 06 01.2	**-4.1**
	18nm,1.0s								
DJR	**Jarkent**	**4.56**	**27**		Pg		**Pb**	08 04 57.4	**-1.7**
	0.6nm,0.4s								
DJR					Lg		Lg	08 06 01.2	
	18nm,1.0s								
KK31	**Karatay Array**	**5.54**	**302**	⇓	Pn		Pn	08 05 06.6	+5.1
	0.8nm,0.6s,baz=132,slow=12,SNR=4.0								
KK31				⇓	Pg		**Pg**	**08 05 23.0**	**-2.1**
	4.0nm,0.5s,baz=119,slow=17,SNR=23								
KK31				⇓	Lg		Lg	08 06 36.8	
	8.4nm,0.7s,baz=113,slow=28,SNR=6.3								

NEIC ***16*** *08:09:07.0±1.0, 18.˙84N±0.˙09×66.˙57W±0.˙07, h59km±10km, Error ellipse: s-maj=15.1km s-min=6.4km az=208.0*

RSPR 16 08:09:07.0, 18.˙72N×66.˙59W, h79km±2km, MD2.5/5, 6C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOPR	**Arecibo Observ**	**0.40**	**204** ⇑	*e*P	Pn	08 09 18.0	-1.9
AOPR	**Arecibo Observ**	**0.40**	**204**	*e*S	Sn	08 09 27.3	-2.1
AOPR	**Arecibo Observ**	**0.40**	**204** ⇓	*e*P	Pn	08 09 18.3	-1.6
AOPR	**Arecibo Observ**	**0.40**	**204**	*e*S	Sn	08 09 28.9	-0.4
AOPR	**Arecibo Observ**	**0.40**	**204**		Pn	08 09 18.8	-1.0
AOPR				Sn	Sn	08 09 28.7	-0.6
AGPR	**Aguadilla, PR**	**0.56**	**244**		Pn	08 09 20.3	-0.8
AGPR				Sn	Sn	08 09 31.1	-0.4
OBIP	**Obispado Ponce**	**0.67**	**182** ⇑	*e*P	Pn	08 09 21.9	-0.3
OBIP	**Obispado Ponce**	**0.67**	**182**	*e*S	Sn	08 09 33.1	-0.5
OBIP	**Obispado Ponce**	**0.67**	**182**		Pn	08 09 22.4	+0.2
OBIP					Sn	08 09 33.9	+0.3
LSP	**Las Mesas**	**0.72**	**222** ⇓	*e*P	Pn	08 09 22.6	-0.2
LSP	**Las Mesas**	**0.72**	**222**	*e*S	Sn	08 09 33.9	-0.6
LSP	**Las Mesas**	**0.72**	**222** ⇑	*e*P	Pn	08 09 22.4	-0.4
LSP	**Las Mesas**	**0.72**	**222**	*e*S	Sn	08 09 34.0	-0.4
LSP	**Las Mesas**	**0.72**	**222**		Pn	08 09 22.4	-0.4
LSP					Sn	08 09 34.0	-0.4
MLPR	**Magueyes Islan**	**0.86**	**210** ⇑	*e*P	Pn	08 09 23.0	-1.3
MLPR	**Magueyes Islan**	**0.86**	**210**	*e*S	Sn	08 09 36.9	-0.3
MLPR	**Magueyes Islan**	**0.86**	**210** ⇑	*e*P	Pn	08 09 23.2	-1.1
MLPR	**Magueyes Islan**	**0.86**	**210**	*e*S	Sn	08 09 37.1	-0.2
MLPR	**Magueyes Islan**	**0.86**	**210**		Pn	08 09 26.4	+2.1
MLPR				Sn	Sn	08 09 38.4	+1.2
CRPR	**Cabo Rojo, PR**	**0.86**	**215** ⇑	*e*P	Pn	08 09 24.1	-0.3
CRPR	**Cabo Rojo, PR**	**0.86**	**215** ⇓	*e*P	Pn	08 09 23.9	-0.5
CRPR	**Cabo Rojo, PR**	**0.86**	**215**	*e*S	Sn	08 09 36.8	-0.5
CRPR	**Cabo Rojo, PR**	**0.86**	**215**		Pn	08 09 24.3	-0.1
CRPR					Sn	08 09 36.6	-0.6

BJI ***16*** *08:14:43.6±0.0, 73.˙80N×8.˙40E, h3km, mB5.3/36, mb4.9/60, Ms4.9/34, Ms7 4.6/34*

NAO ***16*** *08:14:44.4±1.1, 73.˙73N×8.˙41E, ML5.0*

IDC ***16*** *08:14:45.9±0.3, 73.˙73N×8.˙51E, h0km, mb4.7/45, mb1 4.8/51, mb1mx4.7/65, mbtmp4.7/51, ML4.2/5, MS4.4/30, Ms1 4.4/30, ms1mx4.3/51, Error ellipse: s-maj=8.9km s-min=6.7km az=49.0*

MOS ***16*** *08:14:45.4±1.1, 73.˙78N×8.˙37E, h8km, mb5.3/99, MS4.5/15, Error ellipse: s-maj=15.4km s-min=3.1km az=95.3*

GCMT ***16*** *08:14:47.3±0.2, 73.˙81N±0.˙02×8.˙26E±0.˙05, h12km, MW5.0/132, Moment Tensor Solution. s38,c45; s132,c200; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr~3.74±.07; Mθθ 1.08±.07; Mϕϕ 2.66±.07; Mrθ~0.34±.35; Mθϕ 1.58±.07; Mϕr~0.17±.27; Best double couple: Mo 3.70700×10¹⁶ NP1:ϕs 209.00000°, δ 43.00000°, λ -94.00000°. NP2:ϕs 35.00000°, δ 48.00000°, λ -86.00000°. Principal axes: T 3.6500, Plg2.0000°, Azm122.0000°; N 0.1140, Plg3.0000°, Azm212.0000°; P -3.7640, Plg86.0000°, Azm352.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***16*** *08:14:47.3±1.9, 73.˙77N±0.˙06×8.˙6E±0.˙2, h10km±1km, mb5.3/438, Ms_20 4.9/56 Error ellipse: s-maj=10.9km s-min=6.6km az=209.0*

IEPN ***16*** *08:14:48.8, 73.˙56N×8.˙52E, h15km*

BER ***16*** *08:14:48.5±2.9, 73.˙84N×8.˙59E, h23km±23km, ML2.9, ML5.0(NAO), Confirmed Earthquake*

BGR ***16*** *08:14:59.2±0.0, 72.˙88N×8.˙70E, h27km±9km, mb5.0*

ISC 16 08:14:47.8±0.7, 73.˙75N±0.˙03×8.˙67E±0.˙03, h15km±4km, h15km: pP-P, n1325, σ1§33/1298, mb5.3/359, MS4.8/67, 55C-21D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.94**	**70**		Pn	**08 15 32.2**	**-1.6**
BJO1	**Bjornoya**	**2.94**	**70**	*e*P	**Pn**	**08 15 32.4**	**-1.5**
BJO1				*e*S	**Sn**	**08 16 04.3**	**-4.5**
BJO1				IAML		08 16 05.4	
	comp=Z,110nm,0.9s						
BJO1	**Bjornoya**	**2.94**	**70** ⇑	*i*P	**Pn**	**08 15 32.0**	**-1.9**
BJO1				*e*S	**Sn**	**08 16 07.0**	**-1.7**
HSPB	**Hornsund (broa**	**3.70**	**25**		Pn	**08 15 42.2**	**-2.2**
HSPB	**Hornsund (broa**	**3.70**	**25**	*e*P	**Pn**	**08 15 42.1**	**-2.2**
HSPB	**Hornsund (broa**	**3.70**	**25** ⇑	*i*P	**Pn**	**08 15 42.2**	**-2.2**
HSPB				*e*S	**Sn**	**08 16 26.0**	**-1.5**

BRBA	**Barentsburg A**	**4.54**	**15**		Pn		**Pn**	**08 15 54.0**	**-1.8**
BRBA	**Barentsburg A**	**4.54**	**15**		Pn		**Pn**	**08 15 54.0**	**-1.8**
BRBB	**Barentsburg B**	**4.57**	**15**		Pn		**Pn**	**08 15 54.1**	**-2.1**
BRBB	**Barentsburg B**	**4.57**	**15**		Pn		**Pn**	**08 15 54.1**	**-2.1**
SPA0	**Spitsbergen Ar**	**4.82**	**19**		Pn		**Pn**	**08 15 58.5**	**-1.3**
	baz=199,slow=14								
SPA0	**Spitsbergen Ar**	**4.82**	**19**		Pn		**Pn**	**08 15 58.5**	**-1.3**
	baz=199,slow=14								
SPA0	**Spitsbergen Ar**	**4.82**	**19**	⇓	*i*P		**Pn**	**08 15 57.7**	**-2.0**
SPA0					*e*S		**Sn**	**08 16 54.0**	**-1.2**
SPA0	**Spitsbergen Ar**	**4.82**	**19**				**Pn**	**08 15 58.0**	**-1.8**
SPITS	**Spitsbergen Ar**	**4.82**	**19**		Pn		**Pn**	**08 15 57.9**	**-1.8**
	baz=183,slow=14,SNR=503								
SPITS					LR		LR	08 17 41.9	
	comp=Z,2μm,19.2s,baz=300,slow=36								
HOPEN	**Hopen**	**5.02**	**49**		Pn		**Pn**	**08 16 00.3**	**-2.1**
HOPEN	**Hopen**	**5.02**	**49**		*e*P		**Pn**	**08 15 59.9**	**-2.6**
HOPEN					*e*S		**Sn**	**08 16 53.2**	**-6.9**
HOPEN					IAML			08 17 19.4	
	comp=Z,28nm,0.8s								
HOPEN	**Hopen**	**5.02**	**49**	⇓	*i*P		**Pn**	**08 15 59.8**	**-2.6**
HOPEN					*e*S		**Sn**	**08 16 56.4**	**-3.8**
TRO	**Tromso**	**5.24**	**137**		Pn		**Pn**	**08 16 05.2**	**-0.3**
TRO	**Tromso**	**5.24**	**137**		*e*P		**Pn**	**08 16 05.3**	**-0.2**
TRO					*e*S		**Sn**	**08 17 00.0**	**-5.6**
TRO					IAML			08 17 06.2	
	comp=Z,51nm,0.7s								
KBS	**Kingsbay**	**5.26**	**7**		Pn		**Pn**	**08 16 03.6**	**-2.0**
KBS	**Kingsbay**	**5.26**	**7**		*ce*P		**Pn**	**08 16 03.7**	**-2.0**
KBS					pmax		pmax		
	comp=Z,826nm,0.8s								
KBS	**Kingsbay**	**5.26**	**7**		*e*P		**Pn**	**08 16 03.2**	**-2.5**
KBS					*e*S		Sn	08 16 56.8	-9.2
KBS					IAML			08 17 14.0	
	comp=Z,42nm,0.9s								
KBS	**Kingsbay**	**5.26**	**7**	⇑	*i*P		**Pn**	**08 16 03.7**	**-2.0**
KBS					*e*S		**Sn**	**08 17 02.1**	**-3.9**
KBS	**Kingsbay**	**5.26**	**7**				**Pn**	**08 16 02.6**	**-3.1**
HAMF	**Hammerfest**	**5.55**	**117**		Pn		**Pn**	**08 16 08.3**	**-1.4**
HAMF	**Hammerfest**	**5.55**	**117**		*e*P		**Pn**	**08 16 08.1**	**-1.7**
HAMF					*e*S		**Sn**	**08 17 06.8**	**-6.4**
JNE	**Jan Mayen East**	**5.84**	**250**		*e*P		**Pn**	**08 16 12.2**	**-1.5**
JNW	**Jan Mayen West**	**5.85**	**251**		*e*P		**Pn**	**08 16 11.6**	**-2.3**
LOF	**Lofoten**	**5.87**	**162**		Pn		**Pn**	**08 16 13.6**	**-0.5**
LOF	**Lofoten**	**5.87**	**162**		*e*P		**Pn**	**08 16 13.3**	**-0.8**
JMIC	**Jan Mayen**	**5.90**	**250**		Pn		**Pn**	**08 16 12.9**	**-1.6**
JMIC	**Jan Mayen**	**5.90**	**250**		Pn		**Pn**	**08 16 11.7**	**-2.8**
	comp=Z,19nm,0.3s,baz=106,slow=4.0,SNR=8.2								
JMIC					LR		LR	08 17 47.0	
	comp=Z,2μm,19.5s,baz=67,slow=31								
JMIC	**Jan Mayen**	**5.90**	**250**		Pn		**Pn**	**08 16 12.9**	**-1.6**
JMI	**Jan Mayen**	**5.99**	**250**		*e*P		**Pn**	**08 16 14.1**	**-1.6**
KIF	**Kilpisjarvi**	**6.14**	**135**		Pn		**Pn**	**08 16 17.0**	**-0.8**
KIF	**Kilpisjarvi**	**6.14**	**135**		*e*P		**Pn**	**08 16 16.9**	**-0.9**
KIF					*e*S		**Sn**	**08 17 22.9**	**-4.7**
STEI	**Steigen**	**6.23**	**157**		*e*P		**Pn**	**08 16 18.6**	**-0.5**
KTK1	**Kautokeino**	**6.64**	**128**		*e*P		**Pn**	**08 16 24.6**	**-0.2**
ARA0	**ARCESS Array S**	**6.77**	**120**		Pn		**Pn**	**08 16 25.2**	**-1.3**
	baz=320,slow=14								
ARA0	**ARCESS Array S**	**6.77**	**120**		Pn		**Pn**	**08 16 25.2**	**-1.3**
	baz=320,slow=14								
ARCES	**ARCESS Array B**	**6.77**	**120**		Pn		**Pn**	**08 16 24.9**	**-1.6**
	comp=Z,4.7nm,0.3s,baz=324,slow=13,SNR=258								
ARCES					Sn		**Sn**	**08 17 39.4**	**-3.8**
	comp=Z,3.3nm,0.3s,baz=322,slow=24,SNR=6.2								
ARCES					LR		LR	08 19 32.1	
	comp=Z,3μm,18.8s,baz=354,slow=42								
ARE0	**ARCESS Array S**	**6.77**	**120**		*e*P		**Pn**	**08 16 26.0**	**-0.5**
ARE0					*e*S		**Sn**	**08 17 36.8**	**-6.5**
ARE0	**ARCESS Array S**	**6.77**	**120**				**Pn**	**08 16 25.1**	**-1.4**
KEV	**Kevo**	**6.99**	**116**		Pn		**Pn**	**08 16 29.6**	**+0.1**
KEV	**Kevo**	**6.99**	**116**		*e*P		**Pn**	**08 16 27.7**	**-1.8**
HEF	**Hetta**	**7.22**	**130**		*e*P		**Pn**	**08 16 32.8**	**+0.1**
KONS	**Konsvik**	**7.44**	**166**		*e*		**Pn**	**08 16 32.8**	**-2.9**
KONS					*e*P		**Pn**	**08 16 35.0**	**-0.6**
DAG	**Danmarks Havn**	**7.54**	**306**		*i*P		Pn	08 16 31.0	-5.9
DAG	**Danmarks Havn**	**7.54**	**306**		*i*P		Pn	08 16 31.0	-5.9
STOK	**Stokkvaagen**	**7.60**	**167**		*e*P		**Pn**	**08 16 38.0**	**+0.2**
MOR8	**Moi Rana**	**7.87**	**163**		*e*P		**Pn**	**08 16 40.4**	**-1.1**
NSS	**Namsos**	**9.34**	**171**		*e*P		**Pn**	**08 17 02.3**	**+0.6**
NOR	**Nord**	**9.41**	**337**		*i*P		**Pn**	**08 17 00.0**	**-2.6**
SCO	**Scoresbysund**	**9.88**	**266**		P		**Pn**	**08 17 05.4**	**-3.7**
SCO	**Scoresbysund**	**9.88**	**266**		*i*P		**Pn**	**08 17 05.0**	**-4.0**
	comp=Z,57nm,0.8s								
SCO	**Scoresbysund**	**9.88**	**266**				**Pn**	**08 17 05.4**	**-3.7**
APA0	**Apatity Array**	**10.06**	**115**		Pn		**Pn**	**08 17 09.2**	**-2.3**
	baz=318,slow=12								
APA0	**Apatity Array**	**10.06**	**115**		Pn		**Pn**	**08 17 09.2**	**-2.3**
	baz=318,slow=12								
APA	**Apatity**	**10.20**	**115**	⇓	*i*P		**Pn**	**08 17 11.8**	**-1.5**
APA					MLR		MLR		
	comp=Z,3μm,16.0s								
LVZ	**Lovozero**	**10.28**	**112**	⇓	*e*P		**Pn**	**08 17 13.0**	**-1.5**
LVZ					pmax		pmax		
	comp=Z,57nm,1.0s								
LVZ	**Lovozero**	**10.28**	**112**				**Pn**	**08 17 12.2**	**-2.3**
ZFI2	**Zemlya Franca-**	**10.81**	**33**	⇓	*i*P		**Pn**	**08 17 18.9**	**-2.8**
ZFI2					*e*S		**Sn**	**08 19 14.2**	**-8.0**
AKN	**Aaknes**	**11.64**	**184**		Pn		**Pn**	**08 17 31.3**	**-1.9**
AKN	**Aaknes**	**11.64**	**184**		Pn		**Pn**	**08 17 31.3**	**-1.9**
NC204	**NORSAR Array S**	**12.56**	**175**				**Pn**	**08 17 44.1**	**-1.6**
NC303	**NORSAR Array S**	**12.62**	**174**				**Pn**	**08 17 45.6**	**-0.9**
NC405	**NORSAR Array S**	**12.75**	**173**				**Pn**	**08 17 48.7**	**+0.4**
NB2	**NORSAR Subarra**	**12.81**	**174**		Pn		**Pn**	**08 17 47.1**	**-1.9**
NB2	**NORSAR Subarra**	**12.81**	**174**		Pn		**Pn**	**08 17 47.1**	**-1.9**
NOA	**NORSAR Array B**	**12.81**	**174**		Pn		**Pn**	**08 17 46.9**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=353,slow=13,SNR=8.9								
NAO01	**NORSAR Array S**	**12.99**	**175**		Pn		**Pn**	**08 17 51.8**	**+0.2**
SUMG	**Summit**	**13.42**	**288**		P		**Pn**	**08 17 55.7**	**-2.0**
SUMG	**Summit**	**13.42**	**288**		*i*P		**Pn**	**08 17 55.0**	**-2.8**
SUMG	**Summit**	**13.42**	**288**				**Pn**	**08 17 55.7**	**-2.0**
BORG	**Borgarnes**	**13.74**	**245**		LR		LR	08 21 47.0	
	comp=Z,1μm,19.9s,baz=348,slow=31								
HFS	**Hagfors**	**13.81**	**169**		Pn		**Pn**	**08 18 01.3**	**-1.5**
	baz=358,slow=14								
HFS	**Hagfors**	**13.81**	**169**		Pn		**Pn**	**08 18 01.9**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=8.9,slow=10,SNR=7.9								
HFS					LR		LR	08 23 22.1	
	comp=Z,1μm,18.2s,baz=360,slow=37								
HFS	**Hagfors**	**13.81**	**169**		Pn		**Pn**	**08 18 01.3**	**-1.5**
	baz=358,slow=14								
FIA1	**FINESS Array S**	**13.93**	**143**				**Pn**	**08 18 02.3**	**-1.9**
FIA0	**FINESS Array S**	**13.93**	**143**		Pn		**Pn**	**08 18 02.0**	**-2.3**
	baz=348,slow=14								
FIA0	**FINESS Array S**	**13.93**	**143**		Pn		**Pn**	**08 18 02.0**	**-2.3**
	baz=348,slow=14								
FINES	**FINESS Array B**	**13.93**	**143**		Pn		**Pn**	**08 18 02.2**	**-2.0**
	comp=Z,0.6nm,0.3s,baz=346,slow=12,SNR=20								
TMCR	**Tamitsa**	**14.06**	**118**		*e*P		**Pn**	**08 18 02.2**	**-3.9**
TMCR					*e*			08 20 37.9	
TMCR					pmax		pmax		
	comp=Z,25nm,0.3s								
TMCR	**Tamitsa**	**14.06**	**118**		*e*P		**Pn**	**08 18 02.2**	**-3.9**
	comp=Z,24nm,0.3s								
KONO	**Kongsberg**	**14.17**	**178**	⇓	*e*P		**Pn**	**08 18 10.3**	**+2.7**
KONO	**Kongsberg**	**14.17**	**178**		Pn		**Pn**	**08 18 06.8**	**-0.9**
LRW	**Lerwick**	**14.17**	**200**		*e*P		**Pn**	**08 18 08.9**	**+1.3**
LSH	**Leshukonskoye**	**15.50**	**106**		*e*P		**Pn**	**08 18 20.1**	**-5.4**
	comp=Z,104nm,1.3s								
LSH					*e*S		Sn	08 20 59.9	-17
BIGH	**Upper Bighouse**	**16.08**	**204**		*e*P		**Pn**	**08 18 34.5**	**+1.6**
PUL	**Pulkovo**	**16.25**	**138** ⇑		*e*P		**Pn**	**08 18 36.2**	**+1.1**
PUL					pmax		pmax		
	comp=Z,281nm,1.0s								
VSU	**Vasula**	**16.86**	**146**		*ce*P		**Pn**	**08 18 41.3**	**-1.6**
VSU					pmax		pmax		
	comp=Z,119nm,1.0s								
VSU	**Vasula**	**16.86**	**146**		*e*P		**Pn**	**08 18 40.2**	**-2.7**
MCD	**Coleburn Distic**	**16.90**	**203**		*e*P		**P**	**08 18 44.6**	**-0.7**
SLIT	**Slitere, Latvi**	**17.05**	**154**		*e*P		**P**	**08 18 46.4**	**-0.5**
KULLO	**Kullorsuaq**	**17.19**	**304**		*i*P		**Pn**	**08 18 41.2**	**-5.7**
KULLO					pmax		pmax		
	comp=Z,250nm,1.1s								
KULLO	**Kullorsuaq**	**17.19**	**304**		*i*P		**Pn**	**08 18 41.2**	**-5.7**
	comp=Z,251nm,1.1s								
MUD	**Monsted U'grnd**	**17.37**	**179**		*i*P		**P**	**08 18 51.0**	**+0.4**
MUD					pmax		pmax		
	comp=Z,160nm,1.4s								
MUD	**Monsted U'grnd**	**17.37**	**179**		*i*P		**P**	**08 18 51.0**	**+0.4**
	comp=Z,162nm,1.4s								
KPL	**Plockton**	**17.42**	**207**		*e*P		**P**	**08 18 50.7**	**-0.4**
DRUM	**Mains of Drumt**	**17.48**	**201**		*e*P		**Pn**	**08 18 51.4**	**+0.8**
EDU	**Dundee**	**17.89**	**201**		*e*P		**P**	**08 18 57.4**	**+1.1**

PRGR	**Permogore**	**18.10**	**112**		*e*P		**Pn**	**08 18 54.5**	**-3.8**
PRGR					pmax		pmax		
	comp=Z,47nm,0.8s								
INVG	**Invergeldie, C**	**18.12**	**203**		*e*P		**P**	**08 18 59.4**	**+0.6**
EDI	**Edinburgh**	**18.52**	**201**		*e*P		**P**	**08 19 03.0**	**-0.2**
EDI					IAmb		IAmb	08 19 07.8	
	comp=Z,282nm,1.8s								
PBUR	**Paburg**	**18.58**	**156**		*e*P		**Pn**	**08 19 05.5**	**+1.4**
EAU	**Auchinoon**	**18.63**	**202**		*e*P		**Pn**	**08 19 05.4**	**+0.6**
EBL	**Broad Law**	**18.66**	**201**		*e*P		**P**	**08 19 05.1**	**+0.3**
TULEG	**Thule**	**18.72**	**315**		P		**P**	**08 19 02.0**	**-3.2**
BSD	**Bornholm Skovb**	**18.89**	**169**		*e*P		**Pn**	**08 19 12.7**	**+4.9**
BSD					pmax		pmax		
	comp=Z,140nm,1.1s								
BSD	**Bornholm Skovb**	**18.89**	**169**		*i*P		**Pn**	**08 19 12.7**	**+4.9**
	comp=Z,141nm,1.1s								
EKA	**Eskdalemuir Ar**	**19.10**	**201**		P		**P**	**08 19 09.3**	**-0.3**
	baz=13,slow=11,SNR=26								
ESK	**Eskdalemuir**	**19.12**	**201**		*e*P		**Pn**	**08 19 10.8**	**0.0**
ESK					IAmb		IAmb	08 19 14.0	
	comp=Z,63nm,0.9s								
ESK	**Eskdalemuir**	**19.12**	**201**		P		**P**	**08 19 10.4**	**+0.5**
ESK					pmax		pmax		
	comp=Z,78nm,1.0s								
ESK	**Eskdalemuir**	**19.12**	**201**				**P**	**08 19 10.4**	**+0.5**
PABE	**Paberze**	**19.33**	**153**		*e*P		**P**	**08 19 12.9**	**+0.8**
PABE					IAmb		IAmb	08 19 20.0	
	comp=Z,335nm,1.3s								
IZAR	**Zarasai**	**19.40**	**149**		*e*P		**P**	**08 19 12.9**	**0.0**
IZAR					IAmb		IAmb	08 19 14.6	
	comp=Z,41nm,1.2s								
ISAL	**Salakas**	**19.56**	**149**		*e*P		**P**	**08 19 14.9**	**+0.3**
ISAL					IAmb		IAmb	08 19 21.6	
	comp=Z,28nm,0.8s								
IIGN	**Ignalina**	**19.79**	**149**		*e*P		**P**	**08 19 17.7**	**+0.6**
KLNR	**Kaliningrad**	**19.79**	**160**	⇓	*e*P		**Pn**	**08 19 18.6**	**-0.1**
KLNR					pmax		pmax		
	comp=Z,216nm,1.1s								
KESW	**Keswick, Cumbr**	**19.83**	**200**		*e*P		**P**	**08 19 18.1**	**+0.5**
KESW					IAmb		IAmb	08 19 22.6	
	comp=Z,171nm,1.1s								
SFJD	**Kangerlussuaq**	**20.14**	**281**		P		**P**	**08 19 21.6**	**+0.7**
SFJD					pmax		pmax		
	comp=Z,166nm,1.3s								
SFJD	**Kangerlussuaq**	**20.14**	**281**		P		Pn	08 19 23.2	+0.5
	comp=Z,53nm,1.0s,baz=36,slow=12,SNR=8.9								
SFJD					LR		LR	08 26 06.7	
	comp=Z,2μm,19.1s,baz=31,slow=34								
SFJD	**Kangerlussuaq**	**20.14**	**281**		P		**P**	**08 19 21.6**	**+0.7**
SFJD					IAmb		IAmb	08 19 28.3	
	comp=Z,166nm,1.3s								
NACGM	**Naroch**	**20.30**	**149**		*e*P		**P**	**08 19 23.0**	**+0.3**
NACGM					PM			08 19 26.0	
	comp=Z,0.4nm,1.0s								
NACGM					*e*PPP		PPP	08 20 07.0	
NACGM					*e*S		Sn	08 23 12.0	-0.7
NACGM					*e*SS		SnSn	08 24 00.0	+33
NACGM					*e*SSS		SSS	08 24 44.0	
**SU

comp=Z,73nm,1.4s
BRG pmax pmax
comp=Z,8.0nm,1.1s
BRG MLR MLR
comp=N,680nm,21.2s
BRG MLR MLR
comp=E,954nm,19.6s
BRG MLR MLR
comp=Z,1µm,19.6s
BRG Berggiesshubel 23.07 171 *eP* **P 08 19 53.4 +1.0**
comp=Z,21nm,1.1s,baz=358,slow=10
BRG *epP* **pwP 08 19 59.8 +0.6**
baz=359,slow=11
UCC Uccle 23.11 187 P **P 08 19 53.0 +0.3**
UCC pmax pmax
comp=Z,123nm,1.2s
UCC Uccle 23.11 187 P **P 08 19 53.0 +0.3**
UCC IAmb IAmb 08 20 05.7
comp=Z,122nm,1.2s
NRS Narsarsuaq 23.18 266 P **P 08 19 55.5 +2.1**
NRS pmax pmax
comp=Z,162nm,1.2s
NRS Narsarsuaq 23.18 266 P 08 19 55.5 +2.1
NRS IAmb IAmb 08 20 00.5
comp=Z,162nm,1.2s
KSP Ksiaz 23.22 168 *eP* **P 08 19 53.2 -0.7**
KSP Ksiaz 23.22 168 *eP* **P 08 19 53.2 -0.7**
MOX Moxa 23.23 175 *eP* **P 08 19 55.0 +1.1**
comp=Z,64nm,1.1s,baz=358,slow=10
MOX *epP* **pwP 08 20 01.6 +0.7**
baz=359,slow=11
MEM Membach 23.26 184 P **P 08 19 53.9 -0.3**
AHRW Bad Neuenahr-A 23.31 183 *eP* **P 08 19 56.0 +1.3**
comp=Z,114nm,1.3s,baz=358,slow=10
AHRW *epP* **pwP 08 20 02.6 +0.6**
baz=359,slow=11
PLN Plauen 23.40 174 *eP* **P 08 19 56.7 +1.0**
comp=Z,81nm,1.5s,baz=358,slow=10
PLN *epP* **pwP 08 20 03.4 +0.6**
baz=359,slow=11
PVCC Panska Ves 23.45 171 *eP* **P 08 19 58.1 +2.0**
PVCC Panska Ves 23.45 171 *eP* **P 08 19 58.1 +2.0**
BCLA Clavier 23.46 185 P **P 08 19 56.4 +0.1**
CHVC Chvalec 23.46 168 *eP* **P 08 19 56.5 +0.1**
TANN Tannenbergstha 23.48 174 *eP* **P 08 19 57.3 +0.7**
comp=Z,82nm,1.4s,baz=358,slow=10
TANN *epP* **pwP 08 20 04.0 +0.4**
baz=359,slow=11
OSTC Ostas 23.50 168 *eP* **P 08 19 56.5 -0.3**
GUNZ Gunzen 23.53 174 *eP* **P 08 19 58.0 +1.1**
comp=Z,110nm,1.7s,baz=358,slow=10
GUNZ *epP* **pwP 08 20 04.4 +0.4**
baz=359,slow=11
UPC Upice 23.54 168 *eP* **P 08 19 59.5 +2.4**
UPC Upice 23.54 168 *eP* **P 08 19 59.5 +2.4**
BMRD Maredsous 23.59 186 P **P 08 19 58.0 +0.4**
WERN Wernitzgruen 23.60 174 *eP* **P 08 19 58.9 +1.2**
comp=Z,100nm,1.3s,baz=358,slow=10
WERN *epP* **pwP 08 20 05.5 +0.7**
baz=359,slow=11
TNS Taunus Mts 23.61 180 *eP* **P 08 19 59.0 +1.2**
comp=Z,67nm,1.3s,baz=358,slow=10
TNS *epP* **pwP 08 20 05.6 +0.7**
baz=359,slow=11
NKC Novy Kostel 23.66 174 *eP* **P 08 19 59.3 +1.0**
NKC Novy Kostel 23.66 174 *eP* **P 08 19 59.3 +1.0**
DPC Dobruska-Polom 23.72 168 *eP* **P 08 19 59.2 +0.4**
DPC Dobruska-Polom 23.72 168 *eP* **P 08 19 59.2 +0.4**
DOU Dourbes 23.81 187 P **P 08 20 04.6 +5.0**
MANZ Manzenberg 23.90 175 *eP* **P 08 20 01.9 +1.3**
comp=Z,71nm,1.7s,baz=358,slow=10
IVI Ivigtut 23.92 269 P **P 08 20 00.8 +0.3**
IVI IAmb IAmb 08 20 07.2
comp=Z,108nm,1.0s
PRU Pruhonice 23.98 171 *eP* **P 08 20 04.5 +3.2**
PRU Pruhonice 23.98 171 *eP* **P 08 20 04.5 +3.2**
KRLC Kraliky 24.02 167 *eP* **P 08 20 02.1 +0.4**
KRLC Kraliky 24.02 167 *eP* **P 08 20 02.1 +0.4**
OJC Ojcow 24.10 162 P **P 08 20 02.5 +0.1**
OJC pmax pmax
comp=Z,110nm,1.1s
OJC Ojcow 24.10 162 *eP* **P 08 20 02.7 +0.3**
OJC Ojcow 24.10 162 P **P 08 20 02.5 +0.1**
OJC IAmb IAmb 08 20 16.6
comp=Z,110nm,1.1s
ROTZ Rotzenmuhle 24.12 174 *eP* **P 08 20 03.7 +1.1**
comp=Z,53nm,1.4s,baz=358,slow=10
GRA1 Grafenberg Arr 24.17 176 P **P 08 20 02.9 -0.2**
GRA1 IAmb IAmb 08 20 20.3
comp=Z,97nm,1.4s
GRF Grafenberg Arr 24.17 176 P **P 08 20 02.9 -0.2**
GRF pmax pmax
comp=Z,97nm,1.4s
GRF Grafenberg Arr 24.17 176 *eP* **P 08 20 04.0 +0.9**
comp=Z,246nm,2.3s,baz=358,slow=10
PBCC Pribram 24.26 172 *eP* **P 08 20 05.1 +1.2**
OKC Ostrava-Krasne 24.35 165 *eP* **P 08 20 06.1 +1.4**
OKC Ostrava-Krasne 24.35 165 *eP* **P 08 20 06.1 +1.4**
MORC Moravsky Berou 24.37 166 ⇑P **P 08 20 06.4 +1.5**
MORC Moravsky Berou 24.37 166 ⇑P **P 08 20 06.4 +1.5**
MORC Moravsky Berou 24.37 166 *eP* **P 08 20 05.0 +0.1**
MORC Moravsky Berou 24.37 166 P **P 08 20 04.9 0.0**
LPSR Galich'ya Gora 24.67 133 *eP* **P 08 20 08.4 +0.8**
LPSR pmax pmax
comp=Z,100nm,1.0s
LPSR pmax pmax
comp=N,40nm,1.2s
LPSR pmax pmax
comp=E,30nm,1.0s
TREC Trest 24.72 169 *eP* **P 08 20 09.4 +1.3**
TREC Trest 24.72 169 *eP* **P 08 20 09.4 +1.3**
AKASG Malin Array Be 24.74 148 *i* P **P 08 20 08.1 -0.2**
AKASG pmax pmax
comp=Z,10.0nm,0.7s
AKASG Malin Array Be 24.74 148 P **P 08 20 07.8 -0.4**
comp=Z,9.6nm,0.7s,baz=345,slow=9.5,SNR=35
AKASG PcP **PcP 08 23 44.0 -0.4**
comp=Z,2.5nm,0.7s,baz=352,slow=2.3,SNR=4.6
AKBB Malin Array Si 24.75 148 P **P 08 20 07.9 -0.4**
AKBB pmax pmax
comp=Z,30nm,0.8s
AKBB Malin Array Si 24.75 148 P **P 08 20 07.9 -0.4**
WET Wettzell 24.76 173 *eP* **P 08 20 10.7 +2.3**
comp=Z,41nm,1.2s,baz=358,slow=10
VRAC Vranov 24.77 168 ⇑P **P 08 20 09.9 +1.4**
VRAC Vranov 24.77 168 P **P 08 20 09.5 +0.9**
comp=Z,57nm,1.1s,baz=358,slow=11,SNR=22
VRAC Vranov 24.77 168 ⇑P **P 08 20 09.9 +1.4**
VRAC Vranov 24.77 168 *eP* **P 08 20 09.0 +0.4**
KHC Kasperske Hory 24.80 172⇑ *eP* **P 08 20 10.2 +1.4**
KHC pmax pmax
comp=Z,52nm,1.2s
KHC Kasperske Hory 24.80 172 *eP* **P 08 20 10.6 +1.8**
KHC *ex* x 08 20 20.5
KHC *ex* x 08 20 42.0
KHC Kasperske Hory 24.80 172 P **P 08 20 08.4 -0.5**
RES Resolute Bay 24.84 322 P **P 08 20 08.9 0.0**
RES pmax pmax
comp=Z,21nm,1.1s
RES MLR MLR
comp=Z,1µm,19.0s
RES Resolute Bay 24.84 322 P **P 08 20 09.2 +0.2**
comp=Z,7.8nm,1.1s,baz=21,slow=7.7,SNR=14
RES LR LR 08 29 24.2
comp=Z,718nm,20.0s,baz=48,slow=35
RES Resolute Bay 24.84 322 P **P 08 20 08.9 0.0**
LVV L'vov 24.92 156 *eP* **P 08 20 10.4 +0.5**
LVV *eS* **S 08 24 28.1 -4.2**
LVV pmax pmax
comp=Z,100nm,1.1s
LVV MLR MLR
comp=Z,1µm,17.0s
NIE Niedzica 24.94 162 *eP* **P 08 20 11.7 +1.6**
NIE Niedzica 24.94 162 *eP* **P 08 20 11.7 +1.6**
KWP Kalwaria Pacla 24.96 158 P **P 08 20 10.3 +0.1**
KWP pmax pmax
comp=Z,165nm,1.2s
KWP Kalwaria Pacla 24.96 158 *eP* **P 08 20 11.4 +1.2**
KWP Kalwaria Pacla 24.96 158 P **P 08 20 10.3 +0.1**
KRUC Moravsky 25.00 168 *eP* **P 08 20 11.2 +0.6**
GEC2 GERESS Array S 25.09 172 *eP* **P 08 20 14.1 +2.5**
comp=Z,54nm,1.1s,baz=358,slow=10
GEC2 GERESS Array S 25.09 172 P **P 08 20 13.0 +1.5**
GEC2 IAmb IAmb 08 20 21.0
comp=Z,59nm,1.1s

GERES GERESS Array B 25.09 172 P **P 08 20 12.4 +0.8**
comp=Z,28nm,1.1s,baz=10,slow=8.1,SNR=61
JAVC Velka Javorina 25.29 166 *eP* **P 08 20 14.5 +1.2**
BFO Black Forest 25.51 181 P **P 08 20 16.4 +1.2**
BFO pmax pmax
comp=Z,105nm,1.2s
BFO Black Forest 25.51 181 *eP* **P 08 20 17.4 +2.2**
comp=Z,80nm,1.4s,baz=358,slow=10
BFO *epP* **pwP 08 20 24.3 +2.0**
baz=359,slow=11
BFO Black Forest 25.51 181 P **P 08 20 16.4 +1.2**
BFO IAmb IAmb 08 20 25.2
comp=Z,105nm,1.2s
KOLS Kolonicke sedl 25.61 159 *eP* **P 08 20 17.5 +1.4**
KOLS pmax pmax
comp=Z,51nm,1.1s
KOLS Kolonicke sedl 25.61 159 *eP* **P 08 20 17.5 +1.4**
VORR Voronezh 25.61 133 *eP* **P 08 20 15.0 -1.0**
VORR pmax pmax
comp=Z,500nm,1.0s
SMOL Smolenice 25.62 166 *eP* **P 08 20 18.3 +2.1**
SMOL pmax pmax
comp=Z,77nm,1.6s
SMOL Smolenice 25.62 166 *eP* **P 08 20 18.3 +2.1**
ECH Echery 25.63 182 P **P 08 20 16.2 -0.2**
ECH pmax pmax
comp=Z,91nm,1.5s
ECH Echery 25.63 182 P **P 08 20 16.2 -0.2**
ECH IAmb IAmb 08 20 24.6
comp=Z,91nm,1.5s
VYHS Vyhne 25.74 164 *eP* **P 08 20 18.1 +0.8**
VYHS pmax pmax
comp=Z,175nm,2.2s
VYHS Vyhne 25.74 164 *eP* **P 08 20 18.0 +0.8**
MODS Modra-Piesok 25.75 167 *eP* **P 08 20 18.0 +0.6**
MODS pmax pmax
comp=Z,145nm,1.5s
MODS Modra-Piesok 25.75 167 *eP* **P 08 20 18.0 +0.6**
UZH Uzhgorod 25.91 159 *eP* **P 08 20 19.0 +0.2**
UZH *i* 08 20 22.6
ZST Bratislava 25.91 167 *eP* **P 08 20 20.8 +2.0**
ZST pmax pmax
comp=Z,287nm,2.3s
ZST Bratislava 25.91 167 *eP* **P 08 20 20.8 +2.0**
ARU Arti 26.02 104*c i*P **P 08 20 20.8 +1.0**
ARU PPP PPP 08 21 07.6
ARU S **S 08 24 53.4 +3.7**
ARU SS **SnSn 08 25 50.4 +3.5**
ARU pmax pmax
comp=Z,53nm,1.2s
ARU Arti 26.02 104 P **P 08 20 21.1 +1.3**
comp=Z,2.5nm,0.2s,baz=338,slow=8.5,SNR=25
ARU LR LR 08 31 07.5
comp=Z,745nm,20.0s,baz=315,slow=38
ARU Arti 26.02 104 P **P 08 20 20.6 +0.8**
VSR Storozhevoye 26.03 133 *eP* **P 08 20 20.1 +0.2**
VSR pmax pmax
comp=N,30nm,1.1s
VSR pmax pmax
comp=Z,20nm,1.1s
VSR pmax pmax
comp=E,9.0nm,0.7s
CONA Conrad Observa 26.11 169 *i* P **P 08 20 21.8 +1.1**
comp=E,39nm,1.2s,SNR=16
MOA Molln 26.11 171 *i* P **P 08 20 21.8 +1.1**
comp=E,28nm,1.4s,SNR=11
SVE Sverdlovsk 26.25 102 *eP* **P 08 20 22.9 +1.1**
SVE pmax pmax
comp=Z,64nm,1.4s
VORD Divnogorie 26.29 133 *eP* **P 08 20 22.9 +0.7**
VORD pmax pmax
comp=N,50nm,1.0s
VORD pmax pmax
comp=E,10.0nm,1.0s
VORD pmax pmax
comp=Z,20nm,1.0s
RETA Reutte 26.37 177 *i* P **P 08 20 26.1 +3.0**
comp=Z,20nm,1.6s
PSZ Piszkesteto 26.39 163 ⇑P **P 08 20 25.9 +2.6**
PSZ Piszkesteto 26.39 163 ⇑P **P 08 20 25.9 +2.6**
PSZ Piszkesteto 26.39 163 P **P 08 20 24.2 +0.9**
TRPA Tarpa 26.43 159 *eP* **P 08 20 24.7 +1.2**
MOTA Moosalm 26.52 176 *i* pP **P 08 20 25.7 +1.2**
comp=Z,38nm,1.5s,SNR=7.9
WATA Walderalm 26.54 176 *i* pP **P 08 20 27.4 +2.7**
comp=Z,40nm,1.4s
DAVA Damuels 26.56 178 *i* pP **P 08 20 27.2 +2.2**
comp=Z,33nm,1.3s,SNR=9.2
VRH Novokhopyorsk 26.58 130 *eP* **P 08 20 24.9 +0.1**
VRH pmax pmax
comp=N,140nm,1.6s
VRH pmax pmax
comp=Z,90nm,1.6s
VRH pmax pmax
comp=E,10.0nm,0.7s
WTTA Wattenberg 26.61 175 *i* pP **P 08 20 27.8 +2.4**
comp=E,25nm,1.5s,SNR=9.2
SQTA Sankt Quirin 26.64 176 *i* pP **P 08 20 27.3 +1.6**
comp=E,31nm,1.4s
BUD Budapest 26.75 164 *eP* P 08 20 36.5 +10
ARSA Arzberg 26.76 170 *i* pP **P 08 20 27.9 +1.3**
comp=E,18nm,1.1s,SNR=12
FETA Feichten 26.84 177 *i* pP **P 08 20 28.9 +1.5**
comp=E,14nm,1.4s
KBA Koelnbreinsper 26.84 173 *i* pP **P 08 20 29.6 +2.1**
comp=E,27nm,1.2s,SNR=7.5
DAVOX Davos/Dischmat 27.07 178 P **P 08 20 31.2 +1.7**
comp=E,11nm,1.2s,baz=310,slow=5.7,SNR=4.8
SORM Soroca 27.12 150 ⇑P **P 08 20 30.5 +0.7**
SORM Soroca 27.12 150 ⇑P **P 08 20 30.5 +0.7**
ABTA Abfaltersbach 27.15 174 *i* P **P 08 20 33.8 +3.7**
comp=E,34nm,1.6s
BUR08 Bucovina Ar. S 27.20 155 P **P 08 20 31.5 +0.9**
FUORN Ofenpass-Fuorn 27.23 178 P **P 08 20 30.5 -0.6**
BURAR Bucovina Array 27.23 155 ⇑P **P 08 20 32.5 +1.6**
BURAR Bucovina Array 27.23 155 ⇑P **P 08 20 32.5 +1.6**
TIH Tihany 27.25 166 *eP* P 08 20 41.5 +11
MYKA Terra Mystica 27.30 173 *i* pP **P 08 20 33.8 +2.3**
comp=E,21nm,1.1s
SOKA Soboth 27.31 170 *i* P **P 08 20 32.5 +0.9**
comp=E,20nm,1.4s,SNR=10.0
OBKA Obir 27.46 171 *i* pP **P 08 20 34.9 +1.9**
comp=E,32nm,1.3s,SNR=18
SENIN Lac Senin/Sane 27.48 182 P **P 08 20 34.8 +1.5**
FRB Frobisher Bay 27.48 290 P **P 08 20 32.5 -0.4**
comp=E,10.0nm,1.1s,baz=34,slow=12,SNR=5.4
FRB LR LR 08 29 57.8
comp=E,784nm,21.3s,baz=26,slow=33
BEHE Becsehely 27.61 168 *eP* **P 08 20 39.7 +5.5**
STAL STALIGIAL 27.64 174 P **P 08 20 33.7 -0.8**
DRGR 27.77 159 ⇑P **P 08 20 37.0 +1.3**
DRGR 27.77 159 ⇑P **P 08 20 37.0 +1.3**
CTI Castel Tesino 27.82 176 P **P 08 20 35.7 -0.5**
CTI pmax pmax
comp=Z,29nm,1.1s
CTI Castel Tesino 27.82 176 P **P 08 20 35.7 -0.5**
BIZ Bicaz 28.00 154 ⇑P **P 08 20 39.9 +2.2**
SIRR Siria 28.18 161 ⇑P **P 08 20 41.0 +1.6**
TEOL Teolo 28.51 176 P **P 08 20 42.8 +0.6**
TEOL IAmb IAmb 08 20 45.2
comp=Z,34nm,0.8s
BNI Bardonecchia 28.80 183 P **P 08 20 45.2 +0.2**
BNI pmax pmax
comp=Z,41nm,1.3s
BNI Bardonecchia 28.80 183 P **P 08 20 45.2 +0.2**
BZS Buzias 28.83 161 ⇑P **P 08 20 47.2 +2.2**
BZS Buzias 28.83 161 ⇑P **P 08 20 47.2 +2.2**
DOPR Dopca 28.87 155 ⇑P **P 08 20 47.9 +2.4**
VRI Vrincioaia 29.14 154 ⇑P **P 08 20 50.7 +2.9**
VRI Vrincioaia 29.14 154 ⇑P **P 08 20 50.7 +2.9**
PLOR Plostina 29.14 154 ⇑P **P 08 20 49.8 +2.0**
PLOR Plostina 29.14 154 ⇑P **P 08 20 49.8 +2.0**
GZR Gura Zlata 29.16 159 ⇓P **P 08 20 50.4 +2.3**
GZR Gura Zlata 29.16 159 ⇓P **P 08 20 50.4 +2.3**
VOIR 29.36 156 ⇑P **P 08 20 51.9 +2.1**
VOIR 29.36 156 ⇑P **P 08 20 51.9 +2.1**
ARR Arges 29.38 157 ⇑P **P 08 20 52.5 +2.5**
MLR Muntele Rosu 29.41 155 ⇑P **P 08 20 53.3 +3.0**
MLR Muntele Rosu 29.41 155 ⇑P **P 08 20 53.3 +3.0**
MLR Muntele Rosu 29.41 155 P **P 08 20 50.2 -0.2**
BISRR Bisoca 29.45 154 ⇑P **P 08 20 53.4 +2.8**
MDVR Moldovita 29.66 161 ⇑P **P 08 20 54.0 +1.5**
CFR Carcaliu 29.99 152 ⇑P **P 08 20 56.5 +1.2**
CFR Carcaliu 29.99 152 ⇑P **P 08 20 56.5 +1.2**

TIXI Tiksi 30.08 33⇑ *eP* **P 08 20 57.3 +1.4**
TIXI pmax pmax
comp=Z,42nm,1.7s
TIXI Tiksi 30.08 33 P **P 08 20 57.5 +1.6**
comp=Z,16nm,1.0s,baz=180,slow=24,SNR=25
TIXI Tiksi 30.08 33 P **P 08 20 54.9 -1.0**
TOPG Topolog 30.32 152 ⇑P **P 08 21 00.0 +1.8**
OSSC Osservatorio P 30.34 176 P **P 08 20 58.2 -0.3**
OSSC IAmb IAmb 08 21 14.9
comp=Z,88nm,1.4s
MURB Monte Urbino 30.63 174 P **P 08 21 02.1 +1.0**
TIRR Tirgusor 30.74 152 ⇑P **P 08 21 02.5 +0.6**
TIRR Tirgusor 30.74 152 ⇑P **P 08 21 02.5 +0.6**
NRCA Norcia 31.07 174 P **P 08 21 05.4 +0.4**
NRCA IAmb IAmb 08 21 13.9
comp=Z,79nm,1.2s
AKTO Aktyubinsk 31.24 111 P **P 08 21 06.6 +0.3**
comp=Z,27nm,1.0s,baz=325,slow=7.7,SNR=40
AKTO LR LR 08 34 34.8
comp=Z,2µm,18.7s,baz=352,slow=38
LATE Laterza 31.26 176 IAmb IAmb 08 21 25.9
comp=Z,65nm,1.3s
PLVB Pleven 31.34 157 ⇑P **P 08 21 08.5 +1.4**
PDG Podgorica 31.80 165 P **P 08 21 13.0 +1.7**
INTR Introdacqua 31.92 173 P **P 08 21 12.4 -0.1**
INTR IAmb IAmb 08 21 21.0
comp=Z,34nm,1.2s
ELND Elena 31.93 156 ⇑P **P 08 21 13.2 +0.8**
VTS Vitosha 31.95 159 P **P 08 21 12.3 -0.5**
VTS pmax pmax
comp=Z,15nm,1.0s
VTS Vitosha 31.95 159 ⇑P **P 08 21 13.8 +0.9**
VTS Vitosha 31.95 159 P **P 08 21 12.4 -0.5**
VTS Vitosha 31.95 159 P **P 08 21 12.3 -0.5**
BRVK Borovoye 32.24 95 P **P 08 21 15.9 +0.9**
BRVK Borovoye 32.24 95 P **P 08 21 16.4 +1.3**
BVAR Borovoye Array 32.30 95 P **P 08 21 16.7 +1.1**
comp=Z,22nm,1.0s,baz=327,slow=7.8,SNR=39
BVAR PcP **PcP 08 24 04.3 +1.1**
comp=Z,7.2nm,0.9s,baz=318,slow=4.0,SNR=4.3
PLD Plovdiv 32.61 158 P P 08 21 10.3 -8.1
GOF Gofitskoye 32.69 132⇑ *eP* **P 08 21 20.1 +1.0**
GOF pmax pmax
comp=Z,43nm,0.7s
STIP Stip 32.77 161 *i* P **P 08 21 19.6 -0.2**
AB31 Akbulak array 32.83 109 *i* P **P 08 21 20.7 +0.5**
ABKAR Akbulak array 32.83 109 P **P 08 21 20.9 +0.6**
ABKAR IAmb IAmb 08 21 27.8
comp=Z,39nm,0.8s
PAOL Paolisi 32.93 172 IAMs_20 IAMs_20 08 32 07.5
comp=Z,2µm,21.0s
VAY Valandovo 33.17 161 *i* P **P 08 21 24.7 +1.4**
OHR Ohrid 33.23 163 *i* P **P 08 21 22.6 -1.3**
FNA Florina 33.60 162 P **P 08 21 25.8 -1.3**
FNA pmax pmax
comp=Z,48nm,1.0s
FNA Florina 33.60 162 P **P 08 21 25.8 -1.3**
FNA IAmb IAmb 08 21 34.1
comp=Z,48nm,1.0s
KIV Kislovodsk 33.67 133 *eP* **P 08 21 28.9 +1.1**
KIV pmax pmax
comp=Z,52nm,1.1s
KIV MLR MLR
comp=Z,2µm,15.0s
KIV Kislovodsk 33.67 133 ⇑P **P 08 21 28.8 +1.0**
KIV Kislovodsk 33.67 133 P **P 08 21 27.2 -0.6**
KBZ Khabaz 33.93 133 P **P 08 21 30.1 +0.2**
comp=Z,4.5nm,0.8s,baz=339,slow=5.7,SNR=7.4
KBZ LR LR 08 36 01.1
comp=Z,963nm,19.2s,baz=2.5,slow=38
C36M Paulatuk 33.97 332 P **P 08 21 29.5 -0.5**
C36M Paulatuk 33.97 332 P **P 08 21 30.5 +0.6**
baz=22
SCTE Santa Cesarea 34.09 167 IAMs_20 IAMs_20 08 33 03.3
comp=Z,2µm,21.0s
LIT Litokhoron 34.38 161 P **P 08 21 33.5 -0.3**
LIT pmax pmax
comp=Z,44nm,1.2s
LIT Litokhoron 34.38 161 P **P 08 21 33.5 -0.3**
LIT IAmb IAmb 08 21 37.1
comp=Z,44nm,1.2s
SCHQ Schefferville 34.57 279 P **P 08 21 34.9 -0.5**
comp=Z,13nm,0.9s,baz=38,slow=7.5,SNR=13
SCHQ LR LR 08 34 08.0
comp=Z,900nm,19.9s,baz=18,slow=34
SCHQ Schefferville 34.57 279 P **P 08 21 33.3 -2.1**
ESDC Sonseca Array 34.70 197 P **P 08 21 36.3 -0.3**
comp=Z,3.0nm,0.8s,baz=9.0,slow=9.9,SNR=13
ESDC Sonseca Array 34.70 197 IAmb IAmb 08 21 44.2
comp=Z,9.2nm,1.2s
PCBR Castelo Branco 34.86 202 *eP* **P 08 21 37.2 -0.8**
comp=Z,49nm,1.7s
TIP Timpagrande 34.88 169 P **P 08 21 39.1 +0.9**
TIP IAmb IAmb 08 21 41.8
comp=Z,42nm,1.3s
MDUB Mudurnu 35.04 149 P **P 08 21 37.5 -2.2**
ZEI Tsey 35.04 132 *eP* **P 08 21 39.8 0.0**
ZEI pmax pmax
comp=Z,8.0nm,0.9s
GROC Groznyy 35.05 130 *eP* **P 08 21 41.9 +2.4**
GROC *e* 08 22 56.9
GROC *e* 08 24 12.3
GROC *eS* **S 08 27 14.9 +4.0**
GROC pmax pmax
comp=Z,81nm,1.3s
PMRV Marv??o 35.26 202 *eP* **P 08 21 41.6 +0.1**
comp=Z,82nm,1.4s
AGG Agios Georgios 35.43 162 P **P 08 21 41.8 -1.2**
AGG pmax pmax
comp=Z,56nm,1.2s
AGG Agios Georgios 35.43 162 P **P 08 21 41.8 -1.2**
AGG IAmb IAmb 08 21 50.2
comp=Z,56nm,1.2s
ZAA0 Zalesovo Array 35.53 81 P **P 08 21 43.7 +0.1**
ZAA0 PcP **PcP 08 24 14.0 +1.7**
ZALV Zalesovo Beam 35.53 81 P **P 08 21 44.6 +1.0**
comp=Z,9.5nm,1.0s,baz=325,slow=10.0,SNR=19
ZALV PP **PP 08 23 04.8 +0.7**
comp=Z,3.8nm,0.7s,baz=331,slow=12,SNR=4.1
ZALV PcP **PcP 08 24 12.3 +0.1**
comp=Z,11nm,1.0s,baz=316,slow=6.2,SNR=6.7
ZALV LR LR 08 39 26.0
comp=Z,704nm,19.4s,baz=308,slow=42
PMTG Montargil 35.71 203 *eP* **P 08 21 45.7 +0.4**
comp=Z,43nm,1.6s
ANTO Ankara 35.86 148 P **P 08 21 47.8 +1.1**
ANTO pmax pmax
comp=Z,40nm,1.5s
ANTO Ankara 35.86 148 P **P 08 21 47.8 +1.1**
CORL Corleone 36.01 174 P **P 08 21 47.5 -0.4**
INK Inuvik 36.09 337 P **P 08 21 48.5 +0.3**
comp=Z,23nm,1.1s,baz=11,slow=11,SNR=31
INK PcP **PcP 08 24 15.1 +1.5**
comp=Z,6.2nm,1.0s,baz=7.3,slow=5.7,SNR=4.8
INK Inuvik 36.09 337 P **P 08 21 48.6 +0.3**
INK IAmb IAmb 08 21 54.4
comp=Z,62nm,1.2s
INK **PcP 08 24 14.9 +1.2**
BR131 Keskin Array S 36.13 146 P **P 08 21 48.6 -0.5**
BR131 pmax pmax
comp=Z,9.0nm,1.0s
BR131 Keskin Array S 36.13 146 P **P 08 21 48.6 -0.5**
BRTR Keskin Array B 36.13 146 *i* P **P 08 21 50.9 +1.8**
BRTR pmax pmax
comp=Z,11nm,1.0s
BRTR Keskin Array B 36.13 146 P **P 08 21 50.5 +1.5**
comp=Z,10nm,1.0s,baz=350,slow=6.3,SNR=22
BRTR PP **PP 08 23 12.4 +1.3**
comp=Z,5.6nm,1.0s,baz=346,slow=5.0,SNR=3.0
BRTR LR LR 08 37 46.0
comp=Z,440nm,21.8s,baz=6.0,slow=38
TBLG Delisi 36.23 132 P **P 08 21 49.6 -0.1**
TBLG pmax pmax
comp=Z,75nm,1.4s
TBLG Delisi 36.23 132 P **P 08 21 49.6 -0.1**
TBLG IAmb IAmb 08 22 02.5
comp=Z,75nm,1.4s
AKH Akhalkalaki 36.28 133 P **P 08 21 50.2 -0.2**
AKH pmax pmax
comp=Z,19nm,1.2s
AKH Akhalkalaki 36.28 133 P **P 08 21 50.2 -0.2**
MANT Manisa 36.63 153 P **P 08 21 54.1 +0.7**
KURK Kurchatov 36.67 89⇑ *eP* **P 08 21 54.5 +1.1**
KURK pmax pmax
comp=Z,23nm,1.0s

KURK **Kurchatov** 36.67 89 P P 08 21 54.6 +1.1
PBEJ **Beja** 36.70 202 *e*P P 08 21 53.4 -0.4
comp=Z,62nm,1.7s
KURBB **Kurchatov Arra** 36.73 89 P P 08 21 54.9 +1.0
comp=Z,15nm,1.1s,baz=334,slow=7.4,SNR=37
KURBB PP PP 08 23 17.9 +0.6
comp=Z,7.4nm,0.8s,baz=335,slow=10.0,SNR=5.5
KURBB PcP PcP 08 24 16.6 +0.7
comp=Z,2.2nm,0.4s,baz=319,slow=3.5,SNR=6.6
DRLN **Deer Lake** 36.93 266 P P 08 21 56.0 +0.4
DRLN IAmb IAmb 08 22 00.2
comp=Z,88nm,1.4s
PCVE **Castro Verde** 37.11 202 *e*P P 08 21 59.2 +2.0
ITM **Ithomi** 37.22 162 P P 08 21 58.7 +0.5
ITM IAmb IAmb 08 22 05.6
comp=Z,66nm,1.2s
BILL **Bilibino** 37.70 14⇑ *e*P P 08 22 02.7 +0.7
BILL *i* 08 22 07.8
BILL *e* 08 23 25.6
BILL *e* 08 24 19.7
BILL pmax pmax
comp=Z,46nm,1.3s
BILL MLR MLR
comp=Z,309nm,19.0s
BILL **Bilibino** 37.70 14 P P 08 22 01.5 -0.5
BILL IAmb IAmb 08 22 10.0
comp=Z,52nm,1.1s
GNI **Garni** 37.75 133⇓ *e*P P 08 22 05.2 +2.4
GNI pmax pmax
comp=Z,141nm,2.5s
GNI **Garni** 37.75 133 P P 08 22 04.7 +1.9
comp=Z,8.9nm,0.9s,baz=194,slow=7.7,SNR=4.4
GNI **Garni** 37.75 133 P P 08 22 01.3 -1.5
KEST **Kesra** 38.10 179 P P 08 22 06.2 +0.4
comp=Z,15nm,1.0s,baz=253,slow=2.6,SNR=8.8
KEST **Kesra** 38.10 179 P P 08 22 07.0 +1.3
FCC **Fort Churchill** 38.14 305 P P 08 22 05.1 -0.6
FCC pmax pmax
comp=Z,27nm,1.2s
FCC **Fort Churchill** 38.14 305 P P 08 22 05.1 -0.6
EPYK **Eagle Plains** 38.30 338 P P 08 22 07.0 -0.1
EPYK **Eagle Plains** 38.30 338 P P 08 22 07.2 +0.1
baz=15
RDOG **Red Dog Mine** 38.33 355 P P 08 22 06.2 -1.1
COLD **Coldfoot** 38.59 347 P P 08 22 09.5 0.0
FYU **Fort Yukon** 38.89 344 P P 08 22 12.7 +0.7
FYU IAmb IAmb 08 22 20.2
comp=Z,96nm,1.3s
YKA **Yellowknife Ar** 38.91 322 P P 08 22 11.8 -0.4
comp=Z,26nm,1.0s,baz=13,slow=8.4,SNR=168
YKA PcP PcP 08 24 22.6 +0.1
comp=Z,1.5nm,0.7s,baz=9.8,slow=2.8,SNR=11
YKA LR LR 08 38 28.4
comp=Z,526nm,19.0s,baz=0.0,slow=37
YAK **Yakutsk** 38.94 40 *e*P P 08 22 09.7 -2.7
YAK *e* 08 24 19.5
YAK *e*S S 08 28 05.8 -3.9
YAK *e*SS SnSn 08 30 57.8 -2.2
YAK *e* 08 32 18.6
YAK pmax pmax
comp=Z,4.0nm,0.7s
YAK pmax pmax
comp=N,3.0nm,0.8s
YAK pmax pmax
comp=E,1.0nm,0.8s
YAK pmax pmax
comp=Z,11nm,0.7s
YAK pmax pmax
comp=N,6.0nm,0.6s
YAK pmax pmax
comp=E,8.0nm,1.0s
YAK smax smax
comp=E,18nm,2.2s
YAK smax smax
comp=N,36nm,2.3s
YAK **Yakutsk** 38.94 40 P P 08 22 13.2 +0.9
BOD **Bodaibo** 39.58 54 *e*P P 08 22 17.3 -0.5
BOD pmax pmax
comp=Z,21nm,1.5s
PRP **Porcupine Dome** 39.95 344 P P 08 22 23.4 +2.4
EGAK **Eagle** 40.30 341 P P 08 22 24.6 +0.9
EGAK IAmb IAmb 08 22 30.6
comp=Z,70nm,1.4s
POKR **Poker Plat Res** 40.49 345 P P 08 22 25.9 +0.6
baz=10,SNR=18
MDM **Murphy Dome** 40.70 345 P P 08 22 28.4 +1.3
COLA **College** 40.76 345⇓ *e*P P 08 22 28.9 +1.4
COLA pmax pmax
comp=Z,20nm,1.2s
COLA **College** 40.76 345 P P 08 22 27.9 +0.5
TCOL **CIGO, UAF Yank** 40.76 345 P P 08 22 27.8 +0.3
baz=9.9
IL31 40.79 344 P P 08 22 28.7 +1.0
ILAR **Eielson Array** 40.79 344 P P 08 22 28.9 +1.1
comp=Z,12nm,0.9s,baz=2.9,slow=6.3,SNR=83
ILAR PcP PcP 08 24 29.3 +0.9
comp=Z,9.4nm,1.1s,baz=314,slow=3.1,SNR=5.0
MLY **Manley** 40.80 347 P P 08 22 29.9 +2.0
DAWY **Dawson** 40.82 339 P P 08 22 28.6 +0.4
CCB **Clear Creek Bu** 40.98 345 P P 08 22 31.0 +1.6
BATG **Bathurst New B** 41.13 273 P P 08 22 31.3 +0.5
BATG IAmb IAmb 08 22 37.1
comp=Z,64nm,1.0s
HDA **Harding Lake** 41.15 344 P P 08 22 31.4 +0.6
HDA **Harding Lake** 41.15 344 P P 08 22 31.1 +0.3
baz=10,SNR=17
MAKZ **Makanchi** 41.16 89 P P 08 22 32.2 +1.2
MAKZ pmax pmax
comp=Z,19nm,1.3s
MAKZ MLR MLR
comp=Z,900nm,21.0s
MAKZ **Makanchi** 41.16 89 P P 08 22 32.2 +1.2
WRH **Wood River Hil** 41.18 345 P P 08 22 32.6 +1.6
MK31 **Makanchi Array** 41.26 88 *i* P P 08 22 32.4 +0.5
MK31 **Makanchi Array** 41.26 88 P P 08 22 31.6 -0.2
MKAR **Makanchi Array** 41.26 88 *i* P P 08 22 33.0 +1.1
MKAR pmax pmax
comp=Z,8.0nm,1.0s
MKAR **Makanchi Array** 41.26 88 P P 08 22 32.2 +0.4
comp=Z,7.4nm,0.9s,baz=328,slow=6.3,SNR=34
MKAR PP PP 08 24 06.2 -0.7
comp=Z,14nm,1.1s,baz=337,slow=8.4,SNR=4.1
MKAR LR LR 08 43 52.8
comp=Z,773nm,18.1s,baz=302,slow=42
SCRK **Sand Creek** 41.34 342 P P 08 22 33.1 +0.7
KK31 **Karatay Array** 41.35 102 P P 08 22 34.3 +1.6
KK31 **Karatay Array** 41.35 102 P P 08 22 33.9 +1.3
KKAR **Karatay Array** 41.35 102 P P 08 22 33.9 +1.2
KKAR pmax pmax
comp=Z,20nm,1.0s
KKAR **Karatay Array** 41.35 102 P P 08 22 33.9 +1.2
SEY **Seymchan** 41.46 24⇓ *e*P P 08 22 34.0 +0.8
SEY **Seymchan** 41.46 24 P P 08 22 34.5 +1.3
comp=Z,21nm,1.1s,baz=319,slow=5.8,SNR=17
MDT **Midelt** 41.56 197 P P 08 22 34.9 +0.4
comp=Z,3.2nm,0.9s,baz=193,slow=6.3,SNR=4.8
MDT PcP PcP 08 24 32.8 +1.3
comp=Z,5.2nm,1.0s,baz=8.0,slow=11,SNR=4.3
BWN **Browne** 41.57 346 P P 08 22 35.6 +1.4
RIDG **Independent Ri** 41.64 343 P P 08 22 36.5 +1.7
DOT **Dot Lake** 41.67 342 P P 08 22 36.7 +1.7
BPAW **Bear Paw Mtn.** 41.74 347 P P 08 22 35.5 -0.2
BPAW IAmb IAmb 08 22 44.2
comp=Z,63nm,1.2s
ANM **Nome** 41.88 356 P P 08 22 38.5 +1.8
ANM pmax pmax
comp=Z,40nm,1.4s
ANM **Nome** 41.88 356 P P 08 22 38.5 +1.8
D63A **Stockholm** 41.92 275 P P 08 22 37.7 +0.5
baz=24,SNR=10
MOY **Mondy** 41.96 69 *e*P P 08 22 39.7 +2.1
MOY pmax pmax
comp=Z,99nm,2.7s
MCK **McKinley** 41.97 345 P P 08 22 37.7 +0.2
MCK pmax pmax
comp=Z,37nm,1.1s
MCK **McKinley** 41.97 345 P P 08 22 37.7 +0.2
LMN **Caledonia Moun** 42.08 271 P P 08 22 37.9 -0.7
LMN IAmb IAmb 08 22 44.3
comp=Z,81nm,1.1s
MATQ **Matagami** 42.09 285 P P 08 22 38.5 -0.1
baz=25,SNR=17
D62A **Allapoint, All** 42.15 276 P P 08 22 39.6 +0.6
D62A IAmb IAmb 08 22 45.5
comp=Z,54nm,1.1s
D62A **Allapoint, All** 42.15 276 P P 08 22 39.1 0.0
baz=24,SNR=14
RND **Reindeer** 42.29 345 P P 08 22 39.9 -0.2
RND pmax pmax
comp=Z,22nm,1.1s
RND **Reindeer** 42.29 345 P P 08 22 39.9 -0.2
USP **Ospenovka** 42.31 98 P P 08 22 42.2 +1.7
SNR=10
MENT **Mentasta** 42.34 342 P P 08 22 41.1 +0.6
D61A **St Aubert, Com** 42.35 277 P P 08 22 40.0 -0.8
baz=24
E64A **Bridgewater** 42.41 274 P P 08 22 41.1 -0.2
baz=24,SNR=5.6
PAX **Paxson** 42.46 343 P P 08 22 42.6 +1.1
PAX pmax pmax
comp=Z,30nm,1.1s
PAX **Paxson** 42.46 343 P P 08 22 42.6 +1.1
DHY **Denali Highway** 42.51 344 P P 08 22 43.0 +1.0
DHY IAmb IAmb 08 22 49.2
comp=Z,74nm,1.0s
LSQQ **Lebel-sur-Quev** 42.54 284 P P 08 22 42.0 -0.3
baz=24
E63A **Oxbow** 42.57 275 P P 08 22 42.4 -0.1
E63A **Oxbow** 42.57 275 P P 08 22 42.0 -0.5
baz=24
TLY **Talaya** 42.63 66 *ce*P P 08 22 45.3 +2.3
TLY pmax pmax
comp=Z,16nm,1.3s
TLY **Talaya** 42.63 66 P P 08 22 44.9 +1.8
comp=Z,1.9nm,0.6s,baz=354,slow=7.1,SNR=6.7
TLY **Talaya** 42.63 66 P P 08 22 42.4 -0.6
EKS2 **Erkin-Say** 42.67 99 P P 08 22 45.6 +2.1
SNR=17
GAMB **Gambell** 42.73 0 P P 08 22 42.9 -0.7
D60A **Saint Jean D'O** 42.82 277 P P 08 22 44.8 +0.3
baz=24,SNR=11
AAK **Ala-Archa** 42.89 98⇑ *e*P P 08 22 47.4 +2.0
AAK pmax pmax
comp=Z,14nm,1.3s
AAK **Ala-Archa** 42.89 98 P P 08 22 47.4 +2.0
comp=Z,7.3nm,1.1s,baz=308,slow=7.0,SNR=11
AAK **Ala-Archa** 42.89 98 P P 08 22 47.4 +2.0
SNR=8.5
AAK **Ala-Archa** 42.89 98 P P 08 22 45.8 +0.4
LATQ **La Tuque** 42.91 279 P P 08 22 44.9 -0.4
LATQ **La Tuque** 42.91 279 P P 08 22 45.1 -0.2
baz=24,SNR=19
TKM2 **Tokmak 2** 42.93 97 P P 08 22 48.1 +2.4
SNR=17
GEYT **Alibeck** 42.94 118 P P 08 22 47.0 +1.3
comp=Z,16nm,1.0s,baz=305,slow=8.1,SNR=21
GEYT LR LR 08 43 12.5
comp=Z,1µm,18.1s,baz=355,slow=40
GEYT **Alibeck** 42.94 118 IAmb IAmb 08 22 49.7
comp=Z,18nm,1.1s
GYA0B **ALIBECK ARRAY** 42.94 118 P P 08 22 45.1 -0.5
D59A **Saint-Raymond** 42.99 278 P P 08 22 45.6 -0.3
baz=24,SNR=13
KBK **Karagaybulak** 43.00 98 P P 08 22 48.4 +2.1
SNR=7.7
PPLA **Purkeypile** 43.02 347 P P 08 22 46.7 +0.5
F64A **Sherman** 43.06 274 P P 08 22 46.7 +0.2
F64A IAmb IAmb 08 22 52.5
comp=Z,68nm,1.1s
F64A **Sherman** 43.06 274 P P 08 22 46.9 +0.4
baz=24,SNR=14
AML **Almayashu** 43.13 100 P P 08 22 50.0 +2.3
SNR=15
E61A **Lac Etchemin** 43.14 277 P P 08 22 47.2 0.0
baz=24
D58A **Chemin du LacG** 43.20 279 P P 08 22 47.8 +0.1
baz=24,SNR=34
UCH **Uchtor** 43.27 99 P P 08 22 50.7 +1.9
SNR=10
F63A **Nahmakanta, Br** 43.42 275 P P 08 22 49.7 +0.3
F63A IAmb IAmb 08 22 55.8
comp=Z,64nm,1.1s
F63A **Nahmakanta, Br** 43.42 275 P P 08 22 49.4 -0.1
baz=24,SNR=9.8
BOOM **Boomskoye usch** 43.43 97 P P 08 22 51.4 +1.6
BOOM pmax pmax
comp=Z,37nm,1.1s
BOOM MLR MLR
comp=Z,800nm,21.0s
BOOM **Boomskoye usch** 43.43 97 P P 08 22 51.4 +1.6
G65A **Princeton** 43.45 273 P P 08 22 50.1 +0.4
G65A IAmb IAmb 08 22 55.6
comp=Z,55nm,1.1s
G65A **Princeton** 43.45 273 P P 08 22 49.9 +0.2
baz=23
E60A **Ste Agathe de** 43.47 277 P P 08 22 50.3 +0.5
baz=24,SNR=22
VLDQ **Val d'Or** 43.53 284 P P 08 22 50.3 0.0
VLDQ IAmb IAmb 08 22 56.1
comp=Z,75nm,1.4s
D57A **Chemin Vers le** 43.55 280 P P 08 22 50.6 +0.1
baz=24
FFC **Flin Flon** 43.61 308 P P 08 22 49.2 -1.7
FFC pmax pmax
comp=Z,78nm,1.2s
FFC **Flin Flon** 43.61 308 P P 08 22 49.2 -1.7
FFC IAmb IAmb 08 22 56.6
comp=Z,78nm,1.1s
PDGK **Podgornoye** 43.65 93 P P 08 22 53.0 +1.5
WHY **Whitehorse** 43.65 335 P P 08 22 50.1 -1.1
E59A **St. Maurice** 43.66 278 P P 08 22 51.4 0.0
baz=24
ARSB **Arslanbob** 43.69 101 P P 08 22 51.1 -0.7
F61A **St Evariste** 43.70 277 P P 08 22 51.5 -0.2
baz=24,SNR=23
ZAK **Zakamensk** 43.73 67 *e*P P 08 22 53.5 +1.5
ZAK pmax pmax
comp=Z,8.0nm,1.3s
G64A **Maxfield** 43.74 274 P P 08 22 51.7 -0.3
baz=23,SNR=13
H66A **Whiting** 43.76 273 P P 08 22 52.1 0.0
baz=23
D56A **ZEC Mazanza, M** 43.77 281 P P 08 22 51.8 -0.4
baz=24,SNR=24
HYT **Haines Junctio** 43.79 337 P P 08 22 53.2 +0.8
HYT IAmb IAmb 08 22 59.7
comp=Z,45nm,1.3s
GLB **Gilahina Butte** 43.82 341 P P 08 22 54.0 +1.5
SML **Sawmill** 43.83 344 IAmb IAmb 08 22 59.5
comp=Z,84nm,1.4s
PKME **Peaks-Kenny Pk** 43.88 275 P P 08 22 53.2 +0.1
baz=23,SNR=16
SKT **Skwentna** 43.89 347 P P 08 22 51.4 -1.6
SKT IAmb IAmb 08 22 59.2
comp=Z,70nm,1.0s
E58A **La Victoria** 43.98 279 P P 08 22 53.3 -0.6
baz=24,SNR=22
F60A **Warwick** 43.98 278 P P 08 22 53.4 -0.4
baz=24
D55A **Sainte-Anne-du** 43.99 281 P P 08 22 53.7 -0.3
baz=24,SNR=36
H65A **Eastbrook** 44.11 273 P P 08 22 54.7 -0.2
baz=23
G63A **Kingsbury** 44.11 275 P P 08 22 54.4 -0.5
baz=23,SNR=14
D54A **Lac Fusel, La** 44.20 283 P P 08 22 55.5 -0.2
baz=24,SNR=22
G62A **West of Eustis** 44.27 276 P P 08 22 56.1 -0.1
baz=23
BTK **Batken** 44.27 104 P P 08 22 57.2 +0.8
BTK pmax pmax
comp=Z,30nm,1.2s
BTK **Batken** 44.27 104 P P 08 22 57.2 +0.8
E56A **St. Veronique** 44.31 281 P P 08 22 56.6 +0.1
baz=24,SNR=26
F59A **Saint Guilaume** 44.32 278 P P 08 22 56.3 -0.3
baz=23,SNR=5.6
SUA **Susitna One** 44.35 346 P P 08 22 57.0 +0.2
NRN **Naryn** 44.42 98 P P 08 22 58.9 +1.0
NRN pmax pmax
comp=Z,13nm,1.3s
NRN MLR MLR
comp=Z,800nm,20.0s
NRN **Naryn** 44.42 98 P P 08 22 58.9 +1.0
H64A **Troy** 44.43 274 P P 08 22 57.3 -0.3
baz=23
G61A **St-Isidore-de-** 44.49 277 P P 08 22 58.0 0.0
baz=23,SNR=15
MA2 **Magadan** 44.53 26⇓ *e*P P 08 23 00.0 +1.9
MA2 pmax pmax
comp=Z,37nm,1.4s
MA2 **Magadan** 44.53 26 P P 08 22 59.8 +1.7
MA2 IAmb IAmb 08 23 05.4
comp=Z,50nm,1.4s
F58A **St-Lin Laurent** 44.59 279 P P 08 22 58.5 -0.2
baz=23
WVL **Waterville** 44.62 275 P P 08 22 59.7 +0.6
WVL IAmb IAmb 08 23 05.4
comp=Z,54nm,1.0s
H63A **New Sharon** 44.64 275 P P 08 22 59.8 +0.6
baz=23,SNR=5.8
E55A **Montcerf-Lytto** 44.67 282 P P 08 22 59.4 0.0
baz=23
F57A **Harrington** 44.88 280 P P 08 23 01.0 -0.1
baz=23
G60A **Masonville** 44.88 278 P P 08 23 01.3 +0.1
baz=23
D51A **Lot 18 Range I** 44.99 285 P P 08 23 01.9 -0.1
baz=23
E54A **Lac Daplat, Po** 45.00 283 P P 08 23 02.0 -0.1
baz=23
SVW2 **Sparrevohn** 45.00 349 P P 08 23 02.7 +0.7
SVW2 IAmb IAmb 08 23 09.8
comp=Z,48nm,1.0s
H62A **Milan** 45.03 276 P P 08 23 02.5 +0.1
baz=23,SNR=14
D50A **G1974 Best Tow** 45.05 285 P P 08 23 02.0 -0.4
baz=23
G59A **Clarenceville** 45.13 278 P P 08 23 03.0 -0.1
baz=23
E53A **Dumoine, Ponti** 45.18 283 P P 08 23 03.3 -0.2
baz=23
I64A **Boothbay** 45.21 274 P P 08 23 03.6 -0.1
baz=23
H61A **Lyndonville** 45.29 277 P P 08 23 03.7 -0.7
baz=23,SNR=5.2
G58A **Ormstown** 45.31 279 P P 08 23 04.0 -0.5
baz=23
F55A **Otter Lake** 45.32 282 P P 08 23 04.1 -0.5
baz=23,SNR=16
I63A **Otisfield** 45.36 275 IAmb IAmb 08 23 11.3
comp=Z,44nm,1.1s
I63A **Otisfield** 45.36 275 P P 08 23 04.2 -0.7
baz=23
FRNY **Flat Rock** 45.47 279 P P 08 23 05.9 +0.1
H60A **Morristown** 45.48 278 P P 08 23 05.1 -0.8
baz=23,SNR=11
WMQ **Urumqi** 45.50 85 *e*P P 08 23 07.9 +1.7
WMQ pP pwP 08 23 14.0 +0.7
WMQ sP sP 08 23 17.9 +6.5
WMQ pmax pmax
comp=Z,22nm,1.1s
WMQ pmax pmax
comp=Z,210nm,3.8s
WMQ LR LR
comp=Z,440nm,22.9s
WMQ LR LR
comp=Z,430nm,16.7s
WMQ LR LR
comp=Z,620nm,16.7s
E51A **G1948 Merrick** 45.54 285 P P 08 23 05.8 -0.5
baz=23
E52A **Mattawa** 45.54 284 P P 08 23 05.8 -0.5
baz=23
LBNH **Lisbon** 45.56 277 P P 08 23 06.2 -0.3
baz=23
D48A **Paudash Townsh** 45.58 287 P P 08 23 06.2 -0.5
baz=23,SNR=9.3
G57A **Newington** 45.62 280 P P 08 23 06.7 -0.2
baz=23,SNR=29
BESE **Bessie Mountai** 45.67 334 P P 08 23 09.1 +1.8
BESE IAmb IAmb 08 23 14.8
comp=Z,53nm,1.2s
ALGO **Algonquin Park** 45.68 283 P P 08 23 07.3 -0.2
baz=23,SNR=10
H59A **Cadyville** 45.68 279 P P 08 23 07.1 -0.3
baz=23,SNR=13
VT1 **Waterbury** 45.70 277 P P 08 23 07.1 -0.6
VT1 IAmb IAmb 08 23 14.3
comp=Z,40nm,1.0s
I62A **Tamworth** 45.73 276 P P 08 23 07.1 -0.7
baz=23
I61A **Oroboro, Fairl** 45.92 277 P P 08 23 09.5 +0.2
baz=23,SNR=7.0
LONY **Lake Ozonia** 45.95 279 P P 08 23 09.0 -0.6
baz=23
G55A **Calabogie** 45.96 282 P P 08 23 10.0 +0.3
baz=23,SNR=14
H58A **Gabriels** 46.02 279 P P 08 23 10.0 -0.3
baz=23
F52A **Sundridge** 46.17 284 P P 08 23 10.7 -0.6
baz=23,SNR=15
KSH **Kashi** 46.20 99 P P 08 23 13.0 +1.2
KSH pP pwP 08 23 18.8 +0.1
KSH PP PP 08 25 02.0 +2.1
KSH S S 08 29 58.8 +1.5
KSH sS sS 08 30 08.6 +5.0
KSH SS SS 08 33 15.6 -6.5
KSH pmax pmax
comp=Z,17nm,0.8s
KSH pmax pmax
comp=Z,700nm,6.5s
KSH LR LR
comp=Z,660nm,6.7s
KSH LR LR
comp=Z,590nm,6.1s
KSH LR LR
comp=Z,1µm,7.3s
G54A **Lake Saint Pet** 46.20 283 P P 08 23 11.3 -0.3
baz=23,SNR=13
J63A **Strafford** 46.21 275 P P 08 23 11.1 -0.5
baz=22
F51A **Arnstein** 46.21 285 P P 08 23 10.8 -0.9
baz=23
ZEA **Zeya** 46.22 46 *e*P P 08 23 13.8 +2.2
ZEA pmax pmax
comp=Z,46nm,1.4s
PLVO **Plevna** 46.25 282 P P 08 23 12.5 +0.5
I60A **Shoreham** 46.30 278 P P 08 23 12.1 -0.3
baz=23
E48A **Lockeyer** 46.31 287 P P 08 23 11.5 -0.9
baz=23
H57A **Richville** 46.32 280 P P 08 23 12.1 -0.3
baz=23
ULM **Lac du Bonnet** 46.34 301 P P 08 23 12.3 -0.3
comp=Z,11nm,0.9s,baz=8.4,slow=9.6,SNR=6.9
ULM LR LR 08 42 28.9
comp=Z,867nm,18.3s,baz=53,slow=36
ULM **Lac du Bonnet** 46.34 301 IAmb IAmb 08 23 18.1
comp=Z,31nm,1.1s
D46A **Sault St. Mari** 46.43 289 P P 08 23 12.7 -0.7
baz=23
H56A **Elgin** 46.44 281 P P 08 23 12.0 -1.4
baz=23
NCB **Newcomb** 46.45 279 IAmb IAmb 08 23 19.7
comp=Z,39nm,1.2s
J62A **Henniker** 46.46 276 P P 08 23 13.2 -0.4
baz=22
I59A **Olmsteadville** 46.51 278 P P 08 23 13.6 -0.5
baz=22
J61A **Chester** 46.56 277 P P 08 23 14.0 -0.4
baz=22
G53A **Haliburton** 46.60 283 P P 08 23 14.2 -0.5
baz=23
E47A **Iron Bridge** 46.63 288 P P 08 23 14.8 -0.1
baz=23
H55A **Tweed** 46.73 282 P P 08 23 15.7 0.0
baz=23
ACCN **Adirondack Com** 46.83 278 P P 08 23 16.9 +0.3
I57A **Carthage** 46.88 280 P P 08 23 16.9 0.0
baz=22
SONM **Songino Array** 46.88 66 P P 08 23 18.0 +1.0
comp=Z,17nm,1.1s,baz=327,slow=5.9,SNR=51
SONM PcP PcP 08 24 50.3 +0.8
comp=Z,4.2nm,1.0s,baz=299,slow=4.3,SNR=4.5
SONM LR LR 08 45 17.4
comp=Z,151nm,20.3s,baz=317,slow=39
SONM **Songino Array** 46.88 66 IAmb IAmb 08 23 20.9
comp=Z,22nm,1.2s
K63A **Dunstable** 46.88 275 P P 08 23 17.0 +0.1
baz=22
DELO **Deloro Mine** 46.88 282 P P 08 23 16.6 -0.3
J60A **Lant Hill Farm** 46.89 278 P P 08 23 17.1 0.0
baz=22
I58A **Old Forge** 46.91 279 P P 08 23 17.2 0.0
baz=22
F49A **Sandfield** 46.94 287 P P 08 23 17.3 -0.1
baz=23

E46A Sault Ste Mari 46.99 289 P P 08 23 18.5 +0.8
J59A Piesco 46.99 279 P P 08 23 17.1 -0.7
baz=22,SNR=12
ULN Ulaanbaatar 47.02 66*c i* P P 08 23 20.0 +1.9
ULN pmax pmax
comp=Z,50nm,1.3s
ULN Ulaanbaatar 47.02 66 P P 08 23 18.0 -0.2
HRV Adam Dziewonsk 47.05 275 P P 08 23 17.3 -1.0
HRV pmax pmax
comp=Z,70nm,1.3s
HRV Adam Dziewonsk 47.05 275 P P 08 23 17.3 -1.0
HRV Adam Dziewonsk 47.05 275 P P 08 23 18.1 -0.1
baz=22
SADO Sadowa 47.07 284 P P 08 23 16.0 -2.3
H53A Bobcaygeon 47.10 283 P P 08 23 18.3 -0.3
baz=22
K62A Royalston 47.10 276 P P 08 23 16.7 -1.9
K62A Royalston 47.10 276 P P 08 23 18.9 +0.3
baz=22
I55A Frankford 47.18 282 P P 08 23 19.2 0.0
baz=22
J58A Remsen 47.31 279 P P 08 23 20.2 0.0
baz=22
HRA Herat 47.34 115 P P 08 23 21.4 +0.6
L64A Middleborough 47.38 274 P P 08 23 20.7 -0.1
baz=22
K61A Williamstown 47.38 277 P P 08 23 21.9 +1.1
baz=22,SNR=5.7
H52A Wyevale 47.39 284 P P 08 23 20.6 -0.3
baz=22
EYMN Ely 47.40 296 P P 08 23 20.1 -0.8
baz=22,SNR=11
L61B Northampton 47.42 276 P P 08 23 22.2 +1.1
baz=22,SNR=13
TRY Troy 47.44 277 P P 08 23 21.6 +0.3
J57A Williamstown 47.46 280 P P 08 23 21.4 0.0
baz=22
K60A Five Rivers En 47.60 278 P P 08 23 23.3 +0.8
baz=22
L63A North Scituate 47.66 275 P P 08 23 23.6 +0.6
baz=22
M65A Busby, Falmout 47.67 274 P P 08 23 23.7 +0.6
baz=22
K59A Cooperstown 47.73 279 P P 08 23 24.6 +1.0
baz=22,SNR=12
L62A Suffield 47.80 276 P P 08 23 24.9 +0.8
baz=22
M64A Tiverton 47.84 275 P P 08 23 23.6 -0.8
baz=22
L61A Hillsdale 1, H 47.90 277 P P 08 23 26.1 +1.2
baz=22
K58A Earlville 47.96 279 P P 08 23 26.0 +0.7
baz=22
G47A Hillman 47.97 288 P P 08 23 25.5 +0.2
baz=22
J55A Hilton 48.09 282 P P 08 23 26.3 0.0
baz=22
AGMN Agassiz Nation 48.16 300 P P 08 23 26.3 -0.5
AGMN IAmb IAmb 08 23 35.8
comp=Z,32nm,1.1s
AGMN Agassiz Nation 48.16 300 P P 08 23 26.3 -0.5
baz=21
M63A Gales Ferry 48.21 275 P P 08 23 27.6 +0.4
baz=22
K57A Scipio Center 48.23 280 P P 08 23 27.4 0.0
baz=22
H48A Harrisville 48.27 287 P P 08 23 27.3 -0.3
baz=22
L60A Shokan 48.28 278 P P 08 23 27.6 -0.2
baz=22
KSCT Kent School, K 48.32 277 IAmb IAmb 08 23 35.2
comp=Z,38nm,1.1s
L59A Walton 48.32 278 P P 08 23 28.9 +0.7
baz=22
M62A Hamden 48.41 276 P P 08 23 29.6 +0.8
baz=22
I51A Listowel 48.48 285 P P 08 23 29.9 +0.7
baz=22
K56A Middlesex 48.48 281 P P 08 23 29.8 +0.4
baz=22
GLMI Grayling 48.50 288 P P 08 23 30.3 +0.8
baz=22
F42A Maple Grove Fa 48.56 292 P P 08 23 28.9 -1.0
F42A IAmb IAmb 08 23 35.6
comp=Z,39nm,0.8s
BINY Binghamton 48.58 279 P P 08 23 30.8 +0.7
baz=22,SNR=14
E38A The Farm, Brul 48.66 295 IAmb IAmb 08 23 36.0
comp=Z,47nm,1.1s
K55A Perry 48.66 282 P P 08 23 31.3 +0.5
baz=22,SNR=5.0
L58A Harry Jones Me 48.68 279 P P 08 23 31.4 +0.5
baz=22
M61A Granite Spring 48.78 277 P P 08 23 32.4 +0.8
baz=22
WSPT Westport, CT 48.79 276 IAmb IAmb 08 23 38.9
comp=Z,55nm,1.3s
HIA Hailar 48.80 54*ce* P P 08 23 33.5 +1.8
HIA pmax pmax
comp=Z,137nm,1.2s
I48A Sherman Twp 48.84 287 P P 08 23 32.5 +0.4
baz=22
H46A Fife Lake 48.92 289 P P 08 23 32.4 -0.3
baz=22
K54A Basiliko Farm, 48.94 282 P P 08 23 32.7 -0.3
baz=22
L57A Andrews Acres 49.00 280 P P 08 23 34.4 +1.0
baz=22,SNR=16
M60A Port Jervis 49.01 278 P P 08 23 32.7 -0.6
baz=22
M59A Waymart 49.03 279 P P 08 23 34.5 +0.9
baz=22,SNR=11
N62A Caumsett State 49.05 276 P P 08 23 34.8 +1.1
baz=22
L56A Greenwood 49.07 281 P P 08 23 34.9 +1.0
baz=22,SNR=16
PAL Palisades 49.10 277 P P 08 23 34.7 +0.6
baz=22
WVNY West Valley, N 49.11 282 P P 08 23 35.0 +0.8
I47A Gladwin 49.22 288 P P 08 23 35.4 +0.4
baz=22
L55A Hinsdale 49.27 282 P P 08 23 35.6 +0.2
baz=22
K52A Tillsonburg 49.34 284 P P 08 23 35.7 -0.2
baz=22
N61A South Mountain 49.45 277 P P 08 23 37.1 +0.4
baz=22
J49A Marlette 49.46 286 P P 08 23 37.0 +0.2
baz=22
L54A Sinclairville 49.46 282 P P 08 23 37.1 +0.2
baz=22
M58A Price's Panora 49.47 279 P P 08 23 37.3 +0.3
baz=22
MDND Maddock 49.48 303 P P 08 23 36.4 -0.5
baz=20
I46A Reed City 49.54 289 P P 08 23 37.4 -0.1
baz=22
G40A Rib Lake 49.55 294 IAMs_20 IAMs_20 08 43 26.8
comp=Z,914nm,20.0s
N60A Cedar Hill Far 49.56 278 P P 08 23 37.7 +0.1
baz=22
BRNJ Basking Ridge 49.59 277 IAmb IAmb 08 23 44.8
comp=Z,58nm,1.2s
K51A Iona Station 49.61 285 P P 08 23 38.2 +0.2
baz=22
J48A Bridge Port 49.69 287 P P 08 23 39.0 +0.4
J48A Bridge Port 49.69 287 P P 08 23 38.3 -0.3
baz=22
M57A Sunshine Farm, 49.69 280 P P 08 23 37.7 -0.9
M57A IAmb IAmb 08 23 46.0
comp=Z,57nm,1.3s
M57A Sunshine Farm, 49.69 280 P P 08 23 39.2 +0.6
baz=22,SNR=10
N59A State Game Lan 49.70 279 P P 08 23 38.2 -0.6
N59A IAmb IAmb 08 23 46.3
comp=Z,59nm,1.1s
N59A State Game Lan 49.70 279 P P 08 23 38.8 0.0
baz=21
ERPA Erie 49.76 283 P P 08 23 39.6 +0.5
baz=22
K50A Casco 49.86 286 P P 08 23 38.7 -1.2
K50A Casco 49.86 286 P P 08 23 40.4 +0.5
baz=22
L53A Girard 49.98 283 P P 08 23 40.8 0.0
baz=22
M55A Ridgway 50.02 282 IAmb IAmb 08 23 47.4
comp=Z,48nm,1.3s
M55A Ridgway 50.02 282 P P 08 23 41.4 +0.2
baz=21
J47A Sunmer 50.03 288 P P 08 23 40.4 -0.8
baz=21
N58A Sunbury 50.04 279 IAmb IAmb 08 23 48.4
comp=Z,58nm,1.2s
N58A Sunbury 50.04 279 P P 08 23 42.0 +0.8
baz=21,SNR=5.3
K49A Clarkson 50.08 286 P P 08 23 42.0 +0.4
baz=21
O61A Allentown 50.13 277 P P 08 23 40.7 -1.3
baz=21
O60A Telford 50.16 278 P P 08 23 40.6 -1.5
baz=21
ALLY Alegheny Colle 50.23 283 P P 08 23 43.5 +0.7
M54A Oil Creek Stat 50.23 282 P P 08 23 43.3 +0.6
M54A IAmb IAmb 08 23 49.0
comp=Z,54nm,1.1s
M54A Oil Creek Stat 50.23 282 P P 08 23 43.1 +0.3
baz=21,SNR=8.4
K48A Perry 50.24 287 P P 08 23 41.3 -1.5
baz=21
SPMN Marine on St. 50.26 296 IAmb IAmb 08 23 49.0
comp=Z,53nm,1.0s
SPMN Marine on St. 50.26 296 P P 08 23 43.1 +0.2
baz=21,SNR=16
N57A Milroy 50.35 280 P P 08 23 43.7 +0.1
baz=21,SNR=10
O59A Robesonia 50.38 279 P P 08 23 43.0 -0.9
baz=21
N56A West Decatur 50.41 281 P P 08 23 43.1 -0.9
baz=21
SSPA Standing Stone 50.55 280 P P 08 23 45.3 +0.1
SSPA IAmb IAmb 08 23 52.4
comp=Z,88nm,1.5s
SSPA Standing Stone 50.55 280 P P 08 23 44.8 -0.4
baz=21
P61A Hammonton 50.59 277 P P 08 23 45.8 +0.4
baz=21
L50A Kingsville 50.59 285 P P 08 23 46.1 +0.7
baz=21,SNR=5.8
K47A Vermontville 50.60 288 P P 08 23 45.2 -0.3
baz=21
PAGS Pennsylvania G 50.61 279 P P 08 23 45.6 0.0
M52A Chesterland 50.67 284 P P 08 23 46.0 0.0
M52A IAmb IAmb 08 23 52.3
comp=Z,76nm,1.2s
M52A Chesterland 50.67 284 P P 08 23 46.3 +0.2
baz=21
P60A Greenville 50.70 278 P P 08 23 45.4 -0.8
baz=21
MVL Millersville 50.72 279 IAmb IAmb 08 23 53.7
comp=Z,42nm,1.1s
N55A Marion Center 50.72 281 P P 08 23 45.8 -0.7
baz=21
O58A Lewisberry 50.76 279 P P 08 23 46.6 -0.2
baz=21
L49A Milan 50.79 286 P P 08 23 46.7 -0.2
baz=21
K46A Dorr 50.80 288 P P 08 23 46.9 0.0
baz=21
GRNR Gornyy 50.82 40 *e* P P 08 23 47.4 +0.4
GRNR pmax pmax
comp=Z,10.0nm,1.3s
GRNR MLR MLR
comp=Z,110nm,12.0s
N54A Moraine State 50.83 282 P P 08 23 47.0 -0.2
baz=21
O57A Amberson 50.88 280 P P 08 23 46.8 -0.9
baz=21
I40A Norwalk 50.95 293 P P 08 23 47.1 -1.0
I40A IAmb IAmb 08 23 54.2
comp=Z,62nm,1.1s
TAM Tamanrasset 51.02 184 P P 08 23 48.5 -0.5
TAM pmax pmax
comp=Z,33nm,1.2s
TAM Tamanrasset 51.02 184 P P 08 23 48.5 -0.5
TAM IAmb IAmb 08 23 57.9
comp=Z,33nm,1.2s
O56A Blue Knob Stat 51.08 281 IAmb IAmb 08 23 56.5
comp=Z,58nm,1.4s
O56A Blue Knob Stat 51.08 281 P P 08 23 48.8 -0.5
baz=21
M51A Elyria 51.09 285 P P 08 23 48.0 -1.2
baz=21
P59A Jarrettsville 51.10 279 P P 08 23 49.0 -0.4
baz=21
L48A N Adams 51.13 287 P P 08 23 47.5 -1.9
baz=21
M50A Fremont 51.25 285 P P 08 23 48.2 -2.2
M50A IAmb IAmb 08 23 56.5
comp=Z,43nm,1.2s
M50A Fremont 51.25 285 P P 08 23 50.0 -0.5
baz=21
L47A Sherwood 51.30 288 P P 08 23 50.5 -0.3
baz=21
O55A Ligonier 51.34 281 P P 08 23 50.5 -0.7
baz=21
KLR Kul'dur 51.40 45 || *e* P P 08 23 53.1 +1.7
KLR pmax pmax
comp=Z,9.0nm,1.3s
KLR Kul'dur 51.40 45 P P 08 23 52.5 +1.1
comp=Z,2.9nm,0.9s,baz=349,slow=6.2,SNR=4.8
KLR PcP PcP 08 25 06.1 +0.4
comp=Z,4.0nm,1.0s,baz=331,slow=2.7,SNR=3.6
SDMD Soldier's Deli 51.41 279 P P 08 23 50.9 -0.7
N52A McGinn's Farm, 51.44 284 P P 08 23 51.8 0.0
baz=21
M49A Liberty Center 51.44 286 P P 08 23 51.8 0.0
baz=21
P58A Pank, Wackersv 51.46 279 P P 08 23 51.8 -0.1
baz=21
WALA Waterton Lakes 51.47 315 P P 08 23 52.2 +0.1
WALA IAmb IAmb 08 23 57.9
comp=Z,74nm,1.2s
LLLB Lillooet 51.47 322 P P 08 23 52.8 +0.8
LLLB IAmb IAmb 08 23 59.2
comp=Z,54nm,1.1s
N51A Ashland 51.52 285 IAmb IAmb 08 23 58.5
comp=Z,59nm,1.0s
N51A Ashland 51.52 285 P P 08 23 52.5 0.0
baz=21
L46A Eue Claire 51.56 289 P P 08 23 52.4 -0.3
baz=21
EGMT Eagleton 51.59 311 P P 08 23 52.8 -0.2
EGMT Eagleton 51.59 311 P P 08 23 53.2 +0.2
baz=18,SNR=18
P57A Homestead Farm 51.66 280 IAmb IAmb 08 24 00.7
comp=Z,40nm,1.4s
P57A Homestead Farm 51.66 280 P P 08 23 52.9 -0.6
baz=21
O54A Avella 51.66 282 IAmb IAmb 08 23 59.2
comp=Z,24nm,0.9s
O54A Avella 51.66 282 P P 08 23 53.6 0.0
PEA0B Petropavlovsk- 51.68 23 P P 08 23 53.2 -0.3
PEA0B pmax pmax
comp=Z,84nm,1.4s
PEA0B Petropavlovsk- 51.68 23 P P 08 23 53.2 -0.3
PEA0B IAmb IAmb 08 24 01.1
comp=Z,84nm,1.4s
PETK Petropavlovsk- 51.68 23 P P 08 23 53.4 -0.1
comp=Z,5.5nm,0.9s,baz=15,slow=1.6,SNR=4.3
PETK LR LR 08 47 02.7
comp=Z,161nm,19.3s,baz=58,slow=37
JFWS Jewell Farm 51.76 292 P P 08 23 52.8 -1.4
JFWS pmax pmax
comp=Z,50nm,1.0s
JFWS Jewell Farm 51.76 292 P P 08 23 52.8 -1.4
JFWS IAmb IAmb 08 24 00.0
comp=Z,50nm,1.0s
JFWS Jewell Farm 51.76 292 P P 08 23 53.6 -0.6
baz=21
O53A New Philadelph 51.83 283 P P 08 23 55.3 +0.5
baz=21,SNR=18
N50A Nevada 51.87 285 P P 08 23 55.3 +0.3
baz=21
P56A Dayton Farm, R 51.87 281 P P 08 23 55.6 +0.6
baz=21
M47A Cromwell 51.99 288 P P 08 23 56.1 +0.2
baz=21
MCWV Mont Chateau 52.01 282 P P 08 23 56.4 +0.3
baz=21
N49A Columbus Grove 52.01 286 IAmb IAmb 08 24 01.9
comp=Z,38nm,1.0s
N49A Columbus Grove 52.01 286 P P 08 23 56.3 +0.2
baz=21
Q58A Fox Den Farm, 52.08 279 P P 08 23 57.2 +0.6
baz=21
O52A Adamsville 52.13 284 P P 08 23 55.2 -1.8
O52A IAmb IAmb 08 24 03.0
comp=Z,40nm,1.1s
O52A Adamsville 52.13 284 P P 08 23 57.5 +0.5
baz=21
P55A Reedsville 52.14 282 P P 08 23 57.7 +0.6
baz=21,SNR=17
Q57A Strasburg 52.19 280 P P 08 23 57.8 +0.3
baz=21
P54A Burton 52.23 282 P P 08 23 58.1 +0.3
baz=21
N48A Decatur 52.30 287 P P 08 23 58.5 +0.2
baz=21
O51A Pataskala 52.31 284 P P 08 23 57.6 -0.7
baz=21
ACSO Alum Creek Sta 52.33 285 P P 08 23 57.6 -0.9
ACSO IAmb IAmb 08 24 04.3
comp=Z,44nm,1.1s
ACSO IAMs_20 IAMs_20 08 45 08.4
comp=Z,776nm,18.0s
ACSO Alum Creek Sta 52.33 285 P P 08 23 58.5 0.0
baz=21
Q56A Snyder Ridge, 52.40 281 P P 08 23 58.2 -0.8
Q56A Snyder Ridge, 52.40 281 P P 08 23 58.9 -0.2
baz=21
N47A Urbana 52.46 288 IAmb IAmb 08 24 05.0
comp=Z,65nm,1.1s
N47A Urbana 52.46 288 P P 08 23 58.7 -0.7
baz=21
L42A Oliver, Polo 52.46 292 P P 08 23 59.9 +0.5
L42A IAmb IAmb 08 24 05.1
comp=Z,53nm,1.1s
O50A Cable 52.58 285 P P 08 24 00.7 +0.4
baz=21,SNR=11
P53A Whipple 52.59 283 P P 08 24 00.3 -0.1
P53A IAmb IAmb 08 24 06.8
comp=Z,73nm,1.3s
P53A Whipple 52.59 283 P P 08 23 59.1 -1.3
baz=21
R59A King George, V 52.61 279 P P 08 24 00.9 +0.4
baz=21
ECSD EROS Data Cent 52.61 298 P P 08 24 00.9 +0.4
ECSD IAmb IAmb 08 24 06.5
comp=Z,59nm,1.1s
ECSD EROS Data Cent 52.61 298 P P 08 24 00.7 +0.2
baz=20,SNR=33
P52A Corning 52.66 284 P P 08 24 01.2 +0.3
baz=21
CBN Corbin Frederi 52.68 279 P P 08 24 00.6 -0.5
CBN IAmb IAmb 08 24 08.5
comp=Z,36nm,1.0s
Q55A Buckhannon 52.69 282 P P 08 24 01.7 +0.5
baz=21
S61A Accomac 52.69 277 P P 08 24 01.1 0.0
baz=20
O49A Covington 52.74 286 IAmb IAmb 08 24 06.6
comp=Z,32nm,0.9s
O49A Covington 52.74 286 P P 08 24 01.3 -0.2
baz=21
R58A Rapidan 52.77 279 P P 08 24 01.4 -0.3
baz=21
JTMT Jette 52.79 315 IAmb IAmb 08 24 08.2
comp=Z,75nm,1.4s
L40A Anamosa 52.81 293 P P 08 24 02.4 +0.4
NEW Newport 52.85 317 P P 08 24 02.7 +0.4
NEW pmax pmax
comp=Z,47nm,1.2s
NEW MLR MLR
comp=Z,1µm,18.0s
NEW Newport 52.85 317 P P 08 24 03.2 +0.9
comp=Z,13nm,1.1s,baz=25,slow=5.2,SNR=14
NEW Newport 52.85 317 P P 08 24 02.7 +0.4
NEW IAmb IAmb 08 24 08.9
comp=Z,47nm,1.2s
NEW Newport 52.85 317 IAMs_20 IAMs_20 08 47 01.8
comp=Z,1µm,18.0s
NEW Newport 52.85 317 P P 08 24 02.5 +0.2
baz=17,SNR=20
O48A Farmland 52.90 287 P P 08 24 02.7 0.0
baz=20
Q54A Coxs Mills 52.91 282 P P 08 24 03.2 +0.4
baz=21,SNR=16
R57A Stanardsville 52.91 280 P P 08 24 02.9 +0.1
baz=20
GTA Gaotai 52.96 76 || P P 08 24 06.3 +3.0
GTA pP pwP 08 24 10.9 +0.4
GTA sP sP 08 24 13.5 +5.0
GTA S S 08 31 33.4 +1.5
GTA sS sS 08 31 41.3 +3.1
GTA pmax pmax
comp=Z,12nm,1.8s
GTA pmax pmax
comp=Z,470nm,6.8s
GTA LR LR
comp=Z,350nm,19.0s
GTA LR LR
comp=Z,310nm,17.5s
GTA LR LR
comp=Z,420nm,16.8s
R58B Mineral 53.04 279 P P 08 24 03.7 -0.1
baz=20
P51A Williamsport 53.05 285 P P 08 24 03.7 -0.1
P51A IAmb IAmb 08 24 09.4
comp=Z,28nm,0.9s
P51A Williamsport 53.05 285 P P 08 24 03.9 +0.1
baz=20
R56A Bull Pasture M 53.05 281 P P 08 24 03.7 -0.2
baz=20
S59A Mechanicsville 53.07 279 P P 08 24 03.6 -0.3
baz=20
P50A Jamestown 53.13 285 P P 08 24 04.1 -0.3
baz=20,SNR=10.0
B08A Colville Reser 53.18 319 P P 08 24 05.5 +0.8
B08A IAmb IAmb 08 24 11.2
comp=Z,43nm,1.1s
Q53A Leroy 53.22 283 P P 08 24 05.1 +0.1
baz=20
SFIN Lafayette 53.30 289 P P 08 24 06.0 +0.4
SFIN IAmb IAmb 08 24 11.4
comp=Z,45nm,1.1s
SFIN Lafayette 53.30 289 P P 08 24 05.2 -0.5
baz=20
Q52A Bidwell 53.32 284 P P 08 24 04.9 -0.9
baz=20
S58A Poland Farm, P 53.42 279 P P 08 24 06.9 +0.3
S58A IAmb IAmb 08 24 13.8
comp=Z,34nm,1.3s
S58A Poland Farm, P 53.42 279 P P 08 24 06.0 -0.5
baz=20
P49A Miami Univ. Ec 53.45 286 P P 08 24 06.7 -0.1
baz=20,SNR=5.0
SCIA State Center 53.47 295 IAMs_20 IAMs_20 08 45 48.5
comp=Z,938nm,21.0s
SCIA State Center 53.47 295 P P 08 24 06.5 -0.3
baz=20
C09A Chrisman Ranch 53.52 318 P P 08 24 07.6 +0.5
S57A Dark Hollow, R 53.53 280 IAMs_20 IAMs_20 08 45 47.4
comp=Z,1µm,18.0s
S57A Dark Hollow, R 53.53 280 P P 08 24 06.8 -0.6
baz=20
Q51A Peebles 53.56 285 IAmb IAmb 08 24 13.3
comp=Z,52nm,1.1s
Q51A Peebles 53.56 285 P P 08 24 07.8 +0.3
baz=20
MSO Missoula 53.60 314 P P 08 24 08.7 +0.8
MSO IAMs_20 IAMs_20 08 47 04.6
comp=Z,1µm,19.0s
MSO Missoula 53.60 314 P P 08 24 08.2 +0.3
baz=17,SNR=50
GCMT Greycliff 53.70 310 P P 08 24 09.9 +1.2
R54A Victor 53.70 282 P P 08 24 08.9 +0.2
baz=20
P48A Milroy 53.71 287 P P 08 24 08.2 -0.5
P48A Milroy 53.71 287 P P 08 24 07.9 -0.8
baz=20,SNR=14
HDIL Hopedale 53.72 291 IAmb IAmb 08 24 14.7
comp=Z,46nm,1.1s
HDIL Hopedale 53.72 291 P P 08 24 08.9 +0.2
baz=20
S56A Natural Bridge 53.78 281 P P 08 24 09.1 -0.1
baz=20
R53A Hurricane 53.83 283 IAmb IAmb 08 24 15.7
comp=Z,40nm,1.2s
R53A Hurricane 53.83 283 P P 08 24 09.1 -0.4
baz=20

O44A	**Mansfield**	**53.88**	**290**	P	**P**	**08**	**24**	**09.4 -0.5**
T59A	**Double "B" Far**	**53.88**	**278**	P	**P**	**08**	**24**	**10.2 +0.3**
T59A				IAmb	IAmb	08	24	17.1
	comp=Z,37nm,1.2s							
T59A	**Double "B" Far**	**53.88**	**278**	P	**P**	**08**	**24**	**10.1 +0.2**
	baz=20							
Q50A	**Georgetown**	**53.90**	**285**	P	**P**	**08**	**24**	**09.6 -0.4**
	baz=20							
S55A	**Lewisburg**	**53.95**	**281**	P	**P**	**08**	**24**	**08.2 -2.3**
	baz=20							
BANOM	**Banah**	**53.98**	**125**	P	**P**	**08**	**24**	**11.6 +0.9**
N41A	**Harden Midland**	**53.99**	**292**	P	**P**	**08**	**24**	**09.9 -0.7**
Q49A	**Aurora**	**54.00**	**286**	P	**P**	**08**	**24**	**09.8 -1.0**
	baz=20,SNR=11							
R52A	**Catlettsburg**	**54.01**	**284**	P	**P**	**08**	**24**	**11.2 +0.3**
	baz=20							
RAYN	**Ar Rayn**	**54.01**	**137**	P	**P**	**08**	**24**	**10.6 -0.5**
RAYN				pmax	pmax			
	comp=Z,44nm,1.5s							
RAYN	**Ar Rayn**	**54.01**	**137**	P	**P**	**08**	**24**	**10.6 -0.5**
RAYN				IAmb	IAmb	08	24	14.6
	comp=Z,44nm,1.5s							
RSSD	**Black Hills**	**54.02**	**305**	P	**P**	**08**	**24**	**10.2 -1.0**
RSSD				pmax	pmax			
	comp=Z,54nm,1.5s							
RSSD	**Black Hills**	**54.02**	**305**	P	**P**	**08**	**24**	**10.2 -1.0**
RSSD				IAmb	IAmb	08	24	17.2
	comp=Z,54nm,1.4s							
RSSD	**Black Hills**	**54.02**	**305**	P	**P**	**08**	**24**	**11.2 0.0**
	baz=19							
S54A	**Dingess, Beckl**	**54.15**	**282**	P	**P**	**08**	**24**	**12.9 +1.0**
	baz=20							
T58A	**Grand View Acr**	**54.18**	**279**	P	**P**	**08**	**24**	**12.5 +0.4**
	baz=20							
RLMT	**Red Lodge**	**54.25**	**310**	IAmb	IAmb	08	24	19.4
	comp=Z,56nm,1.3s							
RLMT	**Red Lodge**	**54.25**	**310**	P	**P**	**08**	**24**	**13.3 +0.5**
	baz=18,SNR=26							
BLO	**Bloomington**	**54.28**	**288**	P	**P**	**08**	**24**	**12.6 -0.2**
BLO				pmax	pmax			
	comp=Z,25nm,0.8s							
BLO	**Bloomington**	**54.28**	**288**	P	**P**	**08**	**24**	**12.6 -0.2**
BLO				IAmb	IAmb	08	24	17.7
	comp=Z,25nm,0.8s							
Q48A	**North Vernon**	**54.29**	**287**	P	**P**	**08**	**24**	**13.0 +0.1**
	baz=20							
R51A	**Hillsboro**	**54.30**	**285**	P	**P**	**08**	**24**	**13.3 +0.3**
	baz=20							
T57A	**Hurt**	**54.33**	**280**	IAmb	IAmb	08	24	20.6
	comp=Z,40nm,1.4s							
T57A	**Hurt**	**54.33**	**280**	P	**P**	**08**	**24**	**13.6 +0.4**
	baz=20							
BLA	**Blacksburg**	**54.45**	**281**	IAmb	IAmb	08	24	22.2
	comp=Z,35nm,1.1s							
BLA	**Blacksburg**	**54.45**	**281**	P	**P**	**08**	**24**	**13.8 -0.4**
	baz=20							
LTY	**Liberty**	**54.48**	**320**	P	**P**	**08**	**24**	**13.9 -0.4**
T56A	**Rocky Mt**	**54.52**	**281**	P	**P**	**08**	**24**	**14.9 +0.4**
	baz=20							
R50A	**Paris**	**54.52**	**285**	P	**P**	**08**	**24**	**13.8 -0.8**
R50A				IAmb	IAmb	08	24	20.2
	comp=Z,44nm,1.0s							
R50A	**Paris**	**54.52**	**285**	P	**P**	**08**	**24**	**14.4 -0.1**
	baz=20,SNR=14							
T55A	**Pulaski**	**54.64**	**281**	P	**P**	**08**	**24**	**15.6 +0.1**
	baz=20							
D03D	**Eldon**	**54.65**	**322**	P	**P**	**08**	**24**	**15.7 +0.4**
	baz=15,SNR=13							
U58A	**Oxford**	**54.70**	**279**	P	**P**	**08**	**24**	**16.1 +0.2**
	baz=20							
HHC	**Hu-ho-hao-te**	**54.72**	**65**	*e*P	**P**	**08**	**24**	**15.8 -0.3**
HHC				sP	pwP	08	24	26.1 +2.6
HHC				S	**S**	**08**	**31**	**58.0 +2.3**
HHC				sS	sS	08	32	04.5 +2.5
HHC				pmax	pmax			
	comp=Z,7.0nm,1.0s							
HHC				pmax	pmax			
	comp=Z,140nm,6.3s							
HHC				LR	LR			
	comp=Z,190nm,15.1s							
HHC				LR	LR			
	comp=Z,170nm,15.9s							
HHC				LR	LR			
	comp=Z,270nm,16.3s							
DLMT	**Dillon**	**54.73**	**312**	P	**P**	**08**	**24**	**16.5 +0.4**
E09A	**Wood Farm, Sta**	**54.73**	**317**	P	**P**	**08**	**24**	**16.4 +0.5**
E09A				IAmb	IAmb	08	24	22.2
	comp=Z,27nm,1.3s							
R49A	**Shelbyville**	**54.74**	**286**	IAmb	IAmb	08	24	21.8
	comp=Z,38nm,1.1s							
R49A	**Shelbyville**	**54.74**	**286**	P	**P**	**08**	**24**	**16.1 0.0**
	baz=20,SNR=5.4							
S52A	**Salyersville**	**54.74**	**284**	P	**P**	**08**	**24**	**16.3 +0.1**
	baz=20							
U57A	**Blanch**	**54.88**	**280**	P	**P**	**08**	**24**	**16.7 -0.5**
	baz=20							
UOSS	**Minazif**	**54.90**	**125**	P	**P**	**08**	**24**	**17.1 -0.3**
UOSS				IAmb	IAmb	08	24	20.2
	comp=Z,25nm,1.1s							
UOSS	**Minazif**	**54.90**	**125**	P	**P**	**08**	**24**	**19.0 +1.6**
T54A	**Tazewell**	**54.91**	**282**	P	**P**	**08**	**24**	**17.1 -0.4**
	baz=20							
NLWA	**Neilton Lookou**	**54.92**	**322**	P	**P**	**08**	**24**	**19.0 +1.6**
E08A	**Dider Farm, El**	**54.92**	**318**	P	**P**	**08**	**24**	**18.1 +0.8**
S51A	**Beattyville**	**54.92**	**284**	IAmb	IAmb	08	24	22.6
	comp=Z,20nm,0.9s							
S51A	**Beattyville**	**54.92**	**284**	P	**P**	**08**	**24**	**17.4 -0.1**
	baz=20							
V60A	**Jim Taylor Roa**	**54.93**	**278**	IAmb	IAmb	08	24	23.4
	comp=Z,23nm,0.8s							
V60A	**Jim Taylor Roa**	**54.93**	**278**	P	**P**	**08**	**24**	**18.0 +0.5**
	baz=20							
D04E	**Lakebay**	**54.94**	**321**	P	**P**	**08**	**24**	**18.6 +1.2**
	baz=15,SNR=9.2							
YNR	**Norris Junctio**	**54.94**	**311**	P	**P**	**08**	**24**	**16.9 -1.0**
QLMT	**Earthquake Lak**	**54.99**	**311**	P	**P**	**08**	**24**	**18.9 +0.7**
HATD	**Hatta, Dubai**	**55.00**	**125**	P	**P**	**08**	**24**	**18.3 +0.2**
	SNR=7.1							
E07A	**Sunnyside**	**55.01**	**319**	P	**P**	**08**	**24**	**17.8 -0.2**
YHB	**Horse Butte**	**55.02**	**311**	P	**P**	**08**	**24**	**16.7 -1.6**
LKWY	**Lake**	**55.02**	**310**	P	**P**	**08**	**24**	**17.6 -0.9**
LKWY				pmax	pmax			
	comp=Z,27nm,1.4s							
LKWY	**Lake**	**55.02**	**310**	P	**P**	**08**	**24**	**17.6 -0.9**
F10A	**Beach Ranch, E**	**55.07**	**316**	IAmb	IAmb	08	24	24.6
	comp=Z,33nm,1.1s							
WCI	**Wyandotte Cave**	**55.10**	**287**	P	**P**	**08**	**24**	**18.7 -0.1**
WCI				pmax	pmax			
	comp=Z,43nm,1.3s							
WCI	**Wyandotte Cave**	**55.10**	**287**	P	**P**	**08**	**24**	**18.7 -0.1**
WCI				IAmb	IAmb	08	24	25.4
	comp=Z,42nm,1.2s							
WCI	**Wyandotte Cave**	**55.10**	**287**	P	**P**	**08**	**24**	**18.6 -0.1**
	baz=20							
S50A	**Richmond**	**55.10**	**285**	P	**P**	**08**	**24**	**19.0 +0.2**
	baz=20,SNR=20							
HAWA	**Hanford**	**55.11**	**318**	P	**P**	**08**	**24**	**18.8 +0.1**
OLIL	**Olney**	**55.11**	**289**	P	**P**	**08**	**24**	**17.5 -1.4**
OLIL				IAmb	IAmb	08	24	24.2
	comp=Z,43nm,1.2s							
ASHO	**Ashiyiah**	**55.12**	**125**	P	**P**	**08**	**24**	**20.8 +1.7**
LON	**Longmire**	**55.18**	**320**	P	**P**	**08**	**24**	**20.0 +0.7**
LON				pmax	pmax			
	comp=Z,60nm,1.3s							
LON	**Longmire**	**55.18**	**320**	P	**P**	**08**	**24**	**20.0 +0.7**
LON				IAmb	IAmb	08	24	25.9
	comp=Z,60nm,1.2s							
V59A	**Middlesex**	**55.20**	**279**	P	**P**	**08**	**24**	**19.5 0.0**
	baz=20							
H17A	**Grant Village**	**55.22**	**310**	IAMs_20	IAMs_20	08	47	43.6
	comp=Z,869nm,21.0s							
H17A	**Grant Village**	**55.22**	**310**	P	**P**	**08**	**24**	**20.2 +0.3**
	baz=17,SNR=34							
S49A	**Springfield**	**55.25**	**286**	P	**P**	**08**	**24**	**19.8 0.0**
	baz=20,SNR=5.4							
T53A	**Wise**	**55.25**	**283**	P	**P**	**08**	**24**	**19.9 -0.1**
	baz=20,SNR=11							
CN2	**Changchun**	**55.25**	**52**	*e*P	**P**	**08**	**24**	**20.5 +0.7**
CN2				pmax	pmax			
	comp=Z,20nm,1.2s							
U56A	**King**	**55.25**	**281**	IAmb	IAmb	08	24	25.9
	comp=Z,32nm,0.9s							
U56A				IAMs_20	IAMs_20	08	46	33.9
	comp=Z,1μm,18.0s							
U56A	**King**	**55.25**	**281**	P	**P**	**08**	**24**	**19.8 -0.1**
	baz=20							
T52A	**Hallie**	**55.26**	**283**	IAmb	IAmb	08	24	26.0
	comp=Z,35nm,1.1s							
T52A	**Hallie**	**55.26**	**283**	P	**P**	**08**	**24**	**19.1 -0.8**
	baz=20							
MCMT	**McKenzie Canyo**	**55.29**	**312**	P	**P**	**08**	**24**	**21.5 +1.1**
U55A	**TA2, Sparta**	**55.29**	**281**	P	**P**	**08**	**24**	**19.8 -0.4**
	baz=20							
V58A	**Windy Hill, Pi**	**55.42**	**279**	IAmb	IAmb	08	24	27.1
	comp=Z,29nm,0.9s							
V58A	**Windy Hill, Pi**	**55.42**	**279**	P	**P**	**08**	**24**	**21.5 +0.5**
	baz=20							
U54A	**Nelsons Funny**	**55.48**	**282**	P	**P**	**08**	**24**	**21.9 +0.2**
U54A				IAmb	IAmb	08	24	27.6
	comp=Z,42nm,1.0s							
U54A	**Nelsons Funny**	**55.48**	**282**	P	**P**	**08**	**24**	**21.7 +0.1**
	baz=20							
E04D	**Cinebar**	**55.50**	**321**	P	**P**	**08**	**24**	**21.0 -0.5**
	baz=15							
V57A	**Coltrane Farms**	**55.52**	**280**	P	**P**	**08**	**24**	**21.7 0.0**
	baz=20							
FLWY	**Flagg Ranch**	**55.55**	**310**	IAmb	IAmb	08	24	30.6
	comp=Z,51nm,1.3s							
YSS	**Yuzh-Sakhalins**	**55.61**	**37**	*e*P	**P**	**08**	**24**	**24.7 +2.4**
YSS				*e*		08	24	28.6
YSS				pmax	pmax			
	comp=Z,30nm,1.5s							
YSS	**Yuzh-Sakhalins**	**55.61**	**37**	P	**P**	**08**	**24**	**21.4 -0.9**
YSS				IAmb	IAmb	08	24	25.5
	comp=Z,66nm,1.4s							
T51A	**Gray**	**55.65**	**284**	P	**P**	**08**	**24**	**23.1 +0.3**
	baz=20							
F07A	**Phinny Hill Vi**	**55.66**	**319**	P	**P**	**08**	**24**	**23.0 +0.3**
F07A				IAmb	IAmb	08	24	30.1
	comp=Z,52nm,1.3s							
E03A	**Lebam**	**55.69**	**322**	P	**P**	**08**	**24**	**22.8 0.0**
USIN	**University of**	**55.72**	**288**	P	**P**	**08**	**24**	**22.8 -0.4**
USIN				IAmb	IAmb	08	24	28.5
	comp=Z,48nm,1.1s							
SOHO	**SOHO**	**55.76**	**125**	P	**P**	**08**	**24**	**24.2 +0.6**
	SNR=6.1							
SLM	**Saint Louis**	**55.77**	**291**	P	**P**	**08**	**24**	**22.6 -1.0**
SLM				pmax	pmax			
	comp=Z,46nm,1.4s							
SLM	**Saint Louis**	**55.77**	**291**	P	**P**	**08**	**24**	**22.6 -1.0**
SLM				IAmb	IAmb	08	24	28.6
	comp=Z,46nm,1.4s							
V56A	**Mocksville**	**55.79**	**281**	P	**P**	**08**	**24**	**23.9 +0.2**
	baz=20							
U53A	**Fall Branch**	**55.84**	**283**	P	**P**	**08**	**24**	**24.0 -0.1**
	baz=20,SNR=5.7							
T50A	**Nancy**	**55.84**	**285**	P	**P**	**08**	**24**	**24.2 +0.1**
	baz=20,SNR=9.4							
MOOW	**Moose Ponds**	**55.88**	**310**	IAmb	IAmb	08	24	31.4
	comp=Z,39nm,1.2s							
TZTN	**Tazewell**	**55.94**	**284**	IAmb	IAmb	08	24	30.9
	comp=Z,43nm,1.2s							
TZTN	**Tazewell**	**55.94**	**284**	P	**P**	**08**	**24**	**24.7 -0.1**
	baz=20							
V55A	**Taylorsville**	**55.95**	**281**	IAMs_20	IAMs_20	08	46	57.2
	comp=Z,1μm,20.0s							
V55A	**Taylorsville**	**55.95**	**281**	P	**P**	**08**	**24**	**24.3 -0.5**
	baz=20							
F05D	**White Salmon**	**55.95**	**320**	P	**P**	**08**	**24**	**24.5 -0.3**
	baz=15							
T49A	**Edmonton**	**55.95**	**286**	P	**P**	**08**	**24**	**23.9 -1.0**
T49A				IAmb	IAmb	08	24	30.3
	comp=Z,41nm,1.1s							
T49A	**Edmonton**	**55.95**	**286**	P	**P**	**08**	**24**	**24.4 -0.5**
	baz=20,SNR=12							
K22A	**Casper**	**55.99**	**306**	P	**P**	**08**	**24**	**24.7 -0.6**
K22A	**Casper**	**55.99**	**306**	P	**P**	**08**	**24**	**24.7 -0.6**
	baz=18,SNR=25							
U52A	**Thorn Hill**	**56.03**	**284**	P	**P**	**08**	**24**	**24.7 -0.8**
	baz=20							
G08A	**Pilot Rock**	**56.06**	**318**	IAmb	IAmb	08	24	32.9
	comp=Z,57nm,1.3s							
F04A	**Amboy**	**56.08**	**321**	IAmb	IAmb	08	24	33.4
	comp=Z,71nm,1.5s							
SNOW	**Snow King Moun**	**56.15**	**310**	P	**P**	**08**	**24**	**28.0 +1.4**
SNOW				IAmb	IAmb	08	24	33.6
	comp=Z,56nm,1.5s							
BMO	**Blue Mountains**	**56.16**	**316**	P	**P**	**08**	**24**	**26.5 +0.1**
BMO				pmax	pmax			
	comp=Z,61nm,1.4s							
BMO				MLR	MLR			
	comp=Z,1μm,19.0s							
BMO	**Blue Mountains**	**56.16**	**316**	P	**P**	**08**	**24**	**26.5 +0.1**
BMO				IAmb	IAmb	08	24	32.5
	comp=Z,61nm,1.4s							
BMO				IAMs_20	IAMs_20	08	48	54.5
	comp=Z,1μm,19.0s							
TPAW	**Teton Pass**	**56.17**	**310**	P	**P**	**08**	**24**	**27.1 +0.3**
TPAW				IAmb	IAmb	08	24	33.7
	comp=Z,34nm,1.1s							
W58A	**Raeford**	**56.18**	**279**	P	**P**	**08**	**24**	**25.6 -0.9**
	baz=20							
V54A	**Nebo**	**56.22**	**282**	P	**P**	**08**	**24**	**26.8 -0.1**
	baz=20							
U51A	**La Follette**	**56.22**	**284**	P	**P**	**08**	**24**	**26.0 -0.8**
	baz=20							
USRK	**Ussuriysk Ar.**	**56.26**	**46**	P	**P**	**08**	**24**	**27.7 +0.7**
	comp=Z,7.9nm,1.1s,baz=339,slow=8.6,SNR=9.1							
USRK				PcP	**PcP**	**08**	**25**	**24.2 -0.2**
	comp=Z,5.2nm,0.9s,baz=27,slow=1.3,SNR=5.4							
USRK				LR	LR	08	51	23.2
	comp=Z,101nm,19.2s,baz=310,slow=39							
W57A	**Gilead**	**56.26**	**280**	IAmb	IAmb	08	24	33.0
	comp=Z,24nm,1.0s							
W57A	**Gilead**	**56.26**	**280**	P	**P**	**08**	**24**	**27.1 0.0**
	baz=20							
REDW	**Red Top Meadow**	**56.27**	**310**	P	**P**	**08**	**24**	**26.9 -0.5**
REDW				IAmb	IAmb	08	24	35.1
	comp=Z,50nm,1.4s							
S44A	**Carbondale**	**56.40**	**289**	P	**P**	**08**	**24**	**26.9 -1.1**
U50A	**Jamestown**	**56.41**	**285**	P	**P**	**08**	**24**	**27.9 -0.4**
	baz=20							
G06A	**Carlson Farm,**	**56.43**	**319**	P	**P**	**08**	**24**	**29.3 +1.1**
G06A				IAmb	IAmb	08	24	35.5
	comp=Z,60nm,1.5s							
FVM	**French Village**	**56.43**	**291**	P	**P**	**08**	**24**	**27.9 -0.4**
FVM				pmax	pmax			
	comp=Z,39nm,1.1s							
FVM	**French Village**	**56.43**	**291**	P	**P**	**08**	**24**	**27.9 -0.4**
FVM				IAmb	IAmb	08	24	33.2
	comp=Z,39nm,1.1s							
W56A	**Indian Trail**	**56.44**	**280**	P	**P**	**08**	**24**	**27.7 -0.7**
	baz=20							
T47A	**Sharon Grove**	**56.49**	**287**	P	**P**	**08**	**24**	**27.9 -0.8**
T47A				IAmb	IAmb	08	24	33.8
	comp=Z,30nm,1.1s							
G05D	**Wamic, OR**	**56.55**	**320**	P	**P**	**08**	**24**	**28.1 -1.0**
	baz=15							
BW06	**Boulder Array**	**56.56**	**309**	P	**P**	**08**	**24**	**29.7 +0.2**
BW06				IAmb	IAmb	08	24	35.4
	comp=Z,47nm,1.2s							
BW06	**Boulder Array**	**56.56**	**309**	P	**P**	**08**	**24**	**29.7 +0.2**
	baz=17,SNR=22							
PD31	**Pinedale Array**	**56.56**	**309**	P	**P**	**08**	**24**	**29.7 +0.2**
PD31				IAmb	IAmb	08	24	35.4
	comp=Z,43nm,1.2s							
PDAR	**Pinedale Array**	**56.56**	**309**	P	**P**	**08**	**24**	**29.2 -0.2**
	comp=Z,7.1nm,1.0s,baz=35,slow=5.4,SNR=37							
PDAR				PP	**PP**	**08**	**26**	**32.8 -2.1**
	comp=Z,0.8nm,0.9s,baz=27,slow=5.0,SNR=3.2							
PDAR				LR	LR	08	47	38.8
	comp=Z,400nm,21.6s,baz=28,slow=35							
V53A	**Saluda**	**56.56**	**283**	IAmb	IAmb	08	24	35.3
	comp=Z,40nm,1.2s							
V53A	**Saluda**	**56.56**	**283**	P	**P**	**08**	**24**	**28.7 -0.6**
	baz=20							
U49A	**Red Boiling Sp**	**56.57**	**286**	P	**P**	**08**	**24**	**28.8 -0.6**
	baz=20							
CCM	**Cathedral Cave**	**56.58**	**291**	P	**P**	**08**	**24**	**28.2 -1.2**
CCM				pmax	pmax			
	comp=Z,38nm,1.1s							
CCM	**Cathedral Cave**	**56.58**	**291**	P	**P**	**08**	**24**	**28.2 -1.2**
CCM				IAmb	IAmb	08	24	34.0
	comp=Z,38nm,1.1s							
CCM	**Cathedral Cave**	**56.58**	**291**	P	**P**	**08**	**24**	**28.5 -0.9**
	baz=19							
V52A	**Sevierville**	**56.61**	**284**	P	**P**	**08**	**24**	**30.3 +0.6**
V52A				IAmb	IAmb	08	24	35.4
	comp=Z,38nm,1.2s							
V52A	**Sevierville**	**56.61**	**284**	P	**P**	**08**	**24**	**29.1 -0.6**
	baz=20							
BJI	**Beijing**	**56.64**	**61**	P	**P**	**08**	**24**	**29.8 +0.1**
BJI				pmax	pmax			
	comp=Z,4.0nm,1.1s							
KMSC	**Kings Mountain**	**56.65**	**281**	P	**P**	**08**	**24**	**29.4 -0.4**
KMSC				IAmb	IAmb	08	24	35.8
	comp=Z,33nm,1.0s							
KMSC				IAMs_20	IAMs_20	08	47	17.7
	comp=Z,1μm,20.0s							
KMSC	**Kings Mountain**	**56.65**	**281**	P	**P**	**08**	**24**	**30.0 +0.1**
	baz=20,SNR=9.5							
BIDO	**Bidbid**	**56.72**	**123**	P	**P**	**08**	**24**	**32.0 +1.5**
	SNR=11							
TKL	**Tuckaleechee C**	**56.83**	**284**	P	**P**	**08**	**24**	**31.5 +0.3**
TKL	**Tuckaleechee C**	**56.83**	**284**	P	**P**	**08**	**24**	**31.2 0.0**
	comp=Z,19nm,1.0s,baz=46,slow=9.7,SNR=11							
TKL	**Tuckaleechee C**	**56.83**	**284**	P	**P**	**08**	**24**	**31.5 +0.3**
TKL				IAmb	IAmb	08	24	37.1
	comp=Z,65nm,1.4s							
V51A	**Loudon**	**56.85**	**284**	IAmb	IAmb	08	24	37.2
	comp=Z,36nm,1.1s							
V51A	**Loudon**	**56.85**	**284**	P	**P**	**08**	**24**	**31.7 +0.4**
	baz=20							
G03D	**McMinnville, O**	**56.92**	**321**	P	**P**	**08**	**24**	**30.8 -0.9**
	baz=14							
W54A	**Cherokee Point**	**56.93**	**282**	P	**P**	**08**	**24**	**32.0 +0.1**
	baz=20,SNR=12							
KSU1	**Kansas State U**	**56.98**	**296**	P	**P**	**08**	**24**	**31.2 -1.0**
	baz=19							
PHWY	**Pilot Hill**	**57.03**	**305**	P	**P**	**08**	**24**	**33.0 +0.1**
PHWY				IAmb	IAmb	08	24	38.7
	comp=Z,38nm,1.2s							
W53A	**Cullowhee**	**57.12**	**283**	P	**P**	**08**	**24**	**33.0 -0.4**
	baz=20							
SMDO	**Samad**	**57.14**	**124**	P	**P**	**08**	**24**	**34.0 +0.4**
	SNR=9.3							
LZH	**Lanzhou**	**57.17**	**74**	*e*P	**P**	**08**	**24**	**34.6 +0.8**
LZH				pP	pwP	08	24	39.4 -1.8
LZH				sP	sP	08	24	41.9 +2.8
LZH				pmax	pmax			
	comp=Z,23nm,1.0s							
LZH				pmax	pmax			
	comp=Z,59nm,4.6s							
LZH				LR	LR			
	comp=Z,490nm,15.0s							
LZH				LR	LR			
	comp=Z,450nm,14.6s							
LZH				LR	LR			
	comp=Z,520nm,15.2s							
V50A	**Pikevile**	**57.18**	**285**	P	**P**	**08**	**24**	**32.6 -1.0**
	baz=19							
CPCT	**Cooper Cave**	**57.23**	**284**	IAMs_20	IAMs_20	08	48	12.2
	comp=Z,766nm,18.0s							
BSY	**Bisya**	**57.25**	**125**	P	**P**	**08**	**24**	**34.1 -0.2**
	SNR=8.1							
MFID	**Camas Ranch**	**57.25**	**314**	P	**P**	**08**	**24**	**34.0 -0.3**
VLA	**Vladivostok**	**57.27**	**47**	*e*P	**P**	**08**	**24**	**37.2 +3.0**
VLA				pmax	pmax			
	comp=Z,45nm,0.9s							
V49A	**McMinnville**	**57.31**	**286**	P	**P**	**08**	**24**	**33.9 -0.7**
	baz=19,SNR=5.1							
Y58A	**Scranton**	**57.34**	**279**	P	**P**	**08**	**24**	**34.4 -0.4**
	baz=19							
X55A	**Gracelyn & Ava**	**57.36**	**281**	P	**P**	**08**	**24**	**34.5 -0.5**
	baz=19							
W52A	**Murphy**	**57.40**	**284**	IAmb	IAmb	08	24	41.2
	comp=Z,32nm,1.4s							
W52A	**Murphy**	**57.40**	**284**	P	**P**	**08**	**24**	**33.8 -1.5**
	baz=19							
I05D	**Terrebonne, OR**	**57.42**	**319**	P	**P**	**08**	**24**	**34.3 -1.0**
	baz=15							
WVT	**Waverly**	**57.49**	**287**	P	**P**	**08**	**24**	**34.0 -1.8**
WVT				pmax	pmax			
	comp=Z,19nm,1.2s							
WVT	**Waverly**	**57.49**	**287**	P	**P**	**08**	**24**	**34.0 -1.8**
WVT	**Waverly**	**57.49**	**287**	P	**P**	**08**	**24**	**34.5 -1.3**
	baz=19							
X54A	**Belton**	**57.49**	**282**	P	**P**	**08**	**24**	**34.9 -1.0**
	baz=19							
H04D	**Lebanon**	**57.50**	**320**	P	**P**	**08**	**24**	**33.9 -1.9**
	baz=14							
N23A	**Red Feather La**	**57.53**	**305**	P	**P**	**08**	**24**	**35.6 -0.7**
N23A	**Red Feather La**	**57.53**	**305**	P	**P**	**08**	**24**	**35.7 -0.7**
	baz=18,SNR=26							
W51A	**Cleveland**	**57.57**	**284**	P	**P**	**08**	**24**	**35.6 -0.8**
	baz=19							
W50A	**Signal Mountai**	**57.68**	**285**	IAmb	IAmb	08	24	42.5
	comp=Z,38nm,1.1s							
W50A	**Signal Mountai**	**57.68**	**285**	P	**P**	**08**	**24**	**36.2 -1.0**
	baz=19,SNR=5.2							
MGMO	**Mountain Grove**	**57.70**	**292**	P	**P**	**08**	**24**	**37.4 +0.1**
HODGE	**Hodges**	**57.76**	**282**	P	**P**	**08**	**24**	**38.5 +0.7**
HODGE				IAmb	IAmb	08	24	43.3
	comp=Z,21nm,1.0s							
HODGE				IAMs_20	IAMs_20	08	48	01.2
	comp=Z,1μm,20.0s							
X53A	**Estanollee**	**57.79**	**283**	P	**P**	**08**	**24**	**37.0 -1.0**
	baz=19							
JMDO	**Jabal Madar**	**57.82**	**124**	P	**P**	**08**	**24**	**38.5 +0.2**
	SNR=7.6							
SWET	**Sewanee**	**57.84**	**285**	P	**P**	**08**	**24**	**37.6 -0.7**
SWET				IAmb	IAmb	08	24	42.8
	comp=Z,24nm,1.1s							
X52A	**Dahlonega**	**57.86**	**283**	P	**P**	**08**	**24**	**37.5 -1.0**
	baz=19							
Z58A	**St. Stephen**	**57.92**	**279**	P	**P**	**08**	**24**	**39.2 +0.3**
	baz=19							
W49A	**Belvidere**	**58.02**	**286**	P	**P**	**08**	**24**	**39.2 -0.3**
	baz=19							
CBKS	**Cedar Bluff**	**58.03**	**299**	P	**P**	**08**	**24**	**39.4 -0.2**
CBKS				pmax	pmax			
	comp=Z,94nm,1.1s							
CBKS				MLR	MLR	

Z54A Sparta 58.85 282 P P 08 24 44.7 -0.7
baz=19
X48A Hartselle 58.86 286 IAmb IAmb 08 24 49.7
comp=Z,25nm,1.1s
DANN Dangsing 58.86 96 eP P 08 24 46.9 +1.0
comp=Z,40nm,0.8s
GOGA Godfrey 58.86 282 IAmb IAmb 08 24 50.9
comp=Z,31nm,1.1s
GOGA Godfrey 58.86 282 P P 08 24 44.8 -0.7
baz=19
HHAR Hobbs 58.96 293 P P 08 24 44.7 -1.5
Z53A Monticello 59.01 282 P P 08 24 46.5 +0.1
baz=19,SNR=6.1
CTU Camp Tracy 59.02 310 P P 08 24 47.2 +0.6
J01E Myrtle Point 59.03 321 P P 08 24 45.4 -1.1
baz=14
MHTO MHTO 59.12 124 P P 08 24 46.8 -0.5
SNR=6.5
K04D Chiloquin, OR 59.16 319 P P 08 24 46.5 -1.1
baz=14
Q24A Divide 59.18 304 IAmb IAmb 08 24 54.1
comp=Z,42nm,1.1s
Q24A Divide 59.18 304 P P 08 24 47.7 -0.3
baz=17,SNR=27
Y49A Blount Mountai 59.25 285 IAmb IAmb 08 24 52.1
comp=Z,23nm,1.1s
155A Kite 59.33 281 P P 08 24 48.3 -0.4
baz=19
Z52A Williamson 59.33 283 P P 08 24 48.3 -0.5
baz=19
KOLN Koldanda 59.36 96 eP P 08 24 49.8 +0.6
comp=Z,161nm,1.9s
GKN Gorkha 59.43 95 eP P 08 24 50.5 +0.8
comp=Z,59nm,1.1s
K02D Willamette Mer 59.44 321 P P 08 24 48.6 -0.8
baz=14
OXF Oxford 59.44 288 P P 08 24 48.3 -1.1
OXF pmax pmax
comp=Z,44nm,1.1s
OXF Oxford 59.44 288 P P 08 24 48.2 -1.1
OXF Oxford 59.44 288 P P 08 24 48.2 -1.1
baz=19,SNR=12
154A Montrose 59.51 282 IAMs_20 IAMs_20 08 49 04.7
comp=Z,1µm,20.0s
154A Montrose 59.51 282 P P 08 24 49.3 -0.6
baz=19
W41B Gary Mavity, V 59.56 291 P P 08 24 49.0 -1.3
baz=19
MOD Modoc Plateau 59.58 318 P P 08 24 49.8 -0.7
L04D Klamath Falls 59.65 319 P P 08 24 50.9 -0.1
baz=14
Z50A Ashland 59.68 285 P P 08 24 50.2 -0.9
Z50A IAmb IAmb 08 24 55.9
comp=Z,24nm,1.1s
Z50A Ashland 59.68 285 P P 08 24 50.4 -0.7
baz=19
ELK Elko 59.70 313 IAmb IAmb 08 24 58.3
comp=Z,29nm,1.1s
DUG Dugway, Tooele 59.72 311 IAmb IAmb 08 24 57.6
comp=Z,22nm,1.0s
DUG IAMs_20 IAMs_20 08 50 42.6
comp=Z,656nm,18.0s
DUG Dugway, Tooele 59.72 311 P P 08 24 51.5 0.0
baz=16,SNR=27
TUL1 Leonard 59.79 295 P P 08 24 51.7 -0.1
baz=18
NLU North Lily Min 59.79 310 P P 08 24 52.9 +0.8
KKN Kakani 59.81 94 eP P 08 24 53.1 +0.7
X43A Marvell 59.82 290 P P 08 24 51.8 -0.3
baz=19
GUN Gumba 59.87 94 eP P 08 24 53.7 +0.8
comp=Z,89nm,1.1s
152A Waverly Hall 59.91 283 P P 08 24 53.2 +0.5
baz=19
DMN Daman 59.94 95 eP P 08 24 54.4 +1.1
comp=Z,77nm,1.4s
W39A Magazine 59.94 292 P P 08 24 51.9 -1.0
baz=18
L02E Cave Junction 59.95 321 P P 08 24 53.1 +0.3
baz=14
UALR University of 59.97 291 IAmb IAmb 08 24 57.8
comp=Z,16nm,0.9s
255A Hazlehurst 59.99 281 P P 08 24 53.6 +0.3
baz=19
M04C Macdoel 59.99 319 P P 08 24 53.5 +0.2
baz=14,SNR=13
PKIN Phulchoki 60.05 94 eP P 08 24 55.2 +1.1
PKI Pulchoki 60.06 94 eP P 08 24 54.6 +0.4
LRAL Lakeview Retre 60.18 286 P P 08 24 52.2 -2.3
baz=19
JIRN Jiri 60.19 94 eP P 08 24 56.3 +1.1
comp=Z,94nm,1.2s
254A Abbeville 60.19 282 P P 08 24 55.0 +0.3
baz=19
YBH Yreka Blue Hor 60.20 320 P P 08 24 55.2 +0.5
YBH pmax pmax
comp=Z,15nm,1.4s
YBH Yreka Blue Hor 60.20 320 P P 08 24 55.9 +1.2
comp=Z,4.8nm,0.8s,baz=55,slow=6.2,SNR=11
YBH Yreka Blue Hor 60.20 320 P P 08 24 55.2 +0.5
TMUT Trail Mountain 60.24 309 P P 08 24 56.4 +1.1
253A Americus 60.32 283 P P 08 24 55.8 +0.3
baz=19
X40A Basin Creek Fa 60.37 291 P P 08 24 55.6 -0.2
X40A Basin Creek Fa 60.37 291 P P 08 24 56.2 +0.4
baz=18
SDCO Great Sand Dun 60.43 304 P P 08 24 56.8 +0.2
SDCO IAmb IAmb 08 25 02.8
comp=Z,24nm,1.1s
SDCO Great Sand Dun 60.43 304 P P 08 24 56.9 +0.3
baz=17,SNR=25
XAN Xi'an 60.46 70 P P 08 24 57.4 +0.9
XAN pP pwP 08 25 02.6 -1.3
XAN pmax pmax
comp=Z,10.0nm,0.9s
XAN pmax pmax
comp=Z,180nm,4.3s
XAN LR LR
comp=Z,610nm,17.1s
XAN LR LR
comp=Z,300nm,17.2s
XAN LR LR
comp=Z,630nm,19.2s
XAN Xi'an 60.46 70 IAmb IAmb 08 25 03.8
comp=Z,42nm,1.1s
MIAR Mount Ida 60.51 292 P P 08 24 57.1 +0.3
MIAR pmax pmax
comp=Z,92nm,1.5s
MIAR Mount Ida 60.51 292 P P 08 24 57.1 +0.3
MIAR Mount Ida 60.51 292 P P 08 24 56.6 -0.2
baz=18,SNR=23
TIA Tai'an 60.51 62 P P 08 24 57.9 +1.1
TIA pmax pmax
comp=Z,19nm,1.1s
252A Lumpkin 60.54 283 P P 08 24 56.6 -0.4
baz=19
M02C Callahan 60.55 320 P P 08 24 57.3 +0.2
baz=14,SNR=5.8
KRMB Red Mountain 60.62 321 P P 08 24 58.4 +0.8
KRMB IAmb IAmb 08 25 04.5
comp=Z,35nm,1.1s
TOA0 Torodi Ar. Sit 60.72 188 P P 08 24 58.3 0.0
TOA0 IAmb IAmb 08 25 05.5
comp=Z,35nm,0.9s
TORD Torodi Ar. Bea 60.72 188 P P 08 24 58.5 +0.2
comp=Z,28nm,1.0s,baz=356,slow=5.8,SNR=57
TORD Torodi Ar. Bea 60.72 188 IAmb IAmb 08 25 05.5
comp=Z,22nm,0.9s
S22A 4UR Ranch, Cre 60.73 305 P P 08 24 59.9 +1.2
S22A IAmb IAmb 08 25 05.6
comp=Z,42nm,1.1s
S22A 4UR Ranch, Cre 60.73 305 P P 08 24 59.4 +0.8
baz=17,SNR=40
T25A Trinidad 60.75 303 P P 08 24 58.6 -0.1
T25A Trinidad 60.75 303 P P 08 24 59.0 +0.3
baz=17,SNR=5.6
FNO Franklin 60.81 296 P P 08 24 59.8 +0.9
TAPN Taplejung 60.91 92 eP P 08 25 01.1 +1.1
comp=Z,46nm,1.1s
N02D Trinity Center 60.93 319 P P 08 25 00.0 +0.3
baz=14,SNR=12
RAMN Ramite 60.98 93 eP P 08 25 00.6 +0.2
comp=Z,43nm,1.1s
353A Camilla 61.01 282 P P 08 25 00.4 +0.1
baz=19
WHFO Wadi Hawf 61.14 130 P P 08 24 59.2 -2.1
WLAR White Oak Lake 61.20 291 P P 08 25 01.9 +0.5

KHMM Horse Mountain 61.21 320 P P 08 25 03.3 +1.6
KHMM IAmb IAmb 08 25 09.1
comp=Z,34nm,1.1s
WDC Whiskeytown Da 61.28 319 P P 08 25 00.6 -1.3
WDC pmax pmax
comp=Z,14nm,1.0s
WDC Whiskeytown Da 61.28 319 P P 08 25 00.6 -1.3
ODAN Odare 61.29 93 eP P 08 25 03.2 +0.7
comp=Z,106nm,1.3s
O03E Paynes Creek 61.42 319 P P 08 25 03.6 +0.6
baz=14,SNR=28
Z41A Richland Creek 61.52 291 P P 08 25 03.7 0.0
baz=18
PAHR Pah Rah Range 61.53 316 P P 08 25 03.9 +0.1
PSUT Pine Spring 61.54 311 P P 08 25 04.5 +0.5
BEKR Beckworth 61.56 317 IAmb IAmb 08 25 11.0
comp=Z,33nm,1.2s
MVCO Mesa Verde 61.63 306 P P 08 25 04.8 +0.1
MVCO Mesa Verde 61.63 306 P P 08 25 04.9 +0.3
baz=16,SNR=27
MTPU Mount Pierson 61.65 310 P P 08 25 04.8 -0.2
WMOK Wichita Mounta 61.66 297 P P 08 25 04.5 -0.1
WMOK pmax pmax
comp=Z,36nm,1.0s
WMOK Wichita Mounta 61.66 297 P P 08 25 04.5 -0.1
WMOK IAmb IAmb 08 25 10.8
comp=Z,36nm,1.0s
WMOK Wichita Mounta 61.66 297 P P 08 25 04.8 +0.2
baz=18,SNR=33
O02D Mt. Diablo Mer 61.72 319 P P 08 25 05.7 +0.7
baz=14,SNR=13
KMRM Mail Ridge 61.84 320 P P 08 25 06.2 +0.3
KMRM IAmb IAmb 08 25 13.3
comp=Z,38nm,1.1s
KSRS Korea Array 61.86 52 P P 08 25 05.4 -0.5
comp=Z,0.7nm,0.6s,baz=10,slow=7.6,SNR=4.7
KSRS PcP PcP 08 25 47.1 +0.4
comp=Z,1.6nm,0.8s,baz=344,slow=4.0,SNR=4.5
KSRS LR LR 08 55 20.0
comp=Z,156nm,18.7s,baz=334,slow=39
VBMS Vicksburg 61.90 288 P P 08 25 05.2 -1.0
VBMS Vicksburg 61.90 288 P P 08 25 06.7 +0.5
baz=18
KVN Kaiserville 61.91 315 P P 08 25 06.8 +0.3
KVN pmax pmax
comp=Z,40nm,1.2s
KVN Kaiserville 61.91 315 P P 08 25 06.8 +0.3
KVN IAmb IAmb 08 25 13.3
comp=Z,40nm,1.2s
VCNR Virginia City 61.98 316 IAMs_20 IAMs_20 08 52 43.4
comp=Z,696nm,19.0s
CD2 Chengdu 62.03 76 eP P 08 25 05.4 -1.8
CD2 S S 08 33 29.8 -1.2
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 LR LR
comp=Z,630nm,15.7s
CD2 LR LR
comp=Z,510nm,12.3s
R11A Troy Canyon, C 62.08 313 P P 08 25 07.6 0.0
R11A Troy Canyon, C 62.08 313 P P 08 25 08.2 +0.6
baz=15,SNR=62
AMTX Amarillo 62.24 299 P P 08 25 08.5 -0.1
AMTX IAmb IAmb 08 25 16.4
comp=Z,24nm,1.4s
AMTX Amarillo 62.24 299 P P 08 25 09.1 +0.5
baz=17
PKCU Pink Cliffs 62.25 310 P P 08 25 10.0 +1.1
SZCU Shurtz Canyon 62.27 310 P P 08 25 08.5 -0.4
KCPM Cahto Peak 62.34 320 P P 08 25 10.3 +1.1
CCUT Cedar City 62.38 310 P P 08 25 11.5 +1.8
RYN Ryan 62.40 315 P P 08 25 10.1 +0.3
RYN IAmb IAmb 08 25 16.5
comp=Z,27nm,1.0s
NV11 Mina Array Sit 62.52 315 P P 08 25 11.2 +0.7
NV11 IAmb IAmb 08 25 17.1
comp=Z,24nm,1.1s
NVAR Mina Array Bea 62.55 315 P P 08 25 11.6 +0.8
comp=Z,9.6nm,0.9s,baz=24,slow=4.9,SNR=29
NVAR LR LR 08 53 19.2
comp=Z,891nm,18.5s,baz=7.0,slow=37
AFDM Forest Hills D 62.57 317 P P 08 25 11.2 +0.5
AFDM IAmb IAmb 08 25 18.0
comp=Z,21nm,1.2s
WAKR Walker 62.70 316 P P 08 25 13.2 +1.4
WAKR IAmb IAmb 08 25 19.0
comp=Z,25nm,1.3s
TJN Taejon 62.77 53 deP P 08 25 13.7 +1.7
KNB Kanab 62.77 310 P P 08 25 13.6 +1.4
KNB pmax pmax
comp=Z,40nm,1.1s
KNB Kanab 62.77 310 P P 08 25 13.6 +1.4
LCMT Little Creek M 62.87 310 P P 08 25 13.1 +0.2
HOPS Hopland Field 62.92 319 P P 08 25 14.3 +1.4
GDXM Geysers 63.05 319 IAmb IAmb 08 25 22.8
comp=Z,22nm,1.0s
U15A North Rim 63.23 309 IAmb IAmb 08 25 21.6
comp=Z,33nm,1.1s
ANMO Albuquerque 63.33 304 ceP P 08 25 16.7 +0.8
ANMO pmax pmax
comp=Z,17nm,1.3s
ANMO Albuquerque 63.33 304 P P 08 25 16.8 +0.8
ANMO IAmb IAmb 08 25 22.6
comp=Z,38nm,1.2s
ANMO Albuquerque 63.33 304 P P 08 25 16.5 +0.5
baz=16
CMB Columbia Colle 63.34 317 P P 08 25 15.4 -0.5
CMB pmax pmax
comp=Z,15nm,1.3s
CMB MLR MLR
comp=Z,1µm,21.0s
CMB Columbia Colle 63.34 317 P P 08 25 15.4 -0.5
CMB IAMs_20 IAMs_20 08 53 08.4
comp=Z,1µm,21.0s
MSTX Muleshoe 63.38 300 P P 08 25 16.3 +0.1
MSTX Muleshoe 63.38 300 P P 08 25 16.8 +0.6
baz=17,SNR=19
NATX Nacogdoches 63.43 292 P P 08 25 16.0 -0.4
baz=18
MDPB Devils Postpil 63.48 315 P P 08 25 17.8 +0.8
OMMB Old Mammoth Mi 63.48 315 P P 08 25 18.7 +1.6
TPNV Topopah Spring 63.56 313 P P 08 25 17.5 0.0
TPNV pmax pmax
comp=Z,44nm,1.0s
TPNV Topopah Spring 63.56 313 P P 08 25 17.5 0.0
TPNV Topopah Spring 63.56 313 P P 08 25 17.7 +0.2
baz=15,SNR=24
MCCM Marconi Confer 63.71 319 P P 08 25 18.9 +0.7
SHPR Sheep Range 63.76 312 P P 08 25 20.1 +1.3
ABTX Abilene, Hawle 63.88 297 P P 08 25 19.4 -0.1
ABTX Abilene, Hawle 63.88 297 P P 08 25 19.8 +0.3
baz=17,SNR=11
WUAZ Wupatki 63.90 308 P P 08 25 20.0 +0.3
WUAZ IAmb IAmb 08 25 26.3
comp=Z,34nm,1.0s
WUAZ Wupatki 63.90 308 P P 08 25 20.2 +0.5
baz=16,SNR=24
W18A Petrified Fore 63.91 307 P P 08 25 20.5 +0.7
W18A Petrified Fore 63.91 307 P P 08 25 20.2 +0.4
baz=16,SNR=23
WHTX Lake Whitney, 63.93 295 IAMs_20 IAMs_20 08 51 44.4
comp=Z,693nm,22.0s
FURC Furnace Creek, 64.16 313 P P 08 25 21.9 +0.7
baz=15,SNR=14
ENH Enshi 64.18 71 P P 08 25 21.8 +0.4
ENH IAmb IAmb 08 25 24.4
comp=Z,33nm,1.0s
CWC Cottonwood Cre 64.43 314 P P 08 25 24.2 +1.0
baz=14
DAC Darwin (Calif) 64.49 314 IAMs_20 IAMs_20 08 53 48.8
comp=Z,949nm,22.0s
SHOC Shoshone, Teco 64.58 313 P P 08 25 25.2 +1.2
baz=15
MPMC Manual Prospec 64.68 314 P P 08 25 25.5 +0.7
baz=14,SNR=44
SAO San Andreas Ge 64.78 317 P P 08 25 27.3 +2.0
SAO pmax pmax
comp=Z,34nm,1.2s
SAO San Andreas Ge 64.78 317 P P 08 25 27.3 +2.0
SAO IAmb IAmb 08 25 32.7
comp=Z,34nm,1.1s
VOG Valley Oaks Go 64.80 315 P P 08 25 26.4 +1.0
baz=14
W13A Hualapai Mount 64.85 310 IAmb IAmb 08 25 33.1
comp=Z,22nm,1.1s
MJAR Matsushiro Arr 64.88 43 P P 08 25 03.0 +1.0

MJAR pmax pmax
comp=Z,3.0nm,1.0s
MJAR Matsushiro Arr 64.88 43 P P 08 25 26.9 +1.0
comp=Z,4.8nm,0.9s,baz=355,slow=7.7,SNR=5.6
MJAR LR LR 08 55 42.1
comp=Z,114nm,20.2s,baz=270,slow=38
MJAR Matsushiro Arr 64.88 43 IAmb IAmb 08 25 30.2
comp=Z,2.7nm,1.0s
NJ2 Nanjing 64.89 62 eP P 08 25 25.4 -0.6
NJ2 pmax pmax
comp=Z,14nm,0.5s
X16A Lo Mia Camp, P 64.97 308 P P 08 25 26.5 -0.3
X16A IAmb IAmb 08 25 33.7
comp=Z,21nm,1.1s
435B Jarrell 65.11 294 P P 08 25 26.3 -1.2
435B Jarrell 65.11 294 P P 08 25 27.3 -0.2
baz=17
PMPB Monarch Peak 65.18 317 P P 08 25 28.6 +0.6
WHN Wuhan 65.19 66 P P 08 25 28.9 +0.9
VES Vestal, Richgr 65.21 315 P P 08 25 27.6 -0.4
baz=14
ISA Isabella, Lake 65.26 314 P P 08 25 29.7 +1.2
baz=14,SNR=48
GSC Goldstone, Bar 65.27 313 IAmb IAmb 08 25 35.9
comp=Z,37nm,1.1s
GSC Goldstone, Bar 65.27 313 P P 08 25 30.2 +1.6
baz=15,SNR=26
LRMC Laurel Mtn Rad 65.28 314 P P 08 25 29.8 +1.1
baz=14,SNR=15
HKT Hockley 65.45 293 P P 08 25 29.6 0.0
HKT pmax pmax
comp=Z,21nm,1.5s
HKT Hockley 65.45 293 P P 08 25 29.6 0.0
HKT IAmb IAmb 08 25 36.8
comp=Z,21nm,1.4s
GMRC Granite Mounta 65.53 312 P P 08 25 31.8 +1.5
baz=15,SNR=47
HEC Hector,Ludlow 65.63 312 P P 08 25 32.3 +1.4
baz=15,SNR=29
Y14A Wickenburg 65.78 309 IAmb IAmb 08 25 38.3
comp=Z,14nm,1.0s
SMMC Simmler 65.90 316 P P 08 25 33.3 +0.7
baz=14
EDW2 Edwards Air Fo 65.92 314 P P 08 25 33.8 +1.1
baz=14,SNR=22
121A Cookes Peak, D 65.95 304 P P 08 25 33.8 +0.7
121A Cookes Peak, D 65.95 304 P P 08 25 34.2 +1.1
baz=16,SNR=15
JCT Junction City 65.97 296 P P 08 25 32.8 -0.3
JCT pmax pmax
comp=Z,30nm,1.0s
JCT Junction City 65.97 296 P P 08 25 32.8 -0.3
JCT IAmb IAmb 08 25 38.6
comp=Z,30nm,1.0s
JCT Junction City 65.97 296 P P 08 25 34.0 +0.9
baz=17
IRM Iron Mountain 66.02 311 P P 08 25 34.2 +0.8
baz=15,SNR=17
MNTX Cornudas Mount 66.18 302 P P 08 25 33.7 -0.6
MNTX Cornudas Mount 66.18 302 P P 08 25 34.8 +0.4
baz=16,SNR=11
PKM Mcpherson Peak 66.28 315 P P 08 25 36.3 +1.1
baz=14,SNR=7.3
Y12C Blythe 66.28 310 P P 08 25 36.6 +1.6
Y12C Blythe 66.28 310 P P 08 25 36.0 +1.0
baz=15,SNR=13
BBRC Big Bear Solar 66.30 313 P P 08 25 34.9 -0.4
baz=14
OSI Osito Audit: C 66.32 314 P P 08 25 35.1 -0.2
OSI Osito Audit: C 66.32 314 P P 08 25 35.1 -0.2
baz=14
BELC Belle Mtn. Jos 66.36 312 P P 08 25 36.5 +0.9
baz=15
BFSC Mount Baldy Ra 66.47 313 P P 08 25 37.4 +1.1
baz=14,SNR=13
BC3 Big Chuckawall 66.57 311 P P 08 25 37.7 +0.7
baz=15
PFO Pinyon Flats O 66.83 312 ljiP P 08 25 40.6 +2.0
PFO pmax pmax
comp=Z,19nm,1.1s
PFO Pinyon Flats O 66.83 312 P P 08 25 39.4 +0.8
PFO IAmb IAmb 08 25 45.7
comp=Z,23nm,1.1s
PFO Pinyon Flats O 66.83 312 P P 08 25 39.9 +1.2
baz=14,SNR=14
XPFO Pion Flat 66.83 312 P P 08 25 40.1 +1.4
XPFO IAmb IAmb 08 25 45.7
comp=Z,25nm,1.1s
TUC Tucson 66.85 307 P P 08 25 39.3 +0.6
TUC pmax pmax
comp=Z,54nm,1.4s
TUC Tucson 66.85 307 P P 08 25 39.3 +0.6
TUC Tucson 66.85 307 P P 08 25 40.0 +1.2
baz=15
MURC Murrieta 66.99 313 P P 08 25 39.6 +0.1
baz=14
GLA Glamis 67.02 310 P P 08 25 39.6 -0.2
baz=15
113A Mohawk Valley, 67.07 309 P P 08 25 40.5 +0.5
113A IAmb IAmb 08 25 47.1
comp=Z,18nm,1.1s
KMI Kunming 67.23 79 P P 08 25 43.0 +1.6
KMI sP pwP 08 25 47.0 -1.8
KMI pmax pmax
comp=Z,22nm,1.4s
KMI pmax pmax
comp=Z,220nm,6.2s
KMI LR LR
comp=Z,310nm,25.8s
KMI LR LR
comp=Z,260nm,22.0s
KMI LR LR
comp=Z,410nm,19.1s
SWSC Sam W. Stewart 67.33 311 P P 08 25 42.6 +1.0
baz=14,SNR=11
319A Douglas 67.40 305 P P 08 25 43.3 +1.0
CIS Catalina Islan 67.43 314 P P 08 25 43.0 +0.7
baz=14,SNR=5.0
DBIC Dimbokro 67.50 195 P P 08 25 43.3 +0.4
DBIC pmax pmax
comp=Z,22nm,1.5s
DBIC Dimbokro 67.50 195 P P 08 25 43.3 +0.4
DBIC IAmb IAmb 08 25 52.3
comp=Z,22nm,1.5s
MONP2 Monument Peak 67.52 312 P P 08 25 43.6 +0.4
baz=14,SNR=16
TIC Toumodi 67.54 195 eP P 08 25 42.3 -0.9
comp=Z,4.0nm,0.4s
214A Organ Pipe Nat 67.64 308 P P 08 25 43.7 0.0
214A IAmb IAmb 08 25 46.0
comp=Z,45nm,1.4s
109C Camp Elliot, M 67.66 312 P P 08 25 43.1 -0.7
109C IAmb IAmb 08 25 51.1
comp=Z,43nm,1.3s
109C Camp Elliot, M 67.66 312 P P 08 25 44.9 +1.1
baz=14
IKP In-Ko-Pah, Jac 67.68 311 P P 08 25 45.0 +1.0
baz=14,SNR=18
BAR Barrett 67.77 312 P P 08 25 45.0 +0.5
BAR IAmb IAmb 08 25 51.9
comp=Z,30nm,1.2s
HYB Hyderabad 67.80 104 i P P 08 25 46.5 +1.7
KIC Kosan Boka 67.80 194 eP P 08 25 44.9 +0.1
comp=Z,76nm,1.1s
SCI2 San Clemente I 67.87 314 P P 08 25 45.5 +0.4
baz=14
833A Chaparral WMA, 67.92 295 P P 08 25 46.2 +0.8
833A Chaparral WMA, 67.92 295 P P 08 25 45.9 +0.5
baz=17,SNR=11
LIC Lamto 67.96 195 eP P 08 25 45.6 -0.2
comp=Z,53nm,1.2s
TX31 Lajitas Ar. Si 68.02 299 P P 08 25 46.3 +0.1
TX31 IAmb IAmb 08 25 53.0
comp=Z,44nm,1.5s
TX32 Lajitas Array 68.02 299 P P 08 25 46.8 +0.6
TX32 IAmb IAmb 08 25 53.0
comp=Z,45nm,1.5s
TXAR Lajitas Array 68.02 299 P P 08 25 45.8 -0.5
comp=Z,3.3nm,0.7s,baz=36,slow=4.7,SNR=28
TXAR LR LR 08 55 47.3
comp=Z,491nm,18.1s,baz=0.0,slow=36
HSIG 70.05 306 IAmb IAmb 08 26 06.5
comp=Z,51nm,1.4s
HPIG 70.81 301 IAmb IAmb 08 26 10.1
comp=Z,33nm,1.4s
SLVN Son La 71.15 79 IAmb IAmb 08 26 08.7
comp=Z,37nm,1.3s

JOW	**Kunigami**	**72.15**	**55**		IAMs_20	IAMs_20	08 52 59.4		
	comp=Z,791nm,18.0s								
CHTO	**Chiang Mai**	**72.16**	**84**		P	**P**	**08 26 11.6**	**0.0**	
CHTO					pmax	pmax			
	comp=Z,33nm,1.3s								
CHTO	**Chiang Mai**	**72.16**	**84**		P	**P**	**08 26 11.6**	**0.0**	
CHTO					IAmb	IAmb	08 26 14.6		
	comp=Z,33nm,1.3s								
CMAR	**Chiang Mai Arr**	**72.50**	**84**	*i*	P	**P**	**08 26 14.6**	**+1.0**	
CMAR					pmax	pmax			
	comp=Z,8.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**72.50**	**84**		P	**P**	**08 26 14.4**	**+0.8**	
	comp=Z,4.2nm,0.7s,baz=326,slow=6.2,SNR=29								
CMAR					PP	**PP**	**08 28 58.2**	**+3.7**	
	comp=Z,1.4nm,0.5s,baz=334,slow=8.9,SNR=5.3								
CMAR					LR	LR	09 04 09.8		
	comp=Z,119nm,18.9s,baz=336,slow=41								
SSLB	**Suanglung**	**73.32**	**62**		P	**P**	**08 26 19.9**	**+1.5**	
ZAIG	**Zacatecas**	**74.03**	**297**		P	**P**	**08 26 22.5**	**-0.5**	
ZAIG					IAmb	IAmb	08 26 30.7		
	comp=Z,40nm,1.4s								
PBKT	**Sadao Pong**	**74.86**	**83**		IAmb	IAmb	08 26 31.5		
	comp=Z,30nm,1.2s								
SDV	**Santo Domingo**	**78.53**	**262**		P	**P**	**08 26 48.9**	**+0.5**	
SDV					IAmb	IAmb	08 26 55.1		
	comp=Z,15nm,0.8s								
SMLC	**San Martn de**	**79.57**	**266**	*eP*	P	**P**	**08 26 53.8**	**-0.1**	
RUSC	**La Rusia**	**82.07**	**264**		P	**P**	**08 27 08.6**	**+0.7**	
HELC	**Santa Helena**	**82.47**	**266**	*eP*	P	**P**	**08 27 09.0**	**-0.8**	
NORC	**Norcasia**	**82.88**	**265**	*eP*	P	**P**	**08 27 12.3**	**+0.8**	
CBOC	**Ciudad Bolivar**	**82.92**	**267**	*eP*	P	**P**	**08 27 13.6**	**+1.7**	
GUY2C	**Guyana, Caldas**	**83.34**	**266**	*eP*	P	**P**	**08 27 15.1**	**+0.6**	
ROSC	**El Rosal**	**83.42**	**265**		P	**P**	**08 27 17.1**	**+2.4**	
	comp=Z,18nm,0.9s,baz=71,slow=24,SNR=6.6								
ROSC					LR	LR	08 59 45.7		
	comp=Z,157nm,21.1s,baz=37,slow=32								
ROSC	**El Rosal**	**83.42**	**265**		P	**P**	**08 27 14.1**	**-0.7**	
RREF	**El Recreo**	**83.65**	**266**	*eP*	P	**P**	**08 27 18.9**	**+2.7**	
PLMC	**San Jos del P**	**83.91**	**267**	*eP*	P	**P**	**08 27 18.8**	**+1.9**	
VILC	**Villavicencio,**	**83.94**	**264**	*eP*	P	**P**	**08 27 16.1**	**-1.0**	
ORTC	**Ortega, Tolima**	**84.56**	**265**	*eP*	P	**P**	**08 27 20.7**	**+0.5**	
YOTC	**Yotoco, Valle**	**84.80**	**266**	*eP*	P	**P**	**08 27 20.7**	**-0.8**	
SOTA	**Rioblanco**	**86.64**	**266**	*eP*	P	**P**	**08 27 35.3**	**+4.3**	
FLOC	**Florencia**	**86.89**	**265**	*eP*	P	**P**	**08 27 31.9**	**+0.2**	
FLOC	**Florencia**	**86.89**	**265**		P	**P**	**08 27 31.9**	**+0.2**	
BBAC	**Balboa, Cauca**	**86.92**	**267**	*eP*	P	**P**	**08 27 33.1**	**+1.0**	
PSI	**Prapat**	**87.40**	**89**		P	**P**	**08 27 33.8**	**-0.5**	
PSI					pmax	pmax			
	comp=Z,24nm,1.0s								
PSI	**Prapat**	**87.40**	**89**		P	**P**	**08 27 34.2**	**0.0**	
	comp=Z,20nm,1.1s,baz=220,slow=3.6,SNR=8.7								
RPSI	**Rantau Prapat**	**87.50**	**89**		P	**P**	**08 27 33.8**	**-0.8**	
RPSI					IAmb	IAmb	08 27 36.4		
	comp=Z,24nm,1.0s								
PTLC	**Puerto Leguiza**	**88.00**	**264**	*eP*	P	**P**	**08 27 39.7**	**+2.7**	
OTAV	**Otavalo**	**88.96**	**267**		P	**P**	**08 27 41.7**	**-0.4**	
OTAV					pmax	pmax			
	comp=Z,53nm,1.4s								
OTAV	**Otavalo**	**88.96**	**267**		P	**P**	**08 27 41.7**	**-0.4**	
WC1	**Warramunga Arr**	**118.65**	**61**		IAMs_20	IAMs_20	09 09 09.1		
	comp=Z,297nm,20.0s								
WRA	**Warramunga Arr**	**118.67**	**61**		PKP	**PKPdf**	**08 33 33.6**	**-1.0**	
	comp=Z,4.6nm,1.1s,baz=336,slow=2.2,SNR=8.6								
WR6	**Warramunga Arr**	**118.71**	**60**		IAMs_20	IAMs_20	09 13 59.6		
	comp=Z,288nm,20.0s								
CTAO	**Charters Tower**	**121.53**	**48**		IAMs_20	IAMs_20	09 36 40.9		
	comp=Z,23nm,20.0s								
AS31	**Alice Springs**	**122.14**	**62**			**PKPdf**	**08 33 39.9**	**-1.3**	
ASAR	**Alice Springs**	**122.14**	**62**		PKP	**PKPdf**	**08 33 40.4**	**-0.8**	
	comp=Z,7.6nm,1.1s,baz=353,slow=1.7,SNR=28								
PLCA	**Paso Flores**	**125.71**	**247**		PKP	**PKiKP**	**08 33 48.5**	**+0.6**	
	comp=Z,6.0nm,1.0s,baz=30,slow=1.3,SNR=4.9								
SYO	**Syowa Base**	**143.91**	**162**	*i*↑	*e*X	PKPab	08 34 17.9	+0.3	
NVL	**N'lazarevskaya**	**144.31**	**178**	*e*	PKIKP	**PKPab**	**08 34 19.1**	**0.0**	
NVL					pmax	pmax			
	comp=Z,9.0nm,0.7s								
VNA1	**Neumayer--Stat**	**144.58**	**190**		PKPbc	**PKPdf**	**08 34 21.2**	**-0.3**	
	baz=74,slow=8.5								
BKZ	**Black Stump Fm**	**144.84**	**17**			**PKPab**	**08 34 22.1**	**0.0**	
VNA3	**Neumayer Olymp**	**145.24**	**190**		PKPbc	**PKPbc**	**08 34 22.8**	**+0.4**	
	baz=74,slow=8.5								
SNAA	**Sanae**	**145.38**	**186**		PKPbc	**PKPab**	**08 34 23.6**	**+0.5**	
	baz=74,slow=8.5								
MAW	**Mawson**	**145.41**	**147**		PKIKP	**PKPab**	**08 34 24.5**	**+1.3**	
MAW	**Mawson**	**145.41**	**147**		PKPbc	**PKPab**	**08 34 24.1**	**+0.9**	
	comp=Z,44nm,1.1s,baz=312,slow=5.3,SNR=15								
MAW	**Mawson**	**145.41**	**147**			**PKPab**	**08 34 24.5**	**+1.3**	
QSPA	**South Pole Qui**	**163.70**	**180**		PKPdf	**PKPdf**	**08 34 50.4**	**+2.3**	
QSPA						**PKPab**	**08 35 40.7**	**+0.1**	

*DJA **16** 08:22:55.9±0.4,4°S±5°×12°7E±°,h48km±6km,M4.0/13, mB5.7/1,mb4.5/5,MLv4.0/13,MLv3.9/6,Mw(mB)5.2/1*
*IDC **16** 08:23:00.2±2.4,3.34S×127.43E,h86km±29km,mb3.4/2, mb1 3.8/5,mb1mx3.3/42,mbtmp4.0/5,Error ellipse: s-maj=24.5km s-min=18.3km az=128.0*
ISC 16 08:22:56.5±1.0,3.49S±0.08×127.25E±0.05,h42km,n16, σ1ᵠ41/19,Seram

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
NLAI	**Namlea**	**0.29**	**330**	P		**Pn**	**08 23 06.6**		**+1.8**
NLAI				S		**Sn**	**08 23 14.2**		**+3.6**
AAI	**Ambon**	**0.97**	**102**	P		**Pn**	**08 23 14.1**		**+0.5**
AAI				S		**Sn**	**08 23 27.0**		**+0.8**
MSAI	**Masohi**	**1.69**	**85**	P		**Pn**	**08 23 22.3**		**-1.2**
SANI	**Sanana**	**1.91**	**319**	P		**Pn**	**08 23 26.0**		**-0.5**
SANI				S		**Sn**	**08 23 47.4**		**-1.9**
LBMI	**Labuha**	**2.85**	**5**	P		**Pn**	**08 23 40.0**		**+0.5**
SWI	**Sorong**	**4.79**	**57**	P		**Pn**	**08 24 06.3**		**+0.2**
SIJI	**Sorong**	**4.79**	**57**	P		**Pn**	**08 24 06.9**		**+0.8**
	10nm,0.3s,baz=240,slow=12,SNR=13								
SIJI				S		**Sn**	**08 24 59.0**		**-1.4**
	3.9nm,0.3s,baz=60,slow=20,SNR=11								
FAKI	**Fak Fak**	**5.03**	**84**	P		**Pn**	**08 24 09.7**		**+0.3**
	0.1nm28nm,1.3s								
BBSI	**Bau Bau**	**5.07**	**247**	P		**Pn**	**08 24 08.7**		**-1.2**
	0.3nm65nm,0.9s								
LUWI	**Luwuk**	**5.09**	**298**	P		**Pn**	**08 24 10.0**		**-0.3**
	0.3nm46nm,1.2s								
KMSI	**Cibinong**	**5.19**	**321**	P		**Pn**	**08 24 11.1**		**-0.6**
MRSI	**Marisa**	**6.61**	**307**	P		**Pn**	**08 24 30.6**		**-0.5**
KAPI	**Kappang**	**7.62**	**258**	P		Pn	08 24 51.1		+6.0
	2.7nm,0.3s,baz=69,slow=8.6,SNR=4.2								
WRA	**Warramunga Arr**	**17.75**	**158**	P		**P**	**08 27 01.6**		**+0.5**
	0.5nm,0.3s,baz=340,slow=12,SNR=12								
ASAR	**Alice Springs**	**21.06**	**163**	P		**P**	**08 27 38.9**		**+1.7**
	2.3nm,0.7s,baz=343,slow=11,SNR=15								
MKAR	**Makanchi Array**	**63.81**	**327**	P		**P**	**08 33 23.2**		**-1.2**
	0.5nm,0.5s,baz=126,slow=8.8,SNR=7.7								

*IDC **16** 08:41:09.8±2.0,12°.51N×142°.29E,h137km±21km,mb3.5/8, mb1 3.7/9,mb1mx3.4/42,mbtmp3.9/9,Error ellipse: s-maj=23.2km s-min=16.3km az=100.0*
*NEIC **16** 08:41:10.3±0.6,12°.48N±0°.07×142°.4E±0°.1,h144km±9km, mb4.3/8,Error ellipse: s-maj=19.4km s-min=10.8km az=88.0*
ISC 16 08:41:10.7±0.7,12°.5N±0°.1×142°.38E±0°.10,h150km,n19, σ0ᵠ48/21,mb4.0/12,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
GUMO	**Guam**	**2.66**	**65**	P		**Pn**	**08 41 53.8**		**-0.1**
	7.4nm,0.3s,baz=356,slow=22,SNR=4.7								
GUMO				S		**Sn**	**08 42 27.2**		**+0.1**
	21nm,0.3s,baz=129,slow=19,SNR=8.1								
GUMO	**Guam**	**2.66**	**65**			**Pn**	**08 41 53.5**		**-0.4**
GUMO						**Sn**	**08 42 27.0**		**-0.2**
WR0	**Warramunga Arr**	**33.15**	**194**	P		**P**	**08 47 32.7**		**-0.3**
WR0				IAmb		IAmb	08 47 46.0		
	comp=Z,13nm,1.4s								
WRA	**Warramunga Arr**	**33.18**	**194**	P		**P**	**08 47 32.8**		**-0.5**
	comp=Z,1.4nm,0.8s,baz=12,slow=8.7,SNR=7.8								
AS31	**Alice Springs**	**36.87**	**193**	P		**P**	**08 48 05.1**		**+0.2**
ASAR	**Alice Springs**	**36.87**	**193**	P		**P**	**08 48 04.9**		**+0.1**
	comp=Z,0.5nm,0.4s,baz=21,slow=11,SNR=7.8								
CMAR	**Chiang Mai Arr**	**42.21**	**284**	P		**P**	**08 48 49.2**		**+0.1**
	comp=Z,1.0nm,0.3s,baz=93,slow=7.3,SNR=4.3								
BBOO	**Buckleboo**	**45.44**	**187**	P		**P**	**08 49 14.8**		**+0.2**
BBOO				IAmb		IAmb	08 49 23.2		
	comp=Z,11nm,1.2s								
NWAO	**Narrogin (SRO)**	**51.14**	**207**	P		**P**	**08 49 57.9**		**-0.4**
MK31	**Makanchi Array**	**60.62**	**317**	P		**P**	**08 51 06.0**		**+0.2**
MK31				IAmb		IAmb	08 51 06.8		
	comp=Z,2.9nm,1.4s								
MKAR	**Makanchi Array**	**60.62**	**317**	P		**P**	**08 51 05.8**		**0.0**
	comp=Z,1.3nm,0.6s,baz=97,slow=8.4,SNR=15								
KURK	**Kurchatov**	**63.88**	**321**	P		**P**	**08 51 27.1**		**-0.3**
KURK				IAmb		IAmb	08 51 27.6		
	comp=Z,3.1nm,0.7s								
KURBB	**Kurchatov Arra**	**63.92**	**320**	P		**P**	**08 51 27.1**		**-0.4**
	comp=Z,2.0nm,0.5s,baz=106,slow=6.6,SNR=11								
BVAR	**Borovoye Array**	**69.30**	**322**	P		**P**	**08 52 01.5**		**-0.2**
	comp=Z,3.1nm,0.5s,baz=106,slow=8.0,SNR=18								
BRVK	**Borovoye**	**69.37**	**322**	P		**P**	**08 52 02.3**		**+0.2**
ILAR	**Eielson Array**	**70.60**	**25**	P		**P**	**08 52 08.9**		**-0.5**
	comp=Z,0.2nm,0.6s,baz=245,slow=5.6,SNR=6.5								
ABKAR	**Akbulak array**	**75.73**	**318**	P		**P**	**08 52 39.4**		**-0.5**
YKA	**Yellowknife Ar**	**84.95**	**27**	P		**P**	**08 53 29.6**		**+0.9**
	comp=Z,0.1nm,0.5s,baz=288,slow=5.2,SNR=4.4								
LPAZ	**La Paz**	**150.22**	**101**	PKPbc		**PKiKP**	**09 00 47.8**		**+1.3**
	comp=Z,1.6nm,0.6s,baz=322,slow=4.3,SNR=5.0								

IDC 16 08:54:26.8±2.7,15.87S×173.48W,h0km,mb3.7/4, mb1 4.0/5,mb1mx3.7/50,mbtmp3.6/5,ML3.2/1,Error ellipse: s-maj=153.4km s-min=27.3km az=146.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
AFI	**Afiamalu**	**2.55**	**40**	P		Pn	08 55 09.1		-0.4
	5.3nm,0.3s,baz=317,slow=2.3,SNR=6.1								
AFI				S		Sn	08 55 37.3		-4.0
	17nm,0.3s,baz=31,slow=22,SNR=14								
ASAR	**Alice Springs**	**49.89**	**252**	P		P	09 03 21.9		-0.6
	1.1nm,0.6s,baz=84,slow=8.5,SNR=5.7								
NVAR	**Mina Array Bea**	**74.73**	**42**	P		P	09 06 09.6		+0.7
	0.3nm,0.7s,baz=243,slow=5.8,SNR=3.8								
PDAR	**Pinedale Array**	**82.67**	**42**	P		P	09 06 52.0		-0.5
	0.3nm,0.6s,baz=204,slow=2.0,SNR=3.4								
ILAR	**Eielson Array**	**82.92**	**11**	P		P	09 06 52.7		-0.4
	0.8nm,1.1s,baz=229,slow=6.2,SNR=4.7								
BRTR	**Keskin Array B**	**146.47**	**320**	PKPbc		PKPbc	09 14 10.9		+0.4
	0.3nm,0.3s,baz=69,slow=4.1,SNR=4.2								

IDC 16 08:55:36.8±2.0,5.70S×130.66E,h0km,mb4.0/1, mb1 4.0/4,mb1mx3.6/49,mbtmp3.9/4,ML3.9/3,Error ellipse: s-maj=81.6km s-min=26.9km az=77.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
FITZ	**Fitzroy Crossi**	**13.26**	**201**	P		Pn	08 58 46.6		+0.1
	0.2nm,0.3s,baz=21,slow=11,SNR=8.4								
FITZ				S		Sn	09 00 58.7		-16
	0.5nm,0.3s,baz=67,slow=7.8,SNR=4.2								
WRA	**Warramunga Arr**	**14.60**	**166**	Pn		Pn	08 59 04.7		-0.1
	0.8nm,0.3s,baz=346,slow=11,SNR=19								
WRA				S		Sn	09 01 33.1		-14
	0.8nm,0.3s,baz=336,slow=21,SNR=5.5								
ASAR	**Alice Springs**	**18.13**	**170**	P		Pn	08 59 50.2		-0.1
	0.5nm,0.3s,baz=346,slow=9.5,SNR=29								
MKAR	**Makanchi Array**	**67.51**	**326**	P		P	09 06 34.8		0.0
	0.7nm,0.4s,baz=114,slow=8.1,SNR=18								

*DJA **16** 08:56:07.2±0.7,4°S±5°×13°0E±°,h11km±7km,M3.9/11, MLv3.9/11*
*IDC **16** 08:56:08.4±1.2,3°.35S×129°.66E,h0km,mb4.1/5, mb1 4.3/7,mb1mx3.9/51,mbtmp4.1/7,ML3.9/2,MS3.1/5, Ms1 3.1/5,ms1mx2.9/41,Error ellipse: s-maj=44.0km s-min=21.0km az=93.0*
*NEIC **16** 08:56:13.3±1.7,3°.37S±0°.09×130°.0E±0°.1,h35km±3km, mb4.1/3,Error ellipse: s-maj=18.9km s-min=9.9km az=55.0*
ISC 16 08:56:08.3±0.7,3.55S±0°.06×129.72E±0°.04,h10km,n24, σ1ᵠ73/21,mb4.0/6,MS3.0/3,Seram

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
MSAI	**Masohi**	**0.82**	**284**	P		**Pg**	**08 56 22.1**		**-2.0**
BNDI	**Bandanaira**	**0.98**	**169**	P		**Pb**	**08 56 26.3**		**-1.1**
AAI	**Ambon**	**1.53**	**265**	P		**Pn**	**08 56 34.8**		**-0.9**
AAI				S		**Sn**	**08 56 53.8**		**-1.9**
FAKI	**Fak Fak**	**2.60**	**76**	P		**Pn**	**08 56 48.3**		**-2.1**
FAKI	**Fak Fak**	**2.60**	**76**	Pn		**Pn**	**08 56 48.6**		**-1.8**
FAKI						**Sn**	**08 57 20.1**		**-2.0**
NLAI	**Namlea**	**2.64**	**277**	P		**Pn**	**08 56 50.7**		**-0.2**
SIJI	**Sorong**	**3.08**	**30**	Pn		**Pn**	**08 56 57.3**		**+0.3**
	13nm,0.3s,baz=212,slow=22,SNR=30								
SIJI				S		**Sn**	**08 57 34.7**		**+0.8**
	10nm,0.3s,baz=360,slow=14,SNR=6.1								
SIJI				LR		LR	08 58 19.8		
	comp=Z,225nm,19.9s,baz=172,slow=45								
SWI	**Sorong**	**3.08**	**30**	P		**Pn**	**08 56 56.7**		**-0.4**
LBMI	**Labuha**	**3.65**	**322**	P		**Pn**	**08 57 03.9**		**-1.0**
SANI	**Sanana**	**4.02**	**292**	P		**Pn**	**08 57 08.3**		**-1.6**
RKPI	**Ransiki, Papua**	**4.89**	**66**	P		**Pn**	**08 57 19.8**		**-2.2**
WSI	**Waingapu**	**11.16**	**237**	P		Pn	08 58 41.6		-6.4
WRA	**Warramunga Arr**	**16.90**	**165**	P		**P**	**09 00 10.5**		**+3.3**
	0.5nm,0.3s,baz=343,slow=12,SNR=8.2								
PMG	**Port Moresby**	**18.27**	**109**	LR		LR	09 08 54.5		
	comp=Z,58nm,19.2s,baz=312,slow=42								
AS31	**Alice Springs**	**20.40**	**169**	P		Pn	09 00 50.1		+2.3
AS31				IAmb		IAmb	09 00 50.9		
	comp=Z,6.9nm,0.9s								
ASAR	**Alice Springs**	**20.40**	**169**	P		Pn	09 00 48.7		+1.0
	comp=Z,13nm,0.6s,baz=351,slow=11,SNR=58								
ASAR				LR		LR	09 09 44.2		
	comp=Z,60nm,18.7s,baz=300,slow=40								
BBOO	**Buckleboo**	**29.71**	**169**	P		**P**	**09 02 16.7**		**+2.0**
BBOO				IAmb		IAmb	09 02 46.7		
	comp=Z,20nm,1.5s								
CMAR	**Chiang Mai Arr**	**37.38**	**307**	LR		LR	09 21 26.6		
	comp=Z,22nm,19.1s,baz=225,slow=41								
MJAR	**Matsushiro Arr**	**40.66**	**11**	P		**P**	**09 03 47.2**		**-1.7**
	comp=Z,2.7nm,0.7s,baz=190,slow=10,SNR=6.1								
KSRS	**Korea Array**	**40.83**	**358**	P		**P**	**09 03 49.5**		**-0.7**
	comp=Z,1.1nm,0.7s,baz=177,slow=9.8,SNR=6.0								
KLR	**Kul'dur**	**52.60**	**2**	LR		LR	09 28 55.6		
	comp=Z,26nm,19.6s,baz=275,slow=38								
PETK	**Petropavlovsk-**	**61.16**	**19**	P		**P**	**09 06 24.3**		**+1.4**
	comp=Z,2.8nm,0.8s,baz=195,slow=9.0,SNR=3.1								
MKAR	**Makanchi Array**	**65.22**	**326**	P		**P**	**09 06 51.2**		**+1.2**
	comp=Z,0.5nm,0.5s,baz=122,slow=7.8,SNR=6.1								
ABKAR	**Akbulak array**	**79.66**	**321**	P		**P**	**09 08 17.2**		**+1.1**
ABKAR				IAmb		IAmb	09 08 27.4		
	comp=Z,1.8nm,1.1s								

*JMA **16** 09:03:29.9,29°.84N×141°.91E,h49km,M4.3*
*IDC **16** 09:03:32.9±2.0,29°.63N×141°.69E,h61km±20km,mb3.4/8, mb1 3.7/10,mb1mx3.5/42,mbtmp3.7/10,Error ellipse: s-maj=28.9km s-min=13.9km az=85.0*
ISC 16 09:03:29.1±0.7,29.79N±0°.05×141°.9E±0°.1,h26km,n26, σ2ᵠ04/38,mb3.7/8,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
CBIJ	**Chichi jima**	**2.70**	**174**	P		**Pn**	**09 04 12.7**		**+1.9**
CBIJ				S		**Sn**	**09 04 43.8**		**+1.2**
JCJ	**Chichijima**	**2.70**	**174**	P		**Pb**	**09 04 13.3**		**-3.3**
	29nm,0.3s,baz=100,slow=23,SNR=15								
JCJ				S		**Sn**	**09 04 42.7**		**+0.1**
	148nm,0.3s,baz=274,slow=23,SNR=14								
JHH2	**Haha-jima-NKT2**	**3.15**	**175**	*e*S		**Sn**	**09 04 56.3**		**+2.4**
JHCJ	**Hachijojimakas**	**3.73**	**332**	P		**Pn**	**09 04 26.1**		**+1.2**
JHCJ				*e*S		**Sn**	**09 05 07.8**		**-0.1**
JHJ2	**Mitsune**	**3.75**	**333**	P		**Pn**	**09 04 26.6**		**+1.4**
JHJ2				*e*S		**Sn**	**09 05 08.6**		**0.0**
JMKN	**Mikurajimanish**	**4.53**	**335**	P		**Pn**	**09 04 37.6**		**+1.6**
JMKN				*e*S		**Sn**	**09 05 27.3**		**-0.5**
BSO1	**Boso 1**	**4.91**	**351**	P		**Pn**	**09 04 42.6**		**+1.9**
BSO1				*e*S		**Sn**	**09 05 36.5**		**+0.1**
BSO3	**Boso 3**	**5.13**	**347**	P		**Pn**	**09 04 45.8**		**+1.8**
BSO3				*e*S		**Sn**	**09 05 43.6**		**+1.4**
BSO4	**Boso 4**	**5.35**	**346**	*e*S		**Sn**	**09 05 47.4**		**-0.4**
JOD2	**Odawara 2**	**5.95**	**337**	*e*S		**Sn**	**09 06 02.3**		**-0.4**
JHU	**Hanno**	**6.43**	**341**	P		**Pn**	**09 05 03.7**		**+1.7**
JHU				*e*S		**Sn**	**09 06 13.8**		**-0.8**
JYT	**Yasato**	**6.58**	**348**	P		**Pn**	**09 05 06.1**		**+2.1**
JYT				*e*S		**Sn**	**09 06 17.3**		**-0.8**
JRY	**Ryogami san**	**6.70**	**339**	*e*S		**Sn**	**09 06 22.2**		**+1.0**
JHO	**Hitachi**	**6.89**	**351**	P		**Pn**	**09 05 10.2**		**+1.8**
JHO				*e*S		**Sn**	**09 06 22.1**		**-3.8**
JAG	**Ashikaga**	**6.92**	**344**	P		**Pn**	**09 05 10.8**		**+2.0**
JAG				*e*S		**Sn**	**09 06 24.1**		**-2.6**
MJAR	**Matsushiro Arr**	**7.40**	**336**	P		Pn	09 05 18.6		+3.1
	0.3nm,0.3s,baz=147,slow=11,SNR=12								
JFK	**Kawauchi**	**7.60**	**354**	P		**Pn**	**09 05 19.3**		**+1.1**
JFK				*e*S		**Sn**	**09 06 38.3**		**-5.2**
JMK	**Ichinoseki**	**9.16**	**357**	P		**Pn**	**09 05 41.5**		**+2.1**
JMK				*e*S		**Sn**	**09 07 16.5**		**-5.1**
MKAR	**Makanchi Array**	**48.59**	**308**	P		**P**	**09 12 10.2**		**-0.1**
	0.1nm,0.4s,baz=72,slow=9.4,SNR=3.3								
WRA	**Warramunga Arr**	**49.97**	**189**	P		**P**	**09 12 19.1**		**-1.9**
	0.6nm,0.5s,baz=6.1,slow=7.6,SNR=12								
ASAR	**Alice Springs**	**53.70**	**189**	P		**P**	**09 12 47.2**		**-1.6**
	0.2nm,0.4s,baz=1.4,slow=4.6,SNR=11								
ILAR	**Eielson Array**	**55.50**	**29**	P		**P**	**09 13 01.9**		**+0.4**
	0.4nm,0.8s,baz=278,slow=7.0,SNR=4.7								
INK	**Inuvik**	**60.71**	**25**	P		**P**	**09 13 38.5**		**+0.8**
	0.6nm,0.5s,baz=296,slow=7.2,SNR=4.9								
NVAR	**Mina Array Bea**	**79.08**	**52**	P		**P**	**09 15 33.0**		**+1.4**
	0.6nm,0.6s,baz=300,slow=5.0,SNR=6.8								
PDAR	**Pinedale Array**	**82.50**	**45**	P		**P**	**09 15 50.1**		**+0.4**
	0.5nm,0.8s,baz=43,slow=3.0,SNR=4.3								
TXAR	**Lajitas Array**	**94.20**	**53**	P		**P**	**09 16 47.5**		**+1.3**
	0.5nm,0.8s,baz=289,slow=3.8,SNR=5.6								

*KRNET **16** 09:24:44.3±0.1,43°.26N×78°.78E,h16km,mb2.3*
SOME 16 09:24:42.9,42.88N×79.30E,h20km,10C,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m	s ISC
PDGK	**Podgornoye**	**0.47**	**17**	P		Pb	09 24 51.6		-0.9
	4.0nm,0.1s								
PDGK				S		Sb	09 24 58.0		-1.1
	10nm,0.3s								
SATY	**Saty**	**0.68**	**285**	*e*P		Pb	09 24 55.9		-0.3
	3.6nm,0.2s								
SATY				*e*S		Sb	09 25 04.7		-0.5
	34nm,0.1s								
SATY	**Saty**	**0.68**	**285**	P		Pb	09 24 55.2		-1.0
	3.6nm,0.2s								
SATY				S		Sb	09 25 04.1		-1.1
	34nm,0.1s								
KPKS	**Kokpek**	**0.74**	**322**	*e*P		Pb	09 24 56.7		-0.4
	3.7nm,0.1s								
KPKS				*e*S		Sb	09 25 06.0		-0.8
	18nm,0.2s								
PRZ	**Przheval'sk**	**0.78**	**239**	↑*i*	P	Pn	09 25 00.3		+1.4
	baz=99								
PRZ				↑*i*	S	Sn	09 25 11.9		+1.9
	baz=99								
ANVS	**Anan'yevo**	**1.21**	**266**	↑*i*	P	Pn	09 25 02.7		-2.1
	baz=41								
ANVS				↑*i*	S	Sb	09 25 15.9		-4.5
	baz=41								
DJR	**Jarkent**	**1.49**	**14**	*e*P		Pn	09 25 09.2		+0.5
	0.5nm,0.2s								
DJR				*e*S		Sn	09 25 28.0		+0.4
	2.9nm,0.3s								
KDJ	**Kajisay**	**1.74**

SBB	**Saddle Back Bu**	**0.64**	**330**			**Pg**	**09 50 15.4**	**-1.1**
SBB						**Sg**	**09 50 23.9**	**-1.1**
GR2C	**Griffith Obs.**	**0.71**	**269**			**Pg**	**09 50 16.9**	**-0.9**
DEVC	**Devers**	**0.74**	**105**			**Pg**	**09 50 17.9**	**-0.4**
HYS	**Haystack Butte**	**0.74**	**352**			**Pg**	**09 50 17.3**	**-1.0**
DECC	**Green Verdugo**	**0.75**	**280**			**Sg**	**09 50 28.2**	**-0.2**
DECC	**Green Verdugo**	**0.75**	**280**	P		**Pg**	**09 50 17.8**	**-0.6**
	baz=98,SNR=22							
DECC				S		**Sg**	**09 50 28.2**	**-0.2**
	baz=98							
GVDA	**Garner Valley**	**0.78**	**126**			**Pg**	**09 50 18.1**	**-1.0**
GVDA						**Sg**	**09 50 28.9**	**-0.6**
CRY	**Cary Ranch**	**0.81**	**134**			**Sg**	**09 50 29.9**	**-0.3**
FMP	**Fort Macarthur**	**0.82**	**240**			**Pg**	**09 50 19.2**	**-0.6**
FMP	**Fort Macarthur**	**0.82**	**240**	P		**Pg**	**09 50 19.6**	**-0.2**
	baz=59,SNR=5.9							
FMP				Sb		**Sb**	**09 50 32.0**	**+1.0**
	baz=59							
RRX	**Edison Barstow**	**0.83**	**26**			**Pg**	**09 50 19.2**	**-0.8**
RRX						**Sg**	**09 50 30.3**	**-0.6**
RRX	**Edison Barstow**	**0.83**	**26**	P		**Pg**	**09 50 19.2**	**-0.8**
	baz=206,SNR=15							
RRX				S		**Sg**	**09 50 30.5**	**-0.4**
	baz=206							
IR2C	**Iron Canyon**	**0.84**	**288**			**Pg**	**09 50 18.8**	**-1.3**
DJJ	**Donna J Jenkin**	**0.84**	**269**			**Pg**	**09 50 18.8**	**-1.4**
BLAC	**Blackrock camp**	**0.87**	**94**			**Pg**	**09 50 20.3**	**-0.5**
BLAC						**Sg**	**09 50 32.4**	**+0.2**
LEOC	**Leona Valley**	**0.87**	**305**			**Pg**	**09 50 19.6**	**-1.2**
DNR	**Dunn Ranch,Anz**	**0.88**	**130**			**Pg**	**09 50 20.2**	**-0.7**
EW2	**E Wide Canyon**	**0.88**	**102**			**Pg**	**09 50 20.2**	**-0.6**
EW2						**Sg**	**09 50 32.2**	**-0.1**
EDW2	**Edwards Air Fo**	**0.88**	**329**			**Pg**	**09 50 19.8**	**-1.2**
EDW2						**Sg**	**09 50 31.2**	**-1.3**
EDW2	**Edwards Air Fo**	**0.88**	**329**	P		**Pg**	**09 50 19.7**	**-1.2**
	baz=148,SNR=220							
EDW2				S		**Sg**	**09 50 31.3**	**-1.2**
	baz=148							
RPV	**Rancho Palos V**	**0.89**	**245**			**Pg**	**09 50 20.2**	**-0.9**
SNDA	**J Saunders Pla**	**0.90**	**130**			**Sg**	**09 50 32.9**	**-0.1**
FOXC	**Fox Airport**	**0.90**	**313**			**Pg**	**09 50 20.4**	**-0.9**
ALPC	**Antelope**	**0.90**	**308**			**Pg**	**09 50 20.2**	**-1.1**
BZNA	**Buzz No.'s Pla**	**0.90**	**134**			**Sg**	**09 50 32.5**	**-0.7**
PLM	**Palomar**	**0.91**	**148**			**Sg**	**09 50 33.0**	**-0.5**
FRD	**Ford Ranch, An**	**0.94**	**132**			**Sg**	**09 50 33.5**	**-0.8**
FRD	**Ford Ranch, An**	**0.94**	**132**			**Sg**	**09 50 33.6**	**-0.8**
PFO	**Pinyon Flats O**	**0.96**	**122**			**Pg**	**09 50 21.5**	**-1.1**
PFO				Sg		**Sg**	**09 50 34.8**	**-0.4**
PFO	**Pinyon Flats O**	**0.96**	**122**			**Sg**	**09 50 21.4**	**-1.1**
PFO	**Pinyon Flats O**	**0.96**	**122**	P		**Pg**	**09 50 21.4**	**-1.1**
	baz=303,SNR=83							
PFO				S		**Sg**	**09 50 34.7**	**-0.4**
	baz=303							
XPFO	**Pion Flat**	**0.97**	**122**			**Pg**	**09 50 21.4**	**-1.2**
XPFO				Sg		**Sg**	**09 50 34.8**	**-0.4**
XPFO	**Pion Flat**	**0.97**	**122**			**Pg**	**09 50 21.4**	**-1.2**
GORC	**Green Oak Ranc**	**0.99**	**170**			**Pg**	**09 50 21.4**	**-1.5**
OAT	**Oat Mountain**	**1.00**	**283**			**Pg**	**09 50 22.9**	**-0.2**
CIS	**Catalina Islan**	**1.09**	**229**	P		**Pg**	**09 50 24.0**	**-0.8**
	baz=48,SNR=48							
CIS				S		**Sg**	**09 50 38.8**	**-0.3**
	baz=48							
HEC	**Hector,Ludlow**	**1.15**	**52**	P		**Pg**	**09 50 24.9**	**-1.1**
	baz=233,SNR=64							
HEC				S		**Sg**	**09 50 40.4**	**-0.6**
	baz=233							
OSI	**Osito Audit: C**	**1.17**	**295**			**Pg**	**09 50 24.6**	**-1.8**
OSI				Sg		**Sb**	**09 50 41.5**	**+0.4**
OSI	**Osito Audit: C**	**1.17**	**295**	P		**Pg**	**09 50 25.5**	**-0.9**
	baz=114,SNR=22							
OSI				S		**Sb**	**09 50 41.4**	**+0.4**
	baz=114							
HWB	**Hans Werner Br**	**1.17**	**160**			**Pb**	**09 50 24.3**	**-1.7**
DPP	**Dos Picos Cty**	**1.20**	**160**			**Pb**	**09 50 24.8**	**-1.7**
BELC	**Belle Mtn. Jos**	**1.20**	**96**	P		**Pg**	**09 50 26.1**	**-0.9**
	baz=277,SNR=111							
BELC				S		**Sg**	**09 50 42.4**	**-0.4**
	baz=277							
JFS	**Joseph F. Stat**	**1.23**	**351**			**Pn**	**09 50 27.7**	**+0.7**
109C	**Camp Elliot, M**	**1.27**	**167**	Pn		**Pn**	**09 50 26.0**	**-1.2**
109C				Sn		**Sb**	**09 50 43.8**	**0.0**
109C	**Camp Elliot, M**	**1.27**	**167**	P		**Pn**	**09 50 26.1**	**-1.2**
	baz=348,SNR=25							
GSC	**Goldstone, Bar**	**1.28**	**24**			**Pn**	**09 50 27.1**	**-0.5**
GSC				Sg		**Sb**	**09 50 43.7**	**-0.6**
GSC	**Goldstone, Bar**	**1.28**	**24**	P		**Pn**	**09 50 27.2**	**-0.4**
	baz=204,SNR=137							
GSC				S		**Sb**	**09 50 44.0**	**-0.3**
	baz=204							
LRMC	**Laurel Mtn Rad**	**1.36**	**352**			**Pn**	**09 50 29.0**	**+0.3**
LRMC	**Laurel Mtn Rad**	**1.36**	**352**	P		**Pn**	**09 50 28.6**	**-0.2**
	baz=171,SNR=90							
LRMC				S		**Sn**	**09 50 47.3**	**+0.6**
	baz=171							
SCI2	**San Clemente I**	**1.47**	**219**	P		**Pn**	**09 50 30.0**	**-0.1**
	baz=38,SNR=18							
SCI2				S		**Sn**	**09 50 49.6**	**+0.4**
	baz=38							
MONP2	**Monument Peak**	**1.50**	**145**	P		**Pn**	**09 50 30.6**	**0.0**
	baz=326,SNR=93							
MONP2				S		**Sn**	**09 50 50.2**	**+0.1**
	baz=326							
ARVC	**Arvin**	**1.52**	**311**	Pb		**Pn**	**09 50 31.4**	**+0.6**
	baz=130,SNR=46							
ARVC				S		**Sn**	**09 50 51.2**	**+0.8**
	baz=130							
OLP	**Otay Lakes Par**	**1.57**	**164**			**Pn**	**09 50 31.1**	**-0.4**
BAR	**Barrett**	**1.58**	**156**			**Pn**	**09 50 31.1**	**-0.5**
GMRC	**Granite Mounta**	**1.61**	**66**			**Pb**	**09 50 33.6**	**+0.1**
GMRC	**Granite Mounta**	**1.61**	**66**	P		**Pn**	**09 50 31.9**	**-0.2**
	baz=247,SNR=62							
GMRC				Sb		**Sg**	**09 50 54.9**	**-0.8**
	baz=247							
BC3	**Big Chuckawall**	**1.72**	**105**	P		**Pn**	**09 50 33.4**	**-0.2**
	baz=287,SNR=21							
BC3				S		**Sn**	**09 50 56.2**	**+0.8**
	baz=287							
ISA	**Isabella, Lake**	**1.75**	**331**			**Pn**	**09 50 34.1**	**+0.1**
ISA				Sn		**Sn**	**09 50 57.5**	**+1.3**
ISA	**Isabella, Lake**	**1.75**	**331**	P		**Pn**	**09 50 34.1**	**+0.1**
	baz=151,SNR=39							
ISA				Sb		**Sb**	**09 50 58.9**	**+1.1**
	baz=151							
WOFM	**Oak Flat**	**1.75**	**324**			**Pn**	**09 50 34.7**	**+0.6**
TUQ	**Turquoise Moun**	**1.81**	**43**	Sb		**Sb**	**09 51 00.4**	**+1.0**
	baz=224							
SWSC	**Sam W. Stewart**	**1.81**	**130**	P		**Pn**	**09 50 33.8**	**-0.8**
	baz=312,SNR=39							
SWSC				Sb		**Sb**	**09 51 00.9**	**+1.6**
	baz=312							
SCZ2	**Santa Cruz Isl**	**1.83**	**266**	Sb		**Sb**	**09 51 01.6**	**+1.6**
	baz=85							
IKP	**In-Ko-Pah, Jac**	**1.85**	**143**	P		**Pn**	**09 50 35.1**	**-0.2**
	baz=324,SNR=47							
IKP				Sb		**Sb**	**09 51 01.3**	**+0.8**
	baz=324							
IRM	**Iron Mountain**	**1.90**	**88**	P		**Pn**	**09 50 35.8**	**-0.3**
	baz=270,SNR=92							
IRM				S		**Sn**	**09 51 00.6**	**+0.8**
	baz=270							
SBC	**Santa Barbara**	**1.91**	**280**	P		**Pn**	**09 50 35.9**	**-0.2**
	baz=98,SNR=9.4							
SBC				Sb		**Sb**	**09 51 03.9**	**+1.6**
	baz=98							
MPMC	**Manual Prospec**	**1.93**	**359**	P		**Pn**	**09 50 36.8**	**+0.3**
	baz=179,SNR=40							
MPMC				Sb		**Sb**	**09 51 04.3**	**+1.3**
	baz=179							
SNCC	**San Nicolas Is**	**1.95**	**244**	Pn		**Pn**	**09 50 36.6**	**0.0**
PKM	**Mcpherson Peak**	**2.10**	**292**	P		**Pn**	**09 50 39.4**	**+0.5**
	baz=110,SNR=26							
DAC	**Darwin (Calif)**	**2.15**	**357**	Pn		**Pb**	**09 50 42.8**	**+0.1**
VES	**Vestal, Richgr**	**2.18**	**322**	P		**Pn**	**09 50 40.2**	**+0.4**
	baz=141,SNR=16							
SMMC	**Simmler**	**2.42**	**300**	P		**Pn**	**09 50 43.6**	**+0.5**
	baz=118,SNR=9.9							
GLA	**Glamis**	**2.43**	**116**	Pn		**Pb**	**09 50 46.4**	**-1.0**
GLA				Sn		**Sn**	**09 51 14.9**	**+2.0**
Y12C	**Blythe**	**2.45**	**98**			**Pn**	**09 50 43.4**	**-0.2**
Y12C	**Blythe**	**2.45**	**98**	P		**Pn**	**09 50 43.3**	**-0.2**
	baz=280,SNR=28							
GATR	**Gnd/Air Tx Cnt**	**2.57**	**280**			**Pn**	**09 50 45.2**	**0.0**
PAGB	**Antelope Grade**	**2.81**	**305**			**Pn**	**09 50 49.2**	**+0.7**
TPNV	**Topopah Spring**	**2.98**	**19**			**Pn**	**09 50 52.8**	**+1.9**
TPNV	**Topopah Spring**	**2.98**	**19**	P		**Pn**	**09 50 52.2**	**+1.3**
	baz=199,SNR=6.3							
SHPR	**Sheep Range**	**3.02**	**38**	Pn		**Pn**	**09 50 52.0**	**+0.5**
W13A	**Hualapai Mount**	**3.09**	**71**			**Pn**	**09 50 53.1**	**+0.6**
113A	**Mohawk Valley,**	**3.36**	**113**	Pn		**Pn**	**09 50 55.4**	**-0.6**
PMPB	**Monarch Peak**	**3.45**	**308**			**Pn**	**09 50 58.3**	**+0.9**
Y14A	**Wickenburg**	**3.69**	**92**			**Pn**	**09 51 00.6**	**0.0**
OMMB	**Old Mammoth Mi**	**3.70**	**340**			**Pn**	**09 51 03.2**	**+2.1**
MDPB	**Devils Postpil**	**3.74**	**340**			**Pn**	**09 51 02.1**	**+0.5**
LCMT	**Little Creek M**	**4.47**	**49**			**Pn**	**09 51 12.8**	**+1.4**
CMB	**Columbia Colle**	**4.57**	**329**			**Pn**	**09 51 13.6**	**+0.9**
WAKR	**Walker**	**4.66**	**340**	Pn		**Pn**	**09 51 15.1**	**+1.0**
KNB	**Kanab**	**4.74**	**51**	Pn		**Pn**	**09 51 16.4**	**+1.2**
U15A	**North Rim**	**4.79**	**60**	Pn		**Pn**	**09 51 17.5**	**+1.5**
X16A	**Lo Mia Camp, P**	**4.97**	**85**			**Pn**	**09 51 19.6**	**+1.2**
YERR	**Yerington**	**5.06**	**344**	Pn		**Pn**	**09 51 20.1**	**+0.5**
PNTR	**Pine Nut**	**5.25**	**341**	Pn		**Pn**	**09 51 25.1**	**+2.9**
PSUT	**Pine Spring**	**5.26**	**32**	Pn		**Pn**	**09 51 24.2**	**+1.8**
TUC	**Tucson**	**5.86**	**106**	Pn		**Pn**	**09 51 29.8**	**-0.8**
X18A	**Snowflake**	**6.21**	**84**			**Pn**	**09 51 36.5**	**+1.1**

IDC ***16*** *09:55:05.0±6.6,59.°49S×25.°66W,h48km±64km,mb3.9/5, mb1 4.0/6,mb1mx3.6/24,mbtmp4.2/6,ML4.8/1,Error ellipse: s-maj=42.3km s-min=27.0km az=22.0*

NEIC ***16*** *09:55:04.0±1.5,59.°5S×0.°1×25.°7W×0.°4,h41km±9km, mb4.0/4,Error ellipse: s-maj=30.4km s-min=15.4km az=70.0*

ISC 16 09:55:03.0±0.9,59.°4S×0.°1×25.°6W×0.°2,h32km,n15, σ0.°57/15,mb4.0/7,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op			
VNA1	**Neumayer--Stat**	**13.34**	**154**	P	**Pn**	**09 58 09.9**	**+0.2**
VNA3	**Neumayer Olymp**	**13.51**	**158**	P	**Pn**	**09 58 11.6**	**-0.5**
SNAA	**Sanae**	**15.31**	**152**	P	**Pn**	**09 58 36.1**	**-0.3**
SNAA	**Sanae**	**15.31**	**152**	P	**Pn**	**09 58 36.1**	**-0.3**
	4.0nm,0.3s,baz=314,slow=14,SNR=70						
SNAA	**Sanae**	**15.31**	**152**	Pn	**Pn**	**09 58 36.1**	**-0.3**
USHA	**Ushuaia**	**23.37**	**262**	P	**P**	**10 00 09.4**	**+1.0**
	6.1nm,0.9s,baz=142,slow=12,SNR=3.2						
QSPA	**South Pole Qui**	**30.80**	**180**	P	**P**	**10 01 15.8**	**+0.4**
QSPA				IAmb	IAmb	10 01 35.1	
	comp=Z,1.7nm,1.2s						
PLCA	**Paso Flores**	**33.53**	**284**	P	**P**	**10 01 39.6**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=167,slow=4.8,SNR=6.2						
PLCA	**Paso Flores**	**33.53**	**284**	P	**P**	**10 01 39.1**	**-0.4**
PLCA				IAmb	IAmb	10 01 41.0	
	comp=Z,2.8nm,1.1s						
CFA	**Coronel Fontan**	**39.73**	**295**	P	**P**	**10 02 31.8**	**-0.5**
	comp=Z,3.0nm,0.6s,baz=152,slow=8.7,SNR=8.1						
TOA0	**Torodi Ar. Sit**	**75.64**	**27**	P	**P**	**10 06 45.1**	**+0.5**
TOA0				IAmb	IAmb	10 06 56.9	
	comp=Z,2.4nm,1.3s						
TORD	**Torodi Ar. Bea**	**75.64**	**27**	P	**P**	**10 06 45.4**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=199,slow=6.6,SNR=8.5						
ASAR	**Alice Springs**	**95.49**	**161**	P	**P**	**10 08 24.5**	**0.0**
	comp=Z,0.3nm,0.8s,baz=190,slow=4.8,SNR=5.5						
YKA	**Yellowknife Ar**	**139.22**	**315**	PKP	**PKPdf**	**10 14 24.4**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=133,slow=2.2,SNR=14						
ILAR	**Eielson Array**	**152.92**	**306**	PKPbc	**PKPbc**	**10 14 54.5**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=151,slow=1.8,SNR=5.8						

IDC ***16*** *10:15:06.8±0.8,37.°15N×68.°99E,h0km,mb4.0/16, mb1 4.2/22,mb1mx4.0/51,mbtmp4.1/22,ML4.2/6,MS3.5/8, Ms1 3.5/8,ms1mx3.1/40,Error ellipse: s-maj=17.9km s-min=12.5km az=168.0*

NNC ***16*** *10:15:09.5±3.3,37.°51N×68.°60E,h7km±20km,mb4.7, mpv4.7,Error ellipse: s-maj=23.8km s-min=12.6km az=161.0*

MOS ***16*** *10:15:10.3±1.2,37.°51N×68.°92E,h20km,mb4.4/16,Error ellipse: s-maj=7.0km s-min=4.7km az=71.0*

BJI ***16*** *10:15:11.3±0.0,37.°73N×69.°36E,h4km,mB4.8/12, mb4.2/20,Ms4.1/11,Ms7 3.9/9*

NEIC ***16*** *10:15:13.9±2.1,37.°40N×0.°06×68.°90E±0.°08,h45km±7km, mb4.4/20,Error ellipse: s-maj=9.5km s-min=8.8km az=124.0*

ISC 16 10:15:11.9±0.4,37.°33N±0.°03×68.°85E±0.°03,h29km,n166, σ2.°03/172,mb4.1/31,MS3.7/7,22C-16D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op			
PKMR	**Pachkamar**	**2.29**	**303**	*i* P	**Pb**	**10 15 51.3**	**-1.3**
PKMR				*i* S	**Sb**	**10 16 21.8**	**+1.3**
SAM	**Samarkand**	**2.76**	**329**	*i* P	**Pn**	**10 15 57.2**	**+3.0**
SAM				*i* S	**Sb**	**10 16 31.0**	**-3.0**
KBL	**Kabul**	**2.78**	**177**	PN	**Pb**	**10 16 01.1**	**0.0**
KBL						10 16 33.1	
KBL	**Kabul**	**2.78**	**177**	Pn	**Pb**	**10 16 01.1**	**0.0**
KBL				Sn	**Sb**	**10 16 33.1**	**-1.7**
BTK	**Batken**	**3.13**	**29**	PN	**Pn**	**10 16 01.1**	**+1.7**
BTK	**Batken**	**3.13**	**29**		**Pn**	**10 16 01.1**	**+1.7**
TAS	**Tashkent**	**4.01**	**5**	*e*P	**Pb**	**10 16 26.2**	**+4.4**
TAS				S	**Sb**	**10 17 15.8**	**+6.0**
NUT	**Nurota**	**4.06**	**323**	*i* P	**Pb**	**10 16 24.4**	**+1.7**
NUT				*i* S	**Sn**	**10 16 59.4**	**+0.7**
FRG	**Fergana**	**4.10**	**33**	P	**Pb**	**10 16 19.8**	**-3.5**
FRG				S	**Sb**	**10 17 09.3**	**-3.1**
CEP	**Cherat**	**4.29**	**144**	P	**Pn**	**10 16 18.9**	**+3.5**
CHRV	**Charvak**	**4.39**	**11**	P	**Pb**	**10 16 30.0**	**+1.6**
CHRV				S	Sb	10 17 30.1	+9.2
NIL	**Nilore**	**5.13**	**134**	PN	**Pn**	**10 16 29.7**	**+2.9**
NIL	**Nilore**	**5.13**	**134**		**Pn**	**10 16 29.7**	**+2.9**
CHCP	**Chirah Chowk**	**5.13**	**134**	P	**Pn**	**10 16 30.3**	**+3.5**
KK31	**Karatay Array**	**5.91**	**12**	PN	**Pn**	**10 16 37.8**	**+0.4**
KK31	**Karatay Array**	**5.91**	**12**	⇓Pn	**Pn**	**10 16 37.9**	**+0.4**
	4.8nm,0.3s,baz=184,slow=8.7,SNR=117						
KK31				⇓Pg	**Pb**	**10 16 56.2**	**+2.0**
	17nm,0.5s,baz=195,slow=17,SNR=8.7						
KK31				⇓Sn	**Sn**	**10 17 42.8**	**-1.4**
	13nm,0.3s,baz=198,slow=20,SNR=6.7						
KK31				⇓Lg	Lg	10 18 13.5	
	182nm,0.8s,baz=198,slow=24,SNR=6.3						
KK31	**Karatay Array**	**5.91**	**12**		**Pn**	**10 16 37.8**	**+0.4**
KKAR	**Karatay Array**	**5.91**	**12**	PN	**Pn**	**10 16 37.8**	**+0.3**
KKAR	**Karatay Array**	**5.91**	**12**		**Pn**	**10 16 37.8**	**+0.3**
KSH	**Kashi**	**6.01**	**66**	Pn	**Pn**	**10 16 34.6**	**-4.3**
KSH				Sn	Sn	10 17 25.9	-21
KSH				smax	smax		
	comp=N,390nm,0.8s						
KSH				smax	smax		
	comp=E,260nm,0.9s						
AML	**Almayashu**	**6.08**	**36**	P	**Pn**	**10 16 40.0**	**-0.1**
	SNR=50						
HRA	**Herat**	**6.11**	**243**		**Pn**	**10 16 42.7**	**+2.3**
EKS2	**Erkin-Say**	**6.54**	**34**	P	**Pn**	**10 16 46.5**	**+0.4**
	SNR=18						
UCH	**Uchtor**	**6.56**	**40**	P	**Pn**	**10 16 47.1**	**+0.4**
	SNR=39						
KZA	**Kyzart**	**6.84**	**44**	P	**Pn**	**10 16 51.1**	**+0.4**
	SNR=96						
AAK	**Ala-Archa**	**6.85**	**37**	Pn	**Pn**	**10 16 51.0**	**+0.6**
	comp=E,19nm,0.3s,baz=197,slow=5.7,SNR=270						
AAK				LR	LR	10 20 07.8	
	comp=E,411nm,18.0s,baz=214,slow=44						
AAK	**Ala-Archa**	**6.85**	**37**	P	**Pn**	**10 16 50.7**	**+0.2**
	SNR=134						
AAK	**Ala-Archa**	**6.85**	**37**	⇑Pn	**Pn**	**10 16 50.9**	**+0.5**
	comp=E,61nm,0.6s						
AAK				⇓Lg	Lg	10 18 46.9	
	comp=E,93nm,1.1s						
NRN	**Naryn**	**6.89**	**51**	PN	**Pn**	**10 16 50.0**	**-1.2**
NRN	**Naryn**	**6.89**	**51**		**Pn**	**10 16 50.0**	**-1.2**
FRU1	**Bishkek**	**7.04**	**37**	PN	**Pn**	**10 16 54.5**	**+1.4**
FRU1	**Bishkek**	**7.04**	**37**		**Pn**	**10 16 54.5**	**+1.4**
KBK	**Karagaybulak**	**7.09**	**39**	P	**Pn**	**10 16 54.7**	**+0.9**
	SNR=141						
CHMS	**Chumysh**	**7.25**	**37**	P	**Pn**	**10 16 56.5**	**+0.7**
	SNR=33						
USP	**Ospenovka**	**7.34**	**34**	P	**Pn**	**10 16 57.0**	**-0.1**
	SNR=16						
ULHL	**Ulahol**	**7.52**	**47**	P	**Pn**	**10 17 00.1**	**+0.4**
	SNR=20						
TKM2	**Tokmak 2**	**7.61**	**41**	P	**Pn**	**10 17 00.7**	**-0.2**
TKM2	**Tokmak 2**	**7.61**	**41**	P	**Pn**	**10 17 01.1**	**+0.2**
	SNR=43						
TKM2	**Tokmak 2**	**7.61**	**41**	⇓Pn	**Pn**	**10 17 00.8**	**-0.2**
	comp=E,28nm,0.4s						
TKM2				⇓Sn	**Sn**	**10 18 32.3**	**+6.0**
	comp=E,30nm,0.9s						
DHRM	**DHARAMSHALA**	**7.95**	**127**	*e*P	**Pn**	**10 17 04.8**	**-0.8**
DHRM				*e*S	**Sn**	**10 18 35.2**	**+0.5**
DHRM				IAML		10 18 46.6	
	comp=E,386nm,0.9s						
DHRM				IAML		10 18 48.1	
	comp=N,206nm,1.4s						
KDJ	**Kajisay**	**8.01**	**51**	P	**Pn**	**10 17 06.6**	**+0.1**
KDJ	**Kajisay**	**8.01**	**51**		**Pn**	**10 17 06.6**	**+0.1**
GEYT	**Alibeck**	**8.54**	**277**	Pn	**Pn**	**10 17 11.4**	**-2.1**
	comp=N,5.1nm,0.3s,baz=127,slow=10,SNR=21						
GEYT				LR	LR	10 21 49.5	
	comp=N,235nm,18.8s,baz=100,slow=46						
GYA0B	**ALIBECK ARRAY**	**8.54**	**277**	⇑Pn	**Pn**	**10 17 12.3**	**-1.3**
GYA0B				⇑Sn	**Sn**	**10 18 47.3**	**-1.6**
GYA0B	**ALIBECK ARRAY**	**8.54**	**277**		**Pn**	**10 17 12.8**	**-0.7**
MDOK	**Medeo**	**8.56**	**45**	⇓P	**Pn**	**10 17 14.0**	**+0.1**
	comp=N,85nm,0.8s						
PRZ	**Przheval'sk**	**8.96**	**52**	P	**Pn**	**10 17 19.9**	**+0.4**
PRZ	**Przheval'sk**	**8.96**	**52**		**Pn**	**10 17 19.9**	**+0.4**
SMLA	**Simla**	**9.25**	**129**	*e*P	**Pn**	**10 17 24.2**	**+0.9**
SMLA				*e*S	**Sn**	**10 19 05.5**	**-0.8**
SMLA				IAML		10 19 16.9	
	comp=E,43nm,0.2s						
SMLA				IAML		10 19 19.5	
	comp=N,50nm,1.2s						
PDGK	**Podgornoye**	**10.09**	**50**	P	**Pn**	**10 17 32.9**	**-2.0**
PDGK	**Podgornoye**	**10.09**	**50**	⇑P	**Pn**	**10 17 33.0**	**-2.0**
	comp=N,12nm,0.8s						
JOSI	**Joshimath**	**11.16**	**124**	*e*P	**Pn**	**10 17 50.5**	**+0.8**
JOSI				*e*S	**Sn**	**10 19 50.8**	**-2.8**
JOSI				IAML		10 20 07.5	
	comp=N,83nm,0.7s						
JOSI				IAML		10 20 07.7	
	comp=E,83nm,0.7s						
KUDL	**Kundal**	**11.18**	**143**	*e*P	Pn	10 17 43.1	-6.7
KUDL				*e*S	Sn	10 19 43.3	-11
AYAN	**Aya Nagar**	**11.22**	**139**	*e*P	**Pn**	**10 17 50.7**	**+0.4**
AB31	**Akbulak array**	**13.56**	**334**	*e*P	**Pn**	**10 18 19.1**	**-3.0**
AB31	**Akbulak array**	**13.56**	**334**	⇓Pn	**Pn**	**10 18 19.2**	**-3.0**
	comp=E,22nm,0.8s,baz=156,slow=12,SNR=198						
AB31				⇓Sn	**Sn**	**10 20 45.5**	**-6.2**
	comp=E,6.0nm,0.5s,baz=154,slow=23,SNR=5.9						
ABKAR	**Akbulak array**	**13.56**	**334**		**Pn**	**10 18 19.3**	**-2.9**
MAKZ	**Makanchi**	**13.58**	**42**	P	**Pn**	**10 18 20.4**	**-2.1**
MAKZ	**Makanchi**	**13.58**	**42**	⇑P	**Pn**	**10 18 19.7**	**-2.8**
	comp=E,9.4nm,1.4s						
MAKZ	**Makanchi**	**13.58**	**42**			**10 18 20.4**	**-2.1**
MK31	**Makanchi Array**	**13.74**	**42**	P	**Pn**	**10 18 22.6**	**-2.0**
MK31	**Makanchi Array**	**13.74**	**42**	⇑P	**Pn**	**10 18 22.3**	**-2.3**
	comp=E,8.1nm,0.8s,baz=226,slow=13,SNR=29						
MK31	**Makanchi Array**	**13.74**	**42**		**Pn**	**10 18 22.6**	**-2.0**
MKAR	**Makanchi Array**	**13.74**	**42**	*i* P	**Pn**	**10 18 22.7**	**-1.9**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	**Makanchi Array**	**13.74**	**42**	Pn	**Pn**	**10 18 22.4**	**-2.2**
	comp=Z,0.8nm,0.3s,baz=227,slow=14,SNR=37						
KURBB	**Kurchatov Arra**	**14.99**	**24**	Pn	**Pn**	**10 18 36.9**	**-4.7**
	comp=Z,0.2nm,0.3s,baz=216,slow=12,SNR=15						
KURBB	**Kurchatov Arra**	**14.99**	**24**	⇑P	**Pn**	**10 18 36.9**	**-4.7**
	comp=Z,6.3nm,0.5s						
KURK	**Kurchatov**	**15.10**	**24**	⇑*e*P	**Pn**	**10 18 39.6**	**-3.4**
KURK	**Kurchatov**	**15.10**	**24**	⇑P	**Pn**	**10 18 44.4**	**+1.4**
	comp=Z,2.9nm,0.6s						
KURK	**Kurchatov**	**15.10**	**24**		**Pn**	**10 18 40.1**	**-2.9**
AKTO	**Aktyubinsk**	**15.23**	**333**	Pn	**Pn**	**10 18 42.3**	**-2.5**
	comp=Z,1.3nm,0.3s,baz=150,slow=14,SNR=15						
AKTO	**Aktyubinsk**	**15.23**	**333**	⇑Pn	**Pn**	**10 18 41.5**	**-3.3**
	comp=Z,19nm

VRH	**Novokhopyorsk**	**23.70**	**314**	*e*P	**P**	**10 20 28.1**	**+7.1**
VRH				pmax	pmax		
	comp=N,30nm,1.0s						
VRH				pmax	pmax		
	comp=E,20nm,0.6s						
VRH				pmax	pmax		
	comp=Z,30nm,0.6s						
RAYN	**Ar Rayn**	**24.30**	**242**	P	**P**	**10 20 27.1**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
RAYN	**Ar Rayn**	**24.30**	**242**	P	**P**	**10 20 27.1**	**+0.2**
RAYN				IAmb	IAmb	10 20 29.5	
	comp=Z,5.0nm,0.8s						
GTA	**Gaotai**	**24.31**	**76**	⇑P	**P**	**10 20 27.4**	**+0.4**
GTA				pP	pP	10 20 34.8	-0.8
GTA				sP	sP	10 20 37.8	-1.4
GTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,99nm,6.2s						
GTA				LR	LR		
	comp=Z,240nm,13.3s						
GTA				LR	LR		
	comp=Z,270nm,13.3s						
GTA				LR	LR		
	comp=Z,300nm,14.6s						
VSR	**Storozhevoye**	**25.18**	**313**	*e*P	**P**	**10 20 35.3**	**+0.7**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR				pmax	pmax		
	comp=N,2.0nm,0.4s						
VSR				pmax	pmax		
	comp=E,9.0nm,0.7s						
LPSR	**Galich'ya Gora**	**25.86**	**316**	*e*P	**P**	**10 20 42.9**	**+2.2**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR				pmax	pmax		
	comp=N,6.0nm,0.9s						
LPSR				pmax	pmax		
	comp=E,8.0nm,1.0s						
MOY	**Mondy**	**26.78**	**47**	*e*P	**P**	**10 20 50.0**	**+0.8**
BR131	**Keskin Array S**	**27.55**	**286**	P	**P**	**10 20 56.4**	**+0.1**
BR131				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BR131	**Keskin Array S**	**27.55**	**286**	P	**P**	**10 20 56.4**	**+0.1**
BRTR	**Keskin Array B**	**27.55**	**286**	P	**P**	**10 20 58.1**	**+1.9**
	comp=Z,2.2nm,0.6s,baz=104,slow=9.2,SNR=16						
MMAI	**Mount Meron Ar**	**27.59**	**271**	LR	LR	10 34 02.5	
	comp=Z,72nm,20.2s,baz=5.0,slow=41						
ZAK	**Zakamensk**	**27.78**	**51**	*e*P	**P**	**10 20 58.2**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
OBN	**Obninsk**	**28.19**	**319**	*e*P	**P**	**10 21 04.2**	**+2.6**
OBN				*e*		10 21 52.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN	**Obninsk**	**28.19**	**319**	LR	LR	10 32 48.3	
	comp=Z,20nm,18.6s,baz=166,slow=37						
TLY	**Talaya**	**28.35**	**48**	*e*P	**P**	**10 21 03.6**	**+0.4**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,280nm,9.0s						
SONM	**Songino Array**	**29.31**	**57**	P	**P**	**10 21 12.1**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=279,slow=9.3,SNR=5.6						
SONM				LR	LR	10 34 10.7	
	comp=Z,254nm,18.0s,baz=140,slow=39						
ULN	**Ulaanbaatar**	**29.75**	**57**	‖*e*P	**P**	**10 21 16.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**31.08**	**308**	P	**P**	**10 21 28.2**	**+0.9**
	comp=Z,1.5nm,0.4s,baz=82,slow=6.8,SNR=7.1						
MLR	**Muntele Rosu**	**32.87**	**298**	⇑P	**P**	**10 21 46.1**	**+2.8**
BURAR	**Bucovina Array**	**33.39**	**302**	⇑P	**P**	**10 21 48.7**	**+1.0**
VOIR		**33.50**	**298**	⇑P	**P**	**10 21 50.2**	**+1.5**
VSU	**Vasula**	**34.47**	**321**	⇑*e*P	**P**	**10 21 57.5**	**+0.7**
VSU				pmax	pmax		
	comp=Z,67nm,2.1s						
BOD	**Bodaibo**	**35.82**	**40**	*e*P	**P**	**10 22 08.5**	**0.0**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.7s						
FINES	**FINESS Array B**	**35.84**	**326**	P	**P**	**10 22 09.2**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=114,slow=9.6,SNR=14						
ARCES	**ARCESS Array B**	**39.73**	**338**	P	**P**	**10 22 42.2**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=126,slow=8.2,SNR=8.7						
CLL	**Collm**	**41.33**	**308**	*e*PP	PP	10 24 37.0	+6.7
NC405	**NORSAR Array S**	**42.45**	**323**	P	**P**	**10 23 04.0**	**+0.2**
NC602	**NORSAR Array S**	**42.49**	**322**	P	**P**	**10 23 04.5**	**+0.3**
NC303	**NORSAR Array S**	**42.63**	**323**	P	**P**	**10 23 05.9**	**+0.6**
NB2	**NORSAR Subarra**	**42.68**	**323**	P	**P**	**10 23 05.9**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**42.68**	**323**	P	**P**	**10 23 06.2**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=97,slow=7.8,SNR=11						
ZEA	**Zeya**	**42.79**	**48**	*e*P	**P**	**10 23 07.8**	**+1.1**
NC204	**NORSAR Array S**	**42.93**	**323**	P	**P**	**10 23 08.1**	**+0.3**
KONO	**Kongsberg**	**43.36**	**321**	⇓*e*P	**P**	**10 23 13.6**	**+2.4**
KONO				pmax	pmax		
	comp=Z,135nm,3.4s						
TIXI	**Tiksi**	**45.66**	**23**	⇑*i*P	**P**	**10 23 29.2**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLR	**Kul'dur**	**46.05**	**54**	P	**P**	**10 23 32.8**	**0.0**
	comp=Z,1.2nm,0.6s,baz=281,slow=7.1,SNR=6.6						
KSRS	**Korea Array**	**46.24**	**71**	P	**P**	**10 23 34.7**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=277,slow=7.1,SNR=4.4						
KSRS				LR	LR	10 45 23.9	
	comp=Z,89nm,19.4s,baz=310,slow=39						
YSS	**Yuzh-Sakhalins**	**53.76**	**55**	⇓*e*P	**P**	**10 24 33.9**	**+2.6**
YSS				pmax	pmax		
	comp=Z,37nm,1.7s						
ESDC	**Sonseca Array**	**55.55**	**297**	P	**P**	**10 24 45.6**	**+1.0**
	comp=Z,0.5nm,0.4s,baz=57,slow=8.0,SNR=6.5						
BILL	**Bilibino**	**58.62**	**26**	‖*e*P	**P**	**10 25 06.9**	**+1.1**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
TOA0	**Torodi Ar. Sit**	**64.03**	**267**	P	**P**	**10 25 43.2**	**0.0**
TOA0				IAmb	IAmb	10 25 43.8	
	comp=Z,2.7nm,0.9s						
TORD	**Torodi Ar. Bea**	**64.03**	**267**	P	**P**	**10 25 43.4**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=46,slow=6.5,SNR=9.4						
DBIC	**Dimbokro**	**73.03**	**265**	LR	LR	11 02 52.6	
	comp=Z,47nm,18.3s,baz=104,slow=39						
C36M	**Paulatuk**	**73.21**	**5**	P	**P**	**10 26 39.3**	**-0.2**
C36M				IAmb	IAmb	10 26 46.3	
	comp=Z,4.3nm,0.7s						
INK	**Inuvik**	**73.36**	**8**	P	**P**	**10 26 42.0**	**+1.6**
INK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
INK	**Inuvik**	**73.36**	**8**	P	**P**	**10 26 42.0**	**+1.6**
ILAR	**Eielson Array**	**74.44**	**15**	P	**P**	**10 26 47.2**	**+0.3**
	comp=Z,1.1nm,1.0s,baz=322,slow=5.3,SNR=3.4						
KTH	**Kantishna Hill**	**74.60**	**17**	P	**P**	**10 26 47.6**	**-0.3**
SKT	**Skwentna**	**75.79**	**18**	P	**P**	**10 26 53.6**	**-1.1**
SML	**Sawmill**	**76.72**	**17**	P	**P**	**10 27 00.1**	**+0.1**
YKA	**Yellowknife Ar**	**80.49**	**2**	P	**P**	**10 27 21.4**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=352,slow=5.5,SNR=13						
WRA	**Warramunga Arr**	**83.89**	**121**	*i* P	**P**	**10 27 38.9**	**-0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
WRA	**Warramunga Arr**	**83.89**	**121**	P	**P**	**10 27 36.5**	**-2.6**
	comp=Z,1.1nm,1.0s,baz=324,slow=4.1,SNR=4.9						
ASAR	**Alice Springs**	**86.14**	**124**	P	**P**	**10 27 48.1**	**-2.3**
	comp=Z,0.3nm,0.5s,baz=316,slow=4.6,SNR=8.9						

YARS 16 10:22:04.4±0.0, 58°.02N×128°.48E, h15km, mb0.0/23, ML2.3/7, Ms0.0/23, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CGD	**Chagda**	**1.34**	**56**	*e*Pg	Pb	10 22 29.3	+0.1
	5.0nm,0.4s						
CGD				*e*Sg	Sn	10 22 46.0	0.0
	47nm,0.4s						
ALDR	**Aldan**	**1.73**	**291**	*e*Pg	Pb	10 22 36.4	+0.6
	8.2nm,0.2s						
ALDR				*e*Sg	Sg	10 22 59.2	-0.7
	126nm,0.2s						
CLNS	**Chul'man**	**2.28**	**240**	*e*Pg	Pb	10 22 46.0	+0.8
	1.5nm,0.1s						
CLNS				*e*Sg	Sg	10 23 15.5	-2.0
	21nm,0.2s						
BMKR	**Bomnak**	**3.33**	**176**	*e*Pg	Pb	10 23 04.4	+1.3
	8.0nm,0.2s						
BMKR				*e*Sg	Sg	10 23 48.5	-2.6
	17nm,0.2s						
BLSR	**Buluus**	**3.36**	**4**	*e*Pg	Pb	10 23 04.6	+1.0
	47nm,0.5s						
BLSR				*e*Sn	Sn	10 23 37.5	+1.7
BLSR				*e*Sg	Sg	10 23 50.1	-2.1
	76nm,0.4s						
TBGR	**Tabaga**	**3.85**	**8**	*e*Pn	Pn	10 23 04.1	+1.1
TBGR				*e*Pg	Pb	10 23 14.4	+2.4
	20nm,0.3s						
TBGR				*e*Sg	Sg	10 24 05.0	-3.0
	23nm,0.2s						
YKLR	**Yuktali**	**3.97**	**252**	*e*Pg	Pb	10 23 16.5	+2.5
	1.5nm,0.6s						
YKLR				*e*Sg	Sg	10 24 08.0	-3.8
	11nm,0.9s						
YAK	**Yakutsk**	**4.07**	**8**	*e*P	Pb	10 23 17.7	+2.1
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK	**Yakutsk**	**4.07**	**8**	*e*Pg	Pb	10 23 17.3	+1.7
YAK				*e*Sn	Sn	10 23 53.9	+0.7
YAK				*e*Sg	Sg	10 24 11.1	-3.7
	comp=Z,3.0nm,0.8s						
OLMR	**Olekminsk**	**4.75**	**303**	*e*Sn	Sn	10 24 10.0	-0.1
OLMR				*e*Sg	Sg	10 24 32.5	-4.3

*NEIC **16** 10:27:46.7±1.5, 19°.04N×0°.06×66°.68W±0°.03, h25km±13km, Error ellipse: s-maj=8.5km s-min=3.9km az=189.0*

RSPR 16 10:27:47.4, 19°.12N×66°.69W, h43km±5km, MD3.2/11, 17C-3D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.66**	**167**	⇑*e*P	Pn	10 27 59.3	-1.1
EMPR	**Esperanza - Ma**	**0.66**	**167**	*e*S	Sn	10 28 08.9	-0.7
EMPR	**Esperanza - Ma**	**0.66**	**167**	⇓*e*P	Pn	10 27 59.2	-1.1
EMPR	**Esperanza - Ma**	**0.66**	**167**	*e*S	Sn	10 28 08.8	-0.8
EMPR	**Esperanza - Ma**	**0.66**	**167**		Pn	10 27 59.2	-1.1
EMPR					Sn	10 28 08.8	-0.8
AGPR	**Aguadilla, PR**	**0.76**	**212**	⇑*e*P	Pn	10 28 00.2	-1.6
AGPR	**Aguadilla, PR**	**0.76**	**212**	*e*S	Sn	10 28 10.9	-1.3
AGPR	**Aguadilla, PR**	**0.76**	**212**		Pn	10 28 00.2	-1.6
AGPR					Sn	10 28 10.9	-1.3
AOPR	**Arecibo Observ**	**0.77**	**185**	⇑*e*P	Pn	10 28 00.7	-1.2
AOPR	**Arecibo Observ**	**0.77**	**185**	*e*S	Sn	10 28 11.9	-0.6
AOPR	**Arecibo Observ**	**0.77**	**185**	⇓*e*P	Pn	10 28 00.8	-1.2
AOPR	**Arecibo Observ**	**0.77**	**185**	*e*S	Sn	10 28 11.7	-0.8
AOPR	**Arecibo Observ**	**0.77**	**185**		Pn	10 28 00.8	-1.2
AOPR					Sn	10 28 11.7	-0.8
GCPR	**Guaynabo City**	**0.99**	**145**		Pn	10 28 04.4	-0.5
MPR	**Mayaguez**	**1.00**	**205**	Pn	Pn	10 28 03.5	-1.6
MPR					Sn	10 28 16.7	-1.2
LSP	**Las Mesas**	**1.01**	**202**	*e*S	Sn	10 28 17.0	-1.3
LSP	**Las Mesas**	**1.01**	**202**	⇑*e*P	Pn	10 28 04.3	-0.9
LSP	**Las Mesas**	**1.01**	**202**		Pn	10 28 04.3	-0.9
LSP					Sn	10 28 17.0	-1.3
CELP	**Cerrillos**	**1.05**	**174**	⇑*e*P	Pn	10 28 04.7	-1.0
CELP				*e*S	Sn	10 28 17.6	-1.5
CELP	**Cerrillos**	**1.05**	**174**		Pn	10 28 04.7	-1.0
CELP					Sn	10 28 17.6	-1.5
OBIP	**Obispado Ponce**	**1.07**	**176**		Pn	10 28 06.0	0.0
OBIP				Sn	Sn	10 28 18.6	-1.2
SJG	**San Juan**	**1.13**	**153**		Pn	10 28 08.0	+1.3
GBPR	**Guanica, Bosqu**	**1.15**	**189**	*e*S	Sn	10 28 20.9	-0.9
GBPR	**Guanica, Bosqu**	**1.15**	**189**	‖*e*P	Pn	10 28 06.8	-0.4
GBPR	**Guanica, Bosqu**	**1.15**	**189**		Pn	10 28 06.8	-0.4
GBPR					Sn	10 28 20.9	-0.9
CBYP	**Canovanas**	**1.16**	**137**	*e*S	Sn	10 28 20.6	-1.2
CBYP	**Canovanas**	**1.16**	**137**	⇑*e*P	Pn	10 28 06.1	-1.1
CBYP	**Canovanas**	**1.16**	**137**	*e*S	Sn	10 28 20.2	-1.7
CBYP	**Canovanas**	**1.16**	**137**	‖*e*P	Pn	10 28 06.1	-1.1
CBYP	**Canovanas**	**1.16**	**137**		Pn	10 28 06.1	-1.1
CBYP					Sn	10 28 20.2	-1.7
CRPR	**Cabo Rojo, PR**	**1.18**	**200**	*e*S	Sn	10 28 21.7	-0.6
CRPR	**Cabo Rojo, PR**	**1.18**	**200**	‖*e*P	Pn	10 28 06.7	-0.8
CRPR	**Cabo Rojo, PR**	**1.18**	**200**	*e*S	Sn	10 28 19.9	-2.4
CRPR	**Cabo Rojo, PR**	**1.18**	**200**	‖*e*P	Pn	10 28 06.7	-0.8
CRPR	**Cabo Rojo, PR**	**1.18**	**200**		Pn	10 28 06.7	-0.8
CRPR					Sn	10 28 19.9	-2.4
MLPR	**Magueyes Islan**	**1.20**	**197**	*e*S	Sn	10 28 21.3	-1.4
MLPR	**Magueyes Islan**	**1.20**	**197**	‖*e*P	Pn	10 28 06.0	-1.7
MLPR	**Magueyes Islan**	**1.20**	**197**	*e*S	Sn	10 28 21.3	-1.4
MLPR	**Magueyes Islan**	**1.20**	**197**	‖*e*P	Pn	10 28 06.0	-1.7
MLPR	**Magueyes Islan**	**1.20**	**197**		Pn	10 28 06.0	-1.7
MLPR					Sn	10 28 21.3	-1.4
ICMP	**Isla Caja de M**	**1.24**	**173**	Pn	Pn	10 28 09.8	+1.6
HUMP	**Col San Antoni**	**1.26**	**141**	*e*S	Sn	10 28 23.0	-1.3
HUMP	**Col San Antoni**	**1.26**	**141**	⇑*e*P	Pn	10 28 08.0	-0.6
HUMP	**Col San Antoni**	**1.26**	**141**	*e*S	Sn	10 28 23.0	-1.2
HUMP	**Col San Antoni**	**1.26**	**141**	⇓*e*P	Pn	10 28 07.9	-0.6
HUMP	**Col San Antoni**	**1.26**	**141**		Pn	10 28 07.9	-0.6
HUMP					Sn	10 28 23.0	-1.2
PDPR	**Patillas Dam,**	**1.27**	**150**	Pn	Pn	10 28 07.6	-1.0
PDPR					Sn	10 28 21.9	-2.5
IGPR	**InterUniversit**	**1.27**	**154**	*e*S	Sn	10 28 23.5	-1.2
IGPR	**InterUniversit**	**1.27**	**154**	*e*S	Sn	10 28 23.1	-1.6
IGPR	**InterUniversit**	**1.27**	**154**	‖*e*P	Pn	10 28 07.9	-0.9
IGPR	**InterUniversit**	**1.27**	**154**	*e*S	Sn	10 28 23.4	-1.3
IGPR	**InterUniversit**	**1.27**	**154**	⇓*e*P	Pn	10 28 08.0	-0.8
IGPR	**InterUniversit**	**1.27**	**154**		Sn	10 28 23.1	-1.6
IGPR	**InterUniversit**	**1.27**	**154**	Pn	Pn	10 28 09.1	+0.3
MTP	**Monte Pirata**	**1.48**	**133**	‖*e*P	Pn	10 28 10.4	-1.2
MTP	**Monte Pirata**	**1.48**	**133**	‖*e*P	Pn	10 28 10.4	-1.2
MTP	**Monte Pirata**	**1.48**	**133**		Pn	10 28 10.4	-1.2
PCDR	**Punta Cana, DR**	**1.71**	**250**	Pn	Pn	10 28 16.4	+1.6
STVI	**Saint Thomas**	**1.81**	**115**	Pn	Pn	10 28 16.6	+0.5
STVI					Sn	10 28 36.3	-1.7
DR12	**Loma Pena Alta**	**2.57**	**263**	Pn	Pn	10 28 27.0	+0.4

IDC 16 10:50:50.9±2.3, 6°.75S×129°.65E, h0km, mb3.2/1, mb1 3.5/3, mb1mx3.3/28, mbtmp3.3/3, ML3.4/2, Error ellipse: s-maj=159.5km s-min=31.3km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**13.88**	**161**	Pn	Pn	10 54 09.0	0.0
	0.2nm,0.3s,baz=344,slow=13,SNR=7.2						
WRA				Sn	Sn	10 56 30.6	-13
	0.7nm,0.3s,baz=329,slow=23,SNR=12						
ASAR	**Alice Springs**	**17.31**	**167**	P	Pn	10 54 54.1	0.0
	0.1nm,0.3s,baz=346,slow=9.8,SNR=13						
ASAR				S	Sn	10 57 52.1	-15
	0.1nm,0.3s,baz=346,slow=27,SNR=6.3						
MKAR	**Makanchi Array**	**67.83**	**327**	P	P	11 01 51.0	0.0
	0.1nm,0.5s,baz=114,slow=7.9,SNR=2.9						

*GCG **16** 11:08:17.9±0.9, 13°.14N×90°.66W, h30km, MD3.7*
*SNET **16** 11:08:18.3±1.2, 13°.37N×90°.74W, h24km±16km, ML3.4*

ISC 16 11:08:21.0±3.0, 13°.3N±0°.2×90°.65W±0°.10, h38km, n9, σ1 66/11, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcalda de S**	**0.82**	**48**	*e*P	**Pn**	**11 08 33.4**	**-2.6**
FAME				*e*S	**Sn**	**11 08 45.5**	**-1.5**
IXG	**Ixpaco**	**0.89**	**13**	*e*P	**Pn**	**11 08 36.3**	**-0.9**
CEVE	**Cerro Verde**	**1.13**	**62**	*e*S	**Sn**	**11 08 57.8**	**+3.0**
CEVE				IAML		11 08 58.1	
	comp=Z,682nm,0.2s						
SBLS	**San Blas**	**1.13**	**61**	*e*P	**Pn**	**11 08 40.2**	**-0.3**
RTR	**El Retiro**	**1.14**	**58**	*e*P	**Pn**	**11 08 39.9**	**-0.7**
FUG	**Fuego 3**	**1.16**	**351**	*e*P	**Pn**	**11 08 40.6**	**-0.2**
NBG	**Las Nubes**	**1.32**	**13**	*e*P	**Pn**	**11 08 43.9**	**+0.8**
STG3	**Santiaguito 3,**	**1.67**	**328**	*e*P	**Pn**	**11 08 47.4**	**-0.4**
COEG	**Centro de Oper**	**1.75**	**79**	*e*P	**Pn**	**11 08 48.5**	**-0.3**
COEG				*e*S	**Sn**	**11 09 11.2**	**+1.3**

*IDC **16** 11:31:07.5±1.0, 37°.03N×70°.76E, h0km, mb3.3/1, mb1 3.5/3, mb1mx3.2/35, mbtmp3.3/3, ML2.8/2, Error ellipse: s-maj=378.0km s-min=60.1km az=144.0*
*NNC **16** 11:31:24.2±10.0, 37°.54N×71°.06E, h110km±203km, mb3.1, mpv3.7, Error ellipse: s-maj=78.7km s-min=54.0km az=8.0*

ISC 16 11:31:22.9±2.2, 37°.5N±0°.2×71°.2E±0°.1, h100km, n16, σ1 63/21, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.03**	**21**	P	**Pn**	**11 32 37.8**	**+1.4**
	SNR=16						
UCH	**Uchtor**	**5.39**	**27**	P	**Pn**	**11 32 42.8**	**+1.6**
	SNR=8.2						
EKS2	**Erkin-Say**	**5.55**	**20**	P	**Pn**	**11 32 45.3**	**+2.2**
	SNR=12						
KZA	**Kyzart**	**5.55**	**33**	P	**Pn**	**11 32 44.1**	**+0.6**
	SNR=5.6						
KK31	**Karatay Array**	**5.66**	**355**	⇑P	**Pn**	**11 32 47.2**	**+2.6**
	1.0nm,0.3s,baz=175,slow=13,SNR=19						
KK31				⇓S	**Sn**	**11 33 50.6**	**+2.4**
	2.8nm,0.5s,baz=186,slow=28,SNR=3.6						
AAK	**Ala-Archa**	**5.74**	**25**	P	**Pn**	**11 32 47.5**	**+1.7**
	SNR=14						
AAK	**Ala-Archa**	**5.74**	**25**	P	**Pn**	**11 32 46.9**	**+1.1**
	6.9nm,0.5s						
AAK				S	**Sn**	**11 33 49.9**	**-0.5**
	6.0nm,0.6s						
CHMS	**Chumysh**	**6.15**	**25**	P	**Pn**	**11 32 52.5**	**+1.3**
	SNR=12						
USP	**Ospenovka**	**6.31**	**22**	P	**Pn**	**11 32 54.5**	**+1.0**
	SNR=8.0						
TKM2	**Tokmak 2**	**6.39**	**30**	P	**Pn**	**11 32 55.5**	**+0.8**
	SNR=7.6						
TKM2	**Tokmak 2**	**6.39**	**30**	⇑P	**Pn**	**11 32 54.9**	**+0.2**
	6.2nm,0.6s						
TKM2				⇓S	**Sn**	**11 34 06.0**	**-0.4**
	3.7nm,0.8s						
MKAR	**Makanchi Array**	**12.41**	**38**	Pn	**Pn**	**11 34 14.6**	**-1.3**
	0.1nm,0.3s,baz=224,slow=14,SNR=7.8						
AB31	**Akbulak array**	**14.35**	**329**	⇑P	**Pn**	**11 34 41.1**	**0.0**
	0.4nm,0.3s,baz=143,slow=13,SNR=20						
AB31				⇑S	**Sn**	**11 37 15.7**	**-3.3**
	0.4nm,0.5s,baz=150,slow=24,SNR=3.6						
AKTO	**Aktyubinsk**	**16.05**	**328**	⇓P	**Pn**	**11 35 02.4**	**-0.3**
	1.7nm,0.9s						
AKTO				⇑S	**Sn**	**11 37 58.0**	**-2.3**
	2.0nm,0.9s						
ZALV	**Zalesovo Beam**	**18.97**	**25**	P	**P**	**11 35 36.0**	**-0.1**
	0.1nm,0.3s,baz=213,slow=12,SNR=2.8						
YKA	**Yellowknife Ar**	**80.28**	**3**	P	**P**	**11 43 22.3**	**0.0**
	0.1nm,0.6s,baz=349,slow=5.8,SNR=4.1						

*IDC **16** 11:41:26.3±0.7, 6°.24S±0°.06×30°.0E±0°.1, h10km, n18, σ2 72/20, mb4.1/7, MS3.2/3, Lake Tanganyika region*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**5.65**	**8**	Pn	**Pn**	**11 42 51.9**	**+1.3**
	34nm,0.3s,baz=172,slow=17,SNR=31						
MBAR				Sn	**Sn**	**11 43 52.8**	**-2.9**
	171nm,0.3s,baz=116,slow=22,SNR=6.9						
MBAR				Lg	Lg	11 44 12.5	
	234nm,0.3s,baz=192,slow=16,SNR=6.6						
MBAR				LR	LR	11 45 05.9	
	comp=Z,424nm,18.1s,baz=177,slow=39						
KMBO	**Kilima Mbogo**	**8.86**	**55**	Pn	**Pn**	**11 43 33.5**	**-1.3**
	0.6nm,0.3s,baz=227,slow=19,SNR=3.0						
KMBO				Sn	**Sn**	**11 45 12.5**	**-2.5**
	8.8nm,0.3s,baz=145,slow=20,SNR=8.5						
KMBO				Lg	Lg	11 46 04.6	
	14nm,0.3s,baz=329,slow=13,SNR=9.7						
LSZ	**Lusaka**	**9.15**	**191**	Pn	**Pn**	**11 43 42.0**	**+3.3**
	2.0nm,0.3s,baz=5.9,slow=14,SNR=8.2						
LSZ				Sn	**Sn**	**11 45 20.9**	**-1.1**
	3.8nm,0.3s,baz=96,slow=22,SNR=3.9						
LSZ				Lg	Lg	11 46 16.0	
	2.8nm,0.3s,baz=98,slow=18,SNR=11						
LSZ				LR	LR	11 47 34.3	
	comp=Z,243nm,18.8s,baz=21,slow=40						
ITZ	**Itezhi-Tezhi**	**10.22**	**202**	*i* P	Pn	11 44 42.4	+49
ITZ				*i*		11 44 43.6	
	baz=268,slow=14						
ITZ				*i* S	**Sn**	**11 45 43.0**	**-5.1**
ITZ	**Itezhi-Tezhi**	**10.22**	**202**	*i* P	**Pn**	**11 43 55.6**	**+2.3**
ITZ				*i*		11 43 56.8	
	baz=320,slow=6.2						
ITZ				*i* S	**Sn**	**11 45 44.1**	**-3.9**
ITZ	**Itezhi-Tezhi**	**10.22**	**202**	*i* P	Pn	11 44 42.4	+49
ITZ				*i*		11 44 43.6	
	baz=268,slow=14						
ITZ				*i* S	**Sn**	**11 45 43.0**	**-5.1**
MATP	**Matopo**	**14.18**	**186**	Pn	**Pn**	**11 44 48.6**	**+1.1**
	0.3nm,0.3s,baz=9.4,slow=16,SNR=6.8						
MATP				Lg	Lg	11 48 49.2	
	1.2nm,0.3s,baz=271,slow=20,SNR=4.3						
TSUM	**Tsumeb**	**17.65**	**222**	P	**Pn**	**11 45 32.0**	**-0.6**
	0.3nm,0.3s,baz=38,slow=14,SNR=4.2						
TSUM				S	Sn	11 48 33.4	-16
	0.3nm,0.3s,baz=227,slow=6.5,SNR=2.5						
TSUM				LR	LR	11 52 23.3	
	comp=Z,103nm,19.9s,baz=152,slow=38						
LBTB	**Lobatse**	**

OFUJ				S	Sn	11 54 27.6	+1.6		
MIYJ	**Miyakonagasawa**	**2.47**	**298**	P	Pn	11 53 59.5	+0.9		
MIYJ				*e*S	Sn	11 54 28.0	+0.4		
JIKH	**Ishinomakikobu**	**2.49**	**268**	P	Pn	11 53 59.9	+0.9		
JIKH				S	Sn	11 54 28.6	+0.4		
JKMT	**Kesennumamotoy**	**2.50**	**279**	P	Pn	11 54 00.2	+1.1		
JKMT				S	Sn	11 54 29.1	+0.7		
JMK	**Ichinoseki**	**2.72**	**282**	P	Pn	11 54 03.5	+1.4		
JMK				*e*S	Sn	11 54 35.4	+1.7		
JOM	**Ohasama**	**2.80**	**293**	P	Pn	11 54 04.7	+1.5		
JOM				S	Sn	11 54 37.0	+1.2		
JANG	**Nango**	**3.09**	**310**	P	Pn	11 54 07.8	+0.6		
JANG				*e*S	Sn	11 54 42.2	-0.7		
JYK	**Kaneyama**	**3.38**	**279**	P	Pn	11 54 13.2	+2.1		
JYK				*e*S	Sn	11 54 52.2	+2.3		
JFT	**Otama**	**3.52**	**256**	P	Pn	11 54 14.8	+1.8		
JFT				S	Sn	11 54 54.9	+1.5		
JOT	**Ohata**	**4.03**	**318**	P	Pn	11 54 21.7	+1.7		
JOT				*e*S	Sn	11 55 05.0	-0.9		
JCH	**Churui**	**4.28**	**347**	*e*S	Sn	11 55 10.7	-1.4		
JKB	**Kayabe**	**4.41**	**322**	P	Pn	11 54 26.4	+1.2		
JKB				*e*S	Sn	11 55 14.0	-1.3		
BSO1	**Boso 1**	**4.79**	**219**	P	Pn	11 54 31.6	+1.6		
BSO1				*e*S	Sn	11 55 24.1	+0.3		
NEM2	**Nemuro 2**	**4.99**	**9**	P	Pn	11 54 31.3	-1.9		
NEM2				S	Sn	11 55 24.5	-5.0		
JRY	**Ryogami san**	**5.17**	**244**	P	Pn	11 54 36.9	+1.2		
JRY				*e*S	Sn	11 55 31.3	-2.8		
JOD2	**Odawara 2**	**5.46**	**236**	P	Pn	11 54 40.9	+1.2		
JOD2				*e*S	Sn	11 55 39.5	-1.6		
JTKR	**Abashiri--Toko**	**5.55**	**355**	P	Pn	11 54 40.4	-0.5		
JTKR				*e*S	Sn	11 55 40.1	-3.2		

ROM 16 12:01:30.8±0.0, 43°02'N±0'.002×12°50'7E±0'.003, h9km, ML2.3/13, Error ellipse: s-maj=0.2km s-min=0.2km az=178.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**127**	P	Pg	12 01 32.9	+0.1
ATFO				S	Sg	12 01 34.4	+0.1
ATFO				AML	AML		
	comp=E,24900μm,0.6s						
ATFO				AML	AML		
	comp=N,21800μm,0.2s						
ATVO	**AVT- Monte Val**	**0.08**	**255**	P	Pg	12 01 33.1	+0.2
ATVO				S	Sg	12 01 34.7	+0.2
ATVO				AML	AML		
	comp=N,10550μm,0.1s						
ATVO				AML	AML		
	comp=E,16150μm,0.3s						
ATPI	**Pietralunga -**	**0.09**	**302**	P	Pg	12 01 33.5	+0.3
ATPI				S	Sg	12 01 35.3	+0.5
ATPI				AML	AML		
	comp=N,7470μm,0.4s						
ATPI				AML	AML		
	comp=E,8230μm,0.4s						
PIEI	**Pieia**	**0.14**	**9**	P	Pg	12 01 34.4	+0.6
PIEI				S	Sg	12 01 37.1	+1.2
PIEI				AML	AML		
	comp=N,3560μm,0.5s						
PIEI				AML	AML		
	comp=E,6665μm,0.2s						
MURB	**Monte Urbino**	**0.14**	**175**	P	Pg	12 01 34.5	+0.6
MURB				S	Sg	12 01 37.2	+1.2
MURB				AML	AML		
	comp=N,8505μm,0.3s						
MURB				AML	AML		
	comp=E,7455μm,0.3s						
MURB				AML	AML		
	comp=N,9235μm,0.3s						
MURB				AML	AML		
	comp=E,7710μm,0.2s						
ATMI	**Monte Miggiano**	**0.19**	**249**	P	Pg	12 01 35.2	+0.6
ATMI				AML	AML		
	comp=E,1745μm,0.4s						
ATMI				AML	AML		
	comp=N,1885μm,0.3s						
FRON	**Frontone**	**0.20**	**54**	P	Pg	12 01 35.5	+0.6
FRON				S	Sg	12 01 39.0	+1.3
FRON				AML	AML		
	comp=N,3020μm,0.8s						
FRON				AML	AML		
	comp=E,1955μm,0.7s						
SSFR	**Montelago di S**	**0.20**	**80**	P	Pg	12 01 35.6	+0.6
SSFR				S	Sg	12 01 39.3	+1.4
SSFR				AML	AML		
	comp=E,11800μm,0.2s						
SSFR				AML	AML		
	comp=N,6580μm,1.1s						
SSFR				AML	AML		
	comp=N,5455μm,0.2s						
SSFR				AML	AML		
	comp=E,11950μm,0.2s						
CDCA	**Citt' di Caste**	**0.21**	**286**	P	Pg	12 01 35.5	+0.6
CDCA				AML	AML		
	comp=E,1395μm,0.5s						
CDCA				AML	AML		
	comp=N,1310μm,0.6s						
FOSV	**Fossato di Vic**	**0.21**	**120**	P	Pg	12 01 35.9	+0.7
FOSV				AML	AML		
	comp=N,1340μm,0.3s						
FOSV				AML	AML		
	comp=E,1040μm,0.3s						
NARO	**Abbazia di Nar**	**0.21**	**14**	P	Pg	12 01 35.7	+0.6
NARO				S	Sg	12 01 39.4	+1.2
NARO				AML	AML		
	comp=E,1036μm,1.3s						
NARO				AML	AML		
	comp=N,752μm,0.5s						
BADI	**Badiali**	**0.22**	**299**	P	Pg	12 01 35.9	+0.7
BADI				S	Sg	12 01 40.0	+1.8
BADI				AML	AML		
	comp=N,4940μm,0.3s						
BADI				AML	AML		
	comp=E,3855μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.23**	**209**	P	Pg	12 01 35.9	+0.4
ATTE				S	Sg	12 01 40.3	+1.6
ATTE				AML	AML		
	comp=E,1149μm,0.9s						
ATTE				AML	AML		
	comp=E,1148μm,0.9s						
ATTE				AML	AML		
	comp=N,1000μm,1.0s						
ATTE				AML	AML		
	comp=N,999μm,1.0s						
ATCC	**AVT- Casa Cast**	**0.24**	**156**	P	Pg	12 01 36.4	+0.8
ATCC				S	Sg	12 01 41.0	+2.2
ATCC				AML	AML		
	comp=N,3420μm,1.0s						
ATCC				AML	AML		
	comp=E,3880μm,1.0s						
MPAG	**Monte Paganucc**	**0.29**	**39**	P	Pg	12 01 37.2	+0.6
MPAG				S	Sb	12 01 42.0	-1.2
MPAG				AML	AML		
	comp=E,811μm,0.4s						
MPAG				AML	AML		
	comp=N,688μm,1.1s						
PE3	**Peglio**	**0.29**	**359**	AML	AML		
	comp=N,1935μm,0.3s						
PE3				AML	AML		
	comp=E,1490μm,0.3s						
PARC	**Parchiule**	**0.31**	**322**	P	Pg	12 01 37.7	+0.7
PARC				S	Sb	12 01 43.3	-0.6
PARC				AML	AML		
	comp=E,764μm,0.2s						
PARC				AML	AML		
	comp=N,726μm,1.5s						
ARVD	**Arcevia**	**0.33**	**73**	P	Pg	12 01 37.9	+0.6
ARVD				S	Sb	12 01 43.9	-0.4
ARVD				AML	AML		
	comp=N,671μm,0.2s						
ARVD				AML	AML		
	comp=N,670μm,0.2s						
ARVD				AML	AML		
	comp=E,928μm,1.1s						
SNTG	**Esanatoglia**	**0.35**	**115**	P	Pg	12 01 38.1	+0.5
SNTG				S	Sb	12 01 44.0	-0.8
SNTG				AML	AML		
	comp=E,1575μm,0.2s						
SNTG				AML	AML		
	comp=N,1780μm,0.2s						
SNTG				AML	AML		
	comp=N,1785μm,0.2s						
FSSB	**Fossombrone**	**0.35**	**34**	P	Pg	12 01 38.3	+0.6
FSSB				S	Sb	12 01 44.2	-0.7
FSSB				AML	AML		
	comp=E,1115μm,1.1s						
FSSB				AML	AML		
	comp=N,1715μm,0.8s						
FSSB				AML	AML		
	comp=N,1710μm,0.8s						
ASSB	**Assisi San Ben**	**0.38**	**163**	P	Pg	12 01 38.5	+0.4
ASSB				S	Sb	12 01 44.9	-0.8
ASSB				AML	AML		
	comp=E,826μm,0.2s						
ASSB				AML	AML		
	comp=N,964μm,1.0s						
CAFI	**Castiglion Fio**	**0.40**	**260**	P	Pg	12 01 39.1	+0.5
CAFI				AML	AML		
	comp=E,394μm,0.8s						
CAFI				AML	AML		
	comp=N,256μm,1.2s						
CPGN	**Carpegna, Ital**	**0.42**	**341**	P	Pb	12 01 40.4	-0.1
COR1	**Corinaldo**	**0.43**	**57**	P	Pb	12 01 40.3	-0.2
COR1				P	Sb	12 01 48.4	+1.4
COR1				AML	AML		
	comp=N,24951μm,1.6s						
COR1				AML	AML		
	comp=E,4868μm,1.4s						
COR1				AML	AML		
	comp=N,15241μm,1.4s						
COR1				AML	AML		
	comp=E,9825μm,1.6s						
COR1				AML	AML		
	comp=N,24968μm,1.6s						
EL6	**Elcito**	**0.44**	**99**	P	Pg	12 01 39.8	+0.5
EL6				AML	AML		
	comp=E,878μm,1.3s						
EL6				AML	AML		
	comp=N,1224μm,0.4s						
CESI	**CESI - Serrava**	**0.49**	**144**	P	Pg	12 01 40.8	+0.5
CESI				AML	AML		
	comp=E,99μm,0.8s						
CESI				AML	AML		
	comp=N,306μm,0.3s						
CESI				AML	AML		
	comp=E,99μm,0.8s						
CESI				AML	AML		
	comp=E,99μm,0.8s						
CING	**Cingoli**	**0.50**	**93**	AML	AML		
	comp=N,424μm,0.6s						
CING				AML	AML		
	comp=E,368μm,1.3s						
CING				AML	AML		
	comp=N,424μm,0.6s						
CING				AML	AML		
	comp=E,368μm,1.3s						
FDMO	**Fiordimonte**	**0.56**	**131**	P	Pg	12 01 41.8	+0.2
FDMO				S	Sb	12 01 50.2	-0.7
FDMO				AML	AML		
	comp=E,247μm,0.2s						
FDMO				AML	AML		
	comp=N,356μm,0.2s						
FDMO				AML	AML		
	comp=E,246μm,0.2s						
MGAB	**Montegabbione**	**0.57**	**211**	P	Pg	12 01 42.1	+0.4
MGAB				S	Sb	12 01 51.1	0.0
MGAB				AML	AML		
	comp=E,676μm,0.7s						
MGAB				AML	AML		
	comp=N,1915μm,0.3s						
MGAB				AML	AML		
	comp=E,830μm,0.3s						
MGAB				AML	AML		
	comp=N,1765μm,0.3s						
MGAB				AML	AML		
	comp=E,678μm,0.7s						
MOMA	**Monte Martano**	**0.60**	**176**	AML	AML		
	comp=E,386μm,0.6s						
MOMA				AML	AML		
	comp=E,402μm,0.3s						
MOMA				AML	AML		
	comp=N,457μm,0.2s						
MOMA				AML	AML		
	comp=N,443μm,0.2s						
SFI	**Santa Sofia**	**0.69**	**317**	AML	AML		
	comp=E,90μm,0.4s						
SFI				AML	AML		
	comp=N,104μm,1.1s						
SACS	**San Casciano d**	**0.70**	**219**	AML	AML		
	comp=E,195μm,1.5s						
SACS				AML	AML		
	comp=E,194μm,1.5s						
SACS				AML	AML		
	comp=N,262μm,0.3s						
NRCA	**Norcia**	**0.72**	**142**	P	Pg	12 01 44.9	+0.2
NRCA				AML	AML		
	comp=E,280μm,0.3s						
NRCA				AML	AML		
	comp=N,365μm,0.2s						
NRCA				AML	AML		
	comp=N,364μm,0.2s						
ARRO	**Arrone**	**0.84**	**167**	AML	AML		
	comp=N,128μm,0.2s						
ARRO				AML	AML		
	comp=E,128μm,0.3s						
RUFI	**Rufina**	**0.85**	**301**	P	Pb	12 01 48.1	+0.5
RUFI				P	Sb	12 02 00.2	+1.2
BRJN	**Brijuni**	**1.75**	**30**	*i* Pn	Pn	12 02 01.6	+0.4
BRJN				Sn	Sg	12 02 26.2	-0.8
DUGI	**Dugi Otok**	**1.94**	**71**	*e*Pn	Pg	12 02 07.4	-0.5
DUGI				Sn	Sb	12 02 30.8	+0.2
NVLJ	**Novalja**	**2.06**	**55**	*e*Pn	Pn	12 02 06.6	+1.0
NVLJ				Sn	Sb	12 02 33.1	-1.0
ZIRJ	**Zirje**	**2.29**	**83**	*e*Pn	Pn	12 02 10.2	+1.4
ZIRJ				Sn	Sb	12 02 39.3	-1.5
MORI	**Morici**	**2.37**	**78**	*e*Pn	Pn	12 02 11.2	+1.4
MORI				Sn	Sb	12 02 41.7	-1.2
KIJV	**Kijevo**	**2.89**	**77**	*e*Pn	Pn	12 02 18.5	+1.5
KIJV				Sn	Sb	12 02 55.1	-2.8

NNC 16 12:13:18.9±2.4, 38°67N×69°30E, h0km, mb3.7, mpv3.3, 3C-5D, Error ellipse: s-maj=21.8km s-min=11.6km az=3.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**4.52**	**11**	⇑Pn	Pn	12 14 29.3	+0.6
	0.6nm,0.3s,baz=203,slow=17,SNR=29						
KK31				⇓Pg	Pb	12 14 42.1	+2.9
	2.0nm,0.4s,baz=189,slow=17,SNR=16						
KK31				⇑Lg	Lg	12 15 42.6	
	21nm,0.7s,baz=191,slow=36,SNR=16						
AAK	**Ala-Archa**	**5.59**	**43**	Pn	Pn	12 14 44.0	+0.5
	1.5nm,0.4s						
AAK				Pg	Pb	12 14 58.2	+0.7
	5.0nm,0.7s						
AAK				Lg	Lg	12 16 14.6	
	4.4nm,0.6s						
TKM2	**Tokmak 2**	**6.39**	**46**	⇓Pn	Pn	12 14 54.6	+0.1
	3.6nm,0.8s						
TKM2				⇓Sn	Sn	12 16 09.9	+1.6
	6.9nm,0.8s						
AB31	**Akbulak array**	**12.54**	**331**	Pn	Pn	12 16 18.3	-0.2
	0.4nm,0.5s,baz=163,slow=13,SNR=8.2						
AB31				⇓Sn	Sn	12 18 41.2	+2.4
	1.0nm,0.7s						
AKTO	**Aktyubinsk**	**14.23**	**329**	⇑Pn	Pn	12 16 39.6	-2.0
	1.5nm,0.6s						
AKTO				⇓Sn	Sn	12 19 19.8	-0.3
	1.2nm,0.8s						

KRNET ***16*** *12:21:47.8±0.1, 42°53N×79°62E, h15km, mb4.2*
BJI ***16*** *12:21:48.1±0.0, 42°59N×79°54E, h8km, ML3.4/9*
NNC ***16*** *12:21:48.9±0.8, 42°60N×79°55E, h0km, mb4.4, mpv4.3, Error ellipse: s-maj=5.3km s-min=2.8km az=136.0*
SOME ***16*** *12:21:48.2, 42°60N×79°58E, h15km*
ISC 16 12:21:48.5±1.0, 42°51N±0'.04×79°62E±0'.04, h10km, n97, σ1s99/156, 34C-17D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.66**	**350**	*e*P	**Pb**	**12 22 00.9**	**-1.3**
	baz=17						
SHLS				*e*S	**Sb**	**12 22 10.1**	**-1.4**
	baz=17						
SHLS	**Shalkode**	**0.66**	**350**	*e*P	**Pb**	**12 22 00.9**	**-1.3**
	575nm,0.1s						
SHLS				*e*S	**Sb**	**12 22 10.1**	**-1.4**
	1μm,0.3s						
SHLS	**Shalkode**	**0.66**	**350**	P	**Pb**	**12 22 00.9**	**-1.3**
	575nm,0.1s						
SHLS				S	**Sb**	**12 22 10.1**	**-1.4**
	1μm,0.3s						
UZB	**Uzynbulak**	**0.78**	**326**	*e*P	**Pg**	**12 22 02.3**	**-1.2**
	baz=25						
UZB				*e*S	**Sg**	**12 22 12.3**	**-1.3**
	baz=25						
UZB	**Uzynbulak**	**0.78**	**326**	*e*P	**Pg**	**12 22 02.3**	**-1.2**
	192nm,0.1s						
UZB				*e*S	**Sg**	**12 22 12.4**	**-1.3**
	1μm,0.2s						
UZB	**Uzynbulak**	**0.78**	**326**	P	**Pg**	**12 22 02.3**	**-1.2**
	192nm,0.1s						
UZB				S	**Sg**	**12 22 12.4**	**-1.3**
	1μm,0.2s						
PDGK	**Podgornoye**	**0.83**	**353**	P	**Pg**	**12 22 03.0**	**-1.5**
	209nm,0.1s						
PDGK				S	**Sg**	**12 22 13.4**	**-1.9**
	235nm,0.2s						
PDGK	**Podgornoye**	**0.83**	**353**	⇓P	**Pg**	**12 22 03.0**	**-1.5**
	60nm,0.2s						
PDGK				⇓S	**Sg**	**12 22 13.4**	**-1.9**
	138nm,0.3s						
PRZ	**Przheval'sk**	**0.90**	**269**	⇑*i*P	**Pb**	**12 22 05.4**	**-1.0**
	baz=67						
PRZ				⇑*i*S	**Sg**	**12 22 17.0**	**-0.7**
	baz=67						
SATY	**Saty**	**1.05**	**302**	*e*P	**Pg**	**12 22 07.3**	**-1.4**
	55nm,0.1s						
SATY				*e*S	**Sg**	**12 22 21.2**	**-1.2**
	1μm,0.1s						
SATY	**Saty**	**1.05**	**302**	P	**Pg**	**12 22 07.3**	**-1.4**
	55nm,0.1s						
SATY				S	**Sg**	**12 22 21.2**	**-1.2**
	1μm,0.1s						
ZHN	**Zhinishke**	**1.09**	**308**	*e*P	**Pg**	**12 22 08.1**	**-1.4**
	baz=7.0						
ZHN				*e*S	**Sg**	**12 22 22.2**	**-1.6**
	baz=7.0						
ZHN	**Zhinishke**	**1.09**	**308**	*e*P	**Pg**	**12 22 08.1**	**-1.4**
	52nm,0.1s						
ZHN				*e*S	**Sg**	**12 22 22.2**	**-1.6**
	448nm,0.2s						
ZHN	**Zhinishke**	**1.09**	**308**	P	**Pg**	**12 22 08.1**	**-1.4**
	52nm,0.1s						
ZHN				S	**Sg**	**12 22 22.2**	**-1.6**
	448nm,0.2s						
KPKS	**Kokpek**	**1.18**	**325**	*e*P	**Pb**	**12 22 09.4**	**-1.7**
	baz=23						
KPKS				*e*S	**Sb**	**12 22 24.5**	**-1.9**
	baz=23						
KPKS	**Kokpek**	**1.18**	**325**	*e*P	**Pb**	**12 22 09.4**	**-1.7**
	228nm,0.1s						
KPKS				*e*S	**Sb**	**12 22 24.5**	**-1.9**
	569nm,0.2s						
KURS	**Kuram**	**1.45**	**313**	*e*P	**Pg**	**12 22 14.9**	**-1.4**
	baz=12						
KURS				*e*S	**Sg**	**12 22 33.8**	**-1.3**
	baz=12						
KURS	**Kuram**	**1.45**	**313**	*e*P	**Pg**	**12 22 14.8**	**-1.4**
	23nm,0.2s						
KURS				*e*S	**Sg**	**12 22 33.7**	**-1.3**
	103nm,0.2s						
KURS	**Kuram**	**1.45**	**313**	P	**Pg**	**12 22 14.8**	**-1.4**
	23nm,0.2s						
KURS				S	**Sg**	**12 22 33.7**	**-1.3**
	103nm,0.2s						
ANVS	**Anan'yevo**	**1.47**	**281**	⇑*i*P	**Pb**	**12 22 15.4**	**-0.6**
	baz=81						
ANVS				⇑*i*S	**Sg**	**12 22 35.1**	**-0.6**
	baz=81						
MNBS	**Baschi**	**1.81**	**331**	*e*P	**Pb**	**12 22 20.7**	**-1.0**
	88nm,0.2s						
MNBS				*e*S	**Sg**	**12 22 44.3**	**-2.2**
	645nm,0.2s						
MNBS	**Baschi**	**1.81**	**331**	P	**Pb**	**12 22 20.7**	**-1.0**
	88nm,0.2s						
MNBS				S	**Sg**	**12 22 44.3**	**-2.2**
	645nm,0.2s						
DJR	**Jarkent**	**1.83**	**4**	*e*P	**Pb**	**12 22 20.8**	**-1.3**
	17nm,0.1s						
DJR				*e*S	**Sb**	**12 22 44.6**	**-0.5**
	226nm,0.2s						
DJR	**Jarkent**	**1.83**	**4**	P	**Pb**	**12 22 20.8**	**-1.3**
	17nm,0.1s						
DJR				S	**Sb**	**12 22 44.6**	**-0.5**
	226nm,0.2s						
KDJ	**Kajisay**	**1.85**	**259**	⇑*i*P	**Pb**	**12 22 22.1**	**-0.4**
	baz=58						
KDJ				⇑*i*S	**Sg**	**12 22 46.2**	**-1.8**
	baz=58						
KOTS	**Kotyrbulak**	**1.98**	**292**	*e*P	**Pb**	**12 22 24.3**	**-0.5**
	baz=92						
KOTS				*e*S	**Sg**	**12 22 50.5**	**-1.8**
	baz=92						
KOTS	**Kotyrbulak**	**1.98**	**292**	*e*P	**Pb**	**12 22 24.3**	**-0.5**
	386nm,0.2s						
KOTS				*e*S	**Sg**	**12 22 50.4**	**-1.8**
	1μm,0.4s						
KOTS	**Kotyrbulak**	**1.98**	**292**	Pg	**Pb**	**12 22 24.3**	**-0.5**
	386nm,0.2s						
KOTS				Lg	Lg	12 22 50.4	
	1μm,0.4s						
MDOK	**Medeo**	**2.00**	**290**	*e*P	**Pb**	**12 22 24.3**	**-0.8**
	baz=89						
MDOK				*e*S	**Sb**	**12 22 50.1**	**-0.1**
	baz=89						
MDOK	**Medeo**	**2.00**	**290**	*e*P	**Pb**	**12 22 24.3**	**-0.8**
	127nm,0.2s						
MDOK				*e*S	**Sb**	**12 22 50.1**	**-0.1**
	376nm,0.4s						
MDOK	**Medeo**	**2.00**	**290**	⇓Pn	**Pb**	**12 22 23.7**	**-1.4**
	32nm,0.2s						
MDOK				⇓Sn	**Sb**	**12 22 49.5**	**-0.7**
	313nm,0.6s						
MDOK	**Medeo**	**2.00**	**290**	Pg	**Pb**	**12 22 24.3**	**-0.8**
	127nm,0.2s						
MDOK				Lg	Lg	12 22 50.1	
	376nm,0.4s						
TNSS	**Tian-Shan**	**2.04**	**286**	*e*P	**Pb**	**12 22 24.9**	**-1.0**
	baz=85						
TNSS				*e*S	**Sb**	**12 22 51.6**	**+0.1**
	baz=85						
TNSS	**Tian-Shan**	**2.04**	**286**	*e*P	**Pb**	**12 22 24.9**	**-1.0**
	113nm,0.2s						
TNSS				*e*S	**Sb**	**12 22 51.6**	**+0.1**
	345nm,0.2s						
TNSS	**Tian-Shan**	**2.04**	**286**	Pg	**Pb**	**12 22 24.9**	**-1.0**
	113nm,0.2s						
TNSS				Lg	Lg	12 22 51.6	
	345nm,0.2s						
AAA	**Alma-Ata**	**2.11**	**290**	*e*P	**Pg**	**12 22 27.1**	**-1.9**
	328nm,0.2s						
AAA				*e*S	**Sg**	**12 22 54.6**	**-1.7**
	195nm,0.1s						
AAA	**Alma-Ata**	**2.11**	**290**	Pg	**Pg**	**12 22 27.1**	**-1.9**
	328nm,0.2s						
AAA				Lg	Lg	12 22 54.6	
	195nm,0.1s						
ARXS	**Arharly**	**2.15**	**323**	*e*P	**Pb**	**12 22 25.8**	**-1.8**
	36nm,0.3s						
ARXS				*e*S	**Sb**	**12 22 53.3**	**-1.0**
	535nm,0.3s						
ARXS	**Arharly**	**2.15**	**323**	Pg	**Pb**	**12 22 25.8**	**-1.8**
	36nm,0.3s						
ARXS				Lg	Lg	12 22 54.3	
	535nm,0.3s						
IZV	**Izvestkoviy**	**2.28**	**284**	*e*P	**Pb**	**12 22 29.4**	**-0.4**
	184nm,0.1s						
IZV				*e*S	**Sg**	**12 22 59.0**	**-2.6**
	721nm,0.2s						
IZV	**Izvestkoviy**	**2.28**	**284**	Pg	**Pb**	**12 22 29.4**	**-0.4**
	184nm,0.1s						
IZV				Lg	Lg	12 22 59.0	
	721nm,0.2s						
CHKK	**Chushkaly**	**2.35**	**306**	*e*P	**Pb**	**12 22 29.8**	**-1.1**
	40nm,0.2s						
CHKK				*e*S	**Sb**	**12 23 00.0**	**0.0**
	591nm,0.3s						
CHKK	**Chushkaly**	**2.35**	**306**	Pg	**Pb**	**12 22 29.8**	**-1.1**
	40nm,0.2s						
CHKK				Lg	Lg	12 23 00.6	
	591nm,0.3s						
MTBS	**Maitube**	**2.43**	**286**	*e*P	**Pb**	**12 22 31.5**	**-0.8**
	144nm,0.2s						

MTBS				*e*S	**Sb**	**12 23 03.2**	**+0.8**
	334nm,0.2s							
MTBS	**Maitube**	**2.43 286**	Pg	**Pb**	**12 22 31.5**	**-0.8**
	144nm,0.2s							
MTBS				Lg	Lg	12 23 03.2		
	334nm,0.2s							
KTBS	**Karatobe**	**2.47 300**	*e*P	**Pb**	**12 22 31.7**	**-1.2**
	38nm,0.2s							
KTBS				*e*S	**Sb**	**12 23 03.5**	**+0.1**
	923nm,0.2s							
KTBS	**Karatobe**	**2.47 300**	Pg	**Pb**	**12 22 31.7**	**-1.2**
	38nm,0.2s							
KTBS				Lg	Lg	12 23 03.6		
	923nm,0.2s							
ULHL	**Ulahol**	**2.52 265**	⇑*i*P	**Pb**	**12 22 31.8**	**-2.1**
	baz=65							
ULHL			⇑*i*S	**Sb**	**12 23 03.6**	**-1.4**
	baz=65							
ULHL	**Ulahol**	**2.52 265**	P	**Pb**	**12 22 31.4**	**-2.5**
	SNR=227							
TDK	**Taldyqorghan**	**2.65 341**	*e*P	**Pb**	**12 22 34.8**	**-1.2**
	67nm,0.2s							
TDK				*e*S	**Sb**	**12 23 08.3**	**-0.2**
	308nm,0.4s							
TDK	**Taldyqorghan**	**2.65 341**	Pg	**Pb**	**12 22 34.8**	**-1.2**
	67nm,0.2s							
TDK				Lg	Lg	12 23 08.3		
	308nm,0.4s							
BOOM	**Boomskoye usch**	**2.72 271**	⇑*i*P	**Pb**	**12 22 34.2**	**-3.2**
	baz=70							
BOOM			⇑*i*S	**Sb**	**12 23 07.4**	**-3.5**
	baz=70							
KST	**Kastek**	**2.75 282**	*e*P	**Pb**	**12 22 36.6**	**-1.1**
	120nm,0.2s							
KST				*e*S	**Sb**	**12 23 12.2**	**+0.6**
	267nm,0.5s							
KST	**Kastek**	**2.75 282**	Pg	**Pb**	**12 22 36.7**	**-1.1**
	120nm,0.2s							
KST				Lg	Lg	12 23 12.2		
	267nm,0.5s							
KUU	**Kurty**	**2.77 301**	*e*P	**Pb**	**12 22 37.3**	**-0.8**
	12nm,0.2s							
KUU				*e*S	**Sb**	**12 23 12.8**	**+0.7**
	297nm,0.3s							
KUU	**Kurty**	**2.77 301**	Pg	**Pb**	**12 22 37.3**	**-0.8**
	12nm,0.2s							
KUU				Lg	Lg	12 23 12.8		
	297nm,0.3s							
KAPS	**Kapalarasan**	**2.78 356**	*e*P	**Pb**	**12 22 35.9**	**-2.5**
	21nm,0.2s							
KAPS				*e*S	**Sb**	**12 23 10.0**	**-2.5**
	63nm,0.3s							
KAPS	**Kapalarasan**	**2.78 356**	Pg	**Pb**	**12 22 35.2**	**-3.1**
	21nm,0.2s							
KAPS				Lg	Lg	12 23 10.1		
	63nm,0.3s							
NRN	**Naryn**	**2.91 250**	⇓*i*P	**Pb**	**12 22 37.2**	**-3.4**
	baz=49							
NRN			⇓*i*S	**Sn**	**12 23 12.5**	**+2.3**
	baz=49							
DGS	**Degeres**	**2.92 286**	*e*P	**Pb**	**12 22 39.9**	**-0.9**
	96nm,0.2s							
DGS				*e*S	**Sb**	**12 23 17.5**	**+0.9**
	583nm,0.6s							
DGS	**Degeres**	**2.92 286**	Pg	**Pb**	**12 22 39.9**	**-0.9**
	96nm,0.2s							
DGS				Lg	Lg	12 23 17.5		
	583nm,0.6s							
TKM2	**Tokmak 2**	**3.00 279**	⇓*i*P	**Pb**	**12 22 39.1**	**-2.9**
	baz=79							
TKM2			⇓*i*S	**Sb**	**12 23 16.1**	**-2.7**
	baz=79							
TKM2	**Tokmak 2**	**3.00 279**	P	**Pb**	**12 22 38.9**	**-3.2**
	SNR=39							
TKM2	**Tokmak 2**	**3.00 279**	⇑Pn	**Pb**	**12 22 38.7**	**-3.3**
	16nm,0.3s							
TKM2			⇑Lg	Lg	12 23 20.4		
	137nm,0.5s							
KRBS	**Karabastau**	**3.12 294**	*e*P	**Pb**	**12 22 42.1**	**-2.1**
	29nm,0.2s							
KRBS				*e*S	**Sb**	**12 23 20.4**	**-2.0**
	144nm,0.4s							
KRBS	**Karabastau**	**3.12 294**	Pg	**Pb**	**12 22 42.1**	**-2.1**
	29nm,0.2s							
KRBS				Lg	Lg	12 23 20.2		
	144nm,0.4s							
KZA	**Kyzart**	**3.27 264**	⇑*i*P	**Pb**	**12 22 42.8**	**-4.1**
	baz=63							
KZA			⇑*i*S	**Sn**	**12 23 22.0**	**+2.6**
	baz=63							
KZA	**Kyzart**	**3.27 264**	P	**Pb**	**12 22 44.2**	**-2.7**
	SNR=26							
KBK	**Karagaybulak**	**3.46 274**	⇓*i*P	**Pn**	**12 22 45.1**	**+2.6**
	baz=74							
KBK			⇓*i*S	**Sn**	**12 23 26.8**	**+3.2**
	baz=74							
KBK	**Karagaybulak**	**3.46 274**	P	**Pn**	**12 22 45.1**	**+2.6**
	SNR=14							
CHMS	**Chumysh**	**3.62 279**	⇑*i*P	**Pn**	**12 22 47.6**	**+3.0**
	baz=79							
CHMS			⇑*i*S	**Sn**	**12 23 30.8**	**+3.4**
	baz=79							
CHMS	**Chumysh**	**3.62 279**	P	**Pb**	**12 22 48.6**	**-4.0**
	SNR=8.1							
FRU1	**Bishkek**	**3.69 276**	⇓*i*P	**Pn**	**12 22 47.5**	**+1.8**
	baz=76							
FRU1			⇓*i*S	**Sn**	**12 23 30.4**	**+1.1**
	baz=76							
SGDS	**Sogindy**	**3.78 286**	Pg	**Pb**	**12 22 54.3**	**-1.0**
	28nm,0.4s							
SGDS			Lg	Lg	12 23 42.1		
	41nm,0.7s							
AAK	**Ala-Archa**	**3.79 274**	⇑*i*P	**Pn**	**12 22 49.8**	**+2.7**
	baz=73							
AAK			⇑*i*S	**Sn**	**12 23 34.6**	**+2.8**
	baz=73							
AAK	**Ala-Archa**	**3.79 274**	P	**Pb**	**12 22 51.0**	**-4.6**
	SNR=12							
AAK	**Ala-Archa**	**3.79 274**	⇓Pn	**Pn**	**12 22 48.5**	**+1.4**
	13nm,0.5s							
AAK			Lg	Lg	12 23 44.5		
	64nm,0.6s							
UCH	**Uchtor**	**3.79 267**	⇓*i*P	**Pn**	**12 22 49.8**	**+2.4**
	baz=67							
UCH			⇓*i*S	**Sn**	**12 23 34.6**	**+2.2**
	baz=67							
UCH	**Uchtor**	**3.79 267**	P	**Pn**	**12 22 50.8**	**+3.4**
	SNR=13							
USP	**Ospenovka**	**3.84 283**	⇑*i*P	**Pn**	**12 22 50.6**	**+2.9**
	baz=83							
USP			⇑*i*S	**Sn**	**12 23 36.3**	**+3.4**
	baz=83							
USP	**Ospenovka**	**3.84 283**	P	**Pn**	**12 22 49.7**	**+2.0**
	SNR=16							
ARLS	**Aral**	**3.99 262**	⇑*e*P	**Pn**	**12 22 51.5**	**+1.6**
	baz=62							
ARLS			⇑*i*S	**Sn**	**12 23 38.0**	**+1.2**
	baz=62							
EKS2	**Erkin-Say**	**4.32 274**	⇑*i*P	**Pn**	**12 22 57.2**	**+2.9**
	baz=74							
EKS2			⇑*i*S	**Sn**	**12 23 47.4**	**+2.6**
	baz=74							
EKS2	**Erkin-Say**	**4.32 274**	P	**Pg**	**12 23 07.7**	**-3.5**
	SNR=16							
AML	**Almayashu**	**4.41 267**	⇑*i*P	**Pn**	**12 22 58.4**	**+2.5**
	baz=67							
AML			⇑*i*S	**Sn**	**12 23 49.6**	**+2.1**
	baz=67							
AML	**Almayashu**	**4.41 267**	P	Pb	12 23 00.8	-5.5
	SNR=8.5							
MAKZ	**Makanchi**	**4.62 21**	⇓Pn	**Pn**	**12 22 59.7**	**+1.4**
	3.5nm,0.5s							
MAKZ			⇑Lg	Lg	12 24 13.1		
	7.9nm,0.6s							
MK31	**Makanchi Array**	**4.69 23**	⇑Pn	**Pn**	**12 23 01.0**	**+1.7**
	2.4nm,0.3s,baz=204,slow=13,SNR=192							
MK31			⇑Lg	Lg	12 24 13.6		
	2.4nm,0.3s,baz=202,slow=27,SNR=3.7							
MRKS	**Merke**	**4.72 275**	*e*P	**Pb**	**12 23 13.0**	**+1.6**
	15nm,0.3s							
MRKS			*e*S	**Sg**	**12 24 13.5**	**-6.7**
	66nm,0.3s							
MRKS	**Merke**	**4.72 275**	Pg	**Pb**	**12 23 13.0**	**+1.6**
	15nm,0.3s							
MRKS			Lg	Lg	12 24 13.5		
	66nm,0.3s							
BTLS	**Baital**	**4.77 304**	*e*P	**Pb**	**12 23 12.3**	**+0.2**
	4.8nm,0.4s							
BTLS				*e*S	**Sb**	**12 24 12.5**	**+3.1**
	34nm,0.5s							
BTLS	**Baital**	**4.77 304**	Pg	**Pb**	**12 23 12.3**	**+0.2**
	4.8nm,0.4s							
BTLS				Lg	Lg	12 24 12.5		
	34nm,0.5s							
ARSB	**Arslanbob**	**5.09 259**	⇑*i*P	**Pn**	**12 23 07.1**	**+2.1**
	baz=59							
ARSB			⇑*i*S	**Sn**	**12 24 05.2**	**+1.3**
	baz=59							
WMQ	**Urumqi**	**6.05 75**	Pn	**Pn**	**12 23 19.6**	**+1.6**
WMQ			Sn	**Sn**	**12 24 31.5**	**+4.2**
WMQ			smax	smax			
	comp=N,190nm,0.6s							
WMQ			smax	smax			
	comp=E,200nm,0.6s							
KK31	**Karatay Array**	**6.73 278**	⇑Pg	**Pb**	**12 23 49.4**	**+3.8**
	3.6nm,0.6s,baz=95,slow=15,SNR=11							
KK31			⇑Lg	Lg	12 25 18.4		
	7.2nm,0.4s,baz=91,slow=28,SNR=10.0							
KURBB	**Kurchatov Arra**	**8.15 355**	⇓Lg	Lg	12 26 02.3		
	27nm,0.8s							
KURK	**Kurchatov**	**8.24 356**	⇑Lg	Lg	12 26 05.3		
	22nm,1.2s							

NIED **16** *12:22:00,38˚.90N×142˚.60E,h41km,Mw4.1 Best double couple: M₀1.87000×10¹⁵ NP1:φ₀68.00000°,δ50.00000°, λ111.00000°. NP2:φ₀216.00000°,δ44.00000°,λ67.00000°.*
JMA **16** *12:22:15.2±0.1,38˚.91N×142˚.63E,h39km±2km,M4.1*
JMA Felt II J1.
IDC **16** *12:22:16.3±0.7,38˚.83N×142˚.52E,h44km±5km,mb3.8/18, mb1 3.9/22,mb1mx3.8/47,mbtmp4.0/22,ML3.8/3,MS3.1/7, Ms1 3.1/7,ms1mx2.8/36,Error ellipse: s-maj=14.4km s-min=13.4km az=91.0*
NEIC **16** *12:22:17.3±1.5,38˚.85N±0˚.07×142˚.6E±0˚.1,h52km±7km, mb4.5/18,Error ellipse: s-maj=14.6km s-min=8.8km az=115.0*

ISC 16 12:22:16.5±0.7,38˚.88N±0˚.04×142˚.62E±0˚.06,h42km±6km, n72,σ1ˢ35/84,mb4.3/28,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.77**	**285**	P		**Pn**	**12 22 29.8**	**-1.1**
OFUJ				S		**Sn**	**12 22 40.2**	**-1.1**
JKMT	**Kesennumamotoy**	**0.90**	**266**	P		**Pn**	**12 22 31.6**	**-1.1**
JKMT				S		**Sn**	**12 22 43.3**	**-1.1**
MIYJ	**Miyakonagasawa**	**0.93**	**318**	P		**Pn**	**12 22 31.8**	**-1.4**
MIYJ				S		**Sn**	**12 22 43.6**	**-1.7**
JIO	**Ouri**	**1.08**	**247**	P		**Pn**	**12 22 34.2**	**-1.0**
JIO				S		**Sn**	**12 22 47.8**	**-1.2**
JMK	**Ichinoseki**	**1.09**	**274**	P		**Pn**	**12 22 34.6**	**-0.7**
JMK				S		**Sn**	**12 22 49.1**	**-0.2**
JOM	**Ohasama**	**1.19**	**300**	P		**Pn**	**12 22 36.0**	**-0.7**
JOM				*e*S		**Sn**	**12 22 50.9**	**-0.7**
JTH	**Tanohata**	**1.21**	**331**	P		**Pn**	**12 22 35.6**	**-1.3**
JTH				*e*S		**Sn**	**12 22 50.7**	**-1.4**
JKZ	**Kuzumaki**	**1.49**	**318**	P		**Pn**	**12 22 40.3**	**-0.5**
JKZ				*e*S		**Sn**	**12 22 58.9**	**-0.1**
JOU	**Okura**	**1.61**	**252**	P		**Pn**	**12 22 42.2**	**-0.3**
JOU				S		**Sn**	**12 23 02.7**	**+0.5**
JRG	**Rokugo**	**1.63**	**289**	P		**Pn**	**12 22 42.5**	**-0.2**
JRG				*e*S		**Sn**	**12 23 03.1**	**+0.7**
JANG	**Nango**	**1.72**	**331**	P		**Pn**	**12 22 42.7**	**-1.2**
JANG				*e*S		**Sn**	**12 23 03.7**	**-0.9**
JMM	**Marumori**	**1.76**	**235**	P		**Pn**	**12 22 43.6**	**-0.8**
JMM				*e*S		**Sn**	**12 23 05.3**	**-0.3**
JYK	**Kaneyama**	**1.76**	**272**	P		**Pn**	**12 22 44.6**	**+0.1**
ERM	**Erimo**	**3.16**	**7**			**Pn**	**12 23 02.4**	**-1.2**
MJAR	**Matsushiro Arr**	**4.20**	**238**	P		**Pn**	**12 23 19.9**	**+1.8**
	0.9nm,0.3s,baz=52,slow=12,SNR=31							
MJAR				LR		LR	12 25 11.3	
	comp=Z,240nm,18.3s,baz=65,slow=43							
MAJO	**Matsushiro**	**4.21**	**238**			**Pn**	**12 23 20.1**	**+2.0**
MAT	**Matsushiro**	**4.21**	**238**	P		**Pn**	**12 23 20.0**	**+1.9**
MAT				*e*S		**Sn**	**12 24 07.0**	**+1.0**
MJB9	**Matsu-Tunnel**	**4.21**	**238**			**Pn**	**12 23 20.3**	**+2.2**
JKA	**Kamikawa-asahi**	**5.23**	**360**			**Pn**	**12 23 31.2**	**-0.9**
ASAJ	**Asahikawa**	**5.23**	**360**	P		**Pn**	**12 23 31.2**	**-0.9**
	6.5nm,0.3s,baz=204,slow=14,SNR=83							
ASAJ				LR		LR	12 26 01.2	
	comp=Z,290nm,21.0s,baz=167,slow=42							
INU	**Inuyama**	**5.70**	**233**			**Pn**	**12 23 39.3**	**+0.7**
JHJ2	**Mitsune**	**6.19**	**202**	Pn		**Pn**	**12 23 44.8**	**-0.6**
JHJ2				Sn		**Sn**	**12 24 50.0**	**-4.8**
YSS	**Yuzh-Sakhalins**	**8.07**	**1**			**Pn**	**12 24 11.6**	**+0.6**
USRK	**Ussuriysk Ar.**	**9.57**	**307**	P		**Pn**	**12 24 32.9**	**+1.3**
	baz=90,slow=20,SNR=3.6							
JNU	**Nakatsue**	**11.11**	**242**	P		**Pn**	**12 24 53.8**	**+1.1**
	0.2nm,0.3s,baz=197,slow=4.0,SNR=3.9							
JNU				LR		LR	12 29 33.7	
	comp=Z,89nm,19.9s,baz=46,slow=40							
KSRS	**Korea Array**	**11.66**	**268**	P		**Pn**	**12 25 00.3**	**+0.1**
	0.2nm,0.3s,baz=79,slow=17,SNR=3.7							
KSRS				LR		LR	12 29 01.6	
	comp=Z,54nm,20.9s,baz=86,slow=35							
KLR	**Kul'dur**	**12.95**	**327**	P		**Pn**	**12 25 16.8**	**-1.0**
	0.2nm,0.3s,baz=137,slow=15,SNR=7.0							
KLR				LR		LR	12 30 19.6	
	comp=Z,105nm,18.7s,baz=154,slow=37							
PETK	**Petropavlovsk-**	**17.61**	**31**	LR		LR	12 32 24.0	
	comp=Z,52nm,21.6s,baz=241,slow=34							
SEY	**Seymchan**	**24.80**	**11**	P		**P**	**12 27 35.3**	**+1.1**
	2.4nm,0.7s,baz=190,slow=11,SNR=7.4							
SONM	**Songino Array**	**27.60**	**301**	P		**P**	**12 27 59.5**	**-0.4**
	0.8nm,0.5s,baz=118,slow=9.5,SNR=5.3							
H11N2	**WAKE ISLAND Hy**	**28.36**	**125**	T		T	12 58 36.1	
	baz=317,slow=76,SNR=361							
H11N1	**WAKE ISLAND Hy**	**28.37**	**125**	T		T	12 58 39.4	
	baz=317,slow=76,SNR=306							
H11N3	**WAKE ISLAND Hy**	**28.38**	**125**	T		T	12 58 38.5	
	baz=317,slow=76,SNR=329							
H11S1	**WAKE ISLAND Hy**	**29.14**	**127**	T		T	12 59 35.8	
	baz=319,slow=76,SNR=46							
H11S3	**WAKE ISLAND Hy**	**29.14**	**127**	T		T	12 59 36.4	
	baz=319,slow=76,SNR=55							
H11S2	**WAKE ISLAND Hy**	**29.16**	**127**	T		T	12 59 37.7	
	baz=319,slow=76,SNR=18							
ZALV	**Zalesovo Beam**	**41.40**	**311**	P		**P**	**12 29 58.3**	**-0.2**
	1.0nm,0.4s,baz=105,slow=7.5,SNR=3.5							
ZALV				pP		**pP**	**12 30 09.1**	**-0.8**
	2.5nm,0.5s,baz=90,slow=7.4,SNR=4.2							
CMAR	**Chiang Mai Arr**	**42.90**	**254**	LR		LR	12 48 50.4	
	comp=Z,14nm,18.0s,baz=145,slow=37							
MK31	**Makanchi Array**	**43.97**	**301**	P		**P**	**12 30 19.5**	**+0.1**
MKAR	**Makanchi Array**	**43.97**	**301**	P		**P**	**12 30 19.3**	**-0.1**
	1.3nm,0.5s,baz=81,slow=12,SNR=13							
MKAR				pP		**pP**	**12 30 29.9**	**-1.1**
	2.7nm,0.7s,baz=86,slow=9.7,SNR=10							
MAKZ	**Makanchi**	**44.18**	**301**	P		**P**	**12 30 21.1**	**0.0**
MAKZ				IAmb		IAmb	12 30 33.2	
	comp=Z,8.1nm,1.4s							
PPLA	**Purkeypile**	**45.11**	**36**	P		**P**	**12 30 27.9**	**-0.6**
KURK	**Kurchatov**	**45.56**	**307**	P		**P**	**12 30 32.3**	**+0.3**
KURK				IAmb		IAmb	12 30 43.3	
	comp=Z,8.9nm,1.3s							
KURBB	**Kurchatov Arra**	**45.64**	**307**	P		**P**	**12 30 32.0**	**-0.6**
	comp=Z,3.0nm,0.6s,baz=81,slow=8.4,SNR=7.6							
MLY	**Manley**	**45.78**	**33**	P		**P**	**12 30 34.0**	**+0.4**
MLY				IAmb		IAmb	12 30 35.9	
	comp=Z,5.3nm,1.2s							
GHO	**Glory Hole Cre**	**46.67**	**37**	P		**P**	**12 30 41.0**	**+0.3**
HDA	**Harding Lake**	**47.42**	**34**	P		**P**	**12 30 46.3**	**-0.1**
HDA				IAmb		IAmb	12 30 57.3	
	comp=Z,9.8nm,1.4s							
IL31		**47.43**	**33**	P		**P**	**12 30 46.4**	**0.0**
ILAR	**Eielson Array**	**47.43**	**33**	P		**P**	**12 30 46.5**	**0.0**
	comp=Z,2.3nm,0.7s,baz=267,slow=6.2,SNR=28							
PRP	**Porcupine Dome**	**47.97**	**32**	P		**P**	**12 30 50.8**	**0.0**
PRP				IAmb		IAmb	12 30 52.3	
	comp=Z,2.9nm,0.8s							
DOT	**Dot Lake**	**48.74**	**35**	P		**P**	**12 30 55.8**	**-0.8**
DOT				IAmb		IAmb	12 30 59.6	
	comp=Z,6.8nm,1.0s							
SCRK	**Sand Creek**	**48.74**	**34**	P		**P**	**12 30 56.7**	**0.0**
SCRK				IAmb		IAmb	12 31 10.0	
	comp=Z,4.1nm,1.2s							
EGAK	**Eagle**	**49.87**	**33**	P		**P**	**12 31 05.2**	**0.0**
EGAK				IAmb		IAmb	12 31 14.6	
	comp=Z,4.1nm,1.1s							
EPYK	**Eagle Plains**	**51.45**	**31**	P		**P**	**12 31 18.3**	**+1.2**
EPYK				IAmb		IAmb	12 31 19.0	
	comp=Z,6.5nm,0.8s							
INK	**Inuvik**	**52.31**	**28**	P		**P**	**12 31 24.0**	**+0.7**
	comp=Z,1.3nm,0.4s,baz=296,slow=6.5,SNR=19							
INK	**Inuvik**	**52.31**	**28**	P		**P**	**12 31 23.8**	**+0.4**
ARU	**Arti**	**55.62**	**318**	P		**P**	**12 31 47.4**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=111,slow=14,SNR=2.9							
ARU				pP		**pP**	**12 31 59.1**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=100,slow=6.1,SNR=4.0							
WR0	**Warramunga Arr**	**59.02**	**189**	P		**P**	**12 32 10.8**	**-1.2**
WRA	**Warramunga Arr**	**59.03**	**189**	P		**P**	**12 32 10.8**	**-1.2**
	comp=Z,3.0nm,0.5s,baz=6.4,slow=7.0,SNR=21							
WRA				pP		**pP**	**12 32 24.3**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=6.5,slow=7.4,SNR=5.7							
RES	**Resolute Bay**	**60.58**	**15**	P		**P**	**12 32 21.2**	**-0.8**
RES				IAmb		IAmb	12 32 37.1	
	comp=Z,3.6nm,0.8s							
YKA	**Yellowknife Ar**	**61.73**	**31**	P		**P**	**12 32 29.7**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=302,slow=6.6,SNR=14							
YKA				pP		**pP**	**12 32 44.6**	**+2.6**
	comp=Z,0.3nm,0.6s,baz=300,slow=6.3,SNR=4.7							
ASAR	**Alice Springs**	**62.75**	**189**	P		**P**	**12 32 36.4**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=5.3,slow=5.6,SNR=17							
LTY	**Liberty**	**66.70**	**47**	P		**P**	**12 33 03.3**	**+0.2**
FINES	**FINESS Array B**	**67.62**	**332**	P		**P**	**12 33 07.9**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=57,slow=10,SNR=3.5							
FINES				pP		**pP**	**12 33 20.7**	**+0.2**
	comp=Z,3.7nm,0.8s,baz=44,slow=6.3,SNR=4.6							
NOA	**NORSAR Array B**	**72.85**	**338**	P		**P**	**12 33 40.1**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=39,slow=5.8,SNR=3.5							
NVAR	**Mina Array Bea**	**73.13**	**54**	P		**P**	**12 33 43.3**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=297,slow=5.9,SNR=5.3							
AKASG	**Malin Array Be**	**73.42**	**322**	P		**P**	**12 33 43.1**	**-0.9**
	comp=Z,2.0nm,0.5s,baz=44,slow=6.7,SNR=8.0							
PDAR	**Pinedale Array**	**75.70**	**46**	P		**P**	**12 33 57.4**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=257,slow=2.6,SNR=8.7							
SRU	**San Rafael Swe**	**77.49**	**50**			**PcP**	**12 34 25.5**	**+7.4**
GERES	**GERESS Array B**	**81.64**	**329**	P		**P**	**12 34 29.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=37,slow=5.3,SNR=4.4							
TXAR	**Lajitas Array**	**88.25**	**53**	P		**P**	**12 35 03.5**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=295,slow=3.2,SNR=8.1							
LPAZ	**La Paz**	**144.93**	**59**	PKPbc		**PKPab**	**12 41 48.8**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=320,slow=5.3,SNR=4.3							

BJI **16** *12:43:27.1±0.0,31˚.65N×109˚.64E,h7km,mb3.9/7, ML3.7/23,Ms3.5/4,Ms7 3.5/2*
IDC **16** *12:43:27.3±0.9,31˚.73N×109˚.64E,h0km,mb3.7/7, mb1 3.9/9,mb1mx3.6/40,mbtmp3.7/9,ML3.8/2,MS2.8/1, Ms1 2.8/1,ms1mx2.2/51,Error ellipse: s-maj=31.4km s-min=19.1km az=74.0*

ISC 16 12:43:29.1±0.8,31˚.69N±0˚.07×109˚.61E±0˚.06,h10km,n18, σ1ˢ90/23,mb3.8/7,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
XAN	**Xi'an**	**2.41**	**346**	Pg		**Pb**	**12 44 09.8**	**-2.9**
XAN				Sg		**Sg**	**12 44 44.8**	**-1.9**
XAN				smax	smax			
	comp=N,550nm,0.8s							
XAN				smax	smax			
	comp=E,990nm,1.1s							
WHN	**Wuhan**	**4.22**	**104**	Pn		**Pn**	**12 44 32.9**	**-0.6**
WHN				Pg		**Pb**	**12 44 44.0**	**+0.6**
WHN				Sn		**Sn**	**12 45 23.1**	**+0.3**
WHN				Sg		**Sg**	**12 45 42.8**	**-1.8**
WHN				smax	smax			
	comp=N,660nm,0.8s							
WHN				smax	smax			
	comp=E,410nm,0.8s							
LZH	**Lanzhou**	**6.50**	**314**	*e*Pn		**Pn**	**12 45 06.3**	**+1.4**
LZH				Sn		**Sn**	**12 46 24.3**	**+5.1**
LZH				smax	smax			
	comp=N,170nm,1.0s							
LZH				smax	smax			
	comp=E,160nm,1.0s							
LZH				LR	LR			
	comp=E,250nm,4.9s							
NJ2	**Nanjing**	**7.87**	**85**	*e*Pn		**Pn**	**12 45 25.1**	**+1.5**
NJ2				Sn		**Sn**	**12 46 54.8**	**+2.1**
NJ2				smax	smax			
	comp=N,36nm,0.8s							
NJ2				smax	smax			
	comp=E,34nm,0.9s							
BTO	**Baotou**	**8.90**	**2**	Pg		Pn	12 45 49.9	+12
BTO				Sg		**Sn**	**12 47 21.1**	**+2.8**
GTA	**Gaotai**	**11.09**	**317**	*e*P		**Pn**	**12 46 09.3**	**+1.5**
GTA				pP			12 46 13.6	
GTA				sP			12 46 16.3	
GTA				pmax	pmax			
	comp=Z,2.0nm,1.3s							
KSRS	**Korea Array**	**16.13**	**64**	Pn		**P**	**12 47 17.2**	**-2.0**
	0.1nm,0.3s,baz=244,slow=10,SNR=7.9							
SONM	**Songino Array**	**16.31**	**352**	Pn		**Pn**	**12 47 18.3**	**0.0**
	0.2nm,0.3s,baz=169,slow=11,SNR=12							
CMAR	**Chiang Mai Arr**	**16.32**	**219**	Pn		**P**	**12 47 19.6**	**-1.8**
	0.2nm,0.3s,baz=24,slow=10,SNR=10							
WMQ	**Urumqi**	**21.07**	**311**	*e*P		**P**	**12 48 14.5**	**+1.1**
KLR	**Kul'dur**	**24.16**	**37**	P		**P**	**12 48 45.3**	**0.0**
	1.7nm,0.8s,baz=248,slow=9.4,SNR=7.1							
MKAR	**Makanchi Array**	**25.82**	**314**	P		**P**	**12 48 59.7**	**-0.7**
	1.1nm,0.5s,baz=113,slow=12,SNR=17							
ZALV	**Zalesovo Beam**	**28.46**	**329**	P		**P**	**12 49 23.9**	**-0.2**
	0.9nm,0.5s,baz=119,slow=8.9,SNR=4.3							
DAV	**Davao City (W)**	**28.68**	**145**	LR		LR	13 01 27.6

MABD	**Mabed**	**3.95**	**258**	P	**Pn**	**13 03 38.3**	**-0.3**
	baz=258						
RAYN	**Ar Rayn**	**8.24**	**90**	Pn	**Pn**	**13 04 38.1**	**+0.6**
SANT	**Santorini**	**15.72**	**325**	Pn	**Pn**	**13 06 18.0**	**-1.5**
BR231	**Keskin MP Arra**	**16.27**	**350**	Pn	**Pn**	**13 06 27.4**	**+0.9**
BR231				IAmb	IAmb	13 06 29.5	
	comp=Z,12nm,0.5s						
ANTO	**Ankara**	**16.29**	**350**		**P**	**13 06 29.6**	**-0.3**
ANTO				IAmb	IAmb	13 06 31.2	
	comp=Z,8.4nm,0.5s						
UOSS	**Minazif**	**17.96**	**82**	P	**Pn**	**13 06 46.4**	**-1.5**
UOSS				IAmb	IAmb	13 07 11.2	
	comp=Z,20nm,1.2s						
ALN	**Alexandroupoli**	**19.15**	**335**	P	**P**	**13 07 01.5**	**+0.2**
AGG	**Agios Georgios**	**19.35**	**325**	P	**P**	**13 06 59.6**	**-4.0**
AGG				IAmb	IAmb	13 07 56.4	
	comp=Z,18nm,1.5s						
LIT	**Litokhoron**	**20.07**	**327**	P	**P**	**13 07 11.2**	**-0.2**
LIT				IAmb	IAmb	13 07 30.7	
	comp=Z,15nm,1.5s						
GEYT	**Alibeck**	**23.18**	**48**	LR	LR	13 17 56.2	
	comp=Z,41nm,20.1s,baz=55,slow=39						
MKAR	**Makanchi Array**	**43.04**	**46**	P	**P**	**13 10 40.8**	**+3.0**
	comp=Z,0.9nm,0.8s,baz=246,slow=6.0,SNR=8.4						
SONM	**Songino Array**	**59.38**	**47**	P	**P**	**13 12 43.0**	**+2.4**
	comp=Z,0.4nm,0.4s,baz=270,slow=8.7,SNR=4.3						
MJAR	**Matsushiro Arr**	**84.90**	**52**	LR	LR	13 56 07.8	
	comp=Z,19nm,18.3s,baz=95,slow=38						
YKA	**Yellowknife Ar**	**90.94**	**347**	P	**P**	**13 15 43.4**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=25,slow=4.8,SNR=4.7						

*IDC **16** 13:24:20.0±2.7, 46°.13N×149°.80E, h135km±25km, mb3.0/7, mb1 3.3/9, mb1mx3.1/41, mbtmp3.5/9, Error ellipse: s-maj=32.9km s-min=15.8km az=139.0*

ISC 16 13:24:21.3±0.9, 46°.2N±0°.2×149°.7E±0°.2, h149km, n15, σ0s89/10, mb3.2/7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**5.46**	**250**	P	**Pn**	**13 25 40.5**	**-0.3**
	0.5nm,0.3s,baz=54,slow=8.3,SNR=7.1						
PETK	**Petropavlovsk-**	**8.60**	**34**	P	**Pn**	**13 26 21.1**	**-1.5**
	0.3nm,0.3s,baz=206,slow=14,SNR=6.5						
H11N2	**WAKE ISLAND Hy**	**29.97**	**146**	T	T	14 01 09.8	
	baz=334						
H11N1	**WAKE ISLAND Hy**	**29.98**	**146**	T	T	14 01 18.4	
	baz=334,slow=74,SNR=34						
H11N3	**WAKE ISLAND Hy**	**29.99**	**146**	T	T	14 01 12.7	
	baz=334,slow=74,SNR=28						
H11S1	**WAKE ISLAND Hy**	**31.01**	**147**	T	T	14 02 30.0	
	baz=326						
H11S3	**WAKE ISLAND Hy**	**31.02**	**147**	T	T	14 02 26.8	
	baz=326						
H11S2	**WAKE ISLAND Hy**	**31.03**	**147**	T	T	14 02 26.0	
	baz=326						
ILAR	**Eielson Array**	**38.41**	**38**	P	**P**	**13 31 27.8**	**0.0**
	0.4nm,0.5s,baz=268,slow=7.3,SNR=9.5						
INK	**Inuvik**	**43.33**	**32**	P	**P**	**13 32 08.9**	**+0.9**
	0.4nm,0.3s,baz=266,slow=4.6,SNR=7.7						
MKAR	**Makanchi Array**	**45.08**	**296**	P	**P**	**13 32 22.2**	**0.0**
	0.1nm,0.5s,baz=89,slow=5.5,SNR=3.5						
MKAR				PcP	**PcP**	**13 34 01.4**	**+1.1**
	0.3nm,0.7s,baz=70,slow=2.0,SNR=4.6						
YKA	**Yellowknife Ar**	**52.72**	**35**	P	**P**	**13 33 20.8**	**+0.7**
	0.2nm,0.5s,baz=299,slow=7.0,SNR=4.9						
PDAR	**Pinedale Array**	**66.92**	**52**	P	**P**	**13 34 58.1**	**+0.3**
	0.3nm,0.6s,baz=131,slow=2.3,SNR=3.5						
ASAR	**Alice Springs**	**71.03**	**195**	P	**P**	**13 35 22.2**	**-0.7**
	0.2nm,0.5s,baz=11,slow=2.3,SNR=7.9						
TXAR	**Lajitas Array**	**79.77**	**58**	P	**P**	**13 36 13.3**	**+0.3**
	0.2nm,0.5s,baz=293,slow=4.5,SNR=7.5						

*NIED **16** 13:28:00, 38°.10N×141°.80E, h56km, Mw4.0 Best double couple: M₀1.09000×10¹⁵ NP1:φ₁188.00000°, δ48.00000°, λ93.00000°. NP2:φ₂3.00000°, δ42.00000°, λ86.00000°.*

*NEIC **16** 13:28:07.8±2.4, 38°.12N±0°.07×141°.9E±0°.1, h47km±4km, mb4.6/16, Error ellipse: s-maj=13.3km s-min=8.9km az=118.0*

*JMA **16** 13:28:08.8, 38°.11N×141°.74E, h56km±1km, M4.0*

JMA Felt II J1.

*IDC **16** 13:28:08.7±0.6, 38°.08N×141°.65E, h53km±5km, mb3.7/17, mb1 3.9/19, mb1mx3.8/50, mbtmp4.0/19, MS2.9/8, Ms1 3.0/8, ms1mx2.8/36, Error ellipse: s-maj=16.0km s-min=12.9km az=90.0*

ISC 16 13:28:08.6±0.6, 38°.11N±0°.04×141°.76E±0°.06, h54km±4km, n71, σ1s14/81, mb4.2/24, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.31**	**312**	P	**Pn**	**13 28 18.5**	**+0.3**
JIKH				S	**Sn**	**13 28 25.3**	**+0.2**
JIO	**Ouri**	**0.47**	**317**	P	**Pn**	**13 28 20.0**	**+0.1**
JIO				S	**Sn**	**13 28 27.9**	**0.0**
JKMT	**Kesennumamotoy**	**0.74**	**343**	P	**Pn**	**13 28 23.1**	**+0.1**
JKMT				S	**Sn**	**13 28 33.2**	**-0.3**
JMST	**Minamisoumatoc**	**0.79**	**241**	P	**Pn**	**13 28 23.7**	**+0.1**
JMST				S	**Sn**	**13 28 34.8**	**+0.2**
JMM	**Marumori**	**0.80**	**253**	P	**Pn**	**13 28 23.7**	**-0.1**
JMM				S	**Sn**	**13 28 34.5**	**-0.4**
JOU	**Okura**	**0.90**	**287**	P	**Pn**	**13 28 25.3**	**+0.2**
JOU				S	**Sn**	**13 28 37.3**	**0.0**
JMK	**Ichinoseki**	**0.94**	**334**	P	**Pn**	**13 28 26.0**	**+0.3**
JMK				S	**Sn**	**13 28 38.3**	**0.0**
JFK	**Kawauchi**	**1.02**	**224**	P	**Pn**	**13 28 26.7**	**0.0**
JFK				S	**Sn**	**13 28 40.1**	**0.0**
JFT	**Otama**	**1.27**	**243**	P	**Pn**	**13 28 30.7**	**+0.6**
JFT				S	**Sn**	**13 28 47.0**	**+0.9**
JYS	**Shirataka**	**1.34**	**275**	P	**Pn**	**13 28 31.5**	**+0.5**
JYS				S	**Sn**	**13 28 48.6**	**+0.9**
JYK	**Kaneyama**	**1.36**	**307**	P	**Pn**	**13 28 31.7**	**+0.4**
JYK				S	**Sn**	**13 28 49.0**	**+0.6**
JOM	**Ohasama**	**1.41**	**345**	P	**Pn**	**13 28 32.5**	**+0.5**
JOM				S	**Sn**	**13 28 50.0**	**+0.4**
JRG	**Rokugo**	**1.56**	**326**	P	**Pn**	**13 28 34.8**	**+0.8**
JRG				eS	**Sn**	**13 28 53.7**	**+0.6**
JYA	**Atsumi**	**1.68**	**287**	P	**Pn**	**13 28 36.0**	**+0.4**
JFY	**Yanaizu**	**1.77**	**247**	P	**Pn**	**13 28 37.7**	**+0.8**
MAJO	**Matsushiro**	**3.23**	**242**		**Pn**	**13 28 57.9**	**+1.0**
MAT	**Matsushiro**	**3.23**	**242**	P	**Pn**	**13 28 58.7**	**+1.8**
MAT				S	**Sn**	**13 29 32.7**	**-1.4**
MJAR	**Matsushiro Arr**	**3.23**	**242**	P	**Pn**	**13 28 58.5**	**+1.6**
	1.4nm,0.3s,baz=62,slow=13,SNR=47						
MJAR				LR	LR	13 30 34.1	
	comp=Z,146nm,19.7s,baz=75,slow=46						
MJB9	**Matsu-Tunnel**	**3.23**	**242**		**Pn**	**13 28 57.8**	**+0.9**
ERM	**Erimo**	**4.05**	**15**	Pn	**Pn**	**13 29 06.9**	**-1.1**
INU	**Inuyama**	**4.70**	**236**		**Pn**	**13 29 19.3**	**+2.3**
JHJ2	**Mitsune**	**5.23**	**198**	Pn	**Pn**	**13 29 24.7**	**+0.5**
JKA	**Kamikawa-asahi**	**6.04**	**6**		**Pn**	**13 29 34.5**	**-0.8**
ASAJ	**Asahikawa**	**6.04**	**6**	P	**Pn**	**13 29 34.5**	**-0.8**
	2.0nm,0.3s,baz=216,slow=16,SNR=21						
ASAJ				LR	LR	13 32 00.5	
	comp=Z,63nm,19.9s,baz=178,slow=38						
USA0B	**Ussuriysk Arra**	**9.55**	**313**	Pn	**Pn**	**13 30 23.3**	**-0.1**
USRK	**Ussuriysk Ar.**	**9.55**	**313**	P	**Pn**	**13 30 24.5**	**+1.1**
	baz=124,slow=14,SNR=11						
USRK				LR	LR	13 33 49.5	
	comp=Z,36nm,20.5s,baz=115,slow=36						
JNU	**Nakatsue**	**10.15**	**244**	P	**Pn**	**13 30 34.4**	**+2.6**
	0.2nm,0.3s,baz=51,slow=13,SNR=3.2						
JNU				LR	LR	13 34 45.5	
	comp=Z,106nm,18.4s,baz=42,slow=39						
JNU	**Nakatsue**	**10.15**	**244**		**Pn**	**13 30 34.2**	**+2.5**
KSRS	**Korea Array**	**10.97**	**271**	P	**Pn**	**13 30 46.4**	**+3.6**
	0.4nm,0.3s,baz=81,slow=14,SNR=5.5						
KSRS				LR	LR	13 34 09.8	
	comp=Z,50nm,21.1s,baz=94,slow=33						
KLR	**Kul'dur**	**13.26**	**330**	LR	LR	13 35 33.3	
	comp=Z,46nm,19.7s,baz=118,slow=34						
TATO	**Taipei**	**21.61**	**239**	P	**P**	**13 32 51.9**	**-2.2**
YHNB	**Yeheng**	**21.89**	**238**	P	**P**	**13 32 54.3**	**-3.0**
YHNB				IAmb	IAmb	13 33 27.4	
	comp=Z,143nm,1.8s						
YULB	**Yu-li**	**22.82**	**236**	P	**P**	**13 33 06.2**	**-0.9**
YULB				IAmb	IAmb	13 33 41.8	
	comp=Z,25nm,1.2s						
TPUB	**Ta-pu**	**23.33**	**237**	P	**P**	**13 33 09.9**	**-2.2**
TPUB				IAmb	IAmb	13 33 24.1	
	comp=Z,38nm,1.2s						
TWG	**Pinlang**	**23.37**	**235**	P	**P**	**13 33 12.5**	**0.0**
SEY	**Seymchan**	**25.69**	**11**	P	**P**	**13 33 34.8**	**+1.6**
	comp=Z,3.0nm,1.0s,baz=193,slow=13,SNR=4.9						
XAN	**Xi'an**	**26.77**	**271**	P	**P**	**13 33 41.8**	**-1.6**
XAN				IAmb	IAmb	13 33 49.8	
	comp=Z,5.3nm,0.5s						
SONM	**Songino Array**	**27.43**	**302**	P	**P**	**13 33 50.9**	**+1.6**
	comp=Z,0.9nm,0.4s,baz=97,slow=8.7,SNR=3.8						
SONM				LR	LR	13 44 10.0	
	comp=Z,42nm,18.1s,baz=9.0,slow=35						
SONM	**Songino Array**	**27.43**	**302**	IAmb	IAmb	13 33 53.3	
	comp=Z,0.6nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.48**	**123**	T	T	14 04 12.6	
	baz=316,slow=75,SNR=223						
H11N1	**WAKE ISLAND Hy**	**28.49**	**123**	T	T	14 04 19.2	
	baz=316,slow=75,SNR=203						
H11N3	**WAKE ISLAND Hy**	**28.50**	**123**	T	T	14 04 22.0	
	baz=316,slow=75,SNR=183						
H11S1	**WAKE ISLAND Hy**	**29.23**	**125**	T	T	14 05 14.2	
	baz=317,slow=76,SNR=57						
H11S3	**WAKE ISLAND Hy**	**29.23**	**125**	T	T	14 05 12.1	
	baz=317,slow=76,SNR=94						
H11S2	**WAKE ISLAND Hy**	**29.25**	**125**	T	T	14 05 13.4	
	baz=317,slow=76,SNR=60						
SPIA	**Saint Paul Isl**	**36.59**	**43**	P	**P**	**13 35 08.3**	**-0.8**
ZALV	**Zalesovo Beam**	**41.40**	**311**	P	**P**	**13 35 49.0**	**-0.4**
	comp=Z,1.4nm,0.4s,baz=84,slow=7.1,SNR=7.5						
ZALV				pP	**pP**	**13 36 02.6**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=79,slow=7.9,SNR=2.9						
ZALV				sP	**sP**	**13 36 09.1**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=80,slow=7.5,SNR=4.7						
CMAR	**Chiang Mai Arr**	**42.04**	**254**	LR	LR	13 54 57.5	
	comp=Z,38nm,18.1s,baz=172,slow=38						
MK31	**Makanchi Array**	**43.79**	**301**	P	**P**	**13 36 06.8**	**-2.1**
MKAR	**Makanchi Array**	**43.79**	**301**	P	**P**	**13 36 08.6**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=82,slow=9.4,SNR=13						
MKAR				sP	**sP**	**13 36 28.6**	**-0.8**
	comp=Z,2.2nm,0.8s,baz=85,slow=9.9,SNR=8.3						
MAKZ	**Makanchi**	**44.00**	**301**	P	**P**	**13 36 09.0**	**-1.6**
KURK	**Kurchatov**	**45.49**	**307**	P	**P**	**13 36 21.9**	**-0.5**
KURK				IAmb	IAmb	13 36 42.4	
	comp=Z,7.6nm,0.8s						
ILAR	**Eielson Array**	**48.45**	**33**	P	**P**	**13 36 45.4**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=264,slow=6.7,SNR=11						
ILAR				pP	**pP**	**13 37 01.4**	**+1.9**
	comp=Z,0.6nm,0.7s,baz=260,slow=6.2,SNR=3.6						
ARSB	**Arslanbob**	**51.73**	**297**	P	**P**	**13 37 11.6**	**+1.1**
ARSB				IAmb	IAmb	13 37 33.3	
	comp=Z,10.0nm,1.4s						
INK	**Inuvik**	**53.31**	**27**	P	**P**	**13 37 22.3**	**+0.7**
	comp=Z,1.2nm,1.0s,baz=303,slow=6.1,SNR=5.1						
INK	**Inuvik**	**53.31**	**27**	IAmb	IAmb	13 38 24.9	
	comp=Z,12nm,1.8s						
ABKAR	**Akbulak array**	**57.46**	**310**	P	**P**	**13 37 51.3**	**-0.5**
ABKAR				IAmb	IAmb	13 38 05.8	
	comp=Z,2.2nm,0.6s						
WRA	**Warramunga Arr**	**58.16**	**188**	P	**P**	**13 37 56.4**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=3.6,slow=7.2,SNR=26						
WRA				pP	**pP**	**13 38 12.3**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=3.8,slow=7.1,SNR=3.5						
ASAR	**Alice Springs**	**61.89**	**188**	P	**P**	**13 38 22.0**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=351,slow=3.3,SNR=29						
YKA	**Yellowknife Ar**	**62.75**	**31**	P	**P**	**13 38 27.6**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=301,slow=6.7,SNR=6.8						
ARCES	**ARCESS Array B**	**63.09**	**339**	P	**P**	**13 38 29.8**	**-0.2**
	comp=Z,3.6nm,1.0s,baz=52,slow=7.9,SNR=10.0						
FINES	**FINESS Array B**	**68.00**	**332**	P	**P**	**13 39 01.3**	**-0.3**
	comp=Z,1.7nm,0.6s,baz=28,slow=8.6,SNR=6.6						
STKA	**Stephens Creek**	**69.62**	**180**	P	**P**	**13 39 12.4**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=352,slow=15,SNR=3.5						
AKASG	**Malin Array Be**	**73.62**	**322**	P	**P**	**13 39 35.3**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=45,slow=6.2,SNR=8.6						
AKASG				pP	**pP**	**13 39 49.8**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=45,slow=5.6,SNR=3.0						
NVAR	**Mina Array Bea**	**74.13**	**54**	P	**P**	**13 39 40.8**	**+1.2**
	comp=Z,0.9nm,0.8s,baz=294,slow=6.1,SNR=6.6						
PDAR	**Pinedale Array**	**76.72**	**46**	P	**P**	**13 39 54.9**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=266,slow=1.4,SNR=10						
BRTR	**Keskin Array B**	**78.35**	**312**	P	**P**	**13 40 03.3**	**0.0**
	comp=Z,0.3nm,0.4s,baz=67,slow=5.3,SNR=3.4						
TXAR	**Lajitas Array**	**89.25**	**53**	P	**P**	**13 40 59.6**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=292,slow=3.1,SNR=14						
LPAZ	**La Paz**	**145.91**	**59**	PKPbc	**PKPbc**	**13 47 43.2**	**0.0**
	comp=Z,2.3nm,0.5s,baz=29,slow=4.2,SNR=6.8						
LPAZ	**La Paz**	**145.91**	**59**		**PKPbc**	**13 47 43.4**	**+0.2**
SIV	**San Ignacio**	**150.18**	**49**	PKPbc	**PKPbc**	**13 47 53.7**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=0.0,slow=1.0,SNR=5.9						

SJA 16 13:35:28.5±0.7, 31°.81S×66°.53W, h142km±3km, ML3.3, MW3.5, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACAN	**Cantantal**	**0.72**	**230**	*i* P	Pn	13 35 51.8	+1.5
ACAN				*e*S	Sn	13 36 07.5	+0.5
MRA	**San Martin**	**0.92**	**131**	*i* P	Pn	13 35 53.0	+1.1
MRA				*e*S	Sn	13 36 10.3	+0.5
CFA	**Coronel Fontan**	**1.47**	**278**	*i* P	Pn	13 35 57.9	+0.8
CFA				*e*S	Sn	13 36 19.5	+0.5
RTCV	**Cerro Valdivia**	**1.71**	**268**	*i* P	Pn	13 36 00.8	+1.0
TCA	**Tanti**	**1.72**	**75**	*i* P	Pn	13 36 00.9	+0.9
TCA				*e*S	Sn	13 36 24.4	+0.3
RTLL	**Cerro Villicun**	**1.73**	**286**	*i* P	Pn	13 36 00.9	+0.9
RTLL				*e*S	Sn	13 36 24.5	+0.4
RTLL				IAML		13 36 26.1	
	comp=Z,226nm,0.3s						
ZON	**Zonda**	**1.85**	**278**	*i* P	Pn	13 36 02.3	+0.9
ZON				*e*S	Sn	13 36 27.0	+0.4
ZON				IAML		13 36 27.5	
	comp=Z,177nm,0.2s						
AMOG	**MOGNA**	**1.89**	**297**	*i* P	Pn	13 36 03.1	+1.1
AMOG				*e*S	Sn	13 36 27.9	+0.5
RTLS	**Leoncito**	**2.35**	**270**	*i* P	Pn	13 36 09.0	+1.3
RTLS				IAML		13 36 40.5	
	comp=Z,128nm,0.3s						
ACCO	**Cerro Coronel**	**2.49**	**299**	*i* P	Pn	13 36 11.0	+1.5
AGUA	**GUANDACOL**	**2.87**	**323**	*i* P	Pn	13 36 15.5	+1.5
AROD	**Rodeo**	**3.01**	**302**	*i* P	Pn	13 36 17.5	+1.5
VCA	**Vinchina**	**3.39**	**334**	*i* P	Pn	13 36 22.1	+1.4
VCA				IAML		13 37 18.4	
	comp=Z,60nm,0.5s						
CYA	**Choya**	**3.42**	**11**	*i* P	Pn	13 36 21.4	+0.4
CYA				IAML		13 37 23.3	
	comp=Z,25nm,0.3s						
PEL	**Peldehue**	**3.75**	**248**	*i* P	Pn	13 36 26.3	+0.9
GO04	**Tololo Observa**	**4.01**	**293**	*i* P	Pn	13 36 30.2	+1.3
PUMA	**Malargue**	**4.41**	**213**	*i* P	Pn	13 36 34.8	+0.9
AHML	**Horco Molle**	**5.12**	**12**	*i* P	Pn	13 36 43.8	+0.4
GO03	**Copiap**	**5.29**	**322**	*i* P	Pn	13 36 46.7	+0.9
PB06	**IPOC Station P**	**9.46**	**343**	*i* P	Pn	13 37 41.8	+0.1
PB05	**IPOC Station P**	**9.50**	**339**	*i* P	Pn	13 37 41.1	-1.0

MAN 16 13:37:31.4, 10°.68N×124°.93E, h1km, mb4.8, ML3.7, MS3.6, 3C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.49**	**319**	*e*P	Pg	13 37 41.0	+0.3
MSLP	**Maasin**	**0.55**	**188**	*e*P	Pg	13 37 42.6	+0.7
LLP	**Lapu-Lapu**	**1.02**	**249**	⇓*i*P	Pb	13 37 51.5	-0.3
LLP				*i* S	Sb	13 38 05.9	+0.2
SCPH	**Surigao**	**1.04**	**148**	⇑*e*P	Pb	13 37 52.2	-0.1
SCPH				*e*S	Sb	13 38 07.3	+0.8
SNPH	**Sibulan**	**2.13**	**232**	*i* P	Pb	13 38 10.9	0.0
SNPH				*i* S	Sg	13 38 41.8	+1.8
CGP	**Cagayan de Oro**	**2.22**	**186**	⇑*e*P	Pn	13 38 08.6	-0.8
CGP				*i* S	Sb	13 38 39.3	-1.1
GUIM	**Jordan**	**2.31**	**269**	*e*P	Pn	13 38 11.2	+0.7
GUIM				*e*S	Sn	13 38 40.1	+0.5
RCP	**Roxas**	**2.32**	**292**	⇑*e*P	Pn	13 38 12.1	+1.4
BUKP	**Musuan**	**2.79**	**177**	*e*P	Pn	13 38 18.7	+1.5
BUKP				*e*S	Sn	13 38 52.9	+1.4
PAGZ	**Pagadian**	**3.20**	**209**	*e*P	Pn	13 38 24.7	+1.9
PAGZ				*e*S	Sn	13 39 03.7	+2.0
KCP	**Kidapawan**	**3.65**	**178**	⇓*e*P	Pb	13 38 33.0	-3.8

*NEIC **16** 13:46:15.9±2.4, 6°.81N±0°.08×76°.36W±0°.06, h6km±6km, mb4.2/2, Error ellipse: s-maj=13.8km s-min=5.3km az=213.0*

*IDC **16** 13:46:17.6±4.5, 6°.76N×76°.34W, h19km±30km, mb3.6/3, mb1 3.9/4, mb1mx3.5/27, mbtmp3.8/4, ML2.8/1, MS3.3/9, Ms1 3.3/9, ms1mx2.9/32, Error ellipse: s-maj=31.3km s-min=23.3km az=55.0*

*RSNC **16** 13:46:17.8±2.1, 6°.92N×76°.29W, h0km±7km, ML3.7, Mw4.0*

ISC 16 13:46:16.0±0.9, 6°.91N±0°.02×76°.21W±0°.02, h10km±6km, n56, σ1s94/73, mb3.6/3, MS3.1/6, 3C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBBC	**Dabeiba**	**0.10**	**358**	⇑*i*Pg	**Pg**	**13 46 19.7**	**+1.0**
DBBC				*e*S	**Sg**	**13 46 22.1**	**+1.4**
DBBC				*i*		13 46 23.0	
	comp=Z,23µm,0.5s						
HELC	**Santa Helena**	**0.98**	**137**	⇓*i*P	**Pn**	**13 46 35.6**	**-0.6**
	comp=Z,685nm,0.8s						
HELC				*e*S	**Sn**	**13 46 50.4**	**+0.1**
HELC				*i*		13 46 58.6	
	comp=Z,685nm,0.8s						
CBOC	**Ciudad Bolivar**	**1.06**	**170**	⇓*i*P	**Pn**	**13 46 37.0**	**0.0**
CBOC				*e*S	**Sn**	**13 46 53.0**	**+1.0**
CBOC				*i*		13 46 59.6	
	comp=Z,2µm,0.8s						
UREC	**San Jos de Ur**	**1.07**	**39**	*e*P	**Pn**	**13 46 38.8**	**+1.8**
UREC				*e*S	**Sn**	**13 46 54.1**	**+2.1**
UREC				*i*		13 46 56.4	
	comp=Z,3µm,0.3s						
SOLC	**Bahia Solano**	**1.38**	**240**	*e*P	**Pg**	**13 46 41.2**	**-1.3**
SOLC				*e*S	**Sg**	**13 46 59.4**	**-0.9**
SOLC				*i*		13 47 02.5	
	comp=Z,588nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.46**	**67**	⇑*e*P	**Pg**	**13 46 44.6**	**+0.6**
ZARC				*e*S	**Sg**	**13 47 04.7**	**+1.8**
ZARC				*i*		13 47 08.2	
	comp=Z,364nm,0.4s						
PTAC	**Punta Ardita,**	**1.45**	**278**	*e*P	**Pb**	**13 46 44.5**	**-1.3**
PTAC				*e*S	**Sg**	**13 47 05.5**	**-2.2**
PTAC				*i*		13 47 10.9	
	comp=Z,864nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.78**	**102**	⇑*i*P	**Pg**	**13 46 49.5**	**-0.6**
PTBC				*i*		13 47 16.8	
	comp=Z,1µm,1.1s						
GUY2C	**Guyana, Caldas**	**1.88**	**153**	*e*P	**Pg**	**13 46 51.3**	**-0.7**
GUY2C				*e*S	**Sg**	**13 47 17.1**	**+0.7**
GUY2C				*i*		13 47 29.6	
	comp=Z,461nm,1.0s						
NORC	**Norcasia**	**1.89**	**135**	⇓*i*P	**Pg**	**13 46 51.3**	**-0.9**
NORC				*e*S	**Sg**	**13 47 15.9**	**-0.9**
NORC				*i*		13 47 21.8	
	comp=Z,639nm,0.6s						
LCBC	**Los crdobas,**	**1.94**	**355**	*e*P	**Pb**	**13 46 51.0**	**-0.4**
LCBC				*e*S	**Sg**	**13 47 16.0**	**-2.4**
PLMC	**San Jos del P**	**2.00**	**182**	*e*P	**Pb**	**13 46 52.2**	**-0.3**
PLMC				*e*S	**Sg**	**13 47 19.6**	**-0.6**
PLMC				*i*		13 47 26.1	
	comp=Z,716nm,0.5s						
RREF	**El Recreo**	**2.17**	**157**	*e*P	**Pb**	**13 46 55.7**	**-0.1**
RREF				*i*		13 47 39.3	
	comp=Z,489nm,0.9s						
PIZC	**Pizarro, Choco**	**2.25**	**211**	*e*P	**Pg**	**13 46 57.9**	**-1.2**
SPBC	**San Pablo de B**	**2.46**	**120**	*e*P	**Pb**	**13 47 00.8**	**+0.4**
SPBC				*e*S	**Sg**	**13 47 33.0**	**-2.3**
SPBC				*i*		13 47 48.5	
	comp=Z,302nm,0.8s						
TOLC	**Tolima**	**2.47**	**159**	*e*P	**Pg**	**13 47 02.5**	**-0.9**
TOLC				*e*S	**Sg**	**13 47 34.3**	**-1.3**
BRRC	**Barranca, Sant**	**2.48**	**85**	*e*P	**Pb**	**13 47 01.2**	**+0.5**
BRRC				*e*S	**Sg**	**13 47 35.3**	**-0.6**
BRRC				*i*		13 47 41.2	
	comp=Z,278nm,0.6s						
ANIL	**Santa Ana**	**2.54**	**162**	*e*P	**Pb**	**13 47 01.5**	**-0.3**
ANIL				*e*S	**Sg**	**13 47 36.1**	**-1.5**
ANIL				*i*		13 47 48.4	
	comp=Z,494nm,0.4s						
ROSC	**El Rosal**	**2.79**	**138**	Pg	**Pb**	**13 47 07.0**	**+0.9**
	comp=Z,28nm,0.3s,baz=200,slow=11,SNR=16						
ROSC				Lg	Lg	13 47 47.5	
	comp=Z,15nm,0.3s,baz=84,slow=22,SNR=4.6						
ROSC	**El Rosal**	**2.79**	**138**	*e*P	**Pb**	**13 47 04.8**	**-1.3**
ROSC				*i*		13 47 58.6	
	comp=Z,295nm,1.4s						
ROSC	**El Rosal**	**2.79**	**138**		**Pb**	**13 47 03.1**	**-3.1**
SMLC	**San Martn de**	**2.83**	**48**

CMAR	**Chiang Mai Arr**	**154.34**	**11**	PKPab	**PKPab**	**14 06 32.4**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=326,slow=4.8,SNR=6.4						

IDC ***16*** *13:47:36.9±1.1,45°.60N×142°.34E,h308km±12km,mb2.8/6, mb1 3.1/8,mb1mx2.9/33,mbtmp3.6/8,Error ellipse: s-maj=22.1km s-min=14.4km az=119.0*

SKHL ***16*** *13:47:36.2±0.6,45°.34N×143°.79E,h305km±18km,mb4.6/5, msh4.6/4*

JMA ***16*** *13:47:36.3±0.3,45°.54N×142°.35E,h313km±2km,M3.2*

ISC 16 13:47:36.5±0.7,45°.47N±0°.05×142°.41E±0°.08,h308km±6km, n31,σ1§10/40,mb3.1/6,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWK2	**Keihoku**	**0.39**	**247**	P	**Pn**	**13 48 16.4**	**+0.6**
JWK2				*eS*	**S**	**13 48 47.1**	**+0.1**
JSE	**Soyaes**	**0.53**	**166**	P	**Pn**	**13 48 16.6**	**+0.5**
JSE				*eS*	**S**	**13 48 48.5**	**+0.9**
JRR	**Rishiri**	**0.84**	**247**	P	**Pn**	**13 48 17.7**	**+0.6**
JRBN	**Rebuntou**	**0.95**	**268**	P	**Pn**	**13 48 17.4**	**0.0**
JRBN				*eS*	**S**	**13 48 48.8**	**-1.2**
JSS	**Shosan**	**1.14**	**200**	P	**Pn**	**13 48 19.4**	**+0.9**
ASAJ	**Asahikawa**	**1.36**	**174**	P	**Pn**	**13 48 20.7**	**+1.0**
ASAJ	**Asahikawa**	**1.36**	**174**	P	**Pn**	**13 48 20.8**	**+1.1**
	14nm,0.3s,baz=338,slow=4.5,SNR=207						
YSS	**Yuzh-Sakhalins**	**1.50**	**9**	*eP*	**Pn**	**13 48 20.4**	**+0.1**
YSS				AMB	AMB	13 48 20.6	
	100nm,0.3s						
YSS				*eS*	**S**	**13 48 54.1**	**-1.1**
YSS				A	A	13 48 55.4	
	50nm,0.7s						
YSS				A	A	13 48 55.4	
	50nm,0.7s						
KHLM	**Kholmsk**	**1.60**	**351**	*eP*	**Pn**	**13 48 21.0**	**0.0**
KHLM				AMB	AMB	13 48 21.5	
	70nm,0.2s						
KHLM				*eS*	**S**	**13 48 56.3**	**-0.1**
KHLM				A	A	13 48 57.3	
	70nm,0.5s						
KHLM				A	A	13 48 57.3	
	120nm,0.5s						
JMP	**Maruseppu**	**1.61**	**155**	P	**Pn**	**13 48 22.2**	**+0.9**
JKK2	**Kamakawa 2**	**1.62**	**171**	P	**Pn**	**13 48 22.5**	**+1.2**
JHR	**Hokuryu**	**1.80**	**196**	P	**Pn**	**13 48 23.7**	**+1.2**
JTKR	**Abashiri--Toko**	**1.84**	**144**	P	**Pn**	**13 48 24.1**	**+1.3**
JAB	**Ashibetsu**	**1.97**	**184**	P	**Pn**	**13 48 25.1**	**+1.3**
JFR	**Furan**	**2.31**	**177**	P	**Pn**	**13 48 27.4**	**+0.8**
JAR	**Ashorobuto**	**2.38**	**155**	P	**Pn**	**13 48 28.5**	**+1.3**
JRA	**Rausu**	**2.47**	**127**	P	**Pn**	**13 48 29.5**	**+1.6**
JEW	**Eniwo**	**2.72**	**195**	P	**Pn**	**13 48 31.5**	**+1.3**
JCH	**Churui**	**2.94**	**166**	P	**Pn**	**13 48 31.6**	**-0.7**
JCH				*eS*	**S**	**13 49 13.8**	**-3.0**
JAK	**Akkeshi**	**2.97**	**146**	P	**Pn**	**13 48 32.5**	**-0.1**
JAK				*eS*	**S**	**13 49 15.5**	**-1.8**
NEM2	**Nemuro 2**	**3.18**	**130**	*eS*	**S**	**13 49 19.7**	**-1.4**
JNBK	**Urakawa-nobuka**	**3.20**	**175**	P	**Pn**	**13 48 35.3**	**+0.4**
JNBK				*eS*	**S**	**13 49 21.1**	**-0.4**
JKB	**Kayabe**	**3.72**	**196**	P	**Pn**	**13 48 39.9**	**-0.3**
JKB				*eS*	**S**	**13 49 29.8**	**-1.4**
USRK	**Ussuriysk Ar.**	**7.52**	**264**	P	**Pn**	**13 49 24.3**	**0.0**
	baz=76,slow=13,SNR=6.3						
SEY	**Seymchan**	**18.40**	**15**	P	**P**	**13 51 28.9**	**-0.7**
	0.6nm,0.3s,baz=210,slow=12,SNR=14						
SONM	**Songino Array**	**24.70**	**289**	P	**P**	**13 52 29.9**	**-0.4**
	0.4nm,0.4s,baz=83,slow=9.1,SNR=4.8						
ILAR	**Eielson Array**	**42.13**	**37**	P	**P**	**13 54 58.0**	**-0.9**
	0.3nm,0.6s,baz=272,slow=8.3,SNR=9.0						
YKA	**Yellowknife Ar**	**56.23**	**33**	P	**P**	**13 56 44.4**	**-0.4**
	0.3nm,0.5s,baz=307,slow=7.4,SNR=7.3						
WRA	**Warramunga Arr**	**65.51**	**188**	P	**P**	**13 57 48.0**	**+0.6**
	0.6nm,0.8s,baz=6.6,slow=6.8,SNR=2.7						
ASAR	**Alice Springs**	**69.24**	**188**	P	**P**	**13 58 12.0**	**+1.4**
	0.3nm,0.7s,baz=0.8,slow=5.3,SNR=5.9						
TXAR	**Lajitas Array**	**84.42**	**53**	P	**P**	**13 59 36.3**	**+1.3**
	0.1nm,0.5s,baz=308,slow=4.5,SNR=3.6						

WEL 16 13:49:21.2,37°S±9°×17°7E±°,h324km±11km,M3.6/60, MLv3.6/60,Error ellipse: s-maj=0.0km s-min=0.0km az=161.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUZ	**Kuaotunu**	**0.82**	**277**	P	Pn	13 50 03.3	-0.2
OPRZ	**Ohinepanea**	**1.00**	**188**	P	Pn	13 50 04.2	+0.1
HAZ	**Te Kaha**	**1.23**	**137**	P	Pn	13 50 04.4	-0.8
WIAZ	**Waiheke Island**	**1.28**	**272**	P	Pn	13 50 05.8	+0.3
TOZ	**Tahuroa Road**	**1.31**	**228**	P	Pn	13 50 06.3	+0.7
RUGZ	**Raukumara Rang**	**1.34**	**146**	P	Pn	13 50 04.9	-1.0
RUGZ				S	S	13 50 37.5	-4.1
URZ	**Urewera**	**1.44**	**168**	P	Pn	13 50 05.7	-0.6
URZ				S	S	13 50 39.2	-3.1
MXZ	**Matakaoa Point**	**1.45**	**120**	P	Pn	13 50 05.8	-0.5
MXZ				S	S	13 50 39.4	-3.1
ETAZ	**East Tamaki Re**	**1.45**	**266**	P	Pn	13 50 06.8	+0.4
PKGZ	**Pakihiroa**	**1.49**	**134**	P	Pn	13 50 06.7	0.0
PKGZ				S	S	13 50 40.2	-2.8
RRRZ	**Republican Roa**	**1.49**	**186**	P	Pn	13 50 07.0	+0.4
HRRZ	**Handcock Road**	**1.57**	**193**	P	Pn	13 50 07.8	+0.7
MWZ	**Matawai**	**1.61**	**157**	P	Pn	13 50 07.2	-0.2
MWZ				S	S	13 50 41.6	-2.7
MUGZ	**Murupara**	**1.62**	**179**	P	Pn	13 50 07.2	-0.2
TWGZ	**Tauwhareparae**	**1.65**	**143**	P	Pn	13 50 08.1	+0.4
TWGZ				S	S	13 50 43.4	-1.5
WMGZ	**Waiomatatini S**	**1.65**	**126**	P	Pn	13 50 07.6	0.0
WMGZ				S	S	13 50 43.9	-0.9
PRRZ	**Plateau Road**	**1.66**	**189**	P	Pn	13 50 08.0	+0.3
AWAZ	**Awhitu Peninsu**	**1.68**	**262**	P	Pn	13 50 08.5	+0.6
PUZ	**Puketiti**	**1.72**	**135**	P	Pn	13 50 07.9	-0.2
RAGZ	**Rawiri**	**1.73**	**162**	P	Pn	13 50 08.4	+0.2
ALRZ	**Allen Road**	**1.73**	**190**	P	Pn	13 50 08.5	+0.3
RTZ	**Ruatahuna**	**1.77**	**174**	P	Pn	13 50 08.4	-0.1
TKGZ	**Te Karaka**	**1.81**	**151**	P	Pn	13 50 08.8	+0.1
SNGZ	**Shannon Statio**	**1.98**	**166**	P	Pn	13 50 10.2	+0.3
MRHZ	**Matea Rd**	**1.99**	**187**	P	Pn	13 50 09.9	-0.1
MTHZ	**Maungataniwha**	**2.00**	**177**	P	Pn	13 50 10.1	0.0
CNGZ	**Carnagh Statio**	**2.01**	**145**	P	Pn	13 50 10.7	+0.6
WATZ	**Wairara**	**2.01**	**203**	P	Pn	13 50 10.7	+0.5
RIGZ	**Rimuhau**	**2.02**	**156**	P	Pn	13 50 10.6	+0.3
RAHZ	**Arahi**	**2.08**	**172**	P	Pn	13 50 11.1	+0.4
HATZ	**Hinemaiaia**	**2.10**	**194**	P	Pn	13 50 10.8	0.0
RITZ	**Rihia Road**	**2.23**	**198**	P	Pn	13 50 12.7	+0.8
NMHZ	**Naumai**	**2.24**	**178**	P	Pn	13 50 12.7	+0.7
WHHZ	**Waihua**	**2.25**	**170**	P	Pn	13 50 12.4	+0.4
PRGZ	**Paritu Road**	**2.26**	**156**	P	Pn	13 50 12.9	+0.8
KNZ	**Kokohu**	**2.29**	**161**	P	Pn	13 50 12.2	-0.1
BKZ	**Black Stump Fm**	**2.32**	**185**	P	Pn	13 50 12.3	-0.3
ARHZ	**Aropaoanui**	**2.42**	**175**	P	Pn	13 50 13.7	+0.4
WTVZ	**West Tongariro**	**2.43**	**201**	P	Pn	13 50 14.1	+0.5
TWVZ	**Taurewa**	**2.44**	**204**	P	Pn	13 50 14.1	+0.4
MHGZ	**Mahia Peninsul**	**2.48**	**158**	P	Pn	13 50 14.3	+0.5
NGZ	**Ngauruhoe**	**2.48**	**201**	P	Pn	13 50 14.9	+0.8
TUVZ	**Tukino**	**2.56**	**199**	P	Pn	13 50 14.4	-0.3
KWHZ	**Kaweka Forest**	**2.58**	**185**	P	Pn	13 50 14.9	+0.1
MCHZ	**McNeill Hill**	**2.59**	**181**	P	Pn	13 50 15.2	+0.4
WHVZ	**Whangaehu Hut**	**2.59**	**200**	P	Pn	13 50 15.4	+0.4
TRVZ	**Turoa**	**2.61**	**201**	P	Pn	13 50 15.8	+0.5
MOVZ	**Moawhango**	**2.66**	**196**	P	Pn	13 50 15.4	-0.2
PKVZ	**Pokaka**	**2.67**	**204**	P	Pn	13 50 15.7	+0.1
BHHZ	**Black Hill Sta**	**2.68**	**191**	P	Pn	13 50 15.5	-0.2
VRZ	**Vera Road**	**2.75**	**214**	P	Pn	13 50 17.7	+1.5
KRHZ	**Kereru**	**2.80**	**186**	P	Pn	13 50 16.4	-0.3
CKHZ	**Cape Kidnapper**	**2.81**	**175**	P	Pn	13 50 16.9	+0.1
KAHZ	**Kahuranaki**	**2.94**	**178**	P	Pn	13 50 18.1	+0.1
OUZ	**Omahuta**	**3.02**	**302**	P	Pn	13 50 17.5	-1.3
PNHZ	**Pukenui**	**3.08**	**188**	P	Pn	13 50 19.0	-0.4
PXZ	**Pawanui**	**3.17**	**178**	P	Pn	13 50 20.0	-0.2
WAZ	**Wanganui**	**3.20**	**205**	P	Pn	13 50 20.7	+0.2
WPHZ	**Waipukurau**	**3.21**	**184**	P	Pn	13 50 20.4	-0.1
TSZ	**Takapari Road**	**3.26**	**190**	P	Pn	13 50 20.5	-0.5
PRHZ	**Porangahau**	**3.41**	**181**	P	Pn	13 50 22.3	-0.3
DVHZ	**Dannevirke**	**3.47**	**187**	P	Pn	13 50 22.5	-0.6
OHWZ	**Ohakea**	**3.53**	**198**	P	Pn	13 50 23.7	+0.1
PRWZ	**Pori Road**	**3.74**	**189**	P	Pn	13 50 25.7	-0.2
BFZ	**Birch Farm**	**3.84**	**185**	P	Pn	13 50 26.3	-0.6
MRZ	**Mangatainoka R**	**3.91**	**193**	P	Pn	13 50 26.6	-1.0
TIWZ	**Tintock**	**3.97**	**189**	P	Pn	13 50 27.7	-0.6
CPWZ	**Castlepoint**	**4.07**	**186**	P	Pn	13 50 29.5	+0.1
OGWZ	**Otaki Gorge**	**4.14**	**197**	P	Pn	13 50 29.2	-0.9
HOWZ	**Holdsworth Sta**	**4.15**	**193**	P	Pn	13 50 28.9	-1.3
KIW	**Kapiti Island**	**4.25**	**199**	P	Pn	13 50 30.2	-1.0
TMWZ	**Te Maipa**	**4.30**	**188**	P	Pn	13 50 31.0	-0.8
MTW	**Mount Morrison**	**4.40**	**192**	P	Pn	13 50 31.5	-1.4
CAW	**Cannon Point**	**4.44**	**196**	P	Pn	13 50 32.1	-1.3
DUWZ	**D'Urville Isla**	**4.51**	**208**	P	Pn	13 50 32.9	-1.2
TRWZ	**Traveller**	**4.61**	**190**	P	Pn	13 50 34.3	-0.9
PAWZ	**Paruwai Farm**	**4.63**	**192**	P	Pn	13 50 34.1	-1.4
WEL	**Wellington**	**4.68**	**198**	P	Pn	13 50 34.9	-1.1
MSWZ	**Moikau Station**	**4.70**	**194**	P	Pn	13 50 34.8	-1.4
TCW	**Tory Channel**	**4.75**	**203**	P	Pn	13 50 35.6	-1.1
BHW	**Baring Head**	**4.77**	**197**	P	Pn	13 50 35.9	-1.0
PLWZ	**Palliser**	**4.85**	**193**	P	Pn	13 50 36.5	-1.4
TUWZ	**Tuamarina**	**5.06**	**204**	P	Pn	13 50 39.0	-1.2
NNZ	**Nelson**	**5.08**	**210**	P	Pn	13 50 39.1	-1.3
QRZ	**Quartz Range**	**5.14**	**218**	P	Pn	13 50 39.4	-1.8
BSWZ	**Blackbirch Sta**	**5.33**	**204**	P	Pn	13 50 42.5	-0.8
THZ	**Tophouse**	**5.73**	**210**	P	Pn	13 50 46.2	-1.8
KHZ	**Kahutara**	**6.08**	**203**	P	Pn	13 50 50.9	-1.0
DSZ	**Dennistoun Nort**	**6.20**	**217**	P	Pn	13 50 51.7	-1.7
GVZ	**Greta Valley S**	**6.73**	**204**	P	Pn	13 50 58.0	-1.7
LTZ	**Lake Taylor**	**6.84**	**209**	P	Pn	13 50 58.1	-2.9
INZ	**Inchbonnie**	**7.13**	**213**	P	Pn	13 51 02.5	-1.9
OXZ	**Oxford**	**7.40**	**208**	P	Pn	13 51 05.1	-2.5

IDC ***16*** *13:50:29.9±1.5,6°.90N×76°.41W,h0km,mb3.4/1,mb1 3.8/1, mb1mx3.2/27,mbtmp3.4/1,Error ellipse: s-maj=84.6km s-min=17.8km az=48.0*

RSNC ***16*** *13:50:31.9±2.0,6°.90N×76°.28W,h0km±4km,ML3.2,Mw3.6*

ISC 16 13:50:29.6±1.2,6°.84N±0°.03×76°.31W±0°.03,h3km±9km,n23, σ1§17/41,1C,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBBC	**Dabeiba**	**0.20**	**29**	*iP*	**Pg**	**13 50 34.8**	**+1.3**
DBBC				*eS*	**Sg**	**13 50 36.9**	**+0.6**
DBBC				*i*		13 50 37.5	
	comp=Z,13μm,0.7s						
HELC	**Santa Helena**	**1.01**	**130**	*eP*	**Pn**	**13 50 50.4**	**-0.6**
HELC				*eS*	**Sb**	**13 51 04.1**	**+0.3**
HELC				*i*		13 51 07.8	
	comp=Z,219nm,0.6s						
CBOC	**Ciudad Bolivar**	**1.01**	**163**	*eP*	**Pn**	**13 50 51.6**	**+0.6**
CBOC				*eS*	**Sn**	**13 51 06.3**	**+0.5**
CBOC				*i*		13 51 15.3	
	comp=Z,426nm,0.6s						
UREC	**San Jos de Ur**	**1.19**	**40**	*eP*	**Pg**	**13 50 52.6**	**+0.2**
UREC				*eS*	**Sg**	**13 51 08.3**	**+0.5**
UREC				*i*		13 51 10.9	
	comp=Z,1μm,0.3s						
SOLC	**Bahia Solano**	**1.25**	**241**	*eP*	**Pn**	**13 50 54.7**	**+0.6**
SOLC				*eS*	**Sn**	**13 51 12.8**	**+1.3**
SOLC				*i*		13 51 24.2	
	comp=Z,121nm,0.7s						
PTAC	**Punta Ardita,**	**1.52**	**282**	*eP*	**Pg**	**13 50 58.7**	**-0.1**
PTAC				*eS*	**Sg**	**13 51 19.2**	**+0.7**
PTAC				*i*		13 51 26.6	
	comp=Z,376nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.58**	**66**	*eP*	**Pn**	**13 50 59.0**	**+0.5**
ZARC				*eS*	**Sn**	**13 51 19.2**	**-0.4**
ZARC				*i*		13 51 22.1	
	comp=Z,274nm,0.6s						
GUY2C	**Guyana, Caldas**	**1.86**	**150**	*eP*	**Pg**	**13 51 06.2**	**+0.9**
GUY2C				*eS*	**Sg**	**13 51 30.9**	**+1.4**
GUY2C				*i*		13 51 43.9	
	comp=Z,97nm,0.7s						
PTBC	**PUERTO BERRIO,**	**1.86**	**99**	*eP*	**Pb**	**13 51 03.7**	**-0.6**
PTBC				*eS*	**Sb**	**13 51 28.1**	**0.0**
PTBC				*i*		13 51 31.1	
	comp=Z,370nm,1.0s						
NORC	**Norcasia**	**1.91**	**132**	*eP*	**Pg**	**13 51 06.1**	**-0.2**
NORC				*eS*	**Sb**	**13 51 30.2**	**+0.7**
NORC				*i*		13 51 34.3	
	comp=Z,149nm,0.9s						
LCBC	**Los crdobas,**	**2.00**	**358**	*eP*	**Pn**	**13 51 05.2**	**+0.8**
LCBC				*eS*	**Sn**	**13 51 30.7**	**+0.6**
RREF	**El Recreo**	**2.15**	**154**	*eP*	**Pg**	**13 51 11.2**	**+0.2**
RREF				*eS*	**Sg**	**13 51 38.2**	**-0.7**
RREF				*i*		13 51 57.0	
	comp=Z,123nm,1.3s						
UPD2	**Meteti**	**2.40**	**315**	*eP*	**Pb**	**13 51 11.3**	**-2.2**
UPD2				*eS*	**Sn**	**13 51 40.7**	**+1.0**
UPD2				*i*		13 51 52.7	
	comp=Z,97nm,0.7s						
ANIL	**Santa Ana**	**2.50**	**159**	*eP*	**Pg**	**13 51 16.8**	**-0.9**
ANIL				*i*		13 52 07.9	
	comp=Z,74nm,0.5s						
SPBC	**San Pablo de B**	**2.52**	**118**	*eP*	**Pb**	**13 51 15.7**	**+0.1**
SPBC				*eS*	**Sb**	**13 51 46.4**	**-0.6**
SPBC				*i*		13 51 58.5	
	comp=Z,68nm,0.6s						
BRRC	**Barranca, Sant**	**2.59**	**84**	*eP*	**Pb**	**13 51 16.4**	**-0.3**
BRRC				*eS*	**Sb**	**13 51 49.1**	**0.0**
BRRC				*i*		13 52 02.1	
	comp=Z,77nm,0.6s						
ROSC	**El Rosal**	**2.80**	**135**	Pg	**Pg**	**13 51 23.4**	**0.0**
	comp=Z,7.4nm,0.3s,baz=322,slow=19,SNR=4.2						
ROSC				Lg	Lg	13 52 02.3	
	comp=Z,9.2nm,0.3s,baz=182,slow=22,SNR=5.7						
BARC	**Barichara**	**3.11**	**94**	*eP*	**Pb**	**13 51 23.5**	**-2.3**
BARC				*eS*	**Sn**	**13 51 59.0**	**+1.3**
BARC				*i*		13 52 14.4	
	comp=Z,293nm,0.8s						
RUSC	**La Rusia**	**3.34**	**106**	*eP*	**Pb**	**13 51 27.8**	**-2.1**
RUSC				*eS*	**Sb**	**13 52 07.9**	**-3.2**
RUSC				*i*		13 52 18.3	
	comp=Z,81nm,1.0s						
CHIC	**Chingaza**	**3.37**	**130**	*eP*	**Pb**	**13 51 29.6**	**-0.8**
CHIC				*eS*	**Sn**	**13 52 07.6**	**+3.1**
CHIC				*i*		13 52 31.5	
	comp=Z,41nm,1.0s						
SDV	**Santo Domingo**	**5.98**	**70**	Sn	**Sn**	**13 53 08.3**	**-0.1**
	comp=Z,3.1nm,0.3s,baz=342,slow=16,SNR=3.3						
YKA	**Yellowknife Ar**	**62.19**	**341**	P	**P**	**14 00 52.2**	**0.0**
	comp=Z,0.3nm,0.6s,baz=135,slow=6.9,SNR=7.2						
ASAR	**Alice Springs**	**146.51**	**237**	PKPbc	**PKPbc**	**14 10 13.2**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=109,slow=4.4,SNR=4.3						

IDC 16 14:09:40.7±7.0,18°.06S×178°.37W,h0km,mb4.2/3, mb1 4.5/3,mb1mx3.8/34,mbtmp4.2/3,Error ellipse: s-maj=303.0km s-min=37.2km az=143.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.64**	**260**	P	P	14 17 55.6	+0.3
	0.9nm,0.3s,baz=95,slow=7.6,SNR=20						
ASAR	**Alice Springs**	**44.78**	**254**	P	P	14 17 56.0	-0.5
	2.5nm,0.5s,baz=86,slow=7.8,SNR=78						
ILAR	**Eielson Array**	**86.02**	**13**	P	P	14 22 22.6	0.0
	1.4nm,1.1s,baz=212,slow=5.9,SNR=5.1						

IDC ***16*** *14:44:06.7±5.0,16°.14S×176°.29W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.7/44,mbtmp3.9/3,Error ellipse: s-maj=178.7km s-min=99.7km az=154.0*

NEIC ***16*** *14:44:12.9±0.8,16°.5±1°×176°.5W±0°.4,h35km±18km, mb4.0/2,Error ellipse: s-maj=155.7km s-min=6.4km az=160.0*

ISC 16 14:44:12.4±1.3,16°.6S±0°.7×176°.3W±0°.3,h35km,n7, σ1§63/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.14**	**60**	Pn	**Pn**	**14 45 26.7**	**-0.2**
MSVF	**Nonsavu**	**5.49**	**257**	Pn	**Pn**	**14 45 31.3**	**-0.4**
ARMA	**Armidale**	**32.32**	**239**	P	**P**	**14 50 36.2**	**-2.2**
ARMA				IAmb	IAmb	14 50 46.6	
	comp=Z,11nm,1.4s						
STKA	**Stephens Creek**	**41.00**	**240**	P	**P**	**14 51 54.5**	**+2.2**
	comp=Z,0.6nm,0.4s,baz=96,slow=10,SNR=4.4						
STKA	**Stephens Creek**	**41.00**	**240**	IAmb	IAmb	14 52 12.8	
	comp=Z,1.3nm,1.5s						
WRA	**Warramunga Arr**	**46.83**	**258**	P	**P**	**14 52 39.3**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=95,slow=7.7,SNR=5.1						
ASAR	**Alice Springs**	**47.06**	**253**	P	**P**	**14 52 41.6**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=88,slow=7.9,SNR=63						
ASAR				PcP	**PcP**	**14 54 13.1**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=106,slow=4.5,SNR=4.8						

IDC ***16*** *14:50:58.9±0.8,20°.14N×120°.44E,h0km,mb3.8/9, mb1 4.0/10,mb1mx3.7/46,mbtmp3.8/10,ML3.4/1,MS2.9/4, Ms1 3.0/4,ms1mx2.7/42,Error ellipse: s-maj=42.8km s-min=15.8km az=69.0*

NEIC ***16*** *14:51:00.1±2.4,20°.20N±0°.03×120°.5E±0°.2,h10km±2km, mb4.3/4,Error ellipse: s-maj=20.6km s-min=3.1km az=97.0*

JMA ***16*** *14:51:02.5±0.5,20°.38N×120°.29E,h97km,M3.5*

ISC 16 14:51:02.8±0.8,20°.21N±0°.07×120°.41E±0°.09,h28km,n32, σ1§41/36,mb3.7/11,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWG	**Pinlang**	**2.67**	**13**		**Pn**	**14 51 42.3**	**-1.7**
TWG				Sn	**Sn**	**14 52 16.8**	**+1.2**
TPUB	**Ta-pu**	**3.09**	**4**		**Pn**	**14 51 46.8**	**-2.9**
TPUB				Sn	**Sn**	**14 52 25.9**	**+0.2**
YULB	**Yu-li**	**3.28**	**14**		**Pn**	**14 51 50.2**	**-2.1**
YULB				Sn	**Sn**	**14 52 29.6**	**-0.8**
SSLB	**Suanglung**	**3.60**	**8**		**Pn**	**14 51 54.5**	**-2.3**
NACB	**Ninganchiao**	**4.10**	**15**	Pn	**Pn**	**14 52 03.4**	**-0.2**
YHNB	**Yeheng**	**4.53**	**11**	Pn	**Pn**	**14 52 08.2**	**-1.4**
YOJ	**Yonaguni jima**	**4.87**	**29**	P	**Pn**	**14 52 14.2**	**0.0**
HATJ	**Hateruma jima**	**4.96**	**39**	P	**Pn**	**14 52 15.0**	**-0.4**
IRIF	**Iriomote-Funau**	**5.13**	**36**	P	**Pn**	**14 52 17.3**	**-0.5**
IRIF				*eS*	**Sn**	**14 53 16.0**	**-0.1**
JKRS	**Kuro-shima**	**5.22**	**39**	P	**Pn**	**14 52 19.0**	**0.0**
JKRS				*eS*	**Sn**	**14 53 19.1**	**+0.9**
JIJ	**Ishigaki jima**	**5.39**	**39**	P	**Pn**	**14 52 20.9**	**-0.5**
JIJ				S	**Sn**	**14 53 22.9**	**+0.4**
JISG	**Ishigakijimahi**	**5.66**	**39**	P	**Pn**	**14 52 23.9**	**-1.2**
JISG				*eS*	**Sn**	**14 53 27.4**	**-1.8**
JTJ	**Tarama**	**5.94**	**41**	P	**Pn**	**14 52 28.7**	**-0.2**
JTJ				S	**Sn**	**14 53 36.3**	**+0.3**
JNU	**Nakatsue**	**15.89**	**34**	LR	LR	15 00 57.8	
	comp=Z,33nm,18.3s,baz=224,slow=38						
JNU	**Nakatsue**	**15.89**	**34**	Pn	**Pn**	**14 54 43.6**	**-1.0**
JNU				IAmb	IAmb	14 54 49.3	
	comp=Z,15nm,1.1s						
KSRS	**Korea Array**	**18.39**	**19**	P	**P**	**14 55 14.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=195,slow=13,SNR=11						
KSRS				LR	LR	15 03 40.6	
	comp=Z,33nm,18.1s,baz=198,slow=41						
CMAR	**Chiang Mai Arr**	**20.33**	**269**	LR	LR	15 02 19.5	
	comp=Z,41nm,20.1s,baz=170,slow=33						
INU	**Inuyama**	**21.01**	**41**	P	**P**	**14 55 44.4**	**+0.2**
INU				IAmb	IAmb	14 55 45.8	
	comp=Z,32nm,1.4s						
MJAR	**Matsushiro Arr**	**22.53**	**40**	P	**P**	**14 56 03.2**	**+2.8**
	comp=Z,3.5nm,0.9s,baz=244,slow=10,SNR=7.9						
SIJI	**Sorong**	**23.49**	**152**	P	**P**	**14 56 10.9**	**+0.4**
	comp=Z,9.3nm,0.8s,baz=348,slow=5.0,SNR=9.7						
GUMO	**Guam**	**24.29**	**102**	LR	LR	15 03 45.0	
	comp=Z,31nm,21.2s,baz=242,slow=32						
SARN	**Sarigan**	**24.31**	**94**	P	**P**	**14 56 14.7**	**-3.5**
SONM	**Songino Array**	**29.81**	**341**	P	**P**	**14 57 09.6**	**+2.2**
	comp=Z,0.4nm,0.5s,baz=158,slow=8.5,SNR=4.0						
MKAR	**Makanchi Array**	**40.79**	**320**	P	**P**	**14 58 42.9**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=112,slow=9.5,SNR=5.1						
WRA	**Warramunga Arr**	**42.17**	**160**	P	**P**	**14 58 52.2**	**-1.0**
	comp=Z,1.0nm,0.6s,baz=342,slow=9.0,SNR=5.9						
ZALV	**Zalesovo Beam**	**43.25**	**330**	P	**P**	**14 59 01.8**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=128,slow=9.7,SNR=4.0						
KURK	**Kurchatov**	**44.75**	**323**	P	**P**	**14 59 14.0**	**+0.4**
KURK	**Kurchatov**	**44.75**	**323**	IAmb	IAmb	14 59 17.0	
	comp=Z,1.7nm,1.1s						
KURBB	**Kurchatov Arra**	**44.76**	**323**	P	**P**	**14 59 14.0**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=123,slow=7.6,SNR=6.6

AZAP					IAML			15 32 50.9
	comp=Z,20nm,0.3s							
LVC	**Limon Verde**	**2.22**	**316**	*eP*		**Pn**	**15 32 53.5**	**+0.9**
LVC				*i* S		**Sn**	**15 33 23.3**	**-0.8**
LVC	**Limon Verde**	**2.22**	**316**	*i* P		**Pn**	**15 32 53.6**	**+1.1**
LVC					IAML		15 33 26.1	
	comp=Z,33nm,0.1s							
PB15	**IPOC Station P**	**2.27**	**296**	⇑*iP*		**Pn**	**15 32 54.1**	**+1.1**
PB15				*i* S		**Sn**	**15 33 24.2**	**-0.7**
PB15	**IPOC Station P**	**2.27**	**296**	*i* P		**Pn**	**15 32 54.2**	**+1.2**
PB15				*e*S		**Sn**	**15 33 24.7**	**-0.2**
GO02	**Mina Guanaco**	**2.33**	**246**	⇑*iP*		**Pn**	**15 32 54.6**	**+1.0**
GO02				*i* S		**Sn**	**15 33 26.2**	**+0.1**
GO02					IAML		15 33 27.1	
	comp=N,363nm,0.2s							
YJA	**Yavi**	**2.59**	**38**	*i* P		**Pn**	**15 32 57.6**	**+0.9**
PB06	**IPOC Station P**	**2.62**	**305**	⇑*iP*		**Pn**	**15 32 57.8**	**+1.0**
PB06				*i* S		**Sn**	**15 33 30.3**	**-1.5**
PB06					IAML		15 33 33.0	
	comp=N,223nm,0.1s							
PB06	**IPOC Station P**	**2.62**	**305**	*i* P		**Pn**	**15 32 57.7**	**+1.0**
PB06				*e*S		**Sn**	**15 33 31.4**	**-0.3**
PB05	**IPOC Station P**	**3.04**	**296**	⇑*iP*		**Pn**	**15 33 02.4**	**+0.8**
PB05				*i* S		**Sn**	**15 33 38.1**	**-2.4**
PB05					IAML		15 33 42.0	
	comp=N,51nm,0.2s							
PB05	**IPOC Station P**	**3.04**	**296**	*i* P		**Pn**	**15 33 02.3**	**+0.7**
PB09	**IPOC Station P**	**3.04**	**322**	⇓*iP*		**Pn**	**15 33 03.3**	**+1.6**
PB09				*i* S		**Sn**	**15 33 40.3**	**-0.4**
PB09					IAML		15 33 41.5	
	comp=N,99nm,0.5s							
PB09	**IPOC Station P**	**3.04**	**322**	*i* P		**Pn**	**15 33 03.4**	**+1.6**
PB09				*e*S		**Sn**	**15 33 40.7**	**+0.1**
PB03	**IPOC Station P**	**3.16**	**313**	*eP*		**Pn**	**15 33 03.8**	**+0.6**
PB03				*i* S		**Sn**	**15 33 41.2**	**-2.1**
PB03					IAML		15 33 42.3	
	comp=E,122nm,0.2s							
PB04	**IPOC Station P**	**3.27**	**305**	*eP*		**Pn**	**15 33 05.2**	**+0.7**
PB04				*i* S		**Sn**	**15 33 43.5**	**-2.1**
PB04					IAML		15 33 48.7	
	comp=N,96nm,0.2s							
PB04	**IPOC Station P**	**3.27**	**305**	*i* P		**Pn**	**15 33 05.4**	**+1.0**
APLL	**PUNTA DE LOS L**	**6.18**	**174**	*i* P		**Pn**	**15 33 41.3**	**0.0**
ACCO	**Cerro Coronel**	**6.54**	**194**	*i* P		**Pn**	**15 33 46.9**	**+0.7**
GO04	**Tololo Observa**	**6.71**	**207**	*i* P		**Pn**	**15 33 48.4**	**-0.1**
CFA	**Coronel Fontan**	**7.40**	**187**	*i* P		**Pn**	**15 33 57.5**	**+0.2**
TCA	**Tanti**	**7.46**	**162**	*i* P		**Pn**	**15 33 57.8**	**-0.3**
LPAZ	**La Paz**	**7.94**	**354**	⇓*iP*		**Pn**	**15 34 06.3**	**+1.4**
ACAN	**Cantantal**	**8.02**	**180**	*i* P		**Pn**	**15 34 05.3**	**0.0**

DDA **16** *15:33:10.1,40°.66N×46°.82E,h7km±2km,ML2.6*
TEH **16** *15:33:11.5,40°.42N×46°.96E,h18km,ML2.5*
TIF **16** *15:33:12.7,40°.59N×46°.70E,h10km±4km*

ISC 16 15:33:10.9±2.0, 40°.46N±0°.06×47°.0E±0°.1, h9km±20km, n14, σ1§07/25, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDFL	**Dedoflistskaro**	**1.17**	**328**	P	**Pb**	**15 33 33.4**	**0.0**
DDFL				S	**Sb**	**15 33 50.2**	**+1.5**
LGD	**Lagodekhi**	**1.48**	**339**	P	**Pn**	**15 33 37.5**	**-0.2**
LGD				S	**Sn**	**15 33 56.2**	**-1.0**
IMRD	**Marand**	**1.99**	**209**	*e*Pg	**Pb**	**15 33 47.7**	**+0.3**
IMRD				*e*		15 34 25.4	
BTNK	**Botanikuri**	**2.04**	**308**	P	**Pn**	**15 33 46.2**	**+0.8**
BTNK				S	**Sn**	**15 34 10.3**	**-0.7**
BTNK	**Botanikuri**	**2.04**	**308**	*i* P	**Pn**	**15 33 45.0**	**-0.5**
BTNK				*i* S	**Sn**	**15 34 10.6**	**-0.4**
BTNK				IAML		15 34 12.0	
	comp=N,90nm,0.1s						
BTNK				IAML		15 34 13.0	
	comp=E,80nm,0.3s						
TBLG	**Delisi**	**2.10**	**308**	P	**Pn**	**15 33 46.2**	**-0.1**
TBLG				S	**Sn**	**15 34 12.2**	**-0.4**
TBLG	**Delisi**	**2.10**	**308**	*i* P	**Pn**	**15 33 46.1**	**-0.1**
TBLG				*i* S	**Sn**	**15 34 12.2**	**-0.4**
TBLG				IAML		15 34 13.0	
	comp=N,59nm,0.4s						
TBLG				IAML		15 34 13.0	
	comp=E,43nm,0.4s						
IHRS	**Heris**	**2.14**	**178**	*e*Pg	**Pb**	**15 33 50.3**	**+0.3**
IHRS				*e*Sg	**Sg**	**15 34 20.2**	**+0.6**
IHRS				*e*		15 34 25.5	
KZRT	**Kazreti**	**2.14**	**296**	P	**Pn**	**15 33 46.6**	**-0.4**
KZRT				S	**Sn**	**15 34 12.5**	**-1.2**
KZRT	**Kazreti**	**2.14**	**296**	*i* P	**Pn**	**15 33 46.3**	**-0.6**
KZRT				*i* S	**Sn**	**15 34 12.6**	**-1.2**
ITBZ	**Tabriz**	**2.31**	**196**	*e*Pg	**Pg**	**15 33 54.2**	**-1.0**
ITBZ				*e*		15 33 59.2	
TRLG	**Trialeti**	**2.41**	**298**	P	**Pn**	**15 33 51.6**	**+0.9**
TRLG				S	**Sn**	**15 34 20.4**	**-0.1**
GUDG	**Gudauri**	**2.73**	**318**	P	**Pn**	**15 33 55.0**	**-0.2**
GUDG				S	**Sn**	**15 34 26.7**	**-1.8**
ONI	**Oni**	**3.38**	**310**	P	**Pn**	**15 34 07.2**	**+3.2**

NEIC **16** *15:38:21.6±1.7,43°.68N±0°.05×126°.0W±0°.1,h10km±5km, ML3.1/53,Error ellipse: s-maj=14.1km s-min=4.1km az=65.0*
ANF **16** *15:38:23.5±1.0,43°.72N×125°.56W,h0km,ML3.5/22,Error ellipse: s-maj=10.8km s-min=3.9km az=81.0*
IDC **16** *15:38:24.4±3.1,43°.84N×125°.53W,h0km,mb3.6/2, mb1 3.8/8,mb1mx3.5/43,mbtmp3.4/8,ML3.1/5,MS2.8/5, Ms1 2.8/5,ms1mx2.6/43,Error ellipse: s-maj=42.3km s-min=12.9km az=81.0*

ISC 16 15:38:23.6±1.5, 43.72N±0°.04×125°.8W±0°.1, h10km, n102, σ1§37/111, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	**1.38**	**128**		**Pn**	**15 38 46.5**	**-2.5**
I02D	**Swisshome**	**1.47**	**74**	P	**Pn**	**15 38 48.6**	**-1.6**
	baz=255,SNR=241						
J01E	**Myrtle Point**	**1.48**	**112**	P	**Pn**	**15 38 48.1**	**-2.2**
	baz=290,SNR=76						
J01E				S	**Sn**	**15 39 07.6**	**-2.2**
	baz=290						
I03D	**Drain, OR**	**1.79**	**90**	P	**Pn**	**15 38 53.2**	**-1.3**
	baz=270,SNR=356						
I03D				S	**Sn**	**15 39 15.9**	**-1.4**
	baz=270						
K02D	**Willamette Mer**	**1.88**	**122**	P	**Pn**	**15 38 53.7**	**-2.1**
	baz=301,SNR=187						
K02D				S	**Sn**	**15 39 17.3**	**-2.3**
	baz=301						
KBO	**Bosley Butte**	**1.91**	**142**		**Pn**	**15 38 54.7**	**-1.6**
KBO				IAML		15 39 24.8	
	comp=N,100nm,0.7s						
COR	**Corvallis**	**2.00**	**64**		**Pn**	**15 38 56.6**	**-0.8**
COR				IAML		15 39 30.8	
	comp=N,265nm,0.6s						
COR				IAML		15 39 31.1	
	comp=N,176nm,0.7s						
L02E	**Cave Junction**	**2.26**	**133**	P	**Pn**	**15 38 59.3**	**-1.7**
	baz=312,SNR=23						
L02E				S	**Sn**	**15 39 25.6**	**-3.2**
	baz=312						
G03D	**McMinnville, O**	**2.35**	**50**	P	**Pn**	**15 39 01.1**	**-1.2**
	baz=233,SNR=111						
G03D				S	**Sn**	**15 39 29.6**	**-1.7**
	baz=233						
H04D	**Lebanon**	**2.36**	**69**	P	**Pn**	**15 39 01.8**	**-0.5**
	baz=251,SNR=106						
HUMO	**Hull Mountain**	**2.37**	**117**		**Pn**	**15 39 01.1**	**-1.5**
HUMO				IAML		15 39 34.1	
	comp=N,77nm,0.5s						
HUMO				IAML		15 39 38.3	
	comp=E,81nm,0.5s						
I04A	**Tendick Farm,**	**2.47**	**87**	P	**Pn**	**15 39 03.3**	**-0.6**
	baz=269,SNR=62						
KRMB	**Red Mountain**	**2.61**	**147**		**Pn**	**15 39 04.4**	**-1.6**
F03A	**Seaside**	**2.73**	**35**		**Pn**	**15 39 06.2**	**-1.3**
J04D	**Umpqua Nationa**	**2.74**	**99**	P	**Pn**	**15 39 08.1**	**+0.2**
	baz=280,SNR=50						
L04D	**Klamath Falls**	**2.98**	**119**	P	**Pn**	**15 39 11.5**	**+0.4**
	baz=300,SNR=81						
L04D				S	**Sn**	**15 39 46.4**	**-0.6**
	baz=300						
YBH	**Yreka Blue Hor**	**3.03**	**130**	Pn	**Pn**	**15 39 12.0**	**+0.3**
	comp=E,0.7nm,0.3s,baz=318,slow=16,SNR=15						
YBH				Sn	**Sn**	**15 39 48.1**	**0.0**
	comp=E,4.9nm,0.3s,baz=147,slow=21,SNR=10						
YBH	**Yreka Blue Hor**	**3.03**	**130**		**Pn**	**15 39 11.4**	**-0.3**
YBH					**Sn**	**15 39 48.2**	**0.0**
F04D	**Rainier, OR**	**3.09**	**39**	P	**Pn**	**15 39 12.1**	**-0.3**
	baz=222,SNR=17						
F04D				S	**Sn**	**15 39 49.6**	**+0.2**
	baz=222						
JCC	**Jacoby Creek,**	**3.19**	**155**	Pn	**Pn**	**15 39 11.4**	**-2.4**
JCC				IAML		15 40 45.5	
	comp=N,27nm,4.0s						
M02C	**Callahan**	**3.20**	**136**	P	**Pn**	**15 39 13.5**	**-0.5**
	baz=316,SNR=8.9						
M02C				S	**Sn**	**15 39 50.1**	**-2.1**
	baz=316						
E03A	**Lebam**	**3.24**	**29**		**Pn**	**15 39 13.2**	**-1.3**
KHMM	**Horse Mountain**	**3.24**	**151**	Pn	**Pn**	**15 39 13.3**	**-1.4**
KHMM				IAML		15 40 25.4	
	comp=N,30nm,4.8s						
F04A	**Amboy**	**3.27**	**46**		**Pn**	**15 39 15.0**	**+0.1**
I05D	**Terrebonne, OR**	**3.29**	**78**	P	**Pn**	**15 39 14.9**	**-0.3**
	baz=260,SNR=42						
J05D	**Fort Rock, OR**	**3.36**	**96**	P	**Pn**	**15 39 15.8**	**-0.5**
	baz=278,SNR=50						
PINE	**Pine Mountain**	**3.53**	**87**		**Pn**	**15 39 18.3**	**-0.4**
PINE				IAML		15 40 14.7	
	comp=E,29nm,4.9s						
PINE				IAML		15 40 43.2	
	comp=N,23nm,3.2s						
G05D	**Wamic, OR**	**3.56**	**63**	P	**Pn**	**15 39 19.2**	**+0.3**
	baz=247,SNR=57						
N02D	**Trinity Center**	**3.59**	**139**	S	**Sn**	**15 40 01.1**	**-0.7**
	baz=319						
E04D	**Cinebar**	**3.65**	**38**	P	**Pn**	**15 39 19.7**	**-0.4**
	baz=221,SNR=70						
E04D				S	**Sn**	**15 40 02.9**	**-0.2**
	baz=221						
F05D	**White Salmon**	**3.78**	**54**	P	**Pn**	**15 39 22.4**	**+0.5**
	baz=237,SNR=171						
KMRM	**Mail Ridge**	**3.84**	**155**	Pn	**Pn**	**15 39 22.1**	**-0.7**
KMRM				IAML		15 40 10.0	
	comp=E,31nm,4.9s						
KMRM				IAML		15 41 37.9	
	comp=N,23nm,4.5s						
NLWA	**Neilton Lookou**	**3.91**	**20**	Pn	**Pn**	**15 39 22.8**	**-1.1**
NLWA				IAML		15 40 10.0	
	comp=N,49nm,0.8s						
NLWA				IAML		15 40 11.0	
	comp=N,50nm,0.6s						
WDC	**Whiskeytown Da**	**3.97**	**141**	Pn	**Pn**	**15 39 26.0**	**+1.4**
G06A	**Carlson Farm,**	**4.00**	**66**		**Pn**	**15 39 24.7**	**-0.3**
G06A				IAML		15 40 29.4	
	comp=E,19nm,4.3s						
D04E	**Lakebay**	**4.06**	**31**	P	**Pn**	**15 39 25.8**	**0.0**
	baz=214,SNR=39						
D04E				S	**Sn**	**15 40 13.9**	**+0.5**
	baz=214						
LON	**Longmire**	**4.14**	**42**		**Pn**	**15 39 27.2**	**+0.3**
LON				IAML		15 40 17.2	
	comp=E,35nm,0.4s						
D03D	**Eldon**	**4.26**	**26**	P	**Pn**	**15 39 27.4**	**-1.2**
	baz=209,SNR=26						
D03D				S	**Sn**	**15 40 16.1**	**-2.3**
	baz=209						
D05A	**Enumclaw**	**4.39**	**37**		**Pn**	**15 39 31.0**	**+0.7**
MOD	**Modoc Plateau**	**4.45**	**112**		**Pn**	**15 39 30.9**	**-0.3**
MOD				IAML		15 41 13.3	
	comp=N,10.0nm,4.3s						
MOD				IAML		15 41 15.2	
	comp=E,12nm,4.6s						
F07A	**Phinny Hill Vi**	**4.72**	**61**		**Pn**	**15 39 35.0**	**+0.2**
F07A				IAML		15 40 14.1	
	comp=N,20nm,0.8s						
F07A				IAML		15 40 17.1	
	comp=E,21nm,0.5s						
LTY	**Liberty**	**5.06**	**44**		**Pn**	**15 39 39.9**	**+0.3**
LTY				IAML		15 41 01.4	
	comp=E,13nm,0.8s						
LTY				IAML		15 41 07.7	
	comp=N,16nm,4.2s						
E07A	**Sunnyside**	**5.08**	**54**		**Pn**	**15 39 40.1**	**+0.3**
E07A				IAML		15 40 19.2	
	comp=E,24nm,0.5s						
E07A				IAML		15 40 19.2	
	comp=N,20nm,0.6s						
G08A	**Pilot Rock**	**5.15**	**70**		**Pn**	**15 39 40.8**	**-0.1**
G08A				IAML		15 41 06.0	
	comp=E,10nm,3.7s						
HAWA	**Hanford**	**5.19**	**57**		**Pn**	**15 39 41.5**	**+0.2**
HAWA				IAML		15 40 52.2	
	comp=E,11nm,4.5s						
HAWA				IAML		15 41 13.8	
	comp=E,12nm,4.7s						
PGC	**Sidney**	**5.19**	**18**	Pn	**Pn**	**15 39 40.1**	**-1.2**
PGC					**Sn**	**15 40 37.7**	**-3.5**
B05A	**Bryant**	**5.23**	**28**	P	**Pn**	**15 39 41.2**	**-0.6**
	baz=212,SNR=13						
B05A				S	**Sn**	**15 40 41.1**	**-1.0**
	baz=212						
ORV	**Oroville**	**5.27**	**141**	Pn	**Pn**	**15 39 41.9**	**-0.6**
ORV				IAML		15 40 47.7	
	comp=E,5.0nm,4.2s						
WVOR	**Wild Horse Val**	**5.41**	**101**		**Pn**	**15 39 43.3**	**-1.2**
C06D	**Leavenworth**	**5.43**	**38**	P	**Pn**	**15 39 44.3**	**-0.3**
	baz=222,SNR=14						
C06D				S	**Sn**	**15 40 47.6**	**+0.5**
	baz=222						
E08A	**Dider Farm, El**	**5.52**	**58**		**Pn**	**15 39 46.0**	**+0.2**
BEKR	**Beckworth**	**5.61**	**132**	Pn	**Pn**	**15 39 46.5**	**-0.8**
B06A	**Marblemount**	**5.66**	**31**		**Pn**	**15 39 47.5**	**-0.2**
B06A					**Sn**	**15 40 51.4**	**-1.3**
D08A	**Wollman Farm,**	**5.89**	**53**		**Pn**	**15 39 50.5**	**-0.4**
AFDM	**Forest Hills D**	**6.00**	**141**	Pn	**Pn**	**15 39 51.9**	**-0.6**
E09A	**Wood Farm, Sta**	**6.10**	**60**		**Pn**	**15 39 52.9**	**-0.9**
BMO	**Blue Mountains**	**6.21**	**77**		**Pn**	**15 39 55.1**	**-0.3**
B08A	**Colville Reser**	**6.47**	**42**		**Pn**	**15 39 58.4**	**-0.4**
F10A	**Beach Ranch, E**	**6.50**	**67**		**Pn**	**15 39 58.9**	**-0.5**
PNTR	**Pine Nut**	**6.58**	**133**		**Pn**	**15 39 58.1**	**-2.5**
C09A	**Chrisman Ranch**	**6.67**	**50**		**Pn**	**15 40 01.6**	**0.0**
YERR	**Yerington**	**6.84**	**132**	Pn	**Pn**	**15 40 03.3**	**-0.9**
MFID	**Camas Ranch**	**7.26**	**89**	Pn	**Pn**	**15 40 09.2**	**-0.7**
LLLB	**Lillooet**	**7.39**	**20**	Pn	**Pn**	**15 40 09.6**	**-1.9**
NEW	**Newport**	**7.56**	**50**	Pn	**Pn**	**15 40 14.1**	**+0.2**
	comp=E,3.1nm,0.3s,baz=235,slow=11,SNR=15						
NEW				LR	LR	15 43 29.4	
	comp=E,104nm,19.0s,baz=248,slow=42						
NEW	**Newport**	**7.56**	**50**		**Pn**	**15 40 13.7**	**-0.2**
NEW	**Newport**	**7.56**	**50**	P	**Pn**	**15 40 13.3**	**-0.7**
	baz=237						
NVAR	**Mina Array Bea**	**7.75**	**130**	Pn	**Pn**	**15 40 19.7**	**+2.9**
	comp=E,0.2nm,0.3s,baz=303,slow=15,SNR=4.3						
NVAR				LR	LR	15 43 47.3	
	comp=E,37nm,18.2s,baz=335,slow=42						
NVAR	**Mina Array Bea**	**7.75**	**130**		**Pn**	**15 40 15.1**	**-1.6**
MDPB	**Devils Postpil**	**7.95**	**138**	Pn	**Pn**	**15 40 16.7**	**-2.7**
ELK	**Elko**	**8.39**	**107**	Pn	**Pn**	**15 40 28.8**	**+3.3**
	comp=E,0.1nm,0.3s,baz=299,slow=9.2,SNR=4.6						
ELK	**Elko**	**8.39**	**107**		**Pn**	**15 40 27.0**	**+1.5**
BBB	**Bella Bella**	**8.61**	**351**	LR	LR	15 43 10.2	
	comp=E,47nm,21.8s,baz=186,slow=34						
MSO	**Missoula**	**8.93**	**66**		**Pn**	**15 40 32.8**	**+0.1**
MSO	**Missoula**	**8.93**	**66**	P	**Pn**	**15 40 32.6**	**-0.1**
	baz=254						
JTMT	**Jette**	**9.01**	**59**		**Pn**	**15 40 33.6**	**-0.2**
MCMT	**McKenzie Canyo**	**9.37**	**79**	Pn	**Pn**	**15 40 38.7**	**-0.1**
DLMT	**Dillon**	**9.58**	**76**		**Pn**	**15 40 41.1**	**-0.6**
LRM	**Limekiln Ridge**	**9.73**	**73**		**Pn**	**15 40 44.4**	**+0.5**
WALA	**Waterton Lakes**	**9.80**	**53**		**Pn**	**15 40 45.8**	**+1.1**
ISA	**Isabella, Lake**	**9.84**	**142**	Pn	**Pn**	**15 40 43.4**	**-1.7**
BGU	**Big Grassy Mou**	**9.87**	**102**	Pn	**Pn**	**15 40 47.3**	**+1.6**
YHB	**Horse Butte**	**10.54**	**79**		**Pn**	**15 40 56.3**	**+1.4**
YHL	**Hebgen Lake**	**10.55**	**79**		**Pn**	**15 40 56.2**	**+1.0**
H17A	**Grant Village**	**10.99**	**81**		**Pn**	**15 41 04.3**	**+3.2**
YNE	**Yellowstone No**	**11.39**	**78**		**Pn**	**15 41 07.1**	**+0.6**
GCMT	**Greycliff**	**11.67**	**74**	Pn	**Pn**	**15 41 10.5**	**+0.3**
PDAR	**Pinedale Array**	**11.90**	**89**	Pn	**Pn**	**15 41 15.7**	**+2.2**
	comp=E,0.1nm,0.3s,baz=276,slow=9.0,SNR=5.4						
PDAR				LR	LR	15 45 55.9	
	comp=E,54nm,20.2s,baz=294,slow=39						
PDAR	**Pinedale Array**	**11.90**	**89**		**Pn**	**15 41 15.4**	**+1.9**
PFO	**Pinyon Flats O**	**12.46**	**141**	LR	LR	15 46 16.6	
	comp=E,59nm,21.9s,baz=278,slow=38						
YKA	**Yellowknife Ar**	**19.91**	**15**	P	**P**	**15 42 54.7**	**-0.4**
	comp=E,0.0nm,0.3s,baz=204,slow=12,SNR=8.1						
ULM	**Lac du Bonnet**	**21.34**	**62**	P	**P**	**15 43 10.9**	**+0.2**
	comp=E,5.1nm,0.6s,baz=270,slow=9.2,SNR=10.0						
ULM	**Lac du Bonnet**	**21.34**	**62**	P	**P**	**15 43 10.6**	**-0.2**
WMOK	**Wichita Mounta**	**22.70**	**104**	P	**P**	**15 43 27.7**	**+2.2**
TXAR	**Lajitas Array**	**22.77**	**122**	P	**P**	**15 43 29.3**	**+3.0**
	comp=E,0.9nm,0.8s,baz=297,slow=8.3,SNR=7.8						
TXAR	**Lajitas Array**	**22.77**	**122**	P	**P**	**15 43 28.8**	**+2.5**
H11N3	**WAKE ISLAND Hy**	**60.34**	**270**	T	T	16 53 46.5	
	baz=50,slow=75,SNR=19						
H11N2	**WAKE ISLAND Hy**	**60.34**	**270**	T	T	16 53 47.2	
	baz=50,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**60.36**	**270**	T	T	16 53 47.9	
	baz=50,slow=75,SNR=8.9						
H11S1	**WAKE ISLAND Hy**	**61.27**	**269**	T	T	16 54 56.2	
	baz=50,slow=75,SNR=50						
H11S2	**WAKE ISLAND Hy**	**61.27**	**269**	T	T	16 55 02.9	
	baz=50,slow=75,SNR=34						
H11S3	**WAKE ISLAND Hy**	**61.28**	**269**	T	T	16 54 56.0	
	baz=50,slow=75,SNR=32						

TIF **16** *15:39:44.9,42°.36N×41°.01E,h25km±3km*
NORS **16** *15:39:45.3±0.0,42°.51N×41°.16E,h10km,MPVA3.3*
DDA **16** *15:39:46.2,42°.25N×41°.12E,h7km±2km,ML1.9*

ISC 16 15:39:45.0±2.0, 42°.37N±0°.04×41°.12E±0°.09, h8km±13km, n13, σ0§47/24, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBOC	**Borcka**	**1.10**	**158**	*i* P	**Pg**	**15 40 06.1**	**0.0**
DBOC				*i* S	**Sn**	**15 40 21.8**	**-0.4**
DBOC				IAML		15 40 22.0	
	comp=E,66nm,0.2s						
DBAD	**Bademkaya**	**1.42**	**162**	*i* P	**Pn**	**15 40 10.8**	**-0.4**
DBAD				IAML		15 40 31.0	
	comp=N,18nm,0.2s						
DBAD				IAML		15 40 35.0	
	comp=E,20nm,0.3s						
DAGI	**Agillar**	**1.42**	**155**	*i* P	**Pn**	**15 40 10.8**	**-0.5**
DAGI				IAML		15 40 30.0	
	comp=N,12nm,0.4s						
DAGI				*i* S	**Sb**	**15 40 30.2**	**+0.1**
DAGI				IAML		15 40 31.0	
	comp=E,14nm,0.6s						
NEY	**Neytrino**	**1.47**	**53**	*e*Pg	**Pn**	**15 40 12.4**	**+0.4**
NEY				*e*Sg	**Sg**	**15 40 32.5**	**+0.2**
EPOS	**Posof**	**1.48**	**125**	*i* P	**Pb**	**15 40 13.0**	**+0.2**
EPOS				*i* S	**Sg**	**15 40 32.8**	**+0.2**
EPOS				IAML		15 40 35.0	
	comp=N,34nm,0.8s						
EPOS				IAML		15 40 39.0	
	comp=E,16nm,0.4s						
DDEM	**Demirkent**	**1.55**	**162**	*i* P	**Pn**	**15 40 13.3**	**+0.3**
DDEM				*i* S	**Sb**	**15 40 33.9**	**+0.1**
DDEM				IAML		15 40 34.0	
	comp=N,56nm,0.2s						
DDEM				IAML		15 40 41.0	
	comp=E,44nm,0.3s						
ONI	**Oni**	**1.74**	**82**	P	**Pb**	**15 40 16.9**	**-0.3**
ONI				S	**Sg**	**15 40 41.0**	**+0.1**
SHA1	**Shidzhatmaz**	**1.77**	**39**	*e*Pg	**Pb**	**15 40 17.8**	**-0.2**
SHA1				*e*Sg	**Sb**	**15 40 40.7**	**+0.4**
DIGR	**Digorskoe uzhe**	**1.89**	**73**	*e*Pg	**Pb**	**15 40 20.1**	**+0.2**
DIGR				*e*Sg	**Sg**	**15 40 45.5**	**-0.3**
KRIK	**Erzurum-spir**	**2.04**	**184**	*i* P	**Pg**	**15 40 24.1**	**+0.1**
ZEI	**Tsey**	**2.10**	**78**	*e*Pg	**Pb**	**15 40 23.0**	**-0.4**
ZEI				*e*Sg	**Sg**	**15 40 51.8**	**-0.6**
TRLG	**Trialeti**	**2.37**	**109**	P	**Pb**	**15 40 28.8**	**+0.7**
TRLG				S	**Sg**	**15 41 01.6**	**+0.4**
LACR	**Lac**	**2.39**	**78**	*e*Pn	**Pb**	**15 40 29.0**	**+0.6**
LACR				*e*Sn	**Sg**	**15 41 00.6**	**-1.2**

SJA 16 15:49:57.0±0.7, 27°.93S×66°.66W, h202km±10km, ML2.8, MW2.8,1D, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	**Choya**	**0.91**	**124**	*i* P	Pn	15 50 26.8	+0.3
CYA	**Choya**	**0.91**	**124**	*i* P	Pn	15 50 26.9	+0.5
CYA				IAML		15 50 27.2	
	comp=Z,35nm,0.4s						
CYA				*e*S	S	15 50 46.5	-2.7
ACLC	**CERRO LA CRUZ**	**1.51**	**190**	*i* P	Pn	15 50 31.8	+0.6
ACLC				*i* S	S	15 50 55.4	-2.0
ACLC	**CERRO LA CRUZ**	**1.51**	**190**	*i* P	Pn	15 50 31.6	+0.4
ACLC				*e*S	S	15 50 55.9	-1.5
AHML	**Horco Molle**	**1.64**	**46**	*i* P	Pn	15 50 32.4	+0.2
AGUA	**GUANDACOL**	**2.23**	**226**	*i* P	Pn	15 50 38.9	+0.7
AGUA				*i* S	S	15 51 09.7	-0.1
AGUA				IAML		15 51 11.6	
	comp=Z,25nm,0.2s						
AGUA	**GUANDACOL**	**2.23**	**226**	*i* P	Pn	15 50 38.8	+0.7
AGUA				*e*S	S	15 51 08.9	-0.9
APLL	**PUNTA DE LOS L**	**2.46**	**177**	*i* P	Pn	15 50 42.0	+1.4
ACDV	**Cuesta del Vie**	**3.10**	**223**	*i* P	Pn	15 50 49.3	+1.3
ACDV				IAML		15 50 49.7	
	comp=Z,27nm,0.2s						
GO03	**Copiap**	**3.19**	**275**	*i* P	Pn	15 50 49.0	0.0
AROD	**Rodeo**	**3.32**	**227**	*i* P	Pn	15 50 52.4	+1.6
AROD				⇓*e*S	S	15 51 32.5	+0.1
ACCO	**Cerro Coronel**	**3.38**	**218**	*i* P	Pn	15 50 52.6	+1.0
ACCO				*i* S	S	15 51 33.6	-0.1
ACCO

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	44.92	261	P	P	16 30 42.7	-1.0
WR0	Warramunga Arr	45.23	266	P	P	16 30 44.3	-1.9
WR0				IAmb	IAmb	16 30 55.6	
	comp=Z,21nm,1.6s						
WRA	Warramunga Arr	45.42	266	P	P	16 30 45.9	-1.7
	comp=Z,1.8nm,0.4s,baz=102,slow=8.0,SNR=35						
WRA	Warramunga Arr	45.42	266	P	P	16 30 45.6	-2.0
FORT	Forrest	48.86	250	P	P	16 31 14.4	+0.2
FORT				IAmb	IAmb	16 31 32.0	
	comp=Z,17nm,0.8s						
HON	Honolulu	49.41	23	P	P	16 31 18.9	+0.5
KNRA	Kununurra	51.77	269	P	P	16 31 35.1	-1.2
FITZ	Fitzroy Crossi	53.83	265	P	P	16 31 50.9	-0.5
FITZ				IAmb	IAmb	16 31 57.4	
	comp=Z,21nm,1.6s						
MORW	Morawa	59.42	250	P	P	16 32 29.2	-1.8
CMAR	Chiang Mai Arr	92.78	289	P	P	16 35 41.2	+0.9
	comp=Z,0.7nm,0.8s,baz=108,slow=3.5,SNR=5.2						
CMAR	Chiang Mai Arr	92.78	289	P	P	16 35 40.7	+0.4
MKAR	Makanchi Array	115.13	312	PKP	PKPdf	16 41 07.8	-0.2
	comp=Z,0.4nm,0.7s,baz=144,slow=1.1,SNR=3.9						
MKAR	Makanchi Array	115.13	312		PKPdf	16 41 08.1	+0.1
HFS	Hagfors	144.09	351	PKP	PKPab	16 42 00.1	+0.4
	comp=Z,2.4nm,0.7s,baz=54,slow=2.6,SNR=8.3						
AKASG	Malin Array Be	147.47	329	PKPbc	PKPdf	16 42 09.6	+1.6
	comp=Z,1.1nm,0.5s,baz=41,slow=4.0,SNR=5.9						
AKASG	Malin Array Be	147.47	329		PKPdf	16 42 10.0	+2.0
BRTR	Keskin Array B	150.66	308	PKPbc	PKPbc	16 42 19.3	0.0
	comp=Z,0.8nm,0.6s,baz=145,slow=4.9,SNR=5.2						
BRTR				PKPab	PKPab	16 42 25.9	-0.6
	comp=Z,0.9nm,0.8s,baz=94,slow=3.9,SNR=4.3						
BRTR	Keskin Array B	150.66	308		PKPbc	16 42 19.4	+0.1
BRTR					PKPab	16 42 26.2	-0.3
CLL	Collm	152.65	347	ePKPbc	PKPbc	16 42 24.0	+0.8

*NEIC **16** 16:34:19.9±1.4, 12°.0S±0°.1×167°.15E±0°.08, h58km±6km, mb4.7/20, Error ellipse: s-maj=17.7km s-min=5.8km az=215.0*

*IDC **16** 16:34:20.6±5.8, 11°.97S×167°.15E, h62km±56km, mb3.8/11, mb1 4.0/12, mb1mx3.8/31, mbtmp4.1/12, ML3.9/1, MS3.8/15, Ms1 3.8/15, ms1mx3.6/25, Error ellipse: s-maj=36.7km s-min=23.8km az=149.0*

ISC 16 16:34:18.0±0.6, 11°.80S±0°.09×167°.1E±0°.1, h35km, n55, σ1°.09/44, mb4.5/19, MS3.8/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.23	183	ePn	Pn	16 36 46.3	+3.7
	75nm,1.1s						
DZM				eLR	LR	16 39 17.5	
	comp=Z,655nm,25.9s						
DZM	Mont Dzumac	10.23	183	P	Pn	16 36 43.2	+0.6
	1.1nm,0.3s,baz=35,slow=17,SNR=7.8						
DZM				LR	LR	16 40 03.3	
	comp=Z,519nm,19.6s,baz=28,slow=34						
DZM	Mont Dzumac	10.23	183		Pn	16 36 42.0	-0.6
KRVT	Keravat (AS076	16.63	295	LR	LR	16 45 16.1	
	comp=Z,173nm,18.2s,baz=122,slow=39						
PMG	Port Moresby	19.70	275	LR	LR	16 45 51.3	
	comp=Z,494nm,20.3s,baz=132,slow=35						
EIDS	Eidsvold	20.25	226	P	P	16 38 50.8	+0.3
EIDS				IAmb	IAmb	16 38 59.1	
	comp=Z,23nm,0.8s						
AFI	Afiamalu	20.74	98	LR	LR	16 45 16.8	
	comp=Z,179nm,19.7s,baz=293,slow=32						
CTA	Charters Tower	21.62	245	LR	LR	16 46 28.7	
	comp=Z,372nm,20.2s,baz=112,slow=34						
RAO	Raoul Island	22.31	143	LR	LR	16 45 48.0	
	comp=Z,144nm,21.6s,baz=177,slow=31						
ARMA	Armidale	23.41	215	P	P	16 39 24.5	+0.4
ARMA				IAmb	IAmb	16 39 37.4	
	comp=Z,37nm,1.4s						
JAY	Jayapura	27.69	287	LR	LR	16 52 17.4	
	comp=Z,213nm,19.0s,baz=64,slow=39						
URZ	Urewera	27.84	163	LR	LR	16 49 46.0	
	comp=Z,110nm,18.9s,baz=330,slow=34						
STKA	Stephens Creek	30.81	226	P	P	16 40 30.9	+0.2
	comp=Z,1.5nm,0.7s,baz=67,slow=13,SNR=2.5						
STKA				LR	LR	16 52 30.7	
	comp=Z,289nm,18.7s,baz=34,slow=35						
STKA	Stephens Creek	30.81	226	P	P	16 40 29.6	-1.1
WRA	Warramunga Arr	32.45	251	P	P	16 40 45.0	-0.3
	comp=Z,2.5nm,1.1s,baz=86,slow=8.2,SNR=4.9						
WRA	Warramunga Arr	32.45	251	P	P	16 40 44.0	-1.3
ASAR	Alice Springs	33.62	245	P	P	16 40 54.5	-1.0
	comp=Z,2.4nm,0.9s,baz=73,slow=9.3,SNR=16						
ASAR				LR	LR	16 53 16.4	
	comp=Z,227nm,21.5s,baz=87,slow=34						
ASAR	Alice Springs	33.62	245	P	P	16 40 53.6	-1.9
PPT	Papeete	42.27	103	LR	LR	16 56 44.1	
	comp=Z,105nm,18.7s,baz=280,slow=32						
PPT2	Papeete2	42.27	103	eS	S	16 48 28.1	+0.8
	comp=Z,57nm,25.5s						
PPT2				eLR	LR	16 53 57.0	
	comp=Z,360nm,28.0s						
TBI	Tubuai	42.86	112	eLR	LR	16 54 20.6	
	comp=Z,325nm,28.0s						
MJAR	Matsushiro Arr	55.23	332	P	P	16 43 48.7	+1.0
	comp=Z,1.4nm,0.8s,baz=209,slow=8.0,SNR=4.6						
MJAR	Matsushiro Arr	55.23	332	P	P	16 43 47.6	-0.1
USRK	Ussuriysk Ar.	64.19	333	P	P	16 44 51.3	+2.1
	comp=Z,3.5nm,0.9s,baz=134,slow=5.5,SNR=4.4						
USRK	Ussuriysk Ar.	64.19	333	P	P	16 44 50.5	+1.2
CMAR	Chiang Mai Arr	73.59	293	P	P	16 45 49.6	+1.4
	comp=Z,2.7nm,1.0s,baz=120,slow=4.4,SNR=16						
CMAR	Chiang Mai Arr	73.59	293	P	P	16 45 48.8	+0.6
CHTO	Chiang Mai	73.70	294	P	P	16 45 50.0	+1.7
QSPA	South Pole Qui	78.21	180	P	P	16 46 12.8	-1.2
QSPA				IAmb	IAmb	16 46 23.0	
	comp=Z,12nm,1.3s						
ANM	Nome	78.95	12	P	P	16 46 18.1	+0.4
ANM				IAmb	IAmb	16 46 30.2	
	comp=Z,15nm,1.3s						
BILL	Bilibino	79.63	360	P	P	16 46 22.0	+0.7
ULN	Ulaanbaatar	79.66	324	P	P	16 46 22.3	+0.2
SONM	Songino Array	80.03	323	P	P	16 46 23.9	-0.2
	comp=Z,1.6nm,1.1s,baz=128,slow=4.5,SNR=8.7						
SONM	Songino Array	80.03	323	P	P	16 46 22.2	-1.9
RDOG	Red Dog Mine	82.51	11	P	P	16 46 37.3	+0.6
ILAR	Eielson Array	83.82	18	P	P	16 46 42.8	-0.7
	comp=Z,0.4nm,0.6s,baz=246,slow=5.2,SNR=9.1						
ILAR	Eielson Array	83.82	18	P	P	16 46 42.3	-1.2
JIS	Juneau Island	84.41	27	P	P	16 46 45.0	-1.5
MAW	Mawson	84.51	202	LR	LR	17 17 28.8	
	comp=Z,65nm,21.1s,baz=240,slow=31						
WAKR	Walker	84.71	49	P	P	16 46 48.0	-0.9
WAKR				IAmb	IAmb	16 46 51.0	
	comp=Z,9.8nm,1.5s						
NVAR	Mina Array Bea	85.53	49	P	P	16 46 52.7	-0.3
	comp=Z,0.8nm,0.9s,baz=224,slow=8.3,SNR=4.0						
NVAR				LR	LR	17 19 54.9	
	comp=Z,126nm,18.0s,baz=301,slow=32						
NVAR	Mina Array Bea	85.53	49	P	P	16 46 52.1	-1.0
TIXI	Tiksi	87.07	349	P	P	16 46 59.1	-0.4
TIXI				IAmb	IAmb	16 47 00.7	
	comp=Z,7.3nm,1.1s						
LCMT	Little Creek M	88.95	52	P	P	16 47 08.7	-0.8
U15A	North Rim	89.53	53	P	P	16 47 12.1	-0.4
U15A				IAmb	IAmb	16 47 14.0	
	comp=Z,7.6nm,1.2s						
MTPU	Mount Pierson	90.03	51	P	P	16 47 14.8	0.0
PDAR	Pinedale Array	93.12	47	P	P	16 47 28.6	-0.2
	comp=Z,0.5nm,0.8s,baz=321,slow=1.9,SNR=4.1						
PDAR				LR	LR	17 24 16.7	
	comp=Z,34nm,18.3s,baz=288,slow=32						
PDAR	Pinedale Array	93.12	47	P	P	16 47 28.4	-0.5
MK31	Makanchi Array	94.94	317	P	P	16 47 36.9	0.0
MK31				IAmb	IAmb	16 47 38.3	
	comp=Z,3.9nm,1.2s						
MKAR	Makanchi Array	94.94	317	P	P	16 47 37.3	+0.4
	comp=Z,2.2nm,1.1s,baz=101,slow=6.5,SNR=9.6						
MKAR	Makanchi Array	94.94	317	P	P	16 47 36.8	-0.1
TXAR	Lajitas Array	95.06	61	LR	LR	17 20 59.5	
	comp=Z,23nm,22.0s,baz=0.0,slow=29						
MAKZ	Makanchi	95.16	317	P	P	16 47 38.1	+0.3
MAKZ				IAmb	IAmb	16 47 39.1	
	comp=Z,6.6nm,1.4s						
TORD	Torodi Ar. Bea	165.64	277	PKP	PKPdf	16 54 19.8	-0.3
	comp=Z,1.1nm,1.1s,baz=26,slow=3.7,SNR=5.4						
TORD	Torodi Ar. Bea	165.64	277		PKPdf	16 54 18.9	-1.2

*ISK **16** 16:38:55.6, 35°.43N×23°.36E, h27km, ML3.5/6*

*ATH **16** 16:38:55.6, 35°.47N×23°.43E, h42km±1km, ML2.9/7, Error ellipse: s-maj=2.6km s-min=1.0km az=223.0*

*THE **16** 16:38:56.9, 35°.42N×23°.40E, h37km±2km, ML2.7/7, Error ellipse: s-maj=2.5km s-min=1.0km az=77.0*

ISC 16 16:38:56.5±1.2, 35°.45N±0°.03×23°.45E±0°.04, h30km±10km, n43, σ0°.80/66, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RODP	Rodopos	0.27	66	P	Pn	16 39 04.5	0.0
RODP				S	Sn	16 39 11.4	+1.7
	460nm,0.5s						
RODP	Rodopos	0.27	66	PG	Pn	16 39 04.4	0.0
RODP				SG	Sn	16 39 10.5	+0.8
KNDR	Palaiochora Ch	0.29	138	P	Pb	16 39 03.3	-0.5
KNDR				S	Sn	16 39 10.0	0.0
	1µm,0.5s						
KNDR	Palaiochora Ch	0.29	138	PG	Pb	16 39 03.3	-0.5
KNDR				SG	Sn	16 39 08.7	-1.3
IMMV	Iera Moni Meta	0.43	88	P	Pn	16 39 06.3	-0.4
IMMV				S	Sn	16 39 14.5	+1.0
	2µm,0.7s						
IMMV	Iera Moni Meta	0.43	88	P	Pn	16 39 06.2	-0.4
IMMV				S	Sn	16 39 14.3	+0.7
IMMV				AML	AML	16 39 15.5	
	comp=E,3203µm,0.6s						
IMMV				AML	AML	16 39 16.0	
	comp=N,5065µm,0.8s						
IMMV	Iera Moni Meta	0.43	88	PG	Pn	16 39 06.3	-0.4
IMMV				SG	Sn	16 39 14.6	+1.0
CHAN	Chania	0.49	82	P	Pn	16 39 07.3	-0.1
CHAN				S	Sn	16 39 16.1	+1.2
	comp=N,432nm,0.5s						
VAM	Vamos	0.61	94	P	Pn	16 39 09.1	-0.1
VAM				S	Sn	16 39 18.4	+0.4
	comp=N,935nm,0.6s						
VAM	Vamos	0.61	94	P	Pn	16 39 09.3	+0.1
VAM				S	Sn	16 39 18.9	+0.9
VAM				AML	AML	16 39 24.4	
	comp=E,1934µm,0.6s						
VAM				AML	AML	16 39 26.3	
	comp=N,1855µm,0.5s						
GVDS	Gavdos	0.80	139	P	Pb	16 39 11.0	-0.9
GVDS				S	Sn	16 39 22.3	-0.3
	comp=N,790nm,0.5s						
GVDS	Gavdos	0.80	139	PG	Pn	16 39 11.5	-0.2
GVDS				SG	Sn	16 39 23.8	+1.2
GVD	Gavdhos	0.80	139	P	Pn	16 39 11.3	-0.4
GVD				S	Sn	16 39 23.0	+0.3
	comp=N,700nm,0.4s						
GVD	Gavdhos	0.80	139	P	Pn	16 39 11.3	-0.4
GVD				S	Sn	16 39 23.9	+1.2
GVD				AML	AML	16 39 33.3	
	comp=E,1290µm,0.4s						
GVD				AML	AML	16 39 34.0	
	comp=N,1469µm,0.4s						
GVD	Gavdhos	0.80	139	PG	Pn	16 39 11.6	-0.2
KTHA	Kythira Island	0.86	339	P	Pb	16 39 12.7	-0.3
KTHA	Kythira Island	0.86	339	P	Pb	16 39 12.7	-0.3
KTHA				S	Sn	16 39 24.6	+0.3
KTHA				AML	AML	16 39 28.1	
	comp=N,1892µm,0.5s						
KTHA				AML	AML	16 39 30.4	
	comp=E,3609µm,0.4s						
KTHA	Kythira Island	0.86	339	PG	Pb	16 39 12.7	-0.3
KTHR	Kythira	0.89	336	P	Pb	16 39 12.6	-0.7
IDI	Anoyia	1.19	97	P	Pb	16 39 17.6	-0.8
IDI				S	Sb	16 39 34.4	+0.9
IDI				AML	AML	16 39 39.2	
	comp=N,397µm,0.5s						
IDI				AML	AML	16 39 43.7	
	comp=E,266µm,0.7s						
IDI	Anoyia	1.19	97	PN	Pb	16 39 17.8	-0.6
SIVA	Sivas	1.19	111	P	Pb	16 39 17.9	-0.6
VLI	Veliai	1.33	342	P	Pn	16 39 19.2	+0.1
VLI				S	Sn	16 39 35.5	-0.2
VLI				AML	AML	16 39 42.7	
	comp=N,476µm,0.5s						
VLI				AML	AML	16 39 44.4	
	comp=E,477µm,0.4s						
MHLO	Agia Marina, M	1.46	32	P	Pn	16 39 20.5	-0.2
MHLO				S	Sn	16 39 38.6	-0.2
MHLO				AML	AML	16 39 42.5	
	comp=E,1589µm,0.7s						
MHLO				AML	AML	16 39 54.9	
	comp=N,1704µm,0.6s						
LAST	Lasithi	1.68	99	P	Pn	16 39 24.8	+0.9
NPS	Neapolis	1.78	95	P	Pn	16 39 25.9	+0.8
SANT	Santorini	1.87	60	P	Pn	16 39 26.4	-0.1
SANT	Santorini	1.87	60	PN	Pb	16 39 27.9	-2.1
THT2	Imerovigli	1.88	58	PN	Pb	16 39 27.8	-2.3
SERI	Serifos	1.90	26	P	Pn	16 39 26.1	-0.8
SERI				S	Sn	16 39 49.8	0.0
KRND	KRANIDI	1.94	353	P	Pn	16 39 28.4	+0.9
IOSP	Ios island	1.96	49	P	Pn	16 39 27.2	-0.4
IOSP				S	Sn	16 39 51.8	+0.6
DID	Didima	2.06	355	P	Pn	16 39 28.8	-0.2
DID				S	Sn	16 39 54.0	+0.2
ITM	Ithomi	2.12	325	PN	Pn	16 39 29.2	-0.7
ZKR	Zakros	2.29	98	P	Pn	16 39 32.3	+0.1
ZKR	Zakros	2.29	98	PN	Pn	16 39 33.1	+0.9
APE	Apeiranthos	2.33	46	P	Pn	16 39 32.4	-0.5
APE				S	Sn	16 40 01.0	+0.5
APE	Apeiranthos	2.33	46	PN	Pn	16 39 34.0	+1.2
AMGA	Amorgos Island	2.41	54	P	Pn	16 39 33.3	-0.6
AMGA				S	Sn	16 40 03.8	+1.4
KLV	Kalavryta, Ach	2.79	338	P	Pn	16 39 39.9	+0.7
KARP	Karpathos	3.03	87	P	Pn	16 39 42.3	-0.1
KARP	Karpathos	3.03	87	PN	Pn	16 39 43.4	+1.0
AGG	Agios Georgios	3.68	346	PN	Pn	16 39 52.3	+1.0

IDC 16 17:04:55.5±2.2, 12°.92N×144°.45E, h115km±120km, mb3.2/3, mb1 3.4/3, mb1mx3.0/34, mbtmp3.6/3, Error ellipse: s-maj=232.3km s-min=139.2km az=178.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	0.78	31	P	Pn	17 05 15.6	+0.6
	200nm,0.3s,baz=184,slow=5.7,SNR=157						
GUMO				S	Sn	17 05 30.7	+0.9
	239nm,0.3s,baz=4.1,slow=22,SNR=52						
WRA	Warramunga Arr	34.14	197	P	P	17 11 29.5	-0.1
	0.6nm,0.5s,baz=19,slow=9.4,SNR=5.4						
ASAR	Alice Springs	37.79	196	P	P	17 12 00.6	-0.2
	0.3nm,0.5s,baz=19,slow=12,SNR=9.1						
STKA	Stephens Creek	44.62	183	P	P	17 12 56.3	-0.2
	0.7nm,0.4s,baz=1.5,slow=8.3,SNR=3.8						

ISC 16 17:05:32.1±2.2, 51°.42N±0°.09×16°.19E±0°.07, h0km, n12, σ0°.58/23, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.58	174	ePg	Pg	17 05 43.0	+0.4
KSP				eSg	Sg	17 05 51.8	+1.2
CHVC	Chvalec	0.83	186	ePg	Pg	17 05 48.0	-0.1
CHVC				eSG	Sg	17 05 58.8	0.0
OSTC	Ostas	0.86	179	ePG	Pg	17 05 48.7	+0.1
OSTC				eSG	Sg	17 06 00.7	+1.0
UPC	Upice	0.92	187	ePG	Pg	17 05 49.7	0.0
UPC				eSG	Sg	17 06 00.9	-0.6
	comp=Z,6.6nm,0.4s						
DPC	Dobruska-Polom	1.07	176	ePg	Pg	17 05 52.1	-0.5
DPC				eSG	Sg	17 06 06.6	+0.2
	comp=Z,4.0nm,0.5s						
PVCC	Panska Ves	1.36	230	ePG	Pg	17 05 57.8	-0.3
PVCC				eSG	Sn	17 06 16.6	-0.4
	comp=Z,15nm,0.4s						
KRLC	Kraliky	1.39	164	ePG	Pn	17 05 57.7	-1.2
KRLC				eSG	Sg	17 06 16.4	-0.4
	comp=Z,4.1nm,0.4s						
BRG	Berggiesshubel	1.52	250	PG	Pg	17 06 00.5	0.0
BRG				SG	Sg	17 06 20.3	-0.5
	8.6nm,0.4s						
PRU	Pruhonice	1.77	217	ePG	Pn	17 06 04.5	+0.5
PRU				eSG	Sg	17 06 29.2	+0.2
CLL	Collm	2.00	268	ePg	Pn	17 06 08.0	+0.8
CLL				eSg	Sg	17 06 36.0	-0.4
NKC	Novy Kostel	2.65	245	eSG	Sg	17 06 57.3	0.0
KHC	Kasperske Hory	2.84	217	ePG	Pb	17 06 24.0	+0.4
KHC				eSG	Sg	17 07 02.7	-0.5

*NAO **16** 17:09:31.2±1.4, 59°.51N×1°.47E, ML2.1*

*BGS **16** 17:09:33.4±0.8, 59°.48N×1°.50E, h8km±5km, ML2.8*

*BER **16** 17:09:34.4±1.1, 59°.52N×1°.42E, h13km±5km, ML2.4, ML2.8(BGS), Confirmed Earthquake*

ISC 16 17:09:31.4±0.9, 59°.55N±0°.04×1°.44E±0°.03, h10km, n75, σ1°.76/122, North Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAN1	Sandwick	1.44	290	eP	Pg	17 10 06.6	+7.7
SAN1	Sandwick	1.44	290	eP	Pg	17 10 06.6	+7.7
LRW	Lerwick	1.45	295	eP	Pb	17 09 58.8	+0.4
LRW				eS	Sb	17 10 17.5	+0.7
LRW				IAML		17 10 18.8	
	comp=E,215nm,0.2s						
LRW				IAML		17 10 18.8	
	comp=N,196nm,0.2s						
LRW	Lerwick	1.45	295	eP	Pb	17 09 58.8	+0.4
LRW				eS	Sb	17 10 17.5	+0.7
LRW				IAML		17 10 18.8	
	comp=E,215nm,0.2s						
LRW				IAML		17 10 18.8	
	comp=N,196nm,0.2s						
LRW	Lerwick	1.45	295	eP	Pb	17 09 58.8	+0.4
LRW				eS	Sb	17 10 17.5	+0.7
LRW				IAML		17 10 18.8	
	comp=E,215nm,0.2s						
LRW				IAML		17 10 18.8	
	comp=N,196nm,0.2s						
YEL1	Yell	1.62	310	eP	Pg	17 10 10.0	+7.6
YEL1	Yell	1.62	310	eP	Pg	17 10 10.0	+7.6
KMY	Karmoy	1.98	98	eP	Pn	17 10 06.1	+1.3
KMY				eS	Sn	17 10 30.1	+0.5
KMY				IAML		17 10 40.7	
	comp=Z,40nm,0.2s						
ASK	Askoy	2.11	62	eP	Pn	17 10 07.4	+0.8
ASK				eS	Sn	17 10 31.6	-1.2
ASK				IAML		17 10 44.2	
	comp=Z,58nm,0.3s						
BER	Bergen	2.13	65	Pn	Pn	17 10 07.7	+0.7
BER				Sn	Sn	17 10 32.2	-1.3
BER	Bergen	2.13	65	eP	Pn	17 10 07.3	+0.4
BER				eS	Sn	17 10 32.1	-1.3
BER				IAML		17 10 35.0	
	comp=E,14nm,0.1s						
BER				IAML		17 10 41.9	
	comp=N,16nm,0.3s						
BER	Bergen	2.13	65	eP	Pn	17 10 07.3	+0.4
BER				eS	Sn	17 10 32.1	-1.3
BER				IAML		17 10 35.0	
	comp=E,14nm,0.1s						
BER				IAML		17 10 41.9	
	comp=N,16nm,0.3s						
BER	Bergen	2.13	65	eP	Pn	17 10 07.3	+0.4
BER				eS	Sn	17 10 32.1	-1.3
BER				IAML		17 10 44.8	
	comp=Z,44nm,0.2s						
BLS5	Blasjo	2.56	91	eP	Pn	17 10 14.3	+1.4
BLS5				eS	Sn	17 10 43.4	-0.7
BLS5				IAML		17 11 01.6	
	comp=Z,30nm,0.7s						
ODD1	Odda	2.65	80	eP	Pn	17 10 15.2	+1.1
ODD1				eS	Sn	17 10 45.4	-1.0
ODD1				IAML		17 10 58.1	
	comp=Z,21nm,0.2s						
FOO	Floro	2.72	39	Pn	Pn	17 10 16.2	+1.1
FOO				Sn	Sn	17 10 47.6	-0.3
FOO	Floro	2.72	39	eP	Pn	17 10 15.9	+0.9
FOO				eS	Sn	17 10 47.7	-0.3
FOO				IAML		17 10 48.8	
	comp=E,16nm,0.2s						
FOO				IAML		17 10 48.9	
	comp=N,16nm,0.4s						
FOO	Floro	2.72	39	eP	Pn	17 10 15.9	+0.9
FOO				eS	Sn	17 10 47.7	-0.3
FOO				IAML		17 10 48.8	
	comp=E,16nm,0.2s						
FOO				IAML		17 10 48.9	
	comp=N,16nm,0.4s						
FOO	Floro	2.72	39	eP	Pn	17 10 15.9	+0.9
FOO				eS	Sn	17 10 47.7	-0.3
FOO				IAML		17 10 49.2	
	comp=Z,57nm,0.3s						
HYA	Hoyanger	2.86	53	eP	Pn	17 10 18.1	+1.1
HYA				eS	Sn	17 10 50.5	-1.0
HYA				IAML		17 10 54.7	
	comp=Z,22nm,0.2s						
BIGH	Upper Bighouse	2.96	251	eP	Pn	17 10 19.3	+0.9
BIGH				eS	Sn	17 10 52.0	-1.9
BIGH				IAML		17 10 53.2	
	comp=E,29nm,0.1s						
BIGH				IAML		17 10 54.9	
	comp=N,39nm,0.2s						
BIGH	Upper Bighouse	2.96	251	eP	Pn	17 10 19.3	+0.9
BIGH				eS	Sn	17 10 52.0	-1.9
BIGH				IAML		17 10 53.2	
	comp=E,29nm,0.1s						
BIGH				IAML		17 10 54.9	
	comp=N,39nm,0.2s						
BIGH	Upper Bighouse	2.96	251	eP	Pn	17 10 19.3	+0.9
BIGH				eS	Sn	17 10 52.0	-1.9
BIGH				IAML		17 10 53.2	
	comp=E,29nm,0.1s						
BIGH				IAML		17 10 54.9	
	comp=N,39nm,0.2s						
MCD	Coleburn Disti	3.15	233	eP	Pn	17 10 21.5	+0.5
MCD				eS	Sn	17 10 56.3	-2.3
MCD				IAML		17 10 57.4	
	comp=N,58nm,0.2s						
MCD				IAML		17 11 15.3	
	comp=E,44nm,0.5s						
MCD	Coleburn Disti	3.15	233	eP	Pn	17 10 21.5	+0.5
MCD				eS	Sn	17 10 56.3	-2.3
MCD				IAML		17 10 57.4	
	comp=N,58nm,0.2s						
MCD				IAML		17 11 15.3	
	comp=E,44nm,0.5s						
MCD	Coleburn Disti	3.15	233	eP	Pn	17 10 21.5	+0.5
MCD				eS	Sn	17 10 56.3	-2.3
MCD				IAML		17 10 57.4	
	comp=N,58nm,0.2s						
MCD				IAML		17 11 15.3	
	comp=E,44nm,0.5s						
SNART	Snartemo	3.22	110	eP	Pn	17 10 23.9	+1.9
SNART				eS	Sn	17 10 59.4	-1.0
SNART				IAML		17 11 21.0	
	comp=Z,21nm,0.3s						
DRUM	Mains of Drumt	3.36	220	eP	Pn	17 10 24.4	+0.5
DRUM				eS	Sn	17 11 01.4	-2.4
DRUM				IAML		17 11 04.4	
	comp=E,54nm,0.4s						
DRUM				IAML		17 11 04.8	
	comp=N,61nm,0.5s						
DRUM	Mains of Drumt	3.36	220	eP	Pn	17 10 24.4	+0.5
DRUM				eS	Sn	17 11 01.4	-2.4
DRUM				IAML		17 11 04.4	
	comp=E,54nm,0.4s						
DRUM				IAML		17 11 04.8	
	comp=N,61nm,0.5s						
DRUM	Mains of Drumt	3.36	220	eP	Pn	17 10 24.4	+0.5
DRUM				eS	Sn	17 11 01.4	-2.4
DRUM				IAML		17 11 04.4	
	comp=E,54nm,0.4s						
DRUM				IAML		17 11 04.8	
	comp=N,61nm,0.5s						
SKAR	Skarslia	3.62	69	eP	Pn	17 10 28.8	+1.3
SKAR				eS	Sn	17 11 08.5	-1.7
SKAR				IAML		17 11 26.9	
	comp=Z,16nm,0.5s						
AKN	Aaknes	3.79	43	Pn	Pn	17 10 31.7	+1.9
AKN				Sn	Sn	17 11 13.2	-1.1
AKN	Aaknes	3.79	43	Pn	Pn	17 10 31.7	+1.9
AKN				Sn	Sn	17 11 13.2	-1.1
EDU	Dundee	3.83	220	eP	Pn	17 10 30.7	+0.4
EDU	Dundee	3.83	220	eP	Pn	17 10 30.7	+0.4
EDU	Dundee	3.83	220	eP	Pn	17 10 30.7	+0.4
KAC	Achnashellach	4.09	243	eP	Pn	17 10 33.9	0.0
KAC	Achnashellach	4.09	243	eP	Pn	17 10 33.9	0.0
KAC	Achnashellach	4.09	243	eP	Pn	17 10 33.9	0.0
KONO	Kongsberg	4.15	85	eP	Pn	17 10 36.5	+1.8
KONO				eS	Sn	17 11 21.2	-1.9
KONO				IAML		17 11 58.7	
	comp=Z,6.9nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ESY	Stoneypath	4.24	213	eP	Pn	17 10 36.1	+0.1
ESY	Stoneypath	4.24	213	eP	Pn	17 10 36.1	+0.1
ESY	Stoneypath	4.24	213	eP	Pn	17 10 36.1	+0.1
MOL	Molde	4.24	42	Pn	Pn	17 10 37.9	+2.0
MOL				Sn	Sn	17 11 24.6	-0.9
MOL	Molde	4.24	42	eP	Pn	17 10 38.0	+2.0
MOL	Molde	4.24	42	eP	Pn	17 10 38.0	+2.0
MOL	Molde	4.24	42	eP	Pn	17 10 38.0	+2.0
MOL				eS	Sn	17 11 24.7	-0.8
MOL				IAML		17 11 26.2	
	comp=Z,11nm,0.5s						
INVG	Invergeldie, C	4.28	225	eP	Pn	17 10 36.5	+0.1
INVG				IAML		17 11 23.8	
	comp=N,14nm,0.3s						
INVG				IAML		17 11 28.7	
	comp=E,12nm,0.2s						
INVG	Invergeldie, C	4.28	225	eP	Pn	17 10 36.5	+0.1
INVG				IAML		17 11 23.8	
	comp=N,14nm,0.3s						
INVG				IAML		17 11 28.7	
	comp=E,12nm,0.2s						
INVG	Invergeldie, C	4.28	225	eP	Pn	17 10 36.5	+0.1
INVG				IAML		17 11 23.8	
	comp=N,14nm,0.3s						
INVG				IAML		17 11 28.7	
	comp=E,12nm,0.2s						
KPL	Plockton	4.33	242	eP	Pn	17 10 37.3	+0.1
KPL				IAML		17 11 26.6	
	comp=N,10nm,0.2s						
KPL				IAML		17 11 27.5	
	comp=E,8.5nm,0.3s						
KPL	Plockton	4.33	242	eP	Pn	17 10 37.3	+0.1
KPL				IAML		17 11 26.6	
	comp=N,10nm,0.2s						
KPL				IAML		17 11 27.5	
	comp=E,8.5nm,0.3s						
KPL	Plockton	4.33	242	eP	Pn	17 10 37.3	+0.1
KPL				eS	Sn	17 11 23.8	-3.9
KPL				IAML		17 11 26.6	
	comp=N,10nm,0.2s						
KPL				IAML		17 11 27.5	
	comp=E,8.5nm,0.3s						
EDI	Edinburgh	4.40	216	eP	Pn	17 10 38.7	+0.6
EDI				eS	Sn	17 11 26.7	-2.6
DOMB	Dombas	4.50	53	eP	Pn	17 10 41.6	+2.1
DOMB				IAML		17 11 34.8	
	comp=Z,8.9nm,0.2s						
NBO00	NORSAR Array S	4.88	68	eP	Pn	17 10 46.2	+1.4
NBO00				eS	Sn	17 11 38.5	-2.7
NBO00				IAML		17 11 46.4	
	comp=Z,6.1nm,0.2s						
NAO01	NORSAR Array S	4.89	70	eP	Pn	17 10 46.2	+1.4
NAO01				eS	Sn	17 11 38.7	-2.8
NAO01				IAML		17 12 24.0	
	comp=Z,10nm,0.6s						
EKA	Eskdalemuir Ar	4.90	212	Pn	Pn	17 10 45.1	+0.1
EKA				Sn	Sn	17 11 38.4	-3.4
EKA	Eskdalemuir Ar	4.90	212	Pn	Pn	17 10 45.1	+0.1
EKA				Sn	Sn	17 11 38.4	-3.4
ESK	Eskdalemuir	4.93	213	eP	Pn	17 10 45.8	+0.4
ESK	Eskdalemuir	4.93	213	eP	Pn	17 10 45.8	+0.4
ESK	Eskdalemuir	4.93	213	eP	Pn	17 10 45.8	+0.4
NC204	NORSAR Array S	4.94	65	eP	Pn	17 10 46.5	+1.0
NC204				eS	Sn	17 11 39.7	-3.0
NC204				IAML		17 11 43.7	
	comp=Z,7.9nm,0.2s						
STRU	Stroemstad	5.02	92	iP	Pn	17 10 46.9	+0.2
STRU				eP	Pn	17 10 47.0	+0.3
STRU				eS	Sn	17 11 40.9	-3.7
NB2	NORSAR Subarra	5.09	69	Pn	Pn	17 10 49.1	+1.5
	baz=260,slow=14						
NB2				Sn	Sn	17 11 43.3	-3.1
	baz=260,slow=22						
NB2				Lg	Lg	17 12 11.9	
	baz=254,slow=37						
NB2	NORSAR Subarra	5.09	69	Pn	Pn	17 10 49.1	+1.5
	baz=260,slow=14						
NB2				Sn	Sn	17 11 43.3	-3.1
	baz=260,slow=22						
NB201	NORSAR Array S	5.13	69	eP	Pn	17 10 49.1	+1.0
NB201				eS	Sn	17 11 44.1	-3.3
NB201				IAML		17 11 55.6	
	comp=Z,6.0nm,0.5s						
NC602	NORSAR Array S	5.19	72	eP	Pn	17 10 50.1	+1.1
NC602				eS	Sn	17 11 45.1	-3.6
NRA0	NORESS Array S	5.19	72	Pn	Pn	17 10 49.9	+0.9
	baz=260,slow=12						
NRA0				Sn	Sn	17 11 45.7	-3.1
	baz=259,slow=22						
NRA0				Lg	Lg	17 12 15.7	
	baz=267,slow=28						
NRA0	NORESS Array S	5.19	72	Pn	Pn	17 10 49.9	+0.9
	baz=260,slow=12						
NRA0				Sn	Sn	17 11 45.7	-3.1
	baz=259,slow=22						
NC303	NORSAR Array S	5.20	67	eP	Pn	17 10 50.4	+1.2
NC303				eS	Sn	17 11 45.4	-3.8
NC303				IAML		17 12 31.5	
	comp=Z,9.0nm,0.7s						
HFS	Hagfors	6.21	79	Pn	Pn	17 11 03.3	+0.4
	baz=261,slow=14						
HFS				Sn	Sn	17 12 09.2	-4.6
	baz=266,slow=22						
HFS	Hagfors	6.21	79	Pn	Pn	17 11 03.3	+0.4
	baz=261,slow=14						
HFS				Sn	Sn	17 12 09.2	-4.6
	baz=266,slow=22						
BORU	Boraas	6.22	103	eP	Pn	17 11 05.4	+2.2
DEL	Delary	7.29	110	eP	Pn	17 11 22.4	+4.6
DEL				eS	Sn	17 12 42.9	+2.5

*IDC **16** 17:39:04.4±1.2,28.°36N×51.°62E, h0km, mb3.7/6, mb1 3.8/8, mb1mx3.5/38, mbtmp3.5/38, ML3.4/2, Error ellipse: s-maj=30.2km s-min=24.2km az=10.0*
*TEH **16** 17:39:08.1,28.°50N×51.°58E, h19km, ML3.4*
*DSN **16** 17:39:10.5±1.1,28.°47N×52.°04E, h10km, ML3.9/7, Error ellipse: s-maj=22.5km s-min=7.4km az=18.0*
*OMAN **16** 17:39:13.6±1.9,27.°93N×51.°61E, h34km, ml3.5/7, Error ellipse: s-maj=56.2km s-min=10.0km az=111.0*
ISC 16 17:39:07.7±0.7,28.°31N±0.°05×51.°55E±0.°06, h24km, n46, σ1.42/58, mb3.8/6, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	Kazeroun	1.49	10	ePg	Pn	17 39 32.7	-0.6
IKAZ				e		17 39 55.6	
SHI	Shiraz	1.57	32	ePg	Pn	17 39 34.5	+0.2
SHI				eSg	Sb	17 39 55.5	-0.3
SHI				e		17 39 57.0	
LMD1	Lamerd	1.73	124	ePn	Pb	17 39 40.9	+2.1
LMD1				e		17 40 15.1	
ISRV	Sarvestan	1.74	52	ePg	Pn	17 39 37.5	+0.8
ISRV				e		17 40 04.3	
JHRM	Jahrom	1.80	83	ePn	Pb	17 39 40.1	+0.1
JHRM				e		17 40 14.0	
KLNJ	Kolanjah	2.69	1	ePn	Pn	17 39 50.1	+0.1
JHBN	Jahan bin	3.98	349	ePn	Pn	17 40 08.0	+0.4
ISAD	Sadrabad	4.04	27	ePn	Pn	17 40 09.4	+1.0
IMEH	Mehriz	4.06	40	ePn	Pn	17 40 09.8	+1.2
IPIR	Pirpir	4.40	353	ePn	Pn	17 40 12.5	-0.8
IZEF	Zefreh	4.62	8	ePn	Pn	17 40 16.6	+0.3
ICHK	Chekchek	4.63	32	ePn	Pn	17 40 17.3	+0.8
SHME	Shamm	4.67	118	P	Pn	17 40 17.3	+0.5
SHME				S	Sn	17 41 09.3	-0.9
NGRK	Negar Kerman	4.73	72	ePn	Pn	17 40 18.8	+0.9
NGRK				e		17 41 16.9	
NIAN	Nian	4.74	98	ePn	Pn	17 40 18.4	+0.7
NIAN				e		17 41 22.8	
KHGB	Koh Gabri	4.77	63	ePn	Pn	17 40 18.8	+0.5
KHGB				e		17 41 16.3	
IBAF	Bafgh	4.78	46	ePn	Pn	17 40 19.6	+1.2
BANOM	Banah	4.85	118	iP	Pn	17 40 20.2	+0.9
	SNR=29						
BANOM	Banah	4.85	118	P	Pn	17 40 20.3	+0.9
	SNR=29						
BANOM				S	Sn	17 41 14.2	-0.7
NAZ	Nazwa, Dubai	4.95	131	P	Pn	17 40 22.5	+1.9
NAZ	Nazwa, Dubai	4.95	131	P	Pn	17 40 23.0	+2.4
ASUD	Al Ashush, Dub	4.99	136	P	Pn	17 40 23.9	+2.7
MSFE	Esma-Masafi	5.06	124	iP	Pn	17 40 22.9	+0.8
	SNR=11						
MDH	Madha	5.20	124	P	Pn	17 40 25.0	+1.0
MDH				S	Sn	17 41 21.7	-1.5
UOSS	Minazif	5.34	128	iP	Pn	17 40 26.7	+0.7
	SNR=7.4						
HATD	Hatta, Dubai	5.37	129	P	Pn	17 40 27.7	+1.2
HATD	Hatta, Dubai	5.37	129	P	Pn	17 40 28.3	+1.8
ASHO	Ashiyiah	5.42	131	iP	Pn	17 40 28.2	+1.1
	SNR=17						
ASHO	Ashiyiah	5.42	131	P	Pn	17 40 28.6	+1.6
	SNR=17						
SOHO	SOHO	6.11	132	P	Pn	17 40 37.3	+0.7
HOQ	Hoqain	7.00	131	P	Pn	17 40 49.1	+0.2
	SNR=7.3						
HOQ				S	Sn	17 42 07.1	-0.7
SMDO	Samad	7.85	130	P	Pn	17 41 02.4	+1.7
SMDO				S	Sn	17 42 27.2	-1.7
WSAR	Wadi Sarin	8.14	127	Pn	Pn	17 41 04.8	+0.4
	1.1nm,0.3s,baz=322,slow=8.3,SNR=22						
WSAR				Sn	Sn	17 42 31.1	-4.6
	0.6nm,0.3s,baz=155,slow=5.9,SNR=4.7						
WSAR	Wadi Sarin	8.14	127	P	Pn	17 41 04.8	+0.4
	SNR=26						
WSAR				S	Sn	17 42 33.2	-2.5
WBK	Wadi Bani Khal	8.78	129	P	Pn	17 41 13.3	0.0
	SNR=15						
WBK				S	Sn	17 42 50.7	-0.8
MHTO	MHTO	9.34	140	P	Pn	17 41 21.7	+0.9
MHTO				S	Sn	17 43 03.3	-1.9
WHFO	Wadi Hawf	10.54	168	P	Pn	17 41 37.7	+0.3
	SNR=24						
WHFO				S	Sn	17 43 32.3	-2.5
DMTO	DMTO	11.00	163	P	Pn	17 41 43.6	0.0
	SNR=18						
ABTO	Aybut	11.02	171	P	Pn	17 41 44.2	+0.2
ABTO				S	Sn	17 43 42.4	-4.2
BRTR	Keskin Array B	18.67	312	P	Pn	17 43 24.6	-0.1
	0.1nm,0.3s,baz=136,slow=11,SNR=4.6						
MKAR	Makanchi Array	30.29	44	P	P	17 45 17.0	-0.1
	0.1nm,0.4s,baz=230,slow=4.7,SNR=3.1						
ZALV	Zalesovo Beam	35.28	34	P	P	17 46 00.1	-0.4
	0.5nm,0.4s,baz=225,slow=14,SNR=2.9						
FINES	FINESS Array B	37.23	340	P	P	17 46 16.6	-0.4
	0.9nm,0.5s,baz=145,slow=10,SNR=5.9						
TORD	Torodi Ar. Bea	48.67	263	P	P	17 47 51.3	+1.0
	0.8nm,0.8s,baz=54,slow=8.0,SNR=4.4						
YKA	Yellowknife Ar	88.83	354	P	P	17 52 00.0	+0.6
	0.2nm,0.5s,baz=8.6,slow=4.8,SNR=6.6						
ASAR	Alice Springs	94.63	114	P	P	17 52 26.4	-0.6
	0.6nm,1.0s,baz=304,slow=4.8,SNR=5.6						

*IDC **16** 17:47:28.5±0.5,31.°92N×90.°41E, h0km, mb4.5/22, mb1 4.6/23, mb1mx4.5/23, mbtmp4.5/23, ML3.9/1, MS4.2/35, Ms1 4.2/35, ms1mx4.1/39, Error ellipse: s-maj=18.4km s-min=12.0km az=38.0*
*BJI **16** 17:47:29.7±0.0,31.°86N×90.°37E, h10km, mB5.0/46, mb4.8/66, ML5.2/3, Ms4.9/78, Ms7 4.7/67*
*MOS **16** 17:47:31.7±1.2,31.°92N×90.°39E, h32km, mb4.9/26, MS4.6/9, Error ellipse: s-maj=8.0km s-min=4.7km az=116.3*
*GCMT **16** 17:47:33.0±0.2,31.°86N±0.°01×90.°38E±0.°01, h27km, MW5.1/114, Moment Tensor Solution. s51,c63; s114,c187; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.70±.13; $M_{\theta\theta}$-4.08±.11; $M_{\phi\phi}$4.78±.11; $M_{r\theta}$0.69±.21; $M_{\theta\phi}$1.76±.09; $M_{\phi r}$0.34±.19; Best double couple: M_o4.83600×10^{16} NP1:ϕ_s326.00000°,δ80.00000°, λ-177.00000°. NP2:ϕ_s235.00000°,δ87.00000°, λ-10.00000°. Principal axes: T 5.1550, Plg5.0000°, Azm281.0000°; N -0.6360, Plg80.0000°, Azm37.0000°; P -4.5160, Plg9.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **16** 17:47:35.0±1.7,31.°87N±0.°07×90.°3E±0.°1, h46km±4km, mb4.8/65 Error ellipse: s-maj=15.2km s-min=10.4km az=88.0*
*NDI **16** 17:47:37.4±4.5,31.°67N×90.°12E, h66km±48km, mb5.0, mb4.8(NEIC)*
ISC 16 17:47:34.0±0.3,31.°92N±0.°04×90.°37E±0.°03, h35km, n291, σ2.04/294, mb4.7/87, MS4.3/49, 18C-22D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	2.31	163	Pg	Pn	17 48 12.9	+2.9
LSA				Sg	Sn	17 48 44.8	+7.4
LSA				smax	smax		
	comp=N,12μm,0.7s						
LSA				smax	smax		
	comp=E,12μm,1.1s						
GTK	Tadong	4.83	199	eP	Pn	17 48 46.2	+1.8
GTK				i x	x	17 49 00.8	
TAPN	Taplejung	5.11	208	eP	Pn	17 48 49.3	+1.0
	2μm,1.2s						
GUN	Gumba	5.58	225	eP	Pn	17 48 56.1	+1.3
JIRN	Jiri	5.58	222	eP	Pn	17 48 56.2	+1.3
ODAN	Odare	5.67	208	eP	Pn	17 48 56.5	+0.5
	323nm,0.8s						
RAMN	Ramite	5.94	215	eP	Pn	17 49 00.2	+0.5
	368nm,0.5s						
KKN	Kakani	6.04	228	eP	Pn	17 49 01.9	+0.9
	234nm,0.7s						
PKI	Pulchoki	6.11	226	eP	Pn	17 49 03.9	+1.8
	40nm,0.8s						
PKIN	Phulchoki	6.11	226	eP	Pn	17 49 02.7	+0.6
DMN	Daman	6.27	228	eP	Pn	17 49 05.3	+1.0
	2μm,1.6s						
GKN	Gorkha	6.32	233	eP	Pn	17 49 05.3	+0.5
	194nm,0.5s						
SHL	Shillong	6.46	168	P	Pn	17 49 07.1	+0.2
SHL	Shillong	6.46	168	eP	Pn	17 49 07.2	+0.4
SHL				ex	x	17 50 56.1	
SHL	Shillong	6.46	168	Pn	Pn	17 49 07.0	+0.2
DANN	Dangsing	6.74	240	eP	Pn	17 49 10.7	0.0
	369nm,0.6s						
KOHI	KOHIMA	6.99	151	eP	Pn	17 49 15.8	+1.8
KOHI				ex	x	17 51 22.4	
KOLN	Koldanda	7.18	237	eP	Pn	17 49 17.2	+0.4
	201nm,0.7s						
BOK	Bokaro	9.01	207	eP	Pn	17 49 41.2	-0.4
BOK				i x	x	17 52 11.9	
BOK				ex	x	17 52 30.4	
JOSI	Joshimath	9.36	264	eP	Pn	17 49 45.4	-1.1
JOSI				IAmb	IAmb	17 49 53.7	
	comp=Z,340nm,0.8s						
GTA	Gaotai	10.72	43	⇓P	Pn	17 50 05.8	+0.7
GTA				pP		17 50 09.8	
GTA				sP		17 50 12.3	
GTA				sS	Sn	17 52 20.8	+17
GTA				pmax	pmax		
	comp=Z,29nm,1.1s						
GTA				pmax	pmax		
	comp=Z,280nm,7.0s						
GTA				LR	LR		
	comp=Z,6μm,15.9s						
GTA				LR	LR		
	comp=Z,2μm,14.3s						
SMLA	Simla	11.29	269	ex	Pn	17 50 10.9	-2.0
SMLA				ex	x	17 53 21.1	
CD2	Chengdu	11.48	92	P	Pn	17 50 15.6	+0.1
CD2				S	Sn	17 52 23.8	+1.2
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				LR	LR		
	comp=Z,4μm,7.8s						
CD2				LR	LR		
	comp=Z,4μm,8.6s						
CD2				LR	LR		
	comp=Z,4μm,8.4s						
LZH	Lanzhou	11.93	66	eP	Pn	17 50 24.6	+2.9
LZH				pmax	pmax		
	comp=Z,31nm,1.0s						
LZH				pmax	pmax		
	comp=Z,240nm,4.1s						
LZH				LR	LR		
	comp=Z,4μm,10.3s						
LZH				LR	LR		
	comp=Z,3μm,9.8s						
LZH				LR	LR		
	comp=Z,4μm,10.7s						
DHRM	DHARAMSHALA	11.94	275	eP	Pn	17 50 19.8	-2.2
SIMRM	Sittwe	11.95	169		Pn	17 50 20.4	-1.5
WMQ	Urumqi	12.07	351	P	Pn	17 50 24.3	+0.8
WMQ				pP	P	17 50 35.3	-0.6
WMQ				S	Sn	17 52 46.6	+10
WMQ				pmax	pmax		
	comp=Z,33nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,190nm,3.7s						
WMQ				LR	LR		
	comp=Z,2μm,11.3s						
WMQ				LR	LR		
	comp=Z,4μm,14.5s						
KMI	Kunming	12.80	119	P	Pn	17 50 36.8	+3.0
KMI				S	Sn	17 52 58.3	+3.1
KMI				LR	LR		
	comp=Z,2μm,8.0s						
KMI				LR	LR		
	comp=Z,1μm,8.1s						
KMI				LR	LR		
	comp=Z,1μm,12.6s						
KSH	Kashi	13.93	307	P	Pn	17 50 51.5	+2.6
KSH				pP	P	17 51 01.3	+4.7
KSH				PP	PnPn	17 51 03.4	+6.5
KSH				S	Sn	17 53 27.8	+5.5
KSH				sS	S	17 53 39.8	-3.5
KSH				SS	SnSn	17 53 44.4	+10
KSH				pmax	pmax		
	comp=Z,39nm,1.1s						
KSH				pmax	pmax		
	comp=Z,550nm,5.2s						
KSH				LR	LR		
	comp=Z,2μm,8.9s						
KSH				LR	LR		
	comp=Z,2μm,8.4s						
KSH				LR	LR		
	comp=Z,1μm,8.1s						
PDGK	Podgornoye	14.27	326	P	Pn	17 50 51.2	-2.4
BHPL	Bhopal	14.36	236	ex	Pn	17 50 46.5	-8.3
BHPL				IAmb	IAmb	17 50 55.2	
	comp=Z,32nm,0.6s						
CHCP	Chirah Chowk	14.49	281	P	Pn	17 50 52.4	-4.2
CHLP	Challavanipeta	14.52	205	eP	Pn	17 50 55.2	-1.8
NRN	Naryn	14.92	314	P	Pn	17 51 04.1	+1.5
NRN	Naryn	14.92	314	P	Pn	17 51 04.1	+1.5
SARP	Sargodha	15.03	275	P	Pn	17 50 59.3	-4.5
CHTO	Chiang Mai	15.16	147	P	Pn	17 51 05.7	+0.1
CHTO				pmax	pmax		
	comp=Z,13nm,0.9s						
CHTO	Chiang Mai	15.16	147		Pn	17 51 05.7	+0.1
CM31	Chiang Mai Arr	15.47	148	P	Pn	17 51 09.6	-0.1
CMAR	Chiang Mai Arr	15.47	148	Pn	Pn	17 51 07.9	-1.8
	comp=Z,0.2nm,0.3s,baz=322,slow=12,SNR=18						
CMAR				LR	LR	17 58 01.7	
	comp=Z,702nm,18.8s,baz=335,slow=41						
VIS	Vishakhapatnam	15.50	206	iP	Pn	17 51 08.1	-1.9
VIS				iS	Sn	17 53 53.8	-6.9
VIS				iS	Sn	17 53 59.4	-1.3
VIS				ex	S	17 54 16.1	+0.6
	comp=N,53nm,0.8s						
CEP	Cherat	15.63	282	P	Pn	17 51 06.3	-5.5
XAN	Xi'an	15.72	77	P	Pn	17 51 10.0	-2.8
XAN				pP	P	17 51 16.3	-0.1
XAN				PP	pP	17 51 24.5	-2.4
XAN				pmax	pmax		
	comp=N,27nm,1.1s						
XAN				pmax	pmax		
	comp=N,76nm,3.5s						
XAN				LR	LR		
	comp=N,3μm,20.1s						
XAN				LR	LR		
	comp=N,920nm,13.9s						
XAN				LR	LR		
	comp=N,1μm,20.2s						
KZA	Kyzart	15.75	314	P	P	17 51 18.0	+0.9
	SNR=18						
THW	Thamme Wali	15.77	278	P	Pn	17 51 08.0	-5.4
SLVN	Son La	16.03	128	P	Pn	17 51 17.6	+0.7
SLVN				IAmb	IAmb	17 51 23.9	
	comp=Z,65nm,1.0s						
TKM2	Tokmak 2	16.05	317	P	P	17 51 19.3	-0.9
TKM2	Tokmak 2	16.05	317	P	P	17 51 22.1	+1.9
	SNR=29						
MK31	Makanchi Array	16.10	340	iP	Pn	17 51 15.3	-2.4
MK31	Makanchi Array	16.10	340		Pn	17 51 15.2	-2.4
MKAR	Makanchi Array	16.10	340	iP	Pn	17 51 15.5	-2.1
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MKAR	Makanchi Array	16.10	340	Pn	Pn	17 51 15.5	-2.1
	comp=Z,0.4nm,0.3s,baz=149,slow=14,SNR=32						
MKAR				LR	LR	17 58 21.8	
	comp=Z,799nm,19.4s,baz=155,slow=41						
MAKZ	Makanchi	16.21	339	P	Pn	17 51 16.6	-2.4
MAKZ				pmax	pmax		
	comp=Z,29nm,1.2s						
MAKZ	Makanchi	16.21	339		Pn	17 51 16.6	-2.4
KBK	Karagaybulak	16.27	316	P	P	17 51 26.5	+3.9
	SNR=30						
UCH	Uchtor	16.29	314	P	P	17 51 25.5	+2.4
	SNR=22						
RPR	Rampur	16.39	220	eP	Pn	17 51 19.8	-1.6
AAK	Ala-Archa	16.53	315	⇑eP	P	17 51 24.8	-0.7
AAK				pmax	pmax		
	comp=Z,42nm,1.7s						
AAK	Ala-Archa	16.53	315	Pn	P	17 51 24.5	-1.0
	comp=Z,0.4nm,0.3s,baz=122,slow=11,SNR=21						
AAK				LR	LR	17 58 51.4	
	comp=Z,830nm,18.4s,baz=119,slow=41						
AAK	Ala-Archa	16.53	315	P	P	17 51 28.1	+2.6
	SNR=25						
AAK	Ala-Archa	16.53	315	P	P	17 51 24.6	-0.9
CHMS	Chumysh	16.59	316	P	P	17 51 27.6	+1.5
	SNR=22						
PVM	Polavaram	16.61	211	eP	Pn	17 51 24.4	+0.2
AML	Almayashu	16.74	312	P	P	17 51 29.5	+1.4
	SNR=12						
GGR	Gangavaram	16.78	216	eP	P	17 51 27.2	-1.0
ARSB	Arslanbob	16.80	309	P	P	17 51 29.7	+1.2
ARSB				IAmb	IAmb	17 51 37.3	
	comp=Z,65nm,1.2s						
SRSP	Sriramsagar	16.87	223	eP	Pn	17 51 25.0	-2.5
USP	Ospenovka	16.90	317	P	P	17 51 30.4	+1.0
	SNR=46						
EKS2	Erkin-Say	16.98	314	P	P	17 51 33.2	+2.8
	SNR=24						
MYLAV	Mylavaram	17.50	213	eP	Pn	17 51 34.2	-1.1
HYB	Hyderabad	17.97	219	iP	Pn	17 51 39.0	-2.1
HYB				eS	S	17 55 03.0	-2.9
HYBB	Hyderabad (bro	17.97	219	eP	Pn	17 51 39.3	-1.8
KBL	Kabul	18.03	284	P	Pn	17 51 39.5	-2.5
KBL				pmax	pmax		
	comp=Z,116nm,1.1s						
KBL	Kabul	18.03	284		Pn	17 51 39.5	-2.5
KBL				IAmb	IAmb	17 51 47.5	
	comp=Z,116nm,1.1s						
PBKT	Sadao Pong	18.06	145	P	P	17 51 41.9	-0.4
NJS	Nagarjunasagar	18.30	216	eP	P	17 51 43.1	-1.9
KLRI	Killari	18.57	225	eP	P	17 51 46.9	-1.2
ADKI	Addanki	18.59	213	eP	Pn	17 51 49.2	+0.5
DGPR	DIGLIPUR	18.80	172	IAmb	IAmb	17 51 57.2	
	comp=Z,47nm,0.7s						
SRLM	Srisailam	18.89	216	eP	P	17 51 50.4	-1.2
TIY	Taiyuan	19.00	66	eP	Pn	17 51 54.4	+0.8
TIY				S	Sn	17 55 26.0	+0.6
TIY				sS	sS	17 55 36.0	-7.3
TIY				pmax	pmax		
	comp=Z,69nm,1.2s						
TIY				LR	LR		
	comp=Z,3μm,12.2s						
TIY				LR	LR		
	comp=Z,770nm,6.8s						
TIY				LR	LR		
	comp=Z,1μm,13.0s						
HHC	Hu-ho-hao-te	19.22	56	eP	Pn	17 51 58.0	+1.8
HHC				pP	pP	17 52 05.3	-0.3
HHC				S	Sn	17 55 29.8	-0.8
HHC				sS	sS	17 55 41.8	-5.9
HHC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,5.0s						
HHC				LR	LR		
	comp=Z,1μm,9.8s						
HHC				LR	LR		
	comp=Z,2μm,9.8s						
HHC				LR	LR		
	comp=Z,1μm,9.1s						
KK31	Karatay Array	19.26	311	P	Pn	17 51 56.4	-0.2
KK31				pmax	pmax		

comp=Z,36nm,1.4s
KK31 Karatay Array 19.26 311 P **Pn** **17 51 56.4 -0.2**
KKAR Karatay Array 19.26 311 P **Pn** **17 51 56.1 -0.5**
KKAR pmax pmax
comp=Z,36nm,1.4s
KKAR Karatay Array 19.26 311 P **Pn** **17 51 56.1 -0.5**
TAS Tashkent 19.31 305 P **P** **17 51 55.5 -0.5**
TAS pmax pmax
comp=Z,123nm,1.1s
TAS Tashkent 19.31 305 P **P** **17 51 55.5 -0.5**
POO Poona 19.99 232 *ex* **P** **17 52 09.2 +5.6**
SONM Songino Array 20.04 33 P **P** **17 52 02.4 -1.6**
comp=Z,36nm,1.1s,baz=222,slow=10.0,SNR=121
SONM LR LR 18 00 40.7
comp=Z,619nm,21.2s,baz=224,slow=40
BHUJ Bhuj 20.26 250 *eP* **P** **17 52 05.0 -1.5**
BHUJ lAmb lAmb 17 52 14.4
comp=Z,152nm,1.3s
BHUJ *i* x x 17 58 04.5
ULN Ulaanbaatar 20.36 34*d i*P **P** **17 52 08.5 +0.9**
ULN pmax pmax
comp=Z,130nm,1.3s
ULN Ulaanbaatar 20.36 34 P **P** **17 52 08.3 +0.7**
ULN lAmb lAmb 17 52 10.0
comp=Z,95nm,1.1s
WHN Wuhan 20.55 88 P **P** **17 52 09.4 -0.1**
WHN S Sn 17 56 01.5 -1.1
WHN LR LR
comp=Z,5μm,10.0s
WHN LR LR
comp=Z,3μm,9.5s
WHN LR LR
comp=Z,2μm,15.8s
SKHT Srikalahasti 20.56 211 *eP* **P** **17 52 07.4 -2.3**
KURBB Kurchatov Arra 20.65 338 P **P** **17 52 09.8 -0.6**
comp=Z,21nm,0.8s,baz=150,slow=11,SNR=39
URV Uravakonda 20.70 218 *eP* **P** **17 52 11.5 +0.2**
KURK Kurchatov 20.70 339*d i*P **P** **17 52 10.2 -0.8**
KURK pmax pmax
comp=Z,76nm,2.5s
KURK Kurchatov 20.70 339 P **P** **17 52 10.6 -0.4**
ZAK Zakamensk 20.80 24 *eP* **P** **17 52 12.7 +0.5**
ZAK pmax pmax
comp=Z,21nm,1.3s
MOY Mondy 21.22 18 *eP* **P** **17 52 18.1 +1.4**
MOY pmax pmax
comp=Z,60nm,1.9s
UBPT Khong Chiam 21.54 137 P **P** **17 52 20.5 +0.3**
UBPT lAmb lAmb 17 52 38.1
comp=Z,55nm,0.9s
QIZ Qiongzhong 21.72 122 P P 17 52 12.5 -10
QIZ S **S** **17 56 19.0 -1.8**
QIZ LR LR
comp=N,1μm,15.9s
QIZ LR LR
comp=E,1μm,17.1s
QIZ LR LR
comp=Z,730nm,16.2s
TLY Talaya 22.02 22 *eP* **P** **17 52 27.0 +1.8**
TLY *eSS* Sn 17 57 07.2 +29
TLY pmax pmax
comp=Z,22nm,1.1s
TLY MLR MLR
comp=Z,2μm,16.0s
TLY Talaya 22.02 22 LR LR 18 01 44.9
comp=Z,784nm,19.3s,baz=210,slow=39
GZH Guangzhou 22.16 108 P **P** **17 52 26.0 -0.9**
GZH S **S** **17 56 31.8 +2.7**
GZH LR LR
comp=Z,1μm,12.5s
GZH LR LR
comp=Z,1μm,9.7s
GOA Goa 22.24 226 *eP* **P** **17 52 26.5 -1.3**
GOA lAmb lAmb 17 52 44.1
comp=Z,28nm,0.4s
BJI Beijing 22.35 62 P **P** **17 52 29.1 +0.3**
BJI S **S** **17 56 33.0 +0.7**
BJI pmax pmax
comp=Z,9.0nm,1.4s
BJI LR LR
comp=Z,7μm,13.3s
BJI LR LR
comp=Z,2μm,12.9s
BJI LR LR
comp=Z,630nm,19.5s
ZAA0 Zalesovo Array 22.38 351 P **P** **17 52 28.0 -1.0**
ZAA0 lAmb lAmb 17 52 33.8
comp=Z,56nm,1.1s
ZALV Zalesovo Beam 22.38 351 P **P** **17 52 27.5 -1.5**
comp=Z,8.3nm,0.7s,baz=168,slow=9.1,SNR=31
ZALV LR LR 18 01 11.2
comp=Z,655nm,19.0s,baz=198,slow=37
TIA Tai'an 22.55 72 P **P** **17 52 30.5 -0.5**
TIA pmax pmax
comp=Z,16nm,0.9s
TIA LR LR
comp=Z,2μm,13.9s
TIA LR LR
comp=Z,1μm,11.3s
TIA LR LR
comp=Z,960nm,9.0s
HRA Herat 23.65 284 P **P** **17 52 41.1 -1.2**
NJ2 Nanjing 24.14 82 *eP* **P** **17 52 46.8 +0.1**
NJ2 pP **pP** **17 52 56.3 -1.8**
NJ2 PP **PnPn** **17 53 22.8 +6.1**
NJ2 S **S** **17 57 05.3 +3.0**
NJ2 pmax pmax
comp=Z,21nm,0.8s
NJ2 pmax pmax
comp=Z,210nm,4.3s
NJ2 LR LR
comp=Z,1μm,8.5s
NJ2 LR LR
comp=Z,1μm,10.6s
NJ2 LR LR
comp=Z,1μm,10.2s
BVAR Borovoye Array 25.57 331 P **P** **17 52 59.3 -0.2**
comp=Z,4.7nm,0.7s,baz=137,slow=9.5,SNR=19
BVAR PcP **PcP** **17 56 30.1 +0.2**
comp=Z,1.7nm,0.5s,baz=202,slow=1.2,SNR=9.7
BRVK Borovoye 25.64 331 P **P** **17 52 59.0 -1.1**
PALK Pallekele 26.12 202⇓ *i*P **P** **17 53 09.1 +4.2**
PALK Pallekele 26.12 202 LR LR 18 03 32.3
comp=Z,288nm,21.0s,baz=25,slow=37
SSE Sheshan 26.25 84 P **P** **17 53 06.9 +1.1**
SSE S **S** **17 57 40.6 +4.6**
SSE pmax pmax
comp=Z,11nm,0.7s
SSE LR LR
comp=Z,700nm,17.1s
SSE LR LR
comp=Z,580nm,10.5s
DL2 Dalian 26.33 66 *eP* **P** **17 53 06.8 +0.3**
DL2 S **S** **17 57 42.9 +5.8**
DL2 pmax pmax
comp=Z,35nm,0.7s
DL2 LR LR
comp=Z,3μm,18.3s
DL2 LR LR
comp=Z,750nm,17.1s
DL2 LR LR
comp=Z,2μm,13.2s
GEYT Alibeck 27.03 292 P **P** **17 53 14.0 +1.1**
comp=Z,6.1nm,0.8s,baz=111,slow=8.1,SNR=9.7
GEYT LR LR 18 05 41.8
comp=Z,408nm,18.3s,baz=105,slow=40
GYA0B ALIBECK ARRAY 27.03 292 P **P** **17 53 13.1 +0.1**
LHMI Lhok Sumawe 27.26 166 P **P** **17 53 14.0 -1.0**
comp=Z,135nm,0.8s
AB31 Akbulak array 28.61 316 *i*P **P** **17 53 26.7 -0.1**
ABKAR Akbulak array 28.61 316 P **P** **17 53 26.2 -0.6**
WSAR Wadi Sarin 29.35 261 P **P** **17 53 37.1 +3.4**
comp=Z,7.3nm,1.0s,baz=86,slow=8.5,SNR=6.9
WSAR LR LR 18 07 05.7
comp=Z,347nm,18.7s,baz=109,slow=40
CN2 Changchun 29.91 57 *eP* **P** **17 53 38.5 0.0**
CN2 *es*P pP 17 53 45.5 -4.5
CN2 *eS* **S** **17 58 33.4 0.0**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,1μm,10.0s
CN2 LR LR
comp=Z,1μm,10.0s
CN2 LR LR
comp=Z,1μm,10.0s
INCN Inchon 30.20 69 P **P** **17 53 40.9 -0.2**
INCN pmax pmax
comp=Z,21nm,0.9s
INCN Inchon 30.20 69 P **P** **17 53 40.9 -0.2**
INCN lAmb lAmb 17 53 41.6
comp=Z,21nm,0.9s
AKTO Aktyubinsk 30.24 317 LR LR 18 06 15.2
comp=Z,189nm,21.4s,baz=119,slow=37
BOD Bodaibo 30.53 25 *eP* **P** **17 53 44.9 +1.2**
BOD pmax pmax
comp=Z,18nm,1.3s
TJN Taejon 30.82 71*de*P **P** **17 53 45.7 -0.8**
KS19 Wonju Array Si 31.18 69 P **P** **17 53 49.7 -0.1**
KS19 lAmb lAmb 17 54 58.1
comp=Z,39nm,1.6s
KSRS Korea Array 31.23 69 P **P** **17 53 48.7 -1.4**
comp=Z,4.1nm,0.7s,baz=270,slow=8.8,SNR=17
KSRS LR LR 18 08 49.0
comp=Z,169nm,18.8s,baz=266,slow=41
SVE Sverdlovsk 32.28 329 *eP* **P** **17 53 59.0 -0.1**
SVE pmax pmax
comp=Z,38nm,1.2s
SVE MLR MLR
comp=Z,670nm,14.0s
ARU Arti 32.97 327*d i*P **P** **17 54 04.8 -0.4**
ARU S **S** **17 59 24.2 +3.3**
ARU SS **SnSn** **18 01 22.8 +2.7**
ARU pmax pmax
comp=Z,9.0nm,0.7s
ARU MLR MLR
comp=Z,652nm,15.0s
ARU Arti 32.97 327 LR LR 18 08 49.7
comp=Z,777nm,19.7s,baz=117,slow=39
PDSI Padang 34.02 162 P **P** **17 54 15.3 +0.5**
comp=Z,12nm,0.8s
ZEA Zeya 34.18 39 *eP* **P** **17 54 15.6 -0.1**
ZEA pmax pmax
comp=Z,9.0nm,1.0s
ZEA MLR MLR
comp=Z,2μm,12.0s
ZEA MLR MLR
comp=N,600nm,11.0s
ZEA MLR MLR
comp=E,1μm,11.0s
USRK Ussuriysk Ar. 34.64 57 LR LR 18 09 36.2
comp=E,295nm,18.8s,baz=257,slow=38
KLR Kul'dur 35.35 48*c i*P **P** **17 54 26.1 +0.1**
KLR pmax pmax
comp=Z,8.0nm,0.8s
GNI Garni 37.46 296*de*P **P** **17 54 45.7 +1.4**
GNI pmax pmax
comp=Z,100nm,1.4s
GNI Garni 37.46 296 P **P** **17 54 44.7 +0.4**
GRNR Gornyy 38.63 47⇑ *i*P **P** **17 54 53.9 +0.1**
GRNR *eS* **S** **18 00 51.5 +3.7**
GRNR pmax pmax
comp=Z,8.0nm,0.9s
GRNR smax smax
comp=N,6.0nm,0.5s
GRNR MLR MLR
comp=Z,410nm,17.0s
KBZ Khabaz 38.82 302 LR LR 18 13 42.8
comp=Z,399nm,18.2s,baz=92,slow=40
NEY Neytrino 38.94 301⇓ *e*P **P** **17 54 59.2 +2.5**
NEY pmax pmax
comp=Z,2.0nm,0.7s
KIV Kislovodsk 38.98 302 *eP* **P** **17 54 57.7 +0.8**
KIV pmax pmax
comp=Z,24nm,1.1s
KIV MLR MLR
comp=Z,657nm,16.0s
YAK Yakutsk 39.27 28 *eP* **P** **17 54 59.6 +0.7**
YAK pmax pmax
comp=Z,22nm,1.4s
YAK pmax pmax
comp=N,9.0nm,1.4s
YAK pmax pmax
comp=E,13nm,1.3s
YAK Yakutsk 39.27 28 P **P** **17 54 59.1 +0.2**
YAK lAmb lAmb 17 55 08.4
comp=Z,14nm,0.8s
MAJO Matsushiro 39.50 70⇑ *e*P **P** **17 55 00.8 -0.5**
MAJO pmax pmax
comp=Z,28nm,1.9s
MAT Matsushiro 39.50 70 P **P** **17 55 00.3 -1.0**
MAT *eS* **S** **18 00 54.8 -6.5**
MJAR Matsushiro Arr 39.50 70 P **P** **17 55 00.8 -0.6**
comp=Z,4.9nm,0.9s,baz=281,slow=8.4,SNR=9.5
MJAR LR LR 18 10 54.6
comp=Z,367nm,19.5s,baz=300,slow=36
VRH Novokhopyorsk 40.32 313 *eP* **P** **17 55 08.2 +0.4**
VRH pmax pmax
comp=Z,20nm,1.0s
VRH pmax pmax
comp=N,10.0nm,0.8s
VRH pmax pmax
comp=E,10.0nm,0.8s
PRGR Permogore 41.35 329 *eP* **P** **17 55 14.8 -1.3**
PRGR *e* 17 57 13.3
PRGR pmax pmax
comp=Z,8.0nm,0.6s
VSR Storozhevoye 41.91 313⇑ *e*P **P** **17 55 22.9 +2.0**
VSR pmax pmax
comp=Z,14nm,0.7s
LPSR Galich'ya Gora 42.25 315 *eP* **P** **17 55 20.0 -3.6**
LPSR pmax pmax
comp=N,20nm,2.5s
LPSR pmax pmax
comp=Z,10.0nm,1.0s
LPSR pmax pmax
comp=E,10.0nm,1.6s
YSS Yuzh-Sakhalins 42.37 54 *eP* **P** **17 55 21.0 -3.7**
YSS pmax pmax
comp=Z,10.0nm,1.6s
YSS MLR MLR
comp=Z,1μm,16.0s
YSS MLR MLR
comp=E,500nm,17.0s
ANN Anapa 42.75 303 *eP* P 17 55 21.4 -6.4
ANN *eS* **S** **18 01 43.3 -5.8**
ANN *es*SS **SS** **18 05 02.2 +1.8**
ANN pmax pmax
comp=Z,90nm,1.1s
GAZ Gaziantep 43.63 292 P **P** **17 55 34.4 -0.8**
GAZ lAmb lAmb 17 55 54.1
comp=Z,13nm,1.0s
OBN Obninsk 44.01 318 *eP* **P** **17 55 37.3 -0.5**
OBN *e* 17 57 18.3
OBN *e* 17 57 22.5
OBN *e*PPP PPP 17 57 56.5
OBN pmax pmax
comp=Z,50nm,2.5s
TIXI Tiksi 44.78 16⇑ *i*P **P** **17 55 43.8 +0.1**
TIXI pmax pmax
comp=Z,6.0nm,0.6s
TIXI Tiksi 44.78 16 P **P** **17 55 43.4 -0.3**
TIXI lAmb lAmb 17 55 50.1
comp=Z,8.4nm,0.8s
TMCR Tamitsa 45.52 331 *eP* **P** **17 55 50.0 +0.3**
TMCR pmax pmax
comp=Z,25nm,0.6s
BR131 Keskin Array S 46.00 296 P **P** **17 55 53.6 -0.5**
BR131 pmax pmax
comp=Z,7.0nm,0.7s
BR131 Keskin Array S 46.00 296 P **P** **17 55 53.6 -0.5**
BR131 lAmb lAmb 17 55 59.3
comp=Z,7.2nm,0.7s
BRTR Keskin Array B 46.00 296 *i*P **P** **17 55 56.7 +2.6**
BRTR pmax pmax
comp=Z,7.0nm,0.8s
BRTR Keskin Array B 46.00 296 P **P** **17 55 54.1 0.0**
comp=Z,6.9nm,0.8s,baz=92,slow=6.7,SNR=16
BRTR LR LR 18 18 31.4
comp=Z,156nm,21.4s,baz=33,slow=40
ANTO Ankara 46.62 297 P **P** **17 55 59.2 +0.3**
ANTO pmax pmax
comp=Z,17nm,0.6s
ANTO Ankara 46.62 297 P **P** **17 55 59.1 +0.3**
BR231 Keskin MP Arra 46.63 297 P **P** **17 55 58.3 -0.8**
BR231 lAmb lAmb 17 56 08.2
comp=Z,14nm,0.9s
MDUB Mudurnu 47.73 298 P **P** **17 56 07.4 -0.1**
AKASG Malin Array Be 48.16 312 *i*P **P** **17 56 10.0 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 48.16 312 P **P** **17 56 09.7 -0.9**
comp=Z,2.4nm,0.8s,baz=80,slow=6.8,SNR=6.0
AKASG LR LR 18 19 56.2
comp=Z,349nm,19.5s,baz=100,slow=40
AKBB Malin Array Si 48.16 312 P **P** **17 56 09.8 -0.8**
AKBB pmax pmax
comp=Z,9.0nm,1.1s
AKBB Malin Array Si 48.16 312 P **P** **17 56 09.8 -0.8**
AKBB lAmb lAmb 17 56 17.7
comp=Z,9.3nm,1.1s
SEY Seymchan 49.43 32⇑ *e*P **P** **17 56 20.7 +0.6**
ELL Elmali 49.45 293 P **P** **17 56 20.9 +0.1**
ELL pmax pmax
comp=Z,186nm,0.8s
ELL Elmali 49.45 293 P **P** **17 56 20.9 +0.1**
HARR Harsova 49.50 304⇑ P **P** **17 56 25.3 +4.3**
HARR Harsova 49.50 304⇑ P **P** **17 56 25.3 +4.3**
PGOR Pogoanele 50.14 304⇑ P P 17 56 32.6 +6.8
TESR Tescani 50.17 306⇓ P **P** **17 56 28.1 +2.1**
VRI Vrincioaia 50.19 305⇓ P **P** **17 56 26.7 +0.5**
VRI Vrincioaia 50.19 305⇓ P **P** **17 56 26.7 +0.5**
FINES FINESS Array B 50.31 326 P **P** **17 56 26.6 -0.2**
comp=Z,5.3nm,0.7s,baz=104,slow=16,SNR=13
FINES LR LR 18 19 29.2
comp=Z,665nm,18.6s,baz=94,slow=38
MLR Muntele Rosu 50.79 305⇑ P **P** **17 56 32.0 +1.1**
MLR Muntele Rosu 50.79 305⇑ P **P** **17 56 32.0 +1.1**
MLR Muntele Rosu 50.79 305 P **P** **17 56 31.7 +0.8**
OZUR 50.81 306⇓ P P 17 56 39.0 +8.1
BURAR Bucovina Array 51.01 308⇓ P **P** **17 56 33.0 +0.5**
BURAR Bucovina Array 51.01 308⇓ P **P** **17 56 33.0 +0.5**
BUR08 Bucovina Ar. S 51.02 308 P **P** **17 56 32.4 -0.1**
BUR08 lAmb lAmb 17 57 05.2
comp=Z,14nm,1.6s
DOPR Dopca 51.11 306⇓ P **P** **17 56 32.9 -0.2**
VOIR 51.42 305⇑ P **P** **17 56 34.5 -1.1**
VOIR 51.42 305⇑ P **P** **17 56 34.5 -1.1**
ARCES ARCESS Array B 51.72 336 P **P** **17 56 38.7 +1.4**
comp=Z,3.5nm,0.8s,baz=99,slow=7.5,SNR=5.0
ARCES LR LR 18 18 54.1
comp=Z,278nm,19.5s,baz=111,slow=36
ARR Arges 51.72 305⇓ P **P** **17 56 38.4 +0.7**
PETK Petropavlovsk- 51.88 45 LR LR 18 20 29.7
comp=Z,358nm,18.1s,baz=243,slow=38
KARP Karpathos 51.89 292 P **P** **17 56 39.1 -0.1**
KWP Kalwaria Pacla 52.42 311 P **P** **17 56 42.9 0.0**
KWP pmax pmax
comp=Z,193nm,1.3s
KWP Kalwaria Pacla 52.42 311 P **P** **17 56 42.9 0.0**
PET Petropavlovsk 52.46 45 *eP* **P** **17 56 41.9 -1.1**
PET *eS* **S** **18 04 04.1 -2.6**
PET MLR MLR
comp=Z,700nm,15.0s
PET MLR MLR
comp=Z,600nm,12.0s
TRPA Tarpa 52.73 309⇓ P **P** **17 56 45.7 +0.6**
GUMO Guam 52.91 97 LR LR 18 20 03.4
comp=Z,94nm,18.6s,baz=284,slow=37
GZR Gura Zlata 53.01 305⇑ P **P** **17 56 47.3 -0.1**
SANT Santorini 53.01 294⇓ P **P** **17 56 46.3 -1.1**
SANT Santorini 53.01 294 P **P** **17 56 46.5 -1.0**
VTS Vitosha 53.21 302 P **P** **17 56 46.7 -2.3**
VTS pmax pmax
comp=Z,12nm,1.4s
VTS Vitosha 53.21 302 P **P** **17 56 46.6 -2.3**
VTS lAmb lAmb 17 56 59.5
comp=Z,12nm,1.4s
BZS Buzias 53.77 306⇓ P P 17 57 01.8 +9.0
BZS Buzias 53.77 306⇓ P P 17 57 01.8 +9.0
MDVR Moldovita 53.86 305⇑ P **P** **17 56 53.8 +0.2**
BILL Bilibino 55.57 26*de*P **P** **17 57 06.7 +1.2**
BILL *e* 17 58 08.0
BILL *e* 17 59 10.0
BILL *e*PPP PPP 18 00 21.6
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL MLR MLR
comp=Z,224nm,17.0s
BILL Bilibino 55.57 26 P **P** **17 57 06.2 +0.7**
BILL lAmb lAmb 17 57 11.8
comp=Z,9.8nm,0.9s
DPC Dobruska-Polom 56.38 312 *eP* **P** **17 57 12.1 +0.4**
DPC Dobruska-Polom 56.38 312 *eP* **P** **17 57 12.1 +0.4**
UPC Upice 56.54 313 *eP* **P** **17 57 13.2 +0.4**
UPC Upice 56.54 313 *eP* **P** **17 57 13.2 +0.4**
CONA Conrad Observa 57.17 310 P **P** **17 57 21.0 +3.6**
comp=Z,9.2nm,1.1s
NB2 NORSAR Subarra 57.49 325 P **P** **17 57 18.6 -0.7**
comp=Z,7.0nm,1.0s,baz=82,slow=7.4
NOA NORSAR Array B 57.49 325 P **P** **17 57 18.8 -0.6**
comp=Z,1.5nm,0.7s,baz=82,slow=7.1,SNR=6.3
NOA LR LR 18 23 31.6
comp=Z,627nm,18.7s,baz=75,slow=38
ARSA Arzberg 57.55 309 *ep*P pP 17 57 26.2 -6.0
comp=Z,3.8nm,0.5s
PRU Pruhonice 57.57 312 *eP* pP 17 57 28.8 -3.4
PRU Pruhonice 57.57 312 *eP* pP 17 57 28.8 -3.4
BRG Berggiesshubel 57.76 313 *eP* pP 17 57 28.5 -5.0
comp=Z,3.8nm,0.9s
BRG Berggiesshubel 57.76 313 *eP* **pP** **17 57 28.5 -5.0**
BRG pmax pmax
comp=Z,4.0nm,1.0s
SOKA Soboth 58.01 308 *eP* **P** **17 57 26.8 +3.5**
comp=Z,6.8nm,0.8s
MOA Molln 58.23 310 *i*P pP 17 57 33.5 -3.4
comp=Z,7.8nm,1.1s
CLL Collm 58.24 314 *eP* **P** **17 57 24.0 -0.7**
CLL MLR MLR
comp=Z,400nm,18.8s
CLL Collm 58.24 314 *eP* **P** **17 57 24.0 -0.7**
CLL *e*PP **PP** **17 59 36.0 +2.4**
CLL *e*SSS SSS 18 11 54.0
CLL LmV 18 25 00.0
comp=Z,400nm,18.8s
GEC2 GERESS Array S 58.36 311 P **P** **17 57 25.9 +0.2**
GEC2 lAmb lAmb 17 57 36.2
comp=Z,7.5nm,1.0s
GERES GERESS Array B 58.36 311 P **P** **17 57 25.8 +0.1**
comp=Z,2.3nm,0.8s,baz=72,slow=6.2,SNR=10
GERES LR LR 18 26 22.5
comp=Z,312nm,19.9s,baz=80,slow=40
KHC Kasperske Hory 58.38 311 *eP* P 17 57 12.0 -14
KHC *ex* x 17 57 35.7
TIP Timpagrande 58.83 299⇑ P **P** **17 57 28.5 -0.7**
TIP Timpagrande 58.83 299 P **P** **17 57 27.5 -1.6**
TIP lAmb lAmb 17 57 41.2
comp=Z,11nm,1.0s
KBA Koelnbreinsper 59.03 309 *ep*P pP 17 57 38.0 -4.7
comp=Z,6.0nm,1.1s
KMBO Kilima Mbogo 60.00 247 LR LR 18 22 54.7
comp=Z,122nm,18.4s,baz=95,slow=35
INTR Introdacqua 60.06 303 P **P** **17 57 36.4 -1.2**
NRCA Norcia 60.37 304 P **P** **17 57 39.9 +0.2**
NRCA lAmb lAmb 17 58 12.0
comp=Z,8.0nm,1.1s
MURB Monte Urbino 60.65 305 P **P** **17 57 39.1 -2.5**
KEST Kesra 65.55 298 P **P** **17 58 14.0 -0.3**
comp=Z,8.4nm,1.0s,baz=56,slow=3.6,SNR=3.2
KEST LR LR 18 30 52.2
comp=Z,141nm,19.6s,baz=5.5,slow=40
KEST Kesra 65.55 298 P **P** **17 58 13.1 -1.2**
KEST lAmb lAmb 17 58 20.3
comp=Z,11nm,1.1s
WRAB Tennant Creek 66.58 135⇓ *e*P **P** **17 58 21.1 +0.3**
WRAB pmax pmax
comp=Z,30nm,2.8s
WRA Warramunga Arr 66.58 135 *i*P **P** **17 58 21.1 +0.2**
WRA pmax pmax
comp=Z,5.0nm,0.8s
WRA Warramunga Arr 66.58 135 P **P** **17 58 20.8 -0.1**
comp=Z,4.7nm,0.8s,baz=327,slow=6.4,SNR=20
ANM Nome 67.41 27 P **P** **17 58 26.8 +1.3**
ANM pmax pmax
comp=Z,9.0nm,1.0s
ANM Nome 67.41 27 P **P** **17 58 26.8 +1.3**
ANM lAmb lAmb 17 58 30.8
comp=Z,9.1nm,1.0s
KRVT Keravat (AS076 68.69 110 LR LR 18 25 45.2
comp=Z,142nm,20.9s,baz=295,slow=33
AS31 Alice Springs 69.19 137 P **P** **17 58 37.5 +0.3**
ASAR Alice Springs 69.19 137 P **P** **17 58 37.5 +0.2**
comp=Z,5.3nm,0.7s,baz=327,slow=7.0,SNR=53
ASAR LR LR 18 33 05.5
comp=Z,72nm,18.5s,baz=318,slow=40

TULEG	**Thule**	**71.02**	**355**	P	**P**	**17 58 47.1**	**-0.6**
TULEG				IAmb	IAmb	17 58 54.4	
	comp=Z,12nm,0.9s						
COLD	**Coldfoot**	**71.22**	**21**	P	**P**	**17 58 50.5**	**+1.5**
MLY	**Manley**	**72.42**	**23**	P	**P**	**17 58 57.5**	**+1.1**
MLY				IAmb	IAmb	17 59 00.3	
	comp=Z,38nm,1.8s						
NEA	**Nenana**	**73.26**	**23**	P	**P**	**17 59 02.1**	**+0.8**
NEA				IAmb	IAmb	17 59 06.0	
	comp=Z,16nm,1.0s						
ESBB	**Sonseca Array**	**73.44**	**307**	P	**P**	**17 59 02.4**	**-0.4**
ESDC	**Sonseca Array**	**73.44**	**307**	P	**P**	**17 59 02.5**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=53,slow=6.1,SNR=7.7						
ESDC				LR	LR	18 36 07.2	
	comp=Z,117nm,18.5s,baz=30,slow=40						
COLA	**College**	**73.47**	**22**	*eP*	**P**	**17 59 03.6**	**+1.1**
COLA				pmax	pmax		
	comp=Z,11nm,0.9s						
COLA	**College**	**73.47**	**22**	P	**P**	**17 59 03.3**	**+0.8**
RES	**Resolute Bay**	**73.61**	**1**	P	**P**	**17 59 03.5**	**+0.4**
RES				pmax	pmax		
	comp=Z,6.0nm,1.2s						
RES	**Resolute Bay**	**73.61**	**1**	P	**P**	**17 59 03.5**	**+0.4**
CCB	**Clear Creek Bu**	**73.63**	**22**	P	**P**	**17 59 03.6**	**+0.2**
CCB				IAmb	IAmb	17 59 17.8	
	comp=Z,20nm,1.5s						
PRP	**Porcupine Dome**	**73.77**	**21**	P	**P**	**17 59 05.7**	**+1.3**
IL31		**73.85**	**22**	P	**P**	**17 59 04.8**	**+0.1**
IL31				IAmb	IAmb	17 59 08.5	
	comp=Z,9.6nm,0.9s						
ILAR	**Eielson Array**	**73.85**	**22**	P	**P**	**17 59 04.9**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=297,slow=4.9,SNR=37						
ILAR				PP	**PP**	**18 01 48.5**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=298,slow=7.8,SNR=6.1						
ILAR				LR	LR	18 36 12.7	
	comp=Z,144nm,19.6s,baz=300,slow=40						
SKT	**Skwentna**	**74.06**	**26**	IAmb	IAmb	17 59 10.6	
	comp=Z,20nm,1.1s						
HDA	**Harding Lake**	**74.07**	**22**	P	**P**	**17 59 05.5**	**-0.5**
HDA				IAmb	IAmb	18 00 01.3	
	comp=Z,34nm,1.9s						
TAM	**Tamanrasset**	**74.15**	**287**	P	**P**	**17 59 07.1**	**-0.3**
TAM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TAM	**Tamanrasset**	**74.15**	**287**	P	**P**	**17 59 07.1**	**-0.3**
INK	**Inuvik**	**74.90**	**15**	P	**P**	**17 59 10.9**	**+0.2**
INK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
INK	**Inuvik**	**74.90**	**15**	P	**P**	**17 59 10.8**	**+0.2**
RIDG	**Independent Ri**	**75.20**	**22**	P	**P**	**17 59 10.8**	**-1.9**
SCRK	**Sand Creek**	**75.31**	**22**	P	**P**	**17 59 13.9**	**+0.5**
SCRK				IAmb	IAmb	17 59 17.9	
	comp=Z,13nm,1.0s						
SML	**Sawmill**	**75.33**	**25**	P	**P**	**17 59 14.4**	**+1.0**
C36M	**Paulatuk**	**75.93**	**12**	P	**P**	**17 59 16.1**	**-0.5**
C36M				IAmb	IAmb	17 59 31.2	
	comp=Z,15nm,1.2s						
STKA	**Stephens Creek**	**79.83**	**138**	P	**P**	**17 59 38.7**	**-0.1**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
STKA	**Stephens Creek**	**79.83**	**138**	P	**P**	**17 59 39.0**	**+0.2**
	comp=Z,6.2nm,0.8s,baz=330,slow=6.6,SNR=11						
STKA	**Stephens Creek**	**79.83**	**138**	P	**P**	**17 59 38.7**	**-0.1**
TOA0	**Torodi Ar. Sit**	**82.06**	**280**	IAmb	IAmb	17 59 54.6	
	comp=Z,8.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**82.06**	**280**	P	**P**	**17 59 50.7**	**-0.5**
	comp=Z,7.8nm,0.7s,baz=53,slow=4.1,SNR=18						
TORD				LR	LR	18 41 34.2	
	comp=Z,112nm,18.2s,baz=40,slow=40						
YKA	**Yellowknife Ar**	**83.80**	**11**	P	**P**	**17 59 59.2**	**-0.1**
	comp=Z,3.1nm,0.9s,baz=330,slow=5.1,SNR=25						
YKA				LR	LR	18 40 34.5	
	comp=Z,60nm,21.0s,baz=0.0,slow=38						
LBTB	**Lobatse**	**85.82**	**236**		**P**	**18 00 01.0**	**+0.9**
BOSA	**Boshof**	**86.33**	**233**	P	**P**	**18 00 12.1**	**-0.6**
	comp=Z,5.8nm,1.0s,baz=64,slow=4.1,SNR=4.8						
BOSA				LR	LR	18 36 57.0	
	comp=Z,116nm,18.3s,baz=72,slow=34						
BOSA	**Boshof**	**86.33**	**233**	P	**P**	**18 00 11.9**	**-0.7**
BOSA				IAmb	IAmb	18 00 22.6	
	comp=Z,8.7nm,0.9s						
DBIC	**Dimbokro**	**90.93**	**278**	LR	LR	18 45 00.2	
	comp=Z,156nm,18.7s,baz=44,slow=38						
SCHQ	**Schefferville**	**91.40**	**347**	LR	LR	18 46 21.8	
	comp=Z,101nm,19.4s,baz=0.0,slow=39						
ULM	**Lac du Bonnet**	**98.01**	**4**	LR	LR	18 46 45.0	
	comp=Z,100nm,19.3s,baz=62,slow=36						
TXAR	**Lajitas Array**	**117.64**	**14**	PKP	**PKiKP**	**18 06 16.9**	**0.0**
	comp=Z,1.2nm,0.9s,baz=337,slow=1.6,SNR=10						
SAML	**Samuel**	**146.47**	**307**	PKP2	**PKPbc**	**18 07 12.2**	**+0.1**
SAML	**Samuel**	**146.47**	**307**		**PKPbc**	**18 07 12.2**	**+0.1**
CPUP	**Villa Florida**	**151.30**	**273**	PKIKP	**PKPbc**	**18 07 23.2**	**-1.0**
CPUP	**Villa Florida**	**151.30**	**273**	PKPbc	**PKPbc**	**18 07 24.0**	**-0.1**
	comp=Z,12nm,0.9s,baz=49,slow=3.4,SNR=7.9						
CPUP	**Villa Florida**	**151.30**	**273**		**PKPbc**	**18 07 23.2**	**-1.0**

ROM 16 17:55:33.8±0.1,**43°399N**±0.003×**12°470E**±0.006,
h7km,ML0.4/1,Error ellipse: s-maj=0.5km s-min=0.3km az=286.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATVO	**AVT- Monte Val**	**0.05**	**250**	P	Pg	17 55 35.6	+0.2
ATVO				S	Sg	17 55 36.9	+0.3
ATPI	**Pietralunga -**	**0.07**	**317**	P	Pg	17 55 35.9	+0.2
ATPI				S	Sg	17 55 37.5	+0.4
PIEI	**Pieia**	**0.14**	**19**	P	Pg	17 55 37.3	+0.4
PIEI				S	Sg	17 55 39.9	+0.9
PIEI				AML	AML		
	comp=E,25μm,1.2s						
PIEI				AML	AML		
	comp=N,19μm,0.2s						
IMOL	**Imola, Italy**	**1.09**	**332**	P	Pg	17 55 50.1	-4.7

*IDC **16** 17:58:54.7±1.2,35°07N×80°90E,h0km,mb3.3/4, mb1 3.4/7,mb1mx3.2/35,mbtmp3.3/7,ML3.0/3,Error ellipse: s-maj=31.1km s-min=22.9km az=65.0*

ISC 16 17:58:56.7±0.9,**35°06N**±0°09×**80°9E**±0°2,**h16**km,**n18,**
σ1§08/18,mb3.3/4,Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**7.11**	**159**	*eP*	**Pn**	**18 00 39.3**	**-1.1**
	10nm,0.4s						
KOLN	**Koldanda**	**7.62**	**162**	*eP*	**Pn**	**18 00 45.5**	**-1.8**
	3.4nm,0.2s						
GKN	**Gorkha**	**7.71**	**155**	*eP*	**Pn**	**18 00 49.5**	**+0.9**
	11nm,0.3s						
KKN	**Kakani**	**8.14**	**152**	*eP*	**Pn**	**18 00 54.7**	**+0.2**
	10.0nm,0.6s						
GUN	**Gumba**	**8.29**	**148**	*eP*	**Pn**	**18 00 56.8**	**+0.2**
	7.7nm,0.5s						
PKIN	**Phulchoki**	**8.38**	**152**	*eP*	**Pn**	**18 00 57.7**	**-0.1**
	11nm,0.7s						
PKI	**Pulchoki**	**8.39**	**152**	*eP*	**Pn**	**18 00 57.7**	**-0.3**
	1.4nm,0.6s						
JIRN	**Jiri**	**8.64**	**147**	*eP*	**Pn**	**18 01 01.6**	**+0.2**
	25nm,0.5s						
RAMN	**Ramite**	**9.43**	**147**	*eP*	**Pn**	**18 01 10.9**	**-1.3**
	18nm,0.8s						
TAPN	**Taplejung**	**9.63**	**141**	*eP*	**Pn**	**18 01 13.4**	**-1.6**
ODAN	**Odare**	**9.87**	**144**	*eP*	**Pn**	**18 01 16.4**	**-1.9**
	11nm,0.6s						
MKAR	**Makanchi Array**	**11.76**	**5**	Pn	**Pn**	**18 01 43.0**	**-0.8**
	0.3nm,0.3s,baz=186,slow=12,SNR=14						
ZALV	**Zalesovo Beam**	**19.08**	**7**	P	**P**	**18 03 17.7**	**-0.7**
	0.1nm,0.3s,baz=195,slow=11,SNR=4.2						
BVAR	**Borovoye Array**	**19.45**	**341**	P	**Pn**	**18 03 24.1**	**+0.4**
	0.1nm,0.3s,baz=126,slow=9.1,SNR=2.9						
SONM	**Songino Array**	**22.84**	**48**	P	**P**	**18 04 00.3**	**+1.1**
	0.3nm,0.8s,baz=243,slow=9.5,SNR=3.6						
CMAR	**Chiang Mai Arr**	**23.00**	**131**	P	**P**	**18 04 02.3**	**+1.3**
	0.6nm,0.8s,baz=313,slow=12,SNR=5.1						
TORD	**Torodi Ar. Bea**	**73.83**	**275**	P	**P**	**18 10 31.4**	**+0.5**
	0.2nm,0.4s,baz=38,slow=6.3,SNR=3.0						
ASAR	**Alice Springs**	**77.02**	**131**	P	**P**	**18 10 49.2**	**+0.2**
	0.6nm,1.0s,baz=315,slow=6.2,SNR=4.4						

*GUC **16** 18:54:49.5±0.6,32°73S×71°49W,h29km±7km,ML3.4*
*SJA **16** 18:54:49.8±0.8,32°71S×71°41W,h8km±7km,ML3.0, MW3.0*

ISC 16 18:54:49.5±1.1,**32°74S**±0°03×**71°52W**±0°05,**h27**km±10km,
n37,σ1§78/59,4C-8D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.31**	**201**	*i* P	**Pb**	**18 54 56.7**	**-0.1**
VA01				*i* S	**Sb**	**18 55 01.9**	**+0.1**
ROC1	**El Roble**	**0.49**	**120**	*i* P	**Pb**	**18 54 59.4**	**-0.3**
ROC1				*i* S	**Sb**	**18 55 06.2**	**-0.5**
ROC1	**El Roble**	**0.49**	**120**	*e* P	**Pb**	**18 54 59.4**	**-0.3**
ROC1				*i* S	**Sb**	**18 55 06.5**	**-0.3**
ROCH	**El Roble**	**0.49**	**119**	*i* P	**Pb**	**18 54 59.4**	**-0.4**
ROCH				*i* S	**Sb**	**18 55 06.4**	**-0.3**
ROCH				IAML		18 55 07.5	
	comp=E,5μm,0.3s						
PEL	**Peldehue**	**0.81**	**120**	*i* P	**Pn**	**18 55 03.6**	**-1.6**
PEL				*i* S	**Sb**	**18 55 15.5**	**-0.1**
PEL				IAML		18 55 15.9	
	comp=N,3μm,0.2s						
PEL	**Peldehue**	**0.81**	**120**	*i* P	**Pn**	**18 55 04.4**	**-0.8**
PEL				*i* S	**Sb**	**18 55 15.5**	**-0.1**
VA03	**San Esteban**	**0.82**	**92**	*i* P	**Pn**	**18 55 04.0**	**-1.3**
VA03				*i* S	**Sb**	**18 55 15.0**	**-0.9**
MT05	**Renca**	**0.93**	**135**	*i* P	**Pn**	**18 55 06.2**	**-0.6**
MT05				*i* S	**Sb**	**18 55 18.9**	**-0.1**
MT05				IAML		18 55 19.4	
	comp=E,4μm,0.2s						
RCDM	**Rinconada Maip**	**0.96**	**142**	*i* P	**Pb**	**18 55 07.4**	**-0.1**
RCDM				*i* S	**Sb**	**18 55 20.3**	**+0.4**
CLCH	**Cerro Calan**	**1.06**	**129**	*i* P	**Pn**	**18 55 08.2**	**-0.4**
CLCH				*i* S	**Sn**	**18 55 22.1**	**-0.4**
CLCH				IAML		18 55 23.2	
	comp=N,1μm,0.5s						
FSR	**Penalolen**	**1.11**	**132**	*e* P	**Pb**	**18 55 10.2**	**0.0**
FSR				*i* S	**Sb**	**18 55 24.6**	**+0.2**
ANTU	**Antumapu**	**1.11**	**138**	*i* P	**Pb**	**18 55 10.2**	**0.0**
ANTU				*i* S	**Sb**	**18 55 24.7**	**+0.3**
ANTU				IAML		18 55 25.6	
	comp=E,627nm,0.5s						
MT03	**Universidad Ad**	**1.14**	**132**	*i* P	**Pn**	**18 55 09.4**	**-0.3**
MT03				*i* S	**Sn**	**18 55 24.6**	**+0.1**
FCH	**Farellones**	**1.19**	**120**	*i* P	**Pn**	**18 55 10.2**	**-0.5**
FCH				*i* S	**Sn**	**18 55 26.0**	**-0.1**
FCH				IAML		18 55 26.5	
	comp=E,2μm,0.2s						
LMEL	**Las Melosas**	**1.56**	**136**	*i* P	**Pn**	**18 55 16.2**	**+0.6**
LMEL				*i* S	**Sb**	**18 55 36.4**	**-0.9**
LMEL				IAML		18 55 40.6	
	comp=E,910nm,0.2s						
CO02	**Combarbal**	**1.59**	**16**	*i* P	**Pn**	**18 55 16.4**	**+0.4**
CO02				*i* S	**Sb**	**18 55 37.2**	**-0.7**
ASAL	**Salagasta**	**2.27**	**87**	*i* P	**Pb**	**18 55 29.3**	**-0.5**
ASAL				*i* S	**Sb**	**18 56 00.9**	**+3.5**
AAGR	**Agrelo**	**2.29**	**100**	*e* P	**Pb**	**18 55 29.2**	**-1.0**
GO05	**Huala**	**2.29**	**188**	*i* P	**Pn**	**18 55 25.6**	**0.0**
GO04	**Tololo Observa**	**2.63**	**14**	*i* P	**Pn**	**18 55 31.8**	**+1.4**
GO04	**Tololo Observa**	**2.63**	**14**	*i* P	**Pn**	**18 55 32.2**	**+1.8**
GO04				*i* S	**Sb**	**18 56 07.8**	**-0.2**
RTCV	**Cerro Valdivia**	**2.67**	**72**	*i* P	**Pb**	**18 55 35.5**	**-1.1**
RTLL	**Cerro Villicun**	**2.94**	**62**	*i* P	**Pb**	**18 55 38.2**	**-3.0**
RTLL				*i* S	**Sb**	**18 56 14.2**	**-2.5**
RTLL				IAML		18 56 18.8	
	comp=Z,44nm,0.4s						
RTLL	**Cerro Villicun**	**2.94**	**62**	*i* P	**Pb**	**18 55 38.2**	**-3.0**
RTLL				*i* S	**Sb**	**18 56 15.8**	**-1.0**
RTLL				IAML		18 56 18.8	
	comp=Z,44nm,0.4s						
ACCO	**Cerro Coronel**	**2.99**	**45**	*i* P	**Pb**	**18 55 39.9**	**-2.4**
ACCO	**Cerro Coronel**	**2.99**	**45**	*e* P	**Pb**	**18 55 40.0**	**-2.4**
ACCO				*i* S	**Sb**	**18 56 16.9**	**-1.7**
CFA	**Coronel Fontan**	**3.00**	**69**	*i* P	**Pb**	**18 55 38.9**	**-3.4**
AROD	**Rodeo**	**3.10**	**35**	*e* P	**Pb**	**18 55 41.2**	**-3.0**
AMOG	**MOGNA**	**3.14**	**56**	*i* P	**Pn**	**18 55 39.9**	**+2.6**
AMOG	**MOGNA**	**3.14**	**56**	*e* P	**Pn**	**18 55 39.9**	**+2.6**
PUMA	**Malargue**	**3.25**	**149**	*i* P	**Pb**	**18 55 43.4**	**-3.0**
ACAN	**Cantantal**	**3.69**	**84**	*i* P	**Pn**	**18 55 48.0**	**+3.2**
ACAN	**Cantantal**	**3.69**	**84**	*i* P	**Pn**	**18 55 48.0**	**+3.2**
AGUA	**GUANDACOL**	**4.15**	**40**	*i* P	Pn	18 55 56.0	+4.8
APLL	**PUNTA DE LOS L**	**4.86**	**63**	*i* P	**Pn**	**18 56 03.3**	**+2.5**
APLL				*i* S	**Sn**	**18 57 00.6**	**+4.4**
APLL				IAML		18 57 06.6	
	comp=Z,10nm,0.6s						
ACLC	**CERRO LA CRUZ**	**5.12**	**51**	*i* P	**Pn**	**18 56 08.3**	**+3.7**
TCA	**Tanti**	**6.04**	**79**	*i* P	**Pn**	**18 56 18.0**	**+0.8**
TCA				IAML		18 56 19.4	
	comp=Z,7.4nm,0.4s						
TCA				*i* S	**Sn**	**18 57 26.0**	**+0.5**

*IDC **16** 18:59:08.1±2.3,43°43N×105°30W,h0km,mb4.0/2, mb1 4.0/5,mb1mx3.5/52,mbtmp3.8/5,ML3.6/3,Error ellipse: s-maj=55.9km s-min=8.4km az=154.0*
*NEIC **16** 18:59:10.9±1.6,43°69N±0°05×105°30W±0°01,h0km±2km, ML3.5/61,Error ellipse: s-maj=8.8km s-min=3.1km az=1.0*

ISC 16 18:59:09.8±0.8,**43°72N**±0°05×**105°27W**±0°06,**h0**km,**n64,**
σ1§12/63,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**65**		**Pb**	**18 59 29.7**	**-0.1**
K22A	**Casper**	**1.40**	**221**		**Pg**	**18 59 34.8**	**-1.9**
K22A				IAML		18 59 58.4	
	comp=N,678nm,0.3s						
K22A				IAML		18 59 58.8	
	comp=E,549nm,0.9s						
PHWY	**Pilot Hill**	**2.42**	**183**		**Pn**	**18 59 51.2**	**+0.3**
RWWY	**Rawlins**	**2.48**	**216**		**Pn**	**18 59 51.9**	**+0.2**
RWWY				IAML		19 00 27.0	
	comp=E,276nm,1.2s						
RWWY				IAML		19 00 27.8	
	comp=E,282nm,1.1s						
N23A	**Red Feather La**	**2.86**	**190**		**Pn**	**18 59 57.6**	**+0.6**
N23A				IAML		19 00 40.8	
	comp=E,159nm,0.8s						
N23A				IAML		19 00 46.2	
	comp=N,133nm,0.7s						
LAO	**LASA Array**	**3.05**	**348**		**Pn**	**19 00 00.8**	**+1.5**
LAO				IAML		19 00 59.3	
	comp=N,190nm,1.0s						
RLMT	**Red Lodge**	**3.19**	**298**		**Pn**	**19 00 02.0**	**+0.6**
RLMT				IAML		19 00 52.9	
	comp=N,78nm,0.3s						
RLMT				IAML		19 00 54.4	
	comp=N,91nm,0.4s						
BW06	**Boulder Array**	**3.27**	**255**		**Pn**	**19 00 02.9**	**+0.4**
BW06				IAML		19 00 52.7	
	comp=N,71nm,0.8s						
PD31	**Pinedale Array**	**3.27**	**255**		**Pn**	**19 00 02.7**	**+0.1**
PDAR	**Pinedale Array**	**3.27**	**255**	Pn	**Pn**	**19 00 03.0**	**+0.4**
	comp=N,5.7nm,0.3s,baz=71,slow=15,SNR=70						
PDAR				Lg	Lg	19 00 47.7	
	comp=N,29nm,0.3s,baz=75,slow=22,SNR=15						
PDAR	**Pinedale Array**	**3.27**	**255**		**Pn**	**19 00 02.9**	**+0.3**
YNE	**Yellowstone No**	**3.63**	**292**		**Pn**	**19 00 08.2**	**+0.7**
YMP	**Mirror Lake Pl**	**3.66**	**288**		**Pn**	**19 00 09.0**	**+1.1**
OGNE	**Ogallala**	**3.67**	**138**		**Pn**	**19 00 09.6**	**+1.8**
GCMT	**Greycliff**	**3.75**	**305**		**Pn**	**19 00 10.2**	**+1.1**
LKWY	**Lake**	**3.79**	**285**		**Pn**	**19 00 10.8**	**+1.1**
LKWY				IAML		19 00 43.7	
	comp=N,65nm,0.6s						
H17A	**Grant Village**	**3.88**	**282**		**Pn**	**19 00 12.7**	**+1.7**
H17A				IAML		19 01 15.0	
	comp=N,47nm,0.4s						
H17A				IAML		19 01 15.9	
	comp=E,42nm,1.8s						
ISCO	**Idaho Springs**	**3.92**	**184**		**Pn**	**19 00 12.3**	**+0.8**
FLWY	**Flagg Ranch**	**3.94**	**277**		**Pn**	**19 00 13.2**	**+1.4**
FLWY				IAML		19 01 24.2	
	comp=E,76nm,1.1s						
FLWY				IAML		19 01 29.3	
	comp=E,88nm,1.9s						
MOOW	**Moose Ponds**	**3.97**	**272**		**Pn**	**19 00 13.1**	**+1.0**
SNOW	**Snow King Moun**	**3.99**	**268**		**Pn**	**19 00 13.7**	**+1.2**
SNOW				IAML		19 01 19.0	
	comp=E,62nm,1.0s						
SNOW				IAML		19 01 31.5	
	comp=E,90nm,0.9s						
YNR	**Norris Junctio**	**4.01**	**286**		**Pn**	**19 00 13.2**	**+0.4**
YPP	**Pitchstone Pla**	**4.03**	**280**		**Pn**	**19 00 13.4**	**+0.3**
REDW	**Red Top Meadow**	**4.07**	**267**		**Pn**	**19 00 15.6**	**+2.1**
REDW				IAML		19 01 30.3	
	comp=E,81nm,1.5s						
REDW				IAML		19 01 33.8	
	comp=E,81nm,0.9s						
TPAW	**Teton Pass**	**4.13**	**269**		**Pn**	**19 00 16.2**	**+1.8**
TPAW				IAML		19 01 44.2	
	comp=E,76nm,1.0s						
YMR	**Madison River**	**4.20**	**285**		**Pn**	**19 00 16.8**	**+1.4**
O20A	**White River Ci**	**4.21**	**213**		**Pn**	**19 00 16.1**	**+0.7**
O20A				IAML		19 01 58.3	
	comp=E,70nm,1.7s						
YHB	**Horse Butte**	**4.38**	**286**		**Pn**	**19 00 18.0**	**+0.2**
YHL	**Hebgen Lake**	**4.39**	**287**		**Pn**	**19 00 18.8**	**+0.7**
RDMU	**Red Mountain**	**4.48**	**227**		**Pn**	**19 00 20.7**	**+1.6**
QLMT	**Earthquake Lak**	**4.56**	**286**		**Pn**	**19 00 20.4**	**+0.2**
SMCO	**Snowmass**	**4.71**	**196**	Pg	**Pb**	**19 00 34.7**	**+1.2**
SMCO				IAML		19 01 53.1	
	comp=E,32nm,0.8s						
SMCO				IAML		19 01 55.0	
	comp=E,33nm,1.1s						
DGMT	**Dagmar**	**4.81**	**9**		**Pn**	**19 00 25.9**	**+2.3**
HWUT	**Hardware Ranch**	**5.09**	**248**		**Pn**	**19 00 27.7**	**+0.1**
TCUT	**Toone Canyon**	**5.23**	**242**		**Pn**	**19 00 30.7**	**+1.2**
EGMT	**Eagleton**	**5.33**	**326**		**Pn**	**19 00 32.0**	**+1.3**
DLMT	**Dillon**	**5.49**	**290**		**Pn**	**19 00 33.8**	**+0.8**
LRM	**Limekiln Ridge**	**5.53**	**295**		**Pn**	**19 00 35.6**	**+2.0**
MCMT	**McKenzie Canyo**	**5.55**	**284**		**Pn**	**19 00 33.8**	**-0.2**
SPUT	**South Promonto**	**5.82**	**248**		**Pn**	**19 00 39.0**	**+1.4**
P17A	**Butcher Ranch,**	**5.89**	**226**		**Pn**	**19 00 40.1**	**+1.6**
SDCO	**Great Sand Dun**	**5.97**	**182**		**Pn**	**19 00 41.1**	**+1.4**
SRU	**San Rafael Swe**	**6.06**	**222**		**Pn**	**19 00 40.9**	**+0.1**
S22A	**4UR Ranch, Cre**	**6.08**	**192**		**Pn**	**19 00 43.2**	**+2.0**
TMUT	**Trail Mountain**	**6.27**	**227**		**Pn**	**19 00 44.6**	**+0.8**
ECSD	**EROS Data Cent**	**6.28**	**87**		**Pn**	**19 00 44.8**	**+1.2**
NLU	**North Lily Min**	**6.32**	**236**		**Pn**	**19 00 44.7**	**+0.3**
Q16A	**Castle Valley**	**6.53**	**225**		**Pn**	**19 00 47.8**	**+0.4**
T25A	**Trinidad**	**6.60**	**174**		**Pn**	**19 00 49.6**	**+1.3**
DUG	**Dugway, Tooele**	**6.63**	**241**		**Pn**	**19 00 49.4**	**+0.7**
MSO	**Missoula**	**6.86**	**300**	Pn	**Pn**	**19 00 51.3**	**-0.5**
MSU	**Marysvale**	**7.36**	**227**		**Pn**	**19 00 59.8**	**+1.1**
JTMT	**Jette**	**7.48**	**306**		**Pn**	**19 01 02.2**	**+1.9**
MTPU	**Mount Pierson**	**7.71**	**225**		**Pn**	**19 01 03.1**	**-0.6**
WALA	**Waterton Lakes**	**8.01**	**315**		Lg	19 03 32.1	
PSUT	**Pine Spring**	**8.29**	**234**		**Pn**	**19 01 12.5**	**+1.1**
U15A	**North Rim**	**9.05**	**219**	Pn	**Pn**	**19 01 21.9**	**0.0**
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn	**Pn**	**19 01 22.3**	**-0.8**
	comp=E,2.6nm,0.3s,baz=234,slow=11,SNR=16						
ULM				Lg	Lg	19 03 58.4	
	comp=E,0.7nm,0.3s,baz=160,slow=22,SNR=2.7						
WUAZ	**Wupatki**	**9.44**	**212**		**Pn**	**19 01 26.1**	**-1.1**
FFC	**Flin Flon**	**11.23**	**10**		**Pn**	**19 01 50.5**	**-0.9**
YERR	**Yerington**	**11.51**	**251**	Pn	**Pn**	**19 01 55.1**	**-0.4**
YKA	**Yellowknife Ar**	**19.59**	**347**	P	**P**	**19 03 39.7**	**+0.6**
	comp=E,0.1nm,0.3s,baz=157,slow=12,SNR=3.9						
ARCES	**ARCESS Array B**	**61.44**	**18**	P	**P**	**19 09 27.0**	**-0.5**
	comp=E,2.9nm,0.9s,baz=332,slow=6.9,SNR=8.1						
FINES	**FINESS Array B**	**68.05**	**23**	P	**P**	**19 10 10.8**	**+0.1**
	comp=E,1.7nm,0.9s,baz=282,slow=7.0,SNR=3.4						

*DDA **16** 19:13:00.5,42°32N×41°05E,h6km±2km,ML2.2*
*NORS **16** 19:13:00.7±0.0,42°51N×41°17E,h7km,MPVA3.4*
*TIF **16** 19:13:00.0,42°37N×41°02E,h14km±3km*

ISC 16 19:13:00.5±1.9,**42°35N**±0°04×**41°03E**±0°08,**h10**km±14km,
n12,σ1§19/24,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBOC	**Borcka**	**1.11**	**154**	*i* P	**Pg**	**19 13 22.0**	**+0.2**
DBOC				*i* S	**Sb**	**19 13 37.4**	**+1.0**
DBOC				IAML		19 13 38.0	
	comp=E,150nm,0.1s						
DBAD	**Bademkaya**	**1.42**	**159**	*i* P	**Pn**	**19 13 26.7**	**+0.2**
DBAD				*i* S	**Sb**	**19 13 41.1**	**-4.3**
DBAD				IAML		19 13 47.0	
	comp=N,41nm,0.2s						
DBAD				IAML		19 13 51.0	
	comp=E,60nm,0.3s						
DAGI	**Agillar**	**1.43**	**152**	*i* P	**Pn**	**19 13 27.0**	**+0.3**
DAGI				*i* S	**Sb**	**19 13 45.4**	**-0.3**
DAGI				IAML		19 13 48.0	
	comp=N,26nm,0.7s						
DAGI				IAML		19 13 48.0	
	comp=E,25nm,0.3s						
EPOS	**Posof**	**1.52**	**123**	*i* P	**Pn**	**19 13 28.7**	**+0.8**
EPOS				*i* S	**Sg**	**19 13 49.7**	**+0.2**
EPOS				IAML		19 13 55.0	
	comp=E,22nm,0.4s						
EPOS				IAML		19 13 56.0	
	comp=N,53nm,0.7s						
NEY	**Neytrino**	**1.54**	**54**	*e*Pg	**Pn**	**19 13 28.3**	**+0.2**
NEY				*e*Sg	**Sb**	**19 13 48.8**	**+0.1**
DDEM	**Demirkent**	**1.55**	**159**	*i*

JKA Kamikawa-asahi 5.92 6 Pn 19 34 08.9 +0.1
USRK Ussuriysk Ar. 9.49 312 P **Pn 19 34 59.0 +1.1**
baz=118,slow=14,SNR=15
USRK Ussuriysk Ar. 9.49 312 Pn 19 34 58.9 +1.1
JNU Nakatsue 10.23 243 LR LR 19 39 04.6
comp=Z,63nm,20.1s,baz=29,slow=37
KSRS Korea Array 11.00 270 P **Pn 19 35 19.5 +1.0**
0.2nm,0.3s,baz=60,slow=14,SNR=2.9
KSRS LR LR 19 38 49.1
comp=Z,46nm,21.0s,baz=56,slow=33
KLR Kul'dur 13.17 330 LR LR 19 39 56.1
comp=Z,24nm,19.9s,baz=148,slow=33
PETK Petropavlovsk- 18.51 31 LR LR 19 44 18.7
comp=Z,36nm,18.2s,baz=62,slow=38
SONM Songino Array 27.39 302 P **P 19 38 24.8 -0.2**
0.4nm,0.4s,baz=98,slow=10,SNR=5.4
SONM Songino Array 27.39 302 P **P 19 38 24.8 -0.2**
H11N2 WAKE ISLAND Hy 28.52 123 T T 20 08 49.1
baz=316,slow=76,SNR=1384
H11N1 WAKE ISLAND Hy 28.53 123 T T 20 08 49.8
baz=316,slow=76,SNR=1962
H11N3 WAKE ISLAND Hy 28.54 123 T T 20 08 50.3
baz=316,slow=76,SNR=1189
H11S1 WAKE ISLAND Hy 29.28 125 T T 20 09 46.4
baz=317,slow=76,SNR=786
H11S3 WAKE ISLAND Hy 29.28 125 T T 20 09 47.0
baz=317,slow=76,SNR=1071
H11S2 WAKE ISLAND Hy 29.29 125 T T 20 09 47.3
baz=317,slow=76,SNR=501
ZAA0 Zalesovo Array 41.34 311 P **P 19 40 24.9 -0.1**
ZAA0 IAmb IAmb 19 40 42.7
comp=Z,3.7nm,0.8s
ZALV Zalesovo Beam 41.34 311 P **P 19 40 24.2 -0.8**
comp=Z,3.1nm,0.4s,baz=86,slow=7.3,SNR=13
ZALV sP **sP 19 40 42.0 -0.6**
comp=Z,3.2nm,0.6s,baz=83,slow=7.6,SNR=6.8
ZALV Zalesovo Beam 41.34 311 P **P 19 40 24.0 -0.9**
MK31 Makanchi Array 43.75 301 P **P 19 40 44.4 -0.3**
MKAR Makanchi Array 43.75 301 P **P 19 40 44.0 -0.6**
comp=Z,2.0nm,0.6s,baz=85,slow=9.8,SNR=26
MKAR sP **sP 19 41 02.0 -0.3**
comp=Z,1.7nm,0.7s,baz=88,slow=10.0,SNR=7.0
KURK Kurchatov 45.44 307 P **P 19 40 57.7 -0.3**
WRA Warramunga Arr 58.28 188 P **P 19 42 33.4 -0.6**
comp=Z,0.8nm,0.4s,baz=5.6,slow=7.1,SNR=10
WRA pP **pP 19 42 47.2 +0.6**
comp=Z,1.3nm,0.7s,baz=6.9,slow=7.4,SNR=3.4
WRA Warramunga Arr 58.28 188 P **P 19 42 33.5 -0.4**
RES Resolute Bay 61.37 15 P **P 19 42 55.0 +0.5**
comp=Z,0.4nm,0.4s,baz=301,slow=5.0,SNR=4.6
RES Resolute Bay 61.37 15 P **P 19 42 54.7 +0.2**
RES IAmb IAmb 19 43 27.0
comp=Z,5.5nm,1.4s
ASAR Alice Springs 62.01 188 P **P 19 42 59.0 -0.3**
comp=Z,0.5nm,0.6s,baz=354,slow=4.5,SNR=13
ASAR Alice Springs 62.01 188 P **P 19 42 59.3 -0.1**
YKA Yellowknife Ar 62.63 31 P **P 19 43 03.8 +0.7**
comp=Z,0.1nm,0.3s,baz=293,slow=6.0,SNR=4.2
ARCES ARCESS Array B 62.99 339 P **P 19 43 05.4 0.0**
comp=Z,3.6nm,1.0s,baz=32,slow=7.1,SNR=5.7
ARCES ARCESS Array B 62.99 339 P **P 19 43 05.3 -0.2**
FINES FINESS Array B 67.90 332 P **P 19 43 37.0 -0.3**
comp=Z,2.2nm,0.8s,baz=46,slow=8.0,SNR=3.6
FINES FINESS Array B 67.90 332 P **P 19 43 37.3 +0.1**
NOA NORSAR Array B 73.20 337 P **P 19 44 09.7 0.0**
comp=Z,1.1nm,0.8s,baz=51,slow=6.9,SNR=5.3
AKASG Malin Array Be 73.54 322 P **P 19 44 11.1 -0.6**
comp=Z,0.6nm,0.4s,baz=45,slow=6.4,SNR=8.9
AKASG pP **pP 19 44 24.0 -0.9**
comp=Z,0.4nm,0.3s,baz=50,slow=5.9,SNR=3.9
AKASG sP **sP 19 44 29.6 -0.4**
comp=Z,0.8nm,0.4s,baz=46,slow=5.8,SNR=4.1

IDC **16** *20:02:43.3±0.4,54.06S×6.94E,h0km,mb4.9/21, mb1 4.9/22,mb1mx4.9/26,mbtmp4.9/22,ML4.7/1,MS4.6/22, Ms1 4.6/22,ms1mx4.5/30,Error ellipse: s-maj=15.2km s-min=13.0km az=108.0*
MOS **16** *20:02:44.4±1.3,54.10S×6.98E,h10km,mb5.2/18,Error ellipse: s-maj=18.6km s-min=9.6km az=84.0*
NEIC **16** *20:02:45.6±1.8,54.15S±0.1×6.9E±0.2,h10km±1km, mb5.2/45,Error ellipse: s-maj=18.4km s-min=16.4km az=134.0*
GCMT **16** *20:02:46.6±0.1,54.07S±0.01×7.32E±0.02,h12km, MW5.3/151,Moment Tensor Solution. s81,c112; s151,c274; Duration: 1!1 Moment tensor: Scale 10^17 Nm; Mrr~1.09±.01; Mθθ 1.01±.01; Mφφ 0.07±.01; Mrθ 0.12±.04; Mθφ~0.32±.01; Mφr~0.10±.04; Best double couple: Mo1.11100×10^17 NP1:φs 104.00000°,δ41.00000°, λ-95.00000°. NP2:φs 290.00000°,δ49.00000°, λ-86.00000°. Principal axes: T 1.1190, Plg4.0000°, Azm17.0000°; N -0.0170, Plg3.0000°, Azm108.0000°; P -1.1030, Plg85.0000°, Azm237.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 16 20:02:45.4±0.2,54.09S±0.06×6.91E±0.06,h10km,n404, σ1s08/381,mb5.1/41,MS4.7/28,5C-9D,Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
NVL	**N'lazarevskaya**	**16.88**	**174**	*e*P		**Pn**	**20 06 39.1**	**-2.2**
NVL					pmax	pmax		
	comp=Z,106nm,0.9s							
VNA1	**Neumayer--Stat**	**17.94**	**196**	P		**P**	**20 06 55.3**	**+0.2**
SNAA	**Sanae**	**18.15**	**190**	P		**P**	**20 06 59.0**	**+1.5**
SNAA	**Sanae**	**18.15**	**190**	*c* iP		**Pn**	**20 06 56.7**	**-0.5**
SNAA	**Sanae**	**18.15**	**190**	P		**Pn**	**20 06 56.5**	**-0.6**
	comp=Z,2.4nm,0.3s,baz=7.1,slow=10,SNR=244							
SNAA					LR	LR	20 12 37.4	
	comp=Z,5μm,19.6s,baz=16,slow=33							
SNAA	**Sanae**	**18.15**	**190**	P		**Pn**	**20 06 57.1**	**-0.1**
SNAA					IAmb	IAmb	20 07 00.1	
	comp=Z,168nm,0.9s							
VNA3	**Neumayer Olymp**	**18.69**	**197**	P		**Pn**	**20 07 04.1**	**+0.4**
SYO	**Syowa Base**	**21.18**	**147**	‖ *i* P		**P**	**20 07 28.0**	**-2.4**
SYO	**Syowa Base**	**21.18**	**147**	‖ *i* pP		pP	20 07 35.6	+3.0
SYO	**Syowa Base**	**21.18**	**147**	‖ *i* PnPn		P	20 07 45.4	+15
SUR	**Sutherland**	**23.86**	**30**	P		**P**	**20 07 58.2**	**-0.7**
	comp=Z,18nm,1.0s,baz=199,slow=7.1,SNR=7.1							
SUR					LR	LR	20 14 51.1	
	comp=Z,4μm,20.8s,baz=190,slow=30							
SUR	**Sutherland**	**23.86**	**30**	P		**P**	**20 07 59.7**	**+0.7**
BOSA	**Boshof**	**28.77**	**35**	P		**P**	**20 08 43.1**	**-0.1**
BOSA					pmax	pmax		
	comp=Z,11nm,0.9s							
BOSA	**Boshof**	**28.77**	**35**	P		**P**	**20 08 42.5**	**-0.7**
	comp=Z,13nm,1.0s,baz=177,slow=7.6,SNR=12							
BOSA					LR	LR	20 17 56.2	
	comp=Z,4μm,20.7s,baz=198,slow=32							
BOSA	**Boshof**	**28.77**	**35**	P		**P**	**20 08 43.1**	**-0.1**
MAW	**Mawson**	**29.22**	**139**	P		**P**	**20 08 47.8**	**+1.1**
MAW					pmax	pmax		
	comp=Z,19nm,1.7s							
MAW	**Mawson**	**29.22**	**139**	P		**P**	**20 08 46.7**	**+0.1**
	comp=Z,11nm,1.1s,baz=262,slow=12,SNR=4.6							
MAW					LR	LR	20 18 14.9	
	comp=Z,903nm,21.8s,baz=278,slow=32							
MAW	**Mawson**	**29.22**	**139**	P		**P**	**20 08 47.8**	**+1.1**
LBTB	**Lobatse**	**32.21**	**33**	P		**P**	**20 09 12.7**	**-0.9**
LBTB					pmax	pmax		
	comp=Z,26nm,1.5s							
LBTB	**Lobatse**	**32.21**	**33**	P		**P**	**20 09 12.7**	**-0.9**
LBTB					IAmb	IAmb	20 10 15.7	
	comp=Z,26nm,1.4s							
PMSA	**Palmer Station**	**35.66**	**224**	P		**P**	**20 09 42.3**	**-0.8**
	comp=Z,27nm,0.9s,baz=36,slow=2.8,SNR=4.9							
PMSA	**Palmer Station**	**35.66**	**224**	*e*P		**P**	**20 09 45.2**	**+2.1**
PMSA	**Palmer Station**	**35.66**	**224**	P		**P**	**20 09 44.1**	**+1.0**
PMSA					IAmb	IAmb	20 09 45.4	
	comp=Z,64nm,1.1s							
QSPA	**South Pole Qui**	**36.15**	**180**	P		**P**	**20 09 47.7**	**+0.2**
	comp=Z,80nm,0.8s,baz=226,slow=4.7,SNR=181							
QSPA	**South Pole Qui**	**36.15**	**180**	P		**P**	**20 09 47.5**	**0.0**
USHA	**Ushuaia**	**41.81**	**237**	P		**P**	**20 10 34.2**	**-0.5**
	comp=Z,8.0nm,0.7s,baz=125,slow=6.3,SNR=3.7							
LSZ	**Lusaka**	**42.15**	**31**	P		**P**	**20 10 36.9**	**-1.1**
LSZ					pmax	pmax		
	comp=Z,64nm,1.7s							
LSZ	**Lusaka**	**42.15**	**31**			**P**	**20 10 36.9**	**-1.1**
LSZ					IAmb	IAmb	20 10 44.7	
	comp=Z,64nm,1.6s							
ABPO	**Ambohimpanom**	**46.63**	**57**	P		**P**	**20 11 14.0**	**+0.1**
ABPO					pmax	pmax		
	comp=Z,40nm,1.4s							
ABPO	**Ambohimpanom**	**46.63**	**57**	P		**P**	**20 11 13.9**	**+0.1**
ABPO					IAmb	IAmb	20 11 23.1	
	comp=Z,40nm,1.4s							
OGAUY	**Aigu**	**46.74**	**269**	*e*P		**P**	**20 11 16.9**	**+2.4**
VNDA	**Vanda**	**47.73**	**173**	P		**P**	**20 11 22.2**	**+0.6**
	comp=Z,25nm,0.9s,baz=222,slow=7.5,SNR=45							
VNDA					LR	LR	20 31 02.5	
	comp=Z,2μm,18.5s,baz=192,slow=36							
VNDA	**Vanda**	**47.73**	**173**	P		**P**	**20 11 21.7**	**+0.1**
PLTB	**Pedras Altas**	**47.91**	**272**	*e*P		**P**	**20 11 25.4**	**+1.8**
CPSB	**Cacapava Do Su**	**48.80**	**274**	*e*P		**P**	**20 11 32.5**	**+2.1**
VAS01	**Vassouras-RJ**	**49.25**	**290**	*e*P		**P**	**20 11 34.7**	**+0.6**
PARB	**Paraibuna**	**49.63**	**287**	*e*P		**P**	**20 11 38.5**	**+1.5**
ITAB	**Concordia**	**50.38**	**278**	*e*P		**P**	**20 11 44.1**	**+1.5**
SPB	**Sao Paulo**	**50.46**	**285**	*e*P		**P**	**20 11 44.8**	**+1.6**
SPB	**Sao Paulo**	**50.46**	**285**	P		**P**	**20 11 43.2**	**0.0**
SPB					IAmb	IAmb	20 11 46.3	
	comp=Z,25nm,1.1s							
SJMB	**Sao Joao De Ma**	**50.92**	**295**	*e*P		**P**	**20 11 46.2**	**-0.4**
BSCB	**Bom Sucesso**	**51.02**	**289**	*e*P		**P**	**20 11 47.9**	**+0.4**
ITQB	**Itaqui**	**51.21**	**272**	*e*P		**P**	**20 11 50.4**	**+1.6**
PLCA	**Paso Flores**	**51.51**	**251**	P		**P**	**20 11 50.4**	**-0.5**
	comp=Z,4.9nm,0.9s,baz=175,slow=7.1,SNR=8.4							
PLCA					LR	LR	20 30 40.0	
	comp=Z,449nm,22.0s,baz=154,slow=32							
PLCA	**Paso Flores**	**51.51**	**251**	*e*P		**P**	**20 11 50.9**	**-0.1**
PLCA	**Paso Flores**	**51.51**	**251**	P		**P**	**20 11 50.0**	**-1.0**
FRTB	**Fartura**	**51.87**	**283**	*e*P		**P**	**20 11 55.5**	**+1.6**
PTGB	**Pitanga**	**52.26**	**280**	*e*P		**P**	**20 11 58.4**	**+1.6**
GO06	**Curarrehue**	**52.81**	**252**	P		**P**	**20 11 58.3**	**-2.4**
GO06					IAmb	IAmb	20 12 28.5	
	comp=Z,40nm,1.9s							
BB19B	**Bebedouro**	**53.07**	**286**	*e*P		**P**	**20 12 03.6**	**+0.9**
PMNB	**Patos De Minas**	**53.92**	**290**	*e*P		**P**	**20 12 08.5**	**-0.6**
TRCB	**Terra Rica**	**54.07**	**281**	*e*P		**P**	**20 12 12.5**	**+2.4**
CPUP	**Villa Florida**	**54.11**	**274**	P		**P**	**20 12 10.0**	**-0.3**
CPUP	**Villa Florida**	**54.11**	**274**	P		**P**	**20 12 10.0**	**-0.3**
	comp=Z,42nm,1.0s,baz=137,slow=8.5,SNR=2.9							
CPUP					LR	LR	20 33 02.8	
	comp=Z,186nm,19.1s,baz=145,slow=34							
CPUP	**Villa Florida**	**54.11**	**274**	*e*P		**P**	**20 12 11.2**	**+0.9**
PCMB	**Pacaembu**	**54.20**	**283**	*e*P		**P**	**20 12 13.3**	**+2.3**
ITRB	**Iturama**	**55.19**	**285**	*e*P		**P**	**20 12 19.6**	**+1.4**
IPMB	**Ipameri, GO**	**55.35**	**288**	*e*P		**P**	**20 12 19.4**	**0.0**
JANB	**Januaria**	**55.60**	**294**	*e*P		**P**	**20 12 20.2**	**-1.0**
NBLA	**Lagarto - SE**	**55.65**	**303**	*e*P		**P**	**20 12 20.0**	**-1.5**
NBAN	**Anadia - AL**	**56.06**	**306**	*e*P		**P**	**20 12 25.1**	**+0.7**
NBRF	**Rio Formoso -**	**56.38**	**307**	*e*P		**P**	**20 12 27.1**	**+0.4**
MBAR	**Mbarara**	**56.82**	**29**	*de*P		**P**	**20 12 30.5**	**+0.5**
MBAR	**Mbarara**	**56.82**	**29**	P		**P**	**20 12 29.7**	**-0.3**
MBAR					IAmb	IAmb	20 12 44.3	
	comp=Z,19nm,1.3s							
PEL	**Peldehue**	**56.92**	**258**	P		**P**	**20 12 30.4**	**-0.1**
PEL					pmax	pmax		
	comp=Z,61nm,1.2s							
PEL	**Peldehue**	**56.92**	**258**	P		**P**	**20 12 30.4**	**-0.1**
NBPN	**Ponto Novo - B**	**56.98**	**301**	*e*P		**P**	**20 12 29.4**	**-1.6**
BDFB	**Brasilia**	**57.14**	**290**	P		**P**	**20 12 32.3**	**+0.1**
BDFB					pmax	pmax		
	comp=Z,27nm,0.9s							
BDFB	**Brasilia**	**57.14**	**290**	P		**P**	**20 12 31.9**	**-0.4**
	comp=Z,25nm,0.9s,baz=143,slow=6.5,SNR=19							
BDFB					LR	LR	20 32 48.6	
	comp=Z,529nm,18.9s,baz=135,slow=32							
BDFB	**Brasilia**	**57.14**	**290**	P		**P**	**20 12 32.3**	**+0.1**
BDFB					IAmb	IAmb	20 12 34.8	
	comp=Z,27nm,0.9s							
ROC1	**El Roble**	**57.23**	**258**	P		**P**	**20 12 33.2**	**+0.3**
C2SB	**Chapadao do Su**	**57.34**	**284**	*e*P		**P**	**20 12 34.6**	**+1.0**
NBTA	**Tacaratu-PE**	**57.40**	**304**	*e*P		**P**	**20 12 34.7**	**+0.7**
AQDB	**Aquidauana**	**57.55**	**280**	*e*P		**P**	**20 12 37.0**	**+1.3**
NBLI	**Livramento-PB**	**58.39**	**306**	*e*P		**P**	**20 12 40.5**	**-0.4**
KMBO	**Kilima Mbogo**	**58.39**	**36**	*i* P		**P**	**20 12 43.5**	**+2.3**
KMBO					pmax	pmax		
	comp=Z,3.0nm,1.0s							
KMBO	**Kilima Mbogo**	**58.39**	**36**	P		**P**	**20 12 42.4**	**+1.2**
	comp=Z,3.1nm,1.0s,baz=193,slow=8.2,SNR=8.2							
KMBO					LR	LR	20 35 55.7	
	comp=Z,2μm,19.9s,baz=187,slow=34							
KMBO	**Kilima Mbogo**	**58.39**	**36**	P		**P**	**20 12 41.7**	**+0.5**
GO04	**Tololo Observa**	**59.16**	**260**	P		**P**	**20 12 47.8**	**+1.3**
GO04					IAmb	IAmb	20 12 57.2	
	comp=Z,32nm,1.0s							
ARAG	**Araguaiana, MT**	**59.21**	**287**	*e*P		**P**	**20 12 48.0**	**+1.4**
PP1B	**Ponte de Pedra**	**59.44**	**283**	*e*P		**P**	**20 12 49.5**	**+1.3**
PEXB	**Peixe**	**60.19**	**292**	*e*P		**P**	**20 12 54.2**	**+0.8**
GO03	**Copiap**	**60.75**	**263**	P		**P**	**20 12 56.0**	**-1.3**
GO03					IAmb	IAmb	20 13 22.0	
	comp=Z,21nm,0.7s							
SALV	**Santo Antonio**	**61.26**	**283**	*e*P		**P**	**20 13 01.8**	**+1.1**
DBIC	**Dimbokro**	**61.34**	**347**	P		**P**	**20 13 00.3**	**-0.8**
DBIC					pmax	pmax		
	comp=Z,9.0nm,1.0s							
DBIC	**Dimbokro**	**61.34**	**347**	P		**P**	**20 12 59.8**	**-1.3**
	comp=Z,4.0nm,0.7s,baz=133,slow=9.0,SNR=5.1							
DBIC					LR	LR	20 35 38.8	
	comp=Z,513nm,18.2s,baz=119,slow=32							
DBIC	**Dimbokro**	**61.34**	**347**	P		**P**	**20 13 00.3**	**-0.8**
NBCL	**Cascavel-CE**	**61.77**	**307**	*e*P		**P**	**20 13 04.4**	**+0.3**
GO02	**Mina Guanaco**	**62.21**	**265**	P		**P**	**20 13 06.1**	**-1.3**
GO02					IAmb	IAmb	20 13 10.2	
	comp=Z,33nm,1.0s							
LVC	**Limon Verde**	**63.76**	**267**	*e*P		**P**	**20 13 18.7**	**+1.0**
LVC	**Limon Verde**	**63.76**	**267**	LR	LR		20 37 14.8	
	comp=Z,568nm,21.9s,baz=162,slow=32							
LVC	**Limon Verde**	**63.76**	**267**	*e*P		**P**	**20 13 19.7**	**+1.9**
LVC	**Limon Verde**	**63.76**	**267**	P		**P**	**20 13 18.7**	**+1.0**
PB10	**IPOC Station P**	**64.03**	**265**	P		**P**	**20 13 18.3**	**-0.8**
PB10					IAmb	IAmb	20 13 25.4	
	comp=Z,22nm,0.9s							
SIV	**San Ignacio**	**64.30**	**278**	LR	LR		20 38 17.2	
	comp=Z,472nm,19.6s,baz=160,slow=33							
PB04	**IPOC Station P**	**64.70**	**267**	P		**P**	**20 13 24.0**	**+0.3**
CLDB	**Colider**	**65.37**	**286**	*e*P		**P**	**20 13 27.1**	**-0.8**
GO01	**Chusmiza**	**66.19**	**269**	P		**P**	**20 13 34.2**	**+0.4**
GO01					IAmb	IAmb	20 13 36.7	
	comp=Z,22nm,1.0s							
PB11	**IPOC Station P**	**66.39**	**269**	P		**P**	**20 13 33.9**	**-0.8**
PB11					IAmb	IAmb	20 13 44.6	
	comp=Z,26nm,1.0s							
MNMC	**Minye Minye**	**66.85**	**269**	P		**P**	**20 13 38.6**	**+0.8**
MNMC					IAmb	IAmb	20 13 40.8	
	comp=Z,40nm,1.3s							
TOA0	**Torodi Ar. Sit**	**67.12**	**354**	P		**P**	**20 13 37.5**	**-1.4**
TORD	**Torodi Ar. Bea**	**67.12**	**354**	P		**P**	**20 13 37.0**	**-1.9**
	comp=Z,4.8nm,1.1s,baz=168,slow=6.1,SNR=12							
TORD					LR	LR	20 36 45.9	
	comp=Z,842nm,21.9s,baz=150,slow=30							
TORD	**Torodi Ar. Bea**	**67.12**	**354**	IAmb		IAmb	20 13 40.9	
	comp=Z,7.3nm,1.2s							
LPAZ	**La Paz**	**68.21**	**272**	*e*P		**P**	**20 13 47.5**	**+0.7**
LPAZ	**La Paz**	**68.21**	**272**	P		**P**	**20 13 47.1**	**+0.4**
	comp=Z,47nm,1.0s,baz=147,slow=4.0,SNR=67							
LPAZ					LR	LR	20 40 28.3	
	comp=Z,331nm,21.1s,baz=126,slow=33							
LPAZ	**La Paz**	**68.21**	**272**	*e*P		**P**	**20 13 47.9**	**+1.2**
LPAZ	**La Paz**	**68.21**	**272**	P		**P**	**20 13 47.5**	**+0.7**
FURI	**Furi**	**68.24**	**34**	P		**P**	**20 13 48.1**	**+1.7**
H08N3	**Diego Garcia H**	**69.84**	**72**	T		T	21 30 09.8	
	baz=217,slow=76,SNR=23							
H08N1	**Diego Carcia H**	**69.85**	**72**	T		T	21 30 12.7	
	baz=217,slow=76,SNR=17							
H08N2	**Diego Garcia H**	**69.86**	**72**	T		T	21 30 19.8	
	baz=217,slow=76,SNR=26							
SAML	**Samuel**	**71.16**	**281**	P		**P**	**20 14 03.3**	**-0.9**
SAML					pmax	pmax		
	comp=Z,48nm,1.1s							
SAML	**Samuel**	**71.16**	**281**	*e*P		**P**	**20 14 03.6**	**-0.6**
SAML	**Samuel**	**71.16**	**281**	P		**P**	**20 14 03.3**	**-0.9**
H01W2	**Cape Leeuwin H**	**71.53**	**124**	T		T	21 33 01.8	
	baz=217,slow=75,SNR=64							
H01W3	**Cape Leeuwin H**	**71.54**	**124**	T		T	21 33 02.8	
	baz=217,slow=75,SNR=80							
H01W1	**Cape Leeuwin H**	**71.54**	**124**	T		T	21 33 02.9	
	baz=217,slow=75,SNR=73							
NWAO	**Narrogin (SRO)**	**74.62**	**125**	P		**P**	**20 14 23.2**	**-1.4**
	comp=Z,6.8nm,0.9s,baz=227,slow=6.8,SNR=3.0							
TAM	**Tamanrasset**	**76.57**	**359**	P		**P**	**20 14 36.0**	**+0.2**
TAM					pmax	pmax		
	comp=Z,11nm,1.4s							
TAM	**Tamanrasset**	**76.57**	**359**	P		**P**	**20 14 36.0**	**+0.2**
NNA	**Nana**	**76.73**	**268**	*d* iP		**P**	**20 14 39.2**	**+2.3**
NNA					pmax	pmax		
	comp=Z,67nm,1.1s							
NNA	**Nana**	**76.73**	**268**	P		**P**	20 42 49.0	
	comp=Z,108nm,21.5s,baz=124,slow=31							
NNA	**Nana**	**76.73**	**268**	P		**P**	**20 14 37.6**	**+0.6**
FORT	**Forrest**	**81.42**	**132**	P		**P**	**20 15 02.4**	**+0.1**
FORT					IAmb	IAmb	20 15 04.1	
	comp=Z,39nm,1.0s							
RAYN	**Ar Rayn**	**84.15**	**35**	P		**P**	**20 15 17.3**	**+0.9**
RAYN					pmax	pmax		
	comp=Z,28nm,1.9s							
RAYN	**Ar Rayn**	**84.15**	**35**	P		**P**	**20 15 17.3**	**+0.9**
RAYN					IAmb	IAmb	20 15 22.9	
	comp=Z,28nm,1.9s							
STKA	**Stephens Creek**	**85.86**	**143**	P		**P**	**20 15 23.8**	**-1.3**
	comp=Z,3.8nm,0.9s,baz=146,slow=7.2,SNR=5.3							
STKA	**Stephens Creek**	**85.86**	**143**	P		**P**	**20 15 23.1**	**-2.0**
FLOC	**Florencia**	**86.90**	**277**	P		**P**	**20 15 28.5**	**-2.0**
OTAV	**Otavalo**	**87.46**	**274**	*e*P		**P**	**20 15 34.3**	**+0.6**
OTAV	**Otavalo**	**87.46**	**274**	*e*P		**P**	**20 15 34.6**	**+0.9**
OTAV	**Otavalo**	**87.46**	**274**	P		**P**	**20 15 34.3**	**+0.6**
ROSC	**El Rosal**	**88.75**	**280**	LR	LR		20 53 14.6	
	comp=Z,422nm,19.2s,baz=194,slow=34							
RUSC	**La Rusia**	**88.89**	**282**	P		**P**	**20 15 39.3**	**-1.2**
KEST	**Kesra**	**89.48**	**2**	P		**P**	**20 15 43.0**	**+0.8**
	comp=Z,6.0nm,0.9s,baz=141,slow=5.0,SNR=5.4							
KEST					LR	LR	20 55 40.7	
	comp=Z,461nm,18.0s,baz=166,slow=36							
KEST	**Kesra**	**89.48**	**2**	P		**P**	**20 15 42.6**	**+0.4**
KEST					IAmb	IAmb	20 15 47.2	
	comp=Z,7.1nm,0.9s							
SDV	**Santo Domingo**	**89.91**	**285**	*e*P		**P**	**20 15 45.7**	**+0.8**
ASAR	**Alice Springs**	**90.14**	**133**	P		**P**	**20 15 44.9**	**-0.9**
	comp=Z,3.8nm,1.0s,baz=203,slow=5.3,SNR=13							
ASAR					LR	LR	20 50 13.2	
	comp=Z,111nm,20.8s,baz=221,slow=32							
LEM	**Lembang**	**90.76**	**103**	P		**P**	**20 15 49.4**	**+0.5**
	comp=Z,15nm,0.5s,baz=144,slow=18,SNR=4.7							
FITZ	**Fitzroy Crossi**	**91.13**	**123**	LR		LR	20 50 17.5	
	comp=Z,155nm,20.4s,baz=217,slow=31							
WRA	**Warramunga Arr**	**93.60**	**132**	LR		LR	20 51 10.9	
	comp=Z,180nm,22.0s,baz=190,slow=31							
WRAB	**Tennant Creek**	**93.61**	**132**	*de*P		**P**	**20 16 02.9**	**+1.0**
WRAB					pmax	pmax		
	comp=Z,5.0nm,0.8s							
HYB	**Hyderabad**	**93.63**	**65**	*i* P		**P**	**20 16 02.0**	**+0.2**
ESDC	**Sonseca Array**	**93.86**	**352**	P		**P**	**20 16 02.0**	**-0.3**
	comp=Z,2.0nm,1.0s,baz=174,slow=7.3,SNR=3.5							
ESDC					LR	LR	20 55 38.7	
	comp=Z,159nm,19.4s,baz=355,slow=34							
ESDC	**Sonseca Array**	**93.86**	**352**		IAmb	IAmb	20 16 07.8	
	comp=Z,2.9nm,1.1s							
MANT	**Manisa**	**94.08**	**17**	P		**P**	**20 16 03.2**	**-0.4**
FNA	**Florina**	**95.32**	**11**	P		**P**	**20 16 09.8**	**+0.8**
FNA					pmax	pmax		
	comp=Z,5.0nm,0.8s							
FNA	**Florina**	**95.32**	**11**	P		**P**	**20 16 09.8**	**+0.8**
FNA					IAmb	IAmb	20 16 15.6	
	comp=Z,4.9nm,0.8s							
BR131	**Keskin Array S**	**96.24**	**20**	P		**P**	**20 16 12.0**	**-1.3**
BR131					pmax	pmax		
	comp=Z,7.0nm,1.5s							
BR131	**Keskin Array S**	**96.24**	**20**	P		**P**	**20 16 12.0**	**-1.3**
BR131					IAmb	IAmb	20 18 56.3	
	comp=Z,6.6nm,1.5s							
BRTR	**Keskin Array B**	**96.24**	**20**	P		**P**	**20 16 12.8**	**-0.6**
	comp=Z,1.1nm,0.7s,baz=172,slow=6.4,SNR=8.5							
BRTR					LR	LR	21 02 01.8	
	comp=Z,218nm,18.4s,baz=163,slow=37							
GNI	**Garni**	**99.34**	**28**	‖ *e*P		**Pdif**	**20 16 26.2**	**-1.1**
GNI					pmax	pmax		
	comp=Z,2.0nm,1.1s							
TBI	**Tubuai**	**100.23**	**202**	*e*PS		PS	20 29 41.5	+5.6
	comp=Z,124nm,27.5s							
TBI					*e*SS	SS	20 34 58.8	-0.7
	comp=Z,189nm,32.2s							
TBI	**Tubuai**	**100.23**	**202**	*e*LR		LR	20 49 10.4	
	comp=Z,744nm,37.0s							
DZM	**Mont Dzumac**	**102.12**	**161**	*e*LR		LR	20 50 12.8	
	comp=Z,1μm,22.3s							
VYHS	**Vyhne**	**102.71**	**8**	*i* P		**Pdif**	**20 16 46.3**	**+4.4**
VYHS	**Vyhne**	**102.71**	**

GTA	Gaotai	122.28	66	⇑PKP	PKPdf	20 21 39.3	-0.7	
GTA				PP	PP	20 23 20.6	+4.3	
GTA				SKKS		20 30 11.8		
GTA				SS	SS	20 40 01.4	+5.2	
GTA				AMB	AMB			
	comp=Z,110nm,8.4s							
GTA				LR	LR			
	comp=Z,250nm,17.5s							
GTA				LR	LR			
	comp=Z,260nm,20.9s							
XAN	Xi'an	123.50	77	PKP	PKPdf	20 21 41.8	-0.6	
XAN	Xi'an	123.50	77	PKIKP	PKPdf	20 21 42.2	-0.2	
XAN	Xi'an	123.50	77		PKPdf	20 21 42.2	-0.2	
J49A	Marlette	123.59	299	P	PKiKP	20 21 42.5	+0.1	
	baz=135							
W39A	Magazine	123.59	285		PKiKP	20 21 43.6	+1.0	
W39A	Magazine	123.59	285	P	PKPdf	20 21 42.4	0.0	
	baz=136							
JCT	Junction City	123.65	277	P	PKPdf	20 21 42.2	-0.6	
	baz=138							
K48A	Perry	123.70	298	P	PKPdf	20 21 42.5	+0.1	
	baz=135							
U40A	Yellville	123.89	287	P	PKPdf	20 21 42.2	-0.8	
	baz=136							
ARCES	ARCESS Array B	124.06	8	PKP	PKPdf	20 21 41.5	-0.8	
	comp=Z,5.4nm,0.8s,baz=182,slow=2.7,SNR=14							
WHN	Wuhan	124.12	84	PKP	PKPdf	20 21 41.0	-2.6	
MGMO	Mountain Grove	124.13	288		PKiKP	20 21 44.2	+0.5	
CCM	Cathedral Cave	124.20	289	PKIKP	PKPdf	20 21 42.6	-0.9	
CCM	Cathedral Cave	124.20	289		PKPdf	20 21 42.6	-0.9	
CCM	Cathedral Cave	124.20	289	P	PKPdf	20 21 43.2	-0.3	
	baz=135							
SCHQ	Schefferville	124.31	318	PKP	PKPdf	20 21 42.7	-0.5	
	comp=Z,14nm,1.2s,baz=109,slow=0.8,SNR=8.7							
SCHQ	Schefferville	124.31	318		PKPdf	20 21 42.4	-0.8	
TX31	Lajitas Ar. Si	125.08	273		PKPdf	20 21 45.4	-0.2	
TX32	Lajitas Array	125.08	273		PKPdf	20 21 45.3	-0.3	
TXAR	Lajitas Array	125.08	273	PKP	PKPdf	20 21 45.5	-0.1	
	comp=Z,5.1nm,1.1s,baz=156,slow=3.3,SNR=19							
TXAR	Lajitas Array	125.08	273		PKPdf	20 21 45.3	-0.3	
G47A	Hillman	125.23	300	P	PKiKP	20 21 45.8	+0.2	
	baz=134							
MATQ	Matagami	125.37	308	P	PKiKP	20 21 45.7	0.0	
	baz=134							
ZAA0	Zalesovo Array	125.37	45		PKPdf	20 21 45.3	+0.2	
ZALV	Zalesovo Beam	125.37	45	PKP	PKPdf	20 21 44.0	-1.1	
	comp=Z,1.5nm,0.7s,baz=241,slow=4.7,SNR=8.4							
ZALV	Zalesovo Beam	125.37	45		PKPdf	20 21 43.9	-1.3	
WMOK	Wichita Mounta	126.13	281	P	PKiKP	20 21 47.8	0.0	
	baz=136							
D46A	Sault St. Mari	126.50	301	P	PKiKP	20 21 48.5	+0.5	
	baz=133							
JFWS	Jewell Farm	127.03	294	P	PKPdf	20 21 48.8	0.0	
	baz=133							
MNTX	Cornudas Mount	127.81	273		PKPdf	20 21 49.3	-1.3	
MNTX	Cornudas Mount	127.81	273	P	PKPdf	20 21 50.3	-0.4	
	baz=136							
NJ2	Nanjing	127.86	86	*e*PKP	PKiKP	20 21 51.4	+0.2	
MSTX	Muleshoe	127.91	277		PKPdf	20 21 50.4	-0.5	
MSTX	Muleshoe	127.91	277	P	PKPdf	20 21 50.5	-0.5	
	baz=136							
AMTX	Amarillo	127.92	279		PKiKP	20 21 52.1	+0.7	
AMTX	Amarillo	127.92	279	P	PKPdf	20 21 50.5	-0.3	
	baz=135							
HHC	Hu-ho-hao-te	129.76	73	*e*PKP	PKiKP	20 21 56.9	+1.9	
E38A	The Farm, Brul	130.18	297		PKiKP	20 21 55.5	+0.1	
SUMG	Summit	130.23	344	PKIKP	PKiKP	20 21 55.1	-0.2	
SUMG	Summit	130.23	344		PKiKP	20 21 55.0	-0.2	
ANMO	Albuquerque	130.75	275	PKIKP	PKiKP	20 21 57.8	+0.5	
ANMO	Albuquerque	130.75	275		PKiKP	20 21 57.8	+0.5	
ANMO	Albuquerque	130.75	275	P	PKPdf	20 21 56.3	-0.1	
	baz=135							
EYMN	Ely	131.00	298		PKiKP	20 21 56.9	-0.2	
EYMN	Ely	131.00	298	P	PKiKP	20 21 57.0	-0.1	
	baz=130							
ECSD	EROS Data Cent	131.04	291		PKPdf	20 21 56.2	-0.2	
ECSD	EROS Data Cent	131.04	291	P	PKiKP	20 21 57.0	-0.3	
	baz=131							
T25A	Trinidad	131.07	279		PKiKP	20 21 57.6	-0.3	
T25A	Trinidad	131.07	279	P	PKPdf	20 21 57.5	+0.5	
	baz=133							
TUC	Tucson	131.43	270	PKIKP	PKiKP	20 21 58.5	-0.1	
TUC	Tucson	131.43	270		PKiKP	20 21 58.5	-0.1	
SONM	Songino Array	131.49	63	PKP	PKPdf	20 21 56.8	-0.4	
	comp=Z,1.7nm,0.8s,baz=218,slow=1.9,SNR=6.5							
SONM	Songino Array	131.49	63		PKPdf	20 21 56.3	-0.9	
ISCO	Idaho Springs	133.56	281	PKIKP	PKiKP	20 22 03.0	+0.1	
ISCO	Idaho Springs	133.56	281		PKiKP	20 22 03.0	+0.1	
ISCO	Idaho Springs	133.56	281	P	PKPdf	20 22 02.4	+0.7	
	baz=131							
Y14A	Wickenburg	133.89	269		PKPdf	20 22 01.6	-0.5	
WUAZ	Wupatki	134.03	272	P	PKPdf	20 22 03.0	+0.4	
	baz=134							
N23A	Red Feather La	134.46	282		PKPdf	20 22 03.5	+0.2	
N23A	Red Feather La	134.46	282	P	PKiKP	20 22 04.3	-0.4	
	baz=131							
ULM	Lac du Bonnet	134.69	298	PKP	PKPdf	20 22 02.0	-1.0	
	comp=Z,2.4nm,0.6s,baz=164,slow=2.2,SNR=6.6							
ULM	Lac du Bonnet	134.69	298		PKPdf	20 22 03.4	+0.4	
PFO	Pinyon Flats O	135.70	266	*e*PKIKP	PKPdf	20 22 04.3	-1.3	
RWWY	Rawlins	135.71	282		PKPdf	20 22 06.0	+0.5	
K22A	Casper	135.92	283	P	PKPdf	20 22 06.7	+0.9	
	baz=129							
SRU	San Rafael Swe	135.96	277	PKIKP	PKPdf	20 22 07.0	+0.9	
SRU	San Rafael Swe	135.96	277		PKPdf	20 22 07.0	+0.9	
GMRC	Granite Mounta	136.05	268	P	PKPdf	20 22 05.5	-0.7	
	baz=134							
SZCU	Shurtz Canyon	136.46	273		PKPdf	20 22 07.3	+0.3	
TMUT	Trail Mountain	136.48	276		PKPdf	20 22 06.9	-0.2	
MSU	Marysvale	136.53	275	PKIKP	PKPdf	20 22 07.7	+0.5	
MSU	Marysvale	136.53	275		PKPdf	20 22 07.7	+0.5	
JLU	Jordanelle	137.47	278		PKiKP	20 22 10.0	-0.8	
PSUT	Pine Spring	137.53	274		PKPdf	20 22 09.6	+0.6	
BW06	Boulder Array	137.74	281		PKPdf	20 22 08.3	-0.9	
BW06	Boulder Array	137.74	281	P	PKPdf	20 22 09.4	+0.1	
	baz=126							
PD31	Pinedale Array	137.74	281		PKPdf	20 22 09.5	+0.2	
PDAR	Pinedale Array	137.74	281	PKhKP	PKPpre	20 21 56.5		
	comp=Z,0.4nm,0.9s,baz=117,slow=5.2,SNR=3.8							
PDAR				PKP	PKPdf	20 22 08.3	-1.0	
	comp=Z,5.6nm,1.0s,baz=117,slow=3.2,SNR=18							
TCUT	Toone Canyon	137.78	278		PKPdf	20 22 09.1	-0.4	
TPNV	Topopah Spring	137.88	270	PKIKP	PKiKP	20 22 11.0	-0.6	
TPNV	Topopah Spring	137.88	270		PKiKP	20 22 11.0	-0.6	
TPNV	Topopah Spring	137.88	270	P	PKPdf	20 22 09.8	+0.2	
	baz=133							
DUG	Dugway, Tooele	138.01	276	PKIKP	PKiKP	20 22 11.7	0.0	
DUG	Dugway, Tooele	138.01	276		PKiKP	20 22 11.7	0.0	
DUG	Dugway, Tooele	138.01	276	P	PKPdf	20 22 10.3	+0.6	
	baz=130							
MPMC	Manual Prospec	138.01	268	P	PKPdf	20 22 10.3	+0.3	
	baz=134							
DGMT	Dagmar	138.10	292		PKPdf	20 22 10.4	+0.9	
DGMT	Dagmar	138.10	292	P	PKPdf	20 22 10.2	+0.7	
	baz=125							
HWUT	Hardware Ranch	138.18	279		PKPdf	20 22 10.6	+0.6	
ISA	Isabella, Lake	138.32	267	PKIKP	PKPdf	20 22 11.3	+0.9	
ISA	Isabella, Lake	138.32	267		PKPdf	20 22 11.3	+0.9	
ISA	Isabella, Lake	138.32	267	P	PKPdf	20 22 11.1	+0.7	
	baz=134							
R11A	Troy Canyon, C	138.43	272		PKiKP	20 22 12.5	-0.2	
R11A	Troy Canyon, C	138.43	272	P	PKPdf	20 22 10.9	+0.3	
	baz=132							
FCC	Fort Churchill	138.44	310	PKIKP	PKPdf	20 22 09.0	-0.6	
FCC	Fort Churchill	138.44	310		PKPdf	20 22 09.0	-0.6	
SPUT	South Promonto	138.50	278		PKiKP	20 22 12.3	-0.4	
BGU	Big Grassy Mou	138.60	277		PKiKP	20 22 12.2	-0.7	
CWC	Cottonwood Cre	138.62	268	P	PKPdf	20 22 11.7	+0.7	
	baz=133							
TULEG	Thule	138.73	340		PKPdf	20 22 10.9	+1.2	
REDW	Red Top Meadow	138.85	281		PKiKP	20 22 12.9	-0.6	
TPAW	Teton Pass	138.99	281		PKPdf	20 22 12.0	+0.4	
RLMT	Red Lodge	139.00	284		PKiKP	20 22 13.0	-0.7	
RLMT	Red Lodge	139.00	284	P	PKiKP	20 22 12.8	-0.9	
	baz=126							
MOOW	Moose Ponds	139.03	282		PKPdf	20 22 11.8	+0.3	
FLWY	Flagg Ranch	139.20	282		PKPdf	20 22 12.4	+0.5	
ELK	Elko	139.78	275	PKIKP	PKPdf	20 22 13.6	+0.5	
ELK	Elko	139.78	275		PKPdf	20 22 13.6	+0.5	
YHL	Hebgen Lake	139.94	283		PKPdf	20 22 13.5	+0.2	
OMMB	Old Mammoth Mi	139.95	268		PKPdf	20 22 14.3	+0.7	
NV11	Mina Array Sit	140.00	270		PKPdf	20 22 14.2	+0.7	
QLMT	Earthquake Lak	140.07	283		PKPdf	20 22 14.3	+0.9	
NVAR	Mina Array Bea	140.09	270	PKP	PKPdf	20 22 13.7	0.0	
	comp=Z,4.0nm,0.9s,baz=148,slow=2.5,SNR=13							
NVAR	Mina Array Bea	140.09	270		PKPdf	20 22 13.4	-0.3	
KVN	Kaiserville	140.37	271	PKIKP	PKPdf	20 22 14.8	+0.6	
KVN	Kaiserville	140.37	271		PKPdf	20 22 14.8	+0.6	
WAKR	Walker	140.80	269		PKPdf	20 22 15.9	+0.9	
EGMT	Eagleton	140.93	288		PKPdf	20 22 14.9	+0.2	
EGMT	Eagleton	140.93	288	P	PKPdf	20 22 15.7	+1.0	
	baz=123							
YERR	Yerington	141.00	270		PKPdf	20 22 15.8	+0.5	
DLMT	Dillon	141.05	283		PKiKP	20 22 17.0	-0.8	
LRM	Limekiln Ridge	141.23	283		PKiKP	20 22 17.3	-1.0	
PAHR	Pah Rah Range	141.56	271		PKPdf	20 22 17.1	+0.9	
AFDM	Forest Hills D	142.00	268		PKPdf	20 22 17.7	+0.8	
BEKR	Beckworth	142.23	270		PKPdf	20 22 17.0	-0.5	
MSO	Missoula	142.65	284		PKPdf	20 22 16.3	-1.5	
ORV	Oroville	142.70	269	PKIKP	PKPdf	20 22 16.7	-1.4	
ORV	Oroville	142.70	269		PKPdf	20 22 16.7	-1.4	
WVOR	Wild Horse Val	142.83	275	PKIKP	PKPdf	20 22 18.3	-0.1	
WVOR	Wild Horse Val	142.83	275		PKPdf	20 22 18.3	-0.1	
JTMT	Jette	143.34	285		PKPdf	20 22 18.2	-0.9	
O03E	Paynes Creek	143.36	269	P	PKPdf	20 22 19.8	+0.5	
	baz=130							
BMO	Blue Mountains	143.48	279	PKIKP	PKPdf	20 22 19.4	0.0	
BMO	Blue Mountains	143.48	279		PKPdf	20 22 19.4	0.0	
MOD	Modoc Plateau	143.48	273		PKPbc	20 22 18.1	+1.2	
WALA	Waterton Lakes	143.82	287		PKPab	20 22 17.2	+0.2	
O02D	Mt. Diablo Mer	143.86	268	P	PKPdf	20 22 20.0	-0.2	
	baz=130							
WDC	Whiskeytown Da	143.97	269	PKIKP	PKPab	20 22 17.4	-0.2	
WDC	Whiskeytown Da	143.97	269		PKPab	20 22 17.4	-0.2	
F10A	Beach Ranch, E	144.07	280		PKPab	20 22 17.9	-0.1	
RES	Resolute Bay	144.20	334	PKP	PKPab	20 22 17.7	+0.3	
	comp=Z,13nm,0.9s,baz=98,slow=3.9,SNR=39							
M04C	Macdoel	144.31	271	P	PKPdf	20 22 20.5	-0.5	
	baz=128							
N02D	Trinity Center	144.32	269	P	PKPdf	20 22 20.9	-0.1	
	baz=129							
KMRM	Mail Ridge	144.43	268		PKPdf	20 22 21.9	+0.7	
M02C	Callahan	144.67	270	P	PKPab	20 22 20.4	+0.1	
	baz=129							
G08A	Pilot Rock	144.69	278		PKPdf	20 22 21.4	-0.1	
YBH	Yreka Blue Hor	144.79	270	PKIKP	PKPdf	20 22 22.5	+0.7	
YBH	Yreka Blue Hor	144.79	270		PKPdf	20 22 22.5	+0.7	
L04D	Klamath Falls	144.85	271	P	PKPab	20 22 20.8	-0.2	
	baz=128							
J05D	Fort Rock, OR	144.86	274	P	PKPbc	20 22 21.5	+0.4	
	baz=126,SNR=18							
E09A	Wood Farm, Sta	144.90	281		PKPab	20 22 20.7	-0.2	
PINE	Pine Mountain	144.99	275		PKPab	20 22 21.8	+0.3	
NEW	Newport	145.24	284	PKPbc	PKPbc	20 22 20.7	-1.3	
	comp=Z,20nm,1.0s,baz=126,slow=3.2,SNR=20							
NEW	Newport	145.24	284		PKPbc	20 22 21.0	-1.0	
NEW	Newport	145.24	284	P	PKPab	20 22 22.2	+0.1	
	baz=121							
J04D	Umpqua Nationa	145.35	273	P	PKPdf	20 22 23.0	+0.2	
	baz=126,SNR=22							
E08A	Dider Farm, El	145.41	280		PKPbc	20 22 22.3	-0.2	
HUMO	Hull Mountain	145.47	272		PKPab	20 22 23.5	+0.4	
I05D	Terrebonne, OR	145.54	275	P	PKPab	20 22 23.5	+0.1	
	baz=125,SNR=14							
L02E	Cave Junction	145.58	270	P	PKPbc	20 22 23.5	+0.2	
	baz=128							
F07A	Phinny Hill Vi	145.59	278		PKPbc	20 22 23.3	+0.2	
HAWA	Hanford	145.63	279		PKPbc	20 22 23.3	0.0	
D08A	Wollman Farm,	145.64	281		PKPbc	20 22 23.3	+0.1	
G06A	Carlson Farm,	145.64	277		PKPdf	20 22 23.1	0.0	
C09A	Chrisman Ranch	145.66	282		PKPdf	20 22 22.7	-0.3	
ZEA	Zeya	145.77	66	*e*PKIKP	PKPdf	20 22 22.0	-0.9	
ZEA				pmax	pmax			
	comp=N,49nm,1.6s							
ZEA				pmax	pmax			
	comp=Z,67nm,1.6s							
I04A	Tendick Farm,	145.85	274	P	PKPbc	20 22 24.1	0.0	
	baz=126,SNR=16							
E07A	Sunnyside	145.91	280		PKPbc	20 22 24.1	0.0	
K02D	Willamette Mer	145.94	271	P	PKPdf	20 22 24.2	+0.5	
	baz=127							
KBO	Bosley Butte	145.98	270		PKPab	20 22 26.4	+1.3	
G05D	Wamic, OR	146.04	277	P	PKPab	20 22 25.1	-0.1	
	baz=124,SNR=13							
KLR	Kul'dur	146.18	75	PKPbc	PKPdf	20 22 23.6	-0.2	
	comp=Z,24nm,1.0s,baz=298,slow=4.0,SNR=22							
H04A	Detroit Lake	146.24	275		PKPdf	20 22 24.7	+0.6	
I03D	Drain, OR	146.35	273	P	PKPbc	20 22 25.6	+0.1	
	baz=126							
J01E	Myrtle Point	146.38	272	P	PKPbc	20 22 26.1	+0.5	
	baz=126							
H04D	Lebanon	146.47	274	P	PKPbc	20 22 26.3	+0.5	
	baz=125,SNR=5.9							
F05D	White Salmon	146.48	277	P	PKPbc	20 22 26.3	+0.4	
	baz=123							
B08A	Colville Reser	146.55	283		PKPdf	20 22 25.1	+0.6	
LTY	Liberty	146.76	280		PKPbc	20 22 26.0	-0.7	
TEY	Ternei	146.78	85	*e*PKIKP	PKPdf	20 22 23.1	-1.8	
LON	Longmire	147.15	278	PKP2	PKPdf	20 22 26.6	+1.0	
LON	Longmire	147.15	278		PKPdf	20 22 26.6	+1.0	
G03D	McMinnville, O	147.16	275	P	PKPbc	20 22 27.2	-0.6	
	baz=124							
C06D	Leavenworth	147.23	281	P	PKPbc	20 22 28.2	+0.2	
	baz=121							
D05A	Enumclaw	147.49	279		PKPbc	20 22 27.6	-1.0	
E04D	Cinebar	147.49	278	P	PKPbc	20 22 29.2	+0.5	
	baz=122							
B06A	Marblemount	147.87	282		PKPbc	20 22 28.2	-1.3	
D04E	Lakebay	147.94	279	P	PKPbc	20 22 30.7	+0.9	
	baz=121							
B05A	Bryant	148.10	281	P	PKPbc	20 22 30.6	+0.4	
	baz=120							
D03D	Eldon	148.31	279	P	PKiKP	20 22 31.7	-0.7	
	baz=121							
A04D	Lummi Island	148.68	281	P	PKiKP	20 22 32.7	-0.4	
	baz=119							
NLWA	Neilton Lookou	148.69	278		PKPbc	20 22 32.7	+0.8	
LLLB	Lillooet	149.09	285		PKPdf	20 22 30.0	+1.4	
YKA	Yellowknife Ar	149.17	309	PKPbc	PKPbc	20 22 31.7	-0.8	
	comp=Z,14nm,0.7s,baz=99,slow=2.3,SNR=29							
GRNR	Gornyy	149.57	75	*i* PKP2	PKPbc	20 22 33.3	-0.6	
GRNR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
YAK	Yakutsk	149.65	52	*e*PKHKP	PKPbc	20 22 31.5	-2.2	
YAK				pmax	pmax			
	comp=Z,18nm,0.9s							
YAK	Yakutsk	149.65	52	PKPbc	PKPbc	20 22 32.5	-1.2	
	comp=Z,5.9nm,0.6s,baz=291,slow=2.2,SNR=12							
YAK	Yakutsk	149.65	52		PKPdf	20 22 31.2	+2.2	
TIXI	Tiksi	149.91	32	*e*PKHKP	PKPbc	20 22 28.8	-5.3	
TIXI	Tiksi	149.91	32	PKPbc	PKPbc	20 22 32.5	-1.6	
	comp=Z,10.0nm,0.9s,baz=180,slow=24,SNR=17							
TIXI	Tiksi	149.91	32		PKPbc	20 22 31.9	-2.2	
YSS	Yuzh-Sakhalins	151.43	86	*e*PKIKP	PKPbc	20 22 38.1	-0.3	
YSS				*e*		20 22 46.9		
YSS				pmax	pmax			
	comp=Z,30nm,1.3s							
YSS				MLR	MLR			
	comp=Z,100nm,17.0s							
YSS	Yuzh-Sakhalins	151.43	86		PKPbc	20 22 38.2	-0.2	
SEY	Seymchan	160.15	50	PKPab	PKPab	20 23 23.6	-0.1	
	comp=Z,1.1nm,0.3s,baz=218,slow=3.3,SNR=5.5							
DAWY	Dawson	160.27	314		PKPab	20 23 24.4	+0.1	
PRP	Porcupine Dome	162.21	321		PKPab	20 23 33.4	+0.5	
BILL	Bilibino	162.96	27	*e*PKIKP	PKPdf	20 22 46.1	-0.1	
BILL				*e*		20 27 20.9		
BILL				*e*PPP	PPP	20 31 08.7		
BILL				pmax	pmax			
	comp=Z,12nm,1.7s							
IL31		163.06	319		PKPab	20 23 36.3	-0.1	
ILAR	Eielson Array	163.06	319	PKPab	PKPab	20 23 36.2	-0.3	
	comp=Z,4.6nm,0.8s,baz=47,slow=4.2,SNR=35							
ILAR	Eielson Array	163.06	319		PKPab	20 23 36.1	-0.4	
HDA	Harding Lake	163.25	318	P	PKPab	20 23 37.5	+0.2	
	baz=64							
CGD				*e*Sg	Sn	20 10 53.7	-0.1	
	2μm,0.4s							
BMKR	Bomnak	2.11	193	*e*Pn	Pn	20 10 27.2	-1.2	
BMKR				*e*Pg	Pb	20 10 29.6	-1.6	
CLNS	Chul'man	2.60	274	*e*Pg	Pn	20 10 35.5	+0.2	
	58nm,0.3s							
CLNS				*e*Sg	Sn	20 11 08.6	+1.2	
	735nm,0.3s							
IENR	Iengra	2.70	260	*e*Pg	Pn	20 10 37.2	+0.5	
	55nm,0.3s							
IENR				*e*Sg	Sn	20 11 11.9	+2.2	
	543nm,0.8s							
KROS	Kirovskiy	2.78	214	*e*Pn	Pn	20 10 36.1	-1.6	
KROS				*i* Pg	Pb	20 10 41.0	-1.8	
	11nm,0.4s							
KROS				*i* Sn	Sn	20 11 09.2	-2.5	
ALDR	Aldan	2.92	311	*e*Pg	Pn	20 10 40.4	+0.7	
	39nm,0.2s							
ALDR				*e*Sg	Sn	20 11 16.7	+1.5	
	432nm,0.2s							
TNDR	Tynda	3.20	242	*e*Pg	Pb	20 10 47.9	-1.9	
	74nm,0.4s							
TNDR				*e*Sg	Sb	20 11 29.1	0.0	
	119nm,0.2s							
YKLR	Yuktali	4.40	271	*e*Pn	Pn	20 10 56.2	-3.8	
YKLR				*e*Pg	Pb	20 11 07.7	-2.6	
	16nm,0.3s							
YKLR				*e*Sg	Sb	20 12 04.6	+0.9	
	204nm,0.9s							
BLSR	Buluus	4.62	356	*e*Pn	Pn	20 10 60.0	-2.9	
BLSR				*e*Pg	Pb	20 11 12.5	-1.5	
	338nm,0.6s							
BLSR				*e*Sn	Sn	20 11 51.8	-5.1	
BLSR				*e*Sg	Sb	20 12 11.4	+1.6	
	654nm,0.5s							
TBGR	Tabaga	5.07	0	*e*Pg	Pb	20 11 21.0	-0.7	
	133nm,0.3s							
TBGR				*e*Sg	Sb	20 12 25.6	+2.8	
	904nm,0.5s							
YAK	Yakutsk	5.28	0	*e*Pn	Pn	20 11 09.4	-2.6	
YAK				*e*Pg	Pb	20 11 24.5	-0.8	
	4.0nm,0.6s							
YAK				*e*Sn	Sn	20 12 07.9	-5.3	
YAK				*e*Sg	Sb	20 12 32.1	+3.2	
	319nm,0.8s							
KHN	Khani	5.40	276	*e*Pg	Pb	20 11 24.0	-3.4	
	2.4nm,0.2s							
KHN				*e*Sg	Sb	20 12 32.9	+0.4	
	410nm,0.6s							
TUP	Tupik	5.96	251	*e*Pn	Pn	20 11 19.3	-2.2	
TUP				*e*Pg	Pb	20 11 37.2	+0.3	
	15nm,0.5s							
TUP				*e*Sn	Sn	20 12 25.0	-5.1	
TUP				*i* Sg	Sb	20 12 54.5	+5.9	
	140nm,1.5s							
OLMR	Olekminsk	6.00	311	*e*Pn	Pn	20 11 17.3	-4.6	
OLMR				*e*Pg	Pb	20 11 35.9	-1.7	
	16nm,0.4s							
OLMR				*e*Sg	Sb	20 12 53.2	+3.6	
	197nm,0.6s							
CRS	Chara	6.24	276	*i* Sg	Sb	20 13 00.7	+4.2	
	71nm,0.9s							
USRK	Ussuriysk Ar.	12.67	172	Pn	Pn	20 12 53.8	+0.5	
	baz=349,slow=14,SNR=6.2							
SEY	Seymchan	12.95	52	Pn	Pn	20 12 59.1	+2.1	
	0.3nm,0.3s,baz=90,slow=20,SNR=5.7							
SEY				Lg	Lg	20 16 43.2		
	0.3nm,0.3s,baz=73,slow=19,SNR=3.3							
SONM	Songino Array	16.71	248	Pn	P	20 13 53.0	+3.2	
	0.1nm,0.3s,baz=48,slow=11,SNR=5.2							
SONM				Lg	Lg	20 18 36.3		
	baz=36,slow=30,SNR=7.2							
ILAR	Eielson Array	38.65	43	P	P	20 17 16.8	+0.3	
	0.3nm,0.8s,baz=297,slow=7.9,SNR=3.1							

YARS **16** *20:09:50.8±0.0,56.87N×129.40E,h15km,ML3.2/9*
IDC **16** *20:09:54.1±2.1,56.69N×129.95E,h0km,mb3.2/1, mb1 3.6/4,mb1mx3.3/46,mbtmp3.5/4,ML3.1/3,Error ellipse: s-maj=62.5km s-min=25.5km az=133.0*

ISC 16 20:09:52.6±2.8,56.77N±0.03×129.63E±0.04,h5km±21km, n19,σ2s77/42,Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CGD	Chagda	2.06	14	*e*Pg	Pn	20 10 27.5	-0.3
	70nm,0.4s						

IDC **16** *20:12:43.1±2.0,6.79S×129.10E,h0km,mb3.8/1, mb1 4.2/4,mb1mx3.6/46,mbtmp4.0/4,ML3.8/3,Error ellipse: s-maj=90.4km s-min=27.1km az=75.0*
NEIC **16** *20:12:52.6±1.4,7.16S±0.09×128.6E±0.1,h87km±8km,

*IDC **16** 20:24:30.0±2.3,49˚.14N×153˚.41E,h176km±21km,mb3.1/5, mb1 3.3/8,mb1mx3.0/65,mbtmp3.7/8,Error ellipse: s-maj=36.3km s-min=16.3km az=154.0*

ISC 16 20:24:26.2±1.3,**48˚.8N**±0˚.2×**153˚.9E**±0˚.1,**h150**km,**n23,** σ2§**29**/32,**mb3.5/5,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.40**	**35**		*e*P		**Pn**	**20 25 07.9**	**+1.9**
SKR					*e*S		**Sn**	**20 25 38.0**	**+1.2**
PAU	**Pauzhetka**	**3.29**	**33**		*e*P		**Pn**	**20 25 18.8**	**+1.6**
PAU					*e*S		**Sn**	**20 25 56.9**	**+0.1**
KDTR	**Khodutka, Kamc**	**4.06**	**39**		*e*P		**Pn**	**20 25 27.0**	**-0.1**
KDTR					*e*S		**Sn**	**20 26 11.2**	**-3.3**
ASAK	**Asacha**	**4.43**	**33**		*e*P		**Pn**	**20 25 33.6**	**+1.5**
ASAK					*e*S		**Sn**	**20 26 23.2**	**-0.3**
MTVR	**Mutnovka**	**4.62**	**34**		*e*P		**Pn**	**20 25 36.8**	**+2.2**
GRL	**Gorelyy**	**4.63**	**33**		*e*P		**Pn**	**20 25 36.7**	**+1.9**
GRL					*e*S		**Sn**	**20 26 27.7**	**-0.5**
RUS	**Russkaya**	**4.71**	**37**		*e*P		**Pn**	**20 25 36.1**	**+0.5**
RUS					*e*S		**Sn**	**20 26 26.6**	**-3.1**
KRMR	**Karymshinskiy**	**4.88**	**31**		*e*P		**Pn**	**20 25 41.2**	**+3.3**
KRMR					*e*S		**Sn**	**20 26 34.6**	**+0.8**
PETK	**Petropavlovsk-** 1.4nm,0.3s,baz=205,slow=16,SNR=32	**4.97**	**27**	P			**Pn**	**20 25 41.2**	**+2.0**
KOK	**Koryaka**	**5.43**	**31**		*e*P		**Pn**	**20 25 48.2**	**+2.8**
AVH	**Avacha**	**5.45**	**32**		*e*P		**Pn**	**20 25 49.0**	**+3.5**
KRER	**Koryakskii**	**5.48**	**32**		*e*P		**Pn**	**20 25 48.4**	**+2.3**
KRER					*e*S		**Sn**	**20 26 48.3**	**-0.2**
KRX	**Arik**	**5.49**	**31**	P			**Pn**	**20 25 49.5**	**+3.3**
SDLR	**Sedlovina**	**5.51**	**33**		*e*P		**Pn**	**20 25 48.1**	**+1.7**
SPN	**Mys Shipunski**	**5.81**	**39**		*e*P		**Pn**	**20 25 50.3**	**0.0**
SPN					*e*S		**Sn**	**20 26 51.4**	**-4.7**
KZV	**Kizimen**	**7.49**	**29**		*e*P		**Pn**	**20 26 16.1**	**+3.3**
ASAJ	**Asahikawa** 1.3nm,0.3s,baz=83,slow=13,SNR=15	**9.09**	**244**	P			**Pn**	**20 26 35.8**	**+1.8**
KLR	**Kul'dur** 0.4nm,0.3s,baz=78,slow=8.8,SNR=10.0	**14.57**	**280**	P			**Pn**	**20 27 44.5**	**-0.5**
KSRS	**Korea Array** 1.3nm,0.6s,baz=43,slow=11,SNR=6.6	**21.98**	**249**	P			**P**	**20 29 07.5**	**-0.5**
MKAR	**Makanchi Array** 0.6nm,0.5s,baz=65,slow=7.9,SNR=8.6	**46.54**	**296**	P			**P**	**20 32 35.4**	**-3.0**
KURBB	**Kurchatov Arra** 0.6nm,0.5s,baz=67,slow=8.1,SNR=3.8	**46.83**	**302**	P			**P**	**20 32 37.3**	**-3.3**
CMAR	**Chiang Mai Arr** 0.7nm,0.7s,baz=45,slow=6.8,SNR=5.1	**53.39**	**256**	P			**P**	**20 33 30.4**	**0.0**
TXAR	**Lajitas Array** 0.2nm,0.4s,baz=316,slow=5.0,SNR=3.2	**76.04**	**61**	P			**P**	**20 35 58.7**	**+1.6**

ROM 16 20:30:20.5±0.2,**37˚.576N**±0˚.010×**16˚.23E**±0˚.02,**h32**km±1km, **ML2.6**/25,**Error ellipse: s-maj=1.6km s-min=0.8km az=295.0,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MPAZ	**Palizzi**	**0.41**	**335**		P		Pn	20 30 30.1	-0.2
MPAZ					S		Sn	20 30 36.5	-0.4
MPAZ					AML		AML		
	comp=E,712µm,0.5s								
MPAZ					AML		AML		
	comp=E,712µm,0.5s								
MPAZ					AML		AML		
	comp=N,814µm,0.2s								
SOI	**Samo**	**0.51**	**345**		P		Pb	20 30 31.4	+0.2
SOI					S		Sb	20 30 38.7	+0.1
SOI					AML		AML		
	comp=E,312µm,0.4s								
SOI					AML		AML		
	comp=N,325µm,0.7s								
SOI					AML		AML		
	comp=N,324µm,0.7s								
SOI					AML		AML		
	comp=E,312µm,0.4s								
GMB	**Gambarie**	**0.67**	**332**		P		Pn	20 30 33.9	0.0
GMB					AML		AML		
	comp=N,2895µm,0.2s								
GMB					AML		AML		
	comp=N,2900µm,0.2s								
GMB					AML		AML		
	comp=E,2810µm,0.2s								
ATN	**Antennamare**	**0.84**	**314**		AML		AML		
	comp=N,442µm,0.3s								
ATN					AML		AML		
	comp=E,420µm,0.3s								
ATN					AML		AML		
	comp=E,421µm,0.3s								
AGST	**Augusta-Monte**	**0.86**	**248**		P		Pb	20 30 36.9	0.0
AGST					AML		AML		
	comp=N,812µm,0.4s								
AGST					AML		AML		
	comp=N,813µm,0.4s								
AGST					AML		AML		
	comp=E,1070µm,0.1s								
PLAC	**Placanica**	**0.89**	**11**		P		Pn	20 30 36.8	0.0
PLAC					AML		AML		
	comp=E,94µm,0.8s								
PLAC					AML		AML		
	comp=N,104µm,0.5s								
PLAC					AML		AML		
	comp=E,94µm,0.8s								
PLAC					AML		AML		
	comp=N,103µm,0.5s								
MSRU	**Castanea**	**0.89**	**321**		P		Pb	20 30 37.6	+0.1
MSRU					S		Sb	20 30 50.0	+0.9
MSRU					AML		AML		
	comp=E,280µm,0.3s								
MSRU					AML		AML		
	comp=N,199µm,1.0s								
MSRU					AML		AML		
	comp=E,280µm,0.3s								
MSRU					AML		AML		
	comp=N,200µm,1.0s								
MPNC	**Port Mandanici**	**0.90**	**310**		P		Pb	20 30 37.9	+0.3
MPNC					AML		AML		
	comp=E,578µm,0.5s								
MPNC					AML		AML		
	comp=N,519µm,0.5s								
HAGA	**Augusta**	**0.90**	**252**		P		Pb	20 30 37.5	-0.1
HAGA					AML		AML		
	comp=E,570µm,0.8s								
HAGA					AML		AML		
	comp=N,1285µm,0.2s								
HAGA					AML		AML		
	comp=E,570µm,0.8s								
MCSR	**Castroreale**	**0.91**	**303**		P		Pb	20 30 38.2	+0.3
MCSR					AML		AML		
	comp=E,398µm,0.3s								
MCSR					AML		AML		
	comp=N,634µm,0.3s								
NOV	**Novara**	**0.97**	**298**		P		Pb	20 30 39.0	+0.1
NOV					AML		AML		
	comp=E,180µm,0.4s								
NOV					AML		AML		
	comp=N,154µm,0.5s								
HCRL	**Carlentini**	**0.99**	**253**		P		Pb	20 30 39.0	-0.2
HCRL					S		Sb	20 30 51.8	-0.2
HCRL					AML		AML		
	comp=E,948µm,0.1s								
HCRL					AML		AML		
	comp=E,948µm,0.1s								
HCRL					AML		AML		
	comp=N,1112µm,0.1s								
SSY	**Sortino**	**1.01**	**246**		P		Pn	20 30 38.9	+0.4
SSY					S		Sb	20 30 52.2	-0.3
MILZ	**Milazzo**	**1.05**	**312**		P		Pb	20 30 40.1	0.0
MILZ					AML		AML		
	comp=N,319µm,0.5s								
MILZ					AML		AML		
	comp=E,546µm,0.4s								
JOPP	**Joppolo**	**1.06**	**345**		P		Pn	20 30 39.7	+0.4
JOPP					AML		AML		
	comp=N,77µm,0.2s								
JOPP					AML		AML		
	comp=E,72µm,1.3s								
HAVL	**Avola**	**1.07**	**235**		P		Pb	20 30 40.1	-0.4
HAVL					S		Sb	20 30 53.8	-0.4
HAVL					AML		AML		
	comp=N,520µm,0.3s								
HAVL					AML		AML		
	comp=E,518µm,0.3s								
HLNI	**Lentini**	**1.10**	**259**		P		Pn	20 30 40.2	+0.5
HLNI					S		Sb	20 30 54.4	-0.6
HLNI					AML		AML		
	comp=E,260µm,0.1s								
HLNI					AML		AML		
	comp=N,477µm,0.8s								
MEU	**Monte Lauro**	**1.14**	**246**		P		Pb	20 30 41.8	+0.1
MEU					AML		AML		
	comp=E,1096µm,0.4s								
MEU					AML		AML		
	comp=N,3315µm,0.3s								
MEU					AML		AML		
	comp=E,1094µm,0.4s								
MUCR	**Ucria**	**1.17**	**294**		P		Pb	20 30 41.8	-0.4
MUCR					AML		AML		
	comp=E,142µm,0.4s								
MUCR					AML		AML		
	comp=N,121µm,0.7s								
MUCR					AML		AML		
	comp=E,142µm,0.4s								
MUCR					AML		AML		
	comp=N,122µm,0.7s								
HPAC	**Pachino**	**1.25**	**226**		P		Pb	20 30 43.6	+0.1
HPAC					AML		AML		
	comp=N,302µm,1.0s								
HPAC					AML		AML		
	comp=E,334µm,1.6s								
HVZN	**Vizzini**	**1.27**	**252**		P		Pb	20 30 43.0	-0.8
HVZN					S		Sn	20 30 58.4	+0.4
HVZN					AML		AML		
	comp=N,2275µm,1.1s								
HVZN					AML		AML		
	comp=E,2170µm,0.4s								
VPL	**Vulcano Piano**	**1.27**	**310**		P		Pn	20 30 42.8	+0.8
VPL					AML		AML		
	comp=N,846µm,0.5s								
VPL					AML		AML		
	comp=E,623µm,0.9s								
MCPD	**Capo d'Orlando**	**1.30**	**295**		P		Pb	20 30 43.9	-0.5
MCPD					AML		AML		
	comp=E,178µm,1.6s								
MCPD					AML		AML		
	comp=N,148µm,0.3s								
HMDC	**Modica**	**1.31**	**242**		P		Pb	20 30 43.5	-0.9
HMDC					S		Sn	20 30 59.8	+0.8
HMDC					AML		AML		
	comp=E,570µm,0.3s								
HMDC					AML		AML		
	comp=N,646µm,0.2s								
HMDC					AML		AML		
	comp=E,570µm,0.3s								
GALF	**Gagliano Caste**	**1.32**	**276**		P		Pb	20 30 44.1	-0.7
GALF					AML		AML		
	comp=E,97µm,1.6s								
GALF					AML		AML		
	comp=E,97µm,1.6s								
GALF					AML		AML		
	comp=N,118µm,0.4s								
CAGR	**Agira**	**1.37**	**272**		P		Pb	20 30 46.2	+0.6
CAGR					AML		AML		
	comp=E,183µm,0.3s								
CAGR					AML		AML		
	comp=N,205µm,0.7s								
TIP	**Timpagrande**	**1.65**	**14**		P		Pn	20 30 47.3	0.0
TIP					AML		AML		
	comp=E,20µm,1.6s								
TIP					AML		AML		
	comp=N,16µm,1.3s								
CLTA	**Licata**	**1.85**	**258**		P		Pb	20 30 52.8	-0.9
CLTA					AML		AML		
	comp=E,424µm,0.4s								
CLTA					AML		AML		
	comp=N,446µm,1.0s								
MCEL	**Monticello**	**2.77**	**353**		S		Sn	20 31 37.0	+2.0
MIGL	**Miglionico**	**3.03**	**3**		P		Pn	20 31 06.6	+0.4
LTRZ	**Laterza**	**3.06**	**8**		P		Pn	20 31 05.6	-1.0
MATE	**Matera**	**3.09**	**7**		P		Pn	20 31 06.1	-0.9
MASS	**Massafra**	**3.14**	**13**		*e*Pn		Pn	20 31 06.2	-1.5
CGL1	**Ceglie Messapi**	**3.23**	**17**		*e*Pn		Pn	20 31 07.5	-1.4
NOCI	**Noci**	**3.27**	**11**		P		Pn	20 31 08.1	-1.5
NOCI					AML		AML		
	comp=E,42µm,1.4s								
NOCI					AML		AML		
	comp=N,49µm,1.0s								
SG1	**Sgolgore (BA)**	**3.28**	**6**		*e*Pn		Pn	20 31 09.0	-0.7
MCRV	**Calabrutti - M**	**3.31**	**346**		S		Sn	20 31 48.0	-0.4
AMUR	**Altamura**	**3.34**	**5**		P		Pn	20 31 09.8	-0.7
PTMD	**Pantelleria Cu**	**3.47**	**258**		P		Pn	20 31 13.5	+1.2
PTMD					AML		AML		
	comp=N,502µm,0.5s								
PTMD					AML		AML		
	comp=E,148µm,1.2s								
BAI	**Bari**	**3.56**	**8**		*e*Pn		Pn	20 31 12.5	-1.0
MSAG	**Monte S. Angel**	**4.14**	**357**		P		Pn	20 31 21.4	-0.1
SGRT	**San Giovanni R**	**4.19**	**355**		P		Pn	20 31 22.0	-0.2
DBRK	**Dubrovnik**	**5.30**	**16**		*e*Pg		Pn	20 30 58.2	-39
DBRK					Sg			20 31 01.1	
DBRK	**Dubrovnik**	**5.30**	**16**		*e*Pn		Pn	20 31 34.9	-2.4
DBRK					Sn		Sn	20 32 30.1	-7.2
STON	**Ston**	**5.41**	**12**		*e*Pg		Pn	20 30 59.4	-39
STON					Sg			20 31 03.2	
STON	**Ston**	**5.41**	**12**		*e*Pn		Pn	20 31 37.1	-1.8
STON					Sn		Sn	20 32 32.2	-7.8
STON	**Ston**	**5.41**	**12**		P		Pn	20 31 36.4	-2.5
HVAR	**Hvar**	**5.60**	**2**		*e*Pn		Pn	20 31 39.4	-2.0
MAKA	**Makarska**	**5.74**	**6**		Sn		Sn	20 32 39.9	-8.2
CPGN	**Carpegna, Ital**	**6.89**	**336**		P		Pn	20 31 58.3	-1.0

ROM 16 20:31:03.7±0.2,**37˚.547N**±0˚.006×**16˚.18E**±0˚.01,**h26**km±1km, **ML2.6**/3,**Error ellipse: s-maj=1.4km s-min=0.1km az=296.0,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MPAZ	**Palizzi**	**0.43**	**342**		P		Pb	20 31 12.9	0.0
MPAZ					S		Sb	20 31 19.3	+0.3
MPAZ					AML		AML		
	comp=E,314µm,0.3s								
MPAZ					AML		AML		
	comp=N,406µm,0.3s								
SOI	**Samo**	**0.53**	**350**		P		Pb	20 31 14.1	-0.4
SOI					S		Sb	20 31 22.4	+0.5
SOI					AML		AML		
	comp=E,124µm,0.3s								
SOI					AML		AML		
	comp=N,124µm,0.4s								
GMB	**Gambarie**	**0.68**	**336**		AML		AML		
	comp=N,1250µm,0.2s								
GMB					AML		AML		
	comp=E,966µm,0.2s								
HAGA	**Augusta**	**0.85**	**252**		P		Pn	20 31 20.2	+0.2
HAGA					S		Sn	20 31 31.7	+0.1
HAGA					AML		AML		
	comp=E,377µm,0.1s								
HAGA					AML		AML		
	comp=N,652µm,0.2s								
MPNC	**Port Mandanici**	**0.88**	**313**		P		Pn	20 31 20.7	+0.3
MPNC					S		Sn	20 31 33.1	+0.6
MSRU	**Castanea**	**0.89**	**324**		P		Pn	20 31 20.5	0.0
MSRU					S		Sn	20 31 33.5	+1.0
MCSR	**Castroreale**	**0.90**	**305**		P		Pb	20 31 21.0	+0.3
HCRL	**Carlentini**	**0.95**	**254**		P		Pb	20 31 21.8	+0.3
HCRL					S		Sn	20 31 34.2	+0.2
HCRL					AML		AML		
	comp=E,474µm,0.1s								
HCRL					AML		AML		
	comp=N,540µm,0.2s								
SSY	**Sortino**	**0.96**	**246**		P		Pb	20 31 21.8	+0.1
SSY					S		Sn	20 31 35.0	+0.6
HAVL	**Avola**	**1.02**	**235**		P		Pb	20 31 22.9	+0.1
HAVL					S		Sn	20 31 36.6	+0.7
HLNI	**Lentini**	**1.06**	**260**		P		Pn	20 31 23.0	+0.2
HLNI					S		Sb	20 31 37.2	+0.4
MUCR	**Ucria**	**1.14**	**296**		P		Pb	20 31 24.8	-0.1
HPAC	**Pachino**	**1.20**	**225**		P		Pb	20 31 26.4	+0.6
HMDC	**Modica**	**1.26**	**243**		P		Pb	20 31 26.3	-0.5
HMDC					S		Sb	20 31 42.5	-0.1
MCPD	**Capo d'Orlando**	**1.28**	**297**		P		Pb	20 31 27.0	-0.2

*IDC **16** 20:33:13.4±2.1,5˚.00S×152˚.19E,h69km±16km,mb3.9/5, mb1 4.2/6,mb1mx3.5/39,mbtmp4.3/6,MS3.5/2,Ms1 3.5/2, ms1mx2.9/34,Error ellipse: s-maj=50.8km s-min=13.5km az=121.0*

*NEIC **16** 20:33:14.7±0.5,5˚.0S±0˚.3×152˚.2E±0˚.3,h83km±19km, mb4.8/10,Error ellipse: s-maj=59.3km s-min=6.1km az=139.0*

ISC 16 20:33:09.9±1.2,**5˚.18S**±0˚.07×**152˚.6E**±0˚.2,**h35**km,**n20,** σ1§**81**/19,**mb4.4/9,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076** 267nm,0.3s,baz=148,slow=1.8,SNR=268	**1.01**	**329**	P			**Pn**	**20 33 29.2**	**+1.5**
KRVT					S		**Sn**	**20 33 40.7**	**0.0**
	906nm,0.3s,baz=96,slow=19,SNR=88								
PMG	**Port Moresby** 6.7nm,0.3s,baz=59,slow=12,SNR=14	**6.80**	**232**	P			**Pn**	**20 34 50.4**	**+3.0**
PMG					S		**Sn**	**20 36 03.4**	**-0.3**
	6.7nm,0.3s,baz=171,slow=16,SNR=6.9								
PMG	**Port Moresby**	**6.80**	**232**				**Pn**	**20 34 49.4**	**+2.0**
HNR	**Honiara** comp=Z,63nm,19.2s,baz=280,slow=36	**8.46**	**120**	LR			LR	20 38 34.6	
WR0	**Warramunga Arr**	**22.87**	**228**	P			**P**	**20 38 09.5**	**-1.1**
WR0					IAmb		IAmb	20 38 11.8	
	comp=Z,20nm,1.2s								
WRAB	**Tennant Creek**	**23.00**	**229**	P			**P**	**20 38 10.1**	**-1.9**
WRAB					IAmb		IAmb	20 38 13.2	
	comp=Z,9.7nm,0.7s								
WRA	**Warramunga Arr** comp=Z,2.9nm,0.3s,baz=54,slow=10,SNR=41	**23.01**	**229**	P			**P**	**20 38 10.8**	**-1.3**
WRA	**Warramunga Arr**	**23.01**	**229**	P			**P**	**20 38 10.1**	**-2.0**
KNRA	**Kununurra**	**25.59**	**244**	P			**P**	**20 38 34.5**	**-1.6**
AS31	**Alice Springs**	**25.71**	**223**	P			**P**	**20 38 35.8**	**-1.4**
ASAR	**Alice Springs** comp=Z,3.7nm,0.4s,baz=58,slow=9.0,SNR=43	**25.71**	**223**	P			**P**	**20 38 36.4**	**-0.8**
STKA	**Stephens Creek** comp=Z,2.0nm,0.7s,baz=19,slow=13,SNR=5.6	**28.48**	**200**	P			**P**	**20 39 02.3**	**+0.4**
FITZ	**Fitzroy Crossi** comp=Z,5.4nm,0.8s,baz=58,slow=8.3,SNR=9.2	**29.27**	**242**	P			**P**	**20 39 06.7**	**-2.3**
FITZ	**Fitzroy Crossi** comp=Z,65nm,1.8s	**29.27**	**242**	IAmb			IAmb	20 39 08.2	
BBOO	**Buckleboo**	**31.51**	**207**	P			**P**	**20 39 28.9**	**+0.2**
BBOO					IAmb		IAmb	20 40 36.2	
	comp=Z,47nm,1.9s								
FORT	**Forrest**	**34.34**	**219**	P			**P**	**20 39 52.2**	**-1.3**
MORW	**Morawa**	**41.92**	**231**	P			**P**	**20 40 55.9**	**-1.6**
MORW					IAmb		IAmb	20 42 18.3	
	comp=Z,60nm,1.6s								
SONM	**Songino Array** comp=Z,205nm,21.1s,baz=209,slow=36	**66.51**	**328**	LR			LR	21 13 23.2	
ILAR	**Eielson Array** comp=Z,0.5nm,0.9s,baz=241,slow=5.0,SNR=3.9	**82.60**	**22**	P			**P**	**20 45 28.6**	**-0.6**
TORD	**Torodi Ar. Bea** comp=Z,1.4nm,0.6s,baz=96,slow=3.3,SNR=12	**150.19**	**287**	PKPbc			**PKPdf**	**20 52 56.6**	**+3.4**

*NIED **16** 20:40:00,24˚.90N×123˚.30E,h140km,Mw4.2 Best double couple: M0 2.20000×10^15 NP1:φs149.00000°, δ65.00000°,λ.55.00000°. NP2:φs28.00000°,δ43.00000°, λ141.00000°.*

*BJI **16** 20:40:14.9±0.0,24˚.79N×123˚.42E,h114km,mB4.7/30, mb4.3/42*

*NEIC **16** 20:40:18.4±1.3,24˚.97N±0˚.08×123˚.36E±0˚.08, h142km±6km,mb4.5/28,Error ellipse: s-maj=12.1km s-min=9.6km az=157.0*

*TAP **16** 20:40:19.1,24˚.83N×123˚.30E,h131km,ML5.2,B*

*JMA **16** 20:40:19.4±0.2,24˚.90N×123˚.29E,h132km±3km,M4.4*

*IDC **16** 20:40:21.1±2.9,25˚.06N×123˚.33E,h165km±27km, mb3.7/19,mb1 3.8/22,mb1mx3.7/37,mbtmp4.2/22,MS2.6/1, Ms1 2.6/1,ms1mx2.3/46,Error ellipse: s-maj=14.4km s-min=13.0km az=101.0*

ISC 16 20:40:18.2±0.6,**24˚.84N**±0˚.04×**123˚.30E**±0˚.02,**h145**km±4km, **n212,** σ1§**14**/327,**mb4.3**/29,**26C-44D,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima** baz=225	**0.46**	**215**	⇑P			**Pn**	**20 40 38.9**	**+0.2**
YOJ					S		**Sn**	**20 40 53.0**	**-1.4**
	baz=225								
YOJ	**Yonaguni jima**	**0.46**	**215**		P		**Pn**	**20 40 39.0**	**+0.2**
YOJ					*e*S		**Sn**	**20 40 53.9**	**-0.5**
YOJ	**Yonaguni jima**	**0.46**	**215**				**Pn**	**20 40 39.0**	**+0.2**
JYNG	**Yonagunijimaku**	**0.50**	**220**		P		**Pn**	**20 40 39.2**	**+0.2**
JYNG					S		**Sn**	**20 40 54.3**	**-0.5**
IRIF	**Iriomote-Funau**	**0.63**	**142**		P		**Pn**	**20 40 39.9**	**+0.2**
IRIF					S		**Sn**	**20 40 55.1**	**-1.0**
JKRS	**Kuro-shima**	**0.88**	**133**		P		**Pn**	**20 40 42.3**	**+0.8**
JKRS					*i* S		**Sn**	**20 40 59.2**	**0.0**
JIJ	**Ishigaki jima**	**0.90**	**121**		P		**Pn**	**20 40 42.0**	**+0.4**
JIJ					S		**Sn**	**20 40 58.2**	**-1.3**
HATJ	**Hateruma jima**	**0.90**	**149**		P		**Pn**	**20 40 42.6**	**+0.9**
HATJ					S		**Sn**	**20 40 59.3**	**-0.2**
JISG	**Ishigakijimahi**	**0.95**	**105**		P		**Pn**	**20 40 42.4**	**+0.4**
JISG					S		**Sn**	**20 40 59.2**	**-1.0**
EOS1	**EOS1** baz=247	**1.11**	**255**	⇑P			**Pn**	**20 40 44.1**	**+0.8**
EOS1					S		**Sn**	**20 41 02.7**	**+0.1**
	baz=247								
TWB1	**Santiao Chiao** baz=280	**1.21**	**278**	⇓P			**Pn**	**20 40 45.0**	**+0.7**
TWB1					S		**Sn**	**20 41 03.4**	**-0.9**
	baz=280								
JTJ	**Tarama**	**1.29**	**98**		P		**Pn**	**20 40 46.0**	**+0.9**
JTJ					S		**Sn**	**20 41 05.5**	**-0.2**
NTC	**Toucheng** baz=265	**1.34**	**271**	*e*P			**Pn**	**20 40 46.4**	**+0.7**
NTC					*e*S		**Sn**	**20 41 06.7**	**+0.1**
	baz=265								
TWC	**Suao** baz=263	**1.34**	**261**	⇑P			**Pn**	**20 40 46.0**	**+0.4**
TWC					S		**Sn**	**20 41 05.5**	**-1.2**
	baz=263								
PCYT	**Pengchaiyu** baz=308	**1.37**	**306**	⇓*e*P			**Pn**	**20 40 47.0**	**+1.0**
NWF	**Wu-fen Shan** baz=272	**1.40**	**280**	⇓*i*P			**Pn**	**20 40 47.3**	**+0.9**
NWF					S		**Sn**	**20 41 08.2**	**+0.2**
	baz=272								
WFSB	**Wu-fen Shan** baz=272	**1.40**	**280**	⇓P			**Pn**	**20 40 47.2**	**+1.0**
WFSB					S		**Sn**	**20 41 07.7**	**-0.1**
	baz=272								
ILA	**Ilan** baz=267	**1.41**	**267**	*e*P			**Pn**	**20 40 47.4**	**+1.0**
ILA					S		**Sn**	**20 41 07.9**	**-0.1**
	baz=267								
NANB	**Nanao** baz=248	**1.47**	**254**	*e*P			**Pn**	**20 40 47.5**	**+0.5**
NANB					*e*S		**Sn**	**20 41 07.7**	**-1.4**
	baz=248								
ENA	**Nanau** baz=247	**1.48**	**254**	*e*P			**Pn**	**20 40 47.6**	**+0.5**
TWE	**Neicheng** baz=265	**1.49**	**266**	⇓P			**Pn**	**20 40 48.0**	**+0.8**
TWE					*e*S		**Sn**	**20 41 08.1**	**-1.4**
	baz=265								
SLBB	**Yuanshan** baz=262	**1.52**	**267**	⇓*i*P			**Pn**	**20 40 47.6**	**0.0**
TWA	**Mucha** baz=269	**1.57**	**276**	⇓*i*P			**Pn**	**20 40 49.1**	**+1.0**
TWA					*e*S		**Sn**	**20 41 10.1**	**-0.9**
	baz=269								
ENTT	**Nioudou** baz=259	**1.59**	**263**	*e*P			**Pn**	**20 40 49.4**	**+1.1**
YM08	**YM08** baz=276	**1.59**	**283**	⇓P			**Pn**	**20 40 49.2**	**+0.8**
YM08					*e*S		**Sn**	**20 41 11.4**	**-0.1**
	baz=276								
YM01	**YM01** baz=275	**1.60**	**281**	⇓P			**Pn**	**20 40 49.6**	**+1.1**
YM01					*e*S		**Sn**	**20 41 11.7**	**0.0**
	baz=275								
YM11	**YM11** baz=275	**1.60**	**282**	⇓*i*P			**Pn**	**20 40 49.5**	**+1.0**
YM11					*e*S		**Sn**	**20 41 12.5**	**+0.7**
	baz=275								
TWY	**Chenhua

baz=270
TAP S Sn 20 41 12.0 -0.4
baz=270
NDT Datong Townshi 1.64 262 ⇓P Pn 20 40 50.2 +1.3
baz=257
NDT eS Sn 20 41 12.1 -0.3
baz=257
TATO Taipei 1.65 275 Pn 20 40 49.9 +0.8
ANP Anpu 1.65 283⇓eP Pn 20 40 50.0 +0.8
baz=281
ANP eS Sn 20 41 12.7 -0.1
baz=281
NACB Ninganchiao 1.69 247 ⇑P Pn 20 40 49.2 -0.2
baz=241
NACB eS Sn 20 41 10.1 -3.2
baz=241
NACB Ninganchiao 1.69 247 Pn 20 40 49.5 +0.1
JIRB Irabujima 1.70 90 P Pn 20 40 50.1 +0.6
JIRB S Sn 20 41 12.3 -1.2
NTST Danshui 1.71 281 eP Pn 20 40 50.9 +1.2
baz=281
TWD Chiawan 1.73 244⇑*i*P Pn 20 40 49.8 -0.1
baz=244
TWD S Sn 20 41 12.3 -1.8
baz=244
TWS1 Kuangyinshan 1.73 279⇓*i*P Pn 20 40 51.2 +1.3
baz=273
TWS1 eS Sn 20 41 14.4 +0.2
baz=273
YHNB Yeheng 1.76 265 ⇓P Pn 20 40 51.3 +1.0
baz=264
YHNB S Sn 20 41 13.9 -1.0
baz=264
YHNB Yeheng 1.76 265 Pn 20 40 51.2 +0.9
HWA Hwalien 1.77 241 ⇑P Pn 20 40 50.7 +0.3
baz=241
HWA eS Sn 20 41 14.5 -0.4
baz=241
JIKM Ikemajima 1.77 87 P Pn 20 40 51.1 +0.8
JIKM S Sn 20 41 14.4 -0.5
ETLH Xiulin Townshi 1.77 250 ⇑P Pn 20 40 50.6 +0.1
baz=244
ETLH eS Sn 20 41 13.9 -1.3
baz=244
NSK Sanguang 1.77 265 P Pn 20 40 51.3 +0.9
baz=264
NSK S Sn 20 41 14.5 -0.7
baz=264
NNSH Datong 1.79 257 eP Pn 20 40 51.4 +0.7
baz=251
NNSH eS Sn 20 41 14.9 -0.8
baz=251
NNS Nan Shan 1.80 258 eP Pn 20 40 51.5 +0.7
baz=251
NNS eS Sn 20 41 14.5 -1.3
baz=251
ENLB Shoufeng 1.81 239 ⇑P Pn 20 40 50.1 -0.6
baz=240
ENLB eS Sn 20 41 14.1 -1.6
baz=240
JMJ Miyako jima 2 1.81 90 ⇓P Pn 20 40 52.4 +1.6
baz=91
JMJ S Sn 20 41 15.8 +0.1
baz=91
JMJ2 Miyako jima3 1.84 93 P Pn 20 40 52.3 +1.1
JMJ2 S Sn 20 41 16.1 -0.3
WLTB Daxi 1.86 271 eP Pn 20 40 52.2 +0.8
baz=270
WLTB S Sn 20 41 17.0 +0.2
baz=270
JOGS Gusukube 1.91 92 P Pn 20 40 53.2 +1.2
JOGS S Sn 20 41 17.9 0.0
NCU National Centr 1.93 274 eP Pn 20 40 53.5 +1.4
baz=273
NCU eS Sn 20 41 19.2 +1.1
baz=273
NCUH Zhongli 1.93 274 eP Pn 20 40 53.2 +1.1
baz=273
NCUH eS Sn 20 41 18.6 +0.4
baz=273
WHF Hehuan Shan 1.98 250⇑*i*P Pn 20 40 53.7 +0.5
baz=250
WHF eS Sn 20 41 18.0 -2.0
baz=250
ESL Shilin 1.99 240 ⇑P Pn 20 40 52.7 -0.2
baz=244
ESL eS Sn 20 41 17.6 -1.8
baz=244
TWT Tachien 2.02 254 eP Pn 20 40 54.8 +1.4
baz=250
TWT S Sn 20 41 20.3 -0.1
baz=250
TDCB Techi 2.04 254 ⇓P Pn 20 40 54.7 +1.1
baz=249
TDCB eS Sn 20 41 19.3 -1.4
baz=249
EGFH Guangfu 2.07 236 ⇑P Pn 20 40 53.9 0.0
baz=233
EGFH eS Sn 20 41 19.6 -1.6
baz=233
CHGB Renai 2.09 249 ⇑P Pn 20 40 55.1 +0.9
baz=243
CHGB S Sn 20 41 20.7 -1.3
baz=243
LIOB Emei 2.09 265⇓*i*P Pn 20 40 54.9 +0.9
baz=264
LIOB eS Sn 20 41 20.7 -0.9
baz=264
NSTT Nanjuang 2.10 265⇓*i*P Pn 20 40 55.0 +0.8
baz=264
NSTT S Sn 20 41 20.9 -1.0
baz=264
SBCB Hsinchu 2.11 269 ⇓P Pn 20 40 55.3 +1.1
baz=261
SBCB eS Sn 20 41 21.3 -0.7
baz=261
HSN Hsinchu 2.12 270 ⇓P Pn 20 40 55.0 +0.6
baz=262
HSN S Sn 20 41 21.2 -1.0
baz=262
OWD Renai 2.13 246 eP Pn 20 40 55.0 +0.4
baz=241
OWD eS Sn 20 41 21.0 -1.7
baz=241
HGSD Ruisui 2.18 232 ⇑P Pn 20 40 55.2 +0.1
baz=230
HGSD eS Sn 20 41 21.4 -2.0
baz=230
WHP Taichung City 2.22 256 ⇓P Pn 20 40 57.3 +1.6
baz=252
WHP eS Sn 20 41 24.8 +0.3
baz=252
EHY Hungye 2.24 234 ⇑P Pn 20 40 55.8 -0.2
baz=234
EHY eS Sn 20 41 22.7 -2.2
baz=234
VWDT VWDT 2.25 242 ⇑P Pn 20 40 56.8 +0.9
baz=242
VWDT eS Sn 20 41 23.9 -1.1
baz=242
NMLH Miaoli 2.30 263 eP Pn 20 40 57.5 +0.9
baz=262
NMLH eS Sn 20 41 25.7 -0.5
baz=262
DPDB Guoxing 2.31 250 eP Pn 20 40 58.3 +1.5
baz=248
DPDB eS Sn 20 41 25.9 -0.5
baz=248
YULB Yu-li 2.33 232 ⇑P Pn 20 40 57.0 0.0
baz=231
YULB eS Sn 20 41 24.8 -2.0
baz=231
YULB Yu-li 2.33 232 Pn 20 40 56.9 0.0
NSY Sanyi 2.35 260⇓*i*P Pn 20 40 58.4 +1.2
baz=259
NSY eS Sn 20 41 27.2 0.0
baz=259
TWQ1 Liyutan 2.35 259⇓*i*P Pn 20 40 58.3 +1.1
baz=266
TWQ1 eS Sn 20 41 25.7 -1.6
baz=266
TWF1 Yuli 2.35 232⇑*i*P Pn 20 40 57.5 +0.2
baz=230
TWF1 eS Sn 20 41 25.3 -2.1
baz=230
SSLB Suanglung 2.38 244 P Pn 20 40 58.3 +0.6
baz=241
SSLB eS Sn 20 41 26.4 -1.6
baz=241
SSLB Suanglung 2.38 244 Pn 20 40 58.2 +0.6
SMLT Sun Moon Lake 2.39 247 eP Pn 20 40 59.0 +1.2
baz=243
SMLT eS Sn 20 41 28.6 +0.3
baz=243
PTSB Yuanli 2.40 261 eP Pn 20 40 58.6 +0.8
baz=260
PTSB eS Sn 20 41 27.9 -0.3
baz=260
TYC Yuchr 2.42 248 eP Pn 20 40 59.5 +1.5
baz=244
TYC eS Sn 20 41 28.7 0.0
baz=244
FULB Fuli 2.46 229 ⇑P Pn 20 40 58.5 -0.1
baz=225
FULB eS Sn 20 41 28.1 -1.5
baz=225
WDJ Dajia District 2.47 259 eP Pn 20 40 59.8 +1.1
baz=258
WDJ eS Sn 20 41 29.1 -0.8
baz=258
CHKT Chengkung 2.48 226 P Pn 20 40 58.3 -0.4
baz=227
CHKT eS Sn 20 41 28.4 -1.6
baz=227
TCU Taichung 2.49 255 eP Pn 20 41 00.0 +1.1
baz=262
TCU eS Sn 20 41 29.8 -0.5
baz=262
WHYT Xinyi Township 2.51 244 eP Pn 20 41 00.9 +1.7
baz=242
WHYT eS Sn 20 41 31.4 +0.6
baz=242
YUS Yu-Shan 2.53 238 P Pn 20 41 00.9 +0.9
baz=234
YUS eS Sn 20 41 30.5 -1.5
baz=234
WJS Zhushan 2.56 247 eP Pn 20 41 01.4 +1.7
baz=242
WJS eS Sn 20 41 33.4 +1.6
baz=242
WNT Mingjian 2.57 249 ⇓P Pn 20 41 01.3 +1.4
baz=249
WNT eS Sn 20 41 33.2 +1.1
baz=249
WCHH Zhanghua 2.61 254 eP Pn 20 41 01.3 +0.8
baz=260
WCHH eS Sn 20 41 32.7 -0.2
baz=260
ALS Alishan 2.64 240 ⇑P Pn 20 41 02.5 +1.5
baz=236
ALS eS Sn 20 41 34.2 +0.2
baz=236
ELDTW Lidau 2.66 232⇑*i*P Pn 20 41 01.3 +0.2
baz=233
ELDTW eS Sn 20 41 32.2 -2.0
baz=233
CHN5 Tsauling 2.69 243 eP Pn 20 41 03.2 +1.7
baz=243
CHN5 eS Sn 20 41 36.3 +1.3
baz=243
TWH Lutao 2.70 219 ⇑P Pn 20 41 01.7 +0.1
baz=218
TWH S Sn 20 41 33.0 -2.0
baz=218
WGK Gukeng 2.75 246⇑eP Pn 20 41 03.7 +1.5
baz=246
WGK eS Sn 20 41 38.2 +2.1
baz=246
WDLH Douliu 2.77 246 eP Pn 20 41 04.1 +1.7
baz=239
WDLH eS Sn 20 41 37.7 +1.2
baz=239
RLNB Erlin 2.84 251 ⇓P Pn 20 41 04.2 +0.9
baz=251
RLNB eS Sn 20 41 38.1 -0.1
baz=251
TWGBT Beinan 2.86 226 ⇑P Pn 20 41 03.5 -0.1
baz=233
TWGBT eS Sn 20 41 36.3 -2.3
baz=233
TTN Taitung 2.86 224 eP Pn 20 41 04.4 +0.8
baz=225
TTN eS Sn 20 41 38.7 0.0
baz=225
TWG Pinlang 2.86 226 ⇑P Pn 20 41 03.5 -0.2
baz=233
TWG eS Sn 20 41 36.3 -2.4
baz=233
TWG Pinlang 2.86 226 Pn 20 41 03.2 -0.4
TPUB Ta-pu 2.88 238 eP Pn 20 41 05.3 +1.4
baz=234
TPUB eS Sn 20 41 39.7 +0.5
baz=234
TPUB Ta-pu 2.88 238 Pn 20 41 05.5 +1.6
CHN4 Tsaushan 2.88 240 ⇓P Pn 20 41 05.5 +1.7
baz=235
CHN4 eS Sn 20 41 40.4 +1.2
baz=235
CHN2 Minshiung 2.89 244 eP Pn 20 41 05.6 +1.6
baz=253
CHN2 S Sn 20 41 40.9 +1.6
baz=253
WTCT Ta-ch'eng 2.92 251 eP Pn 20 41 05.2 +0.9
baz=251
WTCT eS Sn 20 41 39.6 -0.3
baz=251
WTP Ta-pu 2.92 238 eP Pn 20 41 06.0 +1.6
baz=233
WTP eS Sn 20 41 41.2 +1.1
baz=233
CHY Chiayi 2.95 244 eP Pn 20 41 05.8 +1.1
baz=244
CHY eS Sn 20 41 41.1 +0.5
baz=244
WMLT Mailiao 2.99 251 eS Sn 20 41 42.0 +0.5
baz=250
TWK Hsinying 3.01 239 eP Pn 20 41 07.0 +1.5
baz=240
CHN1 Nanshi 3.02 238 eP Pn 20 41 07.5 +1.8
baz=246
CHN1 eS Sn 20 41 43.3 +1.0
baz=246
SNST Tainan City 3.03 238 eP Pn 20 41 07.3 +1.6
baz=247
SNST eS Sn 20 41 43.4 +1.0
baz=247
SGST Jiashian 3.04 235 eP Pn 20 41 06.8 +0.9
baz=236
SGST eS Sn 20 41 42.4 -0.3
baz=236
SLGT Liugui 3.05 233 eP Pn 20 41 08.1 +2.2
baz=228
SLGT eS Sn 20 41 44.0 +1.1
baz=228
WSF Szhu 3.06 248 eP Pn 20 41 06.8 +0.8
baz=248
WSF eS Sn 20 41 42.8 -0.2
baz=248
WLGB Puzi 3.06 244 eP Pn 20 41 07.0 +1.0
baz=253
WLGB eS Sn 20 41 43.3 +0.2
baz=253
ECL Taimali 3.10 224 eP Pn 20 41 06.0 -0.6
baz=230
ECL eS Sn 20 41 40.7 -3.4
baz=230
CHN8 Yiju 3.19 243 eP Pn 20 41 08.7 +0.9
baz=243
CHN8 eS Sn 20 41 46.2 +0.1
baz=243
SSD Sandimen 3.21 230⇓eP Pn 20 41 09.6 +1.5
baz=229
LAY Lan-yu 3.22 210 eP Pn 20 41 07.6 -0.6
baz=207
LAY eS Sn 20 41 44.3 -2.5
baz=207
PTTC Pingtan 3.27 282 ⇓P Pn 20 41 08.9 +0.2
baz=272
PTTC eS Sn 20 41 45.7 -2.2
baz=272
MASBT Mashibuluo 3.30 228 ⇑P Pn 20 41 10.4 +1.2
baz=227
MASBT eS Sn 20 41 48.5 -0.2
baz=227
MATB Ma-tsu 3.30 294⇓eP Pn 20 41 09.5 +0.3
baz=291
MATB eS Sn 20 41 47.7 -1.0
baz=291
TAW Tawu 3.31 222 eS Sn 20 41 47.7 -1.2
baz=216
TWM1 Shoushan 3.31 233 eP Pn 20 41 12.5 +3.1
baz=234
EAST Anshuo 3.32 223 ⇑P Pn 20 41 09.3 -0.2
baz=228
SGLT Jiouru 3.32 231 eP Pn 20 41 11.0 +1.5
baz=232
SSPT Xinbi 3.43 227 eP Pn 20 41 13.0 +2.1
baz=226
SSPT eS Sn 20 41 53.5 +1.9
baz=226
SCZT Fangliau 3.48 226 eP Pn 20 41 12.6 +1.1
baz=227
XPSS Dashiqiu 3.49 307⇓eP Pn 20 41 11.7 +0.1
baz=304
VWUC VWUC 3.50 273⇓eP Pn 20 41 11.6 -0.2
baz=272
LYJJ Jianjiangzhen 3.62 299⇓eP Pn 20 41 18.9 +5.6
baz=296
PNG Penghu 3.65 250 eP Pn 20 41 13.4 -0.3
baz=250
PNG eS Sn 20 41 54.4 -2.3
baz=250
WLCH Liuqiu 3.65 228 eP Pn 20 41 16.5 +2.8
baz=230
PHUB P'eng-hu 3.65 250⇓eP Pn 20 41 13.4 -0.3
baz=250
PHUB eS Sn 20 41 54.0 -2.9
baz=250
TSEB Hengchuen, Pin 3.66 218 eP Pn 20 41 15.6 +1.7
baz=226
TWKBT Hengchun 3.68 219 eP Pn 20 41 15.4 +1.3
baz=220
TWKBT eS Sn 20 41 57.3 -0.2
baz=220
WDGT Dungji 3.68 246 eP Pn 20 41 14.3 +0.2
baz=246
WDGT eS Sn 20 41 55.0 -2.5
baz=246
TWK1 Hengchun 3.68 219 eP Pn 20 41 14.5 +0.4
baz=220
TWK1 eS Sn 20 41 57.2 -0.4
baz=220
PTMZ Houxiangcun 3.80 274 ⇓P Pn 20 41 15.8 +0.1
baz=271
PTMZ eS Sn 20 41 57.8 -2.5
baz=271
VCHM Qimei 3.89 246 eP Pn 20 41 17.5 +0.6
baz=241
MHZQ Yeshan 4.06 289⇓eP Pn 20 41 19.1 +0.1
baz=286
QZH Quanzhou 4.28 272 *i*P Pn 20 41 22.0 +0.1
QZH S Sn 20 42 08.8 -2.7
QZH smax smax
comp=N,97nm,0.7s
QZH smax smax
comp=E,61nm,0.4s
KNM Kinmen 4.45 266⇓eP Pn 20 41 25.9 +1.7
baz=265
AXDP Jialang 4.84 272 ⇓P Pn 20 41 29.6 +0.2
baz=270
JOW Kunigami 4.90 65⇓eP Pn 20 41 28.4 -1.8
baz=68
JOW Kunigami 4.90 65 Pn 20 41 28.4 -1.8
ZPLA Ao Xicun 5.14 261 ⇓P Pn 20 41 33.6 +0.3
baz=261
ZZJH Jiuhuzhen 5.17 267⇓eP Pn 20 41 33.7 -0.1
baz=264
ZZJH eS Sn 20 42 30.4 -2.3
baz=264
NJ2 Nanjing 8.18 332 eP Pn 20 42 15.0 +1.0
NJ2 pmax pmax
comp=Z,11nm,0.6s
JNU Nakatsue 10.59 37 P Pn 20 42 46.5 +0.5
0.3nm,0.3s,baz=17,slow=11,SNR=3.9
JNU Nakatsue 10.59 37 Pn 20 42 44.6 -1.4
INCN Inchon 12.92 12 P P 20 43 21.1 -0.5
KSAR Wonju Array Be 13.16 16 P P 20 43 22.7 -1.5
KSRS Korea Array 13.18 16 P Pn 20 43 20.7 +1.0
2.3nm,0.3s,baz=194,slow=12,SNR=41
KS19 Wonju Array Si 13.21 16 P Pn 20 43 21.5 +1.3
MJAR Matsushiro Arr 17.31 44 P P 20 44 09.2 -1.0
0.1nm,0.3s,baz=235,slow=7.8,SNR=3.0
MJAR LR LR 20 51 54.6
comp=Z,21nm,18.9s,baz=85,slow=40
MJAR Matsushiro Arr 17.31 44 lAmb lAmb 20 44 17.2
comp=Z,2.0nm,1.1s
KMI Kunming 18.64 275 P Pn 20 44 26.5 -0.6
KMI pmax pmax
comp=Z,8.0nm,0.5s
HHC Hu-ho-hao-te 18.74 331 eP Pn 20 44 28.0 +0.1
HHC pmax pmax
comp=Z,7.0nm,0.8s
HHC pmax pmax
comp=Z,75nm,6.7s
LZH Lanzhou 20.14 308 eP Pn 20 44 44.6 +0.2
LZH pP pP 20 45 07.3 +0.6
LZH sP sP 20 45 23.3 -1.7
LZH pmax pmax
comp=Z,16nm,1.2s
MDJ Mudanjiang 20.39 13 P P 20 44 43.1 -0.4
MDJ lAmb lAmb 20 44 45.6
comp=Z,14nm,1.1s
USA0B Ussuriysk Arra 20.58 18 P P 20 44 44.8 -0.7
USA0B lAmb lAmb 20 44 58.5
comp=Z,18nm,1.4s
USRK Ussuriysk Ar. 20.58 18 P P 20 44 44.6 -0.8
comp=Z,3.6nm,0.5s,baz=206,slow=8.8,SNR=12
USRK Ussuriysk Ar. 20.58 18 P P 20 44 44.4 -1.0
CHTO Chiang Mai 23.38 260 P P 20 45 15.3 +1.4
CMAR Chiang Mai Arr 23.50 259 P P 20 45 17.1 +2.1
comp=Z,3.5nm,1.0s,baz=62,slow=8.4,SNR=18
GTA Gaotai 24.54 312 eP P 20 45 24.4 0.0
GTA pP pP 20 45 55.8 +1.5
GTA S S 20 49 34.3 -0.3
GTA sS sS 20 50 25.0 -2.2
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,130nm,6.2s
GTA LR LR
comp=Z,150nm,17.1s
GTA LR LR
comp=Z,100nm,17.1s
GTA LR LR
comp=Z,150nm,18.1s
ASAJ Asahikawa 24.85 34 P P 20 45 25.5 -1.5
comp=Z,11nm,0.7s,baz=237,slow=9.2,SNR=16
JKA Kamikawa-asahi 24.85 35 P P 20 45 25.5 -1.5
KLR Kul'dur 25.23 13 P P 20 45 30.2 -0.3
comp=Z,3.5nm,0.4s,baz=204,slow=9.6,SNR=25
SONM Songino Array 26.57 334 P P 20 45 41.9 -0.8
comp=Z,1.9nm,0.6s,baz=147,slow=8.7,SNR=12
SONM Songino Array 26.57 334 lAmb lAmb 20 45 44.8
comp=Z,1.5nm,0.7s
WMQ Urumqi 34.62 312 eP P 20 46 54.5 +1.1
WMQ LR LR
comp=Z,250nm,20.9s
WMQ LR LR
comp=Z,320nm,19.5s
WMQ LR LR
comp=Z,100nm,22.1s
YAK Yakutsk 37.43 5 P P 20 47 15.4 -1.6
PETK Petropavlovsk- 38.26 33 P P 20 47 22.9 -1.1
comp=Z,1.4nm,0.5s,baz=203,slow=4.8,SNR=14
MK31 Makanchi Array 39.23 315 P P 20 47 32.2 -0.1
MK31 lAmb lAmb 20 47 32.7
comp=Z,3.5nm,0.6s
MKAR Makanchi Array 39.23 315 P P 20 47 32.3 0.0
comp=Z,4.1nm,0.4s,baz=101,slow=9.9,SNR=130
MAKZ Makanchi 39.44 314 P P 20 47 34.1 0.0
MAKZ lAmb lAmb 20 47 34.8
comp=Z,8.1nm,0.5s
ZAA0 Zalesovo Array 40.77 326 P P 20 47 43.5 -1.3
ZAA0 lAmb lAmb 20 47 47.8
comp=Z,3.7nm,0.6s
ZALV Zalesovo Beam 40.77 326 P P 20 47 43.8 -1.0
comp=Z,3.7nm,0.5s,baz=108,slow=7.6,SNR=13
KURK Kurchatov 42.85 319 P P 20 48 01.4 -0.4
KURK lAmb lAmb 20 48 02.9
comp=Z,17nm,1.7s
KWAJ Kwajalein Atol 45.08 103 P P 20 48 18.7 -1.3
WRA Warramunga Arr 45.79 165 P P 20 48 27.3 +1.9
comp=Z,0.7nm,0.3s,baz=348,slow=8.7,SNR=2.6

TIXI	**Tiksi**	**46.95**	**2**	P	**P**	**20 48 33.1**	**-0.8**
TIXI				IAmb	IAmb	20 48 33.4	
	comp=Z,12nm,1.1s						
TIXI					**PcP**	**20 50 03.7**	**-0.1**
BRVK	**Borovoye**	**48.48**	**320**	P	**P**	**20 48 45.6**	**-0.3**
ASAR	**Alice Springs**	**49.30**	**167**	P	**P**	**20 48 55.3**	**+2.8**
	comp=Z,0.3nm,0.6s,baz=356,slow=12,SNR=2.6						
ABKAR	**Akbulak array**	**54.37**	**314**	P	**P**	**20 49 30.1**	**+0.3**
ILAR	**Eielson Array**	**67.75**	**28**	P	**P**	**20 50 58.9**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=268,slow=3.8,SNR=15						
ARCES	**ARCESS Array B**	**69.65**	**338**	P	**P**	**20 51 10.9**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=89,slow=8.6,SNR=5.8						
DAWY	**Dawson**	**71.07**	**27**	P	**P**	**20 51 20.8**	**+0.5**
DAWY				IAmb	IAmb	20 51 39.6	
	comp=Z,32nm,1.9s						
FINES	**FINESS Array B**	**71.86**	**330**	P	**P**	**20 51 25.0**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=55,slow=5.7,SNR=20						
INK	**Inuvik**	**71.89**	**22**	P	**P**	**20 51 25.4**	**+0.5**
AKASG	**Malin Array Be**	**73.66**	**319**	P	**P**	**20 51 34.4**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=58,slow=7.5,SNR=3.5						
BRTR	**Keskin Array B**	**74.33**	**307**	P	**P**	**20 51 40.7**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=78,slow=6.7,SNR=5.6						
RES	**Resolute Bay**	**77.70**	**10**	P	**P**	**20 51 58.1**	**-0.2**
NC405	**NORSAR Array S**	**78.30**	**333**	P	**P**	**20 52 01.7**	**-0.2**
NC303	**NORSAR Array S**	**78.38**	**333**	P	**P**	**20 52 02.3**	**0.0**
NB201	**NORSAR Array S**	**78.50**	**333**	P	**P**	**20 52 03.1**	**+0.1**
NB2	**NORSAR Subarra**	**78.54**	**333**	P	**P**	**20 52 02.7**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=60,slow=5.3						
NOA	**NORSAR Array B**	**78.54**	**333**	P	**P**	**20 52 02.5**	**-0.8**
	comp=Z,0.5nm,0.4s,baz=73,slow=6.3,SNR=7.4						
NC204	**NORSAR Array S**	**78.61**	**333**	P	**P**	**20 52 03.3**	**-0.3**
VTS	**Vitosha**	**80.53**	**313**	P	**P**	**20 52 15.1**	**+0.6**
VYHS	**Vyhne**	**80.74**	**319**	*e*P	**P**	**20 52 13.7**	**-1.6**
YKA	**Yellowknife Ar**	**81.61**	**23**	P	**P**	**20 52 19.9**	**+0.3**
	comp=Z,6.3nm,0.9s,baz=309,slow=5.1,SNR=52						
GERES	**GERESS Array B**	**83.56**	**321**	P	**P**	**20 52 30.5**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=57,slow=4.9,SNR=10.0						
B08A	**Colville Reser**	**88.13**	**36**	P	**P**	**20 52 53.9**	**+1.4**
B08A				IAmb	IAmb	20 52 54.9	
	comp=Z,4.8nm,0.8s						
NEW	**Newport**	**89.36**	**36**	P	**P**	**20 52 59.9**	**+1.6**
NEW				IAmb	IAmb	20 53 00.8	
	comp=Z,4.8nm,0.7s						
JTMT	**Jette**	**91.17**	**35**	P	**P**	**20 53 08.2**	**+1.3**
JTMT				IAmb	IAmb	20 53 09.5	
	comp=Z,4.0nm,0.9s						
FFC	**Flin Flon**	**91.75**	**24**	P	**P**	**20 53 09.6**	**+0.4**
FFC				IAmb	IAmb	20 53 10.2	
	comp=Z,2.7nm,0.7s						
NVAR	**Mina Array Bea**	**94.63**	**44**	P	**P**	**20 53 24.4**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=305,slow=6.3,SNR=7.7						

*IDC **16** 21:03:58.0±30.0, 36°.27N×22°.10E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.3/48, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=586.7km s-min=38.5km az=35.0*
*ATH **16** 21:04:05.2, 36°.37N×22°.23E, h35km±2km, ML2.9/12, Error ellipse: s-maj=3.5km s-min=1.3km az=40.0*
*THE **16** 21:04:05.7, 36°.33N×22°.15E, h17km±2km, ML2.9/6, Error ellipse: s-maj=2.8km s-min=0.5km az=212.0*

ISC 16 21:04:04.6±1.2, 36°.29N±0°.07×22°.10E±0°.05, h54km±10km, n61, σ1§74/78, mb3.6/3, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.67**	**335**	P		P	**Pn**	**21 04 18.0**	**-0.1**
PYL				S		S	**Sn**	**21 04 28.5**	**+0.6**
	882nm,0.2s								
PYL	**PYLOS**	**0.67**	**335**	P		P	**Pn**	**21 04 17.9**	**-0.2**
PYL				S		S	**Sn**	**21 04 28.4**	**+0.4**
PYL				AML		AML		21 04 30.4	
	comp=E,1901μm,0.2s								
PYL				AML		AML		21 04 32.7	
	comp=N,1589μm,0.2s								
KTHR	**Kythira**	**0.73**	**92**	P		P	**Pn**	**21 04 18.7**	**-0.2**
KTHR				S		S	**Sn**	**21 04 29.2**	**-0.2**
	comp=N,1μm,0.6s								
KLMT	**Kalamata**	**0.77**	**358**	P		P	**Pn**	**21 04 19.6**	**+0.2**
KLMT				S		S	**Sn**	**21 04 30.1**	**-0.1**
	comp=N,1μm,0.3s								
KTHA	**Kythira Island**	**0.78**	**92**	P		P	**Pn**	**21 04 19.8**	**+0.3**
KTHA				S		S	**Sn**	**21 04 30.7**	**+0.2**
	comp=N,1μm,0.6s								
KTHA	**Kythira Island**	**0.78**	**92**	P		P	**Pn**	**21 04 19.5**	**0.0**
KTHA				S		S	**Sn**	**21 04 29.7**	**-0.7**
KTHA				AML		AML		21 04 33.3	
	comp=N,2066μm,0.6s								
KTHA				AML		AML		21 04 33.7	
	comp=E,2761μm,0.7s								
VLI	**Veliai**	**0.80**	**58**	P		P	**Pn**	**21 04 19.5**	**-0.3**
VLI				S		S	**Sn**	**21 04 30.6**	**-0.3**
	comp=E,1μm,0.5s								
VLI	**Veliai**	**0.80**	**58**	P		P	**Pn**	**21 04 19.3**	**-0.4**
VLI				S		S	**Sn**	**21 04 29.4**	**-1.4**
VLI				AML		AML		21 04 34.6	
	comp=N,2784μm,0.5s								
VLI				AML		AML		21 04 36.5	
	comp=E,2730μm,0.7s								
MNVA	**Monemvasia**	**0.85**	**62**	P		P	**Pn**	**21 04 20.2**	**-0.2**
ITM	**Ithomi**	**0.90**	**351**	P		P	**Pn**	**21 04 21.5**	**+0.4**
ITM				S		S	**Sn**	**21 04 34.4**	**+1.2**
	comp=E,625nm,0.3s								
ITM	**Ithomi**	**0.90**	**351**	P		P	**Pn**	**21 04 21.4**	**+0.3**
ITM				S		S	**Sn**	**21 04 33.5**	**+0.2**
ITM				AML		AML		21 04 36.0	
	comp=E,1520μm,0.3s								
ITM				AML		AML		21 04 37.3	
	comp=N,946μm,0.3s								
VLX	**Vlachokerasia**	**1.10**	**12**	P		P	**Pn**	**21 04 24.6**	**+0.8**
VLX				S		S	**Sn**	**21 04 40.0**	**+1.9**
VLX	**Vlachokerasia**	**1.10**	**12**	P		P	**Pn**	**21 04 24.4**	**+0.6**
VLX				S		S	**Sn**	**21 04 38.2**	**+0.1**
VLX				AML		AML		21 04 46.1	
	comp=N,2209μm,0.6s								
VLX				AML		AML		21 04 47.5	
	comp=E,1570μm,0.5s								
AMT	**Artemida-Makis**	**1.28**	**346**	P		P	**Pn**	**21 04 27.9**	**+1.8**
AMT				S		S	**Sn**	**21 04 44.2**	**+1.9**
AMT	**Artemida-Makis**	**1.28**	**346**	P		P	**Pn**	**21 04 28.0**	**+1.8**
AMT				S		S	**Sn**	**21 04 45.1**	**+2.9**
AMT				AML		AML		21 04 55.4	
	comp=E,2425μm,0.7s								
AMT				AML		AML		21 04 55.8	
	comp=N,1494μm,0.6s								
KRND	**KRANIDI**	**1.38**	**37**	P		P	**Pn**	**21 04 28.4**	**+0.9**
KRND	**KRANIDI**	**1.38**	**37**	P		P	**Pn**	**21 04 28.4**	**+0.9**
KRND				AML		AML		21 04 55.2	
	comp=E,907μm,0.8s								
KRND				AML		AML		21 04 56.7	
	comp=N,723μm,0.5s								
DID	**Didima**	**1.52**	**37**	P		P	**Pn**	**21 04 30.2**	**+0.8**
DID	**Didima**	**1.52**	**37**	P		P	**Pn**	**21 04 30.2**	**+0.8**
DID				AML		AML		21 04 56.2	
	comp=N,741μm,0.4s								
DID				AML		AML		21 04 56.6	
	comp=E,1365μm,0.5s								
DRO	**Drossia**	**1.69**	**350**	P		P	**Pn**	**21 04 33.6**	**+1.9**
DRO	**Drossia**	**1.69**	**350**	P		P	**Pn**	**21 04 33.8**	**+2.1**
IMMV	**Iera Moni Meta**	**1.74**	**118**	P		P	**Pn**	**21 04 35.0**	**+2.6**
KLV	**Kalavryta, Ach**	**1.75**	**1**	P		P	**Pn**	**21 04 35.1**	**+2.5**
KLV				AML		AML		21 05 08.6	
	comp=N,296μm,0.7s								
KLV				AML		AML		21 05 10.6	
	comp=E,465μm,0.6s								
LOUT	**Loutraki**	**1.83**	**22**	P		P	**Pn**	**21 04 35.1**	**+1.4**
LOUT				AML		AML		21 05 04.4	
	comp=E,97μm,0.5s								
LOUT				AML		AML		21 05 05.0	
	comp=N,126μm,0.7s								
RLS	**Riolos of Patr**	**1.83**	**344**	P		P	**Pn**	**21 04 36.3**	**+2.6**
RLS				AML		AML		21 05 11.4	
	comp=N,315μm,0.7s								
RLS				AML		AML		21 05 19.1	
	comp=E,335μm,1.3s								
LTK	**Loutraki**	**1.86**	**22**	P		P	**Pn**	**21 04 35.2**	**+1.1**
MHLO	**Agia Marina, M**	**1.90**	**77**	P		P	**Pn**	**21 04 35.3**	**+0.8**
VAM	**Vamos**	**1.92**	**117**	P		P	**Pn**	**21 04 37.1**	**+2.2**
MHLA	**Plaka, Milos I**	**1.93**	**76**	P		P	**Pn**	**21 04 35.9**	**+1.0**
LAKA	**Lakka**	**1.95**	**357**	P		P	**Pn**	**21 04 37.7**	**+2.4**
VLY	**Voula,Athens**	**2.06**	**41**	P		P	**Pn**	**21 04 36.7**	**-0.1**
KALE	**Kalithea**	**2.10**	**1**	P		P	**Pn**	**21 04 39.0**	**+1.7**
KALE				AML		AML		21 05 19.1	
	comp=E,261μm,0.5s								
KALE				AML		AML		21 05 19.8	
	comp=N,357μm,0.7s								
SERI	**Serifos**	**2.10**	**65**	P		P	**Pn**	**21 04 37.4**	**0.0**
SERG	**Sergoula**	**2.12**	**359**	P		P	**Pn**	**21 04 39.5**	**+1.9**
VIL2	**Platees**	**2.13**	**26**	P		P	**Pn**	**21 04 37.6**	**-0.2**
EFP	**Efpalio**	**2.14**	**356**	P		P	**Pn**	**21 04 41.0**	**+3.2**
ATHU	**Athens Univers**	**2.15**	**38**	P		P	**Pn**	**21 04 38.3**	**+0.4**
VLS	**Valsamata**	**2.23**	**328**	P		P	**Pn**	**21 04 40.9**	**+1.7**
PTL	**Penteli**	**2.25**	**38**	P		P	**Pn**	**21 04 39.6**	**+0.2**
ANX	**Ano Chora**	**2.30**	**357**	P		P	**Pn**	**21 04 43.5**	**+3.4**
LKR	**Lokris**	**2.46**	**17**	P		P	**Pn**	**21 04 43.3**	**+1.0**
IDI	**Anoyia**	**2.48**	**113**	P		P	**Pn**	**21 04 43.8**	**+1.2**
AXAR	**Agios Charalam**	**2.51**	**10**	P		P	**Pn**	**21 04 45.1**	**+2.1**
IOSP	**Ios island**	**2.61**	**80**	P		P	**Pn**	**21 04 44.8**	**+0.6**
EVR	**Evrytania**	**2.63**	**355**	P		P	**Pn**	**21 04 48.2**	**+3.6**
LKD2	**Lefkada island**	**2.74**	**336**	P		P	**Pn**	**21 04 48.7**	**+2.6**
APE	**Apeiranthos**	**2.87**	**73**	P		P	**Pn**	**21 04 48.7**	**+0.8**
LAST	**Lasithi**	**2.97**	**111**	P		P	**Pn**	**21 04 51.0**	**+1.7**
AMGA	**Amorgos Island**	**3.10**	**79**	P		P	**Pn**	**21 04 51.7**	**+0.7**
XOR	**Xorichti**	**3.19**	**15**	P		P	**Pn**	**21 04 53.1**	**+0.8**
SG1	**Sgolgore (BA)**	**6.22**	**319**	*e*Pn		P	**Pn**	**21 05 34.1**	**+0.4**
SG1				(Sn)			**Sn**	**21 06 38.8**	**-4.6**
DBRK	**Dubrovnik**	**7.06**	**336**	*e*Pn		P	**Pn**	**21 05 44.0**	**-1.3**
DBRK				Sn			**Sn**	**21 06 58.8**	**-5.4**
MAKA	**Makarska**	**8.01**	**332**	*e*Pn		P	**Pn**	**21 05 58.0**	**-0.1**
MAKA				Sn			**Sn**	**21 07 22.0**	**-5.2**
HVAR	**Hvar**	**8.14**	**329**	*e*Pn		P	**Pn**	**21 05 59.2**	**-0.7**
KIJV	**Kijevo**	**8.85**	**332**	*e*Pn		P	**Pn**	**21 06 09.2**	**-0.6**
KIJV				Sn			Sn	21 07 40.5	-7.5
ZIRJ	**Zirje**	**8.86**	**328**	*e*Pn		P	**Pn**	**21 06 09.3**	**-0.6**
MORI	**Morici**	**9.01**	**329**	*e*Pn		P	**Pn**	**21 06 11.8**	**-0.1**
MORI				Sn			Sn	21 07 44.8	-7.0
GERES	**GERESS Array B**	**13.97**	**336**	Pn			**Pn**	**21 07 17.7**	**-2.0**
	comp=N,0.1nm,0.3s,baz=150,slow=12,SNR=3.4								
FINES	**FINESS Array B**	**25.30**	**4**	P			**P**	**21 09 26.1**	**+0.4**
	comp=N,1.3nm,0.7s,baz=169,slow=8.5,SNR=5.2								
ARCES	**ARCESS Array B**	**33.35**	**2**	P			**P**	**21 10 38.4**	**+1.2**
	comp=N,1.4nm,0.8s,baz=185,slow=9.1,SNR=3.2								
MKAR	**Makanchi Array**	**45.24**	**57**	P			**P**	**21 12 16.8**	**+0.3**
	comp=N,0.3nm,0.3s,baz=273,slow=7.6,SNR=12								

*IDC **16** 21:13:25.9±7.9, 18°.92S×173°.81W, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.7/28, mbtmp3.8/3, Error ellipse: s-maj=339.3km s-min=41.0km az=142.0*
*NEIC **16** 21:13:31.1±0.7, 18°.9S±0°.1×173°.9W±0°.1, h33km±8km, mb4.5/6, Error ellipse: s-maj=21.7km s-min=3.8km az=218.0*

ISC 16 21:13:32.4±0.8, 18°.9S±0°.1×173°.9W±0°.1, h56km, n15, σ1§45/15, mb4.1/4, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FUNA	**Funafuti**	**12.30**	**326**	P		Pn	**Pn**	**21 16 23.2**	**-1.7**
RAR	**Rarotonga**	**13.46**	**102**	P		Pn	**Pn**	**21 16 39.3**	**-1.3**
DZM	**Mont Dzumac**	**18.71**	**257**	P		P	**P**	**21 17 46.8**	**+0.3**
DZM				IAmb		IAmb		21 17 47.5	
	comp=Z,14nm,1.1s								
URZ	**Urewera**	**20.84**	**200**	P		P	**P**	**21 18 10.5**	**+1.1**
URZ				IAmb		IAmb		21 18 22.9	
	comp=Z,22nm,1.1s								
MSWZ	**Moikau Station**	**24.30**	**200**	P		P	**P**	**21 18 45.5**	**+0.9**
TUWZ	**Tuamarina**	**24.76**	**202**	P		P	**P**	**21 18 49.6**	**+0.8**
LHI	**Lord Howe Isla**	**27.44**	**237**	P		P	**P**	**21 19 10.8**	**-2.3**
ODZ	**Otahua Downs**	**29.10**	**203**	P		P	**P**	**21 19 26.1**	**-1.6**
ODZ				IAmb		IAmb		21 19 31.4	
	comp=Z,27nm,1.2s								
WR0	**Warramunga Arr**	**48.50**	**260**	P		P	**P**	**21 22 11.0**	**+0.9**
AS31	**Alice Springs**	**48.68**	**255**	P		P	**P**	**21 22 12.3**	**+0.9**
ASAR	**Alice Springs**	**48.68**	**255**	P		P	**P**	**21 22 13.1**	**+1.6**
	comp=Z,1.6nm,0.5s,baz=91,slow=7.4,SNR=23								
ASAR	**Alice Springs**	**48.68**	**255**	P		P	**P**	**21 22 12.5**	**+1.1**
WRA	**Warramunga Arr**	**48.69**	**260**	P		P	**P**	**21 22 12.2**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=98,slow=6.7,SNR=9.6								
ILAR	**Eielson Array**	**85.93**	**11**	P		P	**P**	**21 26 07.6**	**+1.6**
	comp=Z,0.7nm,1.0s,baz=213,slow=6.8,SNR=3.5								
GCMT	**Greycliff**	**86.65**	**39**	P		P	**P**	**21 26 11.4**	**+1.3**

*KRNET **16** 21:23:35.3±0.1, 43°.45N×76°.54E, h25km, mb2.0*
*NNC **16** 21:23:36.0±0.8, 43°.47N×76°.45E, h3km±5km, mpv2.5, Error ellipse: s-maj=3.4km s-min=1.5km az=105.0*
*SOME **16** 21:23:36.7, 43°.47N×76°.45E, h10km*

ISC 16 21:23:35.9±1.0, 43°.46N±0°.02×76°.50E±0°.03, h23km±9km, n19, σ0§47/38, 10C-3D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KTBS	**Karatobe**	**0.28**	**28**	*e*P			**Pb**	**21 23 42.7**	**+0.1**
	6.8nm,0.1s								
KTBS				*e*S			**Sb**	**21 23 47.0**	**-0.1**
	13nm,0.1s								
KTBS	**Karatobe**	**0.28**	**28**	P			**Pb**	**21 23 42.7**	**+0.1**
	6.8nm,0.1s								
KTBS				S			**Sb**	**21 23 46.9**	**-0.1**
	13nm,0.1s								
MTBS	**Maitube**	**0.34**	**189**	*e*P			**Pb**	**21 23 43.5**	**0.0**
	2.7nm,0.1s								
MTBS				*e*S			**Sb**	**21 23 48.4**	**-0.2**
	18nm,0.1s								
MTBS	**Maitube**	**0.34**	**189**	P			**Pb**	**21 23 43.5**	**0.0**
	2.7nm,0.1s								
MTBS				S			**Sb**	**21 23 48.4**	**-0.2**
	18nm,0.1s								
IZV	**Izvestkoviy**	**0.44**	**169**	*e*P			**Pb**	**21 23 45.4**	**+0.3**
	1.1nm,0.1s								
IZV				*e*S			**Sb**	**21 23 51.7**	**+0.4**
	4.7nm,0.2s								
IZV	**Izvestkoviy**	**0.44**	**169**	P			**Pb**	**21 23 45.4**	**+0.3**
	1.1nm,0.1s								
IZV				S			**Sb**	**21 23 51.9**	**+0.6**
	4.7nm,0.2s								
KUU	**Kurty**	**0.44**	**345**	*e*P			**Pb**	**21 23 45.0**	**-0.2**
	0.9nm,0.1s								
KUU				*e*S			**Sb**	**21 23 50.9**	**-0.5**
	6.5nm,0.2s								
KUU	**Kurty**	**0.44**	**345**	P			**Pb**	**21 23 45.0**	**-0.2**
	0.9nm,0.1s								
KUU				S			**Sb**	**21 23 50.9**	**-0.5**
	6.5nm,0.2s								
CHKK	**Chushkaly**	**0.53**	**42**	*e*P			**Pb**	**21 23 47.0**	**+0.4**
	0.7nm,0.1s								
CHKK				*e*S			**Sb**	**21 23 54.3**	**+0.5**
	10nm,0.2s								
CHKK	**Chushkaly**	**0.53**	**42**	P			**Pb**	**21 23 47.0**	**+0.4**
	0.7nm,0.1s								
CHKK				S			**Sb**	**21 23 54.3**	**+0.5**
	10nm,0.2s								
KST	**Kastek**	**0.57**	**223**	*e*P			**Pb**	**21 23 47.3**	**-0.1**
	1.1nm,0.1s								
KST				⇓*i*S			**Sb**	**21 23 54.9**	**-0.3**
	3.9nm,0.1s								
KST	**Kastek**	**0.57**	**223**	P			**Pb**	**21 23 47.3**	**-0.1**
	1.1nm,0.1s								
KST				S			**Sb**	**21 23 54.9**	**-0.3**
	3.9nm,0.1s								
KRBS	**Karabastau**	**0.64**	**291**	*e*P			**Pb**	**21 23 48.4**	**-0.2**
	0.2nm,0.1s								
KRBS				*e*S			**Sb**	**21 23 56.6**	**-0.5**
	2.5nm,0.1s								
TKM2	**Tokmak 2**	**0.85**	**231**	⇓*i*P			**Pb**	**21 23 52.2**	**0.0**
	baz=33								
TKM2				⇓*i*S			**Sb**	**21 24 03.4**	**+0.1**
	baz=33								
BOOM	**Boomskoye usch**	**1.06**	**203**	⇑*i*P			**Pb**	**21 23 54.9**	**-0.7**
	baz=5.0								
BOOM				⇑*i*S			**Sn**	**21 24 09.7**	**+0.1**
	baz=5.0								
ANVS	**Anan'yevo**	**1.09**	**128**	⇑*i*P			**Pn**	**21 23 54.7**	**-1.4**
	baz=28								
ANVS				⇑*i*S			**Sb**	**21 24 09.3**	**-0.9**
	baz=28								
KBK	**Karagaybulak**	**1.39**	**235**	⇑*i*P			**Pb**	**21 24 00.7**	**+0.5**
	baz=36								
KBK				⇑*i*S			**Sn**	**21 24 18.4**	**+0.4**
	baz=36								
KDJ	**Kajisay**	**1.43**	**159**	⇑*e*P			**Pn**	**21 24 01.1**	**+0.5**
	baz=60								
KDJ				⇑*i*S			**Sb**	**21 24 19.6**	**-0.1**
	baz=60								
USP	**Ospenovka**	**1.47**	**263**	⇑*i*P			**Pb**	**21 24 02.9**	**+0.3**
	baz=64								
USP				⇑*i*S			**Sb**	**21 24 21.7**	**+0.8**
	baz=64								

*IDC **16** 21:25:47.2±2.8, 36°.31N×70°.81E, h174km±26km, mb3.3/10, mb1 3.3/16, mb1mx3.1/49, mbtmp3.7/16, Error ellipse: s-maj=20.8km s-min=14.2km az=23.0*
*NNC **16** 21:25:53.7±4.0, 36°.95N×70°.71E, h200km±47km, mb2.9, mpv3.7, Error ellipse: s-maj=35.6km s-min=26.4km az=34.0*

ISC 16 21:25:49.8±0.7, 36°.64N±0°.07×70°.78E±0°.07, h200km, n34, σ1§84/40, mb3.5/9, 8C, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.46**	**358**	⇑P			**Pn**	**21 27 23.7**	**+0.8**
	3.8nm,0.5s,baz=193,slow=15,SNR=41								
KK31				⇑S			**Sn**	**21 28 34.1**	**-2.7**
	41nm,0.8s,baz=183,slow=20,SNR=20								
AAK	**Ala-Archa**	**6.64**	**24**	P			**Pn**	**21 27 26.3**	**+1.0**
	2.0nm,0.3s,baz=126,slow=3.7,SNR=25								
AAK				S			**Sn**	**21 28 40.8**	**-0.3**
	0.5nm,0.3s,baz=185,slow=13,SNR=4.1								
AAK	**Ala-Archa**	**6.64**	**24**	P			**Pn**	**21 27 25.8**	**+0.4**

*GCG **16** 20:54:45.0±0.8, 14°.32N×92°.68W, h51km±29km, MD4.3*
*UCR **16** 20:54:48.4±0.9, 14°.24N×92°.37W, h59km±16km, ML3.3*
*SNET **16** 20:54:48.2±0.7, 14°.24N×92°.37W, h59km±12km, ML3.5*
*MEX **16** 20:54:48.3±0.6, 14°.48N×92°.33W, h85km±9km, MD4.0*
*IDC **16** 20:54:49.5±1.4, 14°.44N×92°.51W, h60km±8km, mb3.4/3, mb1 3.8/7, mb1mx3.5/35, mbtmp3.7/7, MS3.9/1, Ms1 3.9/1, ms1mx2.8/36, Error ellipse: s-maj=22.5km s-min=7.3km az=5.0*

ISC 16 20:54:48.4±1.0, 14°.33N±0°.08×92°.51W±0°.05, h59km±8km, n23, σ1§42/37, mb3.8/3, 3C, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
THIG		**0.62**	**22**	*e*P			**Pn**	**20 55 00.5**	**-1.2**
THIG				*e*S			**Sn**	**20 55 11.0**	**-0.3**
ERG	**Entre ros, C**	**0.92**	**83**	⇑*e*P			**Pn**	**20 55 04.7**	**-0.6**
ERG				*e*S			**Sn**	**20 55 18.7**	**+0.8**
STG3	**Santiaguito 3,**	**0.98**	**67**	⇑*e*P			**Pn**	**20 55 05.2**	**-1.2**
PCIG		**1.53**	**333**	*e*P			**Pn**	**20 55 12.8**	**-0.8**
PCIG				*e*S			**Sn**	**20 55 31.0**	**-1.4**
FUG	**Fuego 3**	**1.62**	**86**	*e*P			**Pn**	**20 55 13.7**	**-1.2**
IXG	**Ixpaco**	**2.01**	**94**	⇑*e*P			**Pn**	**20 55 19.5**	**-0.7**
APG	**El Apazote**	**2.09**	**71**	P			**Pn**	**20 55 20.7**	**-0.6**
	38nm,0.3s,baz=288,slow=7.6,SNR=105								
APG				S			**Sn**	**20 55 47.5**	**+1.2**
	176nm,0.3s,baz=321,slow=17,SNR=35								
NBG	**Las Nubes**	**2.11**	**83**	*e*P			**Pn**	**20 55 22.1**	**+0.5**
NBG				*e*S			**Sn**	**20 55 49.7**	**+2.8**
FAME	**Alcalda de S**	**2.47**	**101**	*e*P			**Pn**	**20 55 23.9**	**-2.4**
FAME				*e*S			**Sn**	**20 55 52.5**	**-2.8**
FAME				IAML				20 55 55.6	
	comp=Z,236nm,0.3s								
TGIG		**2.51**	**346**	*i*P			**Pn**	**20 55 25.0**	**-1.9**
TGIG				*e*S			**Sn**	**20 55 53.5**	**-2.8**
MRL	**Marmol**	**2.83**	**74**	*e*P			**Pn**	**20 55 31.2**	**-0.2**
CEVE	**Cerro Verde**	**2.84**	**100**	*e*P			**Pn**	**20 55 30.5**	**-1.1**
CEVE				*e*S			**Sn**	**20 56 03.0**	**-1.8**
CEVE	**Cerro Verde**	**2.84**	**100**	*e*P			**Pn**	**20 55 30.5**	**-1.1**
CEVE				*e*S			**Sn**	**20 56 03.0**	**-1.8**
BOQS	**Boqueron**	**3.19**	**100**	*e*P			**Pn**	**20 55 35.6**	**-0.7**
CMIG	**Matias Romero**	**3.58**	**320**	P			**Pn**	**20 55 41.8**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=138,slow=12,SNR=30								
CMIG				S			**Sn**	**20 56 21.4**	**-1.1**
	comp=Z,9.1nm,0.3s,baz=115,slow=16,SNR=6.6								
CMIG	**Matias Romero**	**3.58**	**320**	*e*P			**Pn**	**20 55 41.0**	**-0.4**
CMIG				*i* S			**Sn**	**20 56 22.2**	**-0.2**
TEIG	**Tepich**	**7.12**	**34**	P			**Pn**	**20 56 28.7**	**-1.3**
	comp=Z,11nm,0.3s,baz=307,slow=0.1,SNR=48								
TEIG				S			**Sn**	**20 57 49.2**	**-0.3**
	baz=319,slow=18,SNR=2.2								
TXAR	**Lajitas Array**	**18.15**	**327**	P			**Pn**	**20 58 57.5**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=134,slow=10,SNR=3.8								
NVAR	**Mina Array Bea**	**33.11**	**321**	P			**P**	**21 01 20.7**	**+1.6**
	comp=Z,0.5nm,0.8s

2.2nm,0.5s
AAK S Sn 21 28 40.4 -0.8
4.3nm,0.5s
TKM2 Tokmak 2 7.28 29 ⇑P Pn 21 27 33.8 0.0
TKM2 4.8nm,0.8s
⇑S Sn 21 28 54.3 -2.2
3.5nm,0.8s
GEYT Alibeck 10.18 281 P Pn 21 28 10.1 -1.2
0.2nm,0.3s,baz=116,slow=13,SNR=3.3
MKAR Makanchi Array 13.28 37 P Pn 21 28 51.5 +0.9
0.1nm,0.3s,baz=229,slow=13,SNR=9.1
DANN Dangsing 13.71 123 *e*P Pn 21 28 54.2 -2.3
17nm,0.4s
KOLN Koldanda 13.99 126 *e*P Pn 21 28 58.1 -1.7
GKN Gorkha 14.53 122 *e*P Pn 21 29 05.3 -1.1
AB31 Akbulak array 14.88 331 ⇑P P 21 29 10.4 -0.7
2.2nm,0.6s,baz=147,slow=12,SNR=32
AB31 ⇑S S 21 31 48.7 -6.7
1.1nm,0.7s,baz=156,slow=23,SNR=7.5
KURBB Kurchatov Arra 15.04 19 P P 21 29 14.9 +1.9
0.1nm,0.3s,baz=213,slow=9.0,SNR=2.9
DMN Daman 15.10 123 *e*P P 21 29 13.1 -1.0
KKN Kakani 15.10 122 *e*P Pn 21 29 11.9 -1.6
PKIN Phulchoki 15.31 122 *e*P P 21 29 16.0 -0.5
29nm,0.5s
PKI Pulchoki 15.33 122 *e*P P 21 29 16.2 -0.5
4.2nm,0.5s
GUN Gumba 15.44 120 *e*P Pn 21 29 16.8 -0.9
8.8nm,0.4s
JIRN Jiri 15.81 120 *e*P Pn 21 29 22.1 -0.1
24nm,0.4s
BVAR Borovoye Array 16.38 359 P Pn 21 29 30.0 +1.5
0.2nm,0.3s,baz=152,slow=12,SNR=4.6
RAMN Ramite 16.54 121 *e*P Pn 21 29 30.3 -0.6
9.8nm,0.4s
AKTO Aktyubinsk 16.57 330 P Pn 21 29 33.0 +2.2
1.1nm,0.3s,baz=139,slow=10,SNR=18
AKTO Aktyubinsk 16.57 330 ⇑P Pn 21 29 31.5 +0.7
7.8nm,0.9s
AKTO ⇑S S 21 32 33.3 +0.5
2.8nm,1.1s
TAPN Taplejung 17.07 118 *e*P Pn 21 29 36.5 -0.7
10nm,0.4s
ODAN Odare 17.14 120 *e*P Pn 21 29 38.1 +0.1
9.0nm,0.5s
ZALV Zalesovo Beam 19.86 25 P Pn 21 30 07.2 -2.4
1.2nm,0.3s,baz=222,slow=12,SNR=11
SONM Songino Array 28.40 56 P P 21 31 26.7 +1.1
0.2nm,0.5s,baz=248,slow=9.8,SNR=3.4
CMAR Chiang Mai Arr 30.68 119 P P 21 31 45.5 -0.3
0.4nm,0.4s,baz=312,slow=7.2,SNR=4.2
FINES FINESS Array B 37.27 326 P P 21 32 44.6 +2.6
0.9nm,0.7s,baz=111,slow=11,SNR=3.8
ARCES ARCESS Array B 40.95 338 P P 21 33 15.3 +2.9
1.0nm,0.6s,baz=108,slow=7.8,SNR=5.6
NB2 NORSAR Subarra 44.16 323 P P 21 33 40.4 +2.0
comp=Z,1.3nm,0.5s,baz=96,slow=7.9
NOA NORSAR Array B 44.16 323 P P 21 33 40.4 +2.0
comp=Z,0.9nm,0.7s,baz=96,slow=7.7,SNR=3.2
TORD Torodi Ar. Bea 65.55 268 P P 21 36 11.9 -0.3
comp=Z,0.3nm,0.5s,baz=54,slow=6.5,SNR=6.7
YKA Yellowknife Ar 81.11 3 P P 21 37 44.4 +2.1
comp=Z,0.2nm,0.5s,baz=348,slow=5.3,SNR=5.5
WRA Warramunga Arr 82.21 122 P P 21 37 47.7 -1.1
comp=Z,0.9nm,0.5s,baz=323,slow=4.9,SNR=12
ASAR Alice Springs 84.48 125 P P 21 37 59.3 -0.9
comp=Z,0.9nm,0.6s,baz=311,slow=5.1,SNR=14

*IDC **16** 21:28:58.3±1.6,20.°52S×172.°58E, h0km, mb3.9/10, mb1 4.1/11,mb1mx4.0/39, mbtmp3.9/11, ML3.6/1, MS3.4/9, Ms1 3.4/9, ms1mx3.2/28, Error ellipse: s-maj=58.6km s-min=22.2km az=153.0*
*NEIC **16** 21:29:02.9±1.3,20.°66S±0.°09×172.°6E±0.°1, h35km±8km, mb4.6/7, Error ellipse: s-maj=19.6km s-min=10.2km az=118.0*
ISC 16 21:29:02.8±0.7,20.°7S±0.°1×172.°7E±0.°1, h35km, n53, σ0.°72/42, mb3.9/10, MS3.4/6, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.95**	**256**	*e*Pn		**Pn**	**21 30 28.7**	**+0.1**
DZM	4.8nm,0.3s			*e*LR		LR	21 31 50.5	
	comp=Z,664nm,26.1s							
DZM	**Mont Dzumac**	**5.95**	**256**	Pn		**Pn**	**21 30 29.5**	**+1.0**
	1.4nm,0.3s,baz=146,slow=18,SNR=13							
DZM	**Mont Dzumac**	**5.95**	**256**			**Pn**	**21 30 28.6**	**0.0**
RAO	**Raoul Island**	**12.03**	**137**	LR		LR	21 35 40.3	
	comp=Z,128nm,20.9s,baz=268,slow=33							
AFI	**Afiamalu**	**16.32**	**68**	LR		LR	21 37 51.7	
	comp=Z,93nm,19.8s,baz=343,slow=33							
HNR	**Honiara**	**16.63**	**311**	LR		LR	21 38 12.5	
	comp=Z,89nm,18.4s,baz=126,slow=34							
MXZ	**Matakaoa Point**	**17.48**	**165**			**P**	**21 33 04.5**	**-0.2**
MXZ				IAmb		IAmb	21 33 18.0	
	comp=Z,43nm,0.8s							
URZ	**Urewera**	**17.89**	**169**	LR		LR	21 38 33.3	
	comp=Z,114nm,19.1s,baz=336,slow=32							
QRZ	**Quartz Range**	**20.04**	**180**	P		**P**	**21 33 32.8**	**+0.1**
QRZ				IAmb		IAmb	21 33 48.3	
	comp=Z,24nm,1.0s							
RAR	**Rarotonga**	**25.73**	**96**	LR		LR	21 42 39.3	
	comp=Z,42nm,18.9s,baz=328,slow=32							
KRVT	**Keravat (AS076**	**25.87**	**306**	LR		LR	21 44 24.3	
	comp=Z,161nm,18.8s,baz=117,slow=36							
PMG	**Port Moresby**	**27.04**	**291**	LR		LR	21 44 17.3	
	comp=Z,84nm,18.4s,baz=232,slow=34							
STKA	**Stephens Creek**	**29.89**	**242**	LR		LR	21 45 39.2	
	comp=Z,74nm,21.3s,baz=27,slow=34							
TBI	**Tubuai**	**35.14**	**101**	*e*LR		LR	21 45 27.4	
	comp=Z,123nm,30.2s							
PPT2	**Papeete2**	**35.75**	**92**	*e*LR		LR	21 45 43.7	
	comp=Z,141nm,26.2s							
WRA	**Warramunga Arr**	**35.90**	**264**	P		**P**	**21 35 59.2**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=83,slow=6.8,SNR=2.7							
ASAR	**Alice Springs**	**35.94**	**258**	P		**P**	**21 35 59.8**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=87,slow=9.0,SNR=8.4							
KSRS	**Korea Array**	**71.58**	**324**	P		**P**	**21 40 20.0**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=142,slow=5.3,SNR=4.0							
PETK	**Petropavlovsk-**	**74.66**	**351**	P		**P**	**21 40 38.5**	**+0.1**
	comp=Z,4.1nm,1.0s,baz=176,slow=5.4,SNR=3.5							
KLR	**Kul'dur**	**78.58**	**334**	P		**P**	**21 41 01.6**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=141,slow=5.0,SNR=4.2							
CMAR	**Chiang Mai Arr**	**82.05**	**293**	P		**P**	**21 41 21.1**	**+1.1**
	comp=Z,1.3nm,0.8s,baz=123,slow=4.3,SNR=7.3							
CMAR	**Chiang Mai Arr**	**82.05**	**293**	P		**P**	**21 41 20.0**	**0.0**
NVAR	**Mina Array Bea**	**87.40**	**47**	P		**P**	**21 41 48.2**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=223,slow=6.1,SNR=5.6							
NVAR	**Mina Array Bea**	**87.40**	**47**	P		**P**	**21 41 47.3**	**+0.4**
LCMT	**Little Creek M**	**90.31**	**50**	P		**P**	**21 41 59.5**	**-1.0**
G08A	**Pilot Rock**	**90.32**	**41**	P		**P**	**21 42 00.3**	**0.0**
SONM	**Songino Array**	**90.36**	**322**	P		**P**	**21 41 59.9**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=122,slow=5.7,SNR=4.0							
SONM	**Songino Array**	**90.36**	**322**	IAmb		IAmb	21 42 01.2	
	comp=Z,1.0nm,1.0s							
ILAR	**Eielson Array**	**90.72**	**16**	P		**P**	**21 41 59.9**	**-1.7**
	comp=Z,0.5nm,0.8s,baz=237,slow=4.6,SNR=7.3							
EGAK	**Eagle**	**92.30**	**18**	P		**P**	**21 42 08.6**	**-0.3**
Q16A	**Castle Valley**	**92.60**	**49**	P		**P**	**21 42 09.4**	**-1.8**
TXAR	**Lajitas Array**	**94.66**	**61**	P		**P**	**21 42 22.4**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=177,slow=4.4,SNR=3.7							
OSTC	**Ostas**	**144.92**	**334**	*e*PKP		**PKPab**	**21 48 35.1**	**-0.2**
CHVC	**Chvalec**	**144.96**	**334**	*e*PKP		**PKPbc**	**21 48 35.3**	**-0.2**
DPC	**Dobruska-Polom**	**145.03**	**333**	*e*PKP		**PKPab**	**21 48 35.9**	**+0.1**
DPC				*ex*		x	21 48 42.7	
UPC	**Upice**	**145.04**	**334**	*e*PKP		**PKPab**	**21 48 35.8**	**+0.1**
KRLC	**Kraliky**	**145.04**	**333**	*e*PKP		**PKPab**	**21 48 35.9**	**+0.1**
CLL	**Collm**	**145.57**	**337**	*i* PKPdf		**PKPbc**	**21 48 37.3**	**0.0**
	comp=Z,13nm,0.9s							
CLL				*i* (PKiKP)			21 48 44.1	
PVCC	**Panska Ves**	**145.61**	**335**	*e*PKP		**PKPab**	**21 48 37.9**	**+0.1**
PRU	**Pruhonice**	**146.04**	**335**	*e*PKP		**PKPbc**	**21 48 38.7**	**-0.2**
CONA	**Conrad Observa**	**147.04**	**331**	*i* PKiKP		**PKPbc**	**21 48 42.6**	**+0.6**
	comp=Z,2.3nm,0.7s							
KHC	**Kasperske Hory**	**147.10**	**334**	*e*PKP		**PKPbc**	**21 48 42.0**	**0.0**
GERES	**GERESS Array B**	**147.28**	**334**	PKPbc		**PKPbc**	**21 48 42.3**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=34,slow=3.4,SNR=22							
GERES	**GERESS Array B**	**147.28**	**334**			**PKPbc**	**21 48 42.7**	**+0.1**
ARSA	**Arzberg**	**147.69**	**330**	*i* PKiKP		**PKPbc**	**21 48 44.4**	**+0.7**
	comp=Z,0.6nm,0.3s							
MOA	**Molln**	**147.81**	**332**	*i* PKPab		**PKPbc**	**21 48 44.2**	**+0.2**
	comp=Z,1.7nm,0.6s							
OBKA	**Obir**	**148.69**	**330**	*i* PKiKP		**PKPbc**	**21 48 46.6**	**+0.2**
	comp=Z,1.9nm,0.6s							
KBA	**Koelnbreinsper**	**148.80**	**332**	*i* PKiKP		**PKPbc**	**21 48 46.2**	**-0.6**
	comp=Z,2.8nm,0.9s							
WTTA	**Wattenberg**	**149.38**	**334**	*i* PKPbc		**PKPbc**	**21 48 47.1**	**-1.2**
	comp=Z,2.0nm,0.5s							
ABTA	**Abfaltersbach**	**149.42**	**333**	*i* PKiKP		**PKPbc**	**21 48 47.4**	**-0.8**
	comp=Z,1.5nm,0.6s							
MOTA	**Moosalm**	**149.53**	**335**	*i* PKiKP		**PKPbc**	**21 48 48.4**	**-0.2**
	comp=Z,2.3nm,0.7s							
SQTA	**Sankt Quirin**	**149.58**	**335**	*i* PKiKP		**PKPbc**	**21 48 48.5**	**-0.2**
	comp=Z,1.6nm,0.3s							
FETA	**Feichten**	**149.94**	**335**	*i* PKiKP		**PKPbc**	**21 48 49.2**	**-0.5**
	comp=Z,3.6nm,0.9s							

*MOS **16** 21:37:59.7±1.2,54.°04S×6.°92E, h10km, mb5.2/18, Error ellipse: s-maj=19.0km s-min=9.6km az=83.0*
*IDC **16** 21:37:59.3±0.4,54.°08S×6.°90E, h0km, mb4.7/21, mb1 4.8/22,mb1mx4.8/28, mbtmp4.8/22, ML4.6/1, MS4.5/17, Ms1 4.4/17, ms1mx4.4/19, Error ellipse: s-maj=15.9km s-min=12.9km az=104.0*
*NEIC **16** 21:38:00.5±1.9,53.°99S±0.°10×7.°0E±0.°2, h10km±1km, mb5.2/49, Error ellipse: s-maj=17.2km s-min=16.0km az=137.0*
*GCMT **16** 21:38:02.5±0.2,54.°07S±0.°01×7.°41E±0.°03, h12km, MW5.1/137, Moment Tensor Solution. s58,c71; s137,c213; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}-5.52±.10; $M_{\theta\theta}$4.55±.09; $M_{\phi\phi}$0.96±.10; $M_{r\theta}$-0.15±.34; $M_{\theta\phi}$-1.65±.08; $M_{\phi r}$-0.89±.37; Best double couple: M_o5.42600×10¹⁶ NP1:ϕ_s103.00000°, δ45.00000°, λ-102.00000°. NP2:ϕ_s300.00000°, δ47.00000°, λ-78.00000°. Principal axes: T 5.1980, Plg1.0000°, Azm22.0000°; N 0.4550, Plg8.0000°, Azm112.0000°; P -5.6540, Plg82.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 16 21:38:01.0±0.2,54.°07S±0.°06×7.°01E±0.°06, h10km, n248, σ1.°53/237, mb5.0/49, MS4.6/22, 3C-7D, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NVL	**N'lazarevskaya**	**16.89**	**174**	*e*P		**Pn**	**21 41 57.2**	**0.0**
NVL				pmax		pmax		
	comp=Z,94nm,0.9s							
VNA1	**Neumayer--Stat**	**17.98**	**197**	P		**Pn**	**21 42 10.6**	**0.0**
SNAA	**Sanae**	**18.18**	**190**	P		**P**	**21 42 13.7**	**+0.3**
SNAA	**Sanae**	**18.18**	**190**	*e*P		**Pn**	**21 42 12.9**	**-0.3**
SNAA	**Sanae**	**18.18**	**190**	P		**Pn**	**21 42 12.3**	**-0.9**
	comp=Z,2.0nm,0.3s,baz=17,slow=10,SNR=163							
SNAA				LR		LR	21 47 43.4	
	comp=Z,3μm,20.8s,baz=16,slow=32							
SNAA	**Sanae**	**18.18**	**190**	P		**Pn**	**21 42 12.1**	**-1.0**
SNAA				IAmb		IAmb	21 42 17.3	
	comp=Z,188nm,1.0s							
VNA3	**Neumayer Olymp**	**18.73**	**197**	P		**P**	**21 42 19.3**	**-0.2**
SYO	**Syowa Base**	**21.16**	**147**	*i* P		**P**	**21 42 43.8**	**-2.1**
SYO	**Syowa Base**	**21.16**	**147**	*i* P		**P**	**21 42 47.0**	**+1.1**
SYO	**Syowa Base**	**21.16**	**147**	*i* pP		pP	21 42 51.2	+3.2
SUR	**Sutherland**	**23.82**	**30**	P		**P**	**21 43 15.2**	**+1.1**
	comp=Z,13nm,1.0s,baz=182,slow=6.8,SNR=5.3							
SUR				LR		LR	21 50 15.7	
	comp=Z,2μm,20.5s,baz=194,slow=31							
SUR	**Sutherland**	**23.82**	**30**	P		**P**	**21 43 12.5**	**-1.6**
HOPE	**Hope Point**	**25.16**	**252**	P		**P**	**21 43 24.6**	**-1.5**
HOPE				pmax		pmax		
	comp=Z,82nm,1.2s							
HOPE	**Hope Point**	**25.16**	**252**	P		**P**	**21 43 24.6**	**-1.5**
HOPE				IAmb		IAmb	21 43 33.8	
	comp=Z,82nm,1.1s							
BOSA	**Boshof**	**28.72**	**35**	P		**P**	**21 43 59.6**	**+1.2**
	comp=Z,9.2nm,0.9s,baz=187,slow=8.2,SNR=10							
BOSA				LR		LR	21 53 20.4	
	comp=Z,2μm,19.8s,baz=193,slow=32							
BOSA	**Boshof**	**28.72**	**35**	P		**P**	**21 43 57.0**	**-1.4**
MAW	**Mawson**	**29.20**	**139**	P		**P**	**21 44 03.6**	**+1.4**
MAW				pmax		pmax		
	comp=Z,8.0nm,1.2s							
MAW	**Mawson**	**29.20**	**139**	P		**P**	**21 44 02.8**	**+0.6**
	comp=Z,19nm,1.0s,baz=275,slow=11,SNR=7.8							
MAW				LR		LR	21 53 30.3	
	comp=Z,412nm,21.3s,baz=264,slow=32							
MAW	**Mawson**	**29.20**	**139**	P		**P**	**21 44 03.5**	**+1.4**
CRZF	**Crozet Islands**	**29.25**	**93**	P		**P**	**21 44 04.3**	**+1.4**
CRZF				IAmb		IAmb	21 44 21.1	
	comp=Z,57nm,0.9s							
LBTB	**Lobatse**	**32.16**	**33**	P		**P**	**21 44 27.0**	**-1.8**
LBTB				pmax		pmax		
	comp=Z,7.0nm,1.0s							
LBTB	**Lobatse**	**32.16**	**33**	P		**P**	**21 44 27.0**	**-1.8**
PMSA	**Palmer Station**	**35.72**	**224**	P		**P**	**21 44 59.4**	**+0.3**
	comp=Z,22nm,0.8s,baz=127,slow=5.1,SNR=5.2							
PMSA	**Palmer Station**	**35.72**	**224**	IAmb		IAmb	21 45 02.1	
	comp=Z,20nm,0.8s							
TSUM	**Tsumeb**	**35.74**	**17**	P		**P**	**21 44 58.6**	**-1.4**
TSUM				IAmb		IAmb	21 45 07.2	
	comp=Z,36nm,1.1s							
QSPA	**South Pole Qui**	**36.17**	**180**	P		**P**	**21 45 03.1**	**-0.1**
	comp=Z,63nm,0.8s,baz=227,slow=4.0,SNR=165							
QSPA	**South Pole Qui**	**36.17**	**180**	P		**P**	**21 45 03.2**	**-0.1**
USHA	**Ushuaia**	**41.87**	**237**	P		**P**	**21 45 50.4**	**-0.5**
	comp=Z,11nm,1.1s,baz=153,slow=9.0,SNR=2.6							
LSZ	**Lusaka**	**42.10**	**31**	P		**P**	**21 45 51.8**	**-1.5**
LSZ				pmax		pmax		
	comp=Z,10.0nm,1.0s							
LSZ	**Lusaka**	**42.10**	**31**	P		**P**	**21 45 51.8**	**-1.5**
ABPO	**Ambohimpanom**	**46.57**	**57**	P		**P**	**21 46 28.3**	**-0.8**
ABPO				pmax		pmax		
	comp=Z,12nm,1.1s							
ABPO	**Ambohimpanom**	**46.57**	**57**	P		**P**	**21 46 28.3**	**-0.8**
VNDA	**Vanda**	**47.74**	**173**	P		**P**	**21 46 37.8**	**+0.4**
VNDA				pmax		pmax		
	comp=Z,39nm,1.0s							
VNDA	**Vanda**	**47.74**	**173**	P		**P**	**21 46 37.6**	**+0.3**
	comp=Z,25nm,0.9s,baz=226,slow=8.3,SNR=41							
VNDA				LR		LR	22 06 18.1	
	comp=Z,1μm,18.5s,baz=191,slow=36							
VNDA	**Vanda**	**47.74**	**173**	P		**P**	**21 46 37.8**	**+0.4**
SBA	**Scott Base**	**47.75**	**174**	P		**P**	**21 46 38.6**	**+1.2**
SBA				pmax		pmax		
	comp=Z,37nm,1.0s							
SBA	**Scott Base**	**47.75**	**174**	P		**P**	**21 46 38.6**	**+1.2**
PLTB	**Pedras Altas**	**47.97**	**272**	*e*P		**P**	**21 46 40.6**	**+0.9**
CNLB	**Canela**	**48.14**	**277**	*e*P		**P**	**21 46 43.6**	**+2.5**
CPSB	**Cacapava Do Su**	**48.86**	**274**	*e*P		**P**	**21 46 48.6**	**+2.0**
VAS01	**Vassouras-RJ**	**49.30**	**290**	*e*P		**P**	**21 46 51.8**	**+1.8**
ITAB	**Concordia**	**50.44**	**278**	*e*P		**P**	**21 47 01.4**	**+2.8**
BSFB	**Barra de Sao F**	**50.67**	**295**	*e*P		**P**	**21 47 02.5**	**+2.0**
ITQB	**Itaqui**	**51.27**	**272**	*e*P		**P**	**21 47 06.4**	**+1.5**
PLCA	**Paso Flores**	**51.57**	**251**	P		**P**	**21 47 06.4**	**-0.7**
	comp=Z,3.8nm,0.8s,baz=154,slow=10,SNR=8.2							
PLCA				LR		LR	22 05 56.6	
	comp=Z,266nm,21.8s,baz=154,slow=33							
PLCA	**Paso Flores**	**51.57**	**251**	*e*P		**P**	**21 47 08.2**	**+1.1**
PLCA	**Paso Flores**	**51.57**	**251**	P		**P**	**21 47 06.5**	**-0.7**
GO06	**Curarrehue**	**52.87**	**252**	P		**P**	**21 47 15.1**	**-1.8**
PMNB	**Patos De Minas**	**53.96**	**290**	*e*P		**P**	**21 47 27.0**	**+2.0**
TRCB	**Terra Rica**	**54.12**	**281**	*e*P		**P**	**21 47 27.9**	**+1.8**
CPUP	**Villa Florida**	**54.17**	**274**	P		**P**	**21 47 26.5**	**+0.2**
CPUP				pmax		pmax		
	comp=Z,55nm,1.1s							
CPUP	**Villa Florida**	**54.17**	**274**	P		**P**	**21 47 26.2**	**-0.1**
	comp=Z,29nm,0.9s,baz=133,slow=6.3,SNR=50							
CPUP				LR		LR	22 08 29.0	
	comp=Z,106nm,18.7s,baz=146,slow=34							
CPUP	**Villa Florida**	**54.17**	**274**	*e*P		**P**	**21 47 28.3**	**+1.9**
CPUP	**Villa Florida**	**54.17**	**274**	P		**P**	**21 47 26.4**	**+0.2**
PCMB	**Pacaembu**	**54.25**	**283**	*e*P		**P**	**21 47 29.5**	**+2.5**
IPMB	**Ipameri, GO**	**55.40**	**288**	*e*P		**P**	**21 47 36.4**	**+1.0**
MBAR	**Mbarara**	**56.77**	**29**	*de*P		**P**	**21 47 46.2**	**+0.9**
MBAR				pmax		pmax		
	comp=Z,17nm,1.4s							
MBAR	**Mbarara**	**56.77**	**29**	P		**P**	**21 47 45.1**	**-0.2**
PEL	**Peldehue**	**56.98**	**258**	P		**P**	**21 47 46.0**	**-0.5**
PEL				pmax		pmax		
	comp=Z,22nm,1.0s							
PEL	**Peldehue**	**56.98**	**258**	P		**P**	**21 47 46.0**	**-0.5**
PEL				IAmb		IAmb	21 47 54.2	
	comp=Z,22nm,1.0s							
BDFB	**Brasilia**	**57.18**	**290**	P		**P**	**21 47 48.0**	**-0.2**
BDFB				pmax		pmax		
	comp=Z,19nm,1.0s							
BDFB	**Brasilia**	**57.18**	**290**	P		**P**	**21 47 47.5**	**-0.7**
	comp=Z,19nm,1.1s,baz=151,slow=6.1,SNR=14							
BDFB				LR		LR	22 07 55.2	
	comp=Z,329nm,18.9s,baz=153,slow=31							
BDFB	**Brasilia**	**57.18**	**290**	P		**P**	**21 47 48.0**	**-0.2**
BDFB				IAmb		IAmb	21 47 50.2	
	comp=Z,19nm,1.0s							
ROC1	**El Roble**	**57.29**	**258**	P		**P**	**21 47 49.8**	**+0.8**
C2SB	**Chapadao do Su**	**57.39**	**283**	*e*P		**P**	**21 47 52.4**	**+2.9**
AQDB	**Aquidauana**	**57.70**	**280**	*e*P		**P**	**21 47 53.0**	**+1.3**
KMBO	**Kilima Mbogo**	**58.34**	**36**	P		**P**	**21 47 57.9**	**+1.5**
	comp=Z,2.9nm,0.9s,baz=196,slow=7.2,SNR=7.9							
KMBO				LR		LR	22 11 29.3	
	comp=Z,1μm,19.1s,baz=187,slow=34							
NBLI	**Livramento-PB**	**58.42**	**306**	*e*P		**P**	**21 47 59.0**	**+2.1**
GO04	**Tololo Observa**	**59.22**	**260**	P		**P**	**21 48 02.1**	**-0.4**
GO04				IAmb		IAmb	21 48 11.6	
	comp=Z,23nm,1.0s							
ARAG	**Araguaiana, MT**	**59.26**	**287**	*e*P		**P**	**21 48 04.7**	**+2.1**
PP1B	**Ponte de Pedra**	**59.49**	**282**	*e*P		**P**	**21 48 06.3**	**+2.1**
GO03	**Copiap**	**60.81**	**263**	P		**P**	**21 48 12.3**	**-0.9**
GO03				IAmb		IAmb	21 48 20.1	
	comp=Z,12nm,0.8s							
SALV	**Santo Antonio**	**61.31**	**283**	*e*P		**P**	**21 48 18.6**	**+1.9**
DBIC	**Dimbokro**	**61.33**	**347**	P		**P**	**21 48 16.2**	**-0.5**
	comp=Z,2.6nm,0.7s,baz=142,slow=9.7,SNR=3.4							
DBIC				LR		LR	22 09 20.4	
	comp=Z,292nm,19.6s,baz=117,slow=31							
DBIC	**Dimbokro**	**61.33**	**347**	P		**P**	**21 48 15.7**	**-1.0**
GO02	**Mina Guanaco**	**62.27**	**265**	P		**P**	**21 48 22.6**	**-0.8**
GO02				IAmb		IAmb	21 48 25.5	
	comp=Z,22nm,1.1s							
MSEY	**Mahe Island**	**62.94**	**57**	P		**P**	**21 48 28.2**	**+0.5**
MSEY				pmax		pmax		
	comp=Z,34nm,1.2s							
MSEY	**Mahe Island**	**62.94**	**57**	P		**P**	**21 48 28.2**	**+0.5**
LVC	**Limon Verde**	**63.81**	**267**	P		**P**	**21 48 33.5**	**-0.3**
LVC				pmax		pmax		
	comp=Z,29nm,1.0s							
LVC	**Limon Verde**	**63.81**	**267**	*e*P		**P**	**21 48 35.6**	**+1.8**
LVC	**Limon Verde**	**63.81**	**267**	P		**P**	**21 48 33.5**	**-0.3**
PB10	**IPOC Station P**	**64.09**	**265**	P		**P**	**21 48 34.5**	**-0.6**
PB10				IAmb		IAmb	21 48 47.5	
	comp=Z,23nm,1.1s							
PB04	**IPOC Station P**	**64.75**	**266**	P		**P**	**21 48 38.8**	**-1.0**
PB04				IAmb		IAmb	21 48 46.8	
	comp=Z,22nm,0.8s							
CLDB	**Colider**	**65.42**	**286**	*e*P		**P**	**21 48 44.4**	**+0.5**
GO01	**Chusmiza**	**66.25**	**269**	P		**P**	**21 48 48.1**	**-1.7**
GO01				IAmb		IAmb	21 48 52.1	
	comp=Z,15nm,0.9s							
PB11	**IPOC Station P**	**66.45**	**269**	P		**P**	**21 48 50.9**	**+0.3**
MNMC	**Minye Minye**	**66.91**	**269**	P		**P**	**21 48 53.7**	**0.0**
MNMC				IAmb		IAmb	21 48 56.2	
	comp=Z,19nm,1.1s							
TOA0	**Torodi Ar. Sit**	**67.11**	**354**	P		**P**	**21 48 53.0**	**-1.5**
TORD	**Torodi Ar. Bea**	**67.11**	**354**	P		**P**	**21 48 53.1**	**-1.4**
	comp=Z,5.8nm,1.2s,baz=187,slow=6.7,SNR=14							
TORD				LR		LR	22 12 11.3	
	comp=Z,444nm,21.4s,baz=160,slow=31							
TORD	**Torodi Ar. Bea**	**67.11**	**354**	P		**P**	**21 48 53.5**	**-1.0**
LPAZ	**La Paz**	**68.26**	**272**	P		**P**	**21 49 02.9**	**+0.2**
	comp=Z,28nm,0.8s,baz=146,slow=4.8,SNR=69							
LPAZ				LR		LR	22 16 37.0	
	comp=Z,190nm,20.7s,baz=124,slow=34							
LPAZ	**La Paz**	**68.26**	**272**	*e*P		**P**	**21 49 05.0**	**+2.3**
H08N3	**Diego Garcia H**	**69.78**	**72**	T		T	23 05 22.2	
	baz=213,slow=74							
H08N1	**Diego Carcia H**	**69.79**	**72**	T		T	23 05 27.0	
	baz=213							
H08N2	**Diego Garcia H**	**69.80**	**72**	T		T	23 05 18.6	
	baz=213,slow=74							
SAML	**Samuel**	**71.21**	**281**	P		**P**	**21 49 19.9**	**-0.3**
SAML				pmax		pmax		
	comp=Z,25nm,0.9s							
SAML	**Samuel**	**71.21**	**281**	*e*P		**P**	**21 49 20.4**	**+0.3**
SAML	**Samuel**	**71.21**	**281**	P		**P**	**21 49 19.9**	**-0.3**
SAML				IAmb		IAmb	21 49 22.2	
	comp=Z,25nm,0.9s							
H01W2	**Cape Leeuwin H**	**71.49**	**124**	T		T	23 08 04.0	
	baz=217,slow=75,SNR=67							
H01W3	**Cape Leeuwin H**	**71.50**	**124**	T		T	23 08 10.7	
	baz=217,slow=75,SNR=68							
H01W1	**Cape Leeuwin H**	**71.50**	**

comp=Z,351nm,37.5s
DZM Mont Dzumac 102.12 161 *e*LR LR 22 25 21.0
comp=Z,452nm,22.1s
VYHS Vyhne 102.68 8 *e*P **Pdif 21 51 59.9 +2.5**
LANS Liptovska Anna 103.38 8 *e*P **Pdif 21 52 06.3 +5.8**
LANS Liptovska Anna 103.38 8 *e*PDIFF **Pdif 21 52 06.3 +5.8**
CLL Collm 105.13 4 *e*P **Pdif 21 52 11.0 +2.9**
CLL *e* 21 56 31.0
CLL Collm 105.13 4 *e*Pdif **Pdif 21 52 11.0 +2.9**
CLL *e* 21 56 14.0
CLL *e*PP **PP 21 56 31.0 +1.2**
CLL *e*SKKSac SKKSac 22 03 30.0 -3.1
CLL *e*Sdif **Sdif 22 04 00.0 -2.0**
CLL *e*PS **PS 22 05 36.0 -7.6**
CLL *e*PPS PPS 22 06 48.0
CLL *e*SS SS 22 11 12.0 -13
CLL *e*SSS SSS 22 15 24.0
PPT2 Papeete2 105.86 203 *e*SS SS 22 11 35.9 +2.8
comp=Z,148nm,26.8s
PPT2 Papeete2 105.86 203 *e*LR LR 22 27 01.1
comp=Z,369nm,23.5s
KSH Kashi 110.39 50 PKP **PKiKP 21 56 35.1 +2.3**
KSH PP **PP 21 57 13.5 +4.9**
KSH SS SS 22 12 32.6 -3.8
KSH LR LR
comp=Z,330nm,5.2s
OBN Obninsk 111.51 18 *i* PKIKP **PKiKP 21 56 33.6 -0.6**
OBN *e* 21 57 19.0
OBN pmax pmax
comp=Z,3.0nm,0.8s
KMI Kunming 113.23 79 PKP **PKiKP 21 56 38.8 0.0**
T59A Double "B" Far 116.05 297 **PKPdf 21 56 41.0 -2.4**
CD2 Chengdu 118.19 76 PKP **PKiKP 21 56 48.8 +0.9**
MAKZ Makanchi 118.83 49 PKIKP **PKPdf 21 56 47.3 -1.3**
MAKZ Makanchi 118.83 49 **PKPdf 21 56 47.3 -1.3**
MK31 Makanchi Array 118.95 49 PKIKP **PKPdf 21 56 47.6 -1.2**
MK31 Makanchi Array 118.95 49 **PKPdf 21 56 47.6 -1.2**
MKAR Makanchi Array 118.95 49 PKP **PKPdf 21 56 47.3 -1.5**
comp=Z,2.6nm,0.9s,baz=252,slow=3.5,SNR=20
BRVK Borovoye 118.95 38 PKIKP **PKPdf 21 56 48.5 -0.1**
BRVK Borovoye 118.95 38 **PKPdf 21 56 48.5 -0.1**
WMQ Urumqi 119.23 55 *e*PKP **PiKP 21 56 50.6 +1.0**
WMQ LR LR
comp=Z,560nm,29.0s
WMQ LR LR
comp=Z,740nm,29.2s
KURK Kurchatov 120.36 44⇓ *i*PKIKP **PKPdf 21 56 50.8 -0.5**
KURK Kurchatov 120.36 44 **PKiKP 21 56 51.5 +0.1**
LZH Lanzhou 122.04 72 *e*PKP **PKiKP 21 56 58.5 +3.0**
LZH LR LR
comp=Z,250nm,13.6s
LZH LR LR
comp=Z,300nm,15.2s
LZH LR LR
comp=Z,460nm,16.8s
GTA Gaotai 122.22 66⇑PKP **PKPdf 21 56 54.8 -0.7**
GTA LR LR
comp=Z,130nm,16.2s
GTA LR LR
comp=Z,160nm,17.8s
GTA LR LR
comp=Z,180nm,18.1s
XAN Xi'an 123.44 77 PKP **PKPdf 21 56 56.3 -1.6**
XAN Xi'an 123.44 77 PKIKP **PKPdf 21 56 56.6 -1.3**
XAN Xi'an 123.44 77 **PKPdf 21 56 56.6 -1.3**
ARCES ARCESS Array B 124.03 8 PKP **PKPdf 21 56 57.0 -0.8**
comp=Z,4.5nm,0.8s,baz=176,slow=1.8,SNR=8.0
SCHQ Schefferville 124.34 318 PKP **PKPdf 21 56 58.4 -0.5**
comp=Z,6.2nm,0.9s,baz=104,slow=2.5,SNR=7.2
TXAR Lajitas Array 125.13 273 PKP **PKPdf 21 57 01.2 -0.1**
comp=Z,3.4nm,1.1s,baz=163,slow=4.8,SNR=16
ZALV Zalesovo Beam 125.31 45 PKP **PKPdf 21 56 59.3 -1.4**
comp=Z,1.8nm,0.8s,baz=236,slow=2.7,SNR=6.0
JFWS Jewell Farm 127.07 294 P **PKPdf 21 57 03.5 -1.0**
baz=133
NJ2 Nanjing 127.80 86 *e*PKP **PiKP 21 57 07.8 +1.0**
MNTX Cornudas Mount 127.86 273 P **PKPdf 21 57 06.0 -0.4**
baz=136
HHC Hu-ho-hao-te 129.70 73 *e*PKP **PiKP 21 57 13.3 +2.8**
SUMG Summit 130.23 344 PKIKP **PKPdf 21 57 09.7 -0.4**
SUMG Summit 130.23 344 *i* P **PKPdf 21 57 10.0 -0.1**
comp=Z,35nm,1.0s
SUMG Summit 130.23 344 **PKPdf 21 57 09.7 -0.4**
BGNE Belgrade 130.41 288 P **PKPdf 21 57 10.5 -0.5**
baz=132
ANMO Albuquerque 130.80 275 PKIKP **PiKP 21 57 13.6 +0.6**
ANMO Albuquerque 130.80 275 PKP **PKPdf 21 57 12.3 +0.2**
comp=Z,2.0nm,0.8s,baz=140,slow=8.6,SNR=3.7
ANMO Albuquerque 130.80 275 **PiKP 21 57 13.6 +0.6**
ANMO Albuquerque 130.80 275 P **PKPdf 21 57 11.3 -0.8**
baz=134
EYMN Ely 131.04 298 P **PKPdf 21 57 11.7 -0.2**
baz=129
ECSD EROS Data Cent 131.08 291 **PKPdf 21 57 11.8 -0.3**
ECSD EROS Data Cent 131.08 291 P **PKPdf 21 57 12.1 0.0**
baz=131
T25A Trinidad 131.12 279 **PiKP 21 57 13.1 -0.5**
T25A Trinidad 131.12 279 P **PKPdf 21 57 12.1 -0.6**
baz=133
FRB Frobisher Bay 131.16 325 PKP **PKPdf 21 57 10.3 -1.2**
comp=Z,13nm,1.1s,baz=88,slow=3.2,SNR=7.8
SONM Songino Array 131.43 62 PKP **PKPdf 21 57 12.4 -0.4**
comp=Z,1.1nm,0.8s,baz=215,slow=2.8,SNR=9.0
SDCO Great Sand Dun 132.17 279 P **PKPdf 21 57 14.3 -0.4**
baz=133
N23A Red Feather La 134.51 282 PKPdf **PKPdf 21 57 15.2 -3.8**
ULM Lac du Bonnet 134.73 298 PKP **PKPdf 21 57 17.9 -0.9**
comp=Z,1.5nm,0.6s,baz=33,slow=4.5,SNR=4.7
RSSD Black Hills 135.47 287 P **PKPdf 21 57 20.1 -0.5**
baz=128
MSU Marysvale 136.59 275 PKIKP **PKPdf 21 57 23.1 +0.2**
MSU Marysvale 136.59 275 **PKPdf 21 57 23.1 +0.2**
PSUT Pine Spring 137.59 273 **PKPdf 21 57 24.8 +0.1**
DUG Dugway, Tooele 138.06 276 PKIKP **PiKP 21 57 27.2 -0.3**
DUG Dugway, Tooele 138.06 276 **PiKP 21 57 27.2 -0.3**
DUG Dugway, Tooele 138.06 276 P **PKPdf 21 57 25.9 +0.4**
baz=130
BGU Big Grassy Mou 138.66 277 **PKPdf 21 57 26.5 -0.1**
CWC Cottonwood Cre 138.68 268 P **PKPdf 21 57 26.5 -0.2**
baz=133
RLMT Red Lodge 139.05 284 P **PKPdf 21 57 27.3 +0.1**
baz=126
ELK Elko 139.84 275 PKP **PKPdf 21 57 29.2 +0.4**
comp=Z,2.1nm,0.9s,baz=303,slow=1.5,SNR=8.5
NVAR Mina Array Bea 140.14 270 PKhKP PKPpre 21 57 23.0
comp=Z,0.8nm,0.8s,baz=158,slow=4.3,SNR=3.5
NVAR PKP **PKPdf 21 57 29.8 +0.4**
comp=Z,1.6nm,0.7s,baz=141,slow=3.2,SNR=8.8
MSO Missoula 142.70 284 **PKPdf 21 57 31.9 -1.7**
MSO Missoula 142.70 284 P **PKPdf 21 57 31.9 -1.7**
baz=123
VLA Vladivostok 142.84 84⇑ *e*PKIKP **PKPdf 21 57 35.0 +1.2**
JTMT Jette 143.39 285 **PKPdf 21 57 33.9 -1.0**
O02D Mt. Diablo Mer 143.92 268 P **PKPdf 21 57 35.3 -0.6**
baz=130
RES Resolute Bay 144.21 334 PKP PKPbc 21 57 33.4 -0.1
baz=92,slow=5.3
M04C Macdoel 144.37 271 P **PKPdf 21 57 36.5 -0.3**
baz=128
N02D Trinity Center 144.38 269 P **PKPdf 21 57 36.8 +0.1**
baz=129
M02C Callahan 144.72 270 P **PKPab 21 57 36.1 0.0**
baz=128
YBH Yreka Blue Hor 144.85 270 PKP **PKPab 21 57 34.8 -1.8**
comp=Z,3.2nm,1.0s,baz=321,slow=1.7,SNR=3.7
L04D Klamath Falls 144.91 271 P **PKPab 21 57 36.2 -0.7**
baz=128
J05D Fort Rock, OR 144.92 274 P **PKPab 21 57 36.2 -0.7**
baz=126
PINE Pine Mountain 145.04 275 **PKPdf 21 57 38.1 +0.1**
NEW Newport 145.29 284 PKPbc **PKPbc 21 57 36.5 -1.3**
comp=Z,9.9nm,1.0s,baz=109,slow=4.4,SNR=14
NEW Newport 145.29 284 P **PKPbc 21 57 36.8 -1.0**
baz=121
J04D Umpqua Nationa 145.41 273 P **PKPbc 21 57 37.7 -0.9**
baz=126,SNR=11
HUMO Hull Mountain 145.53 271 **PKPab 21 57 39.3 +0.3**
I05D Terrebonne, OR 145.60 275 P **PKPdf 21 57 38.6 0.0**
baz=125,SNR=12
L02E Cave Junction 145.64 270 P **PKPdf 21 57 38.5 -0.2**
baz=128
ZEA Zeya 145.71 66 *e*PKP2 **PKPdf 21 57 38.2 -0.2**
ZEA pmax pmax
comp=Z,51nm,1.4s
I04A Tendick Farm, 145.91 274 P **PKPdf 21 57 39.0 -0.2**
baz=126,SNR=12
K02D Willamette Mer 146.00 271 P **PKPbc 21 57 40.1 -0.1**
baz=127
G05D Wamic, OR 146.09 276 P **PKPbc 21 57 40.3 -0.1**
baz=124,SNR=6.7
KLR Kul'dur 146.12 75*d* *i*PKP2 **PKPdf 21 57 38.7 -0.6**
J01E Myrtle Point 146.43 271 P **PKPdf 21 57 40.2 +0.2**
baz=126
H04D Lebanon 146.52 274 P **PKPab 21 57 42.2 -0.5**
baz=125
F05D White Salmon 146.53 277 P **PKPbc 21 57 41.7 +0.1**
baz=123
TEY Ternei 146.72 85 *e*PKP2 **PKPdf 21 57 40.9 +0.5**
E04D Cinebar 147.54 278 P **PKPbc 21 57 44.5 +0.1**
baz=122
B05A Bryant 148.15 281 P **PKPbc 21 57 45.5 -0.5**
baz=120
D03D Eldon 148.36 279 P **PKPbc 21 57 47.2 +0.6**
baz=121
YKA Yellowknife Ar 149.20 309 PKPbc **PKPbc 21 57 47.5 -0.7**
comp=Z,18nm,0.8s,baz=98,slow=2.4,SNR=14
YAK Yakutsk 149.59 52 *e*PKHKP **PKPbc 21 57 47.3 -1.9**
YAK pmax pmax
comp=Z,18nm,1.1s
YAK pmax pmax
comp=N,3.0nm,1.4s
YAK pmax pmax
comp=E,2.0nm,1.1s
YAK Yakutsk 149.59 52 **PKPab 21 57 54.0 -0.4**
TIXI Tiksi 149.86 32⇓ *e*PKIKP **PKPdf 21 57 42.9 -1.8**
TIXI Tiksi 149.86 32 **PKPbc 21 57 47.3 -2.2**
YSS Yuzh-Sakhalins 151.37 86 PKIKP **PKPbc 21 57 53.9 0.0**
YSS Yuzh-Sakhalins 151.37 86 **PKPbc 21 57 53.9 0.0**
INK Inuvik 156.80 323 PKPab **PKPab 21 58 23.0 -1.6**
comp=E,5.7nm,0.9s,baz=70,slow=7.0,SNR=9.7
INK Inuvik 156.80 323 **PKPab 21 58 23.4 -1.2**
BILL Bilibino 162.91 27 *e*PKIKP **PKPdf 21 58 02.4 +0.6**
BILL *e* 22 02 35.8
BILL pmax pmax
comp=Z,3.0nm,1.2s
ILAR Eielson Array 163.09 320 PKP2 **PKPab 21 58 52.0 -0.2**
ILAR Eielson Array 163.09 320 PKPab **PKPab 21 58 52.0 -0.2**
comp=Z,5.1nm,0.9s,baz=48,slow=3.7,SNR=30
POKR Poker Plat Res 163.13 321 P **PKPab 21 58 50.6 -1.8**
baz=61
HDA Harding Lake 163.27 319 P **PKPab 21 58 52.6 -0.4**
baz=64

IDC ***16*** *21:38:59.2±0.8, 40.°63N×143.°68E, h0km, mb3.8/14, mb1 3.9/18, mb1mx3.8/49, mbtmp3.8/18, ML3.0/4, MS3.3/3, Ms1 3.3/3, ms1mx2.9/41, Error ellipse: s-maj=20.6km s-min=16.4km az=119.0*
NIED ***16*** *21:39:00, 40.°70N×143.°90E, h8km, Mw4.2 Best double couple: M₀2.03000×10¹⁵ NP1:φ=34.00000°, δ63.00000°, λ120.00000°. NP2:φ=163.00000°, δ40.00000°, λ46.00000°.*
JMA ***16*** *21:39:00.6±0.1, 40.°66N×143.°91E, h58km±5km, M3.6*
MOS ***16*** *21:39:00.2±1.3, 40.°72N×143.°83E, h24km, mb4.2/10, Error ellipse: s-maj=9.0km s-min=5.8km az=92.7*
NEIC ***16*** *21:39:02.1±2.1, 40.°70N±0.°06×143.°8E±0.°1, h17km±2km, mb4.5/22, Error ellipse: s-maj=15.1km s-min=9.0km az=97.0*

ISC 16 21:38:59.6±4.2, **40.°72N**±0.°05×**143.°91E**±0.°05, **h7**km±26km, **n109,** σ=**1**§**86**/116, **mb4.2**/29, **6C-4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ERM	**Erimo**	**1.41**	**336**	Op	*e*P	**Pn**	**21 39 25.4**	**-0.3**
ERM	**Erimo**	**1.41**	**336**			**Pn**	**21 39 25.5**	**-0.2**
JEM	**Erimo**	**1.41**	**336**	P		**Pn**	**21 39 25.4**	**-0.3**
JEM				*e*S		**Sn**	**21 39 43.3**	**-1.3**
JTHR	**Tokachihiroo**	**1.63**	**344**	P		**Pn**	**21 39 28.2**	**-0.6**
JTHR				S		**Sn**	**21 39 48.8**	**-1.3**
JTH	**Tanohata**	**1.75**	**244**	P		**Pn**	**21 39 29.1**	**-1.4**
JKEN	**Kujiedanarisaw**	**1.76**	**254**	P		**Pn**	**21 39 28.9**	**-1.6**
JNBK	**Urakawa-nobuka**	**1.78**	**331**	P		**Pn**	**21 39 30.5**	**-0.4**
JNBK				*e*S		**Sn**	**21 39 52.1**	**-1.7**
JANG	**Nango**	**1.86**	**260**	P		**Pn**	**21 39 30.3**	**-1.6**
JCH	**Churui**	**1.93**	**348**	P		**Pn**	**21 39 32.3**	**-0.6**
JCH				*e*S		**Sn**	**21 39 56.1**	**-1.4**
JOT	**Ohata**	**2.26**	**288**	P		**Pn**	**21 39 36.9**	**-0.6**
JAK	**Akkeshi**	**2.34**	**14**	S		**Sn**	**21 40 05.9**	**-1.7**
JOM	**Ohasama**	**2.37**	**239**	P		**Pn**	**21 39 38.3**	**-0.6**
JKB	**Kayabe**	**2.46**	**299**	P		**Pn**	**21 39 40.3**	**+0.1**
JAR	**Ashorobuto**	**2.57**	**358**	P		**Pn**	**21 39 39.7**	**-2.0**
JAR				*e*S		**Sn**	**21 40 10.1**	**-3.2**
JFR	**Furan**	**2.63**	**338**	P		**Pn**	**21 39 42.9**	**+0.4**
JFR				*e*S		**Sn**	**21 40 14.1**	**-0.6**
JMK	**Ichinoseki**	**2.73**	**230**	P		**Pn**	**21 39 43.5**	**-0.3**
JEW	**Eniwo**	**2.80**	**320**	P		**Pn**	**21 39 45.1**	**+0.2**
NMR	**Nemuro--Hokkai**	**2.97**	**26**⇓	*i*P		**Pn**	**21 39 46.0**	**-1.2**
NMR				*i* S		**Sn**	**21 40 19.1**	**-3.9**
NEM2	**Nemuro 2**	**2.97**	**27**	P		**Pn**	**21 39 46.0**	**-1.2**
NEM2				S		**Sn**	**21 40 19.3**	**-3.7**
GLVR	**Golovnino**	**3.24**	**21**	*e*P		**Pn**	**21 39 50.7**	**-0.2**
GLVR				*i* S		**Sn**	**21 40 26.6**	**-3.1**
GLVR				smax	smax			
	comp=N,832nm,0.3s							
GLVR				smax	smax			
	comp=E,583nm,0.4s							
JTKR	**Abashiri--Toko**	**3.24**	**360**	P		**Pn**	**21 39 50.5**	**-0.4**
JTKR				S		**Sn**	**21 40 27.8**	**-2.0**
JKK2	**Kamakawa 2**	**3.26**	**345**	P		**Pn**	**21 39 51.1**	**-0.1**
JYK	**Kaneyama**	**3.28**	**238**	P		**Pn**	**21 39 50.7**	**-0.7**
JRA	**Rausu**	**3.33**	**15**	S		**Sn**	**21 40 29.1**	**-2.9**
JHR	**Hokuryu**	**3.43**	**332**	P		**Pn**	**21 39 55.0**	**+1.5**
JKA	**Kamikawa-asahi**	**3.53**	**344**			**Pn**	**21 39 54.8**	**0.0**
JKA						**Sn**	**21 40 38.6**	**+1.8**
ASAJ	**Asahikawa**	**3.53**	**344**	Pn		**Pn**	**21 39 54.8**	**0.0**
	comp=E,1.5nm,0.3s,baz=199,slow=8.0,SNR=9.5							
ASAJ				Sn		**Sn**	**21 40 38.6**	**+1.8**
	comp=E,3.4nm,0.3s,baz=338,slow=28,SNR=5.1							
GRPR	**Tuman**	**3.54**	**22**	*e*P		**Pn**	**21 39 55.1**	**0.0**
GRPR				*i* S		**Sn**	**21 40 33.6**	**-3.6**
GRPR				pmax	pmax			
	comp=Z,89nm,0.3s							
GRPR				smax	smax			
	comp=N,753nm,0.5s							
GRPR				smax	smax			
	comp=E,515nm,0.5s							
JOSM	**Okushiri--Mats**	**3.60**	**294**	P		**Pn**	**21 39 55.3**	**-0.6**
JOSM				*e*S		**Sn**	**21 40 34.3**	**-4.4**
YUK	**Yuzh-Kuril'sk**	**3.61**	**23***c*	*i*P		**Pn**	**21 39 56.2**	**+0.2**
YUK				*i* S		**Sn**	**21 40 34.5**	**-4.3**
YUK				pmax	pmax			
	comp=Z,117nm,0.4s							
YUK				pmax	pmax			
	comp=E,48nm,0.1s							
YUK				pmax	pmax			
	comp=N,78nm,0.4s							
YUK				smax	smax			
	comp=N,726nm,0.4s							
YUK				smax	smax			
	comp=E,313nm,0.4s							
SHO	**Shikotan**	**3.82**	**34***c*	*i*P		**Pn**	**21 39 57.1**	**-1.7**
SHO				*i* S		**Sn**	**21 40 37.7**	**-6.2**
SHO				pmax	pmax			
	comp=Z,38nm,0.3s							
SHO				pmax	pmax			
	comp=E,19nm,0.2s							
SHO				pmax	pmax			
	comp=N,16nm,0.3s							
SHO				smax	smax			
	comp=N,287nm,0.5s							
SHO				smax	smax			
	comp=E,419nm,0.4s							
KUR	**Kuril'sk**	**5.36**	**31***c*	*i*P		**Pn**	**21 40 19.7**	**-0.3**
KUR				*e*S		**Sn**	**21 41 17.4**	**-4.5**
KUR				pmax	pmax			
	comp=N,38nm,0.4s							
KUR				pmax	pmax			
	comp=E,28nm,0.4s							
KUR				pmax	pmax			
	comp=Z,143nm,0.4s							
KUR				smax	smax			
	comp=E,219nm,0.3s							
KUR				smax	smax			
	comp=N,159nm,0.6s							
MAJO	**Matsushiro**	**6.11**	**229**⇑	*e*P		**Pn**	**21 40 30.7**	**+0.3**
MAJO				pmax	pmax			
	comp=Z,15nm,0.9s							
MAJO	**Matsushiro**	**6.11**	**229**			**Pn**	**21 40 30.4**	**0.0**
MAT	**Matsushiro**	**6.11**	**229**	P		**Pn**	**21 40 30.6**	**+0.2**
MAT				*e*S		**Sn**	**21 41 34.2**	**-6.4**
MJAR	**Matsushiro Arr**	**6.11**	**229**	P		**Pn**	**21 40 28.9**	**-1.5**
MJAR	**Matsushiro Arr**	**6.11**	**229**	Pn		**Pn**	**21 40 28.0**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=33,slow=14,SNR=12							
MJAR	**Matsushiro Arr**	**6.11**	**229**			**Pn**	**21 40 28.9**	**-1.5**
MJB9	**Matsu-Tunnel**	**6.11**	**229**			**Pn**	**21 40 30.6**	**+0.1**
YSS	**Yuzh-Sakhalins**	**6.28**	**353**	*e*P		**Pn**	**21 40 36.0**	**+3.3**
YSS				MLR	MLR			
	comp=Z,1μm,13.0s							
YSS				MLR	MLR			
	comp=N,600nm,16.0s							
YSS				MLR	MLR			
	comp=E,500nm,17.0s							
INU	**Inuyama**	**7.64**	**228**	Pn		**Pn**	**21 40 51.6**	**+0.2**
JHJ2	**Mitsune**	**8.28**	**205**	Pn		**Pn**	**21 41 01.0**	**+0.9**
USA0B	**Ussuriysk Arra**	**9.47**	**295**	P		**Pn**	**21 41 17.6**	**+1.2**
USA0B	**Ussuriysk Arra**	**9.47**	**295**	Pn		**Pn**	**21 41 17.6**	**+1.2**
USRK	**Ussuriysk Ar.**	**9.47**	**295**	P		**Pn**	**21 41 16.8**	**+0.3**
USRK	**Ussuriysk Ar.**	**9.47**	**295**	Pn		**Pn**	**21 41 18.0**	**+1.5**
	baz=98,slow=15,SNR=7.9							
USRK	**Ussuriysk Ar.**	**9.47**	**295**			**Pn**	**21 41 16.8**	**+0.3**
KLR	**Kul'dur**	**12.09**	**319**⇓	*e*P		**Pn**	**21 41 52.2**	**-0.1**
KLR				pmax	pmax			
	comp=Z,6.0nm,1.1s							
KLR	**Kul'dur**	**12.09**	**319**	Pn		**Pn**	**21 41 51.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=125,slow=14,SNR=8.9							
KSRS	**Korea Array**	**12.85**	**260**	Pn		**Pn**	**21 42 02.4**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=80,slow=14,SNR=3.3							
KSRS				LR	LR		21 46 20.4	
	comp=Z,106nm,20.7s,baz=353,slow=35							
JNU	**Nakatsue**	**12.89**	**238**	LR	LR		21 47 08.0	
	comp=Z,108nm,21.4s,baz=46,slow=38							
ZEA	**Zeya**	**17.19**	**325**	*e*P		**Pn**	**21 42 58.9**	**-1.2**
HIA	**Hailar**	**19.05**	**305**⇑	*e*P		**P**	**21 43 19.9**	**-2.4**
HIA				pmax	pmax			
	comp=Z,24nm,0.7s							
BOD	**Bodaibo**	**25.64**	**322**	*e*P		**P**	**21 44 26.7**	**-2.9**
BOD				pmax	pmax			
	comp=Z,6.0nm,1.9s							
ULN	**Ulaanbaatar**	**27.13**	**298**⇑	*e*P		**P**	**21 44 42.0**	**-1.4**
ULN				pmax	pmax			
	comp=Z,2.0nm,0.7s							
ULN	**Ulaanbaatar**	**27.13**	**298**	P		**P**	**21 44 44.8**	**+1.3**
SONM	**Songino Array**	**27.58**	**298**	*e*P		**P**	**21 44 49.6**	**+2.2**
SONM				pmax	pmax			
	comp=Z,2.0nm,0.9s							
SONM	**Songino Array**	**27.58**	**298**	P		**P**	**21 44 47.4**	**0.0**
	comp=Z,1.5nm,0.9s,baz=96,slow=9.9,SNR=8.9							
SONM	**Songino Array**	**27.58**	**298**	IAmb	IAmb		21 44 50.6	
	comp=Z,1.9nm,1.1s							
H11N2	**WAKE ISLAND Hy**	**28.69**	**130**	T	T		22 14 59.5	
	baz=322							
H11N1	**WAKE ISLAND Hy**	**28.70**	**130**	T	T		22 14 59.2	
	baz=322							
H11N3	**WAKE ISLAND Hy**	**28.71**	**130**	T	T		22 14 55.4	
	baz=322							
H11S1	**WAKE ISLAND Hy**	**29.55**	**132**	T	T		22 16 04.7	
	baz=324							
H11S3	**WAKE ISLAND Hy**	**29.55**	**132**	T	T		22 16 03.6	
	baz=324							
H11S2	**WAKE ISLAND Hy**	**29.56**	**132**	T	T		22 16 01.2	
	baz=324							
ZAK	**Zakamensk**	**29.71**	**303**	*e*P		**P**	**21 45 04.9**	**-1.4**
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.1s							
BILL	**Bilibino**	**29.94**	**17**	*e*P		**P**	**21 45 08.2**	**+0.2**
BILL				*e*			21 46 05.6	
BILL				pmax	pmax			
	comp=Z,2.0nm,1.0s							
ZALV	**Zalesovo Beam**	**40.98**	**309**	P		**P**	**21 46 43.1**	**+0.2**
	comp=Z,3.5nm,0.6s,baz=92,slow=7.8,SNR=12							
ZALV				LR	LR		22 03 50.4	
	comp=Z,69nm,18.6s,baz=68,slow=36							
MK31	**Makanchi Array**	**43.91**	**299**	P		**P**	**21 47 06.3**	**-0.6**
MK31				pmax	pmax			
	comp=Z,4.0nm,0.9s							
MK31	**Makanchi Array**	**43.91**	**299**	P		**P**	**21 47 06.3**	**-0.6**
MK31				IAmb	IAmb		21 47 07.5	
	comp=Z,3.7nm,0.9s							
MKAR	**Makanchi Array**	**43.91**	**299**	*e*P		**P**	**21 47 06.6**	**-0.3**
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.8s							
MKAR	**Makanchi Array**	**43.91**	**299**	P		**P**	**21 47 06.2**	**-0.7**
	comp=Z,3.2nm,0.8s,baz=83,slow=9.1,SNR=34							
MAKZ	**Makanchi**	**44.12**	**299**	P		**P**	**21 47 08.1**	**-0.4**
MAKZ				pmax	pmax			
	comp=Z,4.0nm,1.0s							
MAKZ	**Makanchi**	**44.12**	**299**	P		**P**	**21 47 08.1**	**-0.4**
MAKZ				IAmb	IAmb		21 47 09.7	
	comp=Z,4.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**44.37**	**254**	*e*P		**P**	**21 47 11.3**	**+0.5**
CMAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**44.37**	**254**	P		**P**	**21 47 11.0**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=38,slow=6.6,SNR=5.5							
KURK	**Kurchatov**	**45.28**	**306**⇓	*e*P		**P**	**21 47 17.9**	**+0.2**
KURK				pmax	pmax			
	comp=Z,7.0nm,1.3s							
IL31		**45.34**	**34**	P		**P**	**21 47 19.6**	**+1.7**
ILAR	**Eielson Array**	**45.34**	**34**	*e*P		**P**	**21 47 20.0**	**+2.0**
ILAR	**Eielson Array**	**45.34**	**34**	P		**P**	**21 47 18.9**	**+0.9**
	comp=Z,0.4nm,0.8s,baz=273,slow=5.9,SNR=4.9							
PRP	**Porcupine Dome**	**45.88**	**33**	P		**P**	**21 47 25.2**	**+2.8**
PRP				IAmb	IAmb		21 47 30.3	
	comp=Z,2.3nm,0.8s							
FYU	**Fort Yukon**	**45.95**	**32**	P		**P**	**21 47 26.6**	**+3.8**
SCRK	**Sand Creek**	**46.66**	**35**	P		**P**	**21 47 30.4**	**+1.8**
SCRK				IAmb	IAmb		21 47 46.7	
	comp=Z,3.4nm,1.0s							
EGAK	**Eagle**	**47.79**	**34**	P		**P**	**21 47 39.3**	**+2.1**
BALM	**Baldy**	**47.83**	**39**	P		**P**	**21 47 36.4**	**-1.4**
BALM				IAmb	IAmb		21 47 47.3	
	comp=Z,6.3nm,0.9s							
BARN	**Barnard Glacie**	**48.16**	**39**	P		**P**	**21 47 42.2**	**+1.8**
BARN				IAmb	IAmb		21 47 54.4	
	comp=Z,12nm,1.1s							
INK	**Inuvik**	**50.22**	**29**	P		**P**	**21 47 56.3**	**+0.6**
INK				pmax	pmax			
	comp=Z,2.0nm,0.9s							
INK	**Inuvik**	**50.22**	**29**	P		**P**	**21 47 59.1**	**+3.3**
	comp=Z,0.8nm,0.5s,baz=305,slow=7.1,SNR=5.3							
INK	**Inuvik**	**50.22**	**29**	P		**P**	**21 47 56.3**	**+0.6**
ARSB	**Arslanbob**	**52.08**	**296**	P		**P**	**21 48 11.5**	**+1.1**
ARSB				IAmb	IAmb		21 48 20.9	
	comp=Z,6.2nm,0.8s							
KKAR	**Karatay Array**	**53.02**	**299**	P		**P**	**21 48 17.5**	**+0.4**
KKAR	**Karatay Array**	**53.02**	**299**	P		**P**	**21 48 17.5**	**+0.4**
ABKAR	**Akbulak array**	**57.09**	**309**	IAmb	IAmb		21 48 59.8	
	comp=Z,1.6nm,0.8s							
RES	**Resolute Bay**	**58.54**	**15**	P		**P**	**21 48 58.9**	**+2.7**
	comp=Z,0.9nm,0.8s,baz=29,slow=13,SNR=3.5							
RES	**Resolute Bay**	**58.54**	**15**	IAmb	IAmb		21 49 03.9	
	comp=Z,3.4nm,1.1s							
YKA	**Yellowknife Ar**	**59.64**	**32**	P		**P**	**21 49 07.0**	**+3.0**
	comp=Z,0.1nm,0.6s,baz=301,slow=7.9,SNR=3.6							
WRA	**Warramunga Arr**	**61.01**	**190**	P		**P**	**21 49 12.2**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=6.3,slow=6.7,SNR=3.9							
ASAR	**Alice Springs**	**64.73**	**190**	P		**P**	**21 49 38.6**	**0.0**
	comp=Z,0.6nm,0.8s,baz=15,slow=7.7,SNR=3.9							
FINES	**FINESS Array B**	**66.46**	**332**	*e*P		**P**	**21 49 49.1**	**-0.2**
FINES

MLv2.9/29, Error ellipse: s-maj=0.0km s-min=0.0km az=100.3, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKVZ	**Pokaka**	**0.56**	**99**	P	Pn	21 49 32.1	-0.1
WAZ	**Wanganui**	**0.61**	**154**	P	Pn	21 49 33.0	+0.6
TWVZ	**Taurewa**	**0.64**	**78**	P	Pn	21 49 26.4	-6.1
WTVZ	**West Tongariro**	**0.75**	**84**	P	Pn	21 49 33.0	0.0
NGZ	**Ngauruhoe**	**0.75**	**88**	P	Pn	21 49 33.1	0.0
MOVZ	**Moawhango**	**0.89**	**104**	P	Pn	21 49 33.3	-0.4
BHHZ	**Black Hill Sta**	**1.14**	**105**	P	Pn	21 49 34.9	-0.3
TSZ	**Takapari Road**	**1.33**	**130**	P	Pn	21 49 36.8	+0.4
PNHZ	**Pukenui**	**1.40**	**121**	P	Pn	21 49 37.2	+0.2
KRHZ	**Kereru**	**1.41**	**109**	P	Pn	21 49 37.2	+0.2
BKZ	**Black Stump Fm**	**1.44**	**89**	P	Pn	21 49 36.9	-0.3
DVHZ	**Dannevirke**	**1.61**	**133**	P	Pn	21 49 38.5	0.0
MCHZ	**McNeill Hill**	**1.62**	**99**	P	Pn	21 49 39.1	+0.6
MRZ	**Mangatainoka R**	**1.63**	**154**	P	Pn	21 49 38.6	0.0
WPHZ	**Waipukurau**	**1.64**	**122**	P	Pn	21 49 39.1	+0.4
OGWZ	**Otaki Gorge**	**1.66**	**166**	P	Pn	21 49 39.4	+0.5
KIW	**Kapiti Island**	**1.67**	**173**	P	Pn	21 49 39.3	+0.3
NMHZ	**Naumai**	**1.69**	**87**	P	Pn	21 49 40.1	+0.7
HOWZ	**Holdsworth Sta**	**1.82**	**159**	P	Pn	21 49 40.3	0.0
KAHZ	**Kahuranaki**	**1.83**	**110**	P	Pn	21 49 41.1	+0.6
ARHZ	**Aropaoanui**	**1.83**	**93**	P	Pn	21 49 40.9	+0.4
TIWZ	**Tintock**	**1.84**	**149**	P	Pn	21 49 40.6	+0.1
PRHZ	**Porangahau**	**1.87**	**125**	P	Pn	21 49 41.2	+0.4
RTZ	**Ruatahuna**	**1.92**	**73**	P	Pn	21 49 40.8	-0.5
BFZ	**Birch Farm**	**1.93**	**141**	P	Pn	21 49 32.8	-8.4
MTW	**Mount Morrison**	**2.06**	**162**	P	Pn	21 49 42.5	0.0
TMWZ	**Te Maipa**	**2.13**	**154**	P	Pn	21 49 43.0	-0.2
NNZ	**Nelson**	**2.23**	**205**	P	Pn	21 49 44.6	+0.5
PAWZ	**Paruwai Farm**	**2.26**	**165**	P	Pn	21 49 44.5	0.0
TUWZ	**Tuamarina**	**2.29**	**193**	P	Pn	21 49 45.5	+0.8
QRZ	**Quartz Range**	**2.29**	**224**	P	Pn	21 49 44.9	+0.1
MWZ	**Matawai**	**2.42**	**70**	P	Pn	21 49 45.6	-0.6
RIGZ	**Rimuhau**	**2.49**	**79**	P	Pn	21 49 46.8	0.0
THZ	**Tophouse**	**2.88**	**207**	P	Pn	21 49 51.4	+0.5
KHZ	**Kahutara**	**3.32**	**194**	P	Pn	21 49 56.6	+0.9
GVZ	**Greta Valley S**	**3.95**	**197**	P	Pn	21 50 03.4	+0.2
LTZ	**Lake Taylor**	**4.00**	**206**	P	Pn	21 50 04.1	+0.3
INZ	**Inchbonnie**	**4.27**	**213**	P	Pn	21 50 07.7	+0.7

IDC ***16*** *22:23:34.7±1.2, 73.70N×8.36E, h0km, mb3.2/3, mb1 3.5/6, mb1mx3.2/41, mbtmp3.4/6, ML3.1/3, MS3.7/1, Ms1 3.7/1, ms1mx2.5/33, Error ellipse: s-maj=22.9km s-min=13.1km az=78.0*

BER ***16*** *22:23:39.4±2.0, 73.87N×9.22E, h10km, ML1.9, Confirmed Earthquake*

ISC 16 22:23:36.0±1.1, 73.85N±0.06×9.2E±0.1, h10km, n16, σ1°72/21, mb3.0/3, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.78**	**72**	*eP*	**Pn**	**22 24 21.6**	**+1.1**
HSPB	**Hornsund (broa**	**3.56**	**24**	*eP*	**Pn**	**22 24 31.4**	**+0.3**
SPA0	**Spitsbergen Ar**	**4.69**	**18**	*eP*	**Pn**	**22 24 47.9**	**+1.3**
SPA0				*eS*	**Sn**	**22 25 42.0**	**+0.9**
SPA0				IAML		22 25 45.6	
	comp=Z,4.1nm,0.8s						
SPITS	**Spitsbergen Ar**	**4.69**	**18**	Pn	**Pn**	**22 24 48.0**	**+1.3**
	baz=194,slow=16,SNR=66						
SPITS				Sn	**Sn**	**22 25 43.2**	**+2.2**
	baz=225,slow=18,SNR=2.2						
HOPEN	**Hopen**	**4.86**	**49**	*eP*	**Pn**	**22 24 49.2**	**+0.3**
HOPEN				*eS*	**Sn**	**22 25 42.6**	**-2.6**
HOPEN				IAML		22 25 50.9	
	comp=Z,4.2nm,0.4s						
KBS	**Kingsbay**	**5.15**	**6**	*eP*	**Pn**	**22 24 52.9**	**0.0**
KBS				*eS*	**Sn**	**22 25 50.4**	**-2.0**
KBS				IAML		22 25 52.2	
	comp=Z,5.6nm,0.7s						
TRO	**Tromso**	**5.22**	**139**	*eP*	**Pn**	**22 24 56.5**	**+2.6**
KIF	**Kilpisjarvi**	**6.11**	**137**	*eP*	**Pn**	**22 25 06.1**	**0.0**
KTK1	**Kautokeino**	**6.60**	**130**	*eP*	**Pn**	**22 25 14.7**	**+1.8**
ARCES	**ARCESS Array B**	**6.71**	**122**	Pn	**Pn**	**22 25 15.3**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=323,slow=11,SNR=36						
ARCES				Sn	**Sn**	**22 26 27.7**	**-3.0**
	comp=Z,0.3nm,0.3s,baz=316,slow=19,SNR=3.1						
ARE0	**ARCESS Array S**	**6.71**	**122**	*eP*	**Pn**	**22 25 15.9**	**+1.5**
KEV	**Kevo**	**6.91**	**118**	*eP*	**Pn**	**22 25 16.6**	**-0.6**
FINES	**FINESS Array B**	**13.92**	**144**	Pn	**Pn**	**22 26 51.4**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=345,slow=14,SNR=3.9						
YKA	**Yellowknife Ar**	**38.92**	**322**	P	**P**	**22 31 00.8**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=8.6,slow=8.1,SNR=4.7						
MKAR	**Makanchi Array**	**41.12**	**89**	P	**P**	**22 31 22.3**	**+2.6**
	comp=Z,0.2nm,0.7s,baz=327,slow=6.9,SNR=2.7						
MKAR				LR	LR	22 51 31.8	
	comp=Z,117nm,21.8s,baz=257,slow=41						
TORD	**Torodi Ar. Bea**	**60.83**	**188**	P	**P**	**22 33 47.5**	**-0.6**
	comp=Z,0.6nm,0.8s,baz=352,slow=8.6,SNR=2.9						

DDA ***16*** *22:31:14.7, 42.33N×41.06E, h4km±1km, ML1.5*
NORS ***16*** *22:31:15.3±0.0, 42.48N×41.04E, h4km, MPVA2.9*
TIF ***16*** *22:31:15.1, 42.33N×40.93E, h29km±2km*

ISC 16 22:31:14.3±1.2, 42.38N±0.03×41.03E±0.03, h12km±11km, n18, σ0°78/35, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBOC	**Borcka**	**1.14**	**155**	*iP*	**Pn**	**22 31 36.2**	**+0.2**
DBOC				*iS*	**Sn**	**22 31 51.6**	**+0.1**
DBOC				IAML		22 31 52.0	
	comp=E,31nm,0.1s						
ARXR	**Arkhyz**	**1.20**	**9**	*i* Pg	**Pb**	**22 31 36.8**	**-0.2**
ARXR				*i* Sg	**Sb**	**22 31 52.0**	**-0.6**
RPOR	**Krasnaya Polya**	**1.44**	**337**	*e*Pg	**Pb**	**22 31 40.8**	**-0.2**
RPOR				*e*Sg	**Sg**	**22 31 59.9**	**-0.7**
DBAD	**Bademkaya**	**1.45**	**160**	*iP*	**Pb**	**22 31 40.9**	**-0.3**
DBAD				*iS*	**Sn**	**22 31 56.0**	**-3.3**
DBAD				IAML		22 32 04.0	
	comp=N,12nm,0.8s						
DBAD				IAML		22 32 05.0	
	comp=E,12nm,0.5s						
DAGI	**Agillar**	**1.46**	**153**	*iP*	**Pb**	**22 31 41.2**	**-0.2**
DAGI				*iS*	**Sn**	**22 31 59.6**	**0.0**
DAGI				IAML		22 32 02.0	
	comp=N,5.4nm,0.3s						
DAGI				IAML		22 32 02.0	
	comp=E,5.2nm,0.5s						
NEY	**Neytrino**	**1.52**	**54**	*i* Pg	**Pb**	**22 31 42.3**	**-0.2**
NEY				*e*Sg	**Sg**	**22 32 03.3**	**0.0**
EPOS	**Posof**	**1.54**	**124**	*iP*	**Pg**	**22 31 43.1**	**-0.7**
EPOS				*iS*	**Sg**	**22 32 04.1**	**+0.3**
EPOS				IAML		22 32 09.0	
	comp=N,9.1nm,0.8s						
EPOS				IAML		22 32 43.0	
	comp=E,4.7nm,1.9s						
SOC	**Sochi**	**1.54**	**322**	*i* Pg	**Pb**	**22 31 42.8**	**-0.1**
SOC				*e*Sg	**Sg**	**22 32 03.4**	**-0.6**
ONI	**Oni**	**1.81**	**82**	P	**Pb**	**22 31 47.1**	**-0.2**
ONI				S	**Sg**	**22 32 11.9**	**-0.4**
ONI	**Oni**	**1.81**	**82**	*i* Pg	**Pb**	**22 31 47.2**	**-0.2**
SHA1	**Shidzhatmaz**	**1.81**	**41**	*i* Pg	**Pb**	**22 31 47.2**	**-0.3**
SHA1				*e*Sg	**Sn**	**22 32 09.6**	**+1.1**
KBZ	**Khabaz**	**1.93**	**45**	*e*Pg	**Pb**	**22 31 49.2**	**0.0**
KBZ				*e*Sg	**Sb**	**22 32 12.9**	**-0.3**
DIGR	**Digorskoe uzhe**	**1.96**	**74**	*e*Pg	**Pb**	**22 31 50.1**	**+0.3**
DIGR				*e*Sg	**Sb**	**22 32 15.1**	**+0.8**
LZRR	**Lazarevskoye**	**1.97**	**323**	*e*Pg	**Pb**	**22 31 50.5**	**+0.4**
LZRR				*e*Sg	**Sb**	**22 32 15.1**	**+0.5**
KIV0	**Kislovodsk Arr**	**2.00**	**37**	*e*Pg	**Pb**	**22 31 50.8**	**+0.2**
KIV0				*e*Sg	**Sb**	**22 32 15.9**	**+0.5**
KRIK	**Erzurum-spir**	**2.04**	**182**	*i* P	**Pg**	**22 31 54.3**	**+0.9**
KRIK				*i* S	**Sg**	**22 32 20.2**	**+0.4**
ZEI	**Tsey**	**2.16**	**78**	*e*Pg	**Pb**	**22 31 53.1**	**-0.4**
ZEI				*e*Sg	**Sb**	**22 32 21.1**	**+0.8**
LACR	**Lac**	**2.46**	**78**	*e*Pn	**Pb**	**22 31 58.4**	**0.0**
LACR				*e*Sn	**Sb**	**22 32 29.9**	**+1.2**

SJA ***16*** *22:31:21.5±0.8, 29.27S×69.02W, h122km±4km, ML3.2, MW3.3*
GUC ***16*** *22:31:22.1±0.8, 29.26S×68.99W, h110km±18km, ML3.9*

ISC 16 22:31:22.9±1.4, 29.26S±0.03×68.98W±0.05, h120km±11km, n20, σ0°40/30, 4C-5D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCA	**Vinchina**	**0.86**	**53**	*i* P	**Pn**	**22 31 44.1**	**+0.3**
VCA				*e*S	**Sn**	**22 31 59.7**	**+0.2**
ACDV	**Cuesta del Vie**	**0.91**	**187**	*i* P	**Pn**	**22 31 44.1**	**-0.2**
ACDV				*e*S	**Sn**	**22 32 00.5**	**0.0**
ACDV				IAML		22 32 01.1	
	comp=Z,534nm,0.3s						
AROD	**Rodeo**	**1.00**	**205**	⇓*i* P	**Pn**	**22 31 45.3**	**0.0**
AROD				*e*S	**Sn**	**22 32 01.7**	**-0.5**
ACCO	**Cerro Coronel**	**1.32**	**183**	*i* P	**Pn**	**22 31 48.9**	**+0.2**
AMOG	**MOGNA**	**1.73**	**166**	⇓*i* P	**Pn**	**22 31 52.8**	**-0.3**
ACLC	**CERRO LA CRUZ**	**1.78**	**96**	*i* P	**Pn**	**22 31 54.0**	**+0.1**
GO04	**Tololo Observa**	**1.82**	**240**	⇓*i* P	**Pn**	**22 31 54.4**	**0.0**
GO04				*i* S	**Sn**	**22 32 19.2**	**+0.8**
GO03	**Copiap**	**1.99**	**326**	⇑*i* P	**Pn**	**22 31 56.4**	**0.0**
GO03				*i* S	**Sn**	**22 32 21.5**	**-0.4**
GO03				IAML		22 32 24.2	
	comp=N,300nm,0.2s						
RTLL	**Cerro Villicun**	**2.11**	**168**	⇑*i* P	**Pn**	**22 31 57.9**	**+0.1**
RTLL				*i* S	**Sn**	**22 32 23.8**	**-0.7**
RTLL				IAML		22 32 24.7	
	comp=N,2μm,0.4s						
APLL	**PUNTA DE LOS L**	**2.41**	**119**	*i* P	**Pn**	**22 32 01.6**	**0.0**
CO02	**Combarbal**	**2.61**	**222**	⇑*i* P	**Pn**	**22 32 03.9**	**-0.3**
CO02				*i* S	**Sn**	**22 32 35.9**	**0.0**
CO02				IAML		22 32 40.0	
	comp=N,578nm,0.2s						
CYA	**Choya**	**2.91**	**74**	*i* P	**Pn**	**22 32 08.1**	**+0.1**
CYA				IAML		22 33 01.1	
	comp=Z,51nm,0.6s						
VA03	**San Esteban**	**3.74**	**201**	⇓*i* P	**Pn**	**22 32 19.7**	**+0.6**
VA03				*e*S	**Sn**	**22 33 03.1**	**+0.6**
AHML	**Horco Molle**	**4.06**	**53**	*i* P	**Pn**	**22 32 23.1**	**-0.2**
ROC1	**El Roble**	**4.09**	**205**	*i* P	**Pn**	**22 32 23.0**	**-0.9**
GO02	**Mina Guanaco**	**4.12**	**352**	⇓*i* P	**Pn**	**22 32 24.9**	**+0.6**
GO02				*i* S	**Sn**	**22 33 11.7**	**-0.2**
PEL	**Peldehue**	**4.14**	**200**	*i* P	**Pn**	**22 32 24.0**	**-0.3**
FCH	**Farellones**	**4.21**	**195**	⇑*i* P	**Pn**	**22 32 25.9**	**+0.4**
FCH				*i* S	**Sn**	**22 33 14.3**	**+0.4**
MRA	**San Martin**	**4.22**	**139**	*i* P	**Pn**	**22 32 25.4**	**0.0**
PB14	**IPOC Station P**	**4.79**	**344**	*i* P	**Pn**	**22 32 33.0**	**-0.3**

IDC ***16*** *22:47:01.9±1.9, 39.93S×174.94E, h49km±22km, mb3.6/3, mb1 3.8/5, mb1mx3.7/29, mbtmp3.9/5, ML3.7/2, MS3.0/1, Ms1 3.1/1, ms1mx2.5/20, Error ellipse: s-maj=26.5km s-min=16.6km az=136.0*

WEL ***16*** *22:47:02.9, 40°S±1°×17°5E±°, h73km±2km, ML4.4/31, MLv4.0/93, Error ellipse: s-maj=0.0km s-min=0.0km az=56.3*

NEIC ***16*** *22:47:02.9±2.4, 40.07S±0.04×175.16E±0.07, h81km±9km, Error ellipse: s-maj=9.4km s-min=2.6km az=130.0*

ISC 16 22:47:02.8±0.7, 40.02S±0.03×175.04E±0.04, h75km±6km, n137, σ1°09/146, mb4.1/6, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHWZ	**Ohakea**	**0.29**	**132**	P	**Pn**	**22 47 14.4**	**-0.1**
OHWZ				S	**Sn**	**22 47 23.1**	**0.0**
POWZ	**Post Office Ro**	**0.68**	**124**	P	**Pn**	**22 47 17.9**	**+0.1**
TSZ	**Takapari Road**	**0.71**	**94**	P	**Pn**	**22 47 18.5**	**+0.2**
TSZ				S	**Sn**	**22 47 29.6**	**-0.1**
MTVZ	**Mangateitei**	**0.71**	**28**	P	**Pn**	**22 47 18.1**	**-0.3**
LREZ	**Lake Rotokare**	**0.74**	**318**	P	**Pn**	**22 47 18.7**	**+0.2**
PKVZ	**Pokaka**	**0.76**	**18**	P	**Pn**	**22 47 18.4**	**-0.5**
MRZ	**Mangatainoka R**	**0.77**	**147**	P	**Pn**	**22 47 19.0**	**+0.2**
MRZ				S	**Sn**	**22 47 30.9**	**+0.1**
OGWZ	**Otaki Gorge**	**0.81**	**173**	P	**Pn**	**22 47 19.9**	**+0.6**
OGWZ				S	**Sn**	**22 47 32.4**	**+0.9**
TRVZ	**Turoa**	**0.82**	**29**	P	**Pn**	**22 47 19.4**	**-0.4**
TRVZ				S	**Sn**	**22 47 30.9**	**-1.3**
MOVZ	**Moawhango**	**0.82**	**43**	P	**Pn**	**22 47 19.2**	**-0.4**
MOVZ				S	**Sn**	**22 47 31.1**	**-0.9**
DRZ	**Dome Shelter**	**0.84**	**29**	P	**Pn**	**22 47 20.0**	**-0.1**
DRZ				S	**Sn**	**22 47 32.3**	**-0.6**
KIW	**Kapiti Island**	**0.85**	**186**	P	**Pn**	**22 47 20.5**	**+0.7**
FWVZ	**Far West T-bar**	**0.86**	**28**	P	**Pn**	**22 47 19.9**	**-0.3**
FWVZ				S	**Sn**	**22 47 32.1**	**-0.9**
TUVZ	**Tukino**	**0.89**	**33**	P	**Pn**	**22 47 20.7**	**+0.2**
PRWZ	**Pori Road**	**0.90**	**127**	P	**Pn**	**22 47 20.7**	**+0.3**
PNHZ	**Pukenui**	**0.90**	**84**	P	**Pn**	**22 47 20.6**	**+0.2**
DVHZ	**Dannevirke**	**0.91**	**108**	P	**Pn**	**22 47 20.6**	**0.0**
VRZ	**Vera Road**	**0.92**	**346**	P	**Pn**	**22 47 20.4**	**-0.2**
NGZ	**Ngauruhoe**	**0.92**	**28**	P	**Pn**	**22 47 20.9**	**-0.2**
BHHZ	**Black Hill Sta**	**0.95**	**57**	P	**Pn**	**22 47 20.8**	**+0.2**
HOWZ	**Holdsworth Sta**	**0.95**	**158**	P	**Pn**	**22 47 21.3**	**+0.2**
TWVZ	**Taurewa**	**0.99**	**18**	P	**Pn**	**22 47 21.0**	**-0.7**
WTVZ	**West Tongariro**	**1.00**	**26**	P	**Pn**	**22 47 21.4**	**-0.3**
TIWZ	**Tintock**	**1.00**	**140**	P	**Pn**	**22 47 21.7**	**+0.1**
KRVZ	**Karewarewa**	**1.03**	**27**	P	**Pn**	**22 47 21.8**	**-0.3**
DREZ	**Durham Road**	**1.05**	**322**	P	**Pn**	**22 47 23.1**	**+0.9**
NMEZ	**Namu Road**	**1.08**	**304**	P	**Pn**	**22 47 23.4**	**+0.8**
WPHZ	**Waipukurau**	**1.08**	**93**	P	**Pn**	**22 47 22.7**	**+0.1**
MHEZ	**Mangahewa**	**1.09**	**329**	P	**Pn**	**22 47 23.6**	**+0.9**
CAW	**Cannon Point**	**1.09**	**179**	P	**Pn**	**22 47 23.6**	**+0.8**
KRHZ	**Kereru**	**1.09**	**71**	P	**Pn**	**22 47 23.1**	**+0.3**
BFZ	**Birch Farm**	**1.14**	**126**	P	**Pn**	**22 47 23.0**	**-0.3**
BFZ	**Birch Farm**	**1.14**	**126**			**22 47 23.6**	**+0.3**
PKE	**Pukeiti**	**1.15**	**315**	P	**Pn**	**22 47 24.4**	**+0.8**
DUWZ	**D'Urville Isla**	**1.16**	**227**	P	**Pn**	**22 47 24.1**	**+0.5**
KATZ	**Kakaramea**	**1.16**	**26**	P	**Pn**	**22 47 24.4**	**+0.7**
ANWZ	**Angora Road**	**1.19**	**112**	P	**Pn**	**22 47 24.5**	**+0.5**
MTW	**Mount Morrison**	**1.20**	**163**	P	**Pn**	**22 47 24.4**	**+0.3**
RITZ	**Rihia Road**	**1.22**	**32**	P	**Pn**	**22 47 25.4**	**+1.0**
KWHZ	**Kaweka Forest**	**1.22**	**62**	P	**Pn**	**22 47 25.4**	**+0.9**
PRHZ	**Porangahau**	**1.25**	**102**	P	**Pn**	**22 47 25.0**	**+0.2**
CPWZ	**Castlepoint**	**1.26**	**135**	P	**Pn**	**22 47 26.4**	**+1.5**
TMWZ	**Te Maipa**	**1.27**	**149**	P	**Pn**	**22 47 25.2**	**+0.2**
RATZ	**Rangitukua**	**1.28**	**27**	P	**Pn**	**22 47 25.6**	**+0.4**
WEL	**Wellington**	**1.28**	**189**	P	**Pn**	**22 47 25.8**	**+0.7**
SNZO	**South Karori**	**1.32**	**191**		**Pn**	**22 47 26.1**	**+0.5**
TCW	**Tory Channel**	**1.33**	**206**	P	**Pn**	**22 47 26.5**	**+0.8**
BHW	**Baring Head**	**1.40**	**185**	P	**Pn**	**22 47 27.0**	**+0.4**
BHW	**Baring Head**	**1.40**	**185**		**Pn**	**22 47 26.7**	**+0.1**
PAWZ	**Paruwai Farm**	**1.40**	**168**	P	**Pn**	**22 47 27.1**	**+0.4**
MCHZ	**McNeill Hill**	**1.40**	**67**	P	**Pn**	**22 47 27.4**	**+0.7**
PXZ	**Pawanui**	**1.40**	**91**	P	**Pn**	**22 47 31.0**	**+4.3**
MSWZ	**Moikau Station**	**1.41**	**173**	P	**Pn**	**22 47 27.2**	**+0.4**
MSWZ	**Moikau Station**	**1.41**	**173**		**Pn**	**22 47 26.9**	**+0.1**
BKZ	**Black Stump Fm**	**1.41**	**53**	P	**Pn**	**22 47 27.5**	**+0.7**
BKZ	**Black Stump Fm**	**1.41**	**53**		**Pn**	**22 47 27.6**	**+0.8**
WATZ	**Wairara**	**1.41**	**23**	P	**Pn**	**22 47 27.3**	**+0.4**
KAHZ	**Kahuranaki**	**1.43**	**82**	P	**Pn**	**22 47 27.1**	**0.0**
TRWZ	**Traveller**	**1.47**	**160**	P	**Pn**	**22 47 28.3**	**+0.7**
HIZ	**Hauiti**	**1.51**	**355**	P	**Pn**	**22 47 28.4**	**+0.3**
HIZ	**Hauiti**	**1.51**	**355**		**Pn**	**22 47 28.3**	**+0.3**
PLWZ	**Palliser**	**1.56**	**174**	P	**Pn**	**22 47 28.8**	**+0.1**
PLWZ	**Palliser**	**1.56**	**174**		**Pn**	**22 47 28.9**	**+0.1**
MRHZ	**Matea Rd**	**1.59**	**43**	P	**Pn**	**22 47 29.8**	**+0.5**
CKHZ	**Cape Kidnapper**	**1.61**	**78**	P	**Pn**	**22 47 29.8**	**+0.3**
TUWZ	**Tuamarina**	**1.64**	**210**	P	**Pn**	**22 47 30.5**	**+0.7**
TUWZ	**Tuamarina**	**1.64**	**210**		**Pn**	**22 47 30.4**	**+0.7**
KUTZ	**Kaahu Road**	**1.64**	**22**	P	**Pn**	**22 47 30.8**	**+0.9**
NMHZ	**Naumai**	**1.65**	**57**	P	**Pn**	**22 47 30.7**	**+0.7**
ARHZ	**Aropaoanui**	**1.69**	**64**	P	**Pn**	**22 47 30.6**	**+0.1**
TLZ	**Tolley Road**	**1.73**	**13**	P	**Pn**	**22 47 31.4**	**+0.3**
NNZ	**Nelson**	**1.74**	**226**	P	**Pn**	**22 47 31.7**	**+0.5**
NNZ	**Nelson**	**1.74**	**226**		**Pn**	**22 47 32.6**	**+1.5**
ALRZ	**Allen Road**	**1.77**	**35**	P	**Pn**	**22 47 32.2**	**+0.7**
MTHZ	**Maungataniwha**	**1.82**	**51**	P	**Pn**	**22 47 32.4**	**+0.2**
CMWZ	**Cape Campbell**	**1.84**	**200**	P	**Pn**	**22 47 33.6**	**+1.2**
CMWZ	**Cape Campbell**	**1.84**	**200**		**Pn**	**22 47 33.3**	**+0.8**
PRRZ	**Plateau Road**	**1.84**	**35**	P	**Pn**	**22 47 33.3**	**+0.8**
GRRZ	**Galatos Road**	**1.86**	**27**	P	**Pn**	**22 47 36.5**	**+3.7**
HRRZ	**Handcock Road**	**1.89**	**31**	P	**Pn**	**22 47 34.5**	**+1.3**
BSWZ	**Blackbirch Sta**	**1.91**	**207**	P	**Pn**	**22 47 33.9**	**+0.5**
BSWZ	**Blackbirch Sta**	**1.91**	**207**		**Pn**	**22 47 33.7**	**+0.3**
RAHZ	**Arahi**	**1.93**	**56**	P	**Pn**	**22 47 33.6**	**-0.1**
WHHZ	**Waihua**	**1.94**	**62**	P	**Pn**	**22 47 33.8**	**0.0**
HSRZ	**Hossack Road**	**1.94**	**29**	P	Pn	22 47 38.7	+4.9
RRRZ	**Republican Roa**	**2.03**	**35**	P	**Pn**	**22 47 36.0**	**+0.9**
MUGZ	**Murupara**	**2.04**	**42**	P	**Pn**	**22 47 35.2**	**0.0**
QRZ	**Quartz Range**	**2.08**	**246**	P	**Pn**	**22 47 35.9**	**+0.3**
QRZ	**Quartz Range**	**2.08**	**246**		**Pn**	**22 47 36.2**	**+0.6**
SNZZ	**Shannon Statio**	**2.17**	**56**	P	**Pn**	**22 47 36.6**	**-0.3**
KNZ	**Kokohu**	**2.27**	**65**	P	**Pn**	**22 47 37.3**	**-0.8**
TOZ	**Tahuroa Road**	**2.31**	**9**	P	**Pn**	**22 47 39.2**	**+0.4**
THZ	**Tophouse**	**2.38**	**222**	P	**Pn**	**22 47 40.2**	**+0.6**
THZ	**Tophouse**	**2.38**	**222**		**Pn**	**22 47 40.3**	**+0.6**
MHGZ	**Mahia Peninsul**	**2.38**	**70**	P	**Pn**	**22 47 39.1**	**-0.6**
URZ	**Urewera**	**2.38**	**43**	P	**Pn**	**22 47 38.9**	**-0.9**
URZ	20nm,0.3s,baz=236,slow=10,SNR=34			S	**Sn**	**22 48 06.8**	**-1.2**
	35nm,0.3s,baz=75,slow=18,SNR=6.9						
URZ	**Urewera**	**2.38**	**43**	P	**Pn**	**22 47 38.9**	**-0.9**
URZ	**Urewera**	**2.38**	**43**		**Pn**	**22 47 39.5**	**-0.2**
PRGZ	**Paritu Road**	**2.46**	**65**	P	**Pn**	**22 47 39.9**	**-0.9**
OPRZ	**Ohinepanea**	**2.47**	**29**	P	**Pn**	**22 47 42.4**	**+1.5**
RIGZ	**Rimuhau**	**2.49**	**59**	P	**Pn**	**22 47 40.7**	**-0.5**
MWZ	**Matawai**	**2.56**	**50**	P	**Pn**	**22 47 41.4**	**-0.8**
KHZ	**Kahutara**	**2.65**	**205**	P	**Pn**	**22 47 43.2**	**-0.1**
KHZ	**Kahutara**	**2.65**	**205**		**Pn**	**22 47 43.5**	**+0.2**
TKGZ	**Te Karaka**	**2.69**	**55**	P	**Pn**	**22 47 43.2**	**-0.7**
RUGZ	**Raukumara Rang**	**2.90**	**46**	P	**Pn**	**22 47 45.7**	**-1.2**
KBAZ	**Karaka Road Bo**	**2.92**	**358**	P	**Pn**	**22 47 48.2**	**+1.3**
TWGZ	**Tauwhareparae**	**2.94**	**52**	P	**Pn**	**22 47 46.8**	**-0.4**
AWAZ	**Awhitu Peninsu**	**2.96**	**354**	P	**Pn**	**22 47 48.4**	**+0.8**
ETAZ	**East Tamaki Re**	**3.06**	**358**	P	**Pn**	**22 47 50.3**	**+1.4**
LTZ	**Lake Taylor**	**3.46**	**216**	Pn	**Pn**	**22 47 53.6**	**-0.8**
MXZ	**Matakaoa Point**	**3.54**	**47**	Pn	**Pn**	**22 47 54.8**	**-0.6**
OXZ	**Oxford**	**4.00**	**213**	Pn	**Pn**	**22 47 59.8**	**-1.8**
MQZ	**McQueen's Vall**	**4.09**	**205**	Pn	**Pn**	**22 48 01.4**	**-1.5**
RPZ	**Rata Peaks**	**4.74**	**218**	P	**Pn**	**22 48 10.5**	**-1.3**
	2.5nm,0.3s,baz=15,slow=3.3,SNR=6.2						
RPZ				S	**Sn**	**22 48 59.7**	**-5.7**
	7.3nm,0.3s,baz=137,slow=23,SNR=9.3						
OUZ	**Omahuta**	**4.92**	**346**	Pn	**Pn**	**22 48 15.0**	**+0.8**
FOZ	**Fox Glacier**	**5.25**	**226**	Pn	**Pn**	**22 48 20.7**	**+2.0**
LBZ	**Lake Benmore**	**5.66**	**218**	Pn	**Pn**	**22 48 24.7**	**+0.4**
ODZ	**Otahua Downs**	**5.98**	**211**	Pn	**Pn**	**22 48 27.6**	**-1.1**
WKZ	**Wanaka**	**6.55**	**221**	Pn	**Pn**	**22 48 37.9**	**+1.4**
MLZ	**Mavora Lakes**	**7.38**	**221**	Pn	**Pn**	**22 48 49.3**	**+1.4**
WHZ	**Wether Hill Ro**	**7.84**	**219**	Pn	**Pn**	**22 48 54.5**	**+0.5**
DCZ	**Deep Cove**	**7.95**	**224**	Pn	**Pn**	**22 48 57.7**	**+2.2**
PYZ	**Puysegur Point**	**8.66**	**222**	Pn	**Pn**	**22 49 04.8**	**-0.5**
LHI	**Lord Howe Isla**	**15.47**	**298**	Pn	**Pn**	**22 50 36.4**	**-0.2**
LHI				IAmb	IAmb	22 50 51.6	

INU	**Inuyama**	**9.76**	**39**			**Pn**		**22 58 25.7**	**+0.2**
INU						**Sn**		**23 00 18.1**	**+4.1**
INCN	**Inchon**	**9.83**	**346**		P	**Pn**		**22 58 25.7**	**-0.8**
INCN	**Inchon**	**9.83**	**346**			**Pn**		**22 58 25.7**	**-0.8**
NJ2	**Nanjing**	**10.12**	**296**		*e*P	**Pn**		**22 58 33.8**	**+3.3**
NJ2					sP			22 58 50.8	
NJ2					S	**Sn**		**23 00 26.3**	**+3.3**
NJ2					pmax	pmax			
	comp=Z,76nm,1.1s								
NJ2					pmax	pmax			
	comp=Z,660nm,3.8s								
NJ2					LR	LR			
	comp=N,2µm,13.2s								
NJ2					LR	LR			
	comp=E,2µm,15.3s								
NJ2					LR	LR			
	comp=Z,3µm,14.5s								
JHJ2	**Mitsune**	**10.26**	**57**		Pn	**Pn**		**22 58 34.0**	**+1.7**
JCJ	**Chichijima**	**11.26**	**91**		Pn	**Pn**		**22 58 46.5**	**+0.4**
	9.0nm,0.3s,baz=285,slow=19,SNR=2.6								
JCJ					LR	LR		23 02 29.9	
	comp=Z,1µm,20.6s,baz=284,slow=34								
MAJO	**Matsushiro**	**11.29**	**38**⇑	*e*	P	**Pn**		**22 58 47.4**	**+1.0**
MAJO					pmax	pmax			
	comp=Z,16nm,0.8s								
MAJO	**Matsushiro**	**11.29**	**38**			**Pn**		**22 58 47.5**	**+1.0**
MAT	**Matsushiro**	**11.29**	**38**		P	**Pn**		**22 58 46.0**	**-0.5**
MAT					S	**Sn**		**23 00 53.7**	**+2.1**
MJAR	**Matsushiro Arr**	**11.29**	**38**		Pn	**Pn**		**22 58 46.3**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=240,slow=14,SNR=27								
DL2	**Dalian**	**12.77**	**331**		P	P		22 59 12.1	-5.2
DL2					sP	Pn		22 59 25.0	+18
DL2					S	Sn		23 01 37.6	+10
DL2					sS			23 01 47.9	
DL2					pmax	pmax			
	comp=Z,48nm,1.1s								
DL2					pmax	pmax			
	comp=Z,820nm,4.5s								
DL2					LR	LR			
	comp=Z,3µm,15.5s								
DL2					LR	LR			
	comp=Z,3µm,13.4s								
DL2					LR	LR			
	comp=Z,5µm,15.0s								
TIA	**Tai'an**	**13.36**	**311**		P	**Pn**		**22 59 19.1**	**+4.3**
TIA					pmax	pmax			
	comp=Z,22nm,1.0s								
TIA					pmax	pmax			
	comp=Z,350nm,3.0s								
TIA					LR	LR			
	comp=Z,2µm,15.4s								
TIA					LR	LR			
	comp=Z,3µm,14.6s								
TIA					LR	LR			
	comp=Z,5µm,13.8s								
WHN	**Wuhan**	**13.51**	**285**		P	**Pn**		**22 59 20.8**	**+4.0**
WHN					S	S		23 01 58.6	-10
WHN					LR	LR			
	comp=Z,4µm,9.5s								
WHN					LR	LR			
	comp=Z,5µm,13.2s								
WHN					LR	LR			
	comp=Z,7µm,14.7s								
SNY	**Shenyang**	**14.69**	**342**	⇑	P	**Pn**		**22 59 32.8**	**0.0**
SNY					S	**Sn**		**23 02 18.3**	**+3.8**
SNY					pmax	pmax			
	comp=Z,33nm,1.3s								
SNY					pmax	pmax			
	comp=Z,380nm,3.9s								
SNY					LR	LR			
	comp=Z,4µm,13.1s								
SNY					LR	LR			
	comp=Z,2µm,11.2s								
SNY					LR	LR			
	comp=Z,6µm,12.6s								
CN2	**Changchun**	**16.17**	**349**	*e*	P	**Pn**		**22 59 51.6**	**-0.6**
CN2				*e*	sP	P		22 59 58.6	+3.5
CN2				*e*	S	**Sn**		**23 02 49.0**	**-1.5**
CN2					pmax	pmax			
	comp=Z,10.0nm,1.0s								
CN2					pmax	pmax			
	comp=Z,200nm,3.0s								
CN2					LR	LR			
	comp=Z,3µm,14.0s								
CN2					LR	LR			
	comp=Z,1µm,14.0s								
CN2					LR	LR			
	comp=Z,4µm,17.0s								
BJT	**Baijiatuau**	**16.35**	**321**		P	**Pn**		**22 59 54.9**	**+0.4**
BJT					pmax	pmax			
	comp=Z,57nm,1.0s								
BJT	**Baijiatuau**	**16.35**	**321**			**Pn**		**22 59 54.9**	**+0.4**
USA0B	**Ussuriysk Arra**	**16.35**	**6**		P	**Pn**		**22 59 55.1**	**+0.6**
USA0B					pmax	pmax			
	comp=Z,10.0nm,1.0s								
USA0B	**Ussuriysk Arra**	**16.35**	**6**		Pn	**Pn**		**22 59 55.1**	**+0.6**
USRK	**Ussuriysk Ar.**	**16.35**	**6**		P	**Pn**		**22 59 52.1**	**-2.3**
USRK	**Ussuriysk Ar.**	**16.35**	**6**		Pn	**P**		**22 59 58.0**	**+1.0**
	baz=184,slow=8.3,SNR=8.6								
USRK					LR	LR		23 06 15.4	
	comp=Z,1µm,18.5s,baz=167,slow=38								
USRK	**Ussuriysk Ar.**	**16.35**	**6**			**Pn**		**22 59 52.1**	**-2.3**
MDJ	**Mudanjiang**	**16.65**	**0**		P	**P**		**23 00 01.5**	**+1.1**
MDJ					pP	pP		23 00 09.9	+1.5
MDJ					PP	**sP**		**23 00 11.3**	**-1.0**
MDJ					S	**Sn**		**23 03 07.0**	**+4.9**
MDJ					sS	S		23 03 16.0	+3.3
MDJ					SS	**SnSn**		**23 03 19.0**	**+3.4**
MDJ					pmax	pmax			
	comp=Z,9.0nm,1.2s								
MDJ					pmax	pmax			
	comp=Z,440nm,12.0s								
MDJ					LR	LR			
	comp=Z,1µm,13.5s								
MDJ					LR	LR			
	comp=Z,470nm,12.1s								
MDJ					LR	LR			
	comp=Z,2µm,13.5s								
TIY	**Taiyuan**	**17.34**	**309**	*e*	P	**P**		**23 00 10.8**	**+2.6**
TIY					S	**Sn**		**23 03 19.1**	**0.0**
TIY					pmax	pmax			
	comp=Z,33nm,0.7s								
TIY					pmax	pmax			
	comp=Z,490nm,4.5s								
TIY					LR	LR			
	comp=Z,3µm,11.4s								
TIY					LR	LR			
	comp=Z,3µm,13.5s								
TIY					LR	LR			
	comp=Z,5µm,13.6s								
ENH	**Enshi**	**17.67**	**282**		P	**P**		**23 00 11.4**	**-0.5**
ERM	**Erimo**	**17.91**	**35**⇑	*e*	P	**Pn**		**23 00 13.1**	**-0.8**
ERM					pmax	pmax			
	comp=Z,61nm,1.0s								
ERM	**Erimo**	**17.91**	**35**		Pn	**Pn**		**23 00 13.1**	**-0.8**
XAN	**Xi'an**	**18.68**	**294**		P	**Pn**		**23 00 23.3**	**-0.1**
XAN					pP	pP		23 00 29.0	-2.1
XAN					pmax	pmax			
	comp=Z,11nm,0.4s								
XAN					pmax	pmax			
	comp=Z,380nm,4.9s								
XAN					LR	LR			
	comp=Z,980nm,12.5s								
XAN					LR	LR			
	comp=Z,1µm,16.0s								
XAN					LR	LR			
	comp=Z,2µm,16.4s								
XAN	**Xi'an**	**18.68**	**294**		P	**Pn**		**23 00 23.7**	**+0.3**
XAN					pmax	pmax			
	comp=Z,131nm,0.6s								
XAN	**Xi'an**	**18.68**	**294**		P	**Pn**		**23 00 23.7**	**+0.3**
SARN	**Sarigan**	**18.71**	**123**		P	**Pn**		**23 00 24.7**	**+0.8**
ASAJ	**Asahikawa**	**19.26**	**30**		P	**P**		**23 00 28.1**	**-1.0**
	comp=Z,0.8nm,0.3s,baz=68,slow=28,SNR=8.6								
HHC	**Hu-ho-hao-te**	**19.59**	**316**	*e*	P	**Pn**		**23 00 34.0**	**-0.4**
HHC					pP	pP		23 00 42.9	+1.8
HHC					sP	sP		23 00 48.0	+2.9
HHC					S	**S**		**23 04 08.3**	**-4.2**
HHC					sS	sS		23 04 26.5	+1.1
HHC					pmax	pmax			
	comp=Z,10.0nm,0.8s								
HHC					pmax	pmax			
	comp=Z,320nm,5.9s								
HHC					LR	LR			
	comp=Z,830nm,14.5s								
HHC					LR	LR			
	comp=Z,830nm,12.8s								
HHC					LR	LR			
	comp=Z,2µm,14.6s								
QIZ	**Qiongzhong**	**20.10**	**248**		P	**P**		**23 00 37.3**	**-1.2**
QIZ					S	**S**		**23 04 21.0**	**-1.8**
QIZ					pmax	pmax			
	comp=Z,600nm,3.0s								
QIZ					LR	LR			
	comp=Z,1µm,14.7s								
QIZ					LR	LR			
	comp=Z,1µm,19.4s								
QIZ					LR	LR			
	comp=Z,1µm,21.0s								
GUMO	**Guam**	**20.20**	**132**		LR	LR		23 07 26.1	
	comp=Z,854nm,18.8s,baz=294,slow=34								
BTO	**Baotou**	**20.43**	**313**		P	Pn		23 00 44.1	-0.2
DAV	**Davao City (W)**	**21.09**	**191**		LR	LR		23 10 22.5	
	comp=Z,870nm,18.0s,baz=34,slow=41								
KCP	**Kidapawan**	**21.23**	**192**⇑	*i*	P	**P**		**23 00 56.1**	**+5.2**
KLR	**Kul'dur**	**21.33**	**4**⇓	*e*	P	**P**		**23 00 49.7**	**-1.9**
KLR					pmax	pmax			
	comp=Z,14nm,1.0s								
KLR	**Kul'dur**	**21.33**	**4**		P	**P**		**23 00 49.1**	**-2.5**
	comp=Z,8.4nm,0.8s,baz=198,slow=7.6,SNR=31								
YSS	**Yuzh-Sakhalins**	**21.64**	**25**	*e*	P	**P**		**23 00 55.6**	**+0.7**
YSS				*e*				23 01 05.8	
YSS				*e*				23 05 00.4	
YSS					pmax	pmax			
	comp=Z,90nm,1.2s								
YSS					MLR	MLR			
	comp=Z,800nm,16.0s								
YSS					MLR	MLR			
	comp=N,500nm,15.0s								
YSS					MLR	MLR			
	comp=E,600nm,17.0s								
YSS	**Yuzh-Sakhalins**	**21.64**	**25**		P	**P**		**23 00 55.7**	**+0.9**
YSS					IAmb	IAmb		23 00 59.6	
	comp=Z,88nm,1.0s								
HIA	**Hailar**	**22.59**	**343**⇓	*e*	P	**P**		**23 01 04.9**	**-0.3**
HIA					pmax	pmax			
	comp=Z,39nm,0.8s								
HIA	**Hailar**	**22.59**	**343**		P	**P**		**23 01 01.8**	**-3.3**
KUR	**Kuril'sk**	**22.60**	**35**	*e*	P	**P**		**23 01 10.6**	**+5.4**
KUR					MLR	MLR			
	comp=Z,500nm,10.0s								
CD2	**Chengdu**	**22.63**	**284**		P	**P**		**23 01 05.3**	**-0.5**
CD2					pP	sP		23 01 17.3	-0.5
CD2					S	**S**		**23 05 10.0**	**-1.8**
CD2					sS	Sn		23 05 28.0	+1.4
CD2					pmax	pmax			
	comp=Z,130nm,0.8s								
CD2					pmax	pmax			
	comp=Z,330nm,5.7s								
CD2					LR	LR			
	comp=Z,3µm,17.7s								
CD2					LR	LR			
	comp=Z,3µm,15.2s								
CD2					LR	LR			
	comp=Z,4µm,16.2s								
LZH	**Lanzhou**	**23.20**	**297**	*e*	P	**P**		**23 01 10.8**	**-0.9**
LZH					pP	pP		23 01 21.4	+1.3
LZH					sP	sP		23 01 28.0	+4.0
LZH					PP	**PnPn**		**23 01 47.3**	**+10**
LZH					S	**S**		**23 05 24.8**	**+3.1**
LZH					pmax	pmax			
	comp=Z,31nm,1.2s								
LZH					pmax	pmax			
	comp=Z,200nm,4.9s								
LZH					LR	LR			
	comp=Z,2µm,11.4s								
LZH					LR	LR			
	comp=Z,2µm,12.6s								
LZH					LR	LR			
	comp=Z,3µm,13.6s								
GRNR	**Gornyy**	**23.40**	**11**⇓	*i*	P	**P**		**23 01 11.6**	**-1.7**
GRNR				*e*				23 01 42.7	
GRNR				*e*	S	**S**		**23 05 23.9**	**-0.4**
GRNR				*e*	SS	SnSn		23 06 25.6	+25
GRNR					pmax	pmax			
	comp=Z,10.0nm,0.9s								
GRNR					smax	smax			
	comp=N,3.0nm,1.0s								
GRNR					MLR	MLR			
	comp=Z,1µm,19.0s								
KMI	**Kunming**	**24.12**	**270**		P	**P**		**23 01 20.9**	**+0.2**
KMI					pP	pP		23 01 29.6	+0.1
KMI					sP	sP		23 01 36.9	+3.7
KMI					pmax	pmax			
	comp=Z,85nm,1.1s								
KMI					LR	LR			
	comp=Z,820nm,16.2s								
KMI					LR	LR			
	comp=Z,860nm,17.9s								
KMI					LR	LR			
	comp=Z,910nm,19.5s								
KMI	**Kunming**	**24.12**	**270**		P	**P**		**23 01 20.0**	**-0.7**
KMI					pmax	pmax			
	comp=Z,99nm,1.1s								
KMI	**Kunming**	**24.12**	**270**		P	**P**		**23 01 20.0**	**-0.7**
SLVN	**Son La**	**24.18**	**260**		P	**P**		**23 01 20.0**	**-1.0**
TYV	**Tymovskoe**	**24.97**	**20**	*e*	P	**P**		**23 01 28.3**	**+0.5**
TYV					pmax	pmax			
	comp=Z,22nm,1.9s								
KKM	**Kota Kinabalu**	**25.18**	**213**		P	**P**		**23 01 29.6**	**-0.6**
UBPT	**Khong Chiam**	**25.61**	**246**		P	**P**		**23 01 32.8**	**-1.2**
ZEA	**Zeya**	**25.83**	**357**	*e*	P	**P**		**23 01 35.6**	**-0.1**
ZEA					pmax	pmax			
	comp=N,41nm,1.0s								
ZEA					pmax	pmax			
	comp=Z,75nm,1.2s								
ZEA					MLR	MLR			
	comp=Z,700nm,19.0s								
ZEA					MLR	MLR			
	comp=E,700nm,16.0s								
ZEA					MLR	MLR			
	comp=N,600nm,19.0s								
ULN	**Ulaanbaatar**	**26.49**	**325**⇓	*e*	P	**P**		**23 01 42.0**	**+0.1**
ULN					pmax	pmax			
	comp=Z,12nm,2.5s								
ULN	**Ulaanbaatar**	**26.49**	**325**		P	**P**		**23 01 40.1**	**-1.7**
NKL	**Nikolayevsk**	**26.51**	**15**		P	**P**		**23 01 44.7**	**+2.9**
NKL					S	**S**		**23 06 05.0**	**-8.8**
NKL					pmax	pmax			
	comp=Z,14nm,1.0s								
NKL					pmax	pmax			
	comp=N,3.0nm,0.9s								
NKL					pmax	pmax			
	comp=E,3.0nm,0.8s								
NKL					smax	smax			
	comp=E,15nm,2.4s								
NKL					smax	smax			
	comp=N,11nm,4.9s								
SONM	**Songino Array**	**26.81**	**324**		P	**P**		**23 01 45.3**	**+0.6**
	comp=N,6.8nm,1.0s,baz=140,slow=9.9,SNR=20								
SONM					PcP	**PcP**		**23 05 07.2**	**+0.3**
	comp=N,1.2nm,0.9s,baz=145,slow=5.3,SNR=4.4								
SONM					LR	LR		23 13 52.6	
	comp=N,1µm,19.0s,baz=128,slow=40								
SONM	**Songino Array**	**26.81**	**324**		P	**P**		**23 01 44.9**	**+0.1**
GTA	**Gaotai**	**27.13**	**303**	*e*	P	**P**		**23 01 46.1**	**-1.6**
GTA					pP	pP		23 01 57.3	+0.7
GTA					sP	sP		23 02 02.0	+1.6
GTA					PcP	**PcP**		**23 05 08.8**	**+0.9**
GTA					S	**S**		**23 06 20.5**	**-3.8**
GTA					sS	sS		23 06 41.0	+2.1
GTA					pmax	pmax			
	comp=N,13nm,1.2s								
GTA					pmax	pmax			
	comp=N,150nm,7.3s								
GTA					LR	LR			
	comp=N,920nm,16.5s								
GTA					LR	LR			
	comp=N,2µm,18.4s								
GTA					LR	LR			
	comp=N,2µm,17.8s								
PBKT	**Sadao Pong**	**28.68**	**253**		P	**P**		**23 02 02.5**	**+0.9**
PBKT					IAmb	IAmb		23 02 03.6	
	comp=Z,19nm,0.8s								
CHTO	**Chiang Mai**	**29.44**	**259**		P	**P**		**23 02 08.3**	**-0.1**
CHTO					pmax	pmax			
	comp=Z,20nm,0.8s								
CHTO	**Chiang Mai**	**29.44**	**259**		P	**P**		**23 02 08.2**	**-0.1**
CHTO					IAmb	IAmb		23 02 09.8	
	comp=Z,20nm,0.8s								
CMAR	**Chiang Mai Arr**	**29.59**	**258**		P	**P**		**23 02 10.3**	**+0.7**
	comp=Z,6.3nm,0.8s,baz=56,slow=7.1,SNR=43								
CMAR					PcP	**PcP**		**23 05 15.4**	**+1.3**
	comp=Z,3.9nm,0.8s,baz=29,slow=1.5,SNR=16								
CMAR					LR	LR		23 15 45.2	
	comp=Z,711nm,19.4s,baz=75,slow=40								
ZAK	**Zakamensk**	**30.00**	**326**	*e*	P	P		23 02 17.9	+4.8
ZAK					pmax	pmax			
	comp=Z,3.0nm,1.3s								
SBUM	**Sibu**	**30.26**	**216**		P	**P**		**23 02 15.4**	**-0.2**
TLY	**Talaya**	**30.65**	**328**		LR	LR		23 16 04.9	
	comp=Z,2µm,19.1s,baz=126,slow=39								
FAKI	**Fak Fak**	**30.79**	**175**		P	**P**		**23 02 20.5**	**+0.3**
FAKI					IAmb	IAmb		23 02 30.8	
	comp=Z,24nm,0.9s								
PETK	**Petropavlovsk-**	**32.64**	**32**		P	**P**		**23 02 33.9**	**-2.4**
	comp=Z,6.2nm,0.9s,baz=222,slow=3.9,SNR=4.6								
PETK					LR	LR		23 17 11.4	
	comp=Z,719nm,19.8s,baz=234,slow=39								
PET	**Petropavlovsk**	**33.04**	**33**	*e*	P	P		23 02 49.0	+9.3
PET				*e*	S	**S**		**23 08 04.3**	**+8.1**
PET					MLR	MLR			
	comp=Z,1µm,17.0s								
PET					MLR	MLR			
	comp=Z,800nm,18.0s								
LSA	**Lhasa**	**33.58**	**282**		P	**P**		**23 02 45.8**	**+0.6**
LSA					pmax	pmax			
	comp=Z,85nm,0.8s								
LSA	**Lhasa**	**33.58**	**282**		P	**P**		**23 02 45.9**	**+0.7**
LSA					pmax	pmax			
	comp=Z,15nm,0.7s								
LSA	**Lhasa**	**33.58**	**282**		P	**P**		**23 02 45.9**	**+0.7**
LSA					IAmb	IAmb		23 02 46.7	
	comp=Z,15nm,0.7s								
YAK	**Yakutsk**	**34.09**	**0**	*e*	P	**P**		**23 02 48.1**	**-0.6**
YAK				*e*				23 03 57.8	
YAK				*e*	PPP	PPP		23 04 16.3	
YAK				*e*				23 05 24.6	
YAK				*e*	S	**S**		**23 08 15.5**	**+3.1**
YAK					pmax	pmax			
	comp=Z,30nm,0.9s								
YAK					pmax	pmax			
	comp=N,19nm,1.2s								
YAK					pmax	pmax			
	comp=Z,7.0nm,0.4s								
YAK					smax	smax			
	comp=E,22nm,12.3s								
YAK					smax	smax			
	comp=N,141nm,16.8s								
YAK					MLR	MLR			
	comp=Z,380nm,12.0s								
YAK					MLR	MLR			
	comp=N,314nm,12.0s								
YAK					MLR	MLR			
	comp=E,104nm,11.0s								
MA2	**Magadan**	**34.83**	**19**⇑	*e*	P	**P**		**23 02 54.0**	**-1.1**
MA2					pmax	pmax			
	comp=Z,28nm,1.6s								
MA2	**Magadan**	**34.83**	**19**		P	**P**		**23 02 53.7**	**-1.4**
MA2					IAmb	IAmb		23 02 54.8	
	comp=Z,12nm,1.0s								
WAKE	**Wake Island**	**34.98**	**96**		P	**P**		**23 02 56.5**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**35.03**	**95**		T	T		23 40 15.9	
	baz=290,slow=74,SNR=90								
H11N1	**WAKE ISLAND Hy**	**35.03**	**95**		T	T		23 40 17.3	
	baz=290,slow=74,SNR=61								
H11N3	**WAKE ISLAND Hy**	**35.05**	**95**		T	T		23 40 17.8	
	baz=290,slow=74,SNR=85								
H11S3	**WAKE ISLAND Hy**	**35.30**	**97**		T	T		23 40 38.1	
	baz=301,slow=77,SNR=25								
H11S1	**WAKE ISLAND Hy**	**35.31**	**97**		T	T		23 40 37.5	
	baz=301,slow=77,SNR=20								
H11S2	**WAKE ISLAND Hy**	**35.32**	**97**		T	T		23 40 47.9	
	baz=301,slow=77,SNR=20								
KULM	**Kulim**	**35.50**	**236**		P	**P**		**23 03 02.1**	**+0.7**
KULM					IAmb	IAmb		23 03 11.6	
	comp=Z,11nm,0.9s								
TAPN	**Taplejung**	**36.92**	**279**	*e*	P	**P**		**23 03 14.0**	**+0.1**
WMQ	**Urumqi**	**36.99**	**307**		P	**P**		**23 03 13.4**	**-0.6**
WMQ					pP	sP		23 03 25.4	-1.2
WMQ					sP	pP		23 03 30.8	+7.7
WMQ					pmax	pmax			
	comp=Z,8.0nm,1.1s								
WMQ					pmax	pmax			
	comp=Z,130nm,4.3s								
WMQ					LR	LR			
	comp=Z,510nm,16.1s								
WMQ					LR	LR			
	comp=Z,960nm,17.5s								
WMQ					LR	LR			
	comp=Z,1µm,17.5s								
WMQ	**Urumqi**	**36.99**	**307**		P	**P**		**23 03 14.3**	**+0.3**
WMQ					pmax	pmax			
	comp=Z,6.0nm,1.0s								
WMQ	**Urumqi**	**36.99**	**307**		P	**P**		**23 03 14.3**	**+0.3**
ODAN	**Odare**	**37.30**	**278**	*e*	P	**P**		**23 03 16.7**	**-0.3**
	comp=Z,264nm,0.6s								
SOEI	**Soe**	**37.81**	**188**		P	**P**		**23 03 22.0**	**+0.8**
RAMN	**Ramite**	**37.97**	**279**	*e*	P	**P**		**23 03 22.3**	**-0.4**
	comp=Z,58nm,0.7s								
SEY	**Seymchan**	**38.06**	**17**⇓	*i*	P	**P**		**23 03 23.2**	**+0.6**
JIRN	**Jiri**	**38.19**	**280**	*e*	P	**P**		**23 03 24.5**	**-0.2**
	comp=Z,82nm,0.8s								
GUN	**Gumba**	**38.41**	**281**	*e*	P	**P**		**23 03 26.5**	**0.0**
	comp=Z,154nm,0.7s								
KRVT	**Keravat (AS076**	**38.70**	**142**		LR	LR		23 18 27.5	
	comp=Z,216nm,18.2s,baz=232,slow=35								
PKI	**Pulchoki**	**38.89**	**280**	*e*	P	**P**		**23 03 30.0**	**-0.5**
PKIN	**Phulchoki**	**38.90**	**280**	*e*	P	**P**		**23 03 30.1**	**-0.4**
	comp=Z,136nm,0.8s								
KKN	**Kakani**	**38.96**	**281**	*e*	P	**P**		**23 03 30.8**	**-0.1**
DMN	**Daman**	**39.15**	**280**	*e*	P	**P**		**23 03 32.7**	**+0.2**
	comp=Z,156nm,1.0s								
GKN	**Gorkha**	**39.48**	**281**	*e*	P	**P**		**23 03 34.8**	**-0.4**
UGM	**Wanagama**	**40.10**	**210**		P	**P**		**23 03 36.4**	**-3.8**
DANN	**Dangsing**	**40.17**	**282**	*e*	P	**P**		**23 03 41.2**	**0.0**
	comp=Z,145nm,0.7s								
KOLN	**Koldanda**	**40.42**	**281**	*e*	P	**P**		**23 03 43.0**	**-0.1**
GSI	**Gunungsitoli**	**40.45**	**235**		P	**P**		**23 03 42.6**	**-0.6**
LEM	**Lembang**	**40.53**	**215**		LR	LR		23 20 04.9	
	comp=Z,98nm,21.6s,baz=12,slow=36								
MTN	**Manton Dam**	**40.57**	**178**		P	**P**		**23 03 43.6**	**-0.4**
MTN					IAmb	IAmb		23 03 53.9	
	comp=Z,50nm,1.1s								
PMG	**Port Moresby**	**40.85**	**153**		LR	LR		23 18 36.7	
	comp=Z,801nm,21.2s,baz=340,slow=33								
MKAR	**Makanchi Array**	**41.30**	**310**	*e*	P	**P**		**23 03 48.2**	**-1.7**
MKAR	**Makanchi Array**	**41.30**	**310**		P	**P**		**23 03 47.8**	**-2.1**
	comp=Z,3.0nm,0.8s,baz=96,slow=9.4,SNR=30								
MKAR					PcP	**PcP**		**23 05 46.5**	**-1.6**
	comp=Z,6.1nm,1.0s,baz=82,slow=3.6,SNR=6.5								
MKAR					LR	LR		23 22 40.4	
	comp=Z,813nm,18.2s,baz=95,slow=39								
MAKZ	**Makanchi**	**41.51**	**310**		P	**P**		**23 03 50.4**	**-1.2**
MAKZ					pmax	pmax			
	comp=Z,7.0nm,1.2s								
MAKZ	**Makanchi**	**41.51**	**310**		P	**P**		**23 03 50.4**	**-1.2**
ZAA0	**Zalesovo Array**	**41.62**	**321**			**PcP**		**23 05 48.7**	**-0.2**
ZALV	**Zalesovo Beam**	**41.62**	**321**		P	**P**		**23 03 51.2**	**-1.1**
	comp=Z,4.0nm,0.5s,baz=107,slow=8.8,SNR=20								
ZALV					PcP	**PcP**		**23 05 47.6**	**-1.3**
	comp=Z,4.4nm,1.0s,baz=94,slow=2.0,SNR=5.5								
ZALV					LR	LR		23 23 04.2	
	comp=Z,547nm,18.1s,baz=112,slow=39								
CHLP	**Challavanipeta**	**42.63**	**267**	*e*	P	**P**		**23 04 01.0**	**0.0**
KNRA	**Kununurra**	**43.36**	**187**		P	**P**		**23 04 07.0**	**+0.2**
PRZ	**Przheval'sk**	**43.59**

KSH pP sP 23 04 36.4 +0.4
KSH PP **PP** **23 06 14.0 +4.2**
KSH S **S** **23 11 04.8 +2.0**
KSH sS sS 23 11 24.0 +6.0
KSH pmax pmax
comp=Z,34nm,0.8s
KSH pmax pmax
comp=Z,290nm,4.2s
KSH LR LR
comp=Z,460nm,6.0s
KSH LR LR
comp=Z,400nm,6.2s
KSH LR LR
comp=Z,430nm,6.7s
BILL Bilibino 45.69 18 *e*P **P** **23 04 24.7 -0.2**
BILL *e* 23 04 40.4
BILL *e* 23 06 01.4
BILL *e* 23 06 10.8
BILL pmax pmax
comp=Z,46nm,1.6s
BILL Bilibino 45.69 18 P **P** **23 04 24.7 -0.2**
BILL IAmb IAmb 23 04 42.8
comp=Z,24nm,1.1s
FITZ Fitzroy Crossi 45.92 185 P **P** **23 04 27.1 -0.1**
comp=Z,7.0nm,1.0s,baz=23,slow=7.7,SNR=5.8
FITZ LR LR 23 24 38.3
comp=Z,80nm,21.5s,baz=24,slow=37
GGR Gangavaram 46.29 268 *e*P **P** **23 04 30.1 -0.2**
MYLAV Mylavaram 46.31 267 *e*P **P** **23 04 30.7 +0.2**
ADK Adak 46.39 44 P **P** **23 04 29.2 -1.4**
ADK pmax pmax
comp=Z,32nm,1.1s
ADK Adak 46.39 44 P **P** **23 04 29.2 -1.4**
ADK IAmb IAmb 23 04 45.6
comp=Z,32nm,1.1s
AAK Ala-Archa 46.48 303⇓ *e*P **P** **23 04 30.1 -1.6**
AAK pmax pmax
comp=Z,11nm,2.5s
AAK Ala-Archa 46.48 303 P **P** **23 04 31.1 -0.6**
RPR Rampur 46.72 270 *e*P **P** **23 04 33.1 -0.5**
ADKI Addanki 47.25 266 *e*P **P** **23 04 38.1 +0.3**
HNR Honiara 47.39 137 LR LR 23 22 27.5
comp=Z,168nm,20.1s,baz=323,slow=33
SRSP Sriramsagar 47.53 271 *e*P **P** **23 04 39.0 -1.0**
NJS Nagarjunasagar 47.56 267 *e*P **P** **23 04 40.9 +0.7**
WRAB Tennant Creek 47.81 174⇓ *e*P **P** **23 04 41.8 -0.2**
WRAB pmax pmax
comp=Z,14nm,1.3s
WRAB Tennant Creek 47.81 174 P **P** **23 04 43.0 +1.0**
WRAB IAmb IAmb 23 04 52.1
comp=Z,11nm,0.7s
WRA Warramunga Arr 47.82 174 P **P** **23 04 42.2 +0.1**
comp=Z,3.2nm,0.6s,baz=353,slow=8.5,SNR=28
HYB Hyderabad 47.90 269 *i* P **P** **23 04 42.5 -0.4**
HYBB Hyderabad (bro 47.90 269 *e*P **P** **23 04 41.8 -1.1**
ATKA Atka Island 47.96 44 P **P** **23 04 42.3 -0.6**
SRLM Srisailam 48.10 267 *e*P **P** **23 04 44.1 -0.4**
NIL Nilore 48.19 291 P **P** **23 04 45.1 +0.2**
NIL pmax pmax
comp=Z,29nm,0.6s
NIL Nilore 48.19 291 P **P** **23 04 45.1 +0.2**
SKHT Srikalahasti 48.34 264 *e*P **P** **23 04 46.3 0.0**
KLRI Killari 49.38 270 *e*P **P** **23 04 53.5 -0.8**
KK31 Karatay Array 49.39 304 IAmb IAmb 23 04 54.9
comp=Z,9.4nm,0.8s
KKAR Karatay Array 49.39 304 IAmb IAmb 23 04 54.9
comp=Z,9.4nm,0.8s
BRVK Borovoye 49.86 317 P **P** **23 04 54.4 -3.1**
BRVK pmax pmax
comp=Z,10.0nm,0.6s
BRVK Borovoye 49.86 317 P **P** **23 04 54.4 -3.1**
BRVK IAmb IAmb 23 05 09.5
comp=Z,10nm,0.6s
URV Uravakonda 50.00 266 *e*P **P** **23 04 58.7 -0.4**
CTA Charters Tower 50.41 159 P **P** **23 05 02.9 +1.0**
comp=Z,6.2nm,0.5s,baz=338,slow=8.3,SNR=7.7
CTA LR LR 23 24 31.4
comp=Z,305nm,21.8s,baz=57,slow=34
SPIA Saint Paul Isl 50.94 38 P **P** **23 05 06.7 +1.2**
AS31 Alice Springs 51.47 175 P **P** **23 05 09.8 -0.1**
ASAR Alice Springs 51.47 175 P **P** **23 05 11.2 +1.3**
comp=Z,1.5nm,0.5s,baz=6.8,slow=14,SNR=14
ASAR LR LR 23 25 21.7
comp=Z,119nm,22.0s,baz=1.0,slow=34
KBL Kabul 51.48 293 P **P** **23 05 10.3 +0.1**
KBL pmax pmax
comp=Z,18nm,1.0s
KBL Kabul 51.48 293 P **P** **23 05 10.3 +0.1**
KBL IAmb IAmb 23 05 13.2
comp=Z,18nm,1.0s
POO Poona 51.65 272 *e*P **P** **23 05 09.5 -2.0**
ANM Nome 54.46 29 IAmb IAmb 23 05 33.7
comp=Z,8.9nm,0.8s
SVE Sverdlovsk 55.64 322 *e*P **P** **23 05 39.3 -0.8**
SVE pmax pmax
comp=Z,16nm,1.1s
SVE MLR MLR
comp=Z,2μm,15.0s
ABKAR Akbulak array 56.34 312 P **P** **23 05 44.4 -0.9**
ABKAR Akbulak array 56.34 312 IAmb IAmb 23 05 45.3
comp=Z,8.8nm,1.0s
ARU Arti 56.79 321 *d* *i*P **P** **23 05 47.4 -0.9**
ARU 23 06 43.5
ARU 23 07 54.7
ARU PPP PPP 23 09 09.1
ARU S **S** **23 13 38.3 -0.9**
ARU SS **SS** **23 17 22.0 -5.0**
ARU pmax pmax
comp=Z,15nm,0.9s
ARU MLR MLR
comp=Z,2μm,16.0s
ARU Arti 56.79 321 P **P** **23 05 46.6 -1.7**
ARU IAmb IAmb 23 05 48.6
comp=Z,13nm,0.9s
EIDS Eidsvold 56.91 157 P **P** **23 05 51.3 +1.8**
EIDS IAmb IAmb 23 06 02.2
comp=Z,11nm,1.1s
HRA Herat 57.01 295 IAmb IAmb 23 05 51.7
comp=Z,8.8nm,0.8s
SVW2 Sparrevohn 58.71 33 P **P** **23 06 02.4 +0.7**
SVW2 IAmb IAmb 23 06 04.0
comp=Z,18nm,1.0s
GEYT Alibeck 59.45 300 P **P** **23 06 07.1 -0.2**
comp=Z,2.9nm,0.6s,baz=57,slow=5.5,SNR=6.3
GEYT LR LR 23 36 28.0
comp=Z,572nm,18.2s,baz=70,slow=41
GYA0B ALIBECK ARRAY 59.45 300 P **P** **23 06 07.1 -0.2**
GYA0B IAmb IAmb 23 06 22.1
comp=Z,6.1nm,0.8s
RSO Redoubt South 60.13 34 P **P** **23 06 09.0 -2.8**
OHAK Old Harbor 60.14 38 P **P** **23 06 11.1 -0.5**
PPLA Purkeypile 60.23 31 P **P** **23 06 13.3 +1.0**
PPLA IAmb IAmb 23 06 15.7
comp=Z,10nm,0.8s
KDAK Kodiak Island 60.46 37 P **P** **23 06 14.2 +0.4**
KDAK pmax pmax
comp=Z,24nm,0.8s
KDAK Kodiak Island 60.46 37 P **P** **23 06 14.2 +0.4**
STKA Stephens Creek 60.58 168 P **P** **23 06 16.1 +1.3**
comp=Z,1.4nm,0.6s,baz=156,slow=17,SNR=3.1
STKA LR LR 23 31 59.6
comp=Z,212nm,21.4s,baz=6.7,slow=36
BPAW Bear Paw Mtn. 60.69 30 P **P** **23 06 16.6 +1.3**
BBOO Buckleboo 60.73 174 P **P** **23 06 16.9 +1.0**
MLY Manley 60.73 29 P **P** **23 06 16.7 +1.1**
MLY IAmb IAmb 23 06 26.1
comp=Z,6.7nm,0.8s
KTH Kantishna Hill 60.75 30 P **P** **23 06 16.6 +0.7**
KTH IAmb IAmb 23 06 28.5
comp=Z,8.8nm,1.1s
CNPM China Poot 60.98 35 P **P** **23 06 17.8 +0.5**
TRF Thorofare Moun 61.04 30 P **P** **23 06 18.8 +0.9**
TRF IAmb IAmb 23 06 35.4
comp=Z,8.6nm,1.1s
BRLK Bradley Lake 61.12 35 P **P** **23 06 18.0 -0.4**
DZM Mont Dzumac 61.18 141 *e*S **S** **23 14 41.5 +4.5**
comp=Z,276nm,27.0s
DZM *e*LR LR 23 24 35.0
comp=Z,437nm,25.9s
DZM Mont Dzumac 61.18 141 LR LR 23 29 41.1
comp=Z,164nm,20.9s,baz=7.0,slow=33
DZM Mont Dzumac 61.18 141 P **P** **23 06 19.7 +0.5**
DZM IAmb IAmb 23 06 31.5
comp=Z,20nm,1.1s
NEA Nenana 61.48 29 P **P** **23 06 21.2 +0.5**
NEA IAmb IAmb 23 06 39.4
comp=Z,13nm,0.9s
RC01 Rabbit Creek A 61.54 33 P **P** **23 06 21.6 +0.5**
RC01 IAmb IAmb 23 06 40.2
comp=Z,17nm,1.2s
MCK McKinley 61.62 30 IAmb IAmb 23 06 25.2
comp=Z,12nm,0.8s
NWAO Narrogin (SRO) 61.65 192 P **P** **23 06 22.7 +0.7**
comp=Z,3.7nm,0.5s,baz=351,slow=10,SNR=3.7
NWAO Narrogin (SRO) 61.65 192 P **P** **23 06 22.4 +0.4**
NWAO IAmb IAmb 23 06 33.5
comp=Z,12nm,1.1s
ARMA Armidale 61.75 158 P **P** **23 06 23.4 +0.5**
MDM Murphy Dome 61.80 29 P **P** **23 06 23.3 +0.5**
SEW Seward 61.80 34 P **P** **23 06 22.3 -0.5**
GHO Glory Hole Cre 61.85 32 P **P** **23 06 23.3 0.0**
GHO IAmb IAmb 23 06 38.3
comp=Z,16nm,1.0s
WRH Wood River Hil 61.91 29 P **P** **23 06 24.4 +0.8**
WRH IAmb IAmb 23 06 42.3
comp=Z,11nm,1.1s
COLA College 61.97 29⇑ *e*P **P** **23 06 24.3 +0.4**
COLA pmax pmax
comp=Z,6.0nm,0.7s
CCB Clear Creek Bu 62.01 29 P **P** **23 06 24.5 +0.3**
KNK Knik Glacier 62.11 33 P **P** **23 06 25.5 +0.5**
POKR Poker Plat Res 62.12 28 P **P** **23 06 26.2 +1.3**
baz=277
SML Sawmill 62.12 32 P **P** **23 06 25.0 -0.1**
IL31 62.39 29 P **P** **23 06 26.8 +0.1**
ILAR Eielson Array 62.39 29 P **P** **23 06 26.3 -0.5**
comp=Z,3.2nm,0.8s,baz=285,slow=7.7,SNR=27
ILAR LR LR 23 34 24.2
comp=Z,136nm,21.3s,baz=304,slow=37
HDA Harding Lake 62.41 29 IAmb IAmb 23 06 43.9
comp=Z,10nm,0.8s
HDA Harding Lake 62.41 29 P **P** **23 06 26.9 0.0**
baz=277
SCM Sheep Creek Mo 62.59 32 P **P** **23 06 27.8 -0.4**
SCM pmax pmax
comp=Z,15nm,1.0s
SCM Sheep Creek Mo 62.59 32 P **P** **23 06 27.8 -0.4**
SCM IAmb IAmb 23 06 44.5
comp=Z,15nm,1.0s
PRP Porcupine Dome 62.86 28 IAmb IAmb 23 06 33.5
comp=Z,8.0nm,0.9s
BMAR Burnt Mountain 62.97 26 P **P** **23 06 31.7 +1.0**
PRGR Permogore 62.98 328 *i* *i*P **P** **23 06 30.2 -0.5**
PRGR *e**PP **pP** **23 06 37.5 -2.6**
PRGR *e* 23 07 04.9
PRGR pmax pmax
comp=Z,29nm,0.7s
RIDG Independent Ri 63.42 30 P **P** **23 06 33.5 -0.2**
RIDG IAmb IAmb 23 06 35.1
comp=Z,12nm,1.2s
KEKH Kekaha 63.63 78 P **P** **23 06 34.6 -1.1**
SCRK Sand Creek 63.76 29 IAmb IAmb 23 06 52.9
comp=Z,8.2nm,0.8s
DOT Dot Lake 63.78 30 IAmb IAmb 23 06 37.1
comp=Z,9.4nm,1.0s
UOSS Minazif 64.79 286 P **P** **23 06 41.8 -1.6**
UOSS IAmb IAmb 23 06 58.7
comp=Z,12nm,1.1s
BCAR Beaver Creek A 64.90 30 P **P** **23 06 44.1 +0.7**
TMCR Tamitsa 65.87 331 *e*P **P** **23 06 47.8 -1.8**
TMCR pmax pmax
comp=Z,56nm,0.9s
EPYK Eagle Plains 66.22 26 IAmb IAmb 23 06 53.8
comp=Z,19nm,1.1s
EPYK Eagle Plains 66.22 26 P **P** **23 06 52.7 +0.8**
baz=285
HYT Haines Junctio 67.43 32 P **P** **23 06 59.4 -0.4**
HYT IAmb IAmb 23 07 04.3
comp=Z,11nm,1.0s
KBS Kingsbay 67.79 349 P **P** **23 07 01.3 -0.3**
KBS pmax pmax
comp=Z,23nm,1.1s
KBS Kingsbay 67.79 349 P **P** **23 07 01.3 -0.3**
KBS IAmb IAmb 23 07 09.8
comp=Z,23nm,1.1s
KEV Kevo 68.28 339 *e*P **P** **23 07 04.1 -0.6**
ZEI Tsey 68.59 308 *e*P **P** **23 07 04.7 -2.8**
ZEI pmax pmax
comp=Z,20nm,0.9s
GNI Garni 68.85 305 *c* *i*P **P** **23 07 09.4 +0.3**
GNI pmax pmax
comp=Z,67nm,1.3s
GNI Garni 68.85 305 P **P** **23 07 10.7 +1.6**
GNI IAmb IAmb 23 07 15.7
comp=Z,20nm,1.1s
ARCES ARCESS Array B 68.85 339 P **P** **23 07 07.5 -0.9**
comp=Z,1.8nm,0.6s,baz=74,slow=8.0,SNR=17
ARCES LR LR 23 42 34.1
comp=Z,540nm,19.5s,baz=52,slow=41
ARE0 ARCESS Array S 68.85 339 P **P** **23 07 07.6 -0.8**
VSR Storozhevoye 68.98 318⇓ *e*P **P** **23 07 08.3 -1.1**
KBZ Khabaz 68.98 309 P **P** **23 07 10.0 +0.4**
KBZ Khabaz 68.98 309 P **P** **23 07 10.0 +0.4**
comp=Z,30nm,0.9s,baz=139,slow=1.7,SNR=32
KBZ LR LR 23 41 21.8
comp=Z,437nm,18.2s,baz=67,slow=40
KIV Kislovodsk 69.05 309 *e*P **P** **23 07 10.3 +0.1**
KIV pmax pmax
comp=Z,100nm,1.1s
KIV MLR MLR
comp=Z,1μm,17.0s
KIV Kislovodsk 69.05 309 P **P** **23 07 09.3 -0.9**
OBN Obninsk 69.20 322 *e*P **P** **23 07 09.5 -1.2**
OBN *e* 23 07 17.9
OBN *e* 23 07 31.6
OBN *e* 23 09 42.1
OBN *e*PPP PPP 23 11 22.5
OBN pmax pmax
comp=Z,21nm,1.7s
OBN Obninsk 69.20 322 P **P** **23 07 09.9 -0.8**
OBN IAmb IAmb 23 07 22.0
comp=Z,13nm,1.0s
NEY Neytrino 69.26 309⇓ *e*P **P** **23 07 12.9 +1.3**
NEY pmax pmax
comp=Z,4.0nm,0.8s
AKH Akhalkalaki 69.33 307 IAmb IAmb 23 07 14.0
comp=Z,20nm,0.9s
NOR Nord 69.34 355 *i* P **P** **23 07 08.8 -2.4**
C36M Paulatuk 69.69 21 IAmb IAmb 23 07 14.6
comp=Z,16nm,0.9s
C36M Paulatuk 69.69 21 P **P** **23 07 14.2 +0.7**
baz=295
PUL Pulkovo 70.71 328⇑ *e*P **P** **23 07 20.4 +0.5**
PUL pmax pmax
comp=Z,78nm,0.8s
SOCY Socotra 71.72 274 P **P** **23 07 25.8 -1.2**
FINES FINESS Array B 71.95 331 P **P** **23 07 26.5 -1.0**
comp=Z,11nm,0.5s,baz=64,slow=6.3,SNR=80
FINES LR LR 23 43 17.1
comp=Z,829nm,18.4s,baz=66,slow=40
VSU Vasula 72.94 328 *d* *i*P **P** **23 07 33.3 0.0**
VSU pmax pmax
comp=Z,132nm,0.8s
VSU Vasula 72.94 328 *e*P **P** **23 07 33.0 -0.3**
RES Resolute Bay 73.66 11 IAmb IAmb 23 07 38.7
comp=Z,16nm,1.0s
DAG Danmarks Havn 73.72 353⇑ *i*P **P** **23 07 36.7 -1.0**
DAG pmax pmax
comp=Z,7.0nm,0.9s
DAG Danmarks Havn 73.72 353⇑ *i*P **P** **23 07 36.7 -1.0**
comp=Z,6.8nm,0.9s
IZAR Zarasai 74.37 325 *e*P **P** **23 07 41.9 +0.1**
IZAR IAmb IAmb 23 07 43.3
comp=Z,12nm,0.8s
RAYN Ar Rayn 74.37 289 P **P** **23 07 42.8 +0.3**
RAYN pmax pmax
comp=Z,11nm,1.2s
RAYN Ar Rayn 74.37 289 P **P** **23 07 42.8 +0.3**
ISAL Salakas 74.51 325 *e*P **P** **23 07 42.6 -0.1**
ISAL IAmb IAmb 23 07 44.2
comp=Z,11nm,0.8s
IIGN Ignalina 74.56 325 *e*P **P** **23 07 42.9 -0.1**
AKASG Malin Array Be 74.99 320 P **P** **23 07 44.9 -0.6**
comp=Z,8.5nm,0.7s,baz=52,slow=6.3,SNR=38
AKASG LR LR 23 43 35.1
comp=Z,987nm,18.7s,baz=65,slow=38
TULEG Thule 75.15 4 IAmb IAmb 23 07 46.5
comp=Z,21nm,0.9s
GAZ Gaziantep 75.42 304 P **P** **23 07 47.8 -0.6**
PABE Paberze 75.63 326 *e*P **P** **23 07 48.9 -0.2**
PABE IAmb IAmb 23 07 50.9
comp=Z,76nm,1.2s
PBUR Paburg 76.38 327 *e*P **P** **23 07 53.2 -0.1**
YKA Yellowknife Ar 76.49 25 P **P** **23 07 54.4 +0.5**
comp=Z,6.4nm,0.9s,baz=300,slow=5.7,SNR=56
YKA LR LR 23 43 25.9
comp=Z,81nm,20.8s,baz=0.0,slow=37
SORM Soroca 76.64 318⇓ **P** **P** **23 07 54.2 -0.7**
SUW Suwalki 76.75 324 *e*P **P** **23 07 55.0 -0.5**
SUW Suwalki 76.75 324 *e*P **P** **23 07 55.0 -0.5**
KIS Kishinev 76.87 316 *e*P P 23 08 09.0 +13
KIS LRM MLR 23 44 16.0
comp=Z,600nm,16.0s
KIS Kishinev 76.87 316 *e*P P 23 08 09.0 +13
KIS *e* 23 08 16.0
KIS MLR MLR
comp=Z,600nm,16.0s
BR131 Keskin Array S 76.90 308 IAmb IAmb 23 07 57.8
comp=Z,20nm,0.9s
BRTR Keskin Array B 76.90 308 P **P** **23 07 56.5 -0.3**
comp=Z,18nm,0.9s,baz=98,slow=5.0,SNR=74
BRTR LR LR 23 47 00.3
comp=Z,167nm,20.4s,baz=17,slow=40
MILM Milestii Mici 76.91 316⇑ P **P** **23 07 56.0 -0.5**
ANTO Ankara 77.43 308 P **P** **23 07 59.2 -0.5**
ANTO pmax pmax
comp=Z,18nm,1.1s
ANTO Ankara 77.43 308 **P** **23 07 59.2 -0.5**
ANTO IAmb IAmb 23 08 00.2
comp=Z,18nm,1.1s
BR231 Keskin MP Arra 77.45 308 P **P** **23 07 59.3 -0.6**
BR231 IAmb IAmb 23 08 01.0
comp=Z,20nm,0.9s
VASR Vaslui 77.66 316⇑ P **P** **23 08 01.5 +0.8**
TLCR 77.69 315⇑ P **P** **23 08 00.3 -0.7**
JURR Jurilovca 77.85 314⇓ P **P** **23 08 01.1 -0.7**
BIR Birlad 77.94 316⇑ P **P** **23 08 03.1 +0.8**
TOPG Topolog 78.11 315⇓ P **P** **23 08 03.5 +0.3**
CFR Carcaliu 78.12 315⇓ P **P** **23 08 03.2 -0.2**
GHRR 78.17 316⇓ P **P** **23 08 04.7 +1.1**
MDUB Mudurnu 78.26 310 P **P** **23 08 03.7 -0.7**
NB201 NORSAR Array S 78.26 334 P **P** **23 08 03.2 -0.6**
PRAR RASCA 78.27 317⇓ P **P** **23 08 04.4 +0.2**
TIRR Tirgusor 78.28 314 P **P** **23 08 03.4 -0.8**
TIRR pmax pmax
comp=Z,42nm,1.1s
TIRR Tirgusor 78.28 314 P **P** **23 08 03.4 -0.8**
NB2 NORSAR Subarra 78.30 334 P **P** **23 08 02.9 -1.2**
comp=Z,9.2nm,0.7s,baz=52,slow=5.9
NOA NORSAR Array B 78.30 334 P **P** **23 08 02.7 -1.3**
comp=Z,9.3nm,0.8s,baz=51,slow=5.6,SNR=24
NOA LR LR 23 45 43.4
comp=Z,341nm,20.6s,baz=60,slow=38
LVV L'vov 78.35 320 *e*P **P** **23 08 04.4 -0.1**
LVV MLR MLR
comp=Z,800nm,19.0s
TESR Tescani 78.42 317⇑ P **P** **23 08 04.6 -0.4**
PETR Petresti 78.43 316⇓ P **P** **23 08 06.4 +1.3**
NBO00 NORSAR Array S 78.47 334 P **P** **23 08 04.1 -0.9**
NBO00 IAmb IAmb 23 08 07.0
comp=Z,25nm,1.1s
HARR Harsova 78.48 315⇑ P **P** **23 08 05.4 +0.1**
ODBI Odobesti 78.52 316⇑ P **P** **23 08 06.5 +0.9**
BIZ Bicaz 78.54 317⇑ P **P** **23 08 05.8 +0.2**
VRI Vrincioaia 78.68 316⇓ P **P** **23 08 07.5 +1.1**
PLOR Plostina 78.73 316⇑ P **P** **23 08 07.6 +0.8**
BUR08 Bucovina Ar. S 78.74 318 IAmb IAmb 23 08 08.0
comp=Z,13nm,0.9s
BURAR Bucovina Array 78.75 318⇓ P **P** **23 08 07.3 +0.4**
ICOR Ion Corvin 78.83 314⇑ P **P** **23 08 07.6 +0.3**
BISRR Bisoca 78.84 316⇑ P **P** **23 08 08.9 +1.5**
BEL Belsk 79.10 323 *e*P **P** **23 08 09.6 +1.0**
BEL Belsk 79.10 323 *e*P **P** **23 08 09.6 +1.0**
OZUR 79.14 317⇓ P **P** **23 08 09.2 +0.2**
KWP Kalwaria Pacla 79.19 321 *e*P **P** **23 08 10.1 +0.9**
KWP Kalwaria Pacla 79.19 321 *e*P **P** **23 08 10.1 +0.9**
MLR Muntele Rosu 79.34 316⇑ P **P** **23 08 10.9 +0.7**
MLR Muntele Rosu 79.34 316 IAmb IAmb 23 08 24.7
comp=Z,21nm,1.1s
SUMG Summit 79.42 356⇑ *i*P **P** **23 08 10.9 +0.4**
SUMG pmax pmax
comp=Z,54nm,0.8s
SUMG Summit 79.42 356⇑ *i*P **P** **23 08 10.9 +0.4**
comp=Z,54nm,0.8s
SUMG Summit 79.42 356 IAmb IAmb 23 08 11.5
comp=Z,20nm,0.7s
DOPR Dopca 79.45 317⇓ P **P** **23 08 10.8 +0.2**
SECR 79.48 315⇓ P **P** **23 08 12.1 +1.2**
KOLS Kolonicke sedl 79.79 320 *e*P **P** **23 08 12.6 +0.1**
KOLS pmax pmax
comp=Z,6.0nm,1.0s
KOLS Kolonicke sedl 79.79 320 *e*P **P** **23 08 12.6 +0.1**
VOIR 79.91 316⇑ P **P** **23 08 12.6 -0.6**
RAZG Razgrad 79.92 314⇓ P **P** **23 08 12.8 -0.4**
UZH Uzhgorod 79.94 320⇑ *i*P **P** **23 08 13.2 0.0**
UZH *i* 23 08 29.5
TRPA Tarpa 80.05 319⇓ P **P** **23 08 14.3 +0.5**
GKP Gorka Klasztor 80.16 326 *e*P **P** **23 08 15.0 +0.7**
GKP Gorka Klasztor 80.16 326 *e*P **P** **23 08 15.0 +0.7**
ARR Arges 80.20 316⇑ P **P** **23 08 15.4 +0.6**
HUMR Humele 80.41 315⇑ P **P** **23 08 15.1 -0.7**
COPA Copaceanca 80.45 315⇓ P **P** **23 08 15.9 -0.1**
OJC Ojcow 80.49 322 *e*P **P** **23 08 16.3 +0.1**
OJC Ojcow 80.49 322 *e*P **P** **23 08 16.3 +0.1**
D03D Eldon 80.58 41 P **P** **23 08 18.2 +1.5**
baz=301
ELND Elena 80.63 314⇑ P **P** **23 08 17.4 +0.3**
NIE Niedzica 80.64 321 *e*P **P** **23 08 17.5 +0.4**
NIE Niedzica 80.64 321 *e*P **P** **23 08 17.5 +0.4**
B05A Bryant 80.77 40 P **P** **23 08 18.7 +1.0**
baz=302
VLAD Vladila 81.03 315⇑ P **P** **23 08 19.2 0.0**
PLVB Pleven 81.20 315⇓ P **P** **23 08 20.4 +0.3**
LANS Liptovska Anna 81.25 321 *e*P **P** **23 08 21.6 +1.3**
LANS pmax pmax
comp=Z,7.0nm,1.3s
LANS Liptovska Anna 81.25 321 *e*P **P** **23 08 21.6 +1.3**
GZR Gura Zlata 81.32 317⇑ P **P** **23 08 21.4 +0.6**
E04D Cinebar 81.39 42 P **P** **23 08 22.5 +1.5**
baz=302
OKC Ostrava-Krasne 81.59 322 AMS AMS 23 47 50.0
comp=Z,1μm,22.0s
PUNG Punghina 81.80 316⇓ P **P** **23 08 23.9 +0.7**
HERR Herculane 81.80 317⇑ P **P** **23 08 23.6 +0.4**
F04A Amboy 81.81 42 P **P** **23 08 24.7 +1.4**
F04A IAmb IAmb 23 08 25.2
comp=Z,15nm,0.7s
BZS Buzias 81.90 318⇓ P **P** **23 08 23.1 -0.6**
MORC Moravsky Berou 81.95 323⇑ P **P** **23 08 23.9 -0.1**
MORC Moravsky Berou 81.95 323 *e*P **P** **23 08 23.7 -0.3**
MORC Moravsky Berou 81.95 323 IAmb IAmb 23 08 39.0
comp=Z,10nm,1.1s
VYHS Vyhne 81.95 321 *e*P **P** **23 08 24.8 +0.8**
VYHS pmax pmax
comp=Z,45nm,1.5s
VYHS Vyhne 81.95 321 *e*P **P** **23 08 24.8 +0.8**
KSP Ksiaz 82.01 324 *e*P **P** **23 08 25.1 +0.9**
KSP Ksiaz 82.01 324 *e*P **P** **23 08 25.1 +0.9**
KRLC Kraliky 82.19 323 AMS AMS 23 48 30.0
comp=Z,1μm,18.5s
OSTC Ostas 82.21 324 *e*P P 23 08 19.8 -5.5
OSTC *ex* x 23 08 27.3
B08A Colville Reser 82.27 39 IAmb IAmb 23 08 27.0
comp=Z,9.7nm,0.8s
DPC Dobruska-Polom 82.27 324 *e*P **P** **23 08 26.5 +0.8**
DPC *e* 23 08 37.0
DPC MLR MLR
comp=Z,1μm,8.0s
DPC Dobruska-Polom 82.27 324 *e*P **P** **23 08 26.5 +0.8**
DPC *e*pP **pP** **23 08 37.0 +1.6**
DPC AMS AMS 23 48 30.0
comp=Z,1μm,8.0s
CHVC Chvalec 82.28 324 *e*P **P** **23 08 27.0 +1.3**
CHVC AMS AMS 23 48 40.0
comp=Z,1μm,20.0s
MDVR Moldovita 82.28 317⇑ P **P** **23 08 25.7 -0.2**
J01E Myrtle Point 82.33 45 P **P** **23 08 27.6 +1.5**
baz=301
UPC Upice 82.35 324 *e*P **P** **23 08 27.1 +1.1**
UPC MLR MLR
comp=Z,1μm,20.2s
UPC Upice 82.35 324 *e*P **P** **23 08 27.1 +1.1**
UPC AMS AMS 23 48 50.0

	comp=Z,1µm,20.2s										
JAVC	**Velka Javorina**	**82.39**	**322**	*e*P	**P**	**23 08 27.8 +1.4**	**KHC**			AMS	AMS	23 49 40.0	RYN				IAmb	IAmb	23 08 58.2
I03D	**Drain, OR**	**82.42**	**44**	P	**P**	**23 08 28.3 +1.8**		comp=Z,1µm,24.5s						comp=Z,5.8nm,1.0s					
	baz=302						**KHC**	**Kasperske Hory**	**84.43**	**324**		pP	23 08 49.6 +3.0	**KVN**	**Kaiserville**	**88.27**	**46**	P	**P**	**23 08 56.9 +0.8**
VTS	**Vitosha**	**82.47**	**314**	⇓P	**P**	**23 08 27.6 +0.7**	**ARSA**	**Arzberg**	**84.50**	**321**	*i* PcP	**P**	**23 08 37.8 +0.6**	KVN				pmax	pmax	
VTS	**Vitosha**	**82.47**	**314**	IAmb	IAmb	23 08 28.9		comp=Z,14nm,1.5s						comp=Z,11nm,1.1s					
	comp=Z,19nm,1.1s						**MOX**	**Moxa**	**84.51**	**326**	*e*P	**P**	**23 08 37.6 +0.4**	**KVN**	**Kaiserville**	**88.27**	**46**	P	**P**	**23 08 56.9 +0.8**
H04A	**Detroit Lake**	**82.61**	**43**	P	**P**	**23 08 28.7 +1.1**		comp=Z,17nm,1.4s,baz=52,slow=5.2						KVN				IAmb	IAmb	23 08 58.3
SMOL	**Smolenice**	**82.72**	**322**	*e*P	**P**	**23 08 29.3 +1.3**	MOX					*e*pP	**sP**	**23 08 50.0 -0.3**		comp=Z,11nm,1.1s				
SMOL					pmax	pmax		baz=52,slow=5.1						**MDPB**	**Devils Postpil**	**88.44**	**48**	P	**P**	**23 08 57.3 +0.3**
	comp=Z,10.0nm,1.2s						MOX					*e*L	L	23 54 43.6	**TIP**	**Timpagrande**	**88.45**	**314**	⇓P	P	23 09 02.1 +5.3
SMOL	**Smolenice**	**82.72**	**322**	*e*P	**P**	**23 08 29.3 +1.3**		comp=Z,290nm,19.0s						**TIP**	**Timpagrande**	**88.45**	**314**	P	**P**	**23 08 56.7 -0.1**
VRAC	**Vranov**	**82.72**	**323**	⇓P	**P**	**23 08 28.9 +0.9**	**GEC2**	**GERESS Array S**	**84.54**	**323**	*e*P	**P**	**23 08 37.8 +0.4**	TIP				IAmb	IAmb	23 09 02.8
VRAC	**Vranov**	**82.72**	**323**	*e*P	**P**	**23 08 28.1 +0.1**		comp=Z,13nm,1.2s,baz=52,slow=5.2							comp=Z,5.6nm,0.9s					
K02D	**Willamette Mer**	**82.74**	**45**	P	**P**	**23 08 29.6 +1.3**	GEC2					*e*pP	**sP**	**23 08 50.2 -0.3**	**NVAR**	**Mina Array Bea**	**88.49**	**47**	P	**P**	**23 08 58.5 +1.3**
	baz=302							baz=52,slow=5.1							comp=Z,1.9nm,0.8s,baz=290,slow=4.6,SNR=15					
G05D	**Wamic, OR**	**82.83**	**42**	P	**P**	**23 08 30.0 +1.3**	**GEC2**	**GERESS Array S**	**84.54**	**323**		**pP**	**23 08 49.0 +1.9**	NVAR				LR	LR	23 43 37.8
	baz=303						GEC2					IAmb	IAmb	23 08 51.5		comp=Z,68nm,19.8s,baz=329,slow=32				
MODS	**Modra-Piesok**	**82.88**	**322**	*e*P	**P**	**23 08 30.3 +1.4**		comp=Z,12nm,1.2s						**NVAR**	**Mina Array Bea**	**88.49**	**47**	P	**P**	**23 08 57.7 +0.5**
MODS					pmax	pmax	**GERES**	**GERESS Array B**	**84.54**	**323**		P	**P**	**23 08 37.4 0.0**	**NRCA**	**Norcia**	**88.50**	**319**	IAmb	IAmb	23 08 59.2
	comp=Z,26nm,1.2s							comp=Z,4.7nm,0.8s,baz=44,slow=4.4,SNR=34								comp=Z,11nm,1.0s				
MODS	**Modra-Piesok**	**82.88**	**322**	*e*P	**P**	**23 08 30.2 +1.4**	GERES					LR	LR	23 50 29.6	**OMMB**	**Old Mammoth Mi**	**88.50**	**48**	P	**P**	**23 08 57.7 +0.3**
I04A	**Tendick Farm,**	**82.95**	**44**	P	**P**	**23 08 29.6 +0.3**		comp=Z,756nm,18.2s,baz=64,slow=39						**NV11**	**Mina Array Sit**	**88.59**	**47**	P	**P**	**23 08 56.9 -0.7**
	baz=302						**KOGS**	**Kog**	**84.56**	**320**	*e*P	**P**	**23 08 37.9 +0.4**	**AQU**	**L'Aquila**	**88.63**	**318**	P	**P**	**23 08 57.2 -0.3**
E07A	**Sunnyside**	**82.97**	**41**	IAmb	IAmb	23 08 31.0	**WDC**	**Whiskeytown Da**	**84.58**	**47**	P	**P**	**23 08 37.7 0.0**	AQU				pmax	pmax	
	comp=Z,10nm,0.9s						WDC					pmax	pmax			comp=Z,26nm,1.1s				
KRUC	**Moravsky**	**82.97**	**322**	*e*P	**P**	**23 08 29.5 +0.2**		comp=Z,5.0nm,1.1s						**AQU**	**L'Aquila**	**88.63**	**318**	P	**P**	**23 08 57.2 -0.3**
PVCC	**Panska Ves**	**83.08**	**324**	AMS	AMS	23 49 20.0	**WDC**	**Whiskeytown Da**	**84.58**	**47**	P	**P**	**23 08 37.7 0.0**	**QLMT**	**Earthquake Lak**	**88.75**	**38**	P	**P**	**23 08 58.8 +0.6**
	comp=Z,1µm,21.1s						**FNA**	**Florina**	**84.61**	**314**	IAmb	IAmb	23 08 50.8	**YHL**	**Hebgen Lake**	**88.87**	**38**	P	**P**	**23 08 59.8 +0.9**
ILULI	**Ilulissat**	**83.14**	**0**	P	**P**	**23 08 29.3 -0.4**		comp=Z,9.4nm,0.8s						**YHB**	**Horse Butte**	**88.93**	**38**	P	**P**	**23 08 59.7 +0.6**
ILULI					pmax	pmax	**O02D**	**Mt. Diablo Mer**	**84.63**	**47**	P	**P**	**23 08 39.3 +1.3**	**ELK**	**Elko**	**89.06**	**43**	P	**P**	**23 08 59.9 +0.1**
	comp=Z,18nm,1.0s							baz=302						ELK				pmax	pmax	
ILULI	**Ilulissat**	**83.14**	**0**	P	**P**	**23 08 29.2 -0.4**	**MANZ**	**Manzenberg**	**84.67**	**325**	*e*P	**P**	**23 08 38.6 +0.6**		comp=Z,6.0nm,1.1s					
ILULI					IAmb	IAmb		comp=Z,8.1nm,1.0s,baz=52,slow=5.2						**ELK**	**Elko**	**89.06**	**43**	P	**P**	**23 08 59.9 +0.1**
	comp=Z,18nm,1.0s						**ROTZ**	**Rotzenmuhle**	**84.75**	**325**	*e*P	**P**	**23 08 39.2 +0.8**	ELK				IAmb	IAmb	23 09 02.5
C09A	**Chrisman Ranch**	**83.17**	**39**	IAmb	IAmb	23 08 31.7		comp=Z,12nm,1.0s,baz=52,slow=5.2							comp=Z,6.1nm,1.1s					
	comp=Z,7.1nm,0.8s						ROTZ					*e*pP	**sP**	**23 08 51.5 0.0**	**YMR**	**Madison River**	**89.11**	**38**	P	**P**	**23 08 60.0 0.0**
BRG	**Berggiesshubel**	**83.20**	**325**	*e*P	**P**	**23 08 30.6 +0.2**		baz=52,slow=5.1						**YNR**	**Norris Junctio**	**89.23**	**38**	P	**P**	**23 09 00.7 +0.1**
	comp=Z,10nm,1.2s						**GTTG**	**Gyttingen**	**84.76**	**327**	*e*P	**P**	**23 08 39.1 +0.7**	**YPP**	**Pitchstone Pla**	**89.45**	**39**	P	**P**	**23 09 02.7 +1.0**
BRG				*e*		23 08 41.4		comp=Z,30nm,0.9s,baz=52,slow=5.2						**LKWY**	**Lake**	**89.48**	**38**	P	**P**	**23 09 02.8 +1.1**
	comp=Z,33nm,1.8s						**WALA**	**Waterton Lakes**	**84.79**	**36**	IAmb	IAmb	23 08 40.4	LKWY				pmax	pmax	
	comp=N,817nm,25.0s							comp=Z,12nm,0.9s							comp=Z,8.0nm,0.9s					
	comp=E,844nm,18.6s						**F10A**	**Beach Ranch, E**	**84.81**	**40**	P	**P**	**23 08 39.1 +0.2**	**LKWY**	**Lake**	**89.48**	**38**	P	**P**	**23 09 02.8 +1.1**
	comp=Z,1µm,15.3s						**MOA**	**Molln**	**84.83**	**322**	*i* PcP	**P**	**23 08 39.8 +1.0**	LKWY				IAmb	IAmb	23 09 05.3
BRG	**Berggiesshubel**	**83.20**	**325**	*e*P	**P**	**23 08 30.6 +0.2**		comp=Z,9.6nm,0.9s							comp=Z,8.2nm,0.8s					
BRG				*e*		23 08 41.3	**UPM**	**Unac-Piva**	**84.84**	**317**	*e*P	**P**	**23 08 41.2 +2.0**	**H17A**	**Grant Village**	**89.50**	**38**	P	**P**	**23 09 03.4 +1.6**
BRG					pmax	pmax	**BORG**	**Borgarnes**	**84.87**	**348**	P	**P**	**23 08 38.3 -0.3**	H17A				IAmb	IAmb	23 09 05.5
	comp=Z,10.0nm,1.2s						BORG					pmax	pmax			comp=Z,8.9nm,0.9s				
BRG					pmax	pmax		comp=Z,24nm,1.0s						**H17A**	**Grant Village**	**89.50**	**38**	P	**P**	**23 09 04.9 +3.1**
	comp=Z,33nm,1.8s						**BORG**	**Borgarnes**	**84.87**	**348**	P	**P**	**23 08 38.3 -0.3**		baz=310					
BRG					MLR	MLR	**AGG**	**Agios Georgios**	**84.93**	**312**	IAmb	IAmb	23 08 51.8	**YMP**	**Mirror Lake Pl**	**89.50**	**38**	P	**P**	**23 09 03.6 +1.7**
	comp=N,817nm,25.0s							comp=Z,14nm,0.9s						**FLWY**	**Flagg Ranch**	**89.63**	**39**	P	**P**	**23 09 03.2 +0.8**
BRG					MLR	MLR	**BLY**	**Banja Luka**	**85.00**	**319**	P	**P**	**23 08 38.5 -1.2**	FLWY				IAmb	IAmb	23 09 05.2
	comp=E,844nm,18.6s						BLY					IAmb	IAmb	23 08 54.6		comp=Z,8.5nm,0.8s				
BRG					MLR	MLR		comp=Z,8.0nm,1.0s						**RLMT**	**Red Lodge**	**89.73**	**37**	P	**P**	**23 09 03.0 +0.1**
	comp=Z,1µm,15.3s						**PDG**	**Podgorica**	**85.05**	**316**	⇓P	**P**	**23 08 40.0 0.0**	RLMT				IAmb	IAmb	23 09 04.8
BRG	**Berggiesshubel**	**83.20**	**325**	*e*P	**P**	**23 08 30.9 +0.5**	**PDG**	**Podgorica**	**85.05**	**316**	⇑*i*P	**P**	**23 08 39.4 -0.6**		comp=Z,8.3nm,0.9s					
	comp=Z,10nm,1.2s,baz=52,slow=5.2						**SOKA**	**Soboth**	**85.11**	**321**	*i* PcP	**P**	**23 08 40.9 +0.5**	**RLMT**	**Red Lodge**	**89.73**	**37**	P	**P**	**23 09 04.2 +1.3**
BRG					*e*pP	**sP**		comp=Z,26nm,1.9s							baz=311					
	baz=52,slow=5.1						**O03E**	**Paynes Creek**	**85.20**	**47**	P	**P**	**23 08 42.0 +1.1**	**MOOW**	**Moose Ponds**	**89.82**	**39**	P	**P**	**23 09 03.8 +0.5**
FRGS	**Fruska Gora**	**83.22**	**318**	⇑*i*P	**P**	**23 08 29.6 -1.1**		baz=303						**DGMT**	**Dagmar**	**90.03**	**32**	P	**P**	**23 09 04.2 +0.3**
D08A	**Wollman Farm,**	**83.23**	**40**	IAmb	IAmb	23 08 32.1	**BRY**	**Bratogost**	**85.23**	**316**	*e*P	**P**	**23 08 40.9 -0.2**	**DGMT**	**Dagmar**	**90.03**	**32**	P	**P**	**23 09 04.7 +0.8**
	comp=Z,12nm,0.7s						**DRME**	**Dracevica, Mon**	**85.23**	**316**	⇑*i*P	**P**	**23 08 40.5 -0.4**		baz=315					
HUMO	**Hull Mountain**	**83.24**	**45**	P	**P**	**23 08 31.7 +0.9**	**TIR**	**Tirane**	**85.27**	**315**	⇑P	**P**	**23 08 42.4 +1.3**	**DAC**	**Darwin (Calif)**	**90.19**	**48**	P	**P**	**23 09 05.0 -0.2**
HAWA	**Hanford**	**83.25**	**41**	P	**P**	**23 08 31.1 +0.3**	**MOD**	**Modoc Plateau**	**85.27**	**45**	P	**P**	**23 08 41.5 +0.1**	DAC				pmax	pmax	
HAWA					IAmb	IAmb	MOD					IAmb	IAmb	23 08 43.5		comp=Z,2.0nm,0.9s				
	comp=Z,7.6nm,0.7s							comp=Z,9.0nm,0.8s						**DAC**	**Darwin (Calif)**	**90.19**	**48**		**P**	**23 09 05.0 -0.2**
I05D	**Terrebonne, OR**	**83.31**	**43**	P	**P**	**23 08 32.3 +1.1**	**GRA1**	**Grafenberg Arr**	**85.30**	**325**	IAmb	IAmb	23 08 43.6	**LAO**	**LASA Array**	**90.27**	**35**	P	**P**	**23 09 06.0 +0.8**
	baz=303							comp=Z,14nm,0.8s							baz=313					
MORH	**Mrgy, Hungar**	**83.32**	**319**	*e*P	**P**	**23 08 29.3 -1.8**	**GRF**	**Grafenberg Arr**	**85.30**	**325**	*e*L	L	23 50 56.3	**R11A**	**Troy Canyon, C**	**90.27**	**46**	P	**P**	**23 09 04.8 -0.7**
MORH	**Mrgy, Hungar**	**83.32**	**319**	*e*P	**P**	**23 08 30.6 -0.5**		comp=Z,896nm,19.4s						**R11A**	**Troy Canyon, C**	**90.27**	**46**	P	**P**	**23 09 05.8 +0.3**
TREC	**Trest**	**83.32**	**323**	AMS	AMS	23 49 10.0	**SFJD**	**Kangerlussuaq**	**85.37**	**0**	P	**P**	**23 08 41.2 +0.1**		baz=307					
	comp=Z,1µm,19.6s						SFJD					pmax	pmax		**BGU**	**Big Grassy Mou**	**90.28**	**42**	P	**P**	**23 09 06.3 +0.9**
CLL	**Collm**	**83.41**	**326**	*e*P	**P**	**23 08 31.0 -0.5**		comp=Z,24nm,1.2s						**PPT**	**Papeete**	**90.36**	**110**	LR	LR	23 41 32.7
CLL				*e*		23 08 41.0	**SFJD**	**Kangerlussuaq**	**85.37**	**0**	P	**P**	**23 08 41.2 +0.1**		comp=Z,91nm,21.6s,baz=321,slow=30					
CLL					pmax	pmax	**JTMT**	**Jette**	**85.39**	**37**	IAmb	IAmb	23 08 43.4	**PPT2**	**Papeete2**	**90.36**	**110**	*e*LR	LR	23 37 58.0
	comp=Z,17nm,0.9s							comp=Z,10.0nm,1.0s							comp=Z,187nm,22.8s					
CLL	**Collm**	**83.41**	**326**	*e*P	**P**	**23 08 31.0 -0.5**	**BMO**	**Blue Mountains**	**85.41**	**41**	IAmb	IAmb	23 08 44.0	**SPUT**	**South Promonto**	**90.38**	**42**	P	**P**	**23 09 06.3 +0.4**
	comp=Z,17nm,0.9s							comp=Z,8.5nm,1.1s						**TPNV**	**Topopah Spring**	**90.68**	**47**	IAmb	IAmb	23 09 09.7
CLL				*e*		23 08 41.0	**OBKA**	**Obir**	**85.47**	**321**	*i* PcP	**P**	**23 08 42.6 +0.4**		comp=Z,5.0nm,1.1s					
CLL				*e*pP	**sP**	**23 08 44.0 -0.6**		comp=Z,9.1nm,0.8s						**TPNV**	**Topopah Spring**	**90.68**	**47**	P	**P**	**23 09 08.4 +1.0**
CLL				*e*S	**S**	**23 18 48.0 -2.6**	**HCY**	**Herceg Novi**	**85.51**	**316**	*e*P	**P**	**23 08 41.2 -1.1**		baz=306					
CLL				*e*SP	**SPn**	**23 19 36.0 -4.1**	**RJOB**	**Jochberg**	**85.69**	**323**	*e*P	**P**	**23 08 44.1 +0.9**	**HWUT**	**Hardware Ranch**	**90.71**	**41**	IAmb	IAmb	23 09 09.6
CLL	**Collm**	**83.41**	**326**	*e*P	**P**	**23 08 31.9 +0.4**		comp=Z,24nm,0.9s,baz=52,slow=5.2							comp=Z,11nm,1.0s					
	comp=Z,17nm,0.9s,baz=52,slow=5.2						**LJU**	**Ljubljana**	**85.76**	**321**	*e*P	**P**	**23 08 43.1 -0.4**	**DUG**	**Dugway, Tooele**	**90.86**	**43**	P	**P**	**23 09 09.0 +0.9**
CLL	**Collm**	**83.41**	**326**	IAmb	IAmb	23 08 32.6	**KBA**	**Koelnbreinsper**	**85.79**	**322**	*i* PcP	**P**	**23 08 44.3 +0.4**	DUG				pmax	pmax	
	comp=Z,15nm,0.9s							comp=Z,18nm,1.2s							comp=Z,7.0nm,0.8s					
PRU	**Pruhonice**	**83.42**	**324**	*e*P	**P**	**23 08 32.1 +0.5**	**ORV**	**Oroville**	**85.80**	**47**	P	**P**	**23 08 44.0 +0.2**	**DUG**	**Dugway, Tooele**	**90.86**	**43**	P	**P**	**23 09 09.0 +0.9**
PRU				*e*		23 08 42.0	ORV					pmax	pmax		DUG				IAmb	IAmb	23 09 10.3
PRU					MLR	MLR		comp=Z,7.0nm,0.8s							comp=Z,6.6nm,0.8s					
	comp=Z,1µm,19.6s						**ORV**	**Oroville**	**85.80**	**47**	P	**P**	**23 08 44.0 +0.2**	**DUG**	**Dugway, Tooele**	**90.86**	**43**	P	**P**	**23 09 09.5 +1.4**
PRU	**Pruhonice**	**83.42**	**324**	*e*P	**P**	**23 08 32.1 +0.5**	ORV					IAmb	IAmb	23 08 45.1		baz=309					
PRU				*e*pP	**pP**	**23 08 42.0 +0.7**		comp=Z,7.3nm,0.8s						**PD31**	**Pinedale Array**	**91.11**	**39**	IAmb	IAmb	23 09 11.0
PRU				AMS	AMS	23 49 10.0	**MYKA**	**Terra Mystica**	**85.90**	**322**	*i* PcP	**P**	**23 08 44.2 -0.1**		comp=Z,3.7nm,0.8s					
	comp=Z,1µm,19.6s							comp=Z,8.4nm,1.1s						PD31					pP	23 09 21.9 +3.0
PRA	**Prague**	**83.42**	**324**	AMS	AMS	23 49 00.0	**WVOR**	**Wild Horse Val**	**86.00**	**44**	P	**P**	**23 08 45.3 +0.4**	**PDAR**	**Pinedale Array**	**91.11**	**39**	P	**P**	**23 09 10.1 +0.7**
	comp=Z,1µm,8.6s						WVOR					pmax	pmax		comp=Z,2.1nm,0.7s,baz=352,slow=0.6,SNR=23					
J04D	**Umpqua Nationa**	**83.43**	**44**	P	**P**	**23 08 33.2 +1.2**		comp=Z,7.0nm,1.0s						**TCUT**	**Toone Canyon**	**91.11**	**41**	P	**P**	**23 09 09.7 +0.3**
	baz=302						**WVOR**	**Wild Horse Val**	**86.00**	**44**	P	**P**	**23 08 45.3 +0.4**	**PSUT**	**Pine Spring**	**91.25**	**45**	P	**P**	**23 09 10.5 +0.5**
FBE	**Freiberg**	**83.47**	**325**	*e*P	**P**	**23 08 32.7 +0.9**	WVOR					IAmb	IAmb	23 08 46.7	**JLU**	**Jordanelle**	**91.41**	**42**	P	**P**	**23 09 12.0 +1.1**
	comp=Z,21nm,1.0s,baz=52,slow=5.2							comp=Z,6.8nm,0.9s						**NLU**	**North Lily Min**	**91.45**	**43**	P	**P**	**23 09 11.7 +0.8**
FBE				*e*pP	**sP**	**23 08 45.1 +0.2**	**BUG**	**Bochum--Univer**	**86.11**	**328**	*e*P	**P**	**23 08 46.3 +1.3**	**SHPR**	**Sheep Range**	**91.64**	**47**	P	**P**	**23 09 12.4 +0.5**
	baz=52,slow=5.1							comp=Z,23nm,1.3s,baz=52,slow=5.2						SHPR				IAmb	IAmb	23 09 13.7
NEW	**Newport**	**83.54**	**38**	P	**P**	**23 08 32.1 -0.2**	**JAVS**	**Jaornik**	**86.11**	**321**	*e*P	**P**	**23 08 45.0 -0.4**		comp=Z,4.7nm,1.0s					
NEW					pmax	pmax	**MSO**	**Missoula**	**86.13**	**38**	P	**P**	**23 08 45.5 0.0**	**MPU**	**Maple Canyon**	**91.68**	**42**	P	**P**	**23 09 12.3 +0.4**
	comp=Z,8.0nm,0.8s						**MSO**	**Missoula**	**86.13**	**38**	P	**P**	**23 08 46.5 +1.0**	**ULM**	**Lac du Bonnet**	**92.38**	**27**	P	**P**	**23 09 14.8 +0.1**
NEW	**Newport**	**83.54**	**38**	P	**P**	**23 08 32.1 -0.2**		baz=308							comp=Z,12nm,0.8s,baz=322,slow=5.4,SNR=26					
NEW					IAmb	IAmb	**FCC**	**Fort Churchill**	**86.33**	**21**	IAmb	IAmb	23 08 46.7	ULM				LR	LR	23 54 28.3
	comp=Z,7.6nm,0.8s							comp=Z,11nm,0.9s							comp=Z,66nm,18.8s,baz=328,slow=38					
NEW	**Newport**	**83.54**	**38**	P	**P**	**23 08 33.1 +0.8**	**BEKR**	**Beckworth**	**86.36**	**46**	P	**P**	**23 08 47.3 +0.4**	**KMBO**	**Kilima Mbogo**	**92.54**	**270**	*i* P	**P**	**23 09 15.8 -0.6**
	baz=305						BEKR					IAmb	IAmb	23 08 48.5	KMBO				pmax	pmax	
VAY	**Valandovo**	**83.56**	**314**	*i* P	**P**	**23 08 32.5 +0.1**		comp=Z,12nm,0.8s							comp=Z,1.0nm,0.5s					
STIP	**Stip**	**83.61**	**314**	*i* P	**P**	**23 08 31.7 -1.1**	**ABTA**	**Abfaltersbach**	**86.45**	**322**	*i* PcP	**P**	**23 08 46.0 -1.0**	**KMBO**	**Kilima Mbogo**	**92.54**	**270**	P	**P**	**23 09 15.6 -0.8**
DIVS	**Divibare**	**83.69**	**317**	⇑*i*P	**P**	**23 08 32.5 -0.7**		comp=Z,17nm,1.1s							comp=Z,1.3nm,0.5s,baz=30,slow=8.4,SNR=5.2					
PINE	**Pine Mountain**	**83.85**	**43**	P	**P**	**23 08 35.0 +0.9**	**AFDM**	**Forest Hills D**	**86.47**	**47**	P	**P**	**23 08 47.8 +0.6**	**KMBO**	**Kilima Mbogo**	**92.54**	**270**	IAmb	IAmb	23 09 17.9
L04D	**Klamath Falls**	**83.85**	**45**	P	**P**	**23 08 34.9 +0.7**	AFDM					IAmb	IAmb	23 08 48.9		comp=Z,3.3nm,0.9s				
	baz=302							comp=Z,8.3nm,1.2s						**RSSD**	**Black Hills**	**93.16**	**35**	P	**P**	**23 09 19.8 +1.0**
CONA	**Conrad Observa**	**83.92**	**322**	*i* PcP	**P**	**23 08 35.4 +1.1**	**FFC**	**Flin Flon**	**86.55**	**27**	P	**P**	**23 08 47.5 +0.3**	RSSD				pmax	pmax	
	comp=Z,30nm,1.3s,SNR=8.5						FFC					pmax	pmax			comp=Z,5.0nm,0.9s				
SKO	**Skopje**	**83.94**	**315**	*i* P	**P**	**23 08 35.0 +0.6**		comp=Z,31nm,1.0s						**RSSD**	**Black Hills**	**93.16**	**35**	P	**P**	**23 09 19.8 +1.0**
J05D	**Fort Rock, OR**	**83.94**	**44**	P	**P**	**23 08 35.9 +1.3**	**FFC**	**Flin Flon**	**86.55**	**27**	P	**P**	**23 08 47.5 +0.3**	RSSD				IAmb	IAmb	23 09 20.1
	baz=303						**WATA**	**Walderalm**	**86.59**	**323**	*i* PcP	**P**	**23 08 48.0 +0.2**		comp=Z,5.1nm,0.9s					
M02C	**Callahan**	**83.94**	**46**	P	**P**	**23 08 36.1 +1.5**		comp=Z,7.3nm,0.7s						**RSSD**	**Black Hills**	**93.16**	**35**	P	**P**	**23 09 19.5 +0.7**
	baz=302						**WTTA**	**Wattenberg**	**86.60**	**323**	*i* PcP	**P**	**23 08 48.2 +0.4**		baz=315					
E09A	**Wood Farm, Sta**	**83.97**	**40**	IAmb	IAmb	23 08 36.8		comp=Z,21nm,1.0s						**TBI**	**Tubuai**	**93.24**	**115**	*e*LR	LR	23 39 30.2
	comp=Z,15nm,1.1s						**STAL**	**STALIGIAL**	**86.64**	**322**	P	**P**	**23 08 47.3 -0.5**		comp=Z,183nm,26.8s					
NEUB	**Neuenburg**	**84.08**	**326**	*e*P	**P**	**23 08 35.6 +0.7**	**MOTA**	**Moosalm**	**86.83**	**323**	*i* PcP	**P**	**23 08 49.2 +0.2**	**W13A**	**Hualapai Mount**	**93.32**	**47**	IAmb	IAmb	23 09 21.9
	comp=Z,29nm,0.9s,baz=52,slow=5.2							comp=Z,12nm,0.7s							comp=Z,5.7nm,1.0s					
NRDL	**Niedersach Rie**	**84.09**	**328**	*e*P	**P**	**23 08 35.6 +0.7**	**SQTA**	**Sankt Quirin**	**86.86**	**323**	*i* PcP	**P**	**23 08 48.6 -0.4**	**U15A**	**North Rim**	**93.52**	**45**	IAmb	IAmb	23 09 33.9
	comp=Z,22nm,1.1s,baz=52,slow=5.2							comp=Z,8.0nm,0.6s							comp=Z,10nm,1.1s					
BBLS	**Lazići**	**84.17**	**317**	*e*P	**P**	**23 08 38.4 +2.8**	**RETA**	**Reutte**	**86.92**	**323**	*i* PcP	**P**	**23 08 49.6 +0.3**	**GLA**	**Glamis**	**93.93**	**49**	P	**P**	**23 09 24.0 +1.7**
TANN	**Tannenbergstha**	**84.23**	**325**	*e*P	**P**	**23 08 36.3 +0.5**		comp=Z,8.3nm,1.4s							baz=307					
	comp=Z,18nm,1.1s,baz=52,slow=5.2						**PAHR**	**Pah Rah Range**	**87.08**	**46**	P	**P**	**23 08 50.2 -0.1**	**N23A**	**Red Feather La**	**94.37**	**39**	P	**P**	**23 09 25.8 +1.3**
TANN				*e*pP	**sP**	**23 08 48.7 -0.2**	PAHR					IAmb	IAmb	23 08 52.1		baz=313					
	baz=52,slow=5.1							comp=Z,9.3nm,0.9s						**WUAZ**	**Wupatki**	**94.67**	**46**	P	**P**	**23 09 26.5 +0.7**
HAPS	**Han Pijesak,BI**	**84.32**	**317**	*e*P	**P**	**23 08 35.5 -1.0**	**MFID**	**Camas Ranch**	**87.11**	**42**	P	**P**	**23 08 50.5 +0.2**	WUAZ				IAmb	IAmb	23 09 28.4
GUNZ	**Gunzen**	**84.33**	**325**	*e*P	**P**	**23 08 36.8 +0.6**	**FETA**	**Feichten**	**87.24**	**323**	*i* PcP	**P**	**23 08 52.2 +1.3**		comp=Z,6.9nm,1.1s					
	comp=Z,13nm,1.0s,baz=52,slow=5.2							comp=Z,7.6nm,0.8s						**X16A**	**Lo Mia Camp, P**	**95.32**	**47**	P	**P**	**23 09 28.6 -0.2**
GUNZ				*e*pP	**sP**	**23 08 49.3 -0.1**	**PNTR**	**Pine Nut**	**87.28**	**47**	P	**P**	**23 08 52.0 +0.6**	X16A				IAmb	IAmb	23 09 31.5
	baz=52,slow=5.1						PNTR					IAmb	IAmb	23 08 53.0		comp=Z,4.9nm,1.1s				
PLN	**Plauen**	**84.34**	**325**	*e*P	**P**	**23 08 36.8 +0.6**		comp=Z,8.2nm,0.9s						**SCHQ**	**Schefferville**	**96.38**	**9**	LR	LR	23 55 26.5
	comp=Z,12nm,1.1s,baz=52,slow=5.2						**CTI**	**Castel Tesino**	**87.35**	**322**	IAmb	IAmb	23 09 04.7		comp=Z,282nm,20.7s,baz=338,slow=37					
PLN				*e*pP	**sP**	**23 08 49.2 -0.2**		comp=Z,11nm,1.1s						**ESDC**	**Sonseca Array**	**100.00**	**325**	LR	LR	00 00 33.7
	baz=52,slow=5.1						**CMB**	**Columbia Colle**	**87.36**	**48**	IAmb	IAmb	23 08 53.2		comp=Z,283nm,19.8s,baz=30,slow=39					
NKC	**Novy Kostel**	**84.35**	**325**	*e*P	**P**	**23 08 36.9 +0.6**		comp=Z,6.0nm,0.8s						**TORD**	**Torodi Ar. Bea**	**115.05**	**302**	PKP	**PKiKP**	**23 14 44.3 -1.7**
NKC					MLR	MLR	**DAVA**	**Damuels**	**87.52**	**324**	*i* PcP	**P**	**23 08 53.8 +1.5**		comp=Z,1.2nm,0.8s,baz=16,slow=3.1,SNR=4.7					
	comp=Z,2µm,17.5s							comp=Z,8.6nm,0.6s						TORD				PP	**PP**	**23 15 44.1 -1.0**
NKC	**Novy Kostel**	**84.35**	**325**	*e*P	**P**	**23 08 36.9 +0.6**	**LRM**	**Limekiln Ridge**	**87.56**	**38**	P	**P**	**23 08 51.5 -1.1**		comp=Z,1.1nm,0.8s,baz=51,slow=4.6,SNR=3.8					
NKC					AMS	AMS	**YERR**	**Yerington**	**87.58**	**47**	IAmb	IAmb	23 09 13.4							
	comp=Z,2µm,17.5s							comp=Z,3.9nm,0.6s												
WERN	**Wernitzgruen**	**84.35**	**325**	*e*P	**P**	**23 08 37.1 +0.7**	**SGRT**	**San Giovanni R**	**87.58**	**317**	P	**P**	**23 08 52.3 -0.3**							
	comp=Z,15nm,1.0s,baz=52,slow=5.2						SGRT					IAmb	IAmb	23 09 06.3						
WERN				*e*pP	**sP**	**23 08 49.5 0.0**		comp=Z,13nm,0.9s												
	baz=52,slow=5.1						**EGMT**	**Eagleton**	**

HLNC	**Highland**	**0.18**	**97**		Pg	23 08 38.0 +0.3
RSBC	**Riverside Bore**	**0.19**	**153**		Pg	23 08 38.0 +0.2
RSBC					Sg	23 08 40.6 -0.1
RSBC	**Riverside Bore**	**0.19**	**153**		Pg	23 08 38.1 +0.2
RSBC					Sg	23 08 40.7 0.0
BFSC	**Mount Baldy Ra**	**0.21**	**297**		Pb	23 08 41.1 +1.5
SSK	**Sunset Peak**	**0.23**	**288**		Pg	23 08 38.5 -0.1
CHNC	**Chino**	**0.25**	**235**		Sg	23 08 43.0 +0.5
SVD	**Seven Oaks Dam**	**0.28**	**97**		Pg	23 08 39.9 +0.4
CFT	**Crafton Hills**	**0.29**	**112**		Pg	23 08 40.0 +0.4
PSRC	**Puddingstone R**	**0.32**	**261**		Sg	23 08 44.9 +0.5
SME	**Santa Rosa Min**	**0.33**	**169**		Sg	23 08 44.7 +0.1
PEC	**Perris**	**0.34**	**138**		Pg	23 08 40.5 +0.1
PEC					Sg	23 08 45.3 +0.2
BTL	**Butler Peak**	**0.37**	**72**		Pg	23 08 41.6 +0.3
XTL	**Crystal Lake,**	**0.39**	**293**		Pg	23 08 41.2 -0.3
VTV	**Victorville**	**0.43**	**12**		Pg	23 08 42.0 -0.2
VTV					Sg	23 08 48.0 +0.1
BBRC	**Big Bear Solar**	**0.44**	**74**		Pg	23 08 42.7 +0.2
BBRC					Sg	23 08 48.6 +0.2
MWC	**Mount Wilson**	**0.53**	**279**	Pg	Pg	23 08 43.9 -0.1
MWC				Sg	Sg	23 08 51.2 +0.2
CHFC	**Chilao Flat St**	**0.53**	**291**		Pg	23 08 43.5 -0.5
CHFC					Sg	23 08 51.1 0.0
SIL	**Silver Peak**	**0.54**	**68**		Pg	23 08 44.6 +0.3
SIL					Sg	23 08 52.1 +0.6
HMTC	**Hemet**	**0.56**	**140**		Pg	23 08 44.3 -0.4
HMTC					Sg	23 08 51.8 -0.3
MURC	**Murrieta**	**0.58**	**160**		Pg	23 08 44.7 -0.2
MURC					Sg	23 08 52.3 -0.3
GVRC	**Garvey Reservo**	**0.58**	**261**		Pg	23 08 45.3 +0.3
DGR	**Domenigoni Val**	**0.60**	**144**		Sg	23 08 53.1 -0.3
BACC	**Bachelor Mtn.**	**0.62**	**148**		Pg	23 08 45.3 -0.5
POB	**Polly Butte**	**0.62**	**137**		Pg	23 08 45.6 -0.2
LRRC	**Littlerock Res**	**0.62**	**308**		Pg	23 08 45.6 -0.2
PASC	**Pasadena Art C**	**0.62**	**273**	Pg	Pg	23 08 45.6 -0.2
PASC				Sg	Sg	23 08 54.2 +0.1
SBB	**Saddle Back Bu**	**0.63**	**329**		Pg	23 08 45.6 -0.4
SBB					Sg	23 08 53.8 -0.6
HYS	**Haystack Butte**	**0.73**	**351**		Pg	23 08 47.5 -0.4
DECC	**Green Verdugo**	**0.76**	**279**		Pg	23 08 47.9 -0.4
DECC					Sg	23 08 58.3 +0.1
CRY	**Cary Ranch**	**0.82**	**135**		Pg	23 08 49.1 -0.4
CRY					Sg	23 08 59.7 -0.5
IR2C	**Iron Canyon**	**0.84**	**287**		Pg	23 08 49.1 -0.7
BLAC	**Blackrock camp**	**0.87**	**95**		Pg	23 08 50.5 0.0
EDW2	**Edwards Air Fo**	**0.87**	**328**		Pg	23 08 50.0 -0.5
GTM	**Goat Mountain**	**0.91**	**80**		Pg	23 08 51.0 -0.1
BZNA	**Buzz No.'s Pla**	**0.91**	**135**		Pg	23 08 51.0 -0.3
FRD	**Ford Ranch, An**	**0.95**	**133**		Pg	23 08 51.7 -0.2
PFO	**Pinyon Flats O**	**0.97**	**123**		Pg	23 08 52.3 -0.1
PFO					Sg	23 09 04.4 -0.6
PFO	**Pinyon Flats O**	**0.97**	**123**		Pg	23 08 51.9 -0.4
XPFO	**Pion Flat**	**0.97**	**123**		Pg	23 08 52.3 -0.1
XPFO					Sg	23 09 04.4 -0.7
XPFO	**Pion Flat**	**0.97**	**123**		Pg	23 08 51.8 -0.6
GSC	**Goldstone, Bar**	**1.27**	**24**		Pb	23 08 57.5 -0.1
BAR	**Barrett**	**1.59**	**156**	Pn	Pn	23 09 01.8 +0.1
SNCC	**San Nicolas Is**	**1.96**	**243**	Pn	Pn	23 09 08.0 +1.2
GLA	**Glamis**	**2.43**	**116**	Pn	Pn	23 09 14.4 +1.1
Y12C	**Blythe**	**2.45**	**98**	Pn	Pn	23 09 13.7 +0.2
ESJX	**Sierra Juarez**	**2.47**	**149**		Pb	23 09 17.6 -0.5
PAGB	**Antelope Grade**	**2.81**	**305**	Pn	Pn	23 09 19.9 +1.5

***IDC 16 23:21:28.0**±1.2,**4°32S**×**153°25E**,**h0**km,**mb3.5**/5,*
mb1 3.7**/5,**mb1mx3.6**/28,**mbtmp3.5**/5,**Error ellipse:
s-maj=31.6km s-min=15.4km az=169.0,New Ireland
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.22**	**271**	Pg	Pn	23 21 52.1	-0.1
	508nm,0.3s,baz=151,slow=1.3,SNR=179						
KRVT				Lg	Lg	23 22 06.8	
	193nm,0.3s,baz=317,slow=21,SNR=14						
WRA	**Warramunga Arr**	**24.09**	**228**	P	P	23 26 44.1	-1.4
	1.0nm,0.5s,baz=52,slow=10,SNR=12						
ASAR	**Alice Springs**	**26.80**	**222**	P	P	23 27 12.0	+1.9
	0.3nm,0.5s,baz=41,slow=8.6,SNR=3.7						
SONM	**Songino Array**	**66.16**	**327**	P	P	23 32 18.1	+0.6
	0.2nm,0.5s,baz=134,slow=6.2,SNR=2.2						
MKAR	**Makanchi Array**	**80.26**	**319**	P	P	23 33 40.9	+0.2
	0.3nm,0.6s,baz=96,slow=7.0,SNR=7.1						
ILAR	**Eielson Array**	**81.55**	**22**	P	P	23 33 47.0	-0.3
	0.2nm,0.5s,baz=244,slow=4.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**150.57**	**289**	PKPbc	PKPbc	23 41 22.1	-0.9
	1.8nm,0.7s,baz=68,slow=2.6,SNR=11						

*SJA **16** 23:23:55.7±0.5,23°72S×66°64W,h229km±5km,ML2.3,*
MW3.2

*GUC **16** 23:23:58.8±0.4,23°48S×67°36W,h267km±6km,ML3.7*

***ISC 16 23:23:56.6**±2.8,**23°74S**±0.06×**66°72W**±0.06,*
h219**km,24nm,**n21**,σ1§**07**/35,**3C,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.48**	**132**	*i* P	**Pn**	**23 24 32.4**	**+0.4**
SLA				*e*S	**S**	**23 24 59.3**	**-0.2**
AZAP	**Zapla**	**1.59**	**108**	↑*i* P	**Pn**	**23 24 32.7**	**-0.3**
AZAP				*e*S	**S**	**23 25 00.9**	**-0.4**
YJA	**Yavi**	**1.91**	**36**	*i* P	**Pn**	**23 24 36.5**	**+0.2**
YJA				*e*S	**S**	**23 25 06.7**	**-0.2**
LVC	**Limon Verde**	**2.31**	**299**	*i* P	**Pn**	**23 24 40.9**	**+0.8**
LVC				*e*S	**S**	**23 25 14.2**	**+0.3**
PB15	**IPOC Station P**	**2.58**	**281**	*i* P	**Pn**	**23 24 44.6**	**+1.7**
PB15				*i* S	**S**	**23 25 19.2**	**+0.5**
PB15	**IPOC Station P**	**2.58**	**281**	*i* P	**Pn**	**23 24 43.8**	**+0.9**
PB06	**IPOC Station P**	**2.82**	**291**	*e*P	**Pn**	**23 24 46.4**	**+1.0**
PB06				*i* S	**S**	**23 25 22.6**	**-0.7**
PB06				IAML		23 25 24.7	
	comp=E,217nm,0.2s						
PB06	**IPOC Station P**	**2.82**	**291**	*i* P	**Pn**	**23 24 46.2**	**+0.8**
PB06				IAML		23 25 26.0	
	comp=Z,61nm,0.1s						
GO02	**Mina Guanaco**	**2.98**	**241**	↑*i*P	**Pn**	**23 24 48.4**	**+1.1**
GO02				*i* S	**S**	**23 25 27.0**	**+0.3**
GO02				IAML		23 25 29.1	
	comp=E,129nm,0.3s						
PB09	**IPOC Station P**	**3.03**	**309**	*e*P	**Pn**	**23 24 49.2**	**+1.4**
PB09				*i* S	**S**	**23 25 27.7**	**+0.1**
PB09				IAML		23 25 30.3	
	comp=N,64nm,0.4s						
PB09	**IPOC Station P**	**3.03**	**309**	*i* P	**Pn**	**23 24 48.8**	**+1.0**
PB09				IAML		23 25 32.6	
	comp=Z,40nm,0.2s						
PB03	**IPOC Station P**	**3.27**	**300**	↑*i*P	**Pn**	**23 24 51.0**	**+0.4**
PB03				*i* S	**S**	**23 25 30.6**	**-2.0**
PB03				IAML		23 25 32.1	
	comp=E,116nm,0.4s						
PB05	**IPOC Station P**	**3.32**	**285**	↑*e*P	**Pn**	**23 24 51.7**	**+0.5**
PB05				*i* S	**S**	**23 25 31.6**	**-2.0**
PB05				IAML		23 25 35.0	
	comp=E,70nm,0.2s						
PB05	**IPOC Station P**	**3.32**	**285**	*i* P	**Pn**	**23 24 51.8**	**+0.7**
PB05				IAML		23 25 36.3	
	comp=Z,28nm,0.2s						
PB04	**IPOC Station P**	**3.46**	**293**	*e*P	**Pn**	**23 24 53.1**	**+0.3**
PB04				*i* S	**S**	**23 25 34.7**	**-1.9**
PB04				IAML		23 25 40.0	
	comp=N,134nm,0.7s						
PB04	**IPOC Station P**	**3.46**	**293**	*i* P	**Pn**	**23 24 53.5**	**+0.7**
PB14	**IPOC Station P**	**3.48**	**255**	*i* P	**Pn**	**23 24 53.7**	**+0.6**
PB14				*i* S	**S**	**23 25 36.0**	**-1.3**
PB14	**IPOC Station P**	**3.48**	**255**	*i* P	**Pn**	**23 24 53.9**	**+0.8**
PB14				IAML		23 25 40.9	
	comp=Z,30nm,0.2s						
PB10	**IPOC Station P**	**3.52**	**273**	*i* P	**Pn**	**23 24 54.1**	**+0.7**
PB10				*i* S	**S**	**23 25 35.5**	**-2.3**
PB10				IAML		23 25 40.2	
	comp=E,39nm,0.2s						
PB10	**IPOC Station P**	**3.52**	**273**	*i* P	**Pn**	**23 24 54.3**	**+0.9**
PB10				IAML		23 25 43.0	
	comp=Z,26nm,1.4s						
PB08	**IPOC Station P**	**4.24**	**327**	*e*P	**Pn**	**23 25 03.6**	**+1.1**
PB08				*i* S	**S**	**23 25 53.4**	**-0.7**
PB08				IAML		23 25 55.0	
	comp=E,29nm,0.2s						

*NEIC **16** 23:32:04.9±2.9, 16°36S±0°07×70°37W±0°08,h168km±8km,*
mb4.1/14,Error ellipse: s-maj=11.1km s-min=10.0km
az=82.0

*IDC **16** 23:32:06.8±1.2, 16°32S×70°25W,h172km±11km,mb3.3/8,*
mb1 3.6/12,mb1mx3.4/30,mbtmp3.9/12,Error ellipse:
s-maj=19.3km s-min=15.1km az=28.0

***ISC 16 23:32:07.0**±0.5,**16°42S**±0.05×**70°29W**±0.06,**h200**km,**n37**,*
*σ3§**11**/42,**mb3.9**/12,**Southern Peru***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.08**	**87**	P	**Pn**	**23 32 45.2**	**-1.8**
	19nm,0.3s,baz=321,slow=8.2,SNR=260						
LPAZ				S	**Sn**	**23 33 13.8**	**-4.2**
	11nm,0.3s,baz=358,slow=25,SNR=24						
LPAZ	**La Paz**	**2.08**	**87**		**Pn**	**23 32 44.9**	**-2.1**
MNMC	**Minye Minye**	**2.77**	**166**		**Pn**	**23 32 52.5**	**-1.8**
MNMC					**Sn**	**23 33 27.6**	**-3.7**
PB11	**IPOC Station P**	**3.38**	**170**		**Pn**	**23 32 59.4**	**-1.9**
PB11					**Sn**	**23 33 39.2**	**-4.7**
GO01	**Chusmiza**	**3.39**	**162**	Pn	**Pn**	**23 33 01.2**	**-0.6**
PB04	**IPOC Station P**	**5.88**	**179**	Pn	**Pn**	**23 33 31.3**	**-1.5**
PB04					**Sn**	**23 34 35.4**	**-5.5**
LVC	**Limon Verde**	**6.29**	**168**	P	**Pn**	**23 33 37.9**	**-0.5**
	11nm,0.3s,baz=355,slow=8.6,SNR=76						
LVC				S	**Sn**	**23 34 46.0**	**-4.7**
	7.6nm,0.3s,baz=196,slow=20,SNR=30						
LVC	**Limon Verde**	**6.29**	**168**		**Pn**	**23 33 37.8**	**-0.6**
PB10	**IPOC Station P**	**7.06**	**182**	Pn	**Pn**	**23 33 46.4**	**-1.6**
PB10					Sn	23 35 01.4	-6.8
NNA	**Nana**	**7.73**	**304**	P	**Pn**	**23 33 55.0**	**-1.8**
	3.9nm,0.3s,baz=140,slow=12,SNR=7.9						
NNA				S	**Sn**	**23 35 17.8**	**-6.4**
	3.7nm,0.3s,baz=31,slow=20,SNR=7.3						
NNA	**Nana**	**7.73**	**304**		**Pn**	**23 33 53.2**	**-3.6**
GO02	**Mina Guanaco**	**8.72**	**176**	Pn	**Pn**	**23 34 08.9**	**-1.0**
GO02					Sn	**23 35 45.5**	**-2.6**
SIV	**San Ignacio**	**8.87**	**89**	P	**Pn**	**23 34 09.2**	**-2.5**
	0.7nm,0.3s,baz=282,slow=9.1,SNR=11						
SIV				S	**Sn**	**23 35 44.6**	**-6.6**
	0.1nm,0.3s,baz=41,slow=2.0,SNR=4.2						
SAML	**Samuel**	**10.16**	**44**	Pn	**Pn**	**23 34 26.1**	**-2.3**
GO03	**Copiap**	**11.12**	**180**	Pn	**Pn**	**23 34 39.1**	**-1.6**
OTAV	**Otavalo**	**18.41**	**333**	P	**P**	**23 36 06.3**	**-1.5**
BDFB	**Brasilia**	**21.43**	**91**	P	**P**	**23 36 39.7**	**0.0**
	2.3nm,0.4s,baz=270,slow=14,SNR=6.1						
BDFB	**Brasilia**	**21.43**	**91**	IAmb	IAmb	23 36 41.6	
	comp=Z,6.1nm,1.1s						
RUSC	**La Rusia**	**22.34**	**353**	P	**P**	**23 36 49.1**	**0.0**
PLCA	**Paso Flores**	**24.23**	**180**	P	**P**	**23 37 09.7**	**+4.2**
	comp=Z,2.2nm,0.9s,baz=19,slow=12,SNR=5.0						
PLCA	**Paso Flores**	**24.23**	**180**	P	**P**	**23 37 08.7**	**+3.2**
PLCA				IAmb	IAmb	23 37 13.1	
	comp=Z,4.5nm,1.1s						
AGPR	**Aguadilla, PR**	**34.81**	**5**	P	**P**	**23 38 36.1**	**-2.8**
RCBR	**Riachuelo**	**35.29**	**77**	P	**P**	**23 38 44.8**	**+1.6**
RCBR				IAmb	IAmb	23 38 50.9	
	comp=Z,14nm,1.1s						
TXAR	**Lajitas Array**	**55.74**	**324**	P	**P**	**23 41 25.6**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=147,slow=5.2,SNR=4.2						
SDMD	**Soldier's Deli**	**55.88**	**354**	P	**P**	**23 41 22.5**	**-1.3**
SDMD				IAmb	IAmb	23 41 33.5	
	comp=Z,4.2nm,1.2s						
FVM	**French Village**	**57.33**	**341**	P	**P**	**23 41 35.5**	**+1.4**
SNAA	**Sanae**	**67.48**	**162**	P	**P**	**23 42 45.8**	**+4.8**
SNAA				IAmb	IAmb	23 42 46.1	
	comp=Z,4.8nm,1.1s						
SHPR	**Sheep Range**	**67.57**	**322**	P	**P**	**23 42 43.5**	**+1.3**
DBIC	**Dimbokro**	**68.66**	**76**	P	**P**	**23 42 50.6**	**+1.3**
DBIC				IAmb	IAmb	23 42 59.2	
	comp=Z,3.1nm,1.1s						
PDAR	**Pinedale Array**	**69.08**	**330**	P	**P**	**23 42 54.8**	**+3.3**
	comp=Z,0.2nm,0.4s,baz=122,slow=7.8,SNR=3.0						
PDAR	**Pinedale Array**	**69.08**	**330**	P	**P**	**23 42 47.8**	**-3.7**
ULM	**Lac du Bonnet**	**70.11**	**343**	P	**P**	**23 42 59.3**	**+2.0**
	comp=Z,2.2nm,0.5s,baz=142,slow=5.2,SNR=9.0						
ULM	**Lac du Bonnet**	**70.11**	**343**	IAmb	IAmb	23 43 00.1	
	comp=Z,3.2nm,0.6s						
NVAR	**Mina Array Bea**	**70.71**	**322**	P	**P**	**23 43 03.9**	**+2.4**
	comp=Z,0.1nm,0.3s,baz=127,slow=6.9,SNR=1.0						
TORD	**Torodi Ar. Bea**	**76.96**	**72**	P	**P**	**23 43 40.9**	**+2.9**
	comp=Z,1.2nm,0.6s,baz=253,slow=6.0,SNR=13						
TORD	**Torodi Ar. Bea**	**76.96**	**72**	IAmb	IAmb	23 43 41.3	
	comp=Z,0.8nm,0.7s						
YKA	**Yellowknife Ar**	**85.99**	**341**	P	**P**	**23 44 27.4**	**+3.2**
	comp=Z,0.7nm,0.8s,baz=136,slow=4.6,SNR=7.0						

*IDC **17** 00:00:11.9±1.6,6°82S×147°21E,h0km,mb3.5/3,*
mb1 3.8/5,mb1mx3.6/23,mbtmp3.6/5,ML3.3/1,Error
ellipse: s-maj=59.5km s-min=23.1km az=98.0

*NEIC **17** 00:00:19.4±2.8, 7°00S±0°06×147°0E±0°1,h80km±9km,*
mb4.4/8,Error ellipse: s-maj=18.6km s-min=6.4km
az=112.0

***ISC 17 00:00:15.7**±0.9,**7°00S**±0°08×**147°2E**±0°1,**h33**km,**n20**,*
*σ1§**21**/20,**mb4.3**/5,**Eastern New Guinea region***

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.39**	**181**	Pn	**Pb**	**00 00 56.4**	**-1.7**
	9.3nm,0.3s,baz=355,slow=11,SNR=9.1						
PMG				Sn	**Sb**	**00 01 28.4**	**+1.3**
	17nm,0.3s,baz=328,slow=23,SNR=6.5						
PMG	**Port Moresby**	**2.39**	**181**		**Pb**	**00 00 56.7**	**-1.3**
COEN	**Coen**	**7.96**	**209**	Pn	**Pn**	**00 02 10.8**	**+1.7**
MTN	**Manton Dam**	**16.84**	**249**		**Pn**	**00 04 08.5**	**-0.6**
MTN				IAmb	IAmb	00 04 26.6	
	comp=Z,18nm,1.1s						
WRA	**Warramunga Arr**	**17.91**	**223**	P	**P**	**00 04 23.3**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=51,slow=12,SNR=5.2						
WRA	**Warramunga Arr**	**17.91**	**223**	P	**Pn**	**00 04 21.2**	**-1.2**
EIDS	**Eidsvold**	**18.64**	**169**	P	**Pn**	**00 04 32.2**	**+1.0**
KNRA	**Kununurra**	**20.00**	**243**	P	**P**	**00 04 44.8**	**-0.8**
KNRA				IAmb	IAmb	00 04 51.2	
	comp=Z,27nm,1.1s						
ASAR	**Alice Springs**	**20.91**	**216**	P	**P**	**00 04 56.6**	**+1.0**
	comp=Z,2.1nm,0.5s,baz=34,slow=13,SNR=5.7						
ASAR	**Alice Springs**	**20.91**	**216**	P	**P**	**00 04 55.6**	**0.0**
DZM	**Mont Dzumac**	**23.87**	**131**	P	**P**	**00 05 26.4**	**0.0**
DZM				IAmb	IAmb	00 05 36.9	
	comp=Z,7.8nm,0.8s						
BBOO	**Buckleboo**	**27.68**	**200**	P	**P**	**00 05 59.3**	**-1.5**
BBOO				IAmb	IAmb	00 06 17.3	
	comp=Z,11nm,1.1s						
FORT	**Forrest**	**29.68**	**215**	P	P	00 06 13.3	-5.3
TUWZ	**Tuamarina**	**41.73**	**149**	P	**P**	**00 08 02.2**	**+0.7**
ODZ	**Otahua Downs**	**43.03**	**156**	P	**P**	**00 08 11.2**	**-1.0**
MKAR	**Makanchi Array**	**78.38**	**321**	P	**P**	**00 12 14.8**	**+1.8**
	comp=Z,0.1nm,0.4s,baz=104,slow=4.6,SNR=2.9						
MKAR	**Makanchi Array**	**78.38**	**321**	P	**P**	**00 12 11.8**	**-1.2**
ILAR	**Eielson Array**	**86.32**	**23**	P	**P**	**00 12 53.2**	**-0.8**
	comp=Z,0.6nm,1.1s,baz=245,slow=5.9,SNR=2.4						
WHY	**Whitehorse**	**90.18**	**29**	P	**P**	**00 13 13.2**	**+0.6**
WHY				IAmb	IAmb	00 13 14.4	
	comp=Z,5.2nm,0.9s						
TORD	**Torodi Ar. Bea**	**145.51**	**283**	PKPbc	**PKPab**	**00 19 53.1**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=92,slow=4.7,SNR=7.6						

*IDC **17** 00:16:22.5±0.6,0°71N×29°55W,h0km,mb4.1/19,*
mb1 4.3/20,mb1mx4.0/58,mbtmp4.1/20,ML4.5/1,MS3.7/17,
Ms1 3.7/17,ms1mx3.5/31,Error ellipse: s-maj=24.4km
s-min=12.3km az=150.0

*NEIC **17** 00:16:23.7±1.2, 0°7N±0°1×29°58W±0°07,h10km±1km,*
mb4.5/14,Error ellipse: s-maj=25.1km s-min=3.9km
az=151.0

***ISC 17 00:16:24.7**±0.5,**0°7N**±0°1×**29°60W**±0°09,**h19**km,**n53**,*
*σ1§**67**/38,**mb4.2**/25,**MS3.6**/16,**Central Mid-Atlantic***
Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**9.00**	**224**	Pn	**Pn**	**00 18 34.4**	**+0.5**
	5.3nm,0.3s,baz=18,slow=15,SNR=26						
RCBR				Sn	**Sn**	**00 20 08.1**	**-6.7**
	2.4nm,0.3s,baz=320,slow=19,SNR=3.7						
RCBR				LR	LR	00 21 26.6	
	comp=Z,759nm,18.6s,baz=24,slow=34						
RCBR	**Riachuelo**	**9.00**	**224**		**Pn**	**00 18 34.3**	**+0.4**
SACV	**Santiago Islan**	**15.41**	**22**	Pn	**Pn**	**00 19 58.7**	**-2.6**
SACV				IAmb	IAmb	00 20 02.3	
	comp=Z,47nm,0.8s						
H10N3	**ASCENSION HYDR**	**17.25**	**120**	T	T	00 38 12.7	
	baz=298,slow=75,SNR=2102						
H10N2	**ASCENSION HYDR**	**17.26**	**119**	T	T	00 38 11.6	
	baz=298,slow=75,SNR=3049						
H10N1	**ASCENSION HYDR**	**17.27**	**120**	T	T	00 38 12.8	
	baz=298,slow=75,SNR=3002						
BDFB	**Brasilia**	**24.35**	**228**	P	**P**	**00 21 43.1**	**+1.2**
	comp=Z,2.5nm,0.5s,baz=54,slow=13,SNR=4.2						
BDFB				LR	LR	00 30 26.7	
	comp=Z,309nm,18.7s,baz=36,slow=35						
BDFB	**Brasilia**	**24.35**	**228**	P	**P**	**00 21 42.3**	**+0.4**
LIC	**Lamto**	**25.13**	**77**	*e*P	**P**	**00 21 48.8**	**-0.1**
	comp=Z,54nm,1.2s						
TIC	**Toumodi**	**25.23**	**76**	*e*P	**P**	**00 21 49.3**	**-0.5**
	comp=Z,0.7nm,0.2s						
DBIC	**Dimbokro**	**25.39**	**76**	P	**P**	**00 21 51.0**	**-0.2**
	comp=Z,23nm,1.0s,baz=261,slow=11,SNR=13						
DBIC				LR	LR	00 30 15.0	
	comp=Z,105nm,18.9s,baz=249,slow=33						
DBIC	**Dimbokro**	**25.39**	**76**	P	**P**	**00 21 51.6**	**+0.4**
KIC	**Kosan Boka**	**25.44**	**77**	*e*P	**P**	**00 21 51.7**	**0.0**
	comp=Z,89nm,1.4s						
TOA0	**Torodi Ar. Sit**	**33.39**	**67**	P	**P**	**00 23 02.4**	**0.0**
TOA0				IAmb	IAmb	00 23 13.1	
	comp=Z,2.4nm,0.9s						
TORD	**Torodi Ar. Bea**	**33.39**	**67**	P	**P**	**00 23 01.0**	**-1.4**
	comp=Z,1.6nm,1.1s,baz=252,slow=9.1,SNR=5.6						
TORD				LR	LR	00 35 03.1	
	comp=Z,86nm,18.9s,baz=160,slow=34						
H05S1	**Guadeloupe/Mar**	**33.78**	**295**	T	T	00 58 30.0	
	SNR=69						
H05N1	**Guadeloupe/Mar**	**34.70**	**298**	T	T	00 59 32.6	
	SNR=17						
SAML	**Samuel**	**34.79**	**253**	P	**P**	**00 23 15.1**	**+0.5**
SAML				IAmb	IAmb	00 23 18.8	
	comp=Z,5.4nm,1.1s						
SIV	**San Ignacio**	**35.20**	**241**	P	**P**	**00 23 18.6**	**+0.5**
	comp=Z,3.0nm,0.9s,baz=92,slow=10,SNR=12						
CPUP	**Villa Florida**	**37.88**	**223**	P	**P**	**00 23 42.3**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=78,slow=9.3,SNR=3.3						
CPUP				LR	LR	00 39 09.0	
	comp=Z,409nm,18.6s,baz=74,slow=36						
MDT	**Midelt**	**39.71**	**34**	P	**P**	**00 23 53.6**	**-2.6**
	comp=Z,2.5nm,1.0s,baz=240,slow=8.1,SNR=2.3						
TAM	**Tamanrasset**	**40.61**	**55**	P	**P**	**00 24 05.5**	**+1.6**
H09W1	**TRISTAN DA CUN**	**40.82**	**159**	T	T	01 07 46.5	
	SNR=9.8						
LPAZ	**La Paz**	**41.58**	**244**	P	**P**	**00 24 14.0**	**+1.6**
	comp=Z,3.1nm,0.8s,baz=7.8,slow=6.6,SNR=8.1						
LPAZ				LR	LR	00 41 28.3	
	comp=Z,109nm,18.6s,baz=80,slow=36						
LPAZ	**La Paz**	**41.58**	**244**	P	**P**	**00 24 13.1**	**+0.6**
LPAZ				IAmb	IAmb	00 24 17.6	
	comp=Z,5.7nm,1.1s						
SDV	**Santo Domingo**	**41.66**	**283**	P	**P**	**00 24 13.4**	**+0.6**
	comp=Z,5.7nm,0.2s,baz=43,slow=2.7,SNR=7.3						
DR12	**Loma Pena Alta**	**42.98**	**297**	P	**P**	**00 24 22.8**	**-0.5**
URIC	**Uribia, Colomb**	**43.48**	**286**	P	**P**	**00 24 27.1**	**-0.1**
ROSC	**El Rosal**	**44.85**	**276**	P	**P**	**00 24 39.5**	**+0.8**
	comp=Z,6.8nm,0.4s,baz=96,slow=23,SNR=2.8						
ROSC				LR	LR	00 42 07.3	
	comp=Z,166nm,20.4s,baz=98,slow=34						
ROSC	**El Rosal**	**44.85**	**276**	IAmb	IAmb	00 24 50.2	
	comp=Z,4.9nm,0.8s						
ESDC	**Sonseca Array**	**45.34**	**28**	P	**P**	**00 24 41.4**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=228,slow=8.3,SNR=4.1						
ESDC	**Sonseca Array**	**45.34**	**28**	IAmb	IAmb	00 24 44.0	
	comp=Z,1.8nm,1.1s						
GO02	**Mina Guanaco**	**46.41**	**234**	P	**P**	**00 24 51.3**	**+0.4**
TSUM	**Tsumeb**	**50.31**	**116**	P	**P**	**00 25 21.1**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=275,slow=7.1,SNR=3.1						
BOSA	**Boshof**	**59.95**	**124**	LR	LR	00 47 55.4	
	comp=Z,46nm,20.3s,baz=286,slow=32						
GERES	**GERESS Array B**	**60.71**	**31**	P	**P**	**00 26 35.6**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=250,slow=6.5,SNR=8.9						
GERES				LR	LR	00 52 15.9	
	comp=Z,38nm,18.1s,baz=271,slow=36						
KHC	**Kasperske Hory**	**60.83**	**31**	*e*P	**P**	**00 26 32.0**	**-3.8**
TKL	**Tuckaleechee C**	**61.11**	**311**	LR	LR	00 47 29.4	
	comp=Z,79nm,19.1s,baz=139,slow=31						
MLR	**Muntele Rosu**

Ms1 2.8/1, ms1mx2.4/24, Error ellipse: s-maj=65.7km s-min=41.3km az=164.0
NEIC 17 00:20:22.4±2.8, 18°.32S±0°.07×168°.8E±0°.1, h124km±4km, mb4.5/12, Error ellipse: s-maj=17.8km s-min=10.7km az=86.0

ISC 17 00:20:20.0±0.9, **18°.28S**±0°.09×**168°.9E**±0°.1, **h100**km, **n25,** σ1§**57**/24, **mb4.5**/12, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.42**	**211**	P	**Pn**	**00 21 26.4**	**+1.6**
	39nm,0.3s,baz=50,slow=18,SNR=259						
DZM				S	**Sn**	**00 22 13.7**	**-1.5**
	63nm,0.3s,baz=323,slow=20,SNR=24						
DZM	**Mont Dzumac**	**4.42**	**211**		**Pn**	**00 21 26.5**	**+1.6**
DZM					**Sn**	**00 22 13.3**	**-1.9**
HNR	**Honiara**	**12.36**	**314**	Pn	**Pn**	**00 23 12.1**	**-0.4**
URZ	**Urewera**	**21.16**	**162**	LR	LR	00 30 31.8	
	comp=Z,26nm,21.5s,baz=220,slow=28						
CTA	**Charters Tower**	**21.46**	**262**	P	**P**	**00 25 02.2**	**+1.8**
	2.9nm,0.5s,baz=96,slow=13,SNR=4.3						
PLWZ	**Palliser**	**23.84**	**168**	P	**P**	**00 25 24.6**	**+0.7**
COEN	**Coen**	**25.07**	**276**	P	**P**	**00 25 32.5**	**-2.8**
COEN				IAmb	IAmb	00 25 49.2	
	comp=Z,7.3nm,1.1s						
STKA	**Stephens Creek**	**28.09**	**236**	P	**P**	**00 26 04.2**	**+1.9**
	comp=Z,5.5nm,0.6s,baz=66,slow=8.3,SNR=18						
STKA	**Stephens Creek**	**28.09**	**236**	P	**P**	**00 26 04.2**	**+1.9**
TOO	**Toolangi**	**28.09**	**222**	P	**P**	**00 26 00.1**	**-2.2**
WRA	**Warramunga Arr**	**32.66**	**261**	P	**P**	**00 26 42.4**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=86,slow=8.6,SNR=13						
WRA	**Warramunga Arr**	**32.66**	**261**	IAmb	IAmb	00 26 42.9	
	comp=Z,0.2nm,0.9s						
BBOO	**Buckleboo**	**32.81**	**237**	P	**P**	**00 26 45.1**	**+1.1**
BBOO				IAmb	IAmb	00 26 46.1	
	comp=Z,11nm,0.8s						
AS31	**Alice Springs**	**33.05**	**255**	P	**P**	**00 26 46.7**	**+0.5**
AS31				IAmb	IAmb	00 26 47.3	
	comp=Z,4.8nm,0.4s						
ASAR	**Alice Springs**	**33.05**	**255**	P	**P**	**00 26 46.7**	**+0.4**
	comp=Z,8.2nm,0.5s,baz=83,slow=8.7,SNR=90						
KNRA	**Kununurra**	**38.42**	**268**	P	**P**	**00 27 32.3**	**+0.2**
FORT	**Forrest**	**38.97**	**243**	P	**P**	**00 27 36.0**	**-0.5**
FAKI	**Fak Fak**	**39.00**	**289**	P	**P**	**00 27 35.9**	**-1.1**
FAKI				IAmb	IAmb	00 27 40.8	
	comp=Z,18nm,0.9s						
FITZ	**Fitzroy Crossi**	**41.02**	**263**	P	**P**	**00 27 54.9**	**+1.2**
	comp=Z,5.8nm,0.6s,baz=96,slow=7.5,SNR=16						
FITZ	**Fitzroy Crossi**	**41.02**	**263**	IAmb	IAmb	00 28 08.9	
	comp=Z,3.1nm,0.8s						
MORW	**Morawa**	**49.23**	**247**	P	**P**	**00 28 58.1**	**-0.4**
MORW				IAmb	IAmb	00 29 16.0	
	comp=Z,12nm,1.1s						
OHAK	**Old Harbor**	**81.57**	**20**	P	**P**	**00 32 26.1**	**-0.1**
OHAK				IAmb	IAmb	00 32 43.4	
	comp=Z,11nm,1.0s						
SONM	**Songino Array**	**86.27**	**323**	P	**P**	**00 32 52.9**	**+2.3**
	comp=Z,0.3nm,0.5s,baz=126,slow=5.7,SNR=3.2						
MOBC	**Moresby Island**	**87.44**	**31**	P	**P**	**00 32 54.0**	**-2.0**
ARCES	**ARCESS Array B**	**124.07**	**345**	PKP	**PKPdf**	**00 39 07.5**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=62,slow=2.5,SNR=4.4						

IDC 17 00:26:32.8±1.0, 73°.73N×8°.57E, h0km, mb3.5/4, mb1 3.7/7, mb1mx3.3/52, mbtmp3.6/7, ML2.6/2, MS3.0/3, Ms1 3.0/3, ms1mx2.5/42, Error ellipse: s-maj=21.5km s-min=12.4km az=69.0

ISC 17 00:26:34.1±0.9, **73°.83N**±0°.07×**8°.9E**±0°.1, **h10**km, **n11,** σ1§**27**/13, **mb3.3**/4, **Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPA0	**Spitsbergen Ar**	**4.74**	**19**	*eP*	**Pn**	**00 27 45.0**	**-0.4**
SPA0				*eS*	**Sn**	**00 28 40.2**	**-0.1**
SPA0				IAML		00 28 41.2	
	comp=Z,2.2nm,0.7s						
SPITS	**Spitsbergen Ar**	**4.74**	**19**	Pn	**Pn**	**00 27 45.0**	**-0.4**
	baz=193,slow=12,SNR=131						
SPITS				Sn	**Sn**	**00 28 40.0**	**-0.3**
	baz=205,slow=20,SNR=2.0						
KBS	**Kingsbay**	**5.18**	**7**	*eP*	**Pn**	**00 27 50.1**	**-1.4**
KBS				*eS*	**Sn**	**00 28 49.8**	**-1.4**
KBS				IAML		00 29 05.0	
	comp=Z,4.8nm,0.8s						
JMIC	**Jan Mayen**	**5.97**	**250**	LR	LR	00 29 31.3	
	comp=Z,60nm,18.5s,baz=80,slow=30						
ARCES	**ARCESS Array B**	**6.77**	**121**	Pn	**Pn**	**00 28 12.2**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=322,slow=12,SNR=29						
ARCES				Sn	Sn	00 29 22.1	-8.2
	comp=Z,0.2nm,0.3s,baz=330,slow=22,SNR=2.9						
FINES	**FINESS Array B**	**13.96**	**144**	Pn	**Pn**	**00 29 51.6**	**0.0**
	comp=Z,0.1nm,0.3s,baz=339,slow=15,SNR=4.5						
YKA	**Yellowknife Ar**	**38.88**	**322**	P	**P**	**00 33 59.1**	**+0.2**
	comp=Z,1.0nm,1.0s,baz=13,slow=8.0,SNR=9.2						
YKA				PcP	**PcP**	**00 36 09.9**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=30,slow=2.4,SNR=2.7						
ILAR	**Eielson Array**	**40.73**	**344**	P	**P**	**00 34 16.1**	**+1.8**
	comp=Z,0.6nm,1.1s,baz=360,slow=7.3,SNR=4.3						
MKAR	**Makanchi Array**	**41.21**	**89**	P	**P**	**00 34 20.4**	**+2.0**
	comp=Z,0.3nm,0.8s,baz=325,slow=7.2,SNR=3.4						
MKAR				LR	LR	00 54 16.4	
	comp=Z,14nm,19.6s,baz=303,slow=40						
ULM	**Lac du Bonnet**	**46.35**	**301**	LR	LR	00 54 42.3	
	comp=Z,56nm,18.8s,baz=96,slow=36						
TORD	**Torodi Ar. Bea**	**60.80**	**188**	P	**P**	**00 36 44.3**	**-1.7**
	comp=Z,0.7nm,0.8s,baz=357,slow=6.1,SNR=3.8						

SOME 17 00:43:57.4, 39°.33N×73°.58E, h0km
BJI 17 00:44:02.2±0.0, 39°.63N×73°.24E, h7km, mb3.9/9, ML3.7/4
KRNET 17 00:44:06.8±0.1, 39°.54N×73°.68E, mb4.0
IDC 17 00:44:10.5±6.4, 39°.54N×73°.76E, h30km±41km, mb3.5/9, mb1 3.6/17, mb1mx3.5/56, mbtmp3.7/17, ML3.1/7, MS2.0/1, Ms1 2.0/1, ms1mx1.9/37, Error ellipse: s-maj=38.1km s-min=17.3km az=167.0
NNC 17 00:44:10.9±1.9, 39°.69N×73°.61E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=17.7km s-min=10.9km az=167.0

ISC 17 00:44:06.7±1.6, **39°.56N**±0°.05×**73°.78E**±0°.03, **h2**km±9km, **n71,** σ2§**29**/102, **mb3.7**/11, **38C-14D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.70**	**91**	Pg	Pn	00 44 34.8	-2.7
KSH				Sg	**Sn**	**00 44 53.8**	**-6.1**
KSH				smax	smax		
	comp=N,1μm,0.5s						
KSH				smax	smax		
	comp=E,950nm,0.6s						
ARSB	**Arslanbob**	**1.86**	**341**	⇑*iP*	**Pb**	**00 44 41.4**	**-0.2**
	baz=44						
ARSB				⇑*iS*	**Sg**	**00 45 06.8**	**+0.3**
	baz=44						
FRG	**Fergana**	**1.92**	**308**	P	**Pn**	**00 44 38.7**	**-1.9**
FRG				S	**Sn**	**00 45 00.0**	**-5.4**
ARLS	**Aral**	**2.33**	**10**	⇑*eP*	**Pb**	**00 44 49.6**	**0.0**
	baz=12						
ARLS				⇑*iS*	**Sg**	**00 45 20.5**	**-1.2**
	baz=12						
BTK	**Batken**	**2.33**	**283**	⇓*iP*	**Pn**	**00 44 47.7**	**+1.5**
	baz=84						
BTK				⇓*iS*	**Sb**	**00 45 17.2**	**-1.7**
	baz=84						
NRN	**Naryn**	**2.52**	**42**	⇑*iP*	**Pn**	**00 44 51.7**	**+2.6**
	baz=42						
NRN				⇑*iS*	**Sb**	**00 45 24.7**	**+0.1**
	baz=42						
AML	**Almayashu**	**2.57**	**359**	⇓*iP*	**Pb**	**00 44 52.3**	**-1.4**
	baz=0.0						
AML				⇓*iS*	**Sb**	**00 45 25.8**	**-0.1**
	baz=0.0						
AML	**Almayashu**	**2.57**	**359**	P	**Pb**	**00 44 52.6**	**-1.1**
	SNR=63						
ARK	**Arkit**	**2.62**	**329**	⇑*iP*	**Pn**	**00 44 52.2**	**+1.9**
	baz=31						
ARK				⇑*iS*	**Sb**	**00 45 25.8**	**-1.5**
	baz=31						
UCH	**Uchtor**	**2.72**	**12**	⇑*iP*	**Pn**	**00 44 54.5**	**+2.6**
	baz=13						
UCH				⇑*iS*	**Sb**	**00 45 29.5**	**-0.9**
	baz=13						
UCH	**Uchtor**	**2.72**	**12**	P	**Pb**	**00 44 55.6**	**-0.8**
	SNR=62						
KZA	**Kyzart**	**2.75**	**24**	⇑*iP*	**Pb**	**00 44 55.6**	**-1.3**
	baz=25						
KZA				⇑*iS*	**Sb**	**00 45 30.4**	**-0.8**
	baz=25						
KZA	**Kyzart**	**2.75**	**24**	P	**Pb**	**00 44 55.9**	**-0.9**
	SNR=32						
EKS2	**Erkin-Say**	**3.10**	**0**	⇑*eP*	**Pn**	**00 44 59.6**	**+2.9**
	baz=1.0						
EKS2				⇑*iS*	**Sb**	**00 45 37.6**	**-3.3**
	baz=1.0						
EKS2	**Erkin-Say**	**3.10**	**0**	P	**Pb**	**00 45 00.3**	**-2.3**
	SNR=16						
AAK	**Ala-Archa**	**3.12**	**10**	Pn	**Pb**	**00 45 01.1**	**-1.9**
	11nm,0.3s,baz=158,slow=8.5,SNR=138						
AAK				Lg	Lg	00 45 47.5	
	16nm,0.3s,baz=125,slow=24,SNR=16						
AAK				LR	LR	00 45 50.0	
	comp=Z,22nm,19.4s,baz=176,slow=32						
AAK	**Ala-Archa**	**3.12**	**10**	⇑*iP*	**Pn**	**00 44 59.8**	**+2.7**
	baz=11						
AAK				⇑*iS*	**Sb**	**00 45 38.7**	**-2.9**
	baz=11						
AAK	**Ala-Archa**	**3.12**	**10**	P	**Pb**	**00 45 01.3**	**-1.7**
	SNR=29						
AAK	**Ala-Archa**	**3.12**	**10**	⇓Pn	**Pb**	**00 45 00.8**	**-2.2**
	14nm,0.4s						
AAK				⇓Pg	**Pg**	**00 45 06.2**	**-0.3**
	43nm,0.5s						
AAK				⇑Lg	Lg	00 45 47.2	
	132nm,0.6s						
MRKS	**Merke**	**3.21**	**353**	*eP*	**Pn**	**00 45 01.3**	**+3.1**
	52nm,0.3s						
MRKS				*eS*	**Sg**	**00 45 47.4**	**-2.3**
	212nm,0.5s						
KBK	**Karagaybulak**	**3.21**	**16**	⇑*iP*	**Pn**	**00 45 01.6**	**+3.2**
	baz=17						
KBK				⇑*iS*	**Sb**	**00 45 41.0**	**-3.3**
	baz=17						
KBK	**Karagaybulak**	**3.21**	**16**	P	**Pb**	**00 45 02.9**	**-1.7**
	SNR=31						
ULHL	**Ulahol**	**3.27**	**34**	⇑*iP*	**Pn**	**00 45 02.5**	**+3.3**
	baz=35						
ULHL				⇑*iS*	**Sb**	**00 45 43.1**	**-2.8**
	baz=35						
ULHL	**Ulahol**	**3.27**	**34**	P	**Pb**	**00 45 08.0**	**+2.5**
	SNR=9.6						
FRU1	**Bishkek**	**3.31**	**11**	⇓*iP*	**Pn**	**00 45 02.7**	**+3.1**
	baz=12						
FRU1				⇓*iS*	**Sb**	**00 45 43.6**	**-3.3**
	baz=12						
BOOM	**Boomskoye usch**	**3.35**	**29**	⇑*iP*	**Pn**	**00 45 03.7**	**+3.4**
	baz=29						
BOOM				⇑*iS*	**Sb**	**00 45 45.4**	**-2.8**
	baz=29						
CHMS	**Chumysh**	**3.51**	**12**	⇓*iP*	**Pn**	**00 45 05.4**	**+3.0**
	baz=13						
CHMS				⇓*iS*	**Sn**	**00 45 47.3**	**+2.8**
	baz=13						
CHMS	**Chumysh**	**3.51**	**12**	P	**Pn**	**00 45 03.0**	**+0.6**
	SNR=14						
TKM2	**Tokmak 2**	**3.62**	**22**	⇑*iP*	**Pn**	**00 45 07.4**	**+3.3**
	baz=23						
TKM2				⇑*iS*	**Sn**	**00 45 51.4**	**+3.8**
	baz=23						
TKM2	**Tokmak 2**	**3.62**	**22**	P	**Pn**	**00 45 08.1**	**+4.0**
	SNR=6.9						
TKM2	**Tokmak 2**	**3.62**	**22**	⇑Pn	**Pn**	**00 45 07.8**	**+3.7**
	13nm,0.7s						
TKM2				⇑Pg	**Pg**	**00 45 17.6**	**+1.5**
	39nm,1.1s						
TKM2				⇑Lg	Lg	00 46 01.9	
	40nm,0.8s						
USP	**Ospenovka**	**3.74**	**8**	⇑*iP*	**Pn**	**00 45 08.9**	**+3.4**
	baz=9.0						
USP				⇑*iS*	**Sn**	**00 45 53.3**	**+3.1**
	baz=9.0						
USP	**Ospenovka**	**3.74**	**8**	P	**Pn**	**00 45 09.4**	**+3.9**
	SNR=8.4						
IUG	**Iuzhnay**	**3.84**	**313**	*eP*	**Pn**	**00 45 09.6**	**+2.6**
	4.0nm,0.2s						
IUG				*eS*	**Sb**	**00 46 01.5**	**-0.8**
	158nm,0.5s						
KST	**Kastek**	**3.85**	**25**	*eP*	**Pb**	**00 45 14.9**	**-0.5**
	19nm,0.4s						
KST				*eS*	**Sg**	**00 46 10.9**	**+0.6**
	119nm,0.8s						
IZV	**Izvestkoviy**	**4.07**	**31**	*eP*	**Pb**	**00 45 19.1**	**-0.2**
	34nm,0.5s						
IZV				*eS*	**Sg**	**00 46 17.5**	**-0.1**
	81nm,0.5s						
MTBS	**Maitube**	**4.08**	**28**	*eP*	**Pb**	**00 45 19.0**	**-0.4**
	29nm,0.3s						
MTBS				*eS*	**Sg**	**00 46 17.9**	**0.0**
	50nm,0.6s						
CHM	**Chimkent**	**4.19**	**312**	*eP*	**Pn**	**00 45 16.3**	**+4.6**
	30nm,0.1s						
CHM				*eS*	**Sb**	**00 46 12.7**	**+0.4**
	344nm,0.4s						
TNSS	**Tian-Shan**	**4.21**	**34**	*eP*	**Pb**	**00 45 22.3**	**+0.5**
	13nm,0.3s						
TNSS				*eS*	**Sg**	**00 46 23.3**	**+1.3**
	70nm,0.5s						
KK31	**Karatay Array**	**4.31**	**326**	Pn	**Pn**	**00 45 15.3**	**+2.1**
	5.3nm,0.3s,baz=130,slow=13,SNR=74						
KK31				⇓Pg	**Pb**	**00 45 26.1**	**+2.9**
	7.1nm,0.3s,baz=154,slow=15,SNR=10						
KK31				⇑Lg	Lg	00 46 23.0	
	24nm,0.5s,baz=138,slow=24,SNR=4.9						
MDOK	**Medeo**	**4.36**	**33**	*eP*	**Pb**	**00 45 24.4**	**+0.2**
	29nm,0.5s						
MDOK				*eS*	**Sg**	**00 46 27.0**	**+0.3**
	66nm,0.6s						
MDOK	**Medeo**	**4.36**	**33**	⇑Pn	Pn	00 45 19.6	+5.5
	15nm,0.6s						
MDOK				⇑Pg	**Pg**	**00 45 30.5**	**+0.3**
	30nm,0.6s						
MDOK				⇑Lg	Lg	00 46 26.7	
	91nm,0.8s						
KNDC	**Almaty**	**4.37**	**32**	⇑Pg	**Pg**	**00 45 30.1**	**-0.3**
	41nm,0.6s						
KNDC				⇓Lg	Lg	00 46 26.8	
	148nm,0.8s						
KTBS	**Karatobe**	**4.68**	**27**	*eP*	**Pb**	**00 45 29.8**	**+0.2**
	13nm,0.4s						
KTBS				*eS*	**Sg**	**00 46 36.6**	**-0.5**
	110nm,0.6s						
KUU	**Kurty**	**4.73**	**23**	*eP*	**Pb**	**00 45 30.1**	**-0.2**
	19nm,0.5s						
KUU				*eS*	**Sg**	**00 46 37.0**	**-1.6**
	66nm,0.7s						
CHKK	**Chushkaly**	**4.91**	**28**	*eP*	**Pb**	**00 45 33.9**	**+0.3**
	11nm,0.5s						
CHKK				*eS*	**Sg**	**00 46 43.4**	**-1.1**
	53nm,0.4s						
PDGK	**Podgornoye**	**5.71**	**47**	⇓Pn	**Pn**	**00 45 36.2**	**+3.6**
	7.8nm,0.6s						
PDGK				⇑Pg	Pb	00 45 52.6	+5.5
	16nm,0.9s						
PDGK				⇑Lg	Lg	00 47 09.1	
	36nm,1.0s						
MK31	**Makanchi Array**	**9.53**	**38**	Pn	**Pn**	**00 46 27.7**	**+2.7**
	1.3nm,0.7s,baz=219,slow=14,SNR=7.2						
MK31				⇓Lg	Lg	00 49 12.4	
	4.3nm,1.0s,baz=219,slow=29,SNR=3.6						
MKAR	**Makanchi Array**	**9.53**	**38**	Pn	**Pn**	**00 46 27.4**	**+2.4**
	0.1nm,0.3s,baz=221,slow=18,SNR=3.5						
MKAR				Lg	Lg	00 49 12.1	
	0.1nm,0.3s,baz=224,slow=22,SNR=3.1						
WMQ	**Urumqi**	**11.24**	**63**	*eP*	**Pn**	**00 46 50.5**	**+2.1**
KURBB	**Kurchatov Arra**	**11.55**	**15**	Pn	**Pn**	**00 46 51.2**	**-1.4**
	0.0nm,0.3s,baz=203,slow=9.6,SNR=2.7						
KURBB				Lg	Lg	00 50 13.7	
	0.0nm,0.3s,baz=201,slow=29,SNR=4.6						
GEYT	**Alibeck**	**12.34**	**267**	Pn	**Pn**	**00 47 03.9**	**+0.5**
	0.5nm,0.3s,baz=72,slow=14,SNR=3.3						
BVAR	**Borovoye Array**	**13.66**	**351**	Pn	**Pn**	**00 47 20.0**	**-1.4**
	0.4nm,0.3s,baz=165,slow=14,SNR=18						
AB31	**Akbulak array**	**13.82**	**319**	P	**Pn**	**00 47 21.9**	**-1.7**
	0.9nm,0.5s,baz=128,slow=13,SNR=24						
AKTO	**Aktyubinsk**	**15.54**	**320**	Pn	**Pn**	**00 47 45.5**	**-1.3**
	0.3nm,0.3s,baz=117,slow=16,SNR=7.2						
AKTO	**Aktyubinsk**	**15.54**	**320**	⇑P	**Pn**	**00 47 44.9**	**-1.8**
	4.9nm,0.8s						
ZALV	**Zalesovo Beam**	**16.23**	**24**	Pn	**Pn**	**00 47 55.9**	**+0.2**
	0.3nm,0.3s,baz=209,slow=12,SNR=14						
ARU	**Arti**	**19.63**	**334**	P	**P**	**00 48 36.4**	**+0.1**
	0.0nm,0.3s,baz=127,slow=20,SNR=6.3						
GTA	**Gaotai**	**20.08**	**82**	*eP*	**P**	**00 48 44.3**	**+2.7**
GTA				pP	sP	00 48 47.6	+3.6
GTA				sP	pP	00 48 50.5	+7.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GNI	**Garni**	**22.26**	**281**	P	**P**	**00 49 08.9**	**+3.8**
	4.4nm,0.9s,baz=30,slow=12,SNR=3.5						
KBZ	**Khabaz**	**23.38**	**290**	P	**P**	**00 49 21.1**	**+4.5**
	1.1nm,0.8s,baz=75,slow=16,SNR=1.8						
SONM	**Songino Array**	**24.84**	**60**	P	**P**	**00 49 31.9**	**+1.4**
	0.7nm,0.8s,baz=262,slow=10,SNR=5.1						
BRTR	**Keskin Array B**	**30.73**	**283**	P	**P**	**00 50 23.6**	**+0.3**
	0.8nm,0.6s,baz=97,slow=7.0,SNR=5.9						
FINES	**FINESS Array B**	**36.26**	**323**	P	**P**	**00 51 10.9**	**-0.1**
	0.6nm,0.4s,baz=116,slow=8.7,SNR=8.0						
ARCES	**ARCESS Array B**	**39.21**	**335**	P	**P**	**00 51 35.8**	**-0.2**
	2.2nm,0.8s,baz=99,slow=7.6,SNR=9.7						
NOA	**NORSAR Array B**	**43.32**	**321**	P	**P**	**00 52 09.0**	**-0.9**
	0.8nm,0.7s,baz=91,slow=8.0,SNR=3.4						
JNU	**Nakatsue**	**45.78**	**79**	LR	LR	01 12 22.0	
	comp=Z,493nm,21.7s,baz=335,slow=37						
ESDC	**Sonseca Array**	**57.99**	**297**	P	**P**	**00 54 01.3**	**+0.5**
	0.3nm,0.6s,baz=59,slow=7.1,SNR=3.1						
TORD	**Torodi Ar. Bea**	**67.97**	**269**	P	**P**	**00 55 05.0**	**-2.6**
	0.9nm,0.7s,baz=50,slow=5.7,SNR=4.9						
ILAR	**Eielson Array**	**71.22**	**17**	P	**P**	**00 55 25.2**	**-1.7**
	0.4nm,0.9s,baz=338,slow=6.8,SNR=3.5						
YKA	**Yellowknife Ar**	**78.07**	**4**	P	**P**	**00 56 06.0**	**-0.6**
	0.4nm,0.6s,baz=348,slow=5.6,SNR=9.0						

IDC 17 00:47:58.1±0.8, 0°.37S×135°.27E, h0km, mb4.2/8, mb1 4.4/12, mb1mx4.1/42, mbtmp4.2/12, ML4.1/4, MS3.2/5, Ms1 3.2/5, ms1mx2.8/34, Error ellipse: s-maj=27.3km s-min=16.2km az=66.0
DJA 17 00:47:58.1±0.8, 0°.5S±4°×13°.5E±°, h14km±7km, M4.7/10, mB5.5/2, mb4.5/2, MLv4.8/10, Mw(mB)5.0/2
NEIC 17 00:48:02.5±2.2, 0°.40S±0°.09×135°.31E±0°.06, h33km±4km, mb4.4/18, Error ellipse: s-maj=13.5km s-min=9.1km az=191.0

ISC 17 00:48:01.5±0.6, **0°.44S**±0°.06×**135°.25E**±0°.04, **h26**km, **n51,** σ1§**99**/54, **mb4.2**/14, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAKI	**Biak**	**1.14**	**131**	P	**Pn**	**00 48 21.5**	**-0.2**
RKPI	**Ransiki, Papua**	**1.51**	**225**	P	**Pn**	**00 48 24.6**	**-2.2**
RKPI				S	**Sb**	**00 48 47.6**	**+0.1**
SRPI	**Serui, Papua**	**1.73**	**145**	P	**Pn**	**00 48 30.6**	**+0.7**
SRPI				S	**Sb**	**00 48 55.0**	**+1.1**
KMPI	**Kaimana, Papua**	**3.55**	**206**	P	**Pn**	**00 48 55.0**	**+0.1**
KMPI				S	**Sn**	**00 49 39.2**	**+3.1**
SMPI	**Sarmi**	**3.79**	**114**	P	**Pn**	**00 48 56.1**	**-2.1**
FAKI	**Fak Fak**	**3.88**	**231**	P	**Pn**	**00 48 58.8**	**-0.7**
FAKI				S	**Sn**	**00 49 44.2**	**0.0**
FAKI	**Fak Fak**	**3.88**	**231**		**Pn**	**00 49 00.8**	**+1.3**
SIJI	**Sorong**	**4.00**	**264**	Pn	**Pn**	**00 49 01.1**	**-0.1**
	30nm,0.3s,baz=68,slow=12,SNR=34						
SIJI				Sn	**Sn**	**00 49 48.2**	**+0.9**
	32nm,0.3s,baz=286,slow=22,SNR=9.2						
SWI	**Sorong**	**4.01**	**264**	P	**Pn**	**00 49 01.0**	**-0.3**
SWI				S	**Sn**	**00 49 47.6**	**+0.2**
GENI	**Genyem**	**5.36**	**114**	P	**Pn**	**00 49 18.4**	**-1.5**
JAY	**Jayapura**	**5.83**	**111**	Pn	**Pn**	**00 49 24.8**	**-1.6**
	1.7nm,0.3s,baz=244,slow=11,SNR=6.4						
JAY				Sn	**Sn**	**00 50 29.2**	**-3.2**
	0.9nm,0.3s,baz=212,slow=19,SNR=2.4						
MSAI	**Masohi**	**6.94**	**245**	P	**Pn**	**00 49 39.4**	**-2.2**
	0.3nm16nm,0.6s						
LBMI	**Labuha**	**7.75**	**269**	P	**Pn**	**00 49 49.4**	**-3.3**
MMPI	**Merauke**	**9.47**	**147**	P	Pn	00 50 39.7	+23
MTN	**Manton Dam**	**12.98**	**198**		**Pn**	**00 51 06.3**	**+1.9**
PMG	**Port Moresby**	**14.83**	**127**	LR	LR	00 58 32.6	
	comp=Z,99nm,19.3s,baz=287,slow=43						
COEN	**Coen**	**15.55**	**150**	Pn	**Pn**	**00 51 39.3**	**+0.2**
KNRA	**Kununurra**	**16.43**	**203**	Pn	**Pn**	**00 51 50.4**	**-0.1**
KNRA				IAmb	IAmb	00 51 53.6	
	comp=Z,31nm,0.9s						
KRVT	**Keravat (AS076**	**17.19**	**103**	LR	LR	00 57 28.2	
	comp=Z,130nm,20.2s,baz=275,slow=33						
WRAB	**Tennant Creek**	**19.39**	**183**	P	**Pn**	**00 52 26.9**	**0.0**
WRAB				IAmb	IAmb	00 52 27.6	
	comp=Z,19nm,0.7s						
WRA	**Warramunga Arr**	**19.40**	**183**	P	**Pn**	**00 52 26.4**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=2.5,slow=11,SNR=128						
WRA				S	**S**	**00 55 57.7**	**-6.1**
	comp=Z,0.1nm,0.3s,baz=19,slow=22,SNR=3.4						
WRA	**Warramunga Arr**	**19.40**	**183**	IAmb	IAmb	00 52 27.9	
	comp=Z,0.9nm,0.7s						
WR0	**Warramunga Arr**	**19.41**	**182**	P	**Pn**	**00 52 26.9**	**-0.2**
WR0				IAmb	IAmb	00 52 27.7	
	comp=Z,10nm,0.8s						
FITZ	**Fitzroy Crossi**	**19.93**	**208**	P	**Pn**	**00 52 32.6**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=18,slow=9.6,SNR=4.4						
FITZ				S	**S**	**00 56 06.1**	**-8.5**
	comp=Z,0.2nm,0.3s,baz=3.8,slow=18,SNR=4.0						
FITZ				LR	LR	01 01 35.2	
	comp=Z,53nm,18.7s,baz=33,slow=41						
FITZ	**Fitzroy Crossi**	**19.93**	**208**	IAmb	IAmb	00 52 39.5	
	comp=Z,7.8nm,0.9s						
CTA	**Charters Tower**	**22.30**	**152**	P	**P**	**00 52 59.4**	**+2.3**

JIO	**Ouri**	**1.09**	**315**	P		**Pb**	**01 15 51.4**	**+0.1**
JIO				S		**Sg**	**01 16 05.0**	**-0.2**
JMST	**Minamisoumatoc**	**1.15**	**273**	P		**Pg**	**01 15 52.3**	**+0.3**
JMST				S		**Sg**	**01 16 06.8**	**0.0**
JFK	**Kawauchi**	**1.20**	**255**	P		**Pg**	**01 15 53.2**	**+0.2**
JFK				*e*S		**Sg**	**01 16 08.8**	**+0.2**
JMM	**Marumori**	**1.23**	**279**	P		**Pb**	**01 15 53.7**	**0.0**
JMM				S		**Sg**	**01 16 09.2**	**-0.4**
JKMT	**Kesennumamotoy**	**1.31**	**329**	P		**Pn**	**01 15 54.5**	**-0.4**
JKMT				S		**Sb**	**01 16 10.1**	**-2.1**
JOU	**Okura**	**1.48**	**298**	P		**Pn**	**01 15 57.8**	**+0.5**
JMK	**Ichinoseki**	**1.54**	**326**	P		**Pn**	**01 15 58.0**	**-0.1**
JMK				*e*S		**Sn**	**01 16 16.8**	**-1.6**
JFT	**Otama**	**1.59**	**265**	P		**Pb**	**01 15 59.8**	**-0.1**
JFT				S		**Sn**	**01 16 20.3**	**+0.6**
JYK	**Kaneyama**	**1.98**	**309**	P		**Pn**	**01 16 05.0**	**+0.9**
JFY	**Yanaizu**	**2.10**	**263**	*e*S		**Sn**	**01 16 33.0**	**+0.6**
JRG	**Rokugo**	**2.17**	**323**	P		**Pn**	**01 16 07.7**	**+1.0**
MJAR	**Matsushiro Arr**	**3.48**	**252**	P		**Pb**	**01 16 30.7**	**-1.5**
	0.2nm,0.3s,baz=69,slow=12,SNR=4.1							
MJAR				S		**Sb**	**01 17 13.3**	**-1.5**
	0.2nm,0.3s,baz=92,slow=30,SNR=3.3							
USRK	**Ussuriysk Ar.**	**10.17**	**313**	P		Pn	01 18 04.4	+7.8
	baz=122,slow=14,SNR=3.7							
H11N2	**WAKE ISLAND Hy**	**27.87**	**123**	T		T	01 50 27.9	
	baz=315,slow=74							
H11N1	**WAKE ISLAND Hy**	**27.88**	**123**	T		T	01 50 28.6	
	baz=315,slow=74							
H11N3	**WAKE ISLAND Hy**	**27.89**	**123**	T		T	01 50 32.2	
	baz=315							
SONM	**Songino Array**	**28.04**	**303**	P		**P**	**01 21 23.3**	**+1.2**
	0.5nm,0.7s,baz=96,slow=7.3,SNR=3.7							
H11S1	**WAKE ISLAND Hy**	**28.62**	**125**	T		T	01 51 25.0	
	baz=317,slow=76,SNR=6.5							
H11S3	**WAKE ISLAND Hy**	**28.62**	**125**	T		T	01 51 32.5	
	baz=317,slow=76,SNR=8.9							
H11S2	**WAKE ISLAND Hy**	**28.63**	**125**	T		T	01 51 32.3	
	baz=317,slow=76,SNR=5.6							
MKAR	**Makanchi Array**	**44.40**	**302**	P		**P**	**01 23 42.1**	**+0.7**
	0.3nm,0.7s,baz=92,slow=8.5,SNR=4.0							
WRA	**Warramunga Arr**	**57.81**	**189**	P		**P**	**01 25 21.5**	**-0.8**
	0.4nm,0.6s,baz=2.4,slow=6.9,SNR=2.5							

MAN 17 01:46:26.8, 9.93N×123.13E, h15km, mb4.4, ML3.0, MS3.2, 5C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNPH	**Sibulan**	**0.59**	**170⇑**	*e*P		Pg	01 46 38.2	-0.2
SNPH				*i* S		Sg	01 46 45.4	-0.9
GUIM	**Jordan**	**0.88**	**323**	*e*P		Pb	01 46 43.3	-0.5
GUIM				*e*S		Sn	01 46 57.8	+0.6
LLP	**Lapu-Lapu**	**0.91**	**65⇑**	*e*P		Pb	01 46 42.5	-1.8
LLP				*i* S		Sb	01 46 54.6	-1.7
DCPH	**Dipolog City**	**1.35**	**171⇑**	*e*P		Sn	01 47 07.1	-1.8
RCP	**Roxas**	**1.67**	**347⇑**	*e*P		Pb	01 46 57.9	+0.6
RCP				*e*S		Sg	01 47 21.4	+0.8
MSLP	**Maasin**	**1.72**	**83**	*e*P		Pn	01 46 55.9	-0.3
MSLP				*e*S		Sb	01 47 19.3	-0.2
OCLP	**Ormoc**	**1.84**	**52**	*e*P		Pn	01 46 57.6	-0.2
OCLP				*e*S		Sb	01 47 22.9	-0.1
PAGZ	**Pagadian**	**2.08**	**173**	*e*P		Pn	01 47 01.6	+0.5
PAGZ				*e*S		Sn	01 47 26.9	+0.1
CGP	**Cagayan de Oro**	**2.13**	**133⇓**	*e*P		Pg	01 47 16.3	+8.6
CGP				*e*S		Sg	01 47 34.8	-0.4
BUKP	**Musuan**	**2.79**	**137**	*e*P		Pn	01 47 10.8	-0.2
BUKP				*e*S		Sn	01 47 46.6	+2.2
KCP	**Kidapawan**	**3.49**	**146⇓**	*e*P		Pb	01 47 30.5	+2.2

MAN 17 01:48:07.0, 9.91N×123.13E, h15km, mb4.2, ML3.0, MS2.7, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNPH	**Sibulan**	**0.57**	**169**	*e*P		Pg	01 48 17.9	-0.3
SNPH				*i* S		Sg	01 48 26.2	+0.3
LLP	**Lapu-Lapu**	**0.92**	**64**	*e*P		Pb	01 48 22.8	-1.9
LLP				*i* S		Sb	01 48 34.5	-2.4
RCP	**Roxas**	**1.69**	**347⇑**	*e*P		Pb	01 48 37.9	+0.2
RCP				*e*S		Sg	01 49 01.5	+0.1
MSLP	**Maasin**	**1.72**	**82**	*e*P		Pn	01 48 36.6	+0.2
MSLP				*e*S		Sb	01 48 59.4	-0.5
OCLP	**Ormoc**	**1.85**	**52**	*e*P		Pn	01 48 38.4	+0.2
OCLP				*e*S		Sb	01 49 03.7	+0.2
PAGZ	**Pagadian**	**2.06**	**173**	*e*P		Pn	01 48 42.0	+0.8
PAGZ				*e*S		Sb	01 49 09.2	-0.3
BUKP	**Musuan**	**2.78**	**136**	*e*P		Pn	01 48 53.4	+2.4
BUKP				*e*S		Sg	01 49 34.2	-2.2

*MOS **17** 01:53:00.1±2.4, 20.29S×178.79W, h557km, mb4.7/25, Error ellipse: s-maj=10.1km s-min=8.3km az=105.8*
*NEIC **17** 01:53:01.6±1.1, 20.66S±0.09×178.76W±0.10, h597km±5km, mb4.6/209, Error ellipse: s-maj=13.8km s-min=12.6km az=126.0*
*IDC **17** 01:53:02.7±0.7, 20.65S×178.79W, h605km±8km, mb4.1/37, mb1 4.2/39, mb1mx4.1/52, mbtmp5.1/39, Error ellipse: s-maj=10.2km s-min=7.9km az=169.0*

ISC 17 01:53:01.4±0.4, 20.69S±0.05×178.72W±0.05, h599km±4km, h599km:pP-P, n683, σ1s01/687, mb4.7/163, 82C-41D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	**Nonsavu**	**4.24**	**313**	*d*/*i*P		**P**	**01 54 28.7**	**0.0**
MSVF	**Nonsavu**	**4.24**	**313**	P		**P**	**01 54 29.4**	**+0.7**
NIUE	**Niue**	**8.43**	**81**	P		**P**	**01 55 04.7**	**-0.2**
	baz=8.4,SNR=21							
NIUE	**Niue**	**8.43**	**81**	P		**P**	**01 55 04.9**	**+0.1**
RAO	**Raoul Island**	**8.56**	**175**	P		**P**	**01 55 04.7**	**-1.2**
	129nm,0.3s,baz=75,slow=12,SNR=6.9							
RAO				S		**S**	**01 56 44.5**	**-3.5**
	29nm,0.3s,baz=81,slow=22,SNR=4.3							
AFI	**Afiamalu**	**9.46**	**46**	P		**P**	**01 55 12.9**	**-2.1**
AFI	**Afiamalu**	**9.46**	**46**	P		**P**	**01 55 12.6**	**-2.4**
	13nm,0.3s,baz=236,slow=1.2,SNR=8.0							
AFI				S		**S**	**01 56 59.9**	**-4.6**
	33nm,0.3s,baz=37,slow=20,SNR=15							
AFI	**Afiamalu**	**9.46**	**46**	P		**P**	**01 55 12.9**	**-2.1**
FUNA	**Funafuti**	**12.26**	**350**	P		**P**	**01 55 42.3**	**-0.6**
DZM	**Mont Dzumac**	**13.89**	**262**	*e*P		**P**	**01 55 56.7**	**-2.7**
	86nm,0.9s							
DZM	**Mont Dzumac**	**13.89**	**262**	P		**P**	**01 55 58.7**	**-0.7**
	2.9nm,0.3s,baz=84,slow=19,SNR=11							
DZM	**Mont Dzumac**	**13.89**	**262**	P		**P**	**01 55 58.6**	**-0.8**
RAR	**Rarotonga**	**17.71**	**95**	P		**P**	**01 56 35.0**	**+0.5**
RAR				pmax		pmax		
	comp=Z,94nm,1.0s							
RAR	**Rarotonga**	**17.71**	**95**	P		**P**	**01 56 34.7**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=233,slow=7.3,SNR=12							
RAR	**Rarotonga**	**17.71**	**95**	P		**P**	**01 56 35.0**	**+0.5**
URZ	**Urewera**	**17.88**	**191**	P		**P**	**01 56 34.4**	**-1.4**
	comp=Z,2.3nm,0.3s,baz=292,slow=5.4,SNR=4.7							
URZ				S		**S**	**01 59 24.8**	**-5.1**
	comp=Z,0.4nm,0.3s,baz=336,slow=20,SNR=3.1							
URZ	**Urewera**	**17.88**	**191**	P		**P**	**01 56 35.0**	**-0.8**
URZ				IAmb		IAmb	01 56 43.7	
	comp=Z,24nm,1.0s							
BKZ	**Black Stump Fm**	**18.87**	**192**	P		**P**	**01 56 43.7**	**-1.2**
BKZ				IAmb		IAmb	01 56 55.0	
	comp=Z,12nm,1.0s							
KNTN	**Kanton**	**19.07**	**22**	P		**P**	**01 56 46.3**	**-0.7**
THZ	**Tophouse**	**22.17**	**197**	P		**P**	**01 57 14.7**	**+0.2**
THZ				IAmb		IAmb	01 57 17.9	
	comp=Z,36nm,1.2s							
TARA	**Tarawa**	**23.39**	**339**	P		**P**	**01 57 25.1**	**-0.5**
TBI	**Tubuai**	**27.24**	**101**	*e*P		**P**	**01 58 00.7**	**+1.3**
	comp=Z,83nm,0.9s							
WHZ	**Wether Hill Ro**	**27.42**	**200**	P		**P**	**01 58 01.8**	**+1.1**
WHZ				IAmb		IAmb	01 58 04.3	
	comp=Z,22nm,0.9s							
PAE	**Paea**	**27.67**	**89**	*e*P		**P**	**01 58 03.8**	**+0.5**
	comp=Z,7.6nm,0.8s							
PPT2	**Papeete2**	**27.69**	**89**	*e*P		**P**	**01 58 04.3**	**+0.8**
	comp=Z,86nm,1.1s							
PPT	**Papeete**	**27.70**	**89**	P		**P**	**01 58 03.5**	**0.0**
PPT	**Papeete**	**27.70**	**89**	P		**P**	**01 58 03.3**	**-0.2**
	comp=Z,80nm,0.8s,baz=296,slow=5.2,SNR=7.6							
PPT	**Papeete**	**27.70**	**89**	P		**P**	**01 58 03.5**	**0.0**
PPTF	**Pamatai, Papee**	**27.70**	**89**	P		**P**	**01 58 04.2**	**+0.6**
TIAR	**Tiarei**	**27.91**	**89**	*e*P		**P**	**01 58 06.0**	**+0.6**
	comp=Z,19nm,0.8s							
TVO	**Taravao**	**27.96**	**89**	*e*P		**P**	**01 58 06.4**	**+0.5**
	comp=Z,12nm,0.7s							
EIDS	**Eidsvold**	**28.14**	**255**	P		**P**	**01 58 08.1**	**+0.8**
	baz=28,SNR=3.5							
EIDS	**Eidsvold**	**28.14**	**255**	P		**P**	**01 58 07.2**	**-0.1**
EIDS				IAmb		IAmb	01 58 08.3	
	comp=Z,8.7nm,0.7s							
ARMA	**Armidale**	**28.38**	**244**	P		**P**	**01 58 10.3**	**+1.0**
ARMA				IAmb		IAmb	01 58 11.3	
	comp=Z,13nm,0.8s							
MEH	**Mehetia**	**29.05**	**90**	*e*P		**P**	**01 58 15.7**	**+0.4**
	comp=Z,20nm,0.8s							
RMQ	**Roma**	**30.30**	**253**	P		**P**	**01 58 27.6**	**+1.7**
	baz=30,SNR=5.9							
CTA	**Charters Tower**	**32.80**	**265**	P		**P**	**01 58 47.6**	**+0.4**
	comp=Z,40nm,0.7s,baz=94,slow=11,SNR=38							
CMSA	**Cobar Meteorol**	**33.59**	**244**	P		**P**	**01 58 54.5**	**+0.8**
	baz=34,SNR=10							
QLP	**Quilpie**	**34.35**	**253**	P		**P**	**01 59 00.5**	**+0.4**
	baz=34,SNR=8.2							
PMG	**Port Moresby**	**34.73**	**284**	*d*/*i*P		**P**	**01 59 03.5**	**+0.1**
PMG				pmax		pmax		
	comp=Z,460nm,0.8s							
PMG	**Port Moresby**	**34.73**	**284**	P		**P**	**01 59 03.5**	**+0.1**
	comp=Z,87nm,0.7s,baz=90,slow=6.2,SNR=18							
PMG	**Port Moresby**	**34.73**	**284**	P		**P**	**01 59 03.3**	**0.0**
MTSU	**Mount Surprise**	**34.91**	**268**	P		**P**	**01 59 05.1**	**+0.3**
	baz=35,SNR=5.2							
COEN	**Coen**	**36.92**	**274**	P		**P**	**01 59 22.0**	**+0.6**
	baz=37,SNR=46							
COEN	**Coen**	**36.92**	**274**	P		**P**	**01 59 21.6**	**+0.2**
STKA	**Stephens Creek**	**37.10**	**244**	P		**P**	**01 59 22.9**	**+0.3**
STKA				pmax		pmax		
	comp=Z,4.0nm,1.1s							
STKA	**Stephens Creek**	**37.10**	**244**	P		**P**	**01 59 22.9**	**+0.3**
	comp=Z,9.2nm,0.8s,baz=87,slow=9.3,SNR=13							
STKA	**Stephens Creek**	**37.10**	**244**	P		**P**	**01 59 22.9**	**+0.3**
MANU	**Manus Island**	**37.91**	**295**	P		**P**	**01 59 30.2**	**+0.8**
HTT	**Hallett**	**39.54**	**242**	P		**P**	**01 59 42.9**	**+0.5**
	baz=40,SNR=8.6							
BBOO	**Buckleboo**	**41.86**	**244**	P		**P**	**02 00 00.7**	**+0.1**
	baz=42,SNR=27							
BBOO	**Buckleboo**	**41.86**	**244**	P		**P**	**02 00 01.0**	**+0.3**
BBOO				IAmb		IAmb	02 00 01.2	
	comp=Z,20nm,0.6s							
WAKE	**Wake Island**	**42.23**	**339**	P		**P**	**02 00 03.5**	**-0.1**
JAY	**Jayapura**	**43.46**	**289**	P		**P**	**02 00 13.8**	**+0.4**
	comp=Z,178nm,0.7s,baz=156,slow=4.2,SNR=68							
AS31	**Alice Springs**	**43.81**	**257**	P		**P**	**02 00 16.0**	**-0.1**
AS31				IAmb		IAmb	02 00 17.4	
	comp=Z,21nm,1.1s							
ASAR	**Alice Springs**	**43.82**	**257**	P		**P**	**02 00 16.1**	**0.0**
	comp=Z,54nm,0.9s,baz=86,slow=8.5,SNR=282							
ASAR				PcP		**PcP**	**02 01 49.4**	**+0.4**
	comp=Z,6.7nm,0.6s,baz=98,slow=4.3,SNR=10							
ASAR				pP		**pwP**	**02 02 02.3**	**-1.0**
	comp=Z,3.4nm,0.8s,baz=83,slow=8.7,SNR=2.5							
ASAR				S		**S**	**02 06 03.1**	**-1.7**
	comp=Z,2.1nm,0.7s,baz=90,slow=14,SNR=8.2							
WRAB	**Tennant Creek**	**43.90**	**262**	*de*P		**P**	**02 00 15.9**	**-0.8**
WRAB				pmax		pmax		
	comp=Z,47nm,1.0s							
WRAB	**Tennant Creek**	**43.90**	**262**	P		**P**	**02 00 16.4**	**-0.3**
WRA	**Warramunga Arr**	**43.90**	**262**	P		**P**	**02 00 16.0**	**-0.8**
	comp=Z,24nm,0.7s,baz=98,slow=8.0,SNR=77							
WRA				PcP		**PcP**	**02 01 49.5**	**+0.2**
	comp=Z,4.8nm,0.9s,baz=95,slow=3.7,SNR=4.8							
WRA				S		**S**	**02 06 03.1**	**-3.0**
	comp=Z,1.6nm,0.8s,baz=95,slow=14,SNR=2.5							
WRA	**Warramunga Arr**	**43.90**	**262**	IAmb		IAmb	02 00 17.1	
	comp=Z,3.3nm,0.9s							
HPAH	**Hawaii Prepara**	**46.32**	**31**	P		**P**	**02 00 35.4**	**+0.2**
HLK	**Haleakala**	**46.69**	**29**	P		**P**	**02 00 38.3**	**+0.1**
FORT	**Forrest**	**48.60**	**247**	P		**P**	**02 00 51.7**	**-0.3**
	baz=49,SNR=10							
FORT	**Forrest**	**48.60**	**247**	P		**P**	**02 00 51.6**	**-0.4**
WRKA	**Warakurna**	**48.76**	**254**	P		**P**	**02 00 53.6**	**+0.2**
	baz=49,SNR=20							
GUMO	**Guam**	**49.40**	**311**	P		**P**	**02 00 58.3**	**+0.3**
	comp=Z,78nm,0.7s,baz=142,slow=6.5,SNR=3.8							
SIJI	**Sorong**	**52.63**	**285**	P		**P**	**02 01 21.6**	**+0.1**
	comp=Z,158nm,0.8s,baz=76,slow=6.5,SNR=65							
SOEI	**Soe**	**55.83**	**272**	P		**P**	**02 01 44.6**	**+0.6**
MEEK	**Meekatharra**	**57.22**	**251**	P		**P**	**02 01 52.7**	**-0.5**
	baz=57,SNR=4.9							
KLBR	**Kellerberrin**	**57.36**	**245**	P		**P**	**02 01 54.6**	**+0.5**
	baz=57,SNR=7.0							
VNDA	**Vanda**	**57.66**	**185**	P		**P**	**02 01 57.2**	**+1.9**
VNDA				pmax		pmax		
	comp=Z,5.0nm,1.1s							
VNDA	**Vanda**	**57.66**	**185**	P		**P**	**02 01 57.5**	**+2.2**
	comp=Z,1.4nm,0.5s,baz=16,slow=7.4,SNR=6.5							
VNDA	**Vanda**	**57.66**	**185**	P		**P**	**02 01 57.2**	**+1.9**
NWAO	**Narrogin (SRO)**	**57.68**	**243**	P		**P**	**02 01 56.2**	**0.0**
	comp=Z,11nm,0.8s,baz=93,slow=5.6,SNR=4.9							
BLDU	**Ballidu**	**58.36**	**246**	P		**P**	**02 02 00.7**	**-0.1**
	baz=58,SNR=7.4							
MORW	**Morawa**	**59.13**	**248**	P		**P**	**02 02 06.0**	**0.0**
	baz=59,SNR=4.2							
MORW	**Morawa**	**59.13**	**248**	P		**P**	**02 02 05.9**	**-0.1**
LUWI	**Luwuk**	**60.30**	**281**	P		**P**	**02 02 13.7**	**-0.3**
	comp=Z,8μmcomp=Z,78nm,1.1s							
LUWI	**Luwuk**	**60.30**	**281**	P		**P**	**02 02 14.3**	**+0.3**
MRSI	**Marisa**	**61.67**	**282**	P		**P**	**02 02 23.8**	**+0.9**
	comp=Z,33nm,1.1s							
GIRL	**Giralia**	**61.85**	**255**	P		**P**	**02 02 25.2**	**+1.3**
	baz=62,SNR=3.4							
PLAI	**Plampang**	**62.20**	**271**	P		**P**	**02 02 27.1**	**+0.8**
	comp=Z,86nm,1.0s							
MPSI	**Mapaga**	**63.48**	**281**	P		**P**	**02 02 34.5**	**-0.1**
	comp=Z,52nm,1.0s							
JAGI	**Jajag, Banyuwa**	**65.70**	**270**	P		**P**	**02 02 47.1**	**-1.4**
JHJ2	**Mitsune**	**66.55**	**323**	P		**P**	**02 02 53.3**	**-0.1**
KKM	**Kota Kinabalu**	**69.15**	**285**	P		**P**	**02 03 09.7**	**0.0**
KKM				IAmb		IAmb	02 03 11.1	
	comp=Z,41nm,1.1s							
UGM	**Wanagama**	**69.28**	**269**	P		**P**	**02 03 10.0**	**-0.4**
QSPA	**South Pole Qui**	**69.38**	**180**	P		**P**	**02 03 11.4**	**+1.3**
	comp=Z,11nm,0.6s,baz=41,slow=1.8,SNR=30							
QSPA				pP		**pP**	**02 05 13.3**	**+2.9**
	comp=Z,3.0nm,0.8s,baz=33,slow=3.0,SNR=2.5							
QSPA	**South Pole Qui**	**69.38**	**180**	P		**P**	**02 03 11.0**	**+0.9**
QSPA				IAmb		IAmb	02 03 12.2	
	comp=Z,16nm,0.9s							
MJA0	**Matsu Arr-Jizo**	**69.94**	**324**	*e*P		**P**	**02 03 13.6**	**-0.2**
MJA0				pmax		pmax		
	comp=Z,15nm,0.6s							
MJAR	**Matsushiro Arr**	**69.96**	**324**	P		**P**	**02 03 13.6**	**-0.3**
MJAR				pmax		pmax		
	comp=Z,7.0nm,0.5s							
MJAR	**Matsushiro Arr**	**69.96**	**324**	P		**P**	**02 03 13.6**	**-0.3**
	comp=Z,15nm,0.6s,baz=139,slow=5.9,SNR=27							
MJAR	**Matsushiro Arr**	**69.96**	**324**	IAmb		IAmb	02 03 14.7	
	comp=Z,7.3nm,0.5s							
MAJO	**Matsushiro**	**69.96**	**324**	*de*P		**P**	**02 03 13.7**	**-0.2**
MAJO				pmax		pmax		
	comp=Z,16nm,0.7s							
MAJO	**Matsushiro**	**69.96**	**324**	P		**P**	**02 03 14.2**	**+0.3**
MAJO				IAmb		IAmb	02 03 14.8	
	comp=Z,16nm,0.7s							
MAT	**Matsushiro**	**69.96**	**324**	P		**P**	**02 03 13.6**	**-0.3**
MJB9	**Matsu-Tunnel**	**69.97**	**324**	IAmb		IAmb	02 03 14.8	
	comp=Z,17nm,0.6s							
SBUM	**Sibu**	**71.37**	**280**	P		**P**	**02 03 23.0**	**+0.4**
SBUM	**Sibu**	**71.37**	**280**	P		**P**	**02 03 24.0**	**+1.4**
JNU	**Nakatsue**	**71.95**	**317**	P		**P**	**02 03 25.7**	**+0.1**
	comp=Z,27nm,0.9s,baz=179,slow=1.4,SNR=9.5							
KIWB	**Kanaga Island**	**72.24**	**1**	P		**P**	**02 03 26.7**	**-0.1**
ADK	**Adak**	**72.28**	**1**	P		**P**	**02 03 26.6**	**-0.4**
ADK				pmax		pmax		
	comp=Z,78nm,0.7s							
ADK	**Adak**	**72.28**	**1**	P		**P**	**02 03 26.6**	**-0.4**
LEM	**Lembang**	**72.36**	**269**	P		**P**	**02 03 29.1**	**+0.5**
	comp=Z,68nm,0.8s,baz=111,slow=14,SNR=3.3							
KSM	**Kuching**	**72.77**	**278**	P		**P**	**02 03 31.4**	**+0.6**
TWG	**Pinlang**	**72.91**	**303**	P		**P**	**02 03 30.3**	**-1.0**
YULB	**Yu-li**	**73.04**	**304**	P		**P**	**02 03 31.5**	**-0.6**
YULB				IAmb		IAmb	02 03 31.9	
	comp=Z,11nm,0.6s							
TNG	**Tangerang**	**73.49**	**270**	P		**P**	**02 03 30.3**	**-4.5**
SSLB	**Suanglung**	**73.51**	**304**	P		**P**	**02 03 34.0**	**-0.7**
SSLB				IAmb		IAmb	02 03 34.9	
	comp=Z,28nm,1.0s							
ASAJ	**Asahikawa**	**73.57**	**332**	P		**P**	**02 03 36.4**	**+1.8**
	comp=Z,19nm,0.6s,baz=217,slow=6.8,SNR=12							
KASI	**Kota Agung**	**75.72**	**269**	P		**P**	**02 03 47.1**	**-0.2**
	comp=Z,64nm,1.0s							
YSS	**Yuzh-Sakhalins**	**75.76**	**334**	*e*P		**P**	**02 03 48.3**	**+1.6**
YSS				pmax		pmax		
	comp=Z,10.0nm,1.0s							
YSS	**Yuzh-Sakhalins**	**75.76**	**334**	P		**P**	**02 03 47.9**	**+1.2**
YSS				IAmb		IAmb	02 03 48.4	
	comp=Z,19nm,0.5s							
TJN	**Taejon**	**76.25**	**318⇓**	*e*P		**P**	**02 03 51.4**	**+1.7**
PEA0B	**Petropavlovsk-**	**76.28**	**346**	P		**P**	**02 03 50.0**	**+0.5**
PEA0B				pmax		pmax		
	comp=Z,33nm,0.8s							
PEA0B	**Petropavlovsk-**	**76.28**	**346**	P		**P**	**02 03 50.0**	**+0.5**
PEA0B				IAmb		IAmb	02 03 50.7	
	comp=Z,33nm,0.8s							
PETK	**Petropavlovsk-**	**76.28**	**346**	P		**P**	**02 03 49.5**	**+0.1**
	comp=Z,22nm,0.7s,baz=145,slow=8.4,SNR=31							
MDSI	**Maura Dua**	**76.37**	**270**	P		**P**	**02 03 49.8**	**-1.1**
	comp=Z,1μmcomp=Z,36nm,0.9s							
KSRS	**Korea Array**	**76.58**	**319**	P		**P**	**02 03 52.8**	**+1.3**
	comp=Z,5.1nm,0.6s,baz=130,slow=6.2,SNR=22							
KS19	**Wonju Array Si**	**76.65**	**319**	P		**P**	**02 03 52.3**	**+0.5**
SDPT	**Sand Point**	**77.31**	**11**	P		**P**	**02 03 54.9**	**-0.1**
INCN	**Inchon**	**77.40**	**318**	P		**P**	**02 03 56.6**	**+0.6**
INCN				pmax		pmax		
	comp=Z,22nm,0.3s							
INCN	**Inchon**	**77.40**	**318**	P		**P**	**02 03 56.5**	**+0.6**
KSI	**Kapahiang**	**78.14**	**271**	P		**P**	**02 04 00.3**	**-0.2**
	comp=Z,102nm,0.9s							
PKM	**Mcpherson Peak**	**78.61**	**46**	P		**P**	**02 04 04.6**	**+1.9**
	baz=235							
USA0B	**Ussuriysk Arra**	**78.74**	**326**	IAmb		IAmb	02 04 05.2	
	comp=Z,23nm,0.8s							
USRK	**Ussuriysk Ar.**	**78.74**	**326**	P		**P**	**02 04 04.3**	**+1.4**
	comp=Z,16nm,0.7s,baz=128,slow=2.8,SNR=34							
TYV	**Tymovskoe**	**78.94**	**336**	*e*P		**P**	**02 04 04.4**	**+0.6**
TYV				pmax		pmax		
	comp=Z,35nm,0.8s							
HOPS	**Hopland Field**	**78.95**	**41**	IAmb		IAmb	02 04 06.9	
	comp=Z,16nm,0.9s							
KCPM	**Cahto Peak**	**79.07**	**40**	P		**P**	**02 04 05.7**	**+0.8**
KCPM				IAmb		IAmb	02 04 07.8	
	comp=Z,19nm,1.0s							
KMRM	**Mail Ridge**	**79.33**	**40**	P		**P**	**02 04 08.6**	**+2.3**
KMRM				IAmb		IAmb	02 04 09.8	
	comp=Z,40nm,0.8s							
NJ2	**Nanjing**	**79.48**	**310**	*e*P		**P**	**02 04 07.6**	**+0.5**
NJ2				pmax		pmax		
	comp=Z,13nm,0.5s							
VES	**Vestal, Richgr**	**79.64**	**45**	P		**P**	**02 04 09.5**	**+1.6**
	baz=235							
MURC	**Murrieta**	**79.68**	**48**	P		**P**	**02 04 09.9**	**+1.6**
	baz=237							
KHMM	**Horse Mountain**	**79.72**	**39**	P		**P**	**02 04 08.8**	**+0.4**
KHMM				IAmb		IAmb	02 04 11.4	
	comp=Z,15nm,1.0s							
EDW2	**Edwards Air Fo**	**79.84**	**47**	P		**P**	**02 04 10.5**	**+1.5**
	baz=236							
MONP2	**Monument Peak**	**79.84**	**49**	P		**P**	**02 04 10.8**	**+1.5**
	baz=237							
O02D	**Mt. Diablo Mer**	**79.86**	**40**	P		**P**	**02 04 11.2**	**+2.2**
	baz=232,SNR=14							
IKP	**In-Ko-Pah, Jac**	**79.94**	**50**	P		**P**	**02 04 11.1**	**+1.5**
	baz=238							
ISA	**Isabella, Lake**	**79.95**	**46**	P		**P**	**02 04 10.6**	**+1.0**
ISA				pmax		pmax		
	comp=Z,10.0nm,1.2s							
ISA	**Isabella, Lake**	**79.95**	**46**	P		**P**	**02 04 10.6**	**+1.0**
ISA	**Isabella, Lake**	**79.95**	**46**	P		**

TUQ Turquoise Moun 81.56 47 P **P** **02 04 19.4 +1.5**
baz=237
NVAR Mina Array Bea 81.63 44 P **P** **02 04 19.6 +1.3**
comp=Z,5.1nm,0.7s,baz=224,slow=8.2,SNR=43
Y12C Blythe 81.64 49 P **P** **02 04 18.6 +0.3**
Y12C Blythe 81.64 49 P **P** **02 04 19.8 +1.5**
baz=238
PAHR Pah Rah Range 81.67 42 P **P** **02 04 19.2 +0.7**
PAHR IAmb IAmb 02 04 20.9
comp=Z,12nm,1.0s
113A Mohawk Valley, 81.68 50 P **P** **02 04 19.1 +0.6**
I03D Drain, OR 81.72 37 P **P** **02 04 20.0 +1.6**
baz=231
214A Organ Pipe Nat 81.96 52 P **P** **02 04 21.5 +1.5**
baz=240
K04D Chiloquin, OR 81.97 39 P **P** **02 04 21.5 +1.6**
baz=232
CN2 Changchun 82.04 323 *e*P **P** **02 04 20.8 +0.8**
CN2 pmax pmax
comp=Z,30nm,1.0s
KVN Kaiserville 82.11 43 IAmb IAmb 02 04 22.9
comp=Z,13nm,1.1s
J04D Umpqua Nationa 82.14 38 P **P** **02 04 22.5 +1.6**
baz=232,SNR=15
TPNV Topopah Spring 82.16 46 P **P** **02 04 22.6 +1.5**
baz=237
I04A Tendick Farm, 82.31 37 P **P** **02 04 22.6 +1.1**
baz=232,SNR=6.3
KLR Kul'dur 82.35 330 *d i*P **P** **02 04 22.2 +0.8**
KLR pmax pmax
comp=Z,12nm,1.0s
MOD Modoc Plateau 82.39 40 IAmb IAmb 02 04 24.5
comp=Z,14nm,0.7s
IPM Ipoh 82.48 278 P **P** **02 04 23.2 +0.2**
IPM Ipoh 82.48 278 P **P** **02 04 24.0 +1.0**
H04D Lebanon 82.58 37 P **P** **02 04 24.3 +1.6**
baz=231,SNR=5.8
SHPR Sheep Range 82.66 47 P **P** **02 04 24.1 +0.6**
J05D Fort Rock, OR 82.67 38 P **P** **02 04 25.2 +1.7**
baz=233,SNR=47
G03D McMinnville, O 82.71 36 P **P** **02 04 25.2 +1.9**
baz=231
W13A Hualapai Mount 82.80 48 P **P** **02 04 24.7 +0.4**
Y14A Wickenburg 82.82 50 P **P** **02 04 24.8 +0.5**
H04A Detroit Lake 82.98 37 P **P** **02 04 25.2 +0.4**
H04A IAmb IAmb 02 04 26.3
comp=Z,11nm,0.7s
KULM Kulim 83.13 278 P **P** **02 04 26.7 +0.6**
KULM IAmb IAmb 02 04 28.0
comp=Z,26nm,0.9s
KULM Kulim 83.13 278 P **P** **02 04 27.0 +0.8**
PINE Pine Mountain 83.15 38 IAmb IAmb 02 04 28.7
comp=Z,29nm,0.8s
I05D Terrebonne, OR 83.25 37 P **P** **02 04 27.5 +1.4**
baz=232,SNR=7.1
R11A Troy Canyon, C 83.36 45 P **P** **02 04 27.4 +0.3**
R11A Troy Canyon, C 83.36 45 P **P** **02 04 28.5 +1.5**
baz=237
E03A Lebam 83.39 35 P **P** **02 04 27.4 +0.7**
E03A IAmb IAmb 02 04 29.3
comp=Z,28nm,0.9s
SVW2 Sparrevohn 83.61 11 P **P** **02 04 27.5 0.0**
SVW2 IAmb IAmb 02 04 36.3
comp=Z,9.4nm,1.0s
F04A Amboy 83.63 36 P **P** **02 04 27.9 0.0**
F04A IAmb IAmb 02 04 29.6
comp=Z,17nm,1.0s
TUC Tucson 83.63 52 P **P** **02 04 28.5 +0.1**
TUC pmax pmax
comp=Z,6.0nm,1.0s
TUC Tucson 83.63 52 P **P** **02 04 28.5 +0.1**
TUC Tucson 83.63 52 P **P** **02 04 30.1 +1.7**
baz=241
WVOR Wild Horse Val 83.71 40 P **P** **02 04 29.8 +1.2**
WVOR pmax pmax
comp=Z,12nm,1.1s
WVOR Wild Horse Val 83.71 40 P **P** **02 04 29.8 +1.2**
WVOR IAmb IAmb 02 04 31.1
comp=Z,12nm,1.1s
MA2 Magadan 83.79 345 ⇓ *e*P **P** **02 04 28.0 -0.4**
MA2 pmax pmax
comp=Z,9.0nm,0.7s
MA2 Magadan 83.79 345 P **P** **02 04 27.4 -1.0**
comp=Z,5.9nm,0.5s,baz=83,slow=5.1,SNR=4.7
MA2 Magadan 83.79 345 IAmb IAmb 02 04 45.1
comp=Z,16nm,1.1s
RPSI Rantau Prapat 83.80 275 P **P** **02 04 28.8 -0.7**
RPSI IAmb IAmb 02 04 30.2
comp=Z,17nm,0.9s
G05D Wamic, OR 83.81 37 P **P** **02 04 30.3 +1.4**
baz=232
PSI Prapat 83.83 275 P **P** **02 04 28.8 -1.1**
PSI pmax pmax
comp=Z,17nm,0.9s
E04D Cinebar 83.94 35 P **P** **02 04 31.2 +1.8**
baz=231,SNR=6.1
SEW Seward 83.96 14 P **P** **02 04 29.5 +0.3**
SEW IAmb IAmb 02 04 29.6
comp=Z,36nm,1.1s
F05D White Salmon 84.13 36 P **P** **02 04 32.4 +2.0**
baz=232
X16A Lo Mia Camp, P 84.19 50 P **P** **02 04 32.0 +0.8**
G06A Carlson Farm, 84.19 37 P **P** **02 04 30.8 0.0**
D03D Eldon 84.27 34 P **P** **02 04 32.6 +1.5**
baz=231
319A Douglas 84.30 54 IAmb IAmb 02 04 34.9
comp=Z,10nm,1.1s
CCUT Cedar City 84.43 47 P **P** **02 04 32.1 -0.3**
LON Longmire 84.47 35 P **P** **02 04 32.1 0.0**
LON pmax pmax
comp=Z,4.0nm,1.0s
LON Longmire 84.47 35 P **P** **02 04 32.1 0.0**
KNB Kanab 84.52 47 P **P** **02 04 33.8 +1.0**
KNB Kanab 84.52 47 P **P** **02 04 33.8 +1.0**
GSI Gunungsitoli 84.56 273 P **P** **02 04 34.6 +1.3**
comp=Z,4µmcomp=Z,78nm,1.1s
GSI Gunungsitoli 84.56 273 P **P** **02 04 34.0 +0.7**
U15A North Rim 84.59 48 P **P** **02 04 33.3 +0.1**
U15A IAmb IAmb 02 04 35.9
comp=Z,7.9nm,0.7s
PSUT Pine Spring 84.61 45 P **P** **02 04 34.2 +1.0**
SZCU Shurtz Canyon 84.64 47 P **P** **02 04 33.5 +0.2**
D05A Enumclaw 84.64 35 P **P** **02 04 33.5 +0.7**
D05A IAmb IAmb 02 04 35.7
comp=Z,35nm,1.2s
RC01 Rabbit Creek A 84.78 14 P **P** **02 04 33.4 +0.3**
RC01 IAmb IAmb 02 04 34.7
comp=Z,28nm,1.0s
WUAZ Wupatki 84.78 49 P **P** **02 04 32.8 -1.2**
WUAZ Wupatki 84.78 49 P **P** **02 04 35.6 +1.6**
baz=240
PGC Sidney 84.79 33 IAmb IAmb 02 04 35.7
comp=Z,14nm,0.9s
ELK Elko 84.88 43 P **P** **02 04 34.7 +0.2**
ELK pmax pmax
comp=Z,2.0nm,0.8s
ELK Elko 84.88 43 P **P** **02 04 34.7 +0.2**
BBB Bella Bella 84.89 29 P **P** **02 04 34.1 +0.3**
comp=Z,9.7nm,0.8s,baz=190,slow=4.9,SNR=4.0
BBB Bella Bella 84.89 29 IAmb IAmb 02 04 35.3
comp=Z,28nm,1.1s
F07A Phinny Hill Vi 84.99 37 P **P** **02 04 34.5 0.0**
PKCU Pink Cliffs 85.09 47 P **P** **02 04 35.9 +0.2**
G08A Pilot Rock 85.18 38 P **P** **02 04 35.9 +0.2**
G08A IAmb IAmb 02 04 38.0
comp=Z,14nm,0.9s
SKT Skwentna 85.20 13 P **P** **02 04 34.7 -0.6**
SKT IAmb IAmb 02 04 36.0
comp=Z,12nm,1.2s
A04D Lummi Island 85.22 33 P **P** **02 04 37.2 +1.7**
baz=231
B05A Bryant 85.25 34 P **P** **02 04 37.1 +1.3**
baz=232,SNR=6.4
TTA Tatalina 85.25 10 IAmb IAmb 02 04 37.1
comp=Z,17nm,1.2s
KNK Knik Glacier 85.35 14 IAmb IAmb 02 04 37.1
comp=Z,23nm,0.8s
PMR Palmer 85.36 14 IAmb IAmb 02 04 37.6
comp=Z,8.8nm,0.7s
E07A Sunnyside 85.42 36 P **P** **02 04 37.2 +0.5**
E07A IAmb IAmb 02 04 39.2
comp=Z,16nm,1.0s
MTPU Mount Pierson 85.48 47 P **P** **02 04 37.8 +0.2**
HAWA Hanford 85.50 37 IAmb IAmb 02 04 39.5
comp=Z,13nm,0.8s
BJT Baijiatuau 85.54 316 P **P** **02 04 37.7 +0.3**
BJT pmax pmax
comp=Z,7.0nm,0.7s
BJT Baijiatuau 85.54 316 P **P** **02 04 37.7 +0.3**
BJT IAmb IAmb 02 04 38.6
comp=Z,7.2nm,0.7s
ENH Enshi 85.59 304 P **P** **02 04 38.4 +0.6**
MSU Marysvale 85.72 46 P **P** **02 04 39.6 +1.0**
MSU Marysvale 85.72 46 P **P** **02 04 39.6 +1.0**
E08A Dider Farm, El 85.82 37 P **P** **02 04 39.4 +0.9**
E08A IAmb IAmb 02 04 40.9
comp=Z,10nm,0.7s
BMO Blue Mountains 85.89 39 IAmb IAmb 02 04 41.0
comp=Z,6.9nm,0.8s
MFID Camas Ranch 85.97 41 P **P** **02 04 40.2 +0.8**
MFID IAmb IAmb 02 04 41.7
comp=Z,8.4nm,0.9s
SCM Sheep Creek Mo 85.98 14 P **P** **02 04 39.3 +0.3**
SCM pmax pmax
comp=Z,45nm,0.7s
SCM Sheep Creek Mo 85.98 14 P **P** **02 04 39.3 +0.3**
DUG Dugway, Tooele 86.16 44 P **P** **02 04 41.7 +1.2**
baz=239
D08A Wollman Farm, 86.23 36 P **P** **02 04 41.6 +1.1**
D08A IAmb IAmb 02 04 42.9
comp=Z,18nm,1.0s
E09A Wood Farm, Sta 86.35 37 P **P** **02 04 42.0 +1.0**
E09A IAmb IAmb 02 04 43.1
comp=Z,16nm,1.1s
SEY Seymchan 86.41 347 ⇑ *i*P **P** **02 04 41.5 +0.6**
SEY Seymchan 86.41 347 P **P** **02 04 41.0 +0.1**
comp=Z,14nm,0.6s,baz=156,slow=5.0,SNR=34
GLB Gilahina Butte 86.51 16 P **P** **02 04 42.1 +0.7**
GLB IAmb IAmb 02 04 42.6
comp=Z,13nm,0.6s
KTH Kantishna Hill 86.74 12 IAmb IAmb 02 04 42.5
comp=Z,19nm,0.9s
B08A Colville Reser 86.77 35 IAmb IAmb 02 04 44.6
comp=Z,15nm,0.8s
LLLB Lillooet 86.81 32 IAmb IAmb 02 04 45.2
comp=Z,15nm,1.1s
C09A Chrisman Ranch 87.02 36 P **P** **02 04 45.2 +1.0**
C09A IAmb IAmb 02 04 46.2
comp=Z,12nm,0.8s
PBKT Sadao Pong 87.04 289 P **P** **02 04 45.3 +0.4**
PBKT IAmb IAmb 02 04 47.1
comp=Z,13nm,1.0s
DHY Denali Highway 87.06 14 IAmb IAmb 02 05 03.2
comp=Z,11nm,1.0s
MNTX Cornudas Mount 87.41 55 P **P** **02 04 46.9 +0.5**
MNTX Cornudas Mount 87.41 55 P **P** **02 04 47.5 +1.1**
baz=244
ZEA Zeya 87.47 331 *e*P **P** **02 04 46.1 0.0**
ZEA pmax pmax
comp=Z,17nm,1.0s
XAN Xi'an 87.71 308 P **P** **02 04 48.8 +1.0**
XAN pP PcP 02 05 00.4 +11
XAN pmax pmax
comp=Z,18nm,1.0s
XAN Xi'an 87.71 308 P **P** **02 04 48.4 +0.6**
XAN pmax pmax
comp=Z,18nm,0.9s
XAN Xi'an 87.71 308 P **P** **02 04 48.4 +0.6**
XAN IAmb IAmb 02 04 49.8
comp=Z,18nm,0.9s
TX31 Lajitas Ar. Si 87.73 58 P **P** **02 04 48.4 +0.4**
TX32 Lajitas Array 87.73 58 P **P** **02 04 49.4 +1.3**
TXAR Lajitas Array 87.73 58 P **P** **02 04 50.1 +2.1**
comp=Z,2.0nm,0.9s,baz=216,slow=6.2,SNR=11
TXAR pP **pwP** **02 06 59.6 +0.6**
comp=Z,0.8nm,0.9s,baz=210,slow=7.2,SNR=5.1
SNAA Sanae 87.84 179 P **P** **02 04 47.4 -0.4**
SNAA Sanae 87.84 179 ⇓ *e*P **P** **02 04 47.3 -0.5**
NEW Newport 87.92 36 P **P** **02 04 49.0 +0.6**
NEW pmax pmax
comp=Z,6.0nm,1.0s
NEW Newport 87.92 36 P **P** **02 04 49.0 +0.6**
comp=Z,3.5nm,0.8s,baz=236,slow=3.5,SNR=9.7
NEW Newport 87.92 36 P **P** **02 04 49.0 +0.6**
NEW IAmb IAmb 02 04 50.0
comp=Z,5.9nm,0.9s
NEW Newport 87.92 36 P **P** **02 04 49.1 +0.6**
baz=236
VNA3 Neumayer Olymp 88.00 176 P **P** **02 04 48.0 -0.5**
NEA Nenana 88.03 12 IAmb IAmb 02 04 49.2
comp=Z,9.5nm,0.8s
ANMO Albuquerque 88.05 52 P **P** **02 04 50.2 +0.6**
ANMO pmax pmax
comp=Z,4.0nm,1.2s
ANMO Albuquerque 88.05 52 P **P** **02 04 50.8 +1.2**
comp=Z,2.9nm,1.0s,baz=208,slow=5.9,SNR=4.4
ANMO Albuquerque 88.05 52 P **P** **02 04 50.2 +0.6**
ANMO Albuquerque 88.05 52 P **P** **02 04 50.5 +0.9**
baz=243
MLY Manley 88.11 11 IAmb IAmb 02 04 49.0
comp=Z,11nm,0.7s
RIDG Independent Ri 88.21 14 IAmb IAmb 02 04 50.5
comp=Z,18nm,1.0s
DOT Dot Lake 88.32 15 IAmb IAmb 02 04 50.9
comp=Z,14nm,0.8s
HDA Harding Lake 88.32 13 P **P** **02 04 49.6 -0.2**
baz=210,SNR=21
HIA Hailar 88.45 325 ⇑ *e*P **P** **02 04 51.3 +0.4**
HIA pmax pmax
comp=Z,58nm,1.0s
HIA Hailar 88.45 325 P **P** **02 04 50.8 -0.1**
HIA IAmb IAmb 02 04 51.9
comp=Z,6.6nm,0.8s
MCMT McKenzie Canyo 88.53 41 P **P** **02 04 51.7 +0.1**
TCOL CIGO, UAF Yank 88.53 13 P **P** **02 04 50.4 -0.4**
baz=209,SNR=6.4
COLA College 88.54 13 *d i*P **P** **02 04 50.2 -0.6**
COLA pmax pmax
comp=Z,30nm,0.7s
COLA College 88.54 13 P **P** **02 04 50.4 -0.4**
AHID Auburn Hatcher 88.57 43 P **P** **02 04 52.8 +1.0**
AHID IAmb IAmb 02 04 57.8
comp=Z,7.2nm,1.0s
SCRK Sand Creek 88.61 15 P **P** **02 04 51.0 -0.3**
SCRK IAmb IAmb 02 04 53.8
comp=Z,10nm,0.8s
IL31 88.65 13 IAmb IAmb 02 04 51.8
comp=Z,14nm,0.9s
ILAR Eielson Array 88.65 13 P **P** **02 04 50.8 -0.6**
comp=Z,11nm,0.8s,baz=222,slow=5.4,SNR=82
ILAR PP **PP** **02 08 29.3 -2.4**
comp=Z,1.2nm,1.0s,baz=200,slow=7.5,SNR=4.3
VNA1 Neumayer--Stat 88.66 177 P **P** **02 04 51.4 -0.1**
KMI Kunming 88.83 297 P **P** **02 04 55.3 +1.9**
KMI pmax pmax
comp=Z,17nm,1.3s
KMI Kunming 88.83 297 P **P** **02 04 53.5 +0.1**
KMI pmax pmax
comp=Z,21nm,0.4s
KMI Kunming 88.83 297 P **P** **02 04 53.5 +0.1**
POKR Poker Flat Res 88.84 13 P **P** **02 04 51.5 -0.8**
baz=209,SNR=6.1
MSO Missoula 88.94 38 P **P** **02 04 54.5 +1.2**
baz=238
DLMT Dillon 88.97 40 IAmb IAmb 02 04 55.8
comp=Z,7.1nm,0.9s
HHC Hu-ho-hao-te 89.00 315 *e*P **P** **02 04 54.8 +1.1**
HHC pmax pmax
comp=Z,8.0nm,0.9s
HHC pmax pmax
comp=Z,49nm,6.9s
REDW Red Top Meadow 89.03 43 P **P** **02 04 54.3 +0.3**
REDW IAmb IAmb 02 04 56.2
comp=Z,12nm,1.1s
TPAW Teton Pass 89.03 42 P **P** **02 04 55.0 +1.0**
TPAW IAmb IAmb 02 04 56.4
comp=Z,5.1nm,0.8s
S22A 4UR Ranch, Cre 89.05 49 P **P** **02 04 54.7 +0.4**
S22A 4UR Ranch, Cre 89.05 49 P **P** **02 04 55.2 +0.9**
baz=243
SNOW Snow King Moun 89.14 42 P **P** **02 04 55.5 +1.0**
SNOW IAmb IAmb 02 04 56.9
comp=Z,12nm,0.9s
BILL Bilibino 89.16 354 ⇓ *e*P **P** **02 04 53.8 +0.2**
BILL pmax pmax
comp=Z,13nm,1.3s
BILL Bilibino 89.16 354 P **P** **02 04 53.7 0.0**
BILL IAmb IAmb 02 04 54.9
comp=Z,11nm,1.1s
O20A White River Ci 89.18 46 IAmb IAmb 02 04 56.7
comp=Z,7.6nm,1.0s
O20A White River Ci 89.18 46 P **P** **02 04 55.6 +1.0**
baz=242
JTMT Jette 89.23 38 P **P** **02 04 54.6 0.0**
RDOG Red Dog Mine 89.25 6 P **P** **02 04 55.1 +1.0**
RDOG IAmb IAmb 02 04 55.4
comp=Z,9.5nm,0.9s
MOOW Moose Ponds 89.29 42 P **P** **02 04 55.9 +0.8**
FLWY Flagg Ranch 89.48 42 IAmb IAmb 02 04 58.8
comp=Z,8.4nm,0.9s
YHB Horse Butte 89.51 41 P **P** **02 04 55.9 -0.2**
GO06 Curarrehue 89.52 132 P **P** **02 04 56.6 +0.3**
CM31 Chiang Mai Arr 89.54 290 P **P** **02 04 57.9 +1.3**
CM31 IAmb IAmb 02 04 59.9
comp=Z,16nm,1.1s
CMAR Chiang Mai Arr 89.54 290 P **P** **02 04 58.4 +1.8**
comp=Z,10nm,0.9s,baz=125,slow=2.9,SNR=39
CMAR pP **pwP** **02 07 08.6 -0.8**
comp=Z,1.3nm,0.4s,baz=151,slow=3.9,SNR=1.3
CMAR PP **PP** **02 08 41.6 +2.0**
comp=Z,0.8nm,0.4s,baz=122,slow=6.8,SNR=4.1
BW06 Boulder Array 89.56 43 P **P** **02 04 56.3 -0.1**
BW06 IAmb IAmb 02 04 58.0
comp=Z,4.7nm,0.8s
BW06 Boulder Array 89.56 43 P **P** **02 04 57.2 +0.8**
baz=241
PD31 Pinedale Array 89.56 43 IAmb IAmb 02 04 58.0
comp=Z,4.2nm,0.8s
PDAR Pinedale Array 89.56 43 P **P** **02 04 57.2 +0.8**
comp=Z,3.8nm,0.7s,baz=216,slow=3.6,SNR=41
YHL Hebgen Lake 89.57 41 P **P** **02 04 57.5 +1.0**
PRP Porcupine Dome 89.59 13 IAmb IAmb 02 04 56.6
comp=Z,8.8nm,0.7s
PLCA Paso Flores 89.63 134 *e*P **P** **02 04 58.8 +2.0**
PLCA pmax pmax
comp=Z,4.0nm,0.7s
PLCA Paso Flores 89.63 134 P **P** **02 04 57.9 +1.1**
comp=Z,3.8nm,0.7s,baz=239,slow=4.4,SNR=12
PLCA Paso Flores 89.63 134 P **P** **02 04 57.5 +0.8**
PLCA IAmb IAmb 02 04 59.1
comp=Z,7.8nm,0.9s
CHTO Chiang Mai 89.67 290 P **P** **02 04 58.0 +0.8**
CHTO pmax pmax
comp=Z,13nm,0.8s
CHTO Chiang Mai 89.67 290 P **P** **02 04 58.0 +0.8**
H17A Grant Village 89.72 42 P **P** **02 04 58.1 +1.0**
H17A IAmb IAmb 02 05 01.0
comp=Z,3.7nm,0.8s
H17A Grant Village 89.72 42 P **P** **02 04 59.0 +1.9**
baz=240
SDCO Great Sand Dun 89.99 49 P **P** **02 04 60.0 +1.3**
baz=244
COLD Coldfoot 90.19 11 IAmb IAmb 02 05 04.6
comp=Z,4.6nm,0.9s
YNE Yellowstone No 90.37 41 P **P** **02 05 00.5 +0.3**
T25A Trinidad 90.51 50 P **P** **02 05 02.0 +1.1**
baz=244
RWWY Rawlins 90.59 45 IAmb IAmb 02 05 01.4
comp=Z,5.0nm,0.8s
ISCO Idaho Springs 90.82 47 P **P** **02 05 04.0 +1.6**
baz=244
RLMT Red Lodge 90.88 42 P **P** **02 05 03.5 +1.0**
baz=241
N23A Red Feather La 91.08 46 P **P** **02 05 03.2 -0.3**
N23A IAmb IAmb 02 05 06.8
comp=Z,4.0nm,0.9s
N23A Red Feather La 91.08 46 P **P** **02 05 04.7 +1.1**
baz=243
EFI East Falkland 91.29 148 ⇑ *e*P **P** **02 05 04.4 +0.4**
EFI pmax pmax
comp=Z,96nm,1.5s
K22A Casper 91.48 45 P **P** **02 05 06.4 +1.2**
baz=243
EGMT Eagleton 91.99 39 P **P** **02 05 07.7 +0.4**
baz=241
YAK Yakutsk 92.03 338 P **P** **02 05 06.5 -0.5**
YAK pmax pmax
comp=Z,22nm,0.8s
YAK Yakutsk 92.03 338 P **P** **02 05 06.7 -0.3**
comp=Z,9.0nm,0.5s,baz=82,slow=1.5,SNR=6.7
YAK Yakutsk 92.03 338 P **P** **02 05 06.5 -0.5**
LZH Lanzhou 92.35 308 ⇓ P **P** **02 05 10.5 +1.2**
LZH pP pP 02 07 19.8 +1.8
LZH sP sP 02 08 17.8 +0.7
LZH PP **PP** **02 09 05.9 +4.5**
LZH pmax pmax
comp=Z,19nm,1.4s
LZH pmax pmax
comp=Z,78nm,9.2s
EPYK Eagle Plains 92.35 16 IAmb IAmb 02 05 09.1
comp=Z,8.1nm,0.8s
EPYK Eagle Plains 92.35 16 P **P** **02 05 09.3 +0.8**
baz=219
LAO LASA Array 93.49 41 P **P** **02 05 15.8 +1.6**
baz=243
WMOK Wichita Mounta 93.70 54 P **P** **02 05 15.8 +0.4**
baz=247
RSSD Black Hills 93.76 44 P **P** **02 05 16.0 +0.4**
baz=245
INK Inuvik 94.63 15 P **P** **02 05 18.4 -0.3**
comp=Z,4.8nm,0.9s,baz=242,slow=4.2,SNR=13
INK Inuvik 94.63 15 IAmb IAmb 02 05 19.3
comp=Z,7.7nm,1.1s
ULN Ulaanbaatar 95.06 319 ⇑ *i*P **P** **02 05 21.2 -0.2**
ULN pmax pmax
comp=Z,8.0nm,2.3s
SONM Songino Array 95.45 319 *e*P **P** **02 05 24.2 +1.1**
SONM pmax pmax
comp=Z,1.0nm,0.7s
SONM Songino Array 95.45 319 P **P** **02 05 22.5 -0.6**
comp=Z,0.5nm,0.7s,baz=85,slow=1.8,SNR=4.4
SONM PP **PP** **02 09 21.3 -3.5**
comp=Z,0.7nm,0.8s,baz=110,slow=8.1,SNR=5.3
GTA Gaotai 96.57 310 ⇑ P **P** **02 05 28.9 +0.5**
GTA pP pwP 02 07 46.1 +4.6
GTA sP sP 02 08 51.4 +15
GTA pmax pmax
comp=Z,4.0nm,1.5s
YKA Yellowknife Ar 96.97 25 P **P** **02 05 29.2 -0.2**
comp=Z,1.3nm,0.7s,baz=244,slow=4.6,SNR=30
YKA PP **PP** **02 09 36.4 +0.7**
comp=Z,0.9nm,1.1s,baz=248,slow=6.6,SNR=3.4
MIAR Mount Ida 97.64 56 P Pdif 02 05 32.6 -0.4
baz=250
C36M Paulatuk 97.83 17 P **P** **02 05 33.7 +0.7**
baz=230
TIXI Tiksi 98.76 345 ⇑ *e*P Pdif 02 05 36.4 -0.7
TIXI pmax pmax
comp=Z,3.0nm,1.5s
ZALV Zalesovo Beam 110.21 321 PKiKP **PKiKP** **02 10 24.7 -1.2**
comp=Z,2.3nm,0.5s,baz=124,slow=2.7,SNR=13
MKAR Makanchi Array 110.83 313 Pdiff **Pdif** **02 06 32.6 +1.1**
comp=Z,0.6nm,0.8s,baz=82,slow=5.2,SNR=4.8
MKAR PKiKP **PKiKP** **02 10 26.4 -0.9**
comp=Z,1.3nm,0.4s,baz=88,slow=1.1,SNR=28
MKAR PKKPbc **PKKPbc** **02 21 28.4 +0.4**
comp=Z,0.2nm,0.5s,baz=267,slow=5.2,SNR=4.6
KURK Kurchatov 113.67 317 ⇑ *i*PKiKP **PKiKP** **02 10 31.4 -1.2**
KSH Kashi 114.44 305 *e*PKP PKPdf 02 10 34.3 -0.3
BRVK Borovoye 118.85 320 PKIKP **PKPdf** **02 10 41.4 -1.1**
BRVK Borovoye 118.85 320 **PKPdf** **02 10 41.4 -1.1**
KBL Kabul 119.39 299 PKIKP **PKPdf** **02 10 44.3 -0.1**
KBL Kabul 119.39 299 **PKPdf** **02 10 44.3 -0.1**
DAG Danmarks Havn 122.99 5 *i* PKiKP **PKPdf** **02 10 48.4 -1.4**
DAG pmax pmax
comp=Z,3.0nm,0.8s
ARU Arti 124.97 325 *i* PKiKP **PKPdf** **02 10 54.1 0.0**
ARU 02 12 49.9
ARU 02 17 08.9
ARU Arti 124.97 325 **PKPdf** **02 10 53.8 -0.3**
ABKAR Akbulak array 125.76 316 **PKPdf** **02 10 55.8 0.0**
GEYT Alibeck 128.31 302 PKP **PKPdf** **02 11 01.1 0.0**
comp=Z,3.7nm,0.7s,baz=132,slow=2.1,SNR=8.6
PRGR Permogore 128.93 335 *e*PKiKP **PKPdf** **02 10 58.5 -3.0**
PRGR pmax pmax
comp=Z,9.0nm,1.0s
ARCES ARCESS Array B 128.98 349 *e*PKiKP **PKPdf** **02 11 01.2 -0.2**
ARCES pmax pmax
comp=Z,5.0nm,0.6s
ARCES ARCESS Array B 128.98 349 PKP **PKPdf** **02 11 01.0 -0.4**
comp=Z,4.8nm,0.6s,baz=4.4,slow=0.9,SNR=27
FINES FINESS Array B 135.76 343 PKhKP PKPpre 02 11 01.9
comp=Z,1.3nm,0.6s,baz=17,slow=1.5,SNR=6.6
FINES SKP 02 13 51.9
comp=Z,8.9nm,0.8s,baz=96,slow=5.9,SNR=13
VSR Storozhevoye 137.54 325 ⇑ *i*PKiKP **PKiKP** **02 11 19.2 -0.9**
GNI Garni 138.28 308 ⇓ *i*PKiKP **PKPdf** **02 11 20.5 +0.6**
KMBO Kilima Mbogo 138.65 243 PKP **PKiKP** **02 11 24.0 +0.2**

comp=Z,2.3nm,0.9s,baz=141,slow=6.6,SNR=5.1
RAYN Ar Rayn 139.04 282 PKIKP PKPdf 02 11 21.9 +0.2
RAYN Ar Rayn 139.04 282 PKPdf 02 11 21.9 +0.2
NB2 NORSAR Subarra1 139.08 353 PKP PKPdf 02 11 12.3 -8.3
comp=Z,1.1nm,0.6s,baz=13,slow=3.2
NOA NORSAR Array B 139.08 353 PKhKP PKPdf 02 11 12.0 -8.5
comp=Z,2.4nm,0.8s,baz=12,slow=2.3,SNR=6.5
NOA PKP **PKiKP** **02 11 22.6 -0.4**
comp=Z,1.4nm,0.7s,baz=14,slow=4.0,SNR=5.5
NOA SKPbc **SKPbc** **02 14 01.0 +0.9**
comp=Z,3.8nm,0.9s,baz=18,slow=4.4,SNR=5.4
SUW Suwalki 142.77 339 *e*PKP **PKPdf 02 11 25.2 -2.1**
AKSG Malin Array Be 142.85 330 PKhKP **PKPdf 02 11 24.7 -2.9**
comp=Z,19nm,0.4s,baz=42,slow=4.4,SNR=134
AKSG SKPbc **SKPbc** **02 14 08.9 -1.0**
comp=Z,0.8nm,0.5s,baz=47,slow=3.4,SNR=7.7
KAC Achnashellach 142.92 6 *e*P **PKPdf 02 11 25.2 -2.3**
MCD Coleburn Disti 143.00 4 *e*P PKPab 02 11 24.8 -0.6
KPL Plockton 143.04 6 *e*P PKPab 02 11 24.4 -1.0
MDO Dochfour 143.06 5 *e*P PKPab 02 11 25.1 -0.5
KLNR Kaliningrad 143.22 342 *de*PKHKP PKPab 02 11 26.0 -0.2
SIM Simferopol' 143.70 319 *i* PKHKP **PKPdf 02 11 29.1 -0.1**
SIM pmax pmax
comp=Z,86nm,0.9s
DRUM Mains of Drumt 143.72 3 *e*P PKPbc 02 11 26.8 -1.2
MUD Monsted U'grnd 143.80 353 *i* PKHKP PKPab 02 11 28.2 -0.2
MUD pmax pmax
comp=Z,44nm,0.7s
EDU Dundee 144.05 4 *e*P PKPbc 02 11 28.0 -1.1
INVG Invergeldie, C 144.09 5 *e*P PKPbc 02 11 28.0 -1.2
BSD Bornholm Skovb 144.12 347 *i* PKHKP PKPbc 02 11 28.6 -0.7
BSD pmax pmax
comp=Z,78nm,0.9s
LAWE Loch Awe, Argy 144.13 6 *e*P PKPbc 02 11 28.6 -0.7
SEVA Sevastopol 144.18 319 ⇑P **PKPab 02 11 30.6 +0.4**
MBAR Mbarara 144.24 237 PKPab 02 11 32.3 +0.6
DIKM Dikmen 144.53 314 ⇑P **PKPab 02 11 31.8 0.0**
PGBU Glenifferbraes 144.66 6 *e*P **PKPdf 02 11 30.0 -0.5**
ESY Stoneypath 144.70 4 *e*P PKPbc 02 11 30.9 -0.2
EAU Auchinoon 144.72 5 *e*P PKPbc 02 11 31.4 +0.2
EBL Broad Law 144.82 4 *e*P PKPbc 02 11 31.4 0.0
SORM Soroca 145.01 328 ⇓P **PKPdf 02 11 31.7 +0.3**
BZK Bozkurt 145.23 315 ⇑P **PKPdf 02 11 32.4 +0.5**
GKP Gorka Klasztor 145.24 343 *e*PKIKP **PKPbc 02 11 33.2 +0.4**
GKP Gorka Klasztor 145.24 343 *e*PKP **PKPbc 02 11 33.2 +0.4**
ESK Eskdalemuir 145.26 4 *e*P **PKPdf 02 11 30.0 -1.6**
BEL Belsk 145.39 339 *e*PKIKP **PKPab 02 11 34.1 -0.6**
BEL Belsk 145.39 339 *e*PKP **PKPab 02 11 34.1 -0.6**
MILM Milestii Mici 145.57 326 ⇓P **PKPbc 02 11 33.4 -0.5**
GAL1 Galloway 145.58 6 *e*P **PKPdf 02 11 31.6 -0.5**
LVV L'vov 145.78 334 *e*PKIKP **PKPbc 02 11 33.9 -0.5**
EDMD Edmundbyers 145.82 3 *e*P **PKPbc 02 11 33.6 -0.8**
ILGA Ilgaz 145.83 314 PKPab 02 11 36.2 -1.0
KESW Keswick, Cumbr 145.99 5 *e*P **PKPbc 02 11 34.2 -0.6**
IAS Iasi 146.03 327 ⇑PKIKP **PKPbc 02 11 34.6 -0.6**
IAS Iasi 146.03 327 ⇑P **PKPbc 02 11 34.6 -0.6**
BSEG Bad Segeberg 146.10 350 *e*PKPbc **PKPbc 02 11 35.4 +0.3**
baz=19,slow=2.4
LEOM Leova 146.16 326 ⇑PKIKP **PKPbc 02 11 36.1 +0.5**
LEOM Leova 146.16 326 ⇑P **PKPbc 02 11 36.1 +0.5**
IOMK Kirk Michael 146.19 6 *e*P **PKPbc 02 11 34.3 -1.1**
GDLE Glaisdale, N Y 146.28 2 *e*P **PKPdf 02 11 33.8 +0.5**
VASR Vaslui 146.28 326 ⇓P **PKPbc 02 11 36.5 +0.5**
WIM Isle of Man 146.29 6 *e*P **PKPbc 02 11 35.4 -0.3**
BRTR Keskin Array B 146.46 312 *e*PKHKP **PKPdf 02 11 33.8 -0.5**
BRTR pmax pmax
comp=Z,10.0nm,0.6s
BRTR Keskin Array B 146.46 312 PKPbc **PKPbc 02 11 36.8 -0.1**
comp=Z,9.8nm,0.6s,baz=141,slow=2.7,SNR=64
KWP Kalwaria Pacla 146.46 335 *e*PKIKP **PKPbc 02 11 36.9 +0.5**
KWP Kalwaria Pacla 146.46 335 *e*PKP **PKPbc 02 11 36.9 +0.5**
KWP Kalwaria Pacla 146.46 335 PKPbc 02 11 36.8 +0.5
PRAR RASCA 146.58 329 ⇓P **PKPbc 02 11 37.2 +0.5**
BIR Birlad 146.62 326 ⇑PKIKP **PKPbc 02 11 37.7 +0.8**
BIR Birlad 146.62 326 ⇑P **PKPbc 02 11 37.7 +0.8**
TLCR 146.66 323 ⇑PKIKP **PKPbc 02 11 37.3 +0.4**
TLCR 146.66 323 ⇑P **PKPbc 02 11 37.3 +0.4**
HPK Haverah Park 146.71 3 *e*P **PKPbc 02 11 35.8 -1.1**
GHRR 146.87 326 ⇓P **PKPbc 02 11 38.3 +0.8**
BUR08 Bucovina Ar. S 146.88 330 PKPbc 02 11 38.5 +0.8
JURR Jurilovca 146.88 323 ⇑P **PKPbc 02 11 37.8 +0.2**
BURAR Bucovina Array 146.89 330 ⇓PKIKP **PKPbc 02 11 38.3 +0.6**
BURAR Bucovina Array 146.89 330 ⇓P **PKPbc 02 11 38.3 +0.6**
BIZ Bicaz 146.94 328 ⇓P **PKPbc 02 11 38.1 +0.4**
TESR Tescani 146.96 327 ⇑P **PKPbc 02 11 38.1 +0.3**
ANTO Ankara 146.99 312 ⇓PKIKP **PKPbc 02 11 38.1 -0.1**
ANTO Ankara 146.99 312 ⇓P **PKPbc 02 11 38.1 -0.1**
ANTO Ankara 146.99 312 PKPbc 02 11 38.7 +0.5
BR231 Keskin MP Arra 147.01 312 PKPbc 02 11 38.8 +0.5
TUDR 147.03 325 ⇑P **PKiKP 02 11 39.3 -0.4**
CFR Carcaliu 147.04 324 ⇓PKIKP **PKPbc 02 11 37.8 -0.2**
CFR Carcaliu 147.04 324 ⇓P **PKPbc 02 11 37.8 -0.2**
WME Myndd Eilian 147.07 6 *e*P **PKPbc 02 11 37.1 -0.7**
OJC Ojcow 147.08 338 PKIKP **PKPbc 02 11 38.3 +0.3**
OJC Ojcow 147.08 338 *e*PKP **PKPbc 02 11 38.2 +0.2**
OJC Ojcow 147.08 338 PKPbc 02 11 38.4 +0.3
TOPG Topolog 147.10 323 ⇑P **PKPbc 02 11 38.8 +0.6**
WLF1 Llynfaes 147.16 6 *e*P **PKPbc 02 11 36.8 -1.3**
PETR Petresti 147.18 326 ⇓P **PKPbc 02 11 39.0 +0.6**
YRC Rhoscolyn 147.18 6 *e*P **PKPbc 02 11 36.5 -1.5**
KOLS Kolonicke sedl 147.19 334 *e*PKIKP **PKPbc 02 11 39.1 +0.8**
KOLS *e* 02 11 42.4
KOLS Kolonicke sedl 147.19 334 *e*PKP **PKPbc 02 11 39.1 +0.8**
KOLS *e* 02 11 42.4
ODBI Odobesti 147.25 326 ⇑P **PKiKP 02 11 39.8 -0.4**
LBWR Ladybower, Pea 147.26 3 *e*P **PKPdf 02 11 32.5 -2.5**
TIRR Tirgusor 147.33 323 ⇑PKIKP **PKPbc 02 11 39.2 +0.5**
TIRR Tirgusor 147.33 323 ⇑P **PKPbc 02 11 39.2 +0.5**
VRI Vrincioaia 147.35 326 ⇑PKIKP **PKPbc 02 11 38.9 +0.1**
VRI Vrincioaia 147.35 326 ⇑P **PKPbc 02 11 38.9 +0.1**
UZH Uzhgorod 147.42 334 *e*PKIKP **PKPbc 02 11 38.2 -0.7**
UZH *i* 02 11 39.5
UZH *e* 02 11 41.6
HARR Harsova 147.46 323 ⇓PKIKP **PKPbc 02 11 39.6 +0.5**
HARR Harsova 147.46 323 ⇓P **PKPbc 02 11 39.6 +0.5**
MFTR Murfatlar 147.50 322 ⇓P **PKPbc 02 11 40.0 +0.8**
NRDL Niedersach Rie 147.52 350 *e*PKPbc **PKPbc 02 11 39.2 +0.3**
baz=19,slow=2.4
NIE Niedzica 147.57 337 *e*PKIKP **PKiKP 02 11 40.1 -0.7**
NIE Niedzica 147.57 337 *e*PKP **PKiKP 02 11 40.1 -0.7**
BISRR Bisoca 147.57 326 ⇑P **PKPbc 02 11 39.8 +0.3**
MANR Mangalia 147.62 322 ⇑P **PKiKP 02 11 40.3 -0.7**
TSMN Mangalia Port- 147.63 322 ⇑P **PKiKP 02 11 40.8 -0.2**
BMR Baia Mare 147.63 331 ⇑PKIKP **PKPbc 02 11 40.0 +0.5**
BMR Baia Mare 147.63 331 ⇑P **PKPbc 02 11 40.0 +0.5**
KSP Ksiaz 147.67 342 *e*PKIKP **PKPbc 02 11 40.0 +0.6**
KSP Ksiaz 147.67 342 *e*PKP **PKPbc 02 11 40.0 +0.6**
FOEL Foel Wylfa 147.67 5 *e*P **PKPdf 02 11 35.2 -0.5**
LLW Llanuwchllyn 147.67 6 *e*P **PKPbc 02 11 38.2 -1.1**
ARCR ARCALIA 147.68 330 ⇑P **PKiKP 02 11 40.4 -0.7**
OZUR 147.68 327 ⇑P **PKPbc 02 11 40.4 +0.7**
TRPA Tarpa 147.70 333 ⇑P **PKPbc 02 11 40.1 +0.5**
ASSE Asse, Remlinge 147.78 349 *e*PKPbc **PKPbc 02 11 39.9 +0.4**
baz=19,slow=2.4
MDUB Mudurnu 147.79 314 PKPbc 02 11 40.4 +0.1
AMRR Amara 147.84 324 ⇑PKP2 PKPab 02 11 53.4 +8.6
ICOR Ion Corvin 147.89 323 ⇑P **PKiKP 02 11 40.9 -0.6**
PSN Preselentsi 147.94 322 P **PKPbc 02 11 40.6 +0.3**
ISR Istrita 147.94 325 ⇑PKIKP **PKPbc 02 11 40.9 +0.5**
ISR Istrita 147.94 325 ⇑P **PKPbc 02 11 40.9 +0.5**
OSTC Ostas 147.94 342 *e*PKP **PKPdf 02 11 36.8 +0.6**
OSTC *e*PKPAB **PKPbc 02 11 40.5 +0.3**
OSTC *ex* x 02 11 46.2
CWF Charnwood Fore 147.95 3 *e*P **PKPbc 02 11 39.5 -0.6**
CHVC Chvalec 147.96 342 ⇑ *e*PKP **PKPbc 02 11 40.4 +0.4**
DOPR Dopca 147.97 328 ⇓P **PKiKP 02 11 41.0 -0.6**
OKC Ostrava-Krasne 147.97 339 *e*PKIKP **PKPbc 02 11 40.6 +0.4**
OKC *e* 02 11 45.5
OKC Ostrava-Krasne 147.97 339 ⇑ *e*PKP **PKPbc 02 11 40.6 +0.4**
OKC *e*PKPAB **PKPab 02 11 45.5 +0.3**
MLR Muntele Rosu 148.01 326 ⇑PKIKP **PKPbc 02 11 40.7 0.0**
MLR Muntele Rosu 148.01 326 ⇑P **PKPbc 02 11 40.7 0.0**
UPC Upice 148.05 342 *e*PKIKP **PKPbc 02 11 40.8 +0.4**
UPC *e* 02 11 46.1
UPC Upice 148.05 342 ⇑ *e*PKP **PKPbc 02 11 40.8 +0.4**
UPC *e*PKPAB **PKPab 02 11 46.1 +0.6**
CLL Collm 148.09 346 ⇓ *e*PKIKP **PKPdf 02 11 37.0 +0.6**
CLL *i* 02 11 40.7
CLL *i* 02 11 45.5
CLL pmax pmax
comp=Z,54nm,0.9s
CLL pmax pmax
comp=Z,26nm,0.8s
CLL Collm 148.09 346 ⇓ *e*PKPdf **PKPdf 02 11 37.0 +0.6**
CLL ⇓ *i*PKPbc **PKPbc 02 11 40.7 +0.2**
comp=Z,54nm,0.9s
CLL ⇑ *i*PKPab **PKPab 02 11 45.5 -0.1**
comp=Z,26nm,0.8s
CLL *e*PKiKP **pPKPab 02 14 02.0 +4.3**
CLL *e*SKPbc **SKPbc 02 14 21.0 -0.7**
DPC Dobruska-Polom 148.10 342 *e*PKIKP **PKPbc 02 11 41.0 +0.4**
DPC *e* 02 11 45.6
DPC Dobruska-Polom 148.10 342 ⇑ *e*PKP **PKPbc 02 11 41.0 +0.4**
DPC *e*PKPAB **PKPab 02 11 45.6 -0.2**
LANS Liptovska Anna 148.10 337 *e*PKP **PKiKP 02 11 42.1 +0.2**
LANS *e* 02 11 47.3
CLZ Clausthal 148.11 349 *e*PKPbc **PKPbc 02 11 41.1 +0.5**
baz=19,slow=2.4
KRLC Kraliky 148.20 341 ⇑ *e*PKP **PKPbc 02 11 41.4 +0.5**
KRLC *e*PKPAB **PKPab 02 11 46.6 +0.4**
MORC Moravsky Berou 148.22 340 ⇑P **PKiKP 02 11 41.6 -0.5**
MORC Moravsky Berou 148.22 340 *e*PKP **PKPbc 02 11 41.2 +0.3**
MORC *e* 02 11 46.9
MORC Moravsky Berou 148.22 340 PKPbc 02 11 41.3 +0.3
SECR 148.25 326 ⇑P **PKPbc 02 11 42.5 +0.4**
KECS Kecovo 148.26 335 *e*PKP **PKiKP 02 11 42.1 -0.1**
KECS *e* 02 11 47.2
BRG Berggiesshubel 148.27 345 *i* PKP **PKPbc 02 11 41.2 +0.2**
comp=Z,23nm,0.8s
BRG Berggiesshubel 148.27 345 *i* PKP **PKPab 02 11 46.6 +0.3**
comp=Z,14nm,0.8s
BRG *e*pPKP **pPKPab 02 13 58.4 +0.3**
comp=Z,4.4nm,0.9s
BRG *e*sPKP 02 14 54.1
comp=Z,26nm,1.8s
BRG *e*PKS **PP** **02 15 19.3 +3.8**
comp=Z,35nm,2.0s
BRG Berggiesshubel 148.27 345 *e*PKPbc **PKiKP 02 11 41.5 -0.6**
baz=19,slow=2.4
BRG *e*PKPab **PKPab 02 11 46.7 +0.4**
baz=19,slow=2.4
MDB Medias 148.34 329 ⇓P **PKiKP 02 11 42.3 -0.1**
FBE Freiberg 148.37 345 *e*PKPbc **PKiKP 02 11 41.9 -0.4**
baz=19,slow=2.4
FBE *e*PKPab **PKPab 02 11 47.2 +0.4**
baz=19,slow=2.4
SULR 148.39 325 ⇑P **PKPbc 02 11 41.6 +0.2**
PVCC Panska Ves 148.42 344 ⇑ *e*PKP **PKPbc 02 11 41.7 +0.4**
PVCC *e*PKPAB **PKPab 02 11 47.6 +0.6**
NEUB Neuenburg 148.44 347 *e*PKPbc **PKPbc 02 11 41.7 +0.3**
baz=19,slow=2.4
GTTG Gvttingen 148.46 350 *e*PKPbc **PKPbc 02 11 41.9 +0.5**
baz=19,slow=2.4
SILT Sile 148.47 317 ⇓P **PKPbc 02 11 42.0 +0.3**
VOIR 148.51 327 ⇑P **PKPbc 02 11 41.9 +0.1**
MCH1 Michaelchurch 148.57 5 *e*P **PKPbc 02 11 39.8 -1.9**
MTUR Matau 148.65 327 ⇓P **PKiKP 02 11 42.8 -0.4**
DRGR 148.65 331 ⇓P **PKiKP 02 11 42.8 -0.4**
PRD Provadia 148.68 322 P **PKiKP 02 11 42.7 -0.5**
NEF NEVSHA 148.72 322 P **PKPbc 02 11 42.7 +0.4**
LEF Lefka 148.74 304 ⇓P **PKPbc 02 11 42.3 -0.3**
MONM Monmouth 148.75 5 *e*P **PKPdf 02 11 37.0 -0.5**
ARR Arges 148.76 327 ⇓P **PKiKP 02 11 43.2 -0.3**
SGRR Singureni 148.84 325 ⇑P **PKPdf 02 11 31.3 -6.5**
VYHS Vyhne 148.87 337 *e*PKP **PKiKP 02 11 43.1 -0.4**
VYHS *e* 02 11 49.9
PRA Prague 148.88 344 ⇑ *e*PKP **PKiKP 02 11 43.0 -0.4**
PRU Pruhonice 148.92 343 ⇑ *e*PKP **PKPbc 02 11 42.8 +0.2**
PRU *e*PKPAB **PKPab 02 11 49.5 +0.4**
VRAC Vranov 148.94 340 ⇑P **PKiKP 02 11 43.1 -0.4**
VRAC Vranov 148.94 340 *e*PKP **PKiKP 02 11 42.8 +0.1**
VRAC *e* 02 11 50.0
PSZ Piszkesteto 148.95 335 ⇓P **PKPbc 02 11 43.2 +0.4**
KOLL Kolacno 148.96 338 *e*PKP **PKiKP 02 11 43.3 -0.3**
KOLL *e* 02 11 50.3
RAZG Razgrad 148.96 323 ⇑P **PKPbc 02 11 43.3 +0.4**
JAVC Velka Javorina 148.97 339 *e*PKP **PKiKP 02 11 44.2 +0.5**
JAVC *e* 02 11 51.2
MOX Moxa 149.01 347 *e*PKPbc **PKPbc 02 11 43.0 +0.2**
baz=19,slow=2.4
MOX *e*PKPab **PKPab 02 11 49.3 -0.2**
baz=19,slow=2.4
TANN Tannenbergstha 149.04 346 *e*PKPbc **PKPbc 02 11 43.3 +0.4**
baz=19,slow=2.4
PLN Plauen 149.05 346 *e*PKPbc **PKiKP 02 11 43.4 -0.4**
baz=19,slow=2.4
PLN *e*PKPab **PKPab 02 11 49.6 0.0**
baz=19,slow=2.4
GUNZ Gunzen 149.12 346 *e*PKPbc **PKiKP 02 11 43.6 -0.3**
baz=19,slow=2.4
GUNZ *e*PKPab **PKPab 02 11 50.5 +0.5**
baz=19,slow=2.4
LOT Lotru 149.14 328 ⇑P **PKPbc 02 11 42.9 -0.5**
HUMR Humele 149.16 326 ⇑P **PKPbc 02 11 43.2 -0.2**
WERN Wernitzgruen 149.18 346 *e*PKPab **PKPab 02 11 50.8 +0.6**
baz=19,slow=2.4
KRUC Moravsky 149.21 340 *e*PKP **PKPbc 02 11 43.4 +0.1**
KRUC *e* 02 11 50.9
NKC Novy Kostel 149.22 346 ⇑ *e*PKP **PKiKP 02 11 43.8 -0.3**
NKC *e*PKPAB **PKPab 02 11 50.6 +0.2**
DEV Deva 149.24 330 ⇑P **PKiKP 02 11 43.9 -0.4**
TREC Trest 149.28 342 ⇑ *e*PKP **PKPbc 02 11 43.9 +0.4**
BSZH Besenyszg 149.30 334 *e*PKiKP **PKPbc 02 11 43.9 +0.4**
COPA Copaceanca 149.30 325 ⇑P **PKPbc 02 11 43.6 0.0**
PBCC Pribram 149.34 344 ⇑ *e*PKP **PKPbc 02 11 44.0 +0.4**
PBCC *e*PKPAB **PKPab 02 11 50.9 0.0**
SMOL Smolenice 149.35 339 *e*PKP **PKiKP 02 11 44.7 +0.3**
SMOL *e* 02 11 51.9
SZH Strazhica 149.48 323 P **PKPbc 02 11 44.3 +0.2**
SIRR Siria 149.52 332 ⇑P **PKiKP 02 11 44.8 -0.1**
MODS Modra-Piesok 149.53 339 *e*PKP **PKPbc 02 11 44.0 -0.1**
MODS *e* 02 11 51.5
MANZ Manzenberg 149.53 346 *e*PKPbc **PKiKP 02 11 44.6 -0.2**
baz=19,slow=2.4
ZIMR 149.54 324 ⇑P **PKPbc 02 11 44.5 +0.3**
JMB Yambol 149.60 321 P **PKPbc 02 11 44.5 +0.1**
BUD Budapest 149.65 336 *e*PKiKP **PKPbc 02 11 44.7 +0.3**
GZR Gura Zlata 149.66 329 ⇑PKIKP **PKPbc 02 11 44.6 0.0**
GZR Gura Zlata 149.66 329 ⇑P **PKPbc 02 11 44.6 0.0**
ROTZ Rotzenmuhle 149.71 346 *e*PKPbc **PKiKP 02 11 44.9 -0.3**
baz=19,slow=2.4
ELND Elena 149.73 323 ⇑P **PKiKP 02 11 45.2 -0.2**
ZST Bratislava 149.74 339 *e*PKP **PKiKP 02 11 44.9 -0.3**
ZST *e* 02 11 52.8
VLAD Vladila 149.83 326 ⇑P **PKiKP 02 11 45.5 -0.1**
EDRB Edirne 149.88 320 *e*P **PKPbc 02 11 44.2 -0.9**
MEM Membach 149.91 354 PKiKP **PKiKP 02 11 45.3 -0.2**
MEM Membach 149.91 354 PKPab **PKPab 02 11 53.4 +0.2**
KHC Kasperske Hory 149.96 344 ⇑ *e*PKP **PKiKP 02 11 45.6 -0.1**
KHC *e*PKPAB **PKPab 02 11 54.0 +0.5**
KHC Kasperske Hory 149.96 344 PKPbc 02 11 45.2 0.0
BSTI Sart Tilman 149.97 355 PKiKP **PKiKP 02 11 45.6 -0.1**
BSTI PKPab **PKPab 02 11 53.8 +0.3**
TNS Taunus Mts 149.99 351 *e*PKPbc **PKiKP 02 11 45.6 -0.2**
baz=19,slow=2.4
TNS *e*PKPab **PKPab 02 11 53.6 0.0**
baz=19,slow=2.4
GRF Grafenberg Arr 150.00 347 *e*PKPbc **PKiKP 02 11 45.6 -0.1**
baz=19,slow=2.4
GRF *e*PKPab **PKPab 02 11 54.1 +0.5**
baz=19,slow=2.4
BZS Buzias 150.04 331 ⇑P **PKPbc 02 11 45.2 -0.2**
PLVB Pleven 150.12 325 ⇓P **PKPbc 02 11 45.8 +0.2**
WET Wettzell 150.13 345 *e*PKPab **PKPab 02 11 54.7 +0.5**
baz=19,slow=2.4
GEC2 GERESS Array S 150.19 343 *e*PKPbc **PKPbc 02 11 45.9 +0.1**
baz=19,slow=2.4
GEC2 GERESS Array S 150.19 343 PKiKP 02 11 46.1 -0.2
GERES GERESS Array B 150.19 343 PKP **PKPdf 02 11 40.2 +0.3**
comp=Z,1.1nm,0.9s,baz=7.4,slow=3.1,SNR=5.0
GERES PKPbc **PKPbc 02 11 45.8 +0.1**
comp=Z,8.2nm,0.8s,baz=31,slow=2.4,SNR=56
HERR Herculane 150.21 329 ⇑P **PKPbc 02 11 46.0 +0.2**
BMRD Maredsous 150.32 355 PKiKP **PKiKP 02 11 46.2 -0.1**
BMRD PKPab **PKPab 02 11 55.0 +0.2**
SOP Sopron 150.37 339 *e*PKiKP **PKPbc 02 11 46.0 0.0**
CONA Conrad Observa 150.38 340 *i* PKiKP **PKiKP 02 11 46.6 -0.1**
comp=Z,11nm,0.7s,SNR=8.4
CONA *i* PKPab **PKPab 02 11 56.2 +0.9**
comp=Z,6.6nm,0.8s
PUNG Punghina 150.39 328 ⇑P **PKPbc 02 11 46.1 -0.1**
BANR Banloc 150.43 331 ⇓P **PKiKP 02 11 46.9 +0.2**
DIM Dimitrovgrad 150.47 322 P **PKPbc 02 11 46.5 0.0**
DOU Dourbes 150.54 356 PKiKP **PKiKP 02 11 46.8 0.0**
MANT Manisa 150.54 313 PKPbc 02 11 47.3 +0.2
MDVR Moldovita 150.62 330 ⇑P **PKPbc 02 11 47.0 +0.2**
LPK Lapseki 150.73 318 *e*P **PKPbc 02 11 46.1 -1.0**
KDZ Kurdzhali 150.79 321 P **PKPbc 02 11 46.9 -0.4**
WLF Walferdange 150.83 353 *e*PKPbc **PKiKP 02 11 47.8 +0.4**
baz=19,slow=2.4
WLF Walferdange 150.83 353 PKiKP **PKiKP 02 11 47.6 +0.1**
WLF PKPab **PKPab 02 11 57.7 +0.7**
ALN Alexandroupoli 150.87 319 PKIKP **PKPbc 02 11 46.5 -0.9**
ALN Alexandroupoli 150.87 319 PKPbc 02 11 46.5 -0.9
ENEZ Enez 150.90 319 *e*P **PKPbc 02 11 46.1 -1.4**
MOA Molln 150.94 342 *i* PKiKP **PKPbc 02 11 47.3 -0.1**
comp=Z,6.0nm,0.6s
ARSA Arzberg 151.09 340 *i* PKPdf **PKPdf 02 11 42.5 +1.2**
comp=Z,3.9nm,1.1s
ARSA *i* PKiKP **PKiKP 02 11 48.1 0.0**
comp=Z,5.3nm,0.8s
ARSA *i* PKPab **PKPab 02 11 55.6 -2.6**
comp=Z,11nm,1.5s
AYDB Zeytinkoy-Aydi 151.26 313 *e*P **PKPbc 02 11 47.9 -0.7**
GADA Gvkgeada 151.38 318 *e*P **PKPbc 02 11 47.5 -1.1**
VTS Vitosha 151.39 325 ⇑PKIKP **PKiKP 02 11 49.1 +0.1**
VTS Vitosha 151.39 325 ⇑P **PKiKP 02 11 49.1 +0.1**
FUR Fursnfeldbru 151.43 346 *e*PKPbc **PKiKP 02 11 48.7 -0.1**
baz=19,slow=2.4
FUR *e*PKPab **PKPab 02 12 00.1 +0.5**
baz=19,slow=2.4
RJOB Jochberg 151.45 344 *e*PKPab **PKPab 02 12 00.5 +0.6**
baz=19,slow=2.4
SOKA Soboth 151.75 340 *i* PKPbc **PKPbc 02 11 48.8 -0.6**
comp=Z,9.2nm,0.9s,SNR=5.6
PERS Pernice 151.76 340 *i* PKPbc **PKPbc 02 11 48.8 -0.6**
BFO Black Forest 151.84 350 PKiKP **PKiKP 02 11 49.6 0.0**
BFO Black Forest 151.84 350 *e*PKPbc **PKiKP 02 11 49.6 0.0**
baz=19,slow=2.4
BFO *e*PKPab **PKPab 02 12 01.3 -0.2**
baz=19,slow=2.4
BFO Black Forest 151.84 350 PKiKP 02 11 49.6 0.0
KBA Koelnbreinsper 151.90 342 *i* PKPbc **PKPbc 02 11 48.8 -1.0**
comp=Z,8.4nm,0.8s
OBKA Obir 152.05 340 *i* PKPbc **PKPbc 02 11 49.3 -0.8**
comp=Z,2.7nm,0.5s
WATA Walderalm 152.13 345 *i* PKiKP **PKPbc 02 11 49.9 -0.4**
comp=Z,7.5nm,0.6s
WATA *i* PKPab **PKPab 02 12 03.6 +0.8**
comp=Z,14nm,0.9s
UBR Ueberruh 152.14 347 *e*PKPbc **PKPbc 02 11 50.0 -0.2**
baz=19,slow=2.4
RETA Reutte 152.18 346 *i* PKiKP **PKPbc 02 11 50.2 -0.1**
comp=Z,5.8nm,0.7s
RETA *i* PKPab **PKPab 02 12 03.3 +0.4**
comp=Z,12nm,0.7s
WTTA Wattenberg 152.19 345 *i* PKiKP **PKiKP 02 11 50.6 0.0**
comp=Z,10nm,0.5s,SNR=5.1
WTTA *i* PKPab **PKPab 02 12 03.5 +0.4**
comp=Z,14nm,0.6s
MYKA Terra Mystica 152.22 342 *i* PKPbc **PKPbc 02 11 49.5 -0.8**
comp=Z,5.6nm,0.5s
MOTA Moosalm 152.24 346 *i* PKiKP **PKPbc 02 11 50.1 -0.4**
comp=Z,17nm,1.0s
MOTA *i* PKPab **PKPab 02 12 03.4 +0.1**
comp=Z,20nm,1.1s
SQTA Sankt Quirin 152.33 345 *i* PKiKP **PKPbc 02 11 50.5 -0.1**
comp=Z,12nm,0.8s
SQTA *i* PKPab **PKPab 02 12 04.1 +0.4**
comp=Z,11nm,1.1s
ABTA Abfaltersbach 152.44 343 *i* PKPbc **PKPbc 02 11 50.1 -0.8**
comp=Z,12nm,0.6s,SNR=7.9
LJU Ljubljana 152.47 340 *i* PKPbc **PKPbc 02 11 50.6 -0.3**
CRNS Crni Vrh 152.53 340 *i* PKPbc **PKPbc 02 11 50.3 -0.7**
DAVA Damuels 152.56 347 *i* PKiKP **PKPbc 02 11 51.2 0.0**
comp=Z,4.1nm,0.6s
DAVA *i* PKPab **PKPab 02 12 05.2 +0.6**
comp=Z,16nm,0.9s
BLY Banja Luka 152.63 335 ⇓P **PKiKP 02 11 52.4 +1.1**
BLY Banja Luka 152.63 335 PKPbc **PKiKP 02 11 51.3 0.0**
BLY **PKPab 02 12 05.2 +0.3**
FETA Feichten 152.63 346 *i* PKiKP **PKPbc 02 11 51.0 -0.4**
comp=Z,10nm,0.9s
CTI Castel Tesino 153.31 344 PKP2 **PKPab 02 12 07.9 0.0**
CTI 03 11 53.3
CTI Castel Tesino 153.31 344 PKPbc **PKiKP 02 11 53.3 +0.4**
CTI **PKPab 02 12 07.9 0.0**
LIT Litokhoron 153.49 322 PKP2 **PKPab 02 12 08.8 +0.1**
LIT 03 11 52.7
LIT Litokhoron 153.49 322 PKPbc 02 11 52.7 -0.5
LIT **PKPab 02 12 08.8 +0.1**
PDG Podgorica 153.56 329 ⇑P **PKPbc 02 11 53.0 -0.3**
TEOL Teolo 153.94 343 PKPab 02 12 10.6 +0.2
NRCA Norcia 155.78 338 PKPab 02 12 18.3 -0.2
INTR Introdacqua 156.22 336 PKPab 02 12 20.4 -0.1
ESDC Sonseca Array 160.55 12 PKPab **PKPab 02 12 39.3 0.0**
comp=Z,4.4nm,0.9s,baz=345,slow=5.0,SNR=12
KEST Kesra 163.42 336 PKPab **PKPab 02 12 52.5 +0.4**
comp=Z,6.0nm,0.9s,baz=14,slow=4.2,SNR=4.8
DBIC Dimbokro 164.85 156 PKPab **PKPab 02 12 59.8 +1.1**
comp=Z,3.6nm,0.9s,baz=203,slow=6.6,SNR=2.9
TORD Torodi Ar. Bea 172.49 183 PKP **PKPdf 02 12 02.4 -1.0**
comp=Z,1.8nm,0.8s,baz=273,slow=0.5,SNR=9.2
TORD **PKPab 02 13 32.4 0.0**
comp=Z,0.8nm,1.0s,baz=187,slow=4.0,SNR=4.2
TORD pPKPab **pPKPab 02 15 45.9 +3.3**
comp=Z,1.5nm,1.0s,baz=172,slow=2.4,SNR=4.9

IDC ***17*** *01:56:34.5±3.5, 8.4S×123.7E, h136km±30km, mb3.5/5, mb1 3.6/6, mb1mx3.4/43, mbtmp4.0/6, Error ellipse: s-maj=55.9km s-min=19.2km az=72.0*
NEIC ***17*** *01:56:34.2±1.6, 8.5S±0.1×123.8E±0.2, h136km±7km, mb4.2/5, Error ellipse: s-maj=37.3km s-min=17.1km az=69.0*

ISC 17 01:56:35.6±0.9, 8.7S±0.1×123.8E±0.2, h150km, n13, σ2.2 46/14, mb3.8/6, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**1.13**	**158**			**Pn**	**01 57 00.5**	**-1.2**
MTN	**Manton Dam**	**8.26**	**121**			**Pn**	**01 58 31.7**	**-0.9**
KNRA	**Kununurra**	**8.44**	**146**	Pn		**Pn**	**01 58 33.9**	**-1.0**
FITZ	**Fitzroy Crossi**	**9.50**	**170**	P		**Pn**	**01 58 46.3**	**-2.7**
	1.2nm,0.3s,baz=359,slow=9.4,SNR=17							
FITZ				S		Sn	02 00 27.0	-7.4
	3.7nm,0.3s,baz=150,slow=5.6,SNR=18							
WRA	**Warramunga Arr**	**15.10**	**139**	P		**Pn**	**02 00 00.2**	**-1.2**
	0.9nm,0.3s,baz=318,slow=13,SNR=21							
WRA				S		Sn	02 02 38.8	-10
	0.8nm,0.3s,baz=318,slow=26,SNR=5.9							
ASAR	**Alice Springs**	**17.73**	**148**	P		**Pn**	**02 00 35.0**	**+1.8**
	1.5nm,0.3s,baz=330,slow=13,SNR=13							
ASAR				S		**S**	**02 03 43.3**	**-5.2**
	0.3nm,0.3s,baz=321,slow=23,SNR=5.1							
ASAR				ScP		**ScP**	**02 08 26.3**	**+

H11S3	**WAKE ISLAND Hy**	**40.30**	**64**	T	T	03 41 38.7		
	baz=251,slow=75,SNR=40							
H11S2	**WAKE ISLAND Hy**	**40.31**	**64**	T	T	03 41 35.3		
	baz=251,slow=75,SNR=24							
H11S1	**WAKE ISLAND Hy**	**40.31**	**64**	T	T	03 41 34.2		
	baz=251,slow=75,SNR=17							
H11N1	**WAKE ISLAND Hy**	**40.88**	**63**	T	T	03 42 17.0		
	baz=250,slow=75,SNR=25							
H11N2	**WAKE ISLAND Hy**	**40.89**	**63**	T	T	03 42 17.1		
	baz=250,slow=75,SNR=12							
H11N3	**WAKE ISLAND Hy**	**40.89**	**63**	T	T	03 42 17.7		
	baz=250,slow=75,SNR=22							
SONM	**Songino Array**	**48.96**	**340**	P	P	02 59 35.7		+0.8
	0.2nm,0.4s,baz=151,slow=6.5,SNR=3.3							
MKAR	**Makanchi Array**	**59.59**	**325**	P	P	03 00 52.5		+0.1
	0.4nm,0.3s,baz=119,slow=7.8,SNR=13							

IDC ***17*** *02:52:46.2±1.9, 8˚.34S×106˚.87E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/42, mbtmp3.8/4, MS2.9/2, Ms1 2.9/2, ms1mx2.5/36, Error ellipse: s-maj=51.5km s-min=23.2km az=64.0*

DJA ***17*** *02:52:53.0±1.5, 8˚.S±8˚×107˚.7E±˚, h16km±10km, M4.6/12, mb5.1/2, MLv4.3/12*

NEIC ***17*** *02:52:55.6±1.4, 8˚.06S±0˚.08×107˚.40E±0˚.05, h54km±9km, mb4.2/2, Error ellipse: s-maj=11.5km s-min=7.5km az=169.0*

ISC 17 02:52:50.1±0.9, 8˚.22S±0˚.07×107˚.29E±0˚.05, h10km, n29, σ1s33/27, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.84**	**38**	P	**Pb**	**02 53 07.8**	**+1.0**
CISI				S	**Sb**	**02 53 17.2**	**-0.9**
CISI	**Cisompet, Garu**	**0.84**	**38**	Pn	**Pg**	**02 53 07.0**	**+0.8**
CNJI	**Cibinong**	**0.92**	**350**	P	**Pb**	**02 53 09.0**	**+0.9**
CNJI				S	**Sb**	**02 53 19.6**	**-0.8**
CMJI	**Cimerak**	**1.22**	**69**	P	**Pb**	**02 53 13.6**	**+0.3**
CMJI				S	**Sb**	**02 53 27.4**	**-1.8**
SKJI	**Sukabumi**	**1.41**	**329**	P	**Pn**	**02 53 16.5**	**+0.6**
LEM	**Lembang**	**1.42**	**13**	Pn	**Pn**	**02 53 17.1**	**+0.9**
	212nm,0.3s,baz=102,slow=4.8,SNR=35						
LEM				Sn	**Sb**	**02 53 33.5**	**-1.5**
	519nm,0.3s,baz=165,slow=16,SNR=21						
LEM	**Lembang**	**1.42**	**13**	P	**Pn**	**02 53 16.9**	**+0.8**
DBJI	**Dramaga**	**1.74**	**342**	P	**Pn**	**02 53 21.6**	**+1.2**
KPJI	**Karang Pucung**	**1.84**	**62**	P	**Pn**	**02 53 23.0**	**+1.2**
UGM	**Wanagama**	**3.21**	**85**	P	**Pn**	**02 53 41.6**	**+0.9**
UGM	**Wanagama**	**3.21**	**85**	Pn	**Pn**	**02 53 41.3**	**+0.6**
SMRI	**Semarang**	**3.33**	**70**	P	**Pn**	**02 53 44.3**	**+2.0**
SMRI	**Semarang**	**3.33**	**70**	Pn	**Pn**	**02 53 44.1**	**+1.8**
PCJI	**Pacitan**	**3.84**	**90**	P	**Pn**	**02 53 50.9**	**+1.5**
KASI	**Kota Agung**	**3.86**	**314**	P	**Pb**	**02 53 59.2**	**+0.9**
MDSI	**Maura Dua**	**4.83**	**320**	P	**Pn**	**02 54 04.2**	**+1.3**
MNAI	**Manna**	**5.77**	**311**	Pn	**Pn**	**02 54 18.3**	**+2.4**
PPSI	**Pulau Pagai**	**9.05**	**306**	P	**Pn**	**02 55 00.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**20.36**	**121**	P	**P**	**02 57 27.8**	**+0.7**
	6.9nm,0.8s,baz=315,slow=10.0,SNR=3.5						
FITZ				LR	LR	03 04 15.7	
	comp=Z,19nm,20.6s,baz=42,slow=33						
WRA	**Warramunga Arr**	**28.65**	**117**	P	**P**	**02 58 47.5**	**+0.2**
	0.2nm,0.5s,baz=288,slow=11,SNR=4.4						
H08S2	**Diego Garcia H**	**34.47**	**268**	T	T	03 36 38.1	
	baz=92,slow=76,SNR=7.1						
H08S3	**Diego Garcia H**	**34.48**	**268**	T	T	03 36 39.2	
	baz=92,slow=76,SNR=5.3						
H08S1	**Diego Garcia H**	**34.48**	**268**	T	T	03 36 36.5	
	baz=92,slow=76,SNR=2.4						
STKA	**Stephens Creek**	**39.62**	**131**	P	**P**	**03 00 22.4**	**+0.3**
	1.3nm,0.3s,baz=315,slow=9.8,SNR=6.9						
STKA	**Stephens Creek**	**39.62**	**131**	IAmb	IAmb	03 01 51.7	
	comp=Z,6.4nm,1.9s						
KSH	**Kashi**	**55.66**	**331**	P	P	03 02 32.3		+5.6
KSH				pmax	pmax			
	comp=Z,360nm,5.9s							
MKAR	**Makanchi Array**	**59.12**	**340**	P	**P**	**03 02 48.7**	**-2.2**
	comp=Z,0.2nm,0.5s,baz=138,slow=8.6,SNR=4.1							
AKTO	**Aktyubinsk**	**72.31**	**329**	LR	LR	03 43 40.8		
	comp=Z,12nm,18.3s,baz=300,slow=42							
TXAR	**Lajitas Array**	**144.13**	**50**	PKP	**PKPab**	**03 12 22.9**	**-1.8**	
	comp=Z,0.3nm,0.8s,baz=300,slow=1.4,SNR=2.6							

IDC 17 03:04:33.2±29.0, 24˚.98S×179˚.62E, h454km±282km, mb3.3/5, mb1 3.4/5, mb1mx3.1/22, mbtmp4.1/5, Error ellipse: s-maj=193.7km s-min=32.2km az=54.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.15**	**272**	P	P	03 10 14.4		+0.9
	3.3nm,0.4s,baz=85,slow=8.8,SNR=1.9							
STKA	**Stephens Creek**	**34.01**	**250**	P	P	03 10 37.4		-0.5
	1.2nm,0.4s,baz=108,slow=6.4,SNR=4.6							
ASAR	**Alice Springs**	**41.53**	**262**	P	P	03 11 39.9		+0.1
	0.5nm,0.4s,baz=94,slow=7.1,SNR=11							
WRA	**Warramunga Arr**	**42.00**	**267**	P	P	03 11 42.8		-0.7
	2.3nm,0.5s,baz=103,slow=8.0,SNR=16							
QSPA	**South Pole Qui**	**65.11**	**180**	P	P	03 14 27.7		0.0
	1.2nm,0.7s,baz=59,slow=5.9,SNR=5.9							
BRTR	**Keskin Array B**	**147.94**	**306**	PKPbc	PKPbc	03 23 26.3		-0.5
	0.2nm,0.6s,baz=130,slow=3.8,SNR=3.9							

IDC ***17*** *03:28:23.7±0.8, 60˚.42S×44˚.47W, h0km, mb4.1/7, mb1 4.1/8, mb1mx3.9/26, mbtmp4.1/8, ML3.3/1, MS3.3/5, Ms1 3.3/5, ms1mx3.0/25, Error ellipse: s-maj=33.0km s-min=20.7km az=42.0*

NEIC ***17*** *03:28:25.3±1.5, 60˚.4S±0˚.1×44˚.4W±0˚.3, h10km±2km, mb4.4/8, Error ellipse: s-maj=19.8km s-min=18.5km az=106.0*

ISC 17 03:28:25.1±0.7, 60˚.5S±0˚.1×44˚.4W±0˚.1, h10km, n29, σ0s79/23, mb4.2/7, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**7.51**	**38**	Pn	**Pn**	**03 30 14.5**	**-0.1**
PMSA	**Palmer Station**	**10.01**	**236**	LR	LR	03 34 00.4	
	comp=Z,98nm,21.0s,baz=120,slow=34						
VNA3	**Neumayer Olymp**	**17.53**	**142**	P	**Pn**	**03 32 28.0**	**-1.2**
VNA1	**Neumayer--Stat**	**17.78**	**140**	P	**Pn**	**03 32 32.2**	**-0.1**
SNAA	**Sanae**	**19.75**	**142**	P	**Pn**	**03 32 57.1**	**+1.0**
SNAA	**Sanae**	**19.75**	**142**	P	**Pn**	**03 32 56.4**	**+0.2**
	0.1nm,0.3s,baz=283,slow=9.9,SNR=9.3						
SNAA	**Sanae**	**19.75**	**142**	P	**P**	**03 32 54.4**	**-0.3**
SNAA				IAmb	IAmb	03 33 05.0	
	comp=Z,20nm,1.2s						
PLCA	**Paso Flores**	**25.48**	**309**	P	**P**	**03 33 53.8**	**+0.6**
	comp=Z,1.2nm,1.0s,baz=228,slow=8.8,SNR=2.9						
PLCA				LR	LR	03 43 15.9	
	comp=Z,55nm,20.3s,baz=186,slow=35						
QSPA	**South Pole Qui**	**29.79**	**180**	P	**P**	**03 34 32.3**	**+0.6**
	comp=Z,1.8nm,0.9s,baz=189,slow=6.8,SNR=3.1						
QSPA	**South Pole Qui**	**29.79**	**180**	IAmb	IAmb	03 34 39.9	
	comp=Z,10nm,1.2s						
MAW	**Mawson**	**41.78**	**147**	LR	LR	03 53 01.7	
	comp=Z,82nm,18.3s,baz=237,slow=35						
BDFB	**Brasilia**	**44.82**	**355**	LR	LR	03 54 44.1	
	comp=Z,13nm,19.5s,baz=167,slow=35						
SIV	**San Ignacio**	**46.01**	**337**	P	**P**	**03 36 48.3**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=208,slow=11,SNR=13						
SUR	**Sutherland**	**50.31**	**87**	P	**P**	**03 37 23.2**	**+1.4**
	comp=Z,3.6nm,0.9s,baz=198,slow=9.6,SNR=3.1						
BOSA	**Boshof**	**55.58**	**88**	P	**P**	**03 38 00.8**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=192,slow=9.3,SNR=3.4						
LBTB	**Lobatse**	**58.73**	**86**	P	**P**	**03 38 22.5**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=216,slow=6.7,SNR=4.8						
URZ	**Urewera**	**75.92**	**213**	LR	LR	04 07 47.8	
	comp=Z,64nm,19.1s,baz=182,slow=31						
TOA0	**Torodi Ar. Sit**	**82.03**	**45**	P	**P**	**03 40 45.7**	**+0.5**
TORD	**Torodi Ar. Bea**	**82.03**	**45**	P	**P**	**03 40 46.5**	**+1.3**
	comp=Z,3.9nm,1.0s,baz=212,slow=5.3,SNR=12						
TORD	**Torodi Ar. Bea**	**82.03**	**45**	IAmb	IAmb	03 40 47.7	
	comp=Z,3.4nm,1.0s						
AKASG	**Malin Array Be**	**125.55**	**49**	PKP	**PKPdf**	**03 47 23.7**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=228,slow=0.8,SNR=6.0						
FINES	**FINESS Array B**	**133.00**	**38**	PKP	**PKPdf**	**03 47 38.5**	**-0.5**
	comp=Z,3.4nm,1.0s,baz=167,slow=2.4,SNR=3.0						
YKA	**Yellowknife Ar**	**133.72**	**323**	PKP	**PKPdf**	**03 47 39.9**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=154,slow=1.1,SNR=3.9						
ILAR	**Eielson Array**	**146.16**	**311**	PKPbc	**PKPdf**	**03 48 03.1**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=150,slow=3.5,SNR=21						
MAKZ	**Makanchi**	**146.43**	**89**		**PKPdf**	**03 48 03.9**	**0.0**
MK31	**Makanchi Array**	**146.57**	**90**		**PKPdf**	**03 48 04.5**	**+0.4**
MKAR	**Makanchi Array**	**146.57**	**90**	PKPbc	**PKPbc**	**03 48 04.9**	**-0.8**
	comp=Z,1.8nm,0.8s,baz=234,slow=2.6,SNR=18						
KURBB	**Kurchatov Arra**	**147.27**	**81**	PKPbc	**PKPbc**	**03 48 06.6**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=236,slow=4.2,SNR=7.7						
KURK	**Kurchatov**	**147.37**	**81**		**PKPbc**	**03 48 06.6**	**-1.1**

NIED ***17*** *03:28:00, 24˚.60N×122˚.40E, h5km, Mw3.9 Best double couple: M0 7.53000×10^14 NP1:φs295.00000°, δ74.00000°, λ-37.00000°. NP2:φs37.00000°, δ54.00000°, λ-160.00000°.*

IDC ***17*** *03:28:46.7±1.1, 24˚.36N×122˚.05E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/54, mbtmp3.7/6, MS3.0/4, Ms1 3.0/4, ms1mx2.7/35, Error ellipse: s-maj=72.7km s-min=20.1km az=68.0*

TAP ***17*** *03:28:46.1, 24˚.71N×122˚.37E, h11km, ML4.2, C*

JMA ***17*** *03:28:46.9, 24˚.64N×122˚.40E, h35km±2km, M3.7*

ISC 17 03:28:46.0±1.1, 24˚.70N±0˚.02×122˚.40E±0˚.02, h7km±8km, n82, σ1s07/128, mb3.6/6, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.29**	**239**	P	**Pb**	**03 28 52.6**	**-0.9**
	baz=234						
EOS1				S	**Sb**	**03 28 57.9**	**-0.7**
	baz=234						
EGS		**0.45**	**289**	*e*P	**Pg**	**03 28 54.8**	**0.0**
	baz=289						
EGS				*e*S	**Sb**	**03 29 02.0**	**-1.3**
	baz=289						
TWB1	**Santiao Chiao**	**0.48**	**309**	P	**Pb**	**03 28 55.7**	**-1.2**
	baz=311						
TWB1				S	**Sg**	**03 29 01.9**	**+0.1**
	baz=311						
TWC	**Suao**	**0.51**	**260**	*i* P	**Pg**	**03 28 55.7**	**-0.2**
	baz=258						
TWC				*e*S	**Sb**	**03 29 04.8**	**-0.2**
	baz=258						
NTC	**Toucheng**	**0.54**	**287**	*e*P	**Pb**	**03 28 56.9**	**-1.0**
	baz=286						
NTC				*e*S	**Sb**	**03 29 04.9**	**-1.0**
	baz=286						
JYNG	**Yonagunijimaku**	**0.55**	**116**	P	**Pg**	**03 28 57.7**	**+1.0**
JYNG				S	**Sg**	**03 29 05.2**	**+1.3**
YOJ	**Yonaguni jima**	**0.60**	**113**	P	**Pg**	**03 28 58.2**	**+0.5**
	baz=112						
YOJ				*e*S	**Sg**	**03 29 07.1**	**+1.6**
	baz=112						
YOJ	**Yonaguni jima**	**0.60**	**113**	P	**Pg**	**03 28 58.5**	**+0.8**
YOJ				S	**Sg**	**03 29 06.9**	**+1.4**
NANB	**Nanao**	**0.65**	**246**	P	**Pg**	**03 28 58.4**	**-0.2**
	baz=243						
NANB				S	**Sb**	**03 29 08.2**	**-0.8**
	baz=243						
ENA	**Nanau**	**0.66**	**246**	P	**Pg**	**03 28 58.9**	**+0.1**
	baz=243						
ENA				*e*S	**Sb**	**03 29 08.9**	**-0.3**
	baz=243						
TWE	**Neicheng**	**0.67**	**272**	P	**Pg**	**03 28 58.7**	**-0.2**
	baz=271						
TWE				S	**Sb**	**03 29 09.2**	**-0.3**
	baz=271						
NWF	**Wu-fen Shan**	**0.67**	**303**	*e*P	**Pb**	**03 28 59.4**	**-0.8**
	baz=304						
NWF				*e*S	**Sb**	**03 29 09.8**	**+0.1**
	baz=304						
WFSB	**Wu-fen Shan**	**0.67**	**303**	P	**Pb**	**03 28 59.6**	**-0.5**
	baz=304						
WFSB				S	**Sb**	**03 29 09.5**	**-0.2**
	baz=304						
SLBB	**Yuanshan**	**0.70**	**275**	*e*P	**Pg**	**03 28 58.7**	**-0.7**
	baz=274						
SLBB				*e*S	**Sb**	**03 29 09.5**	**-1.0**
	baz=274						
ENTT	**Nioudou**	**0.76**	**266**	*i* P	**Pb**	**03 29 00.7**	**-1.0**
	baz=264						
ENTT				*e*S	**Sb**	**03 29 11.8**	**-0.5**
	baz=264						
TWA	**Mucha**	**0.79**	**291**	P	**Pn**	**03 29 02.5**	**-1.2**
	baz=290						
TWA				S	**Sb**	**03 29 12.6**	**-0.5**
	baz=290						
NDT	**Datong Townshi**	**0.81**	**263**	*i* P	**Pb**	**03 29 01.7**	**-0.8**
	baz=262						
NDT				*e*S	**Sb**	**03 29 12.7**	**-1.1**
	baz=262						
NWLT	**Wulai**	**0.82**	**276**	P	**Pb**	**03 29 02.5**	**-0.1**
	baz=275						
NWLT				*e*S	**Sb**	**03 29 12.7**	**-1.2**
	baz=275						
NHDH	**Xindian Distri**	**0.84**	**288**	P	**Pn**	**03 29 03.3**	**-1.0**
	baz=288						
NHDH				S	**Sb**	**03 29 13.5**	**-0.9**
	baz=288						
TAP1	**Taipei**	**0.87**	**293**	*e*P	**Pb**	**03 29 02.8**	**-0.6**
	baz=292						
TAP1				*e*S	**Sb**	**03 29 14.7**	**-0.5**
	baz=292						
TATO	**Taipei**	**0.87**	**288**	P	**Pb**	**03 29 03.5**	**-0.1**
	baz=288						
TATO				S	**Sb**	**03 29 14.7**	**-0.7**
	baz=288						
YM01	**YM01**	**0.88**	**301**	P	**Pb**	**03 29 03.3**	**-0.3**
	baz=301						
YM01				S	**Sb**	**03 29 15.1**	**-0.4**
	baz=301						
TAP	**Taipei**	**0.88**	**293**	*e*S	**Sb**	**03 29 15.5**	**-0.1**
	baz=292						
YM08	**YM08**	**0.88**	**304**	P	**Pn**	**03 29 03.8**	**-1.1**
	baz=304						
YM11	**YM11**	**0.88**	**302**	*i* P	**Pn**	**03 29 03.9**	**-1.1**
	baz=302						
YM10	**YM10**	**0.89**	**301**	*i* P	**Pb**	**03 29 03.4**	**-0.4**
	baz=301						
YM05	**YM05**	**0.89**	**302**	P	**Pb**	**03 29 03.4**	**-0.5**
	baz=301						
YM05				*e*S	**Sg**	**03 29 13.8**	**-0.9**
	baz=301						
NACB	**Ninganchiao**	**0.90**	**235**	*i* P	**Pg**	**03 29 03.1**	**-0.3**
	baz=233						
YM04	**YM04**	**0.91**	**300**	P	**Pb**	**03 29 03.8**	**-0.3**
	baz=300						
YM04				*e*S	**Sg**	**03 29 13.8**	**-1.4**
	baz=300						
TWY	**Chenhua**	**0.93**	**308**	P	**Pn**	**03 29 04.4**	**-1.1**
	baz=309						
TWY				*e*S	**Sb**	**03 29 16.8**	**-0.2**
	baz=309						
YHNB	**Yeheng**	**0.93**	**268**	*i* P	**Pb**	**03 29 04.1**	**-0.5**
	baz=267						
NSK	**Sanguang**	**0.95**	**269**	P	**Pb**	**03 29 04.3**	**-0.6**
	baz=267						
NSK				*e*S	**Sb**	**03 29 16.5**	**-1.2**
	baz=267						
TWD	**Chiawan**	**0.96**	**230**	P	**Pg**	**03 29 04.4**	**-0.1**
	baz=228						
TWD				*e*S	**Sn**	**03 29 18.1**	**-1.7**
	baz=228						
ETLH	**Xiulin Townshi**	**0.97**	**240**	*i* P	**Pg**	**03 29 04.4**	**-0.3**
	baz=238						
NNS	**Nan Shan**	**0.97**	**255**	P	**Pg**	**03 29 04.3**	**-0.4**
	baz=253						
NNS				*e*S	**Sb**	**03 29 17.9**	**-0.5**
	baz=253						
PCYT	**Pengchaiyu**	**0.97**	**342**	*e*P	**Pn**	**03 29 06.1**	**-0.1**
	baz=344						
TWS1	**Kuangyinshan**	**0.98**	**294**	*e*P	**Pb**	**03 29 04.6**	**-0.7**
	baz=294						
TWS1				*e*S	**Sb**	**03 29 17.9**	**-0.6**
	baz=294						
WLTB	**Daxi**	**1.05**	**279**	*e*P	**Pn**	**03 29 07.7**	**+0.4**
	baz=278						
NCUH	**Zhongli**	**1.14**	**284**	P	**Pn**	**03 29 07.7**	**-0.7**
	baz=283						
WHF	**Hehuan Shan**	**1.17**	**242**	P	**Pg**	**03 29 08.3**	**-0.3**
	baz=240						
WHF				*e*S	**Sb**	**03 29 23.7**	**-0.8**
	baz=240						
TDCB	**Techi**	**1.22**	**249**	P	**Pg**	**03 29 09.2**	**-0.1**
	baz=247						
LIOB	**Emei**	**1.26**	**268**	*e*P	**Pg**	**03 29 10.0**	**-0.2**
	baz=267						
IRIF	**Iriomote-Funau**	**1.26**	**106**	P	**Pn**	**03 29 08.3**	**-1.8**
IRIF				*e*S	**Sb**	**03 29 24.1**	**-2.6**
NHW	**Xinwu Township**	**1.27**	**284**	P	**Pg**	**03 29 09.9**	**-0.4**
	baz=283						
NHW				*e*S	**Sn**	**03 29 26.5**	**-1.0**
	baz=283						
NSTT	**Nanjuang**	**1.28**	**267**	*e*P	**Pg**	**03 29 10.3**	**-0.2**
	baz=266						
NSTT				*e*S	**Sn**	**03 29 26.5**	**-1.2**
	baz=266						
CHGB	**Renai**	**1.29**	**241**	P	**Pg**	**03 29 10.8**	**0.0**
	baz=239						
SBCB	**Hsinchu**	**1.29**	**274**	P	**Pg**	**03 29 10.3**	**-0.4**
	baz=273						
OWD	**Renai**	**1.34**	**237**	P	**Pg**	**03 29 11.6**	**-0.2**
	baz=235						
WHP	**Taichung City**	**1.39**	**253**	P	**Pg**	**03 29 12.8**	**+0.1**
	baz=251						
HATJ	**Hateruma jima**	**1.43**	**116**	P	**Pn**	**03 29 11.2**	**-1.2**
HATJ				S	**Sn**	**03 29 28.4**	**-3.1**
NMLH	**Miaoli**	**1.47**	**264**	*e*P	**Pb**	**03 29 12.9**	**-0.9**
	baz=263						
VWDT	**VWDT**	**1.49**	**231**	*e*P	**Pb**	**03 29 13.7**	**-0.3**
	baz=229						
VWDT				*e*S	**Sg**	**03 29 33.2**	**-0.7**
	baz=229						
HGSD	**Ruisui**	**1.50**	**217**	P	**Pg**	**03 29 14.8**	**+0.1**
	baz=215						
DPDB	**Guoxing**	**1.50**	**244**	*e*P	**Pb**	**03 29 13.5**	**-0.7**
	baz=243						
DPDB				*e*S	**Sg**	**03 29 33.4**	**-0.9**
	baz=243						
NSY	**Sanyi**	**1.52**	**260**	*e*P	**Pb**	**03 29 13.5**	**-1.1**
	baz=258						
NSY				*e*S	**Sb**	**03 29 33.3**	**-0.8**
	baz=258						
TWQ1	**Liyutan**	**1.52**	**257**	*e*P	**Pb**	**03 29 13.7**	**-0.9**
	baz=256						
TWQ1				*e*S	**Sb**	**03 29 33.6**	**-0.5**
	baz=256						
JKRS	**Kuro-shima**	**1.54**	**107**	P	**Pn**	**03 29 12.6**	**-1.3**
JKRS				S	**Sn**	**03 29 31.3**	**-2.8**
SMLT	**Sun Moon Lake**	**1.59**	**240**	*e*P	**Pb**	**03 29 14.9**	**-1.0**
	baz=238						
SMLT				*e*S	**Sb**	**03 29 35.7**	**-0.6**
	baz=238						
SSLB	**Suanglung**	**1.60**	**236**	*e*P	**Pg**	**03 29 16.5**	**-0.3**
	baz=234						
TYC	**Yuchr**	**1.62**	**241**	*e*P	**Pb**	**03 29 15.1**	**-1.1**
	baz=239						
TYC				*e*S	**Sb**	**03 29 36.1**	**-0.7**
	baz=239						
JIJ	**Ishigaki jima**	**1.62**	**102**	P	**Pn**	**03 29 13.3**	**-1.8**
JIJ				S	**Sn**	**03 29 33.1**	**-3.1**
TCU	**Taichung**	**1.67**	**251**	*e*P	**Pn**	**03 29 15.7**	**+0.1**
	baz=250						
TCU				*e*S	**Sb**	**03 29 36.9**	**-1.4**
	baz=250						
TWF1	**Yuli**	**1.68**	**217**	*e*P	**Pn**	**03 29 15.8**	**0.0**
	baz=215						
TWF1				*e*S	**Sg**	**03 29 38.9**	**-1.1**
	baz=215						
JISG	**Ishigakijimahi**	**1.74**	**93**	P	**Pn**	**03 29 16.0**	**-0.7**
ALS	**Alishan**	**1.88**	**231**	*e*P	**Pb**	**03 29 20.8**	**-0.1**
	baz=230						
CHN5	**Tsauling**	**1.92**	**235**	*e*P	**Pn**	**03 29 19.7**	**+0.5**
	baz=234						
CHN5				*e*S	**Sb**	**03 29 44.1**	**-1.6**
	baz=234						
JTJ	**Tarama**	**2.09**	**91**	P	**Pn**	**03 29 21.2**	**-0.4**
JTJ				*e*S	**Sn**	**03 29 45.5**	**-2.4**
CHN4	**Tsaushan**	**2.13**	**231**	*e*P	**Pn**	**03 29 22.8**	**+0.8**
	baz=230						
CHN4				*e*S	**Sb**	**03 29 49.4**	**-2.2**
	baz=230						
TPUB	**Ta-pu**	**2.14**	**230**	*e*P	**Pb**	**03 29 24.4**	**-0.7**
	baz=228						
WTP	**Ta-pu**	**2.18**	**229**	*e*P	**Pn**	**03 29 23.6**	**+0.8**
	baz=227						
WTP				*e*S	**Sn**	**03 29 50.8**	**+0.6**
	baz=227						
TWK	**Hsinying**	**2.26**	**231**	*e*P	**Pn**	**03 29 24.6**	**+0.7**
	baz=230						
TWK				*e*S	**Sn**	**03 29 52.5**	**+0.4**
	baz=230						
CHN1	**Nanshi**	**2.28**	**229**	*e*P	**Pn**	**03 29 25.1**	**+0.9**
	baz=228						
CHN1				*e*S	**Sn**	**03 29 53.4**	**+0.7**
	baz=228						
KSRS	**Korea Array**	**13.56**	**19**	Pn	**P**	**03 32 09.2**	**+1.2**
	0.1nm,0.3s,baz=195,slow=13,SNR=2.5						
KSRS				LR	LR	03 37 50.7	
	comp=Z,63nm,20.6s,baz=210,slow=39						
DAV	**Davao City (W)**	**17.79**	**170**	LR	LR	03 39 26.9	
	comp=Z,56nm,20.4s,baz=7.5,slow=36						
MJAR	**Matsushiro Arr**	**17.98**	**45**	LR	LR	03 40 36.7	
	comp=Z,31nm,20.5s,baz=225,slow=38						
KLR	**Kul'dur**	**25.56**	**14**	LR	LR	03 44 26.6	
	comp=Z,51nm,19.3s,baz=216,slow=36						
SONM	**Songino Array**	**26.34**	**335**	P	**P**	**03 34 24.4**	**+1.6**
	1.2nm,0.7s,baz=161,slow=9.2,SNR=6.2						
MKAR	**Makanchi Array**	**38.75**	**315**	P	**P**	**03 36 13.2**	**+2.1**
	0.2nm,0.5s,baz=94,slow=10,SNR=2.0						
ZALV	**Zalesovo Beam**	**40.42**	**326**	P	**P**	**03 36 28.6**	**+3.7**
	0.4nm,0.3s,baz=108,slow=8.5,SNR=2.0						
WRA	**Warramunga Arr**	**45.87**	**164**	P	**P**	**03 37 08.5**	**-0.7**
	2.0nm,0.8s,baz=345,slow=8.2,SNR=6.4						
ASAR	**Alice Springs**	**49.36**	**166**	P	**P**	**03 37 36.1**	**-0.2**
	0.8nm,0.7s,baz=343,slow=6.8,SNR=11						
YKA	**Yellowknife Ar**	**82.06**	**23**	P	P	03 41 11.5		+4.6
	0.2nm,0.4s,baz=316,slow=5.2,SNR=3.7							

IDC 17 03:30:36.4±2.1, 4˚.38S×151˚.11E, h0km, mb3.2/2, mb1 3.5/2, mb1mx3.2/35, mbtmp3.3/2, Error ellipse: s-maj=69.6km s-min=11.2km az=168.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**0.91**	**86**	Pg	Pb	03 30 55.2		+0.2
	127nm,0.3s,baz=147,

VRF	**Varrio**	**1.60**	**275**	PG	Pn	03 32 13.0	-0.8
VRF				MSG		03 32 33.3	
	comp=Z,8.4nm,0.2s						
VRF				SG	Sn	03 32 34.1	-0.9
KU6	**Riekki**	**2.25**	**225**	PG	Pn	03 32 23.6	+0.8
KU6				MSG		03 32 50.4	
	comp=Z,3.6nm,0.2s						
KU6				SG	Sn	03 32 52.5	+1.3
MSF	**Maaselka**	**2.57**	**229**	PG	Pn	03 32 29.2	+2.0
MSF				SG	Sb	03 33 03.8	+0.3
SGF	**Sodankyl**	**2.79**	**269**	PB	Pb	03 32 33.7	-1.3
	baz=80						
SGF				SB	Sb	03 33 09.4	-0.3
RNF	**Rovaniemi**	**3.21**	**254**	PN	Pn	03 32 35.8	-0.1
	baz=72						
RNF				SN	Sn	03 33 15.9	+1.0
KEV	**Kevo**	**3.25**	**313**	Pn	Pn	03 32 36.9	+0.5
KEV				Sn	Sn	03 33 15.1	-0.6
KEV	**Kevo**	**3.25**	**313**	PN	Pn	03 32 36.9	+0.5
	baz=129						
KEV				SN	Sn	03 33 16.0	+0.4
KEV	**Kevo**	**3.25**	**313**	Pn	Pn	03 32 36.9	+0.5
KEV				Sn	Sn	03 33 15.1	-0.6
ARA0	**ARCESS Array S**	**3.57**	**306**	Pn	Pn	03 32 40.8	-0.1
	baz=122,slow=16						
ARA0				Pg	Pb	03 32 49.2	+1.0
	baz=116,slow=16						
ARA0				Sn	Sn	03 33 22.2	-1.5
	baz=125,slow=28						
ARA0				Lg	Lg	03 33 32.8	
	baz=116,slow=37						
ARA0	**ARCESS Array S**	**3.57**	**306**	Pn	Pn	03 32 40.8	-0.1
	baz=122,slow=16						
ARA0				Pg	Pb	03 32 49.2	+1.0
	baz=116,slow=16						
ARA0				Sn	Sn	03 33 22.2	-1.5
	baz=125,slow=28						
ARE0	**ARCESS Array S**	**3.57**	**306**	PN	Pn	03 32 40.7	-0.2
	baz=121						
HEF	**Hetta**	**3.88**	**286**	Pn	Pn	03 32 44.8	-0.3
HEF				Sn	Sn	03 33 31.1	-0.2
HEF				Lg	Lg	03 33 45.2	
HEF	**Hetta**	**3.88**	**286**	PN	Pn	03 32 45.4	+0.3
HEF	**Hetta**	**3.88**	**286**	Pn	Pn	03 32 44.8	-0.3
HEF				Sg	Sg	03 33 45.2	-3.5
TOF	**Tornio**	**4.06**	**251**	PG	Pb	03 32 57.3	+0.8
LANU	**Lannavaara**	**4.48**	**280**	PN	Pn	03 32 52.3	-1.1
FIA0	**FINESS Array S**	**7.07**	**212**	Sn	Sn	03 34 45.4	-4.3
FIA0				Lg	Lg	03 35 18.4	
	baz=17,slow=28						
FIA0	**FINESS Array S**	**7.07**	**212**	Sn	Sn	03 34 45.4	-4.3
SPA0	**Spitsbergen Ar**	**11.65**	**342**	Pn	Pn	03 34 28.6	-2.9
	baz=143,slow=16						
SPA0	**Spitsbergen Ar**	**11.65**	**342**	Pn	Pn	03 34 28.6	-2.9
	baz=143,slow=16						

*IDC **17** 04:01:08.1±0.8,6°.66N×72°.83W,h162km±10km,mb2.9/1, mb1 3.4/3,mb1mx2.9/29,mbtmp3.7/3,Error ellipse: s-maj=53.9km s-min=7.8km az=132.0*
*RSNC **17** 04:01:09.6±1.0,6°.85N×73°.14W,h145km±5km,ML3.3, Mw3.4*
*FUNV **17** 04:01:09.0,6°.74N×73°.01W,h16km,MW3.3*
ISC 17 04:01:07.4±0.9,6°.87N±0°.03×73°.05W±0°.03,h156km±7km, n55,σ1°.56/87,4C-4D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.30**	**206**	↑*eP*		**Pn**	**04 01 29.5**	**+0.4**
BARC				*eS*		**Sn**	**04 01 44.1**	**-1.5**
BARC				*i*			04 01 47.2	
	comp=Z,689nm,0.4s							
PAMC	**Pamplona, Colo**	**0.58**	**37**	↓*eP*		**Pn**	**04 01 32.1**	**+1.6**
PAMC				*i*			04 01 51.0	
	comp=Z,546nm,0.6s							
BRRC	**Barranca, Sant**	**0.70**	**290**	↓*iP*		**Pn**	**04 01 31.2**	**+0.6**
BRRC				*eS*		**Sn**	**04 01 47.2**	**-1.0**
BRRC				*i*			04 01 52.4	
	comp=Z,224nm,0.2s							
RUSC	**La Rusia**	**0.97**	**182**	*eP*		**Pn**	**04 01 33.5**	**+0.4**
RUSC				*eS*		**Sn**	**04 01 51.9**	**-0.9**
RUSC				*i*			04 01 54.0	
	comp=Z,422nm,0.3s							
TAMC	**Tame, Arauca**	**1.32**	**109**	↓*iP*		**Pn**	**04 01 37.8**	**+2.1**
TAMC				*eS*		**Sn**	**04 01 59.1**	**+1.7**
TAMC				*i*			04 02 08.7	
	comp=Z,115nm,0.6s							
OCAC	**Ocana**	**1.39**	**349**	*eP*		**Pn**	**04 01 37.3**	**+0.8**
OCAC				*i*			04 02 00.2	
	comp=Z,216nm,0.7s							
PTBC	**PUERTO BERRIO,**	**1.44**	**257**	*eP*		**Pn**	**04 01 36.1**	**-0.7**
PTBC				*eS*		**Sn**	**04 01 57.6**	**-1.7**
PTBC				*i*			04 02 02.4	
	comp=Z,272nm,0.3s							
SPBC	**San Pablo de B**	**1.58**	**220**	*eP*		**Pn**	**04 01 38.5**	**+0.1**
SPBC				*i*			04 02 07.7	
	comp=Z,420nm,0.3s							
ZARC	**Zaragoza, Cauc**	**1.90**	**289**	*eP*		**Pn**	**04 01 41.7**	**0.0**
ZARC				*i*			04 02 13.2	
	comp=Z,248nm,0.3s							
SMLC	**San Martn de**	**2.17**	**332**	*eP*		**Pn**	**04 01 45.2**	**+0.3**
SMLC				*i*			04 02 21.1	
	comp=Z,276nm,0.1s							
NORC	**Norcasia**	**2.23**	**234**	↓*eP*		**Pn**	**04 01 45.6**	**0.0**
NORC				*i*			04 02 16.7	
	comp=Z,195nm,0.2s							
CHIC	**Chingaza**	**2.33**	**197**	↑*eP*		**Pn**	**04 01 47.6**	**+0.4**
CHIC				*i*			04 02 23.8	
	comp=Z,100nm,0.3s							
ROSC	**El Rosal**	**2.38**	**212**	P		**Pn**	**04 01 49.7**	**+1.9**
	comp=Z,59nm,0.3s,baz=45,slow=18,SNR=210							
ROSC				S		**Sn**	**04 02 19.2**	**+0.3**
	comp=Z,82nm,0.3s,baz=138,slow=22,SNR=8.2							
ROSC	**El Rosal**	**2.38**	**212**	↑*eP*		**Pn**	**04 01 49.5**	**+1.8**
ROSC				*eS*		**Sn**	**04 02 18.8**	**-0.1**
ROSC				*i*			04 02 26.4	
	comp=Z,254nm,0.7s							
HELC	**Santa Helena**	**2.55**	**255**	*eP*		**Pn**	**04 01 49.7**	**-0.1**
HELC				*eS*		**Sn**	**04 02 21.6**	**-0.9**
HELC				*i*			04 02 29.1	
	comp=Z,137nm,0.2s							
HELC	**Santa Helena**	**2.55**	**255**	*eP*		**Pn**	**04 01 49.7**	**-0.1**
HELC				*eS*		**Sn**	**04 02 19.5**	**-3.0**
VIGV	**El Vigia**	**2.57**	**40**	*eP*		**Pn**	**04 01 51.2**	**+1.5**
VIGV				*eS*		**Sn**	**04 02 21.7**	**-0.8**
SOCV	**Socops**	**2.59**	**57**	*eP*		**Pn**	**04 01 51.5**	**+1.5**
SOCV				*eS*		**Sn**	**04 02 21.7**	**-1.2**
UREC	**San Jos de Ur**	**2.61**	**290**	*eP*		**Pn**	**04 01 49.8**	**-0.5**
UREC				*eS*		**Sn**	**04 02 20.1**	**-3.2**
UREC				*i*			04 02 29.6	
	comp=Z,129nm,0.4s							
PTGC	**Puerto Gaitan,**	**2.81**	**161**	↑*eP*		**Pn**	**04 01 52.8**	**+0.2**
PTGC				*eS*		**Sn**	**04 02 26.1**	**-1.6**
PTGC				*i*			04 02 28.6	
	comp=Z,105nm,0.4s							
VILC	**Villavicencio,**	**2.81**	**193**	*eP*		**Pn**	**04 01 53.1**	**+0.3**
VILC				*eS*		**Sn**	**04 02 28.1**	**+0.1**
VILC				*i*			04 02 37.0	
	comp=Z,141nm,0.4s							
GUY2C	**Guyana, Caldas**	**2.82**	**235**	*eP*		**Pn**	**04 01 54.3**	**+1.0**
GUY2C				*i*			04 02 35.8	
	comp=Z,162nm,0.6s							
CODC	**Agustn Codazz**	**3.07**	**353**	*eP*		**Pn**	**04 01 56.5**	**+0.6**
CODC				*eS*		**Sn**	**04 02 32.2**	**-1.4**
CODC				*i*			04 02 45.1	
	comp=Z,30nm,0.5s							
CBOC	**Ciudad Bolivar**	**3.11**	**251**	*eP*		**Pn**	**04 01 57.6**	**+1.0**
CBOC				*eS*		**Sn**	**04 02 33.5**	**-1.2**
CBOC				*i*			04 02 45.3	
	comp=Z,39nm,0.5s							
SDV	**Santo Domingo**	**3.12**	**50**	P		**Pn**	**04 01 58.8**	**+2.0**
	comp=Z,9.4nm,0.3s,baz=209,slow=4.7,SNR=63							
SDV				S		**Sn**	**04 02 35.8**	**+0.8**
	comp=Z,25nm,0.3s,baz=29,slow=17,SNR=38							
SDV	**Santo Domingo**	**3.12**	**50**	*eP*		**Pn**	**04 01 58.8**	**+2.0**
SDV				*eS*		**Sn**	**04 02 35.5**	**+0.5**
SDV	**Santo Domingo**	**3.12**	**50**	*eP*		**Pn**	**04 01 58.0**	**+1.2**
SDV				*eS*		**Sn**	**04 02 34.1**	**-0.9**
DBBC	**Dabeiba**	**3.14**	**273**	*eP*		**Pn**	**04 01 57.2**	**+0.3**
DBBC				*i*			04 02 37.3	
	comp=Z,85nm,0.5s							
ARGC	**Ariguani, Magd**	**3.20**	**338**	*eP*		**Pn**	**04 01 59.4**	**+1.9**
ARGC				*i*			04 02 48.0	
	comp=Z,40nm,0.2s							
TOLC	**Tolima**	**3.20**	**225**	*eP*		**Pn**	**04 01 59.2**	**+1.3**
ANIL	**Santa Ana**	**3.33**	**225**	*eP*		**Pn**	**04 02 01.0**	**+1.5**
ELOV	**Elorza**	**3.54**	**88**	*eP*		**Pn**	**04 02 03.5**	**+1.6**
ELOV				*eS*		**Sn**	**04 02 40.9**	**-3.4**
ORTC	**Ortega, Tolima**	**3.66**	**217**	*eP*		**Pn**	**04 02 03.5**	**-0.1**
ORTC				*i*			04 02 53.9	
	comp=Z,70nm,0.7s							
SJCC	**San Jacinto, C**	**3.67**	**325**	*eP*		**Pn**	**04 02 03.1**	**-0.6**
SJCC				*i*			04 02 48.7	
	comp=Z,39nm,0.6s							
PLMC	**San Jos del P**	**3.76**	**239**	*eP*		**Pn**	**04 02 05.5**	**+0.6**
PLMC				*eS*		**Sn**	**04 02 49.4**	**0.0**
TORV	**Torococo**	**3.87**	**46**	*eP*		**Pn**	**04 02 06.5**	**+0.2**
TORV				*eS*		**Sn**	**04 02 49.5**	**-2.5**
QARV	**Quebrada Arrib**	**4.15**	**37**	*eP*		**Pn**	**04 02 11.6**	**+1.7**
QARV				*eS*		**Sn**	**04 02 58.2**	**-0.3**
CURV	**Curarigua**	**4.37**	**44**	*eP*		**Pn**	**04 02 14.3**	**+1.5**
CURV				*eS*		**Sn**	**04 03 02.3**	**-1.4**
DABV	**Dabajuro**	**4.68**	**30**	*eP*		**Pn**	**04 02 18.7**	**+2.0**
DABV				*eS*		**Sn**	**04 03 10.5**	**-0.4**
MACC	**Macarena, Meta**	**4.76**	**190**	*eP*		**Pn**	**04 02 16.7**	**-1.1**
MACC				*i*			04 03 13.6	
	comp=Z,31nm,0.7s							
TEPV	**Terepaima**	**4.90**	**51**	*eP*		**Pn**	**04 02 21.2**	**+1.5**
TEPV				*eS*		**Sn**	**04 03 14.9**	**-1.2**
SIQV	**Siquisique**	**4.94**	**40**	*eP*		**Pn**	**04 02 21.2**	**+1.1**
SIQV				*eS*		**Sn**	**04 03 16.1**	**-0.9**
MALC	**Bahia Malaga**	**5.12**	**237**	*eP*		**Pn**	**04 02 24.5**	**+1.9**
BAUV	**El Baul**	**5.37**	**67**	*eP*		**Pn**	**04 02 25.2**	**-0.7**
BAUV	**El Baul**	**5.37**	**67**	*eS*		**Sn**	**04 03 24.9**	**-2.3**
BAUV	**El Baul**	**5.37**	**67**	*eP*		**Pn**	**04 02 25.5**	**-0.4**
BAUV				*eS*		**Sn**	**04 03 24.0**	**-3.2**
MAPV	**Macapo**	**5.41**	**57**	*eP*		**Pn**	**04 02 27.7**	**+1.2**
MAPV				*eS*		**Sn**	**04 03 26.4**	**-1.8**
PAYV	**Puerto Ayacuch**	**5.55**	**105**	*eP*		**Pn**	**04 02 28.3**	**0.0**
PAYV				*eS*		**Sn**	**04 03 26.9**	**-4.6**
MONV	**Montecano**	**5.90**	**31**	*eP*		**Pn**	**04 02 33.5**	**+0.7**
MONV				*eS*		**Sn**	**04 03 37.2**	**-2.5**
TURV	**Turiamo**	**6.26**	**55**	*eP*		**Pn**	**04 02 38.9**	**+1.2**
MERV	**Las Mercedes**	**7.09**	**70**	*eP*		**Pn**	**04 02 49.8**	**+1.0**
MERV				*eS*		**Sn**	**04 04 03.7**	**-4.7**
CUPV	**Cpira**	**7.85**	**66**	*eP*		**Pn**	**04 02 59.0**	**+0.1**
YKA	**Yellowknife Ar**	**63.24**	**340**	P		**P**	**04 11 20.6**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=136,slow=6.4,SNR=7.1							
ASAR	**Alice Springs**	**149.19**	**234**	PKPbc		**PKPbc**	**04 20 38.0**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=110,slow=4.0,SNR=2.5							
WRA	**Warramunga Arr**	**150.42**	**241**	PKPbc		**PKPbc**	**04 20 41.1**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=109,slow=2.5,SNR=6.2							

*NEIC **17** 04:03:44.8±1.7,18°.88N±0°.05×65°.15W±0°.08,h16km±17km, Error ellipse: s-maj=13.3km s-min=3.0km az=61.0*
*RSPR **17** 04:03:45.6,19°.01N×65°.09W,h18km±6km,MD2.7/6*
ISC 17 04:03:44.1±1.8,19°.0N±0°.1×65°.14W±0°.04,h22km±9km,n29, σ0s44/42,13C-3D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.74**	**138**	↓*eP*		**Pb**	**04 03 58.1**	**-0.1**
TBVI	**Tortola**	**0.74**	**138**	↓*eP*		**Pb**	**04 03 58.1**	**-0.1**
TBVI				*eS*		**Sb**	**04 04 08.1**	**+0.2**
TBVI	**Tortola**	**0.74**	**138**			**Pb**	**04 03 58.1**	**-0.1**
TBVI						**Sb**	**04 04 08.1**	**+0.2**
MTP	**Monte Pirata**	**0.95**	**205**	↑*eP*		**Pb**	**04 04 02.1**	**+0.2**
MTP	**Monte Pirata**	**0.95**	**205**	↑*eP*		**Pb**	**04 04 02.1**	**+0.2**
MTP				*eS*		**Sb**	**04 04 14.5**	**+0.4**
MTP	**Monte Pirata**	**0.95**	**205**			**Pb**	**04 04 02.1**	**+0.2**
MTP						**Sb**	**04 04 14.5**	**+0.4**
CBYP	**Canovanas**	**0.97**	**225**	↑*eP*		**Pb**	**04 04 02.0**	**-0.3**
CBYP	**Canovanas**	**0.97**	**225**	↑*eP*		**Pb**	**04 04 02.0**	**-0.3**
CBYP				*eS*		**Sb**	**04 04 13.6**	**-1.2**
CBYP	**Canovanas**	**0.97**	**225**			**Pb**	**04 04 02.0**	**-0.3**
CBYP						**Sb**	**04 04 13.6**	**-1.2**
HUMP	**Col San Antoni**	**1.06**	**220**	↑*eP*		**Pb**	**04 04 04.2**	**+0.3**
HUMP				*eS*		**Sn**	**04 04 17.9**	**0.0**
HUMP	**Col San Antoni**	**1.06**	**220**	↑*eP*		**Pn**	**04 04 03.4**	**-0.3**
HUMP	**Col San Antoni**	**1.06**	**220**	↑*eP*		**Pn**	**04 04 03.4**	**-0.3**
HUMP	**Col San Antoni**	**1.06**	**220**	↑*eP*		**Pb**	**04 04 04.2**	**+0.3**
HUMP				*eS*		**Sb**	**04 04 17.6**	**+0.3**
HUMP				*eS*		**Sn**	**04 04 17.9**	**0.0**
HUMP	**Col San Antoni**	**1.06**	**220**			**Pn**	**04 04 03.4**	**-0.3**
HUMP						**Sb**	**04 04 17.6**	**+0.3**
GCPR	**Guaynabo City**	**1.11**	**234**	Pn		**Pb**	**04 04 05.7**	**+1.0**
SJG	**San Juan**	**1.28**	**229**	Pn		**Pn**	**04 04 07.0**	**+0.2**
IGPR	**InterUniversit**	**1.36**	**223**	↓*eP*		**Pn**	**04 04 08.0**	**+0.3**
IGPR				*eS*		**Sn**	**04 04 25.5**	**+0.4**
IGPR	**InterUniversit**	**1.36**	**223**	*eS*		**Sn**	**04 04 24.4**	**-0.7**
IGPR	**InterUniversit**	**1.36**	**223**	↑*eP*		**Pn**	**04 04 07.8**	**-0.3**
IGPR	**InterUniversit**	**1.36**	**223**			**Pn**	**04 04 08.0**	**+0.3**
IGPR						**Sn**	**04 04 25.5**	**+0.4**
EMPR	**Esperanza - Ma**	**1.41**	**250**	*eS*		**Sn**	**04 04 26.2**	**-0.2**
EMPR	**Esperanza - Ma**	**1.41**	**250**	↑*eP*		**Pn**	**04 04 08.5**	**+0.1**
EMPR	**Esperanza - Ma**	**1.41**	**250**			**Pn**	**04 04 08.5**	**+0.1**
EMPR						**Sn**	**04 04 26.2**	**-0.2**
AOPR	**Arecibo Observ**	**1.65**	**248**	↑*eP*		**Pn**	**04 04 12.0**	**+0.1**
AOPR	**Arecibo Observ**	**1.65**	**248**	↑*eP*		**Pn**	**04 04 12.0**	**+0.1**
AOPR	**Arecibo Observ**	**1.65**	**248**			**Pn**	**04 04 12.0**	**+0.1**
OBIP	**Obispado Ponce**	**1.67**	**237**	Pn		**Pn**	**04 04 12.6**	**+0.5**
MLPR	**Magueyes Islan**	**2.07**	**242**	↑*eP*		**Pn**	**04 04 17.2**	**-0.3**
MLPR	**Magueyes Islan**	**2.07**	**242**			**Pn**	**04 04 17.2**	**-0.3**

IDC 17 04:19:27.9±1.1,20°.70N×120°.02E,h0km,mb3.6/6, mb1 3.8/6,mb1mx3.5/36,mbtmp3.6/6,MS2.6/2,Ms1 2.7/2, ms1mx2.4/24,Error ellipse: s-maj=61.0km s-min=21.9km az=72.0,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**18.06**	**21**	LR		LR	04 32 03.9	
	comp=Z,12nm,20.1s,baz=96,slow=42							
CMAR	**Chiang Mai Arr**	**19.98**	**267**	LR		LR	04 33 13.5	
	comp=Z,21nm,18.4s,baz=110,slow=41							
SONM	**Songino Array**	**29.23**	**341**	P		P	04 25 31.7	+0.2
	0.2nm,0.3s,baz=160,slow=9.9,SNR=3.2							
MKAR	**Makanchi Array**	**40.18**	**319**	P		P	04 27 05.8	-0.2
	0.5nm,0.8s,baz=121,slow=11,SNR=4.8							
WRA	**Warramunga Arr**	**42.75**	**160**	P		P	04 27 26.9	-0.3
	1.1nm,0.7s,baz=342,slow=8.8,SNR=5.2							
ASAR	**Alice Springs**	**46.12**	**162**	P		P	04 27 54.3	+0.1
	0.3nm,0.4s,baz=347,slow=7.0,SNR=5.6							
ILAR	**Eielson Array**	**72.80**	**27**	P		P	04 30 58.4	+0.3
	0.2nm,0.7s,baz=282,slow=5.2,SNR=1.6							
YKA	**Yellowknife Ar**	**86.59**	**22**	P		P	04 32 12.6	-0.4
	0.4nm,0.8s,baz=316,slow=5.0,SNR=7.5							

IDC 17 04:21:52.4±2.8,25°.25N×141°.00E,h137km±24km,mb3.2/4, mb1 3.5/5,mb1mx3.0/36,mbtmp3.6/5,MS3.3/1,Ms1 3.3/1, ms1mx2.4/12,Error ellipse: s-maj=73.4km s-min=26.6km az=103.0,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**2.12**	**30**	P		Pn	04 22 28.3	0.0
	21nm,0.3s,baz=288,slow=20,SNR=22							
JCJ				S		Sn	04 22 52.3	-3.5
	116nm,0.3s,baz=254,slow=24,SNR=25							
WRA	**Warramunga Arr**	**45.39**	**189**	P		P	04 29 57.3	-0.1
	0.9nm,0.5s,baz=10,slow=8.5,SNR=3.8							
MKAR	**Makanchi Array**	**50.85**	**311**	LR		LR	04 53 38.7	
	comp=Z,26nm,18.9s,baz=2.5,slow=38							
ILAR	**Eielson Array**	**59.84**	**28**	P		P	04 31 43.3	+0.1
	0.4nm,0.9s,baz=260,slow=5.4,SNR=2.6							
YKA	**Yellowknife Ar**	**74.26**	**28**	P		P	04 33 14.2	0.0
	0.1nm,0.4s,baz=294,slow=6.0,SNR=4.1							
FINES	**FINESS Array B**	**79.12**	**334**	P		P	04 33 41.5	0.0
	0.3nm,0.3s,baz=69,slow=5.3,SNR=4.0							

JMA 17 04:39:55.2±0.3,31°.16N×142°.67E,h75km,M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.76**	**338**	P		Pn	04 40 52.2	+1.9
BSO1				*eS*		Sn	04 41 36.6	+3.5
BSO2	**Boso 2**	**3.93**	**336**	*eS*		Sn	04 41 41.1	+3.6
BSO3	**Boso 3**	**4.06**	**334**	P		Pn	04 40 56.1	+1.5
BSO3				*eS*		Sn	04 41 42.8	+2.0
CBIJ	**Chichi jima**	**4.07**	**186**	P		Pn	04 40 56.3	+1.2
CBIJ				*eS*		Sn	04 41 44.1	+2.6
BSO4	**Boso 4**	**4.29**	**333**	*eS*		Sn	04 41 50.7	+4.0
JOD2	**Odawara 2**	**5.08**	**325**	P		Pn	04 41 10.7	+2.0
JHU	**Hanno**	**5.47**	**330**	P		Pn	04 41 15.5	+1.4
JHU				*eS*		Sn	04 42 17.1	+1.5
JRY	**Ryogami san**	**5.77**	**328**	P		Pn	04 41 21.1	+2.8
JRY				*eS*		Sn	04 42 25.6	+2.4
JFK	**Kawauchi**	**6.37**	**347**	*eS*		Sn	04 42 33.5	-4.2

*JMA **17** 05:00:55.7±0.1,23°.79N×121°.98E,h28km±3km,M2.4*
*TAP **17** 05:00:56.5,23°.80N×121°.98E,h28km,ML2.8,D*
ISC 17 05:00:55.8±1.0,23°.79N±0°.02×121°.99E±0°.03,h28km±9km, n45,σ0s53/80,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.37**	**288**	*i* P		**Pb**	**05 01 03.8**	**-0.3**
	baz=290							
ENLB				S		**Sb**	**05 01 10.4**	**+0.7**
	baz=290							
HWA	**Hwalien**	**0.40**	**299**	*eP*		**Pb**	**05 01 03.9**	**-0.6**
	baz=291							
HWA				*eS*		**Sn**	**05 01 12.4**	**+0.1**
	baz=291							
TWD	**Chiawan**	**0.46**	**309**	P		**Pb**	**05 01 05.6**	**+0.1**
	baz=309							
TWD				*eS*		**Sb**	**05 01 12.3**	**+0.2**
	baz=309							
ESL	**Shilin**	**0.51**	**273**	P		**Pb**	**05 01 06.2**	**-0.1**
	baz=272							
ESL				S		**Sb**	**05 01 13.4**	**0.0**
	baz=272							
EGFH	**Guangfu**	**0.52**	**257**	*eS*		**Sn**	**05 01 14.9**	**-0.6**
	baz=255							
NACB	**Ninganchiao**	**0.53**	**317**	*i* P		**Pb**	**05 01 06.4**	**-0.2**
	baz=311							
NACB				S		**Sb**	**05 01 13.8**	**-0.1**
	baz=311							
HGSD	**Ruisui**	**0.59**	**240**	*eP*		**Pn**	**05 01 08.5**	**+0.1**
	baz=239							
HGSD				*eS*		**Sb**	**05 01 16.7**	**+0.9**
	baz=239							
ETLH	**Xiulin Townshi**	**0.62**	**312**	P		**Pb**	**05 01 07.9**	**-0.3**
	baz=312							
ETLH				S		**Sb**	**05 01 16.8**	**+0.1**
	baz=312							
EHY	**Hungye**	**0.67**	**245**	P		**Pb**	**05 01 08.9**	**-0.1**
	baz=248							
EHY				S		**Sb**	**05 01 18.3**	**+0.4**
	baz=248							
NANB	**Nanao**	**0.67**	**341**	P		**Pb**	**05 01 09.0**	**-0.1**
	baz=331							
NANB				*eS*		**Sb**	**05 01 18.2**	**+0.1**
	baz=331							
ENA	**Nanau**	**0.68**	**341**	P		**Pb**	**05 01 09.0**	**-0.1**
	baz=331							
ENA				*eS*		**Sb**	**05 01 18.1**	**0.0**
	baz=331							
YULB	**Yu-li**	**0.74**	**238**	P		**Pb**	**05 01 10.0**	**-0.2**
	baz=253							
YULB				*eS*		**Sb**	**05 01 20.3**	**+0.3**
	baz=253							
OWD	**Renai**	**0.76**	**283**	P		**Pb**	**05 01 10.4**	**-0.2**
	baz=290							
OWD				S		**Sb**	**05 01 20.6**	**-0.1**
	baz=290							
TWF1	**Yuli**	**0.77**	**236**	P		**Pn**	**05 01 11.0**	**+0.2**
	baz=250							
TWF1				S		**Sn**	**05 01 21.6**	**+0.2**
	baz=250							
EOS1	**EOS1**	**0.77**	**10**	*eS*		**Sn**	**05 01 21.6**	**+0.1**
	baz=20							
VWDT	**VWDT**	**0.77**	**268**	P		**Pb**	**05 01 10.9**	**+0.1**
	baz=267							
VWDT				*eS*		**Sn**	**05 01 21.4**	**-0.2**
	baz=267							
CHGB	**Renai**	**0.79**	**290**	P		**Pb**	**05 01 11.1**	**0.0**
	baz=289							
CHGB				S		**Sb**	**05 01 21.8**	**+0.1**
	baz=289							
TWC	**Suao**	**0.83**	**351**	S		**Sn**	**05 01 23.1**	**+0.1**
	baz=352							
NNSH	**Datong**	**0.84**	**319**	P		**Pb**	**05 01 11.6**	**-0.4**
	baz=319							
NNSH				S		**Sb**	**05 01 22.7**	**-0.3**
	baz=319							
NNS	**Nan Shan**	**0.86**	**319**	*eP*		**Pn**	**05 01 12.2**	**0.0**
	baz=319							
NNS				S		**Sb**	**05 01 23.6**	**+0.2**
	baz=319							
FULB	**Fuli**	**0.86**	**227**	*eP*		**Pn**	**05 01 11.9**	**-0.3**
	baz=213							
FULB				*eS*		**Sb**	**05 01 23.9**	**+0.4**
	baz=213							
TDCB	**Techi**	**0.89**	**302**	*eP*		**Pn**	**05 01 12.8**	**+0.1**
	baz=301							
TDCB				*eS*		**Sb**	**05 01 23.8**	**-0.5**

ISC 17 05:07:28.4±2.2, 51°53N±0'.10×16°00E±0'.05, h0km, n13, σ0s54/21, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**165**	*e*Pg	**Pg**	**05 07 42.1**	**+0.2**
KSP				*e*Sg	**Sg**	**05 07 51.6**	**+0.6**
CHVC	**Chvalec**	**0.94**	**178**	*e*PG	**Pg**	**05 07 46.4**	**+0.1**
CHVC				*e*SG	**Sg**	**05 07 58.8**	**+0.3**
	comp=Z,8.8nm,0.4s						
OSTC	**Ostas**	**0.98**	**172**	*e*PG	**Pg**	**05 07 47.3**	**+0.2**
OSTC				*e*SG	**Sg**	**05 08 00.5**	**+0.7**
	comp=Z,14nm,0.4s						
UPC	**Upice**	**1.02**	**180**	*e*PG	**Pg**	**05 07 47.8**	**-0.1**
UPC				*e*SG	**Sg**	**05 08 01.5**	**+0.4**
	comp=Z,11nm,0.4s						
DPC	**Dobruska-Polom**	**1.20**	**170**	*e*PG	**Pg**	**05 07 51.2**	**0.0**
DPC				*e*SG	**Sg**	**05 08 06.3**	**-0.4**
	comp=Z,8.6nm,0.5s						
PVCC	**Panska Ves**	**1.35**	**223**	*e*PG	**Pg**	**05 07 54.0**	**-0.2**
PVCC				*e*SG	**Sg**	**05 08 11.9**	**+0.3**
	comp=Z,13nm,0.4s						
BRG	**Berggiesshubel**	**1.45**	**244**	PG	**Pn**	**05 07 55.7**	**-0.1**
BRG				SG	**Sg**	**05 08 15.5**	**+0.6**
	12nm,0.3s						
KRLC	**Kraliky**	**1.54**	**161**	*e*PG	**Pn**	**05 07 56.8**	**-0.2**
KRLC				*e*SG	**Sn**	**05 08 16.9**	**-0.8**
	comp=Z,7.1nm,0.4s						
PRU	**Pruhonice**	**1.80**	**212**	*e*SG	**Sb**	**05 08 25.6**	**+0.4**
	comp=Z,3.9nm,0.5s						
CLL	**Collm**	**1.89**	**265**	*e*Sg	**Sg**	**05 08 29.0**	**0.0**
OKC	**Ostrava-Krasne**	**2.17**	**140**	*e*SG	**Sg**	**05 08 38.7**	**+0.6**
	comp=Z,3.7nm,0.3s						
NKC	**Novy Kostel**	**2.60**	**241**	*e*SG	**Sg**	**05 08 52.9**	**+1.2**
	comp=Z,5.7nm,0.3s						
KHC	**Kasperske Hory**	**2.86**	**214**	*e*SG	**Sg**	**05 08 59.1**	**-1.0**

*TEH **17** 05:07:43.9, 26°.81N×55°.53E, h12km, ML3.2*
*DSN **17** 05:07:48.0±1.4, 27°.08N×55°.75E, h10km, ML3.2/7, Error ellipse: s-maj=30.4km s-min=7.8km az=61.0*
*OMAN **17** 05:07:54.3±4.7, 26°.81N×55°.67E, h8km±29km, ml3.0/13, Error ellipse: s-maj=75.5km s-min=18.6km az=307.0*

ISC 17 05:07:46.8±0.9, 27°09N±0'.03×55°.80E±0'.07, h10km, n31, σ1s55/36, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GENO	**Geno**	**0.45**	**48**	*e*Pg	**Pn**	**05 07 59.8**	**+0.3**
GENO				*e*		05 08 15.1	
NIAN	**Nian**	**1.03**	**63**	*e*Pg	Pn	05 08 11.0	+3.6
NIAN				*e*Sg	Sn	05 08 30.3	+8.4
NIAN				*e*		05 08 31.2	
SHME	**Shamm**	**1.08**	**163**	*e*P	**Pn**	**05 08 07.8**	**-0.3**
	SNR=28						
SHME				S	**Sn**	**05 08 24.4**	**+1.2**
BANOM	**Banah**	**1.25**	**159**	*e*P	**Pg**	**05 08 11.1**	**+0.3**
	SNR=31						
BANOM	**Banah**	**1.25**	**159**	P	**Pg**	**05 08 11.2**	**+0.3**
	SNR=247						
BANOM				S	**Sn**	**05 08 30.1**	**+2.8**
UMQ	**Umm Al-Quwin**	**1.57**	**184**	P	**Pb**	**05 08 15.8**	**0.0**
MSFE	**Esma-Masafi**	**1.76**	**169**	*e*P	**Pb**	**05 08 18.1**	**-1.0**
	SNR=12						
MDH	**Madha**	**1.84**	**166**	*e*P	**Pb**	**05 08 19.6**	**-0.9**
	SNR=6.7						
MDH	**Madha**	**1.84**	**166**	P	**Pg**	**05 08 20.6**	**-1.5**
	SNR=7.2						
MDH				S	**Sb**	**05 08 43.6**	**-0.1**
KHNJ	**Kahnooj**	**1.90**	**63**	*e*Pn	**Pg**	**05 08 22.7**	**-0.5**
NAZ	**Nazwa, Dubai**	**2.10**	**183**	P	**Pn**	**05 08 22.5**	**+0.5**
NAZ	**Nazwa, Dubai**	**2.10**	**183**	P	**Pn**	**05 08 22.6**	**+0.6**
NAZ				S	**Sb**	**05 08 49.8**	**-1.2**
UOSS	**Minazif**	**2.17**	**170**	*e*P	**Pb**	**05 08 25.6**	**-0.6**
	SNR=7.7						
UOSS	**Minazif**	**2.17**	**170**	P	**Pg**	**05 08 26.7**	**-1.7**
HATD	**Hatta, Dubai**	**2.28**	**172**	P	**Pb**	**05 08 26.9**	**-1.1**
HATD	**Hatta, Dubai**	**2.28**	**172**	P	**Pg**	**05 08 28.5**	**-2.0**
HATD				S	**Sb**	**05 08 56.3**	**+0.1**
FAQ	**Al Faqa, Dubai**	**2.35**	**185**	P	**Pg**	**05 08 31.4**	**-0.3**
ASHO	**Ashiyiah**	**2.41**	**174**	S	**Sn**	**05 08 57.0**	**+1.0**
ASUD	**Al Ashush, Dub**	**2.49**	**190**	*e*P	**Pn**	**05 08 28.2**	**+0.8**
	SNR=9.1						
ASUD	**Al Ashush, Dub**	**2.49**	**190**	P	**Pn**	**05 08 28.2**	**+0.8**
	SNR=9.1						
ASUD				S	**Sn**	**05 08 59.5**	**+1.6**
NGRK	**Negar Kerman**	**2.67**	**18**	*e*Pn	**Pb**	**05 08 33.7**	**-1.2**
NGRK				*e*		05 09 27.0	
TVBK	**TV Kerman**	**3.00**	**16**	*e*Pn	**Pb**	**05 08 38.8**	**-1.8**
TVBK				*e*		05 09 20.2	
SOHO	**SOHO**	**3.02**	**167**	P	**Pg**	**05 08 42.0**	**-2.7**
CHMN	**Cheshme madani**	**3.16**	**29**	*e*Pn	**Pb**	**05 08 42.1**	**-1.1**
CHMN				*e*		05 08 47.5	
KHGB	**Koh Gabri**	**3.32**	**10**	*e*Pn	**Pb**	**05 08 43.1**	**-2.9**
KHGB				*e*		05 09 26.8	
IMEH	**Mehriz**	**4.40**	**347**	*e*Pn	**Pn**	**05 08 56.6**	**+2.7**
IBAF	**Bafgh**	**4.49**	**358**	*e*Pn	**Pn**	**05 08 57.3**	**+2.3**
BSY	**Bisya**	**4.51**	**163**	P	**Pn**	**05 08 58.1**	**+2.9**
ISAD	**Sadrabad**	**5.14**	**340**	*e*Pn	**Pn**	**05 09 06.3**	**+2.2**
KLNJ	**Kolanjah**	**5.36**	**318**	*e*Pn	**Pn**	**05 09 06.4**	**-0.8**
IRAM	**Ramesheh**	**5.56**	**328**	*e*Pn	**Pn**	**05 09 10.9**	**+1.1**

*SKHL **17** 05:22:39.3±0.4, 45°.90N×150°.20E, h168km±10km, mb5.1/6, mbv4.8/2, msh5.2/2, msha5.6/5*
*MOS **17** 05:22:39.3±1.0, 46°.15N×149°.98E, h181km, mb4.2/6, Error ellipse: s-maj=10.3km s-min=6.7km az=65.7*
*IDC **17** 05:22:41.7±2.0, 46°.26N×149°.79E, h180km±19km, mb3.4/16, mb1 3.6/22, mb1mx3.4/49, mbtmp4.0/22, Error ellipse: s-maj=31.2km s-min=12.7km az=158.0*
*JMA **17** 05:22:43.8±0.5, 45°.46N×149°.96E, h182km, M4.0*

ISC 17 05:22:39.9±0.7, 45°.90N±0'.07×150°.04E±0'.07, h200km, n101, σ2s19/113, mb3.7/20, 1C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.66**	**247**	*d i* PN	**Pn**	**05 23 15.1**	**0.0**
KUR				*i* S	**Sn**	**05 23 43.7**	**+1.4**
KUR				pmax	pmax		
	comp=Z,359nm,0.6s						
KUR				pmax	pmax		
	comp=E,24nm,0.2s						
KUR				pmax	pmax		
	comp=N,76nm,0.6s						
KUR				smax	smax		
	comp=N,1μm,0.4s						
KUR				smax	smax		
	comp=E,1μm,0.6s						
KUR	**Kuril'sk**	**1.66**	**247**	*i* P	**Pn**	**05 23 15.1**	**0.0**
KUR				AMB	AMB	05 23 15.6	
	comp=E,300nm,0.6s						
KUR				AMB	AMB	05 23 17.0	
	comp=E,600nm,3.0s						
KUR				*i* S	**Sn**	**05 23 41.7**	**-0.6**
KUR				A	A	05 23 42.0	
	comp=E,1μm,2.0s						
KUR				A	A	05 23 42.0	
	comp=E,2μm,2.0s						
KUR				A	A	05 23 45.0	
	comp=E,1μm,0.5s						
KUR				A	A	05 23 45.0	
	comp=E,1μm,0.5s						
SHO	**Shikotan**	**3.05**	**229**	*d i* PN	**Pn**	**05 23 29.8**	**-0.3**
SHO				*i* S	**Sn**	**05 24 05.9**	**-3.5**
SHO				pmax	pmax		
	comp=Z,156nm,0.5s						
SHO				pmax	pmax		
	comp=N,89nm,0.4s						
SHO				pmax	pmax		
	comp=E,77nm,0.5s						
SHO				smax	smax		
	comp=E,496nm,0.2s						
SHO				smax	smax		
	comp=N,225nm,0.1s						
SHO	**Shikotan**	**3.05**	**229**	*i* P	**Pn**	**05 23 29.8**	**-0.3**
SHO				AMB	AMB	05 23 30.0	
	comp=N,90nm,0.5s						
SHO				AMB	AMB	05 23 30.0	
	comp=N,80nm,0.5s						
SHO				AMB	AMB	05 23 30.0	
	comp=N,160nm,0.5s						
SHO				AMB	AMB	05 23 31.1	
	comp=N,800nm,3.0s						
SHO				*i* S	**Sn**	**05 24 07.1**	**-2.3**
SHO				A	A	05 24 09.2	
	comp=N,270nm,0.4s						
SHO				A	A	05 24 09.2	
	comp=N,280nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.50**	**239**	*d i* PN	**Pn**	**05 23 36.6**	**+1.1**
YUK				*i* S	**Sn**	**05 24 19.8**	**+0.8**
YUK				pmax	pmax		
	comp=Z,363nm,0.4s						
YUK				pmax	pmax		
	comp=E,135nm,0.5s						
YUK				pmax	pmax		
	comp=N,66nm,0.2s						
YUK				smax	smax		
	comp=N,309nm,0.4s						
YUK				smax	smax		
	comp=E,114nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.50**	**239**	*i* P	**Pn**	**05 23 36.6**	**+1.1**
YUK				AMB	AMB	05 23 36.9	
	comp=E,580nm,0.6s						
YUK				*i* S	**Sn**	**05 24 19.9**	**+0.9**
YUK				A	A	05 24 22.0	
	comp=E,1μm,2.0s						
YUK				A	A	05 24 22.0	
	comp=E,1μm,2.0s						
YUK				A	A	05 24 24.0	
	comp=E,310nm,0.4s						
YUK				A	A	05 24 24.0	
	comp=E,110nm,0.4s						
GRPR	**Tuman**	**3.58**	**239**	*d* PN	**Pn**	**05 23 37.4**	**+0.9**
GRPR				*i* S	**Sn**	**05 24 20.8**	**+0.1**
GRPR				pmax	pmax		
	comp=Z,241nm,0.3s						
GRPR				pmax	pmax		
	comp=N,118nm,0.7s						
GRPR				pmax	pmax		
	comp=E,64nm,0.2s						
GRPR				smax	smax		
	comp=E,148nm,0.4s						
GRPR				smax	smax		
	comp=N,324nm,0.3s						
GRPR	**Tuman**	**3.58**	**239**	*i* P	**Pn**	**05 23 37.4**	**+0.9**
GRPR				AMB	AMB	05 23 38.0	
	comp=N,240nm,0.3s						
GRPR				*i* S	**Sn**	**05 24 20.8**	**+0.1**
GRPR				A	A	05 24 26.0	
	comp=N,320nm,0.4s						
GRPR				A	A	05 24 26.0	
	comp=N,150nm,0.4s						
GLVR	**Golovnino**	**3.87**	**238**	*e*PN	**Pn**	**05 23 40.9**	**+0.8**
GLVR				*i* S	**Sn**	**05 24 27.4**	**+0.1**
GLVR				pmax	pmax		
	comp=Z,85nm,0.3s						
GLVR				smax	smax		
	comp=N,182nm,0.1s						
GLVR				smax	smax		
	comp=E,420nm,0.5s						
GLVR	**Golovnino**	**3.87**	**238**	*e*P	**Pn**	**05 23 41.5**	**+1.4**
GLVR				AMB	AMB	05 23 42.0	
	comp=E,90nm,0.3s						
GLVR				*i* S	**Sn**	**05 24 27.4**	**+0.1**
GLVR				A	A	05 24 30.0	
	comp=E,180nm,0.5s						
GLVR				A	A	05 24 30.0	
	comp=E,420nm,0.5s						
NEM2	**Nemuro 2**	**3.98**	**232**	P	**Pn**	**05 23 41.0**	**-0.4**
NEM2				*e*S	**Sn**	**05 24 25.8**	**-3.8**
NMR	**Nemuro--Hokkai**	**3.98**	**232**	*d i* PN	**Pn**	**05 23 40.7**	**-0.7**
NMR				*i* S	**Sn**	**05 24 25.9**	**-3.8**
NMR	**Nemuro--Hokkai**	**3.98**	**232**	*i* P	**Pn**	**05 23 41.0**	**-0.4**
JRA	**Rausu**	**4.00**	**242**	P	**Pn**	**05 23 42.8**	**+1.1**
JNK	**Nakash**	**4.44**	**240**	P	**Pn**	**05 23 47.9**	**+0.7**
JTKR	**Abashiri--Toko**	**4.76**	**248**	P	**Pn**	**05 23 52.5**	**+1.3**
JAK	**Akkeshi**	**4.80**	**235**	P	**Pn**	**05 23 51.6**	**-0.1**
JAK				*e*S	**Sn**	**05 24 45.0**	**-3.3**
JMP	**Maruseppu**	**5.10**	**251**	P	**Pn**	**05 23 57.1**	**+1.5**
YSS	**Yuzh-Sakhalins**	**5.14**	**284**	*e*PN	**Pn**	**05 23 56.5**	**+0.4**
YSS	**Yuzh-Sakhalins**	**5.14**	**284**	*e*P	**Pn**	**05 23 56.5**	**+0.4**
JOB	**Onbets**	**5.36**	**238**	P	**Pn**	**05 23 59.4**	**+0.5**
JOB				*e*S	**Sn**	**05 24 58.8**	**-2.3**
JKK2	**Kamakawa 2**	**5.56**	**251**	P	**Pn**	**05 24 03.4**	**+1.9**
JKA	**Kamikawa-asahi**	**5.57**	**254**	*e*P	**Pn**	**05 24 03.9**	**+2.4**
ASAJ	**Asahikawa**	**5.57**	**254**	P	**Pn**	**05 24 03.7**	**+2.1**
ASAJ	**Asahikawa**	**5.57**	**254**	P	**Pn**	**05 24 03.9**	**+2.3**
	comp=E,14nm,0.3s,baz=74,slow=14,SNR=68						
JWK2	**Keihoku**	**5.74**	**267**	P	**Pn**	**05 24 06.7**	**+3.0**
JCH	**Churui**	**5.81**	**238**	P	**Pn**	**05 24 05.0**	**+0.3**
JCH				*e*S	**Sn**	**05 25 07.8**	**-3.9**
JFR	**Furan**	**5.98**	**245**	P	**Pn**	**05 24 09.0**	**+2.1**
SKR	**Severo-Kuril's**	**6.27**	**38**	*e*PN	**Pn**	**05 24 07.9**	**-2.6**
SKR				*e*S	**Sn**	**05 25 14.0**	**-8.4**
SKR				pmax	pmax		
	comp=Z,36nm,0.6s						
SKR				smax	smax		
	comp=N,22nm,0.6s						
SKR				smax	smax		
	comp=E,20nm,0.5s						
SKR	**Severo-Kuril's**	**6.27**	**38**	*e*P	**Pn**	**05 24 08.1**	**-2.4**
SKR				AMB	AMB	05 24 15.0	
	comp=E,40nm,0.5s						
SKR				*e*S	**Sn**	**05 25 18.4**	**-4.0**
ERM	**Erimo**	**6.30**	**234**	*i* PN	**Pn**	**05 24 12.5**	**+1.4**
JBT2	**Biratori 2**	**6.33**	**243**	P	**Pn**	**05 24 12.5**	**+1.2**
JNBK	**Urakawa-nobuka**	**6.37**	**238**	P	**Pn**	**05 24 10.8**	**-1.1**
JNBK				*e*S	**Sn**	**05 25 18.9**	**-5.9**
JNB	**Noboribetsu**	**7.32**	**245**	P	**Pn**	**05 24 24.6**	**+0.3**
JKB	**Kayabe**	**7.64**	**242**	P	**Pn**	**05 24 28.0**	**-0.4**
JKB				*e*S	**Sn**	**05 25 48.9**	**-5.8**
JSH	**Shimam**	**7.87**	**249**	P	**Pn**	**05 24 32.5**	**+1.0**
JYM2	**Yakumo 2**	**7.93**	**245**	P	**Pn**	**05 24 32.1**	**-0.1**
JTM	**Tenmabayashi**	**8.29**	**235**	P	**Pn**	**05 24 35.5**	**-1.5**
JTM				*e*S	Sn	05 26 01.8	-8.4
JANG	**Nango**	**8.32**	**231**	P	**Pn**	**05 24 35.8**	**-1.6**
JANG				*e*S	Sn	05 26 03.2	-7.8
JOSM	**Okushiri--Mats**	**8.52**	**247**	P	**Pn**	**05 24 40.4**	**+0.6**
PEA0B	**Petropavlovsk-**	**8.77**	**32**	*i* PN	**Pn**	**05 24 40.4**	**-2.6**
PETK	**Petropavlovsk-**	**8.77**	**32**	P	**Pn**	**05 24 40.2**	**-2.8**
	comp=E,0.9nm,0.3s,baz=171,slow=12,SNR=14						
OKH	**Okha**	**8.93**	**332**	*e*P	Pn	05 24 47.1	+2.1
PET	**Petropavlovsk**	**9.07**	**35**	*i* PN	**Pn**	**05 24 44.9**	**-2.0**
PET	**Petropavlovsk**	**9.07**	**35**	*e*P	**Pn**	**05 24 48.0**	**+1.1**
OFUJ	**Ofunato**	**9.20**	**225**	P	**Pn**	**05 24 48.0**	**-0.7**
JRG	**Rokugo**	**9.49**	**230**	P	**Pn**	**05 24 52.4**	**-0.2**
JIO	**Ouri**	**9.84**	**224**	P	**Pn**	**05 24 56.3**	**-0.7**
JFY	**Yanaizu**	**11.47**	**226**	P	**Pn**	**05 25 18.6**	**+0.6**
KLR	**Kul'dur**	**12.79**	**292**	*e*PN	**Pn**	**05 25 32.2**	**-2.4**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLR	**Kul'dur**	**12.79**	**292**	P	**P**	**05 25 36.1**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=115,slow=12,SNR=4.6						
USRK	**Ussuriysk Ar.**	**12.88**	**269**	P	**P**	**05 25 36.9**	**-2.3**
	baz=67,slow=12,SNR=3.0						
MJAR	**Matsushiro Arr**	**12.90**	**228**	P	**Pn**	**05 25 38.2**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=32,slow=12,SNR=3.8						
EKMR	**Ekimchan**	**13.20**	**309**	*e*P	**P**	**05 25 40.0**	**-2.7**
EKMR				AMB	AMB	05 25 45.2	
	comp=Z,70nm,0.8s						
BMKR	**Bomnak**	**16.10**	**311**	*e*P	**Pn**	**05 26 15.0**	**-0.3**
BMKR				AMB	AMB	05 26 18.0	
	comp=Z,10.0nm,0.6s						
ZEA	**Zeya**	**16.61**	**306**	*e*P	**Pn**	**05 26 21.7**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,16nm,0.9s						
ZEA	**Zeya**	**16.61**	**306**	*e*P	**Pn**	**05 26 21.7**	**+0.4**
ZEA				AMB	AMB	05 26 22.2	
	comp=Z,20nm,0.9s						
KROS	**Kirovskiy**	**17.00**	**308**	*e*P	**Pn**	**05 26 25.9**	**-0.1**
KROS				AMB	AMB	05 26 27.0	
	comp=Z,4.0nm,0.6s						
SEY	**Seymchan**	**17.12**	**4**	P	**Pn**	**05 26 25.2**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=203,slow=10,SNR=3.9						
KSRS	**Korea Array**	**18.50**	**251**	P	**Pn**	**05 26 47.9**	**+4.1**
	comp=Z,0.2nm,0.3s,baz=56,slow=12,SNR=4.7						
YAK	**Yakutsk**	**19.96**	**331**	P	**Pn**	**05 26 57.1**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=148,slow=2.9,SNR=4.6						
YAK	**Yakutsk**	**19.96**	**331**	*e*P	**Pn**	**05 26 57.3**	**-3.6**
BILL	**Bilibino**	**23.74**	**15**	*e*P	**P**	**05 27 33.8**	**+0.3**
BILL				*e*S	S	05 31 08.9	-25
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL	**Bilibino**	**23.74**	**15**	*e*P	**P**	**05 27 33.8**	**+0.3**
TIXI	**Tiksi**	**27.73**	**346**	*e*P	**P**	**05 28 06.5**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.9s						
H11N2	**WAKE ISLAND Hy**	**29.57**	**146**	T	T	05 59 53.0	
	baz=335,slow=75,SNR=100						
H11N1	**WAKE ISLAND Hy**	**29.58**	**146**	T	T	05 59 56.5	
	baz=335,slow=75,SNR=68						
H11N3	**WAKE ISLAND Hy**	**29.59**	**146**	T	T	05 59 56.1	
	baz=335,slow=75,SNR=80						
SONM	**Songino Array**	**29.61**	**290**	P	**P**	**05 28 26.2**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=64,slow=9.9,SNR=2.8						
H11S1	**WAKE ISLAND Hy**	**30.61**	**148**	T	T	06 01 13.0	
	baz=336,slow=76,SNR=157						
H11S3	**WAKE ISLAND Hy**	**30.61**	**148**	T	T	06 01 14.8	
	baz=336,slow=76,SNR=70						
H11S2	**WAKE ISLAND Hy**	**30.63**	**148**	T	T	06 01 14.4	
	baz=336,slow=76,SNR=70						
ILAR	**Eielson Array**	**38.53**	**38**	P	**P**	**05 29 44.2**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=262,slow=6.2,SNR=3.2						
ZALV	**Zalesovo Beam**	**41.38**	**306**	*e*P	**P**	**05 30 08.5**	**+2.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
INK	**Inuvik**	**43.50**	**32**	P	P	05 30 25.8	+2.8
	comp=Z,0.5nm,0.2s,baz=294,slow=6.4,SNR=12						
MKAR	**Makanchi Array**	**45.43**	**297**	*e*P	**P**	**05 30 40.2**	**+1.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**45.43**	**297**	P	**P**	**05 30 39.9**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=64,slow=6.0,SNR=12						
MKAR	**Makanchi Array**	**45.43**	**297**	*e*P	**P**	**05 30 40.2**	**+1.6**
KURK	**Kurchatov**	**46.05**	**303**	P	**P**	**05 30 44.7**	**+1.4**
KURK	**Kurchatov**	**46.05**	**303**	*e*P	**P**	**05 30 44.7**	**+1.4**
KURBB	**Kurchatov Arra**	**46.14**	**303**	P	**P**	**05 30 44.7**	**+0.7**
	comp=Z,2.8nm,0.7s,baz=69,slow=8.6,SNR=13						
BVAR	**Borovoye Array**	**49.74**	**309**	P	**P**	**05 31 12.2**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=73,slow=9.9,SNR=3.8						
RES	**Resolute Bay**	**52.31**	**18**	P	**P**	**05 31 32.2**	**+1.9**
	comp=Z,3.4nm,0.8s,baz=336,slow=8.4,SNR=14						
YKA	**Yellowknife Ar**	**52.87**	**35**	P	**P**	**05 31 37.1**	**+2.5**
	comp=Z,0.6nm,0.6s,baz=301,slow=7.9,SNR=4.5						
ARU	**Arti**	**54.18**	**317**	*d i* P	**P**	**05 31 44.7**	**+0.4**
ARU				S	**S**	**05 39 07.1**	**+1.9**
ARU				SS	**SS**	**05 42 49.3**	**+0.1**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ARU	**Arti**	**54.18**	**317**	P	**P**	**05 31 44.2**	**-0.1**
	comp=Z,1.4nm,0.2s,baz=86,slow=19,SNR=2.2						
ARU	**Arti**	**54.18**	**317**	*e*P	**P**	**05 31 44.9**	**+0.6**
FINES	**FINESS Array B**	**63.88**	**334**	P	**P**	**05 32 51.0**	**+0.4**
	comp=Z,5.1nm,0.8s,baz=32,slow=6.6,SNR=16						
OBN	**Obninsk**	**64.78**	**324**	*e*P	**P**	**05 32 57.2**	**+0.6**
OBN				*e**PP	**pP**	**05 33 34.4**	**-7.5**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
OBN	**Obninsk**	**64.78**	**324**	*e*P	**P**	**05 32 57.4**	**+0.8**
NB2	**NORSAR Subarra**	**68.32**	**340**	P	**P**	**05 33 20.0**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=30,slow=6.5						
NOA	**NORSAR Array B**	**68.32**	**340**	*e*P	**P**	**05 33 20.9**	**+1.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	**NORSAR Array B**	**68.32**	**340**	P	**P**	**05 33 20.1**	**+1.0**
	comp=Z,1.2nm,0.5s,baz=29,slow=6.6,SNR=10						
KBZ	**Khabaz**	**69.89**	**312**	P	P	05 33 32.2	+3.4
	comp=Z,3.2nm,1.0s,baz=206,slow=5.4,SNR=4.9						
AKASG	**Malin Array Be**	**71.04**	**325**	*e*P	**P**	**05 33 36.7**	**+1.0**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**71.04**	**325**	P	**P**	**05 33 36.3**	**+0.6**
	comp=Z,1.5nm,0.6s,baz=33,slow=6.4,SNR=7.4						
BRTR	**Keskin Array B**	**77.51**	**315**	P	P	05 34 16.7	+3.2
	comp=Z,0.7nm,0.8s,baz=74,slow=5.4,SNR=5.0						
KHC	**Kasperske Hory**	**78.04**	**332**	*e*P	**P**	**05 34 18.1**	**+2.0**
KHC	**Kasperske Hory**	**78.04**	**332**	*e*P	**P**	**05 34 18.1**	**+2.0**
GERES	**GERESS Array B**	**78.25**	**332**	P	**P**	**05 34 19.5**	**+2.2**
	comp=Z,0.7nm,0.5s,baz=28,slow=6.0,SNR=5.9						
TXAR	**Lajitas Array**	**79.76**	**58**	P	**P**	**05 34 29.2**	**+3.3**
	comp=Z,0.2nm,0.5s,baz=353,slow=4.7,SNR=2.5						

*VAO **17** 06:10:42.4±0.5, 7°.01S×76°.37W, h10km, mb4.7*
*IDC **17** 06:11:19.8±0.5, 8°.74S×74°.37W, h150km±4km, mb3.8/17, mb1 4.0/23, mb1mx3.9/40, mbtmp4.3/23, Error ellipse: s-maj=14.7km s-min=9.4km az=64.0*
*NEIC **17** 06:11:19.6±1.9, 8°.77S±0'.03×74°.35W±0'.08, h148km±5km, mb4.5/81, Error ellipse: s-maj=12.3km s-min=3.0km az=77.0*

ISC 17 06:11:19.3±0.4, 8°.77S±0'.05×74°.36W±0'.07, h148km±3km, h149km:pP-P, n186, σ0s99/208, mb4.4/54, 1D, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.02**	**217**	P	**Pn**	**06 12 20.4**	**+0.5**
	8.0nm,0.3s,baz=63,slow=5.4,SNR=18						
NNA				S	**Sn**	**06 13 04.4**	**-2.7**
	49nm,0.3s,baz=224,slow=15,SNR=16						
ATAH	**Atahualpa**	**4.31**	**292**	P	**Pn**	**06 12 23.5**	**-0.5**
	122nm,0.3s,baz=92,slow=4.2,SNR=611						
ATAH				S	**Sn**	**06 13 11.8**	**-2.4**
	62nm,0.3s,baz=22,slow=20,SNR=6.9						
LPAZ	**La Paz**	**9.64**	**141**	P	**Pn**	**06 13 35.9**	**+0.8**
	1.6nm,0.3s,baz=334,slow=6.9,SNR=31						
LPAZ	**La Paz**	**9.64**	**141**		**Pn**	**06 13 35.2**	**0.0**
OTAV	**Otavalo**	**9.83**	**335**		**Pn**	**06 13 38.5**	**+1.0**
FLOC	**Florencia**	**10.36**	**353**	*e*P	**Pn**	**06 13 42.6**	**-1.6**
FLOC	**Florencia**	**10.36**	**353**		**Pn**	**06 13 42.5

comp=Z,9.3nm,0.5s,baz=137,slow=12,SNR=5.4
SJG San Juan 27.91 17 P **P** **06 16 55.7 +0.1**
ITAB Concordia 27.92 134 *eP* **P** **06 16 55.5 -0.2**
AOPR Arecibo Observ 27.97 16 P **P** **06 16 56.3 +0.2**
HUMP Col San Antoni 28.03 17 P **P** **06 16 57.0 +0.4**
MTP Monte Pirata 28.07 18 P **P** **06 16 59.2 +2.1**
CPSB Cacapava Do Su 29.08 141 *eP* **P** **06 17 07.3 +1.3**
SPB Sao Paulo 29.69 123 *eP* **P** **06 17 11.9 +0.5**
PLTB Pedras Altas 29.93 143 *eP* **P** **06 17 13.5 0.0**
CNLB Canela 30.08 136 *eP* **P** **06 17 16.1 +1.2**
BSCB Bom Sucesso 31.01 116 *eP* **P** **06 17 23.7 +0.5**
BSFB Barra de Sao F 33.99 111 *eP* **P** **06 17 47.0 -2.1**
Z50A Ashland 43.21 346 P **P** **06 19 05.4 -0.4**
LRAL Lakeview Retre 43.27 344 P **P** **06 19 05.9 -0.3**
LRAL IAmb IAmb 06 19 08.3
comp=Z,14nm,1.4s
BIRD Birdtown, Kers 43.56 353 P **P** **06 19 09.4 +0.9**
BIRD IAmb IAmb 06 19 26.4
comp=Z,11nm,1.2s
Y49A Blount Mountai 43.91 345 P **P** **06 19 10.6 -0.7**
Y49A IAmb IAmb 06 19 20.1
comp=Z,12nm,1.4s
Y49A pP **pP** **06 19 45.0 +0.5**
W57A Gilead 44.00 353 P **P** **06 19 12.4 +0.3**
W57A IAmb IAmb 06 19 12.7
comp=Z,7.5nm,0.8s
V58A Windy Hill, Pi 44.55 354 P **P** **06 19 16.9 +0.5**
V58A IAmb IAmb 06 19 18.3
comp=Z,17nm,1.2s
W50A Signal Mountai 44.94 347 P **P** **06 19 19.6 +0.1**
W50A IAmb IAmb 06 19 23.1
comp=Z,13nm,1.4s
V52A Sevierville 45.21 349 P **P** **06 19 21.8 +0.1**
V52A IAmb IAmb 06 19 32.8
comp=Z,20nm,1.5s
T57A Hurt 45.75 355 P **P** **06 19 26.4 +0.6**
V48A Smith Brothers 45.80 346 P **P** **06 19 26.0 -0.3**
V48A IAmb IAmb 06 19 26.2
comp=Z,5.1nm,0.6s
V48A pP **pP** **06 19 59.9 +0.3**
BLA Blacksburg 46.09 353 P **P** **06 19 29.7 +1.2**
BLA IAmb IAmb 06 19 30.4
comp=Z,9.4nm,1.2s
S57A Dark Hollow, R 46.48 355 P **P** **06 19 32.3 +0.7**
S57A IAmb IAmb 06 19 32.8
comp=Z,5.8nm,0.6s
WHAR Wooly Hollow 46.98 340 P **P** **06 19 34.8 -0.6**
WHAR IAmb IAmb 06 19 36.0
comp=Z,11nm,1.3s
TX32 Lajitas Array 47.24 324 P **P** **06 19 38.8 +1.1**
TXAR Lajitas Array 47.24 324 P **P** **06 19 38.5 +0.8**
comp=Z,1.3nm,0.4s,baz=150,slow=8.5,SNR=22
TXAR Lajitas Array 47.24 324 P **P** **06 19 38.2 +0.4**
TX31 Lajitas Ar. Si 47.24 324 P **P** **06 19 38.9 +1.1**
W39A Magazine 47.42 338 P **P** **06 19 39.6 +0.7**
ABTX Abilene, Hawle 47.70 331 P **P** **06 19 42.4 +1.3**
ABTX IAmb IAmb 06 19 42.5
comp=Z,4.7nm,0.5s
PBMO Poplar Bluff 47.75 343 P **P** **06 19 41.3 -0.1**
Q56A Snyder Ridge, 47.77 355 P **P** **06 19 42.8 +1.3**
Q56A IAmb IAmb 06 19 44.7
comp=Z,12nm,1.4s
MVL Millersville 48.55 358 P **P** **06 19 48.6 +1.2**
MVL IAmb IAmb 06 19 48.8
comp=Z,5.8nm,0.7s
FVM French Village 48.87 343 P **P** **06 19 49.6 -0.4**
FVM IAmb IAmb 06 19 49.8
comp=Z,4.9nm,0.6s
O56A Blue Knob Stat 48.94 356 P **P** **06 19 51.5 +1.0**
O56A IAmb IAmb 06 19 54.2
comp=Z,17nm,1.3s
BLO Bloomington 49.01 347 P **P** **06 19 50.5 -0.5**
BLO IAmb IAmb 06 20 02.3
comp=Z,19nm,1.4s
SSPA Standing Stone 49.26 356 P **P** **06 19 53.6 +0.7**
SSPA IAmb IAmb 06 19 59.0
comp=Z,12nm,1.4s
N58A Sunbury 49.41 358 P **P** **06 19 55.3 +1.3**
N58A IAmb IAmb 06 19 55.5
comp=Z,6.8nm,0.8s
N54A Moraine State 49.75 354 P **P** **06 19 58.0 +1.4**
M57A Sunshine Farm, 49.92 357 P **P** **06 19 59.0 +1.2**
M57A IAmb IAmb 06 20 04.5
comp=Z,14nm,1.4s
M55A Ridgway 50.15 356 P **P** **06 20 00.4 +0.8**
P43A Skaggs, Pawnee 50.17 345 P **P** **06 19 59.8 0.0**
N49A Columbus Grove 50.26 350 P **P** **06 19 59.8 -0.6**
N49A IAmb IAmb 06 20 08.5
comp=Z,20nm,1.4s
N47A Urbana 50.49 349 P **P** **06 20 01.1 -1.1**
N47A pP **pP** **06 20 36.3 +0.2**
BINY Binghamton 50.74 358 P **P** **06 20 05.2 +1.1**
L56A Greenwood 50.74 357 P **P** **06 20 04.7 +0.6**
L56A IAmb IAmb 06 20 07.5
comp=Z,12nm,1.1s
WVNY West Valley, N 51.07 356 P **P** **06 20 07.2 +0.7**
WVNY IAmb IAmb 06 20 08.7
comp=Z,17nm,1.4s
K58A Earlville 51.29 359 P **P** **06 20 09.0 +0.8**
K58A IAmb IAmb 06 20 15.2
comp=Z,17nm,1.3s
J57A Williamstown 51.95 358 P **P** **06 20 13.4 +0.5**
J57A IAmb IAmb 06 20 13.7
comp=Z,7.7nm,0.6s
J47A Sunmer 52.62 350 P **P** **06 20 17.0 -1.0**
DELO Deloro Mine 53.12 357 P **P** **06 20 21.9 +0.4**
I47A Gladwin 53.34 351 P **P** **06 20 22.2 -0.9**
FRNY Flat Rock 53.35 1 P **P** **06 20 24.4 +1.1**
FRNY IAmb IAmb 06 20 24.8
comp=Z,12nm,1.2s
SADO Sadowa 53.46 356 P **P** **06 20 23.6 -0.4**
PLVO Plevna 53.61 358 P **P** **06 20 25.5 +0.3**
PLVO IAmb IAmb 06 20 43.3
comp=Z,13nm,1.3s
G62A West of Eustis 53.84 3 P **P** **06 20 27.6 +0.8**
G62A IAmb IAmb 06 20 41.9
comp=Z,11nm,1.3s
G62A pP **pP** **06 21 02.2 +1.0**
PKME Peaks-Kenny Pk 53.97 4 P **P** **06 20 28.4 +0.6**
PKME IAmb IAmb 06 20 35.8
comp=Z,15nm,1.4s
PKME pP **pP** **06 21 03.0 +0.8**
I42A Draeger Farm, 54.05 347 P **P** **06 20 28.4 0.0**
SDCO Great Sand Dun 54.66 330 P **P** **06 20 34.7 +1.4**
TRQ Mont Tremblant 54.74 360 P **P** **06 20 33.7 +0.3**
LMN Caledonia Moun 55.04 8 P **P** **06 20 36.0 +0.5**
LMN IAmb IAmb 06 20 52.0
comp=Z,14nm,1.4s
E43A Lone Tree Farm 56.04 349 P **P** **06 20 41.6 -1.1**
PMSA Palmer Station 56.39 175 *eP* P 06 20 38.7 -6.1
DRLN Deer Lake 59.64 13 P **P** **06 21 07.8 +0.2**
DRLN pP **pP** **06 21 43.4 +0.7**
TCUT Toone Canyon 60.20 328 P **P** **06 21 11.8 -0.2**
DUG Dugway, Tooele 60.29 327 P **P** **06 21 13.4 +0.9**
PDAR Pinedale Array 60.50 331 P **P** **06 21 14.0 0.0**
comp=Z,0.4nm,0.5s,baz=134,slow=7.9,SNR=5.4
R11A Troy Canyon, C 60.59 324 P **P** **06 21 16.1 +1.5**
HWUT Hardware Ranch 60.64 329 P **P** **06 21 15.0 +0.1**
HWUT IAmb IAmb 06 21 15.9
comp=Z,2.9nm,0.7s
ULM Lac du Bonnet 61.69 344 P **P** **06 21 20.7 -0.8**
comp=Z,0.9nm,0.3s,baz=169,slow=5.7,SNR=5.1
ULM pP **pP** **06 21 57.2 +0.5**
comp=Z,1.6nm,0.6s,baz=199,slow=2.3,SNR=3.2
ULM Lac du Bonnet 61.69 344 P **P** **06 21 20.8 -0.8**
ULM IAmb IAmb 06 21 31.6
comp=Z,5.7nm,1.2s
ULM pP **pP** **06 21 57.6 +0.8**
NV11 Mina Array Sit 62.18 322 P **P** **06 21 26.4 +1.1**
NVAR Mina Array Bea 62.27 322 P **P** **06 21 26.5 +0.6**
comp=Z,0.4nm,0.6s,baz=115,slow=7.9,SNR=5.2
NVAR Mina Array Bea 62.27 322 P **P** **06 21 26.1 +0.2**
YNE Yellowstone No 62.41 332 P **P** **06 21 27.4 +0.7**
YHL Hebgen Lake 62.84 331 P **P** **06 21 31.3 +1.6**
SCHQ Schefferville 63.67 5 P **P** **06 21 34.6 0.0**
comp=Z,2.2nm,0.6s,baz=177,slow=6.3,SNR=9.8
SCHQ Schefferville 63.67 5 P **P** **06 21 34.5 0.0**
SCHQ IAmb IAmb 06 21 49.4
comp=Z,10nm,1.4s
MFID Camas Ranch 64.15 328 P **P** **06 21 37.3 -0.8**
MFID IAmb IAmb 06 21 39.8
comp=Z,3.4nm,0.8s
EGMT Eagleton 64.61 335 P **P** **06 21 41.2 +0.3**
EGMT IAmb IAmb 06 21 53.2
comp=Z,8.1nm,1.4s
JTMT Jette 66.43 332 P **P** **06 21 54.1 +1.4**
F10A Beach Ranch, E 66.62 329 P **P** **06 21 55.3 +1.4**
PINE Pine Mountain 67.19 325 P **P** **06 22 00.8 +3.1**
FCC Fort Churchill 69.16 349 P **P** **06 22 09.2 -0.2**
LIC Lamto 70.70 80 *eP* **P** **06 22 19.0 -0.8**
comp=Z,7.2nm,0.6s
LIC Lamto 70.70 80 P **P** **06 22 19.0 -0.8**
TIC Toumodi 70.79 80 *eP* **P** **06 22 20.3 0.0**
comp=Z,1.9nm,0.2s
TIC Toumodi 70.79 80 P **P** **06 22 20.3 0.0**
DBIC Dimbokro 70.96 80 P **P** **06 22 20.9 -0.4**
comp=Z,5.9nm,0.5s,baz=246,slow=4.9,SNR=24
DBIC Dimbokro 70.96 80 P **P** **06 22 21.1 -0.2**
KIC Kosan Boka 71.01 80 *eP* **P** **06 22 21.0 -0.6**
comp=Z,14nm,0.6s
KIC Kosan Boka 71.01 80 P **P** **06 22 21.0 -0.6**
SNAA Sanae 75.95 162 P **P** **06 22 50.5 +0.9**
SNAA Sanae 75.95 162 P **P** **06 22 50.0 +0.5**
comp=Z,1.5nm,0.5s,baz=271,slow=7.8,SNR=18
SNAA Sanae 75.95 162 P **P** **06 22 50.3 +0.7**
YKA Yellowknife Ar 77.51 342 P **P** **06 22 57.9 -0.3**
comp=Z,1.3nm,0.4s,baz=142,slow=6.0,SNR=35
YKA pP **pP** **06 23 35.4 +0.5**
comp=Z,0.3nm,0.5s,baz=141,slow=6.3,SNR=3.2
TOA0 Torodi Ar. Sit 78.59 75 P **P** **06 23 04.7 -0.5**
TORD Torodi Ar. Bea 78.59 75 P **P** **06 23 04.6 -0.6**
comp=Z,1.3nm,0.4s,baz=252,slow=5.0,SNR=23
TORD pP **pP** **06 23 41.7 -0.3**
comp=Z,2.3nm,0.9s,baz=274,slow=5.1,SNR=4.0
TORD Torodi Ar. Bea 78.59 75 P **P** **06 23 03.5 -1.7**
TORD pP **pP** **06 23 40.8 -1.2**
ESDC Sonseca Array 80.81 47 P **P** **06 23 17.6 +0.8**
comp=Z,0.8nm,0.6s,baz=241,slow=5.8,SNR=4.1
ESDC Sonseca Array 80.81 47 P **P** **06 23 16.4 -0.3**
QSPA South Pole Qui 81.35 180 P **P** **06 23 19.5 +0.3**
comp=Z,1.5nm,0.7s,baz=205,slow=1.7,SNR=11
QSPA pP **pP** **06 23 56.4 +0.2**
comp=Z,1.9nm,1.0s,baz=140,slow=2.7,SNR=3.1
QSPA South Pole Qui 81.35 180 P **P** **06 23 20.1 +0.9**
QSPA **pP** **06 23 56.0 -0.2**
RES Resolute Bay 84.26 355 P P **06 23 34.1 +0.4**
SUMG Summit 84.44 10 *iP* **P** **06 23 35.8 +0.5**
SUMG *e* 06 24 11.2
SUMG Summit 84.44 10 P **P** **06 23 35.8 +0.5**
SUMG IAmb IAmb 06 23 36.2
comp=Z,6.4nm,0.7s
ILAR Eielson Array 90.55 336 P **P** **06 24 04.1 -0.1**
comp=Z,0.3nm,0.4s,baz=123,slow=3.4,SNR=9.5
ILAR Eielson Array 90.55 336 P **P** **06 24 03.7 -0.5**
ABKAR Akbulak array 124.52 35 PKPdf **PKiKP** **06 30 02.4 +1.0**
STKA Stephens Creek 126.95 219 PKP **PKPdf** **06 30 06.5 +0.2**
comp=Z,1.6nm,0.7s,baz=101,slow=5.1,SNR=3.9
STKA Stephens Creek 126.95 219 PKPdf **PKiKP** **06 30 07.1 +0.3**
BVAR Borovoye Array 127.47 29 PKP **PKiKP** **06 30 07.3 +0.1**
comp=Z,0.4nm,0.5s,baz=232,slow=1.6,SNR=2.5
ZALV Zalesovo Beam 131.93 16 PKP **PKiKP** **06 30 15.7 -0.4**
comp=Z,1.5nm,0.4s,baz=265,slow=2.5,SNR=7.2
ZALV pPKP **pPKPdf** **06 30 54.6 +0.2**
comp=Z,1.6nm,0.6s,baz=275,slow=2.4,SNR=3.5
ZALV Zalesovo Beam 131.93 16 **PKPdf** **06 30 15.2 +0.1**
KURK Kurchatov 132.59 23 **PKiKP** **06 30 17.4 -0.1**
KURBB Kurchatov Arra 132.62 23 PKP **PKiKP** **06 30 17.4 -0.2**
comp=Z,0.7nm,0.6s,baz=317,slow=3.0,SNR=3.8
MKAR Makanchi Array 137.19 24 PKP **PKPdf** **06 30 25.3 +0.2**
comp=Z,0.4nm,0.5s,baz=3.5,slow=1.2,SNR=5.9
MKAR pPKP **pPKPdf** **06 31 05.9 +1.3**
comp=Z,0.7nm,0.7s,baz=329,slow=2.1,SNR=5.3
MKAR Makanchi Array 137.19 24 **PKPdf** **06 30 24.7 -0.4**
MKAR **pPKPdf** **06 31 04.9 +0.3**
ASAR Alice Springs 137.54 220 PKP **PKPdf** **06 30 26.6 0.0**
comp=Z,1.0nm,0.6s,baz=115,slow=1.9,SNR=14
ASAR pPKP **pPKPdf** **06 31 05.7 -0.3**
comp=Z,0.4nm,0.6s,baz=115,slow=2.0,SNR=1.7
ASAR Alice Springs 137.54 220 **PKPdf** **06 30 26.4 -0.2**
ASAR **pPKPdf** **06 31 04.9 -1.1**
KSH Kashi 139.50 36 *e*PKP **PKPdf** **06 30 25.5 -4.2**
WRA Warramunga Arr 139.85 224 PKP **PKPdf** **06 30 30.7 -0.1**
comp=Z,0.9nm,0.4s,baz=119,slow=2.1,SNR=14
WRA pPKP **pPKPdf** **06 31 10.2 -0.1**
comp=Z,0.9nm,0.7s,baz=134,slow=2.0,SNR=2.7
WRA Warramunga Arr 139.85 224 **PKPdf** **06 30 29.2 -1.6**
SONM Songino Array 141.06 359 PKP **PKPdf** **06 30 31.2 -1.1**
comp=Z,0.3nm,0.6s,baz=349,slow=4.4,SNR=2.3
SONM Songino Array 141.06 359 **PKPdf** **06 30 30.4 -1.9**
KSRS Korea Array 145.04 328 PKPbc **PKPbc** **06 30 37.8 -1.4**
comp=Z,3.8nm,0.9s,baz=49,slow=3.9,SNR=10
KSRS pPKPbc **pPKPdf** **06 31 18.6 -0.2**
comp=Z,1.4nm,0.6s,baz=59,slow=2.7,SNR=2.6
KNRA Kununurra 146.62 223 **PKPbc** **06 30 45.0 +0.5**
FITZ Fitzroy Crossi 146.79 216 PKPbc **PKPbc** **06 30 45.4 +0.5**
LZH Lanzhou 152.75 3 ||PKPbc **PKPdf** **06 30 49.5 -2.6**
LZH PKPbc **PKPab** **06 31 10.6 +0.1**
LZH pPKP pPKPdf 06 31 28.8 -2.9
LZH sPKP 06 31 44.3

IDC 17 06:11:39.1±6.7, 2.14N×96.52W, h0km, mb3.7/5, mb1 4.2/5, mb1mx3.8/35, mbtmp3.7/5, MS3.2/6, Ms1 3.2/6, ms1mx2.9/32, Error ellipse: s-maj=182.7km s-min=131.4km az=74.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**19.70**	**24**	LR	LR	06 23 08.7	
	comp=Z,96nm,19.6s,baz=230,slow=35						
NNA	**Nana**	**24.07**	**126**	LR	LR	06 24 12.0	
	comp=Z,39nm,18.5s,baz=288,slow=31						
LPIG	**La Paz**	**25.59**	**330**	LR	LR	06 24 39.1	
	comp=Z,92nm,19.7s,baz=191,slow=30						
TXAR	**Lajitas Array**	**27.89**	**347**	P	P	06 17 30.1	-0.9
	0.8nm,0.9s,baz=164,slow=10,SNR=4.9						
TXAR				LR	LR	06 26 35.5	
	comp=Z,27nm,18.3s,baz=0.0,slow=32						
NVAR	**Mina Array Bea**	**41.26**	**334**	P	P	06 19 26.2	-0.1
	0.6nm,0.8s,baz=148,slow=8.4,SNR=5.5						
PDAR	**Pinedale Array**	**42.10**	**346**	P	P	06 19 34.0	+0.8
	0.8nm,0.9s,baz=152,slow=7.3,SNR=5.6						
CFA	**Coronel Fontan**	**42.98**	**144**	LR	LR	06 35 06.9	
	comp=Z,40nm,18.1s,baz=360,slow=33						
MDP	**Montagnes des**	**43.88**	**85**	LR	LR	06 38 25.5	
	comp=Z,34nm,19.9s,baz=15,slow=37						
YKA	**Yellowknife Ar**	**61.72**	**351**	P	P	06 21 59.5	+0.6
	1.2nm,1.0s,baz=157,slow=6.7,SNR=7.6						
ILAR	**Eielson Array**	**72.14**	**340**	P	P	06 23 04.8	-0.5
	1.6nm,0.8s,baz=145,slow=5.1,SNR=16						

NEIC 17 06:14:49.4±1.6, 2.5N±0.1×125.82E±0.10, h117km±10km, mb4.0/6, Error ellipse: s-maj=17.5km s-min=13.6km az=167.0
IDC 17 06:14:56.2±10.0, 1.84N×124.62E, h162km±93km, mb3.3/3, mb1 3.5/4, mb1mx3.2/37, mbtmp3.8/4, Error ellipse: s-maj=125.9km s-min=21.0km az=62.0
ISC 17 06:14:48.5±0.8, 2.56N±0.10×125.87E±0.09, h100km, n16, σ1§42/19, mb3.8/6, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.33**	**140**	Pn	**Pn**	**06 15 27.2**	**+1.9**
LUWI	**Luwuk**	**4.73**	**221**	Pn	**Pn**	**06 15 57.8**	**+0.1**
LUWI				Sn	**Sn**	**06 16 50.9**	**-0.5**
SBUM	**Sibu**	**13.63**	**270**	P	**Pn**	**06 18 00.5**	**+2.6**
KNRA	**Kununurra**	**18.35**	**171**	P	P	**06 18 54.2**	**-1.1**
KNRA				IAmb	IAmb	06 19 10.8	
	comp=Z,23nm,1.1s						
FITZ	**Fitzroy Crossi**	**20.53**	**181**	P	P	**06 19 15.5**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=328,slow=9.5,SNR=2.9						
WRA	**Warramunga Arr**	**23.86**	**160**	P	P	**06 19 52.5**	**-0.4**
	comp=Z,3.1nm,0.7s,baz=332,slow=11,SNR=14						
WRA	**Warramunga Arr**	**23.86**	**160**	P	P	**06 19 52.1**	**-0.8**
WR0	**Warramunga Arr**	**23.95**	**160**	P	P	**06 19 54.3**	**+0.7**
WR0				IAmb	IAmb	06 19 55.9	
	comp=Z,7.8nm,1.1s						
AS31	**Alice Springs**	**27.22**	**164**	P	P	**06 20 22.6**	**-0.6**
ASAR	**Alice Springs**	**27.22**	**164**	P	P	**06 20 21.9**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=343,slow=7.5,SNR=12						
ASAR				PcP	**PcP**	**06 23 40.9**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=349,slow=3.8,SNR=2.9						
ASAR	**Alice Springs**	**27.22**	**164**	P	P	**06 20 21.8**	**-1.5**
PBKT	**Sadao Pong**	**28.16**	**301**	P	P	**06 20 30.9**	**-0.8**
PBKT				IAmb	IAmb	06 20 31.6	
	comp=Z,2.7nm,0.5s						
MK31	**Makanchi Array**	**58.03**	**326**	P	P	**06 24 31.3**	**+0.2**
MK31				IAmb	IAmb	06 24 43.7	
	comp=Z,0.4nm,0.9s						
MKAR	**Makanchi Array**	**58.03**	**326**	P	P	**06 24 31.4**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=123,slow=7.2,SNR=15						
MKAR				PcP	**PcP**	**06 25 21.6**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=123,slow=3.7,SNR=4.5						
MKAR	**Makanchi Array**	**58.03**	**326**	P	P	**06 24 31.6**	**+0.5**
GAMB	**Gambell**	**75.81**	**24**	P	P	**06 26 22.2**	**-1.1**

SJA 17 06:17:10.0±0.8, 27.19S×63.22W, h606km±11km, ML3.7, MW3.8
IDC 17 06:17:17.4±1.0, 27.04S×63.38W, h570km±12km, mb3.1/10, mb1 3.2/14, mb1mx3.1/31, mbtmp4.0/14, Error ellipse: s-maj=17.4km s-min=13.7km az=70.0
NEIC 17 06:17:17.1±1.3, 27.16S±0.05×63.5W±0.1, h570km±6km, mb4.1/18, Md3.8(SJA), Error ellipse: s-maj=16.6km s-min=7.0km az=100.0
ISC 17 06:17:16.4±0.5, 27.15S±0.06×63.43W±0.07, h562km, n65, σ1§12/75, mb3.9/15, Santiago del Estero Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AHML	**Horco Molle**	**1.74**	**282**	*i* P	**P**	**06 18 27.6**	**+1.3**
AHML				IAML		06 18 28.0	
	comp=Z,35nm,0.5s						
AHML				*i* S	**S**	**06 19 23.5**	**+0.5**
CYA	**Choya**	**2.46**	**238**	*i* P	**P**	**06 18 30.3**	**+0.9**
CYA				IAML		06 18 30.9	
	comp=Z,58nm,0.3s						
CYA				*i* S	**S**	**06 19 27.5**	**-1.5**
SLA	**San Lorenzo**	**3.05**	**322**	*i* P	**P**	**06 18 34.5**	**+1.4**
SLA				IAML		06 18 39.6	
	comp=Z,6.9nm,0.4s						
AZAP	**Zapla**	**3.26**	**333**	*i* P	**P**	**06 18 35.4**	**+0.9**
AZAP				IAML		06 18 37.0	
	comp=Z,7.5nm,0.3s						
TCA	**Tanti**	**4.30**	**193**	*i* P	**P**	**06 18 41.8**	**+0.4**
TCA				IAML		06 18 42.6	
	comp=Z,23nm,0.3s						
VCA	**Vinchina**	**4.51**	**248**	*e*P	**P**	**06 18 45.0**	**+1.8**
VCA				IAML		06 18 49.4	
	comp=Z,63nm,0.2s						
VCA				*i* S	**S**	**06 19 55.8**	**+1.7**
YJA	**Yavi**	**5.30**	**339**	*i* P	**P**	**06 18 52.3**	**+2.1**
YJA				IAML		06 18 53.3	
	comp=Z,3.3nm,0.6s						
CPUP	**Villa Florida**	**5.52**	**83**	P	**P**	**06 18 52.9**	**+1.5**
	comp=Z,1.5nm,0.3s,baz=247,slow=9.0,SNR=31						
CPUP	**Villa Florida**	**5.52**	**83**	P	**P**	**06 18 52.6**	**+1.3**
MRA	**San Martin**	**5.62**	**200**	*i* P	**P**	**06 18 52.2**	**0.0**
MRA				IAML		06 18 52.5	
	comp=Z,6.7nm,0.3s						
MRA				*i* S	**S**	**06 20 08.5**	**-2.1**
GO02	**Mina Guanaco**	**5.88**	**288**	P	**P**	**06 18 56.6**	**+1.6**
GO02				S	**S**	**06 20 16.4**	**+1.0**
CFA	**Coronel Fontan**	**6.11**	**222**	P	**P**	**06 18 58.3**	**+1.7**
	comp=Z,9.0nm,0.3s,baz=42,slow=11,SNR=62						
CFA				S	**S**	**06 20 19.1**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=156,slow=22,SNR=15						
ZON	**Zonda**	**6.34**	**225**	*i* P	P	06 19 02.3	+3.6
LVC	**Limon Verde**	**6.72**	**311**	P	**P**	**06 19 04.2**	**+1.4**
	comp=Z,2.1nm,0.3s,baz=135,slow=4.1,SNR=19						
LVC				S	**S**	**06 20 27.6**	**-2.0**
	comp=Z,5.0nm,0.3s,baz=237,slow=20,SNR=29						
LVC	**Limon Verde**	**6.72**	**311**	P	**P**	**06 19 04.1**	**+1.3**
GO04	**Tololo Observa**	**7.14**	**243**	P	**P**	**06 19 07.5**	**+1.0**
PB10	**IPOC Station P**	**7.39**	**298**	P	**P**	**06 19 09.3**	**+0.6**
PB10					**S**	**06 20 43.0**	**+2.5**
PB04	**IPOC Station P**	**7.76**	**307**	P	**P**	**06 19 13.1**	**+0.6**
PB04					**S**	**06 20 46.6**	**-0.9**
ROC1	**El Roble**	**8.77**	**227**	P	**P**	**06 19 23.0**	**+0.7**
GO01	**Chusmiza**	**9.13**	**323**	P	**P**	**06 19 26.7**	**+0.2**
GO01					**S**	**06 21 14.2**	**+1.2**
PB11	**IPOC Station P**	**9.31**	**321**	P	**P**	**06 19 28.0**	**+0.2**
MNMC	**Minye Minye**	**9.79**	**323**	P	**P**	**06 19 33.5**	**+0.7**
GO06	**Curarrehue**	**14.10**	**206**	P	**P**	**06 20 16.5**	**0.0**
PLCA	**Paso Flores**	**14.77**	**202**	P	**P**	**06 20 22.7**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=80,slow=3.9,SNR=4.0						
PLCA	**Paso Flores**	**14.77**	**202**	P	**P**	**06 20 22.6**	**-0.7**
SPB	**Sao Paulo**	**14.89**	**80**	P	**P**	**06 20 26.8**	**+2.1**
BDFB	**Brasilia**	**18.34**	**54**	P	**P**	**06 20 57.5**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=212,slow=9.5,SNR=3.7						
BDFB	**Brasilia**	**18.34**	**54**	P	**P**	**06 20 57.6**	**+0.4**
BDFB				IAmb	IAmb	06 21 14.2	
	comp=Z,6.7nm,1.4s						
SDV	**Santo Domingo**	**36.49**	**348**	P	**P**	**06 23 33.7**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=234,slow=18,SNR=5.9						
SDV	**Santo Domingo**	**36.49**	**348**	P	**P**	**06 23 33.9**	**-1.3**
SDV				IAmb	IAmb	06 23 39.1	
	comp=Z,4.7nm,1.1s						
TEIG	**Tepich**	**52.89**	**330**	P	**P**	**06 25 40.0**	**-0.6**
	comp=Z,5.1nm,0.9s,baz=138,slow=12,SNR=2.8						
TEIG	**Tepich**	**52.89**	**330**	P	**P**	**06 25 40.6**	**-0.1**
TEIG				IAmb	IAmb	06 25 57.6	
	comp=Z,24nm,1.2s						
SNAA	**Sanae**	**55.32**	**160**	P	**P**	**06 25 57.9**	**+0.8**
	comp=Z,1.1nm,0.9s,baz=282,slow=14,SNR=3.2						
SNAA	**Sanae**	**55.32**	**160**	P	**P**	**06 25 57.3**	**+0.1**
QSPA	**South Pole Qui**	**63.07**	**180**	P	**P**	**06 26 50.2**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=132,slow=3.3,SNR=4.8						
QSPA	**South Pole Qui**	**63.07**	**180**	P	**P**	**06 26 50.5**	**+1.4**
Z50A	**Ashland**	**63.76**	**339**	P	**P**	**06 26 53.6**	**-0.1**
Z50A				IAmb	IAmb	06 27 01.8	
	comp=Z,9.6nm,1.3s						
V55A	**Taylorsville**	**64.87**	**344**	P	**P**	**06 27 01.9**	**+1.2**
V55A				IAmb	IAmb	06 27 02.5	
	comp=Z,12nm,1.4s						
DBIC	**Dimbokro**	**65.85**	**68**	P	**P**	**06 27 07.0**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=202,slow=4.1,SNR=6.3						
DBIC	**Dimbokro**	**65.85**	**68**	P	**P**	**06 27 07.1**	**-0.2**
DBIC				IAmb	IAmb	06 27 23.1	
	comp=Z,19nm,1.4s						
CLTN	**Cedars of Leba**	**66.51**	**340**	P	**P**	**06 27 10.6**	**-0.2**
WVT	**Waverly**	**67.01**	**339**	P	**P**	**06 27 13.1**	**-0.9**
TXAR	**Lajitas Array**	**68.11**	**323**	P	**P**	**06 27 21.1**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=146,slow=6.6,SNR=3.9						
TXAR	**Lajitas Array**	**68.11**	**323**	P	**P**	**06 27 19.9**	**-1.1**
PBMO	**Poplar Bluff**	**68.48**	**337**	P	**P**	**06 27 22.8**	**-0.1**
PBMO				IAmb	IAmb	06 27 36.0	
	comp=Z,7.6nm,1.3s						
EMMW	**East Machias**	**71.61**	**357**	P	**P**	**06 27 42.7**	**+1.5**
PKME	**Peaks-Kenny Pk**	**72.26**	**356**	P	**P**	**06 27 46.2**	**+1.2**
G62A	**West of Eustis**	**72.31**	**355**	P	**P**	**06 27 46.2**	**+0.9**
LMN	**Caledonia Moun**	**72.66**	**359**	P	**P**	**06 27 48.0**	**+0.7**
TRQ	**Mont Tremblant**	**73.72**	**352**	P	**P**	**06 27 53.9**	**+0.5**
TOA0	**Torodi Ar. Sit**	**74.78**	**66**	P	**P**	**06 27 59.9**	**-0.1**
TOA0				IAmb	IAmb	06 28 00.4	
	comp=Z,2.7nm,0.7s						
TORD	**Torodi Ar. Bea**	**74.78**	**66**	P	**P**	**06 27 59.4**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=259,slow=5.5,SNR=13						
TORD	**Torodi Ar. Bea**	**74.78**	**66**	P	**P**	**06 27 59.2**	**-0.9**
D53A	**Lac Vacive, Po**	**75.00**	**350**	P	**P**	**06 28 01.0**	**+0.5**
D53A				IAmb	IAmb	06 28 14.7	
	comp=Z,14nm,1.5s						
BOSA	**Bo

mb4.3/30,Error ellipse: s-maj=29.3km s-min=19.0km az=239.0

ISC 17 06:28:57.7±0.9,2°.0N±0°.1×97°.9W±0°.2,h10km,n62, σ1s21/50,mb4.2/23,MS3.5/9,West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APG	**El Apazote**	**14.88**	**29**	LR	LR	06 36 46.0	
	comp=Z,236nm,20.2s,baz=96,slow=32						
JTS	**Las Juntas de**	**15.28**	**57**	LR	LR	06 36 35.0	
	comp=Z,214nm,19.9s,baz=175,slow=30						
CMIG	**Matias Romero**	**15.32**	**11**	LR	LR	06 36 58.5	
	comp=Z,268nm,18.8s,baz=164,slow=32						
ACON	**Acoyapa**	**16.05**	**51**	Pn	**Pn**	**06 32 43.5**	**-0.1**
ACON				IAmb	IAmb	06 32 46.8	
	comp=Z,40nm,1.3s						
OTAV	**Otavalo**	**19.50**	**95**	P	**P**	**06 33 26.1**	**+0.4**
TEIG	**Tepich**	**20.43**	**27**	LR	LR	06 40 23.2	
	comp=Z,179nm,18.8s,baz=51,slow=34						
ZAIG	**Zacatecas**	**21.18**	**348**	P	**P**	**06 33 46.0**	**+2.4**
ZAIG				IAmb	IAmb	06 33 48.3	
	comp=Z,13nm,1.2s						
FLOC	**Florencia**	**22.22**	**91**	P	**P**	**06 33 54.5**	**-0.2**
ROSC	**El Rosal**	**23.69**	**82**	LR	LR	06 41 23.7	
	comp=Z,129nm,18.2s,baz=217,slow=32						
ROSC	**El Rosal**	**23.69**	**82**	P	**P**	**06 34 09.2**	**-1.1**
ROSC				IAmb	IAmb	06 34 23.9	
	comp=Z,18nm,1.5s						
RUSC	**La Rusia**	**25.04**	**80**	P	**P**	**06 34 24.1**	**+1.2**
LPIG	**La Paz**	**25.08**	**332**	LR	LR	06 41 55.2	
	comp=Z,165nm,20.1s,baz=170,slow=31						
833A	**Chaparral WMA,**	**26.25**	**357**	P	**P**	**06 34 33.8**	**+0.6**
833A				IAmb	IAmb	06 34 35.7	
	comp=Z,10.0nm,1.1s						
TX32	**Lajitas Array**	**27.77**	**349**	P	**P**	**06 34 47.6**	**+0.7**
TXAR	**Lajitas Array**	**27.77**	**349**	P	**P**	**06 34 48.0**	**+1.1**
	comp=Z,1.7nm,0.9s,baz=161,slow=12,SNR=8.5						
TXAR				LR	LR	06 44 47.5	
	comp=Z,86nm,18.6s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**27.77**	**349**	P	**P**	**06 34 47.6**	**+0.7**
TX31	**Lajitas Ar. Si**	**27.77**	**349**	P	**P**	**06 34 47.5**	**+0.5**
TX31				IAmb	IAmb	06 34 49.4	
	comp=Z,4.1nm,1.1s						
JCT	**Junction City**	**28.42**	**357**	P	**P**	**06 34 53.1**	**+0.4**
MSTX	**Muleshoe**	**32.17**	**352**	P	**P**	**06 35 26.3**	**+0.5**
ANMO	**Albuquerque**	**33.77**	**347**	P	**P**	**06 35 40.7**	**+0.7**
LPAZ	**La Paz**	**34.53**	**123**	P	**P**	**06 35 48.2**	**+1.0**
	comp=Z,1.5nm,1.0s,baz=330,slow=8.1,SNR=3.4						
LPAZ				LR	LR	06 47 48.0	
	comp=Z,50nm,19.8s,baz=330,slow=33						
LPAZ	**La Paz**	**34.53**	**123**	P	**P**	**06 35 46.5**	**-0.8**
LPAZ				IAmb	IAmb	06 35 52.1	
	comp=Z,5.8nm,1.4s						
PFO	**Pinyon Flats O**	**35.97**	**333**	LR	LR	06 47 36.6	
	comp=Z,76nm,21.0s,baz=133,slow=31						
SAML	**Samuel**	**36.24**	**108**	P	**P**	**06 36 00.7**	**-0.7**
SDCO	**Great Sand Dun**	**36.29**	**350**	P	**P**	**06 36 02.4**	**+0.6**
MVCO	**Mesa Verde**	**36.41**	**346**	P	**P**	**06 36 03.7**	**+0.9**
MVCO				IAmb	IAmb	06 36 04.6	
	comp=Z,7.0nm,1.1s						
KSCO	**Kaye Shedlock'**	**37.13**	**354**	P	**P**	**06 36 10.5**	**+1.8**
SMCO	**Snowmass**	**37.96**	**348**	P	**P**	**06 36 16.4**	**+0.3**
SMCO				IAmb	IAmb	06 36 18.6	
	comp=Z,5.7nm,1.2s						
CCUT	**Cedar City**	**38.17**	**340**	P	**P**	**06 36 19.2**	**+1.5**
DUG	**Dugway, Tooele**	**40.40**	**342**	P	**P**	**06 36 36.8**	**+0.6**
SIV	**San Ignacio**	**40.51**	**117**	P	**P**	**06 36 37.8**	**+0.5**
	comp=Z,2.4nm,1.1s,baz=305,slow=14,SNR=6.0						
NVAR	**Mina Array Bea**	**40.83**	**335**	P	**P**	**06 36 41.8**	**+1.9**
	comp=Z,1.5nm,0.9s,baz=160,slow=9.1,SNR=11						
NVAR	**Mina Array Bea**	**40.83**	**335**	P	**P**	**06 36 41.2**	**+1.4**
BGU	**Big Grassy Mou**	**41.13**	**342**	P	**P**	**06 36 43.5**	**+1.3**
HWUT	**Hardware Ranch**	**41.34**	**344**	P	**P**	**06 36 44.8**	**+0.8**
HWUT				IAmb	IAmb	06 36 46.6	
	comp=Z,8.2nm,1.2s						
ECSD	**EROS Data Cent**	**41.60**	**1**	P	**P**	**06 36 45.2**	**-0.7**
ECSD				IAmb	IAmb	06 36 46.6	
	comp=Z,7.6nm,1.2s						
HVU	**Hansel Valley**	**41.84**	**343**	P	**P**	**06 36 49.5**	**+1.5**
PD31	**Pinedale Array**	**41.95**	**347**	P	**P**	**06 36 49.0**	**0.0**
PDAR	**Pinedale Array**	**41.95**	**347**	P	**P**	**06 36 49.5**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=153,slow=8.8,SNR=9.5						
PDAR				LR	LR	06 53 16.2	
	comp=Z,62nm,20.8s,baz=150,slow=35						
PDAR	**Pinedale Array**	**41.95**	**347**	P	**P**	**06 36 49.2**	**+0.2**
REDW	**Red Top Meadow**	**42.81**	**346**	P	**P**	**06 36 57.0**	**+1.0**
REDW				IAmb	IAmb	06 36 57.4	
	comp=Z,8.1nm,1.4s						
BEKR	**Beckworth**	**42.90**	**334**	P	**P**	**06 36 58.6**	**+1.8**
BEKR				IAmb	IAmb	06 37 00.0	
	comp=Z,5.7nm,1.3s						
MOOW	**Moose Ponds**	**43.15**	**346**	P	**P**	**06 36 57.9**	**-0.9**
MOOW				IAmb	IAmb	06 37 04.7	
	comp=Z,5.6nm,1.4s						
CFA	**Coronel Fontan**	**43.66**	**142**	P	**P**	**06 37 04.2**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=245,slow=5.2,SNR=3.7						
QLMT	**Earthquake Lak**	**44.33**	**346**	P	**P**	**06 37 09.7**	**+1.5**
MCMT	**McKenzie Canyo**	**44.69**	**345**	P	**P**	**06 37 12.3**	**+1.2**
YBH	**Yreka Blue Hor**	**45.45**	**334**	P	**P**	**06 37 16.9**	**-0.2**
	comp=Z,1.5nm,1.0s,baz=253,slow=11,SNR=4.2						
ULM	**Lac du Bonnet**	**48.14**	**2**	P	**P**	**06 37 36.6**	**-1.2**
	comp=Z,2.0nm,1.0s,baz=168,slow=5.6,SNR=3.0						
CPUP	**Villa Florida**	**48.20**	**129**	P	**P**	**06 37 39.5**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=317,slow=10.0,SNR=4.0						
PLCA	**Paso Flores**	**49.26**	**153**	LR	LR	06 53 51.1	
	comp=Z,42nm,18.2s,baz=326,slow=30						
SCHQ	**Schefferville**	**58.45**	**20**	LR	LR	07 02 34.3	
	comp=Z,98nm,21.2s,baz=342,slow=35						
YKA	**Yellowknife Ar**	**61.67**	**351**	P	**P**	**06 39 15.0**	**-0.6**
	comp=Z,2.1nm,1.0s,baz=157,slow=6.8,SNR=18						
INK	**Inuvik**	**70.51**	**347**	P	**P**	**06 40 13.0**	**+0.7**
	comp=Z,5.8nm,0.9s,baz=129,slow=5.8,SNR=15						
INK	**Inuvik**	**70.51**	**347**	P	**P**	**06 40 12.6**	**+0.2**
IL31		**71.84**	**340**	P	**P**	**06 40 20.1**	**-0.3**
ILAR	**Eielson Array**	**71.84**	**340**	P	**P**	**06 40 20.4**	**-0.1**
	comp=Z,4.0nm,0.9s,baz=150,slow=5.1,SNR=39						
ILAR	**Eielson Array**	**71.84**	**340**	P	**P**	**06 40 20.0**	**-0.5**
H11S2	**WAKE ISLAND Hy**	**94.52**	**289**	T	T	08 27 28.9	
	baz=86						
H11S1	**WAKE ISLAND Hy**	**94.52**	**289**	T	T	08 27 24.0	
	baz=86						
H11S3	**WAKE ISLAND Hy**	**94.53**	**289**	T	T	08 27 27.4	
	baz=86						
TLY	**Talaya**	**123.52**	**344**		**PKPdf**	**06 47 51.4**	**-4.1**
ZAA0	**Zalesovo Array**	**124.24**	**358**	PKPdf	**PKPdf**	**06 47 54.2**	**-2.5**

IDC 17 06:34:14.5±0.9,31°.2ON×143°.6E,h0km,mb3.8/9, mb1 3.9/13,mb1mx3.7/70,mbtmp3.8/13,ML3.3/3,MS2.7/1, Ms1 2.7/1,ms1mx2.1/43,Error ellipse: s-maj=26.7km s-min=19.6km az=74.0

JMA 17 06:34:17.7±0.6,31°.66N×142°.74E,h0km,M4.4

NEIC 17 06:34:18.7±2.5,31°.2ON±0°.04×142°.8E±0°.1,h35km±6km, mb4.5/11,Error ellipse: s-maj=15.4km s-min=5.8km az=79.0

ISC 17 06:34:19.4±0.6,31°.25N±0°.06×142°.90E±0°.09,h35km,n43, σ2s09/50,mb4.1/14,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.20**	**306**	P	**Pn**	**06 35 06.1**	**-1.1**
JHJ2				*eS*	**Sn**	**06 35 41.6**	**-2.5**
JHJ2	**Mitsune**	**3.20**	**306**	Pn	**Pn**	**06 35 06.2**	**-1.0**
JHJ2				Sn	**Sn**	**06 35 42.4**	**-1.8**
BSO1	**Boso 1**	**3.76**	**335**	P	**Pn**	**06 35 13.2**	**-1.1**
BSO3	**Boso 3**	**4.07**	**331**	P	**Pn**	**06 35 17.1**	**-1.8**
JCJ	**Chichijima**	**4.19**	**189**	Pn	**Pn**	**06 35 19.1**	**-1.7**
	5.0nm,0.3s,baz=300,slow=20,SNR=4.9						
JCJ				Sn	**Sn**	**06 36 04.9**	**-3.6**
	11nm,0.3s,baz=285,slow=19,SNR=3.3						
BSO4	**Boso 4**	**4.30**	**331**	P	**Pn**	**06 35 21.3**	**-0.9**
JOD2	**Odawara 2**	**5.12**	**322**	P	**Pn**	**06 35 31.8**	**-1.7**
JOD2				*eS*	**Sn**	**06 36 27.8**	**-3.6**
JHU	**Hanno**	**5.49**	**328**	P	**Pn**	**06 35 36.8**	**-1.9**
JHU				*eS*	**Sn**	**06 36 36.3**	**-4.3**
JRY	**Ryogami san**	**5.80**	**326**	P	**Pn**	**06 35 41.7**	**-1.3**
JAG	**Ashikaga**	**5.90**	**332**	P	**Pn**	**06 35 42.9**	**-1.4**
JAG				S	**Sn**	**06 36 47.6**	**-3.1**
MJAR	**Matsushiro Arr**	**6.56**	**325**	Pn	**Pn**	**06 35 52.2**	**-1.2**
	0.3nm,0.3s,baz=137,slow=11,SNR=14						
MJAR				Sn	**Sn**	**06 37 04.8**	**-2.1**
	0.1nm,0.3s,baz=144,slow=11,SNR=2.5						
MAJO	**Matsushiro**	**6.56**	**325**	Pn	**Pn**	**06 35 53.4**	**+0.1**
MAJO				Sn	**Sn**	**06 37 06.3**	**-0.6**
MAT	**Matsushiro**	**6.56**	**325**	P	**Pn**	**06 35 53.0**	**-0.4**
MAT				S	**Sn**	**06 37 03.9**	**-3.1**
MJB9	**Matsu-Tunnel**	**6.56**	**325**	Pn	**Pn**	**06 35 53.7**	**+0.3**
JNU	**Nakatsue**	**10.35**	**284**	LR	LR	06 40 23.8	
	comp=Z,45nm,20.2s,baz=175,slow=35						
KSRS	**Korea Array**	**13.82**	**301**	Pn	**Pn**	**06 37 35.0**	**+2.2**
	baz=108,slow=12,SNR=4.4						
KLR	**Kul'dur**	**19.83**	**338**	P	**P**	**06 38 47.0**	**0.0**
	0.1nm,0.3s,baz=156,slow=12,SNR=2.6						
SONM	**Songino Array**	**32.29**	**311**	P	**P**	**06 40 45.6**	**+0.6**
	1.0nm,0.8s,baz=122,slow=9.4,SNR=3.7						
SONM	**Songino Array**	**32.29**	**311**	P	**P**	**06 40 45.5**	**+0.6**
MK31	**Makanchi Array**	**48.40**	**307**	P	**P**	**06 43 01.9**	**+3.9**
MKAR	**Makanchi Array**	**48.40**	**307**	P	**P**	**06 43 01.6**	**+3.6**
	2.6nm,0.6s,baz=91,slow=9.6,SNR=27						
MKAR	**Makanchi Array**	**48.40**	**307**	P	**P**	**06 43 01.9**	**+3.9**
MAKZ	**Makanchi**	**48.61**	**307**	P	**P**	**06 43 03.6**	**+4.0**
MAKZ				IAmb	IAmb	06 43 04.1	
	comp=Z,2.9nm,0.6s						
IMAR	**Indian Mountai**	**51.08**	**28**	P	**P**	**06 43 18.6**	**+0.6**
WRA	**Warramunga Arr**	**51.56**	**190**	P	**P**	**06 43 21.3**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=11,slow=8.4,SNR=3.7						
WRA	**Warramunga Arr**	**51.56**	**190**	P	**P**	**06 43 20.4**	**-1.6**
BOOM	**Boomskoye usch**	**53.46**	**302**	P	**P**	**06 43 36.9**	**+0.6**
BOOM				IAmb	IAmb	06 43 49.9	
	comp=Z,25nm,1.4s						
PRP	**Porcupine Dome**	**54.40**	**29**	P	**P**	**06 43 45.3**	**+2.5**
AAK	**Ala-Archa**	**54.48**	**303**	P	**P**	**06 43 46.1**	**+2.4**
	comp=Z,0.8nm,0.3s,baz=72,slow=3.2,SNR=3.4						
ASAR	**Alice Springs**	**55.28**	**190**	P	**P**	**06 43 50.0**	**+0.7**
	comp=Z,0.6nm,0.9s,baz=11,slow=6.0,SNR=2.6						
HUH	**Hualalai**	**55.89**	**86**	P	**P**	**06 43 53.9**	**-0.4**
KK31	**Karatay Array**	**57.23**	**304**	P	**P**	**06 44 05.3**	**+2.1**
KK31				IAmb	IAmb	06 44 08.5	
	comp=Z,2.9nm,0.8s						
KKAR	**Karatay Array**	**57.23**	**304**	P	**P**	**06 44 05.3**	**+2.1**
KKAR				IAmb	IAmb	06 44 08.5	
	comp=Z,2.9nm,0.8s						
C36M	**Paulatuk**	**62.19**	**24**	P	**P**	**06 44 33.6**	**-3.2**
C36M				IAmb	IAmb	06 44 36.1	
	comp=Z,4.3nm,1.3s						
ABKAR	**Akbulak array**	**62.69**	**313**		pP	06 44 47.7	-1.4
ABKAR	**Akbulak array**	**62.69**	**313**	P	**P**	**06 44 40.8**	**+0.3**
YKA	**Yellowknife Ar**	**68.21**	**29**	P	**P**	**06 45 15.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=292,slow=6.1,SNR=3.4						
LON	**Longmire**	**71.31**	**46**	P	**P**	**06 45 34.7**	**-0.7**
NVAR	**Mina Array Bea**	**77.49**	**53**	P	**P**	**06 46 12.0**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=273,slow=4.8,SNR=3.7						
NVAR	**Mina Array Bea**	**77.49**	**53**	P	**P**	**06 46 10.7**	**-1.0**
PDAR	**Pinedale Array**	**80.84**	**45**	P	**P**	**06 46 30.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=290,slow=3.7,SNR=2.9						
BRTR	**Keskin Array B**	**83.64**	**313**	P	**P**	**06 46 46.0**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=22,slow=1.3,SNR=4.3						
BRTR	**Keskin Array B**	**83.64**	**313**	P	**P**	**06 46 45.5**	**+0.9**

IDC 17 06:37:30.5±1.3,2°.26S×138°.94E,h0km,mb3.5/3, mb1 3.7/4,mb1mx3.5/38,mbtmp3.5/4,ML3.4/1,MS3.2/3, Ms1 3.2/3,ms1mx2.7/30,Error ellipse: s-maj=28.3km s-min=24.5km az=16.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**1.78**	**98**	Pn	Pn	06 38 03.3	+0.7
	12nm,0.3s,baz=234,slow=9.4,SNR=35						
JAY				Sn	Sn	06 38 26.2	+0.3
	12nm,0.3s,baz=135,slow=20,SNR=7.3						
JAY				LR	LR	06 38 36.1	
	comp=Z,78nm,21.4s,baz=182,slow=37						
WRA	**Warramunga Arr**	**18.14**	**194**	P	Pn	06 41 43.9	-0.1
	0.1nm,0.3s,baz=17,slow=12,SNR=2.6						
FITZ	**Fitzroy Crossi**	**20.44**	**219**	LR	LR	06 50 50.3	
	comp=Z,63nm,18.3s,baz=10,slow=39						
ASAR	**Alice Springs**	**21.83**	**193**	P	P	06 42 24.8	+0.1
	0.4nm,0.7s,baz=25,slow=11,SNR=1.2						
ASAR				LR	LR	06 52 18.6	
	comp=Z,29nm,18.9s,baz=14,slow=41						
MKAR	**Makanchi Array**	**69.58**	**322**	P	P	06 48 41.9	+0.3
	0.8nm,0.9s,baz=110,slow=6.7,SNR=4.6						
AAK	**Ala-Archa**	**73.05**	**316**	LR	LR	07 23 09.4	
	comp=Z,40nm,21.9s,baz=44,slow=38						
ILAR	**Eielson Array**	**85.33**	**24**	P	P	06 50 08.6	-0.7
	0.6nm,0.8s,baz=274,slow=4.2,SNR=5.3						

IDC 17 06:48:17.4±3.7,50°.93N×174°.75E,h0km,mb3.5/5, mb1 3.8/6,mb1mx3.5/40,mbtmp3.5/6,ML2.4/1,Error ellipse: s-maj=100.6km s-min=26.4km az=174.0

NEIC 17 06:48:22.1±2.3,51°.00N±0°.10×174°.8E±0°.1,h31km±4km, Error ellipse: s-maj=15.4km s-min=10.2km az=218.0

AEIC 17 06:48:22.4±1.7,51°.1N±0°.1×175°.0E±0°.1,h20km±7km, ML3.7/7,mb4.2/18(NEIC),Error ellipse: s-maj=16.5km s-min=10.3km az=210.0

ISC 17 06:48:21.4±1.2,50°.9N±0°.1×174°.82E±0°.08,h29km,n43, σ1s05/43,mb3.9/15,South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**1.87**	**347**		**Sn**	**06 49 13.8**	**-0.2**
SMY	**Shemya**	**1.87**	**347**		**Pn**	**06 48 49.8**	**-1.6**
GALAA	**Gareloi Lava P**	**4.11**	**76**		**Pn**	**06 49 21.0**	**-1.2**
GAEA	**Gareloi East**	**4.13**	**75**		**Pn**	**06 49 22.2**	**-0.2**
TASE	**Tanaga Southea**	**4.57**	**76**		**Pn**	**06 49 27.4**	**-1.1**
TAFP	**Tanaga Falls P**	**4.62**	**75**		**Pn**	**06 49 28.1**	**-1.1**
TAPA	**Tanaga Point A**	**4.71**	**76**		**Pn**	**06 49 29.1**	**-1.3**
KIMD	**Kanaga Island**	**5.06**	**77**		**Pn**	**06 49 34.1**	**-1.1**
KICM	**Kanaga Island**	**5.10**	**76**		**Pn**	**06 49 34.9**	**-0.9**
KIKV	**Kanaga Island**	**5.11**	**76**		**Pn**	**06 49 34.7**	**-1.2**
KIWB	**Kanaga Island**	**5.12**	**76**	Pn	**Pn**	**06 49 33.9**	**-2.1**
ADK	**Adak**	**5.41**	**76**		**Pn**	**06 49 38.3**	**-1.7**
ADK	**Adak**	**5.41**	**76**		**Pn**	**06 49 38.0**	**-2.0**
GSMY	**Great Sitkin M**	**5.81**	**75**		**Pn**	**06 49 43.7**	**-1.8**
GSIG	**Igitkin Island**	**5.89**	**76**		**Pn**	**06 49 45.2**	**-1.4**
PETK	**Petropavlovsk-**	**10.78**	**288**	Pn	**Pn**	**06 50 53.1**	**-0.5**
	0.1nm,0.3s,baz=101,slow=19,SNR=1.5						
PETK	**Petropavlovsk-**	**10.78**	**288**		**Pn**	**06 50 54.1**	**+0.5**
BRLK	**Bradley Lake**	**21.20**	**52**	P	**P**	**06 53 04.3**	**0.0**
SUA	**Susitna One**	**21.61**	**48**	P	**P**	**06 53 08.5**	**-0.2**
IMAR	**Indian Mountai**	**21.97**	**35**	P	**P**	**06 53 15.1**	**+2.6**
BPAW	**Bear Paw Mtn.**	**22.27**	**41**	P	**P**	**06 53 16.9**	**+1.2**
TRF	**Thorofare Moun**	**22.35**	**43**	P	**P**	**06 53 17.3**	**+0.5**
GHO	**Glory Hole Cre**	**22.52**	**47**	P	**P**	**06 53 17.9**	**-0.6**
SML	**Sawmill**	**22.81**	**47**	P	**P**	**06 53 21.6**	**+0.1**
SML				IAmb	IAmb	06 53 25.9	
	comp=Z,11nm,0.9s						
HDA	**Harding Lake**	**24.04**	**41**	P	**P**	**06 53 33.1**	**-0.5**
HDA				IAmb	IAmb	06 53 47.7	
	comp=Z,6.0nm,1.4s						
ILAR	**Eielson Array**	**24.17**	**40**	P	**P**	**06 53 33.9**	**-0.8**
	comp=Z,1.9nm,1.2s,baz=256,slow=7.3,SNR=7.2						
ILAR	**Eielson Array**	**24.17**	**40**	P	**P**	**06 53 34.0**	**-0.7**
PAX	**Paxson**	**24.34**	**45**	P	**P**	**06 53 36.4**	**-0.1**
RIDG	**Independent Ri**	**24.77**	**43**	P	**P**	**06 53 40.5**	**+0.2**
RIDG				IAmb	IAmb	06 53 54.5	
	comp=Z,10nm,1.5s						
GLB	**Gilahina Butte**	**24.89**	**49**	P	**P**	**06 53 41.0**	**-0.3**
GLB				IAmb	IAmb	06 53 55.3	
	comp=Z,10nm,1.3s						
VRDI	**Verde Repeater**	**25.04**	**50**	P	**P**	**06 53 43.1**	**+0.3**
VRDI				IAmb	IAmb	06 53 57.7	
	comp=Z,5.3nm,1.1s						
DOT	**Dot Lake**	**25.10**	**44**	P	**P**	**06 53 43.0**	**-0.2**
DOT				IAmb	IAmb	06 53 59.4	
	comp=Z,8.2nm,1.4s						
SCRK	**Sand Creek**	**25.20**	**43**	P	**P**	**06 53 43.4**	**-0.7**
SCRK				IAmb	IAmb	06 53 46.3	
	comp=Z,4.3nm,1.2s						
BMAR	**Burnt Mountain**	**25.89**	**35**	P	**P**	**06 53 50.7**	**+0.4**
BARN	**Barnard Glacie**	**25.89**	**50**	P	**P**	**06 53 50.8**	**+0.2**
EGAK	**Eagle**	**26.56**	**42**	P	**P**	**06 53 56.4**	**0.0**
EGAK				IAmb	IAmb	06 53 56.5	
	comp=Z,12nm,1.4s						
DAWY	**Dawson**	**27.21**	**44**	P	**P**	**06 54 03.2**	**+0.9**
DAWY				IAmb	IAmb	06 54 04.0	
	comp=Z,6.0nm,0.8s						
EPYK	**Eagle Plains**	**28.64**	**39**	P	**P**	**06 54 15.8**	**+0.8**
EPYK				IAmb	IAmb	06 54 22.2	
	comp=Z,1.9nm,1.1s						
INK	**Inuvik**	**30.16**	**35**	P	**P**	**06 54 28.8**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=257,slow=6.8,SNR=3.8						
INK	**Inuvik**	**30.16**	**35**	P	**P**	**06 54 29.2**	**+0.8**
YKA	**Yellowknife Ar**	**38.43**	**45**	P	**P**	**06 55 41.2**	**+1.3**
	comp=Z,0.5nm,0.6s,baz=289,slow=8.0,SNR=12						
PDAR	**Pinedale Array**	**50.25**	**68**	P	**P**	**06 57 15.4**	**+0.5**
	comp=Z,0.2nm,0.6s,baz=278,slow=3.4,SNR=2.7						
MKAR	**Makanchi Array**	**57.09**	**305**	P	**P**	**06 58 04.7**	**0.0**
	comp=Z,0.3nm,0.7s,baz=52,slow=7.4,SNR=4.9						

IDC 17 06:56:04.3±1.7,9°.99S×79°.65W,h0km,mb3.6/5,mb1 3.9/8, mb1mx3.7/29,mbtmp3.7/8,ML3.7/3,MS2.8/6,Ms1 2.8/6, ms1mx2.6/30,Error ellipse: s-maj=55.4km s-min=23.0km az=42.0

ISC 17 06:56:09.8±1.1,9°.93S±0°.09×79°.5W±0°.1,h35km,n11, σ0s83/10,mb3.7/5,Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**2.98**	**21**	Pn	**Pn**	**06 56 56.0**	**+1.0**
	7.6nm,0.3s,baz=188,slow=5.3,SNR=100						
ATAH				Sn	**Sn**	**06 57 29.3**	**-0.5**
	16nm,0.3s,baz=323,slow=20,SNR=4.4						
ATAH				LR	LR	06 58 03.3	
	comp=Z,147nm,19.9s,baz=197,slow=38						
NNA	**Nana**	**3.31**	**128**	Pn	**Pn**	**06 57 00.2**	**+1.1**
	19nm,0.3s,baz=327,slow=12,SNR=39						
NNA				Sn	**Sn**	**06 57 36.6**	**-0.7**
	16nm,0.3s,baz=26,slow=15,SNR=7.7						
NNA				LR	LR	06 58 00.1	
	comp=Z,42nm,18.3s,baz=318,slow=34						
LPAZ	**La Paz**	**12.74**	**121**	LR	LR	07 04 59.0	
	comp=Z,57nm,20.6s,baz=270,slow=42						
ROSC	**El Rosal**	**15.55**	**20**	LR	LR	07 06 20.1	
	comp=Z,61nm,20.4s,baz=288,slow=39						
SIV	**San Ignacio**	**18.93**	**110**	P	**Pn**	**07 00 29.0**	**+0.3**
	0.1nm,0.3s,baz=303,slow=10,SNR=5.0						
SIV				LR	LR	07 07 36.3	
	comp=Z,25nm,18.3s,baz=106,slow=36						
JTS	**Las Juntas de**	**20.81**	**345**	LR	LR	07 08 02.3	
	comp=Z,25nm,20.3s,baz=187,slow=34						
PDAR	**Pinedale Array**	**59.21**	**335**	P	**P**	**07 06 08.0**	**+0.2**
	0.4nm,0.7s,baz=143,slow=8.0,SNR=3.6						
NVAR	**Mina Array Bea**	**60.21**	**325**	P	**P**	**07 06 15.3**	**+0.6**
	0.2nm,0.7s,baz=125,slow=5.6,SNR=2.8						
ULM	**Lac du Bonnet**	**61.61**	**348**	P	**P**	**07 06 23.3**	**-0.4**
	2.3nm,0.7s,baz=162,slow=9.6,SNR=4.0						
YKA	**Yellowknife Ar**	**77.15**	**344**	P	**P**	**07 07 59.2**	**-0.3**
	0.3nm,0.6s,baz=144,slow=5.8,SNR=9.1						
TORD	**Torodi Ar. Bea**	**83.78**	**76**	P	**P**	**07 08 35.1**	**-1.0**
	0.5nm,0.8s,baz=268,slow=4.3,SNR=2.8						

WEL 17 06:58:19.1,38°S±3°×177°6E±°,h194km±6km,M3.5/101, MLv3.5/101,Error ellipse: s-maj=0.0km s-min=0.0km az=32.8,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMRZ	**Kaimai**	**0.18**	**287**	P	Pn	06 58 44.7	0.0
TGRZ	**Tauranga**	**0.19**	**26**	P	Pn	06 58 44.6	-0.1
OMRZ	**Omania**	**0.27**	**141**	P	Pn	06 58 44.9	0.0
OPRZ	**Ohinepanea**	**0.32**	**81**	P	Pn	06 58 44.7	-0.2
HSRZ	**Hossack Road**	**0.42**	**170**	P	Pn	06 58 45.6	+0.4
GRRZ	**Galatos Road**	**0.45**	**185**	P	Pn	06 58 45.8	+0.2
RRRZ	**Republican Roa**	**0.52**	**147**	P	Pn	06 58 46.3	+0.7
TOZ	**Tahuroa Road**	**0.54**	**288**	P	Pn	06 58 45.7	+0.1
WPRZ	**Whakapapatarin**	**0.62**	**180**	P	Pn	06 58 46.3	+0.2
TLZ	**Tolley Road**	**0.65**	**228**	P	Pn	06 58 46.3	+0.2
MUGZ	**Murupara**	**0.76**	**140**	P	Pn	06 58 46.4	-0.3
MUGZ				S	Sn	06 59 07.4	-0.7
URZ	**Urewera**	**0.84**	**116**	P	Pn	06 58 46.7	-0

QRZ	Quartz Range	4.06 223	P	Pn	06 59 18.4	-3.0
BSWZ	Blackbirch Sta	4.20 204	P	Pn	06 59 20.2	-2.8
THZ	Tophouse	4.60 212	P	Pn	06 59 25.0	-3.3
KHZ	Kahutara	4.94 203	P	Pn	06 59 29.5	-3.0
DSZ	Denniston Nort	5.10 220	P	Pn	06 59 30.9	-3.7
GVZ	Greta Valley S	5.60 204	P	Pn	06 59 37.5	-3.5
LTZ	Lake Taylor	5.71 210	P	Pn	06 59 38.7	-3.8
INZ	Inchbonnie	6.02 215	P	Pn	06 59 42.6	-3.9
OXZ	Oxford	6.26 209	P	Pn	06 59 45.1	-4.5
OKCZ	Okains Bay	6.28 201	P	Pn	06 59 45.9	-3.9
MQZ	McQueen's Vall	6.38 203	P	Pn	06 59 46.2	-4.9
RPZ	Rata Peaks	6.98 212	P	Pn	06 59 55.3	-3.6
JCZ	Jackson Bay	8.31 220	P	Pn	07 00 12.4	-4.1

BJI ***17*** *07:01:23.3±0.0,58.°82N×101.°74E,h4km,mB4.6/37, mb4.5/47,Ms4.6/38,Ms7 4.3/14*

MOS ***17*** *07:01:26.0±1.3,58.°57N×101.°83E,h19km,mb4.7/25, MS3.5/6,Error ellipse: s-maj=7.9km s-min=4.8km az=91.5*

MOS Felt (IV-V) at Ust'-Ilimsk; (III-IV) at Bratsk; (II-III) at Novaya Igirma; (II) at Ust'-Kut.

BYKL ***17*** *07:01:26.8±0.7,58.°53N×101.°69E,Mw4.3/6(IEC), #STATIONS MAJO SSE XAN BJT ENH GNI FELT I=IV-V MSK at Ust-Ilimsk, III-V at Kodinsk, Tagara, Radishchev, Bratsk, III at Sogra, Educhanka, Podelanka.*

NEIC ***17*** *07:01:28.0±2.2,58.°65N±0.°07×101.°9E±0.°1,h14km±3km, mb4.6/61,Error ellipse: s-maj=11.2km s-min=10.0km az=102.0*

IDC ***17*** *07:01:30.0±2.8,58.°59N×101.°81E,h30km±22km,mb4.0/28, mb1 4.2/37,mb1mx4.1/47,mbtmp4.3/37,ML4.2/7,MS3.5/16, Ms1 3.5/16,ms1mx3.3/40,Error ellipse: s-maj=11.8km s-min=8.4km az=168.0*

ISC 17 07:01:27.1±0.3,58.°68N±0.°03×101.°84E±0.°03,h10km,n265, σ2.6s69/337,mb4.5/71,MS3.7/21,13C-6D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIZ	**Nizh Angarsk**	**5.10**	**122**	⇑*i*	Pn	**07 02 41.9**	**-1.5**
NIZ				*e*Pg	**Pb**	**07 02 57.4**	**+1.1**
NIZ				Pmax		07 03 02.0	
	765nm,0.7s						
NIZ				*e*Sn	**Sn**	**07 03 40.2**	**-2.1**
NIZ				*e*Sg	**Sb**	**07 04 02.3**	**+4.7**
NIZ				Smax		07 04 04.8	
	5μm,0.8s						
NIZ	**Nizh Angarsk**	**5.10**	**122**	*e*PN	**Pn**	**07 02 42.0**	**-1.5**
NIZ				*e*		07 02 58.3	
NIZ				*e*S	**Sn**	**07 03 39.3**	**-3.0**
NIZ				*e*		07 04 01.2	
NIZ				pmax	pmax		
	comp=Z,764nm,0.6s						
NIZ				smax	smax		
	comp=N,5μm,0.5s						
KRAR	**Krasnoyarsk**	**5.54**	**245**	*i* PN	**Pn**	**07 02 48.1**	**-1.4**
VTMR	**Vitim**	**5.58**	**78**	*e*Pn	**Pn**	**07 02 50.6**	**+0.5**
VTMR				*e*Pg	**Pb**	**07 03 09.1**	**+4.6**
VTMR				*e*Sn	**Sn**	**07 03 52.8**	**-1.4**
VTMR				*e*Sg	**Sg**	**07 04 22.8**	**-3.3**
MINR	**Mina**	**5.65**	**231**	⇓*i*	Pn	**07 02 48.4**	**-2.7**
MINR				Pg	**Pb**	**07 03 06.1**	**+0.4**
MINR				*e*		07 03 14.3	
MINR				*e*Sn	**Sn**	**07 03 49.3**	**-6.7**
MINR				*e*Sg	**Sb**	**07 04 16.9**	**+3.4**
KMO	**Kumora**	**5.80**	**115**	⇓*i*	Pn	**07 02 53.2**	**+0.1**
KMO				*e*Pg	**Pb**	**07 03 10.1**	**+1.9**
KMO				Pmax		07 03 13.4	
	comp=N,467nm,0.6s						
KMO				*e*Sn	**Sn**	**07 03 58.4**	**-1.2**
KMO				*e*Sg	**Sb**	**07 04 25.4**	**+7.7**
KMO				Smax		07 04 50.6	
	comp=N,8μm,1.1s						
KMO	**Kumora**	**5.80**	**115**	*e*PN	**Pn**	**07 02 53.2**	**+0.1**
KMO				*e*		07 03 10.6	
KMO				*e*S	**Sn**	**07 03 58.6**	**-1.0**
KMO				*e*		07 04 23.9	
KMO				pmax	pmax		
	comp=Z,462nm,0.4s						
KMO				smax	smax		
	comp=N,8μm,1.4s						
YOA	**Uoyan**	**5.92**	**111**	*e*Pn	**Pn**	**07 02 55.7**	**+0.9**
YOA				*e*Pg	**Pb**	**07 03 14.1**	**+3.8**
YOA				Pmax		07 03 28.4	
	comp=N,1μm,1.0s						
YOA				*e*		07 04 04.0	
YOA				*e*Sg	**Sg**	**07 04 31.5**	**-5.5**
YOA				Smax		07 04 54.3	
	comp=N,25μm,1.8s						
OGRR	**Ongureny**	**5.99**	**145**	⇑*i*	Pn	**07 02 53.4**	**-2.2**
OGRR				*e*Pg	**Pb**	**07 03 13.2**	**+1.8**
OGRR				Pmax		07 03 16.9	
	comp=N,1μm,0.7s						
OGRR				*e*Sn	**Sn**	**07 03 59.5**	**-4.6**
OGRR				*e*Sg	**Sb**	**07 04 29.0**	**+6.0**
OGRR				Smax		07 04 36.0	
	comp=N,3μm,1.3s						
OGRR	**Ongureny**	**5.99**	**145**	*e*PN	**Pn**	**07 02 53.7**	**-1.9**
OGRR				*e*		07 03 11.4	
OGRR				*e*S	**Sn**	**07 03 59.6**	**-4.6**
OGRR				*e*		07 04 26.8	
OGRR				pmax	pmax		
	comp=Z,1μm,0.8s						
OGRR				smax	smax		
	comp=E,3μm,1.6s						
ORL	**Orlik**	**6.26**	**191**	⇑*i*	Pn	**07 02 57.9**	**-1.6**
ORL				*e*Pg	**Pb**	**07 03 16.7**	**+0.5**
ORL				Pmax		07 03 36.7	
	comp=E,170nm,0.7s						
ORL				*e*Sn	**Sn**	**07 04 06.6**	**-4.5**
ORL				*e*Sg	**Sb**	**07 04 35.0**	**+3.9**
ORL				Smax		07 04 51.3	
	comp=E,3μm,1.6s						
ORL	**Orlik**	**6.26**	**191**	*e*PN	**Pn**	**07 02 59.2**	**-0.3**
ORL				*e*		07 03 16.9	
ORL				*e*S	**Sn**	**07 04 06.8**	**-4.3**
ORL				*e*		07 04 33.8	
ORL				pmax	pmax		
	comp=Z,171nm,0.8s						
ORL				smax	smax		
	comp=E,3μm,1.7s						
TRG	**Tyrgan**	**6.46**	**155**	*e*Pn	**Pn**	**07 02 59.2**	**-2.9**
TRG				*e*Pg	**Pb**	**07 03 21.3**	**+1.9**
TRG				Pmax		07 03 28.6	
	comp=E,567nm,0.6s						
TRG				*e*Sn	**Sn**	**07 04 08.9**	**-6.9**
TRG				*e*Sg	**Sb**	**07 04 44.1**	**+7.5**
TRG				Smax		07 05 01.1	
	comp=E,1μm,1.2s						
TRG	**Tyrgan**	**6.46**	**155**	*e*PN	**Pn**	**07 03 00.0**	**-2.1**
TRG				*e*		07 03 21.1	
TRG				*e*S	**Sn**	**07 04 09.8**	**-6.0**
TRG				*e*		07 04 43.8	
TRG				pmax	pmax		
	comp=Z,587nm,0.6s						
TRG				smax	smax		
	comp=E,1μm,1.3s						
BOD	**Bodaibo**	**6.48**	**92**	*e*Pn	**Pn**	**07 03 02.1**	**-0.3**
BOD				*e*		07 03 11.0	
BOD				max		07 03 36.7	
	comp=E,305nm,1.7s						
BOD				*e*Sn	**Sn**	**07 04 13.1**	**-3.3**
BOD				*e*Sg	**Sg**	**07 04 49.8**	**-5.1**
BOD				Smax		07 04 51.5	
	comp=E,3μm,1.6s						
BOD	**Bodaibo**	**6.48**	**92**	*e*PN	**Pn**	**07 03 01.7**	**-0.7**
BOD				*e*		07 03 22.0	
BOD				*e*S	**Sn**	**07 04 14.0**	**-2.4**
BOD				*e*		07 04 46.2	
BOD				pmax	pmax		
	comp=Z,254nm,0.8s						
BOD				smax	smax		
	comp=N,3μm,1.7s						
IRK	**Irkutsk**	**6.60**	**167**	*e*Pg	**Pb**	**07 03 24.7**	**+2.9**
IRK				Pmax		07 03 26.1	
	comp=N,858nm,0.5s						
IRK				*e*Sn	**Sn**	**07 04 12.6**	**-6.7**
IRK				*e*		07 04 25.4	
IRK				*e*Sg	**Sb**	**07 04 49.0**	**+8.3**
IRK				Smax		07 04 51.9	
	comp=N,6μm,0.9s						
IRK	**Irkutsk**	**6.60**	**167**	*e*PN	**Pn**	**07 03 04.7**	**+0.6**
IRK				*e*		07 03 24.4	
IRK				*e*		07 04 48.6	
IRK				pmax	pmax		
	comp=Z,872nm,0.5s						
IRK				smax	smax		
	comp=E,5μm,1.1s						
ARS	**Arshan**	**6.78**	**177**	⇓*i*	Pn	**07 03 04.2**	**-2.5**
ARS				*e*		07 03 07.7	
ARS				*e*Pg	**Pb**	**07 03 26.3**	**+1.3**
ARS				Pmax		07 03 33.8	
	comp=E,850nm,0.5s						
ARS				*e*Sn	**Sn**	**07 04 20.0**	**-3.9**
ARS				*e*Sg	**Sb**	**07 04 52.8**	**+6.8**
ARS				Smax		07 04 58.5	
	comp=E,12μm,0.7s						
ARS	**Arshan**	**6.78**	**177**	*e*PN	**Pn**	**07 03 07.9**	**+1.2**
ARS				*e*		07 03 26.3	
ARS				*e*		07 04 53.0	
ARS				pmax	pmax		
	comp=Z,855nm,0.5s						
ARS				smax	smax		
	comp=N,12μm,0.8s						
SYVR	**Suvo**	**6.79**	**134**	*e*Pn	**Pn**	**07 03 03.5**	**-3.1**
SYVR				*e*Pg	**Pb**	**07 03 28.4**	**+3.4**
SYVR				Pmax		07 03 31.4	
	comp=N,513nm,0.7s						
SYVR				*e*Sn	**Sn**	**07 04 20.0**	**-3.9**
SYVR				*e*Sg	**Sb**	**07 04 54.0**	**+7.9**
SYVR				Smax		07 04 58.1	
	comp=N,1μm,0.9s						
SYVR	**Suvo**	**6.79**	**134**	*e*PN	**Pn**	**07 03 04.8**	**-1.8**
SYVR				*e*		07 03 28.6	
SYVR				*e*S	**Sn**	**07 04 18.0**	**-5.9**
SYVR				*e*		07 04 53.3	
SYVR				pmax	pmax		
	comp=Z,519nm,0.8s						
SYVR				smax	smax		
	comp=N,1μm,1.1s						
SVKR	**Severomuysk**	**6.84**	**107**	*e*PN	**Pn**	**07 03 08.2**	**+0.9**
SVKR				*e*		07 03 27.9	
SVKR				*e*S	**Sn**	**07 04 23.3**	**-1.9**
SVKR				*e*		07 04 55.7	
SVKR				pmax	pmax		
	comp=Z,273nm,0.7s						
SVKR				smax	smax		
	comp=N,6μm,1.0s						
KELR	**Kotokel**	**6.90**	**147**	*e*Pn	**Pn**	**07 03 05.9**	**-2.3**
KELR				*e*Pg	**Pb**	**07 03 30.2**	**+3.2**
KELR				*e*Sn	**Sn**	**07 04 21.3**	**-5.4**
KELR				*e*Sg	Sb	07 04 58.7	+9.4
BGT	**Bolshoye Golou**	**6.95**	**161**	*e*Pn	**Pn**	**07 03 06.7**	**-2.2**
BGT				*e*Pg	**Pb**	**07 03 30.1**	**+2.2**
BGT				*e*Sn	**Sn**	**07 04 22.4**	**-5.6**
BGT				*e*Sg	**Sb**	**07 04 58.8**	**+7.9**
LSTR	**Listvyanka**	**7.04**	**165**	*e*Pn	**Pn**	**07 03 07.4**	**-2.7**
LSTR				*e*		07 03 11.8	
LSTR				*e*Pg	**Pb**	**07 03 30.8**	**+1.5**
LSTR				Pmax		07 03 32.4	
	comp=N,259nm,1.0s						
LSTR				*e*Sg	**Sb**	**07 05 00.7**	**+7.4**
LSTR				Smax		07 05 03.7	
	comp=N,2μm,1.6s						
MOY	**Mondy**	**7.05**	**184**	⇑*i*	Pn	**07 03 09.6**	**-0.7**
MOY				*e*Pg	**Pb**	**07 03 29.7**	**+0.2**
MOY				Pmax		07 03 33.1	
	comp=N,452nm,0.6s						
MOY				*e*		07 04 27.1	
MOY				*e*Sg	**Sb**	**07 04 57.9**	**+4.3**
MOY				Smax		07 05 14.7	
	comp=N,2μm,0.8s						
MOY	**Mondy**	**7.05**	**184**	*e*PN	**Pn**	**07 03 10.7**	**+0.4**
MOY				*i*		07 03 32.6	
MOY				*e*S	**Sn**	**07 04 27.7**	**-2.7**
MOY				*e*		07 04 57.3	
IVK	**Ivanovka**	**7.05**	**167**	*e*Pn	**Pn**	**07 03 06.2**	**-4.0**
IVK				*e*		07 03 34.0	
IVK				*e*Sn	**Sn**	**07 04 24.1**	**-6.3**
IVK				*e*Sg	**Sb**	**07 04 59.6**	**+6.0**
TLY	**Talaya**	**7.09**	**171**	*e*Pn	**Pn**	**07 03 07.7**	**-3.1**
TLY				*e*Pg	**Pb**	**07 03 30.5**	**+0.3**
TLY				Pmax		07 03 39.7	
	comp=N,292nm,0.5s						
TLY				*e*Sn	**Sn**	**07 04 24.2**	**-7.2**
TLY				*e*Sg	**Sb**	**07 04 59.9**	**+5.1**
TLY				Smax		07 05 07.1	
	comp=N,3μm,0.4s						
TLY	**Talaya**	**7.09**	**171**	*e*PN	**Pn**	**07 03 10.0**	**-0.8**
TLY				*e*		07 03 30.7	
TLY				*e*		07 04 59.3	
TLY				pmax	pmax		
	comp=Z,550nm,0.4s						
TLY	**Talaya**	**7.09**	**171**	Pn	**Pn**	**07 03 08.2**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=1.2,slow=7.1,SNR=18						
TLY				Pg	**Pb**	**07 03 32.4**	**+2.2**
	comp=Z,0.8nm,0.3s,baz=344,slow=11,SNR=24						
TLY				Sn	**Sn**	**07 04 23.1**	**-8.3**
	comp=Z,0.2nm,0.3s,baz=12,slow=20,SNR=2.8						
TLY				Lg	Lg	07 04 59.5	
	comp=Z,0.9nm,0.3s,baz=294,slow=20,SNR=5.5						
TLY				LR	LR	07 06 09.3	
	comp=Z,248nm,20.9s,baz=352,slow=40						
TLY	**Talaya**	**7.09**	**171**		**Pn**	**07 03 07.8**	**-3.1**
TLY					**Pb**	**07 03 31.1**	**+0.9**
TLY					**Sn**	**07 04 30.6**	**-0.8**
UKT	**Uakit**	**7.18**	**111**	⇓*i*	Pn	**07 03 11.4**	**-0.6**
UKT				*e*Pg	**Pb**	**07 03 36.0**	**+4.3**
UKT				Pmax		07 03 43.7	
	comp=Z,137nm,1.1s						
UKT				*e*Sn	**Sn**	**07 04 29.4**	**-4.2**
UKT				*e*Sg	**Sg**	**07 05 10.3**	**-6.9**
UKT				Smax		07 05 11.9	
	comp=Z,3μm,1.8s						
HRMR	**Khuramsha**	**7.65**	**155**	*e*Pn	**Pn**	**07 03 15.5**	**-3.0**
HRMR				*e*		07 03 25.9	
HRMR				*e*Pg	**Pb**	**07 03 42.8**	**+3.1**
HRMR				Pmax		07 03 48.0	
	comp=Z,1μm,0.5s						
HRMR				*e*Sn	**Sn**	**07 04 39.2**	**-5.9**
HRMR				*e*Sg	Sb	07 05 20.1	+9.2
HRMR				Smax		07 05 36.9	
	comp=Z,4μm,1.4s						
NLYR	**Nelyaty**	**7.77**	**100**	*e*Pn	**Pn**	**07 03 19.8**	**-0.3**
NLYR				*e*Sn	**Sn**	**07 04 44.8**	**-3.2**
NLYR				*e*Sg	**Sg**	**07 05 28.2**	**-7.9**
NLYR				Smax		07 05 38.1	
	comp=Z,3μm,1.5s						
KZLR	**Kyzyl**	**8.16**	**214**	*e*Sg	Sb	07 05 34.0	+8.4
ZAK	**Zakamensk**	**8.36**	**174**	*e*Pn	**Pn**	**07 03 28.2**	**-0.1**
ZAK				*e*Pg	**Pb**	**07 03 54.3**	**+2.5**
ZAK				Pmax		07 03 59.2	
	comp=Z,421nm,1.2s						
ZAK				*e*		07 05 00.2	
ZAK				*e*Sg	Sb	07 05 41.8	+11
ZAK				Smax		07 05 50.4	
	comp=Z,4μm,1.8s						
ZAK	**Zakamensk**	**8.36**	**174**	*e*PN	**Pn**	**07 03 28.2**	**-0.1**
ZAK				*e*		07 03 54.3	
ZAK				*e*		07 05 40.5	
ZAK				pmax	pmax		
	comp=Z,421nm,1.3s						
ZAK				smax	smax		
	comp=E,4μm,1.7s						
HVS	**Khovu-Aksy**	**8.89**	**215**	*e*PN	**Pn**	**07 03 36.1**	**+0.6**
HVS				*e*		07 04 05.3	
CRS	**Chara**	**8.96**	**94**	*e*Pn	**Pn**	**07 03 35.5**	**-0.9**
CRS				*e*Sn	**Sn**	**07 05 12.6**	**-4.6**
CRS				*e*Sg	Sg	07 06 03.9	-10
CRS				Smax		07 06 11.7	
	comp=E,3μm,1.2s						
CRS	**Chara**	**8.96**	**94**	*e*PN	**Pn**	**07 03 35.5**	**-0.9**
CRS				*e*S	Sg	07 06 03.3	-11
CRS				smax	smax		
	comp=E,2μm,1.3s						
CIT	**Chita**	**9.43**	**130**	*e*Sg	Sn	07 06 17.2	+48
CIT				Smax		07 06 25.9	
	comp=E,1μm,1.6s						
CIT	**Chita**	**9.43**	**130**	*e*P	**Pn**	**07 03 41.1**	**-1.7**
CIT				pmax	pmax		
	comp=Z,93nm,0.3s						
KHNR	**Khani**	**9.84**	**93**	*e*Sn	**Sn**	**07 05 34.3**	**-4.6**
KHNR				*e*Sg		07 06 32.7	
ZAA0	**Zalesovo Array**	**10.56**	**251**		**Pn**	**07 03 56.9**	**-1.5**
ZALV	**Zalesovo Beam**	**10.56**	**251**	P	**Pn**	**07 03 56.3**	**-2.0**
ZALV	**Zalesovo Beam**	**10.56**	**251**	Pn	**Pn**	**07 03 56.8**	**-1.6**
	comp=Z,6.8nm,0.3s,baz=57,slow=12,SNR=94						
ZALV				Sn	**Sn**	**07 05 52.6**	**-4.0**
	comp=Z,2.7nm,0.3s,baz=45,slow=25,SNR=3.9						
ZALV				Lg	Lg	07 06 57.6	
	comp=Z,2.6nm,0.3s,baz=50,slow=28,SNR=3.6						
ZALV	**Zalesovo Beam**	**10.56**	**251**		**Pn**	**07 03 56.3**	**-2.0**
TUP	**Tupik**	**10.86**	**105**	*e*Pn	**Pn**	**07 04 01.4**	**-1.0**
TUP				*e*Sn	**Sn**	**07 05 57.9**	**-6.0**
TUP				*e*Sg		07 07 03.9	
TUP				Smax		07 07 14.9	
	comp=Z,1μm,1.7s						
KPC	**Khapcheranga**	**10.89**	**141**	*e*	**Pn**	**07 03 59.9**	**-3.1**
KPC				*e*Pg		07 04 41.1	
KPC				Pmax		07 04 47.8	
	comp=Z,27nm,0.7s						
KPC				*e*		07 05 52.8	
KPC				*e*Sg	Sn	07 07 01.7	+57
KPC				Smax		07 07 28.9	
	comp=Z,624nm,1.6s						
SONM	**Songino Array**	**11.20**	**164**	P	**Pn**	**07 04 04.6**	**-2.6**
SONM	**Songino Array**	**11.20**	**164**	Pn	**Pn**	**07 04 05.0**	**-2.2**
	comp=Z,0.9nm,0.3s,baz=344,slow=14,SNR=20						
SONM				Lg	Lg	07 07 12.2	
	comp=Z,13nm,0.3s,baz=336,slow=28,SNR=8.7						
SONM				LR	LR	07 09 24.9	
	comp=Z,42nm,18.5s,baz=352,slow=43						
SONM	**Songino Array**	**11.20**	**164**		**Pn**	**07 04 04.6**	**-2.6**
ULN	**Ulaanbaatar**	**11.27**	**162**	*e*P	**Pn**	**07 04 06.9**	**-1.3**
ULN	**Ulaanbaatar**	**11.27**	**162**		**Pn**	**07 04 06.3**	**-1.9**
CLNS	**Chul'man**	**12.43**	**89**	*e*		07 06 22.5	
CLNS				*e*		07 06 31.7	
CLNS				*e*Sg		07 07 52.5	
YAK	**Yakutsk**	**14.13**	**64**	*e*P	Pn	07 04 41.9	-5.0
YAK				*e*SS	**Sn**	**07 07 25.5**	**+2.0**
YAK				pmax	pmax		
	comp=Z,42nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,56nm,0.7s						
YAK				pmax	pmax		
	comp=E,12nm,0.5s						
YAK				pmax	pmax		
	comp=N,9.0nm,0.6s						
YAK	**Yakutsk**	**14.13**	**64**	Pn	Pn	07 04 42.3	-4.6
	comp=N,0.8nm,0.3s,baz=274,slow=3.2,SNR=16						
YAK				Sn	Sn	07 07 09.9	-14
	comp=N,0.4nm,0.3s,baz=18,slow=20,SNR=2.8						
YAK				LR	LR	07 10 35.1	
	comp=N,145nm,20.4s,baz=264,slow=38						
YAK	**Yakutsk**	**14.13**	**64**		Pn	07 04 41.9	-5.0
ZEA	**Zeya**	**14.93**	**98**	*e*P	**Pn**	**07 04 57.8**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZEA				MLR	MLR		
	comp=N,500nm,8.0s						
ZEA				MLR	MLR		
	comp=E,800nm,8.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,8.0s						
KURK	**Kurchatov**	**15.54**	**249**	*ce*P	**Pn**	**07 05 03.4**	**-2.7**
KURK				pmax	pmax		
	comp=Z,15nm,0.7s						
KURK	**Kurchatov**	**15.54**	**249**		**Pn**	**07 05 03.1**	**-3.0**
KURK				IAmb	IAmb	07 05 13.3	
	comp=Z,21nm,0.8s						
KURBB	**Kurchatov Arra**	**15.65**	**249**	Pn	**Pn**	**07 05 04.5**	**-2.9**
	comp=Z,1.0nm,0.3s,baz=57,slow=13,SNR=43						
KURBB				Lg	Lg	07 09 34.2	
	baz=50,slow=30,SNR=3.2						
MK31	**Makanchi Array**	**16.70**	**233**	*e*P	**Pn**	**07 05 18.9**	**-2.1**
MK31	**Makanchi Array**	**16.70**	**233**		**Pn**	**07 05 19.0**	**-2.0**
MK31				IAmb	IAmb	07 05 23.5	
	comp=Z,29nm,0.8s						
MKAR	**Makanchi Array**	**16.70**	**233**	*i* P	**Pn**	**07 05 18.7**	**-2.3**
MKAR				pmax	pmax		
	comp=Z,26nm,0.4s						
MKAR	**Makanchi Array**	**16.70**	**233**	Pn	**Pn**	**07 05 18.1**	**-2.9**
	comp=Z,3.1nm,0.3s,baz=39,slow=11,SNR=184						
MKAR				Lg	Lg	07 10 12.1	
	baz=32,slow=31,SNR=3.5						
MKAR				LR	LR	07 11 14.2	
	comp=Z,127nm,19.1s,baz=28,slow=35						
MKAR	**Makanchi Array**	**16.70**	**233**		**Pn**	**07 05 18.3**	**-2.7**
MAKZ	**Makanchi**	**16.82**	**234**	P	**Pn**	**07 05 19.5**	**-3.0**
MAKZ				pmax	pmax		
	comp=Z,22nm,0.7s						
MAKZ	**Makanchi**	**16.82**	**234**		**Pn**	**07 05 19.5**	**-3.0**
MAKZ				IAmb	IAmb	07 05 26.4	
	comp=Z,22nm,0.7s						
TIXI	**Tiksi**	**17.02**	**29**	*i* P	**Pn**	**07 05 20.8**	**-4.0**
TIXI				pmax	pmax		
	comp=Z,35nm,0.9s						
TIXI				MLR	MLR		
	comp=Z,165nm,14.0s						
TIXI	**Tiksi**	**17.02**	**29**	Pn	**Pn**	**07 05 20.9**	**-4.0**
	comp=Z,3.0nm,0.3s,baz=256,slow=9.4,SNR=9.7						
TIXI				Sn	Sn	07 08 19.0	-15
	comp=Z,1.9nm,0.3s,baz=252,slow=6.4,SNR=2.5						
TIXI				Lg	Lg	07 10 13.3	
	comp=Z,3.5nm,0.3s,baz=302,slow=15,SNR=12						
TIXI				LR	LR	07 12 14.2	
	comp=Z,127nm,19.4s,baz=253,slow=38						
TIXI	**Tiksi**	**17.02**	**29**		**Pn**	**07 05 20.5**	**-4.3**
TIXI				IAmb	IAmb	07 05 26.3	
	comp=Z,29nm,0.8s						
WMQ	**Urumqi**	**17.25**	**217**	P	**P**	**07 05 29.8**	**+0.3**
WMQ				pP	sP	07 05 34.3	+0.6
WMQ				sP	pP	07 05 36.5	+4.1
WMQ				pmax	pmax		
	comp=Z,24nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,45nm,3.7s						
WMQ				LR	LR		
	comp=Z,660nm,11.1s						
WMQ				LR	LR		
	comp=Z,650nm,13.3s						
WMQ	**Urumqi**	**17.25**	**217**	P	**Pn**	**07 05 28.4**	**+0.4**
WMQ				pmax	pmax		
	comp=Z,20nm,0.6s						
WMQ	**Urumqi**	**17.25**	**217**	P	**Pn**	**07 05 28.4**	**+0.4**
BVAR	**Borovoye Array**	**18.42**	**266**	Pn	**P**	**07 05 39.1**	**-3.2**
	comp=Z,4.2nm,0.3s,baz=64,slow=13,SNR=56						
BVAR				Sn	Sn	07 08 55.8	-12
	comp=Z,1.2nm,0.3s,baz=46,slow=16,SNR=4.5						
BRVK	**Borovoye**	**18.46**	**266**	P	**P**	**07 05 39.3**	**-3.3**
BRVK	**Borovoye**	**18.46**	**266**	P	**P**	**07 05 39.1**	**-3.5**
HHC	**Hu-ho-hao-te**	**18.89**	**157**	*e*P	**P**	**07 05 48.1**	**+0.6**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,42nm,6.7s						
HHC				LR	LR		
	comp=Z,170nm,10.6s						
HHC				LR	LR		
	comp=Z,230nm,10.2s						
GTA	**Gaotai**	**19.33**	**185**	*e*P	**P**	**07 05 51.9**	**-0.5**
GTA				pP	pP	07 05 56.3	+1.0
GTA				sP	sP	07 05 59.0	+2.3
GTA				S	**Sn**	**07 09 27.6**	**-2.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,99nm,7.9s						
GTA				LR	LR		
	comp=Z,240nm,14.6s						
GTA				LR	LR		
	comp=Z,1μm,14.9s						
KLR	**Kul'dur**	**19.82**	**105**	*i* P	**P**	**07 05 56.0**	**-1.6**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KLR				MLR	MLR		

CN2 eS S 07 09 59.4 -1.1
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=Z,800nm,13.0s
CN2 LR LR
comp=Z,900nm,13.0s
GRNR Gornyy 21.28 97 eP P 07 06 07.7 -5.7
GRNR MLR MLR
comp=Z,120nm,13.0s
SVE Sverdlovsk 21.82 283 eP P 07 06 22.3 +3.2
SVE eS S 07 10 19.2 -0.7
SVE pmax pmax
comp=Z,26nm,0.9s
LZH Lanzhou 22.64 176 eP P 07 06 30.0 +1.7
LZH pP sP 07 06 33.8 +1.3
LZH sP pP 07 06 36.1 +4.9
LZH PP PnPn 07 06 58.3 +6.6
LZH sS sS 07 10 39.0 -2.2
LZH pmax pmax
comp=Z,26nm,1.1s
LZH pmax pmax
comp=Z,110nm,4.2s
LZH LR LR
comp=Z,500nm,10.8s
LZH LR LR
comp=Z,2µm,12.5s
LZH LR LR
comp=Z,1µm,14.7s
TKM2 Tokmak 2 22.66 237 P P 07 06 26.1 -2.4
TKM2 Tokmak 2 22.66 237 P P 07 06 28.2 -0.3
SNR=8.9
BOOM Boomskoye usch 22.86 236 P P 07 06 29.6 -0.9
BOOM pmax pmax
comp=Z,26nm,0.7s
BOOM Boomskoye usch 22.86 236 P P 07 06 29.6 -0.9
BOOM IAmb IAmb 07 06 32.7
comp=Z,26nm,0.7s
USP Ospenovka 22.88 240 P P 07 06 29.2 -1.4
SNR=15
CHMS Chumysh 22.98 239 P P 07 06 30.5 -1.1
SNR=14
ARU Arti 23.03 283*c iP* P 07 06 31.7 -0.2
ARU PPP PPP 07 07 04.6
ARU S S 07 10 44.3 +2.0
ARU SS SnSn 07 11 16.1 +2.0
ARU pmax pmax
comp=Z,4.0nm,0.6s
ARU MLR MLR
comp=Z,163nm,13.0s
ARU Arti 23.03 283 P P 07 06 32.2 +0.3
comp=Z,1.9nm,0.5s,baz=45,slow=3.1,SNR=8.1
ARU S S 07 10 41.2 -1.2
comp=Z,2.0nm,0.2s,baz=307,slow=20,SNR=3.5
KBK Karagaybulak 23.16 238 P P 07 06 33.0 -0.7
SNR=8.8
AAK Ala-Archa 23.38 239*ce* P P 07 06 34.3 -1.5
AAK pmax pmax
comp=Z,35nm,1.3s
AAK Ala-Archa 23.38 239 P P 07 06 34.9 -1.0
comp=Z,19nm,0.7s,baz=82,slow=5.4,SNR=18
AAK Lg Lg 07 13 42.5
comp=Z,0.8nm,0.4s,baz=175,slow=19,SNR=2.8
AAK Ala-Archa 23.38 239 P P 07 06 35.0 -0.9
SNR=16
AAK Ala-Archa 23.38 239 P P 07 06 35.0 -0.9
AAK IAmb IAmb 07 06 40.9
comp=Z,34nm,1.0s
USRK Ussuriysk Ar. 23.46 115 P P 07 06 37.5 +1.0
comp=Z,1.4nm,0.7s,baz=327,slow=10,SNR=4.5
USRK Lg Lg 07 13 41.6
comp=Z,3.6nm,1.0s,baz=336,slow=21,SNR=6.9
USRK Ussuriysk Ar. 23.46 115 P P 07 06 36.9 +0.4
KZA Kyzart 23.50 237 P P 07 06 36.9 -0.4
SNR=8.8
EKS2 Erkin-Say 23.68 240 P P 07 06 38.3 -0.5
SNR=18
NRN Naryn 23.70 235 P P 07 06 39.7 +0.6
NRN pmax pmax
comp=Z,13nm,1.1s
NRN Naryn 23.70 235 P P 07 06 39.7 +0.6
NRN IAmb IAmb 07 06 51.3
comp=Z,13nm,1.1s
UCH Uchtor 23.70 238 P P 07 06 38.8 -0.5
SNR=9.1
SEY Seymchan 24.48 58 *i* P P 07 06 45.2 -0.7
SEY Seymchan 24.48 58 P P 07 06 46.5 +0.6
comp=Z,5.8nm,0.6s,baz=288,slow=8.4,SNR=20
MA2 Magadan 24.68 67 *i* P P 07 06 46.4 -1.3
MA2 pmax pmax
comp=Z,16nm,1.1s
MA2 Magadan 24.68 67 P P 07 06 48.0 +0.3
comp=Z,7.8nm,0.6s,baz=297,slow=9.0,SNR=4.9
MA2 LR LR 07 16 44.3
comp=Z,86nm,21.6s,baz=262,slow=37
MA2 Magadan 24.68 67 P P 07 06 47.3 -0.4
MA2 IAmb IAmb 07 06 49.0
comp=Z,14nm,1.1s
KK31 Karatay Array 24.85 245 *i* P P 07 06 48.8 -0.6
KK31 Karatay Array 24.85 245 P P 07 06 48.6 -0.8
KKAR Karatay Array 24.85 245 P P 07 06 48.7 -0.8
KKAR pmax pmax
comp=Z,26nm,0.9s
KKAR Karatay Array 24.85 245 P P 07 06 48.6 -0.8
XAN Xi'an 25.10 166 P P 07 06 51.4 -0.4
XAN pP sP 07 06 59.8 +3.6
XAN PP PnPn 07 07 28.3 +3.1
XAN pmax pmax
comp=Z,5.0nm,0.8s
XAN pmax pmax
comp=Z,70nm,4.0s
XAN LR LR
comp=Z,370nm,17.8s
ARSB Arslanbob 25.11 239 P P 07 06 52.4 +0.5
KSH Kashi 25.31 232 P P 07 07 00.0 +6.3
KSH S S 07 11 29.6 +10
KSH SS SnSn 07 12 30.4 +20
KSH pmax pmax
comp=Z,56nm,0.8s
KSH pmax pmax
comp=Z,310nm,5.2s
KSH LR LR
comp=Z,290nm,6.0s
KSH LR LR
comp=Z,260nm,5.4s
KSH LR LR
comp=Z,570nm,8.0s
AB31 Akbulak array 25.98 267 P P 07 06 59.4 -0.2
ABKAR Akbulak array 25.98 267 P P 07 06 58.7 -0.9
AKTO Aktyubinsk 26.29 271 P P 07 07 01.3 -1.0
comp=Z,7.4nm,0.6s,baz=72,slow=12,SNR=31
AKTO LR LR 07 18 36.6
comp=Z,158nm,19.0s,baz=49,slow=39
TAS Tashkent 26.80 244 P P 07 07 10.3 +3.2
TAS pmax pmax
comp=Z,51nm,0.7s
TAS Tashkent 26.80 244 P P 07 07 10.3 +3.2
BTK Batken 27.10 240 P P 07 07 10.1 +0.2
BTK pmax pmax
comp=Z,17nm,0.7s
BTK Batken 27.10 240 P P 07 07 10.1 +0.2
BTK IAmb IAmb 07 07 13.9
comp=Z,17nm,0.7s
KSRS Korea Array 27.16 130 LR LR 07 18 52.0
comp=Z,78nm,18.2s,baz=336,slow=38
TJN Taejon 27.88 132 *i* P P 07 07 15.4 -1.3
BILL Bilibino 28.97 44‖ *eP* P 07 07 25.5 -0.7
BILL *e* 07 08 15.8
BILL pmax pmax
comp=Z,5.0nm,1.2s
BILL MLR MLR
comp=Z,73nm,14.0s
NJ2 Nanjing 29.01 149 *eP* P 07 07 28.4 +1.5
NJ2 pmax pmax
comp=Z,13nm,0.5s
WHN Wuhan 29.41 158 P P 07 07 30.8 +0.4
APA Apatity 30.56 315‖ *iP* P 07 07 40.0 -0.2
APA pmax pmax
comp=Z,3.0nm,0.9s
APA MLR MLR
comp=Z,400nm,10.0s
PETK Petropavlovsk- 31.01 76 P P 07 07 44.5 +0.1
comp=Z,4.0nm,0.8s,baz=321,slow=8.4,SNR=4.1
PETK Petropavlovsk- 31.01 76 P P 07 07 43.9 -0.5
KBL Kabul 32.46 236 P P 07 07 56.0 -1.6
KBL pmax pmax
comp=Z,13nm,0.9s
KBL Kabul 32.46 236 P P 07 07 56.0 -1.6
KBL IAmb IAmb 07 08 02.1
comp=Z,13nm,0.9s
SPA0 Spitsbergen Ar 32.55 338 P P 07 07 59.2 +1.4
SPITS Spitsbergen Ar 32.55 338 P P 07 07 58.6 +0.9
comp=Z,5.4nm,0.7s,baz=88,slow=13,SNR=15
ARCES ARCESS Array B 32.68 321 *eP* P 07 07 59.3 +0.4
ARCES ARCESS Array B 32.68 321 P P 07 07 58.6 -0.4
comp=Z,0.7nm,0.5s,baz=77,slow=9.7,SNR=14
ARCES ARCESS Array B 32.68 321 P P 07 07 58.8 -0.2
GUN Gumba 32.70 207 *eP* P 07 07 59.8 0.0
comp=Z,22nm,0.9s
DANN Dangsing 32.81 210 *eP* P 07 08 00.5 -0.2
comp=Z,27nm,0.7s
TAPN Taplejung 32.83 204 *eP* P 07 08 00.9 0.0
JIRN Jiri 32.87 206 *eP* P 07 08 01.3 0.0
KKN Kakani 32.96 208 *eP* P 07 08 01.4 -0.5
comp=Z,5.3nm,0.2s
PKIN Phulchoki 33.13 207 *eP* P 07 08 03.4 -0.1
PKI Pulchoki 33.13 207 *eP* P 07 08 03.5 -0.1
DMN Daman 33.17 208 *eP* P 07 08 04.2 +0.3
ODAN Odare 33.37 204 *eP* P 07 08 05.6 0.0
comp=Z,19nm,0.7s
KOLN Koldanda 33.40 210 *eP* P 07 08 05.5 -0.3
comp=Z,3.6nm,0.3s
RAMN Ramite 33.46 205 *eP* P 07 08 05.8 -0.6
KMI Kunming 33.54 179 P P 07 08 09.9 +2.9
KMI LR LR
comp=Z,140nm,16.7s
KMI LR LR
comp=Z,970nm,13.6s
OBN Obninsk 34.56 293‖ *eP* P 07 08 14.2 -1.2
OBN *e* 07 09 33.6
OBN pmax pmax
comp=Z,5.0nm,0.8s
OBN MLR MLR
comp=Z,110nm,19.0s
GEYT Alibeck 34.86 253 P P 07 08 18.1 -0.1
comp=Z,6.7nm,0.6s,baz=0.0,slow=4.4,SNR=13
GEYT LR LR 07 25 17.1
comp=Z,32nm,19.6s,baz=40,slow=41
GEYT Alibeck 34.86 253 P P 07 08 18.4 +0.1
GYA0B ALIBECK ARRAY 34.86 253 P P 07 08 18.5 +0.3
GYA0B IAmb IAmb 07 08 23.2
comp=Z,13nm,1.0s
HRA Herat 35.68 245 P P 07 08 25.6 +0.1
FINES FINESS Array B 35.95 307 P P 07 08 27.4 +0.2
FINES FINESS Array B 35.95 307 P P 07 08 27.3 +0.1
comp=Z,4.7nm,0.6s,baz=61,slow=9.5,SNR=22
FINES LR LR 07 24 16.6
comp=Z,67nm,19.6s,baz=66,slow=38
FINES FINESS Array B 35.95 307 P P 07 08 27.4 +0.2
NOR Nord 36.22 347 *i* P P 07 08 29.9 +0.5
comp=Z,4.6nm,0.6s
KIV Kislovodsk 38.44 274 *eP* P 07 08 48.2 -0.5
KIV pmax pmax
comp=Z,27nm,1.0s
KIV MLR MLR
comp=Z,361nm,16.0s
KBZ Khabaz 38.49 274 P P 07 08 50.4 +1.4
comp=Z,2.9nm,1.0s,baz=24,slow=10.0,SNR=3.7
KBZ LR LR 07 26 15.8
comp=Z,234nm,18.5s,baz=28,slow=39
SHA1 Shidzhatmaz 38.60 274 *i* P P 07 08 50.3 0.0
ZEI Tsey 38.62 272 *eP* P 07 08 53.2 +2.8
ZEI pmax pmax
comp=Z,11nm,1.8s
DAG Danmarks Havn 39.76 342 *i* P P 07 08 59.0 -0.2
DAG pmax pmax
comp=Z,2.0nm,0.5s
DAG Danmarks Havn 39.76 342 *i* P P 07 08 59.0 -0.2
comp=Z,2.1nm,0.5s
ANM Nome 40.70 41 P P 07 09 09.2 +2.0
ANM pmax pmax
comp=Z,8.0nm,1.3s
ANM Nome 40.70 41 P P 07 09 09.2 +2.0
AKASG Malin Array Be 40.77 292 P P 07 09 07.5 -0.4
comp=Z,1.5nm,0.5s,baz=45,slow=9.2,SNR=12
NC405 NORSAR Array S 41.85 313 P P 07 09 17.5 +0.8
NB2 NORSAR Subarra 42.09 313 P P 07 09 19.0 +0.3
comp=Z,1.8nm,0.6s,baz=54,slow=7.9
NOA NORSAR Array B 42.09 313 P P 07 09 19.0 +0.3
NOA NORSAR Array B 42.09 313 P P 07 09 18.9 +0.3
comp=Z,4.3nm,0.8s,baz=53,slow=8.0,SNR=10
NOA LR LR 07 28 31.0
comp=Z,58nm,20.2s,baz=50,slow=38
NC204 NORSAR Array S 42.11 314 P P 07 09 19.4 +0.5
NC204 IAmb IAmb 07 09 19.8
comp=Z,9.6nm,0.9s
NORES NORESS Array B 42.15 313 *eP* P 07 09 20.2 +1.1
IMAR Indian Mountai 43.55 35 P P 07 09 30.8 +0.4
BUR08 Bucovina Ar. S 44.78 291 P P 07 09 41.1 +0.5
BURAR Bucovina Array 44.79 291‖ P P 07 09 41.2 +0.5
BURAR Bucovina Array 44.79 291 P P 07 09 40.6 0.0
CFR Carcaliu 45.05 286‖ P P 07 09 46.4 +3.8
MLY Manley 45.12 35 P P 07 09 43.5 +0.5
KOLS Kolonicke sedl 45.30 294 *eP* P 07 09 45.0 +0.4
KOLS Kolonicke sedl 45.30 294 *eP* P 07 09 45.0 +0.4
BPAW Bear Paw Mtn. 45.71 36 P P 07 09 48.3 +0.6
TRPA Tarpa 45.73 293‖ P P 07 09 48.3 +0.4
KTH Kantishna Hill 46.12 36 P P 07 09 52.2 +1.2
BRTR Keskin Array B 46.18 277 P P 07 09 53.5 +1.6
comp=Z,1.7nm,0.9s,baz=53,slow=6.5,SNR=7.2
BRTR LR LR 07 32 30.2
comp=Z,63nm,18.3s,baz=36,slow=40
BRTR Keskin Array B 46.18 277 P P 07 09 52.6 +0.8
PPLA Purkeypile 46.20 38 P P 07 09 52.6 +0.9
CCB Clear Creek Bu 46.26 34 P P 07 09 53.3 +1.3
CCB IAmb IAmb 07 09 56.8
comp=Z,7.3nm,1.3s
WRH Wood River Hil 46.31 34 P P 07 09 53.1 +0.8
WRH IAmb IAmb 07 09 57.0
comp=Z,6.8nm,1.1s
TRF Thorofare Moun 46.39 36 P P 07 09 54.4 +1.2
TRF IAmb IAmb 07 10 02.7
comp=Z,8.5nm,0.8s
VOIR 46.40 289‖ P P 07 09 54.9 +1.4
IL31 46.43 33 P P 07 09 54.7 +1.4
IL31 IAmb IAmb 07 09 59.4
comp=Z,3.5nm,0.8s
ILAR Eielson Array 46.43 33 P P 07 09 54.0 +0.7
comp=Z,1.9nm,0.7s,baz=304,slow=5.3,SNR=22
ILAR LR LR 07 32 13.5
comp=Z,90nm,18.4s,baz=304,slow=40
ILAR Eielson Array 46.43 33 P P 07 09 53.7 +0.4
HDA Harding Lake 46.69 34 P P 07 09 55.8 +0.5
INK Inuvik 47.06 25 P P 07 09 58.7 +0.5
INK pmax pmax
comp=Z,6.0nm,1.4s
INK Inuvik 47.06 25 P P 07 09 59.0 +0.9
comp=Z,0.9nm,0.7s,baz=324,slow=7.0,SNR=4.9
INK Inuvik 47.06 25 P P 07 09 58.7 +0.5
INK IAmb IAmb 07 10 15.9
comp=Z,6.4nm,1.4s
SKT Skwentna 47.08 38 P P 07 09 58.9 +0.4
VYHS Vyhne 47.23 296 *eP* P 07 10 00.9 +1.1
VYHS Vyhne 47.23 296 *eP* P 07 10 00.9 +1.1
AKUT Akutan 47.42 53 P P 07 09 59.8 -1.3
GZR Gura Zlata 47.55 290‖ P P 07 10 01.9 -0.5
SUA Susitna One 47.71 38 P P 07 10 04.3 +0.9
BRG Berggiesshubel 47.79 301 *eP* P 07 10 03.4 -0.7
comp=Z,5.6nm,1.1s
BRG Berggiesshubel 47.79 301 *eP* P 07 10 03.3 -0.7
BRG pmax pmax
comp=Z,6.0nm,1.1s
SCRK Sand Creek 47.86 33 P P 07 10 04.6 -0.1
C36M Paulatuk 48.06 20 P P 07 10 05.6 -0.3
C36M IAmb IAmb 07 10 17.8
comp=Z,5.5nm,1.2s
DOT Dot Lake 48.09 33 P P 07 10 05.8 -0.5
DOT IAmb IAmb 07 10 07.8
comp=Z,3.5nm,0.8s
RC01 Rabbit Creek A 48.31 38 P P 07 10 09.4 +1.4
SCM Sheep Creek Mo 48.51 36 P P 07 10 09.9 +0.3
SCM pmax pmax
comp=Z,23nm,1.3s
SCM Sheep Creek Mo 48.51 36 P P 07 10 09.9 +0.3
DAWY Dawson 49.06 31 P P 07 10 14.2 +0.5
KHC Kasperske Hory 49.20 300 *eP* P 07 10 15.5 +0.5
KHC Kasperske Hory 49.20 300 *eP* P 07 10 15.5 +0.5
GERES GERESS Array B 49.35 300 P P 07 10 16.9 +0.6
comp=Z,1.1nm,0.5s,baz=40,slow=7.4,SNR=8.0
GERES LR LR 07 32 58.7
comp=Z,98nm,19.2s,baz=38,slow=38
GERES GERESS Array B 49.35 300 P P 07 10 16.0 -0.3
ESK Eskdalemuir 51.52 315 P P 07 10 33.4 +0.9
ESK pmax pmax
comp=Z,14nm,0.9s
ESK Eskdalemuir 51.52 315 P P 07 10 33.4 +0.9
HYT Haines Junctio 52.21 32 P P 07 10 38.6 +1.0
HYT IAmb IAmb 07 10 49.7
comp=Z,13nm,1.4s
FUORN Ofenpass-Fuorn 52.56 300 P P 07 10 41.4 +0.8
FUORN IAmb IAmb 07 10 42.8
comp=Z,8.3nm,0.8s
RAYN Ar Rayn 52.83 253 P P 07 10 42.5 -0.1
RAYN pmax pmax
comp=Z,6.0nm,0.8s
RAYN Ar Rayn 52.83 253 P P 07 10 42.5 -0.1
RAYN IAmb IAmb 07 10 43.6
comp=Z,6.2nm,0.8s
ITM Ithomi 54.11 284 P P 07 10 52.0 +0.2
ITM IAmb IAmb 07 10 54.8
comp=Z,12nm,1.1s
YKA Yellowknife Ar 55.94 19 P P 07 11 03.9 -0.8
comp=Z,0.6nm,0.4s,baz=338,slow=7.2,SNR=14
ESDC Sonseca Array 64.38 305 P P 07 12 04.0 +1.0
comp=Z,2.2nm,0.6s,baz=28,slow=6.8,SNR=12
ESDC Sonseca Array 64.38 305 P P 07 12 03.6 +0.7
SCHQ Schefferville 66.47 353 P P 07 12 15.7 -0.5
comp=Z,2.7nm,0.8s,baz=3.4,slow=4.3,SNR=7.7
SCHQ Schefferville 66.47 353 P P 07 12 15.4 -0.8
SCHQ IAmb IAmb 07 12 16.6
comp=Z,8.3nm,1.1s
B08A Colville Reser 68.09 28 P P 07 12 27.5 +0.9
B08A IAmb IAmb 07 12 46.4
comp=Z,3.0nm,0.8s
JTMT Jette 69.85 25 P P 07 12 38.5 +0.8
JTMT IAmb IAmb 07 12 52.9
comp=Z,5.0nm,1.1s
ULM Lac du Bonnet 70.47 12 P P 07 12 40.8 -0.4
ULM pmax pmax
comp=Z,4.0nm,1.2s
ULM Lac du Bonnet 70.47 12 P P 07 12 39.8 -1.4
comp=Z,2.2nm,1.1s,baz=340,slow=2.9,SNR=3.6
ULM Lac du Bonnet 70.47 12 P P 07 12 40.8 -0.4
ULM IAmb IAmb 07 12 55.1
comp=Z,3.6nm,1.1s
PDAR Pinedale Array 75.61 23 P P 07 13 11.6 -0.5
comp=Z,0.2nm,0.5s,baz=15,slow=3.7,SNR=3.0
PDAR Pinedale Array 75.61 23 P P 07 13 11.3 -0.8
BEKR Beckworth 75.72 32 P P 07 13 14.8 +2.1
KVN Kaiserville 77.11 31 P P 07 13 22.9 +2.4
KVN pmax pmax
comp=Z,5.0nm,1.4s
KVN Kaiserville 77.11 31 P P 07 13 22.9 +2.4
NVAR Mina Array Bea 77.63 31 P P 07 13 25.5 +1.9
comp=Z,0.6nm,0.8s,baz=315,slow=3.5,SNR=5.6
KMBO Kilima Mbogo 78.02 247 LR LR 07 49 50.3
comp=Z,37nm,18.3s,baz=88,slow=37
O20A White River Ci 78.41 23 P P 07 13 28.6 +0.8
O20A IAmb IAmb 07 13 29.8
comp=Z,9.9nm,1.4s
PSUT Pine Spring 78.68 28 P P 07 13 31.3 +1.9
SMCO Snowmass 79.59 22 P P 07 13 35.3 +0.8
WRA Warramunga Arr 82.80 149 *i* P P 07 13 52.0 +0.9
WRA pmax pmax
comp=Z,2.0nm,0.8s
WRA Warramunga Arr 82.80 149 P P 07 13 50.5 -0.7
comp=Z,1.8nm,0.8s,baz=347,slow=5.9,SNR=11
WRA Warramunga Arr 82.80 149 P P 07 13 50.1 -1.0
TORD Torodi Ar. Bea 84.08 285 P P 07 13 57.8 -0.2
comp=Z,0.5nm,0.7s,baz=31,slow=4.9,SNR=2.8
ASAR Alice Springs 86.24 151 P P 07 14 08.8 +0.2
comp=Z,1.3nm,0.8s,baz=349,slow=5.7,SNR=10
ASAR Alice Springs 86.24 151 P P 07 14 09.1 +0.6
TXAR Lajitas Array 89.78 22 P P 07 14 27.0 +1.3
comp=Z,0.2nm,0.5s,baz=237,slow=4.2,SNR=3.1
TXAR Lajitas Array 89.78 22 P P 07 14 26.6 +1.0
CPUP Villa Florida 144.52 327 PKP **PKPab** 07 21 01.0 -0.6
comp=Z,1.8nm,0.9s,baz=26,slow=5.2,SNR=3.4
CPUP Villa Florida 144.52 327 **PKPab** 07 21 01.8 +0.1
SNAA Sanae 148.30 216 PKP2 **PKPbc** 07 21 12.8 +1.1
SNAA Sanae 148.30 216 PKPbc **PKPbc** 07 21 12.8 +1.1
GO04 Tololo Observa 151.05 347 PKPbc **PKPbc** 07 21 20.5 +0.5

IDC **17** *07:22:34.0±6.1, 1.47N×96.64W, h0km, mb3.7/6, mb1 4.1/6, mb1mx3.7/42, mbtmp3.7/6, MS3.7/22, Ms1 3.7/22, ms1mx3.5/42, Error ellipse: s-maj=188.8km s-min=124.2km az=72.0*

NEIC **17** *07:22:33.5±0.8, 0.9N±0.1×97.7W±0.1, h10km±1km, mb4.4/14, Error ellipse: s-maj=30.8km s-min=9.5km az=217.0*

ISC 17 07:22:32.4±1.5, 0.8N±0.2×97.8W±0.2, h10km, n46, σ1s24/26, mb4.2/12, MS3.7/20, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APG	**El Apazote**	**15.88**	**27**	LR	LR	07 30 29.6	
	comp=Z,466nm,20.6s,baz=276,slow=32						
JTS	**Las Juntas de**	**15.91**	**53**	LR	LR	07 30 09.4	
	comp=Z,335nm,21.4s,baz=316,slow=31						
JTS	**Las Juntas de**	**15.91**	**53**	P	P	**07 26 20.9**	**+0.6**
JTS				IAmb	IAmb	07 26 39.1	
	comp=Z,22nm,1.3s						
CMIG	**Matias Romero**	**16.45**	**10**	LR	LR	07 30 42.9	
	comp=Z,452nm,19.1s,baz=167,slow=31						
ATAH	**Atahualpa**	**20.94**	**112**	LR	LR	07 32 09.8	
	comp=Z,39nm,20.0s,baz=281,slow=29						
ZAIG	**Zacatecas**	**22.32**	**348**	P	P	**07 27 29.9**	**-0.7**
ZAIG				IAmb	IAmb	07 27 34.5	
	comp=Z,17nm,1.4s						
ROSC	**El Rosal**	**23.83**	**80**	LR	LR	07 35 05.7	
	comp=Z,181nm,18.5s,baz=310,slow=33						
NNA	**Nana**	**24.42**	**122**	LR	LR	07 34 11.8	
	comp=Z,9.9nm,20.6s,baz=298,slow=29						
833A	**Chaparral WMA,**	**27.41**	**357**	P	P	**07 28 18.8**	**+0.5**
TX31	**Lajitas Ar. Si**	**28.91**	**349**	P	P	**07 28 32.6**	**+0.7**
TXAR	**Lajitas Array**	**28.91**	**349**	P	P	**07 28 31.7**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=170,slow=11,SNR=3.5						
TXAR				LR	LR	07 38 30.6	
	comp=Z,124nm,18.8s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**28.91**	**349**	P	P	**07 28 32.5**	**+0.6**
JCT	**Junction City**	**29.57**	**357**	P	P	**07 28 36.9**	**-0.8**
JCT				IAmb	IAmb	07 28 38.5	
	comp=Z,7.0nm,1.1s						
MSTX	**Muleshoe**	**33.32**	**353**	P	P	**07 29 11.3**	**+0.6**
MSTX				IAmb	IAmb	07 29 12.3	
	comp=Z,10nm,1.4s						
LPAZ	**La Paz**	**33.88**	**121**	P	P	**07 29 16.9**	**+0.5**
LPAZ				IAmb	IAmb	07 29 27.7	
	comp=Z,3.7nm,1.4s						
ANMO	**Albuquerque**	**34.91**	**348**	LR	LR	07 41 50.2	
	comp=Z,117nm,20.1s,baz=177,slow=34						
LCAR	**Lake Charles**	**35.64**	**9**	P	P	**07 29 28.7**	**-1.9**
LCAR				IAmb	IAmb	07 29 39.2	
	comp=Z,6.9nm,1.3s						
GCPR	**Guaynabo City**	**35.71**	**59**	P	P	**07 29 31.5**	**+0.1**
LVC	**Limon Verde**	**36.55**	**131**	LR	LR	07 41 23.1	
	comp=Z,92nm,19.7s,baz=298,slow=31						
TKL	**Tuckaleechee C**	**37.07**	**19**	LR	LR	07 44 06.3	
	comp=Z,191nm,18.8s,baz=185,slow=36						
SMCO	**Snowmass**	**39.10**	**349**	P	P	**07 30 01.4**	**+1.0**
NVAR	**Mina Array Bea**	**41.90**	**336**	P	P	**07 30 24.7**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=157,slow=7.4,SNR=3.9						
NVAR	**Mina Array Bea**	**41.90**	**336**	P	P	**07 30 24.3**	**+1.0**
CFA	**Coronel Fontan**	**42.73**	**142**	LR	LR	07 44 54.8	
	comp=Z,58nm,18.4s,baz=282,slow=32						
ELK	**Elko**	**42.78**	**340**	LR	LR	07 48 20.9	
	comp=Z,167nm,18.3s,baz=95,slow=36						
PD31	**Pinedale Array**	**43.08**	**347**	P	P	**07 30 33.7**	**+0.8**
PDAR	**Pinedale Array**	**43.08**	**347**	P	P	**07 30 33.3**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=148,slow=10,SNR=5.5						
PDAR	**Pinedale Array**	**43.08**	**347**	P	P	**07 30 33.6**	**+0.6**
YHL	**Hebgen Lake**	**45.43**	**347**	P	P	**07 30 54.5**	**+2.7**
MOD	**Modoc Plateau**	**45.65**	**336**	P	P	**07 30 54.1**	**+0.6**
MOD				IAmb	IAmb	07 30 55.5	
	comp=Z,8.3nm,1.4s						
MCMT	**McKenzie Canyo**	**45.81**	**345**	P	P	**07 30 55.6**	**+0.8**
SADO	**Sadowa**	**46.81**	**18**	LR	LR	07 49 17.3	
	comp=Z,147nm,20.1s,baz=178,slow=35						
PLCA	**Paso Flores**	**48.22**	**152**	LR	LR	07 47 53.7	
	comp=Z,91nm,18.3s,baz=340,slow=32						
ULM	**Lac du Bonnet**	**49.29**	**2**	LR	LR	07 51 39.8	
	comp=Z,62nm,18.4s,baz=39,slow=36						
PPT	**Papeete**	**54.09**	**248**	LR	LR	07 50 30.2	
	comp=Z,28nm,18.9s,baz=8.0,slow=30						

SCHQ	Schefferville	59.53	20	LR	LR	07 57 13.7	
	comp=Z,79nm,20.4s,baz=312,slow=36						
YKA	Yellowknife Ar	62.82	351	P	P	07 32 57.9	-0.1
	comp=Z,0.8nm,1.0s,baz=157,slow=6.6,SNR=4.3						
YKA				LR	LR	07 59 27.5	
	comp=Z,113nm,19.1s,baz=0.0,slow=36						
FRB	Frobisher Bay	66.41	14	LR	LR	08 02 06.2	
	comp=Z,125nm,18.6s,baz=203,slow=36						
INK	Inuvik	71.65	347	P	P	07 33 55.9	+2.0
	comp=Z,3.6nm,1.1s,baz=142,slow=7.1,SNR=6.2						
INK	Inuvik	71.65	347	P	P	07 33 54.0	+0.1
ILAR	Eielson Array	72.94	340	P	P	07 34 03.1	+1.4
	comp=Z,1.2nm,0.8s,baz=151,slow=4.4,SNR=11						
ILAR				LR	LR	08 04 32.3	
	comp=Z,56nm,18.6s,baz=158,slow=35						
ILAR	Eielson Array	72.94	340	P	P	07 34 00.7	-1.0
VNDA	Vanda	93.01	192	LR	LR	08 09 18.5	
	comp=Z,39nm,19.9s,baz=170,slow=30						
NOA	NORSAR Array B	99.44	28	LR	LR	08 17 11.2	
	comp=Z,24nm,21.8s,baz=0.0,slow=34						
ARCES	ARCESS Array B	100.39	17	LR	LR	08 20 34.5	
	comp=Z,24nm,18.1s,baz=310,slow=35						
ZAA0	Zalesovo Array	125.40	358		PKPdf	07 41 30.7	-3.0

INET ***17*** *07:54:15.4, 11.54N×88.36W, h15km, MD3.3*
UCR ***17*** *07:54:30.5±2.7, 12.02N×87.33W, h39km±5km, MD4.1, ML3.4*
SNET ***17*** *07:54:32.2±0.9, 12.09N×87.58W, h16km±5km, ML3.3*

ISC 17 07:54:30.9±1.4, **12.1**N±0.1×**87.28**W±0.09, **h58**km±43km, **n14**, σ0.76/22, **1C-1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRIN	San Cristobal	0.67	19	*eP*	Pn	07 54 45.0	+0.2
MASN	Masaya	1.11	94	*eP*	Pn	07 54 50.5	+0.2
ESTN	Estel	1.36	41	*eP*	Pn	07 54 54.2	+0.4
LCND	La Caada	1.38	334	*i* P	Pn	07 54 54.2	+0.2
LCND				*eS*	Sn	07 55 11.6	+0.5
LCND				IAML		07 55 14.5	
	comp=Z,593nm,0.3s						
LCND	La Caada	1.38	334	*i* P	Pn	07 54 54.2	+0.2
LCND				*eS*	Sn	07 55 11.6	+0.5
LCND				IAML		07 55 14.5	
	comp=Z,593nm,0.3s						
JUCU	Jucuarn	1.52	321	*eP*	Pn	07 54 55.6	-0.3
JUCU				*eS*	Sn	07 55 13.8	-0.8
ALJI	Alcalda de J	1.78	315	*eS*	Sn	07 55 20.4	-0.5
FAGO	Alcalda de S	1.81	334	*eP*	Pn	07 55 00.3	+0.4
FAGO				*eS*	Sn	07 55 22.7	+1.0
COEB	Comit de Eme	1.88	320	*eP*	Pn	07 55 01.1	+0.2
COEB				*eS*	Sn	07 55 22.7	-0.8
ACON	Acoyapa	2.06	92	*eP*	Pn	07 55 02.8	-0.4
COEG	Centro de Oper	2.20	315	*eP*	Pn	07 55 05.2	0.0
COEG				*eS*	Sn	07 55 30.6	-0.7
NY14	Universidad de	2.21	129	*i* P	Pn	07 55 06.8	+1.5
PLVR	Palo Verde	2.54	132	*eP*	Pn	07 55 11.1	+1.1
PLVR				*eS*	Sn	07 55 38.7	-1.3
JTS	Las Juntas de	2.88	127	*eP*	Pn	07 55 14.6	+0.1
JTS				*eS*	Sn	07 55 47.0	-1.0

NIED ***17*** *08:14:00, 37.00N×142.60E, h23km, Mw3.9 Best double couple: M0 8.93000×10^14 NP1:φs 16.00000°, δ 66.00000°, λ 80.00000°. NP2:φs 220.00000°, δ 26.00000°, λ 112.00000°.*
JMA ***17*** *08:14:06.2±0.3, 37.00N×142.65E, h5km, M3.8*
IDC ***17*** *08:14:06.4±1.5, 37.02N×142.79E, h0km, mb3.8/7, mb1 3.8/10, mb1mx3.6/46, mbtmp3.8/10, ML3.5/3, MS3.1/7, Ms1 3.1/7, ms1mx2.8/45, Error ellipse: s-maj=29.8km s-min=26.3km az=142.0*
NEIC ***17*** *08:14:11.4±1.7, 37.03N±0.07×142.6E±0.1, h30km±9km, mb4.1/4, Error ellipse: s-maj=16.7km s-min=9.1km az=106.0*

ISC 17 08:14:08.1±1.0, **37.00N**±0.04×**142.60E**±0.06, **h9**km, **n51, s**1**56/57, mb3.8/9, MS3.1**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	1.43	285	P	Pn	08 14 33.0	-1.3
JFK				*eS*	Sn	08 14 52.1	-1.1
ONAJ	Iwakimizuishiy	1.45	275	P	Pn	08 14 33.6	-0.9
ONAJ				*eS*	Sn	08 14 52.7	-1.0
JMST	Minamisoumatoc	1.55	298	P	Pn	08 14 34.6	-1.2
JMST				S	Sn	08 14 52.9	-3.1
JIKH	Ishinomakikobu	1.59	326	P	Pn	08 14 35.4	-1.1
JIKH				S	Sb	08 14 57.6	-0.3
JFFD	Fukushimafurud	1.64	274	P	Pn	08 14 36.3	-0.8
JMM	Marumori	1.68	302	P	Pn	08 14 36.7	-1.0
JIO	Ouri	1.76	326	P	Pn	08 14 37.9	-0.9
JIO				*eS*	Sn	08 15 01.4	+0.1
JFT	Otama	1.88	287	P	Pn	08 14 40.0	-0.5
JFT				*eS*	Sn	08 15 03.6	-0.7
JOU	Okura	2.06	312	P	Pn	08 14 43.2	+0.3
JOU				*eS*	Sn	08 15 10.2	+1.5
JMK	Ichinoseki	2.24	331	P	Pn	08 14 45.3	0.0
JAG	Ashikaga	2.59	258	P	Pn	08 14 50.8	+0.5
JYK	Kaneyama	2.61	318	P	Pn	08 14 50.7	+0.2
JYK				*eS*	Sn	08 15 24.4	+2.1
JOM	Ohasama	2.68	338	P	Pn	08 14 51.2	-0.2
JOM				S	Sn	08 15 24.3	+0.3
BSO1	Boso 1	2.69	210	P	Pn	08 14 52.5	+1.5
BSO1				S	Sn	08 15 24.8	+1.4
JRY	Ryogami san	3.14	253	P	Pn	08 14 58.2	+0.4
JRY				*eS*	Sn	08 15 33.9	-1.5
MJAR	Matsushiro Arr	3.56	264	Pn	Pn	08 15 04.8	+1.3
	0.8nm,0.3s,baz=88,slow=16,SNR=26						
MJAR				Sn	Sb	08 15 51.3	-3.2
	0.2nm,0.3s,baz=72,slow=22,SNR=3.3						
MJAR				LR	LR	08 16 38.6	
	comp=Z,207nm,18.9s,baz=80,slow=41						
MJAR	Matsushiro Arr	3.56	264		Pn	08 15 04.0	+0.4
MAJO	Matsushiro	3.56	264		Pn	08 15 04.0	+0.5
MAT	Matsushiro	3.56	264	P	Pn	08 15 05.1	+1.6
MAT				S	Sb	08 15 52.9	-1.6
MJB9	Matsu-Tunnel	3.56	264		Pn	08 15 04.4	+0.8
JHJ2	Mitsune	4.50	211	Pn	Pn	08 15 17.8	+1.4
JHJ2					Sn	08 16 05.1	-3.8
INU	Inuyama	4.81	252	Pn	Pn	08 15 23.1	+2.4
ERM	Erimo	5.03	5	Pn	Pn	08 15 23.2	-0.5
ERM					Sn	08 16 23.3	+1.4
ASAJ	Asahikawa	7.11	360	Pn	Pn	08 15 52.3	0.0
	1.9nm,0.3s,baz=206,slow=9.3,SNR=11						
ASAJ				Sn	Sn	08 17 09.6	-3.7
	0.5nm,0.3s,baz=140,slow=8.5,SNR=3.4						
JKA	Kamikawa-asahi	7.11	360		Pn	08 15 52.3	0.0
JKA					Sn	08 17 09.6	-3.7
JCJ	Chichijima	9.88	182	LR	LR	08 23 52.0	
	comp=Z,12nm,18.6s,baz=24,slow=59						
KSRS	Korea Array	11.71	277	Pn	Pn	08 16 58.9	+3.5
	0.2nm,0.3s,baz=93,slow=13,SNR=5.9						
KSRS				LR	LR	08 21 04.3	
	comp=Z,107nm,19.3s,baz=74,slow=35						
KS19	Wonju Array Si	11.76	277		Sn	08 19 10.8	+3.5
KLR	Kul'dur	14.55	331	LR	LR	08 23 13.7	
	comp=Z,85nm,18.0s,baz=158,slow=37						
H11N2	WAKE ISLAND Hy	27.32	122	T	T	08 48 46.9	
	baz=314,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	27.33	122	T	T	08 48 49.1	
	baz=314,slow=75,SNR=8.4						
H11N3	WAKE ISLAND Hy	27.34	122	T	T	08 48 43.5	
	baz=314,slow=75,SNR=8.9						
H11S1	WAKE ISLAND Hy	28.05	125	T	T	08 49 43.7	
	baz=316,slow=76,SNR=6.0						
H11S3	WAKE ISLAND Hy	28.05	125	T	T	08 49 38.8	
	baz=316,slow=76,SNR=6.0						
H11S2	WAKE ISLAND Hy	28.06	125	T	T	08 49 46.0	
	baz=316,slow=76,SNR=5.4						
SONM	Songino Array	28.59	304	P	P	08 20 05.1	+0.4
	1.4nm,0.8s,baz=103,slow=9.5,SNR=7.6						
SONM	Songino Array	28.59	304	P	P	08 20 04.5	-0.1
TIXI	Tiksi	35.44	353	LR	LR	08 37 30.8	
	comp=Z,33nm,18.9s,baz=341,slow=40						
CMAR	Chiang Mai Arr	42.41	256	LR	LR	08 41 42.8	
	comp=Z,25nm,18.4s,baz=0.0,slow=39						
ZALV	Zalesovo Beam	42.64	312	P	P	08 22 05.3	+0.6
	0.7nm,0.3s,baz=103,slow=6.4,SNR=3.8						
ZALV	Zalesovo Beam	42.64	312	P	P	08 22 05.0	+0.3
MK31	Makanchi Array	44.94	302	P	P	08 22 23.5	+0.2
MK31					IAmb	IAmb	08 22 34.0
	comp=Z,1.4nm,0.8s						
MKAR	Makanchi Array	44.94	302	P	P	08 22 23.4	+0.1
	comp=Z,1.0nm,0.7s,baz=88,slow=9.2,SNR=8.9						
MKAR	Makanchi Array	44.94	302	P	P	08 22 22.6	-0.8
KURK	Kurchatov	46.70	308	P	P	08 22 37.0	-0.1
KURK					IAmb	IAmb	08 22 38.0
	comp=Z,4.1nm,1.1s						
KURBB	Kurchatov Arra	46.77	308	P	P	08 22 37.6	-0.1
	comp=Z,2.0nm,0.6s,baz=82,slow=8.4,SNR=11						
ILAR	Eielson Array	49.02	32	P	P	08 22 53.7	-1.2
	comp=Z,0.2nm,0.6s,baz=262,slow=6.8,SNR=3.0						
BVAR	Borovoye Array	51.30	313	P	P	08 23 12.5	+0.2
	comp=Z,0.4nm,0.4s,baz=82,slow=8.4,SNR=2.4						
WRA	Warramunga Arr	57.17	189	P	P	08 23 55.4	+0.1
	comp=Z,0.9nm,1.0s,baz=6.6,slow=7.1,SNR=3.1						
WRA	Warramunga Arr	57.17	189	P	P	08 23 56.3	+1.0
ELK	Elko	74.84	50	LR	LR	08 53 34.5	
	comp=Z,30nm,21.1s,baz=326,slow=32						

IDC ***17*** *08:18:28.3±1.5, 60.75S×24.70W, h0km, mb4.2/2, mb1 4.3/2, mb1mx3.8/16, mbtmp4.2/2, MS3.3/5, Ms1 3.2/5, ms1mx3.0/19, Error ellipse: s-maj=68.2km s-min=44.0km az=6.0*
NEIC ***17*** *08:18:32.9±1.2, 61.05S±0.1×24.8W±0.3, h33km±4km, mb4.5/8, Error ellipse: s-maj=27.5km s-min=6.0km az=60.0*

ISC 17 08:18:29.3±0.7, **60.9S**±0.1×**24.7W**±0.1, **h10**km, **n38,** σ0**.71**/30, **mb4.6/5, MS3.2**/5, **South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	11.86	153	P	Pn	08 21 19.1	+0.9
VNA3	Neumayer Olymp	12.02	156	P	Pn	08 21 20.9	+0.5
SNAA	Sanae	13.84	150	P	Pn	08 21 45.7	+0.4
SNAA	Sanae	13.84	150		Pn	08 21 45.4	+0.1
PMSA	Palmer Station	18.17	241		Pn	08 22 41.0	-0.3
PMSA					IAmb	IAmb	08 22 50.4
	comp=Z,40nm,1.2s						
EFI	East Falkland	20.46	282	P	P	08 23 07.2	+0.4
PLCA	Paso Flores	34.32	285	LR	LR	08 38 37.3	
	comp=Z,38nm,18.1s,baz=170,slow=35						
MAW	Mawson	35.56	139	LR	LR	08 37 33.3	
	comp=Z,61nm,21.0s,baz=239,slow=32						
MAW	Mawson	35.56	139	P	P	08 25 25.5	-0.6
CPUP	Villa Florida	41.01	312	LR	LR	08 42 32.3	
	comp=Z,28nm,19.9s,baz=145,slow=35						
BDFB	Brasilia	48.19	329	LR	LR	08 44 25.3	
	comp=Z,22nm,21.8s,baz=235,slow=32						
GO01	Chusmiza	51.63	303	P	P	08 27 36.5	+0.1
GO01					IAmb	IAmb	08 27 39.2
	comp=Z,6.2nm,1.1s						
MNMC	Minye Minye	52.28	302	P	P	08 27 41.0	0.0
MNMC					IAmb	IAmb	08 27 50.3
	comp=Z,6.4nm,0.8s						
H10N1	ASCENSION HYDR	53.46	13	T	T	09 25 33.8	
	baz=186						
H10N3	ASCENSION HYDR	53.46	13	T	T	09 25 34.4	
	baz=186,slow=74						
H10N2	ASCENSION HYDR	53.48	13	T	T	09 25 30.2	
	baz=186,slow=74						
LPAZ	La Paz	54.24	306	P	P	08 27 55.9	0.0
	comp=Z,0.6nm,0.4s,baz=159,slow=8.6,SNR=6.3						
LPAZ	La Paz	54.24	306	P	P	08 27 55.9	0.0
LPAZ					IAmb	IAmb	08 28 11.4
	comp=Z,4.1nm,1.3s						
TOA0	Torodi Ar. Sit	76.71	26	P	P	08 30 20.7	+0.3
TOA0					IAmb	IAmb	08 30 21.7
	comp=Z,5.8nm,0.9s						
TORD	Torodi Ar. Bea	76.71	26	P	P	08 30 20.5	+0.1
	comp=Z,4.7nm,0.7s,baz=192,slow=4.3,SNR=25						
TORD	Torodi Ar. Bea	76.71	26	P	P	08 30 19.8	-0.7
STKA	Stephens Creek	96.91	168	LR	LR	09 08 40.8	
	comp=Z,24nm,18.3s,baz=24,slow=35						
PDAR	Pinedale Array	123.90	298	PKP	PKPdf	08 37 27.3	+0.4
	comp=Z,0.1nm,0.4s,baz=142,slow=4.6,SNR=2.8						
PDAR	Pinedale Array	123.90	298		PKPdf	08 37 26.4	-0.5
LKWY	Lake	125.71	299		PKPdf	08 37 31.0	+0.7
MLOA	Mauna Loa Obse	126.29	242	PKPdf	PKPdf	08 37 29.7	-2.7
FINES	FINESS Array B	128.04	28	PKP	PKPdf	08 37 33.9	+0.1
	comp=Z,2.3nm,0.8s,baz=205,slow=6.2,SNR=2.7						
YKA	Yellowknife Ar	140.53	313	PKP	PKPdf	08 37 57.1	-0.1
	comp=Z,0.3nm,0.4s,baz=134,slow=2.0,SNR=11						
SONM	Songino Array	149.45	93	PKPbc	PKPbc	08 38 17.8	+0.2
	comp=Z,1.6nm,0.9s,baz=211,slow=3.5,SNR=7.6						
INK	Inuvik	150.26	315		PKPbc	08 38 19.1	+0.3
EPYK	Eagle Plains	150.70	310	PKPbc	PKPbc	08 38 20.0	0.0
DAWY	Dawson	150.82	305		PKPbc	08 38 21.0	+0.6
BCAR	Beaver Creek A	151.39	302	PKPbc	PKiKP	08 38 22.7	+0.5
EGAK	Eagle	151.81	306	PKPbc	PKPbc	08 38 22.8	+0.3
DOT	Dot Lake	152.56	302	PKPbc	PKiKP	08 38 25.3	+0.7
SCRK	Sand Creek	152.65	303	PKPbc	PKiKP	08 38 25.8	+1.0
ILAR	Eielson Array	154.11	304	PKPbc	PKiKP	08 38 28.2	+0.6
	comp=Z,0.8nm,0.9s,baz=114,slow=1.0,SNR=4.8						
ILAR	Eielson Array	154.11	304		PKPbc	08 38 28.0	+0.3

IDC ***17*** *08:24:53.0±1.3, 13.89N×125.46E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.5/45, mbtmp3.8/5, ML4.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.3/48, Error ellipse: s-maj=60.9km s-min=19.8km az=62.0*
MAN ***17*** *08:25:01.4, 13.35N×124.20E, h0km, mb4.3, ML3.1, MS2.8*

ISC 17 08:24:58.4±0.8, **13.34N**±0.06×**124.08E**±0.06, **h10**km, **n19,** σ2**.42**/17, **mb3.9/5, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PVCP	Virac	0.26	15	*eP*	Pb	08 25 06.1	+0.8
CNP	Catarman	1.00	145	*eP*	Pn	08 25 20.4	+1.9
CNP				*eS*	Sn	08 25 35.5	+2.8
GQP	Guinayangan	1.69	290	*eP*	Pg	08 25 34.0	+3.1
GQP				*eS*	Sb	08 25 52.5	+1.6
BOAC	Boac	2.18	273	*eP*	Pg	08 25 41.5	+1.1
BOAC				*eS*	Sg	08 26 09.4	+0.8
RCP	Roxas	2.20	217	*eP*	Pg	08 25 43.9	+3.3
OTRP	Odiongan	2.23	244	*eP*	Pg	08 25 42.1	+0.8
OTRP				*eS*	Sn	08 26 00.8	-2.3
TGY	Tagaytay City	3.15	284	Pn	Pg	08 26 02.2	+3.3
	34nm,0.3s,baz=128,slow=12,SNR=6.0						
DAV	Davao City (W)	6.40	167	LR	LR	08 29 31.1	
	comp=Z,105nm,21.1s,baz=350,slow=41						
WRA	Warramunga Arr	34.58	163	P	P	08 31 45.4	-2.3
	0.8nm,0.8s,baz=343,slow=9.1,SNR=2.8						
ASAR	Alice Springs	38.01	165	P	P	08 32 14.6	-2.5
	0.6nm,0.3s,baz=341,slow=7.3,SNR=29						
ASAR				PcP	PcP	08 34 29.4	-3.2
	0.3nm,0.5s,baz=341,slow=3.5,SNR=4.1						
H11S3	WAKE ISLAND Hy	41.22	77	T	T	09 16 04.1	
	baz=269,slow=75,SNR=39						
H11S1	WAKE ISLAND Hy	41.23	77	T	T	09 16 01.6	
	baz=269,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy	41.24	77	T	T	09 16 01.9	
	baz=269,slow=75,SNR=35						
H11N1	WAKE ISLAND Hy	41.44	75	T	T	09 16 18.5	
	baz=267,slow=74,SNR=84						
H11N2	WAKE ISLAND Hy	41.45	75	T	T	09 16 18.4	
	baz=267,slow=74,SNR=43						
H11N3	WAKE ISLAND Hy	41.46	75	T	T	09 16 23.0	
	baz=267,slow=74,SNR=82						
MKAR	Makanchi Array	48.30	322	P	P	08 33 38.8	-1.2
	0.9nm,0.9s,baz=115,slow=6.8,SNR=4.2						
KURBB	Kurchatov Arra	52.34	325	P	P	08 34 08.9	-1.6
	1.5nm,0.7s,baz=124,slow=7.6,SNR=10.0						
BVAR	Borovoye Array	57.94	325	P	P	08 34 49.3	-1.6
	0.5nm,0.4s,baz=120,slow=6.5,SNR=3.8						

MEX ***17*** *08:49:54.1±0.7, 15.01N×92.34W, h105km±6km, MD3.7*
GCG ***17*** *08:49:54.2±0.8, 14.65N×92.73W, h35km±999km, MD3.7*

ISC 17 08:49:55.9±1.5, **15.1**N±0.2×**92.5W**±0.1, **h87**km, **n7,** σ1**30**/11, **Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		0.26	124	*eP*	Pn	08 50 07.4	-1.4
THIG				*eS*	Sn	08 50 18.0	-0.3
STG3	Santiaguito 3,	0.95	111	*eP*	Pn	08 50 13.9	-1.1
PCIG		0.96	312	*eP*	Pn	08 50 14.7	-0.2
PCIG				*eS*	Sn	08 50 31.0	+1.8
FUG	Fuego 3	1.70	111	*eS*	Sn	08 50 47.7	+1.9
TGIG		1.82	340	*eP*	Pn	08 50 24.4	-1.4
IXG	Ixpaco	2.16	114	*eP*	Pn	08 50 30.3	0.0
IXG				*eS*	Sn	08 50 57.5	+0.9
CMIG	Matias Romero	3.07	312	*eP*	Pn	08 50 41.8	-0.6
CMIG				*eS*	Sn	08 51 18.8	+0.7

IDC ***17*** *08:53:25.6±1.2, 24.35N×121.61E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.6/52, mbtmp3.8/5, MS3.3/19, Ms1 3.4/19, ms1mx3.2/51, Error ellipse: s-maj=72.6km s-min=20.9km az=82.0*
TAP ***17*** *08:53:25.9, 24.75N×122.37E, h11km, ML4.2, C*
JMA ***17*** *08:53:26.8, 24.65N×122.40E, h34km±3km, M4.3*
NEIC ***17*** *08:53:26.7±2.6, 24.63N±0.03×122.37E±0.02, h10km±1km, mb4.1/5, Error ellipse: s-maj=5.9km s-min=3.0km az=12.0*

ISC 17 08:53:26.2±1.0, **24.66N**±0.02×**122.40E**±0.02, **h5**km±8km, **n149,** σ1**23**/227, **mb3.9**/8, **MS3.2**/16, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.27	246	P	Pg	08 53 32.8	+1.4
	baz=219						
EOS1				S	Sg	08 53 37.7	+2.7
	baz=219						
TWC	Suao	0.50	264	P	Pg	08 53 35.5	-0.4
	baz=253						
TWB1	Santiao Chiao	0.51	313	*i* P	Pg	08 53 35.5	-0.4
	baz=307						
TWB1				*i* S	Sg	08 53 41.2	-1.4
	baz=307						
JYNG	Yonagunijimaku	0.54	113	P	Pg	08 53 37.6	+1.1
JYNG				S	Sg	08 53 44.9	+1.4
NTC	Toucheng	0.55	290	P	Pg	08 53 36.5	-0.3
	baz=282						
NTC				*eS*	Sg	08 53 45.0	+1.0
	baz=282						
YOJ	Yonaguni jima	0.59	110	P	Pg	08 53 38.6	+1.0
	baz=116						
YOJ				S	Sb	08 53 47.7	+0.1
	baz=116						
YOJ	Yonaguni jima	0.59	110	P	Pg	08 53 38.5	+1.0
YOJ				S	Sg	08 53 46.3	+1.1
YOJ	Yonaguni jima	0.59	110		Pg	08 53 38.0	+0.5
ILA	Ilan	0.60	280	*eP*	Pg	08 53 37.2	-0.5
	baz=271						
ILA				S	Sb	08 53 47.9	0.0
	baz=271						
NANB	Nanao	0.64	249	*i* P	Pg	08 53 38.4	0.0
	baz=249						
NANB				*eS*	Sb	08 53 47.9	-1.0
	baz=249						
ENA	Nanau	0.64	249	P	Pb	08 53 39.0	-0.9
	baz=249						
ENA				S	Sb	08 53 48.1	-1.1
	baz=249						
TWE	Neicheng	0.67	275	P	Pg	08 53 38.5	-0.6
	baz=259						
TWE				*eS*	Sg	08 53 47.7	-0.1
	baz=259						
NWF	Wu-fen Shan	0.69	306	*eP*	Pg	08 53 40.2	+0.7
	baz=301						
NWF				*eS*	Sg	08 53 49.1	+0.5
	baz=301						
WFSB	Wu-fen Shan	0.69	306	*eP*	Pg	08 53 39.7	+0.2
	baz=301						
WFSB				*eS*	Sg	08 53 49.3	+0.8
	baz=301						
SLBB	Yuanshan	0.70	278	*i* P	Pg	08 53 38.4	-1.2
	baz=270						
SLBB				S	Sb	08 53 49.6	-1.3
	baz=270						
ENTT	Nioudou	0.76	269	*i* P	Pg	08 53 40.5	-0.3
	baz=261						
ENTT				*eS*	Sn	08 53 51.9	-0.7
	baz=261						
TWA	Mucha	0.81	293	*eP*	Pg	08 53 41.0	-0.7
	baz=288						
TWA				S	Sg	08 53 52.3	+0.1
	baz=288						
NDT	Datong Townshi	0.81	266	*i* P	Pg	08 53 41.3	-0.4
	baz=259						
NDT				S	Sb	08 53 54.0	0.0
	baz=259						
NWLT	Wulai	0.82	278	*eP*	Pg	08 53 41.6	-0.4
	baz=271						
NWLT				*eS*	Sg	08 53 53.1	+0.4
	baz=271						
NHDH	Xindian Distri	0.85	291	P	Pg	08 53 42.7	+0.2
	baz=275						
NHDH				S	Sb	08 53 54.3	-0.8
	baz=275						
NACB	Ninganchiao	0.88	237	*i* P	Pg	08 53 43.0	-0.1
	baz=230						
NACB				*eS*	Sn	08 53 56.5	-1.9
	baz=230						
NACB	Ninganchiao	0.88	237		Pg	08 53 42.8	-0.2
TAP1	Taipei	0.88	295	*eP*	Pg	08 53 43.0	0.0
	baz=290						
TAP1				*eS*	Sb	08 53 55.3	-0.7
	baz=290						
TATO	Taipei	0.89	291	*eP*	Pg	08 53 43.4	+0.2
	baz=285						
TATO				*eS*	Sg	08 53 54.8	+0.2
	baz=285						
TATO	Taipei	0.89	291		Pg	08 53 42.8	-0.4
TAP	Taipei	0.90	295	*eP*	Pg	08 53 42.7	-0.6
	baz=290						
TAP				*eS*	Sg	08 53 55.1	+0.2
	baz=290						
YM01	YM01	0.90	303	P	Pg	08 53 43.2	-0.2
	baz=299						
YM01				*eS*	Sg	08 53 54.9	-0.1
	baz=299						
YM11	YM11	0.90	304	P	Pg	08 53 43.0	-0.5
	baz=300						
YM11				*eS*	Sg	08 53 54.9	-0.3
	baz=300						
YM08	YM08	0.90	306	P	Pg	08 53 43.1	-0.4
	baz=302						
YM08				S	Sg	08 53 54.2	-1.0
	baz=302						
YM10	YM10	0.91	303	P	Pg	08 53 43.2	-0.3
	baz=299						
YM10				S	Sg	08 53 55.6	+0.2
	baz=299						
YM05	YM05	0.91	304	P	Pg	08 53 43.0	-0.6
	baz=300						
YM

baz=292
HWA Hwalien 1.00 227 *e*P **Pn 08 53 47.2 +0.5**
baz=220
HWA *e*S **Sn 08 54 01.9 +0.7**
baz=220
PCYT Pengchaiyu 1.01 343 *e*P **Pg 08 53 43.9 -1.7**
baz=344
ENLB Shoufeng 1.05 224 *e*P **Pn 08 53 47.5 -0.1**
baz=218
ENLB S **Sn 08 54 03.5 +1.0**
baz=218
WLTB Daxi 1.06 281 *e*P **Pn 08 53 47.2 -0.4**
baz=290
WLTB *e*S **Sn 08 54 01.5 -1.4**
baz=290
NCU National Centr 1.14 286 *e*P **Pb 08 53 47.7 -0.7**
baz=281
NCU *e*S **Sn 08 54 03.7 -1.2**
baz=281
NCUH Zhongli 1.15 286 *e*P **Pb 08 53 47.2 -1.3**
baz=281
NCUH *e*S **Sn 08 54 03.7 -1.2**
baz=281
WHF Hehuan Shan 1.16 244 P **Pg 08 53 48.1 -0.2**
baz=249
WHF *e*S **Sn 08 54 04.6 -1.2**
baz=249
TWT Tachien 1.19 250 P **Pn 08 53 49.3 -0.3**
baz=244
TWT *e*S **Sn 08 54 06.5 +0.2**
baz=244
TDCB Techi 1.20 250 *e*P **Pn 08 53 49.5 -0.3**
baz=245
TDCB *e*S **Sn 08 54 06.0 -0.6**
baz=245
ESL Shilin 1.22 226 *e*P **Pb 08 53 49.1 -0.7**
baz=202
ESL *e*S **Sn 08 54 07.3 +0.5**
baz=202
IRIF Iriomote-Funau 1.25 105 P **Pn 08 53 48.1 -2.3**
IRIF S **Sb 08 54 04.4 -2.4**
LIOB Emei 1.26 270 *e*P **Pn 08 53 49.3 -1.2**
baz=264
LIOB *e*S **Sn 08 54 06.7 -1.1**
baz=264
CHGB Renai 1.27 242 P **Pg 08 53 50.5 0.0**
baz=247
CHGB *e*S **Sn 08 54 09.4 +1.1**
baz=247
NSTT Nanjuang 1.27 269 *e*P **Pn 08 53 49.5 -1.2**
baz=263
NSTT *e*S **Sg 08 54 06.8 -0.3**
baz=263
SBCB Hsinchu 1.29 276 *e*P **Pn 08 53 50.2 -0.7**
baz=271
SBCB *e*S **Sg 08 54 07.6 -0.2**
baz=271
HSN Hsinchu 1.31 276 *e*S **Sb 08 54 06.9 -1.4**
baz=273
OWD Renai 1.32 238 *e*P **Pg 08 53 51.5 +0.1**
baz=213
OWD *e*S **Sn 08 54 10.3 +0.8**
baz=213
EGFH Guangfu 1.33 222 *e*P **Pb 08 53 50.9 -0.7**
baz=199
EGFH *e*S **Sg 08 54 09.4 +0.5**
baz=199
WHP Taichung City 1.38 254 *e*P **Pg 08 53 52.4 -0.2**
baz=249
WHP *e*S **Sg 08 54 10.7 +0.2**
baz=249
HATJ Hateruma jima 1.42 115 P **Pn 08 53 51.1 -1.5**
VWDT VWDT 1.46 232 P **Pb 08 53 53.4 -0.5**
baz=208
VWDT *e*S **Sg 08 54 13.4 +0.3**
baz=208
HGSD Ruisui 1.47 218 *e*P **Pn 08 53 52.2 -1.1**
baz=198
HGSD *e*S **Sg 08 54 12.8 -0.6**
baz=198
NMLH Miaoli 1.47 265 *e*P **Pn 08 53 52.8 -0.6**
baz=280
NMLH *e*S **Sg 08 54 13.7 +0.2**
baz=280
DPDB Guoxing 1.48 245 *e*P **Pb 08 53 53.8 -0.4**
baz=240
DPDB *e*S **Sg 08 54 15.5 +1.6**
baz=240
NSY Sanyi 1.51 261 *e*P **Pn 08 53 53.8 -0.1**
baz=276
NSY *e*S **Sg 08 54 13.9 -0.9**
baz=276
TWQ1 Liyutan 1.52 258 *e*P **Pg 08 53 55.1 -0.1**
baz=274
TWQ1 *e*S **Sg 08 54 15.5 +0.6**
baz=274
JKRS Kuro-shima 1.53 106 P **Pn 08 53 52.5 -1.6**
JKRS *e*S **Sn 08 54 11.4 -2.9**
PTSB Yuanli 1.56 262 *e*S **Sg 08 54 15.9 -0.3**
baz=277
SMLT Sun Moon Lake 1.57 241 *e*P **Pb 08 53 55.6 -0.2**
baz=249
SMLT *e*S **Sg 08 54 16.6 -0.1**
baz=249
SSLB Suanglung 1.58 237 *e*P **Pb 08 53 55.5 -0.4**
baz=215
SSLB *e*S **Sg 08 54 16.4 -0.6**
baz=215
SSLB Suanglung 1.58 237 Pb 08 53 55.5 -0.4
TYC Yuchr 1.60 242 *e*P **Pn 08 53 54.9 -0.1**
baz=250
TYC *e*S **Sg 08 54 18.4 +0.9**
baz=250
JIJ Ishigaki jima 1.61 100 P **Pn 08 53 53.1 -2.2**
JIJ *e*S **Sn 08 54 12.6 -3.9**
YULB Yu-li 1.62 219 P **Pn 08 53 54.0 -1.3**
baz=214
YULB *e*S **Sb 08 54 16.2 -1.1**
baz=214
YULB Yu-li 1.62 219 Pn 08 53 54.8 -0.6
WDJ Dajia District 1.63 259 *e*P **Pb 08 53 56.1 -0.7**
baz=274
WDJ *e*S **Sg 08 54 17.5 -1.2**
baz=274
TWF1 Yuli 1.65 218 *e*P **Pb 08 53 55.8 -1.2**
baz=212
TWF1 *e*S **Sb 08 54 16.8 -1.3**
baz=212
WHYT Xinyi Township 1.71 236 *e*P **Pb 08 53 57.6 -0.5**
baz=214
WHYT *e*S **Sg 08 54 21.6 +0.5**
baz=214
JISG Ishigakijimahi 1.74 92 P **Pn 08 53 55.1 -1.9**
WJS Zhushan 1.74 242 *e*P **Pg 08 53 59.0 -0.5**
baz=217
WJS *e*S **Sg 08 54 24.3 +2.2**
baz=217
WNT Mingjian 1.75 244 *e*P **Pg 08 53 59.5 -0.3**
baz=260
WNT *e*S **Sg 08 54 23.8 +1.4**
baz=260
YUS Yu-Shan 1.77 229 *e*S **Sg 08 54 21.4 -1.6**
baz=207
FULB Fuli 1.77 215 *e*P **Pn 08 53 57.2 -0.4**
baz=195
FULB *e*S **Sb 08 54 20.7 -1.1**
baz=195
CHKT Chengkung 1.82 212 *e*S **Sn 08 54 20.2 -1.4**
baz=193
ALS Alishan 1.85 232 *e*P **Pg 08 54 00.9 -0.9**
baz=210
ALS *e*S **Sg 08 54 24.1 -1.7**
baz=210
CHN5 Tsauling 1.90 236 *e*P **Pb 08 54 00.6 -0.8**
baz=213
CHN5 *e*S **Sg 08 54 27.2 +0.1**
baz=213
ELDTW Lidau 1.94 221 *e*P **Pn 08 53 59.0 -0.9**
baz=202
ELDTW *e*S **Sb 08 54 24.5 -2.0**
baz=202
WDLH Douliu 1.96 241 *e*P **Pb 08 54 01.2 -1.0**
baz=217
WDLH *e*S **Sg 08 54 29.2 +0.2**
baz=217
RLNB Erlin 2.01 248 *e*S **Sg 08 54 29.0 -1.9**
baz=262
CHN2 Minshiung 2.09 238 *e*S **Sg 08 54 32.9 -0.4**
baz=215
CHN4 Tsaushan 2.11 232 *e*P **Pb 08 54 04.0 -0.9**
baz=210
CHN4 *e*S **Sg 08 54 32.2 -1.7**
baz=210
TPUB Ta-pu 2.11 230 *e*P **Pb 08 54 04.2 -0.8**
baz=209
TPUB *e*S **Sb 08 54 30.6 -0.9**
baz=209
TPUB Ta-pu 2.11 230 Pb 08 54 04.3 -0.7
STYT Tauyuan 2.12 226 *e*P **Pb 08 54 03.1 -2.0**
baz=206
STYT *e*S **Sb 08 54 30.4 -1.4**
baz=206
TWH Lutao 2.12 204 *e*P **Pn 08 54 01.0 -1.2**
baz=199
TWH S **Sn 08 54 27.4 -1.5**
baz=199
CHY Chiayi 2.15 238 *e*S **Sb 08 54 32.2 -0.3**
baz=215
WTP Ta-pu 2.16 230 *e*P **Pb 08 54 04.0 -1.8**
baz=207
WTP *e*S **Sb 08 54 32.4 -0.4**
baz=207
TWGBT Beinan 2.20 214 *e*P **Pn 08 54 02.2 -1.2**
baz=209
TWGBT *e*S **Sn 08 54 29.5 -1.5**
baz=209
TWG Pinlang 2.20 214 *e*P **Pn 08 54 02.2 -1.2**
baz=209
TWG *e*S **Sn 08 54 30.1 -0.9**
baz=209
TWG Pinlang 2.20 214 Pn 08 54 03.0 -0.4
TTN Taitung 2.22 211 *e*S **Sn 08 54 30.8 -0.6**
baz=195
TWK Hsinying 2.23 232 *e*P **Pb 08 54 06.2 -0.8**
baz=211
TWK S **Sg 08 54 35.4 -2.6**
baz=211
WLGB Puzi 2.25 239 *e*S **Sg 08 54 36.9 -1.6**
baz=253
CHN1 Nanshi 2.26 230 P **Pb 08 54 07.6 +0.1**
baz=209
CHN1 S **Sb 08 54 35.6 -0.1**
baz=209
SGST Jiashian 2.29 227 P **Pb 08 54 06.9 -1.1**
baz=206
SLGT Liugui 2.31 224 *e*P **Pb 08 54 06.0 -2.4**
baz=219
SLGT *e*S **Sb 08 54 36.7 -0.5**
baz=219
SSD Sandimen 2.50 221 *e*P **Pn 08 54 08.5 +0.9**
baz=200
SSD *e*S **Sb 08 54 40.8 -2.0**
baz=200
TWM1 Shoushan 2.58 225 *e*S **Sb 08 54 44.4 -0.5**
baz=220
MASBT Mashibuluo 2.61 219 *e*P **Pb 08 54 11.2 -2.2**
baz=201
MASBT *e*S **Sb 08 54 43.5 -2.2**
baz=201
MATB Ma-tsu 2.67 304 *e*P **Pn 08 54 08.9 -0.9**
baz=303
EAST Anshuo 2.68 212 *e*P **Pn 08 54 10.1 +0.1**
baz=207
EAST *e*S **Sn 08 54 41.7 -1.2**
baz=207
VWUC VWUC 2.70 278 *e*P **Pn 08 54 08.9 -1.3**
baz=275
VWUC *e*S **Sn 08 54 42.6 -0.8**
baz=275
LAY Lan-yu 2.73 197 P **Pn 08 54 09.8 -0.8**
baz=192
LAY S **Sn 08 54 42.8 -1.2**
baz=192
SSPT Xinbi 2.74 218 *e*P **Pb 08 54 13.0 -2.7**
baz=201
SSPT *e*S **Sb 08 54 47.5 -2.1**
baz=201
SCZT Fangliau 2.81 216 P **Pn 08 54 12.5 +0.8**
baz=197
SCZT S **Sb 08 54 47.5 -3.9**
baz=197
PHUB P'eng-hu 2.83 247 *e*S **Sn 08 54 46.6 +0.2**
baz=243
KNMB Chin-men Tao 3.66 268 Pn 08 54 20.2 -3.2
KSRS Korea Array 13.60 19 Pn **P 08 56 51.8 +2.9**
0.2nm,0.3s,baz=199,slow=11,SNR=11
KSRS LR LR 09 02 20.4
comp=Z,138nm,18.8s,baz=200,slow=38
DAV Davao City (W) 17.76 170 LR LR 09 04 29.4
comp=Z,15nm,21.9s,baz=5.5,slow=98
MJAR Matsushiro Arr 18.01 45 LR LR 09 05 16.4
comp=Z,55nm,18.6s,baz=240,slow=38
USRK Ussuriysk Ar. 21.00 20 P **P 08 58 16.8 +6.3**
1.7nm,0.8s,baz=201,slow=11,SNR=3.4
USRK LR LR 09 05 52.3
comp=Z,42nm,19.7s,baz=209,slow=35
CMAR Chiang Mai Arr 22.66 259 LR LR 09 07 08.2
comp=Z,24nm,20.6s,baz=194,slow=38
ASAJ Asahikawa 25.46 35 LR LR 09 09 08.7
comp=Z,67nm,19.2s,baz=180,slow=36
KLR Kul'dur 25.59 14 LR LR 09 09 16.1
comp=Z,64nm,19.4s,baz=222,slow=36
SONM Songino Array 26.38 335 P **P 08 59 03.6 +0.1**
1.4nm,0.7s,baz=156,slow=9.5,SNR=6.9
SONM LR LR 09 09 36.8
comp=Z,61nm,19.3s,baz=62,slow=37
SONM Songino Array 26.38 335 P **P 08 59 03.2 -0.3**
SlJl Sorong 26.80 160 LR LR 09 11 50.3
comp=Z,57nm,18.0s,baz=214,slow=41
TLY Talaya 30.56 337 LR LR 09 12 23.8
comp=Z,36nm,19.8s,baz=136,slow=37
PETK Petropavlovsk- 38.85 34 LR LR 09 17 44.5
comp=Z,34nm,19.2s,baz=73,slow=37
ZAA0 Zalesovo Array 40.46 326 P **P 09 01 06.3 +0.8**
ZAA0 IAmb IAmb 09 01 07.1
comp=Z,2.5nm,0.8s
ZALV Zalesovo Beam 40.46 326 P **P 09 01 07.0 +1.5**
WRA Warramunga Arr 45.83 164 P **P 09 01 48.5 -0.9**
comp=Z,3nm,0.7s,baz=345,slow=8.7,SNR=13
WRA Warramunga Arr 45.83 164 P **P 09 01 48.0 -1.4**
WR0 Warramunga Arr 45.90 164 P **P 09 01 48.2 -1.7**
WR0 IAmb IAmb 09 01 56.0
comp=Z,16nm,1.4s
TIXI Tiksi 47.16 3 LR LR 09 23 15.4
comp=Z,46nm,19.5s,baz=185,slow=38
AS31 Alice Springs 49.32 166 P **P 09 02 16.5 0.0**
AS31 IAmb IAmb 09 02 17.4
comp=Z,1.0nm,0.8s
ASAR Alice Springs 49.32 166 P **P 09 02 16.0 -0.4**
comp=Z,1.5nm,0.7s,baz=341,slow=7.3,SNR=29
ASAR Alice Springs 49.32 166 P **P 09 02 15.8 -0.7**
ARU Arti 55.40 323 LR LR 09 29 56.9
comp=Z,74nm,18.8s,baz=132,slow=40
KIRV Kirov 60.47 325 LR LR 09 31 21.0
comp=Z,80nm,18.8s,baz=187,slow=38
OBN Obninsk 67.81 322 LR LR 09 35 42.2
comp=Z,21nm,21.9s,baz=18,slow=38
NOA NORSAR Array B 78.32 332 LR LR 09 42 34.2
comp=Z,18nm,18.2s,baz=315,slow=38
RPZ Rata Peaks 81.37 147 LR LR 09 39 48.6
comp=Z,30nm,21.7s,baz=210,slow=34
YKA Yellowknife Ar 82.10 23 P **P 09 05 50.5 +3.0**
comp=Z,0.5nm,1.0s,baz=305,slow=5.1,SNR=4.2
RAR Rarotonga 88.30 114 LR LR 09 42 30.7
comp=Z,43nm,21.0s,baz=324,slow=33
KEST Kesra 92.79 311 LR LR 09 53 05.7
comp=Z,30nm,18.3s,baz=252,slow=39

TAP ***17*** *08:57:44.5, 24.74N× 122.36E, h11km, ML3.6, C*
JMA ***17*** *08:57:45.2, 24.64N× 122.39E, h30km± 3km, M2.8*
ISC 17 08:57:44.9±1.1, 24.74N±0.02× 122.41E±0.02, h21km±3km, n84, σ0=86/159, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=218	**0.32**	**234**	*i* P		**Pb**		**08 57 51.1**	**-0.7**
EOS1				S		**Sb**		**08 57 56.0**	**-0.6**
TWB1	**Santiao Chiao** baz=308	**0.47**	**305**	P		**Pb**		**08 57 53.9**	**-0.6**
TWB1				S		**Sb**		**08 57 59.6**	**-1.3**
TWC	**Suao** baz=253	**0.53**	**256**	*i* P		**Pb**		**08 57 53.8**	**-1.7**
NTC	**Toucheng** baz=282	**0.54**	**282**	P		**Pb**		**08 57 54.9**	**-0.9**
NTC				*e*S		**Sb**		**08 58 02.4**	**-0.7**
JYNG	**Yonagunijimaku** baz=282	**0.56**	**120**	P		**Pb**		**08 57 56.0**	**-0.2**
JYNG				S		**Sb**		**08 58 03.5**	**-0.3**
ILA	**Ilan** baz=271	**0.60**	**273**	P		**Pb**		**08 57 55.8**	**-1.1**
ILA				*e*S		**Sb**		**08 58 03.9**	**-1.1**
YOJ	**Yonaguni jima** baz=106	**0.61**	**117**	*e*P		**Pb**		**08 57 56.8**	**-0.2**
YOJ				S		**Sn**		**08 58 06.6**	**-1.0**
YOJ	**Yonaguni jima** baz=106	**0.61**	**117**	P		**Pb**		**08 57 56.9**	**-0.1**
YOJ				*e*S		**Sb**		**08 58 04.9**	**-0.3**
NWF	**Wu-fen Shan** baz=302	**0.66**	**300**	*e*P		**Pb**		**08 57 58.4**	**+0.5**
NWF				*e*S		**Sb**		**08 58 07.7**	**+0.9**
WFSB	**Wu-fen Shan** baz=302	**0.66**	**300**	P		**Pb**		**08 57 58.3**	**+0.5**
WFSB				*e*S		**Sn**		**08 58 08.1**	**-0.8**
NANB	**Nanao** baz=249	**0.68**	**243**	*i* P		**Pb**		**08 57 56.6**	**-1.5**
NANB				S		**Sb**		**08 58 06.5**	**-0.6**
TWE	**Neicheng** baz=260	**0.68**	**269**	*i* P		**Pb**		**08 57 56.9**	**-1.2**
TWE				*e*S		**Sb**		**08 58 06.1**	**-0.9**
ENA	**Nanau** baz=249	**0.69**	**243**	P		**Pb**		**08 57 56.7**	**-1.5**
ENA				S		**Sb**		**08 58 06.6**	**-0.7**
SLBB	**Yuanshan** baz=271	**0.71**	**271**	P		**Pb**		**08 57 57.1**	**-1.5**
SLBB				*e*S		**Sb**		**08 58 07.1**	**-0.8**
ENTT	**Nioudou** baz=261	**0.78**	**263**	*i* P		**Pb**		**08 57 58.9**	**-0.8**
ENTT				S		**Sb**		**08 58 09.3**	**-0.5**
TWA	**Mucha** baz=288	**0.79**	**288**	*e*P		**Pb**		**08 57 59.5**	**-0.5**
TWA				*e*S		**Sb**		**08 58 10.7**	**+0.5**
NWLT	**Wulai** baz=272	**0.83**	**273**	P		**Pb**		**08 57 60.0**	**-0.6**
NWLT				S		**Sb**		**08 58 10.2**	**-1.2**
NDT	**Datong Townshi** baz=259	**0.83**	**261**	*i* P		**Pb**		**08 57 59.8**	**-0.8**
NDT				S		**Sb**		**08 58 11.9**	**+0.6**
NHDH	**Xindian Distri** baz=276	**0.84**	**286**	*i* P		**Pn**		**08 58 01.4**	**-0.1**
NHDH				S		**Sn**		**08 58 12.5**	**-0.7**
TAP1	**Taipei** baz=290	**0.86**	**290**	*e*P		**Pn**		**08 58 02.2**	**+0.4**
TAP1				*e*S		**Sn**		**08 58 13.5**	**-0.2**
YM01	**YM01** baz=299	**0.86**	**298**	P		**Pn**		**08 58 01.7**	**-0.3**
YM01				S		**Sb**		**08 58 13.1**	**+0.6**
YM08	**YM08** baz=302	**0.87**	**301**	P		**Pb**		**08 58 01.4**	**+0.1**
YM08				S		**Sb**		**08 58 12.6**	**0.0**
YM11	**YM11** baz=300	**0.87**	**299**	*e*P		**Pn**		**08 58 02.2**	**+0.1**
YM11				S		**Sn**		**08 58 14.0**	**-0.2**
TATO	**Taipei** baz=286	**0.87**	**286**	P		**Pn**		**08 58 01.9**	**0.0**
TATO				S		**Sb**		**08 58 13.2**	**+0.6**
TAP	**Taipei** baz=290	**0.88**	**290**	*e*P		**Pb**		**08 58 01.1**	**-0.3**
TAP				S		**Sn**		**08 58 14.0**	**-0.1**
YM05	**YM05** baz=300	**0.88**	**299**	*i* P		**Pn**		**08 58 02.0**	**-0.1**
YM05				S		**Sb**		**08 58 13.5**	**+0.7**
YM10	**YM10** baz=299	**0.88**	**298**	P		**Pn**		**08 58 01.9**	**-0.2**
YM10				S		**Sb**		**08 58 13.3**	**+0.5**
YM04	**YM04** baz=298	**0.90**	**298**	P		**Pb**		**08 58 02.0**	**+0.2**
YM04				S		**Sb**		**08 58 13.7**	**+0.4**
YM03	**YM03** baz=300	**0.91**	**299**	*e*P		**Pn**		**08 58 02.2**	**-0.3**
YM03				*e*S		**Sb**		**08 58 14.0**	**+0.4**
TWY	**Chenhua** baz=307	**0.91**	**306**	P		**Pn**		**08 58 02.8**	**+0.3**
TWY				S		**Sn**		**08 58 14.8**	**-0.2**
ANP	**Anpu** baz=300	**0.92**	**299**	*e*P		**Pb**		**08 58 02.1**	**-0.2**
ANP				*e*S		**Sb**		**08 58 14.5**	**+0.3**
NACB	**Ninganchiao** baz=230	**0.93**	**233**	*i* P		**Pb**		**08 58 01.2**	**-1.2**
NACB				*e*S		**Sn**		**08 58 15.2**	**-0.4**
PCYT	**Pengchaiyu** baz=344	**0.94**	**341**	*e*P		**Pn**		**08 58 02.9**	**0.0**
YHNB	**Yeheng** baz=264	**0.94**	**266**	*i* P		**Pb**		**08 58 01.9**	**-0.7**
YHNB				*e*S		**Sb**		**08 58 14.5**	**-0.3**
NSK	**Sanguang** baz=265	**0.96**	**266**	P		**Pb**		**08 58 02.3**	**-0.6**
NSK				*e*S		**Sn**		**08 58 15.6**	**-0.7**
NTST	**Danshui** baz=308	**0.97**	**296**	*e*P		**Pn**		**08 58 03.3**	**0.0**
NTST				*e*S		**Sn**		**08 58 17.0**	**+0.5**
TWS1	**Kuangyinshan** baz=292	**0.97**	**292**	*e*P		**Pn**		**08 58 03.2**	**-0.2**
TWS1				*e*S		**Sn**		**08 58 16.7**	**+0.1**
NNSH	**Datong** baz=242	**0.99**	**252**	P		**Pb**		**08 58 02.4**	**-1.0**
NNSH				S		**Sb**		**08 58 15.3**	**-0.7**
NNS	**Nan Shan** baz=250	**0.99**	**253**	P		**Pb**		**08 58 02.8**	**-0.7**
NNS				*e*S		**Sb**		**08 58 16.3**	**+0.1**
TWD	**Chiawan** baz=233	**0.99**	**229**	P		**Pb**		**08 58 02.5**	**-0.9**
TWD				*e*S		**Sn**		**08 58 16.6**	**-0.4**
ETLH	**Xiulin Townshi** baz=235	**1.00**	**238**	*e*P		**Pn**		**08 58 03.9**	**0.0**
ETLH				S		**Sn**		**08 58 16.8**	**-0.6**
WLTB	**Daxi** baz=275	**1.06**	**276**	P		**Pn**		**08 58 05.5**	**+0.9**
WLTB				*e*S		**Sn**		**08 58 18.5**	**-0.2**
ENLB	**Shoufeng** baz=198	**1.11**	**222**	*e*P		**Pb**		**08 58 05.8**	**+0.3**
ENLB				*e*S		**Sn**		**08 58 21.8**	**+1.7**
NCUH	**Zhongli** baz=281	**1.14**	**282**	*e*P		**Pn**		**08 58 05.6**	**0.0**
NCUH				*e*S		**Sn**		**08 58 21.4**	**+0.8**
WHF	**Hehuan Shan** baz=249	**1.20**	**241**	P		**Pn**		**08 58 06.3**	**-0.6**
WHF				*e*S		**Sn**		**08 58 22.4**	**-0.4**
IRIF	**Iriomote-Funau**	**1.27**	**108**	P		**Pb**		**08 58 09.1**	**+1.0**
IRIF				S		**Sb**		**08 58 25.1**	**+1.2**
LIOB	**Emei** baz=264	**1.27**	**266**	*e*P		**Pn**		**08 58 07.6**	**0.0**
LIOB				*e*S		**Sb**		**08 58 25.2**	**+1.0**

ESL	**Shilin**	**1.28 224**	P	**Pn**	**08 58 07.7**	**+0.1**
	baz=201					
ESL			S	**Sb**	**08 58 26.1**	**+1.7**
	baz=201					
NSTT	**Nanjuang**	**1.29 265**	*e*P	**Pb**	**08 58 08.0**	**-0.5**
	baz=264					
NSTT			S	**Sb**	**08 58 25.0**	**+0.4**
	baz=264					
SBCB	**Hsinchu**	**1.30 273**	*e*P	**Pb**	**08 58 08.4**	**-0.2**
	baz=271					
SBCB			*e*S	**Sb**	**08 58 25.5**	**+0.6**
	baz=271					
HSN	**Hsinchu**	**1.31 273**	*e*S	**Sb**	**08 58 25.2**	**-0.1**
	baz=273					
CHGB	**Renai**	**1.32 239**	P	**Pb**	**08 58 08.9**	**-0.2**
	baz=247					
CHGB			S	**Sb**	**08 58 26.8**	**+1.2**
	baz=247					
OWD	**Renai**	**1.37 236**	*e*P	**Pn**	**08 58 08.9**	**-0.2**
	baz=239					
OWD			*e*S	**Sb**	**08 58 28.5**	**+1.4**
	baz=239					
EGFH	**Guangfu**	**1.39 220**	*e*P	**Pb**	**08 58 09.8**	**-0.4**
	baz=199					
EGFH			*e*S	**Sb**	**08 58 28.7**	**+1.1**
	baz=199					
WHP	**Taichung City**	**1.41 251**	P	**Pb**	**08 58 10.8**	**+0.2**
	baz=249					
WHP			*e*S	**Sb**	**08 58 28.9**	**+0.6**
	baz=249					
HATJ	**Hateruma jima**	**1.44 118**	P	**Pn**	**08 58 09.5**	**-0.3**
NMLH	**Miaoli**	**1.49 263**	*e*P	**Pb**	**08 58 12.7**	**+0.9**
	baz=260					
NMLH			*e*S	**Sb**	**08 58 31.9**	**+1.6**
	baz=260					
VWDT	**VWDT**	**1.52 230**	*e*P	**Pb**	**08 58 12.6**	**+0.2**
	baz=208					
VWDT			S	**Sb**	**08 58 32.2**	**+1.0**
	baz=208					
DPDB	**Guoxing**	**1.53 243**	*e*P	**Pb**	**08 58 13.2**	**+0.7**
	baz=240					
DPDB			*e*S	**Sb**	**08 58 33.4**	**+1.9**
	baz=240					
HGSD	**Ruisui**	**1.54 216**	*e*P	**Pn**	**08 58 11.3**	**+0.2**
	baz=197					
HGSD			*e*S	**Sb**	**08 58 31.6**	**-0.1**
	baz=197					
NSY	**Sanyi**	**1.54 258**	*e*P	**Pb**	**08 58 12.9**	**+0.2**
	baz=256					
NSY			*e*S	**Sb**	**08 58 33.7**	**+1.9**
	baz=256					
JKRS	**Kuro-shima**	**1.54 109**	P	**Pn**	**08 58 10.9**	**-0.3**
JKRS			*e*S	**Sn**	**08 58 29.7**	**-0.8**
TWQ1	**Liyutan**	**1.54 256**	*e*P	**Pb**	**08 58 13.1**	**+0.2**
	baz=253					
TWQ1			*e*S	**Sb**	**08 58 33.1**	**+1.1**
	baz=253					
JIJ	**Ishigaki jima**	**1.62 103**	P	**Pn**	**08 58 12.2**	**-0.1**
JIJ			*e*S	**Sn**	**08 58 31.2**	**-1.4**
SSLB	**Suanglung**	**1.63 235**	*e*P	**Pb**	**08 58 14.2**	**-0.2**
	baz=238					
SSLB			*e*S	**Sb**	**08 58 36.3**	**+1.7**
	baz=238					
TYC	**Yuchr**	**1.64 240**	P	**Pb**	**08 58 15.3**	**+0.8**
	baz=237					
TYC			*e*S	**Sb**	**08 58 36.1**	**+1.3**
	baz=237					
WDJ	**Dajia District**	**1.66 257**	*e*P	**Pb**	**08 58 13.9**	**-0.9**
	baz=274					
WDJ			*e*S	**Sb**	**08 58 36.3**	**+1.0**
	baz=274					
YULB	**Yu-li**	**1.68 217**	P	**Pn**	**08 58 12.7**	**-0.5**
	baz=213					
YULB			*e*S	**Sn**	**08 58 34.0**	**-0.1**
	baz=213					
TWF1	**Yuli**	**1.72 217**	*e*P	**Pn**	**08 58 13.9**	**+0.2**
	baz=212					
TWF1			*e*S	**Sn**	**08 58 35.5**	**+0.5**
	baz=212					
WHYT	**Xinyi Township**	**1.76 234**	*e*P	**Pb**	**08 58 15.5**	**-1.1**
	baz=217					
WNT	**Mingjian**	**1.79 242**	*e*P	**Pb**	**08 58 16.9**	**-0.2**
	baz=260					
WNT			S	**Sb**	**08 58 43.1**	**+3.9**
	baz=260					
YUS	**Yu-Shan**	**1.82 227**	*e*S	**Sb**	**08 58 40.0**	**-0.5**
	baz=206					
FULB	**Fuli**	**1.84 214**	*e*P	**Pn**	**08 58 15.5**	**+0.1**
	baz=195					
FULB			*e*S	**Sn**	**08 58 38.9**	**+0.7**
	baz=195					
CHKT	**Chengkung**	**1.89 211**	*e*S	**Sn**	**08 58 38.9**	**-0.4**
	baz=192					
ALS	**Alishan**	**1.91 231**	*e*P	**Pb**	**08 58 18.2**	**-1.1**
	baz=210					
ALS			S	**Sb**	**08 58 43.2**	**+0.4**
	baz=210					
CHN5	**Tsauling**	**1.95 235**	*e*P	**Pb**	**08 58 19.8**	**0.0**
	baz=213					
CHN5			*e*S	**Sb**	**08 58 44.4**	**+0.6**
	baz=213					
ELDTW	**Lidau**	**2.00 220**	P	**Pn**	**08 58 17.9**	**+0.2**
	baz=201					
ELDTW			*e*S	**Sn**	**08 58 42.1**	**-0.1**
	baz=201					
WDLH	**Douliu**	**2.00 239**	*e*P	**Pb**	**08 58 20.0**	**-0.7**
	baz=217					
WDLH			*e*S	**Sb**	**08 58 47.7**	**+2.5**
	baz=217					
CHN4	**Tsaushan**	**2.16 231**	P	**Pb**	**08 58 22.2**	**-1.1**
	baz=210					
CHN4			S	**Sb**	**08 58 50.3**	**+0.6**
	baz=210					
TPUB	**Ta-pu**	**2.17 229**	*e*P	**Pb**	**08 58 22.2**	**-1.3**
	baz=208					
TPUB			*e*S	**Sb**	**08 58 50.3**	**+0.3**
	baz=208					
TWH	**Lutao**	**2.19 203**	*e*S	**Sn**	**08 58 46.1**	**-0.6**
	baz=198					
WTP	**Ta-pu**	**2.22 228**	*e*P	**Pb**	**08 58 23.4**	**-1.0**
	baz=207					
WTP			*e*S	**Sb**	**08 58 51.3**	**-0.1**
	baz=207					
TWGBT	**Beinan**	**2.27 213**	*e*S	**Sn**	**08 58 47.7**	**-0.9**
	baz=208					
SLGT	**Liugui**	**2.37 223**	*e*P	**Pn**	**08 58 24.4**	**+1.7**
	baz=204					
SLGT			S	**Sb**	**08 58 55.2**	**-0.7**
	baz=204					

DDA 17 09:20:16.5, 39°.10N × 29°.03E, h7km±4km, MD2.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.35**	**91**	*i* P	Pg	09 20 22.9	-0.6
GDZ				*i* S	Sg	09 20 28.9	+0.9
USAK	**Uak-Merkez**	**0.38**	**182**	*i* P	Pb	09 20 25.4	-0.2
USAK				*i* S	Sb	09 20 30.6	-1.2
MANT	**Manisa**	**0.71**	**212**	*i* P	Pb	09 20 31.0	-0.3
MANT				*i* S	Sg	09 20 40.2	+0.8
KHAL	**Karahalli**	**0.81**	**153**	*i* P	Pn	09 20 34.8	+0.3
KHAL				*i* S	Sb	09 20 43.9	-0.3

ISK 17 09:20:49.7, 39°.64N × 29°.44E, h5km, ML1.8/8, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.19**	**174**	PG	Pg	09 20 53.9	+0.5
BORA	**Eskisehir**	**0.82**	**72**	PG	Pg	09 21 05.6	+0.1
BORA				SG	Sb	09 21 17.6	-0.3
YLV	**Yalova**	**0.93**	**357**	PG	Pg	09 21 07.9	+0.3
SRCK	**Saricakaya, Es**	**1.00**	**66**	PG	Pb	09 21 09.6	+0.1
SRCK				SG	Sb	09 21 23.4	+0.4
ARMT	**Armutlu**	**1.03**	**335**	PG	Pg	09 21 09.3	-0.1
KCTX	**Karacabey (Bur**	**1.04**	**307**	PG	Pb	09 21 10.0	-0.2
KCTX				SG	Sn	09 21 25.4	-0.5
GULT	**Gulveren**	**1.15**	**46**	PN	Pn	09 21 12.3	-0.2
GULT				SN	Sn	09 21 28.7	+0.1
BALB	**Balikesir**	**1.20**	**271**	PN	Pn	09 21 13.7	+0.6
CIFT	**Cifteler, Eski**	**1.29**	**102**	PN	Pb	09 21 14.8	+0.4

TAP ***17*** *09:26:19.0, 24°.75N × 122°.32E, h7km, ML2.9, C*
JMA ***17*** *09:26:19.3±0.1, 24°.62N × 122°.38E, h15km±5km, M1.9*

ISC 17 09:26:18.7±1.0, 24°.70N±0°.03 × 122°.39E±0°.02, h14km±8km, n39, σ0°.54/74, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.28**	**239**	*i* P	**Pb**	**09 26 25.2**	**-0.3**
	baz=221						
EOS1				S	**Sg**	**09 26 30.1**	**+1.7**
	baz=221						
EGS		**0.44**	**290**	*e*P	**Pg**	**09 26 27.3**	**-0.2**
	baz=285						
EGS				*e*S	**Sg**	**09 26 33.4**	**0.0**
	baz=285						
TWB1	**Santiao Chiao**	**0.48**	**311**	*i* P	**Pg**	**09 26 28.0**	**-0.2**
	baz=311						
TWB1				*i* S	**Sg**	**09 26 33.9**	**-0.8**
	baz=311						
TWC	**Suao**	**0.50**	**260**	P	**Pg**	**09 26 27.9**	**-0.6**
	baz=260						
TWC				*e*S	**Sb**	**09 26 35.2**	**-1.2**
	baz=260						
NTC	**Toucheng**	**0.53**	**287**	*e*P	**Pg**	**09 26 28.7**	**-0.5**
	baz=283						
NTC				*e*S	**Sb**	**09 26 37.2**	**-0.2**
	baz=283						
JYNG	**Yonaguni jima**	**0.56**	**115**	P	**Pg**	**09 26 29.9**	**+0.1**
JYNG				*e*S	**Sg**	**09 26 37.0**	**-0.3**
YOJ	**Yonaguni jima**	**0.61**	**112**	P	**Pg**	**09 26 30.7**	**0.0**
YOJ				S	**Sg**	**09 26 38.7**	**-0.1**
NANB	**Nanao**	**0.64**	**246**	P	**Pg**	**09 26 30.6**	**-0.6**
	baz=238						
NANB				S	**Sb**	**09 26 40.1**	**-0.4**
	baz=238						
ENA	**Nanau**	**0.65**	**246**	P	**Pg**	**09 26 30.7**	**-0.6**
	baz=238						
ENA				*e*S	**Sb**	**09 26 40.4**	**-0.3**
	baz=238						
TWE	**Neicheng**	**0.66**	**272**	P	**Pg**	**09 26 31.0**	**-0.5**
	baz=256						
TWE				*e*S	**Sg**	**09 26 40.1**	**-0.1**
	baz=256						
SLBB	**Yuanshan**	**0.69**	**275**	*e*P	**Pg**	**09 26 31.1**	**-1.0**
	baz=270						
SLBB				S	**Sb**	**09 26 41.5**	**-0.5**
	baz=270						
ENTT	**Nioudou**	**0.75**	**266**	P	**Pg**	**09 26 32.8**	**-0.5**
	baz=260						
ENTT				*e*S	**Sb**	**09 26 44.2**	**+0.5**
	baz=260						
TWA	**Mucha**	**0.78**	**291**	*e*P	**Pb**	**09 26 34.4**	**+0.2**
	baz=275						
TWA				*e*S	**Sb**	**09 26 44.8**	**+0.1**
	baz=275						
NDT	**Datong Townshi**	**0.80**	**264**	P	**Pb**	**09 26 34.6**	**+0.1**
	baz=258						
NDT				S	**Sb**	**09 26 45.2**	**0.0**
	baz=258						
NWLT	**Wulai**	**0.81**	**276**	*e*P	**Pg**	**09 26 34.3**	**-0.1**
	baz=272						
NWLT				*e*S	**Sg**	**09 26 44.5**	**-0.6**
	baz=272						
YM01	**YM01**	**0.87**	**301**	*e*P	**Pb**	**09 26 36.0**	**+0.4**
	baz=299						
YM01				S	**Sb**	**09 26 47.4**	**+0.2**
	baz=299						
YM08	**YM08**	**0.88**	**304**	*e*P	**Pb**	**09 26 36.0**	**+0.3**
	baz=302						
YM08				S	**Sg**	**09 26 46.8**	**-0.4**
	baz=302						
YM11	**YM11**	**0.88**	**303**	*e*P	**Pb**	**09 26 36.2**	**+0.4**
	baz=301						
YM11				*e*S	**Sg**	**09 26 47.1**	**-0.1**
	baz=301						
YM10	**YM10**	**0.88**	**302**	*e*P	**Pb**	**09 26 36.3**	**+0.5**
	baz=299						
YM10				S	**Sb**	**09 26 47.4**	**-0.2**
	baz=299						
YM05	**YM05**	**0.88**	**302**	*e*P	**Pn**	**09 26 36.7**	**-0.1**
	baz=300						
YM05				S	**Sb**	**09 26 47.7**	**+0.2**
	baz=300						
NACB	**Ninganchiao**	**0.89**	**234**	*e*P	**Pg**	**09 26 35.2**	**-0.7**
	baz=239						
NACB				*e*S	**Sn**	**09 26 48.7**	**-0.9**
	baz=239						
YM04	**YM04**	**0.90**	**301**	*e*P	**Pb**	**09 26 36.6**	**+0.5**
	baz=299						
YM04				S	**Sb**	**09 26 48.1**	**+0.1**
	baz=299						
YM03	**YM03**	**0.91**	**302**	*e*S	**Sb**	**09 26 48.6**	**+0.3**
	baz=300						
TWY	**Chenhua**	**0.92**	**309**	*e*P	**Pb**	**09 26 36.9**	**+0.4**
	baz=308						
TWY				S	**Sb**	**09 26 48.6**	**0.0**
	baz=308						
YHNB	**Yeheng**	**0.92**	**269**	P	**Pg**	**09 26 36.0**	**-0.6**
	baz=264						
YHNB				*e*S	**Sb**	**09 26 48.3**	**-0.4**
	baz=264						
NSK	**Sanguang**	**0.94**	**269**	P	**Pg**	**09 26 36.5**	**-0.4**
	baz=265						
NSK				*e*S	**Sg**	**09 26 48.0**	**-1.1**
	baz=265						
TWD	**Chiawan**	**0.95**	**230**	*e*P	**Pb**	**09 26 37.2**	**+0.3**
	baz=233						
TWD				*e*S	**Sn**	**09 26 51.1**	**+0.2**
	baz=233						
NNSH	**Datong**	**0.95**	**254**	*e*P	**Pb**	**09 26 37.1**	**0.0**
	baz=239						
NNSH				*e*S	**Sb**	**09 26 49.7**	**0.0**
	baz=239						
ETLH	**Xiulin Townshi**	**0.96**	**240**	*e*P	**Pb**	**09 26 37.3**	**+0.1**
	baz=244						
ETLH				*e*S	**Sn**	**09 26 51.1**	**-0.3**
	baz=244						
NNS	**Nan Shan**	**0.96**	**255**	*e*S	**Sb**	**09 26 50.2**	**+0.4**
	baz=249						
LIOB	**Emei**	**1.25**	**268**	*e*P	**Pg**	**09 26 42.6**	**-0.2**
	baz=253						
LIOB				*e*S	**Sn**	**09 26 59.4**	**+0.8**
	baz=253						
NSTT	**Nanjuang**	**1.26**	**267**	P	**Pg**	**09 26 44.0**	**+0.9**
	baz=252						
NSTT				*e*S	**Sn**	**09 26 59.8**	**+1.0**
	baz=252						
IRIF	**Iriomote-Funau**	**1.27**	**106**	P	**Pn**	**09 26 42.5**	**+0.4**
IRIF				S	**Sb**	**09 26 58.8**	**0.0**
CHGB	**Renai**	**1.27**	**241**	*e*P	**Pn**	**09 26 42.6**	**+0.2**
	baz=235						
CHGB				*e*S	**Sn**	**09 27 00.4**	**+1.0**
	baz=235						
OWD	**Renai**	**1.33**	**237**	*e*P	**Pb**	**09 26 43.5**	**-0.1**
	baz=241						
OWD				*e*S	**Sg**	**09 27 02.2**	**+0.6**
	baz=241						
WHP	**Taichung City**	**1.38**	**253**	*e*P	**Pg**	**09 26 45.3**	**+0.1**
	baz=248						
WHP				S	**Sg**	**09 27 03.7**	**+0.5**
	baz=248						
VWDT	**VWDT**	**1.47**	**231**	*e*P	**Pg**	**09 26 46.8**	**-0.3**
	baz=233						
VWDT				*e*S	**Sg**	**09 27 06.8**	**+0.6**
	baz=233						
JKRS	**Kuro-shima**	**1.55**	**107**	S	**Sn**	**09 27 04.5**	**-1.3**
JJ	**Ishigaki jima**	**1.63**	**101**	P	**Pn**	**09 26 47.1**	**0.0**

NIED ***17*** *09:26:00, 37°.10N × 143°.30E, h5km, Mw3.7 Best double couple: M0 4.52000×10^14 NP1:φ=208.00000°, δ=72.00000°, λ=-90.00000°. NP2:φ=27.00000°, δ=18.00000°, λ=-91.00000°.*
IDC ***17*** *09:26:45.7±0.9, 36°.96N × 143°.54E, h0km, mb3.8/7, mb1 4.0/11, mb1mx3.7/66, mbtmp3.8/11, ML3.5/3, MS2.6/1, Ms1 2.6/1, ms1mx2.2/50, Error ellipse: s-maj=23.5km s-min=19.0km az=92.0*
JMA ***17*** *09:26:48.4±0.2, 37°.07N × 143°.32E, h50km, M3.5*
NEIC ***17*** *09:26:50.1±2.3, 36°.95N±0°.08 × 143°.4E±0°.1, h33km±7km, mb4.5/7, Error ellipse: s-maj=16.0km s-min=10.1km az=115.0*

ISC 17 09:26:50.6±0.8, 37°.09N±0°.05 × 143°.31E±0°.07, h35km, n42, σ1°45/52, mb4.0/10, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**1.90**	**310**	P	**Pn**	**09 27 19.5**	**-1.0**
JIKH				S	**Sn**	**09 27 42.6**	**-0.6**
JFK	**Kawauchi**	**1.96**	**279**	P	**Pn**	**09 27 20.3**	**-1.1**
ONAJ	**Iwakimizuishiy**	**2.01**	**271**	P	**Pn**	**09 27 20.8**	**-1.2**
JMST	**Minamisoumatoc**	**2.03**	**289**	P	**Pn**	**09 27 21.3**	**-0.9**
JMST				S	**Sn**	**09 27 45.5**	**-0.8**
JIO	**Ouri**	**2.06**	**312**	P	**Pn**	**09 27 22.0**	**-0.7**
JIO				S	**Sn**	**09 27 46.4**	**-0.8**
JMM	**Marumori**	**2.14**	**292**	P	**Pn**	**09 27 23.1**	**-0.7**
JFT	**Otama**	**2.41**	**281**	P	**Pn**	**09 27 27.4**	**-0.1**
JFT				*e*S	**Sn**	**09 27 55.9**	**+0.2**
JMK	**Ichinoseki**	**2.48**	**319**	P	**Pn**	**09 27 27.8**	**-0.7**
JOM	**Ohasama**	**2.85**	**327**	P	**Pn**	**09 27 33.0**	**-0.6**
JYK	**Kaneyama**	**2.96**	**309**	P	**Pn**	**09 27 35.2**	**+0.2**
BSO1	**Boso 1**	**3.08**	**219**	*e*S	**Sn**	**09 28 09.8**	**-1.9**
JAG	**Ashikaga**	**3.17**	**259**	P	**Pn**	**09 27 37.4**	**-0.5**
JANG	**Nango**	**3.56**	**337**	P	**Pn**	**09 27 42.2**	**-1.2**
JANG				*e*S	**Sn**	**09 28 22.3**	**-1.9**
JRY	**Ryogami san**	**3.71**	**254**	P	**Pn**	**09 27 44.5**	**-0.9**
JRY				*e*S	**Sn**	**09 28 25.1**	**-2.7**
JOD2	**Odawara 2**	**3.87**	**243**	P	**Pn**	**09 27 45.6**	**-2.0**
JOD2				*e*S	**Sn**	**09 28 29.0**	**-2.9**
MJAR	**Matsushiro Arr**	**4.13**	**264**	Pn	**Pn**	**09 27 51.6**	**+0.4**
	0.6nm,0.3s,baz=85,slow=16,SNR=32						
MJAR				Sn	**Sn**	**09 28 38.5**	**+0.3**
	0.4nm,0.3s,baz=69,slow=22,SNR=5.2						
MAJO	**Matsushiro**	**4.13**	**264**		**Pn**	**09 27 51.9**	**+0.7**
MAT	**Matsushiro**	**4.13**	**264**	P	**Pn**	**09 27 52.1**	**+0.9**
MAT				S	**Sn**	**09 28 40.8**	**+2.6**
MJB9	**Matsu-Tunnel**	**4.13**	**264**		**Pn**	**09 27 51.9**	**+0.7**
JHJ2	**Mitsune**	**4.90**	**217**	Pn	**Pn**	**09 27 59.6**	**-2.1**
JHJ2				Sn	**Sn**	**09 28 54.6**	**-2.5**
ERM	**Erimo**	**4.92**	**359**	Pn	**Pn**	**09 28 00.4**	**-1.5**
ERM				Sn	**Sn**	**09 28 56.3**	**-1.2**
INU	**Inuyama**	**5.38**	**253**	Pn	**Pn**	**09 28 06.7**	**-1.6**
JKA	**Kamikawa-asahi**	**7.04**	**356**		**Pn**	**09 28 30.4**	**-0.7**
JKA					**Sn**	**09 29 48.1**	**-1.7**
ASAJ	**Asahikawa**	**7.04**	**356**	Pn	**Pn**	**09 28 30.4**	**-0.7**
	1.9nm,0.3s,baz=236,slow=9.9,SNR=10						
ASAJ				Sn	**Sn**	**09 29 48.1**	**-1.7**
	0.3nm,0.3s,baz=270,slow=20,SNR=2.7						
USRK	**Ussuriysk Ar.**	**11.14**	**313**	Pn	**Pn**	**09 29 28.9**	**+1.6**
	baz=112,slow=12,SNR=3.9						
KSRS	**Korea Array**	**12.26**	**276**	Pn	**Pn**	**09 29 45.7**	**+3.0**
	0.1nm,0.3s,baz=88,slow=14,SNR=6.9						
KSRS				LR	LR	09 33 57.4	
	comp=Z,27nm,19.7s,baz=65,slow=35						
KLR	**Kul'dur**	**14.75**	**329**	Pn	**Pn**	**09 30 14.2**	**-2.3**
	0.1nm,0.3s,baz=124,slow=17,SNR=4.0						
SSLB	**Suanglung**	**23.32**	**242**	P	**P**	**09 31 54.1**	**-1.6**
SSLB				IAmb	IAmb	09 31 56.6	
	comp=Z,29nm,0.4s						
TPUB	**Ta-pu**	**23.86**	**241**	P	**P**	**09 32 00.4**	**-0.4**
TPUB				IAmb	IAmb	09 32 08.5	
	comp=Z,29nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**26.90**	**124**	T	T	10 00 38.7	
	baz=315						
H11N1	**WAKE ISLAND Hy**	**26.91**	**124**	T	T	10 00 30.7	
	baz=315						
H11N3	**WAKE ISLAND Hy**	**26.92**	**124**	T	T	10 00 38.3	
	baz=315						
SONM	**Songino Array**	**29.01**	**303**	P	**P**	**09 32 50.4**	**+3.2**
	comp=Z,1.3nm,0.8s,baz=90,slow=7.8,SNR=8.3						
KURBB	**Kurchatov Arra**	**47.16**	**308**	P	**P**	**09 35 20.3**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=82,slow=8.7,SNR=4.3						
ILAR	**Eielson Array**	**48.63**	**32**	P	**P**	**09 35 31.5**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=272,slow=7.1,SNR=5.7						
INK	**Inuvik**	**53.64**	**27**	P	**P**	**09 36 08.5**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=293,slow=7.7,SNR=3.4						
INK	**Inuvik**	**53.64**	**27**	P	**P**	**09 36 08.7**	**+0.6**
INK				IAmb	IAmb	09 36 10.5	
	comp=Z,3.5nm,1.4s						
WR0	**Warramunga Arr**	**57.35**	**190**	P	**P**	**09 36 34.9**	**-0.4**
WR0				IAmb	IAmb	09 36 48.7	
	comp=Z,2.7nm,1.1s						
WRA	**Warramunga Arr**	**57.36**	**190**	P	**P**	**09 36 34.8**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=7.7,slow=7.1,SNR=17						
AS31	**Alice Springs**	**61.08**	**190**	P	**P**	**09 37 00.5**	**-0.5**
ASAR	**Alice Springs**	**61.08**	**190**	P	**P**	**09 37 00.8**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=5.7,slow=7.3,SNR=26						
TXAR	**Lajitas Array**	**88.88**	**53**	P	**P**	**09 39 41.9**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=316,slow=3.8,SNR=2.7						

TAP ***17*** *09:31:23.9, 24°.75N × 122°.36E, h7km, ML3.2, D*
JMA ***17*** *09:31:24.6±0.1, 24°.65N × 122°.38E, h25km±4km, M2.3*

ISC 17 09:31:23.9±1.0, 24°.73N±0°.03 × 122°.41E±0°.02, h16km±8km, n65, σ0°.68/118, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.31**	**235**	P	**Pg**	**09 31 30.6**	**+0.1**
	baz=216						
EOS1				S	**Sb**	**09 31 35.8**	**-0.2**
	baz=216						
EGS		**0.45**	**285**	*i* P	**Pg**	**09 31 32.8**	**-0.2**
	baz=284						
EGS				S	**Sg**	**09 31 39.2**	**+0.1**
	baz=284						
TWB1	**Santiao Chiao**	**0.47**	**306**	P	**Pg**	**09 31 33.4**	**0.0**
	baz=308						
TWB1				S	**Sg**	**09 31 39.4**	**-0.5**
	baz=308						
TWC	**Suao**	**0.53**	**257**	*i* P	**Pg**	**09 31 33.4**	**-0.9**
	baz=264						
TWC				S	**Sg**	**09 31 41.3**	**-0.1**
	baz=264						
NTC	**Toucheng**	**0.54**	**284**	P	**Pg**	**09 31 34.6**	**-0.1**
	baz=282						
NTC				*e*S	**Sb**	**09 31 42.9**	**+0.3**
	baz=282						
JYNG	**Yonagunijimaku**	**0.56**	**119**	P	**Pb**	**09 31 35.5**	**+0.2**
JYNG				S	**Sb**	**09 31 43.2**	**+0.2**
ILA	**Ilan**	**0.60**	**274**	*e*P	**Pb**	**09 31 36.3**	**+0.2**
	baz=260						
ILA				*e*S	**Sb**	**09 31 44.9**	**+0.6**
	baz=260						
YOJ	**Yonaguni jima**	**0.61**	**116**	P	**Pb**	**09 31 36.2**	**+0.1**
YOJ				*e*S	**Sb**	**09 31 44.3**	**-0.1**
YOJ	**Yonaguni jima**	**0.61**	**116**	P	**Pb**	**09 31 36.5**	**+0.4**
NWF	**Wu-fen Shan**	**0.67**	**301**	*e*S	**Sn**	**09 31 47.9**	**-1.1**
	baz=302						
WFSB	**Wu-fen Shan**	**0.67**	**301**	P	**Pn**	**09 31 38.0**	**-0.7**
	baz=302						
WFSB				S	**Sn**	**09 31 47.6**	**-1.2**
	baz=302						
NANB	**Nanao**	**0.67**	**244**	P	**Pg**	**09 31 36.2**	**-0.9**
	baz=251						
NANB				S	**Sg**	**09 31 46.0**	**-0.1**
	baz=251						
TWE	**Neicheng**	**0.68**	**270**	*i* P	**Pg**	**09 31 36.5**	**-0.7**
	baz=257						
TWE				*i* S	**Sb**	**09 31 46.7**	**+0.3**
	baz=257						
ENA	**Nanau**	**0.68**	**244**	P	**Pg**	**09 31 36.3**	**-0.9**
	baz=251						
ENA				S	**Sg**	**09 31 45.6**	**-0.6**
	baz=251						
SLBB	**Yuanshan**	**0.71**	**272**	P	**Pg**	**09 31 36.3**	**-1.4**
	baz=270						
SLBB				S	**Sb**	**09 31 47.9**	**+0.5**
	baz=270						
ENTT	**Nioudou**	**0.77**	**264**	P	**Pg**	**09 31 38.4**	**-0.6**
	baz=261						
ENTT				*e*S	**Sg**	**09 31 49.0**	**-0.2**
	baz=261						
TWA	**Mucha**	**0.79**	**289**	*e*P	**Pg**	**09 31 38.9**	**-0.5**
	baz=275						
TWA				S	**Sb**	**09 31 51.0**	**+1.1**
	baz=275						
NDT	**Datong Townshi**	**0.83**	**262**	*i* P	**Pb**	**09 31 39.5**	**-0.4**
	baz=259						
NDT				S	**Sg**	**09 31 50.8**	**-0.2**

YM11	**YM11** baz=300	**0.88 300**	*e*S		**Sg**	09 31 53.2 +0.6
YM05	**YM05** baz=300	**0.88 300**	*e*P		**Pn**	09 31 41.7 -0.1
YM05			S		**Sn**	09 31 53.5 -0.7
YM10	**YM10** baz=299	**0.88 299**	P		**Pn**	09 31 41.6 -0.1
YM10			S		**Sg**	09 31 53.1 +0.4
YM04	**YM04** baz=298	**0.90 298**	P		**Pg**	09 31 41.4 0.0
YM04			S		**Sg**	09 31 53.9 +0.6
YM03	**YM03** baz=300	**0.91 300**	*e*P		**Pn**	09 31 42.0 -0.1
YM03			*e*S		**Sn**	09 31 54.4 -0.5
TWY	**Chenhua** baz=308	**0.92 307**	*e*P		**Pg**	09 31 41.7 0.0
TWY			S		**Sn**	09 31 54.9 -0.1
NACB	**Ninganchiao** baz=229	**0.93 234**	*i* P		**Pb**	09 31 40.7 -0.8
ANP	**Anpu** baz=299	**0.93 300**	*e*P		**Pn**	09 31 42.5 +0.1
YHNB	**Yeheng** baz=264	**0.94 267**	*i* P		**Pb**	09 31 41.5 -0.4
YHNB			*e*S		**Sb**	09 31 53.2 -1.1
PCYT	**Pengchaiyu** baz=344	**0.95 341**	*e*P		**Pn**	09 31 43.7 +1.1
NSK	**Sanguang** baz=265	**0.96 267**	*e*P		**Pb**	09 31 41.6 -0.5
NSK			S		**Sb**	09 31 54.0 -0.6
TWS1	**Kuangyinshan** baz=291	**0.98 293**	P		**Pn**	09 31 43.0 +0.1
TWS1			*i* S		**Sn**	09 31 56.5 0.0
NNSH	**Datong** baz=250	**0.98 253**	P		**Pb**	09 31 42.1 -0.5
NNSH			*i* S		**Sb**	09 31 55.1 -0.3
TWD	**Chiawan** baz=235	**0.98 229**	*e*P		**Pg**	09 31 43.0 +0.1
TWD			*e*S		**Sn**	09 31 57.5 +0.9
NNS	**Nan Shan** baz=250	**0.99 253**	P		**Pb**	09 31 42.2 -0.5
NNS			S		**Sb**	09 31 55.1 -0.5
ETLH	**Xiulin Townshi** baz=245	**0.99 239**	P		**Pb**	09 31 42.2 -0.6
ETLH			*e*S		**Sg**	09 31 56.6 +0.4
WLTB	**Daxi** baz=275	**1.06 277**	*e*P		**Pg**	09 31 44.8 +0.3
WLTB			*e*S		**Sg**	09 31 58.5 +0.2
WHF	**Hehuan Shan** baz=237	**1.20 241**	P		**Pn**	09 31 45.9 -0.4
WHF			*e*S		**Sb**	09 32 01.8 0.0
TWT	**Tachien** baz=244	**1.22 247**	P		**Pg**	09 31 47.3 -0.2
TWT			*e*S		**Sg**	09 32 05.6 +2.1
TDCB	**Techi** baz=245	**1.23 248**	*e*P		**Pn**	09 31 46.8 +0.2
TDCB			*e*S		**Sb**	09 32 03.1 +0.4
IRIF	**Iriomote-Funau**	**1.26 108**	P		**Pg**	09 31 48.0 -0.3
IRIF			S		**Sg**	09 32 04.7 -0.1
LIOB	**Emei** baz=255	**1.27 267**	*e*P		**Pb**	09 31 47.7 +0.2
LIOB			*e*S		**Sg**	09 32 05.9 +0.8
ESL	**Shilin** baz=200	**1.27 225**	*e*P		**Pg**	09 31 48.7 +0.2
ESL			S		**Sg**	09 32 06.4 +1.3
NSTT	**Nanjuang** baz=254	**1.29 266**	P		**Pg**	09 31 49.6 +0.8
NSTT			S		**Sb**	09 32 04.2 +0.1
SBCB	**Hsinchu** baz=271	**1.30 273**	*e*S		**Sg**	09 32 09.3 +3.5
CHGB	**Renai** baz=236	**1.31 240**	P		**Pb**	09 31 48.4 +0.1
CHGB			*e*S		**Sb**	09 32 05.0 +0.2
OWD	**Renai** baz=225	**1.36 236**	P		**Pb**	09 31 49.4 +0.3
WHP	**Taichung City** baz=248	**1.41 252**	*e*P		**Pg**	09 31 50.9 -0.1
WHP			*e*S		**Sg**	09 32 09.0 -0.4
HATJ	**Hateruma jima**	**1.44 117**	*e*S		**Sn**	09 32 07.0 -0.8
NMLH	**Miaoli** baz=259	**1.49 263**	*e*P		**Pg**	09 31 52.3 -0.2
NMLH			*e*S		**Sg**	09 32 12.8 +0.9
VWDT	**VWDT** baz=234	**1.51 230**	*e*P		**Pb**	09 31 52.1 +0.6
VWDT			*e*S		**Sg**	09 32 12.6 -0.1
DPDB	**Guoxing** baz=239	**1.52 243**	*e*P		**Pg**	09 31 53.0 -0.2
HGSD	**Ruisui** baz=196	**1.53 216**	*e*P		**Pn**	09 31 51.3 +0.8
HGSD			*e*S		**Sb**	09 32 12.1 +1.2
NSY	**Sanyi** baz=254	**1.53 259**	*e*P		**Pg**	09 31 53.4 -0.1
NSY			*e*S		**Sg**	09 32 14.2 +0.7
JKRS	**Kuro-shima**	**1.54 108**	P		**Pn**	09 31 50.5 -0.1
JKRS			*e*S		**Sn**	09 32 09.8 -0.4
TWQ1	**Liyutan** baz=252	**1.54 256**	*e*P		**Pg**	09 31 53.9 +0.3
SMLT	**Sun Moon Lake** baz=235	**1.61 239**	*e*P		**Pg**	09 31 54.7 -0.3
SMLT			*e*S		**Sg**	09 32 15.7 -0.3
JIJ	**Ishigaki jima** baz=235	**1.62 103**	P		**Pn**	09 31 51.2 -0.6
JIJ			S		**Sn**	09 32 12.4 +0.1
SSLB	**Suanglung** baz=239	**1.63 235**	*e*P		**Pb**	09 31 53.4 -0.2
SSLB			*e*S		**Sb**	09 32 15.0 +1.2
TYC	**Yuchr** baz=236	**1.64 240**	*e*P		**Pg**	09 31 55.1 -0.3
TYC			*e*S		**Sb**	09 32 15.7 +1.6
YULB	**Yu-li** baz=212	**1.68 218**	*e*P		**Pn**	09 31 52.7 +0.1
YULB			*e*S		**Sb**	09 32 15.0 -0.2
YULB	**Yu-li** comp=Z,11nm,0.6s	**1.68 218**	P		**Pn**	09 31 52.7 +0.1
YULB			IAmb		IAmb	09 32 04.8
CHN5	**Tsauling** baz=211	**1.94 235**	*e*P		**Pb**	09 31 59.0 0.0
CHN5			*e*S		**Sg**	09 32 25.5 -1.0

NIED ***17*** *09:37:00, 36.70N×141.30E, h8km, Mw4.2 Best double couple: M0=1.97000×10^15 NP1:φs=191.00000°, δ57.00000°, λ=-76.00000°. NP2:φs=345.00000°, δ35.00000°, λ=-111.00000°.*

IDC ***17*** *09:37:31.6±0.6, 36.71N×141.18E, h0km, mb4.1/25, mb1 4.3/27, mb1mx4.2/48, mbtmp4.1/27, ML3.5/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/58, Error ellipse: s-maj=15.1km s-min=13.2km az=134.0*

BJI ***17*** *09:37:33.7±0.0, 36.82N×141.48E, h27km, mB4.9/29, mb4.6/39, Ms4.1/15, Ms7 4.0/11*

JMA ***17*** *09:37:34.2±0.1, 36.72N×141.23E, h37km±1km, M4.4 JMA Felt III J1.*

MOS ***17*** *09:37:35.4±1.1, 36.70N×141.19E, h37km, mb4.7/25, Error ellipse: s-maj=9.5km s-min=6.4km az=107.3*

NEIC ***17*** *09:37:36.8±1.6, 36.70N±0.04×141.25E±0.06, h35km±1km, mb4.7/52, Error ellipse: s-maj=7.6km s-min=5.8km az=53.0*

ISC 17 09:37:35.3±0.8, 36.71N±0.03×141.32E±0.04, h27km±5km, n167, σ1=93/186, mb4.6/67, MS3.5/6, 9C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.57**	**314**	P		**Pb**	**09 37 44.7**	**-2.2**
ONAJ				S		**Sb**	**09 37 52.1**	**-2.6**
JHO	**Hitachi**	**0.61**	**261**	P		**Pb**	**09 37 45.1**	**-2.3**
JHO				*e*S		**Sb**	**09 37 53.1**	**-2.5**
JHYU	**Hitachinakayam**	**0.69**	**238**	P		**Pb**	**09 37 46.7**	**-2.1**
JHYU				S		**Sb**	**09 37 55.8**	**-2.2**
JFFD	**Fukushimafurud**	**0.72**	**303**	P		**Pb**	**09 37 46.7**	**-2.6**
JFFD				S		**Sb**	**09 37 55.4**	**-3.4**
JFK	**Kawauchi**	**0.75**	**332**	P		**Pb**	**09 37 47.4**	**-2.4**
JFK				S		**Sb**	**09 37 56.7**	**-3.0**
JYT	**Yasato**	**1.02**	**243**	P		**Pn**	**09 37 51.4**	**-2.5**
JYT				*e*S		**Sn**	**09 38 04.2**	**-3.2**
JFT	**Otama**	**1.13**	**316**	P		**Pn**	**09 37 53.8**	**-1.6**
JMM	**Marumori**	**1.23**	**340**	P		**Pn**	**09 37 54.8**	**-2.0**
JMM				*e*S		**Sn**	**09 38 10.1**	**-2.5**
JFY	**Yanaizu**	**1.47**	**299**	P		**Pn**	**09 37 58.9**	**-1.2**
JFY				*e*S		**Sn**	**09 38 17.3**	**-1.1**
JAG	**Ashikaga**	**1.53**	**260**	P		**Pn**	**09 37 58.8**	**-2.1**
JAG				*e*S		**Sn**	**09 38 17.5**	**-2.3**
JKT	**Katashina**	**1.66**	**273**	P		**Pn**	**09 38 01.6**	**-1.2**
MJAR	**Matsushiro Arr** 5.4nm,0.3s,baz=89,slow=14,SNR=122	**2.50**	**267**	Pn		**Pn**	**09 38 13.5**	**-0.8**
MJAR				Sn		**Sn**	**09 38 43.3**	**-0.7**
MAJO	**Matsushiro** 8.3nm,0.3s,baz=93,slow=13,SNR=5.8	**2.51**	**267**	*d* iP		**Pn**	**09 38 14.3**	**-0.1**
MAJO	**Matsushiro**	**2.51**	**267**			**Pn**	**09 38 14.3**	**-0.1**
MAT	**Matsushiro**	**2.51**	**267**	P		**Pn**	**09 38 14.2**	**-0.2**
MAT				S		**Sn**	**09 38 44.5**	**+0.4**
MJB9	**Matsu-Tunnel**	**2.51**	**267**			**Pn**	**09 38 14.0**	**-0.4**
INU	**Inuyama**	**3.74**	**250**			**Pn**	**09 38 31.8**	**+0.5**
INU				Sn		**Sn**	**09 39 15.3**	**+0.9**
JHJ2	**Mitsune**	**3.79**	**199**	Pn		**Pn**	**09 38 34.1**	**+2.1**
JHJ2				Sn		**Sn**	**09 39 15.1**	**-0.6**
ERM	**Erimo**	**5.49**	**14**	Pn		**Pn**	**09 38 54.3**	**-1.0**
ERM				Sn		**Sn**	**09 39 54.6**	**-3.0**
NMR	**Nemuro--Hokkai**	**7.46**	**26**	*d* iP		Pn	09 39 18.8	-3.6
ASAJ	**Asahikawa** 1.2nm,0.3s,baz=211,slow=10,SNR=7.8	**7.47**	**7**	Pn		**Pn**	**09 39 22.3**	**-0.2**
ASAJ				Sn		**Sn**	**09 40 46.5**	**+0.3**
JKA	**Kamikawa-asahi** 0.9nm,0.3s,baz=217,slow=20,SNR=1.8	**7.47**	**7**			**Pn**	**09 39 22.3**	**-0.2**
JKA						**Sn**	**09 40 46.5**	**+0.3**
GLVR	**Golovnino**	**7.72**	**23**	P		**Pn**	**09 39 23.7**	**-2.3**
GLVR				*e*S		**Sn**	**09 40 47.5**	**-5.0**
GRPR	**Tuman**	**8.03**	**24**	P		**Pn**	**09 39 27.9**	**-2.3**
GRPR				*e*S		**Sn**	**09 40 54.7**	**-5.4**
YUK	**Yuzh-Kuril'sk**	**8.10**	**24**	P		**Pn**	**09 39 29.8**	**-1.3**
YUK				*e*S		**Sn**	**09 40 56.1**	**-5.6**
SHO	**Shikotan**	**8.30**	**29**	P		**Pn**	**09 39 31.6**	**-2.3**
SHO	comp=Z,22nm,0.7s			pmax	pmax			
JNU	**Nakatsue**	**9.29**	**250**	Pn		**Pn**	**09 39 46.3**	**-1.3**
JNU				Sn		**Sn**	**09 41 26.7**	**-4.5**
JCJ	**Chichijima** comp=Z,8.0nm,0.3s,baz=287,slow=19,SNR=3.5	**9.61**	**175**	Pn		**Pn**	**09 39 48.8**	**-3.1**
JCJ	comp=Z,6.3nm,0.3s,baz=287,slow=19,SNR=2.8			Sn		**Sn**	**09 41 32.5**	**-6.5**
USRK	**Ussuriysk Ar.** baz=137,slow=13,SNR=6.5	**10.32**	**319**	Pn		**Pn**	**09 40 03.8**	**+2.3**
KSRS	**Korea Array** comp=Z,0.1nm,0.3s,baz=52,slow=48,SNR=2.6	**10.73**	**278**	Pn		**Pn**	**09 40 09.9**	**+2.8**
KSRS				LR		LR	09 43 17.5	
MDJ	**Mudanjiang** comp=Z,64nm,20.6s,baz=98,slow=32	**11.89**	**315**	P		**Pn**	**09 40 24.3**	**+1.2**
MDJ				S		**Sn**	**09 42 37.8**	**+2.9**
MDJ				sS			09 42 43.8	
MDJ				SS			09 42 50.8	
MDJ				ScP		**ScP**	**09 49 41.5**	**+1.4**
MDJ				PcS		**PcS**	**09 49 45.3**	**+2.2**
MDJ				ScS		**ScS**	**09 53 19.8**	**+4.0**
MDJ	comp=Z,6.0nm,1.4s			pmax	pmax			
MDJ	comp=Z,89nm,5.4s			pmax	pmax			
MDJ	comp=Z,250nm,9.1s			LR	LR			
MDJ	comp=Z,310nm,6.4s			LR	LR			
MDJ	comp=Z,380nm,11.8s			LR	LR			
CN2	**Changchun**	**14.03**	**305**	*e*P		**Pn**	**09 40 53.4**	**+1.2**
CN2	comp=Z,10.0nm,0.5s			pmax	pmax			
CN2	comp=Z,200nm,12.0s			LR	LR			
CN2	comp=Z,300nm,12.0s			LR	LR			
CN2	comp=Z,300nm,12.0s			LR	LR			
KLR	**Kul'dur**	**14.33**	**334**	*i* P		**Pn**	**09 40 57.9**	**+1.6**
GRNR	**Gornyy**	**14.49**	**347**	*e*P		**Pn**	**09 40 58.3**	**-0.3**
GRNR	comp=Z,1.0nm,1.0s			pmax	pmax			
GRNR	comp=Z,70nm,16.0s			MLR	MLR			
SKR	**Severo-Kuril's**	**17.55**	**33**	*ce*P		P	09 41 47.1	+8.3
NJ2	**Nanjing**	**19.10**	**263**	*e*P		**P**	**09 41 55.1**	**-0.9**
NJ2	comp=Z,9.0nm,0.5s			pmax	pmax			
ZEA	**Zeya**	**19.64**	**335**	*e*P		**P**	**09 42 02.2**	**+0.4**
ZEA	comp=Z,18nm,0.8s			pmax	pmax			
ZEA	comp=Z,400nm,18.0s			MLR	MLR			
PETK	**Petropavlovsk-** comp=Z,1.3nm,0.8s,baz=207,slow=6.1,SNR=3.2	**20.01**	**30**	P		**P**	**09 42 06.9**	**+1.1**
PETK	comp=Z,45nm,18.1s,baz=232,slow=40			LR		LR	09 51 05.0	
PET	**Petropavlovsk** comp=Z,73nm,2.5s	**20.34**	**31**	*e*P		Pn	09 42 15.6	+4.2
PET				pmax	pmax			
WHN	**Wuhan**	**23.24**	**263**		P	**P**	**09 42 44.4**	**+3.9**
HHC	**Hu-ho-hao-te**	**23.50**	**289**	*e*P		**P**	**09 42 41.1**	**-2.1**
HHC	comp=Z,3.0nm,0.7s			pmax	pmax			
HHC	comp=Z,31nm,5.9s			pmax	pmax			
MA2	**Magadan** comp=Z,22nm,1.1s	**23.69**	**12**	P		**P**	**09 42 46.1**	**+1.5**
MA2				pmax	pmax			
MA2	**Magadan** comp=Z,5.2nm,0.8s,baz=148,slow=6.6,SNR=3.9	**23.69**	**12**	P		**P**	**09 42 44.9**	**+0.3**
MA2	**Magadan** comp=Z,22nm,1.1s	**23.69**	**12**	P		**P**	**09 42 46.1**	**+1.5**
MA2				IAmb		IAmb	09 42 46.9	
YAK	**Yakutsk** comp=Z,13nm,0.8s	**26.37**	**348**	*e*P		**P**	**09 43 08.6**	**-0.4**
YAK				pmax	pmax			
YAK	comp=N,7.0nm,1.0s			pmax	pmax			
YAK	**Yakutsk** comp=N,4.0nm,0.4s,baz=176,slow=1.1,SNR=5.6	**26.37**	**348**	P		**P**	**09 43 08.2**	**-0.8**
YAK	**Yakutsk** comp=Z,18nm,0.7s	**26.37**	**348**	P		**P**	**09 43 08.4**	**-0.6**
YAK				IAmb		IAmb	09 43 17.2	
SEY	**Seymchan**	**27.13**	**11**	*i* P		**P**	**09 43 17.8**	**+2.0**
SEY	**Seymchan** comp=Z,3.0nm,1.0s,baz=202,slow=13,SNR=3.3	**27.13**	**11**	P		**P**	**09 43 17.3**	**+1.5**
ENH	**Enshi**	**27.23**	**266**	P		**P**	**09 43 17.9**	**+0.7**
ENH	comp=Z,19nm,0.7s			IAmb		IAmb	09 43 24.9	
SONM	**Songino Array** comp=Z,1.2nm,0.7s,baz=104,slow=8.8,SNR=8.9	**27.91**	**305**	P		**P**	**09 43 23.2**	**+0.1**
SONM	**Songino Array** comp=Z,2.9nm,0.7s	**27.91**	**305**	IAmb		IAmb	09 43 30.2	
H11N2	**WAKE ISLAND Hy** baz=313,slow=75,SNR=1198	**28.05**	**120**	T		T	10 12 54.6	
H11N1	**WAKE ISLAND Hy** baz=313,slow=75,SNR=1233	**28.06**	**120**	T		T	10 12 51.5	
H11N3	**WAKE ISLAND Hy** baz=313,slow=75,SNR=964	**28.07**	**120**	T		T	10 12 48.2	
H11S1	**WAKE ISLAND Hy** baz=315,slow=76,SNR=719	**28.75**	**122**	T		T	10 13 43.0	
H11S3	**WAKE ISLAND Hy** baz=315,slow=76,SNR=585	**28.75**	**122**	T		T	10 13 44.1	
H11S2	**WAKE ISLAND Hy** baz=315,slow=76,SNR=310	**28.76**	**122**	T		T	10 13 45.3	
LZH	**Lanzhou**	**30.05**	**280**	*e*P		**P**	**09 43 40.3**	**-2.0**
LZH				*e*PP		PP	09 44 38.3	-12
LZH	comp=Z,23nm,1.3s			pmax	pmax			
LZH	comp=Z,82nm,5.0s			pmax	pmax			
LZH	comp=Z,370nm,13.0s			LR	LR			
LZH	comp=Z,370nm,13.2s			LR	LR			
LZH	comp=Z,500nm,16.5s			LR	LR			
GTA	**Gaotai**	**32.59**	**288**	*e*P		P	09 44 09.9	+5.3
GTA				pP		pP	09 44 14.6	+2.1
GTA				sP		sP	09 44 17.0	+1.3
GTA	comp=Z,3.0nm,0.6s			pmax	pmax			
GTA	comp=Z,58nm,7.6s			pmax	pmax			
GTA	comp=Z,71nm,20.3s			LR	LR			
GTA	comp=Z,88nm,19.4s			LR	LR			
GTA	comp=Z,100nm,20.0s			LR	LR			
BILL	**Bilibino**	**34.36**	**16**	*ce*P		**P**	**09 44 20.6**	**+1.0**
BILL				*e*			09 45 37.3	
BILL	comp=Z,3.0nm,1.1s			pmax	pmax			
BILL	comp=Z,72nm,16.0s			MLR	MLR			
KMI	**Kunming**	**34.84**	**262**	P		**P**	**09 44 26.8**	**+2.4**
KMI				pP		pP	09 44 30.6	-1.7
KMI	comp=Z,10.0nm,1.0s			pmax	pmax			
TIXI	**Tiksi**	**35.61**	**353**	*i* P		**P**	**09 44 30.1**	**-0.1**
TIXI	comp=Z,3.0nm,1.0s			pmax	pmax			
WMQ	**Urumqi**	**40.92**	**297**	*e*P		**P**	**09 45 17.3**	**+1.9**
WMQ				pP		pP	09 45 23.1	-0.3
WMQ				sP		sP	09 45 26.9	+0.3
WMQ	comp=Z,8.0nm,0.7s			pmax	pmax			
WMQ	comp=Z,100nm,4.7s			pmax	pmax			
WMQ	comp=Z,990nm,29.1s			LR	LR			
WMQ	**Urumqi** comp=Z,12nm,0.6s	**40.92**	**297**	P		**P**	**09 45 15.2**	**-0.2**
WMQ				pmax	pmax			
WMQ	**Urumqi** comp=Z,12nm,0.6s	**40.92**	**297**	P		**P**	**09 45 15.2**	**-0.2**
WMQ				IAmb		IAmb	09 45 23.7	
CMAR	**Chiang Mai Arr** comp=Z,0.6nm,0.3s,baz=90,slow=19,SNR=2.4	**41.34**	**256**	P		**P**	**09 45 19.1**	**+0.1**
ZAA0	**Zalesovo Array**	**42.08**	**313**	P		**P**	**09 45 22.9**	**-1.7**
RDOG	**Red Dog Mine**	**43.83**	**27**	P		**P**	**09 45 39.6**	**+0.9**
RDOG	comp=Z,18nm,1.5s			IAmb		IAmb	09 45 41.7	
BKB	**Balikpapan**	**44.06**	**216**	P		**P**	**09 45 39.9**	**-1.3**
MK31	**Makanchi Array**	**44.23**	**302**	P		**P**	**09 45 42.1**	**-0.1**
MK31	comp=Z,3.0nm,0.7s			pmax	pmax			
MK31	**Makanchi Array**	**44.23**	**302**	P		**P**	**09 45 42.1**	**-0.1**
MKAR	**Makanchi Array**	**44.23**	**302**	*ce*P		**P**	**09 45 42.0**	**-0.2**
MKAR	comp=Z,1.0nm,0.6s			pmax	pmax			
MKAR	**Makanchi Array** comp=Z,1.2nm,0.6s,baz=88,slow=10.0,SNR=16	**44.23**	**302**	P		**P**	**09 45 41.7**	**-0.5**
MAKZ	**Makanchi** comp=Z,4.0nm,0.7s	**44.44**	**302**	P		**P**	**09 45 44.0**	**+0.1**
MAKZ				pmax	pmax			
MAKZ	**Makanchi** comp=Z,7.2nm,0.5s	**44.44**	**302**	P		**P**	**09 45 44.0**	**+0.1**
TAPN	**Taplejung**	**45.89**	**274**	*e*P		**P**	**09 45 57.4**	**+1.4**
KURK	**Kurchatov** comp=Z,1.1nm,1.7s	**46.07**	**308**	*ce*P		**P**	**09 45 56.9**	**+0.2**
KURK				pmax	pmax			
KURK	**Kurchatov**	**46.07**	**308**	P		**P**	**09 45 56.8**	**+0.1**
KURBB	**Kurchatov Arra** comp=Z,0.9nm,0.3s,baz=82,slow=7.8,SNR=15	**46.14**	**308**	P		**P**	**09 45 56.8**	**-0.5**
RAMN	**Ramite** comp=Z,42nm,0.7s	**46.95**	**274**	*e*P		**P**	**09 46 03.8**	**-0.5**
JIRN	**Jiri**	**46.97**	**275**	*e*P		**P**	**09 46 06.0**	**+1.5**
GUN	**Gumba** comp=Z,47nm,1.0s	**47.11**	**276**	*e*P		**P**	**09 46 07.8**	**+2.2**
MLY	**Manley** comp=Z,21nm,1.8s	**48.17**	**32**	P		**P**	**09 46 13.2**	**+0.3**
MLY				IAmb		IAmb	09 47 44.6	
DANN	**Dangsing** comp=Z,92nm,0.8s	**48.62**	**278**	*e*P		**P**	**09 46 17.6**	**+0.4**
KDJ	**Kajisay**	**48.81**	**297**	P		**P**	**09 46 17.8**	**-0.6**
KDJ	comp=Z,74nm,1.6s			pmax	pmax			
KDJ	**Kajisay**	**48.81**	**297**	P		**P**	**09 46 17.8**	**-0.6**
KOLN	**Koldanda**	**48.99**	**277**	*e*P		**P**	**09 46 19.5**	**-0.5**
GHO	**Glory Hole Cre**	**49.02**	**36**	P		**P**	**09 46 21.2**	**+1.6**
HDA	**Harding Lake**	**49.80**	**33**	P		**P**	**09 46 26.0**	**+0.6**
IL31	**IL31** comp=Z,12nm,1.4s	**49.81**	**32**	P		**P**	**09 46 26.1**	**+0.7**
IL31				IAmb		IAmb	09 46 35.8	
ILAR	**Eielson Array** comp=Z,1.9nm,0.8s,baz=270,slow=6.4,SNR=20	**49.81**	**32**	P		**P**	**09 46 26.4**	**+1.0**
KSH	**Kashi**	**50.47**	**294**	P		**P**	**09 46 34.3**	**+3.3**
KSH				pP		sP	09 46 42.3	0.0
KSH				PP		**PP**	**09 48 31.8**	**+5.2**
KSH	comp=Z,410nm,5.3s			pmax	pmax			
BVAR	**Borovoye Array**	**50.74**	**312**	P		**P**	**09 46 32.0**	**-0.7**
BVAR							09 47 50.0	
BVAR	**Borovoye Array** comp=Z,0.6nm,0.6s,baz=96,slow=5.8,SNR=4.0	**50.74**	**312**	P		**P**	**09 46 32.0**	**-0.7**
BVAR	comp=Z,0.9nm,0.6s,baz=81,slow=4.8,SNR=4.2			PcP		**PcP**	**09 47 50.0**	**+0.5**
BRVK	**Borovoye** comp=Z,18nm,1.9s	**50.79**	**313**	P		**P**	**09 46 32.9**	**-0.2**
BRVK				pmax	pmax			
BRVK	**Borovoye**	**50.79**	**313**	P		**P**	**09 46 32.9**	**-0.2**
BRVK	comp=Z,18nm,1.9s			IAmb		IAmb	09 46 34.2	
DOT	**Dot Lake** comp=Z,29nm,1.8s	**51.12**	**34**	P		**P**	**09 46 36.7**	**+1.3**
DOT				IAmb		IAmb	09 47 56.2	
SCRK	**Sand Creek** comp=Z,28nm,1.9s	**51.12**	**33**	P		**P**	**09 46 36.6**	**+1.1**
SCRK				IAmb		IAmb	09 47 35.9	
ARSB	**Arslanbob** comp=Z,7.5nm,0.7s	**52.05**	**297**	P		**P**	**09 46 42.3**	**-0.6**
ARSB				IAmb		IAmb	09 46 51.7	
KK31	**Karatay Array** comp=Z,6.0nm,1.2s	**53.22**	**300**	P		**P**	**09 46 51.2**	**-0.2**
KK31				pmax	pmax			
KK31	**Karatay Array** comp=Z,6.4nm,1.1s	**53.22**	**300**	P		**P**	**09 46 51.1**	**-0.2**
KK31				IAmb		IAmb	09 47 01.2	
KKAR	**Karatay Array** comp=Z,6.0nm,1.2s	**53.22**	**300**	P		**P**	**09 46 51.2**	**-0.2**
KKAR				pmax	pmax			
KKAR	**Karatay Array** comp=Z,6.4nm,1.1s	**53.22**	**300**	P		**P**	**09 46 51.1**	**-0.2**
KKAR				IAmb		IAmb	09 47 01.2	
KNRA	**Kununurra**	**53.43**	**195**	P		**P**	**09 46 52.7**	**-0.2**
GSI	**Gunungsitoli**	**53.56**	**239**	P		**P**	**09 46 55.1**	**+1.0**
INK	**Inuvik** comp=Z,15nm,1.9s	**54.71**	**27**	P		**P**	**09 47 03.3**	**+1.5**
INK				pmax	pmax			
INK	**Inuvik** comp=Z,16nm,1.9s	**54.71**	**27**	P		**P**	**09 47 03.3**	**+1.5**
INK				IAmb		IAmb	09 47 19.0	
FITZ	**Fitzroy Crossi**	**56.48**	**198**	P		**P**	**09 47 17.2**	**+2.2**
ARU	**Arti**	**56.55**	**319**	*d* iP		**P**	**09 47 15.0**	**-0.2**
ARU				*PP		**sP**	**09 47 31.5**	**+5.0**
ARU							09 49 17.7	
ARU				S		**S**	**09 55 02.2**	**-2.8**
ARU				SS		**SS**	**09 58 46.2**	**-5.8**
ARU	comp=Z,5.0nm,0.7s			pmax	pmax			
WRAB	**Tennant Creek**	**56.72**	**188**	*ce*P		**P**	**09 47 15.6**	**-1.1**
WRAB	comp=Z,33nm,2.5s			pmax	pmax			
WR0	**Warramunga Arr** comp=Z,18nm,1.3s	**56.72**	**188**	P		**P**	**09 47 16.8**	**+0.1**
WR0				IAmb		IAmb	09 47 17.8	
WRA	**Warramunga Arr** comp=Z,3.0nm,0.5s,baz=5.0,slow=7.3,SNR=27	**56.73**	**188**	P		**P**	**09 47 16.7**	**-0.1**
C36M	**Paulatuk**	**57.76**	**25**	P		**P**	**09 47 24.3**	**+0.9**
AS31	**Alice Springs**	**60.45**	**188**	P		**P**	**09 47 42.7**	**0.0**

ASAR	**Alice Springs**	**60.45**	**188**	P		**P**	**09 47 42.7**	**0.0**
	comp=Z,3.0nm,0.9s,baz=8.6,slow=6.0,SNR=17							
GEYT	**Alibeck**	**63.93**	**299**	P		**P**	**09 48 04.9**	**-1.2**
	comp=Z,3.0nm,0.7s,baz=88,slow=4.9,SNR=5.0							
GEYT	**Alibeck**	**63.93**	**299**	IAmb		IAmb	09 48 07.2	
	comp=Z,2.4nm,0.8s							
YKA	**Yellowknife Ar**	**64.13**	**30**	P		**P**	**09 48 07.0**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=302,slow=6.7,SNR=17							
STKA	**Stephens Creek**	**68.23**	**180**	P		**P**	**09 48 33.5**	**+0.1**
STKA				pmax		pmax		
	comp=Z,3.0nm,1.4s							
STKA	**Stephens Creek**	**68.23**	**180**	P		**P**	**09 48 33.9**	**+0.5**
	comp=Z,1.3nm,0.5s,baz=14,slow=9.2,SNR=3.9							
STKA	**Stephens Creek**	**68.23**	**180**	P		**P**	**09 48 33.5**	**+0.1**
OBN	**Obninsk**	**68.31**	**323**	*i* P		**P**	**09 48 34.3**	**+0.5**
OBN				*e*			09 51 00.6	
OBN				*e*S		**S**	**09 57 27.9**	**-4.9**
OBN				*e*SS		**SS**	**10 02 00.9**	**+5.5**
OBN				pmax		pmax		
	comp=Z,6.0nm,0.9s							
FINES	**FINESS Array B**	**69.07**	**332**	*ce*P		**P**	**09 48 40.5**	**+2.1**
FINES				pmax		pmax		
	comp=Z,4.0nm,0.8s							
FINES	**FINESS Array B**	**69.07**	**332**	P		**P**	**09 48 37.9**	**-0.5**
	comp=Z,3.9nm,0.8s,baz=53,slow=9.8,SNR=4.2							
YBH	**Yreka Blue Hor**	**70.61**	**52**	P		**P**	**09 48 49.9**	**+1.5**
YBH				pmax		pmax		
	comp=Z,10.0nm,1.7s							
YBH	**Yreka Blue Hor**	**70.61**	**52**	P		**P**	**09 48 49.9**	**+1.5**
YBH				IAmb		IAmb	09 48 52.3	
	comp=Z,9.8nm,1.6s							
PINE	**Pine Mountain**	**70.61**	**50**	P		**P**	**09 48 50.9**	**+2.4**
E09A	**Wood Farm, Sta**	**70.80**	**46**	P		**P**	**09 48 51.0**	**+1.6**
E09A				IAmb		IAmb	09 48 52.9	
	comp=Z,10nm,1.5s							
KBZ	**Khabaz**	**71.06**	**311**	P		**P**	**09 48 51.3**	**+0.4**
	comp=Z,3.1nm,0.8s,baz=32,slow=0.8,SNR=6.8							
KBZ				LR		LR	10 23 22.8	
	comp=Z,24nm,18.4s,baz=166,slow=39							
KIV	**Kislovodsk**	**71.06**	**311**	*e*P		**P**	**09 48 51.8**	**+0.7**
KIV				pmax		pmax		
	comp=Z,40nm,1.1s							
BMO	**Blue Mountains**	**72.21**	**47**	P		**P**	**09 48 59.9**	**+1.9**
BMO				pmax		pmax		
	comp=Z,3.0nm,1.0s							
BMO	**Blue Mountains**	**72.21**	**47**	P		**P**	**09 48 59.9**	**+1.9**
BEKR	**Beckworth**	**73.12**	**53**	P		**P**	**09 49 05.3**	**+1.7**
PAHR	**Pah Rah Range**	**73.83**	**52**	P		**P**	**09 49 09.7**	**+1.9**
PAHR				IAmb		IAmb	09 51 21.1	
	comp=Z,13nm,1.8s							
YERR	**Yerington**	**74.33**	**53**	P		**P**	**09 49 10.7**	**0.0**
YERR				IAmb		IAmb	09 49 14.0	
	comp=Z,6.4nm,1.2s							
NB2	**NORSAR Subarra**	**74.46**	**337**	P		**P**	**09 49 09.9**	**-1.0**
	comp=Z,3.1nm,0.9s,baz=39,slow=6.2							
NOA	**NORSAR Array B**	**74.46**	**337**	P		**P**	**09 49 10.9**	**0.0**
	comp=Z,0.9nm,0.7s,baz=38,slow=5.7,SNR=3.0							
AKASG	**Malin Array Be**	**74.51**	**322**	P		**P**	**09 49 10.8**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=44,slow=6.0,SNR=9.4							
AKASG	**Malin Array Be**	**74.51**	**322**	IAmb		IAmb	09 49 11.7	
	comp=Z,1.7nm,1.1s							
DLMT	**Dillon**	**74.63**	**45**	P		**P**	**09 49 11.0**	**-1.3**
DLMT				IAmb		IAmb	09 49 15.1	
	comp=Z,4.7nm,0.8s							
KVN	**Kaiserville**	**75.02**	**52**	P		**P**	**09 49 15.4**	**+0.7**
KVN				pmax		pmax		
	comp=Z,3.0nm,0.9s							
KVN	**Kaiserville**	**75.02**	**52**	P		**P**	**09 49 15.4**	**+0.7**
NVAR	**Mina Array Bea**	**75.25**	**53**	P		**P**	**09 49 18.1**	**+2.0**
	comp=Z,1.8nm,0.8s,baz=284,slow=6.4,SNR=11							
OMMB	**Old Mammoth Mi**	**75.27**	**54**	P		**P**	**09 49 17.4**	**+1.1**
H17A	**Grant Village**	**76.36**	**45**	P		**P**	**09 49 22.7**	**+0.3**
H17A				IAmb		IAmb	09 49 27.6	
	comp=Z,6.8nm,1.1s							
MOOW	**Moose Ponds**	**76.66**	**45**	P		**P**	**09 49 23.3**	**-0.8**
DUG	**Dugway, Tooele**	**77.63**	**49**	P		**P**	**09 49 31.9**	**+2.4**
DUG				pmax		pmax		
	comp=Z,5.0nm,1.1s							
DUG	**Dugway, Tooele**	**77.63**	**49**	P		**P**	**09 49 31.9**	**+2.4**
PDAR	**Pinedale Array**	**77.95**	**45**	P		**P**	**09 49 32.2**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=276,slow=2.6,SNR=9.8							
BRTR	**Keskin Array B**	**79.01**	**312**	P		**P**	**09 49 37.5**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=129,slow=4.9,SNR=5.5							
LCMT	**Little Creek M**	**79.31**	**52**	P		**P**	**09 49 39.2**	**+0.4**
P17A	**Butcher Ranch,**	**79.33**	**49**	P		**P**	**09 49 38.4**	**-0.5**
RDMU	**Red Mountain**	**79.33**	**47**	P		**P**	**09 49 41.2**	**+2.2**
KNB	**Kanab**	**79.58**	**52**	P		**P**	**09 49 43.1**	**+2.8**
KNB				pmax		pmax		
	comp=Z,17nm,1.6s							
KNB	**Kanab**	**79.58**	**52**	P		**P**	**09 49 43.1**	**+2.8**
SRU	**San Rafael Swe**	**79.69**	**49**	P		**P**	**09 49 41.4**	**+0.5**
SRU				pmax		pmax		
	comp=Z,4.0nm,0.8s							
SRU	**San Rafael Swe**	**79.69**	**49**	P		**P**	**09 49 41.4**	**+0.5**
ULM	**Lac du Bonnet**	**79.82**	**33**	P		**P**	**09 49 41.7**	**+0.6**
	comp=Z,2.0nm,1.0s,baz=300,slow=8.8,SNR=3.7							
GERES	**GERESS Array B**	**82.95**	**328**	P		**P**	**09 49 57.8**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=32,slow=5.2,SNR=3.9							
ANMO	**Albuquerque**	**84.86**	**50**	*ce*P		**P**	**09 50 09.2**	**+1.2**
ANMO				pmax		pmax		
	comp=Z,2.0nm,1.0s							
LIT	**Litokhoron**	**85.15**	**318**	P		**P**	**09 50 09.2**	**+0.1**
LIT				pmax		pmax		
	comp=Z,9.0nm,1.1s							
LIT	**Litokhoron**	**85.15**	**318**	P		**P**	**09 50 09.2**	**+0.1**
LIT				IAmb		IAmb	09 50 09.6	
	comp=Z,9.3nm,1.1s							
TXAR	**Lajitas Array**	**90.38**	**52**	P		**P**	**09 50 35.6**	**+1.0**
	comp=Z,1.0nm,0.9s,baz=299,slow=2.6,SNR=6.9							
U40A	**Yellville**	**91.63**	**41**	P		**P**	**09 50 41.0**	**+0.9**
X40A	**Basin Creek Fa**	**93.06**	**42**	P		**P**	**09 50 47.2**	**+0.5**
LPAZ	**La Paz**	**146.93**	**60**	PKPbc		**PKPbc**	**09 57 17.4**	**+0.8**
	comp=Z,3.7nm,0.6s,baz=351,slow=1.7,SNR=19							

*THE **17** 09:37:56.9, 34.˚43N×25.˚61E, h0km±1km, ML3.0/6, Error ellipse: s-maj=2.1km s-min=0.6km az=157.0*
*ATH **17** 09:37:56.1, 34.˚37N×25.˚61E, h26km±1km, ML3.0/9, Error ellipse: s-maj=2.8km s-min=1.0km az=357.0*
*HLW **17** 09:37:59.3, 34.˚10N×25.˚97E, h16km±11km, Ml3.4*

ISC 17 09:37:55.9±1.3, 34˚33N±0.˚04×25˚61E±0.˚03, h15km±10km, n29, σ0°94/44, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRMA	**Ierapetra Chan**	**0.69**	**8**	P	**Pg**	**09 38 09.6**	**+0.3**
FRMA				S	**Sb**	**09 38 19.0**	**+0.1**
	485nm,0.5s						
LAST	**Lasithi**	**0.84**	**352**	P	**Pg**	**09 38 11.7**	**-0.4**
LAST				S	**Sb**	**09 38 23.3**	**0.0**
	1µm,0.5s						
LAST	**Lasithi**	**0.84**	**352**	P	**Pg**	**09 38 11.5**	**-0.6**
LAST				S	**Sg**	**09 38 23.0**	**-0.1**
LAST				AML	AML	09 38 26.4	
	comp=E,2224µm,0.4s						
LAST				AML	AML	09 38 27.5	
	comp=N,2352µm,0.6s						
ZKR	**Zakros**	**0.93**	**32**	P	**Pb**	**09 38 13.6**	**0.0**
ZKR				S	**Sn**	**09 38 27.0**	**-0.4**
	comp=N,1µm,0.4s						
ZKR	**Zakros**	**0.93**	**32**	P	**Pb**	**09 38 13.7**	**0.0**
ZKR				S	**Sg**	**09 38 26.3**	**+0.3**
ZKR				AML	AML	09 38 31.9	
	comp=E,3211µm,0.5s						
ZKR				AML	AML	09 38 34.5	
	comp=N,1066µm,0.9s						
NPS	**Neapolis**	**0.93**	**0**	P	**Pb**	**09 38 13.1**	**-0.6**
NPS				S	**Sg**	**09 38 25.9**	**-0.2**
	comp=N,820nm,0.5s						
NPS	**Neapolis**	**0.93**	**0**	P	**Pb**	**09 38 13.0**	**-0.6**
NPS				S	**Sg**	**09 38 26.1**	**0.0**
NPS				AML	AML	09 38 31.0	
	comp=N,1737µm,0.5s						
NPS				AML	AML	09 38 33.2	
	comp=E,1521µm,0.5s						
SIVA	**Sivas**	**0.95**	**316**	P	**Pg**	**09 38 14.8**	**+0.5**
SIVA				S	**Sn**	**09 38 27.7**	**-0.3**
	comp=E,2µm,0.6s						
SIVA	**Sivas**	**0.95**	**316**	P	**Pb**	**09 38 14.5**	**+0.4**
SIVA				S	**Sb**	**09 38 26.6**	**+0.1**
SIVA				AML	AML	09 38 33.5	
	comp=E,5665µm,0.7s						
SIVA				AML	AML	09 38 37.4	
	comp=N,4198µm,0.6s						
STIA	**Sitia Lasithi**	**0.95**	**24**	P	**Pb**	**09 38 13.9**	**-0.2**
KSTL	**Kastelli Herak**	**1.07**	**336**	P	**Pb**	**09 38 12.4**	**-3.7**
IDI	**Anoyia**	**1.12**	**328**	P	**Pb**	**09 38 17.0**	**-0.1**
IDI				S	**Sn**	**09 38 32.8**	**+0.4**
IDI				AML	AML	09 38 36.6	
	comp=E,1295µm,0.4s						
IDI				AML	AML	09 38 37.6	
	comp=N,1006µm,0.5s						
GVDS	**Gavdos**	**1.36**	**293**	P	**Pn**	**09 38 21.2**	**+0.9**
GVD	**Gavdhos**	**1.36**	**292**	P	**Pn**	**09 38 20.9**	**+0.6**
GVD				S	**Sg**	**09 38 40.1**	**+0.4**
	comp=N,645nm,0.4s						
GVD	**Gavdhos**	**1.36**	**292**	P	**Pn**	**09 38 21.2**	**+0.9**
GVD				S	**Sb**	**09 38 39.4**	**+1.2**
GVD				AML	AML	09 38 50.9	
	comp=E,1425µm,0.7s						
GVD				AML	AML	09 38 55.6	
	comp=N,1485µm,0.5s						
VAM	**Vamos**	**1.58**	**313**	P	**Pn**	**09 38 24.1**	**+0.7**
VAM				S	**Sb**	**09 38 44.8**	**+0.2**
VAM				AML	AML	09 39 01.3	
	comp=N,920µm,0.5s						
VAM				AML	AML	09 39 04.4	
	comp=E,717µm,0.8s						
IMMV	**Iera Moni Meta**	**1.75**	**311**	P	**Pn**	**09 38 26.5**	**+0.8**
IMMV	**Iera Moni Meta**	**1.75**	**311**	P	**Pn**	**09 38 26.4**	**+0.6**
IMMV				AML	AML	09 39 02.8	
	comp=N,570µm,0.5s						
IMMV				AML	AML	09 39 02.9	
	comp=E,935µm,0.6s						
KARP	**Karpathos**	**1.76**	**46**	P	**Pn**	**09 38 26.7**	**+0.8**
KARP				S	**Sn**	**09 38 48.8**	**+0.8**
KARP				AML	AML	09 39 07.2	
	comp=N,424µm,0.6s						
KARP				AML	AML	09 39 11.8	
	comp=E,503µm,0.6s						
THR6	**Thira Island,**	**2.03**	**355**	P	**Pn**	**09 38 30.5**	**+1.0**
SANT	**Santorini**	**2.04**	**357**	P	**Pn**	**09 38 31.0**	**+1.3**
THR3	**Thira Island,**	**2.08**	**355**	P	**Pn**	**09 38 31.0**	**+0.8**
IOSP	**Ios island**	**2.40**	**354**	P	**Pn**	**09 38 34.2**	**-0.5**
KTHA	**Kythira Island**	**2.84**	**313**	P	**Pn**	**09 38 40.3**	**-0.3**
SLUM	**Salum**	**2.85**	**187**	P	**Pn**	**09 38 42.2**	**+1.4**
	baz=194						
SLUM				AMP		09 39 00.0	
	baz=194						
SLUM				S	**Sn**	**09 39 12.8**	**-2.1**
	baz=194						
VLI	**Veliai**	**3.23**	**318**	P	**Pn**	**09 38 45.3**	**-0.7**
SWA2		**5.07**	**182**	P	**Pn**	**09 39 12.4**	**+1.1**
	baz=186						
SWA2				AMP		09 40 00.0	
	baz=186						
GLL	**Jalalah**	**7.02**	**131**	P	**Pn**	**09 39 37.2**	**-0.9**
	baz=131						
HFRF	**Wahat Farafira**	**7.53**	**161**	P	**Pn**	**09 39 44.6**	**-0.5**
	baz=163						
HFRF				AMP		09 41 00.0	
	baz=163						
HFRF				S	Sn	09 41 02.5	-7.7
	baz=163						

IDC 17 09:39:03.0±14.0, 22.˚92S×178.˚78W, h619km±129km, mb3.0/5, mb1 3.2/6, mb1mx2.9/31, mbtmp4.1/6, Error ellipse: s-maj=200.1km s-min=60.2km az=54.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**15.69**	**192**	P	P	09 42 16.7	+0.3
	1.7nm,0.3s,baz=348,slow=18,SNR=6.4						
CTA	**Charters Tower**	**32.61**	**268**	P	P	09 44 46.0	0.0
	2.1nm,0.3s,baz=96,slow=10,SNR=12						
STKA	**Stephens Creek**	**36.13**	**247**	P	P	09 45 14.9	-0.2
	0.8nm,0.5s,baz=90,slow=11,SNR=3.9						
ASAR	**Alice Springs**	**43.31**	**259**	P	P	09 46 12.8	+0.4
	0.6nm,0.3s,baz=94,slow=7.5,SNR=40						
WRA	**Warramunga Arr**	**43.60**	**265**	P	P	09 46 14.5	-0.2
	0.6nm,0.3s,baz=103,slow=8.3,SNR=27						
FITZ	**Fitzroy Crossi**	**52.03**	**264**	P	P	09 47 16.6	-0.5
	4.2nm,0.9s,baz=80,slow=6.1,SNR=3.8						

*SJA **17** 09:44:36.5±0.7, 31.˚55S×69.˚58W, h112km±6km, ML3.1, MW3.2*
*GUC **17** 09:44:37.8±0.8, 31.˚54S×69.˚82W, h137km±11km, ML3.6*

ISC 17 09:44:38.1±1.7, 31.˚50S±0.˚04×69.˚51W±0.˚04, h113km±14km, n18, σ0°61/31, 8C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.35**	**149**	*i* P	**Pn**	**09 44 54.6**	**-0.3**
RTLS				IAML		09 45 08.4	
	comp=Z,393nm,0.2s						
RTCV	**Cerro Valdivia**	**0.90**	**114**	*i* P	**Pn**	**09 44 58.2**	**-0.4**
RTCV				*i* S	**Sn**	**09 45 13.9**	**-0.2**
RTCV				IAML		09 45 14.6	
	comp=Z,414nm,0.6s						
RTLL	**Cerro Villicun**	**0.90**	**79**	*i* P	**Pn**	**09 44 58.3**	**-0.4**
RTLL				IAML		09 45 16.9	
	comp=Z,280nm,0.4s						
AMOG	**MOGNA**	**1.04**	**58**	*i* P	**Pn**	**09 45 00.0**	**0.0**
AMOG				IAML		09 45 19.9	
	comp=Z,158nm,0.4s						
CFA	**Coronel Fontan**	**1.09**	**96**	*i* P	**Pn**	**09 45 00.5**	**-0.1**
CFA				⇓*i* S	**Sn**	**09 45 17.5**	**0.0**
CO02	**Combarbal**	**1.31**	**283**	⇑*i* P	**Pn**	**09 45 03.2**	**+0.2**
CO02				*e*S	**Sn**	**09 45 21.8**	**0.0**
CO02				IAML		09 45 23.6	
	comp=N,2µm,0.2s						
VA03	**San Esteban**	**1.54**	**215**	*i* P	**Pn**	**09 45 05.8**	**+0.1**
VA03				*e*S	**Sn**	**09 45 26.8**	**+0.3**
VA03				IAML		09 45 30.1	
	comp=E,471nm,0.4s						
GO04	**Tololo Observa**	**1.73**	**320**	⇑*i* P	**Pn**	**09 45 08.4**	**+0.3**
GO04				*e*S	**Sn**	**09 45 31.8**	**+0.9**
GO04				IAML		09 45 34.8	
	comp=E,1µm,0.4s						
FCH	**Farellones**	**1.94**	**200**	⇓*e*P	**Pn**	**09 45 11.4**	**+0.6**
FCH				*e*S	**Sn**	**09 45 37.2**	**+1.5**
FCH				IAML		09 45 41.7	
	comp=E,301nm,0.3s						
ROCH	**El Roble**	**1.94**	**221**	⇑*i* P	**Pn**	**09 45 10.0**	**-0.7**
ROCH				*e*S	**Sn**	**09 45 34.8**	**-0.7**
ROCH				IAML		09 45 38.3	
	comp=E,213nm,0.4s						
CLCH	**Cerro Calan**	**2.08**	**204**	⇑*i* P	**Pn**	**09 45 12.2**	**-0.1**
CLCH				*e*S	**Sn**	**09 45 38.6**	**+0.2**
CLCH				IAML		09 45 41.9	
	comp=E,362nm,0.4s						
ACAN	**Cantantal**	**2.12**	**112**	*i* P	**Pn**	**09 45 12.9**	**+0.1**
ACAN				*i* S	**Sn**	**09 45 39.9**	**+0.5**
ACAN				IAML		09 45 45.9	
	comp=Z,96nm,0.4s						
MT05	**Renca**	**2.15**	**208**	⇑*i* P	**Pn**	**09 45 12.8**	**-0.4**
MT05				*e*S	**Sn**	**09 45 39.8**	**-0.3**
MT05				IAML		09 45 42.3	
	comp=E,708nm,0.5s						
MT03	**Universidad Ad**	**2.16**	**203**	⇑*i* P	**Pn**	**09 45 13.5**	**+0.1**
MT03				*e*S	**Sn**	**09 45 40.2**	**-0.1**
MT03				IAML		09 45 43.4	
	comp=N,1µm,0.6s						
LSCH	**La Serena**	**2.18**	**316**	⇑*i* P	**Pn**	**09 45 13.2**	**-0.3**
LSCH				*e*S	**Sn**	**09 45 39.6**	**-1.0**
LSCH				IAML		09 45 40.5	
	comp=N,184nm,0.3s						
LMEL	**Las Melosas**	**2.41**	**194**	⇑*i* P	**Pn**	**09 45 17.5**	**+0.8**
LMEL				*e*S	**Sn**	**09 45 47.0**	**+0.8**
LMEL				IAML		09 45 54.2	
	comp=N,220nm,0.2s						
COIS	**El Sosneado**	**3.60**	**181**	*i* P	**Pn**	**09 45 30.8**	**-1.4**
GO03	**Copiap**	**3.94**	**351**	*i* P	**Pn**	**09 45 37.0**	**+0.1**

*NIED **17** 09:53:00, 35.˚60N×140.˚10E, h74km, Mw4.3 Best double couple: M0 3.68000×10^15 NP1:φs142.00000°, δ83.00000°, λ-79.00000°. NP2:φs264.00000°, δ13.00000°, λ-147.00000°.*
*BJI **17** 09:53:11.6±0.0, 35.˚44N×140.˚82E, h42km, mB4.9/27, mb4.6/38, Ms4.6/7, Ms7 4.3/2*
*JMA **17** 09:53:19.1±0.2, 35.˚62N×140.˚10E, h73km±2km, M4.3 Broadband fault plane solution: P waves. NP1: φs343.00000°, δ27.00000°, λ-81.00000°. NP2: φs153.00000°, δ63.00000°, λ-95.00000°. Principal axes: T Plg18.0000°, Azm246.0000°; N Plg4.0000°, Azm155.0000°; P Plg72.0000°, Azm52.0000°;*
JMA Felt II J1.
*MOS **17** 09:53:20.8±0.9, 36.˚00N×140.˚07E, h67km, mb4.7/45 Error ellipse: s-maj=8.4km s-min=5.2km az=80.1*
*IDC **17** 09:53:20.4±1.5, 35.˚50N×140.˚07E, h74km±12km, mb4.0/30, mb1 4.1/32, mb1mx4.0/57, mbtmp4.3/32, MS3.1/6, Ms1 3.1/6, ms1mx2.8/55, Error ellipse: s-maj=12.2km s-min=10.6km az=113.0*
*NEIC **17** 09:53:21.1±1.3, 35.˚53N±0.˚05×140.˚00E±0.˚08, h74km±5km, mb4.6/167, Error ellipse: s-maj=10.2km s-min=7.5km az=67.0*

ISC 17 09:53:19.0±0.5, 35.˚64N±0.˚04×140.˚17E±0.˚03, h57km±4km, n404, σ1°67/431, mb4.6/127, 12C-8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.22**	**174**	⇓P	Pn	09 53 30.6	+2.5
JCN				S	**Sn**	**09 53 39.3**	**+4.6**
JSMT	**Sammumatsuo**	**0.22**	**88**	P	Pn	09 53 31.0	+2.8
JSMT				S	**Sn**	**09 53 40.5**	**+5.7**
TOK	**Tokyo**	**0.34**	**279**	⇓P	**Pn**	**09 53 31.3**	**+2.3**
TOK				*e*S	**Sn**	**09 53 40.7**	**+4.4**
BSO3	**Boso 3**	**0.88**	**162**	⇓P	**Pn**	**09 53 35.9**	**+0.9**
BSO3				X		09 53 48.8	
JOD2	**Odawara 2**	**0.96**	**248**	⇑P	**Pn**	**09 53 36.5**	**+0.1**
JOD2				S	**Sn**	**09 53 48.7**	**-0.5**
JAG	**Ashikaga**	**0.98**	**324**	⇓P	**Pn**	**09 53 37.7**	**+1.1**
JAG				S	**Sn**	**09 53 51.1**	**+1.4**
JIM2	**Oshima 2**	**1.10**	**214**	P	**Pn**	**09 53 37.7**	**-0.5**
JIM2				S	**Sn**	**09 53 51.5**	**-1.0**
JRY	**Ryogami san**	**1.10**	**291**	⇓P	**Pn**	**09 53 39.4**	**+1.1**
JRY				*e*S	**Sn**	**09 53 54.3**	**+1.7**
BSO1	**Boso 1**	**1.18**	**146**	P	**Pn**	**09 53 39.5**	**+0.7**
BSO1				S	**Sn**	**09 53 56.1**	**+2.5**
JFNN	**Fujinakano**	**1.29**	**251**	⇑P	**Pn**	**09 53 41.0**	**+0.2**
JFNN				S	**Sn**	**09 53 56.9**	**-0.2**
JYN	**Shimodate**	**1.33**	**265**	⇑P	**Pn**	**09 53 41.7**	**+0.3**
JYN				*e*S	**Sn**	**09 53 58.2**	**0.0**
JKT	**Katashina**	**1.35**	**327**	⇓P	**Pn**	**09 53 42.7**	**+1.0**
JKT				*e*S	**Sn**	**09 54 00.0**	**+1.3**
JIZS	**Izushimoda**	**1.40**	**230**	P	**Pn**	**09 53 42.2**	**0.0**
JIZS				S	**Sn**	**09 53 58.5**	**-1.2**
MJAR	**Matsushiro Arr**	**1.83**	**300**	P	**Pn**	**09 53 49.3**	**+1.2**
	9.1nm,0.3s,baz=131,slow=16,SNR=255						
MJAR				S	**Sn**	**09 54 12.0**	**+1.8**
	40nm,0.3s,baz=136,slow=25,SNR=19						
MAJO	**Matsushiro**	**1.83**	**300**	*d* iP	**Pn**	**09 53 49.9**	**+1.8**
MAJO	**Matsushiro**	**1.83**	**300**	Pn	**Pn**	**09 53 49.7**	**+1.6**
MAJO				Sn	**Sn**	**09 54 11.4**	**+1.2**
MAT	**Matsushiro**	**1.83**	**300**	P	**Pn**	**09 53 49.6**	**+1.5**
MAT				S	**Sn**	**09 54 12.7**	**+2.5**
MJB9	**Matsu-Tunnel**	**1.84**	**300**	Pn	**Pn**	**09 53 49.7**	**+1.6**
MJB9				Sn	**Sn**	**09 54 09.6**	**-0.7**
JHJ2	**Mitsune**	**2.53**	**187**		**Pn**	**09 53 57.2**	**-0.5**
JHJ2				Sn	**Sn**	**09 54 25.3**	**-2.1**
INU	**Inuyama**	**2.59**	**265**		**Pn**	**09 53 59.2**	**+0.8**
INU				Sn	**Sn**	**09 54 28.7**	**0.0**
ERM	**Erimo**	**6.78**	**19**	*i* P	**Pn**	**09 54 55.8**	**0.0**
ERM	**Erimo**	**6.78**	**19**	Pn	**Pn**	**09 54 56.2**	**+0.4**
ERM					**Sn**	**09 56 10.4**	**-1.2**
JNU	**Nakatsue**	**8.08**	**255**	P	**Pn**	**09 55 15.9**	**+2.2**
	3.5nm,0.3s,baz=67,slow=3.5,SNR=30						
JNU				LR	LR	09 58 57.2	
	comp=Z,105nm,19.7s,baz=43,slow=42						
JNU	**Nakatsue**	**8.08**	**255**		**Pn**	**09 55 13.6**	**-0.1**
ASAJ	**Asahikawa**	**8.67**	**12**	P	**Pn**	**09 55 21.0**	**-0.7**
	1.8nm,0.3s,baz=188,slow=11,SNR=8.4						
ASAJ				S	**Sn**	**09 56 55.7**	**-2.3**
	1.0nm,0.3s,baz=198,slow=20,SNR=4.6						
JKA	**Kamikawa-asahi**	**8.67**	**12**		**Pn**	**09 55 21.0**	**-0.7**
JKA					**Sn**	**09 56 55.7**	**-2.3**
NMR	**Nemuro--Hokkai**	**8.83**	**27**	⇑*i* P	**Pn**	**09 55 21.7**	**-2.2**
NMR				*i* S	**Sn**	**09 56 53.1**	**-8.8**
GLVR	**Golovnino**	**9.08**	**25**	P	**Pn**	**09 55 26.1**	**-1.1**
GLVR				*e*S	**Sn**	**09 57 00.8**	**-7.1**
GRPR	**Tuman**	**9.39**	**26**	*e*P	**Pn**	**09 55 31.8**	**+0.3**
GRPR				*e*S	**Sn**	**09 57 07.7**	**-7.8**
YUK	**Yuzh-Kuril'sk**	**9.46**	**26**	*e*P	**Pn**	**09 55 31.9**	**-0.5**
YUK				*e*S	**Sn**	**09 57 10.3**	**-6.9**
YUK				pmax	pmax		
	comp=Z,82nm,0.7s						
SHO	**Shikotan**	**9.69**	**30**	*e*P	**Pn**	**09 55 32.7**	**-2.8**
SHO				*e*S	Sn	09 57 13.1	-10
SHO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TEY	**Ternei**	**9.78**	**345**	*e*P	Pn	09 55 46.2	+9.4
KSRS	**Korea Array**	**10.02**	**284**	P	**Pn**	**09 55 42.0**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=101,slow=14,SNR=5.6						
KSRS				LR	LR	09 59 33.0	
	comp=Z,104nm,21.1s,baz=102,slow=37						
KS19	**Wonju Array Si**	**10.07**	**284**	Pn	**Pn**	**09 55 39.3**	**-1.6**
KS19				Sn	**Sn**	**09 57 31.4**	**-1.0**
USRK	**Ussuriysk Ar.**	**10.61**	**326**	P	**Pn**	**09 55 51.9**	**+3.7**
	baz=110,slow=12,SNR=3.8						
KUR	**Kuril'sk**	**11.23**	**29**	*e*P	**Pn**	**09 55 56.6**	**0.0**
KUR				*e*S	**Sn**	**09 57 52.5**	**-8.0**
KUR				smax	smax		
	comp=N,65nm,0.6s						
KUR				smax	smax		
	comp=E,31nm,0.6s						
**

SONM Songino Array 27.77 306 P **P** **09 59 01.4 -1.0**
comp=Z,1.0nm,0.7s,baz=103,slow=8.4,SNR=6.8
SONM LR LR 10 09 47.9
comp=Z,50nm,21.5s,baz=146,slow=36
BOD Bodaibo 28.21 330 *eP* **P** **09 59 05.7 -0.4**
BOD pmax pmax
comp=Z,6.0nm,1.9s
H11N2 WAKE ISLAND Hy 28.35 117 T T 10 29 01.6
baz=308,slow=75,SNR=59
SEY Seymchan 28.36 12 *i* P **P** **09 59 07.5 +0.2**
SEY Seymchan 28.36 12 P **P** **09 59 07.9 +0.6**
comp=Z,3.4nm,0.8s,baz=175,slow=6.5,SNR=8.5
H11N1 WAKE ISLAND Hy 28.36 117 T T 10 28 58.5
baz=308,slow=75,SNR=58
H11N3 WAKE ISLAND Hy 28.37 117 T T 10 28 59.3
baz=308,slow=75,SNR=57
H11S3 WAKE ISLAND Hy 29.00 119 T T 10 29 35.6
baz=311,slow=76,SNR=36
H11S1 WAKE ISLAND Hy 29.00 119 T T 10 29 22.3
baz=311,slow=76,SNR=33
H11S2 WAKE ISLAND Hy 29.02 119 T T 10 29 25.2
baz=311,slow=76,SNR=24
LZH Lanzhou 29.34 282 *eP* **P** **09 59 18.3 +1.7**
LZH pP sP 09 59 34.0 -3.4
LZH *e*PP **PnPn** **10 00 15.4 +3.1**
LZH pmax pmax
comp=Z,22nm,1.2s
LZH pmax pmax
comp=Z,73nm,5.1s
LZH LR LR
comp=Z,300nm,12.9s
LZH LR LR
comp=Z,320nm,13.1s
LZH LR LR
comp=Z,460nm,16.5s
QIZ Qiongzhong 31.45 246 P **P** **09 59 36.6 +1.5**
QIZ S **S** **10 04 39.3 +0.2**
QIZ LR LR
comp=Z,350nm,4.1s
QIZ LR LR
comp=Z,250nm,5.0s
GTA Gaotai 32.04 289 *eP* **P** **09 59 43.0 +2.6**
GTA pP sP 09 59 58.3 -3.0
GTA ScP **ScP** **10 06 09.1 +1.6**
GTA pmax pmax
comp=Z,4.0nm,0.7s
GTA pmax pmax
comp=Z,89nm,7.8s
KMI Kunming 33.77 262 P **P** **09 59 56.4 +0.7**
KMI pmax pmax
comp=Z,13nm,0.9s
BILL Bilibino 35.65 16⇑ *eP* **P** **10 00 11.4 +0.3**
BILL *e* 10 01 28.0
BILL pmax pmax
comp=Z,7.0nm,1.0s
TIXI Tiksi 36.56 354 *ceP* **P** **10 00 19.1 +0.3**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
TIXI Tiksi 36.56 354 P **P** **10 00 18.4 -0.5**
comp=Z,2.6nm,0.5s,baz=169,slow=4.8,SNR=6.1
PBKT Sadao Pong 39.67 252 P **P** **10 00 44.0 -1.6**
PBKT IAmb IAmb 10 00 45.7
comp=Z,8.1nm,0.8s
CMAR Chiang Mai Arr 40.18 256 *ceP* **P** **10 00 52.7 +2.8**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 40.18 256 P **P** **10 00 47.7 -2.2**
comp=Z,0.6nm,0.3s,baz=48,slow=6.5,SNR=3.5
WMQ Urumqi 40.59 298 *eP* **P** **10 00 54.8 +1.7**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,11nm,3.7s
WMQ LR LR
comp=Z,930nm,28.1s
ZALV Zalesovo Beam 42.13 314 *i* P **P** **10 01 05.9 +0.4**
ZALV pmax pmax
comp=Z,3.0nm,0.7s
ZALV Zalesovo Beam 42.13 314 P **P** **10 01 05.0 -0.5**
comp=Z,2.5nm,0.7s,baz=94,slow=6.4,SNR=8.1
ZALV PcP **PcP** **10 02 58.4 -0.6**
comp=Z,1.5nm,0.5s,baz=122,slow=3.0,SNR=3.7
ZALV ScP **ScP** **10 06 43.5 -1.1**
comp=Z,0.8nm,0.4s,baz=90,slow=4.3,SNR=3.0
MK31 Makanchi Array 44.03 303 P **P** **10 01 20.6 -0.3**
MK31 pmax pmax
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 44.03 303 P **P** **10 01 20.6 -0.3**
MKAR Makanchi Array 44.03 303 P **P** **10 01 20.5 -0.4**
comp=Z,3.0nm,0.7s,baz=87,slow=11,SNR=19
MKAR ScP **ScP** **10 06 50.9 -1.6**
comp=Z,0.5nm,0.7s,baz=79,slow=5.2,SNR=4.9
MAKZ Makanchi 44.24 303 P **P** **10 01 23.2 +0.6**
MAKZ pmax pmax
comp=Z,3.0nm,0.7s
MAKZ Makanchi 44.24 303 P **P** **10 01 23.2 +0.6**
KURK Kurchatov 46.02 309 *ceP* **P** **10 01 36.9 +0.3**
KURK pmax pmax
comp=Z,7.0nm,0.6s
KURK Kurchatov 46.02 309 P **P** **10 01 36.6 0.0**
KURK IAmb IAmb 10 01 40.3
comp=Z,7.4nm,0.7s
KURBB Kurchatov Arra 46.09 309 P **P** **10 01 37.1 -0.1**
comp=Z,5.1nm,0.6s,baz=84,slow=7.6,SNR=38
RAMN Ramite 46.11 275 *eP* **P** **10 01 36.9 -1.1**
comp=Z,24nm,0.6s
JIRN Jiri 46.16 276 *eP* **P** **10 01 38.3 -0.2**
GUN Gumba 46.30 276 *eP* **P** **10 01 38.7 -0.9**
PKI Pulchoki 46.82 276 *eP* **P** **10 01 43.0 -0.7**
PKIN Phulchoki 46.83 276 *eP* **P** **10 01 42.0 -1.6**
DANN Dangsing 47.84 278 *eP* **P** **10 01 51.3 -0.2**
comp=Z,91nm,1.0s
KOLN Koldanda 48.21 277 *eP* **P** **10 01 53.6 -0.6**
KDAK Kodiak Island 48.81 41 P **P** **10 01 59.2 +1.1**
KDAK pmax pmax
comp=Z,127nm,1.5s
KDAK Kodiak Island 48.81 41 P **P** **10 01 59.2 +1.1**
PPLA Purkeypile 48.88 34 P **P** **10 02 01.4 +2.6**
PPLA IAmb IAmb 10 02 04.5
comp=Z,8.9nm,1.1s
MTN Manton Dam 48.97 192 P **P** **10 01 56.9 -2.9**
COEN Coen 49.40 176 P **P** **10 02 02.9 -0.2**
COEN IAmb IAmb 10 02 14.4
comp=Z,4.8nm,1.0s
CNPM China Poot 49.41 39 P **P** **10 02 04.2 +1.4**
KTH Kantishna Hill 49.46 33 P **P** **10 02 04.0 +0.8**
KTH IAmb IAmb 10 02 05.4
comp=Z,9.6nm,1.2s
MLY Manley 49.56 31 P **P** **10 02 05.6 +1.7**
MLY IAmb IAmb 10 02 06.8
comp=Z,10.0nm,1.1s
SUA Susitna One 49.58 36 P **P** **10 02 05.5 +1.3**
BRLK Bradley Lake 49.58 38 P **P** **10 02 04.7 +0.7**
KSH Kashi 50.07 295 P **P** **10 02 12.4 +4.2**
KSH sP sP 10 02 26.8 -2.9
KSH pmax pmax
comp=Z,250nm,5.7s
PSI Prapat 50.22 239 P **P** **10 02 07.9 -1.7**
comp=Z,4.4nm,0.5s,baz=63,slow=7.6,SNR=3.8
SEW Seward 50.28 38 P **P** **10 02 10.1 +0.8**
AAK Ala-Archa 50.28 299 P **P** **10 02 09.8 -0.1**
comp=Z,1.3nm,0.6s,baz=84,slow=11,SNR=2.7
AAK Ala-Archa 50.28 299 P **P** **10 02 09.8 -0.1**
RPSI Rantau Prapat 50.29 239 P **P** **10 02 07.9 -2.1**
PMR Palmer 50.34 36 P **P** **10 02 10.8 +1.0**
PMR pmax pmax
comp=Z,15nm,1.4s
PMR Palmer 50.34 36 P **P** **10 02 10.8 +1.0**
PMR IAmb IAmb 10 02 21.7
comp=Z,15nm,1.4s
MCK McKinley 50.35 33 P **P** **10 02 10.2 +0.3**
MCK pmax pmax
comp=Z,18nm,1.4s
MCK McKinley 50.35 33 P **P** **10 02 10.2 +0.3**
RND Reindeer 50.40 34 P **P** **10 02 09.6 -0.7**
RND pmax pmax
comp=Z,4.0nm,0.8s
RND Reindeer 50.40 34 P **P** **10 02 09.6 -0.7**
RND IAmb IAmb 10 02 11.9
comp=Z,4.0nm,0.8s
GHQ Glory Hole Cre 50.43 36 P **P** **10 02 10.4 -0.2**
MDM Murphy Dome 50.63 31 P **P** **10 02 12.1 +0.1**
WRH Wood River Hil 50.70 32 P **P** **10 02 13.8 +1.4**
WRH IAmb IAmb 10 02 14.8
comp=Z,3.4nm,0.8s

BVAR Borovoye Array 50.78 313 P **P** **10 02 12.4 -0.8**
comp=Z,0.6nm,0.5s,baz=100,slow=4.5,SNR=6.5
TCOL CIGO, UAF Yank 50.79 32 P **P** **10 02 15.1 +2.0**
baz=271
CCB Clear Creek Bu 50.82 32 P **P** **10 02 14.7 +1.4**
CCB IAmb IAmb 10 02 26.3
comp=Z,6.1nm,1.4s
POKR Poker Plat Res 50.96 31 P **P** **10 02 16.3 +1.8**
baz=272
HDA Harding Lake 51.20 32 P **P** **10 02 16.3 +0.1**
HDA IAmb IAmb 10 02 17.8
comp=Z,7.9nm,0.9s
HDA Harding Lake 51.20 32 P **P** **10 02 16.8 +0.6**
baz=273
IL31 51.21 32 P **P** **10 02 17.1 +0.9**
IL31 IAmb IAmb 10 02 17.9
comp=Z,4.0nm,0.7s
ILAR Eielson Array 51.21 32 P **P** **10 02 17.0 +0.7**
ILAR Eielson Array 51.21 32 P **P** **10 02 16.9 +0.7**
comp=Z,3.8nm,0.8s,baz=267,slow=6.1,SNR=36
ARSB Arslanbob 51.73 298 P **P** **10 02 21.1 +0.4**
ARSB IAmb IAmb 10 02 39.9
comp=Z,16nm,1.4s
PAX Paxson 51.95 34 P **P** **10 02 24.2 +2.2**
PAX pmax pmax
comp=Z,5.0nm,1.3s
PAX Paxson 51.95 34 P **P** **10 02 24.2 +2.2**
KNRA Kununurra 52.16 194 P **P** **10 02 22.9 -0.9**
RIDG Independent Ri 52.16 33 P **P** **10 02 25.0 +1.5**
RIDG IAmb IAmb 10 02 38.4
comp=Z,7.7nm,1.2s
DOT Dot Lake 52.52 33 P **P** **10 02 27.1 +1.0**
DOT IAmb IAmb 10 02 29.1
comp=Z,5.5nm,1.1s
SCRK Sand Creek 52.52 33 P **P** **10 02 27.2 +1.0**
SCRK IAmb IAmb 10 02 28.2
comp=Z,6.4nm,0.9s
MENT Mentasta 52.75 34 P **P** **10 02 28.7 +0.9**
MENT IAmb IAmb 10 02 30.8
comp=Z,5.4nm,0.8s
KK31 Karatay Array 52.97 301 P **P** **10 02 29.9 +0.2**
KK31 pmax pmax
comp=Z,10.0nm,1.3s
KK31 Karatay Array 52.97 301 P **P** **10 02 29.9 +0.2**
KK31 IAmb IAmb 10 02 34.4
comp=Z,9.6nm,1.3s
KKAR Karatay Array 52.97 301 P **P** **10 02 30.0 +0.3**
KKAR pmax pmax
comp=Z,10.0nm,1.3s
KKAR Karatay Array 52.97 301 P **P** **10 02 30.0 +0.3**
KKAR IAmb IAmb 10 02 34.4
comp=Z,9.6nm,1.3s
VRDI Verde Repeater 53.10 36 P **P** **10 02 32.3 +1.7**
VRDI IAmb IAmb 10 02 39.8
comp=Z,6.9nm,1.0s
EGAK Eagle 53.65 31 P **P** **10 02 35.0 +0.7**
EGAK IAmb IAmb 10 02 50.9
comp=Z,10nm,1.4s
MESA MESA 53.99 37 P **P** **10 02 38.9 +1.8**
CTGM Chitina Glacie 54.15 36 P **P** **10 02 38.5 +0.2**
CTGM IAmb IAmb 10 02 40.6
comp=Z,6.9nm,0.7s
FITZ Fitzroy Crossi 55.19 197 P **P** **10 02 45.0 -0.9**
comp=Z,8.8nm,0.8s,baz=5.8,slow=6.2,SNR=14
FITZ Fitzroy Crossi 55.19 197 P **P** **10 02 45.2 -0.7**
EPYK Eagle Plains 55.23 29 P **P** **10 02 47.6 +1.8**
EPYK Eagle Plains 55.23 29 P **P** **10 02 47.6 +1.8**
baz=280
WR0 Warramunga Arr 55.55 186 P **P** **10 02 47.6 -0.9**
WRA Warramunga Arr 55.55 187 *ceP* **P** **10 02 47.7 -0.8**
WRA pmax pmax
comp=Z,5.0nm,0.5s
WRA Warramunga Arr 55.55 187 P **P** **10 02 47.3 -1.2**
comp=Z,5.3nm,0.5s,baz=0.7,slow=7.5,SNR=86
HYT Haines Junctio 56.02 36 P **P** **10 02 54.1 +2.4**
HYT IAmb IAmb 10 02 55.5
comp=Z,5.4nm,0.7s
INK Inuvik 56.08 27 P **P** **10 02 53.2 +1.4**
INK pmax pmax
comp=Z,2.0nm,0.7s
INK Inuvik 56.08 27 P **P** **10 02 52.4 +0.5**
comp=Z,2.3nm,0.6s,baz=300,slow=6.7,SNR=21
INK Inuvik 56.08 27 P **P** **10 02 53.2 +1.4**
ARU Arti 56.75 319 *d* *iP* **P** **10 02 56.7 -0.1**
ARU *'PP* **sP** **10 03 13.8 -4.6**
ARU S **S** **10 10 48.0 +2.8**
ARU SS **SS** **10 14 34.5 +1.3**
ARU pmax pmax
comp=Z,5.0nm,0.6s
ARU Arti 56.75 319 P **P** **10 02 56.7 -0.1**
comp=Z,1.3nm,0.3s,baz=52,slow=2.3,SNR=8.2
ARU Arti 56.75 319 P **P** **10 02 56.8 +0.1**
ARU IAmb IAmb 10 02 57.9
comp=Z,5.7nm,0.6s
WHY Whitehorse 57.31 36 P **P** **10 03 02.8 +2.0**
C36M Paulatuk 59.12 24 P **P** **10 03 14.2 +1.0**
C36M Paulatuk 59.12 24 P **P** **10 03 14.1 +1.0**
baz=289
AS31 Alice Springs 59.27 187 P **P** **10 03 13.2 -1.6**
ASAR Alice Springs 59.28 187 P **P** **10 03 11.9 -2.9**
comp=Z,1.2nm,0.6s,baz=356,slow=6.5,SNR=19
PSAD1 Pilbara Seismi 59.96 202 P **P** **10 03 18.8 -0.6**
PSAC2 Pilbara Seismi 60.04 202 P **P** **10 03 19.3 -0.7**
PSAC1 Pilbara Seismi 60.04 202 P **P** **10 03 19.3 -0.8**
PSAB2 Pilbara Seismi 60.05 202 P **P** **10 03 19.3 -0.7**
PSAA2 Pilbara Seismi 60.06 202 P **P** **10 03 19.2 -1.0**
PSA00 Pilbara Seismi 60.07 202 P **P** **10 03 19.5 -0.7**
PSAA3 Pilbara Seismi 60.07 202 P **P** **10 03 19.5 -0.8**
PSAB1 Pilbara Seismi 60.07 202 P **P** **10 03 19.4 -0.8**
PSAA1 Pilbara Seismi 60.08 202 P **P** **10 03 19.3 -1.0**
PSAD2 Pilbara Seismi 60.08 202 P **P** **10 03 18.8 -1.5**
PSAB3 Pilbara Seismi 60.09 202 P **P** **10 03 19.2 -1.1**
PSAC3 Pilbara Seismi 60.12 202 P **P** **10 03 19.9 -0.6**
PSAD3 Pilbara Seismi 60.16 202 P **P** **10 03 20.1 -0.7**
RES Resolute Bay 64.20 14 P **P** **10 03 48.1 +0.9**
RES pmax pmax
comp=Z,4.0nm,0.7s
RES Resolute Bay 64.20 14 P **P** **10 03 48.1 +0.9**
RES IAmb IAmb 10 03 48.5
comp=Z,3.5nm,0.7s
ARCES ARCESS Array B 64.95 339 P **P** **10 03 52.2 0.0**
comp=Z,3.3nm,0.8s,baz=52,slow=8.0,SNR=8.3
YKA Yellowknife Ar 65.52 29 P **P** **10 03 56.0 0.0**
YKA Yellowknife Ar 65.52 29 P **P** **10 03 56.0 0.0**
comp=Z,2.0nm,0.7s,baz=300,slow=6.6,SNR=45
FORT Forrest 67.04 191 P **P** **10 04 05.2 -0.8**
DAG Danmarks Havn 67.08 355 *i* P **P** **10 04 04.9 -0.8**
DAG pmax pmax
comp=Z,5.0nm,0.7s
DAG Danmarks Havn 67.08 355 *i* P **P** **10 04 04.9 -0.8**
comp=Z,4.7nm,0.7s
NLWA Neilton Lookou 68.40 47 P **P** **10 04 16.3 +1.7**
NLWA IAmb IAmb 10 04 18.0
comp=Z,9.8nm,1.1s
OBN Obninsk 68.61 323⇑ *eP* **P** **10 04 18.1 +2.4**
OBN *e* 10 06 48.4
OBN pmax pmax
comp=Z,4.0nm,0.9s
D03D Eldon 68.79 46 P **P** **10 04 18.8 +1.9**
baz=300
B05A Bryant 69.00 45 P **P** **10 04 20.3 +2.0**
baz=300
FIA1 FINESS Array S 69.58 332 P **P** **10 04 21.7 +0.1**
FIA1 IAmb IAmb 10 04 22.5
comp=Z,4.5nm,0.7s
FINES FINESS Array B 69.58 332 *ceP* **P** **10 04 21.6 0.0**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES FINESS Array B 69.58 332 P **P** **10 04 21.2 -0.4**
comp=Z,3.6nm,0.6s,baz=73,slow=6.7,SNR=17
E04D Cinebar 69.59 47 P **P** **10 04 23.8 +1.9**
baz=300
F04A Amboy 69.99 47 P **P** **10 04 26.3 +1.8**
F04A IAmb IAmb 10 04 27.0
comp=Z,12nm,0.9s
LTY Liberty 70.34 46 P **P** **10 04 27.6 +0.9**
LTY IAmb IAmb 10 04 28.8
comp=Z,12nm,1.4s
H04D Lebanon 70.52 49 P **P** **10 04 29.7 +1.9**
baz=301
B08A Colville Reser 70.53 44 P **P** **10 04 29.2 +1.4**
B08A IAmb IAmb 10 04 30.1
comp=Z,9.6nm,1.4s
I03D Drain, OR 70.57 50 P **P** **10 04 30.0 +2.0**
baz=301

H04A Detroit Lake 70.78 48 P **P** **10 04 30.8 +1.5**
H04A IAmb IAmb 10 04 31.7
comp=Z,6.4nm,0.9s
KBO Bosley Butte 70.78 52 P **P** **10 04 31.4 +2.0**
KBO IAmb IAmb 10 04 43.0
comp=Z,21nm,1.3s
K02D Willamette Mer 70.89 51 P **P** **10 04 31.8 +1.7**
baz=301
KIV Kislovodsk 71.06 311 *eP* **P** **10 04 32.6 +1.5**
KIV pmax pmax
comp=Z,13nm,0.9s
I04A Tendick Farm, 71.10 49 P **P** **10 04 32.6 +1.3**
baz=301
KRMB Red Mountain 71.34 52 P **P** **10 04 34.5 +1.6**
KRMB IAmb IAmb 10 04 46.4
comp=Z,14nm,1.5s
HUMO Hull Mountain 71.38 51 P **P** **10 04 35.0 +2.0**
G06A Carlson Farm, 71.43 47 P **P** **10 04 34.3 +1.0**
C09A Chrisman Ranch 71.43 44 P **P** **10 04 33.4 +0.1**
C09A IAmb IAmb 10 04 35.3
comp=Z,16nm,1.2s
HAWA Hanford 71.46 46 P **P** **10 04 32.9 -0.5**
I05D Terrebonne, OR 71.47 48 P **P** **10 04 35.2 +1.6**
baz=302
NWAO Narrogin (SRO) 71.51 200 P **P** **10 04 32.9 -0.7**
NWAO pmax pmax
comp=Z,27nm,1.5s
NWAO Narrogin (SRO) 71.51 200 P **P** **10 04 32.5 -1.1**
comp=Z,4.9nm,0.8s,baz=56,slow=11,SNR=2.7
NWAO Narrogin (SRO) 71.51 200 P **P** **10 04 32.9 -0.7**
J04D Umpqua Nationa 71.58 50 P **P** **10 04 36.0 +1.6**
baz=302
JCC Jacoby Creek, 71.62 53 P **P** **10 04 35.4 +1.0**
E08A Dider Farm, El 71.69 46 P **P** **10 04 36.6 +1.9**
E08A IAmb IAmb 10 04 37.0
comp=Z,6.3nm,0.8s
NEW Newport 71.83 43 P **P** **10 04 37.0 +1.4**
NEW pmax pmax
comp=Z,5.0nm,0.9s
NEW Newport 71.83 43 P **P** **10 04 37.0 +1.4**
NEW IAmb IAmb 10 04 37.3
comp=Z,4.9nm,0.8s
NEW Newport 71.83 43 P **P** **10 04 37.2 +1.6**
baz=303
L04D Klamath Falls 71.99 51 P **P** **10 04 38.0 +1.2**
baz=302,SNR=6.3
YBH Yreka Blue Hor 71.99 51 P **P** **10 04 37.5 +0.7**
YBH pmax pmax
comp=Z,5.0nm,1.1s
YBH Yreka Blue Hor 71.99 51 P **P** **10 04 37.5 +0.7**
PINE Pine Mountain 72.01 49 P **P** **10 04 39.1 +2.2**
PINE IAmb IAmb 10 04 40.0
comp=Z,10nm,0.8s
SUMG Summit 72.08 360 P **P** **10 04 38.4 +1.3**
SUMG pmax pmax
comp=Z,11nm,0.9s
SUMG Summit 72.08 360 *i* P **P** **10 04 38.0 +0.9**
comp=Z,30nm,0.8s
SUMG Summit 72.08 360 P **P** **10 04 38.4 +1.3**
SUMG IAmb IAmb 10 04 39.0
comp=Z,11nm,0.9s
M02C Callahan 72.08 52 P **P** **10 04 39.6 +2.3**
baz=302
J05D Fort Rock, OR 72.10 49 P **P** **10 04 39.3 +1.8**
baz=302
K04D Chiloquin, OR 72.12 50 P **P** **10 04 39.4 +1.8**
baz=302
E09A Wood Farm, Sta 72.21 45 P **P** **10 04 39.2 +1.4**
E09A IAmb IAmb 10 04 40.2
comp=Z,7.7nm,0.9s
N02D Trinity Center 72.40 52 P **P** **10 04 40.7 +1.5**
baz=302,SNR=5.4
KCPM Cahto Peak 72.51 54 P **P** **10 04 42.0 +2.1**
KCPM IAmb IAmb 10 04 42.2
comp=Z,6.3nm,0.8s
M04C Macdoel 72.52 51 P **P** **10 04 41.7 +1.8**
baz=302
K05A Summer Lake 72.61 50 P **P** **10 04 41.9 +1.3**
K05A IAmb IAmb 10 04 44.1
comp=Z,12nm,1.1s
O02D Mt. Diablo Mer 72.77 53 P **P** **10 04 43.0 +1.6**
baz=302,SNR=6.9
F10A Beach Ranch, E 73.03 45 P **P** **10 04 44.2 +1.3**
F10A IAmb IAmb 10 04 47.2
comp=Z,5.1nm,0.9s
O03E Paynes Creek 73.34 52 P **P** **10 04 46.2 +1.4**
baz=303
MOD Modoc Plateau 73.42 50 P **P** **10 04 47.0 +1.7**
BMO Blue Mountains 73.61 46 P **P** **10 04 47.7 +1.4**
BMO pmax pmax
comp=Z,8.0nm,1.1s
BMO Blue Mountains 73.61 46 P **P** **10 04 47.7 +1.4**
BMO IAmb IAmb 10 04 48.7
comp=Z,7.7nm,1.1s
JTMT Jette 73.70 43 P **P** **10 04 48.3 +1.5**
ORV Oroville 73.94 53 P **P** **10 04 49.5 +1.3**
ORV pmax pmax
comp=Z,3.0nm,0.8s
ORV Oroville 73.94 53 P **P** **10 04 49.5 +1.3**
WVOR Wild Horse Val 74.16 49 P **P** **10 04 50.7 +1.1**
WVOR pmax pmax
comp=Z,6.0nm,1.0s
WVOR Wild Horse Val 74.16 49 P **P** **10 04 50.7 +1.1**
WVOR IAmb IAmb 10 04 52.1
comp=Z,6.2nm,1.0s
MSO Missoula 74.42 43 P **P** **10 04 51.5 +0.5**
MSO IAmb IAmb 10 04 52.7
comp=Z,7.6nm,1.1s
MSO Missoula 74.42 43 P **P** **10 04 51.5 +0.5**
baz=306,SNR=5.9
BEKR Beckworth 74.50 52 P **P** **10 04 53.0 +1.3**
BEKR IAmb IAmb 10 04 53.9
comp=Z,6.2nm,0.8s
AKASG Malin Array Be 74.78 322 P **P** **10 04 51.9 -1.0**
comp=Z,3.5nm,0.7s,baz=47,slow=6.1,SNR=13
AKBB Malin Array Si 74.78 322 P **P** **10 04 52.5 -0.4**
AKBB pmax pmax
comp=Z,4.0nm,0.9s
AKBB Malin Array Si 74.78 322 P **P** **10 04 52.5 -0.4**
NC405 NORSAR Array S 74.87 337 P **P** **10 04 53.2 0.0**
NC303 NORSAR Array S 74.89 337 P **P** **10 04 53.5 +0.1**
NC204 NORSAR Array S 75.05 337 P **P** **10 04 54.7 +0.4**
NB201 NORSAR Array S 75.05 337 P **P** **10 04 54.7 +0.4**
NB2 NORSAR Subarra 75.08 337 P **P** **10 04 54.2 -0.3**
comp=Z,7.4nm,0.8s,baz=41,slow=5.9
NOA NORSAR Array B 75.08 337 P **P** **10 04 54.2 -0.3**
comp=Z,1.7nm,0.6s,baz=40,slow=5.9,SNR=6.7
NC602 NORSAR Array S 75.21 337 P **P** **10 04 55.0 -0.2**
PAHR Pah Rah Range 75.22 52 P **P** **10 04 57.1 +1.3**
PAHR IAmb IAmb 10 04 58.0
comp=Z,5.4nm,1.0s
MFID Camas Ranch 75.31 47 P **P** **10 04 58.0 +1.8**
MFID IAmb IAmb 10 04 58.1
comp=Z,5.1nm,0.8s
PNTR Pine Nut 75.42 52 P **P** **10 04 58.8 +1.7**
CMB Columbia Colle 75.50 54 P **P** **10 04 58.5 +1.1**
CMB pmax pmax
comp=Z,10.0nm,1.3s
CMB Columbia Colle 75.50 54 P **P** **10 04 58.5 +1.1**
CMB IAmb IAmb 10 04 59.6
comp=Z,10nm,1.2s
YERR Yerington 75.71 52 P **P** **10 05 00.6 +1.9**
YERR IAmb IAmb 10 05 01.2
comp=Z,11nm,1.3s
WAKR Walker 75.86 53 P **P** **10 05 01.6 +2.1**
EGMT Eagleton 75.98 41 P **P** **10 05 01.2 +1.3**
EGMT IAmb IAmb 10 05 01.9
comp=Z,10nm,0.9s
EGMT Eagleton 75.98 41 P **P** **10 05 01.1 +1.2**
baz=308
RYN Ryan 76.38 52 P **P** **10 05 04.3 +1.8**
KVN Kaiserville 76.41 52 P **P** **10 05 03.8 +1.2**
KVN pmax pmax
comp=Z,16nm,1.4s
KVN Kaiserville 76.41 52 P **P** **10 05 03.8 +1.2**
KVN IAmb IAmb 10 05 05.2
comp=Z,16nm,1.4s
NVAR Mina Array Bea 76.63 52 P **P** **10 05 05.7 +1.7**
comp=Z,3.1nm,0.7s,baz=298,slow=5.5,SNR=31
NV11 Mina Array Sit 76.72 52 P **P** **10 05 06.1 +1.7**
YHL Hebgen Lake 77.15 44 P **P** **10 05 08.6 +1.8**
YHB Horse Butte 77.20 44 P **P** **10 05 08.6 +1.6**
ELK Elko 77.22 49 P **P** **10 05 09.1 +1.8**
ELK pmax pmax
comp=Z,6.0nm,1.2s

ELK	**Elko**	**77.22**	**49**	P	**P**	**10 05 09.1**	**+1.8**
VES	**Vestal, Richgr**	**77.60**	**55**	P	**P**	**10 05 09.7**	**+0.6**
	baz=305						
PKM	**Mcpherson Peak**	**77.65**	**56**	P	**P**	**10 05 10.9**	**+1.1**
	baz=305						
YNE	**Yellowstone No**	**77.71**	**43**	P	**P**	**10 05 11.8**	**+1.9**
YPP	**Pitchstone Pla**	**77.72**	**44**	P	**P**	**10 05 13.0**	**+2.9**
H17A	**Grant Village**	**77.77**	**44**	P	**P**	**10 05 13.5**	**+3.2**
	baz=308						
CWC	**Cottonwood Cre**	**77.92**	**54**	P	**P**	**10 05 12.4**	**+1.3**
	baz=305						
SBC	**Santa Barbara**	**77.97**	**56**	P	**P**	**10 05 13.0**	**+1.8**
	baz=305						
RLMT	**Red Lodge**	**78.05**	**43**	P	**P**	**10 05 13.5**	**+1.7**
RLMT	**Red Lodge**	**78.05**	**43**	P	**P**	**10 05 13.2**	**+1.5**
	baz=309						
GRAC	**Grapevine Rang**	**78.06**	**53**	P	**P**	**10 05 13.6**	**+1.8**
	baz=306						
MOOW	**Moose Ponds**	**78.07**	**44**	P	**P**	**10 05 14.1**	**+2.1**
ISA	**Isabella, Lake**	**78.11**	**55**	P	**P**	**10 05 12.3**	**+0.3**
	baz=305						
TPAW	**Teton Pass**	**78.11**	**45**	P	**P**	**10 05 13.4**	**+1.1**
TPAW				IAmb	IAmb	10 05 15.0	
	comp=Z,5.6nm,0.7s						
SNOW	**Snow King Moun**	**78.24**	**45**	P	**P**	**10 05 13.9**	**+0.9**
REDW	**Red Top Meadow**	**78.25**	**45**	P	**P**	**10 05 13.6**	**+0.6**
R11A	**Troy Canyon, C**	**78.41**	**51**	P	**P**	**10 05 15.3**	**+1.4**
R11A				IAmb	IAmb	10 05 16.4	
	comp=Z,8.7nm,1.4s						
R11A	**Troy Canyon, C**	**78.41**	**51**	P	**P**	**10 05 15.3**	**+1.4**
	baz=306						
BGU	**Big Grassy Mou**	**78.45**	**48**	P	**P**	**10 05 15.2**	**+1.1**
AHID	**Auburn Hatcher**	**78.47**	**45**	P	**P**	**10 05 15.3**	**+1.1**
AHID				IAmb	IAmb	10 05 16.2	
	comp=Z,3.1nm,0.6s						
MPMC	**Manual Prospec**	**78.53**	**54**	P	**P**	**10 05 15.5**	**+0.9**
	baz=306						
SPUT	**South Promonto**	**78.57**	**47**	P	**P**	**10 05 16.1**	**+1.4**
LAO	**LASA Array**	**78.69**	**40**	P	**P**	**10 05 15.6**	**+0.6**
LAO				IAmb	IAmb	10 05 17.2	
	comp=Z,5.2nm,0.8s						
LAO	**LASA Array**	**78.69**	**40**	P	**P**	**10 05 16.4**	**+1.3**
	baz=310						
FURC	**Furnace Creek,**	**78.70**	**53**	P	**P**	**10 05 16.7**	**+1.5**
	baz=306						
LRMC	**Laurel Mtn Rad**	**78.74**	**54**	P	**P**	**10 05 16.7**	**+1.1**
	baz=306						
BUR08	**Bucovina Ar. S**	**78.77**	**321**	P	**P**	**10 05 15.9**	**+0.3**
TPNV	**Topopah Spring**	**78.81**	**53**	P	**P**	**10 05 17.4**	**+1.3**
TPNV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TPNV	**Topopah Spring**	**78.81**	**53**	P	**P**	**10 05 17.4**	**+1.3**
TPNV				IAmb	IAmb	10 05 18.4	
	comp=Z,7.0nm,1.0s						
TPNV	**Topopah Spring**	**78.81**	**53**	P	**P**	**10 05 17.5**	**+1.3**
	baz=306						
EDW2	**Edwards Air Fo**	**78.88**	**55**	P	**P**	**10 05 17.3**	**+1.0**
	baz=306,SNR=6.4						
HWUT	**Hardware Ranch**	**78.91**	**47**	P	**P**	**10 05 18.1**	**+1.5**
HWUT				IAmb	IAmb	10 05 19.2	
	comp=Z,9.2nm,1.1s						
BRTR	**Keskin Array B**	**79.02**	**311**	*i* P	**P**	**10 05 19.2**	**+2.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	**79.02**	**311**	P	**P**	**10 05 17.8**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=69,slow=6.8,SNR=3.7						
DUG	**Dugway, Tooele**	**79.03**	**48**	P	**P**	**10 05 17.9**	**+0.7**
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DUG	**Dugway, Tooele**	**79.03**	**48**	P	**P**	**10 05 17.9**	**+0.7**
DUG				IAmb	IAmb	10 05 19.8	
	comp=Z,5.6nm,0.9s						
DUG	**Dugway, Tooele**	**79.03**	**48**	P	**P**	**10 05 18.6**	**+1.4**
	baz=306						
TCUT	**Toone Canyon**	**79.31**	**47**	P	**P**	**10 05 20.0**	**+1.2**
BW06	**Boulder Array**	**79.36**	**45**	P	**P**	**10 05 19.4**	**+0.4**
BW06	**Boulder Array**	**79.36**	**45**	P	**P**	**10 05 19.9**	**+0.8**
	baz=309						
PD31	**Pinedale Array**	**79.36**	**45**	P	**P**	**10 05 19.4**	**+0.4**
PDAR	**Pinedale Array**	**79.36**	**45**	P	**P**	**10 05 19.7**	**+0.6**
	comp=Z,2.4nm,0.6s,baz=267,slow=1.3,SNR=38						
PSUT	**Pine Spring**	**79.39**	**50**	P	**P**	**10 05 21.1**	**+1.8**
GSC	**Goldstone, Bar**	**79.42**	**54**	P	**P**	**10 05 20.7**	**+1.4**
GSC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GSC	**Goldstone, Bar**	**79.42**	**54**	P	**P**	**10 05 20.7**	**+1.4**
GSC	**Goldstone, Bar**	**79.42**	**54**	P	**P**	**10 05 20.4**	**+1.0**
	baz=306						
CIS	**Catalina Islan**	**79.46**	**57**	P	**P**	**10 05 20.6**	**+1.1**
	baz=306						
BFSC	**Mount Baldy Ra**	**79.48**	**55**	P	**P**	**10 05 21.4**	**+1.7**
	baz=306						
NLU	**North Lily Min**	**79.62**	**48**	P	**P**	**10 05 22.2**	**+1.7**
SHPR	**Sheep Range**	**79.78**	**52**	P	**P**	**10 05 22.2**	**+0.8**
BBRC	**Big Bear Solar**	**79.96**	**55**	P	**P**	**10 05 23.8**	**+1.3**
	baz=306						
HEC	**Hector,Ludlow**	**80.01**	**54**	P	**P**	**10 05 24.0**	**+1.5**
	baz=306						
MURC	**Murrieta**	**80.16**	**56**	P	**P**	**10 05 24.3**	**+1.0**
	baz=306						
RAYN	**Ar Rayn**	**80.25**	**292**	P	**P**	**10 05 23.4**	**-0.6**
RAYN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RAYN	**Ar Rayn**	**80.25**	**292**	P	**P**	**10 05 23.4**	**-0.6**
CCUT	**Cedar City**	**80.30**	**51**	P	**P**	**10 05 25.0**	**+0.7**
MSU	**Marysvale**	**80.45**	**49**	P	**P**	**10 05 26.5**	**+1.5**
MSU	**Marysvale**	**80.45**	**49**	P	**P**	**10 05 26.5**	**+1.5**
GMRC	**Granite Mounta**	**80.48**	**54**	P	**P**	**10 05 26.5**	**+1.3**
	baz=307						
109C	**Camp Elliot, M**	**80.64**	**56**	P	**P**	**10 05 26.4**	**+0.5**
109C				IAmb	IAmb	10 05 27.8	
	comp=Z,7.8nm,0.6s						
109C	**Camp Elliot, M**	**80.64**	**56**	P	**P**	**10 05 27.3**	**+1.4**
	baz=306						
PFO	**Pinyon Flats O**	**80.65**	**55**	P	**P**	**10 05 26.7**	**+0.6**
PFO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
PFO	**Pinyon Flats O**	**80.65**	**55**	P	**P**	**10 05 26.7**	**+0.6**
PFO				IAmb	IAmb	10 05 28.0	
	comp=Z,9.4nm,1.1s						
PFO	**Pinyon Flats O**	**80.65**	**55**	P	**P**	**10 05 26.9**	**+0.9**
	baz=307,SNR=8.0						
XPFO	**Pion Flat**	**80.66**	**55**	P	**P**	**10 05 26.8**	**+0.7**
XPFO				IAmb	IAmb	10 05 28.0	
	comp=Z,10nm,1.2s						
LCMT	**Little Creek M**	**80.70**	**51**	P	**P**	**10 05 27.2**	**+0.9**
BELC	**Belle Mtn. Jos**	**80.73**	**55**	P	**P**	**10 05 26.9**	**+0.4**
	baz=307,SNR=6.8						
P17A	**Butcher Ranch,**	**80.73**	**48**	P	**P**	**10 05 27.1**	**+0.6**
RDMU	**Red Mountain**	**80.74**	**46**	P	**P**	**10 05 27.9**	**+1.3**
KNB	**Kanab**	**80.97**	**51**	P	**P**	**10 05 30.1**	**+2.4**
KNB				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KNB	**Kanab**	**80.97**	**51**	P	**P**	**10 05 30.1**	**+2.4**
BAR	**Barrett**	**81.06**	**56**	P	**P**	**10 05 28.9**	**+0.7**
BAR				IAmb	IAmb	10 05 30.0	
	comp=Z,6.5nm,0.8s						
SRU	**San Rafael Swe**	**81.09**	**48**	P	**P**	**10 05 29.5**	**+1.2**
SRU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SRU	**San Rafael Swe**	**81.09**	**48**	P	**P**	**10 05 29.5**	**+1.2**
MONP2	**Monument Peak**	**81.11**	**56**	P	**P**	**10 05 29.6**	**+1.0**
	baz=307						
K22A	**Casper**	**81.15**	**43**	P	**P**	**10 05 29.3**	**+0.7**
	baz=311						
IRM	**Iron Mountain**	**81.20**	**54**	P	**P**	**10 05 29.7**	**+0.9**
	baz=307,SNR=5.7						
ULM	**Lac du Bonnet**	**81.22**	**33**	P	**P**	**10 05 28.5**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=310,slow=6.4,SNR=6.0						
BC3	**Big Chuckawall**	**81.30**	**55**	P	**P**	**10 05 30.6**	**+1.1**
	baz=307						
VYHS	**Vyhne**	**81.30**	**325**	*e*P	**P**	**10 05 28.4**	**-0.7**
VYHS	**Vyhne**	**81.30**	**325**	*e*P	**P**	**10 05 28.4**	**-0.7**
W13A	**Hualapai Mount**	**81.46**	**53**	P	**P**	**10 05 31.6**	**+1.2**
IKP	**In-Ko-Pah, Jac**	**81.46**	**56**	P	**P**	**10 05 31.7**	**+1.4**
	baz=307						
SWSC	**Sam W. Stewart**	**81.49**	**56**	P	**P**	**10 05 31.6**	**+1.3**
	baz=307						
RSSD	**Black Hills**	**81.54**	**41**	P	**P**	**10 05 31.7**	**+1.0**
	baz=312						
U15A	**North Rim**	**81.66**	**51**	P	**P**	**10 05 33.3**	**+1.7**
U15A				IAmb	IAmb	10 05 34.2	
	comp=Z,6.4nm,0.7s						
O20A	**White River Ci**	**81.80**	**46**	P	**P**	**10 05 33.1**	**+1.1**
O20A				IAmb	IAmb	10 05 34.0	
	comp=Z,6.6nm,0.9s						
O20A	**White River Ci**	**81.80**	**46**	P	**P**	**10 05 33.2**	**+1.1**
	baz=310						
CLL	**Collm**	**81.80**	**330**	*e*P	**P**	**10 05 32.0**	**+0.4**
CLL	**Collm**	**81.80**	**330**	*e*P	**P**	**10 05 32.0**	**+0.4**
Y12C	**Blythe**	**81.86**	**54**	P	**P**	**10 05 33.7**	**+1.5**
Y12C				IAmb	IAmb	10 05 34.5	
	comp=Z,6.0nm,0.8s						
Y12C	**Blythe**	**81.86**	**54**	P	**P**	**10 05 33.8**	**+1.5**
	baz=308						
GLA	**Glanis**	**82.08**	**55**	P	**P**	**10 05 35.0**	**+1.4**
	baz=308						
N23A	**Red Feather La**	**82.63**	**44**	P	**P**	**10 05 38.4**	**+1.8**
	baz=311						
Y14A	**Wickenburg**	**82.74**	**53**	P	**P**	**10 05 38.2**	**+1.2**
WUAZ	**Wupatki**	**82.81**	**51**	P	**P**	**10 05 39.4**	**+1.9**
WUAZ				IAmb	IAmb	10 05 40.0	
	comp=Z,9.6nm,1.0s						
WUAZ	**Wupatki**	**82.81**	**51**	P	**P**	**10 05 39.4**	**+1.9**
	baz=309						
113A	**Mohawk Valley,**	**82.96**	**55**	P	**P**	**10 05 39.4**	**+1.3**
X16A	**Lo Mia Camp, P**	**83.46**	**52**	P	**P**	**10 05 42.1**	**+1.3**
X16A				IAmb	IAmb	10 05 43.4	
	comp=Z,6.9nm,1.1s						
MVCO	**Mesa Verde**	**83.53**	**48**	P	**P**	**10 05 42.5**	**+1.3**
MVCO				IAmb	IAmb	10 05 43.4	
	comp=Z,6.9nm,0.9s						
MVCO	**Mesa Verde**	**83.53**	**48**	P	**P**	**10 05 42.6**	**+1.4**
	baz=310						
ISCO	**Idaho Springs**	**83.55**	**45**	P	**P**	**10 05 42.5**	**+1.2**
	baz=312						
214A	**Organ Pipe Nat**	**84.09**	**55**	P	**P**	**10 05 45.3**	**+1.3**
	baz=308						
W18A	**Petrified Fore**	**84.10**	**51**	P	**P**	**10 05 44.3**	**+0.2**
W18A	**Petrified Fore**	**84.10**	**51**	P	**P**	**10 05 45.1**	**+1.0**
	baz=310						
S22A	**4UR Ranch, Cre**	**84.19**	**47**	P	**P**	**10 05 45.7**	**+1.1**
S22A				IAmb	IAmb	10 05 47.3	
	comp=Z,4.8nm,0.8s						
S22A	**4UR Ranch, Cre**	**84.19**	**47**	P	**P**	**10 05 46.2**	**+1.6**
	baz=311,SNR=9.3						
X18A	**Snowflake**	**84.34**	**51**	P	**P**	**10 05 46.6**	**+1.3**
X18A				IAmb	IAmb	10 05 47.6	
	comp=Z,3.5nm,0.8s						
SDCO	**Great Sand Dun**	**84.97**	**46**	P	**P**	**10 05 50.3**	**+1.7**
SDCO	**Great Sand Dun**	**84.97**	**46**	P	**P**	**10 05 49.8**	**+1.2**
	baz=312,SNR=5.9						
TUC	**Tucson**	**85.21**	**53**	P	**P**	**10 05 50.4**	**+0.8**
TUC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TUC	**Tucson**	**85.21**	**53**	P	**P**	**10 05 50.4**	**+0.8**
TUC	**Tucson**	**85.21**	**53**	P	**P**	**10 05 50.6**	**+1.0**
	baz=310						
ECSD	**EROS Data Cent**	**85.63**	**37**	P	**P**	**10 05 51.7**	**+0.3**
	baz=317						
T25A	**Trinidad**	**86.03**	**46**	P	**P**	**10 05 55.2**	**+1.5**
T25A				IAmb	IAmb	10 05 55.9	
	comp=Z,4.1nm,0.8s						
T25A	**Trinidad**	**86.03**	**46**	P	**P**	**10 05 54.9**	**+1.2**
	baz=313						
ANMO	**Albuquerque**	**86.25**	**49**	P	**P**	**10 05 56.4**	**+1.5**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANMO	**Albuquerque**	**86.25**	**49**	P	**P**	**10 05 56.4**	**+1.5**
ANMO	**Albuquerque**	**86.25**	**49**	P	**P**	**10 05 56.0**	**+1.1**
	baz=312						
SCHQ	**Schefferville**	**86.95**	**15**	P	**P**	**10 05 58.0**	**+0.3**
	comp=Z,3.3nm,0.7s,baz=0.0,slow=4.0,SNR=9.6						
SCHQ	**Schefferville**	**86.95**	**15**	P	**P**	**10 05 58.3**	**+0.7**
SCHQ				IAmb	IAmb	10 06 07.8	
	comp=Z,6.4nm,1.4s						
AMTX	**Amarillo**	**89.18**	**46**	P	**P**	**10 06 09.8**	**+1.0**
	baz=314						
LSQQ	**Lebel-sur-Quev**	**89.44**	**23**	P	**P**	**10 06 09.8**	**+0.3**
	baz=331						
H47A	**Mio**	**90.58**	**30**	P	**P**	**10 06 15.8**	**+0.9**
	baz=325						
LPIG	**La Paz**	**90.75**	**59**	LR	LR	10 47 41.4	
	comp=Z,23nm,18.7s,baz=48,slow=36						
WMOK	**Wichita Mounta**	**90.97**	**45**	P	**P**	**10 06 17.9**	**+0.8**
	baz=316						
TXAR	**Lajitas Array**	**91.77**	**52**	P	**P**	**10 06 21.8**	**+0.9**
	comp=Z,0.9nm,0.6s,baz=311,slow=2.5,SNR=9.6						
255A	**Hazlehurst**	**101.78**	**36**	P	**Pdif**	**10 07 05.8**	**-0.2**
	baz=326						
Z59A	**Georgetown, SC**	**102.16**	**33**	P	**Pdif**	**10 07 07.4**	**-0.3**
	baz=328						
TORD	**Torodi Ar. Bea**	**117.58**	**313**	PKP	**PKPdf**	**10 11 58.0**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=330,slow=2.9,SNR=3.4						
LPAZ	**La Paz**	**148.26**	**60**	PKPbc	**PKPbc**	**10 12 59.9**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=343,slow=4.4,SNR=12						

NIED ***17*** *10:00:00,37˚.10N×143˚.30E,h5km,Mw4.1 Best double couple: M0 1.72000×10^15 NP1:φs=200.00000°,δ72.00000°, λ-90.00000°. NP2:φs=19.00000°,δ18.00000°,λ-91.00000°.*

IDC ***17*** *10:00:51.9±0.6,36˚.97N×143˚.44E,h0km,mb4.0/18, mb1 4.2/23,mb1mx4.1/47,mbtmp4.1/23,ML3.6/5,MS3.1/6, Ms1 3.1/6,ms1mx2.7/56,Error ellipse: s-maj=16.5km s-min=14.9km az=158.0*

JMA ***17*** *10:00:54.6±0.2,37˚.07N×143˚.32E,h56km,M4.0*

NEIC ***17*** *10:00:57.1±2.1,37˚.05N±0˚.06×143˚.4E±0˚.1,h34km±5km, mb4.4/13,Error ellipse: s-maj=14.9km s-min=8.1km az=112.0*

ISC 17 10:00:53.9±0.6,37˚.11N±0˚.05×143˚.31E±0˚.06,h10km,n74, σ1$55/82,**mb4.2/24,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JIKH	**Ishinomakikobu**	**1.89**	**310**	P		**Pn**	**10 01 25.6**	**-0.7**
JIKH				S		**Sn**	**10 01 48.2**	**-2.0**
JFK	**Kawauchi**	**1.96**	**278**	P		**Pn**	**10 01 26.5**	**-0.8**
ONAJ	**Iwakimizuishiy**	**2.01**	**270**	P		**Pn**	**10 01 26.9**	**-1.0**
ONAJ				*e*S		**Sn**	**10 01 51.3**	**-1.9**
JMST	**Minamisoumatoc**	**2.03**	**288**	P		**Pn**	**10 01 27.4**	**-0.7**
JMST				*e*S		**Sn**	**10 01 51.6**	**-1.8**
JIO	**Ouri**	**2.05**	**311**	P		**Pn**	**10 01 28.1**	**-0.4**
JIO				*e*S		**Sn**	**10 01 51.8**	**-2.4**
JMM	**Marumori**	**2.14**	**291**	P		**Pn**	**10 01 29.2**	**-0.5**
JFT	**Otama**	**2.41**	**281**	P		**Pn**	**10 01 33.6**	**+0.2**
JFT				*e*S		**Sn**	**10 02 01.9**	**-1.0**
JMK	**Ichinoseki**	**2.47**	**319**	P		**Pn**	**10 01 33.8**	**-0.4**
JOM	**Ohasama**	**2.84**	**327**	P		**Pn**	**10 01 39.1**	**-0.3**
JOM				*e*S		**Sn**	**10 02 12.2**	**-1.5**
JYK	**Kaneyama**	**2.95**	**309**	P		**Pn**	**10 01 41.0**	**+0.2**
BSO1	**Boso 1**	**3.10**	**218**	P		**Pn**	**10 01 41.3**	**-1.1**
JAG	**Ashikaga**	**3.17**	**259**	P		**Pn**	**10 01 43.3**	**-0.6**
JANG	**Nango**	**3.55**	**337**	P		**Pn**	**10 01 48.1**	**-0.9**
JANG				*e*S		**Sn**	**10 02 27.6**	**-3.4**
JRY	**Ryogami san**	**3.71**	**254**	P		**Pn**	**10 01 50.6**	**-0.8**
JRY				*e*S		**Sn**	**10 02 31.2**	**-4.0**
JOD2	**Odawara 2**	**3.88**	**243**	P		**Pn**	**10 01 52.3**	**-1.4**
JOD2				S		**Sn**	**10 02 35.3**	**-4.0**
MJAR	**Matsushiro Arr**	**4.13**	**264**	Pn		**Pn**	**10 01 57.5**	**+0.4**
	1.8nm,0.3s,baz=80,slow=9.7,SNR=94							
MJAR				Sn		**Sn**	**10 02 44.5**	**-1.0**
	0.6nm,0.3s,baz=78,slow=32,SNR=3.3							
MJAR				LR		LR	10 04 00.1	
	comp=Z,135nm,20.8s,baz=95,slow=45							
MAJO	**Matsushiro**	**4.13**	**264**			**Pn**	**10 01 58.1**	**+0.9**
MAT	**Matsushiro**	**4.13**	**264**	P		**Pn**	**10 01 57.8**	**+0.7**
MAT	**Matsushiro**	**4.13**	**264**	P		**Pn**	**10 01 58.1**	**+1.0**
MAT				S		**Sn**	**10 02 49.0**	**+3.4**
MJB9	**Matsu-Tunnel**	**4.14**	**264**			**Pn**	**10 01 58.0**	**+0.9**
JYN	**Shimob**	**4.17**	**249**	P		**Pn**	**10 01 57.6**	**-0.1**
JOT	**Ohata**	**4.61**	**338**	P		**Pn**	**10 02 04.3**	**+0.6**
JOT				*e*S		**Sn**	**10 02 54.6**	**-2.7**
ERM	**Erimo**	**4.90**	**359**	Pn		**Pn**	**10 02 06.4**	**-1.2**
ERM				Sn		**Sn**	**10 03 03.9**	**-0.4**
JHJ2	**Mitsune**	**4.91**	**217**	P		Pn	10 02 04.4	-3.4
JHJ2				*e*S		Sn	10 02 57.7	-7.0
JHJ2	**Mitsune**	**4.91**	**217**	Pn		**Pn**	**10 02 07.3**	**-0.5**
JHJ2				Sn		**Sn**	**10 03 00.8**	**-3.9**
INU	**Inuyama**	**5.38**	**253**			**Pn**	**10 02 14.8**	**+0.5**
INU				Sn		**Sn**	**10 03 15.4**	**-0.9**
ASAJ	**Asahikawa**	**7.02**	**356**	Pn		**Pn**	**10 02 36.1**	**-0.6**
	5.0nm,0.3s,baz=225,slow=11,SNR=23							
ASAJ				Sn		**Sn**	**10 03 52.6**	**-3.9**
	baz=328,slow=29,SNR=2.1							
JKA	**Kamikawa-asahi**	**7.02**	**356**			**Pn**	**10 02 36.1**	**-0.6**
JKA						**Sn**	**10 03 52.6**	**-3.9**
JCJ	**Chichijima**	**10.03**	**186**	Pn		Pn	10 03 10.5	-7.6
	5.7nm,0.3s,baz=15,slow=20,SNR=2.8							
JCJ				Sn		Sn	10 04 58.1	-13
	6.2nm,0.3s,baz=291,slow=23,SNR=1.5							
JNU	**Nakatsue**	**10.93**	**252**	Pn		**Pn**	**10 03 31.0**	**+0.6**
	0.3nm,0.3s,baz=67,slow=11,SNR=3.4							
JNU	**Nakatsue**	**10.93**	**252**			**Pn**	**10 03 30.4**	**0.0**
USRK	**Ussuriysk Ar.**	**11.13**	**313**	Pn		**Pn**	**10 03 35.0**	**+2.0**
	baz=115,slow=13,SNR=8.4							
USRK				LR		LR	10 07 39.0	
	comp=Z,91nm,20.1s,baz=163,slow=36							
KSRS	**Korea Array**	**12.27**	**276**	Pn		**Pn**	**10 03 50.9**	**+2.3**
	0.2nm,0.3s,baz=92,slow=14,SNR=22							
KSRS				LR		LR	10 08 25.9	
	comp=Z,74nm,19.2s,baz=70,slow=37							
KLR	**Kul'dur**	**14.74**	**329**	Pn		**Pn**	**10 04 20.6**	**-1.7**
	0.4nm,0.3s,baz=136,slow=12,SNR=12							
KLR				LR		LR	10 09 58.0	
	comp=Z,63nm,18.2s,baz=152,slow=37							
SEY	**Seymchan**	**26.45**	**9**	P		**P**	**10 06 32.0**	**+1.4**
	2.1nm,0.6s,baz=186,slow=12,SNR=5.0							
H11N2	**WAKE ISLAND Hy**	**26.90**	**124**	T		T	10 34 37.0	
	baz=314							
H11N1	**WAKE ISLAND Hy**	**26.91**	**124**	T		T	10 34 44.0	
	baz=314							
H11N3	**WAKE ISLAND Hy**	**26.92**	**124**	T		T	10 34 42.1	
	baz=314							
H11S1	**WAKE ISLAND Hy**	**27.65**	**126**	T		T	10 35 45.5	
	baz=317							
H11S3	**WAKE ISLAND Hy**	**27.65**	**126**	T		T	10 35 36.4	
	baz=317							
H11S2	**WAKE ISLAND Hy**	**27.66**	**126**	T		T	10 35 40.7	
	baz=317							
SONM	**Songino Array**	**29.01**	**303**	P		**P**	**10 06 55.2**	**+1.3**
	4.1nm,0.8s,baz=98,slow=7.9,SNR=16							
TLY	**Talaya**	**31.43**	**310**	LR		LR	10 20 41.4	
	comp=Z,49nm,18.3s,baz=84,slow=38							
ZALV	**Zalesovo Beam**	**42.98**	**312**	P		**P**	**10 08 52.5**	**-0.6**
	0.8nm,0.3s,baz=97,slow=5.1,SNR=4.6							
ZALV				PcP		**PcP**	**10 10 43.7**	**+0.4**
	0.5nm,0.3s,baz=90,slow=2.0,SNR=2.3							
MK31	**Makanchi Array**	**45.36**	**302**	P		**P**	**10 09 14.4**	**+2.2**
MKAR	**Makanchi Array**	**45.36**	**302**	P		**P**	**10 09 13.2**	**+0.9**
	2.0nm,0.7s,baz=85,slow=9.5,SNR=18							
MAKZ	**Makanchi**	**45.57**	**302**	P		**P**	**10 09 16.7**	**+2.7**
KURK	**Kurchatov**	**47.08**	**308**	P		**P**	**10 09 26.1**	**+0.4**
KURBB	**Kurchatov Arra**	**47.15**	**308**	P		**P**	**10 09 26.7**	**+0.5**
	16nm,0.5s,baz=81,slow=8.0,SNR=60							
IL31		**48.62**	**32**	P		**P**	**10 09 38.0**	**+0.7**
IL31				IAmb		IAmb	10 09 50.0	
	comp=Z,2.6nm,0.8s							
ILAR	**Eielson Array**	**48.62**	**32**	P		**P**	**10 09 37.5**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=261,slow=6.0,SNR=17							
BVAR	**Borovoye Array**	**51.64**	**313**	P		**P**	**10 10 01.5**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=76,slow=7.8,SNR=3.7							
AAK	**Ala-Archa**	**51.78**	**299**	P		**P**	**10 10 03.6**	**+1.6**
	comp=Z,0.4nm,0.4s,baz=27,slow=9.5,SNR=2.0							
INK	**Inuvik**	**53.62**	**27**	P		**P**	**10 10 15.2**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=296,slow=6.7,SNR=8.8							
INK	**Inuvik**	**53.62**	**27**	P		**P**	**10 10 15.7**	**+0.8**
INK				IAmb		IAmb	10 10 28.0	
	comp=Z,1.9nm,0.7s							
KKAR	**Karatay Array**	**54.40**	**301**	P		**P**	**10 10 21.5**	**+0.4**
KKAR				IAmb		IAmb	10 10 30.2	
	comp=Z,2.5nm,0.7s							
C36M	**Paulatuk**	**56.72**	**25**	P		**P**	**10 10 37.5**	**+0.3**
C36M				IAmb		IAmb	10 10 50.0	
	comp=Z,3.6nm,0.6s							
ARU	**Arti**	**57.30**	**319**	P		**P**	**10 10 41.9**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=53,slow=20,SNR=3.3							
WR0	**Warramunga Arr**	**57.36**	**190**	P		**P**	**10 10 40.9**	**-1.4**
WR0				IAmb		IAmb	10 10 42.7	
	comp=Z,5.5nm,0.8s							
WRA	**Warramunga Arr**	**57.37**	**190**	P		**P**	**10 10 40.5**	**-1.9**
	comp=Z,5.6nm,0.6s,baz=7.7,slow=7.2,SNR=48							
FITZ	**Fitzroy Crossi**	**57.39**	**200**	P		**P**	**10 10 42.4**	**-0.1**
ABKAR	**Akbulak array**	**59.05**	**311**	P		**P**	**10 10 54.1**	**+0.2**
AS31	**Alice Springs**	**61.10**	**190**	P		**P**	**10 11 07.0**	**-1.2**
AS31				IAmb		IAmb	10 11 09.2	
	comp=Z,4.0nm,1.4s							
ASAR	**Alice Springs**

	31nm,1.3s						
TTSI	**Tana Toraja**	**16.15 191**		P	P	10 15 58.6	+10
	27nm,0.8s						
MSAI	**Masohi**	**17.29 159**		P	**P**	**10 16 06.8**	**+5.2**
	17nm,1.1s						
JNU	**Nakatsue**	**21.41**	**19**	LR	LR	10 23 02.3	
	comp=Z,96nm,21.9s,baz=212,slow=31						
SMPI	**Sarmi**	**21.68 132**		P	**P**	**10 16 51.8**	**+2.2**
	44nm,1.3s						
JCJ	**Chichijima**	**23.00**	**49**	LR	LR	10 23 44.8	
	comp=Z,173nm,20.7s,baz=324,slow=31						
JAY	**Jayapura**	**23.51 130**		LR	LR	10 24 16.3	
	comp=Z,198nm,22.0s,baz=314,slow=32						
CM31	**Chiang Mai Arr**	**23.58 287**		P	**P**	**10 17 09.4**	**-0.2**
CM31				IAmb	IAmb	10 17 24.3	
	comp=Z,11nm,1.1s						
CMAR	**Chiang Mai Arr**	**23.58 287**		P	**P**	**10 17 08.6**	**-1.0**
	comp=Z,1.7nm,0.8s,baz=96,slow=7.2,SNR=13						
RGRI	**Rengat**	**24.19 238**		P	P	10 17 26.3	+11
KSRS	**Korea Array**	**24.84**	**10**	LR	LR	10 28 07.9	
	comp=Z,96nm,19.6s,baz=183,slow=39						
MDSI	**Maura Dua**	**25.32 228**		P	**P**	**10 17 28.7**	**+3.1**
	comp=Z,12nm,1.4s						
PSI	**Prapat**	**25.65 249**		LR	LR	10 28 36.4	
	comp=Z,207nm,18.0s,baz=72,slow=39						
SHL	**Shillong**	**31.66 298**		P	**P**	**10 18 21.6**	**-0.9**
USRK	**Ussuriysk Ar.**	**32.14**	**13**	P	**P**	**10 18 26.7**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=188,slow=9.5,SNR=4.3						
USRK				LR	LR	10 30 01.5	
	comp=Z,71nm,20.9s,baz=175,slow=34						
WRA	**Warramunga Arr**	**34.60 161**		P	**P**	**10 18 45.2**	**-2.7**
	comp=Z,1.5nm,0.5s,baz=342,slow=9.3,SNR=20						
WRA				PcP	**PcP**	**10 21 21.5**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=334,slow=3.0,SNR=3.6						
WR0	**Warramunga Arr**	**34.68 160**		P	**P**	**10 18 46.6**	**-2.0**
WR0				IAmb	IAmb	10 18 53.2	
	comp=Z,13nm,1.4s						
ASAJ	**Asahikawa**	**35.42**	**25**	LR	LR	10 32 01.3	
	comp=Z,88nm,21.4s,baz=195,slow=34						
KLR	**Kul'dur**	**36.94**	**10**	P	**P**	**10 19 07.6**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=211,slow=5.9,SNR=2.9						
SONM	**Songino Array**	**37.38 342**		P	**P**	**10 19 13.3**	**+1.7**
	comp=Z,0.4nm,0.5s,baz=153,slow=8.8,SNR=5.1						
SONM				LR	LR	10 35 27.1	
	comp=Z,120nm,18.4s,baz=82,slow=38						
AS31	**Alice Springs**	**37.97 163**		P	**P**	**10 19 14.9**	**-1.9**
ASAR	**Alice Springs**	**37.97 163**		P	**P**	**10 19 15.0**	**-1.8**
	comp=Z,2.0nm,0.5s,baz=350,slow=7.7,SNR=45						
ASAR				PcP	**PcP**	**10 21 31.2**	**-1.5**
	comp=Z,0.6nm,0.6s,baz=342,slow=2.9,SNR=5.1						
FORT	**Forrest**	**43.76 173**		P	**P**	**10 20 03.9**	**-0.5**
BBOO	**Buckleboo**	**47.23 165**		P	**P**	**10 20 30.5**	**-1.4**
MK31	**Makanchi Array**	**47.85 323**		P	**P**	**10 20 36.9**	**+0.3**
MKAR	**Makanchi Array**	**47.85 323**		P	**P**	**10 20 36.8**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=123,slow=8.8,SNR=8.0						
STKA	**Stephens Creek**	**48.07 158**		P	**P**	**10 20 36.2**	**-2.2**
	comp=Z,2.7nm,0.9s,baz=316,slow=5.2,SNR=4.3						
STKA				LR	LR	10 42 05.9	
	comp=Z,59nm,21.3s,baz=19,slow=38						
STKA	**Stephens Creek**	**48.07 158**		P	**P**	**10 20 36.7**	**-1.7**
PETK	**Petropavlovsk-**	**48.74**	**27**	P	**P**	**10 20 43.1**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=203,slow=7.0,SNR=2.5						
PETK				LR	LR	10 42 18.3	
	comp=Z,26nm,19.1s,baz=239,slow=37						
KSH	**Kashi**	**48.91 312**		P	**P**	**10 20 47.1**	**+2.0**
KSH				pP	sP	10 21 22.9	+38
KSH				PP	**PP**	**10 22 44.3**	**+5.9**
KSH				pmax	pmax		
	comp=Z,240nm,4.5s						
NIL	**Nilore**	**49.41 303**		P	**P**	**10 20 48.4**	**-0.5**
NIL				IAmb	IAmb	10 20 49.1	
	comp=Z,12nm,1.1s						
ZALV	**Zalesovo Beam**	**50.67 332**		LR	LR	10 43 17.2	
	comp=Z,122nm,20.6s,baz=64,slow=37						
AAK	**Ala-Archa**	**51.03 315**		LR	LR	10 44 50.9	
	comp=Z,63nm,19.8s,baz=104,slow=39						
KURK	**Kurchatov**	**51.95 326**		P	**P**	**10 21 07.7**	**+0.1**
KURK				IAmb	IAmb	10 21 15.2	
	comp=Z,9.3nm,1.0s						
KBL	**Kabul**	**53.01 304**		P	**P**	**10 21 14.0**	**-2.2**
KBL				IAmb	IAmb	10 21 23.4	
	comp=Z,5.1nm,1.1s						
KK31	**Karatay Array**	**53.95 314**		P	**P**	**10 21 22.6**	**-0.1**
KK31				IAmb	IAmb	10 21 23.8	
	comp=Z,7.1nm,1.2s						
KKAR	**Karatay Array**	**53.95 314**		P	**P**	**10 21 22.8**	**+0.1**
KKAR				IAmb	IAmb	10 21 23.8	
	comp=Z,7.1nm,1.2s						
BRVK	**Borovoye**	**57.61 325**		P	**P**	**10 21 47.9**	**-0.8**
BRVK				IAmb	IAmb	10 22 00.2	
	comp=Z,8.4nm,1.2s						
GEYT	**Alibeck**	**62.21 306**		LR	LR	10 54 17.4	
	comp=Z,69nm,18.3s,baz=20,slow=41						
GNI	**Garni**	**72.67 308**		LR	LR	10 59 48.8	
	comp=Z,52nm,19.4s,baz=64,slow=40						
KBZ	**Khabaz**	**73.89 312**		LR	LR	10 59 34.2	
	comp=Z,59nm,19.9s,baz=110,slow=39						
OBN	**Obninsk**	**77.34 324**		LR	LR	11 00 21.6	
	comp=Z,20nm,19.5s,baz=356,slow=38						
ILAR	**Eielson Array**	**78.55**	**26**	P	**P**	**10 23 58.3**	**-1.8**
	comp=Z,0.6nm,0.9s,baz=268,slow=4.8,SNR=4.0						
ARCES	**ARCESS Array B**	**80.51 339**		P	**P**	**10 24 12.3**	**+1.6**
	comp=Z,3.2nm,1.1s,baz=88,slow=5.5,SNR=2.7						
ARCES				LR	LR	11 03 37.9	
	comp=Z,97nm,18.8s,baz=348,slow=38						
BRTR	**Keskin Array B**	**81.20 309**		LR	LR	11 03 34.7	
	comp=Z,29nm,20.7s,baz=19,slow=38						
FINES	**FINESS Array B**	**81.92 331**		LR	LR	11 02 59.7	
	comp=Z,110nm,19.6s,baz=74,slow=37						
AKASG	**Malin Array Be**	**82.34 320**		LR	LR	11 03 34.3	
	comp=Z,56nm,18.0s,baz=10.0,slow=38						
KMBO	**Kilima Mbogo**	**85.89 268**		LR	LR	11 01 48.1	
	comp=Z,39nm,18.6s,baz=90,slow=35						
NOA	**NORSAR Array B**	**88.86 333**		LR	LR	11 07 58.5	
	comp=Z,129nm,18.9s,baz=60,slow=38						
GERES	**GERESS Array B**	**92.49 321**		LR	LR	11 09 27.1	
	comp=Z,90nm,18.7s,baz=80,slow=37						
YKA	**Yellowknife Ar**	**92.69**	**23**	P	**P**	**10 25 11.3**	**+0.6**
	comp=Z,0.3nm,0.9s,baz=292,slow=3.2,SNR=4.3						
PLCA	**Paso Flores**	**149.94 160**		PKPbc	**PKPbc**	**10 31 49.9**	**+0.1**
	comp=Z,1.9nm,1.0s,baz=270,slow=7.1,SNR=2.6						

IDC 17 10:25:47.8±4.2,22°.82N×11°.55W,h0km,mb3.4/1, mb1 3.4/2,mb1mx3.1/50,mbtmp3.4/2,ML3.1/1,Error ellipse: s-maj=135.6km s-min=51.1km az=54.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	**Midelt**	**11.70**	**30**	Lg	Lg	10 31 58.0	
	0.1nm,0.3s,baz=186,slow=19,SNR=2.4						
TORD	**Torodi Ar. Bea**	**15.84 125**		Pn	Pn	10 29 33.5	+1.3
	0.1nm,0.3s,baz=308,slow=12,SNR=3.7						
TORD				Sn	Sn	10 32 27.6	-1.1
	0.1nm,0.3s,baz=307,slow=22,SNR=1.8						
MKAR	**Makanchi Array**	**76.25**	**45**	P	P	10 37 38.4	0.0
	0.2nm,0.6s,baz=295,slow=4.6,SNR=2.8						
ASAR	**Alice Springs**	**148.29**	**98**	PKPbc	PKPbc	10 45 36.0	-0.8
	0.6nm,0.9s,baz=277,slow=2.8,SNR=3.4						

*BKK **17** 10:43:06.9±1.2,21°.N±10°.×9°.6E±°, h0km,M3.7/7, mb3.8/1, MLv3.7/7*
*IDC **17** 10:43:20.6±2.4,21°.08N×95°.07E, h95km±26km, mb3.2/3, mb1 3.3/5, mb1mx3.0/60, mbtmp3.4/5, Error ellipse: s-maj=52.5km s-min=21.0km az=47.0*
ISC 17 10:43:20.0±1.1,20°.9N±0°.2×94°.8E±0°.1,h100km,n11, σ1s26/14,mb3.7/3,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**3.43 302**		P	**Pn**	**10 44 12.5**	**+1.0**
	0.3nm,0.3s,baz=360,slow=24,SNR=1.2						
BRDH				S	**Sn**	**10 44 49.8**	**-1.6**
	0.5nm,0.3s,baz=360,slow=24,SNR=1.2						
MHMT	**Maesarieng**	**4.00 132**		Pg	**Pn**	**10 44 18.7**	**-0.5**
CMMT	**Chiang Mai**	**4.41 117**		Pg	**Pn**	**10 44 24.8**	**0.0**
CMMT				Sg	**Sn**	**10 45 12.1**	**-3.0**
CMAR	**Chiang Mai Arr**	**4.59 121**		P	**Pn**	**10 44 27.0**	**-0.2**
	0.8nm,0.3s,baz=303,slow=13,SNR=36						
CMAR				S	**Sn**	**10 45 20.6**	**+1.2**
	0.7nm,0.3s,baz=297,slow=25,SNR=3.1						
PAYA	**Payao**	**4.99 107**		Pg	**Pn**	**10 44 31.8**	**-0.8**
LAMP	**Lampang**	**5.12 117**		Pg	**Pn**	**10 44 34.0**	**-0.4**
NANT	**Nan**	**5.92 110**		Pg	**Pn**	**10 44 45.9**	**+0.6**
PBKT	**Sadao Pong**	**7.25 125**		Pg	**Pn**	**10 45 03.4**	**+0.1**
MKAR	**Makanchi Array**	**27.77 341**		P	**P**	**10 49 00.5**	**+1.1**
	0.1nm,0.4s,baz=149,slow=9.0,SNR=2.1						
WRA	**Warramunga Arr**	**56.07 134**		P	**P**	**10 52 49.3**	**+0.3**
	1.1nm,1.1s,baz=319,slow=7.6,SNR=2.3						
ASAR	**Alice Springs**	**58.41 137**		P	**P**	**10 53 06.0**	**+0.6**
	0.5nm,0.7s,baz=319,slow=7.3,SNR=5.7						

*ISK **17** 10:45:02.4,37°.40N×26°.95E,h8km,ML3.3/18*
*ATH **17** 10:45:02.7,37°.42N×26°.96E, h24km±1km, ML3.0/9, Error ellipse: s-maj=1.3km s-min=0.8km az=263.0*
*THE **17** 10:45:03.3,37°.39N×26°.96E, h2km±1km, ML3.0/6, Error ellipse: s-maj=1.4km s-min=0.4km az=63.0*
*DDA **17** 10:45:04.3,37°.41N×27°.04E, h14km±2km, MW3.5*
ISC 17 10:45:03.3±0.9,37°.41N±0°.02×26°.99E±0°.02,h15km±6km, n64,σ0s79/92,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIDI	**Didim-Aydin**	**0.20**	**99**	PG	**Pg**	**10 45 07.6**	**-0.4**
DIDI				SG	**Sg**	**10 45 11.4**	**+0.3**
SMG	**Samos**	**0.32 338**		P	**Pg**	**10 45 09.7**	**-0.4**
SMG				S	**Sb**	**10 45 15.5**	**-0.3**
	3µm,0.4s						
SMG	**Samos**	**0.32 338**		P	**Pg**	**10 45 09.6**	**-0.4**
SMG				S	**Sg**	**10 45 15.0**	**+0.4**
SMG				AML	AML	10 45 17.0	
	comp=E,5100µm,0.2s						
SMG				AML	AML	10 45 22.3	
	comp=N,6228µm,0.2s						
GCAM	**G?zelcaml?**	**0.35**	**34**	PG	**Pg**	**10 45 10.6**	**+0.1**
GCAM	**G?zelcaml?**	**0.35**	**34**	*i* P	**Pg**	**10 45 10.6**	**+0.1**
GCAM				*i* S	**Sb**	**10 45 16.5**	**0.0**
GCAM				IAML		10 45 18.0	
	comp=N,4µm,0.2s						
GCAM				IAML		10 45 18.0	
	comp=E,5µm,0.3s						
BODT	**Bodrum**	**0.43 143**		P	**Pg**	**10 45 12.2**	**+0.3**
BODT	**Bodrum**	**0.43 143**		PG	**Pg**	**10 45 11.5**	**-0.4**
BODT				SG	**Sg**	**10 45 18.1**	**+0.3**
BDRM	**Kayabasi**	**0.50 133**		*i* P	**Pb**	**10 45 14.1**	**+0.3**
BDRM				*i* S	**Sb**	**10 45 21.4**	**+0.6**
BDRM				IAML		10 45 22.0	
	comp=E,999nm,0.5s						
MLSB	**Milas**	**0.64 100**		PG	**Pg**	**10 45 15.2**	**-0.6**
DGB	**zmir**	**0.65 353**		*i* P	**Pg**	**10 45 15.5**	**-0.5**
DGB				*i* S	**Sn**	**10 45 27.2**	**-0.6**
DGB				IAML		10 45 28.0	
	comp=E,530nm,0.6s						
KOSK	**Kos Island**	**0.66 181**		P	**Pg**	**10 45 16.0**	**-0.1**
KOSK				S	**Sb**	**10 45 25.9**	**+0.6**
	comp=E,2µm,0.5s						
KOSK	**Kos Island**	**0.66 181**		PG	**Pg**	**10 45 15.5**	**-0.6**
KOSK				SG	**Sb**	**10 45 25.2**	**-0.1**
AYDN	**Tasoluk**	**0.75**	**70**	*i* S	**Sb**	**10 45 28.4**	**+0.2**
NISR	**Nisiros**	**0.80 172**		P	**Pg**	**10 45 18.6**	**-0.3**
NISR	**Nisiros**	**0.80 172**		P	**Pg**	**10 45 18.6**	**-0.3**
NISR				S	**Sb**	**10 45 30.0**	**+0.5**
NISR				AML	AML	10 45 34.0	
	comp=N,1352µm,0.6s						
NISR				AML	AML	10 45 36.8	
	comp=E,2145µm,0.5s						
DAT	**Datca**	**0.82 145**		PG	**Pg**	**10 45 18.8**	**-0.5**
DAT	**Datca**	**0.82 145**		*i* P	**Pb**	**10 45 20.0**	**+0.6**
DAT				*i* S	**Sb**	**10 45 31.2**	**+0.9**
DATC	**Datca-Mugla**	**0.84 140**		PG	**Pb**	**10 45 19.3**	**-0.2**
DATC				SG	**Sn**	**10 45 31.9**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**0.89**	**53**	PG	**Pb**	**10 45 20.2**	**-0.4**
AYDB				SG	**Sn**	**10 45 33.9**	**-0.2**
BLCB	**Balcova**	**0.98**	**2**	PG	**Pb**	**10 45 21.5**	**-0.4**
AMGA	**Amorgos Island**	**1.05 237**		P	**Pb**	**10 45 22.7**	**-0.4**
AMGA				S	**Sg**	**10 45 37.2**	**0.0**
	comp=E,1µm,0.6s						
AMGA	**Amorgos Island**	**1.05 237**		P	**Pb**	**10 45 22.6**	**-0.4**
AMGA				S	**Sg**	**10 45 37.1**	**-0.2**
AMGA				AML	AML	10 45 39.2	
	comp=N,2316µm,0.6s						
AMGA				AML	AML	10 45 40.5	
	comp=E,2520µm,0.6s						
YER	**Yerkesik**	**1.07 104**		P	**Pb**	**10 45 23.4**	**-0.1**
YER	**Yerkesik**	**1.07 104**		PN	**Pb**	**10 45 23.7**	**+0.2**
APE	**Apeiranthos**	**1.21 254**		P	**Pn**	**10 45 25.3**	**-0.4**
APE				S	**Sg**	**10 45 42.5**	**0.0**
	comp=E,452nm,0.4s						
APE	**Apeiranthos**	**1.21 254**		P	**Pn**	**10 45 25.3**	**-0.4**
APE				S	**Sn**	**10 45 41.9**	**0.0**
APE				AML	AML	10 45 44.8	
	comp=E,840µm,0.5s						
APE				AML	AML	10 45 48.6	
	comp=N,1056µm,0.5s						
APE	**Apeiranthos**	**1.21 254**		PN	**Pn**	**10 45 25.5**	**-0.2**
CHOS	**Chios island**	**1.23 323**		P	**Pn**	**10 45 25.6**	**-0.3**
CHOS				S	**Sg**	**10 45 44.0**	**+1.1**
	comp=N,365nm,0.6s						
CHOS	**Chios island**	**1.23 323**		P	**Pn**	**10 45 25.8**	**-0.1**
CHOS				S	**Sg**	**10 45 42.5**	**-0.4**
CHOS				AML	AML	10 45 45.9	
	comp=E,749µm,0.4s						
CHOS				AML	AML	10 45 47.1	
	comp=N,680µm,0.7s						
CHOS	**Chios island**	**1.23 323**		PN	**Pn**	**10 45 25.8**	**-0.1**
KRBN	**Karaburun**	**1.23 344**		PN	**Pb**	**10 45 26.6**	**+0.4**
FOCM	**Foa**	**1.32 351**		PN	**Pg**	**10 45 28.4**	**-0.3**
TURN	**Turunc**	**1.40 112**		PN	**Pn**	**10 45 25.8**	**-2.3**
TURN	**Turunc**	**1.40 112**		*i* P	**Pn**	**10 45 24.4**	**-3.7**
TURN				*i* S	**Sn**	**10 45 44.9**	**-1.4**
TURN				IAML		10 45 47.0	
	comp=N,304nm,0.4s						
TURN				IAML		10 45 47.0	
	comp=E,341nm,0.6s						
TNSA	**Tinos**	**1.46 276**		P	**Pg**	**10 45 30.6**	**-0.7**
ARG	**Arkhangelos**	**1.50 142**		P	**Pn**	**10 45 29.7**	**+0.1**
ARG				S	**Sb**	**10 45 50.6**	**+1.0**
	comp=E,522nm,0.6s						
ARG	**Arkhangelos**	**1.50 142**		P	**Pb**	**10 45 30.4**	**-0.4**
ARG				S	**Sb**	**10 45 50.7**	**+1.1**
ARG				AML	AML	10 45 56.0	
	comp=N,1221µm,0.8s						
ARG				AML	AML	10 45 57.8	
	comp=E,915µm,0.5s						
ARG	**Arkhangelos**	**1.50 142**		PN	**Pb**	**10 45 30.3**	**-0.4**
IOSP	**Ios island**	**1.52 244**		P	**Pn**	**10 45 29.5**	**-0.4**
IOSP	**Ios island**	**1.52 244**		P	**Pn**	**10 45 29.7**	**-0.2**
IOSP				S	**Sb**	**10 45 50.0**	**-0.2**
IOSP				AML	AML	10 45 53.7	
	comp=E,1155µm,0.4s						
IOSP				AML	AML	10 45 55.8	
	comp=N,1698µm,0.4s						
TAVA	**DENIZLI_Tavas**	**1.53**	**87**	*i* P	**Pg**	**10 45 33.0**	**+0.3**
AKHS	**Akhisar**	**1.60**	**24**	*i* P	**Pg**	**10 45 33.8**	**-0.4**
AKHS				*i* S	**Sg**	**10 45 54.4**	**-0.7**
AKHS				IAML		10 46 03.0	
	comp=E,108nm,0.7s						
SANT	**Santorini**	**1.61 230**		P	**Pn**	**10 45 31.4**	**+0.3**
SANT	**Santorini**	**1.61 230**		PN	**Pn**	**10 45 31.4**	**+0.3**
THR3	**Thira Island,**	**1.62 232**		P	**Pn**	**10 45 31.0**	**-0.2**
THR3	**Thira Island,**	**1.62 232**		P	**Pb**	**10 45 32.0**	**-0.8**
MANT	**Manisa**	**1.65**	**48**	*i* P	**Pg**	**10 45 35.0**	**0.0**
MANT				*i* S	**Sb**	**10 45 55.2**	**+1.1**
THR6	**Thira Island,**	**1.65 231**		P	**Pn**	**10 45 31.8**	**+0.1**
THR6	**Thira Island,**	**1.65 231**		P	**Pn**	**10 45 32.3**	**+0.6**
DENT	**Denizli**	**1.66**	**77**	PN	**Pb**	**10 45 33.1**	**-0.5**
FETY	**Fethiye**	**1.84 114**		PN	**Pb**	**10 45 36.2**	**-0.5**
FETY	**Fethiye**	**1.84 114**		*i* P	**Pn**	**10 45 35.5**	**+1.2**
KARP	**Karpathos**	**1.86 176**		PN	**Pn**	**10 45 35.2**	**+0.6**
PRK	**Paraskevi**	**1.92 343**		P	**Pn**	**10 45 35.4**	**0.0**
PRK				S	**Sn**	**10 46 00.2**	**+1.0**
PRK				AML	AML	10 46 13.7	
	comp=N,653µm,1.2s						
PRK				AML	AML	10 46 14.7	
	comp=E,750µm,1.0s						
SIGR	**SIGRI**	**2.01 334**		P	**Pn**	**10 45 36.8**	**+0.2**
SIGR				S	**Sn**	**10 46 02.1**	**+0.6**
SIGR				AML	AML	10 46 14.7	
	comp=E,175µm,0.5s						
SIGR				AML	AML	10 46 20.9	
	comp=N,266µm,0.7s						
GOLH	**Golhisar**	**2.06**	**94**	*i* P	**Pb**	**10 45 40.2**	**-0.1**
GOLH				IAML		10 46 28.0	
	comp=N,84nm,1.2s						
GOLH				IAML		10 46 56.0	
	comp=E,66nm,2.8s						
USAK	**Uak-Merkez**	**2.06**	**50**	*i* P	**Pg**	**10 45 42.3**	**-0.6**
KHAL	**Karahalli**	**2.20**	**63**	*i* P	**Pb**	**10 45 41.8**	**-1.0**
AKAS	**Kas**	**2.41 118**		*i* P	**Pb**	**10 45 44.9**	**-1.4**
AKAS				*i* S	**Sb**	**10 46 18.0**	**+2.2**
AKAS				IAML		10 46 28.0	
	comp=E,60nm,1.3s						
AKAS				IAML		10 46 40.0	
	comp=N,65nm,1.3s						
KSL	**Kastellorizon**	**2.43 120**		P	**Pn**	**10 45 43.9**	**+1.5**
LAST	**Lasithi**	**2.55 209**		P	**Pn**	**10 45 45.4**	**+1.2**
VLY	**Voula,Athens**	**2.58 281**		P	**Pn**	**10 45 45.6**	**+1.2**
SMTH	**Samothraki Isl**	**3.26 340**		P	**Pn**	**10 45 54.5**	**+0.6**
ALN	**Alexandroupoli**	**3.56 348**		P	**Pn**	**10 45 58.8**	**+0.8**

*IDC **17** 10:50:35.8±0.8,31°.16N×142°.84E, h0km, mb3.6/7, mb1 3.9/9, mb1mx3.7/43, mbtmp3.7/9, ML3.3/2, Error ellipse: s-maj=27.4km s-min=19.6km az=84.0*
*NEIC **17** 10:50:37.7±1.4,31°.17N±0°.08×142°.8E±0°.2, h14km±6km, mb4.3/4, Error ellipse: s-maj=20.3km s-min=9.5km az=72.0*
*JMA **17** 10:50:37.7±0.2,31°.65N×142°.87E, h0km, M4.2*
ISC 17 10:50:37.1±0.8,31°.30N±0°.06×142°.9E±0°.1,h10km,n31, σ2s36/40,mb3.7/9,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.16 305**		P	**Pn**	**10 51 27.4**	**+0.5**
JHCJ				*e*S	**Sn**	**10 52 03.6**	**-1.1**
JHJ2	**Mitsune**	**3.17 306**		P	**Pn**	**10 51 27.1**	**+0.1**
JHJ2				*e*S	**Sn**	**10 52 04.1**	**-0.8**
JHJ2	**Mitsune**	**3.17 306**		Pn	**Pn**	**10 51 28.1**	**+1.1**
BSO3	**Boso 3**	**4.02 331**		P	**Pn**	**10 51 38.4**	**-0.1**
JCJ	**Chichijima**	**4.24 189**		Pn	**Pn**	**10 51 39.9**	**-1.8**
	3.4nm,0.3s,baz=348,slow=20,SNR=3.5						
JCJ				Sn	**Sn**	**10 52 23.4**	**-7.8**
	12nm,0.3s,baz=305,slow=16,SNR=1.8						
JOD2	**Odawara 2**	**5.08 322**		P	**Pn**	**10 51 53.2**	**0.0**
JOD2				*e*S	**Sn**	**10 52 48.4**	**-3.5**
JHU	**Hanno**	**5.45 327**		P	**Pn**	**10 51 57.9**	**-0.4**
JHU				*e*S	**Sn**	**10 52 57.8**	**-3.3**
JHO	**Hitachi**	**5.64 341**		P	**Pn**	**10 51 59.9**	**-1.0**
JHO				*e*S	**Sn**	**10 53 00.2**	**-5.5**
JRY	**Ryogami san**	**5.76 326**		P	**Pn**	**10 52 02.9**	**+0.2**
JRY				*e*S	**Sn**	**10 53 06.6**	**-2.2**
JAG	**Ashikaga**	**5.86 332**		P	**Pn**	**10 52 04.0**	**+0.1**
JAG				*e*S	**Sn**	**10 53 08.9**	**-2.3**
JFK	**Kawauchi**	**6.28 345**		P	**Pn**	**10 52 09.2**	**-0.5**
JFK				*e*S	Sn	10 53 14.8	-6.7
MJAR	**Matsushiro Arr**	**6.52 325**		Pn	**Pn**	**10 52 13.9**	**+0.8**
	0.3nm,0.3s,baz=146,slow=11,SNR=17						
MJAR				Sn	**Sn**	**10 53 22.1**	**-5.3**
	0.0nm,0.3s,baz=128,slow=18,SNR=2.2						
MAJO	**Matsushiro**	**6.52 325**			**Pn**	**10 52 13.6**	**+0.5**
MAJO				Sn	**Sn**	**10 53 26.7**	**-0.8**
MJB9	**Matsu-Tunnel**	**6.52 325**			**Pn**	**10 52 13.8**	**+0.7**
MJB9				Sn	**Sn**	**10 53 26.6**	**-0.9**
JTNC	**Tanabenakahech**	**6.64 294**		P	**Pn**	**10 52 17.5**	**+2.8**
KSRS	**Korea Array**	**13.80 300**		Pn	**Pn**	**10 53 57.0**	**+4.4**
	0.1nm,0.3s,baz=110,slow=13,SNR=6.1						
H11S3	**WAKE ISLAND Hy**	**25.00 115**		T	T	11 21 51.2	
	baz=304						
H11S1	**WAKE ISLAND Hy**	**25.00 115**		T	T	11 21 51.4	
	baz=304						
H11S2	**WAKE ISLAND Hy**	**25.02 115**		T	T	11 21 52.4	
	baz=304						
SONM	**Songino Array**	**32.26 311**		P	**P**	**10 57 06.9**	**+1.1**
	0.5nm,0.7s,baz=108,slow=7.5,SNR=3.0						
CMAR	**Chiang Mai Arr**	**41.61 263**		P	**P**	**10 58 24.9**	**-0.7**
	0.4nm,0.3s,baz=68,slow=7.9,SNR=3.1						
MK31	**Makanchi Array**	**48.37 307**		P	**P**	**10 59 19.2**	**+0.2**
MKAR	**Makanchi Array**	**48.37 307**		P	**P**	**10 59 19.6**	**+0.6**
	1.5nm,0.5s,baz=89,slow=11,SNR=18						
WR0	**Warramunga Arr**	**51.59 190**		P	**P**	**10 59 42.5**	**-1.1**
WRA	**Warramunga Arr**	**51.61 190**		P	**P**	**10 59 42.4**	**-1.4**
	1.1nm,0.7s,baz=8.3,slow=7.7,SNR=10						
ASAR	**Alice Springs**	**55.33 190**		P	**P**	**11 00 09.6**	**-1.5**
	0.2nm,0.5s,baz=4.5,slow=6.0,SNR=4.8						
ASAR				PcP	**PcP**	**11 01 12.8**	**+1.2**
	0.6nm,0.7s,baz=15,slow=3.9,SNR=4.0						
KK31	**Karatay Array**	**57.20 304**		P	**P**	**11 00 25.7**	**+1.3**
KK31				IAmb	IAmb	11 00 29.8	
	comp=Z,2.5nm,0.8s						
KKAR	**Karatay Array**	**57.20 304**		P	**P**	**11 00 25.7**	**+1.4**
KKAR				IAmb	IAmb	11 00 29.8	
	comp=Z,2.5nm,0.8s						
YKA	**Yellowknife Ar**	**68.17**	**29**	P	**P**	**11 01 37.5**	**+0.3**
	comp=Z,0.2

	comp=Z,7.5nm,0.6s							
H11N2	**WAKE ISLAND Hy**	**24.52**	**113**	T		T	11 27 44.2	
	baz=305							
H11N1	**WAKE ISLAND Hy**	**24.53**	**113**	T		T	11 27 44.2	
	baz=305,slow=74							
H11N3	**WAKE ISLAND Hy**	**24.54**	**113**	T		T	11 27 48.6	
	baz=305,slow=74							
H11S3	**WAKE ISLAND Hy**	**25.06**	**116**	T		T	11 28 22.3	
	baz=306							
H11S1	**WAKE ISLAND Hy**	**25.06**	**115**	T		T	11 28 24.7	
	baz=306							
H11S2	**WAKE ISLAND Hy**	**25.07**	**116**	T		T	11 28 23.8	
	baz=306							
XAN	**Xi'an**	**28.64**	**284**	P		**P**	**11 03 08.9**	**-1.2**
SEY	**Seymchan**	**32.02**	**8**	P		**P**	**11 03 41.0**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=234,slow=23,SNR=4.0							
SONM	**Songino Array**	**32.15**	**311**	P		**P**	**11 03 42.3**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=115,slow=8.9,SNR=4.3							
CMAR	**Chiang Mai Arr**	**41.68**	**263**	P		**P**	**11 05 00.0**	**-2.2**
	comp=Z,0.6nm,0.5s,baz=50,slow=7.5,SNR=4.9							
CMAR				LR		LR	11 24 18.9	
	comp=Z,20nm,18.1s,baz=26,slow=39							
ZALV	**Zalesovo Beam**	**46.67**	**316**	P		**P**	**11 05 41.9**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=99,slow=8.9,SNR=2.8							
ZALV				PcP		**PcP**	**11 07 14.5**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=108,slow=3.2,SNR=3.6							
ZALV				LR		LR	11 25 03.5	
	comp=Z,10nm,21.1s,baz=2.5,slow=36							
MK31	**Makanchi Array**	**48.27**	**307**	P		**P**	**11 05 53.8**	**-0.6**
MKAR	**Makanchi Array**	**48.27**	**307**	P		**P**	**11 05 54.9**	**+0.4**
	comp=Z,4.3nm,0.7s,baz=86,slow=9.1,SNR=41							
MKAR				LR		LR	11 26 17.1	
	comp=Z,15nm,18.1s,baz=348,slow=36							
MAKZ	**Makanchi**	**48.49**	**307**	P		**P**	**11 05 56.3**	**+0.2**
MAKZ				IAmb		IAmb	11 06 00.4	
	comp=Z,3.8nm,0.6s							
KURK	**Kurchatov**	**50.45**	**312**	P		**P**	**11 06 10.5**	**-0.5**
WR0	**Warramunga Arr**	**51.81**	**190**	P		P	11 06 17.1	-4.3
WR0				IAmb		IAmb	11 06 18.9	
	comp=Z,5.3nm,0.9s							
WRAB	**Tennant Creek**	**51.81**	**190**	P		P	11 06 16.5	-4.9
WRAB				IAmb		IAmb	11 06 19.5	
	comp=Z,8.0nm,0.9s							
WRA	**Warramunga Arr**	**51.82**	**190**	P		P	11 06 17.2	-4.4
	comp=Z,2.2nm,0.6s,baz=9.3,slow=7.9,SNR=18							
ILAR	**Eielson Array**	**53.55**	**30**	P		**P**	**11 06 34.3**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=261,slow=6.3,SNR=6.0							
AAK	**Ala-Archa**	**54.37**	**302**	LR		LR	11 30 47.7	
	comp=Z,17nm,18.4s,baz=38,slow=37							
ASAR	**Alice Springs**	**55.54**	**190**	P		P	11 06 44.5	-4.3
	comp=Z,0.5nm,0.6s,baz=5.6,slow=5.9,SNR=10							
ASAR				PcP		**PcP**	**11 07 47.4**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=12,slow=4.1,SNR=4.9							
KK31	**Karatay Array**	**57.11**	**304**	P		**P**	**11 06 59.3**	**-0.6**
KK31				IAmb		IAmb	11 07 04.5	
	comp=Z,4.2nm,0.8s							
KKAR	**Karatay Array**	**57.11**	**304**	P		**P**	**11 06 58.9**	**-1.0**
KKAR				IAmb		IAmb	11 07 04.5	
	comp=Z,4.2nm,0.8s							
INK	**Inuvik**	**58.77**	**26**	P		**P**	**11 07 11.8**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=292,slow=6.3,SNR=4.3							
INK	**Inuvik**	**58.77**	**26**	P		**P**	**11 07 11.2**	**+0.2**
KBL	**Kabul**	**60.72**	**295**	P		**P**	**11 07 23.8**	**-1.6**
ARU	**Arti**	**61.38**	**321**	P		**P**	**11 07 28.8**	**-0.4**
ABKAR	**Akbulak array**	**62.54**	**313**	P		**P**	**11 07 37.2**	**+0.1**
ABKAR				IAmb		IAmb	11 07 44.4	
	comp=Z,3.6nm,1.1s							
AKTO	**Aktyubinsk**	**63.37**	**315**	LR		LR	11 39 38.9	
	comp=Z,23nm,18.5s,baz=51,slow=40							
YKA	**Yellowknife Ar**	**67.97**	**29**	P		**P**	**11 08 12.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=298,slow=6.4,SNR=11							
KBZ	**Khabaz**	**75.50**	**312**	P		**P**	**11 08 58.4**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=3.5,slow=2.7,SNR=6.8							
NVAR	**Mina Array Bea**	**77.30**	**53**	P		**P**	**11 09 08.5**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=291,slow=5.3,SNR=11							
NOA	**NORSAR Array B**	**79.76**	**338**	P		**P**	**11 09 21.0**	**-0.3**
	comp=Z,0.9nm,0.7s,baz=40,slow=5.5,SNR=3.7							
BRTR	**Keskin Array B**	**83.49**	**313**	P		**P**	**11 09 41.3**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=75,slow=3.3,SNR=7.0							
LPAZ	**La Paz**	**147.95**	**69**	PKPbc		**PKPdf**	**11 16 59.4**	**+2.2**
	comp=Z,0.7nm,0.5s,baz=304,slow=7.3,SNR=4.1							

NEIC ***17*** *11:21:26.7±0.8, 19.98°S±0.04°×173.86°W±0.08, h10km±2km, mb4.3/6, Error ellipse: s-maj=12.4km s-min=6.8km az=95.0*

IDC ***17*** *11:21:28.5±1.8, 19.87°S×174.37°W, h0km, mb3.8/4, mb1 4.1/6, mb1mx3.8/28, mbtmp4.0/6, ML3.8/2, Error ellipse: s-maj=60.5km s-min=25.9km az=131.0*

ISC 17 11:21:29.8±0.6, 20.00°S±0.07°×173.83°W±0.07, h31km, n18, σ1s57/22, mb3.9/6, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NIUE	**Niue**	**3.79**	**77**	Pn		**Pn**	**11 22 27.1**	**+1.0**
NIUE				Sn		**Sn**	**11 23 06.7**	**-2.9**
AFI	**Afiamalu**	**6.36**	**18**	Pn		**Pn**	**11 23 03.1**	**+1.5**
	1.6nm,0.3s,baz=225,slow=7.1,SNR=2.7							
AFI				Sn		**Sn**	**11 24 10.4**	**-2.8**
	1.5nm,0.3s,baz=23,slow=19,SNR=1.3							
AFI	**Afiamalu**	**6.36**	**18**			**Pn**	**11 23 00.5**	**-1.0**
AFI				Sn		**Sn**	**11 24 12.3**	**-0.9**
MSVF	**Nonsavu**	**8.02**	**285**	Pn		**Pn**	**11 23 23.5**	**-0.7**
RAO	**Raoul Island**	**9.94**	**201**	Pn		**Pn**	**11 23 49.7**	**-0.7**
RAR	**Rarotonga**	**13.21**	**98**	Pn		**Pn**	**11 24 35.1**	**-0.3**
URZ	**Urewera**	**19.82**	**201**	P		**Pn**	**11 25 59.4**	**-0.1**
	0.3nm,0.3s,baz=95,slow=17,SNR=2.7							
BKZ	**Black Stump Fm**	**20.85**	**202**	P		**P**	**11 26 08.9**	**-0.2**
BKZ				IAmb		IAmb	11 26 21.8	
	comp=Z,31nm,1.5s							
EIDS	**Eidsvold**	**32.75**	**254**	P		**P**	**11 27 58.8**	**-1.3**
CTA	**Charters Tower**	**37.44**	**263**	P		**P**	**11 28 40.1**	**-0.4**
	comp=Z,4.4nm,1.0s,baz=82,slow=11,SNR=4.4							
STKA	**Stephens Creek**	**41.53**	**244**	P		**P**	**11 29 14.2**	**-0.4**
BBOO	**Buckleboo**	**46.28**	**243**	P		**P**	**11 29 52.9**	**+0.3**
WR0	**Warramunga Arr**	**48.36**	**261**	P		**P**	**11 30 08.7**	**-0.3**
WR0				IAmb		IAmb	11 30 18.5	
	comp=Z,5.8nm,1.2s							
AS31	**Alice Springs**	**48.44**	**256**	P		**P**	**11 30 09.4**	**-0.3**
AS31				IAmb		IAmb	11 30 10.1	
	comp=Z,1.6nm,1.3s							
ASAR	**Alice Springs**	**48.44**	**256**	P		**P**	**11 30 09.0**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=92,slow=8.1,SNR=8.7							
ASAR				PcP		**PcP**	**11 31 37.8**	**+2.1**
	comp=Z,0.5nm,1.0s,baz=93,slow=3.7,SNR=3.1							
ASAR	**Alice Springs**	**48.44**	**256**	P		**P**	**11 30 09.7**	**+0.1**
WRA	**Warramunga Arr**	**48.55**	**261**	P		**P**	**11 30 09.7**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=96,slow=7.3,SNR=9.7							
ILAR	**Eielson Array**	**87.01**	**11**	P		**P**	**11 34 15.6**	**+4.1**
	comp=Z,1.0nm,1.2s,baz=218,slow=5.7,SNR=3.1							

KRNET ***17*** *11:28:52.0±0.1, 41.67°N×79.46°E, h18km, mb2.7*
SOME ***17*** *11:28:52.8, 41.75°N×79.42°E, h5km*
NNC ***17*** *11:28:55.8±1.5, 41.83°N×79.35°E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=10.2km s-min=6.0km az=153.0*

ISC 17 11:28:53.1±1.6, 41.68°N±0.06°×79.42°E±0.05, h10km, n47, σ1s68/79, 14C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRZ	**Przheval'sk**	**1.11**	**317**	⇑*i*	P	**Pg**	**11 29 13.3**	**-1.1**
PRZ	baz=17			⇑*i*	S	**Sb**	**11 29 28.7**	**-0.4**
SHLS	**Shalkode**	**1.48**	**1**	*e*	P	**Pg**	**11 29 20.8**	**-0.8**
SHLS	7.2nm,0.1s			*e*	S	**Sg**	**11 29 40.2**	**-0.6**
SHLS	**Shalkode**	**1.48**	**1**		P	**Pg**	**11 29 20.7**	**-0.8**
SHLS	48nm,0.2s				S	**Sg**	**11 29 40.3**	**-0.5**
SATY	**Saty**	**1.57**	**332**	*e*	P	**Pb**	**11 29 21.1**	**-1.3**
SATY	8.3nm,0.1s			*e*	S	**Sb**	**11 29 42.3**	**-0.1**
SATY	**Saty**	**1.57**	**332**		P	**Pb**	**11 29 21.5**	**-0.9**
SATY	101nm,0.1s				S	**Sb**	**11 29 41.6**	**-0.8**
PDGK	**Podgornoye**	**1.65**	**2**	P		**Pb**	**11 29 23.1**	**-0.6**
PDGK	4.5nm,0.3s				S	**Sb**	**11 29 43.9**	**-0.8**
PDGK	**Podgornoye**	**1.65**	**2**	⇑P		**Pb**	**11 29 22.2**	**-1.6**
PDGK	43nm,0.4s			⇑*e*	S	**Sg**	**11 29 44.7**	**-1.6**
ANVS	**Anan'yevo**	**1.71**	**311**	⇑*e*	P	**Pb**	**11 29 24.1**	**-0.6**
ANVS	50nm,0.6s			⇑*e*	S	**Sg**	**11 29 47.4**	**-0.6**
KDJ	**Kajisay**	**1.73**	**286**	⇓*e*	P	**Pb**	**11 29 24.2**	**-0.9**
KDJ	baz=86			⇓*i*	S	**Sg**	**11 29 48.0**	**-0.8**
KPKS	**Kokpek**	**1.87**	**343**	*e*	P	**Pb**	**11 29 26.8**	**-0.6**
KPKS	26nm,0.2s			*e*	S	**Sg**	**11 29 51.8**	**-1.5**
	152nm,0.3s							
TNSS	**Tian-Shan**	**2.28**	**307**	Pg		**Pg**	**11 29 35.5**	**-1.3**
TNSS				Lg		Lg	11 30 05.2	
MDOK	**Medeo**	**2.30**	**311**	*e*	P	**Pb**	**11 29 34.8**	**0.0**
MDOK	5.3nm,0.1s			*e*	S	**Sg**	**11 30 05.4**	**-1.6**
	47nm,0.3s							
MDOK	**Medeo**	**2.30**	**311**	Pg		**Pg**	**11 29 36.3**	**-0.9**
MDOK	8.8nm,0.6s			⇓Lg		Lg	11 30 04.6	
	46nm,0.6s							
MDOK	**Medeo**	**2.30**	**311**	Pg		**Pg**	**11 29 35.5**	**-1.7**
MDOK	7.4nm,0.3s			Lg		Lg	11 30 05.2	
	52nm,0.4s							
KOTS	**Kotyrbulak**	**2.31**	**313**	*e*	P	**Pb**	**11 29 35.3**	**+0.3**
KOTS	17nm,0.1s			*e*	S	**Sg**	**11 30 06.0**	**-1.3**
	94nm,0.2s							
KOTS	**Kotyrbulak**	**2.31**	**313**	Pg		**Pb**	**11 29 34.7**	**-0.3**
KOTS	27nm,0.2s			Lg		Lg	11 30 03.9	
	66nm,0.4s							
AAA	**Alma-Ata**	**2.40**	**310**	*e*	P	**Pg**	**11 29 37.8**	**-1.4**
AAA	26nm,0.0s			*e*	S	**Sg**	**11 30 10.2**	**-0.2**
	32nm,0.1s							
ULHL	**Ulahol**	**2.44**	**285**	⇓*i*	P	**Pb**	**11 29 34.8**	**-2.4**
ULHL	baz=85			⇓*i*	S	**Sb**	**11 30 06.2**	**-1.1**
IZV	**Izvestkoviy**	**2.48**	**304**	*e*	P	**Pb**	**11 29 38.4**	**+0.5**
IZV	4.4nm,0.1s			*e*	S	**Sg**	**11 30 11.3**	**-1.6**
	55nm,0.3s							
IZV	**Izvestkoviy**	**2.48**	**304**	Pg		**Pb**	**11 29 38.1**	**+0.1**
IZV	7.5nm,0.3s			Lg		Lg	11 30 09.9	
	64nm,0.5s							
MNBS	**Baschi**	**2.52**	**343**	*e*	P	**Pb**	**11 29 38.5**	**0.0**
MNBS	5.1nm,0.2s			*e*	S	**Sg**	**11 30 11.4**	**-2.5**
	67nm,0.1s							
MNBS	**Baschi**	**2.52**	**343**	Pg		**Pb**	**11 29 38.9**	**+0.4**
MNBS	5.6nm,0.2s			Lg		Lg	11 30 11.2	
	67nm,0.2s							
NRN	**Naryn**	**2.58**	**266**	⇑*i*	P	**Pb**	**11 29 37.1**	**-2.5**
NRN	baz=66			⇑*i*	S	**Sb**	**11 30 10.1**	**-1.4**
	baz=66							
MTBS	**Maitube**	**2.65**	**304**	*e*	P	**Pb**	**11 29 40.9**	**+0.2**
MTBS	2.6nm,0.1s			*e*	S	**Sg**	**11 30 15.8**	**-2.4**
	26nm,0.2s							
MTBS	**Maitube**	**2.65**	**304**	Pg		**Pb**	**11 29 41.4**	**+0.7**
MTBS	3.6nm,0.1s			Lg		Lg	11 30 15.2	
	26nm,0.3s							
DJR	**Jarkent**	**2.67**	**6**	*e*	P	**Pb**	**11 29 40.2**	**-0.8**
DJR	0.9nm,0.1s			*e*	S	**Sb**	**11 30 14.5**	**+0.6**
	7.8nm,0.2s							
DJR	**Jarkent**	**2.67**	**6**	Pg		**Pg**	**11 29 42.7**	**-1.6**
DJR	1.3nm,0.2s			Lg		Lg	11 30 17.6	
	11nm,0.3s							
BOOM	**Boomskoye usch**	**2.71**	**289**	⇓*i*	P	**Pn**	**11 29 38.1**	**+1.1**
BOOM	baz=89			⇓*i*	S	**Sn**	**11 30 12.0**	**+2.1**
	baz=89							
ARXS	**Arharly**	**2.79**	**336**	*e*	P	**Pb**	**11 29 43.1**	**-0.1**
ARXS	2.8nm,0.1s			*e*	S	**Sb**	**11 30 19.3**	**+1.9**
	20nm,0.2s							
ARXS	**Arharly**	**2.79**	**336**	Pg		**Pb**	**11 29 43.1**	**-0.1**
ARXS	3.0nm,0.3s			Lg		Lg	11 30 18.3	
	21nm,0.3s							
CHKK	**Chushkaly**	**2.82**	**321**	*e*	P	**Pb**	**11 29 43.9**	**+0.3**
CHKK	5.8nm,0.1s			*e*	S	**Sg**	**11 30 20.6**	**-3.0**
	74nm,0.3s							
CHKK	**Chushkaly**	**2.82**	**321**	Pg		**Pb**	**11 29 43.8**	**+0.3**
CHKK	5.8nm,0.2s			Lg		Lg	11 30 19.6	
	36nm,0.3s							
KTBS	**Karatobe**	**2.86**	**316**	*e*	P	**Pb**	**11 29 44.7**	**+0.3**
KTBS	4.0nm,0.1s			*e*	S	**Sg**	**11 30 22.2**	**-2.9**
	49nm,0.2s							
KTBS	**Karatobe**	**2.86**	**316**	Pg		**Pg**	**11 29 45.8**	**-2.3**
KTBS	6.7nm,0.4s			Lg		Lg	11 30 22.8	
	25nm,0.4s							
KST	**Kastek**	**2.90**	**299**	*e*	P	**Pb**	**11 29 45.1**	**0.0**
KST	4.3nm,0.1s			*e*	S	**Sb**	**11 30 22.8**	**+2.2**
	27nm,0.3s							
KST	**Kastek**	**2.90**	**299**	Pg		**Pb**	**11 29 45.9**	**+0.8**
KST	8.4nm,0.4s			Lg		Lg	11 30 23.3	
	18nm,0.6s							
TKM2	**Tokmak 2**	**3.10**	**295**	⇑*i*	P	**Pn**	**11 29 44.3**	**+2.0**
TKM2	baz=95			⇑*i*	S	**Sn**	**11 30 22.5**	**+3.1**
	baz=95							
TKM2	**Tokmak 2**	**3.10**	**295**	⇓Pn		**Pb**	**11 29 49.7**	**+1.3**
TKM2	1.3nm,0.4s			⇓Lg		Lg	11 30 26.9	
	20nm,0.5s							
KZA	**Kyzart**	**3.14**	**279**	⇑*e*	P	**Pn**	**11 29 44.9**	**+1.9**
KZA	baz=79			⇑*i*	S	**Sn**	**11 30 23.4**	**+2.6**
	baz=79							
KUU	**Kurty**	**3.17**	**315**	*e*	P	**Pb**	**11 29 49.9**	**+0.4**
KUU	1.0nm,0.1s			*e*	S	**Sg**	**11 30 31.2**	**-3.7**
	25nm,0.3s							
KUU	**Kurty**	**3.17**	**315**	Pg		**Pb**	**11 29 50.3**	**+0.7**
KUU	2.2nm,0.2s			Lg		Lg	11 30 30.5	
	24nm,0.3s							
KRBS	**Karabastau**	**3.42**	**307**	*e*	P	**Pb**	**11 29 54.8**	**+0.9**
KRBS	2.5nm,0.1s			*e*	S	**Sg**	**11 30 39.2**	**-3.7**
	10nm,0.2s							
KAPS	**Kapalarasan**	**3.61**	**359**	*e*	P	**Pb**	**11 29 57.2**	**+0.2**
KAPS	1.7nm,0.2s			*e*	S	**Sb**	**11 30 43.7**	**+2.8**
	9.2nm,0.3s							
KAPS	**Kapalarasan**	**3.61**	**359**	Pg		**Pg**	**11 29 58.9**	**-3.3**
KAPS	1.7nm,0.4s			Lg		Lg	11 30 45.3	
	5.3nm,0.4s							
UCH	**Uchtor**	**3.70**	**280**	⇓*i*	P	**Pn**	**11 29 52.7**	**+1.9**
UCH	baz=80			⇓*e*	S	**Sn**	**11 30 37.0**	**+2.4**
	baz=80							
ARLS	**Aral**	**3.81**	**274**	⇑*i*	P	**Pn**	**11 29 53.6**	**+1.5**
ARLS	baz=75			⇑*i*	S	**Sn**	**11 30 39.2**	**+2.1**
	baz=75							
MRKS	**Merke**	**4.72**	**285**	*e*	P	**Pb**	**11 30 19.1**	**+3.1**
MRKS	0.5nm,0.0s			*e*	S	**Sg**	**11 31 21.0**	**-3.7**
	2.7nm,0.2s							

WEL 17 11:46:10.6±0.4, 34°S±4°×18°0E±°, h246km±8km, M4.0/19, mB4.6/9, ML4.6/2, MLv4.3/19, Mw(mB)3.8/9, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.73**	**199**	P		Pn	11 47 11.9	+1.0
MXZ				S		S	11 47 58.5	-0.3
WMGZ	**Waiomatatini S**	**3.94**	**197**	P		Pn	11 47 15.2	+1.8
WMGZ				S		S	11 48 04.5	+1.1
HAZ	**Te Kaha**	**4.07**	**204**	P		Pn	11 47 15.6	+0.7
HAZ				S		S	11 48 08.2	+2.3
PKGZ	**Pakihiroa**	**4.10**	**200**	P		Pn	11 47 16.1	+0.7
PUZ	**Puketiti**	**4.22**	**197**	P		Pn	11 47 17.4	+0.6
RUGZ	**Raukumara Rang**	**4.29**	**204**	P		Pn	11 47 18.0	+0.3
KUZ	**Kuaotunu**	**4.32**	**230**	P		Pn	11 47 19.0	+1.1
CNGZ	**Carnagh Statio**	**4.62**	**196**	P		Pn	11 47 22.6	+1.0
OPRZ	**Ohinepanea**	**4.64**	**214**	P		Pn	11 47 22.3	+0.5
MWZ	**Matawai**	**4.67**	**203**	P		Pn	11 47 22.4	+0.1
MWZ				S		S	11 48 16.8	-2.5
MARZ	**Manawahe**	**4.70**	**212**	P		Pn	11 47 24.1	+1.6
URZ	**Urewera**	**4.75**	**207**	P		Pn	11 47 22.6	-0.6
URZ				S		S	11 48 17.0	-4.0
RAGZ	**Rawiri**	**4.86**	**203**	P		Pn	11 47 25.4	+0.9
RIGZ	**Rimuhau**	**4.95**	**199**	P		Pn	11 47 27.2	+1.7
MUGZ	**Murupara**	**5.07**	**208**	P		Pn	11 47 27.3	+0.2
MUGZ				S		S	11 48 26.9	-1.2
GLKZ	**Green Lake**	**5.13**	**22**	S		S	11 48 28.4	-1.2
SNGZ	**Shannon Statio**	**5.14**	**202**	P		Pn	11 47 27.8	-0.2
SNGZ				S		S	11 48 27.3	-2.3
PRRZ	**Plateau Road**	**5.25**	**211**	P		Pn	11 47 30.6	+1.3
KNZ	**Kokohu**	**5.27**	**199**	P		Pn	11 47 30.8	+1.3
OUZ	**Omahuta**	**5.29**	**255**	P		Pn	11 47 28.0	-1.8
ALRZ	**Allen Road**	**5.32**	**211**	P		Pn	11 47 31.8	+1.6
RAHZ	**Arahi**	**5.35**	**204**	P		Pn	11 47 30.0	-0.5
MTHZ	**Maungataniwha**	**5.38**	**206**	P		Pn	11 47 30.7	-0.1
TLZ	**Tolley Road**	**5.52**	**218**	P		Pn	11 47 35.1	+2.5
NMHZ	**Naumai**	**5.61**	**205**	P		Pn	11 47 33.2	-0.5
ARHZ	**Aropaoanui**	**5.69**	**203**	P		Pn	11 47 35.2	+0.5
BKZ	**Black Stump Fm**	**5.78**	**207**	P		Pn	11 47 35.1	-0.8
MCHZ	**McNeill Hill**	**5.95**	**204**	P		Pn	11 47 37.3	-0.7
HIZ	**Hauiti**	**6.01**	**221**	P		Pn	11 47 41.7	+2.9
KWHZ	**Kaweka Forest**	**6.03**	**206**	P		Pn	11 47 37.6	-1.4
KAHZ	**Kahuranaki**	**6.21**	**202**	P		Pn	11 47 40.1	-1.1
BHHZ	**Black Hill Sta**	**6.22**	**208**	P		Pn	11 47 40.4	-1.0
PXZ	**Pawanui**	**6.43**	**201**	P		Pn	11 47 43.0	-1.0
PNHZ	**Pukenui**	**6.54**	**205**	P		Pn	11 47 43.1	-2.3
TSZ	**Takapari Road**	**6.76**	**206**	P		Pn	11 47 45.6	-2.5
DVHZ	**Dannevirke**	**6.90**	**204**	P		Pn	11 47 48.2	-1.7
POWZ	**Post Office Ro**	**7.12**	**206**	P		Pn	11 47 50.6	-2.0
PRWZ	**Pori Road**	**7.19**	**204**	P		Pn	11 47 52.9	-0.7
BFZ	**Birch Farm**	**7.22**	**202**	P		Pn	11 47 51.9	-2.0
TIWZ	**Tintock**	**7.42**	**204**	P		Pn	11 47 55.0	-1.5
MRZ	**Mangatainoka R**	**7.43**	**206**	P		Pn	11 47 53.7	-2.9
HOWZ	**Holdsworth Sta**	**7.66**	**205**	P		Pn	11 47 56.6	-2.9
OGWZ	**Otaki Gorge**	**7.71**	**207**	P		Pn	11 47 57.0	-3.2
TMWZ	**Te Maipa**	**7.72**	**203**	P		Pn	11 47 58.7	-1.5
KIW	**Kapiti Island**	**7.85**	**209**	P		Pn	11 47 58.4	-3.6
MTW	**Mount Morrison**	**7.89**	**205**	P		Pn	11 48 00.6	-1.8
CAW	**Cannon Point**	**8.01**	**207**	P		Pn	11 48 01.3	-2.5
PAWZ	**Paruwai Farm**	**8.12**	**204**	P		Pn	11 48 03.3	-2.0
WEL	**Wellington**	**8.27**	**208**	P		Pn	11 48 04.8	-2.4
PLWZ	**Palliser**	**8.34**	**204**	P		Pn	11 48 05.5	-2.7
TCW	**Tory Channel**	**8.41**	**210**	P		Pn	11 48 06.2	-2.7
BSWZ	**Blackbirch Sta**	**8.99**	**210**	P		Pn	11 48 13.6	-2.8
THZ	**Tophouse**	**9.45**	**213**	P		Pn	11 48 19.4	-2.9

HEL 17 11:59:43.4±0.1, 61.46°N×23.62°E, h0km, ML1.2, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KEF	**Keuruu**	**0.93**	**39**	MSG			12 00 11.9	
	comp=Z,1.1nm,0.2s							
NUR	**Nurmijrvi**	**1.08**	**152**	PN		Pn	12 00 05.5	-0.2
FIA0	**FINESS Array S**	**1.18**	**90**	Pg		Pg	12 00 04.6	-1.4
	baz=267							
FIA0				SB		Sg	12 00 19.8	-1.5
KAF	**Kangasniemi**	**1.44**	**62**	PN		Pn	12 00 09.7	-1.0
KAF				MSG			12 00 26.7	
	comp=Z,5.1nm,0.2s							
SUF	**Sumiainen**	**1.74**	**42**	PG		Pn	12 00 14.6	-0.2
SUF				MSG			12 00 35.2	
	comp=Z,0.8nm,0.2s							
AAL	**Aland**	**2.19**	**236**	PG		Pb	12 00 22.6	-1.2
MTSE	**Matsula**	**2.75**	**178**	PG		Pb	12 00 32.7	-0.7
KALU	**Kalix**	**4.42**	**359**	PG		Pb	12 01 02.5	+0.7
TOF	**Tornio**	**4.65**	**4**	PN		Pn	12 00 55.3	+0.5

HEL 17 12:00:45.2±0.1, 65.78°N×24.66°E, h0km, ML0.9, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TOF	**Tornio**	**0.33**	**336**	*e*	P	Pg	12 00 51.1	-0.4
TOF				*e*	S	Sg	12 00 54.7	-1.0
OUL	**Oulu**	**0.87**	**143**	*e*	P	Pg	12 01 00.5	-1.3
OUL				*e*	S	Sg	12 01 11.9	-1.2
RNF	**Rovaniemi**	**1.00**	**33**	*e*	P	Pg	12 01 03.0	-1.2
RNF				*e*	S	Sg	12 01 16.1	-1.1
OBF0	**Syolatti, Pyha**	**1.30**	**188**	SN		Pg	12 01 08.9	-1.2
OBF0	**Syolatti, Pyha**	**1.30**	**188**	*e*	P	Pg	12 01 08.8	-1.3
OBF0				*e*	S	Sg	12 01 25.3	-1.6
OBF0				MSG			12 01 31.1	
	comp=Z,0.8nm,0.1s							
OUF	**Merijarvi**	**1.42**	**179**	*e*	P	Pn	12 01 11.0	-1.2
OUF				*e*	S	Sg	12 01 28.5	-2.3
OUF				MSG			12 01 34.5	
	comp=Z,0.7nm,0.1s							
SGF	**Sodankyl**	**1.83**	**23

SLBB	**Yuanshan**	**0.75**	**263**	*eP*	**Pg**	**12 24 18.5**	**-0.5**
	baz=247							
NANB	**Nanao**	**0.77**	**237**	*eP*	**Pg**	**12 24 19.4**	**0.0**
	baz=229							
NANB				*eS*	**Sb**	**12 24 29.8**	**-0.1**
	baz=229							
ENA	**Nanau**	**0.78**	**237**	*eP*	**Pg**	**12 24 19.5**	**0.0**
	baz=229							
ENA				*eS*	**Sb**	**12 24 29.8**	**-0.3**
	baz=229							
ENTT	**Nioudou**	**0.84**	**255**	P	**Pg**	**12 24 20.6**	**0.0**
	baz=250							
ENTT				*eS*	**Sb**	**12 24 31.7**	**-0.2**
	baz=250							
YM08	**YM08**	**0.85**	**293**	*eP*	**Pg**	**12 24 21.1**	**+0.2**
	baz=295							
YM08				*eS*	**Sb**	**12 24 32.6**	**+0.2**
	baz=295							
YM01	**YM01**	**0.86**	**290**	*eP*	**Pb**	**12 24 21.4**	**+0.4**
	baz=291							
YM11	**YM11**	**0.86**	**291**	*eP*	**Pg**	**12 24 21.2**	**+0.2**
	baz=292							
YM05	**YM05**	**0.87**	**291**	*eP*	**Pg**	**12 24 21.4**	**+0.2**
	baz=292							
YM10	**YM10**	**0.87**	**290**	*eP*	**Pb**	**12 24 21.6**	**+0.4**
	baz=292							
NWLT	**Wulai**	**0.87**	**265**	*eP*	**Pg**	**12 24 21.4**	**+0.2**
	baz=262							
TWY	**Chenhua**	**0.88**	**299**	*eP*	**Pb**	**12 24 21.9**	**+0.4**
	baz=301							
YM04	**YM04**	**0.89**	**290**	*eP*	**Pb**	**12 24 21.6**	**0.0**
	baz=291							
NDT	**Datong Townshi**	**0.89**	**254**	*eP*	**Pg**	**12 24 22.1**	**+0.5**
	baz=249							
NDT				*eS*	**Sb**	**12 24 33.3**	**-0.2**
	baz=249							
YHNB	**Yeheng**	**1.00**	**260**	*eP*	**Pb**	**12 24 23.6**	**+0.1**
	baz=249							
YHNB				*eS*	**Sb**	**12 24 35.4**	**-1.2**
	baz=249							
NACB	**Ninganchiao**	**1.04**	**229**	*eP*	**Pb**	**12 24 24.3**	**+0.2**
	baz=223							
NACB				*eS*	**Sn**	**12 24 38.2**	**-0.6**
	baz=223							
NNSH	**Datong**	**1.06**	**247**	*eP*	**Pb**	**12 24 24.6**	**0.0**
	baz=242							
NNS	**Nan Shan**	**1.07**	**248**	*eP*	**Pb**	**12 24 25.0**	**+0.3**
	baz=230							
NNS				*eS*	**Sg**	**12 24 38.9**	**-0.1**
	baz=230							
ETLH	**Xiulin Townshi**	**1.10**	**234**	*eP*	**Pg**	**12 24 26.1**	**+0.5**
	baz=229							
WHF	**Hehuan Shan**	**1.29**	**237**	*eS*	**Sg**	**12 24 46.3**	**0.0**
	baz=232							
TDCB	**Techi**	**1.32**	**243**	*eP*	**Pg**	**12 24 30.1**	**+0.3**
	baz=239							
LIOB	**Emei**	**1.33**	**261**	*eP*	**Pg**	**12 24 30.6**	**+0.7**
	baz=258							
LIOB				*eS*	**Sg**	**12 24 47.1**	**-0.1**
	baz=258							
CHGB	**Renai**	**1.41**	**236**	*eP*	**Pg**	**12 24 31.5**	**-0.1**
	baz=231							
CHGB				*eS*	**Sg**	**12 24 49.8**	**-0.1**
	baz=231							
OWD	**Renai**	**1.47**	**233**	*eP*	**Pb**	**12 24 32.2**	**+0.6**
	baz=228							
WHP	**Taichung City**	**1.49**	**248**	*eP*	**Pg**	**12 24 33.2**	**+0.1**
	baz=244							
VWDT	**VWDT**	**1.62**	**228**	*eS*	**Sg**	**12 24 56.7**	**0.0**
	baz=222							
SSLB	**Suanglung**	**1.73**	**233**	*eP*	**Pb**	**12 24 36.9**	**+0.9**
	baz=236							
SSLB				*eS*	**Sg**	**12 24 59.4**	**-0.8**
	baz=236							

MEX 17 12:27:47.2±0.3, **27.74N**×**105.54W**, **h14**km±2km, **MD3.9, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HPIG		**0.81**	**188**	*eP*	Pg	12 28 00.4	-2.5
	baz=8.2,slow=14						
HPIG				*i* S	Sg	12 28 11.0	-2.6
CGIG		**3.38**	**321**	*eP*	Pn	12 28 37.0	-2.8
CGIG				*i* S	Sn	12 29 16.2	-3.6
MNTX	**Cornudas Mount**	**3.95**	**2**	*i* P	Pn	12 28 45.5	-1.9
MNTX				*i* S	Sn	12 29 30.5	-3.1
121A	**Cookes Peak, D**	**5.16**	**338**	*i* P	Pn	12 29 02.0	-2.3
121A				*i* S	Sn	12 30 01.3	-2.4

IDC **17** *12:34:57.1±2.4, 19°.98S×177°.64W, h357km±24km, mb3.5/18, mb1 3.7/20, mb1mx3.6/46, mbtmp4.2/20, Error ellipse: s-maj=19.5km s-min=11.4km az=146.0*

NEIC **17** *12:34:59.5±1.3, 20°.00S±0°.09×177°.58W±0°.10, h385km±7km, mb4.2/23, Error ellipse: s-maj=13.2km s-min=12.7km az=121.0*

ISC 17 12:35:00.6±0.5, **19.88S**±0.08×**177.51W**±0.07, **h400**km, **n64**,σ1°**72**/**66**,**mb3.9**/**28**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.72**	**296**		**Pn**	**12 36 20.6**	**+0.7**
NIUE	**Niue**	**7.20**	**85**	P	**Pn**	**12 36 45.9**	**-0.7**
NIUE				S	**S**	**12 38 12.5**	**-0.7**
AFI	**Afiamalu**	**8.09**	**44**	P	**Pn**	**12 36 54.0**	**-2.8**
	2.5nm,0.3s,baz=260,slow=6.1,SNR=4.1						
AFI				S	S	12 38 21.6	-10
	1.8nm,0.3s,baz=28,slow=23,SNR=2.9						
AFI	**Afiamalu**	**8.09**	**44**		**Pn**	**12 36 54.7**	**-2.1**
AFI				S	**S**	**12 38 24.8**	**-7.1**
FUNA	**Funafuti**	**11.73**	**344**		**Pn**	**12 37 40.5**	**+1.6**
DZM	**Mont Dzumac**	**15.14**	**259**	P	**P**	**12 38 15.8**	**+0.9**
	3.1nm,0.3s,baz=79,slow=19,SNR=27						
DZM	**Mont Dzumac**	**15.14**	**259**	P	**P**	**12 38 14.9**	**+0.1**
URZ	**Urewera**	**18.90**	**193**	P	**P**	**12 38 51.1**	**-3.3**
	1.0nm,0.3s,baz=309,slow=3.4,SNR=6.4						
URZ	**Urewera**	**18.90**	**193**	P	**P**	**12 38 52.0**	**-2.5**
EIDS	**Eidsvold**	**29.46**	**253**	P	**P**	**12 40 28.7**	**-1.1**
EIDS				IAmb	IAmb	12 40 46.5	
	comp=Z,16nm,1.2s						
ARMA	**Armidale**	**29.75**	**243**	P	**P**	**12 40 31.9**	**-0.5**
ARMA				IAmb	IAmb	12 40 48.7	
	comp=Z,19nm,1.4s						
CTA	**Charters Tower**	**34.01**	**263**	P	**P**	**12 41 08.3**	**-0.8**
	comp=Z,7.7nm,0.5s,baz=90,slow=10,SNR=21						
TOO	**Toolangi**	**36.63**	**233**	P	**P**	**12 41 29.8**	**-1.2**
COEN	**Coen**	**38.01**	**273**	P	**P**	**12 41 41.9**	**-0.7**
COEN				IAmb	IAmb	12 41 42.9	
	comp=Z,6.6nm,0.9s						
STKA	**Stephens Creek**	**38.47**	**244**	P	**P**	**12 41 45.3**	**-0.9**
	comp=Z,2.3nm,0.5s,baz=100,slow=11,SNR=10.0						
STKA	**Stephens Creek**	**38.47**	**244**	P	**P**	**12 41 45.4**	**-0.9**
BBOO	**Buckleboo**	**43.23**	**243**	P	**P**	**12 42 23.0**	**-1.6**
BBOO				IAmb	IAmb	12 42 27.4	
	comp=Z,42nm,1.4s						
WR0	**Warramunga Arr**	**44.95**	**261**	P	**P**	**12 42 36.4**	**-1.8**
WR0				IAmb	IAmb	12 42 47.1	
	comp=Z,12nm,1.4s						
AS31	**Alice Springs**	**45.11**	**256**	P	**P**	**12 42 38.3**	**-1.1**
AS31				IAmb	IAmb	12 42 39.0	
	comp=Z,3.2nm,0.3s						
ASAR	**Alice Springs**	**45.11**	**256**	P	**P**	**12 42 38.2**	**-1.2**
	comp=Z,6.6nm,0.6s,baz=93,slow=8.6,SNR=190						
ASAR	**Alice Springs**	**45.11**	**256**	P	**P**	**12 42 37.8**	**-1.7**
WRA	**Warramunga Arr**	**45.14**	**261**	P	**P**	**12 42 37.8**	**-1.9**
	comp=Z,1.0nm,0.3s,baz=98,slow=5.7,SNR=27						
WRA	**Warramunga Arr**	**45.14**	**261**	P	**P**	**12 42 38.2**	**-1.5**
MTN	**Manton Dam**	**49.62**	**270**	P	**P**	**12 43 12.6**	**-1.2**
KNRA	**Kununurra**	**51.16**	**266**	P	**P**	**12 43 24.1**	**-1.0**
KNRA				IAmb	IAmb	12 43 29.8	
	comp=Z,38nm,1.2s						
FITZ	**Fitzroy Crossi**	**53.56**	**262**	P	**P**	**12 43 41.9**	**-0.7**
	comp=Z,2.9nm,0.8s,baz=90,slow=16,SNR=5.3						
FITZ	**Fitzroy Crossi**	**53.56**	**262**	P	**P**	**12 43 41.4**	**-1.1**
FITZ				IAmb	IAmb	12 43 58.6	
	comp=Z,13nm,1.2s						
MJAR	**Matsushiro Arr**	**69.99**	**323**	P	**P**	**12 45 30.9**	**+0.6**
	comp=Z,5.0nm,0.7s,baz=143,slow=6.2,SNR=10						
MJAR	**Matsushiro Arr**	**69.99**	**323**	P	**P**	**12 45 30.6**	**+0.2**
MAJO	**Matsushiro**	**69.99**	**323**	P	**P**	**12 45 31.2**	**+0.9**
MAJO				IAmb	IAmb	12 45 31.3	
	comp=Z,5.9nm,0.8s						
QSPA	**South Pole Qui**	**70.18**	**180**	P	**P**	**12 45 32.0**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=322,slow=1.0,SNR=5.1						
QSPA	**South Pole Qui**	**70.18**	**180**	P	**P**	**12 45 32.2**	**+0.9**
PEA0B	**Petropavlovsk-**	**75.80**	**345**	P	**P**	**12 46 04.7**	**+1.1**
PETK	**Petropavlovsk-**	**75.80**	**345**	P	**P**	**12 46 04.9**	**+1.3**
	comp=Z,6.2nm,0.9s,baz=136,slow=7.7,SNR=9.8						
KSRS	**Korea Array**	**76.73**	**318**	P	**P**	**12 46 09.7**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=134,slow=7.0,SNR=3.2						
USRK	**Ussuriysk Ar.**	**78.72**	**326**	P	**P**	**12 46 21.5**	**+1.6**
	comp=Z,2.2nm,0.6s,baz=153,slow=4.4,SNR=5.0						
YBH	**Yreka Blue Hor**	**79.52**	**38**	P	**P**	**12 46 26.5**	**+2.1**
	comp=Z,1.6nm,0.8s,baz=269,slow=2.1,SNR=6.2						
PNTR	**Pine Nut**	**79.82**	**42**	P	**P**	**12 46 28.0**	**+1.8**
PNTR				IAmb	IAmb	12 46 29.1	
	comp=Z,3.2nm,0.8s						
NVAR	**Mina Array Bea**	**80.26**	**43**	P	**P**	**12 46 30.4**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=223,slow=8.7,SNR=7.7						
NVAR	**Mina Array Bea**	**80.26**	**43**	P	**P**	**12 46 29.6**	**+1.0**
ELK	**Elko**	**83.52**	**43**	P	**P**	**12 46 46.9**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=297,slow=4.5,SNR=3.6						
BALM	**Baldy**	**85.46**	**16**	P	**P**	**12 46 56.1**	**+1.9**
TXAR	**Lajitas Array**	**86.34**	**57**	P	**P**	**12 47 01.4**	**+2.2**
	comp=Z,1.0nm,0.7s,baz=216,slow=7.7,SNR=4.1						
TXAR	**Lajitas Array**	**86.34**	**57**	P	**P**	**12 47 00.4**	**+1.2**
ANMO	**Albuquerque**	**86.66**	**51**	P	**P**	**12 47 02.4**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=210,slow=9.7,SNR=4.6						
IL31		**87.61**	**13**	P	**P**	**12 47 05.5**	**+1.3**
ILAR	**Eielson Array**	**87.61**	**13**	P	**P**	**12 47 04.7**	**+0.4**
	comp=Z,1.5nm,0.9s,baz=223,slow=5.6,SNR=14						
ILAR	**Eielson Array**	**87.61**	**13**	P	**P**	**12 47 05.3**	**+1.0**
PDAR	**Pinedale Array**	**88.20**	**43**	P	**P**	**12 47 09.2**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=194,slow=2.6,SNR=4.8						
PDAR	**Pinedale Array**	**88.20**	**43**	P	**P**	**12 47 08.9**	**+1.1**
PLCA	**Paso Flores**	**89.36**	**133**	P	**P**	**12 47 16.6**	**+3.3**
	comp=Z,0.7nm,0.5s,baz=88,slow=17,SNR=9.0						
PLCA	**Paso Flores**	**89.36**	**133**	P	P	12 47 17.3	+4.0
PLCA				IAmb	IAmb	12 47 30.0	
	comp=Z,4.4nm,1.4s						
CMAR	**Chiang Mai Arr**	**90.34**	**289**	P	**P**	**12 47 19.1**	**+1.1**
	comp=Z,0.5nm,0.3s,baz=128,slow=2.7,SNR=5.7						
CMAR	**Chiang Mai Arr**	**90.34**	**289**	P	**P**	**12 47 18.5**	**+0.4**
MKAR	**Makanchi Array**	**111.11**	**314**	PKiKP	**PKiKP**	**12 52 46.3**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=117,slow=0.9,SNR=4.7						
AKASG	**Malin Array Be**	**142.69**	**332**	PKhKP	**PKPdf**	**12 53 43.1**	**-3.7**
	comp=Z,1.1nm,0.4s,baz=41,slow=4.1,SNR=8.3						
BUR08	**Bucovina Ar. S**	**146.73**	**332**		**PKiKP**	**12 53 57.4**	**-1.3**
BRTR	**Keskin Array B**	**146.76**	**313**	PKPbc	**PKPbc**	**12 53 56.7**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=60,slow=3.5,SNR=7.4						
BRTR	**Keskin Array B**	**146.76**	**313**		**PKPbc**	**12 53 56.6**	**-0.3**
CLL	**Collm**	**147.56**	**348**	*e*PKPbc	**PKiKP**	**12 53 59.0**	**-1.1**
CLL				*e*PKPab	**PKPab**	**12 54 03.0**	**+1.3**
MMAI	**Mount Meron Ar**	**147.90**	**301**	PKPbc	**PKiKP**	**12 54 00.7**	**-0.8**
	comp=Z,0.9nm,0.2s,baz=76,slow=6.1,SNR=2.3						
KHC	**Kasperske Hory**	**149.49**	**346**	*e*PKP	**PKiKP**	**12 54 03.5**	**-0.7**
GERES	**GERESS Array B**	**149.73**	**345**	PKPbc	**PKiKP**	**12 54 04.1**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=308,slow=4.4,SNR=8.5						
GERES	**GERESS Array B**	**149.73**	**345**		**PKiKP**	**12 54 04.4**	**-0.4**

BER 17 12:43:05.0±1.3, **66.37N**×**14.66E**, **h0**km, **ML1.2, Suspected explosion, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOR8	**Moi Rana**	**0.22**	**204**	*eP*	Pg	12 43 06.2	-2.9
MOR8				*eS*	Sg	12 43 08.3	-3.6
MOR8				IAML		12 43 10.3	
	comp=Z,167nm,0.5s						
KONS	**Konsvik**	**0.63**	**283**	*eP*	Pg	12 43 15.4	-1.7
KONS				*eS*	Sg	12 43 25.4	+0.1
KONS				IAML		12 43 28.9	
	comp=Z,6.2nm,0.4s						
STEI	**Steigen**	**1.59**	**8**	*eP*	Pn	12 43 31.7	-2.6
STEI				*eS*	Sn	12 43 53.2	-2.2
STEI				IAML		12 44 01.7	
	comp=Z,4.0nm,0.9s						

HEL 17 12:43:12.5±0.6, **60.53N**×**27.67E**, **h0**km, **ML0.7, Explosion, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VJF	**Virojoki**	**0.06**	**275**	*eP*	Pg	12 43 13.8	+0.2
VJF				*eS*	Sg	12 43 14.4	+0.1
PVF	**Pernaja**	**0.90**	**272**	*eP*	Pg	12 43 28.7	-0.9
PVF				*eS*	Sg	12 43 39.4	-1.8
FIA0	**FINESS Array S**	**1.20**	**320**	*eP*	Pg	12 43 33.2	-2.2
FIA0				*eS*	Sg	12 43 49.6	-1.4
FIA1	**FINESS Array S**	**1.20**	**320**	*eP*	Pg	12 43 33.4	-2.1
FIA1				*eS*	Sg	12 43 49.6	-1.4
KAF	**Kangasniemi**	**1.72**	**338**	*eP*	Pn	12 43 43.2	-0.4
KAF				*eS*	Sn	12 44 05.1	-1.1
KAF				MSG		12 44 10.2	
	comp=Z,0.3nm,0.1s						

NEIC **17** *12:49:37.6±1.4, 20°.83S±0°.10×178°.8W±0°.1, h573km±6km, mb4.4/69, Error ellipse: s-maj=16.2km s-min=13.9km az=111.0*

IDC **17** *12:49:37.1±1.1, 20°.89S×178°.74W, h569km±11km, mb3.6/20, mb1 3.8/23, mb1mx3.7/43, mbtmp4.5/23, Error ellipse: s-maj=14.0km s-min=10.1km az=146.0*

ISC 17 12:49:35.6±0.3, **20.95S**±0.06×**178.67W**±0.06, **h550**km, **n180**,σ1°**78**/181,**mb4.4**/55, **26C-4D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.45**	**315**	P	**P**	**12 51 04.2**	**+3.1**
AFI	**Afiamalu**	**9.61**	**44**	P	**P**	**12 51 51.4**	**+1.7**
	1.3nm,0.3s,baz=261,slow=19,SNR=2.1						
AFI				S	**S**	**12 53 33.2**	**-6.6**
	2.3nm,0.3s,baz=186,slow=19,SNR=3.3						
AFI	**Afiamalu**	**9.61**	**44**	P	**P**	**12 51 51.3**	**+1.5**
AFI				S	**S**	**12 53 36.4**	**-3.5**
FUNA	**Funafuti**	**12.52**	**350**	P	**P**	**12 52 20.3**	**+0.6**
DZM	**Mont Dzumac**	**13.90**	**263**	P	**P**	**12 52 34.2**	**+0.3**
	2.1nm,0.3s,baz=99,slow=23,SNR=14						
DZM	**Mont Dzumac**	**13.90**	**263**	P	**P**	**12 52 34.4**	**+0.5**
OUZ	**Omahuta**	**15.76**	**204**	P	**P**	**12 52 55.1**	**+2.5**
OUZ				IAmb	IAmb	12 53 13.7	
	comp=Z,46nm,1.3s						
URZ	**Urewera**	**17.63**	**191**	P	**P**	**12 53 09.0**	**-0.9**
	comp=Z,1.0nm,0.3s,baz=36,slow=18,SNR=6.4						
URZ				S	**S**	**12 55 57.6**	**-6.9**
	comp=Z,0.4nm,0.3s,baz=59,slow=22,SNR=6.3						
BKZ	**Black Stump Fm**	**18.62**	**192**	P	**P**	**12 53 19.2**	**+0.1**
THZ	**Tophouse**	**21.93**	**197**	P	**P**	**12 53 49.3**	**+0.3**
RPZ	**Rata Peaks**	**24.26**	**198**	P	**P**	**12 54 09.5**	**-0.2**
	comp=Z,27nm,1.1s,baz=42,slow=12,SNR=3.4						
RPZ	**Rata Peaks**	**24.26**	**198**	P	**P**	**12 54 10.2**	**+0.6**
EIDS	**Eidsvold**	**28.12**	**255**	P	**P**	**12 54 43.9**	**+0.1**
EIDS				IAmb	IAmb	12 54 45.0	
	comp=Z,12nm,1.0s						
ARMA	**Armidale**	**28.30**	**244**	P	**P**	**12 54 46.5**	**+1.0**
ARMA				IAmb	IAmb	12 54 47.3	
	comp=Z,11nm,0.7s						
CAN	**Canberra**	**31.74**	**236**	P	**P**	**12 55 15.3**	**+0.3**
CAN				IAmb	IAmb	12 55 24.9	
	comp=Z,12nm,1.1s						
PMG	**Port Moresby**	**34.83**	**284**	P	**P**	**12 55 40.9**	**-0.3**
COEN	**Coen**	**36.98**	**275**	P	**P**	**12 55 59.2**	**+0.2**
STKA	**Stephens Creek**	**37.02**	**245**	P	**P**	**12 55 59.6**	**+0.4**
	comp=Z,10nm,0.5s,baz=91,slow=12,SNR=53						
STKA	**Stephens Creek**	**37.02**	**245**	P	**P**	**12 55 59.4**	**+0.2**
BBOO	**Buckleboo**	**41.78**	**244**	P	**P**	**12 56 36.8**	**-0.7**
BBOO				IAmb	IAmb	12 56 38.1	
	comp=Z,22nm,0.9s						
WAKE	**Wake Island**	**42.49**	**339**	P	**P**	**12 56 42.5**	**-0.5**
JAY	**Jayapura**	**43.59**	**289**	P	**P**	**12 56 51.6**	**-0.3**
	comp=Z,73nm,0.7s,baz=148,slow=4.7,SNR=30						
WR0	**Warramunga Arr**	**43.73**	**263**	P	**P**	**12 56 51.6**	**-1.2**
WR0				IAmb	IAmb	12 56 54.9	
	comp=Z,8.5nm,0.6s						
AS31	**Alice Springs**	**43.80**	**257**	P	**P**	**12 56 52.9**	**-0.5**
AS31				IAmb	IAmb	12 56 54.0	
	comp=Z,7.9nm,1.0s						
ASAR	**Alice Springs**	**43.80**	**257**	P	**P**	**12 56 52.9**	**-0.5**
	comp=Z,23nm,0.8s,baz=91,slow=8.0,SNR=409						
ASAR				PcP	**PcP**	**12 58 26.9**	**-0.8**
	comp=Z,2.7nm,0.6s,baz=105,slow=3.7,SNR=8.0						
ASAR				ScP	**ScP**	**13 01 26.8**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=105,slow=4.6,SNR=13						
ASAR				S	**S**	**13 02 40.8**	**-3.9**
	comp=Z,1.0nm,1.0s,baz=92,slow=16,SNR=4.3						
ASAR	**Alice Springs**	**43.80**	**257**	P	**P**	**12 56 52.5**	**-0.9**
ASAR					**PcP**	**12 58 27.1**	**-0.8**
ASAR					**ScP**	**13 01 26.8**	**-0.4**
WRAB	**Tennant Creek**	**43.91**	**263**	P	**P**	**12 56 52.8**	**-1.4**
WRAB				IAmb	IAmb	12 56 54.3	
	comp=Z,16nm,0.7s						
WRA	**Warramunga Arr**	**43.91**	**263**	P	**P**	**12 56 53.0**	**-1.2**
	comp=Z,1.1nm,0.6s,baz=97,slow=6.9,SNR=135						
WRA				ScP	**ScP**	**13 01 26.7**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=98,slow=3.8,SNR=3.6						
WRA				S	**S**	**13 02 43.2**	**-3.0**
	comp=Z,0.8nm,0.8s,baz=100,slow=14,SNR=3.1						
WRA	**Warramunga Arr**	**43.91**	**263**	P	**P**	**12 56 53.1**	**-1.2**
MTN	**Manton Dam**	**48.54**	**271**	P	**P**	**12 57 28.3**	**-1.0**
KNRA	**Kununurra**	**50.00**	**267**	P	**P**	**12 57 39.4**	**-0.7**
SARN	**Sarigan**	**51.15**	**314**	P	**P**	**12 57 47.8**	**-0.6**
SARN				IAmb	IAmb	12 57 54.3	
	comp=Z,20nm,0.9s						
FITZ	**Fitzroy Crossi**	**52.34**	**263**	P	**P**	**12 57 56.5**	**-0.6**
	comp=Z,5.7nm,0.7s,baz=74,slow=3.8,SNR=20						
FITZ	**Fitzroy Crossi**	**52.34**	**263**	P	**P**	**12 57 56.7**	**-0.4**
FITZ				IAmb	IAmb	12 58 01.2	
	comp=Z,11nm,1.0s						
SIJI	**Sorong**	**52.75**	**286**	P	**P**	**12 57 59.5**	**-0.5**
	comp=Z,93nm,0.7s,baz=86,slow=4.2						
SOEI	**Soe**	**55.88**	**272**	P	**P**	**12 58 22.5**	**+0.3**
PSA00	**Pilbara Seismi**	**56.95**	**257**	P	**P**	**12 58 28.0**	**-1.3**
SBA	**Scott Base**	**57.38**	**184**	P	**P**	**12 58 33.4**	**+2.1**
VNDA	**Vanda**	**57.41**	**185**	P	**P**	**12 58 33.0**	**+1.5**
	comp=Z,2.7nm,0.6s,baz=357,slow=6.8,SNR=8.0						
VNDA	**Vanda**	**57.41**	**185**	P	**P**	**12 58 32.8**	**+1.3**
GIRL	**Giralia**	**61.82**	**255**	P	**P**	**12 59 01.4**	**-0.4**
QSPA	**South Pole Qui**	**69.12**	**180**	P	**P**	**12 59 47.3**	**+0.5**
QSPA				IAmb	IAmb	12 59 49.0	
	comp=Z,17nm,1.1s						
MJAR	**Matsushiro Arr**	**70.20**	**324**	P	**P**	**12 59 52.6**	**-1.0**
	comp=Z,2.9nm,0.7s,baz=147,slow=6.3,SNR=6.1						
MJAR	**Matsushiro Arr**	**70.20**	**324**	P	**P**	**12 59 52.5**	**-1.0**
JNU	**Nakatsue**	**72.17**	**317**	P	**P**	**13 00 04.3**	**-0.8**
	comp=Z,4.7nm,0.8s,baz=63,slow=5.2,SNR=5.2						
JNU	**Nakatsue**	**72.17**	**317**	IAmb	IAmb	13 00 14.7	
	comp=Z,26nm,1.5s						
ADK	**Adak**	**72.54**	**1**	P	**P**	**13 00 05.5**	**-1.3**
YULB	**Yu-li**	**73.22**	**304**	P	**P**	**13 00 09.8**	**-1.6**
YULB				IAmb	IAmb	13 00 24.4	
	comp=Z,14nm,1.1s						
TPUB	**Ta-pu**	**73.69**	**303**	P	**P**	**13 00 12.4**	**-1.6**
PEA0B	**Petropavlovsk-**	**76.55**	**346**	P	**P**	**13 00 28.9**	**-0.4**
PETK	**Petropavlovsk-**	**76.55**	**346**	P	**P**	**13 00 28.6**	**-0.7**
	comp=Z,5.7nm,0.6s,baz=179,slow=6.6,SNR=18						
PETK	**Petropavlovsk-**	**76.55**	**346**	P	**P**	**13 00 28.3**	**-1.0**
USRK	**Ussuriysk Ar.**	**78.98**	**326**	P	**P**	**13 00 43.4**	**+0.8**
	comp=Z,2.1nm,0.6s,baz=108,slow=2.8,SNR=4.1						
USRK	**Ussuriysk Ar.**	**78.98**	**326**	P	**P**	**13 00 42.8**	**+0.2**
HOPS	**Hopland Field**	**79.12**	**41**	P	**P**	**13 00 44.0**	**+0.5**
KMRM	**Mail Ridge**	**79.50**	**40**	P	**P**	**13 00 46.1**	**+0.6**
KMRM				IAmb	IAmb	13 00 47.9	
	comp=Z,12nm,1.1s						
YBH	**Yreka Blue Hor**	**81.03**	**39**	P	**P**	**13 00 53.9**	**+0.4**
	comp=Z,2.1nm,0.7s,baz=154,slow=1.8,SNR=9.6						
YBH	**Yreka Blue Hor**	**81.03**	**39**	P	**P**	**13 00 54.2**	**+0.7**
WAKR	**Walker**	**81.10**	**43**	IAmb	IAmb	13 00 56.2	
	comp=Z,7.6nm,1.3s						
PMSA	**Palmer Station**	**81.12**	**157**	P	**P**	**13 00 54.4**	**+0.9**
PMSA				IAmb	IAmb	13 01 02.1	
	comp=Z,32nm,1.1s						
PNTR	**Pine Nut**	**81.34**	**42**	P	**P**	**13 00 55.7**	**+0.4**
PNTR				IAmb	IAmb	13 00 57.0	
	comp=Z,15nm,1.4s						
HUMO	**Hull Mountain**	**81.44**	**38**	P	**P**	**13 00 56.2**	**+0.7**
NVAR	**Mina Array Bea**	**81.78**	**44**	P	**P**	**13 00 57.9**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=226,slow=7.6,SNR=14						
NVAR	**Mina Array Bea**	**81.78**	**44**	P	**P**	**13 00 57.7**	**+0.1**
NV11	**Mina Array Sit**	**81.88**	**44**	P	**P**	**13 00 58.3**	**+0.3**
NV11				IAmb	IAmb	13 00 58.9	
	comp=Z,8.0nm,1.4s						
MOD	**Modoc Plateau**	**82.57**	**40**	P	**P**	**13 01 01.8**	**+0.4**
MOD				IAmb	IAmb	13 01 02.4	
	comp=Z,11nm,1.4s						
H04A

YKA	**Yellowknife Ar**	**97.19**	**25**	P	Pdif	13 02 08.2	-0.8	
	comp=Z,0.3nm,0.6s,baz=244,slow=4.6,SNR=7.4							
ZALV	**Zalesovo Beam**	**110.45**	**321**	PKiKP	**PKiKP**	**13 07 03.3**	**-2.0**	
	comp=Z,1.1nm,0.6s,baz=106,slow=0.2,SNR=5.4							
MKAR	**Makanchi Array**	**111.05**	**313**	PKiKP	**PKiKP**	**13 07 04.8**	**-1.9**	
	comp=Z,0.5nm,0.4s,baz=103,slow=0.7,SNR=9.7							
KURBB	**Kurchatov Arra**	**113.95**	**317**	PKiKP	**PKiKP**	**13 07 10.1**	**-2.0**	
	comp=Z,0.8nm,0.6s,baz=95,slow=1.8,SNR=6.3							
KSH	**Kashi**	**114.63**	**305**	PKP	**PKiKP**	**13 07 17.1**	**+3.1**	
KSH				PP	**PP**	**13 08 28.1**	**+6.1**	
KSH				AMB	AMB			
	comp=Z,320nm,5.1s							
BVAR	**Borovoye Array**	**119.02**	**320**	PKP	**PKPdf**	**13 07 19.9**	**-1.9**	
	comp=Z,2.6nm,0.4s,baz=118,slow=2.6,SNR=24							
BVAR				SKP		13 10 02.1		
	comp=Z,0.7nm,0.8s,baz=83,slow=6.1,SNR=3.4							
SPITS	**Spitsbergen Ar**	**122.27**	**356**	PKP	**PKPdf**	**13 07 26.5**	**-1.0**	
	comp=Z,3.2nm,0.7s,baz=96,slow=13,SNR=3.7							
ARU	**Arti**	**125.21**	**325**	PKP	**PKPdf**	**13 07 32.4**	**-1.2**	
	comp=Z,2.7nm,0.5s,baz=66,slow=1.1,SNR=12							
ARU	**Arti**	**125.21**	**325**		**PKPdf**	**13 07 32.7**	**-0.9**	
AKTO	**Aktyubinsk**	**126.98**	**318**	PKP	**PKPdf**	**13 07 36.2**	**-0.9**	
	comp=Z,2.4nm,0.7s,baz=117,slow=1.7,SNR=12							
ARCES	**ARCESS Array B**	**129.25**	**349**	PKP	**PKPdf**	**13 07 39.8**	**-1.1**	
	comp=Z,1.5nm,0.6s,baz=47,slow=2.3,SNR=13							
FINES	**FINESS Array B**	**136.02**	**343**	PKP	**PKPdf**	**13 07 50.8**	**-3.1**	
	comp=Z,1.3nm,0.6s,baz=59,slow=2.0,SNR=4.4							
FINES				SKP		13 10 32.5		
	comp=Z,2.6nm,0.7s,baz=79,slow=0.7,SNR=6.7							
FINES	**FINESS Array B**	**136.02**	**343**		**PKPdf**	**13 07 54.0**	**+0.1**	
NB2	**NORSAR Subarra**	**139.35**	**353**	PKP	PKPdf	13 07 50.3	-10	
	comp=Z,0.6nm,0.6s,baz=20,slow=3.5							
NOA	**NORSAR Array B**	**139.35**	**353**	PKhKP	PKPdf	13 07 50.3	-10	
	comp=Z,0.9nm,0.8s,baz=16,slow=4.7,SNR=4.4							
NOA				SKPbc	**SKPbc**	**13 10 40.8**	**-3.1**	
	comp=Z,1.2nm,0.9s,baz=14,slow=4.3,SNR=3.4							
HFS	**Hagfors**	**139.88**	**350**	PKhKP	PKPdf	13 07 52.0	-9.0	
	comp=Z,2.2nm,0.3s,baz=93,slow=3.1,SNR=29							
AKASG	**Malin Array Be**	**143.10**	**330**	PKhKP	PKPab	13 08 02.8	-1.9	
	comp=Z,8.8nm,0.4s,baz=42,slow=4.4,SNR=78							
MBAR	**Mbarara**	**144.14**	**237**		PKPbc	13 08 09.5	-0.3	
SORM	**Soroca**	**145.25**	**328**	⇑P	**PKPdf**	**13 08 10.5**	**-0.3**	
EKA	**Eskdalemuir Ar**	**145.50**	**5**	PKPbc	**PKPdf**	**13 08 11.1**	**+0.1**	
	comp=Z,2.3nm,0.7s,baz=5.6,slow=3.0,SNR=6.7							
MILM	**Milestii Mici**	**145.81**	**326**	⇑P	**PKPdf**	**13 08 12.2**	**+0.4**	
ASF	**Jabal al Asfar**	**146.42**	**297**	PKPbc	**PKPdf**	**13 08 15.1**	**+1.7**	
	comp=Z,3.7nm,0.7s,baz=45,slow=1.5,SNR=7.4							
BR131	**Keskin Array S**	**146.67**	**311**		**PKPdf**	**13 08 14.9**	**+1.2**	
BRTR	**Keskin Array B**	**146.67**	**311**	PKPbc	**PKPdf**	**13 08 14.7**	**+1.1**	
	comp=Z,4.6nm,0.6s,baz=132,slow=4.4,SNR=27							
TLCR		**146.90**	**323**	⇑P	**PKPdf**	**13 08 16.0**	**+2.4**	
GHRR		**147.11**	**326**	⇑P	**PKPdf**	**13 08 17.1**	**+3.1**	
BUR08	**Bucovina Ar. S**	**147.12**	**330**		**PKPbc**	**13 08 17.5**	**+0.2**	
BURAR	**Bucovina Array**	**147.14**	**330**	⇑P	**PKPdf**	**13 08 17.3**	**+3.2**	
GISR	**Galati**	**147.16**	**324**	P	**PKPdf**	**13 08 14.1**	**0.0**	
BIZ	**Bicaz**	**147.18**	**328**	⇑P	**PKPdf**	**13 08 17.1**	**+3.0**	
TESR	**Tescani**	**147.20**	**327**	⇑P	**PKPdf**	**13 08 15.7**	**+1.6**	
CFR	**Carcaliu**	**147.28**	**324**	⇑P	**PKPdf**	**13 08 16.3**	**+2.1**	
TOPG	**Topolog**	**147.33**	**323**	⇑P	**PKPdf**	**13 08 17.6**	**+3.2**	
KOLS	**Kolonicke sedl**	**147.44**	**334**	*e*PKP	**PKPbc**	**13 08 17.9**	**0.0**	
MMAI	**Mount Meron Ar**	**147.48**	**299**	PKPbc	**PKPdf**	**13 08 18.2**	**+3.1**	
	comp=Z,8.6nm,0.6s,baz=69,slow=4.6,SNR=14							
TIRR	**Tirgusor**	**147.57**	**323**	⇑P	**PKPdf**	**13 08 17.4**	**+2.6**	
VRI	**Vrincioaia**	**147.59**	**326**	⇑P	**PKPdf**	**13 08 17.8**	**+3.0**	
HARR	**Harsova**	**147.70**	**323**	⇑P	**PKPdf**	**13 08 18.0**	**+3.0**	
TRPA	**Tarpa**	**147.96**	**333**	⇓P	**PKPdf**	**13 08 18.7**	**+3.4**	
MDUB	**Mudurnu**	**148.01**	**314**		**PKPdf**	**13 08 18.9**	**+3.1**	
DOPR	**Dopca**	**148.21**	**327**	⇑P	**PKPbc**	**13 08 19.6**	**-0.3**	
MLR	**Muntele Rosu**	**148.25**	**326**	PKPbc	**PKPdf**	**13 08 18.6**	**+2.5**	
	comp=Z,5.7nm,0.6s,baz=75,slow=3.9,SNR=12							
MLR	**Muntele Rosu**	**148.25**	**326**	⇑P	**PKPbc**	**13 08 20.4**	**+0.1**	
CLL	**Collm**	**148.35**	**346**	*i* PKPbc	**PKPdf**	**13 08 18.9**	**+3.0**	
	comp=Z,11nm,0.7s							
CLL				*i* PKPab	**PKiKP**	**13 08 24.7**	**+3.4**	
	comp=Z,4.0nm,0.7s							
CLL				*e*(pPKPdf)		13 10 25.0		
LANS	**Liptovska Anna**	**148.35**	**337**	*e*PKP	**PKPbc**	**13 08 20.5**	**+0.3**	
DPC	**Dobruska-Polom**	**148.36**	**342**⇑	*e*PKP	**PKPdf**	**13 08 19.5**	**+3.5**	
EIL	**Elat**	**148.48**	**293**	PKPbc	**PKPdf**	**13 08 19.9**	**+3.1**	
	comp=Z,5.1nm,0.7s,baz=1.4,slow=5.3,SNR=8.8							
BRG	**Berggiesshubel**	**148.53**	**345**	*e*PKP	**PKPdf**	**13 08 19.8**	**+3.6**	
	comp=Z,5.5nm,0.7s							
VOIR		**148.75**	**327**	⇑P	**PKPbc**	**13 08 20.8**	**-0.6**	
ARR	**Arges**	**149.01**	**327**	⇓P	**PKPbc**	**13 08 22.4**	**+0.4**	
VYHS	**Vyhne**	**149.13**	**337**	*e*PKP	**PKPdf**	**13 08 21.3**	**+4.1**	
VYHS				*e*		13 08 28.4		
PRU	**Pruhonice**	**149.19**	**343**⇑	*e*PKP	**PKPbc**	**13 08 22.0**	**-0.2**	
SIRR	**Siria**	**149.77**	**331**	⇑P	**PKPbc**	**13 08 23.0**	**-0.7**	
MODS	**Modra-Piesok**	**149.78**	**339**	*e*PKP	**PKPbc**	**13 08 23.0**	**-0.7**	
GZR	**Gura Zlata**	**149.91**	**329**	⇑P	**PKPdf**	**13 08 22.9**	**+4.3**	
ELND	**Elena**	**149.96**	**322**	⇑P	**PKPbc**	**13 08 23.4**	**-0.8**	
SRE	**Strehaia**	**150.23**	**328**	⇑P	**PKPbc**	**13 08 24.0**	**-0.9**	
KHC	**Kasperske Hory**	**150.23**	**344**⇑	*e*PKP	**PKPbc**	**13 08 24.0**	**-0.7**	
KHC				*e*PKPAB	**PKPab**	**13 08 33.5**	**+0.2**	
BZS	**Buzias**	**150.29**	**331**	⇑P	**PKPbc**	**13 08 23.9**	**-1.0**	
PLVB	**Pleven**	**150.36**	**324**	⇓P	**PKPbc**	**13 08 24.8**	**-0.4**	
GERES	**GERESS Array B**	**150.46**	**343**		**PKPbc**	**13 08 24.1**	**-1.2**	
	comp=Z,3.0nm,0.7s,baz=29,slow=3.0,SNR=19							
GERES	**GERESS Array B**	**150.46**	**343**		**PKPbc**	**13 08 24.5**	**-0.8**	
HERR	**Herculane**	**150.46**	**329**	⇑P	**PKPbc**	**13 08 24.2**	**-1.1**	
CONA	**Conrad Observa**	**150.64**	**340**	*i* PKiKP	**PKPbc**	**13 08 24.9**	**-0.9**	
	comp=Z,3.8nm,0.5s							
MANT	**Manisa**	**150.75**	**313**		**PKPbc**	**13 08 25.2**	**-1.4**	
MDVR	**Moldovita**	**150.87**	**329**	⇑P	**PKPbc**	**13 08 25.2**	**-1.1**	
ARSA	**Arzberg**	**151.35**	**340**	*i* PKPbc	**PKPdf**	**13 08 25.7**	**+5.0**	
	comp=Z,1.3nm,0.4s							
VTS	**Vitosha**	**151.63**	**325**		**PKPbc**	**13 08 27.2**	**-1.1**	
KBA	**Koelnbreinsper**	**152.17**	**342**	*i* PKiKP	**PKPbc**	**13 08 28.3**	**-1.0**	
	comp=Z,2.1nm,0.5s							
WTTA	**Wattenberg**	**152.45**	**345**	*i* PKiKP	**PKPbc**	**13 08 29.2**	**-0.8**	
	comp=Z,3.3nm,0.3s							
MYKA	**Terra Mystica**	**152.49**	**341**	*i* PKPbc	**PKPbc**	**13 08 28.0**	**-1.9**	
	comp=Z,1.8nm,0.4s							
MOTA	**Moosalm**	**152.50**	**346**	*i* PKiKP	**PKPbc**	**13 08 29.0**	**-1.1**	
	comp=Z,0.7nm,0.2s							
ABTA	**Abfaltersbach**	**152.70**	**343**	*i* PKPbc	**PKPbc**	**13 08 28.6**	**-1.8**	
	comp=Z,3.6nm,0.5s							
FETA	**Feichten**	**152.89**	**346**	*i* PKiKP	**PKPbc**	**13 08 30.0**	**-0.9**	
	comp=Z,3.4nm,0.8s							
DAVOX	**Davos/Dischmat**	**153.31**	**347**	PKPbc	**PKPbc**	**13 08 30.3**	**-1.6**	
	comp=Z,3.3nm,0.5s,baz=286,slow=3.1,SNR=5.3							
SANT	**Santorini**	**153.94**	**311**	⇑P	PKPdf	13 08 13.7	-11	

NNC ***17*** *12:54:01.4±0.7, 44.°29N×81.°18E, h0km, mb3.5, mpv3.3,*
Error ellipse: s-maj=6.0km s-min=3.6km az=120.0
SOME ***17*** *12:54:02.7, 44.°23N×81.°18E, h15km*
ISC 17 12:53:59.3±1.4, 44°23N±0.′04×81°28E±0.′04, h6km±11km, n37, σ1°88/59, 8C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.07**	**276**	*e*P			**Pn**	**12 54 20.9**	**-0.1**
	3.8nm,0.1s								
DJR				*e*S			**Sg**	**12 54 34.9**	**+1.1**
	30nm,0.1s								
DJR	**Jarkent**	**1.07**	**276**	P			**Pn**	**12 54 20.9**	**-0.1**
	5.6nm,0.1s								
DJR				S			**Sn**	**12 54 35.1**	**-1.1**
	25nm,0.1s								
PDGK	**Podgornoye**	**1.58**	**236**	P			**Pb**	**12 54 29.9**	**+0.9**
	14nm,0.2s								
PDGK				S			**Sb**	**12 54 50.0**	**+0.8**
	40nm,0.2s								
PDGK	**Podgornoye**	**1.58**	**236**	⇓Pg			**Pb**	**12 54 29.9**	**+0.9**
	7.4nm,0.3s								
PDGK				⇑Lg			Lg	12 54 51.7	
	16nm,0.4s								
SHLS	**Shalkode**	**1.70**	**231**	*e*P			**Pn**	**12 54 29.4**	**-0.3**
	21nm,0.1s								
SHLS				*e*S			**Sn**	**12 54 49.3**	**-2.5**
	136nm,0.2s								
SHLS	**Shalkode**	**1.70**	**231**	P			**Pn**	**12 54 28.7**	**-0.9**
	26nm,0.1s								
SHLS				S			**Sn**	**12 54 48.0**	**-3.7**
	84nm,0.3s								
KAPS	**Kapalarasan**	**1.73**	**308**	P			**Pb**	**12 54 31.3**	**-0.1**
	11nm,0.1s								
KAPS				S			**Sb**	**12 54 52.9**	**-0.5**
	58nm,0.2s								
UZB	**Uzynbulak**	**1.96**	**237**	P			**Pb**	**12 54 36.5**	**+0.9**
	5.6nm,0.2s								
UZB				S			**Sb**	**12 55 01.3**	**+1.0**
	22nm,0.3s								
KPKS	**Kokpek**	**2.03**	**249**	*e*P			**Pb**	**12 54 38.3**	**+1.7**
	22nm,0.1s								
KPKS				*e*S			**Sg**	**12 55 04.2**	**-0.2**
	62nm,0.2s								
MNBS	**Baschi**	**2.08**	**267**	*e*P			**Pg**	**12 54 39.2**	**+0.1**
	5.0nm,0.1s								
MNBS				*e*S			**Sg**	**12 55 05.3**	**-0.7**
	78nm,0.1s								
TDK	**Taldyqorghan**	**2.19**	**292**	*e*P			**Pg**	**12 54 41.1**	**-0.2**
	13nm,0.1s								
TDK				*e*S			**Sg**	**12 55 08.9**	**-0.8**
	69nm,0.4s								
ZHN	**Zhinishke**	**2.32**	**244**	Pg			**Pb**	**12 54 43.2**	**+1.5**
	5.1nm,0.1s								
ZHN				Lg			Lg	12 55 12.8	
	12nm,0.2s								
KURS	**Kuram**	**2.37**	**253**	*e*P			**Pb**	**12 54 44.2**	**+1.8**
	2.5nm,0.1s								
KURS				*e*S			**Sg**	**12 55 14.4**	**-0.9**
	5.8nm,0.2s								
KURS	**Kuram**	**2.37**	**253**	Pg			**Pb**	**12 54 43.4**	**+1.0**
	2.7nm,0.3s								
KURS				Lg			Lg	12 55 13.1	
	5.1nm,0.3s								
SATY	**Saty**	**2.39**	**242**	*e*P			**Pb**	**12 54 44.9**	**+2.1**
	4.5nm,0.1s								
SATY				*e*S			**Sg**	**12 55 15.8**	**-0.4**
	69nm,0.1s								
SATY	**Saty**	**2.39**	**242**	Pg			**Pb**	**12 54 44.3**	**+1.5**
	7.2nm,0.2s								
SATY				Lg			Lg	12 55 14.9	
	36nm,0.2s								
ARXS	**Arharly**	**2.48**	**271**	*e*P			**Pb**	**12 54 45.7**	**+1.4**
	4.1nm,0.1s								
ARXS				*e*S			**Sb**	**12 55 16.9**	**+1.7**
	24nm,0.3s								
ARXS	**Arharly**	**2.48**	**271**	Pg			**Pg**	**12 54 46.3**	**-0.5**
	5.5nm,0.2s								
ARXS				Lg			Lg	12 55 18.3	
	23nm,0.2s								
MAKZ	**Makanchi**	**2.62**	**11**	⇑Pg			**Pg**	**12 54 49.6**	**0.0**
	0.7nm,0.4s								
MAKZ				⇑Lg			Lg	12 55 19.8	
	1.2nm,0.3s								
MK31	**Makanchi Array**	**2.66**	**15**	⇑Pn			**Pn**	**12 54 43.3**	**+0.5**
	0.1nm,0.1s,baz=202,slow=14,SNR=36								
MK31				⇑Pg			**Pg**	**12 54 50.4**	**+0.2**
	0.4nm,0.3s,baz=194,slow=16,SNR=16								
MK31				⇑Lg			Lg	12 55 20.0	
	0.7nm,0.2s,baz=198,slow=24,SNR=3.8								
CHKK	**Chushkaly**	**3.12**	**265**	*e*P			**Pb**	**12 54 57.0**	**+1.8**
	1.0nm,0.0s								
CHKK				*e*S			**Sb**	**12 55 36.1**	**+2.7**
	15nm,0.1s								
CHKK	**Chushkaly**	**3.12**	**265**	Pg			**Pg**	**12 54 57.8**	**-1.2**
	5.6nm,0.2s								
CHKK				Lg			Lg	12 55 38.3	
	13nm,0.3s								
KOTS	**Kotyrbulak**	**3.18**	**253**	*e*P			**Pb**	**12 54 58.2**	**+1.9**
	5.2nm,0.2s								
KOTS				*e*S			**Sb**	**12 55 38.4**	**+3.1**
	23nm,0.2s								
KOTS	**Kotyrbulak**	**3.18**	**253**	Pg			**Pb**	**12 54 58.1**	**+1.8**
	13nm,0.3s								
KOTS				Lg			Lg	12 55 38.3	
	24nm,0.3s								
MDOK	**Medeo**	**3.25**	**252**	Pg			**Pb**	**12 54 59.8**	**+2.3**
	3.2nm,0.4s								
MDOK				⇓Lg			Lg	12 55 43.4	
	5.6nm,0.6s								
MDOK	**Medeo**	**3.25**	**252**	Pg			**Pb**	**12 55 00.3**	**+2.8**
	4.6nm,0.3s								
MDOK				Lg			Lg	12 55 42.2	
	3.8nm,0.3s								
KTBS	**Karatobe**	**3.36**	**263**	*e*P			**Pb**	**12 55 02.0**	**+2.7**
	1.2nm,0.3s								
KTBS				*e*S			**Sg**	**12 55 45.0**	**-2.1**
	30nm,0.5s								
KTBS	**Karatobe**	**3.36**	**263**	Pg			**Pg**	**12 55 02.9**	**-0.8**
	2.8nm,0.4s								
KTBS				Lg			Lg	12 55 46.3	
	14nm,0.6s								
TNSS	**Tian-Shan**	**3.36**	**251**	*e*P			**Pb**	**12 55 01.9**	**+2.4**
	2.7nm,0.1s								
TNSS				*e*S			**Sg**	**12 55 44.7**	**-2.6**
	7.5nm,0.1s								
TNSS	**Tian-Shan**	**3.36**	**251**	Pg			**Pg**	**12 55 03.2**	**-0.6**
	3.7nm,0.3s								
TNSS				Lg			Lg	12 55 47.0	
	8.0nm,0.2s								
KUU	**Kurty**	**3.58**	**266**	Pg			**Pb**	**12 55 05.4**	**+2.4**
	2.9nm,0.1s								
KUU				Lg			Lg	12 55 51.6	
	11nm,0.2s								
IZV	**Izvestkoviy**	**3.59**	**252**	*e*P			**Pb**	**12 55 06.2**	**+2.9**
	1.4nm,0.2s								
IZV				*e*S			**Sg**	**12 55 52.0**	**-2.6**
	4.7nm,0.1s								
MTBS	**Maitube**	**3.69**	**254**	*e*P			**Pg**	**12 55 09.2**	**-0.7**
	3.2nm,0.1s								
MTBS				*e*S			**Sg**	**12 55 57.1**	**-0.6**
	13nm,0.2s								
KST	**Kastek**	**4.04**	**255**	Pg			**Pb**	**12 55 14.2**	**+3.3**
	2.7nm,0.3s								
KST				Lg			Lg	12 56 06.7	
	3.5nm,0.4s								
KRBS	**Karabastau**	**4.08**	**264**	*e*P			**Pg**	**12 55 15.3**	**-2.2**
	1.0nm,0.1s								
KRBS				*e*S			**Sg**	**12 56 07.4**	**-2.9**
	2.0nm,0.3s								
ZSN	**Zaisan**	**4.08**	**37**	*e*P			**Pb**	**12 55 14.5**	**+3.0**
	2.0nm,0.2s								
ZSN				*e*S			**Sg**	**12 56 06.2**	**-4.1**
	5.3nm,0.3s								
TKM2	**Tokmak 2**	**4.33**	**254**	⇑Pg			**Pg**	**12 55 24.5**	**+2.2**
	3.4nm,0.7s								
TKM2				⇑Lg			Lg	12 56 18.5	
	2.1nm,0.4s								

NEIC ***17*** *12:56:40.9±1.9, 19.°04N±0.′06×66.°84W±0.′03, h30km±12km,*
Error ellipse: s-maj=8.5km s-min=4.0km az=184.0
RSPR ***17*** *12:56:40.1, 19.°20N×66.°95W, h23km±23km, MD3.2/15*
ISC 17 12:56:32.7±1.9, 19°44N±0.′08×66°96W±0.′05, h29km±11km, n45, σ1°07/57, 8C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.98**	**188**	⇓*e*P			**Pn**	**12 56 52.2**	**+1.8**
AGPR	**Aguadilla, PR**	**0.98**	**188**	*e*S			**Sb**	**12 57 02.3**	**-1.3**
AGPR	**Aguadilla, PR**	**0.98**	**188**				**Pn**	**12 56 52.4**	**+1.9**
AGPR							**Sb**	**12 57 01.6**	**-1.9**
EMPR	**Esperanza - Ma**	**1.04**	**157**	⇑*e*P			**Pb**	**12 56 53.9**	**+1.9**
EMPR	**Esperanza - Ma**	**1.04**	**157**	*e*S			**Sb**	**12 57 04.0**	**-1.4**
EMPR	**Esperanza - Ma**	**1.04**	**157**				**Pb**	**12 56 54.0**	**+1.9**
EMPR							**Sg**	**12 57 04.8**	**-0.1**
AOPR	**Arecibo Observ**	**1.10**	**170**	⇓*e*P			**Pb**	**12 56 54.0**	**+0.9**
AOPR	**Arecibo Observ**	**1.10**	**170**	*e*S			**Sb**	**12 57 05.3**	**-1.9**
AOPR	**Arecibo Observ**	**1.10**	**170**				**Pb**	**12 56 54.1**	**+0.9**
AOPR							**Sb**	**12 57 05.3**	**-1.9**
IDE	**Isla Desecheo**	**1.15**	**205**	⇑*e*P			**Pb**	**12 56 56.0**	**+1.9**
IDE	**Isla Desecheo**	**1.15**	**205**				**Pb**	**12 56 56.0**	**+1.9**
LSP	**Las Mesas**	**1.26**	**185**	⇓*e*P			**Pb**	**12 56 56.6**	**+0.8**
LSP	**Las Mesas**	**1.26**	**185**	*e*S			**Sn**	**12 57 09.8**	**-0.6**
LSP	**Las Mesas**	**1.26**	**185**				**Pb**	**12 56 56.6**	**+0.8**
LSP							**Sn**	**12 57 09.8**	**-0.6**
GCPR	**Guaynabo City**	**1.40**	**143**				**Pb**	**12 56 59.0**	**+0.9**
CELP	**Cerrillos**	**1.40**	**165**	⇑*e*P			**Pb**	**12 56 58.8**	**+0.6**
CELP				*e*S			**Sn**	**12 57 13.4**	**-0.4**
CELP	**Cerrillos**	**1.40**	**165**				**Pb**	**12 56 58.8**	**+0.6**
CELP							**Sn**	**12 57 13.4**	**-0.4**
OBIP	**Obispado Ponce**	**1.43**	**166**	⇓*e*P			**Pb**	**12 56 59.3**	**+0.6**
OBIP	**Obispado Ponce**	**1.43**	**166**	*e*S			**Sn**	**12 57 13.4**	**-1.0**
OBIP	**Obispado Ponce**	**1.43**	**166**				**Pb**	**12 56 59.3**	**+0.6**
OBIP							**Sn**	**12 57 13.6**	**-1.0**
CRPR	**Cabo Rojo, PR**	**1.43**	**186**	⇓*e*P			**Pb**	**12 56 59.0**	**+0.3**
CRPR	**Cabo Rojo, PR**	**1.43**	**186**	*e*S			**Sn**	**12 57 13.4**	**-1.1**
CRPR	**Cabo Rojo, PR**	**1.43**	**186**				**Pb**	**12 56 59.0**	**+0.3**
CRPR							**Sn**	**12 57 13.3**	**-1.1**
GBPR	**Guanica, Bosqu**	**1.46**	**177**	⇓*e*P			**Pb**	**12 56 59.8**	**+0.6**
GBPR	**Guanica, Bosqu**	**1.46**	**177**	*e*S			**Sn**	**12 57 14.9**	**-0.2**
GBPR	**Guanica, Bosqu**	**1.46**	**177**				**Pb**	**12 56 59.8**	**+0.6**
GBPR							**Sn**	**12 57 14.9**	**-0.2**
MLPR	**Magueyes Islan**	**1.46**	**183**	⇓*e*P			**Pb**	**12 56 58.4**	**-0.9**
MLPR	**Magueyes Islan**	**1.46**	**183**	*e*S			**Sn**	**12 57 14.6**	**-0.8**
MLPR	**Magueyes Islan**	**1.46**	**183**				**Pb**	**12 56 58.4**	**-0.9**
MLPR							**Sn**	**12 57 14.8**	**-0.6**
SJG	**San Juan**	**1.53**	**150**				**Pb**	**12 57 00.7**	**+0.4**
CBYP	**Canovanas**	**1.56**	**138**⇑	*e*P			**Pb**	**12 57 01.4**	**+0.5**
CBYP	**Canovanas**	**1.56**	**138**				**Pb**	**12 57 01.4**	**+0.5**
ICMP	**Isla Caja de M**	**1.60**	**165**	*e*S			**Sn**	**12 57 18.2**	**-0.5**
ICMP	**Isla Caja de M**	**1.60**	**165**⇑	*e*P			**Pb**	**12 57 02.0**	**+0.5**
ICMP	**Isla Caja de M**	**1.60**	**165**				**Pb**	**12 57 02.2**	**+0.6**
ICMP							**Sn**	**12 57 18.7**	**+0.1**
HUMP	**Col San Antoni**	**1.66**	**141**⇑	*e*P			**Pb**	**12 57 02.9**	**+0.2**
HUMP	**Col San Antoni**	**1.66**	**141**				**Pb**	**12 57 02.9**	**+0.2**
IGPR	**InterUniversit**	**1.67**	**151**⇑	*e*P			**Pb**	**12 57 02.7**	**-0.1**
IGPR	**InterUniversit**	**1.67**	**151**	*e*S			**Sn**	**12 57 21.1**	**+0.6**
IGPR	**InterUniversit**	**1.67**	**151**				**Pb**	**12 57 03.0**	**+0.2**
IGPR						Sn	**Sn**	**12 57 19.7**	**-0.8**
MTP	**Monte Pirata**	**1.89**	**135**⇑	*e*P			**Pb**	**12 57 06.2**	**-0.2**
MTP	**Monte Pirata**	**1.89**	**135**				**Pb**	**12 57 06.2**	**-0.2**
DR12	**Loma Pena Alta**	**2.38**	**255**				**Pb**	**12 57 17.1**	**+2.3**
BANI	**BANI**	**3.38**	**253**	Pn			**Pb**	**12 57 31.4**	**-0.6**
SDDR	**Presa de Saban**	**4.12**	**264**				**Pb**	**12 57 42.6**	**-1.9**

JMA ***17*** *12:57:11.7±0.2, 22.°93N×121.°34E, h41km, M2.9*
TAP ***17*** *12:57:12.9, 22.°92N×121.°33E, h32km, ML2.8, B*
ISC 17 12:57:12.8±0.9, 22°92N±0.′02×121°34E±0.′03, h31km±7km, n41, σ0°76/60, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHKT	**Chengkung**	**0.18**	**7**	*i* P			**Pn**	**12 57 20.2**	**+0.7**
	baz=13								
CHKT				S			**Sb**	**12 57 24.3**	**+1.2**
	baz=13								
TWH	**Lutao**	**0.24**	**149**	P			**Pn**	**12 57 21.1**	**+0.7**
	baz=149								
TWH				*e*S			**Sn**	**12 57 26.5**	**+1.3**
	baz=149								
TWGBT	**Beinan**	**0.26**	**247**	P			**Pn**	**12 57 20.4**	**-0.2**
	baz=246								
TWGBT				*e*S			**Sb**	**12 57 23.8**	**-0.8**
	baz=246								
TWG	**Pinlang**	**0.27**	**248**	P			**Pn**	**12 57 20.4**	**-0.3**
	baz=246								
TWG				*e*S			**Sn**	**12 57 25.5**	**-0.2**
	baz=246								
FULB	**Fuli**	**0.28**	**351**	P			**Pb**	**12 57 20.6**	**+0.4**
	baz=353								
ELDTW	**Lidau**	**0.40**	**312**	P			**Pb**	**12 57 21.8**	**-0.1**
	baz=313								
ELDTW				*e*S			**Sb**	**12 57 26.4**	**-1.7**
	baz=313								
YULB	**Yu-li**	**0.47**	**355**	P			**Pb**	**12 57 23.1**	**+0.1**
	baz=356								
ECL	**Taimali**	**0.48**	**228**	*e*P			**Pb**	**12 57 22.7**	**-0.3**
	baz=226								
HGSD	**Ruisui**	**0.57**	**8**	P			**Pb**	**12 57 24.5**	**0.0**
	baz=8.0								
YUS	**Yu-Shan**	**0.67**	**328**	P			**

comp=Z,5.8nm,0.5s

PRU 17 12:58:31.1±0.0, 51°52'N×16°19'E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.68**	**174**	*e*Pg	Pg	12 58 43.8	-0.3
KSP				*e*Sg	Sg	12 58 53.4	+0.4
CHVC	**Chvalec**	**0.94**	**185**	*e*PG	Pg	12 58 48.5	-0.5
CHVC				*e*SG	Sg	12 59 01.4	+0.2
	comp=Z,5.6nm,0.4s						
OSTC	**Ostas**	**0.96**	**179**	*e*PG	Pg	12 58 49.5	-0.1
OSTC				*e*SG	Sg	12 59 02.2	+0.2
UPC	**Upice**	**1.02**	**186**	*e*PG	Pg	12 58 50.3	-0.3
UPC				*e*SG	Sg	12 59 02.9	-0.9
	comp=Z,8.9nm,0.2s						
DPC	**Dobruska-Polom**	**1.17**	**176**	*e*PG	Pg	12 58 52.2	-1.4
DPC				*e*SG	Sg	12 59 07.6	-1.2
KRLC	**Kraliky**	**1.50**	**165**	*e*PG	Pn	12 58 58.4	-0.8
KRLC				*e*SG	Sg	12 59 18.7	-0.4
BRG	**Berggiesshubel**	**1.56**	**246**	PG	Pn	12 58 58.2	-1.8
BRG				SG	Sn	12 59 18.4	-2.5
	7.9nm,0.3s						

IDC 17 13:00:24.8±2.2, 10°29'N×125°82'E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.5/54, mbtmp3.7/5, Error ellipse: s-maj=220.9km s-min=27.7km az=68.0

ISC 17 13:00:30.3±1.4, 10°5'N±0°2'×126°4'E±0°2, h44km, n6, σ1§00/6, mb3.8/5, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**1.13**	**232**	*e*P	**Pn**	**13 00 49.8**	**+0.1**
ASAR	**Alice Springs**	**34.72**	**168**	P	**P**	**13 07 16.2**	**-0.1**
	0.6nm,0.9s,baz=339,slow=7.2,SNR=4.6						
MKAR	**Makanchi Array**	**51.94**	**323**	P	**P**	**13 09 35.1**	**+0.2**
	0.3nm,0.7s,baz=120,slow=8.7,SNR=2.9						
ZALV	**Zalesovo Beam**	**54.51**	**331**	P	**P**	**13 09 53.5**	**0.0**
	0.8nm,0.6s,baz=114,slow=6.5,SNR=4.8						
KURBB	**Kurchatov Arra**	**55.97**	**325**	P	**P**	**13 10 02.7**	**-1.5**
	0.6nm,0.6s,baz=127,slow=6.6,SNR=4.4						
ARCES	**ARCESS Array B**	**84.04**	**340**	P	**P**	**13 12 56.7**	**+0.7**
	2.2nm,0.9s,baz=69,slow=5.9,SNR=3.7						

NEIC 17 13:02:37.4±1.9, 18°97'N±0°06×66°61'W±0°02, h29km±12km, Error ellipse: s-maj=9.4km s-min=2.2km az=170.0
RSPR 17 13:02:38.2, 18°96'N×66°61'W, h59km±3km, MD3.0/11

ISC 17 13:02:36.1±1.5, 19°04'N±0°07×66°62'W±0°03, h28km, n38, σ0§81/48, 5C-6D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.57**	**171**	*e*P	**Pn**	**13 02 49.0**	**+0.7**
EMPR	**Esperanza - Ma**	**0.57**	**171**	*e*S	**Sn**	**13 02 58.2**	**+1.5**
EMPR	**Esperanza - Ma**	**0.57**	**171**		**Pn**	**13 02 49.0**	**+0.7**
EMPR					**Sn**	**13 02 58.2**	**+1.5**
AOPR	**Arecibo Observ**	**0.70**	**191**	*e*P	**Pn**	**13 02 50.5**	**+0.3**
AOPR	**Arecibo Observ**	**0.70**	**191**	*e*S	**Sn**	**13 03 00.8**	**+0.6**
AOPR	**Arecibo Observ**	**0.70**	**191**		**Pn**	**13 02 50.5**	**+0.3**
AOPR					**Sn**	**13 03 00.8**	**+0.6**
AGPR	**Aguadilla, PR**	**0.74**	**219**	*e*P	**Pb**	**13 02 50.0**	**-0.4**
AGPR	**Aguadilla, PR**	**0.74**	**219**	*e*S	**Sn**	**13 03 00.2**	**-0.7**
AGPR	**Aguadilla, PR**	**0.74**	**219**		**Sn**	**13 03 00.2**	**-0.7**
AGPR	**Aguadilla, PR**	**0.74**	**219**		**Pb**	**13 02 49.8**	**-0.6**
GCPR	**Guaynabo City**	**0.89**	**145**		**Pb**	**13 02 53.2**	**+0.3**
CELP	**Cerrillos**	**0.96**	**178**	*e*P	**Pb**	**13 02 54.0**	**-0.3**
CELP				*e*S	**Sb**	**13 03 07.0**	**+0.4**
CELP	**Cerrillos**	**0.96**	**178**		**Pb**	**13 02 54.0**	**-0.3**
CELP					**Sb**	**13 03 07.0**	**+0.4**
OBIP	**Obispado Ponce**	**0.99**	**179**	*e*P	**Pb**	**13 02 54.5**	**-0.2**
OBIP	**Obispado Ponce**	**0.99**	**179**	*e*S	**Sn**	**13 03 06.5**	**-0.8**
OBIP	**Obispado Ponce**	**0.99**	**179**		**Pb**	**13 02 54.5**	**-0.2**
OBIP					**Sn**	**13 03 06.5**	**-0.8**
SJG	**San Juan**	**1.02**	**154**		**Pb**	**13 02 56.4**	**+1.1**
CBYP	**Canovanas**	**1.05**	**136**	*e*P	**Pb**	**13 02 55.6**	**-0.2**
CBYP	**Canovanas**	**1.05**	**136**	*e*S	**Sn**	**13 03 07.7**	**-1.2**
CBYP	**Canovanas**	**1.05**	**136**		**Pb**	**13 02 55.6**	**-0.2**
CBYP					**Sn**	**13 03 07.7**	**-1.2**
CRPR	**Cabo Rojo, PR**	**1.13**	**204**	*e*P	**Pb**	**13 02 56.5**	**-0.6**
CRPR	**Cabo Rojo, PR**	**1.13**	**204**	*e*S	**Sn**	**13 03 09.9**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.13**	**204**		**Pb**	**13 02 56.5**	**-0.6**
CRPR					**Sn**	**13 03 09.9**	**-0.8**
MLPR	**Magueyes Islan**	**1.14**	**201**	*e*P	**Pb**	**13 02 55.8**	**-0.4**
MLPR	**Magueyes Islan**	**1.14**	**201**	*e*S	**Sn**	**13 03 10.0**	**-0.9**
MLPR	**Magueyes Islan**	**1.14**	**201**		**Pn**	**13 02 55.8**	**-0.4**
MLPR					**Sn**	**13 03 10.0**	**-0.9**
ICMP	**Isla Caja de M**	**1.15**	**176**	Pn	**Pb**	**13 02 58.3**	**+0.9**
HUMP	**Col San Antoni**	**1.15**	**141**	*e*P	**Pb**	**13 02 56.8**	**-0.7**
HUMP	**Col San Antoni**	**1.15**	**141**	*e*S	**Sn**	**13 03 10.5**	**-0.8**
HUMP	**Col San Antoni**	**1.15**	**141**		**Pb**	**13 02 56.8**	**-0.7**
HUMP					**Sn**	**13 03 10.5**	**-0.8**
IGPR	**InterUniversit**	**1.17**	**155**	*e*P	**Pb**	**13 02 57.0**	**-0.8**
IGPR	**InterUniversit**	**1.17**	**155**	*e*S	**Sn**	**13 03 11.5**	**-0.3**
MTP	**Monte Pirata**	**1.38**	**133**	*e*P	**Pn**	**13 02 59.6**	**+0.1**
MTP	**Monte Pirata**	**1.38**	**133**	*e*S	**Sn**	**13 03 16.0**	**-0.9**
MTP	**Monte Pirata**	**1.38**	**133**		**Pn**	**13 02 59.6**	**+0.1**
MTP					**Sn**	**13 03 16.0**	**-0.9**
PCDR	**Punta Cana, DR**	**1.75**	**253**	Pn	**Pb**	**13 03 06.4**	**-1.2**
DR12	**Loma Pena Alta**	**2.63**	**265**	Pn	**Pn**	**13 03 17.3**	**+0.5**
SDDR	**Presa de Saban**	**4.42**	**270**	Pn	**Pn**	**13 03 43.6**	**+2.2**

MOS 17 13:06:09.7±1.8, 43°48'N×146°15'E, h55km, mb3.9/4, Error ellipse: s-maj=17.3km s-min=12.1km az=97.3
SKHL 17 13:06:10.6±0.2, 43°40'N×146°10'E, h59km±5km, mb3.9/5
JMA 17 13:06:11.7±0.2, 43°39'N×146°04'E, h47km±1km, M2.9

ISC 17 13:06:10.4±1.0, 43°41'N±0°05×146°17'E±0°04, h46km±7km, n32, σ1§27/49, mb3.6/4, 3C-3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.31**	**261**	P	**Pn**	**13 06 19.8**	**+0.6**
NEM2				*e*S	**Sn**	**13 06 25.2**	**-0.3**
NMR	**Nemuro--Hokkai**	**0.32**	**262**	*d* iPN	**Pn**	**13 06 19.8**	**+0.5**
NMR				*i* S	**Sn**	**13 06 26.2**	**+0.5**
NMR	**Nemuro--Hokkai**	**0.32**	**262**	*i* P	**Pn**	**13 06 19.8**	**+0.5**
NMR				*i* S	**Sn**	**13 06 26.2**	**+0.5**
GLVR	**Golovnino**	**0.57**	**305**	*d* iPN	**Pn**	**13 06 22.9**	**+0.6**
GLVR				*i* S	**Sn**	**13 06 32.0**	**+1.2**
GLVR				pmax	pmax		
	comp=Z,375nm,0.1s						
GLVR				smax	smax		
	comp=E,792nm,0.2s						
GLVR				smax	smax		
	comp=N,2μm,0.4s						
GLVR	**Golovnino**	**0.57**	**305**	*i* P	**Pn**	**13 06 22.9**	**+0.6**
GLVR				AMB	AMB	13 06 23.4	
	comp=N,60nm,0.2s						
GLVR				*i* S	**Sn**	**13 06 31.5**	**+0.7**
GLVR				A	A	13 06 32.0	
	comp=N,2μm,0.3s						
GLVR				A	A	13 06 32.0	
	comp=N,790nm,0.3s						
GRPR	**Tuman**	**0.65**	**334**	*c* iPN	**Pn**	**13 06 23.5**	**+0.3**
GRPR				*i* S	**Sn**	**13 06 32.2**	**-0.3**
GRPR				pmax	pmax		
	comp=Z,409nm,0.2s						
GRPR				smax	smax		
	comp=N,1μm,0.1s						
GRPR				smax	smax		
	comp=E,1μm,0.2s						
GRPR	**Tuman**	**0.65**	**334**	*i* P	**Pn**	**13 06 23.5**	**+0.3**
GRPR				AMB	AMB	13 06 23.7	
	comp=E,40nm,0.2s						
GRPR				*i* S	**Sn**	**13 06 32.5**	**0.0**
GRPR				A	A	13 06 33.1	
	comp=E,1μm,0.4s						
GRPR				A	A	13 06 33.1	
	comp=E,1μm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.66**	**340**	*c* iPN	**Pn**	**13 06 23.6**	**+0.2**
YUK				*i* S	**Sn**	**13 06 33.1**	**+0.3**
YUK				pmax	pmax		
	comp=N,51nm,0.2s						
YUK				pmax	pmax		
	comp=Z,188nm,0.2s						
YUK				smax	smax		
	comp=E,361nm,0.2s						
YUK				smax	smax		
	comp=N,615nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**0.66**	**340**	*i* P	**Pn**	**13 06 23.6**	**+0.2**
YUK				AMB	AMB	13 06 24.0	
	comp=N,50nm,0.2s						
YUK				*i* S	**Sn**	**13 06 33.2**	**+0.4**
YUK				A	A	13 06 34.0	
	comp=N,620nm,0.2s						
YUK				A	A	13 06 34.0	
	comp=N,360nm,0.2s						
SHO	**Shikotan**	**0.66**	**46**	*d* iPN	**Pn**	**13 06 23.1**	**-0.4**
SHO				*i* S	**Sn**	**13 06 32.3**	**-0.6**
SHO				pmax	pmax		
	comp=Z,252nm,0.1s						
SHO				pmax	pmax		
	comp=N,12nm,0.2s						
SHO				pmax	pmax		
	comp=E,14nm,0.2s						
SHO				smax	smax		
	comp=N,1μm,0.2s						
SHO				smax	smax		
	comp=E,725nm,0.2s						
SHO	**Shikotan**	**0.66**	**46**	*i* P	**Pn**	**13 06 23.1**	**-0.4**
SHO				AMB	AMB	13 06 23.6	
	comp=E,10.0nm,0.2s						
SHO				AMB	AMB	13 06 23.6	
	comp=E,10.0nm,0.2s						
SHO				AMB	AMB	13 06 23.6	
	comp=E,30nm,0.2s						
SHO				*i* S	**Sn**	**13 06 32.6**	**-0.3**
SHO				A	A	13 06 33.0	
	comp=E,1μm,0.4s						
SHO				A	A	13 06 33.0	
	comp=E,730nm,0.4s						
JKHN	**Kushirohamanak**	**0.81**	**246**	P	**Pn**	**13 06 25.6**	**+0.2**
JNSB	**Nemuroshibetsu**	**0.92**	**294**	P	**Pn**	**13 06 27.3**	**+0.4**
JRA	**Rausu**	**0.92**	**305**	P	**Pn**	**13 06 27.5**	**+0.6**
JRA				*e*S	**Sn**	**13 06 39.8**	**+0.8**
JNK	**Nakash**	**1.07**	**280**	P	**Pn**	**13 06 28.8**	**-0.1**
JNK				*e*S	**Sn**	**13 06 41.8**	**-0.8**
JAK	**Akkeshi**	**1.15**	**249**	P	**Pn**	**13 06 29.9**	**-0.2**
JAK				*e*S	**Sn**	**13 06 43.8**	**-0.9**
JTKR	**Abashiri--Toko**	**1.73**	**290**	P	**Pn**	**13 06 39.1**	**+1.2**
JAR	**Ashorobuto**	**1.75**	**267**	P	**Pn**	**13 06 39.0**	**+0.7**
JAR				*e*S	**Sn**	**13 07 00.3**	**+0.9**
JOB	**Onbets**	**1.78**	**254**	P	**Pn**	**13 06 38.9**	**+0.3**
KUR	**Kuril'sk**	**2.19**	**33**	*e*PN	**Pn**	**13 06 46.7**	**+2.4**
KUR				*e*S	**Sn**	**13 07 14.6**	**+4.5**
KUR				pmax	pmax		
	comp=Z,10.0nm,0.1s						
KUR				smax	smax		
	comp=E,40nm,0.5s						
KUR				smax	smax		
	comp=N,36nm,0.2s						
KUR	**Kuril'sk**	**2.19**	**33**	*e*P	**Pn**	**13 06 45.0**	**+0.7**
KUR				AMB	AMB	13 06 50.0	
	comp=N,10.0nm,0.2s						
KUR				*e*S	**Sn**	**13 07 09.8**	**-0.3**
KUR				A	A	13 07 12.0	
	comp=N,60nm,0.2s						
KUR				A	A	13 07 12.0	
	comp=N,70nm,0.2s						
ERM	**Erimo**	**2.62**	**239**	*i* PN	**Pn**	**13 06 54.1**	**+3.9**
YSS	**Yuzh-Sakhalins**	**4.28**	**327**	*e*PN	**Pn**	**13 07 15.4**	**+2.4**
KLR	**Kul'dur**	**11.53**	**305**	*i* PN	**Pn**	**13 08 52.5**	**+0.2**
KLR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KLR	**Kul'dur**	**11.53**	**305**	*e*P	**Pn**	**13 08 52.5**	**+0.2**
BILL	**Bilibino**	**26.88**	**17**	*e*P	**P**	**13 11 45.1**	**-1.4**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,47nm,13.0s						
ULN	**Ulaanbaatar**	**27.50**	**293**	*i* P	**P**	**13 11 52.7**	**+0.3**
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULN	**Ulaanbaatar**	**27.50**	**293**	*e*P	**P**	**13 11 52.7**	**+0.3**
TIXI	**Tiksi**	**29.55**	**349**	*e*P	**P**	**13 12 10.7**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TIXI	**Tiksi**	**29.55**	**349**	*e*P	**P**	**13 12 10.7**	**+0.6**
AAK	**Ala-Archa**	**50.86**	**295**	*i* P	**P**	**13 15 04.3**	**-2.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.4s						
AAK	**Ala-Archa**	**50.86**	**295**	*e*P	**P**	**13 15 04.3**	**-2.3**

IDC 17 13:08:48.5±1.8, 9°46'S×106°96'E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.3/48, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=52.6km s-min=28.1km az=66.0
NEIC 17 13:08:53.4±3.0, 9°45'S±0°09×107°1'E±0°1, h43km±9km, mb4.2/6, Error ellipse: s-maj=19.9km s-min=11.6km az=68.0

ISC 17 13:08:51.0±1.2, 9°44'S±0°08×107°1'E±0°1, h22km, n14, σ1§19/15, mb3.7/6, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**2.01**	**21**	Pn	**Pn**	**13 09 23.9**	**+0.2**
CISI				Sn	**Sn**	**13 09 49.5**	**+1.2**
LEM	**Lembang**	**2.66**	**12**	Pn	**Pn**	**13 09 32.2**	**-0.5**
	15nm,0.3s,baz=294,slow=22,SNR=5.5						
LEM				Sn	**Sb**	**13 10 09.6**	**-0.6**
	24nm,0.3s,baz=150,slow=20,SNR=7.0						
UGM	**Wanagama**	**3.73**	**66**	Pn	**Pn**	**13 09 47.6**	**+0.3**
JAGI	**Jajag, Banyuwa**	**7.05**	**83**	Pn	**Pn**	**13 10 32.4**	**-0.7**
PSA00	**Pilbara Seismi**	**17.21**	**136**	Pn	**Pn**	**13 12 49.4**	**-0.8**
PSA00				IAmb	IAmb	13 13 06.8	
	comp=Z,26nm,1.3s						
WRAB	**Tennant Creek**	**28.32**	**115**	P	**P**	**13 14 43.0**	**-0.5**
AS31	**Alice Springs**	**29.27**	**122**	P	**P**	**13 14 52.3**	**+0.4**
ASAR	**Alice Springs**	**29.27**	**122**	P	**P**	**13 14 53.7**	**+1.8**
	comp=Z,0.4nm,0.8s,baz=295,slow=9.1,SNR=3.6						
SLVN	**Son La**	**30.75**	**354**	P	**P**	**13 15 02.4**	**-2.5**
SLVN				IAmb	IAmb	13 15 07.1	
	comp=Z,8.4nm,1.3s						
SONM	**Songino Array**	**57.03**	**359**	P	**P**	**13 18 36.7**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=178,slow=8.7,SNR=2.2						
MKAR	**Makanchi Array**	**60.20**	**341**	P	**P**	**13 18 57.6**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=147,slow=7.0,SNR=6.7						
KURBB	**Kurchatov Arra**	**64.76**	**340**	P	**P**	**13 19 28.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=150,slow=6.2,SNR=3.6						
KURK	**Kurchatov**	**64.81**	**340**	P	**P**	**13 19 28.9**	**+0.9**
KURK	**Kurchatov**	**64.81**	**340**	IAmb	IAmb	13 19 36.4	
	comp=Z,3.1nm,1.4s						

IDC 17 13:14:26.7±3.9, 17°90S×178°27W, h606km±50km, mb3.1/11, mb1 3.4/11, mb1mx3.1/37, mbtmp4.0/11, Error ellipse: s-maj=33.8km s-min=17.8km az=157.0

ISC 17 13:14:24.5±0.8, 17°8S±0°2×178°3W±0°2, h579km, n14, σ0§84/16, mb3.6/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**20.77**	**190**	P	**P**	**13 18 25.2**	**-0.7**
	15nm,1.1s,baz=45,slow=8.6,SNR=4.0						
WRA	**Warramunga Arr**	**44.76**	**259**	P	**P**	**13 21 48.0**	**+0.4**
	0.5nm,0.3s,baz=96,slow=7.3,SNR=10						
WRA				PcP	**PcP**	**13 23 16.4**	**-0.8**
	0.7nm,0.8s,baz=90,slow=3.4,SNR=4.3						
ASAR	**Alice Springs**	**44.92**	**254**	P	**P**	**13 21 49.8**	**+0.9**
	1.9nm,0.5s,baz=92,slow=7.3,SNR=54						
ASAR				PcP	**PcP**	**13 23 17.1**	**-0.6**
	0.8nm,0.7s,baz=105,slow=4.1,SNR=8.3						
FITZ	**Fitzroy Crossi**	**53.15**	**260**	P	**P**	**13 22 50.2**	**+0.7**
	2.4nm,0.9s,baz=75,slow=12,SNR=2.6						
PETK	**Petropavlovsk-**	**73.61**	**345**	P	**P**	**13 24 59.3**	**0.0**
	1.3nm,0.7s,baz=108,slow=9.5,SNR=3.0						
YBH	**Yreka Blue Hor**	**78.38**	**39**	P	**P**	**13 25 26.1**	**+0.2**
	1.2nm,0.7s,baz=297,slow=1.8,SNR=5.8						
NVAR	**Mina Array Bea**	**79.28**	**44**	P	**P**	**13 25 31.5**	**+0.5**
	0.7nm,0.7s,baz=225,slow=9.2,SNR=7.5						
ILAR	**Eielson Array**	**85.77**	**13**	P	**P**	**13 26 01.8**	**-0.9**
	0.4nm,0.5s,baz=216,slow=5.2,SNR=10						
TXAR	**Lajitas Array**	**85.85**	**58**	P	**P**	**13 26 05.4**	**+1.4**
	1.0nm,0.7s,baz=224,slow=5.2,SNR=6.6						
PDAR	**Pinedale Array**	**87.21**	**43**	P	**P**	**13 26 10.9**	**+0.7**
	0.6nm,0.6s,baz=223,slow=3.3,SNR=6.2						
YKA	**Yellowknife Ar**	**94.20**	**25**	P	**P**	**13 26 41.5**	**-0.2**
	0.2nm,0.5s,baz=247,slow=4.7,SNR=3.6						
ARCES	**ARCESS Array B**	**126.24**	**350**	PKP	**PKPdf**	**13 32 20.2**	**-1.0**
	4.2nm,1.0s,baz=45,slow=1.4,SNR=2.5						
BRTR	**Keskin Array B**	**144.79**	**315**	PKP	**PKPdf**	**13 32 56.5**	**+0.1**
	1.0nm,0.6s,baz=119,slow=5.1,SNR=5.9						
GERES	**GERESS Array B**	**147.54**	**345**	PKPbc	**PKPbc**	**13 33 02.9**	**-1.4**
	0.3nm,0.3s,baz=29,slow=3.0,SNR=8.7						

JMA 17 13:18:46.9,24°65'N×122°39E, h29km±3km, M1.8
TAP 17 13:18:46.8,24°74'N×122°31E, h11km, ML2.6, C

ISC 17 13:18:44.6±1.1, 24°72'N±0°04×122°44'E±0°02, h12km±9km, n36, σ0§73/61, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.33**	**240**	*i* P	**Pb**	**13 18 52.8**	**+0.4**
	baz=220						
EOS1				S	**Sb**	**13 18 57.5**	**-0.1**
	baz=220						
TWB1	**Santiao Chiao**	**0.51**	**305**	*e*P	**Pb**	**13 18 55.8**	**+0.3**
	baz=312						
TWB1				*e*S	**Sg**	**13 19 01.3**	**0.0**
	baz=312						
JYNG	**Yonagunijimaku**	**0.53**	**120**	P	**Pn**	**13 18 57.6**	**-0.3**
JYNG				S	**Sn**	**13 19 05.3**	**-1.5**
TWC	**Suao**	**0.55**	**259**	P	**Pb**	**13 18 55.5**	**-0.7**
	baz=260						
TWC				*e*S	**Sg**	**13 19 02.8**	**+0.1**
	baz=260						
YOJ	**Yonaguni jima**	**0.57**	**116**	*e*P	**Pn**	**13 18 58.5**	**0.0**
	baz=114						
YOJ	**Yonaguni jima**	**0.57**	**116**	P	**Pn**	**13 18 58.4**	**-0.2**
YOJ				*e*S	**Sn**	**13 19 06.7**	**-1.3**
NANB	**Nanao**	**0.69**	**246**	*e*P	**Pb**	**13 18 58.3**	**-0.4**
	baz=248						
NANB				*e*S	**Sg**	**13 19 07.2**	**0.0**
	baz=248						
WFSB	**Wu-fen Shan**	**0.70**	**301**	*e*P	**Pn**	**13 18 60.0**	**-0.3**
	baz=304						
WFSB				*e*S	**Sb**	**13 19 09.2**	**+0.9**
	baz=304						
ENA	**Nanau**	**0.70**	**246**	*e*P	**Pb**	**13 18 58.5**	**-0.3**
	baz=248						
ENA				*e*S	**Sg**	**13 19 07.6**	**+0.2**
	baz=248						
TWE	**Neicheng**	**0.71**	**271**	P	**Pb**	**13 18 58.5**	**-0.3**
	baz=259						
TWE				*e*S	**Sg**	**13 19 07.8**	**+0.2**
	baz=259						
SLBB	**Yuanshan**	**0.74**	**273**	*e*P	**Pg**	**13 18 58.5**	**-0.4**
	baz=260						
ENTT	**Nioudou**	**0.80**	**265**	*e*P	**Pb**	**13 19 00.4**	**-0.1**
	baz=260						
ENTT				*e*S	**Sb**	**13 19 11.0**	**-0.3**
	baz=260						
NDT	**Datong Townshi**	**0.85**	**263**	*e*P	**Pb**	**13 19 01.8**	**+0.4**
	baz=258						
NDT				*e*S	**Sg**	**13 19 12.2**	**-0.1**
	baz=258						
NWLT	**Wulai**	**0.86**	**274**	*e*P	**Pn**	**13 19 02.0**	**-0.5**
	baz=272						
NWLT				*e*S	**Sg**	**13 19 12.1**	**-0.3**
	baz=272						
YM01	**YM01**	**0.90**	**299**	*e*P	**Pn**	**13 19 03.0**	**-0.2**
	baz=300						
YM01				*e*S	**Sb**	**13 19 14.7**	**+0.5**
	baz=300						
YM08	**YM08**	**0.91**	**301**	*e*S	**Sb**	**13 19 14.3**	**0.0**
	baz=304						
YM10	**YM10**	**0.91**	**299**	*e*P	**Pn**	**13 19 03.4**	**0.0**
	baz=299						
YM04	**YM04**	**0.93**	**298**	*e*S	**Sb**	**13 19 15.3**	**+0.3**
	baz=300						
NACB	**Ninganchiao**	**0.94**	**235**	*e*P	**Pb**	**13 19 03.0**	**+0.1**
	baz=238						
NACB				*e*S	**Sg**	**13 19 14.6**	**-0.6**
	baz=238						
TWY	**Chenhua**	**0.95**	**306**	*e*S	**Sn**	**13 19 16.5**	**-0.7**
	baz=309						
YHNB	**Yeheng**	**0.97**	**268**	*e*P	**Pb**	**13 19 03.5**	**+0.1**
	baz=264						
YHNB				*e*S	**Sg**	**13 19 15.7**	**-0.4**
	baz=264						
NSK	**Sanguang**	**0.99**	**268**	*e*P	**Pn**	**13 19 04.2**	**-0.2**
	baz=277						
NSK				*e*S	**Sg**	**13 19 15.7**	**-0.9**
	baz=277						
NNSH	**Datong**	**1.01**	**254**	*e*P	**Pb**	**13 19 04.2**	**+0.2**
	baz=240						
NNSH				*e*S	**Sg**	**13 19 17.1**	**-0.1**
	baz=240						
ETLH	**Xiulin Townshi**	**1.01**	**240**	*e*P	**Pb**	**13 19 04.2**	**+0.1**
	baz=233						
NNS	**Nan Shan**	**1.01**	**254**	*e*P	**Pn**	**13 19 04.5**	**-0.2**
	baz=249						
NNS				*e*S	**Sg**	**13 19 17.0**	**-0.3**
	baz=249						
WHF	**Hehuan Shan**	**1.22**	**242**	*e*P	**Pn**	**13 19 08.3**	**+0.5**
	baz=236						
IRIF	**Iriomote-Funau**	**1.23**	**108**	P	**Pg**	**13 19 10.8**	**+2.5**
IRIF				*e*S	**Sn**	**13 19 27.0**	**+2.8**
TDCB	**Techi**	**1.26**	**249**	*e*P	**Pg**	**13 19 09.3**	**+0.4**
	baz=244						
TDCB				*e*S	**Sb**	**13 19 24.4**	**-0.2**
	baz=244						
LIOB	**Emei**	**1.30**	**267**	*e*P	**Pg**	**13 19 09.6**	**0.0**
	baz=264						
LIOB				*e*S	**Sn**	**13 19 26.6**	**+0.6**
	baz=264						
CHGB	**Renai**	**1.33**	**241**	*e*P	**Pg**	**13 19 10.6**	**+0.4**
	baz=235						
CHGB				*e*S	**Sn**	**13 19 27.3**	**+0.4**
	baz=235						
JKRS	**Kuro-shima**	**1.50**	**108**	P	**Pg**	**13 19 12.6**	**-0.9**
JKRS				S	**Sg**	**13 19 32.4**	**-0.6**
VWDT	**VWDT**	**1.53**	**231**	*e*P	**Pg**	**13 19 15.4**	**+1.5**
	baz=209						
JIJ	**Ishigaki jima**	**1.59**	**102**	P	**Pb**	**13 19 13.7**	**-0.2**
SSLB	**Suanglung**	**1.64**	**236**	*e*P	**Pg**	**13 19 15.9**	**-0.3**
	baz=237						
SSLB				*e*S	**Sg**	**13 19 36.6**	**-0.9**
	baz=237						
YULB	**Yu-li**	**1.68**	**219**	*e*P	**Pb**	**

CHFC	**Chilao Flat St**	**0.37**	**57**			**Pg**	**13 27 06.5 -0.4**
CHFC						**Sg**	**13 27 12.1 +0.1**
RPV	**Rancho Palos V**	**0.39**	**180**			**Pg**	**13 27 07.2 0.0**
RPV						**Sg**	**13 27 13.0 +0.6**
FMP	**Fort Macarthur**	**0.43**	**168**			**Sg**	**13 27 13.9 +0.3**
FMP	**Fort Macarthur** baz=348	**0.43**	**168**	P		**Pg**	**13 27 07.6 -0.3**
FMP				S		**Sg**	**13 27 13.6 0.0**
	baz=348						
PEM	**Pine Mountain**	**0.44**	**85**			**Pg**	**13 27 07.7 -0.4**
XTL	**Crystal Lake,**	**0.48**	**70**			**Pg**	**13 27 08.5 -0.3**
XTL						**Sg**	**13 27 15.4 +0.2**
PSRC	**Puddingstone R**	**0.49**	**95**			**Pg**	**13 27 08.8 -0.4**
PSRC						**Sg**	**13 27 15.8 0.0**
LRRC	**Littlerock Res**	**0.50**	**38**			**Pg**	**13 27 09.0 -0.2**
LEOC	**Leona Valley**	**0.50**	**9**			**Pg**	**13 27 08.9 -0.4**
LEOC						**Sg**	**13 27 16.1 0.0**
PYR	**Pyramid**	**0.52**	**327**			**Pb**	**13 27 10.4 -0.1**
OSI	**Osito Audit: C**	**0.55**	**331**	Pg		**Pb**	**13 27 10.7 -0.3**
OSI				Sg		**Sb**	**13 27 19.6 +0.7**
OSI	**Osito Audit: C** baz=150,SNR=9.3	**0.55**	**331**	P		**Pg**	**13 27 10.3 +0.1**
OSI				Sb		**Sb**	**13 27 19.1 +0.2**
	baz=150						
BLG	**Laguna Peak, P**	**0.55**	**268**			**Pg**	**13 27 09.6 -0.7**
BLG						**Sg**	**13 27 16.9 -0.7**
BLG	**Laguna Peak, P** baz=87,SNR=11	**0.55**	**268**	P		**Pg**	**13 27 09.4 -0.8**
BLG				S		**Sg**	**13 27 17.1 -0.4**
	baz=87						
ALPC	**Antelope**	**0.56**	**9**			**Pg**	**13 27 10.1 -0.3**
ALPC						**Sg**	**13 27 17.9 +0.1**
SSK	**Sunset Peak**	**0.59**	**82**			**Pg**	**13 27 10.4 -0.6**
BFSC	**Mount Baldy Ra**	**0.62**	**80**			**Pg**	**13 27 10.9 -0.8**
BFSC	**Mount Baldy Ra** baz=261,SNR=30	**0.62**	**80**	P		**Pg**	**13 27 10.9 -0.8**
BFSC				S		**Sg**	**13 27 19.3 -0.6**
	baz=261						
FOXC	**Fox Airport**	**0.63**	**13**			**Pg**	**13 27 11.3 -0.3**
STCC	**Santa Clara**	**0.67**	**285**			**Pg**	**13 27 12.8 +0.3**
CIAC	**Catalina I. Ai**	**0.73**	**181**			**Pg**	**13 27 13.3 -0.2**
CIAC						**Sg**	**13 27 23.5 +0.4**
CIS	**Catalina Islan** baz=1.1,SNR=29	**0.73**	**181**	P		**Pg**	**13 27 13.3 -0.3**
CIS				S		**Sg**	**13 27 23.3 +0.1**
	baz=1.1						
SBB	**Saddle Back Bu**	**0.73**	**41**			**Pg**	**13 27 12.9 -0.7**
SS2	**San Sevaine**	**0.75**	**84**			**Pg**	**13 27 13.8 -0.2**
THC	**Tehachapi Micr**	**0.80**	**345**			**Pg**	**13 27 15.2 +0.2**
EDW2	**Edwards Air Fo**	**0.82**	**24**			**Pg**	**13 27 14.6 -0.7**
EDW2	**Edwards Air Fo** baz=204,SNR=38	**0.82**	**24**	P		**Pg**	**13 27 14.6 -0.7**
EDW2				S		**Sg**	**13 27 25.3 -0.7**
	baz=204						
CSP	**Cedar Springs**	**0.88**	**79**			**Pg**	**13 27 15.5 -0.9**
MPI	**Mount Pinos, F**	**0.92**	**318**			**Pg**	**13 27 16.7 -0.4**
SME	**Santa Rosa Min**	**0.92**	**109**			**Pg**	**13 27 16.0 -1.2**
RYS	**Reyes Peak**	**0.94**	**303**			**Pg**	**13 27 17.2 -0.3**
VTV	**Victorville**	**0.98**	**64**			**Pg**	**13 27 17.7 -0.7**
ABL	**Mount Abel**	**0.99**	**317**			**Pg**	**13 27 17.7 -0.8**
HYS	**Haystack Butte**	**1.00**	**43**			**Pg**	**13 27 17.8 -0.9**
ARVC	**Arvin**	**1.05**	**341**			**Pb**	**13 27 19.5 -0.1**
ARVC	**Arvin** baz=160,SNR=7.7	**1.05**	**341**	P		**Pb**	**13 27 19.3 -0.3**
ARVC				S		**Sg**	**13 27 33.8 +0.4**
	baz=160						
PEC	**Perris**	**1.06**	**103**			**Pb**	**13 27 18.3 -1.3**
CFT	**Crafton Hills**	**1.08**	**95**			**Pb**	**13 27 19.1 -0.9**
TEJ	**El Tejon**	**1.12**	**348**			**Pb**	**13 27 20.6 -0.1**
SBC	**Santa Barbara** baz=105	**1.13**	**286**	P		**Pb**	**13 27 20.1 -0.7**
MURC	**Murrieta**	**1.14**	**118**			**Pb**	**13 27 20.5 -0.5**
MURC	**Murrieta** baz=299,SNR=6.7	**1.14**	**118**	P		**Pb**	**13 27 20.2 -0.8**
MURC				S		**Sb**	**13 27 35.4 -0.3**
	baz=299						
SCI2	**San Clemente I** baz=6.0	**1.16**	**186**	S		**Sg**	**13 27 36.7 0.0**
BCW	**Bitter Crk WRg**	**1.16**	**314**			**Pb**	**13 27 20.9 -0.5**
DTP	**Desert Tortois**	**1.22**	**22**			**Pn**	**13 27 21.8 -0.6**
BBRC	**Big Bear Solar** baz=265,SNR=20	**1.23**	**84**	Pg		**Pn**	**13 27 22.0 -0.6**
BBRC				S		**Sb**	**13 27 38.5 -0.3**
	baz=265						
BACC	**Bachelor Mtn.**	**1.25**	**114**			**Pn**	**13 27 22.0 -0.6**
DGR	**Domenigoni Val**	**1.25**	**112**			**Pn**	**13 27 21.7 -1.0**
DGR						**Sb**	**13 27 38.6 -0.5**
SNCC	**San Nicolas Is**	**1.29**	**227**	Pg		**Pn**	**13 27 22.1 -1.1**
SNCC				Sg		**Sn**	**13 27 40.7 +0.4**
SNCC	**San Nicolas Is** baz=46	**1.29**	**227**	S		**Sb**	**13 27 40.1 +0.1**
POB	**Polly Butte**	**1.31**	**109**			**Pn**	**13 27 22.6 -1.0**
RRX	**Edison Barstow**	**1.38**	**57**			**Pb**	**13 27 25.2 +0.1**
RRX	**Edison Barstow** baz=238	**1.38**	**57**	Pg		**Pb**	**13 27 24.9 -0.2**
RRX				Sg		**Sg**	**13 27 44.0 +0.2**
	baz=238						
PKM	**Mcpherson Peak**	**1.39**	**303**			**Pn**	**13 27 24.8 0.0**
PKM	**Mcpherson Peak** baz=122,SNR=35	**1.39**	**303**	Pb		**Pn**	**13 27 24.8 0.0**
FIGC	**Figueroa Mtn.**	**1.44**	**295**			**Pn**	**13 27 25.2 -0.2**
LRMC	**Laurel Mtn Rad** baz=204,SNR=32	**1.47**	**24**	Pb		**Pn**	**13 27 26.0 +0.2**
LRMC				S		**Sn**	**13 27 45.0 0.0**
	baz=204						
CRY	**Cary Ranch**	**1.50**	**112**			**Pb**	**13 27 26.7 -0.4**
CRY						**Sn**	**13 27 46.0 +0.3**
ISA	**Isabella, Lake**	**1.53**	**358**			**Pn**	**13 27 27.4 -0.3**
ISA	**Isabella, Lake**	**1.53**	**358**			**Sb**	**13 27 47.4 +0.3**
ISA	**Isabella, Lake** baz=178,SNR=9.5	**1.53**	**358**	Pb		**Pn**	**13 27 27.2 +0.6**
ISA				S		**Sb**	**13 27 47.0 0.0**
	baz=178						
DNR	**Dunn Ranch,Anz**	**1.58**	**110**			**Pb**	**13 27 28.4 -0.2**
BZNA	**Buzz No.'s Pla**	**1.58**	**113**			**Sb**	**13 27 48.8 +0.3**
SNDA	**J Saunders Pla**	**1.60**	**111**			**Pb**	**13 27 28.6 -0.3**
SNDA						**Sb**	**13 27 49.0 -0.2**
FRD	**Ford Ranch, An**	**1.63**	**113**			**Pb**	**13 27 29.0 -0.4**
EW2	**E Wide Canyon**	**1.67**	**96**			**Pn**	**13 27 29.3 +0.8**
EW2						**Sb**	**13 27 51.4 +0.4**
PFO	**Pinyon Flats O**	**1.70**	**107**			**Pn**	**13 27 29.0 0.0**
PFO	**Pinyon Flats O** baz=289	**1.70**	**107**	Pb		**Pn**	**13 27 29.5 +0.6**
PFO				Sb		**Sb**	**13 27 52.1 +0.1**
	baz=289						
XPFO	**Pion Flat**	**1.70**	**107**			**Pn**	**13 27 29.0 0.0**
WNMM	**Nine Mile Cany**	**1.75**	**13**			**Pb**	**13 27 31.4 -0.1**
GSC	**Goldstone, Bar**	**1.76**	**48**			**Pn**	**13 27 30.1 +0.3**
GSC	**Goldstone, Bar** baz=229,SNR=75	**1.76**	**48**	Pb		**Pn**	**13 27 30.2 +0.5**
SMMC	**Simmler** baz=131	**1.77**	**312**	Pb		**Pn**	**13 27 30.6 +0.8**
HEC	**Hector,Ludlow** baz=248	**1.84**	**67**	Pg		**Pb**	**13 27 33.5 +0.4**
HEC				Sg		**Sg**	**13 27 58.8 0.0**
	baz=248						
BELC	**Belle Mtn. Jos** baz=275	**2.00**	**93**	Pb		**Pb**	**13 27 35.2 -0.6**
BELC				Sb		**Sb**	**13 28 01.2 +0.5**
	baz=275						
BAR	**Barrett**	**2.05**	**135**			**Pn**	**13 27 34.0 +0.3**
MPMC	**Manual Prospec** baz=202	**2.06**	**21**	Pg		**Pg**	**13 27 37.9 -1.0**
MPMC				Sb		**Sb**	**13 28 03.7 +1.2**
	baz=202						
RCTC	**Rector, Farmer**	**2.27**	**343**			**Pn**	**13 27 37.8 +1.1**
UABX	**UABC, Campus M**	**2.89**	**120**			**Pn**	**13 27 47.4 +2.1**
TPNV	**Topopah Spring**	**3.31**	**31**			**Pn**	**13 27 52.9 +1.7**
TPNV	**Topopah Spring** baz=212	**3.31**	**31**	Pg		**Pg**	**13 28 02.1 -0.8**
SAO	**San Andreas Ge**	**3.62**	**317**	Pn		**Pn**	**13 27 55.3 +0.1**
W13A	**Hualapai Mount**	**3.85**	**74**			**Pn**	**13 27 59.5 +0.9**

*ANF **17** 14:00:41.7±0.3, 32°.36N×115°.32W, h26km±2km, ML2.1/7, Error ellipse: s-maj=2.8km s-min=1.4km az=12.0*
*SCEDC **17** 14:00:41.8, 32°.27N×115°.30W, h32km*
*ECX **17** 14:00:42.7±0.6, 32°.27N×115°.33W, h6km, MD2.4, ML2.6*

ISC 17 14:00:41.2±1.0, 32°.30N±0°.04×115°.31W±0°.03, h24km±6km, n22, σ0°97/32, 2C-6D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.12**	**4**	*e*P	**Pn**	**14 00 45.9**	**-1.8**
CPBX				*e*S	**Sn**	**14 00 48.1**	**-1.0**
CPBX				⇑*e*		14 00 49.5	
CPBX				IAML		14 00 49.5	
	comp=E,7μm,0.1s						
MBIG	**Mexicali**	**0.14**	**43**	*e*P	**Pb**	**14 00 45.9**	**-0.3**
POT2	**Potabilizadora**	**0.33**	**349**	⇑*i*P	**Pb**	**14 00 49.3**	**+0.7**
UABX	**UABC, Campus M**	**0.35**	**342**	⇓*e*P	**Pb**	**14 00 49.6**	**+0.7**
WESC	**Westside Schoo**	**0.58**	**322**	⇓*e*P	**Pb**	**14 00 53.4**	**+0.6**
ESJX	**Sierra Juarez**	**0.61**	**241**	*e*P	**Pb**	**14 00 53.5**	**0.0**
ESJX				*e*S	**Sb**	**14 01 01.7**	**-0.1**
COK2	**Cook Ranch 2**	**0.65**	**327**	*e*P	**Pn**	**14 00 54.3**	**-0.7**
ERMX	**Rumorosa**	**0.66**	**293**	⇓*e*P	**Pn**	**14 00 54.1**	**-1.1**
ERMX				*e*S	**Sb**	**14 01 02.8**	**-0.2**
ERMX				*e*		14 01 03.4	
ERMX				IAML		14 01 03.4	
	comp=N,316nm,0.1s						
IKP	**In-Ko-Pah, Jac**	**0.76**	**297**	⇓*e*P	**Pn**	**14 00 55.9**	**-0.7**
IKP	**In-Ko-Pah, Jac** baz=119,SNR=23	**0.76**	**297**	P	**Pn**	**14 00 55.9**	**-0.7**
IKP				S	**Sn**	**14 01 05.9**	**-1.4**
	baz=119						
SWSC	**Sam W. Stewart** baz=148,SNR=9.6	**0.76**	**327**	P	**Pn**	**14 00 55.8**	**-0.7**
SWSC				S	**Sn**	**14 01 06.1**	**-1.1**
	baz=148						
CRR	**Carrizo Plain**	**0.80**	**317**	*e*P	**Pn**	**14 00 56.4**	**-0.7**
GLA	**Glamis** baz=207,SNR=5.6	**0.85**	**29**	P	**Pn**	**14 00 57.1**	**-0.7**
GLA				S	**Sn**	**14 01 08.6**	**-1.0**
	baz=207						
ECBX	**El Chinero**	**0.86**	**165**	⇓*e*P	**Pb**	**14 00 57.5**	**0.0**
ECBX				*e*S	**Sb**	**14 01 08.9**	**+0.4**
MONP2	**Monument Peak**	**1.10**	**302**	*e*P	**Pn**	**14 01 02.2**	**+0.8**
MONP2	**Monument Peak** baz=123,SNR=26	**1.10**	**302**	P	**Pn**	**14 01 02.1**	**+0.6**
MONP2				S	**Sn**	**14 01 16.2**	**+0.2**
	baz=123						
CBX	**Cerro Bola**	**1.14**	**271**	*e*P	**Pb**	**14 01 02.8**	**+0.3**
CBX				⇓*e*		14 01 21.8	
CBX				IAML		14 01 21.8	
	comp=N,140nm,0.4s						
BC3	**Big Chuckawall** baz=175	**1.35**	**355**	S	**Sn**	**14 01 21.6**	**-0.5**
109C	**Camp Elliot, M** baz=112	**1.62**	**292**	Sb	**Sb**	**14 01 31.4**	**+0.9**
PFO	**Pinyon Flats O** baz=144	**1.62**	**324**	P	**Pn**	**14 01 08.3**	**-0.2**
PFO				S	**Sn**	**14 01 28.5**	**-0.2**
	baz=144						
214A	**Organ Pipe Nat** baz=279	**2.15**	**99**	P	**Pn**	**14 01 15.8**	**+0.1**
214A				Sb	**Sb**	**14 01 48.2**	**+2.4**
	baz=279						
CIS	**Catalina Islan** baz=112	**2.83**	**294**	Sb	**Sb**	**14 02 07.5**	**+2.1**

*TEH **17** 14:07:26.4, 34°.00N×58°.89E, h12km, ML3.5*
*THR **17** 14:07:26.5±0.3, 34°.06N×58°.91E, h18km±3km, ML3.7*

ISC 17 14:07:25.9±0.9, 34°.06N±0°.03×58°.90E±0°.05, h7km, n26, σ1ş37/28, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFRZ	**Afriz**	**0.64**	**171**	*e*Pg	**Pg**	**14 07 38.3**	**+0.1**
AFRZ				*e*Sg	**Sg**	**14 07 47.0**	**+0.4**
ITEG	**Tejag**	**1.17**	**186**	*e*Pg	**Pg**	**14 07 47.9**	**-0.4**
ITEG				*e*		14 08 10.2	
SHRT	**Shahrakht**	**1.23**	**109**	*e*Pn	**Pg**	**14 07 49.1**	**-0.4**
SHRT	**Shahrakht**	**1.23**	**109**	*e*Pg	**Pg**	**14 07 49.0**	**-0.4**
SHRT				*e*Sg	**Sn**	**14 08 05.7**	**-0.8**
SHRT				IAML		14 08 11.2	
	comp=E,1μm,0.4s						
TABS	**Tabas**	**1.53**	**255**	*e*Pn	**Pn**	**14 07 55.0**	**+1.2**
TABS	**Tabas**	**1.53**	**255**	*e*Pg	**Pn**	**14 07 55.0**	**+1.2**
TABS				IAML		14 08 17.4	
	comp=N,891nm,0.5s						
TKDS	**Koohdasht(Taba**	**1.54**	**254**	*e*Pn	**Pn**	**14 07 54.6**	**+0.7**
TKDS				*e*		14 08 18.0	
IDAH	**Dahanechah**	**1.55**	**148**	*e*Pn	**Pb**	**14 07 54.9**	**-0.1**
IDAH				*e*		14 07 59.5	
IKOO	**Kooshah**	**1.63**	**177**	*e*Pn	**Pn**	**14 07 56.1**	**+0.8**
IKOO				*e*		14 08 28.7	
TNSJ	**Nastanj**	**1.90**	**268**	*e*Pn	**Pn**	**14 08 00.0**	**+1.1**
BSRN	**Basiran**	**2.10**	**175**	*e*Pn	**Pn**	**14 08 02.9**	**+1.3**
BSRN	**Basiran**	**2.10**	**175**	*e*Pn	**Pn**	**14 08 02.9**	**+1.3**
BSRN				*e*Sg	**Sg**	**14 08 32.6**	**-0.6**
TPRV	**Parvadeh(Tabas**	**2.11**	**242**	*e*Pn	**Pn**	**14 08 02.5**	**+0.8**
JRKH	**Jarkhoshk**	**2.20**	**32**	*e*		14 08 13.0	
JRKH				*e*Pn	**Pb**	**14 08 04.9**	**-1.1**
IPAY	**Payeh**	**2.39**	**2**	*e*		14 08 47.7	
IPAY				*e*Pn	**Pn**	**14 08 07.5**	**+1.8**
IMYA	**Miami**	**2.48**	**23**	*e*		14 08 57.6	
IMYA				*e*Pn	**Pb**	**14 08 09.1**	**-1.8**
IAKL	**Akhelmad**	**2.54**	**357**	*e*Pn	**Pn**	**14 08 10.1**	**+2.3**
IAKL				*e*		14 08 46.2	
SBZV	**Sabzevar**	**2.55**	**336**	*e*		14 08 52.1	
SBZV				*e*Pn	**Pn**	**14 08 09.7**	**+1.8**
IKRD	**Kardeh**	**2.73**	**354**	*e*Pn	**Pb**	**14 08 13.5**	**-1.7**
IKRD				*e*		14 08 50.1	
NHDN	**Nehbandan**	**2.83**	**160**	*e*Pn	**Pn**	**14 08 12.9**	**+1.2**
NHDN				*e*		14 08 27.4	
ISFR	**Sfrayin**	**3.08**	**347**	*e*Pn	**Pn**	**14 08 17.5**	**+2.3**
ISFR				*e*		14 09 16.1	
IEMG	**Emamgholi**	**3.36**	**357**	*e*Pn	**Pn**	**14 08 21.0**	**+2.0**
IEMG				*e*		14 09 16.2	
IBAF	**Bafgh**	**3.73**	**230**	*e*Pn	**Pn**	**14 08 24.7**	**+0.7**
IBAF				*e*		14 09 32.7	
YZKH	**Yazd**	**3.97**	**246**	IAML		14 09 33.4	
	comp=E,115nm,0.5s						
YZKH				IAML		14 09 34.0	
	comp=N,101nm,0.4s						
KHGB	**Koh Gabri**	**4.21**	**210**	*e*Pn	**Pn**	**14 08 32.4**	**+1.7**
TVBK	**TV Kerman**	**4.45**	**205**	*e*Pn	**Pn**	**14 08 35.6**	**+1.5**

ISC 17 14:43:36.8±0.9, 50°.24N±0°.05×18°.85E±0°.03, h0km, n17, σ0ş85/29, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.60**	**229**	*e*PG	**Pg**	**14 43 48.4**	**+0.1**
OKC				*e*SG	**Sg**	**14 43 56.7**	**+0.6**
	comp=Z,15nm,0.6s						
OJC	**Ojcow**	**0.61**	**91**	*e*Pg	**Pb**	**14 43 50.3**	**-0.1**
OJC				*e*Sg	**Sb**	**14 43 58.6**	**-0.9**
MORC	**Moravsky Berou**	**0.96**	**242**	*e*PG	**Pb**	**14 43 55.9**	**-0.4**
MORC				*e*SG	**Sg**	**14 44 08.3**	**+0.7**
LANS	**Liptovska Anna**	**1.16**	**159**	*e*PG	**Pn**	**14 44 00.8**	**+0.5**
LANS				*e*SG	**Sn**	**14 44 16.8**	**-0.1**
LANS				eLG	Lg	14 44 19.8	
NIE	**Niedzica**	**1.25**	**130**	*e*Pg	**Pn**	**14 44 02.3**	**+0.7**
NIE				*e*Sg	**Sn**	**14 44 20.5**	**+1.4**
KRLC	**Kraliky**	**1.34**	**264**	*e*PG	**Pg**	**14 44 01.8**	**-0.7**
KRLC				*e*SG	**Sg**	**14 44 19.0**	**-0.8**
	comp=Z,15nm,0.3s						
DPC	**Dobruska-Polom**	**1.62**	**275**	*e*PG	**Pn**	**14 44 06.7**	**0.0**
DPC				*e*SG	**Sn**	**14 44 28.4**	**0.0**
	comp=Z,9.9nm,0.4s						
OSTC	**Ostas**	**1.71**	**282**	*e*PG	**Pn**	**14 44 08.2**	**+0.2**
OSTC				*e*SG	**Sb**	**14 44 31.8**	**+0.5**
VRAC	**Vranov**	**1.73**	**238**	*e*PN	**Pb**	**14 44 09.0**	**-0.5**
VRAC				*e*SG	**Sn**	**14 44 31.0**	**0.0**
KSJP	**Ksiaz**	**1.74**	**291**	*e*Pg	**Pg**	**14 44 10.1**	**0.0**
KSJP				*e*Sg	**Sb**	**14 44 32.9**	**+0.9**
VYHS	**Vyhne**	**1.74**	**180**	*e*PN	**Pb**	**14 44 08.8**	**-0.9**
VYHS				*e*SN	**Sg**	**14 44 32.1**	**-0.7**
CHVC	**Chvalec**	**1.82**	**282**	*e*PG	**Pn**	**14 44 09.4**	**0.0**
CHVC				*e*SG	**Sb**	**14 44 35.3**	**+0.9**
UPC	**Upice**	**1.83**	**280**	*e*SG	**Sb**	**14 44 35.1**	**+0.3**
	comp=Z,4.4nm,0.4s						
KRUC	**Moravsky**	**1.98**	**235**	*e*SG	**Sb**	**14 44 38.5**	**-0.4**
PRU	**Pruhonice**	**2.78**	**267**	*e*SG	**Sb**	**14 45 04.6**	**+2.6**
	comp=Z,3.3nm,0.4s						
KHC	**Kasperske Hory**	**3.59**	**254**	*e*SG	**Sg**	**14 45 30.9**	**-1.4**
	comp=Z,3.9nm,0.4s						
CLL	**Collm**	**3.86**	**288**	*e*Sg	**Sg**	**14 45 40.0**	**-0.8**

*IDC **17** 15:10:24.5±0.7, 29°.30S×66°.80W, h0km, mb3.9/6, mb1 4.1/11, mb1mx4.0/25, mbtmp3.8/11, ML3.8/5, MS3.1/6, Ms1 3.0/6, ms1mx2.9/22, Error ellipse: s-maj=26.0km s-min=21.1km az=94.0*
*SJA **17** 15:10:26.7±1.3, 29°.21S×66°.92W, h16km±5km, ML4.2, MW3.8*
*BJI **17** 15:10:28.0±0.0, 29°.30S×66°.80W, h40km, mB4.8/3, Ms4.8/1, Ms7 4.6/1*
*NEIC **17** 15:10:29.7±2.3, 29°.32S±0°.06×66°.78W±0°.08, h40km±6km, mb4.6/7, Md4.2(SJA), Error ellipse: s-maj=10.6km s-min=8.4km az=112.0*

ISC 17 15:10:30.5±0.8, 29°.23S±0°.04×66°.86W±0°.05, h54km±8km, n61, σ1ş85/69, mb3.9/7, 2D, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APLL	**PUNTA DE LOS L**	**1.20**	**166**	*e*P	**Pn**	**15 10 50.9**	**-0.1**
APLL				*e*S	**Sn**	**15 11 07.2**	**+0.9**
VCA	**Vinchina**	**1.28**	**292**	*e*P	**Pn**	**15 10 50.9**	**-1.3**
VCA				*e*S	**Sn**	**15 11 06.8**	**-1.5**
VCA				IAML		15 11 12.2	
	comp=Z,5μm,0.3s						
AROD	**Rodeo**	**2.46**	**247**	*i* P	**Pn**	**15 11 09.1**	**+0.7**
RTLL	**Cerro Villicun**	**2.51**	**213**	*e*P	**Pn**	**15 11 09.4**	**+0.5**
RTLL				*e*S	**Sn**	**15 11 41.2**	**+2.8**
RTLL				IAML		15 11 43.7	
	comp=Z,2μm,0.4s						
CFA	**Coronel Fontan**	**2.65**	**206**	Pn	**Pn**	**15 11 09.2**	**-1.6**
	comp=Z,30nm,0.3s,baz=32,slow=19,SNR=108						
CFA				Lg	Lg	15 11 44.1	
	comp=Z,242nm,0.3s,baz=116,slow=15,SNR=27						
CFA				LR	LR	15 12 22.2	
	comp=Z,273nm,18.8s,baz=56,slow=45						
CFA	**Coronel Fontan**	**2.65**	**206**	*i* P	**Pn**	**15 11 11.1**	**+0.4**
CFA				*e*S	**Sn**	**15 11 44.6**	**+2.9**
TCA	**Tanti**	**2.87**	**138**	*i* P	**Pn**	**15 11 14.6**	**+0.7**
TCA				*e*S	**Sn**	**15 11 51.8**	**+4.5**
TCA				IAML		15 12 06.9	
	comp=Z,1μm,0.4s						
RTCV	**Cerro Valdivia**	**3.00**	**208**	*i* P	**Pn**	**15 11 15.9**	**+0.4**
ACAN	**Cantantal**	**3.05**	**185**	*i* P	**Pn**	**15 11 17.3**	**+1.0**
RTLS	**Leoncito**	**3.31**	**219**	⇑*i*P	**Pn**	**15 11 20.9**	**+0.8**
MRA	**San Martin**	**3.33**	**163**	*i* P	**Pn**	**15 11 20.8**	**+0.6**
MRA				*e*S	**Sn**	**15 12 02.4**	**+3.9**
MRA				IAML		15 12 20.4	
	comp=Z,956nm,0.3s						
GO03	**Copiap**	**3.39**	**298**		**Pn**	**15 11 21.9**	**+1.0**
GO03				Sn	**Sn**	**15 12 02.1**	**+2.2**
GO03	**Copiap**	**3.39**	**298**	*i* P	**Pn**	**15 11 22.1**	**+1.1**
GO04	**Tololo Observa**	**3.55**	**254**		**Pn**	**15 11 24.5**	**+1.2**
GO04				Sn	**Sn**	**15 12 06.1**	**+1.9**
ASAL	**Salagasta**	**3.75**	**206**	*i* P	**Pn**	**15 11 27.1**	**+1.2**
ASAL				IAML		15 12 38.5	
	comp=Z,235nm,0.6s						
ARCO	**CERRO ARCO**	**4.01**	**206**	*i* P	**Pn**	**15 11 30.6**	**+0.9**
ARCO				IAML		15 12 37.0	
	comp=Z,325nm,0.4s						
ARCO				IAML		15 12 37.2	
	comp=Z,339nm,0.4s						
AAGR	**Agrelo**	**4.20**	**203**	⇓*i*P	**Pn**	**15 11 32.9**	**+0.9**
AAGR				IAML		15 12 57.0	
	comp=Z,254nm,0.5s						
GO02	**Mina Guanaco**	**4.72**	**328**		**Pn**	**15 11 41.7**	**+2.2**
GO02				Sn	**Sn**	**15 12 39.4**	**+6.2**
PEL	**Peldehue**	**5.09**	**219**		**Pn**	**15 11 45.4**	**+1.1**
ROC1	**El Roble**	**5.16**	**223**		**Pn**	**15 11 45.0**	**-0.4**
ROC1	**El Roble**	**5.16**	**223**	*i* P	**Pn**	**15 11 47.1**	**+1.7**
AZAP	**Zapla**	**5.24**	**18**	*i* P	**Pn**	**15 11 48.4**	**+1.9**
PB10	**IPOC Station P**	**6.59**	**329**	Pn	**Pn**	**15 12 03.8**	**-1.0**
LVC	**Limon Verde**	**6.85**	**344**	Pn	**Pn**	**15 12 07.9**	**-0.7**
	comp=Z,1.6nm,0.3s,baz=169,slow=7.3,SNR=7.7						
LVC				LR	LR	15 15 08.0	
	comp=Z,145nm,21.1s,baz=188,slow=41						
LVC	**Limon Verde**	**6.85**	**344**		**Pn**	**15 12 10.7**	**+2.1**
GO05	**Huala**	**7.19**	**215**		**Pn**	**15 12 09.9**	**-3.1**
CPUP	**Villa Florida**	**8.92**	**73**	Pn	**Pn**	**15 12 35.0**	**-1.7**
	comp=Z,0.4nm,0.3s,baz=274,slow=9.0,SNR=9.3						
CPUP				Lg	Lg	15 15 08.8	
	comp=Z,1.5nm,0.3s,baz=270,slow=5.1,SNR=1.8						
CPUP				LR	LR	15 16 31.7	
	comp=Z,114nm,18.9s,baz=226,slow=41						
CPUP	**Villa Florida**	**8.92**	**73**		**Pn**	**15 12 37.4**	**+0.6**
GO01	**Chusmiza**	**9.75**	**347**	Pn	**Pn**	**15 12 49.4**	**+0.8**
PB11	**IPOC Station P**	**9.76**	**344**	Pn	**Pn**	**15 12 47.8**	**-0.7**
MNMC	**Minye Minye**	**10.36**	**345**	Pn	**Pn**	**15 12 56.1**	**-0.6**
GO06	**Curarrehue**	**11.00**	**199**	Pn	**Pn**	**15 13 02.0**	**-3.3**
PLCA	**Paso Flores**	**11.87**	**194**	Pn	**Pn**	**15 13 15.3**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=44,slow=11,SNR=7.0						
PLCA				Lg	Lg	15 16 34.3	
	comp=Z,0.2nm,0.3s,baz=106,slow=7.2,SNR=3.3						
PLCA				LR	LR	15 17 48.5	
	comp=Z,65nm,21.7s,baz=40,slow=38						
PLCA	**Paso Flores**	**11.87**	**194**	Pn	**Pn**	**15 13 15.6**

comp=Z,29nm,0.2s
PB09 IPOC Station P 2.18 262 *i* P **Pn 15 13 50.2 +2.0**
PB09 *i* S **S 15 14 23.6 +1.4**
PB08 IPOC Station P 2.50 303 ⇑*i* P **Pn 15 13 53.3 +1.7**
PB08 *i* S **S 15 14 28.2 -0.2**
PB08 IAML 15 14 30.6
comp=E,210nm,0.3s
PB08 IPOC Station P 2.50 303 *i* P **Pn 15 13 53.4 +1.7**
PB08 *i* S **S 15 14 28.2 -0.2**
PB03 IPOC Station P 2.69 258 *i* P **Pn 15 13 54.5 +1.2**
PB03 *i* S **S 15 14 29.9 -1.6**
PB03 IAML 15 14 31.8
comp=E,334nm,0.1s
PB03 IPOC Station P 2.69 258 *i* P **Pn 15 13 54.5 +1.2**
PB03 *i* S **S 15 14 29.8 -1.7**
PB06 IPOC Station P 2.73 244 *e*P **Pn 15 13 55.0 +1.3**
PB06 *i* S **S 15 14 31.5 -0.7**
PB06 IPOC Station P 2.73 244 *i* P **Pn 15 13 55.1 +1.3**
PB06 *i* S **S 15 14 31.5 -0.7**
PB06 IAML 15 14 35.0
comp=Z,138nm,0.2s
PB15 IPOC Station P 2.90 234 ⇓*i* P **Pn 15 13 57.2 +1.6**
PB15 *i* S **S 15 14 35.7 0.0**
PB15 IPOC Station P 2.90 234 *i* P **Pn 15 13 57.3 +1.6**
PB15 *i* S **S 15 14 35.6 0.0**
PATCX Punta Patache 3.10 282 *e*P **Pn 15 13 58.9 +1.2**
PATCX *i* S **S 15 14 37.5 -2.0**
PATCX Punta Patache 3.10 282 *i* P **Pn 15 13 59.1 +1.3**
PATCX *i* S **S 15 14 37.5 -2.0**
PB04 IPOC Station P 3.11 254 ⇓*i* P **Pn 15 13 59.3 +1.4**
PB04 *i* S **S 15 14 37.9 -1.9**
PB04 IAML 15 14 41.3
comp=N,280nm,0.2s
PB04 IPOC Station P 3.11 254 *i* P **Pn 15 13 59.3 +1.4**
PB04 *i* S **S 15 14 38.4 -1.3**
PB04 IAML 15 14 40.6
comp=Z,156nm,0.1s
PB11 IPOC Station P 3.11 304 ⇑*i* P **Pn 15 13 58.9 +0.9**
PB11 *i* S **S 15 14 37.8 -2.0**
PB11 IAML 15 14 40.0
comp=N,551nm,0.2s
PB11 IPOC Station P 3.11 304 *i* P **Pn 15 13 58.8 +0.9**
PB11 *i* S **S 15 14 37.8 -2.0**
TA01 Diego Aracena 3.20 287 ⇑*i* P **Pn 15 13 59.6 +0.9**
TA01 *i* S **S 15 14 38.3 -2.8**
TA01 IAML 15 14 39.1
comp=E,227nm,0.2s
PB05 IPOC Station P 3.32 246 ⇑*i* P **Pn 15 14 01.7 +1.4**
PB05 *i* S **S 15 14 41.9 -2.1**
PB05 IAML 15 14 42.6
comp=N,152nm,0.7s
PB05 IPOC Station P 3.32 246 *i* P **Pn 15 14 01.6 +1.4**
PB05 *i* S **S 15 14 41.7 -2.3**
MNMCX Minye Minye 3.46 313 *i* P **Pn 15 14 03.8 +1.6**
MNMCX *i* S **S 15 14 46.3 -1.0**
PSGC Pisagua 3.56 302 ⇓*i* P **Pn 15 14 03.4 +0.3**
PSGC *i* S **S 15 14 46.4 -2.6**
PSGC IAML 15 14 49.6
comp=E,238nm,0.3s
PSGCX Pisagua 3.56 302 *i* P **Pn 15 14 03.6 +0.5**
PSGCX *i* S **S 15 14 45.9 -3.1**
PB10 IPOC Station P 3.90 239 *i* P **Pn 15 14 08.2 +1.3**
PB10 *i* S **S 15 14 53.4 -2.6**
PB16 IPOC Station P 4.00 322 *i* P **Pn 15 14 10.9 +2.2**
PB16 *i* S **S 15 14 59.3 +0.2**
PB16 IAML 15 15 03.7
comp=N,55nm,0.6s
PB14 IPOC Station P 4.46 225 *i* P **Pn 15 14 15.3 +1.5**
PB14 *i* S **S 15 15 07.2 -1.3**
LPAZ La Paz 5.33 347 *i* P **Pn 15 14 27.3 +2.2**
LPAZ *i* S **S 15 15 27.7 -1.0**
GO03 Copiap 6.76 206 *i* P **Pn 15 14 42.8 +0.5**

MAN 17 15:25:12.6, 10.02N×123.98E, h33km, mb3.6, ML2.3, MS1.8, 1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.30**	**357**	⇓*i* P	Pn	15 25 21.5	+0.9
LLP				*i* S	Sb	15 25 28.4	+2.7

IDC 17 15:48:56.6±2.7, 1.46N×127.80E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/22, mbtmp3.4/3, Error ellipse: s-maj=241.8km s-min=25.0km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.22**	**164**	P	P	15 53 54.5	-0.5
	0.8nm,0.9s,baz=343,slow=9.8,SNR=4.0						
ASAR	**Alice Springs**	**25.68**	**167**	P	P	15 54 28.6	+0.1
	0.6nm,1.0s,baz=346,slow=9.0,SNR=5.8						
MKAR	**Makanchi Array**	**60.01**	**326**	P	P	15 59 05.2	+0.1
	0.4nm,0.5s,baz=113,slow=7.7,SNR=12						

NEIC 17 16:05:17.8±1.0, 19.10N±0.08×66.65W±0.05, h20km±15km, Error ellipse: s-maj=12.5km s-min=5.0km az=200.0
RSPR 17 16:05:18.8, 19.22N×66.64W, h23km±20km, MD3.0/14
ISC 17 16:05:18.1±1.6, 19.11N±0.08×66.58W±0.04, h28km, n52, σ0.971/59, 11C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMPR	**Esperanza - Ma**	**0.63**	**176**	⇑*e*P	**Pn**	**16 05 31.1**	**-0.1**
EMPR	**Esperanza - Ma**	**0.63**	**176**	*e*S	**Sn**	**16 05 41.4**	**+1.1**
EMPR	**Esperanza - Ma**	**0.63**	**176**		**Sn**	**16 05 41.4**	**+1.1**
EMPR	**Esperanza - Ma**	**0.63**	**176**		**Pn**	**16 05 31.2**	**+0.1**
AOPR	**Arecibo Observ**	**0.78**	**192**	⇑*e*P	**Pb**	**16 05 32.7**	**-0.3**
AOPR	**Arecibo Observ**	**0.78**	**192**	*e*S	**Sb**	**16 05 44.0**	**+0.8**
AOPR	**Arecibo Observ**	**0.78**	**192**		**Pb**	**16 05 32.7**	**-0.3**
AOPR	**Arecibo Observ**	**0.78**	**192**		**Sb**	**16 05 44.0**	**+0.8**
AGPR	**Aguadilla, PR**	**0.81**	**218**	⇑*e*P	**Pn**	**16 05 32.8**	**-0.9**
AGPR	**Aguadilla, PR**	**0.81**	**218**	*e*S	**Sb**	**16 05 44.4**	**+0.1**
AGPR	**Aguadilla, PR**	**0.81**	**218**		**Sb**	**16 05 44.4**	**+0.1**
AGPR	**Aguadilla, PR**	**0.81**	**218**	Pg	**Pn**	**16 05 32.2**	**-1.5**
GCPR	**Guaynabo City**	**0.93**	**149**		**Pb**	**16 05 35.7**	**+0.1**
CELP	**Cerrillos**	**1.03**	**180**	⇓*e*P	**Pb**	**16 05 36.6**	**-0.7**
CELP				*e*S	**Sb**	**16 05 51.3**	**+0.8**
CELP	**Cerrillos**	**1.03**	**180**		**Pb**	**16 05 36.6**	**-0.7**
CELP					**Sb**	**16 05 51.3**	**+0.8**
LSP	**Las Mesas**	**1.05**	**207**	⇑*e*P	**Pb**	**16 05 36.8**	**-0.8**
LSP	**Las Mesas**	**1.05**	**207**	*e*S	**Sn**	**16 05 50.6**	**0.0**
LSP	**Las Mesas**	**1.05**	**207**		**Pb**	**16 05 36.8**	**-0.8**
LSP					**Sn**	**16 05 50.6**	**0.0**
OBIP	**Obispado Ponce**	**1.06**	**181**	⇓*e*P	**Pb**	**16 05 37.3**	**-0.6**
OBIP	**Obispado Ponce**	**1.06**	**181**	*e*S	**Sb**	**16 05 52.3**	**+0.9**
OBIP	**Obispado Ponce**	**1.06**	**181**		**Sb**	**16 05 52.3**	**+0.9**
OBIP	**Obispado Ponce**	**1.06**	**181**	Pn	**Pb**	**16 05 37.2**	**-0.7**
SJG	**San Juan**	**1.07**	**158**	Pn	**Pb**	**16 05 38.2**	**+0.1**
CBYP	**Canovanas**	**1.08**	**140**	⇑*e*P	**Pb**	**16 05 37.9**	**-0.3**
CBYP	**Canovanas**	**1.08**	**140**	*e*S	**Sb**	**16 05 52.5**	**+0.6**
CBYP	**Canovanas**	**1.08**	**140**	Pn	**Pb**	**16 05 37.6**	**-0.6**
IDE	**Isla Desecheo**	**1.11**	**230**	⇓*e*P	**Pn**	**16 05 36.9**	**-0.9**
IDE	**Isla Desecheo**	**1.11**	**230**	*e*S	**Sn**	**16 05 51.6**	**-0.6**
IDE	**Isla Desecheo**	**1.11**	**230**		**Pn**	**16 05 36.9**	**-0.9**
IDE					**Sn**	**16 05 51.6**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.16**	**194**	⇑*e*P	**Pb**	**16 05 38.8**	**-0.7**
GBPR	**Guanica, Bosqu**	**1.16**	**194**	*e*S	**Sn**	**16 05 53.7**	**+0.2**
GBPR	**Guanica, Bosqu**	**1.16**	**194**		**Pb**	**16 05 38.8**	**-0.7**
GBPR					**Sn**	**16 05 53.7**	**+0.2**
HUMP	**Col San Antoni**	**1.19**	**144**	⇓*e*P	**Pb**	**16 05 39.4**	**-0.5**
HUMP	**Col San Antoni**	**1.19**	**144**	*e*S	**Sb**	**16 05 55.5**	**+0.6**
HUMP	**Col San Antoni**	**1.19**	**144**		**Sb**	**16 05 55.5**	**+0.6**
HUMP	**Col San Antoni**	**1.19**	**144**	Pn	**Pb**	**16 05 39.6**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.21**	**205**	⇑*e*P	**Pn**	**16 05 38.8**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.21**	**205**	*e*S	**Sn**	**16 05 54.7**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.21**	**205**		**Sn**	**16 05 54.7**	**+0.2**
MLPR	**Magueyes Islan**	**1.22**	**201**	⇑*e*P	**Pn**	**16 05 38.5**	**-0.7**
MLPR	**Magueyes Islan**	**1.22**	**201**	*e*S	**Sn**	**16 05 55.0**	**+0.3**
MLPR	**Magueyes Islan**	**1.22**	**201**		**Sn**	**16 05 55.0**	**+0.3**
ICMP	**Isla Caja de M**	**1.22**	**178**	⇑*e*P	**Pb**	**16 05 40.1**	**-0.4**
ICMP	**Isla Caja de M**	**1.22**	**178**	*e*S	**Sn**	**16 05 55.6**	**+0.9**
ICMP	**Isla Caja de M**	**1.22**	**178**		**Pb**	**16 05 40.1**	**-0.4**
ICMP					**Sn**	**16 05 55.6**	**+0.9**
IGPR	**InterUniversit**	**1.22**	**158**	⇑*e*P	**Pb**	**16 05 40.4**	**-0.2**
IGPR	**InterUniversit**	**1.22**	**158**	*e*S	**Sb**	**16 05 55.9**	**-0.1**
MTP	**Monte Pirata**	**1.40**	**136**	⇑*e*P	**Pb**	**16 05 42.4**	**-1.2**
MTP	**Monte Pirata**	**1.40**	**136**	*e*S	**Sb**	**16 06 00.3**	**-0.8**
MTP	**Monte Pirata**	**1.40**	**136**		**Pb**	**16 05 42.4**	**-1.2**
MTP					**Sb**	**16 06 00.3**	**-0.8**
DR12	**Loma Pena Alta**	**2.67**	**264**	Pn	**Pn**	**16 06 00.0**	**+0.7**
SDDR	**Presa de Saban**	**4.46**	**269**	Pn	**Pn**	**16 06 25.4**	**+1.6**

IDC 17 16:24:03.4±1.1, 11.70N×87.35W, h0km, mb4.1/11, mb1 4.4/15, mb1mx4.1/35, mbtmp4.1/15, ML3.6/4, MS3.0/5, Ms1 3.0/5, ms1mx2.6/38, Error ellipse: s-maj=36.1km s-min=14.6km az=39.0
INET 17 16:24:03.9, 11.22N×88.01W, h34km, ML4.3
UCR 17 16:24:05.7±1.8, 11.24N×87.80W, h35km±11km, MD4.2, ML4.1, mb4.4(NEIC)
NEIC 17 16:24:07.0±2.3, 11.45N±0.06×87.61W±0.07, h36km±3km, mb4.4/46, Error ellipse: s-maj=10.6km s-min=7.6km az=47.0
SNET 17 16:24:06.1±0.9, 11.33N×87.84W, h23km±100km, ML4.2
ISC 17 16:24:06.6±1.2, 11.32N±0.05×87.71W±0.05, h40km±11km, n130, σ1.938/150, mb4.3/28, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRIN	**San Cristobal**	**1.52**	**25**	*e*P	**Pn**	**16 24 31.4**	**-0.1**
CNGN	**Cerro Negro**	**1.54**	**40**	*e*P	**Pn**	**16 24 32.3**	**+0.6**
CNGN				*e*S	**Sn**	**16 24 54.0**	**+3.5**
LCND	**La Caada**	**1.99**	**355**	*e*P	**Pn**	**16 24 38.1**	**+0.3**
LCND				*e*S	**Sn**	**16 25 02.2**	**+0.7**
LCND				IAML		16 25 08.4	
	comp=Z,2μm,0.4s						
LCND	**La Caada**	**1.99**	**355**	*e*P	**Pn**	**16 24 38.1**	**+0.3**
LCND				*e*S	**Sn**	**16 25 02.2**	**+0.7**
LCND				IAML		16 25 08.4	
	comp=Z,2μm,0.4s						
JUCU	**Jucuarn**	**2.00**	**345**	*e*P	**Pn**	**16 24 38.0**	**0.0**
JUCU				*e*S	**Sn**	**16 25 02.4**	**+0.6**
ALJI	**Alcalda de J**	**2.17**	**337**	*e*S	**Sn**	**16 25 06.3**	**+0.4**
LCY	**Lacayo**	**2.17**	**345**	*e*P	**Pn**	**16 24 40.4**	**0.0**
LCY	**Lacayo**	**2.17**	**345**	*e*P	**Pn**	**16 24 40.4**	**0.0**
BLLM	**Bellamira**	**2.18**	**346**	*e*P	**Pn**	**16 24 40.6**	**+0.2**
BLLM	**Bellamira**	**2.18**	**346**	*e*P	**Pn**	**16 24 40.6**	**+0.2**
ESTN	**Estel**	**2.21**	**36**	*e*P	**Pn**	**16 24 41.6**	**+0.7**
ESTN	**Estel**	**2.21**	**36**		**Pn**	**16 24 41.6**	**+0.7**
ESTN				Sn	**Sn**	**16 25 02.9**	**-4.1**
PACA	**Pacayal**	**2.22**	**344**	*e*P	**Pn**	**16 24 41.4**	**+0.3**
PACA				*e*S	**Sn**	**16 25 09.3**	**+1.9**
PACA				IAML		16 25 14.0	
	comp=Z,2μm,0.3s						
PACA	**Pacayal**	**2.22**	**344**	*e*P	**Pn**	**16 24 41.4**	**+0.3**
PACA				*e*S	**Sn**	**16 25 09.3**	**+1.9**
PACA				IAML		16 25 14.0	
	comp=Z,2μm,0.3s						
NY14	**Universidad de**	**2.24**	**107**	*i* P	**Pn**	**16 24 41.0**	**-0.2**
GBS3	**Finca Las Img**	**2.28**	**103**	*i* P	**Pn**	**16 24 41.0**	**-0.8**
GBS3				*i* S	**Sn**	**16 25 08.1**	**-0.6**
TECA	**Tecapa**	**2.30**	**340**	*e*P	**Pn**	**16 24 42.5**	**+0.2**
TECA				*e*S	**Sn**	**16 25 11.3**	**+1.8**
TECA	**Tecapa**	**2.30**	**340**	*e*P	**Pn**	**16 24 42.5**	**+0.2**
TECA				*e*S	**Sn**	**16 25 11.3**	**+1.8**
LAPC	**Finca la Perla**	**2.30**	**103**	*i* P	**Pn**	**16 24 41.4**	**-0.7**
LAPC				*i* S	**Sn**	**16 25 08.5**	**-0.8**
COEB	**Comit de Eme**	**2.31**	**340**	*e*P	**Pn**	**16 24 42.3**	**0.0**
GB1A	**Borinquen Arri**	**2.33**	**102**	*e*P	Pn	16 24 36.8	-5.7
GPS3	**Bodega del ICE**	**2.37**	**103**	*i* P	**Pn**	**16 24 43.3**	**+0.2**
GPS3				*i* S	**Sn**	**16 25 11.9**	**+0.9**
FAGO	**Alcalda de S**	**2.40**	**351**	*e*S	**Sn**	**16 25 12.8**	**+1.2**
PLVR	**Palo Verde**	**2.51**	**112**	⇓*e*P	**Pn**	**16 24 44.0**	**-1.1**
PLVR				*e*S	**Sn**	**16 25 12.9**	**-1.7**
MESS	**Mesas**	**2.54**	**103**	*i* P	**Pn**	**16 24 45.4**	**+0.1**
COLC	**Colonia**	**2.55**	**104**	*i* P	**Pn**	**16 24 45.3**	**-0.2**
COEG	**Centro de Oper**	**2.56**	**334**	*e*P	**Pn**	**16 24 45.4**	**-0.3**
ACON	**Acoyapa**	**2.57**	**75**	*e*P	**Pn**	**16 24 42.4**	**-3.4**
ACON	**Acoyapa**	**2.57**	**75**		**Pn**	**16 24 45.5**	**-0.3**
ACON				Sn	**Sn**	**16 25 18.1**	**+2.3**
CUI	**Cuipilapa**	**2.59**	**104**	*i* P	**Pn**	**16 24 46.1**	**0.0**
CUI				*e*S	**Sn**	**16 25 18.1**	**-0.2**
LFRS	**El Faro**	**2.65**	**330**	*e*P	**Pn**	**16 24 46.7**	**-0.2**
PAVA	**Las Pavas**	**2.67**	**333**	*e*P	**Pn**	**16 24 47.5**	**+0.3**
PAVA				*e*S	**Sn**	**16 25 19.2**	**+0.8**
PAVA	**Las Pavas**	**2.67**	**333**	*e*P	**Pn**	**16 24 47.5**	**+0.3**
PAVA				*e*S	**Sn**	**16 25 19.2**	**+0.8**
ACAL	**Aguas Claras**	**2.71**	**104**	*i* P	**Pn**	**16 24 48.3**	**+0.4**
ACAL				*i* S	**Sn**	**16 25 20.9**	**+1.4**
LBRS	**Las Brisas**	**2.74**	**332**	*e*P	**Pn**	**16 24 48.5**	**+0.4**
TGUH	**Tegucigalpa,Un**	**2.76**	**9**	*e*P	**Pn**	**16 24 49.5**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.76**	**9**	*e*P	**Pn**	**16 24 49.5**	**+1.0**
TGUH	**Tegucigalpa,Un**	**2.76**	**9**		**Pn**	**16 24 49.5**	**+1.0**
AMAS	**Alto Masis**	**2.76**	**104**	*i* P	**Pn**	**16 24 48.3**	**-0.2**
BOQS	**Boqueron**	**2.85**	**328**	*e*P	**Pn**	**16 24 49.3**	**-0.6**
JTS	**Las Juntas de**	**2.90**	**110**	Pn	**Pn**	**16 24 49.8**	**-0.5**
	comp=Z,27nm,0.3s,baz=0.9,slow=23,SNR=37						
JTS				Sn	**Sn**	**16 25 23.4**	**-0.5**
	comp=Z,64nm,0.3s,baz=357,slow=17,SNR=14						
JTS				LR	LR	16 25 57.9	
	comp=Z,263nm,18.8s,baz=64,slow=42						
JTS	**Las Juntas de**	**2.90**	**110**	*e*P	**Pn**	**16 24 49.5**	**-0.7**
JTS				*e*S	**Sn**	**16 25 24.0**	**+0.1**
ARE1	**Arenal 1**	**3.06**	**106**	*e*P	**Pn**	**16 24 52.9**	**+0.3**
ARE1				*e*S	**Sn**	**16 25 32.3**	**+4.3**
CEDE	**Laguna Cedeo**	**3.07**	**105**	*e*P	**Pn**	**16 24 53.2**	**+0.5**
CEDE				*e*S	**Sn**	**16 25 30.2**	**+2.0**
LLGN	**La Laguna**	**3.08**	**337**	*e*S	**Sn**	**16 25 29.7**	**+1.3**
LLGN	**La Laguna**	**3.08**	**337**	*e*S	**Sn**	**16 25 29.7**	**+1.3**
CEVE	**Cerro Verde**	**3.12**	**323**	*e*P	**Pn**	**16 24 53.4**	**-0.1**
CEVE				IAML		16 25 33.6	
	comp=Z,676nm,0.4s						
CEVE	**Cerro Verde**	**3.12**	**323**	*e*P	**Pn**	**16 24 53.4**	**-0.1**
CEVE				IAML		16 25 33.6	
	comp=Z,676nm,0.4s						
SBLS	**San Blas**	**3.13**	**324**	*e*P	**Pn**	**16 24 53.9**	**+0.2**
SBLS	**San Blas**	**3.13**	**324**	*e*P	**Pn**	**16 24 53.9**	**+0.2**
HDC	**Heredia**	**3.77**	**110**	*e*P	**Pn**	**16 25 05.0**	**+2.6**
HDC				*e*S	**Sn**	**16 25 48.9**	**+3.3**
HDC	**Heredia**	**3.77**	**110**		**Pn**	**16 25 03.9**	**+1.5**
LCR2	**La Lucha 2**	**3.97**	**113**	⇑*e*P	**Pn**	**16 25 05.8**	**+0.7**
LCR2				*e*S	**Sn**	**16 25 52.2**	**+1.6**
CVTR	**Volcan Turrial**	**4.09**	**108**	*e*P	**Pn**	**16 25 09.2**	**+2.1**
CVTR				*e*S	**Sn**	**16 25 57.0**	**+3.0**
EDDO	**Dominical**	**4.31**	**118**	*e*P	**Pn**	**16 25 10.8**	**+1.2**
APG	**El Apazote**	**4.54**	**324**	Pn	**Pn**	**16 25 13.6**	**+0.5**
	comp=Z,3.4nm,0.3s,baz=79,slow=17,SNR=3.0						
DRK0	**Durika**	**4.85**	**114**	*e*P	**Pn**	**16 25 17.9**	**+0.7**
EDBA	**Buenos Aires**	**4.86**	**116**	*e*P	**Pn**	**16 25 17.3**	**0.0**
BRU2	**Volcan**	**5.54**	**116**	*e*P	**Pn**	**16 25 27.9**	**+1.1**
ICCO	**Coco Island**	**5.77**	**173**	*e*P	**Pn**	**16 25 26.7**	**-3.1**
BCIP	**Isla Barro Col**	**8.04**	**105**	Pn	**Pn**	**16 26 01.8**	**+0.8**
CMIG	**Matias Romero**	**9.02**	**310**	Pn	**Pn**	**16 26 15.2**	**+0.9**
	comp=Z,1.4nm,0.3s,baz=150,slow=14,SNR=12						
FSCY	**Frank Sound, G**	**10.14**	**38**	Pn	Pn	16 26 26.2	-3.5
ROSC	**El Rosal**	**14.73**	**115**	LR	LR	16 33 56.3	
	comp=Z,75nm,18.6s,baz=138,slow=41						
SDV	**Santo Domingo**	**16.99**	**97**	Pn	**Pn**	**16 27 59.9**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=312,slow=15,SNR=2.7						
SDV				LR	LR	16 36 30.7	
	comp=Z,32nm,19.0s,baz=274,slow=45						
SDV	**Santo Domingo**	**16.99**	**97**	P	**Pn**	**16 28 02.5**	**+0.9**
DWPF	**Disney Wildern**	**17.72**	**19**	P	**Pn**	**16 28 09.7**	**-0.6**
SDD	**Santo Domingo**	**18.60**	**65**	P	**P**	**16 28 17.1**	**-3.5**
553A	**Crawfordville**	**19.03**	**9**	Pn	**P**	**16 28 26.2**	**+1.0**
553A				IAmb	IAmb	16 28 29.9	
	comp=Z,41nm,1.1s						
833A	**Chaparral WMA,**	**20.15**	**329**	P	**P**	**16 28 38.3**	**+0.7**
CRPR	**Cabo Rojo, PR**	**21.00**	**69**	P	**P**	**16 28 45.1**	**-1.7**
SJG	**San Juan**	**21.91**	**70**	LR	LR	16 36 21.9	
	comp=Z,47nm,19.3s,baz=248,slow=34						
GOGA	**Godfrey**	**22.34**	**9**	P	**P**	**16 29 00.5**	**-0.5**
Y49A	**Blount Mountai**	**22.47**	**3**	P	**P**	**16 29 01.6**	**-0.9**
Y49A				IAmb	IAmb	16 29 04.7	
	comp=Z,9.7nm,0.5s						
Y52A	**Lilburn**	**22.69**	**8**	P	**P**	**16 29 02.1**	**-2.7**
Y52A				IAmb	IAmb	16 29 08.0	
	comp=Z,32nm,1.2s						
TX31	**Lajitas Ar. Si**	**23.30**	**323**	P	**P**	**16 29 11.1**	**0.0**
TX32	**Lajitas Array**	**23.30**	**323**	P	**P**	**16 29 09.9**	**-1.3**
TXAR	**Lajitas Array**	**23.30**	**323**	P	**P**	**16 29 13.2**	**+2.1**
	comp=Z,4.4nm,0.6s,baz=138,slow=9.9,SNR=55						
TXAR	**Lajitas Array**	**23.30**	**323**	P	**P**	**16 29 11.0**	**-0.2**
PLAL	**Pickwick Lake**	**23.56**	**359**	P	**P**	**16 29 11.1**	**-2.4**
MIAR	**Mount Ida**	**23.74**	**348**	P	**P**	**16 29 14.1**	**-1.0**
MIAR				IAmb	IAmb	16 29 17.4	
	comp=Z,12nm,0.9s						
SWET	**Sewanee**	**23.85**	**4**	P	**P**	**16 29 12.8**	**-3.5**
W50A	**Signal Mountai**	**23.88**	**5**	P	**P**	**16 29 15.7**	**-0.8**
W50A				IAmb	IAmb	16 29 19.1	
	comp=Z,8.6nm,0.5s						
ABTX	**Abilene, Hawle**	**23.88**	**334**	P	**P**	**16 29 16.3**	**-0.2**
ABTX				IAmb	IAmb	16 29 19.3	
	comp=Z,16nm,1.1s						
BG3	**Lake Jocassee**	**23.97**	**10**	P	**P**	**16 29 17.4**	**0.0**
BG3				IAmb	IAmb	16 29 20.2	
	comp=Z,12nm,1.3s						
PAULI	**Pauline**	**24.01**	**12**	P	**P**	**16 29 17.7**	**0.0**
PAULI				IAmb	IAmb	16 29 20.8	
	comp=Z,9.4nm,1.0s						
BIRD	**Birdtown, Kers**	**24.15**	**15**	P	**P**	**16 29 18.5**	**-0.5**
W39A	**Magazine**	**24.41**	**348**	P	**P**	**16 29 21.0**	**-0.3**
W39A				IAmb	IAmb	16 29 23.5	
	comp=Z,8.0nm,1.0s						
TKL	**Tuckaleechee C**	**24.50**	**8**	P	**P**	**16 29 21.0**	**-1.1**
	comp=Z,4.0nm,0.4s,baz=155,slow=7.6,SNR=7.9						
TKL	**Tuckaleechee C**	**24.50**	**8**	P	**P**	**16 29 23.1**	**+1.0**
TKL				IAmb	IAmb	16 29 26.1	
	comp=Z,31nm,1.4s						
V53A	**Saluda**	**24.65**	**10**	P	**P**	**16 29 24.2**	**+0.6**
V53A				IAmb	IAmb	16 29 27.4	
	comp=Z,12nm,0.8s						
CLTN	**Cedars of Leba**	**24.70**	**3**	P	**P**	**16 29 23.9**	**-0.1**
CLTN				IAmb	IAmb	16 29 26.7	
	comp=Z,4.3nm,0.6s						
LCAR	**Lake Charles**	**24.84**	**353**	P	**P**	**16 29 25.3**	**+0.1**
LCAR				IAmb	IAmb	16 29 26.4	
	comp=Z,4.9nm,0.6s						
X34A	**Smith Ranch, M**	**24.95**	**340**	P	**P**	**16 29 25.9**	**-0.4**
LPIG	**La Paz**	**24.95**	**304**	LR	LR	16 39 54.1	
	comp=Z,36nm,19.1s,baz=36,slow=38						
V55A	**Taylorsville**	**25.13**	**13**	P	**P**	**16 29 28.1**	**+0.2**
V55A				IAmb	IAmb	16 29 31.6	
	comp=Z,8.5nm,0.8s						
WMOK	**Wichita Mounta**	**25.40**	**338**	P	**P**	**16 29 29.4**	**-1.0**
FNO	**Franklin**	**25.41**	**341**	P	**P**	**16 29 29.5**	**-1.0**
T47A	**Sharon Grove**	**25.57**	**1**	P	**P**	**16 29 31.1**	**-0.8**
T47A				IAmb	IAmb	16 29 33.5	
	comp=Z,6.6nm,0.7s						
V58A	**Windy Hill, Pi**	**25.59**	**16**	P	**P**	**16 29 32.0**	**0.0**
V58A				IAmb	IAmb	16 29 34.6	
	comp=Z,20nm,1.1s						
U54A	**Nelsons Funny**	**25.65**	**11**	P	**P**	**16 29 31.7**	**-1.0**
MSTX	**Muleshoe**	**26.42**	**331**	P	**P**	**16 29 40.0**	**+0.2**
MSTX				IAmb	IAmb	16 29 43.3	
	comp=Z,17nm,0.8s						
AMTX	**Amarillo**	**26.69**	**334**	P	**P**	**16 29 42.7**	**+0.5**
SSPA	**Standing Stone**	**30.47**	**15**	P	**P**	**16 30 13.7**	**-1.8**
SSPA				IAmb	IAmb	16 30 29.5	
	comp=Z,5.9nm,1.1s						
SAML	**Samuel**	**31.63**	**129**	P	**P**	**16 30 26.2**	**+0.1**
SAML				IAmb	IAmb	16 30 27.0	
	comp=Z,4.0nm,0.7s						
PDAR	**Pinedale Array**	**36.65**	**333**	P	**P**	**16 31 11.1**	**+1.4**
	comp=Z,2.0nm,0.9s,baz=126,slow=11,SNR=12						
PDAR				PcP	**PcP**	**16 33 33.1**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=132,slow=6.0,SNR=5.0						
REDW	**Red Top Meadow**	**37.71**	**332**	P	**P**	**16 31 18.9**	**+0.3**
F63A	**Nahmakanta, Br**	**37.77**	**21**	P	**P**	**16 31 17.2**	**-1.6**
MOOW	**Moose Ponds**	**37.96**	**333**	P	**P**	**16 31 17.8**	**-3.0**
NVAR	**Mina Array Bea**	**38.39**	**320**	P	**P**	**16 31 28.0**	**+3.5**
	comp=Z,2.8nm,0.8s,baz=138,slow=7.3,SNR=21						
NVAR				PcP	**PcP**	**16 33 39.5**	**+2.0**
	comp=Z,0.8nm,0.7s,baz=132,slow=4.3,SNR=5.9						
YNE	**Yellowstone No**	**38.63**	**334**	P	**P**	**16 31 25.2**	**-1.2**
KVN	**Kaiserville**	**38.64**	**321**	P	**P**	**16 31 26.1**	**-0.4**
RYN	**Ryan**	**38.65**	**320**	P	**P**	**16 31 26.1**	**-0.4**
YHL	**Hebgen Lake**	**39.02**	**333**	P	**P**	**16 31 29.3**	**-0.4**
ULM	**Lac du Bonnet**	**39.40**	**352**	P	**P**	**16 31 30.8**	**-1.6**

SSNC 17 16:45:11.2±3.8, 23°.13N×80°.67W, h5^{km}±15^{km}, MD3.7, MW3.2, MW3.5, Cuba region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGV	**Manicaragua**	**1.20**	**148**	*e*P	Pg	16 45 32.4	-1.7
MGV				*e*S	Sb	16 45 50.1	0.0
MGV				IAML		16 45 52.2	
	comp=E,530nm,0.5s						
MGV				IAML		16 45 52.8	
	comp=N,486nm,0.5s						
SOR	**Soroa**	**2.18**	**262**	*e*P	Pn	16 45 45.7	-2.5
SOR				*e*S	Sn	16 46 12.4	-3.2
061Z	**Ochoppi**	**2.73**	**356**	*e*P	Pn	16 45 54.1	-1.7
061Z				*e*S	Sn	16 46 27.6	-1.6
CCCC	**Cccc**	**3.31**	**125**	*e*P	Pn	16 46 04.8	+1.2
CCCC				*e*S	Sn	16 46 44.9	+1.6
CCCC				IAML		16 47 03.7	
	comp=N,27nm,0.3s						
CCCC				IAML		16 47 10.2	
	comp=E,33nm,0.7s						
LMGC	**Las Mercedes**	**4.57**	**131**	*e*P	Pn	16 46 19.3	-1.8
LMGC				*e*S	Sn	16 47 11.4	-3.2
LMGC				IAML		16 47 47.6	
	comp=E,20nm,0.3s						
LMGC				IAML		16 47 54.3	
	comp=N,39nm,0.7s						
GTMO	**Guantanamo**	**5.97**	**119**	*e*P	Pn	16 46 43.1	+2.8
GTMO				*e*S	Sn	16 47 49.9	+0.8
MASC	**Masc**	**6.67**	**115**	*e*P	Pn	16 46 46.7	-3.1
MASC				*e*S	Sn	16 47 59.7	-6.6
MASC				IAML		16 48 05.1	
	comp=E,3.8nm,0.5s						
MASC				IAML		16 48 06.3	
	comp=N,4.8nm,0.7s						

IDC 17 16:55:24.4±20.0, 12°.03S×166°.26E, h271^{km}±219^{km}, mb3.1/6, mb1 3.4/6, mb1mx3.1/32, mbtmp3.8/6, MS3.1/1, Ms1 3.1/1, ms1mx2.7/7, Error ellipse: s-maj=142.7km s-min=58.6km az=158.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**16.03**	**297**	LR	LR	17 05 19.6	
	comp=Z,61nm,18.7s,baz=104,slow=37						
CTA	**Charters Tower**	**20.81**	**245**	P	P	16 59 46.3	+0.6
	1.5nm,0.6s,baz=56,slow=7.3,SNR=3.8						
WRA	**Warramunga Arr**	**31.63**	**252**	P	P	17 01 21.9	-0.8
	1.4nm,0.8s,baz=83,slow=9.0,SNR=3.3						
ASAR	**Alice Springs**	**32.81**	**245**	P	P	17 01 32.7	-0.3
	0.5nm,0.5s,baz=65,slow=10,SNR=10						
FITZ	**Fitzroy Crossi**	**39.62**	**256**	P	P	17 02 30.4	0.0
	2.8nm,0.7s,baz=108,slow=6.5,SNR=6.5						
CMAR	**Chiang Mai Arr**	**72.96**	**294**	P	P	17 06 25.3	+0.3
	0.4nm,0.7s,baz=98,slow=3.3,SNR=4.2						
ILAR	**Eielson Array**	**84.28**	**18**	P	P	17 07 25.4	-0.1
	0.2nm,0.7s,baz=234,slow=5.1,SNR=4.0						

*IDC **17** 17:03:00.9±1.2, 3°.39S×135°.80E, h0^{km}, mb3.9/3, mb1 4.2/7, mb1mx3.9/28, mbtmp4.0/7, ML3.6/4, Error ellipse: s-maj=25.5km s-min=24.5km az=114.0*
*NEIC **17** 17:03:04.5±2.6, 3°.51S±0°.09×135°.68E±0°.06, h30^{km}±4^{km}, mb4.1/9, Error ellipse: s-maj=12.6km s-min=9.1km az=185.0*

ISC 17 17:03:03.0±0.7, 3°.57S±0°.07×135°.64E±0°.06, h22^{km}, n23, σ2^{s}03/26, mb3.9/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**3.45**	**281**		**Pn**	**17 03 57.3**	**+1.8**
SIJI	**Sorong**	**5.13**	**301**	Pn	**Pn**	**17 04 19.5**	**+0.9**
	8.3nm,0.3s,baz=159,slow=23,SNR=53						
SIJI				Sn	**Sn**	**17 05 13.1**	**-4.1**
	8.2nm,0.3s,baz=191,slow=17,SNR=9.4						
JAY	**Jayapura**	**5.16**	**78**	Pn	**Pn**	**17 04 18.3**	**-0.8**
	0.3nm,0.3s,baz=240,slow=20,SNR=2.3						
JAY				Sn	**Sn**	**17 05 16.9**	**-1.2**
	0.2nm,0.3s,baz=294,slow=20,SNR=2.1						
MTN	**Manton Dam**	**10.24**	**206**	Pn	**Pn**	**17 05 32.6**	**+3.8**
MTN					**Sn**	**17 07 20.5**	**-2.5**
COEN	**Coen**	**12.72**	**145**	Pn	**Pn**	**17 06 04.7**	**+1.9**
KNRA	**Kununurra**	**13.81**	**209**	Pn	**Pn**	**17 06 19.3**	**+1.7**
WRAB	**Tennant Creek**	**16.32**	**184**	P	**Pn**	**17 06 51.6**	**+0.6**
WRAB				IAmb	IAmb	17 06 59.6	
	comp=Z,10.0nm,0.7s						
WRA	**Warramunga Arr**	**16.33**	**184**	Pn	**Pn**	**17 06 52.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=9.3,slow=12,SNR=11						
WRA				Sn	**Sn**	**17 09 48.4**	**-3.4**
	comp=Z,0.3nm,0.3s,baz=9.8,slow=22,SNR=5.4						
WRA	**Warramunga Arr**	**16.33**	**184**		**Pn**	**17 06 50.9**	**-0.2**
WRA					Sn	17 09 42.7	-9.0
WR0	**Warramunga Arr**	**16.33**	**184**	Pn	**Pn**	**17 06 52.7**	**+1.6**
WR0				IAmb	IAmb	17 07 12.0	
	comp=Z,14nm,1.1s						
FITZ	**Fitzroy Crossi**	**17.45**	**213**	P	**Pn**	**17 07 06.8**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=29,slow=11,SNR=4.6						
FITZ				S	Sn	17 10 07.7	-11
	comp=Z,0.3nm,0.3s,baz=5.7,slow=10,SNR=5.3						
FITZ	**Fitzroy Crossi**	**17.45**	**213**	P	**Pn**	**17 07 06.8**	**+1.6**
FITZ				IAmb	IAmb	17 07 16.9	
	comp=Z,19nm,1.5s						
FITZ					Sn	17 10 08.6	-10
AS31	**Alice Springs**	**20.05**	**185**	P	Pn	17 07 37.9	+1.2
ASAR	**Alice Springs**	**20.05**	**185**	P	Pn	17 07 39.6	+2.9
	comp=Z,11nm,0.8s,baz=8.6,slow=11,SNR=80						
ASAR				S	**S**	**17 11 15.7**	**-3.8**
	comp=Z,0.8nm,0.9s,baz=4.1,slow=27,SNR=3.8						
ASAR	**Alice Springs**	**20.05**	**185**	P	**P**	**17 07 36.5**	**+1.6**
SBUM	**Sibu**	**24.16**	**284**	P	**P**	**17 08 18.7**	**+0.8**
CISI	**Cisompet, Garu**	**27.97**	**261**	P	**P**	**17 08 51.8**	**-0.7**
BBOO	**Buckleboo**	**29.09**	**179**	P	**P**	**17 09 01.4**	**-0.8**
MKAR	**Makanchi Array**	**68.63**	**324**	P	**P**	**17 14 05.8**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=116,slow=7.7,SNR=8.2						
MKAR	**Makanchi Array**	**68.63**	**324**	P	**P**	**17 14 05.6**	**+1.0**
MAKZ	**Makanchi**	**68.82**	**324**	P	**P**	**17 14 06.3**	**+0.5**
MAKZ				IAmb	IAmb	17 14 07.0	
	comp=Z,3.4nm,1.4s						
ILAR	**Eielson Array**	**87.88**	**25**	P	**P**	**17 15 50.5**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=265,slow=4.1,SNR=5.8						
ILAR	**Eielson Array**	**87.88**	**25**	P	**P**	**17 15 49.0**	**-1.6**

*IDC **17** 17:09:08.5±3.4, 34°.31N×23°.28E, h0^{km}, mb3.6/3, mb1 3.6/6, mb1mx3.4/30, mbtmp3.4/6, ML3.5/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/28, Error ellipse: s-maj=67.5km s-min=37.5km az=16.0*
*ISK **17** 17:09:16.1, 34°.93N×23°.38E, h77^{km}, ML3.7/15*
*ATH **17** 17:09:18.9, 35°.02N×23°.40E, h43^{km}±2^{km}, ML3.3/5, Error ellipse: s-maj=4.1km s-min=1.8km az=42.0*
*THE **17** 17:09:19.5, 34°.99N×23°.36E, h18^{km}±1^{km}, ML3.1/13, Error ellipse: s-maj=1.5km s-min=0.6km az=71.0*

ISC 17 17:09:17.7±1.4, 34°.97N±0°.06×23°.37E±0°.05, h31^{km}±6^{km}, n69, σ1^{s}36/89, mb3.8/3, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.37**	**44**	P	**Pb**	**17 09 26.1**	**-0.1**
KNDR				S	**Sb**	**17 09 31.9**	**-0.2**
	2μm,0.4s						
GVD	**Gavdhos**	**0.60**	**102**	P	**Pn**	**17 09 31.1**	**+1.0**
GVD				S	**Sn**	**17 09 40.6**	**+1.9**
	6μm,0.3s						
GVD	**Gavdhos**	**0.60**	**102**	P	**Pn**	**17 09 31.3**	**+1.2**
GVD				S	**Sn**	**17 09 40.9**	**+2.2**
GVD				AML	AML	17 09 42.2	
	comp=N,8182μm,0.4s						
GVD				AML	AML	17 09 42.9	
	comp=E,15566μm,0.4s						
GVD	**Gavdhos**	**0.60**	**102**	PG	**Pn**	**17 09 31.2**	**+1.2**
GVD				SG	**Sn**	**17 09 41.8**	**+3.1**
GVDS	**Gavdos**	**0.60**	**101**	P	**Pn**	**17 09 30.8**	**+0.7**
GVDS				S	**Sn**	**17 09 40.1**	**+1.3**
	comp=E,4μm,0.4s						
GVDS	**Gavdos**	**0.60**	**101**	PG	**Pn**	**17 09 30.8**	**+0.7**
GVDS				SG	**Sn**	**17 09 41.2**	**+2.4**
RODP	**Rodopos**	**0.67**	**28**	P	**Pn**	**17 09 32.4**	**+1.4**
RODP				S	**Sn**	**17 09 41.9**	**+1.4**
	comp=E,658nm,0.6s						
RODP	**Rodopos**	**0.67**	**28**	PG	**Pn**	**17 09 32.5**	**+1.4**
IMMV	**Iera Moni Meta**	**0.70**	**45**	P	**Pn**	**17 09 32.5**	**+1.0**
IMMV				S	**Sn**	**17 09 42.1**	**+0.9**
	comp=E,3μm,0.5s						
IMMV	**Iera Moni Meta**	**0.70**	**45**	P	**Pn**	**17 09 32.8**	**+1.3**
IMMV				S	**Sn**	**17 09 42.2**	**+1.0**
IMMV				AML	AML	17 09 48.2	
	comp=N,5315μm,0.5s						
IMMV				AML	AML	17 09 50.2	
	comp=E,4608μm,0.6s						
IMMV	**Iera Moni Meta**	**0.70**	**45**	PG	**Pn**	**17 09 32.3**	**+0.8**
CHAN	**Chania**	**0.78**	**45**	P	**Pn**	**17 09 34.0**	**+1.5**
CHAN				S	**Sn**	**17 09 44.8**	**+1.7**
	comp=E,582nm,0.5s						
VAM	**Vamos**	**0.81**	**57**	P	**Pn**	**17 09 34.4**	**+1.4**
VAM				S	**Sn**	**17 09 46.0**	**+2.2**
	comp=E,3μm,0.5s						
VAM	**Vamos**	**0.81**	**57**	P	**Pn**	**17 09 34.3**	**+1.4**
VAM				S	**Sn**	**17 09 46.0**	**+2.2**
VAM				AML	AML	17 09 50.2	
	comp=E,5469μm,0.5s						
VAM				AML	AML	17 09 51.3	
	comp=N,6091μm,0.5s						
PRNS	**Prines Rethymn**	**1.01**	**66**	P	**Pb**	**17 09 36.4**	**-0.2**
TMBK	**Timbaki Herakl**	**1.15**	**84**	P	**Pb**	**17 09 39.8**	**+0.8**
SIVA	**Sivas**	**1.18**	**87**	P	**Pb**	**17 09 39.7**	**+0.2**
SIVA				S	**Sb**	**17 09 56.8**	**+2.3**
	comp=N,2μm,0.6s						
SIVA	**Sivas**	**1.18**	**87**	P	**Pb**	**17 09 39.8**	**+0.3**
SIVA				S	**Sb**	**17 09 54.8**	**+0.3**
SIVA				AML	AML	17 10 08.3	
	comp=N,2754μm,0.5s						
SIVA				AML	AML	17 10 11.4	
	comp=E,3248μm,0.6s						
IDI	**Anoyia**	**1.29**	**75**	P	**Pb**	**17 09 41.3**	**0.0**
IDI				S	**Sb**	**17 09 58.1**	**+0.6**
IDI				AML	AML	17 10 09.5	
	comp=N,549μm,0.5s						
IDI				AML	AML	17 10 10.3	
	comp=E,756μm,0.8s						
IDI	**Anoyia**	**1.29**	**75**	PN	**Pn**	**17 09 39.9**	**+0.4**
KTHA	**Kythira Island**	**1.31**	**349**	P	**Pb**	**17 09 42.0**	**+0.2**
KTHA				S	**Sb**	**17 09 59.1**	**+0.8**
	comp=E,618nm,0.8s						
KTHA	**Kythira Island**	**1.31**	**349**	P	**Pn**	**17 09 41.1**	**+1.3**
KTHA	**Kythira Island**	**1.31**	**349**	PN	**Pn**	**17 09 39.9**	**0.0**
KTHR	**Kythira**	**1.33**	**347**	P	**Pb**	**17 09 42.1**	**+0.1**
KTHR				S	**Sb**	**17 09 58.5**	**-0.1**
	comp=E,350nm,0.6s						
LAST	**Lasithi**	**1.74**	**83**	P	**Pb**	**17 09 48.0**	**-1.1**
LAST	**Lasithi**	**1.74**	**83**	P	**Pb**	**17 09 47.9**	**-1.1**
VLI	**Veliai**	**1.78**	**349**	P	**Pn**	**17 09 47.8**	**+1.5**
VLI				S	**Sn**	**17 10 09.7**	**+1.8**
	comp=E,298nm,0.8s						
VLI	**Veliai**	**1.78**	**349**	P	**Pb**	**17 09 48.9**	**-0.8**
NPS	**Neapolis**	**1.86**	**80**	P	**Pb**	**17 09 49.8**	**-1.2**
NPS	**Neapolis**	**1.86**	**80**	P	**Pb**	**17 09 49.9**	**-1.1**
MHLO	**Agia Marina, M**	**1.91**	**26**	P	**Pn**	**17 09 49.5**	**+1.4**
MHLO				S	**Sb**	**17 10 13.7**	**-1.7**
	comp=E,830nm,0.7s						
MHLO	**Agia Marina, M**	**1.91**	**26**	P	**Pn**	**17 09 49.3**	**+1.2**
MHLA	**Plaka, Milos I**	**1.97**	**25**	P	**Pn**	**17 09 50.7**	**+1.8**
DYR	**Agios Nikonas**	**1.98**	**335**	P	**Pn**	**17 09 51.3**	**+2.2**
DYR				S	**Sn**	**17 10 14.5**	**+1.7**
	comp=E,58nm,1.2s						
THR6	**Thira Island,**	**2.16**	**49**	P	**Pn**	**17 09 53.2**	**+1.8**
THR6	**Thira Island,**	**2.16**	**49**	P	**Pn**	**17 09 52.7**	**+1.3**
THR5	**Thira Island,**	**2.17**	**47**	P	**Pn**	**17 09 52.8**	**+1.2**
THR5	**Thira Island,**	**2.17**	**47**	P	**Pn**	**17 09 52.7**	**+1.2**
SAP3	**Santorini-Thir**	**2.18**	**47**	P	**Pn**	**17 09 52.3**	**+0.6**
THR3	**Thira Island,**	**2.19**	**48**	P	**Pn**	**17 09 53.0**	**+1.1**
SANT	**Santorini**	**2.20**	**50**	PN	**Pn**	**17 09 52.2**	**+0.1**
THT2	**Imerovigli**	**2.22**	**48**	PN	**Pn**	**17 09 52.7**	**+0.3**
ZKR	**Zakros**	**2.34**	**86**	P	**Pn**	**17 09 56.2**	**+2.3**
ZKR	**Zakros**	**2.34**	**86**	PN	**Pn**	**17 09 54.1**	**+0.1**
IOSP	**Ios island**	**2.35**	**41**	P	**Pn**	**17 09 54.6**	**+0.5**
ITM	**Ithomi**	**2.50**	**333**	PN	**Pn**	**17 09 56.8**	**+0.6**
DID	**Didima**	**2.54**	**358**	P	**Pn**	**17 09 58.3**	**+1.6**
APE	**Apeiranthos**	**2.73**	**39**	P	**Pn**	**17 09 59.6**	**+0.2**
APE	**Apeiranthos**	**2.73**	**39**	PN	**Pn**	**17 09 59.4**	**0.0**
AMGA	**Amorgos Island**	**2.77**	**47**	P	**Pn**	**17 10 00.2**	**+0.4**
KARP	**Karpathos**	**3.15**	**78**	P	**Pn**	**17 10 06.3**	**+1.1**
KARP	**Karpathos**	**3.15**	**78**	PN	**Pn**	**17 10 05.4**	**+0.2**
KLV	**Kalavryta, Ach**	**3.23**	**343**	P	**Pn**	**17 10 07.6**	**+1.4**
BODT	**Bodrum**	**3.82**	**56**	PN	**Pn**	**17 10 14.9**	**+0.6**
CHOS	**Chios island**	**4.04**	**31**	PN	**Pn**	**17 10 17.2**	**-0.2**
ARG	**Arkhangelos**	**4.07**	**71**	PN	**Pn**	**17 10 17.8**	**0.0**
AGG	**Agios Georgios**	**4.13**	**349**	PN	**Pn**	**17 10 19.5**	**+0.8**
AOS	**Alonnisos**	**4.22**	**5**	PN	**Pn**	**17 10 20.1**	**+0.3**
YER	**Yerkesik**	**4.53**	**60**	PN	**Pn**	**17 10 24.7**	**+0.6**
TURN	**Turunc**	**4.65**	**64**	PN	**Pn**	**17 10 21.7**	**-4.0**
FETY	**Fethiye**	**4.93**	**69**	PN	**Pn**	**17 10 29.4**	**-0.2**
AKAS	**Kas**	**5.23**	**74**	PN	**Pn**	**17 10 33.2**	**-0.7**
ELL	**Elmali**	**5.60**	**70**	PN	**Pn**	**17 10 38.2**	**-0.7**
BRTR	**Keskin Array B**	**9.45**	**57**	Pn	**Pn**	**17 11 35.6**	**+3.8**
	comp=E,0.1nm,0.3s,baz=242,slow=14,SNR=2.5						
GERES	**GERESS Array B**	**15.61**	**336**	Pn	**P**	**17 12 59.8**	**+0.6**
	comp=E,0.1nm,0.3s,baz=154,slow=16,SNR=3.3						
GERES				LR	LR	17 20 59.0	
	comp=E,36nm,18.9s,baz=156,slow=44						
AKASG	**Malin Array Be**	**16.29**	**13**	Pn	**P**	**17 13 06.1**	**-0.6**
	comp=E,0.6nm,0.3s,baz=206,slow=10.0,SNR=3.6						
MKAR	**Makanchi Array**	**45.10**	**56**	P	**P**	**17 17 29.8**	**-1.1**
	comp=E,0.5nm,0.4s,baz=265,slow=7.8,SNR=11						
SONM	**Songino Array**	**60.74**	**50**	P	**P**	**17 19 25.1**	**-1.2**
	comp=E,0.4nm,0.5s,baz=284,slow=7.1,SNR=4.6						
YKA	**Yellowknife Ar**	**77.17**	**341**	P	**P**	**17 21 07.1**	**-0.9**
	comp=E,0.1nm,0.4s,baz=40,slow=5.9,SNR=3.5						

*JMA **17** 17:12:32.6±0.1, 24°.16N×122°.19E, h54^{km}±2^{km}, M2.9*
*TAP **17** 17:12:33.5, 24°.23N×122°.19E, h54^{km}, ML3.6, C*

ISC 17 17:12:32.0±0.8, 24°.14N±0°.02×122°.25E±0°.02, h20^{km}±9^{km}, n120, σ0^{s}83/226, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.42**	**345**	P	**Pn**	**17 12 43.3**	**+0.4**
	baz=343						
EOS1				S	**Sn**	**17 12 50.9**	**+0.9**
	baz=343						
NANB	**Nanao**	**0.53**	**302**	P	**Pn**	**17 12 44.6**	**+0.2**
	baz=303						
NANB				S	**Sb**	**17 12 51.8**	**+1.9**
	baz=303						
ENA	**Nanau**	**0.54**	**302**	P	**Pn**	**17 12 44.3**	**-0.2**
	baz=303						
ENA				S	**Sb**	**17 12 51.9**	**+1.7**
	baz=303						
TWC	**Suao**	**0.59**	**322**	P	**Pb**	**17 12 44.9**	**+1.2**
	baz=325						
TWC				*e*S	**Sb**	**17 12 52.6**	**+1.0**
	baz=325						
NACB	**Ninganchiao**	**0.59**	**273**	P	**Pn**	**17 12 45.1**	**-0.1**
	baz=265						
NACB				*e*S	**Sn**	**17 12 53.8**	**-0.6**
	baz=265						
TWD	**Chiawan**	**0.60**	**264**	P	**Pn**	**17 12 45.3**	**0.0**
	baz=248						
TWD				S	**Sn**	**17 12 53.8**	**-0.6**
	baz=248						
HWA	**Hwalien**	**0.61**	**255**	*e*P	**Pn**	**17 12 46.0**	**+0.6**
	baz=245						
HWA				*e*S	**Sn**	**17 12 56.2**	**+1.6**
	baz=245						
ENLB	**Shoufeng**	**0.63**	**248**	P	**Pn**	**17 12 45.5**	**-0.3**
	baz=233						
ENLB				*e*S	**Sn**	**17 12 55.5**	**+0.2**
	baz=233						
ETLH	**Xiulin Townshi**	**0.70**	**276**	*i* P	**Pn**	**17 12 46.5**	**-0.3**
	baz=269						
ETLH				S	**Sb**	**17 12 56.3**	**+1.5**
	baz=269						
JYNG	**Yonagunijimaku**	**0.71**	**64**	P	**Pn**	**17 12 47.2**	**+0.4**
JYNG				*e*S	**Sn**	**17 12 57.5**	**+0.3**
YOJ	**Yonaguni jima**	**0.77**	**65**	P	**Pn**	**17 12 48.0**	**+0.4**
YOJ				*e*S	**Sn**	**17 12 58.8**	**+0.2**
ILA	**Ilan**	**0.77**	**324**	S	**Sb**	**17 12 58.2**	**+1.6**
	baz=323						
TWE	**Neicheng**	**0.78**	**318**	P	**Pb**	**17 12 47.7**	**+0.9**
	baz=310						
TWE				*e*S	**Sb**	**17 12 57.6**	**+0.6**
	baz=310						
ENTT	**Nioudou**	**0.79**	**309**	*i* P	**Pb**	**17 12 47.8**	**+0.7**
	baz=306						
ENTT				S	**Sb**	**17 12 58.4**	**+1.0**
	baz=306						
NTC	**Toucheng**	**0.81**	**332**	P	**Pb**	**17 12 48.0**	**+0.7**
	baz=341						
NTC				*e*S	**Sb**	**17 12 58.2**	**+0.5**
	baz=341						
NDT	**Datong Townshi**	**0.81**	**305**	*i* P	**Pb**	**17 12 48.0**	**+0.7**
	baz=297						
NDT				S	**Sb**	**17 12 59.2**	**+1.3**
	baz=297						
ESL	**Shilin**	**0.81**	**246**	P	**Pn**	**17 12 48.2**	**0.0**
	baz=239						
ESL				*e*S	**Sn**	**17 12 59.6**	**-0.1**
	baz=239						
SLBB	**Yuanshan**	**0.82**	**318**	P	**Pb**	**17 12 47.6**	**0.0**
	baz=312						
SLBB				*e*S	**Sb**	**17 12 58.2**	**-0.1**
	baz=312						
NNSH	**Datong**	**0.84**	**290**	*i* P	**Pb**	**17 12 48.3**	**+0.4**
	baz=285						
NNSH				S	**Sb**	**17 12 59.4**	**+0.6**
	baz=285						
NNS	**Nan Shan**	**0.85**	**291**	*i* P	**Pb**	**17 12 48.5**	**+0.4**
	baz=286						
NNS				S	**Sb**	**17 12 59.7**	**+0.5**
	baz=286						
EGFH	**Guangfu**	**0.88**	**238**	*e*P	**Pn**	**17 12 49.6**	**+0.3**
	baz=226						
EGFH				S	**Sn**	**17 13 01.8**	**+0.3**
	baz=226						
TWB1	**Santiao Chiao**	**0.90**	**345**	*e*P	**Pb**	**17 12 48.5**	**-0.3**
	baz=347						
TWB1				S	**Sb**	**17 12 59.1**	**-1.2**
	baz=347						
WHF	**Hehuan Shan**	**0.90**	**270**	P	**Pb**	**17 12 49.6**	**+0.5**
	baz=256						
WHF				S	**Sb**	**17 13 01.6**	**+0.9**
	baz=256						
NWLT	**Wulai**	**0.93**	**313**	P	**Pb**	**17 12 49.8**	**+0.4**
	baz=303						
NWLT				S	**Sb**	**17 13 01.3**	**0.0**
	baz=303						
YHNB	**Yeheng**	**0.95**	**304**	*i* P	**Pb**	**17 12 50.0**	**+0.2**
	baz=301						
YHNB				*e*S	**Sb**	**17 13 02.1**	**+0.1**
	baz=301						
NSK	**Sanguang**	**0.97**	**304**	P	**Pb**	**17 12 50.2**	**+0.1**
	baz=301						
NSK				S	**Sb**	**17 13 02.3**	**-0.2**
	baz=301						
CHGB	**Renai**	**0.98**	**266**	*i* P	**Pn**	**17 12 51.0**	**+0.2**
	baz=252						
CHGB				S	**Sb**	**17 13 03.7**	**+0.7**
	baz=252						
TWT	**Tachien**	**0.98**	**277**	*i* P	**Pn**	**17 12 51.5**	**+0.7**
	baz=272						
TWT				*e*S	**Sn**	**17 13 04.4**	**+0.2**
	baz=272						
HGSD	**Ruisui**	**0.99**	**229**	*e*P	**Pn**	**17 12 50.9**	**+0.2**
	baz=220						
HGSD				S	**Sn**	**17 13 04.9**	**+0.8**
	baz=220						
OWD	**Renai**	**0.99**	**259**	P	**Pn**	**17 12 51.1**	**+0.2**
	baz=254						
OWD				S	**Sn**	**17 13 04.0**	**-0.5**
	baz=254						
TDCB	**Techi**	**1.00**	**277**	*i* P	**Pn**	**17 12 51.3**	**+0.4**
	baz=272						
TDCB				S	**Sb**	**17 13 03.4**	**0.0**
	baz=272						
NWF	**Wu-fen Shan**	**1.02**	**336**	*e*P	**Pb**	**17 12 51.4**	**+0.4**
	baz=346						
NWF				S	**Sb**	**17 13 03.0**	**-1.0**
	baz=346						
WFSB	**Wu-fen Shan**	**1.02**	**336**	*e*P	**Pb**	**17 12 50.6**	**-0.3**
	baz=346						
WFSB				*e*S	**Sb**	**17 13 03.1**	**-0.7**
	baz=346						
NHDH	**Xindian Distri**	**1.05**	**321**	*i* P	**Pn**	**17 12 51.6**	**+0.1**
	baz=330						
NHDH				S	**Sb**	**17 13 05.2**	**+0.5**
	baz=330						
EHY	**Hungye**	**1.05**	**233**	P	**Pb**	**17 12 51.4**	**-0.2**
	baz=228						
EHY				*e*S	**Sn**	**17 13 05.4**	**-0.4**
	baz=228						
TATO	**Taipei**	**1.08**	**320**	P	**Pn**	**17 12 52.1**	**+0.1**
	baz=319						
TATO				S	**Sb**	**17 13 05.8**	**+0.2**
	baz=319						
VWDT	**VWDT**	**1.08**	**249**	*e*P	**Pb**	**17 12 52.5**	**+0.6**
	baz=237						
VWDT				S	**Sn**	**17 13 06.8**	**+0.4**
	baz=237						
TAP	**Taipei**	**1.12**	**323**	P	**Pn**	**17 12 52.4**	**-0.1**
	baz=322						
TAP				S	**Sb**	**17 13 06.1**	**-0.7**
	baz=322						
YULB	**Yu-li**	**1.14**	**230**	P	**Pb**	**17 12 53.0**	**-0.1**
	baz=235						
YULB				S	**Sb**	**17 13 07.3**	**-0.1**
	baz=235						
WLTB	**Daxi**	**1.15**	**308**	*i* P	**Pn**	**17 12 53.2**	**+0.3**
	baz=298						
WLTB				S	**Sb**	**17 13 08.0**	**+0.4**
	baz=298						
TWF1	**Yuli**	**1.17**	**228**	P	**Pb**	**17 12 53.3**	**-0.2**
	baz=235						
TWF1				*e*S	**Sn**	**17 13 08.3**	**-0.3**
	baz=235						
YM01	**YM01**	**1.17**	**329**	P	**Pn**	**17 12 52.9**	**-0.4**
	baz=339						
YM01				S	**Sb**	**17 13 06.1**	**-2.3**
	baz=339						
YM10	**YM10**	**1.19**	**329**	P	**Pn**	**17 12 52.6**	**-0.8**
	baz=338						
YM10				S	**Sb**	**17 13 07.0**	**-1.7**
	baz=338						
YM11	**YM11**	**1.19**	**329**	P	**Pn**	**17 12 52.2**	**-1.3**
	baz=339						
YM11				S	**Sb**	**17 13 07.6**	**-1.3**
	baz=339						
YM05	**YM05**	**1.19**	**329**	*e*P	**Pn

TWY S Sn 17 13 10.0 -1.1
baz=343
FULB Fuli 1.28 223 eP Pn 17 12 54.5 -0.3
baz=210
FULB S Sb 17 13 11.4 -0.1
baz=210
TYC Yuchr 1.29 260 P Pb 17 12 55.6 0.0
baz=250
TYC eS Sn 17 13 10.8 -0.7
baz=250
CHKT Chengkung 1.31 218 P Pn 17 12 54.8 -0.4
baz=206
CHKT eS Sn 17 13 10.7 -1.4
baz=206
SBCB Hsinchu 1.32 300 eP Pn 17 12 55.8 +0.6
baz=309
SBCB eS Sn 17 13 11.1 -1.1
baz=309
HSN Hsinchu 1.34 300 eS Sn 17 13 11.1 -1.5
baz=299
WHYT Xinyi Township 1.35 251 P Pb 17 12 57.3 +0.7
baz=247
WHYT eS Sb 17 13 13.5 +0.1
baz=247
YUS Yu-Shan 1.35 242 P Pb 17 12 57.1 +0.3
baz=238
YUS eS Sn 17 13 13.4 -0.3
baz=238
TWQ1 Liyutan 1.36 279 P Pn 17 12 56.1 +0.3
baz=276
TWQ1 S Sn 17 13 13.2 -0.1
baz=276
IRIF Iriomote-Funau 1.37 82 P Pn 17 12 56.2 +0.3
IRIF eS Sn 17 13 13.1 -0.4
NSY Sanyi 1.38 282 eP Pn 17 12 56.2 +0.1
baz=278
NSY eS Sn 17 13 12.9 -0.9
baz=278
NMLH Miaoli 1.38 287 P Pn 17 12 56.8 +0.7
baz=284
NMLH eS Sn 17 13 12.9 -0.9
baz=284
WJS Zhushan 1.42 257 eP Pb 17 12 57.4 -0.5
baz=250
WJS eS Sb 17 13 17.5 +2.0
baz=250
HATJ Hateruma jima 1.43 93 P Pb 17 12 57.9 0.0
HATJ eS Sb 17 13 15.9 +0.3
TCU Taichung 1.43 271 P Pb 17 12 58.1 +0.1
baz=267
TCU S Sb 17 13 16.8 +1.0
baz=267
PTSB Yuanli 1.44 283 eS Sb 17 13 16.8 +0.9
baz=279
WNT Mingjian 1.45 260 P Pb 17 12 59.1 +0.8
baz=256
WNT S Sb 17 13 17.5 +1.2
baz=256
ALS Alishan 1.46 245 eP Pb 17 12 58.1 -0.5
baz=234
ALS eS Sn 17 13 15.7 -0.4
baz=234
ELDTW Lidau 1.47 230 P Pn 17 12 57.1 -0.3
baz=227
ELDTW eS Sn 17 13 15.8 -0.3
baz=227
WDJ Dajia District 1.48 278 P Pn 17 12 58.1 +0.7
baz=275
WDJ eS Sn 17 13 16.7 +0.5
baz=275
CHN5 Tsauling 1.53 250 eP Pn 17 12 58.9 +0.7
baz=237
CHN5 eS Sb 17 13 19.8 +1.0
baz=237
WCHH Zhanghua 1.54 268 P Pn 17 12 58.9 +0.6
baz=265
WCHH S Sb 17 13 19.3 +0.4
baz=265
TWH Lutao 1.59 206 eP Pb 17 12 59.8 -0.9
baz=204
TWH S Sn 17 13 18.4 -0.5
baz=204
WGK Gukeng 1.60 254 eP Pb 17 13 01.0 +0.1
baz=240
WGK S Sb 17 13 21.0 +0.3
baz=240
JKRS Kuro-shima 1.61 86 P Pn 17 13 00.3 +1.0
JKRS eS Sn 17 13 20.0 +0.5
WDLH Douliu 1.62 254 eP Pb 17 13 00.5 -0.8
baz=241
WDLH S Sb 17 13 22.1 +0.8
baz=241
TWGBT Beinan 1.70 219 eP Pn 17 13 00.3 -0.1
baz=225
TWGBT eS Sn 17 13 21.2 -0.4
baz=225
TWG Pinlang 1.70 220 P Pn 17 13 00.8 +0.3
baz=225
TWG eS Sn 17 13 21.0 -0.6
baz=225
TPUB Ta-pu 1.70 241 eP Pb 17 13 01.7 -0.8
baz=238
TPUB eS Sn 17 13 22.1 +0.4
baz=238
CHN4 Tsaushan 1.71 243 P Pb 17 13 02.7 +0.1
baz=232
CHN4 S Sb 17 13 24.2 +0.6
baz=232
TTN Taitung 1.71 216 S Sn 17 13 21.7 -0.1
baz=207
WTP Ta-pu 1.74 240 eP Pb 17 13 02.2 -1.0
baz=237
WTP eS Sb 17 13 24.2 -0.5
baz=237
RLNB Erlin 1.74 262 P Pb 17 13 02.3 -0.9
baz=259
RLNB eS Sn 17 13 22.7 +0.1
baz=259
JIJ Ishigaki jima 1.75 82 P Pn 17 13 01.1 0.0
JIJ eS Sn 17 13 21.6 -1.2
CHY Chiayi 1.79 249 P Pb 17 13 03.4 -0.6
baz=247
CHY S Sb 17 13 25.6 -0.3
baz=247
WTCT Ta-ch'eng 1.82 262 eS Sb 17 13 25.8 -1.1
baz=259
TWK Hsinying 1.83 242 P Pb 17 13 04.0 -0.8
baz=239
TWK S Sb 17 13 27.6 +0.3
baz=239
CHN1 Nanshi 1.84 239 eP Pb 17 13 03.7 -1.2
baz=237
CHN1 eS Sb 17 13 27.0 -0.5
baz=237
SNST Tainan City 1.85 241 eP Pb 17 13 04.8 -0.2
baz=238
SNST eS Sb 17 13 26.6 -1.1
baz=238
SGST Jiashian 1.85 236 P Pb 17 13 04.8 -0.4
baz=233
SGST S Sb 17 13 27.0 -0.9
baz=233
SLGT Liugui 1.86 232 eP Pb 17 13 04.5 -0.7
baz=239
SLGT S Sb 17 13 27.9 -0.2
baz=239
WLGB Puzi 1.90 250 eS Sb 17 13 28.7 -0.5
baz=236
WSF Szhu 1.92 255 P Pn 17 13 04.2 +0.8
baz=264
WSF eS Sn 17 13 28.3 +1.3
baz=264
JISG Ishigakijimahi 1.94 76 P Pn 17 13 03.6 -0.1
JISG eS Sn 17 13 26.5 -0.9
ECL Taimali 1.94 218 eS Sn 17 13 26.5 -1.1
baz=216
CHN3 Shinhua 2.02 239 eS Sb 17 13 32.8 0.0
baz=237
CHN8 Yiju 2.02 247 eP Pn 17 13 05.9 +1.0
baz=235
CHN8 S Sb 17 13 31.8 -1.0
baz=235
SSD Sandimen 2.03 227 P Pb 17 13 07.9 -0.3
baz=225
SSD S Sb 17 13 32.3 -0.7
baz=225
MASBT Mashibuluo 2.12 225 eP Pb 17 13 08.6 -1.2
baz=223
MASBT eS Sb 17 13 33.9 -1.8
baz=223
EAST Anshuo 2.17 217 eS Sn 17 13 32.6 -0.7
baz=208
LAY Lan-yu 2.19 197 eS Sn 17 13 32.9 -0.8
baz=196
JTJ Tarama 2.29 77 P Pn 17 13 09.2 +0.6
JTJ eS Sn 17 13 35.5 -0.8
JIRB Irabujima 2.75 75 P Pn 17 13 15.6 +0.6
JIRB eS Sn 17 13 47.4 -0.3
JIKM Ikemajima 2.84 73 P Pn 17 13 16.9 +0.7
JIKM S Sn 17 13 50.2 +0.3
JMJ Miyako jima 2 2.86 76 eP Pn 17 13 18.6 +2.2
baz=77
JMJ eS Sn 17 13 50.9 +0.7
baz=77
JMJ2 Miyako jima3 2.87 77 P Pn 17 13 17.7 +1.1
JMJ2 eS Sn 17 13 50.7 +0.1
JOGS Gusukube 2.95 77 P Pn 17 13 18.8 +1.2
JOGS eS Sn 17 13 52.6 +0.2
PTMZ Houxiangcun 2.98 288 eP Pn 17 13 18.1 0.0
baz=286
LYJJ Jianjiangzhen 3.29 317 eP Pn 17 13 22.7 +0.4
baz=315
LYJJ eS Sn 17 13 59.3 -1.5
baz=315
XPSS Dashiqiu 3.34 327 eP Pn 17 13 21.6 -1.4
baz=335
KNM Kinmen 3.49 275 eP Pn 17 13 28.1 +3.1
baz=264
KNM eS Sn 17 14 07.3 +1.5
baz=264
MHZQ Yeshan 3.51 304 eP Pn 17 13 23.7 -1.6
baz=302
KNMB Chin-men Tao 3.53 276 eP Pn 17 13 24.8 -0.9
baz=265
KNMB eS Sn 17 14 05.5 -1.4
baz=265
AXDP Jialang 3.97 282 eP Pn 17 13 32.5 +0.8
baz=280

UCR ***17*** *17:20:23.5±0.7, 13°.06N×89°.03W, h61km±12km, ML3.5*
SNET ***17*** *17:20:23.3±0.7, 13°.06N×89°.03W, h62km±12km, ML3.5*
ISC 17 17:20:23.6±2.5, 13°.0N±0°.3×89°.04W±0°.09, h54km±45km, n25, σ0°40/37, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.57**	**53**	eS		**Sn**	**17 20 45.5**	**+0.6**
LFRS	**El Faro**	**0.64**	**358**	eP		**Pn**	**17 20 36.1**	**-0.8**
COEB	**Comit de Eme**	**0.71**	**44**	eP		**Pn**	**17 20 37.6**	**-0.3**
COEB				eS		**Sn**	**17 20 48.5**	**+0.2**
COEB				IAML			17 20 52.6	
	comp=Z,2μm,0.2s							
TECA	**Tecapa**	**0.73**	**46**	*i* P		**Pn**	**17 20 38.0**	**-0.1**
TECA	**Tecapa**	**0.73**	**46**	*i* P		**Pn**	**17 20 38.0**	**-0.1**
PAVA	**Las Pavas**	**0.73**	**8**	eP		**Pn**	**17 20 37.6**	**-0.6**
PAVA				eS		**Sn**	**17 20 49.2**	**+0.5**
PAVA	**Las Pavas**	**0.73**	**8**	eP		**Pn**	**17 20 37.6**	**-0.6**
PAVA				eS		**Sn**	**17 20 49.2**	**+0.5**
LBRS	**Las Brisas**	**0.75**	**360**	eP		**Pn**	**17 20 37.9**	**-0.5**
CUSC	**Alcaldia de Cu**	**0.75**	**349**	eS		**Sn**	**17 20 49.2**	**+0.2**
CUSC	**Alcaldia de Cu**	**0.75**	**349**	eS		**Sn**	**17 20 49.2**	**+0.2**
LFU	**La Fuente**	**0.77**	**354**	eP		**Pn**	**17 20 38.1**	**-0.4**
LFU	**La Fuente**	**0.77**	**354**	eP		**Pn**	**17 20 38.1**	**-0.4**
BOQS	**Boqueron**	**0.79**	**343**	eP		**Pn**	**17 20 38.5**	**-0.4**
BOQS				eS		**Sn**	**17 20 50.1**	**+0.1**
LCY	**Lacayo**	**0.85**	**59**	eP		**Pn**	**17 20 39.2**	**-0.4**
LCY	**Lacayo**	**0.85**	**59**	eP		**Pn**	**17 20 39.2**	**-0.4**
PACA	**Pacayal**	**0.85**	**55**	eP		**Pn**	**17 20 39.5**	**-0.1**
PACA				eS		**Sn**	**17 20 52.0**	**+0.7**
PACA	**Pacayal**	**0.85**	**55**	eP		**Pn**	**17 20 39.5**	**-0.1**
PACA				eS		**Sn**	**17 20 52.0**	**+0.7**
BLLM	**Bellamira**	**0.90**	**59**	eP		**Pn**	**17 20 40.0**	**-0.3**
BLLM				eS		**Sn**	**17 20 52.7**	**+0.2**
BLLM	**Bellamira**	**0.90**	**59**	eP		**Pn**	**17 20 40.0**	**-0.3**
BLLM				eS		**Sn**	**17 20 52.7**	**+0.2**
CEVE	**Cerro Verde**	**1.02**	**326**	eP		**Pn**	**17 20 41.9**	**-0.1**
CEVE				eS		**Sn**	**17 20 55.9**	**+0.4**
CEVE				IAML			17 21 01.6	
	comp=Z,1μm,0.3s							
CEVE	**Cerro Verde**	**1.02**	**326**	eP		**Pn**	**17 20 41.9**	**-0.1**
CEVE				eS		**Sn**	**17 20 55.9**	**+0.4**
CEVE				IAML			17 21 01.6	
	comp=Z,1μm,0.3s							
SNJE	**San Jose**	**1.04**	**328**	eP		**Pn**	**17 20 42.1**	**-0.1**
SNJE	**San Jose**	**1.04**	**328**	eP		**Pn**	**17 20 42.1**	**-0.1**
LCND	**La Caada**	**1.17**	**74**	eP		**Pn**	**17 20 43.6**	**0.0**
LCND				eS		**Sn**	**17 20 58.4**	**-0.2**
LCND				IAML			17 21 03.4	
	comp=Z,602nm,0.2s							
LCND	**La Caada**	**1.17**	**74**	eP		**Pn**	**17 20 43.6**	**0.0**
LCND				eS		**Sn**	**17 20 58.4**	**-0.2**
LCND				IAML			17 21 03.4	
	comp=Z,602nm,0.2s							

SJA 17 17:21:47.3±0.4, 39°.64S×73°.52W, h35km±79km, ML4.5,
Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ROC1	**El Roble**	**6.95**	**18**	*i* P		Pn	17 23 30.6	+3.8
ROC1				*i* S		Sn	17 24 51.2	+6.4
ASAL	**Salagasta**	**7.99**	**30**	*i* P		Pn	17 23 43.4	+2.4
CFA	**Coronel Fontan**	**9.09**	**30**	*i* P		Pn	17 23 55.7	-0.3
CFA				*i* S		Sn	17 25 36.6	-0.6
RTLL	**Cerro Villicun**	**9.25**	**28**	*i* P		Pn	17 23 58.1	-0.1
RTLL				IAML			17 23 58.8	
	comp=Z,13nm,0.3s							
RTLL				*i* S		Sn	17 25 42.3	+1.1
AMOG	**MOGNA**	**9.60**	**27**	*e*P		Pn	17 24 03.2	+0.2
ACCO	**Cerro Coronel**	**9.74**	**23**	*i* P		Pn	17 24 05.0	-0.1
APLL	**PUNTA DE LOS L**	**10.85**	**34**	*e*P		Pn	17 24 16.2	-4.0
APLL				IAML			17 24 17.5	
	comp=Z,8.0nm,0.2s							
AGUA	**GUANDACOL**	**10.94**	**24**	*i* P		Pn	17 24 21.4	0.0
ACLC	**CERRO LA CRUZ**	**11.53**	**30**	*i* P		Pn	17 24 26.4	-3.2

IDC ***17*** *17:30:23.7±1.1, 30°.13S×177°.44W, h0km, mb4.3/5,*
mb1 4.4/5, mb1mx4.0/32, mbtmp4.3/5, MS3.1/3, Ms1 3.1/3,
ms1mx2.8/24, Error ellipse: s-maj=32.2km s-min=17.2km
az=70.0
NEIC ***17*** *17:30:25.7±3.0, 30°.24S±0°.04×177°.7W±0°.1, h18km±5km,*
mb4.7/14, Error ellipse: s-maj=13.5km s-min=5.2km
az=79.0
ISC 17 17:30:24.3±1.1, 30°.27S±0°.05×177°.5W±0°.2, h10km, n48,
σ1§70/45, mb4.5/8, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.07**	**342**		Pn	**Pn**	**17 30 45.9**	**+0.5**
	304nm,0.3s,baz=162,slow=18,SNR=18							
RAO					Sn	**Sg**	**17 30 57.9**	**-0.9**
	488nm,0.3s,baz=80,slow=22,SNR=13							
RAO	**Raoul Island**	**1.07**	**342**			**Pn**	**17 30 46.5**	**+1.0**
RAO	**Raoul Island**	**1.07**	**342**			**Sb**	**17 30 58.5**	**-0.5**
MXZ	**Matakaoa Point**	**8.05**	**204**	Pn		**Pn**	**17 32 20.7**	**-0.6**
OUZ	**Omahuta**	**8.95**	**234**	Pn		**Pn**	**17 32 35.6**	**+1.9**
URZ	**Urewera**	**9.11**	**208**	Pn		**Pn**	**17 32 33.7**	**-2.2**
	0.4nm,0.3s,baz=90,slow=20,SNR=7.9							
URZ					Sn	**Sn**	**17 34 16.8**	**-1.7**
	1.7nm,0.3s,baz=49,slow=19,SNR=9.9							
URZ					LR	LR	17 35 34.1	
	comp=Z,97nm,18.3s,baz=338,slow=34							
URZ	**Urewera**	**9.11**	**208**			**Pn**	**17 32 35.2**	**-0.7**
BKZ	**Black Stump Fm**	**10.14**	**207**	Pn		**Pn**	**17 32 48.4**	**-1.6**
PLWZ	**Palliser**	**12.69**	**205**	Pn		**Pn**	**17 33 24.8**	**0.0**
TUWZ	**Tuamarina**	**13.09**	**209**	Pn		**Pn**	**17 33 29.0**	**-1.3**
MSVF	**Nonsavu**	**13.12**	**341**	Pn		**Pn**	**17 33 28.6**	**-2.3**
NNZ	**Nelson**	**13.17**	**212**	Pn		**Pn**	**17 33 29.9**	**-1.4**
CMWZ	**Cape Campbell**	**13.25**	**208**	Pn		**Pn**	**17 33 30.7**	**-1.7**
QRZ	**Quartz Range**	**13.27**	**215**	Pn		**Pn**	**17 33 34.1**	**+1.4**
BSWZ	**Blackbirch Sta**	**13.36**	**209**	Pn		**Pn**	**17 33 32.5**	**-1.4**
THZ	**Tophouse**	**13.82**	**211**	Pn		**Pn**	**17 33 40.0**	**-0.3**
KHZ	**Kahutara**	**14.08**	**208**	Pn		**Pn**	**17 33 40.2**	**-3.5**
LTZ	**Lake Taylor**	**14.92**	**210**	Pn		**Pn**	**17 33 51.9**	**-3.4**
OXZ	**Oxford**	**15.46**	**210**	Pn		**Pn**	**17 33 59.0**	**-3.3**
RPZ	**Rata Peaks**	**16.20**	**211**	Pn		**Pn**	**17 34 09.6**	**-2.3**
	0.3nm,0.3s,baz=358,slow=2.1,SNR=2.0							
RPZ	**Rata Peaks**	**16.20**	**211**			**Pn**	**17 34 11.7**	**-0.3**
RPZ					IAmb	IAmb	17 34 37.0	
	comp=Z,112nm,1.7s							
DZM	**Mont Dzumac**	**16.53**	**296**		LR	LR	17 39 45.0	
	comp=Z,128nm,18.8s,baz=195,slow=34							
FOZ	**Fox Glacier**	**16.63**	**214**		Pn	**Pn**	**17 34 16.5**	**-1.0**
LBZ	**Lake Benmore**	**17.11**	**211**		Pn	**Pn**	**17 34 23.1**	**-0.5**
LBZ					IAmb	IAmb	17 34 35.0	
	comp=Z,96nm,1.5s							
WKZ	**Wanaka**	**17.98**	**212**		Pn	**Pn**	**17 34 31.6**	**-2.8**
MLZ	**Mavora Lakes**	**18.81**	**213**		P	**P**	**17 34 41.9**	**-2.1**
MLZ					IAmb	IAmb	17 34 55.4	
	comp=Z,109nm,1.6s							
WHZ	**Wether Hill Ro**	**19.28**	**212**		P	**P**	**17 34 47.8**	**-1.3**
PPT	**Papeete**	**28.43**	**70**		LR	LR	17 46 51.9	
	comp=Z,19nm,18.2s,baz=32,slow=35							
CTA	**Charters Tower**	**34.18**	**279**		P	**P**	**17 37 10.6**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=105,slow=14,SNR=3.0							
STKA	**Stephens Creek**	**34.90**	**257**		P	**P**	**17 37 19.3**	**+3.1**
	comp=Z,1.6nm,0.4s,baz=106,slow=15,SNR=5.9							
STKA	**Stephens Creek**	**34.90**	**257**		P	**P**	**17 37 17.7**	**+1.6**
BBOO	**Buckleboo**	**39.39**	**254**		P	**P**	**17 37 56.7**	**+2.4**
BBOO					IAmb	IAmb	17 38 21.7	
	comp=Z,40nm,1.4s							
AS31	**Alice Springs**	**43.52**	**267**		P	**P**	**17 38 29.7**	**+1.3**
ASAR	**Alice Springs**	**43.52**	**267**		P	**P**	**17 38 29.9**	**+1.6**
	comp=Z,0.9nm,0.3s,baz=105,slow=7.3,SNR=18							
ASAR	**Alice Springs**	**43.52**	**267**		P	**P**	**17 38 27.9**	**-0.5**
WR0	**Warramunga Arr**	**44.32**	**272**			P	17 38 25.2	-10
WR0					IAmb	IAmb	17 38 40.2	
	comp=Z,6.7nm,0.9s							
WRAB	**Tennant Creek**	**44.49**	**272**			P	17 38 23.8	-12
WRAB					IAmb	IAmb	17 38 29.4	
	comp=Z,7.0nm,0.7s							
WRA	**Warramunga Arr**	**44.50**	**272**		P	**P**	**17 38 36.8**	**+0.6**
	comp=Z,3.4nm,0.3s,baz=110,slow=8.1,SNR=5.8							
WRA	**Warramunga Arr**	**44.50**	**272**			P	17 38 24.8	-11
QSPA	**South Pole Qui**	**59.84**	**180**		P	**P**	**17 40 32.2**	**+2.4**
	comp=Z,1.5nm,0.6s,baz=17,slow=0.6,SNR=13							
QSPA	**South Pole Qui**	**59.84**	**180**		P	**P**	**17 40 30.7**	**+0.9**
QSPA					IAmb	IAmb	17 40 56.6	
	comp=Z,5.0nm,1.2s							
FINES	**FINESS Array B**	**145.16**	**340**		PKPbc	**PKPbc**	**17 50 01.2**	**+0.3**
	comp=Z,3.5nm,0.5s,baz=48,slow=3.9,SNR=27							
FINES	**FINESS Array B**	**145.16**	**340**			**PKPbc**	**17 50 00.8**	**-0.2**
KBZ	**Khabaz**	**145.38**	**304**		PKPbc	**PKPbc**	**17 50 02.4**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=90,slow=12,SNR=3.7							
AKASG	**Malin Array Be**	**151.44**	**323**		PKPbc	**PKPbc**	**17 50 18.4**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=48,slow=3.6,SNR=5.4							
BRTR	**Keskin Array B**	**152.89**	**299**		PKPbc	**PKPbc**	**17 50 22.2**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=132,slow=3.6,SNR=5.0							
BRTR	**Keskin Array B**	**152.89**	**299**			**PKPbc**	**17 50 20.5**	**-1.5**
TORD	**Torodi Ar. Bea**	**162.94**	**177**		PKPab	**PKPab**	**17 51 17.3**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=236,slow=1.6,SNR=2.4							

IDC 17 17:33:15.8±2.0, 8°.34S×129°.81E, h0km, mb3.4/1,
mb1 3.7/4, mb1mx3.4/32, mbtmp3.5/4, ML3.4/3, Error
ellipse: s-maj=70.7km s-min=27.9km az=77.0, Timor
Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.52**	**202**		Pn	Pn	17 35 48.6	+0.7
	0.2nm,0.3s,baz=26,slow=13,SNR=3.3							
FITZ					Sn	Sn	17 37 37.8	-8.8
	0.1nm,0.3s,baz=60,slow=20,SNR=2.2							
WRA	**Warramunga Arr**	**12.34**	**160**		Pn	Pn	17 36 12.1	-0.9
	0.3nm,0.3s,baz=338,slow=14,SNR=13							
WRA					Sn	Sn	17 38 21.4	-10
	0.2nm,0.3s,baz=336,slow=23,SNR=4.7							
ASAR	**Alice Springs**	**15.74**	**166**		Pn	Pn	17 36 59.5	+0.4
	0.1nm,0.3s,baz=339,slow=9.6,SNR=15							
ASAR					Sn	Sn	17 39 43.5	-11
	0.0nm,0.3s,baz=348,slow=26,SNR=2.7							
MKAR	**Makanchi Array**	**69.24**	**327**		P	P	17 44 24.7	0.0
	0.2nm,0.5s,baz=115,slow=6.8,SNR=3.6							

INET ***17*** *17:41:44.5, 11°.29N×87°.88W, h15km, ML3.0*
SNET ***17*** *17:41:48.9±0.7, 11°.53N×87°.99W, h34km±102km, ML3.5*
UCR 17 17:41:48.9±0.7, 11°.53N×87°.96W, h33km±999km, ML3.4,
Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.74**	**4**	eP		Pn	17 42 17.0	0.0
CNCH				eS		Sn	17 42 39.4	+1.4
CNCH	**Conchagua**	**1.74**	**4**	eP		Pn	17 42 17.0	0.0
CNCH				eS		Sn	17 42 39.4	+1.4
LCND	**La Caada**	**1.77**	**2**	eP		Pn	17 42 17.5	+0.2
LCND				eS		Sn	17 42 38.9	+0.3
LCND				IAML			17 42 48.2	
	comp=Z,262nm,0.4s							
LCND	**La Caada**	**1.77**	**2**	eP		Pn	17 42 17.5	+0.2
LCND				eS		Sn	17 42 38.9	+0.3
LCND				IAML			17 42 48.2	
	comp=Z,262nm,0.4s							
PACA	**Pacayal**	**1.96**	**350**	eP		Pn	17 42 20.4	+0.4
PACA				eS		Sn	17 42 44.7	+1.2
PACA				IAML			17 42 52.6	
	comp=Z,586nm,0.1s							
PACA	**Pacayal**	**1.96**	**350**	eP		Pn	17 42 20.4	+0.4
PACA				eS		Sn	17 42 44.7	+1.2
PACA				IAML			17 42 52.6	
	comp=Z,586nm,0.1s							
TECA	**Tecapa**	**2.02**	**345**	eP		Pn	17 42 20.9	0.0
TECA	**Tecapa**	**2.02**	**345**	eP		Pn	17 42 20.9	0.0
SBLS	**San Blas**	**2.81**	**325**	eP		Pn	17 42 32.2	+0.4
SBLS	**San Blas**	**2.81**	**325**	eP		Pn	17 42 32.2	+0.4

TEH ***17*** *17:58:17.3, 35°.46N×46°.17E, h6km, ML2.5*
ISN ***17*** *17:58:17.2±0.7, 35°.45N×46°.17E, h15km±5km, ML2.6*
ISC 17 17:58:17.3±1.2, 35°.47N±0°.07×46°.19E±0°.06, h10km, n11,
σ1§04/13, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.78**	**168**	eP	g	**Pg**	**17 58 31.7**	**-0.7**
IDHR				*e*			17 58 46.8	
ILIN	**Lien**	**0.83**	**131**	eP	g	**Pg**	**17 58 32.7**	**-0.7**
ILIN				*e*			17 58 35.0	
IVIS	**Veis**	**1.08**	**150**	eP	g	**Pg**	**17 58 36.5**	**-1.6**
IVIS				*e*			17 58 56.0	
IGHG	**Ghaleghazi**	**1.18**	**165**	eP	g	**Pn**	**17 58 40.1**	**+0.1**
IGHG				*e*			17 58 43.1	
MAHB	**Mahabad**	**1.36**	**343**	eP	g	**Pn**	**17 58 41.7**	**-0.7**
MAHB				*e*			17 59 05.8	
KCHF	**Cheshme Sefid,**	**1.38**	**149**	eP	n	**Pg**	**17 58 45.3**	**+1.6**
KCHF				*e*			17 59 09.2	
IKRK	**Kirkuk**	**1.51**	**268**	eP	g	**Pn**	**17 58 44.3**	**-0.2**
	baz=88							
IKRK					AML	AML	17 58 44.9	
	comp=Z,147nm,0.4s							
IKRK				eS	g	**Sg**	**17 59 05.0**	**-1.0**
IKOM	**Komasi**	**1.68**	**140**	eP	n	**Pg**	**17 58 50.2**	**+0.6**
IKOM				*e*			17 58 50.9	
IBZA	**Bozab**	**1.69**	**125**	eP	n	**Pg**	**17 58 50.4**	**+0.6**
IBZA				*e*			17 58 51.8	
IDOB	**Doab**	**2.34**	**135**	eP	n	**Pg**	**17 59 01.7**	**-0.5**
MSL	**Mosul**	**2.67**	**291**	eP	n	**Pn**	**17 59 01.2**	**+0.9**
MSL				AML		AML	17 59 02.4	
	comp=Z,57nm,0.2s							
MSL				eSn		**Sn**	**17 59 34.0**	**+1.2**

NEIC ***17*** *18:16:56.5±2.0, 32°.20N±0°.02×115°.32W±0°.02, h6km±3km,*
Error ellipse: s-maj=3.0km s-min=2.7km az=50.0
PAS ***17*** *18:16:57.5±2.4, 32°.25N±0°.02×115°.33W±0°.03, h8km±1km,*
Error ellipse: s-maj=3.3km s-min=2.7km az=75.0
ECX ***17*** *18:16:58.3±0.6, 32°.26N×115°.33W, h5km, MD2.6, ML2.8*
ISC 17 18:16:56.3±1.1, 32°.24N±0°.02×115°.34W±0°.02, h4km±10km,
n65, σ1§01/82, 8C-1D, California-Baja California border
region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.18**	**9**	eP		**Pg**	**18 17 00.7**	**+0.8**
CPBX				eS		**Sg**	**18 17 03.0**	**+0.5**
CPBX				IAML			18 17 07.3	
	comp=E,7μm,0.1s							
CPBX				*e*			18 17 07.3	
CPBX	**Cerro Prieto**	**0.18**	**9**			**Pg**	**18 17 00.8**	**+0.8**
POT2	**Potabilizadora**	**0.39**	**354**	eP		**Pb**	**18 17 05.2**	**-0.7**

UABX	**UABC, Campus M**	**0.40**	**348**	*eP*		**Pb**	**18 17 05.3**	**-0.7**
UABX	**UABC, Campus M**	**0.40**	**348**			**Pb**	**18 17 05.5**	**-0.5**
UABX						**Sb**	**18 17 12.1**	**-0.4**
SGL	**Mount Signal**	**0.53**	**322**	⇑*iP*		**Pb**	**18 17 07.2**	**-0.9**
SGL	**Mount Signal**	**0.53**	**322**			**Pb**	**18 17 07.2**	**-0.9**
ESJX	**Sierra Juarez**	**0.57**	**246**	⇑*eP*		**Pb**	**18 17 09.1**	**+0.2**
ESJX				*eS*		**Sb**	**18 17 17.1**	**-0.3**
ESJX	**Sierra Juarez**	**0.57**	**246**			**Pb**	**18 17 09.1**	**+0.2**
ERPC	**Ernies Place**	**0.57**	**332**	⇑*iP*		**Pb**	**18 17 08.8**	**-0.2**
ERPC	**Ernies Place**	**0.57**	**332**			**Pb**	**18 17 08.8**	**-0.2**
WESC	**Westside Schoo**	**0.62**	**328**	*eP*		**Pb**	**18 17 09.2**	**-0.5**
WESC	**Westside Schoo**	**0.62**	**328**			**Pb**	**18 17 09.3**	**-0.4**
WESC						**Sb**	**18 17 18.3**	**-0.4**
SNR	**Schaffner Ranc**	**0.63**	**352**			**Pb**	**18 17 09.5**	**-0.4**
SNR						**Sb**	**18 17 18.9**	**-0.2**
YUH	**Yuha Desert**	**0.64**	**310**	⇑*iP*		**Pb**	**18 17 09.2**	**-0.9**
YUH	**Yuha Desert**	**0.64**	**310**			**Pb**	**18 17 09.2**	**-0.9**
COA	**Coachella**	**0.65**	**16**	*eP*		**Pg**	**18 17 09.3**	**+0.4**
COA	**Coachella**	**0.65**	**16**			**Pg**	**18 17 09.3**	**+0.4**
ERMX	**Rumorosa**	**0.66**	**299**	⇑*eP*		**Pb**	**18 17 09.9**	**-0.7**
ERMX				*eS*		**Sg**	**18 17 18.7**	**+1.0**
COK2	**Cook Ranch 2**	**0.69**	**332**	*eP*		**Pb**	**18 17 10.3**	**-0.8**
COK2	**Cook Ranch 2**	**0.69**	**332**			**Pb**	**18 17 10.3**	**-0.8**
COK2						**Sb**	**18 17 20.7**	**-0.3**
RMX	**La Rumorosa**	**0.72**	**300**			**Pg**	**18 17 09.9**	**-0.4**
RMX						**Sg**	**18 17 18.2**	**-1.5**
IKP	**In-Ko-Pah, Jac**	**0.77**	**303**	⇑*eP*		**Pb**	**18 17 11.7**	**-0.7**
IKP				*eS*		**Sg**	**18 17 21.9**	**+0.7**
IKP	**In-Ko-Pah, Jac**	**0.77**	**303**			**Pb**	**18 17 11.6**	**-0.7**
IKP						**Sg**	**18 17 21.9**	**+0.7**
ECBX	**El Chinero**	**0.80**	**162**	*eP*		**Pb**	**18 17 12.9**	**+0.1**
ECBX				*eS*		**Sb**	**18 17 23.8**	**-0.2**
SWSC	**Sam W. Stewart**	**0.81**	**331**	*eP*		**Pg**	**18 17 11.6**	**-0.2**
SWSC	**Sam W. Stewart**	**0.81**	**331**			**Pg**	**18 17 11.7**	**-0.2**
CRR	**Carrizo Plain**	**0.84**	**321**			**Pg**	**18 17 12.6**	**+0.1**
GLA	**Glamis**	**0.92**	**28**			**Pg**	**18 17 13.1**	**-0.9**
GLA	**Glamis**	**0.92**	**28**			**Pg**	**18 17 13.2**	**-0.8**
ERRC	**Elmore Ranch**	**0.97**	**335**			**Sb**	**18 17 29.6**	**+0.8**
CBKC	**Canebrake**	**1.02**	**311**			**Pg**	**18 17 15.9**	**0.0**
MONP2	**Monument Peak**	**1.12**	**306**	⇑*eP*		**Pb**	**18 17 18.0**	**-0.5**
MONP2	**Monument Peak**	**1.12**	**306**			**Pb**	**18 17 18.0**	**-0.5**
MONP2						**Sg**	**18 17 32.5**	**-0.1**
CBX	**Cerro Bola**	**1.13**	**274**	*eP*		**Pb**	**18 17 18.3**	**-0.2**
CBX	**Cerro Bola**	**1.13**	**274**			**Pb**	**18 17 18.3**	**-0.2**
BAR	**Barrett**	**1.21**	**292**	⇓*eP*		**Pb**	**18 17 19.5**	**-0.4**
BAR	**Barrett**	**1.21**	**292**			**Pg**	**18 17 19.3**	**-0.3**
BAR	**Barrett**	**1.21**	**292**			**Sb**	**18 17 35.5**	**-0.4**
BAR	**Barrett**	**1.21**	**292**	Pn		**Pb**	**18 17 19.5**	**-0.4**
SFX	**San Felipe**	**1.27**	**161**			**Sg**	**18 17 36.2**	**-0.8**
OLP	**Otay Lakes Par**	**1.40**	**286**	⇑*eP*		**Pg**	**18 17 22.7**	**-0.4**
OLP	**Otay Lakes Par**	**1.40**	**286**			**Pg**	**18 17 22.9**	**-0.2**
OLP						**Sn**	**18 17 41.2**	**-0.3**
113A	**Mohawk Valley,**	**1.43**	**68**			**Sn**	**18 17 22.8**	**-0.3**
DPP	**Dos Picos Cty**	**1.55**	**300**			**Pb**	**18 17 25.1**	**-0.5**
DPP						**Sb**	**18 17 45.5**	**-0.1**
109C	**Camp Elliot, M**	**1.63**	**294**			**Pn**	**18 17 25.4**	**-0.4**
Y12C	**Blythe**	**1.66**	**24**			**Pb**	**18 17 27.1**	**-0.3**
XPFO	**Pion Flat**	**1.66**	**326**			**Pn**	**18 17 24.2**	**-2.2**
PFO	**Pinyon Flats O**	**1.66**	**326**			**Pn**	**18 17 24.3**	**-2.1**
PLM	**Palomar**	**1.70**	**311**			**Pg**	**18 17 28.8**	**-0.1**
PIX	**Pinacate**	**1.73**	**112**			**Pb**	**18 17 28.5**	**-0.2**
POB	**Polly Butte**	**1.97**	**318**			**Pg**	**18 17 33.5**	**-0.6**
214A	**Organ Pipe Nat**	**2.16**	**97**			**Pb**	**18 17 34.7**	**-1.4**
Y14A	**Wickenburg**	**2.59**	**48**			**Pb**	**18 17 41.1**	**-2.3**
PASC	**Pasadena Art C**	**3.07**	**310**	Pn		**Pn**	**18 17 46.1**	**+0.5**
W13A	**Hualapai Mount**	**3.10**	**23**			**Pn**	**18 17 47.8**	**+1.5**
TUC	**Tucson**	**3.86**	**88**	Pn		**Pn**	**18 17 57.5**	**+1.0**
X16A	**Lo Mia Camp, P**	**3.92**	**55**	Pn		**Pn**	**18 17 57.7**	**-0.1**
WUAZ	**Wupatki**	**4.64**	**44**			**Pn**	**18 18 09.4**	**+2.0**
TPNV	**Topopah Spring**	**4.76**	**351**	Pn		**Pn**	**18 18 07.7**	**-1.3**
U15A	**North Rim**	**4.88**	**30**	Pn		**Pn**	**18 18 10.7**	**-0.1**
PKCU	**Pink Cliffs**	**5.76**	**25**	Pn		**Pn**	**18 18 24.8**	**+1.9**
OMMB	**Old Mammoth Mi**	**6.15**	**332**	Pn		**Pn**	**18 18 30.5**	**+2.3**
OMMB						**Sn**	**18 19 42.6**	**+3.5**
MDPB	**Devils Postpil**	**6.20**	**331**	Pn		**Pn**	**18 18 29.7**	**+0.8**
MDPB						**Sn**	**18 19 41.3**	**+1.0**
MTPU	**Mount Pierson**	**6.34**	**23**	Pn		**Pn**	**18 18 33.7**	**+2.8**
MTPU						**Sn**	**18 19 42.0**	**-2.0**

*IDC **17** 18:24:18.6±2.5, 18°.05S×178°.36W, h492km±36km, mb3.5/4, mb1 3.7/5, mb1mx3.1/26, mbtmp4.4/5, Error ellipse: s-maj=105.0km s-min=20.8km az=155.0*
*NEIC **17** 18:24:21.3±1.6, 18°.1S±0°.1×178°.3W±0°.1, h542km±12km, mb4.5/14, Error ellipse: s-maj=18.8km s-min=17.0km az=59.0*

ISC 17 18:24:21.7±0.8, 18°.1S±0°.2×178°.2W±0°.1, h550km, n24, σ1s45/23, mb4.5/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**3.60**	**275**	P		**P**	**18 25 40.5**	**-0.3**
AFI	**Afiamalu**	**7.42**	**57**	P		**P**	**18 26 10.2**	**-3.6**
	4.7nm,0.3s,baz=241,slow=19,SNR=5.5							
AFI	**Afiamalu**	**7.42**	**57**	P		**P**	**18 26 12.9**	**-1.0**
NOUC	**Port Laguerre**	**15.12**	**252**	P		**P**	**18 27 34.1**	**+1.8**
NOUC				IAmb		IAmb	18 27 50.1	
	comp=Z,31nm,1.2s							
EIDS	**Eidsvold**	**29.41**	**250**	P		**P**	**18 29 39.5**	**-1.6**
EIDS				IAmb		IAmb	18 29 46.0	
	comp=Z,16nm,1.4s							
ARMA	**Armidale**	**30.05**	**240**	P		**P**	**18 29 46.7**	**0.0**
TOO	**Toolangi**	**37.23**	**231**	P		**P**	**18 30 47.0**	**+0.1**
TOO				IAmb		IAmb	18 31 03.8	
	comp=Z,31nm,1.4s							
COEN	**Coen**	**37.32**	**271**	P		**P**	**18 30 48.2**	**+0.3**
COEN				IAmb		IAmb	18 30 49.4	
	comp=Z,13nm,1.1s							
STKA	**Stephens Creek**	**38.74**	**241**	P		**P**	**18 30 58.9**	**-0.3**
	comp=Z,4.1nm,0.6s,baz=90,slow=9.6,SNR=16							
STKA	**Stephens Creek**	**38.74**	**241**	P		**P**	**18 30 58.6**	**-0.6**
MCQ	**Macquarie Isla**	**40.38**	**200**	P		P	18 31 16.1	+4.2
BBOO	**Buckleboo**	**43.52**	**241**	P		**P**	**18 31 36.6**	**-0.4**
BBOO				IAmb		IAmb	18 31 46.4	
	comp=Z,40nm,1.6s							
WR0	**Warramunga Arr**	**44.62**	**260**	P		**P**	**18 31 45.3**	**-0.5**
WRA	**Warramunga Arr**	**44.81**	**260**	P		**P**	**18 31 46.7**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=98,slow=7.4,SNR=29							
WRA	**Warramunga Arr**	**44.81**	**260**	P		**P**	**18 31 46.3**	**-1.0**
AS31	**Alice Springs**	**44.95**	**254**	P		**P**	**18 31 47.8**	**-0.5**
AS31				IAmb		IAmb	18 31 48.9	
	comp=Z,4.5nm,0.6s							
ASAR	**Alice Springs**	**44.95**	**254**	P		**P**	**18 31 48.0**	**-0.4**
	comp=Z,16nm,0.6s,baz=89,slow=8.3,SNR=294							
ASAR	**Alice Springs**	**44.95**	**254**	P		**P**	**18 31 47.5**	**-0.8**
FORT	**Forrest**	**50.13**	**245**	P		**P**	**18 32 26.3**	**-0.6**
FORT				IAmb		IAmb	18 32 43.0	
	comp=Z,19nm,1.2s							
KNRA	**Kununurra**	**50.69**	**264**	P		**P**	**18 32 31.3**	**+0.1**
QSPA	**South Pole Qui**	**71.98**	**180**	P		**P**	**18 34 49.9**	**+0.2**
TXAR	**Lajitas Array**	**85.90**	**58**	P		**P**	**18 36 06.9**	**+2.8**
	comp=Z,0.4nm,0.7s,baz=238,slow=5.0,SNR=4.8							
TXAR	**Lajitas Array**	**85.90**	**58**	P		**P**	**18 36 07.2**	**+3.1**
TIXI	**Tiksi**	**96.37**	**345**	P		**P**	**18 36 51.8**	**+0.7**

*IDC **17** 18:47:41.7±2.8, 35°.95N×141°.01E, h0km, mb3.2/2, mb1 3.3/3, mb1mx3.0/33, mbtmp3.1/3, ML2.2/1, Error ellipse: s-maj=73.5km s-min=27.3km az=46.0*
*JMA **17** 18:47:42.6±0.2, 35°.80N×141°.05E, h15km±2km, M3.4*
*NEIC **17** 18:47:41.8±1.5, 35°.85N±0°.04×141°.07E±0°.08, h14km±8km, n20, σ1s29/24, 2C, Near east coast of eastern Honshu*

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CHOJ	**Chosi**	**0.23**	**230**	⇑P		**Pg**	**18 47 46.9**	**+0.2**
CHOJ				S		**Sg**	**18 47 49.7**	**-0.3**
JIHU	**Itakohorinouch**	**0.46**	**285**	P		**Pb**	**18 47 52.2**	**+0.5**
JIHU				S		**Sb**	**18 47 59.2**	**+0.8**
JSMT	**Sammumatsuo**	**0.55**	**248**	P		**Pb**	**18 47 53.1**	**-0.1**
JSMT				S		**Sb**	**18 48 00.9**	**0.0**
JHYU	**Hitachinakayam**	**0.63**	**322**	⇑P		**Pb**	**18 47 55.5**	**+0.9**
JHYU				S		**Sb**	**18 48 04.4**	**+1.1**
JYT	**Yasato**	**0.81**	**298**	P		**Pb**	**18 47 57.3**	**-0.3**
JYT				S		**Sb**	**18 48 07.9**	**-0.5**
JCN	**Nagara**	**0.83**	**239**	P		**Pb**	**18 47 58.7**	**+0.7**
JCN				S		**Sb**	**18 48 10.2**	**+1.2**
JHO	**Hitachi**	**0.86**	**332**	P		**Pb**	**18 47 58.8**	**+0.2**
JHO				*eS*		**Sn**	**18 48 11.3**	**-0.8**
JKUC	**kamogawauchiur**	**0.99**	**226**	P		**Pg**	**18 48 00.6**	**-0.3**
JKUC				S		**Sg**	**18 48 13.2**	**-0.6**
BSO3	**Boso 3**	**1.14**	**204**	P		**Pb**	**18 48 02.4**	**-0.7**
MJAR	**Matsushiro Arr**	**2.42**	**288**	Pn		**Pn**	**18 48 21.1**	**+0.1**
	0.6nm,0.3s,baz=105,slow=9.5,SNR=35							
MJAR				Sn		**Sn**	**18 48 51.0**	**+0.6**
	0.4nm,0.3s,baz=139,slow=9.6,SNR=4.3							
MAT	**Matsushiro**	**2.42**	**288**	P		**Pn**	**18 48 21.1**	**+0.1**
MAT				S		**Sn**	**18 48 47.8**	**-2.7**
H11N2	**WAKE ISLAND Hy**	**27.80**	**118**	T		T	19 22 32.3	
	baz=311,slow=75,SNR=12							
H11N1	**WAKE ISLAND Hy**	**27.81**	**118**	T		T	19 22 30.5	
	baz=311,slow=75,SNR=8.2							
H11N3	**WAKE ISLAND Hy**	**27.82**	**118**	T		T	19 22 29.6	
	baz=311,slow=75,SNR=13							
H11S1	**WAKE ISLAND Hy**	**28.47**	**121**	T		T	19 23 16.1	
	baz=313,slow=75,SNR=4.9							
H11S3	**WAKE ISLAND Hy**	**28.47**	**121**	T		T	19 23 16.4	
	baz=313,slow=75,SNR=6.9							
H11S2	**WAKE ISLAND Hy**	**28.49**	**121**	T		T	19 23 17.3	
	baz=313,slow=75,SNR=4.1							
MKAR	**Makanchi Array**	**44.52**	**303**	P		**P**	**18 55 54.0**	**+1.0**
	0.3nm,0.7s,baz=90,slow=7.2,SNR=3.3							
ASAR	**Alice Springs**	**59.58**	**188**	P		**P**	**18 57 47.8**	**+2.7**
	0.4nm,1.0s,baz=21,slow=8.0,SNR=3.4							
SPA0	**Spitsbergen Ar**	**61.63**	**349**	*e*		**P**	**18 57 55.3**	**-3.2**

*IDC **17** 18:58:06.8±1.8, 3°.76N×125°.00E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/38, mbtmp3.6/4, Error ellipse: s-maj=120.5km s-min=24.0km az=68.0*
*NEIC **17** 18:58:10.0±2.7, 3°.9N±0°.1×125°.24E±0°.09, h33km±7km, mb4.5/11, Error ellipse: s-maj=16.8km s-min=10.0km az=215.0*

ISC 17 18:58:09.6±0.7, 3°.92N±0°.09×125°.27E±0°.09, h35km, n21, σ1s83/21, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**3.76**	**146**	Pn		**Pn**	**18 59 05.7**	**+0.5**
LUWI	**Luwuk**	**5.52**	**207**	Pn		**Pn**	**18 59 29.9**	**+0.6**
KKM	**Kota Kinabalu**	**9.26**	**284**	Pn		**Pn**	**19 00 22.0**	**+1.1**
FAKI	**Fak Fak**	**9.73**	**134**	Pn		**Pn**	**19 00 25.7**	**-1.6**
SBUM	**Sibu**	**13.11**	**264**	Pn		**Pn**	**19 01 13.7**	**+0.3**
SAUI	**Saumlaki**	**13.26**	**153**	Pn		**Pn**	**19 01 12.7**	**-2.8**
YULB	**Yu-li**	**19.74**	**349**	P		**P**	**19 02 34.7**	**-1.7**
YULB				IAmb		IAmb	19 02 43.7	
	comp=Z,35nm,1.5s							
TPUB	**Ta-pu**	**19.79**	**347**			**P**	**19 02 34.8**	**-2.2**
TPUB				IAmb		IAmb	19 02 39.6	
	comp=Z,64nm,1.3s							
YOJ	**Yonaguni jima**	**20.54**	**354**	P		**P**	**19 02 42.8**	**-2.3**
FITZ	**Fitzroy Crossi**	**21.88**	**179**	P		**P**	**19 03 00.8**	**+1.3**
	comp=Z,2.3nm,0.3s,baz=5.8,slow=9.7,SNR=28							
FITZ	**Fitzroy Crossi**	**21.88**	**179**	P		**P**	**19 03 00.6**	**+1.0**
FITZ				IAmb		IAmb	19 03 13.5	
	comp=Z,31nm,1.6s							
WRAB	**Tennant Creek**	**25.32**	**160**	P		**P**	**19 03 32.2**	**-1.1**
WRAB				IAmb		IAmb	19 03 32.5	
	comp=Z,24nm,1.6s							
WRA	**Warramunga Arr**	**25.33**	**160**	P		**P**	**19 03 35.0**	**+1.7**
	comp=Z,0.7nm,0.3s,baz=336,slow=10,SNR=11							
WRA	**Warramunga Arr**	**25.33**	**160**	P		**P**	**19 03 34.5**	**+1.2**
WR0	**Warramunga Arr**	**25.42**	**159**	P		**P**	**19 03 36.2**	**+2.1**
WR0				IAmb		IAmb	19 03 44.5	
	comp=Z,18nm,1.5s							
GSI	**Gunungsitoli**	**27.78**	**265**	P		**P**	**19 03 51.9**	**-3.7**
ASAR	**Alice Springs**	**28.68**	**163**	P		**P**	**19 04 04.2**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=343,slow=6.7,SNR=8.4							
BBOO	**Buckleboo**	**37.93**	**165**	P		**P**	**19 05 24.1**	**+0.3**
WAKE	**Wake Island**	**43.17**	**66**	P		**P**	**19 06 08.2**	**+0.9**
MKAR	**Makanchi Array**	**56.58**	**326**	P		**P**	**19 07 51.2**	**+2.4**
	comp=Z,0.2nm,0.3s,baz=126,slow=6.7,SNR=6.7							
RPZ	**Rata Peaks**	**62.76**	**144**	P		**P**	**19 08 32.5**	**+1.1**

NNC 17 19:02:57.9±7.1, 36°.70N×69°.95E, h0km, mb3.5, mpv3.1, 4C-2D, Error ellipse: s-maj=70.0km s-min=41.5km az=155.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK31	**Karatay Array**	**6.41**	**4**	P		Pn	19 04 35.8	+2.1
	0.2nm,0.2s,baz=184,slow=13,SNR=18							
KK31				⇓S		Sn	19 05 51.6	+4.1
	0.7nm,0.5s,baz=188,slow=21,SNR=4.6							
AAK	**Ala-Archa**	**6.89**	**29**	⇑P		Pn	19 04 40.5	+0.2
	1.5nm,0.6s							
AAK				⇓S		Sn	19 06 00.2	+0.7
	2.5nm,0.8s							
TKM2	**Tokmak 2**	**7.58**	**33**	⇑P		Pn	19 04 49.0	-0.9
	0.9nm,0.7s							
TKM2				⇑S		Sn	19 06 16.3	-0.3
	0.7nm,0.6s							
AB31	**Akbulak array**	**14.51**	**333**	⇑P		Pn	19 06 22.5	-1.9
	0.6nm,0.5s,baz=152,slow=12,SNR=12							

MAN 17 19:30:33.8, 7°.29N×124°.88E, h33km, mb4.5, ML3.3, MS3.1, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KCP	**Kidapawan**	**0.35**	**144**	⇑*iP*		Pn	19 30 43.5	+0.9
CTBH	**Cotabato--PC H**	**0.64**	**264**	*eP*		Pb	19 30 47.0	+0.4
CTBH				*i* S		Sn	19 30 56.8	+1.3
CGP	**Cagayan de Oro**	**1.17**	**351**	⇑*eP*		Pn	19 30 54.2	+0.3
CGP				*i* S		Sn	19 31 08.7	0.0

*IDC **17** 19:36:44.0±1.0, 36°.91N×143°.62E, h0km, mb3.6/7, mb1 3.8/10, mb1mx3.6/48, mbtmp3.7/10, ML3.4/3, MS2.4/2, Ms1 2.4/2, ms1mx2.1/43, Error ellipse: s-maj=25.2km s-min=20.3km az=76.0*
*JMA **17** 19:36:46.4±0.2, 37°.08N×143°.32E, h43km, M3.3*
*NEIC **17** 19:36:48.1±2.3, 37°.03N±0°.08×143°.4E±0°.1, h36km±8km, mb4.6/2, Error ellipse: s-maj=14.6km s-min=10.5km az=110.0*

ISC 17 19:36:48.8±0.8, 37°.09N±0°.05×143°.38E±0°.07, h35km, n54, σ1s90/66, mb3.6/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakikobu**	**1.95**	**309**	P		**Pn**	**19 37 17.4**	**-2.0**
JIKH				S		**Sn**	**19 37 40.9**	**-1.7**
JFK	**Kawauchi**	**2.02**	**279**	P		**Pn**	**19 37 18.3**	**-2.1**
JFK				*eS*		**Sn**	**19 37 41.7**	**-2.7**
ONAJ	**Iwakimizuishiy**	**2.06**	**271**	P		**Pn**	**19 37 18.8**	**-2.2**
ONAJ				*eS*		**Sn**	**19 37 42.9**	**-2.6**
JMST	**Minamisoumatoc**	**2.08**	**289**	P		**Pn**	**19 37 19.2**	**-2.0**
JMST				*eS*		**Sn**	**19 37 43.5**	**-2.4**
JIO	**Ouri**	**2.11**	**311**	P		**Pn**	**19 37 19.9**	**-1.7**
JIO				*eS*		**Sn**	**19 37 44.1**	**-2.4**
JMM	**Marumori**	**2.20**	**291**	P		**Pn**	**19 37 21.0**	**-1.8**
JMM				*eS*		**Sn**	**19 37 46.9**	**-1.9**
JFT	**Otama**	**2.46**	**281**	P		**Pn**	**19 37 25.5**	**-1.0**
JFT				*eS*		**Sn**	**19 37 54.8**	**-0.5**
JMK	**Ichinoseki**	**2.52**	**318**	*eS*		**Sn**	**19 37 55.6**	**-1.2**
JOM	**Ohasama**	**2.89**	**326**	*eS*		**Sn**	**19 38 04.9**	**-1.0**
JYK	**Kaneyama**	**3.00**	**308**	P		**Pn**	**19 37 33.1**	**-0.8**
BSO1	**Boso 1**	**3.12**	**219**	*eS*		**Sn**	**19 38 09.2**	**-1.4**
JAG	**Ashikaga**	**3.22**	**259**	P		**Pn**	**19 37 35.4**	**-1.5**
JAG				*eS*		**Sn**	**19 38 12.4**	**-1.6**
JANG	**Nango**	**3.59**	**337**	P		**Pn**	**19 37 41.2**	**-0.8**
JANG				*eS*		**Sn**	**19 38 20.4**	**-2.7**
JRY	**Ryogami san**	**3.76**	**255**	P		**Pn**	**19 37 42.5**	**-1.8**
JRY				*eS*		**Sn**	**19 38 24.8**	**-2.6**
JOD2	**Odawara 2**	**3.92**	**244**	P		**Pn**	**19 37 44.5**	**-2.0**
JOD2				*eS*		**Sn**	**19 38 27.7**	**-3.6**
MJAR	**Matsushiro Arr**	**4.18**	**264**	Pn		**Pn**	**19 37 49.6**	**-0.5**
	0.4nm,0.3s,baz=81,slow=10.0,SNR=27							
MJAR				Sn		**Sn**	**19 38 38.0**	**+0.2**
	0.1nm,0.3s,baz=75,slow=25,SNR=2.5							
MJAR				LR		LR	19 39 18.5	
	comp=Z,35nm,19.7s,baz=110,slow=36							
MJAR	**Matsushiro Arr**	**4.18**	**264**			**Pn**	**19 37 49.2**	**-0.9**
MJAR						**Sn**	**19 38 36.9**	**-0.9**
MAJO	**Matsushiro**	**4.18**	**264**			**Pn**	**19 37 50.0**	**-0.2**
MAT	**Matsushiro**	**4.18**	**264**	P		**Pn**	**19 37 50.4**	**+0.2**
MAT	**Matsushiro**	**4.18**	**264**	P		**Pn**	**19 37 50.0**	**-0.2**
MAT				S		**Sn**	**19 38 41.2**	**+3.4**
MJB9	**Matsu-Tunnel**	**4.19**	**264**			**Pn**	**19 37 50.0**	**-0.2**
JYN	**Shimob**	**4.21**	**249**	P		**Pn**	**19 37 49.6**	**-1.0**
JYN				*eS*		**Sn**	**19 38 36.9**	**-1.8**
ERM	**Erimo**	**4.92**	**358**	Pn		**Pn**	**19 37 58.3**	**-2.0**
JHJ2	**Mitsune**	**4.92**	**217**	*eS*		**Sn**	**19 38 50.3**	**-5.8**
JHJ2	**Mitsune**	**4.92**	**217**	Pn		**Pn**	**19 37 57.8**	**-2.5**
JKB	**Kayabe**	**5.12**	**340**	P		**Pn**	**19 38 02.0**	**-1.0**
JKB				*eS*		**Sn**	**19 38 57.9**	**-3.0**
INU	**Inuyama**	**5.43**	**253**	Pn		**Pn**	**19 38 07.0**	**-0.2**
JKA	**Kamikawa-asahi**	**7.04**	**355**			**Pn**	**19 38 28.9**	**-0.5**
JKA						**Sn**	**19 39 45.9**	**-2.4**
ASAJ	**Asahikawa**	**7.05**	**355**	Pn		**Pn**	**19 38 28.9**	**-0.6**
	1.5nm,0.3s,baz=210,slow=12,SNR=15							
ASAJ				Sn		**Sn**	**19 39 45.9**	**-2.4**
	0.0nm,0.3s,baz=300,slow=20,SNR=2.9							
YSS	**Yuzh-Sakhalins**	**9.87**	**358**	Pn		**Pn**	**19 39 06.4**	**-1.7**
USRK	**Ussuriysk Ar.**	**11.19**	**313**	Pn		**Pn**	**19 39 27.2**	**+1.1**
USA0B	**Ussuriysk Arra**	**11.19**	**313**	Pn		**Pn**	**19 39 27.2**	**+1.1**
KSRS	**Korea Array**	**12.32**	**276**	Pn		**Pn**	**19 39 44.9**	**+3.2**
	0.1nm,0.3s,baz=86,slow=14,SNR=5.5							
KSRS				LR		LR	19 43 55.2	
	comp=Z,21nm,19.5s,baz=75,slow=34							
KSAR	**Wonju Array Be**	**12.35**	**276**	Pn		**Pn**	**19 39 41.7**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**26.85**	**124**	T		T	20 10 33.5	
	baz=315							
H11N1	**WAKE ISLAND Hy**	**26.86**	**124**	T		T	20 10 31.7	
	baz=315							
H11N3	**WAKE ISLAND Hy**	**26.86**	**124**	T		T	20 10 33.7	
	baz=315							
H11S1	**WAKE ISLAND Hy**	**27.59**	**126**	T		T	20 11 25.6	
	baz=317							
H11S3	**WAKE ISLAND Hy**	**27.59**	**126**	T		T	20 11 29.1	
	baz=317							
H11S2	**WAKE ISLAND Hy**	**27.61**	**126**	T		T	20 11 28.3	
	baz=317							
SONM	**Songino Array**	**29.06**	**303**	P		**P**	**19 42 48.9**	**+3.1**
	0.7nm,0.7s,baz=96,slow=8.8,SNR=5.9							
SPIA	**Saint Paul Isl**	**36.48**	**42**	P		**P**	**19 43 49.8**	**-0.5**
ZALV	**Zalesovo Beam**	**43.04**	**312**	P		**P**	**19 44 47.5**	**+2.7**
	0.3nm,0.3s,baz=79,slow=7.5,SNR=2.5							
ZALV	**Zalesovo Beam**	**43.04**	**312**	P		**P**	**19 44 44.2**	**-0.6**
MKAR	**Makanchi Array**	**45.42**	**302**	P		**P**	**19 45 06.3**	**+2.3**
	0.5nm,0.7s,baz=86,slow=9.2,SNR=5.4							
KURK	**Kurchatov**	**47.13**	**308**	P		**P**	**19 45 17.5**	**+0.1**
KURK				IAmb		IAmb	19 45 24.0	
	comp=Z,4.2nm,0.6s							
ILAR	**Eielson Array**	**48.61**	**32**	P		**P**	**19 45 29.3**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=278,slow=6.3,SNR=2.9							
ILAR	**Eielson Array**	**48.61**	**32**	P		**P**	**19 45 28.8**	**+0.2**
WRA	**Warramunga Arr**	**57.36**	**190**	P		**P**	**19 46 32.7**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=9.5,slow=7.1,SNR=7.4							
ABKAR	**Akbulak array**	**59.10**	**311**	P		**P**	**19 46 46.2**	**+0.7**
ASAR	**Alice Springs**	**61.09**	**190**	P		**P**	**19 46 58.8**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=4.6,slow

PMPS	**Porto Santo**	**4.74**	**213**	*e*S		Sn	19 45 46.7	-16
PCAS	**Casmilo, Conde**	**4.77**	**50**	*e*P		**Pn**	**19 45 10.7**	**+2.5**
PCAS				*e*S		**Sn**	**19 46 03.9**	**+0.3**
PCAS				A		A	19 46 06.4	
	comp=N,7.9nm,0.1s							
PCAS	**Casmilo, Conde**	**4.77**	**50**	P		**Pn**	**19 45 10.7**	**+2.5**
PCAS				S		**Sn**	**19 46 03.9**	**+0.3**
	comp=N,7.9nm,0.1s							
PESTR	**Estremoz**	**4.83**	**67**	*e*P		**Pn**	**19 45 12.0**	**+3.0**
PESTR				*e*S		**Sn**	**19 46 04.7**	**-0.3**
PESTR				A		A	19 46 10.1	
	comp=N,7.5nm,0.9s							
PESTR	**Estremoz**	**4.83**	**67**	P		**Pn**	**19 45 07.9**	**-1.1**
PESTR				S		**Sn**	**19 46 02.7**	**-2.3**
COI	**Coimbra**	**4.92**	**49**	*e*S		**Sn**	**19 46 07.3**	**+0.1**
COI				A		A	19 46 11.3	
	comp=N,23nm,0.4s							
COI	**Coimbra**	**4.92**	**49**	S		**Sn**	**19 46 07.3**	**+0.1**
	comp=N,11nm,0.4s							
PBAR	**Barrancos**	**5.07**	**76**	*e*S		**Sn**	**19 46 10.2**	**-0.6**
PBAR				A		A	19 46 15.3	
	comp=N,24nm,0.7s							
PBAR	**Barrancos**	**5.07**	**76**	S		**Sn**	**19 46 10.2**	**-0.6**
	comp=N,24nm,0.7s							
PMRV	**Marv??o**	**5.19**	**61**	*e*P		**Pn**	**19 45 16.4**	**+2.5**
PMRV				*e*S		**Sn**	**19 46 12.8**	**-1.0**
PMRV				A		A	19 46 20.0	
	comp=N,12nm,0.2s							
PMRV	**Marv??o**	**5.19**	**61**	P		**Pn**	**19 45 16.4**	**+2.5**
PMRV				S		**Sn**	**19 46 12.8**	**-1.0**
	comp=N,12nm,0.2s							
EBAD	**Badajoz**	**5.22**	**70**	P		**Pn**	**19 45 16.5**	**+2.1**
	comp=N,1.7nm,0.1s,SNR=7.9							
EBAD				S		**Sn**	**19 46 13.8**	**-0.9**
	comp=N,14nm,0.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**5.30**	**81**	P		**Pn**	**19 45 17.5**	**+2.1**
	comp=N,1.7nm,0.1s,SNR=7.9							
EMIN				S		**Sn**	**19 46 15.3**	**-1.2**
	comp=N,7.1nm,0.1s,SNR=7.9							
PCBR	**Castelo Branco**	**5.32**	**57**	*e*P		**Pn**	**19 45 18.6**	**+2.9**
PCBR				*e*S		**Sn**	**19 46 16.2**	**-0.7**
PCBR				A		A	19 46 18.8	
	comp=N,5.5nm,0.2s							
PCBR	**Castelo Branco**	**5.32**	**57**	P		**Pn**	**19 45 18.6**	**+2.9**
PCBR				S		**Sn**	**19 46 16.2**	**-0.7**
	comp=N,2.8nm,0.2s							
PMOZ	**Porto Moniz, M**	**5.33**	**218**	*e*S		Sn	19 46 02.3	-15
PVIS	**Viseu**	**5.54**	**48**	*e*P		**Pn**	**19 45 21.3**	**+2.4**
PVIS				*e*S		**Sn**	**19 46 21.6**	**-1.1**
PVIS				A		A	19 46 24.2	
	comp=N,17nm,0.1s							
PVIS	**Viseu**	**5.54**	**48**	P		**Pn**	**19 45 21.3**	**+2.4**
PVIS				S		**Sn**	**19 46 21.6**	**-1.1**
	comp=N,8.7nm,0.1s							
MTE	**Manteigas**	**5.57**	**52**	*e*S		**Sn**	**19 46 23.1**	**-0.2**
MTE				A		A	19 46 26.0	
	comp=N,21nm,0.5s							
MTE	**Manteigas**	**5.57**	**52**	S		**Sn**	**19 46 23.1**	**-0.2**
	comp=N,11nm,0.5s							
PVRL	**Vila Real**	**6.01**	**44**	*e*P		**Pn**	**19 45 27.6**	**+2.3**
PVRL				*e*S		**Sn**	**19 46 33.4**	**-0.8**
PVRL				A		A	19 46 36.0	
	comp=N,15nm,0.3s							
PVRL	**Vila Real**	**6.01**	**44**	P		**Pn**	**19 45 27.6**	**+2.3**
PVRL				S		**Sn**	**19 46 33.4**	**-0.8**
	comp=N,7.3nm,0.3s							
POLO	**Lamas de Olo**	**6.04**	**43**	*e*P		**Pn**	**19 45 27.6**	**+2.0**
POLO				*e*S		**Sn**	**19 46 33.2**	**-1.6**
POLO				A		A	19 46 36.3	
	comp=N,2.6nm,0.3s							
POLO	**Lamas de Olo**	**6.04**	**43**	P		**Pn**	**19 45 27.6**	**+2.0**
POLO				S		**Sn**	**19 46 33.2**	**-1.6**
	comp=N,2.6nm,0.3s							
PCAB	**Cabril**	**6.15**	**40**	*e*P		**Pn**	**19 45 29.7**	**+2.5**
PCAB				*e*S		**Sn**	**19 46 36.6**	**-1.0**
PCAB				A		A	19 46 39.0	
	comp=N,13nm,0.3s							
PCAB	**Cabril**	**6.15**	**40**	P		**Pn**	**19 45 29.7**	**+2.5**
PCAB				S		**Sn**	**19 46 36.6**	**-1.0**
	comp=N,6.5nm,0.3s							
EZAM	**Zamans**	**6.17**	**34**	P		**Pn**	**19 45 29.4**	**+2.0**
	comp=N,1.9nm,0.1s,SNR=7.9							
EZAM				S		**Sn**	**19 46 35.5**	**-2.5**
	comp=N,6.3nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**6.25**	**39**	P		**Pn**	**19 45 31.2**	**+2.6**
	comp=N,2.0nm,0.2s,SNR=5.6							
ELOB				S		**Sn**	**19 46 37.9**	**-2.2**
	comp=N,8.3nm,0.1s							
ECAB	**El Cabril**	**6.32**	**79**	P		**Pn**	**19 45 31.4**	**+1.9**
	comp=N,1.4nm,0.2s,SNR=7.9							
ECAB				S		**Sn**	**19 46 40.2**	**-1.5**
	comp=N,5.8nm,0.2s,SNR=7.9							
MVO	**Moncorvo**	**6.34**	**48**	*e*P		**Pn**	**19 45 32.1**	**+2.3**
MVO				*e*S		**Sn**	**19 46 41.0**	**-1.2**
MVO				A		A	19 46 41.6	
	comp=N,9.7nm,0.4s							
MVO	**Moncorvo**	**6.34**	**48**	P		**Pn**	**19 45 32.1**	**+2.3**
	comp=N,3.7nm,0.2s,SNR=8.4							
MVO				S		**Sn**	**19 46 40.5**	**-1.7**
	comp=N,8.6nm,0.1s							
EPLA	**Plasencia**	**6.37**	**60**	P		**Pn**	**19 45 33.0**	**+2.7**
	comp=N,1.2nm,0.1s,SNR=7.9							
EPLA				S		**Sn**	**19 46 40.8**	**-2.2**
	comp=N,4.5nm,0.2s,SNR=7.9							
HORN	**Hornachuelos**	**6.42**	**81**	P		**Pn**	**19 45 31.5**	**+0.7**
HORN				S		**Sn**	**19 46 37.5**	**-6.7**
EMIJ	**Mijas**	**6.84**	**92**	P		**Pn**	**19 45 39.4**	**+2.7**
	comp=N,0.5nm,0.2s,SNR=7.9							
EMIJ				S		**Sn**	**19 46 53.0**	**-1.5**
	comp=N,2.5nm,0.3s,SNR=7.9							
PBRG	**Braganca**	**6.91**	**45**	*e*P		**Pn**	**19 45 40.0**	**+2.4**
PBRG				*e*S		**Sn**	**19 46 54.8**	**-1.5**
PBRG				A		A	19 46 57.0	
	comp=N,7.4nm,0.3s							
PBRG	**Braganca**	**6.91**	**45**	P		**Pn**	**19 45 40.0**	**+2.4**
PBRG				S		**Sn**	**19 46 54.8**	**-1.5**
	comp=N,3.7nm,0.3s							
EAGO	**Agolada(Pontev**	**6.96**	**33**	P		**Pn**	**19 45 39.9**	**+1.7**
	comp=N,2.5nm,0.2s,SNR=7.9							
EAGO				S		**Sn**	**19 46 51.5**	**-6.0**
	comp=N,5.4nm,0.1s,SNR=7.9							
EADA	**Adamuz**	**6.99**	**78**	P		**Pn**	**19 45 41.0**	**+2.3**
	comp=N,0.8nm,0.1s,SNR=7.9							
EADA				S		**Sn**	**19 46 56.5**	**-1.7**
	comp=N,6.5nm,0.2s,SNR=7.9							
EGOR	**Sierra Gorda,**	**7.33**	**87**	S		**Sn**	**19 47 05.0**	**-1.7**
	comp=N,9.4nm,3.0s,SNR=7.9							
OUK	**Oukaimeden**	**7.38**	**141**	P		**Pn**	**19 45 42.7**	**-1.7**
OUK				S		Sn	19 46 57.1	-11
PAB	**San Pablo**	**7.43**	**68**	P		**Pn**	**19 45 47.2**	**+2.3**
	comp=N,0.5nm,0.1s,SNR=7.9							
PAB				S		**Sn**	**19 47 07.1**	**-2.2**
	comp=N,1.6nm,0.2s,SNR=7.9							
ELGU	**Los Guajares,**	**7.73**	**89**	P		**Pn**	**19 45 51.9**	**+3.0**
	comp=N,0.4nm,0.1s,SNR=7.9							
ELGU				S		**Sn**	**19 47 12.7**	**-3.8**
	comp=N,2.9nm,0.2s,SNR=7.9							
ESDC	**Sonseca Array**	**7.76**	**68**	P		**Pn**	**19 45 51.5**	**+2.2**
	comp=N,1.1nm,0.1s,baz=253,slow=13,SNR=16							
ESDC				S		**Sn**	**19 47 14.0**	**-3.2**
	comp=N,1.8nm,0.3s,baz=255,slow=23,SNR=4.7							
TISM	**Timmit**	**7.78**	**131**	P		**Pn**	**19 45 47.4**	**-2.1**
EPON	**Pontenova**	**7.80**	**35**	P		**Pn**	**19 45 51.3**	**+1.6**
	comp=N,1.5nm,0.2s,SNR=7.9							
EPON				S		**Sn**	**19 47 14.3**	**-3.8**
	comp=N,4.5nm,0.4s,SNR=7.9							
GUD	**Guadarrama**	**7.95**	**61**	P		**Pn**	**19 45 55.0**	**+3.0**
	comp=N,0.7nm,0.2s,SNR=7.9							
GUD				S		**Sn**	**19 47 18.8**	**-3.3**
	comp=N,1.1nm,0.2s,SNR=7.9							
AKLM	**AKL**	**8.07**	**106**	P		**Pn**	**19 45 50.3**	**-3.3**
AKLM				S		Sn	19 47 09.6	-15
EQES	**Quesada**	**8.15**	**82**	P		**Pn**	**19 45 57.0**	**+2.3**
	comp=N,0.8nm,0.3s,SNR=7.9							
EQES				S		**Sn**	**19 47 24.4**	**-2.5**
	comp=N,1.7nm,0.2s,SNR=7.9							
MD31	**MD31**	**8.16**	**119**	P		**Pn**	**19 45 53.9**	**-0.9**
MD31				S		Sn	19 47 12.6	-14
OUZM	**OUZ**	**8.20**	**137**	P		**Pn**	**19 45 53.2**	**-2.2**
OUZM				S		Sn	19 47 17.5	-11
MDT	**Midelt**	**8.29**	**118**	P		**Pn**	**19 45 54.6**	**-2.1**
MDT				S		Sn	19 47 17.9	-13
SESP	**Santiago Espad**	**8.58**	**80**	P		**Pn**	**19 46 02.9**	**+2.3**
	comp=N,0.6nm,0.2s,SNR=7.9							
SESP				S		**Sn**	**19 47 34.9**	**-2.7**
	comp=N,1.2nm,0.2s,SNR=7.9							

EARI	**Arriondas**	**8.75**	**42**	P		**Pn**	**19 46 05.4**	**+2.6**
	comp=N,0.5nm,0.2s,SNR=6.1								
EARI				S		**Sn**	**19 47 37.7**	**-3.8**
	comp=N,8.1nm,0.8s								
TZRR	**Tazzarine**	**8.97**	**132**	P		**Pn**	**19 46 05.2**	**-0.8**
TZRR				S		Sn	19 47 34.9	-12
ETOB	**Tobarra**	**9.40**	**77**	P		**Pn**	**19 46 13.7**	**+1.8**
	comp=N,0.7nm,0.2s,SNR=7.9								
ETOB				S		**Sn**	**19 47 52.9**	**-4.8**
	comp=N,2.5nm,0.5s,SNR=7.9								
ETOR	**Torete**	**9.50**	**63**	P		**Pn**	**19 46 15.8**	**+2.6**
	comp=N,7.3nm,0.1s,SNR=11								
ETOR				S		**Sn**	**19 47 55.6**	**-4.5**
	comp=N,4.3nm,0.3s,SNR=7.9								
ELAN	**Lanestosa**	**9.71**	**48**	P		**Pn**	**19 46 18.5**	**+2.5**
	comp=N,0.8nm,0.2s,SNR=7.9								
ELAN				S		**Sn**	**19 48 00.8**	**-4.4**
	comp=N,1.9nm,0.3s,SNR=7.9								
ATE	**Arette**	**11.34**	**54**	P		**Pn**	**19 46 41.4**	**+3.2**
	comp=N,0.7nm,0.2s,SNR=7.9								
ATE				S		**Sn**	**19 48 39.5**	**-5.5**
	comp=N,2.8nm,0.7s,SNR=7.9								

IDC ***17*** *20:01:47.3±1.8,20.°84S×169.°86E,h0km,mb3.8/7, mb1 4.0/8,mb1mx3.9/24,mbtmp3.8/8,ML3.5/1,MS3.2/5, Ms1 3.1/5,ms1mx2.8/26,Error ellipse: s-maj=82.2km s-min=20.8km az=152.0*
NEIC ***17*** *20:01:51.5±2.9,20.°45S±0.°08×169.°64E±0.°03,h22km±8km, mb4.7/8,Error ellipse: s-maj=11.6km s-min=3.9km az=194.0*
ISC 17 20:01:50.4±0.7,20.°45S±0.°09×169.°66E±0.°09,h10km,n25, σ1s65/23,mb4.0/10,MS3.1/3,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.41**	**241**	Pn		**Pn**	**20 02 43.2**	**-0.5**
	4.8nm,0.3s,baz=104,slow=13,SNR=39							
DZM				Sn		**Sn**	**20 03 25.1**	**+0.8**
	14nm,0.3s,baz=122,slow=23,SNR=9.5							
DZM	**Mont Dzumac**	**3.41**	**241**			**Pn**	**20 02 43.4**	**-0.3**
NOUC	**Port Laguerre**	**3.54**	**242**	Pn		**Pn**	**20 02 45.3**	**-0.1**
SANVU	**Saraoutou**	**5.50**	**334**			**Pn**	**20 03 12.2**	**-0.2**
MSVF	**Nonsavu**	**8.38**	**73**			**Pn**	**20 03 52.6**	**+0.6**
HNR	**Honiara**	**14.42**	**318**	LR		LR	20 10 13.6	
	comp=Z,64nm,20.9s,baz=124,slow=34							
LHI	**Lord Howe Isla**	**14.56**	**219**			**Pn**	**20 05 20.0**	**+3.4**
FUNA	**Funafuti**	**15.02**	**39**	Pn		**Pn**	**20 05 25.2**	**+2.4**
FUNA				IAmb		IAmb	20 05 31.0	
	comp=Z,54nm,0.9s							
URZ	**Urewera**	**18.88**	**162**	LR		LR	20 11 34.6	
	comp=Z,105nm,20.7s,baz=7.5,slow=32							
BKZ	**Black Stump Fm**	**19.56**	**164**	P		**P**	**20 06 17.7**	**-0.6**
BKZ				IAmb		IAmb	20 06 24.2	
	comp=Z,54nm,1.4s							
CTA	**Charters Tower**	**21.96**	**267**	P		**P**	**20 06 45.6**	**+1.1**
	comp=Z,3.6nm,0.7s,baz=97,slow=14,SNR=5.9							
KRVT	**Keravat (AS076**	**23.50**	**311**	LR		LR	20 14 17.3	
	comp=Z,76nm,21.9s,baz=89,slow=31							
STKA	**Stephens Creek**	**27.56**	**240**	P		**P**	**20 07 36.3**	**-1.4**
	comp=Z,2.8nm,1.0s,baz=73,slow=11,SNR=2.7							
STKA				LR		LR	20 17 57.9	
	comp=Z,22nm,19.2s,baz=37,slow=35							
BBOO	**Buckleboo**	**32.32**	**241**	P		**P**	**20 08 20.6**	**+0.8**
WR0	**Warramunga Arr**	**32.93**	**265**	P		**P**	**20 08 23.6**	**-1.7**
WR0				IAmb		IAmb	20 08 53.6	
	comp=Z,14nm,1.3s							
WRA	**Warramunga Arr**	**33.12**	**265**	P		**P**	**20 08 25.0**	**-2.0**
	comp=Z,0.4nm,0.4s,baz=92,slow=8.4,SNR=7.0							
AS31	**Alice Springs**	**33.24**	**258**	P		**P**	**20 08 25.7**	**-2.3**
ASAR	**Alice Springs**	**33.24**	**258**	P		**P**	**20 08 26.5**	**-1.5**
	comp=Z,2.0nm,0.8s,baz=87,slow=9.5,SNR=17							
ASAR				LR		LR	20 20 38.1	
	comp=Z,51nm,21.1s,baz=84,slow=34							
MTN	**Manton Dam**	**37.61**	**275**	P		**P**	**20 09 03.4**	**-2.3**
FITZ	**Fitzroy Crossi**	**41.53**	**266**	P		**P**	**20 09 37.9**	**-0.5**
FITZ				IAmb		IAmb	20 10 07.7	
	comp=Z,16nm,1.2s							
QSPA	**South Pole Qui**	**69.61**	**180**	P		**P**	**20 12 57.0**	**-2.7**
QSPA				IAmb		IAmb	20 13 13.8	
	comp=Z,8.5nm,1.6s							
CMAR	**Chiang Mai Arr**	**79.36**	**294**	P		**P**	**20 13 57.5**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=141,slow=3.5,SNR=2.6							
NVAR	**Mina Array Bea**	**89.30**	**48**	P		**P**	**20 14 45.8**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=230,slow=4.2,SNR=2.5							
ILAR	**Eielson Array**	**91.27**	**17**	P		**P**	**20 14 55.9**	**+0.3**
	comp=Z,0.7nm,1.0s,baz=216,slow=6.1,SNR=3.7							
GERES	**GERESS Array B**	**145.74**	**331**	PKPbc		**PKPdf**	**20 21 30.4**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=40,slow=1.7,SNR=3.1							

IDC 17 20:12:39.0±83.0,18.°38S×170.°61E,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.6/22,mbtmp3.8/3,Error ellipse: s-maj=1404.0km s-min=136.5km az=74.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**29.40**	**237**	P		P	20 18 44.2	0.0
	1.8nm,1.0s,baz=60,slow=6.2,SNR=3.2							
WRA	**Warramunga Arr**	**34.26**	**261**	P		P	20 19 26.7	-0.4
	0.5nm,0.8s,baz=93,slow=8.9,SNR=4.7							
ASAR	**Alice Springs**	**34.60**	**255**	P		P	20 19 30.1	+0.1
	0.8nm,0.4s,baz=84,slow=8.8,SNR=22							

TAP ***17*** *20:13:52.0,24.°60N×122.°73E,h84km,ML2.6,C*
JMA ***17*** *20:13:52.0±0.1,24.°52N×122.°71E,h86km±1km,M1.5*
ISC 17 20:13:52.7±1.6,24.°58N±0.°07×122.°73E±0.°03,h81km±10km, n40,σ0s61/61,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.23**	**122**	P		**Pn**	**20 14 04.6**	**-0.2**
JYNG				S		**Sn**	**20 14 14.1**	**+0.4**
YOJ	**Yonaguni jima**	**0.28**	**114**	*i* P		**Pn**	**20 14 04.9**	**-0.2**
	baz=117							
YOJ				*i* S		**Sn**	**20 14 14.3**	**+0.2**
	baz=117							
YOJ	**Yonaguni jima**	**0.28**	**114**	P		**Pn**	**20 14 04.8**	**-0.2**
YOJ				S		**Sn**	**20 14 14.3**	**+0.2**
EOS1	**EOS1**	**0.55**	**267**	*e*P		**Pn**	**20 14 06.6**	**-0.3**
	baz=264							
EOS1				*i* S		**Sn**	**20 14 17.8**	**+0.4**
	baz=264							
TWC	**Suao**	**0.80**	**273**	*e*P		**Pn**	**20 14 09.6**	**0.0**
	baz=270							
NANB	**Nanao**	**0.90**	**261**	P		**Pn**	**20 14 10.9**	**+0.2**
	baz=258							
NANB				*i* S		**Sn**	**20 14 24.5**	**+0.4**
	baz=258							
ENA	**Nanau**	**0.91**	**261**	*e*P		**Pn**	**20 14 11.0**	**+0.2**
	baz=258							
ENA				*i* S		**Sn**	**20 14 24.5**	**+0.2**
	baz=258							
IRIF	**Iriomote-Funau**	**0.94**	**104**	P		**Pn**	**20 14 10.9**	**-0.3**
IRIF				*e*S		**Sn**	**20 14 25.5**	**+0.6**
TWE	**Neicheng**	**0.98**	**279**	P		**Pn**	**20 14 11.1**	**-0.4**
	baz=276							
TWE				*e*S		**Sn**	**20 14 25.3**	**-0.3**
	baz=276							
ENTT	**Nioudou**	**1.06**	**274**	P		**Pn**	**20 14 12.9**	**+0.3**
	baz=271							
ENTT				*e*S		**Sn**	**20 14 27.6**	**+0.2**
	baz=271							
NDT	**Datong Townshi**	**1.11**	**272**	*e*P		**Pn**	**20 14 13.8**	**+0.7**
	baz=269							
NDT				*i* S		**Sn**	**20 14 28.6**	**+0.1**
	baz=269							
NACB	**Ninganchiao**	**1.11**	**249**	*e*P		**Pn**	**20 14 12.9**	**-0.2**
	baz=247							
TWA	**Mucha**	**1.12**	**291**	P		**Pn**	**20 14 12.9**	**-0.4**
	baz=289							
NWLT	**Wulai**	**1.13**	**280**	P		**Pn**	**20 14 13.5**	**0.0**
	baz=278							
NWLT				*e*S		**Sn**	**20 14 29.8**	**+0.7**
	baz=278							
ETLH	**Xiulin Townshi**	**1.19**	**252**	P		**Pn**	**20 14 14.5**	**+0.2**
	baz=250							
YM10	**YM10**	**1.21**	**299**	*e*P		**Pn**	**20 14 14.1**	**-0.4**
	baz=297							
JKRS	**Kuro-shima**	**1.22**	**106**	P		**Pn**	**20 14 14.7**	**+0.2**
JKRS				*e*S		**Sn**	**20 14 31.6**	**+0.8**
YM04	**YM04**	**1.23**	**298**	*e*P		**Pn**	**20 14 13.8**	**-0.8**
	baz=296							
NNSH	**Datong**	**1.23**	**263**	P		**Pn**	**20 14 14.6**	**-0.2**
	baz=261							
YHNB	**Yeheng**	**1.23**	**275**	P		**Pn**	**20 14 14.7**	**-0.1**
	baz=273							
YHNB				*e*S		**Sn**	**20 14 31.0**	**-0.3**
	baz=273							
NNS	**Nan Shan**	**1.24**	**264**	*e*P		**Pn**	**20 14 15.5**	**+0.6**
	baz=262							
NSK	**Sanguang**	**1.25**	**275**	P		**Pn**	**20 14 14.9**	**0.0**
	baz=273							
NSK				*e*S		**Sn**	**20 14 31.1**	**-0.6**
	baz=273							
JIJ	**Ishigaki jima**	**1.31**	**99**	P		**Pn**	**20 14 15.3**	**-0.3**
JIJ				*e*S		**Sn**	**20 14 32.4**	**-0.4**
WHF	**Hehuan Shan**	**1.40**	**253**	P		**Pn**	**20 14 17.0**	**-0.2**
	baz=250							
WHF				*e*S		**Sn**	**20 14 34.3**	**-1.3**
	baz=250							
JISG	**Ishigakijimahi**	**1.44**	**89**	P		**Pn**	**20 14 17.0**	**-0.3**
CHGB	**Renai**	**1.51**	**250**	P		**Pn**	**20 14 18.4**	**0.0**
	baz=249							
CHGB				*e*S		**Sn**	**20 14 37.3**	**-0.5**
	baz=249							
OWD	**Renai**	**1.54**	**247**	*e*P		**Pn**	**20 14 19.5**	**+0.7**
	baz=245							
OWD				*e*S		**Sn**	**20 14 36.9**	**-1.7**
	baz=245							
LIOB	**Emei**	**1.56**	**273**	*e*P		**Pn**	**20 14 19.3**	**+0.4**
	baz=271							
HGSD	**Ruisui**	**1.61**	**228**	*e*P		**Pn**	**20 14 18.9**	**-0.5**
	baz=227							
VWDT	**VWDT**	**1.66**	**241**	*e*P		**Pn**	**20 14 20.1**	**-0.1**
	baz=239							
VWDT				*e*S		**Sn**	**20 14 40.6**	**-0.4**
	baz=239							
EHY	**Hungye**	**1.67**	**231**	*e*P		**Pn**	**20 14 20.1**	**-0.2**
	baz=229							
DPDB	**Guoxing**	**1.73**	**252**	*e*P		**Pn**	**20 14 22.0**	**+0.9**
	baz=250							
YULB	**Yu-li**	**1.76**	**228**	*e*P		**Pn**	**20 14 20.7**	**-0.8**
	baz=227							
TWF1	**Yuli**	**1.79**	**227**	*e*P		**Pn**	**20 14 21.1**	**-0.8**
	baz=226							
SSLB	**Suanglung**	**1.80**	**245**	*e*P		**Pn**	**20 14 23.4**	**+1.3**
	baz=243							
SMLT	**Sun Moon Lake**	**1.81**	**248**	*e*P		**Pn**	**20 14 23.3**	**+1.1**
	baz=246							
TYC	**Yuchr**	**1.83**	**249**	*e*P		**Pn**	**20 14 23.4**	**+0.9**
	baz=247							
TYC				*e*S		**Sn**	**20 14 45.6**	**+0.6**
	baz=247							
FULB	**Fuli**	**1.90**	**224**	*e*P		**Pn**	**20 14 22.6**	**-0.8**
	baz=223							
WHYT	**Xinyi Township**	**1.92**	**243**	*e*P		**Pn**	**20 14 24.8**	**+1.1**
	baz=242							
WHYT				*e*S		**Sn**	**20 14 47.4**	**+0.2**
	baz=242							
WNT	**Mingjian**	**1.99**	**250**	*e*S		**Sn**	**20 14 50.0**	**+1.2**
	baz=248							

TAP 17 20:14:42.5,23.°16N×121.°04E,h7km,ML1.5,B,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ELDTW	**Lidau**	**0.04**	**322**	P		Pg	20 14 44.6	+0.5
	baz=330							
ELDTW				S		Sg	20 14 45.3	+0.1
	baz=330							
FULB	**Fuli**	**0.23**	**80**	*e*P		Pg	20 14 49.5	+2.3
	baz=80							
FULB				*e*S		Sg	20 14 53.9	+3.6
	baz=80							
TWF1	**Yuli**	**0.30**	**50**	P		Pb	20 14 49.8	-0.6
	baz=51							
TWG	**Pinlang**	**0.34**	**175**	*e*S		Sb	20 14 55.9	-0.6
	baz=174							
WTP	**Ta-pu**	**0.40**	**283**	*e*P		Pb	20 14 52.1	0.0
	baz=282							
WTP				*i* S		Sb	20 14 58.0	-0.6
	baz=282							
TPUB	**Ta-pu**	**0.41**	**291**	*e*P		Pb	20 14 52.1	-0.1
	baz=290							
TPUB				*e*S		Sb	20 14 57.7	-0.9
	baz=290							
ALS	**Alishan**	**0.41**	**328**	*e*S		Pg	20 14 51.1	+0.4
	baz=238							
ALS	**Alishan**	**0.41**	**328**	*i* P		Pb	20 14 51.6	-0.8
	baz=328							
CHN4	**Tsaushan**	**0.46**	**295**	*e*P		Pb	20 14 53.2	+0.2
	baz=294							

TRN ***17*** *20:17:12.0,10.°57N×63.°05W,h3km,MD3.5*
FUNV ***17*** *20:17:13.0,10.°30N×62.°95W,h6km,MW3.2*
ISC 17 20:17:12.4±1.0,10.°32N±0.°03×62.°97W±0.°03,h12km±7km, n20,σ1s03/36,2C-1D,Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUNV	**Guanoco**	**0.16**	**169**	*e*P		**Pg**	**20 17 15.9**	**-0.1**
GUNV				*e*S		**Sg**	**20 17 18.8**	**+0.1**
CRUV	**Carupano**	**0.44**	**324**	*e*P		**Pg**	**20 17 21.0**	**0.

comp=E,828nm,0.2s
FNA Florina 0.54 89 *i* PG **Pn 20 31 27.8 +0.5**
FNA *i* SG **Sg 20 31 33.3 +0.5**
FNA Florina 0.54 89 P **Pb 20 31 24.9 -0.5**
FNA S **Sg 20 31 33.1 +0.4**
FNA AML AML 20 31 35.6
comp=E,1538μm,0.3s
FNA AML AML 20 31 36.0
comp=N,1774μm,0.2s
TPE Tepelena 0.69 226 P **Pb 20 31 26.9 -1.1**
TPE S **Sg 20 31 37.7 +0.3**
comp=N,98nm,0.6s
TPE Tepelena 0.69 226 *i* PG **Pb 20 31 27.0 -0.9**
TPE *i* SG **Sn 20 31 39.0 -0.6**
PHP Peshkopia 0.92 350 P **Pg 20 31 32.0 -0.6**
PHP S **Sn 20 31 45.1 -0.3**
PHP Peshkopia 0.92 350 *i* PG **Pg 20 31 32.1 -0.5**
PHP *i* SG **Sn 20 31 45.7 +0.3**
KZN Kozani 0.96 119 P **Pb 20 31 32.5 -0.2**
KZN S **Sn 20 31 46.5 +0.1**
comp=N,182nm,0.4s
KZN Kozani 0.96 119 P **Pb 20 31 32.6 -0.2**
KZN S **Sn 20 31 47.6 +1.2**
KZN AML AML 20 31 50.5
comp=N,373μm,0.3s
KZN AML AML 20 31 50.8
comp=E,300μm,0.3s
KPRO Kipourio 0.98 147 P **Pb 20 31 32.5 -0.5**
KPRO S **Sn 20 31 47.4 +0.6**
comp=E,112nm,0.5s
KPRO Kipourio 0.98 147 P **Pb 20 31 32.4 -0.5**
SRN Sarande 1.03 210 P **Pn 20 31 33.7 -0.3**
SRN S **Sg 20 31 48.4 +0.4**
comp=E,48nm,0.4s
SRN Sarande 1.03 210 *i* PG **Pg 20 31 34.7 +0.2**
SRN *i* SG **Sg 20 31 50.2 +2.2**
IGT Igoumenitsa 1.27 192 P **Pg 20 31 38.7 -0.3**
IGT S **Sg 20 31 56.8 +1.2**
comp=E,68nm,0.5s
IGT Igoumenitsa 1.27 192 P **Pb 20 31 38.0 +0.2**
IGT AML AML 20 32 02.0
comp=N,125μm,0.5s
IGT AML AML 20 32 02.4
comp=E,153μm,0.5s
GRG Griva 1.33 82 P **Pb 20 31 38.8 -0.1**
GRG S **Sg 20 31 57.5 -0.1**
comp=E,68nm,0.5s
GRG Griva 1.33 82 P **Pn 20 31 38.3 +0.1**
SKO Skopje 1.33 26 *e*Pg **Pg 20 31 39.6 -0.6**
SKO *i* Sg **Sg 20 31 56.4 -1.2**
SKO *e*Lg Lg 20 31 59.3
comp=N,6.2nm,0.4s
SKO *e*Lg Lg 20 32 00.5
comp=E,3.9nm,0.5s
PUK Puka 1.39 336 *i* PN **Pg 20 31 41.3 -0.1**
PUK *i* SN **Sg 20 32 01.8 +2.1**
STIP Stip 1.47 51 *i* Pn **Pg 20 31 42.6 +0.5**
VAY Valandovo 1.54 69 *i* Pn **Pb 20 31 42.3 -0.2**
LIT Litokhoron 1.55 115 P **Pb 20 32 42.5 -0.1**
LIT S **Sg 20 32 04.0 -0.5**
comp=E,60nm,0.6s
LIT Litokhoron 1.55 115 P **Pb 20 31 42.5 -0.1**
THL Klokotos Trika 1.59 139 P **Pb 20 31 43.1 -0.2**
THL Klokotos Trika 1.59 139 P **Pb 20 31 42.9 -0.5**
BCI Bajram Curri 1.65 344 *i* PN **Pg 20 31 45.9 -0.5**
BCI *i* SN **Sg 20 32 09.5 +1.7**
KNT Kendrikon 1.73 76 P **Pb 20 31 44.6 -1.2**
MAKR Makrakomi, Fth 2.09 147 P **Pb 20 31 51.0 -0.9**
PLG Polygyros 2.16 100 P **Pn 20 31 50.2 +0.7**
AGG Agios Georgios 2.17 143 P **Pb 20 31 51.7 -1.5**
ANX Ano Chora 2.38 156 P **Pb 20 31 54.7 -2.2**
XOR Xorichti 2.40 125 P **Pn 20 31 53.7 +0.9**
KLV Kalavryta, Ach 2.96 157 P **Pb 20 32 03.9 -2.8**

IDC **17** *21:02:39.8±0.4, 9.°93N×84.°28W, h0km, mb4.4/24, mb1 4.6/28, mb1mx4.6/36, mbtmp4.5/28, ML3.9/4, MS4.7/28, Ms1 4.7/28, ms1mx4.6/33, Error ellipse: s-maj=15.5km s-min=7.0km az=38.0*
UCR **17** *21:02:41.2±1.1, 9.°47N×84.°90W, h17km±3km, MD4.1, mb5.2(NEIC), Fault plane solution: NP1:φ=82.30000°, δ=56.36000°, λ=71.89000°.*
NEIC **17** *21:02:42.8±1.6, 9.°70N±0.°06×84.°72W±0.°06, h25km±3km, Error ellipse: s-maj=9.6km s-min=7.9km az=58.0*
MOS **17** *21:02:42.0±1.2, 9.°82N×84.°67W, h26km, mb5.1/11, Error ellipse: s-maj=9.3km s-min=4.7km az=112.5*
BGR **17** *21:02:43.7±0.0, 9.°06N×83.°92W, h33km, mb5.5, Ms4.9*
UPA **17** *21:02:43.2±2.5, 9.°62N×84.°84W, h29km±32km, MW5.6*
GCMT **17** *21:02:45.0±0.1, 9.°54N±0.°01×84.°94W±0.°01, h21km, MW5.3/140, Moment Tensor Solution. s122,c192; s140,c243; Duration: 1ŝ1 Moment tensor: Scale 10^17 Nm; Mrr=0.87±.02; Mθθ=0.82±.01; Mφφ=0.05±.01; Mrθ=0.77±.03; Mrφ=0.34±.01; Mθφ=0.38±.03; Best double couple: M0=1.25500×10^17 NP1:φs=286.00000°, δ=24.00000°, λ=82.00000°. NP2:φs=115.00000°, δ=67.00000°, λ=93.00000°. Principal axes: T 1.2170, Plg=68.0000°, Azm=31.0000°; N 0.0760, Plg=3.0000°, Azm=293.0000°; P -1.2930, Plg=22.0000°, Azm=202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
INET **17** *21:02:48.4, 9.°95N×84.°89W, h11km, ML4.8*
SNET **17** *21:02:54.7±3.0, 10.°61N×85.°09W, h0km±999km, ML4.8*
ISC 17 21:02:42.8±0.7, **9.°61N**±0.°04×**84.°81W**±0.°03, **h27**km±4km, **n1257**, **σ1ŝ29**/1214, **mb5.1**/272, **MS4.7**/38, **13C-29D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**0.69**	**348**	*d*	*i*	P	**Pb**	**21 02 55.5**	**-0.8**
JTS	**Las Juntas de**	**0.69**	**348**		Pg		**Pb**	**21 02 55.9**	**-0.4**
	4μm,0.3s,baz=141,slow=13,SNR=4840								
JTS					Lg		Lg	21 03 06.7	
	7μm,0.3s,baz=330,slow=20,SNR=37								
JTS	**Las Juntas de**	**0.69**	**348**	⇓	*i*	P	**Pb**	**21 02 55.7**	**-0.7**
JTS	**Las Juntas de**	**0.69**	**348**	⇓	*i*	P	**Pb**	**21 02 55.7**	**-0.7**
JTS					*e*	S	**Sb**	**21 03 05.5**	**0.0**
JTS	**Las Juntas de**	**0.69**	**348**				**Pb**	**21 02 55.6**	**-0.8**
HDC	**Heredia**	**0.79**	**60**	⇓	*i*	P	**Pn**	**21 02 58.0**	**-0.2**
HDC					*e*	S	**Sn**	**21 03 11.5**	**+2.3**
HDC	**Heredia**	**0.79**	**60**	⇓	*i*	P	**Pn**	**21 02 58.1**	**-0.2**
HDC	**Heredia**	**0.79**	**60**				**Pn**	**21 02 57.9**	**-0.4**
LCR2	**La Lucha 2**	**0.81**	**80**	⇓	*i*	P	**Pn**	**21 02 57.5**	**-1.1**
SJS	**Escuela Geolog**	**0.81**	**66**	*e*	P		**Pn**	**21 02 58.0**	**-0.6**
CASO	**Castillo**	**0.82**	**5**	⇓	*i*	P	**Pb**	**21 02 58.5**	**0.0**
ARE1	**Arenal 1**	**0.85**	**6**	⇓	*i*	P	**Pb**	**21 02 59.3**	**+0.2**
FORC	**Fortuna**	**0.86**	**9**	⇓	*i*	P	**Pb**	**21 02 59.2**	**0.0**
CEDE	**Laguna Cedeo**	**0.88**	**7**	*i*	P		**Pb**	**21 02 59.8**	**+0.2**
CEDE				⇓	*i*	P	**Pb**	**21 02 59.8**	**+0.2**
PLVR	**Palo Verde**	**0.91**	**324**	⇓	*e*	P	**Pn**	**21 02 59.0**	**-0.9**
EDDO	**Dominical**	**1.00**	**111**	*e*	P		**Pn**	**21 02 59.6**	**-1.3**
EDDO					*e*	S	**Sn**	**21 03 13.8**	**-0.4**
AMAS	**Alto Masis**	**1.01**	**350**	⇓	*i*	P	**Pn**	**21 03 01.3**	**0.0**
AMAS					*i*	S	**Sb**	**21 03 16.9**	**+2.1**
ACAL	**Aguas Claras**	**1.04**	**348**	⇓	*i*	P	**Pn**	**21 03 01.9**	**+0.2**
CUI	**Cuipilapa**	**1.10**	**341**	⇓	*i*	P	**Pn**	**21 03 02.5**	**+0.1**
CVTR	**Volcan Turrial**	**1.11**	**68**	⇓	*i*	P	**Pb**	**21 03 03.5**	**-0.1**
PTEN	**Parque Tenorio**	**1.11**	**351**	⇓	*i*	P	**Pb**	**21 03 03.2**	**-0.3**
COLC	**Colonia**	**1.12**	**340**	⇓	*i*	P	**Pn**	**21 03 02.8**	**+0.1**
HORNC	**Hornillas**	**1.16**	**342**	*e*	P		**Pn**	**21 03 03.4**	**+0.1**
LIM1	**Limonal**	**1.17**	**338**	⇓	*e*	P	**Pn**	**21 03 03.5**	**+0.1**
GUAB	**Guayabo de Bag**	**1.17**	**339**	⇓	*i*	P	**Pn**	**21 03 03.5**	**+0.1**
MESS	**Mesas**	**1.19**	**341**	⇓	*e*	P	**Pn**	**21 03 04.1**	**+0.4**
MESS					*e*	S	**Sb**	**21 03 21.7**	**+2.0**
EDLM	**Las Mercedes**	**1.25**	**105**	*e*	P		**Pn**	**21 03 04.0**	**-0.5**
EDLM					*e*	S	**Sb**	**21 03 23.4**	**+1.9**
GPS2	**Hotel Rincn d**	**1.26**	**335**	*e*	P		**Pn**	**21 03 05.1**	**+0.4**
NY14	**Universidad de**	**1.26**	**325**	⇑	*i*	P	**Pn**	**21 03 04.9**	**+0.4**
GPS3	**Bodega del ICE**	**1.26**	**334**	⇓	*i*	P	**Pn**	**21 03 05.1**	**+0.4**
GPS1	**Guardaparques**	**1.28**	**335**	⇑	*i*	P	**Pn**	**21 03 05.4**	**+0.5**
LAPC	**Finca la Perla**	**1.30**	**332**	⇑	*e*	P	**Pn**	**21 03 05.5**	**+0.2**
BUEV	**Buena Vista**	**1.32**	**334**	⇑	*e*	P	**Pn**	**21 03 05.8**	**+0.3**
GBS3	**Finca Las Img**	**1.33**	**331**	⇑	*i*	P	**Pn**	**21 03 05.6**	**0.0**
GB1A	**Boringuen Arni**	**1.33**	**334**	⇓	*i*	P	**Pn**	**21 03 06.2**	**+0.4**
BUAI	**Buenos Aires**	**1.36**	**338**	⇓	*i*	P	**Pn**	**21 03 06.6**	**+0.6**
EDPN	**Palmar Norte**	**1.48**	**116**	*e*	P		**Pn**	**21 03 06.7**	**-0.9**
EDPN				⇑	*e*	P	**Pn**	**21 03 06.7**	**-0.9**
EDPN					*e*	S	**Sn**	**21 03 25.8**	**-0.3**
EDBA	**Buenos Aires**	**1.58**	**106**	⇓	*e*	P	**Pn**	**21 03 08.1**	**-0.9**
DRK0	**Durika**	**1.58**	**102**	⇑	*i*	P	**Pn**	**21 03 09.0**	**-0.2**
DRK0	**Durika**	**1.58**	**102**	⇑	*i*	P	**Pn**	**21 03 09.1**	**-0.2**
DRK0					*e*	S	**Sn**	**21 03 29.7**	**+0.9**
PTJ1	**Puerto Jimnez**	**1.83**	**126**	*e*	P		**Pn**	**21 03 12.6**	**+0.1**
PTJ1	**Puerto Jimnez**	**1.83**	**126**	*e*	P		**Pn**	**21 03 13.3**	**+0.8**
EDSV	**San Vito**	**1.98**	**113**	*e*	P		**Pn**	**21 03 14.8**	**+0.2**
BRU2	**Volcan**	**2.24**	**111**	*e*	P		**Pn**	**21 03 17.8**	**-0.4**
BRU2	**Volcan**	**2.24**	**111**	*e*	P		**Pn**	**21 03 17.2**	**-1.0**
SBAR3	**San Bartolo, C**	**2.29**	**124**	*i*	P		**Pn**	**21 03 20.1**	**+1.3**
CNI2	**El Empalme, Bo**	**2.31**	**94**	*i*	P		**Pn**	**21 03 19.5**	**+0.4**
ACON	**Acoyapa**	**2.37**	**351**				**Pn**	**21 03 20.5**	**+0.6**
BCO2	**Palmira**	**2.42**	**111**	⇑	*i*	P	**Pn**	**21 03 20.0**	**-0.8**
PTAR3	**Potrerillos Ar**	**2.46**	**112**	*e*	P		**Pn**	**21 03 19.9**	**-1.3**
BAGA3	**Bagala, Chiriq**	**2.52**	**117**	*e*	P		**Pn**	**21 03 22.4**	**+0.4**
DVD	**David**	**2.60**	**116**	*e*	P		**Pn**	**21 03 25.2**	**+2.1**
LOCO3	**Loma Colorada,**	**2.64**	**117**	*e*	P		**Pn**	**21 03 23.8**	**+0.1**
PEDE3	**Pedregal, Chir**	**2.65**	**117**	*i*	P		**Pn**	**21 03 24.3**	**+0.5**
CHGR2	**Aguacate**	**2.71**	**104**	*e*	P		**Pn**	**21 03 25.4**	**+0.8**
NANC3	**Nancito, Chiri**	**3.33**	**114**	*e*	P		**Pn**	**21 03 32.9**	**-0.3**
PVID3	**Puerto Vidal,**	**3.52**	**116**	*i*	P		**Pn**	**21 03 36.2**	**+0.5**
CNAZ3	**Canazas, Verag**	**3.77**	**109**	*e*	P		**Pn**	**21 03 42.0**	**+2.8**
ESTN	**Estel**	**3.79**	**336**				**Pn**	**21 03 40.7**	**+1.1**
MESA3	**La Mesa, Verag**	**3.86**	**112**	*e*	P		**Pb**	**21 03 49.3**	**-1.0**
GMAL	**Guarumal, Vera**	**3.98**	**117**	*i*	P		**Pn**	**21 03 43.2**	**+1.1**
SFRA3	**San Francisco,**	**4.02**	**109**	*e*	P		**Pn**	**21 03 43.9**	**+1.2**
STIA3	**Santiago, Vera**	**4.08**	**111**	*i*	P		**Pn**	**21 03 46.3**	**+2.9**
CALO3	**Calobre, Verag**	**4.12**	**108**	*e*	P		**Pn**	**21 03 45.0**	**+1.0**
PONU3	**Ponuga, Veragu**	**4.16**	**114**	*e*	P		**Pb**	**21 03 51.0**	**-4.2**
OCU3	**Ocu, Herrera**	**4.32**	**112**	*e*	P		**Pn**	**21 03 50.1**	**+3.4**
CRIS3	**El Cristo, Coc**	**4.35**	**108**	*e*	P		**Pn**	**21 03 49.9**	**+2.7**
CACAO	**El Cacao, Vera**	**4.51**	**120**	*e*	P		**Pn**	**21 03 50.5**	**+1.2**
CACAO					*e*	S	**Sn**	**21 04 38.2**	**-2.6**
ICCO	**Coco Island**	**4.61**	**209**	⇓	*e*	P	**Pn**	**21 03 46.8**	**-4.0**
CHIT3	**Chitre**	**4.64**	**110**	*e*	P		**Pn**	**21 03 48.9**	**-2.2**
CNCH	**Conchagua**	**4.70**	**321**	*e*	P		**Pn**	**21 03 55.6**	**+3.5**
VTON	**El Valle, Cocl**	**4.74**	**102**	*e*	P		**Pn**	**21 03 54.1**	**+1.6**
AZU	**Azuero**	**4.83**	**112**	⇓	*e*	P	**Pn**	**21 03 56.7**	**+3.0**
AZU	**Azuero**	**4.83**	**112**	*e*	P		**Pn**	**21 03 55.2**	**+1.5**
TOSI3	**Tonosi**	**4.84**	**117**	*e*	P		**Pb**	21 04 01.0	-6.0
MLIR	**Monte Lirio**	**4.90**	**94**	*e*	P		**Pn**	**21 03 55.5**	**+0.7**
ZANG	**Zanguenga, Cho**	**4.92**	**97**	*e*	P		**Pn**	**21 03 53.7**	**-1.2**
BCIP	**Isla Barro Col**	**4.92**	**95**	P			**Pn**	**21 03 55.6**	**+0.5**
BCIP	**Isla Barro Col**	**4.92**	**95**				**Pn**	**21 03 55.6**	**+0.5**
FRIJ	**El Hiral**	**5.03**	**94**	*e*	P		**Pn**	**21 03 57.2**	**+0.8**
TGUH	**Tegucigalpa,Un**	**5.04**	**332**				**Pn**	**21 03 58.1**	**+1.4**
BLLM	**Bellamira**	**5.08**	**319**	*e*	P		**Pn**	**21 03 59.9**	**+2.6**
UPA	**Univ. de Panam**	**5.24**	**96**	*i*	P		**Pn**	**21 03 58.7**	**-0.7**
COEB	**Comit de Eme**	**5.31**	**317**	*e*	P		**Pn**	**21 04 00.7**	**+0.2**
PAVA	**Las Pavas**	**5.74**	**316**	*e*	P		**Pn**	**21 04 09.4**	**+3.0**
CEVE	**Cerro Verde**	**6.31**	**312**	*e*	P		**Pn**	21 04 19.3	+5.0
CEVE						IAML		21 06 05.7	
	comp=Z,444nm,0.5s								
FAME	**Alcalda de S**	**6.61**	**310**	*e*	S		**Sn**	**21 05 30.0**	**-2.7**
UPD2	**Meteti**	**6.79**	**98**	*e*	P		**Pn**	**21 04 21.9**	**+1.1**
APG	**El Apazote**	**7.70**	**315**	Pn			**Pn**	**21 04 36.8**	**+3.4**
	comp=Z,1.0nm,0.3s,baz=150,slow=14,SNR=16								
APG					Sn		Sb	21 06 14.7	-13
	comp=Z,0.6nm,0.3s,baz=54,slow=19,SNR=1.7								
LCBC	**Los crdobas,**	**8.37**	**94**	*e*	P		**Pn**	**21 04 46.1**	**+3.8**
DBBC	**Dabeiba**	**8.89**	**106**	*e*	P		**Pn**	**21 04 54.2**	**+4.6**
UREC	**San Jos de Ur**	**9.35**	**101**	*e*	P		**Pn**	**21 04 55.8**	**-0.1**
CBOC	**Ciudad Bolivar**	**9.48**	**112**	*e*	P		**Pn**	**21 05 02.5**	**+4.7**
SJCC	**San Jacinto, C**	**9.49**	**87**	*e*	P		**Pn**	**21 05 00.4**	**+2.1**
SJCC	**San Jacinto, C**	**9.49**	**87**	*e*	P		**Pn**	**21 04 60.0**	**+2.1**
HELC	**Santa Helena**	**9.80**	**110**	*e*	P		**Pn**	21 05 07.3	+5.0
ZARC	**Zaragoza, Cauc**	**10.06**	**101**	*e*	P		**Pn**	**21 05 06.4**	**+0.7**
YOTC	**Yotoco, Valle**	**10.09**	**123**	*e*	P		**Pn**	**21 05 06.9**	**+0.8**
FSCY	**Frank Sound, G**	**10.27**	**20**	Pn			**Pn**	**21 05 07.4**	**-1.0**
GUY2C	**Guyana, Caldas**	**10.33**	**114**	*e*	P		**Pn**	**21 05 12.6**	**+3.0**
ARGC	**Ariguani, Magd**	**10.41**	**88**	*e*	P		**Pn**	21 05 20.8	+10
RREF	**El Recreo**	**10.48**	**116**	*e*	P		**Pn**	**21 05 16.0**	**+4.0**
SMRC	**Santa Marta, M**	**10.53**	**81**	*e*	P		**Pn**	**21 05 11.8**	**-0.2**
SMLC	**San Martn de**	**10.63**	**93**	*e*	P		**Pn**	21 05 21.5	+8.1
NORC	**Norcasia**	**10.64**	**111**	*e*	P		**Pn**	**21 05 17.7**	**+4.1**
BBAC	**Balboa, Cauca**	**10.64**	**135**	*e*	P		**Pn**	**21 05 15.8**	**+2.0**
PTBC	**PUERTO BERRIO,**	**10.69**	**106**	*e*	P		**Pn**	21 05 24.9	+11
POPC	**Popayan, Colom**	**10.71**	**130**	*e*	P		**Pn**	**21 05 17.6**	**+2.9**
SOTA	**Rioblanco**	**11.03**	**132**	*e*	P		**Pn**	**21 05 21.5**	**+2.2**
ORTC	**Ortega, Tolima**	**11.05**	**120**	*e*	P		**Pn**	**21 05 23.2**	**+4.0**
PCON	**Cinco Dias**	**11.05**	**130**	*e*	P		**Pn**	**21 05 23.0**	**+3.2**
TEIG	**Tepich**	**11.07**	**343**	Pn			**Pn**	21 05 25.3	+5.9
	comp=Z,0.9nm,0.3s,baz=319,slow=5.9,SNR=6.2								
TEIG						LR	LR	21 09 48.3	
	comp=Z,7μm,19.2s,baz=52,slow=39								
TEIG	**Tepich**	**11.07**	**343**				**Pn**	**21 05 19.2**	**-0.2**
MTDJ	**Mount Denham**	**11.10**	**39**				**Pn**	**21 05 19.4**	**-0.5**
CBCY	**The Bluff, Cay**	**11.19**	**25**	Pn			**Pn**	**21 05 19.5**	**-1.5**
CODC	**Agustn Codazz**	**11.21**	**87**	*e*	P		**Pn**	**21 05 22.2**	**+0.9**
OTAV	**Otavalo**	**11.26**	**145**	P			**Pn**	**21 05 23.3**	**+0.9**
OTAV	**Otavalo**	**11.26**	**145**	*e*	P		**Pn**	**21 05 18.4**	**-4.0**
OTAV	**Otavalo**	**11.26**	**145**				**Pn**	**21 05 23.3**	**+0.9**
ROSC	**El Rosal**	**11.43**	**114**	LR			LR	21 09 20.1	
	comp=Z,4μm,18.7s,baz=317,slow=36								
ROSC	**El Rosal**	**11.43**	**114**	Pn			**Pn**	**21 05 23.6**	**-1.1**
PAYG	**Puerto Ayora**	**11.58**	**208**	Pn			**Pn**	**21 05 28.1**	**+1.7**
BARC	**Barichara**	**11.89**	**104**	*e*	P		**Pn**	**21 05 33.1**	**+2.2**
CHIC	**Chingaza**	**12.05**	**113**	*e*	P		Pn	21 05 39.1	+5.9
FLOC	**Florencia**	**12.10**	**131**	*e*	P		Pn	21 05 39.4	+5.8
FLOC	**Florencia**	**12.10**	**131**	Pn			**Pn**	**21 05 34.5**	**+0.9**
RUSC	**La Rusia**	**12.19**	**107**	*e*	P		**P**	**21 05 45.3**	**-2.2**
RUSC	**La Rusia**	**12.19**	**107**				**Pn**	**21 05 34.3**	**-0.9**
CMIG	**Matias Romero**	**12.30**	**308**	Pn			**Pn**	**21 05 37.9**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=135,slow=9.2,SNR=13								
CMIG					Sn		Sn	21 08 03.9	+11
	comp=Z,0.6nm,0.3s,baz=198,slow=20,SNR=2.4								
URIC	**Uribia, Colomb**	**12.77**	**79**	Pn			**Pn**	**21 05 42.2**	**-0.4**
URIC							**Sn**	**21 08 05.3**	**+1.3**
MACC	**Macarena, Meta**	**13.18**	**124**	*e*	P		**P**	**21 06 00.1**	**+2.0**
GTBY	**Guantanamo Bay**	**13.89**	**41**				**Pn**	**21 05 57.1**	**-0.9**
SDV	**Santo Domingo**	**14.01**	**92**	Sn			**Sn**	**21 08 34.5**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=320,slow=18,SNR=2.3								
SDV						LR	LR	21 12 20.1	
	comp=Z,3μm,21.1s,baz=272,slow=43								
SDV	**Santo Domingo**	**14.01**	**92**	*e*	P		**Pn**	**21 06 01.6**	**+1.8**
SDV	**Santo Domingo**	**14.01**	**92**				**Pn**	**21 05 59.1**	**-0.7**
LGNH	**Logne**	**14.77**	**52**				**Pn**	**21 06 09.7**	**-0.3**
TLIG	**Tlapa**	**15.53**	**302**	P			**Pn**	**21 06 21.0**	**+0.8**
TLIG						IAmb	IAmb	21 06 39.3	
	comp=Z,174nm,1.3s								
SDDR	**Presa de Saban**	**16.07**	**53**	P			**Pn**	**21 06 25.3**	**-1.7**
BANI	**BANI**	**16.51**	**57**	Pn			**Pn**	**21 06 28.6**	**-4.1**
061Z	**Ochoppi**	**16.59**	**12**	Pn			**Pn**	**21 06 32.2**	**-1.3**
DR12	**Loma Pena Alta**	**17.51**	**57**	Pn			**Pn**	**21 06 42.5**	**-2.6**
ATAH	**Atahualpa**	**17.82**	**159**	P			**P**	**21 06 52.5**	**+2.6**
	comp=Z,0.7nm,0.3s,baz=334,slow=13,SNR=9.0								
ATAH						LR	LR	21 12 51.7	
	comp=Z,7μm,19.4s,baz=333,slow=34								
060A	**Indiantown**	**17.84**	**13**	P			**Pn**	**21 06 48.6**	**-0.4**
	baz=194								
DWPF	**Disney Wildern**	**18.68**	**9**	P			**Pn**	**21 06 59.6**	**+0.3**
	baz=190								
MOIG	**Morelia**	**18.73**	**304**	P			**P**	**21 06 59.2**	**-0.6**
MOIG						IAmb	IAmb	21 07 05.6	
	comp=Z,272nm,1.4s								
CRPR	**Cabo Rojo, PR**	**19.09**	**62**	P			**P**	**21 07 01.8**	**-1.7**
MLPR	**Magueyes Islan**	**19.14**	**62**	P			**P**	**21 07 02.9**	**-1.1**
OBIP	**Obispado Ponce**	**19.55**	**63**	P			**P**	**21 07 07.9**	**-0.6**
OBIP						IAmb	IAmb	21 07 24.7	
	comp=Z,103nm,1.5s								
656A	**Willston**	**19.77**	**6**	P			**P**	**21 07 09.8**	**-1.1**
656A						IAmb	IAmb	21 07 18.9	
	comp=Z,109nm,0.7s								
PCRV	**Puerto La Cruz**	**19.88**	**87**	P			**P**	**21 07 08.4**	**-3.9**
	comp=Z,0.6nm,0.3s,baz=307,slow=10,SNR=2.3								
PLCV	**Puerto La Cruz**	**19.93**	**87**	P			**P**	**21 07 08.4**	**-4.3**
SJG	**San Juan**	**19.97**	**63**	P			**P**	**21 07 11.3**	**-1.8**
SJG						pmax	pmax		
	comp=Z,74nm,1.1s								
SJG	**San Juan**	**19.97**	**63**	LR			LR	21 14 04.1	
	comp=Z,2μm,20.0s,baz=237,slow=35								
SJG	**San Juan**	**19.97**	**63**	P			**P**	**21 07 11.3**	**-1.8**
SJG						IAmb	IAmb	21 07 28.4	
	comp=Z,74nm,1.1s								
GCPR	**Guaynabo City**	**20.11**	**63**	P			**P**	**21 07 13.8**	**-0.9**
HUMP	**Col San Antoni**	**20.25**	**63**	P			**P**	**21 07 15.5**	**-0.7**
CBYP	**Canovanas**	**20.29**	**63**	P			Pn	21 07 17.6	-1.2
553A	**Crawfordville**	**20.48**	**1**	P			**P**	**21 07 17.7**	**-0.9**
MTP	**Monte Pirata**	**20.50**	**64**	P			**P**	**21 07 18.3**	**-0.6**
MTP						IAmb	IAmb	21 07 35.6	
	comp=Z,78nm,1.2s								
ZAIG	**Zacatecas**	**21.46**	**310**	P			**P**	**21 07 31.2**	**+1.7**
ZAIG						IAmb	IAmb	21 07 44.7	
	comp=Z,101nm,1.5s								
BRAL	**Brewton**	**21.55**	**355**	P			**P**	**21 07 29.3**	**-0.8**
BRAL	**Brewton**	**21.55**	**355**	P			**P**	**21 07 30.8**	**+0.7**
	baz=174								
353A	**Camilla**	**21.64**	**1**	P			**P**	**21 07 32.2**	**+1.2**
	baz=181,SNR=7.5								
KVTX	**Kingsville**	**21.70**	**327**	P			**P**	**21 07 30.6**	**-1.0**
TIGA	**Tifton**	**21.75**	**3**	P			**P**	**21 07 31.6**	**-0.6**
TIGA						IAmb	IAmb	21 07 36.7	
	comp=Z,119nm,1.1s								
TIGA	**Tifton**	**21.75**	**3**	P			**P**	**21 07 33.1**	**+0.9**
	baz=183								
352A	**Blakely**	**21.76**	**360**	P			**P**	**21 07 32.7**	**+0.3**
352A	**Blakely**	**21.76**	**360**	P			**P**	**21 07 33.0**	**+0.7**
	baz=180,SNR=6.4								
254A	**Abbeville**	**22.27**	**3**	P			**P**	**21 07 38.5**	**+0.7**
	baz=184,SNR=20								
252A	**Lumpkin**	**22.28**	**0**	P			**P**	**21 07 38.8**	**+0.9**
	baz=180,SNR=26								
250A	**Grady**	**22.30**	**357**	P			**P**	**21 07 38.2**	**+0.1**
255A	**Hazlehurst**	**22.31**	**5**	P			**P**	**21 07 39.2**	**+1.0**
255A						IAmb	IAmb	21 07 50.3	
	comp=Z,91nm,1.1s								
255A	**Hazlehurst**	**22.31**	**5**	P			**P**	**21 07 38.8**	**+0.5**
	baz=186,SNR=6.1								
253A	**Americus**	**22.35**	**2**	P			**P**	**21 07 38.0**	**-0.7**
253A	**Americus**	**22.35**	**2**	P			**P**	**21 07 38.9**	**+0.2**
	baz=182								
256A	**Glennville**	**22.43**	**7**	P			**P**	**21 07 39.6**	**+0.2**
	baz=187								
257A	**Skidaway Islan**	**22.53**	**8**	P			**P**	**21 07 41.4**	**+0.8**
	baz=190								
HKT	**Hockley**	**22.71**	**335**	P			**P**	**21 07 40.3**	**-2.1**
HKT						pmax	pmax		
	comp=Z,43nm,1.2s								
HKT	**Hockley**	**22.71**	**335**	P			**P**	**21 07 40.3**	**-2.1**
NNA	**Nana**	**22.87**	**160**	*i*	P		**P**	**21 07 45.2**	**+0.8**
NNA						pmax	pmax		
	comp=Z,56nm,1.1s								
NNA	**Nana**	**22.87**	**160**	P			**P**	**21 07 48.0**	**+3.7**
	comp=Z,6.6nm,0.5s,baz=333,slow=11,SNR=3.8								
NNA						LR	LR	21 15 54.1	
	comp=Z,2μm,18.6s,baz=320,slow=35								
NNA	**Nana**	**22.87**	**160**	P			**P**	**21 07 43.1**	**-1.3**

X55A Gracelyn & Ava 24.92 6 P P 21 08 03.8 +0.2
baz=187,SNR=11
X54A Belton 24.92 5 P P 21 08 03.6 -0.1
baz=186,SNR=10.0
X56A White Oak 25.01 7 P P 21 08 04.6 +0.2
baz=189,SNR=9.5
Y60A Bolivia 25.02 13 P P 21 08 04.3 -0.3
Y60A Bolivia 25.02 13 P P 21 08 05.0 +0.4
baz=195
CCAR Cane Creek 25.03 346 P P 21 08 05.0 +0.4
JCT Junction City 25.04 328 P P 21 08 03.6 -1.2
JCT pmax pmax
comp=Z,69nm,1.2s
JCT Junction City 25.04 328 P P 21 08 03.6 -1.2
JCT IAmb IAmb 21 08 07.2
comp=Z,69nm,1.2s
JCT Junction City 25.04 328 P P 21 08 03.6 -1.2
baz=143,SNR=19
X57A Johnson Farm, 25.11 9 P P 21 08 04.8 -0.6
baz=191
OXF Oxford 25.14 351 P P 21 08 04.9 -0.8
OXF pmax pmax
comp=Z,60nm,0.4s
OXF Oxford 25.14 351 P P 21 08 04.9 -0.8
WLAR White Oak Lake 25.15 344 P P 21 08 05.5 -0.3
WHTX Lake Whitney, 25.17 334 P P 21 08 04.5 -1.4
WHTX IAmb IAmb 21 08 08.6
comp=Z,46nm,0.8s
WHTX Lake Whitney, 25.17 334 P P 21 08 04.7 -1.2
baz=149,SNR=9.3
BIRD Birdtown, Kers 25.24 8 P P 21 08 05.9 -0.6
BIRD IAmb IAmb 21 08 19.2
comp=Z,70nm,1.0s
PAULI Pauline 25.24 6 P P 21 08 06.9 +0.3
PAULI IAmb IAmb 21 08 17.9
comp=Z,53nm,1.0s
BG3 Lake Jocassee 25.32 4 P P 21 08 08.2 +0.8
BG3 IAmb IAmb 21 08 19.5
comp=Z,89nm,1.3s
X58A Rowland 25.33 11 P P 21 08 06.6 -0.7
X58A IAmb IAmb 21 08 19.4
comp=Z,49nm,1.0s
X58A Rowland 25.33 11 P P 21 08 07.8 +0.5
baz=192
W52A Murphy 25.38 2 P P 21 08 08.1 +0.3
W52A IAmb IAmb 21 08 18.9
comp=Z,63nm,1.0s
W52A Murphy 25.38 2 P P 21 08 07.9 0.0
baz=182,SNR=8.8
X43A Marvell 25.41 348 P P 21 08 08.8 +0.7
X43A Marvell 25.41 348 P P 21 08 06.5 -1.6
baz=166
W49A Belvidere 25.43 357 P P 21 08 07.6 -0.6
baz=176,SNR=9.1
PLAL Pickwick Lake 25.43 354 IAmb IAmb 21 08 11.6
comp=Z,91nm,1.5s
W51A Cleveland 25.43 0 P P 21 08 07.8 -0.5
baz=180,SNR=23
W54A Cherokee Point 25.47 5 P P 21 08 09.4 +0.7
baz=186,SNR=14
W50A Signal Mountai 25.48 359 P P 21 08 08.1 -0.7
W50A Signal Mountai 25.48 359 P P 21 08 08.6 -0.2
baz=179,SNR=12
W53A Cullowhee 25.49 3 P P 21 08 09.1 +0.2
baz=184,SNR=13
X59A McDuffie Farm, 25.49 12 P P 21 08 08.7 -0.1
baz=194
SWET Sewanee 25.51 358 P P 21 08 08.2 -0.8
SWET IAmb IAmb 21 08 12.8
comp=Z,65nm,1.2s
KMSC Kings Mountain 25.61 7 P P 21 08 10.1 +0.2
KMSC Kings Mountain 25.61 7 P P 21 08 09.7 -0.2
baz=188,SNR=8.2
X60A Albert Glenn T 25.63 13 P P 21 08 10.1 +0.1
baz=196
W56A Indian Trail 25.70 8 P P 21 08 10.6 -0.1
baz=189
CPCT Cooper Cave 25.72 1 P P 21 08 10.4 -0.5
W58A Raeford 25.80 11 P P 21 08 11.5 -0.2
baz=192
W57A Gilead 25.80 9 P P 21 08 10.9 -0.8
W57A IAmb IAmb 21 08 16.4
comp=Z,52nm,1.2s
W57A Gilead 25.80 9 P P 21 08 11.6 -0.1
baz=191,SNR=8.6
X40A Basin Creek Fa 25.83 345 P P 21 08 10.7 -1.2
X40A Basin Creek Fa 25.83 345 P P 21 08 10.4 -1.5
baz=161
V50A Pikevile 25.95 359 P P 21 08 12.8 -0.2
baz=179,SNR=19
TKL Tuckaleechee C 25.95 2 P P 21 08 13.1 +0.1
TKL pmax pmax
comp=Z,51nm,1.1s
TKL Tuckaleechee C 25.95 2 P P 21 08 12.1 -0.9
comp=Z,14nm,0.5s,baz=173,slow=7.0,SNR=16
TKL LR LR 21 18 34.4
comp=Z,2µm,20.4s,baz=196,slow=37
TKL Tuckaleechee C 25.95 2 P P 21 08 13.1 +0.1
TKL IAmb IAmb 21 08 24.6
comp=Z,50nm,1.1s
UALR University of 25.98 346 P P 21 08 12.7 -0.5
UALR IAmb IAmb 21 08 15.9
comp=Z,57nm,1.4s
V53A Saluda 26.00 4 P P 21 08 12.8 -0.7
V53A IAmb IAmb 21 08 28.7
comp=Z,50nm,1.2s
V53A Saluda 26.00 4 P P 21 08 13.2 -0.3
baz=184,SNR=9.2
V49A McMinnville 26.06 358 P P 21 08 13.4 -0.6
baz=177,SNR=8.2
V48A Smith Brothers 26.08 356 P P 21 08 13.5 -0.7
V48A IAmb IAmb 21 08 16.1
comp=Z,100nm,1.5s
V51A Loudon 26.08 1 P P 21 08 14.1 -0.1
V51A Loudon 26.08 1 P P 21 08 13.8 -0.3
baz=181,SNR=14
MIAR Mount Ida 26.09 343 P P 21 08 14.4 +0.1
MIAR pmax pmax
comp=Z,109nm,1.5s
MIAR Mount Ida 26.09 343 P P 21 08 14.4 +0.1
MIAR IAmb IAmb 21 08 17.0
comp=Z,109nm,1.4s
MIAR Mount Ida 26.09 343 P P 21 08 14.7 +0.4
baz=160,SNR=14
W59A Clinton 26.10 12 P P 21 08 14.4 +0.1
baz=194
V52A Sevierville 26.14 2 P P 21 08 14.4 -0.3
V52A IAmb IAmb 21 08 26.3
comp=Z,37nm,1.0s
V52A Sevierville 26.14 2 P P 21 08 14.6 -0.1
baz=182,SNR=8.5
W60A Pink Hill 26.14 13 P P 21 08 14.6 -0.1
baz=196
V54A Nebo 26.18 5 P P 21 08 15.3 +0.2
baz=186,SNR=10
HPIG 26.18 314 P P 21 08 15.1 -0.3
HPIG IAmb IAmb 21 08 33.7
comp=Z,61nm,1.5s
CNNC Cliffs of the 26.28 13 P P 21 08 16.2 +0.2
CNNC Cliffs of the 26.28 13 P P 21 08 16.0 0.0
baz=195
V55A Taylorsville 26.33 7 P P 21 08 16.6 +0.2
V55A IAmb IAmb 21 08 28.4
comp=Z,50nm,1.4s
V55A Taylorsville 26.33 7 P P 21 08 16.8 +0.4
baz=188,SNR=6.2
W41B Gary Mavity, V 26.34 346 P P 21 08 16.0 -0.5
W41B IAmb IAmb 21 08 20.0
comp=Z,44nm,1.4s
W41B Gary Mavity, V 26.34 346 P P 21 08 16.4 -0.1
baz=163,SNR=10
LPAR Lepanto 26.36 350 P P 21 08 15.9 -0.7
HBAR Harrisburg 26.37 349 P P 21 08 16.1 -0.7
V56A Mocksville 26.38 8 P P 21 08 16.6 -0.3
baz=189
CLTN Cedars of Leba 26.40 357 P P 21 08 16.3 -0.8
TX31 Lajitas Ar. Si 26.40 321 P P 21 08 16.1 -1.2
TX31 IAmb IAmb 21 08 28.5
comp=Z,46nm,1.3s
TX32 Lajitas Array 26.40 321 P P 21 08 16.2 -1.1
TX32 IAmb IAmb 21 08 28.5
comp=Z,46nm,1.3s
TXAR Lajitas Array 26.40 321 P P 21 08 17.0 -0.3
TXAR Lajitas Array 26.40 321 P P 21 08 18.2 +0.9
comp=Z,1.8nm,0.4s,baz=149,slow=9.1,SNR=56
TXAR PcP PcP 21 11 45.2 +2.6
comp=Z,1.0nm,0.7s,baz=133,slow=5.0,SNR=5.5
TXAR Lajitas Array 26.40 321 P P 21 08 17.0 -0.3
W61A Ground Anchor 26.43 14 P P 21 08 17.9 +0.5
baz=197
WHAR Wooly Hollow 26.46 346 P P 21 08 16.9 -0.8
WHAR IAmb IAmb 21 08 35.0
comp=Z,50nm,1.2s
WVT Waverly 26.54 355 P P 21 08 17.9 -0.5
WVT pmax pmax
comp=Z,67nm,1.5s
WVT Waverly 26.54 355 P P 21 08 17.9 -0.5
WVT IAmb IAmb 21 08 23.1
comp=Z,67nm,1.5s
WVT Waverly 26.54 355 P P 21 08 16.6 -1.8
baz=173
V57A Coltrane Farms 26.56 9 P P 21 08 18.3 -0.2
baz=191,SNR=7.2
V58A Windy Hill, Pi 26.58 10 P P 21 08 18.3 -0.4
V58A IAmb IAmb 21 08 20.3
comp=Z,92nm,1.4s
V58A Windy Hill, Pi 26.58 10 P P 21 08 18.5 -0.2
baz=192,SNR=10
U51A La Follette 26.66 1 P P 21 08 19.4 -0.1
baz=182
GNAR Gosnell 26.66 351 P P 21 08 18.4 -1.0
X37A Clayton 26.68 340 P P 21 08 20.1 +0.5
X37A IAmb IAmb 21 08 23.2
comp=Z,60nm,1.4s
U50A Jamestown 26.69 360 P P 21 08 19.2 -0.5
baz=180,SNR=14
ABTX Abilene, Hawle 26.69 331 P P 21 08 19.8 0.0
ABTX IAmb IAmb 21 08 30.5
comp=Z,52nm,1.2s
ABTX Abilene, Hawle 26.69 331 P P 21 08 19.6 -0.2
baz=146,SNR=7.6
U52A Thorn Hill 26.70 3 P P 21 08 19.6 -0.1
baz=183,SNR=9.9
U53A Fall Branch 26.71 4 P P 21 08 19.9 0.0
baz=185,SNR=15
LNXT Lenox 26.71 352 P P 21 08 19.6 -0.3
V59A Middlesex 26.72 12 P P 21 08 19.8 -0.1
baz=194,SNR=7.3
W39A Magazine 26.76 344 P P 21 08 20.5 +0.2
W39A Magazine 26.76 344 P P 21 08 20.9 +0.7
baz=160,SNR=7.6
PEBM Pemiscott Bayo 26.78 351 P P 21 08 19.8 -0.7
U49A Red Boiling Sp 26.80 358 P P 21 08 20.2 -0.4
baz=178,SNR=8.8
TZTN Tazewell 26.84 2 P P 21 08 20.6 -0.4
TZTN IAmb IAmb 21 08 35.4
comp=Z,83nm,1.5s
TZTN Tazewell 26.84 2 P P 21 08 21.3 +0.3
baz=183,SNR=9.7
GLAT Glass 26.85 352 P P 21 08 20.1 -1.0
U56A King 26.92 8 P P 21 08 21.5 -0.3
U56A IAmb IAmb 21 08 24.0
comp=Z,55nm,1.4s
U56A King 26.92 8 P P 21 08 21.9 +0.1
baz=190
U54A Nelsons Funny 26.93 5 P P 21 08 22.4 +0.5
U54A IAmb IAmb 21 08 23.8
comp=Z,94nm,1.4s
U54A Nelsons Funny 26.93 5 P P 21 08 21.8 -0.1
baz=186
V60A Jim Taylor Roa 26.93 14 P P 21 08 21.4 -0.4
V60A IAmb IAmb 21 08 37.0
comp=Z,55nm,1.1s
V60A Jim Taylor Roa 26.93 14 P P 21 08 21.9 +0.1
baz=196
LCAR Lake Charles 26.97 349 P P 21 08 21.1 -1.0
LCAR IAmb IAmb 21 08 23.0
comp=Z,25nm,0.9s
U55A TA2, Sparta 26.99 7 P P 21 08 22.6 +0.1
baz=188,SNR=6.7
V61A Roper 27.12 15 P P 21 08 22.9 -0.6
V61A Roper 27.12 15 P P 21 08 23.6 0.0
baz=198
U57A Blanch 27.16 10 P P 21 08 23.9 0.0
baz=192,SNR=7.7
T51A Gray 27.25 2 P P 21 08 24.2 -0.5
baz=182
U58A Oxford 27.26 11 P P 21 08 24.5 -0.3
baz=193
T50A Nancy 27.29 360 P P 21 08 24.6 -0.5
baz=180
PARMO Parma 27.30 351 P P 21 08 24.6 -0.6
HENM Henderson Moun 27.32 352 P P 21 08 24.7 -0.6
T53A Wise 27.33 4 P P 21 08 25.5 0.0
baz=185,SNR=6.9
T47A Sharon Grove 27.34 356 P P 21 08 25.0 -0.5
T47A IAmb IAmb 21 08 36.1
comp=Z,51nm,1.2s
U59A Littleton 27.38 12 P P 21 08 25.0 -0.9
U59A Littleton 27.38 12 P P 21 08 25.7 -0.1
baz=195
T49A Edmonton 27.38 359 P P 21 08 25.4 -0.5
T49A IAmb IAmb 21 08 40.0
comp=Z,64nm,1.4s
T49A Edmonton 27.38 359 P P 21 08 25.2 -0.7
baz=178,SNR=7.1
T52A Hallie 27.43 3 P P 21 08 26.2 -0.1
T52A IAmb IAmb 21 08 28.8
comp=Z,74nm,1.3s
T52A Hallie 27.43 3 P P 21 08 26.2 -0.1
baz=184,SNR=8.1
T54A Tazewell 27.49 6 P P 21 08 26.4 -0.5
baz=187,SNR=9.0
PBMO Poplar Bluff 27.52 350 P P 21 08 26.3 -0.9
X34A Smith Ranch, M 27.59 336 P P 21 08 26.8 -1.1
U40A Yellville 27.61 346 P P 21 08 27.6 -0.4
U40A Yellville 27.61 346 P P 21 08 25.9 -2.1
baz=162
T55A Pulaski 27.63 7 P P 21 08 28.0 -0.2
baz=188
U60A Pendleton 27.63 13 P P 21 08 28.2 +0.2
baz=196
T56A Rocky Mt 27.64 8 P P 21 08 28.6 +0.4
baz=190
U61A Possum Corner 27.67 15 P P 21 08 27.9 -0.5
baz=198
W35A Tecumseh 27.71 338 P P 21 08 28.8 -0.1
T57A Hurt 27.73 10 P P 21 08 29.0 +0.1
T57A Hurt 27.73 10 P P 21 08 28.7 -0.3
baz=192,SNR=6.4
BLA Blacksburg 27.77 8 P P 21 08 29.8 +0.4
BLA pmax pmax
comp=Z,63nm,1.3s
BLA Blacksburg 27.77 8 P P 21 08 29.8 +0.4
BLA IAmb IAmb 21 08 39.8
comp=Z,63nm,1.2s
BLA Blacksburg 27.77 8 P P 21 08 29.6 +0.2
baz=189
T58A Grand View Acr 27.80 11 P P 21 08 29.2 -0.4
baz=193,SNR=5.7
HHAR Hobbs 27.82 344 P P 21 08 29.5 -0.4
S51A Beattyville 27.93 2 P P 21 08 30.4 -0.4
S51A IAmb IAmb 21 08 40.6
comp=Z,26nm,0.8s
S51A Beattyville 27.93 2 P P 21 08 30.3 -0.5
baz=182,SNR=6.8
S50A Richmond 27.95 1 P P 21 08 30.6 -0.3
baz=181,SNR=6.1
S52A Salyersville 27.99 3 P P 21 08 31.0 -0.4
baz=184
FNO Franklin 28.00 338 P P 21 08 30.5 -1.0
T59A Double "B" Far 28.02 12 P P 21 08 31.7 +0.1
T59A IAmb IAmb 21 08 33.4
comp=Z,44nm,1.3s
T59A Double "B" Far 28.02 12 P P 21 08 31.9 +0.3
baz=195,SNR=5.8
TUL1 Leonard 28.03 341 P P 21 08 29.7 -2.0
TUL1 Leonard 28.03 341 P P 21 08 31.1 -0.6
baz=156
S53A Williamson 28.05 5 P P 21 08 31.3 -0.6
baz=185
S49A Springfield 28.06 359 P P 21 08 31.3 -0.6
baz=179,SNR=6.2
WMOK Wichita Mounta 28.09 335 P P 21 08 30.4 -1.9
WMOK pmax pmax
comp=Z,34nm,1.4s
WMOK Wichita Mounta 28.09 335 P P 21 08 30.4 -1.9
WMOK IAmb IAmb 21 08 43.7
comp=Z,34nm,1.4s
WMOK Wichita Mounta 28.09 335 P P 21 08 32.1 -0.2
baz=150,SNR=6.3
MGMO Mountain Grove 28.24 347 P P 21 08 31.7 -1.9
S54A Dingess, Beckl 28.24 6 P P 21 08 33.6 -0.1
baz=187,SNR=5.4
S44A Carbondale 28.25 353 P P 21 08 32.2 -1.4
S44A IAmb IAmb 21 08 35.0
comp=Z,40nm,1.2s
LPIG La Paz 28.27 304 LR LR 21 20 40.8
comp=Z,1µm,18.5s,baz=105,slow=38
S55A Lewisburg 28.31 7 P P 21 08 34.6 +0.4
baz=189,SNR=8.9
S56A Natural Bridge 28.34 9 P P 21 08 34.4 -0.1
baz=191
SAML Samuel 28.34 130 P P 21 08 33.8 -0.9
SAML pmax pmax
comp=Z,7.0nm,0.8s
SAML Samuel 28.34 130 eP P 21 08 34.1 -0.6
SAML Samuel 28.34 130 P P 21 08 33.8 -0.9
USIN University of 28.35 355 P P 21 08 33.6 -0.9
USIN IAmb IAmb 21 08 35.0
comp=Z,79nm,1.4s
T60A Surry 28.37 14 P P 21 08 33.7 -1.0
T60A IAmb IAmb 21 08 39.1
comp=Z,49nm,1.1s
T60A Surry 28.37 14 P P 21 08 34.1 -0.5
baz=197
S57A Dark Hollow, R 28.52 10 P P 21 08 35.3 -0.8
baz=192
WCI Wyandotte Cave 28.53 358 P P 21 08 34.0 -2.1
WCI pmax pmax
comp=Z,80nm,1.3s
WCI Wyandotte Cave 28.53 358 P P 21 08 34.0 -2.1
WCI IAmb IAmb 21 08 36.8
comp=Z,80nm,1.3s
WCI Wyandotte Cave 28.53 358 P P 21 08 34.7 -1.5
baz=177
S58A Poland Farm, P 28.54 11 P P 21 08 35.7 -0.5
S58A IAmb IAmb 21 08 46.0
comp=Z,36nm,1.4s
S58A Poland Farm, P 28.54 11 P P 21 08 35.9 -0.3
baz=194
R50A Paris 28.55 1 P P 21 08 36.1 -0.2
R50A IAmb IAmb 21 08 37.6
comp=Z,89nm,1.4s
R50A Paris 28.55 1 P P 21 08 36.0 -0.4
baz=181,SNR=11
R49A Shelbyville 28.56 359 P P 21 08 35.7 -0.7
R49A Shelbyville 28.56 359 P P 21 08 35.5 -0.9
baz=179,SNR=9.6
R51A Hillsboro 28.59 2 P P 21 08 36.7 0.0
baz=182,SNR=19
R54A Victor 28.66 6 P P 21 08 37.4 +0.2
baz=188,SNR=9.6
R52A Catlettsburg 28.67 4 P P 21 08 37.0 -0.3
baz=184
FVM French Village 28.70 351 P P 21 08 36.4 -1.3
FVM pmax pmax
comp=Z,18nm,1.2s
FVM French Village 28.70 351 P P 21 08 36.4 -1.3
R53A Hurricane 28.71 5 P P 21 08 37.2 -0.5
R53A IAmb IAmb 21 08 47.6
comp=Z,41nm,0.9s
R53A Hurricane 28.71 5 P P 21 08 37.3 -0.5
baz=186,SNR=9.4
S59A Mechanicsville 28.84 12 P P 21 08 38.6 -0.3
baz=195
R55A Marlinton 28.86 8 P P 21 08 38.8 -0.4
R55A IAmb IAmb 21 08 41.4
comp=Z,47nm,1.3s
R55A Marlinton 28.86 8 P P 21 08 39.6 +0.5
baz=189
CCM Cathedral Cave 28.91 349 P P 21 08 37.9 -1.6
CCM pmax pmax
comp=Z,21nm,0.8s
CCM Cathedral Cave 28.91 349 P P 21 08 37.9 -1.6
CCM IAmb IAmb 21 08 56.0
comp=Z,21nm,0.8s
CCM Cathedral Cave 28.91 349 P P 21 08 38.2 -1.3
baz=167
R58B Mineral 28.91 11 P P 21 08 40.0 +0.4
R58B IAmb IAmb 21 08 41.5
comp=Z,38nm,1.4s
R58B Mineral 28.91 11 P P 21 08 39.3 -0.3
baz=194
S60A Water View 28.93 13 P P 21 08 39.3 -0.4
baz=197
R56A Bull Pasture M 29.08 9 P P 21 08 41.2 +0.1
baz=191,SNR=5.5
MNTX Cornudas Mount 29.11 322 P P 21 08 40.9 -0.5
MNTX Cornudas Mount 29.11 322 P P 21 08 40.8 -0.6
baz=134,SNR=22
R57A Stanardsville 29.12 10 P P 21 08 41.0 -0.3
baz=193
Q50A Georgetown 29.12 1 P P 21 08 40.9 -0.5
baz=182
S61A Accomac 29.14 15 P P 21 08 41.9 +0.4
baz=199
OLIL Olney 29.15 355 P P 21 08 40.7 -0.9
OLIL IAmb IAmb 21 08 43.0
comp=Z,84nm,1.4s
Q48A North Vernon 29.21 359 P P 21 08 41.1 -1.1
baz=178,SNR=5.4
R58A Rapidan 29.21 11 P P 21 08 42.2 0.0
baz=194,SNR=6.3
CBN Corbin Frederi 29.25 12 P P 21 08 42.6 +0.1
CBN Corbin Frederi 29.25 12 P P 21 08 42.4 -0.1
baz=195
Q49A Aurora 29.27 360 P P 21 08 42.0 -0.7
baz=180,SNR=6.5
Q53A Leroy 29.27 5 P P 21 08 41.8 -0.9
baz=186,SNR=9.8
R59A King George, V 29.30 12 P P 21 08 42.1 -0.8
baz=196
SLM Saint Louis 29.31 351 P P 21 08 42.0 -1.1
SLM pmax pmax
comp=Z,18nm,0.6s
SLM Saint Louis 29.31 351 P P 21 08 42.0 -1.1
SLM IAmb IAmb 21 09 00.7
comp=Z,18nm,0.6s
Q52A Bidwell 29.32 4 P P 21 08 42.9 -0.2
baz=185,SNR=17
Q51A Peebles 29.32 2 P P 21 08 42.7 -0.4
Q51A Peebles 29.32 2 P P 21 08 42.7 -0.4
baz=183,SNR=22
MSTX Muleshoe 29.33 328 P P 21 08 41.9 -1.6
MSTX Muleshoe 29.33 328 P P 21 08 41.7 -1.7
baz=142
Q54A Coxs Mills 29.47 6 P P 21 08 43.9 -0.5
Q54A IAmb IAmb 21 08 46.2
comp=Z,74nm,1.4s
Q54A Coxs Mills 29.47 6 P P 21 08 44.5 +0.1
baz=188,SNR=7.9
BLO Bloomington 29.48 357 P P 21 08 43.5 -1.0
BLO pmax pmax
comp=Z,25nm,1.0s
BLO Bloomington 29.48 357 P P 21 08 43.5 -1.0
BLO IAmb IAmb 21 08 55.0
comp=Z,24nm,0.9s
AMTX Amarillo 29.51 331 P P 21 08 44.4 -0.6
Q55A Buckhannon 29.57 7 P P 21 08 45.7 +0.3
baz=189,SNR=12
U32A Winter Ranch, 29.60 336 P P 21 08 43.7 -2.0
U32A IAmb IAmb 21 08 52.4
comp=Z,22nm,1.1s
P48A Milroy 29.73 359 P P 21 08 45.7 -1.1
P48A IAmb IAmb 21 08 47.7
comp=Z,41nm,0.8s
P48A Milroy 29.73 359 P P 21 08 45.3 -1.5
baz=179,SNR=11
Q56A Snyder Ridge, 29.74 9 P P 21 08 47.3 +0.4
Q56A IAmb IAmb 21 08 57.7
comp=Z,48nm,1.3s
Q56A Snyder Ridge, 29.74 9 P P 21 08 47.0 +0.1
baz=191,SNR=6.1
P51A Williamsport 29.79 3 P P 21 08 46.8 -0.5
P51A Williamsport 29.79 3 P P 21 08 46.6 -0.7
baz=183,SNR=6.5
P49A Miami Univ. Ec 29.80 0 P P 21 08 46.0 -1.4
baz=180,SNR=6.3
R61A Willards 29.84 15 P P 21 08 45.9 -1.8
R61A Willards 29.84 15 P P 21 08 47.9 +0.2
baz=199
Q57A Strasburg 29.86 10 P P 21 08 47.2 -0.7
baz=193
P50A Jamestown 29.89 2 P P 21 08 47.3 -0.9
baz=182
Q58A Fox Den Farm, 29.90 11 P P 21 08 48.6 +0.3
baz=194

P53A **Whipple** 29.91 5 P P 21 08 46.7 -1.6
P53A **Whipple** 29.91 5 P P 21 08 48.4 +0.1
baz=187,SNR=19
P46A **Rosedale** 29.96 356 P P 21 08 48.1 -0.7
P46A IAmb IAmb 21 08 59.0
comp=Z,23nm,0.8s
P52A **Corning** 29.99 4 P P 21 08 48.7 -0.4
baz=185,SNR=11
Q59A **Harwood** 30.03 13 P P 21 08 49.3 -0.1
baz=196
P55A **Reedsville** 30.10 8 P P 21 08 50.4 +0.3
baz=190,SNR=8.3
P54A **Burton** 30.12 7 P P 21 08 49.8 -0.4
baz=188
P43A **Skaggs, Pawnee** 30.20 353 P P 21 08 49.9 -1.1
P43A IAmb IAmb 21 08 51.5
comp=Z,74nm,1.5s
P56A **Dayton Farm, R** 30.24 9 P P 21 08 51.9 +0.6
baz=192,SNR=7.3
MCWV **Mont Chateau** 30.25 8 P P 21 08 50.8 -0.5
MCWV IAmb IAmb 21 09 02.3
comp=Z,38nm,1.4s
MCWV **Mont Chateau** 30.25 8 P P 21 08 51.7 +0.3
baz=190,SNR=5.5
Q60A **Greensboro** 30.35 14 P P 21 08 53.0 +0.8
baz=198
P57A **Homestead Farm** 30.36 10 P P 21 08 52.4 0.0
P57A IAmb IAmb 21 08 54.9
comp=Z,55nm,1.2s
P57A **Homestead Farm** 30.36 10 P P 21 08 53.0 +0.6
baz=193,SNR=9.0
O50A **Cable** 30.43 2 P P 21 08 52.4 -0.6
baz=182,SNR=8.3
O49A **Covington** 30.46 1 P P 21 08 52.0 -1.2
baz=181,SNR=9.2
O51A **Pataskala** 30.48 3 P P 21 08 52.9 -0.5
baz=184,SNR=13
O52A **Adamsville** 30.50 4 P P 21 08 52.9 -0.6
baz=186,SNR=8.8
P58A **Pank, Wackersv** 30.50 11 P P 21 08 53.8 +0.2
baz=194
SDMD **Soldier's Deli** 30.52 12 P P 21 08 53.5 -0.3
O48A **Farmland** 30.52 359 P P 21 08 52.6 -1.2
baz=179,SNR=15
ACSO **Alum Creek Sta** 30.54 3 P P 21 08 53.8 -0.2
ACSO **Alum Creek Sta** 30.54 3 P P 21 08 53.1 -0.9
baz=183,SNR=6.7
LPAZ **La Paz** 30.57 147 *e*P P 21 08 58.8 +3.7
LPAZ pmax pmax
comp=Z,2.0nm,0.7s
LPAZ **La Paz** 30.57 147 P P 21 08 55.9 +0.8
comp=Z,2.1nm,0.7s,baz=327,slow=5.8,SNR=6.4
LPAZ LR LR 21 22 08.1
comp=Z,2µm,21.5s,baz=316,slow=38
LPAZ **La Paz** 30.57 147 *e*P P 21 08 53.7 -1.4
LPAZ **La Paz** 30.57 147 P P 21 08 54.2 -0.9
O44A **Mansfield** 30.59 354 P P 21 08 53.1 -1.3
O44A IAmb IAmb 21 08 54.5
comp=Z,60nm,1.3s
O53A **New Philadelph** 30.68 5 P P 21 08 54.5 -0.7
baz=187,SNR=11
O54A **Avella** 30.70 7 P P 21 08 54.0 -1.3
O54A **Avella** 30.70 7 P P 21 08 55.0 -0.4
baz=188
SFIN **Lafayette** 30.71 357 P P 21 08 53.8 -1.6
baz=175,SNR=7.8
P59A **Jarrettsville** 30.80 13 P P 21 08 56.3 +0.1
baz=196,SNR=5.3
O55A **Ligonier** 30.86 8 P P 21 08 56.9 +0.1
baz=190,SNR=8.2
O56A **Blue Knob Stat** 31.03 9 P P 21 08 57.5 -0.9
O56A IAmb IAmb 21 09 10.7
comp=Z,71nm,1.4s
O56A **Blue Knob Stat** 31.03 9 P P 21 08 59.0 +0.7
baz=192,SNR=6.7
N50A **Nevada** 31.07 2 P P 21 08 57.8 -0.8
baz=183,SNR=6.0
HDIL **Hopedale** 31.08 353 P P 21 08 57.1 -1.6
baz=171
N48A **Decatur** 31.12 360 P P 21 08 57.8 -1.3
baz=179,SNR=10
O57A **Amberson** 31.14 11 P P 21 08 58.9 -0.3
baz=194,SNR=9.1
N47A **Urbana** 31.15 359 P P 21 08 57.2 -2.1
N47A IAmb IAmb 21 08 59.9
comp=Z,35nm,1.4s
N47A **Urbana** 31.15 359 P P 21 08 57.3 -2.1
baz=178
121A **Cookes Peak, D** 31.16 320 P P 21 08 59.7 0.0
121A IAmb IAmb 21 09 10.6
comp=Z,62nm,1.4s
121A **Cookes Peak, D** 31.16 320 P P 21 09 00.9 +1.2
baz=132,SNR=8.7
P60A **Greenville** 31.17 14 P P 21 08 58.6 -0.8
P60A **Greenville** 31.17 14 P P 21 08 59.6 +0.1
baz=198
MVL **Millersville** 31.19 13 P P 21 08 58.7 -0.9
MVL IAmb IAmb 21 09 01.8
comp=Z,43nm,1.4s
O58A **Lewisberry** 31.19 12 P P 21 09 00.3 +0.6
baz=195,SNR=5.1
N49A **Columbus Grove** 31.19 1 P P 21 08 58.5 -1.1
baz=181,SNR=16
HSIG 31.20 312 P P 21 09 00.6 +0.7
N52A **McGinn's Farm,** 31.20 5 P P 21 08 58.6 -1.2
baz=186,SNR=6.2
KSU1 **Kansas State U** 31.21 342 P P 21 08 57.9 -2.0
baz=157
P61A **Hammonton** 31.25 15 P P 21 08 59.5 -0.7
P61A **Hammonton** 31.25 15 P P 21 09 00.6 +0.5
baz=199
N51A **Ashland** 31.26 4 P P 21 08 59.9 -0.3
N51A **Ashland** 31.26 4 P P 21 08 59.4 -0.9
baz=184,SNR=5.3
N53A **Lisbon** 31.27 6 P P 21 09 00.0 -0.3
N53A IAmb IAmb 21 09 01.5
comp=Z,48nm,1.2s
N53A **Lisbon** 31.27 6 P P 21 08 59.5 -0.8
baz=187,SNR=5.3
SRIG **Santa Rosalia** 31.30 308 P P 21 09 01.0 +0.2
PSUB **Penn St. - Bra** 31.32 14 P P 21 08 57.2 -3.6
PSUB IAmb IAmb 21 09 10.9
comp=Z,30nm,1.4s
PAGS **Pennsylvania G** 31.33 12 P P 21 08 59.8 -1.1
319A **Douglas** 31.39 317 P P 21 09 02.8 +1.0
319A IAmb IAmb 21 09 15.6
comp=Z,40nm,1.2s
N41A **Harden Midland** 31.43 351 IAmb IAmb 21 09 11.3
comp=Z,22nm,0.9s
N55A **Marion Center** 31.47 8 P P 21 09 01.8 -0.3
baz=191,SNR=6.7
SSPA **Standing Stone** 31.50 10 P P 21 09 01.5 -0.9
SSPA IAmb IAmb 21 09 04.2
comp=Z,51nm,1.3s
SSPA **Standing Stone** 31.50 10 P P 21 09 02.4 0.0
baz=193
N54A **Moraine State** 31.52 7 P P 21 09 01.9 -0.6
N54A IAmb IAmb 21 09 03.9
comp=Z,53nm,1.5s
N54A **Moraine State** 31.52 7 P P 21 09 02.1 -0.4
baz=189
O59A **Robesonia** 31.52 13 P P 21 09 03.2 +0.6
baz=196,SNR=8.0
M47A **Cromwell** 31.63 359 P P 21 09 01.7 -1.9
baz=178
M51A **Elyria** 31.68 4 P P 21 09 02.5 -1.5
baz=185
N57A **Milroy** 31.68 11 P P 21 09 04.0 0.0
baz=194,SNR=5.2
Y22D **IRIS PASSCAL I** 31.70 324 P P 21 09 04.1 -0.3
baz=135
O61A **Allentown** 31.70 15 P P 21 09 04.4 +0.3
baz=199
M50A **Fremont** 31.70 3 P P 21 09 03.1 -1.1
baz=183,SNR=6.7
O60A **Telford** 31.70 14 P P 21 09 04.6 +0.4
baz=198
N56A **West Decatur** 31.71 9 P P 21 09 04.3 +0.1
baz=192,SNR=7.9
M49A **Liberty Center** 31.75 1 P P 21 09 03.4 -1.2
baz=181,SNR=7.1
M48A **Edgerton** 31.75 0 P P 21 09 03.6 -0.9
M48A **Edgerton** 31.75 0 P P 21 09 03.0 -1.6
baz=180
M44A **Midewin, Midew** 31.78 355 P P 21 09 02.8 -2.0
M53A **WI Miller and** 31.91 6 P P 21 09 05.4 -0.6
baz=188,SNR=11

N58A **Sunbury** 31.92 12 P P 21 09 06.0 -0.1
N58A **Sunbury** 31.92 12 P P 21 09 06.4 +0.3
baz=195,SNR=7.0
M52A **Chesterland** 31.95 5 P P 21 09 05.5 -0.9
M52A IAmb IAmb 21 09 15.4
comp=Z,31nm,0.9s
M52A **Chesterland** 31.95 5 P P 21 09 05.3 -1.1
baz=186
LUPA **Lehigh Univers** 31.98 14 P P 21 09 06.9 +0.3
CBKS **Cedar Bluff** 32.01 338 P P 21 09 05.3 -1.7
baz=151
ANMO **Albuquerque** 32.05 325 *i*P P 21 09 08.0 +0.4
ANMO pmax pmax
comp=Z,20nm,1.4s
ANMO **Albuquerque** 32.05 325 P P 21 09 07.5 -0.1
ANMO **Albuquerque** 32.05 325 P P 21 09 07.2 -0.4
baz=137
M54A **Oil Creek Stat** 32.09 7 P P 21 09 07.3 -0.4
M54A IAmb IAmb 21 09 19.9
comp=Z,19nm,1.2s
M54A **Oil Creek Stat** 32.09 7 P P 21 09 07.1 -0.6
baz=189
ALLY **Alegheny Colle** 32.18 7 P P 21 09 08.1 -0.2
M55A **Ridgway** 32.18 9 P P 21 09 08.0 -0.3
M55A **Ridgway** 32.18 9 P P 21 09 08.1 -0.3
baz=191,SNR=10
N59A **State Game Lan** 32.19 13 IAmb IAmb 21 09 18.8
comp=Z,29nm,1.0s
N59A **State Game Lan** 32.19 13 P P 21 09 08.8 +0.3
baz=197,SNR=8.2
L48A **N Adams** 32.21 1 P P 21 09 07.2 -1.4
baz=181,SNR=5.1
L47A **Sherwood** 32.24 359 P P 21 09 06.9 -2.0
baz=179,SNR=6.6
BRNJ **Basking Ridge** 32.25 15 P P 21 09 08.8 -0.2
BRNJ IAmb IAmb 21 09 11.3
comp=Z,48nm,1.4s
MNMC **Minye Minye** 32.26 152 IAmb IAmb 21 09 19.8
comp=Z,22nm,0.7s
M56A **Emporium** 32.28 9 P P 21 09 08.2 -1.1
M56A **Emporium** 32.28 9 P P 21 09 09.2 -0.1
baz=192,SNR=9.9
L46A **Eue Claire** 32.30 358 P P 21 09 05.1 -4.3
L46A **Eue Claire** 32.30 358 P P 21 09 07.5 -2.0
baz=177
N60A **Cedar Hill Far** 32.30 14 P P 21 09 08.7 -0.8
baz=198
M57A **Sunshine Farm,** 32.32 11 P P 21 09 09.2 -0.4
M57A **Sunshine Farm,** 32.32 11 P P 21 09 09.9 +0.3
baz=194,SNR=9.3
L50A **Kingsville** 32.35 3 P P 21 09 08.7 -1.2
baz=184,SNR=5.7
L49A **Milan** 32.38 1 P P 21 09 09.1 -1.0
baz=182
N61A **South Mountain** 32.39 15 P P 21 09 10.0 -0.2
baz=200
L53A **Girard** 32.47 6 P P 21 09 10.5 -0.4
baz=188,SNR=9.1
M58A **Price's Panora** 32.48 12 P P 21 09 11.1 0.0
baz=195,SNR=12
L42A **Oliver, Polo** 32.55 353 P P 21 09 10.3 -1.3
L44A **Lake County Fo** 32.56 356 P P 21 09 09.4 -2.3
baz=174
T25A **Trinidad** 32.64 330 P P 21 09 12.2 -0.5
baz=142
ERPA **Erie** 32.66 7 P P 21 09 12.1 -0.4
baz=189
PAL **Palisades** 32.73 15 P P 21 09 11.9 -1.2
PAL pmax pmax
comp=Z,59nm,1.4s
PAL **Palisades** 32.73 15 P P 21 09 11.9 -1.2
PAL **Palisades** 32.73 15 P P 21 09 13.2 +0.1
baz=200
PB11 **IPOC Station P** 32.78 153 P P 21 09 13.3 -0.7
PB11 IAmb IAmb 21 09 23.7
comp=Z,17nm,0.8s
KSPA **Keystone Colle** 32.81 13 P P 21 09 13.5 -0.4
KSPA IAmb IAmb 21 09 24.0
comp=Z,25nm,0.9s
L40A **Anamosa** 32.81 351 IAmb IAmb 21 09 31.1
comp=Z,20nm,0.9s
M60A **Port Jervis** 32.85 14 P P 21 09 14.6 +0.4
baz=199
L54A **Sinclairville** 32.85 8 P P 21 09 13.3 -0.9
baz=190
M59A **Waymart** 32.86 13 P P 21 09 14.7 +0.3
baz=197,SNR=9.2
GO01 **Chusmiza** 32.91 152 P P 21 09 15.5 0.0
GO01 IAmb IAmb 21 09 27.9
comp=Z,18nm,0.8s
L55A **Hinsdale** 32.93 9 P P 21 09 14.8 -0.2
baz=191,SNR=9.4
K47A **Vermontville** 32.93 360 P P 21 09 13.0 -1.9
baz=180,SNR=9.7
K46A **Dorr** 32.96 359 P P 21 09 12.6 -2.5
baz=178
TUC **Tucson** 32.98 317 P P 21 09 17.1 +1.5
TUC pmax pmax
comp=Z,20nm,1.3s
TUC **Tucson** 32.98 317 P P 21 09 17.1 +1.5
TUC IAmb IAmb 21 09 19.2
comp=Z,20nm,1.2s
TUC **Tucson** 32.98 317 P P 21 09 16.9 +1.4
baz=127
SCIA **State Center** 33.01 348 P P 21 09 14.5 -1.2
SCIA IAmb IAmb 21 09 16.4
comp=Z,44nm,1.1s
SCIA **State Center** 33.01 348 P P 21 09 13.6 -2.1
baz=164
L57A **Andrews Acres** 33.02 11 P P 21 09 15.6 -0.1
baz=194,SNR=7.1
L56A **Greenwood** 33.02 10 P P 21 09 15.4 -0.4
L56A **Greenwood** 33.02 10 P P 21 09 15.2 -0.5
baz=193,SNR=5.6
WSPT **Westport, CT** 33.03 16 P P 21 09 15.9 +0.1
M61A **Granite Spring** 33.05 15 P P 21 09 15.8 -0.2
baz=200
K48A **Perry** 33.07 1 P P 21 09 14.3 -1.8
baz=181,SNR=7.0
K50A **Casco** 33.09 3 P P 21 09 15.3 -1.1
K50A **Casco** 33.09 3 P P 21 09 15.1 -1.2
baz=184
K51A **Iona Station** 33.11 4 P P 21 09 15.3 -1.2
baz=186
WVNY **West Valley, N** 33.12 8 P P 21 09 16.0 -0.6
WVNY IAmb IAmb 21 09 27.9
comp=Z,39nm,1.1s
K52A **Tillsonburg** 33.24 6 P P 21 09 16.5 -1.1
baz=187
L58A **Harry Jones Me** 33.26 12 P P 21 09 17.8 +0.1
baz=196,SNR=5.6
YLE **Yale** 33.28 16 P P 21 09 17.8 -0.1
YLE IAmb IAmb 21 09 22.7
comp=Z,26nm,0.7s
K54A **Basiliko Farm,** 33.31 8 P P 21 09 17.7 -0.6
baz=191
KSCO **Kaye Shedlock'** 33.34 334 P P 21 09 17.6 -1.1
baz=147
BINY **Binghamton** 33.38 12 P P 21 09 17.8 -1.1
BINY IAmb IAmb 21 09 30.6
comp=Z,46nm,1.2s
BINY **Binghamton** 33.38 12 P P 21 09 18.9 0.0
baz=196
M62A **Hamden** 33.41 16 P P 21 09 19.0 -0.1
baz=202
J47A **Sunmer** 33.50 360 P P 21 09 18.2 -1.7
J47A IAmb IAmb 21 09 26.8
comp=Z,34nm,1.1s
J47A **Sunmer** 33.50 360 P P 21 09 17.7 -2.2
baz=180
KSCT **Kent School, K** 33.51 15 P P 21 09 19.5 -0.5
KSCT IAmb IAmb 21 09 22.4
comp=Z,21nm,1.1s
K55A **Perry** 33.52 9 P P 21 09 19.3 -0.8
baz=192,SNR=5.9
JFWS **Jewell Farm** 33.52 353 IAmb IAmb 21 09 20.4
comp=Z,40nm,1.2s
JFWS **Jewell Farm** 33.52 353 P P 21 09 17.6 -2.4
baz=170
MMNY **Mt. Morris Dam** 33.54 9 P P 21 09 19.4 -0.9
L59A **Walton** 33.57 13 P P 21 09 20.6 0.0
L59A IAmb IAmb 21 09 23.2
comp=Z,36nm,1.2s
L59A **Walton** 33.57 13 P P 21 09 20.6 0.0
baz=197
L60A **Shokan** 33.57 14 P P 21 09 20.6 +0.1
baz=199

J48A **Bridge Port** 33.57 1 P P 21 09 19.3 -1.2
J48A IAmb IAmb 21 09 28.7
comp=Z,16nm,0.7s
J48A **Bridge Port** 33.57 1 P P 21 09 18.2 -2.3
baz=182
K56A **Middlesex** 33.61 10 P P 21 09 20.2 -0.7
baz=193
M63A **Gales Ferry** 33.61 17 P P 21 09 20.8 0.0
baz=203
J46A **Howard City** 33.62 359 P P 21 09 18.7 -2.2
baz=178
J49A **Marlette** 33.65 2 P P 21 09 19.1 -2.1
baz=183
SDCO **Great Sand Dun** 33.65 330 P P 21 09 21.0 -0.7
baz=141,SNR=11
J52A **Paris** 33.72 6 P P 21 09 20.8 -0.9
baz=188,SNR=5.2
K57A **Scipio Center** 33.78 11 P P 21 09 21.4 -1.0
baz=195
BGNE **Belgrade** 33.79 342 P P 21 09 21.1 -1.4
baz=156
MEDO **Medina** 33.88 8 P P 21 09 21.2 -2.0
L61A **Hillsdale 1, H** 33.93 15 P P 21 09 24.1 +0.4
baz=200,SNR=6.1
J54A **Appleton** 33.97 8 P P 21 09 23.3 -0.6
J54A IAmb IAmb 21 09 24.7
comp=Z,30nm,0.8s
J54A **Appleton** 33.97 8 P P 21 09 22.7 -1.2
baz=191
K58A **Earlville** 33.99 12 P P 21 09 23.7 -0.4
K58A **Earlville** 33.99 12 P P 21 09 23.5 -0.6
baz=196,SNR=5.0
M64A **Tiverton** 34.00 18 P P 21 09 24.4 +0.2
baz=204
L62A **Suffield** 34.02 16 P P 21 09 23.9 -0.5
baz=202
J55A **Hilton** 34.08 9 P P 21 09 24.0 -0.9
J55A IAmb IAmb 21 09 25.6
comp=Z,27nm,0.9s
J55A **Hilton** 34.08 9 P P 21 09 24.4 -0.5
baz=192
W18A **Petrified Fore** 34.10 322 P P 21 09 26.2 +0.8
baz=132,SNR=27
214A **Organ Pipe Nat** 34.16 315 P P 21 09 26.7 +0.9
214A IAmb IAmb 21 09 29.8
comp=Z,44nm,1.2s
214A **Organ Pipe Nat** 34.16 315 P P 21 09 27.7 +1.9
baz=124,SNR=16
L63A **North Scituate** 34.16 18 P P 21 09 25.2 -0.4
baz=204
K59A **Cooperstown** 34.17 13 P P 21 09 25.6 -0.1
baz=198,SNR=7.1
M65A **Busby, Falmout** 34.19 19 P P 21 09 25.9 0.0
baz=205
I46A **Reed City** 34.21 359 P P 21 09 24.2 -1.8
baz=179
I51A **Listowel** 34.23 5 P P 21 09 24.8 -1.4
baz=186
K60A **Five Rivers En** 34.24 14 P P 21 09 26.4 +0.1
baz=199
I49A **Point Hope** 34.25 3 P P 21 09 25.6 -0.8
I49A **Point Hope** 34.25 3 P P 21 09 24.7 -1.7
baz=183
J56A **Wolcott** 34.25 10 P P 21 09 25.2 -1.2
J56A **Wolcott** 34.25 10 P P 21 09 26.0 -0.4
baz=194
I47A **Gladwin** 34.28 0 P P 21 09 25.3 -1.3
I47A IAmb IAmb 21 09 34.6
comp=Z,26nm,0.6s
I47A **Gladwin** 34.28 0 P P 21 09 24.7 -2.0
baz=180
I45A **Fountain** 34.32 358 P P 21 09 25.6 -1.4
S22A **4UR Ranch, Cre** 34.33 328 P P 21 09 27.1 -0.5
baz=139,SNR=12
I42A **Draeger Farm,** 34.34 355 P P 21 09 25.5 -1.7
I42A IAmb IAmb 21 09 27.5
comp=Z,32nm,0.8s
L61B **Northampton** 34.40 16 P P 21 09 27.6 -0.1
baz=201
TRY **Troy** 34.41 15 P P 21 09 27.8 0.0
Q24A **Divide** 34.44 331 P P 21 09 28.6 +0.1
K61A **Williamstown** 34.45 15 P P 21 09 28.5 +0.3
baz=200
I48A **Sherman Twp** 34.46 1 P P 21 09 26.6 -1.6
baz=182
L64A **Middleborough** 34.47 19 P P 21 09 28.2 -0.1
baz=205
I40A **Norwalk** 34.53 353 IAmb IAmb 21 09 36.1
comp=Z,17nm,0.5s
J57A **Williamstown** 34.54 11 P P 21 09 28.4 -0.5
J57A IAmb IAmb 21 09 37.4
comp=Z,32nm,1.1s
J57A **Williamstown** 34.54 11 P P 21 09 27.9 -1.0
baz=195
I52A **Shelburne** 34.56 6 P P 21 09 28.5 -0.7
baz=188
SIV **San Ignacio** 34.63 137 P P 21 09 30.0 0.0
comp=Z,3.8nm,0.7s,baz=326,slow=9.4,SNR=20
SIV PcP PcP 21 12 04.8 +0.6
comp=Z,2.1nm,0.8s,baz=311,slow=2.6,SNR=3.1
J58A **Remsen** 34.63 12 P P 21 09 29.3 -0.5
baz=196,SNR=7.4
X16A **Lo Mia Camp, P** 34.71 319 P P 21 09 31.5 +0.8
X16A IAmb IAmb 21 09 40.7
comp=Z,28nm,1.2s
K62A **Royalston** 34.72 16 P P 21 09 30.1 -0.4
K62A IAmb IAmb 21 09 32.4
comp=Z,57nm,1.4s
K62A **Royalston** 34.72 16 P P 21 09 30.5 0.0
baz=202
OGNE **Ogallala** 34.74 337 pP 21 09 38.8 -0.1
OGNE **Ogallala** 34.74 337 P P 21 09 29.5 -1.3
baz=149
HRV **Adam Dziewonsk** 34.77 17 P P 21 09 30.8 -0.1
baz=203
H46A **Fife Lake** 34.80 360 P P 21 09 28.9 -2.3
baz=179
H43A **Windswept, Lux** 34.83 356 P P 21 09 30.0 -1.4
MVCO **Mesa Verde** 34.83 326 IAmb IAmb 21 09 41.4
comp=Z,38nm,1.2s
MVCO **Mesa Verde** 34.83 326 P P 21 09 31.0 -0.9
baz=136,SNR=7.0
H47A **Mio** 34.87 1 P P 21 09 29.6 -2.1
baz=181
PECO **Prince Edward** 34.87 10 P P 21 09 30.5 -1.2
PECO IAmb IAmb 21 09 39.7
comp=Z,33nm,1.0s
H45A **Beulah** 34.90 358 P P 21 09 29.5 -2.5
baz=178
J59A **Piesco** 34.90 13 P P 21 09 31.2 -0.8
J59A IAmb IAmb 21 09 41.4
comp=Z,40nm,1.5s
J59A **Piesco** 34.90 13 P P 21 09 31.3 -0.8
baz=198
K63A **Dunstable** 34.95 17 P P 21 09 32.4 0.0
baz=203
J60A **Lant Hill Farm** 34.95 15 P P 21 09 32.7 +0.2
baz=200
H48A **Harrisville** 34.99 2 P P 21 09 31.8 -0.9
H48A **Harrisville** 34.99 2 P P 21 09 31.3 -1.4
baz=182
I58A **Old Forge** 35.02 12 P P 21 09 32.4 -0.7
baz=197
ACCN **Adirondack Com** 35.02 14 P P 21 09 32.5 -0.5
ACCN IAmb IAmb 21 09 35.6
comp=Z,29nm,1.3s
I55A **Frankford** 35.03 9 P P 21 09 31.8 -1.3
baz=192
GLMI **Grayling** 35.09 0 P P 21 09 32.0 -1.6
GLMI IAmb IAmb 21 09 42.1
comp=Z,44nm,1.0s
GLMI **Grayling** 35.09 0 P P 21 09 31.3 -2.3
baz=180
I57A **Carthage** 35.11 12 P P 21 09 33.0 -0.8
baz=196
H52A **Wyevale** 35.16 6 P P 21 09 33.2 -1.1
baz=188
H53A **Bobcaygeon** 35.25 8 P P 21 09 33.9 -1.1
baz=190
J61A **Chester** 35.27 16 P P 21 09 35.6 +0.4
baz=201,SNR=7.1
113A **Mohawk Valley,** 35.28 315 P P 21 09 35.5 0.0
CLDB **Colider** 35.31 124 *e*P P 21 09 34.3 -1.6
G45A **Suttons Bay** 35.31 359 P P 21 09 34.1 -1.4
G45A **Suttons Bay** 35.31 359 P P 21 09 33.5 -2.0
baz=178
ISCO **Idaho Springs** 35.32 332 PcP 21 12 08.4 +2.2

ISCO	**Idaho Springs**	**35.32**	**332**	P		**P**	**21 09 35.1**	**-1.0**
	baz=143								
DELO	**Deloro Mine**	**35.33**	**9**	P		**P**	**21 09 35.3**	**-0.4**
DELO				IAmb		IAmb	21 09 36.3		
	comp=Z,31nm,1.2s								
J62A	**Henniker**	**35.36**	**17**	P		**P**	**21 09 36.2**	**+0.2**
	baz=202								
I59A	**Olmsteadville**	**35.36**	**14**	P		**P**	**21 09 35.6**	**-0.4**
	baz=199,SNR=5.2								
WUAZ	**Wupatki**	**35.37**	**321**	P		**P**	**21 09 37.4**	**+1.0**
	baz=130,SNR=6.3								
SADO	**Sadowa**	**35.37**	**7**	IAmb		IAmb	21 09 43.2		
	comp=Z,30nm,0.8s								
H55A	**Tweed**	**35.43**	**9**	P		**P**	**21 09 36.7**	**+0.1**
	baz=193								
Y14A	**Wickenburg**	**35.44**	**317**	P		**P**	**21 09 37.5**	**+0.5**
G47A	**Hillman**	**35.44**	**1**	P		**P**	**21 09 35.0**	**-1.7**
	baz=182								
ECSD	**EROS Data Cent**	**35.52**	**345**	P		**P**	**21 09 34.9**	**-2.4**
	baz=160,SNR=6.9								
I60A	**Shoreham**	**35.55**	**14**	P		**P**	**21 09 37.3**	**-0.3**
	baz=200,SNR=7.3								
LVC	**Limon Verde**	**35.61**	**154**	P		**P**	**21 09 40.1**	**+1.3**
LVC				pmax		pmax			
	comp=Z,16nm,1.3s								
LVC	**Limon Verde**	**35.61**	**154**	P		**P**	**21 09 40.0**	**+1.3**
	comp=Z,1.2nm,0.3s,baz=341,slow=7.0,SNR=4.4								
LVC	**Limon Verde**	**35.61**	**154**	IAmb		IAmb	21 09 47.8		
	comp=Z,16nm,1.2s								
J63A	**Strafford**	**35.62**	**17**	P		**P**	**21 09 37.9**	**-0.3**
	baz=204								
FFD	**Franklin Falls**	**35.63**	**17**	P		**P**	**21 09 36.4**	**-1.9**
FFD				IAmb		IAmb	21 09 48.9		
	comp=Z,37nm,1.3s								
H56A	**Elgin**	**35.63**	**11**	P		**P**	**21 09 37.8**	**-0.5**
	baz=194,SNR=6.8								
H57A	**Richville**	**35.67**	**12**	P		**P**	**21 09 38.1**	**-0.5**
	baz=196,SNR=6.3								
G53A	**Haliburton**	**35.78**	**7**	P		**P**	**21 09 38.1**	**-1.5**
	baz=190								
H58A	**Gabriels**	**35.88**	**13**	P		**P**	**21 09 39.6**	**-0.9**
	baz=198								
I61A	**Oroboro, Fairl**	**35.91**	**16**	P		**P**	**21 09 39.6**	**-1.1**
	baz=201								
PLVO	**Plevna**	**35.93**	**9**	P		**P**	**21 09 40.1**	**-0.7**
PLVO				IAmb		IAmb	21 09 41.3		
	comp=Z,53nm,1.4s								
F45A	**CMU Biological**	**35.95**	**359**	P		**P**	**21 09 39.2**	**-1.8**
	baz=179								
LONY	**Lake Ozonia**	**35.99**	**12**	P		**P**	**21 09 40.5**	**-0.9**
	baz=197,SNR=11								
I62A	**Tamworth**	**36.09**	**17**	P		**P**	**21 09 41.7**	**-0.5**
I62A				IAmb		IAmb	21 09 52.5		
	comp=Z,31nm,1.2s								
I62A	**Tamworth**	**36.09**	**17**	P		**P**	**21 09 42.1**	**-0.2**
	baz=203								
F49A	**Sandfield**	**36.10**	**3**	P		**P**	**21 09 40.4**	**-2.0**
	baz=184								
G54A	**Lake Saint Pet**	**36.13**	**8**	P		**P**	**21 09 41.2**	**-1.4**
	baz=191								
F42A	**Maple Grove Fa**	**36.13**	**356**	P		**P**	**21 09 40.2**	**-2.4**
F42A				IAmb		IAmb	21 09 50.5		
	comp=Z,53nm,1.5s								
F48A	**Evansville**	**36.14**	**3**	P		**P**	**21 09 40.7**	**-1.9**
	baz=184								
VT1	**Waterbury**	**36.14**	**15**	P		**P**	**21 09 42.0**	**-0.6**
VT1				IAmb		IAmb	21 09 52.2		
	comp=Z,36nm,1.3s								
SPMN	**Marine on St.**	**36.15**	**350**	IAmb		IAmb	21 09 42.7		
	comp=Z,14nm,0.7s								
SPMN	**Marine on St.**	**36.15**	**350**	P		**P**	**21 09 41.3**	**-1.4**
	baz=166,SNR=6.7								
GLA	**Glamis**	**36.18**	**315**	P		**P**	**21 09 44.6**	**+1.3**
GLA				pmax		pmax			
	comp=Z,117nm,1.4s								
GLA	**Glamis**	**36.18**	**315**	P		**P**	**21 09 44.6**	**+1.3**
GLA	**Glamis**	**36.18**	**315**	P		**P**	**21 09 45.1**	**+1.8**
	baz=123,SNR=16								
G55A	**Calabogie**	**36.19**	**10**	P		**P**	**21 09 42.1**	**-1.0**
	baz=193,SNR=6.0								
H59A	**Cadyville**	**36.21**	**13**	P		**P**	**21 09 42.8**	**-0.5**
	baz=199								
LBNH	**Lisbon**	**36.27**	**16**	P		**P**	**21 09 42.9**	**-0.8**
LBNH				pmax		pmax			
	comp=Z,30nm,1.3s								
LBNH	**Lisbon**	**36.27**	**16**	P		**P**	**21 09 42.9**	**-0.8**
LBNH				IAmb		IAmb	21 09 58.4		
	comp=Z,30nm,1.2s								
LBNH	**Lisbon**	**36.27**	**16**	P		**P**	**21 09 43.3**	**-0.5**
	baz=202								
N23A	**Red Feather La**	**36.35**	**333**	P		**P**	**21 09 43.6**	**-1.3**
	baz=143								
Y12C	**Blythe**	**36.36**	**316**	P		**P**	**21 09 45.9**	**+1.2**
Y12C	**Blythe**	**36.36**	**316**	P		**P**	**21 09 46.3**	**+1.6**
	baz=124,SNR=14								
F52A	**Sundridge**	**36.36**	**6**	P		**P**	**21 09 42.8**	**-1.8**
	baz=189								
G57A	**Newington**	**36.37**	**12**	P		**P**	**21 09 43.9**	**-0.7**
	baz=196,SNR=6.7								
H60A	**Morristown**	**36.37**	**15**	P		**P**	**21 09 43.7**	**-0.9**
	baz=200,SNR=5.0								
FRNY	**Flat Rock**	**36.41**	**13**	IAmb		IAmb	21 09 45.3		
	comp=Z,27nm,1.5s								
F51A	**Arnstein**	**36.43**	**6**	P		**P**	**21 09 43.6**	**-1.6**
	baz=188								
PHWY	**Pilot Hill**	**36.46**	**333**	P		**P**	**21 09 44.8**	**-1.0**
I63A	**Otisfield**	**36.47**	**17**	P		**P**	**21 09 45.5**	**0.0**
I63A				IAmb		IAmb	21 09 55.7		
	comp=Z,68nm,1.4s								
I63A	**Otisfield**	**36.47**	**17**	P		**P**	**21 09 45.8**	**+0.3**
	baz=204								
U15A	**North Rim**	**36.52**	**321**	P		**P**	**21 09 46.8**	**+0.4**
U15A				IAmb		IAmb	21 10 00.6		
	comp=Z,54nm,1.4s								
H61A	**Lyndonville**	**36.54**	**16**	P		**P**	**21 09 46.3**	**+0.2**
	baz=202								
COWI	**Conover**	**36.55**	**355**	P		**P**	**21 09 44.1**	**-2.1**
COWI				IAmb		IAmb	21 09 46.0		
	comp=Z,35nm,1.4s								
G58A	**Ormstown**	**36.61**	**13**	P		**P**	**21 09 45.7**	**-0.9**
	baz=198								
I64A	**Boothbay**	**36.64**	**18**	P		**P**	**21 09 46.0**	**-0.9**
	baz=206								
E43A	**Lone Tree Farm**	**36.69**	**357**	IAmb		IAmb	21 09 47.4		
	comp=Z,42nm,0.9s								
W13A	**Hualapai Mount**	**36.71**	**318**	P		**P**	**21 09 49.2**	**+1.2**
W13A				IAmb		IAmb	21 09 57.8		
	comp=Z,21nm,1.1s								
E47A	**Iron Bridge**	**36.74**	**2**	P		**P**	**21 09 46.1**	**-1.7**
	baz=182,SNR=7.0								
H62A	**Milan**	**36.79**	**16**	P		**P**	**21 09 47.5**	**-0.6**
	baz=203								
SUSD	**Miller**	**36.81**	**343**	P		**P**	**21 09 45.6**	**-2.8**
	baz=156								
SWSC	**Sam W. Stewart**	**36.81**	**314**	P		**P**	**21 09 50.2**	**+1.7**
	baz=122,SNR=11								
F55A	**Otter Lake**	**36.82**	**10**	P		**P**	**21 09 47.1**	**-1.4**
	baz=194								
O20A	**White River Ci**	**36.85**	**329**	P		**P**	**21 09 48.2**	**-0.9**
O20A				IAmb		IAmb	21 09 58.9		
	comp=Z,42nm,1.4s								
O20A	**White River Ci**	**36.85**	**329**	P		**P**	**21 09 47.2**	**-1.8**
	baz=139								
IKP	**In-Ko-Pah, Jac**	**36.88**	**313**	P		**P**	**21 09 51.3**	**+2.0**
	baz=121,SNR=12								
E52A	**Mattawa**	**36.92**	**7**	P		**P**	**21 09 47.4**	**-2.0**
	baz=190								
BC3	**Big Chuckawall**	**36.95**	**315**	P		**P**	**21 09 51.7**	**+1.8**
	baz=123,SNR=31								
G60A	**Masonville**	**36.96**	**15**	P		**P**	**21 09 49.1**	**-0.5**
	baz=201								
NEE2	**Needles Airpor**	**37.01**	**317**	P		**P**	**21 09 51.3**	**+1.1**
	baz=125								
IRM	**Iron Mountain**	**37.02**	**316**	P		**P**	**21 09 52.3**	**+1.9**
	baz=124,SNR=21								
E51A	**G1948 Merrick**	**37.08**	**6**	P		**P**	**21 09 49.5**	**-1.1**
	baz=189,SNR=9.6								
D46A	**Sault St. Mari**	**37.16**	**1**	P		**P**	**21 09 49.1**	**-2.2**
	baz=181,SNR=7.0								
H63A	**New Sharon**	**37.19**	**18**	P		**P**	**21 09 51.9**	**+0.3**
	baz=204								
PKCU	**Pink Cliffs**	**37.20**	**323**	P		**P**	**21 09 53.2**	**+1.0**
WVL	**Waterville**	**37.21**	**18**	P		**P**	**21 09 51.4**	**-0.4**
WVL				IAmb		IAmb	21 10 02.5		
	comp=Z,52nm,1.2s								
KNB	**Kanab**	**37.23**	**322**	P		**P**	**21 09 53.1**	**+0.8**
KNB				pmax		pmax			
	comp=Z,53nm,1.2s								
KNB	**Kanab**	**37.23**	**322**	P		**P**	**21 09 53.0**	**+0.8**
MONP2	**Monument Peak**	**37.23**	**313**	P		**P**	**21 09 54.2**	**+1.8**
	baz=121								
BAR	**Barrett**	**37.30**	**313**	P		**P**	**21 09 54.3**	**+1.5**
BAR				IAmb		IAmb	21 10 06.2		
	comp=Z,30nm,1.4s								
G61A	**St-Isidore-de-**	**37.34**	**16**	P		**P**	**21 09 53.1**	**+0.2**
	baz=202								
H64A	**Troy**	**37.42**	**18**	P		**P**	**21 09 54.1**	**+0.6**
	baz=206								
D41A	**Chassel**	**37.46**	**356**	P		**P**	**21 09 51.5**	**-2.3**
D41A				IAmb		IAmb	21 09 54.1		
	comp=Z,59nm,1.4s								
E55A	**Montcerf-Lytto**	**37.47**	**10**	P		**P**	**21 09 52.5**	**-1.4**
	baz=194								
LCMT	**Little Creek M**	**37.48**	**321**	P		**P**	**21 09 54.1**	**-0.3**
BELC	**Belle Mtn. Jos**	**37.52**	**315**	P		**P**	**21 09 55.2**	**+0.4**
	baz=123,SNR=29								
G62A	**West of Eustis**	**37.55**	**17**	P		**P**	**21 09 54.3**	**-0.4**
G62A	**West of Eustis**	**37.55**	**17**	P		**P**	**21 09 54.9**	**+0.2**
	baz=203,SNR=6.8								
RWWY	**Rawlins**	**37.56**	**332**	P		**P**	**21 09 53.7**	**-1.4**
F59A	**Saint Guilaume**	**37.56**	**14**	P		**P**	**21 09 54.5**	**-0.2**
	baz=200								
GO02	**Mina Guanaco**	**37.61**	**157**	P		**P**	**21 09 56.2**	**+0.4**
XPFO	**Pion Flat**	**37.63**	**314**	P		**P**	**21 09 57.2**	**+1.5**
XPFO				IAmb		IAmb	21 09 59.1		
	comp=Z,32nm,1.1s								
PFO	**Pinyon Flats O**	**37.63**	**314**	*i* P		**P**	**21 09 56.9**	**+1.2**
PFO				pmax		pmax			
	comp=Z,53nm,1.2s								
PFO	**Pinyon Flats O**	**37.63**	**314**	P		**P**	**21 09 57.4**	**+1.7**
PFO				IAmb		IAmb	21 09 59.1		
	comp=Z,29nm,1.1s								
PFO	**Pinyon Flats O**	**37.63**	**314**	P		**P**	**21 09 57.3**	**+1.6**
	baz=122,SNR=15								
D51A	**Lot 18 Range I**	**37.64**	**6**	P		**P**	**21 09 53.6**	**-1.8**
	baz=189								
D50A	**G1974 Best Tow**	**37.67**	**6**	P		**P**	**21 09 54.0**	**-1.6**
	baz=188								
P17A	**Butcher Ranch,**	**37.68**	**326**	P		**P**	**21 09 56.2**	**+0.2**
GMRC	**Granite Mounta**	**37.72**	**316**	P		**P**	**21 09 57.8**	**+1.4**
	baz=124,SNR=7.0								
109C	**Camp Elliot, M**	**37.72**	**313**	P		**P**	**21 09 57.4**	**+1.1**
109C				IAmb		IAmb	21 10 07.8		
	comp=Z,37nm,1.0s								
109C	**Camp Elliot, M**	**37.72**	**313**	P		**P**	**21 09 58.1**	**+1.8**
	baz=120								
G63A	**Kingsbury**	**37.72**	**18**	P		**P**	**21 09 56.5**	**+0.3**
	baz=205								
E56A	**St. Veronique**	**37.74**	**11**	P		**P**	**21 09 55.5**	**-0.8**
	baz=196								
SZCU	**Shurtz Canyon**	**37.76**	**322**	P		**P**	**21 09 57.0**	**+0.2**
H65A	**Eastbrook**	**37.78**	**19**	P		**P**	**21 09 56.6**	**+0.1**
	baz=207								
E57A	**Chemin Saint G**	**37.79**	**12**	P		**P**	**21 09 55.4**	**-1.3**
	baz=197,SNR=9.8								
TMUT	**Trail Mountain**	**37.81**	**326**	P		**P**	**21 09 57.1**	**-0.3**
D53A	**Lac Vacive, Po**	**37.83**	**8**	IAmb		IAmb	21 09 57.5		
	comp=Z,29nm,1.0s								
F60A	**Warwick**	**37.87**	**15**	P		**P**	**21 09 56.6**	**-0.7**
	baz=201,SNR=5.1								
CCUT	**Cedar City**	**37.90**	**322**	P		**P**	**21 09 58.9**	**+0.9**
E58A	**La Victoria**	**37.94**	**13**	P		**P**	**21 09 56.9**	**-1.0**
	baz=199,SNR=7.7								
PKME	**Peaks-Kenny Pk**	**37.96**	**18**	P		**P**	**21 09 57.8**	**-0.2**
PKME	**Peaks-Kenny Pk**	**37.96**	**18**	P		**P**	**21 09 58.5**	**+0.4**
	baz=205								
K22A	**Casper**	**38.01**	**334**	P		**P**	**21 09 57.2**	**-1.6**
	baz=144								
TCRU	**Three Creeks R**	**38.05**	**324**	P		**P**	**21 09 59.1**	**-0.2**
D54A	**Lac Fusel, La**	**38.05**	**9**	P		**P**	**21 09 57.2**	**-1.7**
	baz=193,SNR=10								
G64A	**Maxfield**	**38.11**	**18**	P		**P**	**21 09 59.3**	**-0.1**
	baz=206								
D55A	**Sainte-Anne-du**	**38.12**	**10**	P		**P**	**21 09 58.3**	**-1.1**
	baz=195,SNR=9.5								
F61A	**St Evariste**	**38.12**	**16**	P		**P**	**21 09 58.6**	**-0.8**
	baz=202								
MURC	**Murrieta**	**38.15**	**314**	P		**P**	**21 10 01.8**	**+1.8**
	baz=121,SNR=7.7								
H66A	**Whiting**	**38.17**	**20**	P		**P**	**21 10 00.5**	**+0.6**
	baz=208								
HEC	**Hector,Ludlow**	**38.21**	**316**	P		**P**	**21 10 02.5**	**+2.0**
	baz=124,SNR=9.4								
E59A	**St. Maurice**	**38.22**	**14**	P		**P**	**21 09 59.3**	**-0.9**
	baz=200								
RSSD	**Black Hills**	**38.22**	**337**	P		**P**	**21 10 00.3**	**-0.3**
RSSD				pmax		pmax			
	comp=Z,5.0nm,1.1s								
RSSD	**Black Hills**	**38.22**	**337**	P		**P**	**21 10 00.3**	**-0.3**
TUQ	**Turquoise Moun**	**38.27**	**317**	P		**P**	**21 10 02.0**	**+0.9**
	baz=125,SNR=6.9								
D56A	**ZEC Mazanza, M**	**38.28**	**11**	P		**P**	**21 09 59.5**	**-1.3**
	baz=196,SNR=6.3								
BBRC	**Big Bear Solar**	**38.30**	**315**	P		**P**	**21 10 03.0**	**+1.5**
	baz=122								
E60A	**Ste Agathe de**	**38.37**	**15**	P		**P**	**21 10 00.7**	**-0.8**
	baz=201								
SHPR	**Sheep Range**	**38.38**	**319**	P		**P**	**21 10 03.3**	**+1.2**
SALV	**Santo Antonio**	**38.39**	**131**	*e*P		**P**	**21 10 01.7**	**-0.4**
F63A	**Nahmakanta, Br**	**38.41**	**18**	P		**P**	**21 10 01.7**	**-0.3**
F63A				IAmb		IAmb	21 10 11.6		
	comp=Z,55nm,1.5s								
F63A	**Nahmakanta, Br**	**38.41**	**18**	P		**P**	**21 10 01.9**	**0.0**
	baz=205								
D57A	**Chemin Vers le**	**38.42**	**12**	P		**P**	**21 10 00.6**	**-1.4**
	baz=197,SNR=9.5								
EYMN	**Ely**	**38.62**	**353**	P		**P**	**21 10 01.1**	**-2.6**
RRX	**Edison Barstow**	**38.69**	**316**	P		**P**	**21 10 05.2**	**+0.8**
	baz=123								
D58A	**Chemin du LacG**	**38.71**	**13**	P		**P**	**21 10 03.8**	**-0.6**
	baz=199,SNR=12								
NLU	**North Lily Min**	**38.75**	**326**	P		**P**	**21 10 04.7**	**-0.5**
NLU						**PcP**	**21 12 19.5**	**+3.0**
F64A	**Sherman**	**38.79**	**18**	P		**P**	**21 10 04.5**	**-0.5**
F64A				IAmb		IAmb	21 10 15.0		
	comp=Z,57nm,1.3s								
F64A	**Sherman**	**38.79**	**18**	P		**P**	**21 10 05.3**	**+0.3**
	baz=206,SNR=6.1								
GSC	**Goldstone, Bar**	**38.79**	**316**	P		**P**	**21 10 06.4**	**+1.0**
GSC				pmax		pmax			
	comp=Z,54nm,1.5s								
GSC	**Goldstone, Bar**	**38.79**	**316**	P		**P**	**21 10 06.4**	**+1.0**
GSC				IAmb		IAmb	21 10 08.8		
	comp=Z,54nm,1.5s								
GSC	**Goldstone, Bar**	**38.79**	**316**	P		**P**	**21 10 06.9**	**+1.5**
	baz=123,SNR=16								
BFSC	**Mount Baldy Ra**	**38.81**	**314**	P		**P**	**21 10 07.4**	**+1.7**
	baz=121,SNR=6.2								
SCI2	**San Clemente I**	**38.82**	**312**	P		**P**	**21 10 07.8**	**+2.3**
	baz=119								
PSUT	**Pine Spring**	**38.83**	**323**	P		**P**	**21 10 05.7**	**-0.1**
JLU	**Jordanelle**	**38.86**	**327**	P		**P**	**21 10 06.1**	**-0.1**
VLDQ	**Val d'Or**	**38.87**	**8**	IAmb		IAmb	21 10 06.7		
	comp=Z,45nm,1.4s								
CIS	**Catalina Islan**	**38.93**	**313**	P		**P**	**21 10 08.3**	**+1.8**
	baz=120								
FMP	**Fort Macarthur**	**39.00**	**313**	P		**P**	**21 10 08.7**	**+1.7**
	baz=120								
D60A	**Saint Jean D'O**	**39.01**	**15**	P		**P**	**21 10 06.3**	**-0.6**
	baz=202,SNR=6.2								
MWC	**Mount Wilson**	**39.09**	**314**	P		**P**	**21 10 08.1**	**+0.1**
MWC				pmax		pmax			
	comp=Z,54nm,1.4s								
MWC	**Mount Wilson**	**39.09**	**314**	P		**P**	**21 10 08.1**	**+0.1**
MWC				IAmb		IAmb	21 10 20.4		
	comp=Z,54nm,1.4s								
CTU	**Camp Tracy**	**39.09**	**327**	P		**P**	**21 10 07.4**	**-0.5**
PASC	**Pasadena Art C**	**39.15**	**314**	P		**P**	**21 10 09.2**	**+0.9**
PASC				IAmb		IAmb	21 10 19.9		
	comp=Z,76nm,1.5s								
TCUT	**Toone Canyon**	**39.21**	**328**	P		**P**	**21 10 08.7**	**-0.3**
E63A	**Oxbow**	**39.27**	**18**	IAmb		IAmb	21 10 18.3		
	comp=Z,33nm,1.1s								
E63A	**Oxbow**	**39.27**	**18**	P		**P**	**21 10 09.1**	**0.0**
	baz=206								
DECC	**Green Verdugo**	**39.30**	**314**	P		**P**	**21 10 11.2**	**+1.6**
	baz=121								
DUG	**Dugway, Tooele**	**39.33**	**325**	P		**P**	**21 10 10.0**	**+0.1**
DUG				pmax		pmax			
	comp=Z,26nm,1.4s								
DUG	**Dugway, Tooele**	**39.33**	**325**	P		**P**	**21 10 10.0**	**+0.1**
DUG	**Dugway, Tooele**	**39.33**	**325**	P		**P**	**21 10 09.5**	**-0.4**
	baz=133,SNR=6.0								
TPNV	**Topopah Spring**	**39.35**	**319**	P		**P**	**21 10 11.5**	**+1.4**
TPNV	**Topopah Spring**	**39.35**	**319**	P		**P**	**21 10 11.5**	**+1.4**
TPNV	**Topopah Spring**	**39.35**	**319**	P		**P**	**21 10 11.9**	**+1.7**
	baz=126,SNR=13								
EDW2	**Edwards Air Fo**	**39.38**	**315**	P		**P**	**21 10 11.7**	**+1.4**
	baz=122,SNR=15								
E64A	**Bridgewater**	**39.45**	**19**	P		**P**	**21 10 10.5**	**0.0**
	baz=207								
D61A	**St Aubert, Com**	**39.47**	**16**	P		**P**	**21 10 10.8**	**+0.1**
	baz=203,SNR=15								
FURC	**Furnace Creek,**	**39.48**	**318**	P		**P**	**21 10 12.3**	**+1.4**
	baz=124								
LRMC	**Laurel Mtn Rad**	**39.48**	**316**	P		**P**	**21 10 13.1**	**+1.9**
	baz=123,SNR=25								
PDAR	**Pinedale Array**	**39.49**	**331**	P		**P**	**21 10 11.6**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=141,slow=9.6,SNR=13								
PDAR				PcP		**PcP**	**21 12 19.9**	**+1.1**
	comp=Z,1.7nm,0.6s,baz=131,slow=4.1,SNR=6.9								
PDAR				LR		LR	21 31 12.9		
	comp=Z,724nm,18.1s,baz=132,slow=43								
PDAR	**Pinedale Array**	**39.49**	**331**	P		**P**	**21 10 10.4**	**-0.9**
BW06	**Boulder Array**	**39.49**	**331**	P		**P**	**21 10 09.9**	**-1.5**
	baz=139								
GO03	**Copiap**	**39.59**	**159**	P		**P**	**21 10 12.0**	**0.0**
SNCC	**San Nicolas Is**	**39.67**	**312**	P		**P**	**21 10 14.1**	**+1.5**
SNCC				IAmb		IAmb	21 10 24.4		
	comp=Z,86nm,1.4s								
SNCC	**San Nicolas Is**	**39.67**	**312**	P		**P**	**21 10 14.4**	**+1.8**
	baz=118								
MPMC	**Manual Prospec**	**39.67**	**317**	P		**P**	**21 10 14.1**	**+1.3**
	baz=123,SNR=29								
AGMN	**Agassiz Nation**	**39.67**	**348**	P		**P**	**21 10 10.0**	**-2.4**
	baz=163,SNR=8.6								
D62A	**Allapoint, All**	**39.67**	**17**	P		**P**	**21 10 12.2**	**-0.3**
D62A				IAmb		IAmb	21 10 22.2		
	comp=Z,41nm,1.4s								
D62A	**Allapoint, All**	**39.67**	**17**	P		**P**	**21 10 12.4**	**0.0**
	baz=205,SNR=7.4								
BLG	**Laguna Peak, P**	**39.75**	**313**	P		**P**	**21 10 15.3**	**+1.9**
	baz=120								
OSI	**Osito Audit: C**	**39.76**	**314**	P		**P**	**21 10 14.2**	**+0.7**
OSI				IAmb		IAmb	21 10 16.7		
	comp=Z,54nm,1.4s								
OSI	**Osito Audit: C**	**39.76**	**314**	P		**P**	**21 10 14.8**	**+1.4**
	baz=121								
R11A	**Troy Canyon, C**	**39.77**	**321**	P		**P**	**21 10 14.7**	**+1.0**
	baz=128,SNR=23								
DAC	**Darwin (Calif)**	**39.86**	**317**	P		**P**	**21 10 15.4**	**+0.9**
DAC				pmax		pmax			
	comp=Z,21nm,1.5s								
DAC	**Darwin (Calif)**	**39.86**	**317**	P		**P**	**21 10 15.3**	**+0.9**
D63A	**Stockholm**	**39.91**	**18**	P		**P**	**21 10 14.4**	**0.0**
	baz=206								
LMN	**Caledonia Moun**	**39.98**	**22**	IAmb		IAmb	21 10 24.1		
	comp=Z,39nm,0.9s								
ARVC	**Arvin**	**40.10**	**315**	P		**P**	**21 10 18.3**	**+2.1**
	baz=121								
SCZ2	**Santa Cruz Isl**	**40.11**	**313**	P		**P**	**21 10 17.8**	**+1.5**
	baz=119								
MDND	**Maddock**	**40.11**	**345**	IAmb		IAmb	21 10 17.8		
	comp=Z,71nm,1.4s								
MDND	**Maddock**	**40.11**	**345**	P		**P**	**21 10 16.8**	**+0.7**
	baz=157								
ISA	**Isabella, Lake**	**40.13**	**316**	IAmb		IAmb	21 10 20.1		
	comp=Z,49nm,1.4s								
ISA	**Isabella, Lake**	**40.13**	**316**	P		**P**	**21 10 18.3**	**+1.8**
	baz=122,SNR=17								
AHID	**Auburn Hatcher**	**40.25**	**330**	P		**P**	**21 10 16.9**	**-0.7**
CWC	**Cottonwood Cre**	**40.28**	**317**	P		**P**	**21 10 18.8**	**+0.9**
	baz=123								
SBC	**Santa Barbara**	**40.38**	**313**	P		**P**	**21 10 20.3**	**+1.8**
	baz=119								
HVU	**Hansel Valley**	**40.40**	**327**	P		**P**	**21 10 18.6**	**-0.2**
HVU				pmax		pmax			
	comp=Z,13nm,1.0s								
HVU	**Hansel Valley**	**40.40**	**327**	P		**P**	**21 10 18.6**	**-0.2**
MATQ	**Matagami**	**40.47**	**7**	P		**P**	**21 10 17.2**	**-1.8**
	baz=191								
REDW	**Red Top Meadow**	**40.57**	**331**	IAmb		IAmb	21 10 29.6		
	comp=Z,32nm,1.2s								
SNOW	**Snow King Moun**	**40.59**	**331**	P		**P**	**21 10 20.4**	**-0.1**
VES	**Vestal, Richgr**	**40.64**	**315**	P		**P**	**21 10 22.7**	**+2.0**
	baz=121								
PKM	**Mcpherson Peak**	**40.67**	**314**	P		**P**	**21 10 23.2**	**+2.0**
	baz=120,SNR=19								
TPAW	**Teton Pass**	**40.71**	**331**	P		**P**	**21 10 21.5**	**0.0**
TIN	**Tinemaha, Big**	**40.72**	**318**	P		**P**	**21 10 23.1**	**+1.7**
	baz=124,SNR=6.2								
BATG	**Bathurst New B**	**40.77**	**20**	P		**P**	**21 10 20.7**	**-0.9**
BATG				IAmb		IAmb	21 10 30.9		
	comp=Z,33nm,1.0s								
SMMC	**Simmler**	**41.01**

MFID Camas Ranch 43.16 327 P **P** 21 10 41.5 +0.2
MFID **PcP** 21 12 33.6 +3.0
AFDM Forest Hills D 43.56 318 P **P** 21 10 44.7 +0.2
EGMT Eagleton 43.69 336 P **P** 21 10 43.9 -1.5
baz=143
CFA Coronel Fontan 43.95 159 P **P** 21 10 49.1 +1.5
comp=Z,2.4nm,0.5s,baz=355,slow=6.2,SNR=7.2
WVOR Wild Horse Val 44.12 324 lAmb lAmb 21 11 02.0
comp=Z,60nm,1.3s
ORV Oroville 44.23 319 P **P** 21 10 50.0 +0.1
ORV Oroville 44.23 319 P **P** 21 10 50.0 +0.1
ORV lAmb lAmb 21 11 02.7
comp=Z,20nm,1.1s
BDFB Brasilia 44.24 124 P **P** 21 10 51.0 +0.7
BDFB pmax pmax
comp=Z,46nm,1.2s
BDFB Brasilia 44.24 124 P **P** 21 10 50.5 +0.2
comp=Z,8.8nm,0.7s,baz=287,slow=9.1,SNR=11
BDFB LR LR 21 32 09.6
comp=Z,1μm,18.0s,baz=305,slow=40
BDFB Brasilia 44.24 124 P **P** 21 10 51.0 +0.7
BDFB lAmb lAmb 21 11 01.3
comp=Z,46nm,1.2s
ROC1 El Roble 44.34 163 P **P** 21 10 52.4 +1.4
MCCM Marconi Confer 44.43 316 P **P** 21 10 50.5 -0.9
MSO Missoula 44.60 332 P **P** 21 10 51.7 -1.1
baz=137
CPUP Villa Florida 44.60 144 P **P** 21 10 53.0 +0.1
comp=Z,1.3nm,0.7s,baz=310,slow=5.5,SNR=3.2
CPUP LR LR 21 32 10.5
comp=Z,509nm,19.0s,baz=321,slow=40
GDXM Geysers 44.70 317 P **P** 21 10 54.0 +0.3
MOD Modoc Plateau 44.79 322 P **P** 21 10 52.9 -1.6
MOD lAmb lAmb 21 11 03.9
comp=Z,24nm,1.5s
O03E Paynes Creek 44.83 319 P **P** 21 10 54.4 -0.2
baz=123
BMO Blue Mountains 44.91 327 P **P** 21 10 54.1 -1.2
BMO pmax pmax
comp=Z,8.0nm,1.0s
BMO Blue Mountains 44.91 327 P **P** 21 10 54.1 -1.2
HOPS Hopland Field 44.98 317 lAmb lAmb 21 11 06.6
comp=Z,30nm,1.4s
PCMB Pacaembu 45.24 134 *e*P **P** 21 10 57.9 -0.2
IPMB Ipameri, GO 45.36 127 *e*P **P** 21 10 58.9 -0.2
O02D Mt. Diablo Mer 45.40 319 P **P** 21 10 59.1 -0.2
baz=122
JTMT Jette 45.43 332 **PcP** 21 12 40.7 +2.4
WDC Whiskeytown Da 45.45 319 P **P** 21 11 00.5 +1.0
WDC pmax pmax
comp=Z,3.0nm,0.7s
WDC Whiskeytown Da 45.45 319 P **P** 21 11 00.5 +1.0
DRLN Deer Lake 45.62 25 P **P** 21 11 00.6 -0.1
F10A Beach Ranch, E 45.62 328 P **P** 21 11 00.1 -0.8
F10A lAmb lAmb 21 11 08.4
comp=Z,18nm,1.2s
K05A Summer Lake 45.62 323 P **P** 21 11 01.7 +0.6
K05A lAmb lAmb 21 11 09.9
comp=Z,29nm,1.4s
I07A Izee 45.63 325 P **P** 21 11 00.6 -0.4
M04C Macdoel 45.66 321 P **P** 21 11 00.9 -0.4
baz=124,SNR=9.4
KCPM Cahto Peak 45.67 318 P **P** 21 11 02.0 +0.5
KCPM lAmb lAmb 21 11 12.6
comp=Z,30nm,1.1s
N02D Trinity Center 45.77 320 P **P** 21 11 02.1 0.0
baz=122
GO05 Huala 46.02 165 P **P** 21 11 05.1 +1.0
KMRM Mail Ridge 46.03 318 P **P** 21 11 03.8 -0.5
KMRM lAmb lAmb 21 11 14.9
comp=Z,53nm,1.4s
K04D Chiloquin, OR 46.09 322 P **P** 21 11 04.3 -0.4
baz=125
M02C Callahan 46.09 320 P **P** 21 11 04.5 -0.2
baz=122
G08A Pilot Rock 46.09 327 P **P** 21 11 04.1 -0.6
J05D Fort Rock, OR 46.15 323 P **P** 21 11 04.9 -0.4
baz=126
L04D Klamath Falls 46.19 321 P **P** 21 11 04.7 -0.9
baz=124,SNR=9.1
WALA Waterton Lakes 46.24 334 P **P** 21 11 05.1 -0.6
PINE Pine Mountain 46.28 324 P **P** 21 11 05.7 -0.5
PINE lAmb lAmb 21 11 18.1
comp=Z,22nm,1.4s
KHMM Horse Mountain 46.38 319 P **P** 21 11 07.3 +0.2
KHMM lAmb lAmb 21 11 18.5
comp=Z,24nm,0.9s
E09A Wood Farm, Sta 46.46 328 lAmb lAmb 21 11 22.2
comp=Z,14nm,1.0s
JCC Jacoby Creek, 46.54 319 P **P** 21 11 08.3 +0.2
JCC lAmb lAmb 21 11 17.9
comp=Z,29nm,1.1s
J04D Umpqua Nationa 46.65 322 P **P** 21 11 08.6 -0.6
baz=125,SNR=8.9
HUMO Hull Mountain 46.81 321 **P** 21 11 12.3 +2.0
KRMB Red Mountain 46.83 320 lAmb lAmb 21 11 22.6
comp=Z,20nm,1.2s
I05D Terrebonne, OR 46.84 324 P **P** 21 11 10.3 -0.1
baz=126
BB19B Bebedouro 46.90 131 *e*P **P** 21 11 11.2 -0.1
E08A Dider Farm, El 46.92 328 P **P** 21 11 10.6 -0.4
L02E Cave Junction 46.97 320 P **P** 21 11 11.9 +0.4
baz=122
G06A Carlson Farm, 46.98 326 P **P** 21 11 11.6 +0.1
G06A lAmb lAmb 21 11 21.1
comp=Z,25nm,1.5s
F07A Phinny Hill Vi 47.00 327 P **P** 21 11 11.2 -0.4
F07A lAmb lAmb 21 11 26.4
comp=Z,20nm,1.1s
FFC Flin Flon 47.03 346 P **P** 21 11 12.3 +0.6
FFC pmax pmax
comp=Z,7.0nm,0.9s
FFC Flin Flon 47.03 346 P **P** 21 11 12.3 +0.6
PMNB Patos De Minas 47.07 126 *e*P **P** 21 11 13.1 +0.5
HAWA Hanford 47.10 327 lAmb lAmb 21 11 27.1
comp=Z,21nm,1.3s
NEW Newport 47.14 331 P **P** 21 11 10.7 -2.0
NEW pmax pmax
comp=Z,9.0nm,1.5s
NEW Newport 47.14 331 P **P** 21 11 10.7 -2.0
NEW Newport 47.14 331 P **P** 21 11 11.1 -1.6
baz=134
I04A Tendick Farm, 47.15 323 P **P** 21 11 12.7 -0.2
baz=125
D08A Wollman Farm, 47.22 329 P **P** 21 11 12.4 -0.8
K02D Willamette Mer 47.30 321 P **P** 21 11 13.8 -0.3
baz=123
SCHQ Schefferville 47.31 14 P **P** 21 11 12.0 -1.9
comp=Z,10nm,0.4s,baz=208,slow=6.1,SNR=55
SCHQ LR LR 21 31 52.7
comp=Z,3μm,18.6s,baz=212,slow=37
SCHQ Schefferville 47.31 14 P **P** 21 11 12.1 -1.9
G05D Wamic, OR 47.36 325 P **P** 21 11 13.9 -0.7
baz=127
E07A Sunnyside 47.38 327 lAmb lAmb 21 11 23.9
comp=Z,11nm,0.8s
KBO Bosley Butte 47.39 320 P **P** 21 11 17.0 +2.1
H04A Detroit Lake 47.53 324 lAmb lAmb 21 11 24.6
comp=Z,42nm,1.5s
I03D Drain, OR 47.65 322 P **P** 21 11 16.4 -0.3
baz=124
J01E Myrtle Point 47.71 321 P **P** 21 11 17.2 -0.1
baz=123
KEBM Edson Butte 47.81 321 P **P** 21 11 18.8 +0.8
F05D White Salmon 47.83 326 P **P** 21 11 17.5 -0.6
baz=127
F04A Amboy 48.40 325 P **P** 21 11 22.6 +0.2
F04A lAmb lAmb 21 11 33.3
comp=Z,17nm,1.1s
ITAB Concordia 48.42 140 *e*P **P** 21 11 22.9 0.0
G03D McMinnville, O 48.46 324 P **P** 21 11 22.5 -0.4
baz=125
LON Longmire 48.55 326 P **P** 21 11 23.7 -0.1
LON pmax pmax
comp=Z,8.0nm,1.2s
LON Longmire 48.55 326 P **P** 21 11 23.7 -0.1
C06D Leavenworth 48.80 328 P **P** 21 11 24.9 -0.7
baz=129
F03A Seaside 49.04 325 P **P** 21 11 27.4 0.0
VAO Valinhos 49.22 132 *e*P **P** 21 11 28.7 -0.5
SPB Sao Paulo 49.24 133 P **P** 21 11 29.0 -0.2
SPB lAmb lAmb 21 11 39.4
comp=Z,18nm,1.2s
E03A Lebam 49.40 325 P **P** 21 11 29.6 -0.5
E03A lAmb lAmb 21 11 34.1
comp=Z,39nm,1.3s
B06A Marblemount 49.48 329 P **P** 21 11 29.9 -0.8
B06A lAmb lAmb 21 11 39.4
comp=Z,21nm,1.1s
FCC Fort Churchill 49.55 354 lAmb lAmb 21 11 41.6
comp=Z,20nm,1.3s
NLWA Neilton Lookou 50.06 326 P **P** 21 11 35.4 +0.1
NLWA lAmb lAmb 21 11 45.2
comp=Z,26nm,1.2s
PGC Sidney 50.59 328 P **P** 21 11 38.3 -0.7
PGC lAmb lAmb 21 11 54.5
comp=Z,20nm,1.1s
PLTB Pedras Altas 50.83 145 *e*P **P** 21 11 41.5 +0.3
SJMB Sao Joao De Ma 51.41 123 *e*P **P** 21 11 46.6 +0.9
BSFB Barra de Sao F 51.75 123 *e*P **P** 21 11 48.8 +0.5
PLCA Paso Flores 51.79 166 *e*P **P** 21 11 50.7 +2.4
PLCA pmax pmax
comp=Z,3.0nm,0.7s
PLCA Paso Flores 51.79 166 P **P** 21 11 49.3 +1.0
comp=Z,3.2nm,0.7s,baz=355,slow=13,SNR=5.1
PLCA LR LR 21 29 38.4
comp=Z,256nm,18.7s,baz=22,slow=31
PLCA Paso Flores 51.79 166 *e*P **P** 21 11 49.3 +1.0
PLCA Paso Flores 51.79 166 P **P** 21 11 49.0 +0.7
YKA Yellowknife Ar 57.03 344 P **P** 21 12 24.1 -1.9
comp=Z,2.4nm,0.7s,baz=142,slow=6.8,SNR=30
YKA PcP **PcP** 21 13 22.0 +1.2
comp=Z,1.9nm,0.7s,baz=142,slow=4.0,SNR=8.8
TAOE Nuku Hiva Isla 58.07 253 *e*S **S** 21 20 29.4 -4.6
comp=Z,298nm,24.1s
TAOE *e*LR LR 21 29 25.3
comp=Z,719nm,25.1s
TAOE Nuku Hiva Isla 58.07 253 *e*T T 22 14 47.1
comp=Z,39nm,0.2s
RES Resolute Bay 65.30 357 P **P** 21 13 19.9 -1.9
RES pmax pmax
comp=Z,17nm,1.5s
RES Resolute Bay 65.30 357 P **P** 21 13 19.9 -1.9
RES lAmb lAmb 21 13 31.3
comp=Z,17nm,1.4s
INK Inuvik 66.68 342 lAmb lAmb 21 13 40.0
comp=Z,11nm,1.2s
HMT Hamilton 66.85 332 P **P** 21 13 31.5 -0.6
BCAR Beaver Creek A 66.90 335 P **P** 21 13 31.6 -0.8
EGAK Eagle 67.42 337 P **P** 21 13 33.7 -1.9
TULEG Thule 67.46 4 P **P** 21 13 35.1 -0.5
SUMG Summit 68.70 14 *e*P **P** 21 13 43.2 -0.8
SUMG pmax pmax
comp=Z,4.0nm,0.5s
SUMG Summit 68.70 14 *i* P **P** 21 13 43.2 -0.8
comp=Z,3.8nm,0.5s
SUMG Summit 68.70 14 P **P** 21 13 43.2 -0.8
SUMG lAmb lAmb 21 13 59.7
comp=Z,19nm,1.4s
PPT Papeete 69.44 247 LR LR 21 37 01.5
comp=Z,322nm,18.2s,baz=24,slow=29
PPT2 Papeete2 69.44 247 *e*S **S** 21 22 49.6 -5.7
comp=Z,281nm,23.2s
PPT2 Papeete2 69.44 247 *e*LR LR 21 34 49.8
comp=Z,531nm,24.2s,baz=53
IL31 69.65 336 lAmb lAmb 21 13 53.1
comp=Z,18nm,1.4s
ILAR Eielson Array 69.65 336 P **P** 21 13 48.7 -0.9
comp=Z,1.3nm,0.8s,baz=137,slow=4.1,SNR=14
ILAR LR LR 21 49 19.8
comp=Z,681nm,18.2s,baz=122,slow=40
POKR Poker Plat Res 70.00 336 P **P** 21 13 49.5 -2.2
baz=111
TBI Tubuai 71.18 241 *e*S **S** 21 23 12.7 -2.5
comp=Z,279nm,24.2s
TBI Tubuai 71.18 241 *e*LR LR 21 35 37.3
comp=Z,347nm,24.2s,baz=60
TBI Tubuai 71.18 241 *e*T T 22 31 15.2
comp=Z,6.0nm,0.2s
RDOG Red Dog Mine 76.70 338 lAmb lAmb 21 14 39.8
comp=Z,15nm,1.2s
ESDC Sonseca Array 76.91 51 P **P** 21 14 32.8 -0.1
comp=Z,5.0nm,0.7s,baz=282,slow=5.6,SNR=24
ESDC LR LR 21 43 05.1
comp=Z,525nm,21.3s,baz=270,slow=32
ESBB Sonseca Array 76.91 51 lAmb lAmb 21 14 34.6
comp=Z,23nm,1.1s
ESBB pP 21 14 40.0 -1.7
NIKH Nikolski High 78.82 322 P **P** 21 14 42.3 -0.9
TIC Toumodi 78.89 85 *e*P **P** 21 14 44.5 +0.1
comp=Z,25nm,0.8s
LIC Lamto 78.94 86 *e*P **P** 21 14 44.9 +0.2
comp=Z,85nm,0.8s
DBIC Dimbokro 79.04 85 P **P** 21 14 44.2 -1.0
DBIC pmax pmax
comp=Z,19nm,1.0s
DBIC Dimbokro 79.04 85 P **P** 21 14 45.0 -0.2
comp=Z,14nm,0.9s,baz=252,slow=4.8,SNR=11
DBIC LR LR 21 48 08.0
comp=Z,258nm,20.5s,baz=256,slow=35
DBIC Dimbokro 79.04 85 P **P** 21 14 44.1 -1.0
DBIC lAmb lAmb 21 14 47.2
comp=Z,19nm,0.9s
KIC Kosan Boka 79.20 85 *e*P **P** 21 14 46.4 +0.3
comp=Z,50nm,0.9s
DOU Dourbes 82.33 41 ||P **P** 21 15 01.7 -0.4
DOU sP **PcP** 21 15 09.1 +1.7
MEM Membach 83.17 40 P **P** 21 15 06.1 -0.4
WLF Walferdange 83.38 41 P **P** 21 15 07.7 +0.1
WLF pmax pmax
comp=Z,30nm,1.2s
WLF Walferdange 83.38 41 P **P** 21 15 07.7 +0.1
ADK Adak 83.68 321 P **P** 21 15 09.2 +0.1
ADK pmax pmax
comp=Z,195nm,1.5s
ADK Adak 83.68 321 P **P** 21 15 09.2 +0.1
ECH Echery 84.22 42 lAmb lAmb 21 15 20.1
comp=Z,10.0nm,1.0s
TOA0 Torodi Ar. Sit 84.49 78 lAmb lAmb 21 15 24.7
comp=Z,18nm,1.4s
TORD Torodi Ar. Bea 84.49 78 P **P** 21 15 13.0 -0.9
comp=Z,2.1nm,0.9s,baz=297,slow=2.3,SNR=11
TORD LR LR 21 49 19.3
comp=Z,226nm,21.9s,baz=280,slow=33
SENIN Lac Senin/Sane 84.58 44 P **P** 21 15 12.8 -1.2
NB2 NORSAR Subarra 84.58 29 P **P** 21 15 13.8 +0.3
comp=Z,1.2nm,0.7s,baz=281,slow=5.1
NOA NORSAR Array B 84.58 29 *e*P **P** 21 15 14.0 +0.5
NOA pmax pmax
comp=Z,2.0nm,0.8s
NOA NORSAR Array B 84.58 29 P **P** 21 15 11.4 -2.1
comp=Z,1.7nm,0.8s,baz=277,slow=4.9,SNR=4.8
NOA LR LR 21 51 20.2
comp=Z,290nm,19.0s,baz=270,slow=35
NB201 NORSAR Array S 84.61 29 P **P** 21 15 13.3 -0.4
TNS Taunus Mts 84.77 40 *e*L L 21 54 08.8
comp=Z,320nm,20.0s
BFO Black Forest 84.98 42 P **P** 21 15 14.1 -1.7
BFO pmax pmax
comp=Z,10.0nm,1.2s
BFO Black Forest 84.98 42 *e*L L 21 49 59.7
comp=Z,871nm,19.9s
BFO Black Forest 84.98 42 P **P** 21 15 14.1 -1.7
BFO lAmb lAmb 21 15 17.4
comp=Z,10nm,1.2s
BSEG Bad Segeberg 85.32 36 *e*L L 21 52 02.7
comp=Z,348nm,20.1s
STU Stuttgart 85.48 41 P **P** 21 15 17.2 -1.1
STU pmax pmax
comp=Z,22nm,1.2s
STU Stuttgart 85.48 41 P **P** 21 15 17.2 -1.1
STU lAmb lAmb 21 15 26.5
comp=Z,22nm,1.2s
TUE Stuetta 85.96 44 P **P** 21 15 20.4 -0.6
TUE lAmb lAmb 21 15 29.9
comp=Z,12nm,0.7s
DAVA Damuels 86.18 43 *e*P **P** 21 15 20.9 -1.1
comp=Z,22nm,1.0s
FUORN Ofenpass-Fuorn 86.56 43 P **P** 21 15 23.3 -0.6
GRA1 Grafenberg Arr 86.63 40 P **P** 21 15 23.8 -0.1
GRA1 lAmb lAmb 21 15 33.5
comp=Z,16nm,1.0s
GRF Grafenberg Arr 86.63 40 P **P** 21 15 23.8 -0.1
GRF pmax pmax
comp=Z,15nm,1.0s
GRF Grafenberg Arr 86.63 40 *e*P **P** 21 15 23.1 -0.8
comp=Z,694nm,4.2s,baz=272,slow=5.5
GRF *e*L L 21 55 15.7
comp=Z,499nm,18.4s
TAM Tamanrasset 86.64 68 P **P** 21 15 24.2 -0.5
TAM pmax pmax
comp=Z,9.0nm,1.1s
TAM Tamanrasset 86.64 68 P **P** 21 15 24.2 -0.5
TAM lAmb lAmb 21 15 36.4
comp=Z,9.1nm,1.1s
GRA3 Grafenberg Arr 86.68 40 *e*P **P** 21 15 23.5 -0.7
comp=Z,84nm,1.8s,baz=272,slow=5.5
MOX Moxa 86.70 39 *e*L L 21 53 45.4
comp=Z,383nm,21.0s
RETA Reutte 86.74 43 *e*P **P** 21 15 23.0 -1.6
comp=Z,16nm,1.3s
FETA Feichten 86.80 43 *e*P **P** 21 15 23.6 -1.5
comp=Z,18nm,1.4s
PRMA PARMA 86.92 45 P **P** 21 15 25.4 0.0
RGN Rugen 86.93 35 P **P** 21 15 24.1 -1.2
FUR Furstenfeldbru 86.95 42 *e*L L 21 51 18.4
comp=Z,861nm,19.8s
MOTA Moosalm 86.99 43 *e*P **P** 21 15 24.5 -1.5
comp=Z,19nm,1.3s
SQTA Sankt Quirin 87.08 43 P **P** 21 15 25.6 -0.8
comp=Z,22nm,1.9s
MANZ Manzenberg 87.13 40 *e*P **P** 21 15 25.9 -0.6
comp=Z,33nm,1.8s,baz=272,slow=5.5
ROTZ Rotzenmuhle 87.24 40 *e*P **P** 21 15 26.5 -0.4
comp=Z,37nm,1.8s,baz=272,slow=5.5
TANN Tannenbergstha 87.27 39 *e*P **P** 21 15 26.5 -0.6
comp=Z,73nm,1.6s,baz=272,slow=5.5
NKC Novy Kostel 87.30 40 *e*P **P** 21 15 27.6 +0.4
NKC *e* 21 15 35.6
NKC Novy Kostel 87.30 40 *e*P **P** 21 15 27.6 +0.4
NKC *e*pP **pP** 21 15 35.6 -0.4
WATA Walderalm 87.31 43 *e*PcP **P** 21 15 27.7 +0.3
comp=Z,7.8nm,1.1s
WTTA Wattenberg 87.36 43 *e*P **P** 21 15 26.4 -1.4
comp=Z,15nm,1.6s
CLL Collm 87.42 38 *e*P **P** 21 15 27.0 -0.7
CLL *e* 21 15 35.0
CLL *e*S **S** 21 26 10.0 +3.2
CLL pmax pmax
comp=Z,34nm,1.8s
CLL MLR MLR
comp=Z,400nm,18.0s
CLL Collm 87.42 38 *e*P **P** 21 15 27.0 -0.7
comp=Z,34nm,1.8s
CLL *e*pP **pP** 21 15 35.0 -1.5
CLL *e*S **S** 21 26 10.0 +3.2
CLL *e*PS **PnS** 21 27 12.0 +2.5
CLL *e*PPS PPS 21 27 41.0
CLL *e*SS SS 21 32 06.0 +14
CLL *e*SSS SSS 21 35 30.0
CLL *e*SSSS 21 38 24.0
CLL Lm MLR 21 56 00.0
comp=N,400nm,18.3s
CLL Lm MLR 21 56 00.0
comp=E,300nm,18.9s
CLL Lm MLR 21 56 00.0
comp=Z,400nm,18.0s
CLL Collm 87.42 38 *e*L L 21 52 35.4
comp=Z,451nm,19.8s
CLL Collm 87.42 38 lAmb lAmb 21 15 29.4
comp=Z,14nm,1.3s
CTI Castel Tesino 87.61 44 lAmb lAmb 21 15 38.3
comp=Z,15nm,1.0s
MIDW Midway 87.76 298 P **P** 21 15 28.4 -1.4
WET Wettzell 87.80 41 *e*L L 21 49 20.9
comp=Z,676nm,21.9s
KEST Kesra 87.81 54 P **P** 21 15 29.9 -0.1
comp=Z,9.0nm,0.8s,baz=282,slow=5.3,SNR=7.6
KEST LR LR 21 50 58.2
comp=Z,154nm,18.4s,baz=234,slow=33
KEST Kesra 87.81 54 P **P** 21 15 30.0 -0.1
ARCES ARCESS Array B 88.00 19 P **P** 21 15 29.4 -0.7
ARCES ARCESS Array B 88.00 19 P **P** 21 15 30.6 +0.4
comp=Z,1.5nm,0.6s,baz=282,slow=5.3,SNR=5.0
ARCES LR LR 21 54 10.7
comp=Z,343nm,18.6s,baz=316,slow=35
ARCES ARCESS Array B 88.00 19 P **P** 21 15 29.4 -0.7
ABTA Abfaltersbach 88.05 43 *e*P **P** 21 15 30.7 -0.3
comp=Z,18nm,1.2s
BILL Bilibino 88.09 339 ||*e*P **P** 21 15 30.9 +0.3
BILL *e* 21 19 05.2
BILL *e*PPP PPP 21 20 58.9
BILL pmax pmax
comp=Z,16nm,1.4s
BILL MLR MLR
comp=Z,532nm,21.0s
BILL Bilibino 88.09 339 P **P** 21 15 30.4 -0.2
BILL lAmb lAmb 21 15 33.7
comp=Z,17nm,1.3s
BRG Berggiesshubel 88.09 39 *e*P **P** 21 15 31.7 +0.7
comp=Z,41nm,2.0s
BRG Berggiesshubel 88.09 39 *e*P **P** 21 15 31.7 +0.7
BRG pmax pmax
comp=Z,41nm,2.0s
KHC Kasperske Hory 88.25 41 *e*P **P** 21 15 31.1 -0.7
KHC *e* 21 15 40.2
KHC MLR MLR
comp=Z,1μm,22.4s
KHC Kasperske Hory 88.25 41 *e*P **P** 21 15 31.1 -0.7
KHC *e*pP **pP** 21 15 40.2 -0.4
KHC AMS AMS 21 49 40.0
comp=Z,1μm,22.4s
STAL STALIGIAL 88.29 43 P **P** 21 15 31.4 -0.6
GEC2 GERESS Array S 88.39 41 *e*L L 21 52 17.4
comp=Z,774nm,19.2s
GEC2 GERESS Array S 88.39 41 lAmb lAmb 21 15 41.8
comp=Z,19nm,1.4s
GERES GERESS Array B 88.39 41 *e*P **P** 21 15 32.0 -0.5
GERES pmax pmax
comp=Z,1.0nm,0.7s
GERES GERESS Array B 88.39 41 P **P** 21 15 31.6 -1.0
comp=Z,1.2nm,0.7s,baz=318,slow=1.8,SNR=13
GERES LR LR 21 51 40.3
comp=Z,696nm,18.7s,baz=272,slow=34
KBA Koelnbreinsper 88.54 43 *e*P **P** 21 15 31.7 -1.7
comp=Z,26nm,1.5s
MYKA Terra Mystica 88.84 43 *e*P **P** 21 15 33.2 -1.5
comp=Z,26nm,1.5s
TREC Trest 89.43 40 AMS AMS 21 50 50.0
comp=Z,900nm,22.9s
UPC Upice 89.46 39 AMS AMS 21 52 00.0
comp=Z,800nm,22.6s
OBKA Obir 89.47 43 *e*P **P** 21 15 35.6 -2.1
comp=Z,21nm,1.7s
OSTC Ostas 89.57 39 *e*P **P** 21 15 38.2 +0.2
OSTC *ex* x 21 15 43.6
DPC Dobruska-Polom 89.69 39 AMS AMS 21 57 30.0
comp=Z,500nm,21.7s
SOKA Soboth 89.76 43 *e*P **P** 21 15 36.5 -2.5
comp=Z,16nm,1.6s
CONA Conrad Observa 90.00 41 *e*PcP **P** 21 15 40.1 0.0
comp=Z,11nm,1.2s
MORC Moravsky Berou 90.60 39 P **P** 21 15 42.0 -0.8
MORC pmax pmax
comp=Z,7.0nm,1.3s
MORC Moravsky Berou 90.60 39 P **P** 21 15 42.0 -0.8
ZST Bratislava 90.74 41 *e*P **P** 21 15 42.9 -0.5
ZST Bratislava 90.74 41 *e*P **P** 21 15 42.9 -0.5
MODS Modra-Piesok 90.81 41 *e*P **P** 21 15 43.9 +0.2
MODS Modra-Piesok 90.81 41 *e*P **P** 21 15 43.9 +0.2
MODS Modra-Piesok 90.81 41 *e*P **P** 21 15 44.0 +0.2
FINES FINESS Array B 91.35 27 P **P** 21 15 45.1 -0.8
comp=Z,1.9nm,0.7s,baz=228,slow=2.3,SNR=6.0
FINES LR LR 21 51 32.1
comp=Z,290nm,19.9s,baz=299,slow=32
VYHS Vyhne 91.77 40 *e*P **P** 21 15 48.9 +0.7
VYHS Vyhne 91.77 40 *e*P **P** 21 15 48.9 +0.7
OJC Ojcow 91.87 38 P **P** 21 15 48.0 -0.6
OJC pmax pmax
comp=Z,10.0nm,1.2s
OJC Ojcow 91.87 38 P **P** 21 15 48.0 -0.6
OJC lAmb lAmb 21 15 49.6
comp=Z,10nm,1.2s
PSZ Piszkesteto 92.62 41 P **P** 21 15 51.7 -0.5
PSZ pmax pmax
comp=Z,24nm,1.5s
PSZ Piszkesteto 92.62 41 P **P** 21 15 51.7 -0.5
SEY Seymchan 95.56 337 *e*P **P** 21 16 07.1 +1.8
TIXI Tiksi 95.89 350 *e*P **P** 21 16 07.4 +0.8
TIXI pmax pmax
comp=Z,1.0nm,0.9s
AKASG Malin Array Be 97.32 36 LR LR 21 59 15.6
comp=Z,490nm,18.9s,baz=280,slow=35
PETK Petropavlovsk- 98.17 327 LR LR 22 02 09.8
comp=Z,118nm,21.9s,baz=60,slow=36
OBN Obninsk 99.16 30 ||*e*P **Pdif** 21 16 23.3 +1.6
OBN *e*PPP PPP 21 22 33.6

OBN					*e*S		**SKSac**	**21 27 02.9**	**+4.7**
OBN					pmax		pmax		
	comp=Z,4.0nm,1.1s								
SYO	**Syowa Base**	**110.82**	**161⇑**	*e*Pdiff		**Pdif**		**21 17 11.0**	**-2.1**
SYO	**Syowa Base**	**110.82**	**161⇑**	*e*X		**Pdif**		**21 17 24.0**	**+11**
DZM	**Mont Dzumac**	**110.85**	**250**	*e*LR		LR		21 53 56.5	
	comp=Z,242nm,24.0s								
ZALV	**Zalesovo Beam**	**116.08**	**7**	*e*PKIKP		**PKPdf**		**21 21 25.6**	**+2.3**
ZALV	**Zalesovo Beam**	**116.08**	**7**	PKP		**PKiKP**		**21 21 23.2**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=343,slow=1.5,SNR=3.6								
ZALV	**Zalesovo Beam**	**116.08**	**7**	*e*PKPdf		pPKPdf		21 21 32.3	-0.1
ZALV				PP		**PP**		**21 22 23.7**	**-3.4**
GEYT	**Alibeck**	**121.38**	**34**	PKP		**PKPdf**		**21 21 33.6**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=265,slow=10,SNR=4.0								
GEYT	**Alibeck**	**121.38**	**34**	pPKPdf		pPKPdf		21 21 43.0	-0.1
SONM	**Songino Array**	**121.95**	**351**	PKP		**PKPdf**		**21 21 34.9**	**-0.2**
	comp=Z,1.4nm,1.0s,baz=1.6,slow=2.5,SNR=6.4								
MKAR	**Makanchi Array**	**122.68**	**11**	*e*PKIKP		**PKPdf**		**21 21 36.0**	**-0.3**
MKAR	**Makanchi Array**	**122.68**	**11**	PKP		**PKPdf**		**21 21 35.5**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=296,slow=3.4,SNR=15								
KSRS	**Korea Array**	**124.04**	**329**	*e*PKIKP		**PKiKP**		**21 21 40.5**	**+1.1**
KSRS				pmax		pmax			
	comp=Z,3.0nm,0.7s								
KSRS	**Korea Array**	**124.04**	**329**	PKP		**PKPdf**		**21 21 39.4**	**+0.2**
	comp=Z,2.8nm,0.7s,baz=14,slow=1.9,SNR=8.6								
AAK	**Ala-Archa**	**124.67**	**18**	PKIKP		**PKiKP**		**21 21 42.3**	**+1.5**
AAK	**Ala-Archa**	**124.67**	**18**			**PKiKP**		**21 21 42.3**	**+1.5**
WMQ	**Urumqi**	**126.39**	**7**	*e*PKP		**PKPdf**		**21 21 43.8**	**+0.2**
WMQ				LR		LR			
	comp=Z,400nm,24.3s								
WMQ				LR		LR			
	comp=Z,190nm,24.3s								
WMQ				LR		LR			
	comp=Z,540nm,24.3s								
HHC	**Hu-ho-hao-te**	**127.57**	**344**	*e*PKP		**PKPdf**		**21 21 41.5**	**-4.5**
HHC				LR		LR			
	comp=Z,200nm,17.0s								
HHC				LR		LR			
	comp=Z,210nm,17.9s								
HHC				LR		LR			
	comp=Z,320nm,18.7s								
KSH	**Kashi**	**127.97**	**19**	PKP		**PKiKP**		**21 21 49.3**	**+1.9**
KSH				PP		PP		21 23 57.1	+8.9
KSH				PKS		**PKSdf**		**21 25 22.8**	**-0.7**
KSH				SKKS				21 30 46.4	
KSH				LR		LR			
	comp=Z,190nm,4.1s								
KSH				LR		LR			
	comp=Z,210nm,5.3s								
KSH				LR		LR			
	comp=Z,430nm,7.2s								
GTA	**Gaotai**	**131.04**	**355**	⇑PKP		**PKPdf**		**21 21 53.0**	**+0.4**
GTA				PP		PP		21 24 17.4	+9.3
GTA				AMB		AMB			
	comp=Z,150nm,8.6s								
GTA				LR		LR			
	comp=Z,260nm,21.6s								
GTA				LR		LR			
	comp=Z,220nm,19.4s								
GTA				LR		LR			
	comp=Z,310nm,19.4s								
STKA	**Stephens Creek**	**131.74**	**236**	PKP		**PKiKP**		**21 21 55.6**	**+0.7**
	comp=Z,1.8nm,0.7s,baz=11,slow=5.2,SNR=2.8								
NJ2	**Nanjing**	**132.80**	**332**	*e*PKP		**PKPdf**		**21 21 56.3**	**+0.3**
LZH	**Lanzhou**	**133.82**	**350**	*e*PKP		**PKPdf**		**21 21 55.8**	**-2.2**
LZH				sPKP				21 22 03.0	
LZH				LR		LR			
	comp=Z,220nm,17.9s								
LZH				LR		LR			
	comp=Z,230nm,18.2s								
LZH				LR		LR			
	comp=Z,290nm,20.1s								
WHN	**Wuhan**	**136.04**	**336**	PKPbc		**PKiKP**		**21 22 09.8**	**+6.1**
ASAR	**Alice Springs**	**140.51**	**244**	PKHKP		PKPpre		21 22 03.9	
	comp=Z,0.8nm,0.6s,baz=114,slow=3.4,SNR=5.3								
ASAR				PKP		**PKPdf**		**21 22 11.2**	**+0.6**
	comp=Z,3.5nm,1.0s,baz=108,slow=2.5,SNR=17								
DANN	**Dangsing**	**140.68**	**16**	*e*P		**PKPdf**		**21 22 07.7**	**-3.4**
	comp=Z,18nm,0.6s								
WRA	**Warramunga Arr**	**140.87**	**250**	*e*PKIKP		**PKPdf**		**21 22 07.8**	**-3.4**
WRA				pmax		pmax			
	comp=Z,2.0nm,0.5s								
WRA	**Warramunga Arr**	**140.87**	**250**	PKhKP		PKPpre		21 22 06.2	
	comp=Z,1.9nm,0.5s,baz=100,slow=3.1,SNR=6.6								
WRA				PKP		**PKPdf**		**21 22 11.3**	**+0.1**
	comp=Z,4.1nm,0.8s,baz=97,slow=2.8,SNR=17								
GUN	**Gumba**	**141.63**	**13**	*e*P		**PKPdf**		**21 22 09.3**	**-3.6**
DMN	**Daman**	**141.73**	**15**	*e*P		**PKPdf**		**21 22 08.9**	**-4.0**
PKIN	**Phulchoki**	**141.84**	**14**	*e*P		**PKPdf**		**21 22 09.1**	**-4.0**
JIRN	**Jiri**	**141.94**	**13**	*e*P		**PKPdf**		**21 22 09.6**	**-3.9**
TAPN	**Taplejung**	**142.55**	**11**	*e*P		**PKPdf**		**21 22 11.7**	**-2.8**
KMI	**Kunming**	**144.70**	**348**	PKP		PKPbc		21 22 17.5	+0.5
KMI				pPKP		pPKPdf		21 22 26.3	-1.0
KMI				sPKP				21 22 30.5	
KMI				PP		**PP**		**21 25 38.5**	**+5.2**
KMI				AMB		AMB			
	comp=Z,160nm,6.1s								
KMI				LR		LR			
	comp=Z,230nm,18.7s								
KMI				LR		LR			
	comp=Z,240nm,22.3s								
KMI				LR		LR			
	comp=Z,410nm,30.4s								
SHL	**Shillong**	**144.89**	**5**	PKIKP		**PKPdf**		**21 22 18.5**	**0.0**
SHL	**Shillong**	**144.89**	**5**			**PKPdf**		**21 22 18.5**	**0.0**
KCP	**Kidapawan**	**145.94**	**298⇓**	*i*P		**PKPab**		**21 22 23.2**	**+1.6**
KLRI	**Killari**	**146.93**	**34**	*e*PKPdf		**PKPdf**		**21 22 22.3**	**+0.4**
SRSP	**Sriramsagar**	**147.13**	**30**	*e*PKPdf		**PKPdf**		**21 22 22.6**	**+0.4**
RPN	**Rampur**	**147.66**	**29**	*e*PKPbc		**PKPbc**		**21 22 25.8**	**+0.1**
HYBB	**Hyderabad (bro**	**148.51**	**32**	*e*PKPbc		**PKPbc**		**21 22 27.9**	**-0.1**
HYB	**Hyderabad**	**148.51**	**32**	*i* PKP		**PKPbc**		**21 22 27.0**	**-1.1**
GGR	**Gangavaram**	**148.98**	**29**	*e*PKPdf		**PKPdf**		**21 22 25.0**	**-0.2**
NWAO	**Narrogin (SRO)**	**149.15**	**218**	PKP2		**PKPab**		**21 22 35.3**	**+1.7**
NWAO	**Narrogin (SRO)**	**149.15**	**218**			**PKPab**		**21 22 35.3**	**+1.7**
FITZ	**Fitzroy Crossi**	**149.30**	**251**			**PKiKP**		**21 22 32.5**	**+1.3**
NJS	**Nagarjunasagar**	**149.62**	**31**	*e*PKPbc		**PKPbc**		**21 22 30.0**	**-0.8**
SRLM	**Srisailam**	**149.79**	**32**	*e*PKPbc		**PKPbc**		**21 22 30.9**	**-0.4**
URV	**Uravakonda**	**149.81**	**36**	*e*PKPdf		**PKPdf**		**21 22 28.6**	**+2.0**
CHLP	**Challavanipeta**	**149.98**	**21**	*e*PKPbc		**PKPbc**		**21 22 31.2**	**-0.5**
MYLAV	**Mylavaram**	**150.11**	**29**	*e*PKPbc		**PKPbc**		**21 22 31.7**	**-0.4**
PVM	**Polavaram**	**150.13**	**27**	*e*PKPdf		**PKPdf**		**21 22 26.2**	**-0.9**
ADKI	**Addanki**	**150.56**	**31**	*e*PKPdf		**PKPdf**		**21 22 28.0**	**+0.3**
CHTO	**Chiang Mai**	**151.52**	**353**	PKIKP		**PKPbc**		**21 22 35.2**	**-0.1**
CHTO	**Chiang Mai**	**151.52**	**353**			**PKPbc**		**21 22 35.2**	**-0.1**
CM31	**Chiang Mai Arr**	**151.87**	**352**	PKPdf		**PKPdf**		**21 22 30.3**	**+0.5**
CMAR	**Chiang Mai Arr**	**151.87**	**352**	PKP		**PKPdf**		**21 22 30.9**	**+1.1**
	comp=Z,1.5nm,0.8s,baz=311,slow=3.0,SNR=9.8								
CMAR				PKPbc		**PKPbc**		**21 22 36.3**	**+0.2**
	comp=Z,4.1nm,0.7s,baz=326,slow=2.7,SNR=23								
CMAR				PKPab		**PKPab**		**21 22 44.0**	**-1.1**
	comp=Z,12nm,1.1s,baz=325,slow=2.8,SNR=16								
SKHT	**Srikalahasti**	**152.18**	**34**	*e*PKPdf		**PKPdf**		**21 22 29.8**	**-0.4**
PBKT	**Sadao Pong**	**153.37**	**348**	PKPbc		**PKPbc**		**21 22 39.4**	**-0.1**
PBKT				PKPab		**PKPab**		**21 22 48.3**	**-3.0**

*IDC **17** 21:22:38.4±10.0, 13.°26S×167.°30E, h170km±90km, mb3.6/7, mb1 3.8/7, mb1mx3.5/34, mbtmp4.0/7, Error ellipse: s-maj=52.6km s-min=30.1km az=112.0*
*NEIC **17** 21:22:41.8±1.8, 13.°04S±0.°08×167.°2E±0.°1, h203km±7km, mb4.5/17, Error ellipse: s-maj=19.8km s-min=11.7km az=85.0*
ISC 17 21:22:41.7±0.6, 13.°05S±0.°10×167.°2E±0.°1, h200km, n33, σ0s94/31, mb4.2/16, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**2.38**	**180**	Pn		**Pn**	**21 23 25.0**	**+0.8**
CAN	**Canberra**	**27.60**	**213**	P		**P**	**21 28 09.0**	**-1.5**
CAN				IAmb		IAmb	21 28 12.2	
	comp=Z,5.5nm,1.1s							
QRZ	**Quartz Range**	**28.06**	**171**	P		**P**	**21 28 14.9**	**+0.4**
TUWZ	**Tuamarina**	**28.88**	**169**	P		**P**	**21 28 21.4**	**-0.2**
LTZ	**Lake Taylor**	**29.95**	**173**	P		**P**	**21 28 31.1**	**0.0**
LTZ				IAmb		IAmb	21 28 44.9	
	comp=Z,16nm,1.2s							
STKA	**Stephens Creek**	**30.05**	**227**	P		**P**	**21 28 32.1**	**-0.1**
	comp=Z,2.3nm,0.5s,baz=50,slow=9.9,SNR=8.6							
STKA				PcP		**PcP**	**21 31 28.0**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=34,slow=0.6,SNR=4.3							
STKA	**Stephens Creek**	**30.05**	**227**	IAmb		IAmb	21 28 33.2	
	comp=Z,0.8nm,1.0s							
OXZ	**Oxford**	**30.45**	**173**			pwP	21 29 21.9	+2.9
TOO	**Toolangi**	**31.17**	**215**	P		**P**	**21 28 41.9**	**-0.1**
TOO				IAmb		IAmb	21 28 42.7	
	comp=Z,4.5nm,0.8s							
WR0	**Warramunga Arr**	**32.02**	**253**	P		**P**	**21 28 48.5**	**-1.2**
WRA	**Warramunga Arr**	**32.21**	**253**	P		**P**	**21 28 50.0**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=85,slow=9.0,SNR=6.1							
WRA				PcP		**PcP**	**21 31 35.2**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=86,slow=3.3,SNR=4.2							
WRA	**Warramunga Arr**	**32.21**	**253**	IAmb		IAmb	21 28 56.1	
	comp=Z,0.1nm,0.9s							
ASAR	**Alice Springs**	**33.24**	**247**	P		**P**	**21 28 59.2**	**-1.0**
	comp=Z,1.5nm,0.6s,baz=76,slow=9.2,SNR=35							
ASAR				PcP		**PcP**	**21 31 37.6**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=76,slow=2.2,SNR=4.6							
BBOO	**Buckleboo**	**34.58**	**230**	P		**P**	**21 29 11.2**	**-0.4**
BBOO				IAmb		IAmb	21 29 28.9	
	comp=Z,10nm,1.1s							
KNRA	**Kununurra**	**37.30**	**261**	P		**P**	**21 29 34.7**	**-0.1**
KNRA				IAmb		IAmb	21 29 41.8	
	comp=Z,20nm,1.0s							
FORT	**Forrest**	**40.12**	**237**	P		**P**	**21 29 57.7**	**-0.4**
FORT				IAmb		IAmb	21 30 09.0	
	comp=Z,20nm,0.9s							
PSA00	**Pilbara Seismi**	**45.85**	**253**	P		**P**	**21 30 44.5**	**+0.3**
HUH	**Hualalai**	**48.81**	**49**	P		**P**	**21 31 07.8**	**+0.5**
CMAR	**Chiang Mai Arr**	**74.22**	**294**	P		**P**	**21 33 59.0**	**+1.8**
	comp=Z,0.9nm,0.8s,baz=122,slow=4.6,SNR=6.4							
QSPA	**South Pole Qui**	**76.97**	**180**	P		**P**	**21 34 12.1**	**+0.1**
QSPA				IAmb		IAmb	21 34 13.0	
	comp=Z,5.0nm,1.1s							
GAMB	**Gambell**	**78.29**	**9**	P		**P**	**21 34 16.8**	**-2.2**
CNPM	**China Poot**	**79.71**	**20**	P		**P**	**21 34 25.5**	**-1.4**
CNPM				IAmb		IAmb	21 34 35.9	
	comp=Z,26nm,1.0s							
YAK	**Yakutsk**	**80.42**	**343**	P		**P**	**21 34 30.0**	**-0.5**
YAK				IAmb		IAmb	21 34 30.5	
	comp=Z,7.3nm,0.4s							
SONM	**Songino Array**	**81.12**	**323**	P		**P**	**21 34 36.1**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=104,slow=6.1,SNR=2.9							
SONM	**Songino Array**	**81.12**	**323**	IAmb		IAmb	21 34 37.2	
	comp=Z,0.4nm,1.0s							
SKT	**Skwentna**	**81.48**	**18**	P		**P**	**21 34 35.6**	**-0.7**
ILAR	**Eielson Array**	**84.96**	**18**	P		**P**	**21 34 54.8**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=241,slow=4.7,SNR=14							
VCNR	**Virginia City**	**85.54**	**48**			pP	21 35 45.1	-0.8
MKAR	**Makanchi Array**	**95.95**	**317**	P		**P**	**21 35 46.8**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=92,slow=5.7,SNR=12							
ARCES	**ARCESS Array B**	**118.62**	**346**	PKP		**PKiKP**	**21 41 05.6**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=50,slow=1.4,SNR=14							
FINES	**FINESS Array B**	**124.15**	**339**	PKP		**PKiKP**	**21 41 16.5**	**+0.2**
	comp=Z,3.2nm,0.9s,baz=50,slow=2.2,SNR=5.6							
KEST	**Kesra**	**149.87**	**322**	PKPbc		**PKiKP**	**21 42 09.2**	**-0.3**
	comp=Z,4.0nm,0.9s,baz=225,slow=2.9,SNR=4.0							
ESDC	**Sonseca Array**	**152.36**	**345**	PKPbc		**PKiKP**	**21 42 15.7**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=2.4,slow=5.2,SNR=4.3							

*IDC **17** 21:32:02.5±2.0, 1.°88N×127.°55E, h0km, mb3.8/3, mb1 4.1/3, mb1mx3.5/35, mbtmp3.9/3, Error ellipse: s-maj=157.4km s-min=23.1km az=67.0*
*NEIC **17** 21:32:11.7±0.4, 1.°8N±0.°1×127.°55E±0.°10, h76km±11km, mb4.2/6, Error ellipse: s-maj=18.0km s-min=12.2km az=214.0*
ISC 17 21:32:14.2±0.9, 1.°6N±0.°1×127.°4E±0.°1, h112km, n16, σ1s82/16, mb4.0/6, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.84**	**184**	Pn		**Pn**	**21 32 30.5**	**-3.6**
LUWI	**Luwuk**	**5.35**	**240**	Pn		**Pn**	**21 33 32.0**	**+0.2**
FAKI	**Fak Fak**	**6.60**	**133**	Pn		**Pn**	**21 33 46.3**	**-2.5**
SAUI	**Saumlaki**	**10.29**	**158**	Pn		**Pn**	**21 34 37.6**	**-1.2**
SOEI	**Soe**	**11.73**	**195**	Pn		**Pn**	**21 34 58.6**	**+0.3**
KKM	**Kota Kinabalu**	**12.02**	**292**	Pn		**Pn**	**21 35 00.4**	**-1.6**
COEN	**Coen**	**21.98**	**135**	P		**P**	**21 36 59.9**	**+0.5**
COEN				IAmb		IAmb	21 37 09.4	
	comp=Z,8.4nm,1.1s							
WRA	**Warramunga Arr**	**22.48**	**163**	P		**P**	**21 37 06.3**	**+1.8**
	comp=Z,2.8nm,0.6s,baz=343,slow=11,SNR=26							
WRA	**Warramunga Arr**	**22.48**	**163**	P		**P**	**21 37 05.9**	**+1.4**
WR0	**Warramunga Arr**	**22.55**	**162**	P		**P**	**21 37 07.0**	**+1.8**
NACB	**Ninganchiao**	**23.12**	**346**			**P**	**21 37 09.9**	**-0.8**
NACB				IAmb		IAmb	21 37 19.0	
	comp=Z,22nm,0.9s							
ASAR	**Alice Springs**	**25.91**	**166**	P		**P**	**21 37 38.1**	**+2.0**
	comp=Z,1.0nm,0.5s,baz=348,slow=7.2,SNR=20							
MK31	**Makanchi Array**	**59.68**	**326**	P		**P**	**21 42 08.0**	**+1.1**
MKAR	**Makanchi Array**	**59.68**	**326**	P		**P**	**21 42 08.0**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=116,slow=8.0,SNR=16							
MAKZ	**Makanchi**	**59.86**	**326**	P		**P**	**21 42 09.3**	**+1.1**
MAKZ				IAmb		IAmb	21 42 09.7	
	comp=Z,1.4nm,0.8s							
BFZ	**Birch Farm**	**61.16**	**139**	P		**P**	**21 42 18.6**	**+1.6**

*IDC **17** 21:34:38.4±2.6, 16.°53S×174.°13W, h109km±23km, mb3.9/16, mb1 4.2/17, mb1mx4.0/40, mbtmp4.3/17, Error ellipse: s-maj=25.6km s-min=13.5km az=141.0*
*NEIC **17** 21:34:38.7±1.2, 16.°38S±0.°08×174.°29W±0.°08, h109km±6km, mb4.8/49, Error ellipse: s-maj=11.7km s-min=10.6km az=136.0*
ISC 17 21:34:38.7±0.4, 16.°41S±0.°07×174.°23W±0.°07, h111km, n93, σ0s92/88, mb4.7/37, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.43**	**44**	P		**Pn**	**21 35 31.0**	**+0.5**
	191nm,0.3s,baz=170,slow=2.9,SNR=127							
AFI				S		**Sn**	**21 36 07.0**	**-3.6**
	260nm,0.3s,baz=21,slow=22,SNR=12							
NIUE	**Niue**	**4.88**	**124**			**Pn**	**21 35 51.2**	**+1.3**
NIUE				Sn		**Sn**	**21 36 43.5**	**-1.8**
OUZ	**Omahuta**	**21.67**	**208**	P		**P**	**21 39 20.0**	**-0.4**
MXZ	**Matakaoa Point**	**22.08**	**196**	P		**P**	**21 39 25.7**	**+1.0**
URZ	**Urewera**	**23.06**	**198**	P		**P**	**21 39 33.2**	**-1.3**
	14nm,0.3s,baz=313,slow=2.0,SNR=23							
URZ	**Urewera**	**23.06**	**198**	P		**P**	**21 39 34.8**	**+0.3**
URZ				IAmb		IAmb	21 39 39.5	
	comp=Z,22nm,0.6s							
HIZ	**Hauiti**	**24.02**	**201**	P		**P**	**21 39 45.0**	**+1.8**
HIZ				IAmb		IAmb	21 39 51.7	
	comp=Z,47nm,0.9s							
BKZ	**Black Stump Fm**	**24.08**	**198**	P		**P**	**21 39 44.4**	**+0.5**
BKZ				IAmb		IAmb	21 39 51.1	
	comp=Z,30nm,1.1s							
BFZ	**Birch Farm**	**25.56**	**197**	P		**P**	**21 39 58.0**	**+0.8**
QRZ	**Quartz Range**	**26.90**	**203**	P		**P**	**21 40 10.2**	**+0.9**
QRZ				IAmb		IAmb	21 40 26.6	
	comp=Z,41nm,1.2s							
NNZ	**Nelson**	**26.94**	**201**	P		**P**	**21 40 10.0**	**+0.4**
TUWZ	**Tuamarina**	**26.94**	**200**	P		**P**	**21 40 10.6**	**+1.0**
BSWZ	**Blackbirch Sta**	**27.22**	**200**	P		**P**	**21 40 11.6**	**-0.6**
KHZ	**Kahutara**	**27.96**	**200**	P		**P**	**21 40 18.6**	**-0.1**
LHI	**Lord Howe Isla**	**28.57**	**233**	P		**P**	**21 40 21.6**	**-2.6**
LHI				IAmb		IAmb	21 40 30.1	
	comp=Z,22nm,0.9s							
LTZ	**Lake Taylor**	**28.71**	**201**	P		**P**	**21 40 24.6**	**-0.8**
LTZ				IAmb		IAmb	21 40 39.5	
	comp=Z,23nm,1.1s							
OXZ	**Oxford**	**29.27**	**201**	P		**P**	**21 40 30.4**	**+0.1**
FOZ	**Fox Glacier**	**30.25**	**203**	P		**P**	**21 40 38.5**	**-0.4**
FOZ				IAmb		IAmb	21 40 42.1	
	comp=Z,25nm,1.0s							
LBZ	**Lake Benmore**	**30.84**	**202**	P		**P**	**21 40 43.0**	**-1.3**
ODZ	**Otahua Downs**	**31.26**	**201**	P		**P**	**21 40 48.0**	**+0.2**
ODZ				IAmb		IAmb	21 40 53.3	
	comp=Z,28nm,1.2s							
WKZ	**Wanaka**	**31.65**	**203**	P		**P**	**21 40 50.6**	**-0.7**
MLZ	**Mavora Lakes**	**32.45**	**203**	P		**P**	**21 40 58.2**	**-0.1**
MLZ				IAmb		IAmb	21 41 09.3	
	comp=Z,27nm,1.1s							
DCZ	**Deep Cove**	**32.91**	**204**	P		**P**	**21 41 02.2**	**0.0**
DCZ				IAmb		IAmb	21 41 12.8	
	comp=Z,21nm,1.2s							
WHZ	**Wether Hill Ro**	**32.96**	**203**	P		**P**	**21 41 03.4**	**+0.7**
ARMA	**Armidale**	**34.15**	**240**	P		**P**	**21 41 12.8**	**-0.5**
H11S2	**WAKE ISLAND Hy**	**39.44**	**331**	T		T	22 22 46.6	
	baz=146,slow=75,SNR=11							
H11S3	**WAKE ISLAND Hy**	**39.45**	**331**	T		T	22 22 47.8	
	baz=146,slow=75,SNR=15							
H11S1	**WAKE ISLAND Hy**	**39.45**	**331**	T		T	22 22 48.3	
	baz=146,slow=75,SNR=6.9							
COEN	**Coen**	**41.13**	**267**	P		**P**	**21 42 10.9**	**-1.4**
TOO	**Toolangi**	**41.22**	**231**	P		**P**	**21 42 12.7**	**0.0**
TAU	**Tasmania Unive**	**42.04**	**223**	P		**P**	**21 42 18.8**	**-0.4**
STKA	**Stephens Creek**	**42.85**	**241**	P		**P**	**21 42 27.0**	**+1.0**
	comp=Z,2.9nm,0.6s,baz=85,slow=9.7,SNR=6.9							
STKA	**Stephens Creek**	**42.85**	**241**	P		**P**	**21 42 25.6**	**-0.4**
WR0	**Warramunga Arr**	**48.66**	**258**	P		**P**	**21 43 11.8**	**0.0**
WRA	**Warramunga Arr**	**48.85**	**258**	P		**P**	**21 43 12.8**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=95,slow=7.4,SNR=11							
AS31	**Alice Springs**	**49.05**	**253**	P		**P**	**21 43 14.4**	**-0.4**
ASAR	**Alice Springs**	**49.05**	**253**	P		**P**	**21 43 14.8**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=87,slow=8.2,SNR=57							
FORT	**Forrest**	**54.26**	**244**	P		**P**	**21 43 52.5**	**-1.0**
SIJI	**Sorong**	**55.85**	**280**	P		**P**	**21 44 06.2**	**+1.1**
	comp=Z,14nm,0.7s,baz=107,slow=8.4,SNR=8.7							
PSA00	**Pilbara Seismi**	**62.16**	**254**	P		**P**	**21 44 48.2**	**-0.5**
PSA00				IAmb		IAmb	21 45 00.8	
	comp=Z,12nm,1.1s							
MJAR	**Matsushiro Arr**	**69.20**	**321**	P		**P**	**21 45 32.4**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=134,slow=5.6,SNR=3.5							
MJAR	**Matsushiro Arr**	**69.20**	**321**	IAmb		IAmb	21 45 33.0	
	comp=Z,1.9nm,1.2s							
ERM	**Erimo**	**70.18**	**328**	P		**P**	**21 45 38.0**	**-1.4**
JNU	**Nakatsue**	**71.91**	**314**	P		**P**	**21 45 50.1**	**0.0**
	comp=Z,4.9nm,0.6s,baz=50,slow=9.0,SNR=5.4							
JNU	**Nakatsue**	**71.91**	**314**	IAmb		IAmb	21 45 53.5	
	comp=Z,12nm,1.0s							
KMRM	**Mail Ridge**	**73.34**	**38**	P		**P**	**21 45 59.4**	**+1.0**
PEA0B	**Petropavlovsk-**	**73.35**	**343**	P		**P**	**21 45 58.9**	**+0.8**
PEA0B				IAmb		IAmb	21 46 01.4	
	comp=Z,22nm,1.1s							
PETK	**Petropavlovsk-**	**73.35**	**343**	P		**P**	**21 45 59.4**	**+1.3**
	comp=Z,4.8nm,0.8s,baz=134,slow=12,SNR=4.6							
NVAR	**Mina Array Bea**	**75.61**	**42**	P		**P**	**21 46 12.1**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=223,slow=10,SNR=5.8							
KSRS	**Korea Array**	**76.33**	**316**	P		**P**	**21 46 18.2**	**+2.6**
	comp=Z,1.3nm,0.7s,baz=136,slow=6.3,SNR=4.1							
U15A	**North Rim**	**78.57**	**47**	P		**P**	**21 46 29.9**	**+1.3**
MTPU	**Mount Pierson**	**79.46**	**45**			**PcP**	**21 46 41.1**	**0.0**
SUA	**Susitna One**	**79.84**	**11**	P		**P**	**21 46 34.0**	**-0.6**
SUA				IAmb		IAmb	21 46 35.9	
	comp=Z,18nm,1.0s							
SCM	**Sheep Creek Mo**	**80.85**	**13**	P		**P**	**21 46 40.2**	**+0.2**
SCM				IAmb		IAmb	21 46 56.7	
	comp=Z,18nm,1.2s							
JIS	**Juneau Island**	**81.31**	**20**	IAmb		IAmb	21 46 45.3	
	comp=Z,20nm,1.0s							
TXAR	**Lajitas Array**	**81.83**	**56**	P		**P**	**21 46 46.4**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=234,slow=6.0,SNR=4.4							
MCK	**McKinley**	**82.26**	**11**	P		**P**	**21 46 47.7**	**+0.4**
MCK				IAmb		IAmb	21 46 48.4	
	comp=Z,19nm,0.9s							
WRH	**Wood River Hil**	**83.09**	**11**	P		**P**	**21 46 51.5**	**-0.1**
WRH				IAmb		IAmb	21 46 52.9	
	comp=Z,12nm,1.0s							
MLY	**Manley**	**83.14**	**10**	P		**P**	**21 46 51.4**	**-0.4**
DOT	**Dot Lake**	**83.16**	**13**	P		**P**	**21 46 51.6**	**-0.4**
DOT				IAmb		IAmb	21

STG3				*e*S		**Sn**	**21 51 09.4**	**-0.4**
TECA	**Tecapa**	**1.79**	**87**	*e*P		**Pn**	**21 50 49.1**	**+0.2**

PGC **17** *22:15:15.6±1.5, 57°.87N×142°.57W, h10km, ML3.1/6, 239km Wsw of Yakutat, Ak Gulf Of Alaska*
AEIC **17** *22:15:16.2±6.6, 57°.67N±0°.10×142°.7W±0°.1, h8km±8km, ML2.7/16, Error ellipse: s-maj=14.3km s-min=7.9km az=196.0*
NEIC **17** *22:15:19.9±3.1, 58°.19N±0°.05×142°.4W±0°.1, h16km±4km, Error ellipse: s-maj=8.0km s-min=7.2km az=86.0*
ISC 17 22:15:16.5±1.5, 57°.94N±0°.08×142°.48W±0°.05, h12km, n54, σ1§31/61, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YKU2	**Yakutat**	**2.15**	**42**	Pn	**Pb**	**22 15 56.3**	**+1.1**
SUCK	**Suckling Hills**	**2.24**	**343**	Pn	**Pb**	**22 15 57.0**	**+0.2**
MESA	**MESA**	**2.26**	**7**	P	**Pn**	**22 15 53.3**	**-0.6**
MESA	**MESA**	**2.26**	**7**	Pn	**Pn**	**22 15 53.2**	**-0.6**
MESA	**MESA**	**2.26**	**7**		**Pn**	**22 15 53.3**	**-0.6**
PNL	**Peninsula**	**2.36**	**42**	Pn	**Pn**	**22 15 54.0**	**-0.9**
PNL				S	**Sn**	**22 16 23.4**	**-0.5**
PNL	**Peninsula**	**2.36**	**42**		**Pn**	**22 15 54.2**	**-0.8**
PNL					**Sn**	**22 16 23.3**	**-0.5**
RKAV	**Rock Avalanche**	**2.44**	**13**	Pn	**Pn**	**22 15 56.1**	**-0.1**
RKAV	**Rock Avalanche**	**2.44**	**13**	Pn	**Pn**	**22 15 56.1**	**-0.1**
RKAV	**Rock Avalanche**	**2.44**	**13**		**Pn**	**22 15 56.0**	**-0.2**
PCA	**Pinnacle**	**2.45**	**27**	Pn	**Pn**	**22 15 55.9**	**-0.3**
PCA				Sn	**Sn**	**22 16 26.5**	**+0.5**
PCA	**Pinnacle**	**2.45**	**27**		**Pn**	**22 15 56.0**	**-0.2**
PCA	**Pinnacle**	**2.45**	**27**		**Sn**	**22 16 26.6**	**+0.5**
PCA	**Pinnacle**	**2.45**	**27**		Lg	22 16 26.9	
MID	**Middleton Isla**	**2.51**	**308**	Pn	**Pn**	**22 15 58.5**	**+1.5**
DHAK	**Deception Hill**	**2.52**	**61**	Pn	**Pb**	**22 16 00.8**	**-0.8**
HMT	**Hamilton**	**2.57**	**340**	Pn	**Pb**	**22 16 01.5**	**-0.9**
GOAT	**Goat Mountain**	**2.89**	**337**		**Pn**	**22 15 59.6**	**-2.7**
KIAG	**Kiagna River**	**2.99**	**1**	Pn	**Pn**	**22 16 02.8**	**-1.1**
KIAG	**Kiagna River**	**2.99**	**1**		**Pn**	**22 16 02.7**	**-1.1**
CTGM	**Chitina Glacie**	**3.09**	**10**	Pn	**Pn**	**22 16 04.7**	**-0.5**
CTGM	**Chitina Glacie**	**3.09**	**10**		**Pn**	**22 16 04.7**	**-0.5**
BALM	**Baldy**	**3.10**	**1**	Pn	**Pn**	**22 16 04.5**	**-0.8**
BALM				Sn	**Sn**	**22 16 42.6**	**+0.2**
BALM	**Baldy**	**3.10**	**1**		**Pn**	**22 16 04.4**	**-0.8**
BALM	**Baldy**	**3.10**	**1**		**Pn**	**22 16 04.8**	**-0.5**
BALM					**Sn**	**22 16 43.3**	**+0.9**
BALM					Lg	22 16 44.2	
EYAK	**Cordova Ski Ar**	**3.11**	**329**	Pn	**Pn**	**22 16 07.9**	**+2.7**
BARN	**Barnard Glacie**	**3.15**	**7**		**Pn**	**22 16 05.3**	**-0.7**
MCARA	**McCarthy VSAT**	**3.46**	**356**	Pn	**Pn**	**22 16 09.2**	**-1.0**
FID	**Port Fidalgo**	**3.48**	**326**	Pn	**Pn**	**22 16 12.4**	**+2.0**
PLBC	**Pleasant Camp**	**3.53**	**62**	Pn	**Pn**	**22 16 09.8**	**-1.3**
PLBC				Sn	**Sn**	**22 16 51.2**	**-1.5**
PLBC	**Pleasant Camp**	**3.53**	**62**		**Pn**	**22 16 09.8**	**-1.3**
GLB	**Gilahina Butte**	**3.57**	**350**		**Pn**	**22 16 08.9**	**-2.8**
YUK6	**Outpost Mounta**	**3.67**	**33**	Pn	**Pn**	**22 16 13.6**	**+0.4**
YUK6				Sn	**Sn**	**22 16 57.9**	**+1.4**
GLI	**Glacier Island**	**3.77**	**323**	Pn	**Pn**	**22 16 16.6**	**+2.2**
HYT	**Haines Junctio**	**3.85**	**39**	Pn	**Pn**	**22 16 16.1**	**+0.6**
HYT	**Haines Junctio**	**3.85**	**39**	Pn	**Pn**	**22 16 17.7**	**+2.1**
YUK4	**Talbot Arm**	**3.93**	**28**	Pn	**Pn**	**22 16 19.5**	**+2.8**
YUK2	**White River**	**3.94**	**11**	Pn	**Pn**	**22 16 17.9**	**+1.0**
YUK2	**White River**	**3.94**	**11**		**Pn**	**22 16 18.0**	**+1.1**
SIT	**Sitka**	**3.96**	**100**	Pn	**Pn**	**22 16 18.4**	**+1.4**
YUK3	**Moose Creek**	**3.98**	**14**	Pn	**Pn**	**22 16 18.3**	**+0.9**
SKAG	**Skagway**	**4.03**	**65**	Pn	**Pn**	**22 16 18.9**	**+1.0**
BESE	**Bessie Mountai**	**4.08**	**78**	Pn	**Pn**	**22 16 20.8**	**+2.2**
JIS	**Juneau Island**	**4.31**	**82**	Pn	**Pn**	**22 16 19.8**	**-1.8**
SCM	**Sheep Creek Mo**	**4.60**	**330**	Pn	**Pn**	**22 16 25.2**	**-0.7**
KNK	**Knik Glacier**	**4.62**	**321**	Pn	**Pn**	**22 16 26.5**	**+0.5**
WHY	**Whitehorse**	**4.75**	**52**	Pn	**Pn**	**22 16 28.4**	**+0.4**
WHY				Sn	**Sn**	**22 17 21.6**	**-1.3**
WHY	**Whitehorse**	**4.75**	**52**	Pn	**Pn**	**22 16 30.8**	**+2.9**
CNPM	**China Poot**	**4.83**	**293**	Pn	**Pn**	**22 16 27.0**	**-2.0**
RC01	**Rabbit Creek A**	**4.86**	**314**	Pn	**Pn**	**22 16 29.2**	**-0.1**
SML	**Sawmill**	**4.87**	**325**	Pn	**Pn**	**22 16 29.9**	**+0.5**
GHO	**Glory Hole Cre**	**5.03**	**322**	Pn	**Pn**	**22 16 31.1**	**-0.6**
DAWY	**Dawson**	**6.32**	**12**	Pn	**Pn**	**22 16 49.4**	**0.0**
MASB	**Masset**	**7.06**	**119**	Pn	**Pn**	**22 16 57.8**	**-1.7**

IDC **17** *22:26:45.8±1.4, 15°.34N×96°.45E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.4/32, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=25.1km s-min=21.8km az=56.0*
NEIC **17** *22:26:50.1±1.6, 15°.38N±0°.07×96°.50E±0°.04, h32km±5km, mb4.2/8, Error ellipse: s-maj=10.5km s-min=6.1km az=173.0*
BKK **17** *22:26:57.4±1.4, 16°N±5°×97°E±1°4, h0km, M4.6/13, mb5.2/1, MLv4.3/13*
ISC 17 22:26:46.6±0.7, 15°.36N±0°.06×96°.43E±0°.07, h10km, n32, σ1§39/29, mb3.8/8, Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRDT	**SRDT**	**2.79**	**111**	P	Pn	**22 28 03.8**	**-0.6**
MHMT	**Maesarieng**	**3.15**	**27**	P	**Pb**	**22 27 40.2**	**-2.6**
CM31	**Chiang Mai Arr**	**3.91**	**38**	Pn	**Pn**	**22 27 46.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**3.91**	**38**	Pn	**Pn**	**22 27 47.6**	**+0.8**
	1.3nm,0.3s,baz=224,slow=15,SNR=17						
CMAR				Lg	Lg	22 28 50.2	
	3.9nm,0.3s,baz=221,slow=32,SNR=8.5						
PHET	**Kaeng Krachan**	**3.95**	**128**	P	**Pg**	**22 28 03.5**	**+1.2**
CHTO	**Chiang Mai**	**4.20**	**35**		**Pn**	**22 27 51.7**	**+1.0**
CMMT	**Chiang Mai**	**4.20**	**35**	P	**Pn**	**22 27 51.9**	**+1.1**
PHIT	**Phitsanulok**	**4.24**	**64**	P	**Pg**	**22 28 10.7**	**+2.8**
LAMP	**Lampang**	**4.39**	**44**	P	**Pn**	**22 27 53.7**	**+0.2**
PBKT	**Sadao Pong**	**4.53**	**74**	Pn	**Pn**	**22 27 56.1**	**+0.7**
PBKT	**Sadao Pong**	**4.53**	**74**	P	**Pn**	**22 28 03.5**	**-2.8**
PHRA	**Phrae**	**4.80**	**49**	P	**Pn**	**22 27 59.8**	**+0.8**
PBA	**Port Blair**	**5.14**	**225**	Pn	Pn	22 28 06.4	+2.7
PAYA	**Payao**	**5.16**	**39**	P	**Pn**	**22 28 05.2**	**+1.1**
SRAK	**Srakaew**	**5.60**	**103**	P	Pb	22 28 18.3	-6.2
UBPT	**Khong Chiam**	**8.73**	**89**	Pn	**Pn**	**22 28 53.2**	**+0.2**
SLVN	**Son La**	**9.26**	**49**	Pn	**Pn**	**22 29 00.1**	**-0.3**
LHMI	**Lhok Sumawe**	**10.08**	**177**	Pn	**Pn**	**22 29 13.0**	**+1.4**
KULM	**Kulim**	**10.83**	**157**	Pn	**Pn**	**22 29 22.9**	**+1.0**
LSA	**Lhasa**	**15.08**	**342**		**Pn**	**22 30 20.8**	**+0.5**
SONM	**Songino Array**	**33.42**	**12**	P	**P**	**22 33 25.7**	**+0.1**
MKAR	**Makanchi Array**	**33.48**	**342**	P	**P**	**22 33 27.0**	**+0.9**
	0.4nm,0.7s,baz=153,slow=8.2,SNR=5.5						
ZALV	**Zalesovo Beam**	**39.56**	**349**	P	**P**	**22 34 17.6**	**-0.3**
	1.0nm,0.6s,baz=167,slow=9.1,SNR=5.7						
GEYT	**Alibeck**	**40.56**	**311**	P	**P**	**22 34 28.0**	**+1.6**
	2.4nm,0.8s,baz=132,slow=6.4,SNR=9.4						
GEYT	**Alibeck**	**40.56**	**311**	IAmb	IAmb	22 34 29.1	
	comp=Z,2.2nm,0.8s						
GYA0B	**ALIBECK ARRAY**	**40.56**	**311**	P	**P**	**22 34 27.9**	**+1.5**
GYA0B				IAmb	IAmb	22 34 31.3	
	comp=Z,3.3nm,0.8s						
WRA	**Warramunga Arr**	**51.19**	**132**	P	**P**	**22 35 50.6**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=309,slow=7.9,SNR=2.7						
KIV	**Kislovodsk**	**53.55**	**314**	P	**P**	**22 36 08.5**	**+0.7**
KIV				IAmb	IAmb	22 36 10.6	
	comp=Z,4.6nm,1.0s						
ALN	**Alexandroupoli**	**65.34**	**308**	P	**P**	**22 37 28.7**	**-0.5**
ALN				IAmb	IAmb	22 37 30.4	
	comp=Z,5.2nm,1.3s						
ARCES	**ARCESS Array B**	**69.06**	**339**	P	**P**	**22 37 51.1**	**-1.3**
ARE0	**ARCESS Array S**	**69.06**	**339**	P	**P**	**22 37 50.4**	**-2.0**
ARE0				IAmb	IAmb	22 38 06.3	
	comp=Z,0.7nm,1.2s						
TEOL	**Teolo**	**75.59**	**314**	P	**P**	**22 38 29.7**	**-2.2**

IDC 17 22:48:55.7±1.2, 32°.22N×93°.93E, h0km, mb3.5/4, mb1 3.5/6, mb1mx3.3/31, mbtmp3.4/6, ML3.0/2, Error ellipse: s-maj=52.3km s-min=23.6km az=63.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**17.07**	**332**	P	Pn	22 52 56.6	+0.8
	0.0nm,0.3s,baz=148,slow=12,SNR=3.2						
SONM	**Songino Array**	**18.24**	**28**	P	Pn	22 53 08.8	-1.6
	0.1nm,0.3s,baz=224,slow=10,SNR=3.3						
ZALV	**Zalesovo Beam**	**22.68**	**346**	P	P	22 53 59.6	+1.1
	0.3nm,0.3s,baz=143,slow=10,SNR=2.6						
WRA	**Warramunga Arr**	**64.70**	**138**	P	P	22 59 35.5	-0.3
	0.5nm,0.8s,baz=331,slow=6.4,SNR=3.1						
ASAR	**Alice Springs**	**67.43**	**140**	P	P	22 59 54.0	+0.7
	0.6nm,0.6s,baz=324,slow=6.2,SNR=7.3						
TORD	**Torodi Ar. Bea**	**84.97**	**282**	P	P	23 01 32.5	-0.9
	0.6nm,0.9s,baz=59,slow=6.9,SNR=3.1						

MOS **17** *23:06:14.2±1.7, 23°.90S×67°.21W, h183km, mb4.8/5, Error ellipse: s-maj=15.1km s-min=6.7km az=104.7*
BJI **17** *23:06:16.2±0.0, 24°.00S×66°.70W, h190km, mB5.1/1*
SJA **17** *23:06:16.9±0.8, 24°.06S×66°.86W, h217km±5km, ML4.6, MW4.5*
IDC **17** *23:06:17.8±0.8, 23°.96S×66°.70W, h192km±6km, mb4. 1/24, mb1 4.2/32, mb1mx4.2/46, mbtmp4.7/32, MS3.1/2, Ms1 3.1/2, ms1mx2.7/30, Error ellipse: s-maj=11.3km s-min=7.6km az=60.0*
VAO **17** *23:06:18.2±0.4, 24°.00S×66°.74W, h200km±4km, mb4.5*
NEIC **17** *23:06:18.1±2.5, 24°.03S±0°.06×67°.10W±0°.10, h220km±5km, Error ellipse: s-maj=12.9km s-min=8.3km az=89.0*
GUC **17** *23:06:19.4±0.3, 24°.06S×67°.42W, h235km±9km, ML5.1*
ISC 17 23:06:17.5±0.5, 24°.06S±0°.04×66°.91W±0°.04, h202km±5km, n803, σ1§79/829, mb4.6/163, 12C-4D, Salta Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLA	**San Lorenzo**	**1.44**	**117**	*i* P	**Pn**	**23 06 52.5**	**+1.5**
SLA				IAML		23 06 52.9	
	comp=Z,2μm,0.5s						
SLA				*i* S	**S**	**23 07 17.8**	**+1.1**
AZAP	**Zapla**	**1.69**	**96**	*i* P	**Pn**	**23 06 54.2**	**+0.8**
AZAP				IAML		23 06 54.5	
	comp=Z,3μm,0.4s						
YJA	**Yavi**	**2.27**	**35**	*i* P	**Pn**	**23 07 00.5**	**+1.0**
YJA				*i* S	**S**	**23 07 33.0**	**+1.4**
LVC	**Limon Verde**	**2.34**	**308**	P	**Pn**	**23 07 01.5**	**+1.3**
	comp=Z,543nm,0.3s,baz=148,slow=6.1,SNR=3905						
LVC				LR	LR	23 07 27.0	
	comp=Z,239nm,21.1s,baz=175,slow=28						
LVC				S	**S**	**23 07 34.4**	**+1.7**
	comp=Z,297nm,0.3s,baz=297,slow=18,SNR=28						
LVC	**Limon Verde**	**2.34**	**308**	*e*P	**Pn**	**23 07 01.7**	**+1.5**
LVC	**Limon Verde**	**2.34**	**308**	*i* P	**Pn**	**23 07 01.7**	**+1.5**
LVC				*i* S	**S**	**23 07 34.5**	**+1.7**
PB15	**IPOC Station P**	**2.50**	**289**	⇑*i* P	**Pn**	**23 07 03.3**	**+1.6**
PB15				*i* S	**S**	**23 07 36.4**	**+0.9**
PB15	**IPOC Station P**	**2.50**	**289**	*i* P	**Pn**	**23 07 03.4**	**+1.6**
PB15				*i* S	**S**	**23 07 36.5**	**+0.9**
GO02	**Mina Guanaco**	**2.68**	**245**	*i* P	**Pn**	**23 07 05.4**	**+1.5**
GO02				*i* S	**S**	**23 07 40.5**	**+1.2**
GO02	**Mina Guanaco**	**2.68**	**245**		**Pn**	**23 07 05.3**	**+1.5**
GO02					**S**	**23 07 40.9**	**+1.6**
PB06	**IPOC Station P**	**2.80**	**298**	⇑*i* P	**Pn**	**23 07 06.3**	**+1.3**
PB06				*i* S	**S**	**23 07 42.1**	**+0.6**
PB06	**IPOC Station P**	**2.80**	**298**	*i* P	**Pn**	**23 07 06.4**	**+1.4**
PB06				*i* S	**S**	**23 07 42.1**	**+0.6**
PB09	**IPOC Station P**	**3.12**	**316**	*i* P	**Pn**	**23 07 10.1**	**+1.2**
PB09				*i* S	**S**	**23 07 48.6**	**+0.3**
PB09				IAML		23 07 51.0	
	comp=N,2μm,0.6s						
PB09	**IPOC Station P**	**3.12**	**316**	*i* P	**Pn**	**23 07 10.4**	**+1.5**
PB09				*i* S	**S**	**23 07 49.0**	**+0.7**
PB14	**IPOC Station P**	**3.24**	**259**	⇑*i* P	**Pn**	**23 07 11.3**	**+1.0**
PB14				*i* S	**S**	**23 07 50.4**	**-0.7**
PB14				IAML		23 07 53.2	
	comp=E,2μm,0.2s						
PB05	**IPOC Station P**	**3.26**	**291**	⇑*i* P	**Pn**	**23 07 11.1**	**+0.7**
PB05				*i* S	**S**	**23 07 50.0**	**-1.2**
PB05				IAML		23 07 55.5	
	comp=N,2μm,0.5s						
PB03	**IPOC Station P**	**3.30**	**307**	⇑*i* P	**Pn**	**23 07 11.7**	**+0.7**
PB03				*i* S	**S**	**23 07 51.7**	**-0.5**
PB03				IAML		23 07 55.1	
	comp=E,3μm,0.2s						
PB10	**IPOC Station P**	**3.38**	**279**	*i* P	**Pn**	**23 07 13.0**	**+1.2**
PB10				*i* S	**S**	**23 07 53.2**	**-0.6**
PB10				IAML		23 07 58.4	
	comp=E,3μm,0.4s						
PB10	**IPOC Station P**	**3.38**	**279**		**Pn**	**23 07 12.4**	**+0.6**
PB10				S	**S**	**23 07 53.6**	**-0.1**
PB10	**IPOC Station P**	**3.38**	**279**	*i* P	**Pn**	**23 07 13.1**	**+1.3**
PB10				*i* S	**S**	**23 07 54.6**	**+0.8**
PB04	**IPOC Station P**	**3.44**	**299**		**Pn**	**23 07 13.4**	**+0.6**
PB04				S	**S**	**23 07 55.0**	**-0.4**
PB04	**IPOC Station P**	**3.44**	**299**	*i* P	**Pn**	**23 07 13.6**	**+0.9**
PB04				*i* S	**S**	**23 07 54.8**	**-0.5**
GO03	**Copiap**	**4.62**	**220**		**Pn**	**23 07 27.1**	**0.0**
GO03				S	**S**	**23 08 20.5**	**-1.1**
GO03	**Copiap**	**4.62**	**220**	*i* P	**Pn**	**23 07 27.3**	**+0.1**
GO03				*i* S	**S**	**23 08 21.0**	**-0.6**
GO01	**Chusmiza**	**4.86**	**334**	⇑*i* P	**Pn**	**23 07 30.7**	**0.0**
GO01				*i* S	**S**	**23 08 26.2**	**-1.6**
GO01	**Chusmiza**	**4.86**	**334**		**Pn**	**23 07 30.5**	**-0.2**
GO01				S	**S**	**23 08 26.7**	**-1.1**
PB11	**IPOC Station P**	**4.98**	**329**		**Pn**	**23 07 30.7**	**-1.2**
PB11				S	**S**	**23 08 27.2**	**-3.0**
ACLC	**CERRO LA CRUZ**	**5.34**	**180**	*i* P	**Pn**	**23 07 37.2**	**+0.8**
ACLC				*i* S	**S**	**23 08 37.3**	**-1.2**
MNMC	**Minye Minye**	**5.51**	**332**		**Pn**	**23 07 38.0**	**-0.7**
MNMC				S	**S**	**23 08 40.7**	**-1.9**
AMOG	**MOGNA**	**6.99**	**191**	*i* P	**Pn**	**23 07 57.5**	**-0.2**
GO04	**Tololo Observa**	**7.00**	**209**		**Pn**	**23 07 56.9**	**-1.1**
GO04				S	**S**	**23 09 14.9**	**-2.7**
GO04	**Tololo Observa**	**7.00**	**209**	*i* P	**Pn**	**23 07 56.9**	**-1.1**
RTLL	**Cerro Villicun**	**7.37**	**191**	*i* P	**Pn**	**23 08 02.2**	**-0.3**
RTLL				IAML		23 08 03.7	
	comp=Z,84nm,0.3s						
RTLL				*i* S	**S**	**23 09 22.6**	**-3.5**
TCA	**Tanti**	**7.53**	**165**	*i* P	**Pn**	**23 08 04.1**	**-0.6**
TCA				IAML		23 08 06.7	
	comp=Z,73nm,0.3s						
TCA				*i* S	**S**	**23 09 25.8**	**-4.1**
CFA	**Coronel Fontan**	**7.61**	**189**	P	**Pn**	**23 08 05.9**	**+0.4**
	comp=Z,14nm,0.3s,baz=32,slow=13,SNR=286						
CFA				S	**S**	**23 09 25.7**	**-5.9**
	comp=Z,33nm,0.3s,baz=162,slow=19,SNR=16						
CFA	**Coronel Fontan**	**7.61**	**189**	*i* P	**Pn**	**23 08 05.0**	**-0.5**
CFA				*i* S	**S**	**23 09 26.8**	**-4.8**
ZON	**Zonda**	**7.62**	**191**	*i* P	**Pn**	**23 08 06.3**	**+0.5**
LPAZ	**La Paz**	**7.82**	**351**	P	**Pn**	**23 08 09.2**	**+0.2**
	comp=Z,6.4nm,0.3s,baz=141,slow=5.2,SNR=80						
LPAZ				S	**S**	**23 09 35.4**	**-2.3**
	comp=Z,2.7nm,0.3s,baz=297,slow=18,SNR=6.3						
LPAZ	**La Paz**	**7.82**	**351**	*e*P	**Pn**	**23 08 09.3**	**+0.4**
LPAZ	**La Paz**	**7.82**	**351**	*i* P	**Pn**	**23 08 08.0**	**-1.1**
LPAZ	**La Paz**	**7.82**	**351**	*i* P	**Pn**	**23 08 09.4**	**+0.4**
RTCV	**Cerro Valdivia**	**7.90**	**190**	*i* P	**Pn**	**23 08 09.1**	**-0.4**
RTLS	**Leoncito**	**7.99**	**195**	*i* P	**Pn**	**23 08 11.4**	**+0.5**
RTLS				*i* S	S	23 09 31.9	-9.2
ACAN	**Cantantal**	**8.19**	**182**	*i* P	**Pn**	**23 08 12.0**	**-1.1**
ACAN				*i* S	**S**	**23 09 38.3**	**-7.0**
CPUP	**Villa Florida**	**8.96**	**107**	P	**Pn**	**23 08 22.1**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=294,slow=12,SNR=70						
CPUP	**Villa Florida**	**8.96**	**107**	*e*P	**Pn**	**23 08 22.4**	**-0.8**
ROC1	**El Roble**	**9.59**	**201**		**Pn**	**23 08 30.3**	**-1.2**
ROC1	**El Roble**	**9.59**	**201**	*i* P	**Pn**	**23 08 30.8**	**-0.7**
PEL	**Peldehue**	**9.64**	**199**	P	**Pn**	**23 08 30.8**	**-1.2**
PEL	**Peldehue**	**9.64**	**199**	Pn	**Pn**	**23 08 30.8**	**-1.2**
SIV	**San Ignacio**	**9.72**	**35**	P	**Pn**	**23 08 31.3**	**-1.9**
	comp=Z,7.0nm,0.3s,baz=224,slow=13,SNR=79						
SIV				S	S	23 10 08.0	-14
	comp=Z,0.3nm,0.3s,baz=235,slow=16,SNR=3.5						
ITQB	**Itaqui**	**10.74**	**124**	*e*P	**Pn**	**23 08 45.6**	**-0.6**
AQDB	**Aquidauana**	**10.97**	**73**	*e*P	**Pn**	**23 08 47.5**	**-1.7**
COIS	**El Sosneado**	**11.25**	**191**	*e*P	**Pn**	**23 08 51.9**	**-0.8**
GO05	**Huala**	**11.75**	**201**	Pn	**Pn**	**23 08 56.6**	**-2.5**
PP1B	**Ponte de Pedra**	**12.95**	**62**	*e*P	**Pn**	**23 09 12.4**	**-1.9**
TRCB	**Terra Rica**	**13.16**	**87**	*e*P	**Pn**	**23 09 15.7**	**-1.4**
SALV	**Santo Antonio**	**13.30**	**54**	*e*P	**Pn**	**23 09 16.7**	**-2.0**
CPSB	**Cacapava Do Su**	**13.54**	**121**	*e*P	**Pn**	**23 09 20.7**	**-0.9**
PTGB	**Pitanga**	**13.54**	**96**	*e*P	**Pn**	**23 09 22.0**	**+0.2**
ITAB	**Concordia**	**13.70**	**106**	*e*P	**Pn**	**23 09 22.8**	**-0.7**
PLTB	**Pedras Altas**	**14.03**	**126**	*e*P	**Pn**	**23 09 25.9**	**-1.8**
C2SB	**Chapadao do Su**	**14.12**	**71**	*e*P	**Pn**	**23 09 28.6**	**-0.3**
PCMB	**Pacaembu**	**14.63**	**83**	*e*P	**Pn**	**23 09 34.0**	**-1.2**
OGAUY	**Aigu**	**14.76**	**137**	*e*P	**Pn**	**23 09 35.8**	**-0.8**
CNLB	**Canela**	**15.27**	**113**	*e*P	**Pn**	**23 09 42.2**	**-0.7**
NNA	**Nana**	**15.27**	**320**	P	**P**	**23 09 44.8**	**+1.5**
	comp=Z,2.1nm,0.3s,baz=152,slow=13,SNR=7.5						
NNA	**Nana**	**15.27**	**320**	P	**Pn**	**23 09 38.0**	**-5.0**
SAML	**Samuel**	**15.45**	**14**	P	**Pn**	**23 09 44.2**	**-0.9**
SAML				pmax	pmax		
	comp=Z,11nm,0.8s						
SAML	**Samuel**	**15.45**	**14**	*e*P	**Pn**	**23 09 44.5**	**-0.6**
SAML	**Samuel**	**15.45**	**14**	P	**Pn**	**23 09 44.2**	**-0.9**
FRTB	**Fartura**	**15.90**	**91**	*e*P	**P**	**23 09 50.2**	**0.0**
GO06	**Curarrehue**	**15.95**	**193**		**P**	**23 09 51.2**	**+0.5**
ITRB	**Iturama**	**15.96**	**77**	*e*P	**P**	**23 09 50.6**	**-0.3**
ARAG	**Araguaiana, MT**	**16.44**	**62**	*e*P	**P**	**23 09 55.7**	**-0.4**
CLDB	**Colider**	**16.85**	**41**	*e*P	**P**	**23 09 58.7**	**-2.0**
PLCA	**Paso Flores**	**16.90**	**190**	P	**P**	**23 10 00.9**	**-0.2**
PLCA				pmax	pmax		
	comp=Z,21nm,0.8s						
PLCA	**Paso Flores**	**16.90**	**190**	P	**Pn**	**23 10 03.0**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=33,slow=13,SNR=28						
PLCA	**Paso Flores**	**16.90**	**190**	*e*P	**P**	**23 10 02.8**	**+1.7**
PLCA	**Paso Flores**	**16.90**	**190**	P	**P**	**23 10 00.9**	**-0.2**
PLCA				IAmb	IAmb	23 10 10.5	
	comp=Z,21nm,0.8s						
BB19B	**Bebedouro**	**17.23**	**84**	*e*P	**P**	**23 10 04.6**	**-0.3**
SPB	**Sao Paulo**	**17.83**	**92**	*e*P	**P**	**23 10 11.2**	**-0.1**
SPB	**Sao Paulo**	**17.83**	**92**	P	**P**	**23 10 09.8**	**-1.5**
SPB				IAmb	IAmb	23 10 15.0	
	comp=Z,31nm,0.9s						
VAO	**Valinhos**	**18.32**	**91**	*e*P	**P**	**23 10 16.7**	**-0.1**
IPMB	**Ipameri, GO**	**18.46**	**74**	*e*P	**P**	**23 10 18.1**	**-0.2**
PARB	**Paraibuna**	**19.51**	**92**	*e*P	**P**	**23 10 29.5**	**-0.1**
BDFB	**Brasilia**	**19.63**	**68**	P	**P**	**23 10 30.1**	**-0.9**
BDFB				pmax	pmax		
	comp=Z,72nm,0.8s						
BDFB	**Brasilia**	**19.63**	**68**	P	**P**	**23 10 30.9**	**-0.1**
	comp=Z,5.6nm,0.3s,baz=242,slow=12,SNR=87						
BDFB	**Brasilia**	**19.63**	**68**	P	**P**	**23 10 30.1**	**-0.9**
PMNB	**Patos De Minas**	**19.84**	**78**	*e*P	**P**	**23 10 32.5**	**-0.7**
BSCB	**Bom Sucesso**	**20.67**	**86**	*e*P	**P**	**23 10 41.3**	**-0.7**
PEXB	**Peixe**	**21.28**	**59**	*e*P	**P**	**23 10 47.1**	**-1.3**
VAS01	**Vassouras-RJ**	**21.64**	**90**	*e*P	**P**	**23 10 52.0**	**-0.1**
JANB	**Januaria**	**23.07**	**71**	*e*P	**P**	**23 11 04.5**	**-0.9**
SMTB	**Santa Maria do**	**23.86**	**54**	*e*P	**P**	**23 11 12.3**	**-0.3**
SJMB	**Sao Joao De Ma**	**24.52**	**82**	*e*P	**P**	**23 11 17.7**	**-0.8**
BSFB	**Barra de Sao F**	**24.79**	**83**	*e*P	**P**	**23 11 19.9**	**-1.1**
OTAV	**Otavalo**	**26.63**	**333**	*e*P	**P**	**23 11 38.9**	**+0.9**
FLOC	**Florencia**	**26.87**	**340**	P	**P**	**23 11 37.6**	**-2.1**
NBIT	**Itapeh - BA**	**27.40**	**76**	*e*P	**P**	**23 11 44.3**	**-0.1**
EFI	**East Falkland**	**28.39**	**168**	*e*P	**P**	**23 11 53.5**	**+0.7**
EFI				pmax	pmax		
	comp=Z,18nm,1.0s						
EFI	**East Falkland**	**28.39**	**168**	P	**P**	**23 11 52.6**	**-0.2**
EFI				IAmb	IAmb	23 11 54.8	
	comp=Z,14nm,0.8s						
NBPN	**Ponto Novo - B**	**28.60**	**67**	*e*P	**P**	**23 11 53.9**	**-1.2**
GO10	**Punta Arenas**	**29.22**	**

SNAA pmax pmax
comp=Z,11nm,0.9s
SNAA Sanae 59.26 161 P **P** **23 15 59.2 +1.9**
comp=Z,6.7nm,0.6s,baz=284,slow=7.4,SNR=42
SNAA Sanae 59.26 161 P **P** **23 15 58.4 +1.0**
SNAA IAmb IAmb 23 16 00.3
comp=Z,11nm,0.9s
GOGA Godfrey 59.29 344 P **P** **23 15 57.6 -0.3**
GOGA pmax pmax
comp=Z,22nm,1.4s
GOGA Godfrey 59.29 344 P **P** **23 15 57.6 -0.3**
GOGA IAmb IAmb 23 15 59.6
comp=Z,22nm,1.4s
GOGA Godfrey 59.29 344 P **P** **23 15 58.4 +0.5**
baz=163
Z52A Williamson 59.33 343 P **P** **23 15 58.9 +0.8**
baz=162
X59A McDuffie Farm, 59.36 349 P **P** **23 15 59.3 +1.0**
baz=168
Y55A Saluda 59.41 346 P **P** **23 15 59.8 +1.1**
baz=165
X58A Rowland 59.48 348 P **P** **23 16 00.4 +1.3**
baz=167
Y54A Tignall 59.53 345 P **P** **23 16 00.3 +0.8**
baz=164,SNR=6.1
JSC Jenkinsville 59.60 346 P **P** **23 15 59.2 -0.8**
JSC pmax pmax
comp=Z,14nm,1.4s
JSC Jenkinsville 59.60 346 P **P** **23 15 59.1 -0.8**
JSC IAmb IAmb 23 16 02.2
comp=Z,14nm,1.4s
Z51A Franklin 59.66 342 P **P** **23 15 57.8 -2.6**
Z51A IAmb IAmb 23 16 01.4
comp=Z,10nm,0.5s
Y53A Monroe 59.74 344 P **P** **23 16 01.7 +0.7**
baz=163,SNR=6.0
X56A White Oak 59.76 347 P **P** **23 16 02.0 +0.9**
baz=166
BIRD Birdtown, Kers 59.79 347 P **P** **23 16 00.8 -0.4**
BIRD IAmb IAmb 23 16 03.6
comp=Z,19nm,1.1s
Z50A Ashland 59.81 342 P **P** **23 16 00.6 -0.9**
Z50A IAmb IAmb 23 16 02.8
comp=Z,29nm,1.2s
Z50A Ashland 59.81 342 P **P** **23 16 01.9 +0.5**
baz=160,SNR=13
Y52A Lilburn 59.87 344 P **P** **23 16 02.4 +0.5**
Y52A IAmb IAmb 23 16 03.4
comp=Z,21nm,1.2s
Y52A Lilburn 59.87 344 P **P** **23 16 02.4 +0.5**
baz=162,SNR=5.3
W58A Raeford 59.91 348 P **P** **23 16 03.0 +0.9**
baz=168
LRAL Lakeview Retre 59.92 341 P **P** **23 16 01.2 -1.0**
LRAL IAmb IAmb 23 16 03.1
comp=Z,9.0nm,0.6s
LRAL Lakeview Retre 59.92 341 P **P** **23 16 02.6 +0.4**
baz=159,SNR=8.3
X54A Belton 60.11 345 P **P** **23 16 04.7 +1.2**
baz=164
Y51A Rockmart 60.17 343 P **P** **23 16 04.3 +0.4**
baz=161,SNR=8.5
W57A Gilead 60.18 348 P **P** **23 16 03.2 -0.7**
W57A IAmb IAmb 23 16 07.9
comp=Z,17nm,1.3s
W57A Gilead 60.18 348 P **P** **23 16 04.8 +0.8**
baz=167
PAULI Pauline 60.24 346 P **P** **23 16 02.8 -1.6**
W56A Indian Trail 60.28 347 P **P** **23 16 05.3 +0.7**
baz=166
X53A Estanollee 60.29 344 P **P** **23 16 05.7 +1.0**
baz=163
V60A Jim Taylor Roa 60.30 350 P **P** **23 16 02.2 -2.5**
V60A IAmb IAmb 23 16 03.9
comp=Z,31nm,1.4s
KMSC Kings Mountain 60.45 346 P **P** **23 16 02.7 -3.1**
KMSC IAmb IAmb 23 16 08.0
comp=Z,11nm,1.1s
KMSC Kings Mountain 60.45 346 P **P** **23 16 06.6 +0.9**
baz=165
V59A Middlesex 60.46 349 P **P** **23 16 07.5 +1.7**
baz=169
Y49A Blount Mountai 60.52 341 P **P** **23 16 04.9 -1.3**
Y49A IAmb IAmb 23 16 07.6
comp=Z,16nm,1.1s
X52A Dahlonega 60.53 344 P **P** **23 16 07.0 +0.7**
baz=163
W54A Cherokee Point 60.58 346 P **P** **23 16 07.9 +1.2**
baz=164,SNR=5.1
V58A Windy Hill, Pi 60.64 349 P **P** **23 16 07.7 +0.7**
baz=168
BG3 Lake Jocassee 60.67 345 P **P** **23 16 06.4 -0.9**
X51A Calhoun 60.75 343 P **P** **23 16 06.9 -0.9**
X51A Calhoun 60.75 343 P **P** **23 16 08.5 +0.7**
baz=162,SNR=7.3
833A Chaparral WMA, 60.76 327 P **P** **23 16 07.7 -0.3**
833A Chaparral WMA, 60.76 327 P **P** **23 16 09.7 +1.7**
baz=146,SNR=8.2
V57A Coltrane Farms 60.85 348 P **P** **23 16 09.1 +0.6**
baz=167
W53A Cullowhee 60.89 345 P **P** **23 16 10.0 +1.1**
baz=164
V56A Mocksville 60.92 347 P **P** **23 16 10.2 +1.3**
baz=166,SNR=6.3
FPAL Fort Paine 60.93 342 P **P** **23 16 07.6 -1.4**
U59A Littleton 60.96 350 P **P** **23 16 09.8 +0.6**
baz=169
W52A Murphy 61.01 344 P **P** **23 16 07.7 -1.9**
W52A IAmb IAmb 23 16 20.9
comp=Z,12nm,1.3s
W52A Murphy 61.01 344 P **P** **23 16 11.0 +1.5**
baz=163
V55A Taylorsville 61.11 347 P **P** **23 16 09.6 -0.6**
V55A IAmb IAmb 23 16 12.6
comp=Z,31nm,1.3s
V55A Taylorsville 61.11 347 P **P** **23 16 11.4 +1.2**
baz=166
U58A Oxford 61.13 349 P **P** **23 16 10.8 +0.5**
baz=168
V54A Nebo 61.19 346 P **P** **23 16 11.9 +1.1**
baz=165
X48A Hartselle 61.26 341 P **P** **23 16 10.4 -0.7**
W51A Cleveland 61.28 343 P **P** **23 16 11.9 +0.5**
baz=162,SNR=5.4
V53A Saluda 61.28 345 P **P** **23 16 10.6 -0.8**
V53A Saluda 61.28 345 P **P** **23 16 12.3 +0.9**
baz=164
U57A Blanch 61.30 349 P **P** **23 16 12.3 +0.9**
baz=168
U56A King 61.42 348 P **P** **23 16 10.6 -1.6**
U56A IAmb IAmb 23 16 14.2
comp=Z,12nm,1.1s
U56A King 61.42 348 P **P** **23 16 13.1 +0.9**
baz=166
W50A Signal Mountai 61.47 343 P **P** **23 16 11.4 -1.2**
W50A IAmb IAmb 23 16 13.8
comp=Z,11nm,0.7s
W50A Signal Mountai 61.47 343 P **P** **23 16 13.2 +0.5**
baz=161,SNR=6.9
CPCT Cooper Cave 61.49 344 P **P** **23 16 10.4 -2.4**
TKL Tuckaleechee C 61.51 344 P **P** **23 16 11.6 -1.2**
TKL pmax pmax
comp=Z,24nm,1.4s
TKL Tuckaleechee C 61.51 344 P **P** **23 16 13.2 +0.4**
comp=Z,3.5nm,0.4s,baz=167,slow=7.2,SNR=11
TKL Tuckaleechee C 61.51 344 P **P** **23 16 11.6 -1.2**
TKL IAmb IAmb 23 16 14.3
comp=Z,24nm,1.4s
NATX Nacogdoches 61.53 333 P **P** **23 16 11.5 -1.6**
NATX Nacogdoches 61.53 333 P **P** **23 16 14.7 +1.6**
baz=152
T59A Double "B" Far 61.53 350 P **P** **23 16 13.9 +0.9**
baz=170
T60A Surry 61.58 351 P **P** **23 16 14.3 +1.1**
baz=170
V52A Sevierville 61.64 345 P **P** **23 16 10.3 -3.4**
V52A IAmb IAmb 23 16 15.1
comp=Z,25nm,1.4s
V52A Sevierville 61.64 345 P **P** **23 16 14.2 +0.5**
baz=163
SWET Sewanee 61.65 342 P **P** **23 16 12.5 -1.4**
W49A Belvidere 61.65 342 P **P** **23 16 14.3 +0.5**
baz=160,SNR=5.6
T58A Grand View Acr 61.66 349 P **P** **23 16 14.8 +0.9**
baz=168
U55A TA2, Sparta 61.70 347 P **P** **23 16 15.4 +1.2**
baz=166

V51A Loudon 61.79 344 P **P** **23 16 12.2 -2.5**
V51A IAmb IAmb 23 16 25.4
comp=Z,16nm,1.4s
V51A Loudon 61.79 344 P **P** **23 16 14.9 +0.2**
baz=162
V50A Pikevile 61.85 343 P **P** **23 16 15.8 +0.7**
baz=162,SNR=8.5
U54A Nelsons Funny 61.88 346 P **P** **23 16 13.4 -2.0**
U54A IAmb IAmb 23 16 17.3
comp=Z,13nm,1.0s
U54A Nelsons Funny 61.88 346 P **P** **23 16 16.2 +0.8**
baz=165
U53A Fall Branch 61.90 346 P **P** **23 16 15.8 +0.4**
baz=164
OXF Oxford 62.05 339 P **P** **23 16 14.5 -1.9**
OXF pmax pmax
comp=Z,16nm,0.6s
OXF Oxford 62.05 339 P **P** **23 16 14.5 -1.9**
OXF Oxford 62.05 339 P **P** **23 16 16.7 +0.2**
baz=157
PLAL Pickwick Lake 62.06 340 P **P** **23 16 14.5 -2.0**
PLAL IAmb IAmb 23 16 17.7
comp=Z,23nm,1.2s
V49A McMinnville 62.16 343 P **P** **23 16 17.3 +0.1**
baz=161,SNR=7.5
S58A Poland Farm, P 62.24 350 P **P** **23 16 18.7 +1.1**
baz=169
T55A Pulaski 62.24 347 P **P** **23 16 19.1 +1.4**
baz=166
BLA Blacksburg 62.26 348 P **P** **23 16 19.1 +1.2**
baz=167
T54A Tazewell 62.35 347 P **P** **23 16 19.2 +0.7**
baz=165
V48A Smith Brothers 62.39 342 P **P** **23 16 17.4 -1.4**
T53A Wise 62.48 346 P **P** **23 16 20.0 +0.6**
baz=164
U50A Jamestown 62.49 344 P **P** **23 16 19.8 +0.4**
baz=162
S57A Dark Hollow, R 62.53 349 P **P** **23 16 21.0 +1.4**
baz=168
X43A Marvell 62.55 338 P **P** **23 16 17.9 -1.8**
X43A Marvell 62.55 338 P **P** **23 16 21.2 +1.4**
baz=156
R58B Mineral 62.55 350 P **P** **23 16 21.0 +1.3**
baz=169
CLTN Cedars of Leba 62.58 342 P **P** **23 16 18.2 -1.7**
WLAR White Oak Lake 62.61 336 P **P** **23 16 18.8 -1.4**
T52A Hallie 62.70 346 P **P** **23 16 21.2 +0.4**
baz=164
JCT Junction City 62.74 328 P **P** **23 16 19.7 -1.5**
JCT pmax pmax
comp=Z,15nm,0.7s
JCT Junction City 62.74 328 P **P** **23 16 19.7 -1.5**
JCT Junction City 62.74 328 P **P** **23 16 22.7 +1.5**
baz=147
T51A Gray 62.79 345 P **P** **23 16 21.8 +0.5**
baz=163
S55A Lewisburg 62.82 348 P **P** **23 16 22.9 +1.3**
baz=167
U49A Red Boiling Sp 62.83 343 P **P** **23 16 21.7 +0.1**
baz=161,SNR=5.7
WHTX Lake Whitney, 62.92 331 P **P** **23 16 21.5 -0.9**
WHTX IAmb IAmb 23 16 24.2
comp=Z,10nm,0.6s
WHTX Lake Whitney, 62.92 331 P **P** **23 16 23.7 +1.4**
baz=149
R57A Stanardsville 62.98 350 P **P** **23 16 24.2 +1.7**
baz=169
S54A Dingess, Beckl 63.01 347 P **P** **23 16 19.8 -3.0**
S54A IAmb IAmb 23 16 24.2
comp=Z,10nm,0.8s
S54A Dingess, Beckl 63.01 347 P **P** **23 16 23.8 +1.0**
baz=166
HPIG 63.02 321 P **P** **23 16 21.8 -1.5**
HPIG IAmb IAmb 23 16 26.8
comp=Z,14nm,1.3s
WVT Waverly 63.05 341 P **P** **23 16 22.2 -0.8**
WVT pmax pmax
comp=Z,22nm,0.7s
WVT Waverly 63.05 341 P **P** **23 16 22.2 -0.8**
WVT Waverly 63.05 341 P **P** **23 16 23.4 +0.4**
baz=159
T50A Nancy 63.06 344 P **P** **23 16 23.5 +0.3**
baz=162
Q61A Milford 63.11 353 P **P** **23 16 25.2 +1.8**
baz=172
X40A Basin Creek Fa 63.22 336 P **P** **23 16 25.2 +1.0**
baz=154
R56A Bull Pasture M 63.24 349 P **P** **23 16 25.9 +1.6**
baz=160
R55A Marlinton 63.24 348 P **P** **23 16 26.3 +2.0**
baz=167
R54A Victor 63.31 348 P **P** **23 16 26.1 +1.3**
baz=166
T49A Edmonton 63.32 343 P **P** **23 16 23.6 -1.3**
T49A Edmonton 63.32 343 P **P** **23 16 25.1 +0.2**
baz=162,SNR=8.1
S51A Beattyville 63.35 345 P **P** **23 16 25.5 +0.5**
baz=164
Q58A Fox Den Farm, 63.48 351 P **P** **23 16 27.3 +1.5**
baz=170
MIAR Mount Ida 63.55 336 P **P** **23 16 25.4 -1.0**
MIAR pmax pmax
comp=Z,19nm,1.4s
MIAR Mount Ida 63.55 336 P **P** **23 16 25.4 -1.0**
MIAR IAmb IAmb 23 16 28.5
comp=Z,19nm,1.4s
MIAR Mount Ida 63.55 336 P **P** **23 16 27.5 +1.1**
baz=153,SNR=5.8
GNAR Gosnell 63.58 339 P **P** **23 16 27.0 +0.5**
S50A Richmond 63.58 345 P **P** **23 16 27.5 +1.0**
baz=163
W41B Gary Mavity, V 63.62 337 P **P** **23 16 27.8 +1.0**
baz=155
GLAT Glass 63.62 340 P **P** **23 16 25.1 -1.7**
T47A Sharon Grove 63.64 342 P **P** **23 16 25.6 -1.3**
R53A Hurricane 63.65 347 P **P** **23 16 27.8 +0.9**
baz=165
Q57A Strasburg 63.68 350 P **P** **23 16 28.4 +1.3**
baz=169
TX32 Lajitas Array 63.78 324 P **P** **23 16 27.2 -0.9**
TXAR Lajitas Array 63.78 324 P **P** **23 16 27.3 -0.8**
TXAR Lajitas Array 63.78 324 P **P** **23 16 29.9 +1.8**
comp=Z,2.7nm,0.7s,baz=152,slow=8.5,SNR=26
TXAR Lajitas Array 63.78 324 P **P** **23 16 27.3 -0.8**
TX31 Lajitas Ar. Si 63.78 324 P **P** **23 16 26.1 -2.1**
NVL N'lazarevskaya 63.79 159 *e*P **P** **23 16 28.9 +1.4**
NVL pmax pmax
comp=Z,10.0nm,0.6s
R52A Catlettsburg 63.80 346 P **P** **23 16 28.9 +1.0**
baz=164
Q56A Snyder Ridge, 63.82 349 P **P** **23 16 29.4 +1.4**
baz=168
S49A Springfield 63.90 344 P **P** **23 16 29.0 +0.4**
baz=162
Q55A Buckhannon 63.93 349 P **P** **23 16 30.6 +1.8**
baz=167
R51A Hillsboro 63.98 345 P **P** **23 16 29.8 +0.7**
baz=164
LCAR Lake Charles 64.05 338 P **P** **23 16 27.0 -2.6**
LCAR IAmb IAmb 23 16 31.0
comp=Z,15nm,1.4s
Q54A Coxs Mills 64.06 348 P **P** **23 16 30.6 +1.0**
baz=166
P57A Homestead Farm 64.06 350 P **P** **23 16 30.8 +1.2**
baz=169
Q53A Leroy 64.07 347 P **P** **23 16 30.7 +1.0**
baz=166
PARMO Parma 64.13 340 P **P** **23 16 29.6 -0.5**
R50A Paris 64.13 345 P **P** **23 16 28.9 -1.2**
R50A IAmb IAmb 23 16 31.7
comp=Z,19nm,1.4s
R50A Paris 64.13 345 P **P** **23 16 30.5 +0.3**
baz=163
W39A Magazine 64.20 336 P **P** **23 16 29.6 -1.0**
W39A IAmb IAmb 23 16 33.3
comp=Z,13nm,0.9s
W39A Magazine 64.20 336 P **P** **23 16 32.3 +1.6**
baz=153,SNR=7.0
Q52A Bidwell 64.32 347 P **P** **23 16 31.9 +0.6**
baz=165
R49A Shelbyville 64.35 344 P **P** 23 16 26.9 -4.7
R49A IAmb IAmb 23 16 32.4
comp=Z,10.0nm,1.2s
R49A Shelbyville 64.35 344 P **P** **23 16 31.8 +0.3**
baz=162
P55A Reedsville 64.38 349 P **P** **23 16 32.9 +1.2**
baz=167
ABTX Abilene, Hawle 64.45 330 P **P** **23 16 29.6 -2.8**
ABTX IAmb IAmb 23 16 34.8
comp=Z,27nm,1.4s
ABTX Abilene, Hawle 64.45 330 P **P** **23 16 33.6 +1.3**
baz=147
PBMO Poplar Bluff 64.45 339 P **P** **23 16 30.9 -1.3**
MCWV Mont Chateau 64.53 349 P **P** **23 16 33.9 +1.2**
baz=167
WCI Wyandotte Cave 64.58 343 P **P** **23 16 30.5 -2.5**
WCI pmax pmax
comp=Z,18nm,0.5s
WCI Wyandotte Cave 64.58 343 P **P** **23 16 30.5 -2.5**
WCI Wyandotte Cave 64.58 343 P **P** **23 16 33.0 0.0**
baz=161
P54A Burton 64.59 348 P **P** **23 16 34.4 +1.3**
baz=167
Q51A Peebles 64.62 346 P **P** **23 16 34.1 +0.8**
baz=164
P53A Whipple 64.65 348 P **P** **23 16 31.2 -2.3**
P53A IAmb IAmb 23 16 35.5
comp=Z,23nm,1.4s
P53A Whipple 64.65 348 P **P** **23 16 34.7 +1.3**
baz=166
O57A Amberson 64.72 351 P **P** **23 16 35.5 +1.6**
baz=170
U40A Yellville 64.90 337 P **P** **23 16 33.5 -1.6**
U40A IAmb IAmb 23 16 36.4
comp=Z,6.5nm,0.8s
U40A Yellville 64.90 337 P **P** **23 16 36.0 +0.8**
baz=154
S44A Carbondale 64.92 341 P **P** **23 16 33.1 -2.1**
S44A IAmb IAmb 23 16 36.6
comp=Z,8.8nm,0.5s
P52A Corning 64.94 347 P **P** **23 16 35.8 +0.5**
baz=165
Q49A Aurora 64.96 345 P **P** **23 16 36.3 +0.9**
baz=162
O55A Ligonier 64.97 350 P **P** **23 16 37.0 +1.4**
baz=168
N60A Cedar Hill Far 65.05 353 P **P** **23 16 37.0 +1.0**
baz=172
Q48A North Vernon 65.09 344 P **P** **23 16 36.9 +0.6**
baz=162
N59A State Game Lan 65.17 353 P **P** **23 16 38.0 +1.2**
baz=172
SSPA Standing Stone 65.17 351 P **P** **23 16 37.9 +1.1**
baz=170
N58A Sunbury 65.21 352 P **P** **23 16 38.2 +1.1**
baz=171
HHAR Hobbs 65.23 336 P **P** **23 16 36.0 -1.3**
HHAR IAmb IAmb 23 16 39.3
comp=Z,11nm,0.9s
N57A Milroy 65.24 351 P **P** **23 16 38.1 +0.9**
baz=170
P50A Jamestown 65.28 346 P **P** **23 16 37.7 +0.2**
baz=164
YLE Yale 65.28 355 P **P** **23 16 36.5 -1.0**
X34A Smith Ranch, M 65.31 332 P **P** **23 16 34.3 -3.6**
O52A Adamsville 65.35 347 P **P** **23 16 35.8 -2.1**
O52A IAmb IAmb 23 16 39.5
comp=Z,12nm,1.1s
O52A Adamsville 65.35 347 P **P** **23 16 38.6 +0.7**
baz=166
M61A Granite Spring 65.35 354 P **P** **23 16 38.4 +0.5**
baz=174
MGMO Mountain Grove 65.41 338 P **P** **23 16 36.8 -1.6**
P49A Miami Univ. Ec 65.42 345 P **P** **23 16 38.7 +0.3**
baz=163
N55A Marion Center 65.48 350 P **P** **23 16 39.9 +1.1**
baz=168
N56A West Decatur 65.51 351 P **P** **23 16 39.9 +0.9**
baz=169
P48A Milroy 65.52 344 P **P** **23 16 39.2 +0.1**
baz=162
BLO Bloomington 65.53 343 P **P** **23 16 36.7 -2.4**
BLO pmax pmax
comp=Z,15nm,0.5s
BLO Bloomington 65.53 343 P **P** **23 16 36.7 -2.4**
O51A Pataskala 65.53 347 P **P** **23 16 40.0 +0.9**
baz=165
FVM French Village 65.56 340 P **P** **23 16 38.1 -1.2**
FVM pmax pmax
comp=Z,58nm,1.5s
FVM French Village 65.56 340 P **P** **23 16 38.1 -1.2**
TUL1 Leonard 65.61 334 P **P** **23 16 37.4 -2.3**
TUL1 IAmb IAmb 23 16 41.9
comp=Z,20nm,1.1s
TUL1 Leonard 65.61 334 P **P** **23 16 41.4 +1.8**
baz=152
ACSO Alum Creek Sta 65.69 347 P **P** **23 16 36.3 -3.8**
ACSO IAmb IAmb 23 16 41.6
comp=Z,23nm,1.4s
ACSO Alum Creek Sta 65.69 347 P **P** **23 16 40.9 +0.8**
baz=164
M58A Price's Panora 65.70 352 P **P** **23 16 41.6 +1.4**
baz=171
L63A North Scituate 65.74 356 P **P** **23 16 41.8 +1.4**
baz=176
M59A Waymart 65.75 353 P **P** **23 16 41.8 +1.4**
baz=172
M57A Sunshine Farm, 65.75 352 P **P** **23 16 41.8 +1.3**
baz=170
N54A Moraine State 65.82 349 P **P** **23 16 42.8 +1.9**
baz=167
WMOK Wichita Mounta 65.84 332 P **P** **23 16 39.0 -2.2**
WMOK pmax pmax
comp=Z,6.0nm,1.5s
WMOK Wichita Mounta 65.84 332 P **P** **23 16 39.0 -2.2**
WMOK Wichita Mounta 65.84 332 P **P** **23 16 42.4 +1.2**
baz=149
CCM Cathedral Cave 65.88 339 P **P** **23 16 41.0 -0.4**
CCM pmax pmax
comp=Z,23nm,0.6s
CCM Cathedral Cave 65.88 339 P **P** **23 16 41.0 -0.4**
CCM Cathedral Cave 65.88 339 P **P** **23 16 42.4 +1.0**
baz=156
N52A McGinn's Farm, 65.99 348 P **P** **23 16 43.1 +1.1**
baz=166
M56A Emporium 66.05 351 P **P** **23 16 43.7 +1.3**
baz=169
L60A Shokan 66.06 354 P **P** **23 16 43.9 +1.4**
baz=173
M55A Ridgway 66.12 350 P **P** **23 16 43.8 +0.9**
baz=169
QSPA South Pole Qui 66.14 180 P **P** **23 16 45.1 +2.1**
comp=Z,15nm,0.5s,baz=244,slow=0.3,SNR=155
QSPA South Pole Qui 66.14 180 P **P** **23 16 42.8 -0.2**
Q48A Farmland 66.21 345 P **P** **23 16 43.8 +0.4**
baz=162
N51A Ashland 66.23 347 P **P** **23 16 41.0 -2.5**
N51A IAmb IAmb 23 16 45.0
comp=Z,19nm,1.2s
N51A Ashland 66.23 347 P **P** **23 16 44.4 +0.9**
baz=165
L58A Harry Jones Me 66.29 353 P **P** **23 16 45.3 +1.4**
baz=172
M54A Oil Creek Stat 66.30 350 P **P** **23 16 45.1 +1.1**
baz=168
L59A Walton 66.35 353 P **P** **23 16 43.2 -1.1**
L59A IAmb IAmb 23 16 46.5
comp=Z,18nm,1.1s
L59A Walton 66.35 353 P **P** **23 16 45.8 +1.5**
baz=172
L57A Andrews Acres 66.37 352 P **P** **23 16 45.8 +1.4**
baz=171
HRV Adam Dziewonsk 66.37 356 P **P** **23 16 46.1 +1.7**
baz=176
M53A WI Miller and 66.41 349 P **P** **23 16 45.6 +0.9**
baz=167
BINY Binghamton 66.46 353 P **P** **23 16 46.2 +1.2**
baz=172
MNTX Cornudas Mount 66.55 325 P **P** **23 16 43.2 -2.6**
MNTX IAmb IAmb 23 16 47.9
comp=Z,11nm,1.1s
MNTX Cornudas Mount 66.55 325 P **P** **23 16 46.8 +1.0**
baz=142,SNR=12
K62A Royalston 66.58 356 P **P** **23 16 47.3 +1.6**
baz=175
L56A Greenwood 66.60 351 P **P** **23 16 47.3 +1.4**
baz=170
N49A Columbus Grove 66.62 346 P **P** **23 16 43.4 -2.6**
N49A IAmb IAmb 23 16 47.4
comp=Z,17nm,1.1s
N49A Columbus Grove 66.62 346 P **P** **23 16 46.8 +0.9**
baz=163
N48A Decatur 66.75 345 P **P** **23 16 47.4 +0.5**

baz=162
L55A **Hinsdale** 66.77 351 P P 23 16 47.7 +0.7
baz=169
P43A **Skaggs, Pawnee** 66.80 341 P P 23 16 44.6 -2.6
K59A **Cooperstown** 66.91 354 P P 23 16 49.5 +1.7
baz=173
N47A **Urbana** 66.93 345 P P 23 16 46.0 -2.0
N47A IAmb IAmb 23 16 48.9
comp=Z,21nm,1.2s
N47A **Urbana** 66.93 345 P P 23 16 48.4 +0.5
baz=162
ERPA **Erie** 66.95 349 P P 23 16 49.2 +1.2
baz=168
L54A **Sinclairville** 66.95 350 P P 23 16 49.5 +1.4
baz=168
O44A **Mansfield** 66.97 342 P P 23 16 45.4 -2.8
O44A IAmb IAmb 23 16 50.5
comp=Z,9.1nm,0.6s
K58A **Earlville** 66.98 353 P P 23 16 46.7 -1.6
K58A IAmb IAmb 23 16 50.2
comp=Z,9.6nm,0.8s
K58A **Earlville** 66.98 353 P P 23 16 49.9 +1.7
baz=172
WVNY **West Valley, N** 67.01 351 P P 23 16 47.6 -0.8
WVNY IAmb IAmb 23 16 50.4
comp=Z,8.7nm,0.9s
MSTX **Muleshoe** 67.04 328 P P 23 16 47.5 -1.4
MSTX **Muleshoe** 67.04 328 P P 23 16 50.3 +1.4
baz=145,SNR=6.0
K57A **Scipio Center** 67.05 352 P P 23 16 49.5 +0.8
baz=171
M49A **Liberty Center** 67.10 346 P P 23 16 49.0 0.0
baz=164
K56A **Middlesex** 67.12 352 P P 23 16 50.1 +1.0
baz=170
J60A **Lant Hill Farm** 67.24 355 P P 23 16 51.6 +1.7
baz=174
K55A **Perry** 67.25 351 P P 23 16 51.4 +1.5
baz=170
AMTX **Amarillo** 67.27 329 P P 23 16 47.1 -3.2
AMTX IAmb IAmb 23 16 52.0
comp=Z,7.9nm,0.4s
AMTX **Amarillo** 67.27 329 P P 23 16 51.7 +1.3
baz=146
LIC **Lamto** 67.38 72 *e*P P 23 16 50.7 -0.7
comp=Z,10nm,0.5s
L50A **Kingsville** 67.40 347 P P 23 16 52.2 +1.4
baz=165
J58A **Remsen** 67.53 353 P P 23 16 53.2 +1.5
baz=172
J59A **Piesco** 67.56 354 P P 23 16 50.2 -1.6
J59A **Piesco** 67.56 354 P P 23 16 53.4 +1.5
baz=173
HDIL **Hopedale** 67.58 342 P P 23 16 49.9 -2.1
HDIL **Hopedale** 67.58 342 P P 23 16 52.3 +0.2
baz=158
TIC **Toumodi** 67.59 71 *e*P P 23 16 54.2 +1.5
J56A **Wolcott** 67.63 352 P P 23 16 50.7 -1.5
L48A **N Adams** 67.65 346 P P 23 16 52.8 +0.4
baz=163
KIC **Kosan Boka** 67.69 72 *e*P P 23 16 52.9 -0.5
comp=Z,6.6nm,0.4s
DBIC **Dimbokro** 67.74 71 P P 23 16 53.4 -0.3
comp=Z,1.9nm,0.3s,baz=211,slow=7.1,SNR=12
DBIC **Dimbokro** 67.74 71 IAmb IAmb 23 16 54.6
comp=Z,14nm,1.4s
I58A **Old Forge** 67.82 354 P P 23 16 54.7 +1.2
baz=173
I59A **Olmsteadville** 67.83 355 P P 23 16 56.0 +2.5
baz=174
LBNH **Lisbon** 68.12 356 P P 23 16 50.7 -4.7
LBNH pmax pmax
comp=Z,10.0nm,1.4s
LBNH **Lisbon** 68.12 356 P P 23 16 50.7 -4.7
J52A **Paris** 68.12 349 P P 23 16 56.6 +1.2
baz=167
K48A **Perry** 68.40 346 P P 23 16 57.8 +0.7
baz=164
H61A **Lyndonville** 68.42 356 P P 23 16 58.9 +1.7
baz=176
H65A **Eastbrook** 68.43 359 P P 23 16 58.4 +1.2
baz=179
121A **Cookes Peak, D** 68.48 324 P P 23 16 54.6 -3.5
121A IAmb IAmb 23 17 02.1
comp=Z,17nm,1.1s
121A **Cookes Peak, D** 68.48 324 P P 23 17 01.0 +3.0
baz=140
H60A **Morristown** 68.49 356 P P 23 16 58.9 +1.2
baz=175
H57A **Richville** 68.63 353 P P 23 17 00.1 +1.6
baz=172
H59A **Cadyville** 68.65 355 P P 23 17 00.6 +1.9
baz=174
KSU1 **Kansas State U** 68.71 336 P P 23 17 00.1 +1.0
baz=152
LONY **Lake Ozonia** 68.71 354 P P 23 17 01.5 +2.5
baz=173
J48A **Bridge Port** 68.80 347 P P 23 16 59.9 +0.3
baz=164
H56A **Elgin** 68.85 353 P P 23 17 00.7 +0.8
baz=171
G63A **Kingsbury** 68.89 358 P P 23 17 01.4 +1.3
baz=178
L42A **Oliver, Polo** 69.03 342 P P 23 17 00.5 -0.5
L42A IAmb IAmb 23 17 01.7
comp=Z,13nm,0.7s
PKME **Peaks-Kenny Pk** 69.03 358 P P 23 17 02.0 +1.1
baz=178
G57A **Newington** 69.22 354 P P 23 17 03.9 +1.8
baz=173
SADO **Sadowa** 69.40 351 P P 23 17 03.6 +0.4
comp=Z,3.0nm,0.6s,baz=225,slow=3.5
SADO **Sadowa** 69.40 351 P P 23 17 01.4 -1.9
SADO IAmb IAmb 23 17 17.8
comp=Z,15nm,1.3s
L40A **Anamosa** 69.53 341 P P 23 17 02.1 -2.0
F64A **Sherman** 69.60 359 P P 23 17 03.3 -1.2
F64A IAmb IAmb 23 17 06.3
comp=Z,9.8nm,0.7s
F64A **Sherman** 69.60 359 P P 23 17 06.0 +1.6
baz=179
LMN **Caledonia Moun** 69.61 2 P P 23 17 04.1 -0.4
LMN IAmb IAmb 23 17 05.8
comp=Z,11nm,0.6s
ANMO **Albuquerque** 69.64 326 *i* P P 23 17 07.6 +2.4
ANMO pmax pmax
comp=Z,6.0nm,0.7s
ANMO **Albuquerque** 69.64 326 P P 23 17 07.2 +2.0
comp=Z,5.4nm,0.8s,baz=151,slow=4.8,SNR=7.6
ANMO **Albuquerque** 69.64 326 P P 23 17 03.5 -1.7
ANMO **Albuquerque** 69.64 326 P P 23 17 07.7 +2.5
baz=142
CBKS **Cedar Bluff** 69.70 333 P P 23 17 05.8 +0.5
CBKS pmax pmax
comp=Z,37nm,1.3s
CBKS **Cedar Bluff** 69.70 333 P P 23 17 05.8 +0.5
CBKS **Cedar Bluff** 69.70 333 P P 23 17 07.0 +1.8
baz=149,SNR=6.0
G54A **Lake Saint Pet** 69.87 352 P P 23 17 06.9 +0.8
baz=170
TUC **Tucson** 69.98 321 P P 23 17 07.2 0.0
TUC pmax pmax
comp=Z,11nm,1.2s
TUC **Tucson** 69.98 321 P P 23 17 07.2 0.0
TUC IAmb IAmb 23 17 11.1
comp=Z,11nm,1.2s
TUC **Tucson** 69.98 321 P P 23 17 09.7 +2.5
baz=138
SCIA **State Center** 70.01 339 P P 23 17 08.1 +1.1
baz=155
JFWS **Jewell Farm** 70.03 342 P P 23 17 05.9 -1.2
JFWS pmax pmax
comp=Z,24nm,0.6s
JFWS **Jewell Farm** 70.03 342 P P 23 17 05.9 -1.2
JFWS **Jewell Farm** 70.03 342 P P 23 17 07.9 +0.8
baz=158,SNR=6.4
E64A **Bridgewater** 70.15 359 P P 23 17 09.3 +1.5
baz=180
H46A **Fife Lake** 70.29 346 P P 23 17 08.7 0.0
baz=163
TRQ **Mont Tremblant** 70.29 354 P P 23 17 07.2 -1.5
E58A **La Victoria** 70.34 355 P P 23 17 09.8 +0.9
baz=174
T25A **Trinidad** 70.38 329 P P 23 17 08.5 -1.2
T25A IAmb IAmb 23 17 12.7
comp=Z,7.3nm,0.8s
T25A **Trinidad** 70.38 329 P P 23 17 12.2 +2.5
baz=144,SNR=7.9
ALGO **Algonquin Park** 70.41 352 P P 23 17 10.1 +0.7
baz=170
F52A **Sundridge** 70.43 351 P P 23 17 10.4 +0.9
baz=168
I42A **Draeger Farm,** 70.57 343 P P 23 17 08.4 -2.0
E56A **St. Veronique** 70.66 354 P P 23 17 11.8 +0.9
baz=179
D63A **Stockholm** 70.77 359 P P 23 17 12.8 +1.3
baz=179
D62A **Allapoint, All** 70.84 358 P P 23 17 11.8 -0.1
D62A IAmb IAmb 23 17 13.7
comp=Z,6.4nm,0.8s
D62A **Allapoint, All** 70.84 358 P P 23 17 13.6 +1.7
baz=178
214A **Organ Pipe Nat** 70.90 320 P P 23 17 10.3 -2.4
214A **Organ Pipe Nat** 70.90 320 P P 23 17 15.8 +3.1
baz=136,SNR=5.5
D61A **St Aubert, Com** 70.99 358 P P 23 17 14.4 +1.6
baz=177
F48A **Evansville** 71.01 348 P P 23 17 14.2 +1.2
baz=165
D58A **Chemin du LacG** 71.03 356 P P 23 17 14.3 +1.2
baz=175
I40A **Norwalk** 71.04 342 P P 23 17 11.4 -1.8
KSCO **Kaye Shedlock'** 71.09 331 P P 23 17 16.2 +2.4
baz=146
X18A **Snowflake** 71.17 323 P P 23 17 12.6 -1.8
D55A **Sainte-Anne-du** 71.17 354 P P 23 17 14.9 +1.0
baz=172
BGNE **Belgrade** 71.29 336 P P 23 17 14.9 +0.1
BGNE **Belgrade** 71.29 336 P P 23 17 16.3 +1.5
baz=150,SNR=7.1
SDCO **Great Sand Dun** 71.39 329 P P 23 17 16.7 +0.9
SDCO **Great Sand Dun** 71.39 329 P P 23 17 18.4 +2.6
baz=144,SNR=15
E46A **Sault Ste Mari** 71.85 347 P P 23 17 17.3 -0.6
E46A IAmb IAmb 23 17 19.0
comp=Z,13nm,0.8s
X16A **Lo Mia Camp, P** 71.91 322 P P 23 17 18.1 -0.7
S22A **4UR Ranch, Cre** 72.03 328 P P 23 17 17.8 -1.8
S22A **4UR Ranch, Cre** 72.03 328 P P 23 17 22.0 +2.4
baz=142
G40A **Rib Lake** 72.19 343 P P 23 17 19.0 -1.0
G40A IAmb IAmb 23 17 22.1
comp=Z,10nm,0.9s
Q24A **Divide** 72.19 330 P P 23 17 19.0 -1.6
D46A **Sault St. Mari** 72.30 348 P P 23 17 21.4 +0.7
baz=164
MVCO **Mesa Verde** 72.44 326 P P 23 17 22.9 +0.9
MVCO **Mesa Verde** 72.44 326 P P 23 17 24.3 +2.3
baz=141,SNR=5.1
OGNE **Ogallala** 72.44 333 P P 23 17 20.5 -1.3
OGNE IAmb IAmb 23 17 24.4
comp=Z,8.8nm,0.8s
Y14A **Wickenburg** 72.44 321 P P 23 17 18.6 -3.3
Y14A IAmb IAmb 23 17 25.9
comp=Z,12nm,1.4s
WUAZ **Wupatki** 72.68 323 P P 23 17 20.5 -2.9
WUAZ **Wupatki** 72.68 323 P P 23 17 25.9 +2.6
baz=138,SNR=7.7
ECSD **EROS Data Cent** 72.77 338 P P 23 17 23.7 +0.2
ECSD IAmb IAmb 23 17 25.6
comp=Z,12nm,0.8s
ECSD **EROS Data Cent** 72.77 338 P P 23 17 24.5 +1.0
baz=152,SNR=17
GLA **Glamis** 72.88 319 P P 23 17 21.1 -3.3
GLA pmax pmax
comp=Z,8.0nm,1.2s
GLA **Glamis** 72.88 319 P P 23 17 21.1 -3.3
GLA **Glamis** 72.88 319 P P 23 17 27.2 +2.8
baz=135
SPMN **Marine on St.** 72.89 341 P P 23 17 22.5 -1.7
SPMN IAmb IAmb 23 17 25.7
comp=Z,24nm,1.2s
SPMN **Marine on St.** 72.89 341 P P 23 17 25.5 +1.4
baz=156
ISCO **Idaho Springs** 73.08 330 P P 23 17 24.4 -1.4
ISCO pmax pmax
comp=Z,10.0nm,1.3s
ISCO **Idaho Springs** 73.08 330 P P 23 17 24.4 -1.4
ISCO **Idaho Springs** 73.08 330 P P 23 17 28.0 +2.2
baz=144
Y12C **Blythe** 73.19 320 P P 23 17 25.6 -0.6
Y12C IAmb IAmb 23 17 30.3
comp=Z,13nm,1.2s
Y12C **Blythe** 73.19 320 P P 23 17 29.4 +3.2
baz=136
SMCO **Snowmass** 73.22 328 P P 23 17 25.0 -1.8
SMCO IAmb IAmb 23 17 30.1
comp=Z,5.4nm,0.7s
LSQQ **Lebel-sur-Quev** 73.34 353 P P 23 17 27.5 +0.8
baz=171
IKP **In-Ko-Pah, Jac** 73.37 318 P P 23 17 30.3 +3.0
baz=134
D41A **Chassel** 73.44 345 P P 23 17 27.3 -0.1
SYO **Syowa Base** 73.46 159 ||*e*P P 23 17 27.0 -0.3
SYO **Syowa Base** 73.46 159 ||*i*X P 23 17 30.0 +2.7
DRLN **Deer Lake** 73.47 6 P P 23 17 27.6 +0.2
BC3 **Big Chuckawall** 73.67 319 P P 23 17 31.9 +2.7
baz=135,SNR=7.0
MONP2 **Monument Peak** 73.73 318 P P 23 17 32.5 +2.8
baz=134,SNR=5.0
BAR **Barrett** 73.74 318 P P 23 17 27.8 -1.7
BAR IAmb IAmb 23 17 33.2
comp=Z,15nm,1.2s
W13A **Hualapai Mount** 73.78 321 P P 23 17 27.7 -2.2
E38A **The Farm, Brul** 73.79 343 P P 23 17 27.6 -1.8
E38A IAmb IAmb 23 17 31.1
comp=Z,11nm,1.1s
PMOZ **Porto Moniz, M** 73.80 42 P P 23 17 28.3 -1.6
IRM **Iron Mountain** 73.84 320 P P 23 17 32.9 +2.8
baz=135,SNR=6.9
U15A **North Rim** 73.85 323 P P 23 17 29.1 -1.3
U15A IAmb IAmb 23 17 34.8
comp=Z,9.4nm,1.1s
MATQ **Matagami** 74.11 353 P P 23 17 31.6 +0.5
baz=170
N23A **Red Feather La** 74.11 330 P P 23 17 28.3 -3.4
N23A IAmb IAmb 23 17 35.4
comp=Z,11nm,1.2s
N23A **Red Feather La** 74.11 330 P P 23 17 34.0 +2.3
baz=144
SUSD **Miller** 74.21 337 P P 23 17 29.2 -2.7
PHWY **Pilot Hill** 74.22 331 P P 23 17 27.3 -5.1
BELC **Belle Mtn. Jos** 74.24 319 P P 23 17 35.4 +2.9
baz=135
XPFO **Pion Flat** 74.24 319 P P 23 17 29.5 -3.0
PFO **Pinyon Flats O** 74.25 319 *ce*P P 23 17 35.3 +2.8
PFO IAmb IAmb 23 17 38.0
comp=Z,10.0nm,0.9s
PFO **Pinyon Flats O** 74.25 319 P P 23 17 28.6 -3.9
PFO **Pinyon Flats O** 74.25 319 P P 23 17 35.4 +2.8
baz=134
KNB **Kanab** 74.58 323 P P 23 17 32.9 -1.5
KNB pmax pmax
comp=Z,28nm,1.2s
KNB **Kanab** 74.58 323 P P 23 17 32.9 -1.5
O20A **White River Ci** 74.58 328 P P 23 17 31.9 -2.5
O20A IAmb IAmb 23 17 38.1
comp=Z,10nm,0.9s
O20A **White River Ci** 74.58 328 P P 23 17 37.0 +2.6
baz=142,SNR=6.3
GMRC **Granite Mounta** 74.58 320 P P 23 17 37.6 +3.1
baz=135,SNR=11
LCMT **Little Creek M** 74.80 323 P P 23 17 31.2 -4.5
SRU **San Rafael Swe** 74.92 326 P P 23 17 34.4 -2.0
SRU pmax pmax
comp=Z,8.0nm,0.6s
SRU **San Rafael Swe** 74.92 326 P P 23 17 34.4 -2.0
MTPU **Mount Pierson** 74.98 324 P P 23 17 34.5 -2.4
EYMN **Ely** 75.01 343 P P 23 17 35.4 -1.0
EYMN IAmb IAmb 23 17 38.0
comp=Z,13nm,1.2s
EYMN **Ely** 75.01 343 P P 23 17 38.0 +1.6
baz=157
HEC **Hector,Ludlow** 75.01 320 P P 23 17 40.1 +3.2
baz=134
SCI2 **San Clemente I** 75.10 317 P P 23 17 40.5 +3.2
baz=133
Q16A **Castle Valley** 75.11 326 P P 23 17 34.0 -3.4
SZCU **Shurtz Canyon** 75.14 324 P P 23 17 35.6 -2.0
TUQ **Turquoise Moun** 75.19 320 P P 23 17 40.7 +2.8
baz=135
CCUT **Cedar City** 75.26 323 P P 23 17 38.9 +0.6
CIS **Catalina Islan** 75.30 317 P P 23 17 41.7 +3.3
baz=133
P17A **Butcher Ranch,** 75.31 326 P P 23 17 36.8 -1.7
RWWY **Rawlins** 75.32 330 P P 23 17 37.7 -0.9
RWWY IAmb IAmb 23 17 40.7
comp=Z,7.3nm,0.7s
MSU **Marysvale** 75.33 325 P P 23 17 38.7 0.0
MSU **Marysvale** 75.33 325 P P 23 17 38.7 0.0
BFSC **Mount Baldy Ra** 75.40 318 P P 23 17 42.4 +3.3
baz=134
RDMU **Red Mountain** 75.56 328 P P 23 17 41.1 +1.2
GSC **Goldstone, Bar** 75.62 320 P P 23 17 41.6 +1.3
GSC pmax pmax
comp=Z,16nm,1.5s
GSC **Goldstone, Bar** 75.62 320 P P 23 17 41.6 +1.3
GSC IAmb IAmb 23 17 44.4
comp=Z,16nm,1.5s
GSC **Goldstone, Bar** 75.62 320 P P 23 17 43.1 +2.8
baz=134,SNR=5.5
MWC **Mount Wilson** 75.63 318 P P 23 17 38.7 -1.8
MWC pmax pmax
comp=Z,18nm,1.5s
MWC **Mount Wilson** 75.63 318 P P 23 17 38.7 -1.8
MWC IAmb IAmb 23 17 44.4
comp=Z,18nm,1.4s
PASC **Pasadena Art C** 75.68 318 P P 23 17 39.0 -1.5
PASC IAmb IAmb 23 17 44.5
comp=Z,15nm,1.1s
SUR **Sutherland** 75.71 119 P P 23 17 42.6 +1.4
comp=Z,1.7nm,0.6s,baz=210,slow=8.1,SNR=3.5
SUR **Sutherland** 75.71 119 IAmb IAmb 23 17 56.4
comp=Z,18nm,1.4s
K22A **Casper** 75.77 331 P P 23 17 38.0 -3.1
K22A IAmb IAmb 23 17 56.9
comp=Z,13nm,1.0s
SNCC **San Nicolas Is** 75.89 317 P P 23 17 38.3 -3.5
SNCC IAmb IAmb 23 17 45.9
comp=Z,12nm,1.0s
SNCC **San Nicolas Is** 75.89 317 P P 23 17 44.9 +3.2
baz=132
RSSD **Black Hills** 75.90 333 P P 23 17 38.8 -3.0
RSSD pmax pmax
comp=Z,8.0nm,0.7s
RSSD **Black Hills** 75.90 333 P P 23 17 38.8 -3.0
RSSD IAmb IAmb 23 17 48.8
comp=Z,7.8nm,0.7s
EDW2 **Edwards Air Fo** 76.04 319 P P 23 17 45.0 +2.4
baz=133
MPU **Maple Canyon** 76.17 326 P P 23 17 40.0 -3.4
BLG **Laguna Peak, P** 76.17 318 P P 23 17 46.0 +2.6
baz=132
PSUT **Pine Spring** 76.24 324 P P 23 17 39.7 -4.2
LRMC **Laurel Mtn Rad** 76.26 319 P P 23 17 46.8 +2.8
baz=134
OSI **Osito Audit: C** 76.30 318 P P 23 17 40.4 -3.7
NLU **North Lily Min** 76.35 326 P P 23 17 45.7 +1.3
TPNV **Topopah Spring** 76.44 321 P P 23 17 42.8 -2.2
TPNV pmax pmax
comp=Z,24nm,1.5s
TPNV **Topopah Spring** 76.44 321 P P 23 17 42.8 -2.2
TPNV IAmb IAmb 23 17 49.4
comp=Z,24nm,1.4s
TPNV **Topopah Spring** 76.44 321 P P 23 17 47.8 +2.8
baz=135,SNR=8.3
SCZ2 **Santa Cruz Isl** 76.45 317 P P 23 17 47.6 +2.7
baz=132
FURC **Furnace Creek,** 76.46 321 P P 23 17 48.0 +3.2
baz=134
TOA0 **Torodi Ar. Sit** 76.51 69 P P 23 17 45.8 +0.2
TOA0 IAmb IAmb 23 17 47.1
comp=Z,5.8nm,0.6s
TORD **Torodi Ar. Bea** 76.51 69 P P 23 17 45.7 0.0
comp=Z,4.4nm,0.4s,baz=259,slow=5.8,SNR=79
TORD **Torodi Ar. Bea** 76.51 69 IAmb IAmb 23 17 47.1
comp=Z,3.4nm,0.6s
JLU **Jordanelle** 76.51 327 P P 23 17 44.2 -1.2
MPMC **Manual Prospec** 76.54 320 P P 23 17 48.0 +2.3
baz=134
AGMN **Agassiz Nation** 76.57 341 P P 23 17 44.0 -1.2
AGMN IAmb IAmb 23 17 46.7
comp=Z,8.2nm,0.6s
AGMN **Agassiz Nation** 76.57 341 P P 23 17 46.3 +1.1
baz=153
DAC **Darwin (Calif)** 76.75 320 P P 23 17 43.7 -3.1
DAC pmax pmax
comp=Z,8.0nm,1.2s
DAC **Darwin (Calif)** 76.75 320 P P 23 17 43.7 -3.1
ISA **Isabella, Lake** 76.86 319 P P 23 17 45.7 -1.5
ISA pmax pmax
comp=Z,7.0nm,1.0s
ISA **Isabella, Lake** 76.86 319 P P 23 17 45.7 -1.5
ISA **Isabella, Lake** 76.86 319 P P 23 17 50.1 +2.8
baz=133,SNR=5.3
TCUT **Toone Canyon** 76.88 327 P P 23 17 43.7 -3.8
DUG **Dugway, Tooele** 76.91 326 P P 23 17 48.7 +1.2
DUG pmax pmax
comp=Z,9.0nm,1.3s
DUG **Dugway, Tooele** 76.91 326 P P 23 17 48.7 +1.2
DUG **Dugway, Tooele** 76.91 326 P P 23 17 50.2 +2.7
baz=138
R11A **Troy Canyon, C** 77.05 323 P P 23 17 46.5 -1.9
R11A **Troy Canyon, C** 77.05 323 P P 23 17 51.7 +3.3
baz=136,SNR=13
CWC **Cottonwood Cre** 77.15 320 P P 23 17 51.6 +2.6
baz=134
PKM **Mcpherson Peak** 77.15 318 P P 23 17 52.1 +3.1
baz=132,SNR=13
BW06 **Boulder Array** 77.25 329 P P 23 17 46.3 -3.1
BW06 **Boulder Array** 77.25 329 P P 23 17 51.3 +1.8
baz=141
PD31 **Pinedale Array** 77.25 329 P P 23 17 46.8 -2.7
PD31 pP 23 18 44.1 +4.7
PDAR **Pinedale Array** 77.25 329 P P 23 17 51.2 +1.8
comp=Z,1.6nm,0.5s,baz=133,slow=7.8,SNR=29
PDAR **Pinedale Array** 77.25 329 P P 23 17 48.8 -0.6
HWUT **Hardware Ranch** 77.33 327 P P 23 17 46.7 -3.1
HWUT IAmb IAmb 23 17 54.0
comp=Z,23nm,1.5s
VES **Vestal, Richgr** 77.34 319 P P 23 17 52.3 +2.5
baz=133
MDND **Maddock** 77.38 338 P P 23 17 47.7 -2.0
MDND **Maddock** 77.38 338 P P 23 17 51.6 +1.9
baz=150
SPUT **South Promonto** 77.54 327 P P 23 17 48.5 -2.6
SMMC **Simmler** 77.55 318 P P 23 17 54.2 +3.2
baz=132
BGU **Big Grassy Mou** 77.56 326 P P 23 17 47.4 -3.7
TIN **Tinemaha, Big** 77.66 320 P P 23 17 54.5 +2.8
baz=134
AHID **Auburn Hatcher** 77.97 328 P P 23 17 50.8 -2.7
PAGB **Antelope Grade** 77.98 318 P P 23 17 49.9 -3.5
PAGB IAmb IAmb 23 17 57.4
comp=Z,28nm,1.5s
HVU **Hansel Valley** 78.06 327 P P 23 17 50.7 -3.1
HVU pmax pmax
comp=Z,6.0nm,0.8s
HVU **Hansel Valley** 78.06 327 P P 23 17 50.7 -3.1
REDW **Red Top Meadow** 78.31 329 P P 23 17 52.8 -2.5
ULM **Lac du Bonnet** 78.31 341 P P 23 17 55.8 +1.0
comp=Z,8.1nm,0.5s,baz=158,slow=6.7,SNR=44
ULM **Lac du Bonnet** 78.31 341 P P 23 17 54.7 -0.1
ULM IAmb IAmb 23 17 56.2
comp=Z,10nm,0.6s
SNOW **Snow King Moun** 78.34 329 P P 23 17 52.4 -3.1
TPAW **Teton Pass** 78.45 329 P P 23 17 54.4 -1.7
OMMB **Old Mammoth Mi** 78.49 320 P P 23 17 55.2 -1.3
OMMB IAmb IAmb 23 18 00.1
comp=Z,16nm,1.3s
MDPB **Devils Postpil** 78.55 320 P P 23 17 54.2 -2.6
MOOW **Moose Ponds** 78.55 329 P P 23 17 53.7 -2.9
NV11 **Mina Array Sit** 78.56 321 P P 23 17 54.4 -2.3
SCHQ **Schefferville** 78.57 0 P P 23 17 57.0 +0.9
comp=Z,3.2nm,0.6s,baz=206,slow=4.1,SNR=10
SCHQ **Schefferville** 78.57 0 P P 23 17 55.2 -0.9
ELK **Elko** 78.57 325 P P 23 17 53.6 -3.2
ELK pmax pmax
comp=Z,6.0nm,1.1s
ELK **Elko** 78.57 325 P P 23 17 59.2 +2.4
comp=Z,3.4nm,0.9s,baz=111,slow=3.4,SNR=12
ELK **Elko** 78.57 325 P P 23 17 53.6 -3.2
PMPB **Monarch Peak** 78.63 318 P P 23 17 52.2 -4.8
PMPB IAmb IAmb 23 18 01.0
comp=Z,8.4nm,1.0s
NVAR **Mina Array Bea** 78.64 321 P P 23 17 59.8 +2.6
comp=Z,2.0nm,0.7s,baz=146,slow=5.9,SNR=15
NVAR **Mina Array Bea** 78.64 321 P P 23 17 53.2 -4.0

FLWY	**Flagg Ranch**	**78.79**	**329**	P	**P**	**23 17 54.7**	**-3.2**
FLWY				IAmb	IAmb	23 18 01.3	
	comp=Z,12nm,1.1s						
LAO	**LASA Array**	**78.89**	**334**	P	**P**	**23 17 56.0**	**-2.2**
LAO				IAmb	IAmb	23 18 10.9	
	comp=Z,10nm,0.7s						
LAO	**LASA Array**	**78.89**	**334**	P	**P**	**23 18 00.2**	**+2.0**
	baz=144						
RYN	**Ryan**	**78.90**	**321**	P	**P**	**23 17 55.3**	**-3.2**
RLMT	**Red Lodge**	**78.94**	**331**	P	**P**	**23 17 57.4**	**-1.3**
RLMT				IAmb	IAmb	23 18 01.5	
	comp=Z,7.1nm,0.6s						
RLMT	**Red Lodge**	**78.94**	**331**	P	**P**	**23 18 01.2**	**+2.5**
	baz=142,SNR=8.5						
KVN	**Kaiserville**	**78.95**	**322**	P	**P**	**23 17 57.1**	**-1.7**
KVN	**Kaiserville**	**78.95**	**322**	P	**P**	**23 17 57.1**	**-1.7**
KVN				IAmb	IAmb	23 18 02.1	
	comp=Z,16nm,1.3s						
H17A	**Grant Village**	**78.97**	**330**	P	**P**	**23 17 58.0**	**-0.8**
H17A	**Grant Village**	**78.97**	**330**	P	**P**	**23 18 01.7**	**+2.8**
	baz=140						
YPP	**Pitchstone Pla**	**78.98**	**330**	P	**P**	**23 17 57.1**	**-1.9**
LKWY	**Lake**	**79.02**	**330**	P	**P**	**23 17 58.1**	**-1.1**
LKWY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LKWY	**Lake**	**79.02**	**330**	P	**P**	**23 17 58.0**	**-1.1**
YMP	**Mirror Lake Pl**	**79.04**	**330**	P	**P**	**23 17 56.2**	**-3.1**
YNE	**Yellowstone No**	**79.18**	**330**	P	**P**	**23 17 58.3**	**-1.8**
YUF	**Upper Falls**	**79.18**	**330**	P	**P**	**23 17 56.0**	**-4.0**
YNR	**Norris Junctio**	**79.26**	**330**	P	**P**	**23 17 57.1**	**-3.3**
YNM	**Yellowstone No**	**79.28**	**330**	P	**P**	**23 17 57.1**	**-3.4**
WAKR	**Walker**	**79.34**	**321**	P	**P**	**23 17 56.7**	**-4.3**
WAKR				IAmb	IAmb	23 18 05.2	
	comp=Z,13nm,1.4s						
YMR	**Madison River**	**79.36**	**330**	P	**P**	**23 17 57.1**	**-3.8**
YHB	**Horse Butte**	**79.53**	**330**	P	**P**	**23 17 59.5**	**-2.3**
DGMT	**Dagmar**	**79.55**	**336**	P	**P**	**23 17 59.6**	**-2.0**
DGMT	**Dagmar**	**79.55**	**336**	P	**P**	**23 18 04.0**	**+2.4**
	baz=146						
YERR	**Yerington**	**79.55**	**321**	P	**P**	**23 17 58.7**	**-3.4**
CMB	**Columbia Colle**	**79.58**	**320**	P	**P**	**23 17 59.9**	**-2.2**
CMB				pmax	pmax		
	comp=Z,4.0nm,1.2s						
CMB	**Columbia Colle**	**79.58**	**320**	P	**P**	**23 17 59.9**	**-2.2**
YHL	**Hebgen Lake**	**79.60**	**330**	P	**P**	**23 18 01.7**	**-0.6**
PNTR	**Pine Nut**	**79.83**	**321**	P	**P**	**23 18 02.0**	**-1.7**
PNTR				IAmb	IAmb	23 18 07.6	
	comp=Z,13nm,0.9s						
VCNR	**Virginia City**	**80.00**	**321**	P	**P**	**23 18 01.2**	**-3.3**
VCNR				IAmb	IAmb	23 18 08.4	
	comp=Z,12nm,1.2s						
PAHR	**Pah Rah Range**	**80.12**	**322**	P	**P**	**23 18 04.3**	**-0.8**
PAHR				IAmb	IAmb	23 18 09.1	
	comp=Z,18nm,1.1s						
MCMT	**McKenzie Canyo**	**80.36**	**329**	P	**P**	**23 18 05.0**	**-1.4**
AFDM	**Forest Hills D**	**80.53**	**320**	P	**P**	**23 18 05.5**	**-1.6**
BOSA	**Boshof**	**80.63**	**117**	P	**P**	**23 18 08.6**	**+0.4**
	comp=Z,4.5nm,0.8s,baz=232,slow=4.9,SNR=6.2						
DLMT	**Dillon**	**80.64**	**329**	P	**P**	**23 18 05.8**	**-1.9**
DLMT				IAmb	IAmb	23 18 11.5	
	comp=Z,21nm,1.4s						
BEKR	**Beckworth**	**80.79**	**321**	P	**P**	**23 18 05.2**	**-3.5**
BEKR				IAmb	IAmb	23 18 12.4	
	comp=Z,16nm,1.4s						
MFID	**Camas Ranch**	**80.79**	**326**	P	P	23 18 03.7	-4.8
LRM	**Limekiln Ridge**	**80.92**	**330**	P	**P**	**23 18 10.9**	**+1.6**
MCCM	**Marconi Confer**	**81.14**	**319**	P	P	23 18 03.6	-6.7
ORV	**Oroville**	**81.24**	**320**	P	**P**	**23 18 07.7**	**-3.1**
ORV				pmax	pmax		
	comp=Z,21nm,1.4s						
ORV	**Oroville**	**81.24**	**320**	P	**P**	**23 18 07.7**	**-3.1**
ORV				IAmb	IAmb	23 18 14.6	
	comp=Z,21nm,1.4s						
MAW	**Mawson**	**81.35**	**163**	P	**P**	**23 18 10.3**	**-0.7**
MAW				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAW	**Mawson**	**81.35**	**163**	P	**P**	**23 18 13.1**	**+2.1**
	comp=Z,14nm,0.8s,baz=243,slow=6.8,SNR=8.9						
MAW	**Mawson**	**81.35**	**163**	P	**P**	**23 18 10.3**	**-0.7**
EGMT	**Eagleton**	**81.41**	**333**	P	P	23 18 05.8	-5.8
O03E	**Paynes Creek**	**81.90**	**321**	P	**P**	**23 18 16.0**	**+1.6**
	baz=131						
MOD	**Modoc Plateau**	**82.12**	**323**	P	**P**	**23 18 12.1**	**-3.5**
MOD				IAmb	IAmb	23 18 19.0	
	comp=Z,15nm,1.4s						
J08A	**Circle Bar Ran**	**82.12**	**325**	P	**P**	**23 18 14.2**	**-1.3**
J08A				IAmb	IAmb	23 18 18.6	
	comp=Z,8.2nm,0.6s						
MSO	**Missoula**	**82.36**	**330**		**P**	**23 18 14.8**	**-1.8**
MSO	**Missoula**	**82.36**	**330**	P	**P**	**23 18 18.8**	**+2.2**
	baz=138						
O02D	**Mt. Diablo Mer**	**82.40**	**320**	P	**P**	**23 18 19.0**	**+2.0**
	baz=131						
BMO	**Blue Mountains**	**82.56**	**326**	P	**P**	**23 18 13.9**	**-3.8**
BMO				pmax	pmax		
	comp=Z,8.0nm,1.5s						
BMO	**Blue Mountains**	**82.56**	**326**	P	**P**	**23 18 13.9**	**-3.8**
N02D	**Trinity Center**	**82.86**	**321**	P	**P**	**23 18 21.1**	**+1.8**
	baz=131						
M04C	**Macdoel**	**82.90**	**322**	P	**P**	**23 18 21.6**	**+2.1**
	baz=132						
K05A	**Summer Lake**	**83.00**	**323**	P	**P**	**23 18 16.5**	**-3.6**
K05A				IAmb	IAmb	23 18 23.8	
	comp=Z,24nm,1.2s						
I07A	**Izee**	**83.16**	**325**	P	**P**	**23 18 19.2**	**-1.7**
JTMT	**Jette**	**83.19**	**330**	P	**P**	**23 18 18.5**	**-2.4**
JTMT				IAmb	IAmb	23 18 23.6	
	comp=Z,6.4nm,0.8s						
M02C	**Callahan**	**83.22**	**321**	P	**P**	**23 18 23.3**	**+2.1**
	baz=131						
F10A	**Beach Ranch, E**	**83.31**	**327**	P	**P**	**23 18 17.7**	**-3.8**
YBH	**Yreka Blue Hor**	**83.36**	**321**	P	**P**	**23 18 22.4**	**+0.5**
YBH				pmax	pmax		
	comp=Z,6.0nm,1.5s						
YBH	**Yreka Blue Hor**	**83.36**	**321**	P	**P**	**23 18 22.4**	**+0.5**
	comp=Z,1.2nm,0.6s,baz=198,slow=6.4,SNR=4.1						
K04D	**Chiloquin, OR**	**83.40**	**323**	P	**P**	**23 18 23.8**	**+1.7**
	baz=132						
L04D	**Klamath Falls**	**83.44**	**322**	P	**P**	**23 18 24.7**	**+2.3**
	baz=131						
J05D	**Fort Rock, OR**	**83.55**	**323**	P	**P**	**23 18 25.4**	**+2.5**
	baz=132						
G08A	**Pilot Rock**	**83.71**	**326**	P	**P**	**23 18 20.5**	**-3.1**
PINE	**Pine Mountain**	**83.73**	**324**	P	**P**	**23 18 20.3**	**-3.6**
PINE				IAmb	IAmb	23 18 27.6	
	comp=Z,25nm,1.4s						
WALA	**Waterton Lakes**	**83.99**	**331**	P	**P**	**23 18 22.0**	**-3.0**
J04D	**Umpqua Nationa**	**84.00**	**323**	P	**P**	**23 18 27.6**	**+2.3**
	baz=132						
FFC	**Flin Flon**	**84.05**	**340**	P	**P**	**23 18 23.8**	**-1.1**
FFC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
FFC	**Flin Flon**	**84.05**	**340**	P	**P**	**23 18 23.8**	**-1.1**
L02E	**Cave Junction**	**84.14**	**321**	P	**P**	**23 18 28.1**	**+2.3**
	baz=130						
I05D	**Terrebonne, OR**	**84.31**	**324**	P	**P**	**23 18 29.1**	**+2.6**
	baz=132						
TAM	**Tamanrasset**	**84.35**	**62**	P	**P**	**23 18 27.0**	**-0.4**
TAM				pmax	pmax		
	comp=Z,12nm,1.5s						
TAM	**Tamanrasset**	**84.35**	**62**	P	**P**	**23 18 27.0**	**-0.4**
TAM				IAmb	IAmb	23 18 29.9	
	comp=Z,12nm,1.5s						
K02D	**Willamette Mer**	**84.52**	**322**	P	**P**	**23 18 30.4**	**+2.7**
	baz=130						
I04A	**Tendick Farm,**	**84.53**	**323**	P	**P**	**23 18 29.2**	**+1.5**
	baz=131						
E08A	**Dider Farm, El**	**84.58**	**327**	P	**P**	**23 18 24.0**	**-3.8**
F07A	**Phinny Hill Vi**	**84.62**	**326**	P	**P**	**23 18 25.1**	**-2.9**
F07A				IAmb	IAmb	23 18 31.2	
	comp=Z,5.3nm,0.6s						
HAWA	**Hanford**	**84.75**	**326**	P	**P**	**23 18 25.1**	**-3.6**
NEW	**Newport**	**84.88**	**329**	P	**P**	**23 18 25.3**	**-4.0**
NEW				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NEW	**Newport**	**84.88**	**329**	P	**P**	**23 18 25.2**	**-4.0**
NEW	**Newport**	**84.88**	**329**	P	**P**	**23 18 31.5**	**+2.2**
	baz=136						
G05D	**Wamic, OR**	**84.90**	**325**	P	**P**	**23 18 32.4**	**+2.9**
	baz=132						
D08A	**Wollman Farm,**	**84.91**	**327**	P	**P**	**23 18 25.6**	**-3.8**
D08A				IAmb	IAmb	23 18 32.0	
	comp=Z,13nm,1.3s						
J01E	**Myrtle Point**	**84.97**	**322**	P	**P**	**23 18 32.4**	**+2.6**
	baz=130						
I03D	**Drain, OR**	**84.99**	**323**	P	**P**	**23 18 32.2**	**+2.3**
	baz=131						
C09A	**Chrisman Ranch**	**85.11**	**328**	P	**P**	**23 18 28.4**	**-2.0**
I02D	**Swisshome**	**85.53**	**323**	P	**P**	**23 18 35.6**	**+3.1**
	baz=130						
FCC	**Fort Churchill**	**85.54**	**346**	P	**P**	**23 18 31.7**	**-0.5**
FCC				pmax	pmax		
	comp=Z,31nm,1.3s						
FCC	**Fort Churchill**	**85.54**	**346**	P	**P**	**23 18 31.6**	**-0.5**
LTY	**Liberty**	**85.92**	**327**	P	**P**	**23 18 32.1**	**-2.4**
B08A	**Colville Reser**	**86.00**	**328**	P	**P**	**23 18 33.3**	**-1.6**
ESDC	**Sonseca Array**	**86.38**	**44**	P	**P**	**23 18 37.4**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=237,slow=6.1,SNR=5.3						
ESDC	**Sonseca Array**	**86.38**	**44**	P	**P**	**23 18 35.9**	**-1.0**
D04E	**Lakebay**	**86.94**	**326**	P	**P**	**23 18 41.4**	**+2.1**
	baz=131						
B05A	**Bryant**	**87.30**	**327**	P	**P**	**23 18 42.3**	**+1.2**
	baz=132						
D03D	**Eldon**	**87.33**	**326**	P	**P**	**23 18 44.0**	**+2.7**
	baz=131						
PGC	**Sidney**	**88.24**	**326**	P	**P**	**23 18 42.5**	**-2.9**
PGC				IAmb	IAmb	23 18 48.2	
	comp=Z,14nm,1.1s						
LLLB	**Lillooet**	**88.75**	**329**	P	**P**	**23 18 45.3**	**-2.6**
LLLB				IAmb	IAmb	23 18 50.4	
	comp=Z,17nm,1.4s						
YKA	**Yellowknife Ar**	**94.21**	**340**	P	**P**	**23 19 14.1**	**+1.3**
	comp=Z,4.7nm,0.7s,baz=135,slow=4.3,SNR=86						
VYHS	**Vyhne**	**104.93**	**43**	*e*P	**Pdif**	**23 20 03.3**	**+2.1**
VYHS	**Vyhne**	**104.93**	**43**	*e*PDIFF	**Pdif**	**23 20 03.3**	**+2.1**
OBN	**Obninsk**	**117.02**	**39**⇑	*e*PKIKP	**PKPdf**	**23 24 37.9**	**+0.2**
OBN				*e*		23 25 25.2	
OBN				*e*		23 25 50.2	
OBN				*e*		23 31 29.3	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	**Khabaz**	**120.25**	**52**	*i* PKIKP	**PKiKP**	**23 24 45.8**	**+1.4**
KBZ	**Khabaz**	**120.25**	**52**	PKP	**PKiKP**	**23 24 44.8**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=35,slow=1.8,SNR=4.2						
BILL	**Bilibino**	**125.57**	**338**⇓	*e*PKIKP	**PKPdf**	**23 24 54.3**	**+0.5**
BILL				*e*		23 26 42.5	
BILL				*e*PPP	PPP	23 29 30.8	
BILL				pmax	pmax		
	comp=Z,15nm,2.1s						
ASAR	**Alice Springs**	**128.44**	**205**	PKP	**PKiKP**	**23 25 02.0**	**+0.6**
	comp=Z,3.9nm,0.8s,baz=134,slow=1.8,SNR=30						
ARU	**Arti**	**129.18**	**36**	*ce*PKIKP	**PKiKP**	**23 25 02.7**	**+0.9**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ARU	**Arti**	**129.18**	**36**	PKP	**PKiKP**	**23 25 02.3**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=50,slow=1.7,SNR=4.9						
AKTO	**Aktyubinsk**	**130.27**	**43**	PKP	**PKiKP**	**23 25 04.5**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=296,slow=2.2,SNR=3.8						
TIXI	**Tiksi**	**131.54**	**353**	*e*PKIKP	**PKPdf**	**23 25 04.4**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WRA	**Warramunga Arr**	**131.61**	**207**	PKP	**PKPdf**	**23 25 08.0**	**+1.2**
	comp=Z,2.5nm,0.5s,baz=159,slow=1.9,SNR=44						
WRA				SKPbc	**SKPab**	**23 28 15.2**	**+1.1**
	comp=Z,1.3nm,1.1s,baz=162,slow=3.7,SNR=7.0						
SEY	**Seymchan**	**133.17**	**337**	*i* PKIKP	**PKPdf**	**23 25 07.4**	**-1.0**
PETK	**Petropavlovsk-**	**135.71**	**323**	PKP	**PKiKP**	**23 25 15.3**	**+0.2**
	comp=Z,1.7nm,0.5s,baz=135,slow=2.0,SNR=11						
BVAR	**Borovoye Array**	**136.79**	**37**	PKP	**PKiKP**	**23 25 17.5**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=302,slow=2.8,SNR=5.7						
YAK	**Yakutsk**	**140.41**	**348**	*i* PKIKP	**PKPdf**	**23 25 21.8**	**0.0**
KURK	**Kurchatov**	**142.38**	**36**	*i* PKIKP	**PKPdf**	**23 25 26.1**	**+0.4**
KURK				pmax	pmax		
	comp=Z,22nm,1.0s						
KURBB	**Kurchatov Arra**	**142.38**	**36**	PKP	**PKPdf**	**23 25 27.5**	**+1.8**
	comp=Z,2.4nm,0.9s,baz=281,slow=3.0,SNR=6.2						
AAK	**Ala-Archa**	**143.21**	**50***c*	*i* PKIKP	**PKPdf**	**23 25 27.5**	**-0.1**
AAK				pmax	pmax		
	comp=Z,13nm,1.7s						
AAK	**Ala-Archa**	**143.21**	**50**		**PKPdf**	**23 25 27.1**	**-0.6**
ZALV	**Zalesovo Beam**	**143.41**	**28**	PKP	PKPbc	23 25 26.4	+1.2
	comp=Z,6.9nm,0.6s,baz=293,slow=4.4,SNR=32						
KSH	**Kashi**	**145.16**	**55**	PKP	**PKPab**	**23 25 33.1**	**+1.7**
KSH				pPKP	pPKPab	23 26 15.1	-8.6
KSH				PP	**PP**	**23 28 56.0**	**+3.7**
BOD	**Bodaibo**	**146.27**	**359**	*e*PKP2	**PKPbc**	**23 25 33.6**	**-0.1**
BOD				pmax	pmax		
	comp=Z,11nm,1.1s						
MKAR	**Makanchi Array**	**146.52**	**40**	*e*PKP2	**PKPbc**	**23 25 34.8**	**0.0**
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MKAR	**Makanchi Array**	**146.52**	**40**	PKPbc	**PKPbc**	**23 25 34.9**	**0.0**
	comp=Z,8.9nm,0.5s,baz=327,slow=1.9,SNR=110						
YSS	**Yuzh-Sakhalins**	**147.09**	**321**⇑	*e*PKP2	**PKPab**	**23 25 38.9**	**+0.5**
YSS				pmax	pmax		
	comp=Z,230nm,2.5s						
ZEA	**Zeya**	**148.51**	**344**	*e*PKP2	**PKPbc**	**23 25 41.0**	**+1.1**
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
MOY	**Mondy**	**150.91**	**16**	*e*PKIKP	**PKiKP**	**23 25 48.2**	**+1.7**
MOY				pmax	pmax		
	comp=Z,44nm,2.2s						
WMQ	**Urumqi**	**151.34**	**40**	*e*PKPbc	**PKPdf**	**23 25 40.3**	**-0.6**
SONM	**Songino Array**	**155.68**	**11**	PKP	**PKPdf**	**23 25 48.9**	**+1.8**
	comp=Z,1.0nm,0.9s,baz=331,slow=1.1,SNR=6.6						
SONM				PKPab	**PKPab**	**23 26 14.8**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=323,slow=4.0,SNR=9.1						
GTA	**Gaotai**	**161.02**	**33**	⇑PKP	**PKPdf**	**23 25 56.0**	**+2.2**
GTA				PKPab	**PKPab**	**23 26 39.3**	**+1.5**
HHC	**Hu-ho-hao-te**	**163.21**	**4**	*e*PKP	**PKPdf**	**23 25 58.3**	**+2.4**
LZH	**Lanzhou**	**165.60**	**32**	⇓PKP	**PKPdf**	**23 25 57.6**	**-0.6**
LZH				sPKP		23 27 07.5	
CMAR	**Chiang Mai Arr**	**165.68**	**110**	PKP	**PKPdf**	**23 25 59.8**	**+1.2**
	comp=Z,0.7nm,0.7s,baz=273,slow=2.8,SNR=6.4						
CMAR				PKPab	**PKPab**	**23 27 00.0**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=242,slow=5.7,SNR=3.7						
NJ2	**Nanjing**	**170.56**	**329**	*e*PKP	**PKPdf**	**23 26 00.8**	**-0.7**

*IDC **17** 23:12:39.5±1.0,20.76N×146.79E, h0km, mb3.6/9, mb1 3.8/9, mb1mx3.5/56, mbtmp3.6/9, Error ellipse: s-maj=32.4km s-min=23.7km az=82.0*
*NEIC **17** 23:12:40.3±2.7,20.64N±0.09×146.7E±0.2, h10km±1km, mb4.3/9, Error ellipse: s-maj=26.6km s-min=15.1km az=270.0*

ISC 17 23:12:43.8±0.7, 20.69N±0.08×146.7E±0.2, h34km, n22, σ1s39/21, mb3.9/12, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SARN	**Sarigan**	**4.05**	**192**	Pn	**Pn**	**23 13 44.7**	**+1.2**
GUMO	**Guam**	**7.26**	**194**	Pn	**Pn**	**23 14 27.7**	**+0.1**
MJAR	**Matsushiro Arr**	**17.44**	**337**		**Pn**	**23 16 44.5**	**-0.1**
MAJO	**Matsushiro**	**17.45**	**337**		**P**	**23 16 45.9**	**+0.4**
MAJO				IAmb	IAmb	23 17 05.2	
	comp=Z,4.5nm,0.8s						
MJB9	**Matsu-Tunnel**	**17.45**	**337**		**P**	**23 16 45.6**	**+0.1**
KSAR	**Wonju Array Be**	**23.35**	**320**	P	**P**	**23 17 50.5**	**+1.3**
MDJ	**Mudanjiang**	**27.75**	**333**	P	**P**	**23 18 26.0**	**-3.2**
MDJ				IAmb	IAmb	23 18 43.8	
	comp=Z,4.0nm,0.9s						
KNRA	**Kununurra**	**40.19**	**207**	P	**P**	**23 20 14.8**	**-2.3**
KNRA				IAmb	IAmb	23 20 23.2	
	comp=Z,23nm,1.1s						
WRA	**Warramunga Arr**	**42.14**	**197**	P	**P**	**23 20 33.7**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=18,slow=8.6,SNR=3.0						
WRA	**Warramunga Arr**	**42.14**	**197**	IAmb	IAmb	23 20 34.8	
	comp=Z,0.2nm,1.1s						
ADK	**Adak**	**42.17**	**33**	P	**P**	**23 20 33.5**	**+0.5**
SONM	**Songino Array**	**42.20**	**320**	P	**P**	**23 20 32.9**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=103,slow=6.6,SNR=2.7						
ASAR	**Alice Springs**	**45.80**	**196**	P	**P**	**23 21 04.5**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=12,slow=6.7,SNR=3.7						
ASAR	**Alice Springs**	**45.80**	**196**	P	**P**	**23 21 01.4**	**-1.2**
EIDS	**Eidsvold**	**45.98**	**174**	P	**P**	**23 21 02.6**	**-1.3**
EIDS				IAmb	IAmb	23 21 05.8	
	comp=Z,6.1nm,1.1s						
ZALV	**Zalesovo Beam**	**57.02**	**322**	P	**P**	**23 22 26.8**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=118,slow=8.6,SNR=3.1						
MKAR	**Makanchi Array**	**57.77**	**313**	P	**P**	**23 22 32.7**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=92,slow=7.2,SNR=3.7						
MKAR	**Makanchi Array**	**57.77**	**313**	P	**P**	**23 22 31.9**	**+0.3**
KURBB	**Kurchatov Arra**	**60.48**	**317**	P	**P**	**23 22 52.4**	**+2.1**
	comp=Z,0.9nm,0.4s,baz=87,slow=7.7,SNR=6.2						
BVAR	**Borovoye Array**	**65.55**	**320**	P	**P**	**23 23 25.2**	**+1.3**
	comp=Z,0.9nm,0.5s,baz=79,slow=7.7,SNR=7.5						
YKA	**Yellowknife Ar**	**75.81**	**28**	P	**P**	**23 24 26.4**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=287,slow=5.7,SNR=6.4						
NVAR	**Mina Array Bea**	**81.20**	**52**	P	**P**	**23 24 57.1**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=269,slow=6.4,SNR=7.0						

IDC 17 23:38:41.4±2.2, 2.97N×127.67E, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.4/39, mbtmp3.5/3, Error ellipse: s-maj=166.3km s-min=24.1km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.69**	**164**	P	P	23 43 55.3	+0.3
	0.5nm,0.3s,baz=344,slow=10,SNR=10						
ASAR	**Alice Springs**	**27.16**	**167**	P	P	23 44 26.1	-0.6
	0.3nm,0.4s,baz=351,slow=6.7,SNR=7.6						
MKAR	**Makanchi Array**	**58.71**	**325**	P	P	23 48 41.2	+0.2
	0.4nm,0.4s,baz=114,slow=8.3,SNR=11						

IDC 17 23:45:06.2±8.1, 7.58S×119.69E, h385km±105km, mb2.5/3, mb1 2.7/5, mb1mx2.6/36, mbtmp3.4/5, Error ellipse: s-maj=114.1km s-min=35.5km az=57.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.96**	**152**	P	Pn	23 47 47.6	+0.5
	0.1nm,0.3s,baz=302,slow=9.5,SNR=3.6						
FITZ				S	S	23 49 57.7	-0.4
	0.1nm,0.3s,baz=108,slow=20,SNR=2.4						
WRA	**Warramunga Arr**	**18.79**	**132**	P	P	23 48 58.7	-1.2
	0.1nm,0.3s,baz=304,slow=12,SNR=6.4						
ASAR	**Alice Springs**	**21.03**	**141**	P	P	23 49 21.8	+0.6
	0.1nm,0.3s,baz=310,slow=9.3,SNR=3.7						
SONM	**Songino Array**	**56.41**	**349**	P	P	23 54 09.7	+0.5
	0.2nm,0.4s,baz=159,slow=6.1,SNR=2.2						
MKAR	**Makanchi Array**	**63.51**	**332**	P	P	23 54 56.3	-0.6
	0.1nm,0.3s,baz=144,slow=5.7,SNR=4.3						

*RSNC **17** 23:55:21.7±1.7, 3.78N×77.17W, h0km±7km, ML3.6, Mw4.4*
*IDC **17** 23:55:28.3±2.7, 3.91N×77.13W, h83km±23km, mb3.3/13, mb1 3.6/15, mb1mx3.5/29, mbtmp3.7/15, MS3.4/15, Ms1 3.5/15, ms1mx3.3/26, Error ellipse: s-maj=20.7km s-min=13.6km az=59.0*

ISC 17 23:55:22.2±1.0, 3.81N±0.03×77.18W±0.03, h30km±7km, n54, σ2s03/56, mb3.6/13, MS3.5/10, 9C-2D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MALC	**Bahia Malaga**	**0.25**	**323**⇑	*e*Pg	**Pb**	**23 55 28.2**	**-0.8**
	comp=Z,79µm,0.3s						
MALC				*e*Sg	**Sn**	**23 55 34.1**	**-0.8**
YOTC	**Yotoco, Valle**	**0.85**	**78**⇓	*e*P	**Pn**	**23 55 37.5**	**-0.8**
YOTC				*e*S	**Sn**	**23 55 49.5**	**-0.5**
YOTC				*i*		23 55 59.4	
	comp=Z,1µm,0.8s						
PIZC	**Pizarro, Choco**	**1.16**	**351**	*e*P	**Pb**	**23 55 42.7**	**-1.0**
PIZC				*e*S	**Sn**	**23 56 00.1**	**+2.7**
PIZC				*i*		23 56 29.8	
	comp=Z,3µm,0.9s						
GR1C	**Gorgona, Isla**	**1.27**	**231**	*e*P	**Pn**	**23 55 42.1**	**-1.9**
GR1C				*e*S	**Sb**	**23 56 01.9**	**+0.3**
GR1C				*i*		23 56 07.8	
	comp=Z,302nm,0.6s						
POPC	**Popayan, Colom**	**1.36**	**158**⇑	*e*P	**Pb**	**23 55 45.6**	**-1.6**
POPC				*e*S	**Sb**	**23 56 04.9**	**+0.6**
POPC				*i*		23 56 13.1	
	comp=Z,389nm,1.5s						
PLMC	**San Jos del P**	**1.41**	**39**	*e*P	**Pn**	**23 55 45.2**	**-0.8**
PLMC				*i*		23 56 13.2	
	comp=Z,2µm,0.2s						
PCON	**Cinco Dias**	**1.67**	**152**⇑	*i*P	**Pb**	**23 55 51.7**	**-1.0**
PCON				*e*S	**Sb**	**23 56 13.8**	**+0.3**
PCON				*i*		23 56 15.5	
	comp=Z,875nm,0.6s						
SOTA	**Rioblanco**	**1.76**	**161**⇑	*i*P	**Pb**	**23 55 52.5**	**-1.7**
SOTA				*e*S	**Sb**	**23 56 19.4**	**+3.3**
SOTA				*i*		23 56 22.1	
	comp=Z,1µm,0.8s						
BBAC	**Balboa, Cauca**	**1.78**	**182**	*e*P	**Pn**	**23 55 50.7**	**-0.5**
	comp=Z,402nm,0.5s						
BBAC				*e*S	**Sb**	**23 56 14.7**	**-1.6**
BBAC				*i*		23 56 27.2	
	comp=Z,402nm,0.5s						
ANIL	**Santa Ana**	**1.90**	**69**	*e*P	**Pb**	**23 55 53.4**	**-3.0**
ANIL

NVAR	**Mina Array Bea**	**50.86**	**318**	P		**P**	**00 04 21.5**	**+0.7**	
	comp=Z,0.7nm,0.7s,baz=127,slow=7.1,SNR=9.2								
NVAR				PcP		**PcP**	**00 05 38.1**	**+0.9**	
	comp=Z,0.6nm,0.6s,baz=125,slow=4.5,SNR=4.7								
NVAR				LR		LR	00 28 14.5		
	comp=Z,41nm,18.2s,baz=272,slow=39								
SCHQ	**Schefferville**	**51.56**	**8**	P		**P**	**00 04 25.4**	**0.0**	
	comp=Z,0.6nm,0.5s,baz=249,slow=14,SNR=3.1								
YKA	**Yellowknife Ar**	**64.76**	**342**	P		**P**	**00 05 56.7**	**-1.0**	
	comp=Z,0.8nm,0.7s,baz=137,slow=6.1,SNR=13								
DBIC	**Dimbokro**	**72.03**	**84**	P		**P**	**00 06 43.6**	**-0.5**	
	comp=Z,3.3nm,0.9s,baz=276,slow=8.0,SNR=3.3								
ESDC	**Sonseca Array**	**74.67**	**50**	P		**P**	**00 06 58.9**	**-0.4**	
	comp=Z,0.3nm,0.5s,baz=272,slow=4.9,SNR=3.3								
ILAR	**Eielson Array**	**78.00**	**336**	P		**P**	**00 07 17.4**	**-0.2**	
	comp=Z,0.4nm,0.6s,baz=106,slow=3.9,SNR=7.8								
TORD	**Torodi Ar. Bea**	**78.32**	**77**	P		**P**	**00 07 19.5**	**-0.9**	
	comp=Z,0.7nm,1.0s,baz=281,slow=5.7,SNR=3.0								
MKAR	**Makanchi Array**	**126.45**	**17**	PKP		**PKPdf**	**00 14 21.5**	**-1.2**	
	comp=Z,0.2nm,0.6s,baz=313,slow=1.0,SNR=3.6								
SONM	**Songino Array**	**128.48**	**357**	PKP		**PKPdf**	**00 14 24.1**	**-2.5**	
	comp=Z,0.3nm,0.6s,baz=27,slow=0.3,SNR=2.5								
KSH	**Kashi**	**130.30**	**27**	PKP		**PKiKP**	**00 14 35.4**	**+4.2**	
KSH				PP		PP	00 16 55.8	+13	
KSH				AMB		AMB			
	comp=Z,270nm,5.3s								
LZH	**Lanzhou**	**140.30**	**359**	*e*PKP		**PKiKP**	**00 14 51.3**	**-0.4**	
LZH				pPKP		pPKPdf	00 14 56.5	-2.5	
LZH				sPKP			00 14 58.3		
LZH				LR		LR			
	comp=N,59nm,18.0s								
LZH				LR		LR			
	comp=E,67nm,18.2s								
LZH				LR		LR			
	comp=Z,93nm,20.1s								
ASAR	**Alice Springs**	**144.08**	**234**	PKP		**PKPab**	**00 14 53.5**	**-0.1**	
	comp=Z,0.4nm,0.8s,baz=117,slow=3.2,SNR=5.1								
WRA	**Warramunga Arr**	**145.34**	**240**	PKPbc		**PKPbc**	**00 14 57.2**	**-0.9**	
	comp=Z,0.8nm,0.7s,baz=108,slow=3.8,SNR=5.1								

IDC ***18*** *00:03:18.1±0.8, 12°.68N×86°.67W, h175km±12km, mb3.4/7, mb1 3.7/10, mb1mx3.3/37, mbtmp3.9/10, MS3.6/1, Ms1 3.6/1, ms1mx2.5/25, Error ellipse: s-maj=27.7km s-min=9.8km az=43.0*

INET ***18*** *00:03:18.0, 12°.64N×86°.86W, h197km, ML3.5*

NEIC ***18*** *00:03:19.0±1.8, 12°.46N±0°.10×86°.91W±0°.10, h190km±8km, mb4.2/57, Error ellipse: s-maj=17.8km s-min=8.5km az=224.0*

SNET ***18*** *00:03:20.2±1.2, 12°.81N×86°.82W, h178km±9km, ML4.0*

UCR ***18*** *00:03:21.5±2.3, 11°.88N×87°.37W, h0km±4km, MD4.2, ML3.7, mb4.2(NEIC)*

ISC 18 00:03:18.9±0.7, 12°.55N±0°.07×86°.81W±0°.06, h186km±6km, n113, σ1§15/130, mb4.2/31, 2D, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESTN	**Estel**	**0.70**	**38**	*e*P	**Pn**	**00 03 46.5**	**+1.1**
ESTN	**Estel**	**0.70**	**38**		**Pn**	**00 03 46.5**	**+1.1**
LCND	**La Caada**	**1.29**	**306**	*e*P	**Pn**	**00 03 49.6**	**0.0**
LCND	**La Caada**	**1.29**	**306**	*e*P	**Pn**	**00 03 49.6**	**0.0**
TGUH	**Tegucigalpa,Un**	**1.56**	**343**		**Pn**	**00 03 53.5**	**+1.3**
JUCU	**Jucuarn**	**1.57**	**297**	*e*P	**Pn**	**00 03 52.1**	**0.0**
JUCU				*e*S	**Sn**	**00 04 17.3**	**-0.5**
JUCU				IAML		00 04 22.4	
	comp=Z,1μm,0.4s						
BLLM	**Bellamira**	**1.65**	**303**	*e*P	**Pn**	**00 03 53.1**	**+0.2**
BLLM				*e*S	**Sn**	**00 04 18.0**	**-1.2**
BLLM	**Bellamira**	**1.65**	**303**	*e*P	**Pn**	**00 03 53.1**	**+0.2**
BLLM				*e*S	**Sn**	**00 04 18.0**	**-1.2**
FAGO	**Alcalda de S**	**1.70**	**312**	*e*P	**Pn**	**00 03 51.9**	**-1.4**
ACON	**Acoyapa**	**1.70**	**110**		**Pn**	**00 03 54.8**	**+1.5**
PACA	**Pacayal**	**1.73**	**302**	*i e*P	**Pn**	**00 03 53.9**	**+0.2**
PACA				*e*S	**Sn**	**00 04 20.4**	**-0.4**
PACA	**Pacayal**	**1.73**	**302**	*i e*P	**Pn**	**00 03 53.9**	**+0.2**
PACA				*e*S	**Sn**	**00 04 20.4**	**-0.4**
TECA	**Tecapa**	**1.90**	**300**	*e*P	**Pn**	**00 03 56.8**	**+1.3**
TECA				*e*S	**Sn**	**00 04 24.5**	**+0.6**
TECA	**Tecapa**	**1.90**	**300**	*e*P	**Pn**	**00 03 56.8**	**+1.3**
TECA				*e*S	**Sn**	**00 04 24.5**	**+0.6**
BUAI	**Buenos Aires**	**2.20**	**139**	*i* P	**Pn**	**00 04 00.2**	**+1.5**
GB1A	**Boringuen Arri**	**2.21**	**141**	*i* P	**Pn**	**00 03 59.9**	**+1.1**
LAPC	**Finca la Perla**	**2.23**	**143**	*i* P	**Pn**	**00 03 59.5**	**+0.6**
LAPC				*i* S	**Sn**	**00 04 28.8**	**-1.3**
NY14	**Universidad de**	**2.27**	**146**	*i* P	**Pn**	**00 04 01.1**	**+1.8**
COEG	**Centro de Oper**	**2.28**	**298**	*e*P	**Pn**	**00 03 59.9**	**+0.3**
COEG				*e*S	**Sn**	**00 04 30.8**	**-0.3**
GUAB	**Guayabo de Bag**	**2.40**	**140**	*i* P	**Pn**	**00 04 02.2**	**+1.3**
LFRS	**El Faro**	**2.44**	**296**	*e*P	**Pn**	**00 04 01.5**	**+0.2**
LFRS				*e*S	**Sn**	**00 04 34.5**	**+0.1**
COLC	**Colonia**	**2.45**	**140**	*i* P	**Pn**	**00 04 02.9**	**+1.5**
LBRS	**Las Brisas**	**2.48**	**299**	*e*P	**Pn**	**00 04 02.0**	**+0.3**
CUI	**Cuipilapa**	**2.48**	**139**	*e*P	**Pn**	**00 04 03.5**	**+1.7**
CUI				*e*S	**Sn**	**00 04 36.2**	**+1.1**
ACAL	**Aguas Claras**	**2.58**	**137**	*i* P	**Pn**	**00 04 03.7**	**+0.7**
ACAL				*i* S	**Sn**	**00 04 37.7**	**+0.5**
PLVR	**Palo Verde**	**2.61**	**147**	*e*P	**Pn**	**00 04 05.3**	**+1.8**
PLVR				*e*S	**Sn**	**00 04 36.7**	**-1.5**
BOQS	**Boqueron**	**2.68**	**296**	*e*P	**Pn**	**00 04 05.4**	**+1.2**
BOQS				*e*S	**Sn**	**00 04 39.6**	**+0.1**
JTS	**Las Juntas de**	**2.89**	**141**	P	**Pn**	**00 04 07.5**	**+0.9**
	comp=Z,39nm,0.3s,baz=8.4,slow=20,SNR=69						
JTS				S	**Sn**	**00 04 42.2**	**-1.5**
	comp=Z,36nm,0.3s,baz=8.8,slow=20,SNR=13						
JTS	**Las Juntas de**	**2.89**	**141**	*e*P	**Pn**	**00 04 08.0**	**+1.4**
CEDE	**Laguna Cedeo**	**2.91**	**135**	*e*P	**Pn**	**00 04 08.7**	**+1.9**
ARE1	**Arenal 1**	**2.92**	**135**	*e*P	**Pn**	**00 04 08.4**	**+1.5**
CEVE	**Cerro Verde**	**3.02**	**295**	*e*P	**Pn**	**00 04 09.8**	**+1.5**
CEVE				*e*S	**Sn**	**00 04 47.7**	**+0.8**
CEVE				IAML		00 04 54.5	
	comp=Z,360nm,0.3s						
CEVE	**Cerro Verde**	**3.02**	**295**	*e*P	**Pn**	**00 04 09.8**	**+1.5**
CEVE				*e*S	**Sn**	**00 04 47.7**	**+0.8**
CEVE				IAML		00 04 54.5	
	comp=Z,360nm,0.3s						
SBLS	**San Blas**	**3.02**	**295**	*e*P	**Pn**	**00 04 08.6**	**+0.3**
SBLS				*e*S	**Sn**	**00 04 48.3**	**+1.4**
SBLS	**San Blas**	**3.02**	**295**	*e*P	**Pn**	**00 04 08.6**	**+0.3**
SBLS				*e*S	**Sn**	**00 04 48.3**	**+1.4**
MTO3	**Montecristo**	**3.09**	**307**	*e*P	**Pn**	**00 04 10.2**	**+1.1**
HDC	**Heredia**	**3.66**	**133**	Pn	**Pn**	**00 04 16.0**	**-0.1**
APG	**El Apazote**	**4.31**	**305**	P	**Pn**	**00 04 24.2**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=125,slow=11,SNR=3.2						
APG				S	**Sn**	**00 05 15.3**	**-0.3**
	comp=Z,1.9nm,0.3s,baz=212,slow=22,SNR=4.1						
BCIP	**Isla Barro Col**	**7.63**	**115**	Pn	**Pn**	**00 05 04.4**	**-3.0**
CMIG	**Matias Romero**	**9.02**	**301**	P	**Pn**	**00 05 25.1**	**-0.4**
	comp=Z,2.2nm,0.3s,baz=140,slow=8.6,SNR=17						
CMIG				S	Sn	00 06 54.5	-12
	comp=Z,0.3nm,0.3s,baz=318,slow=16,SNR=3.1						
UNM	**Universidad Na**	**13.67**	**301**	Pn	**Pn**	**00 06 24.9**	**-0.6**
553A	**Crawfordville**	**17.69**	**7**	P	**P**	**00 07 12.6**	**+0.3**
KVTX	**Kingsville**	**18.17**	**327**	P	**P**	**00 07 13.3**	**-4.3**
833A	**Chaparral WMA,**	**19.60**	**325**	P	**P**	**00 07 33.5**	**+0.4**
Z50A	**Ashland**	**20.63**	**2**	P	**P**	**00 07 45.3**	**+1.3**
Z50A				IAmb	IAmb	00 07 48.2	
	comp=Z,6.7nm,1.1s						
435B	**Jarrell**	**20.70**	**333**	P	**P**	**00 07 43.3**	**-1.5**
HUMP	**Col San Antoni**	**20.96**	**72**	P	**P**	**00 07 48.6**	**+1.0**
HUMP				IAmb	IAmb	00 08 01.4	
	comp=Z,8.4nm,0.9s						
GOGA	**Godfrey**	**20.99**	**8**	P	**P**	**00 07 50.9**	**+3.1**
GOGA				IAmb	IAmb	00 07 51.3	
	comp=Z,6.9nm,0.7s						
Y49A	**Blount Mountai**	**21.22**	**1**	P	**P**	**00 07 51.6**	**+1.4**
MTP	**Monte Pirata**	**21.22**	**72**	P	**P**	**00 07 52.0**	**+1.6**
Y52A	**Lilburn**	**21.37**	**6**	P	**P**	**00 07 52.0**	**+0.2**
Y52A				IAmb	IAmb	00 07 55.4	
	comp=Z,9.3nm,0.8s						
JCT	**Junction City**	**21.52**	**328**	P	**P**	**00 07 53.5**	**+0.1**
JCT				IAmb	IAmb	00 07 56.1	
	comp=Z,4.3nm,0.5s						
WHTX	**Lake Whitney,**	**21.68**	**335**	P	**P**	**00 07 54.7**	**-0.4**
WHTX				IAmb	IAmb	00 07 56.6	
	comp=Z,5.0nm,0.5s						
FPAL	**Fort Paine**	**21.92**	**3**	P	**P**	**00 07 58.8**	**+1.3**
FPAL				IAmb	IAmb	00 08 13.8	
	comp=Z,5.4nm,0.9s						
JSC	**Jenkinsville**	**22.22**	**12**	P	**P**	**00 08 01.7**	**+1.3**
JSC				IAmb	IAmb	00 08 02.7	
	comp=Z,3.2nm,0.6s						
SWET	**Sewanee**	**22.58**	**2**	P	**P**	**00 08 04.6**	**+0.8**
SWET				IAmb	IAmb	00 08 05.9	
	comp=Z,4.9nm,0.5s						
BG3	**Lake Jocassee**	**22.62**	**8**	P	**P**	**00 08 04.9**	**+0.8**
BG3				IAmb	IAmb	00 08 07.0	
	comp=Z,4.3nm,0.8s						
BIRD	**Birdtown, Kers**	**22.74**	**14**	P	**P**	**00 08 06.2**	**+1.1**
BIRD				IAmb	IAmb	00 08 07.8	
	comp=Z,6.3nm,0.9s						
MIAR	**Mount Ida**	**22.75**	**345**	P	**P**	**00 08 05.3**	**+0.2**
CPCT	**Cooper Cave**	**22.89**	**5**	P	**P**	**00 08 08.1**	**+1.5**
TX31	**Lajitas Ar. Si**	**22.90**	**319**	P	**P**	**00 08 07.7**	**+0.9**
TX31				IAmb	IAmb	00 08 08.8	
	comp=Z,4.7nm,0.6s						
TX32	**Lajitas Array**	**22.90**	**319**	P	**P**	**00 08 07.7**	**+0.9**
TX32				IAmb	IAmb	00 08 08.8	
	comp=Z,4.8nm,0.6s						
TXAR	**Lajitas Array**	**22.90**	**319**	P	**P**	**00 08 06.9**	**+0.1**
	comp=Z,4.9nm,0.6s,baz=140,slow=9.7,SNR=58						
TXAR	**Lajitas Array**	**22.90**	**319**	P	**P**	**00 08 07.7**	**+0.9**
X58A	**Rowland**	**22.94**	**16**	P	**P**	**00 08 08.1**	**+1.2**
TKL	**Tuckaleechee C**	**23.17**	**6**	P	**P**	**00 08 08.5**	**-0.6**
	comp=Z,2.3nm,0.5s,baz=196,slow=14,SNR=5.7						
TKL	**Tuckaleechee C**	**23.17**	**6**	IAmb	IAmb	00 08 15.1	
	comp=Z,4.7nm,0.8s						
WHAR	**Wooly Hollow**	**23.18**	**349**	P	**P**	**00 08 08.9**	**-0.1**
ABTX	**Abilene, Hawle**	**23.19**	**332**	P	**P**	**00 08 10.2**	**+0.9**
ABTX				IAmb	IAmb	00 08 10.8	
	comp=Z,5.8nm,0.8s						
V51A	**Loudon**	**23.26**	**5**	P	**P**	**00 08 11.0**	**+1.2**
V51A				IAmb	IAmb	00 08 12.6	
	comp=Z,4.4nm,0.8s						
V53A	**Saluda**	**23.30**	**8**	P	**P**	**00 08 11.2**	**+1.0**
V53A				IAmb	IAmb	00 08 14.1	
	comp=Z,4.2nm,0.6s						
W57A	**Gilead**	**23.34**	**14**	P	**P**	**00 08 10.9**	**+0.4**
W57A				IAmb	IAmb	00 08 16.5	
	comp=Z,8.0nm,1.1s						
CLTN	**Cedars of Leba**	**23.45**	**1**	P	**P**	**00 08 12.6**	**+1.1**
CLTN				IAmb	IAmb	00 08 14.6	
	comp=Z,2.6nm,0.6s						
V58A	**Windy Hill, Pi**	**24.16**	**15**	P	**P**	**00 08 19.0**	**+1.0**
FNO	**Franklin**	**24.56**	**339**	P	**P**	**00 08 22.5**	**+0.9**
WMOK	**Wichita Mounta**	**24.62**	**336**	P	**P**	**00 08 23.2**	**+0.9**
WMOK				IAmb	IAmb	00 08 25.3	
	comp=Z,7.3nm,0.8s						
R55A	**Marlinton**	**26.31**	**12**	P	**P**	**00 08 39.4**	**+1.9**
P48A	**Milroy**	**26.83**	**2**	P	**P**	**00 08 41.7**	**-0.3**
P48A				IAmb	IAmb	00 08 42.6	
	comp=Z,3.7nm,0.7s						
Q56A	**Snyder Ridge,**	**27.24**	**13**	P	**P**	**00 08 47.4**	**+1.7**
Q56A				IAmb	IAmb	00 08 48.6	
	comp=Z,4.0nm,0.8s						
P53A	**Whipple**	**27.26**	**9**	P	**P**	**00 08 46.1**	**+0.3**
121A	**Cookes Peak, D**	**27.66**	**319**		**PcP**	**00 11 59.4**	**-2.8**
N49A	**Columbus Grove**	**28.36**	**4**	P	**P**	**00 08 55.3**	**-0.2**
N58A	**Sunbury**	**29.54**	**16**	P	**P**	**00 09 07.2**	**+1.2**
N58A				IAmb	IAmb	00 09 16.1	
	comp=Z,4.5nm,1.1s						
M56A	**Emporium**	**29.80**	**13**	P	**P**	**00 09 08.9**	**+0.5**
N59A	**State Game Lan**	**29.87**	**17**	P	**P**	**00 09 10.5**	**+1.4**
SDCO	**Great Sand Dun**	**30.14**	**330**	P	**P**	**00 09 12.6**	**+0.8**
PAL	**Palisades**	**30.52**	**19**	P	**P**	**00 09 15.4**	**+0.7**
W18A	**Petrified Fore**	**30.59**	**321**	P	**P**	**00 09 13.9**	**-1.7**
W18A				IAmb	IAmb	00 09 28.6	
	comp=Z,4.7nm,0.8s						
S22A	**4UR Ranch, Cre**	**30.81**	**328**	P	**P**	**00 09 17.1**	**-0.6**
ECSD	**EROS Data Cent**	**32.20**	**347**	P	**P**	**00 09 29.1**	**-0.4**
SRU	**San Rafael Swe**	**33.78**	**326**	P	**P**	**00 09 44.3**	**+0.9**
G62A	**West of Eustis**	**35.40**	**20**	P	**P**	**00 09 58.0**	**+1.1**
G62A				IAmb	IAmb	00 09 58.9	
	comp=Z,4.9nm,0.7s						
PDAR	**Pinedale Array**	**35.99**	**331**	P	**P**	**00 10 02.4**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=131,slow=11,SNR=5.5						
F63A	**Nahmakanta, Br**	**36.31**	**21**	P	**P**	**00 10 05.1**	**+0.4**
AGMN	**Agassiz Nation**	**36.43**	**350**	P	**P**	**00 10 05.0**	**-0.7**
AGMN				IAmb	IAmb	00 10 05.8	
	comp=Z,3.1nm,0.5s						
F64A	**Sherman**	**36.72**	**22**	P	**P**	**00 10 09.0**	**+0.9**
F64A				IAmb	IAmb	00 10 17.9	
	comp=Z,6.8nm,1.1s						
AHID	**Auburn Hatcher**	**36.73**	**330**	P	**P**	**00 10 07.7**	**-0.8**
REDW	**Red Top Meadow**	**37.05**	**330**	P	**P**	**00 10 11.5**	**+0.2**
E63A	**Oxbow**	**37.17**	**21**	P	**P**	**00 10 12.5**	**+0.6**
E63A				IAmb	IAmb	00 10 18.2	
	comp=Z,6.3nm,1.1s						
TPAW	**Teton Pass**	**37.20**	**331**	P	**P**	**00 10 13.6**	**+1.0**
D62A	**Allapoint, All**	**37.52**	**20**	P	**P**	**00 10 15.2**	**+0.3**
NVAR	**Mina Array Bea**	**38.04**	**318**	P	**P**	**00 10 19.5**	**-0.2**
	comp=Z,0.2nm,0.4s,baz=116,slow=8.1,SNR=3.9						
ULM	**Lac du Bonnet**	**38.32**	**351**	P	**P**	**00 10 20.0**	**-1.5**
	comp=Z,2.2nm,0.5s,baz=160,slow=9.6,SNR=10.0						
ULM	**Lac du Bonnet**	**38.32**	**351**	IAmb	IAmb	00 10 20.5	
	comp=Z,2.6nm,0.6s						
BATG	**Bathurst New B**	**38.76**	**23**	P	**P**	**00 10 25.7**	**+0.5**
MCMT	**McKenzie Canyo**	**39.11**	**330**	P	**P**	**00 10 30.1**	**+1.7**
YBH	**Yreka Blue Hor**	**42.68**	**320**	LR	LR	00 32 45.9	
	comp=Z,77nm,19.7s,baz=4.0,slow=41						
SCHQ	**Schefferville**	**45.01**	**16**	P	**P**	**00 11 14.8**	**-1.0**
	comp=Z,1.3nm,0.5s,baz=224,slow=5.9,SNR=10						
YKA	**Yellowknife Ar**	**53.68**	**344**	P	**P**	**00 12 20.2**	**-1.0**
	comp=Z,0.3nm,0.4s,baz=146,slow=6.8,SNR=6.4						
STKA	**Stephens Creek**	**131.68**	**238**	PKP	**PKiKP**	**00 22 11.2**	**0.0**
	comp=Z,1.1nm,0.5s,baz=112,slow=3.5,SNR=3.5						
ASAR	**Alice Springs**	**139.88**	**248**	PKP	**PKPdf**	**00 22 26.4**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=102,slow=1.8,SNR=12						
WRA	**Warramunga Arr**	**139.90**	**254**	PKP	**PKPdf**	**00 22 26.6**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=93,slow=2.5,SNR=15						
FITZ	**Fitzroy Crossi**	**148.25**	**256**	PKPbc	**PKPbc**	**00 22 44.2**	**+0.2**
	comp=Z,3.7nm,0.8s,baz=117,slow=2.3,SNR=3.4						

BKK 18 00:18:48.9±1.3, 15°N±5°×97°5E±°, h0km, M4.3/4, mB6.5/1, mb4.4/2, MLv4.2/4, Mw(mB)6.3/1, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRDT	**SRDT**	**3.63**	**96**	P	Pn	00 19 46.7	+0.2
SRDT				S	Sn	00 20 29.9	-0.2
UMPA	**Umpang Tak**	**3.64**	**66**	P	Pn	00 19 44.1	-2.5
UMPA				S	Sn	00 20 19.0	-11
MHMT	**Maesarieng**	**4.18**	**35**	P	Pn	00 19 56.4	+2.4
MHMT				S	Sn	00 20 44.1	+0.6
CMMT	**Chiang Mai**	**5.27**	**40**	P	Pn	00 20 01.2	-7.9
CMMT				S	Sn	00 21 13.9	+3.3
PHIT	**Phitsanulok**	**5.40**	**63**	S	Sn	00 21 14.9	+1.2
LAMP	**Lampang**	**5.52**	**47**	P	Pn	00 20 08.5	-4.0
LAMP				S	Sn	00 21 20.8	+4.0
PBKT	**Sadao Pong**	**5.67**	**71**	P	Pn	00 20 21.5	+7.0
PBKT				S	Sn	00 21 26.1	+5.8
PHRA	**Phrae**	**5.94**	**51**	P	Pn	00 20 18.6	+0.4
PHRA				S	Sb	00 21 37.2	-8.0
PAYA	**Payao**	**6.26**	**42**	P	Pn	00 20 22.7	0.0
PAYA				S	Sb	00 21 48.8	-5.7
CHAI	**Chaiyaphum**	**6.46**	**79**	S	Sn	00 21 48.4	+8.5

IDC ***18*** *00:19:50.0±0.7, 2°.47S×136°.39E, h0km, mb4.0/5, mb1 4.2/9, mb1mx4.0/32, mbtmp4.1/9, ML4.2/4, MS3.3/13, Ms1 3.3/13, ms1mx3.2/34, Error ellipse: s-maj=23.4km s-min=16.6km az=58.0*

NEIC ***18*** *00:19:55.8±2.4, 2°.55S±0°.05×136°.38E±0°.06, h48km±5km, mb4.6/24, Error ellipse: s-maj=8.4km s-min=6.9km az=109.0*

DJA ***18*** *00:19:56.4±0.4, 2°.5S±4°×13°6E±°, h82km±16km, M4.5/8, mB5.0/2, mb4.4/3, MLv4.6/8, Mw(mB)4.4/2*

ISC 18 00:19:55.1±0.5, 2°.55S±0°.05×136°.40E±0°.04, h42km, n67, σ1§80/67, mb4.4/16, MS3.4/10, 1C, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAKI	**Biak**	**1.38**	**348**	P	**Pn**	**00 20 17.8**	**-0.2**
SMPI	**Sarmi**	**2.38**	**76**	P	**Pn**	**00 20 31.6**	**0.0**
SMPI				S	**Sn**	**00 21 00.8**	**+1.3**
RKPI	**Ransiki, Papua**	**2.45**	**295**	P	**Pn**	**00 20 33.7**	**+1.1**
RKPI				S	**Sn**	**00 21 00.7**	**-0.6**
KMPI	**Kaimana, Papua**	**2.91**	**248**	P	**Pn**	**00 20 41.5**	**+2.6**
KMPI				S	**Sn**	**00 21 17.7**	**+5.1**
GENI	**Genyem**	**3.77**	**91**	P	**Pn**	**00 20 52.4**	**+1.7**
GENI				S	**Sn**	**00 21 36.7**	**+2.9**
FAKI	**Fak Fak**	**4.16**	**265**	P	**Pn**	**00 20 57.6**	**+1.5**
FAKI				S	**Sn**	**00 21 42.8**	**-0.8**
FAKI	**Fak Fak**	**4.16**	**265**		**Pn**	**00 20 57.5**	**+1.3**
JAY	**Jayapura**	**4.30**	**90**	Pn	**Pn**	**00 20 58.3**	**+0.1**
	13nm,0.3s,baz=229,slow=12,SNR=28						
JAY				Sn	**Sn**	**00 21 47.6**	**+0.5**
	5.3nm,0.3s,baz=52,slow=18,SNR=2.6						
SIJI	**Sorong**	**5.39**	**288**	Pn	**Pn**	**00 21 13.3**	**+0.2**
	12nm,0.3s,baz=255,slow=23,SNR=27						
SIJI				Sn	**Sn**	**00 22 12.3**	**-1.7**
	30nm,0.3s,baz=320,slow=23,SNR=18						
SIJI				LR	LR	00 24 02.0	
	comp=Z,304nm,21.5s,baz=70,slow=47						
SWI	**Sorong**	**5.40**	**288**	P	**Pn**	**00 21 14.5**	**+1.3**
	1.3nm2μm64nm,0.5s						
SWI				S	**Sn**	**00 22 13.2**	**-1.0**
	1.3nm2μm64nm,0.5s						
MTN	**Manton Dam**	**11.48**	**207**		**Pn**	**00 22 37.7**	**+1.2**
PMG	**Port Moresby**	**12.68**	**123**	LR	LR	00 28 17.9	
	comp=Z,196nm,21.4s,baz=320,slow=40						
COEN	**Coen**	**13.16**	**150**		**Pn**	**00 22 58.7**	**-0.9**
LUWI	**Luwuk**	**13.70**	**276**	Pn	**Pn**	**00 23 07.8**	**+0.9**
SOEI	**Soe**	**14.02**	**239**	Pn	**Pn**	**00 23 13.5**	**+2.1**
DAV	**Davao City (W)**	**14.42**	**312**	LR	LR	00 28 40.1	
	comp=Z,102nm,21.8s,baz=140,slow=37						
KNRA	**Kununurra**	**15.06**	**210**		**Pn**	**00 23 25.6**	**+0.5**
KNRA				IAmb	IAmb	00 23 36.6	
	comp=Z,51nm,1.1s						
WRAB	**Tennant Creek**	**17.39**	**186**	P	**P**	**00 23 55.8**	**+0.1**
WRAB				IAmb	IAmb	00 23 58.5	
	comp=Z,44nm,0.9s						
WRAB					**Sn**	**00 27 05.6**	**-1.8**
WR0	**Warramunga Arr**	**17.40**	**186**	P	**Pn**	**00 23 55.2**	**+0.3**
WR0				IAmb	IAmb	00 23 58.5	
	comp=Z,30nm,0.8s						
WRA	**Warramunga Arr**	**17.40**	**186**	P	**Pn**	**00 23 52.5**	**-2.4**
	comp=Z,1.1nm,0.3s,baz=7.1,slow=13,SNR=29						
WRA				S	Sn	00 26 54.8	-13
	comp=Z,0.3nm,0.3s,baz=4.1,slow=20,SNR=2.9						
WRA	**Warramunga Arr**	**17.40**	**186**	P	**Pn**	**00 23 53.3**	**-1.6**
FITZ	**Fitzroy Crossi**	**18.71**	**214**	P	**Pn**	**00 24 11.1**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=34,slow=11,SNR=10.0						
FITZ				S	**Sn**	**00 27 31.2**	**-8.2**
	comp=Z,0.4nm,0.3s,baz=205,slow=17,SNR=3.0						
FITZ				LR	LR	00 33 08.0	
	comp=Z,82nm,19.0s,baz=36,slow=42						
FITZ	**Fitzroy Crossi**	**18.71**	**214**	IAmb	IAmb	00 24 13.4	
	comp=Z,10nm,1.1s						
CTA	**Charters Tower**	**19.91**	**152**	P	**P**	**00 24 23.8**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=330,slow=13,SNR=4.9						
CTAO	**Charters Tower**	**19.91**	**152**	P	**P**	**00 24 22.9**	**-0.4**
AS31	**Alice Springs**	**21.13**	**186**	P	**P**	**00 24 37.5**	**+1.0**
AS31				IAmb	IAmb	00 24 39.5	
	comp=Z,22nm,0.6s						
ASAR	**Alice Springs**	**21.13**	**186**	P	**P**	**00 24 36.8**	**+0.2**
	comp=Z,62nm,0.8s,baz=11,slow=11,SNR=325						
ASAR				S	**S**	**00 28 25.4**	**-4.1**
	comp=Z,1.4nm,0.8s,baz=8.8,slow=27,SNR=3.3						
ASAR				LR	LR	00 33 27.4	
	comp=Z,300nm,20.7s,baz=9.0,slow=38						
PATS	**Pohnpei**	**23.78**	**67**	P	**P**	**00 25 04.2**	**+0.1**
PSA00	**Pilbara Seismi**	**24.84**	**219**	P	**P**	**00 25 14.8**	**+1.1**
FORT	**Forrest**	**29.16**	**195**	P	**P**	**00 25 51.8**	**-0.6**
FORT				IAmb	IAmb	00 25 58.6	
	comp=Z,22n

JAY	**Jayapura**	**7.61**	**293**	P		**Pn**	**00 26 53.2**	**-0.6**
	1.9nm,0.3s,baz=111,slow=9.1,SNR=5.5							
COEN	**Coen**	**9.42**	**208**	Pn		**Pn**	**00 27 16.6**	**-1.0**
MTN	**Manton Dam**	**17.85**	**245**	P		**Pn**	**00 29 03.2**	**-0.2**
MTN				IAmb		IAmb	00 29 03.6	
	comp=Z,28nm,0.9s							
WR0	**Warramunga Arr**	**19.16**	**221**	P		**P**	**00 29 17.0**	**+0.9**
WR0				IAmb		IAmb	00 29 17.9	
	comp=Z,21nm,0.9s							
WRAB	**Tennant Creek**	**19.27**	**221**	P		**P**	**00 29 18.0**	**+0.8**
WRAB				IAmb		IAmb	00 29 22.3	
	comp=Z,33nm,0.7s							
WRA	**Warramunga Arr**	**19.28**	**221**	P		**P**	**00 29 18.7**	**+1.3**
	comp=Z,2.8nm,0.3s,baz=42,slow=11,SNR=26							
WRA				S		**S**	**00 32 45.9**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=44,slow=22,SNR=4.7							
WRA	**Warramunga Arr**	**19.28**	**221**	P		**P**	**00 29 17.4**	**+0.1**
AS31	**Alice Springs**	**22.33**	**215**	P		**P**	**00 29 51.0**	**+1.6**
ASAR	**Alice Springs**	**22.33**	**215**	P		**P**	**00 29 50.9**	**+1.4**
	comp=Z,7.2nm,0.8s,baz=49,slow=8.7,SNR=23							
ASAR				S		**S**	**00 33 44.9**	**+2.4**
	comp=Z,1.1nm,0.8s,baz=30,slow=21,SNR=4.5							
ASAR	**Alice Springs**	**22.33**	**215**	P		**P**	**00 29 50.1**	**+0.7**
SOEI	**Soe**	**23.57**	**258**	P		**P**	**00 30 01.8**	**+0.8**
DZM	**Mont Dzumac**	**24.44**	**134**	P		**P**	**00 30 08.5**	**-0.3**
DZM				IAmb		IAmb	00 30 15.8	
	comp=Z,22nm,1.1s							
FITZ	**Fitzroy Crossi**	**24.86**	**238**	P		**P**	**00 30 13.4**	**+0.9**
	comp=Z,12nm,0.7s,baz=46,slow=11,SNR=12							
FITZ	**Fitzroy Crossi**	**24.86**	**238**	IAmb		IAmb	00 30 17.1	
	comp=Z,15nm,0.9s							
ARMA	**Armidale**	**24.96**	**172**	P		**P**	**00 30 14.7**	**+1.3**
STKA	**Stephens Creek**	**26.75**	**192**	P		**P**	**00 30 29.9**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=328,slow=17,SNR=3.1							
CAN	**Canberra**	**29.60**	**178**	P		**P**	**00 30 56.0**	**+1.3**
CAN				IAmb		IAmb	00 31 02.5	
	comp=Z,11nm,1.1s							
PSA00	**Pilbara Seismi**	**31.28**	**237**	P		**P**	**00 31 09.9**	**+0.3**
PSA00				IAmb		IAmb	00 31 11.8	
	comp=Z,19nm,1.1s							
OUZ	**Omahuta**	**37.94**	**144**	P		**P**	**00 32 08.4**	**+1.9**
QRZ	**Quartz Range**	**41.53**	**151**	P		**P**	**00 32 37.9**	**+1.7**
QRZ				IAmb		IAmb	00 32 44.4	
	comp=Z,23nm,1.1s							
URZ	**Urewera**	**42.08**	**145**	P		**P**	**00 32 40.1**	**-0.5**
URZ				IAmb		IAmb	00 32 54.2	
	comp=Z,25nm,1.1s							
BKZ	**Black Stump Fm**	**42.35**	**146**	P		**P**	**00 32 44.0**	**+1.1**
TUWZ	**Tuamarina**	**42.68**	**151**	P		**P**	**00 32 46.9**	**+1.5**
BSWZ	**Blackbirch Sta**	**42.87**	**151**	P		**P**	**00 32 47.9**	**+0.9**
LTZ	**Lake Taylor**	**42.95**	**153**	P		**P**	**00 32 48.7**	**+1.1**
LTZ				IAmb		IAmb	00 32 52.3	
	comp=Z,20nm,1.2s							
KHZ	**Kahutara**	**43.24**	**152**	P		**P**	**00 32 50.8**	**+0.9**
BFZ	**Birch Farm**	**43.30**	**148**	P		**P**	**00 32 51.2**	**+0.8**
LBZ	**Lake Benmore**	**43.37**	**156**	P		**P**	**00 32 51.9**	**+0.9**
LBZ				IAmb		IAmb	00 33 10.9	
	comp=Z,22nm,1.1s							
MQZ	**McQueen's Vall**	**43.85**	**154**	P		**P**	**00 32 52.5**	**-2.3**
SONM	**Songino Array**	**64.39**	**330**	P		**P**	**00 35 23.9**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=146,slow=7.3,SNR=3.7							
SONM	**Songino Array**	**64.39**	**330**	IAmb		IAmb	00 35 26.8	
	comp=Z,0.7nm,0.8s							
MKAR	**Makanchi Array**	**77.63**	**320**	P		**P**	**00 36 43.3**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=97,slow=8.1,SNR=16							
ZALV	**Zalesovo Beam**	**79.04**	**328**	P		**P**	**00 36 48.8**	**-1.7**
	comp=Z,0.9nm,0.5s,baz=136,slow=5.1,SNR=4.6							
ILAR	**Eielson Array**	**84.85**	**23**	P		**P**	**00 37 20.1**	**-0.6**
	comp=Z,0.8nm,0.7s,baz=250,slow=5.3,SNR=11							
TORD	**Torodi Ar. Bea**	**145.65**	**285**	PKPbc		**PKPdf**	**00 44 24.2**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=64,slow=3.8,SNR=22							

*IDC **18** 00:25:28.7±0.7,6°.77N×72°.97W,h159km±9km,mb3.4/6, mb1 3.7/9,mb1mx3.4/29,mbtmp4.0/9,MS3.0/1,Ms1 3.0/1, ms1mx2.4/30,Error ellipse: s-maj=27.0km s-min=7.2km az=132.0*

*NEIC **18** 00:25:28.2±2.3,6°.81N±0°.06×73°.05W±0°.08,h156km±6km, mb4.2/22,Error ellipse: s-maj=11.8km s-min=8.2km az=123.0*

*FUNV **18** 00:25:29.6,6°.77N×73°.10W,h156km,MW3.5*

*RSNC **18** 00:25:30.0±1.2,6°.85N×73°.17W,h143km±5km,ML3.7, Mw3.7*

ISC 18 00:25:28.2±0.6,6°84N±0°03×73°08W±0°03,h152km±5km, n109,σ1°31/144,mb4.1/18,6C-6D,Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**203**	*e*P		**Pn**	**00 25 49.4**	**+0.2**
BARC				*e*S		**Sn**	**00 26 04.1**	**-1.2**
BARC				*i*			00 26 06.5	
	comp=Z,4μm,0.3s							
PAMC	**Pamplona, Colo**	**0.62**	**37**	*i*P		**Pn**	**00 25 52.3**	**+1.3**
PAMC				*e*S		**Sn**	**00 26 09.1**	**+0.6**
PAMC				*i*			00 26 11.3	
	comp=Z,332nm,0.2s							
BRRC	**Barranca, Sant**	**0.69**	**293**	*i*P		**Pn**	**00 25 51.4**	**+0.5**
BRRC				*e*S		**Sn**	**00 26 08.1**	**0.0**
BRRC				*i*			00 26 09.9	
	comp=Z,805nm,0.2s							
RUSC	**La Rusia**	**0.94**	**180**	*i*P		**Pn**	**00 25 53.3**	**0.0**
RUSC				*e*S		**Sn**	**00 26 11.7**	**-0.8**
RUSC				*i*			00 26 12.8	
	comp=Z,805nm,0.4s							
RUSC	**La Rusia**	**0.94**	**180**	*e*P		**Pn**	**00 25 52.9**	**-0.4**
RUSC				*e*S		**Sn**	**00 26 11.3**	**-1.1**
RUSC	**La Rusia**	**0.94**	**180**			**Pn**	**00 25 53.2**	**-0.1**
RUSC					Sn	**Sn**	**00 26 10.6**	**-1.9**
TAMC	**Tame, Arauca**	**1.34**	**107**	*i*P		**Pn**	**00 25 57.8**	**+1.5**
TAMC				*e*S		**Sn**	**00 26 19.3**	**+1.4**
TAMC				*i*			00 26 28.7	
	comp=Z,339nm,1.0s							
PTBC	**PUERTO BERRIO,**	**1.40**	**258**	*e*P		**Pn**	**00 25 55.9**	**-1.0**
PTBC				*e*S		**Sn**	**00 26 16.8**	**-2.2**
PTBC				*i*			00 26 22.6	
	comp=Z,784nm,0.3s							
OCAC	**Ocana**	**1.41**	**350**	*i*P		**Pn**	**00 25 57.9**	**+0.6**
OCAC				*e*S		**Sn**	**00 26 19.5**	**0.0**
OCAC				*i*			00 26 21.2	
	comp=Z,988nm,0.5s							
SPBC	**San Pablo de B**	**1.54**	**220**	*i*P		**Pn**	**00 25 58.4**	**-0.1**
SPBC				*e*S		**Sn**	**00 26 20.3**	**-1.4**
SPBC				*i*			00 26 21.3	
	comp=Z,679nm,0.2s							
ZARC	**Zaragoza, Cauc**	**1.88**	**290**	*e*P		**Pn**	**00 26 02.4**	**+0.3**
ZARC				*e*S		**Sn**	**00 26 28.6**	**+0.3**
ZARC				*i*			00 26 33.7	
	comp=Z,659nm,0.3s							
SMLC	**San Martn de**	**2.18**	**333**	*e*P		**Pn**	**00 26 05.8**	**+0.1**
SMLC				*e*S		**Sn**	**00 26 33.4**	**-1.1**
SMLC				*i*			00 26 39.8	
	comp=Z,558nm,0.1s							
NORC	**Norcasia**	**2.19**	**235**	*e*P		**Pn**	**00 26 05.2**	**-0.6**
NORC				*e*S		**Sn**	**00 26 33.3**	**-1.4**
NORC				*i*			00 26 38.4	
	comp=Z,303nm,0.4s							
CHIC	**Chingaza**	**2.29**	**197**	*e*P		**Pn**	**00 26 07.3**	**0.0**
CHIC				*e*S		**Sn**	**00 26 38.1**	**+0.6**
CHIC				*i*			00 26 43.4	
	comp=Z,193nm,0.5s							
ROSC	**El Rosal**	**2.34**	**212**	P		**Pn**	**00 26 09.3**	**+1.4**
	comp=Z,168nm,0.3s,baz=204,slow=2.8,SNR=273							
ROSC				S		**Sn**	**00 26 40.1**	**+1.6**
	comp=Z,156nm,0.3s,baz=167,slow=23,SNR=16							
ROSC	**El Rosal**	**2.34**	**212**	*i*P		**Pn**	**00 26 09.3**	**+1.4**
ROSC				*e*S		**Sn**	**00 26 39.0**	**+0.5**
ROSC				*i*			00 26 46.4	
	comp=Z,422nm,0.4s							
CVER	**Cruz Verde, Cu**	**2.51**	**203**	*i*P		**Pn**	**00 26 11.0**	**+1.0**
CVER				*i*			00 26 47.1	
	comp=Z,3μm,0.4s							
HELC	**Santa Helena**	**2.52**	**255**	*e*P		**Pn**	**00 26 10.1**	**0.0**
HELC				*e*S		**Sn**	**00 26 41.8**	**-0.5**
HELC				*i*			00 26 48.1	
	comp=Z,299nm,0.3s							
HELC	**Santa Helena**	**2.52**	**255**	*e*P		**Pn**	**00 26 09.9**	**-0.1**
HELC				*e*S		**Sn**	**00 26 40.8**	**-1.5**
UREC	**San Jos de Ur**	**2.60**	**291**	*e*P		**Pn**	**00 26 09.9**	**-0.8**
UREC				*e*S		**Sn**	**00 26 42.0**	**-1.4**
UREC				*i*			00 26 54.9	
	comp=Z,309nm,0.2s							
VIGV	**El Vigia**	**2.61**	**40**	*e*P		**Pn**	**00 26 12.3**	**+1.4**
VIGV				*e*S		**Sn**	**00 26 44.7**	**+0.8**
SOCV	**Socops**	**2.63**	**57**	*e*P		**Pn**	**00 26 12.0**	**+1.0**
SOCV				*e*S		**Sn**	**00 26 43.9**	**-0.2**
VILC	**Villavicencio,**	**2.78**	**193**	*e*P		**Pn**	**00 26 12.8**	**-0.2**
VILC				*i*			00 26 51.8	
	comp=Z,240nm,0.3s							
GUY2C	**Guyana, Caldas**	**2.79**	**235**	*e*P		**Pn**	**00 26 14.0**	**+0.6**
GUY2C				*e*S		**Sn**	**00 26 51.0**	**+2.6**
GUY2C				*i*			00 26 55.8	
	comp=Z,225nm,0.5s							
PTGC	**Puerto Gaitan,**	**2.79**	**160**	*i*P		**Pn**	**00 26 12.6**	**-0.4**
PTGC				*e*S		**Sn**	**00 26 45.4**	**-2.2**
PTGC				*i*			00 26 50.2	
	comp=Z,191nm,0.3s							
RREF	**El Recreo**	**2.97**	**230**	*e*P		**Pn**	**00 26 16.3**	**+0.4**
RREF				*i*			00 27 00.3	
	comp=Z,250nm,0.6s							
CBOC	**Ciudad Bolivar**	**3.08**	**252**	*e*P		**Pn**	**00 26 17.7**	**+0.9**
CBOC				*e*S		**Sn**	**00 26 54.5**	**+0.1**
CBOC				*i*			00 26 60.0	
	comp=Z,117nm,0.6s							
CODC	**Agustn Codazz**	**3.10**	**353**	*e*P		**Pn**	**00 26 17.4**	**+0.5**
CODC				*e*S		**Sn**	**00 26 52.8**	**-1.9**
CODC				*i*			00 27 03.1	
	comp=Z,110nm,0.9s							
DBBC	**Dabeiba**	**3.12**	**273**	*e*P		**Pn**	**00 26 17.8**	**+0.6**
DBBC				*e*S		**Sn**	**00 26 53.0**	**-2.2**
DBBC				*i*			00 26 59.6	
	comp=Z,229nm,0.3s							
SDV	**Santo Domingo**	**3.16**	**50**	P		**Pn**	**00 26 19.0**	**+1.2**
	comp=Z,15nm,0.3s,baz=223,slow=23,SNR=148							
SDV				S		**Sn**	**00 26 56.5**	**+0.2**
	comp=Z,61nm,0.3s,baz=14,slow=13,SNR=60							
SDV	**Santo Domingo**	**3.16**	**50**	*e*P		**Pn**	**00 26 19.1**	**+1.2**
SDV	**Santo Domingo**	**3.16**	**50**			**Pn**	**00 26 19.3**	**+1.4**
SDV					Sn	**Sn**	**00 26 56.9**	**+0.5**
TOLC	**Tolima**	**3.16**	**225**	*e*P		**Pn**	**00 26 18.8**	**+0.7**
TOLC				*i*			00 27 04.8	
	comp=Z,95nm,0.2s							
ARGC	**Ariguani, Magd**	**3.21**	**339**	*e*P		**Pn**	**00 26 20.8**	**+2.4**
ARGC				*e*S		**Sn**	**00 26 58.8**	**+1.5**
ARGC				*i*			00 27 06.3	
	comp=Z,124nm,0.5s							
ELOV	**Elorza**	**3.57**	**87**	*e*P		**Pn**	**00 26 24.0**	**+1.0**
ORTC	**Ortega, Tolima**	**3.63**	**217**	*e*P		**Pn**	**00 26 24.5**	**+0.7**
ORTC				*e*S		**Sn**	**00 27 06.9**	**+0.1**
ORTC				*i*			00 27 12.4	
	comp=Z,163nm,0.5s							
SJCC	**San Jacinto, C**	**3.68**	**326**	*e*P		**Pn**	**00 26 23.9**	**-0.5**
SJCC				*e*S		**Sn**	**00 27 05.6**	**-2.6**
SJCC				*i*			00 27 09.5	
	comp=Z,237nm,0.5s							
PLMC	**San Jos del P**	**3.73**	**239**	*e*P		**Pn**	**00 26 25.6**	**+0.5**
PLMC				*e*S		**Sn**	**00 27 06.9**	**-2.2**
PLMC				*i*			00 27 12.3	
	comp=Z,184nm,0.2s							
TORV	**Torococo**	**3.90**	**46**	*e*P		**Pn**	**00 26 27.6**	**+0.2**
TORV				*e*S		**Sn**	**00 27 09.9**	**-3.5**
QARV	**Quebrada Arrib**	**4.19**	**37**	*e*P		**Pn**	**00 26 32.2**	**+1.1**
GUVC	**San Jose del G**	**4.29**	**174**	*e*P		**Pn**	**00 26 32.5**	**+0.2**
GUVC				*i*			00 27 23.9	
	comp=Z,150nm,0.1s							
YOTC	**Yotoco, Valle**	**4.32**	**229**	*e*P		**Pn**	**00 26 32.2**	**-0.6**
YOTC				*e*S		**Sn**	**00 27 26.5**	**+3.4**
YOTC				*i*			00 27 29.5	
	comp=Z,27nm,0.4s							
CURV	**Curarigua**	**4.41**	**44**	*e*P		**Pn**	**00 26 34.6**	**+0.6**
CURV				*e*S		**Sn**	**00 27 21.3**	**-3.8**
SMRC	**Santa Marta, M**	**4.44**	**345**	*e*P		**Pn**	**00 26 34.5**	**+0.2**
SMRC				*i*			00 27 26.0	
	comp=Z,84nm,0.7s							
MACC	**Macarena, Meta**	**4.73**	**189**	*e*P		**Pn**	**00 26 36.5**	**-1.6**
MACC				*e*S		**Sn**	**00 27 28.6**	**-4.1**
MACC				*i*			00 27 30.9	
	comp=Z,66nm,0.8s							
TEPV	**Terepaima**	**4.94**	**51**	*e*P		**Pn**	**00 26 41.5**	**+0.6**
URIC	**Uribia, Colomb**	**4.95**	**12**	*e*P		**Pn**	**00 26 40.6**	**-0.4**
URIC				*i*			00 27 37.9	
	comp=Z,40nm,0.7s							
URIC	**Uribia, Colomb**	**4.95**	**12**		Pn	**Pn**	**00 26 40.3**	**-0.6**
URIC					Sn	**Sn**	**00 27 35.8**	**-2.1**
MALC	**Bahia Malaga**	**5.09**	**237**	*e*P		**Pn**	**00 26 44.6**	**+1.8**
MALC				*i*			00 27 52.0	
	comp=Z,39nm,1.0s							
MAPV	**Macapo**	**5.45**	**57**	*e*P		**Pn**	**00 26 47.8**	**+0.1**
PAYV	**Puerto Ayacuch**	**5.57**	**104**	*e*P		**Pn**	**00 26 48.5**	**-0.8**
PCON	**Cinco Dias**	**5.57**	**217**	*e*P		**Pn**	**00 26 50.6**	**+0.9**
PCON				*i*			00 28 20.6	
	comp=Z,15nm,0.6s							
POPC	**Popayan, Colom**	**5.58**	**220**	*e*P		**Pn**	**00 26 49.8**	**+0.3**
POPC				*i*			00 27 59.0	
	comp=Z,14nm,1.1s							
FLOC	**Florencia**	**5.82**	**206**	*e*P		**Pn**	**00 26 52.4**	**-0.2**
FLOC				*i*			00 28 26.6	
	comp=Z,23nm,1.2s							
FLOC	**Florencia**	**5.82**	**206**			**Pn**	**00 26 52.2**	**-0.4**
SOTA	**Rioblanco**	**5.85**	**217**	*e*P		**Pn**	**00 26 54.7**	**+1.3**
SOTA				*i*			00 28 09.9	
	comp=Z,39nm,0.6s							
MONV	**Montecano**	**5.93**	**31**	*e*P		**Pn**	**00 26 54.1**	**0.0**
TURV	**Turiamo**	**6.30**	**55**	*e*P		**Pn**	**00 26 59.1**	**+0.2**
BBAC	**Balboa, Cauca**	**6.34**	**221**	*e*P		**Pn**	**00 27 00.8**	**+1.1**
BBAC				*i*			00 28 13.2	
	comp=Z,29nm,0.5s							
BCIP	**Isla Barro Col**	**7.08**	**289**	Pn		**Pn**	**00 27 08.9**	**-0.5**
MERV	**Las Mercedes**	**7.13**	**70**	*e*P		**Pn**	**00 27 09.5**	**-0.5**
TUMC	**Tumaco**	**7.52**	**229**	Pn		**Pn**	**00 27 10.7**	**-4.5**
BIRV	**Birongo**	**7.64**	**61**	*e*P		**Pn**	**00 27 16.3**	**-0.5**
OTAV	**Otavalo**	**8.47**	**219**	Pn		**Pn**	**00 27 29.0**	**+0.6**
PCRV	**Puerto La Cruz**	**8.98**	**68**	P		**Pn**	**00 27 35.4**	**+0.7**
	comp=Z,0.9nm,0.3s,baz=293,slow=4.2,SNR=6.7							
PLCV	**Puerto La Cruz**	**9.02**	**68**			**Pn**	**00 27 35.4**	**+0.2**
JAKH	**Jacmel**	**11.34**	**3**	Pn		**Pn**	**00 28 05.8**	**-0.1**
BANI	**BANI**	**11.78**	**13**	Pn		**Pn**	**00 28 13.0**	**+1.2**
MTDJ	**Mount Denham**	**12.12**	**339**	Pn		**Pn**	**00 28 18.7**	**+2.6**
SDDR	**Presa de Saban**	**12.19**	**8**	Pn		**Pn**	**00 28 19.0**	**+2.0**
CRPR	**Cabo Rojo, PR**	**12.53**	**27**	Pn		**Pn**	**00 28 21.5**	**+0.2**
GTBY	**Guantanamo Bay**	**13.16**	**352**	Pn		**Pn**	**00 28 28.6**	**-0.7**
EMPR	**Esperanza - Ma**	**13.21**	**28**	Pn		**Pn**	**00 28 29.3**	**-0.7**
GCPR	**Guaynabo City**	**13.28**	**30**	Pn		**Pn**	**00 28 29.4**	**-1.5**
MTP	**Monte Pirata**	**13.38**	**33**	Pn		**Pn**	**00 28 31.7**	**-0.4**
SAML	**Samuel**	**18.53**	**148**			**P**	**00 29 31.1**	**-2.0**
LPAZ	**La Paz**	**23.49**	**168**	pP		pP	**00 30 56.8**	**+2.1**
	comp=Z,2.3nm,0.8s,baz=344,slow=10,SNR=7.7							
SIV	**San Ignacio**	**25.61**	**152**	pP		**pP**	**00 31 15.4**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=345,slow=7.3,SNR=4.7							
SIV				LR		LR	00 40 57.3	
	comp=Z,31nm,19.1s,baz=130,slow=36							
250A	**Grady**	**27.88**	**335**	P		**P**	**00 31 04.5**	**+0.8**
GOGA	**Godfrey**	**28.14**	**341**	P		**P**	**00 31 05.5**	**-0.6**
GOGA				IAmb		IAmb	00 31 14.6	
	comp=Z,5.5nm,1.1s							
HODGE	**Hodges**	**28.55**	**344**	P		**P**	**00 31 09.5**	**-0.2**
HODGE				IAmb		IAmb	00 31 12.7	
	comp=Z,2.4nm,0.6s							
Z50A	**Ashland**	**28.86**	**337**	P		**P**	**00 31 13.5**	**+1.0**
Z50A				IAmb		IAmb	00 31 15.9	
	comp=Z,2.6nm,0.7s							
W57A	**Gilead**	**28.89**	**348**	P		**P**	**00 31 12.3**	**-0.3**
W57A				IAmb		IAmb	00 31 30.3	
	comp=Z,4.4nm,1.1s							
Y49A	**Blount Mountai**	**29.59**	**337**			**P**	**00 31 20.1**	**+1.2**
Y49A				IAmb		IAmb	00 31 22.8	
	comp=Z,3.0nm,0.9s							
V48A	**Smith Brothers**	**31.41**	**338**	P		**P**	**00 31 35.0**	**+0.2**
V48A				IAmb		IAmb	00 31 38.2	
	comp=Z,4.3nm,0.7s							
LUPA	**Lehigh Univers**	**33.68**	**357**	P		**P**	**00 31 52.5**	**-2.1**
S44A	**Carbondale**	**34.05**	**337**	P		**P**	**00 31 55.9**	**-2.0**
U40A	**Yellville**	**34.50**	**331**	P		**P**	**00 32 03.4**	**+1.6**
KSPA	**Keystone Colle**	**34.66**	**356**	P		**P**	**00 32 04.8**	**+1.8**
M54A	**Oil Creek Stat**	**35.02**	**351**	P		**P**	**00 32 08.4**	**+2.2**
M54A				IAmb		IAmb	00 32 11.3	
	comp=Z,3.4nm,0.8s							
L56A	**Greenwood**	**35.38**	**354**	P		**P**	**00 32 07.7**	**-1.5**
L56A				IAmb		IAmb	00 32 21.1	
	comp=Z,3.3nm,1.0s							
TUL1	**Leonard**	**35.64**	**327**	P		**P**	**00 32 11.3**	**-0.2**
TUL1				IAmb		IAmb	00 32 13.0	
	comp=Z,3.2nm,0.6s							
SFIN	**Lafayette**	**35.68**	**341**	P		**P**	**00 32 11.9**	**+0.1**
K58A	**Earlville**	**35.85**	**357**	P		**P**	**00 32 11.7**	**-1.6**
K58A				IAmb		IAmb	00 32 12.5	
	comp=Z,7.5nm,1.1s							
TXAR	**Lajitas Array**	**36.48**	**312**	P		**P**	**00 32 19.2**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=130,slow=9.4,SNR=5.3							
TXAR	**Lajitas Array**	**36.48**	**312**	P		**P**	**00 32 19.1**	**+0.2**
WMOK	**Wichita Mounta**	**36.49**	**323**	P		**P**	**00 32 18.8**	**0.0**
HDIL	**Hopedale**	**36.57**	**339**	P		**P**	**00 32 18.7**	**-0.7**
ULM	**Lac du Bonnet**	**47.28**	**340**	P		**P**	**00 33 46.3**	**+0.2**
	comp=Z,2.3nm,0.4s,baz=148,slow=7.1,SNR=12							
ULM	**Lac du Bonnet**	**47.28**	**340**	IAmb		IAmb	00 33 49.1	
	comp=Z,2.4nm,0.8s							
PDAR	**Pinedale Array**	**48.09**	**324**	P		**P**	**00 33 53.8**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=123,slow=9.8,SNR=4.1							
SCHQ	**Schefferville**	**48.12**	**5**	P		**P**	**00 33 53.7**	**+1.2**
	comp=Z,4.9nm,0.7s,baz=197,slow=6.1,SNR=18							
SCHQ	**Schefferville**	**48.12**	**5**	P		**P**	**00 33 53.1**	**+0.7**
SCHQ				IAmb		IAmb	00 33 54.5	
	comp=Z,4.2nm,0.6s							
YKA	**Yellowknife Ar**	**63.26**	**340**	P		**P**	**00 35 40.8**	**+0.5**
	comp=Z,1.6nm,0.5s,baz=134,slow=6.6,SNR=30							
ILAR	**Eielson Array**	**76.97**	**335**	P		**P**	**00 37 04.1**	**+0.4**
	comp=Z,0.2nm,0.7s,baz=98,slow=5.6,SNR=5.9							
MKAR	**Makanchi Array**	**122.29**	**20**	PKP		**PKPdf**	**00 44 04.8**	**-0.5**
	comp=Z,0.1nm,0.2s,baz=318,slow=1.9,SNR=2.6							
MKAR	**Makanchi Array**	**122.29**	**20**	PKPdf		**PKPdf**	**00 44 05.1**	**-0.3**
ASAR	**Alice Springs**	**149.16**	**234**	PKPbc		**PKPbc**	**00 44 58.7**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=119,slow=3.3,SNR=9.3							
WRA	**Warramunga Arr**	**150.38**	**241**	PKPbc		**PKPbc**	**00 45 01.6**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=108,slow=2.9,SNR=12							

*TIR **18** 00:31:31.8,41°.36N×19°.64E,h17km,Md2.6/4*

BEO 18 00:32:35.9±0.5,41°.45N×20°.07E,h0km,ML1.9/4,Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIR	**Tirane**	**0.18**	**237**	*e*Pg		Pg	00 32 38.9	-0.5
TIR				*e*Sg		Sg	00 32 41.7	-0.1
TIR	**Tirane**	**0.18**	**237**	*i* PG		Pg	00 32 39.1	-0.3
TIR				*i* SG		Sg	00 32 43.1	+1.3
PHP	**Peshkopia**	**0.37**	**50**	*i* PG		Pb	00 32 46.7	+1.4
PHP				*i* SG		Sb	00 32 57.2	+5.6
PUK	**Puka**	**0.61**	**348**	*i* PG		Pg	00 32 47.2	-0.4
PUK				*i* SG		Sb	00 32 58.0	-0.7
BCI	**Bajram Curri**	**0.92**	**360**	*i* PN		Pg	00 32 53.2	-0.3
BCI				*i* SN		Sn	00 33 09.1	-0.9
PDG	**Podgorica**	**1.15**	**329**	*e*Pg		Pg	00 32 57.0	-1.0
PDG				*e*Sg		Sg	00 33 12.0	-0.9
SJES	**Sjenica**	**1.81**	**358**	*e*Pn		Pn	00 33 09.0	+0.5
SJES				*e*Sg		Sg	00 33 33.9	-0.2
SELS	**Selova**	**1.93**	**23**	*e*Pn		Pn	00 33 09.5	-0.6
IVAS	**Ivanjica**	**2.13**	**2**	*e*Pn		Pn	00 33 12.4	-0.4
IVAS				*e*Sg		Sb	00 33 42.9	+0.6
BOVS	**Bovan**	**2.50**	**28**	*e*Sg		Sg	00 33 54.8	-1.3
ZAGS	**Zajecar**	**2.85**	**33**	*e*Pn		Pn	00 33 22.1	-0.5
ZAGS				*e*Sn		Sn	00 33 58.0	+0.3

*VIE **18** 00:44:05.8±1.1,50°.34N×18°.79E,h0km,mb2.0/3,ml2.6/4, Error ellipse: s-maj=13.5km s-min=7.8km az=150.0 17 km NW of Katowice Suspected Mining induced.*

*IPEC **18** 00:44:06.6±0.1,50°.23N×18°.88E,h2km±1km,ML2.3/3, Error ellipse: s-maj=2.4km s-min=0.8km az=168.0*

*PRU **18** 00:44:06.8±0.0,50°.25N×18°.83E,h0km*

ISC 18 00:44:06.3±0.9,50°.25N±0°.04×18°.85E±0°.02,h0km,n33, σ0°55/57,Poland

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

	8.2nm,0.2s							
MRKS	**Merke**	**5.86**	**17**	Pg	Pn	00 47 19.2	-0.2	
	5.8nm,0.4s							
MRKS				Lg	Lg	00 48 27.3		
	3.6nm,0.8s							
KK31	**Karatay Array**	**5.93**	**357**	P	Pn	00 47 21.0	+0.5	
	0.3nm,0.2s,baz=175,slow=12,SNR=16							
KK31				⇑S	Sn	00 48 29.9	+0.7	
	1.1nm,0.3s,baz=189,slow=22							
AAK	**Ala-Archa**	**6.13**	**26**	⇓P	Pn	00 47 22.6	-0.7	
	4.3nm,0.7s							
AAK				⇑S	Sn	00 48 35.8	+1.6	
	2.0nm,0.7s							

IDC ***18*** *00:55:46.2±1.3, 15˚.50N×96˚.17E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/55, mbtmp3.7/7, ML3.6/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/37, Error ellipse: s-maj=24.5km s-min=24.2km az=179.0*

BKK ***18*** *00:55:47.0±1.1, 15˚.N±.7˚×9˚.7E±.˚, h0km, M4.3/6, mb4.5/1, MLv4.1/6*

NEIC ***18*** *00:55:47.7±2.0, 15˚.38N±.0˚.07×96˚.16E±.0˚.08, h25km±5km, mb4.6/22, Error ellipse: s-maj=11.5km s-min=9.6km az=127.0*

ISC 18 00:55:48.0±0.5, 15°31'N±0'.07×96°15'E±0'.06, h28km, n48, σ1§77/47, mb4.4/17, Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
UMPA	**Umpang Tak**	**2.76**	**71**	P	**Pn**	**00 56 29.1**	**-1.4**
SRDT	**SRDT**	**3.03**	**108**	P	**Pn**	**00 56 29.8**	**-4.3**
SRDT				Sg	**Sn**	**00 57 13.0**	**+3.5**
MHMT	**Maesarieng**	**3.33**	**31**	P	**Pn**	**00 56 39.5**	**+1.3**
CM31	**Chiang Mai Arr**	**4.12**	**40**	Pn	**Pn**	**00 56 49.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**4.12**	**40**	Pn	**Pn**	**00 56 46.8**	**-2.4**
	1.0nm,0.3s,baz=224,slow=15,SNR=5.7						
CMAR				Lg	Lg	00 57 52.6	
	2.8nm,0.3s,baz=220,slow=31,SNR=6.4						
CMAR				LR	LR	00 57 56.1	
	comp=Z,32nm,20.4s,baz=348,slow=33						
CMAR	**Chiang Mai Arr**	**4.12**	**40**		**Pn**	**00 56 49.0**	**-0.2**
PHET	**Kaeng Krachan**	**4.13**	**125**	P	**Pn**	**00 56 46.5**	**-2.8**
CHTO	**Chiang Mai**	**4.39**	**37**		**Pn**	**00 56 53.4**	**+0.4**
PBKT	**Sadao Pong**	**4.80**	**74**	Pn	**Pn**	**00 56 59.1**	**+0.6**
PBKT					**Pb**	**00 57 10.6**	**-1.0**
PBKT	**Sadao Pong**	**4.80**	**74**	P	**Pn**	**00 56 56.1**	**-2.5**
PBA	**Port Blair**	**4.91**	**223**	Pn	Pn	00 57 01.4	+1.3
PAYA	**Payao**	**5.37**	**41**	P	**Pn**	**00 57 08.2**	**+1.8**
KULM	**Kulim**	**10.89**	**156**	Pn	**Pn**	**00 58 23.8**	**+1.6**
KMI	**Kunming**	**11.56**	**31**	Pn	**Pn**	**00 58 30.6**	**-0.8**
IPM	**Ipoh**	**11.78**	**155**		**Pn**	**00 58 34.3**	**0.0**
XAN	**Xi'an**	**21.93**	**29**	P	**P**	**01 00 39.1**	**-0.3**
YULB	**Yu-li**	**25.02**	**67**	P	**P**	**01 01 09.2**	**-0.8**
YULB				IAmb	IAmb	01 01 09.3	
	comp=Z,12nm,0.9s						
NACB	**Ninganchiao**	**25.49**	**66**	P	**P**	**01 01 10.7**	**-3.4**
NACB				IAmb	IAmb	01 01 15.9	
	comp=Z,25nm,1.0s						
UGM	**Wanagama**	**27.11**	**147**	P	**P**	**01 01 28.5**	**-0.3**
KAAM	**Kaadhehdhoo**	**27.20**	**239**	P	**P**	**01 01 27.8**	**-1.8**
BJT	**Baijiatuao**	**30.20**	**32**	P	**P**	**01 01 55.2**	**-0.9**
BJT				IAmb	IAmb	01 02 08.2	
	comp=Z,5.2nm,1.1s						
MKAR	**Makanchi Array**	**33.46**	**343**	P	**P**	**01 02 25.8**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=157,slow=7.8,SNR=3.8						
MKAR	**Makanchi Array**	**33.46**	**343**	P	**P**	**01 02 24.7**	**+0.1**
SONM	**Songino Array**	**33.53**	**13**	LR	LR	01 18 51.1	
	comp=Z,56nm,18.5s,baz=276,slow=42						
MAKZ	**Makanchi**	**33.56**	**342**	P	**P**	**01 02 24.9**	**-0.7**
KURBB	**Kurchatov Arra**	**38.00**	**342**	P	**P**	**01 03 04.8**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=152,slow=8.5,SNR=4.4						
KURK	**Kurchatov**	**38.05**	**342**	P	**P**	**01 03 03.3**	**-0.6**
UOSS	**Minazif**	**38.59**	**291**	P	**P**	**01 03 08.4**	**-0.5**
UOSS				IAmb	IAmb	01 03 24.5	
	comp=Z,7.6nm,1.1s						
ZALV	**Zalesovo Beam**	**39.57**	**349**	P	**P**	**01 03 17.5**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=187,slow=7.3,SNR=4.9						
GEYT	**Alibeck**	**40.39**	**311**	P	**P**	**01 03 24.3**	**+0.5**
	comp=Z,2.1nm,0.7s,baz=107,slow=9.5,SNR=5.6						
GEYT	**Alibeck**	**40.39**	**311**	IAmb	IAmb	01 03 28.1	
	comp=Z,1.7nm,0.8s						
ABKAR	**Akbulak array**	**44.90**	**327**	P	**P**	**01 04 00.3**	**+0.1**
MSEY	**Mahe Island**	**44.91**	**247**	P	**P**	**01 04 01.7**	**+1.0**
WRA	**Warramunga Arr**	**51.35**	**132**	P	**P**	**01 04 53.7**	**+3.3**
	comp=Z,1.2nm,1.0s,baz=314,slow=7.7,SNR=3.5						
WR0	**Warramunga Arr**	**51.51**	**132**	P	**P**	**01 04 51.9**	**+0.4**
KIV	**Kislovodsk**	**53.39**	**314**	P	**P**	**01 05 05.0**	**-0.4**
KIV				IAmb	IAmb	01 05 09.0	
	comp=Z,6.0nm,0.9s						
BRTR	**Keskin Array B**	**59.30**	**307**	P	**P**	**01 05 49.5**	**+1.8**
	comp=Z,0.7nm,0.9s,baz=91,slow=9.1,SNR=3.8						
BBOO	**Buckleboo**	**61.19**	**142**	P	**P**	**01 06 01.9**	**+1.5**
BBOO				IAmb	IAmb	01 06 19.6	
	comp=Z,15nm,1.1s						
VTS	**Vitosha**	**67.28**	**310**	P	**P**	**01 06 40.2**	**-0.3**
VTS				IAmb	IAmb	01 06 42.6	
	comp=Z,1.9nm,1.0s						
KHC	**Kasperske Hory**	**73.75**	**317**	P	**P**	**01 07 21.7**	**+1.9**
NBO00	**NORSAR Array S**	**74.51**	**330**	P	**P**	**01 07 23.6**	**-0.3**
NBO00				IAmb	IAmb	01 07 38.6	
	comp=Z,17nm,1.1s						
DZM	**Mont Dzumac**	**78.24**	**117**	P	**P**	**01 07 44.6**	**-1.2**
DZM				IAmb	IAmb	01 07 56.0	
	comp=Z,6.3nm,1.0s						
ILAR	**Eielson Array**	**87.16**	**22**	P	**P**	**01 08 30.2**	**-1.2**
BORG	**Borgarnes**	**87.36**	**338**	P	**P**	**01 08 29.6**	**-2.7**
ESBB	**Sonseca Array**	**87.93**	**311**	P	**P**	**01 08 32.3**	**-3.3**
ESBB				IAmb	IAmb	01 08 41.5	
	comp=Z,6.1nm,1.1s						
PAB	**San Pablo**	**88.26**	**310**	P	**P**	**01 08 35.7**	**-1.5**
PAB				IAmb	IAmb	01 08 44.2	
	comp=Z,1.8nm,0.9s						
WHZ	**Wether Hill Ro**	**88.69**	**138**	P	**P**	**01 08 42.0**	**+3.1**
GLI	**Glacier Island**	**89.06**	**26**	P	**P**	**01 08 40.7**	**+0.2**

NIED ***18*** *01:02:00, 39˚.80N×143˚.50E, h23km, Mw3.9 Best double couple: M0 7.10000×10^14 NP1:φ=36.00000°, δ=63.00000°, λ=93.00000°. NP2:φ=208.00000°, δ=27.00000°, λ=83.00000°.*

JMA ***18*** *01:02:29.5±0.2, 39˚.76N×143˚.48E, h20km±4km, M3.7*

IDC ***18*** *01:02:36.2±4.3, 39˚.72N×143˚.27E, h56km±37km, mb3.4/6, mb1 3.6/8, mb1mx3.3/41, mbtmp3.7/8, ML2.4/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/28, Error ellipse: s-maj=35.2km s-min=19.9km az=77.0*

ISC 18 01:02:29.5±2.2, 39°.76N±0'.05×143°38E±0'.07, h4km±12km, n32, σ1§04/29, mb3.7/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.18**	**279**	P	**Pg**	**01 02 52.1**	**-0.1**
JTH				S	**Sn**	**01 03 08.5**	**-0.8**
MIYJ	**Miyakonagasawa**	**1.22**	**262**	P	**Pg**	**01 02 52.7**	**-0.2**
MIYJ				eS	**Sn**	**01 03 10.5**	**+0.3**
JKEN	**Kujiedanarisaw**	**1.36**	**290**	P	**Pn**	**01 02 54.4**	**-0.8**
JANG	**Nango**	**1.56**	**294**	P	**Pn**	**01 02 57.5**	**-0.5**
JANG				eS	**Sb**	**01 03 18.5**	**-0.4**
JOM	**Ohasama**	**1.64**	**261**	P	**Pn**	**01 02 59.5**	**+0.4**
JOM				eS	**Sg**	**01 03 21.7**	**-0.4**
JMK	**Ichinoseki**	**1.86**	**245**	P	**Pn**	**01 03 02.0**	**-0.1**
JTM	**Tenmabayashi**	**2.04**	**301**	P	**Pn**	**01 03 05.4**	**+0.7**
JTM				eS	**Sn**	**01 03 31.2**	**+0.6**
JIO	**Ouri**	**2.05**	**231**	P	**Pn**	**01 03 04.0**	**-0.7**
JOT	**Ohata**	**2.40**	**313**	P	**Pn**	**01 03 10.1**	**+0.5**
JYK	**Kaneyama**	**2.49**	**251**	P	**Pn**	**01 03 11.7**	**+0.9**
JNBK	**Urakawa-nobuka**	**2.56**	**350**	P	**Pn**	**01 03 12.7**	**+0.9**
JNBK				eS	**Sn**	**01 03 43.5**	**+0.2**
JKB	**Kayabe**	**2.77**	**321**	P	**Pn**	**01 03 15.0**	**+0.3**
JCH	**Churui**	**2.85**	**360**	eS	**Sn**	**01 03 48.7**	**-1.8**
MJAR	**Matsushiro Arr**	**5.19**	**233**	P	**Pn**	**01 03 49.4**	**+1.4**
	0.2nm,0.3s,baz=38,slow=12,SNR=11						
MAT	**Matsushiro**	**5.19**	**233**	P	**Pn**	**01 03 49.3**	**+1.4**
MAT				eS	**Sn**	**01 04 48.5**	**+0.3**
USRK	**Ussuriysk Ar.**	**9.57**	**301**	P	**Pn**	**01 04 51.3**	**+3.3**
	baz=97,slow=12,SNR=3.5						
JNU	**Nakatsue**	**12.04**	**241**	LR	LR	01 10 08.5	
	comp=Z,60nm,19.2s,baz=42,slow=38						
KLR	**Kul'dur**	**12.58**	**323**	LR	LR	01 10 06.7	
	comp=Z,56nm,19.0s,baz=66,slow=36						
SONM	**Songino Array**	**27.67**	**299**	P	**P**	**01 08 18.6**	**0.0**
	0.9nm,0.8s,baz=94,slow=7.7,SNR=5.5						
H11N2	**WAKE ISLAND Hy**	**28.41**	**128**	T	T	01 38 03.5	
	baz=320,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.42**	**128**	T	T	01 38 00.6	
	baz=320,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.42**	**128**	T	T	01 38 09.6	
	baz=320						
H11S1	**WAKE ISLAND Hy**	**29.23**	**130**	T	T	01 39 17.3	
	baz=322,SNR=3.2						
H11S3	**WAKE ISLAND Hy**	**29.23**	**130**	T	T	01 39 20.4	
	baz=322						
H11S2	**WAKE ISLAND Hy**	**29.24**	**130**	T	T	01 39 19.1	
	baz=322						
ZALV	**Zalesovo Beam**	**41.28**	**310**	P	**P**	**01 10 15.6**	**-0.1**
	1.4nm,0.6s,baz=95,slow=8.5,SNR=7.6						
MKAR	**Makanchi Array**	**44.03**	**300**	P	**P**	**01 10 37.5**	**-0.7**
	1.5nm,0.8s,baz=82,slow=9.9,SNR=14						
ILAR	**Eielson Array**	**46.37**	**34**	P	**P**	**01 10 56.9**	**+0.5**
	0.4nm,0.8s,baz=271,slow=6.4,SNR=4.1						
AAK	**Ala-Archa**	**50.59**	**297**	LR	LR	01 34 13.4	
	comp=Z,38nm,20.0s,baz=119,slow=38						
WRA	**Warramunga Arr**	**59.99**	**190**	P	**P**	**01 12 35.7**	**-1.4**
	0.6nm,0.9s,baz=7.1,slow=7.5,SNR=3.0						
ASAR	**Alice Springs**	**63.72**	**190**	P	**P**	**01 13 02.6**	**+0.4**
	0.4nm,0.8s,baz=17,slow=14,SNR=3.3						
NOA	**NORSAR Array B**	**72.26**	**338**	LR	LR	01 49 42.4	
	comp=Z,12nm,19.3s,baz=240,slow=39						

UCR 18 01:09:44.8±1.6, 9°.48N×84°.91W, h18km±5km, MD4.0, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTS	**Las Juntas de**	**0.81**	**357**	*e*P	Pb	01 09 59.0	-1.4
LCR2	**La Lucha 2**	**0.93**	**74**	*e*P	Pb	01 10 01.1	-1.5
CASO	**Castillo**	**0.96**	**10**	*i* P	Pb	01 10 02.0	-1.1
PLVR	**Palo Verde**	**0.97**	**333**	*e*P	Pb	01 10 02.4	-0.8
PLVR				eS	Sb	01 10 16.0	+0.2
ARE1	**Arenal 1**	**0.99**	**11**	*e*P	Pb	01 10 02.7	-0.8
ARE1				eS	Sg	01 10 17.0	-0.2
CEDE	**Laguna Cedeo**	**1.02**	**11**	*e*P	Pb	01 10 03.1	-0.9
AMAS	**Alto Masis**	**1.13**	**356**	*i* P	Pn	01 10 04.6	-1.3
AMAS				*i* S	Sb	01 10 19.8	-0.5
ACAL	**Aguas Claras**	**1.16**	**354**	*i* P	Pn	01 10 05.2	-1.0
ACAL				*i* S	Sb	01 10 20.9	-0.2
CUI	**Cuipilapa**	**1.20**	**348**	*e*P	Pn	01 10 06.0	-0.8
CUI				eS	Sn	01 10 22.6	-0.1
CVTR	**Volcan Turrial**	**1.25**	**64**	*e*P	Pn	01 10 07.4	-0.4
HORNC	**Hornillas**	**1.25**	**348**	*i* P	Pn	01 10 06.8	-0.8
HORNC				*i* S	Sn	01 10 24.5	+0.4
LIM1	**Limonal**	**1.26**	**344**	*i* P	Pn	01 10 06.8	-0.8
MESS	**Mesas**	**1.29**	**347**	*i* P	Pn	01 10 07.4	-0.6
BUEV	**Buena Vista**	**1.40**	**340**	*e*P	Pn	01 10 09.2	-0.4
BUEV				eS	Sb	01 10 29.1	+0.9
GB1A	**Boringuen Arri**	**1.42**	**340**	*e*P	Pn	01 10 09.4	-0.4
DRK0	**Durika**	**1.66**	**97**	*e*P	Pn	01 10 12.7	-0.5
DRK0				eS	Sn	01 10 34.3	+0.2

ISC 18 01:14:33.4±1.3, 51°.31N±0'.06×16°.19E±0'.03, h0km, n16, σ1§27/31, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.47**	**172**	*e*Pg	**Pg**	**01 14 43.1**	**+0.6**
KSP				eSg	**Sb**	**01 14 51.7**	**-0.5**
CHVC	**Chvalec**	**0.73**	**187**	*e*PG	**Pg**	**01 14 47.8**	**+0.4**
CHVC				eSG	**Sb**	**01 14 59.8**	**+0.2**
	comp=Z,7.5nm,0.4s						
OSTC	**Ostas**	**0.76**	**179**	*e*PG	**Pg**	**01 14 48.3**	**+0.4**
OSTC				eSG	**Sb**	**01 15 00.7**	**+0.4**
	comp=Z,9.3nm,0.4s						
UPC	**Upice**	**0.81**	**188**	*e*PG	**Pg**	**01 14 49.1**	**+0.1**
UPC				eSG	**Sb**	**01 15 01.5**	**-0.5**
	comp=Z,19nm,0.4s						
DPC	**Dobruska-Polom**	**0.97**	**175**	*e*PG	**Pg**	**01 14 51.8**	**-0.1**
DPC				eSG	**Sb**	**01 15 06.6**	**+0.2**
	comp=Z,9.5nm,0.7s						
KRLC	**Kraliky**	**1.29**	**163**	*e*PG	**Pg**	**01 14 57.9**	**-0.3**
KRLC				eSG	**Sb**	**01 15 16.7**	**+0.9**
	comp=Z,6.8nm,0.4s						
PRA	**Prague**	**1.67**	**223**	*e*SG	**Sg**	**01 15 28.1**	**+1.0**
PRU	**Pruhonice**	**1.69**	**219**	*e*PG	**Pn**	**01 15 03.1**	**-1.1**
PRU				eSG	**Sb**	**01 15 27.8**	**+0.6**
	comp=Z,5.4nm,0.4s						
MORC	**Moravsky Berou**	**1.76**	**150**	*e*PN	**Pn**	**01 15 04.1**	**-1.1**
MORC				eSG	**Sg**	**01 15 30.7**	**+0.7**
OKC	**Ostrava-Krasne**	**1.93**	**139**	*e*PG	**Pn**	**01 15 07.6**	**+0.1**
OKC				eSG	**Sg**	**01 15 36.0**	**+0.6**
	comp=Z,4.8nm,0.6s						
CLL	**Collm**	**2.00**	**271**	*e*PN	Pn	01 15 04.0	-4.5
CLL				*e*Pg	**Pb**	**01 15 08.0**	**-2.7**
CLL				eSg	**Sn**	**01 15 33.0**	**-1.2**
VRAC	**Vranov**	**2.02**	**173**	*e*PN	**Pn**	**01 15 08.5**	**-0.3**
VRAC				eSG	**Sg**	**01 15 39.6**	**+1.2**
TREC	**Trest**	**2.07**	**193**	eSG	**Sg**	**01 15 41.1**	**+1.2**
OJC	**Ojcow**	**2.54**	**114**	*e*Pg	**Pg**	**01 15 22.6**	**+0.6**
OJC				eSg	**Sg**	**01 15 57.2**	**+2.4**
NKC	**Novy Kostel**	**2.61**	**247**	*e*PG	**Pn**	**01 15 20.1**	**+3.2**
NKC				eSG	**Sb**	**01 15 56.3**	**+2.6**
	comp=Z,5.1nm,0.3s						
KHC	**Kasperske Hory**	**2.75**	**219**	*e*PN	**Pn**	**01 15 17.3**	**-1.6**
KHC				*e*PG	**Pb**	**01 15 23.0**	**-0.5**
KHC				eSG	**Sg**	**01 16 02.8**	**+0.9**

IDC 18 01:14:44.3±19.0, 19°.08N×145°.33E, h254km±199km, mb3.1/7, mb1 3.4/7, mb1mx3.1/39, mbtmp3.7/7, Error ellipse: s-maj=38.8km s-min=31.1km az=82.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.25**	**196**	P	P	01 21 56.1	-0.8
	0.5nm,0.4s,baz=14,slow=8.9,SNR=7.4						
ASAR	**Alice Springs**	**43.92**	**195**	P	P	01 22 26.9	+0.4
	0.5nm,0.7s,baz=12,slow=13,SNR=3.2						
MKAR	**Makanchi Array**	**57.95**	**314**	P	P	01 24 11.5	+1.1
	0.2nm,0.5s,baz=101,slow=7.5,SNR=3.7						
ILAR	**Eielson Array**	**63.46**	**26**	P	P	01 24 46.2	-0.9
	0.4nm,0.6s,baz=246,slow=5.0,SNR=5.9						
YKA	**Yellowknife Ar**	**77.82**	**28**	P	P	01 26 13.8	+0.4
	0.5nm,0.6s,baz=290,slow=5.6,SNR=6.7						
NVAR	**Mina Array Bea**	**83.18**	**52**	P	P	01 26 43.6	+1.0
	0.8nm,0.6s,baz=272,slow=5.2,SNR=10						
FINES	**FINESS Array B**	**86.40**	**335**	P	P	01 26 56.3	-1.5
	0.8nm,0.4s,baz=57,slow=5.1,SNR=6.5						

IDC ***18*** *01:26:43.5±1.1, 35˚.30N×87˚.34E, h0km, mb3.4/4, mb1 3.6/8, mb1mx3.4/35, mbtmp3.5/8, ML3.1/4, MS3.0/8, Ms1 3.0/8, ms1mx2.8/31, Error ellipse: s-maj=40.3km s-min=20.2km az=63.0*

BJI ***18*** *01:26:44.6±0.0, 35˚.18N×87˚.53E, h6km, mb3.8/6, ML3.8/1, Ms3.5/1*

ISC 18 01:26:44.9±1.2, 35°.2N±0'.1×87°.2E±0'.1, h10km, n15, σ2§23/10, mb3.5/4, MS2.9/5, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**8.62**	**3**	*e*P	**Pn**	**01 28 53.8**	**+4.1**
WMQ				sP	Pg	01 28 59.8	-30
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GTA	**Gaotai**	**10.91**	**64**	*e*P	**Pn**	**01 29 21.3**	**+0.1**
GTA				pP		01 29 24.8	
GTA				sP		01 29 27.6	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**12.15**	**344**	Pn	**Pn**	**01 29 37.5**	**-0.5**
	0.1nm,0.3s,baz=151,slow=14,SNR=12						
MKAR				LR	LR	01 35 21.3	
	comp=Z,50nm,19.9s,baz=196,slow=43						
KURBB	**Kurchatov Arra**	**16.64**	**340**	Pn	**Pn**	**01 30 36.2**	**-1.9**
	0.0nm,0.3s,baz=150,slow=12,SNR=4.8						
ZALV	**Zalesovo Beam**	**18.82**	**356**	P	**P**	**01 31 02.1**	**-2.4**
	0.2nm,0.3s,baz=171,slow=10,SNR=7.4						
ZALV				LR	LR	01 39 57.5	
	comp=Z,27nm,19.1s,baz=272,slow=42						
SONM	**Songino Array**	**19.08**	**43**	P	**Pn**	**01 31 05.7**	**-2.7**
	0.3nm,0.3s,baz=230,slow=12,SNR=10						
SONM				LR	LR	01 39 03.3	
	comp=Z,78nm,19.3s,baz=318,slow=39						
TLY	**Talaya**	**20.28**	**31**	LR	LR	01 39 33.4	
	comp=Z,47nm,18.9s,baz=246,slow=38						
BVAR	**Borovoye Array**	**21.41**	**331**	P	**P**	**01 31 32.2**	**-0.6**
	0.7nm,0.7s,baz=165,slow=12,SNR=2.3						
GEYT	**Alibeck**	**23.45**	**285**	LR	LR	01 42 46.9	
	comp=Z,48nm,21.7s,baz=345,slow=41						
AKTO	**Aktyubinsk**	**26.03**	**315**	LR	LR	01 42 51.3	
	comp=Z,45nm,18.5s,baz=146,slow=37						
PALK	**Pallekele**	**28.43**	**194**	LR	LR	01 43 38.1	
	comp=Z,26nm,18.9s,baz=9.7,slow=36						
KSRS	**Korea Array**	**32.73**	**74**	LR	LR	01 47 45.2	
	comp=Z,13nm,18.2s,baz=200,slow=39						
WRA	**Warramunga Arr**	**70.78**	**133**	P	**P**	**01 38 01.8**	**+0.1**
	0.4nm,0.6s,baz=324,slow=6.4,SNR=2.5						
ASAR	**Alice Springs**	**73.41**	**136**	P	**P**	**01 38 17.6**	**+0.2**
	0.5nm,0.8s,baz=325,slow=6.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**78.89**	**278**	P	**P**	**01 38 49.6**	**+0.8**
	0.3nm,0.9s,baz=48,slow=6.4,SNR=2.9						

MAN 18 01:46:27.3, 9°.74N×123°.37E, h32km, mb4.0, ML2.7, MS2.3, 3C, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.42**	**198**	⇑*e*P	Pn	01 46 38.2	+1.0
SNPH				*i* S	Sn	01 46 45.4	+1.5
LLP	**Lapu-Lapu**	**0.82**	**46**	⇑*e*P	Pn	01 46 42.5	-0.2
LLP				*i* S	Sb	01 46 54.6	+0.6
RCP	**Roxas**	**1.91**	**341**	⇑*e*P	Pn	01 46 57.9	+0.2
RCP				*e*S	Sn	01 47 21.4	+0.8

MAN 18 01:48:07.4, 9°.76N×123°.37E, h30km, mb4.2, ML3.0, MS2.6, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.43**	**198**	*e*P	Pn	01 48 17.9	+0.3
SNPH				*i* S	Sn	01 48 26.2	+1.7
LLP	**Lapu-Lapu**	**0.81**	**46**	*e*P	Pn	01 48 22.8	0.0
LLP				*i* S	Sn	01 48 34.5	+0.6
RCP	**Roxas**	**1.90**	**341**	⇑*e*P	Pn	01 48 37.9	+0.1
RCP				*e*S	Sn	01 49 01.5	+0.8

DJA 18 01:58:17.5±0.9, 0°.S±.3°×12°.3E±.°, h10km, M3.8/6, MLv3.8/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.87**	**193**	P	Pg	01 58 34.3	+0.1
LUWI				S	Sb	01 58 46.5	+0.2
MRSI	**Marisa**	**1.22**	**303**	P	Pn	01 58 39.8	-0.8
MRSI				S	Sb	01 58 56.5	+0.1
APSI	**Ampana**	**1.49**	**241**	P	Pn	01 58 43.8	-0.6
MPSI	**Mapaga**	**3.11**	**280**	P	Pn	01 59 07.5	+0.9

IDC 18 01:59:17.6±2.1, 6°.33S×129°.75E, h0km, mb4.1/1, mb1 4.2/3, mb1mx3.6/33, mbtmp4.0/3, ML4.0/2, Error ellipse: s-maj=136.0km s-min=30.1km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.25**	**162**	Pn	Pn	02 02 39.2	-1.7
	0.8nm,0.3s,baz=345,slow=13,SNR=28						
WRA				Sn	Sn	02 05 09.0	-11
	0.8nm,0.3s,baz=342,slow=20,SNR=8.0						
ASAR	**Alice Springs**	**17.69**	**167**	P	P	02 03 26.8	+0.1
	0.6nm,0.3s,baz=345,slow=8.9,SNR=47						
MKAR	**Makanchi Array**	**67.53**	**327**	P	P	02 10 15.8	0.0
	0.8nm,0.4s,baz=119,slow=8.3,SNR=16						

MAN 18 02:00:27.3, 6°.95N×126°.57E, h16km, mb4.4, ML3.2, MS3.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.32**	**269**	*e*P	Pb	02 00 34.9	+0.4
MATI				eS	Sn	02 00 44.7	+1.1
DDMP	**Don Marcelino,**	**1.20**	**225**	*e*P	Pn	02 00 48.4	-1.1
DDMP				eS	Sg	02 01 08.1	+1.9
KCP	**Kidapawan**	**1.47**	**272**	⇑*i*P	Pn	02 00 50.4	-2.9
BUKP	**Musuan**	**1.76**	**302**	*e*P	Pn	02 00 56.9	-0.2

NNC 18 02:12:53.4±3.4, 38°.41N×72°.32E, h0km, mb3.5, mpv3.3, 3C, Error ellipse: s-maj=25.9km s-min=23.6km az=42.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IUG	**Iuzhnay**	**4.12**	**336**	Pg	Pb	02 14 08.2	+1.3
	0.6nm,0.2s						
IUG				Lg	Lg	02 15 03.6	
	37nm,0.3s						
JBG	**Jabagly**	**4.23**	**342**	Pg	Pb	02 14 11.1	+2.4
	3.9nm,0.1s						
JBG				Lg	Lg	02 15 08.7	
	60nm,0.4s				

ZALV	**Zalesovo Beam**	**71.70**	**330**	P		**P**	**02 24 49.8**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=117,slow=8.3,SNR=4.6							
KURK	**Kurchatov**	**73.52**	**325**	P		**P**	**02 25 00.8**	**-0.2**
KBL	**Kabul**	**74.88**	**307**	P		**P**	**02 25 09.1**	**-0.5**
KBL				IAmb		IAmb	02 26 24.2	
	comp=Z,2.2nm,0.7s							
KK31	**Karatay Array**	**76.01**	**315**	P		**P**	**02 25 15.6**	**-0.1**
KKAR	**Karatay Array**	**76.01**	**315**	P		**P**	**02 25 15.6**	**-0.1**
BRVK	**Borovoye**	**79.18**	**325**	P		**P**	**02 25 33.5**	**+0.4**
BRVK				IAmb		IAmb	02 25 34.2	
	comp=Z,3.0nm,0.8s							
ABKAR	**Akbulak array**	**84.56**	**320**	P		**P**	**02 26 01.6**	**+0.1**
ABKAR				IAmb		IAmb	02 26 02.5	
	comp=Z,2.4nm,0.9s							
ILAR	**Eielson Array**	**85.34**	**24**	P		**P**	**02 26 04.5**	**-0.7**
	comp=Z,2.0nm,0.9s,baz=255,slow=4.9,SNR=13							
CPUP	**Villa Florida**	**147.48**	**152**	PKPbc		**PKPbc**	**02 33 13.4**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=228,slow=8.0,SNR=3.1							

TAP ***18*** *02:30:54.6,24.˝75N×122.˝31E,h7km,ML3.2,C*
JMA ***18*** *02:30:54.8,24.˝64N×122.˝38E,h22km±3km,M2.5*

ISC 18 02:30:53.1±1.4,24.˝71N±0.˝03×122.˝44E±0.˝05,h10km±13km, n49,σ0ᵎ68/67,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS1	**EOS1**	**0.33**	**241**	P		**Pb**	**02 31 00.8**	**-0.3**
	baz=220							
EOS1				*e*S		**Sg**	**02 31 05.7**	**+1.8**
	baz=220							
TWB1	**Santiao Chiao**	**0.51**	**306**	P		**Pb**	**02 31 03.6**	**-0.6**
	baz=311							
TWB1				S		**Sg**	**02 31 09.3**	**-0.5**
	baz=311							
JYNG	**Yonagunijimaku**	**0.52**	**119**	P		**Pn**	**02 31 05.5**	**-1.2**
JYNG				S		**Sb**	**02 31 13.0**	**+0.9**
TWC	**Suao**	**0.55**	**260**	P		**Pg**	**02 31 03.5**	**-0.3**
	baz=251							
YOJ	**Yonaguni jima**	**0.57**	**115**	P		**Pn**	**02 31 06.3**	**-1.0**
YOJ				S		**Sb**	**02 31 14.5**	**+1.0**
NTC	**Toucheng**	**0.58**	**285**	P		**Pb**	**02 31 04.5**	**-0.8**
	baz=282							
NANB	**Nanao**	**0.69**	**246**	P		**Pg**	**02 31 06.2**	**-0.3**
	baz=238							
NANB				*e*S		**Sg**	**02 31 16.0**	**+0.5**
	baz=238							
ENA	**Nanau**	**0.70**	**247**	*e*P		**Pg**	**02 31 06.3**	**-0.3**
	baz=238							
ENA				*e*S		**Sg**	**02 31 15.6**	**-0.1**
	baz=238							
NWF	**Wu-fen Shan**	**0.70**	**301**	P		**Pn**	**02 31 08.0**	**-1.2**
	baz=293							
NWF				*e*S		**Sg**	**02 31 16.9**	**+0.9**
	baz=293							
WFSB	**Wu-fen Shan**	**0.70**	**301**	*e*P		**Pn**	**02 31 08.0**	**-1.1**
	baz=303							
WFSB				*e*S		**Sg**	**02 31 17.4**	**+1.5**
	baz=303							
TWE	**Neicheng**	**0.71**	**271**	P		**Pg**	**02 31 06.5**	**-0.3**
	baz=258							
TWE				*e*S		**Sg**	**02 31 16.0**	**0.0**
	baz=258							
ENTT	**Nioudou**	**0.80**	**265**	*i* P		**Pg**	**02 31 08.5**	**0.0**
	baz=259							
TWA	**Mucha**	**0.83**	**289**	*e*P		**Pn**	**02 31 09.9**	**-0.9**
	baz=275							
TWA				*e*S		**Sg**	**02 31 20.5**	**+0.7**
	baz=275							
NDT	**Datong Townshi**	**0.85**	**263**	*i* P		**Pg**	**02 31 09.6**	**0.0**
	baz=258							
NDT				*e*S		**Sg**	**02 31 20.8**	**+0.1**
	baz=258							
NWLT	**Wulai**	**0.86**	**275**	*i* P		**Pg**	**02 31 09.5**	**-0.1**
	baz=263							
NHDH	**Xindian Distri**	**0.87**	**287**	*e*P		**Pn**	**02 31 11.1**	**-0.4**
	baz=278							
NHDH				*e*S		**Sg**	**02 31 21.8**	**+0.5**
	baz=278							
YM01	**YM01**	**0.91**	**299**	P		**Pn**	**02 31 11.2**	**-0.8**
	baz=299							
YM01				*e*S		**Sg**	**02 31 23.0**	**+0.6**
	baz=299							
YM08	**YM08**	**0.91**	**302**	*e*P		**Pn**	**02 31 10.8**	**-1.3**
	baz=302							
YM08				*e*S		**Sg**	**02 31 22.4**	**-0.2**
	baz=302							
YM11	**YM11**	**0.91**	**300**	P		**Pn**	**02 31 11.8**	**-0.3**
	baz=301							
YM11				*e*S		**Sg**	**02 31 23.5**	**+0.9**
	baz=301							
YM05	**YM05**	**0.92**	**300**	P		**Pn**	**02 31 11.8**	**-0.3**
	baz=300							
YM05				*e*S		**Sg**	**02 31 22.2**	**-0.6**
	baz=300							
YM10	**YM10**	**0.92**	**299**	*e*P		**Pn**	**02 31 11.3**	**-0.8**
	baz=299							
YM10				*e*S		**Sg**	**02 31 22.9**	**+0.2**
	baz=299							
NACB	**Ninganchiao**	**0.94**	**236**	*i* P		**Pg**	**02 31 11.0**	**-0.2**
	baz=238							
NACB				*e*S		**Sg**	**02 31 22.1**	**-1.3**
	baz=238							
TWY	**Chenhua**	**0.95**	**307**	*e*P		**Pn**	**02 31 13.4**	**+0.8**
	baz=308							
TWY				S		**Sg**	**02 31 24.6**	**+0.8**
	baz=308							
YHNB	**Yeheng**	**0.97**	**268**	*i* P		**Pg**	**02 31 11.5**	**-0.3**
	baz=263							
NSK	**Sanguang**	**0.99**	**268**	P		**Pg**	**02 31 12.2**	**+0.1**
	baz=273							
TWD	**Chiawan**	**0.99**	**231**	*e*P		**Pb**	**02 31 12.4**	**-0.1**
	baz=231							
NNSH	**Datong**	**1.00**	**254**	P		**Pg**	**02 31 12.3**	**-0.2**
	baz=240							
NNSH				*e*S		**Sg**	**02 31 25.9**	**+0.4**
	baz=240							
ETLH	**Xiulin Townshi**	**1.01**	**241**	*e*P		**Pg**	**02 31 12.2**	**-0.3**
	baz=233							
NNS	**Nan Shan**	**1.01**	**255**	*e*P		**Pn**	**02 31 12.9**	**-0.6**
	baz=249							
NNS				*e*S		**Sg**	**02 31 25.6**	**-0.2**
	baz=249							
WHF	**Hehuan Shan**	**1.21**	**243**	P		**Pn**	**02 31 16.0**	**-0.6**
	baz=235							
IRIF	**Iriomote-Funau**	**1.23**	**107**	P		Pn	02 31 18.0	+1.6
IRIF				*e*S		Sn	02 31 34.5	+1.4
TDCB	**Techi**	**1.25**	**249**	*e*P		**Pb**	**02 31 17.2**	**+0.2**
	baz=243							
LIOB	**Emei**	**1.30**	**268**	*e*P		**Pg**	**02 31 18.3**	**+0.2**
	baz=263							
NSTT	**Nanjuang**	**1.31**	**267**	*e*P		**Pg**	**02 31 18.2**	**-0.1**
	baz=262							
CHGB	**Renai**	**1.32**	**241**	P		**Pg**	**02 31 18.6**	**0.0**
	baz=228							
OWD	**Renai**	**1.38**	**237**	*e*P		**Pb**	**02 31 19.3**	**+0.2**
	baz=224							
HATJ	**Hateruma jima**	**1.40**	**117**	*e*S		**Sn**	**02 31 38.3**	**+1.0**
WHP	**Taichung City**	**1.43**	**253**	*e*P		**Pg**	**02 31 20.7**	**+0.1**
	baz=247							
JKRS	**Kuro-shima**	**1.50**	**108**	*e*S		**Sn**	**02 31 40.3**	**+0.5**
VWDT	**VWDT**	**1.52**	**232**	*e*P		**Pg**	**02 31 22.1**	**-0.2**
	baz=207							
HGSD	**Ruisui**	**1.53**	**218**	*e*P		**Pb**	**02 31 20.9**	**-0.7**
	baz=195							
JIJ	**Ishigaki jima**	**1.58**	**102**	P		Pg	02 31 21.9	-1.6
SMLT	**Sun Moon Lake**	**1.63**	**240**	*e*P		**Pb**	**02 31 23.4**	**+0.1**
	baz=233							
SSLB	**Suanglung**	**1.64**	**236**	*e*P		**Pb**	**02 31 23.8**	**+0.3**
	baz=211							
TYC	**Yuchr**	**1.65**	**241**	*e*P		**Pg**	**02 31 24.8**	**0.0**
	baz=220							
YULB	**Yu-li**	**1.68**	**219**	*e*P		**Pn**	**02 31 22.4**	**-0.2**
	baz=211							
JISG	**Ishigakijimahi**	**1.70**	**94**	P		Pg	02 31 23.6	-2.2
ALS	**Alishan**	**1.91**	**232**	*e*P		**Pg**	**02 31 29.6**	**-0.3**
	baz=207							
CHN4	**Tsaushan**	**2.17**	**232**	*e*P		**Pb**	**02 31 31.6**	**-0.9**
	baz=207							

JMA 18 02:53:10.7,37.˝12N×140.˝70E,h8km±1km,M0.8,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.08**	**103**	P		Pg	02 53 12.9	+0.1
ONAJ				S		Sg	02 53 14.3	-0.1
JFFD	**Fukushimafurud**	**0.12**	**255**	P		Pg	02 53 13.3	0.0
JFFD				S		Sg	02 53 15.0	-0.1
JFK	**Kawauchi**	**0.28**	**29**	P		Pg	02 53 16.4	+0.1
JFK				S		Sg	02 53 20.3	+0.2
JFT	**Otama**	**0.49**	**324**	P		Pg	02 53 20.5	+0.2
JFT				S		Sg	02 53 27.4	+0.7
JMM	**Marumori**	**0.75**	**6**	P		Pg	02 53 25.1	0.0
JMM				S		Sg	02 53 35.2	+0.3

JMA ***18*** *02:54:18.3±0.3,29.˝93N×139.˝13E,h462km±5km,M4.0*
MOS ***18*** *02:54:18.3±0.8,29.˝92N×138.˝67E,h429km,mb4.3/30, Error ellipse: s-maj=9.9km s-min=5.3km az=108.1*
IDC ***18*** *02:54:20.8±1.2,29.˝97N×138.˝70E,h443km±12km, mb3.7/29,mb1 3.8/34,mb1mx3.7/50,mbtmp4.5/34,Error ellipse: s-maj=10.0km s-min=9.1km az=88.0*
NEIC ***18*** *02:54:20.3±0.9,29.˝95N±0.˝06×138.˝7E±0.˝1,h438km±7km, mb4.3/127,Error ellipse: s-maj=14.9km s-min=6.1km az=62.0*

ISC 18 02:54:20.7±0.4,29.˝92N±0.˝05×138.˝86E±0.˝05,h450km, n314,σ1ᵎ54/299,mb4.2/105,32C-6D,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAOM	**Aogashimamukai**	**2.65**	**17**	P		**P**	**02 55 23.8**	**-1.3**
JAOM				*e*S		**S**	**02 56 14.2**	**-3.4**
JHCJ	**Hachijojimakas**	**3.24**	**14**	P		**P**	**02 55 28.2**	**-1.2**
JHJ2	**Mitsune**	**3.28**	**14**	P		**P**	**02 55 28.3**	**-1.4**
JHJ2				*e*S		**S**	**02 56 22.6**	**-3.4**
JHJ2	**Mitsune**	**3.28**	**14**	P		**P**	**02 55 28.6**	**-1.1**
JMKN	**Mikurajimanish**	**4.01**	**9**	P		**P**	**02 55 34.0**	**-1.7**
CBIJ	**Chichi jima**	**4.06**	**133**	P		**P**	**02 55 33.8**	**-2.6**
CBIJ				*e*S		**S**	**02 56 32.5**	**-5.5**
JCJ	**Chichijima**	**4.06**	**133**	P		**P**	**02 55 33.9**	**-2.5**
	96nm,0.3s,baz=289,slow=22,SNR=72							
JCJ				S		**S**	**02 56 32.8**	**-5.2**
	258nm,0.3s,baz=271,slow=23,SNR=27							
TTO2	**TONANKAI O.B.S**	**4.11**	**338**	P		**P**	**02 55 37.5**	**+1.2**
JHH2	**Haha-jima-NKT2**	**4.39**	**137**	P		**P**	**02 55 37.0**	**-2.4**
JHH2				*e*S		**S**	**02 56 38.1**	**-5.3**
JTNC	**Tanabenakahech**	**4.77**	**325**	P		**P**	**02 55 42.8**	**+0.1**
JIE	**Ise**	**4.81**	**338**	P		**P**	**02 55 44.0**	**+0.9**
BSO1	**Boso 1**	**5.05**	**20**	P		**P**	**02 55 43.3**	**-1.4**
BSO1				S		**S**	**02 56 50.6**	**-2.9**
JOD2	**Odawara 2**	**5.33**	**2**	P		**P**	**02 55 46.3**	**-1.8**
JOD2				S		**S**	**02 56 55.5**	**-4.1**
INU	**Inuyama**	**5.63**	**344**	P		**P**	**02 55 51.0**	**0.0**
JTO	**Tosashimizu**	**5.95**	**301**	P		**P**	**02 55 54.8**	**+0.5**
JRY	**Ryogami san**	**6.08**	**0**	P		**P**	**02 55 54.3**	**-1.4**
JRY				*e*S		**S**	**02 57 09.0**	**-4.4**
MJAR	**Matsushiro Arr**	**6.62**	**355**	P		**P**	**02 55 59.1**	**-2.2**
	0.3nm,0.3s,baz=167,slow=11,SNR=18							
MAJO	**Matsushiro**	**6.62**	**355**	*d* iP		**P**	**02 55 59.7**	**-1.6**
MAJO	**Matsushiro**	**6.62**	**355**	P		**P**	**02 55 59.8**	**-1.6**
MAT	**Matsushiro**	**6.62**	**355**	P		**P**	**02 55 59.5**	**-1.8**
MAT				S		**S**	**02 57 18.6**	**-5.2**
MJB9	**Matsu-Tunnel**	**6.63**	**355**	P		**P**	**02 55 59.9**	**-1.5**
JHS	**Saijyo**	**7.01**	**318**	P		**P**	**02 56 06.0**	**+0.6**
JNU	**Nakatsue**	**7.52**	**297**	P		**P**	**02 56 11.8**	**+0.9**
	3.2nm,0.3s,baz=360,slow=12,SNR=14							
JNU	**Nakatsue**	**7.52**	**297**	P		**P**	**02 56 10.9**	**0.0**
JSJ	**Shimokoshiki**	**8.05**	**285**	P		**P**	**02 56 17.0**	**+0.4**
JMK	**Ichinoseki**	**9.22**	**12**	P		**P**	**02 56 28.6**	**-0.5**
JMK				S		**S**	**02 58 11.6**	**-3.1**
JOT	**Ohata**	**11.57**	**8**	P		**P**	**02 56 55.1**	**+0.4**
TJN	**Taejon**	**11.58**	**307**	*ce*P		**P**	**02 56 54.4**	**-0.4**
KSRS	**Korea Array**	**11.80**	**312**	P		**P**	**02 56 56.9**	**-0.2**
	5.0nm,0.3s,baz=126,slow=10,SNR=92							
KS19	**Wonju Array Si**	**11.86**	**312**	P		**P**	**02 56 56.4**	**-1.5**
JKB	**Kayabe**	**12.07**	**8**	P		**P**	**02 57 00.1**	**+0.1**
JOSM	**Okushiri--Mats**	**12.15**	**2**	P		**P**	**02 57 01.1**	**+0.2**
ERM	**Erimo**	**12.56**	**15**	*ce*P		**P**	**02 57 05.8**	**+0.5**
ERM					pmax	pmax		
	comp=Z,29nm,1.3s							
ERM	**Erimo**	**12.56**	**15**	P		**P**	**02 57 05.9**	**+0.5**
JCH	**Churui**	**13.18**	**15**	P		**P**	**02 57 13.3**	**+1.3**
JHR	**Hokuryu**	**13.98**	**9**	P		**P**	**02 57 22.0**	**+1.3**
ASAJ	**Asahikawa**	**14.48**	**11**	P		**P**	**02 57 26.9**	**+0.9**
	comp=Z,1.8nm,0.3s,baz=195,slow=10,SNR=11							
JKA	**Kamikawa-asahi**	**14.48**	**11**	P		**P**	**02 57 26.9**	**+0.9**
NEM2	**Nemuro 2**	**14.50**	**20**	P		**P**	**02 57 26.9**	**+0.7**
NMR	**Nemuro--Hokkai**	**14.50**	**20**	P		**P**	**02 57 25.0**	**-1.2**
NMR				*e*S		**S**	**02 59 55.3**	**-4.3**
JTKR	**Abashiri--Toko**	**14.59**	**15**	P		**P**	**02 57 28.4**	**+1.3**
GRPR	**Tuman**	**15.08**	**20**	*e*P		**P**	**02 57 32.1**	**-0.4**
USA0B	**Ussuriysk Arra**	**15.26**	**341**	P		**P**	**02 57 33.6**	**-0.8**
USA0B					pmax	pmax		
	comp=Z,15nm,0.8s							
USA0B	**Ussuriysk Arra**	**15.26**	**341**	P		**P**	**02 57 33.6**	**-0.8**
USRK	**Ussuriysk Ar.**	**15.26**	**341**	P		**P**	**02 57 34.1**	**-0.2**
	baz=144,slow=10,SNR=29							
SHO	**Shikotan**	**15.30**	**22**	⇓ *i* P		**P**	**02 57 35.0**	**+0.2**
YULB	**Yu-li**	**16.98**	**252**	P		**P**	**02 57 50.7**	**-2.2**
SSLB	**Suanglung**	**17.10**	**253**	P		**P**	**02 57 52.2**	**-1.8**
YSS	**Yuzh-Sakhalins**	**17.27**	**9**	⇑ *i* P		**P**	**02 57 57.2**	**+1.6**
YSS					pmax	pmax		
	comp=Z,20nm,1.3s							
KLR	**Kul'dur**	**20.03**	**346**	*i* P		**P**	**02 58 22.2**	**+0.2**
KLR					pmax	pmax		
	comp=Z,3.0nm,1.0s							
KLR	**Kul'dur**	**20.03**	**346**	P		**P**	**02 58 22.7**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=176,slow=5.9,SNR=7.5							
BJT	**Baijiatuau**	**21.09**	**305**	P		**P**	**02 58 31.2**	**-0.7**
BJT					pmax	pmax		
	comp=Z,17nm,1.0s							
BJT	**Baijiatuau**	**21.09**	**305**	P		**P**	**02 58 31.2**	**-0.7**
TYV	**Tymovskoe**	**21.11**	**7**	*e*P		**P**	**02 58 32.5**	**+0.6**
TYV					pmax	pmax		
	comp=Z,15nm,1.2s							
HHC	**Hu-ho-hao-te**	**24.68**	**304**	*e*P		**P**	**02 59 04.1**	**-0.2**
HHC					pmax	pmax		
	comp=Z,7.0nm,1.1s							
HHC					pmax	pmax		
	comp=Z,65nm,4.7s							
ENH	**Enshi**	**25.38**	**278**	P		**P**	**02 59 09.0**	**-1.6**
XAN	**Xi'an**	**25.68**	**287**	P		**P**	**02 59 12.4**	**-0.7**
XAN					pmax	pmax		
	comp=Z,37nm,0.7s							
XAN	**Xi'an**	**25.68**	**287**	P		**P**	**02 59 12.0**	**-1.1**
XAN					pmax	pmax		
	comp=Z,51nm,1.1s							
XAN	**Xi'an**	**25.68**	**287**	P		**P**	**02 59 12.0**	**-1.1**
PETK	**Petropavlovsk-**	**26.96**	**25**	P		**P**	**02 59 25.3**	**+1.2**
	comp=Z,3.6nm,0.6s,baz=170,slow=3.2,SNR=12							
LZH	**Lanzhou**	**29.89**	**291**	⇑ P		**P**	**02 59 49.5**	**-0.8**
LZH				pP		pP	03 01 07.3	-0.8
LZH				PP		**pwP**	**03 01 13.6**	**-0.5**
LZH				sP		sP	03 01 58.1	-1.9
LZH					pmax	pmax		
	comp=Z,20nm,1.0s							
LZH					pmax	pmax		
	comp=Z,56nm,5.2s							
ULN	**Ulaanbaatar**	**30.26**	**315**	*ce*P		**P**	**02 59 53.2**	**-0.1**
ULN					pmax	pmax		
	comp=Z,7.0nm,0.6s							
ULN	**Ulaanbaatar**	**30.26**	**315**	P		**P**	**02 59 52.8**	**-0.5**
ULN					IAmb	IAmb	02 59 53.8	
	comp=Z,8.4nm,0.6s							
SONM	**Songino Array**	**30.65**	**315**	P		**P**	**02 59 56.5**	**-0.2**
	comp=Z,3.2nm,0.4s,baz=122,slow=7.9,SNR=28							
SONM					ScP	**ScP**	**03 05 41.9**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=134,slow=8.3,SNR=5.1							
SONM	**Songino Array**	**30.65**	**315**		IAmb	IAmb	02 59 56.9	
	comp=Z,2.4nm,0.6s							
MA2	**Magadan**	**30.73**	**12**	*ce*P		**P**	**02 59 58.1**	**+1.1**
MA2					pmax	pmax		
	comp=Z,26nm,1.0s							
MA2	**Magadan**	**30.73**	**12**	P		**P**	**02 59 57.5**	**+0.5**
SLVN	**Son La**	**32.55**	**263**	P		**P**	**03 00 11.1**	**-2.2**
SLVN					IAmb	IAmb	03 00 15.9	
	comp=Z,10nm,1.0s							
YAK	**Yakutsk**	**32.68**	**352**	*i* P		**P**	**03 00 14.1**	**+0.4**
YAK					pmax	pmax		
	comp=Z,5.0nm,0.5s							
GTA	**Gaotai**	**33.26**	**297**	*e*P		**P**	**03 00 18.5**	**-0.7**
GTA				pP		PP	03 01 46.4	-1.0
GTA				sP		PcP	03 02 41.3	-7.6
GTA				S		**S**	**03 05 09.4**	**+2.9**
GTA					pmax	pmax		
	comp=Z,18nm,0.9s							
GTA					pmax	pmax		
	comp=Z,63nm,6.8s							
ZAK	**Zakamensk**	**33.56**	**318**	*e*P		**P**	**03 00 20.4**	**-1.1**
ZAK					pmax	pmax		
	comp=Z,8.0nm,1.1s							
TLY	**Talaya**	**33.90**	**320**	*i* P		**P**	**03 00 23.9**	**-0.4**
TLY					pmax	pmax		
	comp=Z,3.0nm,0.9s							
SEY	**Seymchan**	**34.16**	**11**	*i* P		**P**	**03 00 27.3**	**+1.0**
SEY	**Seymchan**	**34.16**	**11**	P		**P**	**03 00 27.0**	**+0.7**
	comp=Z,4.4nm,0.8s,baz=227,slow=7.1,SNR=7.4							
MOY	**Mondy**	**35.40**	**319**	*e*P		**P**	**03 00 37.0**	**0.0**
PBKT	**Sadao Pong**	**37.09**	**258**	P		**P**	**03 00 51.1**	**-0.2**
PBKT					IAmb	IAmb	03 00 52.7	
	comp=Z,14nm,0.7s							
CHTO	**Chiang Mai**	**37.83**	**262**	P		**P**	**03 00 56.7**	**-0.8**
CHTO					pmax	pmax		
	comp=Z,22nm,0.6s							
CHTO	**Chiang Mai**	**37.83**	**262**	P		**P**	**03 00 56.7**	**-0.8**
CM31	**Chiang Mai Arr**	**37.98**	**262**	P		**P**	**03 00 58.3**	**-0.5**
CMAR	**Chiang Mai Arr**	**37.98**	**262**	*ce*P		**P**	**03 00 59.0**	**+0.3**
CMAR					pmax	pmax		
	comp=Z,4.0nm,0.4s							
CMAR	**Chiang Mai Arr**	**37.98**	**262**	P		**P**	**03 00 58.9**	**+0.1**
	comp=Z,5.6nm,0.6s,baz=63,slow=5.5,SNR=23							
BILL	**Bilibino**	**41.43**	**15**	⇑ *i* P		**P**	**03 01 27.2**	**+1.2**
BILL					pmax	pmax		
	comp=Z,9.0nm,1.0s							
BILL	**Bilibino**	**41.43**	**15**	P		**P**	**03 01 26.9**	**+0.9**
BILL					IAmb	IAmb	03 01 27.9	
	comp=Z,6.4nm,0.6s							
SHL	**Shillong**	**41.58**	**276**	P		**P**	**03 01 26.8**	**-1.2**
SHL					pmax	pmax		
	comp=Z,26nm,0.4s							
SHL	**Shillong**	**41.58**	**276**	P		**P**	**03 01 26.8**	**-1.2**
TIXI	**Tiksi**	**42.13**	**355**	*ce*P		**P**	**03 01 31.4**	**-0.1**
TIXI					pmax	pmax		
	comp=Z,10.0nm,3.1s							
TIXI	**Tiksi**	**42.13**	**355**	P		**P**	**03 01 31.1**	**-0.4**
	comp=Z,1.6nm,0.5s,baz=145,slow=6.6,SNR=5.8							
TIXI	**Tiksi**	**42.13**	**355**	IAmb		IAmb	03 01 31.6	
	comp=Z,2.5nm,0.8s							
WMQ	**Urumqi**	**42.56**	**304**	*e*P		**P**	**03 01 35.6**	**+0.2**
WMQ				pP		pP	03 02 59.3	+0.5
WMQ					pmax	pmax		
	comp=Z,12nm,0.9s							
WMQ					pmax	pmax		
	comp=Z,120nm,6.3s							
WMQ					LR	LR		
	comp=N,120nm,24.7s							
WMQ					LR	LR		
	comp=E,2μm,25.9s							
WMQ					LR	LR		
	comp=Z,120nm,19.5s							
TAPN	**Taplejung**	**44.66**	**280**	*e*P		**P**	**03 01 52.5**	**+0.1**
	comp=Z,39nm,0.3s							
ODAN	**Odare**	**45.08**	**279**	*e*P		**P**	**03 01 55.5**	**0.0**
ZAA0	**Zalesovo Array**	**45.44**	**318**	P		**P**	**03 01 57.0**	**-0.6**
ZALV	**Zalesovo Beam**	**45.44**	**318**	P		**P**	**03 01 56.9**	**-0.6**
	comp=Z,3.7nm,0.4s,baz=98,slow=7.4,SNR=21							
ZALV					PcP	**pwP**	**03 03 27.5**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=104,slow=3.1,SNR=5.0							
ZALV					ScP	**ScP**	**03 06 37.0**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=109,slow=2.3,SNR=5.3							
RAMN	**Ramite**	**45.73**	**280**	*e*P		**P**	**03 02 00.9**	**+0.4**
	comp=Z,95nm,0.5s							
JIRN	**Jiri**	**45.88**	**281**	*e*P		**P**	**03 02 02.4**	**+0.6**
	comp=Z,210nm,0.4s							
GUN	**Gumba**	**46.08**	**281**	*e*P		**P**	**03 02 03.7**	**+0.4**
	comp=Z,73nm,0.5s							
MK31	**Makanchi Array**	**46.43**	**308**	P		**P**	**03 02 04.8**	**-0.6**
MK31					pmax	pmax		
	comp=Z,3.0nm,0.8s							
MK31	**Makanchi Array**	**46.43**	**308**	P		**P**	**03 02 04.8**	**-0.6**
MKAR	**Makanchi Array**	**46.43**	**308**	P		**P**	**03 02 05.0**	**-0.4**
	comp=Z,2.3nm,0.4s,baz=85,slow=9.6,SNR=56							
MKAR					PcP	**PcP**	**03 03 31.5**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=79,slow=7.8,SNR=8.0							
MKAR					ScP	**ScP**	**03 06 42.0**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=83,slow=5.3,SNR=12							
PKI	**Pulchoki**	**46.57**	**281**	*e*P		**P**	**03 02 06.7**	**-0.4**
	comp=Z,2.3nm,0.4s							
PKIN	**Phulchoki**	**46.58**	**281**	*e*P		**P**	**03 02 06.7**	**-0.4**
	comp=Z,13nm,0.3s							
KKN	**Kakani**	**46.62**	**281**	*e*P		**P**	**03 02 07.3**	**0.0**
	comp=Z,40nm,0.5s							
MAKZ	**Makanchi**	**46.64**	**308**	P		**P**	**03 02 06.2**	**-0.8**
MAKZ					pmax	pmax		
	comp=Z,5.0nm,0.9s							
MAKZ	**Makanchi**	**46.64**	**308**	P		**P**	**03 02 06.2**	**-0.8**
DMN	**Daman**	**46.82**	**281**	*e*P		**P**	**03 02 08.9**	**0.0**
	comp=Z,29nm,0.4s							
GKN	**Gorkha**	**47.11**	**282**	*e*P		**P**	**03 02 11.0**	**+0.1**
	comp=Z,47nm,0.3s							
KLSI		**47.47**	**229**	P		**P**	**03 02 14.2**	**+0.6**
MDSI	**Maura Dua**	**47.68**	**230**	P		**P**	**03 02 15.7**	**+0.5**
	comp=Z,28nm,0.8s							
**DANN

comp=Z,12nm,0.8s
KKAR Karatay Array 55.07 304 P P 03 03 08.6 -0.2
KKAR pmax pmax
comp=Z,12nm,0.8s
KKAR Karatay Array 55.07 304 P P 03 03 08.6 -0.2
KKAR lAmb lAmb 03 03 09.5
comp=Z,12nm,0.8s
RC01 Rabbit Creek A 55.37 34 P P 03 03 11.6 +1.1
BTK Batken 55.44 300 P P 03 03 10.1 -1.3
BTK pmax pmax
comp=Z,4.0nm,0.5s
BTK Batken 55.44 300 P P 03 03 10.1 -1.3
BTK lAmb lAmb 03 03 11.5
comp=Z,4.2nm,0.5s
POKR Poker Plat Res 56.45 29 P P 03 03 19.5 +1.5
baz=269
HDA Harding Lake 56.65 30 lAmb lAmb 03 03 20.6
comp=Z,11nm,0.8s
HDA Harding Lake 56.65 30 P P 03 03 19.5 +0.2
baz=270
ILAR Eielson Array 56.68 30 P P 03 03 19.7 +0.2
comp=Z,2.6nm,0.6s,baz=259,slow=4.7,SNR=47
DOT Dot Lake 57.94 31 lAmb lAmb 03 03 29.9
comp=Z,14nm,1.0s
SCRK Sand Creek 57.96 30 lAmb lAmb 03 03 30.1
comp=Z,9.6nm,0.8s
MENT Mentasta 58.14 32 lAmb lAmb 03 03 34.2
comp=Z,15nm,1.1s
KBL Kabul 58.17 294 P P 03 03 30.2 -0.4
KBL pmax pmax
comp=Z,5.0nm,0.7s
KBL Kabul 58.17 294 P P 03 03 30.2 -0.4
KBL lAmb lAmb 03 03 31.0
comp=Z,5.0nm,0.7s
ARU Arti 60.40 321 *d* iP P 03 03 44.5 -0.4
ARU *PP **pP** 03 05 15.0 -1.2
ARU 03 05 59.3
ARU S S 03 11 22.8 -1.1
ARU SS SS 03 15 29.4 -1.3
ARU pmax pmax
comp=Z,9.0nm,0.5s
ARU Arti 60.40 321 P P 03 03 44.4 -0.5
comp=Z,5.6nm,0.4s,baz=85,slow=3.2,SNR=28
ARU Arti 60.40 321 P P 03 03 44.0 -0.9
EPYK Eagle Plains 60.78 27 P P 03 03 49.0 +1.6
baz=278
ABKAR Akbulak array 61.03 313 P P 03 03 48.6 -0.7
STKA Stephens Creek 61.52 177 P P 03 03 54.5 +2.0
comp=Z,1.2nm,0.5s,baz=13,slow=7.3,SNR=3.6
STKA Stephens Creek 61.52 177 lAmb lAmb 03 03 55.9
comp=Z,0.6nm,0.9s
HRA Herat 63.56 296 lAmb lAmb 03 04 07.3
comp=Z,5.2nm,0.9s
C36M Paulatuk 64.78 23 P P 03 04 13.8 +0.7
C36M Paulatuk 64.78 23 P P 03 04 14.0 +0.9
baz=288
GEYT Alibeck 65.53 301 P P 03 04 18.5 0.0
comp=Z,2.2nm,0.6s,baz=66,slow=5.0,SNR=7.4
GEYT Alibeck 65.53 301 lAmb lAmb 03 04 19.5
comp=Z,2.3nm,0.7s
ARCES ARCESS Array B 69.91 340 P P 03 04 45.4 +0.6
comp=Z,2.0nm,0.6s,baz=67,slow=8.4,SNR=20
RES Resolute Bay 70.00 13 P P 03 04 45.8 +0.6
RES pmax pmax
comp=Z,2.0nm,0.8s
RES Resolute Bay 70.00 13 P P 03 04 45.8 +0.6
YKA Yellowknife Ar 71.05 28 P P 03 04 52.3 +0.6
comp=Z,3.0nm,0.5s,baz=295,slow=6.1,SNR=69
LPSR Galich'ya Gora 72.42 321 *eP* P 03 05 00.5 +0.6
LPSR pmax pmax
comp=E,8.0nm,1.1s
LPSR pmax pmax
comp=N,4.0nm,0.6s
LPSR pmax pmax
comp=Z,3.0nm,0.6s
OBN Obninsk 72.54 324 *i* P P 03 04 59.9 -0.6
OBN *i* 03 05 13.1
OBN *i* *PP **pwP** 03 06 39.1 -2.5
OBN *i* 03 07 47.3
OBN pmax pmax
comp=Z,7.0nm,0.5s
VSR Storozhevoye 72.91 320 *eP* P 03 05 02.3 -0.4
VSR pmax pmax
comp=Z,9.0nm,0.5s
VSR pmax pmax
comp=N,8.0nm,1.4s
VSR pmax pmax
comp=E,6.0nm,0.9s
D03D Eldon 73.59 44 P P 03 05 09.5 +2.8
baz=297
B05A Bryant 73.86 43 P P 03 05 10.4 +2.1
baz=297
KBZ Khabaz 73.95 311 *d* iP P 03 05 09.0 +0.2
KBZ Khabaz 73.95 311 P P 03 05 09.3 +0.4
comp=E,8.1nm,0.7s,baz=90,slow=4.0,SNR=30
KIV Kislovodsk 73.98 312 *eP* P 03 05 10.5 +1.3
KIV pmax pmax
comp=Z,22nm,1.1s
KIV Kislovodsk 73.98 312 P P 03 05 08.5 -0.8
KIV lAmb lAmb 03 05 11.4
comp=Z,5.1nm,0.7s
FINES FINESS Array B 74.11 333 *i* P P 03 05 09.6 +0.1
FINES pmax pmax
comp=Z,3.0nm,0.3s
FINES FINESS Array B 74.11 333 P P 03 05 09.4 0.0
comp=Z,2.9nm,0.3s,baz=65,slow=4.8,SNR=33
GNI Garni 74.28 307 *i* P P 03 05 11.6 +0.5
GNI pmax pmax
comp=Z,20nm,1.0s
E04D Cinebar 74.34 45 P P 03 05 13.6 +2.5
baz=297
I03D Drain, OR 75.15 48 P P 03 05 18.3 +2.6
baz=297
B08A Colville Reser 75.45 42 lAmb lAmb 03 05 19.8
comp=Z,7.5nm,0.9s
I04A Tendick Farm, 75.71 48 P P 03 05 21.1 +2.2
baz=298,SNR=5.4
E07A Sunnyside 76.00 44 lAmb lAmb 03 05 23.3
comp=Z,7.3nm,1.1s
I05D Terrebonne, OR 76.14 47 P P 03 05 23.3 +2.0
baz=298
J04D Umpqua Nationa 76.16 48 P P 03 05 23.9 +2.2
baz=298,SNR=9.9
D08A Wollman Farm, 76.32 43 lAmb lAmb 03 05 24.3
comp=Z,6.5nm,0.6s
L04D Klamath Falls 76.52 49 P P 03 05 25.5 +1.9
baz=298
M02C Callahan 76.54 50 P P 03 05 25.9 +2.3
baz=298
K04D Chiloquin, OR 76.68 48 P P 03 05 26.8 +2.3
baz=299
J05D Fort Rock, OR 76.70 48 P P 03 05 27.0 +2.4
baz=299,SNR=9.0
NEW Newport 76.78 42 P P 03 05 26.4 +1.7
NEW pmax pmax
comp=Z,6.0nm,1.0s
NEW Newport 76.78 42 P P 03 05 26.4 +1.7
NEW lAmb lAmb 03 05 27.2
comp=Z,6.1nm,0.9s
NEW Newport 76.78 42 P P 03 05 26.4 +1.7
baz=300
N02D Trinity Center 76.84 50 P P 03 05 27.8 +2.5
baz=298
M04C Macdoel 77.03 49 P P 03 05 28.5 +2.1
baz=299,SNR=5.1
E09A Wood Farm, Sta 77.05 44 lAmb lAmb 03 05 28.9
comp=Z,5.1nm,0.9s
O02D Mt. Diablo Mer 77.16 51 P P 03 05 29.5 +2.4
baz=298
O03E Paynes Creek 77.77 51 P P 03 05 31.6 +1.2
baz=299
MOD Modoc Plateau 77.97 49 lAmb lAmb 03 05 34.3
comp=Z,3.7nm,0.8s
WALA Waterton Lakes 78.19 40 lAmb lAmb 03 05 35.0
comp=Z,5.7nm,0.8s
ORV Oroville 78.33 51 lAmb lAmb 03 05 35.5
comp=Z,5.7nm,1.1s
BMO Blue Mountains 78.39 45 lAmb lAmb 03 05 35.8
comp=Z,3.5nm,0.7s
AKASG Malin Array Be 78.61 322 P P 03 05 34.2 -0.3
baz=303,SNR=5.9
AKASG Malin Array Be 78.61 322 lAmb lAmb 03 05 34.7
comp=Z,1.1nm,0.8s
AKBB Malin Array Si 78.61 322 P P 03 05 34.4 -0.2
AKBB pmax pmax
comp=Z,5.0nm,0.8s
AKBB Malin Array Si 78.61 322 P P 03 05 34.4 -0.2
AKBB lAmb lAmb 03 05 34.9
comp=Z,5.2nm,0.8s
JTMT Jette 78.68 41 lAmb lAmb 03 05 37.6
comp=Z,6.9nm,1.0s
BEKR Beckworth 78.94 50 lAmb lAmb 03 05 39.2
comp=Z,6.3nm,0.8s
PAHR Pah Rah Range 79.67 50 P P 03 05 42.1 +1.4
CMB Columbia Colle 79.83 52 lAmb lAmb 03 05 43.5
comp=Z,4.4nm,0.7s
PNTR Pine Nut 79.84 51 lAmb lAmb 03 05 44.5
comp=Z,4.4nm,0.8s
NB2 NORSAR Subarra 79.89 337 P P 03 05 41.2 0.0
comp=Z,0.9nm,0.4s,baz=49,slow=4.6
NOA NORSAR Array B 79.89 337 P P 03 05 40.9 -0.4
comp=Z,1.6nm,0.6s,baz=56,slow=5.9,SNR=11
MFID Camas Ranch 80.05 46 lAmb lAmb 03 05 44.9
comp=Z,2.2nm,0.5s
YERR Yerington 80.13 51 lAmb lAmb 03 05 45.8
comp=Z,5.3nm,0.9s
RYN Ryan 80.79 51 lAmb lAmb 03 05 49.5
comp=Z,4.3nm,0.8s
FFC Flin Flon 80.86 31 P P 03 05 47.1 +0.7
FFC pmax pmax
comp=Z,4.0nm,0.8s
FFC Flin Flon 80.86 31 P P 03 05 47.1 +0.7
FFC lAmb lAmb 03 05 48.0
comp=Z,4.2nm,0.8s
KVN Kaiserville 80.86 50 lAmb lAmb 03 05 49.7
comp=Z,4.4nm,0.9s
DLMT Dillon 80.95 43 lAmb lAmb 03 05 49.8
comp=Z,6.5nm,1.0s
NVAR Mina Array Bea 81.04 51 P P 03 05 49.6 +1.7
comp=Z,2.6nm,0.6s,baz=290,slow=5.8,SNR=39
EGMT Eagleton 81.06 39 P P 03 05 49.2 +1.5
baz=305
PAGB Antelope Grade 81.08 54 lAmb lAmb 03 05 51.0
comp=Z,7.9nm,0.8s
RAYN Ar Rayn 81.35 292 P P 03 05 49.7 +0.1
RAYN pmax pmax
comp=Z,6.0nm,0.7s
RAYN Ar Rayn 81.35 292 P P 03 05 49.7 +0.1
RAYN lAmb lAmb 03 05 50.8
comp=Z,6.0nm,0.7s
PKM Mcpherson Peak 81.81 55 P P 03 05 54.4 +2.4
baz=301
VES Vestal, Richgr 81.84 53 P P 03 05 53.3 +1.4
baz=301
BR131 Keskin Array S 81.94 311 P P 03 05 52.4 -0.1
BR131 pmax pmax
comp=Z,5.0nm,0.9s
BR131 Keskin Array S 81.94 311 P P 03 05 52.4 -0.1
BR131 lAmb lAmb 03 05 53.5
comp=Z,4.9nm,0.8s
BRTR Keskin Array B 81.94 311 P P 03 05 52.6 +0.1
comp=Z,5.8nm,0.9s,baz=94,slow=3.8,SNR=32
BIR Birlad 81.99 319 ⇑P P 03 05 53.4 +1.0
BIR Birlad 81.99 319 ⇑P P 03 05 53.4 +1.0
CWC Cottonwood Cre 82.22 52 P P 03 05 56.0 +1.9
baz=302
CFR Carcaliu 82.32 318 ⇑P P 03 05 54.4 +0.3
CFR Carcaliu 82.32 318 ⇑P P 03 05 54.4 +0.3
TOPG Topolog 82.35 318 ⇑P P 03 05 55.1 +0.8
ISA Isabella, Lake 82.36 53 P P 03 05 55.9 +1.3
baz=302
TESR Tescani 82.40 320 ⇑P P 03 05 55.0 +0.6
BIZ Bicaz 82.45 320 ⇑P P 03 05 55.6 +0.8
BUR08 Bucovina Ar. S 82.53 321 P P 03 05 55.5 +0.3
BUR08 lAmb lAmb 03 05 56.2
comp=Z,4.6nm,0.8s
BURAR Bucovina Array 82.53 321 ⇑P P 03 05 56.1 +0.8
BURAR Bucovina Array 82.53 321 ⇑P P 03 05 56.1 +0.8
DAC Darwin (Calif) 82.64 52 lAmb lAmb 03 06 01.2
comp=Z,4.4nm,0.8s
H17A Grant Village 82.68 43 lAmb lAmb 03 06 00.9
comp=Z,8.7nm,1.0s
H17A Grant Village 82.68 43 P P 03 06 00.1 +3.8
baz=305
HARR Harsova 82.72 318 ⇓P P 03 05 56.9 +0.8
HARR Harsova 82.72 318 ⇓P P 03 05 56.9 +0.8
VRI Vrincioaia 82.73 319 ⇑P P 03 05 57.8 +1.6
VRI Vrincioaia 82.73 319 ⇑P P 03 05 57.8 +1.6
PLOR Plostina 82.78 319 ⇑P P 03 05 58.1 +1.6
PLOR Plostina 82.78 319 ⇑P P 03 05 58.1 +1.6
FLWY Flagg Ranch 82.79 43 P P 03 05 59.1 +2.3
FLWY lAmb lAmb 03 06 00.4
comp=Z,5.3nm,0.8s
MPMC Manual Prospec 82.83 53 P P 03 05 59.2 +2.0
baz=302,SNR=9.1
R11A Troy Canyon, C 82.90 50 P P 03 05 59.2 +1.8
baz=303,SNR=5.3
BISRR Bisoca 82.93 319 ⇑P P 03 05 58.8 +1.5
TPAW Teton Pass 82.98 43 lAmb lAmb 03 06 00.8
comp=Z,4.0nm,0.7s
LRMC Laurel Mtn Rad 83.00 53 P P 03 05 59.8 +1.9
baz=302,SNR=6.8
RLMT Red Lodge 83.02 41 lAmb lAmb 03 06 00.4
comp=Z,5.6nm,0.6s
RLMT Red Lodge 83.02 41 P P 03 05 60.0 +2.0
baz=306
FURC Furnace Creek, 83.05 52 P P 03 05 60.0 +2.1
baz=302,SNR=8.5
EDW2 Edwards Air Fo 83.10 54 P P 03 06 00.5 +2.2
baz=302,SNR=8.6
OZUR 83.12 320 ⇑P P 03 05 59.5 +1.3
TPNV Topopah Spring 83.21 51 lAmb lAmb 03 06 01.6
comp=Z,8.8nm,0.9s
TPNV Topopah Spring 83.21 51 P P 03 06 00.9 +1.9
baz=303,SNR=15
KOLS Kolonicke sedl 83.29 324 *eP* P 03 05 58.9 0.0
KOLS Kolonicke sedl 83.29 324 *eP* P 03 05 58.9 0.0
MLR Muntele Rosu 83.39 319 ⇑P P 03 06 00.9 +1.2
MLR Muntele Rosu 83.39 319 ⇑P P 03 06 00.9 +1.2
DOPR Dopca 83.42 320 ⇑P P 03 06 01.1 +1.4
DUG Dugway, Tooele 83.69 47 P P 03 06 02.8 +1.5
DUG pmax pmax
comp=Z,5.0nm,0.7s
DUG Dugway, Tooele 83.69 47 P P 03 06 02.8 +1.5
DUG lAmb lAmb 03 06 03.7
comp=Z,5.0nm,0.7s
DUG Dugway, Tooele 83.69 47 P P 03 06 03.3 +2.0
baz=304
GSC Goldstone, Bar 83.70 53 lAmb lAmb 03 06 03.9
comp=Z,5.6nm,0.8s
GSC Goldstone, Bar 83.70 53 P P 03 06 03.3 +1.9
baz=302,SNR=7.3
SHOC Shoshone, Teco 83.75 52 P P 03 06 03.4 +1.8
baz=303
VOIR 83.93 320 ⇑P P 03 06 03.1 +0.8
VOIR 83.93 320 ⇑P P 03 06 03.1 +0.8
SHPR Sheep Range 84.18 51 lAmb lAmb 03 06 06.7
comp=Z,5.1nm,1.0s
ARR Arges 84.21 320 ⇑P P 03 06 04.5 +0.8
BW06 Boulder Array 84.23 43 P P 03 06 05.4 +1.4
baz=306
PDAR Pinedale Array 84.23 43 P P 03 06 05.0 +1.0
comp=Z,1.9nm,0.8s,baz=312,slow=2.3,SNR=17
TUQ Turquoise Moun 84.24 52 P P 03 06 06.2 +2.1
baz=303
HEC Hector,Ludlow 84.28 53 P P 03 06 06.3 +2.0
baz=303,SNR=5.6
MURC Murrieta 84.33 54 P P 03 06 06.0 +1.5
baz=302
GMRC Granite Mounta 84.77 53 P P 03 06 08.5 +1.8
baz=303
PFO Pinyon Flats O 84.85 54 P P 03 06 08.6 +1.5
PFO pmax pmax
comp=Z,6.0nm,0.9s
PFO Pinyon Flats O 84.85 54 P P 03 06 08.7 +1.6
comp=Z,5.6nm,0.9s,baz=329,slow=4.0,SNR=12
PFO Pinyon Flats O 84.85 54 P P 03 06 08.6 +1.5
PFO lAmb lAmb 03 06 09.6
comp=Z,5.8nm,0.9s
PFO Pinyon Flats O 84.85 54 P P 03 06 08.9 +1.8
baz=303,SNR=7.4
XPFO Pion Flat 84.85 54 P P 03 06 08.7 +1.6
XPFO lAmb lAmb 03 06 09.6
comp=Z,5.4nm,0.8s
ELND Elena 84.96 317 ⇑P P 03 06 08.2 +0.8
BELC Belle Mtn. Jos 84.96 54 P P 03 06 09.2 +1.5
baz=303,SNR=5.9
MONP2 Monument Peak 85.26 55 P P 03 06 11.0 +1.7
baz=303,SNR=5.6
VYHS Vyhne 85.32 325 *eP* P 03 06 08.8 -0.2
VYHS Vyhne 85.32 325 *eP* P 03 06 08.8 -0.2
IRM Iron Mountain 85.47 53 P P 03 06 12.2 +2.2
baz=303
RDMU Red Mountain 85.50 45 P P 03 06 11.7 +1.4
BC3 Big Chuckawall 85.53 54 P P 03 06 12.2 +1.8
baz=303
IKP In-Ko-Pah, Jac 85.61 55 P P 03 06 12.8 +2.0
baz=303
K22A Casper 86.09 42 lAmb lAmb 03 06 15.1
comp=Z,4.0nm,0.7s
K22A Casper 86.09 42 P P 03 06 14.5 +1.4
baz=308
N23A Red Feather La 87.51 43 lAmb lAmb 03 06 23.0
comp=Z,3.9nm,0.8s
N23A Red Feather La 87.51 43 P P 03 06 22.3 +2.4
baz=308
GERES GERESS Array B 87.57 327 P P 03 06 19.2 -0.6
comp=Z,0.3nm,0.3s,baz=44,slow=6.4,SNR=4.7
SDCO Great Sand Dun 89.73 46 P P 03 06 32.4 +2.0
baz=309
T25A Trinidad 90.79 46 lAmb lAmb 03 06 39.3
comp=Z,2.6nm,0.8s
T25A Trinidad 90.79 46 P P 03 06 37.1 +1.9
baz=309
ANMO Albuquerque 90.85 48 P P 03 06 37.3 +1.8
ANMO pmax pmax
comp=Z,3.0nm,0.8s
ANMO Albuquerque 90.85 48 P P 03 06 38.1 +2.6
comp=Z,3.0nm,0.8s,baz=306,slow=4.0,SNR=12
ANMO Albuquerque 90.85 48 P P 03 06 37.3 +1.8
ANMO lAmb lAmb 03 06 38.8
comp=Z,2.7nm,0.8s
ANMO Albuquerque 90.85 48 P P 03 06 38.0 +2.6
baz=308
TXAR Lajitas Array 96.19 51 P P 03 07 01.1 +1.3
comp=Z,0.8nm,0.6s,baz=289,slow=2.8,SNR=14
LPAZ La Paz 151.80 67 PKPbc **PKiKP** 03 13 26.7 +1.5
comp=Z,1.5nm,0.5s,baz=341,slow=3.6,SNR=8.1
SIV San Ignacio 157.05 57 PKPab **PKPab** 03 13 58.2 +0.5
comp=Z,1.2nm,0.5s,baz=298,slow=4.9,SNR=7.9

NEIC ***18*** *03:03:22.2±2.0, 17°.51N±0°.09×91°.59W±0°.07, h92km±9km, Error ellipse: s-maj=13.3km s-min=8.9km az=186.0*

MEX 18 03:03:20.4±0.6, 17°.76N×91°.43W, h20km, MD4.3, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGIG		**1.89**	**239**	*eP*		Pn 03 03 48.9	-2.6
TGIG				*eS*		Sn 03 04 10.4	-4.4
TGIG		**1.89**	**239**			Pn 03 03 48.9	-2.6
TGIG						Sn 03 04 10.4	-4.4
PCIG		**2.66**	**220**	*eP*		Pn 03 03 59.5	-2.7
PCIG				*i* S		Sn 03 04 29.8	-4.1
PCIG		**2.66**	**220**			Pn 03 03 59.5	-2.7
CMIG	**Matias Romero**	**3.36**	**259**	*eP*		Pn 03 04 09.2	-2.6
CMIG				*i* S		Sn 03 04 48.1	-3.1
CMIG	**Matias Romero**	**3.36**	**259**			Pn 03 04 11.4	-0.4
TLIG	**Tlapa**	**6.81**	**269**	Pn		Pn 03 04 57.6	-1.7
C36M	**Paulatuk**	**55.38**	**347**			S 03 20 30.1	-5.8

ROM 18 03:03:55.1±0.1, 43°.391N±0°.002×12°.502E±0°.003, h7km, ML1.0/1, Error ellipse: s-maj=0.2km s-min=0.0km az=28.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**116**	P	Pg	03 03 57.0	+0.1
ATFO				S	Sg	03 03 58.3	+0.2
ATFO					AML	AML	
	comp=E,413μm,0.5s						
ATFO					AML	AML	
	comp=N,468μm,0.3s						
ATFO					AML	AML	
	comp=N,468μm,0.3s						
ATVO	**AVT- Monte Val**	**0.07**	**263**	P	Pg	03 03 57.2	+0.2
ATVO				S	Sg	03 03 58.6	+0.3
ATVO					AML	AML	
	comp=E,169μm,0.3s						
ATVO					AML	AML	
	comp=N,154μm,0.8s						
ATPI	**Pietralunga -**	**0.09**	**309**	P	Pg	03 03 57.7	+0.3
ATPI				S	Sg	03 03 59.6	+0.7
MURB	**Monte Urbino**	**0.13**	**173**	P	Pg	03 03 58.5	+0.6
MURB				S	Sg	03 04 00.7	+0.9
PIEI	**Pieia**	**0.15**	**9**	P	Pg	03 03 58.8	+0.6
PIEI				S	Sg	03 04 01.5	+1.1
FRON	**Frontone**	**0.21**	**52**	P	Pg	03 03 59.8	+0.5
FRON				S	Sg	03 04 03.4	+1.3
SSFR	**Montelago di S**	**0.21**	**77**	P	Pg	03 03 59.8	+0.5
SSFR				S	Sg	03 04 03.4	+1.3
ATTE	**AVT- Monte Tez**	**0.22**	**209**	P	Pg	03 04 00.2	+0.6
ATTE				S	Sg	03 04 03.8	+1.3
BADI	**Badiali**	**0.22**	**302**	P	Pg	03 04 00.1	+0.6
BADI				S	Sg	03 04 04.1	+1.6
BADI					AML	AML	
	comp=E,78μm,0.7s						
BADI					AML	AML	
	comp=N,122μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.23**	**154**	P	Pg	03 04 00.5	+0.8
ATCC				S	Sg	03 04 04.6	+1.8
TRIF	**Trifonti**	**1.20**	**257**	S	Sg	03 04 31.0	-2.8

NEIC ***18*** *03:04:02.7±1.1, 3°.86N±0°.06×77°.39W±0°.07, h10km±3km, mb4.3/16, Error ellipse: s-maj=11.5km s-min=8.1km az=119.0*

RSNC ***18*** *03:04:03.4±1.1, 3°.79N×77°.15W, h0km±5km, ML3.6, Mw3.8*

IDC ***18*** *03:04:09.4±2.3, 3°.89N×77°.02W, h82km±22km, mb3.5/14, mb1 3.7/17, mb1mx3.6/46, mbtmp3.9/17, MS3.0/5, Ms1 3.0/5, ms1mx2.8/22, Error ellipse: s-maj=23.1km s-min=13.4km az=70.0*

ISC 18 03:04:03.8±0.9, 3°.84N±0°.04×77°.27W±0°.04, h27km±6km, n74, σ1°78/74, mb4.1/20, MS2.9/4, 5C-1D, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MALC	**Bahia Malaga**	**0.19**	**339**	⇑*iP*	**Pb**	**03 04 09.2**	**-0.4**
MALC				*eS*	**Sb**	**03 04 14.3**	**+0.9**
MALC				*i*		03 04 18.3	
	comp=Z,25μm,0.5s						
YOTC	**Yotoco, Valle**	**0.93**	**81**	⇑*iP*	**Pb**	**03 04 18.6**	**-2.9**
YOTC				*eS*	**Sb**	**03 04 30.6**	**-3.0**
YOTC				*i*		03 04 31.3	
	comp=Z,834nm,0.3s						
YOTC				*i*		03 04 40.3	
	comp=Z,999nm,0.5s						
GR1C	**Gorgona, Isla**	**1.22**	**227**	*eP*	**Pn**	**03 04 23.1**	**-2.1**
GR1C				*i*		03 04 52.7	
	comp=Z,205nm,0.5s						
PLMC	**San Jos del P**	**1.45**	**43**	*eP*	**Pn**	**03 04 26.1**	**-2.2**
PLMC				*i*		03 04 47.3	
	comp=Z,4μm,0.2s						
PCON	**Cinco Dias**	**1.73**	**150**	⇑*iP*	**Pn**	**03 04 32.9**	**+0.2**
PCON				*eS*	**Sn**	**03 04 55.3**	**+1.1**
PCON				*i*		03 04 56.6	
	comp=Z,1μm,0.6s						
PCON				*i*		03 05 01.6	
	comp=Z,1μm,0.5s						
BBAC	**Balboa, Cauca**	**1.80**	**179**	*eP*	**Pn**	**03 04 31.8**	**-1.6**
BBAC				*i*		03 05 04.6	
	comp=Z,483nm,0.5s						
BBAC				*i*		03 05 08.4	
	comp=Z,446nm,0.5s						
SOTA	**Rioblanco**	**1.81**	**159**	⇑*iP*	**Pn**	**03 04 33.7**	**0.0**
SOTA				*eS*	**Sn**	**03 04 57.3**	**+1.1**
SOTA				*i*		03 05 02.3	
	comp=Z,1μm,0.7s						
SOTA				*i*		03 05 03.2	
	comp=Z,1μm,0.6s						
ORTC	**Ortega, Tolima**	**2.02**	**88**	*eP*	**Pn**	**03 04 36.7**	**+0.5**
ORTC				*eS*	**Sn**	**03 05 02.4**	**+1.8**
ORTC				*i*		03 05 11.8	
	comp=Z,398nm,1.0s						
ORTC				*i*		03 05 13.0	
	comp=Z,422nm,0.7s						
TOLC	**Tolima**	**2.08**	**69**	*eP*	**Pn**	**03 04 36.8**	**-0.5**
TOLC				*i*		03 05 03.3	
	comp=Z,166nm,0.8s						
BETC	**Betania**	**2.15**	**122**	*eP*	**Pn**	**03 04 39.7**	**+1.6**
BETC				*i*		03 05 21.6	
	comp=Z,68nm,0.6s						
CRUC	**La Cruz**	**2.27**	**172**	*eP*	**Pn**	**03 04 40.3**	**+0.3**
CRUC				*i*		03 05 31.7	

	comp=Z,313nm,0.6s								
GUY2C	**Guyana, Caldas**	**2.35**	**54**	*eP*		**Pn**	**03 04 41.2**	**+0.1**
GUY2C				*i*			03 05 16.2	
	comp=Z,402nm,0.5s								
GUY2C				*i*			03 05 16.4	
	comp=Z,373nm,0.5s								
CBOC	**Ciudad Bolivar**	**2.37**	**32**	*eP*		**Pn**	**03 04 39.4**	**-1.7**
CBOC				*i*			03 05 17.1	
	comp=Z,416nm,0.7s								
CBOC				*i*			03 05 17.8		
	comp=Z,379nm,0.5s								
TUMC	**Tumaco**	**2.47**	**216**	Pn		**Pn**	**03 04 42.0**	**-0.3**
FLOC	**Florencia**	**2.76**	**144**⇑	*eP*		**Pn**	**03 04 47.6**	**+1.3**
FLOC				*eS*		**Sn**	**03 05 20.2**	**+1.3**
FLOC				*i*			03 05 36.1	
	comp=Z,266nm,1.2s								
FLOC	**Florencia**	**2.76**	**144**			**Pn**	**03 04 47.8**	**+1.4**
HELC	**Santa Helena**	**2.91**	**36**	*eP*		**Pn**	**03 04 48.8**	**0.0**
HELC				*i*			03 05 32.5	
	comp=Z,158nm,0.6s								
NORC	**Norcasia**	**2.94**	**54**	*eP*		**Pn**	**03 04 51.0**	**+2.1**
NORC				*i*			03 05 34.0	
	comp=Z,140nm,0.5s								
ROSC	**El Rosal**	**3.10**	**71**	P		**Pn**	**03 04 53.8**	**+2.3**
	comp=Z,16nm,0.3s,baz=210,slow=7.1,SNR=14								
ROSC	**El Rosal**	**3.10**	**71**	*eP*		**Pn**	**03 04 53.6**	**+2.2**
ROSC				*i*			03 05 50.3	
	comp=Z,123nm,1.4s								
ROSC	**El Rosal**	**3.10**	**71**			**Pn**	**03 04 53.6**	**+2.2**
VILC	**Villavicencio,**	**3.58**	**85**	*eP*		**Pn**	**03 05 00.7**	**+3.0**
VILC				*eS*		**Sb**	**03 05 45.5**	**-4.1**
VILC				*i*			03 05 47.2	
	comp=Z,141nm,0.5s								
CHIC	**Chingaza**	**3.62**	**77**	*eP*		**Pn**	**03 05 00.3**	**+1.8**
CHIC				*i*			03 05 49.0	
	comp=Z,67nm,0.5s								
OTAV	**Otavalo**	**3.76**	**198**			**Pn**	**03 04 59.3**	**-1.3**
MACC	**Macarena, Meta**	**3.81**	**116**	*eP*		**Pn**	**03 05 01.8**	**+1.0**
MACC				*i*			03 06 06.4	
	comp=Z,146nm,1.1s								
MACC				*i*			03 06 18.8		
	comp=Z,100nm,0.6s								
PTBC	**PUERTO BERRIO,**	**3.88**	**46**	*eP*		**Pn**	**03 05 02.8**	**+1.0**
PTBC				*eS*		**Sn**	**03 05 48.7**	**+2.2**
PTBC				*i*			03 05 53.2	
	comp=Z,107nm,0.8s								
PTBC				*i*			03 05 54.1		
	comp=Z,80nm,0.7s								
ZARC	**Zaragoza, Cauc**	**4.35**	**33**	*eP*		**Pn**	**03 05 10.6**	**+2.3**
ZARC				*i*			03 06 10.5	
	comp=Z,63nm,0.8s								
ZARC				*i*			03 06 11.6		
	comp=Z,46nm,0.5s								
PTLC	**Puerto Leguiza**	**4.40**	**146**⇓	*eP*		Pn	03 05 13.9	+5.0
PTLC				*e*			03 05 34.9	
PTLC				*i*			03 06 36.3	
	comp=Z,54nm,0.9s								
RUSC	**La Rusia**	**4.64**	**64**	*eP*		**Pn**	**03 05 15.7**	**+3.0**
RUSC				*i*			03 06 15.6	
	comp=Z,40nm,1.2s								
RUSC	**La Rusia**	**4.64**	**64**			**Pn**	**03 05 14.8**	**+2.1**
SMLC	**San Martn de**	**5.87**	**33**	*eP*		**Pn**	**03 05 29.9**	**+0.8**
SMLC				*i*			03 07 05.9	
	comp=Z,21nm,1.2s								
SDV	**Santo Domingo**	**8.29**	**52**	P		**Pn**	**03 06 04.5**	**+2.1**
	comp=Z,1.1nm,0.3s,baz=269,slow=10,SNR=7.1								
SDV				S		**Sn**	**03 07 39.3**	**+4.0**
	comp=Z,1.8nm,0.3s,baz=169,slow=23,SNR=3.1								
SDV	**Santo Domingo**	**8.29**	**52**			**Pn**	**03 06 03.9**	**+1.4**
ATAH	**Atahualpa**	**10.96**	**186**	P		Pn	03 06 43.8	+4.5
	comp=Z,0.4nm,0.3s,baz=1.2,slow=6.9,SNR=3.5								
ATAH				LR		LR	03 11 45.4		
	comp=Z,58nm,18.3s,baz=5.1,slow=41								
SAML	**Samuel**	**18.93**	**132**	P		**Pn**	**03 08 28.6**	**+4.9**
LPAZ	**La Paz**	**21.94**	**156**	P		**P**	**03 08 57.0**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=321,slow=14,SNR=4.5								
LPAZ				LR		LR	03 18 12.3		
	comp=Z,67nm,20.1s,baz=24,slow=38								
MNMC	**Minye Minye**	**24.04**	**162**	P		**P**	**03 09 20.3**	**+3.1**
MNMC				IAmb		IAmb	03 09 22.7		
	comp=Z,7.2nm,0.8s								
SIV	**San Ignacio**	**25.39**	**141**	P		**P**	**03 09 27.5**	**-1.8**
	comp=Z,1.1nm,0.8s,baz=2.2,slow=9.4,SNR=5.2								
V48A	**Smith Brothers**	**32.95**	**346**	P		**P**	**03 10 37.1**	**+0.8**
BDFB	**Brasilia**	**34.83**	**124**	LR		LR	03 27 20.3		
	comp=Z,18nm,20.4s,baz=120,slow=40								
TXAR	**Lajitas Array**	**35.63**	**318**	P		**P**	**03 11 00.9**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=146,slow=10,SNR=3.9								
TXAR				PcP		**PcP**	**03 13 28.5**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=145,slow=6.0,SNR=6.1								
TXAR				LR		LR	03 27 04.1		
	comp=Z,18nm,19.3s,baz=0.0,slow=38								
CPUP	**Villa Florida**	**35.66**	**148**	LR		LR	03 27 36.0		
	comp=Z,29nm,18.9s,baz=356,slow=40								
FNO	**Franklin**	**36.40**	**332**	P		**P**	**03 11 06.8**	**+0.7**
ROC1	**El Roble**	**37.09**	**171**	P		P	03 11 18.2	+5.9
MSTX	**Muleshoe**	**38.24**	**325**	P		**P**	**03 11 21.8**	**-0.2**
MSTX				IAmb		IAmb	03 11 22.8		
	comp=Z,7.0nm,1.1s								
MNTX	**Cornudas Mount**	**38.29**	**320**	P		**P**	**03 11 22.8**	**+0.6**
ANMO	**Albuquerque**	**41.11**	**322**	P		**P**	**03 11 47.1**	**+1.2**
	comp=Z,2.7nm,0.7s,baz=126,slow=9.4,SNR=15								
ANMO	**Albuquerque**	**41.11**	**322**	P		**P**	**03 11 46.9**	**+1.0**
ANMO				IAmb		IAmb	03 11 47.7		
	comp=Z,3.7nm,0.8s								
SDCO	**Great Sand Dun**	**42.49**	**326**	P		**P**	**03 11 58.3**	**+1.1**
PLCA	**Paso Flores**	**44.78**	**173**	P		**P**	**03 12 15.1**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=23,slow=11,SNR=4.0								
U15A	**North Rim**	**45.71**	**320**	P		**P**	**03 12 24.9**	**+1.8**
U15A				IAmb		IAmb	03 12 25.1		
	comp=Z,4.0nm,1.2s								
SRU	**San Rafael Swe**	**46.30**	**324**	P		**P**	**03 12 28.4**	**+0.9**
TCUT	**Toone Canyon**	**48.13**	**325**	P		**P**	**03 12 43.0**	**+1.1**
PDAR	**Pinedale Array**	**48.23**	**328**	P		**P**	**03 12 42.2**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=123,slow=13,SNR=3.7								
SPUT	**South Promonto**	**48.85**	**325**	P		**P**	**03 12 47.9**	**+0.6**
ULM	**Lac du Bonnet**	**48.85**	**344**	P		**P**	**03 12 45.4**	**-1.6**
	comp=Z,2.3nm,0.6s,baz=150,slow=7.1,SNR=6.6								
ULM	**Lac du Bonnet**	**48.85**	**344**	IAmb		IAmb	03 12 45.8		
	comp=Z,2.3nm,0.7s								
NVAR	**Mina Array Bea**	**50.78**	**318**	P		**P**	**03 13 02.8**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=131,slow=6.7,SNR=14								
NVAR				PcP		**PcP**	**03 14 19.1**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=124,slow=4.6,SNR=9.3								
SCHQ	**Schefferville**	**51.54**	**8**	P		**P**	**03 13 06.7**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=195,slow=8.6,SNR=4.9								
FCC	**Fort Churchill**	**56.33**	**350**	IAmb		IAmb	03 13 41.2		
	comp=Z,3.0nm,0.8s								
FRB	**Frobisher Bay**	**60.12**	**4**	P		**P**	**03 14 07.1**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=210,slow=4.6,SNR=5.5								
YKA	**Yellowknife Ar**	**64.71**	**342**	P		**P**	**03 14 38.0**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=135,slow=6.3,SNR=49								
TIC	**Toumodi**	**71.95**	**84**	*e*PKP2		P	03 15 18.7	-6.9
LIC	**Lamto**	**71.96**	**85**	*e*PKP2		P	03 15 21.0	-4.7
	comp=Z,12nm,0.5s								
KIC	**Kosan Boka**	**72.24**	**85**	*e*PKP2		P	03 15 19.0	-8.4
	comp=Z,6.1nm,0.5s								
INK	**Inuvik**	**74.47**	**341**	P		**P**	**03 15 38.9**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=109,slow=5.2,SNR=9.2								
RAGM	**Ragged Mountai**	**75.64**	**332**	P		**P**	**03 15 49.2**	**+2.8**
ILAR	**Eielson Array**	**77.94**	**336**	P		**P**	**03 15 58.5**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=106,slow=4.5,SNR=13								
TORD	**Torodi Ar. Bea**	**78.40**	**77**	P		**P**	**03 16 00.4**	**-2.3**
	comp=Z,0.4nm,0.5s,baz=285,slow=6.6,SNR=7.1								
MKAR	**Makanchi Array**	**126.45**	**17**	PKP		**PKPdf**	**03 23 03.2**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=301,slow=1.4,SNR=4.2								
KSH	**Kashi**	**130.32**	**27**	*e*PKP		**PKiKP**	**03 23 14.1**	**+0.9**
LZH	**Lanzhou**	**140.27**	**359**	*e*PKP		**PKPdf**	**03 23 31.0**	**-0.1**
LZH				pPKP		PKiKP	03 23 34.1	+0.5
LZH				sPKP			03 23 35.6	
ASAR	**Alice Springs**	**144.03**	**234**	PKP		PKPab	03 23 34.4	-1.0
	comp=Z,0.6nm,0.5s,baz=119,slow=3.7,SNR=12								
WRA	**Warramunga Arr**	**145.28**	**240**	PKPbc		**PKPbc**	**03 23 38.9**	**-1.0**
	comp=Z,1.0nm,0.9s,baz=112,slow=3.2,SNR=6.5								

*IDC **18** 03:25:19.7±5.2, 36°22.N×71°.59E, h160km±35km, mb3.4/2, mb1 3.3/6, mb1mx2.9/56, mbtmp3.8/6, MS2.8/1, Ms1 2.8/1, ms1mx2.2/32, Error ellipse: s-maj=73.8km s-min=23.7km az=145.0*

*NNC **18** 03:25:31.8±3.5, 37°.30N×71°.36E, h213km±51km, mb2.7, mpv4.0, Error ellipse: s-maj=35.9km s-min=21.8km az=22.0*

ISC 18 03:25:24.0±0.9, 36°.81N±0°.07×71°.46E±0°.08, h200km, n30, σ1s99/32, 2C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IUG	**luzhnay**	**5.45**	**349**	Pg		**Pn**	**03 26 46.6**	**+2.4**
	3.4nm,0.2s							
IUG				Lg		Lg	03 27 47.3	
	113nm,0.5s							
AML	**Almayashu**	**5.59**	**17**	P		**Pn**	**03 26 47.9**	**+1.6**
	SNR=33							
JBG	**Jabagly**	**5.65**	**353**	Pg		**Pn**	**03 26 50.2**	**+3.3**
	15nm,0.1s							
JBG				Lg		Lg	03 27 53.6	
	25nm,0.3s							
UCH	**Uchtor**	**5.91**	**23**	P		**Pn**	**03 26 51.8**	**+1.4**
	SNR=28							
MRKS	**Merke**	**6.08**	**12**	Pg		**Pn**	**03 26 54.1**	**+1.7**
	9.4nm,0.3s							
EKS2	**Erkin-Say**	**6.11**	**16**	P		**Pn**	**03 26 55.3**	**+2.6**
	SNR=14							
AAK	**Ala-Archa**	**6.27**	**21**	P		**Pn**	**03 26 57.1**	**+2.2**
	3.1nm,0.3s,baz=195,slow=12,SNR=40							
AAK				S		**Sn**	**03 28 06.6**	**-0.3**
	0.8nm,0.3s,baz=118,slow=20,SNR=10							
AAK	**Ala-Archa**	**6.27**	**21**	P		**Pn**	**03 26 57.0**	**+2.2**
	SNR=17							
AAK	**Ala-Archa**	**6.27**	**21**	P		**Pn**	**03 26 56.9**	**+2.0**
	5.9nm,0.5s							
AAK				⇓S		**Sn**	**03 28 05.9**	**-1.0**
	7.7nm,0.5s							
KK31	**Karatay Array**	**6.33**	**354**	⇑P		**Pn**	**03 26 57.1**	**+1.7**
	0.8nm,0.2s,baz=173,slow=12,SNR=105							
KK31				⇓S		**Sn**	**03 28 05.5**	**-2.6**
	21nm,0.6s,baz=174,slow=19							
CHMS	**Chumysh**	**6.68**	**21**	P		**Pn**	**03 27 01.8**	**+1.7**
	SNR=5.2							
KST	**Kastek**	**7.12**	**28**	Pg		**Pn**	**03 27 07.4**	**+1.5**
	3.7nm,0.3s							
KST				Lg		Lg	03 28 23.6	
	5.1nm,0.4s							
GEYT	**Alibeck**	**10.68**	**280**	P		**Pn**	**03 27 51.3**	**-0.7**
	0.7nm,0.3s,baz=98,slow=9.1,SNR=6.3							
MKAR	**Makanchi Array**	**12.82**	**36**	P		**P**	**03 28 22.1**	**-0.5**
	0.1nm,0.3s,baz=225,slow=14,SNR=6.4							
DANN	**Dangsing**	**13.35**	**126**	*eP*		**P**	**03 28 25.4**	**-3.6**
	11nm,0.2s							
KOLN	**Koldanda**	**13.65**	**128**	*eP*		**P**	**03 28 30.4**	**-1.8**
	7.6nm,0.3s							
GKN	**Gorkha**	**14.16**	**125**	*eP*		**P**	**03 28 35.9**	**-1.9**
	21nm,0.3s							
KKN	**Kakani**	**14.73**	**124**	*eP*		**P**	**03 28 42.7**	**-1.4**
DMN	**Daman**	**14.73**	**125**	*eP*		**P**	**03 28 43.5**	**-0.7**
	16nm,0.6s							
PKIN	**Phulchoki**	**14.95**	**124**	*eP*		**P**	**03 28 45.9**	**-0.7**
	16nm,0.4s							
PKI	**Pulchoki**	**14.96**	**124**	*eP*		**P**	**03 28 46.0**	**-0.8**
	4.4nm,0.6s							
AB31	**Akbulak array**	**15.00**	**330**	P		**P**	**03 28 49.4**	**+2.6**
	0.2nm,0.3s,baz=143,slow=12,SNR=28							
AB31				⇑S		**S**	**03 31 27.9**	**-4.6**
	1.0nm,0.5s							
GUN	**Gumba**	**15.05**	**122**	*eP*		**P**	**03 28 47.2**	**-0.7**
	15nm,0.5s							
JIRN	**Jiri**	**15.43**	**122**	*eP*		**P**	**03 28 52.0**	**0.0**
	31nm,0.3s							
TAPN	**Taplejung**	**16.67**	**120**	*eP*		**Pn**	**03 29 07.2**	**+0.5**
ODAN	**Odare**	**16.76**	**122**	*eP*		**Pn**	**03 29 08.9**	**+1.2**
	15nm,0.6s							
ZALV	**Zalesovo Beam**	**19.48**	**24**	P		**Pn**	**03 29 39.2**	**0.0**
	0.7nm,0.3s,baz=204,slow=13,SNR=5.2							
MMAI	**Mount Meron Ar**	**29.70**	**273**	LR		LR	03 44 37.9	
	comp=Z,17nm,18.1s,baz=185,slow=39							
ARCES	**ARCESS Array B**	**41.01**	**337**	P		P	03 32 51.3	+4.3
	2.4nm,0.9s,baz=117,slow=9.3,SNR=3.5							
TORD	**Torodi Ar. Bea**	**66.10**	**269**	P		**P**	**03 35 50.5**	**+0.6**
	0.4nm,0.5s,baz=47,slow=5.8,SNR=10							

IDC 18 03:27:01.9±2.1, 19°.57N×144°.81E, h0km, mb3.6/4, mb1 4.0/4, mb1mx3.4/55, mbtmp3.6/4, Error ellipse: s-maj=191.4km s-min=25.2km az=114.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.59**	**195**	P		P	03 34 43.8	+0.4
	0.7nm,0.5s,baz=15,slow=8.6,SNR=12							
ASAR	**Alice Springs**	**44.27**	**194**	P		P	03 35 12.8	-0.6
	0.7nm,0.5s,baz=15,slow=6.9,SNR=12							
YKA	**Yellowknife Ar**	**77.61**	**28**	P		P	03 39 00.3	+0.5
	0.1nm,0.5s,baz=283,slow=5.1,SNR=4.1							
NVAR	**Mina Array Bea**	**83.26**	**52**	P		P	03 39 30.5	-0.5
	0.7nm,0.8s,baz=270,slow=6.2,SNR=5.0							

*INET **18** 03:35:25.9, 11°.94N×88°.96W, h15km, ML3.0*

*UCR **18** 03:35:27.6±1.2, 12°.04N×88°.95W, h55km±53km, ML3.6, mb4.2(NEIC)*

*SNET **18** 03:35:27.7±1.2, 12°.03N×88°.95W, h35km±999km, ML3.7*

*NEIC **18** 03:35:28.5±1.8, 12°.01N±0°.09×88°.87W±0°.07, h35km±8km, mb4.2/15, Error ellipse: s-maj=14.9km s-min=7.4km az=212.0*

*IDC **18** 03:35:28.6±3.4, 11°.92N×88°.88W, h39km±28km, mb3.3/4, mb1 3.8/8, mb1mx3.5/37, mbtmp3.6/8, ML3.4/4, MS2.9/5, Ms1 2.9/5, ms1mx2.6/22, Error ellipse: s-maj=56.8km s-min=21.7km az=36.0*

*GCG **18** 03:35:29.7±0.5, 12°.05N×89°.41W, h0km±96km, MD4.1*

ISC 18 03:35:29.0±1.1, 12°.05N±0°.09×88°.86W±0°.04, h40km±9km, n84, σ1s06/115, mb4.1/8, MS2.8/4, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ALJI	**Alcalda de J**	**1.30**	**13**	*eP*		**Pn**	**03 35 50.1**	**-0.6**
ALJI				*eS*		**Sn**	**03 36 07.6**	**+0.7**
LCY	**Lacayo**	**1.47**	**22**	*eP*		**Pn**	**03 35 52.7**	**-0.5**
LCY	**Lacayo**	**1.47**	**22**	*eP*		**Pn**	**03 35 52.7**	**-0.5**
COEB	**Comit de Eme**	**1.47**	**13**	*eP*		**Pn**	**03 35 52.4**	**-0.8**
TECA	**Tecapa**	**1.47**	**14**	*eP*		**Pn**	**03 35 52.7**	**-0.6**
TECA				*eS*		**Sn**	**03 36 13.2**	**+1.7**
TECA	**Tecapa**	**1.47**	**14**	*eP*		**Pn**	**03 35 52.7**	**-0.6**
TECA				*eS*		**Sn**	**03 36 13.2**	**+1.7**
VSM	**San Miguel**	**1.48**	**23**	*eP*		**Pn**	**03 35 53.5**	**+0.1**
VSM	**San Miguel**	**1.48**	**23**	*eP*		**Pn**	**03 35 53.5**	**+0.1**
PACA	**Pacayal**	**1.50**	**20**	*eP*		**Pn**	**03 35 53.0**	**-0.7**
PACA				*eS*		**Sn**	**03 36 13.6**	**+1.6**
PACA	**Pacayal**	**1.50**	**20**	*eP*		**Pn**	**03 35 53.0**	**-0.7**
PACA				*eS*		**Sn**	**03 36 13.6**	**+1.6**
BLLM	**Bellamira**	**1.51**	**24**	*eP*		**Pn**	**03 35 53.2**	**-0.5**
BLLM	**Bellamira**	**1.51**	**24**	*eP*		**Pn**	**03 35 53.2**	**-0.5**
COEG	**Centro de Oper**	**1.56**	**359**	*eP*		**Pn**	**03 35 53.2**	**-1.2**
COEG				IAML			03 36 19.3	
	comp=Z,616nm,0.3s							
LCND	**La Caada**	**1.57**	**37**	*eP*		**Pn**	**03 35 53.4**	**-1.0**
LCND	**La Caada**	**1.57**	**37**	*eP*		**Pn**	**03 35 53.4**	**-1.0**
LFRS	**El Faro**	**1.57**	**353**	*eP*		**Pn**	**03 35 53.4**	**-1.2**
LFRS				*eS*		**Sn**	**03 36 13.6**	**-0.2**
CNCH	**Conchagua**	**1.57**	**39**	*eP*		**Pn**	**03 35 53.5**	**-1.1**
CNCH	**Conchagua**	**1.57**	**39**	*eP*		**Pn**	**03 35 53.5**	**-1.1**
UESV	**Universidad de**	**1.57**	**3**	*eP*		**Pn**	**03 35 54.0**	**-0.6**
UESV	**Universidad de**	**1.57**	**3**	*eP*		**Pn**	**03 35 54.0**	**-0.6**
PAVA	**Las Pavas**	**1.65**	**357**	*eP*		**Pn**	**03 35 54.8**	**-0.9**
PAVA				*eS*		**Sn**	**03 36 16.0**	**+0.3**
PAVA				IAML			03 36 20.0	
	comp=Z,808nm,0.3s							
PAVA	**Las Pavas**	**1.65**	**357**	*eP*		**Pn**	**03 35 54.8**	**-0.9**
PAVA				*eS*		**Sn**	**03 36 16.0**	**+0.3**
PAVA				IAML			03 36 20.0	
	comp=Z,808nm,0.3s							
SNET	**Serv Nac Est T**	**1.66**	**347**	*eP*		**Pn**	**03 35 54.9**	**-0.9**
SNET				*eS*		**Sn**	**03 36 15.7**	**-0.3**
SNET				IAML			03 36 19.1	
	comp=Z,921nm,0.3s							
SNET	**Serv Nac Est T**	**1.66**	**347**	*eP*		**Pn**	**03 35 54.9**	**-0.9**
SNET				*eS*		**Sn**	**03 36 15.7**	**-0.3**
SNET				IAML			03 36 19.1	
	comp=Z,921nm,0.3s							
SNET	**Serv Nac Est T**	**1.66**	**347**			**Pn**	**03 35 54.6**	**-1.2**
OPAM	**Oficina de Pla**	**1.68**	**349**	*eP*		**Pn**	**03 35 55.4**	**-0.7**
OPAM				*eS*		**Sn**	**03 36 17.2**	**+0.8**
OPAM	**Oficina de Pla**	**1.68**	**349**	*eP*		**Pn**	**03 35 55.4**	**-0.7**
OPAM				*eS*		**Sn**	**03 36 17.2**	**+0.8**
LBRS	**Las Brisas**	**1.69**	**354**	*eP*		**Pn**	**03 35 55.3**	**-0.8**
UEES	**Universidad Ev**	**1.69**	**347**	*eP*		**Pn**	**03 35 55.1**	**-1.1**
UEES	**Universidad Ev**	**1.69**	**347**	*eP*		**Pn**	**03 35 55.1**	**-1.1**
LFU	**La Fuente**	**1.70**	**352**	*eP*		**Pn**	**03 35 55.6**	**-0.8**
LFU				*eS*		**Sn**	**03 36 17.7**	**+0.7**
LFU	**La Fuente**	**1.70**	**352**	*eP*		**Pn**	**03 35 55.6**	**-0.8**
LFU				*eS*		**Sn**	**03 36 17.7**	**+0.7**
BOQS	**Boqueron**	**1.72**	**346**	*eP*		**Pn**	**03 35 55.9**	**-0.8**
BOQS				*eS*		**Sn**	**03 36 17.3**	**-0.3**
FAGO	**Alcalda de S**	**1.79**	**24**	*eP*		**Pn**	**03 35 57.2**	**-0.2**
FAGO				*eS*		**Sn**	**03 36 19.9**	**+0.9**
CEVE	**Cerro Verde**	**1.92**	**337**	*eP*		**Pn**	**03 35 58.4**	**-1.0**
CEVE				*eS*		**Sn**	**03 36 21.9**	**-0.6**
CEVE	**Cerro Verde**	**1.92**	**337**	*eP*		**Pn**	**03 35 58.4**	**-1.0**
CEVE				*eS*		**Sn**	**03 36 21.9**	**-0.6**
SBLS	**San Blas**	**1.93**	**337**	*eP*		**Pn**	**03 35 58.6**	**-1.0**
SBLS				*eS*		**Sn**	**03 36 23.0**	**+0.3**
SBLS	**San Blas**	**1.93**	**337**	*eP*		**Pn**	**03 35 58.6**	**-1.0**
SBLS				*eS*		**Sn**	**03 36 23.0**	**+0.3**
SNJE	**San Jose**	**1.94**	**338**	*eP*		**Pn**	**03 35 59.0**	**-0.8**
SNJE				*eS*		**Sn**	**03 36 22.9**	**-0.2**
SNJE	**San Jose**	**1.94**	**338**	*eP*		**Pn**	**03 35 59.0**	**-0.8**
SNJE				*eS*		**Sn**	**03 36 22.9**	**-0.2**
RTR	**El Retiro**	**1.99**	**337**	*eP*		**Pn**	**03 35 59.7**	**-0.6**
RTR				*eS*		**Sn**	**03 36 24.4**	**+0.3**
RTR	**El Retiro**	**1.99**	**337**	*eP*		**Pn**	**03 35 59.7**	**-0.6**
RTR				*eS*		**Sn**	**03 36 24.4**	**+0.3**
UNIC	**Universidad Ca**	**2.03**	**341**	*eP*		**Pn**	**03 36 00.4**	**-0.4**
UNIC				*eS*		**Sn**	**03 36 24.7**	**-0.4**
UNIC	**Universidad Ca**	**2.03**	**341**	*eP*		**Pn**	**03 36 00.4**	**-0.4**
UNIC				*eS*		**Sn**	**03 36 24.7**	**-0.4**
LLGN	**La Laguna**	**2.10**	**358**	*eP*		**Pn**	**03 36 01.9**	**+0.1**
LLGN	**La Laguna**	**2.10**	**358**	*eP*		**Pn**	**03 36 01.9**	**+0.1**
FAME	**Alcalda de S**	**2.11**	**328**	*eP*		**Pn**	**03 36 00.2**	**-1.6**
FAME				*eS*		**Sn**	**03 36 24.9**	**-1.9**
MTO3	**Montecristo**	**2.38**	**348**	*eP*		**Pn**	**03 36 05.6**	**-0.2**
MTO3				*eS*		**Sn**	**03 36 33.7**	**-0.2**
MTO3	**Montecristo**	**2.38**	**348**	*eP*		**Pn**	**03 36 05.6**	**-0.2**
MTO3				*eS*		**Sn**	**03 36 33.7**	**-0.2**
TGUH	**Tegucigalpa,Un**	**2.52**	**38**	*eP*		**Pn**	**03 36 07.8**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.52**	**38**	*eP*		**Pn**	**03 36 07.8**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.52**	**38**			**Pn**	**03 36 07.6**	**-0.1**
IXG	**Ixpaco**	**2.61**	**324**	*eP*		**Pn**	**03 36 08.5**	**-0.4**
ESTN	**Estel**	**2.65**	**67**	Pn		**Pn**	**03 36 07.9**	**-1.4**
NBG	**Las Nubes**	**2.91**	**330**	*eP*		**Pn**	**03 36 14.8**	**+1.8**
NBG				*eS*		**Sn**	**03 36 50.5**	**+3.6**
FUG	**Fuego 3**	**3.06**	**321**	*eP*		**Pn**	**03 36 16.0**	**+0.9**
FUG				*eS*		**Sn**	**03 36 51.5**	**+0.8**
APG	**El Apazote**	**3.32**	**332**	Pn		**Pn**	**03 36 19.1**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=129,slow=12,SNR=4.3							
APG				Sn		**Sn**	**03 37 01.0**	**+3.9**
	comp=Z,5.9nm,0.3s,baz=9.2,slow=18,SNR=7.9							
ACON	**Acoyapa**	**3.61**	**91**			**Pn**	**03 36 22.5**	**0.0**
STG3	**Santiaguito 3,**	**3.73**	**315**	*eP*		**Pn**	**03 36 24.4**	**+0.1**
STG3				*eS*		**Sn**	**03 37 07.2**	**0.0**
JTS	**Las Juntas de**	**4.21**	**114**	Pn		**Pn**	**03 36 30.7**	**-0.1**
	comp=Z,3.2nm,0.3s,baz=28,slow=4.8,SNR=20							
JTS				Sn		**Sn**	**03 37 16.1**	**-2.8**
	comp=Z,2.3nm,0.3s,baz=171,slow=22,SNR=5.5							
CMIG	**Matias Romero**

HSRZ Hossack Road 14.35 190 P P 03 50 02.7 +2.3
RAGZ Rawiri 14.39 186 P P 03 49 59.8 -1.1
RIGZ Rimuhau 14.57 185 P P 03 50 01.4 -1.3
ALRZ Allen Road 14.58 189 P P 03 50 03.4 +0.6
SNGZ Shannon Statio 14.68 186 P P 03 50 02.7 -1.1
PRGZ Paritu Road 14.78 184 P P 03 50 04.8 0.0
MTHZ Maungataniwha 14.80 187 P P 03 50 04.1 -1.0
HIZ Hauiti 14.81 194 P P 03 50 10.2 +5.1
WATZ Wairara 14.82 191 P P 03 50 06.5 +1.2
RAHZ Arahi 14.84 187 P P 03 50 03.1 -2.3
MRHZ Matea Rd 14.84 189 P P 03 50 04.8 -0.6
WHHZ Waihua 14.98 186 P P 03 50 05.9 -1.1
MHGZ Mahia Peninsul 15.00 184 P P 03 50 07.0 -0.1
NMHZ Naumai 15.05 187 P P 03 50 05.7 -2.0
RITZ Rihia Road 15.06 190 P P 03 50 07.8 0.0
BKZ Black Stump Fm 15.16 188 P P 03 50 06.7 -2.0
BKZ Black Stump Fm 15.16 188 P P 03 50 07.1 -1.7
TWVZ Taurewa 15.23 191 P P 03 50 09.6 +0.1
WTVZ West Tongariro 15.24 191 P P 03 50 08.9 -0.9
NGZ Ngauruhoe 15.30 191 P P 03 50 10.9 +0.5
FWVZ Far West T-bar 15.39 191 P P 03 50 10.5 -0.8
MCHZ McNeill Hill 15.40 188 P P 03 50 09.6 -1.7
WHVZ Whangaehu Hut 15.41 191 P P 03 50 10.9 -0.7
KWHZ Kaweka Forest 15.42 188 P P 03 50 09.4 -2.1
TRVZ Turoa 15.43 191 P P 03 50 10.6 -1.3
MOVZ Moawhango 15.50 190 P P 03 50 10.5 -1.9
BHHZ Black Hill Sta 15.53 189 P P 03 50 09.3 -3.4
KRHZ Kereru 15.64 188 P P 03 50 11.1 -2.7
KAHZ Kahuranaki 15.73 187 P P 03 50 13.7 -1.0
KHEZ Kahui Hut 15.74 195 P P 03 50 18.6 +3.7
PNHZ Pukenui 15.93 189 P P 03 50 14.9 -1.8
WPHZ Waipukurau 16.05 188 P P 03 50 16.2 -1.6
SNZO South Karori 17.54 191 P P 03 50 31.3 -0.3
QRZ Quartz Range 17.57 197 P P 03 50 32.8 +0.8
NNZ Nelson 17.72 195 P P 03 50 32.8 -0.6
TUWZ Tuamarina 17.80 193 P P 03 50 32.5 -1.6
THZ Tophouse 18.35 195 P P 03 50 39.5 +0.3
KHZ Kahutara 18.83 193 P P 03 50 43.1 -0.4
LHI Lord Howe Isla 19.31 243 P P 03 50 50.7 +2.7
LTZ Lake Taylor 19.47 196 P P 03 50 50.4 +1.1
RPZ Rata Peaks 20.65 197 P P 03 51 01.7 +1.6
13nm,0.3s,baz=36,slow=3.2,SNR=6.8
RPZ Rata Peaks 20.65 197 IAmb IAmb 03 51 05.0
comp=Z,22nm,0.8s
ARMA Armidale 25.32 250 P P 03 51 43.1 +1.0
ARMA IAmb IAmb 03 51 44.5
comp=Z,15nm,0.8s
EIDS Eidsvold 25.62 261 P P 03 51 42.1 -2.5
EIDS IAmb IAmb 03 51 46.1
comp=Z,22nm,1.1s
CAN Canberra 28.45 240 P P 03 52 10.7 +1.3
CTA Charters Tower 30.82 271 P P 03 52 30.5 +0.5
comp=Z,25nm,0.4s,baz=94,slow=11,SNR=41
TOO Toolangi 31.76 237 P P 03 52 38.6 +0.7
TOO IAmb IAmb 03 52 39.7
comp=Z,15nm,0.7s
PMG Port Moresby 33.95 290 P P 03 52 56.5 -0.2
comp=Z,42nm,0.6s,baz=98,slow=6.4,SNR=12
PMG Port Moresby 33.95 290 IAmb IAmb 03 52 57.1
comp=Z,48nm,0.7s
STKA Stephens Creek 34.02 248 P P 03 52 57.8 +0.8
comp=Z,18nm,0.6s,baz=81,slow=9.5,SNR=23
STKA S S 03 57 46.0 +1.4
comp=Z,3.1nm,0.8s,baz=263,slow=16,SNR=3.7
STKA Stephens Creek 34.02 248 P P 03 52 57.2 +0.2
BBOO Buckleboo 38.74 247 P P 03 53 35.8 -0.2
AS31 Alice Springs 41.34 261 P P 03 53 56.6 -0.4
AS31 IAmb IAmb 03 53 58.1
comp=Z,7.5nm,0.9s
ASAR Alice Springs 41.34 261 P P 03 53 56.7 -0.3
comp=Z,29nm,0.8s,baz=92,slow=8.4,SNR=160
ASAR PcP PcP 03 55 42.8 +0.1
comp=Z,3.6nm,0.7s,baz=107,slow=3.9,SNR=8.0
ASAR S S 03 59 28.4 -4.8
comp=Z,0.6nm,0.8s,baz=101,slow=14,SNR=3.9
WR0 Warramunga Arr 41.54 267 P P 03 53 57.7 -0.9
WR0 IAmb IAmb 03 53 59.0
comp=Z,22nm,0.8s
WRAB Tennant Creek 41.72 267 P P 03 53 58.9 -1.2
WRA Warramunga Arr 41.73 267 P P 03 53 59.1 -1.0
comp=Z,38nm,0.7s,baz=103,slow=8.2,SNR=219
WRA S S 03 59 36.3 -2.5
comp=Z,2.9nm,1.0s,baz=101,slow=14,SNR=5.7
WRA Warramunga Arr 41.73 267 IAmb IAmb 03 54 00.1
comp=Z,3.0nm,0.7s
JAY Jayapura 43.01 294 P P 03 54 09.7 -0.6
comp=Z,13nm,0.5s,baz=55,slow=3.5,SNR=9.6
FORT Forrest 45.60 250 P P 03 54 29.1 -0.9
FITZ Fitzroy Crossi 50.15 266 P P 03 55 03.8 -0.3
comp=Z,11nm,0.6s,baz=133,slow=10,SNR=20
FITZ Fitzroy Crossi 50.15 266 P P 03 55 03.8 -0.3
FITZ IAmb IAmb 03 55 05.5
comp=Z,12nm,0.7s
SWI Sorong 51.90 289 P P 03 55 15.5 -1.4
comp=Z,63nm,0.6s
VNDA Vanda 54.08 185 P P 03 55 33.1 +1.7
comp=Z,8.6nm,1.0s,baz=320,slow=4.0,SNR=3.2
QSPA South Pole Qui 65.93 180 P P 03 56 51.3 +0.9
comp=Z,9.8nm,0.5s,baz=225,slow=1.0,SNR=84
QSPA South Pole Qui 65.93 180 P P 03 56 51.6 +1.2
QSPA IAmb IAmb 03 56 52.6
comp=Z,16nm,1.0s
PWJI Pagerwojo 66.23 272 P P 03 56 52.3 -0.7
comp=Z,40nm,0.8s
MJAR Matsushiro Arr 71.73 326 P P 03 57 24.7 -0.9
comp=Z,4.5nm,0.9s,baz=140,slow=5.5,SNR=9.7
MJAR Matsushiro Arr 71.73 326 IAmb IAmb 03 57 25.8
comp=Z,1.7nm,0.8s
MAW Mawson 77.29 201 P P 03 57 57.2 +0.8
comp=Z,12nm,0.8s,baz=142,slow=3.9,SNR=16
MAW Mawson 77.29 201 P P 03 57 56.9 +0.6
KSRS Korea Array 78.02 321 P P 03 58 01.1 +0.3
comp=Z,2.1nm,0.7s,baz=121,slow=5.4,SNR=5.0
PETK Petropavlovsk- 79.19 347 P P 03 58 06.3 -0.3
comp=Z,4.3nm,0.6s,baz=133,slow=7.4,SNR=13
USRK Ussuriysk Ar. 80.62 328 P P 03 58 14.8 +0.5
comp=Z,3.9nm,0.8s,baz=68,slow=0.4,SNR=4.7
WHN Wuhan 82.63 308 P P 03 58 29.4 +4.5
ISA Isabella, Lake 83.67 46 P P 03 58 32.0 +1.8
ISA IAmb IAmb 03 58 32.6
comp=Z,6.1nm,1.0s
CN2 Changchun 83.70 324 eP P 03 58 29.0 -1.0
CN2 pmax pmax
comp=Z,20nm,1.4s
CMB Columbia Colle 83.84 44 P P 03 58 32.3 +1.4
AFDM Forest Hills D 84.02 43 P P 03 58 33.6 +1.8
ORV Oroville 84.07 42 P P 03 58 32.9 +1.0
SNAA Sanae 84.43 179 P P 03 58 32.8 -0.5
SNAA Sanae 84.43 179 P P 03 58 32.8 -0.5
SNAA IAmb IAmb 03 58 36.0
comp=Z,3.2nm,0.5s
MDPB Devils Postpil 84.43 45 P P 03 58 36.2 +2.1
GSC Goldstone, Bar 84.58 48 P P 03 58 36.7 +2.1
VNA3 Neumayer Olymp 84.66 177 P P 03 58 34.2 -0.2
GLA Glamis 84.69 50 P P 03 58 36.5 +1.3
GLA IAmb IAmb 03 58 38.3
comp=Z,6.8nm,0.9s
WAKR Walker 84.72 44 P P 03 58 37.3 +1.9
WAKR IAmb IAmb 03 58 37.9
comp=Z,6.9nm,1.2s
PNTR Pine Nut 84.96 43 P P 03 58 38.6 +2.0
Y12C Blythe 85.29 50 P P 03 58 39.9 +1.9
VNA1 Neumayer--Stat 85.31 177 P P 03 58 37.3 -0.3
NVAR Mina Array Bea 85.39 44 P P 03 58 39.9 +1.2
comp=Z,1.7nm,0.9s,baz=224,slow=7.8,SNR=9.4
NVAR pP pP 04 00 35.6 +0.7
comp=Z,1.2nm,1.0s,baz=233,slow=8.1,SNR=3.2
K05A Summer Lake 86.37 40 P P 03 58 44.1 +0.8
K05A IAmb IAmb 03 58 46.0
comp=Z,9.3nm,1.2s
PINE Pine Mountain 87.00 39 P P 03 58 47.5 +1.3
PINE IAmb IAmb 03 58 48.9
comp=Z,10.0nm,1.1s
TUC Tucson 87.19 53 P P 03 58 49.0 +1.8
TUC IAmb IAmb 03 58 50.6
comp=Z,4.5nm,1.1s
WVOR Wild Horse Val 87.53 41 P P 03 58 49.6 +1.0
WVOR IAmb IAmb 03 58 51.0
comp=Z,6.7nm,1.1s
319A Douglas 87.83 54 IAmb IAmb 03 58 53.7
comp=Z,7.3nm,0.9s
G06A Carlson Farm, 88.05 38 P P 03 58 51.9 +1.0
G06A IAmb IAmb 03 58 52.3
comp=Z,3.7nm,1.2s
J08A Circle Bar Ran 88.17 40 P P 03 58 52.5 +0.9
J08A IAmb IAmb 03 58 53.8
comp=Z,6.7nm,1.0s
U15A North Rim 88.26 49 IAmb IAmb 03 58 55.2
comp=Z,4.5nm,0.9s
D05A Enumclaw 88.52 36 P P 03 58 54.2 +1.3
PLCA Paso Flores 88.56 134 P P 03 58 56.7 +3.0
comp=Z,0.6nm,0.5s,baz=243,slow=12,SNR=3.8
CMAR Chiang Mai Arr 88.99 291 P P 03 58 56.4 +0.6
comp=Z,1.1nm,0.3s,baz=139,slow=3.6,SNR=6.5
G08A Pilot Rock 89.03 38 IAmb IAmb 03 58 57.8
comp=Z,3.0nm,0.9s
RAGM Ragged Mountai 89.21 17 pP 04 00 54.9 +2.1
E07A Sunnyside 89.29 37 IAmb IAmb 03 58 59.2
comp=Z,3.8nm,0.9s
HHC Hu-ho-hao-te 90.13 315 eP P 03 59 04.4 +3.7
HHC pmax pmax
comp=Z,5.0nm,1.0s
HHC pmax pmax
comp=Z,73nm,4.9s
TXAR Lajitas Array 91.12 58 P P 03 59 07.6 +2.0
comp=Z,1.1nm,0.8s,baz=217,slow=6.8,SNR=14
TXAR pP pP 04 01 04.5 +1.1
comp=Z,0.7nm,1.0s,baz=242,slow=2.7,SNR=3.3
TXAR PKKPbc PKKPbc 04 16 26.1 +0.3
comp=Z,0.2nm,0.6s,baz=120,slow=2.1,SNR=4.4
ILAR Eielson Array 92.43 14 P P 03 59 09.0 -1.6
comp=Z,0.6nm,0.9s,baz=229,slow=5.1,SNR=4.7
ILAR pP pP 04 01 07.7 0.0
comp=Z,1.2nm,0.9s,baz=222,slow=4.8,SNR=4.0
LZH Lanzhou 93.01 308 ⇑P P 03 59 13.1 -1.1
LZH pP pP 04 01 11.3 +0.3
LZH sP sP 04 02 03.5 -0.8
LZH PP PP 04 03 08.3 +1.5
LZH pmax pmax
comp=Z,18nm,1.4s
LZH pmax pmax
comp=Z,65nm,6.3s
PDAR Pinedale Array 93.33 44 P P 03 59 16.4 +0.9
comp=Z,0.3nm,0.7s,baz=126,slow=2.0,SNR=3.8
SONM Songino Array 96.86 320 P P 03 59 31.2 -0.1
comp=Z,0.3nm,0.4s,baz=148,slow=4.8,SNR=4.4
SONM Songino Array 96.86 320 IAmb IAmb 03 59 33.8
comp=Z,1.5nm,1.2s
YKA Yellowknife Ar 100.87 26 PKiKP PKiKP 04 04 09.7 -0.9
comp=Z,0.2nm,0.5s,baz=249,slow=1.6,SNR=5.4
YKA PKKPbc PKKPbc 04 15 58.7 -2.0
comp=Z,0.2nm,0.6s,baz=42,slow=2.3,SNR=4.1
MKAR Makanchi Array 111.83 313 PKiKP PKiKP 04 04 30.0 -1.6
comp=Z,0.3nm,0.4s,baz=195,slow=0.7,SNR=11
MKAR PKKPbc PKKPbc 04 15 26.6 -0.1
comp=Z,0.5nm,0.9s,baz=286,slow=4.6,SNR=4.0
MKAR PKKPab PKKPab 04 15 37.3 +1.6
comp=Z,0.5nm,0.7s,baz=270,slow=3.6,SNR=5.8
KSH Kashi 114.86 304 PKP PKPdf 04 04 37.1 -0.6
KSH sPKP 04 07 34.5
KK31 Karatay Array 119.49 307 PKPdf 04 04 45.6 -0.7
KKAR Karatay Array 119.49 307 PKPdf 04 04 45.6 -0.7
BVAR Borovoye Array 120.19 319 PKP PKPdf 04 04 45.8 -1.6
comp=Z,0.0nm,0.4s,baz=127,slow=1.2,SNR=16
BOSA Boshof 121.88 207 PKP PKPdf 04 04 51.6 -0.1
comp=Z,1.8nm,0.7s,baz=147,slow=9.6,SNR=3.7
ARU Arti 126.69 323 PKP PKPdf 04 04 59.2 -0.5
comp=Z,1.4nm,0.4s,baz=88,slow=5.1,SNR=6.1
AKTO Aktyubinsk 128.02 316 PKP PKPdf 04 05 02.0 -0.5
comp=Z,1.4nm,0.6s,baz=122,slow=3.1,SNR=7.6
ARCES ARCESS Array B 131.99 348 PKP PKPdf 04 05 08.5 -1.0
comp=Z,1.8nm,0.5s,baz=88,slow=3.7,SNR=23
ARCES SKPbc SKPbc 04 07 46.6 +0.9
comp=Z,2.9nm,0.7s,baz=38,slow=3.3,SNR=9.9
FINES FINESS Array B 138.47 341 PKhKP PKPpre 04 05 11.2
comp=Z,1.1nm,0.3s,baz=59,slow=3.5,SNR=10.0
FINES PKP PKPdf 04 05 21.0 -0.7
comp=Z,6.9nm,0.9s,baz=72,slow=2.6,SNR=17
FINES SKPbc SKPbc 04 08 06.3 +0.5
comp=Z,2.1nm,0.6s,baz=69,slow=2.7,SNR=6.4
NB2 NORSAR Subarra1 42.22 351 PKP PKPdf 04 05 23.7 -4.9
comp=Z,1.0nm,0.5s,baz=10,slow=3.2
NOA NORSAR Array B 142.22 351 PKhKP PKPdf 04 05 23.6 -4.9
comp=Z,0.5nm,0.4s,baz=57,slow=1.9,SNR=11
AKASG Malin Array Be 144.82 327 PKP PKPdf 04 05 32.5 -0.7
comp=Z,3.7nm,0.4s,baz=44,slow=4.3,SNR=33
AKASG pPKP pPKPdf 04 07 39.4 +1.4
comp=Z,1.4nm,0.8s,baz=45,slow=4.0,SNR=2.9
GAZ Gaziantep 145.11 301 PKPbc 04 05 35.3 +0.1
BZK Bozkurt 146.20 310 ⇑P PKPbc 04 05 38.4 +0.4
SORM Soroca 146.81 324 ⇑P PKPbc 04 05 39.1 -0.4
BR131 Keskin Array S 147.20 307 PKPbc 04 05 40.6 -0.4
BRTR Keskin Array B 147.20 307 PKPbc PKPbc 04 05 40.5 -0.6
comp=Z,1.1nm,0.6s,baz=148,slow=5.7,SNR=16
MILM Milestii Mici 147.25 321 ⇑P PKPbc 04 05 40.2 -0.5
BR231 Keskin MP Arra 147.79 307 PKPbc 04 05 42.6 +0.1
TLCR 148.18 319 ⇑P PKPbc 04 05 43.0 -0.1
GHRR 148.53 321 ⇑P PKiKP 04 05 44.5 -0.6
CFR Carcaliu 148.59 319 ⇓P PKPbc 04 05 44.1 0.0
TOPG Topolog 148.60 318 ⇑P PKPbc 04 05 44.4 +0.2
CSS Mathiatis 148.62 298 PKPbc 04 05 44.5 -0.1
KWP Kalwaria Pacla 148.66 330 ePKP PKPbc 04 05 44.0 -0.2
KWP Kalwaria Pacla 148.66 330 PKPbc 04 05 43.9 -0.4
TESR Tescani 148.70 322 ⇑P PKPbc 04 05 44.3 -0.2
MDUB Mudurnu 148.71 309 PKPbc 04 05 44.5 -0.2
BIZ Bicaz 148.75 323 ⇑P PKiKP 04 05 45.2 -0.4
BUR08 Bucovina Ar. S 148.79 325 PKPbc 04 05 45.0 +0.2
BURAR Bucovina Array 148.80 325 ⇑P PKPab 04 05 50.0 -0.2
MFTR Murfatlar 148.94 317 ⇓P PKiKP 04 05 45.5 -0.5
LEF Lefka 148.94 298 ⇑P PKPbc 04 05 45.3 -0.1
HARR Harsova 148.97 318 ⇓P PKPbc 04 05 45.3 +0.2
VRI Vrincioaia 149.03 321 ⇑P PKPbc 04 05 45.0 -0.3
PLOR Plostina 149.09 321 ⇓P PKiKP 04 05 46.1 -0.3
BISRR Bisoca 149.23 321 ⇑P PKiKP 04 05 46.6 -0.1
KOLS Kolonicke sedl 149.36 330 ePKP PKiKP 04 05 46.4 -0.4
OZUR 149.43 322 ⇑P PKiKP 04 05 47.6 +0.5
OJC Ojcow 149.47 334 ePKP PKPbc 04 05 45.9 -0.4
OJC Ojcow 149.47 334 PKPbc 04 05 45.8 -0.4
RUE Ruedersdorf 149.63 342 ePKP PKiKP 04 05 46.7 -0.4
baz=25,slow=2.2
MLR Muntele Rosu 149.70 321 ⇑P PKPbc 04 05 46.7 -0.3
MLR Muntele Rosu 149.70 321 PKPbc 04 05 46.9 -0.1
DOPR Dopca 149.73 322 ⇑P PKiKP 04 05 47.5 -0.2
TRPA Tarpa 149.80 328 ⇑P PKPbc 04 05 46.8 -0.1
NIE Niedzica 149.88 332 ePKP PKPbc 04 05 47.1 -0.1
SECR 149.89 320 ⇑P PKPbc 04 05 47.5 +0.2
CJR Cluj-Napoca 150.23 325 ⇑P PKiKP 04 05 48.4 -0.3
VOIR 150.24 322 ⇑P PKPbc 04 05 47.9 -0.4
KSP Ksiaz 150.28 338 ePKP PKPbc 04 05 47.9 -0.2
OKC Ostrava-Krasne 150.43 335 ⇑ePKP PKPbc 04 05 48.4 0.0
ARR Arges 150.51 322 ⇑P PKiKP 04 05 50.3 +0.9
NRDL Niedersach Rie 150.52 347 ePKP PKPbc 04 05 48.6 +0.2
baz=25,slow=2.2
OSTC Ostas 150.54 338 ⇑ePKP PKPbc 04 05 48.5 -0.2
CHVC Chvalec 150.57 338 ⇑ePKP PKPbc 04 05 48.3 -0.5
DRGR 150.63 326 ⇑P PKPbc 04 05 48.9 -0.2
UPC Upice 150.66 338 ⇑ePKP PKPbc 04 05 48.6 -0.3
DPC Dobruska-Polom 150.68 337 ⇑ePKP PKPbc 04 05 48.7 -0.4
DPC ePKPAB PKPab 04 05 57.8 -0.6
MORC Moravsky Berou 150.71 335 ⇑P PKiKP 04 05 49.4 -0.2
MORC Moravsky Berou 150.71 335 ePKP PKPbc 04 05 49.0 -0.1
MORC Moravsky Berou 150.71 335 PKPbc 04 05 48.7 -0.4
KRLC Kraliky 150.75 337 ⇑ePKP PKPbc 04 05 48.4 -0.8
KRLC epPKP pPKPab 04 07 58.1 +0.5
HUMR Humele 150.82 320 ⇑P PKPbc 04 05 48.8 -0.7
ELL Elmali 150.89 303 PKPbc 04 05 49.8 -0.3
CLL Collm 150.90 342 ⇑iPKPbc PKPbc 04 05 49.3 -0.1
comp=Z,17nm,0.7s
CLL i 04 05 50.6
comp=Z,17nm,0.9s
CLL ePKPab PKPab 04 06 00.0 +0.8
comp=Z,8.0nm,1.1s
CLL epPKPab pPKPab 04 07 58.0 -0.1
CLL Collm 150.90 342 ePKP PKPbc 04 05 49.5 +0.1
baz=25,slow=2.2
BRG Berggiesshubel 151.01 341 i PKP PKPbc 04 05 49.3 -0.4
comp=Z,12nm,0.7s
BRG epPKP pPKPab 04 07 58.6 +0.1
comp=Z,18nm,1.5s
BRG Berggiesshubel 151.01 341 ePKP PKPbc 04 05 49.7 -0.1
baz=25,slow=2.2
CLZ Clausthal 151.07 346 ePKP PKiKP 04 05 50.0 -0.2
baz=25,slow=2.2
PVCC Panska Ves 151.11 340 ⇑ePKP PKPbc 04 05 49.9 -0.1
FBE Freiberg 151.14 341 ePKP PKiKP 04 05 50.5 +0.1
baz=25,slow=2.2
ELND Elena 151.17 317 ⇑P PKiKP 04 05 50.5 -0.2
VYHS Vyhne 151.21 332 ePKP PKPbc 04 05 50.0 -0.3
VYHS e 04 06 00.7
VYHS e 04 07 59.2
MANT Manisa 151.33 307 PKPbc 04 05 51.0 -0.2
JAVC Velka Javorina 151.40 334 ePKP PKiKP 04 05 51.6 +0.6
JAVC e 04 08 01.1
GZR Gura Zlata 151.52 324 ⇑P PKPbc 04 05 50.6 -0.5
SIRR Siria 151.52 326 ⇑P PKPbc 04 05 51.1 0.0
PRU Pruhonice 151.59 339 ⇑ePKP PKPbc 04 05 50.9 -0.2
PLVB Pleven 151.68 319 ⇑P PKPbc 04 05 51.5 0.0
KRUC Moravsky 151.72 336 ePKP PKPbc 04 05 51.0 -0.4
KRUC e 04 08 00.5
TREC Trest 151.86 337 ⇑ePKP PKPbc 04 05 51.3 -0.4
MOX Moxa 151.87 343 ePKP PKPbc 04 05 51.5 -0.2
baz=25,slow=2.2
MODS Modra-Piesok 151.94 334 ePKP PKPbc 04 05 51.0 -0.9
MODS e 04 08 00.7
BZS Buzias 151.98 325 ⇑P PKPbc 04 05 51.8 -0.3
WERN Wernitzgruen 151.99 342 ePKPab PKPab 04 06 04.6 +0.7
baz=25,slow=2.2
HERR Herculane 152.04 323 ⇑P PKPbc 04 05 51.8 -0.5
MANZ Manzenberg 152.33 342 ePKP PKiKP 04 05 52.8 -0.1
baz=25,slow=2.2
MDVR Moldovita 152.49 324 ⇑P PKPbc 04 05 52.9 -0.4
KHC Kasperske Hory 152.65 339 ⇑ePKP PKPbc 04 05 53.1 -0.4
KHC ePKPAB PKPab 04 06 06.7 -0.1
KHC epPKP pPKPbc 04 07 56.0 -1.5
GERES GERESS Array B 152.86 339 PKPbc PKPbc 04 05 53.4 -0.6
comp=Z,0.9nm,0.6s,baz=29,slow=2.2,SNR=8.4
GERES PKPab PKPab 04 06 07.5 -0.2
comp=Z,0.9nm,0.6s,baz=27,slow=4.1,SNR=5.8
GERES pPKPbc pPKPbc 04 07 56.3 -1.7
comp=Z,1.5nm,0.9s,baz=27,slow=0.3,SNR=4.1
VTS Vitosha 152.96 319 ⇑P PKiKP 04 05 54.9 +0.3
RJOB Jochberg 154.12 339 ePKPab PKPab 04 06 13.7 +0.5
baz=25,slow=2.2
UBR Ueberruh 154.98 343 ePKPab PKPab 04 06 16.9 +0.1
baz=25,slow=2.2
TOA0 Torodi Ar. Sit 168.82 192 PKPab 04 07 18.5 +0.5
TORD Torodi Ar. Bea 168.82 192 PKP PKPdf 04 06 03.0 -0.9
comp=Z,1.5nm,0.9s,baz=320,slow=0.7,SNR=6.8
TORD PKPab PKPab 04 07 18.2 +0.1
comp=Z,4.1nm,0.6s,baz=170,slow=4.2,SNR=26

*IDC **18** 03:53:06.6±1.7, 41°.93N×82°.51E, h0km, mb3.5/3, mb1 3.4/7, mb1mx3.3/48, mbtmp3.3/7, ML2.9/4, Error ellipse: s-maj=36.5km s-min=20.2km az=98.0*
*NNC **18** 03:53:10.7±1.6, 42°.06N×82°.58E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=13.1km s-min=7.2km az=158.0*
*SOME **18** 03:53:10.2, 42°.03N×82°.43E, h5km*
ISC 18 03:53:09.3±1.2, 42°.01N±0°.06×82°.70E±0°.04, h13km, n53, σ2s 41/76, mb3.3/3, 7C-7D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	Shalkode 136nm,0.4s	2.65	297	eP	Pn	03 53 53.2	+1.3
SHLS				eS	Sn	03 54 24.1	+0.1
SHLS	Shalkode 136nm,0.4s	2.65	297	Pg	Pn	03 53 53.5	+1.5
SHLS				Lg	Lg	03 54 23.7	
PDGK	Podgornoye 9.3nm,0.3s	2.71	300	Pg	Pb	03 53 57.1	-0.7
PDGK	Podgornoye 27nm,0.7s	2.71	300	⇑Pn	Pn	03 53 54.1	+1.4
PDGK				⇓Sn	Sb	03 54 29.9	-1.0
UZB	81nm,0.6s Uzynbulak 20nm,0.3s	2.94	294	eP	Pb	03 54 02.1	+0.4
UZB				eS	Sb	03 54 39.0	+1.3
UZB	67nm,0.5s Uzynbulak 20nm,0.3s	2.94	294	Pg	Pb	03 54 02.4	+0.7
UZB				Lg	Lg	03 54 38.6	
DJR	67nm,0.5s Jarkent 6.2nm,0.4s	3.15	318	eP	Pb	03 54 05.7	+0.4
DJR				eS	Sb	03 54 45.4	+1.9
DJR	37nm,0.5s Jarkent 6.2nm,0.4s	3.15	318	Pg	Pb	03 54 06.4	+1.2
KPKS	Kokpek 21nm,0.3s	3.30	298	eP	Pb	03 54 07.3	-0.4
KPKS				eS	Sb	03 54 48.5	+0.8
SATY	71nm,0.5s Saty 34nm,0.5s	3.34	290	eP	Pb	03 54 09.8	+1.3
SATY				eS	Sg	03 54 53.1	-3.6
SATY	66nm,0.7s Saty 27nm,0.4s	3.34	290	Pg	Pb	03 54 10.3	+1.8
SATY				Lg	Lg	03 54 52.3	
ZHN	44nm,0.6s Zhinishke 9.6nm,0.2s	3.35	292	eP	Pb	03 54 09.7	+1.0
ZHN				eS	Sb	03 54 52.1	+2.7
ZHN	5.5nm,0.2s Zhinishke 9.6nm,0.2s	3.35	292	Pg	Pb	03 54 10.1	+1.4
ZHN				Lg	Lg	03 54 51.7	
KURS	5.5nm,0.2s Kuram 12nm,0.7s	3.65	295	eP	Pb	03 54 15.4	+1.7
KURS				eS	Sg	03 55 02.2	-4.3
KURS	21nm,0.6s Kuram 12nm,0.7s	3.65	295	Pg	Pg	03 54 16.7	-2.5
KURS				Lg	Lg	03 55 02.8	
KAPS	21nm,0.6s Kapalarasan 17nm,0.4s	4.07	325	eP	Pg	03 54 24.6	-2.8
KAPS				eS	Sg	03 55 18.3	-1.8
KAPS	42nm,0.9s Kapalarasan 17nm,0.4s	4.07	325	Pg	Pg	03 54 24.9	-2.5
KAPS				Lg	Lg	03 55 16.7	
ARXS	19nm,0.5s Arharly 15nm,0.3s	4.19	303	eP	Pg	03 54 26.7	-2.9
ARXS				eS	Sg	03 55 21.9	-2.0
ARXS	32nm,0.5s Arharly 15nm,0.3s	4.19	303	Pg	Pg	03 54 27.7	-1.9
ARXS				Lg	Lg	03 55 21.6	
KOTS	32nm,0.5s Kotyrbulak 22nm,0.5s	4.30	288	eP	Pb	03 54 25.3	+0.5
KOTS				eS	Sb	03 55 19.8	+3.1
KOTS	55nm,0.7s Kotyrbulak 22nm,0.5s	4.30	288	Pg	Pb	03 54 26.6	+1.8
KOTS				Lg	Lg	03 55 19.8	
TDK	55nm,0.7s Taldyqorghan 43nm,0.6s	4.32	315	eP	Pb	03 54 27.1	+1.9
TDK				eS	Sb	03 55 22.1	+4.9
MDOK	94nm,0.7s Medeo 8.1nm,0.6s	4.33	287	eP	Pb	03 54 25.9	+0.5
MDOK				eS	Sb	03 55 21.6	+4.0
MDOK	20nm,0.7s Medeo 6.5nm,0.8s	4.33	287	Pn	Pn	03 54 16.1	+1.1
MDOK				⇑Lg	Lg	03 55 20.2	
MDOK	44nm,1.0s Medeo 8.1nm,0.6s	4.33	287	Pg	Pb	03 54 27.5	+2.2
MDOK				Lg	Lg	03 55 21.6	
TNSS	20nm,0.7s Tian-Shan 16nm,0.5s	4.37	286	eP	Pb	03 54 26.1	-0.2
TNSS				eS	Sb	03 55 21.8	+2.7
TNSS	18nm,0.6s Tian-Shan 16nm,0.5s	4.37	286	Pg	Pb	03 54 27.3	+1.1
TNSS				Lg	Lg	03 55 21.3	
CHKK	18nm,0.6s Chushkaly 4.5nm,0.1s	4.58	296	eP	Pb	03 54 30.9	+1.3
CHKK				eS	Sb	03 55 29.9	+5.3
CHKK	19nm,0.6s Chushkaly 4.5nm,0.1s	4.58	296	Pg	Pg	03 54 35.0	-2.0
MTBS	Maitube	4.76	286	eP	Pb	03 54 33.8	+1.1

	7.1nm,0.2s							
MTBS					*e*S	**Sb**	03 55 33.9	+3.9
	13nm,0.5s							
MK31	**Makanchi Array**	**4.79**	**357**		Pn	**Pn**	03 54 22.8	+1.6
	0.4nm,0.2s,baz=180,slow=13,SNR=68							
MK31					⇓Pg	**Pb**	03 54 34.9	+1.7
	3.2nm,0.5s,baz=177,slow=15,SNR=15							
MK31					⇓Lg	Lg	03 55 35.8	
	30nm,0.6s							
MKAR	**Makanchi Array**	**4.79**	**357**		Pn	**Pn**	03 54 23.2	+2.0
	0.8nm,0.3s,baz=190,slow=12,SNR=33							
MKAR					Pg	**Pg**	03 54 37.3	-3.9
	1.7nm,0.3s,baz=186,slow=16,SNR=21							
MKAR					Lg	Lg	03 55 43.9	
	2.6nm,0.3s,baz=163,slow=27,SNR=5.9							
MAKZ	**Makanchi**	**4.83**	**354**		⇑Pn	**Pn**	03 54 23.6	+1.9
	1.5nm,0.4s							
MAKZ					⇑Sn	**Sn**	03 55 20.8	+3.4
	6.2nm,0.6s							
MAKZ					⇓Lg	Lg	03 55 41.0	
	13nm,0.8s							
KUU	**Kurty**	**5.03**	**294**		*e*P	**Pb**	03 54 37.5	+0.3
	3.7nm,0.5s							
KUU					*e*S	**Sb**	03 55 40.8	+3.2
	14nm,0.8s							
KUU	**Kurty**	**5.03**	**294**		Pg	**Pg**	03 54 42.3	-3.4
	2.4nm,0.2s							
KUU					Lg	Lg	03 55 46.7	
	11nm,0.3s							
KST	**Kastek**	**5.08**	**284**		*e*P	**Pb**	03 54 38.5	+0.3
	8.6nm,0.6s							
KST					*e*S	**Sb**	03 55 42.3	+3.1
	21nm,1.2s							
KST	**Kastek**	**5.08**	**284**		Pg	**Pb**	03 54 39.0	+0.8
	8.6nm,0.6s							
DGS	**Degeres**	**5.26**	**286**		*e*P	**Pb**	03 54 42.4	+1.2
	9.6nm,0.4s							
DGS					*e*S	**Sb**	03 55 48.8	+4.6
	17nm,0.8s							
DGS	**Degeres**	**5.26**	**286**		Pg	**Pg**	03 54 46.1	-3.8
	9.6nm,0.4s							
DGS					Lg	Lg	03 55 53.2	
	17nm,0.8s							
KRBS	**Karabastau**	**5.43**	**290**		*e*P	**Pb**	03 54 46.0	+2.0
	2.3nm,0.3s							
KRBS					*e*S	**Sb**	03 55 54.3	+5.1
	3.5nm,0.6s							
KRBS	**Karabastau**	**5.43**	**290**		Pg	Pg	03 54 48.4	-4.9
	2.3nm,0.3s							
KRBS					Lg	Lg	03 55 57.1	
	3.5nm,0.6s							
ZSN	**Zaisan**	**5.66**	**15**		*e*P	**Pg**	03 54 55.1	-2.5
	9.2nm,0.3s							
ZSN					*e*S	**Sg**	03 56 08.8	-2.0
	42nm,0.7s							
ZSN	**Zaisan**	**5.66**	**15**		Pg	**Pg**	03 54 54.3	-3.3
	9.2nm,0.3s							
ZSN					Lg	Lg	03 56 07.6	
	42nm,0.7s							
AAK	**Ala-Archa**	**6.11**	**279**		Pg	**Pb**	03 54 59.7	+4.0
	0.5nm,0.3s,baz=78,slow=11,SNR=6.3							
AAK					Lg	Lg	03 56 22.7	
	0.5nm,0.3s,baz=269,slow=17,SNR=4.7							
SGDS	**Sogindy**	**6.11**	**286**		Pg	**Pg**	03 55 01.9	-4.5
	4.6nm,0.6s							
KURBB	**Kurchatov Arra**	**9.08**	**343**		Pn	**Pn**	03 55 19.9	-0.1
	0.0nm,0.3s,baz=168,slow=12,SNR=3.7							
KURBB					Lg	Lg	03 57 55.4	
	0.1nm,0.3s,baz=162,slow=32,SNR=5.1							
KURBB	**Kurchatov Arra**	**9.08**	**343**		⇑Pn	**Pn**	03 55 21.2	+1.1
	11nm,2.5s							
KURBB					⇑Sn	Sn	03 57 21.5	+19
	7.4nm,0.8s							
KURBB					⇓Lg	Lg	03 57 57.7	
	12nm,0.7s							
KURK	**Kurchatov**	**9.15**	**343**		⇑Pn	**Pn**	03 55 21.1	+0.2
	2.8nm,1.0s							
KURK					⇓Sn	Sn	03 57 17.8	+14
	4.5nm,0.7s							
KURK					⇓Lg	Lg	03 57 52.2	
	12nm,0.8s							
ZALV	**Zalesovo Beam**	**12.03**	**6**		Pn	**Pn**	03 55 59.6	-0.8
	0.2nm,0.3s,baz=189,slow=18,SNR=3.0							
ZALV					Lg	Lg	03 59 30.5	
	0.1nm,0.3s,baz=186,slow=23,SNR=3.0							
SONM	**Songino Array**	**17.73**	**63**		P	**P**	03 57 17.7	+1.0
	0.1nm,0.3s,baz=263,slow=13,SNR=2.6							
ARCES	**ARCESS Array B**	**39.99**	**333**		P	**P**	04 00 42.9	-0.3
	4.9nm,1.2s,baz=82,slow=8.7,SNR=9.3							
TORD	**Torodi Ar. Bea**	**74.68**	**274**		P	**P**	04 04 47.6	-1.2
	0.2nm,0.6s,baz=35,slow=5.4,SNR=3.6							
YKA	**Yellowknife Ar**	**74.92**		**8**	P	**P**	04 04 49.0	-0.5
	0.2nm,0.6s,baz=334,slow=5.8,SNR=3.7							

NEIC ***18*** *04:05:37.5±1.0,40.46N±0.04×124.6W±0.1,h28km±10km, Error ellipse: s-maj=12.8km s-min=4.0km az=67.0*
ANF ***18*** *04:05:38.1±1.2,40.55N×124.41W,h18km,ML2.4/7, Error ellipse: s-maj=12.3km s-min=7.1km az=70.0*
NCEDC ***18*** *04:05:38.4±2.7,40.45N±0.04×124.50W±0.09,h20km±7km, Md2.8/59, Error ellipse: s-maj=9.8km s-min=5.6km az=87.0*

ISC 18 04:05:36.6±1.5,40°44N±0.03×124°61W±0.08,h31km±7km, n71,σ0°87/78, Near coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.21**	**81**			**Pb**	**04 05 43.3**	**+0.1**
KCTM						**Sb**	**04 05 47.4**	**-0.2**
KMPM	**Mount Pierce**	**0.38**	**94**			**Pb**	**04 05 45.3**	**-0.1**
KMPM						**Sb**	**04 05 50.7**	**-0.6**
KSMM	**Slide Mountain**	**0.42**	**127**			**Pb**	**04 05 46.2**	**+0.2**
JCC	**Jacoby Creek,**	**0.58**	**50**			**Pb**	**04 05 47.5**	**-0.9**
KCRM	**Chalk Rock**	**0.61**	**91**			**Pb**	**04 05 48.9**	**0.0**
KMRM	**Mail Ridge**	**0.73**	**107**			**Pb**	**04 05 51.1**	**+0.2**
KHMM	**Horse Mountain**	**0.80**	**57**			**Pb**	**04 05 51.5**	**-0.6**
KRPM	**Rodgers**	**0.84**	**32**			**Pb**	**04 05 52.2**	**-0.6**
KCSM	**Cold Springs**	**0.84**	**83**			**Pb**	**04 05 52.4**	**-0.5**
KBSM	**Bell Springs**	**0.94**	**124**			**Pb**	**04 05 54.1**	**-0.4**
KPPM	**Pickett Peak**	**0.96**	**95**			**Pb**	**04 05 54.3**	**-0.6**
KIPM	**Iron Peak**	**1.07**	**126**			**Pb**	**04 05 56.1**	**-0.6**
KHBM	**Hayfork Bally**	**1.08**	**78**			**Pb**	**04 05 55.5**	**-1.4**
KCPM	**Cahto Peak**	**1.09**	**133**			**Pb**	**04 05 56.1**	**-1.0**
KRMB	**Red Mountain**	**1.20**	**26**			**Pn**	**04 05 57.4**	**0.0**
KOMM	**Orleans Mounta**	**1.21**	**46**			**Pn**	**04 05 57.5**	**0.0**
KFPM	**Farley Peak**	**1.22**	**131**			**Pn**	**04 05 57.7**	**+0.2**
KBNM	**Bluenose Ridge**	**1.22**	**116**			**Pn**	**04 05 58.4**	**+0.8**
GTC	**Three Chop Rid**	**1.32**	**142**			**Pn**	**04 05 59.1**	**+0.2**
LBPM	**Beegum Peak**	**1.33**	**95**			**Pn**	**04 05 59.1**	**+0.1**
KRKM	**Rackout Spring**	**1.41**	**128**			**Pn**	**04 06 00.5**	**+0.3**
O02D	**Mt. Diablo Mer**	**1.42**	**100**			**Pn**	**04 06 00.2**	**-0.2**
O02D	**Mt. Diablo Mer**	**1.42**	**100**	P		**Pn**	**04 06 00.7**	**+0.3**
	baz=282,SNR=21							
LGPM	**Granite Peak**	**1.44**	**70**			**Pn**	**04 06 00.5**	**-0.1**
GNAM	**Navarro Ridge**	**1.46**	**148**			**Pn**	**04 06 01.1**	**+0.4**
KSXB	**Camp Six Broad**	**1.49**	**22**			**Pn**	**04 06 01.4**	**+0.1**
N02D	**Trinity Center**	**1.54**	**69**			**Pn**	**04 06 02.0**	**-0.1**
N02D	**Trinity Center**	**1.54**	**69**	P		**Pn**	**04 06 01.9**	**-0.1**
	baz=250,SNR=134							
N02D					S	**Sn**	**04 06 20.0**	**-1.0**
	baz=250							
WDC	**Whiskeytown Da**	**1.58**	**84**			**Pn**	**04 06 02.6**	**+0.1**
WDC	**Whiskeytown Da**	**1.58**	**84**			**Pn**	**04 06 02.9**	**+0.4**
GHMM	**Hull Mountain**	**1.60**	**126**			**Pn**	**04 06 03.6**	**+0.7**
LBKM	**Bonanza King**	**1.61**	**66**			**Pn**	**04 06 03.1**	**+0.1**
GHOM	**Hamilton Openi**	**1.62**	**149**			**Pn**	**04 06 03.4**	**+0.3**
GVV	**Valley View**	**1.63**	**114**			**Pn**	**04 06 04.0**	**+0.8**
M02C	**Callahan**	**1.64**	**54**			**Pn**	**04 06 03.5**	**+0.2**
M02C	**Callahan**	**1.64**	**54**	P		**Pn**	**04 06 03.4**	**+0.2**
	baz=234,SNR=121							
M02C					S	**Sn**	**04 06 22.4**	**-0.9**
	baz=234							
GASB	**Alder Springs**	**1.66**	**118**			**Pn**	**04 06 04.2**	**+0.6**
KTRM	**Thompson Ridge**	**1.74**	**32**			**Pn**	**04 06 05.1**	**+0.4**
KBO	**Bosley Butte**	**1.79**	**9**	Pn		**Pn**	**04 06 05.8**	**+0.4**
GGUM	**Gualala**	**1.80**	**151**			**Pn**	**04 06 05.8**	**+0.2**
HOPS	**Hopland Field**	**1.87**	**140**	Pn		**Pn**	**04 06 07.6**	**+1.1**
L02E	**Cave Junction**	**1.87**	**24**	P		**Pn**	**04 06 06.9**	**+0.4**
	baz=202,SNR=120							
L02E					S	**Sn**	**04 06 28.9**	**-0.2**
	baz=202							
LAMM	**Antelope Mount**	**1.90**	**52**			**Pn**	**04 06 07.6**	**+0.6**
YBH	**Yreka Blue Hor**	**1.93**	**48**			**Pn**	**04 06 07.8**	**+0.5**
YBH	**Yreka Blue Hor**	**1.93**	**48**	Pn		**Pn**	**04 06 07.4**	**+0.1**
LSHM	**Sage Hen Hill**	**1.99**	**79**			**Pn**	**04 06 08.9**	**+0.8**
LGBM	**Gray Butte**	**2.04**	**63**			**Pn**	**04 06 10.1**	**+1.1**
M03C	**McCloud**	**2.06**	**65**			**Pn**	**04 06 10.6**	**+1.4**
LMPM	**Military Pass**	**2.13**	**60**			**Pn**	**04 06 11.8**	**+1.7**
O03E	**Paynes Creek**	**2.15**	**93**			**Pn**	**04 06 10.8**	**+0.4**
O03E	**Paynes Creek**	**2.15**	**93**	P		**Pn**	**04 06 10.6**	**+0.2**
	baz=275,SNR=24							
LDBM	**Digger Butte**	**2.16**	**89**			**Pn**	**04 06 11.0**	**+0.5**
B040	**Montague**	**2.16**	**49**			**Pn**	**04 06 11.5**	**+1.1**
LHEM	**Herd Peak**	**2.16**	**56**			**Pn**	**04 06 12.0**	**+1.3**
LBFM	**Black Fox Moun**	**2.25**	**66**			**Pn**	**04 06 13.2**	**+1.3**
LMEM	**Manzanita Entr**	**2.32**	**87**			**Pn**	**04 06 14.6**	**+1.8**
K02D	**Willamette Mer**	**2.36**	**17**	P		**Pn**	**04 06 14.2**	**+1.0**
	baz=196,SNR=17							
K02D					S	**Sn**	**04 06 40.2**	**-0.9**
	baz=196							
LGMM	**Garner Mountai**	**2.40**	**60**			**Pn**	**04 06 15.2**	**+1.3**
LRDM	**Redding Peak**	**2.41**	**88**			**Pn**	**04 06 15.2**	**+1.3**
HATC	**Hat Creek Radi**	**2.43**	**80**			**Pn**	**04 06 15.3**	**+1.2**
LTIM	**Timbered Crate**	**2.48**	**72**			**Pn**	**04 06 15.6**	**+0.6**
L04D	**Klamath Falls**	**2.48**	**44**			**Pn**	**04 06 17.2**	**+2.2**
L04D	**Klamath Falls**	**2.48**	**44**	P		**Pn**	**04 06 17.1**	**+2.2**
	baz=224,SNR=32							
L04D					S	**Sn**	**04 06 46.3**	**+2.1**
	baz=224							
M04C	**Macdoel**	**2.49**	**57**			**Pn**	**04 06 16.4**	**+1.3**
M04C	**Macdoel**	**2.49**	**57**	P		**Pn**	**04 06 16.3**	**+1.3**
	baz=237,SNR=6.2							
HUMO	**Hull Mountain**	**2.49**	**29**			**Pn**	**04 06 16.1**	**+1.1**
HUMO	**Hull Mountain**	**2.49**	**29**	Pn		**Pn**	**04 06 15.6**	**+0.6**
LBCM	**Butte Creek Ri**	**2.51**	**80**			**Pn**	**04 06 16.2**	**+0.7**
ORV	**Oroville**	**2.55**	**109**	Pn		**Pn**	**04 06 16.3**	**+0.5**
K04D	**Chiloquin, OR**	**3.06**	**44**	S		**Sn**	**04 06 58.9**	**+0.4**
	baz=224							
K05A	**Summer Lake**	**3.60**	**50**	Pn		**Pn**	**04 06 31.8**	**+1.4**

DJA ***18*** *04:05:37.8±1.2,2°S±16°×13°9E±°,h26km±8km,M4.1/4, mb4.5/2,MLv3.9/4*
IDC ***18*** *04:05:38.7±5.5,2.30S×139.15E,h34km±50km,mb3.5/3, mb1 3.7/4,mb1mx3.4/25,mbtmp3.7/4,ML3.8/1,MS3.1/1, Ms1 3.3/1,ms1mx2.5/23,Error ellipse: s-maj=45.2km s-min=23.5km az=121.0*
NEIC ***18*** *04:05:39.6±1.0,2.4S±0.2×138.99E±0.08,h40km±13km, mb4.2/4,Error ellipse: s-maj=28.4km s-min=12.0km az=180.0*

ISC 18 04:05:39.4±0.8,2°3S±0°1×138°93E±0°05,h37km,n15, σ1°06/17,mb4.0/6,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.34**	**320**	P		**Pn**	**04 05 46.8**	**-1.0**
SMPI				S		**Sn**	**04 05 53.6**	**-1.0**
GENI	**Genyem**	**1.28**	**105**	P		**Pn**	**04 06 00.6**	**-0.1**
GENI				S		**Sn**	**04 06 19.2**	**+2.5**
JAY	**Jayapura**	**1.79**	**98**	Pg		**Pn**	**04 06 07.2**	**-0.6**
	20nm,0.3s,baz=238,slow=11,SNR=70							
JAY				Lg		Lg	04 06 30.1	
	14nm,0.3s,baz=129,slow=20,SNR=7.6							
JAY				LR		LR	04 07 02.9	
	comp=Z,207nm,19.8s,baz=206,slow=54							
JAY	**Jayapura**	**1.79**	**98**	P		**Pn**	**04 06 07.2**	**-0.6**
JAY				S		**Sn**	**04 06 29.7**	**+0.4**
BAKI	**Biak**	**3.02**	**291**	P		**Pn**	**04 06 24.5**	**-0.1**
FAKI	**Fak Fak**	**6.71**	**264**	P		**Pn**	**04 07 16.1**	**+0.7**
	0.2nm40nm,0.5s							
FAKI	**Fak Fak**	**6.71**	**264**			**Pn**	**04 07 16.1**	**+0.7**
WRA	**Warramunga Arr**	**18.14**	**194**	P		**Pn**	**04 09 47.4**	**-1.2**
	0.3nm,0.3s,baz=18,slow=12,SNR=8.9							
ASAR	**Alice Springs**	**21.83**	**192**	P		**P**	**04 10 28.2**	**-0.6**
	0.5nm,0.5s,baz=22,slow=9.8,SNR=13							
CMAR	**Chiang Mai Arr**	**44.41**	**299**	LR		LR	04 34 28.7	
	comp=Z,19nm,18.1s,baz=192,slow=39							
MK31	**Makanchi Array**	**69.57**	**322**	P		**P**	**04 16 45.9**	**+1.2**
MK31				IAmb		IAmb	04 16 46.7	
	comp=Z,1.6nm,1.1s							
MKAR	**Makanchi Array**	**69.57**	**322**	P		**P**	**04 16 45.7**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=110,slow=8.1,SNR=12							
MAKZ	**Makanchi**	**69.77**	**322**	P		**P**	**04 16 46.5**	**+0.6**
MAKZ				IAmb		IAmb	04 16 47.6	
	comp=Z,2.2nm,0.7s							
BRVK	**Borovoye**	**79.14**	**325**	P		**P**	**04 17 40.5**	**+0.3**
BRVK				IAmb		IAmb	04 18 10.1	
	comp=Z,2.7nm,0.8s							
ILAR	**Eielson Array**	**85.33**	**24**	P		**P**	**04 18 11.7**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=268,slow=5.0,SNR=7.7							

ANF ***18*** *04:24:38.2±0.1,34.07N×116.44W,h14km±1km,ML2.9/30, Error ellipse: s-maj=1.0km s-min=0.9km az=38.0*
SCEDC ***18*** *04:24:39.2,34.09N×116.43W,h5km*
PAS ***18*** *04:24:39.2±1.8,34.09N±0.02×116.42W±0.03,h10km±3km, ML3.0/145,Error ellipse: s-maj=4.2km s-min=2.5km az=131.0*
NEIC ***18*** *04:24:39.0±1.6,34.11N±0.02×116.46W±0.04,h13km±3km, Error ellipse: s-maj=4.7km s-min=3.0km az=92.0*

ISC 18 04:24:39.0±0.8,34°09N±0°01×116°43W±0°01,h18km±4km, n114,σ0°94/159,Southern California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BLAC	**Blackrock camp**	**0.04**	**116**			**Pg**	**04 24 42.8**	**+0.5**
EW2	**E Wide Canyon**	**0.15**	**172**			**Pg**	**04 24 42.5**	**-0.8**
EW2						**Sg**	**04 24 45.1**	**-0.9**
DEVC	**Devers**	**0.19**	**219**			**Pg**	**04 24 43.5**	**-0.3**
DEVC						**Sg**	**04 24 46.9**	**-0.2**
BELC	**Belle Mtn. Jos**	**0.37**	**103**			**Pg**	**04 24 46.3**	**-0.5**
BELC						**Sg**	**04 24 51.3**	**-0.8**
BELC	**Belle Mtn. Jos**	**0.37**	**103**	P		**Pg**	**04 24 46.3**	**-0.5**
	baz=284,SNR=337							
BELC					S	**Sg**	**04 24 51.5**	**-0.6**
	baz=284							
BBRC	**Big Bear Solar**	**0.44**	**293**			**Pg**	**04 24 47.9**	**-0.3**
BBRC						**Sg**	**04 24 53.8**	**-0.5**
BBRC	**Big Bear Solar**	**0.44**	**293**	P		**Pg**	**04 24 47.6**	**-0.5**
	baz=113,SNR=28							
BBRC					S	**Sg**	**04 24 53.8**	**-0.5**
	baz=113							
PFO	**Pinyon Flats O**	**0.47**	**183**			**Pg**	**04 24 48.0**	**-0.7**
PFO	**Pinyon Flats O**	**0.47**	**183**			**Sg**	**04 24 54.5**	**-0.6**
PFO	**Pinyon Flats O**	**0.47**	**183**	P		**Pg**	**04 24 47.9**	**-0.7**
	baz=3.3,SNR=94							
PFO					S	**Sg**	**04 24 54.4**	**-0.8**
	baz=3.3							
XPFO	**Pion Flat**	**0.47**	**182**			**Pg**	**04 24 48.0**	**-0.7**
XPFO	**Pion Flat**	**0.47**	**182**			**Sg**	**04 24 54.4**	**-0.8**
BBSC	**Beaumont Base**	**0.48**	**250**			**Pg**	**04 24 48.5**	**-0.3**
DNR	**Dunn Ranch,Anz**	**0.55**	**198**			**Pg**	**04 24 49.4**	**-0.6**
DNR						**Sg**	**04 24 57.2**	**-0.1**
SVD	**Seven Oaks Dam**	**0.55**	**272**			**Pg**	**04 24 49.6**	**-0.4**
SVD						**Sg**	**04 24 57.3**	**-0.2**
SNDA	**J Saunders Pla**	**0.56**	**196**			**Sg**	**04 24 57.1**	**-0.5**
CFT	**Crafton Hills**	**0.57**	**265**			**Pg**	**04 24 50.2**	**-0.1**
CTCC	**Cactus City**	**0.57**	**139**			**Pg**	**04 24 49.9**	**-0.5**
CTCC						**Sg**	**04 24 57.5**	**-0.4**
POB	**Polly Butte**	**0.57**	**226**			**Pg**	**04 24 49.9**	**-0.5**
CRY	**Cary Ranch**	**0.58**	**206**			**Sg**	**04 24 57.8**	**-0.5**
FRD	**Ford Ranch, An**	**0.61**	**194**			**Sg**	**04 24 58.5**	**-0.7**
BZNA	**Buzz No.'s Pla**	**0.62**	**198**			**Sg**	**04 24 59.3**	**-0.5**
PEC	**Perris**	**0.64**	**252**			**Pg**	**04 24 51.0**	**-0.6**
DGR	**Domenigoni Val**	**0.65**	**228**			**Sg**	**04 24 59.8**	**-0.7**
HEC	**Hector,Ludlow**	**0.74**	**6**			**Pg**	**04 24 52.7**	**-0.9**
HEC	**Hector,Ludlow**	**0.74**	**6**	P		**Pg**	**04 24 52.7**	**-0.9**
	baz=186,SNR=85							
RVR	**Riverside**	**0.79**	**263**			**Pg**	**04 24 53.6**	**-0.8**
RVR						**Sg**	**04 25 04.1**	**-0.8**
CSP	**Cedar Springs**	**0.80**	**286**			**Pg**	**04 24 53.9**	**-0.7**
MURC	**Murrieta**	**0.80**	**233**			**Pg**	**04 24 53.7**	**-0.9**
MURC						**Sg**	**04 25 04.1**	**-1.2**
MURC	**Murrieta**	**0.80**	**233**	P		**Pg**	**04 24 53.8**	**-0.9**
	baz=52,SNR=49							
MURC					S	**Sg**	**04 25 04.4**	**-0.9**
	baz=52							
SME	**Santa Rosa Min**	**0.81**	**251**			**Pg**	**04 24 53.7**	**-1.2**
PLM	**Palomar**	**0.81**	**206**			**Sg**	**04 25 05.1**	**-0.7**
VTV	**Victorville**	**0.88**	**303**			**Sg**	**04 25 06.5**	**-1.4**
SALN	**Salton City**	**0.89**	**155**			**Pg**	**04 24 55.7**	**-0.6**
SS2	**San Sevaine**	**0.89**	**278**			**Pg**	**04 24 55.9**	**-0.5**
RRX	**Edison Barstow**	**0.92**	**329**	P		**Pg**	**04 24 56.2**	**-0.7**
	baz=149,SNR=13							
RRX					S	**Sg**	**04 25 08.4**	**-0.5**
	baz=149							
BC3	**Big Chuckawall**	**0.92**	**118**	P		**Pg**	**04 24 56.6**	**-0.4**
	baz=299,SNR=89							
BC3					S	**Sg**	**04 25 08.8**	**-0.3**
	baz=299							
MLSC	**Mira Loma**	**0.94**	**265**			**Sg**	**04 25 08.7**	**-1.0**
GMRC	**Granite Mounta**	**0.94**	**42**			**Pg**	**04 24 56.3**	**-1.1**
GMRC	**Granite Mounta**	**0.94**	**42**	P		**Pg**	**04 24 56.3**	**-1.1**
	baz=222,SNR=128							
GMRC					S	**Sg**	**04 25 08.9**	**-1.0**
	baz=222							
ADO	**Adelanto Recei**	**0.95**	**299**			**Sg**	**04 25 09.7**	**-0.4**
DANC	**Danby, Needles**	**1.03**	**57**			**Pb**	**04 24 58.2**	**-0.1**
DANC						**Sb**	**04 25 11.3**	**-0.2**
BFSC	**Mount Baldy Ra**	**1.03**	**279**	P		**Pb**	**04 24 58.0**	**-0.4**
	baz=98,SNR=113							
BFSC					S	**Sb**	**04 25 12.0**	**+0.3**
	baz=98							
SSK	**Sunset Peak**	**1.05**	**277**			**Pb**	**04 24 58.1**	**-0.7**
IRM	**Iron Mountain**	**1.07**	**86**			**Pb**	**04 24 58.8**	**-0.2**
IRM	**Iron Mountain**	**1.07**	**86**	P		**Pb**	**04 24 58.8**	**-0.2**
	baz=267,SNR=71							
IRM					S	**Sb**	**04 25 13.2**	**+0.5**
	baz=267							
DSCC	**Desert Studies**	**1.09**	**14**			**Pb**	**04 24 58.8**	**-0.5**
PSRC	**Puddingstone R**	**1.14**	**271**			**Pb**	**04 25 00.0**	**-0.2**
GORC	**Green Oak Ranc**	**1.14**	**216**			**Pb**	**04 24 59.5**	**-0.8**
HWB	**Hans Werner Br**	**1.15**	**203**			**Sb**	**04 25 14.5**	**-0.4**
MONP2	**Monument Peak**	**1.19**	**180**			**Pn**	**04 25 00.6**	**-0.4**
MONP2						**Sb**	**04 25 16.6**	**+0.2**
MONP2	**Monument Peak**	**1.19**	**180**	P		**Pn**	**04 25 00.6**	**-0.4**
	baz=360,SNR=67							
MONP2					S	**Sb**	**04 25 16.6**	**+0.2**
	baz=360							
PEM	**Pine Mountain**	**1.20**	**274**			**Pn**	**04 25 00.8**	**-0.1**
HYS	**Haystack Butte**	**1.22**	**310**			**Pn**	**04 25 01.0**	**-0.3**
HOLC	**Holcomb Ridge**	**1.23**	**288**			**Pn**	**04 25 01.6**	**+0.2**
EML	**El Monte Cty P**	**1.24**	**196**			**Pn**	**04 25 01.2**	**-0.3**
EML						**Sb**	**04 25 17.5**	**-0.1**
GSC	**Goldstone, Bar**	**1.25**	**346**			**Pn**	**04 25 01.3**	**-0.4**
GSC	**Goldstone, Bar**	**1.25**	**346**			**Pn**	**04 25 01.8**	**0.0**
GSC	**Goldstone, Bar**	**1.25**	**346**	Pb		**Pn**	**04 25 01.6**	**-0.1**
	baz=165,SNR=68							
GSC					S	**Sb**	**04 25 18.8**	**+0.8**
	baz=165							
SWSC	**Sam W. Stewart**	**1.25**	**155**	P		**Pn**	**04 25 00.4**	**-1.2**
	baz=336,SNR=15							
SWSC					S	**Sb**	**04 25 19.0**	**+1.0**
	baz=336							
SBB	**Saddle Back Bu**	**1.30**	**298**			**Pn**	**04 25 02.1**	**-0.3**
109C	**Camp Elliot, M**	**1.32**	**205**			**Pn**	**04 25 02.5**	**-0.1**
109C	**Camp Elliot, M**	**1.32**	**205**	Pb		**Pn**	**04 25 02.5**	**-0.1**
	baz=25,SNR=22							
109C					S	**Sb**	**04 25 19.6**	**-0.3**
	baz=25							
CHFC	**Chilao Flat St**	**1.34**	**281**			**Pn**	**04 25 03.5**	**+0.5**
GVRC	**Garvey Reservo**	**1.40**	**269**			**Pb**	**04 25 05.2**	**+0.5**
TUQ	**Turquoise Moun**	**1.41**	**17**			**Pn**	**04 25 05.0**	**+1.1**
TUQ	**Turquoise Moun**	**1.41**	**17**	Pb		**Pn**	**04 25 04.5**	**+0.6**
	baz=197,SNR=96							
TUQ					S	**Sb**	**04 25 23.8**	**+1.1**
	baz=197							
SDRC	**San Diego Road**	**1.41**	**198**			**Pn**	**04 25 03.9**	**0.0**
SDRC						**Sn**	**04 25 22.4**	**+0.4**
BAR	**Barrett**	**1.42**	**188**			**Pn**	**04 25 03.7**	**-0.3**
BAR	**Barrett**	**1.42**	**188**			**Pn**	**04 25 03.8**	**-0.1**
BAR	**Barrett**	**1.42**	**188**			**Sn**	**04 25 22.3**	**+0.1**
PASC	**Pasadena Art C**	**1.46**	**274**			**Pn**	**04 25 05.6**	**+1.1**
PASC	**Pasadena Art C**	**1.46**	**274**	Pn		**Pn**	**04 25 04.9**	**+0.4**
IKP	**In-Ko-Pah, Jac**	**1.46**	**169**	Pn		**Pn**	**04 25 03.9**	**-0.7**
	baz=350,SNR=29							
IKP					Pg	**Pb**	**04 25 05.

JMA ***18*** *05:00:41.4±0.2,28.97N×142.48E,h30km,M5.6*

IDC ***18*** *05:00:42.2±2.6,28.97N×142.25E,h9km±15km,mb4.9/27, mb1 5.1/31,mb1mx5.1/33,mbtmp5.0/31,ML4.2/4,MS5.1/32, Ms1 5.1/32,ms1mx5.0/38,Error ellipse: s-maj=14.2km s-min=10.4km az=89.0*

NEIC ***18*** *05:00:42.5±2.1,28.90N±0.04×142.35E±0.10,h14km±1km, mb5.4/290,Ms_20 5.2/372,Mwb5.3/54,Mwc5.5(GCMT), Error ellipse: s-maj=14.9km s-min=7.3km az=83.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.91; Mθθ-0.01; Mφφ-0.90; Mrθ0.25; Mθφ-0.00; Mφr0.80; Fault plane solution: M₀1.23000×10¹⁷ NP1: φs170.05000°,δ24.92000°,λ70.25000°. NP2:φs11.64000°, δ66.63000°,λ98.92000°. Principal axes: T 1.2517, Plg67.0000°, Azm298.0000°; N -0.0452, Plg8.0000°, Azm188.0000°; P -1.2066, Plg21.0000°, Azm95.0000°;*

MOS ***18*** *05:00:42.5±1.1,28.98N×142.26E,h21km,mb5.7/60, MS5.3/34 Error ellipse: s-maj=7.8km s-min=3.8km az=113.0*

NEIC ***18*** *05:00:44,28.83N×142.50E,h15km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.24; Mθθ0.28; Mφφ-1.52; Mrθ0.22; Mφθ0.28; Mφr1.14; Fault plane solution: M₀1.84000×10¹⁷ NP1:φs154.00000°, δ28.00000°,λ61.00000°. NP2:φs5.00000°,δ66.00000°, λ104.00000°. Principal axes: T 1.7150, Plg66.0000°, Azm301.0000°; N 0.2320, Plg13.0000°, Azm179.0000°; P -1.9470, Plg19.0000°, Azm85.0000°;*

GCMT ***18*** *05:00:44.5±0.1,28.88N±0.01×142.46E±0.01,h17km, MW5.5/153,Moment Tensor Solution. s114,c203; s153,c284; Duration: 1s3 Moment tensor: Scale 10¹⁷ Nm; Mrr1.38±.02; Mθθ0.16±.02; Mφφ-1.54±.02; Mrθ0.24±.04; Mθφ0.26±.01; Mφr1.13±.05; Best double couple: M₀1.88300×10¹⁷ NP1:φs157.00000°,δ29.00000°, λ65.00000°. NP2:φs5.00000°,δ64.00000°,λ103.00000°. Principal axes: T 1.8260, Plg68.0000°, Azm300.0000°; N 0.1170, Plg12.0000°, Azm179.0000°; P -1.9400, Plg18.0000°, Azm85.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 05:00:43.5±0.6,28.94N±0.03×142.32E±0.04,h18km±2km, n969,σ1$71/815,mb5.4/295,MS5.2/274,72C-17D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op	ISC		h m s		ISC
CBIJ	**Chichi jima**	**1.84**	**184**	P	**Pn**		**05 01 12.6**		**-1.6**
CBIJ				*e*S	**Sn**		**05 01 35.6**		**-1.4**
JCJ	**Chichijima**	**1.84**	**184**	Pn	**Pn**		**05 01 12.5**		**-1.6**
	124nm,0.3s,baz=289,slow=23,SNR=44								
JCJ				Sn	**Sn**		**05 01 35.1**		**-1.9**
	406nm,0.3s,baz=121,slow=23,SNR=25								
JHH2	**Haha-jima-NKT2**	**2.31**	**183**	P	**Pn**		**05 01 19.6**		**-0.9**
JAOM	**Aogashimamukai**	**4.14**	**329**	P	**Pn**		**05 01 46.3**		**+0.5**
JHCJ	**Hachijojimakas**	**4.65**	**333**	P	**Pn**		**05 01 52.0**		**-0.8**
JHCJ				*e*S	**Sn**		**05 02 43.0**		**-3.3**
JHJ2	**Mitsune**	**4.68**	**333**	P	**Pn**		**05 01 52.5**		**-0.7**
JHJ2				*e*S	**Sn**		**05 02 45.6**		**-1.4**
JHJ2	**Mitsune**	**4.68**	**333**		**Pn**		**05 01 52.8**		**-0.3**
JHJ2				Sn	**Sn**		**05 02 46.2**		**-0.8**
JMKN	**Mikurajimanish**	**5.46**	**335**	P	**Pn**		**05 02 02.9**		**-1.0**
JMKN				*e*S	**Sn**		**05 03 03.7**		**-2.5**
BSO1	**Boso 1**	**5.81**	**349**	P	**Pn**		**05 02 08.7**		**+0.5**
JIM2	**Oshima 3**	**6.26**	**338**	P	**Pn**		**05 02 13.9**		**-1.0**
JIM2				*e*S	**Sn**		**05 03 22.0**		**-4.0**
TATJ	**Tateyama 2**	**6.41**	**342**	P	**Pn**		**05 02 17.4**		**+0.4**
JKUC	**kamogawauchiur**	**6.46**	**344**	P	**Pn**		**05 02 17.2**		**-0.3**
JKUC				*e*S	**Sn**		**05 03 26.8**		**-3.9**
JIZS	**Izushimoda**	**6.46**	**334**	P	**Pn**		**05 02 17.5**		**-0.1**
TTO1	**TONANKAI O.B.S**	**6.65**	**316**	P	**Pn**		**05 02 21.6**		**+1.6**
JOD2	**Odawara 2**	**6.87**	**337**	P	**Pn**		**05 02 22.9**		**-0.4**
JOD2				*e*S	**Sn**		**05 03 39.5**		**-1.6**
JIE	**Ise**	**7.24**	**320**	P	**Pn**		**05 02 30.2**		**+1.9**
JTNC	**Tanabenakahech**	**7.52**	**312**	P	**Pn**		**05 02 33.5**		**+1.3**
JRY	**Ryogami san**	**7.62**	**339**	P	**Pn**		**05 02 33.6**		**0.0**
JRY				*e*S	**Sn**		**05 03 57.5**		**-2.0**
INU	**Inuyama**	**7.81**	**326**		**Pn**		**05 02 36.4**		**+0.2**
MJAR	**Matsushiro Arr**	**8.33**	**336**	Pn	**Pn**		**05 02 43.2**		**-0.2**
	6.3nm,0.3s,baz=158,slow=16,SNR=145								
MJAR				LR	LR		05 05 57.1		
	comp=Z,12μm,19.3s,baz=165,slow=38								
MJAR	**Matsushiro Arr**	**8.33**	**336**		**Pn**		**05 02 42.2**		**-1.1**
MAJO	**Matsushiro**	**8.33**	**336**	*c i*P	**Pn**		**05 02 43.6**		**+0.3**
MAJO	**Matsushiro**	**8.33**	**336**		**Pn**		**05 02 43.2**		**-0.2**
MAT	**Matsushiro**	**8.33**	**336**	P	**Pn**		**05 02 43.6**		**+0.3**
MAT				S	**Sn**		**05 04 13.0**		**-4.0**
MJB9	**Matsu-Tunnel**	**8.34**	**336**		**Pn**		**05 02 43.3**		**-0.1**
JTO	**Tosashimizu**	**9.06**	**298**	P	**Pn**		**05 02 55.9**		**+2.5**
JHS	**Saijyo**	**9.88**	**310**	P	**Pn**		**05 03 08.5**		**+4.0**
JMK	**Ichinoseki**	**10.03**	**355**	P	**Pn**		**05 03 03.6**		**-2.9**
JMK				S	Sn		05 04 49.1		-9.4
JNU	**Nakatsue**	**10.66**	**296**	Pn	**Pn**		**05 03 18.5**		**+3.2**
	0.7nm,0.3s,baz=93,slow=8.2,SNR=12								
JNU				LR	LR		05 07 16.6		
	comp=Z,21μm,18.6s,baz=118,slow=37								
JNU	**Nakatsue**	**10.66**	**296**		**Pn**		**05 03 19.1**		**+3.8**
JOT	**Ohata**	**12.46**	**356**	P	**Pn**		**05 03 38.2**		**-1.5**
ERM	**Erimo**	**13.06**	**3**	P	**Pn**		**05 03 44.1**		**-3.9**
ERM	**Erimo**	**13.06**	**3**		**Pn**		**05 03 44.1**		**-3.9**
TJN	**Taejon**	**14.61**	**304**	*c*eP	**Pn**		**05 04 10.9**		**+1.7**
KSRS	**Korea Array**	**14.73**	**309**	Pn	**Pn**		**05 04 11.8**		**+0.9**
	1.0nm,0.3s,baz=116,slow=13,SNR=25								
KSRS				LR	LR		05 09 54.3		
	comp=Z,11μm,18.4s,baz=121,slow=38								
KSAR	**Wonju Array Be**	**14.75**	**309**	P	**Pn**		**05 04 13.9**		**+2.8**
KSAR	**Wonju Array Be**	**14.75**	**309**	P	**Pn**		**05 04 13.9**		**+2.8**
KSAR				PcP	**PcP**		**05 09 23.2**		**+0.8**
KS19	**Wonju Array Si**	**14.79**	**309**	P	**Pn**		**05 04 14.8**		**+3.1**
JKA	**Kamikawa-asahi**	**15.14**	**1**		**Pn**		**05 04 12.9**		**-3.5**
ASAJ	**Asahikawa**	**15.15**	**1**	Pn	**Pn**		**05 04 12.9**		**-3.5**
	2.4nm,0.3s,baz=207,slow=8.1,SNR=10								
ASAJ				LR	LR		05 11 50.7		
	comp=Z,4μm,20.6s,baz=191,slow=44								
YUK	**Yuzh-Kuril'sk**	**15.33**	**10**	*d i*P	**Pn**		**05 04 14.0**		**-4.7**
YUK				*i* S	**Sn**		**05 07 04.8**		**-3.2**
YUK				pmax	pmax				
	comp=Z,86nm,0.5s								
YUK				pmax	pmax				
	comp=N,39nm,0.2s								
YUK				pmax	pmax				
	comp=E,60nm,0.3s								
YUK				pmax	pmax				
	comp=Z,311nm,1.2s								
YUK				MLR	MLR				
	comp=Z,4μm,20.0s								
GUMO	**Guam**	**15.46**	**171**	Pn	**P**		**05 04 23.1**		**-2.0**
	comp=Z,5.2nm,0.3s,baz=226,slow=3.4,SNR=6.0								
GUMO	**Guam**	**15.46**	**171**	P	**P**		**05 04 23.1**		**-2.0**
INCN	**Inchon**	**15.64**	**307**	P	**Pn**		**05 04 24.9**		**+2.0**
INCN				pmax	pmax				
	comp=Z,131nm,0.8s								
INCN	**Inchon**	**15.64**	**307**	P	**Pn**		**05 04 24.9**		**+2.0**
INCN				IAmb	IAmb		05 04 30.0		
	comp=Z,131nm,0.8s								
VLA	**Vladivostok**	**16.45**	**332**	*i* P	**Pn**		**05 04 34.6**		**+1.3**
VLA				pmax	pmax				
	comp=Z,286nm,0.9s								
TEY	**Ternei**	**16.69**	**346**	⇓*e*P	**Pn**		**05 04 33.9**		**-2.4**
TEY				pmax	pmax				
	comp=E,10.0nm,0.9s								
TEY				pmax	pmax				
	comp=N,30nm,0.8s								
TEY				pmax	pmax				
	comp=Z,30nm,0.9s								
TEY				MLR	MLR				
	comp=N,200nm,13.0s								
TEY				MLR	MLR				
	comp=Z,300nm,16.0s								
KUR	**Kuril'sk**	**16.84**	**14**	*e*P	**P**		**05 04 42.6**		**+2.4**
KUR				*e*S	**Sn**		**05 07 48.0**		**+3.2**
KUR				pmax	pmax				
	comp=Z,278nm,1.3s								
KUR				pmax	pmax				
	comp=N,255nm,1.2s								
KUR				pmax	pmax				
	comp=E,117nm,1.2s								
KUR				MLR	MLR				
	comp=Z,4μm,11.0s								
KUR				MLR	MLR				
	comp=E,2μm,8.0s								
KUR				MLR	MLR				
	comp=N,3μm,11.0s								
USA0B	**Ussuriysk Arra**	**17.32**	**334**	P	**Pn**		**05 04 42.4**		**-1.8**
USA0B				pmax	pmax				
	comp=Z,103nm,1.0s								
USA0B	**Ussuriysk Arra**	**17.32**	**334**	Pn	**Pn**		**05 04 42.4**		**-1.8**
USRK	**Ussuriysk Ar.**	**17.32**	**334**	P	**Pn**		**05 04 42.3**		**-1.9**
	baz=145,slow=11,SNR=28								
USRK				LR	LR		05 11 11.4		
	comp=Z,6μm,18.1s,baz=140,slow=36								
YOJ	**Yonaguni jima**	**17.82**	**260**	P	**Pn**		**05 04 48.8**		**-1.7**
YOJ				pmax	pmax				
	comp=Z,214nm,1.1s								
YOJ	**Yonaguni jima**	**17.82**	**260**	P	**Pn**		**05 04 48.8**		**-1.7**
YOJ				IAmb	IAmb		05 05 14.5		
	comp=Z,214nm,1.1s								
YSS	**Yuzh-Sakhalins**	**17.98**	**1**	*e*P	**Pn**		**05 04 51.3**		**-1.1**
YSS				*e*S	**Sn**		**05 08 05.7**		**-6.8**
YSS				pmax	pmax				
	comp=Z,70nm,1.2s								
YSS				MLR	MLR				
	comp=Z,7μm,17.0s								
YSS				MLR	MLR				
	comp=N,5μm,15.0s								
YSS				MLR	MLR				
	comp=E,4μm,13.0s								
YSS	**Yuzh-Sakhalins**	**17.98**	**1**		**Pn**		**05 04 52.7**		**+0.3**
SSE	**Sheshan**	**18.43**	**282**	P	**P**		**05 04 56.8**		**-1.0**
SSE				S	**Sn**		**05 08 23.3**		**-0.1**
SSE				pmax	pmax				
	comp=E,750nm,7.6s								
SSE				LR	LR				
	comp=E,2μm,17.3s								
SSE				LR	LR				
	comp=E,2μm,17.5s								
MDJ	**Mudanjiang**	**18.64**	**330**	P	**P**		**05 04 58.9**		**-1.1**
MDJ				pP	pP		05 05 03.1		-0.9
MDJ				sP	sP		05 05 05.3		-0.7
MDJ				S	**Sn**		**05 08 27.1**		**-1.2**
MDJ				sS	S		05 08 33.1		+1.4
MDJ				SS			05 08 42.4		
MDJ				pmax	pmax				
	comp=E,250nm,1.4s								
MDJ				pmax	pmax				
	comp=E,2μm,4.8s								
MDJ				LR	LR				
	comp=E,7μm,17.1s								
MDJ				LR	LR				
	comp=E,8μm,15.7s								
MDJ				LR	LR				
	comp=E,13μm,17.1s								
MDJ	**Mudanjiang**	**18.64**	**330**	P	**P**		**05 04 59.8**		**-0.3**
MDJ				IAmb	IAmb		05 05 03.6		
	comp=Z,382nm,1.3s								
TATO	**Taipei**	**18.98**	**263**	P	**Pn**		**05 05 07.9**		**+3.1**
NACB	**Ninganchiao**	**19.14**	**260**	P	**P**		**05 05 06.2**		**+0.5**
NACB				IAmb	IAmb		05 05 14.9		
	comp=Z,176nm,1.1s								
YHNB	**Yeheng**	**19.17**	**262**	P	**P**		**05 05 06.1**		**-0.1**
YHNB				IAmb	IAmb		05 05 11.4		
	comp=Z,182nm,0.9s								
YULB	**Yu-li**	**19.66**	**259**	P	**Pn**		**05 05 13.0**		**+0.1**
DL2	**Dalian**	**19.80**	**306**	P	**P**		**05 05 12.3**		**-0.5**
DL2				PP	pwP		05 05 32.0		+10
DL2				S	**S**		**05 08 55.3**		**+0.1**
DL2				pmax	pmax				
	comp=Z,66nm,0.7s								
DL2				pmax	pmax				
	comp=Z,1μm,8.5s								
DL2				LR	LR				
	comp=Z,10μm,15.7s								
DL2				LR	LR				
	comp=Z,16μm,16.5s								
DL2				LR	LR				
	comp=Z,19μm,16.7s								
SNY	**Shenyang**	**19.92**	**315**	⇓P	**P**		**05 05 11.3**		**-2.8**
SNY				S	**S**		**05 08 53.1**		**-4.3**
SNY				pmax	pmax				
	comp=Z,2μm,12.3s								
SNY				LR	LR				
	comp=Z,6μm,15.7s								
SNY				LR	LR				
	comp=Z,3μm,22.1s								
SNY				LR	LR				
	comp=Z,8μm,14.1s								
CN2	**Changchun**	**20.05**	**322**	*e*P	**P**		**05 05 14.3**		**-1.3**
CN2				*e*PP	**PnPn**		**05 05 33.4**		**+1.6**
CN2				*e*S	**S**		**05 08 53.4**		**-6.8**
CN2				pmax	pmax				
	comp=Z,40nm,1.0s								
CN2				pmax	pmax				
	comp=Z,1μm,5.0s								
CN2				LR	LR				
	comp=Z,7μm,18.0s								
CN2				LR	LR				
	comp=Z,7μm,18.0s								
CN2				LR	LR				
	comp=Z,10μm,18.0s								
TWG	**Pinlang**	**20.06**	**257**	P	Pn		05 05 18.1		+0.5
TWG				IAMs_20	IAMs_20		05 12 48.7		
	comp=Z,12μm,18.0s								
TPUB	**Ta-pu**	**20.26**	**259**	P	Pn		05 05 20.3		+0.2
NJ2	**Nanjing**	**20.45**	**285**	*i*P	**P**		**05 05 19.8**		**-0.2**
NJ2				sP	**sP**		**05 05 24.8**		**-1.0**
NJ2				PP	pwP		05 05 38.3		+10
NJ2				S	**S**		**05 09 08.8**		**+0.6**
NJ2				sS	**sS**		**05 09 15.5**		**+0.1**
NJ2				SS	**SnSn**		**05 09 35.4**		**+8.6**
NJ2				pmax	pmax				
	comp=Z,180nm,0.9s								
NJ2				pmax	pmax				
	comp=Z,1μm,3.9s								
NJ2				LR	LR				
	comp=Z,3μm,12.8s								
NJ2				LR	LR				
	comp=Z,7μm,15.6s								
NJ2				LR	LR				
	comp=Z,9μm,15.2s								
QZH	**Quanzhou**	**21.52**	**265**	⇓*i*P	**P**		**05 05 32.5**		**+1.0**
QZH				S	**S**		**05 09 26.3**		**-3.2**
QZH				pmax	pmax				
	comp=Z,75nm,0.8s								
QZH				LR	LR				
	comp=Z,2μm,17.1s								
QZH				LR	LR				
	comp=Z,4μm,18.2s								
QZH				LR	LR				
	comp=Z,4μm,19.3s								
KLR	**Kul'dur**	**21.82**	**341**	*i* P	**P**		**05 05 34.0**		**-0.5**
KLR				pmax	pmax				
	comp=Z,125nm,1.1s								
KLR				MLR	MLR				
	comp=Z,4μm,17.0s								
KLR	**Kul'dur**	**21.82**	**341**	P	**P**		**05 05 33.5**		**-1.0**
	comp=Z,43nm,0.8s,baz=169,slow=8.2,SNR=61								
KLR				LR	LR		05 14 21.7		
	comp=Z,5μm,18.2s,baz=157,slow=38								
KNMB	**Chin-men Tao**	**21.83**	**264**	P	**P**		**05 05 36.9**		**+2.0**
KNMB				IAmb	IAmb		05 05 38.8		
	comp=Z,286nm,1.3s								
TYV	**Tymovskoe**	**21.90**	**1**	*e*P	**P**		**05 05 36.4**		**+1.1**
TYV				*e*S	**S**		**05 09 41.5**		**+5.1**
TYV				pmax	pmax				
	comp=Z,20nm,0.7s								
TYV				MLR	MLR				
	comp=N,4μm,21.0s								
TYV				MLR	MLR				
	comp=Z,4μm,21.0s								
GRNR	**Gornyy**	**22.25**	**350**	⇓*i*P	**P**		**05 05 40.7**		**+1.5**
GRNR				*i*			05 05 49.3		
GRNR				*i*			05 05 49.3		
GRNR				*e*			05 06 17.2		
GRNR				pmax	pmax				
	comp=Z,90nm,0.9s								
GRNR				MLR	MLR				
	comp=N,1μm,19.0s								
GRNR				MLR	MLR				
	comp=Z,2μm,17.0s								
TIA	**Tai'an**	**22.40**	**295**	P	**P**		**05 05 38.3**		**-2.6**
TIA				S	**S**		**05 09 42.5**		**-3.8**
TIA				pmax	pmax				
	comp=Z,50nm,1.1s								
TIA				pmax	pmax				
	comp=Z,800nm,11.8s								
TIA				LR	LR				
	comp=Z,4μm,18.9s								
TIA				LR	LR				
	comp=Z,4μm,19.9s								
TIA				LR	LR				
	comp=Z,6μm,18.1s								
SKR	**Severo-Kuril's**	**24.08**	**22**	*e*P	**P**		**05 05 57.2**		**-0.5**
SKR				*e*			05 06 32.1		
SKR				pmax	pmax				
	comp=Z,61nm,1.0s								
SKR				pmax	pmax				
	comp=Z,1μm,4.0s								
SKR				pmax	pmax				
	comp=Z,400nm,4.5s								
SKR				MLR	MLR				
	comp=Z,1μm,14.0s								
SKR				MLR	MLR				
	comp=Z,2μm,15.0s								
BJT	**Baijiatuao**	**24.14**	**304**	IAmb	IAmb		05 05 58.0		
	comp=Z,166nm,1.8s								
BJI	**Beijing**	**24.14**	**304**	P	**P**		**05 05 56.5**		**-1.9**
BJI				S	**S**		**05 10 14.3**		**-1.1**
BJI				pmax	pmax				
	comp=Z,31nm,1.1s								
BJI				pmax	pmax				
	comp=Z,950nm,9.3s								
BJI				LR	LR				
	comp=Z,6μm,17.5s								
BJI				LR	LR				
	comp=Z,11μm,16.9s								
H11N2	**WAKE ISLAND Hy**	**24.16**	**107**	T	T		05 31 11.5		
	baz=296,slow=74,SNR=116								
H11N1	**WAKE ISLAND Hy**	**24.16**	**107**	T	T		05 31 11.1		
	baz=296,slow=74,SNR=118								
H11N3	**WAKE ISLAND Hy**	**24.17**	**107**	T	T		05 31 12.1		
	baz=296,slow=74,SNR=151								
NKL	**Nikolayevsk**	**24.22**	**358**	*e*P	**P**		**05 05 58.1**		**-0.8**
NKL				*e*S	**S**		**05 10 19.8**		**+3.6**
NKL				pmax	pmax				
	comp=Z,78nm,1.4s								
NKL				pmax	pmax				
	comp=N,4.0nm,0.9s								
NKL				pmax	pmax				
	comp=E,8.0nm,0.9s								
NKL				smax	smax				
	comp=E,28nm,3.3s								
NKL				smax	smax				
	comp=N,11nm,3.4s								
WHN	**Wuhan**	**24.32**	**281**	⇑P	**P**		**05 05 59.5**		**-0.6**
WHN				PP	pwP		05 06 38.3		+29
WHN				S	**S**		**05 10 12.9**		**-5.5**
WHN				pmax	pmax				
	comp=N,210nm,1.1s								
WHN				pmax	pmax				
	comp=N,3μm,9.2s								
WHN				LR	LR				
	comp=N,5μm,9.9s								
WHN				LR	LR				
	comp=N,7μm,17.6s								
WHN				LR	LR				
	comp=N,9μm,19.4s								
H11S3	**WAKE ISLAND Hy**	**24.56**	**110**	T	T		05 31 47.6		
	baz=304,slow=75,SNR=23								
H11S1	**WAKE ISLAND Hy**	**24.57**	**110**	T	T		05 31 39.1		
	baz=304,slow=75,SNR=20								
H11S2	**WAKE ISLAND Hy**	**24.58**	**110**	T	T		05 31 46.3		
	baz=304,slow=75,SNR=22								
TGY	**Tagaytay City**	**24.71**	**238**	P	**P**		**05 06 04.4**		**+0.5**
	comp=N,711nm,0.8s,baz=138,slow=3.4,SNR=10								
TGY				LR	LR		05 15 05.7		
	comp=N,4μm,18.9s,baz=74,slow=35								
TIY	**Taiyuan**	**26.37**	**297**	*e*P	**P**		**05 06 18.3**		**-0.5**
TIY				PP	pwP		05 07 02.3		+35
TIY				S	**S**		**05 10 46.4**		**-4.8**
TIY				pmax	pmax				
	comp=N,580nm,6.0s								
TIY				LR	LR				
	comp=N,4μm,19.2s								
TIY				LR	LR				
	comp=N,5μm,15.4s								
TIY				LR	LR				
	comp=N,6μm,17.6s								
HIA	**Hailar**	**26.63**	**326**	P	**P**		**05 06 21.7**		**+0.8**
HIA				pmax	pmax				
	comp=Z,294nm,1.1s								
HIA				MLR	MLR				
	comp=Z,4μm,18.0s								
HIA	**Hailar**	**26.63**	**326**	P	**P**		**05 06 21.7**		**+0.8**
PEA0B	**Petropavlovsk-**	**26.67**	**21**	*i* P	**P**		**05 06 21.5**		**+0.4**
PETK	**Petropavlovsk-**	**26.67**	**21**	P	**P**		**05 06 21.4**		**+0.2**
	comp=Z,6.2nm,0.9s,baz=83,slow=27,SNR=5.7								
PETK				LR	LR		05 21 10.7		
	comp=Z,1μm,18.0s,baz=201,slow=46								
PETK	**Petropavlovsk-**	**26.67**	**21**	P	**P**		**05 06 19.6**		**-1.6**
DAV	**Davao City (W)**	**26.89**	**219**	LR	LR		05 16 37.4		
	comp=Z,3μm,20.6s,baz=20,slow=36								
PET	**Petropavlovsk**	**26.90**	**22**	*e*P	**P**		**05 06 23.4**		**+0.2**
PET				*e*S	**S**		**05 10 55.7**		**-3.3**
PET							05 12 12.1		
PET				pmax	pmax				
	comp=Z,72nm,1.2s								
PET				MLR	MLR				
	comp=Z,2μm,18.0s								
ZEA	**Zeya**	**27.12**	**340**	*e*P	**P**		**05 06 25.0**		**-0.2**
ZEA				*e*S	**S**		**05 11 04.0**		**+1.5**
ZEA				*e*SS	**SnSn**		**05 12 19.0**		**+9.2**
ZEA				pmax	pmax				
	comp=N,140nm,0.8s								
ZEA				pmax	pmax				
	comp=E,52nm,1.0s								
ZEA				pmax	pmax				
	comp=Z,190nm,1.0s								
ZEA				pmax	pmax				
	comp=N,600nm,10.0s								
ZEA				pmax	pmax				
	comp=E,200nm,10.0s								
ZEA				pmax	pmax				
	comp=Z,1μm,10.0s								
ZEA				smax	smax				
	comp=Z,1μm,9.0s								
ZEA				smax	smax				
	comp=E,3μm,11.0s								
ZEA				MLR	MLR				
	comp=Z,4μm,16.0s								
ZEA				MLR	MLR				
	comp=E,4μm,13.0s								
ZEA				MLR	MLR				
	comp=N,5μm,16.0s								
KCP	**Kidapawan**	**27.21**	**220**	⇓*i*P	**P**		**05 06 26.7**		**+0.3**
HHC	**Hu-ho-hao-te**	**27.74**	**304**	*e*P	**P**		**05 06 29.6**		**-1.5**
HHC				pP	pP		05 06 33.8		-1.8
HHC				PP	**PnPn**		**05 07 14.4**		**-2.7**
HHC				*e*S	**S**		**05 11 09.1**		**-3.7**
HHC				sS	sS		05 11 20.3		+0.8
HHC				pmax	pmax				
	comp=N,31nm,0.8s								
HHC				pmax	pmax				
	comp=N,280nm,5.3s								
HHC				LR	LR				
	comp=N,3μm,15.6s								
HHC				LR	LR				
	comp=N,7μm,15.6s								
HHC				LR	LR				
	comp=N,11μm,15.7s								
BTO	**Baotou**	**28.82**	**302**	*e*P	**P**		**05 06 39.6**		**-1.0**
BTO				S	**S**		**05 11 33.0**		**+3.3**
XAN	**Xi'an**	**28.85**	**289**	P	**P**		**05 06 39.0**		**-2.0**
XAN				pP	pP		05 06 44.3		-1.2
XAN				S	**S**		**05 11 37.6**		**+7.3**
XAN				pmax	pmax				
	comp=N,230nm,3.5s								
XAN				LR	LR				
	comp=N,3μm,16.6s								
XAN				LR	LR				
	comp=N,7μm,17.6s								
XAN				LR	LR				
	comp=N,8μm,18.6s								
XAN	**Xi'an**	**28.85**	**289**	P	**P**		**05 06 38.7

comp=Z,17nm,0.6s,baz=190,slow=7.9,SNR=12
MA2 Magadan 31.17 8 P **P** **05 07 01.6 +0.5**
MA2 IAmb IAmb 05 07 13.2
comp=Z,80nm,1.5s
QIZ Qiongzhong 31.18 259 P **P** **05 07 01.5 -0.2**
QIZ S **S** **05 12 07.3 +0.3**
QIZ pmax pmax
comp=Z,510nm,3.9s
QIZ LR LR
comp=Z,880nm,23.1s
QIZ LR LR
comp=Z,3μm,18.2s
QIZ LR LR
comp=Z,3μm,18.7s
GENI Genyem 31.42 184 P **P** **05 07 04.0 +0.3**
comp=Z,76nm,0.7s
SWI Sorong 31.47 202 P **P** **05 07 03.4 -0.8**
comp=Z,89nm,0.9s
LZH Lanzhou 33.06 292 ⇓P **P** **05 07 16.8 -1.4**
LZH sP sP 05 07 23.6 -0.6
LZH PP **PnPn** **05 08 28.4 +0.7**
LZH sS sS 05 12 42.3 -1.1
LZH SS SS 05 14 34.3 -25
LZH pmax pmax
comp=Z,49nm,1.3s
LZH pmax pmax
comp=Z,460nm,6.0s
LZH LR LR
comp=Z,4μm,15.2s
LZH LR LR
comp=Z,8μm,14.6s
LZH LR LR
comp=Z,9μm,16.8s
ULN Ulaanbaatar 33.09 315 *ce*P **P** **05 07 18.3 0.0**
ULN pmax pmax
comp=Z,85nm,1.3s
ULN Ulaanbaatar 33.09 315 P **P** **05 07 17.7 -0.6**
ULN IAmb IAmb 05 07 25.0
comp=Z,47nm,0.8s
ULN PcP **PcP** **05 10 01.4 0.0**
FAKI Fak Fak 33.12 199 P **P** **05 07 18.4 -0.2**
comp=Z,60nm,1.2s
FAKI Fak Fak 33.12 199 P **P** **05 07 17.1 -1.5**
FAKI IAmb IAmb 05 07 24.2
comp=Z,50nm,1.0s
FAKI IAMs_20 IAMs_20 05 18 58.6
comp=Z,5μm,19.0s
KMSI Cibinong 33.21 215 P **P** **05 07 19.1 -0.3**
comp=Z,4μmcomp=Z,203nm,0.9s
CD2 Chengdu 33.37 283 P **P** **05 07 19.4 -1.4**
CD2 sP pP 05 07 25.3 -0.1
CD2 PP **PP** **05 08 35.8 -0.6**
CD2 S **S** **05 12 35.8 -5.3**
CD2 sS sS 05 12 47.8 +1.0
CD2 pmax pmax
comp=Z,80nm,0.9s
CD2 pmax pmax
comp=Z,750nm,9.3s
CD2 LR LR
comp=Z,5μm,14.9s
CD2 LR LR
comp=Z,12μm,16.4s
SONM Songino Array 33.49 314 P **P** **05 07 21.0 -0.8**
comp=Z,14nm,0.7s,baz=118,slow=7.8,SNR=79
SONM PcP **PcP** **05 10 02.4 -0.1**
comp=Z,5.9nm,0.9s,baz=156,slow=3.9,SNR=4.7
SONM ScP **ScP** **05 13 45.6 -0.6**
comp=Z,4.3nm,1.1s,baz=98,slow=2.3,SNR=6.7
SONM LR LR 05 21 28.3
comp=Z,3μm,18.8s,baz=108,slow=37
SONM Songino Array 33.49 314 P **P** **05 07 21.8 0.0**
SONM PcP **PcP** **05 10 03.0 +0.6**
KKM Kota Kinabalu 33.58 232 IAMs_20 IAMs_20 05 21 14.7
comp=Z,4μm,20.0s
YAK Yakutsk 34.13 349 *c i*P **P** **05 07 25.3 -1.6**
YAK *e**PP **pwP** **05 07 36.0 -0.6**
YAK *e* 05 08 36.3
YAK *e*S **S** **05 12 52.4 +0.5**
YAK *e*SS **SnSn** **05 14 52.7 -7.3**
YAK pmax pmax
comp=Z,45nm,1.1s
YAK pmax pmax
comp=N,29nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.1s
YAK pmax pmax
comp=Z,105nm,2.4s
YAK pmax pmax
comp=N,142nm,2.7s
YAK pmax pmax
comp=E,59nm,2.3s
YAK smax smax
comp=N,255nm,2.9s
YAK smax smax
comp=E,198nm,2.8s
YAK MLR MLR
comp=Z,2μm,15.0s
YAK MLR MLR
comp=N,2μm,14.0s
YAK MLR MLR
comp=E,1μm,15.0s
YAK Yakutsk 34.13 349 P **P** **05 07 26.8 -0.1**
YAK IAmb IAmb 05 07 39.0
comp=Z,70nm,0.9s
MRSI Marisa 34.36 218 P **P** **05 07 29.7 +0.3**
comp=Z,2μmcomp=Z,247nm,1.2s
SANI Sanana 34.57 210 P **P** **05 07 29.8 -1.4**
comp=Z,954nmcomp=Z,77nm,1.0s
MSAI Masohi 34.59 204 P **P** **05 07 32.5 +1.1**
comp=Z,41nm,1.1s
SEY Seymchan 34.62 8 *i*P **P** **05 07 31.6 +0.4**
SEY Seymchan 34.62 8 P **P** **05 07 31.4 +0.2**
comp=Z,18nm,0.7s,baz=191,slow=7.1,SNR=34
BOD Bodaibo 34.95 334 ⇑ *i*P **P** **05 07 33.9 -0.2**
BOD pmax pmax
comp=Z,78nm,1.1s
AAI Ambon 35.17 205 P **P** **05 07 36.1 -0.3**
NLAI Namlea 35.18 207 P **P** **05 07 36.8 +0.3**
comp=Z,2μmcomp=Z,40nm,1.3s
LUWI Luwuk 35.20 215 P **P** **05 07 35.7 -1.0**
comp=Z,3μmcomp=Z,107nm,0.9s
LUWI Luwuk 35.20 215 P **P** **05 07 36.0 -0.7**
KMI Kunming 35.35 273 P **P** **05 07 37.3 -0.9**
KMI pP pP 05 07 42.8 0.0
KMI PP **PnPn** **05 08 56.4 -0.3**
KMI S **S** **05 13 07.4 -4.7**
KMI sS pS 05 13 18.1 +0.5
KMI pmax pmax
comp=Z,49nm,1.2s
KMI pmax pmax
comp=Z,540nm,4.0s
KMI LR LR
comp=Z,3μm,19.0s
KMI LR LR
comp=Z,4μm,19.2s
KMI LR LR
comp=Z,5μm,18.0s
KMI Kunming 35.35 273 IAMs_20 IAMs_20 05 22 51.2
comp=Z,5μm,19.0s
SLVN Son La 35.48 267 IAMs_20 IAMs_20 05 21 39.6
comp=Z,4μm,21.0s
MPSI Mapaga 35.61 221 P **P** **05 07 40.5 +0.3**
comp=Z,35nm,0.9s
APSI Ampana 35.68 217 P **P** **05 07 40.1 -0.7**
comp=Z,695nmcomp=Z,42nm,0.7s
DLV T Lat 35.76 249 IAMs_20 IAMs_20 05 20 31.0
comp=Z,4μm,19.0s
ZAK Zakamensk 36.33 317 *e*P **P** **05 07 46.4 +0.2**
ZAK pmax pmax
comp=Z,49nm,1.1s
GTA Gaotai 36.39 298 ⇑P **P** **05 07 45.0 -1.9**
GTA pP pP 05 07 49.5 -2.0
GTA sP sP 05 07 52.0 -1.3
GTA PP **PP** **05 09 11.5 +1.8**
GTA PcP **PcP** **05 10 12.0 +0.9**
GTA S **S** **05 13 26.1 -1.5**
GTA sS sS 05 13 37.4 +3.0
GTA ScP **ScP** **05 13 56.6 -0.2**
GTA SS **SnSn** **05 15 53.9 -1.7**
GTA pmax pmax
comp=Z,400nm,9.5s
GTA LR LR
comp=Z,4μm,16.8s
GTA LR LR
comp=Z,3μm,19.0s
GTA LR LR
comp=Z,4μm,19.7s
IRK Irkutsk 36.48 320 *e*P **P** **05 07 47.4 +0.1**
IRK pmax pmax
comp=Z,307nm,2.5s
UBPT Khong Chiam 36.59 256 IAmb IAmb 05 07 50.4
comp=Z,79nm,1.3s
TLY Talaya 36.61 319 *c i*P **P** **05 07 48.9 +0.5**
TLY *e* 05 09 07.3
TLY *e*S **S** **05 13 33.7 +3.4**
TLY *e*SS **SnSn** **05 16 02.8 +2.5**
TLY pmax pmax
comp=Z,884nm,1.7s
TLY MLR MLR
comp=Z,18μm,18.0s
TLY Talaya 36.61 319 P **P** **05 07 49.4 +0.9**
MOY Mondy 38.13 318 *e*P **P** **05 08 01.7 +0.2**
MOY pmax pmax
comp=Z,200nm,1.4s
PMG Port Moresby 38.41 172 *ce*P **P** **05 08 05.0 +1.1**
PMG pmax pmax
comp=Z,320nm,1.7s
TTSI Tana Toraja 38.45 218 P **P** **05 08 02.9 -1.4**
comp=Z,840nmcomp=Z,34nm,1.0s
BKB Balikpapan 38.66 223 P **P** **05 08 05.6 -0.5**
comp=Z,120nm,0.9s
SBUM Sibu 38.92 233 P **P** **05 08 08.0 -0.3**
SPSI Sidrap Palu 39.24 217 P **P** **05 08 10.4 -0.6**
comp=Z,4μmcomp=Z,61nm,0.9s
BNSI Bone 39.43 216 P **P** **05 08 12.4 -0.2**
comp=Z,1μmcomp=Z,71nm,1.6s
PBKT Sadao Pong 39.88 261 P **P** **05 08 16.7 +0.4**
PBKT IAmb IAmb 05 08 17.9
comp=Z,139nm,1.2s
BKSI Bulukumba 40.21 216 P **P** **05 08 18.8 -0.2**
comp=Z,53nm,1.3s
KBKI Kotabaru 40.72 222 P **P** **05 08 22.2 -1.1**
comp=Z,1μmcomp=Z,22nm,1.0s
CHTO Chiang Mai 40.73 266 P **P** **05 08 22.7 -0.8**
CHTO pmax pmax
comp=Z,127nm,1.1s
CHTO MLR MLR
comp=Z,4μm,20.0s
CHTO Chiang Mai 40.73 266 P **P** **05 08 22.7 -0.8**
CHTO IAmb IAmb 05 08 24.4
comp=Z,127nm,1.1s
CHTO Chiang Mai 40.73 266 IAMs_20 IAMs_20 05 24 57.8
comp=Z,4μm,20.0s
CHTO Chiang Mai 40.73 266 P **P** **05 08 23.2 -0.2**
LKP Lekhapani 40.81 279 IAMs_20 IAMs_20 05 28 45.4
comp=Z,4μm,16.0s
CM31 Chiang Mai Arr 40.87 265 P **P** **05 08 24.5 -0.1**
SNR=10
CMAR Chiang Mai Arr 40.87 265 *i*P **P** **05 08 24.5 -0.1**
CMAR pmax pmax
comp=Z,25nm,0.9s
CMAR Chiang Mai Arr 40.87 265 P **P** **05 08 23.8 -0.8**
comp=Z,23nm,0.9s,baz=51,slow=8.8,SNR=87
CMAR PcP **PcP** **05 10 27.0 +1.7**
comp=Z,3.1nm,0.4s,baz=336,slow=1.8,SNR=4.8
CMAR ScP **ScP** **05 14 16.6 +2.6**
comp=Z,0.9nm,0.3s,baz=53,slow=2.6,SNR=4.1
CMAR LR LR 05 25 21.3
comp=Z,3μm,20.7s,baz=74,slow=36
CMAR Chiang Mai Arr 40.87 265 P **P** **05 08 23.4 -1.2**
CMAR PcP **PcP** **05 10 26.5 +1.2**
STKI Sintang 41.15 231 P **P** **05 08 26.9 +0.1**
comp=Z,56nm,0.5s
BILL Bilibino 41.63 13 *c i*P **P** **05 08 30.6 +0.4**
BILL *i* 05 08 39.3
BILL *i* 05 10 06.6
BILL *i*S **S** **05 14 38.7 -6.8**
BILL pmax pmax
comp=Z,32nm,1.0s
BILL MLR MLR
comp=Z,2μm,16.0s
BILL Bilibino 41.63 13 P **P** **05 08 30.3 +0.1**
SOEI Soe 42.24 207 P **P** **05 08 35.3 -0.5**
comp=Z,209nm,0.9s
SOEI Soe 42.24 207 P **P** **05 08 34.8 -1.0**
COEN Coen 42.66 179 P **P** **05 08 38.6 -0.5**
ITAN ITANAGAR 42.70 280 *e*P **P** **05 08 39.5 0.0**
ITAN IAmb IAmb 05 08 45.1
comp=Z,41nm,0.7s
MTN Manton Dam 42.93 196 IAmb IAmb 05 08 46.4
comp=Z,91nm,1.1s
TIXI Tiksi 43.39 354 *ce*P **P** **05 08 44.2 -0.2**
TIXI pmax pmax
comp=Z,16nm,1.0s
TIXI MLR MLR
comp=Z,1μm,16.0s
TIXI Tiksi 43.39 354 P **P** **05 08 44.0 -0.5**
TEZP TEZPUR 43.62 279 *e*P **P** **05 08 42.8 -4.1**
TEZP IAMs_20 IAMs_20 05 29 38.7
comp=Z,4μm,13.5s
LSA Lhasa 44.32 284 *i*P **P** **05 08 53.9 +0.8**
SNR=7.3
PLAI Plampang 44.39 216 P **P** **05 08 52.5 -0.6**
comp=Z,88nm,0.9s
AZL Aizawl 44.53 275 ⇑ *i*P **P** **05 08 52.1 -2.3**
AZL IAmb IAmb 05 09 05.0
comp=Z,129nm,1.2s
AZL IAMs_20 IAMs_20 05 29 13.5
comp=Z,3μm,19.7s
SHL Shillong 44.70 278 *e*P **P** **05 08 52.1 -3.7**
SHL IAmb IAmb 05 09 09.4
comp=Z,17nm,0.6s
SHL IAMs_20 IAMs_20 05 29 18.8
comp=Z,2μm,17.8s
SHL Shillong 44.70 278 IAMs_20 IAMs_20 05 29 25.4
comp=Z,2μm,18.0s
SHL Shillong 44.70 278 P **P** **05 08 54.6 -1.2**
SNR=25
JRMM Jerantut 45.27 244 P **P** **05 09 01.0 +0.8**
MYKOM Kota Tinggi 45.51 241 IAmb IAmb 05 09 04.4
comp=Z,80nm,1.1s
MYKOM IAMs_20 IAMs_20 05 28 02.2
comp=Z,4μm,18.0s
MYKOM Kota Tinggi 45.51 241 P **P** **05 09 02.0 -0.1**
SIMRM Sittwe 45.55 270 IAmb IAmb 05 09 04.1
comp=Z,67nm,1.0s
WMQ Urumqi 45.62 304 P **P** **05 09 02.9 +0.2**
WMQ pP sP 05 09 08.0 -1.2
WMQ PcP **PcP** **05 10 42.9 +2.0**
WMQ S **S** **05 15 47.4 +2.9**
WMQ SS **ScS** **05 18 58.0 -0.3**
WMQ pmax pmax
comp=Z,66nm,1.5s
WMQ pmax pmax
comp=Z,540nm,8.1s
WMQ LR LR
comp=Z,1μm,15.1s
WMQ LR LR
comp=Z,2μm,20.1s
WMQ LR LR
comp=Z,3μm,18.5s
AGT Agartala 45.74 276 *e*P **P** **05 09 03.5 -0.4**
JAGI Jajag, Banyuwa 46.06 220 P **P** **05 09 05.8 -0.6**
comp=Z,4μmcomp=Z,91nm,1.1s
IPM Ipoh 46.06 246 P **P** **05 09 06.4 -0.1**
IPM Ipoh 46.06 246 P **P** **05 09 07.0 +0.5**
KNRA Kununurra 46.25 198 P **P** **05 09 07.7 -0.1**
NGJI Ngawi 46.77 224 P **P** **05 09 12.0 0.0**
comp=Z,61nm,0.9s
GTK Tadong 47.06 282 *e*P **P** **05 09 10.9 -3.5**
GTK IAmb IAmb 05 09 15.7
comp=Z,16nm,0.9s
PWJI Pagerwojo 47.08 223 P **P** **05 09 13.1 -1.3**
comp=Z,60nm,1.0s
TAPN Taplejung 47.82 282 *e*P **P** **05 09 19.1 -1.4**
comp=Z,48nm,0.9s
ZALV Zalesovo Beam 48.19 318 P **P** **05 09 21.9 -0.6**
comp=Z,78nm,0.8s,baz=101,slow=6.2,SNR=230
ZALV PcP **PcP** **05 10 49.8 +0.1**
comp=Z,13nm,0.7s,baz=117,slow=3.4,SNR=4.3
ZALV ScP **ScP** **05 14 42.0 -1.4**
comp=Z,2.2nm,1.0s,baz=49,slow=4.4,SNR=3.2
ZALV LR LR 05 30 19.0
comp=Z,3μm,18.6s,baz=98,slow=37
ZALV Zalesovo Beam 48.19 318 P **P** **05 09 22.0 -0.6**
ZALV PcP **PcP** **05 10 49.4 -0.2**
ODAN Odare 48.23 281 *e*P **P** **05 09 22.2 -1.4**
comp=Z,122nm,1.1s
ANM Nome 48.27 27 IAmb IAmb 05 09 42.7
comp=Z,45nm,1.1s
KPJI Karang Pucung 48.33 227 P **P** **05 09 23.4 -0.7**
comp=Z,324nm,1.0s
BKNI Bangkinang 48.60 242 P **P** **05 09 26.9 +0.7**
BKNI IAMs_20 IAMs_20 05 29 49.0
comp=Z,3μm,18.0s
LEM Lembang 48.80 229 P **P** **05 09 27.7 -0.2**
comp=Z,188nm,1.1s
RPSI Rantau Prapat 48.80 246 IAMs_20 IAMs_20 05 29 59.6
comp=Z,2μm,18.0s
RAMN Ramite 48.88 282 *e*P **P** **05 09 28.1 -0.5**
CBJI Citeko 49.01 230 P **P** **05 09 30.1 +0.8**
comp=Z,179nm,0.6s
JIRN Jiri 49.04 283 *e*P **P** **05 09 29.1 -0.9**
comp=Z,705nm,1.4s
SDSI Sungai Dareh 49.11 240 P **P** **05 09 30.2 +0.1**
comp=Z,8μmcomp=Z,22nm,0.5s
DBJI Dramaga 49.18 230 P **P** **05 09 29.7 -0.9**
comp=Z,12μmcomp=Z,95nm,1.8s
WRAB Tennant Creek 49.20 190 *ce*P **P** **05 09 30.4 -0.2**
WRAB pmax pmax
comp=Z,185nm,1.7s
WRAB Tennant Creek 49.20 190 P **P** **05 09 30.0 -0.7**
WRAB Tennant Creek 49.20 190 IAMs_20 IAMs_20 05 29 29.6
comp=Z,2μm,18.0s
PBA Port Blair 49.20 260 IAMs_20 IAMs_20 05 30 31.2
comp=Z,3μm,20.0s
WRA Warramunga Arr 49.21 190 P **P** **05 09 29.7 -1.0**
WRA pmax pmax
comp=Z,6.0nm,1.0s
WRA Warramunga Arr 49.21 190 P **P** **05 09 30.0 -0.7**
comp=Z,59nm,0.9s,baz=11,slow=8.1,SNR=163
WRA S **S** **05 16 29.4 -6.3**
comp=Z,10nm,1.3s,baz=11,slow=15,SNR=12
WRA LR LR 05 29 41.8
comp=Z,1μm,19.1s,baz=5.0,slow=35
WRA Warramunga Arr 49.21 190 P **P** **05 09 29.7 -1.0**
CISI Cisompet, Garu 49.22 228 P **P** **05 09 27.9 -3.1**
comp=Z,128nm,0.8s
KLSI 49.23 233 P **P** **05 09 30.5 -0.5**
comp=Z,1μmcomp=Z,121nm,1.0s
GUN Gumba 49.24 283 *e*P **P** **05 09 30.5 -1.0**
KCSI Kotacane, Aceh 49.25 248 P **P** **05 09 30.2 -1.0**
MK31 Makanchi Array 49.41 308 *i*P **P** **05 09 31.3 -0.8**
MK31 Makanchi Array 49.41 308 IAmb IAmb 05 09 33.1
comp=Z,42nm,0.8s
MKAR Makanchi Array 49.41 308 P **P** **05 09 31.2 -0.9**
comp=Z,38nm,0.8s,baz=92,slow=8.8,SNR=236
MKAR PcP **PcP** **05 10 54.8 +0.5**
comp=Z,11nm,0.8s,baz=80,slow=8.1,SNR=5.7
MKAR LR LR 05 31 26.2
comp=Z,4μm,18.9s,baz=90,slow=37
MKAR Makanchi Array 49.41 308 P **P** **05 09 31.5 -0.6**
MKAR PcP **PcP** **05 10 54.8 +0.5**
FITZ Fitzroy Crossi 49.47 201 P **P** **05 09 31.8 -0.8**
FITZ IAmb IAmb 05 09 43.3
comp=Z,62nm,1.1s
MDSI Maura Dua 49.47 234 P **P** **05 09 32.2 -0.7**
comp=Z,3μmcomp=Z,405nm,0.9s
MAKZ Makanchi 49.63 308 P **P** **05 09 33.0 -0.8**
MAKZ pmax pmax
comp=Z,117nm,1.5s
MAKZ MLR MLR
comp=Z,5μm,20.0s
MAKZ Makanchi 49.63 308 P **P** **05 09 33.0 -0.8**
PKI Pulchoki 49.73 283 *e*P **P** **05 09 34.3 -0.9**
comp=Z,17nm,1.2s
PKIN Phulchoki 49.74 283 *e*P **P** **05 09 34.3 -0.9**
comp=Z,101nm,1.3s
KKN Kakani 49.78 283 *e*P **P** **05 09 34.7 -0.8**
comp=Z,198nm,1.2s
PDSI Padang 49.83 241 P **P** **05 09 35.0 -0.7**
comp=Z,22nm,0.9s
TPTI 49.88 248 P **P** **05 09 34.2 -1.8**
comp=Z,189nmcomp=Z,11nm,1.3s
LWLI Liwa 49.93 234 P **P** **05 09 35.4 -1.1**
comp=Z,8μmcomp=Z,106nm,0.8s
MASI Maura Aman, Be 49.95 237 P **P** **05 09 36.6 0.0**
comp=Z,4μmcomp=Z,350nm,0.9s
KASI Kota Agung 49.98 233 P **P** **05 09 35.2 -1.5**
comp=Z,1μmcomp=Z,140nm,1.1s
DMN Daman 49.98 283 *e*P **P** **05 09 36.3 -0.7**
comp=Z,176nm,1.4s
KSI Kapahiang 50.04 236 P **P** **05 09 36.3 -1.0**
GKN Gorkha 50.27 284 *e*P **P** **05 09 38.4 -0.7**
comp=Z,322nm,1.3s
BOK Bokaro 50.43 278 ⇑ *i*P **P** **05 09 39.1 -1.1**
BOK IAmb IAmb 05 09 42.9
comp=Z,261nm,1.8s
BOK IAMs_20 IAMs_20 05 34 15.2
comp=Z,2μm,10.3s
GSI Gunungsitoli 50.71 245 P **P** **05 09 42.1 -0.3**
comp=Z,5μmcomp=Z,184nm,1.2s
DANN Dangsing 50.92 284 *e*P **P** **05 09 43.2 -1.0**
comp=Z,511nm,1.2s
PBSI Pulau Batu 50.98 243 P **P** **05 09 43.7 -0.7**
comp=Z,84nm,1.9s
SNSI Sinabang, Aceh 51.06 248 P **P** **05 09 45.0 0.0**
comp=Z,4μmcomp=Z,171nm,1.1s
KOLN Koldanda 51.22 284 *e*P **P** **05 09 45.3 -1.0**
comp=Z,390nm,1.1s
PPSI Pulau Pagai 51.37 239 P **P** **05 09 47.1 -0.1**
comp=Z,220nm,1.0s
PDGK Podgornoye 51.60 304 P **P** **05 09 47.1 -1.7**
KURK Kurchatov 51.79 314 *ce*P **P** **05 09 49.3 -0.7**
KURK pmax pmax
comp=Z,338nm,1.3s
KURK Kurchatov 51.79 314 P **P** **05 09 49.9 -0.1**
KURK Kurchatov 51.79 314 IAMs_20 IAMs_20 05 32 23.9
comp=Z,2μm,19.0s
ASAR Alice Springs 52.93 190 P **P** **05 09 57.0 -1.7**
ASAR 05 11 08.7
ASAR Alice Springs 52.93 190 P **P** **05 09 57.3 -1.4**
comp=Z,11nm,1.0s,baz=6.3,slow=6.6,SNR=37
ASAR PcP **PcP** **05 11 08.8 +1.2**
comp=Z,9.2nm,0.9s,baz=5.1,slow=5.1,SNR=4.6
ASAR S **S** **05 17 22.4 -4.7**
comp=Z,0.9nm,0.8s,baz=13,slow=13,SNR=4.0
ASAR LR LR 05 31 47.7
comp=Z,1μm,20.8s,baz=16,slow=35
ASAR Alice Springs 52.93 190 P **P** **05 09 57.0 -1.7**
ASAR PcP **PcP** **05 11 08.7 +1.2**
IMAR Indian Mountai 53.35 27 P **P** **05 10 01.7 +0.4**
KDJ Kajisay 53.43 303 IAmb IAmb 05 10 03.6
comp=Z,34nm,0.9s
PPLA Purkeypile 53.52 31 IAmb IAmb 05 10 15.9
comp=Z,88nm,1.4s
CHLP Challavanipeta 53.89 273 *e*P **P** **05 10 05.1 -0.8**
CHLP IAmb IAmb 05 10 07.3
comp=Z,57nm,1.2s
SUA Susitna One 54.04 33 IAmb IAmb 05 10 30.1
comp=Z,26nm,0.9s
ULHL Ulahol 54.10 303 P **P** **05 10 08.1 +0.6**
SNR=5.8
KTH Kantishna Hill 54.17 30 IAmb IAmb 05 10 26.9
comp=Z,31nm,1.1s
BOOM Boomskoye usch 54.29 303 IAmb IAmb 05 10 10.0
comp=Z,40nm,0.8s
NRN Naryn 54.41 302 IAmb IAmb 05 10 12.2
comp=Z,40nm,1.0s
MLY Manley 54.43 29 IAmb IAmb 05 10 28.4
comp=Z,25nm,1.0s
TRF Thorofare Moun 54.44 31 P **P** **05 10 10.6 +1.1**
TRF IAmb IAmb 05 10 33.3
comp=Z,33nm,1.0s
TKM2 Tokmak 2 54.47 304 P **P** **05 10 11.1 +1.0**
SNR=7.0
EIDS Eidsvold 54.65 170 IAmb IAmb 05 10 23.2
comp=Z,89nm,1.6s
PSA00 Pilbara Seismi 54.70 206 P **P** **05 10 11.2 -0.4**
PSA00 IAmb IAmb 05 10 12.1
comp=Z,31nm,0.8s
KSH Kashi 54.75 300 ⇑ *i*P **P** **05 10 14.8 +2.7**
KSH pP pwP 05 10 21.0 -0.9
KSH sP sP 05 10 25.8 +7.5
KSH PP **PP** **05 12 20.4 +5.7**
KSH S **S** **05 17 52.9 +0.9**
KSH sS sS 05 18 03.8 +5.0
KSH SS **SS** **05 21 37.5 +2.6**
KSH pmax pmax
comp=Z,130nm,0.8s
KSH pmax pmax
comp=Z,1μm,6.9s
KSH LR LR
comp=Z,2μm,11.1s
KSH LR LR
comp=Z,3μm,13.6s
KSH LR LR
comp=Z,3μm,15.3s

PMR	Palmer	54.82	33	IAmb	IAmb	05 10 30.1					
	comp=Z,31nm,1.0s										
KZA	Kyzart	54.86	303	P	P	05 10 13.6	+0.4				
	SNR=31										
KBK	Karagaybulak	54.99	304	P	P	05 10 13.7	-0.1				
	SNR=47										
MCK	McKinley	55.07	30	IAmb	IAmb	05 10 32.6					
	comp=Z,53nm,1.1s										
CHMS	Chumysh	55.08	304	P	P	05 10 14.3	0.0				
	SNR=24										
RND	Reindeer	55.08	31	IAmb	IAmb	05 10 39.9					
	comp=Z,66nm,1.4s										
KNK	Knik Glacier	55.13	33	IAmb	IAmb	05 10 27.4					
	comp=Z,48nm,0.9s										
FRU1	Bishkek	55.19	304	PcP	PcP	05 11 16.9	+0.8				
FRU1				IAMs_20	IAMs_20	05 35 51.9					
	comp=Z,2μm,18.0s										
SML	Sawmill	55.21	33	P	P	05 10 16.7	+1.7				
SML				IAmb	IAmb	05 10 29.2					
	comp=Z,66nm,1.2s										
USP	Ospenovka	55.22	305	P	P	05 10 14.9	-0.5				
	SNR=32										
AAK	Ala-Archa	55.32	304	*ce*P	P	05 10 15.9	-0.3				
AAK				pmax	pmax						
	comp=Z,58nm,1.3s										
AAK	Ala-Archa	55.32	304	P	P	05 10 15.8	-0.5				
	SNR=32										
AAK	Ala-Archa	55.32	304	*i* P	P	05 10 15.6	-0.6				
	SNR=39										
AAK	Ala-Archa	55.32	304	P	P	05 10 15.4	-0.8				
AAK				IAmb	IAmb	05 10 17.3					
	comp=Z,36nm,0.8s										
UCH	Uchtor	55.37	303	P	P	05 10 17.0	0.0				
	SNR=70										
MDM	Murphy Dome	55.48	29	IAmb	IAmb	05 10 29.6					
	comp=Z,86nm,1.6s										
NOUC	Port Laguerre	55.77	153	IAMs_20	IAMs_20	05 36 41.3					
	comp=Z,3μm,19.0s										
DZM	Mont Dzumac	55.80	153	*e*P	P	05 10 23.6	+4.0				
	comp=Z,121nm,1.3s										
DZM				*e*S	S	05 18 06.2	+0.2				
	comp=Z,547nm,26.1s										
DZM				*e*LR	LR	05 26 43.9					
	comp=Z,3μm,24.6s										
DZM	Mont Dzumac	55.80	153	LR	LR	05 35 13.2					
	comp=Z,2μm,18.6s,baz=354,slow=37										
DZM	Mont Dzumac	55.80	153	IAMs_20	IAMs_20	05 34 52.1					
	comp=Z,3μm,20.0s										
POKR	Poker Plat Res	55.84	29	P	P	05 10 19.9	+0.5				
	baz=266										
EKS2	Erkin-Say	55.84	304	P	P	05 10 20.5	+0.5				
	SNR=11										
AML	Almayashu	55.99	303	P	P	05 10 21.3	0.0				
	SNR=92										
HDA	Harding Lake	55.99	30	P	P	05 10 20.1	-0.4				
	baz=266										
IL31		56.04	29	IAmb	IAmb	05 10 39.0					
	comp=Z,38nm,1.2s										
ILAR	Eielson Array	56.04	29	P	P	05 10 19.9	-0.9				
	comp=Z,12nm,1.1s,baz=261,slow=5.8,SNR=50										
ILAR				LR	LR	05 33 23.7					
	comp=Z,495nm,20.5s,baz=272,slow=35										
PVM	Polavaram	56.51	272	*e*P	P	05 10 24.6	-0.2				
PVM				IAmb	IAmb	05 10 25.9					
	comp=Z,31nm,1.1s										
PAX	Paxson	56.59	31	P	P	05 10 23.9	-1.0				
PAX				pmax	pmax						
	comp=Z,40nm,1.2s										
PAX	Paxson	56.59	31	P	P	05 10 23.9	-1.0				
PAX				IAmb	IAmb	05 10 37.5					
	comp=Z,40nm,1.2s										
ARSB	Arslanbob	56.66	302	P	P	05 10 26.1	+0.2				
BRVK	Borovoye	56.84	317	P	P	05 10 27.2	+0.5				
BRVK				pmax	pmax						
	comp=Z,125nm,1.0s										
BRVK				MLR	MLR						
	comp=Z,3μm,18.0s										
BRVK	Borovoye	56.84	317	P	P	05 10 27.2	+0.5				
BRVK	Borovoye	56.84	317	P	P	05 10 26.7	-0.1				
RIDG	Independent Ri	56.89	30	IAmb	IAmb	05 10 53.9					
	comp=Z,34nm,1.1s										
DOT	Dot Lake	57.24	31	IAmb	IAmb	05 10 41.6					
	comp=Z,84nm,1.6s										
NGP	Nagpur	57.27	278	*e*P	P	05 10 28.1	-2.2				
SCRK	Sand Creek	57.27	30	P	P	05 10 29.8	+0.1				
SCRK				IAmb	IAmb	05 10 42.0					
	comp=Z,68nm,1.3s										
GLB	Gilahina Butte	57.37	33	IAmb	IAmb	05 10 35.6					
	comp=Z,59nm,1.2s										
MENT	Mentasta	57.39	31	IAMs_20	IAMs_20	05 37 34.5					
	comp=Z,2μm,18.0s										
GGR	Gangavaram	57.53	274	*e*P	P	05 10 30.2	-1.9				
GGR				IAmb	IAmb	05 10 32.2					
	comp=Z,19nm,1.1s										
VRDI	Verde Repeater	57.55	33	IAmb	IAmb	05 10 44.4					
	comp=Z,54nm,1.2s										
MYLAV	Mylavaram	57.58	272	*e*P	P	05 10 31.7	-0.7				
MYLAV				IAmb	IAmb	05 10 33.8					
	comp=Z,31nm,1.0s										
MSVF	Nonsavu	57.83	139	P	P	05 10 35.3	+1.1				
MSVF				pmax	pmax						
	comp=Z,92nm,1.7s										
MSVF	Nonsavu	57.83	139	P	P	05 10 35.3	+1.1				
MSVF				IAmb	IAmb	05 10 51.1					
	comp=Z,92nm,1.6s										
RPR	Rampur	57.92	275	*e*P	P	05 10 34.5	-0.3				
RPR				IAmb	IAmb	05 10 35.2					
	comp=Z,53nm,1.6s										
BHPL	Bhopal	57.93	281	*e*P	P	05 10 33.3	-1.6				
BHPL				IAmb	IAmb	05 10 35.4					
	comp=Z,86nm,1.2s										
BHPL				IAMs_20	IAMs_20	05 37 36.2					
	comp=Z,2μm,21.2s										
KK31	Karatay Array	58.12	305	*i* P	P	05 10 35.3	-0.6				
NIL	Nilore	58.22	294	P	P	05 10 36.0	-0.8				
NIL				pmax	pmax						
	comp=Z,97nm,0.9s										
NIL				MLR	MLR						
	comp=Z,1μm,19.0s										
NIL	Nilore	58.22	294	P	P	05 10 36.0	-0.8				
EGAK	Eagle	58.50	29	IAmb	IAmb	05 10 50.6					
	comp=Z,17nm,0.9s										
ADKI	Addanki	58.53	272	*e*P	P	05 10 38.1	-1.0				
ADKI				IAmb	IAmb	05 10 40.3					
	comp=Z,25nm,1.3s										
BTK	Batken	58.53	301	IAmb	IAmb	05 10 49.9					
	comp=Z,55nm,1.2s										
CTGM	Chitina Glacie	58.59	34	IAMs_20	IAMs_20	05 38 13.1					
	comp=Z,2μm,18.0s										
SRSP	Sriramsagar	58.72	276	*e*P	P	05 10 38.6	-1.8				
SRSP				IAmb	IAmb	05 10 40.7					
	comp=Z,26nm,1.2s										
NJS	Nagarjunasagar	58.82	273	*e*P	P	05 10 40.8	-0.3				
NJS				IAmb	IAmb	05 10 41.8					
	comp=Z,22nm,0.9s										
HYB	Hyderabad	59.13	274	*i* P	P	05 10 42.0	-1.4				
	comp=Z,50nm,1.0s										
HYB	Hyderabad	59.13	274	*e*P	P	05 10 42.0	-1.4				
HYB				IAmb	IAmb	05 10 44.9					
	comp=Z,14nm,0.7s										
HYBB	Hyderabad (bro	59.13	274	*e*P	P	05 10 41.6	-1.7				
HYBB				IAmb	IAmb	05 10 43.6					
	comp=Z,63nm,1.7s										
DAWY	Dawson	59.29	30	IAmb	IAmb	05 11 08.2					
	comp=Z,47nm,1.3s										
SRLM	Srisailam	59.37	272	*e*P	P	05 10 44.0	-1.0				
SRLM				IAmb	IAmb	05 10 45.5					
	comp=Z,39nm,1.2s										
SKHT	Srikalahasti	59.64	269	*e*P	P	05 10 46.6	-0.2				
SKHT				IAmb	IAmb	05 10 48.1					
	comp=Z,27nm,0.9s										
COCO	West Island	60.02	234	P	P	05 10 48.6	-0.7				
COCO				pmax	pmax						
	comp=Z,429nm,2.0s										
COCO	West Island	60.02	234	P	P	05 10 48.6	-0.7				
EPYK	Eagle Plains	60.26	27	P	P	05 10 51.4	+1.0				
EPYK	Eagle Plains	60.26	27	P	P	05 10 51.6	+1.2				
	baz=274										
HYT	Haines Junctio	60.46	34	IAmb	IAmb	05 11 09.6					
	comp=Z,41nm,1.2s										
STKA	Stephens Creek	60.49	181	P	P	05 10 51.7	-0.5				
STKA				pmax	pmax						
	comp=Z,3.0nm,0.8s										
STKA				MLR	MLR						
	comp=Z,300nm,19.0s										
STKA	Stephens Creek	60.49	181	P	P	05 10 52.0	-0.2				
	comp=Z,11nm,0.8s,baz=349,slow=8.0,SNR=21										
STKA				LR	LR	05 37 00.9					
	comp=Z,1μm,19.9s,baz=2.7,slow=36										
STKA	Stephens Creek	60.49	181	P	P	05 10 51.7	-0.5				
KLRI	Killari	60.58	275	*e*P	P	05 10 51.7	-1.6				
KLRI				IAmb	IAmb	05 10 53.2					
	comp=Z,39nm,0.9s										
FORT	Forrest	60.93	194	P	P	05 10 54.5	-0.8				
FORT				IAMs_20	IAMs_20	05 36 35.3					
	comp=Z,2μm,20.0s										
URV	Uravakonda	61.28	272	*e*P	P	05 10 56.8	-1.3				
URV				IAmb	IAmb	05 10 58.6					
	comp=Z,83nm,1.1s										
INK	Inuvik	61.30	25	IAmb	IAmb	05 11 10.7					
	comp=Z,47nm,0.9s										
KBL	Kabul	61.32	296	P	P	05 10 57.4	-1.0				
KBL				pmax	pmax						
	comp=Z,37nm,0.9s										
KBL				MLR	MLR						
	comp=Z,2μm,19.0s										
KBL	Kabul	61.32	296	P	P	05 10 57.4	-1.0				
KBL				IAmb	IAmb	05 10 58.9					
	comp=Z,37nm,0.8s										
KBL				IAMs_20	IAMs_20	05 40 34.2					
	comp=Z,2μm,19.0s										
KBL	Kabul	61.32	296	P	P	05 10 57.7	-0.6				
BBOO	Buckleboo	61.70	186	P	P	05 10 59.8	-0.7				
BBOO				IAmb	IAmb	05 11 00.9					
	comp=Z,35nm,0.9s										
BBOO				IAMs_20	IAMs_20	05 36 42.0					
	comp=Z,2μm,19.0s										
PALK	Pallekele	61.72	262	P	P	05 10 59.6	-1.5				
PALK				pmax	pmax						
	comp=Z,37nm,1.1s										
PALK	Pallekele	61.72	262	P	P	05 11 01.5	+0.4				
PALK	Pallekele	61.72	262	P	P	05 10 59.6	-1.5				
PALK				IAmb	IAmb	05 11 02.1					
	comp=Z,37nm,1.1s										
WHY	Whitehorse	61.76	34	IAmb	IAmb	05 11 14.0					
	comp=Z,26nm,1.1s										
SVE	Sverdlovsk	61.85	322	*d i* P	P	05 11 01.9	+0.7				
SVE				*e*		05 11 36.8					
SVE				*e*		05 13 17.4					
SVE				*e* PPP	PPP	05 14 48.4					
SVE				*e*S	S	05 19 20.9	-2.8				
SVE				*e*		05 20 52.3					
SVE				pmax	pmax						
	comp=Z,83nm,1.1s										
SVE				MLR	MLR						
	comp=Z,2μm,17.0s										
POO	Poona	62.79	277	*e*P	P	05 11 06.0	-2.2				
POO				*e*P	P	05 11 07.2	-1.1				
POO				IAmb	IAmb	05 11 18.9					
	comp=Z,33nm,0.8s										
ARU	Arti	63.05	322	*c i* P	P	05 11 09.3	0.0				
ARU						05 11 45.8					
ARU						05 13 24.1					
ARU				S	S	05 19 41.8	+2.9				
ARU						05 21 01.4					
ARU				pmax	pmax						
	comp=Z,160nm,1.3s										
ARU				MLR	MLR						
	comp=Z,2μm,19.0s										
ARU	Arti	63.05	322	P	P	05 11 09.1	-0.2				
ARU				IAMs_20	IAMs_20	05 40 20.5					
	comp=Z,2μm,20.0s										
AB31	Akbulak array	63.91	314	*i* P	P	05 11 14.7	-0.4				
GOA	Goa	64.05	274	*e*P	P	05 11 14.4	-2.1				
GOA				IAmb	IAmb	05 11 18.4					
	comp=Z,27nm,0.5s										
TRD	Trivandrum	64.40	266	*e*P	P	05 11 18.2	-0.6				
TRD				IAmb	IAmb	05 11 24.8					
	comp=Z,25nm,0.8s										
C36M	Paulatuk	64.50	23	P	P	05 11 18.6	0.0				
	baz=284										
BHUJ	Bhuj	64.59	284	*ex*	P	05 11 16.7	-3.2				
BHUJ				IAmb	IAmb	05 11 22.1					
	comp=Z,197nm,1.5s										
BHUJ				IAMs_20	IAMs_20	05 41 34.5					
	comp=Z,1μm,19.5s										
AKTO	Aktyubinsk	64.80	315	P	P	05 11 20.7	-0.3				
NWAO	Narrogin (SRO)	65.98	203	P	P	05 11 29.0	+0.4				
NWAO				pmax	pmax						
	comp=Z,39nm,0.9s										
NWAO	Narrogin (SRO)	65.98	203	P	P	05 11 28.9	+0.4				
NWAO				IAmb	IAmb	05 11 29.8					
	comp=Z,31nm,0.9s										
NWAO	Narrogin (SRO)	65.98	203	P	P	05 11 29.0	+0.4				
NWAO				IAmb	IAmb	05 11 29.8					
	comp=Z,38nm,0.9s										
TOO	Toolangi	66.23	177	IAmb	IAmb	05 11 44.3					
	comp=Z,46nm,0.9s										
HRA	Herat	66.70	298	IAmb	IAmb	05 11 45.5					
	comp=Z,34nm,0.9s										
PRGR	Permogore	68.03	329	*i* P	P	05 11 42.1	+0.8				
PRGR				pmax	pmax						
	comp=Z,61nm,1.1s										
GEYT	Alibeck	68.61	302	P	P	05 11 45.8	+0.3				
	comp=Z,8.7nm,0.9s,baz=52,slow=2.4,SNR=22										
GEYT				LR	LR	05 44 39.5					
	comp=Z,3μm,18.4s,baz=35,slow=38										
GEYT	Alibeck	68.61	302	P	P	05 11 45.5	-0.1				
GYA0B	ALIBECK ARRAY	68.61	302	IAmb	IAmb	05 11 47.7					
	comp=Z,43nm,1.2s										
NOR	Nord	69.15	357	*i* P	P	05 11 49.2	+1.1				
LVZ	Lovozero	69.82	337	IAMs_20	IAMs_20	05 46 18.4					
	comp=Z,2μm,20.0s										
RES	Resolute Bay	70.24	14	IAmb	IAmb	05 12 07.5					
	comp=Z,38nm,1.2s										
TMCR	Tamitsa	70.25	333	*e*P	P	05 11 55.3	+0.3				
TMCR				*e*S	S	05 21 11.8	+6.1				
TMCR				pmax	pmax						
	comp=Z,51nm,1.1s										
APA	Apatity	70.39	337	*i* P	P	05 11 55.4	-0.5				
APA				pmax	pmax						
	comp=Z,21nm,10.0s										
APA				MLR	MLR						
	comp=Z,2μm,16.0s										
YKA	Yellowknife Ar	70.47	29	P	P	05 11 55.8	-0.6				
	comp=Z,11nm,0.9s,baz=292,slow=5.9,SNR=48										
NLWA	Neilton Lookou	71.72	46	IAmb	IAmb	05 12 10.4					
	comp=Z,36nm,1.1s										
NLWA				IAMs_20	IAMs_20	05 46 08.2					
	comp=Z,1μm,18.0s										
ARCES	ARCESS Array B	71.84	341	P	P	05 12 05.7	+0.9				
	comp=Z,16nm,0.9s,baz=62,slow=8.4,SNR=18										
ARCES				LR	LR	05 48 31.8					
	comp=Z,2μm,18.7s,baz=66,slow=40										
ARCES	ARCESS Array B	71.84	341	P	P	05 12 05.0	+0.3				
D03D	Eldon	72.15	45	P	P	05 12 08.5	+1.6				
	baz=293										
E03A	Lebam	72.24	46	IAmb	IAmb	05 12 19.9					
	comp=Z,40nm,0.9s										
E03A				IAMs_20	IAMs_20	05 47 34.2					
	comp=Z,2μm,18.0s										
B05A	Bryant	72.47	44	P	P	05 12 10.0	+1.2				
	baz=294										
F03A	Seaside	72.49	47	IAMs_20	IAMs_20	05 41 15.0					
	comp=Z,1μm,20.0s										
E04D	Cinebar	72.87	46	P	P	05 12 12.7	+1.4				
	baz=294										
G03D	McMinnville, O	72.97	47	P	P	05 12 13.0	+1.2				
	baz=294										
TULEG	Thule	73.00	7	IAmb	IAmb	05 12 24.1					
	comp=Z,66nm,1.3s										
F04A	Amboy	73.22	47	P	P	05 12 13.9	+0.6				
F04A				IAmb	IAmb	05 12 19.2					
	comp=Z,34nm,1.0s										
LON	Longmire	73.26	46	IAMs_20	IAMs_20	05 46 34.2					
	comp=Z,1μm,18.0s										
J01E	Myrtle Point	73.37	50	P	P	05 12 18.6	+4.4				
	baz=294										
I03D	Drain, OR	73.53	49	P	P	05 12 16.9	+1.8				
	baz=294										
H04D	Lebanon	73.59	48	P	P	05 12 19.1	+3.5				
	baz=294										
K02D	Willamette Mer	73.73	50	P	P	05 12 17.2	+0.7				
	baz=294										
LTY	Liberty	73.76	45	IAmb	IAmb	05 12 53.4					
	comp=Z,25nm,1.2s										
LTY				IAMs_20	IAMs_20	05 47 28.3					
	comp=Z,1μm,19.0s										
F05D	White Salmon	73.85	46	P	P	05 12 21.7	+4.7				
	baz=295										
WBK	Wadi Bani Khal	73.87	287	P	P	05 12 17.8	+0.2				
	SNR=6.5										
DAG	Danmarks Havn	73.88	356	*i* P	P	05 12 17.0	+0.4				
DAG				pmax	pmax						
	comp=Z,43nm,1.2s										
DAG	Danmarks Havn	73.88	356	*i* P	P	05 12 17.0	+0.4				
	comp=Z,43nm,1.2s										
H04A	Detroit Lake	73.89	48	IAmb	IAmb	05 12 22.6					
	comp=Z,29nm,1.1s										
H04A				IAMs_20	IAMs_20	05 37 19.7					
	comp=Z,1μm,21.0s										
WSAR	Wadi Sarin	73.89	288	P	P	05 12 17.2	-0.5				
	SNR=6.3										
L02E	Cave Junction	74.00	50	P	P	05 12 20.5	+2.5				
	baz=295										
I04A	Tendick Farm,	74.11	49	P	P	05 12 19.4	+0.7				
	baz=295										
VRH	Novokhopyorsk	74.17	320	*e*P	P	05 12 18.9	+0.1				
VRH				pmax	pmax						
	comp=Z,50nm,1.0s										
VRH				pmax	pmax						
	comp=N,20nm,1.2s										
VRH				pmax	pmax						
	comp=E,20nm,0.7s										
VRH				MLR	MLR						
	comp=Z,5μm,17.0s										
VRH				MLR	MLR						
	comp=N,460nm,11.0s										
VRH				MLR	MLR						
	comp=E,3μm,17.0s										
BIDO	Bidbid	74.19	288	P	P	05 12 19.1	-0.3				
	SNR=15										
G05D	Wamic, OR	74.21	47	P	P	05 12 20.1	+0.9				
	baz=295										
HUMO	Hull Mountain	74.25	50	IAMs_20	IAMs_20	05 37 24.5					
	comp=Z,2μm,22.0s										
MOS	Moscow	74.26	325	*e*P	P	05 12 17.7	-1.5				
MOS				*e*		05 12 29.2					
MOS				*e*		05 15 01.9					
MOS				*e*S	S	05 21 53.3	+1.3				
MOS				pmax	pmax						
	comp=Z,64nm,1.6s										
MOS				pmax	pmax						
	comp=Z,100nm,1.9s										
MOS				MLR	MLR						
	comp=N,1μm,17.0s										
MOS				MLR	MLR						
	comp=E,3μm,17.0s										
MOS				MLR	MLR						
	comp=Z,3μm,17.0s										
KHMM	Horse Mountain	74.45	52	P	P	05 12 21.3	+0.5				
KHMM				IAmb	IAmb	05 12 48.9					
	comp=Z,31nm,1.3s										
SMDO	Samad	74.45	288	P	P	05 12 21.1	0.0				
	SNR=9.4										
J04D	Umpqua Nationa	74.54	49	P	P	05 12 22.4	+1.0				
	baz=295										
E07A	Sunnyside	74.56	45	IAmb	IAmb	05 12 26.7					
	comp=Z,21nm,0.9s										
E07A				IAMs_20	IAMs_20	05 47 16.6					
	comp=Z,1μm,18.0s										
I05D	Terrebonne, OR	74.58	48	P	P	05 12 22.3	+0.9				
	baz=295										
G06A	Carlson Farm,	74.65	47	IAMs_20	IAMs_20	05 42 41.8					
	comp=Z,1μm,20.0s										
BANOM	Banah	74.69	291	*i* P	P	05 12 22.9	+0.6				
	SNR=12										
BANOM	Banah	74.69	291	P	P	05 12 22.6	+0.2				
	SNR=11										
JMDO	Jabal Madar	74.70	287	P	P	05 12 22.0	-0.4				
	SNR=9.0										
SHME	Shamm	74.77	292	*i* P	P	05 12 23.0	+0.2				
	SNR=26										
M02C	Callahan	74.83	51	P	P	05 12 24.0	+1.0				
	baz=295										
HOQ	Hoqain	74.84	289	P	P	05 12 23.0	-0.2				
	SNR=24										
L04D	Klamath Falls	74.85	50	P	P	05 12 23.9	+0.7				
	baz=295										
QRZ	Quartz Range	74.85	157	P	P	05 12 25.8	+3.1				
MDH	Madha	74.95	291	P	P	05 12 22.9	-0.9				
C09A	Chrisman Ranch	74.99	44	IAmb	IAmb	05 12 43.3					
	comp=Z,42nm,1.5s										
MSFE	Esma-Masafi	75.04	291	*i* P	P	05 12 25.1	+0.8				
	SNR=12										
LPSR	Galich'ya Gora	75.07	322	*e*P	P	05 12 24.1	+0.1				
LPSR				pmax	pmax						
	comp=Z,50nm,1.4s										
LPSR				pmax	pmax						
	comp=N,10.0nm,1.3s										
LPSR				pmax	pmax						
	comp=E,10.0nm,1.6s										
LPSR				MLR	MLR						
	comp=Z,2μm,15.0s										
LPSR				MLR	MLR						
	comp=N,2μm,19.0s										
LPSR				MLR	MLR						
	comp=E,1μm,14.0s										
PINE	Pine Mountain	75.07	48	IAmb	IAmb	05 12 30.3					
	comp=Z,47nm,1.1s										
E08A	Dider Farm, El	75.09	45	IAMs_20	IAMs_20	05 47 24.4					
	comp=Z,1μm,19.0s										
OBN	Obninsk	75.09	325	*c i* P	P	05 12 24.1	+0.1				
OBN				*i*		05 12 33.1					
OBN				*i*		05 15 11.9					
OBN				*i* S	S	05 21 58.0	-3.2				
OBN				*i* SS	SS	05 26 44.6	-4.9				
OBN				pmax	pmax						
	comp=Z,31nm,1.1s										
OBN				MLR	MLR						
	comp=Z,2μm,20.0s										
J05D	Fort Rock, OR	75.10	49	P	P	05 12 25.6	+1.0				
	baz=296										
N02D	Trinity Center	75.11	51	P	P	05 12 25.0	+0.4				
	baz=295										
UOSS	Minazif	75.18	290	*i* P	P	05 12 25.4	+0.2				
	SNR=11										
UOSS	Minazif	75.18	290	P	P	05 12 25.6	+0.5				
UOSS				IAmb	IAmb

comp=E,10.0nm,1.0s
E09A Wood Farm, Sta 75.64 45 IAmb IAmb 05 12 32.8
comp=Z,23nm,1.1s
E09A IAMs_20 IAMs_20 05 47 35.0
comp=Z,1µm,18.0s
ALNE Al Ain 75.93 290 *i* P **P 05 12 30.4 +0.9**
SNR=11
O03E Paynes Creek 76.02 52 P **P 05 12 29.9 0.0**
baz=296
ASUD Al Ashush, Dub 76.03 291 *i* P **P 05 12 30.8 +0.7**
SNR=7.2
ASUD Al Ashush, Dub 76.03 291 P **P 05 12 30.4 +0.4**
GOF Gofitskoye 76.15 314⇑ *e*P **P 05 12 30.1 -0.2**
GOF *e*S **S 05 22 08.3 -5.1**
GOF pmax pmax
comp=Z,98nm,1.3s
GOF smax smax
comp=E,51nm,1.8s
GOF smax smax
comp=N,50nm,1.2s
MOD Modoc Plateau 76.33 50 IAMs_20 IAMs_20 05 43 11.5
comp=Z,2µm,19.0s
AJN Ajban 76.34 291 *i* P **P 05 12 32.6 +0.8**
SNR=7.1
AJN Ajban 76.34 291 P **P 05 12 31.6 -0.2**
SNR=6.8
FIA1 FINESS Array S 76.35 334 IAmb IAmb 05 12 44.1
comp=Z,34nm,1.1s
FINES FINESS Array B 76.35 334 P **P 05 12 30.9 -0.2**
comp=Z,12nm,0.9s,baz=74,slow=6.8,SNR=18
FINES LR LR 05 48 56.7
comp=Z,893nm,18.2s,baz=52,slow=38
FINES FINESS Array B 76.35 334 P **P 05 12 29.9 -1.3**
F10A Beach Ranch, E 76.46 45 IAMs_20 IAMs_20 05 49 38.6
comp=Z,1µm,19.0s
TBLG Delisi 76.55 310 P **P 05 12 33.3 +0.6**
TBLG pmax pmax
comp=Z,63nm,1.3s
TBLG Delisi 76.55 310 P **P 05 12 33.2 +0.6**
TBLG IAmb IAmb 05 12 35.1
comp=Z,63nm,1.3s
ORV Oroville 76.56 52 IAmb IAmb 05 12 38.1
comp=Z,30nm,1.3s
ORV IAMs_20 IAMs_20 05 50 25.8
comp=Z,1µm,20.0s
ZEI Tsey 76.62 312 *e*P **P 05 12 31.8 -1.5**
ZEI pmax pmax
comp=Z,38nm,0.8s
KBZ Khabaz 76.85 313 *i* P **P 05 12 34.4 +0.1**
KBZ Khabaz 76.85 313 P **P 05 12 35.2 +0.9**
comp=Z,62nm,0.8s,baz=73,slow=5.2,SNR=127
KBZ LR LR 05 49 28.1
comp=Z,1µm,19.6s,baz=62,slow=38
KIV Kislovodsk 76.88 313 *e*P **P 05 12 35.4 +0.8**
KIV *e*S **S 05 22 23.8 +2.2**
KIV pmax pmax
comp=Z,222nm,1.1s
KIV pmax pmax
comp=Z,671nm,4.7s
KIV MLR MLR
comp=Z,3µm,18.0s
KIV Kislovodsk 76.88 313 ⇑P **P 05 12 36.9 +2.3**
KIV Kislovodsk 76.88 313 *i* P **P 05 12 36.1 +1.5**
SNR=18
KIV Kislovodsk 76.88 313 P **P 05 12 35.4 +0.8**
KIV IAMs_20 IAMs_20 05 50 41.5
comp=Z,1µm,18.0s
H08N1 Diego Carcia H 76.92 255 P **P 05 12 33.8 -0.9**
baz=69,slow=1.6,SNR=3.5
OXZ Oxford 76.92 158 IAMs_20 IAMs_20 05 45 45.2
comp=Z,1µm,22.0s
H08N2 Diego Garcia H 76.92 255 P **P 05 12 33.8 -0.9**
baz=69,slow=1.6,SNR=3.6
BMO Blue Mountains 76.93 46 IAmb IAmb 05 12 40.2
comp=Z,28nm,1.3s
H08N3 Diego Garcia H 76.94 255 P **P 05 12 33.9 -0.9**
baz=69,slow=1.6,SNR=4.2
WALA Waterton Lakes 76.97 41 IAmb IAmb 05 12 53.2
comp=Z,22nm,0.8s
SHA1 Shidzhatmaz 77.00 313 *i* P **P 05 12 35.6 +0.1**
NEY Neytrino 77.18 312 *i* P **P 05 12 36.7 +0.3**
NEY pmax pmax
comp=Z,8.0nm,1.0s
AFDM Forest Hills D 77.20 53 IAMs_20 IAMs_20 05 43 14.8
comp=Z,1µm,19.0s
BEKR Beckworth 77.20 52 IAmb IAmb 05 12 41.5
comp=Z,24nm,1.0s
BEKR IAMs_20 IAMs_20 05 44 09.9
comp=Z,1µm,19.0s
GNI Garni 77.26 309 *ce*P **P 05 12 37.6 +0.7**
GNI pmax pmax
comp=Z,360nm,1.7s
GNI Garni 77.26 309 *i* P **P 05 12 38.3 +1.3**
SNR=16
GNI Garni 77.26 309 P **P 05 12 38.2 +1.3**
JTMT Jette 77.39 42 IAmb IAmb 05 12 43.0
comp=Z,40nm,1.1s
MQZ McQueen's Vall 77.46 158 IAMs_20 IAMs_20 05 36 07.4
comp=Z,1µm,19.0s
RUBR Rubicon Trail 77.72 52 IAmb IAmb 05 13 18.9
comp=Z,31nm,0.9s
RUBR IAMs_20 IAMs_20 05 43 05.5
comp=Z,1µm,20.0s
VSU Vasula 77.84 331 *i* P **P 05 12 39.7 +0.1**
VSU pmax pmax
comp=Z,83nm,1.0s
VSU Vasula 77.84 331 *e*P **P 05 12 39.5 0.0**
SAO San Andreas Ge 77.85 55 P **P 05 12 38.5 -1.6**
SAO pmax pmax
comp=Z,11nm,1.0s
SAO MLR MLR
comp=Z,2µm,20.0s
SAO San Andreas Ge 77.85 55 P **P 05 12 38.5 -1.6**
PAHR Pah Rah Range 77.95 51 IAMs_20 IAMs_20 05 47 20.4
comp=Z,1µm,20.0s
VCNR Virginia City 77.95 52 IAMs_20 IAMs_20 05 51 56.7
comp=Z,1µm,18.0s
CMB Columbia Colle 78.02 53 IAmb IAmb 05 13 04.2
comp=Z,27nm,1.1s
CMB IAMs_20 IAMs_20 05 42 43.6
comp=Z,2µm,20.0s
MSO Missoula 78.05 43 P **P 05 12 41.9 +0.8**
PNTR Pine Nut 78.08 52 IAmb IAmb 05 13 05.0
comp=Z,28nm,0.9s
PNTR IAMs_20 IAMs_20 05 51 06.2
comp=Z,1µm,19.0s
MZR Muzera 78.27 290 *i* P **P 05 12 44.3 +1.7**
SNR=5.3
YERR Yerington 78.38 52 IAmb IAmb 05 13 06.5
comp=Z,26nm,0.9s
YERR IAMs_20 IAMs_20 05 43 59.0
comp=Z,2µm,20.0s
WAKR Walker 78.47 52 IAmb IAmb 05 13 22.3
comp=Z,30nm,1.4s
MFID Camas Ranch 78.55 47 IAmb IAmb 05 12 49.3
comp=Z,31nm,1.1s
PMPB Monarch Peak 78.56 55 IAmb IAmb 05 13 03.9
comp=Z,40nm,1.2s
SHAO Shalim 78.69 284 *i* P **P 05 12 45.3 +0.3**
SNR=6.6
SHAO Shalim 78.69 284 P **P 05 12 44.8 -0.2**
SNR=5.6
SUMG Summit 78.75 0 *i* P **P 05 12 46.7 +1.8**
SUMG pmax pmax
comp=Z,95nm,0.8s
SUMG Summit 78.75 0 *i* P **P 05 12 46.7 +1.8**
comp=Z,95nm,0.8s
SUMG Summit 78.75 0 P **P 05 12 45.7 +0.8**
SOC Sochi 78.95 314 *e*P **P 05 12 46.8 +0.8**
SOC *e* 05 15 39.7
SOC *e*PPP PPP 05 17 37.6
SOC *e*S **S 05 22 47.2 +3.5**
SOC *e*SS **SS 05 27 53.4 +5.1**
SOC *e*SSS SSS 05 31 03.3
SOC pmax pmax
comp=Z,70nm,0.8s
SOC MLR MLR
comp=Z,2µm,21.0s
RYN Ryan 79.04 52 IAMs_20 IAMs_20 05 44 09.6
comp=Z,1µm,19.0s
BMN Battle Mountai 79.07 50 IAMs_20 IAMs_20 05 54 46.2
comp=Z,1µm,18.0s
MDPB Devils Postpil 79.12 53 IAMs_20 IAMs_20 05 43 09.8
comp=Z,2µm,20.0s
KVN Kaiserville 79.13 51 IAMs_20 IAMs_20 05 53 02.9
comp=Z,1µm,19.0s
PAGB Antelope Grade 79.18 55 IAmb IAmb 05 12 52.9
comp=Z,24nm,1.0s
NVAR Mina Array Bea 79.29 52 P **P 05 12 48.5 +0.3**
comp=Z,6.7nm,0.9s,baz=290,slow=5.3,SNR=29
NVAR LR LR 05 44 10.8
comp=Z,1µm,19.9s,baz=290,slow=33
NVAR Mina Array Bea 79.29 52 P **P 05 12 48.2 -0.1**
DMTO DMTO 79.41 284 P **P 05 12 48.4 -0.6**
SNR=9.1
SMMC Simmler 79.56 56 P **P 05 12 51.3 +1.7**
baz=298
MICGM Minsk 79.66 327 *e*P **P 05 12 50.0 +0.4**
MICGM *e*LR LR 05 48 58.0
MICGM LRM MLR 05 51 20.0
comp=Z,5.7nm,18.0s
MNK Minsk 79.66 327 *e*P **P 05 12 50.0 +0.4**
MNK MLR MLR
comp=Z,6µm,18.0s
IZAR Zarasai 79.67 329 *e*P **P 05 12 50.9 +1.2**
IZAR IAmb IAmb 05 12 53.5
comp=Z,19nm,1.0s
MCMT McKenzie Canyo 79.71 44 P **P 05 12 50.6 +0.2**
ANN Anapa 79.76 316 *e*P **P 05 12 51.2 +0.8**
ANN *e*S **S 05 22 51.6 -0.7**
ANN *e* 05 23 09.5
ANN pmax pmax
comp=Z,103nm,1.0s
ANN MLR MLR
comp=Z,2µm,19.0s
ISAL Salakas 79.83 329 *e*P **P 05 12 51.4 +0.8**
ISAL IAmb IAmb 05 12 52.8
comp=Z,31nm,1.2s
EGMT Eagleton 79.88 40 P **P 05 12 51.7 +0.6**
baz=302,SNR=6.0
PKM Mcpherson Peak 79.89 56 P **P 05 12 52.0 +0.4**
baz=298
IIGN Ignalina 79.92 329 *e*P **P 05 12 51.6 +0.6**
NACGM Naroch 79.93 328 *e* **P 05 12 51.0 -0.1**
NACGM *e*LQ LQ 05 40 22.0
NACGM *e*LR LR 05 46 44.0
NACGM LRM MLR 05 52 18.0
comp=Z,4.5nm,15.0s
VES Vestal, Richgr 79.96 55 P **P 05 12 52.1 +0.5**
baz=298
TIN Tinemaha, Big 79.99 53 P **P 05 12 53.1 +1.1**
baz=299
FFC Flin Flon 80.11 32 P **P 05 12 52.3 +0.2**
FFC pmax pmax
comp=Z,141nm,2.0s
FFC Flin Flon 80.11 32 P **P 05 12 52.3 +0.2**
FFC IAmb IAmb 05 13 05.9
comp=Z,141nm,2.0s
RBK Rabkut 80.13 285 P **P 05 12 52.1 -0.8**
SNR=12
WHFO Wadi Hawf 80.31 285 P **P 05 12 52.8 -1.1**
SNR=10
PPT Papeete 80.36 116 LR LR 05 47 16.4
comp=Z,468nm,18.0s,baz=292,slow=35
PPT2 Papeete2 80.37 116 *e*S **S 05 22 56.7 -2.9**
comp=Z,857nm,29.5s
PPT2 Papeete2 80.37 116 *e*LR LR 05 38 02.2
comp=Z,2µm,23.8s,baz=293
CWC Cottonwood Cre 80.39 54 P **P 05 12 54.3 +0.1**
baz=299
ISA Isabella, Lake 80.48 55 P **P 05 12 54.7 +0.1**
baz=299
ARVC Arvin 80.49 55 P **P 05 12 55.3 +0.8**
baz=299
GRAC Grapevine Rang 80.63 53 P **P 05 12 56.2 +0.9**
baz=299
PABE Paberze 80.84 330 *e*P **P 05 12 56.3 +0.3**
ABTO Aybut 80.97 285 P **P 05 12 56.8 -0.6**
SNR=19
MPMC Manual Prospec 81.00 54 P **P 05 12 57.5 0.0**
baz=299,SNR=14
LRMC Laurel Mtn Rad 81.14 54 P **P 05 12 58.4 +0.2**
baz=299,SNR=9.2
R11A Troy Canyon, C 81.19 51 IAMs_20 IAMs_20 05 42 06.4
comp=Z,1µm,21.0s
R11A Troy Canyon, C 81.19 51 P **P 05 12 59.0 +0.6**
baz=300,SNR=20
AKASG Malin Array Be 81.20 324 P **P 05 12 56.8 -1.2**
AKASG pmax pmax
comp=Z,11nm,1.1s
AKASG Malin Array Be 81.20 324 P **P 05 12 57.0 -1.0**
comp=Z,4.0nm,0.5s,baz=50,slow=5.7,SNR=32
AKASG PP **PP 05 16 03.4 +0.5**
comp=Z,9.0nm,1.1s,baz=52,slow=9.1,SNR=6.1
AKASG LR LR 05 51 30.5
comp=Z,3µm,19.7s,baz=60,slow=38
AKASG Malin Array Be 81.20 324 P **P 05 12 56.8 -1.2**
AKBB Malin Array Si 81.20 324 IAmb IAmb 05 13 08.8
comp=Z,30nm,1.1s
EDW2 Edwards Air Fo 81.21 55 P **P 05 12 59.0 +0.5**
baz=299,SNR=17
FURC Furnace Creek, 81.24 53 P **P 05 12 59.0 +0.6**
baz=300
HVU Hansel Valley 81.32 47 P **P 05 12 59.9 +0.8**
HVU pmax pmax
comp=Z,31nm,1.4s
HVU Hansel Valley 81.32 47 P **P 05 12 59.9 +0.8**
H17A Grant Village 81.32 44 IAmb IAmb 05 13 06.5
comp=Z,35nm,1.1s
H17A Grant Village 81.32 44 P **P 05 13 01.9 +2.7**
baz=302,SNR=25
LKWY Lake 81.34 44 IAmb IAmb 05 13 13.3
comp=Z,21nm,0.9s
PBUR Paburg 81.41 331 *e*P **P 05 12 59.2 +0.3**
FLWY Flagg Ranch 81.41 44 IAmb IAmb 05 13 20.6
comp=Z,72nm,1.7s
FLWY IAMs_20 IAMs_20 05 56 13.6
comp=Z,815nm,18.0s
PASC Pasadena Art C 81.41 56 IAMs_20 IAMs_20 05 50 02.6
comp=Z,2µm,20.0s
TPNV Topopah Spring 81.43 53 IAmb IAmb 05 13 14.1
comp=Z,17nm,0.8s
TPNV IAMs_20 IAMs_20 05 49 14.8
comp=Z,1µm,19.0s
TPNV Topopah Spring 81.43 53 P **P 05 13 00.1 +0.4**
baz=300,SNR=15
MWC Mount Wilson 81.48 56 P **P 05 12 58.4 -1.7**
MWC pmax pmax
comp=Z,16nm,1.1s
MWC MLR MLR
comp=Z,2µm,18.0s
MWC Mount Wilson 81.48 56 P **P 05 12 58.4 -1.7**
TPAW Teton Pass 81.57 45 IAmb IAmb 05 13 21.3
comp=Z,48nm,1.8s
TPAW IAMs_20 IAMs_20 05 47 29.9
comp=Z,1µm,20.0s
CIS Catalina Islan 81.62 57 P **P 05 13 00.6 0.0**
baz=299
SIM Simferopol' 81.69 317 *ce*P **P 05 13 00.9 +0.2**
SIM *e*S **S 05 23 08.0 -4.5**
SIM pmax pmax
comp=Z,35nm,0.9s
SIM pmax pmax
comp=Z,170nm,9.2s
REDW Red Top Meadow 81.70 45 P **P 05 13 01.8 +0.7**
REDW IAmb IAmb 05 13 06.9
comp=Z,34nm,1.6s
SNOW Snow King Moun 81.71 45 P **P 05 13 01.6 +0.4**
SNOW IAMs_20 IAMs_20 05 47 33.5
comp=Z,1µm,19.0s
RLMT Red Lodge 81.72 43 IAmb IAmb 05 13 07.1
comp=Z,36nm,1.4s
RLMT Red Lodge 81.72 43 P **P 05 13 01.9 +0.8**
baz=303,SNR=11
BFSC Mount Baldy Ra 81.76 56 P **P 05 13 05.2 +3.7**
baz=299,SNR=5.1
HFS Hagfors 81.78 337 P **P 05 13 00.2 -0.8**
comp=Z,13nm,0.9s,baz=86,slow=7.6,SNR=16
GSC Goldstone, Bar 81.85 54 P **P 05 13 02.2 +0.3**
baz=300,SNR=5.5
AHID Auburn Hatcher 81.86 45 IAMs_20 IAMs_20 05 43 51.6
comp=Z,970nm,20.0s
NB2 NORSAR Subarra 81.95 338 P **P 05 13 01.3 -0.5**
comp=Z,47nm,1.2s,baz=43,slow=5.3
NB2 NORSAR Subarra 81.95 338 P **P 05 13 01.3 -0.5**
baz=43,slow=5.3
NOA NORSAR Array B 81.95 338 P **P 05 13 01.1 -0.7**
comp=Z,9.1nm,0.8s,baz=41,slow=5.2,SNR=27
NOA LR LR 05 54 24.3
comp=Z,1µm,18.8s,baz=45,slow=39
DUG Dugway, Tooele 82.11 48 IAmb IAmb 05 13 08.4
comp=Z,23nm,1.2s
DUG Dugway, Tooele 82.11 48 P **P 05 13 03.9 +0.6**
baz=301,SNR=16
SUW Suwalki 82.14 329 *e*P **P 05 13 02.7 -0.2**
SUW Suwalki 82.14 329 *e*P **P 05 13 02.7 -0.2**
HWUT Hardware Ranch 82.18 47 IAmb IAmb 05 13 23.8
comp=Z,83nm,1.7s
HWUT IAMs_20 IAMs_20 05 45 26.6
comp=Z,971nm,20.0s
SEVA Sevastopol 82.18 317 ⇑P **P 05 13 04.3 +1.1**
SHPR Sheep Range 82.41 53 P **P 05 13 05.5 +0.7**
SHPR IAMs_20 IAMs_20 05 45 25.8
comp=Z,1µm,20.0s
TUQ Turquoise Moun 82.41 54 P **P 05 13 05.4 +0.5**
baz=300,SNR=13
DGMT Dagmar 82.71 38 P **P 05 13 06.8 +0.7**
baz=306
SOCY Socotra 82.77 280 IAmb IAmb 05 13 33.8
comp=Z,47nm,1.1s
BW06 Boulder Array 82.82 45 IAMs_20 IAMs_20 05 52 23.9
comp=Z,1µm,19.0s
BW06 Boulder Array 82.82 45 P **P 05 13 07.1 +0.1**
baz=303
PDAR Pinedale Array 82.82 45 P **P 05 13 07.0 0.0**
comp=Z,3.7nm,0.8s,baz=268,slow=2.5,SNR=16
PDAR LR LR 05 52 00.1
comp=Z,721nm,18.0s,baz=308,slow=37
PDAR Pinedale Array 82.82 45 P **P 05 13 06.2 -0.8**
GMRC Granite Mounta 82.92 54 P **P 05 13 08.1 +0.5**
baz=300,SNR=6.1
PFO Pinyon Flats O 82.94 56 P **P 05 13 07.5 -0.2**
PFO pmax pmax
comp=Z,16nm,1.2s
PFO MLR MLR
comp=Z,1µm,19.0s
PFO Pinyon Flats O 82.94 56 P **P 05 13 07.5 -0.2**
PFO Pinyon Flats O 82.94 56 IAMs_20 IAMs_20 05 49 30.0
comp=Z,1µm,19.0s
PFO Pinyon Flats O 82.94 56 P **P 05 13 07.8 +0.2**
baz=300,SNR=5.3
XPFO Pion Flat 82.94 56 P **P 05 13 07.6 0.0**
XPFO Pion Flat 82.94 56 IAMs_20 IAMs_20 05 49 30.0
comp=Z,1µm,18.0s
TPFO Pinon Flats 82.94 56 P **P 05 13 07.8 +0.1**
baz=300,SNR=13
BELC Belle Mtn. Jos 83.07 55 P **P 05 13 08.4 0.0**
baz=300
SORM Soroca 83.17 322 ⇑P **P 05 13 08.1 -0.3**
SORM Soroca 83.17 322 ⇑P **P 05 13 08.1 -0.3**
BAR Barrett 83.25 56 IAMs_20 IAMs_20 05 44 44.2
comp=Z,877nm,19.0s
MONP2 Monument Peak 83.32 56 P **P 05 13 10.0 +0.2**
baz=300
BZK Bozkurt 83.38 315 ⇑P **P 05 13 11.3 +1.7**
KIS Kishinev 83.58 321 *e*P **P 05 13 10.0 -0.5**
comp=Z,700nm,8.0s
KIS Kishinev 83.58 321 *e*PP PP 05 16 16.0 -6.5
KIS *e*S **S 05 23 31.0 -0.8**
KIS *e*LQ LQ 05 45 46.0
KIS LRM MLR 05 53 32.0
comp=Z,4µm,16.0s
KIS Kishinev 83.58 321 *e*P **P 05 13 10.0 -0.5**
KIS *e* 05 13 14.0
KIS *e* 05 13 20.0
KIS *e*S **S 05 23 31.0 -0.8**
KIS pmax pmax
comp=Z,700nm,8.0s
KIS MLR MLR
comp=Z,4µm,16.0s
IRM Iron Mountain 83.61 55 P **P 05 13 11.4 +0.5**
baz=301,SNR=5.4
BC3 Big Chuckawall 83.64 55 P **P 05 13 11.6 +0.3**
baz=300,SNR=5.2
IKP In-Ko-Pah, Jac 83.67 56 P **P 05 13 11.6 +0.2**
baz=300
TBI Tubuai 83.73 121 *e*S **SKSac 05 23 30.0 -3.7**
comp=Z,694nm,30.8s
TBI Tubuai 83.73 121 *e*LQ LQ 05 35 28.4
comp=Z,862nm,30.5s
TBI *e*LR LR 05 39 32.0
comp=Z,2µm,29.5s,baz=306
GAZ Gaziantep 83.85 309 P **P 05 13 13.1 +0.8**
SFJD Kangerlussuaq 83.86 5 *e*P **P 05 13 14.6 +3.1**
SFJD Kangerlussuaq 83.86 5 *i* P **P 05 13 14.6 +3.1**
W13A Hualapai Mount 84.02 53 IAMs_20 IAMs_20 05 51 04.3
comp=Z,1µm,19.0s
ILGA Ilgaz 84.06 314 P **P 05 13 14.3 +0.9**
ILGA IAMs_20 IAMs_20 05 55 21.6
comp=Z,966nm,20.0s
Y12C Blythe 84.26 55 P **P 05 13 14.6 +0.4**
baz=301
LVV L'vov 84.39 325 *e*P **P 05 13 14.5 -0.1**
LVV *e* 05 16 29.0
LVV *e*S **SKSac 05 23 38.0 +0.5**
LVV pmax pmax
comp=Z,50nm,1.6s
U15A North Rim 84.43 51 IAMs_20 IAMs_20 05 46 59.1
comp=Z,1µm,20.0s
RAYN Ar Rayn 84.52 294 P **P 05 13 15.6 -0.2**
RAYN pmax pmax
comp=Z,277nm,0.9s
RAYN Ar Rayn 84.52 294 *i* P **P 05 13 16.5 +0.7**
SNR=23
RAYN Ar Rayn 84.52 294 P **P 05 13 15.6 -0.2**
TLCR 84.66 319 ⇑P **P 05 13 18.6 +2.6**
TLCR 84.66 319 ⇑P **P 05 13 18.6 +2.6**
BEL Belsk 84.66 328 *e*P **P 05 13 16.3 +0.4**
BEL Belsk 84.66 328 *e*P **P 05 13 16.3 +0.4**
K22A Casper 84.74 44 IAmb IAmb 05 13 21.8
comp=Z,18nm,1.1s
K22A IAMs_20 IAMs_20 05 55 41.7
comp=Z,802nm,19.0s
K22A Casper 84.74 44 P **P 05 13 17.2 +0.5**
baz=305
BR131 Keskin Array S 84.84 313 P **P 05 13 17.7 +0.4**
SNR=36
BRTR Keskin Array B 84.84 313 P **P 05 13 17.2 -0.1**
BRTR Keskin Array B 84.84 313 P **P 05 13 16.6 -0.7**
comp=Z,44nm,1.0s,baz=100,slow=3.8,SNR=126
BRTR LR LR 05 54 12.3
comp=Z,503nm,21.9s,baz=48,slow=38
BRTR Keskin Array B 84.84 313 P **P 05 13 17.1 -0.1**
JURR Jurilovca 84.87 319 ⇑P **P 05 13 18.0 +1.0**
RWWY Rawlins 84.87 45 IAmb IAmb 05 13 30.6
comp=Z,33nm,1.1s
RWWY IAMs_20 IAMs_20 05 51 36.1
comp=Z,1µm,19.0s
CFR Carcaliu 85.05 320 ⇑P **P 05 13 18.7 +0.7**
CFR Carcaliu 85.05 320 ⇑P **P 05 13 18.7 +0.7**
TESR Tescani 85.07 321 ⇑P **P 05 13 18.8 +0.7**
TOPG Topolog 85.09 319 ⇑P **P 05 13 19.2 +1.0**
O20A White River Ci 85.09 47 IAmb IAmb 05 13 33.0
comp=Z,22nm,0.9s
O20A IAMs_20 IAMs_20 05 46 54.3
comp=Z,1µm,21.0s
O20A White River Ci 85.09 47 P **P 05 13 18.9 +0.3**
baz=304
BIZ Bicaz 85.11 322 ⇑P **P 05 13 19.4 +1.1**
BUR08 Bucovina Ar. S 85.15 323 IAmb IAmb 05 13 24.1
comp=Z,17nm,0.9s
BURAR Bucovina Array 85.16 323 ⇑P **P 05 13 19.6 +0.9**
KWP Kalwaria Pacla 85.17 325 *e*P **P 05 13 18.9 +0.3**
KWP Kalwaria Pacla 85.17 325 *e*P **P 05 13 18.9 +0.3**
GKP Gorka Klasztor 85.28 330 *e*P **P 05 13 18.7 -0.3**
GKP Gorka Klasztor 85.28 330 *e*P **P 05 13 18.7 -0.3**
ANTO Ankara 85.30 313 ⇓P **P 05 13 21.1 +1.6**
ANTO Ankara 85.30 313 ⇓P **P 05 13 21.1 +1.6**
ANTO Ankara 85.30 313 P **P 05 13 20.3 +0.8**
ANTO IAmb IAmb 05 13 21.4
comp=Z,38nm,0.9s
113A Mohawk Valley, 85.31 55 IAMs_20 IAMs_20 05 51 13.7
comp=Z,999nm,18.0s
TIRR Tirgusor 85.32 319 ⇑P **P 05 13 20.1 +0.8**
TIRR Tirgusor 85.32 319 ⇑P **P 05 13 20.1 +0.8**
BR231 Keskin MP Arra 85.33 313 IAmb IAmb 05 13 36.1
comp=Z,27nm,0.8s
RSSD Black Hills 85.36 41 P **P 05 13 23.1 +3.2**
RSSD pmax pmax
comp=Z,48nm,1.8s
RSSD Black Hills 85.36 41 P **P 05 13 23.1 +3.2**
RSSD IAmb IAmb 05 13 47.1
comp=Z,48nm,1.8s
VRI Vrincioaia 85.42 321 ⇑P **P 05 13 24.6 +4.7**
VRI Vrincioaia 85.42 321 ⇑P **P 05 13 24.6 +4.7**
HARR Harsova 85.45 319 ⇓P **P 05 13 24.5 +4.5**
HARR Harsova 85.45 319 ⇓P **P 05 13 24.5 +4.5**
PLOR Plostina 85.47 321 ⇑P **P 05 13 21.3 +1.1**

PLOR Plostina 85.47 321 ⇑P P 05 13 21.3 +1.1
WUAZ Wupatki 85.54 52 IAmb IAmb 05 13 41.0
comp=Z,30nm,1.2s
WUAZ IAMs_20 IAMs_20 05 52 10.8
comp=Z,1µm,19.0s
WUAZ Wupatki 85.54 52 P P 05 13 21.7 +0.8
baz=302
BISRR Bisoca 85.62 321 ⇑P P 05 13 25.5 +4.5
OZUR 85.80 321 ⇑P P 05 13 23.3 +1.5
ULM Lac du Bonnet 85.84 33 P P 05 13 21.2 -0.6
comp=Z,3.7nm,0.9s,baz=327,slow=6.3,SNR=8.8
ULM LR LR 05 49 38.1
comp=Z,445nm,21.7s,baz=314,slow=34
KOLS Kolonicke sedl 85.84 325 eP P 05 13 22.5 +0.6
KOLS pmax pmax
comp=Z,51nm,2.2s
KOLS Kolonicke sedl 85.84 325 eP P 05 13 22.5 +0.6
ISR Istrita 85.98 320 ⇑P P 05 13 25.8 +3.1
ISR Istrita 85.98 320 ⇑P P 05 13 25.8 +3.1
UZH Uzhgorod 86.03 325 eP P 05 13 21.8 -1.0
UZH e 05 13 27.1
UZH eS SKSac 05 23 50.1 +2.2
UZH MLR MLR
comp=N,500nm,17.0s
UZH MLR MLR
comp=E,700nm,17.0s
UZH MLR MLR
comp=Z,500nm,17.0s
X16A Lo Mia Camp, P 86.08 53 IAMs_20 IAMs_20 05 52 06.1
comp=Z,1µm,18.0s
MLR Muntele Rosu 86.08 321 ⇑P P 05 13 29.0 +5.6
MLR Muntele Rosu 86.08 321 ⇑P P 05 13 29.0 +5.6
MLR Muntele Rosu 86.08 321 IAmb IAmb 05 14 19.4
comp=Z,16nm,1.1s
N23A Red Feather La 86.10 45 IAmb IAmb 05 13 29.6
comp=Z,34nm,1.1s
N23A Red Feather La 86.10 45 P P 05 13 24.9 +1.2
baz=305
PHWY Pilot Hill 86.17 44 IAMs_20 IAMs_20 05 51 53.5
comp=Z,898nm,18.0s
OJC Ojcow 86.20 327 eP P 05 13 23.8 +0.1
OJC Ojcow 86.20 327 eP P 05 13 23.8 +0.1
OJC Ojcow 86.20 327 P P 05 13 23.1 -0.6
OJC IAmb IAmb 05 13 47.3
comp=Z,40nm,1.3s
TRPA Tarpa 86.23 324 eP P 05 13 23.0 -0.8
214A Organ Pipe Nat 86.42 55 P P 05 13 25.4 +0.2
214A IAmb IAmb 05 13 30.3
comp=Z,20nm,1.1s
214A IAMs_20 IAMs_20 05 55 43.2
comp=Z,926nm,19.0s
214A Organ Pipe Nat 86.42 55 P P 05 13 25.9 +0.7
baz=302
SMCO Snowmass 86.44 47 IAmb IAmb 05 13 40.0
comp=Z,15nm,0.9s
SMCO IAMs_20 IAMs_20 05 50 16.0
comp=Z,1µm,19.0s
NIE Niedzica 86.50 326 eP P 05 13 25.5 +0.3
NIE Niedzica 86.50 326 eP P 05 13 25.5 +0.3
MVCO Mesa Verde 86.56 49 IAMs_20 IAMs_20 05 50 22.3
comp=Z,1µm,19.0s
MVCO Mesa Verde 86.56 49 P P 05 13 26.6 +0.6
baz=304
VOIR 86.61 321 ⇑P P 05 13 27.8 +1.9
VOIR 86.61 321 ⇑P P 05 13 27.8 +1.9
ARR Arges 86.88 321 ⇑P P 05 13 27.7 +0.5
ISCO Idaho Springs 86.94 46 IAMs_20 IAMs_20 05 55 11.2
comp=Z,999nm,18.0s
ISCO Idaho Springs 86.94 46 P P 05 13 28.7 +0.8
baz=306
DRGR 87.01 323 ⇑P P 05 13 28.3 +0.5
DRGR 87.01 323 ⇑P P 05 13 28.3 +0.5
X18A Snowflake 87.06 52 IAMs_20 IAMs_20 05 52 44.8
comp=Z,1µm,18.0s
LANS Liptovska Anna 87.08 326 eP P 05 13 28.9 +0.8
LANS pmax pmax
comp=Z,9.0nm,1.5s
LANS Liptovska Anna 87.08 326 eP P 05 13 28.9 +0.8
AGMN Agassiz Nation 87.14 35 IAmb IAmb 05 13 47.9
comp=Z,40nm,1.4s
AGMN Agassiz Nation 87.14 35 P P 05 13 28.2 -0.1
baz=312
OKC Ostrava-Krasne 87.24 328 AMS AMS 05 55 50.0
comp=Z,2µm,14.0s
S22A 4UR Ranch, Cre 87.35 48 IAmb IAmb 05 13 50.4
comp=Z,16nm,1.4s
S22A 4UR Ranch, Cre 87.35 48 P P 05 13 31.2 +1.3
baz=305
KSP Ksiaz 87.39 329 eP P 05 13 29.3 -0.2
KSP Ksiaz 87.39 329 eP P 05 13 29.3 -0.2
MORC Moravsky Berou 87.57 328 ⇓P P 05 13 30.4 0.0
MORC Moravsky Berou 87.57 328 ⇓P P 05 13 30.4 0.0
MORC Moravsky Berou 87.57 328 eP P 05 13 29.9 -0.5
MORC Moravsky Berou 87.57 328 IAmb IAmb 05 13 31.5
comp=Z,38nm,1.7s
BSEG Bad Segeberg 87.62 334 eL L 05 57 01.6
comp=Z,990nm,18.5s
OSTC Ostas 87.63 329 eP P 05 13 34.7 +4.0
OSTC AMS AMS 05 56 30.0
comp=Z,3µm,14.2s
CHVC Chvalec 87.68 329 AMS AMS 05 56 40.0
comp=Z,3µm,14.5s
TUC Tucson 87.68 54 P P 05 13 31.3 0.0
TUC pmax pmax
comp=Z,25nm,1.7s
TUC MLR MLR
comp=Z,1µm,20.0s
TUC Tucson 87.68 54 P P 05 13 31.3 0.0
TUC IAmb IAmb 05 13 51.5
comp=Z,25nm,1.7s
TUC Tucson 87.68 54 IAMs_20 IAMs_20 05 53 18.5
comp=Z,1µm,20.0s
TUC Tucson 87.68 54 P P 05 13 35.2 +3.8
baz=303
CSS Mathiatis 87.69 309 IAmb IAmb 05 13 48.6
comp=Z,33nm,1.0s
PSZ Piszkesteto 87.70 325 ⇑P P 05 13 31.9 +0.8
PSZ Piszkesteto 87.70 325 ⇑P P 05 13 31.9 +0.8
PSZ Piszkesteto 87.70 325 IAmb IAmb 05 13 32.4
comp=Z,40nm,1.5s
ELND Elena 87.71 319 ⇓P P 05 13 31.5 +0.4
KRLC Kraliky 87.71 328 eP P 05 13 30.5 -0.6
KRLC MLR MLR
comp=Z,4µm,15.4s
KRLC Kraliky 87.71 328 eP P 05 13 30.5 -0.6
KRLC AMS AMS 05 56 40.0
comp=Z,4µm,15.4s
Q24A Divide 87.72 46 IAMs_20 IAMs_20 05 46 41.9
comp=Z,1µm,22.0s
DPC Dobruska-Polom 87.73 329 eP P 05 13 31.3 +0.1
DPC e 05 13 45.2
DPC MLR MLR
comp=Z,4µm,17.2s
DPC Dobruska-Polom 87.73 329 eP P 05 13 31.3 +0.1
DPC ex x 05 13 45.2
DPC AMS AMS 05 56 30.0
comp=Z,4µm,17.2s
UPC Upice 87.76 329 eP P 05 13 28.2 -3.0
UPC e 05 13 33.9
UPC MLR MLR
comp=Z,3µm,16.9s
UPC Upice 87.76 329 eP P 05 13 28.2 -3.0
UPC epP PcP 05 13 33.9 +0.8
UPC AMS AMS 05 56 40.0
comp=Z,3µm,16.9s
VYHS Vyhne 87.83 326 eP P 05 13 31.5 -0.2
VYHS pmax pmax
comp=Z,21nm,1.4s
VYHS Vyhne 87.83 326 eP P 05 13 31.5 -0.2
GZR Gura Zlata 87.88 322 ⇑P P 05 13 32.5 +0.5
GZR Gura Zlata 87.88 322 ⇑P P 05 13 32.5 +0.5
ISP Isparta 87.92 313 IAMs_20 IAMs_20 05 56 14.8
comp=Z,922nm,22.0s
PLVB Pleven 88.14 320 ⇑P P 05 13 33.9 +0.8
JAVC Velka Javorina 88.14 327 eP P 05 13 34.3 +1.1
SDCO Great Sand Dun 88.21 47 IAMs_20 IAMs_20 05 54 06.9
comp=Z,1µm,19.0s
SDCO Great Sand Dun 88.21 47 P P 05 13 35.1 +1.1
baz=306
VRAC Vranov 88.34 328 ⇑P P 05 13 34.0 0.0
VRAC Vranov 88.34 328 ⇑P P 05 13 34.0 0.0
VRAC Vranov 88.34 328 eP P 05 13 33.8 -0.2
BZS Buzias 88.35 323 ⇑P P 05 13 33.3 -0.9
BZS Buzias 88.35 323 ⇑P P 05 13 33.3 -0.9
PVCC Panska Ves 88.39 330 AMS AMS 05 57 50.0
comp=Z,1µm,12.8s
HERR Herculane 88.40 322 ⇑P P 05 13 34.2 -0.2
BRG Berggiesshubel 88.41 330 eP P 05 13 33.7 -0.6
comp=Z,19nm,1.6s
BRG eP P 05 17 02.8 +1.4
comp=Z,34nm,1.5s
BRG S S 05 24 28.0 +9.1
BRG SS SS 05 30 14.0 +6.4
BRG eP KP KP 05 39 09.8
comp=Z,2.4nm,1.1s
comp=N,834nm,17.1s
comp=E,944nm,18.6s
comp=Z,1µm,10.6s
BRG Berggiesshubel 88.41 330 eP P 05 13 33.7 -0.6
BRG e 05 17 02.8
BRG SS SS 05 30 14.0 +6.4
BRG pmax pmax
comp=Z,19nm,1.6s
BRG pmax pmax
comp=Z,34nm,1.5s
BRG pmax pmax
comp=Z,2.0nm,1.1s
BRG MLR MLR
comp=N,834nm,17.1s
BRG MLR MLR
comp=E,944nm,18.6s
BRG MLR MLR
comp=Z,1µm,10.6s
SMOL Smolenice 88.50 327 eP P 05 13 35.5 +0.7
SMOL pmax pmax
comp=Z,20nm,1.8s
SMOL Smolenice 88.50 327 eP P 05 13 35.5 +0.7
CLL Collm 88.50 331 eP P 05 13 34.0 -0.7
CLL eS SKKSac 05 24 11.0 -2.7
CLL pmax pmax
comp=Z,15nm,1.4s
CLL Collm 88.50 331 eP P 05 13 34.0 -0.7
comp=Z,15nm,1.4s
CLL e 05 16 32.0
CLL eP P 05 16 59.0 -3.1
CLL eSKKSac SKKSac 05 24 11.0 -2.7
CLL eS ScS 05 24 23.0 -2.4
CLL eP S PS 05 25 22.0 -2.7
CLL eS S 05 30 12.0 +3.2
CLL Collm 88.50 331 IAmb IAmb 05 13 50.2
comp=Z,15nm,1.3s
KRUC Moravsky 88.60 328 eP P 05 13 35.0 -0.3
MODS Modra-Piesok 88.67 327 eP P 05 13 35.7 +0.1
MODS pmax pmax
comp=Z,24nm,1.5s
MODS Modra-Piesok 88.67 327 eP P 05 13 35.7 +0.1
PRA Prague 88.78 329 AMS AMS 05 58 30.0
comp=Z,2µm,12.4s
PRU Pruhonice 88.79 329 AMS AMS 05 58 20.0
comp=Z,2µm,13.2s
MDVR Moldovita 88.85 322 ⇑P P 05 13 35.5 -1.0
TREC Trest 88.86 328 eP P 05 13 35.7 -0.8
TREC MLR MLR
comp=Z,3µm,16.5s
TREC Trest 88.86 328 eP P 05 13 35.7 -0.8
TREC AMS AMS 05 57 10.0
comp=Z,3µm,16.5s
ZST Bratislava 88.88 327 eP P 05 13 36.1 -0.5
ZST Bratislava 88.88 327 eP P 05 13 36.1 -0.5
ANMO Albuquerque 89.20 50 eP P 05 13 38.5 -0.1
ANMO pmax pmax
comp=Z,8.0nm,2.5s
ANMO Albuquerque 89.20 50 P P 05 13 39.0 +0.4
ANMO Albuquerque 89.20 50 IAMs_20 IAMs_20 05 54 58.4
comp=Z,906nm,18.0s
ANMO Albuquerque 89.20 50 P P 05 13 39.6 +1.0
baz=305
PBCC Pribram 89.25 329 AMS AMS 05 58 50.0
comp=Z,600nm,16.1s
319A Douglas 89.26 54 IAMs_20 IAMs_20 05 53 49.4
comp=Z,1µm,18.0s
T25A Trinidad 89.27 47 P P 05 13 40.4 +1.4
baz=306
KSCO Kaye Shedlock' 89.27 45 IAMs_20 IAMs_20 05 49 15.7
comp=Z,801nm,20.0s
SRIG Santa Rosalia 89.30 59 IAMs_20 IAMs_20 05 52 18.8
comp=Z,1µm,19.0s
HSIG 89.35 57 IAMs_20 IAMs_20 05 48 05.8
comp=Z,961nm,20.0s
MPLH Magyarpolny 89.38 326 eP P 05 13 38.3 -0.7
MPLH Magyarpolny 89.38 326 eP P 05 13 31.0 -8.0
VTS Vitosha 89.41 320 ⇑P P 05 13 39.3 -0.1
VTS Vitosha 89.41 320 ⇑P P 05 13 39.3 -0.1
VTS Vitosha 89.41 320 IAMs_20 IAMs_20 05 56 41.9
comp=Z,880nm,19.0s
MORH Mrgy, Hungar 89.49 325 eP P 05 13 39.1 -0.3
EYMN Ely 89.51 33 IAmb IAmb 05 13 58.9
comp=Z,20nm,1.0s
EYMN Ely 89.51 33 P P 05 13 38.9 -0.7
baz=315
NKC Novy Kostel 89.53 330 AMS AMS 05 57 30.0
comp=Z,2µm,17.8s
MOX Moxa 89.58 331 eL L 05 57 20.1
comp=Z,1µm,18.2s
CONA Conrad Observa 89.66 327 ePcP P 05 13 40.8 +0.4
comp=Z,16nm,1.6s
CONA eP P 05 17 11.0 -0.5
comp=Z,12nm,1.6s
121A Cookes Peak, D 89.67 53 IAMs_20 IAMs_20 05 55 07.0
comp=Z,1µm,18.0s
121A Cookes Peak, D 89.67 53 P P 05 13 42.1 +1.2
baz=305
ECSD EROS Data Cent 89.78 38 IAmb IAmb 05 14 00.2
comp=Z,17nm,1.1s
ECSD EROS Data Cent 89.78 38 P P 05 13 40.9 0.0
baz=311
DAMY Dhamar 89.81 286 IAMs_20 IAMs_20 05 56 19.1
comp=Z,869nm,21.0s
DAMY Dhamar 89.81 286 P P 05 13 43.0 +1.1
SNR=5.2
KHC Kasperske Hory 89.84 329 eP P 05 13 40.3 -0.9
KHC e 05 13 53.9
KHC MLR MLR
comp=Z,4µm,17.0s
KHC Kasperske Hory 89.84 329 eP P 05 13 40.3 -0.9
KHC ex x 05 13 53.9
KHC AMS AMS 05 58 10.0
comp=Z,4µm,17.0s
KHC Kasperske Hory 89.84 329 P P 05 13 40.3 -0.9
GEC2 GERESS Array S 90.00 329 eL L 05 57 16.7
comp=Z,1µm,19.1s
GERES GERESS Array B 90.00 329 P P 05 13 40.9 -1.0
comp=Z,2.5nm,0.8s,baz=46,slow=4.4,SNR=12
GERES PP PP 05 17 18.0 +3.8
comp=Z,1.6nm,0.8s,baz=49,slow=9.1,SNR=4.1
GERES LR LR 05 57 36.4
comp=Z,1µm,18.5s,baz=52,slow=38
GERES GERESS Array B 90.00 329 P P 05 13 40.8 -1.2
WET Wettzell 90.15 330 eL L 05 56 49.3
comp=Z,1µm,21.6s
ARSA Arzberg 90.30 327 ePcP P 05 13 43.3 0.0
comp=Z,14nm,1.5s
ARSA eP P 05 17 17.3 +0.8
comp=Z,8.3nm,1.3s
E38A The Farm, Brul 90.43 34 IAmb IAmb 05 14 10.3
comp=Z,18nm,1.0s
BGNE Belgrade 90.44 41 IAMs_20 IAMs_20 05 52 17.7
comp=Z,866nm,20.0s
MOA Molln 90.46 328 i PP PP 05 17 18.6 +0.8
GRF Grafenberg Arr 90.46 331 eP P 05 13 43.7 -0.3
comp=Z,138nm,18.7s,baz=50,slow=4.4
GRF eL L 06 01 04.5
comp=Z,1µm,18.1s
KOGS Kog 90.52 326 eP P 05 13 43.8 -0.5
SPMN Marine on St. 90.78 35 P P 05 13 46.2 +0.7
baz=314
SOKA Soboth 90.94 327 ePcP P 05 13 46.1 -0.2
comp=Z,18nm,1.5s
SOKA eP P 05 17 21.4 -0.3
comp=Z,10nm,1.2s
EPT El Paso 90.99 53 IAMs_20 IAMs_20 05 54 53.0
comp=Z,723nm,19.0s
TNS Taunus Mts 91.22 332 eL L 05 59 15.5
comp=Z,917nm,19.9s
OBKA Obir 91.30 327 ePcP P 05 13 47.7 -0.4
comp=Z,8.8nm,1.3s
OBKA eP P 05 17 22.7 -1.8
comp=Z,23nm,1.5s
KARP Karpathos 91.45 312 IAMs_20 IAMs_20 06 02 49.2
comp=Z,989nm,18.0s
KBA Koelnbreinsper 91.45 328 ePcP P 05 13 47.8 -1.0
comp=Z,7.2nm,1.1s
KBA eP P 05 17 26.3 +0.4
comp=Z,17nm,1.3s
LIT Litokhoron 91.46 318 IAmb IAmb 05 13 53.1
comp=Z,19nm,0.9s
FUR Furstenfeldbru 91.59 330 eL L 05 58 45.7
comp=Z,1µm,18.2s
MYKA Terra Mystica 91.64 327 ePcP P 05 13 48.5 -1.1
comp=Z,8.9nm,1.2s
MYKA eP P 05 17 23.6 -3.6
comp=Z,21nm,1.3s
MNTX Cornudas Mount 91.82 52 P P 05 13 51.2 +0.5
baz=306
SANT Santorini 92.03 314 IAMs_20 IAMs_20 06 02 06.5
comp=Z,806nm,18.0s
G40A Rib Lake 92.05 34 IAMs_20 IAMs_20 06 02 50.1
comp=Z,731nm,19.0s
WATA Walderalm 92.07 329 ePcP P 05 13 51.6 -0.1
comp=Z,9.5nm,1.2s
WATA eP P 05 17 30.9 +0.2
comp=Z,13nm,0.9s
ABTA Abfaltersbach 92.08 328 ePcP P 05 13 50.5 -1.2
comp=Z,13nm,1.0s,SNR=5.4
ABTA PP PP 05 17 24.9 -5.9
comp=Z,7.8nm,1.6s
WTTA Wattenberg 92.10 329 ePcP P 05 13 51.3 -0.5
comp=Z,13nm,1.5s
WTTA eP P 05 17 31.5 +0.5
comp=Z,20nm,1.2s
MSTX Muleshoe 92.23 49 IAMs_20 IAMs_20 05 52 25.5
comp=Z,1µm,20.0s
MOTA Moosalm 92.28 329 ePcP P 05 13 52.7 0.0
comp=Z,6.8nm,1.1s
MOTA eP P 05 17 30.9 -1.4
comp=Z,20nm,1.3s
RETA Reutte 92.33 329 i PcP P 05 13 51.6 -1.2
comp=Z,15nm,1.3s
SQTA Sankt Quirin 92.33 329 ePcP P 05 13 52.3 -0.5
comp=Z,4.3nm,0.8s
SQTA PP PP 05 17 28.9 -3.8
comp=Z,17nm,1.2s
STAL STALIGIAL 92.35 328 IAMs_20 IAMs_20 05 59 24.9
comp=Z,1µm,19.0s
AMTX Amarillo 92.39 48 IAmb IAmb 05 13 58.7
comp=Z,17nm,0.9s
AMTX Amarillo 92.39 48 P P 05 13 54.4 +1.1
baz=308
ATD Arta Tunnel 92.63 285 IAMs_20 IAMs_20 06 03 15.7
comp=Z,683nm,18.0s
FETA Feichten 92.69 329 ePcP P 05 13 54.3 -0.3
comp=Z,10nm,1.0s
FETA eP P 05 17 29.6 -6.0
comp=Z,12nm,1.3s
BFO Black Forest 92.73 331 P P 05 13 54.4 -0.1
BFO pmax pmax
comp=Z,35nm,1.4s
BFO Black Forest 92.73 331 eL L 06 00 00.5
comp=Z,1µm,18.8s
BFO Black Forest 92.73 331 P P 05 13 54.4 -0.1
BFO IAmb IAmb 05 13 55.8
comp=Z,35nm,1.4s
KSU1 Kansas State U 92.84 42 P P 05 13 55.3 +0.1
baz=311
DAVA Damuels 92.87 330 ePcP P 05 13 54.0 -1.3
comp=Z,14nm,1.0s
DAVA eP P 05 17 35.5 -1.5
comp=Z,22nm,1.4s
SCHQ Schefferville 92.88 16 P P 05 13 55.5 +0.4
comp=Z,2.6nm,0.9s,baz=308,slow=2.8,SNR=4.3
SCHQ LR LR 05 57 43.2
comp=Z,365nm,21.6s,baz=330,slow=37
SCHQ Schefferville 92.88 16 IAmb IAmb 05 14 09.0
comp=Z,24nm,1.4s
CTI Castel Tesino 93.00 328 IAmb IAmb 05 14 15.2
comp=Z,35nm,1.6s
U32A Winter Ranch, 93.16 45 IAMs_20 IAMs_20 05 50 42.6
comp=Z,1µm,21.0s
H43A Windswept, Lux 93.81 33 IAMs_20 IAMs_20 05 59 51.8
comp=Z,750nm,20.0s
WMOK Wichita Mounta 94.34 46 IAmb IAmb 05 14 22.1
comp=Z,15nm,1.1s
WMOK Wichita Mounta 94.34 46 IAMs_20 IAMs_20 05 56 35.1
comp=Z,892nm,19.0s
WMOK Wichita Mounta 94.34 46 P P 05 14 01.9 -0.4
baz=310
HPIG 94.38 56 IAMs_20 IAMs_20 05 51 17.0
comp=Z,946nm,20.0s
TX31 Lajitas Ar. Si 94.40 53 IAmb IAmb 05 14 23.9
comp=Z,12nm,1.0s
TX32 Lajitas Array 94.40 53 IAmb IAmb 05 14 23.9
comp=Z,12nm,1.0s
TXAR Lajitas Array 94.40 53 P P 05 14 03.1 +0.4
comp=Z,5.9nm,0.9s,baz=301,slow=2.4,SNR=26
TXAR LR LR 05 57 48.9
comp=Z,424nm,18.1s,baz=0.0,slow=36
TXAR Lajitas Array 94.40 53 P P 05 14 02.8 0.0
OKCFA Oklahoma City 94.74 45 IAMs_20 IAMs_20 05 51 53.5
comp=Z,1µm,21.0s
ABTX Abilene, Hawle 95.12 48 IAMs_20 IAMs_20 06 03 19.0
comp=Z,916nm,18.0s
TUL1 Leonard 95.43 44 IAMs_20 IAMs_20 06 02 27.8
comp=Z,716nm,18.0s
H48A Harrisville 95.71 31 IAMs_20 IAMs_20 05 54 31.7
comp=Z,688nm,20.0s
M44A Midewin, Midew 95.94 36 IAMs_20 IAMs_20 05 59 24.4
comp=Z,709nm,18.0s
HHAR Hobbs 96.30 43 IAMs_20 IAMs_20 05 56 26.4
comp=Z,1µm,21.0s
JCT Junction City 96.36 50 IAMs_20 IAMs_20 05 54 38.9
comp=Z,697nm,19.0s
P43A Skaggs, Pawnee 96.44 38 IAMs_20 IAMs_20 06 02 26.8
comp=Z,858nm,18.0s
CEL Celeste 96.48 320 IAMs_20 IAMs_20 06 03 10.0
comp=Z,975nm,19.0s
CCM Cathedral Cave 96.62 40 IAMs_20 IAMs_20 05 59 33.8
comp=Z,697nm,20.0s
MGMO Mountain Grove 96.67 41 IAMs_20 IAMs_20 06 02 25.3
comp=Z,760nm,18.0s
U40A Yellville 96.89 42 IAmb IAmb 05 14 28.9
comp=Z,9.0nm,1.1s
U40A Yellville 96.89 42 P P 05 14 13.6 -0.2
baz=314
SFIN Lafayette 97.17 36 IAMs_20 IAMs_20 06 03 02.0
comp=Z,660nm,19.0s
FURI Furi 97.49 284 IAMs_20 IAMs_20 06 05 40.6
comp=Z,794nm,18.0s
K50A Casco 97.53 32 IAMs_20 IAMs_20 05 59 13.9
comp=Z,712nm,19.0s
M48A Edgerton 97.53 34 IAMs_20 IAMs_20 06 07 12.2
comp=Z,813nm,19.0s
MIAR Mount Ida 97.69 44 IAMs_20 IAMs_20 06 02 40.5
comp=Z,911nm,18.0s
OLIL Olney 97.86 37 IAMs_20 IAMs_20 06 03 34.3
comp=Z,705nm,19.0s
W41B Gary Mavity, V 98.06 42 IAMs_20 IAMs_20 05 57 17.0
comp=Z,729nm,20.0s
X40A Basin Creek Fa 98.18 43 IAMs_20 IAMs_20 06 01 54.4
comp=Z,1µm,19.0s
WLAR White Oak Lake 98.56 44 IAMs_20 IAMs_20 06 05 09.5
comp=Z,807nm,19.0s
USIN University of 98.65 38 IAMs_20 IAMs_20 06 04 28.3
comp=Z,773nm,19.0s
O49A Covington 98.71 34 IAMs_20 IAMs_20 06 02 00.4
comp=Z,731nm,19.0s
P48A Milroy 98.71 35 IAMs_20 IAMs_20 06 03 33.7
comp=Z,842nm,18.0s
PEBM Pemiscott Bayo 98.78 40 IAMs_20 IAMs_20 06 00 21.4
comp=Z,782nm,20.0s
J54A Appleton 98.89 29 IAMs_20 IAMs_20 05 56 59.8
comp=Z,808nm,20.0s
LPAR Lepanto 98.89 41 IAMs_20 IAMs_20 05 55 03.0
comp=Z,594nm,18.0s
GLAT Glass 98.99 40 IAMs_20 IAMs_20 05 55 47.5
comp=Z,707nm,21.0s
LNXT Lenox 99.00 40 IAMs_20 IAMs_20 06 00 40.7
comp=Z,1µm,22.0s
Z41A Richland Creek 99.04 44 IAMs_20 IAMs_20 05 54 14.2
comp=Z,714nm,20.0s
N51A Ashland 99.09 33 IAMs_20 IAMs_20 06 06 18.4
comp=Z,837nm,19.0s
ZAIG Zacatecas 99.09 58 IAMs_20 IAMs_20 05 53 44.1
comp=Z,1µm,20.0s
X43A Marvell 99.32 42 IAMs_20 IAMs_20 06 04 47.4
comp=Z,848nm,20.0s
ACSO Alum Creek Sta 99.33 33 IAMs_20 IAMs_20 06 07 13.9
comp=Z,731nm,19.0s
ALLY Alegheny Colle 99.54 31 IAMs_20 IAMs_20 05 56 38.2
comp=Z,1µm,22.0s

WVNY	West Valley, N	99.61	29	IAMs_20	IAMs_20	05 57 51.9	
	comp=Z,726nm,20.0s						
T47A	Sharon Grove	99.67	38	IAMs_20	IAMs_20	06 04 26.4	
	comp=Z,808nm,18.0s						
P51A	Williamsport	99.88	34	IAMs_20	IAMs_20	06 03 33.3	
	comp=Z,732nm,19.0s						
WVT	Waverly	99.91	39	IAMs_20	IAMs_20	06 04 12.6	
	comp=Z,900nm,18.0s						
O52A	Adamsville	99.97	33	IAMs_20	IAMs_20	06 03 48.5	
	comp=Z,714nm,20.0s						
T49A	Edmonton	100.43	37	IAMs_20	IAMs_20	06 05 16.2	
	comp=Z,762nm,19.0s						
V48A	Smith Brothers	100.75	39	IAMs_20	IAMs_20	06 02 15.9	
	comp=Z,813nm,19.0s						
ACCN	Adirondack Com	100.81	26	IAMs_20	IAMs_20	06 03 47.2	
	comp=Z,1um,21.0s						
S51A	Beattyville	101.03	36	IAMs_20	IAMs_20	06 07 51.6	
	comp=Z,813nm,18.0s						
N58A	Sunbury	101.71	29	IAMs_20	IAMs_20	06 08 34.5	
	comp=Z,818nm,19.0s						
TZTN	Tazewell	101.89	36	IAMs_20	IAMs_20	05 54 23.8	
	comp=Z,804nm,20.0s						
CPCT	Cooper Cave	102.21	38	IAMs_20	IAMs_20	06 09 38.0	
	comp=Z,676nm,19.0s						
P57A	Homestead Farm	102.25	31	IAMs_20	IAMs_20	06 03 15.6	
	comp=Z,670nm,20.0s						
MVL	Millersville	102.56	29	IAMs_20	IAMs_20	05 59 35.0	
	comp=Z,666nm,20.0s						
V53A	Saluda	102.94	36	IAMs_20	IAMs_20	06 04 34.3	
	comp=Z,596nm,19.0s						
PSUB	Penn St. - Bra	103.00	29	IAMs_20	IAMs_20	06 09 23.8	
	comp=Z,941nm,19.0s						
P60A	Greenville	103.02	29	IAMs_20	IAMs_20	06 09 49.0	
	comp=Z,986nm,19.0s						
Z51A	Franklin	103.45	39	IAMs_20	IAMs_20	06 01 03.1	
	comp=Z,660nm,20.0s						
R58B	Mineral	103.54	32	IAMs_20	IAMs_20	06 02 30.9	
	comp=Z,878nm,19.0s						
Q60A	Greensboro	103.60	30	IAMs_20	IAMs_20	06 01 16.7	
	comp=Z,852nm,19.0s						
U56A	King	103.64	34	IAMs_20	IAMs_20	06 10 48.8	
	comp=Z,684nm,19.0s						
KMBO	Kilima Mbogo	103.72	276	IAMs_20	IAMs_20	06 07 48.1	
	comp=Z,558nm,18.0s						
S58A	Poland Farm, P	103.75	32	IAMs_20	IAMs_20	06 02 26.4	
	comp=Z,717nm,21.0s						
250A	Grady	103.82	41	IAMs_20	IAMs_20	05 57 28.0	
	comp=Z,802nm,22.0s						
KMSC	Kings Mountain	104.11	36	IAMs_20	IAMs_20	05 56 33.2	
	comp=Z,870nm,22.0s						
PAULI	Pauline	104.11	36	IAMs_20	IAMs_20	05 56 35.3	
	comp=Z,759nm,20.0s						
GOGA	Godfrey	104.32	38	IAMs_20	IAMs_20	06 03 25.9	
	comp=Z,584nm,18.0s						
W57A	Gilead	104.78	35	IAMs_20	IAMs_20	06 09 58.2	
	comp=Z,753nm,18.0s						
BIRD	Birdtown, Kers	104.94	35	IAMs_20	IAMs_20	06 05 50.3	
	comp=Z,769nm,19.0s						
253A	Americus	104.97	40	IAMs_20	IAMs_20	06 07 19.4	
	comp=Z,696nm,20.0s						
TLIG	Tlapa	105.21	60	IAMs_20	IAMs_20	05 58 46.2	
	comp=Z,816nm,20.0s						
Z56A	Williston	105.51	37	IAMs_20	IAMs_20	06 07 55.8	
	comp=Z,617nm,18.0s						
V60A	Jim Taylor Roa	105.62	33	IAMs_20	IAMs_20	06 12 06.9	
	comp=Z,801nm,19.0s						
656A	Willston	107.90	40	IAMs_20	IAMs_20	06 00 30.0	
	comp=Z,901nm,21.0s						
MBAR	Mbarara	109.11	280	IAMs_20	IAMs_20	06 12 40.8	
	comp=Z,704nm,19.0s						
DWPF	Disney Wildern	109.48	40	IAMs_20	IAMs_20	06 10 08.9	
	comp=Z,770nm,19.0s						
TEIG	Tepich	110.91	51	IAMs_20	IAMs_20	06 11 55.2	
	comp=Z,610nm,19.0s						
061Z	Ochoppi	111.50	42	IAMs_20	IAMs_20	06 15 11.9	
	comp=Z,724nm,20.0s						
TAM	Tamanrasset	113.84	316	IAMs_20	IAMs_20	06 18 33.7	
	comp=Z,718nm,20.0s						
TGUH	Tegucigalpa,Un	115.79	55	IAMs_20	IAMs_20	06 11 31.2	
	comp=Z,729nm,19.0s						
QSPA	South Pole Qui	118.71	180		PKPdf	05 19 28.9	-0.8
SYO	Syowa Base	121.25	204	ePKPdf	PKPdf	05 19 33.2	-1.2
SYO	Syowa Base	121.25	204	epPKPdf	pPKPdf	05 19 41.0	+1.7
SYO	Syowa Base	121.25	204	eX	PKiKP	05 19 45.0	+11
TOA0	Torodi Ar. Sit	123.45	312		PKPdf	05 19 39.9	-0.4
TORD	Torodi Ar. Bea	123.45	312	PKP	PKPdf	05 19 39.5	-0.8
	comp=Z,7.9nm,0.9s,baz=19,slow=1.5,SNR=42						
TORD				PP	PP	05 21 20.4	-0.4
	comp=Z,11nm,1.2s,baz=33,slow=4.1,SNR=9.0						
TORD	Torodi Ar. Bea	123.45	312		PKPdf	05 19 39.0	-1.3
LBTB	Lobatse	124.06	258	PKiKP	PKiKP	05 19 41.8	+0.3
LBTB	Lobatse	124.06	258		PKiKP	05 19 41.8	+0.3
BOSA	Boshof	125.45	254	PKP	PKPdf	05 19 44.2	+0.3
	comp=Z,1.9nm,0.7s,baz=33,slow=3.4,SNR=3.8						
TSUM	Tsumeb	129.01	266		PKPdf	05 19 50.6	-0.3
NVL	N'lazarevskaya	130.00	199	ePKIKP	PKiKP	05 19 53.8	+1.9
NVL				MLR	MLR		
	comp=Z,610nm,20.0s						
SDV	Santo Domingo	130.76	45		PKPdf	05 19 54.8	+0.3
OTAV	Otavalo	131.43	61	IAMs_20	IAMs_20	06 08 12.2	
	comp=Z,586nm,22.0s						
DBIC	Dimbokro	132.54	313	PKP	PKPdf	05 19 57.9	+0.2
	comp=Z,8.3nm,0.8s,baz=31,slow=1.6,SNR=6.2						
TIC	Toumodi	132.66	313	ePKIKP	PKiKP	05 19 58.8	-0.3
	comp=Z,6.0nm,0.3s						
KIC	Kosan Boka	132.70	313	ePKIKP	PKiKP	05 19 59.1	0.0
	comp=Z,6.7nm,0.7s						
LIC	Lamto	132.99	313	ePKIKP	PKiKP	05 19 59.5	-0.2
SNAA	Sanae	133.18	194	PKPdf	PKPdf	05 19 57.3	+0.1
SNAA	Sanae	133.18	194	PKIKP	PKPdf	05 19 57.2	0.0
SNAA	Sanae	133.18	194		PKPdf	05 19 57.2	0.0
VNA3	Neumayer Olymp	134.90	192	PKPdf	PKiKP	05 20 04.1	+2.2
VNA1	Neumayer--Stat	135.10	193	PKPdf	PKPdf	05 20 01.4	+0.7
GO10	Punta Arenas	145.60	144		PKPab	05 20 22.6	+1.8
USHA	Ushuaia	145.94	148	PKPbc	PKPab	05 20 22.7	+0.8
	comp=Z,27nm,0.9s,baz=215,slow=4.4,SNR=9.9						
SAML	Samuel	148.87	55	PKP2	PKPbc	05 20 30.0	-0.8
SAML	Samuel	148.87	55		PKPbc	05 20 30.0	-0.8
SAML	Samuel	148.87	55	IAMs_20	IAMs_20	06 31 32.8	
	comp=Z,423nm,19.0s						
LPAZ	La Paz	149.29	72	PKP	PKPdf	05 20 29.0	+0.8
	comp=Z,18nm,0.9s,baz=78,slow=3.1,SNR=7.4						
LPAZ				PKPbc	PKiKP	05 20 33.3	-0.4
	comp=Z,29nm,1.0s,baz=358,slow=3.7,SNR=49						
LPAZ	La Paz	149.29	72		PKPdf	05 20 29.2	+1.0
MNMC	Minye Minye	149.34	79		PKiKP	05 20 33.1	-0.2
PB11	IPOC Station P	149.54	80		PKPbc	05 20 32.9	+0.4
GO01	Chusmiza	149.91	79		PKPbc	05 20 33.7	-0.1
PB04	IPOC Station P	150.06	85		PKPbc	05 20 33.4	-0.3
GO06	Curarrehue	150.28	120		PKPdf	05 20 26.2	-2.3
GO06				PKPbc	sPKPdf	05 20 34.1	-1.1
GO06				IAMs_20	IAMs_20	06 14 11.1	
	comp=Z,498nm,20.0s						
PLCA	Paso Flores	150.73	122	PKIKP	PKPbc	05 20 35.1	+0.4
PLCA	Paso Flores	150.73	122	PKPbc	PKiKP	05 20 35.5	+0.2
	comp=Z,9.1nm,1.0s,baz=246,slow=3.5,SNR=19						
PLCA	Paso Flores	150.73	122		PKPbc	05 20 35.1	+0.4
ROC1	El Roble	151.20	106		PKPbc	05 20 34.1	-2.2
GO04	Tololo Observa	151.22	101		PKPbc	05 20 35.6	-0.7
LVC	Limon Verde	151.23	85	PKIKP	PKPbc	05 20 35.2	-1.5
LVC	Limon Verde	151.23	85	PKPbc	PKiKP	05 20 37.9	+0.7
	comp=Z,12nm,1.0s,baz=268,slow=4.7,SNR=5.6						
LVC	Limon Verde	151.23	85		PKPbc	05 20 35.2	-1.5
GO03	Copiap	151.34	95		PKPbc	05 20 35.6	-0.8
GO02	Mina Guanaco	151.38	90		PKPbc	05 20 37.1	+0.2
PEL	Peldehue	151.48	107	PKIKP	PKPbc	05 20 36.0	-0.6
PEL	Peldehue	151.48	107		PKPbc	05 20 36.0	-0.6
SIV	San Ignacio	154.89	64	PKP	PKPdf	05 20 36.9	+1.1
	comp=Z,1.4nm,0.9s,baz=276,slow=3.7,SNR=6.1						
SIV				PKPbc	PKPbc	05 20 44.6	+0.1
	comp=Z,2.4nm,1.0s,baz=275,slow=5.2,SNR=7.1						
CPUP	Villa Florida	162.39	86	PKIKP	PKPdf	05 20 44.6	+0.2
CPUP	Villa Florida	162.39	86	PKP	PKPdf	05 20 45.1	+0.6
	comp=Z,2.1nm,1.0s,baz=116,slow=2.1,SNR=2.9						
CPUP	Villa Florida	162.39	86		PKPdf	05 20 44.6	+0.2

JMA 18 05:00:52.7,36.69N×140.62E,h5km,M0.9,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.09	207	P	Pg	05 00 54.7	+0.1
JHO				S	Sg	05 00 56.2	+0.3
ONAJ	Iwakimizuishiy	0.43	19	P	Pg	05 01 01.3	+0.2
ONAJ				eS	Sg	05 01 07.1	+0.3
JFK	Kawauchi	0.70	17	eS	Sg	05 01 15.7	+0.3
JFT	Otama	0.86	345	S	Sg	05 01 20.7	+0.4

*IDC **18** 05:08:16.7±1.1,28.94N×142.34E,h0km,mb4.0/6, mb1 4.2/7,mb1mx3.8/34,mbtmp4.0/7,ML3.3/1,Error ellipse: s-maj=43.4km s-min=20.3km az=83.0*
*NEIC **18** 05:08:19.6±1.2,28.92N±0.07×142.4E±0.2,h20km±6km, mb4.6/10,Error ellipse: s-maj=26.1km s-min=9.7km az=84.0*

ISC 18 05:08:20.8±0.8,28.92N±0.09×142.4E±0.2,h27km,n22, σ05.69/22,mb4.3/10,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.82	186	Pn	Pn	05 08 50.2	-0.2
	8.7nm,0.3s,baz=18,slow=21,SNR=4.5						
MJAR	Matsushiro Arr	8.38	336	Pn	Pn	05 10 20.4	-0.1
	0.3nm,0.3s,baz=78,slow=18,SNR=6.1						
MJAR	Matsushiro Arr	8.38	336		Pn	05 10 19.7	-0.8
MAJO	Matsushiro	8.38	336	Pn	Pn	05 10 20.0	-0.5
MJB9	Matsu-Tunnel	8.39	336	Pn	Pn	05 10 20.0	-0.5
YAK	Yakutsk	34.16	349	P	P	05 15 04.9	+1.6
ATKA	Atka Island	39.54	42	P	P	05 15 48.3	-0.9
ZALV	Zalesovo Beam	48.25	318	P	P	05 16 58.5	-0.7
	2.2nm,0.7s,baz=90,slow=7.4,SNR=5.2						
ZALV	Zalesovo Beam	48.25	318	P	P	05 16 58.8	-0.4
WRA	Warramunga Arr	49.19	190	P	P	05 17 06.7	0.0
	1.5nm,0.8s,baz=7.4,slow=7.5,SNR=7.9						
WRA	Warramunga Arr	49.19	190	P	P	05 17 07.1	+0.4
MK31	Makanchi Array	49.48	308	P	P	05 17 08.1	-0.6
MKAR	Makanchi Array	49.48	308	P	P	05 17 08.1	-0.7
	1.4nm,0.7s,baz=91,slow=9.8,SNR=4.2						
KURK	Kurchatov	51.86	314	P	P	05 17 26.8	+0.2
KURK				IAmb	IAmb	05 17 27.0	
	comp=Z,9.6nm,1.0s						
KK31	Karatay Array	58.19	305	P	P	05 18 11.8	-0.6
KKAR	Karatay Array	58.19	305	P	P	05 18 11.8	-0.6
KKAR				IAmb	IAmb	05 18 12.8	
	comp=Z,3.1nm,0.8s						
ABKAR	Akbulak array	63.97	314	P	P	05 18 51.7	+0.1
ABKAR				IAmb	IAmb	05 19 03.4	
	comp=Z,3.3nm,0.9s						
YKA	Yellowknife Ar	70.45	29	P	P	05 19 32.7	+0.3
	comp=Z,0.3nm,0.6s,baz=295,slow=6.2,SNR=3.2						
KBZ	Khabaz	76.91	313	P	P	05 20 11.5	+0.8
	comp=Z,2.6nm,0.9s,baz=68,slow=8.8,SNR=4.5						
RAYN	Ar Rayn	84.59	294	P	P	05 20 52.8	+0.6
RAYN				IAmb	IAmb	05 20 53.6	
	comp=Z,7.1nm,0.8s						
BR131	Keskin Array S	84.91	313	P	P	05 20 54.2	+0.6
BR131				IAmb	IAmb	05 20 55.5	
	comp=Z,3.1nm,1.1s						
BRTR	Keskin Array B	84.91	313	P	P	05 20 52.8	-0.8
	comp=Z,1.7nm,0.9s,baz=85,slow=4.2,SNR=5.8						

MAN 18 05:12:45.8,17.33N×119.79E,h21km,mb4.6,ML3.5, MS3.4,1C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	Brgy, Tapao	0.87	47	ieP	Pb	05 13 01.7	-0.5
SIPP				i S	Sn	05 13 19.4	+4.5
SMPP	San Manuel, Pa	1.45	144	eP	Pn	05 13 09.3	-1.5
SMPP				eS	Sn	05 13 27.1	-2.0
SCZP	Santa Cruz	1.55	176	eP	Pn	05 13 11.6	-0.5
SCZP				eS	Sn	05 13 29.6	-1.9
PALP	Palanan	2.53	96	eP	Pn	05 13 27.3	+1.7
PALP				eS	Sn	05 13 52.2	-3.7

*TAP **18** 05:26:45.2,24.55N×122.28E,h18km,ML3.5,B*
*JMA **18** 05:26:45.6,24.48N×122.30E,h28km±5km,M3.4*

ISC 18 05:26:45.1±0.9,24.53N±0.02×122.31E±0.02,h16km±7km, n84,σ0.51/140,6D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.16	276	i/P	Pg	05 26 49.5	+0.3
	baz=271						
EOS1				S	Sb	05 26 52.9	+0.1
	baz=271						
TWC	Suao	0.42	281	i/P	Pg	05 26 53.1	-0.5
	baz=279						
TWC				eS	Sg	05 26 59.5	+0.1
	baz=279						
EGS		0.46	313	eP	Pg	05 26 54.3	0.0
	baz=313						
EGS				eS	Sg	05 27 00.5	-0.1
	baz=313						
NANB	Nanao	0.52	259	i/P	Pg	05 26 55.1	-0.2
	baz=265						
NANB				eS	Sg	05 27 02.4	+0.1
	baz=265						
ENA	Nanau	0.52	259	i/P	Pg	05 26 55.3	-0.2
	baz=265						
ENA				eS	Sg	05 27 02.3	-0.3
	baz=265						
NTC	Toucheng	0.54	307	i/P	Pg	05 26 55.6	-0.2
	baz=306						
NTC				eS	Sb	05 27 04.1	+0.5
	baz=306						
TWB1	Santiao Chiao	0.56	329	P	Pg	05 26 55.9	-0.2
	baz=338						
TWB1				eS	Sg	05 27 03.1	-0.5
	baz=338						
ILA	Ilan	0.56	295	eP	Pg	05 26 56.2	0.0
	baz=286						
ILA				eS	Sb	05 27 04.1	-0.1
	baz=286						
JYNG	Yonagunijimaku	0.59	98	P	Pb	05 26 57.0	0.0
JYNG				S	Sn	05 27 06.6	-1.4
TWE	Neicheng	0.61	288	P	Pg	05 26 56.8	-0.4
	baz=282						
TWE				eS	Sg	05 27 04.7	-0.6
	baz=282						
TIPB	Shuangxi	0.62	315	i P	Pg	05 26 57.2	-0.1
	baz=306						
TIPB				S	Sg	05 27 04.6	-0.9
	baz=306						
YOJ	Yonaguni jima	0.65	96	P	Pb	05 26 58.0	0.0
	baz=96						
YOJ				eS	Sb	05 27 07.2	+0.5
	baz=96						
YOJ	Yonaguni jima	0.65	96	P	Pb	05 26 58.0	0.0
YOJ				S	Sb	05 27 08.0	+1.3
SLBB	Yuanshan	0.65	290	eP	Pg	05 26 56.8	-1.0
	baz=290						
ENTT	Nioudou	0.68	279	P	Pg	05 26 58.3	-0.2
	baz=271						
ENTT				eS	Sg	05 27 07.8	+0.2
	baz=271						
NWF	Wu-fen Shan	0.72	319	P	Pb	05 26 60.0	+0.7
	baz=319						
NWF				S	Sb	05 27 09.8	+0.9
	baz=319						
WFSB	Wu-fen Shan	0.72	319	P	Pb	05 26 59.9	+0.7
	baz=319						
WFSB				S	Sb	05 27 09.5	+0.7
	baz=319						
NDT	Datong Townshi	0.72	276	i/P	Pg	05 26 58.9	-0.3
	baz=275						
NDT				eS	Sg	05 27 08.5	-0.3
	baz=275						
NACB	Ninganchiao	0.74	241	i P	Pg	05 26 59.2	-0.3
	baz=246						
NACB				eS	Sg	05 27 09.3	0.0
	baz=246						
NWLT	Wulai	0.77	289	P	Pb	05 26 59.9	-0.2
	baz=280						
NWLT				eS	Sg	05 27 10.2	-0.1
	baz=280						
TWD	Chiawan	0.79	235	P	Pg	05 27 00.5	+0.1
	baz=239						
TWD				eS	Sn	05 27 12.2	-0.8
	baz=239						
TWA	Mucha	0.79	304	eP	Pg	05 27 01.0	+0.4
	baz=295						
TWA				eS	Sb	05 27 11.2	+0.2
	baz=295						
ETLH	Xiulin Townshi	0.82	247	P	Pb	05 27 00.5	-0.4
	baz=253						
ETLH				eS	Sn	05 27 13.1	-0.7
	baz=253						
NHDH	Xindian Distri	0.83	301	eP	Pg	05 27 01.5	+0.3
	baz=301						
NHDH				eS	Sb	05 27 11.8	-0.2
	baz=301						
NNSH	Datong	0.85	263	P	Pb	05 27 01.1	-0.3
	baz=262						
NNSH				eS	Sb	05 27 12.6	0.0
	baz=262						
NNS	Nan Shan	0.85	264	eP	Pb	05 27 01.1	-0.5
	baz=263						
NNS				eS	Sb	05 27 12.2	-0.6
	baz=263						
YHNB	Yeheng	0.86	279	P	Pb	05 27 01.5	-0.1
	baz=279						
YHNB				eS	Sb	05 27 12.7	-0.2
	baz=279						
TATO	Taipei	0.86	301	eP	Pb	05 27 01.8	+0.1
	baz=300						
TATO				eS	Sg	05 27 13.5	+0.2
	baz=300						
NSK	Sanguang	0.87	280	P	Pb	05 27 01.8	-0.1
	baz=279						
NSK				eS	Sb	05 27 13.2	-0.2
	baz=279						
TAP	Taipei	0.89	305	eP	Pg	05 27 02.6	+0.3
	baz=296						
TAP				eS	Sg	05 27 14.5	+0.6
	baz=296						
ENLB	Shoufeng	0.90	226	eP	Pn	05 27 03.3	+0.3
	baz=207						
YM01	YM01	0.91	313	P	Pn	05 27 03.2	0.0
	baz=312						
YM01				eS	Sb	05 27 14.1	-0.1
	baz=312						
YM11	YM11	0.92	314	eP	Pg	05 27 03.0	+0.1
	baz=313						
YM11				eS	Sg	05 27 15.3	+0.4
	baz=313						
YM10	YM10	0.92	313	P	Pn	05 27 03.5	+0.1
	baz=312						
YM10				eS	Sb	05 27 15.0	+0.4
	baz=312						
YM05	YM05	0.92	313	eP	Pn	05 27 03.5	+0.1
	baz=313						
YM08	YM08	0.92	315	eP	Pb	05 27 02.8	+0.1
	baz=315						
YM08				eS	Sb	05 27 14.3	-0.4
	baz=315						
YM04	YM04	0.93	312	P	Pb	05 27 03.0	+0.1
	baz=311						
YM04				eS	Sb	05 27 15.0	-0.1
	baz=311						
ANP	Anpu	0.97	313	eP	Pb	05 27 03.5	0.0
	baz=313						
TWY	Chenhua	0.98	319	eP	Pb	05 27 03.4	-0.3
	baz=320						
TWS1	Kuangyinshan	0.99	305	P	Pn	05 27 04.5	+0.3
	baz=305						
TWS1				eS	Sg	05 27 17.3	+0.2
	baz=305						
WLTB	Daxi	1.01	289	eP	Pg	05 27 05.7	+1.1
	baz=280						
WLTB				eS	Sg	05 27 18.1	+0.2
	baz=280						
WHF	Hehuan Shan	1.02	248	P	Pb	05 27 04.6	-0.1
	baz=254						
WHF				eS	Sb	05 27 18.3	+0.3
	baz=254						
ESL	Shilin	1.07	228	eP	Pn	05 27 05.5	+0.2
	baz=210						
TDCB	Techi	1.08	255	eP	Pn	05 27 05.8	+0.1
	baz=254						
TDCB				eS	Sg	05 27 20.1	-0.2
	baz=254						
NCU	National Centr	1.11	293	P	Pg	05 27 06.8	+0.4
	baz=307						
NCU				eS	Sg	05 27 21.7	+0.7
	baz=307						
NCUH	Zhongli	1.11	293	eP	Pg	05 27 07.1	+0.6
	baz=307						
NCUH				eS	Sg	05 27 21.8	+0.8
	baz=307						
PCYT	Pengchaiyu	1.11	349	eP	Pb	05 27 04.9	-1.0
	baz=357						
CHGB	Renai	1.13	246	P	Pn	05 27 06.8	+0.3
	baz=250						
CHGB				eS	Sg	05 27 22.1	+0.2
	baz=250						
EGFH	Guangfu	1.18	223	eP	Pn	05 27 06.9	0.0
	baz=207						
LIOB	Emei	1.18	276	P	Pg	05 27 08.6	+0.8
	baz=267						
OWD	Renai	1.18	241	eP	Pb	05 27 07.3	+0.1
	baz=224						
NSTT	Nanjuang	1.19	275	eP	Pg	05 27 08.4	+0.3
	baz=287						
NSTT				eS	Sb	05 27 22.4	0.0
	baz=287						
WHP	Taichung City	1.27	259	eP	Pg	05 27 09.5	0.0
	baz=265						
WHP				eS	Sn	05 27 25.2	+0.4
	baz=265						
HGSD	Ruisui	1.31	218	eP	Pb	05 27 09.7	+0.4
	baz=204						
IRIF	Iriomote-Funau	1.31	98	P	Pn	05 27 08.3	-0.4
IRIF				S	Sn	05 27 25.4	-0.5
VWDT	VWDT	1.31	234	eP	Pb	05 27 09.8	+0.4
	baz=216						
VWDT				eS	Sn	05 27 25.4	-0.6
	baz=216						
NMLH	Miaoli	1.38	271	eP	Pg	05 27 11.9	+0.3
	baz=281						
NMLH				eS	Sg	05 27 30.1	+0.4
	baz=281						
TWQ1	Liyutan	1.41	263	eP	Pg	05 27 12.7	+0.5
	baz=273						
TWQ1				eS	Sg	05 27 30.7	+0.2
	baz=273						
NSY	Sanyi	1.41	266	eP	Pg	05 27 12.8	+0.5
	baz=277						
SMLT	Sun Moon Lake	1.44	244	eP	Pb	05 27 12.0	+0.4
	baz=225						
SMLT				eS	Sg	05 27 32.1	+0.6
	baz=225						
SSLB	Suanglung	1.44	239	eP	Pb	05 27 12.2	+0.7
	baz=222						
SSLB				eS	Sb	05 27 30.2	+0.6
	baz=222						
HATJ	Hateruma jima	1.45	109	P	Pn	05 27 11.0	+0.4
YULB	Yu-li	1.46	219	eP	Pn	05 27 10.0	-0.8
	baz=217						
YULB				eS	Sn	05 27 28.2	-1.4
	baz=217						
TYC	Yuchr	1.46	245	eP	Pb	05 27 11.8	-0.1
	baz=232						
TWF1	Yuli	1.49	218	eP	Pn	05 27 10.8	-0.4
	baz=205						
WDJ	Dajia District	1.53	263	eP	Pg	05 27 15.4	+0.9
	baz=274						
WHYT	Xinyi Township	1.56	238	eP	Pb	05 27 13.7	0.0
	baz=223						
JKRS	Kuro-shima	1.58	100	P	Pn	05 27 12.4	0.0
JKRS				S	Sn	05 27 32.4	-0.1
YUS	Yu-Shan	1.61	230	eP	Pb	05 27 14.4	-0.4
	baz=229						
FULB	Fuli	1.62	215	eP	Pn	05 27 12.8	-0.2

SNST	**Tainan City**	**2.11**	**232**	*eP*		**Pb**	**05 27 22.3**	**-0.6**
	baz=231								
SGST	**Jiashian**	**2.14**	**228**	*eP*		**Pb**	**05 27 23.0**	**-0.5**
	baz=212								
SLGT	**Liugui**	**2.16**	**225**	*eP*		**Pb**	**05 27 23.9**	**+0.1**
	baz=224								
JTJ	**Tarama**	**2.19**	**87**	P		**Pn**	**05 27 21.4**	**+0.7**
JTJ				S		**Sn**	**05 27 47.8**	**+0.4**
MASBT	**Mashibuluo**	**2.45**	**219**	*eP*		**Pn**	**05 27 26.4**	**+2.0**
	baz=208								

IDC ***18*** *05:31:55.7±1.0,35°.65N×140°.86E,h0km,mb3.6/7, mb1 3.9/8,mb1mx3.6/32,mbtmp3.6/8,ML2.8/1,Error ellipse: s-maj=29.3km s-min=23.9km az=6.0*
JMA ***18*** *05:31:57.2±0.1,35°.82N×140°.91E,h13km±1km,M4.1*
JMA Felt II J1.
NEIC ***18*** *05:31:59.8±1.2,36°.1N±0°.1×140°.8E±0°.1,h16km±6km, mb4.2/1,Error ellipse: s-maj=22.2km s-min=10.9km az=148.0*

ISC 18 05:31:57.3±1.0,35°.83N±0°.03×140°.86E±0°.06,h11km±6km, n37,σ0°97/37,mb3.6/8,5C-2D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.13**	**181**	⇓P	**Pg**	**05 32 00.5**	**+0.1**
CHOJ				S	**Sg**	**05 32 02.6**	**+0.1**
JIHU	**Itakohorinouch**	**0.30**	**296**	⇑P	**Pb**	**05 32 04.9**	**+0.1**
JIHU				*eS*	**Sb**	**05 32 10.5**	**+0.7**
JSMT	**Sammumatsuo**	**0.39**	**241**	⇑P	**Pb**	**05 32 06.0**	**-0.2**
JHYU	**Hitachinakayam**	**0.56**	**336**	S	**Sb**	**05 32 16.9**	**-0.2**
JYT	**Yasato**	**0.67**	**306**	⇑P	**Pb**	**05 32 10.6**	**-0.5**
JYT				S	**Sb**	**05 32 19.8**	**-0.6**
JCN	**Nagara**	**0.68**	**233**	⇑P	**Pn**	**05 32 11.7**	**-1.2**
JHO	**Hitachi**	**0.81**	**343**	⇓P	**Pg**	**05 32 12.7**	**-0.3**
JHO				S	**Sg**	**05 32 23.9**	**+0.2**
JKUC	**kamogawauchiur**	**0.86**	**219**	P	**Pb**	**05 32 14.2**	**-0.1**
JKUC				S	**Sb**	**05 32 25.9**	**+0.1**
TOK	**Tokyo**	**0.91**	**261**	P	**Pn**	**05 32 15.2**	**-0.8**
BSO4	**Boso 4**	**0.94**	**207**	P	**Pn**	**05 32 15.7**	**-0.7**
BSO3	**Boso 3**	**1.07**	**196**	⇑P	**Pb**	**05 32 17.1**	**-0.5**
MJAR	**Matsushiro Arr**	**2.26**	**289**	Pn	**Pn**	**05 32 33.9**	**-0.8**
	2.6nm,0.3s,baz=95,slow=10.0,SNR=72						
MJAR	**Matsushiro Arr**	**2.26**	**289**		**Pn**	**05 32 33.7**	**-1.0**
MAJO	**Matsushiro**	**2.26**	**289**		**Pn**	**05 32 34.5**	**-0.2**
MAT	**Matsushiro**	**2.26**	**289**	P	**Pn**	**05 32 34.3**	**-0.4**
MAT				*eS*	**Sn**	**05 33 01.9**	**-0.8**
MJB9	**Matsu-Tunnel**	**2.27**	**289**		**Pn**	**05 32 34.4**	**-0.4**
INU	**Inuyama**	**3.17**	**262**		**Pn**	**05 32 48.6**	**+1.5**
ERM	**Erimo**	**6.43**	**15**	Pn	**Pn**	**05 33 31.0**	**-1.0**
H11N2	**WAKE ISLAND Hy**	**27.95**	**118**	T	T	06 06 44.6	
	baz=311,slow=75,SNR=75						
H11N1	**WAKE ISLAND Hy**	**27.95**	**118**	T	T	06 06 45.3	
	baz=311,slow=75,SNR=61						
H11N3	**WAKE ISLAND Hy**	**27.96**	**118**	T	T	06 06 46.1	
	baz=311,slow=75,SNR=74						
H11S3	**WAKE ISLAND Hy**	**28.61**	**120**	T	T	06 07 33.5	
	baz=312,slow=75,SNR=50						
H11S1	**WAKE ISLAND Hy**	**28.61**	**120**	T	T	06 07 33.2	
	baz=312,slow=75,SNR=57						
H11S2	**WAKE ISLAND Hy**	**28.62**	**120**	T	T	06 07 35.9	
	baz=312,slow=75,SNR=35						
ZALV	**Zalesovo Beam**	**42.41**	**313**	P	**P**	**05 39 53.7**	**+2.0**
	0.5nm,0.4s,baz=97,slow=6.1,SNR=4.4						
ZALV	**Zalesovo Beam**	**42.41**	**313**	P	**P**	**05 39 54.1**	**+2.5**
MKAR	**Makanchi Array**	**44.39**	**303**	P	**P**	**05 40 08.4**	**+0.5**
	0.5nm,0.6s,baz=91,slow=8.9,SNR=4.4						
KURK	**Kurchatov**	**46.33**	**309**	P	**P**	**05 40 22.4**	**-0.7**
KURK				IAmb	IAmb	05 40 30.3	
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	**50.75**	**32**	P	**P**	**05 40 57.6**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=262,slow=5.9,SNR=6.1						
WRA	**Warramunga Arr**	**55.81**	**187**	P	**P**	**05 41 33.3**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=1.0,slow=7.4,SNR=7.3						
NVAR	**Mina Array Bea**	**76.07**	**53**	P	**P**	**05 43 46.7**	**+1.4**
	comp=Z,0.4nm,0.8s,baz=305,slow=5.2,SNR=3.7						
PDAR	**Pinedale Array**	**76.83**	**45**	P	**P**	**05 44 01.1**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=226,slow=1.6,SNR=4.2						
PDAR	**Pinedale Array**	**78.83**	**45**	P	**P**	**05 44 01.0**	**+0.3**
TXAR	**Lajitas Array**	**91.21**	**52**	P	**P**	**05 45 03.8**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=331,slow=3.5,SNR=3.9						
TXAR	**Lajitas Array**	**91.21**	**52**	P	**P**	**05 45 04.0**	**+1.0**
MNMC	**Minye Minye**	**148.44**	**66**	PKPbc	**PKiKP**	**05 51 46.5**	**0.0**
RCBR	**Riachuelo**	**149.99**	**354**	PKPbc	**PKPab**	**05 51 52.0**	**-2.1**

TRN ***18*** *05:36:27.7, 11°.87N×61°.98W,h119km,MD3.4*
FUNV ***18*** *05:36:30.1, 11°.39N×61°.88W,h5km,MW2.9*
ISC 18 05:36:25.4±1.4,11°.77N±0°.04×61°.88W±0°.05,h134km±9km, n25,σ2°29/48,2D,Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRGR	**Grenville**	**0.42**	**31**	*eP*	**Pn**	**05 36 44.4**	**-0.2**
GRGR				*eS*	**Sn**	**05 36 57.6**	**-1.4**
GRGR	**Grenville**	**0.42**	**31**	⇓*eP*	**Pn**	**05 36 44.4**	**-0.2**
GRGR				*eS*	**Sn**	**05 36 56.7**	**-2.3**
GRHS	**Sauteurs**	**0.51**	**27**	*eP*	**Pn**	**05 36 46.1**	**+1.2**
GRHS				*eS*	**Sn**	**05 36 58.8**	**-1.0**
GRSS	**Sisters**	**0.59**	**26**	*eP*	**Pn**	**05 36 47.1**	**+1.7**
GRSS				*eS*	**Sn**	**05 36 58.9**	**-1.7**
TRN	**Trinidad (W)**	**1.21**	**157**	*eP*	**Pn**	**05 36 53.6**	**+2.9**
TRN				*eS*	**Sn**	**05 37 11.3**	**+1.4**
TOSP	**Speyside**	**1.40**	**109**	*eP*	**Pn**	**05 36 54.5**	**+1.8**
TOSP				*eS*	**Sn**	**05 37 15.1**	**+1.7**
TOSP	**Speyside**	**1.40**	**109**	*eP*	**Pn**	**05 36 54.1**	**+1.4**
TOSP				*eS*	**Sn**	**05 37 12.8**	**-0.6**
TBH	**Brigand Hill**	**1.50**	**148**	*eP*	**Pn**	**05 36 57.7**	**+3.8**
TBH				*eS*	**Sn**	**05 37 19.0**	**+3.4**
SVB	**Belmont**	**1.61**	**22**	*eP*	**Pn**	**05 36 55.2**	**0.0**
SVB				*eS*	**Sn**	**05 37 16.2**	**-1.7**
SVCV	**St. Vincent, C**	**1.66**	**26**	*eP*	**Pn**	**05 36 55.6**	**0.0**
SVCV				*eS*	**Sn**	**05 37 17.4**	**-1.3**
SVV	**Soufriere Volc**	**1.67**	**23**	*eP*	**Pn**	**05 36 57.0**	**+1.2**
CRUV	**Carupano**	**1.72**	**231**	*eP*	**Pn**	**05 36 57.0**	**+0.7**
CRUV				*eS*	**Sn**	**05 37 18.4**	**-1.4**
GUNV	**Guanoco**	**1.91**	**213**	*eP*	**Pn**	**05 36 58.9**	**+0.4**
GUNV				*eS*	**Sn**	**05 37 20.6**	**-3.3**
SLB	**Belfond**	**2.20**	**22**	*eP*	**Pn**	**05 37 02.9**	**+0.7**
SLB				*eS*	**Sn**	**05 37 30.7**	**+0.3**
SLBI	**Saint Lucia, B**	**2.41**	**21**	*eP*	**Pn**	**05 37 00.9**	**+0.4**
SLBI				*eS*	**Sn**	**05 37 33.8**	**-1.1**
ORIV	**Oritupano**	**3.07**	**209**	*eP*	**Pn**	**05 37 15.9**	**+2.7**
ORIV				*eS*	**Sn**	**05 37 50.0**	**-0.1**
ORIV	**Oritupano**	**3.07**	**209**	*eP*	**Pn**	**05 37 14.1**	**+0.9**
ORIV				*eS*	**Sn**	**05 37 47.6**	**-2.4**
PCRV	**Puerto La Cruz**	**3.13**	**240**	*eP*	**Pn**	**05 37 17.0**	**+3.0**
PCRV				*eS*	**Sn**	**05 37 51.3**	**-0.2**
RIOV	**Rio Grande**	**3.68**	**179**	⇓*eP*	**Pn**	**05 37 22.4**	**+1.3**
RIOV				*eS*	**Sn**	**05 38 00.2**	**-4.0**
PRGV	**PARIAGUAN**	**4.04**	**223**	*eP*	**Pn**	**05 37 27.8**	**+1.9**
PRGV				*eS*	**Sn**	**05 38 10.6**	**-2.2**
CUPV	**Cpira**	**4.20**	**246**	*eP*	**Pn**	**05 37 31.2**	**+3.2**
CUPV				*eS*	**Sn**	**05 38 18.8**	**+2.3**
MERV	**Las Mercedes**	**5.01**	**240**	*eS*	**Sn**	**05 38 34.9**	**-1.0**
LUEV	**Luepa**	**5.90**	**176**	*eP*	**Pn**	**05 37 50.5**	**-0.4**
LUEV				*eS*	**Sn**	**05 38 51.4**	**-6.1**
MAPV	**Macapo**	**6.74**	**254**	*eP*	**Pn**	**05 38 05.0**	**+2.9**
MAPV				*eS*	**Sn**	**05 39 18.4**	**+0.7**
PAYV	**Puerto Ayacuch**	**8.51**	**223**	*eP*	**Pn**	**05 38 25.6**	**+2.2**
PAYV				*eS*	**Sn**	**05 39 54.2**	**-6.0**

IDC 18 05:42:27.7±1.3,20°.17S×67°.83E,h0km,mb3.6/6, mb1 3.7/6,mb1mx3.5/45,mbtmp3.6/6,Error ellipse: s-maj=58.0km s-min=23.1km az=31.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H08S1	**Diego Carcia H**	**13.24**	**21**	T	T	05 59 17.8	
	baz=202,slow=76,SNR=60						
H08S2	**Diego Garcia H**	**13.25**	**21**	T	T	05 59 18.3	
	baz=202,slow=76,SNR=46						
H08S3	**Diego Garcia H**	**13.26**	**21**	T	T	05 59 19.3	
	baz=202,slow=76,SNR=68						
H08N3	**Diego Garcia H**	**14.09**	**13**	T	T	06 00 19.8	
	baz=192,slow=76,SNR=23						
H08N1	**Diego Garcia H**	**14.09**	**13**	T	T	06 00 20.3	
	baz=192,slow=76,SNR=24						
H08N2	**Diego Garcia H**	**14.11**	**13**	T	T	06 00 21.5	
	baz=192,slow=76,SNR=24						

ASAR	**Alice Springs**	**60.91**	**106**	P		P	05 52 42.5	-0.4	
	0.5nm,0.8s,baz=259,slow=7.5,SNR=5.3								
WRA	**Warramunga Arr**	**62.06**	**102**	P		P	05 52 51.3	+0.6	
	1.1nm,0.8s,baz=267,slow=6.0,SNR=2.8								
BRTR	**Keskin Array B**	**67.60**	**332**	P		P	05 53 27.8	+1.4	
	0.8nm,0.9s,baz=132,slow=2.1,SNR=3.3								
MKAR	**Makanchi Array**	**67.92**	**11**	P		P	05 53 26.8	-1.3	
	0.3nm,0.7s,baz=201,slow=7.7,SNR=3.0								
TORD	**Torodi Ar. Bea**	**72.98**	**291**	P		P	05 53 58.8	-0.8	
	0.4nm,0.8s,baz=92,slow=5.7,SNR=2.6								
AKASG	**Malin Array Be**	**78.33**	**336**	P		P	05 54 30.2	+0.6	
	0.3nm,0.4s,baz=148,slow=4.2,SNR=3.1								

JMA ***18*** *05:49:29.9±0.1,25°.33N×126°.02E,h76km±2km,M3.3*
IDC ***18*** *05:49:33.0±15.0,25°.21N×125°.91E,h75km±145km, mb3.3/7,mb1 3.4/7,mb1mx3.2/54,mbtmp3.6/7,Error ellipse: s-maj=44.0km s-min=25.2km az=72.0*

ISC 18 05:49:31.2±1.0,25°.32N±0°.10×126°.03E±0°.08,h58km±10km, n25,σ0°70/34,mb3.4/7,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.79**	**226**	P	**Pn**	**05 49 46.3**	**-0.2**
JOGS				*eS*	**Sn**	**05 49 58.5**	**+0.7**
JIKM	**Ikemajima**	**0.81**	**241**	P	**Pn**	**05 49 46.8**	**0.0**
JIKM				S	**Sn**	**05 49 58.7**	**+0.5**
JMJ2	**Miyako jima3**	**0.86**	**228**	P	**Pn**	**05 49 47.3**	**-0.1**
JMJ2				S	**Sn**	**05 49 59.5**	**+0.3**
JIRB	**Irabujima**	**0.92**	**238**	P	**Pn**	**05 49 47.8**	**-0.3**
JIRB				*eS*	**Sn**	**05 50 00.7**	**+0.1**
JKE	**Kume jima 2**	**1.21**	**34**	P	**Pn**	**05 49 51.6**	**-0.4**
JKE				*eS*	**Sn**	**05 50 07.4**	**-0.1**
JTJ	**Tarama**	**1.38**	**241**	P	**Pn**	**05 49 53.9**	**-0.4**
JTJ				*eS*	**Sn**	**05 50 11.0**	**-0.6**
JAGN	**Aguni-jima**	**1.67**	**40**	P	**Pn**	**05 49 57.9**	**-0.3**
JAGN				*eS*	**Sn**	**05 50 18.1**	**-0.5**
JISG	**Ishigakijimahi**	**1.72**	**245**	P	**Pn**	**05 49 58.1**	**-0.8**
JISG				S	**Sn**	**05 50 19.1**	**-0.8**
JJT3	**Tamagusuku3**	**1.78**	**62**	P	**Pn**	**05 49 59.3**	**-0.4**
JIJ	**Ishigaki jima**	**1.96**	**242**	P	**Pn**	**05 50 01.0**	**-1.2**
JIJ				*eS*	**Sn**	**05 50 25.0**	**-0.7**
JKRS	**Kuro-shima**	**2.13**	**240**	P	**Pn**	**05 50 03.6**	**-0.8**
JNTH	**Nagotoyohara**	**2.15**	**56**	P	**Pn**	**05 50 04.4**	**-0.4**
IRIF	**Iriomote-Funau**	**2.31**	**245**	P	**Pn**	**05 50 06.2**	**-0.7**
HATJ	**Hateruma jima**	**2.38**	**239**	P	**Pn**	**05 50 07.6**	**-0.3**
JIH	**Iheya**	**2.44**	**45**	P	**Pn**	**05 50 08.4**	**-0.3**
JOW	**Kunigami**	**2.52**	**53**	P	**Pn**	**05 50 09.3**	**-0.5**
JYRO	**Yoronjima**	**2.76**	**51**	P	**Pn**	**05 50 12.1**	**-0.9**
JOKE	**Okinoerabujima**	**3.06**	**48**	P	**Pn**	**05 50 16.2**	**-0.9**
SONM	**Songino Array**	**27.31**	**330**	P	**P**	**05 55 12.2**	**+1.7**
	0.2nm,0.3s,baz=151,slow=11,SNR=3.8						
MKAR	**Makanchi Array**	**40.69**	**313**	P	**P**	**05 57 05.5**	**-0.5**
	0.2nm,0.3s,baz=94,slow=9.8,SNR=6.1						
ZALV	**Zalesovo Beam**	**41.80**	**324**	P	**P**	**05 57 13.9**	**-1.0**
	0.9nm,0.4s,baz=107,slow=8.6,SNR=4.3						
ASAR	**Alice Springs**	**49.29**	**170**	P	**P**	**05 58 13.8**	**-0.7**
	0.2nm,0.5s,baz=355,slow=7.3,SNR=4.9						
ILAR	**Eielson Array**	**66.17**	**28**	P	**P**	**06 00 13.5**	**+1.1**
	0.2nm,0.6s,baz=292,slow=5.7,SNR=3.9						
BRTR	**Keskin Array B**	**76.02**	**307**	P	**P**	**06 01 13.1**	**+0.4**
	0.4nm,0.7s,baz=102,slow=5.6,SNR=3.7						
YKA	**Yellowknife Ar**	**80.18**	**24**	P	**P**	**06 01 35.2**	**+0.2**
	0.3nm,0.8s,baz=302,slow=5.7,SNR=4.5						

SJA ***18*** *05:53:57.5±1.5,15°.48S×71°.86W,h115km±729km, MW4.7(GFZ)*
NEIC ***18*** *05:54:20.4±2.1,15°.48S±0°.06×71°.82W±0°.07,h114km±3km, mb4.6/114,ML4.6(ARE),Error ellipse: s-maj=10.8km s-min=7.6km az=58.0*
ARE ***18*** *05:54:20±4.8,15°.63S±0°.06×72°.12W±0°.07,h141km±4km, Error ellipse: s-maj=0.0km s-min=0.0km az=142.0*
IDC ***18*** *05:54:23.5±0.7,15°.41S×71°.78W,h138km±6km,mb4.3/21, mb1 4.4/23,mb1mx4.3/39,mbtmp4.7/23,MS3.7/2, Ms1 3.7/2,ms1mx3.1/31,Error ellipse: s-maj=12.0km s-min=9.1km az=59.0*
VAO ***18*** *05:54:26.1±1.3,15°.46S×71°.55W,h158km±12km,mb5.0*

ISC 18 05:54:21.6±0.3,15°.60S±0°.04×71°.96W±0°.05,h132km, n381,σ1°69/383,mb4.6/67,7C-2D,Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AP01	**Chacalluta**	**3.16**	**151**	⇑*iP*	**Pn**	**05 55 10.4**	**+0.1**
AP01				*eS*	**Sn**	**05 55 47.1**	**-0.9**
AP01				IAML		05 55 50.5	
	comp=E,32μm,0.3s						
PB16	**IPOC Station P**	**3.59**	**140**	⇓*eP*	**Pn**	**05 55 18.1**	**+1.5**
PB16				*eS*	**Sn**	**05 55 59.4**	**+0.3**
LPAZ	**La Paz**	**3.75**	**101**	P	**Pn**	**05 55 20.4**	**+1.8**
	comp=E,74nm,0.3s,baz=287,slow=9.5,SNR=1761						
LPAZ				S	**Sn**	**05 56 05.2**	**+2.5**
	baz=182,slow=19,SNR=2.0						
LPAZ	**La Paz**	**3.75**	**101**		**Pn**	**05 55 20.2**	**+1.5**
LPAZ				Sn	**Sn**	**05 56 03.7**	**+0.9**
MNMC	**Minye Minye**	**4.17**	**148**	⇑*iP*	**Pn**	**05 55 23.7**	**-0.3**
MNMC				*eS*	**Sn**	**05 56 09.8**	**-2.6**
MNMC				IAML		05 56 16.6	
	comp=E,5μm,0.3s						
MNMC	**Minye Minye**	**4.17**	**148**		**Pn**	**05 55 24.0**	**0.0**
MNMC				Sn	**Sn**	**05 56 10.0**	**-2.4**
PSGC	**Pisagua**	**4.34**	**156**	⇑*iP*	**Pn**	**05 55 25.4**	**-0.6**
PSGC				*eS*	**Sn**	**05 56 12.3**	**-3.9**
PSGC				IAML		05 56 15.9	
	comp=E,2μm,0.3s						
PB11	**IPOC Station P**	**4.68**	**152**	⇑*iP*	**Pn**	**05 55 30.0**	**-0.7**
PB11				*eS*	**Sn**	**05 56 20.3**	**-4.1**
PB11				IAML		05 56 23.7	
	comp=N,2μm,0.4s						
PB11	**IPOC Station P**	**4.68**	**152**		**Pn**	**05 55 29.7**	**-1.0**
PB11				Sn	**Sn**	**05 56 20.6**	**-3.7**
GO01	**Chusmiza**	**4.83**	**147**	⇑*iP*	**Pn**	**05 55 32.9**	**-0.1**
GO01				*eS*	**Sn**	**05 56 26.0**	**-2.3**
GO01				IAML		05 56 31.7	
	comp=N,2μm,0.5s						
GO01	**Chusmiza**	**4.83**	**147**		**Pn**	**05 55 33.9**	**+1.0**
GO01				Sn	**Sn**	**05 56 27.6**	**-0.7**
TA01	**Diego Aracena**	**5.22**	**161**	⇑*iP*	**Pn**	**05 55 36.0**	**-1.7**
TA01				*eS*	**Sn**	**05 56 31.7**	**-5.3**
TA01				IAML		05 56 34.5	
	comp=E,4μm,0.4s						
PB08	**IPOC Station P**	**5.25**	**150**	*eP*	**Pn**	**05 55 37.8**	**-0.6**
PB08				*eS*	**Sn**	**05 56 34.2**	**-4.0**
PB08				IAML		05 56 39.0	
	comp=E,2μm,0.2s						
PATCX	**Punta Patache**	**5.47**	**162**	*iP*	**Pn**	**05 55 39.9**	**-1.2**
PATCX				*eS*	**Sn**	**05 56 37.7**	**-5.4**
PATCX				IAML		05 56 40.4	
	comp=E,3μm,0.5s						
NNA	**Nana**	**5.95**	**307**	P	**Pn**	**05 55 46.2**	**-1.3**
	comp=E,66nm,0.3s,baz=139,slow=10,SNR=158						
NNA				S	**Sn**	**05 56 50.1**	**-4.5**
	comp=E,62nm,0.3s,baz=36,slow=16,SNR=16						
NNA	**Nana**	**5.95**	**307**		**Pn**	**05 55 46.4**	**-1.2**
NNA				Sn	**Sn**	**05 56 49.3**	**-5.4**
PB04	**IPOC Station P**	**6.91**	**166**		**Pn**	**05 55 58.7**	**-1.9**
PB04				Sn	**Sn**	**05 57 12.6**	**-5.4**
LVC	**Limon Verde**	**7.54**	**158**	P	**Pn**	**05 56 08.8**	**-0.5**
	comp=E,31nm,0.3s,baz=336,slow=9.2,SNR=183						
LVC				S	**Sn**	**05 57 29.8**	**-3.8**
	comp=E,64nm,0.3s,baz=157,slow=21,SNR=31						
LVC				LR	LR	05 58 43.9	
	comp=E,229nm,19.1s,baz=39,slow=34						
LVC	**Limon Verde**	**7.54**	**158**		**Pn**	**05 56 08.4**	**-0.9**
LVC				Sn	**Sn**	**05 57 29.4**	**-4.2**
PB10	**IPOC Station P**	**7.98**	**171**	Pn	**Pn**	**05 56 12.8**	**-2.1**
PB10				Sn	**Sn**	**05 57 36.9**	**-6.7**
GO02	**Mina Guanaco**	**9.77**	**167**		**Pn**	**05 56 37.8**	**-1.3**
SIV	**San Ignacio**	**10.49**	**94**	P	**Pn**	**05 56 45.3**	**-3.3**
	comp=E,16nm,0.3s,baz=283,slow=12,SNR=320						
ATAH	**Atahualpa**	**10.51**	**322**	S	**Sn**	**05 58 41.1**	**-4.4**
	comp=E,1.7nm,0.3s,baz=221,slow=20,SNR=5.9						
SAML	**Samuel**	**10.83**	**53**		Pn	05 56 47.8	-5.3
GO03	**Copiap**	**12.04**	**173**		**Pn**	**05 57 09.0**	**-0.1**
VCA	**Vinchina**	**13.52**	**166**	*i* P	**Pn**	**05 57 29.3**	**+0.9**
CYA	**Choya**	**13.99**	**157**	*eP*	**Pn**	**05 57 35.3**	**+1.1**
GO04	**Tololo Observa**	**14.54**	**176**		**Pn**	**05 57 42.2**	**+0.8**
GO04	**Tololo Observa**	**14.54**	**176**	*i* P	**Pn**	**05 57 42.0**	**+0.6**
AMOG	**MOGNA**	**15.59**	**169**	*i* P	**P**	**05 57 56.9**	**+1.1**
SALV	**Santo Antonio**	**15.66**	**93**	*eP*	**Pn**	**05 57 52.8**	**-2.4**
PTLC	**Puerto Leguiza**	**15.92**	**350**	*eP*	**Pn**	**05 57 52.0**	**-6.4**
RTLL	**Cerro Villicun**	**15.98**	**169**	*i* P	**P**	**05 58 01.4**	**+1.4**

AQDB	**Aquidauana**	**16.20**	**110**	*eP*		**Pn**	**05 58 00.6**	**-1.2**	
CFA	**Coronel Fontan**	**16.29**	**169**	P		**P**	**05 58 05.0**	**+1.6**	
	comp=E,5.2nm,0.3s,baz=347,slow=12,SNR=81								
CFA	**Coronel Fontan**	**16.29**	**169**	*i* P		**P**	**05 58 04.1**	**+0.7**	
CLDB	**Colider**	**16.42**	**75**	*eP*		**Pn**	**05 58 02.4**	**-2.2**	
RTCV	**Cerro Valdivia**	**16.48**	**170**	*eP*		**P**	**05 58 07.7**	**+2.1**	
PP1B	**Ponte de Pedra**	**16.49**	**99**	*eP*		**Pn**	**05 58 04.1**	**-1.3**	
OTAV	**Otavalo**	**16.99**	**337**	*eP*		**Pn**	**05 58 13.6**	**+1.6**	
OTAV	**Otavalo**	**16.99**	**337**	*eP*		**Pn**	**05 58 15.1**	**+3.1**	
OTAV	**Otavalo**	**16.99**	**337**	P		**Pn**	**05 58 13.3**	**+1.3**	
OTAV				IAmb		IAmb	05 58 28.0		
	comp=Z,35nm,0.8s								
TCA	**Tanti**	**17.05**	**158**	*i* P		**Pn**	**05 58 13.1**	**+0.9**	
ACAN	**Cantantal**	**17.16**	**166**	*eP*		**Pn**	**05 58 15.9**	**+2.5**	
ROC1	**El Roble**	**17.32**	**177**	P		**Pn**	**05 58 16.3**	**+0.7**	
ROC1	**El Roble**	**17.32**	**177**	*eP*		**Pn**	**05 58 16.9**	**+1.3**	
CPUP	**Villa Florida**	**17.32**	**130**	P		**P**	**05 58 13.8**	**-0.9**	
	comp=Z,1.1nm,0.3s,baz=310,slow=11,SNR=40								
CPUP	**Villa Florida**	**17.32**	**130**	*eP*		**Pn**	**05 58 15.7**	**+0.3**	
CPUP	**Villa Florida**	**17.32**	**130**	P		**P**	**05 58 13.5**	**-1.3**	
CPUP				IAmb		IAmb	05 58 16.5		
	comp=Z,39nm,1.1s								
ARCO	**CERRO ARCO**	**17.38**	**171**	*eP*		**Pn**	**05 58 19.0**	**+2.8**	
FLOC	**Florencia**	**17.46**	**348**	*eP*		**P**	**05 58 15.5**	**-0.9**	
FLOC	**Florencia**	**17.46**	**348**	P		**P**	**05 58 15.6**	**-0.8**	
PEL	**Peldehue**	**17.50**	**176**	P		**Pn**	**05 58 18.5**	**+1.0**	
GCUF	**Volcan Galeras**	**17.55**	**342**	*eP*		**Pn**	**05 58 21.0**	**+2.3**	
AAGR	**Agrelo**	**17.64**	**171**	*i* P		**Pn**	**05 58 20.6**	**+1.4**	
MRA	**San Martin**	**17.68**	**162**	*eP*		**Pn**	**05 58 21.1**	**+1.3**	
MACC	**Macarena, Meta**	**17.73**	**354**	*eP*		**P**	**05 58 17.5**	**-1.9**	
CRUC	**La Cruz**	**17.76**	**343**	*eP*		**Pn**	**05 58 23.2**	**+2.1**	
GUVC	**San Jose del G**	**18.04**	**358**	*eP*		**P**	**05 58 21.3**	**-1.5**	
SOTA	**Rioblanco**	**18.21**	**345**	*eP*		**Pn**	**05 58 27.4**	**+0.8**	
BBAC	**Balboa, Cauca**	**18.27**	**343**	*eP*		**Pn**	**05 58 29.3**	**+2.2**	
PCON	**Cinco Dias**	**18.35**	**346**	*eP*		**Pn**	**05 58 31.0**	**+2.7**	
BETC	**Betania**	**18.49**	**349**	*eP*		**Pn**	**05 58 30.2**	**+0.7**	
C2SB	**Chapadao do Su**	**18.54**	**103**	*eP*		**P**	**05 58 28.4**	**+0.2**	
GO05	**Huala**	**19.33**	**180**	P		**Pn**	**05 58 38.8**	**-0.3**	
GO05				IAmb		IAmb	05 58 52.3		
	comp=Z,23nm,0.8s								
ARAG	**Araguaiana, MT**	**19.40**	**93**	*eP*		**P**	**05 58 36.2**	**-1.4**	
TRCB	**Terra Rica**	**19.59**	**114**	*eP*		**P**	**05 58 39.7**	**0.0**	
ORTC	**Ortega, Tolima**	**19.66**	**350**	*eP*		**P**	**05 58 40.9**	**+0.5**	
VILC	**Villavicencio,**	**19.66**	**355**	*eP*		**P**	**05 58 38.7**	**-1.8**	
PTGC	**Puerto Gaitan,**	**19.68**	**359**	*eP*		**P**	**05 58 38.8**	**-1.8**	
ITQB	**Itaqui**	**19.88**	**137**	*eP*		**Pn**	**05 58 44.6**	**-0.9**	
YOTC	**Yotoco, Valle**	**19.94**	**347**	*eP*		**P**	**05 58 43.5**	**0.0**	
**CH

baz=164
T59A **Double "B" Far** 52.55 354 P P 06 03 21.6 +0.1
T59A IAmb IAmb 06 03 24.8
comp=Z,7.7nm,0.8s
T58A **Grand View Acr** 52.63 353 P P 06 03 22.7 +0.7
baz=172,SNR=5.8
T57A **Hurt** 52.77 353 P P 06 03 23.7 +0.6
T57A **Hurt** 52.77 353 P P 06 03 23.6 +0.6
baz=171,SNR=5.9
V49A **McMinnville** 52.77 346 P P 06 03 22.4 -0.7
baz=163
T55A **Pulaski** 53.09 351 P P 06 03 26.2 +0.7
baz=169
U50A **Jamestown** 53.15 347 P P 06 03 25.5 -0.4
baz=164
WHTX **Lake Whitney,** 53.26 333 P P 06 03 27.7 +0.9
baz=149
S57A **Dark Hollow, R** 53.48 353 P P 06 03 29.1 +0.8
baz=172,SNR=5.9
T51A **Gray** 53.49 348 P P 06 03 27.2 -1.2
baz=165
S55A **Lewisburg** 53.69 352 P P 06 03 30.4 +0.5
baz=170
T50A **Nancy** 53.73 347 P P 06 03 29.5 -0.7
baz=164
MIAR **Mount Ida** 53.94 338 IAmb IAmb 06 03 49.1
comp=Z,4.5nm,0.8s
MIAR **Mount Ida** 53.94 338 P P 06 03 31.7 0.0
baz=154
T49A **Edmonton** 53.96 347 P P 06 03 31.4 -0.4
baz=164,SNR=6.9
R57A **Stanardsville** 53.97 354 P P 06 03 32.8 +1.0
baz=172
TXAR **Lajitas Array** 54.16 326 P P 06 03 34.2 +0.7
comp=Z,0.9nm,0.7s,baz=152,slow=8.4,SNR=13
TXAR **Lajitas Array** 54.16 326 P P 06 03 32.7 -0.8
TX32 **Lajitas Array** 54.16 326 P P 06 03 34.8 +1.3
S50A **Richmond** 54.27 348 P P 06 03 33.7 -0.3
baz=165
Q57A **Strasburg** 54.68 354 P P 06 03 38.2 +1.2
baz=172,SNR=5.4
Q56A **Snyder Ridge,** 54.77 353 P P 06 03 39.0 +1.3
baz=171,SNR=8.5
ABTX **Abilene, Hawle** 54.78 331 P P 06 03 38.8 +0.9
baz=147
Q55A **Buckhannon** 54.84 352 P P 06 03 39.2 +1.0
baz=170
Q53A **Leroy** 54.91 351 P P 06 03 38.9 +0.2
baz=169
Q54A **Coxs Mills** 54.93 352 P P 06 03 38.8 0.0
Q54A IAmb IAmb 06 03 41.0
comp=Z,5.9nm,0.8s
Q54A **Coxs Mills** 54.93 352 P P 06 03 39.0 +0.2
baz=169
P56A **Dayton Farm, R** 55.19 354 P P 06 03 41.6 +1.0
baz=172
WCI **Wyandotte Cave** 55.21 346 P P 06 03 40.2 -0.6
baz=163
U40A **Yellville** 55.32 340 P P 06 03 41.3 -0.4
baz=155
P54A **Burton** 55.49 352 P P 06 03 43.2 +0.4
baz=170
P53A **Whipple** 55.50 351 P P 06 03 43.2 +0.3
baz=169
HHAR **Hobbs** 55.63 339 P P 06 03 43.8 0.0
HHAR IAmb IAmb 06 03 59.3
comp=Z,7.6nm,1.3s
X34A **Smith Ranch, M** 55.66 334 IAmb IAmb 06 03 45.7
comp=Z,7.7nm,0.7s
O56A **Blue Knob Stat** 55.92 354 P P 06 03 46.9 +1.0
baz=172
O55A **Ligonier** 55.94 353 P P 06 03 46.9 +0.9
baz=171
TUL1 **Leonard** 55.98 337 P P 06 03 47.0 +0.7
baz=152
SSPA **Standing Stone** 56.22 355 P P 06 03 48.8 +0.8
baz=173
ODNJ **Ogdensburg** 56.45 358 P P 06 03 49.8 +0.2
ODNJ IAmb IAmb 06 03 56.0
comp=Z,10nm,1.5s
N55A **Marion Center** 56.47 354 P P 06 03 50.4 +0.6
baz=172,SNR=9.3
N56A **West Decatur** 56.54 354 P P 06 03 50.8 +0.6
baz=172,SNR=5.5
N54A **Moraine State** 56.77 353 P P 06 03 52.5 +0.6
baz=171
M57A **Sunshine Farm,** 56.85 355 P P 06 03 53.1 +0.7
baz=174
MNTX **Cornudas Mount** 56.92 326 IAmb IAmb 06 03 54.2
comp=Z,5.0nm,1.1s
MNTX **Cornudas Mount** 56.92 326 P P 06 03 53.3 +0.2
baz=141,SNR=5.7
M56A **Emporium** 57.09 354 P P 06 03 54.7 +0.6
baz=173,SNR=7.1
M55A **Ridgway** 57.13 354 P P 06 03 55.0 +0.6
baz=172,SNR=7.4
M54A **Oil Creek Stat** 57.27 353 P P 06 03 55.8 +0.4
baz=171
N49A **Columbus Grove** 57.37 349 P P 06 03 55.5 -0.6
baz=166
MSTX **Muleshoe** 57.38 330 IAmb IAmb 06 03 57.6
comp=Z,16nm,1.3s
MSTX **Muleshoe** 57.38 330 P P 06 03 56.8 +0.4
baz=144
SFIN **Lafayette** 57.45 346 P P 06 03 55.5 -1.1
baz=162
L56A **Greenwood** 57.68 355 P P 06 03 58.6 +0.3
L56A **Greenwood** 57.68 355 P P 06 03 58.7 +0.5
baz=174
L55A **Hinsdale** 57.80 354 P P 06 03 59.8 +0.7
baz=172
L54A **Sinclairville** 57.95 354 P P 06 04 00.8 +0.7
baz=172
K54A **Basiliko Farm,** 58.25 354 P P 06 04 02.8 +0.6
baz=172
K55A **Perry** 58.31 355 P P 06 04 02.9 +0.3
baz=173
L48A **N Adams** 58.40 349 P P 06 04 02.3 -1.0
baz=166
L47A **Sherwood** 58.58 348 P P 06 04 03.5 -0.9
baz=165
319A **Douglas** 58.87 323 IAmb IAmb 06 04 09.7
comp=Z,8.4nm,0.8s
121A **Cookes Peak, D** 58.87 325 IAmb IAmb 06 04 09.5
comp=Z,7.2nm,1.0s
121A **Cookes Peak, D** 58.87 325 P P 06 04 08.8 +1.8
baz=139
J54A **Appleton** 58.90 354 P P 06 04 06.7 0.0
baz=172
I58A **Old Forge** 59.06 357 P P 06 04 08.0 +0.1
baz=176
K48A **Perry** 59.18 350 P P 06 04 07.8 -0.8
baz=166
I55A **Frankford** 59.76 355 P P 06 04 12.3 -0.2
baz=174
H57A **Richville** 59.85 357 P P 06 04 13.0 -0.1
baz=176
ANMO **Albuquerque** 60.00 328 P P 06 04 15.5 +0.8
baz=141
H53A **Bobcaygeon** 60.19 355 P P 06 04 14.9 -0.6
baz=172
TUC **Tucson** 60.43 322 P P 06 04 19.1 +1.7
baz=136
I46A **Reed City** 60.52 349 P P 06 04 16.2 -1.5
baz=165
PKME **Peaks-Kenny Pk** 60.62 2 P P 06 04 18.4 0.0
T25A **Trinidad** 60.72 331 P P 06 04 20.6 +1.1
baz=144,SNR=5.6
G55A **Calabogie** 60.72 356 P P 06 04 19.0 -0.1
baz=175
G53A **Haliburton** 60.74 355 P P 06 04 19.4 +0.2
baz=172,SNR=5.4
H46A **Fife Lake** 61.06 349 P P 06 04 20.4 -0.9
baz=165
214A **Organ Pipe Nat** 61.39 321 IAmb IAmb 06 04 26.6
comp=Z,6.7nm,1.0s
214A **Organ Pipe Nat** 61.39 321 P P 06 04 26.0 +2.0
baz=134
ALGO **Algonquin Park** 61.51 355 P P 06 04 24.4 0.0
baz=173
SDCO **Great Sand Dun** 61.72 330 P P 06 04 27.8 +1.4
SDCO IAmb IAmb 06 04 28.4
comp=Z,6.5nm,0.8s
SDCO **Great Sand Dun** 61.72 330 P P 06 04 27.8 +1.4
baz=143,SNR=13
E57A **Chemin Saint G** 61.75 358 P P 06 04 26.0 0.0
baz=178
E55A **Montcerf-Lytto** 61.88 357 P P 06 04 27.0 +0.1
baz=175
E53A **Dumoine, Ponti** 61.90 356 P P 06 04 26.7 -0.3
baz=174
E56A **St. Veronique** 61.92 358 P P 06 04 27.3 +0.2
baz=176,SNR=5.5
E54A **Lac Daplat, Po** 61.92 356 P P 06 04 27.2 0.0
baz=174
E51A **G1948 Merrick** 62.22 354 P P 06 04 29.8 +0.7
baz=172
X16A **Lo Mia Camp, P** 62.32 324 IAmb IAmb 06 04 33.6
comp=Z,7.1nm,1.0s
D57A **Chemin Vers le** 62.35 359 P P 06 04 30.0 0.0
baz=178
S22A **4UR Ranch, Cre** 62.37 329 P P 06 04 32.0 +1.3
baz=142
D55A **Sainte-Anne-du** 62.41 357 P P 06 04 30.2 -0.2
baz=176,SNR=5.7
D56A **ZEC Mazanza, M** 62.41 358 P P 06 04 30.2 -0.2
baz=177
D58A **Chemin du LacG** 62.41 359 P P 06 04 30.5 +0.1
baz=179
D62A **Allapoint, All** 62.45 2 P P 06 04 30.7 +0.1
D62A **Allapoint, All** 62.45 2 P P 06 04 30.8 +0.2
baz=183
Q24A **Divide** 62.53 331 P P 06 04 32.6 +0.8
baz=143
D53A **Lac Vacive, Po** 62.60 356 P P 06 04 31.5 -0.2
baz=174
D54A **Lac Fusel, La** 62.61 356 P P 06 04 31.1 -0.6
baz=175
LATQ **La Tuque** 62.70 359 P P 06 04 32.2 0.0
baz=179
MVCO **Mesa Verde** 62.80 328 P P 06 04 34.6 +1.1
baz=140
Y14A **Wickenburg** 62.89 322 IAmb IAmb 06 04 36.5
comp=Z,5.0nm,0.8s
WUAZ **Wupatki** 63.08 324 IAmb IAmb 06 04 38.6
comp=Z,9.4nm,1.0s
WUAZ **Wupatki** 63.08 324 P P 06 04 37.8 +2.5
baz=137,SNR=8.1
ECSD **EROS Data Cent** 63.21 340 P P 06 04 36.2 +0.4
ECSD IAmb IAmb 06 04 36.9
comp=Z,11nm,1.4s
ECSD **EROS Data Cent** 63.21 340 P P 06 04 35.8 0.0
baz=155,SNR=5.1
BC3 **Big Chuckawall** 64.17 320 P P 06 04 44.6 +2.1
baz=132
MONP2 **Monument Peak** 64.27 319 P P 06 04 45.2 +2.1
baz=131
BAR **Barrett** 64.28 319 P P 06 04 44.6 +1.5
BAR IAmb IAmb 06 04 46.0
comp=Z,8.0nm,1.0s
IRM **Iron Mountain** 64.33 321 P P 06 04 45.2 +1.9
baz=133
LSQQ **Lebel-sur-Quev** 64.53 356 P P 06 04 44.3 0.0
baz=174
109C **Camp Elliot, M** 64.70 319 P P 06 04 47.4 +1.7
109C IAmb IAmb 06 04 48.1
comp=Z,5.5nm,0.9s
PFO **Pinyon Flats O** 64.77 320 P P 06 04 48.4 +2.1
baz=132
O20A **White River Ci** 64.92 330 P P 06 04 48.7 +1.4
baz=141
GMRC **Granite Mounta** 65.06 321 P P 06 04 50.1 +1.8
baz=133
MATQ **Matagami** 65.27 356 P P 06 04 48.5 -0.5
baz=174
EYMN **Ely** 65.63 346 P P 06 04 51.1 -0.3
EYMN IAmb IAmb 06 04 51.8
comp=Z,5.5nm,0.8s
EYMN **Ely** 65.63 346 P P 06 04 51.0 -0.4
baz=159
TUQ **Turquoise Moun** 65.66 322 P P 06 04 53.9 +1.9
baz=133
BFSC **Mount Baldy Ra** 65.93 320 P P 06 04 55.8 +2.0
baz=131
SHPR **Sheep Range** 65.94 323 IAmb IAmb 06 04 56.8
comp=Z,5.2nm,0.9s
GSC **Goldstone, Bar** 66.10 321 P P 06 04 55.6 +0.7
GSC **Goldstone, Bar** 66.10 321 P P 06 04 56.7 +1.9
baz=132
K22A **Casper** 66.11 333 IAmb IAmb 06 04 56.6
comp=Z,6.3nm,0.9s
K22A **Casper** 66.11 333 P P 06 04 55.9 +1.1
baz=143
SHOC **Shoshone, Teco** 66.19 322 P P 06 04 57.9 +2.6
baz=133
EDW2 **Edwards Air Fo** 66.56 320 P P 06 04 59.2 +1.5
baz=131
TPNV **Topopah Spring** 66.88 323 P P 06 05 02.0 +2.1
baz=133,SNR=9.3
FURC **Furnace Creek,** 66.92 322 P P 06 05 02.3 +2.5
baz=132,SNR=8.6
MPMC **Manual Prospec** 67.02 321 P P 06 05 02.6 +1.7
baz=132
AGMN **Agassiz Nation** 67.09 343 IAmb IAmb 06 05 01.5
comp=Z,7.4nm,0.8s
AGMN **Agassiz Nation** 67.09 343 P P 06 05 00.9 +0.2
baz=155,SNR=7.5
DUG **Dugway, Tooele** 67.26 327 IAmb IAmb 06 05 04.9
comp=Z,6.8nm,1.1s
DUG **Dugway, Tooele** 67.26 327 P P 06 05 04.0 +1.8
baz=137,SNR=7.8
ISA **Isabella, Lake** 67.36 320 P P 06 05 04.5 +1.7
ISA **Isabella, Lake** 67.36 320 P P 06 05 05.2 +2.4
baz=131
R11A **Troy Canyon, C** 67.46 324 P P 06 05 05.8 +2.3
baz=134,SNR=7.1
BW06 **Boulder Array** 67.58 331 P P 06 05 05.3 +1.1
baz=140
PDAR **Pinedale Array** 67.58 331 P P 06 05 04.8 +0.5
comp=Z,0.7nm,0.6s,baz=127,slow=7.4,SNR=8.0
PDAR PcP PcP 06 05 30.6 +0.1
comp=Z,0.9nm,0.6s,baz=134,slow=7.6,SNR=5.6
PDAR **Pinedale Array** 67.58 331 P P 06 05 04.4 +0.1
CWC **Cottonwood Cre** 67.63 321 P P 06 05 06.7 +2.1
baz=131
PKM **Mcpherson Peak** 67.70 319 P P 06 05 07.2 +2.0
baz=129
VES **Vestal, Richgr** 67.86 320 P P 06 05 07.8 +2.0
baz=130
SMMC **Simler** 68.09 319 P P 06 05 09.7 +2.4
baz=129,SNR=5.4
SNAA **Sanae** 68.76 162 P P 06 05 13.1 +2.1
SNAA **Sanae** 68.76 162 P P 06 05 13.1 +2.1
comp=Z,2.4nm,0.5s,baz=268,slow=9.4,SNR=26
SNAA pP pP 06 05 45.1 +0.6
comp=Z,5.5nm,0.8s,baz=293,slow=7.6,SNR=5.7
SNAA **Sanae** 68.76 162 P P 06 05 13.0 +1.9
ULM **Lac du Bonnet** 68.86 344 P P 06 05 11.3 -0.5
comp=Z,4.7nm,0.6s,baz=160,slow=6.1,SNR=16
ULM **Lac du Bonnet** 68.86 344 P P 06 05 11.5 -0.2
ULM IAmb IAmb 06 05 12.3
comp=Z,9.6nm,1.1s
OMMB **Old Mammoth Mi** 68.96 321 IAmb IAmb 06 05 15.9
comp=Z,8.4nm,0.9s
NVAR **Mina Array Bea** 69.08 323 P P 06 05 15.3 +1.6
comp=Z,2.2nm,0.8s,baz=147,slow=7.1,SNR=8.9
NVAR PcP PcP 06 05 38.0 +1.1
comp=Z,0.8nm,0.7s,baz=126,slow=4.9,SNR=4.0
NVAR **Mina Array Bea** 69.08 323 P P 06 05 14.7 +1.0
FLWY **Flagg Ranch** 69.12 331 IAmb IAmb 06 05 16.3
comp=Z,7.5nm,0.9s
RLMT **Red Lodge** 69.28 333 P P 06 05 15.8 +1.1
baz=141
LIC **Lamto** 69.72 77 *e*P P 06 05 15.9 -1.9
comp=Z,9.1nm,0.4s
TIC **Toumodi** 69.87 77 *e*P P 06 05 16.6 -2.2
comp=Z,2.1nm,0.3s
YERR **Yerington** 70.00 322 IAmb IAmb 06 05 22.4
comp=Z,17nm,1.5s
DBIC **Dimbokro** 70.03 77 P P 06 05 18.2 -1.5
comp=Z,3.1nm,0.4s,baz=232,slow=6.0,SNR=11
DBIC **Dimbokro** 70.03 77 P P 06 05 17.8 -1.9
DBIC IAmb IAmb 06 05 25.9
comp=Z,14nm,1.1s
KIC **Kosan Boka** 70.04 77 *e*P P 06 05 17.7 -2.1
comp=Z,9.5nm,0.5s
PNTR **Pine Nut** 70.28 322 IAmb IAmb 06 05 24.3
comp=Z,7.0nm,0.8s
PAHR **Pah Rah Range** 70.56 323 IAmb IAmb 06 05 25.9
comp=Z,12nm,0.9s
MFID **Camas Ranch** 71.14 328 IAmb IAmb 06 05 28.9
comp=Z,8.8nm,1.1s
ORV **Oroville** 71.70 322 IAmb IAmb 06 05 32.6
comp=Z,13nm,1.1s
EGMT **Eagleton** 71.76 334 P P 06 05 30.5 +1.0
baz=141
MOD **Modoc Plateau** 72.53 324 P P 06 05 35.5 +1.2
MOD IAmb IAmb 06 05 37.1
comp=Z,8.3nm,1.1s
MSO **Missoula** 72.69 331 P P 06 05 37.0 +1.9
MSO **Missoula** 72.69 331 P P 06 05 37.5 +2.3
baz=137
M04C **Macdoel** 73.32 323 P P 06 05 40.9 +1.9
baz=130,SNR=5.8
F10A **Beach Ranch, E** 73.66 329 P P 06 05 41.8 +0.9
M02C **Callahan** 73.66 323 P P 06 05 42.3 +1.3
baz=129
L04D **Klamath Falls** 73.87 323 P P 06 05 43.6 +1.4
baz=129
PPT **Papeete** 73.90 256 LR LR 06 31 44.4
comp=Z,114nm,19.2s,baz=349,slow=30
J05D **Fort Rock, OR** 73.95 325 P P 06 05 44.4 +1.7
baz=130
PINE **Pine Mountain** 74.12 325 P P 06 05 45.9 +2.2
J04D **Umpqua Nationa** 74.41 324 P P 06 05 47.4 +2.0
baz=130
E09A **Wood Farm, Sta** 74.49 329 P P 06 05 45.7 +0.1
QSPA **South Pole Qui** 74.56 180 P P 06 05 48.8 +2.9
comp=Z,1.5nm,0.4s,baz=334,slow=2.2,SNR=24
QSPA pP pP 06 06 21.8 +2.2
comp=Z,2.4nm,0.7s,baz=242,slow=1.5,SNR=4.0
QSPA **South Pole Qui** 74.56 180 P P 06 05 48.6 +2.8
I05D **Terrebonne, OR** 74.69 326 P P 06 05 49.3 +2.5
baz=131
H04A **Detroit Lake** 75.38 325 P P 06 05 51.5 +0.8
H04A IAmb IAmb 06 05 53.1
comp=Z,12nm,1.3s
FCC **Fort Churchill** 76.29 348 IAmb IAmb 06 05 56.8
comp=Z,15nm,1.4s
B05A **Bryant** 77.65 328 P P 06 06 04.7 +1.3
baz=131
TOA0 **Torodi Ar. Sit** 78.24 73 P P 06 06 05.7 -1.7
TORD **Torodi Ar. Bea** 78.24 73 P P 06 06 05.9 -1.5
comp=Z,22nm,0.9s,baz=256,slow=5.0,SNR=85
TORD **Torodi Ar. Bea** 78.24 73 P P 06 06 05.2 -2.1
SYO **Syowa Base** 83.00 160 *e*P P 06 06 32.4 +0.6
ESDC **Sonseca Array** 83.76 46 P P 06 06 36.3 +0.1
comp=Z,3.9nm,0.7s,baz=256,slow=5.2,SNR=21
ESDC **Sonseca Array** 83.76 46 P P 06 06 35.6 -0.6
TSUM **Tsumeb** 84.57 108 P P 06 06 41.2 +0.3
TSUM IAmb IAmb 06 06 42.7
comp=Z,14nm,0.8s
YKA **Yellowknife Ar** 84.70 342 P P 06 06 40.6 +0.3
comp=Z,8.4nm,0.8s,baz=137,slow=4.8,SNR=153
YKA pP pP 06 07 16.7 +1.3
comp=Z,3.0nm,0.8s,baz=138,slow=5.4,SNR=3.1
TAM **Tamanrasset** 84.85 65 P P 06 06 41.9 -0.3
TAM IAmb IAmb 06 06 44.8
comp=Z,9.9nm,1.3s
BOSA **Boshof** 88.80 119 P P 06 07 02.1 +0.8
comp=Z,5.0nm,0.8s,baz=248,slow=4.2,SNR=7.1
BOSA **Boshof** 88.80 119 P P 06 07 01.4 +0.1
SUMG **Summit** 90.73 10 *i* P P 06 07 10.5 +1.0
comp=Z,42nm,0.8s
SUMG **Summit** 90.73 10 P P 06 07 09.5 0.0
INK **Inuvik** 94.45 341 P P 06 07 26.9 +0.7
comp=Z,2.1nm,0.8s,baz=107,slow=5.5,SNR=8.2
INK **Inuvik** 94.45 341 IAmb IAmb 06 07 27.7
comp=Z,4.4nm,1.1s
DAVOX **Davos/Dischmat** 95.75 43 P P 06 07 33.2 +0.2
comp=Z,2.0nm,0.8s,baz=338,slow=9.9,SNR=4.5
ILAR **Eielson Array** 97.71 335 P P 06 07 41.1 -0.1
comp=Z,0.7nm,0.7s,baz=132,slow=3.4,SNR=10.0
ILAR **Eielson Array** 97.71 335 P P 06 07 40.4 -0.7
KBZ **Khabaz** 118.54 48 PKP PKiKP 06 12 55.5 +1.6
comp=Z,1.2nm,0.8s,baz=291,slow=2.9,SNR=6.1
STKA **Stephens Creek** 122.87 214 PKP PKiKP 06 13 04.7 +1.8
comp=Z,1.6nm,0.5s,baz=129,slow=4.4,SNR=3.8
STKA **Stephens Creek** 122.87 214 PKiKP 06 13 03.6 +0.6
ARU **Arti** 124.76 31 PKP PKiKP 06 13 06.2 +0.4
comp=Z,0.7nm,0.3s,baz=18,slow=2.2,SNR=5.4
ARU **Arti** 124.76 31 PKPdf 06 13 05.3 -0.1
AKTO **Aktyubinsk** 126.97 38 PKP PKiKP 06 13 11.7 +1.2
comp=Z,3.0nm,0.6s,baz=320,slow=2.1,SNR=14
ABKAR **Akbulak array** 128.58 39 PKiKP 06 13 14.4 +0.8
ASAR **Alice Springs** 133.50 213 PKP PKiKP 06 13 24.6 +0.1
comp=Z,1.2nm,0.6s,baz=130,slow=2.1,SNR=18
ASAR **Alice Springs** 133.50 213 PKPdf 06 13 23.8 +0.5
WRA **Warramunga Arr** 136.23 217 PKP PKiKP 06 13 30.1 0.0
comp=Z,3.5nm,0.9s,baz=149,slow=1.9,SNR=16
WRA **Warramunga Arr** 136.23 217 PKPdf 06 13 29.4 +1.1
ZALV **Zalesovo Beam** 137.65 20 PKhKP PKPpre 06 13 26.5
comp=Z,5.0nm,0.9s,baz=307,slow=2.7,SNR=8.1
ZALV PKP PKPdf 06 13 31.1 +1.2
comp=Z,7.7nm,0.7s,baz=229,slow=1.4,SNR=23
ZALV **Zalesovo Beam** 137.65 20 PKPdf 06 13 28.4 -1.5
MK31 **Makanchi Array** 142.24 29 PKPdf 06 13 34.6 -3.9
MKAR **Makanchi Array** 142.24 29 PKhKP PKPdf 06 13 34.9 -3.7
comp=Z,1.3nm,0.6s,baz=313,slow=2.9,SNR=12
MKAR **Makanchi Array** 142.24 29 PKPdf 06 13 34.2 -4.3
USRK **Ussuriysk Ar.** 145.00 329 PKP PKPdf 06 13 44.0 +0.6
comp=Z,5.3nm,0.6s,baz=28,slow=3.2,SNR=11
USRK **Ussuriysk Ar.** 145.00 329 PKPdf 06 13 43.9 +0.5
HIA **Hailar** 145.09 347 PKPdf 06 13 43.8 +0.3
MJAR **Matsushiro Arr** 146.03 314 PKPbc PKPab 06 13 47.3 +0.1
comp=Z,18nm,0.9s,baz=100,slow=1.4,SNR=42
MJAR **Matsushiro Arr** 146.03 314 PKPbc 06 13 47.0 +0.5
MAJO **Matsushiro** 146.03 314 PKPab 06 13 47.4 +0.1
MAT **Matsushiro** 146.03 314 PKP PKPab 06 13 47.7 +0.4
MJB9 **Matsu-Tunnel** 146.03 314 PKPab 06 13 47.3 0.0
ULN **Ulaanbaatar** 147.82 1 PKPbc 06 13 52.5 +1.2
SONM **Songino Array** 147.83 2 PKP PKPbc 06 13 50.1 -1.2
comp=Z,14nm,0.7s,baz=328,slow=0.9,SNR=83
SONM PKPbc PKiKP 06 13 52.7 -0.4
comp=Z,14nm,0.7s,baz=327,slow=2.3,SNR=82
SONM pPKPbc pPKPab 06 14 30.5 +0.6
comp=Z,3.1nm,0.9s,baz=323,slow=0.9,SNR=2.6
SONM **Songino Array** 147.83 2 PKPdf 06 13 49.7 +1.5
KSRS **Korea Array** 152.00 325 PKPbc PKiKP 06 14 03.2 +1.3
comp=Z,10nm,0.7s,baz=16,slow=2.1,SNR=18
LZH **Lanzhou** 159.26 10 PKP PKPdf 06 14 00.6 -4.3
LZH pPKP pPKPdf 06 14 38.5 -3.1
LZH PKP PKPab 06 14 41.0 -1.6
LZH sPKP 06 14 53.6
WHN **Wuhan** 164.04 340 PKP PKPdf 06 14 17.3 +7.5

*IPEC **18** 06:09:38.7±0.2,51°59N×16°09E,h1km,ML2.2/3,Error ellipse: s-maj=1.5km s-min=0.8km az=31.0*
*VIE **18** 06:09:41.6±1.0,51°37N×15°86E,h0km,mb2.1/1,ml2.7/5, Error ellipse: s-maj=9.2km s-min=6.3km az=54.0 84 km NE of Liberec Suspected Mining induced.*
ISC 18 06:09:38.3±0.9,51°60N±0°03×16°00E±0°03,h0km,n32,
σ1§19/63,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.78**	**166**	*e*Pg		**Pg**	**06 09 53.6**	**+0.3**
KSP				*i* Sg		**Sg**	**06 10 03.5**	**+0.1**
CHVC	**Chvalec**	**1.02**	**178**	*e*PG		**Pg**	**06 09 57.9**	**+0.1**
CHVC				*e*SG		**Sg**	**06 10 09.8**	**-1.1**
	comp=Z,45nm,0.5s							
OSTC	**Ostas**	**1.06**	**173**	*e*PG		**Pg**	**06 09 57.9**	**-0.6**
OSTC				*e*SG		**Sg**	**06 10 11.9**	**-0.3**
	comp=Z,62nm,0.3s							
UPC	**Upice**	**1.10**	**180**	*e*PG		**Pg**	**06 09 59.3**	**0.0**
UPC				*e*SG		**Sg**	**06 10 12.3**	**-1.2**
	comp=Z,53nm,0.3s							
DPC	**Dobruska-Polom**	**1.27**	**171**	*e*PG		**Pg**	**06 10 02.4**	**-0.2**
DPC				*e*SG		**Sg**	**06 10 18.1**	**-1.0**
	comp=Z,47nm,0.5s							
PVCC	**Panska Ves**	**1.41**	**221**	*e*PG		**Pn**	**06 10 05.1**	**-0.1**
PVCC				*e*SG		**Sg**	**06 10 23.6**	**+0.2**
	comp=Z,77nm,0.3s							
BRG	**Berggiesshubel**	**1.49**	**241**	PN		**Pn**	**06 10 05.8**	**-0.5**
BRG				PG		**Pb**	**06 10 07.2**	**+0.4**
BRG				SG		**Sb**	**06 10 27.0**	**+0.8**
	138nm,0.5s							
KRLC	**Kraliky**	**1.61**	**162**	*e*PG		**Pn**	**06 10 07.9**	**-0.1**
KRLC				*e*SG		**Sn**	**06 10 28.8**	**-0.7**
	comp=Z,56nm,0.4s							
PRA	**Prague**	**1.83**	**214**	*e*SG		**Sb**	**06 10 36.3**	**+0.3**
	comp=Z,24nm,0.5s							
PRU	**Pruhonice**	**1.86**	**210**	*e*PN		**Pn**	**06 10 11.3**	**-0.2**
PRU				*e*PG		**Pb**	**06 10 12.9**	**-0.3**
PRU				*e*SG		**Sb**	**06 10 37.2**	**+0.1**
	comp=Z,21nm,0.6s							
CLL	**Collm**	**1.90**	**262**	*i* Pn		**Pn**	**06 10 11.6**	**-0.4**
CLL				*e*Pg		**Pg**	**06 10 15.0**	**+0.3**
CLL				*i*			06 10 18.5	
CLL				*e*Sg		**Sg**	**06 10 40.0**	**+0.7**

	comp=Z,14nm,0.5s							
MORC	**Moravsky Berou**	**2.08**	**151**	*e*PN	**Pn**	**06**	**10**	**14.4 0.0**
MORC				*e*SG	**Sb**	**06**	**10**	**42.5 -0.7**
MORC	**Moravsky Berou**	**2.08**	**151**	*e*Pn	**Pn**	**06**	**10**	**14.4 0.0**
	baz=334							
MORC				*e*Sg	**Sb**	**06**	**10**	**42.5 -0.7**
	comp=Z,14nm,0.4s,baz=334							
OKC	**Ostrava-Krasne**	**2.23**	**142**	*e*PG	**Pb**	**06**	**10**	**19.5 0.0**
OKC				*e*SG	**Sg**	**06**	**10**	**48.7 -1.3**
	comp=Z,34nm,0.9s							
VRAC	**Vranov**	**2.33**	**170**	*e*PN	**Pn**	**06**	**10**	**18.3 +0.4**
VRAC				*e*SG	**Sb**	**06**	**10**	**50.7 +0.3**
VRAC	**Vranov**	**2.33**	**170**	*e*Pn	**Pn**	**06**	**10**	**18.2 +0.4**
	baz=352							
VRAC				*e*Sg	**Sb**	**06**	**10**	**50.7 +0.3**
	comp=Z,13nm,0.3s,baz=352							
TREC	**Trest**	**2.33**	**188**	*e*SG	**Sb**	**06**	**10**	**51.8 +1.2**
	comp=Z,15nm,0.3s							
KRUC	**Moravsky**	**2.56**	**174**	*e*PN	**Pn**	**06**	**10**	**21.4 +0.4**
KRUC				*e*SG	**Sb**	**06**	**10**	**58.2 +1.2**
KRUC	**Moravsky**	**2.56**	**174**	*e*Pn	**Pn**	**06**	**10**	**21.3 +0.3**
	baz=356							
KRUC				*e*Sg	**Sb**	**06**	**10**	**58.1 +1.1**
	comp=Z,14nm,0.5s,baz=356							
NKC	**Novy Kostel**	**2.63**	**240**	*e*PN	**Pn**	**06**	**10**	**22.8 +0.7**
NKC				*e*SG	**Sg**	**06**	**11**	**02.7 -0.2**
	comp=Z,48nm,0.9s							
OJC	**Ojcow**	**2.77**	**118**	*e*Pg	**Pg**	**06**	**10**	**31.2 -0.3**
OJC				*e*SG	**Sg**	**06**	**11**	**06.9 -0.4**
KHC	**Kasperske Hory**	**2.92**	**213**	*e*PN	**Pn**	**06**	**10**	**26.9 +0.8**
KHC				*e*PG	**Pb**	**06**	**10**	**31.7 +0.4**
KHC				*e*SN	**Sn**	**06**	**11**	**01.4 -0.5**
KHC				*e*SG	**Sb**	**06**	**11**	**10.3 +2.8**
	comp=Z,6.8nm,0.4s							
SMOL	**Smolenice**	**3.23**	**163**	*e*SG	**Sg**	**06**	**11**	**23.0 +1.1**
LANS	**Liptovska Anna**	**3.31**	**137**	*e*SG	**Sg**	**06**	**11**	**24.3 -0.3**
MODS	**Modra-Piesok**	**3.34**	**165**	*e*PG	**Pg**	**06**	**10**	**42.0 -0.2**
MODS				*e*SG	**Sg**	**06**	**11**	**25.7 +0.3**
BSD	**Bornholm Skovb**	**3.58**	**350**	*i* P	**Pn**	**06**	**10**	**35.0 +0.1**
BSD	**Bornholm Skovb**	**3.58**	**350**	*i* P	**Pn**	**06**	**10**	**35.1 +0.1**
BSD				*i* S	**Sn**	**06**	**11**	**15.2 -2.7**
VYHS	**Vyhne**	**3.61**	**149**	*e*PN	**Pn**	**06**	**10**	**32.7 -2.8**
VYHS				*e*PG	**Pg**	**06**	**10**	**51.4 +4.0**
VYHS				*e*SG	**Sg**	**06**	**11**	**34.5 +0.3**
CONA	**Conrad Observa**	**3.68**	**181**	*e*Pn	**Pn**	**06**	**10**	**37.3 +0.8**
	comp=Z,0.8nm,0.4s							
CONA				Sg	**Sg**	**06**	**11**	**34.1 -2.4**
	comp=Z,11nm,0.5s							
MOA	**Molln**	**3.92**	**197**	*e*Pn	**Pn**	**06**	**10**	**39.9 +0.1**
	comp=Z,0.8nm,0.2s							
MOA				Sg	**Sg**	**06**	**11**	**41.7 -2.6**
	comp=Z,4.9nm,0.4s							
STHS	**Stebnicka Huta**	**4.00**	**121**	*e*SG	**Sg**	**06**	**11**	**50.3 +3.6**
ARSA	**Arzberg**	**4.37**	**184**	Sg	**Sg**	**06**	**11**	**56.8 -1.8**
	comp=Z,4.1nm,0.5s							

JMA ***18*** *06:34:42.5±0.1, 37°.24N×141°.47E, h47km±1km, M3.9*
JMA Felt II J1.
IDC ***18*** *06:34:44.4±5.0, 37°.11N×141°.52E, h52km±49km, mb3.3/9, mb1 3.7/10, mb1mx3.5/30, mbtmp3.6/10, ML2.9/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/28, Error ellipse: s-maj=41.0km s-min=17.0km az=108.0*

ISC 18 06:34:42.0±1.0, 37°.24N±0°.05×141°.53E±0°.06, h30km±6km, n30, σ1§02/34, mb3.6/10, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.54**	**284**	P	**Pb**	**06 34 53.3**	**+0.2**
JFK				*e*S	**Sn**	**06 35 01.0**	**-0.8**
ONAJ	**Iwakimizuishiy**	**0.60**	**257**	P	**Pb**	**06 34 54.2**	**+0.1**
ONAJ				S	**Sb**	**06 35 02.3**	**0.0**
JMST	**Minamisoumatoc**	**0.71**	**314**	P	**Pb**	**06 34 55.5**	**-0.3**
JMST				S	**Sb**	**06 35 04.8**	**-0.4**
JFFD	**Fukushimafurud**	**0.79**	**260**	P	**Pn**	**06 34 56.7**	**-0.4**
JFFD				S	**Sb**	**06 35 06.7**	**-0.8**
JMM	**Marumori**	**0.86**	**317**	P	**Pn**	**06 34 57.6**	**-0.5**
JMM				S	**Sb**	**06 35 08.7**	**-0.9**
JHO	**Hitachi**	**0.99**	**231**	P	**Pn**	**06 34 59.1**	**-0.8**
JHO				S	**Sn**	**06 35 11.0**	**-1.9**
JFT	**Otama**	**0.99**	**287**	P	**Pn**	**06 35 00.2**	**+0.3**
JFT				S	**Sn**	**06 35 12.6**	**-0.3**
JIO	**Ouri**	**1.23**	**353**	P	**Pn**	**06 35 03.0**	**-0.1**
JIO				*e*S	**Sn**	**06 35 17.6**	**-1.1**
JOU	**Okura**	**1.32**	**329**	P	**Pn**	**06 35 04.4**	**-0.1**
JFY	**Yanaizu**	**1.46**	**277**	P	**Pn**	**06 35 06.6**	**+0.2**
JFY				S	**Sn**	**06 35 24.2**	**-0.4**
JYS	**Shirataka**	**1.52**	**311**	P	**Pn**	**06 35 07.9**	**+0.7**
JYS				*e*S	**Sb**	**06 35 27.0**	**-1.5**
MJAR	**Matsushiro Arr**	**2.75**	**256**	P	**Pn**	**06 35 25.0**	**+0.9**
	1.9nm,0.3s,baz=82,slow=16,SNR=32						
MAT	**Matsushiro**	**2.75**	**256**	P	**Pn**	**06 35 24.4**	**+0.3**
MAT				*e*S	**Sn**	**06 35 59.1**	**+2.7**
JNU	**Nakatsue**	**9.63**	**248**	LR	LR	06 41 38.4	
	comp=Z,116nm,18.0s,baz=352,slow=43						
SEY	**Seymchan**	**26.57**	**11**	P	**P**	**06 40 19.9**	**+2.8**
	0.5nm,0.3s,baz=153,slow=11,SNR=5.2						
SONM	**Songino Array**	**27.75**	**304**	P	**P**	**06 40 28.5**	**+0.4**
	0.9nm,0.8s,baz=98,slow=8.5,SNR=6.0						
H11N2	**WAKE ISLAND Hy**	**28.17**	**121**	T	T	07 10 02.9	
	baz=315,slow=76						
H11N1	**WAKE ISLAND Hy**	**28.18**	**121**	T	T	07 10 07.8	
	baz=315						
H11N3	**WAKE ISLAND Hy**	**28.19**	**121**	T	T	07 10 12.3	
	baz=315,slow=76						
H11S1	**WAKE ISLAND Hy**	**28.89**	**123**	T	T	07 11 04.9	
	baz=316,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.89**	**123**	T	T	07 11 08.2	
	baz=316						
H11S2	**WAKE ISLAND Hy**	**28.91**	**123**	T	T	07 11 09.3	
	baz=316,slow=74						
MKAR	**Makanchi Array**	**44.09**	**302**	pP	pP	06 42 58.3	+2.1
	0.7nm,0.6s,baz=88,slow=11,SNR=4.5						
ILAR	**Eielson Array**	**49.27**	**32**	P	**P**	**06 43 27.4**	**-0.3**
	0.4nm,0.6s,baz=266,slow=6.1,SNR=7.3						
WRA	**Warramunga Arr**	**57.27**	**188**	P	**P**	**06 44 25.7**	**-1.2**
	1.9nm,0.6s,baz=5.7,slow=7.3,SNR=24						
ASAR	**Alice Springs**	**61.00**	**188**	P	**P**	**06 44 51.7**	**-1.0**
	0.6nm,0.7s,baz=16,slow=9.6,SNR=10						
YKA	**Yellowknife Ar**	**63.59**	**30**	P	**P**	**06 45 09.4**	**-0.2**
	0.2nm,0.7s,baz=304,slow=6.5,SNR=3.5						
YKA				pP	**sP**	**06 45 22.6**	**+0.4**
	0.2nm,0.6s,baz=303,slow=6.5,SNR=4.0						
NVAR	**Mina Array Bea**	**74.79**	**53**	P	**P**	**06 46 20.7**	**+1.0**
	0.2nm,0.6s,baz=323,slow=5.9,SNR=2.8						
PDAR	**Pinedale Array**	**77.46**	**46**	P	**P**	**06 46 34.2**	**-0.6**
	0.2nm,0.6s,baz=0.0,slow=2.8,SNR=3.0						
TXAR	**Lajitas Array**	**89.92**	**52**	P	**P**	**06 47 38.9**	**+0.3**
	0.2nm,0.6s,baz=314,slow=2.2,SNR=3.6						

ANF ***18*** *06:37:36.4±0.1, 36°.38N×116°.95W, h10km±1km, ML3.2/32, Error ellipse: s-maj=1.1km s-min=1.0km az=113.0*
REN ***18*** *06:37:36.8, 36°.40N×116°.96W, h9km*
PAS ***18*** *06:37:37.2±1.9, 36°.39N±0°.04×116°.94W±0°.05, h9km±4km, ML3.2/41, Error ellipse: s-maj=6.3km s-min=5.5km az=177.0*
NEIC ***18*** *06:37:37.2±2.8, 36°.37N±0°.04×116°.97W±0°.03, h9km±6km, Error ellipse: s-maj=6.4km s-min=3.1km az=164.0*

ISC 18 06:37:37.5±0.8, 36°.37N±0°.02×116°.97W±0°.01, h15km±7km, n96, σ1§53/125, California-Nevada border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FURC	**Furnace Creek,**	**0.13**	**40**		**Pg**	**06 37 41.6**	**+0.5**
FURC	**Furnace Creek,**	**0.13**	**40**	P	**Pg**	**06 37 39.4**	**-1.7**
	baz=226,SNR=1000						
FMT	**Funeral Mounta**	**0.31**	**29**		**Pg**	**06 37 42.4**	**-1.6**
QSM	**Queen of Sheba**	**0.41**	**168**		**Pg**	**06 37 45.2**	**-0.5**
DAC	**Darwin (Calif)**	**0.51**	**260**		**Pn**	**06 37 49.6**	**-0.8**
MPMC	**Manual Prospec**	**0.52**	**234**		**Pg**	**06 37 47.5**	**-0.4**
MPMC					**Sg**	**06 37 54.8**	**-0.1**
MPMC	**Manual Prospec**	**0.52**	**234**	P	**Pg**	**06 37 47.2**	**-0.6**
	baz=52,SNR=1000						
MPMC				S	**Sg**	**06 37 54.7**	**-0.1**
	baz=52						
AMDNV	**Amargosa**	**0.56**	**81**		**Pg**	**06 37 47.3**	**-1.3**
AMDNV					**Sg**	**06 37 54.5**	**-1.6**
CGO	**Cerro Gordo**	**0.70**	**286**		**Pg**	**06 37 49.8**	**-1.4**
GRAC	**Grapevine Rang**	**0.70**	**333**		**Pg**	**06 37 50.0**	**-1.3**
GRAC					**Sg**	**06 37 59.4**	**-1.2**
GRAC	**Grapevine Rang**	**0.70**	**333**	P	**Pg**	**06 37 49.9**	**-1.3**
	baz=151,SNR=141						
GRAC				S	**Sg**	**06 37 60.0**	**-0.6**
	baz=151						
SHOC	**Shoshone, Teco**	**0.73**	**129**		**Pg**	**06 37 50.7**	**-1.0**
SHOC					**Sg**	**06 38 00.4**	**-0.9**
SHOC	**Shoshone, Teco**	**0.73**	**129**	P	**Pg**	**06 37 51.4**	**-0.3**
	baz=312,SNR=30						
SHOC				S	**Sg**	**06 38 00.4**	**-0.9**
	baz=312						
CLC	**China Lake**	**0.75**	**223**		**Sg**	**06 38 01.8**	**-0.1**
JRC2	**Joshua Ridge**	**0.78**	**241**		**Sg**	**06 38 02.9**	**0.0**
VPEM	**Volcano Peak E**	**0.80**	**239**		**Pg**	**06 37 52.5**	**-0.5**
TPNV	**Topopah Spring**	**0.82**	**45**		**Pg**	**06 37 52.0**	**-1.5**
TPNV	**Topopah Spring**	**0.82**	**45**	P	**Pg**	**06 37 52.0**	**-1.5**
	baz=226,SNR=724						
TPNV				S	**Sg**	**06 38 03.1**	**-1.2**
	baz=226						
TOW	**Tower One**	**0.85**	**229**		**Pb**	**06 37 54.0**	**0.0**
CCCA	**Chr Cany lake**	**0.90**	**201**		**Pg**	**06 37 54.6**	**-0.2**
CCCA					**Sb**	**06 38 06.8**	**+0.3**
CWC	**Cottonwood Cre**	**0.90**	**275**		**Pg**	**06 37 53.6**	**-1.3**
CWC					**Sg**	**06 38 06.4**	**-0.3**
CWC	**Cottonwood Cre**	**0.90**	**275**	P	**Pg**	**06 37 53.7**	**-1.3**
	baz=92						
CWC				S	**Sg**	**06 38 06.4**	**-0.3**
	baz=92						
WCHM	**Chimney Peak**	**1.02**	**242**		**Pg**	**06 37 56.5**	**-0.7**
LRMC	**Laurel Mtn Rad**	**1.06**	**213**		**Pg**	**06 37 57.0**	**-0.9**
LRMC	**Laurel Mtn Rad**	**1.06**	**213**	P	**Pg**	**06 37 57.1**	**-0.9**
	baz=32,SNR=172						
LRMC				S	**Sb**	**06 38 12.1**	**+0.8**
	baz=32						
GSC	**Goldstone, Bar**	**1.07**	**173**	Pg	**Pg**	**06 37 56.9**	**-1.2**
GSC	**Goldstone, Bar**	**1.07**	**173**	P	**Pg**	**06 37 57.3**	**-0.9**
	baz=354,SNR=183						
GSC				S	**Sn**	**06 38 12.8**	**+0.1**
	baz=354						
JFS	**Joseph F. Stat**	**1.16**	**210**		**Pg**	**06 37 59.1**	**-0.8**
TIN	**Tinemaha, Big**	**1.22**	**305**		**Pb**	**06 38 00.6**	**+0.2**
TIN	**Tinemaha, Big**	**1.22**	**305**	P	**Pb**	**06 37 59.9**	**-0.5**
	baz=122,SNR=46						
WORM	**Onyx Ranch**	**1.23**	**237**		**Pn**	**06 38 00.4**	**+0.2**
TUQ	**Turquoise Moun**	**1.26**	**137**		**Pn**	**06 37 59.5**	**-1.1**
TUQ	**Turquoise Moun**	**1.26**	**137**	P	**Pn**	**06 37 59.6**	**-1.1**
	baz=319,SNR=105						
TUQ				S	**Sg**	**06 38 17.9**	**-0.3**
	baz=319						
ISA	**Isabella, Lake**	**1.41**	**241**		**Pn**	**06 38 03.0**	**+0.4**
ISA	**Isabella, Lake**	**1.41**	**241**	Pg	**Pb**	**06 38 03.5**	**0.0**
	baz=59,SNR=160						
ISA				Sb	**Sg**	**06 38 22.4**	**-0.4**
	baz=59						
WASM	**Alta Sierra Ca**	**1.43**	**245**		**Pg**	**06 38 04.5**	**-0.5**
SPG2	**Springville 2**	**1.46**	**264**		**Pn**	**06 38 03.8**	**+0.5**
SHPR	**Sheep Range**	**1.47**	**84**		**Pn**	**06 38 03.1**	**-0.5**
RRX	**Edison Barstow**	**1.49**	**181**	Sg	**Sg**	**06 38 26.9**	**+1.5**
	baz=1.2						
HYS	**Haystack Butte**	**1.58**	**198**		**Pb**	**06 38 06.8**	**+0.5**
HEC	**Hector,Ludlow**	**1.62**	**161**	Pn	**Pn**	**06 38 04.5**	**-1.0**
	baz=342,SNR=42						
HEC				Pg	**Pb**	**06 38 07.3**	**+0.3**
	baz=342						
HEC				Sb	**Sg**	**06 38 28.8**	**-0.8**
	baz=342						
EDW2	**Edwards Air Fo**	**1.70**	**210**	Pg	**Pg**	**06 38 09.2**	**-0.9**
	baz=29,SNR=75						
EDW2				Sb	**Sg**	**06 38 31.9**	**-0.3**
	baz=29						
VES	**Vestal, Richgr**	**1.79**	**254**		**Pg**	**06 38 10.9**	**-0.9**
VES	**Vestal, Richgr**	**1.79**	**254**	Pg	**Pb**	**06 38 10.8**	**+0.8**
	baz=72,SNR=46						
VES				Sb	**Sg**	**06 38 34.6**	**-0.5**
	baz=72						
TEJ	**El Tejon**	**1.80**	**231**		**Pb**	**06 38 10.5**	**+0.4**
SBB	**Saddle Back Bu**	**1.81**	**203**		**Pb**	**06 38 11.2**	**+0.8**
GMRC	**Granite Mounta**	**1.91**	**146**	Pb	**Pb**	**06 38 11.3**	**-0.7**
	baz=327,SNR=36						
GMRC				Sb	**Sb**	**06 38 37.1**	**+1.4**
	baz=327						
ARVC	**Arvin**	**1.95**	**231**	Pg	**Pb**	**06 38 13.5**	**+0.7**
	baz=50,SNR=10						
MLAC	**Mammoth, Mammo**	**1.96**	**311**	Pg	**Pg**	**06 38 14.5**	**-0.6**
	baz=129,SNR=21						
OMMB	**Old Mammoth Mi**	**2.05**	**308**		**Pn**	**06 38 10.8**	**-0.9**
BBRC	**Big Bear Solar**	**2.10**	**179**	Pg	**Pg**	**06 38 16.6**	**-1.1**
	baz=359,SNR=13						
BBRC				Sg	**Sg**	**06 38 45.7**	**+0.7**
	baz=359						
MDPB	**Devils Postpil**	**2.11**	**307**	Pn	**Pn**	**06 38 11.1**	**-1.4**
OSI	**Osito Audit: C**	**2.26**	**220**		**Pb**	**06 38 18.7**	**+0.7**
OSI	**Osito Audit: C**	**2.26**	**220**	Pg	**Pg**	**06 38 19.3**	**-1.5**
	baz=38						
R11A	**Troy Canyon, C**	**2.27**	**29**	Pn	**Pn**	**06 38 13.9**	**-0.6**
	baz=210,SNR=136						
R11A				Pb	**Pb**	**06 38 17.2**	**-1.0**
	baz=210						
R11A				Sb	**Sb**	**06 38 47.8**	**+1.7**
	baz=210						
NV11	**Mina Array Sit**	**2.27**	**336**		**Pn**	**06 38 14.3**	**-0.3**
MWC	**Mount Wilson**	**2.31**	**203**		**Pb**	**06 38 20.2**	**+1.1**
DECC	**Green Verdugo**	**2.38**	**208**	Pg	**Pg**	**06 38 22.6**	**-0.6**
	baz=27,SNR=25						
PASC	**Pasadena Art C**	**2.40**	**205**		**Pb**	**06 38 21.7**	**+1.2**
PASC	**Pasadena Art C**	**2.40**	**205**		**Pg**	**06 38 21.9**	**-1.6**
BELC	**Belle Mtn. Jos**	**2.49**	**161**	Sb	**Sg**	**06 38 55.4**	**-2.1**
	baz=342						
RYN	**Ryan**	**2.57**	**332**		**Pn**	**06 38 18.2**	**-0.5**
IRM	**Iron Mountain**	**2.66**	**145**	Pg	**Pg**	**06 38 27.1**	**-1.4**
	baz=327						
IRM				Sb	**Sg**	**06 39 01.1**	**-1.9**
	baz=327						
SMMC	**Simmler**	**2.67**	**248**	Pb	**Pb**	**06 38 25.7**	**+0.6**
	baz=65,SNR=14						
SMMC				Sb	**Sg**	**06 39 01.2**	**-2.2**
	baz=65						
PAGB	**Antelope Grade**	**2.73**	**258**		**Pb**	**06 38 25.2**	**-0.9**
PKM	**Mcpherson Peak**	**2.75**	**238**	Pg	**Pb**	**06 38 27.7**	**+1.3**
	baz=56,SNR=27						
MURC	**Murrieta**	**2.77**	**184**	Pg	**Pg**	**06 38 28.8**	**-1.7**
	baz=4.0,SNR=15						
PFO	**Pinyon Flats O**	**2.78**	**171**		**Pn**	**06 38 20.8**	**-0.8**
PFO	**Pinyon Flats O**	**2.78**	**171**	Pn	**Pn**	**06 38 21.3**	**-0.3**
	baz=352,SNR=11						
PFO				Pg	**Pg**	**06 38 28.8**	**-2.0**
	baz=352						
PFO				S	**Sn**	**06 38 54.9**	**0.0**
	baz=352						
XPFO	**Pion Flat**	**2.78**	**171**		**Pn**	**06 38 20.6**	**-1.0**
W13A	**Hualapai Mount**	**2.81**	**116**		**Pb**	**06 38 28.9**	**+1.4**
KVN	**Kaiserville**	**2.83**	**342**		**Pn**	**06 38 22.6**	**+0.3**
WAKR	**Walker**	**2.90**	**318**		**Pn**	**06 38 22.1**	**-1.3**
LCMT	**Little Creek M**	**3.06**	**77**		**Pn**	**06 38 26.6**	**+1.1**
YERR	**Yerington**	**3.18**	**326**		**Pn**	**06 38 26.8**	**-0.2**
CIS	**Catalina Islan**	**3.19**	**202**	Pg	**Pg**	**06 38 37.7**	**-0.8**
	baz=21,SNR=9.8						
CMB	**Columbia Colle**	**3.20**	**302**		**Pb**	**06 38 33.8**	**-0.2**
Y12C	**Blythe**	**3.29**	**142**		**Pn**	**06 38 29.0**	**+0.6**
Y12C	**Blythe**	**3.29**	**142**	Sb	**Sg**	**06 39 21.1**	**-2.1**
	baz=324						
KNB	**Kanab**	**3.40**	**78**		**Pn**	**06 38 30.4**	**+0.3**
109C	**Camp Elliot, M**	**3.47**	**182**		**Pb**	**06 38 39.9**	**+1.3**
MONP2	**Monument Peak**	**3.49**	**172**	Pg	**Pb**	**06 38 41.6**	**+2.5**
	baz=353,SNR=11						
SAO	**San Andreas Ge**	**3.63**	**278**	Pn	**Pn**	**06 38 32.9**	**-0.2**
GLA	**Glamis**	**3.75**	**151**		**Pb**	**06 38 44.5**	**+1.1**
GLA	**Glamis**	**3.75**	**151**	Sb	**Sg**	**06 39 35.6**	**-2.2**
	baz=333						
IKP	**In-Ko-Pah, Jac**	**3.77**	**169**	Pg	**Pg**	**06 38 46.8**	**-3.0**
	baz=350,SNR=9.0						
IKP				Sb	**Sg**	**06 39 35.7**	**-2.9**
	baz=350						
Y14A	**Wickenburg**	**4.05**	**126**		**Pg**	**06 38 53.0**	**-2.0**
AFDM	**Forest Hills D**	**4.09**	**310**		**Pb**	**06 38 51.2**	**+2.0**
ELK	**Elko**	**4.58**	**17**		**Pn**	**06 38 46.7**	**+0.3**
WUAZ	**Wupatki**	**4.62**	**99**		**Pb**	**06 39 01.8**	**+3.5**
X16A	**Lo Mia Camp, P**	**4.92**	**112**		**Pb**	**06 39 05.8**	**+2.4**
DUG	**Dugway, Tooele**	**5.03**	**39**		**Pb**	**06 39 08.8**	**+3.5**
DUG	**Dugway, Tooele**	**5.03**	**39**	Pg	**Pg**	**06 39 09.7**	**-4.1**
	baz=222						
DUG				Sb	**Sb**	**06 40 12.2**	**+6.6**
	baz=222						
NLU	**North Lily Min**	**5.26**	**46**		**Pg**	**06 39 13.9**	**-4.4**
BGU	**Big Grassy Mou**	**5.50**	**33**		**Pb**	**06 39 17.8**	**+4.5**
CTU	**Camp Tracy**	**5.95**	**42**		**Pg**	**06 39 28.5**	**-2.8**

SJA ***18*** *06:42:15.9±0.9, 21°.30S×67°.64W, h186km±8km, ML2.6, MW2.9*
GUC ***18*** *06:42:17.7±0.7, 21°.26S×68°.07W, h192km±5km, ML3.3*

ISC 18 06:42:16.0±1.7, 21°.28S±0°.05×67°.74W±0°.05, h190km±15km, n25, σ1§33/46, 10C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**1.49**	**250**	⇓*e*P	**Pn**	**06 42 49.8**	**+0.9**
PB09				*e*S	**Sn**	**06 43 13.4**	**-1.0**
PB09	**IPOC Station P**	**1.49**	**250**	*i* P	**Pn**	**06 42 50.0**	**+1.0**
PB09				*i* S	**Sn**	**06 43 14.7**	**+0.3**
LVC	**Limon Verde**	**1.71**	**219**	⇑*i*P	**Pn**	**06 42 52.1**	**+0.9**
LVC				*e*S	**Sn**	**06 43 18.8**	**+0.1**
LVC	**Limon Verde**	**1.71**	**219**	*e*P	**Pn**	**06 42 51.9**	**+0.7**
LVC				*i* S	**Sn**	**06 43 18.6**	**-0.1**
PB08	**IPOC Station P**	**1.74**	**310**	⇑*i*P	**Pn**	**06 42 52.6**	**+1.0**
PB08				*e*S	**Sn**	**06 43 18.8**	**-0.3**
PB08				IAML		06 43 20.7	
	comp=N,108nm,0.3s						
PB03	**IPOC Station P**	**2.02**	**247**	⇑*i*P	**Pn**	**06 42 54.5**	**+0.3**
PB03				*e*S	**Sn**	**06 43 22.6**	**-1.2**
PB03				IAML		06 43 24.2	
	comp=E,250nm,0.1s						
GO01	**Chusmiza**	**2.10**	**319**	⇑*i*P	**Pn**	**06 42 56.4**	**+1.0**
GO01				*e*S	**Sn**	**06 43 26.0**	**0.0**
GO01				IAML		06 43 30.7	
	comp=N,184nm,0.2s						
PB06	**IPOC Station P**	**2.21**	**230**	*e*P	**Pn**	**06 42 57.1**	**+0.9**
PB06				*e*S	**Sn**	**06 43 26.7**	**-0.9**
PB06	**IPOC Station P**	**2.21**	**230**	*i* P	**Pn**	**06 42 57.1**	**+0.9**
PB06				*i* S	**Sn**	**06 43 27.6**	**0.0**
YJA	**Yavi**	**2.26**	**114**	*e*P	**Pn**	**06 42 57.4**	**+0.3**
YJA				*i* S	**Sn**	**06 43 26.6**	**-2.2**
YJA				IAML		06 43 30.8	
	comp=Z,14nm,0.2s						
PB11	**IPOC Station P**	**2.34**	**310**	⇑*i*P	**Pn**	**06 42 58.1**	**+0.3**
PB11				*e*S	**Sn**	**06 43 28.8**	**-1.4**
TA01	**Diego Aracena**	**2.39**	**287**	⇑*i*P	**Pn**	**06 42 57.8**	**-0.2**
TA01				*e*S	**Sn**	**06 43 28.1**	**-2.6**
PB04	**IPOC Station P**	**2.47**	**244**	⇑*i*P	**Pn**	**06 42 59.5**	**+0.3**
PB04				*e*S	**Sn**	**06 43 31.4**	**-1.4**
PB04				IAML		06 43 34.0	
	comp=N,155nm,0.2s						
PB04	**IPOC Station P**	**2.47**	**244**	*i* P	**Pn**	**06 42 59.7**	**+0.6**
PB04				*i* S	**Sn**	**06 43 31.2**	**-1.5**
PB15	**IPOC Station P**	**2.50**	**220**	⇑*i*P	**Pn**	**06 43 00.8**	**+1.3**
PB15				*e*S	**Sn**	**06 43 33.6**	**+0.1**
PB15	**IPOC Station P**	**2.50**	**220**	*e*P	**Pn**	**06 43 00.8**	**+1.3**
PB15				*i* S	**Sn**	**06 43 34.0**	**+0.5**
MNMC	**Minye Minye**	**2.76**	**321**	⇑*i*P	**Pn**	**06 43 03.5**	**+0.9**
MNMC				*e*S	**Sn**	**06 43 38.4**	**-0.5**
PB05	**IPOC Station P**	**2.77**	**235**	*i* P	**Pn**	**06 43 03.4**	**+0.9**
PB05				*i* S	**Sn**	**06 43 37.3**	**-1.5**
PSGC	**Pisagua**	**2.79**	**306**	⇑*i*P	**Pn**	**06 43 02.7**	**-0.1**
PSGC				*e*S	**Sn**	**06 43 37.0**	**-2.3**
PSGC				IAML		06 43 39.5	
	comp=N,61nm,0.3s						
PB10	**IPOC Station P**	**3.42**	**229**	*i* P	**Pn**	**06 43 11.0**	**+0.7**
PB10				*i* S	**Sn**	**06 43 49.8**	**-3.0**
AZAP	**Zapla**	**3.83**	**140**	*i* P	**Pn**	**06 43 16.1**	**+0.5**
AZAP				*i* S	**Sn**	**06 43 59.2**	**-3.1**
AZAP				IAML		06 44 05.5	
	comp=Z,10nm,0.8s						
SLA	**San Lorenzo**	**4.00**	**149**	*i* P	**Pn**	**06 43 19.5**	**+1.9**
LPAZ	**La Paz**	**4.98**	**356**	*i* P	**Pn**	**06 43 32.5**	**+1.9**
VCAZ	**Vinchina**	**7.44**	**183**	*i* P	**Pn**	**06 44 04.5**	**+2.5**
CFA	**Coronel Fontan**	**10.29**	**182**	*i* P	**Pn**	**06 44 39.9**	**+0.7**

IDC ***18*** *07:06:24.4±2.3, 50°.81N×179°.18E, h0km, mb3.3/5, mb1 3.7/5, mb1mx3.4/36, mbtmp3.4/5, Error ellipse: s-maj=67.0km s-min=29.4km az=4.0*
NEIC ***18*** *07:06:27.4±3.1, 50°.6N±0°.2×179°.3E±0°.1,

SC01 eS **Sn** 07 07 40.6 +0.8
SC01 IAML 07 07 48.3
comp=Z,1μm,0.7s
SC01 Santiago de lo 1.36 317 Pn 07 07 21.4 +0.2
SC01 Sn **Sn** 07 07 40.6 +0.8
SJM1 San Juan de la 1.46 285 *i* P **Pn** 07 07 23.4 +0.9
SJM1 eS **Sn** 07 07 42.4 +0.6
SDDR Presa de Saban 1.57 291 *i* P **Pn** 07 07 24.3 +0.4
SDDR eS **Sn** 07 07 43.7 -0.7
SDDR IAML 07 07 51.2
comp=Z,657nm,0.6s
SDDR Presa de Saban 1.57 291 Pn 07 07 23.9 +0.1
MPR Mayaguez 2.47 95 Pn 07 07 37.7 +2.2
AGPR Aguadilla, PR 2.49 89 *i* P **Pn** 07 07 37.7 +2.0
AGPR IAML 07 08 17.7
comp=Z,434nm,0.2s
AGPR Aguadilla, PR 2.49 89 Pn 07 07 37.4 +1.7
CRPR Cabo Rojo, PR 2.53 99 Pn 07 07 37.6 +1.3
MLPR Magueyes Islan 2.60 100 Pn 07 07 37.4 +0.3
JAKH Jacmel 2.65 266 *i* P **Pn** 07 07 38.7 +0.9
JAKH IAML 07 08 13.0
comp=E,150nm,0.4s
LGNH Logne 2.73 272 Pn 07 07 39.1 +0.2
AOPR Arecibo Observ 2.83 91 Pn 07 07 41.4 +1.1
OBIP Obispado Ponce 3.00 97 Pn 07 07 43.3 +0.9
EMPR Esperanza - Ma 3.04 89 Pn 07 07 44.4 +1.4
SJG San Juan 3.42 95 P **Pn** 07 07 49.0 +0.9
comp=E,9.3nm,0.3s,baz=318,slow=14,SNR=19
SJG S **Sn** 07 08 30.6 +2.8
comp=E,26nm,0.3s,baz=116,slow=22,SNR=20
SJG San Juan 3.42 95 Pn 07 07 48.8 +0.6
GCPR Guaynabo City 3.47 91 Pn 07 07 49.5 +0.7
IGPR InterUniversit 3.48 97 Pn 07 07 54.1 +5.2
CBYP Canovanas 3.69 92 Pn 07 07 51.6 -0.1
HUMP Col San Antoni 3.70 94 Pn 07 07 53.3 +1.4
MTP Monte Pirata 3.99 94 Pn 07 07 56.6 +0.8
GTBY Guantanamo Bay 5.29 287 *i* P **Pn** 07 08 11.2 -2.3
GTBY Guantanamo Bay 5.29 287 Pn 07 08 11.1 -2.4
SMRT St. Maarten 6.34 92 Pn **Pn** 07 08 23.4 -1.3
URIC Uribia, Colomb 7.04 198 Pn **Pn** 07 08 37.6 +0.3
SDV Santo Domingo 9.53 185 P **Pn** 07 09 14.6 +3.2
comp=E,3.5nm,0.3s,baz=48,slow=6.8,SNR=55
SDV S **Sn** 07 10 55.3 -1.6
comp=E,1.9nm,0.3s,baz=282,slow=8.8,SNR=3.6
SDV Santo Domingo 9.53 185 Pn 07 09 14.2 +2.9
PCRV Puerto La Cruz 9.58 148 P **Pn** 07 09 14.8 +2.9
comp=E,1.2nm,0.3s,baz=305,slow=1.8,SNR=7.0
PCRV S **Sn** 07 10 52.2 -5.6
comp=E,1.1nm,0.3s,baz=332,slow=3.3,SNR=3.1
PLCV Puerto La Cruz 9.61 148 Pn 07 09 14.8 +2.5
PLCV **Sn** 07 10 52.2 -6.4
TOSP Speyside 11.37 127 Pn **Pn** 07 09 37.0 +0.8
RUSC La Rusia 12.89 195 Pn 07 09 58.3 +1.5
BCIP Isla Barro Col 13.45 228 Pn 07 10 03.1 -0.6
ROSC El Rosal 14.23 199 P **P** 07 10 22.4 +3.8
BBSR BB Station 14.60 17 Pn **Pn** 07 10 17.7 -0.8
FLOC Florencia 17.73 200 P **Pn** 07 11 01.8 +4.4
BIRD Birdtown, Kers 18.76 331 P 07 11 08.2 +0.1
BIRD IAmb IAmb 07 11 14.1
comp=Z,28nm,1.4s
Y52A Lilburn 20.00 323 P Pn 07 11 25.7 +1.4
OTAV Otavalo 20.01 206 P Pn 07 11 25.7 +0.8
OTAV IAmb IAmb 07 11 30.3
comp=Z,12nm,0.9s
V55A Taylorsville 20.10 332 P Pn 07 11 26.7 +1.3
V55A IAmb IAmb 07 11 32.1
comp=Z,16nm,1.3s
BRAL Brewton 20.16 312 P P 07 11 24.9 +1.6
Z50A Ashland 20.70 319 P P 07 11 29.5 +0.4
Z50A IAmb IAmb 07 11 43.4
comp=Z,12nm,1.2s
LRAL Lakeview Retre 21.24 317 P P 07 11 35.0 +0.1
LRAL IAmb IAmb 07 11 49.3
comp=Z,14nm,1.4s
V51A Loudon 21.60 326 P P 07 11 40.6 +1.8
V51A IAmb IAmb 07 11 40.8
comp=Z,8.3nm,0.8s
PSUB Penn St. - Bra 21.98 348 P P 07 11 44.5 +1.8
Q54A Coxs Mills 22.64 337 P P 07 11 50.2 +0.6
Q54A IAmb IAmb 07 11 58.1
comp=Z,16nm,1.4s
ODNJ Ogdensburg 22.96 351 P P 07 11 53.3 +0.5
ODNJ IAmb IAmb 07 12 02.5
comp=Z,15nm,1.5s
N59A State Game Lan 23.00 348 P P 07 11 53.8 +0.6
WVT Waverly 23.79 321 P P 07 12 00.1 -0.4
WHAR Wooly Hollow 26.11 315 P P 07 12 21.2 -0.3
SAML Samuel Colombo 27.97 166 P P 07 12 38.2 +0.1
TUL1 Leonard 28.85 312 P P 07 12 46.2 +0.1
TUL1 IAmb IAmb 07 12 47.1
comp=Z,6.1nm,1.1s
JFWS Jewell Farm 29.95 329 P P 07 12 55.5 -0.2
I42A Draeger Farm, 30.07 332 P P 07 12 56.5 -0.2
TXAR Lajitas Array 32.76 296 P P 07 13 21.1 +0.4
comp=Z,0.1nm,0.4s,baz=123,slow=7.6,SNR=6.5
TXAR Lajitas Array 32.76 296 P P 07 13 20.2 -0.5
ECSD EROS Data Cent 33.87 324 P P 07 13 29.4 -0.6
ECSD IAmb IAmb 07 13 29.9
comp=Z,1.9nm,0.7s
SCHQ Schefferville 36.40 3 P **P 07 13 50.9 -0.7**
comp=Z,2.3nm,0.8s,baz=205,slow=11,SNR=4.1
SCHQ Schefferville 36.40 3 P P 07 13 51.4 -0.2
MNMC Minye Minye 37.33 180 P P 07 13 59.0 -1.1
GO01 Chusmiza 37.87 179 P P 07 14 04.1 -0.8
GO01 IAmb IAmb 07 14 18.1
comp=Z,9.6nm,1.4s
PB11 IPOC Station P 37.96 180 P P 07 14 04.5 -0.7
ULM Lac du Bonnet 37.99 333 P P 07 14 03.6 -1.5
comp=Z,1.6nm,0.7s,baz=126,slow=6.1,SNR=6.2
ULM Lac du Bonnet 37.99 333 P **P** 07 14 02.9 -2.2
ULM IAmb IAmb 07 14 03.7
comp=Z,2.0nm,0.8s
PDAR Pinedale Array 41.45 315 P P 07 14 34.2 0.0
comp=Z,0.2nm,0.6s,baz=134,slow=7.6,SNR=2.8
PDAR Pinedale Array 41.45 315 P P 07 14 33.8 -0.4
MTPU Mount Pierson 41.76 307 P P 07 14 36.5 -0.4
RLMT Red Lodge 42.24 318 P P 07 14 40.6 +0.1
RLMT IAmb IAmb 07 14 52.6
comp=Z,3.9nm,1.4s
FFC Flin Flon 43.80 333 P P 07 14 51.3 -1.4
FFC IAmb IAmb 07 14 51.7
comp=Z,2.9nm,0.6s
FCC Fort Churchill 44.03 342 P P 07 14 53.8 -0.6
FCC IAmb IAmb 07 14 54.0
comp=Z,2.5nm,0.7s
CPUP Villa Florida 46.10 164 P P 07 15 10.6 -0.6
NVAR Mina Array Bea 46.53 306 P P 07 15 16.6 +1.8
comp=Z,0.6nm,0.7s,baz=100,slow=3.0,SNR=5.5
NVAR Mina Array Bea 46.53 306 P P 07 15 15.3 +0.4
YKA Yellowknife Ar 53.79 336 P P 07 16 07.6 -1.3
comp=Z,1.3nm,0.6s,baz=114,slow=6.9,SNR=19
DAWY Dawson 64.70 333 P P 07 17 24.1 -0.1
SCRK Sand Creek 66.69 332 P P 07 17 37.4 +0.3
SCRK IAmb IAmb 07 17 38.7
comp=Z,8.0nm,1.1s
IL31 68.01 333 P P 07 17 45.0 -0.1
ILAR Eielson Array 68.01 333 P P 07 17 44.2 -1.1
comp=Z,0.7nm,0.7s,baz=96,slow=4.4,SNR=9.7
ILAR Eielson Array 68.01 333 P P 07 17 43.4 -1.8
RND Reindeer 68.82 332 P P 07 17 51.1 +0.7
RND IAmb IAmb 07 17 52.8
comp=Z,7.8nm,1.1s
MCK McKinley 68.86 332 P P 07 17 50.7 +0.1
MCK IAmb IAmb 07 17 53.4
comp=Z,6.7nm,1.3s
MLY Manley 69.66 333 P P 07 17 55.0 -0.5
SUA Susitna One 69.70 330 P P 07 17 56.5 +0.5
KTH Kantishna Hill 69.75 332 P P 07 17 56.2 0.0
KTH IAmb IAmb 07 18 03.9
comp=Z,6.3nm,1.0s
ARCES ARCESS Array B 74.71 21 P P 07 18 25.4 -0.1
comp=Z,2.9nm,1.0s,baz=302,slow=2.7,SNR=9.2
ARCES ARCESS Array B 74.71 21 P P 07 18 24.3 -1.2
FIA1 FINESS Array S 76.73 29 P P 07 18 39.5 +2.3
FINES FINESS Array B 76.73 29 P P 07 18 37.2 +0.1
comp=Z,3.2nm,0.9s,baz=251,slow=4.3,SNR=12
LZH Lanzhou 125.44 6 ⇑PKP **PKPdf 07 25 45.6 -1.5**
LZH pPKP pPKPdf 07 26 13.3 -0.7
LZH sPKP 07 26 25.1

*AEIC **18** 07:07:49.8±2.8, 50.8°N±0.1°×179.52°E±0.09, h28km±5km, ML3.7/10, mb4.3/55(NEIC), Error ellipse: s-maj=19.6km*

s-min=8.0km az=171.0
*NEIC **18** 07:07:51.4±2.4, 50.9°N±0.1°×179.44°E±0.10, h50km±8km, Error ellipse: s-maj=15.9km s-min=7.7km az=158.0*
*IDC **18** 07:07:54.7±5.4, 51.30N×179.34E, h75km±46km, mb3.5/12, mb1 3.8/13, mb1mx3.6/36, mbtmp3.8/13, ML2.6/1, MS3.3/4, Ms1 3.3/4, ms1mx2.9/33, Error ellipse: s-maj=44.1km s-min=14.9km az=4.0*

ISC 18 07:07:50.4±0.8, 50.9N±0.1°×179.36E±0.05, h48km, n99, σ1§24/94, mb4.3/31, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TASE	**Tanaga Southea**	**1.88**	**59**		**Pn**	**07 08 20.2**	**0.0**
TAFP	**Tanaga Falls P**	**1.94**	**58**		**Pn**	**07 08 21.0**	**0.0**
TAFP					**Sn**	**07 08 45.7**	**+1.4**
TAPA	**Tanaga Point A**	**2.00**	**61**		**Pn**	**07 08 21.2**	**-0.5**
KIMD	**Kanaga Island**	**2.31**	**66**		**Pn**	**07 08 26.0**	**+0.1**
KIKV	**Kanaga Island**	**2.39**	**64**		**Pn**	**07 08 27.2**	**+0.2**
KIWB	**Kanaga Island**	**2.39**	**65**	Pn	**Pn**	**07 08 26.6**	**-0.4**
ADK	**Adak**	**2.67**	**67**		**Pn**	**07 08 30.4**	**-0.4**
GSTD	**Great Sitkin T**	**3.04**	**66**		**Pn**	**07 08 36.9**	**+0.8**
GSTD					**Sn**	**07 09 11.9**	**+0.6**
SMY	**Shemya**	**3.75**	**301**		**Pn**	**07 08 46.5**	**+0.9**
UNV	**Unalaska Valle**	**9.14**	**66**	Pn	**Pn**	**07 09 59.4**	**-0.1**
SDPT	**Sand Point**	**12.89**	**62**	Pn	**Pn**	**07 10 50.3**	**-0.4**
PETK	**Petropavlovsk-**	**13.52**	**288**	P	**Pn**	**07 11 01.6**	**+2.2**
	0.2nm,0.3s,baz=89,slow=14,SNR=4.2						
PETK				LR	LR	07 16 33.2	
	comp=Z,62nm,18.9s,baz=62,slow=39						
PETK	**Petropavlovsk-**	**13.52**	**288**		**Pn**	**07 11 01.4**	**+2.0**
OHAK	**Old Harbor**	**17.18**	**58**	Pn	**Pn**	**07 11 45.2**	**-1.5**
KDAK	**Kodiak Island**	**17.66**	**56**	P	**Pn**	**07 11 49.3**	**-3.3**
	1.4nm,0.3s,baz=266,slow=6.7,SNR=8.2						
KDAK	**Kodiak Island**	**17.66**	**56**	P	**Pn**	**07 11 48.2**	**-4.4**
RSO	**Redoubt South**	**18.27**	**48**	P	**P**	**07 11 58.7**	**-1.4**
SKT	**Skwentna**	**19.36**	**44**	P	**Pn**	**07 12 12.5**	**-0.6**
SKT				IAmb	IAmb	07 12 13.2	
	comp=Z,23nm,1.2s						
SUA	**Susitna One**	**19.53**	**46**	P	**Pn**	**07 12 15.4**	**+0.1**
SUA				IAmb	IAmb	07 12 16.9	
	comp=Z,28nm,1.2s						
CAST	**Castle Rocks**	**19.71**	**40**	P	**Pn**	**07 12 17.4**	**+0.1**
SEW	**Seward**	**19.75**	**50**	P	**P**	**07 12 16.4**	**+0.5**
KTH	**Kantishna Hill**	**20.24**	**40**	P	Pn	07 12 22.4	-1.2
KTH				IAmb	IAmb	07 12 26.6	
	comp=Z,12nm,1.0s						
IMAR	**Indian Mountai**	**20.40**	**32**	P	**P**	**07 12 22.6**	**-0.4**
GHO	**Glory Hole Cre**	**20.45**	**46**	P	**P**	**07 12 24.4**	**+0.8**
GHO				IAmb	IAmb	07 12 37.8	
	comp=Z,25nm,1.3s						
KNK	**Knik Glacier**	**20.56**	**47**	P	**P**	**07 12 25.7**	**+0.9**
SML	**Sawmill**	**20.73**	**46**	P	Pn	07 12 30.8	+1.4
SML				IAmb	IAmb	07 12 46.5	
	comp=Z,25nm,1.2s						
MLY	**Manley**	**20.97**	**36**	P	**P**	**07 12 30.5**	**+1.3**
RND	**Reindeer**	**21.03**	**41**	P	**P**	**07 12 31.4**	**+1.5**
RND				IAmb	IAmb	07 12 48.2	
	comp=Z,22nm,1.2s						
MCK	**McKinley**	**21.12**	**40**	P	**P**	**07 12 33.0**	**+2.2**
SCM	**Sheep Creek Mo**	**21.20**	**46**	P	**P**	**07 12 30.4**	**-1.3**
DHY	**Denali Highway**	**21.55**	**43**	P	**P**	**07 12 35.6**	**+0.1**
WRH	**Wood River Hil**	**21.75**	**39**	P	**P**	**07 12 36.8**	**-0.7**
MDM	**Murphy Dome**	**21.90**	**38**	P	**P**	**07 12 39.7**	**+0.6**
MDM				IAmb	IAmb	07 12 55.2	
	comp=Z,6.0nm,0.8s						
HDA	**Harding Lake**	**22.19**	**40**	P	**P**	**07 12 40.4**	**-1.8**
HDA				IAmb	IAmb	07 12 54.0	
	comp=Z,14nm,1.5s						
IL31		**22.35**	**39**	P	**P**	**07 12 46.3**	**+2.4**
ILAR	**Eielson Array**	**22.35**	**39**	P	**P**	**07 12 41.6**	**-2.3**
	comp=Z,0.6nm,0.8s,baz=243,slow=10.0,SNR=4.5						
ILAR	**Eielson Array**	**22.35**	**39**	P	**P**	**07 12 45.9**	**+2.0**
GLB	**Gilahina Butte**	**22.74**	**48**	P	**P**	**07 12 50.0**	**+1.9**
GLB				IAmb	IAmb	07 12 58.6	
	comp=Z,21nm,1.4s						
SCRK	**Sand Creek**	**23.27**	**42**	P	**P**	**07 12 52.1**	**-1.4**
BCAR	**Beaver Creek A**	**24.00**	**45**	P	**P**	**07 12 59.8**	**-0.5**
BMAR	**Burnt Mountain**	**24.28**	**34**	P	**P**	**07 13 02.1**	**-0.7**
EGAK	**Eagle**	**24.67**	**41**	P	**P**	**07 13 05.9**	**-0.4**
EGAK				IAmb	IAmb	07 13 07.4	
	comp=Z,8.1nm,0.9s						
DHAK	**Deception Hill**	**25.29**	**55**	P	**P**	**07 13 11.0**	**-1.0**
INK	**Inuvik**	**28.52**	**35**	P	**P**	**07 13 41.2**	**+0.3**
	comp=Z,1.1nm,0.5s,baz=263,slow=7.1,SNR=5.5						
INK	**Inuvik**	**28.52**	**35**	P	**P**	**07 13 42.3**	**+1.4**
INK				IAmb	IAmb	07 13 58.3	
	comp=Z,8.7nm,1.5s						
MOBC	**Moresby Island**	**29.58**	**66**	P	**P**	**07 13 49.6**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**32.62**	**202**	T	T	07 49 29.4	
	baz=7.0						
H11N3	**WAKE ISLAND Hy**	**32.63**	**202**	T	T	07 49 19.7	
	baz=7.0						
H11N1	**WAKE ISLAND Hy**	**32.64**	**202**	T	T	07 49 30.9	
	baz=7.0						
YKA	**Yellowknife Ar**	**36.40**	**46**	P	**P**	**07 14 48.5**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=282,slow=8.3,SNR=11						
YKA				PcP	**PcP**	**07 17 11.9**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=291,slow=3.9,SNR=4.1						
LON	**Longmire**	**38.06**	**73**	P	**P**	**07 15 05.7**	**+1.5**
KSRS	**Korea Array**	**38.48**	**270**	LR	LR	07 32 14.2	
	comp=Z,13nm,18.8s,baz=5.0,slow=38						
LTY	**Liberty**	**38.51**	**71**	P	**P**	**07 15 08.7**	**+0.8**
LTY				IAmb	IAmb	07 15 09.6	
	comp=Z,7.7nm,1.4s						
B08A	**Colville Reser**	**38.79**	**69**	P	**P**	**07 15 11.0**	**+0.9**
HAWA	**Hanford**	**39.61**	**72**	P	**P**	**07 15 18.1**	**+1.1**
HAWA				IAmb	IAmb	07 15 19.0	
	comp=Z,7.9nm,1.3s						
NEW	**Newport**	**40.14**	**68**	P	**P**	**07 15 22.0**	**+0.6**
NEW				IAmb	IAmb	07 15 34.3	
	comp=Z,6.2nm,1.4s						
WVOR	**Wild Horse Val**	**42.24**	**77**	P	**P**	**07 15 40.8**	**+1.9**
MCMT	**McKenzie Canyo**	**44.43**	**70**	P	**P**	**07 15 57.5**	**+0.9**
MDPB	**Devils Postpil**	**44.76**	**82**	P	**P**	**07 16 01.1**	**+1.7**
NVAR	**Mina Array Bea**	**44.77**	**81**	P	**P**	**07 16 01.0**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=293,slow=5.1,SNR=6.5						
NVAR	**Mina Array Bea**	**44.77**	**81**	P	**P**	**07 16 00.4**	**+1.1**
QLMT	**Earthquake Lak**	**45.27**	**69**	P	**P**	**07 16 03.2**	**-0.1**
ELK	**Elko**	**45.29**	**76**	P	**P**	**07 16 04.2**	**+0.7**
TLY	**Talaya**	**45.34**	**302**	LR	LR	07 36 06.3	
	comp=Z,50nm,18.2s,baz=46,slow=38						
YHL	**Hebgen Lake**	**45.41**	**69**	P	**P**	**07 16 05.2**	**+0.8**
YNR	**Norris Junctio**	**45.78**	**69**	P	**P**	**07 16 08.7**	**+1.4**
SONM	**Songino Array**	**45.83**	**296**	P	**P**	**07 16 07.8**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=53,slow=9.6,SNR=5.1						
SONM	**Songino Array**	**45.83**	**296**	P	**P**	**07 16 07.7**	**+0.2**
H17A	**Grant Village**	**46.02**	**69**	P	**P**	**07 16 11.0**	**+1.8**
H17A				IAmb	IAmb	07 16 11.8	
	comp=Z,3.3nm,0.8s						
FLWY	**Flagg Ranch**	**46.12**	**70**	P	**P**	**07 16 11.1**	**+1.1**
FLWY				IAmb	IAmb	07 16 11.9	
	comp=Z,4.5nm,0.9s						
RLMT	**Red Lodge**	**46.39**	**68**	P	**P**	**07 16 12.8**	**+0.8**
RLMT				IAmb	IAmb	07 16 14.5	
	comp=Z,4.5nm,1.1s						
GUMO	**Guam**	**46.51**	**229**	P	**P**	**07 16 12.8**	**-0.1**
TPNV	**Topopah Spring**	**46.96**	**81**	P	**P**	**07 16 17.5**	**+0.9**
TPNV				IAmb	IAmb	07 16 19.8	
	comp=Z,3.2nm,0.8s						
DUG	**Dugway, Tooele**	**47.11**	**76**	P	**P**	**07 16 19.0**	**+1.3**
DUG				IAmb	IAmb	07 16 19.6	
	comp=Z,4.0nm,1.3s						
BW06	**Boulder Array**	**47.56**	**71**	P	**P**	**07 16 21.1**	**-0.1**
BW06				IAmb	IAmb	07 16 22.5	
	comp=Z,3.2nm,0.8s						
PD31	**Pinedale Array**	**47.56**	**71**	P	**P**	**07 16 21.5**	**+0.3**
PD31				IAmb	IAmb	07 16 22.5	
	comp=Z,2.9nm,0.8s						
PDAR	**Pinedale Array**	**47.56**	**71**	P	**P**	**07 16 21.5**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=310,slow=3.4,SNR=18						
PDAR	**Pinedale Array**	**47.56**	**71**	P	**P**	**07 16 21.3**	**0.0**
RDMU	**Red Mountain**	**48.86**	**73**	P	**P**	**07 16 32.6**	**+1.3**
SRU	**San Rafael Swe**	**49.17**	**75**	P	**P**	**07 16 35.6**	**+2.0**
U15A	**North Rim**	**49.76**	**79**	P	**P**	**07 16 38.8**	**+0.6**
U15A				IAmb	IAmb	07 16 54.7	
	comp=Z,2.9nm,0.9s						
O20A	**White River Ci**	**49.93**	**73**	P	**P**	**07 16 40.2**	**+0.8**
O20A				IAmb	IAmb	07 16 40.8	
	comp=Z,3.3nm,0.8s						
ZALV	**Zalesovo Beam**	**53.52**	**313**	P	**P**	**07 17 04.7**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=36,slow=7.8,SNR=3.8						
ZALV	**Zalesovo Beam**	**53.52**	**313**	P	**P**	**07 17 03.9**	**-1.8**
KURK	**Kurchatov**	**58.51**	**313**	P	**P**	**07 17 40.9**	**-0.5**
MK31	**Makanchi Array**	**59.42**	**308**	P	**P**	**07 17 46.4**	**-1.5**
MKAR	**Makanchi Array**	**59.42**	**308**	P	**P**	**07 17 46.9**	**-0.9**
	comp=Z,1.0nm,0.4s,baz=45,slow=6.0,SNR=16						
TXAR	**Lajitas Array**	**59.88**	**80**	P	**P**	**07 17 51.9**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=302,slow=6.3,SNR=4.5						
TXAR	**Lajitas Array**	**59.88**	**80**	P	**P**	**07 17 51.3**	**0.0**
BRVK	**Borovoye**	**60.53**	**319**	P	**P**	**07 17 54.7**	**-0.5**
FINES	**FINESS Array B**	**65.99**	**346**	LR	LR	07 50 58.9	
	comp=Z,59nm,18.0s,baz=250,slow=39						
ABKAR	**Akbulak array**	**67.62**	**322**	P	**P**	**07 18 41.5**	**-0.3**
ABKAR				IAmb	IAmb	07 18 43.1	
	comp=Z,3.8nm,1.1s						
KK31	**Karatay Array**	**67.85**	**312**	P	**P**	**07 18 43.4**	**0.0**
KK31				IAmb	IAmb	07 18 45.2	
	comp=Z,3.5nm,0.9s						
KKAR	**Karatay Array**	**67.85**	**312**	P	**P**	**07 18 43.3**	**-0.1**
KKAR				IAmb	IAmb	07 18 45.2	
	comp=Z,3.5nm,0.9s						
NOA	**NORSAR Array B**	**68.02**	**354**	P	**P**	**07 18 43.1**	**-1.1**
	comp=Z,1.2nm,0.8s,baz=9.0,slow=6.4,SNR=5.4						
BTK	**Batken**	**70.03**	**309**	P	**P**	**07 18 58.0**	**+0.9**
AKASG	**Malin Array Be**	**75.64**	**341**	P	**P**	**07 19 28.6**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=21,slow=6.4,SNR=3.2						
BRTR	**Keskin Array B**	**84.89**	**334**	P	**P**	**07 20 20.1**	**0.0**
	comp=Z,0.9nm,0.8s,baz=101,slow=2.5,SNR=4.4						
BRTR	**Keskin Array B**	**84.89**	**334**	P	**P**	**07 20 20.6**	**+0.5**

*NNC **18** 07:24:34.4±0.6, 50.03N×78.76E, h0km, mb3.6, mpv3.1, Error ellipse: s-maj=5.5km s-min=2.7km az=63.0, Suspected Mining explosion.*
*IDC **18** 07:24:35.7±1.1, 50.06N×78.79E, h0km, mb1 3.0/3, mb1mx3.0/35, mbtmp3.0/3, ML2.8/3, Error ellipse: s-maj=13.4km s-min=7.7km az=60.0*
*ASRS **18** 07:24:38.2±0.9, 50°N±4°×7°9E±°, h10km, MLh3.6/7, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

ISC 18 07:24:35.6±0.8, 50.07N±0.04×78.75E±0.04, h0km, n32, σ1§10/51, 24C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.54**	**344**	⇑P	**Pg**	**07 24 45.8**	**-0.2**
KUR07				⇓S	**Sb**	**07 24 54.7**	**-1.6**
KUR06	**Kurchatov Arra**	**0.56**	**345**	⇑P	**Pg**	**07 24 46.0**	**-0.3**
KUR06				⇑S	**Sg**	**07 24 54.9**	**+1.3**
KUR14	**Kurchatov Arra**	**0.56**	**349**	⇑P	**Pg**	**07 24 46.0**	**-0.3**
KUR14				⇑S	**Sg**	**07 24 55.0**	**+1.4**
KUR15	**Kurchatov Arra**	**0.57**	**348**	⇑P	**Pg**	**07 24 46.3**	**-0.3**
KUR15				⇑S	**Sg**	**07 24 55.3**	**+1.4**
KURBB	**Kurchatov Arra**	**0.57**	**346**	Pg	**Pg**	**07 24 46.5**	**-0.2**
	5.1nm,0.3s,baz=164,slow=18,SNR=82						
KURBB				Lg	Lg	07 24 55.5	
	5.3nm,0.3s,baz=168,slow=32,SNR=39						
KURBB	**Kurchatov Arra**	**0.57**	**346**	⇑P	**Pg**	**07 24 46.5**	**-0.2**
	30nm,0.3s						
KURBB				⇑S	**Sg**	**07 24 55.6**	**+1.5**
	198nm,0.7s						
KUR16	**Kurchatov Arra**	**0.58**	**344**	⇑P	**Pg**	**07 24 46.6**	**-0.3**
KUR16				⇓S	**Sg**	**07 24 55.3**	**+0.8**
KUR05	**Kurchatov Arra**	**0.59**	**347**	⇑P	**Pg**	**07 24 46.7**	**-0.3**
KUR05				⇑S	**Sg**	**07 24 55.6**	**+0.9**
KUR17	**Kurchatov Arra**	**0.59**	**342**	⇑P	**Pg**	**07 24 46.7**	**-0.3**
KUR17				⇑S	**Sb**	**07 24 56.4**	**-1.5**
KUR04	**Kurchatov Arra**	**0.61**	**347**	⇑P	**Pg**	**07 24 47.1**	**-0.2**
KUR04				⇑S	**Sg**	**07 24 56.5**	**+1.2**
KURK	**Kurchatov**	**0.66**	**353**	⇑P	**Pg**	**07 24 47.7**	**-0.6**
	11nm,0.3s						
KURK				⇑S	**Sg**	**07 24 57.1**	**+0.4**
	35nm,0.6s						
SEM	**Semipalatinsk**	**1.02**	**70**	P	**Pg**	**07 24 53.5**	**-1.7**
	3.6nm,0.1s						
SEM				S	**Sb**	**07 25 09.7**	**-0.7**
	28nm,0.1s						
MAKZ	**Makanchi**	**3.90**	**145**	P	**Pn**	**07 25 38.6**	**+1.8**
MAKZ				S	**Sn**	**07 26 25.0**	**+1.6**
MAKZ	**Makanchi**	**3.90**	**145**	⇓Pn	**Pn**	**07 25 36.2**	**-0.7**
	7.9nm,1.8s						
MAKZ				⇓Lg	Lg	07 26 33.0	
	8.6nm,0.6s						
BRZS	**Berezniki**	**3.92**	**271**	Pg	**Pb**	**07 25 45.1**	**-0.5**
	14nm,0.3s						
BRZS				Lg	Lg	07 26 38.2	
	4.7nm,0.2s						
UKR	**Ust'-Kan**	**3.94**	**75**	P	**Pn**	**07 25 38.2**	**+0.8**
UKR				S	**Sn**	**07 26 24.4**	**0.0**
MK31	**Makanchi Array**	**4.03**	**143**	⇑Pn	**Pn**	**07 25 38.7**	**+0.1**
	0.1nm,0.1s,baz=324,slow=9.9,SNR=28						
MK31				⇑Pg	**Pb**	**07 25 46.3**	**-1.3**
	1.1nm,0.3s,baz=337,slow=14,SNR=12						
MK31				⇑Lg	Lg	07 26 38.1	
	12nm,0.5s						
MKAR	**Makanchi Array**	**4.03**	**143**	Pn	**Pn**	**07 25 38.8**	**+0.1**
	0.6nm,0.3s,baz=324,slow=10,SNR=36						
MKAR				Lg	Lg	07 26 39.8	
	3.1nm,0.3s,baz=331,slow=26,SNR=15						
MKAR	**Makanchi Array**	**4.03**	**143**	P	**Pn**	**07 25 38.9**	**+0.3**
MKAR				S	**Sn**	**07 26 26.5**	**-0.1**
KAPS	**Kapalarasan**	**4.80**	**175**	Lg	Lg	07 27 03.8	
	9.3nm,0.5s						
ZSN	**Zaisan**	**4.82**	**121**	Pg	**Pb**	**07 26 03.0**	**+2.1**
	4.7nm,0.2s						
ZAA0	**Zalesovo Array**	**5.40**	**42**	⇑Pn	**Pn**	**07 25 57.7**	**+0.4**
	0.2nm,0.3s						
ZAA0				⇑Sn	**Sn**	**07 27 00.1**	**0.0**
	0.1nm,0.3s						
ZAA0				⇓Lg	Lg	07 27 32.6	
	0.5nm,0.7s						
ZALV	**Zalesovo Beam**	**5.40**	**42**	Pn	**Pn**	**07 25 59.0**	**+1.7**
	1.4nm,0.3s,baz=232,slow=15,SNR=14						
ZALV				Lg	Lg	07 27 23

LVC				*e*S		**Sn**	**07 36 12.8**	**+1.1**
PB15	**IPOC Station P**	**2.31**	**290**	⇑*i*P		**Pn**	**07 35 43.5**	**+1.3**
PB15				*i* S		**Sn**	**07 36 14.4**	**+0.2**
PB15	**IPOC Station P**	**2.31**	**290**	*i* P		**Pn**	**07 35 43.5**	**+1.3**
PB15				*e*S		**Sn**	**07 36 15.0**	**+0.8**
YJA	**Yavi**	**2.35**	**39**	*i* P		**Pn**	**07 35 43.7**	**+0.8**
YJA				*e*S		**Sn**	**07 36 16.2**	**+0.7**
GO02	**Mina Guanaco**	**2.53**	**243**	⇑*i*P		**Pn**	**07 35 45.9**	**+1.1**
GO02				*i* S		**Sn**	**07 36 19.3**	**+0.4**
GO02				IAML			07 36 20.6	
	comp=E,702nm,0.4s							
GO02	**Mina Guanaco**	**2.53**	**243**			**Pn**	**07 35 45.9**	**+1.1**
GO02				Sn		**Sn**	**07 36 19.1**	**+0.2**
PB06	**IPOC Station P**	**2.61**	**299**	⇑*i*P		**Pn**	**07 35 46.7**	**+1.2**
PB06				*i* S		**Sn**	**07 36 19.9**	**-0.4**
PB06				IAML			07 36 23.2	
	comp=N,583nm,0.6s							
PB06	**IPOC Station P**	**2.61**	**299**	*i* P		**Pn**	**07 35 46.6**	**+1.1**
PB06				IAML			07 36 23.6	
	comp=Z,372nm,0.4s							
PB09	**IPOC Station P**	**2.95**	**318**	*i* P		**Pn**	**07 35 50.9**	**+1.3**
PB09				IAML			07 36 31.4	
	comp=Z,218nm,0.5s							
PB05	**IPOC Station P**	**3.06**	**292**	⇑*i*P		**Pn**	**07 35 51.4**	**+0.5**
PB05				*i* S		**Sn**	**07 36 28.2**	**-1.7**
PB05				IAML			07 36 30.8	
	comp=E,273nm,0.3s							
PB05	**IPOC Station P**	**3.06**	**292**	*i* P		**Pn**	**07 35 51.7**	**+0.8**
PB05				IAML			07 36 36.1	
	comp=Z,129nm,0.3s							
PB14	**IPOC Station P**	**3.06**	**258**	*i* P		**Pn**	**07 35 51.7**	**+0.6**
PB14				IAML			07 36 32.3	
	comp=Z,158nm,0.4s							
PB03	**IPOC Station P**	**3.12**	**308**	⇑*i*P		**Pn**	**07 35 52.3**	**+0.7**
PB03				*i* S		**Sn**	**07 36 29.5**	**-1.7**
PB03				IAML			07 36 32.1	
	comp=E,366nm,0.5s							
PB10	**IPOC Station P**	**3.19**	**278**	⇑*i*P		**Pn**	**07 35 53.2**	**+0.9**
PB10				*i* S		**Sn**	**07 36 30.8**	**-1.7**
PB10				IAML			07 36 37.0	
	comp=E,292nm,0.4s							
PB10	**IPOC Station P**	**3.19**	**278**			**Pn**	**07 35 53.2**	**+0.9**
PB10				Sn		**Sn**	**07 36 32.0**	**-0.5**
PB10	**IPOC Station P**	**3.19**	**278**	*i* P		**Pn**	**07 35 53.3**	**+0.9**
PB10				IAML			07 36 36.2	
	comp=Z,185nm,0.5s							
AHML	**Horco Molle**	**3.19**	**150**	*i* P		**Pn**	**07 35 52.7**	**+0.3**
PB04	**IPOC Station P**	**3.26**	**300**			**Pn**	**07 35 53.8**	**+0.6**
PB04				Sn		**Sn**	**07 36 32.5**	**-1.7**
PB04	**IPOC Station P**	**3.26**	**300**	*i* P		**Pn**	**07 35 54.0**	**+0.7**
GO03	**Copiap**	**4.54**	**218**			**Pn**	**07 36 08.4**	**-0.8**
GO03				Sn		**Sn**	**07 37 00.7**	**-2.3**
GO03	**Copiap**	**4.54**	**218**	*i* P		**Pn**	**07 36 08.5**	**-0.8**
CYA	**Choya**	**4.57**	**165**	*i* P		**Pn**	**07 36 10.1**	**+0.7**
GO01	**Chusmiza**	**4.74**	**335**			**Pn**	**07 36 12.4**	**+0.3**
GO01				Sn		**Sn**	**07 37 07.6**	**-0.5**
VCA	**Vinchina**	**4.81**	**192**	*i* P		**Pn**	**07 36 13.8**	**+1.1**
PB11	**IPOC Station P**	**4.84**	**330**			**Pn**	**07 36 12.2**	**-1.1**
PB11				Sn		**Sn**	**07 37 07.2**	**-2.9**
MNMC	**Minye Minye**	**5.38**	**334**			**Pn**	**07 36 19.7**	**-0.6**
MNMC				Sn		**Sn**	**07 37 19.9**	**-2.8**
GO04	**Tololo Observa**	**6.96**	**207**			**Pn**	**07 36 38.5**	**-2.3**
GO04				Sn		**Sn**	**07 37 55.9**	**-3.9**
CFA	**Coronel Fontan**	**7.63**	**187**	P		**Pn**	**07 36 49.0**	**-0.3**
	comp=Z,0.6nm,0.3s,baz=7.9,slow=13,SNR=4.4							
CFA				S		**Sn**	**07 38 09.7**	**-5.6**
	comp=Z,1.0nm,0.3s,baz=296,slow=23,SNR=6.8							
TCA	**Tanti**	**7.63**	**164**	*i* P		**Pn**	**07 36 48.1**	**-1.2**
TCA				IAML			07 38 34.6	
	comp=Z,5.6nm,3.1s							
LPAZ	**La Paz**	**7.74**	**353**	P		**Pn**	**07 36 52.1**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=154,slow=10.0,SNR=21							
LPAZ				S		**Sn**	**07 38 17.7**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=4.4,slow=12,SNR=2.9							
LPAZ	**La Paz**	**7.74**	**353**			**Pn**	**07 36 51.7**	**+0.2**
CPUP	**Villa Florida**	**9.16**	**107**	P		**Pn**	**07 37 07.0**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=288,slow=12,SNR=7.4							
CPUP	**Villa Florida**	**9.16**	**107**			**Pn**	**07 37 07.1**	**-2.2**
SIV	**San Ignacio**	**9.79**	**37**	P		**Pn**	**07 37 15.5**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=225,slow=12,SNR=16							
SIV				S		**Sn**	**07 39 04.4**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=248,slow=13,SNR=3.6							
AQDB	**Aquidauana**	**11.14**	**74**	*e*P		**Pn**	**07 37 36.7**	**+1.6**
SALV	**Santo Antonio**	**13.42**	**55**	*e*P		**Pn**	**07 38 02.4**	**-1.7**
PTGB	**Pitanga**	**13.73**	**96**	*e*P		**P**	**07 38 11.2**	**+0.6**
C2SB	**Chapadao do Su**	**14.28**	**71**	*e*P		**P**	**07 38 15.4**	**-1.2**
PCMB	**Pacaembu**	**14.81**	**84**	*e*P		**P**	**07 38 23.1**	**+0.6**
GO06	**Curarrehue**	**15.96**	**192**	P		**Pn**	**07 38 36.1**	**+0.9**
GO06				IAmb		IAmb	07 38 37.7	
	comp=Z,3.7nm,0.6s							
FRTB	**Fartura**	**16.09**	**91**	*e*P		**P**	**07 38 36.2**	**-0.5**
ITRB	**Iturama**	**16.13**	**78**	*e*P		**Pn**	**07 38 38.5**	**+1.0**
ARAG	**Araguaiana, MT**	**16.58**	**63**	*e*P		**Pn**	**07 38 43.0**	**+0.1**
PLCA	**Paso Flores**	**16.92**	**189**	P		**Pn**	**07 38 47.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=30,slow=10,SNR=3.7							
PLCA	**Paso Flores**	**16.92**	**189**	*e*P		**Pn**	**07 38 52.6**	**+5.8**
PLCA	**Paso Flores**	**16.92**	**189**			**P**	**07 38 44.9**	**-0.7**
CLDB	**Colider**	**16.93**	**41**	*e*P		**P**	**07 38 44.1**	**-1.9**
BB19B	**Bebedouro**	**17.42**	**84**	*e*P		**Pn**	**07 38 52.3**	**-0.5**
IPMB	**Ipameri, GO**	**18.63**	**75**	*e*P		**P**	**07 39 04.2**	**-0.3**
PARB	**Paraibuna**	**19.70**	**92**	*e*P		**Pn**	**07 39 18.4**	**-1.2**
BDFB	**Brasilia**	**19.79**	**69**	P		**P**	**07 39 16.9**	**-0.1**
	comp=Z,2.5nm,0.3s,baz=246,slow=11,SNR=30							
BDFB	**Brasilia**	**19.79**	**69**	P		**P**	**07 39 16.8**	**-0.2**
PMNB	**Patos De Minas**	**20.01**	**78**	*e*P		**P**	**07 39 18.8**	**-0.6**
BSCB	**Bom Sucesso**	**20.85**	**86**	*e*P		**P**	**07 39 30.4**	**+2.0**
JANB	**Januaria**	**23.23**	**72**	*e*P		**P**	**07 39 50.5**	**-1.0**
SMTB	**Santa Maria do**	**23.98**	**54**	*e*P		**P**	**07 39 58.0**	**-0.3**
SJMB	**Sao Joao De Ma**	**24.70**	**83**	*e*P		**P**	**07 40 06.7**	**+2.0**
RUSC	**La Rusia**	**30.29**	**348**	P		**P**	**07 40 55.3**	**+0.3**
RCBR	**Riachuelo**	**35.02**	**64**	P		**P**	**07 41 35.4**	**-0.4**
RCBR				IAmb		IAmb	07 41 43.4	
	comp=Z,19nm,1.1s							
TEIG	**Tepich**	**48.56**	**333**	P		**P**	**07 43 22.5**	**-2.8**
TEIG				IAmb		IAmb	07 43 29.5	
	comp=Z,32nm,1.4s							
061Z	**Ochoppi**	**51.35**	**344**	P		**P**	**07 43 48.3**	**+2.2**
VNA3	**Neumayer Olymp**	**57.17**	**161**	P		**P**	**07 44 29.4**	**+1.7**
VNA1	**Neumayer--Stat**	**57.37**	**160**	P		**P**	**07 44 29.3**	**+0.4**
SNAA	**Sanae**	**59.37**	**161**	P		**P**	**07 44 43.9**	**+0.9**
SNAA	**Sanae**	**59.37**	**161**	P		**P**	**07 44 42.4**	**-0.5**
Z50A	**Ashland**	**59.70**	**342**	P		**P**	**07 44 46.1**	**+0.5**
Y49A	**Blount Mountai**	**60.41**	**342**	P		**P**	**07 44 50.7**	**+0.3**
Y49A				IAmb		IAmb	07 45 02.8	
	comp=Z,16nm,1.4s							
V52A	**Sevierville**	**61.54**	**345**	P		**P**	**07 44 57.9**	**0.0**
V52A				IAmb		IAmb	07 45 07.0	
	comp=Z,16nm,1.4s							
WVT	**Waverly**	**62.94**	**341**	P		**P**	**07 45 07.2**	**0.0**
WVT				IAmb		IAmb	07 45 14.5	
	comp=Z,7.0nm,1.2s							
T49A	**Edmonton**	**63.22**	**344**	P		**P**	**07 45 08.4**	**-0.6**
T49A				IAmb		IAmb	07 45 24.7	
	comp=Z,3.4nm,1.0s							
TXAR	**Lajitas Array**	**63.63**	**325**	P		**P**	**07 45 13.6**	**+1.7**
	comp=Z,0.3nm,0.8s,baz=128,slow=8.1,SNR=3.9							
TXAR	**Lajitas Array**	**63.63**	**325**	P		**P**	**07 45 12.3**	**+0.3**
WCI	**Wyandotte Cave**	**64.48**	**343**	P		**P**	**07 45 16.5**	**-0.7**
WCI				IAmb		IAmb	07 45 23.8	
	comp=Z,4.1nm,0.8s							
P48A	**Milroy**	**65.42**	**344**	P		**P**	**07 45 23.0**	**-0.2**
P48A				IAmb		IAmb	07 45 38.8	
	comp=Z,14nm,1.5s							
QSPA	**South Pole Qui**	**66.19**	**180**	P		**P**	**07 45 29.8**	**+1.7**
QSPA				IAmb		IAmb	07 45 30.7	
	comp=Z,1.7nm,0.5s							
CCUT	**Cedar City**	**75.11**	**324**	P		**P**	**07 46 20.4**	**-2.0**
TOA0	**Torodi Ar. Sit**	**76.67**	**69**	P		**P**	**07 46 31.2**	**-0.3**
TOA0				IAmb		IAmb	07 46 41.2	
	comp=Z,5.4nm,1.4s							
TORD	**Torodi Ar. Bea**	**76.67**	**69**	P		**P**	**07 46 31.6**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=258,slow=5.4,SNR=10.0							
TORD	**Torodi Ar. Bea**	**76.67**	**69**	P		**P**	**07 46 30.6**	**-0.8**
PDAR	**Pinedale Array**	**77.11**	**329**	P		**P**	**07 46 34.7**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=140,slow=5.9,SNR=3.4							
PDAR	**Pinedale Array**	**77.11**	**329**	P		**P**	**07 46 34.1**	**+0.5**
ULM	**Lac du Bonnet**	**78.21**	**342**	P		**P**	**07 46 40.1**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=140,slow=7.3,SNR=5.3							
ULM	**Lac du Bonnet**	**78.21**	**342**	P		**P**	**07 46 39.8**	**+0.6**
ELK	**Elko**	**78.42**	**325**	P		**P**	**07 46 40.8**	**-0.1**
RLMT	**Red Lodge**	**78.80**	**331**	P		**P**	**07 46 45.1**	**+2.2**
YKA	**Yellowknife Ar**	**94.10**	**340**	P		**P**	**07 47 58.4**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=132,slow=4.4,SNR=23							
ASAR	**Alice Springs**	**128.40**	**205**	PKP		**PKiKP**	**07 53 46.6**	**+0.2**
	comp=Z,0.5nm,0.5s,baz=126,slow=1.7,SNR=9.5							
ASAR	**Alice Springs**	**128.40**	**205**			**PKPdf**	**07 53 44.8**	**-1.0**
WRA	**Warramunga Arr**	**131.57**	**207**	PKP		**PKiKP**	**07 53 53.0**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=160,slow=1.9,SNR=10							
WRA	**Warramunga Arr**	**131.57**	**207**			**PKPdf**	**07 53 52.4**	**+0.6**
WRAB	**Tennant Creek**	**131.57**	**207**	PKPdf		**PKiKP**	**07 53 53.4**	**+0.5**
MAKZ	**Makanchi**	**146.41**	**40**	PKPbc		**PKPab**	**07 54 20.6**	**-0.2**
MK31	**Makanchi Array**	**146.60**	**39**			**PKPdf**	**07 54 17.8**	**-0.4**
MKAR	**Makanchi Array**	**146.60**	**39**	PKPbc		**PKPab**	**07 54 21.2**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=299,slow=3.3,SNR=15							
MKAR	**Makanchi Array**	**146.60**	**39**			**PKPbc**	**07 54 20.6**	**+0.5**

*IDC **18** 07:56:02.4±0.7,14.°04N×145.°02E,h128km±5km, mb3.3/7, mb1 3.6/7,mb1mx3.3/57,mbtmp3.7/7,Error ellipse: s-maj=34.7km s-min=16.3km az=100.0*
*NEIC **18** 07:56:03.6±1.5, 13.°96N±0.°07×145.°0E±0.°1, h132km±5km, mb4.5/20, Error ellipse: s-maj=17.4km s-min=10.1km az=84.0*
ISC 18 07:56:02.7±0.5,**13.°99N**±0.°07×**145.°0E**±0.°1,**h125**km,**n42,** σ1°**56**/37,**mb4.1**/17,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.43**	**201**	P	**Pn**	**07 56 22.7**	**+1.9**
GUMO				S	**Sn**	**07 56 36.4**	**+1.9**
	2μm,0.3s,baz=30,slow=20,SNR=56						
ANA2	**Anatahan**	**2.43**	**16**		**Pn**	**07 56 45.5**	**+3.7**
SARN	**Sarigan**	**2.79**	**15**		**Pn**	**07 56 49.4**	**+3.0**
FAKI	**Fak Fak**	**21.05**	**218**	P	**P**	**08 00 39.4**	**+2.6**
FAKI				IAmb	IAmb	08 00 40.1	
	comp=Z,16nm,0.6s						
H11S3	**WAKE ISLAND Hy**	**21.27**	**75**	T	T	08 22 23.2	
	baz=263,slow=74,SNR=4.1						
H11S1	**WAKE ISLAND Hy**	**21.28**	**75**	T	T	08 22 44.7	
	baz=263,slow=74,SNR=5.9						
H11S2	**WAKE ISLAND Hy**	**21.28**	**75**	T	T	08 22 23.1	
	baz=263,slow=74,SNR=4.5						
H11N1	**WAKE ISLAND Hy**	**21.67**	**72**	T	T	08 24 02.9	
	baz=257,slow=75,SNR=4.1						
H11N2	**WAKE ISLAND Hy**	**21.68**	**72**	T	T	08 24 03.6	
	baz=257,slow=75,SNR=2.3						
H11N3	**WAKE ISLAND Hy**	**21.69**	**72**	T	T	08 24 04.3	
	baz=257,slow=75,SNR=4.8						
MJAR	**Matsushiro Arr**	**23.27**	**346**	P	**P**	**08 00 57.8**	**-1.4**
	comp=Z,2.4nm,0.7s,baz=162,slow=8.9,SNR=7.5						
MJAR	**Matsushiro Arr**	**23.27**	**346**	P	**P**	**08 00 57.1**	**-2.1**
MAJO	**Matsushiro**	**23.27**	**346**	P	**P**	**08 00 59.7**	**+0.5**
MAJO				IAmb	IAmb	08 01 04.2	
	comp=Z,6.8nm,0.8s						
MJB9	**Matsu-Tunnel**	**23.28**	**346**	P	**P**	**08 00 59.7**	**+0.4**
MJB9				IAmb	IAmb	08 01 04.2	
	comp=Z,6.9nm,0.8s						
YULB	**Yu-li**	**24.31**	**296**	P	**P**	**08 01 08.6**	**-0.3**
YULB				IAmb	IAmb	08 01 08.7	
	comp=Z,61nm,1.5s						
SSLB	**Suanglung**	**24.74**	**297**	P	**P**	**08 01 11.8**	**-0.9**
SSLB				IAmb	IAmb	08 01 19.6	
	comp=Z,50nm,1.4s						
COEN	**Coen**	**27.83**	**184**		**P**	**08 01 40.8**	**+0.3**
COEN				IAmb	IAmb	08 01 50.7	
	comp=Z,17nm,1.5s						
WR0	**Warramunga Arr**	**35.28**	**197**	P	**P**	**08 02 45.3**	**-0.4**
WR0				IAmb	IAmb	08 02 59.4	
	comp=Z,8.5nm,1.2s						
WRAB	**Tennant Creek**	**35.31**	**198**		**P**	**08 02 45.6**	**-0.3**
WRAB				IAmb	IAmb	08 02 52.3	
	comp=Z,9.0nm,1.4s						
WRA	**Warramunga Arr**	**35.32**	**198**	P	**P**	**08 02 45.6**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=20,slow=9.5,SNR=16						
WRA	**Warramunga Arr**	**35.32**	**198**	P	**P**	**08 02 45.1**	**-1.0**
AS31	**Alice Springs**	**38.98**	**196**	P	**P**	**08 03 17.7**	**+0.8**
ASAR	**Alice Springs**	**38.98**	**196**	P	**P**	**08 03 16.4**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=19,slow=6.5,SNR=11						
ASAR	**Alice Springs**	**38.98**	**196**	P	**P**	**08 03 17.1**	**+0.2**
EIDS	**Eidsvold**	**39.56**	**171**	P	**P**	**08 03 22.3**	**+0.6**
EIDS				IAmb	IAmb	08 03 33.2	
	comp=Z,16nm,1.4s						
BBOO	**Buckleboo**	**47.32**	**190**	P	**P**	**08 04 23.9**	**0.0**
BBOO				IAmb	IAmb	08 04 42.5	
	comp=Z,31nm,1.3s						
AIN	**Ainahou**	**57.03**	**76**	P	**P**	**08 05 37.5**	**+1.2**
HLP	**Hilina Pali**	**57.18**	**76**	P	**P**	**08 05 36.4**	**-0.7**
QRZ	**Quartz Range**	**60.20**	**156**	P	**P**	**08 05 59.1**	**+1.6**
TUWZ	**Tuamarina**	**61.28**	**156**	P	**P**	**08 06 04.9**	**+0.2**
MK31	**Makanchi Array**	**61.31**	**316**	P	**P**	**08 06 04.6**	**-0.4**
MKAR	**Makanchi Array**	**61.31**	**316**	P	**P**	**08 06 04.5**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=92,slow=8.8,SNR=12						
MKAR	**Makanchi Array**	**61.31**	**316**	P	**P**	**08 06 04.4**	**-0.6**
SNZO	**South Karori**	**61.49**	**155**	P	**P**	**08 06 02.1**	**-4.0**
KURK	**Kurchatov**	**64.38**	**320**	P	**P**	**08 06 24.2**	**-1.0**
ILAR	**Eielson Array**	**68.14**	**25**	P	**P**	**08 06 46.6**	**-2.4**
	comp=Z,0.5nm,0.6s,baz=247,slow=6.1,SNR=6.2						
YKA	**Yellowknife Ar**	**82.43**	**27**	P	**P**	**08 08 10.2**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=286,slow=5.3,SNR=4.3						
G06A	**Carlson Farm,**	**83.21**	**45**	P	**P**	**08 08 14.2**	**-1.1**
NVAR	**Mina Array Bea**	**86.55**	**51**	P	**P**	**08 08 33.0**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=256,slow=6.4,SNR=3.3						
NVAR	**Mina Array Bea**	**86.55**	**51**	P	**P**	**08 08 30.1**	**-2.3**
SNAA	**Sanae**	**119.21**	**191**		**PKPdf**	**08 14 36.0**	**-0.5**
PB11	**IPOC Station P**	**146.36**	**105**		**PKPbc**	**08 15 30.5**	**+0.5**

*IDC **18** 07:56:11.1±1.1,37.°95N×20.°98E,h0km,mb3.8/10, mb1 3.8/13,mb1mx3.6/51,mbtmp3.7/13,ML3.2/3,MS3.6/2, Ms1 3.6/2,ms1mx2.6/48,Error ellipse: s-maj=21.0km s-min=15.5km az=49.0*
*ATH **18** 07:56:11.2,37.°85N×21.°04E,h25km±2km,ML3.7/11,Error ellipse: s-maj=2.5km s-min=0.8km az=239.0*
*THE **18** 07:56:12.6,37.°86N×21.°02E,h0km±2km,ML3.6/18,Error ellipse: s-maj=2.3km s-min=0.7km az=243.0*
ISC 18 07:56:12.6±0.9,**37.°88N**±0.°02×**21.°04E**±0.°02,**h13**km±6km, **n125,** σ1°**39**/164,**mb3.9**/10,**4C-6D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLMS	**Volimes, Zakyn**	**0.29**	**270**	P	**Pg**	**07 56 18.3**	**-0.3**
VLMS				S	**Sg**	**07 56 23.8**	**+1.1**
VLMS				AML	AML	07 56 25.3	
	comp=E,41531μm,0.2s						
VLMS				AML	AML	07 56 29.1	
	comp=N,25518μm,0.3s						
KFL	**Anninata**	**0.30**	**320**	P	**Pg**	**07 56 18.6**	**-0.2**
KFL				S	**Sg**	**07 56 23.4**	**+0.4**
	comp=N,21μm,0.3s						
KFL	**Anninata**	**0.30**	**320**	P	**Pg**	**07 56 18.5**	**-0.3**
KFL				S	**Sb**	**07 56 24.3**	**-0.5**
KFL				AML	AML	07 56 27.5	
	comp=E,51998μm,0.4s						
KFL				AML	AML	07 56 28.2	
	comp=N,32202μm,0.3s						
RLS	**Riolos of Patr**	**0.39**	**62**	P	**Pg**	**07 56 19.4**	**-0.9**
RLS				S	**Sb**	**07 56 26.9**	**-0.3**
	comp=N,17μm,0.4s						
RLS	**Riolos of Patr**	**0.39**	**62**	P	**Pg**	**07 56 19.4**	**-0.9**
RLS				S	**Sb**	**07 56 26.3**	**-0.8**
RLS				AML	AML	07 56 28.9	
	comp=E,33143μm,0.5s						
RLS				AML	AML	07 56 30.0	
	comp=N,36737μm,0.3s						
VLS	**Valsamata**	**0.46**	**311**	P	**Pg**	**07 56 20.9**	**-0.8**
VLS				S	**Sg**	**07 56 29.0**	**+1.1**
	comp=N,9μm,0.3s						
VLS	**Valsamata**	**0.46**	**311**	P	**Pg**	**07 56 21.0**	**-0.7**
VLS				S	**Sb**	**07 56 29.2**	**-0.2**
VLS				AML	AML	07 56 30.2	
	comp=E,15587μm,0.3s						
VLS				AML	AML	07 56 30.3	
	comp=N,19919μm,0.3s						
DRO	**Drossia**	**0.54**	**82**	P	**Pg**	**07 56 21.8**	**-1.3**
DRO				S	**Sb**	**07 56 31.4**	**-0.2**
	comp=N,24μm,0.4s						
DRO	**Drossia**	**0.54**	**82**	P	**Pg**	**07 56 22.0**	**-1.1**
DRO				S	**Sb**	**07 56 30.7**	**-0.9**
DRO				AML	AML	07 56 33.8	
	comp=E,65876μm,0.5s						
DRO				AML	AML	07 56 34.2	
	comp=N,31183μm,0.3s						
AMT	**Artemida-Makis**	**0.64**	**123**	P	**Pg**	**07 56 23.8**	**-1.1**
AMT				S	**Sb**	**07 56 34.0**	**-0.4**
	comp=N,6μm,0.7s						
AMT	**Artemida-Makis**	**0.64**	**123**	P	**Pg**	**07 56 23.9**	**-1.1**
AMT				S	**Sg**	**07 56 32.4**	**-0.9**
AMT				AML	AML	07 56 42.9	
	comp=N,10659μm,0.9s						
AMT				AML	AML	07 56 44.4	
	comp=E,10311μm,0.6s						
FSK	**Fiskardo**	**0.69**	**327**	P	**Pg**	**07 56 25.0**	**-1.0**
FSK	**Fiskardo**	**0.69**	**327**	P	**Pg**	**07 56 24.9**	**-1.0**
UPR	**University Cam**	**0.72**	**55**	P	**Pb**	**07 56 27.1**	**+0.1**
UPR				S	**Sn**	**07 56 37.8**	**-1.6**
PDO	**Prodromos**	**0.73**	**9**	P	**Pg**	**07 56 26.5**	**-0.2**
PDO				S	**Sn**	**07 56 38.5**	**-1.2**
	comp=E,18μm,0.2s						
PDO	**Prodromos**	**0.73**	**9**	P	**Pg**	**07 56 26.5**	**-0.2**
PDO				S	**Sb**	**07 56 37.8**	**+0.7**
PDO				AML	AML	07 56 41.5	
	comp=E,21851μm,0.3s						
PDO				AML	AML	07 56 42.5	
	comp=N,31201μm,0.4s						
EVGI	**Lefkada island**	**0.80**	**338**	P	**Pg**	**07 56 27.0**	**-1.1**
EVGI	**Lefkada island**	**0.80**	**338**	P	**Pg**	**07 56 27.0**	**-1.1**
MGNA	**Meganis**	**0.80**	**346**	P	**Pg**	**07 56 27.1**	**-0.9**
LAKA	**Lakka**	**0.83**	**64**	P	**Pg**	**07 56 27.6**	**-1.0**
LAKA				S	**Sn**	**07 56 41.3**	**-0.8**
	comp=N,3μm,0.8s						
LAKA	**Lakka**	**0.83**	**64**	P	**Pg**	**07 56 27.5**	**-1.1**
PVO	**Paravola**	**0.83**	**27**	P	**Pg**	**07 56 28.6**	**-0.1**
PVO				S	**Sn**	**07 56 41.0**	**-1.2**
	comp=N,5μm,0.6s						
PVO	**Paravola**	**0.83**	**27**	P	**Pg**	**07 56 28.6**	**-0.1**
PVO				S	**Sb**	**07 56 39.9**	**-0.2**
PVO				AML	AML	07 56 45.6	
	comp=E,9229μm,0.6s						
PVO				AML	AML	07 56 50.2	
	comp=N,9144μm,0.4s						
EFP	**Efpalio**	**0.88**	**51**	P	**Pg**	**07 56 28.9**	**-0.6**
EFP				S	**Sn**	**07 56 43.4**	**+0.1**
	comp=N,6μm,0.5s						
EFP	**Efpalio**	**0.88**	**51**	P	**Pg**	**07 56 28.9**	**-0.6**
EFP				S	**Sb**	**07 56 40.9**	**-0.4**
EFP				AML	AML	07 56 45.1	
	comp=N,16207μm,0.6s						
EFP				AML	AML	07 56 48.8	
	comp=E,8721μm,0.4s						
KLV	**Kalavryta, Ach**	**0.90**	**79**	P	**Pg**	**07 56 28.8**	**-1.1**
KLV				S	**Sn**	**07 56 42.9**	**-1.0**
KLV	**Kalavryta, Ach**	**0.90**	**79**	P	**Pg**	**07 56 28.7**	**-1.7**
KLV				AML	AML	07 56 54.3	
	comp=N,5467μm,0.7s						
KLV				AML	AML	07 56 54.7	
	comp=E,4606μm,0.6s						
ALIK	**Aliki, Aigiali**	**0.93**	**65**	P	**Pb**	**07 56 29.9**	**-0.7**
TRIZ	**Trizonia**	**0.95**	**59**	P	**Pb**	**07 56 29.9**	**-1.0**
TRIZ				S	**Sn**	**07 56 45.2**	**+0.1**
	comp=E,4μm,0.5s						
TRIZ	**Trizonia**	**0.95**	**59**	P	**Pb**	**07 56 30.0**	**-1.0**
LKD2	**Lefkada island**	**0.96**	**342**	P	**Pb**	**07 56 29.8**	**-1.3**
LKD2				S	**Sn**	**07 56 45.2**	**-0.2**
	comp=E,4μm,0.4s						
LKD2	**Lefkada island**	**0.96**	**342**	P	**Pb**	**07 56 29.8**	**-1.3**
SERG	**Sergoula**	**0.97**	**56**	P	**Pb**	**07 56 30.5**	**-0.7**
SERG				S	**Sn**	**07 56 45.6**	**0.0**
	comp=E,4μm,0.5s						
SERG	**Sergoula**	**0.97**	**56**	P	**Pb**	**07 56 30.6**	**-0.7**
ITM	**Ithomi**	**0.99**	**134**	P	**Pb**	**07 56 30.3**	**-1.4**
ITM				S	**Sg**	**07 56 45.3**	**+0.6**
	comp=E,2μm,0.7s						
**

comp=N,1.0nm,0.3s
OBKA *e*Sn **Sn** **08 00 21.5 -3.5**
comp=N,5.4nm,0.7s
BRTR Keskin Array B 10.01 75 Pn **Pn** **07 58 39.6 +3.4**
comp=N,0.1nm,0.3s,baz=264,slow=11,SNR=2.4
KBA Koelnbreinsper 10.80 331 *e*Pn **Pn** **07 58 47.3 +0.3**
comp=N,1.0nm,0.5s
KBA *e*Sn **Sn** **08 00 44.2 -3.6**
comp=N,2.1nm,0.6s
ABTA Abfaltersbach 10.87 327 *e*Pn **Pn** **07 58 49.5 +1.5**
comp=N,1.5nm,0.5s
ABTA *e*Sn **Sn** **08 00 47.9 -1.7**
comp=N,3.7nm,0.6s
MOA Molln 11.13 336 *e*Pn **Pn** **07 58 52.1 +0.7**
comp=N,0.6nm,0.2s
MOA *e*Sn **Sn** **08 00 56.4 +0.7**
comp=N,1.2nm,0.4s
WTTA Wattenberg 11.65 327 *e*Pn **Pn** **07 59 00.5 +1.8**
comp=N,1.1nm,0.4s
WTTA *e*Sn **Sn** **08 01 06.4 -2.3**
comp=N,2.4nm,0.5s
GERES GERESS Array B 12.19 336 Pn **Pn** **07 59 05.6 -0.3**
comp=N,0.1nm,0.3s,baz=153,slow=13,SNR=6.1
GERES Sn **Sn** **08 01 19.6 -2.1**
comp=N,0.2nm,0.3s,baz=155,slow=24,SNR=4.1
HFS Hagfors 22.76 350 P **P** **08 01 14.5 +0.1**
comp=N,2.8nm,0.5s,baz=153,slow=10.0,SNR=10
HFS LR LR 08 12 02.8
comp=N,124nm,18.5s,baz=250,slow=42
FINES FINESS Array B 23.80 6 P **P** **08 01 23.7 -1.1**
comp=N,2.9nm,0.9s,baz=179,slow=14,SNR=4.2
EKA Eskdalemuir Ar 23.91 325 P **P** **08 01 26.0 +0.1**
comp=N,2.9nm,0.8s,baz=131,slow=9.2,SNR=5.2
NOA NORSAR Array B 23.99 348 P **P** **08 01 26.6 -0.2**
comp=N,0.5nm,0.5s,baz=176,slow=8.5,SNR=5.0
AKTO Aktyubinsk 29.04 52 P **P** **08 02 12.6 +0.3**
comp=N,1.0nm,0.6s,baz=243,slow=4.5,SNR=4.1
TORD Torodi Ar. Bea 30.06 220 P **P** **08 02 21.9 +0.3**
comp=N,1.5nm,0.7s,baz=31,slow=9.2,SNR=9.2
ARCES ARCESS Array B 31.81 3 P **P** **08 02 36.5 0.0**
comp=N,0.5nm,0.5s,baz=185,slow=9.1,SNR=4.6
MKAR Makanchi Array 45.11 58 P **P** **08 04 29.7 +1.1**
comp=N,0.8nm,0.5s,baz=274,slow=7.5,SNR=11
ZALV Zalesovo Beam 45.59 48 P **P** **08 04 31.9 -0.3**
comp=N,1.6nm,0.7s,baz=285,slow=7.9,SNR=5.5
SCHQ Schefferville 58.96 318 P **P** **08 06 11.9 +0.4**
comp=N,1.5nm,0.9s,baz=84,slow=3.1,SNR=6.6
PSI Prapat 78.72 95 LR LR 08 48 01.1
comp=N,38nm,18.2s,baz=20,slow=39

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*IDC **18** 07:56:48.1±0.7,51.23N×179.35E,h0km,mb4.3/26, mb1 4.4/27,mb1mx4.3/67,mbtmp4.3/27,ML4.9/1,MS4.2/34, Ms1 4.2/34,ms1mx4.1/51,Error ellipse: s-maj=23.0km s-min=10.9km az=175.0*

*BJI **18** 07:56:49.7±0.0,51.24N×179.63E,h38km,mB5.1/33, mb4.7/40,Ms4.9/28,Ms7 4.6/28*

*GCMT **18** 07:56:52.7±0.2,51.07N±0.01×179.43E±0.03,h16km, MW5.1/104,Moment Tensor Solution. s68,c84; s104,c146; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr3.90±.18; Mθθ-3.61±.13; Mφφ-0.29±.11; Mrθ4.12±.41; Mrφ-1.31±.09; Mθφ2.06±.36; Best double couple: M=6.09000×10^16^ NP1:φ257.00000°,δ21.00000°, λ101.00000°. NP2:φ65.00000°,δ70.00000°,λ86.00000°. Principal axes: T 6.0280, Plg65.0000°, Azm328.0000°; N 0.1230, Plg4.0000°, Azm67.0000°; P -6.1520, Plg25.0000°, Azm158.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **18** 07:56:52.8±1.1,51.18N×179.37E,h46km,mb4.9/48, MS4.4/6 Error ellipse: s-maj=8.6km s-min=7.0km az=113.9*

*AEIC **18** 07:56:54.0±2.4,51.13N±0.08×179.40E±0.08,h59km±4km, Error ellipse: s-maj=11.7km s-min=7.3km az=190.0*

*NEIC **18** 07:56:55.7±2.1,51.2N±0.1×179.45E±0.09,h55km±5km, mb4.8/221,ML4.6/15(AEIC),Error ellipse: s-maj=16.7km s-min=7.9km az=174.0*

ISC 18 07:56:55.0±0.5,51.20N±0.08×179.36E±0.04,h48km,n428, σ1ꟾ31/356,mb4.7/145,MS4.3/47,15C-7D,Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAEA	**Gareloi East**	**1.32**	**63**		**Pn**	**07 57 16.7**	**-0.2**
TASE	**Tanaga Southea**	**1.74**	**68**		**Pn**	**07 57 22.8**	**0.0**
TAFP	**Tanaga Falls P**	**1.80**	**66**		**Pn**	**07 57 23.7**	**+0.2**
TAFP					**Sn**	**07 57 45.1**	**0.0**
TAPA	**Tanaga Point A**	**1.87**	**70**		**Pn**	**07 57 24.4**	**-0.2**
KIMD	**Kanaga Island**	**2.20**	**74**		**Pn**	**07 57 28.4**	**-0.6**
KICM	**Kanaga Island**	**2.26**	**70**		**Pn**	**07 57 30.5**	**+0.6**
KIKV	**Kanaga Island**	**2.27**	**71**		**Pn**	**07 57 29.6**	**-0.3**
KIWB	**Kanaga Island**	**2.27**	**72**		**Pn**	**07 57 29.9**	**-0.1**
ADK	**Adak**	**2.56**	**73**	P	**Pn**	**07 57 32.5**	**-1.5**
ADK						07 58 06.7	
ADK	**Adak**	**2.56**	**73**		**Pn**	**07 57 32.5**	**-1.5**
ADK				Sn	**Sn**	**07 58 06.7**	**+2.9**
ADAG	**Mount Adagdak**	**2.63**	**71**		**Pn**	**07 57 35.4**	**+0.4**
GSTD	**Great Sitkin T**	**2.93**	**71**		**Pn**	**07 57 39.0**	**0.0**
GSMY	**Great Sitkin M**	**2.98**	**72**		**Pn**	**07 57 39.5**	**-0.2**
GSTR	**Great Sitkin T**	**2.99**	**71**		**Pn**	**07 57 41.4**	**+1.5**
SMY	**Shemya**	**3.60**	**297**	P	**Pn**	**07 57 48.8**	**+0.6**
SMY	**Shemya**	**3.60**	**297**		**Pn**	**07 57 48.8**	**+0.6**
ATKA	**Atka Island**	**4.13**	**73**		**Pn**	**07 57 55.4**	**-0.1**
NIKH	**Nikolski High**	**7.47**	**72**	Pn	**Pn**	**07 58 44.7**	**+3.4**
SPIA	**Saint Paul Isl**	**8.53**	**41**		**Pn**	**07 58 51.9**	**-3.8**
UNV	**Unalaska Valle**	**9.01**	**67**	Pn	**Pn**	**07 59 02.7**	**+0.3**
AKUT	**Akutan**	**9.50**	**66**	Pn	**Pn**	**07 59 09.6**	**+0.6**
FALS	**False Pass**	**10.99**	**64**		**Pn**	**07 59 32.5**	**+3.2**
SDPT	**Sand Point**	**12.75**	**63**	Pn	**Pn**	**07 59 53.0**	**-0.3**
PEA0B	**Petropavlovsk-**	**13.43**	**287**	‖*e*P	**Pn**	**08 00 02.5**	**-0.2**
PETK	**Petropavlovsk-**	**13.43**	**287**	P	**Pn**	**08 00 04.9**	**+2.2**
PETK	**Petropavlovsk-**	**13.43**	**287**	Pn	**Pn**	**08 00 04.8**	**+2.0**
	0.2nm,0.3s,baz=92,slow=18,SNR=10						
PETK				LR	LR	08 04 55.1	
	comp=Z,776nm,22.0s,baz=77,slow=36						
PETK	**Petropavlovsk-**	**13.43**	**287**		**Pn**	**08 00 04.9**	**+2.2**
SKR	**Severo-Kuril's**	**14.66**	**277**	*e*P	P	08 00 32.9	+8.5
SKR				pmax	pmax		
	comp=Z,120nm,1.2s						
SKR				MLR	MLR		
	comp=Z,700nm,19.0s						
SKR				MLR	MLR		
	comp=Z,2μm,18.0s						
ANM	**Nome**	**15.60**	**25**	P	**P**	**08 00 37.1**	**+2.3**
ANM				pmax	pmax		
	comp=Z,42nm,1.3s						
ANM	**Nome**	**15.60**	**25**	P	**P**	**08 00 37.1**	**+2.3**
OHAK	**Old Harbor**	**17.02**	**59**	Pn	**Pn**	**08 00 47.7**	**-1.6**
OHAK				IAmb	IAmb	08 01 05.7	
	comp=Z,63nm,0.8s						
KDAK	**Kodiak Island**	**17.49**	**57**	P	**Pn**	**08 00 53.2**	**-1.9**
KDAK				pmax	pmax		
	comp=Z,41nm,0.9s						
KDAK	**Kodiak Island**	**17.49**	**57**	P	**Pn**	**08 00 53.2**	**-1.9**
	comp=Z,4.4nm,0.3s,baz=268,slow=6.6,SNR=21						
KDAK	**Kodiak Island**	**17.49**	**57**	P	**Pn**	**08 00 53.2**	**-1.9**
KDAK				IAmb	IAmb	08 01 12.5	
	comp=Z,41nm,0.8s						
RSO	**Redoubt South**	**18.06**	**48**		**Pn**	**08 01 04.6**	**+2.3**
BILL	**Bilibino**	**18.07**	**344**	*i* P	**Pn**	**08 01 03.7**	**+1.6**
BILL				pmax	pmax		
	comp=Z,12nm,1.2s						
BILL				MLR	MLR		
	comp=Z,1μm,17.0s						
BILL	**Bilibino**	**18.07**	**344**	P	**Pn**	**08 01 04.1**	**+2.0**
CNPM	**China Poot**	**18.54**	**52**	P	**Pn**	**08 01 08.2**	**+0.2**
CNPM				IAmb	IAmb	08 01 22.2	
	comp=Z,62nm,1.0s						
SEY	**Seymchan**	**18.62**	**319**	⇑*e*P	**P**	**08 01 07.8**	**-0.3**
BRLK	**Bradley Lake**	**18.77**	**51**	P	**Pn**	**08 01 11.8**	**+1.1**
BRLK				IAmb	IAmb	08 01 21.0	
	comp=Z,77nm,1.4s						
RDOG	**Red Dog Mine**	**19.00**	**21**	P	**Pn**	**08 01 14.5**	**+1.2**
RDOG				IAmb	IAmb	08 01 20.5	
	comp=Z,92nm,1.3s						
SKT	**Skwentna**	**19.13**	**44**	P	**Pn**	**08 01 14.9**	**-0.1**
PPLA	**Purkeypile**	**19.21**	**42**	P	**Pn**	**08 01 17.1**	**+1.0**
PPLA				IAmb	IAmb	08 01 32.1	
	comp=Z,103nm,1.3s						
SUA	**Susitna One**	**19.31**	**46**	P	**P**	**08 01 16.5**	**+0.6**
SUA				IAmb	IAmb	08 01 23.4	
	comp=Z,91nm,1.2s						
SEW	**Seward**	**19.55**	**51**	P	**Pn**	**08 01 19.4**	**-0.5**
SEW				IAmb	IAmb	08 01 36.1	
	comp=Z,38nm,1.0s						
BPAW	**Bear Paw Mtn.**	**20.21**	**39**	IAmb	IAmb	08 01 45.7	
	comp=Z,38nm,0.8s						
TRF	**Thorofare Moun**	**20.22**	**41**	P	**P**	**08 01 26.6**	**+0.8**
TRF				IAmb	IAmb	08 01 44.3	
	comp=Z,57nm,1.1s						
SML	**Sawmill**	**20.51**	**46**	P	**P**	**08 01 29.9**	**+1.1**
SML				IAmb	IAmb	08 01 40.6	
	comp=Z,44nm,1.2s						
MLY	**Manley**	**20.72**	**37**	IAmb	IAmb	08 01 33.3	
	comp=Z,59nm,1.2s						
RND	**Reindeer**	**20.80**	**42**	IAmb	IAmb	08 01 50.8	
	comp=Z,50nm,1.2s						
MCK	**McKinley**	**20.89**	**41**	IAmb	IAmb	08 01 36.9	
	comp=Z,51nm,1.1s						
SCM	**Sheep Creek Mo**	**20.98**	**47**	P	**P**	**08 01 33.5**	**-0.4**
SCM				pmax	pmax		
	comp=Z,54nm,1.0s						
SCM	**Sheep Creek Mo**	**20.98**	**47**	P	**P**	**08 01 33.5**	**-0.4**
SCM				IAmb	IAmb	08 01 48.0	
	comp=Z,54nm,1.0s						
NEA	**Nenana**	**21.16**	**39**	IAmb	IAmb	08 01 37.8	
	comp=Z,62nm,1.0s						
DHY	**Denali Highway**	**21.32**	**43**	IAmb	IAmb	08 01 56.1	
	comp=Z,46nm,0.8s						
MDM	**Murphy Dome**	**21.65**	**38**	IAmb	IAmb	08 01 43.4	
	comp=Z,48nm,1.1s						
TCOL	**CIGO, UAF Yank**	**21.76**	**39**	P	**P**	**08 01 43.4**	**+1.3**
	baz=246						
COLA	**College**	**21.77**	**39**	⇑*i*P	**P**	**08 01 43.3**	**+1.2**
COLA				pmax	pmax		
	comp=Z,21nm,1.0s						
COLA	**College**	**21.77**	**39**	P	**P**	**08 01 43.1**	**+1.0**
COLA				IAmb	IAmb	08 01 59.6	
	comp=Z,39nm,1.1s						
HDA	**Harding Lake**	**21.95**	**40**	P	**P**	**08 01 44.7**	**+0.5**
	baz=249						
COLD	**Coldfoot**	**22.01**	**32**	P	**P**	**08 01 46.3**	**+1.6**
POKR	**Poker Plat Res**	**22.02**	**38**	P	**P**	**08 01 45.5**	**+0.5**
	baz=247						
IL31		**22.11**	**39**	P	**P**	**08 01 46.0**	**+0.2**
IL31				IAmb	IAmb	08 02 03.1	
	comp=Z,35nm,1.2s						
ILAR	**Eielson Array**	**22.11**	**39**	P	**P**	**08 01 44.9**	**-0.9**
ILAR	**Eielson Array**	**22.11**	**39**	P	**P**	**08 01 43.8**	**-2.1**
	comp=Z,1.3nm,0.8s,baz=252,slow=10,SNR=17						
ILAR	**Eielson Array**	**22.11**	**39**	P	**P**	**08 01 44.9**	**-0.9**
PAX	**Paxson**	**22.12**	**44**	IAmb	IAmb	08 02 04.0	
	comp=Z,47nm,1.4s						
GLB	**Gilahina Butte**	**22.53**	**49**	IAmb	IAmb	08 01 52.2	
	comp=Z,79nm,1.4s						
RIDG	**Independent Ri**	**22.61**	**43**	P	**P**	**08 01 52.0**	**+0.7**
RIDG				IAmb	IAmb	08 02 08.3	
	comp=Z,31nm,1.2s						
VRDI	**Verde Repeater**	**22.67**	**49**	IAmb	IAmb	08 01 57.0	
	comp=Z,47nm,1.2s						
DOT	**Dot Lake**	**22.92**	**43**	IAmb	IAmb	08 02 10.8	
	comp=Z,26nm,1.0s						
TYV	**Tymovskoe**	**22.94**	**284**	*e*P	**P**	**08 01 54.8**	**0.0**
TYV				pmax	pmax		
	comp=Z,400nm,3.6s						
TYV				pmax	pmax		
	comp=Z,22nm,1.9s						
SCRK	**Sand Creek**	**23.04**	**42**	P	**P**	**08 01 54.9**	**-0.9**
BARN	**Barnard Glacie**	**23.50**	**50**	IAmb	IAmb	08 02 03.8	
	comp=Z,60nm,1.3s						
NKL	**Nikolayevsk**	**23.61**	**290**	*e*P	**P**	**08 01 59.8**	**-1.5**
NKL				pmax	pmax		
	comp=Z,27nm,1.7s						
NKL				pmax	pmax		
	comp=N,4.0nm,0.9s						
NKL				pmax	pmax		
	comp=E,3.0nm,1.7s						
CTGM	**Chitina Glacie**	**23.65**	**50**	IAmb	IAmb	08 02 05.1	
	comp=Z,41nm,1.2s						
YSS	**Yuzh-Sakhalins**	**24.18**	**274**	*e*P	**P**	**08 02 05.0**	**-1.6**
YSS				*e*S	**S**	**08 06 21.9**	**+0.6**
YSS				*e*		08 06 41.5	
YSS				pmax	pmax		
	comp=Z,30nm,1.7s						
YSS				MLR	MLR		
	comp=Z,800nm,16.0s						
YSS				MLR	MLR		
	comp=N,300nm,17.0s						
YSS				MLR	MLR		
	comp=E,400nm,15.0s						
DAWY	**Dawson**	**25.02**	**43**	IAmb	IAmb	08 02 30.4	
	comp=Z,30nm,1.2s						
ASAJ	**Asahikawa**	**25.55**	**268**	P	**P**	**08 02 19.3**	**+0.3**
	comp=Z,19nm,0.8s,baz=130,slow=5.9,SNR=8.0						
ASAJ				LR	LR	08 12 17.9	
	comp=Z,337nm,20.3s,baz=78,slow=36						
EPYK	**Eagle Plains**	**26.62**	**39**	P	**P**	**08 02 27.9**	**-0.7**
	baz=257						
GRNR	**Gornyy**	**26.76**	**286**	⇑*i*P	**P**	**08 02 24.9**	**-5.0**
GRNR				*e*S	**S**	**08 06 55.8**	**-6.4**
GRNR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GRNR				smax	smax		
	comp=N,3.0nm,0.7s						
GRNR				MLR	MLR		
	comp=Z,230nm,17.0s						
INK	**Inuvik**	**28.27**	**35**	P	**P**	**08 02 43.4**	**+0.2**
INK				pmax	pmax		
	comp=Z,21nm,1.2s						
INK	**Inuvik**	**28.27**	**35**	P	**P**	**08 02 42.6**	**-0.6**
	comp=Z,2.9nm,1.0s,baz=224,slow=4.5,SNR=6.8						
INK				LR	LR	08 13 33.5	
	comp=Z,505nm,21.7s,baz=228,slow=36						
INK	**Inuvik**	**28.27**	**35**	P	**P**	**08 02 43.4**	**+0.2**
INK				IAmb	IAmb	08 02 49.1	
	comp=Z,22nm,1.2s						
YAK	**Yakutsk**	**28.67**	**311**	⇑*e*P	**P**	**08 02 46.3**	**-0.5**
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK	**Yakutsk**	**28.67**	**311**	LR	LR	08 14 12.0	
	comp=Z,628nm,19.5s,baz=94,slow=36						
KLR	**Kul'dur**	**30.12**	**285**	*c i*P	**P**	**08 02 59.0**	**-0.8**
KLR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLR	**Kul'dur**	**30.12**	**285**	P	**P**	**08 02 58.4**	**-1.4**
	comp=Z,7.2nm,0.7s,baz=66,slow=8.0,SNR=11						
KLR				LR	LR	08 15 33.8	
	comp=Z,262nm,20.0s,baz=18,slow=37						
ZEA	**Zeya**	**31.26**	**295**	*e*P	**P**	**08 03 08.4**	**-1.5**
ZEA				pmax	pmax		
	comp=Z,37nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,200nm,10.0s						
ZEA				MLR	MLR		
	comp=Z,700nm,16.0s						
ZEA				MLR	MLR		
	comp=E,400nm,14.0s						
ZEA				MLR	MLR		
	comp=N,300nm,13.0s						
C36M	**Paulatuk**	**31.82**	**34**	IAmb	IAmb	08 03 15.6	
	comp=Z,18nm,1.2s						
C36M	**Paulatuk**	**31.82**	**34**	P	**P**	**08 03 14.5**	**0.0**
	baz=265,SNR=9.1						
USRK	**Ussuriysk Ar.**	**32.17**	**276**	LR	LR	08 15 33.8	
	comp=Z,292nm,21.5s,baz=58,slow=35						
MJAR	**Matsushiro Arr**	**32.62**	**259**	LR	LR	08 14 32.6	
	comp=Z,290nm,21.5s,baz=65,slow=33						
MAJO	**Matsushiro**	**32.62**	**259**	‖*e*P	**P**	**08 03 21.6**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
H11N2	**WAKE ISLAND Hy**	**32.91**	**202**	T	T	08 39 10.4	
	baz=19,slow=75,SNR=26						
H11N3	**WAKE ISLAND Hy**	**32.92**	**202**	T	T	08 38 40.8	
	baz=19,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	**32.93**	**202**	T	T	08 39 08.6	
	baz=19,slow=75,SNR=27						
YKA	**Yellowknife Ar**	**36.19**	**46**	P	**P**	**08 03 50.6**	**-1.9**
	comp=Z,6.7nm,0.9s,baz=282,slow=8.6,SNR=44						
YKA				ScP	**ScP**	**08 10 02.7**	**+3.8**
	comp=Z,1.5nm,1.0s,baz=290,slow=4.2,SNR=6.8						
YKA				LR	LR	08 20 09.2	
	comp=Z,2μm,19.1s,baz=0.0,slow=39						
LLLB	**Lillooet**	**36.19**	**67**	IAmb	IAmb	08 03 59.5	
	comp=Z,11nm,1.1s						
D03D	**Eldon**	**36.83**	**73**	P	**P**	**08 03 59.8**	**+1.7**
	baz=298,SNR=12						
JCJ	**Chichijima**	**36.96**	**244**	LR	LR	08 16 30.7	
	comp=Z,190nm,20.9s,baz=19,slow=32						
B05A	**Bryant**	**37.09**	**71**	P	**P**	**08 04 01.4**	**+1.1**
	baz=297,SNR=10.0						
BOD	**Bodaibo**	**37.16**	**306**	*e*P	**P**	**08 03 59.0**	**-1.8**
BOD				pmax	pmax		
	comp=Z,17nm,1.5s						
D04E	**Lakebay**	**37.19**	**73**	P	**P**	**08 04 03.1**	**+2.0**
	baz=298						
E04D	**Cinebar**	**37.61**	**74**	P	**P**	**08 04 06.4**	**+1.7**
	baz=299,SNR=6.9						
LON	**Longmire**	**37.97**	**73**	P	**P**	**08 04 09.1**	**+1.2**
LON				pmax	pmax		
	comp=Z,11nm,1.2s						
LON	**Longmire**	**37.97**	**73**	P	**P**	**08 04 09.1**	**+1.2**
LON				IAmb	IAmb	08 04 09.9	
	comp=Z,11nm,1.1s						
LTY	**Liberty**	**38.41**	**72**	IAmb	IAmb	08 04 13.1	
	comp=Z,12nm,1.1s						
KSRS	**Korea Array**	**38.48**	**270**	P	**P**	**08 04 11.5**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=76,slow=8.8,SNR=3.4						
KSRS				LR	LR	08 20 31.1	
	comp=Z,208nm,19.3s,baz=56,slow=37						
H04D	**Lebanon**	**38.52**	**77**	P	**P**	**08 04 13.7**	**+1.2**
	baz=301						
B08A	**Colville Reser**	**38.68**	**69**	IAmb	IAmb	08 04 32.4	
	comp=Z,24nm,1.4s						
H04A	**Detroit Lake**	**38.78**	**76**	IAmb	IAmb	08 04 16.7	
	comp=Z,23nm,1.1s						
G05D	**Wamic, OR**	**39.02**	**75**	P	**P**	**08 04 18.3**	**+1.7**
	baz=301						
I04A	**Tendick Farm,**	**39.11**	**77**	P	**P**	**08 04 18.5**	**+1.1**
	baz=302,SNR=6.0						
E07A	**Sunnyside**	**39.24**	**72**	IAmb	IAmb	08 04 20.3	
	comp=Z,19nm,1.2s						
L02E	**Cave Junction**	**39.26**	**80**	P	**P**	**08 04 19.9**	**+1.2**
	baz=304						
HUMO	**Hull Mountain**	**39.41**	**79**	P	**P**	**08 04 21.1**	**+1.1**
I05D	**Terrebonne, OR**	**39.48**	**76**	P	**P**	**08 04 21.6**	**+1.1**
	baz=302						
TJN	**Taejon**	**39.50**	**269**	*ce*P	**P**	**08 04 17.9**	**-2.8**
F07A	**Phinny Hill Vi**	**39.53**	**73**	IAmb	IAmb	08 04 22.8	
	comp=Z,25nm,1.1s						
D08A	**Wollman Farm,**	**39.55**	**71**	IAmb	IAmb	08 04 22.3	
	comp=Z,18nm,1.2s						
C09A	**Chrisman Ranch**	**39.57**	**70**	IAmb	IAmb	08 04 22.4	
	comp=Z,17nm,1.2s						
J04D	**Umpqua Nationa**	**39.59**	**78**	P	**P**	**08 04 23.5**	**+1.8**
	baz=303						
E08A	**Dider Farm, El**	**39.75**	**72**	IAmb	IAmb	08 04 24.1	
	comp=Z,20nm,1.1s						
PINE	**Pine Mountain**	**40.01**	**77**	IAmb	IAmb	08 04 27.6	
	comp=Z,20nm,1.3s						
NEW	**Newport**	**40.02**	**68**	P	**P**	**08 04 24.7**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=9.4,slow=5.6,SNR=6.0						
NEW	**Newport**	**40.02**	**68**	IAmb	IAmb	08 04 43.1	
	comp=Z,26nm,1.4s						
NEW	**Newport**	**40.02**	**68**	P	**P**	**08 04 24.4**	**-0.6**
	baz=299,SNR=6.4						
L04D	**Klamath Falls**	**40.03**	**79**	P	**P**	**08 04 26.3**	**+1.1**
	baz=304						
YBH	**Yreka Blue Hor**	**40.05**	**80**	P	**P**	**08 04 26.7**	**+1.4**
YBH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YBH	**Yreka Blue Hor**	**40.05**	**80**	P	**P**	**08 04 26.3**	**+1.0**
	comp=Z,6.5nm,1.0s,baz=270,slow=8.7,SNR=7.8						
YBH	**Yreka Blue Hor**	**40.05**	**80**	P	**P**	**08 04 26.7**	**+1.4**
J05D	**Fort Rock, OR**	**40.10**	**77**	P	**P**	**08 04 27.1**	**+1.3**
	baz=303,SNR=6.8						
M02C	**Callahan**	**40.15**	**81**	P	**P**	**08 04 27.4**	**+1.2**
	baz=304						
E09A	**Wood Farm, Sta**	**40.28**	**71**	IAmb	IAmb	08 04 28.4	
	comp=Z,24nm,1.1s						
RES	**Resolute Bay**	**40.38**	**24**	P	**P**	**08 04 27.7**	**+0.2**
RES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
RES	**Resolute Bay**	**40.38**	**24**	P	**P**	**08 04 27.8**	**+0.2**
	comp=Z,6.8nm,1.1s,baz=278,slow=9.9,SNR=7.6						
RES	**Resolute Bay**	**40.38**	**24**	P	**P**	**08 04 27.7**	**+0.2**
N02D	**Trinity Center**	**40.48**	**81**	P	**P**	**08 04 30.3**	**+1.4**
	baz=305						
M04C	**Macdoel**	**40.56**	**80**	P	**P**	**08 04 30.8**	**+1.1**
	baz=304,SNR=7.9						
WDC	**Whiskeytown Da**	**40.80**	**82**	P	**P**	**08 04 32.0**	**+0.5**
WDC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
WDC	**Whiskeytown Da**	**40.80**	**82**	P	**P**	**08 04 32.0**	**+0.5**
O02D	**Mt. Diablo Mer**	**40.88**	**82**	P	**P**	**08 04 33.8**	**+1.5**
	baz=306						
F10A	**Beach Ranch, E**	**41.11**	**72**	IAmb	IAmb	08 04 42.5	
	comp=Z,15nm,1.1s						
O03E	**Paynes Creek**	**41.43**	**82**	P	**P**	**08 04 37.2**	**+0.5**
	baz=306						
WALA	**Waterton Lakes**	**41.50**	**66**	IAmb	IAmb	08 04 39.4	
	comp=Z,13nm,1.1s						
BMO	**Blue Mountains**	**41.65**	**73**	P	**P**	**08 04 38.8**	**+0.3**
BMO				pmax	pmax		
	comp=Z,21nm,1.3s						
BMO	**Blue Mountains**	**41.65**	**73**	P	**P**	**08 04 38.8**	**+0.3**
BMO				IAmb	IAmb	08 04 40.0	
	comp=Z,21nm,1.2s						
J08A	**Circle Bar Ran**	**41.75**	**76**	P	**P**	**08 04 39.7**	**+0.3**
JTMT	**Jette**	**41.94**	**68**	P	**P**	**08 04 40.9**	**+0.1**
WVOR	**Wild Horse Val**	**42.16**	**77**	P	**P**	**08 04 43.1**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,11nm,1.0s						
WVOR	**Wild Horse Val**	**42.16**	**77**	P	**P**	**08 04 43.1**	**+0.4**
MSO	**Missoula**	**42.61**	**69**	IAmb	IAmb	08 05 05.0	
	comp=Z,18nm,1.1s						
MSO	**Missoula**	**42.61**	**69**	P	**P**	**08 04 46.3**	**+0.1**
	baz=301						
AFDM	**Forest Hills D**	**42.74**	**83**	P	**P**	**08 04 47.6**	**+0.2**
MFID	**Camas Ranch**	**43.33**	**74**	IAmb	IAmb	08 04 53.6	
	comp=Z,18nm,1.4s						
PNTR	**Pine Nut**	**43.51**	**81**	P	**P**	**08 04 54.9**	**+1.0**
PNTR				IAmb	IAmb	08 05 11.5	
	comp=Z,15nm,0.8s						
MCMT	**McKenzie Canyo**	**44.33**	**71**	P	**P**	**08 05 00.1**	**-0.2**
EGMT	**Eagleton**	**44.40**	**65**	P	**P**	**08 05 00.1**	**-0.5**
	baz=302						
NVAR	**Mina Array Bea**	**44.72**	**81**	P	**P**	**08 05 03.4**	**0.0**
	comp=Z,5.0nm,0.9s,baz=291,slow=8.2,SNR=19						
NVAR				LR	LR	08 21 25.2	
	comp=Z,178nm,19.4s,baz=301,slow=33						
OMMB	**Old Mammoth Mi**	**44.78**

ISA pmax pmax
comp=Z,5.0nm,0.9s
ISA Isabella, Lake 46.34 84 P **P 08 05 15.5 -0.6**
ISA Isabella, Lake 46.34 84 P **P 08 05 15.7 -0.5**
baz=310
REDW Red Top Meadow 46.34 71 IAmb IAmb 08 05 18.0
comp=Z,20nm,1.3s
SNOW Snow King Moun 46.34 71 IAmb IAmb 08 05 18.0
comp=Z,11nm,1.1s
R11A Troy Canyon, C 46.45 80 IAmb IAmb 08 05 34.6
comp=Z,19nm,1.4s
R11A Troy Canyon, C 46.45 80 P **P 08 05 17.3 +0.2**
baz=308,SNR=13
BGU Big Grassy Mou 46.46 75 P **P 08 05 17.2 0.0**
AHID Auburn Hatcher 46.54 72 IAmb IAmb 08 05 19.2
comp=Z,19nm,1.1s
MOY Mondy 46.60 303 *e*P **P 08 05 18.5 +0.5**
HHC Hu-ho-hao-te 46.62 285 *e*P **P 08 05 18.8 +0.4**
HHC *e*S **S 08 12 03.9 -0.1**
HHC pmax pmax
comp=Z,10.0nm,1.1s
HHC pmax pmax
comp=Z,83nm,6.7s
HHC LR LR
comp=Z,190nm,17.0s
HHC LR LR
comp=Z,140nm,12.8s
HHC LR LR
comp=Z,220nm,17.9s
MPMC Manual Prospec 46.70 83 P **P 08 05 19.5 +0.3**
baz=310
GUMO Guam 46.71 229 LR LR 08 22 38.9
comp=Z,188nm,20.4s,baz=50,slow=33
FURC Furnace Creek, 46.83 82 P **P 08 05 20.4 +0.6**
baz=309,SNR=7.0
TPNV Topopah Spring 46.91 82 IAmb IAmb 08 05 25.1
comp=Z,15nm,0.9s
TPNV Topopah Spring 46.91 82 P **P 08 05 20.9 +0.2**
baz=309,SNR=21
HWUT Hardware Ranch 46.94 73 IAmb IAmb 08 05 22.5
comp=Z,19nm,1.2s
DUG Dugway, Tooele 47.03 76 P **P 08 05 21.9 +0.3**
DUG pmax pmax
comp=Z,26nm,1.2s
DUG Dugway, Tooele 47.03 76 P **P 08 05 21.9 +0.3**
DUG Dugway, Tooele 47.03 76 P **P 08 05 22.3 +0.7**
baz=307,SNR=15
EDW2 Edwards Air Fo 47.14 85 P **P 08 05 22.4 0.0**
baz=310
LAO LASA Array 47.14 65 IAmb IAmb 08 05 24.5
comp=Z,20nm,1.2s
LAO LASA Array 47.14 65 P **P 08 05 23.1 +0.9**
baz=304
PSUT Pine Spring 47.41 78 P **P 08 05 24.6 0.0**
BW06 Boulder Array 47.46 71 P **P 08 05 24.8 -0.2**
BW06 Boulder Array 47.46 71 P **P 08 05 25.1 +0.1**
baz=306,SNR=32
PDAR Pinedale Array 47.46 71 P **P 08 05 24.6 -0.4**
comp=Z,20nm,1.0s,baz=316,slow=4.1,SNR=99
PDAR LR LR 08 23 19.6
comp=Z,181nm,21.3s,baz=316,slow=34
PDAR Pinedale Array 47.46 71 P **P 08 05 24.4 -0.6**
MWC Mount Wilson 47.53 86 IAmb IAmb 08 05 26.6
comp=Z,22nm,1.4s
SHOC Shoshone, Teco 47.56 83 P **P 08 05 25.9 +0.3**
baz=310,SNR=5.9
GSC Goldstone, Bar 47.61 84 IAmb IAmb 08 05 43.6
comp=Z,11nm,1.1s
GSC Goldstone, 47.61 84 P **P 08 05 26.3 +0.2**
baz=310,SNR=8.4
NLU North Lily Min 47.63 76 P **P 08 05 26.2 -0.1**
NJ2 Nanjing 47.66 271 *e*P **P 08 05 25.8 -0.6**
NJ2 pmax pmax
comp=Z,12nm,0.7s
BTO Baotou 47.71 286 *e*P **P 08 05 25.8 -1.0**
BFSC Mount Baldy Ra 47.77 85 P **P 08 05 27.6 +0.2**
baz=311,SNR=5.3
SHPR Sheep Range 47.87 81 P **P 08 05 27.7 -0.5**
TUQ Turquoise Moun 48.08 83 P **P 08 05 30.0 +0.2**
baz=310
CCUT Cedar City 48.32 79 P **P 08 05 31.5 -0.3**
SZCU Shurtz Canyon 48.47 79 P **P 08 05 33.3 +0.4**
GMRC Granite Mounta 48.66 83 P **P 08 05 34.2 0.0**
baz=311
P17A Butcher Ranch, 48.73 75 P **P 08 05 35.3 +0.4**
PFO Pinyon Flats O 48.93 85 ⇓ *i*P **P 08 05 36.2 -0.1**
PFO pmax pmax
comp=Z,5.0nm,0.9s
PFO Pinyon Flats O 48.93 85 P **P 08 05 36.0 -0.3**
comp=Z,2.7nm,0.9s,baz=282,slow=3.0,SNR=6.4
PFO Pinyon Flats O 48.93 85 P **P 08 05 35.8 -0.6**
PFO IAmb IAmb 08 05 38.4
comp=Z,7.8nm,1.2s
PFO Pinyon Flats O 48.93 85 P **P 08 05 36.1 -0.1**
baz=311
XPFO Pion Flat 48.93 85 P **P 08 05 36.0 -0.3**
XPFO IAmb IAmb 08 05 38.4
comp=Z,7.8nm,1.2s
TPFO Pinon Flats 48.94 85 P **P 08 05 35.9 -0.5**
baz=311
K22A Casper 49.32 69 P **P 08 05 38.3 -1.0**
K22A IAmb IAmb 08 05 39.8
comp=Z,14nm,1.1s
K22A Casper 49.32 69 P **P 08 05 38.7 -0.6**
baz=307,SNR=7.6
IRM Iron Mountain 49.40 84 P **P 08 05 40.1 +0.4**
baz=311
BAR Barrett 49.41 86 IAmb IAmb 08 05 55.1
comp=Z,7.7nm,1.0s
MONP2 Monument Peak 49.43 86 P **P 08 05 40.3 0.0**
baz=312,SNR=5.8
BC3 Big Chuckawall 49.53 84 P **P 08 05 40.8 -0.1**
baz=311
W13A Hualapai Mount 49.57 82 IAmb IAmb 08 05 57.0
comp=Z,8.5nm,1.2s
U15A North Rim 49.70 79 IAmb IAmb 08 05 55.1
comp=Z,11nm,0.8s
IKP In-Ko-Pah, Jac 49.79 86 P **P 08 05 42.8 0.0**
baz=312,SNR=5.6
O20A White River Ci 49.84 73 P **P 08 05 43.3 0.0**
baz=308,SNR=14
Y12C Blythe 50.05 84 IAmb IAmb 08 06 03.5
comp=Z,6.3nm,0.8s
Y12C Blythe 50.05 84 P **P 08 05 44.3 -0.4**
baz=312
GLA Glamis 50.32 84 P **P 08 05 46.4 -0.4**
GLA pmax pmax
comp=Z,10.0nm,0.8s
GLA Glamis 50.32 84 P **P 08 05 46.4 -0.4**
GLA IAmb IAmb 08 06 04.6
comp=Z,9.8nm,0.8s
GLA Glamis 50.32 84 P **P 08 05 46.8 0.0**
baz=312
SPITS Spitsbergen Ar 50.47 356 P **P 08 05 46.7 -0.5**
comp=Z,6.2nm,0.6s,baz=55,slow=7.2,SNR=11
ULM Lac du Bonnet 50.74 56 ⇑ *e*P **P 08 05 48.9 -0.8**
ULM Lac du Bonnet 50.74 56 P **P 08 05 48.7 -1.0**
comp=Z,1.3nm,0.7s,baz=300,slow=9.9,SNR=3.4
ULM LR LR 08 27 27.8
comp=Z,466nm,21.1s,baz=312,slow=36
N23A Red Feather La 50.74 71 P **P 08 05 50.8 +0.6**
baz=308,SNR=7.2
WUAZ Wupatki 50.85 80 P **P 08 05 51.7 +0.7**
baz=311,SNR=7.1
SMCO Snowmass 51.20 73 P **P 08 05 53.7 -0.1**
MVCO Mesa Verde 51.53 76 IAmb IAmb 08 06 14.6
comp=Z,7.5nm,0.9s
MVCO Mesa Verde 51.53 76 P **P 08 05 56.5 +0.4**
baz=310
X16A Lo Mia Camp, P 51.53 81 IAmb IAmb 08 06 14.1
comp=Z,6.1nm,1.0s
ISCO Idaho Springs 51.62 72 IAmb IAmb 08 05 58.4
comp=Z,17nm,1.2s
ISCO Idaho Springs 51.62 72 P **P 08 05 57.5 +0.7**
baz=309,SNR=8.3
DAG Danmarks Havn 51.78 5 *e*P **P 08 05 55.8 -1.3**
DAG Danmarks Havn 51.78 5 *i*P **P 08 05 55.8 -1.3**
S22A 4UR Ranch, Cre 52.20 74 P **P 08 06 01.8 +0.6**
S22A IAmb IAmb 08 06 18.9
comp=Z,8.8nm,1.1s
S22A 4UR Ranch, Cre 52.20 74 P **P 08 06 02.1 +1.0**
baz=310,SNR=9.4
214A Organ Pipe Nat 52.32 84 P **P 08 06 03.8 +2.1**
baz=313
X18A Snowflake 52.38 80 P **P 08 06 02.1 -0.3**
X18A IAmb IAmb 08 06 15.2
comp=Z,7.0nm,0.8s

XAN Xi'an 52.56 280 P **P 08 06 02.8 -0.7**
XAN pmax pmax
comp=Z,8.0nm,1.2s
SDCO Great Sand Dun 53.00 74 IAmb IAmb 08 06 08.8
comp=Z,19nm,1.4s
SDCO Great Sand Dun 53.00 74 P **P 08 06 07.5 +0.5**
baz=310,SNR=14
ZALV Zalesovo Beam 53.31 313 LR LR 08 30 24.8
comp=Z,452nm,18.6s,baz=52,slow=38
TUC Tucson 53.35 82 P **P 08 06 08.9 -0.5**
TUC pmax pmax
comp=Z,8.0nm,1.3s
TUC Tucson 53.35 82 P **P 08 06 08.9 -0.5**
TUC IAmb IAmb 08 06 25.5
comp=Z,7.8nm,1.2s
TUC Tucson 53.35 82 P **P 08 06 09.2 -0.2**
baz=313
SUMG Summit 53.74 13 P **P 08 06 11.5 -0.6**
SUMG pmax pmax
comp=Z,27nm,1.2s
SUMG Summit 53.74 13 *i* P **P 08 06 11.0 -1.1**
comp=Z,66nm,1.2s
SUMG Summit 53.74 13 P **P 08 06 11.5 -0.6**
KSCO Kaye Shedlock' 53.90 71 P **P 08 06 14.8 +1.4**
baz=310
T25A Trinidad 54.06 73 P **P 08 06 15.4 +0.7**
baz=311,SNR=12
ANMO Albuquerque 54.26 77 ⇓ *e*P **P 08 06 16.5 +0.3**
ANMO pmax pmax
comp=Z,3.0nm,0.8s
ANMO Albuquerque 54.26 77 P **P 08 06 15.8 -0.4**
ANMO Albuquerque 54.26 77 P **P 08 06 16.7 +0.5**
baz=312
LZH Lanzhou 54.32 285 *e*P **P 08 06 16.8 +0.2**
LZH *e*PP **PP 08 08 20.3 +1.7**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,92nm,7.2s
LZH LR LR
comp=Z,350nm,14.7s
LZH LR LR
comp=Z,350nm,15.0s
LZH LR LR
comp=Z,530nm,17.3s
ECSD EROS Data Cent 54.34 63 P **P 08 06 16.2 -0.2**
baz=310
GTA Gaotai 54.56 291 ⇑ P **P 08 06 17.9 -0.3**
GTA pP pP 08 06 30.8 -0.6
GTA S **S 08 13 53.8 -0.2**
GTA SS **SS 08 17 38.3 +1.7**
GTA pmax pmax
comp=Z,7.0nm,1.3s
GTA pmax pmax
comp=Z,170nm,6.8s
GTA LR LR
comp=Z,300nm,17.8s
GTA LR LR
comp=Z,760nm,20.6s
GTA LR LR
comp=Z,610nm,16.5s
319A Douglas 54.92 82 IAmb IAmb 08 06 23.7
comp=Z,9.2nm,1.1s
121A Cookes Peak, D 55.06 80 P **P 08 06 22.2 +0.3**
baz=313
E38A The Farm, Brul 55.25 57 IAmb IAmb 08 06 31.9
comp=Z,7.3nm,0.7s
CBKS Cedar Bluff 55.74 69 P **P 08 06 26.7 +0.1**
baz=311
MNTX Cornudas Mount 57.12 79 IAmb IAmb 08 06 49.1
comp=Z,6.5nm,0.8s
MNTX Cornudas Mount 57.12 79 P **P 08 06 36.8 +0.3**
baz=314,SNR=7.6
MSTX Muleshoe 57.16 75 P **P 08 06 37.5 +0.6**
baz=313
KSU1 Kansas State U 57.37 67 P **P 08 06 38.2 0.0**
baz=312
ARCES ARCESS Array B 58.06 349 LR LR 08 35 28.8
comp=Z,268nm,18.4s,baz=1.5,slow=40
KURK Kurchatov 58.30 313 P **P 08 06 44.0 -0.5**
KURK pmax pmax
comp=Z,14nm,1.1s
KURK Kurchatov 58.30 313 P **P 08 06 44.0 -0.5**
WMQ Urumqi 58.46 302 *e*P **P 08 06 46.8 +1.0**
WMQ pmax pmax
comp=Z,12nm,1.5s
WMQ pmax pmax
comp=Z,110nm,5.3s
WMQ LR LR
comp=Z,510nm,22.5s
WMQ LR LR
comp=Z,390nm,24.1s
WMQ LR LR
comp=Z,890nm,20.9s
WMOK Wichita Mounta 59.05 72 IAmb IAmb 08 07 07.1
comp=Z,10nm,0.9s
WMOK Wichita Mounta 59.05 72 P **P 08 06 50.1 +0.2**
baz=314,SNR=11
MK31 Makanchi Array 59.23 307 P **P 08 06 49.8 -1.3**
MK31 pmax pmax
comp=Z,9.0nm,1.5s
MK31 Makanchi Array 59.23 307 P **P 08 06 49.8 -1.3**
MK31 IAmb IAmb 08 06 50.7
comp=Z,8.5nm,1.4s
MKAR Makanchi Array 59.23 307 P **P 08 06 49.9 -1.1**
comp=Z,1.0nm,0.4s,baz=71,slow=6.2,SNR=10
MKAR LR LR 08 33 52.4
comp=Z,428nm,19.6s,baz=41,slow=38
MKAR Makanchi Array 59.23 307 P **P 08 06 49.2 -1.9**
TX31 Lajitas Ar. Si 59.82 80 IAmb IAmb 08 07 02.9
comp=Z,8.7nm,1.2s
TX32 Lajitas Array 59.82 80 IAmb IAmb 08 07 02.9
comp=Z,8.1nm,1.1s
TXAR Lajitas Array 59.82 80 P **P 08 06 54.9 -0.5**
comp=Z,1.5nm,0.9s,baz=296,slow=4.0,SNR=12
TXAR LR LR 08 32 59.4
comp=Z,182nm,18.0s,baz=0.0,slow=36
TXAR Lajitas Array 59.82 80 P **P 08 06 54.5 -0.9**
ABTX Abilene, Hawle 59.99 74 IAmb IAmb 08 07 12.5
comp=Z,13nm,1.1s
TUL1 Leonard 60.01 69 P **P 08 06 56.2 -0.4**
TUL1 Leonard 60.01 69 P **P 08 06 56.5 0.0**
baz=314,SNR=5.7
KRVT Keravat (AS076 60.04 212 LR LR 08 29 40.8
comp=Z,195nm,18.9s,baz=52,slow=33
BRVK Borovoye 60.29 319 P **P 08 06 57.9 -0.3**
BRVK pmax pmax
comp=Z,36nm,1.4s
BRVK Borovoye 60.29 319 P **P 08 06 57.9 -0.3**
HDIL Hopedale 60.52 61 P **P 08 06 59.3 -0.6**
baz=314
SCHQ Schefferville 60.85 37 P **P 08 07 00.8 -1.2**
comp=Z,6.0nm,1.0s,baz=337,slow=7.6,SNR=6.2
SCHQ Schefferville 60.85 37 P **P 08 07 00.4 -1.6**
SCHQ IAmb IAmb 08 07 03.1
comp=Z,13nm,1.3s
MGMO Mountain Grove 61.20 66 IAmb IAmb 08 07 04.0
comp=Z,11nm,1.2s
JCT Junction City 61.39 76 P **P 08 07 05.2 -0.9**
JCT pmax pmax
comp=Z,4.0nm,0.8s
JCT Junction City 61.39 76 P **P 08 07 05.2 -0.9**
JCT IAmb IAmb 08 07 18.6
comp=Z,4.2nm,0.8s
JCT Junction City 61.39 76 P **P 08 07 06.3 +0.2**
baz=315
U40A Yellville 61.42 67 P **P 08 07 03.8 -2.3**
U40A Yellville 61.42 67 P **P 08 07 05.4 -0.7**
baz=314,SNR=6.7
W39A Magazine 61.69 68 P **P 08 07 07.7 -0.2**
baz=315,SNR=7.4
WHTX Lake Whitney, 61.75 73 IAmb IAmb 08 07 25.6
comp=Z,9.1nm,0.8s
WHTX Lake Whitney, 61.75 73 P **P 08 07 08.9 +0.5**
baz=315
SFIN Lafayette 61.84 60 P **P 08 07 09.2 +0.4**
baz=315
ARU Arti 62.14 327 *c i*P **P 08 07 10.6 0.0**
ARU 08 07 46.9
ARU S **S 08 15 34.2 +2.3**
ARU SS **SS 08 19 37.3 +2.9**
ARU pmax pmax
comp=Z,15nm,1.2s
ARU MLR MLR
comp=Z,492nm,20.0s
ARU Arti 62.14 327 P **P 08 07 10.0 -0.6**
MIAR Mount Ida 62.26 69 P **P 08 07 11.8 0.0**
baz=315,SNR=12
W41B Gary Mavity, V 62.60 67 P **P 08 07 13.3 -0.7**
baz=315,SNR=7.0
LCAR Lake Charles 62.60 66 P **P 08 07 12.8 -1.2**
LCAR IAmb IAmb 08 07 15.0
comp=Z,11nm,1.2s
X40A Basin Creek Fa 62.74 68 P **P 08 07 13.7 -1.3**
X40A Basin Creek Fa 62.74 68 P **P 08 07 14.7 -0.3**
baz=315,SNR=8.6
JAY Jayapura 62.81 225 LR LR 08 28 51.2
comp=Z,160nm,20.0s,baz=8.5,slow=31
D56A ZEC Mazanza, M 63.29 47 P **P 08 07 16.3 -2.2**
baz=317
P48A Milroy 63.40 60 P **P 08 07 18.4 -0.9**
baz=316
HKT Hockley 64.18 74 P **P 08 07 25.0 +0.6**
HKT pmax pmax
comp=Z,29nm,1.5s
HKT Hockley 64.18 74 P **P 08 07 25.0 +0.6**
OXF Oxford 64.71 66 P **P 08 07 28.0 +0.1**
baz=316,SNR=7.2
O52A Adamsville 64.85 57 P **P 08 07 29.2 +0.4**
baz=317
T49A Edmonton 65.03 61 P **P 08 07 33.5 +3.5**
baz=316
R51A Hillsboro 65.23 59 P **P 08 07 31.5 +0.2**
baz=317
K56A Middlesex 65.27 52 P **P 08 07 31.1 -0.4**
baz=318
CLTN Cedars of Leba 65.31 63 IAmb IAmb 08 07 41.2
comp=Z,15nm,1.4s
BOOM Boomskoye usch 65.48 308 IAmb IAmb 08 07 38.1
comp=Z,16nm,1.4s
L56A Greenwood 65.56 53 P **P 08 07 32.9 -0.5**
baz=318
USP Ospenovka 65.61 309 P **P 08 07 34.5 +0.8**
SNR=13
FINES FINESS Array B 65.69 346 LR LR 08 37 20.7
comp=Z,176nm,21.3s,baz=15,slow=37
KBK Karagaybulak 65.84 308 P **P 08 07 35.7 +0.3**
SNR=7.1
AAK Ala-Archa 66.08 309 *c i*P **P 08 07 36.9 0.0**
AAK pmax pmax
comp=Z,13nm,1.3s
AAK Ala-Archa 66.08 309 P **P 08 07 36.9 0.0**
SNR=7.8
AAK Ala-Archa 66.08 309 P **P 08 07 37.2 +0.3**
AAK IAmb IAmb 08 07 40.3
comp=Z,13nm,1.2s
EKS2 Erkin-Say 66.41 309 P **P 08 07 39.4 +0.4**
SNR=8.1
PMG Port Moresby 66.48 215 LR LR 08 34 24.4
comp=Z,196nm,18.6s,baz=353,slow=34
AML Almayashu 66.85 309 P **P 08 07 43.4 +1.2**
SNR=8.3
AKTO Aktyubinsk 67.15 324 P **P 08 07 44.0 +0.6**
AKTO Aktyubinsk 67.15 324 P **P 08 07 44.0 +0.6**
comp=Z,9.0nm,1.0s,baz=36,slow=6.4,SNR=15
N59A State Game Lan 67.37 53 P **P 08 07 44.8 -0.2**
baz=319
ABKAR Akbulak array 67.37 322 P **P 08 07 45.1 +0.3**
Z50A Ashland 67.61 65 P **P 08 07 45.8 -0.8**
Z50A IAmb IAmb 08 07 46.8
comp=Z,22nm,1.3s
Z50A Ashland 67.61 65 P **P 08 07 46.2 -0.4**
baz=317
KK31 Karatay Array 67.65 311 P **P 08 07 46.2 -0.5**
KK31 pmax pmax
comp=Z,11nm,1.3s
KK31 Karatay Array 67.65 311 P **P 08 07 46.2 -0.5**
KK31 IAmb IAmb 08 07 47.3
comp=Z,11nm,1.3s
KKAR Karatay Array 67.65 311 P **P 08 07 46.6 -0.1**
KKAR pmax pmax
comp=Z,11nm,1.3s
KKAR Karatay Array 67.65 311 P **P 08 07 46.6 -0.1**
KKAR IAmb IAmb 08 07 47.3
comp=Z,11nm,1.3s
KSH Kashi 67.67 306 P **P 08 07 50.8 +3.8**
KSH pP pP 08 08 01.5 +0.9
KSH PP PP 08 10 24.1 +7.9
KSH S **S 08 16 43.8 +3.1**
KSH SS **SS 08 21 10.1 +8.6**
KSH LR LR
comp=Z,190nm,4.8s
KSH LR LR
comp=Z,160nm,4.1s
KSH LR LR
comp=Z,330nm,6.8s
NB2 NORSAR Subarra 67.71 354 P **P 08 07 45.8 -1.0**
comp=Z,55nm,1.7s,baz=8.0,slow=6.2
NB2 NORSAR Subarra 67.71 354 P **P 08 07 45.8 -1.0**
baz=8.0,slow=6.2
NOA NORSAR Array B 67.71 354 P **P 08 07 46.4 -0.4**
comp=Z,5.7nm,1.1s,baz=7.4,slow=6.3,SNR=4.1
NOA LR LR 08 39 05.1
comp=Z,130nm,18.7s,baz=330,slow=38
ARSB Arslanbob 67.81 309 **pP 08 08 03.1 +1.7**
ARSB IAmb IAmb 08 08 03.4
comp=Z,8.6nm,0.9s
TAOE Nuku Hiva Isla 69.27 137 *e*LR LR 08 28 52.0
comp=Z,1µm,35.5s
OBN Obninsk 69.62 338 *i*P **P 08 07 57.5 -1.2**
OBN *i* 08 08 20.6
OBN pmax pmax
comp=Z,11nm,1.1s
OBN MLR MLR
comp=Z,673nm,18.0s
CMAR Chiang Mai Arr 69.88 275 LR LR 08 43 53.3
comp=Z,86nm,18.1s,baz=22,slow=40
VSR Storozhevoye 72.52 335 ⇑ *e*P **P 08 08 15.9 -0.4**
VSR pmax pmax
comp=Z,5.0nm,1.0s
NIL Nilore 73.56 303 P **P 08 08 23.5 +0.7**
NIL pmax pmax
comp=Z,30nm,1.4s
NIL Nilore 73.56 303 P **P 08 08 23.5 +0.7**
PPT Papeete 73.68 149 LR LR 08 32 45.2
comp=Z,334nm,19.9s,baz=328,slow=29
PPT2 Papeete2 73.70 149 *e*S **S 08 17 54.0 +3.2**
comp=Z,610nm,28.2s
PPT2 Papeete2 73.70 149 *e*LR LR 08 30 58.8
comp=Z,569nm,25.2s,baz=338
DZM Mont Dzumac 73.83 192 *e*LR LR 08 30 51.5
comp=Z,718nm,25.9s
KBL Kabul 75.03 307 P **P 08 08 30.6 -1.0**
KBL pmax pmax
comp=Z,22nm,1.4s
KBL Kabul 75.03 307 P **P 08 08 30.6 -1.0**
KBL IAmb IAmb 08 08 33.6
comp=Z,22nm,1.4s
AKASG Malin Array Be 75.35 341 *i*P P 08 08 24.8 -8.1
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 75.35 341 P **P 08 08 32.4 -0.4**
comp=Z,0.9nm,0.4s,baz=26,slow=6.2,SNR=8.3
AKASG LR LR 08 45 43.1
comp=Z,332nm,19.6s,baz=290,slow=39
AKASG Malin Array Be 75.35 341 P **P 08 08 29.9 -3.0**
GEYT Alibeck 77.42 316 P **P 08 08 45.2 +0.3**
comp=Z,4.7nm,1.0s,baz=253,slow=1.5,SNR=10
GEYT LR LR 08 47 58.9
comp=Z,456nm,18.3s,baz=10.0,slow=40
GEYT Alibeck 77.42 316 P **P 08 08 45.0 +0.1**
KWP Kalwaria Pacla 77.59 345 P **P 08 08 45.1 -0.5**
KWP pmax pmax
comp=Z,208nm,1.3s
KWP Kalwaria Pacla 77.59 345 P **P 08 08 45.1 -0.5**
KIV Kislovodsk 78.05 330 *e*P **P 08 08 49.6 +1.2**
KIV pmax pmax
comp=Z,10.0nm,0.9s
KBZ Khabaz 78.19 329 ⇑ *e*P **P 08 08 49.7 +0.8**
KBZ Khabaz 78.19 329 P **P 08 08 50.3 +1.4**
comp=Z,0.8nm,0.5s,baz=39,slow=6.5,SNR=4.3
KBZ LR LR 08 47 26.6
comp=Z,358nm,21.2s,baz=24,slow=39
KOLS Kolonicke sedl 78.34 345 *e*P **P 08 08 51.3 +1.5**
KOLS Kolonicke sedl 78.34 345 *e*P **P 08 08 51.3 +1.5**
LANS Liptovska Anna 78.56 347 *e*P **P 08 08 52.2 +1.2**
LANS pmax pmax
comp=Z,5.0nm,1.4s
LANS Liptovska Anna 78.56 347 *e*P **P 08 08 52.1 +1.1**
ZEI Tsey 78.70 328 *e*P **P 08 08 50.6 -1.5**
ZEI pmax pmax
comp=Z,9.0nm,1.1s
BUR08 Bucovina Ar. S 79.06 343 P **P 08 08 54.2 +0.3**

BURAR	**Bucovina Array**	**79.09 343**	⇑P		**P**		**08 08 53.9**	**-0.2**
TBI	**Tubuai**	**79.14 151**	*e*S		**S**		**08 18 53.2**	**+3.2**
	comp=Z,420nm,35.0s							
TBI	**Tubuai**	**79.14 151**	*e*LR		LR		08 33 24.4	
	comp=Z,643nm,22.2s,baz=336							
VYHS	**Vyhne**	**79.29 347**	*e*P		**P**		**08 08 55.7**	**+0.7**
VYHS	**Vyhne**	**79.29 347**	*e*P		**P**		**08 08 55.7**	**+0.7**
TBLG	**Delisi**	**79.36 327**	P		**P**		**08 08 57.1**	**+1.6**
TBLG			pmax		pmax			
	comp=Z,10.0nm,0.9s							
TBLG	**Delisi**	**79.36 327**	P		**P**		**08 08 57.1**	**+1.6**
TBLG			IAmb		IAmb		08 08 57.8	
	comp=Z,10nm,0.9s							
GERES	**GERESS Array B**	**79.58 350**	P		**P**		**08 08 55.8**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=343,slow=3.1,SNR=3.6							
GERES			LR		LR		08 50 02.1	
	comp=Z,114nm,18.6s,baz=20,slow=40							
GERES	**GERESS Array B**	**79.58 350**	P		**P**		**08 08 54.5**	**-2.2**
SIM	**Simferopol'**	**79.62 336**	*e*P		P		08 09 03.4	+6.6
SIM			*e**PP		sP		08 09 25.0	+8.9
SIM			pmax		pmax			
	comp=Z,16nm,0.5s							
AKH	**Akhalkalaki**	**80.07 328**	P		**P**		**08 08 59.9**	**+0.3**
AKH			pmax		pmax			
	comp=Z,5.0nm,1.0s							
AKH	**Akhalkalaki**	**80.07 328**	P		**P**		**08 08 59.9**	**+0.3**
CONA	**Conrad Observa**	**80.24 349**	*e*P		**P**		**08 08 57.4**	**-2.9**
	comp=Z,7.6nm,1.7s							
DRGR		**80.34 344**	⇑P		**P**		**08 09 01.1**	**+0.4**
MOA	**Molln**	**80.50 350**	*e*P		**P**		**08 08 59.6**	**-2.0**
	comp=Z,8.1nm,1.6s							
GNI	**Garni**	**80.77 326**⇑	*e*P		**P**		**08 09 05.1**	**+1.8**
GNI			pmax		pmax			
	comp=Z,18nm,1.2s							
VOIR		**81.21 342**	⇓P		**P**		**08 09 06.4**	**+0.9**
WATA	**Walderalm**	**81.28 352**	*e*P		**P**		**08 09 04.5**	**-1.4**
	comp=Z,8.3nm,0.8s							
KBA	**Koelnbreinsper**	**81.36 350**	*e*P		**P**		**08 09 04.1**	**-2.3**
	comp=Z,16nm,1.4s							
SOKA	**Soboth**	**81.57 349**	*e*P		**P**		**08 09 05.0**	**-2.3**
	comp=Z,11nm,1.3s							
GZR	**Gura Zlata**	**81.68 344**	⇓P		**P**		**08 09 08.5**	**+0.6**
MYKA	**Terra Mystica**	**81.77 350**	*e*P		**P**		**08 09 05.4**	**-3.0**
	comp=Z,4.9nm,1.1s							
FITZ	**Fitzroy Crossi**	**83.45 231**	LR		LR		08 42 24.1	
	comp=Z,64nm,19.6s,baz=40,slow=33							
ASAR	**Alice Springs**	**84.59 221**	P		**P**		**08 09 22.2**	**-0.8**
	comp=Z,1.4nm,0.9s,baz=36,slow=4.8,SNR=3.6							
ASAR			LR		LR		08 43 40.5	
	comp=Z,118nm,20.6s,baz=38,slow=33							
ASAR	**Alice Springs**	**84.59 221**	P		**P**		**08 09 21.4**	**-1.6**
BRTR	**Keskin Array B**	**84.61 334**	*i* P		**P**		**08 09 24.2**	**+0.9**
BRTR			pmax		pmax			
	comp=Z,1.0nm,0.9s							
BRTR	**Keskin Array B**	**84.61 334**	P		**P**		**08 09 22.1**	**-1.2**
	comp=Z,1.4nm,0.9s,baz=38,slow=2.2,SNR=6.0							
BRTR			LR		LR		08 53 31.2	
	comp=Z,84nm,18.9s,baz=20,slow=40							
BRTR	**Keskin Array B**	**84.61 334**	P		**P**		**08 09 21.3**	**-2.0**
STKA	**Stephens Creek**	**89.16 211**	LR		LR		08 47 51.1	
	comp=Z,178nm,18.4s,baz=24,slow=34							
GCPR	**Guaynabo City**	**90.32 60**	P		**P**		**08 09 51.4**	**+0.5**
TSUM	**Tsumeb**	**144.97 329**			**PKPdf**		**08 16 26.6**	**-0.3**
BOSA	**Boshof**	**150.22 309**	PKPbc		**PKPbc**		**08 16 40.7**	**+0.2**
	comp=Z,8.7nm,1.2s,baz=3.7,slow=11,SNR=5.6							
BOSA	**Boshof**	**150.22 309**			**PKiKP**		**08 16 41.2**	**-0.1**
SUR	**Sutherland**	**155.47 312**	PKPdf		**PKPdf**		**08 16 41.1**	**-1.9**
HOPE	**Hope Point**	**158.23 112**	PKiKP		**PKPdf**		**08 16 44.1**	**-1.4**
HOPE	**Hope Point**	**158.23 112**			**PKPdf**		**08 16 44.1**	**-1.4**

NEIC ***18*** *08:01:07.1±2.4, 11°.45S±0°.08×166°.4E±0°.1, h35km±2km, mb4.6/13, Error ellipse: s-maj=17.9km s-min=13.2km az=65.0*

IDC ***18*** *08:01:09.6±0.9, 11°.55S×166°.39E, h55km±6km, mb4.0/9, mb1 4.2/10, mb1mx3.8/39, mbtmp4.3/10, MS3.5/7, Ms1 3.5/7, ms1mx3.2/32, Error ellipse: s-maj=27.7km s-min=16.2km az=160.0*

ISC 18 08:01:09.8±0.6, 11°.51S±0°.07×166°.39E±0°.09, h59km, n38, σ1s01/41, mb4.4/15, MS3.6/4, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**3.99**	**169**	Pn	**Pn**	**08 02 09.2**	**+0.6**
SANVU				Sn	**Sn**	**08 02 54.0**	**-0.1**
HNR	**Honiara**	**6.66**	**287**	P	**Pn**	**08 02 46.4**	**+1.2**
	42nm,0.3s,baz=167,slow=7.0,SNR=5.7						
HNR				S	**Sn**	**08 04 00.1**	**+0.4**
	20nm,0.3s,baz=4.4,slow=18,SNR=2.0						
HNR				LR	LR	08 05 40.4	
	comp=Z,352nm,20.2s,baz=119,slow=41						
HNR	**Honiara**	**6.66**	**287**		**Pn**	**08 02 44.6**	**-0.5**
NOUC	**Port Laguerre**	**10.53**	**180**	Pn	**Pn**	**08 03 36.4**	**-1.7**
KRVT	**Keravat (AS076**	**15.91**	**296**	LR	LR	08 09 37.8	
	comp=Z,71nm,20.7s,baz=129,slow=32						
PMG	**Port Moresby**	**19.02**	**275**	LR	LR	08 12 18.5	
	comp=Z,129nm,20.8s,baz=107,slow=35						
EIDS	**Eidsvold**	**19.99**	**224**	Pn	**Pn**	**08 05 39.9**	**+0.1**
CTA	**Charters Tower**	**21.15**	**244**	P	**P**	**08 05 51.6**	**+1.4**
	2.4nm,0.7s,baz=51,slow=12,SNR=5.8						
ARMA	**Armidale**	**23.27**	**214**	P	**P**	**08 06 13.2**	**+0.7**
ARMA				IAmb	IAmb	08 06 14.7	
	comp=Z,20nm,0.9s						
STKA	**Stephens Creek**	**30.54**	**225**	P	**P**	**08 07 18.1**	**+0.2**
	comp=Z,5.4nm,0.7s,baz=36,slow=11,SNR=9.6						
STKA				LR	LR	08 18 40.0	
	comp=Z,117nm,19.9s,baz=24,slow=34						
STKA	**Stephens Creek**	**30.54**	**225**	P	**P**	**08 07 16.9**	**-1.0**
THZ	**Tophouse**	**30.67**	**170**	P	**P**	**08 07 21.4**	**+2.5**
WR0	**Warramunga Arr**	**31.73**	**251**	P	**P**	**08 07 28.0**	**-0.5**
WRAB	**Tennant Creek**	**31.91**	**251**	P	**P**	**08 07 29.5**	**-0.5**
WRAB				IAmb	IAmb	08 07 30.1	
	comp=Z,8.9nm,1.0s						
WRA	**Warramunga Arr**	**31.92**	**251**	P	**P**	**08 07 29.6**	**-0.6**
	comp=Z,5.6nm,0.9s,baz=82,slow=9.1,SNR=16						
WRA	**Warramunga Arr**	**31.91**	**251**	P	**P**	**08 07 29.5**	**-0.6**
TOO	**Toolangi**	**32.01**	**212**	P	**P**	**08 07 31.6**	**+0.8**
TOO				IAmb	IAmb	08 07 39.8	
	comp=Z,13nm,1.2s						
RPZ	**Rata Peaks**	**32.34**	**174**	P	**P**	**08 07 32.9**	**-0.6**
LBZ	**Lake Benmore**	**32.92**	**175**	P	**P**	**08 07 38.3**	**-0.2**
AS31	**Alice Springs**	**33.15**	**244**	P	**P**	**08 07 39.8**	**-1.1**
ASAR	**Alice Springs**	**33.15**	**244**	P	**P**	**08 07 39.6**	**-1.3**
	comp=Z,3.5nm,0.7s,baz=68,slow=9.7,SNR=45						
ASAR				LR	LR	08 20 19.1	
	comp=Z,68nm,18.9s,baz=74,slow=35						
ASAR	**Alice Springs**	**33.15**	**244**	P	**P**	**08 07 40.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**39.87**	**256**	LR	LR	08 24 14.7	
	comp=Z,85nm,19.4s,baz=56,slow=35						
FITZ	**Fitzroy Crossi**	**39.87**	**256**	P	**P**	**08 08 37.8**	**-0.3**
FITZ				IAmb	IAmb	08 08 50.9	
	comp=Z,20nm,1.4s						
NWAO	**Narrogin (SRO)**	**49.73**	**236**	LR	LR	08 30 57.6	
	comp=Z,109nm,19.0s,baz=210,slow=36						
CMAR	**Chiang Mai Arr**	**72.87**	**293**	P	**P**	**08 12 34.7**	**+1.6**
	comp=Z,1.7nm,0.4s,baz=117,slow=4.2,SNR=10.0						
CMAR				pP	**PcP**	**08 12 50.8**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=125,slow=3.6,SNR=2.8						
CMAR	**Chiang Mai Arr**	**72.87**	**293**	P	**P**	**08 12 33.8**	**+0.6**
QSPA	**South Pole Qui**	**78.50**	**180**	P	**P**	**08 13 04.0**	**-0.6**
QSPA				IAmb	IAmb	08 13 05.1	
	comp=Z,5.3nm,1.0s						
ILAR	**Eielson Array**	**83.75**	**18**	P	**P**	**08 13 32.8**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=239,slow=5.0,SNR=4.9						
ILAR				pP	**pP**	**08 13 48.5**	**0.0**
	comp=Z,0.4nm,0.5s,baz=245,slow=4.9,SNR=2.3						
ILAR	**Eielson Array**	**83.75**	**18**	P	**P**	**08 13 32.6**	**+0.4**
NVAR	**Mina Array Bea**	**85.84**	**50**	P	**P**	**08 13 44.1**	**+0.5**
	comp=Z,0.4nm,0.9s,baz=234,slow=7.7,SNR=3.5						
NVAR				pP	**pP**	**08 13 59.9**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=236,slow=6.4,SNR=3.6						
NVAR	**Mina Array Bea**	**85.84**	**50**	P	**P**	**08 13 44.3**	**+0.7**
MK31	**Makanchi Array**	**94.29**	**317**	P	**P**	**08 14 22.7**	**-0.2**
MK31				IAmb	IAmb	08 14 23.6	
	comp=Z,2.0nm,0.9s						
MKAR	**Makanchi Array**	**94.29**	**317**	P	**P**	**08 14 22.8**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=100,slow=6.2,SNR=18						
MKAR				pP	**pP**	**08 14 37.7**	**-1.5**
	comp=Z,2.1nm,0.8s,baz=102,slow=5.1,SNR=9.2						
MKAR	**Makanchi Array**	**94.29**	**317**	P	**P**	**08 14 22.4**	**-0.5**
ZALV	**Zalesovo Beam**	**94.30**	**324**	P	**P**	**08 14 21.4**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=103,slow=1.9,SNR=4.3						
ZALV				pP	**pP**	**08 14 37.0**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=90,slow=7.2,SNR=2.3						
ZALV	**Zalesovo Beam**	**94.30**	**324**	P	**P**	**08 14 20.5**	**-2.2**

LBTB	**Lobatse**	**127.28**	**226**		**PKPdf**		**08 20 08.4**	**-0.4**

IDC ***18*** *08:14:43.6±3.2, 51°.19N×179°.36E, h15km±19km, mb4.3/26, mb1 4.4/28, mb1mx4.3/58, mbtmp4.4/28, ML4.2/2, MS4.1/18, Ms1 4.2/18, ms1mx4.0/35, Error ellipse: s-maj=19.5km s-min=10.2km az=167.0*

MOS ***18*** *08:14:46.1±1.1, 51°.20N×179°.31E, h46km, mb4.7/38, Error ellipse: s-maj=8.5km s-min=6.8km az=97.7*

AEIC ***18*** *08:14:46.7±2.0, 51°.0N±0°.1×179°.37E±0°.09, h41km±4km, Error ellipse: s-maj=15.6km s-min=7.7km az=173.0*

NEIC ***18*** *08:14:47.2±1.6, 51°.1N±0°.1×179°.29E±0°.08, h44km±5km, mb4.6/182, ML4.4/15(AEIC), Error ellipse: s-maj=15.6km s-min=7.5km az=177.0*

BJI ***18*** *08:14:47.1±0.0, 51°.44N×179°.03E, h48km, mB5.1/29, mb4.9/47, Ms4.8/24, Ms7 4.5/26*

GCMT ***18*** *08:14:48.2±0.3, 51°.09N±0°.02×179°.29E±0°.04, h20km, MW5.0/100, Moment Tensor Solution. s54,c62; s100,c131; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr3.31±.18; Mθθ-3.04±.12; Mϕϕ-0.27±.10; Mrθ 1.53±.19; Mθϕ-0.95±.07; Mϕr1.18±.20; Best double couple: M₀3.84400×10¹⁶ NP1:ϕs262.00000°, δ31.00000°, λ107.00000°. NP2:ϕs63.00000°, δ60.00000°, λ80.00000°. Principal axes: T 3.8820, Plg73.0000°, Azm308.0000°; N -0.0790, Plg9.0000°, Azm68.0000°; P -3.8050, Plg14.0000°, Azm160.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 08:14:46.7±1.0, 51°.01N×179°.36E±0°.04, h41km±8km, n397, σ1s22/346, mb4.6/138, MS4.3/27, 30C-12D, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAEA	**Gareloi East**	**1.42**	**56**		**Pn**	**08 15 10.2**	**+0.2**
TASE	**Tanaga Southea**	**1.83**	**62**		**Pn**	**08 15 16.2**	**+0.5**
TAFP	**Tanaga Falls P**	**1.89**	**61**		**Pn**	**08 15 17.6**	**+1.1**
TAFP					**Sn**	**08 15 40.4**	**+1.3**
TAPA	**Tanaga Point A**	**1.95**	**64**		**Pn**	**08 15 17.9**	**+0.5**
KIMD	**Kanaga Island**	**2.27**	**69**		**Pn**	**08 15 22.2**	**+0.6**
KIKV	**Kanaga Island**	**2.34**	**67**		**Pn**	**08 15 23.4**	**+0.7**
KIWB	**Kanaga Island**	**2.34**	**67**		**Pn**	**08 15 23.6**	**+0.8**
ADK	**Adak**	**2.63**	**69**	P	**Pn**	**08 15 27.1**	**+0.5**
ADK	**Adak**	**2.63**	**69**		**Pn**	**08 15 27.1**	**+0.5**
GSTD	**Great Sitkin T**	**3.00**	**68**		**Pn**	**08 15 32.3**	**+0.5**
GSTD					**Sn**	**08 16 07.6**	**+1.1**
GSMY	**Great Sitkin M**	**3.05**	**68**		**Pn**	**08 15 32.9**	**+0.5**
GSTR	**Great Sitkin T**	**3.06**	**67**	Pn	**Pn**	**08 15 34.6**	**+2.1**
SMY	**Shemya**	**3.69**	**300**	P	**Pn**	**08 15 41.9**	**+0.8**
SMY	**Shemya**	**3.69**	**300**		**Pn**	**08 15 41.9**	**+0.8**
ATKA	**Atka Island**	**4.19**	**71**		**Sn**	**08 16 36.1**	**+0.4**
ATKA	**Atka Island**	**4.19**	**71**		**Pn**	**08 15 48.6**	**+0.6**
SPIA	**Saint Paul Isl**	**8.68**	**41**	Pn	Pn	08 16 44.3	-5.3
UNV	**Unalaska Valle**	**9.09**	**66**	Pn	**Pn**	**08 16 56.5**	**+1.2**
AKUT	**Akutan**	**9.58**	**65**	Pn	**Pn**	**08 17 05.5**	**+3.6**
SDPT	**Sand Point**	**12.84**	**62**	Pn	**Pn**	**08 17 46.8**	**+0.4**
PEA0B	**Petropavlovsk-**	**13.48**	**287**	P	**Pn**	**08 17 59.2**	**+3.9**
PEA0B	**Petropavlovsk-**	**13.48**	**287**	Pn	**Pn**	**08 17 59.2**	**+3.9**
PETK	**Petropavlovsk-**	**13.48**	**287**	P	**Pn**	**08 17 56.4**	**+1.1**
PETK	**Petropavlovsk-**	**13.48**	**287**	Pn	**Pn**	**08 17 55.4**	**+0.1**
	0.8nm,0.3s,baz=95,slow=19,SNR=17						
PETK				LR	LR	08 22 46.5	
	comp=Z,713nm,21.6s,baz=74,slow=36						
PETK	**Petropavlovsk-**	**13.48**	**287**		**Pn**	**08 17 56.4**	**+1.1**
SKR	**Severo-Kuril's**	**14.68**	**278**	*e*P	**P**	**08 18 21.2**	**+4.3**
SKR				pmax	pmax		
	comp=Z,43nm,1.7s						
SKR				MLR	MLR		
	comp=Z,600nm,13.0s						
SKR				MLR	MLR		
	comp=Z,1μm,13.0s						
ANM	**Nome**	**15.77**	**25**	P	**P**	**08 18 30.5**	**+1.4**
ANM				pmax	pmax		
	comp=Z,25nm,1.3s						
ANM	**Nome**	**15.77**	**25**	P	**P**	**08 18 30.5**	**+1.4**
OHAK	**Old Harbor**	**17.12**	**58**	Pn	**Pn**	**08 18 39.6**	**-3.1**
OHAK				IAmb	IAmb	08 18 48.3	
	comp=Z,42nm,0.7s						
KDAK	**Kodiak Island**	**17.60**	**56**	P	**Pn**	**08 18 46.1**	**-2.5**
KDAK				pmax	pmax		
	comp=Z,83nm,1.5s						
KDAK	**Kodiak Island**	**17.60**	**56**	P	**Pn**	**08 18 45.4**	**-3.2**
	comp=Z,5.6nm,0.3s,baz=254,slow=4.4,SNR=24						
KDAK	**Kodiak Island**	**17.60**	**56**		**Pn**	**08 18 46.0**	**-2.5**
KDAK				IAmb	IAmb	08 18 53.7	
	comp=Z,83nm,1.4s						
RSO	**Redoubt South**	**18.20**	**48**	P	**Pn**	**08 18 58.6**	**+2.5**
BILL	**Bilibino**	**18.25**	**344**	*c i*P	**Pn**	**08 18 57.5**	**+1.0**
BILL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,768nm,16.0s						
BILL	**Bilibino**	**18.25**	**344**	P	**Pn**	**08 18 56.6**	**+0.1**
MA2	**Magadan**	**18.27**	**309**⇑	*e*P	**Pn**	**08 18 58.5**	**+1.7**
SEY	**Seymchan**	**18.76**	**320**⇑	*e*P	**P**	**08 18 59.8**	**-2.2**
BRLK	**Bradley Lake**	**18.89**	**51**	P	**Pn**	**08 19 05.5**	**+1.2**
RDOG	**Red Dog Mine**	**19.18**	**20**	P	**Pn**	**08 19 08.2**	**+0.5**
RDOG				IAmb	IAmb	08 19 13.9	
	comp=Z,31nm,1.1s						
SKT	**Skwentna**	**19.28**	**44**	P	**P**	**08 19 07.1**	**-0.6**
SKT				IAmb	IAmb	08 19 10.7	
	comp=Z,37nm,1.0s						
PPLA	**Purkeypile**	**19.36**	**41**	P	**Pn**	**08 19 11.9**	**+1.9**
PPLA				IAmb	IAmb	08 19 20.0	
	comp=Z,22nm,0.9s						
SUA	**Susitna One**	**19.45**	**46**	P	**P**	**08 19 10.1**	**+0.4**
SEW	**Seward**	**19.68**	**50**	P	**P**	**08 19 12.6**	**+0.6**
RC01	**Rabbit Creek A**	**19.80**	**47**	P	**Pn**	**08 19 14.7**	**-0.4**
RC01				IAmb	IAmb	08 19 28.5	
	comp=Z,50nm,1.3s						
KTH	**Kantishna Hill**	**20.15**	**40**	P	**P**	**08 19 17.9**	**+0.6**
PMR	**Palmer**	**20.23**	**46**	P	Pn	08 19 19.4	-0.7
PMR				pmax	pmax		
	comp=Z,24nm,1.3s						
PMR	**Palmer**	**20.23**	**46**	P	Pn	08 19 19.4	-0.8
BPAW	**Bear Paw Mtn.**	**20.36**	**39**	P	Pn	08 19 21.4	-0.4
BPAW				IAmb	IAmb	08 19 39.2	
	comp=Z,36nm,1.2s						
GHO	**Glory Hole Cre**	**20.37**	**46**	P	**P**	**08 19 18.6**	**-1.0**
GHO				IAmb	IAmb	08 19 35.8	
	comp=Z,26nm,1.1s						
KNK	**Knik Glacier**	**20.48**	**47**	P	**P**	**08 19 19.9**	**-0.9**
KNK				IAmb	IAmb	08 19 36.8	
	comp=Z,22nm,1.0s						
SML	**Sawmill**	**20.65**	**46**	P	**P**	**08 19 21.2**	**-1.4**
SML				IAmb	IAmb	08 19 22.8	
	comp=Z,37nm,1.3s						
MLY	**Manley**	**20.88**	**36**	P	**P**	**08 19 25.4**	**+0.2**
MLY				IAmb	IAmb	08 19 26.8	
	comp=Z,20nm,1.0s						
RND	**Reindeer**	**20.95**	**42**	P	**P**	**08 19 26.1**	**+0.2**
RND				pmax	pmax		
	comp=Z,28nm,1.0s						
RND	**Reindeer**	**20.95**	**42**	P	**P**	**08 19 26.1**	**+0.2**
RND				IAmb	IAmb	08 19 45.1	
	comp=Z,28nm,1.0s						
BWN	**Browne**	**21.00**	**39**	P	**P**	**08 19 27.7**	**+1.4**
MCK	**McKinley**	**21.04**	**41**	P	**P**	**08 19 26.9**	**+0.1**
MCK				pmax	pmax		
	comp=Z,28nm,1.1s						
MCK	**McKinley**	**21.04**	**41**	P	**P**	**08 19 26.9**	**+0.1**
MCK				IAmb	IAmb	08 19 30.3	
	comp=Z,28nm,1.1s						
SCM	**Sheep Creek Mo**	**21.12**	**46**	P	**P**	**08 19 26.1**	**-1.6**
SCM				pmax	pmax		
	comp=Z,29nm,1.0s						
SCM	**Sheep Creek Mo**	**21.12**	**46**	P	**P**	**08 19 26.1**	**-1.6**
SCM				IAmb	IAmb	08 19 39.0	
	comp=Z,29nm,1.0s						
DHY	**Denali Highway**	**21.46**	**43**	IAmb	IAmb	08 19 49.5	
	comp=Z,32nm,1.0s						
WRH	**Wood River Hil**	**21.67**	**39**	IAmb	IAmb	08 19 52.6	
	comp=Z,22nm,1.2s						
KUR	**Kuril'sk**	**21.69**	**267**	⇓ *i*P	**P**	**08 19 34.6**	**+0.7**
MDM	**Murphy Dome**	**21.81**	**38**	IAmb	IAmb	08 19 36.8	
	comp=Z,28nm,1.0s						
CCB	**Clear Creek Bu**	**21.85**	**39**	P	**P**	**08 19 34.2**	**-1.1**
TCOL	**CIGO, UAF Yank**	**21.92**	**38**	P	**P**	**08 19 37.1**	**+1.0**
	baz=247						
COLA	**College**	**21.92**	**38**⇑	*e*P	**P**	**08 19 36.4**	**+0.3**
COLA				pmax	pmax		
	comp=Z,12nm,1.0s						
COLA	**College**	**21.92**	**38**	P	**P**	**08 19 35.8**	**-0.3**
COLA				IAmb	IAmb	08 19 38.5	
	comp=Z,16nm,0.9s						
HDA	**Harding Lake**	**22.10**	**40**	P	**P**	**08 19 38.1**	**0.0**
HDA				IAmb	IAmb	08 19 52.2	
	comp=Z,25nm,1.4s						
HDA	**Harding Lake**	**22.10**	**40**	P	**P**	**08 19 38.2**	**0.0**
	baz=249						
POKR	**Poker Plat Res**	**22.18**	**38**	P	**P**	**08 19 39.0**	**0.0**
	baz=247						
IL31		**22.26**	**39**	P	**P**	**08 19 38.2**	**-1.6**
IL31				IAmb	IAmb	08 19 56.6	
	comp=Z,24nm,1.4s						
ILAR	**Eielson Array**	**22.26**	**39**	P	**P**	**08 19 38.2**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=244,slow=9.2,SNR=23						
ILAR				PcP	**PcP**	**08 23 34.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=272,slow=3.0,SNR=4.5						
ILAR				ScP	**ScP**	**08 27 11.0**	**+2.8**
	comp=Z,0.2nm,0.5s,baz=313,slow=3.8,SNR=4.8						
ILAR	**Eielson Array**	**22.26**	**39**	P	**P**	**08 19 38.5**	**-1.3**
ILAR				PcP	**PcP**	**08 23 34.3**	**-0.1**
GLB	**Gilahina Butte**	**22.66**	**48**	IAmb	IAmb	08 19 45.5	
	comp=Z,33nm,1.4s						
RIDG	**Independent Ri**	**22.75**	**42**	P	**P**	**08 19 44.9**	**-0.2**
RIDG				IAmb	IAmb	08 20 01.6	
	comp=Z,27nm,1.3s						
TYV	**Tymovskoe**	**22.98**	**284**	*e*P	**P**	**08 19 48.7**	**+1.2**
TYV				pmax	pmax		
	comp=Z,22nm,1.6s						
TYV				pmax	pmax		
	comp=Z,300nm,4.3s						
MENT	**Mentasta**	**23.03**	**45**	IAmb	IAmb	08 19 57.9	
	comp=Z,22nm,1.3s						
SCRK	**Sand Creek**	**23.19**	**42**	P	**P**	**08 19 47.6**	**-2.1**
BARN	**Barnard Glacie**	**23.63**	**50**	P	**P**	**08 19 52.7**	**-1.3**
YSS	**Yuzh-Sakhalins**	**24.20**	**275**	P	**P**	**08 19 57.5**	**-1.7**
YSS				pmax	pmax		
	comp=Z,26nm,0.9s						
YSS	**Yuzh-Sakhalins**	**24.20**	**275**	P	**P**	**08 19 57.5**	**-1.7**
YSS				IAmb	IAmb	08 20 00.8	
	comp=Z,26nm,0.9s						
EGAK	**Eagle**	**24.59**	**41**	P	**P**	**08 20 01.8**	**-0.8**
EGAK				IAmb	IAmb	08 20 20.1	
	comp=Z,22nm,0.9s						
DAWY	**Dawson**	**25.17**	**43**	IAmb	IAmb	08 20 24.2	
	comp=Z,20nm,1.4s						
ASAJ	**Asahikawa**	**25.54**	**269**	P	**P**	**08 20 12.3**	**+0.9**
	comp=Z,44nm,0.9s,baz=24,slow=7.8,SNR=16						
HYT	**Haines Junctio**	**25.63**	**51**	P	**P**	**08 20 11.8**	**-0.4**
EPYK	**Eagle Plains**	**26.77**	**38**	P	**P**	**08 20 21.3**	**-1.1**
	baz=257						
GRNR	**Gornyy**	**26.81**	**286**	*e*P	**P**	**08 20 18.7**	**-4.1**
GRNR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GRNR				MLR	MLR		
	comp=Z,130nm,19.0s						
INK	**Inuvik**	**28.43**	**35**	P	**P**	**08 20 36.2**	**-0.9**
INK						08 23 48.1	
INK				pmax	pmax		
	comp=Z,11nm,1.2s						
INK	**Inuvik**	**28.43**	**35**	P	**P**	**08 20 36.0**	**-1.0**
	comp=Z,1.1nm,0.4s,baz=247,slow=6.4,SNR=14						
INK				PcP	**PcP**	**08 23 48.5**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=357,slow=5.9,SNR=4.2						
INK	**Inuvik**	**28.43**	**35**	P	**P**	**08 20 36.1**	**-0.9**
INK				IAmb	IAmb	08 20 43.0	
	comp=Z,11nm,1.1s						
INK					**PcP**	**08 23 48.1**	**0.0**
YAK	**Yakutsk**	**28.80**	**312**	*e*P	**P**	**08 20 38.8**	**-1.6**
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
KLR	**Kul'dur**	**30.16**	**286**	*c i*P	**P**	**08 20 52.5**	**-0.2**
KLR				pmax	pmax		
	comp=Z,28nm,0.9s						
KLR	**Kul'dur**	**30.16**	**286**	P	**P**	**08 20 52.7**	**0.0**
	comp=Z,18nm,0.6s,baz=66,slow=8.7,SNR=74						
ZEA	**Zeya**	**31.34**	**296**	*e*P	**P**	**08 21 01.8**	**-1.2**
ZEA				pmax	pmax		
	comp=E,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,36nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,14.0s						
C36M	**Paulatuk**	**31.98**	**34**	P	**

YBH	**Yreka Blue Hor**	**40.08**	**80**	P	**P**	**08 22 19.7 +1.6**			
NEW	**Newport**	**40.10**	**68**	P	**P**	**08 22 18.2 +0.1**			
	baz=299,SNR=6.8								
J05D	**Fort Rock, OR**	**40.15**	**77**	P	**P**	**08 22 20.6 +1.9**			
	baz=303								
E09A	**Wood Farm, Sta**	**40.35**	**71**	IAmb	IAmb	08 22 21.8			
	comp=Z,8.5nm,1.0s								
RES	**Resolute Bay**	**40.56**	**24**	P	**P**	**08 22 21.1 -0.4**			
RES				pmax	pmax				
	comp=Z,7.0nm,1.3s								
RES	**Resolute Bay**	**40.56**	**24**	P	**P**	**08 22 21.1 -0.4**			
M04C	**Macdoel**	**40.60**	**79**	P	**P**	**08 22 24.2 +1.8**			
	baz=304								
O02D	**Mt. Diablo Mer**	**40.91**	**82**	P	**P**	**08 22 26.9 +1.9**			
	baz=306								
F10A	**Beach Ranch, E**	**41.17**	**71**	IAmb	IAmb	08 22 28.6			
	comp=Z,9.6nm,1.2s								
O03E	**Paynes Creek**	**41.46**	**81**	P	**P**	**08 22 30.6 +1.1**			
	baz=306								
WALA	**Waterton Lakes**	**41.58**	**66**	IAmb	IAmb	08 22 32.7			
	comp=Z,12nm,1.1s								
BMO	**Blue Mountains**	**41.71**	**73**	P	**P**	**08 22 31.8 +0.3**			
BMO				pmax	pmax				
	comp=Z,5.0nm,1.0s								
BMO	**Blue Mountains**	**41.71**	**73**	P	**P**	**08 22 31.8 +0.3**			
MSO	**Missoula**	**42.68**	**68**	IAmb	IAmb	08 22 40.5			
	comp=Z,11nm,1.2s								
MSO	**Missoula**	**42.68**	**68**	P	**P**	**08 22 39.3 -0.1**			
	baz=301,SNR=8.2								
PAHR	**Pah Rah Range**	**43.31**	**80**	P	**P**	**08 22 45.3 +0.7**			
PNTR	**Pine Nut**	**43.55**	**81**	IAmb	IAmb	08 22 56.1			
	comp=Z,7.1nm,0.7s								
BJT	**Baijiatuau**	**44.33**	**281**	IAmb	IAmb	08 22 55.0			
	comp=Z,6.5nm,0.7s								
EGMT	**Eagleton**	**44.49**	**65**	IAmb	IAmb	08 22 54.6			
	comp=Z,5.6nm,0.8s								
EGMT	**Eagleton**	**44.49**	**65**	P	**P**	**08 22 53.9 0.0**			
	baz=302								
NVAR	**Mina Arroyo Bea**	**44.75**	**81**	P	**P**	**08 22 57.2 +0.9**			
	comp=Z,2.9nm,0.8s,baz=292,slow=7.3,SNR=20								
NVAR				LR	LR	08 39 19.6			
	comp=Z,235nm,18.6s,baz=318,slow=33								
NVAR	**Mina Arroyo Bea**	**44.75**	**81**	P	**P**	**08 22 56.8 +0.6**			
PAGB	**Antelope Grade**	**45.20**	**85**	P	**P**	**08 23 01.3 +1.7**			
PAGB				IAmb	IAmb	08 23 01.4			
	comp=Z,6.4nm,0.6s								
ELK	**Elko**	**45.27**	**77**	P	**P**	**08 23 01.7 +1.3**			
ELK				pmax	pmax				
	comp=Z,5.0nm,0.8s								
ELK	**Elko**	**45.27**	**77**	P	**P**	**08 23 01.7 +1.3**			
ELK				IAmb	IAmb	08 23 02.4			
	comp=Z,5.2nm,0.8s								
TLY	**Talaya**	**45.28**	**302**	*ce*P	**P**	**08 23 00.0 0.0**			
TLY				pmax	pmax				
	comp=Z,4.0nm,0.9s								
ULN	**Ulaanbaatar**	**45.38**	**296**	*de*P	**P**	**08 23 00.8 -0.3**			
ULN				pmax	pmax				
	comp=Z,8.0nm,1.0s								
ULN	**Ulaanbaatar**	**45.38**	**296**	P	**P**	**08 23 01.5 +0.4**			
ULN				IAmb	IAmb	08 23 02.4			
	comp=Z,7.6nm,0.9s								
YHB	**Horse Butte**	**45.42**	**70**	P	**P**	**08 23 02.0 +0.5**			
SONM	**Songino Array**	**45.77**	**296**	P	**P**	**08 23 03.8 -0.3**			
SONM				pmax	pmax				
	comp=Z,6.0nm,1.1s								
SONM	**Songino Array**	**45.77**	**296**	P	**P**	**08 23 04.6 +0.5**			
	comp=Z,2.7nm,0.6s,baz=57,slow=6.4,SNR=24								
SONM	**Songino Array**	**45.77**	**296**	P	**P**	**08 23 03.8 -0.3**			
VES	**Vestal, Richgr**	**45.86**	**85**	P	**P**	**08 23 05.4 +0.6**			
	baz=310								
H17A	**Grant Village**	**45.98**	**70**	P	**P**	**08 23 08.0 +2.0**			
	baz=305,SNR=11								
LKWY	**Lake**	**45.99**	**69**	IAmb	IAmb	08 23 08.6			
	comp=Z,7.8nm,0.8s								
PKM	**Mcpherson Peak**	**46.01**	**86**	P	**P**	**08 23 07.8 +1.6**			
	baz=310								
FLWY	**Flagg Ranch**	**46.09**	**70**	IAmb	IAmb	08 23 08.8			
	comp=Z,9.5nm,0.8s								
CWC	**Cottonwood Cre**	**46.12**	**83**	P	**P**	**08 23 08.2 +1.2**			
	baz=309								
ZAK	**Zakamensk**	**46.15**	**300**	*e*P	**P**	**08 23 06.7 -0.3**			
ZAK				pmax	pmax				
	comp=Z,5.0nm,1.5s								
TPAW	**Teton Pass**	**46.28**	**71**	IAmb	IAmb	08 23 11.9			
	comp=Z,3.8nm,0.7s								
RLMT	**Red Lodge**	**46.35**	**68**	IAmb	IAmb	08 23 11.0			
	comp=Z,11nm,0.8s								
RLMT	**Red Lodge**	**46.35**	**68**	P	**P**	**08 23 09.8 +1.0**			
	baz=304,SNR=13								
ISA	**Isabella, Lake**	**46.36**	**84**	P	**P**	**08 23 09.0 +0.2**			
ISA				pmax	pmax				
	comp=Z,3.0nm,0.8s								
ISA	**Isabella, Lake**	**46.36**	**84**	P	**P**	**08 23 09.0 +0.2**			
ISA	**Isabella, Lake**	**46.36**	**84**	P	**P**	**08 23 09.3 +0.5**			
	baz=310								
REDW	**Red Top Meadow**	**46.41**	**71**	P	**P**	**08 23 09.4 +0.1**			
REDW				IAmb	IAmb	08 23 10.7			
	comp=Z,8.3nm,1.2s								
R11A	**Troy Canyon, C**	**46.49**	**79**	P	**P**	**08 23 10.6 +0.6**			
	baz=308,SNR=8.6								
BGU	**Big Grassy Mou**	**46.52**	**75**	P	**P**	**08 23 10.3 +0.2**			
GUMO	**Guam**	**46.58**	**229**	LR	LR	08 40 22.9			
	comp=Z,180nm,19.9s,baz=51,slow=33								
AHID	**Auburn Hatcher**	**46.60**	**72**	IAmb	IAmb	08 23 12.6			
	comp=Z,14nm,1.2s								
HHC	**Hu-ho-hao-te**	**46.67**	**285**	P	**P**	**08 23 12.0 +0.8**			
HHC				pP	pwP	08 23 25.5 -0.2			
HHC				sP	sP	08 23 32.3 +6.1			
HHC				pmax	pmax				
	comp=Z,11nm,0.9s								
HHC				pmax	pmax				
	comp=Z,54nm,5.0s								
MPMC	**Manual Prospec**	**46.73**	**83**	P	**P**	**08 23 12.8 +1.0**			
	baz=310,SNR=5.5								
FURC	**Furnace Creek,**	**46.86**	**82**	P	**P**	**08 23 13.8 +1.2**			
	baz=309								
TPNV	**Topopah Spring**	**46.95**	**81**	P	**P**	**08 23 13.9 +0.4**			
TPNV				pmax	pmax				
	comp=Z,8.0nm,0.8s								
TPNV	**Topopah Spring**	**46.95**	**81**	P	**P**	**08 23 13.9 +0.4**			
TPNV				IAmb	IAmb	08 23 16.5			
	comp=Z,8.0nm,0.8s								
TPNV	**Topopah Spring**	**46.95**	**81**	P	**P**	**08 23 14.4 +0.9**			
	baz=309,SNR=14								
HWUT	**Hardware Ranch**	**47.00**	**73**	IAmb	IAmb	08 23 15.9			
	comp=Z,7.4nm,1.1s								
DUG	**Dugway, Tooele**	**47.08**	**76**	P	**P**	**08 23 15.1 +0.6**			
DUG				pmax	pmax				
	comp=Z,20nm,1.4s								
DUG	**Dugway, Tooele**	**47.08**	**76**	P	**P**	**08 23 15.1 +0.6**			
DUG	**Dugway, Tooele**	**47.08**	**76**	P	**P**	**08 23 15.7 +1.2**			
	baz=307,SNR=11								
EDW2	**Edwards Air Fo**	**47.16**	**85**	P	**P**	**08 23 15.7 +0.7**			
	baz=310								
NOR	**Nord**	**47.36**	**3**	*i* P	**P**	**08 23 14.4 -1.5**			
TCUT	**Toone Canyon**	**47.39**	**74**	P	**P**	**08 23 17.8 +0.8**			
PSUT	**Pine Spring**	**47.45**	**78**	P	**P**	**08 23 17.9 +0.4**			
BW06	**Boulder Array**	**47.53**	**71**	P	**P**	**08 23 18.3 +0.3**			
	baz=306,SNR=19								
PDAR	**Pinedale Array**	**47.53**	**71**	P	**P**	**08 23 18.3 +0.3**			
	comp=Z,10nm,0.7s,baz=311,slow=3.0,SNR=99								
PDAR				LR	LR	08 41 03.2			
	comp=Z,186nm,20.4s,baz=326,slow=33								
PDAR	**Pinedale Array**	**47.53**	**71**	P	**P**	**08 23 18.1 0.0**			
SHOC	**Shoshone, Teco**	**47.59**	**82**	P	**P**	**08 23 19.3 +0.9**			
	baz=310,SNR=8.6								
GSC	**Goldstone, Bar**	**47.64**	**83**	IAmb	IAmb	08 23 20.0			
	comp=Z,5.3nm,0.9s								
GSC	**Goldstone, Bar**	**47.64**	**83**	P	**P**	**08 23 19.6 +0.8**			
	baz=310,SNR=7.5								
NJ2	**Nanjing**	**47.66**	**271**	*e*P	**P**	**08 23 19.3 +0.4**			
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
NLU	**North Lily Min**	**47.68**	**75**	P	**P**	**08 23 20.0 +0.7**			
BFSC	**Mount Baldy Ra**	**47.79**	**85**	P	**P**	**08 23 21.1 +1.1**			
	baz=311,SNR=5.7								
GMRC	**Granite Mounta**	**48.69**	**83**	P	**P**	**08 23 27.8 +0.8**			
	baz=311,SNR=6.2								
LCMT	**Little Creek M**	**48.78**	**79**	P	**P**	**08 23 28.3 +0.6**			
P17A	**Butcher Ranch,**	**48.79**	**75**	P	**P**	**08 23 28.3 +0.5**			
PFO	**Pinyon Flats O**	**48.95**	**85**	P	**P**	**08 23 29.4 +0.4**			
PFO				pmax	pmax				
	comp=Z,6.0nm,1.4s								
PFO	**Pinyon Flats O**	**48.95**	**85**	P	**P**	**08 23 29.4 +0.4**			
PFO				IAmb	IAmb	08 23 46.6			
	comp=Z,5.9nm,1.4s								
PFO	**Pinyon Flats O**	**48.95**	**85**	P	**P**	**08 23 29.6 +0.6**			
	baz=311,SNR=5.7								
XPFO	**Pion Flat**	**48.95**	**85**	P	**P**	**08 23 29.4 +0.4**			
XPFO				IAmb	IAmb	08 23 46.6			
	comp=Z,6.5nm,1.4s								
TPFO	**Pinon Flats**	**48.96**	**85**	P	**P**	**08 23 29.5 +0.5**			
	baz=311								
K22A	**Casper**	**49.40**	**69**	IAmb	IAmb	08 23 33.1			
	comp=Z,6.8nm,0.9s								
K22A	**Casper**	**49.40**	**69**	P	**P**	**08 23 32.2 -0.1**			
	baz=307								
IRM	**Iron Mountain**	**49.42**	**83**	P	**P**	**08 23 33.0 +0.5**			
	baz=311								
BAR	**Barrett**	**49.43**	**86**	IAmb	IAmb	08 23 33.7			
	comp=Z,5.5nm,0.9s								
MONP2	**Monument Peak**	**49.45**	**86**	P	**P**	**08 23 33.6 +0.7**			
	baz=312								
U15A	**North Rim**	**49.74**	**79**	IAmb	IAmb	08 23 51.3			
	comp=Z,7.1nm,0.9s								
IKP	**In-Ko-Pah, Jac**	**49.80**	**86**	P	**P**	**08 23 35.9 +0.5**			
	baz=312								
O20A	**White River Ci**	**49.90**	**73**	P	**P**	**08 23 36.3 +0.1**			
O20A	**White River Ci**	**49.90**	**73**	P	**P**	**08 23 36.8 +0.5**			
	baz=308,SNR=10								
N23A	**Red Feather La**	**50.81**	**71**	IAmb	IAmb	08 23 48.8			
	comp=Z,16nm,1.5s								
N23A	**Red Feather La**	**50.81**	**71**	P	**P**	**08 23 43.8 +0.6**			
	baz=308								
ULM	**Lac du Bonnet**	**50.85**	**56**⇑	*e*P	**P**	**08 23 41.3 -1.7**			
ULM	**Lac du Bonnet**	**50.85**	**56**	P	**P**	**08 23 41.4 -1.6**			
	comp=Z,0.9nm,0.5s,baz=302,slow=8.7,SNR=4.3								
ULM				PcP	**PcP**	**08 24 59.5 +0.3**			
	comp=Z,1.1nm,0.5s,baz=324,slow=4.4,SNR=3.2								
ULM				LR	LR	08 45 11.2			
	comp=Z,359nm,20.3s,baz=320,slow=36								
ULM	**Lac du Bonnet**	**50.85**	**56**	P	**P**	**08 23 41.1 -1.9**			
WUAZ	**Wupatki**	**50.89**	**79**	P	**P**	**08 23 43.8 0.0**			
WUAZ				IAmb	IAmb	08 23 53.2			
	comp=Z,5.8nm,0.9s								
WUAZ	**Wupatki**	**50.89**	**79**	P	**P**	**08 23 45.0 +1.2**			
	baz=311								
MVCO	**Mesa Verde**	**51.58**	**76**	P	**P**	**08 23 50.1 +1.1**			
	baz=310								
ISCO	**Idaho Springs**	**51.69**	**72**	IAmb	IAmb	08 23 51.8			
	comp=Z,5.0nm,0.9s								
ISCO	**Idaho Springs**	**51.69**	**72**	P	**P**	**08 23 51.4 +1.5**			
	baz=309,SNR=5.2								
DAG	**Danmarks Havn**	**51.98**	**5**	*i* P	**P**	**08 23 49.8 -1.3**			
DAG				pmax	pmax				
	comp=Z,2.0nm,0.4s								
DAG	**Danmarks Havn**	**51.98**	**5**	*i* P	**P**	**08 23 49.8 -1.3**			
	comp=Z,1.5nm,0.4s								
S22A	**4UR Ranch, Cre**	**52.26**	**74**	IAmb	IAmb	08 23 56.6			
	comp=Z,8.7nm,1.4s								
S22A	**4UR Ranch, Cre**	**52.26**	**74**	P	**P**	**08 23 55.5 +1.4**			
	baz=310,SNR=5.3								
XAN	**Xi'an**	**52.59**	**280**	P	**P**	**08 23 56.3 0.0**			
XAN				pmax	pmax				
	comp=Z,6.0nm,0.8s								
XAN				LR	LR				
	comp=Z,170nm,13.2s								
XAN				LR	LR				
	comp=Z,280nm,18.6s								
XAN				LR	LR				
	comp=Z,250nm,18.0s								
SDCO	**Great Sand Dun**	**53.06**	**73**	IAmb	IAmb	08 24 02.2			
	comp=Z,7.1nm,1.2s								
SDCO	**Great Sand Dun**	**53.06**	**73**	P	**P**	**08 24 01.1 +1.1**			
	baz=310,SNR=5.6								
TUC	**Tucson**	**53.38**	**82**	P	**P**	**08 24 02.7 +0.5**			
TUC				pmax	pmax				
	comp=Z,4.0nm,1.2s								
TUC	**Tucson**	**53.38**	**82**	P	**P**	**08 24 02.7 +0.5**			
ZAA0	**Zalesovo Array**	**53.44**	**313**	IAmb	IAmb	08 24 05.7			
	comp=Z,4.2nm,0.5s								
ZALV	**Zalesovo Beam**	**53.44**	**313**	P	**P**	**08 24 01.1 -1.0**			
	comp=Z,2.7nm,0.4s,baz=51,slow=6.1,SNR=14								
ZALV				PcP	**PcP**	**08 25 09.2 +0.4**			
	comp=Z,1.9nm,0.6s,baz=23,slow=5.0,SNR=4.4								
ZALV				LR	LR	08 48 26.5			
	comp=Z,307nm,18.6s,baz=54,slow=38								
ZALV	**Zalesovo Beam**	**53.44**	**313**	P	**P**	**08 24 00.4 -1.8**			
ZALV					**PcP**	**08 25 08.6 -0.2**			
SUMG	**Summit**	**53.93**	**13**⇑	*i* P	**P**	**08 24 05.5 -0.5**			
SUMG				pmax	pmax				
	comp=Z,37nm,1.0s								
SUMG	**Summit**	**53.93**	**13**⇑	*i* P	**P**	**08 24 05.5 -0.5**			
	comp=Z,37nm,1.0s								
SUMG	**Summit**	**53.93**	**13**	P	**P**	**08 24 04.9 -1.1**			
KSCO	**Kaye Shedlock'**	**53.97**	**70**	P	**P**	**08 24 07.6 +1.2**			
	baz=310								
T25A	**Trinidad**	**54.12**	**73**	P	**P**	**08 24 09.1 +1.4**			
	baz=311,SNR=9.0								
ANMO	**Albuquerque**	**54.31**	**77**⇓	*e*P	**P**	**08 24 09.8 +0.7**			
ANMO				pmax	pmax				
	comp=Z,2.0nm,1.0s								
ANMO	**Albuquerque**	**54.31**	**77**	P	**P**	**08 24 10.0 +1.0**			
	baz=312								
LZH	**Lanzhou**	**54.37**	**285**	*e*P	**P**	**08 24 09.5 +0.1**			
LZH				pP	pP	08 24 22.1 +1.9			
LZH				sP	sP	08 24 27.6 +3.0			
LZH				*e*PP	**PP**	**08 26 13.3 +1.9**			
LZH				pmax	pmax				
	comp=Z,20nm,1.3s								
LZH				pmax	pmax				
	comp=Z,78nm,7.0s								
LZH				LR	LR				
	comp=Z,230nm,14.9s								
LZH				LR	LR				
	comp=Z,230nm,15.1s								
LZH				LR	LR				
	comp=Z,410nm,17.5s								
GTA	**Gaotai**	**54.62**	**291**	⇑P	**P**	**08 24 11.4 +0.2**			
GTA				pP	pwP	08 24 25.8 -0.3			
GTA				sP	sP	08 24 29.8 +3.6			
GTA				pmax	pmax				
	comp=Z,9.0nm,1.1s								
GTA				pmax	pmax				
	comp=Z,77nm,6.8s								
GTA				LR	LR				
	comp=Z,290nm,19.4s								
GTA				LR	LR				
	comp=Z,480nm,18.4s								
GTA				LR	LR				
	comp=Z,430nm,17.1s								
MNTX	**Cornudas Mount**	**57.16**	**79**	IAmb	IAmb	08 24 38.6			
	comp=Z,3.8nm,1.0s								
MNTX	**Cornudas Mount**	**57.16**	**79**	P	**P**	**08 24 29.9 +0.6**			
	baz=314								
ARCES	**ARCESS Array B**	**58.25**	**349**	P	**P**	**08 24 35.5 -0.9**			
ARCES	**ARCESS Array B**	**58.25**	**349**	P	**P**	**08 24 34.6 -1.8**			
	comp=Z,1.5nm,0.5s,baz=25,slow=7.6,SNR=13								
ARCES				LR	LR	08 53 22.1			
	comp=Z,225nm,18.1s,baz=1.0,slow=40								
ARCES	**ARCESS Array B**	**58.25**	**349**	P	**P**	**08 24 35.5 -0.9**			
KURK	**Kurchatov**	**58.43**	**313**	*ce*P	**P**	**08 24 37.5 -0.4**			
KURK				pmax	pmax				
	comp=Z,14nm,1.0s								
KURK	**Kurchatov**	**58.43**	**313**	P	**P**	**08 24 37.0 -0.9**			
WMQ	**Urumqi**	**58.56**	**302**	*e*P	**P**	**08 24 42.1 +3.0**			
WMQ				sP	sP	08 24 59.9 +4.9			
WMQ				pmax	pmax				
	comp=Z,150nm,5.9s								
WMQ				LR	LR				
	comp=Z,370nm,17.1s								
WMQ				LR	LR				
	comp=Z,310nm,19.1s								
WMQ				LR	LR				
	comp=Z,570nm,21.3s								
WMOK	**Wichita Mounta**	**59.11**	**72**	IAmb	IAmb	08 24 44.5			
	comp=Z,7.5nm,1.1s								
WMOK	**Wichita Mounta**	**59.11**	**72**	P	**P**	**08 24 43.8 +0.9**			
	baz=314,SNR=8.8								
MKAR	**Makanchi Array**	**59.35**	**308**	P	**P**	**08 24 43.6 -0.8**			
	comp=Z,3.5nm,0.4s,baz=50,slow=6.4,SNR=42								
MKAR				LR	LR	08 51 44.3			
	comp=Z,284nm,19.7s,baz=43,slow=38								
MKAR	**Makanchi Array**	**59.35**	**308**	P	**P**	**08 24 42.9 -1.5**			
MAKZ	**Makanchi**	**59.50**	**308**	P	**P**	**08 24 43.9 -1.5**			
MAKZ	**Makanchi**	**59.50**	**308**	P	**P**	**08 24 43.9 -1.5**			
TX31	**Lajitas Ar. Si**	**59.86**	**80**	IAmb	IAmb	08 24 56.1			
	comp=Z,6.0nm,1.3s								
TX32	**Lajitas Array**	**59.86**	**80**	IAmb	IAmb	08 24 56.1			
	comp=Z,5.5nm,1.2s								
TXAR	**Lajitas Array**	**59.86**	**80**	P	**P**	**08 24 47.7 -0.6**			
TXAR	**Lajitas Array**	**59.86**	**80**	P	**P**	**08 24 48.5 +0.2**			
	comp=Z,0.8nm,0.5s,baz=299,slow=4.9,SNR=14								
TXAR	**Lajitas Array**	**59.86**	**80**	P	**P**	**08 24 47.7 -0.6**			
KRVT	**Keravat (AS076**	**59.88**	**212**	LR	LR	08 45 51.9			
	comp=Z,161nm,20.8s,baz=14,slow=31								
TUL1	**Leonard**	**60.09**	**69**	P	**P**	**08 24 49.2 -0.4**			
BRVK	**Borovoye**	**60.44**	**319**	P	**P**	**08 24 51.7 0.0**			
BRVK				pmax	pmax				
	comp=Z,39nm,1.3s								
BRVK	**Borovoye**	**60.44**	**319**	P	**P**	**08 24 51.7 0.0**			
HDIL	**Hopedale**	**60.61**	**61**	P	**P**	**08 24 53.5 +0.4**			
	baz=314								
SCHQ	**Schefferville**	**61.01**	**37**	P	**P**	**08 24 54.3 -1.4**			
	comp=Z,3.7nm,0.8s,baz=301,slow=6.4,SNR=7.9								
SCHQ	**Schefferville**	**61.01**	**37**	P	**P**	**08 24 53.9 -1.7**			
SCHQ				IAmb	IAmb	08 24 55.3			
	comp=Z,5.4nm,1.1s								
U40A	**Yellville**	**61.50**	**67**	P	**P**	**08 24 58.3 -0.9**			
U40A	**Yellville**	**61.50**	**67**	P	**P**	**08 24 58.7 -0.5**			
	baz=314,SNR=5.4								
W39A	**Magazine**	**61.76**	**68**	P	**P**	**08 25 01.2 +0.2**			
	baz=315								
ARU	**Arti**	**62.30**	**327**	*d i* P	**P**	**08 25 04.0 -0.3**			
ARU						08 25 43.3			
ARU				S	**S**	**08 33 28.2 +1.0**			
ARU				pmax	pmax				
	comp=Z,18nm,1.2s								
ARU	**Arti**	**62.30**	**327**	P	**P**	**08 25 04.5 +0.2**			
MIAR	**Mount Ida**	**62.34**	**69**	P	**P**	**08 25 05.2 +0.3**			
	baz=315,SNR=6.8								
W41B	**Gary Mavity, V**	**62.68**	**67**	IAmb	IAmb	08 25 07.8			
	comp=Z,8.1nm,1.0s								
W41B	**Gary Mavity, V**	**62.68**	**67**	P	**P**	**08 25 06.8 -0.3**			
	baz=315								
LCAR	**Lake Charles**	**62.68**	**66**	IAmb	IAmb	08 25 08.4			
	comp=Z,5.0nm,1.0s								
X40A	**Basin Creek Fa**	**62.81**	**68**	P	**P**	**08 25 08.3 +0.3**			
	baz=315								
O50A	**Cable**	**63.98**	**58**	P	**P**	**08 25 15.2 -0.6**			
	baz=316								
T47A	**Sharon Grove**	**64.33**	**62**	P	**P**	**08 25 17.7 -0.3**			
Q51A	**Peebles**	**64.94**	**59**	P	**P**	**08 25 21.5 -0.5**			
	baz=316								
PLAL	**Pickwick Lake**	**65.22**	**65**	P	**P**	**08 25 23.2 -0.6**			
PLAL				IAmb	IAmb	08 25 24.6			
	comp=Z,6.3nm,0.7s								
KDJ	**Kajisay**	**65.23**	**307**	IAmb	IAmb	08 25 24.9			
	comp=Z,8.1nm,0.8s								
BOOM	**Boomskoye usch**	**65.59**	**308**	IAmb	IAmb	08 25 28.0			
	comp=Z,9.4nm,1.1s								
L56A	**Greenwood**	**65.69**	**53**	P	**P**	**08 25 26.8 0.0**			
	baz=318								
USP	**Ospenovka**	**65.73**	**309**	P	**P**	**08 25 27.5 +0.5**			
	SNR=16								
FINES	**FINESS Array B**	**65.88**	**346**	P	**P**	**08 25 27.2 -0.5**			
FINES	**FINESS Array B**	**65.88**	**346**	P	**P**	**08 25 25.6 -2.0**			
	comp=Z,2.1nm,0.6s,baz=9.6,slow=7.2,SNR=8.9								
FINES				LR	LR	08 55 23.1			
	comp=Z,109nm,21.4s,baz=18,slow=37								
FINES	**FINESS Array B**	**65.88**	**346**	P	**P**	**08 25 27.1 -0.5**			
KBK	**Karagaybulak**	**65.96**	**309**	P	**P**	**08 25 29.3 +0.6**			
	SNR=6.7								
Q53A	**Leroy**	**66.03**	**58**	P	**P**	**08 25 27.6 -1.4**			
	baz=317								
AAK	**Ala-Archa**	**66.20**	**309**	P	**P**	**08 25 30.4 +0.2**			
AAK				pmax	pmax				
	comp=Z,18nm,1.4s								
AAK	**Ala-Archa**	**66.20**	**309**	P	**P**	**08 25 30.7 +0.5**			
	SNR=8.6								
AAK	**Ala-Archa**	**66.20**	**309**	P	**P**	**08 25 30.4 +0.2**			
PMG	**Port Moresby**	**66.32**	**215**	LR	LR	08 53 36.2			
	comp=Z,104nm,18.7s,baz=348,slow=35								
UCH	**Uchtor**	**66.50**	**308**	P	**P**	**08 25 33.5 +1.0**			
	SNR=5.7								
EKS2	**Erkin-Say**	**66.53**	**309**	P	**P**	**08 25 32.8 +0.5**			
	SNR=16								
AML	**Almayashu**	**66.97**	**309**	P	**P**	**08 25 36.4 +0.9**			
	SNR=11								
Z50A	**Ashland**	**67.70**	**65**	P	**P**	**08 25 39.2 -0.6**			
	baz=317								
KSH	**Kashi**	**67.78**	**306**	P	**P**	**08 25 44.1 +3.8**			
KSH				pP	sP	08 25 56.8 +0.4			
KSH				PP	PP	08 28 17.8 +8.2			
KSH				S	**S**	**08 34 39.1 +3.9**			
KSH				sS	sS	08 35 01.3 +7.1			
KSH				ScS	**ScS**	**08 35 35.8 +0.1**			
KSH				SS	**SS**	**08 39 02.4 +6.2**			
KSH				pmax	pmax				
	comp=Z,24nm,0.5s								
KSH				LR	LR				
	comp=Z,140nm,4.6s								
KSH				LR	LR				
	comp=Z,140nm,4.6s								
KSH				LR	LR				
	comp=Z,170nm,5.3s								
NB2	**NORSAR Subarra**	**67

comp=Z,1.6nm,0.5s,baz=144,slow=4.6,SNR=6.1

ZEI	**Tsey**	**78.86**	**328**	*e*P	**P**	**08 26 45.2**	**-0.4**
ZEI				pmax	pmax		

comp=Z,6.0nm,0.6s

TBI	**Tubuai**	**78.97**	**151**	*e*LR	LR	08 51 25.0	

comp=Z,346nm,22.0s,baz=340

BUR08	**Bucovina Ar. S**	**79.25**	**343**	P	**P**	**08 26 46.8**	**-0.7**
BUR08				IAmb	IAmb	08 26 48.8	

comp=Z,4.3nm,0.8s

TRPA	**Tarpa**	**79.26**	**344**	⇓P	**P**	**08 26 47.6**	**+0.3**
BURAR	**Bucovina Array**	**79.27**	**343**	⇑P	**P**	**08 26 47.2**	**-0.4**
BURAR	**Bucovina Array**	**79.27**	**343**	⇑P	**P**	**08 26 47.2**	**-0.4**
KHC	**Kasperske Hory**	**79.50**	**351**	⇓*e*P	**P**	**08 26 48.3**	**-0.5**
KHC				pmax	pmax		

comp=Z,6.0nm,1.2s

TBLG	**Delisi**	**79.52**	**327**	P	**P**	**08 26 50.1**	**+1.1**
TBLG				pmax	pmax		

comp=Z,28nm,1.4s

TBLG	**Delisi**	**79.52**	**327**	P	**P**	**08 26 50.1**	**+1.1**
BIZ	**Bicaz**	**79.75**	**342**	⇓P	**P**	**08 26 49.1**	**-1.0**
DRGR		**80.52**	**344**	⇑P	**P**	**08 26 54.2**	**-0.2**
DRGR		**80.52**	**344**	⇑P	**P**	**08 26 54.2**	**-0.2**
GNI	**Garni**	**80.93**	**326**	⇑*e*P	**P**	**08 26 56.5**	**-0.3**
GNI				pmax	pmax		

comp=Z,19nm,1.2s

WRA	**Warramunga Arr**	**80.95**	**222**	P	**P**	**08 26 55.6**	**-1.2**
WRA	**Warramunga Arr**	**80.95**	**222**	P	**P**	**08 26 56.3**	**-0.4**

comp=Z,2.6nm,0.8s,baz=36,slow=6.0,SNR=8.8

WRA	**Warramunga Arr**	**80.95**	**222**	P	**P**	**08 26 55.5**	**-1.2**
MLR	**Muntele Rosu**	**81.17**	**341**	⇓P	**P**	**08 26 58.8**	**+0.9**
MLR	**Muntele Rosu**	**81.17**	**341**	⇓P	**P**	**08 26 58.8**	**+0.9**
TOPG	**Topolog**	**81.24**	**340**	⇑P	P	08 26 52.6	-5.5
VOIR		**81.40**	**342**	⇑P	**P**	**08 26 59.2**	**+0.1**
VOIR		**81.40**	**342**	⇑P	**P**	**08 26 59.2**	**+0.1**
ARR	**Arges**	**81.55**	**342**	⇑P	**P**	**08 26 58.9**	**-0.9**
KBA	**Koelnbreinsper**	**81.56**	**350**	*e*P	**P**	**08 26 59.4**	**-0.6**

comp=Z,6.3nm,0.9s

TIRR	**Tirgusor**	**81.63**	**339**	⇑P	**P**	**08 26 57.4**	**-2.8**
TIRR	**Tirgusor**	**81.63**	**339**	⇑P	**P**	**08 26 57.4**	**-2.8**
SOKA	**Soboth**	**81.76**	**349**	*e*P	**P**	**08 27 01.5**	**+0.5**

comp=Z,6.8nm,1.0s

BZS	**Buzias**	**81.85**	**344**	⇓P	**P**	**08 27 01.1**	**-0.2**
BZS	**Buzias**	**81.85**	**344**	⇓P	**P**	**08 27 01.1**	**-0.2**
GZR	**Gura Zlata**	**81.86**	**344**	⇑P	**P**	**08 27 01.3**	**-0.2**
GZR	**Gura Zlata**	**81.86**	**344**	⇑P	**P**	**08 27 01.3**	**-0.2**
ABTA	**Abfaltersbach**	**81.97**	**351**	*i* P	**P**	**08 27 01.3**	**-0.7**

comp=Z,5.9nm,1.4s

HERR	**Herculane**	**82.42**	**344**	⇑P	**P**	**08 27 04.9**	**+0.6**
MDVR	**Moldovita**	**82.64**	**344**	⇓P	**P**	**08 27 05.0**	**-0.6**
HYB	**Hyderabad**	**83.25**	**289**	*i* P	**P**	**08 27 08.0**	**-1.1**
CISI	**Cisompet, Garu**	**84.43**	**251**	P	**P**	**08 27 13.9**	**-1.2**
ASAR	**Alice Springs**	**84.44**	**221**	P	**P**	**08 27 15.0**	**+0.2**

comp=Z,1.4nm,0.8s,baz=21,slow=4.1,SNR=5.6

ASAR	**Alice Springs**	**84.44**	**221**	P	**P**	**08 27 14.7**	**-0.2**
BR131	**Keskin Array S**	**84.79**	**334**	P	**P**	**08 27 16.2**	**-0.6**
BR131				pmax	pmax		

comp=Z,7.0nm,1.3s

BR131	**Keskin Array S**	**84.79**	**334**	P	**P**	**08 27 16.2**	**-0.6**
BR131				IAmb	IAmb	08 27 17.9	

comp=Z,6.9nm,1.2s

BRTR	**Keskin Array B**	**84.79**	**334**	P	**P**	**08 27 16.7**	**-0.1**

comp=Z,2.3nm,0.6s,baz=37,slow=2.5,SNR=12

BRTR	**Keskin Array B**	**84.79**	**334**	P	**P**	**08 27 16.2**	**-0.6**
STKA	**Stephens Creek**	**88.99**	**211**	LR	LR	09 06 23.4	

comp=Z,145nm,18.1s,baz=25,slow=35

TORD	**Torodi Ar. Bea**	**116.09**	**357**	PKP	**PKiKP**	**08 33 24.3**	**-1.2**

comp=Z,0.3nm,0.4s,baz=343,slow=4.0,SNR=5.5

PLCA	**Paso Flores**	**131.97**	**106**	PKiKP	**PKiKP**	**08 33 56.2**	**0.0**
PLCA	**Paso Flores**	**131.97**	**106**	PKiKP	**PKiKP**	**08 33 55.7**	**-0.5**

comp=Z,1.2nm,1.0s,baz=242,slow=7.1,SNR=3.2

PLCA	**Paso Flores**	**131.97**	**106**	PKPdf	**PKiKP**	**08 33 56.2**	**0.0**
QSPA	**South Pole Qui**	**140.76**	**180**	PKPpre	PKPpre	08 34 04.4	
EFI	**East Falkland**	**144.92**	**114**	PKiKP	**PKPdf**	**08 34 18.8**	**+0.5**
EFI	**East Falkland**	**144.92**	**114**		**PKPdf**	**08 34 18.8**	**+0.5**
TSUM	**Tsumeb**	**145.14**	**329**		**PKPab**	**08 34 19.5**	**0.0**
MAW	**Mawson**	**145.48**	**217**	PKPbc	**PKPab**	**08 34 19.2**	**0.0**

comp=Z,2.1nm,0.7s,baz=129,slow=10,SNR=3.7

LBTB	**Lobatse**	**147.15**	**312**	PKP2	**PKPbc**	**08 34 25.8**	**+0.5**
LBTB	**Lobatse**	**147.15**	**312**		**PKPbc**	**08 34 25.8**	**+0.5**
BOSA	**Boshof**	**150.34**	**309**	PKiKP	**PKPbc**	**08 34 33.5**	**0.0**
BOSA	**Boshof**	**150.34**	**309**	PKPbc	**PKiKP**	**08 34 33.9**	**-0.3**

comp=Z,2.3nm,0.5s,baz=68,slow=1.9,SNR=9.4

BOSA	**Boshof**	**150.34**	**309**		**PKPbc**	**08 34 33.5**	**0.0**

*KRNET **18** 08:19:19.6±0.1, 40.34N×79.16E, mb2.6*
*NNC **18** 08:19:19.5±1.8, 40.29N×78.83E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=11.9km s-min=10.3km az=166.0*
ISC 18 08:19:19.0±3.4, 40.3N±0.1×79.08E±0.09, h10km, n13, σ1s40/19, 10C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**2.22**	**347**	⇓*i*P	**Pb**	**08 19 59.9**	**+0.5**
PRZ				⇓*i*S	**Sg**	**08 20 29.5**	**-0.9**

baz=46

KDJ	**Kajisay**	**2.31**	**322**	⇑*i*P	**Pb**	**08 20 01.2**	**+0.4**
KDJ				⇑*i*S	**Sb**	**08 20 31.7**	**+2.2**

baz=21

NRN	**Naryn**	**2.59**	**297**	⇑*i*P	**Pb**	**08 20 06.4**	**+0.8**
NRN				⇑*i*S	**Sb**	**08 20 40.2**	**+2.6**

baz=95

ANVS	**Anan'yevo**	**2.68**	**337**	⇑*i*P	**Pb**	**08 20 06.7**	**-0.5**
ANVS				⇑*i*S	**Sb**	**08 20 40.5**	**+0.3**

baz=36

SATY	**Saty**	**2.79**	**350**	Pg	**Pb**	**08 20 10.2**	**+1.3**
SATY				Lg	Lg	08 20 48.1	

8.9nm,0.5s 14nm,0.4s

UZB	**Uzymbulak**	**2.83**	**359**	Pg	**Pg**	**08 20 12.8**	**-0.4**
UZB				Lg	Lg	08 20 52.1	

5.2nm,0.4s 9.4nm,0.7s

ULHL	**Ulahol**	**2.88**	**313**	⇑*i*P	**Pb**	**08 20 09.6**	**-0.9**
ULHL				⇑*i*S	**Sb**	**08 20 46.5**	**+0.6**

baz=12

PDGK	**Podgornoye**	**3.02**	**6**	Pg	**Pb**	**08 20 14.3**	**+1.3**
PDGK				Lg	Lg	08 20 54.9	

1.8nm,0.3s 3.1nm,0.3s

BOOM	**Boomskoye usch**	**3.21**	**314**	⇑*i*P	**Pb**	**08 20 14.0**	**-2.1**
BOOM				⇑*i*S	**Sb**	**08 20 54.6**	**-0.7**

baz=13

KOTS	**Kotyrbulak**	**3.26**	**334**	Pg	**Pb**	**08 20 18.6**	**+1.5**
KOTS				Lg	Lg	08 21 01.9	

12nm,0.3s 13nm,0.3s

KST	**Kastek**	**3.58**	**320**	Pg	**Pb**	**08 20 23.5**	**+0.9**
KST				Lg	Lg	08 21 10.2	

3.5nm,0.4s 5.3nm,0.4s

DGS	**Degeres**	**3.83**	**321**	Pg	**Pb**	**08 20 27.6**	**+1.0**
DGS				Lg	Lg	08 21 17.4	

2.9nm,0.6s 4.4nm,0.8s

DJR	**Jarkent**	**4.05**	**7**	Pg	**Pg**	**08 20 34.5**	**-2.0**
DJR				Lg	Lg	08 21 29.2	

0.4nm,0.1s 4.6nm,0.2s

*IDC **18** 08:21:17.8±1.7, 4.19S×133.45E, h0km, mb3.7/2, mb1 4.0/6, mb1mx3.7/33, mbtmp3.8/6, ML3.7/4, Error ellipse: s-maj=67.8km s-min=22.0km az=69.0*
ISC 18 08:21:22.2±1.1, 4.41S±0.08×133.2E±0.2, h35km, n7, σ2s77/10, 1C, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.02**	**331**	Pn	**Pn**	**08 22 21.0**	**-0.4**

1.2nm,0.3s,baz=162,slow=20,SNR=5.1

SIJI				Sn	**Sn**	**08 23 04.6**	**-2.8**

4.8nm,0.3s,baz=178,slow=23,SNR=6.9

WRA	**Warramunga Arr**	**15.48**	**176**	Pn	**Pn**	**08 24 59.0**	**+1.0**
WRA				Sn	**Sn**	**08 27 42.8**	**-5.7**

0.2nm,0.3s,baz=356,slow=13,SNR=8.9 0.3nm,0.3s,baz=358,slow=23,SNR=5.8

FITZ	**Fitzroy Crossi**	**15.49**	**208**	Pn	**P**	**08 25 01.4**	**-0.9**

0.4nm,0.3s,baz=31,slow=12,SNR=6.1

FITZ				Sn	**Sn**	**08 27 50.3**	**+1.5**

0.5nm,0.3s,baz=211,slow=19,SNR=4.3

RCP	**Roxas**	**18.98**	**327**	⇑*e*P	**Pn**	**08 25 43.9**	**+2.2**
ASAR	**Alice Springs**	**19.16**	**178**	P	**Pn**	**08 25 45.9**	**+2.1**

0.3nm,0.3s,baz=4.8,slow=12,SNR=15

CTA	**Charters Tower**	**20.10**	**142**	P	**P**	**08 25 53.8**	**+0.8**

3.0nm,0.5s,baz=323,slow=12,SNR=3.9

MKAR	**Makanchi Array**	**67.90**	**325**	P	**P**	**08 32 17.6**	**+0.3**

0.4nm,0.6s,baz=119,slow=7.2,SNR=3.4

IDC 18 08:30:35.0±2.1, 1.05N×125.94E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/30, mbtmp3.2/3, Error ellipse: s-maj=205.8km s-min=25.2km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.43**	**159**	P	P	08 35 35.6	-0.1

0.7nm,0.6s,baz=337,slow=11,SNR=6.3

ASAR	**Alice Springs**	**25.76**	**163**	P	P	08 36 07.7	+0.1

0.2nm,0.5s,baz=347,slow=8.0,SNR=5.8

MKAR	**Makanchi Array**	**59.31**	**327**	P	P	08 40 38.7	-0.1

0.1nm,0.4s,baz=125,slow=7.3,SNR=3.0

ATH 18 08:35:37.5, 40.39N×21.75E, h0km±8km, ML0.0, Error ellipse: s-maj=8.3km s-min=1.8km az=168.0, Suspected Mining explosion., Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.09**	**167**	P	Pg	08 35 39.4	+0.2
FNA	**Florina**	**0.48**	**324**	P	Pg	08 35 47.2	+0.4
KPRO	**Kipourio**	**0.53**	**214**	P	Pg	08 35 48.0	+0.4
NEST	**Nestorio**	**0.53**	**273**	P	Pg	08 35 48.2	+0.5
LIT	**Litokhoron**	**0.64**	**117**	P	Pg	08 35 50.5	+0.7
GRG	**Griva**	**0.75**	**41**	P	Pg	08 35 51.6	-0.4
THL	**Klokotos Trika**	**0.85**	**166**	P	Pg	08 35 53.6	-0.3
HORT	**Hortiatis**	**1.05**	**78**	P	Pg	08 35 58.2	+0.5

*MEX **18** 09:12:40.3±0.2, 17.61N×101.58W, h51km±1km, MD3.8*
ISC 18 09:12:39.7±0.9, 17.68N±0.06×101.60W±0.04, h43km±7km, n24, σ1s72/35, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.15**	**120**	*e*P	**Pn**	**09 12 46.9**	**0.0**
ZIIG				*e*S	**Sn**	**09 12 52.0**	**+0.1**
ZIIG	**Zihuatanejo**	**0.15**	**120**		**Pn**	**09 12 46.9**	**0.0**
ZIIG					**Sn**	**09 12 52.0**	**+0.1**
ARIG	**Puente Sto Nin**	**1.33**	**63**	*e*P	**Pn**	**09 13 01.2**	**-0.6**
ARIG				*e*S	**Sn**	**09 13 17.5**	**-1.0**
ARIG	**Puente Sto Nin**	**1.33**	**63**		**Pn**	**09 13 01.2**	**-0.6**
ARIG					**Sn**	**09 13 17.5**	**-1.0**
CAIG	**El Cayaco**	**1.42**	**116**	*i* P	**Pn**	**09 13 01.1**	**-1.9**
CAIG				*i* S	**Sn**	**09 13 18.0**	**-2.5**
CAIG	**El Cayaco**	**1.42**	**116**		**Pn**	**09 13 05.9**	**+2.9**
MMIG	**Aquila**	**1.77**	**290**	*e*P	**Pn**	**09 13 07.6**	**-0.2**
MMIG				*i* S	**Sn**	**09 13 28.7**	**-0.4**
MMIG	**Aquila**	**1.77**	**290**		**Pn**	**09 13 07.6**	**-0.2**
MEIG	**Mezcala**	**1.90**	**82**	*i* P	**Pn**	**09 13 08.6**	**-1.1**
MEIG				*i* S	**Sn**	**09 13 31.3**	**-1.2**
MEIG	**Mezcala**	**1.90**	**82**		**Pn**	**09 13 11.6**	**+1.9**
MOIG	**Morelia**	**2.02**	**11**	*e*P	**Pn**	**09 13 11.4**	**-0.1**
MOIG				*i* S	**Sn**	**09 13 35.8**	**0.0**
MOIG	**Morelia**	**2.02**	**11**		**Pn**	**09 13 11.4**	**-0.1**
MOIG	**Morelia**	**2.02**	**11**	Pn	**Pn**	**09 13 12.2**	**+0.6**
MOIG				Sn	**Sn**	**09 13 37.2**	**+1.5**
PLIG	**Platanillo**	**2.12**	**70**	*e*P	**Pn**	**09 13 10.2**	**-2.5**
YAIG	**Yautepec**	**2.68**	**64**	*e*P	**Pn**	**09 13 20.0**	**-0.5**
YAIG				*i* S	**Sn**	**09 13 50.7**	**-1.1**
YAIG	**Yautepec**	**2.68**	**64**		**Pn**	**09 13 23.4**	**+3.0**
TLIG	**Tlapa**	**2.90**	**92**	*i* P	**Pn**	**09 13 22.5**	**-0.9**
TLIG				*i* S	**Sn**	**09 13 55.8**	**-1.4**
TLIG	**Tlapa**	**2.90**	**92**		**Pn**	**09 13 26.3**	**+2.9**
TLIG	**Tlapa**	**2.90**	**92**	Pn	Pn	09 13 27.5	+4.0
TLIG					**Sn**	**09 14 02.5**	**+5.4**
W18A	**Petrified Fore**	**18.82**	**339**	P	**Pn**	**09 16 56.7**	**-0.1**
W18A				IAmb	IAmb	09 17 06.6	

comp=Z,7.3nm,0.9s

AHID	**Auburn Hatcher**	**26.28**	**344**	P	**P**	**09 18 13.1**	**+1.8**
GRTK	**Grand Turk**	**28.93**	**77**	P	**P**	**09 18 34.0**	**-1.0**
MOD	**Modoc Plateau**	**28.96**	**330**	P	**P**	**09 18 34.8**	**-0.5**
MOD				IAmb	IAmb	09 18 45.0	

comp=Z,2.3nm,1.5s

JCC	**Jacoby Creek,**	**30.07**	**325**	P	**P**	**09 18 44.9**	**0.0**
JCC				IAmb	IAmb	09 18 52.8	

comp=Z,18nm,1.2s

*AEIC **18** 09:22:32.5±2.4, 51.0N±0.1×179.9W±0.1, h45km±8km, ML3.4/14, mb4.0/11(NEIC), Error ellipse: s-maj=19.9km s-min=9.9km az=172.0*
*IDC **18** 09:22:33.8±3.5, 51.71N×179.54E, h76km±27km, mb3.5/13, mb1 3.7/14, mb1mx3.5/48, mbtmp3.9/14, Error ellipse: s-maj=43.6km s-min=15.0km az=176.0*
ISC 18 09:22:31.2±1.1, 51.5N±0.2×179.59E±0.06, h52km, n54, σ2s07/51, mb3.8/15, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**1.53**	**74**		**Pn**	**09 22 56.4**	**+0.3**
TAFP	**Tanaga Falls P**	**1.58**	**72**		**Pn**	**09 22 56.7**	**0.0**
TAFP					**Sn**	**09 23 16.7**	**+0.8**
TAPA	**Tanaga Point A**	**1.66**	**76**		**Pn**	**09 22 57.8**	**-0.1**
KIMD	**Kanaga Island**	**2.00**	**80**		**Pn**	**09 23 02.2**	**-0.3**
KICM	**Kanaga Island**	**2.06**	**76**		**Pn**	**09 23 03.7**	**+0.5**
KIKV	**Kanaga Island**	**2.06**	**77**		**Pn**	**09 23 03.5**	**+0.1**
KIWB	**Kanaga Island**	**2.07**	**78**		**Pn**	**09 23 03.3**	**-0.1**
ADK	**Adak**	**2.36**	**78**		**Pn**	**09 23 07.2**	**-0.2**
GSTD	**Great Sitkin T**	**2.72**	**75**		**Pn**	**09 23 12.3**	**-0.1**
GSTD					**Sn**	**09 23 44.0**	**0.0**
GSMY	**Great Sitkin M**	**2.77**	**76**		**Pn**	**09 23 13.0**	**0.0**
SMY	**Shemya**	**3.62**	**293**	Pn	**Pn**	**09 23 27.3**	**+2.6**
ATKA	**Atka Island**	**3.93**	**77**		**Pn**	**09 23 28.5**	**-0.3**
ATKA	**Atka Island**	**3.93**	**77**		**Sn**	**09 24 11.8**	**-1.8**
NIKH	**Nikolski High**	**7.26**	**73**	Pn	**Pn**	**09 24 15.5**	**+1.6**
SPIA	**Saint Paul Isl**	**8.25**	**42**		**Pn**	**09 24 23.6**	**-4.5**
UNV	**Unalaska Valle**	**8.79**	**69**	Pn	**Pn**	**09 24 36.6**	**+1.2**
AKUT	**Akutan**	**9.27**	**67**	Pn	**Pn**	**09 24 43.6**	**+1.7**
FALS	**False Pass**	**10.76**	**65**	Pn	**Pn**	**09 25 03.7**	**+1.5**
SDPT	**Sand Point**	**12.51**	**64**	Pn	**Pn**	**09 25 25.2**	**-1.0**
PETK	**Petropavlovsk-**	**13.50**	**286**	P	**Pn**	**09 25 41.9**	**+2.1**

0.1nm,0.3s,baz=80,slow=13,SNR=4.1

ANM	**Nome**	**15.31**	**25**	Pn	**P**	**09 26 09.3**	**+1.9**
ANM				IAmb	IAmb	09 26 09.4	

comp=Z,8.8nm,1.2s

KDAK	**Kodiak Island**	**17.23**	**58**	P	**Pn**	**09 26 24.2**	**-3.6**

comp=Z,2.1nm,0.3s,baz=182,slow=2.6,SNR=18

KDAK	**Kodiak Island**	**17.23**	**58**	P	**Pn**	**09 26 25.6**	**-2.3**
RSO	**Redoubt South**	**17.79**	**49**	P	**P**	**09 26 39.0**	**+3.8**
BILL	**Bilibino**	**17.86**	**344**	P	**P**	**09 26 42.6**	**+7.0**
CNPM	**China Poot**	**18.27**	**52**	P	**Pn**	**09 26 42.5**	**+1.9**
SKT	**Skwentna**	**18.86**	**45**	P	**Pn**	**09 26 48.9**	**+1.3**
SKT				IAmb	IAmb	09 26 50.3	

comp=Z,6.1nm,0.5s

PPLA	**Purkeypile**	**18.93**	**42**	P	**Pn**	**09 26 54.1**	**+5.5**
PPLA				IAmb	IAmb	09 27 02.1	

comp=Z,28nm,1.5s

SUA	**Susitna One**	**19.04**	**47**	P	**P**	**09 26 48.8**	**+0.1**
SUA				IAmb	IAmb	09 26 54.3	

comp=Z,20nm,1.3s

KTH	**Kantishna Hill**	**19.72**	**41**	P	**Pn**	**09 26 57.4**	**-0.5**
IMAR	**Indian Mountai**	**19.85**	**33**	P	**Pn**	**09 27 02.2**	**+2.9**
WRH	**Wood River Hil**	**21.23**	**40**	P	**P**	**09 27 12.3**	**0.0**
WRH				IAmb	IAmb	09 27 21.9	

comp=Z,11nm,1.4s

ILAR	**Eielson Array**	**21.82**	**40**	P	**P**	**09 27 18.6**	**-0.1**

comp=Z,0.3nm,0.5s,baz=254,slow=7.2,SNR=6.4

EGAK	**Eagle**	**24.16**	**41**	P	**P**	**09 27 42.3**	**+0.3**
EGAK				IAmb	IAmb	09 27 43.4	

comp=Z,2.9nm,0.8s

INK	**Inuvik**	**27.98**	**35**	P	**P**	**09 28 15.7**	**-0.7**

comp=Z,0.6nm,0.4s,baz=245,slow=8.3,SNR=5.3

INK	**Inuvik**	**27.98**	**35**	P	**P**	**09 28 17.6**	**+1.2**
INK				IAmb	IAmb	09 28 26.2	

comp=Z,3.9nm,1.4s

KLR	**Kul'dur**	**30.19**	**285**	P	**P**	**09 28 35.9**	**-0.4**

comp=Z,1.1nm,0.7s,baz=67,slow=7.2,SNR=15

H11N2	**WAKE ISLAND Hy**	**33.19**	**202**	T	T	10 04 08.5	

baz=19,slow=75,SNR=16

H11N3	**WAKE ISLAND Hy**	**33.20**	**202**	T	T	10 04 13.8	

baz=19,slow=75,SNR=12

H11N1	**WAKE ISLAND Hy**	**33.21**	**202**	T	T	10 04 09.1	

baz=19,slow=75,SNR=11

H11S1	**WAKE ISLAND Hy**	**34.42**	**202**	T	T	10 05 43.5	

baz=18,slow=72

H11S2	**WAKE ISLAND Hy**	**34.43**	**202**	T	T	10 05 45.5	

baz=18,slow=72

H11S3	**WAKE ISLAND Hy**	**34.43**	**202**	T	T	10 05 47.7	

baz=18,slow=72

YKA	**Yellowknife Ar**	**35.91**	**46**	P	**P**	**09 29 24.7**	**-1.2**

comp=Z,0.5nm,0.6s,baz=280,slow=8.0,SNR=10

YKA				ScP	**ScP**	**09 35 30.9**	**-2.3**

comp=Z,0.1nm,0.6s,baz=288,slow=4.0,SNR=4.7

NVAR	**Mina Array Bea**	**44.54**	**82**	P	**P**	**09 30 37.8**	**0.0**

comp=Z,0.2nm,0.6s,baz=292,slow=7.3,SNR=3.8

SONM	**Songino Array**	**45.71**	**296**	P	**P**	**09 30 46.8**	**-0.1**

comp=Z,0.5nm,0.3s,baz=61,slow=10,SNR=4.6

PDAR	**Pinedale Array**	**47.24**	**71**	P	**P**	**09 30 58.3**	**-0.8**

comp=Z,0.4nm,0.5s,baz=303,slow=1.7,SNR=6.1

ZALV	**Zalesovo Beam**	**53.24**	**313**	P	**P**	**09 31 42.6**	**-1.4**

comp=Z,0.9nm,0.5s,baz=56,slow=7.2,SNR=4.1

ARCES	**ARCESS Array B**	**57.84**	**350**	P	**P**	**09 32 14.8**	**-2.0**

comp=Z,1.4nm,0.5s,baz=21,slow=8.0,SNR=14

MKAR	**Makanchi Array**	**59.19**	**307**	P	**P**	**09 32 25.0**	**-1.5**

comp=Z,1.4nm,0.5s,baz=50,slow=5.9,SNR=23

FINES	**FINESS Array B**	**65.48**	**346**	P	**P**	**09 33 05.8**	**-2.4**

comp=Z,0.9nm,0.6s,baz=49,slow=5.8,SNR=4.2

NB2	**NORSAR Subarra**	**67.47**	**354**	P	**P**	**09 33 19.5**	**-1.5**

comp=Z,1.0nm,0.5s,baz=8.4,slow=6.5

NOA	**NORSAR Array B**	**67.47**	**354**	P	**P**	**09 33 19.5**	**-1.5**

comp=Z,1.7nm,0.6s,baz=3.2,slow=5.0,SNR=9.3

AKASG	**Malin Array Be**	**75.16**	**341**	P	**P**	**09 34 05.4**	**-2.1**

comp=Z,0.7nm,0.3s,baz=21,slow=6.3,SNR=4.8

*NEIC **18** 09:34:18.3±1.8, 6.81S±0.05×130.40E±0.06, h113km±5km, mb4.7/55, Error ellipse: s-maj=8.9km s-min=7.2km az=78.0*
*DJA **18** 09:34:19.3±0.3, 7.5S±2.2×13.0E±, h149km±6km, M5.1/13, mb5.2/10, mB5.5/7, MLv5.2/13, Mw(mB)5.0/7*
*IDC **18** 09:34:19.4±2.0, 6.77S×130.32E, h116km±17km, mb4.0/16, mb1 4.1/17, mb1mx4.0/39, mbtmp4.4/17, MS3.5/1, Ms1 3.5/1, ms1mx2.6/20, Error ellipse: s-maj=23.0km s-min=11.9km az=86.0*
ISC 18 09:34:21.4±0.3, 6.92S±0.04×130.44E±0.04, h150km, n150, σ2s13/157, mb4.6/49, 1C-1D, Banda Sea

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

JNU **Nakatsue** 39.82 1 P **P** 09 41 38.4 -1.7
CM31 **Chiang Mai Arr** 40.02 310 P **P** 09 41 41.8 -0.2
CM31 IAmb IAmb 09 41 48.0
comp=Z,11nm,0.9s
CMAR Chiang Mai Arr 40.02 310 P **P** 09 41 41.2 -0.7
comp=Z,5.7nm,0.6s,baz=136,slow=7.2,SNR=24
CMAR ScP **ScP** 09 47 23.2 +3.8
comp=Z,0.9nm,0.7s,baz=200,slow=3.2,SNR=4.9
CMAR Chiang Mai Arr 40.02 310 P **P** 09 41 41.0 -1.0
CHTO Chiang Mai 40.23 310 P **P** 09 41 43.1 -0.6
CHTO IAmb IAmb 09 41 49.7
comp=Z,9.5nm,0.7s
NJ2 Nanjing 40.30 345 *e*P P 09 41 46.8 +2.7
NJ2 pmax pmax
comp=Z,13nm,0.6s
WHN Wuhan 40.32 338 P P 09 41 48.3 +4.1
INU Inuyama 42.50 8 P **P** 09 42 01.1 -0.8
INU IAmb IAmb 09 42 03.6
comp=Z,8.5nm,0.8s
MJAR Matsushiro Arr 43.84 9 P **P** 09 42 12.0 -0.7
comp=Z,6.6nm,0.7s,baz=187,slow=9.4,SNR=21
MJAR Matsushiro Arr 43.84 9 P **P** 09 42 11.4 -1.4
MAJO Matsushiro 43.84 9 P **P** 09 42 12.0 -0.8
MAJO IAmb IAmb 09 42 12.7
comp=Z,9.6nm,0.6s
MJB9 Matsu-Tunnel 43.85 9 P **P** 09 42 12.0 -0.8
MJB9 IAmb IAmb 09 42 12.7
comp=Z,9.6nm,0.6s
KSRS Korea Array 44.20 357 P **P** 09 42 15.8 +0.3
comp=Z,1.2nm,0.5s,baz=174,slow=9.0,SNR=6.0
LZH Lanzhou 49.54 332 ⇓P P 09 43 00.3 +3.0
LZH pP pwP 09 43 30.5 -4.4
LZH sP sP 09 43 45.3 -1.3
LZH PP **PP** 09 44 57.6 +4.4
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,82nm,6.5s
QRZ Quartz Range 50.43 139 P **P** 09 43 04.8 +1.1
WKZ Wanaka 50.48 145 P **P** 09 43 05.1 +1.0
HHC Hu-ho-hao-te 50.61 341 *e*P P 09 43 08.3 +3.2
HHC pmax pmax
comp=Z,3.0nm,1.0s
HHC pmax pmax
comp=Z,81nm,5.3s
USRK Ussuriysk Ar. 50.90 1 P **P** 09 43 07.6 +0.5
comp=Z,1.5nm,0.5s,baz=177,slow=7.4,SNR=6.2
USRK Ussuriysk Ar. 50.90 1 P **P** 09 43 06.3 -0.8
LSA Lhasa 52.44 316 P **P** 09 43 19.1 -0.4
LSA IAmb IAmb 09 43 20.5
comp=Z,12nm,0.7s
ODAN Odare 53.54 311 *e*P **P** 09 43 26.6 -0.6
comp=Z,34nm,0.6s
GTA Gaotai 54.12 331 *e*P P 09 43 38.8 +7.7
GTA ScP **ScP** 09 48 21.6 +3.5
GTA pmax pmax
comp=Z,2.0nm,0.8s
RAMN Ramite 54.18 310 *e*P **P** 09 43 31.6 -0.3
comp=Z,79nm,0.6s
YSS Yuzh-Sakhalins 54.74 10 P **P** 09 43 35.6 +0.4
JIRN Jiri 54.87 311 *e*P **P** 09 43 36.3 -0.7
comp=Z,40nm,0.6s
GUN Gumba 55.23 311 *e*P **P** 09 43 38.9 -0.7
comp=Z,68nm,0.6s
PKI Pulchoki 55.41 310 *e*P **P** 09 43 39.7 -1.2
comp=Z,2.4nm,0.5s
PKIN Phulchoki 55.42 310 *e*P **P** 09 43 39.9 -1.0
comp=Z,14nm,0.4s
KKN Kakani 55.62 310 *e*P **P** 09 43 41.6 -0.6
comp=Z,18nm,0.4s
DMN Daman 55.66 310 *e*P **P** 09 43 42.0 -0.6
GKN Gorkha 56.22 310 *e*P **P** 09 43 45.8 -0.6
comp=Z,61nm,0.4s
DANN Dangsing 57.06 310 *e*P **P** 09 43 51.7 -0.8
comp=Z,21nm,0.5s
ULN Ulaanbaatar 58.33 342 P **P** 09 44 01.4 +0.6
ULN IAmb IAmb 09 44 02.4
comp=Z,5.6nm,0.6s
SONM Songino Array 58.51 341 P **P** 09 44 02.9 +0.9
comp=Z,1.2nm,0.5s,baz=158,slow=6.4,SNR=8.3
SONM Songino Array 58.51 341 P **P** 09 44 02.4 +0.3
WMQ Urumqi 63.57 327 *e*P **P** 09 44 38.3 +2.1
WMQ pP PcP 09 45 08.9 -2.4
WMQ pmax pmax
comp=Z,150nm,4.7s
WMQ LR LR
comp=Z,340nm,21.1s
WMQ LR LR
comp=Z,1μm,25.5s
WMQ LR LR
comp=Z,120nm,21.1s
PEA0B Petropavlovsk- 64.11 18 P **P** 09 44 40.6 +1.1
PETK Petropavlovsk- 64.11 18 P **P** 09 44 41.3 +1.8
comp=Z,6.4nm,0.8s,baz=179,slow=6.1,SNR=12
PETK Petropavlovsk- 64.11 18 P **P** 09 44 38.3 -1.2
NIL Nilore 67.50 311 P **P** 09 45 01.3 -0.3
KSH Kashi 68.26 317 P **P** 09 45 07.8 +1.5
KSH pmax pmax
comp=Z,35nm,1.0s
KSH pmax pmax
comp=Z,110nm,5.3s
MK31 Makanchi Array 68.40 327 P **P** 09 45 06.9 0.0
MK31 IAmb IAmb 09 45 08.4
comp=Z,5.0nm,0.7s
MKAR Makanchi Array 68.40 327 P **P** 09 45 07.6 +0.6
comp=Z,7.8nm,0.6s,baz=117,slow=8.1,SNR=103
MKAR S **S** 09 53 56.2 -0.1
comp=Z,0.7nm,1.0s,baz=144,slow=10,SNR=4.3
MKAR Makanchi Array 68.40 327 P **P** 09 45 07.3 +0.4
MAKZ Makanchi 68.58 326 P **P** 09 45 08.9 +0.8
MAKZ IAmb IAmb 09 45 09.0
comp=Z,5.9nm,0.5s
YAK Yakutsk 68.75 360 P **P** 09 45 09.6 +0.9
YAK IAmb IAmb 09 45 10.3
comp=Z,9.8nm,0.5s
KDJ Kajisay 68.79 320 P **P** 09 45 10.6 +0.9
KDJ IAmb IAmb 09 45 11.6
comp=Z,6.9nm,0.8s
NRN Naryn 69.19 319 P **P** 09 45 12.3 0.0
KZA Kyzart 70.00 319 P **P** 09 45 18.6 +1.2
SNR=7.1
TKM2 Tokmak 2 70.20 320 P **P** 09 45 19.5 +1.1
SNR=5.4
UCH Uchtor 70.55 319 P **P** 09 45 22.4 +1.6
SNR=10
AAK Ala-Archa 70.76 320 P **P** 09 45 23.2 +1.5
comp=Z,4.1nm,0.6s,baz=136,slow=6.1,SNR=11
AAK Ala-Archa 70.76 320 P **P** 09 45 23.0 +1.3
SNR=5.9
AAK Ala-Archa 70.76 320 P **P** 09 45 23.0 +1.3
AAK IAmb IAmb 09 45 23.8
comp=Z,7.4nm,0.9s
AML Almayashu 71.04 319 P **P** 09 45 25.0 +1.4
SNR=11
KBL Kabul 71.05 310 P **P** 09 45 24.2 +0.5
KBL IAmb IAmb 09 45 24.8
comp=Z,6.6nm,0.8s
USP Ospenovka 71.07 320 P **P** 09 45 24.2 +0.8
SNR=8.4
ARSB Arslanbob 71.13 318 P **P** 09 45 23.2 -0.7
ARSB IAmb IAmb 09 45 25.7
comp=Z,14nm,0.7s
EKS2 Erkin-Say 71.24 319 P **P** 09 45 26.2 +1.7
SNR=8.7
ZALV Zalesovo Beam 71.71 334 P **P** 09 45 26.5 -0.4
comp=Z,1.6nm,0.7s,baz=134,slow=6.4,SNR=6.6
ZALV Zalesovo Beam 71.71 334 P **P** 09 45 26.7 -0.2
BTK Batken 72.03 316 P **P** 09 45 29.8 +0.5
KURK Kurchatov 72.68 328 P **P** 09 45 32.6 -0.1
KK31 Karatay Array 73.57 319 P **P** 09 45 38.8 +0.6
KKAR Karatay Array 73.57 319 P **P** 09 45 37.9 -0.3
KKAR Karatay Array 73.57 319 P **P** 09 45 38.5 +0.3
MAW Mawson 75.18 201 P **P** 09 45 49.6 +2.5
comp=Z,5.6nm,0.7s,baz=77,slow=9.3,SNR=11
MAW Mawson 75.18 201 P **P** 09 45 48.7 +1.6
WSAR Wadi Sarin 76.22 296 P **P** 09 45 55.1 +1.3
comp=Z,11nm,1.1s,baz=108,slow=3.2,SNR=4.4
HRA Herat 76.25 308 P **P** 09 45 54.8 +0.8
BILL Bilibino 78.94 13 P **P** 09 46 09.4 +1.5
ABKAR Akbulak array 82.72 321 P **P** 09 46 27.8 -0.6
ABKAR Akbulak array 82.72 321 P **P** 09 46 28.6 +0.2
QSPA South Pole Qui 83.06 180 P **P** 09 46 31.9 +1.9
AKTO Aktyubinsk 84.28 322 P **P** 09 46 36.8 +0.4
comp=Z,1.2nm,0.5s,baz=97,slow=6.8,SNR=5.8
ARU Arti 85.87 328 P **P** 09 46 44.4 +0.3
comp=Z,0.6nm,0.4s,baz=74,slow=6.8,SNR=3.8
ARU Arti 85.87 328 P **P** 09 46 43.9 -0.3
RAYN Ar Rayn 88.11 294 P **P** 09 46 56.6 +0.9
RAYN IAmb IAmb 09 46 57.3
comp=Z,3.8nm,0.8s
ILAR Eielson Array 93.09 25 P **P** 09 47 17.5 -0.4
comp=Z,0.3nm,0.8s,baz=259,slow=4.8,SNR=4.1
ILAR Eielson Array 93.09 25 P **P** 09 47 18.7 +0.8
HMT Hamilton 93.63 30 P **P** 09 47 20.4 -0.1
SNAA Sanae 95.84 193 P **P** 09 47 33.1 +2.5
FINES FINESS Array B 102.90 331 PKiKP **PKiKP** 09 52 23.0 +1.4
comp=Z,4.0nm,1.1s,baz=94,slow=5.7,SNR=5.4
YKA Yellowknife Ar 107.49 26 PKiKP **PKiKP** 09 52 31.1 +1.0
comp=Z,0.2nm,0.7s,baz=305,slow=2.3,SNR=5.6
YKA PKKPbc **PKKPbc** 10 03 46.7 -1.3
comp=Z,0.4nm,0.6s,baz=112,slow=3.1,SNR=12
YKA PKKPab **PKKPdf** 10 04 00.8 +0.2
comp=Z,0.3nm,0.8s,baz=106,slow=5.1,SNR=5.0
GERES GERESS Array B 112.64 320 PKiKP **PKiKP** 09 52 41.4 +1.1
comp=Z,0.6nm,0.5s,baz=64,slow=3.1,SNR=7.1
ULM Lac du Bonnet 122.14 33 PKKPab PKKPab 10 02 56.5 +0.6
comp=Z,0.8nm,0.5s,baz=81,slow=1.1,SNR=3.4
TXAR Lajitas Array 124.51 59 PKP **PKiKP** 09 53 05.7 +1.6
comp=Z,0.1nm,0.3s,baz=228,slow=2.3,SNR=4.4
TXAR PKKPbc **PKKPbc** 10 02 48.6 +1.3
comp=Z,0.1nm,0.4s,baz=107,slow=4.2,SNR=3.5
TXAR Lajitas Array 124.51 59 **PKiKP** 09 53 04.7 +0.7
TORD Torodi Ar. Bea 129.22 281 PKP **PKiKP** 09 53 14.4 +0.8
comp=Z,2.7nm,0.5s,baz=73,slow=2.0,SNR=20
TORD SKPbc SKPbc 09 56 23.1 +2.3
comp=Z,2.7nm,1.1s,baz=68,slow=3.2,SNR=7.2
TORD Torodi Ar. Bea 129.22 281 **PKiKP** 09 53 13.6 0.0
SCHQ Schefferville 130.25 13 SKPbc **SKPbc** 09 56 26.2 +3.0
comp=Z,1.5nm,0.8s,baz=14,slow=1.8,SNR=4.1
DBIC Dimbokro 135.62 272 PKP **PKiKP** 09 53 26.0 -0.6
comp=Z,3.4nm,0.4s,baz=98,slow=3.0,SNR=6.9
DBIC SKPbc **SKPab** 09 56 45.8 -1.8
comp=Z,2.7nm,0.7s,baz=58,slow=1.0,SNR=3.1
DBIC Dimbokro 135.62 272 **PKiKP** 09 53 25.3 -1.3
CPUP Villa Florida 146.10 167 PKPbc **PKiKP** 09 53 47.3 -0.5
comp=Z,3.8nm,1.0s,baz=131,slow=3.9,SNR=6.8
LPAZ La Paz 150.51 142 PKPbc **PKPab** 09 54 00.2 -3.9
comp=Z,2.2nm,0.4s,baz=321,slow=1.1,SNR=18

TAP ***18*** *09:48:36.0,24.91N×121.74E,h110km,ML3.7,A*
JMA ***18*** *09:48:36.0±0.2,24.81N×121.78E,h105km±2km,M2.8*
ISC 18 09:48:35.4±1.3,24.93N±0.03×121.76E±0.03,h114km±5km,
n123,σ0°70/221,6C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TIPB	**Shuangxi**	**0.08**	**52**	⇑*i*P		**Pn**	**09 48 51.3**	**+0.3**
TIPB	baz=48			*i* S		**Sn**	**09 49 02.5**	**-0.4**
NTC	**Toucheng**	**0.10**	**138**	P		**Pn**	**09 48 51.5**	**+0.5**
NTC	baz=122			*e*S		**Sn**	**09 49 02.0**	**-0.8**
NWF	**Wu-fen Shan**	**0.15**	**8**	P		**Pn**	**09 48 51.5**	**+0.2**
NWF	baz=11			*e*S		**Sn**	**09 49 02.7**	**-0.5**
WFSB	**Wu-fen Shan**	**0.15**	**8**	*e*P		**Pn**	**09 48 51.5**	**+0.3**
WFSB	baz=11			*e*S		**Sn**	**09 49 03.1**	**+0.1**
ILA	**Ilan**	**0.16**	**184**	*e*P		**Pn**	**09 48 51.9**	**+0.7**
ILA	baz=175			*e*S		**Sn**	**09 49 03.6**	**+0.6**
TWA	**Mucha**	**0.17**	**289**	⇑*i*P		**Pn**	**09 48 51.5**	**+0.3**
TWA	baz=297			S		**Sn**	**09 49 02.6**	**-0.4**
SLBB	**Yuanshan**	**0.20**	**214**	P		**Pn**	**09 48 50.7**	**-0.6**
SLBB	baz=212			*e*S		**Sn**	**09 49 02.6**	**-0.7**
NHDH	**Xindian Distri**	**0.22**	**280**	P		**Pn**	**09 48 51.6**	**+0.3**
NHDH	baz=286			*e*S		**Sn**	**09 49 02.6**	**-0.7**
TWE	**Neicheng**	**0.22**	**203**	P		**Pn**	**09 48 51.6**	**+0.2**
TWE	baz=196			*e*S		**Sn**	**09 49 03.8**	**+0.5**
TWB1	**Santiao Chiao**	**0.22**	**68**	P		**Pn**	**09 48 51.4**	**+0.1**
TWB1	baz=66			S		**Sn**	**09 49 03.1**	**-0.2**
TAP1	**Taipei**	**0.24**	**298**	S		**Sn**	**09 49 02.9**	**-0.5**
TATO	**Taipei**	**0.25**	**282**	P		**Pn**	**09 48 51.5**	**+0.2**
TATO	baz=287			*e*S		**Sn**	**09 49 02.4**	**-1.0**
TAP	**Taipei**	**0.26**	**296**	*e*P		**Pn**	**09 48 51.6**	**+0.2**
TAP	baz=302			*i* S		**Sn**	**09 49 03.2**	**-0.2**
NWLT	**Wulai**	**0.28**	**238**	P		**Pn**	**09 48 51.2**	**-0.3**
NWLT	baz=239			*i* S		**Sn**	**09 49 02.5**	**-1.2**
YM01	**YM01**	**0.28**	**322**	P		**Pn**	**09 48 51.9**	**+0.3**
YM01	baz=326			*e*S		**Sn**	**09 49 03.4**	**-0.4**
YM10	**YM10**	**0.29**	**322**	*e*P		**Pn**	**09 48 51.5**	**-0.1**
YM10	baz=326			*e*S		**Sn**	**09 49 03.4**	**-0.5**
YM11	**YM11**	**0.29**	**325**	*e*P		**Pn**	**09 48 52.1**	**+0.4**
YM11	baz=329			*e*S		**Sn**	**09 49 05.0**	**+1.1**
YM05	**YM05**	**0.30**	**324**	*e*P		**Pn**	**09 48 51.8**	**+0.1**
YM05	baz=328			*e*S		**Sn**	**09 49 04.9**	**+0.9**
YM08	**YM08**	**0.30**	**330**	*e*P		**Pn**	**09 48 52.2**	**+0.6**
YM08	baz=333			*e*S		**Sn**	**09 49 03.2**	**-0.7**
YM04	**YM04**	**0.30**	**318**	P		**Pn**	**09 48 52.2**	**+0.6**
YM04	baz=322			*e*S		**Sn**	**09 49 03.8**	**-0.1**
YM03	**YM03**	**0.32**	**322**	*e*P		**Pn**	**09 48 52.9**	**+1.2**
YM03	baz=325			*e*S		**Sn**	**09 49 03.8**	**-0.3**
TWC	**Suao**	**0.32**	**166**	P		**Pn**	**09 48 52.3**	**+0.6**
TWC	baz=160			*e*S		**Sn**	**09 49 04.2**	**+0.2**
ENTT	**Nioudou**	**0.33**	**212**	P		**Pn**	**09 48 51.9**	**+0.1**
ENTT	baz=210			*e*S		**Sn**	**09 49 03.2**	**-0.9**
ANP	**Anpu**	**0.34**	**320**	*e*P		**Pn**	**09 48 51.5**	**-0.4**
TWS1	**Kuangyinshan**	**0.36**	**300**	P		**Pn**	**09 48 52.4**	**+0.6**
TWS1	baz=304			*i* S		**Sn**	**09 49 04.4**	**+0.2**
TWY	**Chenhua**	**0.38**	**337**	*e*P		**Pn**	**09 48 52.4**	**+0.4**
TWY	baz=341			*e*S		**Sn**	**09 49 05.1**	**+0.7**
NDT	**Datong Townshi**	**0.39**	**215**	P		**Pn**	**09 48 52.1**	**0.0**
NDT	baz=214			*e*S		**Sn**	**09 49 04.2**	**-0.4**
YHNB	**Yeheng**	**0.43**	**234**	P		**Pn**	**09 48 51.9**	**-0.5**
YHNB	baz=234			S		**Sn**	**09 49 03.8**	**-1.3**
NSK	**Sanguang**	**0.44**	**236**	⇑*i*P		**Pn**	**09 48 52.2**	**-0.1**
NSK	baz=236			*e*S		**Sn**	**09 49 03.8**	**-1.4**
WLTB	**Daxi**	**0.47**	**261**	⇑*i*P		**Pn**	**09 48 52.8**	**+0.4**
WLTB	baz=263			*i* S		**Sn**	**09 49 05.5**	**+0.2**
ENA	**Nanau**	**0.49**	**182**	P		**Pn**	**09 48 53.2**	**+0.6**
ENA	baz=179			*e*S		**Sn**	**09 49 06.4**	**+0.8**
NANB	**Nanao**	**0.49**	**181**	P		**Pn**	**09 48 52.9**	**+0.3**
NANB	baz=179			*e*S		**Sn**	**09 49 05.8**	**+0.2**
EOS1	**EOS1**	**0.50**	**138**	*e*P		**Pn**	**09 48 53.2**	**+0.6**
EOS1	baz=135			*e*S		**Sn**	**09 49 05.8**	**+0.3**
NCU	**National Centr**	**0.52**	**275**	P		**Pn**	**09 48 53.3**	**+0.5**
NCU	baz=277			S		**Sn**	**09 49 06.1**	**+0.2**
NCUH	**Zhongli**	**0.52**	**275**	P		**Pn**	**09 48 53.2**	**+0.4**
NCUH	baz=277			*e*S		**Sn**	**09 49 05.6**	**-0.3**
NNS	**Nan Shan**	**0.60**	**216**	P		**Pn**	**09 48 53.7**	**+0.2**
NNS	baz=215			*e*S		**Sn**	**09 49 06.4**	**-0.7**
NNSH	**Datong**	**0.60**	**215**	P		**Pn**	**09 48 53.5**	**0.0**
NNSH	baz=214			*i* S		**Sn**	**09 49 06.1**	**-1.0**
NHW	**Xinwu Township**	**0.65**	**277**	P		**Pn**	**09 48 54.5**	**+0.8**
SBCB	**Hsinchu**	**0.72**	**260**	P		**Pn**	**09 48 54.9**	**+0.7**
SBCB	baz=260			*e*S		**Sn**	**09 49 08.6**	**+0.1**
HSN	**Hsinchu**	**0.73**	**261**	P		**Pn**	**09 48 54.4**	**+0.1**
HSN	baz=263			*e*S		**Sn**	**09 49 08.0**	**-0.6**
LIOB	**Emei**	**0.73**	**248**	P		**Pn**	**09 48 54.5**	**+0.1**
LIOB	baz=248			*e*S		**Sn**	**09 49 08.3**	**-0.4**
NSTT	**Nanjuang**	**0.75**	**247**	⇑*i*P		**Pn**	**09 48 54.7**	**+0.2**
NSTT	baz=247			*e*S		**Sn**	**09 49 08.6**	**-0.4**
PCYT	**Pengchaiyu**	**0.76**	**22**	*e*P		**Pn**	**09 48 55.4**	**+0.8**
ETLH	**Xiulin Townshi**	**0.76**	**200**	*e*P		**Pn**	**09 48 54.7**	**0.0**
ETLH	baz=198			*e*S		**Sn**	**09 49 08.3**	**-1.0**
NACB	**Ninganchiao**	**0.76**	**191**	P		**Pn**	**09 48 54.1**	**-0.5**
NACB	baz=190			*e*S		**Sn**	**09 49 07.6**	**-1.6**
TWD	**Chiawan**	**0.85**	**190**	*e*P		**Pn**	**09 48 54.7**	**-0.7**
TWD	baz=188			*e*S		**Sn**	**09 49 08.8**	**-1.8**
TWT	**Tachien**	**0.85**	**219**	P		**Pn**	**09 48 56.1**	**+0.4**
TWT	baz=219			*e*S		**Sn**	**09 49 11.2**	**+0.2**
TDCB	**Techi**	**0.86**	**219**	P		**Pn**	**09 48 56.2**	**+0.4**
TDCB	baz=219			*e*S		**Sn**	**09 49 10.9**	**-0.2**
WHF	**Hehuan Shan**	**0.90**	**210**	P		**Pn**	**09 48 56.6**	**+0.2**
WHF	baz=209			*e*S		**Sn**	**09 49 11.4**	**-0.8**
HWA	**Hwalien**	**0.95**	**189**	*e*S		**Sn**	**09 49 11.3**	**-1.0**
NMLH	**Miaoli**	**0.96**	**247**	*e*P		**Pn**	**09 48 57.0**	**+0.5**
NMLH	baz=247			S		**Sn**	**09 49 12.2**	**-0.2**
WHP	**Taichung City**	**0.98**	**229**	⇑*i*P		**Pn**	**09 48 57.2**	**+0.5**
WHP	baz=229			*e*S		**Sn**	**09 49 12.0**	**-1.0**
CHGB	**Renai**	**1.01**	**212**	P		**Pn**	**09 48 58.1**	**+0.8**
CHGB	baz=211			S		**Sn**	**09 49 13.8**	**0.0**
ENLB	**Shoufeng**	**1.03**	**188**	*e*S		**Sn**	**09 49 13.8**	**+0.2**
NSY	**Sanyi**	**1.04**	**241**	P		**Pn**	**09 48 58.0**	**+0.7**
NSY	baz=241			*e*S		**Sn**	**09 49 14.1**	**+0.2**
TWQ1	**Liyutan**	**1.07**	**238**	P		**Pn**	**09 48 57.8**	**+0.2**
TWQ1	baz=237			*e*S		**Sn**	**09 49 14.1**	**-0.2**
PTSB	**Yuanli**	**1.07**	**244**	*e*S		**Sn**	**09 49 14.9**	**+0.5**
OWD	**Renai**	**1.10**	**209**	*e*P		**Pn**	**09 48 58.5**	**+0.4**
OWD	baz=208			*e*S		**Sn**	**09 49 14.8**	**-0.5**
ESL	**Shilin**	**1.15**	**195**	*e*P		**Pn**	**09 48 57.2**	**-1.2**
ESL	baz=194			*e*S		**Sn**	**09 49 14.3**	**-1.5**
DPDB	**Guoxing**	**1.17**	**221**	P		**Pn**	**09 48 58.7**	**0.0**
DPDB	baz=220			*e*S		**Sn**	**09 49 17.2**	**+0.8**
WDJ	**Dajia District**	**1.17**	**241**	*e*S		**Sn**	**09 49 16.5**	**+0.2**
JYNG	**Yonagunijimaku**	**1.18**	**113**	P		**Pn**	**09 48 58.0**	**-0.7**
JYNG				*e*S		**Sn**	**09 49 15.1**	**-1.3**
YOJ	**Yonaguni jima**	**1.23**	**112**	*e*P		**Pn**	**09 48 58.7**	**-0.5**
YOJ	**Yonaguni jima**	**1.23**	**112**	P		**Pn**	**09 48 59.1**	**-0.2**
YOJ	baz=110			*e*S		**Sn**	**09 49 16.4**	**-1.0**
TCU	**Taichung**	**1.25**	**232**	*e*S		**Sn**	**09 49 17.1**	**-0.9**
EGFH	**Guangfu**	**1.29**	**194**	*e*P		**Pn**	**09 49 00.7**	**+0.7**
EGFH	baz=193			*e*S		**Sn**	**09 49 17.4**	**-1.2**
VWDT	**VWDT**	**1.29**	**206**	P		**Pn**	**09 49 00.5**	**+0.5**
VWDT	baz=205			*e*S		**Sn**	**09 49 19.7**	**+0.9**
SMLT	**Sun Moon Lake**	**1.30**	**217**	P		**Pn**	**09 49 00.7**	**+0.4**
SMLT	baz=216			S		**Sn**	**09 49 19.2**	**+0.1**
TYC	**Yuchr**	**1.31**	**219**	*e*P		**Pn**	**09 49 00.7**	**+0.5**
TYC	baz=218			*e*S		**Sn**	**09 49 19.1**	**+0.1**
SSLB	**Suanglung**	**1.35**	**213**	P		**Pn**	**09 49 01.1**	**+0.3**
SSLB	baz=212			S		**Sn**	**09 49 19.7**	**-0.3**
WCHH	**Zhanghua**	**1.38**	**233**	*e*S		**Sn**	**09 49 20.4**	**-0.1**
WNT	**Mingjian**	**1.43**	**223**	*e*P		**Pn**	**09 49 01.5**	**-0.1**
WNT	baz=223			*e*S		**Sn**	**09 49 21.2**	**-0.3**
WJS	**Zhushan**	**1.45**	**221**	P		**Pn**	**09 49 02.3**	**+0.5**
WJS	baz=220			*e*S		**Sn**	**09 49 21.2**	**-0.6**
HGSD	**Ruisui**	**1.46**	**192**	*e*P		**Pn**	**09 49 02.0**	**+0.1**
HGSD	baz=191			*e*S		**Sn**	**09 49 22.5**	**+0.4**
EHY	**Hungye**	**1.47**	**196**	*e*P		**Pn**	**09 49 01.6**	**-0.5**
EHY	baz=195			*e*S		**Sn**	**09 49 20.7**	**-1.6**
WHYT	**Xinyi Township**	**1.48**	**214**	P		**Pn**	**09 49 02.9**	**+0.7**
WHYT	baz=214			S		**Sn**	**09 49 22.4**	**-0.1**
YULB	**Yu-li**	**1.58**	**196**	*e*P		**Pn**	**09 49 03.5**	**0.0**
YULB	baz=195			*e*S		**Sn**	**09 49 25.8**	**+1.1**
TWF1	**Yuli**	**1.62**	**195**	*e*P		**Pn**	**09 49 04.3**	**+0.4**
	baz=194							

TWF1			*e*S		**Sn**	**09 49 25.7**	**+0.1**
	baz=194						
RLNB	**Erlin**	**1.64 231**	*e*S		**Sn**	**09 49 25.5**	**-0.4**
	baz=231						
WGK	**Gukeng**	**1.65 222**	*e*P		**Pn**	**09 49 04.4**	**+0.2**
	baz=221						
WGK			*e*S		**Sn**	**09 49 26.8**	**+0.7**
	baz=221						
CHN5	**Tsauling**	**1.65 217**	*e*P		**Pn**	**09 49 04.8**	**+0.5**
	baz=216						
CHN5			*e*S		**Sn**	**09 49 26.4**	**+0.1**
	baz=216						
ALS	**Alishan**	**1.66 212**	*e*P		**Pn**	**09 49 05.4**	**+0.8**
	baz=211						
ALS			*e*S		**Sn**	**09 49 26.2**	**-0.6**
	baz=211						
WDLH	**Douliu**	**1.66 222**	*e*P		**Pn**	**09 49 04.8**	**+0.4**
	baz=222						
WDLH			*e*S		**Sn**	**09 49 26.3**	**-0.1**
	baz=222						
WTCT	**Ta-ch'eng**	**1.71 232**	*e*S		**Sn**	**09 49 27.2**	**-0.2**
	baz=231						
FULB	**Fuli**	**1.77 194**	*e*P		**Pn**	**09 49 06.4**	**+0.7**
	baz=193						
FULB			*e*S		**Sn**	**09 49 29.5**	**+0.6**
	baz=193						
CHN2	**Minshiung**	**1.82 220**	*e*S		**Sn**	**09 49 30.9**	**+1.1**
	baz=220						
CHKT	**Chengkung**	**1.85 191**	*e*S		**Sn**	**09 49 29.8**	**-0.8**
	baz=190						
ELDTW	**Lidau**	**1.86 202**	*e*P		**Pn**	**09 49 07.7**	**+0.8**
	baz=200						
ELDTW			*e*S		**Sn**	**09 49 31.1**	**+0.3**
	baz=200						
CHY	**Chiayi**	**1.87 221**	*e*P		**Pn**	**09 49 07.4**	**+0.4**
	baz=220						
CHY			*e*S		**Sn**	**09 49 30.9**	**-0.1**
	baz=220						
IRIF	**Iriomote-Funau**	**1.89 108**	P		**Pn**	**09 49 07.0**	**-0.1**
IRIF			*e*S		**Sn**	**09 49 30.1**	**-1.2**
CHN4	**Tsaushan**	**1.90 214**	*e*P		**Pn**	**09 49 07.6**	**+0.4**
	baz=214						
CHN4			*e*S		**Sn**	**09 49 31.9**	**+0.3**
	baz=214						
WSF	**Szhu**	**1.90 228**	*e*S		**Sn**	**09 49 31.9**	**+0.2**
	baz=227						
TPUB	**Ta-pu**	**1.92 213**	*e*P		**Pn**	**09 49 08.7**	**+1.1**
	baz=212						
TPUB			*e*S		**Sn**	**09 49 32.3**	**+0.2**
	baz=212						
WTP	**Ta-pu**	**1.97 212**	P		**Pn**	**09 49 08.3**	**+0.1**
	baz=211						
WTP			*e*S		**Sn**	**09 49 32.7**	**-0.7**
	baz=211						
STYT	**Tauyuan**	**1.98 208**	*e*P		**Pn**	**09 49 08.8**	**+0.4**
	baz=207						
STYT			*e*S		**Sn**	**09 49 33.4**	**-0.1**
	baz=207						
TWK	**Hsinying**	**2.02 215**	*e*P		**Pn**	**09 49 09.4**	**+0.5**
	baz=214						
TWK			*e*S		**Sn**	**09 49 34.8**	**+0.4**
	baz=214						
MATB	**Ma-tsu**	**2.04 307**	*e*P		**Pn**	**09 49 09.2**	**+0.1**
	baz=306						
MATB			*e*S		**Sn**	**09 49 34.1**	**-0.7**
	baz=306						
SNST	**Tainan City**	**2.05 214**	*e*P		**Pn**	**09 49 09.5**	**+0.3**
	baz=214						
SNST			*e*S		**Sn**	**09 49 34.7**	**-0.4**
	baz=214						
HATJ	**Hateruma jima**	**2.05 114**	P		**Pn**	**09 49 09.6**	**+0.4**
HATJ			*e*S		**Sn**	**09 49 34.4**	**-0.7**
CHN1	**Nanshi**	**2.07 213**	P		**Pn**	**09 49 09.5**	**+0.1**
	baz=212						
CHN1			*i* S		**Sn**	**09 49 35.3**	**-0.1**
	baz=212						
VWUC	**VWUC**	**2.10 272**	*e*P		**Pn**	**09 49 09.4**	**-0.4**
	baz=272						
VWUC			*e*S		**Sn**	**09 49 34.5**	**-1.6**
	baz=272						
SGST	**Jiashian**	**2.13 211**	*e*P		**Pn**	**09 49 10.0**	**-0.2**
	baz=210						
SGST			S		**Sn**	**09 49 36.5**	**-0.3**
	baz=210						
JKRS	**Kuro-shima**	**2.16 108**	P		**Pn**	**09 49 11.1**	**+0.6**
JKRS			S		**Sn**	**09 49 37.3**	**-0.1**
SLGT	**Liugui**	**2.18 208**	*e*P		**Pn**	**09 49 10.9**	**+0.1**
	baz=207						
SLGT			S		**Sn**	**09 49 38.5**	**+0.6**
	baz=207						
TWG	**Pinlang**	**2.19 197**	*e*P		**Pn**	**09 49 12.7**	**+1.7**
	baz=196						
TWG			*e*S		**Sn**	**09 49 37.2**	**-1.0**
	baz=196						
TWGBT	**Beinan**	**2.19 197**	*e*P		**Pn**	**09 49 12.8**	**+1.9**
	baz=196						
TWGBT			*e*S		**Sn**	**09 49 37.5**	**-0.6**
	baz=196						
JIJ	**Ishigaki jima**	**2.24 104**	P		**Pn**	**09 49 11.5**	**-0.1**
JIJ			S		**Sn**	**09 49 37.8**	**-1.5**
SCLT	**Jiali**	**2.25 220**	*e*S		**Sn**	**09 49 39.7**	**0.0**
	baz=219						
JISG	**Ishigakijimahi**	**2.34 98**	P		**Pn**	**09 49 13.4**	**+0.5**
JISG			*e*S		**Sn**	**09 49 41.8**	**+0.1**
PTMZ	**Houxiangcun**	**2.40 273**	P		**Pn**	**09 49 13.8**	**+0.2**
	baz=273						
PTMZ			*e*S		**Sn**	**09 49 41.0**	**-2.0**
	baz=273						
SSD	**Sandimen**	**2.40 206**	*e*P		**Pn**	**09 49 14.8**	**+1.1**
	baz=205						
SSD			*e*S		**Sn**	**09 49 42.7**	**-0.3**
	baz=205						
ECL	**Taimali**	**2.43 198**	*e*P		**Pn**	**09 49 14.9**	**+0.9**
	baz=197						
ECL			*e*S		**Sn**	**09 49 43.3**	**-0.4**
	baz=197						
PHUB	**P'eng-hu**	**2.44 235**	P		**Pn**	**09 49 13.5**	**-0.6**
	baz=234						
PHUB			S		**Sn**	**09 49 42.0**	**-1.9**
	baz=234						
XPSS	**Dashiqiu**	**2.45 325**	*e*P		**Pn**	**09 49 14.6**	**+0.4**
	baz=325						
MASBT	**Mashibuluo**	**2.52 204**	*e*P		**Pn**	**09 49 15.4**	**+0.2**
	baz=204						
MASBT			*e*S		**Sn**	**09 49 45.3**	**-0.5**
	baz=204						
EAST	**Anshuo**	**2.67 198**	*e*P		**Pn**	**09 49 19.4**	**+2.3**
	baz=197						
JTJ	**Tarama**	**2.69 95**	P		**Pn**	**09 49 18.2**	**+0.8**
JTJ			S		**Sn**	**09 49 49.8**	**+0.1**
MHZQ	**Yeshan**	**2.73 296**	*e*P		**Pn**	**09 49 18.4**	**+0.5**
	baz=295						
VCHM	**Qimei**	**2.73 232**	S		**Sn**	**09 49 48.9**	**-1.8**
	baz=231						
KNM	**Kinmen**	**3.07 261**	*e*P		**Pn**	**09 49 23.9**	**+1.6**
	baz=261						
KNMB	**Chin-men Tao**	**3.10 262**	*e*P		**Pn**	**09 49 22.0**	**-0.7**
	baz=261						
AXDP	**Jialang**	**3.44 270**	*e*P		**Pn**	**09 49 27.4**	**+0.1**
	baz=269						
JOW	**Kunigami**	**6.17 71**	*e*P		**Pn**	**09 50 05.3**	**+1.3**
	baz=71						

*IDC **18** 10:05:35.3±0.7,2°.49S×141°.62E,h0km,mb4.0/13, mb1 4.1/14,mb1mx4.0/32,mbtmp4.0/14,ML4.0/1,MS3.2/3, Ms1 3.2/3,ms1mx2.8/29,Error ellipse: s-maj=17.3km s-min=10.7km az=164.0*

*NEIC **18** 10:05:36.1±1.3,2°.5S±0°.1×141°.59E±0°.06,h11km±4km, mb4.4/23,Error ellipse: s-maj=16.3km s-min=8.6km az=177.0*

ISC 18 10:05:39.1±0.6,2°.51S±0°.08×141°.49E±0°.10,h29km,n57, σ0°79/53,mb4.3/22,Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
JAY	**Jayapura**	**0.78**	**269**	Pg		**Pb**	**10 05 52.9**	**-1.3**
	139nm,0.3s,baz=80,slow=16,SNR=414							
JAY				Lg		Lg	10 06 06.2	
	231nm,0.3s,baz=308,slow=19,SNR=13							
PMG	**Port Moresby**	**8.88**	**141**	LR		LR	10 12 04.3	
	comp=Z,112nm,22.0s,baz=19,slow=44							
FAKI	**Fak Fak**	**9.24**	**267**	Pn		**Pn**	**10 07 51.0**	**+0.6**
MTN	**Manton Dam**	**14.51**	**224**	Pn		**Pn**	**10 09 02.8**	**+0.2**
KNRA	**Kununurra**	**18.12**	**223**	P		**P**	**10 09 49.6**	**+0.7**
KNRA				IAmb		IAmb	10 10 07.8	
	comp=Z,62nm,1.4s							

WR0	**Warramunga Arr**	**18.63**	**201**	P		**P**	**10 09 54.2**	**-0.3**
WRA	**Warramunga Arr**	**18.68**	**201**	P		**P**	**10 09 55.4**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=22,slow=12,SNR=16							
WRA	**Warramunga Arr**	**18.68**	**201**	P		**P**	**10 09 55.0**	**-0.2**
FITZ	**Fitzroy Crossi**	**21.95**	**224**	P		**P**	**10 10 30.0**	**-0.5**
	comp=Z,6.2nm,0.8s,baz=35,slow=18,SNR=7.3							
FITZ				LR		LR	10 19 35.6	
	comp=Z,65nm,19.3s,baz=38,slow=38							
FITZ	**Fitzroy Crossi**	**21.95**	**224**	P		**P**	**10 10 30.5**	**-0.1**
FITZ				IAmb		IAmb	10 10 38.5	
	comp=Z,19nm,1.2s							
AS31	**Alice Springs**	**22.28**	**199**	P		**P**	**10 10 35.0**	**+0.9**
ASAR	**Alice Springs**	**22.28**	**199**	P		**P**	**10 10 34.5**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=31,slow=11,SNR=30							
ASAR				LR		LR	10 20 10.6	
	comp=Z,71nm,18.4s,baz=22,slow=39							
ASAR	**Alice Springs**	**22.28**	**199**	P		**P**	**10 10 34.4**	**+0.2**
EIDS	**Eidsvold**	**24.54**	**159**	P		**P**	**10 10 56.0**	**-0.4**
EIDS				IAmb		IAmb	10 11 05.1	
	comp=Z,7.9nm,0.9s							
BKB	**Balikpapan**	**24.61**	**272**	P		**P**	**10 10 57.9**	**+0.7**
FORT	**Forrest**	**30.86**	**203**	P		**P**	**10 11 52.8**	**-0.1**
H11S3	**WAKE ISLAND Hy**	**32.42**	**49**	T		T	10 46 05.5	
	baz=232,slow=76,SNR=437							
H11S2	**WAKE ISLAND Hy**	**32.43**	**49**	T		T	10 46 04.0	
	baz=232,slow=76,SNR=206							
H11S1	**WAKE ISLAND Hy**	**32.43**	**49**	T		T	10 46 07.0	
	baz=232,slow=76,SNR=162							
MORW	**Morawa**	**35.83**	**220**	P		**P**	**10 12 37.0**	**+0.7**
MJAR	**Matsushiro Arr**	**38.97**	**356**	P		**P**	**10 13 02.2**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=170,slow=9.1,SNR=4.8							
MAJO	**Matsushiro**	**38.97**	**356**	P		**P**	**10 13 02.5**	**-0.2**
MAJO				IAmb		IAmb	10 13 02.7	
	comp=Z,9.7nm,1.4s							
KLR	**Kul'dur**	**52.22**	**352**	P		**P**	**10 14 48.1**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=180,slow=6.1,SNR=3.2							
PETK	**Petropavlovsk-**	**57.06**	**12**	P		**P**	**10 15 22.7**	**+0.3**
	comp=Z,4.1nm,1.1s,baz=146,slow=5.6,SNR=5.3							
PETK	**Petropavlovsk-**	**57.06**	**12**	P		**P**	**10 15 22.6**	**+0.2**
SONM	**Songino Array**	**58.76**	**333**	P		**P**	**10 15 35.9**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=145,slow=8.8,SNR=2.5							
SONM	**Songino Array**	**58.76**	**333**	P		**P**	**10 15 34.4**	**-0.2**
MK31	**Makanchi Array**	**71.34**	**321**	P		**P**	**10 16 56.7**	**+0.4**
MKAR	**Makanchi Array**	**71.34**	**321**	P		**P**	**10 16 57.9**	**+1.6**
	comp=Z,1.4nm,0.7s,baz=104,slow=7.0,SNR=12							
MKAR	**Makanchi Array**	**71.34**	**321**	P		**P**	**10 16 55.7**	**-0.6**
KDJ	**Kajisay**	**72.95**	**315**	P		**P**	**10 17 06.9**	**+0.6**
KDJ				IAmb		IAmb	10 17 09.3	
	comp=Z,8.3nm,1.1s							
ZAA0	**Zalesovo Array**	**73.17**	**329**	P		**P**	**10 17 07.5**	**+0.4**
ZAA0				IAmb		IAmb	10 17 08.3	
	comp=Z,2.0nm,0.8s							
ZALV	**Zalesovo Beam**	**73.17**	**329**	P		**P**	**10 17 07.6**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=108,slow=6.6,SNR=7.7							
ZALV	**Zalesovo Beam**	**73.17**	**329**	P		**P**	**10 17 07.7**	**+0.7**
NIL	**Nilore**	**73.44**	**306**	P		**P**	**10 17 08.5**	**-0.6**
KURK	**Kurchatov**	**75.16**	**324**	P		**P**	**10 17 18.4**	**-0.3**
KURK				IAmb		IAmb	10 17 20.8	
	comp=Z,2.6nm,0.8s							
KURBB	**Kurchatov Arra**	**75.18**	**324**	P		**P**	**10 17 20.0**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=113,slow=5.1,SNR=9.5							
KK31	**Karatay Array**	**77.94**	**315**	P		**P**	**10 17 34.2**	**-0.5**
KK31				IAmb		IAmb	10 17 36.6	
	comp=Z,1.5nm,0.6s							
KKAR	**Karatay Array**	**77.94**	**315**	P		**P**	**10 17 33.5**	**-1.1**
KKAR	**Karatay Array**	**77.94**	**315**	P		**P**	**10 17 34.2**	**-0.5**
KKAR				IAmb		IAmb	10 17 36.6	
	comp=Z,1.5nm,0.6s							
SVW2	**Sparrevohn**	**79.46**	**26**	P		**P**	**10 17 42.3**	**-0.3**
BVAR	**Borovoye Array**	**80.74**	**325**	P		**P**	**10 17 51.1**	**+1.4**
	comp=Z,2.2nm,0.5s,baz=114,slow=8.0,SNR=13							
BRVK	**Borovoye**	**80.81**	**325**	P		**P**	**10 17 49.6**	**-0.4**
BRVK				IAmb		IAmb	10 17 56.3	
	comp=Z,4.0nm,1.1s							
IL31		**84.51**	**24**	P		**P**	**10 18 08.7**	**-0.3**
IL31				IAmb		IAmb	10 18 23.8	
	comp=Z,7.3nm,1.5s							
ILAR	**Eielson Array**	**84.51**	**24**	P		**P**	**10 18 08.5**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=257,slow=3.8,SNR=10							
ILAR	**Eielson Array**	**84.51**	**24**	P		**P**	**10 18 08.0**	**-1.0**
BMAR	**Burnt Mountain**	**86.18**	**22**	P		**P**	**10 18 17.6**	**+0.2**
GEYT	**Alibeck**	**86.30**	**308**	P		**P**	**10 18 20.4**	**+1.8**
	comp=Z,2.0nm,0.6s,baz=211,slow=4.7,SNR=4.6							
GEYT	**Alibeck**	**86.30**	**308**	P		**P**	**10 18 18.4**	**-0.2**
ABKAR	**Akbulak array**	**86.36**	**320**	P		**P**	**10 18 17.2**	**-1.4**
ABKAR				IAmb		IAmb	10 18 20.9	
	comp=Z,3.2nm,1.2s							
YKA	**Yellowknife Ar**	**98.62**	**27**	P		**P**	**10 19 15.4**	**+0.3**
	comp=Z,0.2nm,0.8s,baz=283,slow=5.2,SNR=4.1							
LPAZ	**La Paz**	**145.28**	**124**	PKPbc		**PKPdf**	**10 25 16.6**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=186,slow=1.1,SNR=3.8							
LPAZ	**La Paz**	**145.28**	**124**			**PKPbc**	**10 25 14.1**	**-1.5**
CPUP	**Villa Florida**	**146.05**	**149**	PKPbc		**PKPab**	**10 25 18.2**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=207,slow=4.5,SNR=1.9							
CPUP	**Villa Florida**	**146.05**	**149**			**PKPdf**	**10 25 14.8**	**-1.4**
DBIC	**Dimbokro**	**146.21**	**278**	PKPbc		**PKPab**	**10 25 19.1**	**+0.6**
	comp=Z,5.3nm,0.6s,baz=127,slow=2.9,SNR=11							
DBIC	**Dimbokro**	**146.21**	**278**			**PKPdf**	**10 25 16.0**	**-0.8**

*IDC **18** 10:09:20.6±3.5,35°.76N×52°.93E,h0km,mb3.2/3, mb1 3.5/7,mb1mx3.3/39,mbtmp3.4/7,ML3.2/4,MS2.5/2, Ms1 2.6/2,ms1mx2.4/18,Error ellipse: s-maj=58.9km s-min=17.7km az=10.0*

*TEH **18** 10:09:22.1,35°.95N×53°.25E,h8km,ML3.8*

*THR **18** 10:09:22.4±0.7,35°.95N×53°.23E,h14km±8km,ML3.7*

ISC 18 10:09:22.0±1.2,35°.96N±0°.03×53°.23E±0°.03,h2km±11km, n71,σ1°58/74,mb3.3/3,2C-2D,Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
ISHM	**Shahmirzad**	**0.16**	**162**	*e*Pg		**Pg**	**10 09 26.0**	**+0.8**
ISHM				*e*Sg		**Sg**	**10 09 28.2**	**+0.8**
IALA	**Alasht**	**0.36**	**289**	*e*Pg		**Pg**	**10 09 29.7**	**+0.7**
IALA				*e*Sg		**Sb**	**10 09 35.6**	**-1.9**
IFIR	**Firoozkooh**	**0.50**	**231**	*e*Pg		**Pg**	**10 09 31.6**	**0.0**
IFIR				*e*			10 09 40.9	
ILAS	**Lasjerd**	**0.62**	**201**	*e*Pg		**Pg**	**10 09 33.9**	**0.0**
IGLO	**Ghaloghah**	**0.72**	**42**	*e*Pg		**Pg**	**10 09 36.2**	**+0.3**
IGLO				*e*			10 09 56.1	
IANJ	**Anjilo**	**0.74**	**131**	*e*Pg		**Pg**	**10 09 36.4**	**+0.2**
IANJ				*e*			10 09 46.8	
IPRN	**Peran**	**0.78**	**291**	*e*Pg		**Pg**	**10 09 37.2**	**+0.4**
IDMV	**Damavand**	**1.05**	**249**	*e*Pg		**Pg**	**10 09 42.2**	**+0.1**
IDMV				*e*			10 10 01.2	
IVRN	**Varamin**	**1.56**	**232**	*e*Pg		**Pb**	**10 09 51.0**	**-0.6**
IVRN				*e*			10 09 51.7	
IHSB	**Hasanabad**	**1.68**	**252**	*e*Pn		**Pb**	**10 09 53.0**	**-0.6**
IHSB				*e*			10 10 19.8	
CHTH	**Charan**	**1.71**	**269**	*e*Pg		**Pb**	**10 09 53.5**	**-0.7**
CHTH	**Charan**	**1.71**	**269**	*e*Pg		**Pb**	**10 09 53.5**	**-0.7**
THKV	**Tehran--Karaj**	**1.91**	**269**	IAML			10 10 18.4	
	comp=E,610nm,0.5s							
IQOM	**Qom**	**2.09**	**238**	*e*Pn		**Pb**	**10 09 59.1**	**-1.6**
IQOM				*e*			10 10 31.5	
IMHD	**Mahdasht**	**2.10**	**263**	*e*Pn		**Pb**	**10 10 00.6**	**-0.2**
IMHD				*e*			10 10 03.5	
QALM	**Alamut, Qazvin**	**2.14**	**283**	*e*Pn		**Pb**	**10 10 01.2**	**-0.4**
QALM				*e*			10 10 32.8	
GHVR	**GHOM**	**2.17**	**228**	*e*Pg		**Pb**	**10 10 00.7**	**-1.3**
GHVR	**GHOM**	**2.17**	**228**	*e*Pn		**Pb**	**10 10 00.7**	**-1.3**
GHVR				*e*Sg		**Sg**	**10 10 31.0**	**-0.7**
GHVR				IAML			10 10 40.0	
	comp=N,397nm,0.5s							
IMND	**Minoodasht**	**2.18**	**53**	*e*Pn		**Pn**	**10 09 59.7**	**+0.6**
KRSH	**Karshahi**	**2.18**	**205**	*e*Pn		**Pn**	**10 09 59.8**	**+0.4**
SHRO	**Shahrood**	**2.25**	**89**	*e*Pn		**Pn**	**10 10 01.2**	**+0.9**
SHRO	**Shahrood**	**2.25**	**89**	*e*Pn		**Pn**	**10 10 01.2**	**+0.9**
IGZV	**Ghazvin**	**2.47**	**281**	*e*			10 10 09.3	
IGZV				*e*Pn		**Pb**	**10 10 07.2**	**0.0**
QAM	**Ghamsar**	**2.65**	**214**	*e*Pn		**Pn**	**10 10 06.2**	**+0.4**
IRAZ	**Razeghan**	**2.75**	**259**	*e*			10 10 59.2	
IRAZ				*e*Pn		**Pn**	**10 10 08.7**	**+1.5**
IKLH	**Kolahrood**	**2.97**	**208**	*e*Pn		**Pn**	**10 10 10.4**	**+0.1**
QABG	**Abgarm-Qazvin**	**2.98**	**266**	*e*Pn		**Pn**	**10 10 12.2**	**+1.8**
QABG				*e*			10 11 10.4	
ASAO	**Ashtian**	**2.98**	**243**	*e*Pn		**Pn**	**10 10 11.8**	**+1.4**
ASAO	**Ashtian**	**2.98**	**243**	*e*Pn		**Pn**	**10 10 11.8**	**+1.4**
IZEF	**Zefreh**	**3.15**	**194**	*e*Pn		**Pn**	**10 10 13.8**	**+1.0**
TNSJ	**Nastanj**	**3.42**	**125**	*e*Pn		**Pn**	**10 10 17.1**	**+0.8**
HAGD	**Aghdareh**	**3.53**	**252**	*e*Pn		**Pn**	**10 10 20.3**	**+2.3**
SBZV	**Sabzevar**	**3.57**	**82**	*e*Pn		**Pn**	**10 10 19.9**	**+1.4**
YZKH	**Yazd**	**3.74**	**162**	*e*Pn		**Pn**	**10 10 21.7**	**+1.0**
YZKH	**Yazd**	**3.74**	**162**	*e*Pn		**Pn**	**10 10 21.7**	**+1.0**
IPIR	**Pirpir**	**3.80**	**211**	*e*Pn		**Pn**	**10 10 23.8**	**+2.0**
ICHK	**Chekchek**	**3.84**	**165**	*e*Pn		**Pn**	**10 10 23.8**	**+1.6**
TKDS	**Koohdasht(Taba**	**3.97**	**125**	*e*Pn		**Pn**	**10 10 25.2**	**+1.3**
ISFR	**Sfrayin**	**3.99**	**73**	*e*Pn		**Pn**	**10 10 26.6**	**+2.2**
ISAD	**Sadrabad**	**4.06**	**175**	*e*Pn		**Pn**	**10 10 25.3**	**0.0**
TPRV	**Parvadeh(Tabas**	**4.09**	**135**	*e*Pn		**Pn**	**10 10 26.7**	**+1.2**
HSAM	**Samen**	**4.18**	**247**	*e*Pn		**Pn**	**10 10 28.5**	**+1.6**
IRAM	**Ramesheh**	**4.20**	**190**	*e*Pn		**Pn**	**10 10 27.8**	**+0.6**
JHBN	**Jahan bin**	**4.29**	**210**	*e*Pn		**Pn**	**10 10 31.2**	**+2.7**
IKRD	**Kardeh**	**4.34**	**78**	*e*Pn		**Pg**	**10 10 42.4**	**-2.7**
GEYT	**Alibeck**	**4.38**	**62**	Pn		**Pn**	**10 10 31.8**	**+2.3**
	comp=N,2.9nm,0.3s,baz=243,slow=16,SNR=16							
GEYT				Pg		**Pg**	**10 10 45.5**	**-0.3**
	comp=N,3.9nm,0.3s,baz=275,slow=16,SNR=13							
GEYT				Sn		**Sn**	**10 11 22.6**	**+1.6**
	comp=N,1.7nm,0.3s,baz=241,slow=18,SNR=2.3							
GEYT				LR		LR	10 12 05.0	
	comp=N,35nm,19.7s,baz=250,slow=35							
IAKL	**Akhelmad**	**4.51**	**80**	*e*Pn		**Pn**	**10 10 32.9**	**+1.4**
IEMG	**Emamgholi**	**4.59**	**70**	*e*Pn		**Pn**	**10 10 34.8**	**+2.2**
IPAY	**Payeh**	**4.69**	**82**	*e*Pn		**Pn**	**10 10 35.4**	**+1.5**
IMEH	**Mehriz**	**4.70**	**165**	*e*Pn		**Pn**	**10 10 35.1**	**+1.0**
IBAF	**Bafgh**	**4.78**	**155**	*e*Pn		**Pn**	**10 10 35.8**	**+0.8**
ISRB	**Sarab**	**4.83**	**294**	*e*Pn		**Pn**	**10 10 38.1**	**+2.2**
KLNJ	**Kolanjah**	**5.13**	**196**	*e*Pn		**Pn**	**10 10 42.9**	**+2.8**
IHSH	**Hashtrud**	**5.31**	**298**	*e*Pn		**Pn**	**10 10 40.8**	**-1.7**
AFRZ	**Afriz**	**5.39**	**116**	*e*Pn		**Pn**	**10 10 45.4**	**+1.8**
IHRS	**Heris**	**5.47**	**297**	*e*Pn		**Pn**	**10 10 46.3**	**+1.6**
IMYA	**Miami**	**5.57**	**84**	*e*Pn		**Pn**	**10 10 47.7**	**+1.7**
IKOO	**Kooshah**	**5.95**	**125**	*e*Pn		**Pn**	**10 10 52.1**	**+0.9**
SHRT	**Shahrakht**	**6.25**	**110**	*e*Pn		**Pn**	**10 10 56.7**	**+1.5**
SHRT	**Shahrakht**	**6.25**	**110**	*e*Pn		**Pn**	**10 10 56.7**	**+1.5**
IMRD	**Marand**	**6.59**	**297**	*e*Pn		**Pn**	**10 11 02.0**	**+1.9**
KBZ	**Khabaz**	**11.09**	**317**	Pn		**Pn**	**10 12 02.5**	**+1.0**
	comp=N,0.0nm,0.3s,baz=129,slow=6.5,SNR=2.7							
KBZ				Sn		**Sn**	**10 14 03.2**	**-2.9**
	comp=N,0.1nm,0.3s,baz=156,slow=12,SNR=2.9							
AB31	**Akbulak array**	**14.16**	**18**	⇑P		**Pn**	**10 12 41.8**	**-1.7**
	comp=N,0.8nm,0.7s,baz=204,slow=14,SNR=4.0							
AB31				⇑S		Sn	10 15 09.2	-12
	comp=N,2.3nm,0.7s,baz=205,slow=23							
AKTO	**Aktyubinsk**	**14.88**	**12**	⇓P		**Pn**	**10 12 50.2**	**-2.9**
	comp=N,7.3nm,1.5s							
AKTO				⇓S		Sn	10 15 28.7	-10
	comp=N,3.6nm,0.6s							
BRTR	**Keskin Array B**	**15.92**	**290**	Pn		**Pn**	**10 13 07.3**	**+0.1**
	comp=N,0.1nm,0.3s,baz=113,slow=9.6,SNR=5.4							
AAK	**Ala-Archa**	**17.73**	**61**	P		**P**	**10 13 33.0**	**+2.0**
	comp=N,0.1nm,0.3s,baz=237,slow=14,SNR=4.0							
BVAR	**Borovoye Array**	**20.90**	**30**	P		Pn	10 14 09.1	+1.2
	comp=N,1.6nm,0.8s,baz=203,slow=11,SNR=8.2							
AKASG	**Malin Array Be**	**22.71**	**318**	P		**P**	**10 14 23.2**	**-1.5**
	comp=N,0.3nm,0.3s,baz=122,slow=11,SNR=3.7							
KURBB	**Kurchatov Arra**	**23.38**	**43**	P		**P**	**10 14 36.7**	**+5.0**
	comp=N,0.9nm,1.1s,baz=245,slow=8.9,SNR=3.1							
MKAR	**Makanchi Array**	**24.21**	**54**	P		**P**	**10 14 41.3**	**+1.4**
	comp=N,0.3nm,0.8s,baz=268,slow=10,SNR=3.3							
CMAR	**Chiang Mai Arr**	**43.81**	**101**	LR		LR	10 41 25.8	
	comp=N,6.9nm,20.1s,baz=115,slow=44							

MAN 18 10:11:59.6,12°.86N×122°.86E,h13km,mb4.9,ML3.8, MS3.8,3C,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MMPH	**Masbate**	**0.90**	**123**	⇑*e*P		Pg	10 12 16.5

ML2.6(DNK),Confirmed Earthquake
IEPN ***18*** *11:06:50.0, 79.17N×4.34E, h15km*
ISC 18 11:06:43.6±1.1, 79°29′N±0.07×2°38′E±0.04, h16km, n13, σ2ᵖ58/25, 2D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.77**	**98**	*e*P	**Pn**	**11 07 14.9**	**+1.5**
KBS				*e*S	**Sn**	**11 07 33.5**	**-2.0**
KBS				IAML		11 07 37.3	
	comp=Z,40nm,0.3s						
KBS	**Kingsbay**	**1.77**	**98**	↓*i*P	**Pn**	**11 07 15.1**	**+1.6**
KBS				*i* S	**Sn**	**11 07 33.6**	**-2.0**
SPA0	**Spitsbergen Ar**	**2.88**	**106**	*e*P	**Pn**	**11 07 31.5**	**+2.7**
SPA0				*e*S	**Sn**	**11 08 02.1**	**-0.9**
SPA0				IAML		11 08 07.1	
	comp=Z,29nm,0.2s						
SPA0	**Spitsbergen Ar**	**2.88**	**106**	↓*i*P	**Pn**	**11 07 31.5**	**+2.7**
SPA0				*i* S	**Sn**	**11 08 02.1**	**-0.9**
HSPB	**Hornsund (broa**	**3.48**	**125**	*e*P	**Pn**	**11 07 39.6**	**+2.6**
HSPB				*e*S	**Sn**	**11 08 16.2**	**-1.5**
HSPB				IAML		11 08 18.9	
	comp=Z,20nm,0.7s						
HSPB	**Hornsund (broa**	**3.48**	**125**	*e*P	**Pn**	**11 07 39.4**	**+2.4**
HSPB				*e*S	**Sn**	**11 08 16.2**	**-1.5**
NOR	**Nord**	**3.97**	**315**	*i* P	**Pn**	**11 07 45.8**	**+2.2**
NOR				*i* S	**Sn**	**11 08 29.2**	**-0.6**
NOR	**Nord**	**3.97**	**315**	*i* P	**Pn**	**11 07 45.9**	**+2.2**
NOR				*i* S	**Sn**	**11 08 29.2**	**-0.6**
DAG	**Danmarks Havn**	**5.11**	**251**	*i* P	**Pn**	**11 08 02.0**	**+2.7**
DAG	**Danmarks Havn**	**5.11**	**251**	*i* P	**Pn**	**11 08 02.0**	**+2.7**
DAG				*i* S	**Sn**	**11 08 54.8**	**-3.0**
DAG				IAML		11 08 59.6	
	comp=Z,2.9nm,0.4s						
HOPEN	**Hopen**	**5.40**	**110**	*e*P	**Pn**	**11 08 06.0**	**+2.6**
HOPEN				*e*S	**Sn**	**11 09 02.6**	**-2.5**
DBG	**Daneborg**	**7.20**	**238**	*i* P	**Pn**	**11 08 31.4**	**+3.3**
DBG				*i* S	**Sn**	**11 09 46.0**	**-3.3**
DBG				IAML		11 09 50.6	
	comp=Z,1.6nm,0.4s						
ZFI2	**Zemlya Franca-**	**7.73**	**57**	*e*P	**Pn**	**11 08 37.0**	**+1.8**
ZFI2				*e*S	**Sn**	**11 09 57.2**	**-5.2**
	comp=Z,2.0nm,0.9s						

IDC 18 11:14:38.7±2.1, 8°21′S×149°41′E, h0km, mb3.3/2, mb1 3.7/4, mb1mx3.4/23, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=106.9km s-min=26.4km az=134.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.52**	**242**	Pn	Pb	11 15 23.0	-1.9
	14nm,0.3s,baz=21,slow=12,SNR=24						
PMG				Sn	Sn	11 15 50.4	-2.1
	28nm,0.3s,baz=52,slow=23,SNR=14						
WRA	**Warramunga Arr**	**18.68**	**230**	P	P	11 18 57.0	-1.6
	0.2nm,0.3s,baz=54,slow=11,SNR=4.6						
ASAR	**Alice Springs**	**21.38**	**222**	P	P	11 19 27.6	-0.4
	0.4nm,0.6s,baz=57,slow=9.3,SNR=7.7						
ILAR	**Eielson Array**	**86.58**	**23**	P	P	11 27 23.5	-0.1
	0.2nm,0.7s,baz=253,slow=4.9,SNR=3.5						

NEIC ***18*** *11:37:27.8±2.3, 50.7N±0.1×179.50E±0.09, h45km±5km, Error ellipse: s-maj=20.9km s-min=8.5km az=177.0*
IDC ***18*** *11:37:28.7±6.3, 50.92N×179.31E, h52km±49km, mb3.3/6, mb1 3.7/8, mb1mx3.4/53, mbtmp3.8/8, ML3.2/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/20, Error ellipse: s-maj=77.8km s-min=22.1km az=176.0*
AEIC ***18*** *11:37:28.4±2.8, 50.7N±0.1×179.59E±0.09, h48km±8km, mb4.1/13(NEIC), Error ellipse: s-maj=21.3km s-min=8.1km az=175.0*
ISC 18 11:37:25.7±1.4, 50°5′N±0.2×179°47′E±0.05, h35km, n37, σ1ᵖ35/41, mb3.7/8, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TASE	**Tanaga Southea**	**2.05**	**49**		**Pn**	**11 37 58.4**	**+0.8**
TASE					**Sn**	**11 38 21.2**	**-0.9**
TAPA	**Tanaga Point A**	**2.15**	**52**		**Pn**	**11 37 59.6**	**+0.6**
TAPA					**Sn**	**11 38 26.2**	**+1.8**
KIMD	**Kanaga Island**	**2.42**	**58**		**Pn**	**11 38 04.2**	**+1.5**
KIWB	**Kanaga Island**	**2.51**	**57**	Pn	**Pn**	**11 38 05.1**	**+1.1**
KIWB				Sn	**Sn**	**11 38 34.9**	**+1.6**
ADK	**Adak**	**2.78**	**59**		**Pn**	**11 38 08.3**	**+0.7**
ADK	**Adak**	**2.78**	**59**	Sn	**Sn**	**11 38 40.7**	**+0.8**
GSMY	**Great Sitkin M**	**3.20**	**60**		**Pn**	**11 38 14.9**	**+1.5**
SMY	**Shemya**	**4.01**	**306**	Pn	**Pn**	**11 38 25.0**	**+0.5**
SMY				Sn	**Sn**	**11 39 10.4**	**+0.1**
ATKA	**Atka Island**	**4.31**	**65**	Pn	**Pn**	**11 38 30.0**	**+1.4**
ATKA				Sn	**Sn**	**11 39 18.8**	**+1.1**
NIKH	**Nikolski High**	**7.65**	**67**	Pn	**Pn**	**11 39 13.0**	**-1.5**
UNV	**Unalaska Valle**	**9.24**	**63**	Pn	**Pn**	**11 39 36.2**	**0.0**
PETK	**Petropavlovsk-**	**13.71**	**289**	P	**Pn**	**11 40 38.5**	**+1.2**
	0.1nm,0.3s,baz=89,slow=16,SNR=3.2						
PETK	**Petropavlovsk-**	**13.71**	**289**		**Pn**	**11 40 39.7**	**+2.4**
KDAK	**Kodiak Island**	**17.81**	**55**	P	**Pn**	**11 41 29.5**	**-1.0**
	0.5nm,0.3s,baz=216,slow=6.8,SNR=4.7						
KDAK	**Kodiak Island**	**17.81**	**55**	P	**Pn**	**11 41 29.3**	**-1.2**
KDAK				IAmb	IAmb	11 41 44.6	
	comp=Z,16nm,0.9s						
PPLA	**Purkeypile**	**19.68**	**40**		**Pn**	**11 41 54.0**	**+0.9**
SUA	**Susitna One**	**19.74**	**45**		**Pn**	**11 41 53.9**	**+0.1**
SUA				IAmb	IAmb	11 42 09.2	
	comp=Z,13nm,1.2s						
KTH	**Kantishna Hill**	**20.48**	**39**	P	**P**	**11 42 00.5**	**+0.3**
KTH				IAmb	IAmb	11 42 03.8	
	comp=Z,8.6nm,1.1s						
PMR	**Palmer**	**20.52**	**45**	P	**P**	**11 41 59.2**	**-1.2**
PMR				IAmb	IAmb	11 41 60.0	
	comp=Z,11nm,1.2s						
IMAR	**Indian Mountai**	**20.68**	**31**	P	**P**	**11 42 00.8**	**-1.4**
MLY	**Manley**	**21.24**	**36**	P	**P**	**11 42 08.4**	**+0.1**
RND	**Reindeer**	**21.27**	**41**	P	**P**	**11 42 06.2**	**-2.5**
RND				IAmb	IAmb	11 42 08.5	
	comp=Z,13nm,1.4s						
SCM	**Sheep Creek Mo**	**21.41**	**45**	P	**P**	**11 42 09.2**	**-0.9**
DHY	**Denali Highway**	**21.78**	**42**	P	**P**	**11 42 11.2**	**-3.0**
DHY				IAmb	IAmb	11 42 15.3	
	comp=Z,10nm,1.4s						
IL31		**22.60**	**38**	P	**P**	**11 42 20.3**	**-2.5**
ILAR	**Eielson Array**	**22.60**	**38**	P	**P**	**11 42 21.3**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=234,slow=8.1,SNR=6.0						
ILAR	**Eielson Array**	**22.60**	**38**	P	**P**	**11 42 22.2**	**-0.6**
DOT	**Dot Lake**	**23.38**	**42**	P	**P**	**11 42 29.5**	**-1.3**
INK	**Inuvik**	**28.79**	**34**	P	**P**	**11 43 19.8**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=252,slow=5.1,SNR=3.2						
INK	**Inuvik**	**28.79**	**34**	P	**P**	**11 43 19.4**	**-0.3**
YKA	**Yellowknife Ar**	**36.62**	**45**	P	**P**	**11 44 26.9**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=280,slow=7.9,SNR=6.6						
JCJ	**Chichijima**	**36.73**	**245**	LR	LR	11 58 33.9	
	comp=Z,48nm,20.3s,baz=26,slow=34						
PD31	**Pinedale Array**	**47.62**	**70**	P	**P**	**11 45 58.8**	**+0.5**
PD31				IAmb	IAmb	11 46 01.2	
	comp=Z,2.8nm,1.2s						
PDAR	**Pinedale Array**	**47.62**	**70**	P	**P**	**11 45 59.5**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=305,slow=3.2,SNR=9.8						
PDAR	**Pinedale Array**	**47.62**	**70**	P	**P**	**11 45 59.2**	**+0.9**
MKAR	**Makanchi Array**	**59.71**	**308**	P	**P**	**11 47 24.1**	**-2.3**
	comp=Z,0.3nm,0.4s,baz=51,slow=5.2,SNR=6.1						
AKASG	**Malin Array Be**	**76.02**	**341**	P	**P**	**11 49 08.3**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=24,slow=6.7,SNR=3.0						

NEIC ***18*** *11:38:47.6±0.9, 23.7S±0.2×179.7W±0.2, h548km±11km, mb4.3/11, Error ellipse: s-maj=28.3km s-min=11.5km az=141.0*
IDC ***18*** *11:38:49.9±3.0, 23.81S×179.78W, h574km±38km, mb3.2/10, mb1 3.5/11, mb1mx3.3/39, mbtmp4.1/11, Error ellipse: s-maj=46.7km s-min=15.0km az=160.0*
ISC 18 11:38:46.4±0.7, 23°6′S±0.1×179°7′W±0.1, h532km, n34, σ0ᵖ84/35, mb3.9/16, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.23**	**340**	P	**P**	**11 40 28.2**	**+1.7**
URZ	**Urewera**	**14.82**	**190**	P	**P**	**11 41 54.9**	**+0.9**
	0.5nm,0.3s,baz=50,slow=7.9,SNR=4.7						
URZ	**Urewera**	**14.82**	**190**	P	**P**	**11 41 54.7**	**+0.6**
ARMA	**Armidale**	**26.34**	**249**	P	**P**	**11 43 41.2**	**+1.1**
ARMA				IAmb	IAmb	11 43 43.0	
	comp=Z,8.9nm,1.4s						
EIDS	**Eidsvold**	**26.59**	**260**	P	**P**	**11 43 43.1**	**+0.9**
CAN	**Canberra**	**29.48**	**240**	P	**P**	**11 44 07.9**	**+0.5**
CAN				IAmb	IAmb	11 44 09.6	
	comp=Z,5.7nm,0.9s						
STKA	**Stephens Creek**	**35.05**	**248**	P	**P**	**11 44 55.3**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=41,slow=11,SNR=4.4						
STKA	**Stephens Creek**	**35.05**	**248**	P	**P**	**11 44 54.4**	**-0.3**
COEN	**Coen**	**36.32**	**279**	P	**P**	**11 45 06.0**	**+0.5**
COEN				IAmb	IAmb	11 45 11.6	
	comp=Z,12nm,1.2s						
BBOO	**Buckleboo**	**39.77**	**247**	P	**P**	**11 45 33.1**	**-0.3**
BBOO				IAmb	IAmb	11 45 42.0	
	comp=Z,12nm,1.1s						
AS31	**Alice Springs**	**42.32**	**260**	P	**P**	**11 45 54.0**	**+0.2**
ASAR	**Alice Springs**	**42.32**	**260**	P	**P**	**11 45 54.1**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=98,slow=7.2,SNR=29						
ASAR				S	**S**	**11 51 34.4**	**-2.1**
	comp=Z,0.3nm,0.7s,baz=91,slow=18,SNR=4.0						
ASAR	**Alice Springs**	**42.32**	**260**	P	**P**	**11 45 53.6**	**-0.2**
WR0	**Warramunga Arr**	**42.48**	**266**	P	**P**	**11 45 54.2**	**-0.8**
WR0				IAmb	IAmb	11 46 00.4	
	comp=Z,3.2nm,0.9s						
WRA	**Warramunga Arr**	**42.67**	**266**	P	**P**	**11 45 56.4**	**-0.1**
	comp=Z,2.5nm,0.3s,baz=93,slow=8.4,SNR=62						
WRA	**Warramunga Arr**	**42.67**	**266**	P	**P**	**11 45 55.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**51.09**	**265**	P	**P**	**11 47 01.0**	**+0.9**
	comp=Z,7.7nm,0.9s,baz=56,slow=3.6,SNR=4.5						
FITZ	**Fitzroy Crossi**	**51.09**	**265**	P	**P**	**11 47 00.4**	**+0.3**
PEA0B	**Petropavlovsk-**	**78.90**	**346**	P	**P**	**11 49 54.0**	**-0.2**
PEA0B				IAmb	IAmb	11 49 55.0	
	comp=Z,15nm,1.1s						
PETK	**Petropavlovsk-**	**78.90**	**346**	P	**P**	**11 49 54.2**	**0.0**
	comp=Z,1.2nm,0.8s,baz=134,slow=8.3,SNR=4.2						
PETK	**Petropavlovsk-**	**78.90**	**346**	P	**P**	**11 49 53.9**	**-0.4**
NVAR	**Mina Array Bea**	**84.39**	**44**	P	**P**	**11 50 23.4**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=222,slow=7.7,SNR=4.1						
NVAR	**Mina Array Bea**	**84.39**	**44**	P	**P**	**11 50 23.0**	**0.0**
SEY	**Seymchan**	**89.07**	**348**	P	**P**	**11 50 44.5**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=158,slow=8.2,SNR=4.6						
TXAR	**Lajitas Array**	**90.08**	**58**	P	**P**	**11 50 50.9**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=222,slow=6.0,SNR=9.4						
TXAR	**Lajitas Array**	**90.08**	**58**	P	**P**	**11 50 50.0**	**0.0**
ILAR	**Eielson Array**	**91.72**	**13**	P	**P**	**11 50 55.5**	**-1.0**
	comp=Z,0.8nm,1.1s,baz=215,slow=6.0,SNR=3.9						
PDAR	**Pinedale Array**	**92.33**	**44**	P	**P**	**11 50 59.5**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=107,slow=1.5,SNR=3.7						
PDAR	**Pinedale Array**	**92.33**	**44**	P	**P**	**11 50 59.9**	**-0.2**
MKAR	**Makanchi Array**	**112.16**	**313**	PKiKP	**PKiKP**	**11 56 19.2**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=67,slow=0.5,SNR=2.5						
ARCES	**ARCESS Array B**	**131.68**	**348**	PKP	**PKPdf**	**11 56 57.3**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=56,slow=1.6,SNR=4.9						
AKASG	**Malin Array Be**	**144.88**	**328**	PKPbc	**PKPdf**	**11 57 22.1**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=44,slow=4.1,SNR=5.0						
MMAI	**Mount Meron Ar**	**147.81**	**295**	PKPbc	**PKPbc**	**11 57 31.3**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=71,slow=4.9,SNR=2.5						
CLL	**Collm**	**150.68**	**344**	*e*PKPbc	**PKPbc**	**11 57 38.0**	**-0.1**

TAP ***18*** *11:46:20.1,24.53N×122.30E, h16km±1km, ML2.7, D*
JMA ***18*** *11:46:20.6,24.51N×122.28E, h7km, M2.4*
ISC 18 11:46:20.6±1.1, 24°52′N±0.05×122°29′E±0.02, h14km±10km, n20, σ0ᵖ37/35, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.15**	**283**	P	**Pg**	**11 46 24.6**	**+0.3**
	baz=277						
EOS1				*e*S	**Sb**	**11 46 28.2**	**+0.1**
	baz=277						
TWC	**Suao**	**0.41**	**283**	*e*P	**Pg**	**11 46 28.1**	**-0.7**
	baz=281						
TWC				*e*S	**Sb**	**11 46 36.3**	**+0.6**
	baz=281						
NANB	**Nanao**	**0.50**	**260**	*e*P	**Pg**	**11 46 30.2**	**-0.2**
	baz=258						
NANB				*e*S	**Sb**	**11 46 38.4**	**+0.2**
	baz=258						
ENA	**Nanau**	**0.50**	**260**	*e*P	**Pg**	**11 46 30.1**	**-0.5**
	baz=258						
ENA				*e*S	**Sb**	**11 46 38.7**	**+0.2**
	baz=258						
NTC	**Toucheng**	**0.54**	**309**	*e*P	**Pg**	**11 46 31.3**	**+0.1**
	baz=307						
NTC				*e*S	**Sg**	**11 46 38.5**	**+0.2**
	baz=307						
TWB1	**Santiao Chiao**	**0.56**	**331**	*e*P	**Pg**	**11 46 31.2**	**-0.5**
	baz=330						
TWE	**Neicheng**	**0.60**	**290**	*e*P	**Pg**	**11 46 32.1**	**-0.3**
	baz=288						
TWE				*e*S	**Sb**	**11 46 41.0**	**-0.2**
	baz=288						
JYNG	**Yonagunijimaku**	**0.60**	**96**	P	**Pg**	**11 46 32.5**	**+0.1**
JYNG				S	**Sb**	**11 46 40.9**	**-0.4**
TIPB	**Shuangxi**	**0.62**	**317**	*e*P	**Pg**	**11 46 32.5**	**-0.2**
	baz=315						
TIPB				*e*S	**Sb**	**11 46 42.1**	**+0.4**
	baz=315						
ENTT	**Nioudou**	**0.67**	**281**	P	**Pg**	**11 46 33.9**	**+0.2**
	baz=279						
ENTT				*e*S	**Sg**	**11 46 42.4**	**-0.1**
	baz=279						
NDT	**Datong Townshi**	**0.71**	**277**	*e*P	**Pg**	**11 46 34.1**	**-0.4**
	baz=275						
NDT				*e*S	**Sb**	**11 46 45.3**	**+0.9**
	baz=275						
NACB	**Ninganchiao**	**0.72**	**242**	P	**Pg**	**11 46 34.5**	**-0.1**
	baz=241						
NWLT	**Wulai**	**0.76**	**290**	*e*P	**Pb**	**11 46 35.8**	**+0.2**
	baz=288						
NWLT				*e*S	**Sg**	**11 46 45.3**	**-0.1**
	baz=288						
NNSH	**Datong**	**0.83**	**264**	*e*P	**Pg**	**11 46 36.5**	**-0.2**
	baz=263						
NNS	**Nan Shan**	**0.83**	**265**	*e*P	**Pg**	**11 46 36.7**	**-0.2**
	baz=263						
NNS				*e*S	**Sb**	**11 46 48.9**	**+0.8**
	baz=263						
YHNB	**Yeheng**	**0.84**	**281**	P	**Pb**	**11 46 37.1**	**0.0**
	baz=279						
YHNB				*e*S	**Sb**	**11 46 48.6**	**+0.3**
	baz=279						
NSK	**Sanguang**	**0.86**	**281**	P	**Pb**	**11 46 37.2**	**-0.1**
	baz=279						
NSK				*e*S	**Sg**	**11 46 48.1**	**-0.5**
	baz=279						
WHF	**Hehuan Shan**	**1.00**	**249**	*e*P	**Pb**	**11 46 39.8**	**-0.2**
	baz=247						
IRIF	**Iriomote-Funau**	**1.33**	**97**	P	**Pb**	**11 46 45.3**	**0.0**
IRIF				S	**Sb**	**11 47 02.5**	**+0.3**
HATJ	**Hateruma jima**	**1.46**	**108**	S	**Sb**	**11 47 06.3**	**+0.4**

ISC 18 11:49:00.6±1.0, 50°24′N±0.05×18°74′E±0.03, h0km, n14, σ0ᵖ66/26, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.56**	**224**	*e*PG	**Pg**	**11 49 12.1**	**+0.9**
OKC				*e*SG	**Sg**	**11 49 18.5**	**+0.1**
	comp=Z,11nm,0.6s						
OJC	**Ojcow**	**0.68**	**91**	*e*Pg	**Pg**	**11 49 13.2**	**-0.3**
OJC				*e*Sg	**Sg**	**11 49 21.7**	**-0.7**
MORC	**Moravsky Berou**	**0.90**	**240**	*e*PG	**Pg**	**11 49 18.0**	**+0.2**
MORC				*e*SG	**Sb**	**11 49 31.2**	**-0.5**
LANS	**Liptovska Anna**	**1.19**	**156**	*e*PG	**Pg**	**11 49 23.3**	**0.0**
LANS				*e*SG	**Sb**	**11 49 39.9**	**0.0**
LANS				*e*LG	Lg	11 49 40.6	
KRLC	**Kraliky**	**1.27**	**263**	*e*PG	**Pg**	**11 49 23.9**	**-1.0**
KRLC				*e*SG	**Sg**	**11 49 41.6**	**+0.2**
NIE	**Niedzica**	**1.30**	**129**	*e*Pg	**Pg**	**11 49 25.9**	**+0.4**
NIE				*e*Sg	**Sg**	**11 49 43.6**	**+1.3**
DPC	**Dobruska-Polom**	**1.56**	**275**	*e*PG	**Pn**	**11 49 28.7**	**-0.8**
DPC				*e*SG	**Sg**	**11 49 50.7**	**+0.2**
	comp=Z,4.7nm,0.6s						
OSTC	**Ostas**	**1.65**	**282**	*e*PG	**Pn**	**11 49 30.4**	**-0.4**
OSTC				*e*SG	**Sg**	**11 49 54.1**	**+0.6**
KSP	**Ksiaz**	**1.68**	**292**	*e*Pg	**Pn**	**11 49 32.1**	**+1.0**
KSP				*e*Sg	**Sn**	**11 49 54.2**	**+0.9**
VRAC	**Vranov**	**1.68**	**237**	*e*PN	**Pn**	**11 49 31.0**	**-0.2**
VRAC				*e*SG	**Sn**	**11 49 52.8**	**-0.6**
VYHS	**Vyhne**	**1.75**	**178**	*e*PN	**Pn**	**11 49 31.4**	**-0.8**
VYHS				*e*SN	**Sn**	**11 49 55.3**	**+0.2**
CHVC	**Chvalec**	**1.75**	**282**	*e*PG	**Pn**	**11 49 32.9**	**+0.6**
CHVC				*e*SG	**Sg**	**11 49 57.2**	**+0.3**
KRUC	**Moravsky**	**1.93**	**233**	*e*PN	**Pn**	**11 49 34.9**	**+0.3**
KHC	**Kasperske Hory**	**3.53**	**254**	*e*SG	**Sg**	**11 50 53.0**	**-1.0**

IDC ***18*** *11:51:24.5±1.0, 20.57N×121.24E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.5/51, mbtmp3.6/6, Error ellipse: s-maj=37.2km s-min=21.1km az=73.0*
JMA ***18*** *11:51:26.9±0.7, 20.85N×121.46E, h0km, M4.1*
ISC 18 11:51:30.2±1.0, 20.7N±0.1×121.4E±0.1, h43km, n13, σ0ᵖ97/18, mb3.6/6, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**4.05**	**33**	P	**Pn**	**11 52 29.3**	**-0.3**
HATJ				S	**Sn**	**11 53 15.2**	**-0.6**
IRIF	**Iriomote-Funau**	**4.24**	**30**	P	**Pn**	**11 52 32.2**	**-0.1**
IRIF				*e*S	**Sn**	**11 53 19.7**	**-0.9**
JKRS	**Kuro-shima**	**4.30**	**34**	P	**Pn**	**11 52 32.9**	**-0.2**
JKRS				*e*S	**Sn**	**11 53 21.6**	**-0.4**
JIJ	**Ishigaki jima**	**4.47**	**34**	P	**Pn**	**11 52 35.2**	**-0.3**
JIJ				*e*S	**Sn**	**11 53 24.9**	**-1.4**
JISG	**Ishigakijimahi**	**4.74**	**34**	P	**Pn**	**11 52 38.8**	**-0.4**
JISG				*e*S	**Sn**	**11 53 33.0**	**+0.1**
JTJ	**Tarama**	**5.00**	**37**	*e*S	**Sn**	**11 53 38.7**	**-0.6**
KSRS	**Korea Array**	**17.66**	**17**	P	**Pn**	**11 55 33.6**	**+0.6**
	baz=196,slow=11,SNR=4.2						
CMAR	**Chiang Mai Arr**	**21.26**	**268**	P	**P**	**11 56 10.6**	**-2.3**
	0.4nm,0.4s,baz=70,slow=11,SNR=3.3						
SONM	**Songino Array**	**29.68**	**339**	P	**P**	**11 57 32.3**	**+0.3**
	0.3nm,0.3s,baz=156,slow=8.7,SNR=4.3						
WRA	**Warramunga Arr**	**42.31**	**162**	P	**P**	**11 59 19.0**	**-1.0**
	1.4nm,0.7s,baz=343,slow=9.1,SNR=9.1						
ASAR	**Alice Springs**	**45.73**	**164**	P	**P**	**11 59 47.7**	**+0.3**
	1.0nm,0.5s,baz=344,slow=7.2,SNR=34						
YKA	**Yellowknife Ar**	**86.12**	**23**	P	**P**	**12 04 07.7**	**+1.2**
	0.2nm,0.6s,baz=307,slow=5.1,SNR=4.7						
KEST	**Kesra**	**94.69**	**311**	P	**P**	**12 04 48.6**	**+1.3**
	2.7nm,0.6s,baz=72,slow=6.4,SNR=5.1						

NEIC ***18*** *11:51:47.2±1.3, 33.60N±0.04×141.20E±0.06, h48km±6km, mb4.7/19, Error ellipse: s-maj=8.8km s-min=4.9km az=125.0*
JMA ***18*** *11:51:47.3±0.1, 33.67N×141.06E, h44km, M4.2*
IDC ***18*** *11:51:49.0±2.2, 33.56N×140.98E, h56km±19km, mb3.7/19, mb1 3.9/23, mb1mx3.7/53, mbtmp4.0/23, ML3.2/3, MS3.2/8, Ms1 3.2/8, ms1mx2.9/40, Error ellipse: s-maj=18.7km s-min=11.6km az=73.0*
ISC 18 11:51:45.2±1.8, 33°58′N±0.04×141°27′E±0.06, h30km±13km, n91, σ1ᵖ53/96, mb4.2/27, MS3.3/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.10**	**347**	P	**Pb**	**11 52 05.0**	**-0.2**
JHJ2	**Mitsune**	**1.30**	**249**	P	**Pn**	**11 52 07.8**	**+0.4**
JHJ2				S	**Sn**	**11 52 22.7**	**-1.1**
JHJ2	**Mitsune**	**1.30**	**249**		**Pn**	**11 52 07.8**	**+0.4**
JHJ2				Sn	**Sn**	**11 52 22.1**	**-1.7**
JHCJ	**Hachijojimakas**	**1.33**	**248**	P	**Pn**	**11 52 08.1**	**+0.3**
BSO3	**Boso 3**	**1.37**	**333**	P	**Pn**	**11 52 08.7**	**+0.6**
JMKN	**Mikurajimanish**	**1.44**	**283**	P	**Pn**	**11 52 08.9**	**-0.3**
JAOM	**Aogashimamukai**	**1.69**	**229**	P	**Pn**	**11 52 13.7**	**+1.0**
JKO	**Kozu shima**	**1.88**	**289**	P	**Pn**	**11 52 15.2**	**-0.1**
JKO				*e*S	**Sn**	**11 52 35.3**	**-2.6**
JTHY	**Toshimahigashi**	**1.90**	**300**	P	**Pn**	**11 52 15.4**	**-0.1**
JIM2	**Oshima 3**	**1.90**	**307**	P	**Pn**	**11 52 15.2**	**-0.4**
JIZS	**Izushimoda**	**2.29**	**300**	P	**Pn**	**11 52 21.1**	**+0.2**
JIZS				*e*S	**Sn**	**11 52 45.8**	**-2.3**
JOD2	**Odawara 2**	**2.46**	**314**	P	**Pn**	**11 52 23.3**	**-0.1**
JFNN	**Fujinakano**	**2.68**	**308**	P	**Pn**	**11 52 27.2**	**+0.9**
JFNN				*e*S	**Sn**	**11 52 56.4**	**-1.3**
SHZ3	**Shizuoka 3**	**2.94**	**301**	P	**Pn**	**11 52 31.2**	**+1.3**
JYN	**Shimob**	**2.95**	**311**	P	**Pn**	**11 52 31.1**	**+0.9**
JYN				*e*S	**Sn**	**11 53 03.7**	**-1.0**
JRY	**Ryogami san**	**3.12**	**322**	P	**Pn**	**11 52 32.8**	**+0.5**
MJAR	**Matsushiro Arr**	**3.88**	**320**	P	**Pn**	**11 52 44.4**	**+1.6**
	1.3nm,0.3s,baz=146,slow=11,SNR=87						
MJAR				S	**Sn**	**11 53 27.0**	**-0.4**
	1.2nm,0.3s,baz=143,slow=23,SNR=6.7						
MJAR	**Matsushiro Arr**	**3.88**	**320**		**Pn**	**11 52 44.1**	**+1.3**
MAJO	**Matsushiro**	**3.88**	**320**		**Pn**	**11 52 44.6**	**+1.7**
MAJO				Sn	**Sn**	**11 53 27.4**	**0.0**
MAT	**

comp=Z,2.0nm,0.8s,baz=103,slow=4.7,SNR=5.2
FITZ Fitzroy Crossi 53.51 199 P P 12 01 03.5 +0.4
WR0 Warramunga Arr 53.63 188 P P 12 01 04.0 +0.1
WR0 IAmb IAmb 12 01 04.9
comp=Z,10nm,0.7s
WRA Warramunga Arr 53.63 188 P P 12 01 04.0 0.0
comp=Z,9.8nm,0.6s,baz=3.1,slow=7.5,SNR=103
WRA Warramunga Arr 53.63 188 P P 12 01 03.3 -0.6
AS31 Alice Springs 57.36 188 P P 12 01 31.0 +0.3
AS31 IAmb IAmb 12 01 33.3
comp=Z,2.6nm,0.7s
ASAR Alice Springs 57.36 188 P P 12 01 31.4 +0.6
comp=Z,2.8nm,0.6s,baz=16,slow=12,SNR=40
ASAR Alice Springs 57.36 188 P P 12 01 31.1 +0.4
ARU Arti 58.90 320 P P 12 01 40.8 -0.3
comp=Z,2.2nm,0.6s,baz=229,slow=13,SNR=5.2
ARU Arti 58.90 320 P P 12 01 40.7 -0.5
ARU IAmb IAmb 12 01 41.4
comp=Z,7.9nm,0.7s
ABKAR Akbulak array 60.11 312 P P 12 01 49.3 -0.3
ABKAR IAmb IAmb 12 01 57.4
comp=Z,5.4nm,0.7s
ABKAR Akbulak array 60.11 312 P P 12 01 49.0 -0.6
STKA Stephens Creek 65.11 180 P P 12 02 24.1 +1.1
comp=Z,3.1nm,1.0s,baz=344,slow=7.4,SNR=3.0
STKA LR LR 12 29 44.1
comp=Z,26nm,20.0s,baz=25,slow=35
STKA Stephens Creek 65.11 180 P P 12 02 23.2 +0.2
RES Resolute Bay 65.97 14 P P 12 02 29.3 +1.2
MORW Morawa 66.73 204 P P 12 02 33.1 -0.4
MORW IAmb IAmb 12 02 35.6
comp=Z,12nm,1.1s
YKA Yellowknife Ar 66.86 29 P P 12 02 33.8 -0.2
comp=Z,0.4nm,0.8s,baz=295,slow=6.4,SNR=4.5
NWAO Narrogin (SRO) 69.92 201 P P 12 02 54.0 +0.6
KBZ Khabaz 73.08 311 P P 12 03 11.6 -0.9
comp=Z,4.7nm,0.8s,baz=26,slow=1.7,SNR=6.8
AKASG Malin Array Be 76.96 323 P P 12 03 34.1 -0.7
comp=Z,1.8nm,0.7s,baz=46,slow=5.8,SNR=4.2
NVAR Mina Array Bea 77.17 52 P P 12 03 38.9 +2.5
comp=Z,0.1nm,0.6s,baz=316,slow=5.0,SNR=2.5
NVAR Mina Array Bea 77.17 52 P P 12 03 37.0 +0.6
NOA NORSAR Array B 77.32 338 P P 12 03 36.8 +0.1
NOA NORSAR Array B 77.32 338 P P 12 03 36.8 +0.1
comp=Z,2.6nm,0.8s,baz=40,slow=5.6,SNR=7.5
NOA LR LR 12 41 02.6
comp=Z,19nm,18.1s,baz=305,slow=38
PDAR Pinedale Array 80.18 45 P P 12 03 54.4 +1.4
comp=Z,0.4nm,0.8s,baz=318,slow=2.6,SNR=3.1
BRTR Keskin Array B 81.06 312 P P 12 03 57.6 -0.1
comp=Z,2.1nm,1.0s,baz=104,slow=6.1,SNR=3.7
BRTR Keskin Array B 81.06 312 P P 12 03 57.4 -0.2
GERES GERESS Array B 85.58 328 P P 12 04 19.4 -1.3
comp=Z,0.9nm,1.0s,baz=53,slow=6.9,SNR=4.1
GERES GERESS Array B 85.58 328 P P 12 04 19.7 -1.0
TXAR Lajitas Array 92.32 52 P P 12 04 55.1 +2.1
comp=Z,0.7nm,1.0s,baz=270,slow=2.5,SNR=5.2
TXAR Lajitas Array 92.32 52 P P 12 04 53.2 +0.2
LPAZ La Paz 148.42 64 PKPbc PKPbc 12 11 31.3 +1.2
comp=Z,1.9nm,0.8s,baz=326,slow=3.6,SNR=7.9
LPAZ La Paz 148.42 64 PKPbc PKPbc 12 11 30.4 +0.3

*IDC **18** 11:55:41.9±2.2,36˚.45N×71˚.10E,h197km±21km, mb3.5/17, mb1 3.6/24,mb1mx3.5/53,mbtmp4.1/24, Error ellipse: s-maj=14.7km s-min=10.1km az=8.0*
*NNC **18** 11:55:42.8±6.0,36˚.79N×70˚.85E,h100km, mb4.0, mpv4.6, Error ellipse: s-maj=49.3km s-min=41.9km az=162.0*
*MOS **18** 11:55:43.9±0.7,36˚.68N×71˚.17E,h221km, mb4.4/12, Error ellipse: s-maj=10.1km s-min=5.6km az=80.7*
*NEIC **18** 11:55:44.5±2.0,36˚.68N±0˚.05×71˚.07E±0˚.09, h215km±6km, mb4.3/34, Error ellipse: s-maj=10.4km s-min=7.8km az=77.0*
*BJI **18** 11:55:44.2±0.0,36˚.64N×71˚.23E, h212km, mB4.6/16, mb4.3/15*

ISC 18 11:55:43.2±0.4, 36˚.74N±0˚.04×71˚.19E±0˚.04, h200km, n187, σ1s90/215, mb4.2/38, 14C-7D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBL	**Kabul**	**2.81**	**219**	PN		**Pn**	**11 56 32.2**	**+1.4**
KBL				S		**Sn**	**11 57 07.8**	**-0.2**
KBL	**Kabul**	**2.81**	**219**			**Pn**	**11 56 32.2**	**+1.4**
KBL				S		**Sn**	**11 57 07.8**	**-0.2**
CEP	**Cherat**	**2.97**	**168**	P		**Pn**	**11 56 34.7**	**+2.0**
CEP				S		**Sn**	**11 57 12.0**	**+0.7**
BTK	**Batken**	**3.33**	**355**			**Pn**	**11 56 40.1**	**+3.3**
BTK				S		**Sn**	**11 57 21.2**	**+2.3**
NIL	**Nilore**	**3.51**	**151**	PN		**Pn**	**11 56 41.3**	**+2.2**
NIL				S		**Sn**	**11 57 24.9**	**+2.1**
NIL	**Nilore**	**3.51**	**151**			**Pn**	**11 56 41.3**	**+2.2**
NIL				S		**Sn**	**11 57 24.9**	**+2.1**
THW	**Thamme Wali**	**3.96**	**173**	P		**Pn**	**11 56 45.9**	**+1.3**
FRG	**Fergana**	**4.02**	**6**	P		**Pn**	**11 56 44.4**	**-0.8**
FRG				S		**Sn**	**11 57 27.8**	**-6.2**
ANR	**Andizhan**	**4.11**	**12**	P		**Pn**	**11 56 49.8**	**+3.4**
PKMR	**Pachkamar**	**4.21**	**297**	*i* P		**Pn**	**11 56 50.8**	**+3.1**
PKMR				*i* S		**Sn**	**11 57 39.6**	**+1.2**
AGL	**Agalyk**	**4.39**	**311**	S		**Sn**	**11 57 43.3**	**+1.0**
KSH	**Kashi**	**4.68**	**52**	P		**Pn**	**11 56 51.8**	**-1.8**
KSH				S		**Sn**	**11 57 40.9**	**-8.2**
KSH				smax		smax		
	comp=N,640nm,0.5s							
KSH				smax		smax		
	comp=E,490nm,0.4s							
ARSB	**Arslanbob**	**4.79**	**16**			**Pn**	**11 56 57.0**	**+2.0**
ARSB				S		**Sn**	**11 57 51.5**	**-0.1**
TAS	**Tashkent**	**4.81**	**343**	PN		**Pn**	**11 56 57.6**	**+2.5**
TAS	**Tashkent**	**4.81**	**343**			**Pn**	**11 56 57.7**	**+2.5**
TAS				S		**Sn**	**11 57 51.8**	**-0.2**
SARP	**Sargodha**	**4.96**	**165**	P		**Pn**	**11 56 57.7**	**+0.5**
CHRV	**Charvak**	**4.99**	**349**	P		**Pn**	**11 56 59.6**	**+2.1**
CHRV				S		**Sn**	**11 57 55.0**	**-1.1**
IUG	**Iuzhnay** 14nm,0.5s	**5.48**	**351**	Pg		**Pn**	**11 57 05.6**	**+1.9**
IUG				Lg		Lg	11 58 06.7	
	387nm,0.5s							
THN	**Thein Dam**	**5.69**	**138**	*e*P		**Pn**	**11 57 09.4**	**+2.9**
THN				*e*S		**Sn**	**11 58 12.5**	**+0.3**
JBG	**Jabagly** 75nm,0.3s	**5.70**	**355**	Pg		**Pn**	**11 57 09.0**	**+2.4**
JBG				Lg		Lg	11 58 12.7	
	436nm,0.3s							
AML	**Almayashu** SNR=281	**5.72**	**19**	P		**Pn**	**11 57 09.3**	**+2.1**
UCH	**Uchtor** SNR=113	**6.05**	**24**	P		**Pn**	**11 57 13.7**	**+2.1**
DHRM	**DHARAMSHALA**	**6.15**	**135**	*e*P		**Pn**	**11 57 13.8**	**+1.1**
DHRM				*e*S		**Sn**	**11 58 21.8**	**-1.7**
DHRM				IAML			11 58 23.8	
	comp=N,526nm,0.4s							
DHRM				IAML			11 58 24.0	
	comp=E,547nm,0.2s							
KZA	**Kyzart** SNR=16	**6.19**	**29**	P		**Pn**	**11 57 15.1**	**+1.8**
MRKS	**Merke** comp=E,60nm,0.4s	**6.20**	**14**	Pg		**Pn**	**11 57 15.2**	**+2.1**
EKS2	**Erkin-Say** SNR=36	**6.24**	**18**	P		**Pn**	**11 57 16.0**	**+2.3**
KK31	**Karatay Array** comp=E,6.0nm,0.2s,baz=182,slow=12,SNR=199	**6.38**	**356**	P		**Pn**	**11 57 16.8**	**+1.5**
KK31				⇑S		**Sn**	**11 58 25.7**	**-2.7**
	comp=E,77nm,0.4s							
KK31	**Karatay Array**	**6.38**	**356**			**Pn**	**11 57 16.8**	**+1.5**
KK31				S		**Sn**	**11 58 26.2**	**-2.1**
KKAR	**Karatay Array**	**6.38**	**356**			**Pn**	**11 57 16.8**	**+1.5**
KKAR				S		**Sn**	**11 58 26.6**	**-1.7**
AAK	**Ala-Archa**	**6.42**	**22**	*d* iPN		**Pn**	**11 57 18.2**	**+2.3**
AAK	**Ala-Archa** comp=E,8.7nm,0.3s,baz=171,slow=7.2,SNR=103	**6.42**	**22**	P		**Pn**	**11 57 18.3**	**+2.4**
AAK				S		**Sn**	**11 58 30.0**	**+0.6**
	comp=E,3.6nm,0.3s,baz=181,slow=8.7,SNR=5.9							
AAK	**Ala-Archa** SNR=33	**6.42**	**22**	P		**Pn**	**11 57 18.4**	**+2.5**
AAK	**Ala-Archa** comp=E,6.0nm,0.3s	**6.42**	**22**	⇑P		**Pn**	**11 57 18.3**	**+2.3**
AAK				⇓S		**Sn**	**11 58 29.2**	**-0.3**
	comp=E,53nm,0.7s							
AAK	**Ala-Archa**	**6.42**	**22**			**Pn**	**11 57 18.2**	**+2.3**
AAK				S		**Sn**	**11 58 31.0**	**+1.5**
KBK	**Karagaybulak** SNR=21	**6.58**	**25**	P		**Pn**	**11 57 20.7**	**+2.6**
FRU1	**Bishkek**	**6.62**	**23**	PN		**Pn**	**11 57 21.3**	**+2.9**
FRU1	**Bishkek**	**6.62**	**23**	Pn		**Pn**	**11 57 21.3**	**+2.9**
ULHL	**Ulahol** SNR=7.1	**6.74**	**34**	P		**Pn**	**11 57 23.2**	**+3.0**
BOOM	**Boomskoye usch**	**6.81**	**31**	PN		**Pn**	**11 57 23.6**	**+2.5**
BOOM	**Boomskoye usch**	**6.81**	**31**			**Pn**	**11 57 23.6**	**+2.5**
CHMS	**Chumysh** SNR=8.2	**6.83**	**23**	P		**Pn**	**11 57 23.7**	**+2.5**
BHK	**Bhakra**	**6.85**	**139**	*e*S		**Sn**	**11 58 38.8**	**-0.8**
USP	**Ospenovka** SNR=22	**7.00**	**20**	P		**Pn**	**11 57 24.7**	**+1.3**
TKM2	**Tokmak 2** SNR=34	**7.04**	**27**	P		**Pn**	**11 57 26.4**	**+2.3**
TKM2	**Tokmak 2** comp=E,15nm,0.6s	**7.04**	**27**	⇓P		**Pn**	**11 57 26.3**	**+2.1**
TKM2				⇓S		**Sn**	**11 58 42.9**	**-1.4**
	comp=E,21nm,0.8s							
KDJ	**Kajisay**	**7.10**	**39**	PN		**Pn**	**11 57 27.0**	**+2.1**
KDJ	**Kajisay**	**7.10**	**39**			**Pn**	**11 57 27.0**	**+2.1**
SGDS	**Sogindy** comp=E,19nm,0.3s	**7.20**	**20**	Pg		**Pn**	**11 57 27.3**	**+1.2**
SGDS				Lg		Lg	11 58 44.8	
KST	**Kastek** comp=E,12nm,0.4s	**7.29**	**29**	Pg		**Pn**	**11 57 29.5**	**+2.3**
KST				Lg		Lg	11 58 47.7	
	comp=E,24nm,0.6s							
SMLA	**Simla**	**7.48**	**137**	*e*P		**Pn**	**11 57 30.5**	**+0.8**
SMLA				*e*S		**Sn**	**11 58 50.6**	**-3.8**
SMLA				IAML			11 58 53.9	
	comp=E,241nm,0.5s							
SMLA				IAML			11 58 54.0	
	comp=N,184nm,0.5s							
HRA	**Herat**	**7.66**	**255**			**Pn**	**11 57 32.8**	**+0.5**
PRZ	**Przheval'sk**	**7.99**	**42**	PN		**Pn**	**11 57 39.2**	**+2.8**
PRZ	**Przheval'sk**	**7.99**	**42**	Pn		**Pn**	**11 57 39.2**	**+2.8**
JOSI	**Joshimath**	**9.31**	**129**	*e*P		**Pn**	**11 57 54.2**	**+0.5**
JOSI				*e*S		**Sn**	**11 59 34.3**	**-3.8**
JOSI				IAML			11 59 37.3	
	comp=E,60nm,0.4s							
JOSI				IAML			11 59 37.5	
	comp=N,53nm,0.6s							
AYAN	**Aya Nagar**	**9.63**	**147**	*e*P		**Pn**	**11 57 57.1**	**-0.6**
AYAN				*e*S		**Sn**	**11 59 37.6**	**-7.9**
KUDL	**Kundal**	**9.66**	**151**	*e*P		Pn	11 57 51.0	-7.2
KUDL				*e*S		Sn	11 59 31.5	-15
KUDL				IAML			11 59 32.9	
	comp=E,105nm,0.4s							
KUDL				IAML			11 59 35.6	
	comp=N,83nm,0.2s							
GEYT	**Alibeck**	**10.48**	**280**	P		**Pn**	**11 58 07.0**	**-1.6**
	comp=N,0.9nm,0.3s,baz=123,slow=12,SNR=6.5							
GEYT				S		**Sn**	**12 00 01.5**	**-4.1**
	comp=N,2.0nm,0.3s,baz=110,slow=17,SNR=5.6							
GEYT	**Alibeck**	**10.48**	**280**			**Pn**	**11 58 06.8**	**-1.8**
GEYT						**Sn**	**12 00 03.4**	**-2.3**
GYA0B	**ALIBECK ARRAY**	**10.48**	**280**	Pn		**Pn**	**11 58 07.9**	**-0.8**
MAKZ	**Makanchi**	**12.87**	**35**	P		**P**	**11 58 40.2**	**-2.2**
MAKZ	**Makanchi** comp=N,5.4nm,0.5s	**12.87**	**35**	⇑P		**Pn**	**11 58 39.6**	**+0.6**
MAKZ	**Makanchi**	**12.87**	**35**	Pn		**P**	**11 58 40.2**	**-2.2**
MK31	**Makanchi Array**	**13.01**	**36**	P		**P**	**11 58 42.0**	**-1.9**
MK31	**Makanchi Array** comp=N,1.2nm,0.5s,baz=204,slow=9.3,SNR=30	**13.01**	**36**	⇑P		**P**	**11 58 42.3**	**-1.6**
MK31	**Makanchi Array**	**13.01**	**36**			**P**	**11 58 42.0**	**-1.9**
MKAR	**Makanchi Array**	**13.01**	**36**	*i* P		**P**	**11 58 43.9**	**0.0**
MKAR				pmax		pmax		
	comp=Z,3.0nm,0.7s							
MKAR	**Makanchi Array** comp=Z,0.6nm,0.3s,baz=213,slow=15,SNR=31	**13.01**	**36**	P		**P**	**11 58 42.1**	**-1.8**
MKAR	**Makanchi Array**	**13.01**	**36**			**P**	**11 58 42.4**	**-1.5**
DANN	**Dangsing**	**13.49**	**125**	*e*P		**Pn**	**11 58 46.5**	**-0.7**
KOLN	**Koldanda**	**13.78**	**127**	*e*P		**Pn**	**11 58 50.5**	**-0.2**
GKN	**Gorkha**	**14.30**	**124**	*e*P		**P**	**11 58 57.3**	**-1.3**
WMQ	**Urumqi**	**14.44**	**56**	*e*P		**P**	**11 59 00.5**	**+0.7**
WMQ				pmax		pmax		
	comp=Z,9.0nm,0.9s							
WMQ				LR		LR		
	comp=Z,100nm,6.9s							
WMQ				LR		LR		
	comp=Z,300nm,8.3s							
WMQ				LR		LR		
	comp=Z,39nm,15.1s							
WMQ	**Urumqi**	**14.44**	**56**	P		**P**	**11 59 00.0**	**+0.2**
WMQ	**Urumqi**	**14.44**	**56**			**P**	**11 59 00.0**	**+0.2**
KURBB	**Kurchatov Arra** comp=Z,0.2nm,0.3s,baz=210,slow=9.9,SNR=5.5	**14.85**	**19**	P		**P**	**11 59 03.8**	**-0.4**
KKN	**Kakani**	**14.87**	**123**	*e*P		**Pn**	**11 59 03.6**	**-0.6**
DMN	**Daman**	**14.88**	**124**	*e*P		**P**	**11 59 04.1**	**-0.9**
AB31	**Akbulak array** comp=Z,18nm,0.8s,baz=139,slow=12,SNR=124	**14.95**	**330**	P		**P**	**11 59 04.4**	**-1.0**
AB31				⇑S		**S**	**12 01 43.7**	**-6.8**
	comp=Z,4.6nm,0.6s							
ABKAR	**Akbulak array**	**14.95**	**330**	P		**P**	**11 59 04.5**	**-0.9**
ABKAR	**Akbulak array**	**14.95**	**330**			**P**	**11 59 04.4**	**-0.9**
KURK	**Kurchatov**	**14.96**	**19**	⇑*e*P		**P**	**11 59 06.0**	**+0.6**
KURK	**Kurchatov**	**14.96**	**19**			**P**	**11 59 05.7**	**+0.3**
PKIN	**Phulchoki** comp=Z,29nm,0.4s	**15.09**	**123**	*e*P		**P**	**11 59 06.7**	**-0.7**
PKI	**Pulchoki**	**15.10**	**123**	*e*P		**P**	**11 59 06.9**	**-0.7**
GUN	**Gumba** comp=Z,20nm,0.3s	**15.21**	**121**	*e*P		**P**	**11 59 08.5**	**-0.3**
JIRN	**Jiri** comp=Z,96nm,0.3s	**15.58**	**121**	*e*P		**P**	**11 59 13.1**	**+0.2**
BVAR	**Borovoye Array**	**16.30**	**358**	P		**Pn**	**11 59 22.0**	**+1.1**
BVAR	**Borovoye Array** comp=Z,1.8nm,0.3s,baz=163,slow=11,SNR=32	**16.30**	**358**	P		**Pn**	**11 59 21.9**	**+1.1**
RAMN	**Ramite** comp=Z,24nm,0.3s	**16.31**	**122**	*e*P		**Pn**	**11 59 21.5**	**-0.1**
BRVK	**Borovoye**	**16.33**	**358**	P		**Pn**	**11 59 21.3**	**0.0**
BRVK				pmax		pmax		
	comp=Z,6.0nm,0.9s							
BRVK	**Borovoye**	**16.33**	**358**	P		**Pn**	**11 59 21.2**	**0.0**
AKTO	**Aktyubinsk** comp=Z,3.5nm,0.3s,baz=143,slow=8.0,SNR=50	**16.65**	**329**	P		**Pn**	**11 59 25.8**	**+0.6**
AKTO				S		**S**	**12 02 26.6**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=56,slow=18,SNR=3.0							
AKTO	**Aktyubinsk** comp=Z,21nm,0.8s	**16.65**	**329**	⇓P		**Pn**	**11 59 25.8**	**+0.6**
TAPN	**Taplejung** comp=Z,20nm,0.4s	**16.82**	**119**	*e*P		**Pn**	**11 59 28.1**	**+0.3**
ODAN	**Odare**	**16.91**	**121**	*e*P		**Pn**	**11 59 28.7**	**0.0**
UOSS	**Minazif**	**17.40**	**232**	P		**P**	**11 59 31.9**	**-0.7**
UOSS				IAmb		IAmb	11 59 43.9	
	comp=Z,14nm,1.4s							
AKT	**Akhty**	**18.79**	**292**	⇑*e*P		**Pn**	**11 59 48.8**	**-1.8**
ZAA0	**Zalesovo Array**	**19.64**	**24**	P		**P**	**11 59 57.4**	**+1.0**
ZAA0				IAmb		IAmb	11 59 58.1	
	comp=Z,4.7nm,0.7s							
ZALV	**Zalesovo Beam** comp=Z,1.8nm,0.3s,baz=218,slow=10,SNR=19	**19.64**	**24**	P		**Pn**	**11 59 57.7**	**-2.6**
ZALV	**Zalesovo Beam**	**19.64**	**24**	P		**P**	**11 59 57.3**	**+0.9**
GNI	**Garni**	**20.97**	**287**	⇑*e*P		Pn	12 00 13.7	-3.6
GNI				pmax		pmax		
	comp=Z,13nm,1.2s							
GNI	**Garni** comp=Z,4.2nm,0.5s,baz=105,slow=16,SNR=2.0	**20.97**	**287**	P		**P**	**12 00 09.8**	**-1.1**
GNI	**Garni**	**20.97**	**287**	P		**P**	**12 00 10.2**	**-0.8**
GNI				IAmb		IAmb	12 00 15.6	
	comp=Z,18nm,1.5s							
ARU	**Arti**	**21.46**	**341**	P		**P**	**12 00 16.5**	**+0.8**
ARU				S		**S**	**12 04 03.0**	**+2.6**
ARU	**Arti** comp=Z,1.2nm,0.4s,baz=103,slow=7.7,SNR=4.7	**21.46**	**341**	P		**P**	**12 00 17.0**	**+1.3**
ARU	**Arti**	**21.46**	**341**	P		**P**	**12 00 16.8**	**+1.1**
ARU				IAmb		IAmb	12 00 32.2	
	comp=Z,11nm,1.4s							
KBZ	**Khabaz**	**22.63**	**297**	⇓*e*P		**P**	**12 00 28.1**	**+1.0**
KBZ	**Khabaz** comp=Z,1.4nm,0.7s,baz=113,slow=9.8,SNR=5.2	**22.63**	**297**	P		**P**	**12 00 27.8**	**+0.7**
GTA	**Gaotai**	**22.65**	**74**	*e*P		**P**	**12 00 29.4**	**+1.9**
GOF	**Gofitskoye**	**22.76**	**300**	⇑*e*P		P	12 00 20.5	-7.7
GOF				pmax		pmax		
	comp=Z,15nm,0.6s							
KIV	**Kislovodsk**	**22.81**	**297**	*e*P		**P**	**12 00 31.7**	**+2.8**
KIV				*e*S		**S**	**12 04 27.4**	**+4.7**
KIV				pmax		pmax		
	comp=Z,20nm,1.1s							
LZH	**Lanzhou**	**26.22**	**82**	⇑P		**P**	**12 01 01.9**	**+2.1**
LZH				pP		pP	12 01 44.3	+2.9
LZH				PP		**PnPn**	**12 01 55.0**	**+3.2**
LZH				sP		sP	12 02 09.3	+4.1
LZH				pmax		pmax		
	comp=Z,18nm,1.0s							
LZH				pmax		pmax		
	comp=Z,59nm,4.6s							
SONM	**Songino Array** comp=Z,1.1nm,0.5s,baz=266,slow=9.0,SNR=7.5	**28.07**	**56**	P		**P**	**12 01 17.9**	**+1.7**
SONM	**Songino Array**	**28.07**	**56**	P		**P**	**12 01 17.2**	**+1.0**
ULN	**Ulaanbaatar**	**28.52**	**56**	⇑*e*P		**P**	**12 01 21.3**	**+1.2**
ULN				pmax		pmax		
	comp=Z,1.0nm,0.9s							
BRTR	**Keskin Array B**	**29.51**	**287**	*i* P		**P**	**12 01 30.6**	**+1.6**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
BRTR	**Keskin Array B** comp=Z,0.8nm,0.6s,baz=100,slow=8.7,SNR=5.1	**29.51**	**287**	P		**P**	**12 01 28.1**	**-0.9**
BRTR	**Keskin Array B**	**29.51**	**287**	P		**P**	**12 01 29.5**	**+0.6**
OBN	**Obninsk**	**29.86**	**319**	*i* P		**P**	**12 01 32.9**	**+1.3**
OBN				pmax		pmax		
	comp=Z,4.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**30.43**	**119**	*i* P		**P**	**12 01 38.7**	**+1.6**
CMAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
CMAR	**Chiang Mai Arr** comp=Z,0.7nm,0.6s,baz=306,slow=9.6,SNR=6.6	**30.43**	**119**	P		**P**	**12 01 36.2**	**-0.9**
HHC	**Hu-ho-hao-te**	**31.54**	**70**	*e*P		**P**	**12 01 47.5**	**+0.8**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,38nm,3.6s							
AKASG	**Malin Array Be** comp=Z,1.3nm,0.4s,baz=81,slow=7.2,SNR=8.2	**32.92**	**309**	P		**P**	**12 01 58.7**	**+0.3**
AKASG	**Malin Array Be**	**32.92**	**309**	P		**P**	**12 01 58.7**	**+0.3**
AKBB	**Malin Array Si**	**32.92**	**309**	P		**P**	**12 01 58.5**	**0.0**
AKBB				pmax		pmax		
	comp=Z,3.0nm,0.5s							
AKBB	**Malin Array Si**	**32.92**	**309**	P		**P**	**12 01 58.5**	**0.0**
AKBB				IAmb		IAmb	12 01 59.4	
	comp=Z,3.2nm,0.5s							
PBKT	**Sadao Pong**	**33.13**	**119**	P		**P**	**12 02 01.6**	**+0.9**
PBKT				IAmb		IAmb	12 02 01.6	
	comp=Z,7.4nm,1.3s							
BUR08	**Bucovina Ar. S**	**35.30**	**303**	P		**P**	**12 02 19.9**	**+0.8**
VSU	**Vasula**	**36.09**	**321**	⇑*e*P		**P**	**12 02 26.1**	**+0.6**
VSU				pmax		pmax		
	comp=Z,14nm,0.9s							
WHN	**Wuhan**	**36.23**	**87**	P		**P**	**12 02 30.9**	**+3.9**
HIA	**Hailar**	**37.03**	**55**	⇑*e*P		**P**	**12 02 34.4**	**+0.7**
HIA				pmax		pmax		
	comp=Z,9.0nm,0.8s							
FIA1	**FINESS Array S**	**37.37**	**326**	P		**P**	**12 02 36.9**	**+0.6**
FIA1				IAmb		IAmb	12 02 56.2	
	comp=Z,12nm,1.3s							
FINES	**FINESS Array B**	**37.37**	**326**	P		**P**	**12 02 37.0**	**+0.7**
FINES	**FINESS Array B** comp=Z,2.2nm,0.6s,baz=122,slow=10,SNR=16	**37.37**	**326**	P		**P**	**12 02 37.2**	**+0.9**
FINES	**FINESS Array B**	**37.37**	**326**	P		**P**	**12 02 37.0**	**+0.7**
ARCES	**ARCESS Array B**	**40.98**	**337**	P		**P**	**12 03 07.1**	**+1.0**
ARCES	**ARCESS Array B** comp=Z,1.4nm,0.5s,baz=118,slow=8.9,SNR=19	**40.98**	**337**	P		**P**	**12 03 07.4**	**+1.3**
ARCES	**ARCESS Array B**	**40.98**	**337**	P		**P**	**12 03 07.1**	**+1.0**
ARE0	**ARCESS Array S**	**40.98**	**337**	P		**P**	**12 03 07.0**	**+0.9**
GSI	**Gunungsitoli**	**42.87**	**139**	P		**P**	**12 03 21.9**	**-0.1**
YAK	**Yakutsk**	**43.68**	**36**	P		**P**	**12 03 28.7**	**+0.8**
YAK				pmax		pmax		
	comp=Z,9.0nm,0.6s							
YAK	**Yakutsk**	**43.68**	**36**	P		**P**	**12 03 28.7**	**+0.8**
YAK				IAmb		IAmb	12 03 29.4	
	comp=Z,9.3nm,0.6s							
NC602	**NORSAR Array S**	**44.10**	**322**	P		**P**	**12 03 31.4**	**+0.1**
NB2	**NORSAR Subarra** comp=Z,1.4nm,0.4s,baz=97,slow=7.9	**44.28**	**323**	P		**P**	**12 03 32.8**	**0.0**
NOA	**NORSAR Array B** comp=Z,0.3nm,0.3s,baz=103,slow=7.1,SNR=14	**44.28**	**323**	P		**P**	**12 03 33.1**	**+0.3**
NC204	**NORSAR Array S**	**44.52**	**323**	P		**P**	**12 03 34.9**	**+0.2**
MURB	**Monte Urbino**	**44.61**	**297**	P		**P**	**12 03 36.7**	**+1.0**
KLR	**Kul'dur**	**44.88**	**54**	⇓*e*P		**P**	**12 03 38.2**	**+0.6**
KLR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
KLR	**Kul'dur** comp=Z,1.6nm,0.4s,baz=280,slow=6.0,SNR=9.6	**44.88**	**54**	P		**P**	**12 03 38.6**	**+1.0**
KONO	**Kongsberg**	**45.00**	**321**	P		**P**	**12 03 38.1**	**-0.2**
KONO				pmax		pmax		
	comp=Z,44nm,1.4s							
KONO	**Kongsberg**	**45.00**	**321**	P		**P**	**12 03 38.1**	**-0.2**
BILL	**Bilibino**	**58.33**	**26**	*i* P		**P**	**12 05 17.0**	**+0.2**
BILL				*i*			12 07 24.8	
BILL				pmax		pmax		
	comp=Z,2.0nm,1.1s							
TOA0	**Torodi Ar. Sit**	**65.88**	**269**	P		**P**	**12 06 06.3**	**-1.5**
TOA0				IAmb		IAmb	12 06 06.9	
	comp=Z,8.9nm,1.5s							
TORD	**Torodi Ar. Bea** comp=Z,1.6nm,0.8s,baz=46,slow=6.0,SNR=12	**65.88**	**269**	P		**P**	**12 06 05.7**	**-2.1**
RES	**Resolute Bay**	**68.47**	**356**	P		**P**	**12 06 23.2**	**+0.1**
RES	**Resolute Bay**	**68.47**	**356**	P		**P**	**12 06 23.2**	**+0.1**
ANM	**Nome**	**69.75**	**23**	P		**P**	**12 06 32.4**	**+1.2**
ANM				pmax		pmax		
	comp=Z,10.0nm,1.1s							
ANM	**Nome**	**69.75**	**23**	P		**P**	**12 06 32.4**	**+1.2**
ANM				IAmb		IAmb	12 06 32.6	
	comp=Z,10.0nm,1.1s

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**0.52**	**185**	*e*Pg	**Pb**	**12 00 30.1**	**+0.2**
SHGR	**Shooshtar-Gavs**	**0.52**	**185**	*e*Pg	**Pb**	**12 00 30.1**	**+0.2**
SHGR				*e*Sg	**Sb**	**12 00 38.0**	**+0.5**
SHGR	comp=E,3μm,0.5s			IAML		12 00 43.1	
SHGR	comp=N,6μm,0.9s			IAML		12 00 47.1	
IKMR	**Kamar-syah**	**0.97**	**336**	*e*	**Sb**	**12 00 52.1**	**+1.6**
IKFM	**Kafar-mosalman**	**1.23**	**317**	*e*Pg	**Pb**	**12 00 42.4**	**+0.4**
IKFM				*e*Sg	**Sn**	**12 01 01.9**	**+3.3**
IDOB	**Doab**	**1.29**	**334**	*e*Pg	**Pb**	**12 00 43.4**	**+0.3**
IDOB				*e*		12 01 06.5	
BDRS	**Dareh Seyedi**	**1.32**	**1**	*e*Pg	**Pn**	**12 00 43.5**	**0.0**
BDRS				*e*		12 00 46.2	
JHBN	**Jahan bin**	**1.59**	**104**	*e*Pg	**Pg**	**12 00 48.7**	**-0.5**
JHBN				*e*		12 01 17.5	
HSAM	**Samen**	**1.59**	**353**	*e*Pn	**Pb**	**12 00 48.2**	**-0.2**
IPIR	**Pirpir**	**1.72**	**88**	*e*Pn	**Pb**	**12 00 50.3**	**-0.4**
IPIR				*e*		12 01 29.0	
ROKH	**ROKH**	**1.87**	**98**	*e*Pn	**Pb**	**12 00 52.8**	**-0.3**
ROKH				*e*		12 01 24.9	
IKOM	**Komasi**	**1.91**	**324**	*e*Pn	**Pb**	**12 00 54.7**	**+1.0**
IKOM				*e*		12 01 35.2	
IBZA	**Bozab**	**2.01**	**336**	*e*Pn	**Pb**	**12 00 54.8**	**-0.8**
IBZA				*e*		12 01 29.2	
ASAO	**Ashtian**	**2.15**	**27**	*e*Pn	**Pb**	**12 00 57.5**	**-0.4**
ASAO	**Ashtian**	**2.15**	**27**	*e*Pn	**Pb**	**12 00 57.5**	**-0.4**
ASAO				*e*Sg	**Sg**	**12 01 27.5**	**-0.4**
IBRJ	**Brojen**	**2.17**	**109**	*e*Pn	**Pb**	**12 00 57.1**	**-1.1**
IBRJ				*e*		12 01 43.2	
HAGD	**Aghdareh**	**2.20**	**6**	*e*Pn	**Pb**	**12 00 57.8**	**-1.0**
HAGD				*e*		12 01 32.8	
KCHF	**Cheshme Sefid,**	**2.23**	**318**	*e*Pn	**Pb**	**12 00 58.3**	**-1.0**
KCHF				*e*		12 01 42.1	
KER	**Kermanshah**	**2.26**	**321**	*e*Pn	**Pb**	**12 00 59.3**	**-0.5**
IKLH	**Kolahrood**	**2.40**	**73**	*e*Pn	**Pb**	**12 01 00.2**	**-1.9**
IKLH				*e*		12 01 45.8	
QAM	**Ghamsar**	**2.45**	**62**	*e*Pn	**Pb**	**12 01 02.2**	**-0.7**
HSRG	**Sareghieh**	**2.65**	**350**	*e*Pn	**Pb**	**12 01 04.2**	**-2.2**
HSRG				*e*		12 01 53.1	
GHVR	**GHOM**	**2.75**	**47**	*e*Pn	**Pn**	**12 01 04.5**	**+1.5**
GHVR	**GHOM**	**2.75**	**47**	*e*Pn	**Pn**	**12 01 04.5**	**+1.5**
SNGE	**Sanandaj**	**2.76**	**333**	*e*Pn	**Pb**	**12 01 07.2**	**-1.0**
SNGE	**Sanandaj**	**2.76**	**333**	*e*Pn	**Pb**	**12 01 07.2**	**-1.0**
KLNJ	**Kolanjah**	**2.84**	**124**	*e*Pn	**Pn**	**12 01 06.4**	**+2.0**
IQOM	**Qom**	**2.88**	**39**	*e*Pn	**Pn**	**12 01 07.0**	**+2.1**
IRAZ	**Razeghan**	**2.91**	**18**	*e*Pn	**Pb**	**12 01 08.1**	**-2.7**
IDHR	**Dehrash**	**2.91**	**316**	*e*		12 01 56.2	
IDHR				*e*Pn	**Pn**	**12 01 07.2**	**+1.9**
IZEF	**Zefreh**	**2.94**	**84**	*e*Pn	**Pn**	**12 01 07.8**	**+2.0**
KRSH	**Karshahi**	**3.06**	**63**	*e*		12 01 17.7	
KRSH				*e*Pn	**Pn**	**12 01 09.6**	**+2.3**
IRAM	**Ramesheh**	**3.10**	**104**	*e*Pn	**Pn**	**12 01 08.7**	**+0.7**
IRAM				*e*		12 02 18.2	
QABG	**Abgarm-Qazvin**	**3.13**	**11**	*e*Pn	**Pn**	**12 01 10.4**	**+2.0**
IVRN	**Varamin**	**3.36**	**45**	*e*Pn	**Pn**	**12 01 13.7**	**+2.3**
IMHD	**Mahdasht**	**3.40**	**26**	*e*Pn	**Pn**	**12 01 14.1**	**+2.2**
IDMV	**Damavand**	**3.95**	**41**	*e*Pn	**Pn**	**12 01 21.3**	**+1.6**
ANAR	**Anarak**	**4.14**	**81**	*e*Pn	**Pn**	**12 01 23.2**	**+1.0**
ISAD	**Sadrabad**	**4.16**	**99**	*e*Pn	**Pn**	**12 01 23.4**	**+0.9**
IFIR	**Firoozkooh**	**4.42**	**46**	*e*Pn	**Pn**	**12 01 27.7**	**+1.6**
IALA	**Alasht**	**4.75**	**42**	*e*Pn	**Pn**	**12 01 33.1**	**+2.4**
ISHM	**Shahmirzad**	**4.86**	**48**	*e*Pn	**Pn**	**12 01 35.0**	**+2.9**
ASF	**Jabal al Asfar**	**10.12**	**271**	Pn	**Pn**	**12 02 43.0**	**-1.1**
	comp=N,0.5nm,0.3s,baz=75,slow=16,SNR=3.5						
ASF				Sn	**Sn**	**12 04 31.9**	**-5.9**
	comp=N,0.5nm,0.3s,baz=135,slow=5.7,SNR=3.5						
AKASG	**Malin Array Be**	**23.14**	**327**	P	**P**	**12 05 25.4**	**+0.5**
	comp=N,0.4nm,0.5s,baz=132,slow=9.3,SNR=3.5						
MKAR	**Makanchi Array**	**29.11**	**51**	P	**P**	**12 06 20.0**	**+0.4**
	comp=N,0.6nm,0.7s,baz=251,slow=9.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**33.23**	**39**	P	**P**	**12 06 55.1**	**-0.6**
	comp=N,0.6nm,0.5s,baz=240,slow=9.6,SNR=3.4						
TORD	**Torodi Ar. Bea**	**47.14**	**257**	P	**P**	**12 08 51.1**	**-0.4**
	comp=N,0.6nm,0.4s,baz=55,slow=8.7,SNR=4.6						

ISC 18 12:03:29.9±2.5, 51°.4N±0°.1×16°.12E±0°.07, h0km, n8, σ0$89/18, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.54**	**168**	*e*Pg	**Pg**	**12 03 41.2**	**+0.9**
KSP				*e*Sg	**Sb**	**12 03 49.7**	**-0.9**
CHVC	**Chvalec**	**0.79**	**183**	*e*PG	**Pg**	**12 03 45.9**	**+0.9**
CHVC				*e*SG	**Sb**	**12 03 57.8**	**+0.1**
	comp=Z,12nm,0.3s						
OSTC	**Ostas**	**0.82**	**176**	*e*PG	**Pg**	**12 03 46.2**	**+0.6**
OSTC				*e*SG	**Sb**	**12 03 58.4**	**-0.2**
	comp=Z,18nm,0.7s						
UPC	**Upice**	**0.87**	**184**	*e*PG	**Pg**	**12 03 47.4**	**+0.8**
UPC				*e*SG	**Sb**	**12 03 59.6**	**-0.4**
	comp=Z,26nm,0.5s						
DPC	**Dobruska-Polom**	**1.03**	**173**	*e*PG	**Pg**	**12 03 50.0**	**+0.3**
DPC				*e*SG	**Sb**	**12 04 04.7**	**-0.1**
	comp=Z,12nm,0.6s						
MORC	**Moravsky Berou**	**1.84**	**150**	*e*PN	**Pn**	**12 04 02.1**	**-0.7**
MORC				*e*SG	**Sn**	**12 04 26.7**	**0.0**
NKC	**Novy Kostel**	**2.59**	**245**	*e*PG	**Pb**	**12 04 17.9**	**+0.6**
NKC				*e*SG	**Sg**	**12 04 53.5**	**+0.3**
	comp=Z,7.0nm,0.4s						
KHC	**Kasperske Hory**	**2.77**	**217**	*e*PN	**Pn**	**12 04 15.0**	**-0.6**
KHC				*e*PG	**Pb**	**12 04 20.7**	**+0.3**
KHC				*e*SN	**Sn**	**12 04 47.5**	**-2.3**
KHC				*e*SG	**Sg**	**12 05 00.1**	**+1.1**

*OMAN **18** 12:33:19.6±16.0, 27°.53N×53°.28E, h36km, ml4.1/12, Error ellipse: s-maj=570.5km s-min=222.3km az=113.0*
*IDC **18** 12:33:25.7±0.9, 26°.65N×53°.78E, h0km, mb3.8/14, mb1 3.9/16, mb1mx3.7/40, mbtmp3.8/16, ML3.6/2, MS2.9/7, Ms1 2.9/7, ms1mx2.7/46, Error ellipse: s-maj=22.0km s-min=13.6km az=26.0*
*TEH **18** 12:33:28.6, 26°.75N×53°.93E, h10km, ML3.7*
*DSN **18** 12:33:30.1±1.2, 26°.88N×54°.12E, h10km, ML3.8/7, Error ellipse: s-maj=15.5km s-min=5.7km az=175.0*
*THR **18** 12:33:30.6±0.4, 27°.22N×53°.93E, h46km±6km, ML3.8*

ISC 18 12:33:29.0±1.4, 26°.84N±0°.04×53°.93E±0°.04, h16km±9km, n72, σ1$81/76, mb3.6/14, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMD1	**Lamerd**	**0.85**	**306**	*e*Pg	**Pn**	**12 33 45.8**	**-0.6**
LMD1				*e*Sg	**Sn**	**12 33 59.3**	**+0.8**
LMD1				*e*		12 34 13.5	
JHRM	**Jahrom**	**1.69**	**349**	*e*Pn	**Pg**	**12 34 00.9**	**-0.7**
JHRM				*e*		12 34 39.4	
BNDS	**Bandar-Abbas**	**2.07**	**74**	*e*Pg	**Pb**	**12 34 07.0**	**+0.6**
BNDS				*e*Sg	**Sb**	**12 34 33.2**	**+1.3**
GENO	**Geno**	**2.07**	**74**	*e*Pn	**Pb**	**12 34 05.7**	**-0.7**
SHME	**Shamm**	**2.13**	**111**	*e*P	**Pn**	**12 34 03.8**	**-0.1**
	SNR=16						
SHME				S	**Sn**	**12 34 29.8**	**-0.3**
SHME	**Shamm**	**2.13**	**111**	*e*Pn	**Pn**	**12 34 04.1**	**+0.1**
BANOM	**Banah**	**2.31**	**113**	*e*P	**Pn**	**12 34 06.8**	**+0.3**
	SNR=28						
BANOM	**Banah**	**2.31**	**113**	P	**Pn**	**12 34 06.8**	**+0.3**
	SNR=28						
BANOM				S	**Sg**	**12 34 44.0**	**+0.7**
NAZ	**Nazwa, Dubai**	**2.41**	**139**	*e*P	**Pn**	**12 34 09.5**	**+1.7**
	SNR=8.4						
NAZ	**Nazwa, Dubai**	**2.41**	**139**	*e*Pn	**Pn**	**12 34 09.7**	**+1.9**
NAZ	**Nazwa, Dubai**	**2.41**	**139**	P	**Pn**	**12 34 09.5**	**+1.7**
	SNR=8.4						
AJN	**Ajban**	**2.46**	**157**	P	**Pn**	**12 34 09.0**	**+0.6**
MSFE	**Esma-Masafi**	**2.48**	**126**	P	**Pn**	**12 34 09.0**	**+0.1**
MSFE	**Esma-Masafi**	**2.48**	**126**	*e*Pn	**Pn**	**12 34 09.6**	**+0.7**
ASUD	**Al Ashush, Dub**	**2.54**	**150**	*e*P	**Pn**	**12 34 10.8**	**+1.3**
	SNR=9.9						
ASUD	**Al Ashush, Dub**	**2.54**	**150**	*e*Pn	**Pn**	**12 34 11.2**	**+1.7**
ASUD	**Al Ashush, Dub**	**2.54**	**150**	P	**Pn**	**12 34 11.4**	**+1.9**
	SNR=9.6						
FAQ	**Al Faqa, Dubai**	**2.56**	**144**	P	**Pb**	**12 34 13.5**	**-1.1**
FAQ				S	**Sg**	**12 34 51.9**	**+0.4**
MDH	**Madha**	**2.62**	**125**	*e*Pn	**Pn**	**12 34 11.4**	**+0.7**
MDH	**Madha**	**2.62**	**125**	P	**Pn**	**12 34 11.6**	**+0.9**
MDH				S	**Sg**	**12 34 52.4**	**-0.9**
NIAN	**Nian**	**2.68**	**74**	*e*Pn	**Pn**	**12 34 13.8**	**+2.2**
NIAN				*e*		12 35 09.2	
UOSS	**Minazif**	**2.78**	**132**	*e*P	**Pn**	**12 34 13.4**	**+0.5**
	SNR=5.2						
UOSS	**Minazif**	**2.78**	**132**	*e*Pn	**Pn**	**12 34 13.5**	**+0.6**
UOSS	**Minazif**	**2.78**	**132**	P	**Pn**	**12 34 13.5**	**+0.6**
HATD	**Hatta, Dubai**	**2.82**	**135**	P	**Pn**	**12 34 13.9**	**+0.5**
HATD	**Hatta, Dubai**	**2.82**	**135**	*e*Pn	**Pn**	**12 34 14.5**	**+1.1**
HATD	**Hatta, Dubai**	**2.82**	**135**	P	**Pn**	**12 34 14.2**	**+0.8**
ASHO	**Ashiyiah**	**2.88**	**138**	*e*P	**Pn**	**12 34 15.1**	**+0.9**
	SNR=16						
ASHO	**Ashiyiah**	**2.88**	**138**	*e*Pn	**Pn**	**12 34 15.4**	**+1.1**
ASHO	**Ashiyiah**	**2.88**	**138**	P	**Pn**	**12 34 15.3**	**+1.1**
	SNR=16						
ASHO				S	**Sb**	**12 34 59.2**	**+4.2**
ALNE	**Al Ain**	**3.22**	**149**	*e*Pn	**Pn**	**12 34 20.4**	**+1.4**
KHNJ	**Kahnooj**	**3.53**	**71**	*e*Pn	**Pn**	**12 34 25.3**	**+2.0**
MZR	**Muzera**	**3.84**	**186**	*e*Pn	**Pn**	**12 34 28.7**	**+1.2**
KRBR	**Kerman**	**4.00**	**38**	*e*Pn	**Pn**	**12 34 26.2**	**-3.8**
KRBR				*e*Sg	**Sb**	**12 35 23.7**	**-4.0**
KRBR				IAML		12 35 29.0	
	comp=N,61nm,0.5s						
TVBK	**TV Kerman**	**4.01**	**38**	*e*Pn	**Pn**	**12 34 34.0**	**+3.9**
TVBK				*e*		12 35 34.9	
KHGB	**Koh Gabri**	**4.18**	**32**	*e*Pn	**Pn**	**12 34 35.9**	**+3.6**
KHGB				*e*		12 35 31.5	
ARQ	**Araqi**	**4.20**	**145**	P	**Pn**	**12 34 34.1**	**+1.6**
	SNR=11						
CHMN	**Cheshme madani**	**4.38**	**46**	*e*Pn	**Pn**	**12 34 39.1**	**+3.9**
CHMN				*e*		12 34 41.3	
IMEH	**Mehriz**	**4.58**	**7**	*e*Pn	**Pn**	**12 34 41.8**	**+4.0**
KLNJ	**Kolanjah**	**4.64**	**334**	*e*Pn	**Pn**	**12 34 42.3**	**+3.6**
BSY	**Bisya**	**5.04**	**143**	P	**Pn**	**12 34 44.7**	**+0.7**
	SNR=20						
ISAD	**Sadrabad**	**5.07**	**358**	*e*Pn	**Pn**	**12 34 47.5**	**+2.9**
IRAM	**Ramesheh**	**5.14**	**345**	*e*Pn	**Pn**	**12 34 47.5**	**+2.0**
SMDO	**Samad**	**5.30**	**134**	P	**Pn**	**12 34 48.7**	**+1.0**
	SNR=12						
WSAR	**Wadi Sarin**	**5.56**	**129**	Pn	**Pn**	**12 34 50.7**	**-0.5**
	comp=N,2.6nm,0.3s,baz=326,slow=13,SNR=12						
WSAR				Sn	**Sn**	**12 35 50.9**	**-4.0**
	comp=N,0.9nm,0.3s,baz=349,slow=16,SNR=2.6						
WSAR				LR	LR	12 37 27.7	
	comp=N,77nm,19.2s,baz=334,slow=44						
WBK	**Wadi Bani Khal**	**6.22**	**131**	P	**Pn**	**12 35 00.2**	**0.0**
	SNR=22						
BSRN	**Basiran**	**6.83**	**40**	*e*Pn	**Pn**	**12 35 05.4**	**-3.3**
MHTO	**MHTO**	**6.89**	**147**	P	**Pn**	**12 35 09.8**	**+0.4**
	SNR=8.8						
SHGR	**Shooshtar-Gavs**	**6.90**	**321**	IAML		12 36 41.2	
	comp=E,27nm,0.3s						
SHGR				IAML		12 36 54.3	
	comp=N,17nm,0.7s						
DQM	**DQM**	**7.63**	**154**	P	**Pn**	**12 35 19.5**	**-0.1**
WHFO	**Wadi Hawf**	**8.88**	**181**	P	**Pn**	**12 35 35.0**	**-1.7**
	SNR=32						
SHAO	**Shalim**	**8.91**	**170**	P	**Pn**	**12 35 35.4**	**-1.7**
GEYT	**Alibeck**	**11.61**	**17**	LR	LR	12 41 41.8	
	comp=N,37nm,18.8s,baz=250,slow=42						
EIL	**Elat**	**16.96**	**284**	LR	LR	12 45 14.3	
	comp=N,39nm,19.1s,baz=300,slow=42						
MMAI	**Mount Meron Ar**	**17.19**	**295**	LR	LR	12 45 46.6	
	comp=N,14nm,20.0s,baz=255,slow=43						
KBZ	**Khabaz**	**19.08**	**335**	P	**Pn**	**12 37 52.8**	**+1.2**
	comp=N,0.1nm,0.3s,baz=142,slow=7.6,SNR=3.9						
KBZ				LR	LR	12 46 17.5	
	comp=N,24nm,20.2s,baz=43,slow=40						
BRTR	**Keskin Array B**	**21.23**	**312**	P	**P**	**12 38 14.9**	**+0.6**
	comp=N,1.3nm,0.6s,baz=134,slow=11,SNR=8.6						
BRTR				S	**S**	**12 42 10.6**	**+0.7**
	comp=N,0.4nm,0.3s,baz=280,slow=17,SNR=5.0						
AKTO	**Aktyubinsk**	**23.77**	**6**	P	**P**	**12 38 42.7**	**+2.0**
	comp=N,1.4nm,0.6s,baz=162,slow=11,SNR=3.6						
BVAR	**Borovoye Array**	**28.90**	**21**	P	**P**	**12 39 28.5**	**+1.5**
	comp=N,0.2nm,0.4s,baz=207,slow=6.0,SNR=3.2						
MKAR	**Makanchi Array**	**29.95**	**41**	P	**P**	**12 39 36.4**	**-0.1**
	comp=N,0.3nm,0.6s,baz=231,slow=9.8,SNR=4.6						
AKASG	**Malin Array Be**	**30.38**	**328**	P	**P**	**12 39 39.7**	**-0.4**
	comp=N,0.3nm,0.3s,baz=135,slow=10,SNR=4.5						
ZALV	**Zalesovo Beam**	**35.37**	**32**	P	**P**	**12 40 24.0**	**+0.3**
	comp=N,1.7nm,0.4s,baz=236,slow=9.8,SNR=11						
FINES	**FINESS Array B**	**39.34**	**339**	P	**P**	**12 40 57.6**	**+0.3**
	comp=N,0.9nm,0.5s,baz=134,slow=8.0,SNR=5.7						
CMAR	**Chiang Mai Arr**	**42.19**	**92**	P	**P**	**12 41 21.5**	**+0.1**
	comp=N,0.3nm,0.4s,baz=279,slow=7.2,SNR=3.3						
TLY	**Talaya**	**44.67**	**42**	LR	LR	13 03 29.7	
	comp=N,26nm,18.4s,baz=337,slow=40						
SONM	**Songino Array**	**45.69**	**48**	P	**P**	**12 41 50.3**	**+1.1**
	comp=N,0.3nm,0.4s,baz=250,slow=7.5,SNR=2.3						
ARCES	**ARCESS Array B**	**45.84**	**347**	P	**P**	**12 41 50.6**	**+0.6**
	comp=N,0.6nm,0.5s,baz=139,slow=9.5,SNR=6.5						
TORD	**Torodi Ar. Bea**	**50.62**	**265**	P	**P**	**12 42 25.6**	**-2.1**
	comp=N,0.9nm,0.5s,baz=55,slow=7.5,SNR=7.5						
JMIC	**Jan Mayen**	**55.96**	**339**	LR	LR	13 06 56.8	
	comp=N,52nm,18.8s,baz=77,slow=36						
DBIC	**Dimbokro**	**59.22**	**261**	P	**P**	**12 43 28.0**	**-1.9**
	comp=N,2.0nm,0.6s,baz=34,slow=3.6,SNR=4.3						
YKA	**Yellowknife Ar**	**90.51**	**355**	P	**P**	**12 46 30.4**	**+0.6**
	comp=N,0.2nm,0.6s,baz=4.0,slow=4.9,SNR=7.7						
WRA	**Warramunga Arr**	**90.70**	**112**	P	**P**	**12 46 30.3**	**-1.2**
	comp=N,0.4nm,0.7s,baz=293,slow=7.6,SNR=3.0						

*IDC **18** 12:54:26.9±2.0, 2°.04N×90°.83E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.5/43, mbtmp3.7/6, ML3.9/2, MS3.2/9, Ms1 3.2/9, ms1mx3.0/35, Error ellipse: s-maj=54.1km s-min=31.1km az=50.0*
*NEIC **18** 12:54:27.8±0.7, 2°.03N±0°.05×90°.72E±0°.10, h10km±1km, mb4.1/10, Error ellipse: s-maj=16.8km s-min=7.2km az=251.0*

ISC 18 12:54:27.7±1.0, 2°.0N±0°.2×90°.68E±0°.09, h10km, n36, σ1$15/29, mb4.0/8, MS3.3/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSI	**Gunungsitoli**	**6.93**	**96**	Pn	**Pn**	**12 56 08.8**	**-0.6**
RPSI	**Rantau Prapat**	**8.27**	**85**	Pn	**Pn**	**12 56 27.9**	**+0.2**
PSI	**Prapat**	**8.27**	**84**	LR	LR	12 59 29.1	
	comp=Z,342nm,20.8s,baz=232,slow=37						
KULM	**Kulim**	**10.46**	**72**	Pn	**Pn**	**12 56 57.9**	**0.0**
IPM	**Ipoh**	**10.61**	**76**	Pn	**Pn**	**12 56 58.4**	**-1.6**
PALK	**Pallekele**	**11.22**	**298**	Pn	**Pn**	**12 57 11.8**	**+3.5**
	0.4nm,0.3s,baz=129,slow=14,SNR=2.6						
PALK				Sn	**Sn**	**12 59 11.3**	**-2.8**
	0.4nm,0.3s,baz=204,slow=20,SNR=3						
PALK				LR	LR	13 01 07.6	
	comp=Z,28nm,18.2s,baz=115,slow=35						
PALK	**Pallekele**	**11.22**	**298**		**Pn**	**12 57 09.4**	**+1.0**
PALK				Sn	**Sn**	**12 59 11.3**	**-2.8**
MYKOM	**Kota Tinggi**	**13.17**	**91**	Pn	**Pn**	**12 57 33.9**	**-1.0**
MNAI	**Manna**	**13.81**	**117**	Pn	**Pn**	**12 57 43.3**	**-0.4**
CMAR	**Chiang Mai Arr**	**18.23**	**26**	P	**P**	**12 58 41.5**	**+0.3**
	0.2nm,0.3s,baz=212,slow=14,SNR=4.1						
CMAR				LR	LR	13 06 02.2	
	comp=Z,29nm,19.0s,baz=190,slow=38						
H08S2	**Diego Garcia H**	**20.53**	**242**	T	T	13 20 00.7	
	baz=63,slow=76,SNR=9.3						
H08S3	**Diego Garcia H**	**20.53**	**242**	T	T	13 20 01.6	
	baz=63,slow=76,SNR=11						
H08S1	**Diego Carcia H**	**20.55**	**242**	T	T	13 20 02.8	
	baz=63,slow=76,SNR=7.0						
LSA	**Lhasa**	**27.53**	**1**	P	**P**	**13 00 15.0**	**-0.2**
LSA				IAmb	IAmb	13 00 31.6	
	comp=Z,4.1nm,1.0s						
NIL	**Nilore**	**35.44**	**334**	P	**P**	**13 01 24.6**	**+0.4**
HRA	**Herat**	**41.71**	**324**	P	**P**	**13 02 17.2**	**+0.1**
KDJ	**Kajisay**	**41.73**	**345**	P	**P**	**13 02 16.8**	**-0.4**
KDJ				IAmb	IAmb	13 02 18.6	
	comp=Z,3.8nm,1.1s						
PRZ	**Przheval'sk**	**41.76**	**346**	P	**P**	**13 02 17.1**	**-0.3**
BTK	**Batken**	**41.93**	**337**	P	**P**	**13 02 18.7**	**0.0**
BTK				IAmb	IAmb	13 02 20.7	
	comp=Z,3.6nm,1.1s						
KKAR	**Karatay Array**	**44.68**	**339**	P	**P**	**13 02 41.2**	**+0.4**
KKAR				IAmb	IAmb	13 02 56.4	
	comp=Z,3.6nm,1.3s						
KKAR	**Karatay Array**	**44.68**	**339**	P	**P**	**13 02 41.6**	**+0.8**
MK31	**Makanchi Array**	**45.19**	**352**	P	**P**	**13 02 44.8**	**0.0**
MKAR	**Makanchi Array**	**45.19**	**352**	P	**P**	**13 02 45.3**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=167,slow=7.2,SNR=3.3						
MKAR	**Makanchi Array**	**45.19**	**352**	P	**P**	**13 02 45.1**	**+0.3**
GEYT	**Alibeck**	**46.56**	**324**	LR	LR	13 22 41.1	
	comp=Z,32nm,21.8s,baz=15,slow=36						
SONM	**Songino Array**	**47.62**	**14**	P	**P**	**13 03 04.8**	**+0.8**
	comp=Z,1.0nm,0.5s,baz=189,slow=8.6,SNR=6.8						
SONM				LR	LR	13 25 25.6	
	comp=Z,56nm,19.1s,baz=85,slow=39						
SONM	**Songino Array**	**47.62**	**14**	P	**P**	**13 03 04.0**	**0.0**
WRA	**Warramunga Arr**	**48.07**	**119**	P	**P**	**13 03 07.6**	**-0.2**
	comp=Z,1.1nm,1.0s,baz=294,slow=8.4,SNR=3.1						
WRA	**Warramunga Arr**	**48.07**	**119**	IAmb	IAmb	13 03 11.2	
	comp=Z,0.2nm,1.0s						
KSRS	**Korea Array**	**49.13**	**40**	LR	LR	13 25 07.6	
	comp=Z,44nm,18.0s,baz=265,slow=38						
ZALV	**Zalesovo Beam**	**51.98**	**356**	P	**P**	**13 03 36.7**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=174,slow=5.4,SNR=3.5						
ZALV				LR	LR	13 27 08.4	
	comp=Z,42nm,21.3s,baz=134,slow=38						
ZALV	**Zalesovo Beam**	**51.98**	**356**	P	**P**	**13 03 37.0**	**+0.1**
MJAR	**Matsushiro Arr**	**55.65**	**46**	LR	LR	13 30 51.7	
	comp=Z,17nm,18.0s,baz=265,slow=39						
NOA	**NORSAR Array B**	**83.13**	**331**	LR	LR	13 45 23.5	
	comp=Z,9.2nm,20.1s,baz=275,slow=37						
TXAR	**Lajitas Array**	**145.93**	**23**	PKPbc	**PKPbc**	**13 14 08.2**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=319,slow=0.5,SNR=4.5						
TXAR	**Lajitas Array**	**145.93**	**23**		**PKPdf**	**13 14 07.6**	**-0.2**

*IDC **18** 12:59:23.4±0.7, 33°.25N×39°.42W, h0km, mb3.9/16, mb1 4.1/16, mb1mx3.9/52, mbtmp3.9/16, MS3.6/18, Ms1 3.6/18, ms1mx3.4/43, Error ellipse: s-maj=21.1km s-min=17.7km az=18.0*
*NEIC **18** 12:59:25.1±0.9, 33°.2N±0°.1×39°.5W±0°.1, h10km±1km, mb4.5/33, Error ellipse: s-maj=17.7km s-min=16.1km az=160.0*

ISC 18 12:59:24.8±0.5, 33°.23N±0°.09×39°.46W±0°.08, h8km, n70, σ0°53/54, mb4.3/28, MS3.6/18, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSA	**Rosais**	**10.61**	**56**	Pn	**Pn**	**13 01 58.2**	**+1.0**
GBN	**Guysborough**	**20.88**	**312**	P	**P**	**13 04 07.7**	**+0.5**
LMN	**Caledonia Moun**	**23.15**	**310**	P	**P**	**13 04 31.3**	**-0.2**
LMN				IAmb	IAmb	13 04 33.5	
	comp=Z,12nm,1.2s						
SACV	**Santiago Islan**	**23.18**	**138**	P	**P**	**13 04 31.4**	**-0.7**
BATG	**Bathurst New B**	**24.53**	**313**	P	**P**	**13 04 44.5**	**-0.2**
BATG				IAmb	IAmb	13 04 56.0	
	comp=Z,40nm,1.7s						
K62A	**Royalston**	**27.36**	**300**	P	**P**	**13 05 11.2**	**+0.8**
SJG	**San Juan**	**28.26**	**244**	LR	LR	13 14 04.5	
	comp=Z,29nm,21.1s,baz=84,slow=31						
SCHQ	**Schefferville**	**28.90**	**327**	LR	LR	13 15 27.0	
	comp=Z,63nm,18.6s,baz=36,slow=33						
MDT	**Midelt**	**29.15**	**81**	LR	LR	13 14 14.3	
	comp=Z,166nm,19.4s,baz=347,slow=31						
TKL	**Tuckaleechee C**	**36.40**	**287**	LR	LR	13 19 03.8	
	comp=Z,152nm,19.5s,baz=114,slow=32						
SDV	**Santo Domingo**	**37.59**	**237**	LR	LR	13 19 22.5	
	comp=Z,25nm,20.8s,baz=258,slow=32						
SDV	**Santo Domingo**	**37.59**	**237**	P	**P**	**13 06 40.7**	**+0.5**
SDV				IAmb	IAmb	13 06 43.9	
	comp=Z,9.0nm,1.2s						
CLTN	**Cedars of Leba**	**38.37**	**288**	P	**P**	**13 06 46.2**	**-0.2**
CLTN				IAmb	IAmb	13 06 48.9	
	comp=Z,11nm,1.4s						
TUE	**Stuetta**	**39.13**	**55**	P	**P**	**13 06 52.8**	**-0.2**
TUE

ZALV	**Zalesovo Beam**	**80.75**	**30**	P		**P**	**13 11 39.2**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=306,slow=6.6,SNR=2.6							
ZALV	**Zalesovo Beam**	**80.75**	**30**	P		**P**	**13 11 38.6**	**+0.1**
MATP	**Matopo**	**83.93**	**119**	LR		LR	13 44 16.9	
	comp=Z,62nm,20.0s,baz=186,slow=32							
MKAR	**Makanchi Array**	**84.65**	**36**	P		**P**	**13 11 59.2**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=302,slow=4.3,SNR=3.7							
MKAR	**Makanchi Array**	**84.65**	**36**	P		**P**	**13 11 59.5**	**+0.4**
LBTB	**Lobatse**	**84.76**	**124**	LR		LR	13 45 20.0	
	comp=Z,25nm,21.9s,baz=158,slow=32							
SUR	**Sutherland**	**86.50**	**133**	LR		LR	13 44 14.5	
	comp=Z,26nm,19.6s,baz=3.5,slow=31							

IDC ***18*** *13:14:27.4±4.4, 13°.82N×92°.99W, h0km, mb3.3/2, mb1 3.7/6, mb1mx3.5/36, mbtmp3.4/6, ML3.4/4, MS2.2/1, Ms1 2.2/1, ms1mx2.1/20, Error ellipse: s-maj=71.4km s-min=25.0km az=177.0*

MEX ***18*** *13:14:27.1±0.6, 13°.52N×93°.22W, h11km±25km, MD4.1*

NEIC ***18*** *13:14:30.4±1.5, 13°.92N±0°.04×93°.21W±0°.04, h27km±14km, Error ellipse: s-maj=7.7km s-min=4.2km az=223.0*

ISC 18 13:14:27.7±1.3, 13.72N±0°.09×93.21W±0.06, h10km, n17, σ1°91/26, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.97**	**360**	*i* P	**Pn**	**13 14 59.7**	**-1.6**
PCIG				*i* S	**Sn**	**13 15 25.0**	**-1.0**
PCIG		**1.97**	**360**		**Pn**	**13 14 59.7**	**-1.6**
PCIG					**Sn**	**13 15 24.1**	**-2.0**
APG	**El Apazote**	**2.95**	**64**	Pn	**Pn**	**13 15 11.7**	**-3.2**
	1.5nm,0.3s,baz=246,slow=11,SNR=13						
APG				Sn	**Sn**	**13 15 48.7**	**-1.9**
	1.5nm,0.3s,baz=327,slow=17,SNR=2.7						
APG				LR	LR	13 16 09.6	
	comp=Z,46nm,20.5s,baz=354,slow=38						
TGIG		**3.04**	**2**	*e*P	**Pn**	**13 15 16.1**	**+0.1**
TGIG				*e*S	**Sn**	**13 15 52.9**	**+0.4**
TGIG		**3.04**	**2**		**Pn**	**13 15 16.1**	**+0.1**
TGIG					**Sn**	**13 15 52.9**	**+0.4**
HUIG	**Huatulco**	**3.46**	**306**	*e*P	**Pn**	**13 15 19.4**	**-2.3**
HUIG				*i* S	**Sn**	**13 16 01.2**	**-1.7**
HUIG	**Huatulco**	**3.46**	**306**		**Pn**	**13 15 19.4**	**-2.3**
HUIG					Sn	13 15 55.1	-7.7
CMIG	**Matias Romero**	**3.72**	**335**	Pn	**Pn**	**13 15 24.4**	**-0.9**
	3.4nm,0.3s,baz=152,slow=12,SNR=62						
CMIG				Sn	**Sn**	**13 16 05.7**	**-3.5**
	6.8nm,0.3s,baz=14,slow=14,SNR=9.1						
CMIG	**Matias Romero**	**3.72**	**335**	*e*P	**Pn**	**13 15 24.5**	**-0.7**
CMIG				*i* S	**Sn**	**13 16 09.5**	**+0.3**
CMIG	**Matias Romero**	**3.72**	**335**		**Pn**	**13 15 24.6**	**-0.7**
TEIG	**Tepich**	**8.01**	**35**	Pn	**Pn**	**13 16 22.9**	**-1.3**
	2.2nm,0.3s,baz=198,slow=20,SNR=43						
TEIG				Sn	**Sn**	**13 17 52.3**	**-2.6**
	1.3nm,0.3s,baz=140,slow=1.2,SNR=3.6						
TEIG	**Tepich**	**8.01**	**35**	Pn	**Pn**	**13 16 23.1**	**-1.1**
ACON	**Acoyapa**	**8.03**	**102**	Pn	**Pn**	**13 16 22.2**	**-2.3**
HDC	**Heredia**	**9.64**	**112**	Pn	**Pn**	**13 16 48.8**	**+2.0**
TXAR	**Lajitas Array**	**18.31**	**330**	P	**Pn**	**13 18 45.0**	**+2.9**
	0.0nm,0.3s,baz=158,slow=12,SNR=3.9						
NVAR	**Mina Array Bea**	**33.16**	**322**	P	**P**	**13 21 06.7**	**+2.0**
	0.2nm,0.7s,baz=137,slow=9.8,SNR=3.6						
YKA	**Yellowknife Ar**	**51.03**	**347**	P	**P**	**13 23 30.3**	**+0.5**
	0.2nm,0.5s,baz=151,slow=7.6,SNR=8.5						

MOS ***18*** *13:26:33.2±1.0, 52°.78N×174°.33W, h185km, mb4.3/29, Error ellipse: s-maj=10.4km s-min=7.2km az=65.3*

NEIC ***18*** *13:26:35.9±1.7, 52°.8N±0°.1×174°.31W±0°.09, h193km±6km, Error ellipse: s-maj=16.7km s-min=7.5km az=169.0*

IDC ***18*** *13:26:36.2±1.6, 52°.90N×174°.37W, h200km±13km, mb3.7/18, mb1 3.9/20, mb1mx3.7/46, mbtmp4.2/20, Error ellipse: s-maj=15.1km s-min=9.8km az=178.0*

AEIC ***18*** *13:26:36.8±2.7, 52°.6N±0°.1×174°.37W±0°.06, h181km±5km, mb4.5/138(NEIC), Error ellipse: s-maj=19.0km s-min=2.8km az=166.0*

ISC 18 13:26:35.8±0.4, 52.73N±0°.07×174°.25W±0°.04, h200km, n379, σ1°19/396, mb4.3/99, 8C-7D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOKL	**Mount Kliuchef**	**0.41**	**176**		**Pn**	**13 27 02.1**	**-0.6**
KOFP	**Korovin Flat P**	**0.46**	**169**		**Pn**	**13 27 02.1**	**-0.8**
ATKA	**Atka Island**	**0.53**	**177**		**Pn**	**13 27 01.7**	**-1.3**
ATKA	**Atka Island**	**0.53**	**177**	Sn	**Sn**	**13 27 22.9**	**-1.1**
GSTR	**Great Sitkin T**	**1.28**	**241**		**Pn**	**13 27 07.2**	**-0.5**
GSTR	**Great Sitkin T**	**1.28**	**241**	Sn	**Sn**	**13 27 32.3**	**0.0**
GSMY	**Great Sitkin M**	**1.30**	**239**		**Pn**	**13 27 07.0**	**-0.9**
GSTD	**Great Sitkin T**	**1.34**	**241**		**Pn**	**13 27 07.5**	**-0.8**
GSTD					**Sn**	**13 27 31.4**	**-1.9**
ADAG	**Mount Adagdak**	**1.63**	**244**		**Pn**	**13 27 10.2**	**-0.5**
ADK	**Adak**	**1.72**	**241**		**Pn**	**13 27 10.5**	**-0.9**
ADK				Sn	**Sn**	**13 27 37.3**	**-1.9**
KICM	**Kanaga Island**	**1.98**	**247**		**Pn**	**13 27 14.0**	**-0.1**
KIKV	**Kanaga Island**	**1.99**	**246**		**Pn**	**13 27 13.7**	**-0.4**
KIWB	**Kanaga Island**	**1.99**	**245**		**Pn**	**13 27 13.4**	**-0.8**
KIMD	**Kanaga Island**	**2.08**	**243**		**Pn**	**13 27 14.7**	**-0.3**
TAPA	**Tanaga Point A**	**2.37**	**249**		**Pn**	**13 27 18.1**	**-0.2**
TAFP	**Tanaga Falls P**	**2.44**	**252**		**Pn**	**13 27 19.0**	**0.0**
TAFP					**Sn**	**13 27 51.4**	**-1.2**
TASE	**Tanaga Southea**	**2.49**	**250**		**Pn**	**13 27 19.6**	**-0.1**
GAEA	**Gareloi East**	**2.92**	**253**		**Pn**	**13 27 24.8**	**+0.3**
NIKH	**Nikolski High**	**3.28**	**84**	Pn	**Pn**	**13 27 28.7**	**0.0**
UNV	**Unalaska Valle**	**4.78**	**73**		**Pn**	**13 27 47.5**	**+0.3**
UNV				Sn	**Sn**	**13 28 43.1**	**-0.5**
AKUT	**Akutan**	**5.26**	**71**	Pn	**Pn**	**13 27 53.3**	**0.0**
SDPT	**Sand Point**	**8.52**	**67**	Pn	**Pn**	**13 28 34.4**	**-1.2**
CNBA	**Chernabura Isl**	**8.93**	**71**	Pn	**Pn**	**13 28 41.1**	**+0.1**
ANM	**Nome**	**12.72**	**18**	P	**P**	**13 29 31.9**	**-1.2**
ANM	**Nome**	**12.72**	**18**		**P**	**13 29 31.9**	**-1.2**
OHAK	**Old Harbor**	**12.83**	**61**		**Pn**	**13 29 28.3**	**-2.6**
KDAK	**Kodiak Island**	**13.32**	**59**	P	**Pn**	**13 29 35.6**	**-1.4**
	12nm,0.3s,baz=277,slow=3.5,SNR=46						
KDAK				S	**S**	**13 32 04.8**	**-0.5**
	0.9nm,0.3s,baz=312,slow=11,SNR=6.5						
KDAK	**Kodiak Island**	**13.32**	**59**	P	**Pn**	**13 29 34.8**	**-2.2**
TTA	**Tatalina**	**14.04**	**36**	P	**P**	**13 29 47.6**	**-0.2**
TTA	**Tatalina**	**14.04**	**36**		**P**	**13 29 47.6**	**-0.2**
RSD	**Redoubt South**	**14.09**	**48**		**Pn**	**13 29 46.1**	**-0.7**
HOM	**Homer**	**14.32**	**52**	Pn	**Pn**	**13 29 50.2**	**-0.6**
CNPM	**China Poot**	**14.47**	**53**		**Pn**	**13 29 51.1**	**-0.2**
BRLK	**Bradley Lake**	**14.71**	**52**		**Pn**	**13 29 54.5**	**+0.2**
SKT	**Skwentna**	**15.28**	**44**	P	**P**	**13 30 04.3**	**+2.8**
SUA	**Susitna One**	**15.40**	**46**	P	**P**	**13 30 03.1**	**+0.3**
SUA				IAmb	IAmb	13 30 06.1	
	comp=Z,29nm,0.8s						
PPLA	**Purkeypile**	**15.46**	**40**	P	**P**	**13 30 06.1**	**+2.5**
SEW	**Seward**	**15.51**	**52**	P	**Pn**	**13 30 03.4**	**-0.4**
RC01	**Rabbit Creek A**	**15.70**	**48**	P	**Pn**	**13 30 06.7**	**+0.5**
RC01				IAmb	IAmb	13 30 14.7	
	comp=Z,26nm,1.0s						
PMR	**Palmer**	**16.16**	**47**	P	**Pn**	**13 30 11.5**	**-0.2**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PMR	**Palmer**	**16.16**	**47**		**Pn**	**13 30 11.5**	**-0.2**
PMR				IAmb	IAmb	13 30 31.1	
	comp=Z,8.4nm,0.6s						
KTH	**Kantishna Hill**	**16.29**	**39**	P	**Pn**	**13 30 15.2**	**+1.9**
RDOG	**Red Dog Mine**	**16.31**	**15**	P	**Pn**	**13 30 15.6**	**+2.1**
RDOG				IAmb	IAmb	13 30 23.3	
	comp=Z,9.8nm,0.7s						
GHO	**Glory Hole Cre**	**16.32**	**46**	P	**Pn**	**13 30 13.2**	**-0.5**
KNK	**Knik Glacier**	**16.39**	**48**	P	**Pn**	**13 30 14.1**	**-0.5**
TRF	**Thorofare Moun**	**16.48**	**40**	P	**Pn**	**13 30 16.6**	**+0.9**
BPAW	**Bear Paw Mtn.**	**16.56**	**37**	P	**Pn**	**13 30 18.1**	**+1.7**
SML	**Sawmill**	**16.59**	**47**	P	**P**	**13 30 16.0**	**0.0**
SML				IAmb	IAmb	13 30 18.9	
	comp=Z,41nm,1.1s						
GLI	**Glacier Island**	**16.85**	**50**		**P**	**13 30 18.6**	**-0.1**
GLI				IAmb	IAmb	13 30 35.9	
	comp=Z,70nm,1.2s						
PETK	**Petropavlovsk-**	**16.88**	**283**	P	**Pn**	**13 30 20.8**	**+0.4**
PETK	**Petropavlovsk-**	**16.88**	**283**	P	**P**	**13 30 17.6**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=88,slow=16,SNR=27						
PETK	**Petropavlovsk-**	**16.88**	**283**	P	**Pn**	**13 30 20.8**	**+0.4**
RND	**Reindeer**	**17.03**	**41**	P	**Pn**	**13 30 21.8**	**-0.4**
RND				pmax	pmax		
	comp=Z,104nm,0.6s						
RND	**Reindeer**	**17.03**	**41**	P	**Pn**	**13 30 21.8**	**-0.4**
SCM	**Sheep Creek Mo**	**17.05**	**47**	P	**P**	**13 30 20.7**	**-0.3**
SCM				pmax	pmax		
	comp=Z,42nm,0.7s						
SCM	**Sheep Creek Mo**	**17.05**	**47**	P	**P**	**13 30 20.7**	**-0.3**
FID	**Port Fidalgo**	**17.11**	**51**	P	**P**	**13 30 21.8**	**+0.3**
MCK	**McKinley**	**17.15**	**40**	P	**Pn**	**13 30 23.1**	**-0.4**
MCK				pmax	pmax		
	comp=Z,70nm,0.7s						
MCK	**McKinley**	**17.15**	**40**	P	**Pn**	**13 30 23.1**	**-0.4**
BWN	**Browne**	**17.16**	**38**	P	**Pn**	**13 30 23.7**	**+0.1**
MLY	**Manley**	**17.16**	**35**	P	**Pn**	**13 30 24.3**	**+0.7**
MLY				IAmb	IAmb	13 30 25.1	
	comp=Z,32nm,0.8s						
EYAK	**Cordova Ski Ar**	**17.40**	**52**	P	**P**	**13 30 24.8**	**+0.1**
EYAK				IAmb	IAmb	13 30 41.4	
	comp=Z,54nm,1.2s						
DHY	**Denali Highway**	**17.49**	**43**	P	**Pn**	**13 30 26.9**	**-0.7**
WRH	**Wood River Hil**	**17.83**	**39**	P	**P**	**13 30 29.4**	**0.0**
BILL	**Bilibino**	**17.98**	**336**	*i* P	**Pn**	**13 30 32.5**	**-0.6**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MDM	**Murphy Dome**	**18.02**	**37**	P	**Pn**	**13 30 32.2**	**-1.5**
CCB	**Clear Creek Bu**	**18.03**	**38**	P	**P**	**13 30 31.3**	**-0.2**
TCOL	**CIGO, UAF Yank**	**18.12**	**38**	P	**Pn**	**13 30 34.1**	**-0.6**
	baz=241,SNR=13						
COLA	**College**	**18.12**	**38**	*ce*P	**Pn**	**13 30 33.2**	**-1.6**
COLA	**College**	**18.12**	**38**	P	**Pn**	**13 30 33.4**	**-1.4**
HDA	**Harding Lake**	**18.24**	**40**	P	**P**	**13 30 33.7**	**-0.2**
HDA	**Harding Lake**	**18.24**	**40**	P	**P**	**13 30 33.3**	**-0.6**
	baz=243,SNR=48						
PAX	**Paxson**	**18.26**	**45**	P	**Pn**	**13 30 35.7**	**-0.9**
PAX				pmax	pmax		
	comp=Z,39nm,0.5s						
PAX	**Paxson**	**18.26**	**45**	P	**Pn**	**13 30 35.7**	**-0.9**
POKR	**Poker Flat Res**	**18.39**	**37**	P	**P**	**13 30 35.4**	**-0.1**
	baz=241,SNR=13						
IL31		**18.43**	**39**	P	**P**	**13 30 35.1**	**-0.7**
ILAR	**Eielson Array**	**18.43**	**39**	P	**P**	**13 30 35.0**	**-0.9**
	comp=Z,2.4nm,0.3s,baz=229,slow=9.6,SNR=108						
ILAR				S	**S**	**13 33 54.5**	**-1.0**
	comp=Z,0.0nm,0.3s,baz=206,slow=18,SNR=3.2						
ILAR				ScP	**ScP**	**13 38 11.4**	**-1.5**
	comp=Z,0.0nm,0.3s,baz=294,slow=4.0,SNR=4.1						
ILAR	**Eielson Array**	**18.43**	**39**	P	**P**	**13 30 35.2**	**-0.7**
GLB	**Gilahina Butte**	**18.54**	**50**	P	**P**	**13 30 36.4**	**-0.7**
GLB				IAmb	IAmb	13 30 41.3	
	comp=Z,28nm,1.0s						
VRDI	**Verde Repeater**	**18.65**	**51**	P	**P**	**13 30 37.5**	**-1.1**
VRDI				IAmb	IAmb	13 30 56.9	
	comp=Z,46nm,1.3s						
COLD	**Coldfoot**	**18.67**	**30**	P	**Pn**	**13 30 40.0**	**-1.2**
COLD				IAmb	IAmb	13 30 46.3	
	comp=Z,11nm,0.8s						
RIDG	**Independent Ri**	**18.80**	**43**	P	**P**	**13 30 40.6**	**+0.6**
MCARA	**McCarthy VSAT**	**18.89**	**50**	P	**P**	**13 30 40.7**	**-0.2**
MENT	**Mentasta**	**19.00**	**46**	P	**P**	**13 30 43.0**	**+0.9**
MENT				IAmb	IAmb	13 30 50.1	
	comp=Z,20nm,0.7s						
DOT	**Dot Lake**	**19.09**	**43**	P	**P**	**13 30 43.5**	**+0.4**
SCRK	**Sand Creek**	**19.25**	**42**	P	**P**	**13 30 45.2**	**+0.4**
PRP	**Porcupine Dome**	**19.29**	**37**	P	**P**	**13 30 43.5**	**-1.8**
PRP				IAmb	IAmb	13 31 02.8	
	comp=Z,12nm,0.6s						
FYU	**Fort Yukon**	**19.90**	**35**		**P**	**13 30 48.2**	**-3.5**
FYU				IAmb	IAmb	13 30 57.5	
	comp=Z,28nm,1.2s						
SEY	**Seymchan**	**20.25**	**313**	*e*P	**P**	**13 30 56.6**	**+1.2**
SEY	**Seymchan**	**20.25**	**313**	P	**P**	**13 30 53.7**	**-1.6**
	comp=Z,1.4nm,0.8s,baz=144,slow=17,SNR=3.9						
EGAK	**Eagle**	**20.68**	**41**	P	**P**	**13 31 00.6**	**+0.6**
EGAK				IAmb	IAmb	13 31 04.3	
	comp=Z,24nm,0.8s						
DAWY	**Dawson**	**21.19**	**44**	P	**P**	**13 31 05.9**	**+0.4**
EPYK	**Eagle Plains**	**22.95**	**39**	P	**P**	**13 31 22.1**	**-0.1**
EPYK				IAmb	IAmb	13 31 24.2	
	comp=Z,23nm,0.8s						
EPYK	**Eagle Plains**	**22.95**	**39**	P	**P**	**13 31 22.5**	**+0.3**
	baz=252						
INK	**Inuvik**	**24.73**	**35**	P	**P**	**13 31 38.5**	**+0.2**
	comp=Z,5.7nm,0.3s,baz=232,slow=7.2,SNR=85						
INK				PcP	**PcP**	**13 35 08.8**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=207,slow=4.5,SNR=3.3						
INK	**Inuvik**	**24.73**	**35**	P	**P**	**13 31 38.6**	**+0.3**
INK				IAmb	IAmb	13 31 40.2	
	comp=Z,21nm,1.4s						
BBB	**Bella Bella**	**27.75**	**72**	P	**P**	**13 32 06.5**	**+1.0**
	comp=Z,15nm,0.9s,baz=265,slow=11,SNR=2.9						
YKA	**Yellowknife Ar**	**32.24**	**49**	P	**P**	**13 32 44.8**	**-0.2**
	comp=Z,1.9nm,0.7s,baz=275,slow=9.1,SNR=37						
YKA				PP	**PP**	**13 34 02.5**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=276,slow=11,SNR=6.0						
YKA				PcP	**PcP**	**13 35 28.4**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=286,slow=3.1,SNR=6.9						
YKA				ScP	**ScP**	**13 38 51.6**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=285,slow=3.4,SNR=8.0						
D03D	**Eldon**	**32.62**	**78**	P	**P**	**13 32 50.7**	**+2.3**
	baz=299						
B05A	**Bryant**	**32.87**	**76**	P	**P**	**13 32 52.4**	**+2.0**
	baz=298,SNR=5.8						
E04D	**Cinebar**	**33.41**	**79**	P	**P**	**13 32 57.5**	**+2.3**
	baz=300						
LON	**Longmire**	**33.77**	**79**	P	**P**	**13 32 59.6**	**+1.2**
LON				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LON	**Longmire**	**33.77**	**79**	P	**P**	**13 32 59.6**	**+1.2**
LTY	**Liberty**	**34.19**	**77**	P	**P**	**13 33 03.3**	**+1.2**
H04D	**Lebanon**	**34.36**	**83**	P	**P**	**13 33 06.0**	**+2.5**
	baz=303						
B08A	**Colville Reser**	**34.45**	**75**	P	**P**	**13 33 05.4**	**+1.2**
B08A				IAmb	IAmb	13 33 06.4	
	comp=Z,16nm,0.7s						
H04A	**Detroit Lake**	**34.61**	**82**	P	**P**	**13 33 07.7**	**+2.1**
H04A				IAmb	IAmb	13 33 08.4	
	comp=Z,9.3nm,0.7s						
G05D	**Wamic, OR**	**34.84**	**81**	P	**P**	**13 33 09.7**	**+2.1**
	baz=302						
I04A	**Tendick Farm,**	**34.96**	**84**	P	**P**	**13 33 10.9**	**+2.3**
	baz=304						
E07A	**Sunnyside**	**35.03**	**78**	P	**P**	**13 33 10.9**	**+1.7**
E07A				IAmb	IAmb	13 33 11.1	
	comp=Z,4.7nm,0.6s						
L02E	**Cave Junction**	**35.16**	**87**	P	**P**	**13 33 12.9**	**+2.6**
	baz=306						
HAWA	**Hanford**	**35.30**	**78**	P	**P**	**13 33 12.6**	**+1.1**
HAWA				IAmb	IAmb	13 33 13.4	
	comp=Z,9.1nm,0.6s						
I05D	**Terrebonne, OR**	**35.31**	**82**	P	**P**	**13 33 13.7**	**+2.1**
	baz=303						
C09A	**Chrisman Ranch**	**35.34**	**75**	P	**P**	**13 33 12.3**	**+0.5**
C09A				IAmb	IAmb	13 33 13.6	
	comp=Z,9.7nm,0.6s						
J04D	**Umpqua Nationa**	**35.45**	**84**	P	**P**	**13 33 15.4**	**+2.5**
	baz=304						
NEW	**Newport**	**35.79**	**74**	P	**P**	**13 33 16.8**	**+1.2**
NEW				pmax	pmax		
	comp=Z,18nm,0.6s						
NEW	**Newport**	**35.79**	**74**	P	**P**	**13 33 16.8**	**+1.2**
NEW				IAmb	IAmb	13 33 17.3	
	comp=Z,18nm,0.6s						
NEW	**Newport**	**35.79**	**74**	P	**P**	**13 33 16.7**	**+1.0**
	baz=299,SNR=25						
L04D	**Klamath Falls**	**35.91**	**86**	P	**P**	**13 33 19.1**	**+2.3**
	baz=306						
YBH	**Yreka Blue Hor**	**35.95**	**87**	P	**P**	**13 33 19.3**	**+2.2**
YBH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YBH	**Yreka Blue Hor**	**35.95**	**87**	P	**P**	**13 33 19.2**	**+2.2**
J05D	**Fort Rock, OR**	**35.95**	**83**	P	**P**	**13 33 19.6**	**+2.4**
	baz=304,SNR=6.9						
H11N2	**WAKE ISLAND Hy**	**36.05**	**211**	T	T	14 10 06.3	
	baz=18,slow=76,SNR=24						
H11N3	**WAKE ISLAND Hy**	**36.05**	**211**	T	T	14 10 14.5	
	baz=18,slow=76,SNR=21						
M02C	**Callahan**	**36.06**	**87**	P	**P**	**13 33 21.0**	**+3.0**
	baz=306						
H11N1	**WAKE ISLAND Hy**	**36.06**	**211**	T	T	14 10 15.1	
	baz=18,slow=76,SNR=16						
E09A	**Wood Farm, Sta**	**36.06**	**77**	P	**P**	**13 33 17.7**	**-0.3**
N02D	**Trinity Center**	**36.40**	**88**	P	**P**	**13 33 23.9**	**+3.0**
	baz=307						
M04C	**Macdoel**	**36.45**	**86**	P	**P**	**13 33 23.9**	**+2.5**
	baz=306						
K05A	**Summer Lake**	**36.47**	**84**	P	**P**	**13 33 23.8**	**+2.1**
I07A	**Izee**	**36.55**	**81**	P	**P**	**13 33 23.0**	**+0.8**
WDC	**Whiskeytown Da**	**36.73**	**88**	P	**P**	**13 33 25.3**	**+1.6**
WDC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WDC	**Whiskeytown Da**	**36.73**	**88**	P	**P**	**13 33 25.2**	**+1.6**
WDC				IAmb	IAmb	13 33 26.9	
	comp=Z,6.2nm,0.9s						
O02D	**Mt. Diablo Mer**	**36.83**	**89**	P	**P**	**13 33 27.3**	**+2.8**
	baz=308						
F10A	**Beach Ranch, E**	**36.89**	**77**	P	**P**	**13 33 24.6**	**-0.5**
H11S1	**WAKE ISLAND Hy**	**37.25**	**211**	T	T	14 11 40.9	
	baz=17,slow=76,SNR=15						
WALA	**Waterton Lakes**	**37.26**	**71**	P	**P**	**13 33 28.9**	**+0.7**
WALA				IAmb	IAmb	13 33 29.9	
	comp=Z,8.0nm,1.1s						
H11S2	**WAKE ISLAND Hy**	**37.27**	**211**	T	T	14 11 41.4	
	baz=17,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**37.27**	**211**	T	T	14 11 41.5	
	baz=17,slow=76,SNR=9.6						
MOD	**Modoc Plateau**	**37.31**	**85**	P	**P**	**13 33 30.7**	**+2.0**
MOD				IAmb	IAmb	13 33 31.5	
	comp=Z,6.1nm,0.7s						
O03E	**Paynes Creek**	**37.35**	**88**	P	**P**	**13 33 30.7**	**+1.7**
	baz=308,SNR=7.1						
BMO	**Blue Mountains**	**37.44**	**79**	P	**P**	**13 33 30.5**	**+0.8**
BMO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BMO	**Blue Mountains**	**37.44**	**79**	P	**P**	**13 33 30.5**	**+0.8**
J08A	**Circle Bar Ran**	**37.58**	**81**	P	**P**	**13 33 31.2**	**+0.4**
J08A				IAmb	IAmb	13 33 32.8	
	comp=Z,4.6nm,0.7s						
JTMT	**Jette**	**37.70**	**73**	P	**P**	**13 33 32.8**	**+0.9**
JTMT				IAmb	IAmb	13 33 33.1	
	comp=Z,6.5nm,0.6s						
ORV	**Oroville**	**37.99**	**89**	P	**P**	**13 33 33.6**	**-0.6**
ORV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ORV	**Oroville**	**37.99**	**89**	P	**P**	**13 33 33.6**	**-0.6**
WVOR	**Wild Horse Val**	**38.01**	**83**	P	**P**	**13 33 34.9**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WVOR	**Wild Horse Val**	**38.01**	**83**	P	**P**	**13 33 34.9**	**+0.4**
MSO	**Missoula**	**38.38**	**74**	P	**P**	**13 33 38.0**	**+0.5**
MSO				IAmb	IAmb	13 33 38.8	
	comp=Z,9.4nm,0.6s						
MSO	**Missoula**	**38.38**	**74**	P	**P**	**13 33 38.1**	**+0.7**
	baz=302,SNR=18						
BEKR	**Beckworth**	**38.49**	**87**	P	**P**	**13 33 40.3**	**+1.7**
BEKR				IAmb	IAmb	13 33 40.7	
	comp=Z,4.8nm,0.5s						
AFDM	**Forest Hills D**	**38.69**	**89**	P	**P**	**13 33 41.9**	**+1.9**
RUBR	**Rubicon Trail**	**39.12**	**88**	P	**P**	**13 33 46.1**	**+2.3**
RUBR				IAmb	IAmb	13 33 51.4	
	comp=Z,6.0nm,0.6s						
PAHR	**Pah Rah Range**	**39.18**	**87**	P	**P**	**13 33 45.8**	**+1.5**
PAHR				IAmb	IAmb	13 33 46.9	
	comp=Z,8.5nm,0.8s						
VCNR	**Virginia City**	**39.28**	**88**	P	**P**	**13 33 47.3**	**+2.2**
VCNR				IAmb	IAmb	13 33 48.1	
	comp=Z,9.1nm,0.7s						
PNTR	**Pine Nut**	**39.44**	**88**	P	**P**	**13 33 48.7**	**+2.2**
PNTR				IAmb	IAmb	13 33 49.5	
	comp=Z,24nm,0.9s						
CMB	**Columbia Colle**	**39.62**	**90**	P	**P**	**13 33 48.8**	**+1.0**
CMB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CMB	**Columbia Colle**	**39.62**	**90**	P	**P**	**13 33 48.8**	**+1.0**
YERR	**Yerington**	**39.72**	**88**	P	**P**	**13 33 50.8**	**+2.0**
YERR				IAmb	IAmb	13 33 51.6	
	comp=Z,9.4nm,1.0s						
WAKR	**Walker**	**39.90**	**88**	P	**P**	**13 33 52.7**	**+2.4**
WAKR				IAmb	IAmb	13 33 53.0	
	comp=Z,9.7nm,0.5s						
MCMT	**McKenzie Canyo**	**40.10**	**76**	P	**P**	**13 33 52.7**	**+0.7**
EGMT	**Eagleton**	**40.17**	**70**	P	**P**	**13 33 52.3**	**0.0**
EGMT	**Eagleton**	**40.17**	**70**	P	**P**	**13 33 53.1**	**+0.9**
	baz=302,SNR=5.9						
KVN	**Kaiserville**	**40.37**	**87**	P	**P**	**13 33 54.4**	**+0.3**
KVN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KVN	**Kaiserville**	**40.37**	**87**	P	**P**	**13 33 54.4**	**+0.3**
RYN	**Ryan**	**40.38**	**88**	P	**P**	**13 33 54.8**

LRMC	**Laurel Mtn Rad**	**42.93**	**90**	P		**P**		**13 34 16.1**	**+1.2**
	baz=312								
FCC	**Fort Churchill**	**42.98**	**49**	P		**P**		**13 34 14.0**	**-0.7**
FCC				pmax		pmax			
	comp=Z,4.0nm,0.7s								
FCC	**Fort Churchill**	**42.98**	**49**	P		**P**		**13 34 14.0**	**-0.7**
EDW2	**Edwards Air Fo**	**43.14**	**91**	P		**P**		**13 34 17.8**	**+1.4**
	baz=313								
BW06	**Boulder Array**	**43.24**	**76**	P		**P**		**13 34 17.7**	**+0.4**
BW06				IAmb		IAmb		13 34 18.8	
	comp=Z,10nm,0.8s								
BW06	**Boulder Array**	**43.24**	**76**	P		**P**		**13 34 18.1**	**+0.7**
	baz=307,SNR=18								
PD31	**Pinedale Array**	**43.24**	**76**	P		**P**		**13 34 17.8**	**+0.4**
PD31				IAmb		IAmb		13 34 18.8	
	comp=Z,9.1nm,0.8s								
PDAR	**Pinedale Array**	**43.24**	**76**	P		**P**		**13 34 18.1**	**+0.6**
	comp=Z,11nm,0.7s,baz=309,slow=3.6,SNR=123								
PDAR				PcP		**PP**		**13 36 02.4**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=187,slow=0.7,SNR=3.1								
PDAR				ScP		**ScP**		**13 39 35.0**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=155,slow=0.4,SNR=3.8								
PDAR	**Pinedale Array**	**43.24**	**76**	P		**P**		**13 34 17.9**	**+0.6**
PSUT	**Pine Spring**	**43.27**	**84**	P		**P**		**13 34 19.1**	**+1.4**
NLU	**North Lily Min**	**43.45**	**81**	P		**P**		**13 34 19.7**	**+0.7**
SHOC	**Shoshone, Teco**	**43.51**	**89**	P		**P**		**13 34 21.0**	**+1.7**
	baz=312,SNR=8.1								
GSC	**Goldstone, Bar**	**43.58**	**90**	P		**P**		**13 34 21.8**	**+1.8**
GSC				pmax		pmax			
	comp=Z,10.0nm,0.9s								
GSC	**Goldstone, Bar**	**43.58**	**90**	P		**P**		**13 34 21.8**	**+1.8**
GSC				IAmb		IAmb		13 34 22.4	
	comp=Z,10nm,0.9s								
GSC	**Goldstone, Bar**	**43.58**	**90**	P		**P**		**13 34 21.7**	**+1.7**
	baz=312,SNR=16								
BFSC	**Mount Baldy Ra**	**43.78**	**92**	P		**P**		**13 34 23.2**	**+1.5**
	baz=313,SNR=6.7								
CIS	**Catalina Islan**	**43.89**	**93**	P		**P**		**13 34 23.7**	**+1.3**
	baz=314								
TUQ	**Turquoise Moun**	**44.03**	**89**	P		**P**		**13 34 25.3**	**+1.7**
	baz=312								
HEC	**Hector,Ludlow**	**44.19**	**90**	P		**P**		**13 34 26.3**	**+1.5**
	baz=313								
BBRC	**Big Bear Solar**	**44.21**	**91**	P		**P**		**13 34 26.9**	**+1.8**
	baz=313								
TMUT	**Trail Mountain**	**44.38**	**81**	P		**P**		**13 34 28.2**	**+1.6**
GMRC	**Granite Mounta**	**44.63**	**90**	P		**P**		**13 34 29.9**	**+1.5**
	baz=313,SNR=6.6								
KNB	**Kanab**	**44.87**	**85**	P		**P**		**13 34 32.4**	**+2.1**
KNB				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KNB	**Kanab**	**44.87**	**85**	P		**P**		**13 34 32.4**	**+2.1**
SRU	**San Rafael Swe**	**44.91**	**81**	P		**P**		**13 34 31.8**	**+1.2**
SRU				pmax		pmax			
	comp=Z,4.0nm,0.6s								
SRU	**San Rafael Swe**	**44.91**	**81**	P		**P**		**13 34 31.8**	**+1.2**
PFO	**Pinyon Flats O**	**44.93**	**91**	*i*P		**P**		**13 34 31.5**	**+0.7**
PFO				pmax		pmax			
	comp=Z,2.0nm,0.8s								
PFO	**Pinyon Flats O**	**44.93**	**91**	P		**P**		**13 34 31.7**	**+0.9**
	baz=314								
TPFO	**Pinon Flats**	**44.94**	**91**	P		**P**		**13 34 31.8**	**+1.0**
	baz=314								
BELC	**Belle Mtn. Jos**	**44.95**	**91**	P		**P**		**13 34 32.0**	**+1.1**
	baz=313								
K22A	**Casper**	**45.09**	**75**	P		**P**		**13 34 32.5**	**+0.5**
	baz=308								
IRM	**Iron Mountain**	**45.36**	**90**	P		**P**		**13 34 35.4**	**+1.3**
	baz=313								
MONP2	**Monument Peak**	**45.45**	**92**	P		**P**		**13 34 36.1**	**+1.1**
	baz=314								
BC3	**Big Chuckawall**	**45.52**	**91**	P		**P**		**13 34 36.3**	**+1.0**
	baz=314								
U15A	**North Rim**	**45.58**	**85**	P		**P**		**13 34 37.8**	**+1.8**
U15A				IAmb		IAmb		13 34 38.5	
	comp=Z,9.2nm,0.6s								
O20A	**White River Ci**	**45.63**	**78**	P		**P**		**13 34 36.6**	**+0.3**
O20A				IAmb		IAmb		13 34 37.2	
	comp=Z,9.7nm,0.6s								
O20A	**White River Ci**	**45.63**	**78**	P		**P**		**13 34 36.9**	**+0.7**
	baz=309,SNR=11								
RSSD	**Black Hills**	**45.65**	**71**	P		**P**		**13 34 36.2**	**-0.2**
RSSD				pmax		pmax			
	comp=Z,4.0nm,0.5s								
RSSD	**Black Hills**	**45.65**	**71**	P		**P**		**13 34 36.2**	**-0.2**
RSSD	**Black Hills**	**45.65**	**71**	P		**P**		**13 34 36.3**	**-0.1**
	baz=307								
IKP	**In-Ko-Pah, Jac**	**45.81**	**92**	P		**P**		**13 34 38.9**	**+1.3**
	baz=314								
Y12C	**Blythe**	**46.02**	**90**	P		**P**		**13 34 40.2**	**+1.1**
Y12C				IAmb		IAmb		13 34 41.2	
	comp=Z,8.5nm,0.8s								
Y12C	**Blythe**	**46.02**	**90**	P		**P**		**13 34 40.4**	**+1.3**
	baz=313,SNR=7.2								
N23A	**Red Feather La**	**46.52**	**76**	P		**P**		**13 34 43.9**	**+0.6**
	baz=309								
ULM	**Lac du Bonnet**	**46.58**	**60**	P		**P**		**13 34 42.2**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=308,slow=7.4,SNR=7.9								
ULM				PcP		**PcP**		**13 36 13.1**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=284,slow=4.2,SNR=6.0								
WUAZ	**Wupatki**	**46.74**	**86**	P		**P**		**13 34 46.6**	**+1.6**
WUAZ	**Wupatki**	**46.74**	**86**	P		**P**		**13 34 46.5**	**+1.6**
	baz=312,SNR=9.4								
ISCO	**Idaho Springs**	**47.41**	**77**	P		**P**		**13 34 51.9**	**+1.8**
	baz=310								
X16A	**Lo Mia Camp, P**	**47.44**	**87**	P		**P**		**13 34 51.0**	**+0.7**
S22A	**4UR Ranch, Cre**	**48.01**	**80**	P		**P**		**13 34 56.4**	**+1.6**
	baz=311								
X18A	**Snowflake**	**48.27**	**85**	P		**P**		**13 34 57.5**	**+0.8**
X18A				IAmb		IAmb		13 34 59.1	
	comp=Z,6.0nm,0.6s								
214A	**Organ Pipe Nat**	**48.30**	**90**	P		**P**		**13 34 58.2**	**+1.4**
214A	**Organ Pipe Nat**	**48.30**	**90**	P		**P**		**13 34 58.0**	**+1.2**
	baz=315,SNR=5.0								
SDCO	**Great Sand Dun**	**48.80**	**79**	P		**P**		**13 35 01.9**	**+1.0**
SDCO	**Great Sand Dun**	**48.80**	**79**	P		**P**		**13 35 01.9**	**+1.0**
	baz=311,SNR=7.7								
TUC	**Tucson**	**49.28**	**88**	P		**P**		**13 35 04.6**	**+0.3**
TUC				pmax		pmax			
	comp=Z,6.0nm,0.8s								
TUC	**Tucson**	**49.28**	**88**	P		**P**		**13 35 04.6**	**+0.3**
TUC	**Tucson**	**49.28**	**88**	P		**P**		**13 35 05.7**	**+1.4**
	baz=314								
T25A	**Trinidad**	**49.85**	**79**	P		**P**		**13 35 10.2**	**+1.5**
T25A				IAmb		IAmb		13 35 10.8	
	comp=Z,10nm,0.9s								
T25A	**Trinidad**	**49.85**	**79**	P		**P**		**13 35 10.1**	**+1.3**
	baz=312,SNR=8.4								
HHC	**Hu-ho-hao-te**	**49.99**	**288**	*e*P		**P**		**13 35 11.4**	**+1.8**
HHC				pmax		pmax			
	comp=Z,6.0nm,0.9s								
HHC				pmax		pmax			
	comp=Z,50nm,5.2s								
ECSD	**EROS Data Cent**	**50.11**	**67**	P		**P**		**13 35 09.2**	**-1.1**
	baz=310								
EYMN	**Ely**	**50.27**	**60**	P		**P**		**13 35 11.0**	**-0.4**
	baz=309								
121A	**Cookes Peak, D**	**50.95**	**86**	P		**P**		**13 35 18.3**	**+1.4**
	baz=314								
CBKS	**Cedar Bluff**	**51.51**	**74**	P		**P**		**13 35 21.1**	**+0.3**
CBKS				pmax		pmax			
	comp=Z,28nm,0.7s								
CBKS	**Cedar Bluff**	**51.51**	**74**	P		**P**		**13 35 21.1**	**+0.3**
CBKS	**Cedar Bluff**	**51.51**	**74**	P		**P**		**13 35 21.4**	**+0.6**
	baz=312,SNR=7.3								
MNTX	**Cornudas Mount**	**52.99**	**85**	P		**P**		**13 35 32.9**	**+1.1**
MNTX				IAmb		IAmb		13 35 33.9	
	comp=Z,5.7nm,0.8s								
MNTX	**Cornudas Mount**	**52.99**	**85**	P		**P**		**13 35 33.1**	**+1.3**
	baz=315,SNR=12								
WMOK	**Wichita Mounta**	**54.83**	**77**	P		**P**		**13 35 45.2**	**+0.1**
WMOK				pmax		pmax			
	comp=Z,5.0nm,0.9s								
WMOK	**Wichita Mounta**	**54.83**	**77**	P		**P**		**13 35 45.2**	**+0.1**
WMOK	**Wichita Mounta**	**54.83**	**77**	P		**P**		**13 35 45.5**	**+0.4**
	baz=314,SNR=5.1								
D47A	**Chapleau**	**55.18**	**56**	P		**P**		**13 35 46.5**	**-0.9**
	baz=312								
W35A	**Tecumseh**	**55.67**	**76**	P		**P**		**13 35 50.7**	**-0.3**
TX31	**Lajitas Ar. Si**	**55.70**	**85**	P		**P**		**13 35 51.9**	**+0.4**
TX31				IAmb		IAmb		13 35 53.0	
	comp=Z,5.9nm,1.0s								
TX32	**Lajitas Array**	**55.70**	**85**	P		**P**		**13 35 52.1**	**+0.6**
TX32				IAmb		IAmb		13 35 53.0	
	comp=Z,6.0nm,1.0s								
TXAR	**Lajitas Array**	**55.70**	**85**	P		**P**		**13 35 52.2**	**+0.7**
	comp=Z,3.7nm,0.8s,baz=299,slow=4.8,SNR=44								
TXAR				PcP		**PcP**		**13 36 49.3**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=250,slow=1.2,SNR=8.8								
TXAR				ScP		**ScP**		**13 40 28.0**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=287,slow=2.9,SNR=9.3								
CCM	**Cathedral Cave**	**56.92**	**69**	P		**P**		**13 35 58.4**	**-1.4**
	baz=314								
SCHQ	**Scheffer ville**	**57.17**	**41**	P		**P**		**13 36 00.8**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=355,slow=6.5,SNR=6.0								
U40A	**Yellville**	**57.18**	**72**			**P**		**13 36 00.2**	**-1.5**
U40A	**Yellville**	**57.18**	**72**	P		**P**		**13 36 00.5**	**-1.2**
	baz=315,SNR=8.9								
ARCES	**ARCESS Array B**	**57.20**	**352**	P		**P**		**13 36 00.5**	**-0.7**
	comp=Z,3.4nm,1.0s,baz=21,slow=6.2,SNR=6.0								
ARCES				PcP		**PcP**		**13 36 53.1**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=13,slow=4.5,SNR=9.1								
W39A	**Magazine**	**57.45**	**73**	P		**P**		**13 36 03.2**	**-0.4**
	baz=315								
LZH	**Lanzhou**	**57.67**	**288**	⇓P		**P**		**13 36 07.3**	**+2.0**
LZH				pP		pwP		13 36 52.3	-2.0
LZH				sP		sP		13 37 13.5	+2.8
LZH				PP		**PP**		**13 38 18.8**	**+3.7**
LZH				pmax		pmax			
	comp=Z,21nm,1.3s								
LZH				pmax		pmax			
	comp=Z,65nm,5.6s								
MIAR	**Mount Ida**	**58.03**	**74**	P		**P**		**13 36 07.7**	**+0.1**
MIAR				pmax		pmax			
	comp=Z,13nm,0.7s								
MIAR	**Mount Ida**	**58.03**	**74**	P		**P**		**13 36 07.7**	**+0.1**
MIAR				IAmb		IAmb		13 36 08.4	
	comp=Z,13nm,0.7s								
MIAR	**Mount Ida**	**58.03**	**74**	P		**P**		**13 36 07.8**	**+0.2**
	baz=315,SNR=8.3								
W41B	**Gary Mavity, V**	**58.36**	**72**	P		**P**		**13 36 09.2**	**-0.7**
W41B				IAmb		IAmb		13 36 09.6	
	comp=Z,8.9nm,0.6s								
W41B	**Gary Mavity, V**	**58.36**	**72**	P		**P**		**13 36 09.2**	**-0.7**
	baz=315,SNR=5.3								
X40A	**Basin Creek Fa**	**58.50**	**73**	P		**P**		**13 36 10.9**	**+0.1**
	baz=315								
KURK	**Kurchatov**	**60.08**	**315**	⇓*e*P		**P**		**13 36 21.3**	**-0.1**
KURK				pmax		pmax			
	comp=Z,1.0nm,0.9s								
S49A	**Springfield**	**60.46**	**66**	P		**P**		**13 36 23.8**	**-0.4**
	baz=316								
OXF	**Oxford**	**60.47**	**71**	P		**P**		**13 36 24.1**	**-0.2**
OXF				pmax		pmax			
	comp=Z,31nm,0.5s								
OXF	**Oxford**	**60.47**	**71**	P		**P**		**13 36 24.1**	**-0.2**
OXF	**Oxford**	**60.47**	**71**	P		**P**		**13 36 24.0**	**-0.3**
	baz=316								
T49A	**Edmonton**	**60.81**	**66**	P		**P**		**13 36 26.5**	**0.0**
	baz=316								
WMQ	**Urumqi**	**60.92**	**305**	*e*P		**P**		**13 36 29.9**	**+2.6**
WMQ				pmax		pmax			
	comp=Z,7.0nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,110nm,4.1s								
WMQ				LR		LR			
	comp=N,580nm,27.9s								
WMQ				LR		LR			
	comp=E,1μm,29.2s								
WMQ				LR		LR			
	comp=Z,51nm,28.8s								
R51A	**Hillsboro**	**61.03**	**64**	P		**P**		**13 36 27.9**	**-0.1**
	baz=316								
T50A	**Nancy**	**61.25**	**66**	P		**P**		**13 36 29.3**	**-0.3**
	baz=316								
MKAR	**Makanchi Array**	**61.35**	**310**	*i* P		**P**		**13 36 29.1**	**-1.0**
MKAR	**Makanchi Array**	**61.35**	**310**	P		**P**		**13 36 29.5**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=54,slow=6.0,SNR=5.3								
L56A	**Greenwood**	**61.45**	**57**	P		**P**		**13 36 30.1**	**-0.7**
L56A				IAmb		IAmb		13 36 31.7	
	comp=Z,10nm,0.6s								
L56A	**Greenwood**	**61.45**	**57**	P		**P**		**13 36 30.9**	**0.0**
	baz=317								
V49A	**McMinnville**	**61.56**	**68**	P		**P**		**13 36 30.9**	**-0.7**
	baz=316								
W49A	**Belvidere**	**61.83**	**68**	P		**P**		**13 36 33.1**	**-0.3**
	baz=317								
V50A	**Pikevile**	**62.08**	**67**	P		**P**		**13 36 34.6**	**-0.5**
	baz=317								
R54A	**Victor**	**62.52**	**62**	P		**P**		**13 36 38.1**	**0.0**
	baz=317								
ARU	**Arti**	**62.88**	**330**	*c i* P		**P**		**13 36 40.2**	**+0.2**
ARU								13 39 00.0	
ARU				S		**S**		**13 44 54.3**	**+1.2**
ARU				SS		**SS**		**13 49 00.9**	**0.0**
ARU				pmax		pmax			
	comp=Z,5.0nm,0.9s								
LRAL	**Lakeview Retre**	**62.92**	**70**	P		**P**		**13 36 40.0**	**-0.7**
	baz=317								
E64A	**Bridgewater**	**62.98**	**48**	P		**P**		**13 36 39.4**	**-1.4**
	baz=319								
T54A	**Tazewell**	**63.02**	**64**	P		**P**		**13 36 41.6**	**+0.3**
	baz=317								
Z50A	**Ashland**	**63.38**	**70**	P		**P**		**13 36 42.9**	**-0.9**
Z50A	**Ashland**	**63.38**	**70**	P		**P**		**13 36 42.8**	**-0.9**
	baz=317,SNR=6.1								
Y51A	**Rockmart**	**63.39**	**68**	P		**P**		**13 36 42.7**	**-1.1**
	baz=317								
Y53A	**Monroe**	**64.26**	**67**	P		**P**		**13 36 49.1**	**-0.4**
	baz=318								
Z52A	**Williamson**	**64.28**	**69**	P		**P**		**13 36 48.9**	**-0.7**
	baz=318								
X54A	**Belton**	**64.42**	**66**	P		**P**		**13 36 50.5**	**+0.1**
	baz=318								
152A	**Waverly Hall**	**64.49**	**69**	P		**P**		**13 36 49.8**	**-1.2**
	baz=318								
KMSC	**Kings Mountain**	**64.56**	**65**	P		**P**		**13 36 51.3**	**0.0**
	baz=318								
GOGA	**Godfrey**	**64.65**	**68**	P		**P**		**13 36 51.4**	**-0.5**
	baz=318								
Z53A	**Monticello**	**64.69**	**68**	P		**P**		**13 36 51.5**	**-0.7**
	baz=318								
Y54A	**Tignall**	**64.75**	**67**	P		**P**		**13 36 52.1**	**-0.5**
	baz=318								
X55A	**Gracelyn & Ava**	**64.89**	**66**	P		**P**		**13 36 53.3**	**-0.2**
	baz=318								
FINES	**FINESS Array B**	**65.03**	**349**	*i* P		**P**		**13 36 54.0**	**+0.1**
FINES				pmax		pmax			
	comp=Z,2.0nm,0.9s								
FINES	**FINESS Array B**	**65.03**	**349**	P		**P**		**13 36 53.5**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=21,slow=11,SNR=5.1								
FINES				PcP		**PcP**		**13 37 24.8**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=38,slow=5.3,SNR=6.0								
Z54A	**Sparta**	**65.13**	**67**	P		**P**		**13 36 54.5**	**-0.5**
	baz=318								
Y55A	**Saluda**	**65.16**	**66**	P		**P**		**13 36 54.7**	**-0.5**
	baz=318								
KONO	**Kongsberg**	**67.93**	**358**	⇓*e*P		**P**		**13 37 14.3**	**+2.0**
KONO				pmax		pmax			
	comp=Z,38nm,1.6s								
AAK	**Ala-Archa**	**68.10**	**312**	⇓*e*P		**P**		**13 37 14.7**	**+0.8**
AAK				pmax		pmax			
	comp=Z,1.0nm,0.9s								
KSH	**Kashi**	**69.89**	**309**	P		**P**		**13 37 27.3**	**+2.4**
KSH				pmax		pmax			
	comp=Z,300nm,4.3s								
MSVF	**Nonsavu**	**70.48**	**188**	⇓*e*P		**P**		**13 37 28.7**	**+0.2**
MSVF				pmax		pmax			
	comp=Z,7.0nm,1.1s								
KLNR	**Kaliningrad**	**72.36**	**351**	⇑*e*P		**P**		**13 37 39.9**	**+0.6**
KLNR				pmax		pmax			
	comp=Z,73nm,1.2s								
VSR	**Storozhevoye**	**72.67**	**339**	⇓*i*P		**P**		**13 37 40.9**	**-0.3**
VSR				pmax		pmax			
	comp=Z,6.0nm,0.9s								
AKASG	**Malin Array Be**	**75.06**	**345**	P		**P**		**13 37 54.3**	**-0.7**
	comp=Z,1.2nm,0.3s,baz=18,slow=5.9,SNR=5.1								
AKBB	**Malin Array Si**	**75.06**	**345**	⇓*e*P		**P**		**13 37 54.0**	**-1.0**
CLL	**Collm**	**76.16**	**355**	*e*P		**P**		**13 38 01.0**	**-0.2**
CLL	**Collm**	**76.16**	**355**	*e*P		**P**		**13 38 01.0**	**-0.2**
DPC	**Dobruska-Polom**	**76.91**	**353**	*e*P		**P**		**13 38 06.3**	**+0.7**
DPC	**Dobruska-Polom**	**76.91**	**353**	*e*P		**P**		**13 38 06.3**	**+0.7**
KHC	**Kasperske Hory**	**78.30**	**355**	⇑*e*P		**P**		**13 38 13.0**	**-0.3**
KHC				pmax		pmax			
	comp=Z,5.0nm,1.0s								
KHC	**Kasperske Hory**	**78.30**	**355**	*e*P		**P**		**13 38 13.5**	**+0.2**
GERES	**GERESS Array B**	**78.58**	**355**	P		**P**		**13 38 14.7**	**-0.2**
GERES	**GERESS Array B**	**78.58**	**355**	P		**P**		**13 38 14.6**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=18,slow=5.6,SNR=9.5								
GERES	**GERESS Array B**	**78.58**	**355**	P		**P**		**13 38 14.7**	**-0.2**
BUR08	**Bucovina Ar. S**	**78.64**	**347**	P		**P**		**13 38 14.6**	**-0.7**
KBZ	**Khabaz**	**78.73**	**333**	⇑*e*P		**P**		**13 38 15.2**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=57,slow=1.8,SNR=4.5								
BFO	**Black Forest**	**79.29**	**358**	P		**P**		**13 38 19.0**	**+0.3**
BFO				pmax		pmax			
	comp=Z,7.0nm,1.4s								
BFO	**Black Forest**	**79.29**	**358**	P		**P**		**13 38 19.0**	**+0.3**
CONA	**Conrad Observa**	**79.35**	**353**	*i* P		**P**		**13 38 17.2**	**-1.8**
	comp=Z,1.6nm,0.5s								
ECH	**Echery**	**79.43**	**359**	P		**P**		**13 38 19.6**	**+0.2**
ECH				pmax		pmax			
	comp=Z,11nm,1.0s								
ECH	**Echery**	**79.43**	**359**	P		**P**		**13 38 19.6**	**+0.2**
ECH				IAmb		IAmb		13 38 20.9	
	comp=Z,10nm,1.0s								
KBA	**Koelnbreinsper**	**80.36**	**355**	*e*P		**P**		**13 38 25.3**	**+0.7**
	comp=Z,4.7nm,0.5s								
FUORN	**Ofenpass-Fuorn**	**80.95**	**357**	P		**P**		**13 38 27.8**	**-0.1**
FUORN				IAmb		IAmb		13 38 32.4	
	comp=Z,11nm,1.4s								
TIRR	**Tirgusor**	**81.25**	**344**	P		**P**		**13 38 29.8**	**+0.7**
TIRR				pmax		pmax			
	comp=Z,54nm,1.4s								
TIRR	**Tirgusor**	**81.25**	**344**	P		**P**		**13 38 29.8**	**+0.7**
SSB	**Saint Sauveur**	**82.36**	**1**	P		**P**		**13 38 34.0**	**-1.0**
SSB				pmax		pmax			
	comp=Z,13nm,1.3s								
SSB	**Saint Sauveur**	**82.36**	**1**	P		**P**		**13 38 34.0**	**-1.0**
SSB				IAmb		IAmb		13 38 52.7	
	comp=Z,13nm,1.3s								
BNI	**Bardonecchia**	**82.59**	**359**	P		**P**		**13 38 37.2**	**+0.9**
BNI	**Bardonecchia**	**82.59**	**359**	P		**P**		**13 38 37.2**	**+0.9**
BNI				IAmb		IAmb		13 38 39.0	
	comp=Z,3.4nm,0.6s								
DR12	**Loma Pena Alta**	**83.90**	**67**	P		**P**		**13 38 43.2**	**0.0**
NRCA	**Norcia**	**84.60**	**355**	P		**P**		**13 38 47.3**	**+0.9**
NRCA				IAmb		IAmb		13 38 49.8	
	comp=Z,6.8nm,1.0s								
BRTR	**Keskin Array B**	**84.79**	**339**	*i* P		**P**		**13 38 48.0**	**+0.4**
BRTR				pmax		pmax			
	comp=Z,1.0nm,0.6s								
BRTR	**Keskin Array B**	**84.79**	**339**	P		**P**		**13 38 47.9**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=48,slow=2.0,SNR=5.4								
WRA	**Warramunga Arr**	**84.97**	**228**	P		**P**		**13 38 48.0**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=34,slow=5.8,SNR=2.9								
ESDC	**Sonseca Array**	**87.59**	**7**	P		**P**		**13 39 00.5**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=343,slow=4.1,SNR=5.1								
ASAR	**Alice Springs**	**88.42**	**226**	P		**P**		**13 39 05.2**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=26,slow=4.5,SNR=6.6								
ASAR				pP		**pP**		**13 39 52.7**	**-1.0**
	comp=Z,0.7nm,1.0s,baz=15,slow=5.2,SNR=2.9								
PALK	**Pallekele**	**93.26**	**286**	⇑*e*P		**P**		**13 39 26.0**	**-1.8**
PALK				pmax		pmax			
	comp=Z,13nm,1.1s								
BOSA	**Boshof**	**151.91**	**321**	PKPbc		**PKPbc**		**13 46 06.5**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=84,slow=3.1,SNR=4.9								

IDC 18 13:55:07.6±2.1, 0.02S×127.85E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/42, mbtmp3.6/4, Error ellipse: s-maj=200.9km s-min=22.3km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.80**	**163**	P	P	13 59 50.7	0.0
	0.4nm,0.5s,baz=342,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**24.23**	**166**	P	P	14 00 26.4	0.0
	0.4nm,0.7s,baz=344,slow=12,SNR=8.0						
MKAR	**Makanchi Array**	**61.26**	**326**	P	P	14 05 24.8	+0.1
	0.5nm,0.4s,baz=129,slow=8.1,SNR=13						
KURBB	**Kurchatov Arra**	**65.48**	**328**	P	P	14 05 52.5	-0.1
	0.7nm,0.5s,baz=126,slow=6.2,SNR=6.1						

*IDC **18** 13:59:29.9±6.9, 7.18S×155.49E, h55km±57km, mb3.4/7, mb1 3.7/8, mb1mx3.4/37, mbtmp3.7/8, ML1.8/1, Error ellipse: s-maj=54.9km s-min=29.5km az=128.0*

ISC 18 13:59:29.2±1.6, 7.2S±0.3×155.6E±0.2, h50km, n11, σ0.99/9, mb3.5/7, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**8.59**	**255**	P	**Pn**	**14 01 32.6**	**+1.6**
	0.6nm,0.3s,baz=318,slow=16,SNR=3.2						
PMG				S	**Sn**	**14 03 05.2**	**-1.3**
	0.2nm,0.3s,baz=162,slow=20,SNR=1.8						
WRA	**Warramunga Arr**	**24.16**	**236**	P	**P**	**14 04 41.1**	**+0.2**
	1.1nm,0.6s,baz=63,slow=

SRTM				IAML			14 00 55.0	
	comp=E,316nm,0.9s							
SRTM				IAML			14 00 56.0	
	comp=N,289nm,0.5s							
BNGL	**BINGOL**	**0.61**	**333**	*i* P		**Pb**	**14 00 45.0**	**-0.5**
BNGL				*i* S		**Sb**	**14 00 54.5**	**+0.4**
VRTB	**Varto-Mus**	**0.75**	**357**	PG		**Pg**	**14 00 46.9**	**-0.3**
VRTB	**Varto-Mus**	**0.75**	**357**	*i* P		**Pb**	**14 00 47.4**	**-0.4**
VRTB				*i* S		**Sg**	**14 00 57.1**	**+0.1**
BNGB	**Bingl**	**0.87**	**312**	PG		**Pg**	**14 00 49.5**	**-0.3**
BNGB				SG		**Sb**	**14 01 02.0**	**+0.5**
HANI	**Diyarbakir_Han**	**0.87**	**271**	*i* P		**Pg**	**14 00 49.2**	**-0.2**
HANI				*i* S		**Sb**	**14 01 01.8**	**+0.2**
HANI				IAML			14 01 10.0	
	comp=N,61nm,0.7s							
HANI				IAML			14 01 11.0	
	comp=E,67nm,0.8s							
KARO	**Karliova-Bingo**	**0.96**	**338**	PG		**Pg**	**14 00 51.1**	**-0.2**
KARO				SG		**Sb**	**14 01 04.9**	**+0.5**
AKDM	**Akdamar-Van**	**1.16**	**94**	PN		**Pb**	**14 00 54.9**	**+0.1**
AKDM				SN		**Sn**	**14 01 10.8**	**-0.1**
SIRT	**Sirnak**	**1.17**	**141**	PN		**Pg**	**14 00 54.9**	**-0.2**
SIRT				SN		**Sn**	**14 01 11.5**	**+0.5**
MARD	**Mardin**	**1.24**	**208**	*i* P		**Pg**	**14 00 56.2**	**-0.2**
MARD				*i* S		**Sn**	**14 01 12.8**	**+0.1**
MARD				IAML			14 01 15.0	
	comp=E,348nm,0.3s							
MARD				IAML			14 01 16.0	
	comp=N,398nm,0.4s							
MAZI	**Mazidag**	**1.27**	**222**	PN		**Pg**	**14 00 56.7**	**-0.3**
YEDI	**Yedisu-Bingol**	**1.27**	**324**	PN		**Pn**	**14 00 56.5**	**0.0**
YEDI				SN		**Sn**	**14 01 14.5**	**+0.9**

*IDC **18** 14:01:06.8±0.8, 25°.03N×98°.19E, h0km, mb3.8/11, mb1 3.9/12, mb1mx3.7/50, mbtmp3.8/12, ML4.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/30, Error ellipse: s-maj=36.7km s-min=13.7km az=66.0*
*BJI **18** 14:01:07.9±0.0, 25°.00N×97°.81E, h14km, mb3.8/8, ML3.9/8*
*NEIC **18** 14:01:11.6±2.1, 25°.0N±0°.1×98°.27E±0°.09, h43km±16km, mb4.1/8, Error ellipse: s-maj=14.9km s-min=12.3km az=192.0*
*BKK **18** 14:01:19.2±1.3, 24°.N±10°×98°.E±1°.0, h0km, M4.5/6, mb4.9/6, mB4.8/6, MLv4.6/5, Mw(mB)4.1/6*

ISC 18 14:01:09.2±0.6, 25°.07N±0°.06×97°.78E±0°.04, h10km, n47, σ2s10/48, mb4.0/14, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
LKP	**Lekhapani**	**2.84**	**323**	*eP*		**Pb**	**14 01 57.4**	**-2.7**
LKP				*eS*		**Sb**	**14 02 34.9**	**-0.1**
LKP				IAML			14 02 48.2	
	comp=N,238nm,0.6s							
LKP				IAML			14 02 49.4	
	comp=E,273nm,0.6s							
KOHI	**KOHIMA**	**3.38**	**282**	*eP*		**Pb**	**14 02 05.4**	**-4.0**
KOHI				*eS*		**Sb**	**14 02 51.4**	**+0.8**
KOHI				IAML			14 03 24.2	
	comp=E,163nm,0.8s							
KMI	**Kunming**	**4.50**	**88**	Pg		**Pb**	**14 02 29.5**	**+1.0**
KMI				Sg		**Sg**	**14 03 26.4**	**-7.4**
KMI				smax	smax			
	comp=E,120nm,1.0s							
KMI	**Kunming**	**4.50**	**88**	Pn		Pn	14 02 10.1	-7.6
TEZP	**TEZPUR**	**4.74**	**290**	*ex*		**Pn**	**14 02 21.4**	**+0.6**
TEZP				*eS*		**Sb**	**14 03 28.0**	**-1.7**
SHL	**Shillong**	**5.36**	**277**	Pn		Pn	14 02 35.2	+5.8
CHTO	**Chiang Mai**	**6.32**	**170**			**Pn**	**14 02 40.1**	**-2.4**
CMMT	**Chiang Mai**	**6.32**	**170**	P		**Pn**	**14 02 41.8**	**-0.7**
CM31	**Chiang Mai Arr**	**6.67**	**170**			**Pn**	**14 02 46.6**	**-0.7**
CMAR	**Chiang Mai Arr**	**6.67**	**170**	Pn		**Pn**	**14 02 45.1**	**-2.2**
	comp=E,2.3nm,0.3s,baz=346,slow=13,SNR=43							
CMAR				Pg		**Pb**	**14 03 07.3**	**+2.0**
	comp=E,1.3nm,0.3s,baz=355,slow=18,SNR=30							
CMAR				Lg		Lg	14 04 33.3	
	comp=E,0.9nm,0.3s,baz=1.1,slow=14,SNR=5.2							
CMAR	**Chiang Mai Arr**	**6.67**	**170**			**Pn**	**14 02 46.1**	**-1.2**
SLVN	**Son La**	**6.75**	**122**	Pn		Pn	14 02 43.1	-5.4
PBKT	**Sadao Pong**	**8.97**	**160**	Pn		**Pn**	**14 03 19.2**	**+0.3**
TAPN	**Taplejung**	**9.32**	**286**	*eP*		**Pn**	**14 03 24.0**	**0.0**
	comp=E,14nm,0.5s							
ODAN	**Odare**	**9.52**	**283**	*eP*		**Pn**	**14 03 26.5**	**-0.1**
JIRN	**Jiri**	**10.71**	**286**	*eP*		**Pn**	**14 03 42.7**	**-0.3**
GUN	**Gumba**	**11.03**	**287**	*eP*		**Pn**	**14 03 46.2**	**-1.2**
	comp=E,62nm,1.0s							
PKI	**Pulchoki**	**11.37**	**285**	*eP*		**Pn**	**14 03 50.4**	**-1.7**
	comp=E,2.1nm,0.7s							
KKN	**Kakani**	**11.52**	**286**	*eP*		**Pn**	**14 03 53.6**	**-0.5**
DMN	**Daman**	**11.64**	**285**	*eP*		**Pn**	**14 03 54.5**	**-1.3**
UBPT	**Khong Chiam**	**12.12**	**142**	Pn		**Pn**	**14 04 00.2**	**-1.9**
GKN	**Gorkha**	**12.12**	**287**	*eP*		**Pn**	**14 04 00.2**	**-2.0**
	comp=E,13nm,0.5s							
WHN	**Wuhan**	**15.64**	**66**	P		**P**	**14 04 57.3**	**+3.4**
WMQ	**Urumqi**	**20.44**	**339**	*eP*		**P**	**14 05 46.3**	**-0.5**
SONM	**Songino Array**	**23.72**	**15**	P		**P**	**14 06 20.1**	**-1.4**
	comp=E,0.5nm,0.7s,baz=204,slow=9.5,SNR=2.7							
KDJ	**Kajisay**	**24.06**	**320**	P		**P**	**14 06 26.0**	**+1.1**
KDJ				IAmb		IAmb	14 06 30.0	
	comp=E,5.6nm,0.8s							
PALK	**Pallekele**	**24.08**	**226**	P		**P**	**14 06 24.9**	**-0.1**
NRN	**Naryn**	**24.35**	**317**	P		**P**	**14 06 26.6**	**-1.1**
NRN				IAmb		IAmb	14 06 31.3	
	comp=E,4.6nm,0.8s							
MK31	**Makanchi Array**	**24.95**	**334**	P		**P**	**14 06 30.9**	**-1.9**
MKAR	**Makanchi Array**	**24.95**	**334**	P		**P**	**14 06 33.4**	**+0.6**
	comp=E,2.4nm,0.7s,baz=146,slow=9.4,SNR=16							
MKAR	**Makanchi Array**	**24.95**	**334**	P		**P**	**14 06 33.5**	**+0.7**
AAK	**Ala-Archa**	**25.96**	**318**	P		**P**	**14 06 43.6**	**+1.5**
	comp=Z,3.3nm,0.7s,baz=134,slow=9.1,SNR=20							
AAK	**Ala-Archa**	**25.96**	**318**	P		**P**	**14 06 45.2**	**+3.1**
AAK				IAmb		IAmb	14 06 50.9	
	comp=E,4.8nm,0.8s							
KBL	**Kabul**	**26.59**	**298**	P		**P**	**14 06 49.9**	**+2.0**
TLY	**Talaya**	**26.95**	**8**	LR		LR	14 18 52.7	
	comp=Z,37nm,21.3s,baz=107,slow=40							
BTK	**Batken**	**27.06**	**310**	P		**P**	**14 06 55.4**	**+3.4**
BTK				IAmb		IAmb	14 07 00.2	
	comp=Z,3.9nm,0.7s							
KKAR	**Karatay Array**	**28.68**	**316**	P		**P**	**14 07 09.3**	**+3.0**
KURBB	**Kurchatov Arra**	**29.52**	**335**	P		**P**	**14 07 13.6**	**0.0**
	comp=Z,0.2nm,0.3s,baz=144,slow=9.4,SNR=2.9							
ZAA0	**Zalesovo Array**	**30.42**	**345**	P		**P**	**14 07 20.6**	**-1.0**
ZALV	**Zalesovo Beam**	**30.42**	**345**	P		**P**	**14 07 21.7**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=165,slow=12,SNR=6.2							
ZALV	**Zalesovo Beam**	**30.42**	**345**	P		**P**	**14 07 21.4**	**-0.2**
GEYT	**Alibeck**	**35.90**	**301**	P		**P**	**14 08 12.3**	**+2.6**
	comp=Z,2.6nm,0.8s,baz=116,slow=6.6,SNR=6.4							
WRA	**Warramunga Arr**	**57.15**	**138**	P		**P**	**14 10 53.6**	**-2.8**
	comp=Z,0.7nm,0.5s,baz=326,slow=7.5,SNR=4.9							
AKASG	**Malin Array Be**	**57.58**	**315**	P		**P**	**14 10 59.3**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=74,slow=5.7,SNR=3.0							
FINES	**FINESS Array B**	**59.58**	**328**	P		**P**	**14 11 14.6**	**+1.8**
	comp=Z,1.5nm,0.8s,baz=98,slow=8.6,SNR=3.2							
ASAR	**Alice Springs**	**59.77**	**141**	P		**P**	**14 11 12.1**	**-2.6**
	comp=Z,0.7nm,0.8s,baz=322,slow=6.2,SNR=4.9							
GERES	**GERESS Array B**	**67.78**	**315**	P		**P**	**14 12 08.8**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=62,slow=6.8,SNR=4.2							

*IDC **18** 14:42:24.4±5.5, 5°.56N×94°.59E, h83km±48km, mb3.5/6, mb1 3.6/8, mb1mx3.3/39, mbtmp3.7/8, ML3.7/2, Error ellipse: s-maj=65.9km s-min=20.8km az=61.0*

ISC 18 14:42:19.8±1.3, 5°.4N±0°.2×94°.2E±0°.2, h46km, n11, σ1s22/9, mb3.7/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
PSI	**Prapat**	**5.39**	**118**	P		**Pn**	**14 43 38.2**	**+0.4**
	1.3nm,0.3s,baz=303,slow=14,SNR=3.9							
PSI				S		**Sn**	**14 44 39.3**	**+0.6**
	baz=342,slow=19,SNR=3.1							
CMAR	**Chiang Mai Arr**	**13.81**	**19**	P		**Pn**	**14 45 34.0**	**+0.9**
	0.2nm,0.3s,baz=213,slow=12,SNR=8.7							
H08S3	**Diego Garcia H**	**25.20**	**239**	T		T	15 13 53.4	
	baz=59,slow=76,SNR=5.4							
H08S2	**Diego Garcia H**	**25.20**	**239**	T		T	15 13 53.0	
	baz=59,slow=76,SNR=3.5							
H08S1	**Diego Carcia H**	**25.21**	**239**	T		T	15 13 54.5	
	baz=59,slow=76,SNR=3.0							
MKAR	**Makanchi Array**	**42.52**	**348**	P		**P**	**14 50 10.8**	**0.0**
	1.2nm,0.6s,baz=170,slow=8.1,SNR=16							
SONM	**Songino Array**	**43.58**	**12**	P		**P**	**14 50 17.4**	**-2.1**
	0.3nm,0.6s,baz=206,slow=7.3,SNR=2.6							
WRA	**Warramunga Arr**	**46.83**	**124**	P		**P**	**14 50 44.4**	**-1.1**
	0.3nm,0.5s,baz=304,slow=9.2,SNR=4.4							
ZALV	**Zalesovo Beam**	**49.02**	**353**	P		**P**	**14 51 01.7**	**-0.3**
	0.5nm,0.3s,baz=181,slow=7.1,SNR=3.9							
ARCES	**ARCESS Array B**	**77.61**	**340**	P		**P**	**14 54 11.3**	**+0.4**
	4.0nm,1.1s,baz=97,slow=6.5,SNR=4.1							
GERES	**GERESS Array B**	**79.70**	**319**	P		**P**	**14 54 24.3**	**+1.3**
	0.3nm,0.5s,baz=100,slow=4.1,SNR=3.5							

*IDC **18** 15:10:40.2±1.1, 27°.87S×179°.40W, h425km±19km, mb3.2/2, mb1 3.5/3, mb1mx3.1/20, mbtmp4.1/3, Error ellipse: s-maj=42.6km s-min=31.0km az=129.0*

ISC 18 15:10:41.4±1.3, 27°.9S±0°.1×179°.8W±0°.2, h400km, n23, σ1s83/25, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
RAO	**Raoul Island**	**2.15**	**129**	P		**Pn**	**15 11 38.2**	**-0.1**
	94nm,0.3s,baz=270,slow=20,SNR=5.8							
RAO				S		**S**	**15 12 24.7**	**+0.4**
	65nm,0.3s,baz=90,slow=20,SNR=3.1							
HAZ	**Te Kaha**	**10.03**	**191**	P		**S**	**15 14 55.4**	**+2.8**
RUGZ	**Raukumara Rang**	**10.25**	**191**	P		**S**	**15 14 53.7**	**-3.8**
TWGZ	**Tauwhareparae**	**10.41**	**190**	P		**S**	**15 15 00.7**	**+0.1**
MWZ	**Matawai**	**10.63**	**191**	P		**S**	**15 15 05.0**	**-0.2**
URZ	**Urewera**	**10.64**	**193**	P		**P**	**15 13 06.3**	**+0.4**
	2.9nm,0.3s,baz=269,slow=4.8,SNR=30							
URZ				S		**S**	**15 15 04.7**	**-0.5**
	5.1nm,0.3s,baz=93,slow=21,SNR=17							
URZ	**Urewera**	**10.64**	**193**	P		**S**	**15 15 06.7**	**+1.6**
TKGZ	**Te Karaka**	**10.68**	**190**	P		**S**	**15 15 05.3**	**-0.7**
MUGZ	**Murupara**	**10.92**	**194**	P		**S**	**15 15 09.9**	**-1.0**
RIGZ	**Rimuhau**	**10.96**	**190**	P		**S**	**15 15 09.0**	**-2.7**
RTZ	**Ruatahuna**	**11.01**	**193**	P		**S**	**15 15 11.5**	**-1.4**
PRGZ	**Paritu Road**	**11.15**	**189**	P		**S**	**15 15 15.0**	**-0.6**
MTHZ	**Maungataniwha**	**11.27**	**193**	P		**S**	**15 15 18.3**	**+0.3**
RAHZ	**Arahi**	**11.28**	**192**	P		**S**	**15 15 19.8**	**+1.6**
MHGZ	**Mahia Peninsul**	**11.38**	**189**	P		**S**	**15 15 18.5**	**-1.6**
WHHZ	**Waihua**	**11.41**	**192**	P		**S**	**15 15 21.4**	**+0.6**
ARHZ	**Aropaoanui**	**11.63**	**192**	P		**S**	**15 15 27.8**	**+2.5**
BKZ	**Black Stump Fm**	**11.64**	**194**	P		**S**	**15 15 27.5**	**+1.9**
MCHZ	**McNeill Hill**	**11.87**	**193**	P		**S**	**15 15 32.4**	**+2.3**
KAHZ	**Kahuranaki**	**12.17**	**192**	P		**S**	**15 15 32.2**	**-4.1**
ASAR	**Alice Springs**	**41.68**	**265**	P		**P**	**15 17 53.1**	**-0.1**
	0.7nm,0.4s,baz=96,slow=7.8,SNR=49							
WRA	**Warramunga Arr**	**42.44**	**270**	P		**P**	**15 17 58.8**	**-0.4**
	1.8nm,0.6s,baz=108,slow=7.5,SNR=9.8							
AKASG	**Malin Array Be**	**148.35**	**324**	PKPbc		**PKPdf**	**15 29 37.0**	**0.0**
	1.1nm,0.6s,baz=44,slow=3.2,SNR=6.4							

*IDC **18** 15:11:01.3±1.0, 0°.54N×25°.47W, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.8/37, mbtmp4.0/8, ML3.9/1, MS3.7/18, Ms1 3.7/18, ms1mx3.5/30, Error ellipse: s-maj=47.3km s-min=19.7km az=159.0*
*NEIC **18** 15:11:01.8±2.0, 0°.7N±0°.1×25°.5W±0°.1, h10km±1km, mb4.4/6, Error ellipse: s-maj=21.9km s-min=17.4km az=189.0*

ISC 18 15:11:02.7±0.7, 0°.7N±0°.1×25°.54W±0°.10, h12km, n38, σ1s24/21, mb4.0/11, MS3.7/17, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
RCBR	**Riachuelo**	**12.18**	**238**	Pn		**Pn**	**15 13 55.3**	**-1.0**
	0.8nm,0.3s,baz=54,slow=11,SNR=7.0							
RCBR				Sn		Sn	15 15 58.9	-13
	0.3nm,0.3s,baz=252,slow=13,SNR=3.4							
RCBR				LR		LR	15 17 33.8	
	comp=Z,524nm,18.9s,baz=83,slow=32							
RCBR	**Riachuelo**	**12.18**	**238**			Pn	15 13 50.0	-6.3
H10N3	**ASCENSION HYDR**	**13.87**	**128**	T		T	15 28 45.0	
	baz=306,slow=74,SNR=163							
H10N2	**ASCENSION HYDR**	**13.87**	**128**	T		T	15 28 42.8	
	baz=306,slow=74,SNR=155							
H10N1	**ASCENSION HYDR**	**13.89**	**128**	T		T	15 28 45.6	
	baz=306,slow=74,SNR=230							
SACV	**Santiago Islan**	**14.36**	**8**	Pn		**Pn**	**15 14 25.3**	**-0.7**
LIC	**Lamto**	**21.20**	**74**	*eP*		**P**	**15 15 49.4**	**+0.9**
	38nm,0.9s							
LIC	**Lamto**	**21.20**	**74**	P		**P**	**15 15 49.4**	**+0.9**
TIC	**Toumodi**	**21.32**	**73**	*eP*		**P**	**15 15 50.4**	**+0.7**
TIC	**Toumodi**	**21.32**	**73**	P		**P**	**15 15 50.4**	**+0.7**
DBIC	**Dimbokro**	**21.48**	**73**	P		**P**	**15 15 51.5**	**+0.1**
	15nm,0.9s,baz=242,slow=12,SNR=14							
DBIC				S		**S**	**15 19 47.1**	**-2.7**
	1.6nm,0.9s,baz=204,slow=20,SNR=2.3							
DBIC				LR		LR	15 22 19.9	
	comp=Z,241nm,21.0s,baz=232,slow=32							
DBIC	**Dimbokro**	**21.48**	**73**	P		**P**	**15 15 50.7**	**-0.7**
DBIC				IAmb		IAmb	15 15 53.6	
	comp=Z,20nm,0.9s							
KIC	**Kosan Boka**	**21.51**	**74**	*eP*		**P**	**15 15 52.9**	**+1.1**
	comp=Z,47nm,1.0s							
KIC	**Kosan Boka**	**21.51**	**74**	P		**P**	**15 15 52.9**	**+1.1**
MDP	**Montagnes des**	**27.42**	**280**	LR		LR	15 25 16.8	
	comp=Z,74nm,20.4s,baz=13,slow=31							
BDFB	**Brasilia**	**27.48**	**233**	LR		LR	15 26 34.7	
	comp=Z,340nm,20.9s,baz=73,slow=34							
TOA0	**Torodi Ar. Sit**	**29.70**	**64**	P		P	15 17 03.3	-5.6
TOA0				IAmb		IAmb	15 17 18.8	
	comp=Z,6.2nm,1.3s							
TORD	**Torodi Ar. Bea**	**29.70**	**64**	P		**P**	**15 17 10.0**	**+1.1**
	comp=Z,1.2nm,0.7s,baz=249,slow=9.9,SNR=8.4							
TORD				LR		LR	15 28 01.6	
	comp=Z,232nm,18.2s,baz=280,slow=34							
MDT	**Midelt**	**37.58**	**30**	LR		LR	15 32 00.7	
	comp=Z,156nm,21.2s,baz=138,slow=34							
CPUP	**Villa Florida**	**40.73**	**226**	LR		LR	15 35 21.3	
	comp=Z,104nm,18.3s,baz=44,slow=36							
CPUP	**Villa Florida**	**40.73**	**226**	P		**P**	**15 18 42.4**	**-1.3**
PESTR	**Estremoz**	**41.44**	**21**	P		**P**	**15 18 48.0**	**-1.3**
PESTR				IAmb		IAmb	15 18 52.3	
	comp=Z,23nm,1.5s							
OBIP	**Obispado Ponce**	**43.88**	**296**	P		**P**	**15 19 08.7**	**-0.8**
LPAZ	**La Paz**	**45.26**	**246**	P		**P**	**15 19 23.1**	**+1.8**
	comp=Z,1.1nm,0.7s,baz=86,slow=6.8,SNR=4.8							
LPAZ				LR		LR	15 37 48.9	
	comp=Z,206nm,19.6s,baz=64,slow=36							
LPAZ	**La Paz**	**45.26**	**246**	IAmb		IAmb	15 19 24.0	
	comp=Z,1.8nm,0.9s							
KEST	**Kesra**	**47.63**	**39**	LR		LR	15 39 47.5	
	comp=Z,194nm,21.0s,baz=209,slow=36							
ROSC	**El Rosal**	**48.89**	**276**	LR		LR	15 38 28.8	
	comp=Z,82nm,21.0s,baz=122,slow=34							
PLCA	**Paso Flores**	**58.00**	**219**	LR		LR	15 46 32.7	
	comp=Z,87nm,18.1s,baz=79,slow=37							
GERES	**GERESS Array B**	**58.66**	**29**	LR		LR	15 43 27.6	
	comp=Z,31nm,20.6s,baz=255,slow=33							
BRTR	**Keskin Array B**	**66.28**	**46**	P		**P**	**15 21 52.5**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=212,slow=7.1,SNR=3.8							
BRTR				LR		LR	15 51 53.5	
	comp=Z,36nm,19.6s,baz=252,slow=37							
NOA	**NORSAR Array B**	**66.44**	**19**	LR		LR	15 48 38.1	
	comp=Z,28nm,18.9s,baz=220,slow=34							
AKASG	**Malin Array Be**	**67.94**	**34**	P		**P**	**15 22 01.3**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=246,slow=5.6,SNR=3.5							
AKASG				LR		LR	15 51 10.0	
	comp=Z,37nm,21.5s,baz=260,slow=35							
FINES	**FINESS Array B**	**72.05**	**23**	LR		LR	15 52 36.1	
	comp=Z,29nm,20.1s,baz=247,slow=35							
TXAR	**Lajitas Array**	**79.33**	**300**	P		**P**	**15 23 10.3**	**+1.3**
	comp=Z,1.2nm,1.0s,baz=112,slow=5.6,SNR=8.5							
GEYT	**Alibeck**	**84.55**	**52**	LR		LR	16 04 40.7	
	comp=Z,27nm,18.7s,baz=175,slow=38							
PDAR	**Pinedale Array**	**85.16**	**313**	LR		LR	15 57 03.5	
	comp=Z,9.3nm,20.5s,baz=30,slow=32							
YKA	**Yellowknife Ar**	**89.00**	**332**	P		**P**	**15 23 58.0**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=89,slow=5.0,SNR=6.6							
ASAR	**Alice Springs**	**149.65**	**140**	PKPbc		**PKPbc**	**15 30 52.1**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=233,slow=2.1,SNR=4.8							

BKK 18 15:29:01.4±1.4, 15°N±5°×9°6E±°, h0km, M3.7/3, MLv3.7/3, Near south coast of Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
UMPA	**Umpang Tak**	**3.02**	**70**	Sg		Sg	15 30 38.8	+0.2
SRDT	**SRDT**	**3.22**	**105**	Sg		Sg	15 30 48.1	+3.2
MHMT	**Maesarieng**	**3.55**	**33**	Pg		Pg	15 30 22.2	+13
CMMT	**Chiang Mai**	**4.63**	**38**	Pg		Pg	15 30 42.8	+13
CMMT				Sg		Sg	15 31 36.5	+6.1
LAMP	**Lampang**	**4.87**	**47**	Sg		Sg	15 31 41.8	+3.8
UTTA	**Uttaradit**	**5.13**	**60**	Sg		Sg	15 31 50.0	+3.6

*IDC **18** 15:42:40.5±2.4, 10°.04N×125°.12E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.4/32, mbtmp3.7/4, ML4.3/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/37, Error ellipse: s-maj=97.9km s-min=24.7km az=63.0*
*MAN **18** 15:42:44.1, 9.87N×124°.12E, h3km, mb5.0, ML3.9, MS3.9*

ISC 18 15:42:47.0±1.9, 9.93N±0°.04×124°.11E±0°.04, h26km±17km, n17, σ2s42/23, mb3.4/3, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
MSLP	**Maasin**	**0.76**	**74**	*eP*		**Pn**	**15 42 59.1**	**-3.0**
MSLP				*eS*		**Sn**	**15 43 11.3**	**-1.5**
OCLP	**Ormoc**	**1.22**	**24**	*eP*		**Pn**	**15 43 06.8**	**-1.6**
OCLP				*eS*		**Sb**	**15 43 26.8**	**+2.0**
SCPH	**Surigao**	**1.36**	**96**	*eP*		**Pn**	**15 43 09.6**	**-0.9**
SCPH				*eS*		**Sb**	**15 43 28.5**	**-0.5**
DCPH	**Dipolog City**	**1.53**	**209**	*eP*		**Pn**	**15 43 11.1**	**-1.7**
GUIM	**Jordan**	**1.65**	**295**	*eP*		**Pn**	**15 43 13.2**	**-1.2**
GUIM				*eS*		**Sb**	**15 43 37.1**	**-0.1**
BUTP	**Butuan**	**1.77**	**122**	*eP*		**Pn**	**15 43 15.0**	**-1.0**
BUTP				*eS*		**Sn**	**15 43 38.4**	**+0.7**
PAGZ	**Pagadian**	**2.19**	**199**	*eP*		**Pn**	**15 43 20.6**	**-1.2**
PAGZ				*eS*		**Sn**	**15 43 43.4**	**-4.7**
BUKP	**Musuan**	**2.24**	**155**	*eP*		**Pn**	**15 43 21.5**	**-1.0**
BUKP				*eS*		**Sn**	**15 43 51.0**	**+1.6**
CTBH	**Cotabato--PC H**	**2.69**	**177**	*eP*		**Pn**	**15 43 27.7**	**-1.0**
CTBH				*i S*		**Sn**	**15 44 00.5**	**0.0**
KCP	**Kidapawan**	**3.06**	**161**	*eP*		**Pn**	**15 43 34.8**	**+0.9**
KCP				*i S*		**Sn**	**15 44 10.5**	**+0.9**
OTRP	**Odiongan**	**3.17**	**320**	*eP*		**Pn**	**15 43 27.4**	**-7.9**
DAV	**Davao City (W)**	**3.19**	**153**	Pn		Pn	15 43 27.4	-8.1
	45nm,0.3s,baz=238,slow=16,SNR=2.4							
DAV				Sn		**Sn**	**15 44 16.1**	**+3.3**
	30nm,0.3s,baz=220,slow=17,SNR=1.3							
SIJI	**Sorong**	**12.88**	**146**	LR		LR	15 50 39.8	
	comp=Z,18nm,19.6s,baz=346,slow=38							
LEM	**Lembang**	**23.39**	**225**	LR		LR	15 59 31.6	
	comp=Z,37nm,18.9s,baz=229,slow=42							
CMAR	**Chiang Mai Arr**	**25.80**	**292**	P		**P**	**15 48 22.3**	**+6.0**
	0.9nm,1.0s,baz=122,slow=9.8,SNR=4.2							
CMAR				LR		LR	15 59 16.2	
	comp=Z,20nm,18.7s,baz=115,slow=37							
ASAR	**Alice Springs**	**34.73**	**164**	P		**P**	**15 49 32.1**	**-3.2**
	0.3nm,0.6s,baz=342,slow=7.9,SNR=2.4							
MKAR	**Makanchi Array**	**51.03**	**324**	P		**P**	**15 51 47.5**	**+0.5**
	1.0nm,0.7s,baz=117,slow=8.6,SNR=11							

KRSC 18 15:51:05.2±2.1, 49°.62N×156°.83E, h7km±28km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
SKR	**Severo-Kuril's**	**1.16**	**337**	*eP*		Pg	15 51 25.7	-1.7
SKR				*eS*		Sg	15 51 40.7	-1.7
PAU	**Pauzhetka**	**1.85**	**360**	*eP*		Pn	15 51 38.3	+1.0
PAU				*eS*		Sb	15 52 02.5	-0.1
KDTR	**Khodutka, Kamc**	**2.33**	**19**	*eP*		Pb	15 51 46.2	-1.3
KDTR				*eS*		Sb	15 52 16.5	0.0
ASAK	**Asacha**	**2.85**	**13**	*eP*		Pb	15 51 53.9	-2.5
ASAK				*eS*		Sb	15 52 29.8	-1.7
MTVR	**Mutnovka**	**2.99**	**16**	*eP*		Pb	15 51 56.4	-2.5
RUS

*VAO **18** 16:01:17.7±1.2, 15°.97S×72°.24W, h133km±8km, mb4.0*
*IDC **18** 16:01:28.1±2.2, 16°.13S×71°.32W, h162km±18km, mb3.5/6, mb1 3.6/9, mb1mx3.3/45, mbtmp4.0/9, MS3.3/2, Ms1 3.3/2, ms1mx2.7/21, Error ellipse: s-maj=27.4km s-min=21.6km az=31.0*

ISC 18 16:01:26.7±0.9, **16°.13S**±0°.08×**71°.33W**±0°.09, **h150**km, **n43**, σ1°59/42, **mb3.9/6**, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.08**	**93**	P	**Pn**	**16 02 18.6**	**+2.8**
	6.2nm,0.3s,baz=292,slow=9.4,SNR=120						
LPAZ				S	**Sn**	**16 02 55.6**	**+2.2**
	3.4nm,0.3s,baz=165,slow=24,SNR=21						
LPAZ	**La Paz**	**3.08**	**93**	*e*P	**Pn**	**16 02 18.5**	**+2.8**
NNA	**Nana**	**6.75**	**307**	P	Pn	16 02 59.1	-4.5
	5.3nm,0.3s,baz=132,slow=12,SNR=6.1						
NNA				S	Sn	16 04 06.3	-13
	2.2nm,0.3s,baz=225,slow=10.0,SNR=3.8						
LVC	**Limon Verde**	**6.84**	**161**	P	**Pn**	**16 03 05.7**	**+0.7**
	4.5nm,0.3s,baz=356,slow=8.4,SNR=46						
LVC				S	**Sn**	**16 04 19.2**	**-2.7**
	7.6nm,0.3s,baz=232,slow=22,SNR=15						
SIV	**San Ignacio**	**9.87**	**91**	P	**Pn**	**16 03 43.5**	**-1.5**
	0.2nm,0.3s,baz=295,slow=11,SNR=8.2						
SIV				S	**Sn**	**16 05 29.5**	**-4.9**
	0.1nm,0.3s,baz=212,slow=19,SNR=5.5						
SAML	**Samuel**	**10.69**	**49**	*e*P	**Pn**	**16 03 53.4**	**-2.5**
SALV	**Santo Antonio**	**15.04**	**91**	*e*P	**Pn**	**16 04 53.4**	**+1.6**
AQDB	**Aquidauana**	**15.46**	**109**	*e*P	**Pn**	**16 04 58.1**	**+1.3**
CLDB	**Colider**	**15.98**	**73**	*e*P	**Pn**	**16 05 04.2**	**+0.8**
CPUP	**Villa Florida**	**16.52**	**130**	P	**P**	**16 05 10.5**	**+0.7**
	0.2nm,0.3s,baz=300,slow=14,SNR=5.4						
CPUP	**Villa Florida**	**16.52**	**130**	*e*P	**P**	**16 05 10.7**	**+1.0**
C2SB	**Chapadao do Su**	**17.84**	**101**	*e*P	**Pn**	**16 05 26.7**	**+0.9**
ARAG	**Araguaiana, MT**	**18.78**	**91**	*e*P	**P**	**16 05 35.8**	**+1.1**
TRCB	**Terra Rica**	**18.83**	**114**	*e*P	**P**	**16 05 37.1**	**+2.0**
ITQB	**Itaqui**	**19.08**	**137**	*e*P	**P**	**16 05 37.6**	**-0.2**
PCMB	**Pacaembu**	**19.75**	**109**	*e*P	**P**	**16 05 46.8**	**+1.7**
PTGB	**Pitanga**	**19.96**	**118**	*e*P	**P**	**16 05 49.5**	**+2.1**
ITRB	**Iturama**	**20.27**	**103**	*e*P	**P**	**16 05 53.1**	**+2.4**
ITAB	**Concordia**	**20.96**	**125**	*e*P	**P**	**16 05 59.1**	**+1.1**
ROSC	**El Rosal**	**21.05**	**352**	LR	LR	16 15 24.5	
	comp=Z,82nm,19.8s,baz=76,slow=40						
CPSB	**Cacapava Do Su**	**21.68**	**134**	*e*P	**P**	**16 06 05.5**	**-0.2**
FRTB	**Fartura**	**21.69**	**118**	*e*P	**P**	**16 06 06.6**	**+0.7**
BB19B	**Bebedouro**	**22.16**	**106**	*e*P	**P**	**16 06 11.8**	**+1.1**
IPMB	**Ipameri, GO**	**22.18**	**98**	*e*P	**P**	**16 06 11.1**	**+0.1**
PLTB	**Pedras Altas**	**22.41**	**137**	*e*P	**P**	**16 06 12.1**	**-0.9**
BDFB	**Brasilia**	**22.43**	**92**	P	**P**	**16 06 13.5**	**0.0**
	1.8nm,0.4s,baz=265,slow=12,SNR=3.6						
CNLB	**Canela**	**22.95**	**128**	*e*P	**P**	**16 06 17.7**	**-0.4**
OGAUY	**Aigu**	**23.49**	**144**	*e*P	**P**	**16 06 20.9**	**-2.0**
SPB	**Sao Paulo**	**23.65**	**112**	*e*P	**P**	**16 06 25.1**	**+0.5**
PMNB	**Patos De Minas**	**23.88**	**99**	*e*P	**P**	**16 06 27.4**	**+0.6**
VAO	**Valinhos**	**23.93**	**110**	*e*P	**P**	**16 06 27.7**	**+0.5**
SMTB	**Santa Maria do**	**24.26**	**76**	*e*P	**P**	**16 06 30.6**	**+0.4**
PLCA	**Paso Flores**	**24.52**	**179**	*e*P	P	16 06 26.0	-6.4
SDV	**Santo Domingo**	**24.87**	**2**	P	**P**	**16 06 35.6**	**-0.2**
	1.4nm,0.4s,baz=209,slow=19,SNR=3.0						
SDV	**Santo Domingo**	**24.87**	**2**	*e*P	P	16 06 27.6	-8.2
JANB	**Januaria**	**26.04**	**91**	*e*P	**P**	**16 06 47.4**	**+1.0**
VAS01	**Vassouras-RJ**	**27.01**	**107**	*e*P	**P**	**16 06 55.4**	**+0.5**
NBPN	**Ponto Novo - B**	**30.70**	**84**	*e*P	**P**	**16 07 28.3**	**+0.5**
NBMO	**Morrinhos-CE**	**33.30**	**71**	*e*P	**P**	**16 07 49.8**	**-0.6**
TXAR	**Lajitas Array**	**54.94**	**325**	P	**P**	**16 10 42.2**	**-0.1**
	0.2nm,0.4s,baz=151,slow=11,SNR=4.6						
TXAR				LR	LR	16 34 51.5	
	comp=Z,26nm,19.1s,baz=0.0,slow=36						
DBIC	**Dimbokro**	**69.56**	**76**	P	**P**	**16 12 19.8**	**-0.1**
	2.5nm,0.5s,baz=205,slow=5.9,SNR=5.4						
TORD	**Torodi Ar. Bea**	**77.93**		P	**P**	**16 13 08.2**	**+0.1**
	3.3nm,0.6s,baz=265,slow=4.6,SNR=18						
YKA	**Yellowknife Ar**	**85.39**	**341**	P	**P**	**16 13 47.0**	**+0.2**
	0.1nm,0.4s,baz=137,slow=5.6,SNR=5.0						

IDC 18 16:02:26.0±14.0, **25°.29S**×**178°.89E**, **h534**km±169km, **mb3.1/4, mb1 3.4/4, mb1mx3.0/32, mbtmp4.0/4, Error ellipse: s-maj=131.5km s-min=63.8km az=161.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**33.28**	**250**	P	P	16 08 18.4	-1.0
	1.5nm,0.5s,baz=100,slow=11,SNR=2.4						
ASAR	**Alice Springs**	**40.83**	**262**	P	P	16 09 21.4	0.0
	2.1nm,0.8s,baz=96,slow=8.4,SNR=34						
WRA	**Warramunga Arr**	**41.33**	**268**	P	P	16 09 25.5	+0.1
	2.2nm,0.5s,baz=103,slow=7.7,SNR=21						
NVAR	**Mina Array Bea**	**86.45**	**44**	P	P	16 14 12.4	+0.1
	0.3nm,0.6s,baz=218,slow=5.7,SNR=4.5						
HFS	**Hagfors**		**143.70 348**	PKP	PKPbc	16 20 58.8	+0.2
	5.9nm,1.1s,baz=28,slow=3.4,SNR=5.1						

*NCEDC **18** 16:35:21.7±1.9, 36°.77N±0°.03×121°.36W±0°.05, h9km±6km, Md3.2/207, Error ellipse: s-maj=7.4km s-min=2.6km az=53.0*

NEIC 18 16:35:21.6±2.1, **36°.73N**±0°.03×**121°.49W**±0°.06, **h16**km±1km, **Error ellipse: s-maj=8.0km s-min=3.5km az=63.0, Central California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FRP	**Fremont Peak**	**0.03**	**353**		Pg	16 35 24.4	-0.1
SCZ	**Santa Cruz**	**0.14**	**153**		Pg	16 35 25.3	-0.3
SCZ					Sg	16 35 27.8	-0.4
BJOM	**Mount Johnson**	**0.17**	**125**		Sg	16 35 27.9	-0.8
BLRM	**Lewis Ranch**	**0.18**	**110**		Pg	16 35 25.2	-0.9
OCR	**O'Connell Ranc**	**0.19**	**355**		Pg	16 35 26.4	+0.2
BJCM	**Johnson Can.**	**0.20**	**157**		Pg	16 35 26.2	0.0
CSR	**Chase Ranch**	**0.24**	**341**		Pb	16 35 27.4	-0.2
BEHM	**Elkhorn Ranch**	**0.26**	**104**		Pg	16 35 26.2	-1.0
HFEM	**San Felipe**	**0.27**	**15**		Pg	16 35 26.8	-0.6
CDC	**Canada Road**	**0.30**	**0**		Pg	16 35 27.8	-0.1
PACP	**Pacheco Peak**	**0.32**	**30**		Sg	16 35 31.8	-1.2
HLPM	**Lions Peak**	**0.34**	**340**		Pb	16 35 28.9	-0.2
BPIM	**Pinnacles**	**0.35**	**133**		Pg	16 35 28.1	-0.7
BSGM	**Shirttail Gulc**	**0.36**	**149**		Pg	16 35 28.7	-0.4
GHS	**Gilroy Hot Spr**	**0.37**	**5**		Pg	16 35 28.9	-0.3
HPCM	**Pacheco Lake**	**0.37**	**27**		Sg	16 35 33.3	-1.2
BBGB	**Big Mountain B**	**0.39**	**112**		Pg	16 35 28.9	-0.7
HSPM	**Sheep**	**0.39**	**356**		Pg	16 35 29.6	+0.1
BBNM	**San Benito**	**0.40**	**123**		Pg	16 35 29.4	-0.2
CADM	**Anderson Res.**	**0.45**	**346**		Pb	16 35 31.0	-0.1
JLAB	**Laurel Hill**	**0.47**	**335**		Pb	16 35 31.6	+0.2
JHLM	**Holstrom Ranch**	**0.47**	**324**		Pb	16 35 31.9	+0.3
LRV	**Little Rabbit**	**0.48**	**129**		Pg	16 35 30.9	-0.3
AMC	**Almaden**	**0.52**	**326**		Pb	16 35 32.6	+0.3
JSTM	**Santa Teresa H**	**0.54**	**333**		Pb	16 35 32.8	+0.2
BRMM	**Rolling Bench**	**0.54**	**78**		Pg	16 35 31.5	-0.9
JUMM	**Mount Umunhum**	**0.54**	**323**		Pb	16 35 33.1	+0.3
BPOM	**Post Ranch**	**0.55**	**205**		Pb	16 35 33.6	+0.9
MOBB	**Monterey Bay O**	**0.55**	**266**		Pn	16 35 34.8	+0.3
CCOB	**Coe Ranch Numb**	**0.55**	**344**		Pb	16 35 33.4	+0.5
BMSM	**Mercy Hot Spri**	**0.56**	**97**		Pg	16 35 31.5	-1.2
BAPM	**Anderson Peak**	**0.56**	**193**		Pb	16 35 33.8	+0.7
SCKWR	**San Luis Creek**	**0.56**	**36**		Pg	16 35 32.0	-0.7
LRC	**Lone Oak Road**	**0.60**	**143**		Pg	16 35 32.9	-0.5
JJOM	**Saint Joseph's**	**0.62**	**321**		Pb	16 35 34.3	+0.3
ARN	**Arnold Ranch**	**0.62**	**357**		Pg	16 35 33.8	-0.1
MHC	**Mount Hamilton**	**0.63**	**349**		Pb	16 35 34.1	-0.1
SCCB	**Santa Clara Co**	**0.64**	**332**		Pb	16 35 35.0	+0.7
JBNB	**Ben Lomond Mou**	**0.67**	**307**		Pb	16 35 35.1	+0.2
PCCM	**Crazy Canyon**	**0.69**	**158**		Pb	16 35 35.3	+0.1
JSGM	**Saratoga Golf**	**0.71**	**321**		Pb	16 35 36.2	+0.6
CMMM	**Mount Mocho**	**0.73**	**360**		Pg	16 35 35.7	-0.1
PMPB	**Monarch Peak**	**0.75**	**133**		Pg	16 35 35.7	-0.6
CMLM	**Mount Lewis**	**0.76**	**350**		Pb	16 35 36.6	+0.1
JBMM	**Black Mountain**	**0.80**	**318**		Pg	16 35 37.6	+0.5
JPC	**Peters Creek,**	**0.80**	**313**		Pg	16 35 37.4	+0.4
PAPM	**Alder Peak**	**0.82**	**173**		Pn	16 35 38.0	-0.5
JPSM		**0.84**	**305**		Pg	16 35 38.2	+0.3
JJRM	**Joaquin Road**	**0.84**	**317**		Pg	16 35 38.1	+0.2
JFP	**Foothills Park**	**0.85**	**319**		Pn	16 35 38.5	-0.4
CMJM	**Mission San Jo**	**0.85**	**339**		Pg	16 35 38.4	+0.3
PSAM	**San Ardo**	**0.85**	**145**		Pb	16 35 37.6	-0.3
JSFB	**Stanford Teles**	**0.87**	**321**		Pg	16 35 38.6	+0.1
JRSC	**Jasper Ridge**	**0.91**	**319**		Pg	16 35 39.1	0.0
BGH	**Bear Gulch**	**0.92**	**312**		Pn	16 35 39.6	-0.1
WENL	**Wente Vineyard**	**0.92**	**346**		Pn	16 35 40.0	+0.2
CNIC	**Niles Canyon**	**0.96**	**337**		Pg	16 35 40.0	-0.1
PHSB	**Hesperia Broad**	**0.97**	**159**		Pb	16 35 40.1	+0.1
JHPM	**Huddart Park**	**0.97**	**318**		Pg	16 35 40.3	-0.1
PARM	**Anticline Ridg**	**1.04**	**117**		Pb	16 35 40.9	-0.3
PANM	**San Antonio Re**	**1.05**	**153**		Pb	16 35 41.2	-0.2
PWMM	**Westland Maint**	**1.07**	**106**		Pb	16 35 41.1	-0.5
MYLM	**Yosemite Lake**	**1.07**	**52**		Pb	16 35 40.2	-1.5
OXMT	**Ox Mountain**	**1.08**	**316**		Pb	16 35 41.7	0.0
PHCM	**Hearst Castle**	**1.08**	**165**		Pg	16 35 42.3	-0.1
JCPM	**Coyote Point**	**1.09**	**322**		Pb	16 35 41.7	-0.3
CBSNC	**Byron Hot Spri**	**1.10**	**354**		Pg	16 35 43.5	+0.7
CLCB	**Lake Chabot**	**1.11**	**336**		Pn	16 35 42.6	+0.2
PPO	**Portuguese Can**	**1.11**	**140**		Pb	16 35 42.0	-0.4
CMOB	**Morgan Territo**	**1.11**	**347**		Pg	16 35 44.0	+0.9
PVCM	**Vineyard Canyo**	**1.11**	**136**		Pb	16 35 41.8	-0.6
PSTM	**Stockdale Moun**	**1.12**	**135**		Pb	16 35 41.9	-0.7
SAC	**San Andreas**	**1.13**	**319**		Pg	16 35 43.3	-0.2
BGC	**Bolinger Road**	**1.18**	**337**		Pn	16 35 43.4	-0.1
RAMR	**Ramage Ranch**	**1.20**	**155**		Pn	16 35 43.3	-0.3
CRHM	**Round Hill Res**	**1.20**	**340**		Pb	16 35 44.0	+0.1
PHFM	**Heflinger Ranc**	**1.22**	**134**		Pn	16 35 43.5	-0.4
CTM	**Castle Mountai**	**1.22**	**130**		Pb	16 35 44.6	+0.3
CRPB	**Russellman Par**	**1.23**	**344**		Pb	16 35 44.6	+0.2
PCBM	**Cambria**	**1.25**	**164**		Pn	16 35 44.3	-0.1
PCMM	**Cholame Hills**	**1.27**	**136**		Pn	16 35 44.2	-0.4
BLDC	**Black Mountain**	**1.28**	**158**		Pn	16 35 44.9	+0.1
BLDC	**Black Mountain**	**1.28**	**158**		Pn	16 35 44.8	+0.1
GHC	**Gold Hill**	**1.28**	**134**		Pn	16 35 44.4	-0.4
BKS	**Berkeley--Byer**	**1.29**	**333**		Pn	16 35 44.9	-0.1
PKEM	**Kettleman Hill**	**1.29**	**120**		Pn	16 35 45.1	+0.1
CVPM	**Vollmer Peak**	**1.29**	**333**		Pn	16 35 44.8	-0.2
VAK	**Adit at Lawren**	**1.30**	**332**		Pn	16 35 45.2	+0.1
BRIB	**Briones**	**1.30**	**336**		Pn	16 35 45.1	0.0
PSRM	**Scobie Ranch**	**1.30**	**131**		Pn	16 35 44.8	-0.4
ARDC	**Alexander Banc**	**1.33**	**162**		Pn	16 35 45.2	-0.2
PKLM	**Kerr Lake**	**1.33**	**135**		Pn	16 35 44.9	-0.6
MHDM	**Hidden Dam**	**1.33**	**73**		Pn	16 35 43.8	-1.7
PSNM	**Stone Corral**	**1.34**	**134**		Pn	16 35 45.2	-0.4
PMCM	**McMillan Canyo**	**1.35**	**138**		Pn	16 35 45.8	0.0
TCHL	**Shandon**	**1.36**	**139**		Pn	16 35 45.8	-0.1
PMRM	**Maxey Ranch**	**1.38**	**133**		Pn	16 35 46.0	-0.2
CPIM	**Pinole Ridge**	**1.39**	**335**		Pn	16 35 46.5	+0.3
PAGB	**Antelope Grade**	**1.41**	**134**		Pn	16 35 46.3	-0.3
MCUB	**Copperopolis B**	**1.42**	**29**		Pn	16 35 45.4	-1.3
THIS	**South End of C**	**1.43**	**134**		Pn	16 35 47.3	+0.4
TRAM	**Private Proper**	**1.44**	**136**		Pn	16 35 47.0	+0.1
FRI	**Friant**	**1.45**	**79**		Pn	16 35 45.6	-1.5
PTAM	**Tassajara Cree**	**1.47**	**154**		Pn	16 35 47.4	-0.1
PTRM	**Twissleman Ran**	**1.49**	**136**		Pn	16 35 47.4	-0.2
TSCN	**Private Proper**	**1.50**	**142**		Pn	16 35 47.7	-0.1
MNHB	**New Hogan Dam**	**1.51**	**20**		Pn	16 35 46.8	-1.2
LSDC	**Los Osos Digit**	**1.52**	**160**		Pg	16 35 50.1	-0.6
EFD	**Emergency Oper**	**1.53**	**156**		Pn	16 35 48.1	-0.2
MMIM	**Miami Mountain**	**1.56**	**63**		Pn	16 35 47.8	-0.9
VPDC	**Valencia Peak**	**1.57**	**161**		Pn	16 35 48.8	0.0
CMB	**Columbia Colle**	**1.57**	**34**		Pn	16 35 47.8	-1.0
DPD	**Davis Peak**	**1.60**	**159**		Pn	16 35 49.2	+0.1
DCD	**Diablo Creek**	**1.60**	**161**		Pn	16 35 49.3	+0.2
PBPM	**Bitterwater Pu**	**1.62**	**135**		Pn	16 35 49.6	+0.1
SNT	**Sears Point**	**1.64**	**332**		Pn	16 35 49.5	-0.3
CVS	**Carmenet Viney**	**1.79**	**335**		Pn	16 35 51.0	-0.8
MCCM	**Marconi Confer**	**1.80**	**322**		Pn	16 35 51.8	0.0
NAPC	**Atlas Peak**	**1.81**	**341**		Pn	16 35 52.4	+0.2
KCC	**Kaiser Creek**	**1.83**	**70**		Pn	16 35 52.3	-0.1
SMMC	**Simmler**	**1.86**	**139**		Pn	16 35 52.3	-0.4
NTYM	**Taylor**	**1.91**	**331**		Pn	16 35 53.0	-0.3
BCH	**Branch Mountai**	**1.91**	**143**		Pn	16 35 53.2	-0.4
CARC	**Carrizo Plain**	**1.94**	**136**		Pn	16 35 54.0	0.0
PMLM	**Mount Lospe**	**1.96**	**158**		Pn	16 35 54.1	-0.1
MRHM	**Rocky Hill**	**1.98**	**102**		Pn	16 35 54.4	-0.1
NSHM	**Saint Helena R**	**2.00**	**334**		Pn	16 35 54.1	-0.6
MDPB	**Devils Postpil**	**2.12**	**64**		Pn	16 35 57.7	+1.0
MRDM	**Red Cones**	**2.12**	**65**		Pn	16 35 56.7	+0.1
MINS	**Minaret Summit**	**2.15**	**64**		Pn	16 35 58.2	+1.3
MMPM	**Mammoth Pass**	**2.15**	**65**		Pn	16 35 57.7	+0.7
OMMB	**Old Mammoth Mi**	**2.17**	**65**		Pn	16 35 57.7	+0.3
NMCNC	**Mill Creek, So**	**2.18**	**329**		Pn	16 35 56.3	-0.8
MDYM	**Dry Creek**	**2.18**	**64**		Pb	16 35 59.8	-1.0
MDCM	**Deadman Creek**	**2.18**	**63**		Pn	16 35 58.7	+1.3
ASMM	**Slate Mountain**	**2.19**	**17**		Pn	16 35 58.3	+0.9
MMLB	**Mammoth Lakes**	**2.21**	**64**		Pb	16 36 01.4	+0.1
NMTM	**Middletown**	**2.21**	**340**		Pn	16 35 57.7	+0.1
FTR	**Fort Ross**	**2.23**	**324**		Pn	16 35 57.7	-0.2
MLCM	**Laurel Creek C**	**2.29**	**66**		Pn	16 35 58.3	-1.5
MGPM	**Great Pit**	**2.25**	**66**		Pn	16 35 59.7	+1.4
AFDM	**Forest Hills D**	**2.25**	**10**		Pn	16 35 57.9	-0.3
SPG2	**Springville 2**	**2.25**	**103**		Pn	16 35 57.2	-1.0
MCBM	**Casa Benchmark**	**2.26**	**65**		Pn	16 35 59.9	+1.4
PKM	**Mcpherson Peak**	**2.28**	**143**		Pn	16 35 58.8	+0.1
MCVM	**Convict Lake**	**2.29**	**67**		Pn	16 35 59.5	+0.5
MDRNC	**Doe Ridge**	**2.30**	**66**		Pn	16 36 00.3	+1.2
GATR	**Gnd/Air Tx Cnt**	**2.31**	**159**		Pn	16 35 59.0	0.0
GDXM	**Geysers**	**2.32**	**334**		Pn	16 35 59.6	+0.5
SCHCA	**Scheelite**	**2.33**	**73**		Pn	16 36 00.9	+1.5
FIGC	**Figueroa Mtn.**	**2.34**	**148**		Pn	16 35 59.3	-0.1
GSGM	**Seigler Mounta**	**2.35**	**336**		Pn	16 35 58.2	-1.1
WAKR	**Walker**	**2.41**	**42**		Pn	16 36 01.6	+1.1
MTUM	**Tungsten Hills**	**2.42**	**74**		Pn	16 36 01.4	+0.8
ORC	**Owens River**	**2.44**	**67**		Pn	16 36 02.3	+1.4
BCW	**Bitter Crk WRg**	**2.45**	**136**		Pn	16 36 01.9	+0.9
EMB	**Emerald Bay**	**2.50**	**26**		Pn	16 36 02.9	+1.1
BENR	**Benton**	**2.53**	**66**		Pn	16 36 03.5	+1.4
GNO	**Genoa**	**2.55**	**30**		Pn	16 36 03.9	+1.4
MRCM	**Red Rock Canyo**	**2.56**	**67**		Pn	16 36 04.6	+2.0
MCDM	**Chidago Canyon**	**2.57**	**70**		Pn	16 36 04.7	+2.1
HOPS	**Hopland Field**	**2.59**	**331**	Pn	Pn	16 36 02.5	-0.3
GHLM	**Highland Sprin**	**2.61**	**333**		Pn	16 36 03.2	+0.1
BFC	**Buffalo Canyon**	**2.62**	**34**		Pn	16 36 05.3	+1.8
MLNR	**Milner Canyon**	**2.66**	**70**		Pn	16 36 06.0	+2.1
GGUM	**Gualala**	**2.66**	**324**		Pn	16 36 03.8	0.0
ISA	**Isabella, Lake**	**2.66**	**113**		Pn	16 36 04.6	+0.8
PNTR	**Pine Nut**	**2.79**	**32**		Pn	16 36 07.2	+1.4
ORV	**Oroville**	**2.82**	**360**		Pn	16 36 07.4	+1.4
YERR	**Yerington**	**2.87**	**38**		Pn	16 36 08.1	+1.2
RYN	**Ryan**	**3.02**	**50**		Pb	16 36 15.7	+0.6
NVAR	**Mina Array Bea**	**3.05**	**55**		Pb	16 36 12.4	+0.7
NV11	**Mina Array Sit**	**3.15**	**56**		Pb	16 36 18.6	+1.4
DAC	**Darwin (Calif)**	**3.17**	**97**		Pb	16 36 19.5	+1.9
BEKR	**Beckworth**	**3.21**	**15**		Pn	16 36 12.1	0.0
PAHR	**Pah Rah Range**	**3.40**	**28**		Pn	16 36 14.7	+0.5
KVN	**Kaiserville**	**3.54**	**48**		Pb	16 36 25.4	+1.4
MWC	**Mount Wilson**	**3.75**	**131**		Pn	16 36 18.2	-0.7
GSC	**Goldstone, Bar**	**4.05**	**109**		Pn	16 36 22.7	-0.3
TPNV	**Topopah Spring**	**4.21**	**85**		Pn	16 36 26.1	+0.9
PFO	**Pinyon Flats O**	**5.16**	**126**	Pn	Pn	16 36 38.4	+0.1
XPFO	**Pion Flat**	**5.16**	**126**	Pn	Pn	16 36 38.4	+0.1
PKCU	**Pink Cliffs**	**7.37**	**82**	Pn	Pn	16 37 06.5	-2.3
NLU	**North Lily Min**	**8.07**	**64**	Pn	Pn	16 37 16.1	-2.2
SPUT	**South Promonto**	**8.39**	**54**	Pn	Pn	16 37 20.0	-2.6

*IPEC **18** 16:38:30.5±0.2, 51°.49N×16°.20E, h1km, ML2.5/3, Error ellipse: s-maj=2.0km s-min=0.8km az=44.0*
*IDC **18** 16:38:31.4±0.8, 51°.47N×16°.07E, h0km, mb3.3/1, mb1 3.4/6, mb1mx3.2/43, mbtmp3.2/6, ML2.7/5, Error ellipse: s-maj=12.3km s-min=8.2km az=114.0*
*VIE **18** 16:38:33.4±0.8, 51°.30N×15°.92E, h0km, mb2.4/4, ml2.7/7, Error ellipse: s-maj=9.2km s-min=4.3km az=55.0 79 km WNW of Wroclaw Suspected Mining induced.*

ISC 18 16:38:29.6±0.7, **51°.50N**±0°.03×**16°.10E**±0°.02, **h0**km, **n52**, σ1**8**s**85**/90, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**170**	*i* Pg	**Pg**	**16 38 43.5**	**+1.1**
KSP				*e*Sg	**Sg**	**16 38 52.0**	**+0.9**
CHVC	**Chvalec**	**0.92**	**182**	*e*PG	**Pg**	**16 38 48.4**	**+1.3**
CHVC				*e*SG	**Sg**	**16 38 58.6**	**-0.4**
	comp=Z,56nm,0.5s						
OSTC	**Ostas**	**0.95**	**176**	*e*PG	**Pg**	**16 38 48.4**	**+0.6**
OSTC				*e*SG	**Sg**	**16 39 01.1**	**+1.0**
	comp=Z,58nm,0.5s						
UPC	**Upice**	**1.00**	**183**	*e*PG	**Pg**	**16 38 49.5**	**+0.8**
UPC				*e*SG	**Sg**	**16 39 01.4**	**-0.2**
	comp=Z,152nm,0.5s						
DPC	**Dobruska-Polom**	**1.16**	**173**	*e*PG	**Pg**	**16 38 52.1**	**+0.3**
DPC				*e*SG	**Sg**	**16 39 06.8**	**-0.1**
	comp=Z,81nm,0.9s						

*SJA **18** 16:40:04.7±0.8, 22°.32S×68°.69W, h114km±8km, ML2.3, MW3.1*
*GUC **18** 16:40:05.7±0.7, 22°.29S×68°.69W, h115km±5km, ML3.1*

ISC 18 16:40:06.3±1.7, **22°.30S**±0°.05×**68°.73W**±0°.06, **h111**km±14km, **n16**, σ0**51**/27, **5C-1D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.69**	**317**	*e*P	**Pn**	**16 40 24.6**	**-0.4**
PB09				*i* S	**Sn**	**16 40 38.6**	**-0.4**
PB09				IAML		16 40 40.5	
	comp=E,496nm,0.7s						
PB09	**IPOC Station P**	**0.69**	**317**	*i* P	**Pn**	**16 40 24.7**	**-0.2**
PB09				*e*S	**Sn**	**16 40 39.1**	**+0.1**
PB09				IAML		16 40 39.6	
	comp=Z,557nm,0.8s						
PB06	**IPOC Station P**	**0.88**	**243**	↑*i* P	**Pn**	**16 40 26.2**	**-0.4**
PB06				*i* S	**Sn**	**16 40 42.2**	**+0.4**
PB06				IAML		16 40 44.9	
	comp=N,723nm,0.2s						
PB06	**IPOC Station P**	**0.88**	**243**	*i* P	**Pn**	**16 40 26.2**	**-0.4**
PB06				*e*S	**Sn**	**16 40 42.4**	**+0.6**
PB06				IAML		16 40 44.7	
	comp=Z,297nm,0.7s						
PB03	**IPOC Station P**	**0.98**	**285**	↑*i* P	**Pn**	**16 40 27.3**	**-0.3**
PB03				*i* S	**Sn**	**16 40 43.5**	**-0.1**
PB03				IAML		16 40 44.8	
	comp=N,574nm,0.3s						
PVCC	**Panska Ves**	**1.37**	**225**	*e*PG	**Pg**	**16 38 56.5**	**+0.6**
PVCC				*e*SG	**Sb**	**16 39 15.3**	**+1.1**
	comp=Z,234nm,1.1s						
KRLC	**Kraliky**	**1.49**	**163**	*e*PG	**Pn**	**16 38 57.9**	**+0.2**
KRLC				*e*SG	**Sg**	**16 39 16.9**	**-0.6**
	comp=Z,90nm,0.9s						
BRG	**Berggiesshubel**	**1.50**	**246**	PN	**Pn**	**16 38 58.1**	**+0.4**
BRG				PG	**Pb**	**16 38 59.5**	**+1.3**
BRG				SG	**Sg**	**16 39 19.1**	**+1.5**
	50nm,0.6s						
PRA	**Prague**	**1.78**	**

PB15	**IPOC Station P**	**1.13**	**217**	⇑*iP*	**Pn**	**16 40 29.1**	**-0.1**
PB15				*i* S	**Sn**	**16 40 47.6**	**+1.0**
PB04	**IPOC Station P**	**1.32**	**268**	⇑*iP*	**Pn**	**16 40 30.9**	**-0.3**
PB04				*i* S	**Sn**	**16 40 50.7**	**+0.6**
PB04	**IPOC Station P**	**1.32**	**268**	*i* P	**Pn**	**16 40 31.0**	**-0.3**
PB04				*e*S	**Sn**	**16 40 51.1**	**+1.0**
PB05	**IPOC Station P**	**1.47**	**248**	⇑*iP*	**Pn**	**16 40 32.6**	**-0.4**
PB05				*i* S	**Sn**	**16 40 53.0**	**-0.1**
PB05				IAML		16 40 57.9	
	comp=N,178nm,0.2s						
PB05	**IPOC Station P**	**1.47**	**248**	⇓*iP*	**Pn**	**16 40 32.8**	**-0.2**
PB05				IAML		16 40 58.1	
	comp=Z,83nm,0.2s						
PATCX	**Punta Patache**	**1.98**	**318**	*e*P	**Pn**	**16 40 38.7**	**-0.6**
PATCX				*i* S	**Sn**	**16 41 04.3**	**-0.1**
PATCX				IAML		16 41 11.1	
	comp=E,298nm,0.5s						
PB10	**IPOC Station P**	**2.07**	**234**	*i* P	**Pn**	**16 40 40.5**	**+0.3**
PB10				IAML		16 41 15.1	
	comp=Z,47nm,0.3s						
PB08	**IPOC Station P**	**2.19**	**349**	*e*P	**Pn**	**16 40 42.5**	**+0.3**
PB08				*i* S	**Sn**	**16 41 10.1**	**+0.6**
PB14	**IPOC Station P**	**2.78**	**213**	*i* P	**Pn**	**16 40 49.1**	**-0.7**
PB14				IAML		16 41 34.7	
	comp=Z,82nm,0.3s						
YJA	**Yavi**	**2.98**	**88**	*i* P	**Pn**	**16 40 52.8**	**+0.3**
ASTB	**Santa Barbara**	**4.26**	**113**	*i* P	**Pn**	**16 41 08.6**	**-0.8**

*IDC **18** 16:47:16.7±1.3,42°.99S×83°.38W,h0km,mb3.8/8, mb1 4.1/8,mb1mx3.9/31,mbtmp3.8/8,MS3.8/17, Ms1 3.8/17,ms1mx3.7/30,Error ellipse: s-maj=33.7km s-min=29.6km az=82.0*

*NEIC **18** 16:47:16.7±1.9,42°.7S±0°.1×83°.41W±0°.06,h10km±2km, mb4.5/7,Error ellipse: s-maj=23.1km s-min=5.7km az=348.0*

ISC 18 16:47:18.0±0.9,**42°.8S**±0°.1×**83°.2W**±0°.1,**h10**km,**n31,** σ1°**95**/17,**mb3.7**/11,**MS3.9**/14,**West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO06	**Curarrehue**	**9.44**	**74**	Pn	**Pn**	**16 49 33.8**	**-0.3**
PLCA	**Paso Flores**	**9.71**	**82**	LR	LR	16 52 51.3	
	comp=Z,1μm,18.7s,baz=340,slow=34						
PLCA	**Paso Flores**	**9.71**	**82**	Pn	**Pn**	**16 49 38.3**	**+0.5**
USHA	**Ushuaia**	**15.43**	**146**	LR	LR	16 55 52.1	
	comp=Z,146nm,21.9s,baz=280,slow=34						
CFA	**Coronel Fontan**	**16.35**	**52**	LR	LR	16 56 20.3	
	comp=Z,509nm,21.4s,baz=255,slow=33						
GO02	**Mina Guanaco**	**20.89**	**37**	P	**P**	**16 51 57.1**	**-3.6**
GO02				IAmb	IAmb	16 52 12.4	
	comp=Z,19nm,1.0s						
PB10	**IPOC Station P**	**21.95**	**33**	P	**P**	**16 52 09.3**	**-2.4**
PB10				IAmb	IAmb	16 52 13.7	
	comp=Z,27nm,1.3s						
LVC	**Limon Verde**	**23.43**	**35**	LR	LR	16 59 25.5	
	comp=Z,142nm,19.8s,baz=208,slow=31						
PMSA	**Palmer Station**	**24.53**	**160**	LR	LR	16 58 34.6	
	comp=Z,50nm,18.4s,baz=307,slow=28						
RPN	**Rapa Nui**	**26.36**	**298**	LR	LR	17 00 26.3	
	comp=Z,451nm,20.0s,baz=150,slow=30						
CPUP	**Villa Florida**	**26.79**	**60**	P	**P**	**16 53 01.1**	**+3.0**
	comp=Z,1.3nm,0.7s,baz=229,slow=12,SNR=4.1						
CPUP				LR	LR	17 03 30.3	
	comp=Z,502nm,18.7s,baz=222,slow=36						
CPUP	**Villa Florida**	**26.79**	**60**	P	**P**	**16 52 56.2**	**-1.9**
LPAZ	**La Paz**	**29.44**	**31**	P	**P**	**16 53 24.9**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=196,slow=7.1,SNR=3.3						
LPAZ				LR	LR	17 03 47.8	
	comp=Z,43nm,19.3s,baz=168,slow=33						
NNA	**Nana**	**31.23**	**12**	LR	LR	17 02 46.9	
	comp=Z,74nm,20.3s,baz=202,slow=30						
SIV	**San Ignacio**	**32.78**	**42**	P	**P**	**16 53 52.2**	**+0.8**
	comp=Z,0.7nm,0.8s,baz=240,slow=17,SNR=3.8						
BDFB	**Brasilia**	**40.49**	**59**	P	**P**	**16 54 58.2**	**+1.0**
	comp=Z,1.4nm,0.4s,baz=204,slow=3.4,SNR=3.1						
BDFB				LR	LR	17 12 12.8	
	comp=Z,283nm,18.7s,baz=215,slow=37						
OTAV	**Otavalo**	**43.09**	**7**	P	**P**	**16 55 17.2**	**-1.6**
OTAV				IAmb	IAmb	16 55 35.9	
	comp=Z,5.6nm,1.2s						
SNAA	**Sanae**	**47.05**	**155**	P	**P**	**16 55 48.6**	**-0.7**
	comp=Z,3.9nm,0.8s,baz=211,slow=0.5,SNR=5.8						
SNAA	**Sanae**	**47.05**	**155**	P	**P**	**16 55 49.0**	**-0.3**
SNAA				IAmb	IAmb	16 55 55.3	
	comp=Z,6.5nm,1.0s						
ROSC	**El Rosal**	**48.13**	**12**	LR	LR	17 14 36.1	
	comp=Z,109nm,18.8s,baz=63,slow=34						
ROSC	**El Rosal**	**48.13**	**12**	P	**P**	**16 55 56.3**	**-2.3**
ROSC				IAmb	IAmb	16 56 15.1	
	comp=Z,9.2nm,1.1s						
VNDA	**Vanda**	**53.58**	**194**	P	**P**	**16 56 37.8**	**-0.7**
MDP	**Montagnes des**	**55.18**	**38**	LR	LR	17 21 14.9	
	comp=Z,106nm,18.2s,baz=302,slow=37						
RCBR	**Riachuelo**	**55.64**	**62**	LR	LR	17 21 04.0	
	comp=Z,748nm,18.8s,baz=184,slow=36						
PPT	**Papeete**	**61.00**	**273**	LR	LR	17 17 30.8	
	comp=Z,60nm,20.8s,baz=168,slow=30						
TXAR	**Lajitas Array**	**74.23**	**342**	P	**P**	**16 58 55.9**	**+0.9**
	comp=Z,0.6nm,0.8s,baz=178,slow=8.1,SNR=5.0						
BOSA	**Boshof**	**83.25**	**123**	LR	LR	17 29 51.1	
	comp=Z,50nm,19.2s,baz=304,slow=31						
DBIC	**Dimbokro**	**86.04**	**77**	LR	LR	17 30 43.9	
	comp=Z,57nm,21.6s,baz=199,slow=30						
NVAR	**Mina Array Bea**	**86.92**	**333**	P	**P**	**17 00 05.0**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=163,slow=6.6,SNR=2.0						
PDAR	**Pinedale Array**	**88.43**	**341**	P	**P**	**17 00 10.6**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=174,slow=2.7,SNR=2.7						
TORD	**Torodi Ar. Bea**	**95.15**	**77**	LR	LR	17 43 43.5	
	comp=Z,27nm,18.0s,baz=320,slow=36						

*THR **18** 16:47:46.6±0.3,35°.00N×49°.73E,h14km±7km,ML3.4*
*TEH **18** 16:47:47.0,34°.98N×49°.85E,h8km,ML3.5*

ISC 18 16:47:47.5±0.9,**34°.94N**±0°.03×**49°.84E**±0°.02,**h10**km,**n44,** σ1°**65**/45,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAO	**Ashtian**	**0.42**	**159**	*e*Pg	**Pb**	**16 47 56.9**	**-0.3**
ASAO	**Ashtian**	**0.42**	**159**	*e*Pg	**Pb**	**16 47 56.9**	**-0.3**
IRAZ	**Razeghan**	**0.47**	**9**	*e*Pg	**Pg**	**16 47 56.2**	**-0.5**
HAGD	**Aghdareh**	**0.59**	**258**	*e*Pg	**Pb**	**16 47 59.7**	**-0.4**
HAGD				*e*Sg	**Sb**	**16 48 07.9**	**-0.7**
QABG	**Abgarm-Qazvin**	**0.79**	**345**	*e*Pg	**Pg**	**16 48 01.9**	**-1.0**
IMHD	**Mahdasht**	**1.00**	**42**	*e*		16 48 19.9	
IMHD				*e*Pg	**Pb**	**16 48 06.2**	**-0.9**
IQOM	**Qom**	**1.01**	**95**	*e*		16 48 23.1	
IQOM				*e*Pg	**Pb**	**16 48 06.8**	**-0.6**
KHMZ	**Khomeyn**	**1.20**	**175**	*e*Pg	**Pn**	**16 48 10.2**	**-0.5**
KHMZ	**Khomeyn**	**1.20**	**175**	*e*Pg	**Pn**	**16 48 10.2**	**-0.5**
KHMZ				*e*S	**Sg**	**16 48 27.1**	**+0.8**
HSAM	**Samen**	**1.25**	**235**	*e*Pg	**Pb**	**16 48 11.3**	**-0.2**
BDRS	**Dareh Seyedi**	**1.27**	**219**	*e*Pg	**Pb**	**16 48 11.7**	**0.0**
BDRS				*e*		16 48 12.7	
IHSB	**Hasanabad**	**1.27**	**67**	*e*Pg	**Pg**	**16 48 11.8**	**-0.2**
IHSB				*e*		16 48 32.5	
GHVR	**GHOM**	**1.28**	**111**	*e*Pg	**Pb**	**16 48 11.5**	**-0.3**
GHVR	**GHOM**	**1.28**	**111**	*e*Pg	**Pb**	**16 48 11.5**	**-0.3**
GHVR				IAML		16 48 33.3	
	comp=E,489nm,0.2s						
THKV	**Tehran--Karaj**	**1.29**	**41**	IAML		16 48 15.4	
	comp=E,2μm,0.3s						
HSRG	**Sareghieh**	**1.32**	**284**	*e*Pg	**Pg**	**16 48 12.2**	**-0.6**
CHTH	**Charan**	**1.43**	**47**	*e*Pg	**Pb**	**16 48 13.6**	**-0.7**
CHTH	**Charan**	**1.43**	**47**	*e*Pg	**Pb**	**16 48 13.6**	**-0.7**
CHTH				IAML		16 48 38.4	
	comp=E,230nm,0.4s						
IGZV	**Ghazvin**	**1.47**	**12**	*e*Pn	**Pg**	**16 48 14.7**	**-1.1**
IGZV				*e*		16 48 16.5	
TEH	**Tehran**	**1.49**	**57**	*e*Pg	**Pg**	**16 48 15.4**	**-0.7**
TEH				*e*		16 48 37.1	
IVRN	**Varamin**	**1.55**	**87**	*e*Pg	**Pb**	**16 48 16.1**	**-0.3**
IVRN				*e*		16 48 40.5	
QALM	**Alamut, Qazvin**	**1.62**	**24**	*e*Pn	**Pg**	**16 48 17.2**	**-1.5**
IBZA	**Bozab**	**1.70**	**254**	*e*Pn	**Pb**	**16 48 19.2**	**+0.2**
QAM	**Ghamsar**	**1.77**	**131**	*e*Pn	**Pg**	**16 48 20.8**	**-0.7**
IDOB	**Doab**	**1.79**	**231**	*e*Pn	**Pg**	**16 48 21.4**	**-0.6**
IKMR	**Kamar-syah**	**1.87**	**221**	*e*Pn	**Pg**	**16 48 22.7**	**-0.6**
IKMR				*e*		16 48 26.8	
IDMV	**Damavand**	**1.90**	**70**	*e*Pn	**Pb**	**16 48 22.1**	**-0.4**
IDMV				*e*		16 48 51.1	
KRSH	**Karshahi**	**2.13**	**116**	*e*Pn	**Pb**	**16 48 25.5**	**-0.8**
IKLH	**Kolahrood**	**2.17**	**138**	*e*Pn	**Pb**	**16 48 27.4**	**+0.4**
IKLH				*e*		16 49 01.3	
IKFM	**Kafar-mosalman**	**2.17**	**230**	*e*Pn	**Pg**	**16 48 28.1**	**-1.1**
IKFM				*e*		16 49 07.4	
IPIR	**Pirpir**	**2.42**	**158**	*e*Pn	**Pb**	**16 48 31.6**	**+0.3**
IPIR				*e*		16 49 11.2	
IFIR	**Firoozkooh**	**2.48**	**73**	*e*Pn	**Pb**	**16 48 30.3**	**-2.1**
ILAS	**Lasjerd**	**2.59**	**79**	*e*Pn	**Pb**	**16 48 31.8**	**-2.5**
ILAS				*e*		16 49 14.2	
JHBN	**Jahan bin**	**2.79**	**165**	*e*Pn	**Pb**	**16 48 36.0**	**-1.7**
IDHR	**Dehrash**	**2.85**	**266**	*e*Pn	**Pb**	**16 48 36.6**	**-2.1**
IZEF	**Zefreh**	**2.91**	**134**	*e*Pn	**Pb**	**16 48 36.8**	**-2.8**
ISHM	**Shahmirzad**	**2.95**	**72**	*e*Pn	**Pb**	**16 48 37.4**	**-3.0**
ISRB	**Sarab**	**3.37**	**329**	*e*Pn	**Pn**	**16 48 42.2**	**+1.8**
IANJ	**Anjilo**	**3.38**	**80**	*e*Pn	**Pn**	**16 48 42.6**	**+2.1**
IGLO	**Ghaloghah**	**3.60**	**63**	*e*Pn	**Pn**	**16 48 46.4**	**+2.8**
ANAR	**Anarak**	**3.67**	**117**	*e*Pn	**Pn**	**16 48 47.3**	**+2.8**
IRAM	**Ramesheh**	**3.78**	**145**	*e*Pn	**Pb**	**16 48 50.4**	**-4.1**
IHRS	**Heris**	**4.05**	**327**	*e*Pn	**Pn**	**16 48 52.5**	**+2.7**
ISAD	**Sadrabad**	**4.41**	**132**	*e*Pn	**Pn**	**16 48 59.1**	**+4.3**

*NEIC **18** 17:02:46.4±2.2,30°.6S±0°.1×179°.3E±0°.2,h451km±11km, mb4.6/10,Error ellipse: s-maj=21.9km s-min=16.4km az=106.0*

*IDC **18** 17:02:54.2±5.2,31°.44S×179°.21E,h545km±61km,mb2.7/2, mb1 3.0/3,mb1mx2.8/33,mbtmp3.8/3,Error ellipse: s-maj=81.7km s-min=35.0km az=12.0*

ISC 18 17:02:46.5±0.7,**30°.62S**±0°.07×**179°.6E**±0°.1,**h450**km,**n57,** σ2°**36**/63,**mb4.3**/5,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.58**	**59**	S	**S**	**17 04 39.5**	**-3.0**
KUZ	**Kuaotunu**	**6.89**	**207**	P	**P**	**17 04 33.8**	**+3.9**
MXZ	**Matakaoa Point**	**7.00**	**188**	P	P	17 04 36.6	+5.5
MXZ	**Matakaoa Point**	**7.00**	**188**	P	**P**	**17 04 32.2**	**+1.1**
WIAZ	**Waiheke Island**	**7.17**	**210**	P	**P**	**17 04 37.3**	**+4.4**
WMGZ	**Waiomatatini S**	**7.25**	**187**	P	**P**	**17 04 36.4**	**+2.8**
WMGZ				S	**S**	**17 06 01.0**	**-0.5**
HAZ	**Te Kaha**	**7.27**	**191**	P	**P**	**17 04 36.8**	**+3.0**
PKGZ	**Pakihiroa**	**7.36**	**189**	P	**P**	**17 04 39.1**	**+4.2**
ETAZ	**East Tamaki Re**	**7.40**	**210**	P	**P**	**17 04 40.0**	**+4.8**
MKAZ	**Moumakai**	**7.43**	**208**	P	**P**	**17 04 39.6**	**+4.0**
RUGZ	**Raukumara Rang**	**7.49**	**191**	P	**P**	**17 04 38.0**	**+1.6**
RUGZ				S	**S**	**17 06 06.0**	**-0.6**
PUZ	**Puketiti**	**7.51**	**188**	P	**P**	**17 04 38.8**	**+2.3**
PUZ				S	**S**	**17 06 07.7**	**+0.9**
AWAZ	**Awhitu Peninsu**	**7.62**	**211**	P	**P**	**17 04 41.6**	**+4.0**
TWGZ	**Tauwhareparae**	**7.65**	**189**	P	**P**	**17 04 40.7**	**+2.7**
TWGZ				S	**S**	**17 06 10.5**	**+0.9**
KMRZ	**Kaimai**	**7.80**	**202**	P	**P**	**17 04 42.5**	**+2.8**
TOZ	**Tahuroa Road**	**7.85**	**204**	P	**P**	**17 04 44.3**	**+4.2**
MWZ	**Matawai**	**7.88**	**192**	P	**P**	**17 04 42.1**	**+1.7**
MWZ				S	**S**	**17 06 16.3**	**+2.2**
URZ	**Urewera**	**7.89**	**194**	P	**P**	**17 04 41.2**	**+0.7**
	3.9nm,0.3s,baz=294,slow=3.0,SNR=27						
URZ				S	**S**	**17 06 10.6**	**-3.4**
	0.5nm,0.3s,baz=92,slow=13,SNR=3.1						
URZ	**Urewera**	**7.89**	**194**	P	**P**	**17 04 41.1**	**+0.7**
URZ	**Urewera**	**7.89**	**194**	P	**P**	**17 04 41.1**	**+0.7**
URZ				S	**S**	**17 06 09.9**	**-4.2**
CNGZ	**Carnagh Statio**	**7.93**	**188**	P	**P**	**17 04 43.9**	**+2.9**
RIGZ	**Rimuhau**	**8.20**	**190**	P	**P**	**17 04 45.5**	**+1.6**
HIZ	**Hauiti**	**8.78**	**205**	P	**P**	**17 04 53.5**	**+3.4**
BKZ	**Black Stump Fm**	**8.89**	**196**	P	**P**	**17 04 51.6**	**+0.2**
BKZ	**Black Stump Fm**	**8.89**	**196**	P	**P**	**17 04 51.4**	**0.0**
KAHZ	**Kahuranaki**	**9.41**	**193**	P	**P**	**17 04 58.2**	**+1.1**
MSWZ	**Moikau Station**	**11.32**	**197**	P	**P**	**17 05 16.8**	**-1.0**
PLWZ	**Palliser**	**11.47**	**196**	P	**P**	**17 05 19.6**	**+0.2**
QRZ	**Quartz Range**	**11.67**	**207**	P	**P**	**17 05 22.4**	**+0.8**
NNZ	**Nelson**	**11.70**	**204**	P	**P**	**17 05 20.8**	**-1.0**
TUWZ	**Tuamarina**	**11.70**	**201**	P	**P**	**17 05 21.2**	**-0.7**
BSWZ	**Blackbirch Sta**	**11.98**	**201**	P	**P**	**17 05 25.3**	**+0.3**
THZ	**Tophouse**	**12.34**	**204**	P	**P**	**17 05 27.9**	**-1.1**
KHZ	**Kahutara**	**12.72**	**201**	P	**P**	**17 05 31.7**	**-1.2**
MSVF	**Nonsavu**	**12.90**	**354**	P	**P**	**17 05 35.7**	**+0.4**
LTZ	**Lake Taylor**	**13.46**	**204**	P	**P**	**17 05 40.3**	**-0.7**
OXZ	**Oxford**	**14.03**	**203**	P	**P**	**17 05 45.0**	**-2.0**
MQZ	**McQueen's Vall**	**14.17**	**201**	P	**P**	**17 05 46.8**	**-1.6**
NOUC	**Port Laguerre**	**14.58**	**302**	P	P	17 05 49.0	-4.2
NIUE	**Niue**	**14.93**	**42**	P	**P**	**17 05 58.1**	**+1.1**
FOZ	**Fox Glacier**	**15.04**	**208**	P	**P**	**17 05 56.2**	**-1.5**
LBZ	**Lake Benmore**	**15.61**	**206**	P	**P**	**17 06 01.1**	**-2.8**
AFI	**Afiamalu**	**18.45**	**28**	P	**P**	**17 06 33.3**	**-0.5**
AFI				IAmb	IAmb	17 07 02.5	
	comp=Z,36nm,1.1s						
STKA	**Stephens Creek**	**32.37**	**258**	P	**P**	**17 08 36.9**	**-0.5**
BBOO	**Buckleboo**	**36.87**	**255**	P	**P**	**17 09 13.9**	**-1.4**
BBOO				IAmb	IAmb	17 09 33.3	
	comp=Z,40nm,1.4s						
ASAR	**Alice Springs**	**40.99**	**268**	P	**P**	**17 09 47.8**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=105,slow=7.2,SNR=11						
ASAR				PcP	**PP**	**17 11 37.5**	**+1.7**
	comp=Z,0.3nm,0.8s,baz=118,slow=3.6,SNR=4.3						
ASAR	**Alice Springs**	**40.99**	**268**	P	**P**	**17 09 46.3**	**-2.6**
WR0	**Warramunga Arr**	**41.82**	**274**	P	**P**	**17 09 54.3**	**-1.2**
WR0				IAmb	IAmb	17 10 17.5	
	comp=Z,25nm,1.6s						
WRA	**Warramunga Arr**	**42.00**	**274**	P	**P**	**17 09 55.5**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=112,slow=7.8,SNR=4.9						
WRA	**Warramunga Arr**	**42.00**	**274**	P	**P**	**17 09 55.3**	**-1.7**
FAKI	**Fak Fak**	**52.45**	**292**	P	**P**	**17 11 15.4**	**-0.8**
FAKI				IAmb	IAmb	17 12 27.0	
	comp=Z,20nm,1.2s						
QSPA	**South Pole Qui**	**59.49**	**180**	P	**P**	**17 12 05.2**	**+0.5**
NLU	**North Lily Min**	**94.58**	**46**	P	**P**	**17 15 18.6**	**+0.5**
FINES	**FINESS Array B**	**144.59**	**338**	PKPbc	**PKPdf**	**17 21 28.4**	**-1.6**
	comp=Z,3.9nm,0.7s,baz=54,slow=4.2,SNR=15						
BRTR	**Keskin Array B**	**150.83**	**298**	PKPbc	**PKPdf**	**17 21 46.1**	**+4.9**
	comp=Z,0.4nm,0.5s,baz=139,slow=3.9,SNR=4.2						
BRTR	**Keskin Array B**	**150.83**	**298**		**PKPdf**	**17 21 45.8**	**+4.6**
CLL	**Collm**	**157.04**	**338**	*e*PKPab	**PKPab**	**17 22 21.0**	**-1.4**

*THE **18** 17:03:23.8,37°.84N×21°.02E,h0km±3km,ML3.2/12, Error ellipse: s-maj=3.4km s-min=0.8km az=218.0*

*ATH **18** 17:03:23.4,37°.83N×21°.02E,h8km±2km,ML3.2/13, Error ellipse: s-maj=2.3km s-min=0.6km az=8.0*

*IDC **18** 17:03:25.8±3.5,38°.07N×21°.47E,h0km,mb3.9/3, mb1 3.9/4,mb1mx3.5/41,mbtmp3.7/4,ML4.4/1,Error ellipse: s-maj=85.6km s-min=33.0km az=177.0*

ISC 18 17:03:23.9±1.1,**37°.84N**±0°.02×**21°.03E**±0°.02,**h5**km±9km, **n90**,σ0°**92**/118,**mb4.0**/3,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KFL	**Anninata**	**0.33**	**325**	P	**Pg**	**17 03 30.1**	**-0.1**
KFL				S	**Sg**	**17 03 35.8**	**+1.2**
	5μm,0.4s						
KFL	**Anninata**	**0.33**	**325**	P	**Pg**	**17 03 30.1**	**-0.1**
KFL				S	**Sg**	**17 03 35.0**	**+0.4**
KFL				AML	AML	17 03 45.2	
	comp=E,9531μm,0.5s						
KFL				AML	AML	17 03 46.8	
	comp=N,9167μm,0.9s						
RLS	**Riolos of Patr**	**0.41**	**58**	P	**Pg**	**17 03 31.0**	**-0.8**
RLS				S	**Sg**	**17 03 37.7**	**+0.6**
	comp=N,5μm,0.5s						
RLS	**Riolos of Patr**	**0.41**	**58**	P	**Pg**	**17 03 31.1**	**-0.7**
RLS				S	**Sg**	**17 03 38.1**	**+1.0**
RLS				AML	AML	17 03 40.6	
	comp=N,10846μm,0.5s						
RLS				AML	AML	17 03 41.2	
	comp=E,6994μm,0.5s						
VLS	**Valsamata**	**0.48**	**314**	P	**Pg**	**17 03 32.4**	**-0.8**
VLS				S	**Sb**	**17 03 40.7**	**-1.6**
	comp=E,1μm,0.3s						
VLS	**Valsamata**	**0.48**	**314**	P	**Pg**	**17 03 32.9**	**-0.3**
VLS				S	**Sg**	**17 03 39.4**	**-0.1**
VLS				AML	AML	17 03 42.2	
	comp=N,3852μm,0.5s						
VLS				AML	AML	17 03 42.6	
	comp=E,2156μm,0.2s						
DRO	**Drossia**	**0.55**	**78**	P	**Pg**	**17 03 33.5**	**-1.0**
DRO				S	**Sb**	**17 03 43.4**	**-0.9**
	comp=E,8μm,0.5s						
DRO	**Drossia**	**0.55**	**78**	P	**Pg**	**17 03 34.3**	**-0.2**
DRO				S	**Sg**	**17 03 42.0**	**+0.3**
DRO				AML	AML	17 03 50.2	
	comp=E,17100μm,0.6s						
DRO				AML	AML	17 03 51.4	
	comp=N,17462μm,0.7s						
AMT	**Artemida-Makis**	**0.62**	**119**	P	**Pg**	**17 03 35.5**	**-0.3**
AMT				S	**Sb**	**17 03 45.7**	**-0.6**
	comp=N,2μm,0.8s						
AMT	**Artemida-Makis**	**0.62**	**119**	P	**Pg**	**17 03 35.6**	**-0.3**
AMT				S	**Sg**	**17 03 43.6**	**-0.3**
AMT				AML	AML	17 03 52.5	
	comp=E,5167μm,0.8s						
AMT				AML	AML	17 03 58.9	
	comp=N,4116μm,0.6s						
FSK	**Fiskardo**	**0.72**	**329**	P	**Pg**	**17 03 36.9**	**-0.8**
FSK	**Fiskardo**	**0.72**	**329**	P	**Pg**	**17 03 37.5**	**-0.2**
FSK				S	**Sb**	**17 03 47.9**	**-1.2**
UPR	**University Cam**	**0.74**	**53**	P	**Pg**	**17 03 38.6**	**+0.4**
UPR				S	**Sg**	**17 03 48.6**	**+0.8**
PDO	**Prodromos**	**0.77**	**9**	P	**Pg**	**17 03 38.3**	**-0.3**
PDO				S	**Sb**	**17 03 50.6**	**+0.1**
	comp=N,4μm,0.6s						
PDO	**Prodromos**	**0.77**	**9**	P	**Pg**	**17 03 38.5**	**-0.1**
PDO				S	**Sg**	**17 03 48.8**	**+0.2**
PDO				AML	AML	17 03 57.7	
	comp=E,5504μm,0.6s						
PDO				AML	AML	17 03 59.1	
	comp=N,6245μm,0.5s						
EVGI	**Lefkada island**	**0.83**	**340**	P	**Pg**	**17 03 38.5**	**-1.4**
EVGI	**Lefkada island**	**0.83**	**340**	P	**Pg**	**17 03 38.8**	**-1.1**
EVGI				S	**Sg**	**17 03 51.2**	**+0.5**
MGNA	**Meganis**	**0.83**	**347**	P	**Pg**	**17 03 38.9**	**-1.0**
MGNA				S	**Sg**	**17 03 50.8**	**0.0**
MGNA				AML	AML	17 04 00.5	
	comp=E,2715μm,0.6s						
MGNA				AML	AML	17 04 05.5	
	comp=N,1711μm,0.7s						
LAKA	**Lakka**	**0.85**	**62**	P	**Pg**	**17 03 39.6**	**-0.6**
LAKA				S	**Sb**	**17 03 52.9**	**0.0**
	comp=N,2μm,1.1s						
LAKA	**Lakka**	**0.85**	**62**	P	**Pg**	**17 03 39.8**	**-0.4**
LAKA				AML	AML	17 03 58.5	
	comp=N,3088μm,0.8s						
LAKA				AML	AML	17 04 01.3	
	comp=E,3683μm,0.7s						
PVO	**Paravola**	**0.87**	**27**	P	**Pg**	**17 03 40.3**	**-0.2**
PVO	**Paravola**	**0.87**	**27**	P	**Pg**	**17 03 40.4**	**-0.2**
PVO				S	**Sb**	**17 03 52.6**	**-0.9**
PVO				AML	AML	17 04 01.9	
	comp=E,3691μm,0.5s						
PVO				AML	AML	17 04 02.3	
	comp=N,3149μm,0.5s						
EFP	**Efpalio**	**0.91**	**50**	P	**Pg**	**17 03 40.6**	**-0.7**
EFP				S	**Sb**	**17 03 54.6**	**+0.1**
	comp=N,2μm,0.6s						
EFP	**Efpalio**	**0.91**	**50**	P	**Pg**	**17 03 40.8**	**-0.4**
EFP				S	**Sg**	**17 03 53.3**	**+0.3**
EFP				AML	AML	17 03 57.1	
	comp=N,3886μm,0.6s						
EFP				AML	AML	17 04 03.5	
	comp=E,2143μm,0.7s						
KLV	**Kalavryta, Ach**	**0.91**	**77**	P	**Pg**	**17 03 40.0**	**-1.4**
KLV				S	**Sb**	**17 03 55.0**	**+0.3**
KLV	**Kalavryta, Ach**	**0.91**	**77**	P	**Pg**	**17 03 40.0**	**-1.4**
ALIK	**Aliki, Aigiali**	**0.95**	**64**	P	**Pg**	**17 03 41.1**	**-1.1**
ITM	**Ithomi**	**0.97**	**132**	P	**Pg**	**17 03 41.8**	**-0.7**
ITM	**Ithomi**	**0.97**	**132**	P	**Pg**	**17 03 41.9**	**-0.7**
TRIZ	**Trizonia**	**0.98**	**57**	P	**Pg**	**17 03 41.8**	**-0.8**
TRIZ				S	**Sb**	**17 03 56.5**	**0.0**
	comp=E,1μm,0.5s						
TRIZ	**Trizonia**	**0.98**	**57**	P	**Pg**	**17 03 41.8**	**-0.8**
TRIZ				S	**Sb**	**17 03 55.9**	**-0.7**
LKD2	**Lefkada island**	**0.99**	**343**	P	**Pg**	**17 03 41.5**	**-1.4**
LKD2	**Lefkada island**	**0.99**	**343**	P	**Pg**	**17 03 41.5**	**-1.4**
SERG	**Sergoula**	**0.99**	**55**	P	**Pg**	**17 03 42.1**	**-0.8**
SERG				S	**Sb**	**17 03 57.5**	**+0.5**
	comp=E,1μm,0.5s						

ISC 18 17:04:34.4±0.6, 31°08'N±0'07×142°79E±0'09, h30km, n65, σ0§98/64, mb4.1/22, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**3.23**	**309**	Pn	**Pn**	**17 05 23.1**	**+0.1**
JCJ	**Chichijima**	**4.01**	**188**	Sn	**Sn**	**17 06 17.9**	**-1.8**
	27nm,0.3s,baz=270,slow=20,SNR=4.1						
ASAJ	**Asahikawa**	**13.01**	**359**	LR	LR	17 12 36.1	
	comp=Z,27nm,21.8s,baz=148,slow=38						
KSRS	**Korea Array**	**13.83**	**301**	Pn	**Pn**	**17 07 46.8**	**-1.6**
	0.1nm,0.3s,baz=94,slow=14,SNR=4.4						
KSRS				LR	LR	17 11 57.9	
	comp=Z,98nm,19.6s,baz=92,slow=38						
KSRS	**Korea Array**	**13.83**	**301**		**Pn**	**17 07 46.8**	**-1.6**
USA0B	**Ussuriysk Arra**	**15.62**	**330**	Pn	**Pn**	**17 08 11.3**	**-1.0**
KLR	**Kul'dur**	**19.95**	**338**	P	**P**	**17 09 02.4**	**-1.5**
	0.1nm,0.3s,baz=158,slow=19,SNR=3.3						
YHNB	**Yeheng**	**19.96**	**257**	P	**P**	**17 09 04.4**	**+0.1**
YHNB				IAmb	IAmb	17 09 16.0	
	comp=Z,69nm,1.4s						
NACB	**Ninganchiao**	**19.98**	**255**	P	**P**	**17 09 04.3**	**-0.1**
NACB				IAmb	IAmb	17 09 30.4	
	comp=Z,22nm,1.0s						
YULB	**Yu-li**	**20.57**	**253**	P	**P**	**17 09 11.1**	**+0.4**
YULB				IAmb	IAmb	17 09 11.3	
	comp=Z,38nm,1.4s						
SSLB	**Suanglung**	**20.68**	**255**	P	**P**	**17 09 10.9**	**-1.1**
SSLB				IAmb	IAmb	17 09 20.4	
	comp=Z,20nm,1.1s						
TPUB	**Ta-pu**	**21.16**	**254**	P	**P**	**17 09 18.4**	**+1.2**
H11N2	**WAKE ISLAND Hy**	**24.48**	**112**	T	T	17 35 01.2	
	baz=304,slow=74,SNR=3.1						
H11N1	**WAKE ISLAND Hy**	**24.48**	**112**	T	T	17 35 02.6	
	baz=304,slow=74,SNR=3.7						
H11N3	**WAKE ISLAND Hy**	**24.50**	**112**	T	T	17 35 05.5	
	baz=304,slow=74,SNR=4.3						
ULN	**Ulaanbaatar**	**31.92**	**312**	P	**P**	**17 10 57.4**	**0.0**
YAK	**Yakutsk**	**32.11**	**348**	P	**P**	**17 10 58.4**	**-0.2**
	comp=Z,2.1nm,0.4s,baz=342,slow=3.7,SNR=4.3						
YAK	**Yakutsk**	**32.11**	**348**	P	**P**	**17 10 57.1**	**-1.5**
YAK				IAmb	IAmb	17 10 59.1	
	comp=Z,5.5nm,0.6s						
SONM	**Songino Array**	**32.33**	**312**	P	**P**	**17 11 01.2**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=106,slow=8.6,SNR=4.2						
SONM	**Songino Array**	**32.33**	**312**	P	**P**	**17 11 01.6**	**+0.6**
KMI	**Kunming**	**35.68**	**271**	P	**P**	**17 11 30.7**	**+0.4**
LUWI	**Luwuk**	**37.18**	**214**	P	**P**	**17 11 41.8**	**-1.1**
CMAR	**Chiang Mai Arr**	**41.50**	**263**	P	**P**	**17 12 20.5**	**+1.5**
	comp=Z,0.4nm,0.4s,baz=56,slow=5.4,SNR=5.4						
CMAR	**Chiang Mai Arr**	**41.50**	**263**	P	**P**	**17 12 20.2**	**+1.2**
MTN	**Manton Dam**	**45.09**	**196**	P	**P**	**17 12 47.2**	**-0.6**
ZALV	**Zalesovo Beam**	**46.89**	**317**	P	**P**	**17 13 02.7**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=94,slow=8.7,SNR=5.1						
ZALV				PcP	**PcP**	**17 14 34.7**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=62,slow=3.9,SNR=3.6						
ZALV	**Zalesovo Beam**	**46.89**	**317**	P	**P**	**17 13 02.2**	**+0.5**
ZALV				PcP	**PcP**	**17 14 33.0**	**-1.1**
KNRA	**Kununurra**	**48.41**	**198**	P	**P**	**17 13 14.3**	**+0.5**
MK31	**Makanchi Array**	**48.43**	**307**	P	**P**	**17 13 14.4**	**+0.6**
MKAR	**Makanchi Array**	**48.43**	**307**	P	**P**	**17 13 15.1**	**+1.2**
	comp=Z,3.0nm,0.7s,baz=89,slow=9.1,SNR=30						
MKAR	**Makanchi Array**	**48.43**	**307**	P	**P**	**17 13 14.8**	**+0.9**
KURK	**Kurchatov**	**50.64**	**312**	P	**P**	**17 13 30.4**	**-0.1**
IMAR	**Indian Mountai**	**51.27**	**28**	P	**P**	**17 13 33.7**	**-1.4**
WRA	**Warramunga Arr**	**51.38**	**190**	P	**P**	**17 13 37.1**	**+0.7**
	comp=Z,1.0nm,0.3s,baz=7.3,slow=7.6,SNR=13						
WRA	**Warramunga Arr**	**51.38**	**190**	P	**P**	**17 13 36.5**	**0.0**
PPLA	**Purkeypile**	**51.49**	**32**	P	**P**	**17 13 36.1**	**-0.9**
PPLA				IAmb	IAmb	17 13 37.4	
	comp=Z,28nm,1.6s						
ILAR	**Eielson Array**	**53.99**	**30**	P	**P**	**17 13 54.1**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=257,slow=6.0,SNR=5.2						
ILAR	**Eielson Array**	**53.99**	**30**	P	**P**	**17 13 53.3**	**-1.9**
AS31	**Alice Springs**	**55.10**	**190**	P	**P**	**17 14 02.7**	**-1.1**
ASAR	**Alice Springs**	**55.10**	**190**	P	**P**	**17 14 04.5**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=5.0,slow=7.7,SNR=26						
ASAR				PcP	**PcP**	**17 15 07.5**	**+2.6**
	comp=Z,0.7nm,0.6s,baz=15,slow=4.0,SNR=5.7						
ASAR	**Alice Springs**	**55.10**	**190**	P	**P**	**17 14 02.8**	**-1.0**
SCRK	**Sand Creek**	**55.23**	**31**	P	**P**	**17 14 04.8**	**+0.4**
SCRK				IAmb	IAmb	17 14 11.3	
	comp=Z,14nm,1.6s						
KK31	**Karatay Array**	**57.24**	**304**	P	**P**	**17 14 18.0**	**-1.0**
KKAR	**Karatay Array**	**57.24**	**304**	P	**P**	**17 14 17.9**	**-1.1**
KKAR				IAmb	IAmb	17 14 24.0	
	comp=Z,2.6nm,0.7s						
KKAR	**Karatay Array**	**57.24**	**304**	P	**P**	**17 14 18.6**	**-0.4**
NIL	**Nilore**	**57.75**	**292**	P	**P**	**17 14 24.1**	**+1.3**
NIL				IAmb	IAmb	17 14 37.6	
	comp=Z,5.2nm,1.0s						
INK	**Inuvik**	**59.20**	**25**	P	**P**	**17 14 32.0**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=302,slow=5.6,SNR=4.8						
INK	**Inuvik**	**59.20**	**25**	P	**P**	**17 14 32.2**	**0.0**
INK				IAmb	IAmb	17 14 58.6	
	comp=Z,8.7nm,1.6s						
ABKAR	**Akbulak array**	**62.73**	**313**	P	**P**	**17 14 56.8**	**+0.3**
ABKAR	**Akbulak array**	**62.73**	**313**	P	**P**	**17 14 57.0**	**+0.5**
YKA	**Yellowknife Ar**	**68.40**	**29**	P	**P**	**17 15 33.2**	**+0.3**
	comp=Z,0.3nm,0.7s,baz=294,slow=6.3,SNR=8.0						
PINE	**Pine Mountain**	**73.36**	**49**	P	**P**	**17 16 04.1**	**+0.5**
PINE				IAmb	IAmb	17 16 23.4	
	comp=Z,4.2nm,1.1s						
FINES	**FINESS Arra B**	**74.62**	**334**	P	**P**	**17 16 10.6**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=76,slow=6.3,SNR=3.1						
FINES	**FINESS Array B**	**74.62**	**334**	P	**P**	**17 16 10.4**	**+0.1**
KBZ	**Khabaz**	**75.70**	**313**	P	**P**	**17 16 18.3**	**+1.4**
	comp=Z,2.3nm,0.8s,baz=130,slow=2.6,SNR=6.5						
NVAR	**Mina Array Bea**	**77.66**	**53**	P	**P**	**17 16 28.6**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=289,slow=5.9,SNR=10						
NVAR	**Mina Array Bea**	**77.66**	**53**	P	**P**	**17 16 27.8**	**-0.7**
NOA	**NORSAR Array B**	**80.11**	**338**	P	**P**	**17 16 41.2**	**0.0**
	comp=Z,1.5nm,0.9s,baz=40,slow=5.7,SNR=2.8						
PDAR	**Pinedale Array**	**81.03**	**45**	P	**P**	**17 16 46.5**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=253,slow=1.5,SNR=4.7						
PDAR	**Pinedale Array**	**81.03**	**45**	P	**P**	**17 16 45.8**	**-0.9**
BRTR	**Keskin Array B**	**83.69**	**313**	P	**P**	**17 17 01.6**	**+1.1**
	comp=Z,1.4nm,0.9s,baz=82,slow=3.3,SNR=6.3						
BRTR	**Keskin Array B**	**83.69**	**313**	P	**P**	**17 17 01.5**	**+0.9**
TXAR	**Lajitas Array**	**92.80**	**53**	P	**P**	**17 17 45.9**	**+1.5**
	comp=Z,0.5nm,0.8s,baz=299,slow=5.2,SNR=5.3						
TXAR	**Lajitas Array**	**92.80**	**53**	P	**P**	**17 17 44.8**	**+0.3**
LPAZ	**La Paz**	**148.22**	**70**	PKPbc	**PKiKP**	**17 24 19.7**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=317,slow=4.1,SNR=4.8						

*NIED **18** 17:05:00, 35°.60N×140°.80E, h50km, Mw4.1 Best double couple: M₀1.62000×10¹⁵ NP1:φs23.00000°,δ68.00000°, λ90.00000°. NP2:φs202.00000°,δ22.00000°,λ89.00000°.*

*IDC **18** 17:05:07.8±1.4, 35°.47N×140°.91E, h0km, mb3.8/4, mb1 4.0/7, mb1mx3.7/49, mbtmp3.8/7, ML3.4/2, MS3.2/8, Ms1 3.2/8, ms1mx2.9/42, Error ellipse: s-maj=36.2km s-min=27.6km az=83.0*

*JMA **18** 17:05:14.3±0.2, 35°.64N×140°.70E, h49km±2km, M3.3 Broadband fault plane solution: P waves. NP1: φs190.00000°,δ22.00000°,λ87.00000°. NP2:φs13.00000°, δ68.00000°,λ91.00000°. Principal axes: T Plg67.0000°, Azm285.0000°; N Plg1.0000°, Azm192.0000°; P Plg23.0000°, Azm102.0000°;*

JMA Felt I J1.

*NEIC **18** 17:05:15.1±2.7, 35°.70N±0°.07×140°.7E±0°.1, h62km±6km, mb4.4/10 Error ellipse: s-maj=14.3km s-min=10.5km az=93.0*

ISC 18 17:05:14.0±0.8, 35°63N±0'05×140°79E±0'07, h55km±6km, n48, σ1§53/44, mb4.2/8, MS3.4/4, 1C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.09**	**36**	↑P	**Pn**	**17 05 22.1**	**-0.3**
CHOJ				S	**Sn**	**17 05 28.0**	**-0.4**
JSMT	**Sammumatsuo**	**0.28**	**273**	↓P	**Pn**	**17 05 22.8**	**-0.6**
JSMT				S	**Sn**	**17 05 29.8**	**-0.4**
JIHU	**Itakohorinouch**	**0.40**	**327**	↓P	**Pn**	**17 05 24.5**	**0.0**
JIHU				S	**Sn**	**17 05 32.4**	**+0.3**
JCN	**Nagara**	**0.53**	**247**	↓P	**Pn**	**17 05 25.6**	**-0.3**
BSO4	**Boso 4**	**0.74**	**210**	P	**Pn**	**17 05 28.8**	**+0.4**
JYT	**Yasato**	**0.77**	**321**	↓P	**Pn**	**17 05 27.9**	**-1.0**
BSO3	**Boso 3**	**0.86**	**196**	P	**Pn**	**17 05 30.2**	**+0.4**
JHO	**Hitachi**	**1.00**	**350**	↓P	**Pn**	**17 05 31.9**	**+0.1**
JAG	**Ashikaga**	**1.35**	**307**	↓P	**Pn**	**17 05 35.5**	**-1.0**
JIM2	**Oshima 3**	**1.44**	**231**	P	**Pn**	**17 05 36.4**	**-1.4**
JIM2				eS	**Sn**	**17 05 52.6**	**-3.1**
JOD2	**Odawara 2**	**1.44**	**256**	↓P	**Pn**	**17 05 37.0**	**-0.8**
MJAR	**Matsushiro Arr**	**2.28**	**294**	Pn	**Pn**	**17 05 49.6**	**+0.3**
	2.6nm,0.3s,baz=101,slow=14,SNR=146						
MJAR				LR	LR	17 06 49.9	
	comp=Z,345nm,19.0s,baz=110,slow=43						
MJAR	**Matsushiro Arr**	**2.28**	**294**		**Pn**	**17 05 49.3**	**0.0**
MAJO	**Matsushiro**	**2.29**	**294**		**Pn**	**17 05 50.2**	**+0.9**
MAT	**Matsushiro**	**2.29**	**294**	P	**Pn**	**17 05 50.2**	**+0.9**
MAT				S	**Sn**	**17 06 19.2**	**+2.9**
MJB9	**Matsu-Tunnel**	**2.29**	**294**		**Pn**	**17 05 50.2**	**+0.9**
JHJ2	**Mitsune**	**2.64**	**198**		**Pn**	**17 05 55.9**	**+1.7**
INU	**Inuyama**	**3.10**	**266**		**Pn**	**17 06 01.2**	**+0.8**
ERM	**Erimo**	**6.64**	**15**	Pn	**Pn**	**17 06 48.6**	**-0.3**
ASAJ	**Asahikawa**	**8.59**	**9**	Pn	**Pn**	**17 07 14.5**	**-1.1**
	0.7nm,0.3s,baz=222,slow=17,SNR=9.9						
ASAJ				Sn	**Sn**	**17 08 47.0**	**-4.0**
	0.1nm,0.3s,baz=319,slow=18,SNR=1.9						
USRK	**Ussuriysk Ar.**	**10.90**	**324**	Pn	**Pn**	**17 07 49.3**	**+2.1**
	baz=106,slow=14,SNR=2.9						
USRK				LR	LR	17 11 42.0	
	comp=Z,82nm,21.0s,baz=166,slow=36						
USRK	**Ussuriysk Ar.**	**10.90**	**324**		**Pn**	**17 07 47.7**	**+0.5**
KLR	**Kul'dur**	**15.13**	**337**	LR	LR	17 14 17.1	
	comp=Z,53nm,19.6s,baz=122,slow=36						
SSLB	**Suanglung**	**20.84**	**241**	P	**P**	**17 09 49.9**	**-1.4**
SSLB				IAmb	IAmb	17 10 00.7	
	comp=Z,21nm,1.2s						
YULB	**Yu-li**	**20.85**	**239**	P	**P**	**17 09 50.0**	**-1.3**
ENH	**Enshi**	**26.74**	**267**	P	**P**	**17 10 46.7**	**-1.9**
ENH				IAmb	IAmb	17 10 48.8	
	comp=Z,8.9nm,0.8s						
ULN	**Ulaanbaatar**	**27.76**	**307**	P	**P**	**17 10 55.4**	**-2.2**
ULN				IAmb	IAmb	17 11 04.0	
	comp=Z,2.7nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**27.90**	**118**	T	T	17 40 19.2	
	baz=310,slow=75,SNR=9.4						
H11N1	**WAKE ISLAND Hy**	**27.91**	**118**	T	T	17 40 21.7	
	baz=310,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy**	**27.92**	**118**	T	T	17 40 19.0	
	baz=310,slow=75,SNR=8.9						
H11S1	**WAKE ISLAND Hy**	**28.56**	**120**	T	T	17 40 59.7	
	baz=312,slow=75,SNR=31						
H11S3	**WAKE ISLAND Hy**	**28.56**	**120**	T	T	17 40 53.2	
	baz=312,slow=75,SNR=20						
H11S2	**WAKE ISLAND Hy**	**28.57**	**120**	T	T	17 41 08.0	
	baz=312,slow=75,SNR=11						
MK31	**Makanchi Array**	**44.45**	**303**	P	**P**	**17 13 17.5**	**-2.1**
MK31				IAmb	IAmb	17 13 19.1	
	comp=Z,2.4nm,0.8s						
MKAR	**Makanchi Array**	**44.45**	**303**	LR	LR	17 31 27.4	
	comp=Z,34nm,18.2s,baz=35,slow=35						
MKAR	**Makanchi Array**	**44.45**	**303**	P	**P**	**17 13 17.6**	**-2.0**
MAKZ	**Makanchi**	**44.66**	**303**	P	**P**	**17 13 19.4**	**-1.8**
MAKZ				IAmb	IAmb	17 13 20.0	
	comp=Z,3.3nm,0.5s						
KURK	**Kurchatov**	**46.41**	**309**	P	**P**	**17 13 35.5**	**+0.5**
KURK				IAmb	IAmb	17 13 37.7	
	comp=Z,6.8nm,1.0s						
ILAR	**Eielson Array**	**50.95**	**32**	P	**P**	**17 14 12.5**	**+2.9**
	comp=Z,0.7nm,0.9s,baz=276,slow=6.7,SNR=5.1						
ILAR	**Eielson Array**	**50.95**	**32**	P	**P**	**17 14 11.3**	**+1.7**
WR0	**Warramunga Arr**	**55.60**	**187**	P	**P**	**17 14 44.1**	**-0.1**
WRA	**Warramunga Arr**	**55.60**	**187**	P	**P**	**17 14 44.5**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=0.9,slow=7.4,SNR=3.6						
WRA	**Warramunga Arr**	**55.60**	**187**	P	**P**	**17 14 45.0**	**+0.8**
ARU	**Arti**	**57.09**	**319**	LR	LR	17 39 26.9	
	comp=Z,17nm,19.0s,baz=236,slow=36						
ARU	**Arti**	**57.09**	**319**	P	**P**	**17 14 54.7**	**+0.3**
ARU				IAmb	IAmb	17 14 56.9	
	comp=Z,5.1nm,1.0s						
ASAR	**Alice Springs**	**59.33**	**187**	LR	LR	17 41 15.0	
	comp=Z,44nm,19.2s,baz=110,slow=37						
FINES	**FINESS Array B**	**69.82**	**332**	P	**P**	**17 16 19.9**	**+1.5**
	comp=Z,2.2nm,0.9s,baz=46,slow=8.2,SNR=4.5						
NOA	**NORSAR Array B**	**75.28**	**337**	P	**P**	**17 16 52.6**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=54,slow=6.7,SNR=2.8						
NOA				LR	LR	17 52 39.3	
	comp=Z,19nm,20.3s,baz=265,slow=38						

*IDC **18** 17:21:31.1±0.9, 38°.67N×21°.81E, h0km, mb3.8/10, mb1 3.8/16, mb1mx3.7/45, mbtmp3.7/16, ML3.8/6, MS2.9/9, Ms1 3.0/9, ms1mx2.7/49, Error ellipse: s-maj=16.3km s-min=14.4km az=82.0*

*ATH **18** 17:21:31.3, 38°.64N×21°.78E, h19km±1km, ML3.9/13, Error ellipse: s-maj=1.6km s-min=0.6km az=199.0*

*ISK **18** 17:21:32.4, 38°.66N×22°.03E, h12km, ML3.6/25*

*THE **18** 17:21:32.0, 38°.65N×21°.77E, h3km, ML3.8/29, Error ellipse: s-maj=0.8km s-min=0.4km az=226.0*

*NEIC **18** 17:21:32.7±2.5, 38°.65N±0°.05×21°.80E±0°.07, h12km±2km, Error ellipse: s-maj=8.3km s-min=7.0km az=50.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr1.68; Mθθ-0.14; Mφφ-1.54; Mrθ-0.10; Mθφ-6.06; Mφr-3.98; Fault plane solution: M₀7.42000×10¹⁴ NP1: φs180.70000°,δ82.44000°,λ35.60000°. NP2:φs85.31000°, δ54.76000°,λ170.72000°. Principal axes: T 6.7580, Plg30.0000°, Azm49.0000°; N 1.1902, Plg54.0000°, Azm191.0000°; P -7.9482, Plg18.0000°, Azm308.0000°;*

ISC 18 17:21:32.1±0.7, 38°.64N±0'.01×21°.78E±0'.01, h12km±4km, n276, σ1§33/340, mb3.9/14, MS3.1/4, 15C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANX	**Ano Chora**	**0.12**	**115**	P	**Pg**	**17 21 35.2**	**-0.2**
ANX				S	**Sg**	**17 21 37.1**	**-0.6**
	226μm,0.5s						
ANX	**Ano Chora**	**0.12**	**115**	P	**Pg**	**17 21 35.1**	**-0.3**
ANX				S	**Sg**	**17 21 37.7**	**0.0**
PVO	**Paravola**	**0.20**	**262**	P	**Pg**	**17 21 36.0**	**-0.5**
PVO				S	**Sg**	**17 21 39.3**	**-0.2**
	67μm,0.4s						
PVO	**Paravola**	**0.20**	**262**	P	**Pg**	**17 21 36.1**	**-0.4**
PVO				S	**Sg**	**17 21 39.6**	**+0.1**
PVO				AML	AML	17 21 39.9	
PVO				AML	AML	17 21 40.8	
	comp=E,99491μm,0.3s						
EFP	**Efpalio**	**0.24**	**156**	P	**Pg**	**17 21 37.0**	**-0.2**
EFP				S	**Sg**	**17 21 40.9**	**+0.4**
	comp=E,120μm,0.4s						
EFP	**Efpalio**	**0.24**	**156**	P	**Pg**	**17 21 36.9**	**-0.2**
EFP				S	**Sg**	**17 21 41.0**	**+0.4**
EFP				AML	AML	17 21 41.6	
EFP				AML	AML	17 21 42.2	
EVR	**Evrytania**	**0.27**	**5**	P	**Pb**	**17 21 37.6**	**-1.5**
EVR				S	**Sg**	**17 21 40.8**	**-0.9**
	comp=E,60μm,0.2s						
EVR	**Evrytania**	**0.27**	**5**	P	**Pb**	**17 21 37.7**	**-1.3**
EVR				S	**Sb**	**17 21 42.5**	**-1.3**
EVR				AML	AML	17 21 43.4	
EVR				AML	AML	17 21 43.8	
SERG	**Sergoula**	**0.32**	**137**	P	**Pb**	**17 21 38.2**	**-1.5**
SERG				S	**Sb**	**17 21 43.8**	**-1.0**
	comp=E,67μm,0.4s						
SERG	**Sergoula**	**0.32**	**137**	P	**Pb**	**17 21 38.3**	**-1.5**
SERG				S	**Sb**	**17 21 43.1**	**-1.7**
SERG				AML	AML	17 21 45.1	
SERG				AML	AML	17 21 45.6	
TRIZ	**Trizonia**	**0.36**	**140**	P	**Pb**	**17 21 38.9**	**-1.5**
TRIZ				S	**Sb**	**17 21 44.3**	**-1.8**
	comp=E,40μm,0.3s						
TRIZ	**Trizonia**	**0.36**	**140**	P	**Pb**	**17 21 38.8**	**-1.7**
TRIZ				S	**Sb**	**17 21 44.2**	**-1.8**
UPR	**University Cam**	**0.36**	**179**	P	**Pb**	**17 21 39.1**	**-1.3**
KALE	**Kalithea**	**0.38**	**132**	P	**Pb**	**17 21 39.2**	**-1.6**
KALE				S	**Sb**	**17 21 45.1**	**-1.5**
	comp=E,29μm,0.6s						
KALE	**Kalithea**	**0.38**	**132**	P	**Pb**	**17 21 39.2**	**-1.6**
KALE				S	**Sb**	**17 21 45.2**	**-1.5**
KALE				AML	AML	17 21 48.4	
	comp=E,44869μm,0.5s						
KALE				AML	AML	17 21 48.6	
	comp=N,71908μm,0.4s						
LAKA	**Lakka**	**0.43**	**159**	P	**Pb**	**17 21 40.1**	**-1.6**
LAKA				S	**Sb**	**17 21 47.1**	**-1.1**
	comp=N,5μm,0.5s						
LAKA	**Lakka**	**0.43**	**159**	P	**Pb**	**17 21 40.1**	**-1.6**
LAKA				S	**Sb**	**17 21 46.1**	**-2.1**
LAKA				AML	AML	17 21 48.5	
	comp=N,11077μm,0.5s						
LAKA				AML	AML	17 21 50.6	
	comp=E,10218μm,0.5s						
MAKR	**Makrakomi, Fth**	**0.46**	**37**	P	**Pb**	**17 21 41.3**	**-0.9**
MAKR				S	**Sb**	**17 21 48.3**	**-0.7**
	comp=E,27μm,0.3s						
MAKR	**Makrakomi, Fth**	**0.46**	**37**	P	**Pb**	**17 21 41.2**	**-0.9**
ALIK	**Aliki, Aigiali**	**0.46**	**146**	P	**Pb**	**17 21 40.9**	**-1.3**
ALIK				S	**Sb**	**17 21 48.4**	**-0.6**
PDO	**Prodromos**	**0.47**	**265**	P	**Pg**	**17 21 40.4**	**-1.0**
PDO				S	**Sb**	**17 21 47.9**	**-1.3**
	comp=E,21μm,0.4s						
PDO	**Prodromos**	**0.47**	**265**	P	**Pg**	**17 21 40.3**	**-1.0**
PDO				S	**Sb**	**17 21 47.8**	**-1.5**
PDO				AML	AML	17 21 52.1	
	comp=E,30071μm,0.3s						
PDO				AML	AML	17 21 54.0	
	comp=N,40608μm,0.4s						
AGG	**Agios Georgios**	**0.57**	**48**	P	**Pb**	**17 21 42.7**	**-1.4**
AGG				S	**Sb**	**17 21 51.7**	**-0.5**
	comp=N,8μm,0.3s						
AGG	**Agios Georgios**	**0.57**	**48**	P	**Pb**	**17 21 42.7**	**-1.4**
AGG				S	**Sb**	**17 21 50.9**	**-1.3**
AGG				AML	AML	17 21 53.5	
	comp=E,20318μm,0.3s						
AGG				AML	AML	17 21 55.2	
	comp=N,13140μm,0.5s						
AGG	**Agios Georgios**	**0.57**	**48**	PG	**Pb**	**17 21 42.3**	**-1.8**
AGG	**Agios Georgios**	**0.57**	**48**		**Pb**	**17 21 42.7**	**-1.4**
DLFA	**Delphi**	**0.58**	**106**	P	**Pb**	**17 21 42.6**	**-1.8**
DLFA				S	**Sb**	**17 21 51.3**	**-1.2**
DLFA				AML	AML	17 21 55.6	
	comp=N,32999μm,0.4s						
DLFA				AML	AML	17 21 55.6	
	comp=E,53150μm,0.5s						
RLS	**Riolos of Patr**	**0.64**	**203**	P	**Pb**	**17 21 43.8**	**-1.3**
RLS				S	**Sb**	**17 21 53.9**	**-0.1**
	comp=E,8μm,0.4s						
RLS	**Riolos of Patr**	**0.64**	**203**	P	**Pb**	**17 21 43.8**	**-1.3**
RLS				S	**Sb**	**17 21 53.1**	**-0.8**
RLS				AML	AML	17 21 56.2	
	comp=E,22713μm,0.5s						
RLS				AML	AML	17 21 57.1	
	comp=N,9297μm,0.4s						
KLV	**Kalavryta, Ach**	**0.67**	**154**	P	**Pb**	**17 21 44.0**	**-1.7**
KLV				S	**Sb**	**17 21 55.1**	**+0.2**
	comp=N,5μm,0.7s						
KLV	**Kalavryta, Ach**	**0.67**	**154**	P	**Pg**	**17 21 43.8**	**-1.3**
KLV				S	**Sb**	**17 21 54.0**	**-1.0**
KLV				AML	AML	17 21 56.6	
	comp=E,10137μm,0.8s						
KLV				AML	AML	17 21 57.5	
	comp=N,8670μm,0.5s						
DRO	**Drossia**	**0.69**	**185**	P	**Pg**	**17 21 44.4**	**-1.2**
DRO				S	**Sb**	**17 21 55.7**	**0.0**
	comp=N,11μm,0.4s						
DRO	**Drossia**	**0.69**	**185**	P	**Pb**	**17 21 44.8**	**-1.4**
DRO				S	**Sb**	**17 21 54.7**	**-1.0**
DRO				AML	AML	17 22 02.7	
	comp=N,22667μm,0.6s						
DRO				AML	AML	17 22 04.9	
	comp=E,19736μm,0.5s						
AXAR	**Agios Charalam**	**0.70**	**80**	P	**Pb**	**17 21 45.1**	**-1.1**
MGNA	**Meganis**	**0.78**	**271**	P	**Pg**	**17 21 46.1**	**-1.0**
EVGI	**Lefkada island**	**0.88**	**269**	P	**Pg**	**17 21 47.9**	**-1.3**
EVGI	**Lefkada island**	**0.88**	**269**	P	**Pb**	**17 21 48.1**	**-1.2**
LKD2	**Lefkada island**	**0.89**	**280**	P	**Pb**	**17 21 48.1**	**-1.2**
LKD2	**Lefkada island**	**0.89**	**280**	P	**Pg**	**17 21 48.2**	**-1.2**
TSLK	**Tsoukalades, L**	**0.90**	**282**	P	**Pb**	**17 21 48.5**	**-1.2**
TSLK	**Tsoukalades, L**	**0.90**	**282**	P	**Pb**	**17 21 48.4**	**-1.2**
THL	**Klokotos Trika**	**0.94**	**11**	P	**Pb**	**17 21 49.0**	**-1.3**
THL				S	**Sn**	**17 22 03.2**	**-1.2**
	comp=E,2μm,0.5s						
THL	**Klokotos Trika**	**0.94**	**11**	P	**Pb**	**17 21 49.2**	**-1.1**
KFL	**Anninata**	**0.94**	**236**	P	**Pg**	**17 21 49.1**	**-1.3**
KFL	**Anninata**	**0.94**	**236**	P	**Pb**	**17 21 49.4**	**-1.0**
LKR	**Lokris**	**0.95**	**89**	P	**Pg**	**17 21 49.0**	**-1.5**
LKR				S	**Sn**	**17 22 03.6**	**-1.2**
	comp=E,8μm,0.5s						
LKR	**Lokris**	**0.95**	**89**	P	**Pb**	**17 21 49.2**	**-1.4**
PROD	**Prodromos**	**0.96**	**113**	P	**Pg**	**17 21 49.0**	**-1.6**
PROD				S	**Sn**	**17 22 04.7**	**-0.3**
PROD	**Prodromos**	**0.96**	**113**	P	**Pb**	**17 21 49.3**	**-1.4**
PROD				S	**Sb**	**17 22 03.2**	**-0.1**
PROD				AML	AML	17 22 09.2	
	comp=N,6146μm,0.3s						
PROD				AML	AML	17 22 10.3	
	comp=E,12032μm,0.3s						
FSK	**Fiskardo**	**0.97**	**259**	P	**Pg**	**17 21 49.5**	**-1.4**
FSK				S	**Sn**	**17 22 04.4**	**-0.9**
	comp=E,5μm,0.7s						
VLS	**Valsamata**	**1.04**	**244**	P	**Pg**	**17 21 50.5**	**-1.7**
VLS				S	**Sn**	**17 22 06.6**	**-0.5**

GRG	Griva	2.36	11	PN	Pn	17 22 11.2	+0.5
OUR	Ouranopolis	2.40	45	P	Pn	17 22 11.4	+0.2
OUR	Ouranopolis	2.40	45	PN	Pn	17 22 11.1	-0.1
SOH	Sokhos	2.49	29	P	Pn	17 22 13.0	+0.5
KTHR	Kythira	2.57	157	P	Pb	17 22 15.8	-2.4
OHR	Ohrid	2.58	343	*i* Pn	Pb	17 22 16.4	-2.0
KTHA	Kythira Island	2.59	156	P	Pb	17 22 15.7	-2.8
KTHA	Kythira Island	2.59	156	PN	Pn	17 22 14.8	+0.9
KNT	Kendrikon	2.66	19	P	Pn	17 22 15.6	+0.8
KNT	Kendrikon	2.66	19	PN	Sn	17 22 15.1	+0.3
KNT				SN	Sn	17 22 47.0	+0.1
VAY	Valandovo	2.74	13	*i* Pn	Pn	17 22 17.1	+1.2
SRS	Serrai	2.84	29	P	Pn	17 22 17.2	0.0
SCTE	Santa Cesarea	2.94	300	Pn	Pn	17 22 19.9	+1.3
THAS	Thassos island	3.00	48	P	Pn	17 22 19.1	-0.3
TIR	Tirane	3.08	332		Pb	17 22 23.3	-3.4
KAVA	Kavala	3.15	41	P	Pn	17 22 21.2	-0.4
SIGR	SIGRI	3.23	79	PN	Pn	17 22 21.9	-0.7
SKO	Skopje	3.33	356	*i* Pn	Pn	17 22 26.1	+2.0
APE	Apeiranthos	3.36	117	⇓P	Pn	17 22 25.2	+0.7
APE	Apeiranthos	3.36	117	PN	Pn	17 22 23.9	-0.5
CHOS	Chios island	3.36	93	PN	Pn	17 22 23.8	-0.7
RODP	Rodopos	3.46	152	PN	Pn	17 22 26.7	+0.9
BOZC	Bozcaada	3.53	69	PN	Pn	17 22 25.4	-1.3
GADA	Gvkgeada	3.54	63	PN	Pn	17 22 26.3	-0.6
IMMV	Iera Moni Meta	3.63	150	PN	Pn	17 22 28.9	+0.7
THT2	Imerovigli	3.64	126	PN	Pn	17 22 28.4	+0.1
SANT	Santorini	3.70	127	⇑P	Pn	17 22 30.4	+1.2
SANT	Santorini	3.70	127	PN	Pn	17 22 29.3	+0.1
SANT	Santorini	3.70	127	Pn	Pn	17 22 30.6	+1.4
EZN	Ezine	3.72	70	PN	Pn	17 22 28.4	-1.0
KNR	Palaiochora Ch	3.73	155	PN	Pn	17 22 30.3	+0.8
RDO	Rodhopi	3.82	48	PN	Pn	17 22 30.3	-0.4
TIP	Timpagrande	3.95	279	⇑P	Pn	17 22 34.1	+1.4
TIP	Timpagrande	3.95	279		Pn	17 22 34.0	+1.3
ENEZ	Enez	3.97	57	PN	Pn	17 22 33.0	+0.2
ALN	Alexandroupoli	3.98	54	PN	Pn	17 22 32.9	-0.1
ALN	Alexandroupoli	3.98	54	Pn	Pn	17 22 33.3	+0.3
DKL	Dikili	4.02	82	PN	Pn	17 22 33.5	0.0
GELI	Tayfur-Gelibol	4.03	63	PN	Pn	17 22 32.9	-0.7
DRME	Dracevica, Mon	4.06	332	*e*Pn	Pn	17 22 36.1	+2.1
KDZ	Kurdzhali	4.10	42	PN	Pn	17 22 33.8	-0.7
PLD	Plovdiv	4.12	32	PN	Pn	17 22 34.9	+0.1
VTS	Vitosha	4.12	15	P	Pn	17 22 36.1	+1.1
VTS				S	Sn	17 23 23.3	+0.1
VTS	Vitosha	4.12	15	⇑P	Pn	17 22 36.1	+1.1
VTS	Vitosha	4.12	15	Pn	Pn	17 22 35.7	+0.7
IDI	Anoyia	4.17	142	Pn	Pn	17 22 37.6	+1.9
	comp=E,2.5nm,0.3s,baz=353,slow=14,SNR=13						
IDI				Sn	Sn	17 23 25.8	+1.4
	comp=E,2.1nm,0.3s,baz=292,slow=19,SNR=2.9						
IDI				LR	LR	17 24 00.6	
	comp=E,38nm,19.2s,baz=344,slow=36						
IDI	Anoyia	4.17	142	PN	Pn	17 22 35.7	0.0
ERIK	Erikli-Kesan	4.18	60	PN	Pn	17 22 35.2	-0.4
LPK	Lapseki	4.22	64	PN	Pn	17 22 35.6	-0.6
GVDS	Gavdos	4.22	153	PN	Pn	17 22 37.1	+0.8
GVD	Gavdhos	4.22	153	PN	Pn	17 22 37.4	+1.1
PDG	Podgorica	4.24	334	*e*Pn	Pn	17 22 38.3	+1.8
PDG	Podgorica	4.24	334		Pn	17 22 38.7	+2.2
HRKL	Herakleio	4.26	140	PN	Pn	17 22 37.5	+0.7
GCAM	G?zelcami?	4.40	101	PN	Pn	17 22 38.0	-0.7
UKOP	Uzunkopru-Edir	4.48	55	PN	Pn	17 22 40.0	+0.2
BAI	Bari	4.50	305	*e*Pn	Pn	17 22 41.1	+1.0
SG1	Sgolgore (BA)	4.50	301	*e*Pn	Pn	17 22 41.3	+1.1
KOSK	Kos Island	4.53	113	PN	Pn	17 22 40.7	+0.2
HCY	Herceg Novi	4.55	328	*e*Pn	Pn	17 22 40.9	+0.1
KRBG	Karabiga-Canak	4.61	66	PN	Pn	17 22 41.4	-0.2
CEL	Celeste	4.64	267	Pn	Pn	17 22 43.1	+1.1
BODT	Bodrum	4.65	108	PN	Pn	17 22 42.1	-0.1
TREB	Trebinje	4.83	328	*e*Pn	Pn	17 22 44.8	+0.1
AYDB	Zeytinkoy-Aydi	4.86	96	PN	Pn	17 22 44.6	-0.5
DBRK	Dubrovnik	4.88	327	*e*Pn	Pn	17 22 45.7	+0.4
DBRK				Sn	Sn	17 23 43.0	+1.3
MRMT	Marmara Adasi	4.90	65	PN	Pn	17 22 44.6	-1.0
BRY	Bratogost	4.91	331	*e*Pn	Pn	17 22 46.3	+0.4
EDRB	Edirne	4.96	48	PN	Pn	17 22 46.0	-0.5
ACER	Acerenza	4.98	297		Pn	17 22 48.7	+1.9
STON	Ston	5.24	325	*e*Pn	Pn	17 22 50.5	+0.3
STON				Sn	Sn	17 22 48.7	-1.7
STON	Ston	5.24	325	*e*Pn	Pn	17 22 50.4	+0.2
ELND	Elena	5.29	35	⇑P	Pn	17 22 51.3	+0.4
KARP	Karpathos	5.30	124		Pn	17 22 52.7	+1.7
BBLS	Lazići	5.52	342	*e*Pn	Pn	17 22 55.7	+1.6
SGRT	San Giovanni R	5.57	306		Pn	17 22 55.3	+0.4
DIVS	Divibare	5.61	347	*e*Pn	Pn	17 22 57.2	+1.7
HAPS	Han Pijesak,BI	5.84	340	*e*Pn	Pn	17 22 58.0	-0.6
VAE	Valguarnera	5.93	261	Sn	Sn	17 24 08.8	+1.2
	comp=E,1.5nm,0.3s,baz=67,slow=15,SNR=2.7						
PAOL	Paolisi	6.04	296		Pn	17 23 03.5	+2.2
HVAR	Hvar	6.07	320	*i* Pn	Pn	17 23 01.9	+0.3
MDVR	Moldovita	6.13	360	⇑P	Pn	17 23 04.4	+1.8
HERR	Herculane	6.25	4	⇑P	Pn	17 23 04.3	+0.2
FRGS	Fruska Gora	6.67	348	*e*Pn	Pn	17 23 11.1	+1.2
KIJV	Kijevo	6.71	325	*i* Pn	Pn	17 23 10.7	+0.3
KIJV				Sn	Sn	17 24 25.1	-1.8
ELL	Elmali	6.72	104		Pn	17 23 12.0	+1.3
MGRS	Mrkonjic Grad	6.76	330	*e*Pn	Pn	17 23 12.3	+1.2
GZR	Gura Zlata	6.79	6	⇑P	Pn	17 23 12.3	+0.8
ZIRJ	Zirje	6.82	319	*e*Pn	Pn	17 23 11.7	-0.2
ZIRJ				Sn	Sn	17 24 27.6	-1.8
INTR	Introdacqua	6.89	302		Pn	17 23 15.2	+2.2
MORI	Morici	6.94	321	*e*Pn	Pn	17 23 14.5	+1.0
BZS	Buzias	6.97	359	⇑P	Pn	17 23 16.3	+2.4
BLY	Banja Luka	7.00	332	*e*Pn	Pn	17 23 13.6	-0.8
BLY	Banja Luka	7.00	332	Pn	Pn	17 23 14.1	-0.3
VOIR		7.21	19	⇑P	Pn	17 23 18.9	+1.6
ISR	Istrita	7.38	27	⇓P	Pn	17 23 22.1	+2.4
AQU	L'Aquila	7.38	303	*e*Pn	Pn	17 23 20.5	+0.8
AQU	L'Aquila	7.38	303	Pn	Pn	17 23 17.8	-1.9
MLR	Muntele Rosu	7.51	23	Pn	Pn	17 23 23.8	+2.3
	comp=E,0.8nm,0.3s,baz=205,slow=5,2,SNR=13						
MLR				Sn	Sn	17 24 46.8	+0.1
	baz=154,slow=16,SNR=1.7						
MLR				LR	LR	17 26 51.8	
	comp=E,134nm,19.6s,baz=118,slow=43						
MLR	Muntele Rosu	7.51	23	⇑P	Pn	17 23 23.0	+1.5
MLR	Muntele Rosu	7.51	23		Pn	17 23 23.7	+2.1
TIRR	Tirgusor	7.64	38	Pn	Pn	17 23 22.7	-0.6
DOPR	Dopca	7.79	19	⇑P	Pn	17 23 27.0	+1.7
NRCA	Norcia	7.80	305		Pn	17 23 27.4	+2.0
BISRR	Bisoca	7.81	26	⇑P	Pn	17 23 28.5	+2.9
NVLJ	Novalja	7.86	321	*e*Pn	Pn	17 23 27.1	+1.0
NVLJ				Sn	Sn	17 24 51.9	-3.0
MORH	Mrgy, Hungar	7.91	344	*e*Pn	Pn	17 23 27.0	+0.1
OZUR		8.01	20	⇓P	Pn	17 23 30.6	+2.2
PLOR	Plostina	8.05	25	⇑P	Pn	17 23 31.0	+2.1
VRI	Vrincioaia	8.09	25	⇑P	Pn	17 23 32.1	+2.6
MURB	Monte Urbino	8.38	306	Pn	Pn	17 23 35.4	+1.9
CRES	Cresnjev	8.57	329	*e*Pn	Pn	17 23 35.0	-1.0
BRJN	Brijuni	8.66	319	*i* Pn	Pn	17 23 37.6	+0.4
CEY	Cerknica	8.94	325	*e*Pn	Pn	17 23 40.3	-0.8
BR131	Keskin Array S	9.27	80		Pn	17 23 47.5	+1.8
BRTR	Keskin Array B	9.27	80	Pn	Pn	17 23 48.5	+2.8
	comp=E,0.3nm,0.3s,baz=262,slow=12,SNR=15						
BRTR	Keskin Array B	9.27	80		Pn	17 23 48.0	+2.3
BURAR	Bucovina Array	9.31	15	⇓P	Pn	17 23 48.0	+1.8
OSSC	Osservatorio P	9.33	305	Pn	Pn	17 23 47.2	+0.8
PSZ	Piszkesteto	9.37	352	⇑P	Pn	17 23 49.1	+2.1
PSZ	Piszkesteto	9.37	352		Pn	17 23 48.9	+1.9
SOKA	Soboth	9.44	330	*i* Pn	Pn	17 23 49.1	+1.2
	comp=E,0.3nm,0.1s						
OBKA	Obir	9.49	328	*e*Pn	Pn	17 23 50.0	+1.3
	comp=E,0.9nm,0.2s						
OBKA				*e*Sn	Sn	17 25 34.5	-0.9
	comp=E,2.9nm,0.4s						
ARSA	Arzberg	9.74	334	*e*Pn	Pn	17 23 52.6	+0.5
	comp=E,0.6nm,0.2s						
VYHS	Vyhne	10.07	349	*e*Pn	Pn	17 24 00.0	+3.4
VYHS				*e*SN	Sn	17 25 54.0	+4.5
TEOL	Teolo	10.08	315	Pn	Pn	17 23 56.6	0.0
KBA	Koelnbreinsper	10.45	326	*e*Pn	Pn	17 24 01.9	0.0
	comp=E,0.4nm,0.2s						
KBA				*i* Sn	Sn	17 25 58.1	-0.9
	comp=E,1.1nm,0.5s						
CTI	Castel Tesino	10.53	318		Pn	17 24 02.9	0.0
CTI					Sn	17 26 00.1	-0.6
ABTA	Abfaltersbach	10.58	323	*i* Pn	Pn	17 24 03.8	+0.2
	comp=E,0.5nm,0.2s						
ABTA				*e*Sn	Sn	17 25 59.6	-2.4
	comp=E,5.0nm,0.6s						
MOA	Molln	10.70	332	*e*Pn	Pn	17 24 06.5	+1.3
	comp=E,0.9nm,0.3s						
MOA				*e*Sn	Sn	17 26 06.3	+1.4
	comp=E,0.8nm,0.4s						
WTTA	Wattenberg	11.37	323	*e*Pn	Pn	17 24 15.5	+1.0
	comp=E,1.6nm,0.2s						
WTTA				*e*Sn	Sn	17 26 19.5	-2.0
	comp=E,6.7nm,0.6s						
SQTA	Sankt Quirin	11.54	321	*e*Pn	Pn	17 24 17.8	+1.0
	comp=E,2.5nm,0.4s						
SQTA				*e*Sn	Sn	17 26 24.7	-1.0
	comp=E,1.7nm,0.4s						
FUORN	Ofenpass-Fuorn	11.63	317	Pn	Pn	17 24 18.5	+0.4
FETA	Feichten	11.65	319	*e*Pn	Pn	17 24 19.7	+1.5
	comp=E,2.5nm,0.7s						
FETA				*e*Sn	Sn	17 26 26.0	-2.2
	comp=E,1.0nm,0.4s						
MOTA	Moosalm	11.68	322	*e*Pn	Pn	17 24 19.4	+0.7
	comp=E,4.1nm,0.7s						
MOTA				*e*Sn	Sn	17 26 28.9	-0.2
	comp=E,6.7nm,0.8s						
GERES	GERESS Array B	11.74	333	Pn	Pn	17 24 21.1	+1.6
	comp=E,0.1nm,0.3s,baz=165,slow=12,SNR=5.5						
GERES				Sn	Sn	17 26 25.0	-5.5
	comp=E,0.1nm,0.3s,baz=140,slow=23,SNR=2.1						
GERES				LR	LR	17 28 44.5	
	comp=E,52nm,19.6s,baz=261,slow=37						
GERES	GERESS Array B	11.74	333		Pn	17 24 20.2	+0.8
MMAI	Mount Meron Ar	12.39	113	Pn	Pn	17 24 28.7	+0.3
	comp=E,0.4nm,0.3s,baz=294,slow=11,SNR=3.1						
AKASG	Malin Array Be	13.16	21	Pn	Pn	17 24 40.4	+1.7
	comp=E,0.1nm,0.3s,baz=210,slow=11,SNR=2.5						
AKASG	Malin Array Be	13.16	21		Pn	17 24 39.2	+0.6
SENIN	Lac Senin/Sane	13.16	311	Pn	Pn	17 24 40.7	+1.6
BFO	Black Forest	13.73	319	Pn	Pn	17 24 46.5	0.0
EIL	Elat	14.10	125	LR	LR	17 32 29.5	
	comp=E,30nm,18.5s,baz=304,slow=47						
GNI	Garni	17.80	78	LR	LR	17 32 14.6	
	comp=E,24nm,20.6s,baz=306,slow=36						
ESDC	Sonseca Array	19.97	281	P	Pn	17 26 05.6	-0.4
	comp=E,0.1nm,0.3s,baz=72,slow=11,SNR=4.0						
ESDC	Sonseca Array	19.97	281	IAmb	IAmb	17 26 10.7	
	comp=Z,1.5nm,1.2s						
HFS	Hagfors	22.11	349	P	P	17 26 27.5	+0.4
	comp=Z,3.0nm,0.7s,baz=163,slow=11,SNR=12						
FINES	FINESS Array B	22.98	5	P	P	17 26 37.1	+0.8
	comp=Z,2.4nm,0.7s,baz=172,slow=11,SNR=5.5						
FINES				LR	LR	17 35 53.7	
	comp=Z,52nm,18.3s,baz=138,slow=38						
FINES	FINESS Array B	22.98	5	P	P	17 26 36.8	+0.5
NC602	NORSAR Array S	23.03	347	P	P	17 26 37.6	+0.8
NC602				IAmb	IAmb	17 26 53.5	
	comp=Z,37nm,1.4s						
NC405	NORSAR Array S	23.35	348	P	P	17 26 40.2	0.0
NC405				IAmb	IAmb	17 26 46.2	
	comp=Z,12nm,1.4s						
NB201	NORSAR Array S	23.37	347	P	P	17 26 37.9	-2.4
NB2	NORSAR Subarra	23.37	347	P	P	17 26 40.0	-0.3
	comp=Z,1.4nm,0.8s,baz=159,slow=11						
NOA	NORSAR Array B	23.37	347	P	P	17 26 40.5	+0.1
	comp=Z,1.7nm,0.8s,baz=155,slow=9.4,SNR=6.2						
NOA				LR	LR	17 37 43.0	
	comp=Z,20nm,19.7s,baz=260,slow=42						
NBO00	NORSAR Array S	23.44	346	P	P	17 26 39.5	-1.5
NC303	NORSAR Array S	23.52	347	P	P	17 26 40.4	-1.3
EKA	Eskdalemuir Ar	23.64	323	P	P	17 26 42.6	-0.3
	comp=Z,2.1nm,0.7s,baz=133,slow=9.6,SNR=6.4						
ESK	Eskdalemuir	23.65	323	P	P	17 26 42.8	-0.2
NC204	NORSAR Array S	23.67	347	P	P	17 26 43.2	-0.1
ARCES	ARCESS Array B	31.02	3	P	P	17 27 49.3	+0.1
	comp=Z,1.6nm,0.8s,baz=191,slow=10.0,SNR=5.6						
ARCES	ARCESS Array B	31.02	3	P	P	17 27 50.4	+1.2
TOA0	Torodi Ar. Sit	31.02	220	P	P	17 27 50.1	+0.4
TORD	Torodi Ar. Bea	31.02	220	P	P	17 27 50.5	+0.8
	comp=Z,1.1nm,0.6s,baz=31,slow=10,SNR=6.8						
TORD	Torodi Ar. Bea	31.02	220	P	P	17 27 50.4	+0.7
DBIC	Dimbokro	39.91	224	P	P	17 29 07.2	+1.1
DBIC				IAmb	IAmb	17 29 23.8	
	comp=Z,10nm,1.5s						
MK31	Makanchi Array	44.21	59	P	P	17 29 40.8	-0.2
MKAR	Makanchi Array	44.21	59	P	P	17 29 40.3	-0.7
	comp=Z,0.7nm,0.4s,baz=278,slow=7.7,SNR=20						
MKAR	Makanchi Array	44.21	59	P	P	17 29 40.7	-0.3
ZAA0	Zalesovo Array	44.64	49	P	P	17 29 43.4	-0.8
ZAA0				IAmb	IAmb	17 30 00.6	
	comp=Z,3.0nm,1.1s						
ZALV	Zalesovo Beam	44.64	49	P	P	17 29 43.7	-0.6
	comp=Z,1.0nm,0.4s,baz=273,slow=10,SNR=5.0						
ZALV	Zalesovo Beam	44.64	49	P	P	17 29 44.0	-0.3
SFJD	Kangerlussuaq	48.32	330	LR	LR	17 50 57.3	
	comp=Z,53nm,18.1s,baz=101,slow=37						
SCHQ	Schefferville	58.79	317	P	P	17 31 30.9	+0.9
	comp=Z,1.4nm,0.9s,baz=56,slow=18,SNR=3.6						
SCHQ	Schefferville	58.79	317	P	P	17 31 31.0	+1.1
CMAR	Chiang Mai Arr	68.85	83	LR	LR	18 06 44.0	
	comp=Z,19nm,21.3s,baz=185,slow=39						
YKA	Yellowknife Ar	73.29	340	P	P	17 33 04.5	+1.5
	comp=Z,0.3nm,0.5s,baz=35,slow=5.6,SNR=2.8						
ASAR	Alice Springs	121.24	97	PKP	PKiKP	17 40 27.9	+2.5
	comp=Z,0.3nm,0.8s,baz=314,slow=1.5,SNR=3.5						

*IDC **18** 17:26:28.7±1.0, 7°.30S×156°.57E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.9/31, mbtmp3.9/8, ML3.8/1, MS3.0/5, Ms1 3.0/5, ms1mx2.8/25, Error ellipse: s-maj=30.4km s-min=24.0km az=136.0*
*NEIC **18** 17:26:32.5±2.1, 7°.5S±0°.1×156°.5E±0°.1, h21km±6km, mb4.8/12, Error ellipse: s-maj=20.3km s-min=13.3km az=209.0*

ISC 18 17:26:30.7±0.6, 7°.4S±0°.1×156°.43E±0°.09, h10km, n36, σ1$14/28, mb4.3/11, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.04	121	Pn	Pn	17 27 31.8	-0.9
	5.8nm,0.3s,baz=270,slow=6.1,SNR=3.3						
HNR				Sn	Sn	17 28 22.4	+2.4
	10nm,0.3s,baz=162,slow=20,SNR=3.1						
HNR				LR	LR	17 29 01.7	
	comp=Z,162nm,18.4s,baz=264,slow=39						
HNR	Honiara	4.04	121	Pn	Pn	17 27 30.9	-1.7
KRVT	Keravat (AS076	5.33	304	LR	LR	17 30 07.2	
	comp=Z,102nm,22.0s,slow=40						
PMG	Port Moresby	9.40	257	LR	LR	17 32 04.3	
	comp=Z,65nm,18.2s,baz=4.5,slow=35						
GUMO	Guam	23.77	331	LR	LR	17 38 60.0	
	comp=Z,22nm,20.6s,baz=174,slow=32						
FAKI	Fak Fak	24.48	279	P	P	17 31 51.5	+1.2
WRAI	Warramunga Arr	24.64	237	P	P	17 31 50.9	-0.9
WR0				IAmb	IAmb	17 31 55.0	
	comp=Z,29nm,1.7s						
WRA	Warramunga Ar	24.80	238	P	P	17 31 55.0	+1.8
	comp=Z,2.7nm,0.6s,baz=64,slow=9.1,SNR=12						
WRA				PcP	PcP	17 35 28.3	-1.5
	comp=Z,0.6nm,0.9s,baz=54,slow=1.9,SNR=4.3						
WRA	Warramunga Ar	24.80	238	P	P	17 31 53.1	-0.1
ASAR	Alice Springs	27.02	231	P	P	17 32 13.5	+0.2
	comp=Z,0.6nm,0.7s,baz=58,slow=9.7,SNR=12						
ASAR	Alice Springs	27.02	231	P	P	17 32 12.3	-1.0
H11S3	WAKE ISLAND Hy	27.61	21	T	T	18 00 31.1	
	baz=202,slow=75,SNR=132						
H11S2	WAKE ISLAND Hy	27.62	21	T	T	18 00 31.3	
	baz=202,slow=75,SNR=96						
H11S1	WAKE ISLAND Hy	27.63	21	T	T	18 00 32.2	
	baz=202,slow=75,SNR=56						
CAN	Canberra	28.65	193	P	P	17 32 26.8	-0.9
CAN				IAmb	IAmb	17 32 35.0	
	comp=Z,63nm,1.8s						
H11N1	WAKE ISLAND Hy	28.81	21	T	T	18 01 56.3	
	baz=203,slow=76,SNR=6.1						
H11N3	WAKE ISLAND Hy	28.82	21	T	T	18 02 02.6	
	baz=203,slow=76,SNR=9.7						
H11N2	WAKE ISLAND Hy	28.83	21	T	T	18 01 59.4	
	baz=203,slow=76,SNR=5.7						
FITZ	Fitzroy Crossi	31.82	247	P	P	17 32 57.1	+1.2
FITZ				IAmb	IAmb	17 33 00.8	
	comp=Z,42nm,1.7s						
SOEI	Soe	31.89	263	P	P	17 32 57.1	+0.4
FORT	Forrest	35.32	225	P	P	17 33 26.5	+0.2
ODZ	Otahua Downs	39.52	164	P	P	17 34 01.1	-0.6
RAR	Rarotonga	44.45	113	LR	LR	17 49 04.1	
	comp=Z,124nm,20.8s,baz=38,slow=31						
MJAR	Matsushiro Arr	46.90	340	P	P	17 35 02.4	+1.0
PPT	Papeete	53.53	106	P	P	17 35 53.5	+1.5
PPTF	Pamatai, Papee	53.54	106	P	P	17 35 53.7	+1.5
CM31	Chiang Mai Arr	62.23	295	P	P	17 36 53.8	+0.6
CM31				IAmb	IAmb	17 36 54.6	
	comp=Z,3.4nm,0.8s						
CMAR	Chiang Mai Arr	62.23	295	P	P	17 36 54.0	+0.8
	comp=Z,1.9nm,0.8s,baz=122,slow=5.1,SNR=17						
CMAR	Chiang Mai Arr	62.23	295	P	P	17 36 53.5	+0.3
SONM	Songino Array	70.42	327	P	P	17 37 45.0	-0.3
	comp=Z,1.2nm,0.4s,baz=135,slow=6.8,SNR=5.5						
ILAR	Eielson Array	83.19	21	P	P	17 38 57.0	+0.1
	comp=Z,0.4nm,0.9s,baz=233,slow=4.1,SNR=3.2						
ILAR	Eielson Array	83.19	21	P	P	17 38 57.2	+0.3
MK31	Makanchi Array	84.62	318	P	P	17 39 03.8	-0.9
MKAR	Makanchi Array	84.62	318	P	P	17 39 04.4	-0.2
	comp=Z,1.2nm,0.7s,baz=106,slow=6.2,SNR=14						
MKAR	Makanchi Array	84.62	318	P	P	17 39 03.9	-0.7
YKA	Yellowknife Ar	95.99	28	P	P	17 39 55.9	-1.9
	comp=Z,0.1nm,0.5s,baz=269,slow=5.0,SNR=3.2						

*TEH **18** 17:28:35.0, 28°.49N×51°.63E, h20km, ML3.3*
*OMAN **18** 17:28:38.6±51.0, 28°.28N×51°.84E, h32km, ml3.4/5, Error ellipse: s-maj=5616.0km s-min=533.3km az=38.0*

ISC 18 17:28:35.3±2.1, 28°.37N±0°.06×51°.7E±0°.1, h24km, n19, σ0$81/29, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	Kazeroun	1.41	6	*e*Pg	Pn	17 28 59.7	-0.2
IKAZ				*e*		17 29 22.6	
SHI	Shiraz	1.47	30	*e*Pg	Pn	17 29 00.7	+0.2
SHI				*e*Sg	Sb	17 29 20.9	+0.5
SHI				*e*		17 29 22.7	
LMD1	Lamerd	1.68	127	*e*		17 29 41.9	
LMD1				*e*Pn	Pb	17 29 06.5	+1.0
JHRM	Jahrom	1.69	85	*e*		17 29 39.6	
JHRM				*e*Pn	Pb	17 29 05.6	-0.2
KLNJ	Kolanjah	2.63	359	*e*Pn	Pn	17 29 15.6	-1.0
IRAM	Ramesheh	3.48	10	*e*Pn	Pn	17 29 27.6	-0.7
IMEH	Mehriz	3.95	40	*e*Pn	Pn	17 29 36.1	+1.4
IBAF	Bafgh	4.66	46	*e*Pn	Pn	17 29 45.0	+0.6
BANOM	Banah	4.79	119	P	Pn	17 29 46.0	-0.1
BANOM	SNR=35						
				S	Sn	17 30 40.1	-0.8
ASUD	Al Ashush, Dub	4.97	138	P	Pn	17 29 49.5	+1.0
ASUD	SNR=6.1						
				S	Sn	17 30 45.6	+0.5
MDH	Madha	5.14	125	P	Pn	17 29 50.7	-0.2
MDH				S	Sn	17 30 48.0	-1.6
UOSS	Minazif	5.30	129	P	Pn	17 29 52.8	-0.2
UOSS				S	Sn	17 30 53.2	-0.2
ASHO	Ashiyiah	5.38	132	P	Pn	17 29 54.4	+0.2
ASHO	SNR=5.2						
				S	Sn	17 30 55.5	+0.1
SOHO	SOHO	6.07	133	P	Pn	17 30 03.5	-0.2
HOQ	SNR=6.5						
				S	Sn	17 31 33.4	-1.1
ARQ	Araqi	6.65	138	P	Pn	17 30 12.3	+0.7
ARQ	SNR=5.4						
				S	Sn	17 31 26.9	+0.2
HOQ	Hoqain	6.96	132	P	Pn	17 30 16.0	+0.1
HOQ	SNR=7.1						
				S	Sn	17 31 33.4	-1.1
BSY	Bisya	7.50	137	P	Pn	17 30 23.5	+0.2
BSY				S	Sn	17 31 45.6	-2.1
SMDO	Samad	7.81	131	P	Pn	17 30 28.2	+0.5
SMDO				S

comp=Z,0.6nm,0.7s,baz=236,slow=0.4,SNR=3.6
MKAR Makanchi Array 169.01 64 PKPab **PKPab 17 54 46.3 -1.3**
comp=Z,0.5nm,0.8s,baz=296,slow=4.0,SNR=5.1

*IDC **18** 18:02:10.8±1.7, 18°.22S×177°.80W, h533km±19km, mb3.4/14, mb1 3.6/16, mb1mx3.5/28, mbtmp4.3/16, Error ellipse: s-maj=22.2km s-min=12.1km az=144.0*
*NEIC **18** 18:02:11.7±1.6, 18°.2S±0°.1×177°.8W±0°.1, h552km±7km, mb4.8/55, Error ellipse: s-maj=18.3km s-min=13.9km az=141.0*
ISC 18 18:02:11.7±0.4, **18°.16S**±0°.09×**177°.76W**±0°.07, **h550**km, **n141**, σ**1s06**/143, **mb4.7**/39, **12C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.01**	**275**	P	**P**	**18 03 36.6**	**+2.8**
AFI	**Afiamalu**	**7.14**	**55**	P	**P**	**18 04 00.1**	**-1.0**
	5.9nm,0.3s,baz=290,slow=1.3,SNR=8.4						
AFI				S	**S**	**18 05 27.1**	**-3.6**
	5.1nm,0.3s,baz=47,slow=19,SNR=4.5						
AFI	**Afiamalu**	**7.14**	**55**	P	**P**	**18 04 00.7**	**-0.5**
AFI					**S**	**18 05 28.6**	**-2.1**
NIUE	**Niue**	**7.48**	**98**		**P**	**18 04 04.8**	**+0.4**
DZM	**Mont Dzumac**	**15.34**	**253**	P	**P**	**18 05 23.8**	**-1.0**
	1.1nm,0.3s,baz=100,slow=18,SNR=7.7						
DZM	**Mont Dzumac**	**15.34**	**253**	P	**P**	**18 05 23.6**	**-1.2**
NOUC	**Port Laguerre**	**15.47**	**253**	P	**P**	**18 05 25.7**	**-0.4**
KNTN	**Kanton**	**16.39**	**22**	P	**P**	**18 05 35.1**	**0.0**
OUZ	**Omahuta**	**18.65**	**203**	P	**P**	**18 05 57.1**	**+1.7**
URZ	**Urewera**	**20.52**	**192**	P	**P**	**18 06 10.0**	**-2.3**
	10nm,0.7s,baz=321,slow=4.8,SNR=5.6						
URZ	**Urewera**	**20.52**	**192**	P	**P**	**18 06 09.5**	**-2.8**
URZ				IAmb	IAmb	18 06 11.5	
	comp=Z,44nm,1.5s						
BKZ	**Black Stump Fm**	**21.52**	**192**	P	**P**	**18 06 17.8**	**-3.6**
BKZ				IAmb	IAmb	18 06 38.0	
	comp=Z,38nm,1.7s						
QRZ	**Quartz Range**	**24.09**	**198**	P	**P**	**18 06 43.6**	**-0.6**
QRZ				IAmb	IAmb	18 06 44.6	
	comp=Z,46nm,1.1s						
NNZ	**Nelson**	**24.21**	**196**	P	**P**	**18 06 44.1**	**-1.1**
NNZ				IAmb	IAmb	18 06 57.9	
	comp=Z,28nm,1.1s						
THZ	**Tophouse**	**24.84**	**197**	P	**P**	**18 06 49.8**	**-1.1**
KHZ	**Kahutara**	**25.29**	**195**	P	**P**	**18 06 52.8**	**-2.0**
KHZ				IAmb	IAmb	18 07 08.0	
	comp=Z,55nm,1.6s						
LTZ	**Lake Taylor**	**25.97**	**197**	P	**P**	**18 06 58.4**	**-2.5**
LTZ				IAmb	IAmb	18 07 23.3	
	comp=Z,38nm,1.4s						
WKZ	**Wanaka**	**28.80**	**200**	P	**P**	**18 07 24.8**	**-0.8**
MLZ	**Mavora Lakes**	**29.57**	**200**	P	**P**	**18 07 31.7**	**-0.6**
EIDS	**Eidsvold**	**29.76**	**251**	P	**P**	**18 07 34.2**	**0.0**
EIDS				IAmb	IAmb	18 07 57.0	
	comp=Z,30nm,1.6s						
WHZ	**Wether Hill Ro**	**30.10**	**200**	P	**P**	**18 07 36.4**	**-0.3**
ARMA	**Armidale**	**30.35**	**241**	P	**P**	**18 07 38.6**	**-0.8**
CTA	**Charters Tower**	**34.02**	**261**	P	**P**	**18 08 10.2**	**-0.3**
	comp=Z,2.9nm,0.4s,baz=93,slow=13,SNR=7.9						
CAN	**Canberra**	**34.05**	**233**	P	**P**	**18 08 10.8**	**+0.3**
CAN				IAmb	IAmb	18 08 12.1	
	comp=Z,62nm,1.8s						
PMG	**Port Moresby**	**35.11**	**280**	P	**P**	**18 08 20.6**	**+0.9**
PMG				IAmb	IAmb	18 08 21.9	
	comp=Z,29nm,0.9s						
TOO	**Toolangi**	**37.49**	**231**	P	**P**	**18 08 39.9**	**+0.8**
TOO				IAmb	IAmb	18 08 45.1	
	comp=Z,18nm,1.4s						
COEN	**Coen**	**37.72**	**271**	P	**P**	**18 08 41.6**	**+0.4**
COEN				IAmb	IAmb	18 08 42.5	
	comp=Z,17nm,1.1s						
STKA	**Stephens Creek**	**39.05**	**242**	P	**P**	**18 08 52.4**	**+0.7**
	comp=Z,3.7nm,0.8s,baz=65,slow=6.0,SNR=10						
STKA	**Stephens Creek**	**39.05**	**242**	P	**P**	**18 08 51.8**	**0.0**
BBOO	**Buckleboo**	**43.83**	**241**	P	**P**	**18 09 29.4**	**-0.1**
BBOO				IAmb	IAmb	18 09 47.0	
	comp=Z,61nm,1.7s						
WR0	**Warramunga Arr**	**45.00**	**260**	P	**P**	**18 09 38.5**	**-0.3**
WRA	**Warramunga Arr**	**45.19**	**260**	P	**P**	**18 09 39.7**	**-0.6**
	comp=Z,4.2nm,0.4s,baz=96,slow=6.9,SNR=47						
WRA				PcP	**PcP**	**18 11 08.9**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=90,slow=3.4,SNR=4.2						
WRA	**Warramunga Arr**	**45.19**	**260**	P	**P**	**18 09 39.6**	**-0.6**
WRA					**PcP**	**18 11 08.7**	**0.0**
AS31	**Alice Springs**	**45.32**	**254**	P	**P**	**18 09 40.9**	**-0.2**
AS31				PcP	**PcP**	**18 11 09.4**	**+0.2**
ASAR	**Alice Springs**	**45.32**	**254**	P	**P**	**18 09 40.9**	**-0.2**
	comp=Z,14nm,0.6s,baz=88,slow=8.9,SNR=203						
ASAR				PcP	**PcP**	**18 11 09.0**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=105,slow=3.8,SNR=14						
ASAR				S	**S**	**18 15 39.0**	**-3.1**
	comp=Z,1.9nm,0.8s,baz=87,slow=14,SNR=12						
ASAR	**Alice Springs**	**45.32**	**254**	P	**P**	**18 09 40.5**	**-0.6**
ASAR					**PcP**	**18 11 09.1**	**-0.1**
MTN	**Manton Dam**	**49.41**	**268**	P	**P**	**18 10 11.3**	**-0.6**
FORT	**Forrest**	**50.46**	**245**	P	**P**	**18 10 18.9**	**-0.5**
FORT				IAmb	IAmb	18 10 45.9	
	comp=Z,34nm,1.2s						
KNRA	**Kununurra**	**51.08**	**264**	P	**P**	**18 10 23.3**	**-0.7**
KNRA				IAmb	IAmb	18 10 24.6	
	comp=Z,59nm,1.2s						
FAKI	**Fak Fak**	**51.23**	**281**	P	**P**	**18 10 25.1**	**-0.1**
FITZ	**Fitzroy Crossi**	**53.60**	**261**	P	**P**	**18 10 42.0**	**-0.1**
FITZ				IAmb	IAmb	18 11 05.7	
	comp=Z,49nm,1.6s						
SOEI	**Soe**	**56.69**	**270**	P	**P**	**18 11 04.3**	**+0.5**
SOEI				IAmb	IAmb	18 11 05.5	
	comp=Z,35nm,0.9s						
PSA00	**Pilbara Seismi**	**58.44**	**255**	P	**P**	**18 11 14.9**	**-0.6**
MORW	**Morawa**	**60.95**	**246**	P	**P**	**18 11 30.6**	**-1.4**
MORW				IAmb	IAmb	18 11 51.6	
	comp=Z,53nm,1.8s						
GIRL	**Giralia**	**63.41**	**253**	P	**P**	**18 11 49.0**	**+0.8**
JAGI	**Jajag, Banyuwa**	**66.65**	**268**	P	**P**	**18 12 07.2**	**-1.4**
JAGI				IAmb	IAmb	18 12 14.0	
	comp=Z,32nm,1.2s						
INU	**Inuyama**	**68.34**	**321**	P	**P**	**18 12 19.1**	**+0.6**
INU				IAmb	IAmb	18 12 36.6	
	comp=Z,39nm,1.4s						
MJAR	**Matsushiro Arr**	**68.47**	**323**	P	**P**	**18 12 19.3**	**0.0**
	comp=Z,2.8nm,0.5s,baz=142,slow=5.9,SNR=20						
MJAR	**Matsushiro Arr**	**68.47**	**323**	P	**P**	**18 12 19.2**	**0.0**
MAJO	**Matsushiro**	**68.48**	**323**	P	**P**	**18 12 19.2**	**-0.1**
MAJO				IAmb	IAmb	18 12 25.0	
	comp=Z,50nm,1.8s						
MJB9	**Matsu-Tunnel**	**68.48**	**323**	P	**P**	**18 12 19.1**	**-0.2**
MJB9				IAmb	IAmb	18 12 25.0	
	comp=Z,49nm,1.7s						
KKM	**Kota Kinabalu**	**69.40**	**284**	P	**P**	**18 12 25.3**	**-0.1**
KKM				IAmb	IAmb	18 12 49.8	
	comp=Z,45nm,1.2s						
UGM	**Wanagama**	**70.25**	**268**	P	**P**	**18 12 28.9**	**-1.5**
JNU	**Nakatsue**	**70.75**	**316**	P	**P**	**18 12 33.3**	**+0.4**
JNU				IAmb	IAmb	18 12 45.8	
	comp=Z,46nm,1.4s						
QSPA	**South Pole Qui**	**71.90**	**180**	P	**P**	**18 12 40.1**	**+0.8**
UNV	**Unalaska Valle**	**72.36**	**7**	P	**P**	**18 12 41.0**	**-0.7**
YULB	**Yu-li**	**72.42**	**303**	P	**P**	**18 12 41.3**	**-1.5**
YULB				IAmb	IAmb	18 13 08.4	
	comp=Z,50nm,1.5s						
SSLB	**Suanglung**	**72.89**	**303**	P	**P**	**18 12 44.5**	**-1.0**
SSLB				IAmb	IAmb	18 13 02.4	
	comp=Z,78nm,1.6s						
TPUB	**Ta-pu**	**72.91**	**302**	P	**P**	**18 12 44.2**	**-1.5**
CISI	**Cisompet, Garu**	**72.93**	**267**	P	**P**	**18 12 43.9**	**-2.1**
KSM	**Kuching**	**73.33**	**277**	P	**P**	**18 12 49.0**	**+0.8**
KSM				IAmb	IAmb	18 13 00.4	
	comp=Z,53nm,1.4s						
PETK	**Petropavlovsk-**	**74.08**	**345**	P	**P**	**18 12 52.4**	**+0.8**
	comp=Z,6.5nm,1.1s,baz=157,slow=7.8,SNR=3.6						
PETK	**Petropavlovsk-**	**74.08**	**345**	P	**P**	**18 12 52.2**	**+0.6**
KSRS	**Korea Array**	**75.30**	**318**	P	**P**	**18 12 59.8**	**+1.0**
	comp=Z,0.9nm,0.9s,baz=105,slow=5.4,SNR=4.4						
WAKR	**Walker**	**78.48**	**43**	P	**P**	**18 13 16.1**	**-0.4**
NVAR	**Mina Array Bea**	**79.18**	**44**	P	**P**	**18 13 21.9**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=228,slow=8.8,SNR=7.9						
NVAR	**Mina Array Bea**	**79.18**	**44**	P	**P**	**18 13 21.6**	**+1.5**
KVN	**Kaiserville**	**79.65**	**43**	P	**P**	**18 13 23.7**	**+1.1**
TPNV	**Topopah Spring**	**79.75**	**46**	P	**P**	**18 13 25.4**	**+2.2**
K05A	**Summer Lake**	**80.00**	**39**	P	**P**	**18 13 26.2**	**+1.8**
U15A	**North Rim**	**82.23**	**48**	P	**P**	**18 13 37.3**	**+1.2**
SUA	**Susitna One**	**82.24**	**13**	P	**P**	**18 13 35.0**	**-0.4**
SUA				IAmb	IAmb	18 13 53.6	
	comp=Z,38nm,1.5s						
ENH	**Enshi**	**84.92**	**304**	P	**P**	**18 13 50.2**	**+0.9**
TXAR	**Lajitas Array**	**85.61**	**57**	P	**P**	**18 13 55.2**	**+2.5**
	comp=Z,0.7nm,0.7s,baz=218,slow=6.2,SNR=9.9						
TXAR	**Lajitas Array**	**85.61**	**57**	P	**P**	**18 13 54.6**	**+1.9**
ILAR	**Eielson Array**	**85.99**	**13**	P	**P**	**18 13 53.3**	**-0.3**
	comp=Z,0.4nm,0.4s,baz=221,slow=4.8,SNR=8.5						
ILAR	**Eielson Array**	**85.99**	**13**	P	**P**	**18 13 53.0**	**-0.6**
PDAR	**Pinedale Array**	**87.11**	**43**	P	**P**	**18 14 00.9**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=204,slow=2.0,SNR=3.2						
PDAR	**Pinedale Array**	**87.11**	**43**	P	**P**	**18 13 59.5**	**-0.1**
CMAR	**Chiang Mai Arr**	**89.55**	**289**	P	**P**	**18 14 11.6**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=108,slow=3.4,SNR=7.8						
CMAR	**Chiang Mai Arr**	**89.55**	**289**	P	**P**	**18 14 11.2**	**-0.1**
YKA	**Yellowknife Ar**	**94.30**	**25**	P	**P**	**18 14 31.3**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=249,slow=4.4,SNR=3.5						
MKAR	**Makanchi Array**	**109.75**	**314**	PKiKP	**PKiKP**	**18 19 39.5**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=165,slow=0.9,SNR=8.2						
MKAR	**Makanchi Array**	**109.75**	**314**	PKiKP	**PKiKP**	**18 19 39.4**	**-1.0**
ARCES	**ARCESS Array B**	**126.67**	**350**	PKP	**PKPdf**	**18 20 12.2**	**0.0**
	comp=Z,3.1nm,0.8s,baz=48,slow=1.8,SNR=6.7						
ARCES	**ARCESS Array B**	**126.67**	**350**		**PKPdf**	**18 20 12.3**	**+0.2**
FINES	**FINESS Array B**	**133.59**	**344**	PKP	**PKPdf**	**18 20 25.4**	**0.0**
	comp=Z,2.4nm,0.9s,baz=288,slow=1.3,SNR=4.4						
FINES	**FINESS Array B**	**133.59**	**344**		**PKPdf**	**18 20 25.8**	**+0.4**
AKASG	**Malin Array Be**	**141.06**	**333**	PKhKP	PKPpre	18 20 33.8	
	comp=Z,0.4nm,0.3s,baz=40,slow=4.1,SNR=5.4						
AKASG	**Malin Array Be**	**141.06**	**333**		PKPpre	18 20 33.2	
SORM	**Soroca**	**143.31**	**330**	⇑P	PKPab	18 20 40.3	-1.4
MILM	**Milestii Mici**	**143.94**	**329**	⇓P	PKPbc	18 20 44.0	0.0
GAZ	**Gaziantep**	**143.97**	**309**		PKPbc	18 20 44.2	-0.3
LEOM	**Leova**	**144.53**	**329**	⇓P	**PKPdf**	**18 20 45.8**	**+0.1**
VASR	**Vaslui**	**144.64**	**329**	⇓P	PKPbc	18 20 46.7	+0.5
BUR08	**Bucovina Ar. S**	**145.10**	**333**		**PKPbc**	**18 20 48.1**	**+0.3**
BURAR	**Bucovina Array**	**145.12**	**332**	⇑P	**PKPbc**	**18 20 48.6**	**+0.8**
BIZ	**Bicaz**	**145.23**	**331**	⇓P	**PKPab**	**18 20 49.2**	**+0.1**
GHRR		**145.24**	**329**	⇑P	**PKPbc**	**18 20 48.8**	**+0.8**
TESR	**Tescani**	**145.28**	**330**	⇓P	**PKPbc**	**18 20 48.6**	**+0.4**
BRTR	**Keskin Array B**	**145.39**	**315**	PKPbc	**PKPbc**	**18 20 49.0**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=130,slow=4.3,SNR=21						
TOPG	**Topolog**	**145.56**	**326**	⇑P	**PKPdf**	**18 20 48.7**	**+1.1**
VRI	**Vrincioaia**	**145.71**	**329**	⇑P	**PKPbc**	**18 20 49.5**	**+0.1**
PLOR	**Plostina**	**145.76**	**329**	⇓P	**PKPbc**	**18 20 49.3**	**-0.3**
OSTC	**Ostas**	**145.80**	**344**	*e*PKP	**PKPbc**	**18 20 50.5**	**+1.0**
TRPA	**Tarpa**	**145.83**	**336**	⇑P	**PKPbc**	**18 20 50.3**	**+0.7**
CLL	**Collm**	**145.84**	**348**	*i* PKPbc	**PKPbc**	**18 20 49.9**	**+0.3**
	comp=Z,13nm,1.0s						
CLL	**Collm**	**145.84**	**348**		**PKPdf**	**18 20 49.2**	**+1.4**
UPC	**Upice**	**145.90**	**344**	*e*PKP	**PKPbc**	**18 20 50.6**	**+0.8**
ARCR	**ARCALIA**	**145.90**	**333**	⇓P	**PKPbc**	**18 20 50.9**	**+1.0**
HARR	**Harsova**	**145.92**	**327**	⇓P	**PKPbc**	**18 20 50.6**	**+0.6**
DPC	**Dobruska-Polom**	**145.96**	**344**	*e*PKP	**PKPbc**	**18 20 50.8**	**+0.8**
DPC				*ex*	x	18 20 53.0	
BRG	**Berggiesshubel**	**146.05**	**347**	*e*PKP	**PKPbc**	**18 20 50.9**	**+0.7**
	comp=Z,6.2nm,0.8s						
KRLC	**Kraliky**	**146.09**	**343**	*e*PKP	**PKPbc**	**18 20 51.0**	**+0.6**
DOPR	**Dopca**	**146.28**	**330**	⇓P	**PKPbc**	**18 20 52.0**	**+1.0**
MBAR	**Mbarara**	**146.34**	**239**	PKPbc	**PKPbc**	**18 20 52.9**	**+0.6**
	comp=Z,2.6nm,0.2s,baz=186,slow=17,SNR=3.8						
MBAR	**Mbarara**	**146.34**	**239**		**PKPbc**	**18 20 52.1**	**-0.2**
MLR	**Muntele Rosu**	**146.36**	**329**	⇓P	**PKPbc**	**18 20 50.9**	**-0.5**
PRU	**Pruhonice**	**146.74**	**345**	*e*PKP	**PKPbc**	**18 20 52.6**	**+0.5**
VOIR		**146.83**	**330**	⇑P	**PKPbc**	**18 20 53.0**	**+0.3**
DRGR		**146.83**	**334**	⇑P	**PKPbc**	**18 20 52.9**	**+0.3**
PBCC	**Pribram**	**147.15**	**346**	*e*PKP	**PKPbc**	**18 20 53.6**	**+0.4**
KHC	**Kasperske Hory**	**147.77**	**346**	*e*PKP	**PKPbc**	**18 20 55.6**	**+0.7**
KHC				*ex*	x	18 21 00.0	
GZR	**Gura Zlata**	**147.91**	**332**	⇑P	**PKPbc**	**18 20 55.5**	**+0.1**
GERES	**GERESS Array B**	**148.01**	**346**	PKPbc	**PKPbc**	**18 20 56.0**	**+0.4**
	comp=Z,2.2nm,0.5s,baz=25,slow=3.2,SNR=21						
GERES	**GERESS Array B**	**148.01**	**346**		**PKPbc**	**18 20 55.5**	**0.0**
BZS	**Buzias**	**148.23**	**334**	⇑P	**PKPbc**	**18 20 56.2**	**+0.1**
CONA	**Conrad Observa**	**148.29**	**342**	*i* PKiKP	**PKPbc**	**18 20 57.1**	**+0.8**
	comp=Z,2.9nm,0.7s						
HERR	**Herculane**	**148.47**	**332**	⇓P	**PKPbc**	**18 20 57.0**	**+0.3**
MOA	**Molln**	**148.79**	**344**	*e*PKiKP	**PKPbc**	**18 20 57.8**	**+0.4**
	comp=Z,11nm,2.2s						
MDVR	**Moldovita**	**148.85**	**333**	⇑P	**PKPdf**	**18 20 52.5**	**-0.5**
SOKA	**Soboth**	**149.66**	**342**	*i* PKiKP	**PKPbc**	**18 20 59.5**	**-0.1**
	comp=Z,4.5nm,0.9s						
KBA	**Koelnbreinsper**	**149.74**	**345**	*i* PKiKP	**PKPbc**	**18 21 00.3**	**+0.4**
	comp=Z,5.8nm,1.1s						
VTS	**Vitosha**	**149.79**	**328**	⇑P	**PKPbc**	**18 20 59.2**	**-1.0**
WATA	**Walderalm**	**149.91**	**347**	*i* PKiKP	**PKPbc**	**18 21 00.4**	**+0.1**
	comp=Z,3.4nm,0.6s						
WTTA	**Wattenberg**	**149.96**	**347**	*e*PKiKP	**PKPbc**	**18 21 00.8**	**+0.4**
	comp=Z,6.3nm,0.6s,SNR=6.4						
MOTA	**Moosalm**	**149.99**	**348**	*e*PKiKP	**PKPbc**	**18 21 00.5**	**0.0**
	comp=Z,3.6nm,0.8s						
MYKA	**Terra Mystica**	**150.08**	**344**	*i* PKiKP	**PKPbc**	**18 21 00.2**	**-0.4**
	comp=Z,4.3nm,0.6s						
SQTA	**Sankt Quirin**	**150.09**	**348**	*i* PKiKP	**PKPbc**	**18 21 00.7**	**0.0**
	comp=Z,6.3nm,0.8s						
ABTA	**Abfaltersbach**	**150.25**	**346**	*i* PKiKP	**PKPbc**	**18 21 00.8**	**-0.2**
	comp=Z,7.0nm,0.7s,SNR=6.0						
FUORN	**Ofenpass-Fuorn**	**150.85**	**349**		**PKPbc**	**18 21 03.0**	**+0.3**

MAN 18 18:13:47.0, 11°.21N×122°.85E, h27km, mb4.2, ML3.0, MS2.7, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**1.73**	**95**	*e*P	Pn	18 14 16.3	+1.0
OCLP				*e*S	Sn	18 14 37.1	+0.5
CUYO	**Cuyo Island**	**1.83**	**259**	*e*P	Pn	18 14 18.3	+1.5
MSLP	**Maasin**	**2.24**	**118**	*e*P	Pn	18 14 23.5	+1.2

MAN 18 18:15:38.3, 6°.14N×126°.38E, h37km, mb4.7, ML3.6, MS3.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.67**	**267**	*e*P	Pn	18 15 52.5	+1.2
DDMP				*e*S	Sn	18 16 03.0	+2.5
MATI	**Mati**	**0.81**	**351**	*e*P	Pn	18 15 53.8	+0.6
MATI				*e*S	Sn	18 16 05.2	+1.1
GSPH	**General Santos**	**1.43**	**268**	*i*P	Pn	18 16 01.3	-0.5
GSPH				*i* S	Sn	18 16 18.8	-0.5
KCP	**Kidapawan**	**1.55**	**304**	⇓*e*P	Pn	18 16 03.9	+0.5
KCP				*i* S	Sn	18 16 22.1	-0.1
SKMP	**Bagumbayan, Su**	**1.87**	**282**	*e*P	Pn	18 16 07.5	-0.1
SKMP				*e*S	Sn	18 16 26.0	-4.0
BUKP	**Musuan**	**2.17**	**323**	*e*P	Pn	18 16 13.2	+1.3
BUKP				*e*S	Sn	18 16 39.6	+2.1

*SKHL **18** 18:29:31.1±0.4, 42°.90N×145°.90E, h50km±5km, mb3.8/4*
*JMA **18** 18:29:32.1±0.1, 43°.02N×145°.82E, h43km±1km, M3.3*
ISC 18 18:29:31.9±1.8, **43°.00N**±0°.09×**145°.87E**±0°.06, **h40**km±17km, **n15**, σ**0s54**/26, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.38**	**346**	P	**Pn**	**18 29 41.1**	**+0.1**
NEM2				S	**Sn**	**18 29 47.4**	**0.0**
NMR	**Nemuro--Hokkai**	**0.38**	**344**	*i* P	**Pn**	**18 29 41.2**	**+0.1**
JKHN	**Kushirohamanak**	**0.53**	**279**	P	**Pn**	**18 29 42.8**	**-0.2**
JKHN				*e*S	**Sn**	**18 29 50.7**	**-0.1**
GLVR	**Golovnino**	**0.78**	**341**	*e*P	**Pn**	**18 29 46.0**	**-0.4**
GLVR				*i* S	**Sn**	**18 29 57.6**	**+0.7**
GLVR				A	A	18 29 58.0	
	800nm,0.3s						
GLVR				A	A	18 29 58.0	
	600nm,0.3s						
JAK	**Akkeshi**	**0.86**	**270**	P	**Pn**	**18 29 47.3**	**-0.2**
JAK				*e*S	**Sn**	**18 29 58.7**	**-0.2**
GRPR	**Tuman**	**0.99**	**356**	*e*P	**Pn**	**18 29 48.8**	**-0.5**
GRPR				AMB	AMB	18 29 51.0	
	50nm,0.2s						
GRPR				A	A	18 30 01.0	
	550nm,0.2s						
GRPR				A	A	18 30 01.0	
	640nm,0.2s						
GRPR				*i* S	**Sn**	**18 30 01.2**	**-0.9**
JNSB	**Nemuroshibetsu**	**1.00**	**321**	P	**Pn**	**18 29 49.5**	**+0.1**
JNSB				*e*S	**Sn**	**18 30 02.3**	**0.0**
JNK	**Nakash**	**1.02**	**305**	P	**Pn**	**18 29 49.5**	**-0.2**
JNK				*e*S	**Sn**	**18 30 02.1**	**-0.8**
YUK	**Yuzh-Kuril'sk**	**1.03**	**360**	*e*P	**Pn**	**18 29 49.3**	**-0.6**
YUK				AMB	AMB	18 29 51.0	
	30nm,0.2s						
YUK				*i* S	**Sn**	**18 30 02.8**	**-0.3**
YUK				A	A	18 30 05.0	
	500nm,0.3s						
YUK				A	A	18 30 05.0	
	620nm,0.3s						
JRA	**Rausu**	**1.08**	**330**	P	**Pn**	**18 29 50.7**	**+0.2**
JRA				*e*S	**Sn**	**18 30 04.3**	**0.0**
SHO	**Shikotan**	**1.11**	**39**	*e*P	**Pn**	**18 29 50.4**	**-0.6**
SHO				AMB	AMB	18 29 55.0	
	20nm,0.3s						
SHO				*i* S	**Sn**	**18 30 04.7**	**-0.4**
SHO				A	A	18 30 06.0	
	320nm,0.3s						
SHO				A	A	18 30 06.0	
	430nm,0.3s						
JOB	**Onbets**	**1.50**	**267**	P	**Pn**	**18 29 56.2**	**0.0**
JAR	**Ashorobuto**	**1.57**	**282**	P	**Pn**	**18 29 57.4**	**+0.2**
JTKR	**Abashiri--Toko**	**1.73**	**305**	P	**Pn**	**18 30 00.3**	**+0.9**
KUR	**Kuril'sk**	**2.65**	**32**	*e*P	**Pn**	**18 30 12.6**	**+0.5**
KUR				AMB	AMB	18 30 17.0	
	10.0nm,0.4s						
KUR				*i* S	**Sn**	**18 30 44.3**	**+1.3**
KUR				A	A	18 30 53.0	
	80nm,0.3s						
KUR				A	A	18 30 53.0	
	100nm,0.3s						

*IDC **18** 18:59:27.6±1.0, 69°.96N×25°.09E, h0km, mb1 3.5/4, mb1mx3.1/37, mbtmp3.5/4, ML2.6/4, Error ellipse: s-maj=8.5km s-min=6.3km az=65.0*
*NAO **18** 18:59:28.8±0.7, 69°.91N×25°.19E, h10km±7km, ML2.8*
*BER **18** 18:59:29.9±3.2, 69°.89N×25°.32E, h4km±7km, ML2.3, ML2.8(NAO), Confirmed Earthquake*
*UPP **18** 18:59:29.8±2.1, 69°.76N×25°.00E, h0km, ML2.3, Suspected explosion*
*HEL **18** 18:59:30.3±0.1, 69°.84N×25°.26E, h23km, ML2.5, ML2.3(UPP), Confirmed Earthquake*
*IEPN **18** 18:59:31.0, 69°.83N×24°.94E, h0km*
*KOLA **18** 18:59:32.5, 69°.82N×26°.20E, h0km*
ISC 18 18:59:27.4±1.2, **69°.84N**±0°.03×**25°.33E**±0°.02, **h14**km±9km, **n81**, σ**2s07**/129, **4D, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARA0	**ARCESS Array S**	**0.31**	**169**	Pg	**Pn**	**18 59 37.0**	**-0.5**
	baz=346,slow=14						
ARA0				Lg	Lg	18 59 41.9	
	baz=348,slow=22						
ARA0	**ARCESS Array S**	**0.31**	**169**	P	**Pn**	**18 59 37.0**	**-0.5**
	baz=346,slow=14						
ARA0				S	**Sb**	**18 59 41.9**	**+2.2**
	baz=348,slow=22						
ARCES	**ARCESS Array B**	**0.31**	**169**	Pg	**Pn**	**18 59 37.1**	**-0.5**
	25nm,0.3s,baz=344,slow=15,SNR=2272						
ARCES				Lg	Lg	18 59 42.0	
	208nm,0.3s,baz=345,slow=23,SNR=207						
ARE0	**ARCESS Array S**	**0.31**	**169**	*e*P	**Pn**	**18 59 37.2**	**-0.4**
ARE0				*e*S	**Sb**	**18 59 41.9**	**+2.2**
ARE0	**ARCESS Array S**	**0.31**	**169**	⇓*i*P	**Pn**	**18 59 37.2**	**-0.4**
ARE0				*e*S	**Sb**	**18 59 41.9**	**+2.2**
ARE0	**ARCESS Array S**	**0.31**	**169**	*i* P	**Pn**	**18 59 37.2**	**-0.4**
ARE0				*i* S	**Sb**	**18 59 41.7**	**+2.0**
KEV	**Kevo**	**0.59**	**97**	Pg	**Pn**	**18 59 41.6**	**+0.2**
KEV				Lg	Lg	18 59 49.3	
KEV	**Kevo**	**0.59**	**97**	*e*P	**Pn**	**18 59 41.6**	**+0.2**
KEV				*e*S	**Sb**	**18 59 49.4**	**+1.8**
KEV				MSG		18 59 50.2	
	comp=Z,159nm,0.1s			

APA0				S	Sn	19 01 04.3	-0.2	
APA0	**Apatity Array**	**3.58**	**125**	Pn	Pn	19 00 25.1	+2.6	
	baz=311,slow=12							
APA0				Sn	Sn	19 01 04.9	+0.4	
	baz=304,slow=18							
APA0				Sg	Sb	19 01 18.7	+5.0	
	baz=318,slow=28							
APA	**Apatity**	**3.72**	**124**	S	Sn	19 01 07.6	-0.4	
TOF	**Tornio**	**3.79**	**186**	*e*S	Sn	19 01 11.1	+1.4	
TOF				MSG		19 01 27.4		
	comp=Z,7.8nm,0.2s							
TOF	**Tornio**	**3.79**	**186**	*e*S	Sn	19 01 11.1	+1.4	
TOF				MSG		19 01 27.4		
	comp=Z,7.8nm,0.2s							
LVZ	**Lovozero**	**3.90**	**116**	*e*P	Pn	19 00 29.6	+2.7	
LVZ				*e*S	Sn	19 01 13.1	+0.8	
LVZ	**Lovozero**	**3.90**	**116**	*e*P	Pn	19 00 29.6	+2.7	
LVZ				*e*S	Sn	19 01 13.1	+0.8	
HARU	**Harads**	**4.04**	**206**	*e*P	Pn	19 00 30.9	+2.2	
HARU	**Harads**	**4.04**	**206**	P	Pn	19 00 30.9	+2.2	
KALU	**Kalix**	**4.07**	**192**	*e*P	Pn	19 00 31.8	+2.7	
KALU	**Kalix**	**4.07**	**192**	P	Pn	19 00 31.8	+2.7	
STEI	**Steigen**	**4.12**	**247**	Pn	Pn	19 00 30.9	+1.0	
STEI				Sn	Sn	19 01 18.1	+0.3	
STEI	**Steigen**	**4.12**	**247**	*e*P	Pn	19 00 31.5	+1.6	
STEI				*e*S	Sn	19 01 17.2	-0.7	
STEI				IAML		19 01 37.6		
	comp=Z,12nm,0.5s							
KU6	**Riekki**	**4.20**	**154**	*e*S	Sn	19 01 20.5	+0.8	
KU6				MSG		19 01 45.2		
	comp=Z,4.1nm,0.2s							
KU6	**Riekki**	**4.20**	**154**	*e*S	Sn	19 01 20.5	+0.8	
KU6				MSG		19 01 45.2		
	comp=Z,4.1nm,0.2s							
SJUU	**Sjulsmark**	**4.57**	**200**	*e*P	Pn	19 00 37.7	+1.6	
SJUU	**Sjulsmark**	**4.57**	**200**	P	Pn	19 00 37.7	+1.6	
LOF	**Lofoten**	**4.58**	**254**	Pn	Pn	19 00 36.7	+0.5	
LOF				Sn	Sn	19 01 28.7	-0.4	
LOF				Lg	Lg	19 01 48.4		
LOF	**Lofoten**	**4.58**	**254**	*e*P	Pn	19 00 37.3	+1.2	
LILU	**Lilltraesk**	**5.03**	**207**	*e*P	Pn	19 00 43.6	+1.3	
LILU	**Lilltraesk**	**5.03**	**207**	P	Pn	19 00 43.6	+1.3	
MOR8	**Moi Rana**	**5.50**	**233**	Pn	Pn	19 00 49.5	+0.7	
MOR8				Sn	Sn	19 01 47.8	-4.0	
MOR8				Lg	Lg	19 02 14.3		
MOR8	**Moi Rana**	**5.50**	**233**	*e*P	Pn	19 00 50.1	+1.3	
MOR8				*e*S	Sn	19 01 47.4	-4.4	
MOR8				IAML		19 02 19.5		
	comp=Z,7.9nm,0.4s							
KONS	**Konsvik**	**5.65**	**239**	*e*P	Pn	19 00 53.4	+2.5	
SLVR	**Solovky**	**6.26**	**135**	*e*P	Pn	19 01 00.9	+1.8	
SLVR				*e*S	Sn	19 02 08.7	-1.7	
	comp=Z,23nm,0.7s							
NSS	**Namsos**	**7.43**	**231**	*e*P	Pn	19 01 17.1	+1.8	
FIA0	**FINESS Array S**	**8.44**	**178**	Pn	Pn	19 01 31.2	+2.2	
	baz=3.1,slow=12							
FIA0				Sn	Sn	19 03 00.8	-3.2	
	baz=356,slow=22							
FIA0				Lg	Lg	19 03 44.7		
	slow=28							
FIA0	**FINESS Array S**	**8.44**	**178**	Pn	Pn	19 01 31.2	+2.2	
	baz=3.1,slow=12							
FIA0				Sn	Sn	19 03 00.8	-3.2	
	baz=356,slow=22							
FINES	**FINESS Array B**	**8.44**	**178**	Pn	Pn	19 01 30.8	+1.7	
	comp=Z,0.2nm,0.3s,baz=7.5,slow=12,SNR=7.7							
FINES				Sn	Sn	19 03 00.5	-3.4	
	comp=Z,0.3nm,0.3s,baz=357,slow=21,SNR=5.2							
FINES				Lg	Lg	19 03 44.4		
	comp=Z,0.5nm,0.3s,baz=353,slow=21,SNR=2.7							
SPA0	**Spitsbergen Ar**	**8.72**	**348**	Pn	Pn	19 01 32.2	-0.8	
	baz=141,slow=18							
SPA0	**Spitsbergen Ar**	**8.72**	**348**	Pn	Pn	19 01 32.2	-0.8	
	baz=141,slow=18							
SPITS	**Spitsbergen Ar**	**8.72**	**348**	Pn	Pn	19 01 32.5	-0.5	
	baz=161,slow=14,SNR=2.0							
SPITS				Sn	Sn	19 03 04.4	-6.6	
	baz=137,slow=30,SNR=1.2							
LSH	**Leshunkoskoye**	**9.27**	**113**	*e*P	Pn	19 01 42.2	+1.8	
LSH				*e*S	Sn	19 03 21.1	-3.3	
NOA	**NORSAR Array B**	**10.57**	**220**	Pn	Pn	19 01 57.5	-0.8	
	comp=Z,0.0nm,0.3s,baz=34,slow=11,SNR=6.1							
HFS	**Hagfors**	**10.89**	**212**	Pn	Pn	19 02 01.9	-0.7	
	baz=18,slow=12							
HFS	**Hagfors**	**10.89**	**212**	Pn	Pn	19 02 01.4	-1.2	
	comp=Z,0.2nm,0.3s,baz=27,slow=11,SNR=10							
HFS				Sn	Sn	19 03 57.2	-6.9	
	comp=Z,0.1nm,0.3s,baz=25,slow=29,SNR=1.5							
HFS	**Hagfors**	**10.89**	**212**	Pn	Pn	19 02 01.9	-0.7	
	baz=18,slow=12							

IDC ***18*** *19:04:43.7±1.6,43˚.84N×105˚.53W,h0km,mb3.9/1, mb1 3.5/5,mb1mx3.3/37,mbtmp3.2/5,ML2.7/3,Error ellipse: s-maj=43.4km s-min=7.9km az=148.0*

NEIC ***18*** *19:04:43.7±1.5,43˚.73N±0˚.05×105˚.23W±0˚.06,h0km±2km, ML3.1/57,Error ellipse: s-maj=9.5km s-min=6.8km az=323.0*

ISC 18 19:04:43.3±0.8,43˚70N±0˚.05×105˚26W±0˚.05,h0km,n46, σ1§15/47,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**64**			Pg	**Pg**	**19 05 02.2**	**+0.1**
K22A	**Casper**	**1.40**	**222**				**Pg**	**19 05 08.2**	**-1.9**
K22A						IAML		19 05 30.3	
	comp=E,284nm,0.4s								
K22A						IAML		19 05 33.0	
	comp=N,285nm,0.3s								
PHWY	**Pilot Hill**	**2.40**	**184**				**Pn**	**19 05 25.1**	**+0.9**
PHWY						IAML		19 06 04.6	
	comp=N,59nm,0.4s								
RWWY	**Rawlins**	**2.47**	**216**				**Pn**	**19 05 25.2**	**+0.1**
RWWY						IAML		19 06 01.0	
	comp=N,107nm,1.3s								
RWWY						IAML		19 06 04.3	
	comp=N,104nm,0.9s								
N23A	**Red Feather La**	**2.85**	**191**				**Pn**	**19 05 31.2**	**+0.9**
N23A						IAML		19 06 20.2	
	comp=N,58nm,0.5s								
N23A						IAML		19 06 26.5	
	comp=E,48nm,1.2s								
LAO	**LASA Array**	**3.07**	**347**				**Pn**	**19 05 34.3**	**+1.2**
RLMT	**Red Lodge**	**3.21**	**298**				**Pn**	**19 05 34.8**	**-0.4**
RLMT						IAML		19 06 24.5	
	comp=E,44nm,0.3s								
RLMT						IAML		19 06 24.7	
	comp=E,45nm,0.3s								
BW06	**Boulder Array**	**3.28**	**255**				**Pn**	**19 05 36.4**	**+0.2**
PD31	**Pinedale Array**	**3.28**	**255**				**Pn**	**19 05 36.4**	**+0.2**
PDAR	**Pinedale Array**	**3.28**	**255**	Pn			**Pn**	**19 05 36.2**	**0.0**
	comp=E,2.8nm,0.3s,baz=72,slow=16,SNR=44								
PDAR				Pg			**Pb**	**19 05 45.0**	**+2.5**
	comp=E,6.4nm,0.3s,baz=72,slow=20,SNR=35								
PDAR				Sn			**Sn**	**19 06 16.6**	**+0.6**
	comp=E,1.2nm,0.3s,baz=72,slow=27,SNR=2.8								
PDAR				Lg		Lg	Lg	19 06 21.0	
	comp=E,7.7nm,0.3s,baz=68,slow=32,SNR=6.6								
PDAR	**Pinedale Array**	**3.28**	**255**				**Pn**	**19 05 37.0**	**+0.9**
OGNE	**Ogallala**	**3.65**	**138**				**Pn**	**19 05 42.9**	**+1.8**
YNE	**Yellowstone No**	**3.65**	**293**				**Pn**	**19 05 40.9**	**-0.4**
YMP	**Mirror Lake Pl**	**3.67**	**288**				**Pn**	**19 05 42.3**	**+0.7**
LKWY	**Lake**	**3.80**	**285**				**Pn**	**19 05 44.4**	**+1.0**
LKWY						IAML		19 06 54.2	
	comp=E,32nm,2.0s								
LKWY						IAML		19 06 56.6	
	comp=E,20nm,2.9s								
H17A	**Grant Village**	**3.90**	**282**				**Pn**	**19 05 45.5**	**+0.8**
H17A						IAML		19 06 47.2	
	comp=N,16nm,0.8s								
ISCO	**Idaho Springs**	**3.91**	**184**				**Pn**	**19 05 46.2**	**+1.3**
FLWY	**Flagg Ranch**	**3.95**	**277**				**Pn**	**19 05 45.5**	**+0.1**
FLWY						IAML		19 06 56.8	
	comp=N,35nm,2.0s								
FLWY						IAML		19 07 40.1	
	comp=N,32nm,2.0s								
MOOW	**Moose Ponds**	**3.98**	**273**				**Pn**	**19 05 46.9**	**+1.1**
YPP	**Pitchstone Pla**	**4.04**	**280**				**Pn**	**19 05 46.6**	**-0.2**
REDW	**Red Top Meadow**	**4.08**	**267**				**Pn**	**19 05 47.0**	**-0.2**
REDW						IAML		19 07 04.5	
	comp=N,27nm,0.9s								
O20A	**White River Ci**	**4.20**	**213**				**Pn**	**19 05 49.7**	**+0.9**
AHID	**Auburn Hatcher**	**4.37**	**260**				**Pn**	**19 05 52.4**	**+1.2**
AHID						IAML		19 07 04.0	
	comp=N,20nm,1.4s								
YHL	**Hebgen Lake**	**4.41**	**287**				**Pn**	**19 05 52.5**	**+0.8**
RDMU	**Red Mountain**	**4.48**	**227**				**Pn**	**19 05 53.8**	**+1.2**
SMCO	**Snowmass**	**4.70**	**197**		IAML			19 07 18.8	
	comp=N,16nm,1.8s								
SMCO					IAML			19 07 19.2	
	comp=N,13nm,0.5s								
DGMT	**Dagmar**	**4.83**	**8**				**Pn**	**19 05 58.5**	**+1.2**
KSCO	**Kaye Shedlock'**	**5.08**	**156**				**Pn**	**19 06 01.7**	**+0.8**
HWUT	**Hardware Ranch**	**5.10**	**248**	Pn		Pn	**Pn**	**19 06 01.2**	**0.0**
HWUT					IAML			19 08 02.2	
	comp=N,13nm,2.1s								
TCUT	**Toone Canyon**	**5.23**	**243**				**Pn**	**19 06 03.8**	**+0.7**
EGMT	**Eagleton**	**5.34**	**326**				**Pn**	**19 06 04.2**	**-0.2**
DLMT	**Dillon**	**5.50**	**290**				**Pn**	**19 06 06.6**	**0.0**
LRM	**Limekiln Ridge**	**5.54**	**295**	Pn			**Pn**	**19 06 11.7**	**+4.3**
SPUT	**South Promonto**	**5.83**	**248**				**Pn**	**19 06 11.5**	**+0.4**
P17A	**Butcher Ranch,**	**5.89**	**226**				**Pn**	**19 06 12.9**	**+0.9**
SDCO	**Great Sand Dun**	**5.95**	**182**	Pn			**Pn**	**19 06 12.4**	**-0.5**
SRU	**San Rafael Swe**	**6.06**	**223**				**Pn**	**19 06 14.4**	**+0.1**
S22A	**4UR Ranch, Cre**	**6.07**	**192**	Pn			**Pn**	**19 06 13.9**	**-0.6**
ECSD	**EROS Data Cent**	**6.26**	**87**				**Pn**	**19 06 17.3**	**+0.3**
T25A	**Trinidad**	**6.58**	**174**				**Pn**	**19 06 21.5**	**-0.1**
PSUT	**Pine Spring**	**8.29**	**234**				**Pn**	**19 06 45.6**	**+0.7**
ULM	**Lac du Bonnet**	**9.16**	**41**	Pn			**Pn**	**19 06 55.6**	**-1.1**
	comp=N,0.4nm,0.3s,baz=230,slow=12,SNR=5.7								
ULM					Pg			19 07 29.1	
	comp=N,0.4nm,0.3s,baz=226,slow=16,SNR=3.5								
ULM					Lg		Lg	19 09 28.2	
	comp=N,0.2nm,0.3s,baz=276,slow=19,SNR=2.9								
ULM	**Lac du Bonnet**	**9.16**	**41**				**Pn**	**19 06 55.5**	**-1.2**
NVAR	**Mina Array Bea**	**11.16**	**246**	Pn			**Pn**	**19 07 26.2**	**+1.9**
	comp=N,0.1nm,0.3s,baz=68,slow=12,SNR=2.8								
YKA	**Yellowknife Ar**	**19.61**	**347**	P			**P**	**19 09 12.7**	**-0.2**
	comp=N,0.1nm,0.3s,baz=166,slow=12,SNR=4.5								
ARCES	**ARCESS Array B**	**61.45**	**18**	P			**P**	**19 14 59.8**	**-1.2**
	comp=N,1.3nm,0.9s,baz=310,slow=7.7,SNR=2.9								

SJA ***18*** *19:39:24.7±0.6,31˚.58S×68˚.77W,h18km±2km,ML3.4, MW3.6*

IDC ***18*** *19:39:25.7±4.3,31˚.71S×68˚.70W,h20km±26km,mb1 3.7/4, mb1mx3.4/33,mbtmp3.6/4,ML3.5/4,Error ellipse: s-maj=44.7km s-min=19.7km az=106.0*

ISC 18 19:39:24.7±0.9,31˚58S±0˚.04×68˚80W±0˚.04,h17km±6km, n17,σ0˚88/24,San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.11**	**73**	*i* P		**Pg**	**Pg**	**19 39 28.4**	**0.0**
ZON				*e*S		**Sg**	**Sg**	**19 39 31.0**	**0.0**
ZON				IAML				19 39 34.9	
	comp=Z,5μm,0.5s								
SJA	**San Juan**	**0.21**	**76**	*i* P			**Pb**	**19 39 30.1**	**-0.1**
SJA				*e*S			**Sb**	**19 39 33.4**	**-0.4**
SJA				IAML				19 39 34.9	
	comp=Z,12μm,0.3s								
RTCV	**Cerro Valdivia**	**0.36**	**142**	*i* P			**Pb**	**19 39 32.2**	**-0.5**
RTLL	**Cerro Villicun**	**0.38**	**48**	*i* P			**Pg**	**19 39 32.1**	**-0.4**
RTLL				*e*S			**Sg**	**19 39 38.1**	**+0.3**
RTLL				IAML				19 39 38.7	
	comp=Z,6μm,0.5s								
CFA	**Coronel Fontan**	**0.48**	**93**	Pg			**Pg**	**19 39 34.0**	**-0.5**
	comp=Z,77nm,0.3s,baz=258,slow=19,SNR=1433								
CFA					Lg		Lg	19 39 41.2	
	comp=Z,1μm,0.3s,baz=307,slow=5.1,SNR=268								
CFA	**Coronel Fontan**	**0.48**	**93**	*i* P			**Pg**	**19 39 34.2**	**-0.2**
CFA				*e*S			**Sb**	**19 39 41.1**	**-0.5**
AMOG	**MOGNA**	**0.69**	**23**	*i* P			**Pb**	**19 39 38.2**	**-0.2**
AMOG				*e*S			**Sg**	**19 39 48.3**	**+0.7**
ACAN	**Cantantal**	**1.54**	**117**	*i* P			**Pb**	**19 39 52.9**	**+0.1**
GO04	**Tololo Observa**	**2.22**	**309**	*i* P			**Pb**	**19 40 03.7**	**-0.8**
PEL	**Peldehue**	**2.23**	**225**	*i* P			**Pb**	**19 40 03.7**	**-0.9**
PEL				*e*S			**Sb**	**19 40 31.8**	**-0.2**
ROC1	**El Roble**	**2.33**	**233**	*i* P			**Pb**	**19 40 35.7**	**-0.8**
ROC1				*e*S			**Sb**	**19 40 35.4**	**+0.2**
GO05	**Huala**	**4.31**	**217**	*i* P			**Pn**	**19 40 32.6**	**+3.1**
PLCA	**Paso Flores**	**9.24**	**188**	Pn			**Pn**	**19 41 36.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=21,slow=14,SNR=2.7								
PLCA					Lg		Lg	19 44 15.4	
	comp=Z,0.4nm,0.3s,baz=101,slow=16,SNR=3.6								
CPUP	**Villa Florida**	**11.32**	**65**	Pn			**Pn**	**19 42 05.5**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=232,slow=9.8,SNR=3.2								
CPUP					Lg		Lg	19 45 17.8	
	comp=Z,0.2nm,0.3s,baz=287,slow=20,SNR=3.0								
LPAZ	**La Paz**	**15.23**	**2**	Pn			**P**	**19 43 03.5**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=186,slow=10,SNR=5.1								
SIV	**San Ignacio**	**17.04**	**26**	P			**P**	**19 43 24.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=185,slow=11,SNR=5.1								
MKAR	**Makanchi Array**	**153.12**	**47**	PKPbc			**PKiKP**	**19 59 21.4**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=316,slow=4.0,SNR=2.9								

GCG ***18*** *19:53:00.7±2.9,11˚.42N×88˚.26W,h50km±999km,MD4.6*

UCR ***18*** *19:53:13.3±1.2,12˚.49N×88˚.74W,h26km±3km,ML4.1, mb4.5(NEIC)*

SNET ***18*** *19:53:13.3±1.1,12˚.50N×88˚.76W,h25km±4km,ML4.2*

IDC ***18*** *19:53:15.5±2.8,13˚.15N×88˚.06W,h26km±18km,mb3.9/19, mb1 4.1/24,mb1mx4.0/45,mbtmp4.0/24,ML3.3/5,MS3.3/8, Ms1 3.3/8,ms1mx3.0/38,Error ellipse: s-maj=22.3km s-min=10.2km az=52.0*

NEIC ***18*** *19:53:15.5±2.0,12˚.70N±0˚.06×88˚.49W±0˚.04,h45km±6km, mb4.5/85,Md4.2(SNET),Error ellipse: s-maj=9.5km s-min=5.0km az=205.0*

INET ***18*** *19:53:16.4,11˚.76N×88˚.36W,h5km,ML3.8*

ISC 18 19:53:15.2±0.9,12˚57N±0˚.04×88˚60W±0˚.04,h43km±8km, n241,σ1§58/267,mb4.4/50,MS3.3/6,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.75**	**2**	*e*P			**Pn**	**19 53 29.4**	**-0.1**
ALJI				*e*S			**Sn**	**19 53 40.1**	**+0.4**
ALJI				IAML				19 53 44.2	
	comp=Z,6μm,0.5s								
LCY	**Lacayo**	**0.90**	**19**	*e*P			**Pn**	**19 53 31.9**	**+0.4**
LCY	**Lacayo**	**0.90**	**19**	*e*P			**Pn**	**19 53 31.9**	**+0.4**
VSM	**San Miguel**	**0.91**	**20**	*e*P			**Pn**	**19 53 32.5**	**+0.7**
VSM	**San Miguel**	**0.91**	**20**	*e*P			**Pn**	**19 53 32.5**	**+0.7**
TECA	**Tecapa**	**0.92**	**6**	*e*P			**Pn**	**19 53 31.9**	**0.0**
TECA	**Tecapa**	**0.92**	**6**	*e*P			**Pn**	**19 53 31.9**	**0.0**
COEB	**Comit de Eme**	**0.92**	**4**	*e*P			**Pn**	**19 53 31.9**	**0.0**
COEB				*e*S			**Sn**	**19 53 46.9**	**+2.9**
COEB				IAML				19 53 49.5	
	comp=Z,7μm,0.3s								
PACA	**Pacayal**	**0.93**	**17**	*e*P			**Pn**	**19 53 32.5**	**+0.4**
PACA				*e*S			**Sn**	**19 53 47.8**	**+3.6**
PACA	**Pacayal**	**0.93**	**17**	*e*P			**Pn**	**19 53 32.5**	**+0.4**
PACA				*e*S			**Sn**	**19 53 47.8**	**+3.6**
BLLM	**Bellamira**	**0.93**	**22**	*e*P			**Pn**	**19 53 32.1**	**+0.1**
BLLM	**Bellamira**	**0.93**	**22**	*e*P			**Pn**	**19 53 32.1**	**+0.1**
LCND	**La Caada**	**1.01**	**43**	*e*P			**Pn**	**19 53 33.4**	**+0.4**
LCND	**La Caada**	**1.01**	**43**	*e*P			**Pn**	**19 53 33.4**	**+0.4**
COEG	**Centro de Oper**	**1.08**	**345**	*e*P			**Pn**	**19 53 33.4**	**-0.6**
COEG				*e*S			**Sn**	**19 53 49.0**	**+1.3**
COEG				IAML				19 53 51.8	
	comp=Z,4μm,0.5s								
LFRS	**El Faro**	**1.14**	**337**	*e*P			**Pn**	**19 53 33.3**	**-1.5**
PAVA	**Las Pavas**	**1.18**	**344**	*e*P			**Pn**	**19 53 35.0**	**-0.4**
PAVA	**Las Pavas**	**1.18**	**344**	*e*P			**Pn**	**19 53 35.0**	**-0.4**
FAGO	**Alcalda de S**	**1.21**	**23**	*e*P			**Pn**	**19 53 36.6**	**+0.8**
FAGO				*e*S			**Sn**	**19 53 54.0**	**+2.9**
LBRS	**Las Brisas**	**1.24**	**340**	*e*P			**Pn**	**19 53 35.7**	**-0.5**
SNET	**Serv Nac Est T**	**1.27**	**331**	*e*P			**Pn**	**19 53 35.3**	**-1.3**
SNET				*e*S			**Sn**	**19 53 52.8**	**+0.3**
SNET				IAML				19 53 56.5	
	comp=Z,3μm,0.4s								
SNET	**Serv Nac Est T**	**1.27**	**331**	*e*P			**Pn**	**19 53 35.3**	**-1.3**
SNET				*e*S			**Sn**	**19 53 52.8**	**+0.3**
SNET				IAML				19 53 56.5	
	comp=Z,3μm,0.4s								
SNET	**Serv Nac Est T**	**1.27**	**331**				**Pn**	**19 53 35.4**	**-1.2**
SNET						Sn	**Sn**	**19 53 50.8**	**-1.7**
LFU	**La Fuente**	**1.27**	**337**	*e*P			**Pn**	**19 53 36.2**	**-0.5**
LFU	**La Fuente**	**1.27**	**337**	*e*P			**Pn**	**19 53 36.2**	**-0.5**
OPAM	**Oficina de Pla**	**1.27**	**333**	*e*P			**Pn**	**19 53 36.3**	**-0.4**
OPAM				*e*S			**Sn**	**19 53 53.0**	**+0.4**
OPAM	**Oficina de Pla**	**1.27**	**333**	*e*P			**Pn**	**19 53 36.3**	**-0.4**
OPAM				*e*S			**Sn**	**19 53 53.0**	**+0.4**
UEES	**Universidad Ev**	**1.30**	**331**	*e*P			**Pn**	**19 53 35.9**	**-1.1**
UEES				*e*S			**Sn**	**19 53 53.5**	**+0.3**
UEES	**Universidad Ev**	**1.30**	**331**	*e*P			**Pn**	**19 53 35.9**	**-1.1**
UEES				*e*S			**Sn**	**19 53 53.5**	**+0.3**
BOQS	**Boqueron**	**1.33**	**330**	*e*P			**Pn**	**19 53 36.7**	**-0.9**
BOQS				*e*S			**Sn**	**19 53 55.1**	**+0.9**
CEVE	**Cerro Verde**	**1.60**	**321**	*e*P			**Pn**	**19 53 40.2**	**-1.0**
CEVE				*e*S			**Sn**	**19 54 01.9**	**+1.0**
CEVE				IAML				19 54 13.2	
	comp=Z,5μm,0.3s								
CEVE	**Cerro Verde**	**1.60**	**321**	*e*P			**Pn**	**19 53 40.2**	**-1.0**
CEVE				*e*S			**Sn**	**19 54 01.9**	**+1.0**
CEVE				IAML				19 54 13.2	
	comp=Z,5μm,0.3s								
SBLS	**San Blas**	**1.61**	**322**	*e*P			**Pn**	**19 53 40.3**	**-1.1**
SBLS				*e*S			**Sn**	**19 54 00.2**	**-0.8**
SBLS	**San Blas**	**1.61**	**322**	*e*P			**Pn**	**19 53 40.3**	**-1.1**
SBLS				*e*S			**Sn**	**19 54 00.2**	**-0.8**
SNJE	**San Jose**	**1.62**	**323**	*e*P			**Pn**	**19 53 40.4**	**-1.1**
SNJE	**San Jose**	**1.62**	**323**	*e*P			**Pn**	**19 53 40.4**	**-1.1**
RTR	**El Retiro**	**1.67**	**322**	*e*P			**Pn**	**19 53 41.3**	**-0.8**
RTR				*e*S			**Sn**	**19 54 02.5**	**+0.1**
RTR	**El Retiro**	**1.67**	**322**	*e*P			**Pn**	**19 53 41.3**	**-0.8**
RTR				*e*S			**Sn**	**19 54 02.5**	**+0.1**
FAME	**Alcalda de S**	**1.87**	**313**	*e*P			**Pn**	**19 53 42.6**	**-2.2**
TGUH	**Tegucigalpa,Un**	**1.96**	**41**	*e*P			**Pn**	**19 53 47.6**	**+1.5**
TGUH	**Tegucigalpa,Un**	**1.96**	**41**	*e*P			**Pn**	**19 53 47.6**	**+1.5**
TGUH	**Tegucigalpa,Un**	**1.96**	**41**				**Pn**	**19 53 46.2**	**+0.1**
TGUH						Sn	**Sn**	**19 54 03.9**	**-5.7**
MTO3	**Montecristo**	**1.96**	**338**	*e*P			**Pn**	**19 53 46.5**	**+0.3**
MTO3				*e*S			**Sn**	**19 54 11.7**	**+2.0**
MTO3	**Montecristo**	**1.96**	**338**	*e*P			**Pn**	**19 53 46.5**	**+0.3**
MTO3				*e*S			**Sn**	**19 54 11.7**	**+2.0**
ESTN	**Estel**	**2.24**	**76**				**Pn**	**19 53 49.2**	**-0.7**
ESTN						Sn	**Sn**	**19 54 15.0**	**-1.4**
IXG	**Ixpaco**	**2.40**	**312**	*e*P			**Pn**	**19 53 50.3**	**-1.9**
IXG	**Ixpaco**	**2.40**	**312**	*e*P			**Pn**	**19 53 50.3**	**-1.9**
IXG	**Ixpaco**	**2.40**	**312**	*e*P			**Pn**	**19 53 51.5**	**-0.7**
NBG	**Las Nubes**	**2.63**	**320**	*e*P			**Pn**	**19 53 57.1**	**+1.7**
MRL	**Marmol**	**2.71**	**337**	*e*P			**Pn**	**19 53 58.5**	**+2.0**
FUG	**Fuego 3**	**2.87**	**311**	*e*P			**Pn**	**19 53 58.8**	**+0.1**
FUG				*e*S			Sn	19 54 44.6	+13
APG	**El Apazote**	**3.02**	**323**	Pn			**Pn**	**19 54 01.1**	**+0.3**
	comp=Z,2.7nm,0.3s,baz=136,slow=11,SNR=3.5								
ACON	**Acoyapa**	**3.40**	**100**	*e*P			**Pn**	**19 54 04.1**	**-1.7**
ACON	**Acoyapa**	**3.40**	**100**				**Pn**	**19 54 04.7**	**-1.1**
ACON						Sn	**Sn**	**19 54 43.4**	**-1.6**
STG3	**Santiaguito 3,**	**3.59**	**307**	*e*P			**Pn**	**19 54 08.2**	**-0.4**
CUI	**Cuipilapa**	**3.87**	**119**	*e*P			**Pn**	**19 54 11.5**	**-0.8**
PLVR	**Palo Verde**	**3.88**	**124**	*e*P			**Pn**	**19 54 11.7**	**-0.8**
JTS	**Las Juntas de**	**4.23**	**122**	Pn			**Pn**	**19 54 16.6**	**-0.7**
	comp=Z,6.2nm,0.3s,baz=22,slow=12,SNR=16								
JTS						Sn	**Sn**	**19 55 04.4**	**-1.1**
	comp=Z,26nm,0.3s,baz=321,slow=24,SNR=6.2								
JTS						Lg	Lg	19 55 32.1	
	comp=Z,24nm,0.3s,baz=172,slow=19,SNR=12								
JTS						LR	LR	19 55 47.5	
	comp=Z,99nm,18.5s,baz=2.5,slow=36								
JTS	**Las Juntas de**	**4.23**	**122**	*e*P			**Pn**	**19 54 16.6

	comp=Z,4.6nm,0.7s,baz=174,slow=9.9,SNR=2.2						
TKL				LR	LR	20 07 32.4	
	comp=Z,56nm,18.8s,baz=166,slow=38						
TKL	**Tuckaleechee C**	**23.39**	**10**	P	**P**	**19 58 19.4**	**-0.9**
TKL				IAmb	IAmb	19 58 23.9	
	comp=Z,33nm,1.5s						
X34A	**Smith Ranch, M**	**23.48**	**341**	P	**P**	**19 58 20.7**	**-0.4**
LPIG	**La Paz**	**23.54**	**302**	P	**P**	**19 58 26.8**	**+5.0**
	comp=Z,22nm,0.3s,baz=307,slow=22,SNR=3.1						
PCRV	**Puerto La Cruz**	**23.61**	**93**	P	**P**	**19 58 22.2**	**-0.4**
	comp=Z,14nm,1.0s,baz=121,slow=4.9,SNR=3.2						
PLCV	**Puerto La Cruz**	**23.66**	**93**	P	**P**	**19 58 22.2**	**-0.8**
W35A	**Tecumseh**	**23.70**	**343**	P	**P**	**19 58 22.2**	**-1.0**
WMOK	**Wichita Mounta**	**23.92**	**339**	P	**P**	**19 58 24.2**	**-1.1**
WMOK				IAmb	IAmb	19 58 29.6	
	comp=Z,9.3nm,0.9s						
WMOK	**Wichita Mounta**	**23.92**	**339**	P	**P**	**19 58 26.3**	**+1.0**
	baz=155,SNR=10						
FNO	**Franklin**	**23.95**	**342**	P	**P**	**19 58 25.1**	**-0.4**
U40A	**Yellville**	**23.99**	**352**	IAmb	IAmb	19 58 27.8	
	comp=Z,16nm,0.9s						
U40A	**Yellville**	**23.99**	**352**	P	**P**	**19 58 26.4**	**+0.5**
	baz=170,SNR=8.1						
HHAR	**Hobbs**	**24.09**	**349**	P	**P**	**19 58 26.3**	**-0.6**
HHAR				IAmb	IAmb	19 58 30.5	
	comp=Z,11nm,0.8s						
T47A	**Sharon Grove**	**24.35**	**3**	P	**P**	**19 58 27.6**	**-1.5**
T47A				IAmb	IAmb	19 58 33.8	
	comp=Z,17nm,1.1s						
MNTX	**Cornudas Mount**	**24.51**	**324**	P	**P**	**19 58 30.4**	**-0.3**
MNTX	**Cornudas Mount**	**24.51**	**324**	P	**P**	**19 58 31.6**	**+0.8**
	baz=137,SNR=7.8						
V58A	**Windy Hill, Pi**	**24.66**	**19**	P	**P**	**19 58 32.3**	**+0.3**
	baz=202						
MGMO	**Mountain Grove**	**24.70**	**353**	P	**P**	**19 58 31.3**	**-1.1**
MGMO				IAmb	IAmb	19 58 50.0	
	comp=Z,15nm,1.2s						
MSTX	**Muleshoe**	**24.91**	**331**	P	**P**	**19 58 33.5**	**-1.0**
MSTX	**Muleshoe**	**24.91**	**331**	P	**P**	**19 58 34.8**	**+0.3**
	baz=145,SNR=12						
U57A	**Blanch**	**25.18**	**18**	P	**P**	**19 58 37.1**	**+0.4**
	baz=201						
AMTX	**Amarillo**	**25.18**	**334**	P	**P**	**19 58 36.0**	**-0.8**
AMTX	**Amarillo**	**25.18**	**334**	P	**P**	**19 58 37.7**	**+0.8**
	baz=149						
CCM	**Cathedral Cave**	**25.49**	**355**	P	**P**	**19 58 38.0**	**-1.5**
CCM				IAmb	IAmb	19 58 41.8	
	comp=Z,28nm,1.5s						
CCM	**Cathedral Cave**	**25.49**	**355**	P	**P**	**19 58 39.0**	**-0.5**
	baz=174						
GRGR	**Grenville**	**26.32**	**88**	P	**P**	**19 58 44.1**	**-3.2**
121A	**Cookes Peak, D**	**26.53**	**322**	P	**P**	**19 58 49.9**	**+0.7**
121A	**Cookes Peak, D**	**26.53**	**322**	P	**P**	**19 58 52.0**	**+2.8**
	baz=134						
NNA	**Nana**	**27.05**	**154**	LR	LR	20 08 31.2	
	comp=Z,35nm,18.1s,baz=343,slow=34						
Q54A	**Coxs Mills**	**27.19**	**13**	P	**P**	**19 58 55.2**	**+0.3**
	baz=196						
ANMO	**Albuquerque**	**27.54**	**327**	P	**P**	**19 58 59.8**	**+1.5**
	comp=Z,1.1nm,0.6s,baz=126,slow=12,SNR=5.1						
ANMO				LR	LR	20 10 46.5	
	comp=Z,37nm,18.3s,baz=115,slow=38						
ANMO	**Albuquerque**	**27.54**	**327**	P	**P**	**19 58 59.2**	**+1.0**
ANMO	**Albuquerque**	**27.54**	**327**	P	**P**	**19 59 01.4**	**+3.2**
	baz=140						
O50A	**Cable**	**27.82**	**8**	P	**P**	**19 59 00.5**	**+0.1**
	baz=190						
T25A	**Trinidad**	**28.27**	**333**	P	**P**	**19 59 05.3**	**+0.4**
T25A				IAmb	IAmb	19 59 09.4	
	comp=Z,9.8nm,0.8s						
T25A	**Trinidad**	**28.27**	**333**	P	**P**	**19 59 06.3**	**+1.5**
	baz=146,SNR=10						
SDCO	**Great Sand Dun**	**29.27**	**332**	P	**P**	**19 59 13.2**	**-0.6**
SDCO	**Great Sand Dun**	**29.27**	**332**	P	**P**	**19 59 15.2**	**+1.5**
	baz=144,SNR=5.8						
PSUB	**Penn St. - Bra**	**29.61**	**21**	P	**P**	**19 59 15.2**	**-1.2**
S22A	**4UR Ranch, Cre**	**29.89**	**330**	P	**P**	**19 59 19.4**	**0.0**
S22A				IAmb	IAmb	19 59 23.8	
	comp=Z,5.2nm,0.8s						
S22A	**4UR Ranch, Cre**	**29.89**	**330**	P	**P**	**19 59 20.9**	**+1.6**
	baz=142,SNR=7.5						
X16A	**Lo Mia Camp, P**	**30.06**	**320**	P	**P**	**19 59 21.0**	**+0.4**
ISCO	**Idaho Springs**	**31.00**	**334**	P	**P**	**19 59 29.0**	**-0.1**
ISCO	**Idaho Springs**	**31.00**	**334**	P	**P**	**19 59 30.4**	**+1.3**
	baz=146						
SMCO	**Snowmass**	**31.10**	**332**	P	**P**	**19 59 30.9**	**+0.9**
SMCO				IAmb	IAmb	19 59 34.0	
	comp=Z,4.8nm,0.8s						
ECSD	**EROS Data Cent**	**31.81**	**349**	IAmb	IAmb	19 59 37.2	
	comp=Z,7.8nm,1.2s						
ECSD	**EROS Data Cent**	**31.81**	**349**	P	**P**	**19 59 34.2**	**-1.6**
	baz=165						
N23A	**Red Feather La**	**32.05**	**335**	P	**P**	**19 59 38.3**	**0.0**
N23A				IAmb	IAmb	19 59 42.3	
	comp=Z,5.7nm,0.8s						
N23A	**Red Feather La**	**32.05**	**335**	P	**P**	**19 59 40.4**	**+2.1**
	baz=147						
IKP	**In-Ko-Pah, Jac**	**32.15**	**313**	P	**P**	**19 59 42.6**	**+3.6**
	baz=122						
BC3	**Big Chuckawall**	**32.24**	**315**	P	**P**	**19 59 42.4**	**+2.6**
	baz=124						
O20A	**White River Ci**	**32.45**	**331**	P	**P**	**19 59 44.0**	**+2.2**
	baz=142						
MONP2	**Monument Peak**	**32.50**	**313**	P	**P**	**19 59 45.2**	**+3.0**
	baz=122						
SPMN	**Marine on St.**	**32.74**	**354**	P	**P**	**19 59 42.9**	**-1.0**
	baz=172						
SRU	**San Rafael Swe**	**32.80**	**328**	P	**P**	**19 59 46.1**	**+1.4**
SAML	**Samuel**	**33.09**	**129**	P	**P**	**19 59 46.2**	**-1.1**
SAML				IAmb	IAmb	19 59 55.0	
	comp=Z,4.7nm,0.9s						
E43A	**Lone Tree Farm**	**33.72**	**2**	P	**P**	**19 59 49.8**	**-2.6**
E43A				IAmb	IAmb	19 59 58.5	
	comp=Z,8.1nm,1.0s						
K22A	**Casper**	**33.76**	**336**	P	**P**	**19 59 53.6**	**+0.6**
RSSD	**Black Hills**	**34.12**	**340**	P	**P**	**19 59 56.0**	**-0.2**
RSSD				IAmb	IAmb	20 00 01.4	
	comp=Z,6.8nm,0.9s						
TCUT	**Toone Canyon**	**34.75**	**329**	P	**P**	**20 00 02.5**	**+0.8**
LPAZ	**La Paz**	**35.10**	**144**	P	**P**	**20 00 09.1**	**+3.8**
	comp=Z,0.7nm,0.6s,baz=321,slow=14,SNR=3.1						
LPAZ	**La Paz**	**35.10**	**144**	P	**P**	**20 00 05.0**	**-0.4**
PD31	**Pinedale Array**	**35.14**	**333**	P	**P**	**20 00 05.4**	**+0.3**
PDAR	**Pinedale Array**	**35.14**	**333**	P	**P**	**20 00 05.3**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=134,slow=9.9,SNR=12						
PDAR				PcP	**PcP**	**20 02 35.8**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=154,slow=5.0,SNR=2.3						
PDAR	**Pinedale Array**	**35.14**	**333**	P	**P**	**20 00 04.4**	**-0.7**
HWUT	**Hardware Ranch**	**35.19**	**329**	IAmb	IAmb	20 00 09.6	
	comp=Z,3.3nm,0.6s						
EYMN	**Ely**	**35.35**	**357**	P	**P**	**20 00 05.0**	**-1.5**
	baz=175						
BGU	**Big Grassy Mou**	**35.44**	**327**	P	**P**	**20 00 07.8**	**+0.2**
AHID	**Auburn Hatcher**	**35.85**	**331**	P	**P**	**20 00 11.5**	**+0.3**
AHID				IAmb	IAmb	20 00 15.3	
	comp=Z,5.7nm,0.8s						
AGMN	**Agassiz Nation**	**36.13**	**352**	P	**P**	**20 00 11.6**	**-1.6**
AGMN	**Agassiz Nation**	**36.13**	**352**	P	**P**	**20 00 12.0**	**-1.1**
	baz=168,SNR=8.1						
REDW	**Red Top Meadow**	**36.20**	**332**	P	**P**	**20 00 13.4**	**-0.7**
MDND	**Maddock**	**36.35**	**347**	P	**P**	**20 00 14.2**	**-0.9**
MOOW	**Moose Ponds**	**36.45**	**333**	P	**P**	**20 00 15.1**	**-1.1**
ELK	**Elko**	**36.52**	**325**	P	**P**	**20 00 18.2**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=132,slow=3.9,SNR=6.5						
NVAR	**Mina Array Bea**	**36.88**	**320**	P	**P**	**20 00 22.1**	**+2.2**
	comp=Z,1.6nm,0.7s,baz=126,slow=7.1,SNR=14						
NVAR				PcP	**PcP**	**20 02 42.6**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=136,slow=5.1,SNR=3.8						
NVAR				ScP	**ScP**	**20 06 31.0**	**+6.3**
	comp=Z,0.1nm,0.7s,baz=115,slow=4.1,SNR=2.3						
NVAR	**Mina Array Bea**	**36.88**	**320**	P	**P**	**20 00 20.0**	**0.0**
RLMT	**Red Lodge**	**36.92**	**335**	P	**P**	**20 00 19.9**	**-0.3**
RLMT				IAmb	IAmb	20 00 23.5	
	comp=Z,6.1nm,0.9s						
RLMT	**Red Lodge**	**36.92**	**335**	P	**P**	**20 00 21.5**	**+1.2**
	baz=145,SNR=7.1						
YMP	**Mirror Lake Pl**	**36.98**	**334**	P	**P**	**20 00 19.7**	**-1.2**
KVN	**Kaiserville**	**37.12**	**321**	P	**P**	**20 00 21.7**	**-0.3**
YNE	**Yellowstone No**	**37.13**	**335**	P	**P**	**20 00 21.3**	**-0.8**
YMR	**Madison River**	**37.27**	**333**	P	**P**	**20 00 23.3**	**0.0**
YHL	**Hebgen Lake**	**37.51**	**333**	P	**P**	**20 00 25.0**	**-0.4**
ULM	**Lac du Bonnet**	**38.04**	**352**	P	**P**	**20 00 27.3**	**-2.1**
	comp=Z,4.2nm,0.5s,baz=169,slow=8.9,SNR=17						
ULM				PcP	**PcP**	**20 02 44.4**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=135,slow=5.7,SNR=2.4						
ULM	**Lac du Bonnet**	**38.04**	**352**	P	**P**	**20 00 27.1**	**-2.3**
ULM				IAmb	IAmb	20 00 27.7	
	comp=Z,5.9nm,0.7s						
DGMT	**Dagmar**	**38.07**	**343**	P	**P**	**20 00 28.2**	**-1.5**
DGMT	**Dagmar**	**38.07**	**343**	P	**P**	**20 00 29.8**	**+0.1**
	baz=155						
PNTR	**Pine Nut**	**38.09**	**319**	P	**P**	**20 00 30.8**	**+0.6**
PNTR				IAmb	IAmb	20 00 35.1	
	comp=Z,2.8nm,0.7s						
MATQ	**Matagami**	**38.16**	**12**	P	**P**	**20 00 29.0**	**-1.4**
	baz=197						
MCMT	**McKenzie Canyo**	**38.24**	**332**	P	**P**	**20 00 32.1**	**+0.6**
LMN	**Caledonia Moun**	**38.82**	**27**	P	**P**	**20 00 33.9**	**-2.2**
LMN				IAmb	IAmb	20 00 50.4	
	comp=Z,10nm,1.3s						
EGMT	**Eagleton**	**39.51**	**338**	P	**P**	**20 00 40.6**	**-1.2**
EGMT	**Eagleton**	**39.51**	**338**	P	**P**	**20 00 42.8**	**+1.0**
	baz=146,SNR=13						
LVC	**Limon Verde**	**39.94**	**151**	P	**P**	**20 00 45.3**	**-0.7**
LVC				IAmb	IAmb	20 00 59.0	
	comp=Z,7.0nm,1.2s						
F10A	**Beach Ranch, E**	**41.18**	**330**	P	**P**	**20 00 55.5**	**-0.2**
FFC	**Flin Flon**	**43.35**	**349**	P	**P**	**20 01 12.0**	**-1.1**
DRLN	**Deer Lake**	**44.67**	**29**	P	**P**	**20 01 21.6**	**-2.2**
DRLN				IAmb	IAmb	20 01 27.5	
	comp=Z,11nm,1.1s						
SCHQ	**Schefferville**	**45.49**	**18**	P	**P**	**20 01 28.2**	**-2.0**
	comp=Z,2.5nm,0.7s,baz=238,slow=7.5,SNR=5.5						
SCHQ	**Schefferville**	**45.49**	**18**	P	**P**	**20 01 28.0**	**-2.2**
FCC	**Fort Churchill**	**46.28**	**356**	P	**P**	**20 01 34.7**	**-1.6**
FCC				IAmb	IAmb	20 01 35.3	
	comp=Z,3.6nm,0.7s						
BDFB	**Brasilia**	**48.97**	**124**	P	**P**	**20 01 59.2**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=297,slow=9.0,SNR=2.9						
BDFB				LR	LR	20 26 17.9	
	comp=Z,63nm,18.7s,baz=141,slow=41						
BDFB	**Brasilia**	**48.97**	**124**	P	**P**	**20 01 57.5**	**-0.5**
BDFB				IAmb	IAmb	20 02 05.7	
	comp=Z,3.1nm,0.8s						
CPUP	**Villa Florida**	**49.19**	**142**	P	**P**	**20 02 02.3**	**+3.0**
	comp=Z,1.0nm,0.4s,baz=294,slow=16,SNR=3.7						
CPUP	**Villa Florida**	**49.19**	**142**	P	**P**	**20 01 59.9**	**+0.5**
CPUP				IAmb	IAmb	20 02 06.7	
	comp=Z,3.0nm,1.0s						
GO05	**Huala**	**49.89**	**162**	P	**P**	**20 02 05.2**	**+0.7**
FRB	**Frobisher Bay**	**53.02**	**11**	P	**P**	**20 02 25.0**	**-2.5**
	comp=Z,2.3nm,0.5s,baz=215,slow=10,SNR=16						
YKA	**Yellowknife Ar**	**53.20**	**345**	P	**P**	**20 02 27.4**	**-1.5**
	comp=Z,1.6nm,0.7s,baz=141,slow=7.5,SNR=24						
YKA				PcP	**PcP**	**20 03 35.4**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=150,slow=3.7,SNR=2.8						
YKA				ScP	**ScP**	**20 07 33.1**	**+2.3**
	comp=Z,0.1nm,0.5s,baz=134,slow=5.0,SNR=3.7						
PLCA	**Paso Flores**	**55.61**	**163**	P	P	20 02 52.5	+5.7
	comp=Z,1.4nm,0.9s,baz=320,slow=7.9,SNR=2.5						
PLCA	**Paso Flores**	**55.61**	**163**	P	**P**	**20 02 48.0**	**+1.2**
PLCA				IAmb	IAmb	20 03 07.0	
	comp=Z,6.4nm,1.3s						
RES	**Resolute Bay**	**62.20**	**358**	P	**P**	**20 03 30.1**	**-1.9**
	comp=Z,1.3nm,0.5s,baz=186,slow=8.6,SNR=11						
RES	**Resolute Bay**	**62.20**	**358**	P	**P**	**20 03 30.0**	**-1.9**
RES				IAmb	IAmb	20 03 31.3	
	comp=Z,1.7nm,0.7s						
ILAR	**Eielson Array**	**65.46**	**336**	P	**P**	**20 03 53.1**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=151,slow=4.7,SNR=15						
ILAR	**Eielson Array**	**65.46**	**336**	P	**P**	**20 03 53.3**	**-0.3**
BMAR	**Burnt Mountain**	**65.77**	**339**	P	**P**	**20 03 55.8**	**+0.2**
MLY	**Manley**	**67.08**	**336**	P	**P**	**20 04 05.2**	**+1.2**
MLY				IAmb	IAmb	20 04 21.8	
	comp=Z,7.5nm,1.4s						
PPT	**Papeete**	**67.23**	**245**	LR	LR	20 25 43.2	
	comp=Z,78nm,18.0s,baz=281,slow=29						
IMAR	**Indian Mountai**	**68.58**	**336**	P	**P**	**20 04 14.7**	**+1.3**
TORD	**Torodi Ar. Bea**	**87.48**	**77**	P	**P**	**20 05 57.7**	**-1.4**
	comp=Z,0.2nm,0.6s,baz=286,slow=4.5,SNR=2.5						
MKAR	**Makanchi Array**	**120.34**	**7**	PKP	**PKPdf**	**20 12 00.9**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=301,slow=3.2,SNR=4.9						
MKAR	**Makanchi Array**	**120.34**	**7**		**PKPdf**	**20 12 00.4**	**-1.7**
LZH	**Lanzhou**	**130.20**	**347**	*e*PKP	**PKPdf**	**20 12 20.0**	**-1.5**
LZH				pPKP	sPKPdf	20 12 36.9	-2.6
LZH				sPKP		20 12 43.6	
LZH				LR	LR		
	comp=N,56nm,18.0s						
LZH				LR	LR		
	comp=E,61nm,18.1s						
LZH				LR	LR		
	comp=Z,85nm,20.2s						
WRA	**Warramunga Arr**	**138.22**	**254**	PKhKP	**PKPdf**	**20 12 36.7**	**+0.1**
	comp=Z,0.7nm,0.9s,baz=92,slow=2.2,SNR=4.5						
WRA				PKP	**PKiKP**	**20 12 41.6**	**+2.9**
	comp=Z,0.6nm,0.5s,baz=91,slow=2.1,SNR=8.2						
ASAR	**Alice Springs**	**138.27**	**249**	PKhKP	**PKPdf**	**20 12 33.3**	**-3.4**
	comp=Z,0.2nm,0.6s,baz=104,slow=3.9,SNR=3.4						
ASAR				PKP	**PKiKP**	**20 12 42.1**	**+3.3**
	comp=Z,0.4nm,0.6s,baz=95,slow=2.2,SNR=5.0						
ASAR	**Alice Springs**	**138.27**	**249**		**PKiKP**	**20 12 38.0**	**-0.8**
CMAR	**Chiang Mai Arr**	**148.28**	**346**	PKPbc	**PKPbc**	**20 12 57.2**	**-0.5**
	comp=Z,3.1nm,1.1s,baz=338,slow=2.8,SNR=8.9						
CMAR	**Chiang Mai Arr**	**148.28**	**346**		**PKPbc**	**20 12 57.5**	**-0.3**

*TEH **18** 19:59:34.2,29°.31N×51°.40E,h5km,ML3.5*
*THR **18** 19:59:34.6±0.3,29°.28N×51°.43E,h9km±13km,ML3.6*
*IDC **18** 19:59:39.4±2.3,29°.23N×51°.42E,h44km±26km,mb3.4/17, mb1 3.6/21,mb1mx3.5/44,mbtmp3.7/21,ML3.0/4,MS2.9/1, Ms1 2.9/1,ms1mx2.1/32,Error ellipse: s-maj=18.6km s-min=15.0km az=171.0*
*OMAN **18** 19:59:40.9±0.7,29°.26N×51°.61E,h33km±12km,ml3.5/2, Error ellipse: s-maj=10.6km s-min=4.8km az=17.0*

ISC 18 19:59:35.1±0.6,29°.32N±0°.04×51°.37E±0°.05,h10km,n68, σ18°93/76,mb3.6/18,4C-3D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**0.61**	**42**	*e*Pg		**Pg**		**19 59 46.5**	**-0.6**
IKAZ				*e*				20 00 01.9	
SHI	**Shiraz**	**1.05**	**72**	*e*Pg		**Pn**		**19 59 55.2**	**-0.9**
SHI				*e*Sg		**Sn**		**20 00 11.9**	**+1.1**
KLNJ	**Kolanjah**	**1.69**	**6**	*e*Pn		**Pg**		**20 00 06.8**	**-0.9**
JHRM	**Jahrom**	**2.10**	**112**	*e*Pn		**Pb**		**20 00 12.6**	**-0.8**
JHRM				*e*				20 00 57.6	
IBRJ	**Brojen**	**2.58**	**358**	*e*Pn		**Pb**		**20 00 20.3**	**-1.4**
IRAM	**Ramesheh**	**2.63**	**19**	*e*Pn		**Pb**		**20 00 19.9**	**-2.6**
JHBN	**Jahan bin**	**2.96**	**348**	*e*Pn		**Pn**		**20 00 24.6**	**+2.1**
ROKH	**ROKH**	**3.03**	**355**	*e*Pn		**Pb**		**20 00 25.8**	**-3.5**
ISAD	**Sadrabad**	**3.27**	**37**	*e*Pn		**Pb**		**20 00 29.6**	**-3.8**
IPIR	**Pirpir**	**3.38**	**353**	*e*Pn		**Pn**		**20 00 30.1**	**+1.9**
IMEH	**Mehriz**	**3.48**	**53**	*e*Pn		**Pb**		**20 00 33.0**	**-4.0**
SHGR	**Shooshtar-Gavs**	**3.55**	**322**	IAML				20 01 16.3	
	comp=E,128nm,0.5s								
SHGR				IAML				20 01 16.6	
	comp=N,149nm,0.4s								
IZEF	**Zefreh**	**3.66**	**13**	*e*Pn		**Pn**		**20 00 34.1**	**+2.1**
ICHK	**Chekchek**	**3.92**	**41**	*e*Pn		**Pn**		**20 00 38.2**	**+2.7**
IKLH	**Kolahrood**	**3.99**	**3**	*e*Pn		**Pn**		**20 00 38.6**	**+2.0**
YZKH	**Yazd**	**4.13**	**41**	*e*Pn		**Pn**		**20 00 40.1**	**+1.8**
YZKH	**Yazd**	**4.13**	**41**	*e*Pn		**Pn**		**20 00 40.1**	**+1.8**
YZKH				*e*S		**Sn**		**20 01 27.9**	**+1.2**
YZKH				IAML				20 01 37.2	
	comp=N,16nm,0.4s								
IBAF	**Bafgh**	**4.27**	**57**	*e*Pn		**Pn**		**20 00 43.2**	**+2.8**
ANAR	**Anarak**	**4.36**	**27**	*e*Pn		**Pn**		**20 00 44.0**	**+2.5**
KHGB	**Koh Gabri**	**4.56**	**75**	*e*Pn		**Pn**		**20 00 46.7**	**+2.3**
KHMZ	**Khomeyn**	**4.57**	**345**	*e*Pn		**Pn**		**20 00 47.0**	**+2.5**
KHMZ	**Khomeyn**	**4.57**	**345**	*e*Pn		**Pn**		**20 00 47.0**	**+2.5**
GENO	**Geno**	**4.64**	**113**	*e*		**Sb**		**20 01 56.8**	**+3.9**
KRBR	**Kerman**	**4.74**	**81**	*e*Pn		**Pn**		**20 00 47.9**	**+1.0**
KRBR	**Kerman**	**4.74**	**81**	*e*Pn		**Pn**		**20 00 47.9**	**+1.0**
NIAN	**Nian**	**5.12**	**109**	*e*Pn		**Pn**		**20 00 52.5**	**+0.6**
NIAN				*e*				20 01 55.6	
CHMN	**Cheshme madani**	**5.40**	**83**	*e*Pn		**Pn**		**20 00 58.5**	**+2.4**
BANOM	**Banah**	**5.53**	**127**	P		**Pn**		**20 00 58.2**	**+0.6**
BANOM				S		**Sn**		**20 02 00.3**	**-1.0**
NAZ	**Nazwa, Dubai**	**5.76**	**137**	P		**Pn**		**20 01 01.4**	**+0.7**
NAZ				S		**Sn**		**20 02 06.0**	**-1.0**
ASUD	**Al Ashush, Dub**	**5.86**	**142**	P		**Pn**		**20 01 03.6**	**+1.5**
	SNR=9.4								
ASUD				S		**Sn**		**20 02 09.6**	**+0.3**
TPRV	**Parvadeh(Tabas**	**5.87**	**50**	*e*Pn		**Pn**		**20 01 04.1**	**+1.9**
MDH	**Madha**	**5.94**	**131**	P		**Pn**		**20 01 02.6**	**-0.6**
MDH				S		**Sn**		**20 02 08.3**	**-3.0**
ASHO	**Ashiyiah**	**6.23**	**137**	P		**Pn**		**20 01 07.5**	**+0.3**
	SNR=11								
ASHO				S		**Sn**		**20 02 16.6**	**-1.9**
TKDS	**Koohdasht(Taba**	**6.52**	**47**	*e*Pn		**Pn**		**20 01 13.3**	**+2.1**
SNGE	**Sanandaj**	**6.69**	**330**	*e*Pn		**Pn**		**20 01 16.3**	**+2.7**
SNGE	**Sanandaj**	**6.69**	**330**	*e*Pn		**Pn**		**20 01 16.3**	**+2.7**
SOHO	**SOHO**	**6.93**	**137**	P		**Pn**		**20 01 16.6**	**-0.1**
SOHO				S		**Sn**		**20 02 34.4**	**-1.2**
ITEG	**Tejag**	**7.26**	**59**	*e*Pn		**Pn**		**20 01 23.6**	**+2.1**
WSAR	**Wadi Sarin**	**8.89**	**131**	P		**Pn**		**20 01 43.5**	**-0.2**
	comp=N,0.5nm,0.3s,baz=314,slow=7.3,SNR=11								
WSAR				S		**Sn**		**20 03 21.2**	**-2.8**
	comp=N,0.4nm,0.3s,baz=46,slow=20,SNR=4.5								
GEYT	**Alibeck**	**10.26**	**31**	P		**Pn**		**20 02 04.8**	**+2.3**
	comp=N,0.1nm,0.3s,baz=215,slow=17,SNR=2.8								
KBZ	**Khabaz**	**15.90**	**337**	P		**P**		**20 03 20.9**	**-1.7**
	comp=N,0.0nm,0.3s,baz=147,slow=8.4,SNR=3.1								
BRTR	**Keskin Array B**	**17.89**	**310**	P		**P**		**20 03 46.8**	**+2.0**
	comp=N,0.1nm,0.3s,baz=114,slow=9.8,SNR=3.4								
AKTO	**Aktyubinsk**	**21.68**	**12**	P		**P**		**20 04 27.1**	**+1.2**
	comp=N,1.3nm,0.5s,baz=194,slow=10,SNR=4.7								
AAK	**Ala-Archa**	**22.86**	**48**	P		**P**		**20 04 40.5**	**+1.7**
	comp=N,0.2nm,0.3s,baz=240,slow=19,SNR=3.0								
AAK				LR		LR		20 15 37.2	
	comp=N,29nm,18.3s,baz=339,slow=42								
IDI	**Anoyia**	**23.12**	**292**	P		**P**		**20 04 42.7**	**+1.2**
	comp=N,4.2nm,0.7s,baz=88,slow=22,SNR=3.4								
VRI	**Vrincioaia**	**25.42**	**317**	⇓P		**P**		**20 05 02.7**	**-0.2**
PLOR	**Plostina**	**25.46**	**317**	⇓P		**P**		**20 05 04.1**	**+0.9**
MLR	**Muntele Rosu**	**25.70**	**316**	P		**P**		**20 05 07.6**	**+2.1**
	comp=N,1.9nm,0.6s,baz=175,slow=7.6,SNR=6.2								
MLR	**Muntele Rosu**	**25.70**	**316**	⇓P		**P**		**20 05 08.0**	**+2.5**
TESR	**Tescani**	**25.82**	**318**	⇑P		**P**		**20 05 05.9**	**-0.6**
VOIR		**26.22**	**315**	⇑P		**P**		**20 05 13.4**	**+3.2**
DOPR	**Dopca**	**26.28**	**316**	⇑P		**P**		**20 05 11.8**	**+1.2**
AKASG	**Malin Array Be**	**27.08**	**328**	P		**P**		**20 05 16.7**	**-1.1**
	comp=N,0.2nm,0.3s,baz=133,slow=7.1,SNR=3.7								
BURAR	**Bucovina Array**	**27.24**	**319**	⇑P		**P**		**20 05 24.2**	**+4.8**
BVAR	**Borovoye Array**	**27.50**	**25**	P		**P**		**20 05 22.4**	**+0.8**
	comp=N,0.9nm,0.7s,baz=217,slow=32,SNR=3.3								
KURBB	**Kurchatov Arra**	**29.48**	**36**	P		**P**		**20 05 40.6**	**+1.4**
	comp=N,0.3nm,0.6s,baz=235,slow=8.9,SNR=2.4								
MKAR	**Makanchi Array**	**29.69**	**45**	P		**P**		**20 05 41.8**	**+0.6**
	comp=N,0.5nm,0.8s,baz=251,slow=7.6,SNR=5.1								
ZALV	**Zalesovo Beam**	**34.55**	**35**	P		**P**		**20 06 23.5**	**-0.1**
	comp=N,0.6nm,0.5s,baz=248,slow=7.8,SNR=3.6								
GERES	**GERESS Array B**	**34.67**	**315**	P		**P**		**20 06 26.7**	**+1.7**
	comp=N,0.4nm,0.7s,baz=100,slow=5.1,SNR=3.1								
FINES	**FINESS Array B**	**36.23**	**340**	P		**P**		**20 06 37.2**	**-0.8**
	comp=N,1.1nm,0.6s,baz=148,slow=11,SNR=5.4								
**NB2

SDV	Santo Domingo	20.02	99	P	P	20 15 17.6	-0.6	
TXAR	Lajitas Array	20.50	326	P	Pn	20 15 25.5	+0.1	
	comp=Z,2.1nm,0.8s,baz=151,slow=13,SNR=26							
TXAR	Lajitas Array	20.50	326	P	Pn	20 15 24.3	-1.1	
TX31	Lajitas Ar. Si	20.50	326	P	Pn	20 15 25.3	0.0	
TX32	Lajitas Array	20.50	326	P	Pn	20 15 24.6	-0.7	
ABTX	Abilene, Hawle	21.47	339	P	P	20 15 33.9	+0.5	
ABTX				IAmb	IAmb	20 15 36.0		
	comp=Z,9.2nm,1.1s							
X37A	Clayton	22.21	350	P	P	20 15 41.6	+0.3	
SWET	Sewanee	22.82	10	P	P	20 15 47.8	-0.1	
SWET				IAmb	IAmb	20 15 57.2		
	comp=Z,7.5nm,0.7s							
MNTX	Cornudas Mount	23.26	327	P	P	20 15 53.1	+0.7	
MNTX				IAmb	IAmb	20 15 56.1		
	comp=Z,6.4nm,1.1s							
TKL	Tuckaleechee C	23.69	14	P	P	20 15 57.6	+1.1	
	comp=Z,30nm,1.3s,baz=191,slow=12,SNR=3.7							
TKL	Tuckaleechee C	23.69	14	P	P	20 15 56.6	+0.1	
AMTX	Amarillo	24.24	337	P	P	20 16 02.1	+0.3	
AMTX				IAmb	IAmb	20 16 02.2		
	comp=Z,6.5nm,1.0s							
T47A	Sharon Grove	24.39	7	P	P	20 16 02.5	-0.5	
121A	Cookes Peak, D	25.22	324	P	P	20 16 11.5	+0.6	
121A				IAmb	IAmb	20 16 16.8		
	comp=Z,4.5nm,0.8s							
NV11	Mina Array Sit	35.41	321	P	P	20 17 42.3	+1.4	
NV11				IAmb	IAmb	20 17 44.5		
	comp=Z,3.4nm,0.9s							
NVAR	Mina Array Bea	35.50	321	P	P	20 17 44.0	+2.2	
	comp=Z,3.8nm,0.9s,baz=139,slow=8.8,SNR=25							
NVAR	Mina Array Bea	35.50	321	P	P	20 17 42.8	+1.1	
KVN	Kaiserville	35.77	322	P	P	20 17 44.6	+0.6	
KVN				IAmb	IAmb	20 17 48.1		
	comp=Z,3.5nm,1.0s							
ULM	Lac du Bonnet	37.69	355	P	P	20 17 58.7	-1.2	
	comp=Z,1.3nm,0.6s,baz=170,slow=8.1,SNR=4.6							
ULM	Lac du Bonnet	37.69	355	P	P	20 18 00.4	+0.5	
ULM				IAmb	IAmb	20 18 08.3		
	comp=Z,3.3nm,0.8s							
SIV	San Ignacio	40.85	133	P	P	20 18 26.5	-0.3	
	comp=Z,3.7nm,0.9s,baz=321,slow=7.2,SNR=12							
SCHQ	Schefferville	46.00	19	P	P	20 19 06.4	-1.5	
	comp=Z,2.0nm,0.7s,baz=230,slow=7.1,SNR=4.2							
YKA	Yellowknife Ar	52.59	346	P	P	20 19 57.6	-0.5	
	comp=Z,0.4nm,0.7s,baz=151,slow=7.3,SNR=6.4							
YKA				PcP	PcP	20 21 08.5	+0.5	
	comp=Z,0.4nm,0.8s,baz=158,slow=3.6,SNR=5.2							
ILAR	Eielson Array	64.54	337	P	P	20 21 22.8	+1.4	
	comp=Z,1.1nm,1.0s,baz=164,slow=4.7,SNR=8.3							
ILAR	Eielson Array	64.54	337	P	P	20 21 21.6	+0.2	
WRA	Warramunga Arr	136.33	254	PKP	PKPdf	20 30 06.9	-0.2	
	comp=Z,0.6nm,0.8s,baz=90,slow=2.0,SNR=4.2							
CMAR	Chiang Mai Arr	147.62	343	PKPbc	PKPbc	20 30 29.6	-0.3	
	comp=Z,0.9nm,0.8s,baz=350,slow=3.7,SNR=4.9							
CMAR	Chiang Mai Arr	147.62	343		PKPbc	20 30 29.9	0.0	

NIED ***18*** *20:11:00,37.20N×141.50E,h53km,Mw3.8 Best double couple: M0 5.24000×10^14 NP1:φ=98.00000°, δ=52.00000°, λ=102.00000° NP2:φ=259.00000°, δ=40.00000°, λ=75.00000°.*
JMA ***18*** *20:11:15.2±0.1,37.15N×141.41E,h47km±1km,M3.7*
JMA Felt I J1.
IDC ***18*** *20:11:15.9±0.9,37.24N×141.58E,h44km±8km, mb3.4/8, mb1 3.5/10,mb1mx3.3/35,mbtmp3.6/10,ML3.1/2,Error ellipse: s-maj=14.4km s-min=11.8km az=146.0*

ISC 18 20:11:15.3±0.9, 37.16N±0.05×141.52E±0.07, h41km±8km, n29, σ1=41/37, mb3.6/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.56	292	P	Pn	20 11 25.9	-1.0
JFK				S	Sn	20 11 33.2	-1.9
ONAJ	Iwakimizuishiy	0.58	265	P	Pn	20 11 26.2	-1.0
ONAJ				S	Sn	20 11 33.7	-1.9
JMST	Minamisoumatoc	0.76	319	P	Pn	20 11 28.7	-0.8
JMST				S	Sn	20 11 38.4	-1.4
JFFD	Fukushimafurud	0.77	265	P	Pn	20 11 28.6	-1.1
JFFD				S	Sn	20 11 38.1	-2.0
JMM	Marumori	0.91	321	P	Pn	20 11 31.0	-0.7
JMM				S	Sn	20 11 42.5	-1.1
JHO	Hitachi	0.94	235	P	Pn	20 11 30.5	-1.5
JHO				S	Sn	20 11 41.4	-2.8
JFT	Otama	1.01	291	P	Pn	20 11 32.8	-0.2
JFT				S	Sn	20 11 45.2	-0.8
JIO	Ouri	1.30	354	P	Pn	20 11 36.8	-0.2
JOU	Okura	1.38	331	P	Pn	20 11 38.4	+0.3
JFY	Yanaizu	1.47	280	P	Pn	20 11 39.0	-0.3
JYS	Shirataka	1.57	313	P	Pn	20 11 41.2	+0.6
JYS				S	Sn	20 12 00.3	+0.6
MJAR	Matsushiro Arr	2.73	258	P	Pn	20 11 56.7	+0.1
	0.7nm,0.3s,baz=88,slow=27,SNR=35						
MJAR				S	Sn	20 12 31.1	+2.9
	1.8nm,0.3s,baz=6.3,slow=12,SNR=7.9						
MAT	Matsushiro	2.73	258	P	Pn	20 11 57.3	+0.7
MAT				S	Sn	20 12 27.3	-1.0
ASAJ	Asahikawa	7.00	6	P	Pn	20 12 54.4	-0.8
	0.7nm,0.3s,baz=210,slow=9.3,SNR=9.7						
ASAJ				S	Sn	20 14 10.3	-3.1
	0.3nm,0.3s,baz=116,slow=22,SNR=1.5						
SONM	Songino Array	27.79	304	P	P	20 17 00.1	-0.2
	0.8nm,0.6s,baz=96,slow=8.4,SNR=6.2						
H11N2	WAKE ISLAND Hy	28.14	121	T	T	20 46 43.0	
	baz=314,slow=75,SNR=32						
H11N1	WAKE ISLAND Hy	28.15	121	T	T	20 46 39.1	
	baz=314,slow=75,SNR=59						
H11N3	WAKE ISLAND Hy	28.16	121	T	T	20 46 43.1	
	baz=314,slow=75,SNR=39						
H11S1	WAKE ISLAND Hy	28.86	123	T	T	20 47 35.4	
	baz=319						
H11S3	WAKE ISLAND Hy	28.86	123	T	T	20 47 36.4	
	baz=318,slow=74						
H11S2	WAKE ISLAND Hy	28.87	123	T	T	20 47 36.4	
	baz=318,slow=74						
ZALV	Zalesovo Beam	41.89	312	P	P	20 19 01.6	+0.2
	0.5nm,0.4s,baz=92,slow=3.6,SNR=4.0						
MKAR	Makanchi Array	44.12	302	P	P	20 19 19.5	0.0
	0.4nm,0.6s,baz=97,slow=8.3,SNR=4.8						
KURBB	Kurchatov Arra	45.99	308	P	P	20 19 32.6	-1.7
	1.5nm,0.6s,baz=85,slow=7.9,SNR=13						
KURBB				pP	pP	20 19 48.6	+2.7
	1.3nm,0.7s,baz=81,slow=8.1,SNR=5.5						
ILAR	Eielson Array	49.34	32	P	P	20 20 01.0	+0.9
	0.4nm,1.0s,baz=282,slow=6.4,SNR=4.5						
WRA	Warramunga Arr	57.20	188	P	P	20 20 57.7	-0.4
	0.2nm,0.4s,baz=2.8,slow=7.4,SNR=3.3						
WRA				pP	pP	20 21 10.5	+0.4
	0.7nm,0.6s,baz=3.0,slow=7.1,SNR=3.4						
ASAR	Alice Springs	60.92	188	P	P	20 21 25.6	+1.6
	0.2nm,0.8s,baz=7.0,slow=8.4,SNR=3.2						
ASAR				pP	pP	20 21 36.9	+0.9
	0.2nm,0.5s,baz=358,slow=5.4,SNR=2.0						
AKASG	Malin Array Be	74.25	322	P	P	20 22 47.3	-0.5
	0.3nm,0.4s,baz=44,slow=6.3,SNR=3.9						
LPAZ	La Paz	146.56	60	PKPbc	PKPab	20 30 54.3	-0.2
	0.9nm,0.7s,baz=31,slow=5.9,SNR=3.2						

IDC ***18*** *20:51:14.0±0.7,13.91N×92.91E,h0km,mb3.8/14, mb1 3.9/15,mb1mx3.7/49,mbtmp3.8/15,ML3.6/1,MS2.8/3, Ms1 2.8/3,ms1mx2.5/32,Error ellipse: s-maj=26.6km s-min=16.5km az=60.0*

ISC 18 20:51:19.1±0.8, 14.1N±0.1×92.99E±0.10, h32km, n27, σ1=13/23, mb3.8/14, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	7.20	52	Pn	Pn	20 53 03.9	+1.6
	0.3nm,0.3s,baz=243,slow=15,SNR=7.8						
CMAR				Sn	Sn	20 54 20.9	-2.0
	0.3nm,0.3s,baz=240,slow=17,SNR=3.1						
CMAR				LR	LR	20 56 54.3	
	comp=Z,47nm,18.1s,baz=235,slow=46						
ODAN	Odare	13.78	339	*e*P	Pn	20 54 31.2	-1.2
PALK	Pallekele	13.82	242	Sn	Sn	20 56 52.1	-13
	0.3nm,0.3s,baz=4.8,slow=12,SNR=3.8						
TAPN	Taplejung	14.12	340	*e*P	Pn	20 54 35.0	-2.2
RAMN	Ramite	14.15	336	*e*P	Pn	20 54 36.9	-0.7
JIRN	Jiri	14.95	336	*e*P	Pn	20 54 47.5	-1.0
PKIN	Phulchoki	15.21	333	*e*P	Pn	20 54 50.6	-1.2
DMN	Daman	15.36	333	*e*P	Pn	20 54 53.0	-0.8
DANN	Dangsing	16.61	330	*e*P	Pn	20 55 08.2	-1.7
H08S3	Diego Garcia H	29.63	225	T	T	21 28 17.5	
	baz=46						
H08S2	Diego Garcia H	29.64	225	T	T	21 28 16.5	
	baz=46,slow=74						
H08S1	Diego Carcia H	29.65	225	T	T	21 28 14.9	
	baz=46,slow=74						
WSAR	Wadi Sarin	33.74	291	LR	LR	21 12 18.6	
	comp=Z,20nm,19.1s,baz=58,slow=38						
MKAR	Makanchi Array	33.85	347	P	P	20 57 59.8	+1.2
	1.0nm,0.8s,baz=166,slow=8.7,SNR=9.0						
SONM	Songino Array	35.48	16	P	P	20 58 14.0	+1.2
	0.5nm,0.5s,baz=196,slow=6.3,SNR=4.6						
KURBB	Kurchatov Arra	38.32	345	P	P	20 58 37.7	+1.0
	0.5nm,0.3s,baz=164,slow=7.8,SNR=4.6						
ZALV	Zalesovo Beam	40.32	353	P	P	20 58 54.1	+0.8
	0.9nm,0.5s,baz=172,slow=7.9,SNR=5.7						
ZALV				LR	LR	21 17 07.5	
	comp=Z,10nm,20.0s,baz=222,slow=38						
WRA	Warramunga Arr	52.88	129	P	P	21 00 31.6	-0.6
	0.3nm,0.4s,baz=302,slow=9.9,SNR=4.8						
ASAR	Alice Springs	54.82	133	P	P	21 00 45.9	-0.6
	0.5nm,0.3s,baz=311,slow=7.1,SNR=21						
BRTR	Keskin Array B	57.65	308	P	P	21 01 06.4	-0.2
	0.2nm,0.7s,baz=113,slow=6.7,SNR=3.7						
STKA	Stephens Creek	65.22	135	P	P	21 01 57.2	-0.5
	1.3nm,0.7s,baz=346,slow=8.3,SNR=2.5						
FINES	FINESS Array B	66.77	331	P	P	21 02 07.2	+0.1
	4.1nm,1.1s,baz=115,slow=8.6,SNR=5.3						
ARCES	ARCESS Array B	69.11	340	P	P	21 02 21.7	-0.1
	1.1nm,0.7s,baz=87,slow=8.2,SNR=7.1						
GERES	GERESS Array B	72.52	317	P	P	21 02 43.5	+0.4
	0.2nm,0.4s,baz=82,slow=7.0,SNR=3.5						
BOSA	Boshof	77.97	236	P	P	21 03 14.9	+0.2
	1.8nm,0.7s,baz=49,slow=5.9,SNR=5.3						
TORD	Torodi Ar. Bea	88.10	283	P	P	21 04 07.0	-0.3
	0.5nm,1.0s,baz=54,slow=6.5,SNR=2.4						
ILAR	Eielson Array	89.47	22	P	P	21 04 12.8	0.0
	0.3nm,0.6s,baz=327,slow=2.8,SNR=4.1						

SKHL ***18*** *21:12:49.7±0.6,47.90N×154.90E,h62km±5km,mb4.8/8*
MOS ***18*** *21:12:49.8±1.1,48.11N×154.57E,h57km,mb3.6/1,Error ellipse: s-maj=12.3km s-min=4.3km az=69.9*
KRSC ***18*** *21:12:50.7±1.3,48.07N×156.48E,h17km±20km,ML4.4*
IDC ***18*** *21:12:55.0±2.3,48.30N×154.28E,h74km±20km,mb3.4/16, mb1 3.6/22,mb1mx3.5/34,mbtmp3.7/22,MS3.0/5, Ms1 3.0/5,ms1mx2.7/26,Error ellipse: s-maj=20.2km s-min=12.3km az=136.0*

ISC 18 21:12:49.4±0.7, 48.01N±0.08×154.87E±0.08, h33km, n95, σ2=91/109, mb3.7/17, 2C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.79	17	*e*PN	Pn	21 13 33.6	+1.9
SKR				*e*S	Sn	21 14 07.2	+3.0
SKR				pmax	pmax		
	comp=Z,186nm,0.5s						
SKR				smax	smax		
	comp=N,472nm,0.5s						
SKR				smax	smax		
	comp=E,252nm,0.5s						
SKR	Severo-Kuril's	2.79	17	*e*P	Pn	21 13 33.2	+1.5
SKR				*e*S	Sn	21 14 05.3	+1.1
SKR	Severo-Kuril's	2.79	17	*i*P	Pn	21 13 33.6	+1.9
SKR				AMB	AMB	21 13 36.0	
	comp=E,190nm,0.5s						
SKR				*e*S	Sn	21 14 07.0	+2.8
SKR				A	A	21 14 16.4	
	comp=E,470nm,0.5s						
SKR				A	A	21 14 16.4	
	comp=E,250nm,0.5s						
PAU	Pauzhetka	3.68	19	PN	Pn	21 13 46.0	+2.1
PAU				S	Sn	21 14 27.1	+1.0
PAU	Pauzhetka	3.68	19	*e*P	Pn	21 13 46.0	+2.1
PAU				*e*S	Sn	21 14 27.1	+1.0
PAU	Pauzhetka	3.68	19	*e*P	Pn	21 13 46.0	+2.1
PAU				*e*S	Sn	21 14 27.1	+1.0
KDTR	Khodutka, Kamc	4.33	27	PN	Pn	21 13 53.7	+0.9
KDTR	Khodutka, Kamc	4.33	27	*e*P	Pn	21 13 53.7	+0.9
KDTR				*e*S	Sn	21 14 39.9	-2.1
ASAK	Asacha	4.79	23	PN	Pn	21 14 01.0	+1.8
ASAK				S	Sn	21 14 52.8	-0.7
ASAK	Asacha	4.79	23	*e*P	Pn	21 14 01.0	+1.8
ASAK				*e*S	Sn	21 14 52.8	-0.7
MTVR	Mutnovka	4.96	24	PN	Pn	21 14 03.1	+1.6
MTVR	Mutnovka	4.96	24	*e*P	Pn	21 14 03.1	+1.6
GRL	Gorelyy	4.99	23	PN	Pn	21 14 04.5	+2.6
GRL	Gorelyy	4.99	23	*e*P	Pn	21 14 04.5	+2.6
RUS	Russkaya	5.00	27	PN	Pn	21 14 02.6	+0.5
RUS	Russkaya	5.00	27	*e*P	Pn	21 14 02.6	+0.5
RUS				*e*S	Sn	21 14 55.9	-2.8
RUS	Russkaya	5.00	27	*e*P	Pn	21 14 02.6	+0.5
APC	Apacha	5.13	16	PN	Pn	21 14 07.2	+3.4
APC	Apacha	5.13	16	*e*P	Pn	21 14 07.2	+3.4
KRMR	Karymshinskiy	5.25	22	PN	Pn	21 14 07.9	+2.4
KRMR				S	Sn	21 15 04.8	0.0
KRMR	Karymshinskiy	5.25	22	*e*P	Pn	21 14 07.9	+2.4
KRMR				*e*S	Sn	21 15 04.8	0.0
PETK	Petropavlovsk-	5.41	18	P	Pn	21 14 10.8	+3.2
	comp=E,2.3nm,0.3s,baz=198,slow=16,SNR=33						
PETK				S	Sn	21 15 15.2	+6.5
	comp=E,0.3nm,0.3s,baz=182,slow=17,SNR=2.2						
PETK				LR	LR	21 16 38.1	
	comp=E,91nm,21.2s,baz=243,slow=42						
KUR	Kuril'sk	5.57	243	*c i*PN	Pn	21 14 12.0	+2.2
KUR				S	Sn	21 15 14.5	+2.0
KUR				pmax	pmax		
	comp=Z,66nm,0.3s						
KUR				pmax	pmax		
	comp=N,36nm,0.2s						
KUR				smax	smax		
	comp=N,101nm,0.8s						
KUR				smax	smax		
	comp=E,39nm,0.7s						
KUR	Kuril'sk	5.57	243	*i*P	Pn	21 14 12.0	+2.2
KUR				AMB	AMB	21 14 14.0	
	comp=E,60nm,0.5s						
KUR				*e*S	Sn	21 15 12.0	-0.5
KUR				A	A	21 15 17.9	
	comp=E,150nm,0.7s						
KUR				A	A	21 15 17.9	
	comp=E,130nm,0.7s						
PET	Petropavlovsk	5.57	24	*e*PN	Pn	21 14 13.7	+3.9
PET				*e*S	Sn	21 15 14.0	+1.5
PET				smax	smax		
	comp=E,102nm,0.6s						
PET				smax	smax		
	comp=N,114nm,0.6s						
PET	Petropavlovsk	5.57	24	*e*P	Pn	21 14 12.6	+2.8
PET				*e*S	Sn	21 15 14.3	+1.8
PET				A	A	21 15 33.6	
	comp=N,110nm,0.6s						
PET				A	A	21 15 33.6	
	comp=N,100nm,0.6s						
UGLR	Uglovaya	5.78	24	PN	Pn	21 14 15.3	+2.5
UGLR	Uglovaya	5.78	24	*e*P	Pn	21 14 15.3	+2.5
KOK	Koryaka	5.80	23	PN	Pn	21 14 15.5	+2.4
KOK	Koryaka	5.80	23	*e*P	Pn	21 14 15.5	+2.4
KOK	Koryaka	5.80	23	*e*P	Pn	21 14 15.5	+2.4
AVH	Avacha	5.81	24	PN	Pn	21 14 15.3	+2.2
AVH	Avacha	5.81	24	*e*P	Pn	21 14 15.3	+2.2
AVH				*e*S	Sn	21 15 17.0	-1.6
SMAR	Somma	5.82	24	PN	Pn	21 14 16.2	+2.7
SMAR	Somma	5.82	24	*e*P	Pn	21 14 16.2	+2.7
KRER	Koryakskii	5.84	24	PN	Pn	21 14 15.5	+1.7
KRER	Koryakskii	5.84	24	*e*P	Pn	21 14 15.5	+1.7
SDLR	Sedlovina	5.86	24	PN	Pn	21 14 15.5	+1.6
SDLR	Sedlovina	5.86	24	*e*P	Pn	21 14 15.5	+1.6
KRX	Arik	5.87	23	PN	Pn	21 14 16.0	+2.0
KRX	Arik	5.87	23	*e*P	Pn	21 14 16.0	+2.0
NLC	Nalytchevo	5.90	27	*e*S	Sn	21 15 17.9	-2.8
SPN	Mys Shipunski	6.06	31	PN	Pn	21 14 17.1	+0.6
SPN	Mys Shipunski	6.06	31	*e*P	Pn	21 14 17.1	+0.6
SPN				*e*S	Sn	21 15 21.0	-3.6
SHO	Shikotan	6.97	236	*e*PN	Pn	21 14 27.1	-1.9
SHO				pmax	pmax		
	comp=E,17nm,0.3s						
SHO				pmax	pmax		
	comp=Z,24nm,0.3s						
SHO				pmax	pmax		
	comp=N,7.0nm,0.2s						
SHO	Shikotan	6.97	236	*i*P	Pn	21 14 28.2	-0.8
SHO				AMB	AMB	21 14 29.9	
	comp=N,10.0nm,0.3s						
SHO				AMB	AMB	21 14 29.9	
	comp=N,20nm,0.3s						
SHO				AMB	AMB	21 14 29.9	
	comp=N,20nm,0.3s						
YUK	Yuzh-Kuril'sk	7.42	241	*e*PN	Pn	21 14 35.1	-0.2
YUK	Yuzh-Kuril'sk	7.42	241	*e*P	Pn	21 14 35.1	-0.2
YUK				AMB	AMB	21 14 35.8	
	comp=N,30nm,0.4s						
GRPR	Tuman	7.50	241	*e*PN	Pn	21 14 36.5	+0.2
GRPR				pmax	pmax		
	comp=Z,43nm,0.2s						
GRPR	Tuman	7.50	241	*e*P	Pn	21 14 36.5	+0.2
GRPR				AMB	AMB	21 14 39.6	
	comp=Z,10.0nm,0.5s						
GRPR				AMB	AMB	21 14 39.6	
	comp=Z,40nm,0.5s						
GLVR	Golovnino	7.80	240	PN	Pn	21 14 41.0	+0.6
GLVR				pmax	pmax		
	comp=Z,39nm,0.4s						
GLVR				pmax	pmax		
	comp=E,22nm,0.3s						
GLVR	Golovnino	7.80	240	*e*P	Pn	21 14 41.0	+0.6
GLVR				AMB	AMB	21 14 44.3	
	comp=E,20nm,0.5s						
GLVR				AMB	AMB	21 14 44.3	
	comp=E,40nm,0.5s						
MKZ	Mys Kozlova	7.83	31	PN	Pn	21 14 41.6	+0.7
MKZ	Mys Kozlova	7.83	31	*e*P	Pn	21 14 41.6	+0.7
MKZ	Mys Kozlova	7.83	31	*e*P	Pn	21 14 41.6	+0.7
NMR	Nemuro--Hokkai	7.90	237	*e*PN	Pn	21 14 39.5	-2.4
NMR	Nemuro--Hokkai	7.90	237	*i*P	Pn	21 14 39.9	-2.0
YSS	Yuzh-Sakhalins	8.27	267	*e*PN	Pn	21 14 49.1	+2.2
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS	Yuzh-Sakhalins	8.27	267	*e*P	Pn	21 14 49.1	+2.2
YSS				AMB	AMB	21 14 50.3	
	comp=Z,20nm,0.5s						
YSS				*e*S	Sn	21 16 18.6	-0.6
ASAJ	Asahikawa	9.38	250	P	Pn	21 15 03.7	+1.6
	comp=Z,1.2nm,0.3s,baz=61,slow=15,SNR=11						
ASAJ				LR	LR	21 18 05.0	
	comp=Z,62nm,18.9s,baz=78,slow=34						
BKI	Bering	9.97	40	PN	Pn	21 15 08.7	-1.4
BKI	Bering	9.97	40	*e*P	Pn	21 15 08.7	-1.4
BKI				*e*S	Sn	21 16 49.6	-11
MA2	Magadan	11.83	350	P	Pn	21 15 37.1	+1.5
	comp=Z,1.1nm,0.3s,baz=167,slow=18,SNR=3.0						
MA2				LR	LR	21 19 36.4	
	comp=Z,64nm,20.0s,baz=232,slow=35						
EKMR	Ekimchan	14.80	298	*e*P	Pn	21 16 16.2	+0.1
EKMR				AMB	AMB	21 16 24.1	
	comp=Z,10.0nm,0.8s						
SEY	Seymchan	15.02	356	P	Pn	21 16 18.3	-0.6
	comp=Z,0.1nm,0.3s,baz=177,slow=16,SNR=2.0						
KLR	Kul'dur	15.33	283	P	Pn	21 16 21.1	-2.0
	comp=Z,0.1nm,0.3s,baz=113,slow=12,SNR=2.1						
USRK	Ussuriysk Ar.	16.30	265	P	Pn	21 16 34.9	-0.7
	baz=69,slow=9.0,SNR=4.1						
KROS	Kirovskiy	18.54	301	*e*P	Pn	21 17 04.5	+1.2
KROS				AMB	AMB	21 17 07.9	
	comp=Z,4.0nm,0.6s						
BILL	Bilibino	20.90	12	*i* P	Pn	21 17 34.4	+3.2
BILL				*i* *PP	sP	21 18 04.2	+24
BILL				*i*		21 21 30.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSRS	Korea Array	22.32	252	P	P	21 17 43.1	-0.9
	comp=Z,2.5nm,0.5s,baz=45,slow=10,SNR=13						
JCJ	Chichijima	23.12	210	P	P	21 17 56.8	+4.4
	comp=Z,192nm,0.8s,baz=127,slow=6.3,SNR=3.6						
H11N2	WAKE ISLAND Hy	29.85	157	T	T	21 50 34.7	
	baz=344,slow=76,SNR=251						
H11N1	WAKE ISLAND Hy	29.87	157	T	T	21 50 35.4	
	baz=344,slow=76,SNR=359						
H11N3	WAKE ISLAND Hy	29.87	157	T	T	21 50 35.6	
	baz=344,slow=76,SNR=133						
H11S1	WAKE ISLAND Hy	30.97	158	T	T	21 51 59.9	
	baz=344,slow=76,SNR=1788						
H11S3	WAKE ISLAND Hy	30.98	158	T	T	21 52 00.1	
	baz=344,slow=76,SNR=1305						
H11S2	WAKE ISLAND Hy	30.99	158	T	T	21 52 00.9	
	baz=344,slow=76,SNR=1145						
SONM	Songino Array	32.05	288	LR	LR	21 33 02.9	
	comp=Z,32nm,18.5s,baz=192,slow=38						
ILAR	Eielson Array	34.82	40	P	P	21 19 38.4	+1.8
	comp=Z,0.3nm,0.5s,baz=266,slow=6.5,SNR=6.2						
INK	Inuvik	39.94	33	P	P	21 20 21.6	+1.7
	comp=Z,1.3nm,0.5s,baz=303,slow=5.3,SNR=12						
ZALV	Zalesovo Beam	42.85	305	P	P	21 20 41.0	-2.9
	comp=Z,0.6nm,0.4s,baz=78,slow=5.5,SNR=3.5						
ZALV				PcP	PcP	21 22 33.8	-0.7
	comp=Z,0.4nm,0.4s,baz=90,slow=1.4,SNR=2.5						
ZALV				LR	LR	21 39 01.1	
	comp=Z,26nm,19.3s,baz=145,slow=37						
MKAR	Makanchi Array	47.42	297	P	P	21 21 17.5	-3.0
	comp=Z,0.6nm,0.6s,baz=60,slow=7.9,SNR=8.7						
MKAR				PcP	PcP	21 22 49.7	-0.8
	comp=Z,0.2nm,0.6s,baz=52,slow=1.2,SNR=2.9						
YKA	Yellowknife Ar	49.20	38	P	P	21 21 34.2	+0.4
	comp=Z,0.3nm,0.7s,baz=296,slow=7.0,SNR=4.0					

BKZ	Black Stump Fm	9.47	206	Pn		Pn	22 13 04.8	0.0
HIZ	Hauiti	9.63	214	Pn		Pn	22 13 07.2	+0.2
BFZ	Birch Farm	10.90	203	Pn		Pn	22 13 25.5	+1.1
PLWZ	Palliser	12.03	204	Pn		Pn	22 13 37.9	-2.0
QRZ	Quartz Range	12.56	214			Pn	22 13 46.9	-0.2
KHZ	Kahutara	13.40	207	Pn		Pn	22 13 58.0	-0.6
LTZ	Lake Taylor	14.23	210	Pn		Pn	22 14 09.9	0.0
DZM	Mont Dzumac	16.20	298			Pn	22 14 36.7	+0.5
NOUC	Port Laguerre	16.29	298	Pn		Pn	22 14 35.5	-1.8
NOUC	comp=Z,20nm,1.0s			IAmb		IAmb	22 14 50.0	
WKZ	Wanaka	17.28	212	Pn		Pn	22 14 45.3	-4.5
WKZ	comp=Z,15nm,1.0s			IAmb		IAmb	22 15 02.8	
STKA	Stephens Creek	34.21	257	P		P	22 17 36.3	+2.0
	comp=Z,3.6nm,0.8s,baz=83,slow=9.0,SNR=5.0							
ASAR	Alice Springs	42.89	267	P		P	22 18 47.7	+0.4
	comp=Z,0.9nm,0.5s,baz=106,slow=7.2,SNR=15							
WR0	Warramunga Arr	43.73	273	P		P	22 18 54.1	+0.1
WR0	comp=Z,3.6nm,1.1s			IAmb		IAmb	22 19 12.6	
WRAB	Tennant Creek	43.91	273	P		P	22 18 54.9	-0.6
WRAB	comp=Z,4.6nm,0.8s			IAmb		IAmb	22 18 57.6	
WRA	Warramunga Arr	43.91	273	P		P	22 18 55.8	+0.2
	comp=Z,1.4nm,0.5s,baz=111,slow=8.0,SNR=16							
FAKI	Fak Fak	54.27	291	P		P	22 20 14.8	-0.1
QSPA	South Pole Qui	59.39	180	P		P	22 20 52.1	+1.4
	comp=Z,0.5nm,0.5s,baz=80,slow=6.1,SNR=3.5							
QSPA	South Pole Qui	59.39	180	IAmb		IAmb	22 21 03.4	
	comp=Z,1.3nm,0.9s							
H10S2	ASCENSION HYDR	137.51	156	T		T	01 04 34.3	
	baz=16,slow=74,SNR=6.0							
H10S3	ASCENSION HYDR	137.51	156	T		T	01 04 30.5	
	baz=204,slow=74,SNR=5.2							
H10N3	ASCENSION HYDR	138.60	155	T		T	01 05 48.9	
	baz=204,slow=75,SNR=10							
H10N1	ASCENSION HYDR	138.60	155	T		T	01 05 43.2	
	baz=204,slow=75,SNR=9.8							
H10N2	ASCENSION HYDR	138.62	155	T		T	01 05 48.3	
	baz=204,slow=75,SNR=9.5							
FINES	FINESS Array B	145.38	340	PKPbc		PKPbc	22 30 23.9	-1.8
	comp=Z,2.3nm,0.5s,baz=48,slow=3.6,SNR=12							
NOA	NORSAR Array B	149.04	351	PKPbc		PKPdf	22 30 34.5	+2.5
	comp=Z,0.7nm,0.8s,baz=14,slow=4.1,SNR=2.3							
AKASG	Malin Array Be	151.44	322	PKPbc		PKPbc	22 30 43.8	+1.7
	comp=Z,1.2nm,0.6s,baz=45,slow=2.3,SNR=3.8							
TORD	Torodi Ar. Bea	162.51	180	PKPab		PKPab	22 31 37.9	-0.8
	comp=Z,1.6nm,1.1s,baz=165,slow=2.5,SNR=3.7							

MOS ***18*** *22:19:26.8±0.9, 26°.38N×44°.48W, h10km, mb5.3/40, MS4.7/14, Error ellipse: s-maj=6.0km s-min=4.3km az=55.6*

BJI ***18*** *22:19:26.0±0.0, 26°.40N×44°.50W, h5km, mB5.8/8, mb5.5/5, Ms5.4/13, Ms7 5.1/10*

IDC ***18*** *22:19:26.7±0.3, 26°.40N×44°.50W, h0km, mb4.7/44, mb1 4.9/44, mb1mx4.8/52, mbtmp4.8/44, MS4.9/26, Ms1 4.9/26, ms1mx4.8/33, Error ellipse: s-maj=10.6km s-min=8.7km az=137.0*

NEIC ***18*** *22:19:28.5±1.4, 26°.32N±0°.09×44°.51W±0°.10, h10km±1km, mb5.4/550, Error ellipse: s-maj=15.5km s-min=14.3km az=156.0*

BGR ***18*** *22:19:30.9±0.0, 26°.29N×44°.68W, h33km, mb5.5, Ms4.4*

GCMT ***18*** *22:19:30.5±0.1, 26°.55N±0°.01×44°.41W±0°.01, h12km, MW5.4/152, Moment Tensor Solution. s75,c101; s152,c277; Duration: 1s2 Moment tensor: Scale 10^{17} Nm; M_{rr}1.41±.02; $M_{\theta\theta}$-0.47±.02; $M_{\phi\phi}$-0.93±.01; $M_{r\theta}$0.13±.05; $M_{\theta\phi}$-0.68±.01; $M_{r\phi}$0.34±.05; Best double couple: $M_0$1.46200×10^{17} NP1:ϕ_s219.00000°, δ38.00000°, λ96.00000°. NP2:ϕ_s32.00000°, δ52.00000°, λ85.00000°. Principal axes: T 1.4580, Plg82.0000°, Azm278.0000°; N 0.0120, Plg4.0000°, Azm35.0000°; P -1.4660, Plg7.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 18 22:19:28.8±0.6, 26°.33N±0°.05×44°.43W±0°.04, h11km±3km, h12km:pP-P,n1064,σ1931/950, mb5.3/376, MS4.8/49, 51C-25D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	18.25	245	eP	P	22 23 50.7	+8.6
ANWB	Willy Bob	18.25	245		Pn	22 23 40.1	-1.9
ROSA	Rosais	18.37	44		P	22 23 44.0	+0.5
BBSR	BB Station	18.66	294	P	P	22 23 44.5	-2.1
DWS	Wesley	19.04	239	eP	Pn	22 23 58.3	+6.6
MLYT	Lee's Yard	19.07	243	eP	Pn	22 23 58.7	+6.6
SMRT	St. Maarten	19.12	248	eP	Pn	22 23 55.4	+2.7
SMRT	St. Maarten	19.12	248	P	P	22 23 49.8	-2.0
DLPL	La Plaine	19.13	238	eP	P	22 23 50.6	-1.4
DLPL	La Plaine	19.13	238	P	P	22 23 50.5	-1.5
MDPO	Dominica; Chan	19.14	239	eP	P	22 23 46.8	-5.3
SEUS	St. Eustatius	19.32	247	eP	P	22 23 50.7	-3.2
SEUS	St. Eustatius	19.32	247	eS	S	22 27 41.8	+9.2
BBGH	Gun Hill	19.34	230	eP	Pn	22 24 01.3	+6.0
H05S1	Guadeloupe/Mar	19.39	236	T	T	22 43 32.1	
	SNR=6.0						
FDF	Fort de France	19.43	237	P	Pn	22 23 55.1	-1.3
FDF	comp=Z,266nm,1.4s			pmax	pmax		
FDF	Fort de France	19.43	237	eP	Pn	22 24 01.6	+5.2
FDF	Fort de France	19.43	237	P	Pn	22 23 55.1	-1.3
FDF	comp=Z,266nm,1.4s			IAmb	IAmb	22 24 13.4	
SABA	Saba	19.47	247	eP	Pn	22 23 59.0	+2.2
SABA	Saba	19.47	247	eS	S	22 27 41.0	+5.3
SABA	Saba	19.47	247	P	P	22 23 54.6	-1.0
CMLA	Cha da Macela	19.62	50	P	P	22 23 57.9	+0.7
CMLA	comp=Z,773nm,1.7s			pmax	pmax		
CMLA	Cha da Macela	19.62	50	P	P	22 23 57.9	+0.7
SLBI	Saint Lucia, B	19.75	235	eP	P	22 23 58.3	-0.4
SFAN	Fancy Village	20.32	234	eP	P	22 24 02.2	-2.7
SVB	Belmont	20.45	234	eP	P	22 24 05.5	-0.8
SVB	Belmont	20.45	234	P	P	22 24 04.4	-2.0
SVB	comp=Z,303nm,1.5s			IAmb	IAmb	22 24 16.7	
MTP	Monte Pirata	21.18	252	P	P	22 24 14.1	-0.2
MTP	comp=Z,258nm,1.2s			IAmb	IAmb	22 24 25.4	
TOSP	Speyside	21.32	228	eP	P	22 24 13.8	-1.9
CBYP	Canovanas	21.37	252	P	P	22 24 15.4	-1.0
CBYP	comp=Z,235nm,1.9s			IAmb	IAmb	22 24 40.9	
HUMP	Col San Antoni	21.42	252	P	P	22 24 14.3	-2.5
GRGR	Grenville	21.50	232	eP	P	22 24 20.4	+2.6
GRGR	Grenville	21.50	232	P	P	22 24 16.5	-1.3
GCPR	Guaynabo City	21.55	253	P	P	22 24 17.1	-1.0
SJG	San Juan	21.69	252	P	P	22 24 19.0	-0.7
SJG	comp=Z,212nm,1.8s			pmax	pmax		
SJG	San Juan	21.69	252	P	P	22 24 19.5	-0.2
SJG	comp=Z,4.2nm,0.4s,baz=54,slow=12,SNR=3.5			LR	LR	22 31 03.4	
SJG	comp=Z,2μm,21.7s,baz=70,slow=32			P	P	22 24 19.0	-0.7
SJG	San Juan	21.69	252	IAmb	IAmb	22 24 38.8	
EMPR	Esperanza - Ma	21.86	254	P	P	22 24 17.9	-3.6
AOPR	Arecibo Observ	22.11	254	P	P	22 24 23.5	-0.8
AOPR	comp=Z,156nm,1.4s			IAmb	IAmb	22 24 58.4	
OBIP	Obispado Ponce	22.11	253	P	P	22 24 24.5	+0.3
OBIP	comp=Z,197nm,1.6s			IAmb	IAmb	22 24 45.9	
AGPR	Aguadilla, PR	22.36	254	P	P	22 24 24.1	-2.8
SACV	Santiago Islan	22.49	116	P	P	22 24 30.2	+1.9
MLPR	Magueyes Islan	22.52	253	P	P	22 24 26.9	-1.7
MLPR	comp=Z,157nm,1.4s			IAmb	IAmb	22 24 54.9	
MDP	Montagnes des	22.53	202	P	P	22 24 29.9	+1.2
MDP	comp=Z,34nm,1.0s,baz=27,slow=13,SNR=4.5			LR	LR	22 31 25.1	
CRPR	comp=Z,1μm,20.6s,baz=30,slow=32 Cabo Rojo, PR	22.56	253	P	P	22 24 27.9	-1.1
CRPR	comp=Z,154nm,1.4s			IAmb	IAmb	22 24 38.9	
TPP	Pointe-a-Pierr	22.65	228	e	P	22 24 32.5	+2.5
PCDR	Punta Cana, DR	23.45	256	P	P	22 24 38.1	-0.1
GBN	Guysborough	23.45	329	IAmb	IAmb	22 24 51.9	
	comp=Z,274nm,1.7s						
HAL	Halifax	23.92	325	P	P	22 24 41.8	-0.8
HAL	comp=Z,462nm,2.0s			pmax	pmax		
HAL	Halifax	23.92	325	P	P	22 24 41.8	-0.8
DR12	Loma Pena Alta	24.21	257	P	P	22 24 45.3	-0.3
PMOZ	Porto Moniz, M	24.51	68	P	P	22 24 50.6	+2.3
MACI	Morro de la Ar	24.86	79	P	P	22 24 53.6	+1.9
PLCV	Puerto La Cruz	24.95	234	P	P	22 24 52.3	+0.1
PCRV	Puerto La Cruz	24.97	234	P	P	22 24 52.3	-0.2
PCRV	comp=Z,17nm,1.0s,baz=26,slow=12,SNR=3.1			LR	LR	22 33 53.2	
DRLN	comp=Z,829nm,21.4s,slow=35 Deer Lake	25.04	339	IAmb	IAmb	22 25 05.5	
SC01	comp=Z,96nm,1.1s Santiago de lo	25.16	260	P	P	22 24 54.4	+0.2
SC01	comp=Z,134nm,1.2s			IAmb	IAmb	22 25 17.3	
BANI	BANI	25.22	257	P	P	22 24 54.0	-0.8
LMN	Caledonia Moun	25.38	325	P	P	22 24 56.1	+0.2
SDDR	Presa de Saban	25.81	259	IAmb	IAmb	22 25 08.8	
GGN	comp=Z,87nm,1.2s Saint George	25.98	322	P	P	22 25 00.9	-0.4
EMMW	East Machias	26.07	321	P	P	22 25 02.0	-0.2
EMMW	comp=Z,226nm,1.8s			IAmb	IAmb	22 25 22.2	
L64A	Middleborough	26.69	312	P	P	22 25 10.1	+2.3
BATG	baz=118 Bathurst New B	26.98	326	P	P	22 25 09.9	-0.5
G64A	Maxfield	27.14	320	P	P	22 25 11.7	-0.1
E64A	baz=126 Bridgewater	27.33	323	P	P	22 25 13.5	-0.1
HRV	baz=129 Adam Dziewonsk	27.43	313	P	P	22 25 14.4	-0.1
HRV	comp=Z,172nm,1.7s			pmax	pmax		
HRV	Adam Dziewonsk	27.43	313	P	P	22 25 14.4	-0.1
HRV	comp=Z,172nm,1.7s			IAmb	IAmb	22 25 31.2	
HRV	Adam Dziewonsk	27.43	313	P	P	22 25 17.8	+3.3
K63A	baz=118 Dunstable	27.49	313	P	P	22 25 18.7	+3.7
G63A	baz=118 Kingsbury	27.56	319	P	P	22 25 15.4	-0.3
E63A	baz=125 Oxbow	27.66	323	P	P	22 25 16.6	+0.2
D63A	baz=128 Stockholm	27.87	324	P	P	22 25 18.7	+0.3
BAUV	baz=130 El Baul	28.29	237	eP	P	22 25 20.4	-2.1
D62A	Allapoint, All	28.40	323	P	P	22 25 23.3	+0.1
D62A	Allapoint, All	28.40	323	P	P	22 25 23.9	+0.8
E61A	baz=128 Lac Etchemin	28.81	321	P	P	22 25 27.0	+0.2
G60A	baz=125 Masonville	29.17	317	P	P	22 25 30.1	+0.1
H59A	baz=121 Cadyville	29.79	315	P	P	22 25 34.6	-0.9
FRNY	baz=118 Flat Rock	29.82	316	P	P	22 25 35.1	-0.6
FRNY	comp=Z,60nm,1.4s			IAmb	IAmb	22 26 08.1	
MVL	Millersville	29.82	305	P	P	22 25 36.0	+0.2
MVL	comp=Z,135nm,1.9s			IAmb	IAmb	22 25 44.3	
H58A	Gabriels	30.00	315	P	P	22 25 37.9	+0.5
SDMD	baz=117 Soldier's Deli	30.02	304	P	P	22 25 37.3	-0.3
J58A	Remsen	30.26	312	P	P	22 25 40.3	+0.6
BINY	baz=114 Binghamton	30.29	310	P	P	22 25 37.4	-2.6
BINY	comp=Z,141nm,1.9s			IAmb	IAmb	22 25 42.2	
BINY	Binghamton	30.29	310	P	P	22 25 40.5	+0.5
SDV	baz=112 Santo Domingo	30.31	240	P	P	22 25 40.5	0.0
SDV	comp=Z,5.9nm,0.9s,baz=51,slow=7.5,SNR=5.9 Santo Domingo	30.31	240	eP	P	22 25 41.6	+1.1
SDV	Santo Domingo	30.31	240	P	P	22 25 40.2	-0.3
N58A	Sunbury	30.34	307	P	P	22 25 40.6	+0.2
N58A	comp=Z,84nm,1.8s			IAmb	IAmb	22 25 44.5	
LONY	Lake Ozonia	30.35	315	IAmb	IAmb	22 25 56.2	
LONY	comp=Z,166nm,1.9s Lake Ozonia	30.35	315	P	P	22 25 41.0	+0.6
E58A	baz=117 La Victoria	30.39	319	P	P	22 25 40.5	-0.2
D58A	baz=121 Chemin du LacG	30.55	320	P	P	22 25 41.7	-0.5
M57A	baz=123 Sunshine Farm,	30.80	307	P	P	22 25 43.5	-0.9
M57A	Sunshine Farm,	30.80	307	P	P	22 25 44.7	+0.3
E57A	baz=105 Chemin Saint G	30.93	318	P	P	22 25 45.2	-0.4
W58A	baz=120 Raeford	31.04	295	P	P	22 25 47.5	+0.9
D57A	baz=97 Chemin Vers le	31.09	319	P	P	22 25 46.5	-0.4
SSPA	baz=122 Standing Stone	31.13	306	P	P	22 25 47.3	-0.1
SSPA	comp=Z,66nm,1.6s			IAmb	IAmb	22 26 00.0	
S57A	Dark Hollow, R	31.24	300	P	P	22 25 48.0	-0.3
H56A	baz=101 Elgin	31.41	314	P	P	22 25 50.5	+0.7
V57A	baz=115 Coltrane Farms	31.58	296	P	P	22 25 52.3	+0.9
D56A	baz=98 ZEC Mazanza, M	31.61	319	P	P	22 25 51.3	-0.3
W57A	baz=120 Gilead	31.67	295	P	P	22 25 51.8	-0.4
W57A	comp=Z,46nm,1.4s			IAmb	IAmb	22 26 05.1	
W57A	Gilead	31.67	295	P	P	22 25 52.9	+0.8
Q56A	baz=96 Snyder Ridge,	31.69	302	P	P	22 25 51.9	-0.4
Q56A	comp=Z,95nm,1.6s			IAmb	IAmb	22 26 05.9	
S56A	Natural Bridge	31.70	300	P	P	22 25 54.2	+1.7
R56A	baz=101 Bull Pasture M	31.72	301	P	P	22 25 54.0	+1.4
MMNY	baz=102 Mt. Morris Dam	31.81	310	P	P	22 25 53.4	+0.1
MMNY	comp=Z,86nm,1.7s			IAmb	IAmb	22 26 25.9	
J55A	Hilton	31.93	311	P	P	22 25 53.3	-1.1
J55A	comp=Z,46nm,1.1s			IAmb	IAmb	22 26 01.7	
T56A	Rocky Mt	31.95	298	P	P	22 25 55.9	+1.2
BIRD	baz=99 Birdtown, Kers	32.01	294	IAmb	IAmb	22 26 08.2	
M55A	comp=Z,70nm,1.5s Ridgway	32.01	307	P	P	22 25 55.5	+0.4
D55A	baz=107 Sainte-Anne-du	32.02	318	P	P	22 25 55.1	-0.1
060A	baz=119,SNR=5.9 Indiantown	32.05	279	P	P	22 25 53.1	-2.5
U56A	King	32.13	297	P	P	22 25 57.0	+0.7
U56A	King	32.13	297	P	P	22 25 57.9	+1.6
V56A	baz=98 Mocksville	32.16	296	P	P	22 25 57.1	+0.6
WVNY	baz=97 West Valley, N	32.19	309	P	P	22 25 56.2	-0.5
R55A	Marlinton	32.24	301	P	P	22 25 58.9	+1.6
DELO	baz=101 Deloro Mine	32.27	313	P	P	22 25 56.8	-0.6
DELO	comp=Z,58nm,1.5s			IAmb	IAmb	22 26 12.6	
BLA	Blacksburg	32.29	299	P	P	22 25 57.5	-0.2
BLA	Blacksburg	32.29	299	P	P	22 25 57.5	-0.2
BLA	Blacksburg	32.29	299	P	P	22 25 59.1	+1.5
MCWV	baz=99 Mont Chateau	32.33	303	P	P	22 25 58.0	+0.1
MCWV	comp=Z,57nm,1.7s			IAmb	IAmb	22 26 16.0	
Q55A	Buckhannon	32.36	302	P	P	22 25 59.2	+1.0
U55A	baz=102 TA2, Sparta	32.69	297	P	P	22 26 02.5	+1.3
E54A	baz=98 Lac Daplat, Po	32.80	316	P	P	22 26 01.7	-0.2
D54A	baz=116 Lac Fusel, La	32.80	318	P	P	22 26 01.7	-0.3
O54A	baz=118 Avella	32.85	304	P	P	22 26 01.4	-1.1
O54A	comp=Z,54nm,1.5s			IAmb	IAmb	22 26 07.5	
SCHQ	Schefferville	32.87	336	P	P	22 26 01.3	-1.3
SCHQ	comp=Z,17nm,0.8s,baz=133,slow=7.4,SNR=31			LR	LR	22 37 48.9	
SCHQ	comp=Z,2μm,21.2s,baz=146,slow=34 Schefferville	32.87	336	IAmb	IAmb	22 26 09.7	
Q54A	comp=Z,41nm,1.1s Coxs Mills	32.93	302	P	P	22 26 03.9	+0.7
X55A	baz=102 Gracelyn & Ava	32.96	293	P	P	22 26 04.4	+0.9
E53A	baz=94,SNR=5.6 Dumoine, Ponti	33.07	316	P	P	22 26 04.3	0.0
Y55A	baz=116 Saluda	33.11	292	P	P	22 26 03.1	-1.7
T54A	baz=93 Tazewell	33.18	298	P	P	22 26 06.3	+0.8
PESTR	baz=98 Estremoz	33.23	59	P	P	22 26 07.6	+1.7
PESTR	comp=Z,60nm,1.7s			IAmb	IAmb	22 26 16.4	
U54A	Nelsons Funny	33.30	297	P	P	22 26 05.7	-0.9
U54A	comp=Z,95nm,1.6s			IAmb	IAmb	22 26 24.6	
V54A	Nebo	33.33	296	P	P	22 26 08.0	+1.3
SADO	baz=96 Sadowa	33.37	312	P	P	22 26 06.7	-0.3
SADO	comp=Z,108nm,1.8s			IAmb	IAmb	22 26 23.5	
D53A	Lac Vacive, Po	33.40	317	IAmb	IAmb	22 26 09.6	
D53A	comp=Z,91nm,1.9s Lac Vacive, Po	33.40	317	P	P	22 26 06.8	-0.4
Q53A	baz=117 Leroy	33.43	301	P	P	22 26 08.1	+0.5
P53A	baz=101 Whipple	33.45	302	P	P	22 26 08.5	+0.7
P53A	Whipple	33.45	302	P	P	22 26 08.1	+0.3
W54A	baz=102 Cherokee Point	33.46	294	P	P	22 26 09.0	+1.1
HODGE	baz=95 Hodges	33.46	293	P	P	22 26 07.9	+0.1
155A	Kite	33.58	290	P	P	22 26 10.2	+1.3
MTE	baz=91 Manteigas	33.59	56	P	P	22 26 10.6	+1.5
E52A	Mattawa	33.65	315	P	P	22 26 09.3	-0.1
R53A	baz=114 Hurricane	33.67	300	P	P	22 26 09.7	0.0
R53A	comp=Z,86nm,1.8s			IAmb	IAmb	22 26 28.3	
VLDQ	Val d'Or	33.73	319	IAmb	IAmb	22 26 19.8	
Y54A	comp=Z,93nm,1.8s Tignall	33.80	292	P	P	22 26 11.5	+0.7
LSQQ	baz=92 Lebel-sur-Quev	33.91	321	P	P	22 26 11.4	-0.2
T53A	baz=120 Wise	33.93	298	P	P	22 26 12.8	+0.7
N52A	baz=97 McGinn's Farm,	33.97	305	P	P	22 26 12.4	+0.1
V53A	baz=104 Saluda	34.02	295	P	P	22 26 11.5	-1.3
Q52A	baz=95 Bidwell	34.02	301	P	P	22 26 16.4	+3.7
BG3	baz=100 Lake Jocassee	34.06	294	IAmb	IAmb	22 26 26.3	
154A	comp=Z,72nm,1.9s Montrose	34.12	290	IAmb	IAmb	22 26 23.1	
R52A	comp=Z,54nm,0.9s Catlettsburg	34.21	300	P	P	22 26 18.2	+3.9
W53A	baz=99 Cullowhee	34.26	294	P	P	22 26 16.3	+1.3
F51A	baz=94,SNR=7.5 Arnstein	34.31	314	P	P	22 26 14.7	-0.4
X53A	baz=113 Estanollee	34.33	293	P	P	22 26 18.8	+3.4
GOGA	baz=93 Godfrey	34.43	291	P	P	22 26 17.4	+1.1
D51A	baz=91,SNR=6.2 Lot 18 Range I	34.44	316	P	P	22 26 16.4	+0.2
M51A	baz=115 Elyria	34.45	305	P	P	22 26 19.0	+2.6
N51A	baz=104 Ashland	34.50	305	P	P	22 26 18.7	+1.9
O51A	baz=103 Pataskala	34.50	303	P	P	22 26 19.5	+2.5
Z53A	baz=102 Monticello	34.51	291	P	P	22 26 17.0	-0.1
U52A	baz=91 Thorn Hill	34.53	297	P	P	22 26 17.6	+0.4
TIGA	baz=96 Tifton	34.54	288	P	P	22 26 18.2	+0.9
TIGA	Tifton	34.54	288	P	P	22 26 23.0	+5.7
Y53A	baz=88 Monroe	34.54	292	P	P	22 26 18.9	+1.6
MATQ	baz=92 Matagami	34.64	321	P	P	22 26 17.9	0.0
V52A	baz=120,SNR=5.8 Sevierville	34.66	296	IAmb	IAmb	22 26 24.0	
V52A	comp=Z,124nm,1.9s Sevierville	34.66	296	P	P	22 26 21.9	+3.6
TZTN	baz=95 Tazewell	34.69	297	P	P	22 26 18.2	-0.4
TZTN	comp=Z,133nm,1.8s			IAmb	IAmb	22 26 29.5	
P51A	Williamsport	34.72	302	P	P	22 26 16.3	-2.5
153A	baz=100 Fort Valley	34.73	290	P	P	22 26 20.4	+1.5
TKL	baz=90 Tuckaleechee C	34.79	295	P	P	22 26 19.4	-0.1
TKL	comp=Z,17nm,0.9s,baz=106,slow=9.7,SNR=12 Tuckaleechee C	34.79	295	IAmb	IAmb	22 26 32.3	
ACSO	comp=Z,58nm,1.3s Alum Creek Sta	34.80	303	P	P	22 26 19.6	+0.1
NRS	baz=102 Narsarsuaq	34.82	359	P	P	22 26 19.0	-0.3
NRS	comp=Z,34nm,0.6s			pmax	pmax		
NRS	Narsarsuaq	34.82	359	P	P	22 26 19.0	-0.3
NRS	comp=Z,34nm,0.6s			IAmb	IAmb	22 26 21.1	
X52A	Dahlonega	34.83	293	P	P	22 26 20.7	+0.9
S51A	baz=93 Beattyville	34.85	299	P	P	22 26 19.1	-0.8
S51A	comp=Z,75nm,2.0s			IAmb	IAmb	22 26 49.1	
Q51A	Peebles	34.86	301	IAmb	IAmb	22 26 32.6	
Q51A	comp=Z,64nm,1.1s Peebles	34.86	301	P	P	22 26 20.3	+0.3
R51A	baz=100,SNR=7.6 Hillsboro	34.93	300	P	P	22 26 21.1	+0.5
IVI	baz=98 Ivigtut	34.95	357	P	P	22 26 20.8	+0.4
N50A	Nevada	35.04	304	P	P	22 26 24.9	+3.4
L50A	baz=102 Kingsville	35.08	306	P	P	22 26 24.4	+2.6
M50A	baz=104 Fremont	35.10	305	P	P	22 26 22.0	0.0
M50A	comp=Z,106nm,2.0s			IAmb	IAmb	22 26 39.3	
M50A	Fremont	35.10	305	P	P	22 26 23.7	+1.7
K50A	baz=103 Casco	35.13	308	P	P	22 26 21.6	-0.7
K50A	comp=Z,114nm,1.8s			IAmb	IAmb	22 26 40.5	
K50A	Casco	35.13	308	P	P	22 26 24.8	+2.5
O50A	baz=106 Cable	35.27	303	P	P	22 26 26.3	+2.8
P50A	baz=101 Jamestown	35.30	302	P	P	22 26 24.9	+1.0
Q50A	baz=100,SNR=29 Georgetown	35.32	301	P	P	22 26 27.4	+3.4
152A	baz=99 Waverly Hall	35.48	290	IAmb	IAmb	22 26 51.0	
152A	comp=Z,123nm,1.9s Waverly Hall	35.48	290	P	P	22 26 29.4	+4.1
252A	baz=90 Lumpkin	35.50	289	P	P	22 26 27.0	+1.4
R50A	baz=89,SNR=7.7 Paris	35.51	300	P	P	22 26 28.4	+2.8
F49A	baz=98 Sandfield	35.64	313	P	P	22 26 28.4	+1.8
352A	baz=110 Blakely	35.68	288	P	P	22 26 27.3	+0.2
ROSC	baz=88 El Rosal	35.68	238	LR	LR	22 40 25.4	
U50A	comp=Z,1μm,21.1s,baz=50,slow=35 Jamestown	35.72	296	P	P	22 26 28.2	+0.8
T50A	baz=95 Nancy	35.77	297	P	P	22 26 30.2	+2.4
Y51A	baz=96 Rockmart	35.77	292	P	P	22 26 27.5	-0.5

baz=91
L49A **Milan** 35.79 306 P P 22 26 27.9 -0.1
baz=104
M49A **Liberty Center** 35.80 305 P P 22 26 29.4 +1.4
baz=102
O49A **Covington** 35.81 303 P P 22 26 28.3 +0.1
O49A **Covington** 35.81 303 P P 22 26 28.3 +0.1
baz=100
N49A **Columbus Grove** 35.84 304 P P 22 26 27.8 -0.6
N49A IAmb IAmb 22 26 44.2
comp=Z,89nm,2.0s
N49A **Columbus Grove** 35.84 304 P P 22 26 27.7 -0.6
baz=102
Z51A **Franklin** 35.86 291 IAmb IAmb 22 26 53.1
comp=Z,73nm,1.7s
V50A **Pikevile** 35.87 295 P P 22 26 29.7 +1.0
baz=94,SNR=6.7
E48A **Lockeyer** 35.97 314 P P 22 26 30.1 +0.6
baz=111
P49A **Miami Univ. Ec** 35.99 302 P P 22 26 29.8 +0.1
baz=99,SNR=6.1
D48A **Paudash Townsh** 35.99 315 P P 22 26 29.9 +0.2
baz=112,SNR=5.3
W50A **Signal Mountai** 36.02 294 P P 22 26 30.5 +0.4
baz=93
Q49A **Aurora** 36.05 301 P P 22 26 30.2 -0.1
baz=98
ESDC **Sonseca Array** 36.15 58 P P 22 26 30.6 -0.5
comp=Z,1.2nm,0.8s,baz=251,slow=7.8,SNR=4.6
ESDC LR LR 22 37 39.6
comp=Z,715nm,21.3s,baz=250,slow=30
R49A **Shelbyville** 36.17 300 IAmb IAmb 22 26 44.1
comp=Z,61nm,1.4s
R49A **Shelbyville** 36.17 300 P P 22 26 31.7 +0.4
baz=97
T49A **Edmonton** 36.33 297 IAmb IAmb 22 26 45.8
comp=Z,95nm,1.9s
T49A **Edmonton** 36.33 297 P P 22 26 29.4 -3.2
baz=95
M48A **Edgerton** 36.34 305 P P 22 26 31.7 -1.0
M48A IAmb IAmb 22 26 45.0
comp=Z,104nm,1.7s
M48A **Edgerton** 36.34 305 P P 22 26 32.9 +0.1
baz=102
O48A **Farmland** 36.44 303 P P 22 26 33.3 -0.3
baz=100,SNR=5.8
N48A **Decatur** 36.45 304 P P 22 26 33.8 +0.2
baz=101
Z50A **Ashland** 36.48 291 IAmb IAmb 22 26 47.2
comp=Z,112nm,1.8s
Z50A **Ashland** 36.48 291 P P 22 26 34.8 +0.7
baz=90
P48A **Milroy** 36.52 301 IAmb IAmb 22 26 48.1
comp=Z,84nm,1.7s
P48A **Milroy** 36.52 301 P P 22 26 33.9 -0.3
baz=98
V49A **McMinnville** 36.53 295 P P 22 26 33.7 -0.7
baz=93
E47A **Iron Bridge** 36.68 313 P P 22 26 34.4 -1.1
baz=110
Q48A **North Vernon** 36.69 300 P P 22 26 35.4 -0.3
baz=98
D47A **Chapleau** 36.78 314 P P 22 26 38.3 +1.9
baz=111
I47A **Gladwin** 36.79 309 P P 22 26 35.9 -0.6
I47A IAmb IAmb 22 26 46.7
comp=Z,90nm,1.6s
W49A **Belvidere** 36.80 294 P P 22 26 37.5 +0.9
baz=92
250A **Grady** 36.80 289 P P 22 26 36.1 -0.6
250A IAmb IAmb 22 27 01.8
comp=Z,175nm,1.9s
Y49A **Blount Mountai** 36.89 292 IAmb IAmb 22 26 54.2
comp=Z,80nm,1.6s
N47A **Urbana** 36.95 304 P P 22 26 37.9 0.0
baz=100
M47A **Cromwell** 36.99 305 P P 22 26 38.8 +0.6
baz=101
WCI **Wyandotte Cave** 37.04 299 P P 22 26 39.6 +0.9
WCI pmax pmax 22 26 46.6
comp=Z,100nm,2.0s
WCI **Wyandotte Cave** 37.04 299 P P 22 26 39.6 +0.9
WCI IAmb IAmb 22 26 46.6
comp=Z,100nm,2.0s
WCI **Wyandotte Cave** 37.04 299 P P 22 26 39.5 +0.8
baz=96
D46A **Sault St. Mari** 37.32 314 P P 22 26 43.0 +2.1
baz=110
E46A **Sault Ste Mari** 37.33 313 IAmb IAmb 22 26 53.4
comp=Z,120nm,1.9s
LRAL **Lakeview Retre** 37.39 291 P P 22 26 42.6 +0.9
baz=89
BRAL **Brewton** 37.51 288 P P 22 26 44.7 +2.0
baz=86
T47A **Sharon Grove** 37.57 297 IAmb IAmb 22 26 56.1
comp=Z,97nm,1.9s
G45A **Suttons Bay** 37.85 310 P P 22 26 44.8 -0.7
G45A IAmb IAmb 22 26 58.1
comp=Z,72nm,1.4s
F45A **CMU Biological** 37.93 311 P P 22 26 46.2 +0.1
baz=106
SFIN **Lafayette** 37.93 303 IAmb IAmb 22 26 58.8
comp=Z,84nm,1.4s
SFIN **Lafayette** 37.93 303 P P 22 26 46.2 +0.1
baz=98,SNR=6.3
WVT **Waverly** 38.11 296 P P 22 26 48.0 +0.3
WVT pmax pmax 22 27 38.0
comp=Z,33nm,1.1s
WVT **Waverly** 38.11 296 P P 22 26 48.0 +0.3
WVT **Waverly** 38.11 296 P P 22 26 48.2 +0.4
baz=92
PLAL **Pickwick Lake** 38.28 294 IAmb IAmb 22 27 02.3
comp=Z,91nm,1.4s
PEXB **Peixe** 38.39 186 *e*P P 22 26 51.6 +1.3
OLIL **Olney** 38.50 300 IAmb IAmb 22 27 03.9
comp=Z,98nm,1.5s
CLDB **Colider** 38.60 198 *e*P P 22 26 51.5 -0.5
L44A **Lake County Fo** 38.82 305 P P 22 26 52.0 -1.7
L44A IAmb IAmb 22 27 38.0
comp=Z,81nm,1.4s
K43A **Burlington** 39.22 306 P P 22 26 56.5 -0.5
S44A **Carbondale** 39.33 298 P P 22 26 57.2 -0.7
SAML **Samuel** 39.52 210 P P 22 26 59.4 -0.3
SAML pmax pmax 22 27 38.0
comp=Z,49nm,1.3s
SAML **Samuel** 39.52 210 *e*P P 22 26 59.6 -0.1
SAML **Samuel** 39.52 210 P P 22 26 59.4 -0.3
ANGG **Ammassalik, Gr** 39.53 4 P P 22 26 59.4 +0.2
ANGG IAmb IAmb 22 27 12.3
comp=Z,176nm,1.6s
PENMO **Penman** 39.57 296 P P 22 26 59.8 -0.2
HDIL **Hopedale** 39.61 303 P P 22 27 00.1 -0.3
HDIL IAmb IAmb 22 27 12.9
comp=Z,112nm,1.6s
HDIL **Hopedale** 39.61 303 P P 22 27 02.7 +2.4
baz=97
PARMO **Parma** 39.68 296 P P 22 26 59.9 -1.0
P43A **Skaggs, Pawnee** 39.69 301 P P 22 26 59.9 -1.1
L42A **Oliver, Polo** 40.08 305 P P 22 27 03.4 -0.8
FVM **French Village** 40.27 298 P P 22 27 06.1 +0.3
FVM pmax pmax 22 27 38.0
comp=Z,50nm,1.6s
FVM **French Village** 40.27 298 P P 22 27 06.1 +0.3
D41A **Chassel** 40.33 313 IAmb IAmb 22 27 18.9
comp=Z,85nm,1.2s
VBMS **Vicksburg** 40.39 290 P P 22 27 08.6 +1.7
baz=86
TEIG **Tepich** 40.59 271 P P 22 27 07.4 -1.2
comp=Z,21nm,0.9s,baz=136,slow=0.3,SNR=6.3
TEIG **Tepich** 40.59 271 P P 22 27 10.0 +1.4
X43A **Marvell** 40.59 293 P P 22 27 08.3 -0.2
X43A **Marvell** 40.59 293 P P 22 27 08.8 +0.3
baz=89
JFWS **Jewell Farm** 40.64 306 P P 22 27 07.6 -1.3
baz=99
SFJD **Kangerlussuaq** 40.86 356 P P 22 27 10.2 0.0
SFJD pmax pmax 22 27 38.0
comp=Z,126nm,1.6s
SFJD **Kangerlussuaq** 40.86 356 P P 22 27 08.1 -2.1
comp=Z,17nm,0.9s,baz=159,slow=6.7,SNR=6.7
SFJD **Kangerlussuaq** 40.86 356 *i* P P 22 27 09.7 -0.5
SFJD **Kangerlussuaq** 40.86 356 P P 22 27 10.2 0.0
SFJD IAmb IAmb 22 27 26.5
comp=Z,126nm,1.6s
CCM **Cathedral Cave** 40.92 298 P P 22 27 11.4 +0.2
CCM pmax pmax 22 27 38.0
comp=Z,27nm,0.9s
CCM **Cathedral Cave** 40.92 298 P P 22 27 11.4 +0.2
baz=93
I40A **Norwalk** 41.07 307 P P 22 27 11.9 -0.5
BORG **Borgarnes** 41.18 15 P P 22 27 12.8 -0.1
comp=Z,36nm,1.0s,baz=224,slow=3.9,SNR=4.6
L40A **Anamosa** 41.24 305 P P 22 27 13.1 -0.6
L40A IAmb IAmb 22 27 22.0
comp=Z,190nm,2.0s
JTS **Las Juntas de** 41.44 255 P P 22 27 15.9 +0.2
JTS pmax pmax 22 27 38.0
comp=Z,24nm,1.2s
JTS **Las Juntas de** 41.44 255 P P 22 27 15.9 +0.2
W41B **Gary Mavity, V** 41.70 294 P P 22 27 17.8 +0.2
baz=89,SNR=14
MGMO **Mountain Grove** 41.71 297 IAmb IAmb 22 27 30.1
comp=Z,90nm,1.6s
WHAR **Wooly Hollow** 41.73 294 IAmb IAmb 22 27 29.9
comp=Z,84nm,1.3s
UALR **University of** 41.79 294 P P 22 27 17.4 -0.9
UALR IAmb IAmb 22 27 30.8
comp=Z,72nm,1.2s
OTAV **Otavalo** 41.79 237 P P 22 27 18.8 -0.3
OTAV pmax pmax 22 27 38.0
comp=Z,35nm,1.2s
OTAV **Otavalo** 41.79 237 *e*P P 22 27 19.9 +0.8
OTAV **Otavalo** 41.79 237 P P 22 27 18.8 -0.3
BDFB **Brasilia** 41.87 185 P P 22 27 19.4 +0.2
comp=Z,11nm,0.9s,baz=1.4,slow=9.5,SNR=16
BDFB LR LR 22 42 55.4
comp=Z,3µm,19.2s,baz=353,slow=34
U40A **Yellville** 42.17 296 P P 22 27 21.2 -0.3
baz=90,SNR=9.9
X40A **Basin Creek Fa** 42.20 293 P P 22 27 21.8 +0.1
baz=88
Z41A **Richland Creek** 42.24 291 IAmb IAmb 22 27 35.3
comp=Z,226nm,1.8s
Z41A **Richland Creek** 42.24 291 P P 22 27 23.2 +1.1
baz=86
TIC **Toumodi** 42.31 110 *e*P P 22 27 23.1 +0.3
comp=Z,46nm,1.0s
ARAG **Araguaiana, MT** 42.40 191 *e*P P 22 27 24.8 +1.4
DBIC **Dimbokro** 42.44 110 P P 22 27 24.0 +0.2
comp=Z,21nm,0.9s,baz=284,slow=9.1,SNR=21
DBIC LR LR 22 42 13.7
comp=Z,4µm,20.0s,baz=276,slow=32
DBIC **Dimbokro** 42.44 110 IAmb IAmb 22 27 37.0
comp=Z,91nm,1.4s
WLAR **White Oak Lake** 42.48 292 P P 22 27 24.3 +0.3
WLAR IAmb IAmb 22 27 32.8
comp=Z,87nm,1.0s
EYMN **Ely** 42.48 313 P P 22 27 23.5 -0.3
baz=104
LIC **Lamto** 42.53 111 *e*P P 22 27 25.1 +0.5
comp=Z,149nm,1.1s
KIC **Kosan Boka** 42.70 111 *e*P P 22 27 25.2 -0.8
comp=Z,86nm,1.0s
MIAR **Mount Ida** 42.81 293 P P 22 27 27.9 +1.2
baz=87
SPMN **Marine on St.** 42.83 309 P P 22 27 26.7 0.0
baz=99
W39A **Magazine** 42.96 294 P P 22 27 28.2 +0.3
baz=88,SNR=9.8
HHAR **Hobbs** 43.05 296 IAmb IAmb 22 27 40.6
comp=Z,116nm,1.9s
ILULI **Ilulissat** 43.09 357 P P 22 27 28.5 +0.1
ILULI pmax pmax 22 27 38.0
comp=Z,56nm,1.1s
ILULI **Ilulissat** 43.09 357 P P 22 27 28.5 +0.1
ILULI IAmb IAmb 22 27 40.9
comp=Z,56nm,1.1s
SSB **Saint Sauveur** 43.25 51 P P 22 27 30.6 +0.4
SSB pmax pmax 22 27 38.0
comp=Z,98nm,2.0s
SSB **Saint Sauveur** 43.25 51 P P 22 27 30.6 +0.4
SSB IAmb IAmb 22 27 51.1
comp=Z,98nm,2.0s
SALV **Santo Antonio** 43.39 196 *e*P P 22 27 32.4 +1.0
NATX **Nacogdoches** 43.94 289 P P 22 27 36.4 +0.6
NATX **Nacogdoches** 43.94 289 P P 22 27 37.1 +1.3
baz=84
IPMB **Ipameri, GO** 44.20 185 *e*P P 22 27 38.7 +0.7
X37A **Clayton** 44.29 293 IAmb IAmb 22 28 07.9
comp=Z,79nm,1.6s
APG **El Apazote** 44.31 265 P P 22 27 38.2 -1.0
comp=Z,22nm,0.9s,baz=46,slow=11,SNR=12
TUL1 **Leonard** 44.56 295 IAmb IAmb 22 27 48.5
comp=Z,92nm,1.3s
TUL1 **Leonard** 44.56 295 P P 22 27 40.8 0.0
baz=88,SNR=7.9
H10N2 **ASCENSION HYDR** 44.70 135 T T 23 15 17.7
baz=320,slow=75
H10N3 **ASCENSION HYDR** 44.70 135 T T 23 15 23.2
baz=320,slow=75
BNI **Bardonecchia** 44.71 52 IAmb IAmb 22 28 00.3
comp=Z,147nm,1.8s
H10N1 **ASCENSION HYDR** 44.72 135 T T 23 15 26.5
baz=320,slow=75
PP1B **Ponte de Pedra** 44.84 194 *e*P P 22 27 44.3 +1.3
SIV **San Ignacio** 45.08 203 P P 22 27 44.5 -0.5
comp=Z,7.9nm,1.0s,baz=52,slow=7.6,SNR=18
TOA0 **Torodi Ar. Sit** 45.12 98 P P 22 27 45.6 +0.1
TORD **Torodi Ar. Bea** 45.12 98 P P 22 27 44.6 -0.9
comp=Z,8.0nm,1.0s,baz=300,slow=6.4,SNR=12
TORD LR LR 22 45 59.7
comp=Z,4µm,18.5s,baz=315,slow=35
KSU1 **Kansas State U** 45.15 300 P P 22 27 44.8 -0.6
baz=90,SNR=5.1
HKT **Hockley** 45.17 287 P P 22 27 46.5 +0.9
HKT pmax pmax 22 27 38.0
comp=Z,127nm,1.7s
HKT **Hockley** 45.17 287 P P 22 27 46.5 +0.9
HKT IAmb IAmb 22 27 58.8
comp=Z,127nm,1.7s
SENIN **Lac Senin/Sane** 45.31 50 IAmb IAmb 22 28 29.2
comp=Z,79nm,1.9s
TAM **Tamanrasset** 45.35 83 IAmb IAmb 22 28 01.2
comp=Z,54nm,1.6s
AGMN **Agassiz Nation** 45.41 313 IAmb IAmb 22 27 59.6
comp=Z,111nm,1.4s
AGMN **Agassiz Nation** 45.41 313 P P 22 27 47.1 -0.3
baz=100,SNR=17
H10S3 **ASCENSION HYDR** 45.46 137 T T 23 16 21.0
baz=319,slow=74,SNR=3219
H10S2 **ASCENSION HYDR** 45.47 137 T T 23 16 22.2
baz=261,slow=74,SNR=2152
W35A **Tecumseh** 45.49 294 P P 22 27 47.0 -1.2
ECH **Echery** 45.50 47 IAmb IAmb 22 28 04.7
comp=Z,62nm,1.6s
ULM **Lac du Bonnet** 45.79 316 ⇑ *i*P P 22 27 49.0 -1.3
ULM **Lac du Bonnet** 45.79 316 P P 22 27 48.5 -1.7
comp=Z,12nm,0.9s,baz=86,slow=7.3,SNR=19
ULM LR LR 22 44 29.2
comp=Z,2µm,21.9s,baz=98,slow=33
ULM **Lac du Bonnet** 45.79 316 IAmb IAmb 22 27 57.4
comp=Z,128nm,1.8s
FNO **Franklin** 45.91 295 P P 22 27 51.7 +0.2
OKCFA **Oklahoma City** 45.94 295 P P 22 27 52.0 +0.2
OKCFA IAmb IAmb 22 27 59.7
comp=Z,56nm,1.0s
SCO **Scoresbysund** 46.03 10 *i* P P 22 27 52.0 +0.1
SCO pmax pmax 22 27 38.0
comp=Z,40nm,0.8s
SCO **Scoresbysund** 46.03 10 *i* P P 22 27 52.0 +0.1
comp=Z,40nm,0.8s
WHTX **Lake Whitney,** 46.27 290 P P 22 27 54.6 +0.2
WHTX **Lake Whitney,** 46.27 290 P P 22 27 55.5 +1.1
baz=83
BFO **Black Forest** 46.29 47 P P 22 27 54.9 +0.6
BFO pmax pmax 22 27 38.0
comp=Z,187nm,2.0s
BFO **Black Forest** 46.29 47 *e*P P 22 27 54.4 +0.1
comp=Z,171nm,2.4s,baz=260,slow=7.3
BFO eL L 22 44 12.2
comp=Z,463nm,20.2s
BFO **Black Forest** 46.29 47 P P 22 27 54.9 +0.6
BGNE **Belgrade** 46.36 303 P P 22 27 54.3 -0.7
SUMG **Summit** 46.40 2 *i* P P 22 27 54.5 -0.8
SUMG pmax pmax 22 27 38.0
comp=Z,180nm,1.1s
SUMG **Summit** 46.40 2 *i* P P 22 27 54.5 -0.8
comp=Z,184nm,1.1s
SUMG **Summit** 46.40 2 IAmb IAmb 22 28 03.3
comp=Z,63nm,1.0s
KEST **Kesra** 46.53 65 P P 22 27 56.0 -0.5
comp=Z,11nm,0.9s,baz=209,slow=5.9,SNR=6.1
KEST LR LR 22 46 36.3
comp=Z,938nm,18.0s,baz=244,slow=35
KEST **Kesra** 46.53 65 IAmb IAmb 22 28 19.1
comp=Z,64nm,1.2s
435B **Jarrell** 46.55 288 IAmb IAmb 22 28 09.2
comp=Z,63nm,1.2s
435B **Jarrell** 46.55 288 P P 22 27 56.7 +0.1
baz=82
TNS **Taunus Mts** 46.68 45 *e*P P 22 27 58.2 +0.8
comp=Z,160nm,2.2s,baz=260,slow=7.3
TNS eL L 22 44 33.7
comp=Z,407nm,18.9s
TUE **Stuetta** 46.73 50 P P 22 27 58.2 +0.2
TUE IAmb IAmb 22 28 10.5
comp=Z,58nm,1.3s
ATAH **Atahualpa** 46.83 229 P P 22 27 59.2 -0.2
comp=Z,14nm,0.9s,baz=3.3,slow=6.1,SNR=8.3
STU **Stuttgart** 46.92 47 IAmb IAmb 22 28 13.3
comp=Z,28nm,1.0s
BSCB **Bom Sucesso** 47.05 180 *e*P P 22 28 01.2 +0.7
WMOK **Wichita Mounta** 47.08 294 IAmb IAmb 22 28 13.2
comp=Z,83nm,1.6s
WMOK **Wichita Mounta** 47.08 294 P P 22 28 00.8 0.0
baz=85,SNR=17
SUSD **Miller** 47.09 307 P P 22 27 59.6 -1.1
U32A **Winter Ranch,** 47.13 296 P P 22 28 00.9 -0.2
DAVA **Damuels** 47.19 49 *i* pP P 22 28 02.5 +1.0
comp=Z,29nm,1.0s,SNR=6.2
PRMA **PARMA** 47.26 52 P P 22 28 02.8 +0.9
BB19B **Bebedouro** 47.28 185 *e*P P 22 28 03.6 +1.2
KVTX **Kingsville** 47.37 284 P P 22 28 02.3 -0.7
FUORN **Ofenpass-Fuorn** 47.38 50 IAmb IAmb 22 28 26.1
comp=Z,84nm,1.6s
CBKS **Cedar Bluff** 47.59 300 P P 22 28 03.5 -1.2
CBKS pmax pmax 22 28 00.0
comp=Z,62nm,1.6s
CBKS **Cedar Bluff** 47.59 300 P P 22 28 03.5 -1.2
CBKS IAmb IAmb 22 28 34.0
comp=Z,62nm,1.6s
ZCCA **Zocca** 47.71 53 P P 22 28 05.9 +0.4
FETA **Feichten** 47.73 49 *i* pP P 22 28 06.4 +0.6
comp=Z,15nm,1.0s,SNR=8.0
AQDB **Aquidauana** 47.80 194 *e*P P 22 28 07.5 +1.3
RETA **Reutte** 47.80 49 *i* P P 22 28 06.7 +0.4
comp=Z,16nm,1.1s
MDND **Maddock** 47.83 312 P P 22 28 06.0 -0.4
baz=96
MOTA **Moosalm** 48.02 49 *i* P P 22 28 08.4 +0.4
comp=Z,12nm,1.2s
ABTX **Abilene, Hawle** 48.03 291 P P 22 28 06.8 -1.4
ABTX **Abilene, Hawle** 48.03 291 P P 22 28 08.1 0.0
baz=82,SNR=9.3
SQTA **Sankt Quirin** 48.08 49 *i* pP P 22 28 09.2 +0.8
comp=Z,30nm,1.1s,SNR=8.4
PCMB **Pacaembu** 48.12 189 *e*P P 22 28 09.4 +0.7
FUR **Furstenfeldbru** 48.22 48 eL L 22 45 39.5
comp=Z,382nm,20.3s
LPAZ **La Paz** 48.23 211 P P 22 28 10.2 -0.2
comp=Z,39nm,1.2s,baz=20,slow=8.5,SNR=39
LPAZ LR LR 22 47 17.5
comp=Z,854nm,20.8s,baz=26,slow=35
LPAZ **La Paz** 48.23 211 *e*P P 22 28 10.5 +0.1
LPAZ **La Paz** 48.23 211 IAmb IAmb 22 28 17.0
comp=Z,42nm,1.1s
LATE **Laterza** 48.25 55 P P 22 28 09.9 +0.1
TEOL **Teolo** 48.26 52 IAmb IAmb 22 28 25.6
comp=Z,40nm,1.1s
VAS01 **Vassouras-RJ** 48.34 179 *e*P P 22 28 11.7 +1.3
WATA **Walderalm** 48.34 49 *i* P P 22 28 10.5 0.0
comp=Z,17nm,1.1s,SNR=5.6
GRF **Grafenberg Arr** 48.37 46 *e*P P 22 28 10.6 +0.2
comp=Z,225nm,2.5s,baz=260,slow=7.3
GRF eL L 22 45 48.5
comp=Z,706nm,18.0s
WTTA **Wattenberg** 48.37 49 *i* P P 22 28 11.2 +0.5
comp=Z,24nm,0.9s,SNR=7.4
ASSE **Asse, Remlinge** 48.40 43 *e*P P 22 28 11.3 +0.7
comp=Z,195nm,2.2s,baz=260,slow=7.3
JCT **Junction City** 48.48 288 IAmb IAmb 22 28 23.6
comp=Z,86nm,1.6s
JCT **Junction City** 48.48 288 P P 22 28 11.5 -0.2
baz=80,SNR=9.5
833A **Chaparral WMA,** 48.52 286 P P 22 28 10.6 -1.3
833A IAmb IAmb 22 28 23.7
comp=Z,96nm,1.8s
833A **Chaparral WMA,** 48.52 286 P P 22 28 13.0 +1.0
baz=79
BSEG **Bad Segeberg** 48.54 40 *e*P P 22 28 12.4 +0.7
comp=Z,359nm,2.5s,baz=260,slow=7.3
BSEG eL L 22 44 48.7
comp=Z,454nm,21.7s
MOX **Moxa** 48.75 45 *e*P P 22 28 13.5 +0.1
comp=Z,77nm,2.3s,baz=260,slow=7.3
KULLO **Kullorsuaq** 48.76 355 *i* P P 22 28 12.9 -0.2
KULLO pmax pmax 22 28 00.0
comp=Z,39nm,0.9s
KULLO **Kullorsuaq** 48.76 355 *i* P P 22 28 12.9 -0.2
comp=Z,39nm,0.9s
MURB **Monte Urbino** 48.79 54 P P 22 28 14.7 +0.8
ABTA **Abfaltersbach** 48.93 50 *i* P P 22 28 14.7 -0.2
comp=Z,21nm,0.9s,SNR=5.8
VAO **Valinhos** 49.11 183 *e*P P 22 28 17.7 +1.3
WERN **Wernitzgruen** 49.18 45 *e*P P 22 28 17.0 +0.2
comp=Z,132nm,2.3s,baz=260,slow=7.3
NRCA **Norcia** 49.22 55 P P 22 28 17.6 +0.3
NKC **Novy Kostel** 49.22 45 *e*P P 22 28 17.6 +0.5
NKC *e* 22 28 24.0
NKC MLR MLR 22 28 00.0
comp=Z,1µm,18.8s
NKC **Novy Kostel** 49.22 45 *e*P P 22 28 17.6 +0.5
NKC *e*pP pwP 22 28 24.0 +0.5
NKC AMS AMS 22 46 10.0
comp=Z,1µm,18.8s
OGNE **Ogallala** 49.29 302 P P 22 28 17.3 -0.5
OGNE **Ogallala** 49.29 302 P P 22 28 18.4 +0.6
baz=88
WET **Wettzell** 49.38 47 *e*P P 22 28 18.4 +0.1
comp=Z,94nm,2.4s,baz=260,slow=7.3
WET eL L 22 46 05.8
comp=Z,433nm,20.7s
AQU **L'Aquila** 49.43 56 IAmb IAmb 22 28 21.8
comp=Z,50nm,1.0s
AMTX **Amarillo** 49.44 294 P P 22 28 18.6 -0.5
AMTX **Amarillo** 49.44 294 P P 22 28 19.7 +0.6
baz=84
NNA **Nana** 49.44 224 ⇓ *e*P P 22 28 17.5 -1.6
NNA pmax pmax 22 28 00.0
comp=Z,27nm,1.0s
NNA **Nana** 49.44 224 P P 22 28 17.7 -1.4
comp=Z,5.6nm,0.5s,baz=42,slow=3.9,SNR=5.0
NNA **Nana** 49.44 224 P P 22 28 16.4 -2.7
NNA IAmb IAmb 22 28 23.4
comp=Z,48nm,1.6s
TRCB **Terra Rica** 49.48 190 *e*P P 22 28 20.1 +0.8
KBA **Koelnbreinsper** 49.52 49 *i* P P 22 28 19.4 -0.2
comp=Z,14nm,0.9s
KONO **Kongsberg** 49.62 33 ⇓ *i*P P 22 28 19.7 -0.2
KONO pmax pmax 22 28 00.0
comp=Z,12nm,0.9s
FRTB **Fartura** 49.63 186 *e*P P 22 28 21.6 +1.2
MYKA **Terra Mystica** 49.70 50 *i* P P 22 28 20.3 -0.5
comp=Z,15nm,1.2s
CLL **Collm** 49.71 44 *e*P P 22 28 19.0 -1.7
CLL *i* 22 28 24.8
CLL *e*S S 22 35 27.0 -2.3
CLL pmax pmax 22 28 00.0
comp=Z,15nm,1.0s
CLL **Collm** 49.71 44 *i* P P 22 28 20.6 -0.1
comp=Z,15nm,1.0s
CLL *i* pP sP 22 28 24.8 +0.4
comp=Z,97nm,1.9s
CLL *e*PPP PPP 22 31 04.0
CLL *e*S S 22 35 27.0 -2.3
CLL **Collm** 49.71 44 *e*P P 22 28 20.6 -0.1
comp=Z,15nm,1.0s,baz=260,slow=7.3
CLL **Collm** 49.71 44 P P 22 28 19.9 -0.7
CLL IAmb IAmb 22 28 37.2
comp=Z,54nm,1.5s
INTR **Introdacqua** 49.81 56 P P 22 28 18.4 -3.4
KSCO **Kaye Shedlock'** 49.83 300 P P 22 28 22.2 +0.1
baz=86
KHC **Kasperske Hory** 49.83 47 ⇑ *i*P P 22 28 21.6 -0.2
KHC pmax pmax 22 28 00.0
comp=Z,23nm,1.0s
KHC **Kasperske Hory** 49.83 47 *e*P P 22 28 21.7 -0.1
KHC *e*pP pwP 22 28 27.2 -1.0
KHC AMS AMS 22 43 40.0

comp=Z,800nm,20.9s
GEC2 GERESS Array S 49.89 47 *e*P **P** **22 28 22.2 -0.1**
comp=Z,97nm,2.2s,baz=260,slow=7.3
GEC2 *e*L L 22 46 21.2
comp=Z,306nm,18.8s
GERES GERESS Array B 49.89 47 P **P** **22 28 21.9 -0.4**
comp=Z,3.9nm,0.8s,baz=265,slow=6.7,SNR=30
GERES LR LR 22 46 22.9
comp=Z,306nm,18.4s,baz=258,slow=32
MOA Molln 50.19 49 *i* P **P** **22 28 24.0 -0.5**
comp=Z,12nm,1.3s
BRG Berggiesshubel 50.24 45 *e*P **P** **22 28 25.0 +0.2**
comp=Z,23nm,1.4s
BRG *i* 22 28 35.3
comp=Z,209nm,2.2s
BRG *e* 22 29 30.0
comp=Z,98nm,2.0s
BRG S **S** **22 35 45.0 +8.1**
comp=N,665nm,18.5s
comp=E,415nm,17.9s
comp=Z,1µm,19.3s
BRG Berggiesshubel 50.24 45 *e*P **P** **22 28 25.0 +0.2**
BRG S **S** **22 35 45.0 +8.1**
BRG pmax pmax
comp=Z,23nm,1.4s
BRG pmax pmax
comp=Z,209nm,2.2s
BRG pmax pmax
comp=Z,98nm,2.0s
BRG MLR MLR
comp=N,665nm,18.5s
BRG MLR MLR
comp=E,415nm,17.9s
BRG MLR MLR
comp=Z,1µm,19.3s
BRG Berggiesshubel 50.24 45 *e*P **P** **22 28 24.7 -0.1**
comp=Z,114nm,2.5s,baz=260,slow=7.3
LJU Ljubljana 50.29 51 *e*P **P** **22 28 25.9 +0.7**
FFC Flin Flon 50.30 320 P **P** **22 28 24.7 -0.5**
FFC pmax pmax
comp=Z,50nm,1.3s
FFC Flin Flon 50.30 320 P **P** **22 28 24.7 -0.5**
FFC IAmb IAmb 22 28 37.2
comp=Z,50nm,1.2s
OBKA Obir 50.32 50 *i* P **P** **22 28 25.6 0.0**
comp=Z,33nm,0.9s,SNR=9.7
MSTX Muleshoe 50.45 293 IAmb IAmb 22 28 39.0
comp=Z,112nm,1.8s
MSTX Muleshoe 50.45 293 P **P** **22 28 26.8 +0.1**
baz=82,SNR=5.7
PRA Prague 50.47 46 *e*P P 22 28 35.5 +9.0
PRA MLR MLR
comp=Z,800nm,24.7s
PRA Prague 50.47 46 AMS AMS 22 44 20.0
comp=Z,800nm,24.7s
PRU Pruhonice 50.54 46 *e*P **P** **22 28 27.7 +0.7**
PRU *e* 22 28 32.0
PRU MLR MLR
comp=Z,900nm,26.5s
PRU Pruhonice 50.54 46 *e*P **P** **22 28 27.7 +0.7**
PRU *e*p**P** **sP** **22 28 32.0 +1.2**
PRU AMS AMS 22 44 00.0
comp=Z,900nm,26.5s
NAO01 NORSAR Array S 50.60 31 P **P** **22 28 28.6 +1.3**
NBO00 NORSAR Array S 50.60 31 P **P** **22 28 28.6 +1.2**
PVCC Panska Ves 50.60 45 *e*P **P** **22 28 27.7 +0.2**
PVCC MLR MLR
comp=Z,1µm,31.1s
PVCC Panska Ves 50.60 45 *e*P **P** **22 28 27.7 +0.2**
PVCC AMS AMS 22 44 30.0
comp=Z,1µm,31.1s
SOKA Soboth 50.66 50 *i* P **P** **22 28 27.2 -0.9**
comp=Z,16nm,1.1s
NC204 NORSAR Array S 50.67 31 P **P** **22 28 28.8 +0.8**
RSSD Black Hills 50.72 307 P **P** **22 28 28.4 -0.4**
RSSD pmax pmax
comp=Z,43nm,2.0s
RSSD Black Hills 50.72 307 P **P** **22 28 28.4 -0.4**
RSSD Black Hills 50.72 307 P **P** **22 28 28.4 -0.4**
baz=90
NB2 NORSAR Subarra 50.81 31 P **P** **22 28 29.1 +0.2**
comp=Z,249nm,2.5s,baz=253,slow=7.9
NB2 NORSAR Subarra 50.81 31 P **P** **22 28 29.1 +0.2**
baz=253,slow=7.9
NOA NORSAR Array B 50.81 31 P **P** **22 28 28.9 -0.1**
comp=Z,7.0nm,0.9s,baz=253,slow=7.8,SNR=16
NOA LR LR 22 46 24.5
comp=Z,796nm,19.4s,baz=245,slow=32
NB201 NORSAR Array S 50.85 31 P **P** **22 28 30.2 +1.0**
NC602 NORSAR Array S 50.87 32 P **P** **22 28 30.0 +0.6**
NC303 NORSAR Array S 50.93 31 P **P** **22 28 29.9 0.0**
DGMT Dagmar 50.95 312 IAmb IAmb 22 28 42.3
comp=Z,70nm,1.4s
DGMT Dagmar 50.95 312 P **P** **22 28 29.8 -0.4**
baz=93
ARSA Arzberg 51.01 49 *i* P **P** **22 28 30.1 -0.6**
comp=Z,19nm,1.0s,SNR=10
NC405 NORSAR Array S 51.06 31 P **P** **22 28 31.1 +0.3**
TREC Trest 51.09 47 *e*P **P** **22 28 31.1 -0.2**
TREC Trest 51.09 47 *e*P **P** **22 28 31.1 -0.2**
CONA Conrad Observa 51.27 48 *i* P **P** **22 28 32.3 -0.4**
comp=Z,12nm,1.0s,SNR=6.7
PTGB Pitanga 51.28 189 *e*P **P** **22 28 33.6 +0.7**
MNMC Minye Minye 51.38 211 P **P** **22 28 32.5 -1.4**
MNMC IAmb IAmb 22 29 00.2
comp=Z,59nm,1.5s
T25A Trinidad 51.39 298 P **P** **22 28 33.8 -0.1**
T25A Trinidad 51.39 298 P **P** **22 28 34.4 +0.4**
baz=84,SNR=8.8
UPC Upice 51.52 45 *e*P **P** **22 28 34.7 +0.3**
UPC *e* 22 28 41.5
UPC MLR MLR
comp=Z,900nm,21.4s
UPC Upice 51.52 45 *e*P **P** **22 28 34.7 +0.3**
UPC *ex* x 22 28 41.5
UPC AMS AMS 22 44 40.0
comp=Z,900nm,21.4s
CHVC Chvalec 51.55 45 *e*P **P** **22 28 34.9 +0.2**
CHVC *ex* x 22 28 40.8
CHVC AMS AMS 22 48 20.0
comp=Z,900nm,19.6s
OSTC Ostas 51.65 45 *e*P **P** **22 28 35.6 +0.2**
OSTC *ex* x 22 28 41.9
OSTC AMS AMS 22 48 20.0
comp=Z,900nm,19.9s
GO01 Chusmiza 51.66 210 IAmb IAmb 22 28 37.0
comp=Z,65nm,1.1s
KRUC Moravsky 51.68 47 *e*P **P** **22 28 35.3 -0.3**
PAYG Puerto Ayora 51.70 246 P **P** **22 28 35.9 -0.4**
PAYG IAmb IAmb 22 28 43.6
comp=Z,48nm,0.9s
DPC Dobruska-Polom 51.71 45 *e*P **P** **22 28 35.5 -0.4**
DPC MLR MLR
comp=Z,800nm,20.3s
DPC Dobruska-Polom 51.71 45 *e*P **P** **22 28 35.5 -0.4**
DPC AMS AMS 22 44 40.0
comp=Z,800nm,20.3s
KSP Ksiaz 51.72 45 *e*P **P** **22 28 36.2 +0.3**
KSP Ksiaz 51.72 45 *e*P **P** **22 28 36.2 +0.3**
SOP Sopron 51.73 49⇑ *e*P **P** **22 28 36.1 +0.1**
Q24A Divide 51.80 300 IAmb IAmb 22 28 45.7
comp=Z,45nm,1.2s
Q24A Divide 51.80 300 P **P** **22 28 37.5 +0.4**
baz=85
VRAC Vranov 51.82 47 ⇓P **P** **22 28 37.0 +0.3**
VRAC Vranov 51.82 47 *e*P **P** **22 28 36.6 -0.1**
BEHE Becsehely 51.85 50 *e*P **P** **22 28 35.7 -1.3**
PHWY Pilot Hill 51.86 303 P **P** **22 28 36.6 -0.9**
KRLC Kraliky 51.98 46 *e*P **P** **22 28 38.1 +0.2**
KRLC MLR MLR
comp=Z,600nm,19.4s
KRLC Kraliky 51.98 46 *e*P **P** **22 28 38.1 +0.2**
KRLC AMS AMS 22 45 00.0
comp=Z,600nm,19.4s
TXAR Lajitas Array 51.99 288 P **P** **22 28 37.6 -0.7**
comp=Z,4.6nm,0.8s,baz=96,slow=8.1,SNR=45
TXAR PcP **PcP** **22 29 48.5 -2.2**
comp=Z,3.5nm,0.9s,baz=95,slow=4.5,SNR=5.7
TXAR LR LR 22 51 27.1
comp=Z,367nm,18.4s,baz=0.0,slow=37
DAG Danmarks Havn 52.02 7⇑ *i*P **P** **22 28 37.6 -0.1**
DAG pmax pmax
comp=Z,26nm,1.0s
DAG Danmarks Havn 52.02 7⇑ *i*P **P** **22 28 37.6 -0.1**
comp=Z,26nm,1.0s
ISCO Idaho Springs 52.08 301 P **P** **22 28 38.7 -0.5**
ISCO pmax pmax
comp=Z,40nm,1.9s
ISCO Idaho Springs 52.08 301 P **P** **22 28 38.7 -0.5**
ISCO Idaho Springs 52.08 301 P **P** **22 28 40.0 +0.8**
baz=85
ZST Bratislava 52.11 48 *e*P **P** **22 28 37.7 -1.1**
ZST pmax pmax
comp=Z,129nm,1.8s
ZST Bratislava 52.11 48 *e*P **P** **22 28 37.7 -1.1**
TIP Timpagrande 52.14 60 P **P** **22 28 37.8 -1.5**
TIP IAmb IAmb 22 29 24.0
comp=Z,72nm,1.7s
BLY Banja Luka 52.15 53 P **P** **22 28 40.1 +0.9**
BLY IAmb IAmb 22 29 01.9
comp=Z,74nm,1.7s
SDCO Great Sand Dun 52.19 299 P **P** **22 28 39.7 -0.3**
SDCO Great Sand Dun 52.19 299 P **P** **22 28 42.4 +2.4**
baz=84
MODS Modra-Piesok 52.23 48 *e*P **P** **22 28 38.7 -1.1**
MODS pmax pmax
comp=Z,110nm,1.6s
MODS Modra-Piesok 52.23 48 *e*P **P** **22 28 38.7 -1.1**
N23A Red Feather La 52.25 303 P **P** **22 28 39.5 -0.8**
N23A Red Feather La 52.25 303 P **P** **22 28 40.8 +0.4**
baz=86
LAO LASA Array 52.27 310 P **P** **22 28 39.5 -0.6**
LAO LASA Array 52.27 310 P **P** **22 28 37.7 -2.4**
baz=90
MOIG Morelia 52.32 275 P **P** **22 28 40.1 -1.0**
SMOL Smolenice 52.34 48 *e*P **P** **22 28 40.6 +0.1**
SMOL pmax pmax
comp=Z,23nm,1.7s
SMOL Smolenice 52.34 48 *e*P **P** **22 28 40.6 +0.1**
MORC Moravsky Berou 52.46 46⇑P **P** **22 28 41.8 +0.3**
MORC Moravsky Berou 52.46 46 *e*P **P** **22 28 40.8 -0.7**
MORC Moravsky Berou 52.46 46 IAmb IAmb 22 28 54.3
comp=Z,116nm,1.9s
JAVC Velka Javorina 52.51 47 *e*P **P** **22 28 41.8 -0.1**
K22A Casper 52.58 305 P **P** **22 28 41.3 -1.4**
K22A Casper 52.58 305 P **P** **22 28 42.2 -0.5**
baz=87,SNR=7.1
TIH Tihany 52.63 50⇑ *e*P **P** **22 28 43.2 +0.5**
ZAIG Zacatecas 52.63 279 P **P** **22 28 43.2 -0.3**
OKC Ostrava-Krasne 52.85 46 *e*P **P** **22 28 44.4 +0.1**
OKC *e* 22 28 50.6
OKC MLR MLR
comp=Z,600nm,20.6s
OKC Ostrava-Krasne 52.85 46 *e*P **P** **22 28 44.4 +0.1**
OKC *e*p**P** **pwP** **22 28 50.6 -0.2**
OKC AMS AMS 22 48 00.0
comp=Z,600nm,20.6s
SRO Srobarova 52.92 49 *e*P **P** **22 28 44.2 -0.6**
SRO pmax pmax
comp=Z,96nm,1.8s
SRO Srobarova 52.92 49 *e*P **P** **22 28 44.2 -0.6**
MNTX Cornudas Mount 52.98 291 P **P** **22 28 44.9 -0.7**
baz=79,SNR=9.6
RWWY Rawlins 53.15 304 IAmb IAmb 22 29 09.5
comp=Z,66nm,1.5s
SMCO Snowmass 53.19 301 P **P** **22 28 46.8 -0.7**
S22A 4UR Ranch, Cre 53.24 299 IAmb IAmb 22 29 01.4
comp=Z,87nm,1.8s
S22A 4UR Ranch, Cre 53.24 299 P **P** **22 28 48.6 +0.9**
baz=83,SNR=8.9
VYHS Vyhne 53.27 48 *e*P **P** **22 28 47.1 -0.4**
VYHS pmax pmax
comp=Z,131nm,2.1s
VYHS Vyhne 53.27 48 *e*P **P** **22 28 47.1 -0.4**
ANMO Albuquerque 53.32 295⇑ *e*P **P** **22 28 48.9 +0.6**
ANMO pmax pmax
comp=Z,49nm,2.5s
ANMO Albuquerque 53.32 295 P **P** **22 28 49.1 +0.9**
ANMO IAmb IAmb 22 29 01.9
comp=Z,85nm,1.7s
ANMO Albuquerque 53.32 295 P **P** **22 28 49.2 +0.9**
baz=81
LANS Liptovska Anna 53.70 47 *e*P **P** **22 28 53.8 +3.2**
LANS pmax pmax
comp=Z,14nm,1.7s
LANS Liptovska Anna 53.70 47 *e*P **P** **22 28 53.8 +3.2**
PDG Podgorica 53.76 55⇑P **P** **22 28 51.6 +0.5**
ITAB Concordia 53.77 189 *e*P **P** **22 28 52.5 +1.3**
CPUP Villa Florida 53.82 194 P **P** **22 28 51.6 +0.1**
CPUP pmax pmax
comp=Z,44nm,1.4s
CPUP Villa Florida 53.82 194 P **P** **22 28 51.1 -0.4**
comp=Z,11nm,1.2s,baz=12,slow=6.3,SNR=11
CPUP PcP **PcP** **22 29 55.3 -2.0**
comp=Z,5.9nm,1.1s,baz=17,slow=6.8,SNR=2.9
CPUP LR LR 22 52 05.6
comp=Z,535nm,18.5s,baz=20,slow=36
CPUP Villa Florida 53.82 194 P **P** **22 28 51.6 +0.1**
CPUP IAmb IAmb 22 28 57.9
comp=Z,44nm,1.4s
Y22D IRIS PASSCAL I 53.84 294 P **P** **22 28 53.1 +1.1**
Y22D IRIS PASSCAL I 53.84 294 P **P** **22 28 54.7 +2.7**
baz=80
OJC Ojcow 53.93 46 *e*P **P** **22 28 52.7 +0.5**
OJC Ojcow 53.93 46 *e*P **P** **22 28 52.7 +0.5**
PSZ Piszkesteto 53.98 49 P **P** **22 28 52.5 -0.2**
PSZ pmax pmax
comp=Z,79nm,1.8s
PSZ Piszkesteto 53.98 49 P **P** **22 28 52.5 -0.2**
PSZ IAmb IAmb 22 29 08.2
comp=Z,79nm,1.8s
O20A White River Ci 54.06 302 P **P** **22 28 52.3 -1.3**
O20A IAmb IAmb 22 29 37.6
comp=Z,88nm,1.6s
O20A White River Ci 54.06 302 P **P** **22 28 54.3 +0.6**
baz=84
LVC Limon Verde 54.12 208 P **P** **22 28 54.3 0.0**
LVC pmax pmax
comp=Z,33nm,1.2s
LVC Limon Verde 54.12 208 *e*P **P** **22 28 54.3 0.0**
LVC Limon Verde 54.12 208 P **P** **22 28 54.3 0.0**
LVC IAmb IAmb 22 29 00.2
comp=Z,33nm,1.2s
NIE Niedzica 54.24 47 *e*P **P** **22 28 55.7 +1.1**
NIE Niedzica 54.24 47 *e*P **P** **22 28 55.7 +1.1**
HPIG 54.25 285 IAmb IAmb 22 29 08.0
comp=Z,89nm,1.5s
TIR Tirane 54.30 57 P **P** **22 28 55.9 +0.8**
TIR pmax pmax
comp=Z,117nm,1.3s
TIR Tirane 54.30 57 P **P** **22 28 55.9 +0.8**
KLNR Kaliningrad 54.37 40⇓ *e*P **P** **22 28 54.1 -1.2**
KLNR pmax pmax
comp=Z,111nm,1.2s
PB04 IPOC Station P 54.42 210 P **P** **22 28 55.9 -0.3**
PB04 IAmb IAmb 22 29 23.9
comp=Z,61nm,1.3s
RLMT Red Lodge 54.43 308 IAmb IAmb 22 29 05.0
comp=Z,105nm,1.7s
RLMT Red Lodge 54.43 308 P **P** **22 28 56.6 +0.3**
baz=87,SNR=18
BEL Belsk 54.59 44 *e*P **P** **22 28 58.3 +1.3**
BEL Belsk 54.59 44 *e*P **P** **22 28 58.3 +1.3**
MVCO Mesa Verde 54.62 298 P **P** **22 28 56.8 -1.0**
MVCO IAmb IAmb 22 29 27.7
comp=Z,43nm,1.2s
MVCO Mesa Verde 54.62 298 P **P** **22 28 58.9 +1.0**
baz=82,SNR=13
EGMT Eagleton 54.66 312 P **P** **22 28 57.6 -0.1**
baz=89,SNR=23
GCMT Greycliff 54.68 309 P **P** **22 28 56.8 -1.1**
RES Resolute Bay 54.75 345 P **P** **22 28 57.2 -0.6**
comp=Z,11nm,1.0s,baz=134,slow=6.7,SNR=25
RES Resolute Bay 54.75 345 IAmb IAmb 22 29 06.3
comp=Z,70nm,1.4s
BW06 Boulder Array 54.80 305 IAmb IAmb 22 29 11.0
comp=Z,54nm,1.3s
BW06 Boulder Array 54.80 305 P **P** **22 28 58.6 -0.4**
baz=85,SNR=29
PD31 Pinedale Array 54.80 305 IAmb IAmb 22 29 11.0
comp=Z,49nm,1.3s
PDAR Pinedale Array 54.80 305 P **P** **22 28 58.4 -0.6**
comp=Z,14nm,0.8s,baz=92,slow=7.4,SNR=90
PDAR LR LR 22 51 14.4
comp=Z,2µm,18.8s,baz=98,slow=35
121A Cookes Peak, D 54.83 293 P **P** **22 28 59.3 +0.1**
121A Cookes Peak, D 54.83 293 P **P** **22 29 00.0 +0.7**
baz=79,SNR=15
BZS Buzias 55.25 51⇑P **P** **22 29 02.5 +0.7**
LKWY Lake 55.27 307 IAmb IAmb 22 29 11.8
comp=Z,45nm,1.3s
YUF Upper Falls 55.34 308 P **P** **22 29 03.3 +0.4**
LTVH Ltavrtes, Hu 55.35 49 *e*P **P** **22 29 00.8 -1.8**
MDVR Moldovita 55.37 52⇑P **P** **22 29 03.2 +0.4**
H17A Grant Village 55.41 307 P **P** **22 29 04.0 +0.6**
H17A IAmb IAmb 22 29 30.2
comp=Z,64nm,1.7s
H17A Grant Village 55.41 307 P **P** **22 29 05.0 +1.6**
baz=86
SKO Skopje 55.42 56 *i* P **P** **22 29 03.8 +0.6**
YNM Yellowstone No 55.47 308 P **P** **22 29 04.1 +0.2**
FNA Florina 55.50 57 P **P** **22 29 05.4 +1.5**
FNA pmax pmax
comp=Z,94nm,1.8s
FNA Florina 55.50 57 P **P** **22 29 05.4 +1.5**
FNA IAmb IAmb 22 29 16.0
comp=Z,94nm,1.8s
FLWY Flagg Ranch 55.52 307 IAmb IAmb 22 29 12.7
comp=Z,48nm,1.2s
KOLS Kolonicke sedl 55.55 47 *e*P **P** **22 29 04.7 +0.7**
KOLS pmax pmax
comp=Z,87nm,2.0s
KOLS Kolonicke sedl 55.55 47 *e*P **P** **22 29 04.7 +0.7**
UZH Uzhgorod 55.57 48*c* *i*P **P** **22 29 04.2 +0.1**
UZH *e*S **S** **22 36 45.0 -4.5**
UZH MLR MLR
comp=Z,1µm,17.0s
MOOW Moose Ponds 55.58 306 IAmb IAmb 22 29 12.8
comp=Z,58nm,1.9s
SNOW Snow King Moun 55.61 306 IAmb IAmb 22 29 17.5
comp=Z,57nm,1.4s
PB10 IPOC Station P 55.63 209 P **P** **22 29 05.9 +1.1**
CNLB Canela 55.67 187 *e*P **P** **22 29 06.4 +1.4**
REDW Red Top Meadow 55.69 306 IAmb IAmb 22 29 49.9
comp=Z,104nm,1.7s
TRPA Tarpa 55.75 48⇑P **P** **22 29 06.1 +0.7**
TPAW Teton Pass 55.75 306 IAmb IAmb 22 29 14.3
comp=Z,43nm,1.2s
YHL Hebgen Lake 55.80 308 P **P** **22 29 06.6 +0.3**
KWP Kalwaria Pacla 55.81 46 *e*P **P** **22 29 06.9 +1.0**
KWP Kalwaria Pacla 55.81 46 *e*P **P** **22 29 06.9 +1.0**
YHB Horse Butte 55.82 308 P **P** **22 29 06.9 +0.5**
AHID Auburn Hatcher 55.93 305 IAmb IAmb 22 29 19.4
comp=Z,44nm,1.4s
DRGR 55.94 50⇑P **P** **22 29 07.1 +0.2**
W18A Petrified Fore 55.95 296 P **P** **22 29 07.5 +0.2**
W18A IAmb IAmb 22 29 20.4
comp=Z,111nm,1.7s
W18A Petrified Fore 55.95 296 P **P** **22 29 08.1 +0.8**
baz=80
QLMT Earthquake Lak 55.98 308 P **P** **22 29 08.0 +0.6**
GZR Gura Zlata 56.08 52⇑P **P** **22 29 08.3 +0.4**
SUW Suwalki 56.09 41 P **P** **22 29 08.5 +0.7**
SUW pmax pmax
comp=Z,100nm,1.6s
SUW Suwalki 56.09 41 P **P** **22 29 08.4 +0.7**
SUW IAmb IAmb 22 29 23.6
comp=Z,100nm,1.6s
DEV Deva 56.13 51⇑P **P** **22 29 08.7 +0.5**
X18A Snowflake 56.23 295 P **P** **22 29 08.8 -0.5**
PUNG Punghina 56.28 53⇓P **P** **22 29 10.0 +0.7**
319A Douglas 56.31 291 P **P** **22 29 09.0 -0.8**
319A IAmb IAmb 22 29 49.4
comp=Z,38nm,1.2s
VAY Valandovo 56.33 56 *i* P **P** **22 29 10.3 +0.6**
TCUT Toone Canyon 56.35 303 P **P** **22 29 08.7 -1.5**
SHEL Horse Pasture 56.40 134 P **P** **22 29 11.6 +1.1**
SHEL pmax pmax
comp=Z,149nm,1.4s
SHEL Horse Pasture 56.40 134 P **P** **22 29 11.6 +1.1**
NOR Nord 56.41 5⇑ *i*P **P** **22 29 09.4 -0.3**
comp=Z,21nm,0.9s
ITM Ithomi 56.43 61 P **P** **22 29 09.4 -1.1**
LIT Litokhoron 56.43 58 IAmb IAmb 22 29 19.4
comp=Z,33nm,1.1s
SRE Strehaia 56.44 52⇓P **P** **22 29 11.0 +0.6**
AGG Agios Georgios 56.46 59 IAmb IAmb 22 29 26.7
comp=Z,40nm,1.1s
CJR Cluj-Napoca 56.55 50⇓P **P** **22 29 11.7 +0.4**
PABE Paberze 56.58 39 *e*P **P** **22 29 11.1 -0.1**
LRM Limekiln Ridge 56.62 309 P **P** **22 29 11.7 -0.3**
LVV L'vov 56.66 46 *e*P **P** **22 29 12.2 +0.3**
LVV *e* 22 30 13.5
LVV *e* 22 31 22.5
LVV *e*S **S** **22 37 00.7 -3.4**
MPU Maple Canyon 56.66 302 P **P** **22 29 11.9 -0.5**
GO02 Mina Guanaco 56.67 207 P **P** **22 29 11.9 -0.7**
GO02 IAmb IAmb 22 29 18.4
comp=Z,31nm,1.1s
VTS Vitosha 56.67 55⇑P **P** **22 29 13.1 +0.8**
VTS Vitosha 56.67 55 IAmb IAmb 22 29 27.1
comp=Z,44nm,1.6s
NLU North Lily Min 57.01 302 P **P** **22 29 15.0 +0.2**
ARCR ARCALIA 57.04 49⇓P **P** **22 29 15.1 +0.4**
WUAZ Wupatki 57.19 297 P **P** **22 29 16.3 +0.1**
WUAZ IAmb IAmb 22 29 29.7
comp=Z,82nm,1.4s
WUAZ Wupatki 57.19 297 P **P** **22 29 17.0 +0.8**
baz=79,SNR=22
HVU Hansel Valley 57.28 304 P **P** **22 29 16.0 -0.7**
HVU pmax pmax
comp=Z,10.0nm,0.6s
HVU Hansel Valley 57.28 304 P **P** **22 29 16.0 -0.7**
MSU Marysvale 57.30 300 P **P** **22 29 17.1 +0.1**
MSU Marysvale 57.30 300 P **P** **22 29 17.1 +0.1**
TUC Tucson 57.35 293 P **P** **22 29 17.8 +0.5**
TUC pmax pmax
comp=Z,66nm,1.6s
TUC Tucson 57.35 293 P **P** **22 29 17.8 +0.5**
TUC IAmb IAmb 22 29 47.8
comp=Z,66nm,1.6s
TUC Tucson 57.35 293 P **P** **22 29 18.0 +0.8**
baz=78
WALA Waterton Lakes 57.37 313 P **P** **22 29 15.7 -1.4**
ARR Arges 57.38 51⇑P **P** **22 29 17.4 +0.2**
MTPU Mount Pierson 57.39 300 P **P** **22 29 17.3 -0.5**
X16A Lo Mia Camp, P 57.46 295 P **P** **22 29 18.4 +0.4**
X16A IAmb IAmb 22 29 32.0
comp=Z,48nm,1.6s
TCRU Three Creeks R 57.50 301 P **P** **22 29 18.1 -0.3**
DUG Dugway, Tooele 57.53 302 IAmb IAmb 22 29 31.0
comp=Z,40nm,1.2s
DUG Dugway, Tooele 57.53 302 P **P** **22 29 18.6 +0.2**
baz=82,SNR=30
MSO Missoula 57.56 310 P **P** **22 29 18.3 -0.2**
MSO IAmb IAmb 22 30 02.8
comp=Z,63nm,1.9s
MSO Missoula 57.56 310 P **P** **22 29 19.4 +0.9**
baz=85
BURAR Bucovina Array 57.58 49⇑P **P** **22 29 19.1 +0.4**
BURAR Bucovina Array 57.58 49 P **P** **22 29 19.0 +0.4**
PKCU Pink Cliffs 57.59 299 P **P** **22 29 18.6 -0.6**
PLVB Pleven 57.59 54⇑P **P** **22 29 18.8 +0.2**
VOIR 57.67 51⇓P **P** **22 29 18.9 -0.4**
JTMT Jette 57.71 311 P **P** **22 29 19.0 -0.6**
HUMR Humele 57.72 52⇑P **P** **22 29 19.4 -0.1**
U15A North Rim 57.75 298 P **P** **22 29 20.4 +0.2**
U15A IAmb IAmb 22 29 33.9
comp=Z,53nm,1.4s
ISAL Salakas 57.80 39 *e*P **P** **22 29 20.2 +0.3**
ISAL IAmb IAmb 22 29 36.6
comp=Z,34nm,1.2s
DOPR Dopca 57.85 51⇑P **P** **22 29 20.4 -0.1**
YKA Yellowknife Ar 57.86 329 P **P** **22 29 18.9 -1.3**
comp=Z,12nm,0.8s,baz=94,slow=7.6,SNR=138
YKA LR LR 22 52 59.4
comp=Z,5µm,20.7s,baz=0.0,slow=35
IIGN Ignalina 57.86 40 *e*P **P** **22 29 20.7 +0.4**
IIGN IAmb IAmb 22 29 37.0
comp=Z,21nm,1.2s
IZAR Zarasai 57.87 39 *e*P **P** **22 29 20.7 +0.3**
FINES FINESS Array B 57.94 32 P **P** **22 29 19.9 -0.8**
comp=Z,13nm,0.8s,baz=283,slow=3.3,SNR=22
FINES LR LR 22 51 20.1
comp=Z,637nm,18.6s,baz=262,slow=33
KBS Kingsbay 58.06 11 P **P** **22 29 22.0 +0.6**
KBS pmax pmax
comp=Z,67nm,1.6s
KBS Kingsbay 58.06 11 P **P** **22 29 22.0 +0.6**
KBS IAmb IAmb 22 29 38.9
comp=Z,67nm,1.6s
KNB Kanab 58.06 299 P **P** **22 29 21.6 -0.7**
KNB pmax pmax
comp=Z,39nm,1.4s
KNB Kanab 58.06 299 P **P** **22 29 21.6 -0.7**

VSU Vasula 58.15 36*c i*P P 22 29 21.6 -0.7**
VSU pmax pmax
comp=Z,52nm,0.8s
VSU Vasula 58.15 36 *e*P P 22 29 21.9 -0.4**
VSU IAmb IAmb 22 29 22.6
comp=Z,56nm,0.7s
SZCU Shurtz Canyon 58.17 299 P P 22 29 22.6 -0.4**
NACGM Naroch 58.19 40 *e* P 22 29 23.0 +0.4**
NACGM *e*LR LR 22 48 14.0
BIZ Bicaz 58.24 49 ⇑P P 22 29 23.4 +0.3**
HSIG 58.26 289 P P 22 29 23.1 -0.5**
HSIG IAmb IAmb 22 29 36.6
comp=Z,48nm,1.5s
PRAR RASCA 58.29 49 ⇑P P 22 29 23.3 -0.2**
MLR Muntele Rosu 58.29 51 ⇓P P 22 29 24.5 +0.8**
CCUT Cedar City 58.39 299 P P 22 29 24.8 +0.1**
PLTB Pedras Altas 58.43 189 *e*P P 22 29 25.3 +0.8**
SPA0 Spitsbergen Ar 58.53 12 P P 22 29 25.6 +0.9**
SPA0 IAmb IAmb 22 29 41.9
comp=Z,75nm,1.4s
ELND Elena 58.56 54 ⇑P P 22 29 26.0 +0.5**
ARCES ARCESS Array B 58.58 23 P P 22 29 24.4 -0.8**
comp=Z,15nm,0.8s,baz=263,slow=5.7,SNR=26
ARCES LR LR 22 48 53.6
comp=Z,374nm,21.8s,baz=290,slow=30
PSUT Pine Spring 58.60 301 P P 22 29 25.4 -0.7**
SULR 58.60 52 ⇓P P 22 29 25.7 0.0**
TESR Tescani 58.66 50 ⇓P P 22 29 25.9 -0.2**
PLOR Plostina 58.74 51 ⇓P P 22 29 27.1 +0.4**
ISR Istrita 58.75 52 ⇓P P 22 29 27.0 +0.2**
VRI Vrincioaia 58.79 51 ⇓P P 22 29 26.9 -0.1**
BISRR Bisoca 58.82 51 ⇑P P 22 29 27.8 +0.6**
Y14A Wickenburg 58.82 295 IAmb IAmb 22 29 40.9
comp=Z,67nm,1.5s
MICGM Minsk 58.84 40 *e* P 22 29 26.0 -1.2**
MNK Minsk 58.84 40 *e*P P 22 29 26.0 -1.2**
RAZG Razgrad 58.93 53 ⇓P P 22 29 28.2 +0.2**
ALN Alexandroupoli 58.99 56 P P 22 29 28.0 -0.4**
ALN pmax pmax
comp=Z,31nm,1.3s
ALN Alexandroupoli 58.99 56 P P 22 29 28.0 -0.4**
ALN IAmb IAmb 22 29 44.6
comp=Z,31nm,1.3s
ODBI Odobesti 59.03 51 ⇑P P 22 29 28.3 -0.4**
GO03 Copiap 59.09 207 IAmb IAmb 22 29 34.4
comp=Z,40nm,1.4s
214A Organ Pipe Nat 59.11 293 P P 22 29 30.3 +0.8**
baz=76,SNR=22
PETR Petresti 59.16 51 ⇓P P 22 29 29.4 -0.1**
IAS Iasi 59.21 49 ⇑P P 22 29 30.5 +0.6**
ELK Elko 59.27 303 P P 22 29 30.0 -0.8**
ELK Elko 59.27 303 P P 22 29 30.0 -0.8**
comp=Z,13nm,0.9s,baz=69,slow=5.7,SNR=42
ELK LR LR 22 53 53.3
comp=Z,2µm,19.2s,baz=82,slow=35
W13A Hualapai Mount 59.29 297 P P 22 29 31.2 +0.4**
W13A IAmb IAmb 22 29 44.6
comp=Z,43nm,1.5s
SANT Santorini 59.36 62 P P 22 29 27.6 -3.6**
NEW Newport 59.56 312 P P 22 29 32.1 -0.2**
comp=Z,38nm,0.9s,baz=89,slow=6.3,SNR=78
NEW LR LR 22 53 43.1
comp=Z,3µm,19.6s,baz=83,slow=35
NEW Newport 59.56 312 P P 22 29 32.1 -0.2**
baz=84,SNR=46
SORM Soroca 59.63 48 ⇑P P 22 29 31.3 -1.5**
113A Mohawk Valley, 59.71 294 P P 22 29 33.2 -0.4**
113A IAmb IAmb 22 29 46.7
comp=Z,54nm,1.6s
LEOM Leova 59.76 50 ⇓P P 22 29 33.3 -0.4**
ICOR Ion Corvin 59.78 53 ⇑P P 22 29 33.2 -0.6**
HARR Harsova 59.79 52 ⇓P P 22 29 33.2 -0.7**
SRIG Santa Rosalia 59.81 288 P P 22 29 34.4 +0.1**
SRIG IAmb IAmb 22 29 48.6
comp=Z,28nm,0.9s
CFR Carcaliu 59.86 51 ⇑P P 22 29 33.3 -1.1**
F10A Beach Ranch, E 59.92 310 IAmb IAmb 22 29 36.4
comp=Z,22nm,0.9s
AKASG Malin Array Be 59.92 45*ce*P P 22 29 33.0 -1.7**
AKASG pmax pmax
comp=Z,11nm,0.8s
AKASG Malin Array Be 59.92 45 P P 22 29 33.7 -1.0**
comp=Z,11nm,0.8s,baz=275,slow=5.9,SNR=12
AKASG LR LR 22 53 52.6
comp=Z,588nm,18.4s,baz=295,slow=34
AKBB Malin Array Si 59.92 45*ce*P P 22 29 33.9 -0.8**
AKBB Malin Array Si 59.92 45 IAmb IAmb 22 29 50.3
comp=Z,44nm,1.3s
NEE2 Needles Airpor 59.95 297 P P 22 29 36.1 +0.9**
baz=77
R11A Troy Canyon, C 59.97 301 P P 22 29 34.9 -0.6**
R11A Troy Canyon, C 59.97 301 P P 22 29 35.7 +0.2**
baz=79,SNR=12
PUL Pulkovo 60.00 34⇑ *e*P P 22 29 35.2 +0.1**
PUL pmax pmax
comp=Z,29nm,0.7s
SHPR Sheep Range 60.01 299 P P 22 29 35.1 -0.7**
KIS Kishinev 60.08 49 *e*P P 22 29 34.0 -1.9**
comp=Z,330nm,2.4s
KIS Kishinev 60.08 49 *e*PcP PcP 22 30 11.0 -11
KIS *e*L L 22 49 26.0
KIS LRM MLR 22 57 38.0
comp=Z,300nm,16.0s
KIS Kishinev 60.08 49 *e*P P 22 29 34.0 -1.9**
KIS pmax pmax
comp=Z,330nm,2.4s
KIS MLR MLR
comp=Z,300nm,16.0s
MILM Milestii Mici 60.09 49 ⇑P P 22 29 34.9 -1.1**
Y12C Blythe 60.10 295 P P 22 29 35.7 -0.5**
Y12C IAmb IAmb 22 29 49.6
comp=Z,98nm,1.9s
Y12C Blythe 60.10 295 P P 22 29 36.9 +0.7**
baz=77
TIRR Tigusor 60.16 52 ⇑P P 22 29 35.5 -0.9**
C09A Chrisman Ranch 60.38 312 P P 22 29 37.5 -0.5**
E09A Wood Farm, Sta 60.47 310 IAmb IAmb 22 29 46.4
comp=Z,32nm,1.3s
GLA Glamis 60.51 295 P P 22 29 38.3 -0.8**
GLA Glamis 60.51 295 P P 22 29 38.3 -0.8**
GLA IAmb IAmb 22 29 52.4
comp=Z,57nm,1.4s
GLA Glamis 60.51 295 P P 22 29 39.9 +0.8**
baz=76,SNR=5.1
IRM Iron Mountain 60.51 296 P P 22 29 39.7 +0.6**
baz=77,SNR=14
TPNV Topopah Spring 60.77 299 P P 22 29 41.6 +0.6**
TPNV pmax pmax
comp=Z,88nm,1.8s
TPNV Topopah Spring 60.77 299 P P 22 29 41.6 +0.6**
TPNV IAmb IAmb 22 29 50.2
comp=Z,88nm,1.8s
TPNV Topopah Spring 60.77 299 P P 22 29 41.9 +0.9**
baz=78,SNR=21
GMRC Granite Mounta 60.78 297 P P 22 29 41.5 +0.5**
baz=77,SNR=14
BMN Battle Mountai 60.81 303 P P 22 29 40.7 -0.5**
BMN pmax pmax
comp=Z,16nm,1.2s
BMN Battle Mountai 60.81 303 P P 22 29 40.7 -0.5**
TUQ Turquoise Moun 60.84 298 P P 22 29 42.4 +0.9**
baz=77,SNR=10.0
BC3 Big Chuckawall 60.87 295 P P 22 29 42.5 +0.8**
baz=76,SNR=7.8
KARP Karpathos 60.89 62 P P 22 29 41.3 -0.3**
PNT Penticton 61.07 314 P P 22 29 54.3 +12
PNT pmax pmax
comp=Z,12nm,1.1s
E08A Dider Farm, El 61.10 310 P P 22 29 42.7 -0.2**
E08A IAmb IAmb 22 29 55.3
comp=Z,56nm,1.3s
J08A Circle Bar Ran 61.20 307 IAmb IAmb 22 29 56.4
comp=Z,45nm,1.3s
G08A Pilot Rock 61.22 309 IAmb IAmb 22 29 53.2
comp=Z,53nm,1.8s
BELC Belle Mtn. Jos 61.23 296 P P 22 29 44.9 +0.7**
baz=76,SNR=7.7
HEC Hector,Ludlow 61.31 297 P P 22 29 45.2 +0.7**
baz=76
APA Apatity 61.31 25⇑ *i*P P 22 29 41.0 -2.9**
APA pmax pmax
comp=Z,13nm,1.0s
SWSC Sam W. Stewart 61.33 295 P P 22 29 45.2 +0.6**
baz=76
FURC Furnace Creek, 61.35 299 P P 22 29 45.9 +1.2**
baz=77
YER Yerkesik 61.42 60 P P 22 29 52.4 +7.1**
YER pmax pmax
comp=Z,15nm,1.3s
GSC Goldstone, Bar 61.57 298 P P 22 29 45.5 -0.9**
GSC pmax pmax
comp=Z,15nm,1.2s
GSC Goldstone, Bar 61.57 298 P P 22 29 45.5 -0.9**
GSC Goldstone, Bar 61.57 298 P P 22 29 46.9 +0.5**
baz=76,SNR=7.0
GO04 Tololo Observa 61.60 206 P P 22 29 45.7 -0.9**
GO04 IAmb IAmb 22 31 19.5
comp=Z,29nm,1.3s
GRAC Grapevine Rang 61.63 300 P P 22 29 47.6 +0.9**
baz=77
E07A Sunnyside 61.63 311 IAmb IAmb 22 29 48.4
comp=Z,40nm,0.9s
IKP In-Ko-Pah, Jac 61.65 294 P P 22 29 47.9 +1.0**
baz=76,SNR=17
TPFO Pinon Flats 61.70 296 P P 22 29 48.4 +1.1**
baz=76,SNR=8.2
XPFO Pion Flat 61.70 296 P P 22 29 47.2 -0.1**
XPFO IAmb IAmb 22 30 00.6
comp=Z,77nm,1.8s
PFO Pinyon Flats O 61.70 296*ce*P P 22 29 47.8 +0.5**
PFO pmax pmax
comp=Z,12nm,1.0s
PFO Pinyon Flats O 61.70 296 P P 22 29 47.4 +0.2**
PFO IAmb IAmb 22 30 00.5
comp=Z,76nm,1.8s
PFO Pinyon Flats O 61.70 296 P P 22 29 48.0 +0.7**
baz=76,SNR=7.7
KVN Kaiserville 61.75 302 IAmb IAmb 22 30 01.5
comp=Z,41nm,1.6s
F07A Phinny Hill Vi 61.79 310 P P 22 29 46.5 -1.0**
F07A IAmb IAmb 22 29 59.9
comp=Z,40nm,1.1s
I07A Izee 61.81 308 P P 22 29 47.2 -0.7**
I07A IAmb IAmb 22 30 01.4
comp=Z,41nm,1.4s
MONP2 Monument Peak 61.85 295 P P 22 29 49.2 +0.8**
baz=75,SNR=16
NV11 Mina Array Sit 61.93 301 P P 22 29 47.5 -1.3**
MPMC Manual Prospec 61.94 299 P P 22 29 49.7 +0.8**
baz=77,SNR=14
DAC Darwin (Calif) 61.97 299 P P 22 29 49.0 -0.2**
DAC pmax pmax
comp=Z,43nm,1.5s
DAC Darwin (Calif) 61.97 299 P P 22 29 49.0 -0.2**
DAC IAmb IAmb 22 30 05.2
comp=Z,43nm,1.4s
C36M Paulatuk 61.98 337 P P 22 29 48.4 0.0**
NVAR Mina Array Bea 62.04 301 P P 22 29 48.7 -0.9**
comp=Z,4.5nm,0.8s,baz=80,slow=5.8,SNR=27
NVAR LR LR 22 54 57.7
comp=Z,3µm,20.8s,baz=70,slow=34
LTY Liberty 62.07 312 IAmb IAmb 22 30 01.2
comp=Z,46nm,1.2s
BAR Barrett 62.10 295 P P 22 29 49.4 -0.6**
BAR IAmb IAmb 22 30 02.9
comp=Z,57nm,1.7s
C06D Leavenworth 62.11 312 P P 22 29 49.4 -0.3**
baz=81
LRMC Laurel Mtn Rad 62.23 298 P P 22 29 51.4 +0.5**
baz=76,SNR=5.3
TIN Tinemaha, Big 62.29 300 P P 22 29 52.4 +1.2**
baz=77
MURC Murrieta 62.30 296 P P 22 29 52.0 +0.8**
baz=76
CWC Cedarwood Cre 62.32 299 P P 22 29 52.5 +1.1**
baz=76
LLLB Lillooet 62.34 315 IAmb IAmb 22 30 02.3
comp=Z,32nm,1.1s
G06A Carlson Farm, 62.40 309 P P 22 29 51.1 -0.6**
109C Camp Elliot, M 62.40 295 P P 22 29 51.1 -0.8**
109C Camp Elliot, M 62.40 295 P P 22 29 52.6 +0.7**
baz=75
B06A Marblemount 62.41 313 P P 22 29 50.1 -1.5**
B06A IAmb IAmb 22 30 39.2
comp=Z,52nm,1.8s
BFSC Mount Baldy Ra 62.51 297 P P 22 29 52.7 0.0**
baz=76,SNR=5.2
PAHR Pah Rah Range 62.59 303 IAmb IAmb 22 30 01.1
comp=Z,49nm,1.4s
EDW2 Edwards Air Fo 62.62 297 P P 22 29 53.9 +0.5**
baz=76,SNR=16
YERR Yerington 62.63 302 P P 22 29 52.4 -1.2**
OMMB Old Mammoth Mi 62.76 301 P P 22 29 53.2 -1.4**
OMMB IAmb IAmb 22 30 03.8
comp=Z,64nm,1.9s
ISA Isabella, Lake 62.81 298 IAmb IAmb 22 30 08.2
comp=Z,53nm,1.3s
ISA Isabella, Lake 62.81 298 P P 22 29 56.0 +1.4**
baz=76,SNR=19
MDPB Devils Postpil 62.82 301 P P 22 29 54.2 -0.7**
MWC Mount Wilson 62.84 297 P P 22 29 54.4 -0.6**
MWC pmax pmax
comp=Z,55nm,1.6s
MWC Mount Wilson 62.84 297 P P 22 29 54.4 -0.6**
MWC IAmb IAmb 22 30 07.6
comp=Z,55nm,1.6s
F05D White Salmon 62.85 310 P P 22 29 54.8 +0.1**
baz=79
B05A Bryant 62.85 313 P P 22 29 52.5 -2.1**
baz=80,SNR=9.2
G05D Wamic, OR 62.87 309 P P 22 29 55.4 +0.6**
baz=79,SNR=8.8
VCNR Virginia City 62.88 303 P P 22 29 54.4 -0.8**
VCNR IAmb IAmb 22 30 17.0
comp=Z,27nm,1.3s
PINE Pine Mountain 62.88 308 P P 22 29 55.0 -0.1**
PNTR Pine Nut 62.88 302 P P 22 29 54.3 -0.9**
WAKR Walker 62.89 302 P P 22 29 54.8 -0.5**
WAKR IAmb IAmb 22 30 18.7
comp=Z,44nm,1.7s
PASC Pasadena Art C 62.95 297 P 22 29 55.1 -0.4**
PASC Pasadena Art C 62.95 297 P P 22 29 54.5 -1.1**
D05A Enumclaw 62.97 312 P P 22 29 55.6 +0.2**
D05A IAmb IAmb 22 30 38.3
comp=Z,51nm,1.4s
ISP Isparta 63.00 59 P P 22 29 56.7 +0.8**
ISP pmax pmax
comp=Z,24nm,0.7s
ISP Isparta 63.00 59 P P 22 29 56.7 +0.8**
ISP IAmb IAmb 22 30 19.1
comp=Z,24nm,0.7s
I05D Terrebonne, OR 63.06 308 P P 22 29 57.6 +1.5**
baz=79,SNR=5.8
J05D Fort Rock, OR 63.19 307 P P 22 29 57.9 +0.7**
baz=78,SNR=21
ARVC Arvin 63.22 298 P P 22 29 58.5 +1.2**
baz=76
VES Vestal, Richgr 63.25 299 P P 22 29 59.8 +2.4**
baz=76
OSI Osito Audit: C 63.27 297 P P 22 29 57.5 -0.1**
OSI Osito Audit: C 63.27 297 P P 22 29 58.4 +0.7**
baz=75
RUBR Rubicon Trail 63.31 302 P P 22 29 57.6 -0.6**
CIS Catalina Islan 63.33 296 P P 22 29 59.1 +1.0**
baz=75
TMCR Tamitsa 63.37 29 *e*P P 22 29 56.2 -1.5**
TMCR pmax pmax
comp=Z,16nm,1.3s
SCI2 San Clemente I 63.55 295 P P 22 30 00.7 +1.2**
baz=75
H04A Detroit Lake 63.58 309 P P 22 29 58.6 -1.0**
H04A IAmb IAmb 22 30 07.4
comp=Z,33nm,1.2s
PGC Sidney 63.67 313 P P 22 29 59.8 -0.1**
PGC IAmb IAmb 22 30 39.1
comp=Z,46nm,1.3s
CMB Columbia Colle 63.73 301 P P 22 30 00.2 -0.5**
CMB pmax pmax
comp=Z,37nm,1.6s
CMB Columbia Colle 63.73 301 P P 22 30 00.2 -0.5**
CMB IAmb IAmb 22 30 52.1
comp=Z,37nm,1.6s
OBN Obninsk 63.78 39 *i* P P 22 30 00.6 0.0**
OBN *i* 22 32 21.0
OBN pmax pmax
comp=Z,18nm,0.9s
OBN Obninsk 63.78 39 P P 22 30 00.5 -0.1**
J04D Umpqua Nationa 63.83 307 P P 22 30 01.6 +0.1**
baz=78,SNR=11
I04A Tendick Farm, 63.92 308 P P 22 30 01.5 -0.4**
baz=78,SNR=7.8
M04C Macdoel 63.95 306 P P 22 30 02.4 +0.3**
baz=77,SNR=22
AFDM Forest Hills D 63.96 302 P P 22 30 02.0 -0.1**
AFDM IAmb IAmb 22 30 17.6
comp=Z,43nm,1.8s
PKM Mcpherson Peak 64.07 298 P P 22 30 04.5 +1.4**
baz=75,SNR=5.2
SIM Simferopol' 64.07 51 P P 22 30 05.5 +2.8**
SIM pmax pmax
comp=Z,17nm,1.1s
E03A Lebam 64.15 311 P P 22 30 02.4 -0.8**
E03A IAmb IAmb 22 30 26.7
comp=Z,47nm,1.3s
SCZ2 Santa Cruz Isl 64.16 297 P P 22 30 04.0 +0.5**
baz=75
L04D Klamath Falls 64.19 306 P P 22 30 03.7 0.0**
baz=77,SNR=12
PAGB Antelope Grade 64.19 299 P P 22 30 03.0 -0.7**
ORV Oroville 64.21 303 IAmb IAmb 22 30 16.2
comp=Z,48nm,1.2s
BR231 Keskin MP Arra 64.24 56 P P 22 30 03.9 -0.1**
ANTO Ankara 64.25 56 P P 22 30 05.2 +1.1**
ANTO pmax pmax
comp=Z,140nm,1.7s
ANTO Ankara 64.25 56 ⇑P P 22 30 05.0 +0.9**
ANTO Ankara 64.25 56 P P 22 30 05.2 +1.1**
O03E Paynes Creek 64.26 304 P P 22 30 04.0 -0.1**
baz=76,SNR=9.9
SNCC San Nicolas Is 64.27 296 P P 22 30 04.1 -0.1**
SNCC San Nicolas Is 64.27 296 P P 22 30 05.2 +0.9**
baz=74
F03A Seaside 64.27 310 P P 22 30 04.0 -0.1**
MOS Moscow 64.28 38 *e*P P 22 30 03.1 -0.7**
MOS *e* 22 30 11.1
MOS *e* 22 32 26.4
MOS *e*S S 22 38 55.6 +14
MOS pmax pmax
comp=Z,59nm,1.9s
MOS pmax pmax
comp=Z,200nm,2.6s
COR Corvallis 64.38 309 P P 22 30 04.2 -0.5**
COR pmax pmax
comp=Z,255nm,2.0s
COR Corvallis 64.38 309 P P 22 30 04.2 -0.5**
PMPB Monarch Peak 64.50 299 P P 22 30 05.3 -0.5**
YBH Yreka Blue Hor 64.60 306 P P 22 30 04.6 -1.7**
comp=Z,5.3nm,0.8s,baz=101,slow=4.5,SNR=18
ILGA Ilgaz 64.65 55 P P 22 30 07.0 +0.1**
ILGA IAmb IAmb 22 30 18.5
comp=Z,58nm,1.4s
N02D Trinity Center 64.77 305 P P 22 30 06.6 -0.9**
baz=76,SNR=8.0
M02C Callahan 64.78 305 P P 22 30 06.7 -0.9**
baz=76
SAO San Andreas Ge 64.86 300 P P 22 30 08.0 0.0**
SAO pmax pmax
comp=Z,17nm,1.3s
SAO San Andreas Ge 64.86 300 P P 22 30 08.0 0.0**
BR131 Keskin Array S 64.91 56*c i*P P 22 30 08.8 +0.2**
BR131 Keskin Array S 64.91 56 P P 22 30 09.0 +0.5**
BRTR Keskin Array B 64.91 56 P P 22 30 08.7 +0.2**
comp=Z,16nm,0.8s,baz=271,slow=4.7,SNR=86
BRTR LR LR 22 55 56.3
comp=Z,261nm,20.8s,baz=274,slow=34
O02D Mt. Diablo Mer 65.02 304 P P 22 30 08.2 -0.9**
baz=76,SNR=6.9
K02D Willamette Mer 65.06 307 P P 22 30 09.1 -0.3**
baz=76
GDXM Geysers 65.37 303 P P 22 30 10.8 -0.6**
GDXM IAmb IAmb 22 30 25.2
comp=Z,40nm,1.4s
INK Inuvik 65.49 336 P P 22 30 10.5 -1.1**
comp=Z,17nm,0.9s,baz=66,slow=8.5,SNR=58
INK Inuvik 65.49 336 IAmb IAmb 22 30 18.9
comp=Z,41nm,1.2s
KEBM Edson Butte 65.50 307 P P 22 30 11.9 -0.2**
KRMB Red Mountain 65.52 306 P P 22 30 12.0 -0.3**
KRMB IAmb IAmb 22 30 22.5
comp=Z,68nm,1.8s
HOPS Hopland Field 65.53 303 P P 22 30 12.4 0.0**
KHMM Horse Mountain 65.55 305 P P 22 30 11.6 -1.0**
KHMM IAmb IAmb 22 30 33.9
comp=Z,61nm,1.7s
KBO Bosley Butte 65.58 307 P P 22 30 11.8 -1.0**
LPSR Galich'ya Gora 65.61 42 *e*P P 22 30 12.8 +0.2**
LPSR pmax pmax
comp=Z,30nm,1.0s
LPSR pmax pmax
comp=N,20nm,1.7s
LPSR pmax pmax
comp=E,20nm,1.7s
KMRM Mail Ridge 65.70 304 P P 22 30 13.6 +0.1**
DLBC Dease Lake 65.70 325 P P 22 30 14.0 +0.8**
KCPM Cahto Peak 65.74 304 P P 22 30 13.7 -0.1**
JCC Jacoby Creek, 65.78 305 P P 22 30 13.3 -0.6**
CSS Mathiatis 65.92 62 P P 22 30 14.1 -0.9**
CSS IAmb IAmb 22 30 26.6
comp=Z,28nm,1.1s
VSR Storozhevoye 66.05 43 *e*P P 22 30 15.0 -0.4**
VSR pmax pmax
comp=E,20nm,1.1s
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR pmax pmax
comp=N,2.0nm,0.7s
GO05 Huala 66.33 204 IAmb IAmb 22 30 22.7
comp=Z,27nm,1.3s
EPYK Eagle Plains 67.09 334 IAmb IAmb 22 30 29.6
comp=Z,56nm,1.2s
EPYK Eagle Plains 67.09 334 P P 22 30 21.7 -0.2**
baz=77
PRGR Permogore 67.22 31 *e*P P 22 30 21.5 -1.2**
PRGR pmax pmax
comp=Z,25nm,1.1s
WRAK Wrangell Islan 67.36 323 P P 22 30 23.3 -0.4**
VRH Novokhopyorsk 67.61 43 *e*P P 22 30 25.5 +0.1**
VRH pmax pmax
comp=N,20nm,1.4s
VRH pmax pmax
comp=Z,20nm,1.0s
VRH pmax pmax
comp=E,10.0nm,0.8s
WHY Whitehorse 67.64 328 IAmb IAmb 22 30 45.2
comp=Z,34nm,1.6s
SKAG Skagway 68.15 327 P P 22 30 30.1 +1.4**
SKAG IAmb IAmb 22 30 43.4
comp=Z,59nm,1.4s
GAZ Gaziantep 68.30 58 P P 22 30 30.6 +0.5**
GAZ IAmb IAmb 22 30 39.2
comp=Z,44nm,1.4s
DAWY Dawson 68.77 332 IAmb IAmb 22 30 40.4
comp=Z,52nm,1.2s
HYT Haines Junctio 68.84 328 P P 22 30 32.4 -0.7**
HYT IAmb IAmb 22 30 41.4
comp=Z,50nm,1.5s
EGAK Eagle 69.29 333 IAmb IAmb 22 30 50.3
comp=Z,31nm,1.4s
H09N1 TRISTAN DA CUN 69.93 153 T T 23 46 55.4
SNR=46
H09W1 TRISTAN DA CUN 69.95 153 T T 23 47 00.6
SNR=73
GOF Gofitskoye 70.16 49⇑ *i*P P 22 30 41.8 +0.4**
GOF pmax pmax
comp=Z,56nm,1.5s
KIV Kislovodsk 70.26 50 *e*P P 22 30 42.8 +0.7**
KIV pmax pmax
comp=Z,69nm,1.0s
KIV MLR MLR
comp=Z,487nm,18.0s
KIV Kislovodsk 70.26 50 P P 22 30 43.1 +1.0**
KIV IAmb IAmb 22 30 54.8
comp=Z,47nm,1.3s
YKU2 Yakutat 70.26 327 P P 22 30 41.8 +0.1**
GO06 Curarrehue 70.27 202 P P 22 30 41.5 -0.6**
GO06 IAmb IAmb 22 30 55.3
comp=Z,59nm,1.8s
SHA1 Shidzhatmaz 70.30 50*d i*P P 22 30 44.1 +1.5**
PCA Pinnacle 70.36 328 P P 22 30 40.8 -1.6**
KBZ Khabaz 70.47 50*c i*P P 22 30 44.6 +1.3**
KBZ Khabaz 70.47 50 P P 22 30 44.1 +0.8**
comp=Z,6.1nm,0.9s,baz=284,slow=5.5,SNR=14
NEY Neytrino 70.50 51⇑ *i*P P 22 30 42.1 -1.6**
NEY pmax pmax
comp=Z,7.0nm,2.1s
CTGM Chitina Glacie 70.58 329 P P 22 30 43.6 -0.3**

BARN	Barnard Glacie	70.70	329	P	P	22 30 44.7	+0.1	
PRP	Porcupine Dome	70.79	334	P	P	22 30 44.3	-0.7	
PRP				IAmb	IAmb	22 30 53.5		
	comp=Z,61nm,1.4s							
MENT	Mentasta	70.97	331	P	P	22 30 46.7	+0.6	
MENT				IAmb	IAmb	22 30 55.4		
	comp=Z,64nm,2.0s							
PLCA	Paso Flores	71.00	201	P	P	22 30 46.3	-0.2	
PLCA				pmax	pmax			
	comp=Z,24nm,1.3s							
PLCA	Paso Flores	71.00	201	P	P	22 30 46.8	+0.4	
	comp=Z,8.5nm,0.9s,baz=46,slow=7.4,SNR=17							
PLCA	Paso Flores	71.00	201	*e*P	P	22 30 47.5	+1.0	
PLCA	Paso Flores	71.00	201	P	P	22 30 46.3	-0.2	
BALM	Baldy	71.02	329	P	P	22 30 45.6	-0.9	
BALM				IAmb	IAmb	22 30 54.9		
	comp=Z,51nm,1.1s							
MESA	MESA	71.13	328	P	P	22 30 47.0	-0.3	
RIDG	Independent Ri	71.16	332	IAmb	IAmb	22 30 59.5		
	comp=Z,25nm,1.1s							
VRDI	Verde Repeater	71.46	330	IAmb	IAmb	22 30 57.3		
	comp=Z,49nm,1.2s							
ZEI	Tsey	71.46	51	*e*P	P	22 30 50.0	+0.3	
ZEI				pmax	pmax			
	comp=Z,33nm,1.4s							
GLB	Gilahina Butte	71.54	330	IAmb	IAmb	22 30 57.6		
	comp=Z,44nm,1.1s							
IL31		71.60	334	P	P	22 30 48.9	-0.8	
IL31				IAmb	IAmb	22 30 57.9		
	comp=Z,38nm,1.1s							
ILAR	Eielson Array	71.60	334	P	P	22 30 49.2	-0.6	
	comp=Z,16nm,0.8s,baz=70,slow=4.6,SNR=140							
AKH	Akhalkalaki	71.62	52	P	P	22 30 51.0	+0.4	
AKH				pmax	pmax			
	comp=Z,47nm,1.5s							
AKH	Akhalkalaki	71.62	52	⇓P	P	22 30 51.3	+0.7	
AKH	Akhalkalaki	71.62	52	P	P	22 30 51.0	+0.4	
AKH				IAmb	IAmb	22 31 07.8		
	comp=Z,47nm,1.5s							
POKR	Poker Plat Res	71.68	334	P	P	22 30 50.7	+0.4	
	baz=67							
PAX	Paxson	71.70	332	IAmb	IAmb	22 30 58.0		
	comp=Z,29nm,1.3s							
HDA	Harding Lake	71.77	333	P	P	22 30 50.8	0.0	
HDA				IAmb	IAmb	22 31 04.7		
	comp=Z,88nm,1.8s							
HDA	Harding Lake	71.77	333	P	P	22 30 52.3	+1.5	
	baz=67							
COLD	Coldfoot	71.86	337	P	P	22 30 51.7	+0.4	
COLD				IAmb	IAmb	22 31 05.4		
	comp=Z,36nm,1.2s							
COLA	College	71.94	334	*c i*P	P	22 30 51.5	-0.3	
COLA				pmax	pmax			
	comp=Z,16nm,0.9s							
COLA	College	71.94	334	P	P	22 30 51.7	-0.1	
COLA				IAmb	IAmb	22 30 59.9		
	comp=Z,35nm,0.9s							
TCOL	CIGO, UAF Yank	71.94	334	P	P	22 30 52.0	+0.2	
	baz=67							
CCB	Clear Creek Bu	72.01	334	IAmb	IAmb	22 31 00.2		
	comp=Z,58nm,1.3s							
SUCK	Suckling Hills	72.02	329	P	P	22 30 51.7	-0.8	
MDM	Murphy Dome	72.05	334	IAmb	IAmb	22 31 00.7		
	comp=Z,28nm,1.1s							
WRH	Wood River Hil	72.19	334	IAmb	IAmb	22 31 01.3		
	comp=Z,44nm,1.1s							
RAGM	Ragged Mountai	72.32	329	P	P	22 30 54.0	-0.2	
TBLG	Delisi	72.40	52	IAmb	IAmb	22 31 15.6		
	comp=Z,69nm,1.7s							
DHY	Denali Highway	72.47	332	IAmb	IAmb	22 31 03.1		
	comp=Z,28nm,1.1s							
GROC	Groznyy	72.64	50	*e*P	P	22 30 56.5	+0.1	
GROC				*e*		22 31 12.6		
GROC				*e*		22 33 41.4		
GROC				pmax	pmax			
	comp=Z,40nm,1.6s							
MCK	McKinley	72.84	333	IAmb	IAmb	22 31 05.0		
	comp=Z,30nm,1.0s							
RND	Reindeer	72.94	333	IAmb	IAmb	22 31 13.2		
	comp=Z,45nm,1.4s							
GNI	Garni	72.94	53	*c i*P	P	22 30 59.5	+1.0	
GNI				pmax	pmax			
	comp=Z,146nm,1.7s							
GNI	Garni	72.94	53	P	P	22 30 59.7	+1.2	
SCM	Sheep Creek Mo	72.94	331	P	P	22 30 57.4	-0.6	
SCM				pmax	pmax			
	comp=Z,126nm,1.9s							
SCM	Sheep Creek Mo	72.94	331	P	P	22 30 57.4	-0.6	
MLY	Manley	72.99	335	IAmb	IAmb	22 31 17.9		
	comp=Z,37nm,1.3s							
SML	Sawmill	73.39	331	P	P	22 30 59.7	-0.9	
SML				IAmb	IAmb	22 31 13.4		
	comp=Z,48nm,1.3s							
BPAW	Bear Paw Mtn.	73.50	334	IAmb	IAmb	22 31 15.2		
	comp=Z,49nm,1.4s							
KNK	Knik Glacier	73.61	331	P	P	22 31 01.8	-0.1	
KNK				IAmb	IAmb	22 32 38.9		
	comp=Z,119nm,2.0s							
GHO	Glory Hole Cre	73.66	331	P	P	22 31 02.3	+0.1	
GHO				IAmb	IAmb	22 31 21.8		
	comp=Z,49nm,1.3s							
KTH	Kantishna Hill	73.72	333	IAmb	IAmb	22 31 03.3		
	comp=Z,44nm,1.0s							
PMR	Palmer	73.83	331	IAmb	IAmb	22 31 11.0		
	comp=Z,66nm,1.3s							
RC01	Rabbit Creek A	74.31	331	P	P	22 31 06.2	+0.3	
RC01				IAmb	IAmb	22 31 18.5		
	comp=Z,39nm,1.1s							
SUA	Susitna One	74.58	331	IAmb	IAmb	22 31 15.8		
	comp=Z,36nm,1.2s							
AKT	Akhty	74.59	51	*e*P	P	22 31 09.0	+0.9	
AKT				*e*		22 31 22.7		
AKT				pmax	pmax			
	comp=Z,30nm,1.2s							
ARU	Arti	75.24	34	*c i*P	P	22 31 11.5	+0.1	
ARU				S	S	22 40 51.3	+1.1	
ARU				pmax	pmax			
	comp=Z,19nm,1.7s							
ARU				MLR	MLR			
	comp=Z,663nm,20.0s							
ARU	Arti	75.24	34	P	P	22 31 11.5	+0.1	
TSUM	Tsumeb	75.30	120	P	P	22 31 13.1	+0.7	
BRLK	Bradley Lake	75.41	330	P	P	22 31 11.5	-0.9	
RDOG	Red Dog Mine	75.64	340	IAmb	IAmb	22 31 22.3		
	comp=Z,59nm,1.0s							
CNPM	China Poot	75.68	330	P	P	22 31 14.2	+0.3	
HOM	Homer	75.80	330	P	P	22 31 13.5	-1.0	
RSO	Redoubt South	75.91	331	P	P	22 31 15.2	-0.2	
SVE	Sverdlovsk	76.09	33	⇓*e*P	P	22 31 16.8	+0.5	
SVE				pmax	pmax			
	comp=Z,81nm,2.3s							
MBAR	Mbarara	76.99	97	*de*P	P	22 31 24.2	+1.9	
MBAR				pmax	pmax			
	comp=Z,10.0nm,1.1s							
MBAR	Mbarara	76.99	97	P	P	22 31 23.0	+0.8	
MBAR				IAmb	IAmb	22 31 36.6		
	comp=Z,44nm,1.4s							
OHAK	Old Harbor	77.74	328	P	P	22 31 24.8	-0.7	
SII	Sitkinak Islan	78.50	328	P	P	22 31 29.6	-0.2	
ANM	Nome	78.54	338	P	P	22 31 30.3	+0.5	
ANM				pmax	pmax			
	comp=Z,10.0nm,0.9s							
ANM	Nome	78.54	338	P	P	22 31 30.3	+0.5	
EFI	East Falkland	78.59	189	P	P	22 31 28.5	-1.5	
EFI				pmax	pmax			
	comp=Z,276nm,1.9s							
EFI	East Falkland	78.59	189	P	P	22 31 28.5	-1.5	
ABKAR	Akbulak array	79.20	40	P	P	22 31 33.3	-0.4	
LODK	Lodwar	79.34	91	P	P	22 31 37.6	+2.4	
	SNR=30							
RAYN	Ar Rayn	79.86	69	P	P	22 31 38.3	+0.4	
RAYN				pmax	pmax			
	comp=Z,29nm,1.6s							
RAYN	Ar Rayn	79.86	69	P	P	22 31 38.3	+0.4	
FURI	Furi	79.97	85	P	P	22 31 42.2	+3.3	
GO09	Cerro Castillo	81.09	197	P	P	22 31 42.9	-0.8	
GAMB	Gambell	81.15	339	P	P	22 31 44.0	+0.1	
GAMB				IAmb	IAmb	22 33 03.4		
	comp=Z,29nm,1.0s							
ATD	Arta Tunnel	82.56	81	P	P	22 31 53.4	+1.0	
ATD				IAmb	IAmb	22 32 04.0		
	comp=Z,50nm,1.5s							
DAMY	Dhamar	82.63	77	P	P	22 31 54.2	+1.1	
DAMY				IAmb	IAmb	22 32 04.3		
	comp=Z,28nm,1.4s							
BRVK	Borovoye	82.80	34	P	P	22 31 54.0	+1.1	
BRVK				pmax	pmax			
	comp=Z,36nm,1.3s							
BRVK	Borovoye	82.80	34	P	P	22 31 54.0	+1.1	
BRVK				IAmb	IAmb	22 32 07.9		
	comp=Z,36nm,1.3s							
KMBO	Kilima Mbogo	83.04	95	*i* P	P	22 31 58.7	+3.6	
KMBO				pmax	pmax			
	comp=Z,4.0nm,1.0s							
KMBO	Kilima Mbogo	83.04	95	P	P	22 31 56.8	+1.7	
	comp=Z,3.9nm,1.0s,baz=291,slow=4.7,SNR=9.0							
KMBO	Kilima Mbogo	83.04	95	P	P	22 31 56.4	+1.3	
KMBO				IAmb	IAmb	22 32 10.1		
	comp=Z,42nm,1.5s							
BILL	Bilibino	83.19	349	*i* P	P	22 31 53.2	-1.4	
BILL				*i*		22 32 01.1		
BILL				*i* S	S	22 42 17.8	+3.5	
BILL				*i* SS	SS	22 47 47.8	+10	
BILL				pmax	pmax			
	comp=Z,15nm,1.0s							
BILL	Bilibino	83.19	349	P	P	22 31 54.0	-0.6	
BILL				IAmb	IAmb	22 32 10.2		
	comp=Z,42nm,1.4s							
GEYT	Alibeck	83.34	51	P	P	22 31 56.6	+0.5	
	comp=Z,3.2nm,0.9s,baz=241,slow=9.3,SNR=7.7							
GYA0B	ALIBECK ARRAY	83.34	51	P	P	22 31 56.9	+0.8	
KIBK	Kibwezi	84.29	95	P	P	22 32 04.5	+3.2	
	SNR=6.9							
BOSA	Boshof	86.34	124	LR	LR	23 05 24.3		
	comp=Z,1μm,19.3s,baz=302,slow=32							
NIKH	Nikolski High	87.45	330	P	P	22 32 16.5	+0.3	
KURK	Kurchatov	88.31	32	P	P	22 32 20.8	+0.4	
KURK				pmax	pmax			
	comp=Z,56nm,1.9s							
KURK	Kurchatov	88.31	32	P	P	22 32 20.8	+0.4	
KURK				IAmb	IAmb	22 32 28.9		
	comp=Z,56nm,1.9s							
ZAA0	Zalesovo Array	88.84	27	IAmb	IAmb	22 32 31.0		
	comp=Z,33nm,1.4s							
ZALV	Zalesovo Beam	88.84	27	P	P	22 32 22.7	-0.1	
	comp=Z,6.2nm,0.8s,baz=306,slow=5.3,SNR=27							
RBK	Rabkut	89.81	71	P	P	22 32 33.4	+5.4	
	SNR=5.8							
RBK				P	P	22 32 33.4	+5.4	
	SNR=5.8							
SEY	Seymchan	90.04	352	P	P	22 32 28.1	-0.1	
	comp=Z,3.4nm,0.9s,baz=145,slow=4.3,SNR=9.0							
SMDO	Samad	90.39	64	P	P	22 32 36.0	+5.2	
	SNR=8.3							
SMDO				P	P	22 32 36.0	+5.2	
	SNR=8.3							
BTK	Batken	90.63	44	P	P	22 32 32.5	+1.0	
BTK				pmax	pmax			
	comp=Z,41nm,2.0s							
BTK	Batken	90.63	44	P	P	22 32 32.5	+1.0	
BTK				IAmb	IAmb	22 32 40.4		
	comp=Z,41nm,1.9s							
WSAR	Wadi Sarin	90.77	64	P	P	22 32 38.2	+5.7	
ARSB	Arslanbob	91.20	42	P	P	22 32 35.5	+1.3	
FRU1	Bishkek	91.26	40	P	P	22 32 35.2	+0.8	
FRU1				pmax	pmax			
	comp=Z,42nm,2.0s							
FRU1	Bishkek	91.26	40	P	P	22 32 35.2	+0.8	
FRU1				IAmb	IAmb	22 32 54.2		
	comp=Z,42nm,1.9s							
AAK	Ala-Archa	91.29	40	⇓*e*P	P	22 32 36.0	+1.3	
AAK				pmax	pmax			
	comp=Z,23nm,3.0s							
AAK	Ala-Archa	91.29	40	P	P	22 32 35.8	+1.1	
MHTO	MHTO	91.31	66	P	P	22 32 40.4	+5.4	
	SNR=6.8							
MHTO				P	P	22 32 40.4	+5.4	
	SNR=6.8							
YAK	Yakutsk	91.82	3	P	P	22 32 37.2	+0.7	
YAK				pmax	pmax			
	comp=Z,11nm,0.5s							
YAK	Yakutsk	91.82	3	P	P	22 32 37.2	+0.7	
YAK				IAmb	IAmb	22 36 07.5		
	comp=Z,11nm,0.5s							
SOCY	Socotra	92.05	75	P	P	22 32 38.4	-0.2	
SOCY				IAmb	IAmb	22 32 47.9		
	comp=Z,30nm,1.4s							
MAKZ	Makanchi	92.59	34	P	P	22 32 40.6	+0.2	
MAKZ				pmax	pmax			
	comp=Z,28nm,1.9s							
MAKZ	Makanchi	92.59	34	P	P	22 32 40.6	+0.2	
MAKZ				IAmb	IAmb	22 32 48.6		
	comp=Z,28nm,1.9s							
KBL	Kabul	92.64	49	P	P	22 32 41.0	-0.1	
KBL				pmax	pmax			
	comp=Z,10.0nm,1.5s							
KBL	Kabul	92.64	49	P	P	22 32 41.0	-0.1	
MKAR	Makanchi Array	92.75	33	*ce*P	P	22 32 41.2	0.0	
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
MKAR	Makanchi Array	92.75	33	P	P	22 32 40.6	-0.6	
	comp=Z,1.0nm,0.8s,baz=311,slow=4.0,SNR=12							
MKAR				PKKP	PKKPdf	22 49 48.6	-1.1	
	comp=Z,0.6nm,1.0s,baz=10,slow=1.4,SNR=3.8							
NRN	Naryn	92.92	40	P	P	22 32 43.1	+0.7	
NRN				pmax	pmax			
	comp=Z,32nm,1.7s							
NRN	Naryn	92.92	40	P	P	22 32 43.1	+0.7	
NRN				IAmb	IAmb	22 32 57.9		
	comp=Z,32nm,1.7s							
KDJ	Kajisay	93.15	39	P	P	22 32 41.8	-1.6	
KDJ				pmax	pmax			
	comp=Z,5.0nm,1.0s							
KDJ	Kajisay	93.15	39	P	P	22 32 41.8	-1.6	
MA2	Magadan	93.50	352	⇓*e*P	P	22 32 44.4	+0.1	
MA2				pmax	pmax			
	comp=Z,10.0nm,1.0s							
MA2	Magadan	93.50	352	P	P	22 32 44.3	0.0	
MA2				IAmb	IAmb	22 32 58.5		
	comp=Z,20nm,1.4s							
PRZ	Przheval'sk	93.61	39	P	P	22 32 47.2	+1.7	
PRZ				pmax	pmax			
	comp=Z,13nm,1.2s							
PRZ	Przheval'sk	93.61	39	P	P	22 32 47.2	+1.7	
KSH	Kashi	94.11	42	P	P	22 32 49.3	+1.6	
KSH				sP	pwP	22 32 55.8	+1.5	
KSH				PP	PP	22 36 36.4	+3.0	
KSH				SKS	SKSac	22 43 18.5	-4.5	
KSH				S	S	22 43 54.5	-4.3	
KSH				SS	SS	22 50 15.3	-2.5	
KSH				pmax	pmax			
	comp=Z,20nm,0.9s							
KSH				LR	LR			
	comp=Z,260nm,4.9s							
KSH				LR	LR			
	comp=Z,430nm,5.7s							
BOD	Bodaibo	94.24	11	*e*P	P	22 32 46.5	-1.2	
BOD				pmax	pmax			
	comp=Z,12nm,1.4s							
SMY	Shemya	94.40	338	P	P	22 32 49.8	+1.2	
SMY				pmax	pmax			
	comp=Z,214nm,1.0s							
SMY	Shemya	94.40	338	P	P	22 32 49.8	+1.2	
NIL	Nilore	95.99	48	P	P	22 32 57.0	+0.7	
NIL				pmax	pmax			
	comp=Z,38nm,1.7s							
NIL	Nilore	95.99	48	P	P	22 32 57.0	+0.7	
WMQ	Urumqi	97.54	33	*e*P	Pdif	22 33 04.5	+1.3	
WMQ				sP	pwP	22 33 11.5	+1.7	
WMQ				pmax	pmax			
	comp=Z,140nm,4.9s							
WMQ				LR	LR			
	comp=Z,270nm,22.3s							
WMQ				LR	LR			
	comp=Z,350nm,22.3s							
TAOE	Nuku Hiva Isla	98.97	265	*e*LR	LR	23 05 20.0		
	comp=Z,394nm,23.4s							
SONM	Songino Array	101.65	20	PP	PKiKP	22 37 41.7	-3.4	
	comp=Z,0.8nm,0.8s,baz=282,slow=6.9,SNR=5.1							
GRNR	Gornyy	103.23	359	*e*P	Pdif	22 33 21.9	-6.4	
GRNR				pmax	pmax			
	comp=Z,3.0nm,1.3s							
GRNR				MLR	MLR			
	comp=Z,230nm,17.0s							
PPT2	Papeete2	110.87	260	*e*LR	LR	23 10 52.6		
	comp=Z,644nm,33.2s							
LZH	Lanzhou	111.07	27	*e*PKP	PKiKP	22 37 58.4	-4.5	
LZH				sPKP		22 38 03.0		
LZH				PP	PP	22 38 41.5	+1.1	
LZH				AMB	AMB			
	comp=Z,190nm,9.3s							
LZH				LR	LR			
	comp=Z,450nm,17.9s							
LZH				LR	LR			
	comp=Z,360nm,16.8s							
LZH				LR	LR			
	comp=Z,540nm,19.5s							
SYO	Syowa Base	112.20	157	⇑*e*X	Pdif	22 34 04.2	-3.3	
SYO	Syowa Base	112.20	157	⇑*e*pPdif	pPdif	22 34 11.2	+1.0	
TBI	Tubuai	112.82	254	*e*LR	LR	23 11 50.1		
	comp=Z,377nm,33.0s							
CD2	Chengdu	115.46	30	PKP	PKiKP	22 38 10.3	-0.9	
NJ2	Nanjing	119.79	16	*e*PKP	PKPdf	22 38 19.1	-0.3	
KMI	Kunming	119.82	35	PKP	PKPdf	22 38 17.8	-2.2	
KMI				PP	PP	22 39 40.6	-1.6	
KMI				AMB	AMB			
	comp=Z,160nm,5.7s							
KMI				LR	LR			
	comp=Z,250nm,10.6s							
KMI				LR	LR			
	comp=Z,370nm,14.7s							
CMAR	Chiang Mai Arr	123.01	42	PKP	PKPdf	22 38 25.2	-0.7	
	comp=Z,3.4nm,0.9s,baz=297,slow=3.0,SNR=18							
STKA	Stephens Creek	172.37	222	PKP	PKPdf	22 39 37.4	-0.7	
	comp=Z,4.9nm,1.1s,baz=49,slow=6.0,SNR=3.2							
WRA	Warramunga Arr	173.54	10	PKP	PKPdf	22 39 37.7	-1.3	
	comp=Z,1.7nm,0.9s,baz=331,slow=0.7,SNR=5.1							
WRA				PKPab	PKPab	22 41 06.8	-0.9	
	comp=Z,2.1nm,0.9s,baz=351,slow=4.7,SNR=5.2							
ASAR	Alice Springs	176.94	30	PKP	PKPdf	22 39 38.4	-1.4	
	comp=Z,1.6nm,0.9s,baz=41,slow=1.1,SNR=12							
ASAR				PKPab	PKPab	22 41 21.9	-1.0	
	comp=Z,1.2nm,0.9s,baz=336,slow=5.6,SNR=5.5							
ASAR				PP	PP	22 45 26.9	+12	
	comp=Z,1.5nm,1.1s,baz=358,slow=3.8,SNR=4.4							

IDC ***18*** *22:21:49.9±2.3,26°59N×44°52W,h0km,mb4.2/10, mb1 4.4/10,mb1mx4.0/52,mbtmp4.2/10,Error ellipse: s-maj=70.0km s-min=20.3km az=172.0*
NEIC ***18*** *22:21:50.3±2.5,26°41N±0°06×44°7W±0°1,h10km±1km, mb4.8/38,Error ellipse: s-maj=19.3km s-min=6.4km az=112.0*

ISC 18 22:21:50.2±0.7,26°4N±0°1×44°64W±0°09,h11km,n56, σ1§23/50,mb4.7/26,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANWB	Willy Bob	18.09	245	Pn	Pn	22 25 59.9	-1.6
ANWB				IAmb	IAmb	22 26 16.6	
	comp=Z,150nm,1.5s						
ROSA	Rosais	18.48	44	P	Pn	22 26 04.7	-1.5
ROSA				IAmb	IAmb	22 26 18.1	
	comp=Z,148nm,1.1s						
AOPR	Arecibo Observ	21.93	253	P	P	22 26 41.9	-1.9
AOPR				IAmb	IAmb	22 26 58.0	
	comp=Z,45nm,1.2s						
GBN	Guysborough	23.31	329	P	P	22 26 57.7	-0.4
M65A	Busby, Falmout	26.22	312	P	P	22 27 22.1	-2.9
X48A	Hartselle	37.23	293	P	P	22 29 01.7	-0.1
HICK	Hickman	39.06	296	P	P	22 29 15.7	-1.5
ANGG	Ammassalik, Gr	39.50	5	P	P	22 29 20.8	+0.3
H10N2	ASCENSION HYDR	44.86	135	T	T	23 17 40.5	
	baz=320						
H10N3	ASCENSION HYDR	44.87	135	T	T	23 17 46.2	
	baz=320						
H10N1	ASCENSION HYDR	44.88	135	T	T	23 17 40.8	
	baz=320						
H10S3	ASCENSION HYDR	45.62	136	T	T	23 18 40.8	
	baz=264						
H10S2	ASCENSION HYDR	45.63	136	T	T	23 18 45.1	
	baz=316						
CMIG	Matias Romero	47.33	269	P	P	22 30 25.7	+1.4
	comp=Z,11nm,1.2s,baz=117,slow=6.8,SNR=3.6						
TXAR	Lajitas Array	51.79	288	P	P	22 31 00.4	+2.1
	comp=Z,1.5nm,0.9s,baz=91,slow=7.6,SNR=3.4						
PDAR	Pinedale Array	54.62	305	P	P	22 31 20.2	+1.0
	comp=Z,1.7nm,0.7s,baz=105,slow=6.9,SNR=3.8						
YKA	Yellowknife Ar	57.72	329	P	P	22 31 40.1	-0.6
	comp=Z,2.5nm,0.8s,baz=91,slow=7.2,SNR=6.8						
FINES	FINESS Array B	58.01	32	P	P	22 31 43.1	+0.4
	comp=Z,1.9nm,0.7s,baz=247,slow=5.4,SNR=2.8						
ELK	Elko	59.09	303	P	P	22 31 52.8	+1.9
	comp=Z,2.2nm,0.8s,baz=64,slow=10,SNR=3.4						
NEW	Newport	59.39	312	P	P	22 31 54.5	+1.8
	comp=Z,6.4nm,0.9s,baz=100,slow=7.7,SNR=4.3						
AKASG	Malin Array Be	60.03	45	P	P	22 31 56.3	-0.6
	comp=Z,1.0nm,0.6s,baz=276,slow=5.8,SNR=2.8						
HUMO	Hull Mountain	64.39	307	P	P	22 32 27.1	+0.8
SAO	San Andreas Ge	64.67	300	P	P	22 32 26.6	-1.7
BR131	Keskin Array S	65.05	56	P	P	22 32 31.9	+1.0
BR131				IAmb	IAmb	22 32 32.3	
	comp=Z,4.0nm,0.9s						
BRTR	Keskin Array B	65.06	56	P	P	22 32 31.0	+0.1
	comp=Z,2.5nm,0.8s,baz=271,slow=5.0,SNR=4.6						
BRTR	Keskin Array B	65.06	56	P	P	22 32 32.0	+1.1
KEBM	Edson Butte	65.32	307	P	P	22 32 30.9	-1.5
HOPS	Hopland Field	65.35	303	P	P	22 32 33.7	+1.0
HOPS				IAmb	IAmb	22 32 37.7	
	comp=Z,23nm,1.2s						
INK	Inuvik	65.38	336	P	P	22 32 33.0	+0.7
INK				IAmb	IAmb	22 32 44.3	
	comp=Z,9.3nm,1.1s						
KMRM	Mail Ridge	65.51	304	P	P	22 32 35.3	+1.5
KMRM				IAmb	IAmb	22 32 40.7	
	comp=Z,14nm,1.3s						
JCC	Jacoby Creek,	65.60	305	P	P	22 32 34.1	-0.1
H09W1	TRISTAN DA CUN	70.07	153	T	T	23 49 21.9	
BALM	Baldy	70.89	329	P	P	22 33 07.9	+0.8
PLCA	Paso Flores	70.97	201	P	P	22 33 09.2	+1.5
PLCA				IAmb	IAmb	22 33 22.5	
	comp=Z,5.4nm,1.1s						
VRDI	Verde Repeater	71.33	330	P	P	22 33 09.2	-0.7
VRDI				IAmb	IAmb	22 33 12.2	
	comp=Z,7.7nm,1.0s						
GLB	Gilahina Butte	71.41	330	P	P	22 33 11.4	+1.1
GLB				IAmb	IAmb	22 33 28.3	
	comp=Z,6.4nm,1.0s						
IL31		71.48	334	P	P	22 33 10.4	0.0
IL31				IAmb	IAmb	22 33 12.7	
	comp=Z,6.3nm,1.0s						
ILAR	Eielson Array	71.48	334	P	P	22 33 10.8	+0.3
	comp=Z,2.0nm,0.7s,baz=80,slow=4.0,SNR=5.3						
PAX	Paxson	71.58	332	P	P	22 33 09.4	-1.8
PAX				IAmb	IAmb	22 33 10.0	
	comp=Z,5.9nm,0.7s						
SUCK	Suckling Hills	71.89	329	P	P	22 33 11.4	-1.7
CCB	Clear Creek Bu	71.89	334	P	P	22 33 13.4	+0.4
CCB				IAmb	IAmb	22 33 15.0	
	comp=Z,8.5nm,1.2s						
WRH	Wood River Hil	72.07	334	P	P	22 33 13.9	-0.2
NEA	Nenana	72.42

SKR				eS		Sn	22 58 10.0	-0.3		
PAU	**Pauzhetka**	**1.56**	**352**	eP		Pn	22 58 07.3	+2.6		
PAU				eS		Sn	22 58 26.8	+3.1		
KDTR	**Khodutka, Kamc**	**1.98**	**17**	eP		Pn	22 58 13.5	+3.0		
KDTR				eS		Sn	22 58 38.1	+4.1		
ASAK	**Asacha**	**2.50**	**11**	eP		Pn	22 58 21.4	+3.6		
ASAK				eS		Sn	22 58 51.0	+3.8		
MTVR	**Mutnovka**	**2.64**	**14**	eP		Pn	22 58 23.1	+3.3		
RUS	**Russkaya**	**2.65**	**18**	eP		Pn	22 58 22.4	+2.6		
RUS				eS		Sn	22 58 53.4	+2.7		
GRL	**Gorelyy**	**2.69**	**12**	eP		Pn	22 58 24.0	+3.6		
GRL				eS		Sn	22 58 56.7	+4.9		
KRMR	**Karymshinskiy**	**2.97**	**12**	eP		Pn	22 58 28.1	+4.0		
KRMR				eS		Sn	22 59 02.3	+3.8		
UGLR	**Uglovaya**	**3.45**	**17**	eP		Pn	22 58 35.0	+4.2		
AVH	**Avacha**	**3.49**	**16**	eP		Pn	22 58 35.6	+4.3		
KOK	**Koryaka**	**3.50**	**15**	eP		Pn	22 58 36.1	+4.7		
SMAR	**Somma**	**3.50**	**17**	eP		Pn	22 58 35.5	+4.0		
KRER	**Koryakskii**	**3.53**	**16**	eP		Pn	22 58 35.6	+3.7		
KRER				eS		Sn	22 59 17.0	+4.5		
SDLR	**Sedlovina**	**3.53**	**17**	eP		Pn	22 58 35.0	+3.1		
NLC	**Nalytchevo**	**3.53**	**22**	eS		Sn	22 59 14.6	+2.5		
KRX	**Arik**	**3.56**	**15**	eP		Pn	22 58 35.9	+3.5		
SPN	**Mys Shipunski**	**3.65**	**28**	eP		Pn	22 58 36.9	+3.5		
SPN				eS		Sn	22 59 19.3	+4.1		
KZV	**Kizimen**	**5.54**	**19**	eP		Pn	22 59 05.0	+5.5		
KBTR	**Krutoberegovo**	**7.16**	**26**	eP		Pn	22 59 24.9	+3.4		
BKI	**Bering**	**7.54**	**42**	eS		Sn	23 00 50.0	-0.7		

MOS ***18*** *23:01:32.7±0.9, 26°.49N×44°.50W, h10km, mb5.0/32, Error ellipse: s-maj=6.9km s-min=5.4km az=53.5*

IDC ***18*** *23:01:32.5±0.4, 26°.47N×44°.48W, h0km, mb4.5/36, mb1 4.6/36, mb1mx4.5/53, mbtmp4.5/36, MS3.8/13, Ms1 3.8/13, ms1mx3.5/41, Error ellipse: s-maj=12.3km s-min=11.0km az=7.0*

BJI ***18*** *23:01:32.0±0.0, 26°.40N×44°.60W, h10km, mb5.0/5, Ms5.0/3, Ms7 4.7/3*

NEIC ***18*** *23:01:33.9±1.5, 26°.40N±0°.09×44°.5W±0°.1, h10km±1km, mb5.0/221, Error ellipse: s-maj=16.7km s-min=14.4km az=134.0*

BGR ***18*** *23:01:39.1±0.0, 26°.44N×44°.35W, h33km, mb5.3*

ISC 18 23:01:34.8±0.7,**26°.43N**±0°.06×**44°.49W**±0°.06,**h13**km±4km, **h13**km:**pP-P,n481,**σ0892/452,**mb4.9**/185,**MS3.9**/15, **28C-21D,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
ROSA	**Rosais**	**18.34**	**44**	Pn		**Pn**	**23 05 46.6**		**-2.3**
BBSR	**BB Station**	**18.57**	**293**	P		**P**	**23 05 51.1**		**-0.3**
BBSR				IAmb		IAmb	23 06 18.2		
	comp=Z,167nm,1.6s								
FDF	**Fort de France**	**19.43**	**236**	P		**P**	**23 06 00.6**		**-0.5**
FDF				pmax		pmax			
	comp=Z,86nm,1.1s								
FDF	**Fort de France**	**19.43**	**236**	P		**P**	**23 06 00.6**		**-0.5**
FDF				IAmb		IAmb	23 06 21.2		
	comp=Z,86nm,1.1s								
SABA	**Saba**	**19.45**	**247**	P		**P**	**23 05 59.4**		**-1.9**
SABA				IAmb		IAmb	23 06 14.7		
	comp=Z,69nm,0.8s								
GRGR	**Grenville**	**21.52**	**232**	P		**P**	**23 06 23.0**		**-0.7**
SJG	**San Juan**	**21.66**	**252**	LR		LR	23 12 35.0		
	comp=Z,208nm,21.8s,baz=88,slow=31								
GBN	**Guysborough**	**23.34**	**329**	P		**P**	**23 06 43.0**		**+0.3**
GBN				IAmb		IAmb	23 06 50.2		
	comp=Z,42nm,1.3s								
PCDR	**Punta Cana, DR**	**23.42**	**255**	P		**P**	**23 06 41.2**		**-2.5**
DRLN	**Deer Lake**	**24.93**	**340**	P		**P**	**23 06 58.2**		**+0.7**
DRLN				IAmb		IAmb	23 06 58.7		
	comp=Z,42nm,1.2s								
LMN	**Caledonia Moun**	**25.27**	**325**	P		**P**	**23 07 01.4**		**+0.6**
LMN				IAmb		IAmb	23 07 03.8		
	comp=Z,24nm,1.1s								
BATG	**Bathurst New B**	**26.88**	**326**	P		**P**	**23 07 16.4**		**+1.2**
I62A	**Tamworth**	**27.84**	**316**	P		**P**	**23 07 22.6**		**-1.3**
WSPT	**Westport, CT**	**27.96**	**309**	P		**P**	**23 07 25.2**		**+0.1**
H62A	**Milan**	**28.08**	**317**	P		**P**	**23 07 25.4**		**-0.7**
N59A	**State Game Lan**	**29.59**	**307**	P		**P**	**23 07 39.0**		**-0.6**
T59A	**Double "B" Far**	**29.90**	**299**	P		**P**	**23 07 42.5**		**+0.2**
E58A	**La Victoria**	**30.29**	**319**	P		**P**	**23 07 45.4**		**-0.2**
	baz=121								
E54A	**Lac Daplat, Po**	**32.69**	**316**	P		**P**	**23 08 07.4**		**+0.6**
	baz=116								
SCHQ	**Schefferville**	**32.77**	**336**	P		**P**	**23 08 06.8**		**-0.6**
	comp=Z,6.8nm,0.9s,baz=127,slow=7.8,SNR=9.9								
SCHQ	**Schefferville**	**32.77**	**336**	P		**P**	**23 08 08.0**		**+0.6**
SADO	**Sadowa**	**33.27**	**312**	LR		LR	23 19 13.2		
	comp=Z,243nm,19.4s,baz=138,slow=32								
VLDQ	**Val d'Or**	**33.62**	**319**	P		**P**	**23 08 17.7**		**+2.8**
VLDQ				IAmb		IAmb	23 08 18.6		
	comp=Z,36nm,1.6s								
LSQQ	**Lebel-sur-Quev**	**33.81**	**321**	P		**P**	**23 08 16.7**		**+0.2**
	baz=120								
W53A	**Cullowhee**	**34.17**	**294**	P		**P**	**23 08 21.6**		**+1.6**
	baz=94								
MATQ	**Matagami**	**34.53**	**321**	P		**P**	**23 08 23.1**		**+0.3**
	baz=120								
TKL	**Tuckaleechee C**	**34.71**	**295**	P		**P**	**23 08 25.4**		**+0.9**
TKL				pmax		pmax			
	comp=Z,24nm,1.3s								
TKL	**Tuckaleechee C**	**34.71**	**295**	P		**P**	**23 08 25.3**		**+0.9**
	comp=Z,7.4nm,0.9s,baz=116,slow=6.8,SNR=4.2								
TKL				LR		LR	23 19 39.2		
	comp=Z,247nm,18.7s,baz=106,slow=31								
TKL	**Tuckaleechee C**	**34.71**	**295**	IAmb		IAmb	23 08 32.4		
	comp=Z,24nm,1.2s								
Q51A	**Peebles**	**34.77**	**301**	P		**P**	**23 08 26.7**		**+1.7**
Q51A				IAmb		IAmb	23 08 26.9		
	comp=Z,13nm,0.9s								
Q51A	**Peebles**	**34.77**	**301**	P		**P**	**23 08 26.4**		**+1.4**
	baz=100								
P50A	**Jamestown**	**35.21**	**302**	P		**P**	**23 08 30.2**		**+1.4**
	baz=100,SNR=8.7								
V50A	**Pikevile**	**35.78**	**295**	P		**P**	**23 08 35.3**		**+1.5**
	baz=94								
Q49A	**Aurora**	**35.96**	**301**	P		**P**	**23 08 36.8**		**+1.6**
	baz=98								
WVT	**Waverly**	**38.02**	**296**	P		**P**	**23 08 53.2**		**+0.4**
WVT				pmax		pmax			
	comp=Z,10.0nm,1.1s								
WVT	**Waverly**	**38.02**	**296**	P		**P**	**23 08 53.2**		**+0.4**
WVT	**Waverly**	**38.02**	**296**	P		**P**	**23 08 53.6**		**+0.8**
	baz=92								
PLAL	**Pickwick Lake**	**38.19**	**294**	P		**P**	**23 08 56.3**		**+2.0**
E44A	**Grand Marais A**	**38.37**	**313**			**S**	**23 14 51.1**		**+1.3**
PEXB	**Peixe**	**38.48**	**186**	eP		**P**	**23 08 58.5**		**+1.7**
CLDB	**Colider**	**38.67**	**198**	eP		**P**	**23 08 59.8**		**+1.5**
SAML	**Samuel**	**39.58**	**210**	P		**P**	**23 09 05.8**		**-0.1**
SAML				pmax		pmax			
	comp=Z,10.0nm,1.2s								
SAML	**Samuel**	**39.58**	**210**	P		**P**	**23 09 05.8**		**-0.1**
D41A	**Chassel**	**40.23**	**313**	P		**P**	**23 09 12.8**		**+1.6**
D41A				IAmb		IAmb	23 09 13.7		
	comp=Z,90nm,1.8s								
COWI	**Conover**	**40.38**	**311**	P		**P**	**23 09 12.5**		**+0.1**
FRB	**Frobisher Bay**	**40.48**	**344**	P		**P**	**23 09 12.8**		**-0.1**
	comp=Z,18nm,1.0s,baz=149,slow=7.4,SNR=23								
FRB				LR		LR	23 23 51.6		
	comp=Z,164nm,21.0s,baz=182,slow=33								
TEIG	**Tepich**	**40.53**	**271**	LR		LR	23 22 43.9		
	comp=Z,138nm,21.4s,baz=232,slow=31								
CCM	**Cathedral Cave**	**40.83**	**298**	P		**P**	**23 09 16.9**		**+0.7**
CCM				pmax		pmax			
	comp=Z,13nm,1.2s								
CCM	**Cathedral Cave**	**40.83**	**298**	P		**P**	**23 09 16.9**		**+0.7**
CCM	**Cathedral Cave**	**40.83**	**298**	P		**P**	**23 09 16.8**		**+0.7**
	baz=92								
W41B	**Gary Mavity, V**	**41.61**	**294**	P		**P**	**23 09 23.2**		**+0.5**
W41B	**Gary Mavity, V**	**41.61**	**294**	P		**P**	**23 09 23.2**		**+0.5**
	baz=88,SNR=5.5								
WHAR	**Wooly Hollow**	**41.64**	**294**	P		**P**	**23 09 23.9**		**+1.0**
WHAR				IAmb		IAmb	23 09 24.2		
	comp=Z,23nm,1.2s								
UALR	**University of**	**41.70**	**293**	IAmb		IAmb	23 09 25.6		
	comp=Z,23nm,1.2s								
OTAV	**Otavalo**	**41.80**	**237**	P		**P**	**23 09 26.2**		**+1.3**
OTAV				pmax		pmax			
	comp=Z,17nm,1.3s								
OTAV	**Otavalo**	**41.80**	**237**	eP		**P**	**23 09 26.1**		**+1.2**
OTAV	**Otavalo**	**41.80**	**237**	P		**P**	**23 09 26.2**		**+1.2**
BDFB	**Brasilia**	**41.95**	**185**	P		**P**	**23 09 27.7**		**+2.0**
BDFB				pmax		pmax			
	comp=Z,11nm,1.1s								
BDFB	**Brasilia**	**41.95**	**185**	P		**P**	**23 09 26.1**		**+0.5**
	comp=Z,7.5nm,1.0s,baz=2.1,slow=5.8,SNR=8.4								
BDFB	**Brasilia**	**41.95**	**185**	P		**P**	**23 09 27.7**		**+2.0**
U40A	**Yellville**	**42.09**	**296**	P		**P**	**23 09 27.3**		**+0.7**
	baz=90								
X40A	**Basin Creek Fa**	**42.12**	**293**	P		**P**	**23 09 27.2**		**+0.4**
	baz=88								
TIC	**Toumodi**	**42.39**	**111**	eP		**P**	**23 09 28.1**		**-1.2**
ARAG	**Araguaiana, MT**	**42.48**	**190**	eP		**P**	**23 09 31.0**		**+1.2**
DBIC	**Dimbokro**	**42.52**	**110**	P		**P**	**23 09 30.9**		**+0.7**
	comp=Z,6.0nm,1.0s,baz=298,slow=12,SNR=5.0								
DBIC				LR		LR	23 24 47.2		
	comp=Z,152nm,18.8s,baz=252,slow=33								
DBIC	**Dimbokro**	**42.52**	**110**	P		P	23 09 21.5		-8.8
SCIA	**State Center**	**42.60**	**304**	P		**P**	**23 09 31.4**		**+0.7**
SCIA				IAmb		IAmb	23 09 33.4		
	comp=Z,52nm,1.4s								
LIC	**Lamto**	**42.61**	**111**	eP		**P**	**23 09 30.8**		**-0.2**
	comp=Z,108nm,1.9s								
SPMN	**Marine on St.**	**42.73**	**309**	P		**P**	**23 09 30.9**		**-0.7**
KIC	**Kosan Boka**	**42.78**	**111**	eP		**P**	**23 09 32.0**		**-0.4**
	comp=Z,47nm,1.2s								
W39A	**Magazine**	**42.87**	**294**	P		**P**	**23 09 32.6**		**-0.3**
SALV	**Santo Antonio**	**43.46**	**196**	eP		**P**	**23 09 39.2**		**+1.5**
IPMB	**Ipameri, GO**	**44.29**	**185**	eP		**P**	**23 09 44.3**		**-0.2**
H10N2	**ASCENSION HYDR**	**44.80**	**135**	T		T	23 57 29.8		
	baz=320,slow=75,SNR=597								
H10N3	**ASCENSION HYDR**	**44.80**	**135**	T		T	23 57 27.5		
	baz=320,slow=75,SNR=601								
H10N1	**ASCENSION HYDR**	**44.82**	**135**	T		T	23 57 31.1		
	baz=320,slow=75,SNR=554								
PP1B	**Ponte de Pedra**	**44.91**	**194**	eP		**P**	**23 09 50.7**		**+1.3**
HKT	**Hockley**	**45.09**	**287**	P		**P**	**23 09 50.6**		**-0.2**
HKT				pmax		pmax			
	comp=Z,18nm,1.4s								
HKT	**Hockley**	**45.09**	**287**	P		**P**	**23 09 50.6**		**-0.2**
HKT				IAmb		IAmb	23 09 53.0		
	comp=Z,18nm,1.4s								
SIV	**San Ignacio**	**45.14**	**203**	P		**P**	**23 09 50.9**		**-0.4**
	comp=Z,2.3nm,0.9s,baz=34,slow=8.4,SNR=7.8								
AGMN	**Agassiz Nation**	**45.31**	**313**	IAmb		IAmb	23 09 53.6		
	comp=Z,14nm,1.1s								
AGMN	**Agassiz Nation**	**45.31**	**313**	P		**P**	**23 09 52.9**		**+0.5**
	baz=100,SNR=7.4								
TAM	**Tamanrasset**	**45.39**	**83**	P		**P**	**23 09 55.3**		**+1.8**
TAM				pmax		pmax			
	comp=Z,7.0nm,1.3s								
TAM	**Tamanrasset**	**45.39**	**83**	P		**P**	**23 09 55.3**		**+1.8**
H10S3	**ASCENSION HYDR**	**45.56**	**137**	T		T	23 58 22.2		
	baz=319,slow=74,SNR=246								
H10S2	**ASCENSION HYDR**	**45.58**	**136**	T		T	23 58 27.7		
	baz=261,slow=74,SNR=352								
ULM	**Lac du Bonnet**	**45.68**	**315**	i	P	**P**	**23 09 54.8**		**-0.5**
ULM	**Lac du Bonnet**	**45.68**	**315**	P		**P**	**23 09 53.4**		**-1.8**
	comp=Z,6.9nm,1.1s,baz=63,slow=8.5,SNR=10								
ULM				LR		LR	23 27 25.2		
	comp=Z,78nm,19.7s,baz=95,slow=34								
ULM	**Lac du Bonnet**	**45.68**	**315**	IAmb		IAmb	23 09 55.8		
	comp=Z,17nm,1.2s								
SCO	**Scoresbysund**	**45.95**	**10**	i	P	**P**	**23 09 58.0**		**+0.9**
SCO				pmax		pmax			
	comp=Z,50nm,1.2s								
SCO	**Scoresbysund**	**45.95**	**10**	i	P	**P**	**23 09 58.0**		**+0.9**
	comp=Z,50nm,1.2s								
WHTX	**Lake Whitney,**	**46.19**	**290**	P		**P**	**23 10 00.6**		**+1.1**
	baz=83								
X34A	**Smith Ranch, M**	**46.23**	**294**	IAmb		IAmb	23 10 01.8		
	comp=Z,25nm,1.1s								
BFO	**Black Forest**	**46.27**	**47**	P		**P**	**23 10 00.3**		**+0.4**
BFO				pmax		pmax			
	comp=Z,20nm,1.2s								
BFO	**Black Forest**	**46.27**	**47**	eP		**P**	**23 09 60.0**		**+0.1**
	comp=Z,25nm,1.3s,baz=260,slow=7.4								
BFO	**Black Forest**	**46.27**	**47**	P		**P**	**23 10 00.3**		**+0.4**
BFO				IAmb		IAmb	23 10 01.7		
	comp=Z,20nm,1.2s								
SUMG	**Summit**	**46.31**	**3**	i	P	**P**	**23 10 00.0**		**-0.4**
SUMG				pmax		pmax			
	comp=Z,56nm,0.9s								
SUMG	**Summit**	**46.31**	**3**	i	P	**P**	**23 10 00.0**		**-0.4**
	comp=Z,56nm,0.9s								
SUMG	**Summit**	**46.31**	**3**	P		**P**	**23 10 00.7**		**+0.3**
SUMG				IAmb		IAmb	23 10 02.5		
	comp=Z,23nm,1.0s								
KEST	**Kesra**	**46.54**	**65**	P		**P**	**23 10 01.1**		**-1.2**
	comp=Z,15nm,1.1s,baz=241,slow=5.0,SNR=4.3								
TNS	**Taunus Mts**	**46.65**	**45**	eP		**P**	**23 10 04.5**		**+1.5**
	comp=Z,245nm,3.1s,baz=260,slow=7.4								
WMOK	**Wichita Mounta**	**46.99**	**294**	IAmb		IAmb	23 10 07.3		
	comp=Z,13nm,1.2s								
WMOK	**Wichita Mounta**	**46.99**	**294**	P		**P**	**23 10 06.6**		**+0.7**
	baz=85,SNR=12								
FCC	**Fort Churchill**	**47.10**	**327**	P		**P**	**23 10 06.8**		**+0.6**
FCC				pmax		pmax			
	comp=Z,24nm,1.2s								
FCC	**Fort Churchill**	**47.10**	**327**	P		**P**	**23 10 06.8**		**+0.6**
FCC				IAmb		IAmb	23 10 07.7		
	comp=Z,24nm,1.2s								
DAVA	**Damuels**	**47.17**	**49**	i	pP	**P**	**23 10 08.5**		**+1.3**
	comp=Z,27nm,1.3s,SNR=6.0								
FETA	**Feichten**	**47.72**	**49**	i	sP	**P**	**23 10 12.9**		**+1.5**
	comp=Z,15nm,1.2s,SNR=4.1								
RETA	**Reutte**	**47.78**	**49**	i	pP	**P**	**23 10 13.1**		**+1.3**
	comp=Z,16nm,1.3s,SNR=5.1								
ABTX	**Abilene, Hawle**	**47.95**	**291**	IAmb		IAmb	23 10 14.7		
	comp=Z,18nm,1.2s								
ABTX	**Abilene, Hawle**	**47.95**	**291**	P		**P**	**23 10 13.8**		**+0.5**
	baz=82								
MOTA	**Moosalm**	**48.00**	**49**	i	pP	**P**	**23 10 14.8**		**+1.2**
	comp=Z,11nm,1.4s								
SQTA	**Sankt Quirin**	**48.06**	**49**	i	pP	**P**	**23 10 15.3**		**+1.2**
	comp=Z,22nm,1.3s,SNR=5.8								
NRDL	**Niedersach Rie**	**48.09**	**42**	eP		**P**	**23 10 15.1**		**+1.1**
	comp=Z,36nm,1.3s,baz=260,slow=7.4								
PCMB	**Pacaembu**	**48.20**	**188**	eP		**P**	**23 10 15.7**		**+0.6**
LPAZ	**La Paz**	**48.28**	**211**	P		**P**	**23 10 16.4**		**-0.2**
LPAZ				pmax		pmax			
	comp=Z,18nm,1.2s								
LPAZ	**La Paz**	**48.28**	**211**	P		**P**	**23 10 16.2**		**-0.3**
	comp=Z,13nm,1.2s,baz=11,slow=6.9,SNR=17								
LPAZ	**La Paz**	**48.28**	**211**	eP		**P**	**23 10 16.8**		**+0.3**
LPAZ	**La Paz**	**48.28**	**211**	P		**P**	**23 10 16.4**		**-0.2**
LPAZ				IAmb		IAmb	23 10 29.1		
	comp=Z,18nm,1.2s								
WATA	**Walderalm**	**48.32**	**49**	i	pP	**P**	**23 10 17.1**		**+1.0**
	comp=Z,17nm,1.3s,SNR=4.4								
GRF	**Grafenberg Arr**	**48.34**	**46**	eP		**P**	**23 10 16.4**		**+0.4**
	comp=Z,36nm,1.7s,baz=260,slow=7.4								
WTTA	**Wattenberg**	**48.35**	**49**	i	pP	**P**	**23 10 16.5**		**+0.1**
	comp=Z,13nm,1.1s,SNR=4.7								
JCT	**Junction City**	**48.40**	**288**	IAmb		IAmb	23 10 18.5		
	comp=Z,25nm,1.4s								
BSEG	**Bad Segeberg**	**48.50**	**40**	eP		**P**	**23 10 17.5**		**+0.4**
	comp=Z,54nm,1.3s,baz=260,slow=7.4								
ABTA	**Abfaltersbach**	**48.91**	**50**	i	pP	**P**	**23 10 21.2**		**+0.6**
	comp=Z,15nm,1.2s								
WERN	**Wernitzgruen**	**49.16**	**45**	eP		**P**	**23 10 23.1**		**+0.7**
	comp=Z,19nm,1.3s,baz=260,slow=7.4								
AMTX	**Amarillo**	**49.35**	**294**	P		**P**	**23 10 25.5**		**+1.4**
	baz=83								
KBA	**Koelnbreinsper**	**49.50**	**50**	i	pP	**P**	**23 10 25.5**		**+0.3**
	comp=Z,11nm,1.3s								
TRCB	**Terra Rica**	**49.56**	**190**	eP		**P**	**23 10 26.6**		**+0.9**
CLL	**Collm**	**49.68**	**44**	eP		**P**	**23 10 25.0**		**-1.2**
CLL				*e*			23 10 31.0		
CLL				pmax		pmax			
	comp=Z,14nm,1.2s								
CLL	**Collm**	**49.68**	**44**	eP		**P**	**23 10 25.0**		**-1.2**
	comp=Z,14nm,1.2s								
CLL				*es*	P	**sP**	**23 10 31.0**		**+0.1**
MYKA	**Terra Mystica**	**49.68**	**50**	i	pP	**P**	**23 10 26.6**		**+0.2**
	comp=Z,11nm,1.1s								
FRTB	**Fartura**	**49.72**	**186**	eP		**P**	**23 10 26.5**		**-0.3**
KHC	**Kasperske Hory**	**49.81**	**47**	⇓	*i* P	**P**	**23 10 27.0**		**-0.4**
KHC				pmax		pmax			
	comp=Z,19nm,1.2s								
KHC	**Kasperske Hory**	**49.81**	**47**	eP		**P**	**23 10 27.5**		**+0.1**
KHC				*ep*	P	**sP**	**23 10 32.5**		**+0.4**
GEC2	**GERESS Array S**	**49.87**	**47**	eP		**P**	**23 10 27.8**		**-0.1**
	comp=Z,32nm,1.6s,baz=260,slow=7.4								
GEC2	**GERESS Array S**	**49.87**	**47**	IAmb		IAmb	23 10 34.0		
	comp=Z,23nm,1.4s								
GERES	**GERESS Array B**	**49.87**	**47**	P		**P**	**23 10 26.9**		**-1.0**
	comp=Z,3.1nm,1.0s,baz=263,slow=6.2,SNR=14								
MOA	**Molln**	**50.17**	**49**	*i*	pP	**P**	**23 10 30.2**		**+0.1**
	comp=Z,10nm,1.5s								
FFC	**Flin Flon**	**50.20**	**320**	P		**P**	**23 10 30.2**		**0.0**
FFC				pmax		pmax			
	comp=Z,14nm,1.1s								
FFC	**Flin Flon**	**50.20**	**320**	P		**P**	**23 10 30.2**		**0.0**
FFC				IAmb		IAmb	23 10 31.3		
	comp=Z,14nm,1.1s								
BRG	**Berggiesshubel**	**50.22**	**45**	eP		**P**	**23 10 31.1**		**+0.8**
	comp=Z,24nm,1.5s								
BRG	**Berggiesshubel**	**50.22**	**45**	eP		**P**	**23 10 31.1**		**+0.8**
BRG				pmax		pmax			
	comp=Z,24nm,1.5s								
OBKA	**Obir**	**50.30**	**50**	*i*	pP	**P**	**23 10 31.8**		**+0.6**
	comp=Z,26nm,1.5s,SNR=4.4								
MSTX	**Muleshoe**	**50.36**	**293**	IAmb		IAmb	23 10 33.2		
	comp=Z,16nm,1.2s								
MSTX	**Muleshoe**	**50.36**	**293**	P		**P**	**23 10 32.7**		**+0.8**
	baz=82								
PRU	**Pruhonice**	**50.51**	**46**	eP		**P**	**23 10 33.3**		**+0.7**
PRU				*e*			23 10 38.0		
PRU	**Pruhonice**	**50.51**	**46**	eP		**P**	**23 10 33.3**		**+0.7**
PRU				*ep*	P	**sP**	**23 10 38.0**		**+0.7**
SOKA	**Soboth**	**50.64**	**50**	*i*	pP	**P**	**23 10 33.0**		**-0.7**
	comp=Z,11nm,1.4s								
NB2	**NORSAR Subarra**	**50.76**	**31**	P		**P**	**23 10 34.9**		**+0.6**
	comp=Z,24nm,1.2s,baz=253,slow=7.9								
NOA	**NORSAR Array B**	**50.76**	**31**	P		**P**	**23 10 33.9**		**-0.4**
	comp=Z,5.5nm,1.0s,baz=252,slow=7.3,SNR=5.3								
ARSA	**Arzberg**	**50.99**	**49**	*i*	pP	**P**	**23 10 36.3**		**0.0**
	comp=Z,11nm,1.2s,SNR=6.0								
CONA	**Conrad Observa**	**51.25**	**49**	*i*	pP	**P**	**23 10 38.7**		**+0.4**
	comp=Z,8.7nm,1.2s,SNR=4.8								
T25A	**Trinidad**	**51.30**	**298**	IAmb		IAmb	23 10 41.0		
	comp=Z,19nm,1.4s								
T25A	**Trinidad**	**51.30**	**298**	P		**P**	**23 10 40.6**		**+1.6**
	baz=84,SNR=5.6								
UPC	**Upice**	**51.49**	**45**	eP		**P**	**23 10 40.5**		**+0.5**
UPC				*e*			23 10 44.9		
UPC	**Upice**	**51.49**	**45**	eP		**P**	**23 10 40.5**		**+0.5**
UPC				*ep*	P	**sP**	**23 10 44.9**		**+0.2**
CHVC	**Chvalec**	**51.53**	**45**	eP		**P**	**23 10 40.7**		**+0.4**
CHVC				*ex*		x	23 10 45.4		
OSTC	**Ostas**	**51.63**	**45**	eP		**P**	**23 10 39.9**		**-1.1**
OSTC				*ex*		x	23 10 46.0		
KRUC	**Moravsky**	**51.65**	**47**	eP		**P**	**23 10 40.5**		**-0.7**
DPC	**Dobruska-Polom**	**51.68**	**45**	eP		**P**	**23 10 41.7**		**+0.3**
DPC				*e*			23 10 46.3		
DPC	**Dobruska-Polom**	**51.68**	**45**	eP		**P**	**23 10 41.7**		**+0.3**
DPC				*ep*	P	**sP**	**23 10 46.3**		**+0.2**
Q24A	**Divide**	**51.70**	**300**	IAmb		IAmb	23 10 44.8		
	comp=Z,16nm,1.2s								
Q24A	**Divide**	**51.70**	**300**	P		**P**	**23 10 43.6**		**+1.5**
	baz=85								
GO01	**Chusmiza**	**51.72**	**210**	IAmb		IAmb	23 10 43.4		
	comp=Z,24nm,1.1s								
VRAC	**Vranov**	**51.80**	**47**	⇑	P	**P**	**23 10 42.8**		**+0.6**
VRAC	**Vranov**	**51.80**	**47**	eP		**P**	**23 10 42.1**		**-0.2**
TXAR	**Lajitas Array**	**51.91**	**288**	P		**P**	**23 10 43.0**		**-0.5**
	comp=Z,1.3nm,0.8s,baz=95,slow=7.5,SNR=11								
TXAR				PcP		**PcP**	**23 11 55.9**		**-0.4**
	comp=Z,1.9nm,1.0s,baz=120,slow=5.3,SNR=6.1								
TXAR				LR		LR	23 30 03.8		
	comp=Z,35nm,21.9s,baz=0.0,slow=33								
DAG	**Danmarks Havn**	**51.93**	**7

comp=Z,8.0nm,1.1s,baz=113,slow=5.4,SNR=17
RES Resolute Bay 54.65 345 P P 23 11 02.7 -0.2
RES IAmb IAmb 23 11 05.1
comp=Z,18nm,1.2s
BW06 Boulder Array 54.70 305 P P 23 11 03.2 -0.8
BW06 IAmb IAmb 23 11 05.1
comp=Z,14nm,1.1s
BW06 Boulder Array 54.70 305 P P 23 11 04.3 +0.2
baz=85,SNR=5.3
PD31 Pinedale Array 54.70 305 P P 23 11 04.1 0.0
PD31 IAmb IAmb 23 11 05.2
comp=Z,13nm,1.1s
PDAR Pinedale Array 54.70 305 P P 23 11 03.9 -0.2
comp=Z,5.6nm,0.9s,baz=89,slow=8.2,SNR=14
PDAR LR LR 23 33 18.5
comp=Z,92nm,18.0s,baz=42,slow=35
YNE Yellowstone No 54.86 308 P P 23 11 05.3 +0.1
RDMU Red Mountain 54.93 302 P P 23 11 05.2 -0.6
YMP Mirror Lake Pl 54.98 308 P P 23 11 05.7 -0.5
LKWY Lake 55.17 307 P P 23 11 08.1 +0.7
LKWY pmax pmax
comp=Z,10.0nm,1.1s
LKWY Lake 55.17 307 P P 23 11 08.1 +0.7
BZS Buzias 55.23 51 ⇑P P 23 11 08.2 +0.7
MDVR Moldovita 55.36 52 ⇓P P 23 11 09.1 +0.6
FLWY Flagg Ranch 55.42 307 P P 23 11 08.3 -0.9
YPP Pitchstone Pla 55.48 307 P P 23 11 09.8 +0.1
MOOW Moose Ponds 55.48 306 P P 23 11 09.3 -0.4
FNA Florina 55.50 57 P P 23 11 08.6 -1.0
FNA pmax pmax
comp=Z,23nm,1.2s
FNA Florina 55.50 57 P P 23 11 08.6 -1.0
FNA IAmb IAmb 23 11 16.8
comp=Z,23nm,1.2s
UZH Uzhgorod 55.55 48 *e*P P 23 11 10.1 +0.4
UZH *e* 23 11 15.3
YMR Madison River 55.56 308 P P 23 11 10.6 +0.3
REDW Red Top Meadow 55.60 306 P P 23 11 10.1 -0.4
REDW IAmb IAmb 23 11 17.2
comp=Z,30nm,1.8s
TPAW Teton Pass 55.66 306 P P 23 11 10.0 -1.0
TPAW IAmb IAmb 23 11 12.6
comp=Z,13nm,1.1s
YHL Hebgen Lake 55.70 308 P P 23 11 12.0 +0.6
YHB Horse Butte 55.72 308 P P 23 11 11.8 +0.4
TRPA Tarpa 55.73 48 ⇑P P 23 11 11.3 +0.2
KWP Kalwaria Pacla 55.79 46 P P 23 11 12.0 +0.5
KWP pmax pmax
comp=Z,289nm,1.5s
KWP Kalwaria Pacla 55.79 46 P P 23 11 12.0 +0.5
AHID Auburn Hatcher 55.84 305 P P 23 11 11.5 -0.7
AHID IAmb IAmb 23 11 13.4
comp=Z,14nm,1.3s
SRU San Rafael Swe 55.84 301 P P 23 11 12.3 0.0
SRU pmax pmax
comp=Z,14nm,1.0s
SRU San Rafael Swe 55.84 301 P P 23 11 12.3 0.0
HERR Herculane 55.85 52 ⇓P P 23 11 12.5 +0.5
W18A Petrified Fore 55.86 296 P P 23 11 11.2 -1.3
W18A IAmb IAmb 23 11 14.3
comp=Z,26nm,1.6s
DRGR 55.92 50 ⇑P P 23 11 13.3 +0.8
P17A Butcher Ranch, 55.96 301 P P 23 11 12.9 -0.3
GZR Gura Zlata 56.06 52 ⇑P P 23 11 13.7 +0.1
DEV Deva 56.11 51 ⇑P P 23 11 14.7 +0.9
TCUT Toone Canyon 56.25 303 P P 23 11 14.2 -1.0
HWUT Hardware Ranch 56.31 304 P P 23 11 14.9 -0.7
NOR Nord 56.33 5 *i* P P 23 11 14.7 -0.2
comp=Z,36nm,1.3s
TMUT Trail Mountain 56.34 301 P P 23 11 14.8 -1.3
JLU Jordanelle 56.35 303 P P 23 11 15.9 -0.1
Q16A Castle Valley 56.37 301 P P 23 11 15.2 -0.9
LIT Litokhoron 56.43 58 P P 23 11 15.5 -0.8
LIT pmax pmax
comp=Z,19nm,1.2s
LIT Litokhoron 56.43 58 P P 23 11 15.4 -0.8
LIT IAmb IAmb 23 11 17.8
comp=Z,19nm,1.2s
AGG Agios Georgios 56.46 59 IAmb IAmb 23 11 19.5
comp=Z,25nm,1.3s
MPU Maple Canyon 56.57 302 P P 23 11 17.2 -0.3
LVV L'vov 56.64 46 *e*P P 23 11 18.4 +0.9
DLMT Dillon 56.66 308 P P 23 11 17.1 -0.8
VTS Vitosha 56.66 55 P P 23 11 17.8 -0.2
VTS pmax pmax
comp=Z,13nm,1.3s
VTS Vitosha 56.66 55 ⇑P P 23 11 19.1 +1.0
VTS Vitosha 56.66 55 P P 23 11 17.8 -0.2
VTS IAmb IAmb 23 11 24.6
comp=Z,13nm,1.3s
GO02 Mina Guanaco 56.73 207 P P 23 11 16.6 -2.1
GO02 IAmb IAmb 23 11 19.6
comp=Z,15nm,1.2s
NLU North Lily Min 56.91 302 P P 23 11 20.1 +0.1
SPUT South Promonto 57.01 304 P P 23 11 19.9 -0.6
ARCR ARCALIA 57.02 49 ⇑P P 23 11 20.0 -0.3
WUAZ Wupatki 57.10 297 P P 23 11 21.1 -0.2
WUAZ IAmb IAmb 23 11 24.6
comp=Z,26nm,1.2s
WUAZ Wupatki 57.10 297 P P 23 11 22.6 +1.3
baz=79,SNR=5.3
MSU Marysvale 57.21 300 P P 23 11 21.9 -0.2
MSU Marysvale 57.21 300 P P 23 11 21.9 -0.2
TUC Tucson 57.27 293 P P 23 11 22.8 +0.3
TUC pmax pmax
comp=Z,8.0nm,1.1s
TUC Tucson 57.27 293 P P 23 11 22.8 +0.3
TUC Tucson 57.27 293 P P 23 11 23.7 +1.2
baz=77
MTPU Mount Pierson 57.30 300 P P 23 11 23.3 +0.5
ARR Arges 57.37 51 ⇓P P 23 11 23.4 +0.5
X16A Lo Mia Camp, P 57.37 295 P P 23 11 22.9 -0.3
DUG Dugway, Tooele 57.44 302 P P 23 11 23.8 +0.2
DUG pmax pmax
comp=Z,12nm,1.1s
DUG Dugway, Tooele 57.44 302 P P 23 11 23.8 +0.2
DUG IAmb IAmb 23 11 25.2
comp=Z,12nm,1.1s
DUG Dugway, Tooele 57.44 302 P P 23 11 24.2 +0.7
baz=81,SNR=12
BGU Big Grassy Mou 57.49 303 P P 23 11 24.0 +0.1
PKCU Pink Cliffs 57.50 299 P P 23 11 23.6 -0.6
BUR08 Bucovina Ar. S 57.55 49 P P 23 11 24.4 +0.2
BUR08 IAmb IAmb 23 11 31.2
comp=Z,30nm,1.4s
BURAR Bucovina Array 57.56 49 ⇓P P 23 11 24.5 +0.2
JTMT Jette 57.61 311 P P 23 11 23.7 -0.9
VOIR 57.65 51 ⇓P P 23 11 24.0 -0.9
U15A North Rim 57.66 298 P P 23 11 25.5 +0.1
U15A IAmb IAmb 23 11 28.6
comp=Z,14nm,1.3s
YKA Yellowknife Ar 57.75 329 P P 23 11 24.1 -1.1
comp=Z,4.9nm,1.0s,baz=95,slow=7.5,SNR=37
YKA LR LR 23 34 52.4
comp=Z,155nm,21.1s,baz=0.0,slow=35
DOPR Dopca 57.83 51 ⇑P P 23 11 26.4 +0.3
FINES FINESS Array B 57.89 32 P P 23 11 25.0 -1.2
comp=Z,11nm,1.0s,baz=250,slow=5.5,SNR=9.1
KNB Kanab 57.97 299 P P 23 11 27.0 -0.4
KNB pmax pmax
comp=Z,11nm,1.4s
KNB Kanab 57.97 299 P P 23 11 27.0 -0.4
SZCU Shurtz Canyon 58.08 299 P P 23 11 28.1 -0.1
OZUR 58.09 50 ⇑P P 23 11 28.3 +0.4
VSU Vasula 58.11 36⇑ *e*P P 23 11 27.8 +0.1
VSU pmax pmax
comp=Z,32nm,1.0s
HSIG 58.18 289 P P 23 11 29.3 +0.5
HSIG IAmb IAmb 23 11 31.4
comp=Z,9.8nm,1.0s
BIZ Bicaz 58.23 49 ⇓P P 23 11 29.5 +0.7
PRAR RASCA 58.27 49 ⇑P P 23 11 29.7 +0.6
MLR Muntele Rosu 58.27 51 P P 23 11 29.2 -0.1
MLR pmax pmax
comp=Z,41nm,1.1s
MLR Muntele Rosu 58.27 51 ⇓P P 23 11 30.5 +1.2
MLR Muntele Rosu 58.27 51 P P 23 11 29.2 -0.1
CCUT Cedar City 58.30 299 P P 23 11 30.1 +0.3
LCMT Little Creek M 58.31 299 P P 23 11 29.2 -0.5
PSUT Pine Spring 58.51 301 P P 23 11 26.2 -5.0
ARCES ARCESS Array B 58.52 23 P P 23 11 29.1 -1.3
comp=Z,9.3nm,0.9s,baz=263,slow=7.2,SNR=10
ARE0 ARCESS Array S 58.52 23 P 23 11 29.3 -1.2
ELND Elena 58.55 54 ⇑P P 23 11 31.1 -0.1
PLOR Plostina 58.72 51 ⇑P P 23 11 30.4 -1.9
VRI Vrincioaia 58.77 51 ⇑P P 23 11 32.9 +0.2
BISRR Bisoca 58.80 51 ⇓P P 23 11 34.0 +1.1
RAZG Razgrad 58.92 53 ⇓P P 23 11 34.7 +1.0
ALN Alexandroupoli 58.99 57 P 23 11 33.9 -0.3
ALN IAmb IAmb 23 12 18.8
comp=Z,13nm,1.2s
214A Organ Pipe Nat 59.02 293 P P 23 11 34.6 -0.1
214A IAmb IAmb 23 11 37.7
comp=Z,21nm,1.1s
214A Organ Pipe Nat 59.02 293 P P 23 11 36.8 +2.2
baz=76,SNR=8.2
GO03 Copiap 59.14 207 P P 23 11 33.9 -1.4
ELK Elko 59.18 303 P P 23 11 35.5 -0.3
comp=Z,4.6nm,1.0s,baz=57,slow=4.9,SNR=16
ELK Elko 59.18 303 P P 23 11 35.1 -0.7
MFID Camas Ranch 59.19 307 IAmb IAmb 23 11 37.3
comp=Z,15nm,1.1s
W13A Hualapai Mount 59.20 297 P P 23 11 36.4 +0.4
W13A IAmb IAmb 23 11 39.4
comp=Z,15nm,1.5s
SANT Santorini 59.37 62 P 23 11 35.8 -1.2
NEW Newport 59.46 312 P P 23 11 37.2 -0.2
comp=Z,16nm,1.0s,baz=86,slow=4.4,SNR=12
NEW Newport 59.46 312 P P 23 11 37.1 -0.3
NEW Newport 59.46 312 P P 23 11 37.9 +0.5
baz=84,SNR=16
SORM Soroca 59.61 48 ⇑P P 23 11 37.3 -1.0
113A Mohawk Valley, 59.62 294 P P 23 11 38.3 -0.4
R11A Troy Canyon, C 59.88 301 P P 23 11 40.2 -0.4
R11A Troy Canyon, C 59.88 301 P P 23 11 41.5 +0.9
baz=79,SNR=6.9
AKASG Malin Array Be 59.90 45 *ce*P P 23 11 39.7 -0.6
AKASG pmax pmax
comp=Z,7.0nm,1.0s
AKASG Malin Array Be 59.90 45 P P 23 11 39.3 -1.0
comp=Z,3.6nm,0.7s,baz=273,slow=5.9,SNR=21
AKASG Malin Array Be 59.90 45 IAmb IAmb 23 11 40.9
comp=Z,8.7nm,1.4s
AKBB Malin Array Si 59.90 45 *de*P P 23 11 39.6 -0.7
AKBB Malin Array Si 59.90 45 P P 23 11 39.0 -1.3
AKBB IAmb IAmb 23 11 45.7
comp=Z,16nm,1.2s
SHPR Sheep Range 59.91 299 P P 23 11 39.5 -1.4
Y12C Blythe 60.01 295 P P 23 11 41.0 -0.4
Y12C IAmb IAmb 23 11 48.9
comp=Z,11nm,1.2s
BMO Blue Mountains 60.03 308 P P 23 11 40.4 -1.1
BMO pmax pmax
comp=Z,7.0nm,1.4s
BMO Blue Mountains 60.03 308 P P 23 11 40.4 -1.1
MILM Milestii Mici 60.07 49 ⇓P P 23 11 40.7 -0.8
E09A Wood Farm, Sta 60.37 310 P P 23 11 43.8 +0.1
E09A IAmb IAmb 23 11 44.7
comp=Z,14nm,1.3s
IRM Iron Mountain 60.42 296 P P 23 11 45.6 +1.4
baz=77
GLA Glamis 60.42 295 P P 23 11 44.4 +0.1
GLA pmax pmax
comp=Z,20nm,1.5s
GLA Glamis 60.42 295 P P 23 11 44.4 +0.1
GLA IAmb IAmb 23 11 46.4
comp=Z,20nm,1.4s
TPNV Topopah Spring 60.68 299 P P 23 11 45.5 -0.6
TPNV pmax pmax
comp=Z,10.0nm,1.2s
TPNV Topopah Spring 60.68 299 P P 23 11 45.5 -0.6
TPNV IAmb IAmb 23 11 54.4
comp=Z,10nm,1.2s
TPNV Topopah Spring 60.68 299 P P 23 11 47.7 +1.6
baz=78,SNR=6.7
GMRC Granite Mounta 60.69 297 P P 23 11 47.6 +1.5
baz=77,SNR=6.6
TUQ Turquoise Moun 60.75 297 P P 23 11 48.4 +1.8
baz=77
BC3 Big Chuckawall 60.79 295 P P 23 11 48.4 +1.5
baz=76
D08A Wollman Farm, 60.82 311 P P 23 11 46.4 -0.4
KARP Karpathos 60.89 62 P P 23 11 46.2 -1.2
J08A Circle Bar Ran 61.10 307 P P 23 11 49.0 +0.2
J08A IAmb IAmb 23 11 50.5
comp=Z,18nm,1.4s
G08A Pilot Rock 61.12 309 P P 23 11 48.5 -0.4
G08A IAmb IAmb 23 11 50.4
comp=Z,9.7nm,1.3s
BELC Belle Mtn. Jos 61.14 296 P P 23 11 50.6 +1.2
baz=76
HAWA Hanford 61.34 310 P P 23 11 50.0 -0.2
GSC Goldstone, Bar 61.48 298 P P 23 11 51.5 -0.1
GSC pmax pmax
comp=Z,11nm,1.3s
GSC Goldstone, Bar 61.48 298 P P 23 11 51.5 -0.1
GSC IAmb IAmb 23 11 53.6
comp=Z,11nm,1.3s
GSC Goldstone, Bar 61.48 298 P P 23 11 52.8 +1.3
baz=76
E07A Sunnyside 61.53 311 P P 23 11 51.3 -0.3
IKP In-Ko-Pah, Jac 61.56 294 P P 23 11 53.6 +1.5
baz=75,SNR=7.6
XPFO Pion Flat 61.61 296 P P 23 11 52.6 +0.2
XPFO IAmb IAmb 23 11 54.7
comp=Z,12nm,1.3s
TPFO Pinon Flats 61.61 296 P P 23 11 53.9 +1.5
baz=76
PFO Pinyon Flats O 61.61 296⇑ *e*P P 23 11 53.4 +0.9
PFO pmax pmax
comp=Z,8.0nm,1.1s
PFO Pinyon Flats O 61.61 296 P P 23 11 51.8 -0.6
comp=Z,4.8nm,1.1s,baz=74,slow=3.8,SNR=7.0
PFO Pinyon Flats O 61.61 296 P P 23 11 52.3 -0.2
PFO IAmb IAmb 23 11 54.7
comp=Z,11nm,1.2s
PFO Pinyon Flats O 61.61 296 P P 23 11 53.8 +1.3
baz=76
KVN Kaiserville 61.66 302 P P 23 11 52.1 -0.7
KVN pmax pmax
comp=Z,5.0nm,1.1s
KVN Kaiserville 61.66 302 P P 23 11 52.1 -0.7
GO04 Tololo Observa 61.66 206 P P 23 11 51.8 -0.9
GO04 IAmb IAmb 23 12 26.5
comp=Z,17nm,1.2s
I07A Izee 61.71 308 P P 23 11 52.2 -0.8
I07A IAmb IAmb 23 12 00.1
comp=Z,8.1nm,1.2s
MONP2 Monument Peak 61.76 295 P P 23 11 54.9 +1.3
baz=75,SNR=6.4
NV11 Mina Array Sit 61.83 301 P P 23 11 52.9 -1.1
NV11 IAmb IAmb 23 12 00.1
comp=Z,14nm,1.7s
MPMC Manual Prospec 61.85 298 P P 23 11 55.5 +1.4
baz=76,SNR=9.0
DAC Darwin (Calif) 61.88 299 P P 23 11 54.6 +0.3
DAC pmax pmax
comp=Z,10.0nm,1.3s
DAC Darwin (Calif) 61.88 299 P P 23 11 54.6 +0.3
DAC IAmb IAmb 23 11 59.3
comp=Z,10nm,1.2s
NVAR Mina Array Bea 61.95 301 P P 23 11 54.2 -0.5
comp=Z,2.5nm,1.0s,baz=91,slow=6.0,SNR=11
NVAR LR LR 23 36 40.2
comp=Z,142nm,21.2s,baz=18,slow=34
LTY Liberty 61.97 311 P P 23 11 53.5 -1.1
LTY IAmb IAmb 23 11 55.4
comp=Z,15nm,1.1s
CFA Coronel Fontan 62.00 203 LR LR 23 40 11.3
comp=Z,48nm,18.1s,baz=82,slow=37
BAR Barrett 62.02 295 P P 23 11 54.1 -1.0
BAR IAmb IAmb 23 11 57.0
comp=Z,9.2nm,1.1s
CWC Cottonwood Cre 62.22 299 P P 23 11 57.8 +1.2
baz=76
LLLB Lillooet 62.23 315 IAmb IAmb 23 11 59.1
comp=Z,11nm,1.1s
G06A Carlson Farm, 62.30 309 P P 23 11 56.9 +0.1
PAHR Pah Rah Range 62.49 303 P P 23 11 58.4 +0.1
PAHR IAmb IAmb 23 12 00.1
comp=Z,14nm,1.1s
EDW2 Edwards Air Fo 62.53 297 P P 23 11 59.7 +1.2
baz=76,SNR=7.3
OMMB Old Mammoth Mi 62.67 301 P P 23 11 59.5 -0.3
MOD Modoc Plateau 62.71 305 P P 23 11 59.6 -0.1
MOD IAmb IAmb 23 12 01.4
comp=Z,17nm,1.1s
ISA Isabella, Lake 62.72 298 P P 23 12 00.1 +0.3
ISA pmax pmax
comp=Z,13nm,1.2s
ISA Isabella, Lake 62.72 298 P P 23 12 00.1 +0.3
ISA IAmb IAmb 23 12 02.9
comp=Z,13nm,1.1s
ISA Isabella, Lake 62.72 298 P P 23 12 01.8 +2.0
baz=76,SNR=8.9
F05D White Salmon 62.75 310 P P 23 12 00.8 +1.1
baz=79
ELL Elmali 62.78 60 P P 23 12 00.5 +0.3
ELL pmax pmax
comp=Z,146nm,1.1s
ELL Elmali 62.78 60 P P 23 12 00.5 +0.3
WAKR Walker 62.80 302 P P 23 12 00.8 +0.4
WAKR IAmb IAmb 23 12 08.0
comp=Z,19nm,1.5s
MDUB Mudurnu 62.91 56 P P 23 12 01.2 +0.2
K05A Summer Lake 62.97 306 P P 23 12 01.6 +0.1
J05D Fort Rock, OR 63.09 307 P P 23 12 03.1 +0.8
baz=78,SNR=7.9
TMCR Tamitsa 63.32 29 *e*P P 23 12 03.4 +0.3
TMCR pmax pmax
comp=Z,7.0nm,1.0s
H04A Detroit Lake 63.48 309 P P 23 12 04.8 +0.2
H04A IAmb IAmb 23 12 05.8
comp=Z,16nm,1.2s
J04D Umpqua Nationa 63.73 307 P P 23 12 07.2 +0.7
baz=78
OBN Obninsk 63.74 39 *de*P P 23 12 06.4 +0.3
OBN *i* 23 12 11.6
OBN pmax pmax
comp=Z,19nm,1.1s
OBN Obninsk 63.74 39 P P 23 12 06.4 +0.3
M04C Macdoel 63.85 306 P P 23 12 08.0 +0.7
baz=77,SNR=7.6
AFDM Forest Hills D 63.86 302 P P 23 12 06.4 -0.9
E03A Lebam 64.05 311 P P 23 12 07.7 -0.6
NLWA Neilton Lookou 64.08 312 P P 23 12 08.2 -0.3
L04D Klamath Falls 64.09 306 P P 23 12 09.1 +0.2
baz=77
PAGB Antelope Grade 64.10 299 P P 23 12 07.7 -1.2
PAGB IAmb IAmb 23 12 09.7
comp=Z,8.5nm,1.1s
ORV Oroville 64.12 303 P P 23 12 08.7 -0.2
ORV pmax pmax
comp=Z,11nm,1.1s
ORV Oroville 64.12 303 P P 23 12 08.7 -0.2
ORV IAmb IAmb 23 12 10.9
comp=Z,11nm,1.1s
O03E Paynes Creek 64.17 304 P P 23 12 09.6 +0.3
baz=76,SNR=6.6
SNCC San Nicolas Is 64.18 296 P P 23 12 08.5 -0.9
MOS Moscow 64.24 38 *e*P P 23 12 09.0 -0.3
MOS pmax pmax
comp=Z,37nm,1.2s
ROC1 El Roble 64.24 205 P P 23 12 09.8 0.0
ANTO Ankara 64.24 56 P P 23 12 09.7 -0.1
ANTO pmax pmax
comp=Z,32nm,1.3s
ANTO Ankara 64.24 56 P P 23 12 09.7 -0.1
YBH Yreka Blue Hor 64.50 306 P P 23 12 11.2 -0.3
comp=Z,2.3nm,0.9s,baz=100,slow=5.1,SNR=5.1
YBH Yreka Blue Hor 64.50 306 IAmb IAmb 23 12 58.6
comp=Z,13nm,1.6s
ILGA Ilgaz 64.64 55 P P 23 12 12.2 -0.4
ILGA IAmb IAmb 23 12 19.7
comp=Z,19nm,1.4s
M02C Callahan 64.68 305 P P 23 12 11.8 -0.8
baz=76
BR131 Keskin Array S 64.91 56 *de*P P 23 12 14.5 +0.3
BR131 Keskin Array S 64.91 56 IAmb IAmb 23 12 20.7
comp=Z,14nm,1.1s
BRTR Keskin Array B 64.91 56 P P 23 12 14.6 +0.4
comp=Z,12nm,1.0s,baz=274,slow=5.3,SNR=40
INK Inuvik 65.39 336 P P 23 12 16.1 -0.5
comp=Z,10nm,1.1s,baz=72,slow=7.3,SNR=18
INK Inuvik 65.39 336 IAmb IAmb 23 12 17.8
comp=Z,14nm,1.1s
HOPS Hopland Field 65.44 303 P P 23 12 16.8 -0.7
LPSR Galich'ya Gora 65.58 42 *e*P P 23 12 18.3 +0.2
LPSR pmax pmax
comp=Z,20nm,1.3s
LPSR pmax pmax
comp=N,4.0nm,1.2s
LPSR pmax pmax
comp=E,10.0nm,1.1s
KMRM Mail Ridge 65.60 304 P P 23 12 18.1 -0.6
BBB Bella Bella 65.79 318 P P 23 12 18.6 -0.8
comp=E,34nm,1.0s,baz=58,slow=9.5,SNR=3.2
VSR Storozhevoye 66.02 43 *e*P P 23 12 19.8 -1.2
VSR pmax pmax
comp=E,20nm,1.2s
VSR pmax pmax
comp=Z,10.0nm,1.4s
VSR pmax pmax
comp=N,10.0nm,0.9s
VRH Novokhopyorsk 67.58 43 *e*P P 23 12 30.0 -1.0
VRH pmax pmax
comp=N,10.0nm,0.5s
VRH pmax pmax
comp=Z,6.0nm,0.4s
VRH pmax pmax
comp=E,8.0nm,0.6s
GAZ Gaziantep 68.30 58 P P 23 12 35.7 -0.2
GAZ IAmb IAmb 23 12 38.8
comp=Z,13nm,1.1s
EGAK Eagle 69.19 333 P P 23 12 40.3 -0.5
EGAK IAmb IAmb 23 12 47.2
comp=Z,9.2nm,1.2s
H09N1 TRISTAN DA CUN 70.03 153 T T 00 29 01.7
SNR=13
H09W1 TRISTAN DA CUN 70.05 153 T T 00 29 02.3
SNR=17
GOF Gofitskoye 70.14 49⇑ *e*P P 23 12 48.3 +1.2
GOF pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 70.24 50 P P 23 12 47.5 -0.3
KIV pmax pmax
comp=Z,21nm,1.3s
KIV Kislovodsk 70.24 50 P P 23 12 47.5 -0.3
KIV IAmb IAmb 23 12 55.0
comp=Z,21nm,1.3s
KBZ Khabaz 70.45 50 P P 23 12 49.0 +0.1
comp=Z,4.6nm,1.1s,baz=228,slow=4.1,SNR=5.8
DOT Dot Lake 70.76 332 P P 23 12 49.2 -1.3
DOT IAmb IAmb 23 12 50.6
comp=Z,14nm,1.4s
BALM Baldy 70.91 329 P P 23 12 52.0 +0.3
PLCA Paso Flores 71.07 201 P P 23 12 53.1 +0.5
PLCA pmax pmax
comp=Z,10.0nm,1.2s
PLCA Paso Flores 71.07 201 P P 23 12 52.7 +0.1
comp=Z,4.5nm,1.1s,baz=56,slow=6.6,SNR=3.9
PLCA Paso Flores 71.07 201 P P 23 12 53.1 +0.5
PLCA IAmb IAmb 23 13 04.2
comp=Z,10nm,1.2s
MCARA McCarthy VSAT 71.10 330 P P 23 12 52.8 +0.2
ZEI Tsey 71.45 51 *e*P P 23 12 53.0 -2.3
ZEI pmax pmax
comp=Z,9.0nm,1.1s
IL31 71.49 334 P P 23 12 54.5 -0.3
IL31 IAmb IAmb 23 12 56.6
comp=Z,19nm,1.2s
ILAR Eielson Array 71.49 334 P P 23 12 54.8 -0.2
comp=Z,4.7,1nm,1.0s,baz=66,slow=4.7,SNR=40
AKH Akhalkalaki 71.61 52 ⇓P P 23 12 57.4 +1.1
COLA College 71.83 334⇑ *e*P P 23 12 56.3 -0.6
COLA pmax pmax
comp=Z,9.0nm,1.1s
CCB Clear Creek Bu 71.91 334 IAmb IAmb 23 12 58.5
comp=Z,16nm,1.2s
RAGM Ragged Mountai 72.22 329 P P 23 12 59.9 +0.5
NEA Nenana 72.44 334 IAmb IAmb 23 13 06.8
comp=Z,12nm,1.0s
MLY Manley 72.89 335 IAmb IAmb 23 13 14.5
comp=Z,11nm,1.2s
GNI Garni 72.93 53 *de*P P 23 13 05.3 +1.1
GNI pmax pmax
comp=Z,118nm,1.7s
GNI Garni 72.93 53 P P 23 13 04.9 +0.8
ARU Arti 75.19 34 *c i*P P 23 13 17.5 +0.7
ARU 23 16 04.4
ARU S **S 23 22 58.8 +3.6**
ARU SS **SS 23 27 41.9 -1.9**
ARU pmax pmax
comp=Z,12nm,1.5s
ARU Arti 75.19 34 P P 23 13 17.6 +0.7

ARU					lAmb	lAmb	23 13 19.0	
	comp=Z,13nm,1.4s							
SVE	**Sverdlovsk**	**76.05**	**33**	*e*P	**P**	**P**	**23 13 21.6**	**-0.1**
SVE					pmax	pmax		
	comp=Z,13nm,1.5s							
MBAR	**Mbarara**	**77.05**	**97⇑**	*e*P	**P**	**P**	**23 13 28.9**	**+0.5**
MBAR					pmax	pmax		
	comp=Z,5.0nm,1.3s							
BILL	**Bilibino**	**83.09**	**349**	*i* P	**P**	**P**	**23 14 00.1**	**+0.2**
BILL				*i*			23 14 04.6	
BILL				*i*			23 17 15.2	
BILL					pmax	pmax		
	comp=Z,8.0nm,1.1s							
KMBO	**Kilima Mbogo**	**83.10**	**95**	P	**P**	**P**	**23 14 02.5**	**+1.4**
	comp=Z,4.2nm,1.2s,baz=317,slow=9.4,SNR=5.9							
GEYT	**Alibeck**	**83.33**	**51**	P	**P**	**P**	**23 14 02.1**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=291,slow=12,SNR=6.4							
GEYT	**Alibeck**	**83.33**	**51**	lAmb	lAmb	lAmb	23 14 04.0	
	comp=Z,3.2nm,1.2s							
KURK	**Kurchatov**	**88.26**	**32⇓**	*e*P	**P**	**P**	**23 14 26.2**	**+0.3**
KURK					pmax	pmax		
	comp=Z,6.0nm,1.7s							
ZAA0	**Zalesovo Array**	**88.78**	**27**	P	**P**	**P**	**23 14 29.0**	**+0.7**
ZAA0					lAmb	lAmb	23 14 29.9	
	comp=Z,7.9nm,1.1s							
ZALV	**Zalesovo Beam**	**88.78**	**27**	*i* P	**P**	**P**	**23 14 28.8**	**+0.6**
ZALV					pmax	pmax		
	comp=Z,5.0nm,1.0s							
ZALV	**Zalesovo Beam**	**88.78**	**27**	P	**P**	**P**	**23 14 28.2**	**0.0**
	comp=Z,5.2nm,1.0s,baz=308,slow=5.5,SNR=18							
SEY	**Seymchan**	**89.94**	**352⇑**	*e*P	**P**	**P**	**23 14 34.6**	**+1.1**
AAK	**Ala-Archa**	**91.25**	**40⇑**	*e*P	**P**	**P**	**23 14 40.5**	**+0.2**
AAK					pmax	pmax		
	comp=Z,2.0nm,1.2s							
AAK	**Ala-Archa**	**91.25**	**40**	P	**P**	**P**	**23 14 40.1**	**-0.2**
AAK					lAmb	lAmb	23 14 42.9	
	comp=Z,8.7nm,1.6s							
YAK	**Yakutsk**	**91.73**	**3⇑**	*e*P	**P**	**P**	**23 14 42.4**	**+0.6**
YAK					pmax	pmax		
	comp=Z,3.0nm,0.8s							
MKAR	**Makanchi Array**	**92.71**	**33**	*ce*P	**P**	**P**	**23 14 47.2**	**+0.5**
MKAR					pmax	pmax		
	comp=Z,1.0nm,1.1s							
MKAR	**Makanchi Array**	**92.71**	**33**	P	**P**	**P**	**23 14 45.3**	**-1.4**
	comp=Z,1.2nm,1.1s,baz=336,slow=3.2,SNR=6.5							
MA2	**Magadan**	**93.40**	**352⇓**	*e*P	**P**	**P**	**23 14 50.9**	**+1.3**
MA2					pmax	pmax		
	comp=Z,5.0nm,1.1s							
WMQ	**Urumqi**	**97.49**	**33**	*e*P	Pdif	**Pdif**	23 15 09.5	+0.7
WMQ					pP	sP	23 15 14.3	+0.7
WMQ					pmax	pmax		
	comp=Z,6.0nm,1.3s							
WMQ					LR	LR		
	comp=Z,330nm,26.5s							
WMQ					LR	LR		
	comp=Z,150nm,21.7s							
LZH	**Lanzhou**	**111.01**	**27**	*e*PKP		**PKiKP**	**23 20 02.3**	**-6.2**
LZH				sPKP			23 20 06.8	
LZH				LR	LR			
	comp=Z,140nm,18.0s							
LZH				LR	LR			
	comp=Z,140nm,17.9s							
LZH				LR	LR			
	comp=Z,190nm,20.1s							
SYO	**Syowa Base**	**112.31**	**157⇓**	*e*Pdiff		**Pdif**	**23 16 15.0**	**+1.3**
CD2	**Chengdu**	**115.41**	**30**	PKP		**PKiKP**	**23 20 15.3**	**-1.6**
CMAR	**Chiang Mai Arr**	**122.97**	**42**	PKP		**PKPdf**	**23 20 31.0**	**-0.6**
	comp=Z,1.0nm,0.5s,baz=301,slow=3.6,SNR=6.8							
DZM	**Mont Dzumac**	**151.50**	**272**			**PKPbc**	**23 21 29.0**	**-0.3**
WRA	**Warramunga Arr**	**173.46**	**10**	PKPab		**PKPab**	**23 23 12.5**	**-0.5**
	comp=Z,2.1nm,1.1s,baz=349,slow=4.2,SNR=4.1							
ASAR	**Alice Springs**	**176.89**	**28**	PKP		**PKPdf**	**23 21 44.6**	**-0.9**
	comp=Z,1.6nm,1.1s,baz=26,slow=2.4,SNR=6.0							
ASAR				PKPab		**PKPab**	**23 23 28.9**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=225,slow=36,SNR=4.1							

*IDC **18** 23:24:46.2±23.0, 28.°66N×97.°36E, h0km, mb3.3/4, mb1 3.4/4, mb1mx3.1/45, mbtmp3.4/4, Error ellipse: s-maj=366.4km s-min=74.0km az=168.0*

ISC 18 23:25:06.2±3.9, 30.°3N±0.°4×97.°2E±0.°4, h35km, n14, σ0.°96/14, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**8.85**	**253**	*e*P	**Pn**	**23 27 13.1**	**+1.2**
	9.4nm,0.5s						
ODAN	**Odare**	**9.30**	**251**	*e*P	**Pn**	**23 27 17.6**	**-0.5**
RAMN	**Ramite**	**9.92**	**253**	*e*P	**Pn**	**23 27 25.7**	**-0.8**
	12nm,0.4s						
JIRN	**Jiri**	**10.02**	**257**	*e*P	**Pn**	**23 27 28.8**	**+0.8**
	15nm,0.4s						
GUN	**Gumba**	**10.21**	**259**	*e*P	**Pn**	**23 27 31.3**	**+0.7**
	11nm,0.3s						
PKI	**Pulchoki**	**10.71**	**258**	*e*P	**Pn**	**23 27 37.4**	**0.0**
	2.2nm,0.4s						
PKIN	**Phulchoki**	**10.71**	**258**	*e*P	**Pn**	**23 27 38.0**	**+0.6**
	13nm,0.4s						
KKN	**Kakani**	**10.75**	**259**	*e*P	**Pn**	**23 27 38.5**	**+0.6**
	12nm,0.5s						
DMN	**Daman**	**10.95**	**259**	*e*P	**Pn**	**23 27 40.9**	**+0.2**
DANN	**Dangsing**	**11.91**	**264**	*e*P	**Pn**	**23 27 52.7**	**-1.2**
	15nm,0.7s						
SONM	**Songino Array**	**18.87**	**19**	P	**Pn**	**23 29 25.1**	**+0.9**
	0.2nm,0.4s,baz=203,slow=14,SNR=2.3						
MKAR	**Makanchi Array**	**20.13**	**329**	P	**P**	**23 29 37.9**	**+0.7**
	0.3nm,0.6s,baz=132,slow=13,SNR=6.0						
KURBB	**Kurchatov Arra**	**24.66**	**331**	P	**P**	**23 30 22.5**	**-0.9**
	0.7nm,0.5s,baz=144,slow=10,SNR=4.5						
ZALV	**Zalesovo Beam**	**25.28**	**343**	P	**P**	**23 30 27.4**	**-1.6**
	0.5nm,0.4s,baz=158,slow=8.1,SNR=2.9						

*SKHL **18** 23:27:20.8±0.5, 44.°10N×148.°60E, h32km±2km, mb4.0/4*
*JMA **18** 23:27:20.5±0.3, 43.°88N×148.°32E, h0km, M3.8*

ISC 18 23:27:19.2±3.2, 44.°17N±0.°09×148.°5E±0.°2, h5km±13km, n15, σ1.°05/23, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**1.15**	**338**	*i* P	**Pg**	**23 27 40.9**	**-0.3**
KUR				AMB	AMB	23 27 41.3	
	40nm,0.3s						
KUR				*i* S	**Sg**	**23 27 55.5**	**-0.6**
KUR				A	A	23 27 58.6	
	570nm,0.3s						
KUR				A	A	23 27 58.6	
	140nm,0.3s						
SHO	**Shikotan**	**1.23**	**256**	*e*P	**Pg**	**23 27 42.8**	**+0.1**
SHO				AMB	AMB	23 27 47.0	
	50nm,0.3s						
SHO				*i* S	**Sg**	**23 27 58.3**	**-0.2**
SHO				A	A	23 28 02.0	
	560nm,0.3s						
SHO				A	A	23 28 02.0	
	400nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.89**	**267**	*e*P	**Pn**	**23 27 52.3**	**+0.3**
YUK				AMB	AMB	23 27 56.0	
	30nm,0.2s						
YUK				*i* S	**Sn**	**23 28 14.5**	**-1.6**
YUK				A	A	23 28 22.0	
	360nm,0.4s						
YUK				A	A	23 28 22.0	
	320nm,0.4s						
GRPR	**Tuman**	**1.96**	**266**	*i* S	**Sn**	**23 28 17.5**	**-0.3**
NEM2	**Nemuro 2**	**2.14**	**249**	P	**Pn**	**23 27 55.5**	**+0.1**
NEM2				eS	**Sn**	**23 28 21.1**	**-1.2**
NMR	**Nemuro--Hokkai**	**2.15**	**249**	*e*P	**Pn**	**23 27 55.0**	**-0.5**
NMR				*i* S	**Sn**	**23 28 21.0**	**-1.5**
GLVR	**Golovnino**	**2.18**	**260**	*e*P	**Pn**	**23 27 56.0**	**0.0**
GLVR				AMB	AMB	23 28 00.0	
	10.0nm,0.2s						
GLVR				*i* S	**Sn**	**23 28 22.6**	**-0.7**
GLVR				A	A	23 28 32.0	
	210nm,0.4s						
GLVR				A	A	23 28 32.0	
	230nm,0.4s						
JRA	**Rausu**	**2.43**	**266**	P	**Pn**	**23 28 00.9**	**+1.5**
JRA				eS	**Sn**	**23 28 30.2**	**+0.7**
JNSB	**Nemuroshibetsu**	**2.54**	**262**	P	**Pn**	**23 28 02.1**	**+1.2**
JKHN	**Kushirohamanak**	**2.64**	**247**	P	**Pn**	**23 28 02.7**	**+0.3**
JNK	**Nakash**	**2.78**	**259**	P	**Pn**	**23 28 05.0**	**+0.7**
JNK				eS	**Sn**	**23 28 37.9**	**-0.2**
JAK	**Akkeshi**	**2.99**	**248**	P	**Pn**	**23 28 07.4**	**+0.3**
JTKR	**Abashiri--Toko**	**3.30**	**268**	P	**Pn**	**23 28 13.3**	**+1.9**
JAR	**Ashorobuto**	**3.52**	**257**	P	**Pn**	**23 28 16.1**	**+1.6**
JCH	**Churui**	**4.04**	**249**	P	**Pn**	**23 28 23.0**	**+1.4**

IDC 18 23:32:43.3±11.0, 44.°16S×123.°33W, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.6/25, mbtmp3.8/2, MS3.5/1, Ms1 3.5/1, ms1mx3.0/25, Error ellipse: s-maj=428.3km s-min=102.4km az=110.0, South Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**20.40**	**38**	LR	LR	23 43 10.0	
	comp=Z,126nm,19.6s,baz=145,slow=31						
ASAR	**Alice Springs**	**82.46**	**244**	P	P	23 45 08.0	+0.2
	0.4nm,0.9s,baz=133,slow=6.8,SNR=5.0						
WRA	**Warramunga Arr**	**84.79**	**247**	P	P	23 45 19.6	-0.1
	1.0nm,0.7s,baz=138,slow=4.9,SNR=4.6						
H11S2	**WAKE ISLAND Hy**	**89.13**	**297**	T	T	01 24 45.8	
	baz=145,slow=74						
H11S3	**WAKE ISLAND Hy**	**89.14**	**297**	T	T	01 24 46.2	
	baz=145						
H11S1	**WAKE ISLAND Hy**	**89.15**	**297**	T	T	01 24 47.0	
	baz=145,slow=74						
SONM	**Songino Array**	**145.74**	**294**	PKPbc	PKPdf	23 52 22.5	-0.7
	0.9nm,0.7s,baz=116,slow=3.4,SNR=4.8						
MKAR	**Makanchi Array**	**161.86**	**287**	PKPab	PKPab	23 53 31.5	-0.2
	0.2nm,0.5s,baz=108,slow=3.7,SNR=3.6						

*IPEC **18** 23:45:49.8±0.2, 51.°60N×16.°21E, h1km, ML2.6/3, Error ellipse: s-maj=1.6km s-min=0.8km az=41.0*
*IDC **18** 23:45:51.2±0.7, 51.°52N×16.°01E, h0km, mb3.3/1, mb1 3.6/8, mb1mx3.3/58, mbtmp3.4/8, ML2.9/7, Error ellipse: s-maj=14.2km s-min=6.4km az=98.0*
*BGR **18** 23:45:51.7±0.4, 51.°53N×16.°12E, h1km, ML3.1/12, Error ellipse: s-maj=3.3km s-min=2.2km az=35.0*
*LDG **18** 23:45:51.7±0.3, 51.°49N×16.°12E, h1km, Ml3.0/7, Error ellipse: s-maj=6.6km s-min=3.4km az=22.0, Suspected Mining induced.*
*VIE **18** 23:45:52.2±0.9, 51.°43N×16.°06E, h0km, mb2.8/12, ml3.0/12, ms3.6/2, Error ellipse: s-maj=10.1km s-min=3.2km az=56.0 76 km WNW of Wroclaw Suspected Mining induced.*

ISC 18 23:45:48.8±0.6, 51.°60N±0.°03×16.°10E±0.°02, h0km, n91, σ1.°78/167, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.76**	**171**	*e*Pg	**Pg**	**23 46 04.9**	**+1.5**
	SNR=52						
KSP				*e*Sg	**Sg**	**23 46 14.3**	**+1.0**
	SNR=5.5						
KSP	**Ksiaz**	**0.76**	**171**	*i* Pg	**Pg**	**23 46 04.8**	**+1.5**
KSP				*i* Sg	**Sg**	**23 46 14.3**	**+1.0**
CHVC	**Chvalec**	**1.01**	**182**	*e*PG	**Pg**	**23 46 09.4**	**+1.3**
CHVC				*e*SG	**Sg**	**23 46 21.4**	**+0.2**
	comp=Z,108nm,0.4s						
OSTC	**Ostas**	**1.04**	**176**	*e*PG	**Pg**	**23 46 09.8**	**+1.0**
OSTC				*e*SG	**Sg**	**23 46 23.2**	**+0.9**
	comp=Z,103nm,0.6s						
UPC	**Upice**	**1.09**	**183**	*e*PG	**Pg**	**23 46 10.8**	**+1.1**
UPC				*e*SG	**Sg**	**23 46 24.5**	**+0.7**
	comp=Z,195nm,0.4s						
DPC	**Dobruska-Polom**	**1.26**	**173**	*e*Pg	**Pg**	**23 46 13.8**	**+1.0**
	SNR=31						
DPC				*e*Sg	**Sg**	**23 46 29.2**	**+0.1**
	SNR=1.5						
DPC	**Dobruska-Polom**	**1.26**	**173**	*e*PG	**Pg**	**23 46 13.3**	**+0.5**
DPC				*e*SG	**Sg**	**23 46 29.2**	**+0.1**
	comp=Z,69nm,0.5s						
PVCC	**Panska Ves**	**1.44**	**223**	*e*Pg	**Pb**	**23 46 17.9**	**+1.4**
	SNR=123						
PVCC				*e*Sg	**Sb**	**23 46 36.9**	**+1.6**
	SNR=2.4						
PVCC	**Panska Ves**	**1.44**	**223**	*e*PG	**Pn**	**23 46 17.3**	**+1.2**
PVCC				*e*SG	**Sg**	**23 46 36.1**	**+1.1**
	comp=Z,357nm,0.3s						
BRG	**Berggiesshubel**	**1.54**	**243**	PN	**Pn**	**23 46 18.0**	**+0.6**
BRG				PG	**Pg**	**23 46 19.7**	**+1.5**
BRG				SG	**Sn**	**23 46 39.6**	**+1.6**
	153nm,0.4s						
BRG	**Berggiesshubel**	**1.54**	**243**	*e*Pg	**Pb**	**23 46 19.5**	**+1.4**
	SNR=97						
BRG				*e*Sg	**Sg**	**23 46 40.1**	**+2.0**
	SNR=3.2						
KRLC	**Kraliky**	**1.58**	**164**	*e*PG	**Pn**	**23 46 18.8**	**+0.7**
KRLC				*e*SG	**Sn**	**23 46 39.0**	**-0.3**
	comp=Z,87nm,0.5s						
RUE	**Ruedersdorf**	**1.68**	**303**	*e*Sg	**Sg**	**23 46 46.6**	**+3.7**
	SNR=3.4						
FBE	**Freiberg**	**1.85**	**250**	*e*Pn	**Pb**	**23 46 25.3**	**+1.8**
	SNR=8.7						
FBE				*e*Sg	**Sg**	**23 46 49.6**	**+1.3**
	SNR=3.3						
PRA	**Prague**	**1.86**	**215**	*e*PN	**Pn**	**23 46 22.9**	**+1.1**
PRA				*e*SG	**Sb**	**23 46 48.8**	**+1.5**
	comp=Z,74nm,0.5s						
PRU	**Pruhonice**	**1.89**	**212**	*e*Pn	**Pn**	**23 46 23.1**	**+0.8**
	SNR=13						
PRU	**Pruhonice**	**1.89**	**212**	*e*PN	**Pn**	**23 46 23.1**	**+0.8**
PRU				*e*PG	**Pb**	**23 46 25.1**	**+1.0**
PRU				*e*SG	**Sb**	**23 46 49.1**	**+0.9**
	comp=Z,68nm,0.3s						
CLL	**Collm**	**1.96**	**263**	*i* Pn	**Pn**	**23 46 23.9**	**+0.7**
CLL				*e*Pg	**Pb**	**23 46 27.0**	**+1.7**
CLL				*i*		23 46 30.6	
CLL				*e*Sg	**Sg**	**23 46 53.0**	**+1.3**
	comp=Z,49nm,0.8s						
CLL	**Collm**	**1.96**	**263**	*e*Pn	**Pn**	**23 46 24.0**	**+0.8**
	SNR=14						
CLL				*e*Sg	**Sg**	**23 46 53.6**	**+2.0**
	SNR=3.2						
MORC	**Moravsky Berou**	**2.04**	**153**	*e*Pn	**Pn**	**23 46 25.2**	**+0.8**
	SNR=29						
MORC	**Moravsky Berou**	**2.04**	**153**	*e*PN	**Pn**	**23 46 24.9**	**+0.5**
MORC				*e*SG	**Sb**	**23 46 52.8**	**+0.1**
MORC	**Moravsky Berou**	**2.04**	**153**	*e*Pn	**Pn**	**23 46 24.9**	**+0.5**
	baz=336						
MORC				*e*Sg	**Sb**	**23 46 52.7**	**+0.1**
	comp=Z,43nm,0.4s,baz=336						
OKC	**Ostrava-Krasne**	**2.19**	**143**	*e*Pn	**Pn**	**23 46 27.1**	**+0.7**
OKC				*e*PG	**Pb**	**23 46 30.3**	**+1.1**
OKC				*e*SG	**Sg**	**23 46 58.6**	**-0.5**
	comp=Z,59nm,0.5s						
VRAC	**Vranov**	**2.31**	**172**	*e*Pn	**Pn**	**23 46 29.3**	**+1.1**
	SNR=21						
VRAC				*e*Sg	**Sb**	**23 47 02.4**	**+2.0**
	SNR=3.0						
VRAC	**Vranov**	**2.31**	**172**	Pn	**Pn**	**23 46 29.3**	**+1.1**
	comp=Z,3.7nm,0.3s,baz=347,slow=15,SNR=53			Sn	**Sn**	**23 46 57.5**	**+0.2**
VRAC	comp=Z,2.8nm,0.3s,baz=12,slow=20,SNR=4.8						
VRAC				Lg	Lg	23 47 02.3	
	comp=Z,8.3nm,0.3s,baz=86,slow=16,SNR=7.8						
VRAC	**Vranov**	**2.31**	**172**	*e*PN	**Pn**	**23 46 29.2**	**+1.1**
VRAC				*e*SG	**Sb**	**23 47 01.3**	**+0.9**
VRAC	**Vranov**	**2.31**	**172**	*e*Pn	**Pn**	**23 46 29.2**	**+1.1**
	baz=354						
VRAC				*e*Sg	**Sb**	**23 47 01.3**	**+0.9**
	comp=Z,22nm,0.2s,baz=354						
PBCC	**Pribram**	**2.33**	**216**	*e*PN	**Pn**	**23 46 29.6**	**+1.2**
PBCC				*e*PG	**Pb**	**23 46 33.2**	**+1.5**
PBCC				*e*SG	**Sg**	**23 47 04.1**	**+0.4**
	comp=Z,12nm,0.3s						
TREC	**Trest**	**2.34**	**190**	*e*Sg	**Sg**	**23 47 03.8**	**0.0**
	SNR=3.7						
TREC	**Trest**	**2.34**	**190**	*e*PN	**Pn**	**23 46 29.8**	**+1.3**
TREC				*e*PG	**Pb**	**23 46 33.3**	**+1.5**
TREC				*e*SG	**Sb**	**23 47 03.3**	**+2.1**
	comp=Z,54nm,0.9s						
KRUC	**Moravsky**	**2.54**	**176**	*e*Pn	**Pn**	**23 46 32.8**	**+1.5**
	SNR=7.1						
KRUC	**Moravsky**	**2.54**	**176**	*e*PN	**Pn**	**23 46 32.6**	**+1.3**
KRUC				*e*PG	**Pb**	**23 46 36.7**	**+1.4**
KRUC				*e*SG	**Sb**	**23 47 09.4**	**+2.3**
KRUC	**Moravsky**	**2.54**	**176**	*e*Pn	**Pn**	**23 46 32.5**	**+1.3**
	baz=357						
KRUC	**Moravsky**	**2.54**	**176**	*e*Pg	**Pb**	**23 46 36.7**	**+1.4**
	baz=357						
KRUC				*e*Sg	**Sb**	**23 47 09.4**	**+2.3**
	comp=Z,22nm,0.4s,baz=357						
TANN	**Tannenbergstha**	**2.58**	**244**	*e*Pn	**Pn**	**23 46 33.3**	**+1.4**
	SNR=5.4						
GUNZ	**Gunzen**	**2.68**	**244**	*e*Pn	**Pn**	**23 46 34.4**	**+1.2**
	SNR=3.4						
GUNZ				*e*Pg	**Pg**	**23 46 42.2**	**+2.0**
	SNR=5.4						
NKC	**Novy Kostel**	**2.68**	**241**	*e*Pn	**Pn**	**23 46 35.0**	**+1.7**
	SNR=4.9						
NKC	**Novy Kostel**	**2.68**	**241**	*e*PN	**Pn**	**23 46 34.9**	**+1.7**
NKC				*e*PG	**Pb**	**23 46 40.2**	**+2.5**
NKC				*e*SG	**Sg**	**23 47 16.7**	**+1.8**
	comp=Z,98nm,0.6s						
WERN	**Wernitzgruen**	**2.69**	**242**	*e*Pn	**Pn**	**23 46 35.0**	**+1.6**
	SNR=8.4						
OJC	**Ojcow**	**2.72**	**119**	*e*Pg	**Pg**	**23 46 41.8**	**+1.0**
	SNR=5.8						
OJC	**Ojcow**	**2.72**	**119**	*e*Pn	**Pn**	**23 46 34.2**	**+0.5**
OJC				*e*Pg	**Pg**	**23 46 41.9**	**+1.0**
OJC				*e*Sg	**Sg**	**23 47 17.2**	**+1.2**
PLN	**Plauen**	**2.73**	**247**	*e*Pg	**Pg**	**23 46 42.6**	**+1.6**
	SNR=3.4						
PLN				*e*Sg	**Sg**	**23 47 17.4**	**+1.2**
	SNR=4.9						
NEUB	**Neuenburg**	**2.73**	**264**	*e*Pg	**Pg**	**23 46 42.7**	**+1.6**
	SNR=9.7						
NEUB				*e*Sg	**Sg**	**23 47 18.6**	**+2.0**
	SNR=3.0						
JAVC	**Velka Javorina**	**2.92**	**159**	*e*PN	**Pn**	**23 46 38.5**	**+2.0**
JAVC				*e*SG	**Sg**	**23 47 23.3**	**+0.8**
KHC	**Kasperske Hory**	**2.95**	**214**	*e*Pn	**Pn**	**23 46 37.8**	**+1.0**
	SNR=8.6						
KHC	**Kasperske Hory**	**2.95**	**214**	*e*PN	**Pn**	**23 46 37.9**	**+1.0**
KHC				*e*PG	**Pb**	**23 46 44.0**	**+1.8**
KHC				*e*SN	**Sn**	**23 47 13.0**	**0.0**
KHC				*e*SG	**Sg**	**23 47 23.0**	**-0.5**
	comp=Z,17nm,0.3s						
MOX	**Moxa**	**2.98**	**253**	*e*Pn	**Pn**	**23 46 38.4**	**+1.1**
	SNR=3.7						
MOX				*e*Sg	**Sg**	**23 47 26.7**	**+2.2**
	SNR=7.2						
MANZ	**Manzenberg**	**3.00**	**239**	*e*Pn	**Pn**	**23 46 39.2**	**+1.6**
	SNR=9.7						
MANZ				*e*Pg	**Pg**	**23 46 47.7**	**+1.4**
	SNR=2.0						
ROTZ	**Rotzenmuhle**	**3.08**	**235**	*e*Pn	**Pn**	**23 46 40.0**	**+1.4**
	SNR=13						
GEC2	**GERESS Array S**	**3.15**	**210**	*e*Pn	**Pn**	**23 46 41.4**	**+1.6**
	SNR=10.0						
GERES	**GERESS Array B**	**3.15**	**210**	Pn	**Pn**	**23 46 41.0**	**+1.2**
	comp=Z,2.6nm,0.3s,baz=30,slow=13,SNR=68						
GERES				Sn	**Sn**	**23 47 19.6**	**+1.4**
	comp=Z,2.8nm,0.3s,baz=29,slow=22,SNR=5.2						
GERES				Lg	Lg	23 47 27.6	
	comp=Z,8.1nm,0.3s,baz=30,slow=27,SNR=7.3						
SMOL	**Smolenice**	**3.20**	**164**	*e*PG	**Pg**	**23 46 50.7**	**+0.6**
SMOL				*e*SG	**Sg**	**23 47 33.5**	**+1.9**
SMOL				*e*LG	Lg	23 47 38.2	
WET	**Wettzell**	**3.21**	**221**	*e*Pn	**Pn**	**23 46 41.8**	**+1.3**
	SNR=8.4						
LANS	**Liptovska Anna**	**3.26**	**137**	*e*PN	**Pn**	**23 46 42.6**	**+1.4**
LANS				*e*PG	**Pg**	**23 46 51.6**	**+0.3**
LANS				*e*SG	**Sg**	**23 47 34.1**	**+0.6**
LANS				*e*LG	Lg	23 47 42.8	
MODS	**Modra-Piesok**	**3.31**	**166**	*e*PN	**Pn**	**23 46 42.8**	**+0.9**
MODS				*e*PG	**Pg**	**23 46 51.8**	**-0.5**
MODS				*e*SG	**Sg**	**23 47 34.0**	**-1.2**
MODS				*e*LG	Lg	23 47 42.1	
NIE	**Niedzica**	**3.46**	**127**	*e*P	**Pg**	**23 46 55.2**	**+0.2**
NIE				*e*S	**Sg**	**23 47 40.0**	**+0.2**
ZST	**Bratislava**	**3.46**	**169**	*e*PG	**Pg**	**23 46 54.1**	**-1.1**
ZST				*e*SG	**Sg**	**23 47 38.3**	**-1.7**
CLZ	**Clausthal**	**3.57**	**276**	*e*Pn	**Pn**	**23 46 47.6**	**+2.1**
	SNR=5.4						
VYHS	**Vyhne**	**3.57**	**149**	*e*PN	**Pn**	**23 46 45.8**	**+0.4**
VYHS				*e*PG	**Pg**	**23 46 57.3**	**+0.1**
VYHS				*e*SG	**Sg**	**23 47 44.8**	**+1.3**
BSD	**Bornholm Skovb**	**3.59**	**349**	*i* P	**Pn**	**23 46 46.4**	**+0.7**
BSD				*i* S	**Sn**	**23 47 26.3**	**-2.5**
CONA	**Conrad Observa**	**3.67**	**182**	*e*Pn	**Pn**	**23 46 48.5**	**+1.6**
	comp=Z,2.5nm,0.3s,SNR=11						
CONA				Sg	**Sg**	**23 47 47.2**	**+0.4**
	comp=Z,41nm,0.7s						
MOA	**Molln**	**3.93**	**198**	*e*Pn	**Pn**	**23 46 51.9**	**+1.4**
	comp=Z,9.7nm,0.3s,SNR=41						
MOA				Sg	**Sg**	**23 47 54.8**	**-0.3**
	comp=Z,13nm,0.3s						
STHS	**Stebnicka Huta**	**3.94**	**122**	*e*PG	**Pg**	**23 47 05.7**	**+1.4**
STHS				*e*SG	**Sg**	**23 47 58.6**	**+3.2**
BSEG	**Bad Segeberg**	**4.22**	**306**	*e*Pn	**Pn**	**23 46 55.7**	**+1.4**
	SNR=4.2						
ARSA	**Arzberg**	**4.37**	**185**	*e*Pn	**Pn**	**23 46 58.1**	**+1.8**
	comp=Z,3.1nm,0.3s,SNR=4.9						
ARSA				Pg	**Pg**	**23 47 12.2**	**-0.3**
	comp=Z,4.5nm,0.4s						
ARSA				Sg	**Sg**	**23 48 08.9**	**0.0**
	comp=Z,16nm,0.7s						
KOLS	**Kolonicke sedl**	**4.77**	**122**	*e*PN	**Pn**	**23 47 03.0**	**+1.1**
KOLS				*e*PG	**Pg**	**23 47 21.1**	**+0.9**
KOLS				*e*SG	**Sg**	**23 48 21.6**	**-0.4**
KBA	**Koelnbreinsper**	**4.87**	**203**	*e*Pn	**Pn**	**23 47 05.1**	**+1.7**
	comp=Z,7.1nm,0.4s,SNR=11						
KBA				*e*Sg	**Sg**	**23 48 25.8**	**+0.7**
	comp=Z,6.6nm,0.4s						
SOKA	**Soboth**	**4.97**	**188**	*e*Pn	**Pn**	**23 47 06.2**	**+1.4**
	comp=Z,1.2nm,0.3s						
WTTA	**Wattenberg**	**5.22**	**216**	*i* Pn	**Pn**	**23 47 10.4**	**+2.1**
	comp

*MEX **19** 23:57:06.3±0.4, 17.30N×100.69W, h3km±3km, MD4.0*
ISC 18 23:57:03.5±1.3, **17.28N**±0.04×**100.61W**±0.03, **h2**km±10km, **n31**,σ1**s24**/46, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.40**	**125**	*e*P	**Pn**	**23 57 15.1**	**-1.2**
CAIG				*e*S	**Sb**	**23 57 21.8**	**+1.8**
CAIG	**El Cayaco**	**0.40**	**125**		**Pn**	**23 57 15.1**	**-1.2**
CAIG					**Sb**	**23 57 21.8**	**+1.8**
ACP2	**Acapulco**	**0.80**	**120**	*e*P	**Pn**	**23 57 21.7**	**-0.2**
ACP2				*i* S	**Sn**	**23 57 33.3**	**-1.1**
ACP2	**Acapulco**	**0.80**	**120**		**Pn**	**23 57 21.7**	**-0.2**
ZIIG	**Zihuatanejo**	**0.88**	**292**	*i* P	**Pg**	**23 57 20.3**	**0.0**
ZIIG				*e*S	**Sg**	**23 57 31.2**	**-0.5**
ZIIG	**Zihuatanejo**	**0.88**	**292**		**Pg**	**23 57 20.3**	**0.0**
ZIIG					**Sg**	**23 57 31.0**	**-0.6**
ARIG	**Puente Sto Nin**	**1.03**	**14**	*e*P	**Pg**	**23 57 23.3**	**+0.1**
ARIG				*e*S	**Sg**	**23 57 36.9**	**+0.4**
ARIG	**Puente Sto Nin**	**1.03**	**14**		**Pg**	**23 57 23.3**	**+0.1**
ARIG					**Sg**	**23 57 36.9**	**+0.4**
MEIG	**Mezcala**	**1.14**	**56**	*e*P	**Pn**	**23 57 26.4**	**-0.3**
MEIG				*i* S	**Sb**	**23 57 41.5**	**0.0**
MEIG	**Mezcala**	**1.14**	**56**		**Pn**	**23 57 26.4**	**-0.3**
MEIG					**Sb**	**23 57 41.5**	**0.0**
PLIG	**Platanillo**	**1.53**	**44**	*e*P	**Pn**	**23 57 31.6**	**-0.4**
PLIG				*i* S	**Sn**	**23 57 51.2**	**-1.3**
PLIG	**Platanillo**	**1.53**	**44**		**Pn**	**23 57 31.6**	**-0.4**
TLIG	**Tlapa**	**1.97**	**82**	*i* P	**Pb**	**23 57 38.5**	**-1.8**
TLIG				*i* S	**Sn**	**23 58 03.0**	**-0.6**
TLIG	**Tlapa**	**1.97**	**82**		**Pn**	**23 57 34.6**	**-3.5**
TLIG	**Tlapa**	**1.97**	**82**	Pn	**Pn**	**23 57 37.3**	**-0.8**
TLIG				Sn	**Sg**	**23 58 07.4**	**+0.5**
YAIG	**Yautepec**	**2.15**	**43**	*i* P	**Pn**	**23 57 39.7**	**-0.9**
YAIG				*i* S	**Sn**	**23 58 07.5**	**-0.5**
YAIG	**Yautepec**	**2.15**	**43**		**Pn**	**23 57 39.7**	**-0.9**
MOIG	**Morelia**	**2.45**	**347**	Pn	**Pn**	**23 57 46.1**	**+1.3**
MOIG				Sn	**Sn**	**23 58 13.8**	**-1.6**
UNM	**Universidad Na**	**2.45**	**34**	Pn	**Pn**	**23 57 45.9**	**+1.1**
PNIG	**Pinotepa**	**2.54**	**110**	*e*P	**Pn**	**23 57 46.0**	**+0.2**
PNIG				*e*S	**Sb**	**23 58 17.8**	**-3.8**
PNIG	**Pinotepa**	**2.54**	**110**		**Pn**	**23 57 46.0**	**+0.2**
ZAIG	**Zacatecas**	**5.76**	**342**	Pn	**Pn**	**23 58 29.1**	**-1.2**
KVTX	**Kingsville**	**10.52**	**13**	Pn	**Pn**	**23 59 35.5**	**+0.1**
HPIG		**10.69**	**335**	Pn	**Pn**	**23 59 38.2**	**+0.4**
TGUH	**Tegucigalpa,Un**	**13.24**	**102**		**Pn**	**00 00 14.9**	**+2.1**
X40A	**Basin Creek Fa**	**18.50**	**21**	P	**Pn**	**00 01 22.8**	**+1.7**
X40A				IAmb	IAmb	00 01 24.3	
comp=Z,2.0nm,0.7s							
TUL1	**Leonard**	**19.04**	**12**	P	**Pn**	**00 01 27.8**	**+0.1**
TUL1				IAmb	IAmb	00 01 35.8	
comp=Z,3.9nm,0.8s							
X16A	**Lo Mia Camp, P**	**19.63**	**332**	P	**Pn**	**00 01 34.4**	**-0.5**
GLA	**Glamis**	**20.26**	**323**	P	**P**	**00 01 41.3**	**+0.9**
GLA				IAmb	IAmb	00 01 46.0	
comp=Z,12nm,0.8s							
PEBM	**Pemiscott Bayo**	**21.04**	**25**	P	**P**	**00 01 49.9**	**+1.1**
W57A	**Gilead**	**25.58**	**42**	P	**P**	**00 02 34.1**	**0.0**
W57A				IAmb	IAmb	00 02 52.8	
comp=Z,27nm,1.4s							

*NEIC **19** 00:03:00.5±2.3, 29.46S±0.08×179.2W±0.1, h340km±5km, mb4.7/76, Error ellipse: s-maj=15.3km s-min=11.1km az=115.0*
*IDC **19** 00:03:00.6±0.4, 29.37S×179.14W, h335km±3km, mb4.4/16, mb1 4.5/19, mb1mx4.2/39, mbtmp5.1/19, Error ellipse: s-maj=11.7km s-min=10.7km az=148.0*
*BJI **19** 00:03:01.4±0.0, 29.17S×178.98W, h347km, mB4.9/12, mb4.7/25*
ISC 19 00:02:58.1±0.3, **29.48S**±0.04×**179.15W**±0.06, **h315**km, **n390**,σ1**s39**/413, **mb4.9**/70, **20C-17D**, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**1.09**	**78**	P	Pn	00 03 46.0	+5.5
GLKZ	**Green Lake**	**1.10**	**79**	P	Pn	00 03 46.0	+5.5
GLKZ				S	**S**	**00 04 17.6**	**+3.2**
RAO	**Raoul Island**	**1.10**	**78**	P	Pn	00 03 46.7	+6.1
4μm,0.3s,baz=100,slow=5.7,SNR=104							
RAO				S	**S**	**00 04 20.0**	**+5.6**
2μm,0.3s,baz=169,slow=22,SNR=6.4							
RAO	**Raoul Island**	**1.10**	**78**	Pn	Pn	00 03 46.8	+6.2
MXZ	**Matakaoa Point**	**8.33**	**194**	P	**P**	**00 05 00.5**	**+0.4**
MXZ	**Matakaoa Point**	**8.33**	**194**	Pn	**P**	**00 05 00.8**	**+0.7**
MXZ				S	**S**	**00 06 30.0**	**-1.4**
OUZ	**Omahuta**	**8.38**	**225**	P	**P**	**00 05 02.9**	**+2.0**
OUZ	**Omahuta**	**8.38**	**225**	Pn	**P**	**00 05 03.9**	**+3.1**
KUZ	**Kuaotunu**	**8.42**	**209**	P	**P**	**00 05 03.4**	**+2.2**
WMGZ	**Waiomatatini S**	**8.56**	**193**	P	**P**	**00 05 04.0**	**+1.1**
HAZ	**Te Kaha**	**8.64**	**196**	P	**P**	**00 05 04.9**	**+1.1**
HAZ				S	**S**	**00 06 39.6**	**+1.4**
PKGZ	**Pakihiroa**	**8.69**	**195**	P	**P**	**00 05 05.8**	**+1.2**
WIAZ	**Waiheke Island**	**8.72**	**212**	P	**P**	**00 05 07.4**	**+2.6**
PUZ	**Puketiti**	**8.83**	**193**	P	**P**	**00 05 04.0**	**-2.0**
RUGZ	**Raukumara Rang**	**8.86**	**196**	P	**P**	**00 05 07.5**	**+1.1**
ETAZ	**East Tamaki Re**	**8.95**	**212**	P	**P**	**00 05 11.0**	**+3.7**
TWGZ	**Tauwhareparae**	**8.99**	**195**	P	**P**	**00 05 09.3**	**+1.5**
MWZ	**Matawai**	**9.25**	**196**	P	**Pn**	**00 05 07.5**	**+0.6**
EDRZ	**Edgecumbe**	**9.25**	**201**	P	**P**	**00 05 11.0**	**+0.3**
TKGZ	**Te Karaka**	**9.27**	**195**	P	**Pn**	**00 05 07.5**	**+0.4**
URZ	**Urewera**	**9.29**	**199**	P	**P**	**00 05 09.7**	**-1.3**
33nm,0.3s,baz=274,slow=4.4,SNR=63							
URZ				S	**S**	**00 06 50.1**	**-2.6**
18nm,0.3s,baz=331,slow=23,SNR=3.6							
URZ	**Urewera**	**9.29**	**199**		**P**	**00 05 11.1**	**+0.1**
URZ				S	**S**	**00 06 53.3**	**+0.5**
RAGZ	**Rawiri**	**9.43**	**197**	P	**P**	**00 05 13.3**	**+0.6**
TARZ	**Mount Tarawera**	**9.45**	**201**	P	**P**	**00 05 14.8**	**+1.9**
HLRZ	**Highlands Stat**	**9.51**	**202**	P	**P**	**00 05 15.4**	**+1.8**
RRRZ	**Republican Roa**	**9.54**	**201**	P	**P**	**00 05 15.2**	**+1.4**
RIGZ	**Rimuhau**	**9.55**	**195**	P	**P**	**00 05 13.5**	**-0.5**
RIGZ				S	**S**	**00 06 55.2**	**-3.5**
MUGZ	**Murupara**	**9.59**	**200**	P	**P**	**00 05 14.5**	**+0.2**
MUGZ				S	**S**	**00 06 58.0**	**-1.6**
HSRZ	**Hossack Road**	**9.60**	**202**	P	**P**	**00 05 17.1**	**+2.6**
RTZ	**Ruatahuna**	**9.66**	**198**	P	**P**	**00 05 13.8**	**-1.5**
RTZ				S	**S**	**00 06 57.2**	**-4.0**
HRRZ	**Handcock Road**	**9.66**	**202**	P	**P**	**00 05 16.7**	**+1.6**
GRRZ	**Galatos Road**	**9.68**	**203**	P	**P**	**00 05 17.0**	**+1.6**
SNGZ	**Shannon Statio**	**9.72**	**196**	P	**Pn**	**00 05 13.9**	**+1.3**
PRRZ	**Plateau Road**	**9.72**	**201**	P	**P**	**00 05 16.3**	**+0.4**
PRGZ	**Paritu Road**	**9.73**	**194**	P	**Pn**	**00 05 14.2**	**+1.4**
PRGZ				S	**S**	**00 07 01.1**	**-1.7**
ALRZ	**Allen Road**	**9.79**	**201**	P	**P**	**00 05 17.0**	**+0.3**
WPRZ	**Whakapapatarin**	**9.81**	**202**	P	**P**	**00 05 18.2**	**+1.3**
TLZ	**Tolley Road**	**9.86**	**205**	P	**P**	**00 05 20.6**	**+3.1**
KNZ	**Kokohu**	**9.87**	**195**	P	**P**	**00 05 17.5**	**0.0**
KUTZ	**Kaahu Road**	**9.90**	**204**	P	**P**	**00 05 20.5**	**+2.6**
RAHZ	**Arahi**	**9.91**	**197**	P	**Pn**	**00 05 15.4**	**+0.4**
RAHZ				S	**S**	**00 07 04.1**	**-2.7**
MTHZ	**Maungataniwha**	**9.92**	**198**	P	**P**	**00 05 16.9**	**-1.2**
MTHZ				S	**S**	**00 07 05.6**	**-1.4**
MHGZ	**Mahia Peninsul**	**9.95**	**193**	P	**Pn**	**00 05 16.7**	**+1.3**
WHTZ	**Whakaora**	**10.02**	**203**	P	**P**	**00 05 21.1**	**+1.9**
MRHZ	**Matea Rd**	**10.02**	**200**	P	**P**	**00 05 18.6**	**-0.7**
WHHZ	**Waihua**	**10.02**	**196**	P	**Pn**	**00 05 16.9**	**+0.6**
WATZ	**Wairara**	**10.13**	**203**	P	**P**	**00 05 21.7**	**+1.2**
NMHZ	**Naumai**	**10.15**	**198**	P	**Pn**	**00 05 19.0**	**+1.1**
RATZ	**Rangitukua**	**10.26**	**203**	P	**P**	**00 05 22.4**	**+0.5**
ARHZ	**Aropaoanui**	**10.26**	**197**	P	**Pn**	**00 05 19.4**	**+0.2**
HIZ	**Hauiti**	**10.29**	**207**	P	**P**	**00 05 26.5**	**+4.4**
HIZ	**Hauiti**	**10.29**	**207**		**P**	**00 05 22.9**	**+0.8**
BKZ	**Black Stump Fm**	**10.31**	**199**	P	**Pn**	**00 05 19.2**	**-0.6**
BKZ	**Black Stump Fm**	**10.31**	**199**	Pn	**P**	**00 05 21.8**	**-0.7**
RITZ	**Rihia Road**	**10.33**	**202**	P	**P**	**00 05 23.8**	**+1.1**
KRVZ	**Karewarewa**	**10.51**	**203**	P	**P**	**00 05 25.4**	**+0.6**
MCHZ	**McNeill Hill**	**10.51**	**198**	P	**P**	**00 05 23.5**	**-1.2**
WTVZ	**West Tongariro**	**10.54**	**203**	P	**P**	**00 05 24.8**	**-0.3**
KWHZ	**Kaweka Forest**	**10.57**	**199**	P	**P**	**00 05 25.3**	**0.0**
NGZ	**Ngauruhoe**	**10.59**	**203**	P	**P**	**00 05 25.9**	**+0.1**
CKHZ	**Cape Kidnapper**	**10.61**	**196**	P	**P**	**00 05 25.5**	**-0.3**
FWVZ	**Far West T-bar**	**10.68**	**203**	P	**P**	**00 05 26.5**	**-0.8**
WHVZ	**Whangaehu Hut**	**10.69**	**203**	P	**P**	**00 05 26.2**	**-0.7**
BHHZ	**Black Hill Sta**	**10.73**	**200**	P	**P**	**00 05 26.4**	**-0.7**
MOVZ	**Moawhango**	**10.75**	**202**	P	**Pn**	**00 05 25.7**	**+0.5**
KRHZ	**Kereru**	**10.78**	**199**	P	**Pn**	**00 05 24.0**	**-1.6**
KAHZ	**Kahuranaki**	**10.79**	**197**	P	**Pn**	**00 05 23.8**	**-1.9**
VRZ	**Vera Road**	**10.85**	**206**	P	**P**	**00 05 30.0**	**+1.6**
PXZ	**Pawanui**	**11.02**	**196**	P	**Pn**	**00 05 27.3**	**-1.1**
PNHZ	**Pukenui**	**11.08**	**199**	P	**Pn**	**00 05 27.8**	**-1.4**
WPHZ	**Waipukurau**	**11.16**	**198**	P	**P**	**00 05 31.4**	**-0.4**
PKE	**Pukeiti**	**11.22**	**208**	P	**P**	**00 05 36.2**	**+3.7**
LREZ	**Lake Rotokare**	**11.28**	**206**	P	**P**	**00 05 35.9**	**+2.8**
TSZ	**Takapari Road**	**11.29**	**200**	P	**Pn**	**00 05 29.3**	**-2.4**
KHEZ	**Kahui Hut**	**11.29**	**208**	P	**P**	**00 05 38.0**	**+4.6**
PRHZ	**Porangahau**	**11.30**	**197**	P	**P**	**00 05 32.6**	**-0.7**
DVHZ	**Dannevirke**	**11.45**	**198**	P	**Pn**	**00 05 33.9**	**+0.2**
ANWZ	**Angora Road**	**11.52**	**197**	P	**P**	**00 05 36.9**	**+1.1**
PRWZ	**Pori Road**	**11.74**	**199**	P	**P**	**00 05 38.5**	**+0.2**
BFZ	**Birch Farm**	**11.79**	**197**	P	**P**	**00 05 39.0**	**+0.2**
BFZ	**Birch Farm**	**11.79**	**197**	P	**P**	**00 05 38.4**	**-0.4**
MRZ	**Mangatainoka R**	**11.95**	**200**	P	**Pn**	**00 05 38.7**	**-1.0**
MSVF	**Nonsavu**	**11.97**	**347**	P	**P**	**00 05 41.6**	**+0.4**
CPWZ	**Castlepoint**	**12.01**	**197**	P	**P**	**00 05 41.8**	**+0.5**
OGWZ	**Otaki Gorge**	**12.22**	**201**	P	**Pn**	**00 05 42.1**	**-0.7**
TMWZ	**Te Maipa**	**12.28**	**198**	P	**Pn**	**00 05 41.7**	**-1.9**
KIW	**Kapiti Island**	**12.34**	**202**	P	**Pn**	**00 05 44.3**	**0.0**
TRWZ	**Traveller**	**12.61**	**198**	P	**Pn**	**00 05 47.2**	**-0.4**
PAWZ	**Paruwai Farm**	**12.66**	**199**	P	**P**	**00 05 48.7**	**+0.2**
MSWZ	**Moikau Station**	**12.75**	**199**	P	**Pn**	**00 05 48.8**	**-0.5**
MSWZ	**Moikau Station**	**12.75**	**199**	P	**Pn**	**00 05 48.8**	**-0.5**
SNZO	**South Karori**	**12.81**	**201**	P	**P**	**00 05 51.5**	**+1.3**
BHW	**Baring Head**	**12.85**	**201**	P	**Pn**	**00 05 49.3**	**-1.1**
BHW	**Baring Head**	**12.85**	**201**	P	**Pn**	**00 05 50.0**	**-0.4**
PLWZ	**Palliser**	**12.89**	**199**	P	**Pn**	**00 05 50.0**	**-0.9**
PLWZ	**Palliser**	**12.89**	**199**		**P**	**00 05 50.9**	**-0.1**
TUWZ	**Tuamarina**	**13.17**	**203**	P	**P**	**00 05 53.2**	**-0.9**
NNZ	**Nelson**	**13.19**	**205**	P	**P**	**00 05 53.7**	**-0.6**
QRZ	**Quartz Range**	**13.20**	**209**	P	**Pn**	**00 05 55.3**	**+0.7**
QRZ					**S**	**00 08 19.6**	**-0.3**
NIUE	**Niue**	**13.34**	**41**	P	**Pn**	**00 05 56.8**	**+0.3**
CMWZ	**Cape Campbell**	**13.37**	**202**	P	**Pn**	**00 05 57.3**	**+0.6**
BSWZ	**Blackbirch Sta**	**13.45**	**203**	P	**Pn**	**00 05 58.8**	**+1.2**
BSWZ	**Blackbirch Sta**	**13.45**	**203**	P	**P**	**00 05 56.8**	**-0.4**
THZ	**Tophouse**	**13.84**	**206**		**Pn**	**00 06 02.4**	**+0.1**
KHZ	**Kahutara**	**14.19**	**203**		**P**	**00 06 05.2**	**-0.2**
DZM	**Mont Dzumac**	**14.92**	**296**	P	**Pn**	**00 06 16.7**	**+1.4**
11nm,0.3s,baz=130,slow=12,SNR=78							
DZM	**Mont Dzumac**	**14.92**	**296**	P	**Pn**	**00 06 15.9**	**+0.6**
LTZ	**Lake Taylor**	**14.96**	**205**		**Pn**	**00 06 14.7**	**-0.8**
LTZ					**S**	**00 08 53.2**	**-3.1**
NOUC	**Port Laguerre**	**15.01**	**296**	P	**Pn**	**00 06 17.0**	**+0.7**
OXZ	**Oxford**	**15.51**	**205**		**P**	**00 06 20.3**	**+0.4**
OXZ				IAmb	IAmb	00 06 22.8	
comp=Z,62nm,1.2s							
MQZ	**McQueen's Vall**	**15.63**	**203**		**P**	**00 06 21.8**	**+0.6**
MQZ				IAmb	IAmb	00 06 22.0	
comp=Z,36nm,1.1s							
MQZ					**S**	**00 09 05.7**	**-3.9**
RPZ	**Rata Peaks**	**16.22**	**206**	P	**P**	**00 06 27.1**	**-0.5**
comp=Z,0.7nm,0.3s,baz=5.2,slow=11,SNR=3.1							
RPZ				S	**S**	**00 09 17.3**	**-4.1**
comp=Z,3.8nm,0.3s,baz=138,slow=23,SNR=9.9							
RPZ	**Rata Peaks**	**16.22**	**206**	P	**P**	**00 06 28.1**	**+0.5**
RPZ				IAmb	IAmb	00 06 37.8	
comp=Z,22nm,1.2s							
FOZ	**Fox Glacier**	**16.57**	**209**	P	**P**	**00 06 32.2**	**+0.9**
AFI	**Afiamalu**	**16.94**	**25**	P	**P**	**00 06 36.5**	**+0.8**
comp=Z,6.3nm,0.3s,baz=355,slow=5.4,SNR=9.1							
AFI				S	**S**	**00 09 30.5**	**-5.8**
comp=Z,3.1nm,0.3s,baz=15,slow=14,SNR=4.6							
AFI	**Afiamalu**	**16.94**	**25**	P	**P**	**00 06 36.7**	**+1.0**
LBZ	**Lake Benmore**	**17.12**	**207**	P	**Pn**	**00 06 39.0**	**-1.5**
ODZ	**Otahua Downs**	**17.50**	**205**	P	**Pn**	**00 06 43.7**	**-1.3**
WKZ	**Wanaka**	**17.95**	**208**	P	**Pn**	**00 06 48.8**	**-1.5**
MLZ	**Mavora Lakes**	**18.77**	**209**	P	**P**	**00 06 56.3**	**+1.3**
MLZ				IAmb	IAmb	00 07 12.3	
comp=Z,28nm,1.1s							
SANVU	**Saraoutou**	**18.79**	**315**	P	**P**	**00 06 57.5**	**+2.1**
SANVU				IAmb	IAmb	00 07 08.4	
comp=Z,22nm,0.9s							
DCZ	**Deep Cove**	**19.26**	**210**	P	**P**	**00 07 02.0**	**+1.9**
WHZ	**Wether Hill Ro**	**19.26**	**208**	P	**P**	**00 07 02.6**	**+2.4**
WHZ				IAmb	IAmb	00 07 15.7	
comp=Z,25nm,1.2s							
RAR	**Rarotonga**	**19.34**	**69**	P	**P**	**00 07 02.2**	**+0.9**
ARMA	**Armidale**	**25.31**	**261**	P	**P**	**00 07 60.0**	**+3.0**
ARMA				IAmb	IAmb	00 08 01.8	
comp=Z,50nm,1.1s							
EIDS	**Eidsvold**	**26.70**	**272**	P	**P**	**00 08 10.9**	**+1.5**
CAN	**Canberra**	**27.44**	**249**	P	**P**	**00 08 17.1**	**+1.2**
TOO	**Toolangi**	**30.42**	**245**	P	**P**	**00 08 43.5**	**+1.5**
CTA	**Charters Tower**	**32.67**	**279**	P	**P**	**00 09 03.2**	**+1.5**
comp=Z,23nm,0.5s,baz=100,slow=10,SNR=64							
STKA	**Stephens Creek**	**33.72**	**256**	P	**P**	**00 09 12.1**	**+1.4**
comp=Z,17nm,0.5s,baz=103,slow=11,SNR=51							
STKA				pP	**pwP**	**00 10 16.2**	**+0.8**
comp=Z,1.8nm,0.5s,baz=290,slow=21,SNR=1.2							
STKA				ScP	**ScP**	**00 14 54.5**	**-1.9**
comp=Z,3.5nm,0.8s,baz=126,slow=4.8,SNR=4.0							
COEN	**Coen**	**38.06**	**286**	P	**P**	**00 09 47.9**	**+0.5**
COEN				IAmb	IAmb	00 09 49.9	
comp=Z,17nm,0.9s							
BBOO	**Buckleboo**	**38.26**	**253**	P	**P**	**00 09 49.3**	**+0.4**
BBOO				IAmb	IAmb	00 09 50.0	
comp=Z,13nm,0.3s							
AS31	**Alice Springs**	**42.16**	**266**	P	**P**	**00 10 21.6**	**+0.8**
AS31				IAmb	IAmb	00 10 22.6	
comp=Z,12nm,0.5s							
ASAR	**Alice Springs**	**42.16**	**266**	P	**P**	**00 10 20.6**	**-0.2**
comp=Z,27nm,0.5s,baz=104,slow=7.0,SNR=568							
ASAR				pP	**pwP**	**00 11 27.6**	**+1.0**
comp=Z,2.4nm,0.7s,baz=109,slow=7.8,SNR=1.6							
ASAR				PcP	**PcP**	**00 12 07.3**	**-1.4**
comp=Z,2.1nm,0.6s,baz=118,slow=3.9,SNR=3.1							
ASAR				ScP	**ScP**	**00 15 27.2**	**-1.5**
comp=Z,3.2nm,0.6s,baz=117,slow=4.4,SNR=12							
ASAR				S	**S**	**00 16 11.5**	**-5.2**
comp=Z,0.9nm,0.9s,baz=112,slow=14,SNR=5.0							
WR0	**Warramunga Arr**	**42.88**	**272**	P	**P**	**00 10 26.8**	**+0.2**
WR0				IAmb	IAmb	00 10 27.9	
comp=Z,50nm,1.1s							
WRAB	**Tennant Creek**	**43.06**	**272**	P	**P**	**00 10 28.1**	**+0.2**
WRAB				IAmb	IAmb	00 10 28.7	
comp=Z,29nm,0.5s							
WRA	**Warramunga Arr**	**43.07**	**272**	P	**P**	**00 10 28.2**	**+0.1**
comp=Z,25nm,0.5s,baz=111,slow=7.0,SNR=218							
WRA				pP	**pwP**	**00 11 35.9**	**+0.4**
comp=Z,1.4nm,0.5s,baz=110,slow=7.7,SNR=0.8							
WRA				PcP	**PcP**	**00 12 10.8**	**-1.0**
comp=Z,6.3nm,0.9s,baz=120,slow=3.1,SNR=6.6							
WRA				ScP	**ScP**	**00 15 30.5**	**-1.8**
comp=Z,4.4nm,0.8s,baz=108,slow=4.1,SNR=9.1							
WRA				S	**S**	**00 16 24.9**	**-5.0**
comp=Z,2.2nm,0.8s,baz=108,slow=13,SNR=5.5							
WRA	**Warramunga Arr**	**43.07**	**272**	IAmb	IAmb	00 10 28.8	
comp=Z,2.5nm,0.5s							
FORT	**Forrest**	**45.32**	**255**	P	**P**	**00 10 45.2**	**-0.5**
FORT				IAmb	IAmb	00 10 46.1	
comp=Z,65nm,0.7s							
GENI	**Genyem**	**46.96**	**297**	P	**P**	**00 10 59.8**	**+1.4**
comp=Z,83nm,1.3s							
SMPI	**Sarmi**	**48.47**	**296**	P	**P**	**00 11 11.1**	**+1.1**
comp=Z,48nm,1.5s							
MTN	**Manton Dam**	**48.85**	**279**	P	**P**	**00 11 12.6**	**-0.3**
MTN				IAmb	IAmb	00 11 12.8	
comp=Z,28nm,0.9s							
SBA	**Scott Base**	**48.88**	**184**	P	**P**	**00 11 13.2**	**+1.1**
VNDA	**Vanda**	**48.91**	**185**	P	**P**	**00 11 13.4**	**+1.0**
KNRA	**Kununurra**	**49.64**	**274**	P	**P**	**00 11 19.4**	**+0.6**
KNRA				IAmb	IAmb	00 11 20.1	
comp=Z,69nm,1.1s							
FITZ	**Fitzroy Crossi**	**51.36**	**270**	P	**P**	**00 11 32.0**	**+0.4**
comp=Z,42nm,1.0s,baz=120,slow=5.6,SNR=17							
FITZ	**Fitzroy Crossi**	**51.36**	**270**	IAmb	IAmb	00 11 32.8	
comp=Z,54nm,1.0s							
RKPI	**Ransiki, Papua**	**52.34**	**293**	P	**P**	**00 11 40.1**	**+1.3**
comp=Z,47nm,1.0s							
FAKI	**Fak Fak**	**53.08**	**290**	P	**P**	**00 11 43.3**	**-0.9**
comp=Z,50nm,1.2s							
FAKI	**Fak Fak**	**53.08**	**290**	P	**P**	**00 11 42.8**	**-1.4**
FAKI				IAmb	IAmb	00 11 44.0	
comp=Z,22nm,0.8s							
NWAO	**Narrogin (SRO)**	**53.79**	**249**	P	**P**	**00 11 47.7**	**-1.3**
NWAO	**Narrogin (SRO)**	**53.79**	**249**	P	**P**	**00 11 48.4**	**-0.7**
NWAO				IAmb	IAmb	00 12 03.6	
comp=Z,18nm,1.1s							
SWI	**Sorong**	**55.08**	**292**	P	**P**	**00 11 58.3**	**-0.1**
comp=Z,126nm,1.1s							
PSA00	**Pilbara Seismi**	**55.08**	**263**	P	**P**	**00 11 58.1**	**-0.4**
PSA00				IAmb	IAmb	00 11 59.3	
comp=Z,69nm,1.1s							
CASY	**Casey**	**55.48**	**208**	P	**P**	**00 12 01.3**	**+0.7**
CASY				IAmb	IAmb	00 12 03.6	
comp=Z,30nm,1.1s							
MORW	**Morawa**	**55.84**	**253**	P	**P**	**00 12 03.4**	**-0.3**
MORW				IAmb	IAmb	00 12 04.0	
comp=Z,34nm,1.1s							
SOEI	**Soe**	**56.23**	**278**	P	**P**	**00 12 03.9**	**-2.9**
SOEI				IAmb	IAmb	00 12 09.0	
comp=Z,56nm,0.9s							
SANI	**Sanana**	**58.74**	**287**	P	**P**	**00 12 23.3**	**-0.7**
comp=Z,64nm,1.6s							
GIRL	**Giralia**	**59.52**	**260**	P	**P**	**00 12 29.5**	**+0.2**
QSPA	**South Pole Qui**	**60.62**	**180**	P	**P**	**00 12 38.8**	**+2.7**
comp=Z,18nm,0.8s,baz=332,slow=0.5,SNR=134							
QSPA				pP	**pwP**	**00 13 49.8**	**+3.4**
comp=Z,10nm,1.0s,baz=30,slow=6.5,SNR=2.7							
QSPA	**South Pole Qui**	**60.62**	**180**	P	**P**	**00 12 37.3**	**+1.1**
QSPA				IAmb	IAmb	00 12 39.3	
comp=Z,18nm,0.7s							
LUWI	**Luwuk**	**61.98**	**286**	P	**P**	**00 12 46.3**	**+0.5**
comp=Z,3μmcomp=Z,88nm,1.1s							
PLAI	**Plampang**	**62.30**	**276**	P	**P**	**00 12 48.1**	**+0.2**
comp=Z,117nm,1.0s							
BNSI	**Bone**	**62.47**	**281**	P	**P**	**00 12 47.9**	**-1.1**
comp=Z,44nm,1.4s							
TTSI	**Tana Toraja**	**63.41**	**282**	P	**P**	**00 12 55.3**	**+0.1**
comp=Z,24nm,1.1s							
MPSI	**Mapaga**	**65.13**	**286**	P	**P**	**00 13 04.9**	**-1.4**
comp=Z,27nm,1.2s							
JAGI	**Jajag, Banyuwa**	**65.61**	**274**	P	**P**	**00 13 07.9**	**-1.5**
comp=Z,79nm,1.1s							
JAGI	**Jajag, Banyuwa**	**65.61**	**274**	P	**P**	**00 13 08.6**	**-0.8**
GMJI	**Gumukmas**	**66.32**	**274**	P	**P**	**00 13 13.1**	**-0.7**
comp=Z,70nm,1.1s							
PCJI	**Pacitan**	**68.33**	**273**	P	**P**	**00 13 26.2**	**-0.2**
comp=Z,203nm,1.1s							
WOJI	**Wonogiri, Jawa**	**68.72**	**273**	P	**P**	**00 13 29.5**	**+0.7**
comp=Z,82nm,1.3s							
UGM	**Wanagama**	**69.04**	**273**	P	**P**	**00 13 30.2**	**-0.5**
KKM	**Kota Kinabalu**	**71.32**	**288**	P	**P**	**00 13 43.4**	**-1.1**
KKM				IAmb	IAmb	00 13 44.7	
comp=Z,26nm,0.8s							
CISI	**Cisompet, Garu**	**71.56**	**272**	P	**P**	**00 13 44.5**	**-1.5**
CNJI	**Cibinong**	**72.28**	**272**	P	**P**	**00 13 50.5**	**+0.4**
comp=Z,129nm,1.0s							
SBUM	**Sibu**	**72.74**	**283**	P	**P**	**00 13 52.6**	**-0.2**
SBUM				IAmb	IAmb	00 13 53.6	
comp=

LZH pP pwP 00 17 21.0 +7.3
LZH sP sP 00 17 55.8 +13
LZH PP **PP** **00 20 04.8 +6.7**
LZH pmax pmax
comp=Z,18nm,1.4s
LZH pmax pmax
comp=Z,72nm,9.5s
YKA Yellowknife Ar 105.05 26 PKiKP **PKiKP 00 20 41.1 -1.1**
comp=Z,0.2nm,0.5s,baz=255,slow=1.9,SNR=5.6
WMQ Urumqi 111.87 300 ePKP **PKiKP 00 20 55.1 -0.6**
MKAR Makanchi Array 116.42 311 PKP **PKPdf 00 21 03.1 -1.1**
comp=Z,1.5nm,0.6s,baz=117,slow=4.3,SNR=28
MAKZ Makanchi 116.63 311 **PKPdf 00 21 03.3 -1.4**
RES Resolute Bay 116.67 17 PKP **PKPdf 00 21 02.3 -1.6**
comp=Z,0.7nm,0.6s,baz=0.5,slow=2.6,SNR=5.4
ZALV Zalesovo Beam 116.69 319 PKP **PKPdf 00 21 02.6 -1.9**
comp=Z,0.5nm,0.4s,baz=191,slow=1.1,SNR=5.8
BOSA Boshof 117.70 204 PKP **PKiKP 00 21 07.7 +0.1**
comp=Z,1.3nm,0.7s,baz=168,slow=4.7,SNR=4.8
KURK Kurchatov 119.69 314 **PKPdf 00 21 09.1 -1.3**
AAK Ala-Archa 120.77 305 **PKPdf 00 21 12.7 -0.3**
KBL Kabul 122.94 294 **PKPdf 00 21 17.4 -0.1**
BRVK Borovoye 125.12 316 **PKPdf 00 21 20.3 -0.5**
SPA0 Spitsbergen Ar 130.72 356 ePKPdf **PKPdf 00 21 30.5 -0.3**
ARU Arti 131.75 321 **PKPdf 00 21 32.6 -0.7**
GEYT Alibeck 132.26 296 PKP **PKPdf 00 21 34.4 -0.5**
comp=Z,3.5nm,0.7s,baz=288,slow=0.5,SNR=13
GEYT SKPbc **SKPbc 00 24 29.5 -1.9**
comp=Z,8.0nm,0.8s,baz=169,slow=1.5,SNR=20
KMBO Kilima Mbogo 133.79 235 SKPbc **SKPbc 00 24 35.0 -2.5**
comp=Z,0.5nm,0.3s,baz=63,slow=6.5,SNR=4.4
ARCES ARCESS Array B 137.48 347 PKiKP PKPpre 00 21 33.2
comp=Z,1.3nm,0.6s,baz=86,slow=3.2,SNR=10
ARCES PKP **PKPdf 00 21 41.2 -2.4**
comp=Z,3.7nm,0.6s,baz=46,slow=1.2,SNR=14
ARCES SKPbc **SKPbc 00 24 43.8 -3.0**
comp=Z,2.1nm,0.8s,baz=20,slow=2.9,SNR=3.7
ARCES ARCESS Array B 137.48 347 PKPpre 00 21 34.5
KTK1 Kautokeino 138.35 348 ePKPdf **PKPdf 00 21 45.7 +0.5**
TRO Tromso 138.49 351 ePKPdf **PKPdf 00 21 45.5 +0.1**
STEI Steigen 140.58 351 ePKPdf **PKPdf 00 21 45.9 -3.4**
GNI Garni 142.76 299 **PKPdf 00 21 52.0 -2.3**
AKH Akhalkalaki 143.62 301 ⇑P PKPbc 00 21 54.8 +0.6
KBZ Khabaz 143.77 305 PKP PKPab 00 21 53.6 +0.1
comp=Z,12nm,1.0s,baz=151,slow=3.4,SNR=31
OBN Obninsk 143.85 325 PKPab 00 21 53.0 -0.5
KIV Kislovodsk 143.88 305 ⇓P PKPab 00 21 54.1 -0.1
KIV Kislovodsk 143.88 305 PKPab 00 21 53.8 -0.4
FINES FINESS Array B 143.94 340 PKP PKPab 00 21 53.0 -0.6
comp=Z,45nm,0.7s,baz=57,slow=3.8,SNR=378
NSS Namsos 144.24 352 ePKPab **PKPab 00 21 53.9 -0.8**
VSU Vasula 145.98 336 e*P* **PKPdf 00 21 59.5 +0.5**
MOL Molde 146.62 354 ePKPbc **PKPbc 00 22 01.9 -0.2**
DOMB Dombas 146.99 353 ePKPbc **PKPbc 00 22 02.6 -0.7**
AKN Aaknes 147.05 355 ePKPbc **PKPbc 00 22 03.0 -0.3**
NB2 NORSAR Subarra147.69 351 PKP **PKPbc 00 22 04.6 -0.5**
comp=Z,6.2nm,0.5s,baz=14,slow=2.8
NB2 NORSAR Subarra147.69 351 PKPab **PKPbc 00 22 04.6 -0.5**
baz=14,slow=2.8
NOA NORSAR Array B147.69 351 PKPbc **PKPbc 00 22 04.7 -0.5**
comp=Z,9.4nm,0.6s,baz=15,slow=4.3,SNR=34
FOO Floro 147.76 356 ePKPbc **PKPbc 00 22 04.9 -0.3**
NC602 NORSAR Array S 147.94 350 ePKPbc **PKPbc 00 22 04.8 -0.9**
IZAR Zarasai 148.13 333 e*P* **PKPbc 00 22 06.3 0.0**
IZAR IAmb IAmb 00 22 07.0
comp=Z,9.6nm,0.6s
ISAL Salakas 148.30 333 e*P* **PKPbc 00 22 06.6 -0.2**
SUE Sulen 148.32 356 ePKPbc **PKPbc 00 22 06.3 -0.3**
SKAR Skarslia 148.40 353 ePKPbc **PKPbc 00 22 07.3 +0.3**
IIGN Ignalina 148.42 332 e*P* **PKPbc 00 22 06.8 -0.3**
IIGN IAmb IAmb 00 22 07.8
comp=Z,12nm,0.6s
ASK Askoy 148.86 356 ePKPbc **PKPbc 00 22 07.8 -0.2**
BER Bergen 148.95 356 ePKPbc **PKPbc 00 22 08.0 -0.3**
PABE Paberze 149.19 334 e*P* **PKPbc 00 22 08.8 -0.2**
PABE IAmb IAmb 00 22 09.5
comp=Z,54nm,0.6s
KONO Kongsberg 149.25 351 ePKPbc **PKPbc 00 22 08.8 -0.3**
ODD1 Odda 149.32 354 ePKPbc **PKPbc 00 22 09.2 -0.1**
DIKM Dikmen 149.69 303 ⇓P **PKPbc 00 22 10.9 +0.2**
BLS5 Blasjo 149.82 354 ePKPbc **PKPbc 00 22 09.6 -0.9**
AKASG Malin Array Be 149.97 323 PKPbc **PKPbc 00 22 10.4 -0.6**
comp=Z,12nm,0.5s,baz=46,slow=3.0,SNR=82
AKASG pPKPbc **pPKPab 00 23 34.2 +0.9**
comp=Z,0.7nm,0.5s,baz=44,slow=3.1,SNR=1.6
KMY Karmoy 150.12 355 ePKPbc **PKPbc 00 22 09.7 -1.4**
BZK Bozkurt 150.53 304 ⇑P **PKPbc 00 22 12.3 -0.3**
SUW Suwalki 150.61 333 ePKP **PKPbc 00 22 12.0 -0.4**
HOMB Homborsund 150.74 352 ePKPbc **PKPbc 00 22 12.7 +0.2**
SNART Snartemo 150.82 353 ePKPbc **PKPbc 00 22 12.8 0.0**
BR131 Keskin Array S 151.28 300 PKPbc **PKPbc 00 22 13.8 -0.9**
BRTR Keskin Array B 151.28 300 PKP **PKPdf 00 22 07.8 -0.6**
comp=Z,0.4nm,0.8s,baz=180,slow=1.1,SNR=3.5
BRTR PKPbc **PKPbc 00 22 14.1 -0.6**
comp=Z,4.5nm,0.5s,baz=143,slow=5.3,SNR=64
BRTR pPKPbc **pPKPab 00 23 38.6 -0.6**
comp=Z,2.7nm,1.0s,baz=170,slow=3.8,SNR=2.7
SORM Soroca 151.84 319 ⇓P **PKPbc 00 22 14.8 -0.6**
ANTO Ankara 151.89 300 ⇑P **PKPbc 00 22 15.8 -0.2**
ANTO Ankara 151.89 300 **PKiKP 00 22 16.1 -0.2**
MILM Milestii Mici 152.18 316 ⇑P **PKPbc 00 22 15.3 -0.9**
BSD Bornholm Skovb 152.46 342 *i* P **PKPbc 00 22 16.4 -0.2**
comp=Z,5.4nm,0.3s
BEL Belsk 153.20 332 ePKP **PKiKP 00 22 18.7 +0.3**
TOPG Topolog 153.39 313 ⇑P **PKPab 00 22 32.6 +0.1**
CFR Carcaliu 153.41 319 ⇓P **PKPbc 00 22 18.6 -0.4**
TESR Tescani 153.67 317 ⇓P **PKPab 00 22 33.4 -0.4**
PETR Petresti 153.72 315 ⇓P **PKPab 00 22 35.6 +1.7**
HARR Harsova 153.76 313 ⇑P **PKiKP 00 22 20.0 +0.2**
BIZ Bicaz 153.76 319 ⇓P **PKiKP 00 22 20.0 +0.2**
ODBI Odobesti 153.80 316 ⇑P **PKPab 00 22 35.6 +1.3**
BUR08 Bucovina Ar. S 153.88 321 PKPab **PKPab 00 22 35.3 +0.6**
BURAR Bucovina Array 153.89 321 ⇓P **PKiKP 00 22 20.2 0.0**
KWP Kalwaria Pacla 153.92 327 ePKP **PKPab 00 22 34.9 +0.2**
VRI Vrincioaia 153.95 316 ⇑P **PKPab 00 22 35.2 +0.2**
PLOR Plostina 154.01 316 ⇑P **PKPab 00 22 35.4 +0.1**
PGOR Pogoanele 154.26 314 ⇓P **PKPab 00 22 37.9 +1.7**
OZUR 154.40 317 ⇓P **PKPab 00 22 37.4 +0.5**
LEHL Lehliu 154.56 313 ⇑P **PKPdf 00 22 09.8 -2.9**
KOLS Kolonicke sedl 154.60 326 ePKP **PKPab 00 22 37.0 -0.6**
MLR Muntele Rosu 154.62 316 ⇓P **PKPab 00 22 38.4 +0.4**
DOPR Dopca 154.70 317 ⇓P **PKPab 00 22 38.7 +0.5**
SULR 154.87 314 ⇓P **PKPab 00 22 39.3 +0.6**
TRPA Tarpa 155.00 324 ⇑P **PKPab 00 22 39.5 +0.2**
NIE Niedzica 155.19 329 ePKP **PKPab 00 22 40.6 +0.4**
CJR Cluj-Napoca 155.31 320 ⇓P **PKPab 00 22 41.7 +0.9**
ARR Arges 155.47 317 ⇓P **PKPab 00 22 42.2 +0.7**
KSP Ksiaz 155.71 336 ePKP **PKPab 00 22 42.3 0.0**
DRGR 155.75 321 ⇑P **PKPab 00 22 42.7 0.0**
LANS Liptovska Anna 155.76 329 ePKP **PKPab 00 22 43.1 +0.5**
CHVC Chvalec 156.01 336 ePKPAB **PKPab 00 22 43.7 +0.1**
CHVC *ex* x 00 22 46.6
UPC Upice 156.09 336 ePKPAB **PKPab 00 22 44.0 +0.1**
MORC Moravsky Berou 156.10 333 ePKP **PKPab 00 22 43.7 -0.3**
DPC Dobruska-Polom 156.11 335 ePKPAB **PKPab 00 22 44.2 +0.1**
KRLC Kraliky 156.16 334 ePKPAB **PKPab 00 22 43.7 -0.6**
LIC Lamto 156.21 165 ePKP2 **PKPab 00 22 46.4 +1.1**
comp=Z,21nm,0.8s
CLL Collm 156.38 341 *i* PKPab **PKPab 00 22 44.6 -0.5**
comp=Z,9.0nm,0.6s
CLL Collm 156.38 341 ePKPab **PKPab 00 22 44.7 -0.4**
baz=25,slow=4.5
CLL Collm 156.38 341 **PKPab 00 22 45.1 0.0**
KIC Kosan Boka 156.40 166 ePKP2 **PKPab 00 22 47.3 +1.2**
comp=Z,20nm,0.8s
PSZ Piszkesteto 156.45 327 ⇑P **PKPab 00 22 45.7 0.0**
PSZ Piszkesteto 156.45 327 **PKPab 00 22 45.6 -0.1**
PLVB Pleven 156.47 313 ⇑P **PKPab 00 22 46.5 +0.6**
BRG Berggiesshubel 156.48 339 ePKP **PKPab 00 22 45.5 -0.1**
comp=Z,15nm,1.5s
BRG Berggiesshubel 156.48 339 ePKPab **PKPab 00 22 45.4 -0.1**
baz=25,slow=4.5
VYHS Vyhne 156.53 329 ePKP **PKPab 00 22 46.1 +0.2**
GZR Gura Zlata 156.54 319 ⇓P **PKPab 00 22 46.8 +0.6**
PVCC Panska Ves 156.57 338 ePKPAB **PKPab 00 22 46.3 +0.3**
FBE Freiberg 156.62 340 ePKPab **PKPab 00 22 46.6 +0.5**
baz=25,slow=4.5
TIC Toumodi 156.62 165 ePKP2 **PKPab 00 22 48.1 +1.0**
comp=Z,1.2nm,0.2s
DBIC Dimbokro 156.68 166 PKP **PKPdf 00 22 16.6 +0.1**
comp=Z,2.8nm,0.8s,baz=211,slow=6.5,SNR=3.6
DBIC PKPab **PKPab 00 22 47.5 +0.3**
comp=Z,3.6nm,0.8s,baz=177,slow=8.8,SNR=4.5

JAVC Velka Javorina 156.76 331 ePKP **PKPab 00 22 47.9 +0.9**
NEUB Neuenburg 156.81 342 ePKPab **PKPab 00 22 46.9 0.0**
baz=25,slow=4.5
VRAC Vranov 156.85 333 ⇑P **PKPab 00 22 48.3 +1.1**
VRAC Vranov 156.85 333 ePKP **PKPab 00 22 47.4 +0.2**
GTTG Gyttingen 156.93 345 ePKPab **PKPab 00 22 47.3 -0.2**
baz=25,slow=4.5
PRU Pruhonice 157.04 337 ePKPAB **PKPab 00 22 48.1 +0.1**
HERR Herculane 157.05 318 ⇓P **PKPab 00 22 47.7 -0.6**
BZS Buzias 157.07 320 ⇑P **PKPab 00 22 48.0 -0.3**
KRUC Moravsky 157.12 333 ePKP **PKPab 00 22 48.3 -0.1**
SMOL Smolnice 157.13 331 ePKP **PKPab 00 22 49.0 +0.5**
MODS Modra-Piesok 157.30 331 ePKP **PKPab 00 22 48.4 -0.9**
MOX Moxa 157.36 342 ePKPab **PKPab 00 22 49.2 -0.2**
baz=25,slow=4.5
GUNZ Gunzen 157.41 341 ePKPab **PKPab 00 22 49.1 -0.5**
baz=25,slow=4.5
WERN Wernitzgruen 157.47 340 ePKPab **PKPab 00 22 50.2 +0.3**
baz=25,slow=4.5
NKC Novy Kostel 157.50 340 ePKPAB **PKPab 00 22 49.8 -0.2**
MDVR Moldovita 157.51 318 ⇑P **PKPab 00 22 50.0 -0.4**
VTS Vitosha 157.74 312 ⇑P **PKPab 00 22 52.1 +0.6**
MANZ Manzenberg 157.81 340 ePKPab **PKPab 00 22 51.5 +0.1**
baz=25,slow=4.5
ROTZ Rotzenmuhle 157.98 340 ePKPab **PKPab 00 22 51.4 -0.7**
baz=25,slow=4.5
KHC Kasperske Hory 158.10 337 ePKPAB **PKPab 00 22 52.7 0.0**
KHC *ex* x 00 23 07.7
KHC Kasperske Hory 158.10 337 **PKPab 00 22 53.0 +0.3**
CONA Conrad Observa 158.24 332 ePKPab **PKPab 00 22 53.8 +0.3**
comp=Z,6.3nm,0.9s
GEC2 GERESS Array S 158.30 337 ePKPab **PKPab 00 22 53.4 -0.3**
baz=25,slow=4.5
GERES GERESS Array B 158.30 337 PKP **PKPdf 00 22 16.5 -1.1**
comp=Z,0.6nm,0.8s,baz=252,slow=0.6,SNR=3.4
GERES PKPab **PKPab 00 22 53.4 -0.3**
comp=Z,1.6nm,0.6s,baz=29,slow=4.1,SNR=11
WET Wettzell 158.32 338 ePKPab **PKPab 00 22 54.2 +0.6**
baz=25,slow=4.5
TNS Taunus Mts 158.50 347 ePKPab **PKPab 00 22 54.3 -0.1**
baz=25,slow=4.5
MOA Molln 158.94 334 ePKPab **PKPab 00 22 56.4 0.0**
comp=Z,12nm,1.4s
RJOB Jochberg 159.57 336 ePKPab **PKPab 00 22 59.6 +0.4**
baz=25,slow=4.5
FUR Furstenfeldbru 159.69 340 ePKPab **PKPab 00 23 00.1 +0.5**
baz=25,slow=4.5
STU Stuttgart 159.70 344 ePKPab **PKPab 00 22 59.7 +0.1**
baz=25,slow=4.5
KBA Koelnbreinsper 159.93 334 ePKPab **PKPab 00 23 00.3 -0.6**
comp=Z,8.1nm,1.4s
BFO Black Forest 160.32 345 ePKPab **PKPab 00 23 02.2 -0.1**
baz=25,slow=4.5
WATA Walderalm 160.33 338 ePKPab **PKPab 00 23 02.6 0.0**
comp=Z,2.9nm,0.5s
RETA Reutte 160.45 340 ePKPab **PKPab 00 23 03.1 +0.1**
comp=Z,4.8nm,0.5s,SNR=6.2
MOTA Moosalm 160.47 339 ePKPab **PKPab 00 23 03.2 0.0**
comp=Z,5.1nm,0.7s,SNR=4.6
ABTA Abfaltersbach 160.51 335 ePKPab **PKPab 00 23 02.2 -1.1**
comp=Z,12nm,1.3s
SQTA Sankt Quirin 160.55 338 ePKPab **PKPab 00 23 03.5 0.0**
comp=Z,6.2nm,0.8s
FETA Feichten 160.88 339 ePKPab **PKPab 00 23 04.6 -0.4**
comp=Z,8.4nm,1.4s
DAVA Damuels 160.89 341 ePKPab **PKPab 00 23 04.9 -0.1**
comp=Z,6.4nm,0.6s,SNR=8.0
FUORN Ofenpass-Fuorn 161.38 339 **PKPab 00 23 07.8 +0.5**
TOA0 Torodi Ar. Sit 163.72 183 **PKPab 00 23 18.6 +0.6**
TORD Torodi Ar. Bea 163.72 183 PKP **PKPdf 00 22 23.7 -0.5**
comp=Z,2.7nm,1.1s,baz=11,slow=0.2,SNR=7.9
TORD PKPab **PKPab 00 23 18.4 +0.5**
comp=Z,6.0nm,0.7s,baz=183,slow=3.7,SNR=30
TORD pPKPab **pPKPab 00 24 36.1 +3.8**
comp=Z,3.7nm,0.9s,baz=171,slow=4.0,SNR=8.2

IDC 19 00:16:27.4±2.1, 3°.06N×127°.29E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/36, mbtmp3.4/3, Error ellipse: s-maj=162.3km s-min=24.9km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.88**	**163**	P	P	00 21 42.4	-0.5
	0.7nm,0.5s,baz=343,slow=11,SNR=7.3						
ASAR	**Alice Springs**	**27.34**	**167**	P	P	00 22 14.7	+0.4
	0.3nm,0.6s,baz=347,slow=8.1,SNR=3.6						
MKAR	**Makanchi Array**	**58.42**	**325**	P	P	00 26 24.9	-0.1
	0.1nm,0.5s,baz=113,slow=7.8,SNR=3.5						

*MEX **19** 00:18:47.8±0.7, 15°.90N×98°.81W, h15km±7km, MD4.3*
*IDC **19** 00:18:48.8±1.0, 16°.40N×98°.52W, h0km, mb4.0/14, mb1 4.2/20, mb1mx4.0/39, mbtmp4.0/20, ML3.4/6, MS3.4/8, Ms1 3.4/8, ms1mx3.2/35, Error ellipse: s-maj=23.6km s-min=11.6km az=30.0*
*NEIC **19** 00:18:55.3±2.5, 16°.37N±0°.08×98°.34W±0°.07, h35km±3km, Error ellipse: s-maj=13.5km s-min=7.5km az=213.0*

ISC 19 00:18:53.5±0.7, 16°.33N±0°.06×98°.46W±0°.05, h28km, n340, σ1s99/296, mb4.5/77, MS3.4/5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.32**	**79**	e*P*	**Pb**	**00 19 00.2**	**-0.9**
PNIG				e*S*	**Sn**	**00 19 11.2**	**+3.0**
PNIG	**Pinotepa**	**0.32**	**79**		**Pb**	**00 19 00.2**	**-0.9**
PNIG					**Sn**	**00 19 11.6**	**+3.4**
TLIG	**Tlapa**	**1.23**	**355**	e*P*	**Pn**	**00 19 13.1**	**-1.9**
TLIG				*i* S	**Sn**	**00 19 32.3**	**+1.5**
TLIG	**Tlapa**	**1.23**	**355**		**Pn**	**00 19 13.9**	**-1.9**
TLIG	**Tlapa**	**1.23**	**355**		**Pn**	**00 19 13.1**	**-1.9**
CAIG	**El Cayaco**	**1.88**	**293**	e*P*	Pn	00 19 14.5	-9.3
CAIG				*i* S	Sn	00 19 36.9	-10
CAIG	**El Cayaco**	**1.88**	**293**		Pn	00 19 14.5	-9.3
MEIG	**Mezcala**	**1.94**	**325**	e*P*	Pn	00 19 20.2	-4.5
MEIG				*i* S	**Sn**	**00 19 44.9**	**-3.3**
MEIG	**Mezcala**	**1.94**	**325**		Pn	00 19 20.2	-4.5
PLIG	**Platanillo**	**2.28**	**334**	e*P*	**Pn**	**00 19 26.7**	**-2.8**
PLIG				*i* S	**Sn**	**00 19 56.0**	**-0.7**
PLIG	**Platanillo**	**2.28**	**334**		**Pn**	**00 19 26.7**	**-2.8**
HUIG	**Huatulco**	**2.33**	**104**	e*P*	**Pn**	**00 19 26.8**	**-3.2**
HUIG				*i* S	**Sn**	**00 19 55.9**	**-1.8**
HUIG	**Huatulco**	**2.33**	**104**		**Pn**	**00 19 26.8**	**-3.2**
TPIG	**Tehuac#an**	**2.33**	**27**	e*P*	**Pn**	**00 19 30.7**	**+0.5**
TPIG				*i* S	**Sb**	**00 20 03.6**	**+0.3**
TPIG	**Tehuac#an**	**2.33**	**27**		**Pn**	**00 19 30.7**	**+0.5**
YAIG	**Yautepec**	**2.58**	**347**	*i* P	**Pn**	**00 19 32.2**	**-1.5**
YAIG				e*S*	**Sn**	**00 20 06.2**	**+2.0**
YAIG	**Yautepec**	**2.58**	**347**		**Pn**	**00 19 36.3**	**+2.6**
ARIG	**Puente Sto Nin**	**2.65**	**317**	e*P*	Pn	00 19 29.2	-5.3
ARIG				*i* S	**Sn**	**00 20 00.4**	**-5.4**
ARIG	**Puente Sto Nin**	**2.65**	**317**		Pn	00 19 30.3	-4.2
UNM	**Universidad Na**	**3.06**	**347**		**Pn**	**00 19 41.1**	**+0.8**
CMIG	**Matias Romero**	**3.50**	**77**	Pn	**Pn**	**00 19 44.9**	**-1.3**
	9.2nm,0.3s,baz=256,slow=12,SNR=69						
CMIG				Sn	**Sn**	**00 20 29.5**	**+2.7**
	7.2nm,0.3s,baz=298,slow=16,SNR=4.0						
CMIG				Lg	Lg	00 20 41.6	
	14nm,0.3s,baz=275,slow=10,SNR=5.5						
MOIG	**Morelia**	**4.22**	**322**		**Pn**	**00 19 59.4**	**+3.1**
ZAIG	**Zacatecas**	**7.49**	**329**	Pn	**Pn**	**00 20 43.5**	**+2.3**
APG	**El Apazote**	**7.81**	**99**	Pn	**Pn**	**00 20 43.6**	**-2.0**
	0.5nm,0.3s,baz=303,slow=17,SNR=3.3						
APG				Sn	**Sn**	**00 22 09.6**	**-3.7**
	0.5nm,0.3s,baz=27,slow=18,SNR=2.2						
APG				Lg	Lg	00 22 59.6	
	0.5nm,0.3s,baz=223,slow=19,SNR=2.4						
APG				LR	LR	00 23 46.8	
	comp=Z,294nm,21.7s,baz=318,slow=38						
TEIG	**Tepich**	**10.42**	**67**	Pn	**Pn**	**00 21 19.5**	**-1.6**
	0.7nm,0.3s,baz=307,slow=0.3,SNR=6.4						
TEIG				Sn	**Sn**	**00 23 13.7**	**-3.3**
	4.7nm,0.3s,baz=319,slow=22,SNR=11						
TEIG				LR	LR	00 26 23.7	
	comp=Z,274nm,18.5s,baz=228,slow=44						
TEIG	**Tepich**	**10.42**	**67**	Pn	**Pn**	**00 21 20.2**	**-0.9**
TEIG					**Sn**	**00 23 16.0**	**-0.9**
TGUH	**Tegucigalpa,Un**	**11.03**	**100**	Pn	**Pn**	**00 21 27.1**	**-2.5**
833A	**Chaparral WMA,**	**11.97**	**356**	Pn	**Pn**	**00 21 43.2**	**+0.8**
ESTN	**Estel**	**12.12**	**104**	Pn	**Pn**	**00 21 43.4**	**-1.2**
H06E1	**SOCORRO T-PHASE**	**12.14**	**283**	T	T	00 33 52.9	
	SNR=40						
H06S1	**SOCORRO T**	**12.16**	**283**	T	T	00 33 57.4	
	SNR=20						

H06N1 SOCORRO T-PHASE 12.21 284 T T 00 33 56.6
SNR=9.2
LPIG La Paz 13.54 307 LR LR 00 25 56.5
comp=Z,54nm,21.8s,baz=36,slow=32
HKT Hockley 13.77 10 Pn **Pn 00 22 04.7 -2.1**
TX32 Lajitas Array 13.80 341 **Pn 00 22 09.6 +2.1**
TXAR Lajitas Array 13.80 341 Pn **Pn 00 22 06.2 -1.3**
0.0nm,0.3s,baz=159,slow=14,SNR=5.5
TXAR Lg Lg 00 25 59.4
baz=173,slow=18,SNR=3.3
TX31 Lajitas Ar. Si 13.80 341 **Pn 00 22 08.7 +1.2**
JCT Junction City 14.14 355 **Pn 00 22 13.6 +1.5**
JCT Junction City 14.14 355 P **P 00 22 21.0 +1.7**
baz=174
435B Jarrell 14.41 3 **Pn 00 22 16.9 +1.2**
JTS Las Juntas de 14.44 113 Pn **Pn 00 22 17.3 +1.0**
0.4nm,0.3s,baz=325,slow=10,SNR=3.6
JTS Las Juntas de 14.44 113 **Pn 00 22 15.8 -0.4**
HDC Heredia 15.31 112 Pn **Pn 00 22 27.1 -0.9**
WHTX Lake Whitney, 15.62 3 P **Pn 00 22 32.9 +1.2**
WHTX IAmb IAmb 00 22 44.2
comp=Z,59nm,1.2s
WHTX Lake Whitney, 15.62 3 P **P 00 22 36.5 +0.8**
baz=183,SNR=13
NATX Nacogdoches 15.74 12 Pn **Pn 00 22 34.4 +1.0**
NATX Nacogdoches 15.74 12 P **P 00 22 37.8 +0.7**
baz=193
ABTX Abilene, Hawle 16.26 356 **Pn 00 22 41.7 +1.6**
ABTX Abilene, Hawle 16.26 356 P **P 00 22 43.1 +0.2**
baz=176,SNR=11
MNTX Cornudas Mount 16.55 339 **Pn 00 22 42.8 -0.9**
MNTX Cornudas Mount 16.55 339 P **Pn 00 22 42.6 -1.1**
baz=156,SNR=14
HSIG 17.08 320 P **Pn 00 22 51.1 +0.7**
Z41A Richland Creek 17.61 16 P **P 00 22 59.2 +1.5**
baz=198
319A Douglas 17.93 329 IAmb IAmb 00 23 09.1
comp=Z,39nm,1.2s
WLAR White Oak Lake 17.94 15 P **Pn 00 23 01.0 0.0**
MSTX Muleshoe 17.99 348 IAmb IAmb 00 23 08.9
comp=Z,36nm,1.2s
MSTX Muleshoe 17.99 348 P **Pn 00 23 01.4 -0.3**
baz=166
121A Cookes Peak, D 18.21 334 P **Pn 00 23 05.8 +1.3**
baz=150
WMOK Wichita Mounta 18.33 359 **P 00 23 06.4 +0.6**
WMOK Wichita Mounta 18.33 359 P **P 00 23 04.7 -1.1**
baz=179
MIAR Mount Ida 18.66 13 P **Pn 00 23 10.9 +1.1**
MIAR Mount Ida 18.66 13 P **Pn 00 23 10.1 +0.3**
baz=194
AMTX Amarillo 18.70 352 IAmb IAmb 00 23 25.2
comp=Z,31nm,1.4s
AMTX Amarillo 18.70 352 P **P 00 23 10.4 +0.5**
baz=170
X40A Basin Creek Fa 18.77 15 P **P 00 23 11.1 +0.5**
W35A Tecumseh 18.80 4 P **P 00 23 11.2 +0.3**
061Z Ochoppi 18.91 57 **P 00 23 11.2 -0.8**
W39A Magazine 19.25 12 P **Pn 00 23 17.8 +0.9**
baz=193
TUC Tucson 19.45 327 P **P 00 23 19.3 +1.1**
TUC Tucson 19.45 327 P **P 00 23 19.2 +1.1**
baz=142
W41B Gary Mavity, V 19.57 15 P **P 00 23 20.3 +1.0**
W41B Gary Mavity, V 19.57 15 P **Pn 00 23 25.4 +4.7**
baz=198
LRAL Lakeview Retre 19.59 30 P **P 00 23 20.1 +0.5**
LRAL Lakeview Retre 19.59 30 P **Pn 00 23 20.8 -0.3**
baz=214
TUL1 Leonard 19.65 6 P **P 00 23 19.1 -1.0**
TUL1 Leonard 19.65 6 P **P 00 23 19.7 -0.4**
baz=187
WHAR Wooly Hollow 19.67 15 P **P 00 23 20.4 0.0**
WHAR IAmb IAmb 00 23 34.5
comp=Z,26nm,0.9s
ANMO Albuquerque 19.88 340 P **P 00 23 22.0 -0.9**
comp=Z,0.1nm,0.3s,baz=154,slow=12,SNR=16
ANMO Lg Lg 00 29 13.8
comp=Z,0.1nm,0.3s,baz=47,slow=16,SNR=2.5
ANMO LR LR 00 30 03.7
comp=Z,96nm,19.2s,baz=154,slow=34
ANMO Albuquerque 19.88 340 P **P 00 23 23.1 +0.2**
ANMO Albuquerque 19.88 340 P **P 00 23 23.6 +0.8**
baz=157
U32A Winter Ranch, 19.98 359 P **P 00 23 23.6 -0.2**
U32A IAmb IAmb 00 23 33.2
comp=Z,68nm,1.2s
HHAR Hobbs 20.27 11 P **P 00 23 27.7 +0.7**
HHAR IAmb IAmb 00 23 38.3
comp=Z,28nm,1.4s
Z50A Ashland 20.30 32 P **P 00 23 26.6 -0.7**
Z50A IAmb IAmb 00 23 37.3
comp=Z,23nm,1.1s
Z50A Ashland 20.30 32 P Pn 00 23 28.7 -0.7
214A Organ Pipe Nat 20.30 323 IAmb IAmb 00 23 35.2
comp=Z,42nm,1.4s
214A Organ Pipe Nat 20.30 323 P **P 00 23 27.2 -0.2**
baz=136,SNR=6.6
HBAR Harrisburg 20.37 19 P **P 00 23 27.3 -0.8**
152A Waverly Hall 20.48 35 P **P 00 23 28.9 -0.3**
152A IAmb IAmb 00 23 43.5
comp=Z,32nm,1.4s
LPAR Lepanto 20.53 19 P **P 00 23 29.5 -0.2**
Y49A Blount Mountai 20.55 30 IAmb IAmb 00 23 42.1
comp=Z,20nm,0.9s
U40A Yellville 20.56 13 IAmb IAmb 00 23 42.1
comp=Z,24nm,0.9s
U40A Yellville 20.56 13 P **P 00 23 31.4 +1.4**
baz=195,SNR=7.1
LCAR Lake Charles 20.71 17 P **P 00 23 31.8 +0.2**
LCAR IAmb IAmb 00 23 43.3
comp=Z,30nm,1.3s
Z51A Franklin 20.73 33 P **P 00 23 30.7 -1.2**
Z51A IAmb IAmb 00 23 46.1
comp=Z,20nm,1.1s
X48A Hartselle 20.75 27 P **P 00 23 32.5 +0.4**
X48A IAmb IAmb 00 23 43.9
comp=Z,24nm,1.0s
PLAL Pickwick Lake 20.77 25 IAmb IAmb 00 23 44.3
comp=Z,19nm,0.8s
X18A Snowflake 20.85 332 IAmb IAmb 00 23 41.2
comp=Z,45nm,1.5s
GNAR Gosnell 20.95 19 P **P 00 23 35.5 +1.2**
PEBM Pemiscott Bayo 21.14 20 P **P 00 23 35.7 -0.6**
Y51A Rockmart 21.25 32 P **P 00 23 36.6 -0.9**
baz=218,SNR=6.4
T25A Trinidad 21.39 347 IAmb IAmb 00 23 50.0
comp=Z,27nm,1.1s
T25A Trinidad 21.39 347 P **P 00 23 42.0 +2.8**
baz=164,SNR=6.9
113A Mohawk Valley, 21.45 323 IAmb IAmb 00 23 50.0
comp=Z,27nm,1.4s
MGMO Mountain Grove 21.45 14 P **P 00 23 42.2 +2.5**
MGMO IAmb IAmb 00 23 57.0
comp=Z,19nm,1.2s
X16A Lo Mia Camp, P 21.46 329 IAmb IAmb 00 23 50.1
comp=Z,18nm,1.1s
FPAL Fort Paine 21.49 30 IAmb IAmb 00 23 57.0
comp=Z,19nm,1.3s
Z53A Monticello 21.57 36 P **P 00 23 41.3 +0.3**
baz=222
PBMO Poplar Bluff 21.58 18 P **P 00 23 43.5 +2.5**
PBMO IAmb IAmb 00 23 45.0
comp=Z,19nm,0.8s
W49A Belvidere 21.66 28 P **P 00 23 44.8 +2.9**
baz=213,SNR=5.6
UTMT University of 21.68 21 P **P 00 23 43.8 +1.7**
GOGA Godfrey 21.73 36 P **P 00 23 44.3 +1.6**
GOGA IAmb IAmb 00 23 56.8
comp=Z,37nm,1.4s
Y52A Lilburn 21.74 34 P **P 00 23 43.5 +0.7**
Y52A IAmb IAmb 00 23 56.0
comp=Z,40nm,1.4s
Y52A Lilburn 21.74 34 P

SWET IAmb IAmb 00 23 57.4
comp=Z,32nm,1.2s
V48A Smith Brothers 21.94 26 P P 00 23 45.5 +0.6
V48A IAmb IAmb 00 24 00.3
comp=Z,45nm,1.4s
Z54A Sparta 21.96 37 P P 00 23 45.3 +0.1
baz=223
Y53A Monroe 22.00 35 P P 00 23 46.2 +0.7
baz=221
W50A Signal Mountai 22.17 30 IAmb IAmb 00 23 55.5
comp=Z,37nm,1.2s
W50A Signal Mountai 22.17 30 P P 00 23 48.0 +0.6
baz=215
SDCO Great Sand Dun 22.22 345 P P 00 23 48.3 0.0
baz=162
GLA Glamis 22.27 321 P P 00 23 50.7 +2.1
GLA Glamis 22.27 321 P P 00 23 53.7 +5.1
baz=134
WUAZ Wupatki 22.32 331 IAmb IAmb 00 23 58.5
comp=Z,28nm,1.1s
WUAZ Wupatki 22.32 331 P P 00 23 51.1 +1.9
baz=145,SNR=8.2
V49A McMinnville 22.36 28 P P 00 23 51.4 +2.0
baz=213,SNR=7.0
CBKS Cedar Bluff 22.43 357 P P 00 23 52.5 +2.3
CBKS IAmb IAmb 00 24 04.5
comp=Z,30nm,1.2s
CBKS Cedar Bluff 22.43 357 P P 00 23 54.5 +4.3
baz=176
CLTN Cedars of Leba 22.45 26 P P 00 23 50.5 +0.1
CLTN IAmb IAmb 00 23 54.9
comp=Z,13nm,1.1s
GTBY Guantanamo Bay 22.47 77 P P 00 23 51.5 +0.7
Y54A Tignall 22.50 36 P P 00 23 50.1 -0.8
baz=223
CCM Cathedral Cave 22.56 15 P P 00 23 52.1 +0.6
CCM IAmb IAmb 00 24 04.2
comp=Z,17nm,1.1s
CCM Cathedral Cave 22.56 15 P P 00 23 52.5 +1.0
baz=198
S22A 4UR Ranch, Cre 22.58 343 P P 00 23 52.4 +0.3
baz=158,SNR=14
Y12C Blythe 22.59 323 P P 00 23 56.0 +4.0
Y12C Blythe 22.59 323 P P 00 23 58.0 +6.0
baz=136
MVCO Mesa Verde 22.62 339 P P 00 23 52.3 -0.1
baz=154,SNR=29
V50A Pikevile 22.65 29 P P 00 23 52.4 -0.2
baz=215
CPCT Cooper Cave 22.75 31 P P 00 23 53.8 +0.2
CPCT IAmb IAmb 00 24 01.9
comp=Z,38nm,1.2s
W52A Murphy 22.76 32 P P 00 23 53.7 0.0
W52A Murphy 22.76 32 P P 00 23 54.7 +1.0
baz=218
S44A Carbondale 22.78 19 P P 00 23 53.9 0.0
S44A IAmb IAmb 00 24 02.8
comp=Z,30nm,1.0s
SWSC Sam W. Stewart 22.80 320 P P 00 24 00.1 +6.0
baz=132
T47A Sharon Grove 22.90 24 P P 00 23 54.9 -0.3
HODGE Hodges 23.01 36 IAmb IAmb 00 24 04.5
comp=Z,18nm,1.1s
Y55A Saluda 23.03 37 P P 00 23 55.3 -1.2
baz=224
U49A Red Boiling Sp 23.04 27 P P 00 23 57.1 +0.5
baz=212
BC3 Big Chuckawall 23.07 322 P P 00 23 57.0 -0.1
baz=134
V51A Loudon 23.11 30 P P 00 23 58.4 +1.1
baz=216
MONP2 Monument Peak 23.15 319 P P 00 23 58.1 +0.1
baz=131
BG3 Lake Jocassee 23.21 34 P P 00 23 58.8 +0.5
BG3 IAmb IAmb 00 24 12.0
comp=Z,19nm,1.4s
W53A Cullowhee 23.22 33 P P 00 23 59.7 +1.1
baz=220
IRM Iron Mountain 23.24 323 P P 00 23 58.4 -0.3
baz=136,SNR=9.6
TKL Tuckaleechee C 23.28 31 P P 00 23 57.0 -2.1
comp=Z,6.0nm,0.9s,baz=201,slow=12,SNR=4.2
TKL Tuckaleechee C 23.28 31 P P 00 23 59.4 +0.4
SLM Saint Louis 23.36 16 P P 00 24 00.3 +0.5
U50A Jamestown 23.38 29 P P 00 24 01.0 +1.0
baz=214
U15A North Rim 23.49 331 IAmb IAmb 00 24 13.4
comp=Z,14nm,1.2s
V52A Sevierville 23.52 31 P P 00 24 01.4 +0.1
V52A IAmb IAmb 00 24 02.6
comp=Z,28nm,1.5s
USIN University of 23.56 22 P P 00 24 02.2 +0.6
109C Camp Elliot, M 23.59 318 P P 00 24 06.9 +4.9
BELC Belle Mtn. Jos 23.64 321 P P 00 24 02.2 -0.5
baz=134,SNR=6.7
T49A Edmonton 23.65 26 P P 00 24 02.5 -0.1
T49A IAmb IAmb 00 24 17.2
comp=Z,18nm,1.2s
T49A Edmonton 23.65 26 P P 00 24 04.5 +1.9
baz=212
XPFO Pion Flat 23.65 320 P P 00 24 04.8 +2.1
PFO Pinyon Flats O 23.65 320 P P 00 23 59.8 -3.0
comp=Z,0.7nm,0.6s,baz=142,slow=8.6,SNR=4.5
PFO LR LR 00 34 09.6
comp=Z,114nm,19.1s,baz=130,slow=39
PFO Pinyon Flats O 23.65 320 P 00 24 04.8 +2.0
PFO Pinyon Flats O 23.65 320 P P 00 24 07.9 +5.1
baz=132
W54A Cherokee Point 23.68 35 P P 00 24 04.0 +1.0
baz=222
V53A Saluda 23.79 33 P P 00 24 02.7 -1.3
V53A IAmb IAmb 00 24 12.0
comp=Z,29nm,1.4s
V53A Saluda 23.79 33 P P 00 24 04.7 +0.7
baz=220
T50A Nancy 23.88 28 P P 00 24 05.0 +0.2
baz=214,SNR=6.0
X56A White Oak 23.91 38 P P 00 24 05.9 +0.9
baz=225
SMCO Snowmass 23.95 344 IAmb IAmb 00 24 16.3
comp=Z,34nm,1.4s
Y57A Sumter 23.96 39 P P 00 24 04.6 -1.0
GMRC Granite Mounta 23.99 323 P P 00 24 11.4 +5.4
baz=136,SNR=5.9
U52A Thorn Hill 24.07 31 P P 00 24 08.6 +2.0
baz=218
TZTN Tazewell 24.09 30 P P 00 24 08.3 +1.5
TZTN Tazewell 24.09 30 P P 00 24 07.7 +0.9
baz=217
OLIL Olney 24.10 20 P P 00 24 06.8 0.0
MURC Murrieta 24.10 319 P P 00 24 12.9 +6.0
baz=131
KMSC Kings Mountain 24.20 36 P P 00 24 08.3 +0.5
KMSC IAmb IAmb 00 24 22.3
comp=Z,27nm,1.2s
ISCO Idaho Springs 24.20 346 IAmb IAmb 00 24 15.9
comp=Z,33nm,1.4s
ISCO Idaho Springs 24.20 346 P P 00 24 08.0 -0.2
baz=163,SNR=7.5
T51A Gray 24.24 29 P P 00 24 08.8 +0.7
baz=216
WCI Wyandotte Cave 24.30 24 P P 00 24 09.0 +0.3
WCI Wyandotte Cave 24.30 24 P P 00 24 09.4 +0.8
baz=209
S49A Springfield 24.32 26 P P 00 24 09.0 +0.1
baz=212
V54A Nebo 24.32 34 P P 00 24 10.5 +1.6
baz=221
BIRD Birdtown, Kers 24.35 38 P P 00 24 08.6 -0.6
BIRD IAmb IAmb 00 24 19.3
comp=Z,18nm,1.3s
HEC Hector,Ludlow 24.41 322 P P 00 24 15.4 +5.5
baz=134
P43A Skaggs, Pawnee 24.50 17 IAmb IAmb 00 24 18.3
comp=Z,34nm,1.4s
TUQ Turquoise Moun 24.61 324 P P 00 24 11.6 0.0
baz=136,SNR=7.2
S50A Richmond 24.62 28 P P 00 24 12.9 +1.3
baz=214,SNR=6.3
OGNE Ogallala 24.72 354 P P 00 24 14.1 +1.5
baz=172,SNR=10
V55A Taylorsville 24.78 35 P P 00 24 13.2 +0.1
V55A Taylorsville 24.78 35 P P 00 24 14.7 +1.6
baz=222
T52A Hallie 24.82 31 P P 00 24 13.0 -0.4
T52A Hallie 24.82 31 P P 00 24 15.0 +1.6
baz=217

T53A Wise 24.94 31 P P 00 24 15.2 +0.6
baz=218
S51A Beattyville 24.95 29 P P 00 24 15.6 +1.0
baz=215,SNR=6.4
U54A Nelsons Funny 24.95 33 P P 00 24 16.2 +1.5
baz=220
X58A Rowland 24.97 40 P P 00 24 15.3 +0.6
SHPR Sheep Range 24.98 327 IAmb IAmb 00 24 23.7
comp=Z,15nm,1.4s
W57A Gilead 24.98 38 P P 00 24 15.7 +0.8
baz=226,SNR=5.2
GSC Goldstone, Bar 25.02 322 IAmb IAmb 00 24 23.3
comp=Z,10nm,1.2s
GSC Goldstone, Bar 25.02 322 P P 00 24 19.7 +4.4
baz=134
BLO Bloomington 25.04 22 IAmb IAmb 00 24 24.3
comp=Z,22nm,0.8s
MWC Mount Wilson 25.05 319 P P 00 24 20.7 +4.9
Q48A North Vernon 25.12 24 P P 00 24 17.6 +1.5
baz=210,SNR=7.7
SHOC Shoshone, Teco 25.14 324 P P 00 24 22.6 +6.3
baz=136
R50A Paris 25.15 27 IAmb IAmb 00 24 24.9
comp=Z,8.9nm,0.8s
R50A Paris 25.15 27 P P 00 24 17.1 +0.7
baz=213
O20A White River Ci 25.20 342 P P 00 24 19.4 +2.3
baz=157,SNR=12
N23A Red Feather La 25.32 347 IAmb IAmb 00 24 26.8
comp=Z,12nm,1.0s
N23A Red Feather La 25.32 347 P P 00 24 19.2 +1.0
baz=163
U55A TA2, Sparta 25.35 34 P P 00 24 19.9 +1.6
baz=222
TCRU Three Creeks R 25.37 334 P P 00 24 22.3 +3.7
OTAV Otavalo 25.39 127 P P 00 24 23.2 +3.9
HDIL Hopedale 25.42 16 P P 00 24 19.0 +0.2
baz=201
P17A Butcher Ranch, 25.43 337 P P 00 24 22.9 +3.7
EDW2 Edwards Air Fo 25.44 320 P P 00 24 20.5 +1.4
baz=132
R51A Hillsboro 25.50 28 P P 00 24 21.5 +2.0
baz=215,SNR=9.0
Q49A Aurora 25.52 25 P P 00 24 20.7 +1.0
baz=211
PHWY Pilot Hill 25.61 348 IAmb IAmb 00 24 30.1
comp=Z,12nm,1.0s
BLG Langa Peak, P 25.62 318 P P 00 24 23.5 +2.7
baz=128
LRMC Laurel Mtn Rad 25.66 322 P P 00 24 26.8 +5.6
baz=133
OSI Osito Audit: C 25.72 319 P P 00 24 26.5 +4.8
OSI IAmb IAmb 00 24 36.7
comp=Z,10nm,0.8s
OSI Osito Audit: C 25.72 319 P P 00 24 28.9 +7.2
baz=130
Q50A Georgetown 25.77 27 P P 00 24 22.5 +0.5
baz=213
FURC Furnace Creek, 25.88 324 P P 00 24 23.2 +0.3
baz=136
SCIA State Center 25.89 9 P P 00 24 23.9 +0.9
baz=191
TPNV Topopah Spring 25.89 326 IAmb IAmb 00 24 32.5
comp=Z,14nm,1.1s
TPNV Topopah Spring 25.89 326 P P 00 24 24.8 +1.5
baz=138
SFIN Lafayette 25.91 20 IAmb IAmb 00 24 26.1
comp=Z,14nm,1.0s
SFIN Lafayette 25.91 20 P P 00 24 24.7 +1.4
baz=205
V58A Windy Hill, Pi 25.94 38 P P 00 24 23.8 +0.2
MPMC Manual Prospec 25.94 323 P P 00 24 25.1 +1.3
baz=134
R52A Catlettsburg 25.96 29 P P 00 24 25.9 +2.1
baz=216
SDDR Presa de Saban 26.01 80 P P 00 24 33.2 +8.8
P49A Miami Univ. Ec 26.05 25 P P 00 24 26.2 +1.7
baz=211
DAC Darwin (Calif) 26.16 323 P P 00 24 30.6 +4.8
S54A Dingess, Beckl 26.19 32 P P 00 24 25.5 -0.3
S54A IAmb IAmb 00 24 36.1
comp=Z,20nm,1.1s
Q51A Peebles 26.20 27 P P 00 24 26.6 +0.7
baz=214
BLA Blacksburg 26.21 34 P P 00 24 26.8 +0.7
ISA Isabella, Lake 26.26 321 P P 00 24 27.8 +1.3
ISA Isabella, Lake 26.26 321 P P 00 24 27.5 +1.0
baz=132
R53A Hurricane 26.28 30 P P 00 24 27.6 +1.0
baz=218
ROSC El Rosal 26.29 113 P P 00 24 28.9 +1.6
comp=Z,5.4nm,0.4s,baz=336,slow=20,SNR=2.1
ROSC El Rosal 26.29 113 P P 00 24 30.8 +3.4
RWWY Rawlins 26.37 345 P P 00 24 29.6 +1.8
L40A Anamosa 26.39 12 P P 00 24 28.1 +0.6
L40A IAmb IAmb 00 24 36.6
comp=Z,10.0nm,0.9s
V59A Middlesex 26.44 39 P P 00 24 29.5 +1.3
baz=226
P50A Jamestown 26.49 26 P P 00 24 28.1 -0.4
baz=213
O48A Farmland 26.50 23 P P 00 24 29.5 +0.9
baz=209
GRAC Grapevine Rang 26.54 324 P P 00 24 35.9 +6.9
baz=136
M44A Midewin, Midew 26.54 18 P P 00 24 26.6 -2.3
CWC Cottonwood Cre 26.55 323 P P 00 24 34.5 +5.2
baz=134
R11A Troy Canyon, C 26.61 329 P P 00 24 30.6 +0.8
R11A Troy Canyon, C 26.61 329 P P 00 24 34.4 +4.6
baz=141
Q52A Bidwell 26.64 29 P P 00 24 30.9 +1.0
baz=216
L42A Oliver, Polo 26.68 15 IAmb IAmb 00 24 37.8
comp=Z,22nm,0.9s
JLU Jordanelle 26.68 338 P P 00 24 32.7 +2.1
U58A Oxford 26.68 38 P P 00 24 32.8 +2.5
baz=226
P51A Williamsport 26.70 27 P P 00 24 29.6 -0.8
P51A Williamsport 26.70 27 P P 00 24 31.0 +0.6
baz=214
O49A Covington 26.76 25 P P 00 24 30.4 -0.5
O49A IAmb IAmb 00 24 41.9
comp=Z,21nm,1.1s
O49A Covington 26.76 25 P P 00 24 32.0 +1.1
baz=211
FLOC Florencia 26.82 121 P P 00 24 33.4 +1.6
DUG Dugway, Tooele 26.86 335 P P 00 24 32.6 +0.6
CTU Camp Tracy 26.87 337 P P 00 24 34.0 +1.8
RUSC La Rusia 26.93 110 P P 00 24 32.5 -0.8
O50A Cable 27.01 26 P P 00 24 34.4 +1.2
baz=212
N48A Decatur 27.07 23 P P 00 24 34.3 +0.6
baz=209
TCUT Toone Canyon 27.12 338 P P 00 24 35.0 +0.6
K22A Casper 27.13 347 P P 00 24 36.0 +1.6
K22A IAmb IAmb 00 24 50.5
comp=Z,16nm,1.3s
L44A Lake County Fo 27.31 17 P P 00 24 35.9 +0.1
ACSO Alum Creek Sta 27.35 26 P P 00 24 36.4 +0.2
ACSO IAmb IAmb 00 24 46.7
comp=Z,11nm,0.9s
ECSD EROS Data Cent 27.36 3 P P 00 24 36.6 +0.3
ECSD IAmb IAmb 00 24 40.2
comp=Z,11nm,1.2s
ECSD EROS Data Cent 27.36 3 P P 00 24 37.9 +1.5
baz=184
BGU Big Grassy Mou 27.57 336 P P 00 24 38.6 +0.3
SPUT South Promonto 27.67 337 P P 00 24 39.2 -0.1
M48A Edgerton 27.73 23 P P 00 24 38.7 -0.9
M48A IAmb IAmb 00 24 44.1
comp=Z,11nm,0.8s
DR12 Loma Pena Alta 27.82 81 P P 00 24 40.5 -0.3
OMMB Old Mammoth Mi 27.89 323 P P 00 24 40.7 -0.8
OMMB IAmb IAmb 00 24 55.1
comp=Z,9.3nm,1.5s
MDPB Devils Postpil 27.95 323 P P 00 24 42.5 +0.5
NV11 Mina Array Sit 28.00 326 IAmb IAmb 00 24 49.5
comp=Z,10nm,1.1s
BW06 Boulder Array 28.01 342 IAmb IAmb 00 24 53.8
comp=Z,12nm,1.3s
BW06 Boulder Array 28.01 342 P P 00 24 41.9 -0.5
baz=157
PD31 Pinedale Array 28.01 342 IAmb IAmb 00 24 53.8
comp=Z,11nm,1.3s
PDAR Pinedale Array 28.01 342 P P 00 24 41.8 -0.6
comp=Z,3.3nm,1.1s,baz=148,slow=8.7,SNR=14
PDAR LR LR 00 36 09.6
comp=Z,176nm,18.7s,baz=155,slow=37
NVAR Mina Array Bea 28.08 325 P P 00 24 42.1 -1.0
comp=Z,1.3nm,0.9s,baz=152,slow=9.6,SNR=8.9
SDV Santo Domingo 28.12 102 LR LR 00 36 17.8
comp=Z,70nm,18.8s,baz=49,slow=37
SDV Santo Domingo 28.12 102 P P 00 24 43.0 -0.5
SDV IAmb IAmb 00 24 59.6
comp=Z,5.9nm,0.9s
N51A Ashland 28.18 26 P P 00 24 43.3 -0.4
N51A IAmb IAmb 00 24 50.7
comp=Z,8.9nm,0.8s
M50A Fremont 28.31 25 P P 00 24 44.7 -0.1
ELK Elko 28.34 332 P P 00 24 43.8 -1.6
comp=Z,0.3nm,0.3s,baz=158,slow=4.4,SNR=3.0
ELK Elko 28.34 332 IAmb IAmb 00 24 52.6
comp=Z,7.8nm,1.4s
RYN Ryan 28.34 326 P P 00 24 46.6 +1.3
KVN Kaiserville 28.42 327 IAmb IAmb 00 24 53.2
comp=Z,7.6nm,1.1s
WAKR Walker 28.76 324 P P 00 24 49.7 +0.6
REDW Red Top Meadow 28.94 341 P P 00 24 51.1 +0.4
CMB Columbia Colle 28.98 323 P P 00 24 52.5 +1.6
YERR Yerington 28.99 325 P P 00 24 49.1 -2.1
YERR IAmb IAmb 00 24 58.1
comp=Z,11nm,1.5s
SNOW Snow King Moun 29.00 341 P P 00 24 51.5 +0.2
SNOW IAmb IAmb 00 25 00.1
comp=Z,11nm,1.1s
TPAW Teton Pass 29.09 341 P P 00 24 53.2 +1.2
M52A Chesterland 29.13 27 P P 00 24 51.3 -0.8
MOOW Moose Ponds 29.26 342 P P 00 24 54.3 +0.8
PNTR Pine Nut 29.26 325 P P 00 24 56.8 +3.3
PNTR IAmb IAmb 00 25 00.8
comp=Z,9.7nm,1.1s
RUBR Rubicon Trail 29.54 324 P P 00 24 58.0 +1.9
RUBR IAmb IAmb 00 25 03.6
comp=Z,14nm,0.9s
FLWY Flagg Ranch 29.55 342 P P 00 24 58.3 +2.2
FLWY IAmb IAmb 00 25 15.1
comp=Z,7.3nm,1.3s
RLMT Red Lodge 30.11 345 P P 00 25 01.0 0.0
baz=159
DLMT Dillon 31.29 341 IAmb IAmb 00 25 22.6
comp=Z,16nm,1.5s
AGMN Agassiz Nation 31.95 3 IAmb IAmb 00 25 24.4
comp=Z,12nm,0.9s
M04C Macdoel 32.37 326 P P 00 25 26.7 +5.8
baz=134
BMO Blue Mountains 32.57 335 IAmb IAmb 00 25 28.6
comp=Z,6.2nm,1.2s
YBH Yreka Blue Hor 32.80 325 P P 00 25 22.4 -2.2
comp=Z,0.5nm,0.5s,baz=124,slow=11,SNR=2.2
F10A Beach Ranch, E 33.46 336 IAmb IAmb 00 25 38.7
comp=Z,12nm,1.0s
G08A Pilot Rock 33.62 333 IAmb IAmb 00 25 38.5
comp=Z,8.1nm,1.2s
ULM Lac du Bonnet 33.90 3 P P 00 25 32.4 -1.5
comp=Z,3.1nm,1.0s,baz=172,slow=9.2,SNR=4.2
ULM Lac du Bonnet 33.90 3 IAmb IAmb 00 25 40.1
comp=Z,6.1nm,1.0s
F05D White Salmon 35.18 332 P P 00 25 52.3 +7.2
baz=139
LSQQ Lebel-sur-Quev 37.04 24 P P 00 26 01.1 +0.2
baz=216
MATQ Matagami 37.37 22 P P 00 26 03.9 +0.2
baz=214
FFC Flin Flon 38.41 357 P P 00 26 12.4 -0.1
LPAZ La Paz 44.11 136 P P 00 26 58.6 -1.7
comp=Z,0.9nm,0.9s,baz=248,slow=6.2,SNR=3.8
LPAZ LR LR 00 44 04.2
comp=Z,47nm,18.4s,baz=309,slow=34
LPAZ La Paz 44.11 136 IAmb IAmb 00 27 05.5
comp=Z,3.2nm,1.2s
SCHQ Schefferville 45.50 25 P P 00 27 09.2 -1.1
comp=Z,6.8nm,0.9s,baz=248,slow=3.6,SNR=10
SCHQ Schefferville 45.50 25 IAmb IAmb 00 27 12.4
comp=Z,10.0nm,1.1s
YKA Yellowknife Ar 47.49 350 P P 00 27 24.9 -0.9
comp=Z,1.5nm,1.0s,baz=159,slow=7.6,SNR=13
SIV San Ignacio 48.91 129 P P 00 27 38.4 +0.9
comp=Z,1.1nm,1.0s,baz=315,slow=8.6,SNR=3.5
INK Inuvik 56.52 345 P P 00 28 31.7 -1.2
comp=Z,3.1nm,1.0s,baz=136,slow=5.4,SNR=7.1
ILAR Eielson Array 58.30 338 P P 00 28 44.8 -0.8
comp=Z,2.1nm,1.0s,baz=144,slow=5.7,SNR=11

LZH Lanzhou 123.76 338 *e*PKP **PKiKP 00 37 52.0 +2.3**
LZH pPKP sPKPdf 00 38 02.9 +0.9
LZH sPKP 00 38 07.1
LZH LR LR
comp=N,58nm,18.2s
LZH LR LR
comp=E,63nm,17.9s
LZH LR LR
comp=Z,82nm,20.0s
KSH Kashi 124.20 5 PKP PKiKP 00 37 51.3 +0.8
KSH sPKP 00 38 07.8
KSH PP PP 00 39 42.0 +8.4
KSH SKS **SKSdf 00 44 57.3 -3.2**
KSH SKKS **SKKSac 00 46 27.5 -4.5**
KSH Kashi 124.20 5 SS SS 00 56 24.9 +2.7
KSH AMB AMB
comp=Z,440nm,5.4s
CD2 Chengdu 128.40 336 Pdif **Pdif 00 34 43.8 +0.8**

ROM 19 00:20:38.5±0.1, 43°.392N±0°.003×12°.501E±0°.005, h7km±1km, ML0.9/5, Error ellipse: s-maj=0.4km s-min=0.1km az=58.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**116**	P	Pg	00 20 40.3	+0.1
ATFO				S	Sg	00 20 41.5	+0.1
ATVO	**AVT- Monte Val**	**0.07**	**262**	*i* P	Pg	00 20 40.4	+0.1
ATVO				S	Sg	00 20 41.8	+0.1
ATVO				AML	AML		
	comp=E,99μm,0.2s						
ATVO				AML	AML		
	comp=E,99μm,0.2s						
ATVO				AML	AML		
	comp=N,164μm,0.2s						
ATPI	**Pietralunga -**	**0.09**	**309**	P	Pg	00 20 40.9	+0.2
ATPI				S	Sg	00 20 42.8	+0.6
ATPI				AML	AML		
	comp=E,57μm,1.6s						
ATPI				AML	AML		
	comp=N,49μm,1.6s						
MURB	**Monte Urbino**	**0.13**	**172**	*e*P	Pg	00 20 41.7	+0.5
MURB				S	Sg	00 20 44.4	+1.2
PIEI	**Pieia**	**0.15**	**10**	*e*P	Pg	00 20 42.0	+0.4
PIEI				S	Sg	00 20 45.2	+1.5
PIEI				AML	AML		
	comp=E,55μm,1.5s						
PIEI				AML	AML		
	comp=N,63μm,1.2s						
PIEI				AML	AML		
	comp=E,55μm,1.5s						
FRON	**Frontone**	**0.21**	**52**	*e*P	Pg	00 20 43.1	+0.5
FRON				S	Sg	00 20 46.8	+1.4
FOSV	**Fossato di Vic**	**0.21**	**117**	*e*P	Pg	00 20 42.9	+0.2
FOSV				S	Sg	00 20 46.9	+1.3
BADI	**Badiali**	**0.22**	**302**	*e*P	Pg	00 20 43.5	+0.6
BADI				S	Sg	00 20 47.5	+1.6
BADI				AML	AML		
	comp=N,91μm,1.6s						
BADI				AML	AML		
	comp=E,84μm,1.6s						
NARO	**Abbazia di Nar**	**0.23**	**15**	*e*P	Pg	00 20 43.4	+0.4
NARO				S	Sg	00 20 47.6	+1.5
ATCC	**AVT- Casa Cast**	**0.23**	**154**	*e*P	Pg	00 20 43.8	+0.8
ATCC				S	Sg	00 20 48.1	+2.0
CPGN	**Carpegna, Ital**	**0.43**	**342**	AML	AML		
	comp=E,138μm,1.6s						
CPGN				AML	AML		
	comp=N,150μm,1.6s						

*IDC **19** 00:21:46.7±2.3, 15°.71N×98°.58W, h0km, mb4.0/10, mb1 4.3/12, mb1mx3.9/35, mbtmp4.1/12, ML4.1/2, Error ellipse: s-maj=43.5km s-min=17.4km az=7.0*
*MEX **19** 00:21:50.8±0.6, 15°.91N×98°.81W, h14km±6km, MD4.2*
*NEIC **19** 00:21:54.4±2.2, 16°.15N±0°.09×98°.52W±0°.06, h30km±8km,*

Error ellipse: s-maj=14.2km s-min=7.7km az=200.0
ISC 19 00:21:50.3±1.9,**16.07N**±0.07×**98.78W**±0.05,**h8**km±11km,
n103,σ1**43**/102,**mb4.3**/30,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.70**	**63**	*i* P		**Pg**	**00 22 03.3**	**-0.5**
PNIG				*i* S		**Sb**	**00 22 14.2**	**-0.5**
PNIG	**Pinotepa**	**0.70**	**63**			**Pg**	**00 22 03.3**	**-0.5**
PNIG						**Pn**	**00 22 10.6**	**+4.0**
TLIG	**Tlapa**	**1.50**	**8**	*e*P		**Pn**	**00 22 16.5**	**-1.2**
TLIG				*i* S		**Sn**	**00 22 35.8**	**-1.7**
TLIG	**Tlapa**	**1.50**	**8**			**Pn**	**00 22 16.5**	**-1.2**
TLIG	**Tlapa**	**1.50**	**8**	Pn		**Pn**	**00 22 17.4**	**-0.3**
CAIG	**El Cayaco**	**1.73**	**304**	*e*P		Pn	00 22 17.7	-3.0
CAIG				*i* S		**Sn**	**00 22 39.8**	**-3.1**
CAIG	**El Cayaco**	**1.73**	**304**			Pn	00 22 17.3	-3.4
MEIG	**Mezcala**	**2.01**	**337**	*i* P		**Pn**	**00 22 22.6**	**-2.1**
MEIG				*i* S		**Sn**	**00 22 48.0**	**-2.2**
MEIG	**Mezcala**	**2.01**	**337**			**Pn**	**00 22 23.8**	**-1.0**
PLIG	**Platanillo**	**2.41**	**343**	*e*P		**Pn**	**00 22 29.0**	**-1.2**
PLIG				*i* S		**Sn**	**00 22 59.1**	**-0.9**
PLIG	**Platanillo**	**2.41**	**343**			**Pn**	**00 22 30.0**	**-0.2**
HUIG	**Huatulco**	**2.59**	**96**	*e*P		**Pn**	**00 22 29.8**	**-2.7**
HUIG				*i* S		**Sn**	**00 22 59.5**	**-4.7**
HUIG	**Huatulco**	**2.59**	**96**			**Pn**	**00 22 29.8**	**-2.7**
ARIG	**Puente Sto Nin**	**2.66**	**326**	*e*P		**Pn**	**00 22 31.7**	**-1.9**
ARIG				*i* S		**Sn**	**00 23 04.2**	**-1.9**
ARIG	**Puente Sto Nin**	**2.66**	**326**			**Pb**	**00 22 37.6**	**-0.7**
TPIG	**Tehuac#an**	**2.70**	**30**	*e*P		**Pn**	**00 22 32.4**	**-1.8**
TPIG				*i* S		**Sn**	**00 23 06.5**	**-0.7**
TPIG	**Tehuac#an**	**2.70**	**30**			**Pn**	**00 22 31.8**	**-2.5**
YAIG	**Yautepec**	**2.79**	**354**	*e*P		**Pn**	**00 22 35.2**	**-0.3**
YAIG				*i* S		**Sn**	**00 23 08.3**	**-1.1**
YAIG	**Yautepec**	**2.79**	**354**			**Pn**	**00 22 35.8**	**+0.3**
UNM	**Universidad Na**	**3.26**	**353**	Pn		**Pn**	**00 22 43.2**	**+1.1**
CMIG	**Matias Romero**	**3.87**	**74**	Pn		**Pn**	**00 22 48.0**	**-2.1**
	9.9nm,0.3s,baz=247,slow=12,SNR=9.5							
CMIG					Sn	**Sn**	**00 23 32.7**	**-3.2**
	13nm,0.3s,baz=345,slow=24,SNR=6.5							
CMIG					Lg	Lg	00 23 47.3	
	26nm,0.3s,baz=222,slow=19,SNR=6.0							
MOIG	**Morelia**	**4.26**	**328**	Pn		**Pn**	**00 22 57.2**	**+1.5**
ZAIG	**Zacatecas**	**7.56**	**332**	Pn		**Pn**	**00 23 42.2**	**+1.0**
TEIG	**Tepich**	**10.80**	**66**	Pn		**Pn**	**00 24 23.2**	**-2.2**
	2.2nm,0.3s,baz=102,slow=0.0,SNR=3.3							
TEIG					Sn	Sn	00 26 16.3	-10
	2.6nm,0.3s,baz=319,slow=24,SNR=8.4							
H06E1	**SOCORRO T-PHAS**	**1.90**	**285**		T	T	00 36 56.1	
	SNR=75							
H06S1	**SOCORRO T**	**11.92**	**285**		T	T	00 36 54.7	
	SNR=26							
H06N1	**SOCORRO T-PHAS**	**11.97**	**285**		T	T	00 36 57.0	
ACON	**Acoyapa**	**13.81**	**105**	Pn		**Pn**	**00 25 07.2**	**+0.6**
TXAR	**Lajitas Array**	**13.95**	**342**	Pn		**Pn**	**00 25 10.5**	**+2.0**
	0.0nm,0.3s,baz=152,slow=12,SNR=4.2							
WHTX	**Lake Whitney,**	**15.90**	**4**	P		**Pn**	**00 25 36.3**	**+1.8**
WHTX					IAmb	IAmb	00 25 40.2	
	comp=Z,17nm,0.9s							
ABTX	**Abilene, Hawle**	**16.50**	**357**	P		**Pn**	**00 25 43.8**	**+1.5**
MNTX	**Cornudas Mount**	**16.68**	**340**	Pn		**Pn**	**00 25 45.1**	**+0.6**
319A	**Douglas**	**18.00**	**330**	P		**Pn**	**00 26 01.8**	**+0.7**
MSTX	**Muleshoe**	**18.18**	**349**	P		**P**	**00 26 04.5**	**+0.8**
W39A	**Magazine**	**19.57**	**12**	P		**P**	**00 26 19.6**	**+0.9**
W39A					IAmb	IAmb	00 26 21.0	
	comp=Z,16nm,1.2s							
WHAR	**Wooly Hollow**	**20.00**	**16**	P		**P**	**00 26 23.9**	**+0.4**
WHAR					IAmb	IAmb	00 26 36.4	
	comp=Z,20nm,1.4s							
ANMO	**Albuquerque**	**20.02**	**341**	P		Pn	00 26 25.6	0.0
	comp=Z,4.8nm,0.9s,baz=152,slow=11,SNR=9.8							
ANMO	**Albuquerque**	**20.02**	**341**	P		**P**	**00 26 24.6**	**+0.8**
Z50A	**Ashland**	**20.68**	**32**	P		**P**	**00 26 31.5**	**+0.6**
Z50A					IAmb	IAmb	00 26 48.7	
	comp=Z,8.7nm,1.0s							
U40A	**Yellville**	**20.88**	**14**	P		**P**	**00 26 34.2**	**+1.2**
U40A					IAmb	IAmb	00 26 37.7	
	comp=Z,13nm,0.9s							
Y49A	**Blount Mountai**	**20.93**	**30**	P		**P**	**00 26 33.2**	**-0.3**
Y49A					IAmb	IAmb	00 26 46.8	
	comp=Z,12nm,1.1s							
PLAL	**Pickwick Lake**	**21.14**	**25**	P		**P**	**00 26 37.6**	**+1.9**
PLAL					IAmb	IAmb	00 26 45.0	
	comp=Z,20nm,1.2s							
X16A	**Lo Mia Camp, P**	**21.53**	**330**	P		**P**	**00 26 42.4**	**+2.2**
T25A	**Trinidad**	**21.57**	**348**	P		**P**	**00 26 44.4**	**+3.7**
GLAT	**Glass**	**21.82**	**21**	P		**P**	**00 26 44.1**	**+1.1**
PBMO	**Poplar Bluff**	**21.92**	**18**	P		**P**	**00 26 44.1**	**0.0**
PBMO					IAmb	IAmb	00 26 47.1	
	comp=Z,15nm,0.7s							
Y14A	**Wickenburg**	**21.93**	**327**	P		**P**	**00 26 45.2**	**+0.8**
Y14A						**PcP**	**00 30 43.7**	**+0.2**
PARMO	**Parma**	**22.02**	**20**	P		**P**	**00 26 46.2**	**+0.9**
HICK	**Hickman**	**22.09**	**21**	P		**P**	**00 26 46.0**	**+0.1**
Y52A	**Lilburn**	**22.13**	**34**	P		**P**	**00 26 46.2**	**-0.3**
Y52A					IAmb	IAmb	00 26 47.2	
	comp=Z,25nm,1.2s							
WVT	**Waverly**	**22.23**	**24**	P		**P**	**00 26 49.0**	**+1.5**
WVT					IAmb	IAmb	00 26 50.0	
	comp=Z,16nm,0.9s							
SWET	**Sewanee**	**22.27**	**29**	P		**P**	**00 26 46.9**	**-1.1**
SWET					IAmb	IAmb	00 26 50.1	
	comp=Z,8.4nm,0.9s							
V48A	**Smith Brothers**	**22.31**	**26**	IAmb		IAmb	00 26 50.8	
	comp=Z,8.2nm,0.9s							
SDCO	**Great Sand Dun**	**22.39**	**346**	P		**P**	**00 26 49.9**	**+0.4**
WUAZ	**Wupatki**	**22.40**	**332**	P		**P**	**00 26 51.6**	**+2.0**
WUAZ					IAmb	IAmb	00 26 54.4	
	comp=Z,12nm,0.9s							
W50A	**Signal Mountai**	**22.54**	**30**	P		**P**	**00 26 50.1**	**-0.8**
W50A					IAmb	IAmb	00 26 58.1	
	comp=Z,13nm,0.9s							
Y12C	**Blythe**	**22.62**	**324**	P		**P**	**00 26 51.7**	**+0.1**
S22A	**4UR Ranch, Cre**	**22.73**	**343**	P		**P**	**00 26 54.6**	**+1.4**
MVCO	**Mesa Verde**	**22.75**	**340**	P		**P**	**00 26 54.0**	**+0.7**
MVCO					IAmb	IAmb	00 26 56.1	
	comp=Z,13nm,1.0s							
CLTN	**Cedars of Leba**	**22.82**	**27**	P		**P**	**00 26 54.2**	**+0.5**
CCM	**Cathedral Cave**	**22.89**	**15**	P		**P**	**00 26 54.5**	**+0.1**
CCM					IAmb	IAmb	00 27 06.8	
	comp=Z,9.9nm,1.1s							
KSU1	**Kansas State U**	**23.02**	**4**	P		**P**	**00 26 56.8**	**+0.9**
FVM	**French Village**	**23.04**	**17**	P		**P**	**00 26 56.4**	**+0.3**
FVM					IAmb	IAmb	00 26 57.3	
	comp=Z,9.9nm,0.9s							
KSCO	**Kaye Shedlock'**	**23.10**	**352**	P		**P**	**00 26 57.8**	**+1.0**
S44A	**Carbondale**	**23.12**	**20**	P		**P**	**00 26 56.9**	**-0.1**
CPCT	**Cooper Cave**	**23.13**	**31**	P		**P**	**00 26 56.5**	**-0.5**
CPCT					IAmb	IAmb	00 26 59.5	
	comp=Z,14nm,1.0s							
W52A	**Murphy**	**23.15**	**32**	P		**P**	**00 26 56.5**	**-0.7**
T47A	**Sharon Grove**	**23.27**	**24**	P		**P**	**00 26 58.7**	**+0.4**
T47A					IAmb	IAmb	00 27 00.0	
	comp=Z,16nm,0.8s							
W13A	**Hualapai Mount**	**23.28**	**327**	P		**P**	**00 27 00.5**	**+1.7**
Z56A	**Williston**	**23.29**	**39**	P		**P**	**00 26 57.7**	**-1.0**
TKL	**Tuckaleechee C**	**23.66**	**32**	P		**P**	**00 27 02.1**	**-0.3**
	comp=Z,2.8nm,0.7s,baz=197,slow=11,SNR=3.5							
TKL	**Tuckaleechee C**	**23.66**	**32**	IAmb		IAmb	00 27 14.1	
	comp=Z,23nm,1.4s							
USIN	**University of**	**23.91**	**22**	P		**P**	**00 27 04.6**	**-0.1**
T49A	**Edmonton**	**24.02**	**27**	P		**P**	**00 27 05.6**	**-0.1**
T49A					IAmb	IAmb	00 27 07.3	
	comp=Z,9.6nm,1.1s							
PAULI	**Pauline**	**24.08**	**36**	P		**P**	**00 27 07.4**	**+1.0**
SMCO	**Snowmass**	**24.11**	**344**	P		**P**	**00 27 07.3**	**+0.2**
SMCO					IAmb	IAmb	00 27 22.4	
	comp=Z,14nm,1.3s							
KMSC	**Kings Mountain**	**24.59**	**36**	P		**P**	**00 27 10.8**	**-0.2**
KMSC					IAmb	IAmb	00 27 23.8	
	comp=Z,12nm,1.4s							
WCI	**Wyandotte Cave**	**24.66**	**24**	P		**P**	**00 27 12.1**	**+0.5**
WCI					IAmb	IAmb	00 27 13.3	
	comp=Z,13nm,0.8s							
P43A	**Skaggs, Pawnee**	**24.84**	**17**	P		**P**	**00 27 13.3**	**+0.1**
P43A					IAmb	IAmb	00 27 14.8	
	comp=Z,5.8nm,0.8s							
MTPU	**Mount Pierson**	**24.87**	**334**	P		**P**	**00 27 14.6**	**+0.6**
SRU	**San Rafael Swe**	**25.16**	**338**	P		**P**	**00 27 17.5**	**+1.2**
T52A	**Hallie**	**25.20**	**31**	P		**P**	**00 27 17.3**	**+0.8**
T52A					IAmb	IAmb	00 27 18.1	
	comp=Z,14nm,0.9s							
Q16A	**Castle Valley**	**25.23**	**337**	P		**P**	**00 27 18.4**	**+1.4**
U54A	**Nelsons Funny**	**25.34**	**33**	P		**P**	**00 27 18.4**	**+0.6**
O20A	**White River Ci**	**25.36**	**343**	P		**P**	**00 27 19.1**	**+1.0**
P17A	**Butcher Ranch,**	**25.55**	**338**	P		**P**	**00 27 19.7**	**-0.2**
TMUT	**Trail Mountain**	**25.57**	**337**	P		**P**	**00 27 20.7**	**+0.5**
PSUT	**Pine Spring**	**26.01**	**332**	P		**P**	**00 27 25.9**	**+1.8**
RDMU	**Red Mountain**	**26.15**	**341**	P		**P**	**00 27 25.6**	**+0.2**
Q51A	**Peebles**	**26.57**	**28**	P		**P**	**00 27 30.2**	**+1.3**
Q51A					IAmb	IAmb	00 27 32.5	
	comp=Z,11nm,1.1s							
R53A	**Hurricane**	**26.66**	**30**	P		**P**	**00 27 30.3**	**+0.6**
NVAR	**Mina Array Bea**	**28.12**	**326**	P		**P**	**00 27 44.8**	**+1.6**
	comp=Z,1.3nm,0.9s,baz=152,slow=8.6,SNR=7.6							
PD31	**Pinedale Array**	**28.16**	**343**	IAmb		IAmb	00 27 56.2	
	comp=Z,5.6nm,1.2s							
PDAR	**Pinedale Array**	**28.16**	**343**	P		**P**	**00 27 45.1**	**+1.7**
	comp=Z,1.7nm,0.9s,baz=148,slow=9.8,SNR=7.4							
SDV	**Santo Domingo**	**28.37**	**101**	P		P	00 27 40.6	-4.9
	comp=Z,1.3nm,0.4s,baz=323,slow=20,SNR=2.8							
AGMN	**Agassiz Nation**	**32.23**	**4**	IAmb		IAmb	00 28 20.6	
	comp=Z,5.0nm,0.9s							
ULM	**Lac du Bonnet**	**34.17**	**3**	P		**P**	**00 28 36.6**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=210,slow=5.9,SNR=4.4							
ULM	**Lac du Bonnet**	**34.17**	**3**	IAmb		IAmb	00 28 43.2	
	comp=Z,7.5nm,1.5s							
SCHQ	**Schefferville**	**45.86**	**25**	P		**P**	**00 30 12.3**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=228,slow=6.8,SNR=8.4							
SCHQ	**Schefferville**	**45.86**	**25**	IAmb		IAmb	00 30 13.6	
	comp=Z,5.1nm,0.9s							
YKA	**Yellowknife Ar**	**47.69**	**350**	P		**P**	**00 30 27.0**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=162,slow=7.6,SNR=7.3							
INK	**Inuvik**	**56.70**	**345**	P		**P**	**00 31 33.9**	**-0.1**
	comp=Z,2.6nm,0.9s,baz=128,slow=8.1,SNR=5.8							
ILAR	**Eielson Array**	**58.42**	**338**	P		**P**	**00 31 47.1**	**+0.8**
	comp=Z,1.7nm,0.9s,baz=144,slow=4.6,SNR=7.6							

KRSC ***19*** *00:52:34.0±2.1,49.15N×157.20E,h40km±25km,ML5.0*
BJI ***19*** *00:52:34.1±0.0,49.37N×156.28E,h44km,mB4.9/40, mb4.8/59,Ms4.7/36,Ms7 4.5/36*
SKHL ***19*** *00:52:35.3±0.5,49.00N×156.50E,h62km±7km,mb5.1/8, mbv5.6/3,ms4.5/10,msh5.3/1*
NEIC ***19*** *00:52:36.2±1.8,49.25N±0.08×156.1E±0.1,h33km±4km, mb4.8/185,Error ellipse: s-maj=12.9km s-min=9.3km az=147.0*
IDC ***19*** *00:52:36.9±2.4,49.20N×156.08E,h42km±21km,mb4.2/32, mb1 4.3/38,mb1mx4.3/59,mbtmp4.4/38,ML3.3/4,MS4.1/25, Ms1 4.1/25,ms1mx3.9/42,Error ellipse: s-maj=14.5km s-min=9.9km az=156.0*
MOS ***19*** *00:52:36.1±1.2,49.29N×156.18E,h48km,mb5.1/46, MS4.0/11,Error ellipse: s-maj=6.2km s-min=2.9km az=81.0*
GCMT ***19*** *00:52:40.2±0.4,49.12N±0.04×156.47E±0.05,h28km±1km, MW4.9/60,Moment Tensor Solution. s28,c34; s60,c71; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr2.59±.18; Mθθ-0.97±.12; Mφφ-1.61±.12; Mre1.00±.21; Mθφ-0.78±.06; Mφr0.40±.16; Best double couple: M₀2.57800×10¹⁶ NP1:φs206.00000°,δ35.00000°,λ74.00000°. NP2: φs46.00000°,δ56.00000°,λ101.00000°. Principal axes: T 2.8590, Plg76.0000°, Azm350.0000°; N -0.5570, Plg9.0000°, Azm219.0000°; P -2.2980, Plg11.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
BGR ***19*** *00:52:42.6±0.0,49.87N×155.56E,h33km,mb5.1,Ms4.4*
ISC 19 00:52:35.4±0.6,**49.07N**±0.05×**156.35E**±0.04,**h35**km±2km,
h35km:**pP-P,n618,**σ1**31**/602,**mb4.8**/187,**MS4.2**/29,
57C-37D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.62**	**355**		PN	**Pn**	**00 53 01.5**	**+0.1**
SKR	**Severo-Kuril's**	**1.62**	**355**	*i* P		**Pn**	**00 53 01.5**	**+0.1**
SKR				*e*S		**Sn**	**00 53 22.5**	**+1.4**
SKR	**Severo-Kuril's**	**1.62**	**355**	*e*P		**Pn**	**00 53 01.5**	**+0.1**
SKR					AMB	AMB	00 53 02.1	
	2μm,2.0s							
SKR					AMB	AMB	00 53 06.0	
	2μm,0.7s							
SKR				*e*S		**Sn**	**00 53 21.0**	**-0.1**
SKR					A	A	00 53 34.0	
	5μm,0.7s							
SKR					A	A	00 53 34.0	
	5μm,0.7s							
SKR					AMS	AMS	00 53 49.5	
	8μm,15.0s							
SKR					AMS	AMS	00 53 49.5	
	7μm,15.0s							
SKR					AMS	AMS	00 53 49.5	
	6μm,15.0s							
PAU	**Pauzhetka**	**2.41**	**7**		PN	**Pn**	**00 53 12.9**	**+0.5**
PAU					S	**Sn**	**00 53 41.1**	**+0.4**
PAU	**Pauzhetka**	**2.41**	**7**	*e*P		**Pn**	**00 53 12.9**	**+0.5**
PAU				*e*S		**Sn**	**00 53 41.1**	**+0.4**
PAU	**Pauzhetka**	**2.41**	**7**	*e*P		**Pn**	**00 53 12.9**	**+0.5**
PAU				*e*S		**Sn**	**00 53 41.1**	**+0.4**
KDTR	**Khodutka, Kamc**	**2.95**	**21**		PN	**Pn**	**00 53 19.0**	**-0.8**
KDTR					S	**Sn**	**00 53 51.9**	**-2.0**
KDTR	**Khodutka, Kamc**	**2.95**	**21**	*e*P		**Pn**	**00 53 19.0**	**-0.8**
KDTR				*e*S		**Sn**	**00 53 51.9**	**-2.0**
ASAK	**Asacha**	**3.46**	**16**		PN	**Pn**	**00 53 26.6**	**-0.2**
ASAK	**Asacha**	**3.46**	**16**	*e*P		**Pn**	**00 53 26.6**	**-0.2**
MTVR	**Mutnovka**	**3.60**	**18**		PN	**Pn**	**00 53 28.8**	**-0.1**
MTVR	**Mutnovka**	**3.60**	**18**	*e*P		**Pn**	**00 53 28.8**	**-0.1**
RUS	**Russkaya**	**3.63**	**21**		PN	**Pn**	**00 53 28.4**	**-0.7**
RUS					S	**Sn**	**00 54 08.7**	**-2.0**
RUS	**Russkaya**	**3.63**	**21**	*e*P		**Pn**	**00 53 28.4**	**-0.7**
RUS				*e*S		**Sn**	**00 54 08.7**	**-2.0**
RUS	**Russkaya**	**3.63**	**21**	*e*P		**Pn**	**00 53 28.4**	**-0.7**
GRL	**Gorelyy**	**3.65**	**17**		PN	**Pn**	**00 53 29.8**	**+0.3**
GRL	**Gorelyy**	**3.65**	**17**	*e*P		**Pn**	**00 53 29.8**	**+0.3**
APC	**Apacha**	**3.89**	**7**		PN	**Pn**	**00 53 33.2**	**+0.6**
APC	**Apacha**	**3.89**	**7**	*e*P		**Pn**	**00 53 33.2**	**+0.6**
KRMR	**Karymshinskiy**	**3.92**	**16**		PN	**Pn**	**00 53 34.4**	**+1.3**
KRMR					S	**Sn**	**00 54 16.6**	**-1.3**
KRMR	**Karymshinskiy**	**3.92**	**16**	*e*P		**Pn**	**00 53 34.4**	**+1.3**
KRMR				*e*S		**Sn**	**00 54 16.6**	**-1.3**
PEA0B	**Petropavlovsk-**	**4.13**	**11**	*i* P		**Pn**	**00 53 37.0**	**+1.0**
PEA0B	**Petropavlovsk-**	**4.13**	**11**			**Pn**	**00 53 34.8**	**-1.2**
PETK	**Petropavlovsk-**	**4.13**	**11**		PN	**Pn**	**00 53 36.8**	**+0.8**
PETK	**Petropavlovsk-**	**4.13**	**11**		P	**Pn**	**00 53 37.1**	**+1.2**
	8.1nm,0.3s,baz=178,slow=15,SNR=156							
PETK					LR	LR	00 55 23.5	
	comp=Z,2μm,21.1s,baz=196,slow=41							
PETK	**Petropavlovsk-**	**4.13**	**11**			**Pn**	**00 53 36.8**	**+0.8**
PET	**Petropavlovsk**	**4.21**	**19**		PN	**Pn**	**00 53 36.8**	**-0.3**
PET					S	**Sn**	**00 54 23.5**	**-1.5**
PET	**Petropavlovsk**	**4.21**	**19**	*i* P		**Pn**	**00 53 36.8**	**-0.3**
PET	**Petropavlovsk**	**4.21**	**19**	*e*P		**Pn**	**00 53 37.2**	**+0.1**
PET					AMB	AMB	00 53 44.3	
	130nm,0.4s							
PET				*e*S		**Sn**	**00 54 24.1**	**-0.9**
PET					A	A	00 54 40.8	
	570nm,0.5s							
PET					A	A	00 54 40.8	
	510nm,0.5s							
PET					AMS	AMS	00 55 31.8	
	3μm,15.0s							
PET					AMS	AMS	00 55 31.8	
	2μm,15.0s							
PET					AMS	AMS	00 55 31.8	
	2μm,15.0s							
PET	**Petropavlovsk**	**4.21**	**19**			**Pn**	**00 53 37.0**	**-0.1**
UGLR	**Uglovaya**	**4.42**	**20**		PN	**Pn**	**00 53 41.1**	**+1.0**
UGLR	**Uglovaya**	**4.42**	**20**	*e*P		**Pn**	**00 53 41.1**	**+1.0**
AVH	**Avacha**	**4.46**	**19**		PN	**Pn**	**00 53 41.4**	**+0.9**
AVH	**Avacha**	**4.46**	**19**	*e*P		**Pn**	**00 53 41.4**	**+0.9**
KOK	**Koryaka**	**4.46**	**18**		PN	**Pn**	**00 53 42.0**	**+1.4**
KOK	**Koryaka**	**4.46**	**18**	*e*P		**Pn**	**00 53 42.0**	**+1.4**
KOK	**Koryaka**	**4.46**	**18**	*e*P		**Pn**	**00 53 42.0**	**+1.4**
SMAR	**Somma**	**4.47**	**19**		PN	**Pn**	**00 53 41.4**	**+0.6**
SMAR	**Somma**	**4.47**	**19**	*e*P		**Pn**	**00 53 41.4**	**+0.6**
KRER	**Koryakskii**	**4.50**	**19**		PN	**Pn**	**00 53 42.0**	**+0.8**
KRER	**Koryakskii**	**4.50**	**19**	*e*P		**Pn**	**00 53 42.0**	**+0.8**
SDLR	**Sedlovina**	**4.50**	**20**		PN	**Pn**	**00 53 41.0**	**-0.2**
SDLR	**Sedlovina**	**4.50**	**20**	*e*P		**Pn**	**00 53 41.0**	**-0.2**
NLC	**Nalytchevo**	**4.51**	**24**		PN	**Pn**	**00 53 39.7**	**-1.5**
NLC	**Nalytchevo**	**4.51**	**24**	*e*P		**Pn**	**00 53 39.7**	**-1.5**
KRX	**Arik**	**4.53**	**18**		PN	**Pn**	**00 53 42.2**	**+0.6**
KRX	**Arik**	**4.53**	**18**	*e*P		**Pn**	**00 53 42.2**	**+0.6**
SPN	**Mys Shipunski**	**4.65**	**28**		PN	**Pn**	**00 53 42.4**	**-0.6**
SPN	**Mys Shipunski**	**4.65**	**28**	*e*P		**Pn**	**00 53 42.4**	**-0.6**
SPN				*e*S		**Sn**	**00 54 32.3**	**-3.4**
SPN	**Mys Shipunski**	**4.65**	**28**	*e*P		**Pn**	**00 53 42.4**	**-0.6**
MKZ	**Mys Kozlova**	**6.42**	**29**		PN	**Pn**	**00 54 04.8**	**-2.6**
MKZ	**Mys Kozlova**	**6.42**	**29**	*e*P		**Pn**	**00 54 04.8**	**-2.6**
MKZ				*e*S		**Sn**	**00 55 13.1**	**-6.3**
KZV	**Kizimen**	**6.52**	**20**		PN	**Pn**	**00 54 08.8**	**-0.1**
KZV	**Kizimen**	**6.52**	**20**	*e*P		**Pn**	**00 54 08.8**	**-0.1**
TUMD	**Tumrok D**	**6.62**	**21**	*e*P		**Pn**	**00 54 09.8**	**-0.4**
TUMR	**Tumrok**	**6.64**	**19**		PN	**Pn**	**00 54 11.1**	**+0.6**
TUMR	**Tumrok**	**6.64**	**19**	*e*P		**Pn**	**00 54 11.1**	**+0.6**
KUR	**Kuril'sk**	**6.94**	**240**	*e*PN		**Pn**	**00 54 16.8**	**+2.2**
KUR					pmax	pmax		
	comp=Z,700nm,2.8s							
KUR					pmax	pmax		
	comp=N,72nm,0.6s							
KUR					pmax	pmax		
	comp=E,44nm,0.6s							
KUR					pmax	pmax		
	comp=Z,138nm,0.6s							
KUR					MLR	MLR		
	comp=Z,1μm,15.0s							
KUR					MLR	MLR		
	comp=N,2μm,13.0s							
KUR	**Kuril'sk**	**6.94**	**240**	*i* P		**Pn**	**00 54 16.4**	**+1.8**
KUR					AMB	AMB	00 54 23.2	
	comp=N,700nm,3.0s							
KUR					AMB	AMB	00 54 25.6	
	comp=N,140nm,0.6s							
KUR				*e*S		**Sn**	**00 55 31.8**	**-0.5**
KUR					AMS	AMS	00 56 40.7	
	comp=N,3μm,14.0s							
KUR					AMS	AMS	00 56 40.7	
	comp=N,2μm,14.0s							
KUR					AMS	AMS	00 56 40.7	
	comp=N,1μm,14.0s							
ESO	**Esso**	**7.01**	**11**		PN	**Pn**	**00 54 15.8**	**+0.3**
ESO	**Esso**	**7.01**	**11**	*e*P		**Pn**	**00 54 15.8**	**+0.3**
KMNR	**Kamenistaya**	**7.10**	**18**		PN	**Pn**	**00 54 17.8**	**+1.0**
KMNR	**Kamenistaya**	**7.10**	**18**	*e*P		**Pn**	**00 54 17.8**	**+1.0**
KPT	**Kopyto**	**7.29**	**17**		PN	**Pn**	**00 54 19.4**	**-0.1**
KPT	**Kopyto**	**7.29**	**17**	*e*P		**Pn**	**00 54 19.4**	**-0.1**
KOZ	**Kozyrevsk**	**7.32**	**16**		PN	**Pn**	**00 54 20.9**	**+1.2**
KOZ	**Kozyrevsk**	**7.32**	**16**	*e*P		**Pn**	**00 54 20.9**	**+1.2**
ZLN	**Zelenaya**	**7.46**	**20**		PN	**Pn**	**00 54 23.1**	**+1.3**
ZLN	**Zelenaya**	**7.46**	**20**	*e*P		**Pn**	**00 54 23.1**	**+1.3**
SRDR	**Sredinnyy**	**7.54**	**14**		PN	**Pn**	**00 54 23.7**	**+0.9**
SRDR	**Sredinnyy**	**7.54**	**14**	*e*P		**Pn**	**00 54 23.7**	**+0.9**
KRSR	**Krestovskiy**	**7.60**	**18**		PN	**Pn**	**00 54 22.2**	**-1.4**
KRSR	**Krestovskiy**	**7.60**	**18**	*e*P		**Pn**	**00 54 22.2**	**-1.4**
KLY	**Klyuchi**	**7.71**	**18**		PN	**Pn**	**00 54 25.3**	**+0.3**
KLY	**Klyuchi**	**7.71**	**18**	*e*P		**Pn**	**00 54 25.3**	**+0.3**
BDR	**Baidarnaya**	**8.06**	**20**		PN	**Pn**	**00 54 29.8**	**-0.2**
BDR	**Baidarnaya**	**8.06**	**20**	*e*P		**Pn**	**00 54 29.8**	**-0.2**
SRKR	**Sorokina**	**8.13**	**19**		PN	**Pn**	**00 54 30.8**	**-0.1**
SRKR	**Sorokina**	**8.13**	**19**	*e*P		**Pn**	**00 54 30.8**	**-0.1**
SMKR	**Semkarok**	**8.13**	**20**		PN	**Pn**	**00 54 31.1**	**+0.2**
SMKR	**Semkarok**	**8.13**	**20**	P		**Pn**	**00 54 31.1**	**+0.2**
KBTR

YSS Yuzh-Sakhalins 9.36 262 Pn 00 54 45.8 -1.9
UGL Uglegorsk 9.38 275 ePN Pn 00 54 52.0 +4.0
UGL pmax pmax
comp=Z,178nm,1.0s
UGL pmax pmax
comp=Z,400nm,2.0s
UGL MLR MLR
comp=Z,2µm,16.0s
UGL MLR MLR
comp=E,3µm,14.0s
UGL Uglegorsk 9.38 275 eP Pn 00 54 51.4 +3.4
UGL AMB AMB 00 55 01.5
comp=E,180nm,1.0s
UGL AMB AMB 00 55 04.0
comp=E,400nm,2.0s
UGL eS Sn **00 56 33.2 +1.1**
UGL A A 00 56 40.0
comp=E,90nm,0.6s
UGL A A 00 56 52.5
comp=E,700nm,3.0s
UGL AMS AMS 00 58 59.0
comp=E,3µm,15.0s
UGL AMS AMS 00 58 59.0
comp=E,2µm,15.0s
OKH Okha 9.52 303 eP Pn 00 54 52.3 +2.4
OKH eS Sn **00 56 36.6 +1.1**
OKH AMS AMS 00 59 04.5
comp=E,1µm,15.0s
OKH AMS AMS 00 59 04.5
comp=E,2µm,15.0s
OKH AMS AMS 00 59 04.5
comp=E,1µm,15.0s
JKA Kamikawa-asahi 10.68 248 eP Pn 00 55 07.9 +2.1
JKA Kamikawa-asahi 10.68 248 Pn 00 55 07.9 +2.1
ASAJ Asahikawa 10.68 248 P Pn 00 55 07.9 +2.1
comp=E,7.1nm,0.3s,baz=70,slow=13,SNR=28
ASAJ LR LR 00 59 03.6
comp=E,1µm,18.7s,baz=76,slow=37
MA2 Magadan 11.01 345 dePN Pn 00 55 10.7 +0.4
MA2 Magadan 11.01 345 P Pn 00 55 10.9 +0.6
comp=E,2.5nm,0.3s,baz=162,slow=12,SNR=4.0
MA2 LR LR 01 00 04.0
comp=E,925nm,18.1s,baz=167,slow=41
MA2 Magadan 11.01 345 eP Pn 00 55 10.7 +0.4
MA2 Magadan 11.01 345 Pn Pn 00 55 08.0 -2.3
MA2 Pn 00 55 09.7 -0.6
ERM Erimo 11.63 238⇑ ePN Pn 00 55 17.9 -0.9
ERM Erimo 11.63 238 Pn Pn 00 55 18.4 -0.4
SMY Shemya 11.78 65 PN Pn 00 55 19.1 -1.7
SMY Shemya 11.78 65 Pn Pn 00 55 19.1 -1.7
TILK Tilichiki 12.70 23 PN Pn 00 55 32.4 -0.9
TILK Tilichiki 12.70 23 eP Pn 00 55 32.4 -0.9
GRNR Gornyy 12.95 285 ePN Pn 00 55 38.4 +1.5
GRNR eS Sn **00 58 02.3 +2.7**
GRNR pmax pmax
comp=Z,10.0nm,0.6s
GRNR smax smax
comp=N,4.0nm,0.6s
GRNR MLR MLR
comp=Z,1µm,16.0s
GRNR Gornyy 12.95 285 eP Pn 00 55 38.4 +1.5
GRNR AMB AMB 00 55 42.1
GRNR AMS AMS 01 01 29.9
comp=Z,400nm,15.0s
GRNR AMS AMS 01 01 29.9
comp=Z,900nm,15.0s
GRNR AMS AMS 01 01 29.9
comp=Z,1µm,15.0s
TEY Ternei 14.05 261 eP Pn 00 55 55.2 +3.4
TEY Ternei 14.05 261 erx rx 00 55 55.2
SEY Seymchan 14.06 353 eP Pn 00 55 52.2 +0.3
SEY Seymchan 14.06 353 P Pn 00 55 52.4 +0.5
comp=Z,0.2nm,0.3s,baz=168,slow=5.2,SNR=4.3
SEY Seymchan 14.06 353 eP Pn 00 55 52.2 +0.3
EKMR Ekimchan 15.22 294 eP Pn 00 56 07.2 -0.4
EKMR AMB AMB 00 56 14.8
comp=Z,20nm,0.9s
KLR Kul'dur 16.08 280 P Pn 00 56 20.4 +1.7
comp=Z,0.4nm,0.3s,baz=80,slow=12,SNR=26
KLR LR LR 01 03 07.2
comp=Z,1µm,18.1s,baz=85,slow=40
ADK Adak 17.35 70 P P 00 56 35.7 0.0
ADK pmax pmax
comp=Z,34nm,1.0s
ADK Adak 17.35 70 Pn P 00 56 35.7 0.0
USA0B Ussuriysk Arra 17.40 263 deP Pn 00 56 35.1 -0.1
USA0B Ussuriysk Arra 17.40 263 Pn Pn 00 56 33.3 -1.9
USRK Ussuriysk Ar. 17.40 263 P Pn 00 56 34.6 -0.6
baz=71,slow=9.9,SNR=13
USRK LR LR 01 03 14.5
comp=Z,257nm,18.9s,baz=54,slow=37
MJB9 Matsu-Tunnel 18.22 233 P Pn 00 56 45.9 +0.5
MAJO Matsushiro 18.22 233 eP P 00 56 45.5 +0.1
MAJO Matsushiro 18.22 233 P Pn 00 56 46.1 +0.7
MAT Matsushiro 18.22 233 P Pn 00 56 46.1 +0.7
MJAR Matsushiro Arr 18.22 233 P P 00 56 43.7 -1.7
comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=12
MJAR LR LR 01 04 40.2
comp=Z,404nm,19.8s,baz=55,slow=40
ZEA Zeya 18.67 296 eP P 00 56 49.2 -1.0
ZEA pmax pmax
comp=Z,12nm,1.0s
ZEA pmax pmax
comp=Z,200nm,12.0s
ZEA MLR MLR
comp=Z,1µm,14.0s
ZEA MLR MLR
comp=E,500nm,13.0s
ZEA Zeya 18.67 296 eP P 00 56 49.2 -1.0
ZEA AMB AMB 00 56 54.4
comp=E,10.0nm,1.0s
ZEA AMS AMS 01 05 54.0
comp=E,500nm,13.0s
ZEA AMS AMS 01 05 54.0
comp=E,1µm,13.0s
MDJ Mudanjiang 18.80 266 P P 00 56 50.8 -0.9
MDJ pP pP 00 57 00.4 +0.4
MDJ sP pwP 00 57 06.9 +3.6
MDJ S Sn **01 00 19.5 -2.0**
MDJ sS sS 01 00 33.6 -4.0
MDJ pmax pmax
comp=E,12nm,1.2s
MDJ pmax pmax
comp=E,140nm,4.2s
MDJ LR LR
comp=E,430nm,12.1s
MDJ LR LR
comp=E,620nm,15.2s
MDJ LR LR
comp=E,580nm,12.7s
MDJ Mudanjiang 18.80 266 P P 00 56 51.5 -0.1
ATKA Atka Island 18.88 69 P Pn 00 56 54.3 +1.0
ATKA IAmb IAmb 00 56 59.5
comp=Z,56nm,1.2s
KROS Kirovskiy 18.88 298 eP P 00 56 52.7 +0.2
KROS AMB AMB 00 56 54.0
comp=Z,6.0nm,0.8s
BILL Bilibino 19.66 11⇑ eP P 00 57 00.0 -0.9
BILL pmax pmax
comp=Z,20nm,1.0s
BILL MLR MLR
comp=Z,928nm,17.0s
BILL Bilibino 19.66 11 P P 00 57 00.2 -0.7
YAK Yakutsk 19.71 321 eP P 00 56 59.6 -1.9
YAK eS S **01 00 38.2 -3.3**
YAK pmax pmax
comp=Z,59nm,0.9s
YAK pmax pmax
comp=E,41nm,1.1s
YAK pmax pmax
comp=N,30nm,1.2s
YAK pmax pmax
comp=Z,79nm,1.5s
YAK pmax pmax
comp=N,43nm,1.4s
YAK pmax pmax
comp=E,82nm,2.2s
YAK smax smax
comp=E,30nm,2.3s
YAK smax smax
comp=N,34nm,2.5s
YAK MLR MLR
comp=Z,421nm,14.0s
YAK MLR MLR
comp=N,236nm,14.0s
YAK MLR MLR
comp=E,364nm,14.0s
YAK Yakutsk 19.71 321 P P 00 56 59.9 -1.5
comp=E,0.1nm,0.3s,baz=110,slow=3.5,SNR=30
YAK LR LR 01 05 01.5
comp=E,410nm,18.1s,baz=112,slow=38
YAK Yakutsk 19.71 321 IAmb IAmb 00 57 00.9
comp=Z,59nm,0.8s
INU Inuyama 19.75 233 P P 00 57 03.0 +0.8
JHJ2 Mitsune 20.17 224 P Pn 00 57 08.4 -0.4
CN2 Changchun 21.85 268 eP P 00 57 21.6 -3.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,150nm,5.0s
CN2 LR LR
comp=Z,550nm,15.0s
CN2 LR LR
comp=Z,430nm,15.0s
CN2 LR LR
comp=Z,500nm,16.0s
GAMB Gambell 22.65 38 P P 00 57 32.5 -0.6
KSRS Korea Array 23.59 251 P P 00 57 42.5 -0.3
comp=Z,14nm,0.9s,baz=50,slow=9.6,SNR=25
KSRS LR LR 01 06 26.2
comp=Z,371nm,18.9s,baz=60,slow=35
KS19 Wonju Array Si 23.60 251 P P 00 57 43.3 +0.4
KS19 IAmb IAmb 00 57 45.0
comp=Z,26nm,1.0s
KSAR Wonju Array Be 23.62 251 P P 00 57 42.0 -1.1
KSAR Wonju Array Be 23.62 251 P P 00 57 42.0 -1.1
HIA Hailar 23.79 284⇑ eP P 00 57 42.4 -2.3
HIA pmax pmax
comp=Z,19nm,0.7s
JCJ Chichijima 24.53 212 LR LR 01 07 32.7
comp=Z,84nm,19.2s,baz=10,slow=36
TJN Taejon 24.62 250⇑ eP P 00 57 52.7 +0.3
JNU Nakatsue 24.78 239 P P 00 57 53.5 -0.5
comp=Z,18nm,0.9s,baz=25,slow=6.8,SNR=5.4
JNU LR LR 01 09 20.7
comp=Z,145nm,18.4s,baz=88,slow=41
JNU Nakatsue 24.78 239 IAmb IAmb 00 58 08.8
comp=Z,40nm,1.1s
ANM Nome 25.52 38 P P 00 58 00.5 +0.2
ANM pmax pmax
comp=Z,30nm,1.1s
ANM Nome 25.52 38 P P 00 58 00.5 +0.2
ANM IAmb IAmb 00 58 18.4
comp=Z,30nm,1.1s
BOD Bodaibo 26.30 306 eP P 00 58 04.1 -3.3
BOD pmax pmax
comp=Z,6.0nm,1.3s
RDOG Red Dog Mine 27.70 32 P P 00 58 20.4 +0.5
RDOG IAmb IAmb 00 58 22.1
comp=Z,13nm,1.0s
BJI Beijing 29.72 268 eP P 00 58 37.8 -0.3
BJI pmax pmax
comp=Z,5.0nm,1.0s
BJI LR LR
comp=Z,340nm,13.5s
BJI LR LR
comp=Z,180nm,12.7s
H11N2 WAKE ISLAND Hy 30.48 160 T T 01 31 52.8
baz=347,slow=77,SNR=11
H11N1 WAKE ISLAND Hy 30.49 160 T T 01 31 41.2
baz=347,slow=77,SNR=13
H11N3 WAKE ISLAND Hy 30.49 160 T T 01 31 50.4
baz=347,slow=77,SNR=14
IMAR Indian Mountai 30.60 38 P P 00 58 45.7 0.0
H11S1 WAKE ISLAND Hy 31.62 161 T T 01 33 20.6
baz=347,slow=76,SNR=61
H11S3 WAKE ISLAND Hy 31.63 161 T T 01 33 25.2
baz=347,slow=76,SNR=56
H11S2 WAKE ISLAND Hy 31.64 161 T T 01 33 15.1
baz=347,slow=76,SNR=42
BWN Browne 32.24 42 P P 00 59 02.1 +2.1
ULN Ulaanbaatar 32.25 287⇑ eP P 00 58 59.2 -1.3
ULN Ulaanbaatar 32.25 287 eP P 00 58 59.2 -1.3
NEA Nenana 32.42 41 P P 00 59 02.6 +0.9
NEA IAmb IAmb 00 59 16.9
comp=Z,12nm,1.1s
RND Reindeer 32.50 43 P P 00 59 02.8 +0.3
RND pmax pmax
comp=Z,10.0nm,1.0s
RND Reindeer 32.50 43 P P 00 59 02.8 +0.3
RND IAmb IAmb 00 59 11.8
comp=Z,9.7nm,1.0s
SONM Songino Array 32.67 287 P P 00 59 01.1 -3.1
comp=Z,0.4nm,0.4s,baz=81,slow=9.1,SNR=2.7
SONM LR LR 01 13 35.9
comp=Z,628nm,18.7s,baz=66,slow=39
SONM Songino Array 32.67 287 IAmb IAmb 00 59 08.0
comp=Z,1.0nm,1.0s
NJ2 Nanjing 32.76 253 eP P 00 59 07.1 +2.1
NJ2 pmax pmax
comp=Z,11nm,0.6s
NJ2 LR LR
comp=Z,570nm,19.4s
NJ2 LR LR
comp=Z,560nm,16.1s
NJ2 LR LR
comp=Z,660nm,16.6s
SML Sawmill 32.78 46 P P 00 59 05.3 +0.4
SML IAmb IAmb 00 59 23.1
comp=Z,17nm,0.8s
WRH Wood River Hil 32.85 41 P P 00 59 06.4 +1.0
COLA College 32.96 40⇑ iP P 00 59 06.2 -0.1
COLA pmax pmax
comp=Z,32nm,2.8s
CCB Clear Creek Bu 32.97 41 P P 00 59 08.2 +1.7
CCB IAmb IAmb 00 59 13.2
comp=Z,7.5nm,1.0s
TLY Talaya 33.11 295 ciP P 00 59 06.8 -1.1
TLY pmax pmax
comp=Z,16nm,1.0s
TLY MLR MLR
comp=Z,436nm,15.0s
TLY Talaya 33.11 295 eP P 00 59 06.8 -1.1
TLY Talaya 33.11 295 P P 00 59 06.5 -1.4
TLY IAmb IAmb 00 59 08.4
comp=Z,16nm,0.9s
DHY Denali Highway 33.17 44 P P 00 59 09.6 +1.2
SCM Sheep Creek Mo 33.26 46 P P 00 59 11.1 +2.0
SCM pmax pmax
comp=Z,19nm,1.2s
SCM Sheep Creek Mo 33.26 46 P P 00 59 11.1 +2.0
SCM IAmb IAmb 00 59 21.8
comp=Z,19nm,1.2s
IL31 33.37 41 P P 00 59 10.6 +0.8
ILAR Eielson Array 33.37 41 P P 00 59 10.5 +0.6
ILAR Eielson Array 33.37 41 P P 00 59 09.6 -0.3
comp=Z,1.7nm,0.8s,baz=259,slow=7.5,SNR=16
ILAR Eielson Array 33.37 41 P P 00 59 10.5 +0.6
ZAK Zakamensk 33.73 293 eP P 00 59 12.7 -0.6
ZAK pmax pmax
comp=Z,8.0nm,1.0s
ZAK Zakamensk 33.73 293 eP P 00 59 12.7 -0.6
FYU Fort Yukon 34.08 37 P P 00 59 18.0 +1.9
RIDG Independent Ri 34.28 42 P P 00 59 17.8 -0.1
RIDG IAmb IAmb 00 59 34.0
comp=Z,18nm,1.2s
BMAR Burnt Mountain 34.36 36 P P 00 59 19.8 +1.2
DOT Dot Lake 34.64 43 P P 00 59 20.9 -0.1
SCRK Sand Creek 34.65 42 P P 00 59 23.5 +2.2
MOY Mondy 34.69 296 eP P 00 59 21.0 -0.7
GLB Gilahina Butte 34.97 46 P P 00 59 24.3 +0.4
VRDI Verde Repeater 35.17 47 P P 00 59 25.8 0.0
VRDI IAmb IAmb 00 59 39.6
comp=Z,8.8nm,1.1s
TGL Tana Glacier 35.54 48 P P 00 59 29.2 +0.4
TGL IAmb IAmb 00 59 31.5
comp=Z,22nm,1.2s
BCAR Beaver Creek A 35.71 43 P P 00 59 31.5 +1.3
BALM Baldy 35.73 47 P P 00 59 31.4 +0.9
EGAK Eagle 35.82 40 IAmb IAmb 00 59 47.5
comp=Z,9.1nm,0.7s
BARN Barnard Glacie 36.05 47 P P 00 59 34.3 +0.9
CTGM Chitina Glacie 36.23 47 P P 00 59 35.2 +0.4
CTGM IAmb IAmb 00 59 44.0
comp=Z,19nm,1.2s
WHN Wuhan 36.63 255 ⇑P P 00 59 38.3 0.0
WHN sP **sP 00 59 51.0 +0.1**
EPYK Eagle Plains 37.50 38 IAmb IAmb 00 59 58.0
comp=Z,12nm,1.1s
LZH Lanzhou 40.00 271 ⇑P P 01 00 07.6 +0.7
LZH pP sP 01 00 19.5 +0.4
LZH sP pwP 01 00 24.8 +4.8
LZH ePP **PnPn 01 01 43.5 +0.9**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,92nm,5.4s
LZH LR LR
comp=Z,380nm,13.2s
LZH LR LR
comp=Z,380nm,13.5s
LZH LR LR
comp=Z,660nm,16.7s
GTA Gaotai 40.77 278 eP P 01 00 12.8 -0.4
GTA pP pwP 01 00 26.1 +0.5
GTA sP sP 01 00 31.3 +5.8
GTA S S **01 06 16.1 -5.5**
GTA pmax pmax
comp=Z,9.0nm,1.7s
GTA pmax pmax
comp=Z,43nm,7.8s
GTA LR LR
comp=Z,270nm,15.6s
GTA LR LR
comp=Z,620nm,16.5s
GTA LR LR
comp=Z,730nm,16.8s
C36M Paulatuk 41.71 32 P P 01 00 20.9 +0.6
C36M IAmb IAmb 01 00 35.8
comp=Z,14nm,1.0s
ZAA0 Zalesovo Array 43.05 305 PcP 01 02 21.9 +0.9
ZALV Zalesovo Beam 43.05 305 P P 01 00 29.6 -1.7
comp=Z,3.6nm,0.8s,baz=62,slow=7.3,SNR=15
ZALV PcP **PcP 01 02 21.6 +0.7**
comp=Z,1.7nm,0.8s,baz=90,slow=4.4,SNR=4.3
ZALV LR LR 01 19 41.8
comp=Z,182nm,18.4s,baz=39,slow=38
CD2 Chengdu 43.24 265⇑ iP P 01 00 33.0 -0.4
CD2 pmax pmax
comp=Z,10.0nm,0.5s
WMQ Urumqi 46.13 291 eP P 01 00 55.6 -0.6
WMQ pP pP 01 01 06.4 +0.7
WMQ pmax pmax
comp=Z,8.0nm,1.1s
WMQ pmax pmax
comp=Z,72nm,4.3s
WMQ LR LR
comp=Z,400nm,28.9s
WMQ LR LR
comp=Z,1µm,29.2s
WMQ LR LR
comp=Z,240nm,17.5s
YKA Yellowknife Ar 47.75 39 P P 01 01 09.4 +0.9
comp=Z,3.9nm,0.8s,baz=296,slow=7.7,SNR=34
KMI Kunming 47.80 260 P P 01 01 09.8 +0.2
KMI pP sP 01 01 23.0 +0.7
KMI sP pwP 01 01 28.5 +5.8
KMI pmax pmax
comp=Z,20nm,1.0s
KMI LR LR
comp=Z,310nm,23.9s
KMI LR LR
comp=Z,280nm,21.7s
KMI LR LR
comp=Z,160nm,21.2s
MK31 Makanchi Array 47.82 297 i P P 01 01 07.7 -1.6
MK31 Makanchi Array 47.82 297 IAmb IAmb 01 01 09.4
comp=Z,7.4nm,0.9s
MKAR Makanchi Array 47.82 297 P P 01 01 08.2 -1.2
comp=Z,7.5nm,0.8s,baz=75,slow=12,SNR=78
MKAR LR LR 01 22 42.9
comp=Z,628nm,18.1s,baz=38,slow=38
KURK Kurchatov 47.90 303 ciP P 01 01 08.1 -1.8
KURK pmax pmax
comp=Z,18nm,0.9s
KURK Kurchatov 47.90 303 eP P 01 01 08.1 -1.8
KURK Kurchatov 47.90 303 P P 01 01 08.6 -1.2
RES Resolute Bay 47.92 20 P P 01 01 10.4 +0.7
comp=Z,7.2nm,0.8s,baz=295,slow=7.6,SNR=30
RES Resolute Bay 47.92 20 IAmb IAmb 01 01 11.7
comp=Z,9.7nm,1.0s
MAKZ Makanchi 47.99 297 P P 01 01 09.0 -1.7
MAKZ Makanchi 47.99 297 P P 01 01 09.5 -1.2
SLVN Son La 49.75 256 P P 01 01 25.9 +1.4
SLVN IAmb IAmb 01 01 26.5
comp=Z,12nm,0.9s
SPA0 Spitsbergen Ar 50.70 350 P P 01 01 30.2 -0.8
BRVK Borovoye 51.11 309 P P 01 01 32.5 -1.7
BRVK Borovoye 51.11 309 eP P 01 01 32.5 -1.7
BRVK Borovoye 51.11 309 P P 01 01 33.0 -1.3
BRVK IAmb IAmb 01 01 34.0
comp=Z,11nm,0.8s
LSA Lhasa 52.31 274 IAmb IAmb 01 01 47.6
comp=Z,6.3nm,0.6s
LTY Liberty 52.67 58 P P 01 01 47.4 +1.2
B08A Colville Reser 52.79 56 IAmb IAmb 01 01 55.6
comp=Z,7.3nm,1.1s
SVE Sverdlovsk 53.61 317 diP P 01 01 51.6 -1.1
SVE pmax pmax
comp=Z,39nm,0.9s
F07A Phinny Hill Vi 53.88 59 P P 01 01 56.4 +1.5
F07A IAmb IAmb 01 02 10.6
comp=Z,6.2nm,0.9s
NEW Newport 54.05 55 P P 01 01 56.7 +0.6
comp=Z,1.4nm,0.9s,baz=304,slow=7.3,SNR=2.7
DAG Danmarks Havn 54.39 359 i P P 01 01 57.0 -1.2
DAG pmax pmax
comp=Z,3.0nm,0.9s
DAG Danmarks Havn 54.39 359 i P P 01 01 57.0 -1.2
comp=Z,3.1nm,0.9s
E09A Wood Farm, Sta 54.52 58 IAmb IAmb 01 02 09.3
comp=Z,7.1nm,1.0s
PINE Pine Mountain 54.55 62 IAmb IAmb 01 02 10.5
comp=Z,8.1nm,1.1s
AAK Ala-Archa 54.75 297⇑ iP P 01 02 00.5 -1.0
AAK pmax pmax
comp=Z,3.0nm,0.8s
AAK Ala-Archa 54.75 297 P P 01 02 00.8 -0.7
AAK Ala-Archa 54.75 297 eP P 01 02 00.5 -1.0
AAK Ala-Archa 54.75 297 P P 01 02 00.8 -0.7
YBH Yreka Blue Hor 54.75 65 P P 01 02 02.9 +1.5
comp=Z,1.6nm,0.6s,baz=52,slow=8.5,SNR=6.9
YBH Yreka Blue Hor 54.75 65 IAmb IAmb 01 02 13.8
comp=Z,5.8nm,1.1s
CHTO Chiang Mai 54.76 258 P P 01 02 02.7 +1.1
CHTO pmax pmax
comp=Z,8.0nm,0.9s
CHTO Chiang Mai 54.76 258 P P 01 02 02.7 +1.1
CHTO IAmb IAmb 01 02 16.4
comp=Z,8.5nm,0.8s
ARU Arti 54.77 318 ciP P 01 01 59.7 -1.5
ARU 01 03 01.5
ARU 01 03 58.4
ARU PPP PPP 01 05 16.4
ARU S S **01 09 37.0 -2.1**
ARU pmax pmax
comp=Z,43nm,0.7s
ARU Arti 54.77 318 P P 01 01 59.7 -1.5
comp=Z,15nm,0.7s,baz=50,slow=4.8,SNR=73
ARU Arti 54.77 318 eP P 01 01 59.6 -1.6
ARU Arti 54.77 318 P P 01 01 59.7 -1.5
CMAR Chiang Mai Arr 55.02 257 P P 01 02 04.3 +0.8
comp=Z,3.3nm,0.3s,baz=33,slow=6.9,SNR=23
CMAR LR LR 01 26 25.4
comp=Z,144nm,20.5s,baz=36,slow=37
PBKT Sadao Pong 55.12 254 P P 01 02 05.9 +1.7
PBKT IAmb IAmb 01 02 07.5
comp=Z,6.9nm,0.7s
K05A Summer Lake 55.22 63 IAmb IAmb 01 02 16.7
comp=Z,18nm,1.2s
WALA Waterton Lakes 55.29 53 IAmb IAmb 01 02 21.1
comp=Z,6.8nm,0.8s
KSH Kashi 55.77 293 P P 01 02 13.3 +4.5
KSH pP pwP 01 02 26.8 +4.4
KSH PP **PP 01 04 18.3 +5.1**
KSH S **S 01 09 54.1 +0.8**
KSH sS sS 01 10 15.5 +8.4
KSH SS **SS 01 13 44.1 +5.6**
KSH pmax pmax
comp=Z,240nm,3.7s
KSH LR LR
comp=Z,200nm,4.7s
KSH LR LR
comp=Z,190nm,4.3s
KSH LR LR
comp=Z,390nm,7.1s
MOD Modoc Plateau 56.07 63 IAmb IAmb 01 02 20.0

comp=Z,5.7nm,0.9s
TAPN Taplejung 56.13 274 *e*P **P 01 02 11.9 +0.1**
ARCES ARCESS Array B 56.36 341 P **P 01 02 10.9 -1.5**
comp=Z,2.8nm,0.8s,baz=51,slow=7.7,SNR=5.3
ARCES LR LR 01 31 30.9
comp=Z,237nm,18.1s,baz=18,slow=42
PRGR Permogore 56.58 328 *e*P **P 01 02 11.2 -2.9**
PRGR pmax pmax
comp=Z,14nm,0.8s
MSO Missoula 56.63 55 IAmb IAmb 01 02 25.7
comp=Z,7.8nm,1.1s
WVOR Wild Horse Val 56.72 62 IAmb IAmb 01 02 25.6
comp=Z,10nm,1.1s
KKAR Karatay Array 56.78 299 P **P 01 02 14.5 -1.3**
KKAR **P 01 02 15.0 -0.8**
JIRN Jiri 56.92 275 *e*P **P 01 02 17.5 +0.1**
comp=Z,46nm,1.1s
GUN Gumba 56.95 276 *e*P **P 01 02 17.4 -0.3**
RAMN Ramite 57.13 274 *e*P **P 01 02 18.8 0.0**
comp=Z,33nm,0.8s
KIRV Kirov 57.22 323 P **P 01 02 17.4 -1.3**
comp=Z,11nm,0.5s,baz=134,slow=2.1,SNR=5.0
TMCR Tamitsa 57.28 333 *e*P **P 01 02 17.5 -1.5**
TMCR pmax pmax
comp=Z,17nm,0.9s
KKN Kakani 57.43 276 *e*P **P 01 02 22.0 +1.1**
PKI Pulchoki 57.49 276 *e*P **P 01 02 21.5 +0.1**
PKIN Phulchoki 57.49 276 *e*P **P 01 02 21.2 -0.2**
AFDM Forest Hills D 57.52 66 P **P 01 02 24.2 +3.1**
FFC Flin Flon 57.55 42 P **P 01 02 22.2 +1.1**
FFC pmax pmax
comp=Z,6.0nm,1.0s
FFC Flin Flon 57.55 42 P **P 01 02 22.2 +1.1**
FFC IAmb IAmb 01 02 30.6
comp=Z,5.9nm,0.9s
DMN Daman 57.66 276 *e*P **P 01 02 23.0 +0.4**
comp=Z,27nm,0.8s
MFID Camas Ranch 57.71 59 P **P 01 02 24.4 +1.8**
PAHR Pah Rah Range 57.99 65 P **P 01 02 26.8 +2.2**
LRM Limekiln Ridge 58.07 55 P **P 01 02 22.6 -2.6**
SUMG Summit 58.21 5 *i*P **P 01 02 26.4 +0.5**
SUMG pmax pmax
comp=Z,38nm,0.9s
SUMG Summit 58.21 5 *i*P **P 01 02 26.4 +0.5**
comp=Z,38nm,0.9s
SUMG Summit 58.21 5 P **P 01 02 26.4 +0.5**
PNTR Pine Nut 58.25 66 P **P 01 02 28.4 +1.9**
PNTR IAmb IAmb 01 02 35.4
comp=Z,4.1nm,0.7s
BTK Batken 58.52 296 IAmb IAmb 01 02 28.5
comp=Z,8.5nm,0.9s
YERR Yerington 58.53 65 IAmb IAmb 01 02 37.6
comp=Z,5.6nm,0.9s
AB31 Akbulak array 58.60 310 *i*P **P 01 02 27.4 -1.1**
ABKAR Akbulak array 58.60 310 P **P 01 02 27.6 -0.8**
ABKAR **P 01 02 27.8 -0.7**
ABKAR IAmb IAmb 01 02 28.4
comp=Z,8.2nm,0.7s
WAKR Walker 58.73 66 P **P 01 02 30.8 +1.0**
WAKR IAmb IAmb 01 02 39.1
comp=Z,4.4nm,0.9s
AKTO Aktyubinsk 58.79 312 P **P 01 02 28.4 -1.4**
comp=Z,4.5nm,0.6s,baz=73,slow=7.9,SNR=17
KVN Kaiserville 59.17 65 IAmb IAmb 01 02 42.6
comp=Z,6.2nm,1.1s
RYN Ryan 59.19 65 IAmb IAmb 01 02 42.0
comp=Z,3.9nm,0.9s
QLMT Earthquake Lak 59.25 56 P **P 01 02 34.8 +1.4**
NVAR Mina Array Bea 59.45 65 P **P 01 02 36.0 +1.2**
comp=Z,1.0nm,0.7s,baz=296,slow=7.3,SNR=10.0
MDPB Devils Postpil 59.50 67 P **P 01 02 38.8 +3.5**
NV11 Mina Array Sit 59.54 65 P **P 01 02 37.4 +2.0**
ELK Elko 59.76 62 P **P 01 02 39.2 +2.3**
ELK pmax pmax
comp=Z,2.0nm,1.1s
ELK Elko 59.76 62 P **P 01 02 39.2 +2.3**
YPP Pitchstone Pla 59.96 56 pP 01 02 47.8 +0.3
LKWY Lake 59.98 56 P **P 01 02 40.5 +2.0**
LKWY pmax pmax
comp=Z,8.0nm,1.0s
LKWY Lake 59.98 56 P **P 01 02 40.5 +2.0**
LKWY IAmb IAmb 01 02 50.6
comp=Z,7.9nm,1.0s
H17A Grant Village 60.00 56 P **P 01 02 41.2 +2.6**
H17A IAmb IAmb 01 02 58.1
comp=Z,9.4nm,1.0s
FLWY Flagg Ranch 60.14 56 IAmb IAmb 01 02 51.0
comp=Z,8.9nm,1.1s
RLMT Red Lodge 60.23 54 IAmb IAmb 01 02 50.7
comp=Z,6.6nm,0.9s
TPAW Teton Pass 60.39 57 IAmb IAmb 01 02 52.1
comp=Z,9.1nm,1.1s
REDW Red Top Meadow 60.52 57 IAmb IAmb 01 03 01.9
comp=Z,9.7nm,1.0s
LAO LASA Array 60.79 51 IAmb IAmb 01 02 46.9
comp=Z,12nm,1.0s
NIL Nilore 61.22 289 P **P 01 02 47.2 +0.4**
NIL pmax pmax
comp=Z,22nm,0.8s
NIL Nilore 61.22 289 P **P 01 02 47.2 +0.4**
HWUT Hardware Ranch 61.28 59 IAmb IAmb 01 02 57.4
comp=Z,5.5nm,0.9s
DUG Dugway, Tooele 61.51 61 P **P 01 02 51.3 +2.5**
DUG pmax pmax
comp=Z,6.0nm,1.0s
DUG Dugway, Tooele 61.51 61 P **P 01 02 51.3 +2.5**
DUG IAmb IAmb 01 02 59.4
comp=Z,6.2nm,0.9s
BW06 Boulder Array 61.63 57 IAmb IAmb 01 02 59.5
comp=Z,6.4nm,1.0s
PD31 Pinedale Array 61.63 57 IAmb IAmb 01 02 59.4
comp=Z,6.0nm,1.1s
PDAR Pinedale Array 61.63 57 P **P 01 02 50.7 +1.0**
comp=Z,2.0nm,0.9s,baz=308,slow=2.3,SNR=14
PDAR LR LR 01 30 11.9
comp=Z,44nm,19.2s,baz=332,slow=36
TPNV Topopah Spring 61.65 65 P **P 01 02 52.7 +2.9**
TPNV pmax pmax
comp=Z,7.0nm,1.2s
TPNV Topopah Spring 61.65 65 P **P 01 02 52.7 +2.9**
TPNV IAmb IAmb 01 02 57.9
comp=Z,7.4nm,1.1s
FINES FINESS Array B 62.84 336 P **P 01 02 55.9 -1.3**
comp=Z,6.4nm,0.8s,baz=31,slow=8.3,SNR=17
FINES LR LR 01 33 20.7
comp=Z,217nm,19.0s,baz=26,slow=39
CCUT Cedar City 62.96 63 P **P 01 03 02.3 +3.7**
TMUT Trail Mountain 63.03 60 P **P 01 03 00.5 +1.3**
P17A Butcher Ranch, 63.18 60 P **P 01 03 02.1 +2.1**
KBL Kabul 63.21 293 P **P 01 02 58.9 -1.4**
KBL pmax pmax
comp=Z,8.0nm,1.1s
KBL Kabul 63.21 293 P **P 01 02 58.9 -1.4**
KBL IAmb IAmb 01 03 00.0
comp=Z,8.1nm,1.1s
Q16A Castle Valley 63.31 61 P **P 01 03 02.9 +2.0**
ULM Lac du Bonnet 63.34 43 *i*P **P 01 02 59.9 -0.7**
ULM Lac du Bonnet 63.34 43 P **P 01 03 00.7 +0.1**
comp=Z,1.9nm,0.8s,baz=276,slow=5.8,SNR=5.5
KNB Kanab 63.64 63 P **P 01 03 05.9 +2.8**
KNB pmax pmax
comp=Z,7.0nm,1.0s
KNB Kanab 63.64 63 P **P 01 03 05.8 +2.8**
RSSD Black Hills 63.67 52 P **P 01 03 04.5 +1.3**
RSSD pmax pmax
comp=Z,7.0nm,0.8s
RSSD Black Hills 63.67 52 P **P 01 03 04.5 +1.3**
RSSD IAmb IAmb 01 03 20.4
comp=Z,6.6nm,0.8s
OBN Obninsk 64.60 326 *de*P **P 01 03 07.5 -1.3**
OBN *e**PP **pwP 01 03 22.9 +1.0**
OBN 01 03 43.0
OBN pmax pmax
comp=Z,24nm,1.7s
OBN MLR MLR
comp=Z,167nm,18.0s
OBN Obninsk 64.60 326 P **P 01 03 07.0 -1.8**
comp=Z,2.9nm,0.8s,baz=354,slow=23,SNR=5.0
OBN Obninsk 64.60 326 *e*P **P 01 03 07.3 -1.5**
OBN Obninsk 64.60 326 P **P 01 03 07.3 -1.5**
N23A Red Feather La 64.88 56 IAmb IAmb 01 03 19.9
comp=Z,5.8nm,0.8s
SMCO Snowmass 65.51 58 IAmb IAmb 01 03 24.6
comp=Z,5.7nm,0.8s
LPSR Galich'ya Gora 65.65 324 *e*P **P 01 03 14.5 -1.2**
LPSR pmax pmax
comp=Z,30nm,0.7s
LPSR pmax pmax
comp=N,4.0nm,0.4s
LPSR pmax pmax
comp=E,4.0nm,0.4s
ISCO Idaho Springs 65.83 57 IAmb IAmb 01 03 28.2
comp=Z,7.9nm,1.0s
S22A 4UR Ranch, Cre 66.59 59 IAmb IAmb 01 03 33.1
comp=Z,5.5nm,0.9s
VSR Storozhevoye 66.62 322 *c i*P **P 01 03 20.1 -1.9**
VSR pmax pmax
comp=Z,19nm,0.8s
NB2 NORSAR Subarra 66.70 342 P **P 01 03 21.6 -0.7**
comp=Z,14nm,1.2s,baz=29,slow=6.5
NOA NORSAR Array B 66.70 342 P **P 01 03 21.7 -0.7**
comp=Z,4.3nm,0.9s,baz=24,slow=6.4,SNR=8.8
VORD Divnogorie 66.77 322 *e*P **P 01 03 21.5 -1.3**
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,20nm,0.7s
VORD pmax pmax
comp=Z,10.0nm,0.7s
GEYT Alibeck 67.25 302 P **P 01 03 26.5 +0.2**
comp=Z,3.4nm,0.6s,baz=28,slow=3.5,SNR=18
GEYT Alibeck 67.25 302 IAmb IAmb 01 03 27.7
comp=Z,2.8nm,0.6s
SDCO Great Sand Dun 67.33 58 P **P 01 03 28.1 +1.0**
HRA Herat 67.38 297 IAmb IAmb 01 03 29.4
comp=Z,3.7nm,0.7s
IVI Ivigtut 68.31 12 P **P 01 03 32.4 0.0**
ANMO Albuquerque 68.78 61 ⇑*e*P **P 01 03 35.8 -0.3**
ANMO pmax pmax
comp=Z,1.0nm,1.0s
ANMO Albuquerque 68.78 61 P **P 01 03 39.0 +2.9**
AKT Akhty 70.16 311 *e*P **P 01 03 44.3 -0.1**
AKT *e* 01 04 07.9
AKT pmax pmax
comp=Z,16nm,0.9s
SCHQ Schefferville 70.30 25 P **P 01 03 45.4 +0.5**
comp=Z,5.3nm,0.8s,baz=348,slow=8.5,SNR=11
SCHQ LR LR 01 39 43.2
comp=Z,110nm,18.0s,baz=359,slow=40
SCHQ Schefferville 70.30 25 P **P 01 03 45.4 +0.5**
SCHQ **P 01 03 45.7 +0.8**
SCHQ IAmb IAmb 01 04 00.0
comp=Z,10nm,1.0s
KIV Kislovodsk 70.70 316 *e*P **P 01 03 47.5 -0.1**
KIV pmax pmax
comp=Z,28nm,1.0s
KIV MLR MLR
comp=Z,217nm,18.0s
KIV Kislovodsk 70.70 316 P **P 01 03 48.0 +0.4**
KIV Kislovodsk 70.70 316 *e*P **P 01 03 47.5 -0.1**
KIV Kislovodsk 70.70 316 P **P 01 03 48.1 +0.4**
KIV IAmb IAmb 01 03 51.6
comp=Z,7.4nm,0.8s
SRIG Santa Rosalia 70.76 70 P **P 01 03 48.5 +0.4**
KBZ Khabaz 70.78 315 P **P 01 03 47.8 -0.1**
comp=Z,5.3nm,0.7s,baz=90,slow=2.0,SNR=22
KBZ LR LR 01 39 02.3
comp=Z,153nm,18.5s,baz=27,slow=40
AKASG Malin Array Be 70.79 328 *i*P **P 01 03 46.7 -1.2**
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 70.79 328 P **P 01 03 46.8 -1.1**
comp=Z,3.5nm,0.5s,baz=32,slow=6.5,SNR=15
AKASG LR LR 01 36 54.2
comp=Z,138nm,21.0s,baz=0.0,slow=38
AKASG Malin Array Be 70.79 328 P **P 01 03 47.1 -0.8**
AKBB Malin Array Si 70.79 328 ⇑*e*P **P 01 03 46.3 -1.6**
AKBB Malin Array Si 70.79 328 P **P 01 03 46.4 -1.5**
AKBB IAmb IAmb 01 03 47.0
comp=Z,4.6nm,0.7s
SHA1 Shidzhatmaz 70.88 315 *de*P **P 01 03 49.0 +0.1**
ZEI Tsey 71.03 314 *e*P **P 01 03 47.8 -2.0**
ZEI pmax pmax
comp=Z,6.0nm,0.9s
POO Poona 71.37 277 *ex* **P 01 03 50.5 -1.5**
TBLG Delisi 71.44 313 P **P 01 03 50.9 -1.1**
TBLG pmax pmax
comp=Z,16nm,1.2s
TBLG Delisi 71.44 313 P **P 01 03 50.9 -1.1**
TBLG IAmb IAmb 01 03 54.8
comp=Z,16nm,1.2s
WRA Warramunga Arr 71.45 202 P **P 01 03 52.4 +0.2**
comp=Z,3.9nm,0.8s,baz=19,slow=6.4,SNR=10
MNTX Cornudas Mount 71.74 63 P **P 01 03 55.8 +1.8**
AKH Akhalkalaki 72.28 313 ⇓P **P 01 03 58.5 +1.2**
GNI Garni 72.65 312 *de*P **P 01 04 01.0 +1.5**
GNI pmax pmax
comp=Z,33nm,1.0s
GNI Garni 72.65 312 *i*P **P 01 04 00.9 +1.3**
SNR=6.0
GNI Garni 72.65 312 P **P 01 04 00.1 +0.6**
GNI IAmb IAmb 01 04 03.0
comp=Z,20nm,1.1s
SORM Soroca 73.25 327 ⇑P **P 01 04 01.6 -1.0**
LVV L'vov 73.31 330 *e*P **P 01 04 02.8 -0.2**
KWP Kalwaria Pacla 73.90 331 P **P 01 04 06.4 -0.1**
KWP Kalwaria Pacla 73.90 331 *e*P **P 01 04 07.0 +0.4**
KWP Kalwaria Pacla 73.90 331 P **P 01 04 06.4 -0.1**
W35A Tecumseh 73.96 55 P **P 01 04 07.5 +0.3**
NIUE Niue 74.19 147 P **P 01 04 09.8 +1.4**
OJC Ojcow 74.30 333 *e*P **P 01 04 09.0 +0.2**
OJC Ojcow 74.30 333 *e*P **P 01 04 09.0 +0.2**
ABTX Abilene, Hawle 74.34 58 P **P 01 04 11.6 +2.2**
ABTX IAmb IAmb 01 04 17.8
comp=Z,6.4nm,1.1s
TX31 Lajitas Ar. Si 74.47 63 IAmb IAmb 01 04 19.8
comp=Z,6.1nm,1.1s
TX32 Lajitas Array 74.47 63 IAmb IAmb 01 04 19.8
comp=Z,6.3nm,1.1s
TXAR Lajitas Array 74.47 63 P **P 01 04 11.3 +1.0**
comp=Z,2.4nm,0.7s,baz=298,slow=4.5,SNR=31
KOLS Kolonicke sedl 74.65 331 *e*P **P 01 04 11.3 +0.3**
KOLS pmax pmax
comp=Z,10.0nm,0.9s
KOLS Kolonicke sedl 74.65 331 *e*P **P 01 04 11.2 +0.3**
LEOM Leova 74.69 326 ⇑P **P 01 04 11.2 +0.1**
KSP Ksiaz 74.75 335 *e*P **P 01 04 12.0 +0.6**
KSP Ksiaz 74.75 335 *e*P **P 01 04 12.0 +0.6**
BUR08 Bucovina Ar. S 74.79 328 IAmb IAmb 01 04 12.6
comp=Z,11nm,0.8s
BURAR Bucovina Array 74.81 328 ⇓P **P 01 04 11.7 -0.2**
BURAR Bucovina Array 74.81 328 P **P 01 04 11.4 -0.5**
NIE Niedzica 74.85 332 *e*P **P 01 04 12.6 +0.5**
NIE Niedzica 74.85 332 *e*P **P 01 04 12.6 +0.5**
UZH Uzhgorod 74.91 330 ⇓*i*P **P 01 04 12.2 -0.1**
UZH *i* 01 04 20.0
OSTC Ostas 75.03 335 *e*P **P 01 04 13.3 +0.2**
CHVC Chvalec 75.05 335 *e*P **P 01 04 13.4 +0.2**
BIZ Bicaz 75.07 327 ⇓P **P 01 04 13.6 +0.2**
BIR Birlad 75.09 326 ⇓P **P 01 04 14.6 +1.1**
FVM French Village 75.12 49 P **P 01 04 15.4 +1.6**
FVM pmax pmax
comp=Z,6.0nm,0.9s
FVM French Village 75.12 49 P **P 01 04 15.4 +1.6**
FVM IAmb IAmb 01 04 20.7
comp=Z,6.4nm,0.9s
OKC Ostrava-Krasne 75.12 333 *e*P **P 01 04 14.1 +0.5**
OKC *e* 01 04 22.4
OKC Ostrava-Krasne 75.12 333 *e*P **P 01 04 14.1 +0.5**
OKC *e*pP **pP 01 04 22.4 -1.2**
UPC Upice 75.13 335 *e*P **P 01 04 14.2 +0.5**
UPC Upice 75.13 335 *e*P **P 01 04 14.2 +0.5**
ASAR Alice Springs 75.14 201 P **P 01 04 15.0 +1.1**
ASAR Alice Springs 75.14 201 P **P 01 04 14.9 +1.1**
comp=Z,1.2nm,0.8s,baz=16,slow=4.7,SNR=8.3
U40A Yellville 75.16 51 IAmb IAmb 01 04 21.2
comp=Z,11nm,1.1s
DPC Dobruska-Polom 75.19 335 *e*P **P 01 04 14.7 +0.7**
DPC Dobruska-Polom 75.19 335 *e*P **P 01 04 14.7 +0.7**
CLL Collm 75.21 337 ⇑*i*P **P 01 04 13.8 -0.2**
CLL *e* 01 04 22.0
CLL pmax pmax
comp=Z,26nm,1.0s
CLL Collm 75.21 337 ⇑*i*P **P 01 04 13.8 -0.2**
comp=Z,26nm,1.0s
CLL *e*(pP) **pP 01 04 22.0 -2.0**
CLL Lm MLR 01 41 00.0
comp=Z,200nm,18.2s
CLL Collm 75.21 337 *e*P **P 01 04 14.0 0.0**
comp=Z,13nm,0.7s,baz=23,slow=5.7
TESR Tescani 75.24 327 ⇓P **P 01 04 14.3 0.0**
TRPA Tarpa 75.27 330 ⇓*e*P **P 01 04 15.0 +0.6**
TRPA Tarpa 75.27 330 ⇑P **P 01 04 14.7 +0.3**
KRLC Kraliky 75.31 334 *e*P **P 01 04 15.2 +0.5**
KRLC *e* 01 04 22.9
KRLC Kraliky 75.31 334 *e*P **P 01 04 15.2 +0.5**
KRLC *e*pP **pP 01 04 22.9 -1.8**
LANS Liptovska Anna 75.34 332 *e*P **P 01 04 16.3 +1.4**
LANS pmax pmax
comp=Z,20nm,0.8s
LANS Liptovska Anna 75.34 332 *e*P **P 01 04 16.3 +1.4**
MORC Moravsky Berou 75.36 334 ⇓P **P 01 04 15.8 +0.8**
MORC Moravsky Berou 75.36 334 *e*P **P 01 04 15.1 +0.1**
BRG Berggiesshubel 75.36 336 *i* PKP **P 01 04 14.9 0.0**
comp=Z,9.5nm,1.0s
BRG *e* 01 12 27.0
comp=Z,6.3nm,1.0s
BRG Berggiesshubel 75.36 336 *i* P **P 01 04 14.9 0.0**
BRG pmax pmax
comp=Z,10.0nm,1.0s
BRG Berggiesshubel 75.36 336 *e*P **P 01 04 15.0 0.0**
comp=Z,5.3nm,0.8s,baz=23,slow=5.7
CLZ Clausthal 75.36 339 *e*P **P 01 04 15.8 +0.9**
baz=23,slow=5.7
FBE Freiberg 75.47 337 *e*P **P 01 04 15.9 +0.4**
comp=Z,18nm,1.0s,baz=23,slow=5.7
PVCC Panska Ves 75.51 336 *e*P **P 01 04 16.2 +0.4**
PVCC Panska Ves 75.51 336 *e*P **P 01 04 16.2 +0.4**
ARCR ARCALIA 75.56 328 ⇓P **P 01 04 17.2 +1.1**
TLCR 75.56 325 ⇑P **P 01 04 16.5 +0.3**
KECS Kecovo 75.62 331 *e*P **P 01 04 17.1 +0.7**
KECS pmax pmax
comp=Z,7.0nm,0.9s
KECS Kecovo 75.62 331 *e*P **P 01 04 17.1 +0.7**
PETR Petresti 75.70 326 ⇓P **P 01 04 18.3 +1.3**
ODBI Odobesti 75.73 326 ⇓P **P 01 04 18.6 +1.4**
VRI Vrincioaia 75.76 326 ⇑P **P 01 04 17.5 +0.1**
CFR Carcaliu 75.83 325 ⇑P **P 01 04 17.4 -0.2**
DIKM Dikmen 75.86 319 ⇓P **P 01 04 19.1 +1.1**
OZUR 75.91 327 ⇑P **P 01 04 18.8 +0.6**
PRA Prague 75.96 336 *e*P **P 01 04 18.9 +0.5**
PRA Prague 75.96 336 *e*P **P 01 04 18.9 +0.5**
TOPG Topolog 75.99 325 ⇓P **P 01 04 18.5 -0.1**
PRU Pruhonice 76.01 336 *e*P **P 01 04 18.9 +0.3**
PRU Pruhonice 76.01 336 *e*P **P 01 04 18.9 +0.3**
BISRR Bisoca 76.04 326 ⇓P **P 01 04 20.0 +1.0**
VRAC Vranov 76.05 334 ⇓P **P 01 04 19.7 +0.7**
VRAC Vranov 76.05 334 *e*P **P 01 04 19.6 +0.7**
VYHS Vyhne 76.12 332 *e*P **P 01 04 20.0 +0.7**
VYHS pmax pmax
comp=Z,15nm,0.8s
VYHS Vyhne 76.12 332 *e*P **P 01 04 20.0 +0.7**
LTVH Ltavrtes, Hu 76.13 330 *e*P pP 01 04 34.0 +4.7
JAVC Velka Javorina 76.14 333 *e*P **P 01 04 20.9 +1.4**
CJR Cluj-Napoca 76.14 329 ⇑P **P 01 04 20.1 +0.5**
DOPR Dopca 76.16 327 ⇑P **P 01 04 20.4 +0.7**
TANN Tannenbergstha 76.16 337 *e*P **P 01 04 20.1 +0.4**
comp=Z,12nm,0.8s,baz=23,slow=5.7
MOX Moxa 76.17 338 *e*P **P 01 04 19.7 +0.2**
comp=Z,8.7nm,0.7s,baz=23,slow=5.7
MOX *e*L L 01 41 59.9
comp=Z,167nm,20.2s
PLN Plauen 76.18 337 *e*P **P 01 04 20.1 +0.5**
comp=Z,14nm,0.9s,baz=23,slow=5.7
GUNZ Gunzen 76.24 337 *e*P **P 01 04 20.6 +0.6**
comp=Z,20nm,0.9s,baz=23,slow=5.7
O49A Covington 76.25 43 P **P 01 04 21.4 +1.1**
O49A IAmb IAmb 01 04 26.5
comp=Z,14nm,1.1s
PSZ Piszkesteto 76.30 332 P **P 01 04 20.7 +0.2**
PSZ pmax pmax
comp=Z,18nm,1.0s
PSZ Piszkesteto 76.30 332 ⇑P **P 01 04 20.9 +0.4**
PSZ Piszkesteto 76.30 332 P **P 01 04 20.7 +0.2**
PSZ IAmb IAmb 01 04 22.1
comp=Z,18nm,1.0s
WERN Wernitzgruen 76.30 337 *e*P **P 01 04 21.0 +0.7**
comp=Z,21nm,0.9s,baz=23,slow=5.7
HARR Harsova 76.32 325 ⇓P **P 01 04 20.7 +0.2**
KRUC Moravsky 76.33 334 *e*P **P 01 04 21.0 +0.5**
TIRR Tirgusor 76.33 324 ⇑P **P 01 04 20.5 -0.1**
NKC Novy Kostel 76.33 337 *e*P **P 01 04 21.1 +0.6**
NKC Novy Kostel 76.33 337 *e*P **P 01 04 21.1 +0.6**
MLR Muntele Rosu 76.37 327 ⇑P **P 01 04 21.8 +0.8**
DRGR 76.38 329 ⇑P **P 01 04 21.1 +0.2**
TREC Trest 76.38 335 *e*P **P 01 04 21.2 +0.4**
TREC *e* 01 04 33.6
TREC Trest 76.38 335 *e*P **P 01 04 21.2 +0.4**
TREC epP **sP 01 04 33.6 -0.2**
W41B Gary Mavity, V 76.38 52 IAmb IAmb 01 04 29.3
comp=Z,6.1nm,1.0s
UBBA Unterbreizbach 76.40 339 *e*P **P 01 04 21.3 +0.6**
comp=Z,7.3nm,0.7s,baz=23,slow=5.7
PBCC Pribram 76.43 336 *e*P **P 01 04 21.3 +0.2**
ISR Istrita 76.47 326 ⇓P **P 01 04 22.1 +0.7**
PGOR Pogoanele 76.49 326 ⇑P **P 01 04 22.5 +1.1**
SMOL Smolenice 76.52 333 *e*P **P 01 04 22.7 +1.1**
SMOL pmax pmax
comp=Z,12nm,0.9s
SMOL Smolenice 76.52 333 *e*P **P 01 04 22.7 +1.1**
MFTR Murfatlar 76.56 324 ⇑P **P 01 04 22.6 +0.7**
MANZ Manzenberg 76.65 337 *e*P **P 01 04 22.7 +0.4**
comp=Z,8.2nm,0.8s,baz=23,slow=5.7
MODS Modra-Piesok 76.69 333 *e*P **P 01 04 22.7 +0.1**
MODS pmax pmax
comp=Z,23nm,0.9s
MODS Modra-Piesok 76.69 333 *e*P **P 01 04 22.7 +0.1**
VOIR 76.74 327 ⇑P **P 01 04 23.4 +0.4**
ROTZ Rotzenmuhle 76.82 337 *e*P **P 01 04 24.0 +0.7**
comp=Z,12nm,0.8s,baz=23,slow=5.7
ICOR Ion Corvin 76.85 325 ⇓P **P 01 04 24.0 +0.5**
SRO Srobarova 76.88 332 *e*P **P 01 04 24.7 +1.1**
SRO pmax pmax
comp=Z,33nm,0.8s
SRO Srobarova 76.88 332 *e*P **P 01 04 24.7 +1.1**
ZST Bratislava 76.90 333 *e*P **P 01 04 24.0 +0.3**
ZST pmax pmax
comp=Z,21nm,1.0s
ZST Bratislava 76.90 333 *e*P **P 01 04 24.0 +0.3**
MTUR Matau 76.92 327 ⇑P **P 01 04 24.7 +0.7**
WCI Wyandotte Cave 76.92 46 P **P 01 04 23.3 -0.7**
WCI pmax pmax
comp=Z,9.0nm,1.0s
WCI Wyandotte Cave 76.92 46 P **P 01 04 23.3 -0.7**
WCI IAmb IAmb 01 04 32.9
comp=Z,9.3nm,1.0s
ARR Arges 76.95 327 ⇑P **P 01 04 25.2 +1.1**
SULR 76.95 326 ⇑P **P 01 04 24.2 +0.1**
BUD Budapest 76.96 332 *e*P **P 01 04 25.4 +1.3**
ILGA Ilgaz 77.02 319 P **P 01 04 25.4 +0.6**
BANOM Banah 77.04 295 P **P 01 04 25.1 +0.1**
SHME Shamm 77.05 295 P **P 01 04 24.6 -0.3**
KHC Kasperske Hory 77.05 336 *d i*P **P 01 04 24.7 +0.1**
KHC pmax pmax
comp=Z,56nm,0.8s
KHC Kasperske Hory 77.05 336 *e*P **P 01 04 25.3 +0.7**
KHC epP **pP 01 04 32.6 -2.0**
KHC Kasperske Hory 77.05 336 IAmb IAmb 01 04 26.4
comp=Z,9.6nm,0.8s
DEV Deva 77.10 329 ⇑P **P 01 04 25.9 +1.0**
GRA1 Grafenberg Arr 77.14 338 P **P 01 04 25.7 +0.6**
GRF Grafenberg Arr 77.14 338 P **P 01 04 25.7 +0.6**
GRF pmax pmax
comp=Z,39nm,0.8s
GRF Grafenberg Arr 77.14 338 *e*P **P 01 04 26.1 +1.0**
comp=Z,50nm,1.0s,baz=23,slow=5.7
GRF *e*L L 01 43 30.9
comp=Z,168nm,19.0s
WET Wettzell 77.22 336 *e*P **P 01 04 26.4 +0.8**
comp=Z,16nm,0.8s,baz=23,slow=5.7
GEC2 GERESS Array S 77.28 336 *e*P **P 01 04 26.3 +0.3**
comp=Z,8.4nm,0.7s,baz=23,slow=5.7
GEC2 GERESS Array S 77.28 336 P **P 01 04 25.9 -0.1**
GEC2 IAmb IAmb 01 04 27.2
comp=Z,9.3nm,0.8s
GERES GERESS Array B 77.28 336 P **P 01 04 26.2 +0.3**
comp=Z,6.4nm,0.6s,baz=33,slow=5.3,SNR=62
GERES LR LR 01 42 50.0
comp=Z,364nm,18.2s,baz=38,slow=39
CSKK Cskako 77.30 332 *e*P **P 01 04 26.9 +0.9**
TNS Taunus Mts 77.32 340 *e*P **P 01 04 26.7 +0.5**
comp=Z,22nm,0.7s,baz=23,slow=5.7
AHRW Bad Neuenahr-A 77.33 340 *e*P **P 01 04 26.8 +0.7**
comp=Z,27nm,1.0s,baz=23,slow=5.7

BEBN	**Eben Emael**	**77.39**	**341**	P		**P**	**01 04 25.6**	**-0.8**
	comp=Z,38nm,0.8s							
MEM	**Membach**	**77.49**	**341**	P		**P**	**01 04 27.5**	**+0.5**
	comp=Z,34nm,1.0s							
CONA	**Conrad Observa**	**77.51**	**334**	*i* P		**P**	**01 04 28.3**	**+1.0**
	comp=Z,22nm,0.8s,SNR=11							
SOP	**Sopron**	**77.52**	**333**⇓	*e*P		**P**	**01 04 28.3**	**+1.1**
GZR	**Gura Zlata**	**77.57**	**328**	⇑P		**P**	**01 04 27.7**	**0.0**
BSTI	**Sart Tilman**	**77.61**	**341**	P		**P**	**01 04 28.3**	**+0.6**
	comp=Z,8.4nm,1.2s							
MPLH	**Magyarpolny**	**77.69**	**333**⇓	*e*P		**P**	**01 04 29.0**	**+0.8**
MPLH	**Magyarpolny**	**77.69**	**333**⇓	*e*P		P	01 04 20.9	-7.3
BZS	**Buzias**	**77.77**	**329**	⇑P		**P**	**01 04 28.5**	**-0.2**
COPA	**Copaceanca**	**77.80**	**326**	⇑P		**P**	**01 04 28.5**	**+0.2**
RAZG	**Razgrad**	**77.81**	**325**	⇓P		**P**	**01 04 29.0**	**+0.1**
BCLA	**Clavier**	**77.82**	**342**	⇑P		**P**	**01 04 28.8**	**0.0**
	comp=Z,16nm,0.9s							
TIH	**Tihany**	**77.83**	**332**	*e*P		**P**	**01 04 29.4**	**+0.5**
UOSS	**Minazif**	**77.83**	**294**	P		**P**	**01 04 29.5**	**+0.2**
UOSS	**Minazif**	**77.83**	**294**	P		**P**	**01 04 29.6**	**+0.2**
BGES	**Gesves**	**77.90**	**342**	P		**P**	**01 04 29.1**	**-0.2**
	comp=Z,18nm,1.0s							
PKME	**Peaks-Kenny Pk**	**77.95**	**31**	P		**P**	**01 04 30.2**	**+0.6**
PKME				IAmb	IAmb		01 04 44.2	
	comp=Z,4.4nm,0.8s							
HATD	**Hatta, Dubai**	**77.96**	**294**	*i* P		**P**	**01 04 30.6**	**+0.5**
	SNR=7.0							
MOA	**Molln**	**78.03**	**335**	*i* P		**P**	**01 04 30.6**	**+0.5**
	comp=Z,12nm,0.8s							
BMRD	**Maredsous**	**78.04**	**342**	P		**P**	**01 04 30.4**	**+0.3**
	comp=Z,24nm,1.1s							
SRE	**Strehaia**	**78.06**	**328**	⇓P		**P**	**01 04 30.3**	**0.0**
ASHO	**Ashiyiah**	**78.11**	**294**	P		**P**	**01 04 30.8**	**-0.2**
NAZ	**Nazwa, Dubai**	**78.12**	**294**	P		**P**	**01 04 31.4**	**+0.4**
BR131	**Keskin Array S**	**78.14**	**318***c*	*i*P		**P**	**01 04 31.0**	**0.0**
BRTR	**Keskin Array B**	**78.14**	**318**	P		**P**	**01 04 31.2**	**+0.2**
	comp=Z,15nm,0.9s,baz=59,slow=3.5,SNR=68							
HERR	**Herculane**	**78.14**	**328**	⇑P		**P**	**01 04 30.3**	**-0.4**
MORH	**Mrgy, Hungar**	**78.21**	**331**⇓	*e*P		**P**	**01 04 30.5**	**-0.5**
MORH	**Mrgy, Hungar**	**78.21**	**331**⇑	*i*P		**P**	**01 04 30.5**	**-0.5**
ARSA	**Arzberg**	**78.22**	**334**	*i* P		**P**	**01 04 31.9**	**+0.8**
	comp=Z,17nm,1.0s,SNR=6.3							
DOU	**Dourbes**	**78.27**	**342**	P		**P**	**01 04 31.6**	**+0.2**
	comp=Z,13nm,1.1s							
ANTO	**Ankara**	**78.39**	**319**	P		**P**	**01 04 33.4**	**+1.1**
ANTO				pmax	pmax			
	comp=Z,21nm,0.8s							
ANTO	**Ankara**	**78.39**	**319**	⇑P		**P**	**01 04 32.9**	**+0.6**
ANTO	**Ankara**	**78.39**	**319**	P		**P**	**01 04 33.4**	**+1.1**
MDVR	**Moldovita**	**78.47**	**329**	⇑P		**P**	**01 04 32.3**	**-0.4**
PUNG	**Punghina**	**78.49**	**328**	⇑P		**P**	**01 04 32.4**	**-0.3**
RJOB	**Jochberg**	**78.53**	**336**	*e*P		**P**	**01 04 33.8**	**+0.9**
	comp=Z,9.3nm,0.8s,baz=23,slow=5.7							
FUR	**Furstenfeldbru**	**78.54**	**337**	*e*P		**P**	**01 04 33.5**	**+0.6**
	comp=Z,18nm,0.8s,baz=23,slow=5.7							
BEHE	**Becsehely**	**78.55**	**333**	*e*P		**P**	**01 04 33.7**	**+0.7**
BEHE	**Becsehely**	**78.55**	**333**	*e*P		**P**	**01 04 33.5**	**+0.5**
ASUD	**Al Ashush, Dub**	**78.59**	**294**	*i* P		**P**	**01 04 34.1**	**+0.5**
	SNR=6.0							
ELND	**Elena**	**78.59**	**325**	⇑P		**P**	**01 04 33.1**	**-0.2**
PLVB	**Pleven**	**78.66**	**326**	⇓P		**P**	**01 04 33.6**	**-0.1**
ALNE	**Al Ain**	**78.77**	**294**	*i* P		**P**	**01 04 34.7**	**+0.2**
	SNR=7.7							
FRGS	**Fruska Gora**	**78.77**	**330**⇑	*i*P		**P**	**01 04 33.4**	**-0.9**
SOKA	**Soboth**	**78.88**	**334**	*i* P		**P**	**01 04 35.5**	**+0.6**
	comp=Z,37nm,1.1s,SNR=10.0							
PERS	**Pernice**	**78.89**	**334**	*i* P		**P**	**01 04 35.5**	**+0.6**
KBA	**Koelnbreinsper**	**78.99**	**335**	*i* P		**P**	**01 04 36.7**	**+1.2**
	comp=Z,74nm,0.9s,SNR=25							
BFO	**Black Forest**	**79.11**	**339**	P		**P**	**01 04 36.3**	**+0.2**
BFO				pmax	pmax			
	comp=Z,21nm,1.0s							
BFO	**Black Forest**	**79.11**	**339**	*e*P		**P**	**01 04 36.2**	**+0.2**
	comp=Z,11nm,0.8s,baz=23,slow=5.7							
BFO	**Black Forest**	**79.11**	**339**	P		**P**	**01 04 36.3**	**+0.2**
OBKA	**Obir**	**79.17**	**334**	*i* P		**P**	**01 04 37.1**	**+0.6**
	comp=Z,13nm,0.8s							
WATA	**Walderalm**	**79.23**	**336**	*i* P		**P**	**01 04 37.6**	**+0.8**
	comp=Z,10nm,1.1s,SNR=8.9							
WTTA	**Wattenberg**	**79.28**	**336**	*e*P		**P**	**01 04 38.2**	**+1.1**
	comp=Z,51nm,1.0s,SNR=12							
UBR	**Ueberruh**	**79.29**	**338**	*e*P		**P**	**01 04 37.7**	**+0.6**
	comp=Z,8.6nm,0.9s,baz=23,slow=5.7							
RETA	**Reutte**	**79.30**	**337**	*i* P		**P**	**01 04 38.0**	**+0.8**
	comp=Z,17nm,0.9s							
MYKA	**Terra Mystica**	**79.32**	**335**	*i* P		**P**	**01 04 37.5**	**+0.3**
	comp=Z,7.7nm,0.7s							
MOTA	**Moosalm**	**79.34**	**337**	*i* P		**P**	**01 04 38.2**	**+0.7**
	comp=Z,34nm,0.9s,SNR=12							
ZAG	**Zagreb**	**79.37**	**333**	*e*P		**P**	**01 04 37.9**	**+0.5**
SQTA	**Sankt Quirin**	**79.43**	**337**	*e*P		**P**	**01 04 38.8**	**+0.9**
	comp=Z,30nm,0.9s,SNR=11							
ABTA	**Abfaltersbach**	**79.52**	**336**	*i* P		**P**	**01 04 38.8**	**+0.4**
	comp=Z,11nm,0.8s,SNR=6.5							
CRES	**Cresnjev**	**79.53**	**333**	*i* P		**P**	**01 04 38.4**	**+0.1**
CRES	**Cresnjev**	**79.53**	**333**	*e*P		**P**	**01 04 38.1**	**-0.2**
LJU	**Ljubljana**	**79.60**	**334**	*e*P		**P**	**01 04 38.6**	**-0.1**
DIVS	**Divibare**	**79.66**	**330**⇑	*i*P		**P**	**01 04 38.7**	**-0.5**
DAVA	**Damuels**	**79.71**	**338**	*i* P		**P**	**01 04 40.1**	**+0.6**
	comp=Z,15nm,0.9s							
FETA	**Feichten**	**79.74**	**337**	*i* P		**P**	**01 04 40.6**	**+1.0**
	comp=Z,20nm,0.9s,SNR=5.1							
VTS	**Vitosha**	**79.83**	**327**	⇓P		**P**	**01 04 40.2**	**0.0**
CEY	**Cerknica**	**79.91**	**334**	*e*P		**P**	**01 04 39.5**	**-0.9**
BLY	**Banja Luka**	**79.98**	**332**	*e*P		**P**	**01 04 37.3**	**-3.5**
HAPS	**Han Pijesak,BI**	**80.01**	**330**⇑	*i*P		**P**	**01 04 40.5**	**-0.6**
BBLS	**Lazići**	**80.06**	**330**⇑	*i*P		**P**	**01 04 41.3**	**0.0**
FUORN	**Ofenpass-Fuorn**	**80.23**	**337**	P		**P**	**01 04 42.7**	**+0.2**
ALN	**Alexandroupoli**	**80.28**	**324**	P		**P**	**01 04 42.3**	**-0.1**
ALN				pmax	pmax			
	comp=Z,13nm,1.0s							
ALN	**Alexandroupoli**	**80.28**	**324**	P		**P**	**01 04 42.3**	**-0.1**
ALN				IAmb	IAmb		01 04 43.5	
	comp=Z,13nm,1.0s							
MGRS	**Mrkonjic Grad**	**80.31**	**332**	*e*P		**P**	**01 04 42.8**	**+0.2**
TUE	**Stuetta**	**80.60**	**338**	P		**P**	**01 04 44.2**	**-0.2**
BALB	**Balikesir**	**80.63**	**322**	P		**P**	**01 04 44.8**	**+0.4**
TEOL	**Teolo**	**81.03**	**336**	P		**P**	**01 04 46.4**	**0.0**
Z50A	**Ashland**	**81.09**	**49**	IAmb	IAmb		01 04 55.5	
	comp=Z,10nm,0.9s							
PDG	**Podgorica**	**81.38**	**329**	*e*P		**P**	**01 04 47.7**	**-0.6**
DRME	**Dracevica, Mon**	**81.62**	**329**	*e*P		**P**	**01 04 50.3**	**+0.7**
STKA	**Stephens Creek**	**81.66**	**193**	LR	LR		01 42 12.8	
	comp=Z,34nm,19.0s,baz=23,slow=36							
LIT	**Litokhoron**	**82.31**	**326**	IAmb	IAmb		01 05 08.3	
	comp=Z,9.2nm,1.1s							
MURB	**Monte Urbino**	**82.72**	**334**	P		**P**	**01 04 55.5**	**+0.1**
RAYN	**Ar Rayn**	**85.17**	**301**	P		**P**	**01 05 08.5**	**+0.3**
RAYN				pmax	pmax			
	comp=Z,12nm,1.0s							
RAYN	**Ar Rayn**	**85.17**	**301**	*i* P		**P**	**01 05 08.0**	**-0.2**
	SNR=8.5							
RAYN	**Ar Rayn**	**85.17**	**301**	P		**P**	**01 05 08.5**	**+0.3**
EIL	**Elat**	**85.82**	**312**	LR	LR		01 47 05.2	
	comp=Z,71nm,18.7s,baz=101,slow=38							
ESDC	**Sonseca Array**	**89.93**	**345**	P		**P**	**01 05 29.9**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=13,slow=3.3,SNR=6.2							
ESDC				LR	LR		01 52 55.0	
	comp=Z,70nm,18.2s,baz=275,slow=40							
KEST	**Kesra**	**90.61**	**334**	P		**P**	**01 05 33.7**	**-0.5**
	comp=Z,3.1nm,1.0s,baz=162,slow=3.2,SNR=1.9							
KEST				LR	LR		01 50 16.1	
	comp=Z,193nm,20.3s,baz=298,slow=38							
KEST	**Kesra**	**90.61**	**334**	IAmb	IAmb		01 05 48.4	
	comp=Z,8.2nm,0.9s							
LPAZ	**La Paz**	**131.34**	**64**	PKP		**PKPdf**	**01 11 44.9**	**0.0**
	comp=Z,0.9nm,0.6s,baz=0.0,slow=2.0,SNR=4.1							
SYO	**Syowa Base**	**144.04**	**213**⇑	*e*P		**PKPab**	**01 12 02.8**	**-0.5**
CPUP	**Villa Florida**	**145.43**	**61**	PKPbc		**PKPbc**	**01 12 09.8**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=316,slow=4.6,SNR=8.3							
PLCA	**Paso Flores**	**146.22**	**94**	PKPbc		**PKPab**	**01 12 12.6**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=243,slow=9.0,SNR=1.9							

NEIC ***19*** *00:53:08.5±2.0, 21°.47S±0°.09×170°.71E±0°.08, h180km±6km, mb4.7/46, Error ellipse: s-maj=13.5km s-min=9.8km az=153.0*

IDC ***19*** *00:53:09.8±2.0, 21°.52S×170°.58E, h185km±16km, mb3.9/10, mb1 4.1/13, mb1mx3.8/39, mbtmp4.5/13, MS2.7/1, Ms1 2.7/1, ms1mx2.5/24, Error ellipse: s-maj=18.3km s-min=15.6km az=147.0*

ISC 19 00:53:10.0±0.4, 21°.50S±0°.07×170°.70E±0°.06, h200km, n78, σ1§22/75, mb4.6/26, 1D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.00**	**261**	P	**Pn**	**00 54 10.0**	**-1.8**
	3.7nm,0.3s,baz=104,slow=13,SNR=62						
DZM				S	**Sn**	**00 54 56.9**	**-3.4**
	10nm,0.3s,baz=85,slow=19,SNR=4.7						
DZM				LR	LR	00 55 33.3	
	comp=Z,92nm,18.5s,baz=188,slow=37						
DZM	**Mont Dzumac**	**4.00**	**261**		**Pn**	**00 54 10.2**	**-1.6**
NOUC	**Port Laguerre**	**4.13**	**261**		**Pn**	**00 54 12.1**	**-1.3**
SANVU	**Saraoutou**	**6.88**	**331**	Pn	**Pn**	**00 54 45.6**	**-3.1**
MSVF	**Nonsavu**	**7.88**	**63**	Pn	**Pn**	**00 54 59.0**	**-2.7**
OUZ	**Omahuta**	**13.90**	**170**	P	**P**	**00 56 19.3**	**-1.3**
LHI	**Lord Howe Isla**	**14.41**	**224**		**P**	**00 56 25.2**	**-1.1**
MXZ	**Matakaoa Point**	**17.30**	**159**	P	**P**	**00 56 57.7**	**-0.4**
MXZ				IAmb	IAmb	00 56 59.6	
	comp=Z,44nm,1.2s						
HIZ	**Hauiti**	**17.33**	**169**	P	**Pn**	**00 56 59.4**	**-0.5**
HIZ				IAmb	IAmb	00 57 08.0	
	comp=Z,34nm,1.0s						
URZ	**Urewera**	**17.59**	**163**	P	**Pn**	**00 57 01.8**	**-1.2**
	comp=Z,2.1nm,0.3s,baz=359,slow=3.6,SNR=16						
URZ	**Urewera**	**17.59**	**163**	P	**Pn**	**00 57 02.0**	**-1.1**
BKZ	**Black Stump Fm**	**18.29**	**166**	P	**Pn**	**00 57 10.2**	**-1.1**
AFI	**Afiamalu**	**18.31**	**69**	P	**Pn**	**00 57 11.4**	**-0.4**
	comp=Z,1.3nm,0.3s,baz=214,slow=3.6,SNR=2.3						
AFI	**Afiamalu**	**18.31**	**69**	P	**Pn**	**00 57 09.6**	**-2.2**
AFI				IAmb	IAmb	00 57 20.4	
	comp=Z,22nm,0.9s						
EIDS	**Eidsvold**	**18.41**	**254**		**Pn**	**00 57 12.9**	**+0.1**
EIDS				IAmb	IAmb	00 57 13.5	
	comp=Z,23nm,0.8s						
ARMA	**Armidale**	**19.29**	**239**	P	**Pn**	**00 57 22.1**	**-1.2**
ARMA				IAmb	IAmb	00 57 27.0	
	comp=Z,21nm,0.8s						
QRZ	**Quartz Range**	**19.32**	**176**	P	**P**	**00 57 20.6**	**+0.6**
QRZ				IAmb	IAmb	00 57 25.6	
	comp=Z,35nm,0.9s						
NNZ	**Nelson**	**19.78**	**174**	P	**Pn**	**00 57 26.9**	**-2.1**
NNZ				IAmb	IAmb	00 57 44.6	
	comp=Z,36nm,1.1s						
SNZO	**South Karori**	**20.04**	**171**	P	**P**	**00 57 28.7**	**+1.1**
TUWZ	**Tuamarina**	**20.05**	**173**	P	**P**	**00 57 28.3**	**+0.5**
BHW	**Baring Head**	**20.16**	**171**	P	**P**	**00 57 29.9**	**+1.0**
MSWZ	**Moikau Station**	**20.22**	**170**	P	**P**	**00 57 29.0**	**-0.6**
THZ	**Tophouse**	**20.28**	**175**	IAmb	IAmb	00 57 33.4	
	comp=Z,25nm,0.8s						
BSWZ	**Blackbirch Sta**	**20.33**	**173**	P	Pn	00 57 32.5	-3.2
PLWZ	**Palliser**	**20.37**	**170**	P	**P**	**00 57 30.6**	**-0.7**
KHZ	**Kahutara**	**20.99**	**174**	P	**P**	**00 57 37.0**	**-0.6**
KHZ				IAmb	IAmb	00 57 52.0	
	comp=Z,23nm,1.0s						
LTZ	**Lake Taylor**	**21.26**	**177**	P	**P**	**00 57 41.7**	**+1.1**
OXZ	**Oxford**	**21.79**	**177**	P	**P**	**00 57 46.7**	**+0.7**
OXZ				IAmb	IAmb	00 57 48.3	
	comp=Z,23nm,0.7s						
FOZ	**Fox Glacier**	**21.98**	**182**	P	**P**	**00 57 49.3**	**+1.5**
RPZ	**Rata Peaks**	**22.15**	**179**	P	**P**	**00 57 50.1**	**+0.6**
RPZ				IAmb	IAmb	00 57 51.2	
	comp=Z,17nm,0.7s						
MQZ	**McQueen's Vall**	**22.20**	**176**	P	**P**	**00 57 49.9**	**0.0**
MQZ				IAmb	IAmb	00 57 52.4	
	comp=Z,12nm,0.8s						
LBZ	**Lake Benmore**	**22.82**	**181**	P	**P**	**00 57 56.2**	**+0.6**
LBZ				IAmb	IAmb	00 57 58.3	
	comp=Z,30nm,1.0s						
CTA	**Charters Tower**	**22.89**	**269**	P	**P**	**00 57 56.9**	**+0.3**
	comp=Z,2.3nm,0.4s,baz=104,slow=12,SNR=4.8						
WKZ	**Wanaka**	**23.30**	**183**	P	**P**	**00 58 00.9**	**+1.0**
WKZ				IAmb	IAmb	00 58 04.4	
	comp=Z,35nm,1.2s						
CAN	**Canberra**	**23.47**	**229**	P	**P**	**00 58 02.8**	**+1.2**
CAN				IAmb	IAmb	00 58 05.1	
	comp=Z,10nm,0.7s						
ODZ	**Otahua Downs**	**23.48**	**180**	P	**P**	**00 58 01.6**	**+0.1**
MLZ	**Mavora Lakes**	**23.89**	**184**	P	**P**	**00 58 05.2**	**-0.1**
DCZ	**Deep Cove**	**24.08**	**186**	P	**P**	**00 58 08.0**	**+1.1**
WHZ	**Wether Hill Ro**	**24.43**	**185**	P	**P**	**00 58 10.3**	**+0.2**
WHZ				IAmb	IAmb	00 58 21.1	
	comp=Z,18nm,1.1s						
TOO	**Toolangi**	**27.04**	**228**	P	**P**	**00 58 34.4**	**+0.6**
STKA	**Stephens Creek**	**27.90**	**242**	P	**P**	**00 58 42.2**	**+0.7**
	comp=Z,9.6nm,0.8s,baz=78,slow=12,SNR=14						
BBOO	**Buckleboo**	**32.68**	**242**	P	**P**	**00 59 23.7**	**+0.2**
BBOO				IAmb	IAmb	00 59 25.2	
	comp=Z,18nm,0.9s						
WR0	**Warramunga Arr**	**33.81**	**266**	P	**P**	**00 59 32.6**	**-0.8**
ASAR	**Alice Springs**	**33.98**	**259**	P	**P**	**00 59 35.0**	**0.0**
	comp=Z,7.1nm,0.7s,baz=91,slow=9.5,SNR=114						
WRAB	**Tennant Creek**	**33.99**	**266**	P	**P**	**00 59 34.6**	**-0.3**
WRA	**Warramunga Arr**	**34.00**	**266**	P	**P**	**00 59 34.4**	**-0.6**
	comp=Z,3.8nm,0.7s,baz=99,slow=8.0,SNR=20						
WRA	**Warramunga Arr**	**34.00**	**266**	IAmb	IAmb	00 59 35.4	
	comp=Z,0.4nm,0.9s						
FORT	**Forrest**	**39.18**	**247**	P	**P**	**01 00 17.9**	**-0.8**
FITZ	**Fitzroy Crossi**	**42.42**	**266**	P	**P**	**01 00 46.1**	**+0.8**
	comp=Z,13nm,1.0s,baz=111,slow=7.8,SNR=7.5						
FITZ	**Fitzroy Crossi**	**42.42**	**266**	P	**P**	**01 00 46.1**	**+0.8**
FITZ				IAmb	IAmb	01 00 46.9	
	comp=Z,12nm,0.9s						
SIJI	**Sorong**	**43.56**	**293**	P	**P**	**01 00 54.4**	**0.0**
	comp=Z,4.2nm,0.5s,baz=93,slow=11,SNR=4.0						
PSA00	**Pilbara Seismi**	**47.12**	**260**	P	**P**	**01 01 22.7**	**+0.3**
NWAO	**Narrogin (SRO)**	**48.44**	**245**	P	**P**	**01 01 32.7**	**+0.4**
	baz=96,slow=9.2						
NWAO	**Narrogin (SRO)**	**48.44**	**245**	P		**01 01 32.3**	**-0.1**
MORW	**Morawa**	**49.63**	**250**	IAmb	IAmb	01 01 42.4	
	comp=Z,22nm,1.0s						
MLOA	**Mauna Loa Obse**	**52.46**	**41**	P	**P**	**01 02 02.8**	**-0.2**
VNDA	**Vanda**	**56.23**	**182**	P	**P**	**01 02 29.5**	**+0.7**
SBA	**Scott Base**	**56.43**	**181**	P	**P**	**01 02 31.4**	**+1.1**
CASY	**Casey**	**58.62**	**204**	P	**P**	**01 02 45.0**	**-0.6**
CASY				IAmb	IAmb	01 02 46.1	
	comp=Z,12nm,0.8s						
MJAR	**Matsushiro Arr**	**65.39**	**332**	P	**P**	**01 03 32.3**	**+1.2**
	comp=Z,2.5nm,0.6s,baz=150,slow=6.8,SNR=13						
MJAR	**Matsushiro Arr**	**65.39**	**332**	IAmb	IAmb	01 03 41.6	
	comp=Z,1.7nm,0.8s						
MJB9	**Matsu-Tunnel**	**65.39**	**332**	P	**P**	**01 03 32.5**	**+1.3**
MJB9				IAmb	IAmb	01 03 39.8	
	comp=Z,8.7nm,1.0s						
QSPA	**South Pole Qui**	**68.56**	**180**	P	**P**	**01 03 51.1**	**+0.3**
QSPA				IAmb	IAmb	01 03 52.1	
	comp=Z,12nm,0.8s						
MAW	**Mawson**	**76.86**	**202**	P	**P**	**01 04 40.5**	**+1.0**
	comp=Z,8.6nm,0.7s,baz=120,slow=7.4,SNR=13						
KLR	**Kul'dur**	**78.49**	**335**	P	**P**	**01 04 49.7**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=169,slow=5.2,SNR=2.9						
CD2	**Chengdu**	**82.69**	**307**	P	**P**	**01 05 11.6**	**+0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**82.82**	**319**	*e*P	**P**	**01 05 14.5**	**+2.5**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,71nm,5.1s						
LZH	**Lanzhou**	**85.25**	**312**	⇓P	**P**	**01 05 24.8**	**+0.4**
LZH				pP	pP	01 06 07.0	-6.2
LZH				sP	sP	01 06 25.1	-9.0
LZH				PP	**PP**	**01 08 47.3**	**+1.9**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,81nm,8.2s						
SNAA	**Sanae**	**86.96**	**182**	P	**P**	**01 05 31.8**	**-0.3**
SNAA	**Sanae**	**86.96**	**182**	P	**P**	**01 05 31.9**	**-0.3**
VNA3	**Neumayer Olymp**	**87.50**	**180**	P	**P**	**01 05 34.2**	**-0.5**
EYAK	**Cordova Ski Ar**	**89.04**	**20**	P	**P**	**01 05 43.2**	**+1.4**
NVAR	**Mina Array Bea**	**89.28**	**48**	P	**P**	**01 05 45.6**	**+1.9**
	comp=Z,0.4nm,0.7s,baz=238,slow=5.2,SNR=3.6						
WMQ	**Urumqi**	**99.75**	**313**	*e*P	**Pdif**	**01 06 32.8**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,65nm,4.3s						
WMQ				LR	LR		
	comp=N,480nm,29.0s						
WMQ				LR	LR		
	comp=E,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,100nm,29.0s						
BOSA	**Boshof**	**120.05**	**215**	PKP	**PKiKP**	**01 11 40.0**	**+2.4**
	comp=Z,3.3nm,1.0s,baz=270,slow=3.0,SNR=4.1						
VYHS	**Vyhne**	**144.92**	**327**	*e*PKP	**PKiKP**	**01 12 25.0**	**-2.0**
GERES	**GERESS Array B**	**147.13**	**332**	PKPbc	**PKiKP**	**01 12 30.4**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=27,slow=4.7,SNR=7.2						
TORD	**Torodi Ar. Bea**	**166.62**	**233**	PKPab	**PKPab**	**01 13 56.0**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=113,slow=4.5,SNR=4.2						

IDC ***19*** *01:01:35.5±2.3, 6°.33S×130°.13E, h154km±23km, mb3.5/8, mb1 3.6/12, mb1mx3.5/31, mbtmp4.0/12, Error ellipse: s-maj=28.1km s-min=13.6km az=74.0*

NEIC ***19*** *01:01:36.1±1.4, 6°.29S±0°.06×130°.1E±0°.1, h158km±4km, mb4.0/5, Error ellipse: s-maj=17.0km s-min=7.8km az=71.0*

DJA ***19*** *01:01:37.4±0.4, 6°.5±3°×13°.0E±°, h169km±10km, M4.6/10, mB5.1/3, mb4.4/7, MLv4.7/10, Mw(mB)4.5/3*

ISC 19 01:01:35.3±0.6, 6°.24S±0°.05×130°.23E±0°.07, h150km, n34, σ2§55/37, mb3.9/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.03**	**148**	P	**Pn**	**01 02 12.9**	**+2.2**
SAUI				S	**Sn**	**01 02 41.7**	**+3.7**
SAUI	**Saumlaki**	**2.03**	**148**		**Pn**	**01 02 12.3**	**+1.6**
MSAI	**Masohi**	**3.16**	**336**	P	**Pn**	**01 02 27.9**	**+3.2**
MSAI	**Masohi**	**3.16**	**336**	P	**Pn**	**01 02 27.3**	**+2.6**
	1μm24nm,0.4s						
FAKI	**Fak Fak**	**3.87**	**31**	P	**Pn**	**01 02 35.4**	**+1.6**
FAKI				S	**Sn**	**01 03 17.8**	**-1.5**
FAKI	**Fak Fak**	**3.87**	**31**		**Pn**	**01 02 35.4**	**+1.6**
KMPI	**Kaimana, Papua**	**4.31**	**54**	P	**Pn**	**01 02 42.5**	**+2.9**
NLAI	**Namlea**	**4.32**	**314**	P	**Pn**	**01 02 44.4**	**+4.7**
SIJI	**Sorong**	**5.44**	**11**	P	**Pn**	**01 02 56.4**	**+1.8**
	3.7nm,0.3s,baz=56,slow=19,SNR=28						
SIJI				S	**Sn**	**01 03 54.2**	**-2.3**
	12nm,0.3s,baz=244,slow=2.8,SNR=4.4						
SWI	**Sorong**	**5.44**	**11**	P	**Pn**	**01 02 56.4**	**+1.8**
	1.0nm2μm17nm,0.5s						
SANI	**Sanana**	**5.94**	**314**	P	**Pn**	**01 03 04.0**	**+2.8**
	0.2nm58nm,0.7s						
RKPI	**Ransiki, Papua**	**6.13**	**40**	P	**Pn**	**01 03 06.5**	**+2.7**
	1.9nm4μm273nm,0.5s						
MTN	**Manton Dam**	**6.62**	**172**		**Pn**	**01 03 10.0**	**-0.2**
SOEI	**Soe**	**6.86**	**239**	P	**Pn**	**01 03 16.6**	**+3.0**
	0.6nm56nm,1.3s						
SOEI	**Soe**	**6.86**	**239**	Pn	**Pn**	**01 03 13.2**	**-0.3**
MRSI	**Marisa**	**10.63**	**309**	P	**Pn**	**01 04 06.8**	**+3.1**
FITZ	**Fitzroy Crossi**	**12.61**	**200**	P	**Pn**	**01 04 26.6**	**-2.8**
	1.1nm,0.3s,baz=36,slow=12,SNR=11						
FITZ				S	Sn	01 06 35.2	-14
	1.1nm,0.3s,baz=70,slow=12,SNR=3.5						
WRA	**Warramunga Arr**	**14.19**	**164**	P	**Pn**	**01 04 47.3**	**-2.3**
	1.1nm,0.3s,baz=348,slow=13,SNR=17						
WRA				S	Sn	01 07 13.5	-14
	3.3nm,0.3s,baz=344,slow=19,SNR=9.2						
COEN	**Coen**	**14.87**	**122**	P	**Pn**	**01 05 00.5**	**+2.3**
AS31	**Alice Springs**	**17.68**	**169**	P	**P**	**01 05 30.8**	**-0.4**
ASAR	**Alice Springs**

VYHS	**Vyhne**	**0.59**	**318**	*eP*	**Pg**	**01 34 46.9**	**+0.3**
VYHS				*e*		01 34 54.9	
VYHS	**Vyhne**	**0.59**	**318**	*ePG*	**Pg**	**01 34 46.9**	**+0.3**
VYHS				*eSG*	**Sg**	**01 34 54.9**	**+0.5**
BUD	**Budapest**	**0.63**	**206**⇑	*ePg*	**Pg**	**01 34 46.4**	**-0.9**
BUD			⇑	*eSg*	**Sg**	**01 34 54.7**	**-1.0**
SRO	**Srobarova**	**0.79**	**253**	*ePg*	**Pg**	**01 34 49.9**	**-0.3**
SRO				*eSg*	**Sg**	**01 35 00.6**	**+0.1**
SRO	**Srobarova**	**0.79**	**253**	*eP*	**Pg**	**01 34 49.9**	**-0.3**
SRO				*e*		01 35 00.6	
SRO				pmax	pmax		
	comp=N,20µm,0.8s						
SRO	**Srobarova**	**0.79**	**253**	*ePG*	**Pg**	**01 34 49.8**	**-0.4**
SRO				*eSG*	**Sg**	**01 35 00.6**	**+0.1**
SRO				*eLG*	Lg	01 35 06.2	
KECS	**Kecovo**	**0.83**	**58**	*ePg*	**Pg**	**01 34 50.2**	**-0.8**
KECS				*eSg*	**Sb**	**01 35 03.0**	**+0.6**
KECS	**Kecovo**	**0.83**	**58**	*eP*	**Pg**	**01 34 50.2**	**-0.8**
KECS				*e*		01 35 03.0	
KECS				pmax	pmax		
	comp=N,1µm,0.7s						
KECS	**Kecovo**	**0.83**	**58**	*ePG*	**Pg**	**01 34 50.2**	**-0.8**
KECS				*eSG*	**Sb**	**01 35 03.0**	**+0.6**
KECS				*eLG*	Lg	01 35 09.6	
KOLL	**Kolacno**	**0.86**	**308**	*ePG*	**Pb**	**01 34 52.0**	**+0.1**
KOLL				*eSG*	**Sb**	**01 35 03.3**	**-0.1**
BSZH	**Besenyszg**	**0.94**	**143**⇓	*ePg*	**Pg**	**01 34 53.2**	**0.0**
BSZH			⇓	*eSg*	**Sn**	**01 35 07.0**	**-0.4**
BSZH	**Besenyszg**	**0.94**	**143**	*ePgD*	**Pg**	**01 34 52.9**	**-0.3**
CSKK	**Cskako**	**1.05**	**229**⇑	*ePg*	**Pb**	**01 34 53.9**	**-1.2**
CSKK			⇑	*eSg*	**Sn**	**01 35 09.5**	**-0.5**
LANS	**Liptovska Anna**	**1.10**	**1**	*ePn*	**Pn**	**01 34 56.7**	**+0.5**
LANS				*eSn*	**Sn**	**01 35 11.5**	**+0.2**
LANS	**Liptovska Anna**	**1.10**	**1**	*eP*	**Pn**	**01 34 56.7**	**+0.5**
LANS				*e*		01 35 11.5	
LANS				pmax	pmax		
	comp=N,1µm,0.6s						
LANS	**Liptovska Anna**	**1.10**	**1**	*ePG*	**Pn**	**01 34 56.7**	**+0.5**
LANS				*eSG*	**Sn**	**01 35 11.5**	**+0.2**
LANS				*eLG*	Lg	01 35 19.8	
SMOL	**Smolenice**	**1.41**	**290**	*ePn*	**Pg**	**01 35 02.6**	**+0.5**
SMOL				*eSn*	**Sg**	**01 35 21.5**	**+1.1**
SMOL	**Smolenice**	**1.41**	**290**	*eP*	**Pg**	**01 35 02.6**	**+0.5**
SMOL				*e*		01 35 21.5	
SMOL				pmax	pmax		
	comp=N,1µm,0.8s						
SMOL	**Smolenice**	**1.41**	**290**	*ePG*	**Pg**	**01 35 02.5**	**+0.5**
SMOL				*eSG*	**Sg**	**01 35 21.5**	**+1.1**
SMOL				*eLG*	Lg	01 35 26.3	
JAVC	**Velka Javorina**	**1.42**	**305**	*ePn*	**Pb**	**01 35 01.4**	**0.0**
	SNR=63						
JAVC				*eSn*	**Sg**	**01 35 21.6**	**+0.9**
	SNR=4.6						
JAVC	**Velka Javorina**	**1.42**	**305**	*ePn*	**Pb**	**01 35 01.4**	**0.0**
	SNR=63						
JAVC				*eSn*	**Sg**	**01 35 21.6**	**+0.9**
	SNR=4.6						
JAVC	**Velka Javorina**	**1.42**	**305**	*ePG*	**Pb**	**01 35 01.2**	**-0.2**
JAVC				*eSG*	**Sn**	**01 35 19.2**	**-0.1**
JAVC	**Velka Javorina**	**1.42**	**305**	*ePg*	**Pb**	**01 35 01.1**	**-0.3**
	baz=126						
JAVC				*eSg*	**Sn**	**01 35 19.2**	**-0.1**
	comp=N,2µm,0.9s,baz=126						
MODS	**Modra-Piesok**	**1.47**	**283**	*ePn*	**Pb**	**01 35 02.5**	**+0.2**
MODS				*eSn*	**Sg**	**01 35 22.6**	**+0.2**
MODS	**Modra-Piesok**	**1.47**	**283**	*eP*	**Pb**	**01 35 02.5**	**+0.2**
MODS				*e*		01 35 22.6	
MODS				pmax	pmax		
	comp=N,4µm,1.1s						
MODS	**Modra-Piesok**	**1.47**	**283**	*ePG*	**Pb**	**01 35 02.5**	**+0.2**
MODS				*eSG*	**Sg**	**01 35 22.6**	**+0.2**
MODS				*eLG*	Lg	01 35 27.6	
NIE	**Niedzica**	**1.48**	**23**⇓	*eP*	**Pb**	**01 35 02.9**	**+0.4**
NIE				*e*		01 35 23.5	
NIE	**Niedzica**	**1.48**	**23**	*ePn*	**Pb**	**01 35 02.9**	**+0.4**
	SNR=604						
NIE				*eSn*	**Sg**	**01 35 23.1**	**+0.4**
NIE	**Niedzica**	**1.48**	**23**	*ePn*	**Pb**	**01 35 02.9**	**+0.4**
	SNR=604						
NIE				*eSn*	**Sg**	**01 35 23.1**	**+0.4**
NIE	**Niedzica**	**1.48**	**23**	*ePg*	**Pb**	**01 35 02.7**	**+0.2**
NIE				*eSg*	**Sg**	**01 35 23.4**	**+0.6**
NIE	**Niedzica**	**1.48**	**23**	*ePnd*	**Pb**	**01 35 02.9**	**+0.4**
NIE				*eSn*	**Sg**	**01 35 23.5**	**+0.8**
MPLH	**Magyarpolny**	**1.55**	**236**⇓	*ePn*	**Pn**	**01 35 02.9**	**+0.5**
MPLH			⇓	*eSn*	**Sg**	**01 35 27.1**	**+2.1**
TIH	**Tihany**	**1.56**	**223**	*ePn*	**Pn**	**01 35 03.0**	**+0.6**
TIH				*eSn*	**Sg**	**01 35 25.4**	**+0.4**
ZST	**Bratislava**	**1.56**	**276**	*ePn*	**Pb**	**01 35 04.3**	**+0.5**
ZST				*eSn*	**Sg**	**01 35 25.5**	**+0.2**
ZST	**Bratislava**	**1.56**	**276**	*eP*	**Pb**	**01 35 04.3**	**+0.5**
ZST				*e*		01 35 25.5	
ZST				pmax	pmax		
	comp=N,1µm,0.7s						
ZST	**Bratislava**	**1.56**	**276**	*ePG*	**Pb**	**01 35 04.3**	**+0.5**
ZST				*eSG*	**Sg**	**01 35 25.5**	**+0.2**
ZST				*eLG*	Lg	01 35 26.7	
LTVH	**Ltavrtes, Hu**	**1.80**	**111**	*eSn*	**Sg**	**01 35 32.5**	**-0.4**
STHS	**Stebnicka Huta**	**1.82**	**41**	*ePn*	**Pn**	**01 35 06.9**	**+0.8**
STHS	**Stebnicka Huta**	**1.82**	**41**	*eP*	**Pn**	**01 35 06.9**	**+0.8**
STHS				*e*		01 35 35.2	
STHS				pmax	pmax		
	comp=N,545nm,0.8s						
STHS	**Stebnicka Huta**	**1.82**	**41**	*ePN*	**Pn**	**01 35 06.9**	**+0.8**
STHS				*eSG*	**Sg**	**01 35 35.2**	**+1.7**
STHS				*eLG*	Lg	01 35 43.8	
MORH	**Mrgy, Hungar**	**1.92**	**196**	*ePn*	**Pn**	**01 35 06.3**	**-1.1**
MORH	**Mrgy, Hungar**	**1.92**	**196**⇓	*iPn*	**Pn**	**01 35 06.1**	**-1.3**
SOP	**Sopron**	**1.97**	**260**	*ePn*	**Pn**	**01 35 07.9**	**-0.2**
OKC	**Ostrava-Krasne**	**1.97**	**335**	*ePn*	**Pn**	**01 35 09.5**	**+1.3**
OKC				*eSn*	**Sn**	**01 35 33.4**	**+0.6**
OKC	**Ostrava-Krasne**	**1.97**	**335**	*eP*	**Pn**	**01 35 09.5**	**+1.3**
OKC				*e*		01 35 33.4	
OKC	**Ostrava-Krasne**	**1.97**	**335**	*ePn*	**Pn**	**01 35 09.4**	**+1.3**
	SNR=20						
OKC	**Ostrava-Krasne**	**1.97**	**335**	*ePn*	**Pn**	**01 35 09.4**	**+1.3**
	SNR=20						
OKC	**Ostrava-Krasne**	**1.97**	**335**	*ePN*	**Pn**	**01 35 09.5**	**+1.3**
OKC				*eSN*	**Sn**	**01 35 33.4**	**+0.6**
UZH	**Uzhgorod**	**2.00**	**72**⇓	*iP*	**Pn**	**01 35 07.5**	**-1.0**
UZH				*eS*	**Sn**	**01 35 32.8**	**-0.6**
UZH				smax	smax		
	comp=E,220nm,0.8s						
CEI	**Carei**	**2.07**	**99**⇓	*iPn*	**Pn**	**01 35 09.5**	**-0.1**
CEI	**Carei**	**2.07**	**99**	*P*	**Pn**	**01 35 09.5**	**-0.1**
CEI	**Carei**	**2.07**	**99**	*⇓P*	**Pn**	**01 35 09.5**	**-0.1**
CEI	**Carei**	**2.07**	**99**		**Pn**	**01 35 09.5**	**-0.1**
KOLS	**Kolonicke sedl**	**2.09**	**64**	*ePn*	**Pn**	**01 35 09.7**	**-0.1**
KOLS	**Kolonicke sedl**	**2.09**	**64**	*eP*	**Pn**	**01 35 09.7**	**-0.1**
KOLS	**Kolonicke sedl**	**2.09**	**64**	*ePN*	**Pn**	**01 35 09.7**	**-0.1**
KOLS				*ePG*	**Pg**	**01 35 15.1**	**+0.1**
TRPA	**Tarpa**	**2.09**	**87**	*ePn*	**Pn**	**01 35 09.2**	**-0.6**
TRPA				*eSn*	**Sg**	**01 35 43.6**	**+1.5**
TRPA	**Tarpa**	**2.09**	**87**	*⇓P*	**Pn**	**01 35 09.1**	**-0.7**
TRPA	**Tarpa**	**2.09**	**87**	*⇓S*	**Sb**	**01 35 38.2**	**-0.4**
TRPA	**Tarpa**	**2.09**	**87**		**Pn**	**01 35 09.1**	**-0.7**
TRPA					**Sb**	**01 35 38.2**	**-0.4**
MORC	**Moravsky Berou**	**2.12**	**325**	*iPn*	**Pn**	**01 35 10.6**	**+0.3**
MORC	**Moravsky Berou**	**2.12**	**325**	*P*	**Pn**	**01 35 10.2**	**-0.1**
MORC						01 35 36.7	
MORC	**Moravsky Berou**	**2.12**	**325**	*ePn*	**Pn**	**01 35 11.2**	**+0.9**
	SNR=47						
MORC				*eSn*	**Sn**	**01 35 37.1**	**+0.4**
	SNR=4.0						
MORC	**Moravsky Berou**	**2.12**	**325**	*ePn*	**Pn**	**01 35 11.2**	**+0.9**
	SNR=47						
MORC				*eSn*	**Sn**	**01 35 37.1**	**+0.4**
	SNR=4.0						
MORC	**Moravsky Berou**	**2.12**	**325**	⇑*P*	**Pn**	**01 35 10.6**	**+0.3**
MORC	**Moravsky Berou**	**2.12**	**325**	⇑*S*	**Sn**	**01 35 36.7**	**+0.1**
MORC	**Moravsky Berou**	**2.12**	**325**	*ePN*	**Pn**	**01 35 10.6**	**+0.3**
MORC				*eSN*	**Sn**	**01 35 38.0**	**+1.3**
MORC	**Moravsky Berou**	**2.12**	**325**		**Pn**	**01 35 10.2**	**-0.1**
MORC	**Moravsky Berou**	**2.12**	**325**		**Pn**	**01 35 10.6**	**+0.3**
MORC					**Sn**	**01 35 36.7**	**+0.1**
MORC	**Moravsky Berou**	**2.12**	**325**	*ePn*	**Pn**	**01 35 10.5**	**+0.3**
	baz=145						
MORC				*eSn*	**Sn**	**01 35 37.9**	**+1.3**
	comp=E,503nm,0.6s,baz=145						
OJC	**Ojcow**	**2.18**	**6**	*eP*	**Pn**	**01 35 11.8**	**+0.8**
OJC				*e*		01 35 38.2	
OJC	**Ojcow**	**2.18**	**6**	*ePn*	**Pn**	**01 35 11.8**	**+0.8**
	SNR=6.4						
OJC	**Ojcow**	**2.18**	**6**	*ePn*	**Pn**	**01 35 11.8**	**+0.8**
	SNR=6.4						
OJC	**Ojcow**	**2.18**	**6**	*eP*	**Pn**	**01 35 11.8**	**+0.8**
OJC				*eS*	**Sn**	**01 35 38.0**	**0.0**
OJC	**Ojcow**	**2.18**	**6**	*ePn*	**Pn**	**01 35 11.8**	**+0.8**
OJC				*eSn*	**Sn**	**01 35 38.2**	**+0.2**
OJC	**Ojcow**	**2.18**	**6**		**Pn**	**01 35 11.3**	**+0.3**
RAC	**Raciborz**	**2.19**	**339**	*eP*	**Pg**	**01 35 16.6**	**-0.3**
RAC				*e*		01 35 45.6	
KRUC	**Moravsky**	**2.25**	**298**	*ePn*	**Pn**	**01 35 11.7**	**-0.3**
	SNR=185						
KRUC	**Moravsky**	**2.25**	**298**	*ePn*	**Pn**	**01 35 11.7**	**-0.3**
	SNR=185						
KRUC	**Moravsky**	**2.25**	**298**	*ePN*	**Pn**	**01 35 11.6**	**-0.4**
KRUC				*eSN*	**Sn**	**01 35 40.7**	**+1.0**
KRUC	**Moravsky**	**2.25**	**298**	*ePn*	**Pn**	**01 35 11.6**	**-0.4**
	baz=117						
KRUC				*eSn*	**Sn**	**01 35 40.6**	**+0.9**
	comp=E,330nm,0.9s,baz=117						
VRAC	**Vranov**	**2.26**	**305**	*iPn*	**Pn**	**01 35 12.3**	**+0.1**
VRAC	**Vranov**	**2.26**	**305**	*P*	**Pn**	**01 35 12.3**	**+0.1**
VRAC						01 35 40.1	
VRAC	**Vranov**	**2.26**	**305**	*ePn*	**Pn**	**01 35 12.4**	**+0.3**
	SNR=329						
VRAC				*eSn*	**Sn**	**01 35 40.3**	**+0.4**
	SNR=4.7						
VRAC	**Vranov**	**2.26**	**305**	*ePn*	**Pn**	**01 35 12.4**	**+0.3**
	SNR=329						
VRAC				*eSn*	**Sn**	**01 35 40.3**	**+0.4**
	SNR=4.7						
VRAC	**Vranov**	**2.26**	**305**	*Pn*	**Pn**	**01 35 12.3**	**+0.1**
	comp=E,77nm,0.3s,baz=116,slow=13,SNR=634						
VRAC				*Sn*	**Sn**	**01 35 39.5**	**-0.4**
	comp=E,99nm,0.3s,baz=82,slow=17,SNR=9.1						
VRAC				*LR*	LR	01 36 31.4	
	comp=E,462nm,18.1s,baz=141,slow=50						
VRAC	**Vranov**	**2.26**	**305**	⇑*P*	**Pn**	**01 35 12.3**	**+0.1**
VRAC	**Vranov**	**2.26**	**305**	⇑*S*	**Sn**	**01 35 40.1**	**+0.2**
VRAC	**Vranov**	**2.26**	**305**	*ePN*	**Pn**	**01 35 12.3**	**+0.1**
VRAC				*eSN*	**Sn**	**01 35 40.7**	**+0.8**
VRAC	**Vranov**	**2.26**	**305**		**Pn**	**01 35 12.3**	**+0.1**
VRAC					**Sn**	**01 35 40.1**	**+0.2**
VRAC	**Vranov**	**2.26**	**305**	*ePn*	**Pn**	**01 35 12.2**	**+0.1**
	baz=124						
VRAC				*eSn*	**Sn**	**01 35 40.6**	**+0.7**
	comp=E,346nm,0.5s,baz=124						
SIRR	**Siria**	**2.35**	**139**	*iPn*	**Pn**	**01 35 12.7**	**-0.7**
SIRR	**Siria**	**2.35**	**139**	⇑*P*	**Pn**	**01 35 12.7**	**-0.7**
SIRR	**Siria**	**2.35**	**139**		**Pn**	**01 35 12.7**	**-0.7**
CONA	**Conrad Observa**	**2.40**	**268**	*Pn*	**Pn**	**01 35 13.7**	**-0.4**
CONA				*Sn*	**Sn**	**01 35 42.6**	**-0.9**
CONA	**Conrad Observa**	**2.40**	**268**	*iPn*	**Pn**	**01 35 13.8**	**-0.4**
	comp=E,128nm,0.4s,SNR=179						
CONA				*Sn*	**Sn**	**01 35 42.6**	**-0.9**
	comp=E,414nm,0.7s						
CONA	**Conrad Observa**	**2.40**	**268**		**Pn**	**01 35 13.8**	**-0.4**
CONA					**Sn**	**01 35 42.6**	**-0.9**
BEHE	**Becsehely**	**2.40**	**230**	*ePn*	**Pn**	**01 35 15.0**	**+0.9**
BEHE				*eSn*	**Sn**	**01 35 44.3**	**+0.9**
BEHE	**Becsehely**	**2.40**	**230**	*ePn*	**Pn**	**01 35 14.5**	**+0.4**
DRGR		**2.56**	**118**	*ePn*	**Pn**	**01 35 16.2**	**-0.1**
DRGR		**2.56**	**118**	*iPn*	**Pn**	**01 35 16.3**	**-0.1**
DRGR		**2.56**	**118**	*P*	**Pn**	**01 35 16.3**	**-0.1**
DRGR		**2.56**	**118**	⇑*P*	**Pn**	**01 35 16.3**	**-0.1**
DRGR		**2.56**	**118**		**Pn**	**01 35 16.3**	**-0.1**
TIM	**Timisoara**	**2.62**	**151**	*iPn*	**Pn**	**01 35 16.9**	**-0.2**
TIM	**Timisoara**	**2.62**	**151**	*P*	**Pn**	**01 35 16.9**	**-0.2**
TIM	**Timisoara**	**2.62**	**151**	⇑*P*	**Pn**	**01 35 16.9**	**-0.2**
TIM	**Timisoara**	**2.62**	**151**		**Pn**	**01 35 16.9**	**-0.2**
KRLC	**Kraliky**	**2.67**	**320**	*ePn*	**Pn**	**01 35 18.7**	**+0.9**
KRLC				*eSn*	**Sn**	**01 35 49.4**	**-0.6**
KRLC	**Kraliky**	**2.67**	**320**	*eP*	**Pn**	**01 35 18.7**	**+0.9**
KRLC				*e*		01 35 49.4	
KRLC	**Kraliky**	**2.67**	**320**	*ePN*	**Pn**	**01 35 18.7**	**+0.9**
KRLC				*eSN*	**Sn**	**01 35 49.4**	**-0.6**
KWP	**Kalwaria Pacla**	**2.68**	**53**⇓	*eP*	**Pn**	**01 35 19.6**	**+1.7**
KWP	**Kalwaria Pacla**	**2.68**	**53**	*ePnd*	**Pn**	**01 35 19.6**	**+1.7**
KWP				*eSn*	Sg	01 36 16.5	+15
KWP	**Kalwaria Pacla**	**2.68**	**53**		**Pn**	**01 35 19.0**	**+1.1**
KOGS	**Kog**	**2.69**	**235**	*ePn*	**Pn**	**01 35 18.1**	**0.0**
KOGS				*eSn*	**Sg**	**01 36 04.6**	**+3.0**
KOGS	**Kog**	**2.69**	**235**	*ePn*	**Pn**	**01 35 18.1**	**0.0**
KOGS				*ePg*	**Pg**	**01 35 25.5**	**-1.1**
KOGS				*eSg*	**Sg**	**01 36 04.6**	**+3.0**
ARSA	**Arzberg**	**2.76**	**254**	*Pn*	**Pn**	**01 35 19.0**	**0.0**
ARSA				*Sn*	**Sn**	**01 35 52.3**	**+0.1**
ARSA	**Arzberg**	**2.76**	**254**	*ePn*	**Pn**	**01 35 19.1**	**0.0**
	SNR=49						
ARSA	**Arzberg**	**2.76**	**254**	*ePn*	**Pn**	**01 35 19.1**	**0.0**
	SNR=49						
ARSA	**Arzberg**	**2.76**	**254**	*iPn*	**Pn**	**01 35 19.0**	**0.0**
	comp=E,23nm,0.3s,SNR=25						
ARSA				*Sn*	**Sn**	**01 35 52.3**	**+0.1**
	comp=E,148nm,0.6s						
ARSA	**Arzberg**	**2.76**	**254**		**Pn**	**01 35 19.0**	**0.0**
ARSA					**Sn**	**01 35 52.3**	**+0.1**
BMR	**Baia Mare**	**2.77**	**96**	*iPn*	**Pn**	**01 35 19.9**	**+0.8**
BMR	**Baia Mare**	**2.77**	**96**	*P*	**Pn**	**01 35 19.9**	**+0.8**
BMR	**Baia Mare**	**2.77**	**96**	⇑*P*	**Pn**	**01 35 19.9**	**+0.8**
BMR	**Baia Mare**	**2.77**	**96**		**Pn**	**01 35 19.9**	**+0.8**
KALN	**Kalnik**	**2.80**	**228**	*ePn*	**Pn**	**01 35 19.4**	**-0.2**
BZS	**Buzias**	**2.87**	**148**	*ePn*	**Pn**	**01 35 19.8**	**-0.7**
BZS	**Buzias**	**2.87**	**148**	*iPn*	**Pn**	**01 35 19.8**	**-0.7**
BZS	**Buzias**	**2.87**	**148**	*P*	**Pn**	**01 35 19.8**	**-0.7**
BZS	**Buzias**	**2.87**	**148**	⇑*P*	**Pn**	**01 35 19.8**	**-0.7**
BZS	**Buzias**	**2.87**	**148**		**Pn**	**01 35 19.8**	**-0.7**
TREC	**Trest**	**2.89**	**297**	*ePn*	**Pn**	**01 35 21.0**	**+0.2**
TREC				*eSn*	**Sn**	**01 35 54.0**	**-1.5**
TREC	**Trest**	**2.89**	**297**	*eP*	**Pn**	**01 35 21.0**	**+0.2**
TREC				*e*		01 35 54.0	
TREC	**Trest**	**2.89**	**297**	*ePn*	**Pn**	**01 35 21.1**	**+0.3**
	SNR=20						
TREC				*eSn*	**Sn**	**01 35 55.5**	**0.0**
	SNR=1.9						
TREC	**Trest**	**2.89**	**297**	*ePn*	**Pn**	**01 35 21.1**	**+0.3**
	SNR=20						
TREC				*eSn*	**Sn**	**01 35 55.5**	**0.0**
	SNR=1.9						
TREC	**Trest**	**2.89**	**297**	*ePN*	**Pn**	**01 35 21.0**	**+0.2**
TREC				*eSN*	**Sn**	**01 35 54.0**	**-1.5**
FRGS	**Fruska Gora**	**2.91**	**175**	*iPn*	**Pn**	**01 35 20.4**	**-0.7**
FRGS	**Fruska Gora**	**2.91**	**175**⇑	*iPn*	**Pn**	**01 35 20.2**	**-0.9**
BANR	**Banloc**	**2.92**	**156**	*iPn*	**Pn**	**01 35 21.1**	**-0.1**
BANR	**Banloc**	**2.92**	**156**	*⇓P*	**Pn**	**01 35 21.1**	**-0.1**
BANR	**Banloc**	**2.92**	**156**		**Pn**	**01 35 21.1**	**-0.1**
MOSL	**Moslavina**	**3.05**	**218**	*ePn*	**Pn**	**01 35 22.6**	**+0.5**
DPC	**Dobruska-Polom**	**3.07**	**320**	*ePn*	**Pn**	**01 35 24.3**	**+1.0**
DPC				*eSn*	**Sn**	**01 35 59.8**	**-0.2**
DPC	**Dobruska-Polom**	**3.07**	**320**	*eP*	**Pn**	**01 35 24.3**	**+1.0**
DPC				*e*		01 35 59.8	
DPC	**Dobruska-Polom**	**3.07**	**320**	*ePn*	**Pn**	**01 35 24.5**	**+1.2**
	SNR=49						
DPC	**Dobruska-Polom**	**3.07**	**320**	*ePn*	**Pn**	**01 35 24.5**	**+1.2**
	SNR=49						
DPC	**Dobruska-Polom**	**3.07**	**320**	*ePN*	**Pn**	**01 35 24.3**	**+1.0**
DPC				*eSN*	**Sn**	**01 35 59.8**	**-0.2**
CJR	**Cluj-Napoca**	**3.14**	**114**	*iPn*	**Pn**	**01 35 25.2**	**+0.9**
CJR	**Cluj-Napoca**	**3.14**	**114**	*P*	**Pn**	**01 35 25.2**	**+0.9**
CJR	**Cluj-Napoca**	**3.14**	**114**	*⇓P*	**Pn**	**01 35 25.2**	**+0.9**
CJR	**Cluj-Napoca**	**3.14**	**114**		**Pn**	**01 35 25.2**	**+0.9**
PTJ	**Puntijarka**	**3.20**	**229**	*ePn*	**Pn**	**01 35 24.9**	**-0.3**
DEV	**Deva**	**3.22**	**131**	*iPn*	**Pn**	**01 35 25.3**	**-0.1**
DEV	**Deva**	**3.22**	**131**	*P*	**Pn**	**01 35 25.3**	**-0.1**
DEV	**Deva**	**3.22**	**131**	*⇓P*	**Pn**	**01 35 25.3**	**-0.1**
DEV	**Deva**	**3.22**	**131**		**Pn**	**01 35 25.3**	**-0.1**
ZAG	**Zagreb**	**3.24**	**228**	*ePn*	**Pn**	**01 35 26.2**	**+0.5**
ZAG	**Zagreb**	**3.24**	**228**	*ePn*	**Pn**	**01 35 26.1**	**+0.5**
BISS	**Bistriski jare**	**3.24**	**246**	*iPn*	**Pn**	**01 35 25.4**	**-0.3**
BISS	**Bistriski jare**	**3.24**	**246**	*iPn*	**Pn**	**01 35 25.5**	**-0.3**
PERS	**Pernice**	**3.26**	**246**⇑	*iPn*	**Pn**	**01 35 25.8**	**-0.1**
PERS	**Pernice**	**3.26**	**246**⇑	*iPn*	**Pn**	**01 35 25.8**	**-0.1**
OSTC	**Ostas**	**3.27**	**321**	*ePN*	**Pn**	**01 35 27.1**	**+1.1**
OSTC				*eSN*	**Sn**	**01 36 05.1**	**+0.3**
SOKA	**Soboth**	**3.29**	**247**	*Pn*	**Pn**	**01 35 26.3**	**-0.1**
SOKA				*Sn*	**Sn**	**01 36 04.2**	**-1.2**
SOKA	**Soboth**	**3.29**	**247**	*ePn*	**Pn**	**01 35 26.3**	**-0.1**
	comp=E,28nm,0.4s,SNR=16						
SOKA				*Sn*	**Sn**	**01 36 04.2**	**-1.2**
	comp=E,46nm,0.5s						
SOKA	**Soboth**	**3.29**	**247**		**Pn**	**01 35 26.3**	**-0.1**
SOKA					**Sn**	**01 36 04.2**	**-1.2**
UPC	**Upice**	**3.32**	**319**	*ePn*	**Pn**	**01 35 27.6**	**+0.9**
UPC				*eSn*	**Sn**	**01 36 06.1**	**0.0**
UPC	**Upice**	**3.32**	**319**	*eP*	**Pn**	**01 35 27.6**	**+0.9**
UPC				*e*		01 36 06.1	
UPC	**Upice**	**3.32**	**319**	*ePN*	**Pn**	**01 35 27.6**	**+0.9**
UPC				*eSN*	**Sn**	**01 36 06.1**	**0.0**
BEO	**Beograd**	**3.33**	**167**	*ePn*	**Pn**	**01 35 26.4**	**-0.4**
CHVC	**Chvalec**	**3.36**	**320**	*ePn*	**Pn**	**01 35 28.0**	**+0.7**
CHVC				*eSN*	**Sn**	**01 36 05.2**	**-1.9**
DOB	**Doboj**	**3.45**	**196**	*ePn*	**Pn**	**01 35 28.1**	**-0.4**
KSP	**Ksiaz**	**3.46**	**325**	*eP*	**Pn**	**01 35 30.0**	**+1.4**
KSP	**Ksiaz**	**3.46**	**325**	*ePn*	**Pn**	**01 35 30.1**	**+1.5**
	SNR=50						
KSP	**Ksiaz**	**3.46**	**325**	*ePn*	**Pn**	**01 35 30.1**	**+1.5**
	SNR=50						
KSP	**Ksiaz**	**3.46**	**325**	*ePn*	**Pn**	**01 35 30.0**	**+1.4**
ARCR	**ARCALIA**	**3.47**	**104**	*iPn*	**Pn**	**01 35 29.8**	**+1.0**
ARCR	**ARCALIA**	**3.47**	**104**	⇑*P*	**Pn**	**01 35 29.8**	**+1.0**
ARCR	**ARCALIA**	**3.47**	**104**		**Pn**	**01 35 29.8**	**+1.0**
MOA	**Molln**	**3.48**	**269**	*ePn*	**Pn**	**01 35 29.1**	**+0.2**
MOA	**Molln**	**3.48**	**269**	*Pn*	**Pn**	**01 35 29.0**	**+0.2**
MOA	**Molln**	**3.48**	**269**	*ePn*	**Pn**	**01 35 29.2**	**+0.2**
	SNR=87						
MOA	**Molln**	**3.48**	**269**	*ePn*	**Pn**	**01 35 29.2**	**+0.2**
	SNR=87						
MOA	**Molln**	**3.48**	**269**	*iPn*	**Pn**	**01 35 29.1**	**+0.2**
	comp=E,16nm,0.3s,SNR=24						
MOA	**Molln**	**3.48**	**269**		**Pn**	**01 35 29.1**	**+0.2**
TEKS	**Tekeris**	**3.51**	**179**	*ePn*	**Pn**	**01 35 29.8**	**+0.5**
TEKS	**Tekeris**	**3.51**	**179**	*ePn*	**Pn**	**01 35 26.7**	**-2.6**
LVV	**L'vov**	**3.51**	**58**	*iP*	**Pn**	**01 35 30.5**	**+1.2**
LVV				*iS*	**Sn**	**01 36 10.0**	**-0.8**
LVV				MLR	MLR		
	comp=Z,380nm,3.3s						
CRES	**Cresnjev**	**3.52**	**232**	*ePn*	**Pn**	**01 35 29.1**	**-0.3**
GZR	**Gura Zlata**	**3.52**	**138**⇓	*iPn*	**Pn**	**01 35 29.5**	**0.0**
GZR	**Gura Zlata**	**3.52**	**138**	*P*	**Pn**	**01 35 29.5**	**0.0**
GZR	**Gura Zlata**	**3.52**	**138**	*⇓P*	**Pn**	**01 35 29.5**	**0.0**
GZR	**Gura Zlata**	**3.52**	**138**		**Pn**	**01 35 29.5**	**0.0**
MDVR	**Moldovita**	**3.64**	**153**⇓	*iPn*	**Pn**	**01 35 30.8**	**-0.3**
MDVR	**Moldovita**	**3.64**	**153**	⇓*P*	**Pn**	**01 35 30.8**	**-0.3**
MDVR	**Moldovita**	**3.64**	**153**		**Pn**	**01 35 30.8**	**-0.3**
BLY	**Banja Luka**	**3.65**	**206**	*ePn*	**Pn**	**01 35 30.9**	**-0.3**
BLY	**Ban

PRAR RASCA 4.64 96 Pn 01 35 45.8 +0.9
BIZ Bicaz 4.66 101 ⇑P Pn 01 35 46.1 +0.9
BIZ Bicaz 4.66 101 Pn 01 35 46.1 +0.9
VOIR 4.67 122 P Pn 01 35 45.9 +0.6
VOIR 4.67 122 ⇑P Pn 01 35 45.9 +0.6
VOIR 4.67 122 Pn 01 35 45.9 +0.6
ZAGS Zajecar 4.67 154 *i* Pn Pn 01 35 44.1 -1.2
BOVS Bovan 4.70 159 *i* Pn Pn 01 35 45.2 -0.5
NVLJ Novalja 4.71 224 *e*Pn Pn 01 35 47.5 +1.8
OZUR 4.77 112 ⇑P Pn 01 35 47.5 +0.9
OZUR 4.77 112 Pn 01 35 47.5 +0.9
MTUR Matau 4.80 124 P Pn 01 35 48.5 +1.3
MTUR Matau 4.80 124 ⇓P Pn 01 35 48.5 +1.3
MTUR Matau 4.80 124 Pn 01 35 48.5 +1.3
SJES Sjenica 4.81 175 *i* Pn Pn 01 35 47.4 +0.1
ABTA Abfaltersbach 4.87 257 *e*Pn Pn 01 35 48.4 +0.2
comp=Z,12nm,0.5s
ABTA Abfaltersbach 4.87 257 Pn 01 35 48.4 +0.2
FBE Freiberg 4.89 308 *e*Pn Pn 01 35 48.6 +0.4
SNR=12
FBE Freiberg 4.89 308 *e*Pn Pn 01 35 48.6 +0.4
SNR=12
GIRR Girov 4.92 100 ⇓P Pn 01 35 49.1 +0.4
GIRR Girov 4.92 100 Pn 01 35 49.1 +0.4
STAL STALIGIAL 4.92 251 Pn Pn 01 35 48.9 +0.1
MORI Morici 4.93 213 *e*Pn Pn 01 35 50.5 +1.7
MORI Sn Sn 01 36 48.5 +0.9
SELS Selova 4.98 166 *i* Pn Pn 01 35 49.3 -0.3
BRJN Brijuni 5.03 233 *e*Pn Pn 01 35 50.8 +0.6
ROTZ Rotzenmuhle 5.06 292 *e*Pn Pn 01 35 50.8 +0.2
SNR=43
ROTZ Rotzenmuhle 5.06 292 *e*Pn Pn 01 35 50.8 +0.2
SNR=43
NKC Novy Kostel 5.07 298 *e*P Pn 01 35 51.4 +0.6
NKC *e* 01 36 46.6
NKC Novy Kostel 5.07 298 *e*Pn Pn 01 35 51.4 +0.6
SNR=23
NKC *e*Sn Sn 01 36 48.3 -1.0
SNR=2.4
NKC Novy Kostel 5.07 298 *e*Pn Pn 01 35 51.4 +0.6
SNR=23
NKC *e*Sn Sn 01 36 48.3 -1.0
SNR=2.4
NKC Novy Kostel 5.07 298 *e*PN Pn 01 35 51.4 +0.6
NKC *e*SN Sn 01 36 46.6 -2.7
DUGI Dugi Otok 5.08 218 *e*Pn Pn 01 35 53.1 +2.2
RISI Rein 5.10 260 ⇑*i*PmP 01 35 52.4
ZIRJ Zirje 5.13 212 *i* Pn Pn 01 35 52.6 +1.0
WERN Wernitzgruen 5.14 298 *e*Pn Pn 01 35 52.2 +0.5
SNR=47
WERN *e*Sn Sn 01 36 50.7 -0.2
SNR=1.8
WERN Wernitzgruen 5.14 298 *e*Pn Pn 01 35 52.2 +0.5
SNR=47
WERN *e*Sn Sn 01 36 50.7 -0.2
SNR=1.8
TANN Tannenbergstha 5.14 300 *e*Pn Pn 01 35 51.8 0.0
SNR=37
TANN Tannenbergstha 5.14 300 *e*Pn Pn 01 35 51.8 0.0
SNR=37
TESR Tescani 5.15 105 ⇑P Pn 01 35 53.5 +1.6
TESR Tescani 5.15 105 Pn 01 35 53.5 +1.6
MLR Muntele Rosu 5.16 117 Pn Pn 01 35 52.5 +0.4
comp=Z,0.6nm,0.3s,baz=337,slow=12,SNR=11
MLR Lg Lg 01 37 11.3
comp=Z,0.4nm,0.3s,baz=18,slow=20,SNR=2.3
MLR Muntele Rosu 5.16 117 ⇑P Pn 01 35 52.8 +0.6
MLR Muntele Rosu 5.16 117 Pn 01 35 52.8 +0.6
MANZ Manzenberg 5.19 295 *e*Pn Pn 01 35 52.5 +0.1
SNR=79
MANZ Manzenberg 5.19 295 *e*Pn Pn 01 35 52.5 +0.1
SNR=79
GUNZ Gunzen 5.19 299 *e*Pn Pn 01 35 52.8 +0.3
SNR=45
GUNZ Gunzen 5.19 299 *e*Pn Pn 01 35 52.8 +0.3
SNR=45
ZAPS Zavoj 5.28 154 *i* Pn Pn 01 35 53.8 +0.1
CLL Collm 5.29 310 *i* P Pn 01 35 53.9 +0.1
CLL Collm 5.29 310 *i* Pn Pn 01 35 53.9 +0.1
CLL *e*Pg Pg 01 36 20.0 +3.8
CLL *e*Sn Sn 01 36 42.0 -13
CLL *e* 01 36 53.0
CLL *e* 01 37 11.0
CLL *e*Sg Sg 01 37 23.0 -1.7
comp=Z,150nm,0.8s
CLL Lm MLR 01 38 00.0
comp=Z,100nm,20.6s
CLL Collm 5.29 310 *e*Pn Pn 01 35 53.9 +0.1
SNR=46
CLL Collm 5.29 310 *e*Pn Pn 01 35 53.9 +0.1
SNR=46
CLL Collm 5.29 310 Pn 01 35 53.6 -0.1
HVAR Hvar 5.30 204 *e*Pn Pn 01 35 55.5 +1.5
HVAR Sn Sn 01 36 55.5 +0.6
WTTA Wattenberg 5.32 264 ⇓*i*Pn Pn 01 35 55.1 +0.7
WTTA Wattenberg 5.32 264 P Pn 01 35 54.9 +0.5
WTTA Wattenberg 5.32 264 *e*Pn Pn 01 35 55.1 +0.7
SNR=18
WTTA Wattenberg 5.32 264 *e*Pn Pn 01 35 55.1 +0.7
SNR=18
WTTA Wattenberg 5.32 264 *e*Pn Pn 01 35 54.9 +0.5
comp=Z,14nm,0.3s,SNR=15
WTTA Wattenberg 5.32 264 Pn 01 35 54.9 +0.5
STON Ston 5.32 194 *e*Pn Pn 01 35 55.9 +1.7
STON Ston 5.32 194 *e*Pn Pn 01 35 56.0 +1.7
STON Ston 5.32 194 *e*Pn Pn 01 35 55.6 +1.4
PLN Plauen 5.34 300 *e*Pn Pn 01 35 54.7 +0.2
SNR=40
PLN Plauen 5.34 300 *e*Pn Pn 01 35 54.7 +0.2
SNR=40
WATA Walderalm 5.35 265 P Pn 01 35 55.1 +0.3
WATA Walderalm 5.35 265 *e*Pn Pn 01 35 55.1 +0.3
comp=Z,6.3nm,0.2s,SNR=7.4
WATA Walderalm 5.35 265 Pn 01 35 55.1 +0.3
TREB Trebinje 5.39 188 *e*Pn Pn 01 35 56.6 +1.4
PLOR Plostina 5.41 111 P Pn 01 35 56.2 +0.7
PLOR Plostina 5.41 111 ⇑P Pn 01 35 56.2 +0.7
PLOR Plostina 5.41 111 Pn 01 35 56.2 +0.7
VRI Vrincioaia 5.46 111 P Pn 01 35 57.1 +1.0
VRI Vrincioaia 5.46 111 ⇑P Pn 01 35 57.1 +1.0
VRI Vrincioaia 5.46 111 Pn 01 35 57.1 +1.0
DBRK Dubrovnik 5.46 190 *e*Pn Pn 01 35 57.5 +1.4
FUR Furstenfeldbru 5.46 274 *e*Pn Pn 01 35 56.5 +0.3
SNR=15
FUR Furstenfeldbru 5.46 274 *e*Pn Pn 01 35 56.5 +0.3
SNR=15
BARS Barje 5.50 161 *i* Pn Pn 01 35 56.7 0.0
ROSI Rosskopf 5.55 261 ⇑*i*Pn Pn 01 35 58.5 +1.0
BISR Bisoca 5.59 114 ⇓P Pn 01 35 60.0 +1.9
BISR Bisoca 5.59 114 Pn 01 35 60.0 +1.9
SQTA Sankt Quirin 5.62 264 P Pn 01 35 59.0 +0.6
SQTA Sankt Quirin 5.62 264 *e*Pn Pn 01 35 59.0 +0.6
comp=Z,46nm,0.4s,SNR=28
SQTA Sankt Quirin 5.62 264 Pn 01 35 59.0 +0.6
PDG Podgorica 5.63 181 *e*Pn Pn 01 35 59.2 +0.8
PDG Podgorica 5.63 181 ⇑P Pn 01 35 59.3 +0.8
PDG Podgorica 5.63 181 *e*Pn Pn 01 35 58.6 +0.2
PDG Podgorica 5.63 181 Pn 01 35 58.4 0.0
HCY Herceg Novi 5.65 187 *e*Pn Pn 01 35 59.6 +0.9
GRA1 Grafenberg Arr 5.66 290 Pn 01 35 58.6 -0.2
GRF Grafenberg Arr 5.66 290 P Pn 01 35 58.6 -0.2
GRF Grafenberg Arr 5.66 290 *e*Pn Pn 01 35 59.0 +0.1
SNR=13
GRF Grafenberg Arr 5.66 290 *e*Pn Pn 01 35 59.0 +0.1
SNR=13
ABSI Aberstueckl 5.66 259 ⇑*i*Pg Pn 01 35 58.6 -0.5
MOTA Moosalm 5.66 266 P Pn 01 35 59.1 +0.1
MOTA Moosalm 5.66 266 *i* Pn Pn 01 35 59.1 +0.1
comp=Z,10nm,0.3s,SNR=12
MOTA Moosalm 5.66 266 Pn 01 35 59.1 +0.1
CTI Castel Tesino 5.68 252 P Pn 01 35 59.8 +0.5
CTI Castel Tesino 5.68 252 Pn 01 35 59.8 +0.5
KOSI Kohlern 5.71 257 ⇑*i*Pn Pn 01 36 01.1 +1.4
MOX Moxa 5.72 300 *e*Pn Pn 01 36 00.4 +0.6
SNR=30
MOX Moxa 5.72 300 *e*Pn Pn 01 36 00.4 +0.6
SNR=30
GHRR 5.81 107 ⇑P Pn 01 36 02.4 +1.5
GHRR 5.81 107 Pn 01 36 02.4 +1.5
RETA Reutte 5.87 268 *e*Pn Pn 01 36 02.4 +0.6
comp=Z,16nm,0.5s,SNR=8.3
RETA Reutte 5.87 268 Pn 01 36 02.4 +0.6
DRME Dracevica, Mon 5.87 182 *e*Pn Pn 01 36 03.5 +1.7
BOSS Bosilegrad 5.96 158 *i* Pn Pn 01 36 03.3 +0.3

TEOL Teolo 5.98 246 Pn 01 36 02.8 -0.4
FETA Feichten 5.98 263 *i* Pn Pn 01 36 04.0 +0.6
comp=Z,24nm,0.4s,SNR=14
FETA Feichten 5.98 263 Pn 01 36 04.0 +0.6
SORM Soroca 5.98 86 P Pn 01 36 03.0 -0.2
SORM Soroca 5.98 86 ⇑P Pn 01 36 03.0 -0.2
SORM Soroca 5.98 86 Pn 01 36 03.0 -0.2
VTS Vitosha 6.06 152 *i* Pn Pn 01 36 05.3 +0.7
VTS Vitosha 6.06 152 P Pn 01 36 05.2 +0.7
VTS Vitosha 6.06 152 ⇑P Pn 01 36 05.2 +0.6
VTS Vitosha 6.06 152 Pn 01 36 05.2 +0.6
MOSI Grossmontoni 6.20 260 ⇑*i*Pn Pn 01 36 07.9 +1.4
UBR Ueberruh 6.28 270 *e*Pn Pn 01 36 07.9 +0.4
SNR=148
UBR Ueberruh 6.28 270 *e*Pn Pn 01 36 07.9 +0.4
SNR=148
FUORN Ofenpass-Fuorn 6.39 260 ⇑*i*Pn Pn 01 36 10.4 +1.2
FUORN Ofenpass-Fuorn 6.39 260 Pn Pn 01 36 09.4 +0.2
SUW Suwalki 6.42 20 P Pn 01 36 09.5 +0.3
SUW Suwalki 6.42 20 Pn Pn 01 36 09.5 +0.3
KIS Kishinev 6.45 96 *e* 01 37 44.0
KIS LRM MLR 01 38 44.0
comp=Z,1μm,16.0s
MILM Milestii Mici 6.46 97 ⇑P Pn 01 36 11.0 +1.2
MILM Milestii Mici 6.46 97 Pn 01 36 11.0 +1.2
DAVA Damuels 6.49 267 ⇑*i*Pn Pn 01 36 10.7 +0.3
DAVA Damuels 6.49 267 *e*Pn Pn 01 36 10.8 +0.3
SNR=42
DAVA Damuels 6.49 267 *e*Pn Pn 01 36 10.8 +0.3
SNR=42
DAVA Damuels 6.49 267 *e*Pn Pn 01 36 10.7 +0.3
comp=Z,47nm,0.4s,SNR=19
DAVA Damuels 6.49 267 Pn 01 36 10.7 +0.3
DAVOX Davos/Dischmat 6.60 262 ⇑*i*Pn Pn 01 36 12.8 +0.8
DAVOX Davos/Dischmat 6.60 262 Pn Pn 01 36 12.4 +0.4
comp=Z,5.6nm,0.3s,baz=80,slow=13,SNR=80
DAVOX Lg Lg 01 37 58.5
comp=Z,0.7nm,0.3s,baz=161,slow=18,SNR=2.1
CFR Carcaliu 6.65 112 P Pn 01 36 13.3 +0.8
CFR Carcaliu 6.65 112 ⇑P Pn 01 36 13.2 +0.8
CFR Carcaliu 6.65 112 Pn 01 36 13.2 +0.8
UBBA Unterbreizbach 6.74 298 *e*Pn Pn 01 36 15.0 +1.4
SNR=6.7
UBBA Unterbreizbach 6.74 298 *e*Pn Pn 01 36 15.0 +1.4
SNR=6.7
LIENZ Kamor/St.Gall 6.75 267 ⇑*i*Pn Pn 01 36 14.1 0.0
HARR Harsova 6.78 117 P Pn 01 36 14.7 +0.5
HARR Harsova 6.78 117 ⇑P Pn 01 36 14.7 +0.5
HARR Harsova 6.78 117 Pn 01 36 14.7 +0.5
MURB Monte Urbino 6.81 228 Pn Pn 01 36 13.4 -1.3
SGT04 Schlatt-Haslen 6.84 268 ⇑*i*Pn Pn 01 36 15.2 +0.1
STU Stuttgart 6.85 280 P Pn 01 36 14.9 -0.3
STU Stuttgart 6.85 280 *e*Pn Pn 01 36 15.3 +0.2
SNR=6.6
STU Stuttgart 6.85 280 *e*Pn Pn 01 36 15.3 +0.2
SNR=6.6
STU Stuttgart 6.85 280 Pn 01 36 14.9 -0.3
NRCA Norcia 6.85 223 Pn Pn 01 36 15.5 +0.2
PLONS Plons/SG 6.87 265 ⇑*i*Pn Pn 01 36 15.7 +0.1
SGT02 Zihlschlacht 6.88 269 ⇑*i*Pn Pn 01 36 15.5 -0.1
GUT Gutenstein 6.91 274 ⇑*i*Pn Pn 01 36 15.6 -0.5
AKASG Malin Array Be 6.92 64 *i* P Pn 01 36 15.1 -1.1
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG Malin Array Be 6.92 64 Pn Pn 01 36 15.8 -0.3
comp=Z,1.9nm,0.3s,baz=249,slow=12,SNR=7.9
AKASG Pg Pb 01 36 32.8 -2.4
comp=Z,2.1nm,0.3s,baz=250,slow=18,SNR=6.5
AKASG Sn Sn 01 37 30.0 -4.8
comp=Z,1.6nm,0.3s,baz=252,slow=24,SNR=4.2
AKBB Malin Array Si 6.92 64 *e*P Pn 01 36 15.1 -1.1
AKBB Malin Array Si 6.92 64 Pn Pn 01 36 15.0 -1.1
ZCCA Zocca 6.94 241 Pn Pn 01 36 15.5 -0.9
CLZ Clausthal 6.96 306 *e*Pn Pn 01 36 18.1 +1.3
SNR=12
CLZ Clausthal 6.96 306 *e*Pn Pn 01 36 18.1 +1.3
SNR=12
VDL Val di Lei 6.97 261 ⇓*i*Pn Pn 01 36 17.8 +0.8
ICOR Ion Corvin 7.03 121 ⇑P Pn 01 36 19.1 +1.4
ICOR Ion Corvin 7.03 121 Pn 01 36 19.1 +1.4
TUE Stuetta 7.04 261 Pn 01 36 17.6 -0.4
WEIN Weingarten 7.05 270 ⇑*i*Pn Pn 01 36 17.9 -0.1
PANIX Pigniu (Panix) 7.10 264 ⇑*i*Pn Pn 01 36 18.9 +0.1
PRMA PARMA 7.11 246 Pn Pn 01 36 17.8 -0.9
AQU L'Aquila 7.11 219 P Pn 01 36 18.8 -0.1
AQU L'Aquila 7.11 219 Pn Pn 01 36 18.8 -0.1
STEIN Stein am Rhein 7.11 271 ⇑*i*Pn Pn 01 36 18.7 -0.1
WILA Wila 7.12 269 ⇑*i*Pn Pn 01 36 18.9 -0.2
LLS Linth-Limmern 7.17 264 ⇓*i*Pn Pn 01 36 20.0 +0.2
TIRR Tirgusor 7.19 117 P Pn 01 36 20.4 +0.5
TIRR Tirgusor 7.19 117 ⇑P Pn 01 36 21.1 +1.2
TIRR Tirgusor 7.19 117 Pn 01 36 20.4 +0.5
TIRR Tirgusor 7.19 117 Pn 01 36 21.1 +1.2
INTR Introdacqua 7.20 215 Pn Pn 01 36 19.7 -0.3
TRULL Truellikon 7.24 271 ⇑*i*Pn Pn 01 36 20.3 -0.3
OSSC Osservatorio P 7.29 235 Pn Pn 01 36 21.1 -0.2
FLACH Flaach 7.33 270 ⇓*i*Pn Pn 01 36 21.6 -0.2
SLE Schleitheim 7.36 272 ⇑*i*Pn Pn 01 36 21.5 -0.7
MUO Muotathal 7.39 266 ⇑*i*Pn Pn 01 36 22.6 -0.2
FNA Florina 7.40 168 P Pn 01 36 23.2 +0.4
FNA Florina 7.40 168 Pn Pn 01 36 23.2 +0.4
BFO Black Forest 7.42 276 ⇑*i*Pn Pn 01 36 22.5 -0.6
BFO Black Forest 7.42 276 P Pn 01 36 22.8 -0.3
BFO Black Forest 7.42 276 Pn Pn 01 36 22.8 -0.3
FUSIO Fusio 7.50 262 ⇓*i*Pn Pn 01 36 25.0 +0.8
BNALP Bannalp 7.55 265 ⇓*i*Pn Pn 01 36 25.0 0.0
BSD Bornholm Skovb 7.61 340 *i* P Pn 01 36 27.1 +1.6
BSD Bornholm Skovb 7.61 340 *i* P Pn 01 36 27.1 +1.6
SULZ Cheisacher 7.64 270 ⇓*i*Pn Pn 01 36 25.5 -0.6
KIZ Kirchzarten 7.72 274 ⇑*i*Pn Pn 01 36 26.3 -0.9
HASLI Hasliberg/Brie 7.76 265 ⇓*i*Pn Pn 01 36 27.6 -0.2
FIESA Fiescheralp 7.87 262 ⇑*i*Pn Pn 01 36 30.2 +0.7
BALST Balsthal 7.95 269 ⇑*i*Pn Pn 01 36 29.4 -0.9
SIMPL Simplonpass 7.99 261 ⇑*i*Pn Pn 01 36 31.9 +0.9
MMK Mattmark 8.08 260 ⇓*i*Pn Pn 01 36 32.9 +0.6
LAUCH Lauchernalp 8.10 263 ⇓*i*Pn Pn 01 36 33.2 +0.6
EMBD Embd, Matterta 8.12 261 ⇑*i*Pn Pn 01 36 34.1 +1.4
CDF Champ du Feu 8.12 277 *e*P Pn 01 36 31.5 -1.2
CDF *e*Sg Sg 01 38 46.7 -8.8
comp=Z,121nm,1.0s
PBUR Paburg 8.13 10 *e*S Sb 01 38 29.2 -3.0
LKBD Leukerbad 8.21 263 ⇓*i*Pn Pn 01 36 34.3 +0.4
ECH Echery 8.21 276 P Pn 01 36 33.2 -0.7
ECH Echery 8.21 276 Pn Pn 01 36 33.2 -0.7
BGG Burgeitz 8.22 290 *e*Pn Pn 01 36 34.2 +0.3
BGG *e*Sn Sn 01 38 04.6 -2.0
comp=Z,47nm,1.4s
LIT Litokhoron 8.25 163 P Pn 01 36 35.2 +0.7
LIT Litokhoron 8.25 163 Pn Pn 01 36 35.1 +0.7
BOURR Bourrignon 8.25 270 ⇓*i*Pn Pn 01 36 33.7 -0.8
MICGM Minsk 8.35 36 *e*P Pg 01 37 11.0 -3.7
SENIN Lac Senin/Sane 8.43 263 ⇓*i*Pn Pn 01 36 37.0 -0.1
SENIN Lac Senin/Sane 8.43 263 Pn Pn 01 36 36.8 -0.3
DIX Grande Dixence 8.44 261 ⇓*i*Pn Pn 01 36 38.2 +1.0
HINF Hinteralfeld 8.45 273 *e*P Pn 01 36 35.9 -1.3
HINF *e*Sg Sg 01 38 56.5 -9.4
comp=Z,87nm,1.0s
TORNY Torny/Romont 8.55 266 ⇑*e*Pn Pn 01 36 36.8 -1.8
ALN Alexandroupoli 8.58 144 P Pn 01 36 38.7 -0.2
ALN Alexandroupoli 8.58 144 Pn Pn 01 36 38.7 -0.2
GRYON Gryon 8.59 262 ⇓*e*Pn Pn 01 36 39.0 -0.1
STB Steinbach 8.61 292 *e*Pn Pn 01 36 39.0 -0.3
STB *e*Sn Sn 01 38 13.7 -2.5
comp=Z,47nm,1.5s
HILG Hillesheim 8.65 290 *e*Pn Pn 01 36 40.1 +0.2
HAU Haudompre 8.77 275 *e*P Pn 01 36 40.7 -0.8
HAU *e*Sg Sg 01 39 06.0 -10
comp=Z,75nm,0.9s
MRGE Morge 8.77 259 ⇑*i*Pn Pn 01 36 42.2 +0.5
LSD Lago del Serru 8.83 257 ⇑*i*Pn Pn 01 36 44.7 +2.1
BRANT Les Verrieres 8.84 268 ⇓*e*Pn Pn 01 36 41.8 -0.8
WLF Walferdange 8.90 285 P Pn 01 36 43.8 +0.5
WLF Walferdange 8.90 285 Pn Pn 01 36 43.8 +0.5
LPG La Plagne 9.07 258 *e*P Pn 01 36 47.3 +1.4
LPG *e*Sn Sn 01 38 17.0 -11
comp=Z,21nm,0.8s
LPL La Plagne 9.07 258 *e*P Pn 01 36 47.3 +1.4
LPL *e*Sn Sn 01 38 16.6 -11
comp=Z,14nm,0.8s
GIMEL St. Georges / 9.07 265 ⇓Pn Pn 01 36 45.0 -0.8
PAGF Fort de Pagny 9.15 278 *e*P Pn 01 36 47.4 +0.7
baz=92

PAGF *e*Sg Sn 01 39 19.0 +49
comp=Z,190nm,1.3s
CABF La Chapelle 9.18 266 *e*P Pn 01 36 45.9 -1.3
CABF *e*Sg Sn 01 39 20.5 +50
comp=Z,254nm,1.5s
PGF Pioggiola 9.18 237 *e*P Pn 01 36 48.3 +1.1
PGF *e*Sn Sn 01 38 19.4 -11
comp=Z,446nm,1.9s
AGG Agios Georgios 9.27 166 P Pn 01 36 50.2 +1.8
AGG Agios Georgios 9.27 166 Pn Pn 01 36 50.2 +1.8
BNI Bardonecchia 9.28 256 P Pn 01 36 49.0 +0.3
BNI Bardonecchia 9.28 256 Pn 01 36 49.0 +0.3
SBF Sospel 9.34 248 *e*P Pn 01 36 51.3 +1.9
SBF *e*Sn Sn 01 38 23.9 -11
comp=Z,4.0nm,0.3s
MBDF Montbardon 9.36 254 *e*P Pn 01 36 49.1 -0.6
MBDF *e*Sg Sn 01 39 23.8 +49
comp=Z,126nm,1.9s
MEZF Maizieres J'vi 9.60 278 *e*P Pn 01 36 54.0 +1.1
baz=88
MEZF *e*Sg Sn 01 39 33.0 +52
comp=Z,126nm,1.3s
SFTF Sexfontaines 9.63 276 *e*P Pn 01 36 52.5 -0.8
baz=105
SFTF *e*Sg Sn 01 39 32.7 +51
comp=Z,179nm,1.4s
GIVF Givet 9.80 287 *e*P Pn 01 36 57.9 +2.3
GIVF *e*Sg Sn 01 39 38.9 +53
comp=Z,105nm,1.4s
ORIF Oris-en-Rattie 9.86 256 *e*P Pn 01 36 57.4 +0.9
ORIF *e*Sn Sn 01 38 36.8 -10
comp=Z,186nm,1.9s
FRF La Foret Royal 9.99 248 *e*P Pn 01 36 59.8 +1.6
FRF *e*Sn Sn 01 38 39.4 -11
comp=Z,210nm,1.8s
BAIF Baives 10.19 287 *e*P Pn 01 37 02.9 +1.9
BAIF *e*Sg Sn 01 39 49.6 +55
comp=Z,74nm,1.4s
LMR La Mourre 10.19 247 *e*P Pn 01 37 00.6 -0.4
SMRF Simiane la Rot 10.46 252 *e*P Pn 01 37 06.3 +1.6
SMRF *e*Sn Sn 01 38 50.1 -12
comp=Z,265nm,1.9s
LOR Lormes 10.54 272 *e*P Pn 01 37 05.7 0.0
baz=80
LOR *e*Sn Sn 01 38 52.5 -11
LOR *e*Sg 01 40 02.1
comp=Z,28nm,1.0s
SSB Saint Sauveur 10.60 260 P Pn 01 37 05.2 -1.4
SSB Saint Sauveur 10.60 260 Pn 01 37 05.2 -1.4
VIVF Saint-Julien-l 10.67 258 *e*P Pn 01 37 06.7 -0.9
SMF Signal de Mont 10.67 268 *e*P Pn 01 37 07.3 -0.3
SMF *e*Sn Sn 01 38 56.5 -10
SMF *e*Sg 01 40 10.9
comp=Z,194nm,2.0s
SSF Saint Saulge 10.81 271 *e*P Pn 01 37 09.2 -0.3
SSF *e*Sn Sn 01 39 02.3 -8.0
SSF *e*Sg 01 40 08.8
comp=Z,8.6nm,0.7s
AVF Avril sur Loir 10.97 269 *e*P Pn 01 37 10.6 -1.0
AVF *e*Sg 01 40 14.4
comp=Z,61nm,1.4s
VSU Vasula 11.30 20 ⇑*e*P Pn 01 37 15.8 -0.2
VSU Vasula 11.30 20 *e*P Pn 01 37 20.8 +4.8
HYF Humbligny 11.35 272 *e*P Pn 01 37 16.9 0.0
HYF *e*Sg 01 40 26.6
BGF Bois d'Agland 11.36 269 *e*P Pn 01 37 15.7 -1.3
BGF *e*Sg 01 40 27.0
comp=Z,12nm,0.7s
LASF Ste Croix 11.52 256 *e*P Pn 01 37 18.8 -0.4
TCF Toulx Ste Croi 11.85 268 *e*P Pn 01 37 22.7 -1.1
CAF Calviac 12.37 262 *e*Pn Pn 01 37 29.7 -1.1
HFS Hagfors 12.55 347 Pn Pn 01 37 31.8 -1.5
comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=2.8
HFS Sn Sn 01 39 46.9 -5.9
comp=Z,0.2nm,0.3s,baz=151,slow=22,SNR=3.6
RJF Les Rejaudoux 12.60 264 *e*P Pn 01 37 35.5 +1.5
RJF *e*Sg 01 41 05.8
comp=Z,156nm,2.0s
OBN Obninsk 12.77 50 ⇓*e*P Pn 01 37 35.4 -0.7
OBN *e*S Sn 01 39 55.7 -2.3
OBN pmax pmax
comp=Z,6.0nm,0.5s
OBN MLR MLR
comp=Z,125nm,13.0s
OBN Obninsk 12.77 50 Pn Pn 01 37 35.5 -0.7
MTLF Montolieu 12.91 255 *e*P Pn 01 37 38.8 +0.6
RAF Rauma 13.06 5 *e*P Pn 01 37 41.9 +1.7
VSR Storozhevoye 13.18 69 ⇓*e*P Pn 01 37 39.9 -1.8
BR131 Keskin Array S 13.19 124 P Pn 01 37 41.0 -1.1
BR131 Keskin Array S 13.19 124 Pn Pn 01 37 41.0 -1.1
BRTR Keskin Array B 13.19 124 Pn Pn 01 37 41.2 -0.9
comp=Z,0.0nm,0.3s,baz=310,slow=11,SNR=2.8
BRTR LR LR 01 43 26.0
comp=Z,90nm,20.1s,baz=286,slow=41
VORD Divnogorie 13.23 70 *e*P Pn 01 37 38.6 -3.9
VORD pmax pmax
comp=E,6.0nm,0.6s
VORD pmax pmax
comp=Z,6.0nm,0.7s
VORD pmax pmax
comp=N,4.0nm,0.6s
LFF La Frestale 13.24 263 *e*P Pn 01 37 43.2 +0.5
LPSR Galich'ya Gora 13.25 63 *e*P P 01 37 52.8 +0.2
LPSR pmax pmax
comp=E,10.0nm,1.0s
LPSR pmax pmax
comp=Z,10.0nm,0.6s
LPSR pmax pmax
comp=N,10.0nm,0.9s
MFF Saint Martin d 13.36 271 *e*P Pn 01 37 43.3 -0.9
NC602 NORSAR Array S 13.49 343 Pn Pn 01 37 46.0 -0.1
MOS Moscow 13.59 49 *e*P Pn 01 37 44.4 -2.9
MOS MLR MLR
comp=Z,400nm,9.0s
NAO01 NORSAR Array S 13.73 342 Pn Pn 01 37 49.5 +0.3
NC405 NORSAR Array S 13.81 344 Pn Pn 01 37 49.8 -0.6
NB201 NORSAR Array S 13.83 343 Pn Pn 01 37 51.1 +0.5
NB2 NORSAR Subarra 13.84 343 P Pn 01 37 51.0 +0.2
comp=Z,1.8nm,1.0s,baz=156,slow=11
NOA NORSAR Array B 13.84 343 Pn Pn 01 37 49.0 -1.7
comp=Z,0.0nm,0.3s,baz=160,slow=12,SNR=4.1
NOA Sn Sn 01 40 14.0 -10
comp=Z,0.0nm,0.3s,baz=347,slow=15,SNR=2.5
FINES FINESS Array B 13.94 13 Pn Pn 01 37 50.1 -2.1
comp=Z,0.2nm,0.3s,baz=195,slow=12,SNR=5.2
FINES Sn Sn 01 40 17.2 -10
comp=Z,0.2nm,0.3s,baz=202,slow=22,SNR=4.2
FINES LR LR 01 44 16.2
comp=Z,19nm,19.2s,baz=190,slow=41
NC303 NORSAR Array S 13.98 344 Pn Pn 01 37 53.2 +0.5
NC204 NORSAR Array S 14.14 343 Pn Pn 01 37 55.4 +0.5
EPF Esparros 14.28 256 *e*P Pn 01 37 57.8 +0.9
SGMF Saint Gilles 14.67 279 *e*P Pn 01 38 03.2 +1.0
SGMF *e*Sg 01 42 08.1
comp=Z,520nm,2.1s
VRH Novokhopyorsk 14.78 69 *e*P Pn 01 37 59.9 -3.7
VRH pmax pmax
comp=E,30nm,0.8s
VRH pmax pmax
comp=Z,10.0nm,0.9s
VRH pmax pmax
comp=N,8.0nm,0.8s
ETSF Etsaut 14.93 257 *e*P P 01 38 08.8 -2.6
QUIF Quistinic 15.12 278 *e*P Pn 01 38 08.3 0.0
SJPF Ste Jean 15.27 259 *e*P P 01 38 15.0 -0.1
EKA Eskdalemuir Ar 15.74 306 Pn Pn 01 38 16.8 +0.5
baz=109,slow=14,SNR=11
KIV Kislovodsk 16.65 96 *e*P Pn 01 38 26.1 -2.1
KIV pmax pmax
comp=Z,14nm,1.0s
SHA1 Shidzhatmaz 16.72 96 ⇓*e*P Pn 01 38 25.7 -3.4
ESDC Sonseca Array 18.78 252 P P 01 38 53.2 -0.8
comp=Z,0.2nm,0.3s,baz=52,slow=11,SNR=9.4
ESDC Sonseca Array 18.78 252 IAmb IAmb 01 38 54.6
comp=Z,3.0nm,1.4s
MMAI Mount Meron Ar 19.26 135 P Pn 01 39 00.4 +0.1
comp=Z,0.6nm,0.3s,baz=322,slow=9.1,SNR=5.3
GNI Garni 19.76 104 *i* P Pn 01 39 09.7 +3.3
PRGR Permogore 20.12 38 *e*P P 01 39 07.2 -1.1
PRGR *e*S S 01 42 54.1 +0.3
PRGR pmax pmax
comp=Z,18nm,0.4s
KIRV Kirov 20.60 48 P Pn 01 39 15.0 -0.9
KIRV Kirov 20.60 48 P Pn 01 39 14.9 -0.9
comp=Z,19nm,0.8s,baz=56,slow=1.4,SNR=8.4

KIRV				LR	LR	01 48 37.1		
	comp=Z,40nm,18.5s,baz=224,slow=41							
ARCES	**ARCESS Array B**	**21.75**	**6**	P	**P**	**01 39 28.9**	**+2.9**	
	comp=Z,2.3nm,0.8s,baz=186,slow=11,SNR=8.1							
ARCES				LR	LR	01 48 46.8		
	comp=Z,88nm,18.1s,baz=182,slow=39							
ARU	**Arti**	**25.08**	**56**	P	**P**	**01 40 00.1**	**+1.0**	
ARU				pmax	pmax			
	comp=Z,8.0nm,1.1s							
ARU	**Arti**	**25.08**	**56**	P	**P**	**01 40 00.3**	**+1.2**	
	comp=Z,0.5nm,0.3s,baz=284,slow=7.2,SNR=8.6							
ARU				LR	LR	01 50 16.9		
	comp=Z,62nm,19.1s,baz=234,slow=38							
ARU	**Arti**	**25.08**	**56**	P	**P**	**01 40 00.1**	**+1.0**	
AKTO	**Aktyubinsk**	**25.12**	**70**	P	**P**	**01 40 01.0**	**+1.5**	
AKTO	**Aktyubinsk**	**25.12**	**70**	P	**P**	**01 40 01.0**	**+1.5**	
	comp=Z,1.8nm,0.8s,baz=293,slow=12,SNR=7.1							
SVE	**Sverdlovsk**	**26.25**	**55**‖	*eP*	**P**	**01 40 11.6**	**+2.0**	
SVE				pmax	pmax			
	comp=Z,13nm,1.4s							
ABKAR	**Akbulak array**	**26.57**	**72**	P	**P**	**01 40 13.4**	**+0.8**	
BORG	**Borgarnes**	**27.39**	**323**	LR	LR	01 52 10.2		
	comp=Z,101nm,20.6s,baz=136,slow=38							
GEYT	**Alibeck**	**29.77**	**95**	LR	LR	01 54 27.5		
	comp=Z,61nm,19.0s,baz=0.0,slow=40							
PMOZ	**Porto Moniz, M**	**31.41**	**255**	P	**P**	**01 40 55.0**	**-1.0**	
BRVK	**Borovoye**	**32.13**	**62**	P	**P**	**01 41 03.9**	**+2.0**	
BRVK				pmax	pmax			
	comp=Z,2.0nm,0.9s							
BRVK	**Borovoye**	**32.13**	**62**	P	**P**	**01 41 03.9**	**+2.0**	
BRVK				IAmb	IAmb	01 41 07.5		
	comp=Z,2.4nm,0.8s							
KK31	**Karatay Array**	**35.55**	**79**	P	**P**	**01 41 31.6**	**-0.2**	
KK31				pmax	pmax			
	comp=Z,2.0nm,1.3s							
KK31	**Karatay Array**	**35.55**	**79**	P	**P**	**01 41 31.6**	**-0.2**	
KK31				IAmb	IAmb	01 41 36.2		
	comp=Z,2.3nm,1.3s							
KKAR	**Karatay Array**	**35.55**	**79**	P	**P**	**01 41 31.6**	**-0.2**	
KKAR				pmax	pmax			
	comp=Z,2.0nm,1.2s							
KKAR	**Karatay Array**	**35.55**	**79**	P	**P**	**01 41 31.6**	**-0.2**	
KKAR				IAmb	IAmb	01 41 48.7		
	comp=Z,1.5nm,1.1s							
TORD	**Torodi Ar. Bea**	**37.81**	**209**	P	**P**	**01 41 51.3**	**+0.1**	
	comp=Z,1.4nm,0.8s,baz=18,slow=6.8,SNR=7.3							
TORD	**Torodi Ar. Bea**	**37.81**	**209**	IAmb	IAmb	01 41 54.6		
	comp=Z,1.4nm,0.9s							
AAK	**Ala-Archa**	**38.38**	**77**‖	*eP*	**P**	**01 41 54.9**	**-1.1**	
AAK				pmax	pmax			
	comp=Z,1.0nm,1.2s							
ZALV	**Zalesovo Beam**	**40.25**	**56**	P	**P**	**01 42 13.4**	**+2.2**	
	comp=Z,0.3nm,0.3s,baz=306,slow=10,SNR=3.0							
ZALV				LR	LR	02 00 10.4		
	comp=Z,36nm,18.6s,baz=234,slow=38							
MKAR	**Makanchi Array**	**41.49**	**67**	P	**P**	**01 42 23.7**	**+2.0**	
	comp=Z,0.3nm,0.6s,baz=289,slow=7.6,SNR=4.3							
WMQ	**Urumqi**	**46.25**	**69**	*eP*	**P**	**01 43 02.8**	**+2.8**	
WMQ				pmax	pmax			
	comp=Z,6.0nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,80nm,4.9s							
WMQ				LR	LR			
	comp=N,490nm,28.8s							
WMQ				LR	LR			
	comp=E,1μm,28.8s							
WMQ				LR	LR			
	comp=Z,39nm,29.0s							
SONM	**Songino Array**	**55.12**	**55**	P	**P**	**01 44 07.4**	**+0.5**	
	comp=Z,1.0nm,0.8s,baz=292,slow=9.2,SNR=4.9							
SONM	**Songino Array**	**55.12**	**55**	IAmb	IAmb	01 44 09.9		
	comp=Z,1.2nm,1.0s							
HIA	**Hailar**	**61.21**	**47**‖	*eP*	**P**	**01 44 49.3**	**-0.1**	
HIA				pmax	pmax			
	comp=Z,14nm,0.9s							
HHC	**Hu-ho-hao-te**	**62.34**	**59**	*eP*	**P**	**01 44 58.3**	**+1.1**	
HHC				pmax	pmax			
	comp=Z,6.0nm,1.1s							
HHC				pmax	pmax			
	comp=Z,51nm,5.3s							
YKA	**Yellowknife Ar**	**63.88**	**338**	P	**P**	**01 45 08.0**	**+1.1**	
YKA	**Yellowknife Ar**	**63.88**	**338**	P	**P**	**01 45 08.0**	**+1.1**	
	comp=Z,0.3nm,0.8s,baz=29,slow=6.4,SNR=5.8							

NEIC ***19*** *01:42:57.0±0.2, 16.°03N±0.°03×98.°1W±0.°1, h8km±13km, Error ellipse: s-maj=18.2km s-min=3.2km az=85.0*
MEX ***19*** *01:42:57.8±0.6, 16.°09N×97.°94W, h4km±3km, MD4.1*
ISC 19 01:42:55.5±1.9, 16.°04N±0.°08×97.°93W±0.°05, h17km±11km, n20, σ 9 6/31, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.40**	**331**	*i* P	**Pb**	**01 43 04.1**	**0.0**
PNIG				*i* S	**Sg**	**01 43 08.9**	**-0.3**
PNIG	**Pinotepa**	**0.40**	**331**		**Pb**	**01 43 04.1**	**0.0**
PNIG					**Sg**	**01 43 08.9**	**-0.3**
TLIG	**Tlapa**	**1.63**	**338**	*eP*	**Pn**	**01 43 23.1**	**-0.4**
TLIG				*i* S	**Sn**	**01 43 42.3**	**-1.9**
TLIG	**Tlapa**	**1.63**	**338**		**Pn**	**01 43 23.0**	**-0.6**
TLIG	**Tlapa**	**1.63**	**338**		**Pn**	**01 43 23.1**	**-0.4**
HUIG	**Huatulco**	**1.77**	**99**	*eP*	**Pn**	**01 43 25.9**	**+0.5**
HUIG				*i* S	**Sn**	**01 43 47.4**	**-0.1**
HUIG	**Huatulco**	**1.77**	**99**		**Pn**	**01 43 25.9**	**+0.5**
HUIG					**Sn**	**01 43 46.4**	**-1.1**
TPIG	**Tehuac#an**	**2.42**	**13**	*i* P	**Pn**	**01 43 35.2**	**+0.7**
TPIG				*i* S	**Sn**	**01 44 03.2**	**-0.7**
TPIG	**Tehuac#an**	**2.42**	**13**		**Pb**	**01 43 38.5**	**-0.3**
CAIG	**El Cayaco**	**2.46**	**294**	*eP*	**Pn**	**01 43 34.3**	**-0.5**
CAIG				*i* S	**Sn**	**01 44 04.0**	**-0.4**
CAIG	**El Cayaco**	**2.46**	**294**		**Pn**	**01 43 34.1**	**-0.7**
MEIG	**Mezcala**	**2.48**	**319**	*eP*	**Pn**	**01 43 35.2**	**+0.1**
MEIG				*eS*	**Sn**	**01 44 05.0**	**-0.1**
MEIG	**Mezcala**	**2.48**	**319**		**Pn**	**01 43 35.2**	**+0.1**
PLIG	**Platanillo**	**2.78**	**327**	*i* P	**Pn**	**01 43 40.1**	**+0.8**
PLIG				*i* S	**Sn**	**01 44 12.9**	**+0.4**
PLIG	**Platanillo**	**2.78**	**327**		**Pn**	**01 43 40.9**	**+1.6**
YAIG	**Yautepec**	**3.01**	**339**	*i* P	**Pn**	**01 43 42.7**	**+0.2**
YAIG				*i* S	**Sn**	**01 44 18.1**	**-0.2**
YAIG	**Yautepec**	**3.01**	**339**		**Pn**	**01 43 44.1**	**+1.6**
ARIG	**Puente Sto Nin**	**3.21**	**314**	*eP*	**Pn**	**01 43 46.3**	**+1.1**
ARIG				*i* S	**Sn**	**01 44 22.4**	**-0.7**
ARIG	**Puente Sto Nin**	**3.21**	**314**		**Pn**	**01 43 46.3**	**+1.1**
MOIG	**Morelia**	**4.77**	**320**	Pn	**Pn**	**01 44 09.6**	**+2.8**

IDC ***19*** *02:14:34.0±2.0, 16.°18N×98.°58W, h0km, mb3.9/6, mb1 4.0/11, mb1mx3.8/37, mbtmp3.8/11, ML3.4/5, MS2.7/4, Ms1 2.7/4, ms1mx2.6/32, Error ellipse: s-maj=41.3km s-min=15.1km az=17.0*
MEX ***19*** *02:14:34.5±0.8, 15.°88N×98.°81W, h14km±9km, MD4.2*
NEIC ***19*** *02:14:35.2±2.7, 16.°07N±0.°06×98.°66W±0.°05, h10km±3km, mb4.1/25, Md4.2/15(MEX), Error ellipse: s-maj=8.4km s-min=6.2km az=167.0*
ISC 19 02:14:33.8±1.8, 15.°98N±0.°07×98.°73W±0.°05, h11km±10km, n59, σ 1 9 80/70, mb4.0/15, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.71**	**55**	*i* P	**Pg**	**02 14 47.1**	**-0.4**
PNIG				*eS*	**Sg**	**02 14 58.0**	**+1.1**
PNIG	**Pinotepa**	**0.71**	**55**		**Pg**	**02 14 47.1**	**-0.4**
PNIG					**Sg**	**02 14 54.9**	**-2.0**
TLIG	**Tlapa**	**1.58**	**6**	*eP*	**Pn**	**02 15 00.1**	**-1.7**
TLIG				*eS*	**Sn**	**02 15 20.5**	**-1.8**
TLIG	**Tlapa**	**1.58**	**6**		**Pn**	**02 15 00.4**	**-1.4**
TLIG	**Tlapa**	**1.58**	**6**		**Pn**	**02 15 00.1**	**-1.7**
CAIG	**El Cayaco**	**1.81**	**306**	*i* P	**Pn**	**02 15 01.1**	**-3.8**
CAIG				*i* S	**Sn**	**02 15 23.6**	**-4.4**
CAIG	**El Cayaco**	**1.81**	**306**		**Pn**	**02 15 01.1**	**-3.8**
MEIG	**Mezcala**	**2.11**	**336**	*eP*	**Pn**	**02 15 07.3**	**-1.8**
MEIG				*i* S	**Sn**	**02 15 31.8**	**-3.6**
MEIG	**Mezcala**	**2.11**	**336**		**Pn**	**02 15 07.3**	**-1.8**
PLIG	**Platanillo**	**2.51**	**343**	*eP*	**Pn**	**02 15 13.6**	**-1.0**
PLIG				*i* S	**Sn**	**02 15 43.1**	**-2.1**
PLIG	**Platanillo**	**2.51**	**343**		**Pn**	**02 15 13.6**	**-1.0**
HUIG	**Huatulco**	**2.53**	**94**	*eP*	**Pn**	**02 15 13.7**	**-1.2**
HUIG				*i* S	**Sn**	**02 15 44.1**	**-1.6**
HUIG	**Huatulco**	**2.53**	**94**		**Pn**	**02 15 13.7**	**-1.2**
TPIG	**Tehuac#an**	**2.75**	**28**	*i* P	**Pn**	**02 15 17.4**	**-0.6**
TPIG				*i* S	**Sn**	**02 15 50.9**	**-0.5**
TPIG	**Tehuac#an**	**2.75**	**28**		**Pn**	**02 15 17.5**	**-0.6**
ARIG	**Puente Sto Nin**	**2.76**	**326**	*eP*	**Pn**	**02 15 16.8**	**-1.2**
ARIG				*i* S	**Sn**	**02 15 49.0**	**-2.3**
ARIG	**Puente Sto Nin**	**2.76**	**326**		**Pn**	**02 15 16.8**	**-1.2**
YAIG	**Yautepec**	**2.88**	**354**	*eP*	**Pn**	**02 15 19.1**	**-0.6**
YAIG				*eS*	**Sn**	**02 15 52.9**	**-1.6**
YAIG	**Yautepec**	**2.88**	**354**		**Pn**	**02 15 19.1**	**-0.6**
UNM	**Universidad Na**	**3.35**	**353**	Pn	**Pn**	**02 15 27.0**	**+0.6**
CMIG	**Matias Romero**	**3.85**	**73**	Pn	**Pn**	**02 15 31.9**	**-1.1**
	5.8nm,0.3s,baz=256,slow=12,SNR=52						
CMIG					**Sn**	**02 16 16.0**	**-2.2**
	8.4nm,0.3s,baz=281,slow=13,SNR=3.9						
CMIG				Lg	Lg	02 16 31.2	
	10.0nm,0.3s,baz=32,slow=0.7,SNR=7.0						
CMIG				LR	LR	02 16 46.8	
	comp=Z,49nm,18.8s,baz=264,slow=36						
MOIG	**Morelia**	**4.36**	**328**	Pn	**Pn**	**02 15 41.2**	**+1.0**
APG	**El Apazote**	**8.03**	**96**	Pn	**Pn**	**02 16 31.3**	**+0.7**
	0.3nm,0.3s,baz=212,slow=15,SNR=4.2						
APG				Sn	**Sn**	**02 17 59.2**	**-2.4**
	0.3nm,0.3s,baz=90,slow=16,SNR=2.3						
TEIG	**Tepich**	**10.80**	**65**	Pn	**Pn**	**02 17 06.0**	**-2.4**
	1.2nm,0.3s,baz=320,slow=1.2,SNR=7.6						
TEIG				Sn	Sn	02 19 01.6	-7.6
	1.2nm,0.3s,baz=319,slow=20,SNR=6.6						
H06E1	**SOCORRO T-PHAS**	**1.97**	**285**	T	T	02 29 38.1	
	SNR=72						
LPIG	**La Paz**	**13.54**	**308**	Pn	**Pn**	**02 17 48.0**	**+2.2**
	13nm,0.3s,baz=66,slow=4.8,SNR=4.5						
LPIG				LR	LR	02 21 55.9	
	comp=Z,42nm,21.7s,baz=204,slow=33						
TXAR	**Lajitas Array**	**14.04**	**342**	Pn	**Pn**	**02 17 53.4**	**+0.6**
	0.0nm,0.3s,baz=163,slow=9.4,SNR=3.4						
TXAR				LR	LR	02 24 10.7	
	comp=Z,46nm,19.5s,baz=0.0,slow=42						
NATX	**Nacogdoches**	**16.14**	**13**	Pn	**Pn**	**02 18 19.7**	**-0.9**
NATX				IAmb	IAmb	02 18 27.6	
	comp=Z,47nm,1.8s						
ABTX	**Abilene, Hawle**	**16.59**	**357**	Pn	**Pn**	**02 18 26.6**	**+0.3**
ABTX				IAmb	IAmb	02 18 31.0	
	comp=Z,10nm,1.2s						
319A	**Douglas**	**18.09**	**330**		**Pn**	**02 18 46.4**	**+1.0**
MSTX	**Muleshoe**	**18.28**	**349**	Pn	**Pn**	**02 18 46.7**	**-0.8**
BRAL	**Brewton**	**18.50**	**33**		**Sn**	**02 22 14.2**	**-2.7**
ANMO	**Albuquerque**	**20.11**	**341**	P	**P**	**02 19 09.4**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=162,slow=11,SNR=8.7						
ANMO	**Albuquerque**	**20.11**	**341**	P	**P**	**02 19 08.7**	**+0.8**
214A	**Organ Pipe Nat**	**20.42**	**324**	P	**P**	**02 19 12.9**	**+1.8**
214A				IAmb	IAmb	02 19 21.7	
	comp=Z,11nm,1.6s						
X18A	**Snowflake**	**21.04**	**333**	P	**P**	**02 19 19.4**	**+1.5**
X18A				IAmb	IAmb	02 19 24.0	
	comp=Z,6.6nm,1.1s						
PLAL	**Pickwick Lake**	**21.20**	**25**	P	**P**	**02 19 19.8**	**+0.4**
PLAL				IAmb	IAmb	02 19 23.5	
	comp=Z,22nm,1.5s						
113A	**Mohawk Valley,**	**21.56**	**324**	P	**P**	**02 19 25.6**	**+2.3**
X16A	**Lo Mia Camp, P**	**21.62**	**330**	P	**P**	**02 19 26.6**	**+2.5**
X16A				IAmb	IAmb	02 19 31.2	
	comp=Z,5.7nm,1.1s						
T25A	**Trinidad**	**21.66**	**348**	P	**P**	**02 19 26.6**	**+2.0**
PBMO	**Poplar Bluff**	**21.99**	**18**	P	**P**	**02 19 29.6**	**+1.7**
PBMO				IAmb	IAmb	02 19 30.9	
	comp=Z,8.7nm,0.7s						
Y14A	**Wickenburg**	**22.02**	**327**	P	**P**	**02 19 30.6**	**+2.2**
WVT	**Waverly**	**22.29**	**24**	P	**P**	**02 19 32.4**	**+1.2**
WVT				IAmb	IAmb	02 19 33.9	
	comp=Z,8.5nm,0.9s						
WUAZ	**Wupatki**	**22.50**	**332**	P	**P**	**02 19 35.8**	**+2.3**
WUAZ				IAmb	IAmb	02 19 38.2	
	comp=Z,5.7nm,0.9s						
S22A	**4UR Ranch, Cre**	**22.83**	**343**	P	**P**	**02 19 38.3**	**+1.1**
S22A				IAmb	IAmb	02 19 59.3	
	comp=Z,5.6nm,1.3s						
MVCO	**Mesa Verde**	**22.85**	**340**	P	**P**	**02 19 38.4**	**+1.1**
MVCO				IAmb	IAmb	02 19 39.9	
	comp=Z,6.7nm,1.0s						
S44A	**Carbondale**	**23.19**	**19**	P	**P**	**02 19 41.5**	**+0.9**
W52A	**Murphy**	**23.20**	**32**	P	**P**	**02 19 41.1**	**+0.4**
T47A	**Sharon Grove**	**23.33**	**24**	P	**P**	**02 19 43.1**	**+1.2**
SMCO	**Snowmass**	**24.21**	**344**	P	**P**	**02 19 52.9**	**+2.0**
SMCO				IAmb	IAmb	02 20 06.1	
	comp=Z,12nm,1.5s						
SRU	**San Rafael Swe**	**25.25**	**338**	P	**P**	**02 20 03.0**	**+2.8**
S51A	**Beattyville**	**25.38**	**29**	P	**P**	**02 20 02.4**	**+1.3**
O20A	**White River Ci**	**25.45**	**343**	P	**P**	**02 20 04.9**	**+2.9**
NVAR	**Mina Array Bea**	**28.22**	**326**	P	**P**	**02 20 28.8**	**+1.9**
	comp=Z,1.0nm,0.9s,baz=148,slow=8.8,SNR=6.3						
PDAR	**Pinedale Array**	**28.26**	**343**	P	**P**	**02 20 28.5**	**+1.3**
	comp=Z,0.8nm,0.8s,baz=144,slow=10,SNR=7.2						
PDAR				LR	LR	02 31 00.8	
	comp=Z,22nm,19.3s,baz=324,slow=35						
SDV	**Santo Domingo**	**28.31**	**101**	P	**P**	**02 20 28.9**	**+1.0**
	comp=Z,2.6nm,0.4s,baz=296,slow=18,SNR=2.5						
SCHQ	**Schefferville**	**45.92**	**25**	P	**P**	**02 22 56.1**	**-0.2**
	comp=Z,2.2nm,0.8s,baz=217,slow=7.1,SNR=5.3						
YKA	**Yellowknife Ar**	**47.78**	**350**	P	**P**	**02 23 10.5**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=160,slow=7.2,SNR=6.4						
ILAR	**Eielson Array**	**58.52**	**338**	P	**P**	**02 24 30.5**	**+0.6**
	comp=Z,1.0nm,1.0s,baz=140,slow=4.8,SNR=6.4						

NEIC ***19*** *02:22:16.4±1.1, 16.°0N±0.°1×98.°73W±0.°06, h20km±13km, Error ellipse: s-maj=15.2km s-min=7.7km az=184.0*
MEX ***19*** *02:22:16.8±0.8, 15.°86N×98.°86W, h16km±9km, MD4.2*
ISC 19 02:22:10.2±3.0, 15.°8N±0.°2×98.°86W±0.°05, h3km±13km, n18, σ 1 9 51/27, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.91**	**51**	*eP*	**Pn**	**02 22 30.0**	**+0.2**
PNIG				*i* S	**Sb**	**02 22 41.5**	**+0.5**
PNIG	**Pinotepa**	**0.91**	**51**		**Pn**	**02 22 30.0**	**+0.2**
PNIG					**Sg**	**02 22 38.9**	**-0.4**
TLIG	**Tlapa**	**1.75**	**9**	*eP*	**Pb**	**02 22 43.2**	**+0.1**
TLIG				*i* S	**Sn**	**02 23 02.5**	**-2.0**
TLIG	**Tlapa**	**1.75**	**9**	Pn	**Pb**	**02 22 43.1**	**-0.1**
TLIG	**Tlapa**	**1.75**	**9**		**Pb**	**02 22 43.2**	**+0.1**
CAIG	**El Cayaco**	**1.82**	**312**	*eP*	**Pn**	**02 22 43.2**	**+0.8**
CAIG				*i* S	**Sn**	**02 23 04.2**	**-1.7**
CAIG	**El Cayaco**	**1.82**	**312**		**Pn**	**02 22 43.2**	**+0.8**
MEIG	**Mezcala**	**2.21**	**341**	*eP*	**Pb**	**02 22 50.0**	**-1.0**
MEIG				*i* S	**Sn**	**02 23 14.6**	**-1.3**
MEIG	**Mezcala**	**2.21**	**341**		**Pb**	**02 22 50.3**	**-0.7**
PLIG	**Platanillo**	**2.63**	**347**	*eP*	**Pn**	**02 22 55.9**	**+2.2**
PLIG				*i* S	**Sn**	**02 23 25.3**	**-0.8**
PLIG	**Platanillo**	**2.63**	**347**		**Pb**	**02 22 56.3**	**-1.7**
ARIG	**Puente Sto Nin**	**2.83**	**330**	*i* P	**Pn**	**02 22 57.3**	**+0.9**
ARIG				*i* S	**Sn**	**02 23 29.8**	**-1.2**
ARIG	**Puente Sto Nin**	**2.83**	**330**		**Pb**	**02 23 01.6**	**+0.2**
TPIG	**Tehuac#an**	**2.95**	**29**	*eP*	**Pn**	**02 23 00.7**	**+2.5**
TPIG				*i* S	**Sn**	**02 23 33.0**	**-1.3**
TPIG	**Tehuac#an**	**2.95**	**29**		**Pn**	**02 23 00.7**	**+2.5**
YAIG	**Yautepec**	**3.03**	**356**	*i* P	**Pn**	**02 23 01.6**	**+2.4**
YAIG				*eS*	**Sn**	**02 23 35.8**	**-0.3**
YAIG	**Yautepec**	**3.03**	**356**		**Pg**	**02 23 07.9**	**-0.4**
MOIG	**Morelia**	**4.43**	**330**	Pn	**Pn**	**02 23 21.6**	**+3.0**

IDC ***19*** *02:38:01.0±0.7, 20.°38S×172.°49E, h0km, mb4.2/12, mb1 4.5/14, mb1mx4.3/30, mbtmp4.3/14, ML3.8/2, MS4.5/28, Ms1 4.5/28, ms1mx4.3/43, Error ellipse: s-maj=25.2km s-min=17.2km az=144.0*
GCMT ***19*** *02:38:06.1±0.1, 20.°53S±0.°01×172.°49E±0.°01, h12km, MW5.2/135, Moment Tensor Solution. s70,c95; s135,c228; Duration: 1§0 Moment tensor: Scale 10^16 Nm; Mrr-1.44±.14; Mθθ-4.83±.12; Mφφ 6.28±.14; Mrθ-0.76±.33; Mrφ 4.51±.11; Mθφ 2.00±.35; Best double couple: M 6.48100×10^16 NP1:φs 64.00000°, δ 72.00000°, λ -4.00000°. NP2:φs 155.00000°, δ 86.00000°, λ -162.00000°. Principal axes: T 8.1610, Plg 10.0000°, Azm 289.0000°; N -1.3500, Plg 72.0000°, Azm 167.0000°; P -6.8010, Plg 15.0000°, Azm 21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***19*** *02:38:08.1±1.5, 20.°54S±0.°09×172.°52E±0.°03, h51km±5km, mb4.7/70 Error ellipse: s-maj=12.9km s-min=4.7km az=183.0*
ISC 19 02:38:06.0±0.4, 20.°56S±0.°07×172.°61E±0.°06, h35km, n211, σ 1 9 18/176, mb4.7/43, MS4.6/30, 9C-8D, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.86**	**62**		**Pn**	**02 39 31.9**	**+1.4**
DZM	**Mont Dzumac**	**5.94**	**254**	*e*Pn	**Pn**	**02 39 31.1**	**-0.5**
	4.3nm,0.3s						
DZM				*e*LR	LR	02 40 53.9	
	comp=Z,9μm,25.1s						
DZM	**Mont Dzumac**	**5.94**	**254**	Pn	**Pn**	**02 39 30.8**	**-0.8**
	1.3nm,0.3s,baz=128,slow=19,SNR=12						
DZM	**Mont Dzumac**	**5.94**	**254**	Pn	**Pn**	**02 39 32.4**	**+0.9**
SANVU	**Saraoutou**	**7.23**	**314**	Pn	**Pn**	**02 39 50.2**	**+1.0**
RAO	**Raoul Island**	**12.19**	**137**	LR	LR	02 44 40.2	
	comp=Z,3μm,18.9s,baz=291,slow=32						
OUZ	**Omahuta**	**14.63**	**177**		**Pn**	**02 41 32.1**	**+1.7**
AFI	**Afiamalu**	**16.31**	**69**	LR	LR	02 46 53.7	
	comp=Z,1μm,21.8s,baz=236,slow=33						
HNR	**Honiara**	**16.48**	**310**	LR	LR	02 47 15.7	
	comp=Z,1μm,19.1s,baz=140,slow=34						
URZ	**Urewera**	**18.07**	**169**	P	**P**	**02 42 16.0**	**+1.7**
	0.5nm,0.3s,baz=335,slow=6.5,SNR=13						
URZ				LR	LR	02 47 38.4	
	comp=Z,954nm,19.1s,baz=353,slow=32						
URZ	**Urewera**	**18.07**	**169**		**Pn**	**02 42 14.8**	**+0.7**
URZ				IAmb	IAmb	02 42 21.7	
	comp=Z,76nm,1.1s						
BKZ	**Black Stump Fm**	**18.84**	**171**	P	**P**	**02 42 24.1**	**+1.1**
QRZ	**Quartz Range**	**20.20**	**180**		**P**	**02 42 37.8**	**0.0**
QRZ				IAmb	IAmb	02 42 48.0	
	comp=Z,57nm,1.0s						
BFZ	**Birch Farm**	**20.30**	**172**	P	**P**	**02 42 39.3**	**+0.6**
EIDS	**Eidsvold**	**20.39**	**252**	P	**P**	**02 42 40.7**	**+0.8**
THZ	**Tophouse**	**21.14**	**179**	P	**P**	**02 42 49.1**	**+1.2**
THZ				IAmb	IAmb	02 42 56.4	
	comp=Z,36nm,1.0s						
ARMA	**Armidale**	**21.30**	**238**	P	**P**	**02 42 50.9**	**+1.1**
LTZ	**Lake Taylor**	**22.16**	**181**	P	**P**	**02 42 59.4**	**+0.6**
RPZ	**Rata Peaks**	**23.13**	**183**	P	**P**	**02 43 10.0**	**+1.0**
	comp=Z,6.6nm,0.7s,baz=323,slow=9.1,SNR=3.8						
RPZ				LR	LR	02 51 00.8	
	comp=Z,2μm,20.4s,baz=9.5,slow=34						
RPZ	**Rata Peaks**	**23.13**	**183**	IAmb	IAmb	02 43 24.7	
	comp=Z,19nm,0.9s						
CTA	**Charters Tower**	**24.71**	**266**	P	**P**	**02 43 23.6**	**-0.5**
	comp=Z,8.7nm,1.1s,baz=92,slow=7.8,SNR=8.0						
CTA				LR	LR	02 52 28.7	
	comp=Z,2μm,20.8s,baz=80,slow=35						
RAR	**Rarotonga**	**25.80**	**96**	LR	LR	02 51 28.3	
	comp=Z,1μm,21.2s,baz=266,slow=31						
PMG	**Port Moresby**	**26.93**	**291**	LR	LR	02 52 51.0	
	comp=Z,1μm,19.9s,baz=106,slow=33						
STKA	**Stephens Creek**	**29.92**	**242**	P	**P**	**02 44 10.4**	**-0.3**
	comp=Z,6.3nm,0.8s,baz=106,slow=6.3,SNR=8.0						
STKA				LR	LR	02 54 24.0	
	comp=Z,511nm,21.6s,baz=70,slow=33						
STKA	**Stephens Creek**	**29.92**	**242**	P	**P**	**02 44 11.9**	**+1.2**
TBI	**Tubuai**	**35.23**	**102**	*e*S	**S**	**02 50 26.0**	**-2.6**
	comp=Z,282nm,28.5s						
TBI				*e*LR	LR	02 54 19.2	
	comp=Z,2μm,30.5s,baz=270						
PPT2	**Papeete2**	**35.81**	**92**	*e*S	**S**	**02 50 34.2**	**-3.6**
	comp=Z,243nm,24.8s						
PPT2				*e*LR	LR	02 54 34.6	
	comp=Z,3μm,26.2s,baz=255						
PPT	**Papeete**	**35.81**	**92**	LR	LR	02 58 12.6	
	comp=Z,485nm,19.3s,baz=248,slow=34						
WRA	**Warramunga Arr**	**35.86**	**264**	P	**P**	**02 45 01.4**	**-1.4**
	comp=Z,2.4nm,1.0s,baz=94,slow=9.3,SNR=5.1						
WRA				LR	LR	02 59 36.4	
	comp=Z,1μm,19.0s,baz=90,slow=36						
WRA	**Warramunga Arr**	**35.86**	**264**	IAmb	IAmb	02 45 09.8	
	comp=Z,0.3nm,1.0s						
JAY	**Jayapura**	**35.91**	**296**	LR	LR	02 59 02.6	
	comp=Z,814nm,20.5s,baz=129,slow=35						
AS31	**Alice Springs**	**35.92**	**258**	P	**P**	**02 45 03.0**	**-0.2**
ASAR	**Alice Springs**	**35.92**	**258**	P	**P**	**02 45 01.4**	**-1.8**
	comp=Z,2.7nm,0.9s,baz=80,slow=9.0,SNR=16						
ASA

LZH					LR	LR		
	comp=E,150nm,16.0s							
LZH					LR	LR		
	comp=Z,220nm,19.3s							
YBH	**Yreka Blue Hor**	**86.08**	**43**	P	**P**	**02 50 43.7 +0.4**		
YBH				IAmb	IAmb	02 50 45.5		
	comp=Z,6.9nm,0.9s							
MONP2	**Monument Peak**	**86.08**	**53**	P	**P**	**02 50 45.0 +1.4**		
	baz=242,SNR=6.4							
IKP	**In-Ko-Pah, Jac**	**86.20**	**53**	P	**P**	**02 50 45.8 +1.7**		
	baz=243							
LRMC	**Laurel Mtn Rad**	**86.36**	**50**	P	**P**	**02 50 46.4 +1.6**		
	baz=242							
PFO	**Pinyon Flats O**	**86.38**	**52**	P	**P**	**02 50 46.2 +1.2**		
PFO	**Pinyon Flats O**	**86.38**	**52**	P	**P**	**02 50 46.0 +1.0**		
	baz=242							
HUMO	**Hull Mountain**	**86.38**	**42**	P	**P**	**02 50 46.0 +1.4**		
XPFO	**Pion Flat**	**86.38**	**52**	P	**P**	**02 50 46.3 +1.2**		
MDPB	**Devils Postpil**	**86.41**	**48**	P	**P**	**02 50 46.5 +1.3**		
MDPB				IAmb	IAmb	02 50 48.4		
	comp=Z,4.3nm,1.1s							
OMMB	**Old Mammoth Mi**	**86.45**	**48**	P	**P**	**02 50 46.2 +0.7**		
OMMB				IAmb	IAmb	02 50 48.8		
	comp=Z,3.7nm,1.1s							
CWC	**Cottonwood Cre**	**86.53**	**49**	P	**P**	**02 50 46.9 +1.1**		
	baz=241							
SWSC	**Sam W. Stewart**	**86.57**	**53**	P	**P**	**02 50 47.4 +1.6**		
	baz=243							
L04D	**Klamath Falls**	**86.59**	**42**	P	**P**	**02 50 46.6 +0.7**		
	baz=238							
WAKR	**Walker**	**86.59**	**47**	P	**P**	**02 50 46.9 +0.9**		
BEKR	**Beckworth**	**86.64**	**45**	P	**P**	**02 50 46.7 +0.5**		
BEKR				IAmb	IAmb	02 50 48.0		
	comp=Z,8.1nm,1.1s							
M04C	**Macdoel**	**86.66**	**43**	P	**P**	**02 50 47.1 +0.9**		
	baz=239							
PNTR	**Pine Nut**	**86.77**	**46**	P	**P**	**02 50 47.8 +0.9**		
MPMC	**Manual Prospec**	**86.77**	**50**	P	**P**	**02 50 47.8 +0.8**		
	baz=242							
VCNR	**Virginia City**	**86.83**	**46**	P	**P**	**02 50 48.0 +0.8**		
BELC	**Belle Mtn. Jos**	**86.90**	**52**	P	**P**	**02 50 48.5 +0.9**		
	baz=243,SNR=13							
GSC	**Goldstone, Bar**	**86.91**	**51**	P	**P**	**02 50 48.3 +0.8**		
GSC	**Goldstone, Bar**	**86.91**	**51**	P	**P**	**02 50 48.8 +1.3**		
	baz=242							
YERR	**Yerington**	**86.96**	**46**	IAmb	IAmb	02 50 49.6		
	comp=Z,5.5nm,1.1s							
HEC	**Hector,Ludlow**	**87.03**	**51**	P	**P**	**02 50 49.5 +1.4**		
	baz=242,SNR=10							
BC3	**Big Chuckawall**	**87.15**	**53**	P	**P**	**02 50 50.5 +1.7**		
	baz=243							
LPIG	**La Paz**	**87.15**	**63**	LR	LR	03 20 16.3		
	comp=Z,192nm,21.9s,baz=243,slow=29							
PAHR	**Pah Rah Range**	**87.22**	**46**	IAmb	IAmb	02 50 56.8		
	comp=Z,3.7nm,1.1s							
J04D	**Umpqua Nationa**	**87.25**	**42**	P	**P**	**02 50 50.5 +1.4**		
	baz=238							
NVAR	**Mina Array Bea**	**87.33**	**47**	P	**P**	**02 50 50.8 +1.1**		
	comp=Z,2.7nm,0.9s,baz=227,slow=9.1,SNR=17							
NVAR				LR	LR	03 22 27.4		
	comp=Z,242nm,20.6s,baz=221,slow=30							
FURC	**Furnace Creek,**	**87.41**	**50**	P	**P**	**02 50 50.3 +0.6**		
	baz=242							
GMRC	**Granite Mounta**	**87.50**	**51**	P	**P**	**02 50 51.7 +1.3**		
	baz=243							
SHOC	**Shoshone, Teco**	**87.57**	**50**	P	**P**	**02 50 52.2 +1.6**		
	baz=242							
IRM	**Iron Mountain**	**87.60**	**52**	P	**P**	**02 50 52.7 +1.8**		
	baz=243,SNR=6.1							
TUQ	**Turquoise Moun**	**87.61**	**51**	P	**P**	**02 50 52.5 +1.5**		
	baz=243							
K05A	**Summer Lake**	**87.74**	**43**	P	**P**	**02 50 53.1 +1.6**		
KVN	**Kaiserville**	**87.77**	**47**	IAmb	IAmb	02 50 59.4		
	comp=Z,6.3nm,1.2s							
J05D	**Fort Rock, OR**	**87.81**	**42**	P	**P**	**02 50 53.1 +1.3**		
	baz=239							
Y12C	**Blythe**	**87.88**	**53**	P	**P**	**02 50 53.9 +1.8**		
	baz=244							
H04A	**Detroit Lake**	**87.95**	**40**	IAmb	IAmb	02 51 03.3		
	comp=Z,7.8nm,1.2s							
SNAA	**Sanae**	**87.96**	**181**	P	**P**	**02 50 50.1 -1.9**		
TPNV	**Topopah Spring**	**88.07**	**49**	IAmb	IAmb	02 50 55.1		
	comp=Z,6.5nm,1.0s							
TPNV	**Topopah Spring**	**88.07**	**49**	P	**P**	**02 50 54.3 +1.2**		
	baz=242,SNR=7.1							
PINE	**Pine Mountain**	**88.26**	**42**	IAmb	IAmb	02 51 01.2		
	comp=Z,3.3nm,0.8s							
214A	**Organ Pipe Nat**	**88.40**	**55**	P	**P**	**02 50 56.5 +1.8**		
	baz=245							
VNA3	**Neumayer Olymp**	**88.43**	**179**	P	**P**	**02 50 53.8 -0.4**		
W13A	**Hualapai Mount**	**88.95**	**52**	P	**P**	**02 50 58.2 +0.8**		
W13A				IAmb	IAmb	02 51 00.4		
	comp=Z,3.1nm,1.0s							
WVOR	**Wild Horse Val**	**89.04**	**44**	P	**P**	**02 50 58.5 +1.0**		
WVOR				IAmb	IAmb	02 51 06.2		
	comp=Z,4.5nm,1.1s							
I07A	**Izee**	**89.30**	**42**	IAmb	IAmb	02 51 06.7		
	comp=Z,5.7nm,1.2s							
J08A	**Circle Bar Ran**	**89.60**	**43**	IAmb	IAmb	02 51 02.6		
	comp=Z,5.2nm,0.9s							
B05A	**Bryant**	**89.89**	**37**	P	**P**	**02 51 02.0 +0.8**		
	baz=238							
TUC	**Tucson**	**90.11**	**55**	P	**P**	**02 51 05.1 +2.4**		
TUC				IAmb	IAmb	02 51 16.2		
	comp=Z,5.2nm,1.1s							
TUC	**Tucson**	**90.11**	**55**	P	**P**	**02 51 05.3 +2.6**		
	baz=246							
LTY	**Liberty**	**90.19**	**39**	P	**P**	**02 51 03.0 +0.3**		
SONM	**Songino Array**	**90.19**	**322**	P	**P**	**02 51 02.1 -0.7**		
	comp=Z,1.1nm,0.8s,baz=142,slow=5.1,SNR=6.0							
SONM				LR	LR	03 28 36.9		
	comp=Z,63nm,21.1s,baz=58,slow=34							
SONM	**Songino Array**	**90.19**	**322**	IAmb	IAmb	02 51 04.5		
	comp=Z,1.6nm,1.0s							
HDA	**Harding Lake**	**90.27**	**16**	P	**P**	**02 51 02.4 -0.2**		
	baz=217							
GTA	**Gaotai**	**90.34**	**312**	*eP*	**P**	**02 51 04.5 +0.8**		
GTA				pP	pwP	02 51 22.6 +4.7		
GTA				sP	sP	02 51 29.3 +12		
GTA				pmax	pmax			
	comp=Z,5.0nm,1.0s							
GTA				pmax	pmax			
	comp=Z,56nm,8.3s							
GTA				LR	LR			
	comp=N,110nm,19.7s							
GTA				LR	LR			
	comp=E,220nm,20.9s							
GTA				LR	LR			
	comp=Z,260nm,23.2s							
HAWA	**Hanford**	**90.43**	**40**	P	**P**	**02 51 04.3 +0.5**		
ELK	**Elko**	**90.50**	**46**	IAmb	IAmb	02 51 06.4		
	comp=Z,5.7nm,1.1s							
ILAR	**Eielson Array**	**90.58**	**16**	P	**P**	**02 51 02.7 -1.3**		
	comp=Z,0.9nm,0.7s,baz=228,slow=4.8,SNR=12							
ILAR				LR	LR	03 25 33.0		
	comp=Z,436nm,20.1s,baz=214,slow=32							
WUAZ	**Wupatki**	**90.98**	**52**	P	**P**	**02 51 08.9 +2.1**		
	baz=245							
MFID	**Camas Ranch**	**91.33**	**44**	IAmb	IAmb	02 51 11.7		
	comp=Z,2.5nm,1.1s							
DUG	**Dugway, Tooele**	**91.92**	**48**	P	**P**	**02 51 11.4 +0.3**		
	baz=245							
Q16A	**Castle Valley**	**92.54**	**49**	P	**P**	**02 51 15.2 +1.2**		
MNTX	**Cornudas Mount**	**94.10**	**58**	P	**P**	**02 51 22.4 +1.3**		
	baz=248							
EPYK	**Eagle Plains**	**94.59**	**18**	P	**P**	**02 51 21.0 -1.6**		
	baz=227							
TXAR	**Lajitas Array**	**94.63**	**61**	P	**P**	**02 51 24.6 +0.8**		
	comp=Z,0.7nm,0.8s,baz=229,slow=3.5,SNR=7.9							
TXAR				LR	LR	03 25 22.0		
	comp=Z,172nm,22.0s,baz=0.0,slow=30							
PDAR	**Pinedale Array**	**95.21**	**46**	P	**P**	**02 51 25.5 -0.8**		
	comp=Z,0.1nm,0.3s,baz=272,slow=5.0,SNR=3.1							
PDAR				LR	LR	03 31 01.5		
	comp=Z,115nm,18.4s,baz=258,slow=33							
S22A	**4UR Ranch, Cre**	**95.22**	**52**	P	**P**	**02 51 27.9 +1.4**		
	baz=248							
PLCA	**Paso Flores**	**95.43**	**137**	LR	LR	03 26 57.4		
	comp=Z,82nm,19.2s,baz=264,slow=31							
CMIG	**Matias Romero**	**98.12**	**75**	LR	LR	03 26 20.4		
	comp=Z,248nm,20.1s,baz=237,slow=30							
YKA	**Yellowknife Ar**	**100.39**	**27**	P	**Pdif**	**02 51 48.8 +0.1**		
	comp=Z,0.2nm,0.8s,baz=248,slow=4.5,SNR=3.5							
WMQ	**Urumqi**	**100.41**	**313**	*eP*	**Pdif**	**02 51 49.8 +0.4**		
WMQ				pP	pPdif	02 51 58.8 -0.8		
WMQ				pmax	pmax			
	comp=Z,7.0nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,75nm,3.9s							
WMQ				LR	LR			
	comp=N,350nm,28.9s							
WMQ				LR	LR			
	comp=E,1μm,28.9s							
WMQ				LR	LR			
	comp=Z,230nm,28.8s							
MKAR	**Makanchi Array**	**104.91**	**315**	Pdiff	**Pdif**	**02 52 08.5 -0.8**		
	comp=Z,0.4nm,0.8s,baz=94,slow=4.3,SNR=3.1							
BRTR	**Keskin Array B**	**140.12**	**308**	PKP	**PKPdf**	**02 57 31.8 +0.5**		
	comp=Z,0.7nm,1.0s,baz=82,slow=2.0,SNR=2.8							
TRPA	**Tarpa**	**143.44**	**326**	⇓P	PKPab	02 57 31.5	-1.4	
VOIR		**143.58**	**320**	⇑P	PKPab	02 57 34.0	+0.3	
ARR	**Arges**	**143.87**	**321**	⇑P	PKPab	02 57 35.5	+0.7	
HUMR	**Humele**	**144.10**	**319**	⇑P	**PKPab**	**02 57 36.0**	**+0.4**	
DRGR		**144.16**	**324**	⇑P	**PKPab**	**02 57 35.9**	**0.0**	
LANS	**Liptovska Anna**	**144.31**	**329**	*e*PKP	**PKPdf**	**02 57 38.9**	**+0.6**	
OKC	**Ostrava-Krasne**	**144.44**	**331**	*e*PKP	PKPbc	02 57 37.5	+0.5	
VLAD	**Vladila**	**144.73**	**319**	⇓P	PKPbc	02 57 38.9	+0.9	
OSTC	**Ostas**	**144.74**	**334**	*e*PKP	**PKPab**	**02 57 37.8**	**0.0**	
MORC	**Moravsky Berou**	**144.75**	**332**	⇓P	**PKPab**	**02 57 37.1**	**-0.8**	
MORC	**Moravsky Berou**	**144.75**	**332**	*e*PKP	**PKPab**	**02 57 38.0**	**+0.1**	
CHVC	**Chvalec**	**144.79**	**334**	*e*PKP	**PKPab**	**02 57 37.4**	**-0.6**	
DPC	**Dobruska-Polom**	**144.85**	**333**	*e*PKP	**PKPab**	**02 57 38.2**	**-0.1**	
DPC				*ex*	x	02 57 47.5		
UPC	**Upice**	**144.87**	**334**	*e*PKP	**PKPab**	**02 57 38.0**	**-0.3**	
UPC				*ex*	x	02 57 44.8		
KRLC	**Kraliky**	**144.87**	**333**	*e*PKP	**PKPab**	**02 57 38.0**	**-0.3**	
PLVB	**Pleven**	**144.91**	**318**	⇑P	PKPbc	02 57 39.4	+0.7	
PSZ	**Piszkesteto**	**144.94**	**328**	⇑P	**PKPab**	**02 57 38.9**	**+0.2**	
GZR	**Gura Zlata**	**144.94**	**322**	⇑P	**PKPab**	**02 57 39.0**	**+0.2**	
VYHS	**Vyhne**	**145.07**	**329**	*e*PKP	**PKPab**	**02 57 39.6**	**+0.5**	
JAVC	**Velka Javorina**	**145.36**	**331**	*e*PKP	**PKPdf**	**02 57 41.5**	**+1.4**	
CLL	**Collm**	**145.40**	**337**	*i* PKPdf	**PKPbc**	**02 57 39.0**	**-1.0**	
	comp=Z,35nm,0.9s							
CLL				*e*PKiKP	**PKiKP**	**02 57 45.0**	**+1.0**	
CLL				LmV		04 09 00.0		
	comp=Z,100nm,18.1s							
CLL	**Collm**	**145.40**	**337**	*e*PKPbc	**PKPbc**	**02 57 39.9**	**-0.1**	
	baz=34,slow=3.2							
CLL	**Collm**	**145.40**	**337**		**PKPbc**	**02 57 39.2**	**-0.8**	
BRG	**Berggiesshubel**	**145.40**	**336**	*e*PKP	**PKPbc**	**02 57 39.8**	**-0.2**	
	comp=Z,35nm,1.0s							
BRG	**Berggiesshubel**	**145.40**	**336**	*e*PKPbc	**PKPbc**	**02 57 39.9**	**-0.1**	
	baz=34,slow=3.2							
PVCC	**Panska Ves**	**145.43**	**335**	*e*PKP	**PKPbc**	**02 57 39.7**	**-0.4**	
PVCC				*ex*	x	02 57 44.3		
HERR	**Herculane**	**145.44**	**321**	⇑P	**PKPbc**	**02 57 40.0**	**-0.3**	
BZS	**Buzias**	**145.47**	**323**	⇓P	**PKPbc**	**02 57 40.1**	**-0.3**	
VRAC	**Vranov**	**145.52**	**332**	⇓P	**PKPbc**	**02 57 40.9**	**+0.4**	
VRAC	**Vranov**	**145.52**	**332**	*e*PKP	**PKPbc**	**02 57 40.9**	**+0.4**	
FBE	**Freiberg**	**145.58**	**337**	*e*PKPbc	**PKPab**	**02 57 41.3**	**+0.5**	
	baz=34,slow=3.2							
SMOL	**Smolenice**	**145.72**	**330**	*e*PKP	**PKPab**	**02 57 42.0**	**+0.5**	
KRUC	**Moravsky**	**145.79**	**332**	*e*PKP	**PKPbc**	**02 57 41.7**	**+0.4**	
PRU	**Pruhonice**	**145.87**	**335**	*e*PKP	**PKPdf**	**02 57 39.7**	**-1.2**	
MODS	**Modra-Piesok**	**145.89**	**330**	*e*PKP	**PKPdf**	**02 57 41.6**	**+0.6**	
MDVR	**Moldovita**	**145.91**	**322**	⇓P	**PKPbc**	**02 57 42.2**	**+0.3**	
NEUB	**Neuenburg**	**145.91**	**338**	*e*PKPbc	**PKPdf**	**02 57 41.8**	**+0.9**	
	baz=34,slow=3.2							
TREC	**Trest**	**146.01**	**333**	*e*PKP	**PKPdf**	**02 57 41.9**	**+0.7**	
ZST	**Bratislava**	**146.10**	**330**	*e*PKP	**PKPdf**	**02 57 41.1**	**-0.2**	
VTS	**Vitosha**	**146.18**	**318**	⇑P	**PKPbc**	**02 57 43.2**	**+0.3**	
GTTG	**Gyttingen**	**146.22**	**340**	*e*PKPbc	**PKPbc**	**02 57 42.9**	**+0.4**	
	baz=34,slow=3.2							
PLN	**Plauen**	**146.38**	**337**	*e*PKPbc	**PKPbc**	**02 57 43.4**	**+0.4**	
	baz=34,slow=3.2							
GUNZ	**Gunzen**	**146.41**	**337**	*e*PKPbc	**PKPbc**	**02 57 43.7**	**+0.5**	
	baz=34,slow=3.2							
MOX	**Moxa**	**146.44**	**338**	*e*L	L	04 08 06.1		
	comp=Z,120nm,20.2s							
WERN	**Wernitzgruen**	**146.46**	**337**	*e*PKPbc	**PKPbc**	**02 57 43.9**	**+0.6**	
	baz=34,slow=3.2							
NKC	**Novy Kostel**	**146.48**	**337**	*e*PKP	**PKPbc**	**02 57 43.9**	**+0.5**	
NKC				*ex*	x	02 57 50.2		
CONA	**Conrad Observa**	**146.87**	**331**	*e*PKPab	**PKPbc**	**02 57 44.6**	**0.0**	
	comp=Z,12nm,1.1s							
KHC	**Kasperske Hory**	**146.93**	**334**	*e*PKP	**PKPdf**	**02 57 43.9**	**+1.1**	
KHC				*ep*PKP	**sPKPdf**	**02 57 58.2**	**+1.4**	
KHC	**Kasperske Hory**	**146.93**	**334**	PKPbc	**PKPbc**	**02 57 44.6**	**-0.1**	
ROTZ	**Rotzenmuhle**	**146.95**	**336**	*e*PKPbc	**PKPbc**	**02 57 45.1**	**+0.4**	
	baz=34,slow=3.2							
GEC2	**GERESS Array S**	**147.10**	**334**	*e*PKPbc	**PKPbc**	**02 57 45.5**	**+0.2**	
	baz=34,slow=3.2							
GEC2	**GERESS Array S**	**147.10**	**334**	PKPbc	**PKPdf**	**02 57 44.5**	**+1.3**	
GERES	**GERESS Array B**	**147.10**	**334**	PKPbc	**PKPdf**	**02 57 44.6**	**+1.5**	
	comp=Z,6.1nm,0.8s,baz=33,slow=3.2,SNR=39							
GRF	**Grafenberg Arr**	**147.37**	**337**	*e*L	L	04 01 05.5		
	comp=Z,127nm,19.8s							
MOA	**Molln**	**147.64**	**332**	*e*PKiKP	**PKPab**	**02 57 49.6**	**+0.7**	
	comp=Z,9.7nm,1.6s							
LIT	**Litokhoron**	**147.91**	**314**	PKPbc	**PKPbc**	**02 57 47.0**	**-0.7**	
SOKA	**Soloth**	**148.17**	**330**	*e*PKPab	**PKiKP**	**02 57 50.3**	**+0.4**	
	comp=Z,5.3nm,0.9s							
OBKA	**Obir**	**148.52**	**330**	*e*PKPab	**PKiKP**	**02 57 52.0**	**+1.3**	
	comp=Z,11nm,1.3s							
WTTA	**Wattenberg**	**149.20**	**334**	*e*PKPbc	**PKPbc**	**02 57 50.2**	**-0.8**	
	comp=Z,15nm,1.6s							
ABTA	**Abfaltersbach**	**149.25**	**333**	*e*PKPbc	**PKPbc**	**02 57 49.8**	**-1.2**	
	comp=Z,4.8nm,0.8s							
MOTA	**Moosalm**	**149.35**	**335**	*e*PKPbc	**PKPbc**	**02 57 50.1**	**-1.2**	
	comp=Z,9.2nm,0.9s,SNR=7.7							
SQTA	**Sankt Quirin**	**149.41**	**335**	*e*PKPbc	**PKPbc**	**02 57 51.4**	**-0.1**	
	comp=Z,6.0nm,0.7s,SNR=6.3							
BFO	**Black Forest**	**149.54**	**339**		**PKPbc**	**02 57 51.6**	**0.0**	
FETA	**Feichten**	**149.76**	**335**	*e*PKiKP	**PKPbc**	**02 57 52.5**	**+0.2**	
	comp=Z,12nm,1.1s							
DAVA	**Damuels**	**149.87**	**336**	PKiKP	**PKPbc**	**02 57 52.5**	**-0.2**	
	comp=Z,13nm,1.2s							
ESDC	**Sonseca Array**	**160.72**	**352**	PKPab	**PKPab**	**02 58 43.8**	**-0.6**	
	comp=Z,1.5nm,0.9s,baz=51,slow=3.9,SNR=3.9							
TORD	**Tord Ar. Bea**	**168.60**	**231**	PKP	**PKPdf**	**02 58 09.3**	**-0.8**	
	comp=Z,1.9nm,1.2s,baz=122,slow=2.2,SNR=4.0							
TORD				PKPab	**PKPab**	**02 59 21.9**	**+2.1**	
	comp=Z,0.7nm,0.9s,baz=127,slow=3.8,SNR=4.7							

*MAN **19** 02:55:16.6, 8.°79N× 126.°56E, h6km, mb5.0, ML3.9, MS4.0*
*IDC **19** 02:55:23.8± 1.5, 8.°68N× 126.°39E, h100km± 14km, mb3.8/21, mb1 3.9/21, mb1mx3.8/42, mbtmp4.1/21, MS3.7/1, Ms1 3.7/1, ms1mx2.8/43, Error ellipse: s-maj=21.0km s-min=11.6km az=86.0*
*NEIC **19** 02:55:23.1± 1.7, 8.°64N± 0.°03× 126.°4E± 0.°2, h95km± 7km, mb4.5/7, Error ellipse: s-maj=23.1km s-min=1.9km az=80.0*

ISC 19 02:55:16.5±1.5, **8.°86N**±0.°04×**126.°53E**±0.°07, **h30**km±10km, **n48**, σ1§**62**/57, **mb4.3**/27, **4C-3D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.69**	**194**	⇑*i*P	**Pb**	**02 55 29.3**	**-0.7**
BIPH				*i* S	**Sb**	**02 55 37.2**	**-2.0**
BUTP	**Butuan**	**0.91**	**277**	*e*P	**Pb**	**02 55 34.6**	**+0.9**
BUTP				*e*S	**Sb**	**02 55 45.7**	**+0.2**
BUKP	**Musuan**	**1.75**	**236**	*e*P	**Pb**	**02 55 46.8**	**-1.1**
BUKP				*e*S	**Sb**	**02 56 10.8**	**+1.2**
DAV	**Davao City (W)**	**2.01**	**208**	P	**Pb**	**02 55 52.1**	**-0.3**
	41nm,0.3s,baz=197,slow=19,SNR=3.6						
DAV				S	**Sb**	**02 56 17.1**	**+0.1**
	82nm,0.3s,baz=269,slow=23,SNR=6.1						
DAV				LR	LR	02 56 53.0	
	comp=Z,431nm,21.9s,baz=336,slow=50						
DMPH	**Davao City--Mi**	**2.03**	**210**	⇓P	Pb	02 55 58.0	+5.2
MSLP	**Maasin**	**2.08**	**308**	*e*P	**Pb**	**02 55 52.7**	**-1.0**
MSLP				*e*S	**Sb**	**02 56 19.4**	**+0.3**
KCP	**Kidapawan**	**2.33**	**218**	⇑*e*P	**Pn**	**02 55 55.1**	**+2.3**
KCP				*i* S	**Sb**	**02 56 26.0**	**-0.2**
OCLP	**Ormoc**	**2.89**	**319**	*e*P	**Pb**	**02 56 05.0**	**-2.4**
OCLP				*e*S	**Sb**	**02 56 42.3**	**0.0**
LLP	**Lapu-Lapu**	**2.92**	**300**	⇑*e*P	**Pb**	**02 56 05.0**	**-2.8**
LLP				*e*S	**Sb**	**02 56 41.9**	**-1.3**
DCPH	**Dipolog City**	**3.16**	**265**	⇓*e*P	**Pn**	**02 56 07.4**	**+3.2**
SNPH	**Sibulan**	**3.29**	**279**	⇑*e*P	**Pn**	**02 56 08.2**	**+2.1**
SNPH				*e*S	**Sn**	**02 56 46.7**	**+2.4**
GUIM	**Jordan**	**4.27**	**295**	*e*P	**Pn**	**02 56 21.3**	**+1.8**
GUIM				*e*S	**Sn**	**02 57 03.4**	**-5.0**
RCP	**Roxas**	**4.60**	**306**	⇓*e*P	Pn	02 56 29.5	+5.5
JNU	**Nakatsue**	**24.48**	**9**	P	**P**	**03 00 34.7**	**+1.6**
	6.3nm,0.8s,baz=173,slow=8.1,SNR=4.3						
FITZ	**Fitzroy Crossi**	**26.80**	**182**	P	**P**	**03 00 53.4**	**-0.7**
	2.1nm,0.4s,baz=188,slow=12,SNR=3.5						
CMAR	**Chiang Mai Arr**	**28.42**	**293**	P	**P**	**03 01 09.5**	**+0.7**
	1.0nm,0.3s,baz=93,slow=8.2,SNR=4.0						
KSRS	**Korea Array**	**28.50**	**2**	P	**P**	**03 01 10.9**	**+1.8**
	1.4nm,0.7s,baz=182,slow=10.0,SNR=5.5						
WRA	**Warramunga Arr**	**29.63**	**165**	P	**P**	**03 01 17.1**	**-2.4**
	0.6nm,0.9s,baz=345,slow=9.4,SNR=4.4						
ASAR	**Alice Springs**	**33.12**	**168**	P	**P**	**03 01 49.1**	**-1.0**
	0.3nm,0.3s,baz=343,slow=7.2,SNR=14						
ASAR				PcP	**PcP**	**03 04 32.3**	**-0.8**
	0.6nm,0.7s,baz=345,slow=2.5,SNR=4.6						
USRK	**Ussuriysk Ar.**	**35.53**	**7**	P	**P**	**03 02 12.7**	**+1.9**
	5.5nm,0.8s,baz=195,slow=6.0,SNR=8.6						
ASAJ	**Asahikawa**	**37.81**	**19**	P	**P**	**03 02 32.8**	**+2.6**
	5.4nm,0.7s,baz=189,slow=13,SNR=3.3						
JKA	**Kamikawa-asahi**	**37.81**	**19**	P	**P**	**03 02 32.8**	**+2.6**
KLR	**Kul'dur**	**40.48**	**5**	P	**P**	**03 02 54.0**	**+1.5**
	0.8nm,0.3s,baz=227,slow=5.6,SNR=6.4						
TAPN	**Taplejung**	**41.00**	**302**	*e*P	**P**	**03 02 57.5**	**0.0**
ODAN	**Odare**	**41.11**	**301**	*e*P	**P**	**03 02 59.1**	**+0.8**
JIRN	**Jiri**	**42.38**	**302**	*e*P	**P**	**03 03 08.7**	**-0.1**
	14nm,0.4s						
GUN	**Gumba**	**42.72**	**302**	*e*P	**P**	**03 03 12.0**	**+0.4**
	7.5nm,0.4s						
STKA	**Stephens Creek**	**42.99**	**161**	P	**P**	**03 03 12.1**	**-1.1**
	1.3nm,0.5s,baz=331,slow=12,SNR=3.7						
KOLN	**Koldanda**	**44.60**	**301**	*e*P	**P**	**03 03 26.9**	**+0.3**
	8.9nm,0.5s						
DANN	**Dangsing**	**44.63**	**302**	*e*P	**P**	**03 03 27.1**	**+0.2**
	23nm,1.0s						
PETK	**Petropavlovsk-**	**50.81**	**24**	P	**P**	**03 04 16.4**	**+2.3**
	3.7nm,0.8s,baz=306,slow=1.5,SNR=5.4						
MKAR	**Makanchi Array**	**53.31**	**323**	P	**P**	**03 04 32.9**	**+0.1**
	3.6nm,0.7s,baz=120,slow=8.4,SNR=30						
MKAR				PcP	**PcP**	**03 05 39.7**	**-0.5**
	1.4nm,0.6s,baz=111,slow=4.7,SNR=7.7						
ZALV	**Zalesovo Beam**	**55.99**	**332**	P	**P**	**03 04 50.9**	**-1.1**
	0.8nm,0.3s,baz=121,slow=7.5,SNR=8.6						
ZALV				PcP	**PcP**	**03 05 48.5**	**-1.7**
	0.9nm,0.4s,baz=153,slow=4.0,SNR=3.9						
AAK	**Ala-Archa**	**56.51**	**316**	LR	LR	03 30 41.8	
	comp=Z,71nm,19.5s,baz=320,slow=38						
KURK	**Kurchatov**	**57.38**	**326**	P	**P**	**03 05 02.0**	**0.0**
KURK				IAmb	IAmb	03 05 03.0	
	comp=Z,4.9nm,0.9s						
TIXI	**Tiksi**	**62.75**	**1**	P	**P**	**03 05 39.2**	**+0.7**
TIXI				IAmb	IAmb	03 05 39.8	
	comp=Z,5.8nm,1.1s						
GEYT	**Alibeck**	**67.60**	**307**	P	**P**	**03 06 11.1**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=144,slow=2.8,SNR=5.1						
GEYT	**Alibeck**	**67.60**	**307**	IAmb	IAmb	03 06 11.9	
	comp=Z,1.2nm,0.8s						
ABKAR	**Akbulak array**	**68.11**	**320**	P	**P**	**03 06 13.3**	**-0.3**
ILAR	**Eielson Array**	**80.59**	**26**	P	**P**	**03 07 26.4**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=248,slow=4.8,SNR=7.7						
INK	**Inuvik**	**85.50**	**22**	P	**P**	**03 07 52.0**	**+0.8**
	comp=Z,1.8nm,1.1s,baz=322,slow=4.7,SNR=3.8						
ARCES	**ARCESS Array B**	**85.60**	**340**	P	**P**	**03 07 51.3**	**

comp=Z,0.4nm,0.6s,baz=77,slow=4.6,SNR=3.6
WMOK Wichita Mounta 96.32 45 P **P** **03 08 18.3 -1.1**
TORD Torodi Ar. Bea 122.06 310 PKP **PKPdf** **03 13 41.6 -1.4**
comp=Z,0.5nm,1.1s,baz=16,slow=3.1,SNR=2.4

*KRNET **19** 03:01:50.6±0.1, 39°.97N×69°.07E, mb2.7*
*NNC **19** 03:01:58.9±2.3, 39°.07N×70°.56E, h0km, mb3.2, mpv2.8, Error ellipse: s-maj=20.6km s-min=13.2km az=167.0*
ISC 19 03:01:54.8±3.8, 39°.5N±0°.2×69°.5E±0°.1, h10km, n11, σ1§59/21, 13C-9D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.18**	**60**	⇑*i*P	**Pn**	**03 02 16.1**	**-1.4**
	baz=86						
BTK				⇑*i*S	**Sb**	**03 02 34.5**	**+1.7**
	baz=86						
ARK	**Arkit**	**2.99**	**38**	⇑*i*P	**Pn**	**03 02 38.8**	**-3.6**
	baz=50						
ARK				⇑*i*S	**Sn**	**03 03 14.8**	**-3.6**
	baz=50						
ARSB	**Arslanbob**	**3.25**	**54**	⇓*i*P	**Pn**	**03 02 45.1**	**-0.8**
	baz=64						
ARSB				⇓*i*S	**Sn**	**03 03 24.6**	**-0.2**
	baz=64						
KK31	**Karatay Array**	**3.71**	**12**	Pn	**Pb**	**03 03 02.3**	**+2.0**
	0.7nm,0.5s,baz=179,slow=12,SNR=16						
KK31				⇓Pg	Pg	03 03 12.0	+6.2
	0.8nm,0.5s,baz=177,slow=17,SNR=3.4						
KK31				Lg	Lg	03 04 07.3	
	4.0nm,0.7s,baz=153,slow=11,SNR=10						
AML	**Almayashu**	**4.16**	**49**	⇑*i*P	**Pn**	**03 02 58.2**	**-0.4**
	baz=57						
AML				⇑*i*S	**Sn**	**03 03 47.3**	**-0.1**
	baz=57						
EKS2	**Erkin-Say**	**4.55**	**44**	⇓*i*P	**Pn**	**03 03 03.6**	**-0.2**
	baz=51						
EKS2				⇓*i*S	**Sn**	**03 03 56.7**	**0.0**
	baz=51						
UCH	**Uchtor**	**4.70**	**53**	⇑*i*P	**Pn**	**03 03 05.5**	**-0.7**
	baz=60						
UCH				⇑*i*S	**Sn**	**03 03 59.9**	**-1.1**
	baz=60						
AAK	**Ala-Archa**	**4.93**	**49**	⇑*i*P	**Pn**	**03 03 08.7**	**-0.4**
	baz=55						
AAK				⇑*i*S	**Sn**	**03 04 05.4**	**-0.9**
	baz=55						
AAK	**Ala-Archa**	**4.93**	**49**	⇓Pn	**Pn**	**03 03 10.6**	**+1.5**
	2.5nm,1.0s						
AAK				⇓Sn	**Sn**	**03 04 05.5**	**-0.9**
	2.5nm,0.6s						
AAK				⇑Lg	Lg	03 04 27.0	
	3.4nm,0.8s						
KZA	**Kyzart**	**5.09**	**57**	⇓*i*P	**Pn**	**03 03 10.5**	**-1.0**
	baz=64						
KZA				⇓*i*S	**Sn**	**03 04 08.6**	**-2.0**
	baz=64						
TKM2	**Tokmak 2**	**5.75**	**51**	⇑Pn	**Pn**	**03 03 20.5**	**+0.1**
	0.7nm,0.5s						
TKM2				⇑Sn	**Sn**	**03 04 26.8**	**+0.2**
	2.0nm,0.8s						

*IDC **19** 03:07:09.0±0.9, 19°.23S×167°.73E, h0km, mb4.3/10, mb1 4.5/11, mb1mx4.2/43, mbtmp4.3/11, ML4.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.7/25, Error ellipse: s-maj=31.8km s-min=18.8km az=132.0*
*NEIC **19** 03:07:12.2±1.5, 19°.23S±0°.06×167°.71E±0°.09, h24km±5km, mb4.6/19, Error ellipse: s-maj=13.2km s-min=7.3km az=114.0*
ISC 19 03:07:12.5±0.6, 19°.29S±0°.07×167°.7E±0°.1, h28km, n36, σ1§06/28, mb4.6/16, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.02**	**203**	Pn	**Pn**	**03 07 57.0**	**-1.6**
	55nm,0.3s,baz=178,slow=19,SNR=370						
DZM				Sn	**Sn**	**03 08 31.8**	**-2.2**
	44nm,0.3s,baz=122,slow=23,SNR=9.8						
DZM				LR	LR	03 09 10.3	
	comp=Z,578nm,19.2s,baz=41,slow=40						
NOUC	**Port Laguerre**	**3.10**	**205**		**Pn**	**03 07 58.3**	**-1.4**
SANVU	**Saraoutou**	**3.85**	**352**	Pn	**Pn**	**03 08 07.4**	**-2.5**
MSVF	**Nonsavu**	**9.91**	**83**		**Pn**	**03 09 32.8**	**-0.6**
CTA	**Charters Tower**	**20.24**	**264**	P	Pn	03 11 47.9	+0.2
	9.0nm,1.0s,baz=80,slow=13,SNR=10						
STKA	**Stephens Creek**	**26.62**	**237**	P	**P**	**03 12 49.5**	**+0.7**
	2.7nm,0.7s,baz=52,slow=11,SNR=6.5						
STKA	**Stephens Creek**	**26.62**	**237**	IAmb	IAmb	03 12 51.2	
	comp=Z,2.4nm,1.1s						
WR0	**Warramunga Arr**	**31.24**	**263**	P	**P**	**03 13 29.9**	**-0.1**
WRA	**Warramunga Arr**	**31.43**	**263**	P	**P**	**03 13 31.2**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=84,slow=7.9,SNR=26						
AS31	**Alice Springs**	**31.73**	**256**	P	**P**	**03 13 34.2**	**-0.2**
ASAR	**Alice Springs**	**31.73**	**256**	P	**P**	**03 13 34.5**	**+0.2**
	comp=Z,3.4nm,0.4s,baz=83,slow=8.0,SNR=145						
KSRS	**Korea Array**	**67.75**	**327**	P	**P**	**03 18 08.1**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=137,slow=7.1,SNR=4.4						
QSPA	**South Pole Qui**	**70.77**	**180**	P	**P**	**03 18 25.9**	**-0.3**
QSPA				IAmb	IAmb	03 18 27.4	
	comp=Z,5.9nm,1.1s						
PETK	**Petropavlovsk-**	**72.61**	**354**	P	**P**	**03 18 38.5**	**+1.4**
	comp=Z,2.8nm,0.7s,baz=138,slow=5.7,SNR=6.6						
MAW	**Mawson**	**77.85**	**202**	P	**P**	**03 19 09.7**	**+2.6**
	comp=Z,2.3nm,0.4s,baz=288,slow=8.1,SNR=11						
SONM	**Songino Array**	**86.41**	**324**	P	**P**	**03 19 53.1**	**+0.7**
	comp=Z,1.4nm,0.9s,baz=134,slow=4.2,SNR=4.1						
SONM	**Songino Array**	**86.41**	**324**	IAmb	IAmb	03 19 54.3	
	comp=Z,1.9nm,1.1s						
AFDM	**Forest Hills D**	**88.25**	**48**	P	**P**	**03 20 01.5**	**+0.1**
CMB	**Columbia Colle**	**88.25**	**49**	P	**P**	**03 20 01.5**	**0.0**
BEKR	**Beckworth**	**89.08**	**47**	IAmb	IAmb	03 20 06.3	
	comp=Z,3.1nm,0.9s						
PAHR	**Pah Rah Range**	**89.69**	**48**	IAmb	IAmb	03 20 09.2	
	comp=Z,4.0nm,1.1s						
NVAR	**Mina Array Bea**	**89.91**	**49**	P	**P**	**03 20 09.6**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=228,slow=8.5,SNR=12						
MOD	**Modoc Plateau**	**90.01**	**45**	IAmb	IAmb	03 20 11.9	
	comp=Z,4.8nm,1.1s						
NV11	**Mina Array Sit**	**90.01**	**49**	P	**P**	**03 20 10.1**	**+0.2**
NV11				IAmb	IAmb	03 20 10.6	
	comp=Z,2.6nm,0.9s						
KVN	**Kaiserville**	**90.31**	**49**	IAmb	IAmb	03 20 12.0	
	comp=Z,2.5nm,0.7s						
PINE	**Pine Mountain**	**90.43**	**43**	P	**P**	**03 20 11.7**	**-0.1**
TPNV	**Topopah Spring**	**90.79**	**51**	P	**P**	**03 20 13.5**	**0.0**
TPNV				IAmb	IAmb	03 20 14.3	
	comp=Z,2.8nm,0.8s						
WVOR	**Wild Horse Val**	**91.36**	**45**	IAmb	IAmb	03 20 16.5	
	comp=Z,3.7nm,1.1s						
PDAR	**Pinedale Array**	**97.69**	**47**	P	Pdif	03 20 45.7	+0.5
	comp=Z,0.2nm,0.5s,baz=230,slow=7.0,SNR=2.3						
YKA	**Yellowknife Ar**	**101.37**	**28**	P	**Pdif**	**03 21 00.8**	**+0.1**
	comp=Z,0.3nm,0.5s,baz=254,slow=4.5,SNR=6.2						
GERES	**GERESS Array B**	**143.85**	**331**	PKP	**PKPdf**	**03 26 44.0**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=127,slow=2.0,SNR=4.6						
MOA	**Molln**	**144.28**	**329**	*e*PKPdf	**PKPdf**	**03 26 45.3**	**-0.6**
	comp=Z,4.7nm,1.0s						
KBA	**Koelnbreinsper**	**145.26**	**329**	*e*PKPdf	**PKPdf**	**03 26 47.8**	**-0.1**
	comp=Z,11nm,1.2s						
WTTA	**Wattenberg**	**145.95**	**330**	*e*PKPab	**PKPab**	**03 26 50.4**	**+0.2**
	comp=Z,0.6nm,0.3s						
MOTA	**Moosalm**	**146.13**	**331**	*e*PKPab	**PKPab**	**03 26 50.9**	**-0.1**
	comp=Z,3.5nm,1.1s						
FETA	**Feichten**	**146.54**	**331**	*e*PKPab	**PKPab**	**03 26 52.4**	**-0.1**
	comp=Z,1.8nm,0.6s						

*IDC **19** 03:09:32.1±3.5, 16°.27N×147°.31E, h48km±33km, mb3.7/18, mb1 3.9/19, mb1mx3.7/55, mbtmp4.0/19, ML3.8/1, Error ellipse: s-maj=24.8km s-min=16.3km az=90.0*
*NEIC **19** 03:09:32.6±0.9, 16°.26N±0°.06×147°.3E±0°.1, h52km±6km, mb4.3/17, Error ellipse: s-maj=15.1km s-min=8.8km az=98.0*
ISC 19 03:09:30.7±0.8, 16°.24N±0°.08×147°.4E±0°.1, h35km, n46, σ0§83/37, mb4.3/23, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	**Sarigan**	**1.59**	**287**		**Pn**	**03 09 57.7**	**+1.3**
ANA2	**Anatahan**	**1.59**	**274**	Pn	**Pn**	**03 09 58.5**	**+2.1**
GUMO	**Guam**	**3.57**	**223**	P	**Pn**	**03 10 25.4**	**+1.8**
	7.9nm,0.3s,baz=40,slow=7.9,SNR=4.8						
GUMO				S	**Sn**	**03 11 02.8**	**-1.9**
	16nm,0.3s,baz=29,slow=23,SNR=2.1						
H11S3	**WAKE ISLAND Hy**	**18.58**	**80**	T	T	03 32 38.6	
	baz=266,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**18.59**	**80**	T	T	03 32 37.3	
	baz=266,slow=75,SNR=17						
H11S2	**WAKE ISLAND Hy**	**18.59**	**80**	T	T	03 32 37.5	
	baz=266,slow=75,SNR=23						
H11N1	**WAKE ISLAND Hy**	**18.89**	**77**	T	T	03 33 07.4	
	baz=262,slow=75,SNR=7.9						
H11N2	**WAKE ISLAND Hy**	**18.90**	**76**	T	T	03 33 11.2	
	baz=262,slow=75,SNR=9.7						
H11N3	**WAKE ISLAND Hy**	**18.91**	**77**	T	T	03 33 02.0	
	baz=262,slow=75,SNR=6.8						
MJAR	**Matsushiro Arr**	**21.80**	**340**	P	**P**	**03 14 18.8**	**-0.9**
	5.5nm,0.7s,baz=170,slow=8.7,SNR=12						
MJAR	**Matsushiro Arr**	**21.80**	**340**	IAmb	IAmb	03 14 21.2	
	comp=Z,6.1nm,0.8s						
MAT	**Matsushiro**	**21.80**	**340**	P	**P**	**03 14 19.1**	**-0.6**
MJB9	**Matsu-Tunnel**	**21.81**	**340**	P	**P**	**03 14 19.1**	**-0.7**
JNU	**Nakatsue**	**22.47**	**321**	P	**P**	**03 14 27.4**	**+0.5**
	comp=Z,2.6nm,0.6s,baz=180,slow=20,SNR=2.3						
KSRS	**Korea Array**	**27.24**	**325**	P	**P**	**03 15 10.4**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=137,slow=8.4,SNR=3.7						
KLR	**Kul'dur**	**35.28**	**342**	P	**P**	**03 16 21.5**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=177,slow=13,SNR=9.2						
WRA	**Warramunga Arr**	**38.16**	**200**	P	**P**	**03 16 46.1**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=21,slow=9.1,SNR=5.7						
AS31	**Alice Springs**	**41.78**	**199**	P	**P**	**03 17 16.7**	**-0.2**
ASAR	**Alice Springs**	**41.78**	**199**	P	**P**	**03 17 17.4**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=14,slow=12,SNR=5.4						
SONM	**Songino Array**	**46.05**	**322**	P	**P**	**03 17 51.4**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=133,slow=8.1,SNR=2.3						
SONM	**Songino Array**	**46.05**	**322**	IAmb	IAmb	03 17 57.2	
	comp=Z,2.6nm,1.3s						
CMAR	**Chiang Mai Arr**	**46.17**	**280**	P	**P**	**03 17 52.2**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=72,slow=6.4,SNR=9.1						
LSA	**Lhasa**	**53.01**	**295**	P	**P**	**03 18 45.0**	**+0.1**
ZAA0	**Zalesovo Array**	**60.93**	**323**	P	**P**	**03 19 40.3**	**+0.3**
ZALV	**Zalesovo Beam**	**60.93**	**323**	P	**P**	**03 19 40.2**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=106,slow=9.0,SNR=3.0						
MK31	**Makanchi Array**	**61.31**	**315**	P	**P**	**03 19 42.7**	**-0.1**
MKAR	**Makanchi Array**	**61.31**	**315**	P	**P**	**03 19 42.5**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=91,slow=8.3,SNR=7.3						
MAKZ	**Makanchi**	**61.53**	**315**	P	**P**	**03 19 44.2**	**-0.1**
MAKZ				IAmb	IAmb	03 19 51.8	
	comp=Z,2.6nm,0.8s						
KURK	**Kurchatov**	**64.16**	**319**	P	**P**	**03 20 01.2**	**-0.5**
KURBB	**Kurchatov Arra**	**64.21**	**319**	P	**P**	**03 20 01.4**	**-0.5**
	comp=Z,6.8nm,1.1s,baz=97,slow=6.5,SNR=11						
ILAR	**Eielson Array**	**65.15**	**26**	P	**P**	**03 20 07.6**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=252,slow=6.3,SNR=11						
NIL	**Nilore**	**68.13**	**300**	P	**P**	**03 20 27.5**	**0.0**
BVAR	**Borovoye Array**	**69.38**	**321**	P	**P**	**03 20 34.5**	**-0.4**
	comp=Z,2.1nm,0.7s,baz=106,slow=6.8,SNR=12						
BRVK	**Borovoye**	**69.44**	**321**	P	**P**	**03 20 35.0**	**-0.3**
BRVK				IAmb	IAmb	03 20 37.6	
	comp=Z,2.9nm,0.8s						
KK31	**Karatay Array**	**69.56**	**310**	P	**P**	**03 20 35.7**	**-0.5**
KK31				IAmb	IAmb	03 20 43.8	
	comp=Z,3.5nm,0.9s						
KKAR	**Karatay Array**	**69.56**	**310**	P	**P**	**03 20 36.2**	**-0.1**
KKAR				IAmb	IAmb	03 20 43.8	
	comp=Z,3.5nm,0.9s						
INK	**Inuvik**	**71.01**	**23**	P	**P**	**03 20 44.4**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=238,slow=8.1,SNR=5.6						
INK	**Inuvik**	**71.01**	**23**	IAmb	IAmb	03 20 46.1	
	comp=Z,4.7nm,1.1s						
KBL	**Kabul**	**71.50**	**302**	P	**P**	**03 20 48.4**	**0.0**
KBL				IAmb	IAmb	03 20 52.5	
	comp=Z,3.5nm,0.8s						
ABKAR	**Akbulak array**	**76.22**	**318**	P	**P**	**03 21 14.9**	**-0.6**
YKA	**Yellowknife Ar**	**79.41**	**28**	P	**P**	**03 21 33.6**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=286,slow=5.7,SNR=8.1						
NVAR	**Mina Array Bea**	**83.39**	**52**	P	**P**	**03 21 56.0**	**+1.1**
	comp=Z,0.5nm,1.0s,baz=260,slow=5.4,SNR=2.8						
ARCES	**ARCESS Array B**	**85.31**	**343**	P	**P**	**03 22 03.9**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=54,slow=6.2,SNR=5.3						
FINES	**FINESS Array B**	**89.77**	**336**	P	**P**	**03 22 23.8**	**-1.5**
	comp=Z,2.5nm,0.9s,baz=46,slow=5.5,SNR=4.5						
TORD	**Torodi Ar. Bea**	**135.23**	**309**	PKP	**PKPdf**	**03 28 48.2**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=30,slow=2.5,SNR=2.9						
DBIC	**Dimbokro**	**144.31**	**307**	PKP	PKPbc	03 29 02.4	0.0
	comp=Z,2.0nm,0.8s,baz=243,slow=2.3,SNR=3.3						

*IDC **19** 03:09:50.1±3.3, 30°.79N×131°.66E, h51km±26km, mb3.4/13, mb1 3.5/17, mb1mx3.4/57, mbtmp3.6/17, ML2.7/4, MS3.8/3, Ms1 3.8/3, ms1mx3.1/24, Error ellipse: s-maj=29.5km s-min=24.0km az=19.0*
*JMA **19** 03:09:52.7±0.1, 31°.04N×131°.35E, h35km±1km, M3.7*
JMA Felt I J1.
ISC 19 03:09:51.3±1.1, 31°.00N±0°.04×131°.47E±0°.08, h47km±9km, n32, σ1§37/40, mb3.7/13, MS4.0/3, 4C-5D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSR	**Tashiro 2**	**0.50**	**289**	⇑P	**Pn**	**03 10 01.4**	**-0.9**
JTSR				*e*S	**Sn**	**03 10 08.4**	**-1.9**
JTN	**Tanegashima 3**	**0.55**	**231**	⇓P	**Pn**	**03 10 03.4**	**+0.5**
JTN				*e*S	**Sn**	**03 10 12.0**	**+0.7**
JNAR	**Kushima--Naru**	**0.55**	**342**	⇑P	**Pn**	**03 10 02.9**	**-0.1**
JNAR				*e*S	**Sn**	**03 10 10.6**	**-0.8**
JNKG	**Nichinankitago**	**0.66**	**353**	⇓P	**Pn**	**03 10 05.0**	**+0.6**
JNKG				*e*S	**Sn**	**03 10 14.8**	**+0.9**
JMTN	**Minamitane**	**0.78**	**219**	⇓P	**Pn**	**03 10 07.0**	**+1.1**
JMTN				*e*S	**Sn**	**03 10 18.8**	**+2.2**
JTZ	**Takazaki**	**0.95**	**340**	⇓P	**Pn**	**03 10 08.9**	**+0.6**
JTZ				*e*S	**Sn**	**03 10 21.7**	**+0.9**
JSU	**Suzuyama**	**1.00**	**300**	⇑P	**Pn**	**03 10 08.7**	**-0.3**
JSU				*e*S	**Sn**	**03 10 21.6**	**-0.4**
JYAK	**Yakushimahirau**	**1.12**	**228**	P	**Pn**	**03 10 11.8**	**+1.2**
JYAK				*e*S	**Sn**	**03 10 27.1**	**+2.2**
JKC	**Kuchinoerabu**	**1.22**	**244**	⇑P	**Pn**	**03 10 12.5**	**+0.6**
JKC				*e*S	**Sn**	**03 10 27.6**	**+0.3**
JTSN	**Tsuno**	**1.24**	**1**	P	**Pn**	**03 10 12.6**	**+0.4**
JTSN				S	**Sn**	**03 10 28.7**	**+0.9**
JZO	**Okuchi**	**1.36**	**327**	⇓P	**Pn**	**03 10 14.2**	**+0.4**
JZO				S	**Sn**	**03 10 30.8**	**+0.1**
JNU	**Nakatsue**	**2.17**	**347**	P	**Pn**	**03 10 26.1**	**+1.1**
	2.0nm,0.3s,baz=191,slow=14,SNR=33						
JNU				S	**Sn**	**03 10 51.2**	**+0.5**
	9.2nm,0.3s,baz=358,slow=5.2,SNR=4.5						
KSRS	**Korea Array**	**7.07**	**336**	P	**Pn**	**03 11 35.8**	**+3.6**
	0.2nm,0.3s,baz=155,slow=13,SNR=4.2						
MJAR	**Matsushiro Arr**	**7.87**	**44**	P	**Pn**	**03 11 44.3**	**+1.1**
	0.0nm,0.3s,baz=237,slow=11,SNR=3.1						
KLR	**Kul'dur**	**18.21**	**1**	P	**Pn**	**03 14 02.0**	**+1.6**
	0.1nm,0.3s,baz=175,slow=12,SNR=3.6						
SONM	**Songino Array**	**25.48**	**318**	P	**P**	**03 15 16.3**	**+1.3**
	0.6nm,0.6s,baz=142,slow=8.9,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**33.79**	**101**	T	T	03 52 26.6	
	baz=296,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**33.79**	**101**	T	T	03 52 29.0	
	baz=296,slow=75,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**33.80**	**101**	T	T	03 52 32.0	
	baz=296,slow=75,SNR=9.3						
MKAR	**Makanchi Array**	**40.71**	**307**	P	**P**	**03 17 27.0**	**-0.2**
	0.5nm,0.7s,baz=101,slow=11,SNR=3.8						
MKAR				LR	LR	03 36 09.0	
	comp=Z,75nm,20.2s,baz=100,slow=38						
KURBB	**Kurchatov Arra**	**43.55**	**312**	P	**P**	**03 17 50.1**	**-0.2**
	0.3nm,0.4s,baz=86,slow=8.1,SNR=3.8						
BVAR	**Borovoye Array**	**48.75**	**315**	P	**P**	**03 18 31.7**	**+0.5**
	0.6nm,0.5s,baz=98,slow=8.4,SNR=6.6						
WRA	**Warramunga Arr**	**50.73**	**177**	P	**P**	**03 18 42.8**	**-3.7**
	0.2nm,0.4s,baz=351,slow=7.7,SNR=2.5						
ARU	**Arti**	**55.50**	**320**	P	**P**	**03 19 19.5**	**-1.7**
	0.3nm,0.3s,baz=85,slow=11,SNR=3.8						
ILAR	**Eielson Array**	**58.90**	**30**	P	**P**	**03 19 43.4**	**-1.7**
	0.3nm,0.7s,baz=268,slow=6.9,SNR=5.0						
GEYT	**Ailbeck**	**59.45**	**298**	LR	LR	03 49 26.3	
	comp=Z,102nm,19.9s,baz=190,slow=40						
KBZ	**Khabaz**	**68.37**	**309**	P	**P**	**03 20 49.6**	**+1.8**
	0.7nm,0.5s,baz=108,slow=3.2,SNR=3.2						
FINES	**FINESS Array B**	**70.12**	**330**	P	**P**	**03 20 58.1**	**-0.3**
	1.4nm,0.6s,baz=73,slow=7.0,SNR=6.3						
FINES				LR	LR	03 55 01.3	
	comp=Z,104nm,20.1s,baz=44,slow=38						
YKA	**Yellowknife Ar**	**73.01**	**26**	P	**P**	**03 21 14.8**	**-0.9**
	0.5nm,0.8s,baz=305,slow=5.5,SNR=7.6						
AKASG	**Malin Array Be**	**73.75**	**320**	P	**P**	**03 21 20.8**	**+0.5**
	0.5nm,0.5s,baz=55,slow=6.4,SNR=3.0						
NOA	**NORSAR Array B**	**76.28**	**334**	P	**P**	**03 21 35.5**	**+0.8**
	0.7nm,0.7s,baz=48,slow=6.2,SNR=2.8						
BRTR	**Keskin Array B**	**76.35**	**308**	P	**P**	**03 21 36.5**	**+0.8**
	0.7nm,0.8s,baz=68,slow=6.5,SNR=5.3						

*IDC **19** 03:13:03.7±2.9, 19°.73S×175°.27W, h109km, 26km, mb3.8/9, mb1 4.0/12, mb1mx3.8/44, mbtmp4.3/12, Error ellipse: s-maj=29.0km s-min=15.3km az=127.0*
ISC 19 03:13:02.6±0.9, 19°.7S±0°.2×175°.2W±0°.2, h100km, n15, σ1§17/18, mb4.0/9, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.59**	**31**	P	**Pn**	**03 14 39.0**	**+1.8**
	13nm,0.3s,baz=308,slow=3.0,SNR=13						
AFI				S	**Sn**	**03 15 47.9**	**-3.1**
	8.9nm,0.3s,baz=42,slow=20,SNR=2.1						
DZM	**Mont Dzumac**	**17.30**	**259**	P	**P**	**03 16 58.2**	**+0.1**
	0.2nm,0.3s,baz=246,slow=20,SNR=1.9						
URZ	**Urewera**	**19.70**	**198**	P	**P**	**03 17 24.0**	**0.0**
	4.7nm,0.3s,baz=268,slow=4.4,SNR=34						
URZ				S	S	03 20 47.2	-14
	0.2nm,0.3s,baz=338,slow=19,SNR=3.1						
RPZ	**Rata Peaks**	**26.61**	**203**	P	**P**	**03 18 31.1**	**-0.5**
	8.5nm,0.9s,baz=24,slow=10.0,SNR=2.0						
ASAR	**Alice Springs**	**47.26**	**256**	P	**P**	**03 21 25.9**	**-0.2**
	1.7nm,0.4s,baz=90,slow=8.4,SNR=39						
ASAR				PcP	**PcP**	**03 22 55.5**	**-0.5**
	1.1nm,0.7s,baz=106,slow=4.0,SNR=8.7						
WRA	**Warramunga Arr**	**47.31**	**261**	P	**P**	**03 21 25.3**	**-1.2**
	0.7nm,0.3s,baz=96,slow=7.6,SNR=16						
WRA				PcP	**PcP**	**03 22 55.6**	**-0.6**
	1.0nm,0.9s,baz=90,slow=3.6,SNR=4.6						
MJAR	**Matsushiro Arr**	**71.12**	**322**	P	**P**	**03 24 10.8**	**+0.4**
	4.1nm,0.6s,baz=140,slow=6.1,SNR=14						
PETK	**Petropavlovsk-**	**76.16**	**344**	P	**P**	**03 24 40.3**	**+0.8**
	1.5nm,0.7s,baz=148,slow=8.5,SNR=3.5						
KSRS	**Korea Array**	**78.02**	**317**	P	**P**	**03 24 51.4**	**+1.2**
	0.6nm,0.5s,baz=111,slow=5.6,SNR=3.8						
NVAR	**Mina Array Bea**	**78.63**	**42**	P	**P**	**03 24 54.8**	**+0.9**
	0.4nm,0.7s,baz=230,slow=8.2,SNR=12						
SEY	**Seymchan**	**86.17**	**346**	P	**P**	**03 25 32.7**	**+0.5**
	1.6nm,0.5s,baz=214,slow=5.5,SNR=7.3						
ILAR	**Eielson Array**	**86.94**	**12**	P	**P**	**03 25 35.6**	**-0.3**
	0.1nm,0.4s,baz=238,slow=5.2,SNR=4.9						
ARCES	**ARCESS Array B**	**128.53**	**351**	PKP	**PKPdf**	**03 31 56.7**	**-0.6**
	2.9nm,0.9s,baz=1.9,slow=2.7,SNR=4.3						
BRTR	**Keskin Array B**	**148.15**	**315**	PKPbc	**PKPbc**	**03 32 36.7**	**-0.6**
	0.6nm,0.8s,baz=89,slow=1.5,SNR=3.3						
GERES	**GERESS Array B**	**150.00**	**348**	PKPbc	**PKPbc**	**03 32 40.4**	**-1.1**
	0.4nm,0.6s,baz=48,slow=2.0,SNR=4.7						

*UCR **19** 03:16:07.3±1.0, 12°.33N×89°.40W, h13km±5km, ML4.0, mb4.4(NEIC)*
*SNET **19** 03:16:07.0±1.0, 12°.32N×89°.40W, h12km±5km, ML4.1*
*INET **19** 03:16:11.9, 12°.77N×89°.20W, h0km, MD3.5*
*NEIC **19** 03:16:11.4±2.3, 12°.48N±0°.06×89°.24W±0°.04, h37km±4km, mb4.4/61, Md4.1(SNET), Error ellipse: s-maj=9.1km s-min=5.8km az=178.0*
*IDC **19** 03:16:14.1±2.5, 12°.83N×88°.95W, h52km±21km, mb3.8/11, mb1 4.1/14, mb1mx3.8/44, mbtmp4.1/14, ML3.5/3, MS3.4/3, Ms1 3.4/3, ms1mx2.9/35, Error ellipse: s-maj=32.9km s-min=13.4km az=45.0*
ISC 19 03:16:06.6±0.6, 12°.31N±0°.05×89°.39W±0°.05, h10km, n181, σ1§41/171, mb4.4/30, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**1.28**	**38**	*e*P	**Pn**	**03 16 30.1**	**-0.6**
LFRS	**El Faro**	**1.34**	**14**	*e*P	**Pn**	**03 16 30.8**	**-0.7**
SNET	**Serv Nac Est T**	**1.37**	**6**	*e*P	**Pn**	**03 16 31.3**	**-0.7**
SNET	**Serv Nac Est T**	**1.37**	**6**	*e*P	**Pn**	**03 16 31.3**	**-0.7**
SNET	**Serv Nac Est T**	**1.37

comp=Z,4.6nm,0.8s
352A **Blakely** 19.51 11 P Pn 03 20 35.7 +0.3
baz=193
353A **Camilla** 19.53 13 P Pn 03 20 35.7 +0.1
baz=195
TIGA **Tifton** 19.77 15 P P 03 20 37.6 +0.6
TIGA **Tifton** 19.77 15 P Pn 03 20 38.4 -0.1
baz=197
VBMS **Vicksburg** 19.84 357 P P 03 20 37.9 +0.2
435B **Jarrell** 19.88 339 P P 03 20 38.8 +0.6
435B **Jarrell** 19.88 339 P P 03 20 38.8 +0.6
baz=155,SNR=6.8
NATX **Nacogdoches** 19.95 347 P P 03 20 39.4 +0.4
NATX IAmb IAmb 03 20 40.2
comp=Z,17nm,0.8s
NATX **Nacogdoches** 19.95 347 P P 03 20 39.9 +0.9
baz=164
252A **Lumpkin** 20.05 12 P P 03 20 41.1 +1.1
baz=193
254A **Abbeville** 20.33 15 P P 03 20 43.5 +0.5
baz=197
JCT **Junction City** 20.49 334 P P 03 20 45.3 +0.4
JCT IAmb IAmb 03 20 45.7
comp=Z,10nm,0.7s
JCT **Junction City** 20.49 334 P P 03 20 45.2 +0.4
baz=149,SNR=6.2
LRAL **Lakeview Retre** 20.74 6 P P 03 20 47.9 +0.4
LRAL IAmb IAmb 03 20 49.0
comp=Z,7.5nm,0.8s
LRAL **Lakeview Retre** 20.74 6 P P 03 20 48.4 +0.9
baz=186
WHTX **Lake Whitney,** 20.95 341 P P 03 20 49.5 -0.2
WHTX **Lake Whitney,** 20.95 341 P P 03 20 49.8 +0.1
baz=157,SNR=28
Z41A **Richland Creek** 21.08 352 P P 03 20 54.4 +3.2
baz=170
Z50A **Ashland** 21.08 8 P P 03 20 52.0 +0.8
baz=189
HPIG 21.10 316 P P 03 20 53.9 +2.3
TXAR **Lajitas Array** 21.52 324 P P 03 20 58.1 +2.0
comp=Z,3.9nm,0.7s,baz=142,slow=10,SNR=25
Z53A **Monticello** 21.54 13 P P 03 20 57.8 +1.8
baz=195
WLAR **White Oak Lake** 21.55 352 P P 03 20 56.8 +0.6
WLAR IAmb IAmb 03 21 01.4
comp=Z,15nm,0.8s
GOGA **Godfrey** 21.69 13 P P 03 20 58.1 +0.5
baz=196
H06E1 **SOCORRO T-PHAS** 21.71 290 T T 03 43 20.4
Y51A **Rockmart** 21.85 10 P P 03 20 59.5 +0.1
baz=191
Y53A **Monroe** 22.09 13 P P 03 21 03.0 +1.0
baz=195
OXF **Oxford** 22.10 360 P P 03 21 02.4 +0.3
OXF **Oxford** 22.10 360 P P 03 21 02.5 +0.3
baz=180
X40A **Basin Creek Fa** 22.30 352 P P 03 21 06.7 +2.5
baz=171
ABTX **Abilene, Hawle** 22.30 337 IAmb IAmb 03 21 05.8
comp=Z,8.0nm,0.7s
ABTX **Abilene, Hawle** 22.30 337 P P 03 21 04.8 +0.4
baz=152,SNR=5.3
MIAR **Mount Ida** 22.46 351 IAmb IAmb 03 21 08.5
comp=Z,17nm,0.8s
MIAR **Mount Ida** 22.46 351 P P 03 21 06.2 +0.2
baz=169,SNR=7.6
Y55A **Saluda** 22.59 16 P P 03 21 08.2 +0.8
baz=199
X53A **Estanollee** 22.77 13 P P 03 21 08.8 -0.5
baz=195
W41B **Gary Mavity, V** 22.91 354 IAmb IAmb 03 21 12.4
comp=Z,12nm,0.8s
W41B **Gary Mavity, V** 22.91 354 P P 03 21 11.7 +1.1
baz=172
WHAR **Wooly Hollow** 23.02 354 IAmb IAmb 03 21 18.8
comp=Z,16nm,1.2s
W39A **Magazine** 23.13 351 IAmb IAmb 03 21 14.8
comp=Z,9.4nm,0.8s
W39A **Magazine** 23.13 351 P P 03 21 13.3 +0.3
baz=169,SNR=6.0
W51A **Cleveland** 23.13 10 P P 03 21 12.0 -1.0
baz=191
X55A **Gracelyn & Ava** 23.16 16 P P 03 21 13.0 -0.3
baz=199
X56A **White Oak** 23.35 18 P P 03 21 15.1 -0.1
baz=201
GNAR **Gosnell** 23.55 359 P P 03 21 17.0 -0.3
V50A **Pikevile** 23.58 9 P P 03 21 16.3 -1.2
baz=190
W54A **Cherokee Point** 23.59 15 P P 03 21 17.6 -0.1
baz=198
LCAR **Lake Charles** 23.71 356 IAmb IAmb 03 21 19.8
comp=Z,12nm,0.7s
TKL **Tuckaleechee C** 23.79 11 P P 03 21 17.3 -2.3
comp=Z,6.1nm,0.7s,baz=177,slow=11,SNR=11
TKL **Tuckaleechee C** 23.79 11 IAmb IAmb 03 21 20.0
comp=Z,7.6nm,0.8s
CLTN **Cedars of Leba** 23.83 6 P P 03 21 19.5 -0.4
CLTN IAmb IAmb 03 21 20.0
comp=Z,4.7nm,0.7s
KMSC **Kings Mountain** 23.87 16 P P 03 21 19.4 -1.0
baz=200
WMOK **Wichita Mounta** 23.90 341 IAmb IAmb 03 21 19.8
comp=Z,7.9nm,0.8s
WMOK **Wichita Mounta** 23.90 341 P P 03 21 19.2 -1.5
baz=156,SNR=10
U40A **Yellville** 24.14 353 IAmb IAmb 03 21 23.9
comp=Z,11nm,0.7s
U40A **Yellville** 24.14 353 P P 03 21 22.9 0.0
baz=171,SNR=6.9
MNTX **Cornudas Mount** 24.27 325 P P 03 21 24.3 +0.1
baz=139,SNR=5.8
V54A **Nebo** 24.31 15 P P 03 21 24.0 -0.4
baz=198
U49A **Red Boiling Sp** 24.31 7 P P 03 21 23.3 -1.1
baz=188
PCRV **Puerto La Cruz** 24.36 92 P P 03 21 26.2 +0.9
comp=Z,8.2nm,0.6s,baz=160,slow=16,SNR=3.3
PLCV **Puerto La Cruz** 24.41 93 P P 03 21 26.2 +0.5
U53A **Fall Branch** 24.72 13 P P 03 21 28.7 +0.5
baz=196
V56A **Mocksville** 24.73 17 P P 03 21 28.9 +0.6
baz=201
MSTX **Muleshoe** 24.77 333 IAmb IAmb 03 21 29.4
comp=Z,8.0nm,1.0s
MSTX **Muleshoe** 24.77 333 P P 03 21 28.1 -0.7
baz=147,SNR=6.1
T49A **Edmonton** 24.93 7 IAmb IAmb 03 21 29.6
comp=Z,7.6nm,0.8s
T49A **Edmonton** 24.93 7 P P 03 21 28.6 -1.4
baz=189,SNR=5.5
U54A **Nelsons Funny** 25.05 15 P P 03 21 30.5 -0.7
baz=197
AMTX **Amarillo** 25.09 336 IAmb IAmb 03 21 32.3
comp=Z,9.8nm,0.7s
AMTX **Amarillo** 25.09 336 P P 03 21 31.7 +0.1
baz=150
V58A **Windy Hill, Pi** 25.15 20 P P 03 21 31.3 -0.8
baz=204
FVM **French Village** 25.58 358 IAmb IAmb 03 21 37.1
comp=Z,6.6nm,0.7s
S49A **Springfield** 25.63 8 P P 03 21 35.4 -0.9
baz=189
U57A **Blanch** 25.66 19 P P 03 21 36.2 -0.5
baz=203
CCM **Cathedral Cave** 25.69 357 P P 03 21 35.9 -1.0
CCM **Cathedral Cave** 25.69 357 P P 03 21 36.1 -0.8
baz=176
WCI **Wyandotte Cave** 25.95 6 P P 03 21 37.9 -1.4
WCI IAmb IAmb 03 21 38.4
comp=Z,11nm,0.7s
WCI **Wyandotte Cave** 25.95 6 P P 03 21 37.9 -1.4
baz=187
T59A **Double "B" Far** 26.75 21 P P 03 21 45.9 -0.7
baz=206
KSU1 **Kansas State U** 27.44 348 P P 03 21 51.7 -1.0
baz=164
Q54A **Coxs Mills** 27.63 14 P P 03 21 53.4 -1.0
baz=198
TUC **Tucson** 27.97 319 P P 03 22 03.7 +6.0
baz=130
T25A **Trinidad** 28.16 334 IAmb IAmb 03 22 01.9
comp=Z,4.0nm,0.8s
T25A **Trinidad** 28.16 334 P P 03 22 00.7 +1.3
baz=147
O50A **Cable** 28.19 9 P P 03 21 57.9 -1.5
baz=192
P54A **Burton** 28.30 15 P P 03 21 59.5 -0.9
baz=198
P56A **Dayton Farm, R** 28.65 17 P P 03 22 03.6 +0.1
baz=202
KSCO **Kaye Shedlock'** 29.07 338 IAmb IAmb 03 22 08.6
comp=Z,11nm,1.0s
KSCO **Kaye Shedlock'** 29.07 338 P P 03 22 07.6 +0.1
baz=152
M47A **Cromwell** 29.12 6 P P 03 22 05.4 -2.3
baz=187
SDCO **Great Sand Dun** 29.14 333 P P 03 22 11.3 +3.0
baz=146
N54A **Moraine State** 29.71 14 P P 03 22 11.5 -1.4
baz=198
S22A **4UR Ranch, Cre** 29.74 331 P P 03 22 14.7 +1.0
baz=144
K47A **Vermontville** 30.48 6 P P 03 22 16.8 -2.9
baz=188
IKP **In-Ko-Pah, Jac** 31.77 314 P P 03 22 39.2 +7.8
baz=123
BC3 **Big Chuckawall** 31.88 316 P P 03 22 35.4 +3.1
baz=125
ECSD **EROS Data Cent** 31.92 350 P P 03 22 30.8 -1.6
baz=166
SPMN **Marine on St.** 32.93 356 P P 03 22 39.8 -1.5
baz=174,SNR=8.7
RSSD **Black Hills** 34.11 341 P P 03 22 51.1 -0.7
RSSD IAmb IAmb 03 22 52.9
comp=Z,2.8nm,0.7s
RSSD **Black Hills** 34.11 341 P P 03 22 52.6 +0.8
baz=154
MPMC **Manual Prospec** 34.64 318 P P 03 22 58.7 +2.2
baz=126
PDAR **Pinedale Array** 35.03 334 P P 03 22 59.5 -0.3
comp=Z,0.2nm,0.5s,baz=122,slow=12,SNR=2.8
PDAR PcP PcP 03 25 33.1 +1.3
comp=Z,0.3nm,0.7s,baz=148,slow=5.3,SNR=3.9
EYMN **Ely** 35.56 358 P P 03 23 02.0 -2.0
baz=176
REDW **Red Top Meadow** 36.07 333 IAmb IAmb 03 23 18.9
comp=Z,3.6nm,0.7s
AGMN **Agassiz Nation** 36.28 353 P P 03 23 08.8 -1.4
baz=169
NVAR **Mina Array Bea** 36.58 320 P P 03 23 14.8 +1.6
comp=Z,1.4nm,0.8s,baz=137,slow=9.6,SNR=11
NVAR PcP PcP 03 25 38.6 +2.1
comp=Z,0.6nm,0.7s,baz=141,slow=4.4,SNR=4.7
LSQQ **Lebel-sur-Quev** 38.05 13 P P 03 23 23.1 -2.1
baz=200
DGMT **Dagmar** 38.10 344 P P 03 23 25.7 0.0
baz=156
ULM **Lac du Bonnet** 38.20 353 P P 03 23 23.9 -2.6
comp=Z,4.1nm,0.6s,baz=167,slow=8.3,SNR=11
ULM **Lac du Bonnet** 38.20 353 IAmb IAmb 03 23 24.7
comp=Z,4.8nm,0.7s
MATQ **Magami** 38.57 12 P P 03 23 27.6 -2.0
baz=198
SIV **San Ignacio** 39.69 134 P P 03 23 41.6 +2.2
comp=Z,2.2nm,0.8s,baz=316,slow=9.5,SNR=11
SCHQ **Schefferville** 45.97 18 P P 03 24 27.0 -2.8
comp=Z,5.3nm,0.7s,baz=215,slow=6.2,SNR=16
SCHQ LR LR 03 43 13.5
comp=Z,396nm,21.5s,baz=303,slow=36
SCHQ **Schefferville** 45.97 18 P P 03 24 27.4 -2.5
YKA **Yellowknife Ar** 53.26 346 P P 03 25 23.9 -1.4
comp=Z,3.5nm,0.8s,baz=146,slow=7.6,SNR=25
YKA PcP PcP 03 26 33.6 +0.7
comp=Z,0.2nm,0.6s,baz=147,slow=4.4,SNR=2.5
ILAR **Eielson Array** 65.39 337 P P 03 26 48.2 -0.9
comp=Z,1.0nm,0.9s,baz=127,slow=4.3,SNR=6.8
TORD **Torodi Ar. Bea** 88.28 77 P P 03 28 56.4 -2.7
comp=Z,0.5nm,0.8s,baz=278,slow=4.7,SNR=5.0
MKAR **Makanchi Array** 120.69 7 PKP PKPdf 03 34 58.6 -0.6
comp=Z,0.1nm,0.4s,baz=322,slow=3.0,SNR=2.6
KSH **Kashi** 126.66 14 PKP PKPdf 03 35 09.0 -2.0
LZH **Lanzhou** 130.26 346 ePKP PKiKP 03 35 20.8 +2.0
LZH pPKP sPKPdf 03 35 26.9 +6.2
LZH sPKP 03 35 29.1
LZH LR LR
comp=N,52nm,18.0s
LZH LR LR
comp=E,57nm,18.2s
LZH LR LR
comp=Z,83nm,20.1s
CD2 **Chengdu** 135.21 344 PKP PKPdf 03 35 27.8 +0.5
WRA **Warramunga Arr** 137.41 254 PKP PKiKP 03 35 32.9 -0.5
comp=Z,0.6nm,0.9s,baz=120,slow=1.8,SNR=2.5
ASAR **Alice Springs** 137.46 248 PKP PKiKP 03 35 33.1 -0.4
comp=Z,0.4nm,0.8s,baz=76,slow=2.2,SNR=3.4
CMAR **Chiang Mai Arr** 148.34 345 PKPbc PKPbc 03 35 53.7 -0.5
comp=Z,2.7nm,0.8s,baz=341,slow=3.6,SNR=10

*IDC **19** 03:20:05.5±0.7, 4.°15S×77.°55W, h0km, mb3.8/13, mb1 4.0/16, mb1mx3.9/43, mbtmp3.8/16, ML3.6/3, Error ellipse: s-maj=25.9km s-min=14.6km az=66.0*
*NEIC **19** 03:20:06.8±1.8, 4.°23S±0.°06×77.°6W±0.°1, h10km±2km, mb4.3/11, Error ellipse: s-maj=16.7km s-min=8.5km az=88.0*
ISC 19 03:20:06.8±0.5, **4.°22S**±0.°06×**77.°5W**±0.°1, **h10**km, **n31**, σ1**9**8**1**/**27**, **mb3.8**/12, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**3.03**	**197**	Pn	**Pn**	**03 20 55.1**	**-0.1**
	10nm,0.3s,baz=20,slow=6.5,SNR=30						
ATAH				Sn	**Sn**	**03 21 33.9**	**+2.2**
	21nm,0.3s,baz=309,slow=21,SNR=13						
OTAV	**Otavalo**	**4.53**	**348**	Pn	**Pn**	**03 21 16.2**	**+0.3**
FLOC	**Florencia**	**6.06**	**18**		**Pn**	**03 21 38.0**	**+1.5**
NNA	**Nana**	**7.74**	**175**	Pn	**Pn**	**03 21 59.8**	**+0.1**
	2.3nm,0.3s,baz=292,slow=6.6,SNR=4.6						
NNA				Sn	**Sn**	**03 23 21.8**	**-5.8**
	2.2nm,0.3s,baz=102,slow=23,SNR=7.0						
NNA	**Nana**	**7.74**	**175**		**Sn**	**03 23 25.5**	**-2.1**
SDV	**Santo Domingo**	**14.71**	**28**	Pn	**Pn**	**03 23 34.4**	**-1.0**
SAML	**Samuel**	**14.98**	**109**		**Pn**	**03 23 38.0**	**-0.8**
SAML				IAmb	IAmb	03 23 51.0	
	comp=Z,6.5nm,0.8s						
LPAZ	**La Paz**	**15.12**	**143**	Pn	**Pn**	**03 23 42.6**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=325,slow=11,SNR=3.1						
LPAZ	**La Paz**	**15.12**	**143**	IAmb	IAmb	03 23 51.6	
	comp=Z,3.5nm,0.6s						
SIV	**San Ignacio**	**19.94**	**127**	P	**P**	**03 24 39.8**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=315,slow=11,SNR=4.0						
LVC	**Limon Verde**	**20.09**	**156**	P	Pn	03 24 47.3	+4.4
	comp=Z,3.1nm,0.7s,baz=330,slow=8.1,SNR=2.6						
LVC	**Limon Verde**	**20.09**	**156**	P	**P**	**03 24 40.0**	**-1.1**
LVC				IAmb	IAmb	03 25 01.2	
	comp=Z,5.2nm,0.8s						
SJG	**San Juan**	**24.86**	**26**	P	**P**	**03 25 28.5**	**-1.2**
	comp=Z,3.8nm,0.5s,baz=233,slow=5.1,SNR=2.9						
CPUP	**Villa Florida**	**29.27**	**141**	P	**P**	**03 26 11.2**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=323,slow=14,SNR=3.0						
CPUP	**Villa Florida**	**29.27**	**141**	IAmb	IAmb	03 27 11.7	
	comp=Z,13nm,1.9s						
BDFB	**Brasilia**	**31.14**	**113**	P	**P**	**03 26 25.7**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=229,slow=7.7,SNR=3.3						
BDFB	**Brasilia**	**31.14**	**113**	IAmb	IAmb	03 26 28.1	
	comp=Z,22nm,1.9s						
TXAR	**Lajitas Array**	**41.76**	**325**	P	**P**	**03 27 56.3**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=143,slow=9.1,SNR=3.6						
PDAR	**Pinedale Array**	**55.04**	**332**	P	**P**	**03 29 38.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=127,slow=9.4,SNR=3.7						
ULM	**Lac du Bonnet**	**56.52**	**346**	P	**P**	**03 29 48.6**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=140,slow=6.1,SNR=4.5						
NVAR	**Mina Array Bea**	**56.79**	**322**	P	**P**	**03 29 51.7**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=119,slow=8.2,SNR=3.7						
YHL	**Hebgen Lake**	**57.39**	**332**	P	**P**	**03 29 55.7**	**-0.1**
YKA	**Yellowknife Ar**	**72.27**	**343**	P	**P**	**03 31 31.6**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=141,slow=5.3,SNR=6.3						
DBIC	**Dimbokro**	**73.32**	**82**	P	**P**	**03 31 40.3**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=266,slow=6.6,SNR=2.6						
DBIC	**Dimbokro**	**73.32**	**82**	IAmb	IAmb	03 31 49.8	
	comp=Z,11nm,1.4s						
TORD	**Torodi Ar. Bea**	**80.47**	**76**	P	**P**	**03 32 21.0**	**+1.3**
	comp=Z,1.0nm,0.9s,baz=285,slow=6.6,SNR=9.7						
SNAA	**Sanae**	**81.21**	**162**	P	**P**	**03 32 24.0**	**+1.4**
	comp=Z,0.9nm,0.7s,baz=240,slow=18,SNR=3.2						
SNAA	**Sanae**	**81.21**	**162**	IAmb	IAmb	03 33 34.1	
	comp=Z,7.5nm,1.5s						
ILAR	**Eielson Array**	**85.16**	**336**	P	**P**	**03 32 42.5**	**-0.5**
	comp=Z,0.5nm,0.9s,baz=120,slow=5.3,SNR=5.1						
ZALV	**Zalesovo Beam**	**128.37**	**13**	PKP	**PKiKP**	**03 39 15.2**	**+0.8**
	comp=Z,0.6nm,0.6s,baz=338,slow=3.4,SNR=2.2						
MKAR	**Makanchi Array**	**134.12**	**19**	PKP	**PKPdf**	**03 39 24.4**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=346,slow=2.8,SNR=3.4						

*IDC **19** 03:54:37.8±0.5, 26.°41N×44.°50W, h0km, mb4.2/27, mb1 4.4/27, mb1mx4.3/45, mbtmp4.3/27, MS3.5/6, Ms1 3.5/6, ms1mx3.1/42, Error ellipse: s-maj=15.0km s-min=12.8km az=137.0*
*NEIC **19** 03:54:40.0±1.2, 26.°39N±0.°09×44.°47W±0.°10, h10km±2km, mb4.6/148, Error ellipse: s-maj=14.1km s-min=10.7km az=48.0*
*NEIC **19** 03:54:47.3±2.0, 27.°1N±0.°1×44.°6W±0.°1, h10km±4km, Error ellipse: s-maj=18.5km s-min=14.5km az=161.0*
ISC 19 03:54:40.0±0.4, **26.°39N**±0.°07×**44.°50W**±0.°07, **h11**km, **n220**, σ0**88**/168, **mb4.6**/92, **MS3.5**/7, **5C-5D**, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**21.65**	**252**	P	**P**	**03 59 30.3**	**-0.3**
	4.4nm,0.7s,baz=357,slow=5.3,SNR=2.3						
SJG				LR	LR	04 06 03.0	
	comp=Z,102nm,21.4s,baz=79,slow=32						
SJG	**San Juan**	**21.65**	**252**	IAmb	IAmb	03 59 37.5	
	comp=Z,11nm,0.9s						
ICMP	**Isla Caja de M**	**22.07**	**252**	P	**P**	**03 59 34.9**	**-0.2**
MDP	**Montagnes des**	**22.56**	**202**	P	**P**	**03 59 39.1**	**-1.2**
	comp=Z,21nm,1.0s,baz=64,slow=11,SNR=2.4						
DR12	**Loma Pena Alta**	**24.16**	**257**	P	**P**	**03 59 57.7**	**+1.2**
W57A	**Gilead**	**31.59**	**295**	P	**P**	**04 01 03.6**	**+0.8**
	baz=96						
D55A	**Sainte-Anne-du**	**31.94**	**318**	P	**P**	**04 01 06.1**	**+0.4**
	baz=119						
V56A	**Mocksville**	**32.08**	**296**	P	**P**	**04 01 08.4**	**+1.3**
	baz=97						
E54A	**Lac Daplat, Po**	**32.71**	**316**	P	**P**	**04 01 12.8**	**+0.3**
	baz=116						
SCHQ	**Schefferville**	**32.80**	**336**	P	**P**	**04 01 13.1**	**-0.1**
	comp=Z,4.5nm,0.8s,baz=135,slow=9.6,SNR=9.9						
SCHQ				LR	LR	04 13 55.2	
	comp=Z,74nm,18.1s,baz=330,slow=35						
SCHQ	**Schefferville**	**32.80**	**336**	IAmb	IAmb	04 01 14.2	
	comp=Z,5.8nm,0.8s						
X55A	**Gracelyn & Ava**	**32.88**	**293**	P	**P**	**04 01 15.5**	**+1.4**
	baz=94						
Y54A	**Tignall**	**33.72**	**292**	P	**P**	**04 01 22.7**	**+1.3**
	baz=92						
MATQ	**Matagami**	**34.55**	**321**	P	**P**	**04 01 28.3**	**-0.2**
	baz=120						
P51A	**Williamsport**	**34.64**	**302**	P	**P**	**04 01 29.6**	**+0.3**
P51A				IAmb	IAmb	04 01 30.1	
	comp=Z,6.2nm,0.8s						
Q51A	**Peebles**	**34.78**	**301**	P	**P**	**04 01 31.4**	**+0.8**
Q51A				IAmb	IAmb	04 01 32.3	
	comp=Z,15nm,0.9s						
Q51A	**Peebles**	**34.78**	**301**	P	**P**	**04 01 31.6**	**+1.0**
	baz=100						
P50A	**Jamestown**	**35.22**	**302**	P	**P**	**04 01 35.8**	**+1.4**
	baz=100						
ROSC	**El Rosal**	**35.66**	**238**	LR	LR	04 16 25.9	
	comp=Z,36nm,18.7s,baz=175,slow=37						
Q49A	**Aurora**	**35.97**	**301**	P	**P**	**04 01 42.2**	**+1.4**
	baz=98						
Z50A	**Ashland**	**36.41**	**291**	P	**P**	**04 01 46.0**	**+1.4**
	baz=90						
W49A	**Belvidere**	**36.72**	**294**	P	**P**	**04 01 48.7**	**+1.4**
	baz=92						
P46A	**Rosedale**	**37.83**	**301**	P	**P**	**04 01 57.6**	**+1.0**
P46A				IAmb	IAmb	04 01 59.2	
	comp=Z,9.3nm,0.8s						
WVT	**Waverly**	**38.03**	**296**	P	**P**	**04 01 59.2**	**+0.8**
	baz=92						
OXF	**Oxford**	**39.30**	**293**	P	**P**	**04 02 09.9**	**+0.9**
OXF				IAmb	IAmb	04 02 10.1	
	comp=Z,11nm,0.9s						
SAML	**Samuel**	**39.54**	**210**	P	**P**	**04 02 11.5**	**+0.3**
PBMO	**Poplar Bluff**	**40.15**	**297**	P	**P**	**04 02 16.7**	**+0.7**
FRB	**Frobisher Bay**	**40.51**	**344**	P	**P**	**04 02 18.4**	**-0.3**
	comp=Z,9.5nm,0.9s,baz=135,slow=8.0,SNR=15						
CCM	**Cathedral Cave**	**40.84**	**298**	P	**P**	**04 02 22.5**	**+0.7**
CCM	**Cathedral Cave**	**40.84**	**298**	P	**P**	**04 02 22.0**	**+0.2**
	baz=92						
W41B	**Gary Mavity, V**	**41.62**	**294**	P	**P**	**04 02 28.9**	**+0.7**
W41B	**Gary Mavity, V**	**41.62**	**294**	P	**P**	**04 02 28.2**	**0.0**
	baz=89						
WHAR	**Wooly Hollow**	**41.65**	**294**	P	**P**	**04 02 28.8**	**+0.3**
WHAR				IAmb	IAmb	04 02 29.1	
	comp=Z,13nm,1.2s						
OTAV	**Otavalo**	**41.77**	**237**	P	**P**	**04 02 30.6**	**+0.4**
BDFB	**Brasilia**	**41.92**	**185**	P	**P**	**04 02 31.1**	**+0.2**
	comp=Z,4.0nm,0.9s,baz=3.2,slow=7.3,SNR=6.4						
BDFB	**Brasilia**	**41.92**	**185**	IAmb	IAmb	04 02 33.9	
	comp=Z,4.7nm,0.9s						
U40A	**Yellville**	**42.09**	**296**	P	**P**	**04 02 33.0**	**+0.8**
U40A				IAmb	IAmb	04 02 38.3	
	comp=Z,8.5nm,0.9s						
U40A	**Yellville**	**42.09**	**296**	P	**P**	**04 02 32.7**	**+0.6**
	baz=90						
Z41A	**Richland Creek**	**42.17**	**291**	P	**P**	**04 02 34.5**	**+1.7**
	baz=86						
H10N2	**ASCENSION HYDR**	**44.78**	**135**	T	T	04 50 38.1	
	baz=320,slow=75,SNR=419						
H10N3	**ASCENSION HYDR**	**44.78**	**135**	T	T	04 50 38.2	
	baz=320,slow=75,SNR=998						
H10N1	**ASCENSION HYDR**	**44.80**	**135**	T	T	04 50 39.2	
	baz=320,slow=75,SNR=881						
ASCN	**Ascension**	**44.94**	**135**	P	**P**	**04 02 54.7**	**-0.6**
TOA0	**Torodi Ar. Sit**	**45.19**	**98**	P	**P**	**04 02 57.4**	**+0.1**
TORD	**Torodi Ar. Bea**	**45.19**	**98**	P	**P**	**04 02 56.8**	**-0.5**
	comp=Z,1.7nm,1.1s,baz=302,slow=8.4,SNR=5.5						
AGMN	**Agassiz Nation**	**45.33**	**313**	P	**P**	**04 02 57.9**	**-0.1**
AGMN				IAmb	IAmb	04 02 59.0	
	comp=Z,13nm,1.1s						
AGMN	**Agassiz Nation**	**45.33**	**313**	P	**P**	**04 02 58.3**	**+0.3**
	baz=100						
TAM	**Tamanrasset**	**45.40**	**83**	P	**P**	**04 03 00.8**	**+1.7**
H10S3	**ASCENSION HYDR**	**45.54**	**136**	T	T	04 51 32.2	
	baz=320,slow=74,SNR=447						
H10S2	**ASCENSION HYDR**	**45.56**	**136**	T	T	04 51 33.5	
	baz=260,slow=74,SNR=399						
ULM	**Lac du Bonnet**	**45.70**	**316**	P	**P**	**04 03 00.2**	**-0.7**
	comp=Z,2.6nm,0.6s,baz=77,slow=8.9,SNR=7.6						
ULM				LR	LR	04 21 30.1	
	comp=Z,49nm,18.3s,baz=52,slow=35						
WHTX	**Lake Whitney,**	**46.20**	**290**	P	**P**	**04 03 05.0**	**-0.1**
WHTX	**Lake Whitney,**	**46.20**	**290**	P	**P**	**04 03 06.4**	**+1.3**
	baz=83						
SUMG	**Summit**	**46.35**	**3**	*i* P	**P**	**04 03 05.6**	**-0.6**
SUMG	**Summit**	**46.35**	**3**	P	**P**	**04 03 05.5**	**-0.7**
KEST	**Kesra**	**46.56**	**65**	P	**P**	**04 03 07.8**	**-0.2**
	comp=Z,6.5nm,0.9s,baz=274,slow=9.2,SNR=4.1						
KEST	**Kesra**	**46.56**	**65**	IAmb	IAmb	04 03 11.4	
	comp=Z,11nm,1.0s						
STU	**Stuttgart**	**46.93**	**47**	P	**P**	**04 03 10.5**	**-0.1**
STU				IAmb	IAmb	04 03 11.8	
	comp=Z,6.5nm,0.9s						
WMOK	**Wichita Mounta**	**47.00**	**294**	IAmb	IAmb	04 03 12.8	
	comp=Z,9.0nm,1.1s						
WMOK	**Wichita Mounta**	**47.00**	**294**	P	**P**	**04 03 11.7**	**+0.2**
	baz=85,SNR=7.6						
FCC	**Fort Churchill**	**47.13**	**327**	P	**P**	**04 03 12.0**	**+0.1**
ABTX	**Abilene, Hawle**	**47.95**	**291**	IAmb	IAmb	04 03 26.1	
	comp=Z,9.8nm,1.1s						
ABTX	**Abilene, Hawle**	**47.95**	**291**	P	**P**	**04 03 19.4**	**+0.6**
	baz=82						
SQTA	**Sankt Quirin**	**48.09**	**49**	*e*pP	**P**	**04 03 20.7**	**+0.9**
	comp=Z,13nm,1.4s						
LPAZ	**La Paz**	**48.25**	**211**	P	**P**	**04 03 21.3**	**-0.5**
	comp=Z,4.6nm,1.0s,baz=45,slow=8.8,SNR=12						
LPAZ	**La Paz**	**48.25**	**211**	P	**P**	**04 03 22.3**	**+0.5**
LPAZ				IAmb	IAmb	04 03 34.4	
	comp=Z,6.2nm,0.9s						
WATA	**Walderalm**	**48.35**	**49**	pP	**P**	**04 03 22.6**	**+0.8**
	comp=Z,3.0nm,0.7s						
JCT	**Junction City**	**48.40**	**288**	IAmb	IAmb	04 03 28.5	
	comp=Z,7.4nm,1.1s						
JCT	**Junction City**	**48.40**	**288**	P	**P**	**04 03 23.0**	**+0.6**
	baz=80						
ABTA	**Abfaltersbach**	**48.94**	**50**	pP	**P**	**04 03 26.8**	**+0.4**
	comp=Z,6.4nm,1.0s						
AMTX	**Amarillo**	**49.36**	**294**	IAmb	IAmb	04 03 31.5	
	comp=Z,10nm,1.1s						
AMTX	**Amarillo**	**49.36**	**294**	P	**P**	**04 03 31.0**	**+1.3**
	baz=83						
CLL	**Collm**	**49.71**	**44**	*e*P	**P**	**04 03 32.0**	**0.0**
	comp=Z,37nm,1.9s						
KHC	**Kasperske Hory**	**49.84**	**47**	*e*P	**P**	**04 03 33.0**	**-0.1**
KHC	**Kasperske Hory**	**49.84**	**47**	P	**P**	**04 03 33.3**	**+0.1**
GEC2	**GERESS Array S**	**49.90**	**47**	P	**P**	**04 03 33.7**	**+0.1**

GERES	**GERESS Array B**	49.90	47	P		P		04 03 32.4	-1.2
	comp=Z,0.9nm,0.8s,baz=266,slow=7.8,SNR=7.9								
FFC	**Flin Flon**	50.22	320	P		P		04 03 35.6	-0.2
FFC				IAmb		IAmb		04 03 36.6	
	comp=Z,6.1nm,0.9s								
OBKA	**Obir**	50.33	50	*e*pP		P		04 03 37.1	+0.2
	comp=Z,12nm,0.9s								
NOA	**NORSAR Array B**	50.79	31	P		P		04 03 40.3	+0.2
	comp=Z,2.6nm,1.0s,baz=250,slow=7.9,SNR=3.6								
ARSA	**Arzberg**	51.02	49	pP		P		04 03 41.9	-0.2
	comp=Z,8.5nm,1.8s								
TULEG	**Thule**	51.59	353	P		P		04 03 45.4	-0.4
GO01	**Chusmiza**	51.68	210	P		P		04 03 47.4	-0.4
Q24A	**Divide**	51.71	300	IAmb		IAmb		04 03 49.6	
	comp=Z,7.7nm,0.9s								
TXAR	**Lajitas Array**	51.91	288	P		P		04 03 48.5	-0.5
	comp=Z,1.5nm,0.7s,baz=94,slow=7.7,SNR=13								
TXAR				PcP		PcP		04 05 01.9	+0.1
	comp=Z,1.1nm,0.9s,baz=116,slow=5.7,SNR=5.0								
DAG	**Danmarks Havn**	51.97	7⇑	*i*P		P		04 03 48.5	-0.1
	comp=Z,8.8nm,1.0s								
PB11	**IPOC Station P**	51.97	211	P		P		04 03 48.2	-1.3
K22A	**Casper**	52.49	305	P		P		04 03 53.2	-0.1
	baz=87								
ZAIG	**Zacatecas**	52.56	279	P		P		04 03 54.4	+0.2
MNTX	**Cornudas Mount**	52.90	291	P		P		04 03 56.3	0.0
	baz=79								
S22A	**4UR Ranch, Cre**	53.16	299	P		P		04 03 59.8	+1.4
	baz=83								
ANMO	**Albuquerque**	53.24	295	P		P		04 03 59.8	+0.8
ANMO	**Albuquerque**	53.24	295	P		P		04 04 00.3	+1.3
	baz=81								
VYHS	**Vyhne**	53.28	48	*e*P		P		04 03 59.0	+0.2
HPIG		54.17	285	P		P		04 04 06.3	+0.3
RLMT	**Red Lodge**	54.35	308	IAmb		IAmb		04 04 08.5	
	comp=Z,8.1nm,1.1s								
RLMT	**Red Lodge**	54.35	308	P		P		04 04 07.8	+0.8
	baz=87,SNR=8.6								
MVCO	**Mesa Verde**	54.54	298	IAmb		IAmb		04 04 12.2	
	comp=Z,3.8nm,0.8s								
MVCO	**Mesa Verde**	54.54	298	P		P		04 04 09.9	+1.4
	baz=82								
RES	**Resolute Bay**	54.68	345	P		P		04 04 09.1	+0.5
RES				IAmb		IAmb		04 04 09.9	
	comp=Z,7.3nm,1.1s								
BW06	**Boulder Array**	54.72	305	IAmb		IAmb		04 04 10.5	
	comp=Z,8.5nm,1.0s								
BW06	**Boulder Array**	54.72	305	P		P		04 04 09.8	+0.1
	baz=85,SNR=13								
PD31	**Pinedale Array**	54.72	305	IAmb		IAmb		04 04 10.5	
	comp=Z,7.2nm,0.9s								
PDAR	**Pinedale Array**	54.72	305	P		P		04 04 09.5	-0.2
	comp=Z,4.5nm,0.8s,baz=90,slow=7.8,SNR=38								
PDAR				PcP		PcP		04 05 10.1	-2.3
	comp=Z,0.5nm,0.8s,baz=100,slow=5.0,SNR=2.0								
121A	**Cookes Peak, D**	54.75	292	IAmb		IAmb		04 04 12.5	
	comp=Z,8.5nm,1.1s								
121A	**Cookes Peak, D**	54.75	292	P		P		04 04 12.0	+2.0
	baz=79,SNR=5.0								
LKWY	**Lake**	55.19	307	IAmb		IAmb		04 04 20.6	
	comp=Z,5.3nm,1.0s								
BZS	**Buzias**	55.26	51	⇓P		P		04 04 13.8	+0.5
FLWY	**Flagg Ranch**	55.44	307	P		P		04 04 15.5	+0.6
FLWY				IAmb		IAmb		04 04 16.5	
	comp=Z,4.3nm,0.8s								
SNOW	**Snow King Moun**	55.53	306	IAmb		IAmb		04 04 16.9	
	comp=Z,4.9nm,0.8s								
REDW	**Red Top Meadow**	55.61	306	IAmb		IAmb		04 04 31.1	
	comp=Z,5.2nm,1.1s								
TPAW	**Teton Pass**	55.67	306	IAmb		IAmb		04 04 18.0	
	comp=Z,8.0nm,1.0s								
SRU	**San Rafael Swe**	55.86	301	P		P		04 04 18.4	+0.5
DRGR		55.95	50	⇑P		P		04 04 17.7	-0.6
NOR	**Nord**	56.36	5	*i* P		P		04 04 20.2	-0.4
	comp=Z,10nm,1.0s								
DLMT	**Dillon**	56.67	308	IAmb		IAmb		04 04 25.1	
	comp=Z,4.8nm,1.0s								
GO02	**Mina Guanaco**	56.69	207	P		P		04 04 24.2	+0.2
WUAZ	**Wupatki**	57.11	297	IAmb		IAmb		04 04 29.3	
	comp=Z,12nm,1.1s								
WUAZ	**Wupatki**	57.11	297	P		P		04 04 28.5	+1.6
	baz=79,SNR=7.9								
TUC	**Tucson**	57.28	293	P		P		04 04 28.7	+0.7
TUC				IAmb		IAmb		04 04 30.1	
	comp=Z,5.3nm,1.1s								
TUC	**Tucson**	57.28	293	P		P		04 04 29.5	+1.5
	baz=77								
ARR	**Arges**	57.40	51	⇑P		P		04 04 27.8	-0.8
DUG	**Dugway, Tooele**	57.45	302	IAmb		IAmb		04 04 30.6	
	comp=Z,8.2nm,0.9s								
DUG	**Dugway, Tooele**	57.45	302	P		P		04 04 29.9	+0.8
	baz=81,SNR=12								
BUR08	**Bucovina Ar. S**	57.58	49	P		P		04 04 30.0	+0.1
BURAR	**Bucovina Array**	57.59	49	⇓P		P		04 04 31.4	+1.4
U15A	**North Rim**	57.67	298	IAmb		IAmb		04 04 33.4	
	comp=Z,6.1nm,1.1s								
YKA	**Yellowknife Ar**	57.77	329	P		P		04 04 29.8	-1.1
	comp=Z,3.2nm,0.8s,baz=94,slow=7.5,SNR=40								
YKA				PcP		PcP		04 05 20.2	-3.3
	comp=Z,0.5nm,0.7s,baz=99,slow=4.7,SNR=2.6								
YKA				LR		LR		04 27 57.6	
	comp=Z,118nm,20.4s,baz=0.0,slow=35								
DOPR	**Dopca**	57.86	51	⇓P		P		04 04 30.9	-1.0
FINES	**FINESS Array B**	57.92	32	P		P		04 04 31.6	-0.3
	comp=Z,6.5nm,1.0s,baz=268,slow=4.2,SNR=6.5								
HSIG		58.18	289	P		P		04 04 35.1	+0.7
HSIG				IAmb		IAmb		04 04 47.5	
	comp=Z,6.5nm,0.9s								
BIZ	**Bicaz**	58.25	49	⇑P		P		04 04 34.9	+0.3
PRAR	**RASCA**	58.30	49	⇑P		P		04 04 35.2	+0.4
MLR	**Muntele Rosu**	58.30	51	⇓P		P		04 04 34.2	-0.8
MLR	**Muntele Rosu**	58.30	51	P		P		04 04 35.7	+0.7
ARCES	**ARCESS Array B**	58.55	23	P		P		04 04 35.8	-0.4
	comp=Z,3.9nm,0.8s,baz=251,slow=7.6,SNR=9.2								
ELND	**Elena**	58.58	54	⇓P		P		04 04 37.1	+0.2
Y14A	**Wickenburg**	58.74	295	IAmb		IAmb		04 04 40.4	
	comp=Z,6.1nm,1.0s								
214A	**Organ Pipe Nat**	59.03	293	P		P		04 04 42.0	+1.8
	baz=76,SNR=8.9								
ELK	**Elko**	59.19	303	IAmb		IAmb		04 04 43.0	
	comp=Z,4.7nm,0.9s								
MFID	**Camas Ranch**	59.20	307	IAmb		IAmb		04 04 42.7	
	comp=Z,9.5nm,1.1s								
NEW	**Newport**	59.48	312	P		P		04 04 43.3	+0.2
	baz=84,SNR=19								
113A	**Mohawk Valley,**	59.63	294	IAmb		IAmb		04 04 46.1	
	comp=Z,4.4nm,1.0s								
R11A	**Troy Canyon, C**	59.88	301	P		P		04 04 46.5	+0.2
	baz=79								
AKASG	**Malin Array Be**	59.93	45	P		P		04 04 45.0	-1.0
	comp=Z,3.5nm,0.9s,baz=275,slow=5.8,SNR=7.5								
AKASG	**Malin Array Be**	59.93	45	IAmb		IAmb		04 04 50.1	
	comp=Z,2.1nm,1.1s								
AKBB	**Malin Array Si**	59.93	45	P		P		04 04 45.2	-0.8
AKBB				IAmb		IAmb		04 04 47.2	
	comp=Z,6.0nm,1.1s								
E09A	**Wood Farm, Sta**	60.39	310	IAmb		IAmb		04 04 56.1	
	comp=Z,5.4nm,1.1s								
IRM	**Iron Mountain**	60.43	296	P		P		04 04 51.0	+1.2
	baz=77								
TPNV	**Topopah Spring**	60.69	299	IAmb		IAmb		04 04 54.0	
	comp=Z,3.7nm,0.9s								
TPNV	**Topopah Spring**	60.69	299	P		P		04 04 53.1	+1.4
	baz=78								
GMRC	**Granite Mounta**	60.70	297	P		P		04 04 52.7	+0.9
	baz=77								
TUQ	**Turquoise Moun**	60.76	297	P		P		04 04 53.4	+1.2
	baz=77								
BC3	**Big Chuckawall**	60.79	295	P		P		04 04 53.6	+1.1
	baz=76								
J08A	**Circle Bar Ran**	61.12	307	IAmb		IAmb		04 05 01.4	
	comp=Z,4.1nm,1.0s								
BELC	**Belle Mtn. Jos**	61.15	296	P		P		04 04 55.8	+0.9
	baz=76								
HEC	**Hector,Ludlow**	61.23	297	P		P		04 04 56.7	+1.4
	baz=76								
HAWA	**Hanford**	61.35	310	P		P		04 04 56.5	+0.6
MANT	**Manisa**	61.37	59	P		P		04 04 56.7	+0.3
GSC	**Goldstone, Bar**	61.49	298	IAmb		IAmb		04 04 59.0	
	comp=Z,3.5nm,1.1s								
GSC	**Goldstone, Bar**	61.49	298	P		P		04 04 58.2	+1.1
	baz=76								
IKP	**In-Ko-Pah, Jac**	61.57	294	P		P		04 04 59.2	+1.5
	baz=75,SNR=6.8								
PFO	**Pinyon Flats O**	61.62	296	P		P		04 04 59.4	+1.4
	baz=76								
I07A	**Izee**	61.73	308	IAmb		IAmb		04 05 00.2	
	comp=Z,5.6nm,1.1s								
MONP2	**Monument Peak**	61.77	295	P		P		04 05 00.6	+1.4
	baz=75,SNR=5.3								
MPMC	**Manual Prospec**	61.86	299	P		P		04 05 00.8	+1.1
	baz=76,SNR=6.6								
NVAR	**Mina Array Bea**	61.96	301	P		P		04 04 59.9	-0.5
	comp=Z,1.4nm,0.8s,baz=80,slow=6.7,SNR=12								
LTY	**Liberty**	61.99	311	IAmb		IAmb		04 05 05.9	
	comp=Z,8.5nm,1.1s								
BAR	**Barrett**	62.02	295	IAmb		IAmb		04 05 01.9	
	comp=Z,2.2nm,0.7s								
RYN	**Ryan**	62.08	302	IAmb		IAmb		04 05 02.4	
	comp=Z,3.0nm,0.9s								
CWC	**Cottonwood Cre**	62.23	299	P		P		04 05 03.4	+1.2
	baz=76								
LLLB	**Lillooet**	62.25	315	IAmb		IAmb		04 05 04.1	
	comp=Z,7.0nm,0.9s								
BFSC	**Mount Baldy Ra**	62.43	297	P		P		04 05 04.7	+1.2
	baz=76								
PAHR	**Pah Rah Range**	62.50	303	P		P		04 05 03.6	-0.3
PAHR				IAmb		IAmb		04 05 04.9	
	comp=Z,7.4nm,1.0s								
EDW2	**Edwards Air Fo**	62.54	297	P		P		04 05 05.2	+1.0
	baz=76,SNR=6.2								
ISA	**Isabella, Lake**	62.73	298	IAmb		IAmb		04 05 07.7	
	comp=Z,8.1nm,1.1s								
ISA	**Isabella, Lake**	62.73	298	P		P		04 05 07.0	+1.6
	baz=76,SNR=5.8								
B05A	**Bryant**	62.77	313	P		P		04 05 03.7	-1.6
	baz=80								
G05D	**Wamic, OR**	62.78	309	P		P		04 05 06.4	+0.9
	baz=79								
VCNR	**Virginia City**	62.79	303	IAmb		IAmb		04 05 07.2	
	comp=Z,2.8nm,0.8s								
ELL	**Elmali**	62.80	60	P		P		04 05 06.5	+0.6
WAKR	**Walker**	62.81	302	IAmb		IAmb		04 05 07.6	
	comp=Z,3.6nm,1.0s								
MDUB	**Mudurnu**	62.94	56	P		P		04 05 07.1	+0.4
J05D	**Fort Rock, OR**	63.11	307	P		P		04 05 08.7	+0.8
	baz=78,SNR=7.0								
ORV	**Oroville**	64.13	303	P		P		04 05 15.0	+0.5
O03E	**Paynes Creek**	64.18	304	P		P		04 05 15.0	+0.1
	baz=76,SNR=6.1								
BR231	**Keskin MP Arra**	64.26	56	P		P		04 05 15.4	-0.1
ANTO	**Ankara**	64.27	56	P		P		04 05 15.9	+0.4
BR131	**Keskin Array S**	64.93	56	P		P		04 05 19.9	-0.1
BR131				IAmb		IAmb		04 05 26.7	
	comp=Z,7.0nm,1.1s								
BRTR	**Keskin Array B**	64.93	56	P		P		04 05 19.6	-0.3
	comp=Z,3.5nm,0.9s,baz=272,slow=4.8,SNR=17								
INK	**Inuvik**	65.41	336	P		P		04 05 21.6	-0.8
	comp=Z,6.0nm,1.0s,baz=69,slow=5.2,SNR=9.3								
INK				LR		LR		04 32 38.9	
	comp=Z,50nm,19.8s,baz=21,slow=35								
INK	**Inuvik**	65.41	336	IAmb		IAmb		04 05 23.2	
	comp=Z,7.4nm,1.0s								
DAWY	**Dawson**	68.69	332	P		P		04 05 43.4	0.0
H09W1	**TRISTAN DA CUN**	70.03	153	T		T		05 22 11.1	
	SNR=7.5								
KIV	**Kislovodsk**	70.27	50	P		P		04 05 54.7	+1.2
PLCA	**Paso Flores**	71.03	201	P		P		04 05 58.1	+0.1
	comp=Z,1.7nm,0.8s,baz=49,slow=8.3,SNR=5.0								
PLCA	**Paso Flores**	71.03	201	IAmb		IAmb		04 06 04.5	
	comp=Z,4.5nm,1.1s								
IL31		71.52	334	IAmb		IAmb		04 06 01.5	
	comp=Z,5.7nm,0.9s								
ILAR	**Eielson Array**	71.52	334	P		P		04 06 00.5	-0.2
	comp=Z,4.3nm,0.9s,baz=73,slow=4.6,SNR=48								
COLD	**Coldfoot**	71.78	337	IAmb		IAmb		04 06 03.9	
	comp=Z,5.7nm,1.2s								
CCB	**Clear Creek Bu**	71.93	334	IAmb		IAmb		04 06 03.7	
	comp=Z,11nm,1.2s								
WRH	**Wood River Hil**	72.12	334	P		P		04 06 04.2	0.0
WRH				IAmb		IAmb		04 06 05.5	
	comp=Z,11nm,1.2s								
MLY	**Manley**	72.91	335	IAmb		IAmb		04 06 11.4	
	comp=Z,5.5nm,1.1s								
GNI	**Garni**	72.96	53	P		P		04 06 10.6	+0.7
ABKAR	**Akbulak array**	79.20	40	P		P		04 06 45.4	+0.3
TIXI	**Tiksi**	82.12	2	P		P		04 07 00.4	+0.1
	comp=Z,1.8nm,0.3s,baz=360,slow=24,SNR=7.7								
TIXI	**Tiksi**	82.12	2	P		P		04 07 00.7	+0.4
TIXI				IAmb		IAmb		04 07 01.3	
	comp=Z,5.5nm,1.1s								
BRVK	**Borovoye**	82.79	34	P		P		04 07 04.5	+0.4
BRVK				IAmb		IAmb		04 07 10.7	
	comp=Z,3.4nm,1.0s								
BILL	**Bilibino**	83.12	349	P		P		04 07 05.2	-0.4
BILL				IAmb		IAmb		04 07 11.6	
	comp=Z,4.7nm,0.9s								
GEYT	**Alibeck**	83.35	51	P		P		04 07 07.0	-0.4
	comp=Z,0.7nm,0.5s,baz=215,slow=4.8,SNR=3.0								
GEYT	**Alibeck**	83.35	51	IAmb		IAmb		04 07 13.9	
	comp=Z,1.2nm,0.9s								
KURK	**Kurchatov**	88.30	32	P		P		04 07 30.8	-0.8
KURK	**Kurchatov**	88.30	32	IAmb		IAmb		04 07 33.1	
	comp=Z,1.7nm,1.1s								
KURBB	**Kurtovo Arra**	88.31	32	P		P		04 07 30.8	-0.9
	comp=Z,0.6nm,0.7s,baz=311,slow=4.3,SNR=4.0								
ZAA0	**Zalesovo Array**	88.82	27	P		P		04 07 34.5	+0.5
ZAA0				IAmb		IAmb		04 07 34.6	
	comp=Z,4.8nm,1.1s								
ZALV	**Zalesovo Beam**	88.82	27	P		P		04 07 33.0	-1.0
	comp=Z,1.2nm,0.6s,baz=310,slow=5.6,SNR=7.5								
SEY	**Seymchan**	89.97	352	P		P		04 07 39.4	+0.2
	comp=Z,0.5nm,0.4s,baz=34,slow=3.6,SNR=2.9								
WMQ	**Urumqi**	97.53	33	*e*P		Pdif		04 08 14.5	0.0
WMQ				pP		pwP		04 08 21.1	-0.1
WMQ				pmax		pmax			
	comp=Z,5.0nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,33nm,4.9s								
WMQ				LR		LR			
	comp=N,450nm,29.1s								
WMQ				LR		LR			
	comp=E,1μm,29.2s								
WMQ				LR		LR			
	comp=Z,77nm,29.2s								
CD2	**Chengdu**	115.44	30	PKP		**PKiKP**		04 13 21.3	-1.2
NJ2	**Nanjing**	119.75	16	*e*P		**PKiKP**		04 13 31.4	+0.7
NJ2				pmax		pmax			
	comp=Z,13nm,0.6s								

IDC 19 04:11:43.9±1.1, 19.05N×120.50E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.6/40, mbtmp3.7/7, ML3.4/1, Error ellipse: s-maj=52.6km s-min=20.9km az=68.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	19.45	18	P	P	04 16 11.6	-0.5
	0.1nm,0.3s,baz=188,slow=11,SNR=3.8						
WRA	**Warramunga Arr**	41.06	160	P	P	04 19 28.7	-0.7
	1.2nm,1.0s,baz=342,slow=8.7,SNR=3.1						
MKAR	**Makanchi Array**	41.72	320	P	P	04 19 34.7	+0.1
	0.5nm,0.7s,baz=120,slow=8.5,SNR=6.2						
ZALV	**Zalesovo Beam**	44.28	330	P	P	04 19 54.9	-0.3
	0.5nm,0.3s,baz=119,slow=8.6,SNR=4.7						
ASAR	**Alice Springs**	44.43	162	P	P	04 19 57.0	+0.3
	0.3nm,0.5s,baz=334,slow=6.7,SNR=4.2						
KURBB	**Kurchatov Arra**	45.73	323	P	P	04 20 06.5	-0.2
	1.3nm,0.6s,baz=122,slow=7.9,SNR=7.1						
YKA	**Yellowknife Ar**	87.93	22	P	P	04 24 35.6	+0.2
	0.5nm,0.8s,baz=314,slow=4.5,SNR=6.5						

*IDC **19** 04:11:28.5±1.4, 25.54N×123.98E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.4/37, mbtmp3.6/3, Error ellipse: s-maj=63.2km s-min=32.1km az=69.0*
*JMA **19** 04:11:49.0±0.2, 25.15N×123.51E, h168km±3km, M3.7*
ISC 19 04:11:47.7±1.0, 25.3N±0.1×123.50E±0.07, h168km±10km, n15, σ0s67/26, mb3.2/3, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	0.95	208	P	Pn	04 12 14.3	+0.4
YOJ				*e*S	Sn	04 12 34.1	+0.1
JYNG	**Yonagunijimaku**	0.99	210	P	Pn	04 12 14.8	+0.6
JYNG				*e*S	Sn	04 12 34.4	-0.1
IRIF	**Iriomote-Funau**	0.99	168	P	Pn	04 12 14.3	+0.1
IRIF				*e*S	Sn	04 12 33.4	-1.1
JISG	**Ishigakijimahi**	1.03	134	P	Pn	04 12 14.8	+0.3
JISG				S	Sn	04 12 34.8	-0.2
JIJ	**Ishigaki jima**	1.11	148	P	Pn	04 12 15.2	+0.1
JIJ				S	Sn	04 12 35.2	-1.0
JKRS	**Kuro-shima**	1.16	156	P	Pn	04 12 16.2	+0.6
JKRS				S	Sn	04 12 36.7	-0.3
HATJ	**Hateruma jima**	1.28	167	P	Pn	04 12 16.8	+0.2
HATJ				S	Sn	04 12 37.7	-1.1
JTJ	**Tarama**	1.28	121	P	Pn	04 12 17.5	+0.9
JTJ				S	Sn	04 12 38.5	-0.3
JIRB	**Irabujima**	1.59	107	P	Pn	04 12 20.3	+0.7
JIRB				S	Sn	04 12 43.4	-0.8
JIKM	**Ikemajima**	1.63	103	P	Pn	04 12 21.0	+1.0
JIKM				S	Sn	04 12 45.0	+0.1
JOGS	**Gusukube**	1.82	107	P	Pn	04 12 23.1	+1.1
JOGS				S	Sn	04 12 48.4	0.0
JKE	**Kume jima 2**	3.13	70	P	Pn	04 12 37.1	-0.4
MKAR	**Makanchi Array**	39.03	314	P	P	04 18 58.2	+0.2
	0.1nm,0.3s,baz=106,slow=9.9,SNR=4.3						
WRA	**Warramunga Arr**	46.20	166	P	P	04 19 56.2	+0.3
	0.9nm,0.5s,baz=348,slow=8.5,SNR=4.9						
YKA	**Yellowknife Ar**	81.11	24	P	P	04 23 43.4	-0.6
	0.3nm,0.5s,baz=308,slow=5.0,SNR=6.9						

*IDC **19** 04:17:16.7±1.5, 9.20S×108.67W, h0km, mb3.8/11, mb1 4.1/11, mb1mx3.9/30, mbtmp3.8/11, MS3.9/6, Ms1 3.9/6, ms1mx3.5/36, Error ellipse: s-maj=63.7km s-min=17.2km az=55.0*
*NEIC **19** 04:17:19.4±1.4, 9.1S±0.1×108.5W±0.2, h10km±2km, mb4.4/25, Error ellipse: s-maj=29.0km s-min=17.0km az=68.0*
ISC 19 04:17:20.0±0.9, 9.1S±0.1×108.5W±0.2, h15km, n58, σ0s87/38, mb4.2/17, MS4.0/8, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	17.91	182	LR	LR	04 26 25.9	
	comp=Z,478nm,21.2s,baz=6.5,slow=31						
H06S1	**SOCORRO T**	27.80	355	T	T	04 52 10.0	
	SNR=90						
H06E1	**SOCORRO T-PHAS**	27.84	355	T	T	04 52 10.1	
TLIG	**Tlapa**	28.29	20	P	P	04 23 08.4	-4.8
ZAIG	**Zacatecas**	32.24	10	P	P	04 23 48.8	+0.4
ZAIG				IAmb	IAmb	04 23 50.8	
	comp=Z,3.8nm,0.8s						
833A	**Chaparral WMA,**	38.27	13	P	P	04 24 40.0	+0.1
833A				IAmb	IAmb	04 24 46.3	
	comp=Z,10nm,0.9s						
TXAR	**Lajitas Array**	38.53	7	P	P	04 24 43.4	+1.2
	comp=Z,0.9nm,1.0s,baz=206,slow=11,SNR=4.6						
LPAZ	**La Paz**	39.96	104	P	P	04 24 55.6	+0.5
	comp=Z,1.3nm,1.0s,baz=168,slow=2.7,SNR=4.4						
JCT	**Junction City**	40.27	12	P	P	04 24 58.1	+1.4
JCT				IAmb	IAmb	04 25 07.0	
	comp=Z,21nm,1.8s						
MNTX	**Cornudas Mount**	40.72	4	P	P	04 25 00.8	+0.5
PPT2	**Papeete2**	40.76	254	*e*LR	LR	04 36 11.7	
	comp=Z,400nm,26.5s						
TBI	**Tubuai**	41.62	245	*e*LR	LR	04 36 31.5	
	comp=Z,317nm,28.2s						
SDV	**Santo Domingo**	41.75	66	LR	LR	04 39 46.3	
	comp=Z,96nm,21.7s,baz=300,slow=32						
ABTX	**Abilene, Hawle**	42.38	11	P	P	04 25 14.2	+0.3
ABTX				IAmb	IAmb	04 25 19.5	
	comp=Z,7.2nm,1.0s						
CFA	**Coronel Fontan**	43.52	127	P	P	04 25 22.6	-0.7
	comp=Z,0.6nm,0.3s,baz=295,slow=7.4,SNR=4.7						
CFA				LR	LR	04 38 52.9	
	comp=Z,133nm,20.6s,baz=288,slow=30						
ANMO	**Albuquerque**	43.89	2	LR	LR	04 40 33.0	
	comp=Z,190nm,18.9s,baz=180,slow=32						
Z41A	**Richland Creek**	44.73	19	P	P	04 25 33.5	+0.7
SAML	**Samuel**	44.74	94	P	P	04 25 33.6	+0.4
SAML				IAmb	IAmb	04 25 41.6	
	comp=Z,4.2nm,0.9s						
GSC	**Goldstone, Bar**	44.89	350	P	P	04 25 33.9	-0.3
W35A	**Tecumseh**	45.40	13	P	P	04 25 37.6	-0.6
OKCFA	**Oklahoma City**	45.53	13	P	P	04 25 39.5	+0.4
MIAR	**Mount Ida**	45.69	17	P	P	04 25 40.8	+0.3
PLCA	**Paso Flores**	46.03	140	P	P	04 25 43.8	+0.5
	comp=Z,3.6nm,1.1s,baz=309,slow=8.4,SNR=3.5						
MVCO	**Mesa Verde**	46.10	0	P	P	04 25 44.9	+0.9
S22A	**4UR Ranch, Cre**	46.66	2	P	P	04 25 49.5	+1.1
S22A				IAmb	IAmb	04 25 56.8	
	comp=Z,4.5nm,1.1s						
W41B	**Gary Mavity, V**	46.68	18	P	P	04 25 49.0	+0.8
SIV	**San Ignacio

OGWZ	**Otaki Gorge**	**3.98 189**	P	Pn	04 28 05.6	+0.4
OGWZ			S	S	04 28 57.8	-3.0
KIW	**Kapiti Island**	**4.06 192**	P	Pn	04 28 07.1	+1.1
CAW	**Cannon Point**	**4.28 189**	P	Pn	04 28 08.7	+0.4
TCW	**Tory Channel**	**4.52 197**	P	Pn	04 28 11.8	+1.0
QRZ	**Quartz Range**	**4.78 213**	P	Pn	04 28 15.1	+1.6
NNZ	**Nelson**	**4.78 204**	P	Pn	04 28 14.7	+1.1
THZ	**Tophouse**	**5.43 205**	P	Pn	04 28 21.8	+1.1
DSZ	**Denniston Nort**	**5.84 212**	P	Pn	04 28 26.5	+1.2

IDC 19 04:29:08.2±1.2,2˚12N×100˚05E,h162km±22km,mb3.5/4, mb1 3.6/4,mb1mx3.0/46,mbtmp3.9/4,Error ellipse: s-maj=69.5km s-min=18.9km az=57.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**1.32**	**301**	P	Pn	04 29 36.5	-0.5
	16nm,0.3s,baz=113,slow=7.7,SNR=36						
PSI				S	Sn	04 29 58.3	-0.9
	0.5nm,0.3s,baz=118,slow=17,SNR=1.4						
WRA	**Warramunga Arr**	**40.15**	**125**	P	P	04 36 28.3	-0.4
	1.7nm,0.4s,baz=303,slow=9.1,SNR=8.5						
ASAR	**Alice Springs**	**41.73**	**130**	P	P	04 36 41.8	+0.2
	0.3nm,0.4s,baz=305,slow=7.8,SNR=2.7						
MKAR	**Makanchi Array**	**47.12**	**343**	P	P	04 37 23.7	-0.2
	0.7nm,0.3s,baz=160,slow=7.9,SNR=7.5						
ZALV	**Zalesovo Beam**	**53.16**	**349**	P	P	04 38 09.2	0.0
	1.2nm,0.6s,baz=178,slow=7.1,SNR=2.3						

*IDC **19** 04:30:50.8±0.9,8˚99S×108˚36W,h0km,mb4.0/15, mb1 4.3/15,mb1mx4.1/30,mbtmp4.0/15,MS4.7/27, Ms1 4.7/27,ms1mx4.7/28,Error ellipse: s-maj=35.1km s-min=14.3km az=56.0*

*NEIC **19** 04:30:53.5±2.6,8˚9S±0˚1×107˚9W±0˚1,h10km±2km, mb4.7/100,Ms_20 4.9/169,Mwc5.3(GCMT),Error ellipse: s-maj=21.4km s-min=15.4km az=59.0*

*NEIC **19** 04:30:55,9˚09S×108˚40W,h16km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=0.10; $M_{\theta\theta}$=0.78; $M_{\phi\phi}$=-0.68; $M_{r\theta}$=0.10; $M_{\theta\phi}$=0.68; $M_{\phi r}$=0.02; Fault plane solution: M_0=1.01000×10^{17} NP1:ϕ_s=23.00000°, δ=86.00000°, λ=178.00000°. NP2:ϕ_s=114.00000°, δ=88.00000°, λ=4.00000°. Principal axes: T 1.0560, Plg5.0000°, Azm339.0000°; N -0.1028, Plg85.0000°, Azm142.0000°; P -0.9531, Plg1.0000°, Azm248.0000°;*

*GCMT **19** 04:30:55.5±0.1,9˚08S±0˚01×108˚42W±0˚01,h17km, MW5.3/134,Moment Tensor Solution. s91,c138; s134,c232; Duration: 1s0 Moment tensor: Scale 10^{17} Nm; M_{rr}=0.09±.02; $M_{\theta\theta}$=0.74±.02; $M_{\phi\phi}$=-0.65±.02; $M_{r\theta}$=0.02±.04; $M_{\theta\phi}$=0.66±.01; $M_{\phi r}$=-0.12±.04; Best double couple: M_0=0.96800×10^{17} NP1:ϕ_s=293.00000°,δ=83.00000°, λ=-5.00000°. NP2:ϕ_s=24.00000°,δ=85.00000°,λ=-173.00000°. Principal axes: T 1.0010, Plg1.0000°, Azm158.0000°; N -0.0680, Plg82.0000°, Azm59.0000°; P -0.9340, Plg8.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 04:30:52.5±0.4,9˚05S±0˚09×108˚24W±0˚09,h10km,n208, σ1§64/107,mb4.6/55,MS4.9/112,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**18.01**	**183**	LR	LR	04 40 08.7	
	comp=Z,4μm,19.1s,baz=3.0,slow=31						
PAYG	**Puerto Ayora**	**19.72**	**66**	P	**P**	**04 35 19.6**	**-2.9**
H06S1	**SOCORRO T**	**27.74**	**354**	T	T	05 05 36.1	
	baz=200						
H06E1	**SOCORRO T-PHAS**	**27.78**	**355**	T	T	05 05 46.2	
CMIG	**Matias Romero**	**29.14**	**27**	LR	LR	04 45 01.2	
	comp=Z,857nm,20.6s,baz=20,slow=29						
ATAH	**Atahualpa**	**29.61**	**89**	LR	LR	04 45 52.5	
	comp=Z,2μm,18.5s,baz=266,slow=30						
APG	**El Apazote**	**29.69**	**37**	LR	LR	04 46 25.0	
	comp=Z,2μm,19.9s,baz=216,slow=31						
JTS	**Las Juntas de**	**30.11**	**51**	IAMs_20	IAMs_20	04 45 48.1	
	comp=Z,3μm,19.0s						
HDC	**Heredia**	**30.58**	**52**	IAMs_20	IAMs_20	04 45 55.6	
	comp=Z,3μm,22.0s						
OTAV	**Otavalo**	**31.07**	**74**	IAMs_20	IAMs_20	04 46 17.1	
	comp=Z,3μm,19.0s						
TAOE	**Nuku Hiva Isla**	**31.51**	**268**	*e*LR	LR	04 45 12.4	
	comp=Z,3μm,25.9s,baz=93						
TAOE	**Nuku Hiva Isla**	**31.51**	**268**	*e*T	T	05 09 54.7	
	comp=Z,21nm,0.4s						
ZAIG	**Zacatecas**	**32.10**	**10**	IAMs_20	IAMs_20	04 47 40.2	
	comp=Z,2μm,18.0s						
LPIG	**La Paz**	**33.01**	**357**	LR	LR	04 47 26.6	
	comp=Z,2μm,21.8s,baz=174,slow=30						
TEIG	**Tepich**	**35.10**	**34**	LR	LR	04 50 00.4	
	comp=Z,2μm,19.0s,baz=323,slow=33						
TEIG	**Tepich**	**35.10**	**34**	IAMs_20	IAMs_20	04 49 39.8	
	comp=Z,2μm,20.0s						
SRIG	**Santa Rosalia**	**36.36**	**354**	IAMs_20	IAMs_20	04 49 06.1	
	comp=Z,3μm,20.0s						
ROSC	**El Rosal**	**36.52**	**69**	LR	LR	04 50 11.5	
	comp=Z,1μm,21.1s,baz=244,slow=32						
HSIG		**37.94**	**356**	P	**P**	**04 38 10.9**	**+0.6**
HSIG				IAmb	IAmb	04 38 22.4	
	comp=Z,13nm,1.3s						
RUSC	**La Rusia**	**38.06**	**68**	P	**P**	**04 38 08.3**	**-3.9**
833A	**Chaparral WMA,**	**38.12**	**13**	P	**P**	**04 38 10.2**	**-1.7**
833A				IAmb	IAmb	04 38 27.4	
	comp=Z,17nm,1.1s						
TXAR	**Lajitas Array**	**38.41**	**6**	P	**P**	**04 38 13.6**	**-0.8**
	comp=Z,1.2nm,1.0s,baz=183,slow=8.6,SNR=6.8						
TXAR				PcP	**PcP**	**04 40 28.5**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=180,slow=7.5,SNR=4.9						
TXAR				LR	LR	04 51 05.1	
	comp=Z,569nm,21.0s,baz=0.0,slow=32						
PB10	**IPOC Station P**	**38.79**	**116**	IAMs_20	IAMs_20	04 49 40.0	
	comp=Z,1μm,20.0s						
LPAZ	**La Paz**	**39.73**	**105**	P	**P**	**04 38 28.2**	**+1.9**
	comp=Z,3.0nm,0.8s,baz=291,slow=5.9,SNR=12						
LPAZ				LR	LR	04 52 17.5	
	comp=Z,465nm,18.5s,baz=266,slow=32						
LVC	**Limon Verde**	**40.03**	**114**	P	**P**	**04 38 26.8**	**-1.7**
LVC	**Limon Verde**	**40.03**	**114**	IAMs_20	IAMs_20	04 50 07.8	
	comp=Z,1μm,19.0s						
GO02	**Mina Guanaco**	**40.09**	**118**	P	**P**	**04 38 28.0**	**-0.8**
GO02				IAmb	IAmb	04 38 31.4	
	comp=Z,18nm,1.4s						
GO02				IAMs_20	IAMs_20	04 51 05.6	
	comp=Z,1μm,19.0s						
JCT	**Junction City**	**40.13**	**11**	P	**P**	**04 38 29.5**	**+0.8**
JCT				IAMs_20	IAMs_20	04 52 36.4	
	comp=Z,2μm,20.0s						
319A	**Douglas**	**40.21**	**359**	P	**P**	**04 38 29.7**	**+0.2**
319A				IAmb	IAmb	04 38 41.5	
	comp=Z,14nm,1.2s						
319A				IAMs_20	IAMs_20	04 51 37.3	
	comp=Z,1μm,20.0s						
GO03	**Copiap**	**40.30**	**122**	P	**P**	**04 38 30.6**	**+0.3**
GO03				IAMs_20	IAMs_20	04 50 12.6	
	comp=Z,1μm,20.0s						
MNTX	**Cornudas Mount**	**40.61**	**4**	P	**P**	**04 38 33.3**	**+0.7**
GO04	**Tololo Observa**	**40.78**	**126**	IAMs_20	IAMs_20	04 50 26.8	
	comp=Z,2μm,22.0s						
435B	**Jarrell**	**40.90**	**14**	P	**P**	**04 38 35.7**	**+0.6**
435B				IAmb	IAmb	04 38 47.3	
	comp=Z,12nm,1.2s						
214A	**Organ Pipe Nat**	**41.01**	**354**	P	**P**	**04 38 37.4**	**+1.5**
PPT	**Papeete**	**41.03**	**254**	LR	LR	04 51 08.5	
	comp=Z,1μm,18.8s,baz=76,slow=30						
PPT2	**Papeete2**	**41.03**	**254**	*e*S	**S**	**04 44 45.3**	**-4.0**
	comp=Z,317nm,26.0s						
PPT2				*e*LQ	LQ	04 47 59.9	
	comp=Z,1μm,28.8s						
PPT2				*e*LR	LR	04 49 46.3	
	comp=Z,4μm,26.5s,baz=80						
TUC	**Tucson**	**41.20**	**357**	P	**P**	**04 38 36.5**	**-1.1**
TUC	**Tucson**	**41.20**	**357**	IAMs_20	IAMs_20	04 51 48.8	
	comp=Z,1μm,20.0s						
121A	**Cookes Peak, D**	**41.35**	**1**	P	**P**	**04 38 38.9**	**0.0**
121A				IAMs_20	IAMs_20	04 52 40.3	
	comp=Z,2μm,18.0s						
SDV	**Santo Domingo**	**41.48**	**66**	P	**P**	**04 38 40.3**	**+0.1**
	comp=Z,5.7nm,1.3s,baz=270,slow=10,SNR=2.2						
SDV	**Santo Domingo**	**41.48**	**66**	P	**P**	**04 38 37.6**	**-2.7**
TBI	**Tubuai**	**41.89**	**245**	*e*S	**S**	**04 44 58.6**	**-3.2**
	comp=Z,345nm,27.0s						
TBI				*e*LR	LR	04 50 20.9	
	comp=Z,3μm,27.5s,baz=74						
TBI	**Tubuai**	**41.89**	**245**	*e*T	T	05 22 59.5	
	comp=Z,4.7nm,0.3s						
113A	**Mohawk Valley,**	**41.91**	**353**	P	**P**	**04 38 44.0**	**+0.7**
113A				IAMs_20	IAMs_20	04 51 52.4	
	comp=Z,2μm,21.0s						
GO05	**Huala**	**42.05**	**133**	P	**P**	**04 38 45.1**	**+0.6**
GO05				IAmb	IAmb	04 38 59.3	
	comp=Z,11nm,1.0s						
GO05				IAMs_20	IAMs_20	04 51 35.3	
	comp=Z,2μm,19.0s						
WHTX	**Lake Whitney,**	**42.09**	**14**	P	**P**	**04 38 45.2**	**+0.4**
WHTX				IAmb	IAmb	04 39 03.0	
	comp=Z,16nm,1.3s						
WHTX				IAMs_20	IAMs_20	04 54 13.1	
	comp=Z,1μm,18.0s						
PEL	**Peldehue**	**42.10**	**130**	P	**P**	**04 38 45.3**	**+0.3**
PEL				IAmb	IAmb	04 38 52.8	
	comp=Z,7.6nm,0.8s						
PEL				IAMs_20	IAMs_20	04 51 06.5	
	comp=Z,1μm,22.0s						
ABTX	**Abilene, Hawle**	**42.24**	**11**	P	**P**	**04 38 46.4**	**+0.3**
ABTX				IAmb	IAmb	04 39 01.2	
	comp=Z,14nm,1.1s						
ABTX				IAMs_20	IAMs_20	04 53 51.5	
	comp=Z,2μm,19.0s						
BAR	**Barrett**	**42.27**	**349**	P	**P**	**04 38 46.2**	**-0.1**
BAR				IAMs_20	IAMs_20	04 51 35.3	
	comp=Z,2μm,19.0s						
GLA	**Glamis**	**42.33**	**352**	P	**P**	**04 38 48.4**	**+1.6**
GLA				IAMs_20	IAMs_20	04 51 57.6	
	comp=Z,2μm,21.0s						
109C	**Camp Elliot, M**	**42.55**	**349**	IAMs_20	IAMs_20	04 51 57.8	
	comp=Z,2μm,19.0s						
NATX	**Nacogdoches**	**42.61**	**17**	P	**P**	**04 38 48.4**	**-0.6**
NATX				IAmb	IAmb	04 39 01.1	
	comp=Z,12nm,0.8s						
Y22D	**IRIS PASSCAL I**	**42.90**	**2**	IAMs_20	IAMs_20	04 53 25.3	
	comp=Z,2μm,19.0s						
Y12C	**Blythe**	**42.98**	**352**	IAMs_20	IAMs_20	04 52 21.7	
	comp=Z,1μm,20.0s						
Y14A	**Wickenburg**	**42.99**	**354**	P	**P**	**04 38 53.9**	**+1.8**
Y14A				IAMs_20	IAMs_20	04 52 45.6	
	comp=Z,2μm,20.0s						
MSTX	**Muleshoe**	**43.09**	**7**	P	**P**	**04 38 53.8**	**+0.7**
MSTX				IAMs_20	IAMs_20	04 54 09.6	
	comp=Z,1μm,19.0s						
XPFO	**Pion Flat**	**43.13**	**350**	IAMs_20	IAMs_20	04 52 12.2	
	comp=Z,1μm,20.0s						
PFO	**Pinyon Flats O**	**43.14**	**350**	LR	LR	04 52 24.8	
	comp=Z,2μm,20.6s,baz=166,slow=30						
PFO	**Pinyon Flats O**	**43.14**	**350**	IAMs_20	IAMs_20	04 52 02.2	
	comp=Z,2μm,21.0s						
X16A	**Lo Mia Camp, P**	**43.33**	**356**	P	**P**	**04 38 56.0**	**+0.9**
CFA	**Coronel Fontan**	**43.36**	**127**	P	**P**	**04 38 55.5**	**+0.2**
	comp=Z,1.4nm,0.4s,baz=292,slow=6.8,SNR=7.0						
CFA				PcP	**PcP**		
	comp=Z,1.1nm,0.3s,baz=294,slow=6.0,SNR=3.8						
X18A	**Snowflake**	**43.37**	**358**	P	**P**	**04 38 57.0**	**+1.7**
GTBY	**Guantanamo Bay**	**43.51**	**48**	IAMs_20	IAMs_20	04 53 20.4	
	comp=Z,1μm,21.0s						
ANMO	**Albuquerque**	**43.79**	**2**	P	**P**	**04 39 00.4**	**+1.6**
ANMO	**Albuquerque**	**43.79**	**2**	IAMs_20	IAMs_20	04 54 05.6	
	comp=Z,1μm,18.0s						
PASC	**Pasadena Art C**	**44.01**	**348**	IAMs_20	IAMs_20	04 52 23.5	
	comp=Z,2μm,20.0s						
MWC	**Mount Wilson**	**44.03**	**348**	IAMs_20	IAMs_20	04 52 22.1	
	comp=Z,2μm,20.0s						
AMTX	**Amarillo**	**44.13**	**8**	P	**P**	**04 39 01.1**	**-0.3**
W13A	**Hualapai Mount**	**44.23**	**353**	P	**P**	**04 39 03.2**	**+0.9**
W13A				IAMs_20	IAMs_20	04 53 33.6	
	comp=Z,2μm,18.0s						
WUAZ	**Wupatki**	**44.42**	**356**	P	**P**	**04 39 04.7**	**+0.9**
WUAZ				IAMs_20	IAMs_20	04 53 49.3	
	comp=Z,2μm,20.0s						
WMOK	**Wichita Mounta**	**44.46**	**11**	P	**P**	**04 39 03.4**	**-0.5**
WMOK				IAmb	IAmb	04 39 12.1	
	comp=Z,8.6nm,1.4s						
WMOK	**Wichita Mounta**	**44.46**	**11**	IAMs_20	IAMs_20	04 55 12.1	
	comp=Z,2μm,20.0s						
SAML	**Samuel**	**44.48**	**94**	P	**P**	**04 39 01.3**	**-3.2**
SAML				IAmb	IAmb	04 39 13.7	
	comp=Z,11nm,0.9s						
Z41A	**Richland Creek**	**44.56**	**19**	P	**P**	**04 39 03.2**	**-1.6**
GO06	**Curarrehue**	**44.72**	**139**	P	**P**	**04 39 06.0**	**-0.2**
GO06				IAmb	IAmb	04 39 20.7	
	comp=Z,21nm,1.4s						
GO06				IAMs_20	IAMs_20	04 52 59.6	
	comp=Z,2μm,19.0s						
GSC	**Goldstone, Bar**	**44.84**	**350**	IAMs_20	IAMs_20	04 53 25.5	
	comp=Z,1μm,20.0s						
WLAR	**White Oak Lake**	**44.87**	**18**	P	**P**	**04 39 04.8**	**-2.4**
WLAR				IAmb	IAmb	04 39 21.4	
	comp=Z,7.4nm,0.7s						
W35A	**Tecumseh**	**45.26**	**13**	P	**P**	**04 39 07.2**	**-3.1**
OKCFA	**Oklahoma City**	**45.38**	**12**	P	**P**	**04 39 11.0**	**-0.2**
OKCFA				IAMs_20	IAMs_20	04 56 10.4	
	comp=Z,2μm,18.0s						
U15A	**North Rim**	**45.39**	**355**	P	**P**	**04 39 12.0**	**+0.3**
U15A				IAMs_20	IAMs_20	04 54 05.1	
	comp=Z,2μm,20.0s						
ISA	**Isabella, Lake**	**45.51**	**348**	P	**P**	**04 39 12.5**	**+0.2**
656A	**Willston**	**45.52**	**32**	IAMs_20	IAMs_20	04 55 37.0	
	comp=Z,1μm,21.0s						
MIAR	**Mount Ida**	**45.53**	**17**	P	**P**	**04 39 12.5**	**+0.1**
X40A	**Basin Creek Fa**	**45.69**	**18**	P	**P**	**04 39 11.0**	**-2.8**
SHPR	**Sheep Range**	**45.77**	**352**	IAMs_20	IAMs_20	04 54 06.7	
	comp=Z,1μm,19.0s						
PLCA	**Paso Flores**	**45.93**	**140**	P	**P**	**04 39 16.1**	**+0.3**
	comp=Z,4.6nm,1.1s,baz=332,slow=9.8,SNR=7.6						
PLCA				LR	LR	04 53 48.9	
	comp=Z,1μm,19.0s,baz=330,slow=30						
PLCA	**Paso Flores**	**45.93**	**140**	P	**P**	**04 39 17.4**	**+1.6**
PLCA				IAmb	IAmb	04 39 27.9	
	comp=Z,6.3nm,1.1s						
DAC	**Darwin (Calif)**	**45.93**	**349**	P	**P**	**04 39 17.6**	**+1.8**
MVCO	**Mesa Verde**	**46.01**	**360**	P	**P**	**04 39 15.3**	**-1.2**
MVCO				IAmb	IAmb	04 39 21.1	
	comp=Z,24nm,1.8s						
U32A	**Winter Ranch,**	**46.01**	**10**	IAMs_20	IAMs_20	04 56 09.4	
	comp=Z,1μm,20.0s						
TUL1	**Leonard**	**46.23**	**14**	P	**P**	**04 39 18.1**	**+0.1**
TUL1				IAmb	IAmb	04 39 28.8	
	comp=Z,13nm,1.1s						
TUL1				IAMs_20	IAMs_20	04 56 50.7	
	comp=Z,1μm,18.0s						
TPNV	**Topopah Spring**	**46.37**	**351**	IAMs_20	IAMs_20	04 54 44.6	
	comp=Z,2μm,18.0s						
PKCU	**Pink Cliffs**	**46.40**	**356**	P	**P**	**04 39 21.7**	**+2.1**
PMPB	**Monarch Peak**	**46.55**	**346**	IAMs_20	IAMs_20	04 53 43.2	
	comp=Z,2μm,19.0s						
S22A	**4UR Ranch, Cre**	**46.57**	**2**	IAmb	IAmb	04 39 35.1	
	comp=Z,5.2nm,1.0s						
S22A				IAMs_20	IAMs_20	04 55 54.3	
	comp=Z,2μm,19.0s						
WHAR	**Wooly Hollow**	**46.60**	**18**	P	**P**	**04 39 20.1**	**-0.7**
SDCO	**Great Sand Dun**	**46.62**	**3**	IAmb	IAmb	04 39 37.1	
	comp=Z,5.1nm,1.1s						
SDCO				IAMs_20	IAMs_20	04 56 09.4	
	comp=Z,1μm,19.0s						
HHAR	**Hobbs**	**47.05**	**16**	IAMs_20	IAMs_20	04 57 36.3	
	comp=Z,915nm,19.0s						
U40A	**Yellville**	**47.43**	**17**	P	**P**	**04 39 25.5**	**-1.8**
MSU	**Marysvale**	**47.46**	**356**	P	**P**	**04 39 30.2**	**+2.5**
OMMB	**Old Mammoth Mi**	**47.50**	**348**	IAMs_20	IAMs_20	04 55 00.9	
	comp=Z,2μm,19.0s						
255A	**Hazlehurst**	**47.61**	**30**	IAMs_20	IAMs_20	04 57 18.5	
	comp=Z,954nm,20.0s						
R11A	**Troy Canyon, C**	**47.65**	**352**	IAMs_20	IAMs_20	04 55 42.3	
	comp=Z,2μm,19.0s						
Q16A	**Castle Valley**	**47.80**	**357**	P	**P**	**04 39 31.3**	**+0.9**
Q24A	**Divide**	**47.85**	**3**	IAMs_20	IAMs_20	04 56 14.0	
	comp=Z,1μm,20.0s						
SMCO	**Snowmass**	**47.99**	**1**	P	**P**	**04 39 33.8**	**+1.7**
SMCO				IAmb	IAmb	04 39 44.0	
	comp=Z,6.6nm,1.2s						
NV11	**Mina Array Sit**	**48.13**	**350**	IAMs_20	IAMs_20	04 55 09.5	
	comp=Z,2μm,20.0s						
NVAR	**Mina Array Bea**	**48.16**	**349**	P	**P**	**04 39 33.4**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=168,slow=8.9,SNR=5.5						
NVAR				LR	LR	04 55 31.3	
	comp=Z,2μm,19.5s,baz=174,slow=31						
CBKS	**Cedar Bluff**	**48.27**	**9**	IAMs_20	IAMs_20	04 57 40.3	
	comp=Z,958nm,18.0s						
RYN	**Ryan**	**48.39**	**349**	IAmb	IAmb	04 39 52.1	
	comp=Z,5.5nm,1.2s						
RYN				IAMs_20	IAMs_20	04 55 18.4	
	comp=Z,2μm,20.0s						
PBMO	**Poplar Bluff**	**48.56**	**19**	P	**P**	**04 39 33.9**	**-2.2**
ISCO	**Idaho Springs**	**48.66**	**3**	IAmb	IAmb	04 39 56.0	
	comp=Z,5.9nm,1.1s						
KVN	**Kaiserville**	**48.72**	**350**	IAMs_20	IAMs_20	04 55 41.1	
	comp=Z,1μm,19.0s						
YERR	**Yerington**	**48.87**	**349**	IAmb	IAmb	04 39 56.7	
	comp=Z,4.6nm,1.2s						
YERR				IAMs_20	IAMs_20	04 55 10.2	
	comp=Z,2μm,21.0s						
PNTR	**Pine Nut**	**49.04**	**348**	IAMs_20	IAMs_20	04 56 00.8	
	comp=Z,2μm,20.0s						
KSU1	**Kansas State U**	**49.11**	**12**	IAMs_20	IAMs_20	04 58 19.1	
	comp=Z,1μm,18.0s						
DUG	**Dugway, Tooele**	**49.18**	**355**	IAMs_20	IAMs_20	04 56 38.3	
	comp=Z,2μm,20.0s						
CCM	**Cathedral Cave**	**49.48**	**18**	P	**P**	**04 39 43.0**	**-0.1**
HOPS	**Hopland Field**	**49.75**	**345**	IAMs_20	IAMs_20	04 55 20.0	
	comp=Z,2μm,20.0s						
ELK	**Elko**	**49.96**	**353**	P	**P**	**04 39 46.6**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=179,slow=17,SNR=2.1						
ELK	**Elko**	**49.96**	**353**	IAMs_20	IAMs_20	04 56 21.4	
	comp=Z,1μm,22.0s						
TKL	**Tuckaleechee C**	**50.10**	**26**	LR	LR	04 58 44.0	
	comp=Z,282nm,21.8s,baz=236,slow=33						
PHWY	**Pilot Hill**	**50.16**	**3**	IAMs_20	IAMs_20	04 58 34.3	
	comp=Z,1μm,18.0s						
HWUT	**Hardware Ranch**	**50.50**	**357**	IAmb	IAmb	04 40 08.2	
	comp=Z,6.3nm,1.1s						
V53A	**Saluda**	**50.53**	**27**	IAmb	IAmb	04 40 08.7	
	comp=Z,12nm,1.0s						
T49A	**Edmonton**	**50.61**	**24**	IAmb	IAmb	04 40 08.9	
	comp=Z,10.0nm,0.9s						
RAR	**Rarotonga**	**50.98**	**250**	LR	LR	04 56 48.0	
	comp=Z,456nm,18.0s,baz=78,slow=31						
BGNE	**Belgrade**	**51.06**	**10**	IAMs_20	IAMs_20	04 58 55.0	
	comp=Z,1μm,22.0s						
CPUP	**Villa Florida**	**51.11**	**117**	P	**P**	**04 39 56.1**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=284,slow=9.3,SNR=12						
CPUP				LR	LR	04 57 37.2	
	comp=Z,624nm,21.4s,baz=280,slow=31						
CPUP	**Villa Florida**	**51.11**	**117**	IAmb	IAmb	04 40 12.1	
	comp=Z,5.1nm,0.9s						
V55A	**Taylorsville**	**51.41**	**28**	IAmb	IAmb	04 40 04.9	
	comp=Z,16nm,1.1s						
W57A	**Gilead**	**51.43**	**30**	IAMs_20	IAMs_20	04 59 34.7	
	comp=Z,942nm,20.0s						
K22A	**Casper**	**51.47**	**2**	P	**P**	**04 39 57.1**	**-1.2**
K22A				IAmb	IAmb	04 40 04.9	
	comp=Z,13nm,1.1s						
BW06	**Boulder Array**	**51.58**	**359**	IAMs_20	IAMs_20	04 58 16.3	
	comp=Z,1μm,20.0s						
PDAR	**Pinedale Array**	**51.58**	**359**	P	**P**	**04 39 57.9**	**-1.3**
	comp=Z,0.7nm,0.7s,baz=187,slow=6.0,SNR=6.6						
PDAR				LR	LR	04 59 04.7	
	comp=Z,922nm,18.3s,baz=190,slow=33						
SEUS	**St. Eustatius**	**51.92**	**59**	IAMs_20	IAMs_20	04 57 32.7	
	comp=Z,900nm,20.0s						
R50A	**Paris**	**52.11**	**24**	IAmb	IAmb	04 40 04.1	
	comp=Z,6.0nm,0.8s						
WVOR	**Wild Horse Val**	**52.11**	**350**	IAMs_20	IAMs_20	04 57 27.6	
	comp=Z,1μm,18.0s						
MFID	**Camas Ranch**	**52.67**	**353**	IAmb	IAmb	04 40 23.9	
	comp=Z,6.4nm,0.8s						
MFID				IAMs_20	IAMs_20	04 59 12.0	
	comp=Z,1μm,20.0s						
FLWY	**Flagg Ranch**	**52.93**	**358**	P	**P**	**04 40 09.0**	**-0.1**
LKWY	**Lake**	**53.40**	**358**	IAMs_20	IAMs_20	05 00 15.6	
	comp=Z,1μm,18.0s						
ECSD	**EROS Data Cent**	**53.58**	**10**	IAMs_20	IAMs_20	05 00 44.7	
	comp=Z,1μm,19.0s						
BMO	**Blue Mountains**	**54.27**	**352**	IAMs_20	IAMs_20	04 59 58.6	
	comp=Z,1μm,18.0s						
DLMT	**Dillon**	**54.30**	**356**	IAMs_20	IAMs_20	05 01 30.7	
	comp=Z,805nm,18.0s						
F10A	**Beach Ranch, E**	**55.36**	**352**	IAMs_20	IAMs_20	05 01 09.4	
	comp=Z,1μm,18.0s						
LAO	**LASA Array**	**55.51**	**2**	P	**P**	**04 40 27.7**	**-0.1**
LAO				IAmb	IAmb	04 40 33.4	
	comp=Z,8.1nm,0.8s						
LAO				IAMs_20	IAMs_20	05 01 28.0	
	comp=Z,964nm,20.0s						
MSO	**Missoula**	**55.86**	**355**	IAMs_20	IAMs_20	05 00 58.1	
	comp=Z,1μm,21.0s						
LON	**Longmire**	**56.85**	**349**	IAMs_20	IAMs_20	04 59 51.5	
	comp=Z,1μm,22.0s						
C09A	**Chrisman Ranch**	**57.29**	**352**	IAmb	IAmb	04 40 58.9	
	comp=Z,9.3nm,1.1s						
DGMT	**Dagmar**

H11S1	**WAKE ISLAND Hy**	**88.20**	**289**	T	T	06 20 58.8		
	baz=100,slow=75,SNR=313							
H11S3	**WAKE ISLAND Hy**	**88.21**	**289**	T	T	06 20 59.5		
	baz=100,slow=75,SNR=368							
H11N3	**WAKE ISLAND Hy**	**88.22**	**290**	T	T	06 21 10.7		
	baz=100,slow=75,SNR=59							
H11N2	**WAKE ISLAND Hy**	**88.23**	**290**	T	T	06 21 06.1		
	baz=100,slow=75,SNR=72							
H11N1	**WAKE ISLAND Hy**	**88.23**	**290**	T	T	06 21 11.9		
	baz=100,slow=75,SNR=53							
PETK	**Petropavlovsk-**	**99.60**	**322**	LR	LR	05 20 13.5		
	comp=Z,443nm,21.8s,baz=61,slow=30							
AKASG	**Malin Array Be**	**125.69**	**32**	PKP	**PKPdf**	**04 49 53.7**	**-0.7**	
	comp=Z,0.3nm,0.5s,baz=305,slow=2.0,SNR=4.2							
NJ2	**Nanjing**	**130.81**	**305**	*eP*	**PKiKP**	**04 50 07.8**	**+2.2**	
NJ2				pmax	pmax			
	comp=Z,8.0nm,0.5s							
SONM	**Songino Array**	**131.53**	**329**	PKP	**PKPdf**	**04 50 05.7**	**-0.1**	
	comp=Z,1.0nm,0.9s,baz=48,slow=2.1,SNR=3.2							
HHC	**Hu-ho-hao-te**	**132.64**	**319**	*eP*	**PKiKP**	**04 50 10.5**	**+1.3**	
ZALV	**Zalesovo Beam**	**134.01**	**349**	PKP	**PKPdf**	**04 50 09.7**	**-0.4**	
	comp=Z,0.4nm,0.3s,baz=35,slow=5.3,SNR=3.5							
BRTR	**Keskin Array B**	**134.33**	**42**	PKP	**PKPdf**	**04 50 09.4**	**-2.0**	
	comp=Z,0.5nm,0.7s,baz=285,slow=1.7,SNR=3.2							
KBZ	**Khabaz**	**137.28**	**31**	PKP	**PKPdf**	**04 50 16.9**	**+0.5**	
	comp=Z,2.2nm,1.0s,baz=198,slow=3.2,SNR=3.5							
KURK	**Kurchatov**	**138.07**	**353**		**PKPdf**	**04 50 17.4**	**-0.3**	
KURBB	**Kurchatov Arra**	**138.18**	**354**	PKP	**PKPdf**	**04 50 17.4**	**-0.5**	
	comp=Z,0.6nm,0.8s,baz=3,2,slow=1.6,SNR=4.3							
LZH	**Lanzhou**	**140.31**	**318**	*ePKP*	**PKiKP**	**04 50 24.8**	**-0.2**	
LZH				pPKP	sPKPdf	04 50 28.0	+2.3	
LZH				sPKP		04 50 29.4		
LZH				LR	LR			
	comp=N,59nm,18.0s							
LZH				LR	LR			
	comp=E,65nm,18.2s							
LZH				LR	LR			
	comp=Z,87nm,20.1s							
GTA	**Gaotai**	**140.72**	**325**	*ePKP*	**PKiKP**	**04 50 31.3**	**+5.6**	
MKAR	**Makanchi Array**	**141.33**	**348**	PKP	**PKPdf**	**04 50 23.0**	**-0.9**	
	comp=Z,1.1nm,0.8s,baz=349,slow=1.9,SNR=8.4							
WMQ	**Urumqi**	**142.68**	**341**	*eP*	**PKPdf**	**04 50 28.0**	**+1.6**	
WMQ				pmax	pmax			
	comp=Z,130nm,4.3s							
WMQ				LR	LR			
	comp=N,300nm,29.1s							
WMQ				LR	LR			
	comp=E,910nm,28.9s							
WMQ				LR	LR			
	comp=Z,390nm,28.5s							
CD2	**Chengdu**	**143.11**	**311**	PKP	**PKPdf**	**04 50 29.1**	**+1.6**	
KMBO	**Kilima Mbogo**	**144.17**	**105**	PKP	PKPbc	04 50 29.1	+0.9	
	comp=Z,3.7nm,1.0s,baz=208,slow=8.1,SNR=4.9							
KMBO	**Kilima Mbogo**	**144.17**	**105**		**PKPdf**	**04 50 31.4**	**+1.2**	
AAK	**Ala-Archa**	**146.46**	**356**	PKPbc	**PKPdf**	**04 50 33.4**	**+0.3**	
	comp=Z,1.9nm,0.8s,baz=74,slow=2.0,SNR=6.8							
AAK	**Ala-Archa**	**146.46**	**356**		**PKPbc**	**04 50 34.9**	**+0.5**	
GEYT	**Alibeck**	**148.72**	**21**	PKPbc	**PKPbc**	**04 50 40.9**	**+0.3**	
	comp=Z,3.2nm,0.8s,baz=323,slow=2.2,SNR=5.2							
KSH	**Kashi**	**149.43**	**354**	PKPbc	**PKPbc**	**04 50 42.8**	**+0.3**	
KSH				PP	**PP**	**04 54 20.0**	**+6.7**	
KSH				AMB	AMB			
	comp=Z,200nm,6.7s							
CMAR	**Chiang Mai Arr**	**152.02**	**292**	PKPbc	**PKPbc**	**04 50 49.1**	**0.0**	
	comp=Z,1.0nm,0.3s,baz=8.5,slow=0.9,SNR=10							

*IDC **19** 04:32:14.9±0.9, 32.2°21N×104.7°67E, h0km, mb3.7/11, mb1 3.8/11, mb1mx3.6/53, mbtmp3.7/11, MS2.3/1, Ms1 2.5/1, ms1mx2.3/35, Error ellipse: s-maj=56.6km s-min=17.5km az=55.0*

*BJI **19** 04:32:18.6±0.0, 32.2°21N×104.7°54E, h18km, mb3.9/4, ML3.6/16, Ms3.5/6, Ms7 3.4/3*

*NEIC **19** 04:32:19.8±1.0, 32.2°2N±0.7°1×104.7°6E±0.7°1, h32km±6km, mb4.0/3, Error ellipse: s-maj=19.1km s-min=15.2km az=46.0*

ISC 19 04:32:17.2±0.6, 32.2°25N±0.7°04×104.7°63E±0.7°05, h10km, n24, σ1s31/28, mb3.9/14, 1C, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.52**	**209**	*i*Pn	**Pn**	**04 32 44.8**	**+0.2**
CD2				Sg	**Sb**	**04 33 04.8**	**-0.2**
CD2				Sn	**Sg**	**04 33 07.3**	**+1.0**
CD2				smax	smax		
	comp=N,2μm,0.8s						
CD2				smax	smax		
	comp=E,2μm,0.6s						
LZH	**Lanzhou**	**3.89**	**351**	Pn	**Pn**	**04 33 19.5**	**+2.3**
LZH				Pg	**Pb**	**04 33 29.8**	**+3.9**
LZH				Sg	**Sg**	**04 34 20.3**	**-1.7**
LZH				smax	smax		
	comp=N,260nm,1.1s						
LZH				smax	smax		
	comp=E,280nm,1.0s						
LZH				LR	LR		
	comp=N,480nm,6.0s						
LZH				LR	LR		
	comp=Z,370nm,6.8s						
XAN	**Xi'an**	**4.02**	**62**	Pn	**Pn**	**04 33 19.3**	**+0.4**
XAN				Pg	**Pb**	**04 33 28.6**	**+0.4**
XAN				Sn	**Sb**	**04 34 16.3**	**-0.6**
XAN				Sg	**Sg**	**04 34 27.0**	**+0.7**
XAN				smax	smax		
	comp=N,280nm,0.9s						
XAN				smax	smax		
	comp=E,200nm,0.9s						
XAN				LR	LR		
	comp=N,250nm,5.1s						
XAN				LR	LR		
	comp=E,410nm,6.5s						
XAN				LR	LR		
	comp=Z,290nm,8.6s						
XAN	**Xi'an**	**4.02**	**62**		**Pn**	**04 33 18.7**	**-0.2**
ENH	**Enshi**	**4.60**	**114**	Pn	**Pn**	**04 33 29.7**	**+2.9**
KMI	**Kunming**	**7.29**	**194**	P	Pg	04 34 44.3	+7.5
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI				pmax	pmax		
	comp=Z,150nm,4.6s						
KMI				LR	LR		
	comp=N,230nm,4.9s						
KMI				LR	LR		
	comp=E,260nm,4.6s						
KMI				LR	LR		
	comp=Z,140nm,7.6s						
GTA	**Gaotai**	**8.15**	**333**	*eP*	**Pn**	**04 34 16.8**	**+1.2**
GTA				pP	Pb	04 34 21.1	-17
GTA				sP	Pg	04 34 24.3	-29
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**14.65**	**202**	LR	LR	04 42 15.6	
	comp=Z,14nm,21.5s,baz=120,slow=41						
WMQ	**Urumqi**	**17.61**	**316**	*eP*	**Pn**	**04 36 22.4**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,62nm,7.5s						
MKAR	**Makanchi Array**	**22.43**	**317**	P	**P**	**04 37 16.6**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=110,slow=10,SNR=4.5						
ZAA0	**Zalesovo Array**	**25.90**	**333**	P	**P**	**04 37 49.0**	**-0.2**
ZAA0				IAmb	IAmb	04 37 50.2	
	comp=Z,2.8nm,0.8s						
ZALV	**Zalesovo Beam**	**25.90**	**333**	P	**P**	**04 37 49.1**	**0.0**
	comp=Z,2.1nm,0.7s,baz=128,slow=9.0,SNR=10						
NIL	**Nilore**	**26.32**	**282**	P	**P**	**04 37 52.2**	**-1.1**
NIL				IAmb	IAmb	04 38 00.1	
	comp=Z,7.0nm,1.0s						
KURBB	**Kurchatov Arra**	**26.61**	**321**	P	**P**	**04 37 56.2**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=125,slow=8.0,SNR=3.7						
KURK	**Kurchatov**	**26.62**	**322**	P	**P**	**04 37 56.2**	**+0.5**
KURK	**Kurchatov**	**26.62**	**322**	IAmb	IAmb	04 37 59.4	
	comp=Z,3.2nm,1.1s						
ARCES	**ARCESS Array B**	**56.41**	**336**	P	**P**	**04 41 57.9**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=78,slow=8.4,SNR=6.1						
BRTR	**Keskin Array B**	**56.57**	**299**	P	**P**	**04 41 59.3**	**-1.0**
	comp=Z,0.3nm,0.8s,baz=86,slow=4.5,SNR=3.0						
FINES	**FINESS Array B**	**56.87**	**326**	P	**P**	**04 42 01.6**	**-0.2**
	comp=Z,0.9nm,0.4s,baz=86,slow=5.3,SNR=15						
AKASG	**Malin Array Be**	**56.94**	**313**	P	**P**	**04 42 01.5**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=67,slow=7.4,SNR=3.9						
WRA	**Warramunga Arr**	**59.18**	**147**	P	**P**	**04 42 17.7**	**-0.7**
	comp=Z,1.1nm,0.7s,baz=338,slow=7.4,SNR=6.1						
ASAR	**Alice Springs**	**62.24**	**150**	P	**P**	**04 42 38.2**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=332,slow=6.4,SNR=6.3						
NOA	**NORSAR Array B**	**63.94**	**327**	P	**P**	**04 42 49.0**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=74,slow=5.2,SNR=3.3						
YKA	**Yellowknife Ar**	**80.47**	**17**	P	**P**	**04 44 28.3**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=333,slow=5.3,SNR=6.7						

*JMA **19** 05:23:58.2±0.2, 33.1°11N×137.1°17E, h399km, M3.0*

*IDC **19** 05:24:00.4±1.2, 33.2°28N×136.9°99E, h377km±10km, mb3.0/13, mb1 3.0/18, mb1mx2.9/51, mbtmp3.6/18, Error ellipse: s-maj=18.2km s-min=15.4km az=122.0*

ISC 19 05:24:01.5±1.0, 33.3°3N±0.1×137.1°10E±0.0°07, h400km, n34, σ2s09/40, mb3.3/13, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO1	**TONANKAI O.B.S**	**0.41**	**320**	P	**Pn**	**05 24 48.8**	**-1.9**
TK01	**Tokai 1**	**0.61**	**42**	P	**Pn**	**05 24 48.9**	**-2.2**
TTO4	**TONANKAI O.B.S**	**0.79**	**28**	P	**Pn**	**05 24 49.9**	**-1.7**
TK02	**Tokai 2**	**0.84**	**41**	P	**Pn**	**05 24 50.1**	**-1.7**
JTNC	**Tanabenakahech**	**1.34**	**293**	P	**Pn**	**05 24 51.1**	**-2.9**
JWY	**Kouya**	**1.55**	**306**	P	**Pn**	**05 24 52.6**	**-2.4**
JAI	**Aioi**	**2.26**	**283**	P	**Pn**	**05 24 56.7**	**-2.5**
JYTA	**Yamagatataniai**	**2.30**	**353**	P	**Pn**	**05 24 57.9**	**-1.4**
JYTA				S	**S**	**05 25 43.7**	**-2.4**
JWT	**Wachi**	**2.42**	**325**	P	**Pn**	**05 24 59.2**	**-1.0**
JOD2	**Odawara 2**	**2.55**	**40**	P	**Pn**	**05 24 59.9**	**-1.3**
JMN	**Monobe**	**2.72**	**280**	P	**Pn**	**05 25 00.3**	**-2.3**
JRY	**Ryogami san**	**3.08**	**28**	P	**Pn**	**05 25 04.3**	**-1.0**
JRY				*eS*	**S**	**05 25 55.6**	**-1.5**
MJAR	**Matsushiro Arr**	**3.35**	**15**	P	**Pn**	**05 25 05.9**	**-1.7**
	0.3nm,0.3s,baz=179,slow=8.7,SNR=32						
MJAR				S	**S**	**05 25 57.1**	**-4.2**
	baz=205,slow=22,SNR=3.0						
MAT	**Matsushiro**	**3.35**	**15**	P	**Pn**	**05 25 06.0**	**-1.6**
MAT				S	**S**	**05 25 57.4**	**-3.8**
BSO1	**Boso 1**	**3.49**	**66**	P	**Pn**	**05 25 05.6**	**-2.6**
BSO1				*eS*	**S**	**05 25 57.5**	**-4.9**
JTO	**Tosashimizu**	**3.63**	**264**	P	**Pn**	**05 25 07.7**	**-2.5**
JHS	**Saijyo**	**3.71**	**298**	P	**Pn**	**05 25 08.7**	**-2.2**
JNU	**Nakatsue**	**5.22**	**270**	P	**Pn**	**05 25 23.6**	**-2.3**
	1.1nm,0.3s,baz=116,slow=0.4,SNR=8.3						
JNU				S	S	05 26 17.2	-17
	baz=271,slow=12,SNR=1.4						
KSRS	**Korea Array**	**8.56**	**301**	P	**P**	**05 26 02.3**	**-0.6**
	0.2nm,0.3s,baz=117,slow=11,SNR=4.0						
USRK	**Ussuriysk Ar.**	**11.58**	**341**	P	**P**	**05 26 34.3**	**-2.1**
	baz=154,slow=11,SNR=3.3						
KLR	**Kul'dur**	**16.40**	**347**	P	**P**	**05 27 28.2**	**-0.6**
	0.2nm,0.3s,baz=180,slow=13,SNR=4.4						
SONM	**Songino Array**	**27.25**	**311**	P	**P**	**05 29 11.4**	**+0.4**
	0.4nm,0.4s,baz=110,slow=8.2,SNR=2.3						
ZALV	**Zalesovo Beam**	**41.95**	**316**	P	**P**	**05 31 14.8**	**-0.1**
	0.5nm,0.3s,baz=107,slow=4.8,SNR=3.5						
ZALV				PcP	**PP**	**05 33 01.9**	**-0.1**
	0.4nm,0.4s,baz=66,slow=3.6,SNR=2.1						
MKAR	**Makanchi Array**	**43.22**	**305**	P	**P**	**05 31 25.9**	**+0.7**
	0.4nm,0.3s,baz=88,slow=9.6,SNR=15						
MKAR				PcP	**PcP**	**05 33 06.9**	**+0.8**
	0.1nm,0.6s,baz=96,slow=4.3,SNR=2						
WRA	**Warramunga Arr**	**53.02**	**183**	P	P	05 32 39.5	+0.2
	0.3nm,0.7s,baz=0.3,slow=7.6,SNR=3.0						
ILAR	**Eielson Array**	**54.51**	**31**	P	**P**	**05 32 51.0**	**+1.6**
	0.4nm,0.9s,baz=258,slow=5.5,SNR=4.2						
INK	**Inuvik**	**59.28**	**26**	P	**P**	**05 33 24.6**	**+2.3**
	1.2nm,1.0s,baz=284,slow=4.2,SNR=3.1						
ARCES	**ARCESS Array B**	**66.22**	**339**	P	**P**	**05 34 08.2**	**+0.7**
	2.1nm,0.8s,baz=61,slow=9.9,SNR=6.8						
RES	**Resolute Bay**	**67.05**	**13**	P	**P**	**05 34 14.6**	**+2.0**
	0.9nm,0.4s,baz=308,slow=7.8,SNR=6.3						
YKA	**Yellowknife Ar**	**68.77**	**28**	P	**P**	**05 34 25.1**	**+1.7**
	0.1nm,0.4s,baz=299,slow=6.1,SNR=3.6						
FINES	**FINESS Array B**	**70.42**	**332**	P	**P**	**05 34 34.2**	**+0.9**
	0.9nm,0.4s,baz=51,slow=5.9,SNR=17						
AKASG	**Malin Array Be**	**75.02**	**321**	P	**P**	**05 35 00.5**	**+0.2**
	0.4nm,0.5s,baz=50,slow=5.2,SNR=3.5						
NOA	**NORSAR Array B**	**76.19**	**336**	P	**P**	**05 35 07.6**	**+0.9**
	1.0nm,1.0s,baz=40,slow=5.2,SNR=2.8						
BRTR	**Keskin Array B**	**78.60**	**310**	P	**P**	**05 35 20.7**	**+0.2**
	0.7nm,0.8s,baz=52,slow=5.7,SNR=4.2						

*NEIC **19** 05:24:26.6±1.7, 9.0°0S±0.1°1×108.3°3W±0.1°1, h10km±1km, mb4.6/102, Error ellipse: s-maj=20.6km s-min=18.6km az=114.0*

*IDC **19** 05:24:26.3±0.9, 8.8°86S×108.2°24W, h0km, mb4.1/22, mb1 4.2/22, mb1mx4.1/43, mbtmp4.1/22, MS4.5/12, Ms1 4.5/12, ms1mx4.3/31, Error ellipse: s-maj=27.7km s-min=14.9km az=47.0*

*GCMT **19** 05:24:39.6±0.1, 9.02S±0.01°1×108.39W±0.01, h15km, MW5.3/144, Moment Tension Solution. s92, c122; s144, c250; Duration: 1s0 Moment tensor: Scale 10^17 Nm; Mrr-0.04±.02; Mθθ0.33±.02; Mϕϕ-0.28±.02; Mrθ-0.08±.05; Mθϕ0.93±.01; Mϕr-0.04±.05; Best double couple: M0 0.98400×10^17 NP1:ϕs189.00000°, δ86.00000°, λ177.00000°. NP2:ϕs279.00000°, δ87.00000°, λ4.00000°. Principal axes: T 1.0070, Plg5.0000°, Azm144.0000°; N -0.0460, Plg85.0000°, Azm311.0000°; P -0.9610, Plg1.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 05:24:27.5±0.4, 9.04S±0.08×108.40W±0.08, h15km, n159, σ1s07/148, mb4.5/62, MS4.5/15, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**18.01**	**183**		**Pn**	**05 28 37.7**	**+0.3**
PAYG	**Puerto Ayora**	**19.86**	**66**	P	**P**	**05 28 59.0**	**+0.8**
PTCN	**Pitcairn Islan**	**26.09**	**230**	P	**P**	**05 30 02.1**	**+1.3**
H06S1	**SOCORRO T**	**27.71**	**355**	T	T	05 59 28.0	
	baz=153						
H06E1	**SOCORRO T-PHAS**	**27.75**	**355**	T	T	05 59 22.0	
TLIG	**Tlapa**	**28.16**	**20**	P	**P**	**05 30 20.1**	**+0.5**
TLIG				IAmb	IAmb	05 30 26.4	
	comp=Z,13nm,1.5s						
MOIG	**Morelia**	**29.41**	**14**	P	**P**	**05 30 31.3**	**+0.5**
SNET	**Serv Nac Est T**	**29.53**	**40**	P	**P**	**05 30 29.6**	**-2.1**
ATAH	**Atahualpa**	**29.76**	**89**	P	**P**	**05 30 34.4**	**+0.1**
	comp=Z,3.4nm,0.8s,baz=252,slow=3.2,SNR=2.1						
APG	**El Apazote**	**29.78**	**37**	P	**P**	**05 30 31.9**	**-2.2**
	comp=Z,2.8nm,0.4s,baz=204,slow=20,SNR=2.9						
JTS	**Las Juntas de**	**30.22**	**51**	P	**P**	**05 30 37.6**	**-0.2**
	comp=Z,11nm,1.1s,baz=219,slow=6.5,SNR=2.4						
JTS	**Las Juntas de**	**30.22**	**51**	P	**P**	**05 30 37.6**	**-0.2**
ESTN	**Estel**	**31.02**	**45**	P	**P**	**05 30 45.6**	**+0.7**
TGUH	**Tegucigalpa,Un**	**31.08**	**43**	P	**P**	**05 30 43.9**	**-1.6**
ACON	**Acoyapa**	**31.12**	**48**	P	**P**	**05 30 45.4**	**-0.3**
OTAV	**Otavalo**	**31.22**	**74**	P	**P**	**05 30 45.8**	**-1.4**
OTAV				IAmb	IAmb	05 30 55.1	
	comp=Z,6.4nm,1.4s						
TAOE	**Nuku Hiva Isla**	**31.36**	**268**	*e*LR	LR	05 38 47.3	
	comp=Z,1μm,24.8s,baz=88						
ZAIG	**Zacatecas**	**32.12**	**10**	P	**P**	**05 30 55.4**	**+0.6**
ZAIG				IAmb	IAmb	05 31 13.2	
	comp=Z,15nm,1.5s						
LPIG	**La Paz**	**32.99**	**357**	LR	LR	05 41 08.9	
	comp=Z,1μm,18.4s,baz=179,slow=31						
BCIP	**Isla Barro Col**	**33.70**	**58**	P	**P**	**05 31 06.5**	**-1.9**
FLOC	**Florencia**	**34.29**	**74**	P	**P**	**05 31 13.1**	**-0.5**
TEIG	**Tepich**	**35.18**	**34**	P	**P**	**05 31 21.4**	**+0.3**
HPIG		**35.86**	**4**	P	**P**	**05 31 26.7**	**-0.4**
HPIG				IAmb	IAmb	05 31 36.1	
	comp=Z,8.5nm,1.4s						
SRIG	**Santa Rosalia**	**36.33**	**354**	P	**P**	**05 31 32.5**	**+1.6**
ROSC	**El Rosal**	**36.66**	**69**	P	**P**	**05 31 34.6**	**+0.2**
	comp=Z,1.2nm,0.3s,baz=251,slow=17,SNR=2.1						
ROSC	**El Rosal**	**36.66**	**69**	P	**P**	**05 31 32.8**	**-1.6**
ROSC				IAmb	IAmb	05 31 45.4	
	comp=Z,13nm,1.5s						
HSIG		**37.92**	**356**	P	**P**	**05 31 44.2**	**-0.1**
833A	**Chaparral WMA,**	**38.15**	**13**	P	**P**	**05 31 47.6**	**+1.3**
833A				IAmb	IAmb	05 31 55.0	
	comp=Z,7.7nm,0.8s						
RUSC	**La Rusia**	**38.20**	**68**	P	**P**	**05 31 47.7**	**+0.1**
TXAR	**Lajitas Array**	**38.42**	**7**	P	**P**	**05 31 49.2**	**+0.5**
	comp=Z,1.4nm,1.0s,baz=194,slow=10,SNR=6.8						
TXAR				PcP	**PcP**	**05 34 03.3**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=189,slow=4.2,SNR=2.6						
TXAR				LR	LR	05 44 58.3	
	comp=Z,261nm,19.9s,baz=0.0,slow=32						
TXAR	**Lajitas Array**	**38.42**	**7**	P	**P**	**05 31 48.1**	**-0.6**
TX31	**Lajitas Ar. Si**	**38.42**	**7**	P	**P**	**05 31 49.0**	**+0.3**
TX32	**Lajitas Array**	**38.42**	**7**	P	**P**	**05 31 48.8**	**0.0**
FSCY	**Frank Sound, G**	**38.90**	**43**	P	**P**	**05 31 53.3**	**+0.5**
LPAZ	**La Paz**	**39.89**	**105**	P	**P**	**05 32 03.1**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=293,slow=7.7,SNR=1.5						
LPAZ				LR	LR	05 45 06.5	
	comp=Z,721nm,20.2s,baz=266,slow=31						
LPAZ	**La Paz**	**39.89**	**105**	P	**P**	**05 32 00.3**	**-1.5**
LPAZ				IAmb	IAmb	05 32 19.2	
	comp=Z,12nm,1.4s						
JCT	**Junction City**	**40.15**	**12**	P	**P**	**05 32 02.5**	**-0.6**
JCT				IAmb	IAmb	05 32 20.5	
	comp=Z,11nm,1.2s						
LVC	**Limon Verde**	**40.18**	**114**	LR	LR	05 43 28.2	
	comp=Z,416nm,18.6s,baz=288,slow=28						
319A	**Douglas**	**40.19**	**359**	P	**P**	**05 32 04.5**	**+1.0**
MNTX	**Cornudas Mount**	**40.61**	**4**	P	**P**	**05 32 06.8**	**-0.1**
PPT	**Papeete**	**40.88**	**254**	P	**P**	**05 32 10.9**	**+1.5**
PPT2	**Papeete2**	**40.89**	**254**	*e*S	**S**	**05 38 15.8**	**-5.0**
	comp=Z,173nm,23.5s						
PPT2				*e*LQ	LQ	05 41 36.6	
	comp=Z,1μm,26.0s						
PPT2				*e*LR	LR	05 43 22.7	
	comp=Z,1μm,21.8s,baz=79						
435B	**Jarrell**	**40.93**	**14**	P	**P**	**05 32 09.4**	**-0.1**
214A	**Organ Pipe Nat**	**40.98**	**354**	P	**P**	**05 32 07.7**	**-2.2**
TUC	**Tucson**	**41.18**	**357**	P	**P**	**05 32 10.9**	**-0.7**
121A	**Cookes Peak, D**	**41.34**	**1**	P	**P**	**05 32 12.2**	**-0.9**
SDV	**Santo Domingo**	**41.61**	**66**	P	**P**	**05 32 15.3**	**-0.3**
	comp=Z,3.7nm,1.0s,baz=313,slow=6.9,SNR=4.8						
SDV	**Santo Domingo**	**41.61**	**66**	P	**P**		
SDV				IAmb	IAmb	05 32 32.8	
	comp=Z,23nm,1.4s						
TBI	**Tubuai**	**41.76**	**245**	*e*S	**S**	**05 38 30.4**	**-3.0**
	comp=Z,224nm,34.5s						
TBI				*e*LQ	LQ	05 42 04.8	
	comp=Z,928nm,31.5s						
TBI				*e*LR	LR	05 43 50.0	
	comp=Z,2μm,23.8s,baz=77						
113A	**Mohawk Valley,**	**41.89**	**353**	P	**P**	**05 32 16.7**	**-0.6**
WHTX	**Lake Whitney,**	**42.12**	**14**	P	**P**	**05 32 18.9**	**-0.4**
WHTX				IAmb	IAmb	05 32 31.8	
	comp=Z,18nm,1.4s						
GO05	**Huala**	**42.17**	**133**	P	**P**	**05 32 20.1**	**+0.3**
GO05				IAmb	IAmb	05 32 27.6	
	comp=Z,11nm,1.0s						
BAR	**Barrett**	**42.23**	**350**	P	**P**	**05 32 18.3**	**-1.8**
ABTX	**Abilene, Hawle**	**42.26**	**11**	P	**P**	**05 32 20.1**	**-0.3**
ABTX				IAmb	IAmb	05 32 33.2	
	comp=Z,7.6nm,0.9s						
NATX	**Nacogdoches**	**42.65**	**17**	P	**P**	**05 32 23.8**	**+0.3**
NATX				IAmb	IAmb	05 32 35.8	
	comp=Z,7.3nm,0.6s						
Y12C	**Blythe**	**42.95**	**353**	P	**P**	**05 32 26.6**	**+0.7**
Y14A	**Wickenburg**	**42.96**	**354**	P	**P**	**05 32 26.6**	**+0.5**
XPFO	**Pion Flat**	**43.10**	**350**	P	**P**	**05 32 27.4**	**+0.1**
PFO	**Pinyon Flats O**	**43.10**	**350**	P	**P**	**05 32 27.5**	**+0.2**
MSTX	**Muleshoe**	**43.10**	**7**	P	**P**	**05 32 26.9**	**-0.4**
MSTX				IAmb	IAmb	05 32 29.9	
	comp=Z,11nm,1.4s						
X16A	**Lo Mia Camp, P**	**43.31**	**356**	P	**P**	**05 32 29.4**	**+0.3**
X18A	**Snowflake**	**43.35**	**358**	P	**P**	**05 32 30.1**	**+0.6**
SNCC	**San Nicolas Is**	**43.37**	**346**	P	**P**	**05 32 30.2**	**+0.8**
PASC	**Pasadena Art C**	**43.97**	**348**	P	**P**	**05 32 34.7**	**+0.5**
PASC				IAmb	IAmb	05 32 35.6	
	comp=Z,9.6nm,1.3s						
MWC	**Mount Wilson**	**43.99**	**348**	P	**P**	**05 32 35.4**	**+0.8**
MWC				IAmb	IAmb	05 32 42.1	
	comp=Z,8.7nm,1.4s						
AMTX	**Amarillo**	**44.14**	**8**	P	**P**	**05 32 36.1**	**+0.4**
AMTX				IAmb	IAmb	05 32 53.7	
	comp=Z,11nm,1.4s						
W13A	**Hualapai Mount**	**44.20**	**354**	P	**P**	**05 32 36.7**	**+0.4**
WUAZ	**Wupatki**	**44.40**	**357**	P	**P**	**05 32 37.5**	**-0.4**
WMOK	**Wichita Mounta**	**44.48**	**11**	P	**P**	**05 32 37.1**	**-1.2**
Z41A	**Richland Creek**	**44.61**	**19**	P	**P**	**05 32 37.7**	**-1.6**
SAML	**Samuel**	**44.64**	**94**	P	**P**	**05 32 37.3**	**-2.6**
SAML				IAmb	IAmb	05 32 49.8	
	comp=Z,14nm,1.0s						
GSC	**Goldstone, Bar**	**44.81**	**350**	P	**P**	**05 32 41.4**	**+0.4**
GSC				IAmb	IAmb	05 32 43.2	
	comp=Z,5.5nm,1.2s						
BRAL	**Brewton**	**44.91**	**26**	P	**P**	**05 32 41.6**	**-0.1**
FNO	**Franklin**	**45.27**	**13**	P	**P**	**05 32 44.8**	**+0.2**
W35A	**Tecumseh**	**45.28**	**13**	P	**P**	**05 32 44.0**	**-0.7**
OKCFA	**Oklahoma City**	**45.41**	**13**	P	**P**	**05 32 46.0**	**+0.4**
MIAR	**Mount Ida**	**45.56**	**17**	P	**P**	**05 32 47.2**	**+0.3**
MIAR				IAmb	IAmb	05 32 54.6	
	comp=Z,13nm,1.1s						
MVCO	**Mesa Verde**	**46.01**	**360**	P	**P**	**05 32 50.0**	**-0.6**
MVCO				IAmb	IAmb	05 32 58.8	

AHID	**Auburn Hatcher**	**51.61**	**357**	P		**P**		**05 33 32.2**	**-1.4**
MOD	**Modoc Plateau**	**51.86**	**349**	P		**P**		**05 33 35.4**	**0.0**
MOD				IAmb		IAmb		05 33 49.8	
	comp=Z,10nm,1.4s								
REDW	**Red Top Meadow**	**52.20**	**358**	P		**P**		**05 33 35.7**	**-2.3**
REDW				IAmb		IAmb		05 33 51.6	
	comp=Z,7.7nm,1.4s								
MOOW	**Moose Ponds**	**52.58**	**358**	P		**P**		**05 33 40.2**	**-0.6**
MOOW				IAmb		IAmb		05 33 52.8	
	comp=Z,7.3nm,1.4s								
MFID	**Camas Ranch**	**52.64**	**353**	P		**P**		**05 33 41.1**	**0.0**
MFID				IAmb		IAmb		05 33 54.8	
	comp=Z,9.9nm,1.1s								
P48A	**Milroy**	**52.76**	**22**	P		**P**		**05 33 40.8**	**-1.1**
P48A				IAmb		IAmb		05 33 47.7	
	comp=Z,14nm,1.2s								
FLWY	**Flagg Ranch**	**52.91**	**358**	P		**P**		**05 33 41.7**	**-1.6**
RSSD	**Black Hills**	**53.06**	**4**	P		**P**		**05 33 43.6**	**-0.7**
RSSD				IAmb		IAmb		05 33 52.1	
	comp=Z,9.4nm,1.4s								
YHL	**Hebgen Lake**	**53.70**	**358**	P		**P**		**05 33 49.0**	**-0.1**
MCMT	**McKenzie Canyo**	**53.77**	**356**	P		**P**		**05 33 49.1**	**-0.4**
I07A	**Izee**	**53.82**	**350**	P		**P**		**05 33 49.9**	**+0.1**
I07A				IAmb		IAmb		05 34 03.7	
	comp=Z,12nm,1.4s								
G08A	**Pilot Rock**	**54.91**	**351**	P		**P**		**05 33 57.8**	**+0.1**
G08A				IAmb		IAmb		05 34 11.6	
	comp=Z,6.1nm,1.2s								
NEW	**Newport**	**57.57**	**353**	P		**P**		**05 34 16.1**	**-0.5**
	comp=Z,1.1nm,0.9s,baz=163,slow=9.1,SNR=2.8								
NEW	**Newport**	**57.57**	**353**	P		**P**		**05 34 16.5**	**-0.1**
NEW				IAmb		IAmb		05 34 30.3	
	comp=Z,6.7nm,1.3s								
BDFB	**Brasilia**	**59.20**	**103**	P		**P**		**05 34 28.2**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=3.3,slow=5.6,SNR=3.3								
BDFB				LR		LR		05 57 47.5	
	comp=Z,394nm,18.4s,baz=286,slow=34								
ULM	**Lac du Bonnet**	**60.04**	**9**	P		**P**		**05 34 33.2**	**-0.5**
	comp=Z,2.0nm,1.0s,baz=264,slow=21,SNR=3.2								
ULM				LR		LR		05 57 51.4	
	comp=Z,176nm,21.9s,baz=206,slow=34								
ULM	**Lac du Bonnet**	**60.04**	**9**	P		**P**		**05 34 32.9**	**-0.8**
YKA	**Yellowknife Ar**	**71.48**	**357**	P		**P**		**05 35 46.2**	**-0.9**
	comp=Z,1.4nm,0.9s,baz=168,slow=6.0,SNR=15								
SCHQ	**Schefferville**	**72.53**	**24**	P		**P**		**05 35 53.1**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=210,slow=16,SNR=2.4								
SCHQ				LR		LR		06 07 02.7	
	comp=Z,603nm,18.2s,baz=204,slow=35								
DAWY	**Dawson**	**76.58**	**347**	P		**P**		**05 36 16.9**	**-0.1**
DAWY				IAmb		IAmb		05 36 33.9	
	comp=Z,8.5nm,1.3s								
ILAR	**Eielson Array**	**79.03**	**344**	P		**P**		**05 36 30.3**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=168,slow=5.6,SNR=6.3								
ILAR	**Eielson Array**	**79.03**	**344**	P		**P**		**05 36 30.5**	**-0.1**
WRH	**Wood River Hil**	**79.12**	**344**	P		**P**		**05 36 31.0**	**-0.1**
INK	**Inuvik**	**79.19**	**351**	P		**P**		**05 36 31.8**	**+0.5**
	comp=Z,2.8nm,1.0s,baz=152,slow=7.7,SNR=6.2								
INK	**Inuvik**	**79.19**	**351**	P		**P**		**05 36 31.6**	**+0.2**
INK				IAmb		IAmb		05 36 49.9	
	comp=Z,13nm,1.3s								
VNDA	**Vanda**	**81.18**	**193**	LR		LR		06 06 06.9	
	comp=Z,121nm,18.4s,baz=110,slow=31								
DZM	**Mont Dzumac**	**82.20**	**349**	LR		LR		06 06 52.4	
	comp=Z,160nm,18.6s,baz=208,slow=31								
RES	**Resolute Bay**	**83.99**	**4**	P		**P**		**05 36 57.6**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=234,slow=10,SNR=2.4								
H11S2	**WAKE ISLAND Hy**	**88.04**	**289**	T		T		07 15 04.1	
	baz=100,slow=75,SNR=1252								
H11S1	**WAKE ISLAND Hy**	**88.05**	**289**	T		T		07 14 51.4	
	baz=100,slow=75,SNR=493								
H11S3	**WAKE ISLAND Hy**	**88.06**	**289**	T		T		07 14 52.1	
	baz=100,slow=74,SNR=96								
H11N3	**WAKE ISLAND Hy**	**88.07**	**290**	T		T		07 15 03.4	
	baz=100,slow=74,SNR=96								
H11N2	**WAKE ISLAND Hy**	**88.08**	**290**	T		T		07 15 01.0	
	baz=100,slow=74,SNR=93								
H11N1	**WAKE ISLAND Hy**	**88.08**	**290**	T		T		07 14 51.4	
	baz=100,slow=74,SNR=76								
AKASG	**Malin Array Be**	**125.77**	**32**	PKP		**PKiKP**		**05 43 29.7**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=304,slow=2.5,SNR=3.0								
SONM	**Songino Array**	**131.44**	**329**	PKP		**PKiKP**		**05 43 42.2**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=45,slow=2.2,SNR=2.8								
SONM	**Songino Array**	**131.44**	**329**			**PKPdf**		**05 43 40.3**	**+0.5**
ZALV	**Zalesovo Beam**	**133.97**	**349**	PKP		**PKiKP**		**05 43 46.3**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=20,slow=4.6,SNR=2.5								
ZALV	**Zalesovo Beam**	**133.97**	**349**			**PKPdf**		**05 43 42.9**	**-1.2**
BRTR	**Keskin Array B**	**134.42**	**42**	PKP		**PKiKP**		**05 43 47.7**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=297,slow=0.3,SNR=2.4								
BRTR	**Keskin Array B**	**134.42**	**42**			**PKPdf**		**05 43 43.3**	**-2.3**
MKAR	**Makanchi Array**	**141.29**	**348**	PKP		**PKPdf**		**05 43 57.2**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=11,slow=2.9,SNR=4.5								
MKAR	**Makanchi Array**	**141.29**	**348**			**PKPdf**		**05 43 56.4**	**-1.5**
KMBO	**Kilima Mbogo**	**144.32**	**105**	PKP		**PKPdf**		**05 44 05.8**	**+1.3**
	comp=Z,1.6nm,0.7s,baz=262,slow=3.0,SNR=2.3								
KMBO	**Kilima Mbogo**	**144.32**	**105**			**PKPab**		**05 44 03.1**	**+0.6**
GEYT	**Alibeck**	**148.77**	**21**	PKPbc		**PKPbc**		**05 44 15.0**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=298,slow=3.1,SNR=2.7								
KSH	**Kashi**	**149.40**	**353**	PKP		**PKPdf**		**05 44 13.4**	**+1.3**
KSH				PP		**PP**		**05 47 50.1**	**+2.8**
KSH				AMB		AMB			
	comp=Z,440nm,5.3s								
CMAR	**Chiang Mai Arr**	**151.88**	**292**	PKPbc		**PKiKP**		**05 44 24.5**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=17,slow=0.9,SNR=1.9								

*TIF **19** 05:26:04.6,42.37N×41.01E,h22km±2km*
*NORS **19** 05:26:06.7±0.0,42.50N×41.29E,h13km*
*DDA **19** 05:26:11.1,41.98N×41.19E,h7km±6km, MW2.8*
ISC 19 05:26:07.7±1.7,**42.34N**±0.03×**40.93E**±0.04,**h31**km±17km,
n23,σ1ᵎ**71**/**42**,**Black Sea**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
DBOC	**Borcka**	**1.13**	**151**	*i* P		**Pn**	**05**	**26 26.1**	**-1.4**
DBOC				*i* S		**Sn**	**05**	**26 41.9**	**-0.1**
DBOC				IAML			05	26 43.0	
	comp=E,114nm,0.2s								
ARXR	**Arkhyz**	**1.25**	**12**	*i* Pg		**Pn**	**05**	**26 26.9**	**-2.3**
ARXR				*i* Sg		**Sn**	**05**	**26 42.0**	**-3.1**
DBAD	**Bademkaya**	**1.44**	**156**	*i* P		**Pn**	**05**	**26 30.9**	**-0.9**
DBAD				*i* S		**Sn**	**05**	**26 45.4**	**-4.2**
DBAD				IAML			05	26 50.0	
	comp=N,33nm,0.1s								
DBAD				IAML			05	26 56.0	
	comp=E,33nm,0.3s								
RPOR	**Krasnaya Polya**	**1.45**	**341**	*i* Pg		**Pn**	**05**	**26 30.7**	**-1.1**
RPOR				*i* Sg		**Sn**	**05**	**26 49.4**	**-0.3**
DAGI	**Agillar**	**1.46**	**149**	*i* P		**Pn**	**05**	**26 31.2**	**-0.8**
DAGI				*i* S		**Sn**	**05**	**26 46.4**	**-3.7**
DAGI				IAML			05	26 51.0	
	comp=N,19nm,0.3s								
DAGI				IAML			05	26 51.0	
	comp=E,21nm,0.3s								
SOC	**Sochi**	**1.53**	**325**	*e*Pg		**Pn**	**05**	**26 32.8**	**-0.1**
SOC				*i* Sg		**Sn**	**05**	**26 53.4**	**+1.7**
DDEM	**Demirkent**	**1.57**	**157**	*i* P		**Pn**	**05**	**26 33.3**	**-0.3**
DDEM				IAML			05	26 55.0	
	comp=N,83nm,0.2s								
DDEM				IAML			05	27 01.0	
	comp=E,56nm,0.3s								
EPOS	**Posof**	**1.58**	**121**	*i* P		**Pn**	**05**	**26 33.5**	**-0.2**
EPOS				*i* S		**Sn**	**05**	**26 53.5**	**+0.3**
EPOS				IAML			05	26 56.0	
	comp=E,22nm,0.4s								
EPOS				IAML			05	26 58.0	
	comp=N,45nm,0.5s								
NEY	**Neytrino**	**1.61**	**55**	*i* Pg		**Pn**	**05**	**26 32.2**	**-1.9**
NEY				*e*Sg		**Sn**	**05**	**26 51.0**	**-2.9**
MACK	**Trabzon**	**1.64**	**212**	*i* P		**Sn**	**05**	**26 55.6**	**+1.1**
MACK				IAML			05	27 29.0	
	comp=E,14nm,0.5s								
MACK				IAML			05	27 35.0	
	comp=N,11nm,0.4s								
ONI	**Oni**	**1.89**	**81**	P		**Pn**	**05**	**26 37.1**	**-0.8**
ONI				S		**Sn**	**05**	**27 01.3**	**+0.6**
ONI	**Oni**	**1.89**	**81**	*i* Pg		**Pn**	**05**	**26 37.1**	**-0.8**
ONI				*e*Sg		**Sn**	**05**	**27 01.2**	**+0.6**
SHA1	**Shidzhatmaz**	**1.89**	**42**	*i* Pg		**Pn**	**05**	**26 37.7**	**-0.3**
SHA1				*i* Sg		**Sn**	**05**	**27 00.2**	**-0.7**
LZRR	**Lazarevskoye**	**1.96**	**325**	*e*Pg		**Pn**	**05**	**26 39.8**	**+1.0**
LZRR				*e*Sg		**Sn**	**05**	**27 04.2**	**+2.0**
KRIK	**Erzurum-spir**	**2.00**	**180**	*i* P		**Pb**	**05**	**26 44.1**	**+0.6**
KRIK				IAML			05	27 48.0	
	comp=N,3.3nm,1.6s								
KRIK				IAML			05	27 48.0	
	comp=E,3.8nm,1.8s								
KBZ	**Khabaz**	**2.01**	**45**	*i* Pg		**Pn**	**05**	**26 39.7**	**+0.3**
KBZ				*i* Sg		**Sn**	**05**	**27 03.8**	**+0.4**
DIGR	**Digorskoe uzhe**	**2.04**	**73**	*e*Pg		**Pn**	**05**	**26 40.1**	**0.0**
DIGR				*e*Sg		**Sn**	**05**	**27 04.6**	**0.0**
KIV0	**Kislovodsk Arr**	**2.07**	**38**	*e*Pg		**Pn**	**05**	**26 40.8**	**+0.3**
KIV0				*e*Sg		**Sn**	**05**	**27 06.1**	**+0.8**
AKH	**Akhalkalaki**	**2.13**	**115**	P		**Pn**	**05**	**26 42.0**	**+0.7**
AKH				S		**Sn**	**05**	**27 09.7**	**+3.0**
AKH	**Akhalkalaki**	**2.13**	**115**	*e*Pg		**Pn**	**05**	**26 42.0**	**+0.7**
AKH				*e*Sg		**Sn**	**05**	**27 09.7**	**+3.0**
ZEI	**Tsey**	**2.25**	**77**	*e*Pg		**Pn**	**05**	**26 43.3**	**+0.4**
ZEI				*e*Sg		**Sn**	**05**	**27 10.8**	**+1.2**
TRLG	**Trialeti**	**2.50**	**108**	P		**Pn**	**05**	**26 49.8**	**+3.4**
TRLG				S		**Sb**	**05**	**27 21.3**	**-1.1**
GUDG	**Gudauri**	**2.63**	**86**	*e*Pn		**Pn**	**05**	**26 49.7**	**+1.4**

*VAO **19** 05:26:16.2±0.7,22.03S×72.44W,h10km,mb4.1*
*NEIC **19** 05:26:42.2±1.3,20.98S±0.04×69.89W±0.09,h30km±5km, Error ellipse: s-maj=12.8km s-min=5.5km az=95.0*
*GUC **19** 05:26:44.4±0.8,21.00S×69.79W,h40km±2km, ML4.5*
*IDC **19** 05:26:47.7±2.3,20.86S×69.50W,h40km±24km,mb3.5/6, mb1 3.8/9,mb1mx3.6/38,mbtmp3.8/9,ML3.9/3,MS2.9/1, Ms1 3.0/1,ms1mx2.5/28,Error ellipse: s-maj=25.5km s-min=13.3km az=76.0*
ISC 19 05:26:44.2±0.7,**20.99S**±0.03×**69.91W**±0.05,**h45**km±7km,
n92,σ1ᵎ**98**/**102**,**mb4.1**/**13**,**1C-5D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h	m s	ISC
PATCX	**Punta Patache**	**0.28**	**306**	*i* P		**Pn**	**05**	**26 53.8**	**+1.0**
PATCX				*i* S		**Sn**	**05**	**27 00.0**	**+1.2**
PATCX				IAML			05	27 00.8	
	comp=N,64μm,0.2s								
TA01	**Diego Aracena**	**0.49**	**329**	⇓*i* P		**Pn**	**05**	**26 56.3**	**+1.2**
TA01				*i* S		**Sn**	**05**	**27 04.4**	**+1.7**
TA01				IAML			05	27 05.1	
	comp=N,54μm,0.4s								
PB09	**IPOC Station P**	**1.01**	**142**	*i* P		**Pn**	**05**	**27 02.7**	**+0.5**
PB09				*i* S		**Sn**	**05**	**27 15.2**	**-0.2**
PB09				IAML			05	27 16.3	
	comp=E,21μm,0.5s								
PB03	**IPOC Station P**	**1.06**	**172**	⇓*i* P		**Pn**	**05**	**27 03.6**	**+0.8**
PB03				*i* S		**Sn**	**05**	**27 16.9**	**+0.4**
PB03				IAML			05	27 18.6	
	comp=E,13μm,0.2s								
PB08	**IPOC Station P**	**1.10**	**40**	⇑*i* P		**Pn**	**05**	**27 04.1**	**+0.5**
PB08				*i* S		**Sn**	**05**	**27 18.0**	**+0.2**
PB11	**IPOC Station P**	**1.25**	**11**	⇓*i* P		**Pn**	**05**	**27 06.6**	**+1.3**
PB11				*i* S		**Sn**	**05**	**27 23.1**	**+2.1**
PB11				IAML			05	27 24.2	
	comp=E,12μm,0.7s								
PB11	**IPOC Station P**	**1.25**	**11**			**Pn**	**05**	**27 06.0**	**+0.7**
PB11					Sn	**Sn**	**05**	**27 23.0**	**+2.0**
PB04	**IPOC Station P**	**1.36**	**189**	*i* P		**Pn**	**05**	**27 08.2**	**+1.4**
PB04				*i* S		**Sn**	**05**	**27 26.3**	**+2.5**
PB04	**IPOC Station P**	**1.36**	**189**			**Pn**	**05**	**27 07.7**	**+0.8**
PB04					Sn	**Sn**	**05**	**27 25.0**	**+1.2**
PSGC	**Pisagua**	**1.40**	**352**	*i* P		**Pn**	**05**	**27 09.1**	**+1.8**
PSGC				*i* S		**Sn**	**05**	**27 28.4**	**+3.7**
GO01	**Chusmiza**	**1.48**	**27**	⇓*i* P		**Pn**	**05**	**27 10.2**	**+1.5**
GO01				*i* S		**Sn**	**05**	**27 29.1**	**+1.9**
GO01				IAML			05	27 30.1	
	comp=N,27μm,0.1s								
GO01	**Chusmiza**	**1.48**	**27**			**Pn**	**05**	**27 10.3**	**+1.5**
GO01					Sn	**Sn**	**05**	**27 29.2**	**+2.1**
PB06	**IPOC Station P**	**1.74**	**170**	⇓*i* P		**Pn**	**05**	**27 13.5**	**+1.5**
PB06				*i* S		**Sn**	**05**	**27 35.4**	**+2.3**
PB06				IAML			05	27 40.0	
	comp=E,7μm,0.3s								
LVC	**Limon Verde**	**1.86**	**150**	*i* P		**Pn**	**05**	**27 16.5**	**+2.6**
LVC				*i* S		**Sn**	**05**	**27 39.4**	**+3.0**
LVC	**Limon Verde**	**1.86**	**150**	P		**Pn**	**05**	**27 16.4**	**+2.6**
	comp=E,567nm,0.3s,baz=340,slow=10,SNR=3562								
LVC					S	**Sn**	**05**	**27 39.3**	**+2.9**
	comp=E,504nm,0.3s,baz=221,slow=19,SNR=24								
LVC					LR	LR	05	27 56.3	
	comp=E,354nm,19.1s,baz=9.5,slow=38								
LVC	**Limon Verde**	**1.86**	**150**			**Pn**	**05**	**27 16.5**	**+2.6**
LVC					Sn	**Sn**	**05**	**27 40.4**	**+4.0**
MNMC	**Minye Minye**	**1.87**	**9**			**Pn**	**05**	**27 16.4**	**+2.3**
PB10	**IPOC Station P**	**2.58**	**193**			**Pn**	**05**	**27 25.3**	**+1.9**
GO02	**Mina Guanaco**	**4.16**	**176**			**Pn**	**05**	**27 47.6**	**+2.1**
LPAZ	**La Paz**	**4.97**	**20**	P		Pn	05	28 02.7	+5.8
	comp=E,1.6nm,0.3s,baz=202,slow=5.7,SNR=53								
LPAZ					LR	LR	05	30 11.8	
	comp=E,131nm,19.7s,baz=186,slow=43								
LPAZ	**La Paz**	**4.97**	**20**			Pn	05	28 02.5	+5.7
GO03	**Copiap**	**6.58**	**183**	Pn		**Pn**	**05**	**28 18.3**	**-0.1**
GO04	**Tololo Observa**	**9.18**	**185**	Pn		**Pn**	**05**	**28 53.2**	**-1.0**
SIV	**San Ignacio**	**9.75**	**61**	P		**Pn**	**05**	**29 01.9**	**0.0**
	comp=E,2.1nm,0.3s,baz=265,slow=10,SNR=33								
CFA	**Coronel Fontan**	**10.68**	**172**	P		**Pn**	**05**	**29 12.9**	**-1.7**
	comp=E,1.0nm,0.3s,baz=357,slow=13,SNR=8.8								
CFA					S	Sn	05	31 28.0	+15
	comp=E,0.4nm,0.3s,baz=74,slow=22,SNR=1.4								
NNA	**Nana**	**11.15**	**322**	P		**Pn**	**05**	**29 25.1**	**+4.0**
	comp=E,1.9nm,0.3s,baz=227,slow=15,SNR=4.3								
NNA					S	**Sn**	**05**	**31 21.8**	**-2.7**
	comp=E,0.6nm,0.3s,baz=282,slow=9.7,SNR=1.9								
NNA	**Nana**	**11.15**	**322**	Pn		**Pn**	**05**	**29 20.3**	**-0.8**
ROC1	**El Roble**	**11.98**	**184**	Pn		**Pn**	**05**	**29 31.4**	**-1.1**
CPUP	**Villa Florida**	**12.69**	**117**	P		**Pn**	**05**	**29 42.0**	**0.0**
	comp=E,0.1nm,0.3s,baz=301,slow=12,SNR=2.3								
CPUP	**Villa Florida**	**12.69**	**117**	*e*P		**Pn**	**05**	**29 41.4**	**-0.6**
CPUP	**Villa Florida**	**12.69**	**117**			**Pn**	**05**	**29 40.5**	**-1.6**
AQDB	**Aquidauana**	**13.31**	**90**	*e*P		**P**	**05**	**29 58.5**	**-1.6**
SAML	**Samuel**	**13.62**	**29**	*e*P		**P**	**05**	**29 58.7**	**-3.9**
SAML	**Samuel**	**13.62**	**29**			**Pn**	**05**	**29 52.3**	**-2.4**
SALV	**Santo Antonio**	**14.40**	**72**	*e*P		**P**	**05**	**30 12.6**	**+1.3**
PP1B	**Ponte de Pedra**	**14.58**	**79**	*e*P		**P**	**05**	**30 14.4**	**+1.1**
ITQB	**Itaqui**	**14.79**	**128**	*e*P		Pn	05	30 03.3	-7.1
TRCB	**Terra Rica**	**16.14**	**100**	*e*P		**P**	**05**	**30 31.8**	**+1.2**
C2SB	**Chapadao do Su**	**16.21**	**85**	*e*P		**P**	**05**	**30 34.2**	**+2.8**
PCMB	**Pacaembu**	**17.39**	**95**	*e*P		**P**	**05**	**30 46.5**	**+2.0**
ARAG	**Araguaiana, MT**	**17.96**	**76**	*e*P		**P**	**05**	**30 53.1**	**+2.3**
ITRB	**Iturama**	**18.38**	**89**	*e*P		**Pn**	**05**	**30 56.9**	**+1.1**
GO06	**Curarrehue**	**18.58**	**184**	P		**P**	**05**	**30 57.5**	**-0.1**
FRTB	**Fartura**	**18.99**	**101**	*e*P		**P**	**05**	**31 02.1**	**-0.1**
CNLB	**Canela**	**19.12**	**119**	*e*P		**P**	**05**	**30 56.9**	**-6.6**
PLCA	**Paso Flores**	**19.69**	**181**	P		**Pn**	**05**	**31 12.1**	**+0.7**
	comp=E,0.1nm,0.3s,baz=215,slow=16,SNR=4.7								
PLCA	**Paso Flores**	**19.69**	**181**	P		**P**	**05**	**31 09.2**	**-0.5**
PLCA				IAmb		IAmb	05	31 24.6	
	comp=Z,9.0nm,1.1s								
BB19B	**Bebedouro**	**19.96**	**94**	*e*P		**P**	**05**	**31 12.6**	**-0.1**
VAO	**Valinhos**	**21.36**	**100**	*e*P		**P**	**05**	**31 25.7**	**-2.3**
BDFB	**Brasilia**	**21.45**	**79**	P		**P**	**05**	**31 27.7**	**-1.2**
	comp=Z,1.5nm,0.6s,baz=222,slow=10,SNR=3.6								
BDFB	**Brasilia**	**21.45**	**79**	P		**P**	**05**	**31 27.0**	**-1.9**
PMNB	**Patos De Minas**	**22.22**	**88**	*e*P		**P**	**05**	**31 36.7**	**-0.5**
PEXB	**Peixe**	**22.50**	**70**	*e*P		**P**	**05**	**31 41.5**	**+1.4**
PARB	**Paraibuna**	**22.61**	**100**	*e*P		**P**	**05**	**31 37.8**	**-3.5**
OTAV	**Otavalo**	**22.69**	**337**	P		**P**	**05**	**31 42.2**	**-0.3**
OTAV				IAmb		IAmb	05	31 46.1	
	comp=Z,8.7nm,1.2s								
FLOC	**Florencia**	**23.13**	**345**	P		**P**	**05**	**31 47.4**	**+0.8**
BSCB	**Bom Sucesso**	**23.46**	**95**	*e*P		**P**	**05**	**31 47.5**	**-2.5**
SMTB	**Santa Maria do**	**24.67**	**64**	*e*P		**P**	**05**	**32 01.6**	**+0.6**
JANB	**Januaria**	**25.03**	**81**	*e*P		**P**	**05**	**32 03.5**	**-0.8**
ROSC	**El Rosal**	**26.03**	**350**	P		**P**	**05**	**32 17.0**	**+3.3**
	comp=Z,4.0nm,0.5s,baz=131,slow=20,SNR=3.4								
ROSC	**El Rosal**	**26.03**	**350**	P		**P**	**05**	**32 12.5**	**-1.2**
ROSC				IAmb		IAmb	05	32 21.5	
	comp=Z,13nm,1.4s								
RUSC	**La Rusia**	**26.90**	**353**	P		**P**	**05**	**32 21.4**	**-0.3**
PAYG	**Puerto Ayora**	**28.35**	**313**	P		**P**	**05**	**32 33.7**	**-0.5**
PAYG				IAmb		IAmb	05	32 44.0	
	comp=Z,20nm,1.1s								
CBYP	**Canovanas**	**39.22**	**6**	P		**P**	**05**	**34 07.2**	**-1.1**
SMRT	**St. Maarten**	**39.37**	**10**	P		**P**	**05**	**34 08.8**	**-0.7**
ZAIG	**Zacatecas**	**53.91**	**322**	P		**P**	**05**	**36 02.9**	**-0.7**
ZAIG				IAmb		IAmb	05	36 03.1	
	comp=Z,2.6nm,0.9s								
BRAL	**Brewton**	**54.41**	**342**	P		**P**	**05**	**36 06.3**	**-0.4**
HAL	**Halifax**	**65.56**	**5**	P		**P**	**05**	**37 22.8**	**-0.2**
ISCO	**Idaho Springs**	**69.05**	**331**	P		**P**	**05**	**37 45.0**	**-0.6**
ISCO				IAmb		IAmb	05	37 49.3	
	comp=Z,2.5nm,1.4s								
Y12C	**Blythe**	**69.07**	**321**	P		**P**	**05**	**37 42.3**	**-3.1**
DRLN	**Deer Lake**	**70.80**	**9**	P		**P**	**05**	**37 55.4**	**-0.3**
MSU	**Marysvale**	**71.24**	**326**	P		**P**	**05**	**37 59.5**	**+0.6**
EYMN	**Ely**	**71.30**	**345**	P		**P**	**05**	**37 57.0**	**-1.9**
EYMN				IAmb		IAmb	05	38 00.7	
	comp=Z,8.7nm,1.1s								
TMUT	**Trail Mountain**	**71.33**	**327**	P		**P**	**05**	**37 59.5**	**-0.1**
CMLA	**Cha da Macela**	**71.81**	**36**	P		**P**	**05**	**38 01.7**	**-0.5**
PDAR	**Pinedale Array**	**73.21**	**331**	P		**P**	**05**	**38 15.2**	**+4.6**
	comp=Z,0.1nm,0.5s,baz=134,slow=5.2,SNR=2.3								
PDAR	**Pinedale Array**	**73.21**	**331**	P		**P**	**05**	**38 10.6**	**-0.1**
NVAR	**Mina Array Bea**	**74.52**	**322**	P		P	05	38 23.8	+5.4
	comp=Z,0.4nm,0.9s,baz=134,slow=10,SNR=2.6								
TOA0	**Torodi Ar. Sit**	**78.07**	**71**	P		**P**	**05**	**38 36.6**	**-2.2**
TOA0				IAmb		IAmb	05	38 48.5	
	comp=Z,1.8nm,0.9s								
TORD	**Torodi Ar. Bea**	**78.07**	**71**	P		**P**	**05**	**38 39.9**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=253,slow=5.0,SNR=12								
WALA	**Waterton Lakes**	**79.98**	**332**	P		**P**	**05**	**38 48.9**	**+0.3**
WALA				IAmb		IAmb	05	39 05.1	
	comp=Z,14nm,1.5s								
YKA	**Yellowknife Ar**	**90.40**	**341**	P		**P**	**05**	**39 43.7**	**+3.4**
	comp=Z,0.4nm,0.7s,baz=140,slow=4.1,SNR=6.8								
H11S2	**WAKE ISLAND Hy**	**26.89**	**278**	T		T		08 05 02.6	
	baz=103,slow=75,SNR=140								
H11S1	**WAKE ISLAND Hy**	**26.90**	**278**	T		T		08 05 08.5	
	baz=103,slow=75,SNR=131								
H11S3	**WAKE ISLAND Hy**	**26.91**	**278**	T		T		08 05 12.2	
	baz=103,slow=75,SNR=119								
H11N3	**WAKE ISLAND Hy**	**26.96**	**279**	T		T		08 05 09.9	
	baz=102,slow=75,SNR=92								
H11N2	**WAKE ISLAND Hy**	**26.97**	**279**	T		T		08 05 17.9	
	baz=102,slow=75,SNR=67								
H11N1	**WAKE ISLAND Hy**	**26.97**	**279**	T		T		08 05 18.5	
	baz=102,slow=75,SNR=79								
KSH	**Kashi**	**145.50**	**50**	PKPbc		**PKPab**	**05**	**46 18.4**	**+0.3**
KSH				PP		**PP**	**05**	**49 43.3**	**+5.0**
KSH				AMB		AMB			
	comp=Z,330nm,5.2s								
MKAR	**Makanchi Array**	**145.76**	**35**	PKPbc		**PKiKP**

NVAR	Mina Array Bea	48.94	351	P		P		05 39 27.3	+1.2
	comp=Z,0.4nm,0.7s,baz=163,slow=6.6,SNR=3.5								
NVAR	Mina Array Bea	48.94	351	P		P		05 39 25.7	-0.4
LCAR	Lake Charles	49.00	20	P		P		05 39 23.4	-2.9
LCAR				IAmb		IAmb		05 39 34.4	
	comp=Z,14nm,1.3s								
SMCO	Snowmass	49.03	2	P		P		05 39 26.6	-0.4
SMCO				IAmb		IAmb		05 39 41.8	
	comp=Z,7.0nm,1.5s								
TMUT	Trail Mountain	49.12	358	P		P		05 39 27.5	-0.1
RYN	Ryan	49.17	351	P		P		05 39 26.8	-1.0
RYN				IAmb		IAmb		05 39 39.9	
	comp=Z,3.1nm,1.0s								
WAKR	Walker	49.21	350	P		P		05 39 27.9	-0.3
P17A	Butcher Ranch,	49.29	359	P		P		05 39 27.1	-1.6
AFDM	Forest Hills D	49.93	348	P		P		05 39 33.1	-0.3
AFDM				IAmb		IAmb		05 39 51.9	
	comp=Z,4.6nm,1.3s								
O20A	White River Ci	49.94	1	P		P		05 39 33.5	-0.3
O20A				IAmb		IAmb		05 39 50.3	
	comp=Z,10nm,1.2s								
SJG	San Juan	51.05	57	LR		LR		05 57 42.6	
	comp=Z,287nm,20.8s,baz=224,slow=32								
PHWY	Pilot Hill	51.23	4	P		P		05 39 42.7	-0.8
PHWY				IAmb		IAmb		05 39 58.6	
	comp=Z,8.5nm,1.3s								
CPUP	Villa Florida	51.70	116	P		P		05 39 48.2	+1.1
	comp=Z,2.0nm,0.8s,baz=298,slow=7.5,SNR=5.0								
CPUP	Villa Florida	51.70	116	P		P		05 39 44.6	-2.4
CPUP				IAmb		IAmb		05 39 52.5	
	comp=Z,4.3nm,1.1s								
V53A	Saluda	51.95	28	P		P		05 39 48.5	-0.2
V53A				IAmb		IAmb		05 39 52.3	
	comp=Z,14nm,1.3s								
PDAR	Pinedale Array	52.56	360	P		P		05 39 52.5	-0.9
	comp=Z,0.3nm,0.7s,baz=173,slow=7.8,SNR=3.6								
TPAW	Teton Pass	53.30	359	P		P		05 39 57.1	-1.8
TPAW				IAmb		IAmb		05 40 10.5	
	comp=Z,8.8nm,1.4s								
MFID	Camas Ranch	53.53	354	P		P		05 40 00.2	-0.2
MFID				IAmb		IAmb		05 40 07.6	
	comp=Z,8.0nm,1.1s								
MOOW	Moose Ponds	53.56	359	P		P		05 39 59.0	-1.7
MOOW				IAmb		IAmb		05 40 09.8	
	comp=Z,5.7nm,1.4s								
K05A	Summer Lake	53.56	349	P		P		05 40 00.6	-0.2
K05A				IAmb		IAmb		05 40 20.0	
	comp=Z,12nm,1.2s								
YMR	Madison River	54.48	359	P		P		05 40 06.3	-1.1
YHL	Hebgen Lake	54.67	358	P		P		05 40 08.8	-0.1
F10A	Beach Ranch, E	56.21	353	P		P		05 40 17.0	-2.7
F10A				IAmb		IAmb		05 40 18.9	
	comp=Z,7.9nm,1.1s								
JTMT	Jette	57.71	356	P		P		05 40 29.8	-0.6
JTMT				IAmb		IAmb		05 40 42.1	
	comp=Z,10nm,1.5s								
DGMT	Dagmar	58.45	4	P		P		05 40 35.4	0.0
NEW	Newport	58.46	354	P		P		05 40 34.5	-1.0
YKA	Yellowknife Ar	72.44	357	P		P		05 42 06.5	+0.9
	comp=Z,1.1nm,0.9s,baz=168,slow=5.9,SNR=9.1								
ILAR	Eielson Array	79.73	345	P		P		05 42 49.0	+1.8
	comp=Z,0.9nm,1.0s,baz=171,slow=4.6,SNR=3.8								
INK	Inuvik	80.03	351	P		P		05 42 49.8	+1.1
	comp=Z,2.0nm,1.0s,baz=150,slow=6.8,SNR=3.7								
H11S2	WAKE ISLAND Hy 87.44	289		T		T		07 21 01.4	
	baz=100,slow=75,SNR=99								
H11S1	WAKE ISLAND Hy 87.44	289		T		T		07 21 05.8	
	baz=100,slow=75,SNR=66								
H11S3	WAKE ISLAND Hy 87.45	289		T		T		07 21 08.2	
	baz=100,slow=75,SNR=68								
H11N3	WAKE ISLAND Hy 87.49	290		T		T		07 21 05.8	
	baz=101,slow=74,SNR=23								
H11N2	WAKE ISLAND Hy 87.50	290		T		T		07 21 05.7	
	baz=101,slow=74,SNR=22								
H11N1	WAKE ISLAND Hy 87.50	290		T		T		07 21 02.4	
	baz=101,slow=74,SNR=15								
SONM	Songino Array	131.79	328	PKP		PKiKP		05 49 55.5	+1.4
	comp=Z,0.2nm,0.6s,baz=77,slow=1.9,SNR=2.6								
ZALV	Zalesovo Beam	134.76	348	PKP		PKiKP		05 50 00.8	+1.0
	comp=Z,0.4nm,0.4s,baz=56,slow=3.6,SNR=2.3								
MKAR	Makanchi Array	142.06	347	PKP		PKiKP		05 50 14.3	-0.7
	comp=Z,0.4nm,0.9s,baz=0.0,slow=1.7,SNR=3.0								
GEYT	Alibeck	150.06	20	PKPbc		PKPbc		05 50 30.7	-0.1
	comp=Z,0.3nm,0.3s,baz=349,slow=2.9,SNR=2.2								
CMAR	Chiang Mai Arr	151.32	290	PKPbc		PKiKP		05 50 37.9	+3.1
	comp=Z,1.3nm,0.4s,baz=153,slow=0.6,SNR=6.2								

*IDC **19** 05:46:21.6±1.2,30˚.25N×103˚.00E,h0km,mb3.6/6, mb1 3.8/7,mb1mx3.5/38,mbtmp3.6/7,ML3.2/1,MS3.7/2, Ms1 3.7/2,ms1mx2.9/33,Error ellipse: s-maj=41.1km s-min=20.9km az=61.0*

*BJI **19** 05:46:25.8±0.0,30˚.36N×102˚.96E,h17km,ML3.5/15*

ISC 19 05:46:23.1±0.9,**30˚.22N**±0˚.08×**103˚.06E**±0˚.09,**h10**km,**n13, s54**/15,**mb3.7**/6,**1C,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.92	41	i*P*g	Pg	05 46 41.8	+1.0
CD2				Sg	Sg	05 46 53.6	+0.8
CD2	comp=N,2μm,0.6s			smax	smax		
CD2	comp=E,1μm,0.6s			smax	smax		
KMI	Kunming	5.08	183	Pn	Pn	05 47 39.5	-0.1
XAN	Xi'an	6.27	51	Pn	Pn	05 47 57.8	+2.1
XAN				Pg	Pg	05 48 20.8	-2.3
XAN				Sn	Sn	05 49 04.0	-3.4
XAN				Sg	Sg	05 49 45.8	+1.5
XAN	comp=N,75nm,1.1s			smax	smax		
XAN	comp=E,89nm,0.9s			smax	smax		
SONM	Songino Array	17.78	7	P	Pn	05 50 31.6	+0.8
	0.1nm,0.3s,baz=178,slow=13,SNR=2.4						
WMQ	Urumqi	18.26	322	e*P*	Pn	05 50 36.0	-0.6
KSRS	Korea Array	21.84	64	P	P	05 51 15.8	0.0
	3.0nm,0.9s,baz=266,slow=9.2,SNR=6.9						
MKAR	Makanchi Array	23.08	322	P	P	05 51 28.7	-0.2
	1.3nm,0.9s,baz=132,slow=10,SNR=7.9						
JNU	Nakatsue	23.83	76	LR	LR	06 02 26.0	
	comp=Z,41nm,19.8s,baz=46,slow=40						
ZALV	Zalesovo Beam	27.14	336	P	P	05 52 05.7	-0.6
	0.7nm,0.6s,baz=140,slow=9.5,SNR=5.0						
PETK	Petropavlovsk-	45.45	44	LR	LR	06 14 28.0	
	comp=Z,457nm,21.2s,baz=62,slow=37						
WRA	Warramunga Arr	58.26	145	P	P	05 56 19.1	+1.2
	0.5nm,0.4s,baz=335,slow=7.6,SNR=5.6						
ASAR	Alice Springs	61.22	148	P	P	05 56 38.2	-0.2
	0.6nm,0.9s,baz=333,slow=6.5,SNR=4.5						
YKA	Yellowknife Ar	82.80	17	P	P	05 58 46.4	-0.8
	0.5nm,0.8s,baz=328,slow=5.2,SNR=7.2						

*OSPL **19** 05:56:08.7±1.9,18˚.84N×65˚.62W,h48km±224km,MD3.6, ML2.9*

*RSPR **19** 05:56:11.6,19˚.07N×66˚.04W,h52km±4km,MD3.3/18*

ISC 19 05:56:12.1±1.5,**19˚.01N**±0˚.08×**66˚.02W**±0˚.03,**h45**km±35km, **n54**,σ0**85**/73,**12C-6D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCPR	Guaynabo City	0.70	185		Pn	05 56 25.1	-0.6
EMPR	Esperanza - Ma	0.72	222	i*P*	Pn	05 56 25.2	-0.7
EMPR	Esperanza - Ma	0.72	222	eS	Sn	05 56 36.3	+0.5
EMPR	Esperanza - Ma	0.72	222	Pn	Pn	05 56 25.4	-0.5
CBYP	Canovanas	0.75	168	e*P*	Pn	05 56 25.6	-0.9
CBYP				eS	Sn	05 56 36.9	+0.2
CBYP	Canovanas	0.75	168	i*P*	Pn	05 56 25.6	-0.9
CBYP	Canovanas	0.75	168	eS	Sn	05 56 37.2	+0.5
CBYP	Canovanas	0.75	168		Pn	05 56 25.7	-0.8
CBYP					Pn	05 56 25.9	-0.6
CBYP					Sn	05 56 37.8	+1.0
CBYP					Sn	05 56 37.9	+1.2
HUMP	Col San Antoni	0.88	169	i*P*	Pn	05 56 27.4	-0.6
HUMP	Col San Antoni	0.88	169	e*P*	Pn	05 56 27.6	-0.5
HUMP				eS	Sn	05 56 40.5	+0.8
HUMP	Col San Antoni	0.88	169	Pn	Pn	05 56 27.5	-0.6
HUMP					Sn	05 56 40.7	+1.0
SJG	San Juan	0.90	188		Pn	05 56 28.4	-0.1
SJG				Sn	Sn	05 56 42.3	+2.0
AOPR	Arecibo Observ	0.96	227	i*P*	Pn	05 56 28.6	-0.6
AOPR	Arecibo Observ	0.96	227	eS	Sn	05 56 41.2	-0.5
AOPR	Arecibo Observ	0.96	227	Pn	Pn	05 56 28.8	-0.4
AOPR					Sn	05 56 42.5	+0.7
MTP	Monte Pirata	1.01	154	i*P*	Pn	05 56 29.2	-0.7
MTP	Monte Pirata	1.01	154	eS	Sn	05 56 43.7	+0.8
MTP	Monte Pirata	1.01	154	Pn	Pn	05 56 29.2	-0.7
MTP					Sn	05 56 43.8	+0.8
IGPR	InterUniversit	1.04	185	i*P*	Pn	05 56 30.4	0.0
IGPR				eS	Sn	05 56 44.5	+0.8
IGPR	InterUniversit	1.04	185	i*P*	Pn	05 56 29.8	-0.6
IGPR	InterUniversit	1.04	185	eS	Sn	05 56 44.0	+0.2
IGPR	InterUniversit	1.04	185	Pn	Pn	05 56 30.6	+0.2
IGPR				Sn	Sn	05 56 45.8	+2.0
CELP	Cerrillos	1.07	210	i*P*	Pn	05 56 30.0	-0.8
CELP				eS	Sn	05 56 44.5	+0.1
CELP	Cerrillos	1.07	210		Pn	05 56 30.0	-0.8
CELP					Sn	05 56 44.5	+0.1
OBIP	Obispado Ponce	1.11	210	i*P*	Pn	05 56 30.9	-0.4
OBIP	Obispado Ponce	1.11	210	eS	Sn	05 56 45.3	-0.1
OBIP	Obispado Ponce	1.11	210	Pn	Pn	05 56 31.3	0.0
AGPR	Aguadilla, PR	1.17	243	i*P*	Pn	05 56 30.7	-1.2
AGPR	Aguadilla, PR	1.17	243	*i* P	Pn	05 56 30.8	-1.2
AGPR				eS	Sn	05 56 49.9	+3.1
AGPR				IAML		05 56 53.8	
	comp=Z,120nm,0.3s						
AGPR	Aguadilla, PR	1.17	243		Pn	05 56 30.5	-1.5
ICMP	Isla Caja de M	1.22	203	i*P*	Pn	05 56 32.1	-0.6
ICMP	Isla Caja de M	1.22	203	eS	Sn	05 56 47.6	-0.4
ICMP	Isla Caja de M	1.22	203		Pn	05 56 33.2	+0.5
ICMP					Pn	05 56 33.3	+0.6
LSP	Las Mesas	1.31	231	i*P*	Pn	05 56 33.3	-0.6
LSP	Las Mesas	1.31	231	eS	Sn	05 56 49.6	-0.7
LSP	Las Mesas	1.31	231		Pn	05 56 33.3	-0.6
LSP					Sn	05 56 49.6	-0.7
GBPR	Guanica, Bosqu	1.31	219	i*P*	Pn	05 56 33.5	-0.5
GBPR				eS	Sn	05 56 49.7	-0.6
GBPR	Guanica, Bosqu	1.31	219		Pn	05 56 33.5	-0.5
GBPR					Sn	05 56 49.7	-0.6
MPR	Mayaguez	1.32	233	*i* P	Pn	05 56 33.7	-0.5
MPR				eS	Sn	05 56 50.8	+0.1
MPR				IAML		05 56 53.7	
	comp=Z,100nm,0.8s						
MPR	Mayaguez	1.32	233		Pn	05 56 33.6	-0.5
MLPR	Magueyes Islan	1.42	223	e*P*	Pn	05 56 34.2	-1.3
MLPR	Magueyes Islan	1.42	223	eS	Sn	05 56 52.1	-0.8
MLPR	Magueyes Islan	1.42	223	Pn	Pn	05 56 34.3	-1.3
CRPR	Cabo Rojo, PR	1.44	226	i*P*	Pn	05 56 35.5	-0.3
CRPR	Cabo Rojo, PR	1.44	226	eS	Sn	05 56 53.0	-0.3
CRPR	Cabo Rojo, PR	1.44	226		Pn	05 56 35.4	-0.3
CRPR					Pn	05 56 35.6	-0.1
TBVI	Tortola	1.46	114	i*P*	Pn	05 56 35.3	-0.6
TBVI				eS	Sn	05 56 53.9	0.0
TBVI	Tortola	1.46	114		Pn	05 56 35.3	-0.6
TBVI					Sn	05 56 53.9	0.0
PCDR	Punta Cana, DR	2.29	258	*i* P	Pn	05 56 47.7	+0.3
PCDR				eS	Sn	05 57 15.7	+1.3
PCDR				IAML		05 57 20.0	
	comp=Z,72nm,0.9s						
PCDR	Punta Cana, DR	2.29	258	Pn	Pn	05 56 48.2	+0.8
DR12	Loma Pena Alta	3.19	267	Pn	Pn	05 56 59.0	-0.8
SKI	Saint Kitts	3.54	118	Pn	Pn	05 57 04.4	-0.2
SDDR	Presa de Saban	4.98	271	i*P*	Pn	05 57 25.3	+0.8
SDDR				IAML		05 58 51.3	
	comp=Z,15nm,1.8s						
SDDR	Presa de Saban	4.98	271		Pn	05 57 23.9	-0.6

*IDC **19** 06:00:43.9±1.8,17˚.78S×178˚.14W,h397km±19km, mb3.5/13,mb1 3.7/14,mb1mx3.6/24,mbtmp4.2/14,Error ellipse: s-maj=20.0km s-min=12.5km az=138.0*

*NEIC **19** 06:00:46.8±1.3,17˚.7S±0˚.1×178˚.2W±0˚.1,h424km±7km, mb4.3/36,Error ellipse: s-maj=20.4km s-min=15.9km az=141.0*

ISC 19 06:00:44.5±0.5,**17˚.6S**±0˚.1×**178˚.19W**±0˚.08,**h400**km,**n70,** σ1**924**/74,**mb4.1**/27,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	3.58	267	P	Pn	06 01 58.9	+6.0
AFI	Afiamalu	7.19	60	P	Pn	06 02 29.9	-0.5
	6.3nm,0.3s,baz=260,slow=18,SNR=8.4						
AFI				S	S	06 03 52.7	-4.3
	2.0nm,0.3s,baz=329,slow=19,SNR=2.3						
AFI	Afiamalu	7.19	60	P	Pn	06 02 31.0	+0.5
NIUE	Niue	7.99	102	P	P	06 02 41.7	+1.9
DZM	Mont Dzumac	15.12	250	P	P	06 04 01.3	+2.8
	0.1nm,0.3s,baz=139,slow=19,SNR=2.2						
DZM	Mont Dzumac	15.12	250	P	P	06 03 59.4	+0.9
DZM				IAmb	IAmb	06 04 18.4	
	comp=Z,24nm,1.3s						
OUZ	Omahuta	19.01	201	P	P	06 04 41.0	+1.5
OUZ				IAmb	IAmb	06 04 42.6	
	comp=Z,12nm,0.6s						
URZ	Urewera	20.99	190	P	P	06 04 55.8	-2.1
	comp=Z,3.9nm,0.4s,baz=27,slow=4.5,SNR=6.2						
URZ	Urewera	20.99	190	P	P	06 04 56.1	-1.7
URZ				IAmb	IAmb	06 05 07.0	
	comp=Z,12nm,0.9s						
BKZ	Black Stump Fm	21.98	191	P	P	06 05 05.3	-1.7
BKZ				IAmb	IAmb	06 05 16.9	
	comp=Z,15nm,1.4s						
WKZ	Wanaka	29.19	199	P	P	06 06 09.7	-1.3
MLZ	Mavora Lakes	29.95	200	P	P	06 06 18.1	+0.3
CAN	Canberra	34.05	232	P	P	06 06 54.3	+1.0
TOO	Toolangi	37.52	231	P	P	06 07 23.5	+1.2
TOO				IAmb	IAmb	06 07 23.8	
	comp=Z,9.6nm,0.7s						
STKA	Stephens Creek	38.96	241	P	P	06 07 33.5	-0.6
	comp=Z,2.1nm,0.5s,baz=98,slow=9.6,SNR=5.1						
STKA	Stephens Creek	38.96	241	P	P	06 07 35.4	+1.3
BBOO	Buckleboo	43.73	241	P	P	06 08 12.6	+0.2
WRA	Warramunga Arr	44.89	259	P	P	06 08 20.9	-0.8
	comp=Z,0.3nm,0.3s,baz=93,slow=8.3,SNR=8.5						
WRA				PcP	PcP	06 09 54.1	-1.3
	comp=Z,0.4nm,0.6s,baz=99,slow=3.9,SNR=3.1						
WRA	Warramunga Arr	44.89	259	P	P	06 08 21.2	-0.5
AS31	Alice Springs	45.07	254	P	P	06 08 23.4	+0.3
ASAR	Alice Springs	45.07	254	P	P	06 08 23.2	+0.2
	comp=Z,5.4nm,0.4s,baz=90,slow=8.0,SNR=195						
ASAR				PcP	PcP	06 09 55.1	-0.9
	comp=Z,0.5nm,0.4s,baz=101,slow=4.4,SNR=4.5						
ASAR				ScP	ScP	06 13 10.0	+0.2
	comp=Z,0.3nm,0.5s,baz=98,slow=4.5,SNR=7.9						
ASAR				S	S	06 14 26.8	-5.0
	comp=Z,0.8nm,0.9s,baz=90,slow=16,SNR=4.9						
ASAR	Alice Springs	45.07	254	P	P	06 08 23.0	-0.1
MJAR	Matsushiro Arr	67.79	323	P	P	06 11 01.7	+0.8
	comp=Z,4.0nm,0.5s,baz=138,slow=6.0,SNR=17						
MJAR	Matsushiro Arr	67.79	323	P	P	06 11 02.1	+1.2
QSPA	South Pole Qui	72.45	180	P	P	06 11 28.8	+0.2
QSPA				IAmb	IAmb	06 11 29.4	
	comp=Z,5.6nm,0.7s						
PETK	Petropavlovsk-	73.44	345	P	P	06 11 34.7	+0.5
	comp=Z,2.3nm,0.6s,baz=145,slow=8.3,SNR=3.5						
PETK	Petropavlovsk-	73.44	345	P	P	06 11 35.2	+1.0
KSRS	Korea Array	74.61	318	P	P	06 11 41.8	+0.6
	comp=Z,0.9nm,0.6s,baz=163,slow=38,SNR=4.3						
KDAK	Kodiak Island	78.06	14	P	P	06 12 00.2	+0.4
YERR	Yerington	78.75	43	P	P	06 12 05.4	+1.0
NVAR	Mina Array Bea	79.06	44	P	P	06 12 07.0	+0.9
	comp=Z,1.4nm,0.7s,baz=225,slow=8.4,SNR=18						
MOD	Modoc Plateau	79.72	40	P	P	06 12 10.5	+1.0
K05A	Summer Lake	79.83	39	P	P	06 12 11.4	+1.3
K05A				IAmb	IAmb	06 12 11.9	
	comp=Z,4.0nm,1.1s						
I07A	Izee	81.44	39	P	P	06 12 19.1	+0.7
SUA	Susitna One	81.79	13	P	P	06 12 20.1	+0.3
SUA				IAmb	IAmb	06 12 22.7	
	comp=Z,6.4nm,0.8s						
PMR	Palmer	82.26	14	P	P	06 12 21.8	-0.2
GHO	Glory Hole Cre	82.47	14	P	P	06 12 23.5	+0.3
SCM	Sheep Creek Mo	82.88	14	P	P	06 12 25.5	+0.2
GLB	Gilahina Butte	83.42	16	P	P	06 12 28.0	+0.1
BALM	Baldy	83.47	17	P	P	06 12 28.5	+0.2
BALM				IAmb	IAmb	06 12 39.8	
	comp=Z,16nm,1.4s						
KTH	Kantishna Hill	83.64	12	P	P	06 12 29.0	0.0
KTH				IAmb	IAmb	06 12 32.5	
	comp=Z,13nm,1.4s						
TRF	Thorofare Moun	83.67	12	P	P	06 12 28.9	-0.4
CTGM	Chitina Glacie	83.69	17	P	P	06 12 29.9	+0.5
RND	Reindeer	83.93	13	P	P	06 12 30.7	+0.2
RND				IAmb	IAmb	06 12 31.5	
	comp=Z,12nm,1.2s						
DHY	Denali Highway	83.96	14	P	P	06 12 30.7	0.0
DHY				IAmb	IAmb	06 12 49.3	
	comp=Z,3.7nm,1.4s						
MCK	McKinley	84.20	13	P	P	06 12 31.9	+0.1
MCK				IAmb	IAmb	06 12 39.7	
	comp=Z,2.1nm,0.8s						
MLY	Manley	85.00	11	P	P	06 12 35.9	+0.1
MLY				IAmb	IAmb	06 12 40.1	
	comp=Z,3.7nm,1.3s						
WRH	Wood River Hil	85.03	13	P	P	06 12 35.9	+0.1
HDA	Harding Lake	85.22	13	P	P	06 12 37.1	+0.3
HDA				IAmb	IAmb	06 12 37.5	
	comp=Z,3.4nm,0.6s						
DOT	Dot Lake	85.22	15	P	P	06 12 37.1	+0.2
DOT				IAmb	IAmb	06 12 37.5	
	comp=Z,2.3nm,0.8s						
CCB	Clear Creek Bu	85.24	13	P	P	06 12 36.4	-0.5
CCB				IAmb	IAmb	06 12 37.0	
	comp=Z,2.4nm,0.6s						
SCRK	Sand Creek	85.52	14	P	P	06 12 38.9	+0.5
SCRK				IAmb	IAmb	06 12 39.8	
	comp=Z,4.9nm,1.3s						
ILAR	Eielson Array	85.55	13	P	P	06 12 37.8	-0.6
	comp=Z,0.7nm,0.5s,baz=223,slow=5.6,SNR=23						
ILAR	Eielson Array	85.55	13	P	P	06 12 38.3	-0.1
TXAR	Lajitas Array	85.66	58	P	P	06 12 41.1	+1.2
	comp=Z,1.3nm,1.0s,baz=223,slow=6.8,SNR=8.2						
TXAR	Lajitas Array	85.66	58	P	P	06 12 42.0	+2.1
PDAR	Pinedale Array	86.99	43	P	P	06 12 46.2	+0.1
	comp=Z,0.3nm,0.5s,baz=194,slow=3.4,SNR=4.9						
PDAR	Pinedale Array	86.99	43	P	P	06 12 46.4	+0.3
BMAR	Burnt Mountain	88.32	12	P	P	06 12 52.3	+0.8
SONM	Songino Array	93.45	319	P	P	06 13 16.3	+0.4
	comp=Z,0.2nm,0.4s,baz=117,slow=5.0,SNR=2.7						
YKA	Yellowknife Ar	93.97	25	P	P	06 13 17.2	-0.4
	comp=Z,0.6nm,0.7s,baz=244,slow=4.5,SNR=12						
ARCES	ARCESS Array B	126.05	350	PKP	PKPdf	06 18 57.3	-2.0
	comp=Z,4.0nm,1.1s,baz=23,slow=4.0,SNR=4.2						
BOSA	Boshof	128.76	207	PKP	PKPdf	06 19 04.6	-1.4
	comp=Z,2.2nm,0.8s,baz=214,slow=3.6,SNR=4.5						
FINES	FINESS Array B	132.95	344	PKP	PKPdf	06 19 10.9	-1.7
	comp=Z,5.4nm,1.2s,baz=345,slow=4.9,SNR=3.1						
FINES	FINESS Array B	132.95	344		PKPdf	06 19 11.3	-1.2
BRTR	Keskin Array B	144.71	315	PKP	PKPdf	06 19 35.0	+0.1
	comp=Z,0.6nm,0.6s,baz=119,slow=4.5,SNR=5.6						
BRTR	Keskin Array B	144.71	315		PKPdf	06 19 35.2	+0.4
GERES	GERESS Array B	147.37	345	PKPbc	PKPbc	06 19 42.0	-0.1
	comp=Z,1.0nm,0.7s,baz=20,slow=3.1,SNR=8.8						
GERES	GERESS Array B	147.37	345		PKPbc	06 19 42.2	+0.1
TORD	Torodi Ar. Bea	175.57	179	PKPab	PKPab	06 21 46.1	-1.9
	comp=Z,0.5nm,0.8s,baz=158,slow=3.2,SNR=2.7						

*TEH **19** 06:44:14.9,31˚.83N×55˚.90E,h10km,ML3.6*

*THR **19** 06:44:15.9±0.5,31˚.96N×55˚.93E,h16km±5km,ML3.6*

ISC 19 06:44:15.9±0.9,**31˚.85N**±0˚.03×**55˚.92E**±0˚.03,**h10**km,**n40,** σ1**975**/42,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMEH	Mehriz	1.21	248	e*P*g	Pb	06 44 37.5	-1.5
IMEH				*e*		06 44 55.7	
YZKH	Yazd	1.25	296	e*P*g	Pb	06 44 38.6	-1.0
YZKH	Yazd	1.25	296	e*P*g	Pb	06 44 38.6	-1.0
YZKH				eSg	Sg	06 44 54.9	-1.2
TPRV	Parvadeh(Tabas	1.34	29	e*P*g	Pg	06 44 41.3	-0.3
TPRV				*e*		06 45 08.8	
ICHK	Chekchek	1.34	287	e*P*g	Pb	06 44 40.2	-1.1
ICHK				*e*		06 45 00.0	
KHGB	Koh Gabri	1.55	162	e*P*g	Pb	06 44 43.9	-0.9
KHGB				*e*		06 45 10.0	
ISAD	Sadrabad	1.90	272	e*P*n	Pb	06 44 49.6	-1.3
ISAD				*e*		06 45 18.7	
TVBK	TV Kerman	2.00	159	e*P*n	Pg	06 44 52.2	-2.1
TVBK				*e*		06 45 23.7	
KRBR	Kerman	2.00	159	e*P*n	Pg	06 44 52.8	-1.5
KRBR	Kerman	2.00	159	e*P*n	Pg	06 44 52.8	-1.5
KRBR				eSg	Sg	06 45 22.0	+1.8
KRBR				IAML		06 45 23.5	
KRBR	comp=N,362nm,0.7s			IAML		06 45 25.2	
	comp=E,346nm,0.5s						
TKDS	Koohdasht(Taba	2.02	30	e*P*n	Pb	06 44 51.6	-1.3
TKDS				*e*		06 45 35.6	
TABS	Tabas	2.06	29	e*P*n	Pb	06 44 51.8	-1.6
TABS	Tabas	2.06	29	e*P*g	Pb	06 44 51.8	-1.6
TNSJ	Nastanj	2.18	15	e*P*n	Pn	06 44 53.3	+0.9
TNS

ZALV	**Zalesovo Beam**	**35.00**	**306**	P		**P**	**07 00 45.6**	**-0.8**
	0.6nm,0.4s,baz=86,slow=9.3,SNR=3.4							
MKAR	**Makanchi Array**	**37.78**	**295**	P		**P**	**07 01 08.4**	**-1.4**
	0.2nm,0.7s,baz=92,slow=9.1,SNR=3.3							
ILAR	**Eielson Array**	**46.39**	**35**	P		**P**	**07 02 20.2**	**+1.9**
	0.4nm,0.5s,baz=276,slow=6.7,SNR=7.7							
FINES	**FINESS Array B**	**61.49**	**329**	P		**P**	**07 04 06.7**	**+0.3**
	1.0nm,0.7s,baz=51,slow=7.5,SNR=2.9							
NOA	**NORSAR Array B**	**66.91**	**334**	P		**P**	**07 04 41.2**	**-0.1**
	1.5nm,1.1s,baz=41,slow=4.1,SNR=2.5							

MAN 19 06:56:00.5, 13.48N×121.50E, h17km, mb4.4, ML3.2, MS3.0, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.33**	**93**	*eP*	Pg	06 56 07.5	0.0
BOAC				*eS*	Sb	06 56 13.9	+0.8
LQP	**Lukban**	**0.63**	**3**	*eP*	Pg	06 56 12.5	-0.5
LQP				*i* S	Sg	06 56 21.4	-0.1
TGY	**Tagaytay City**	**0.83**	**319**	*eP*	Pn	06 56 17.3	-0.2
GQP	**Guinayangan**	**1.01**	**65**	*eP*	Pn	06 56 19.8	-0.1
GQP				*eS*	Sg	06 56 33.3	-0.1
SJMP	**San Jose**	**1.08**	**200**	*eP*	Pg	06 56 21.6	+0.2
SJMP				*eS*	Sg	06 56 36.7	+1.2
OTRP	**Odiongan**	**1.22**	**155**	*eP*	Pn	06 56 20.7	-2.1
OTRP				*eS*	Sg	06 56 39.8	-0.2
LUBP	**Lubang**	**1.25**	**282**	*eP*	Pn	06 56 21.3	-1.9
LUBP				*eS*	Sb	06 56 39.0	-0.4
POLP	**Polilio Island**	**1.31**	**19**	*eP*	Pn	06 56 24.0	-0.1
POLP				*eS*	Sg	06 56 42.3	-0.8

BGR **19** *07:17:06.0±0.0, 0.50N×92.23E, h33km, mb4.8*
MOS **19** *07:17:09.3±1.1, 1.49N×91.63E, h10km, mb5.0/31, Error ellipse: s-maj=9.7km s-min=6.4km az=114.7*
IDC **19** *07:17:09.5±0.4, 1.35N×91.53E, h0km, mb4.5/26, mb1 4.6/29, mb1mx4.5/39, mbtmp4.5/29, ML4.5/3, MS3.4/15, Ms1 3.4/15, ms1mx3.2/39, Error ellipse: s-maj=14.7km s-min=12.0km az=47.0*
BJI **19** *07:17:10.0±0.0, 1.37N×91.48E, h6km, mB4.9/40, mb4.7/55, Ms4.6/12, Ms7 4.3/11*
NEIC **19** *07:17:10.5±1.7, 1.35N±0.04×91.51E±0.06, h10km±2km, mb4.9/99, Error ellipse: s-maj=9.4km s-min=5.1km az=119.0*
DJA **19** *07:17:12.1±0.3, 1.1N±4.9×9.2E±.7, h10km, M5.0/24, mb5.0/24, mB5.3/9, MLv5.2/8, Mw(mB)4.8/9*
GCMT **19** *07:17:14.5±0.5, 1.57N±0.04×91.62E±0.06, h19km±1km, MW4.8/77, Moment Tensor Solution. s13,c15; s77,c93; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr1.49±.16; Mθθ-1.06±.10; Mϕϕ-0.42±.10; Mrθ-1.30±.21; Mrϕ-0.27±.07; Mθϕ0.14±.26; Best double couple: M0 1.84700×10^16 NP1:ϕ1=64.00000°, δ24.00000°, λ69.00000°. NP2: ϕ2=267.00000°, δ67.00000°, λ99.00000°. Principal axes: T 2.0580, Plg66.0000°, Azm194.0000°; N -0.4160, Plg9.0000°, Azm84.0000°; P -1.6360, Plg22.0000°, Azm350.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 19 07:17:11.2±0.6, 1.40N±0.04×91.58E±0.04, h13km±3km, n387, σ1§42/399, mb4.8/130, MS3.8/18, 24C-15D, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**4.85**	**78**	P	**Pn**	**07 18 25.3**	**+1.5**
MLSI	**Meulaboh, Aceh**	**5.60**	**59**	P	**Pn**	**07 18 36.0**	**+1.9**
	2.4nm6µm286nm,0.5s						
TPTI		**5.89**	**72**	P	**Pn**	**07 18 39.3**	**+1.1**
	0.2nm854nm30nm,0.5s						
GSI	**Gunungsitoli**	**5.99**	**91**	P	**Pn**	**07 18 41.1**	**+1.5**
	1.0nm3µm254nm,0.6s						
GSI	**Gunungsitoli**	**5.99**	**91**		**Pn**	**07 18 40.3**	**+0.7**
GSI				Sn	**Sn**	**07 19 45.0**	**-3.1**
CMBY	**CAMPBELL BAY**	**6.04**	**23**	*ex*	**Pn**	**07 18 42.8**	**+2.6**
CMBY				*eP*	**Pn**	**07 18 42.9**	**+2.6**
CMBY				*ex*	**Sn**	**07 19 46.2**	**-3.1**
CMBY				IAML		07 19 57.3	
	comp=E,772nm,0.6s						
CMBY				IAML		07 19 57.6	
	comp=N,1µm,0.5s						
KCSI	**Kotacane, Aceh**	**6.53**	**71**	P	**Pn**	**07 18 49.7**	**+2.7**
	comp=N,1.0nmcomp=N,3µmcomp=N,120nm,0.6s						
LHMI	**Lhok Sumawe**	**6.57**	**55**	P	**Pn**	**07 18 51.0**	**+3.5**
	comp=N,2.5nmcomp=N,276nm,0.9s						
LHMI	**Lhok Sumawe**	**6.57**	**55**	Pn	**Pn**	**07 18 48.7**	**+1.2**
PBSI	**Pulau Batu**	**6.85**	**102**	P	**Pn**	**07 18 52.9**	**+1.5**
	comp=N,1.6nmcomp=N,4µmcomp=N,463nm,0.6s						
RPSI	**Rantau Prapat**	**7.45**	**80**		**Pn**	**07 19 01.1**	**+1.4**
RPSI				Sn	**Sn**	**07 20 20.2**	**-3.9**
RPSI	**Rantau Prapat**	**7.45**	**80**		**Pn**	**07 19 06.6**	**+0.9**
RPSI					**Sn**	**07 20 19.9**	**-4.1**
PSI	**Prapat**	**7.47**	**79**	Pn	**Pn**	**07 19 00.6**	**+0.6**
	comp=N,2.5nm,0.3s,baz=309,slow=13,SNR=7.9						
PSI				Sn	**Sn**	**07 20 19.9**	**-4.8**
	comp=N,3.7nm,0.3s,baz=310,slow=19,SNR=3.9						
PSI				LR	LR	07 21 43.6	
	comp=N,158nm,19.3s,baz=214,slow=36						
SISI	**Saibi**	**7.98**	**110**	P	**Pn**	**07 19 08.4**	**+1.5**
	comp=N,795nmcomp=N,63nm,0.9s						
PDSI	**Padang**	**9.17**	**104**	P	**Pn**	**07 19 24.3**	**+1.0**
	comp=N,101nm,0.6s						
PPSI	**Pulau Pagai**	**9.39**	**116**	P	**Pn**	**07 19 26.2**	**0.0**
	comp=N,2µmcomp=N,118nm,0.7s						
BKNI	**Bangkinang**	**9.52**	**96**	P	Pn	07 19 47.3	+19
BKNI	**Bangkinang**	**9.52**	**96**	Pn	**Pn**	**07 19 29.6**	**+1.6**
KULM	**Kulim**	**9.84**	**67**		**Pn**	**07 19 32.6**	**+0.1**
IPM	**Ipoh**	**9.91**	**72**		**Pn**	**07 19 34.7**	**+1.2**
SDSI	**Sungai Dareh**	**10.12**	**103**	P	Pn	07 19 49.5	+13
PBA	**Port Blair**	**10.25**	**6**	*eP*	Pn	07 19 39.5	+1.5
PBA	**Port Blair**	**10.25**	**6**	Pn	Pn	07 19 38.8	+0.7
KRJI	**Kerinci**	**10.47**	**109**	P	**Pn**	**07 19 43.0**	**+1.8**
	comp=N,674nm,0.7s						
DGPR	**DIGLIPUR**	**11.78**	**6**	*ex*	**Pn**	**07 19 59.5**	**+0.6**
DGPR				IAML		07 20 13.0	
	comp=N,55nm,0.5s						
DGPR				IAML		07 20 14.8	
	comp=E,46nm,0.4s						
PALK	**Pallekele**	**12.31**	**299**	*i* P	**Pn**	**07 20 04.4**	**-1.9**
PALK	**Pallekele**	**12.31**	**299**	Pn	**Pn**	**07 20 04.3**	**-2.1**
	comp=E,5.5nm,0.3s,baz=121,slow=11,SNR=24						
PALK				Sn	Sn	07 22 07.6	-16
	comp=E,13nm,0.3s,baz=29,slow=9.4,SNR=6.8						
PALK				LR	LR	07 24 25.2	
	comp=E,65nm,20.2s,baz=120,slow=36						
PALK	**Pallekele**	**12.31**	**299**		**Pn**	**07 20 04.7**	**-1.7**
PALK					Sn	07 22 09.3	-14
MNAI	**Manna**	**12.73**	**117**	Pn	**Pn**	**07 20 11.9**	**0.0**
MDSI	**Maura Dua**	**13.88**	**115**	P	P	07 20 48.3	+12
KLSI		**14.46**	**115**	P	**P**	**07 20 44.7**	**+2.2**
TRD	**Trivandrum**	**16.18**	**296**	*ex*	**P**	**07 21 05.6**	**+4.0**
TRD				*ex*	x	07 23 43.6	
SKHT	**Srikalahasti**	**16.98**	**317**	*eP*	**Pn**	**07 21 08.4**	**-0.1**
PBKT	**Sadao Pong**	**17.68**	**31**	P	**P**	**07 21 18.7**	**+0.5**
VIS	**Vishakhapatnam**	**18.13**	**334**	*i* P	**Pn**	**07 21 21.1**	**-1.7**
VIS				*i* S	Sn	07 24 27.6	-18
VIS				*i* x	x	07 24 29.2	
ADKI	**Addanki**	**18.36**	**322**	*eP*	**P**	**07 21 26.0**	**+0.3**
CM31	**Chiang Mai Arr**	**18.43**	**23**	P	**P**	**07 21 25.2**	**-1.2**
CMAR	**Chiang Mai Arr**	**18.43**	**23**	P	**Pn**	**07 21 27.2**	**+0.7**
	comp=E,0.6nm,0.3s,baz=215,slow=12,SNR=11						
CMAR				LR	LR	07 28 52.9	
	comp=E,45nm,20.8s,baz=227,slow=38						
CMAR	**Chiang Mai Arr**	**18.43**	**23**	P	**P**	**07 21 26.6**	**+0.2**
CISI	**Cisompet, Garu**	**18.48**	**119**	P	**P**	**07 21 26.2**	**-0.9**
CHLP	**Challavanipeta**	**18.53**	**337**	*eP*	**Pn**	**07 21 29.4**	**+1.7**
PVM	**Polavaram**	**18.55**	**329**	*eP*	**Pn**	**07 21 29.5**	**+1.6**
KAAM	**Kaadhehdhoo**	**18.61**	**267**	P	**P**	**07 21 27.0**	**-1.4**
KAAM				IAmb	IAmb	07 21 38.5	
	comp=E,144nm,1.4s						
MYLAV	**Mylavaram**	**18.68**	**325**	*eP*	**Pn**	**07 21 30.6**	**+1.1**
CHTO	**Chiang Mai**	**18.75**	**22**	P	**P**	**07 21 30.7**	**+0.7**
SRLM	**Srisailam**	**19.23**	**320**	*eP*	**Pn**	**07 21 37.3**	**+1.1**
NJS	**Nagarjunasagar**	**19.31**	**322**	*eP*	**Pn**	**07 21 38.8**	**+1.7**
URV	**Uravakonda**	**19.52**	**314**	*eP*	**Pn**	**07 21 39.6**	**-0.1**
BWNR	**Bhubaneshwar**	**19.61**	**344**	*eP*	**P**	**07 21 39.6**	**+0.3**
BWNR				*ex*	x	07 25 07.8	
GGR	**Gangavaram**	**19.78**	**326**	*eP*	**P**	**07 21 41.6**	**+0.3**
STKI	**Sintang**	**19.94**	**94**	P	Pn	07 21 47.0	+2.3
	comp=Z,17µcomp=Z,61nm,0.7s						
HYB	**Hyderabad**	**20.43**	**322**	*i* P	Pn	07 21 50.0	-0.5
HYB				*e*		07 25 33.0	
HYBB	**Hyderabad (bro**	**20.43**	**322**	*eP*	Pn	07 21 49.2	-1.3
SAIH	**SAIHA**	**21.01**	**4**	*ex*	P	07 22 05.1	+10
H08S2	**Diego Garcia H**	**21.05**	**244**	T	T	07 43 34.3	
	baz=65,slow=75,SNR=55						
H08S3	**Diego Garcia H**	**21.05**	**245**	T	T	07 43 34.9	
	baz=65,slow=75,SNR=34						
H08S1	**Diego Garcia H**	**21.07**	**244**	T	T	07 43 36.1	
	baz=65,slow=75,SNR=95						
RPR	**Rampur**	**21.12**	**326**	*eP*	**P**	**07 21 57.1**	**+1.3**
SRSP	**Sriramsagar**	**21.72**	**324**	*eP*	**P**	**07 22 02.5**	**+0.2**
KLRI	**Killari**	**22.16**	**319**	*eP*	**P**	**07 22 08.0**	**+1.0**
BOK	**Bokaro**	**22.94**	**347**	*eP*	**P**	**07 22 18.4**	**+3.2**
BOK				IAmb	IAmb	07 22 31.8	
	comp=Z,50nm,0.5s						
SLVN	**Son La**	**23.17**	**30**	P	**P**	**07 22 18.6**	**+0.9**
SLVN				IAmb	IAmb	07 22 30.6	
	comp=Z,27nm,1.1s						
SHL	**Shillong**	**24.03**	**1**	P	**P**	**07 22 27.2**	**+1.1**
KOHI	**KOHIMA**	**24.30**	**6**	*eP*	**P**	**07 22 32.6**	**+3.9**
KOHI				IAmb	IAmb	07 22 38.4	
	comp=Z,24nm,0.8s						
POO	**Poona**	**24.34**	**315**	*ex*	**S**	**07 26 44.4**	**-3.7**
POO				*ex*	x	07 30 51.4	
ODAN	**Odare**	**25.63**	**351**	*eP*	**P**	**07 22 42.6**	**+1.8**
	comp=Z,100nm,0.7s						
RAMN	**Ramite**	**25.85**	**350**	*eP*	**P**	**07 22 45.1**	**+2.3**
	comp=Z,65nm,0.6s						
KMI	**Kunming**	**25.93**	**24**	P	**P**	**07 22 46.0**	**+2.5**
KMI				pP	pwP	07 22 49.3	-2.9
KMI				pmax	pmax		
	comp=Z,21nm,0.6s						
KMI				pmax	pmax		
	comp=Z,200nm,4.0s						
KMI	**Kunming**	**25.93**	**24**	P	**P**	**07 22 46.9**	**+3.4**
KMI				IAmb	IAmb	07 22 57.6	
	comp=Z,22nm,0.6s						
TAPN	**Taplejung**	**26.07**	**352**	*eP*	**P**	**07 22 46.7**	**+1.9**
	comp=Z,24nm,0.7s						
JIRN	**Jiri**	**26.62**	**349**	*eP*	**P**	**07 22 51.5**	**+1.6**
	comp=Z,90nm,0.9s						
DMN	**Daman**	**26.79**	**347**	*eP*	**P**	**07 22 53.1**	**+1.8**
GUN	**Gumba**	**26.92**	**349**	*eP*	**P**	**07 22 54.4**	**+1.8**
	comp=Z,51nm,0.9s						
GKN	**Gorkha**	**27.27**	**347**	*eP*	**P**	**07 22 57.3**	**+1.7**
	comp=Z,37nm,0.9s						
KOLN	**Koldanda**	**27.31**	**344**	*eP*	**P**	**07 22 57.5**	**+1.5**
	comp=Z,24nm,0.8s						
DANN	**Dangsing**	**27.82**	**345**	*eP*	**P**	**07 23 02.2**	**+1.6**
	comp=Z,26nm,0.8s						
LSA	**Lhasa**	**28.15**	**359**	P	**P**	**07 23 06.3**	**+2.6**
LSA				pmax	pmax		
	comp=Z,91nm,0.8s						
LSA	**Lhasa**	**28.15**	**359**	P	**P**	**07 23 06.4**	**+2.7**
LSA				IAmb	IAmb	07 23 07.3	
	comp=Z,16nm,0.7s						
CD2	**Chengdu**	**31.54**	**20**	P	**P**	**07 23 34.8**	**+1.6**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
SMLA	**Simla**	**32.56**	**337**	*eP*	**P**	**07 23 44.3**	**+2.1**
SMLA				IAmb	IAmb	07 24 00.9	
	comp=Z,13nm,1.0s						
DHRM	**DHARAMSHALA**	**33.90**	**336**	*ex*	**P**	**07 23 55.1**	**+1.0**
SOEI	**Soe**	**34.38**	**109**	P	**P**	**07 23 58.8**	**+0.4**
WHN	**Wuhan**	**36.14**	**34**	‖P	**P**	**07 24 16.0**	**+2.8**
YULB	**Yu-li**	**36.17**	**51**	P	**P**	**07 24 13.4**	**-0.2**
YULB				IAmb	IAmb	07 24 30.0	
	comp=Z,37nm,1.5s						
XAN	**Xi'an**	**36.30**	**25**	P	**P**	**07 24 15.5**	**+0.9**
XAN				pP	pwP	07 24 21.5	-1.8
XAN				pmax	pmax		
	comp=Z,14nm,0.8s						
XAN	**Xi'an**	**36.30**	**25**	P	**P**	**07 24 15.3**	**+0.7**
XAN				IAmb	IAmb	07 24 24.4	
	comp=Z,20nm,1.0s						
LZH	**Lanzhou**	**36.34**	**17**	*eP*	**P**	**07 24 15.3**	**+0.2**
LZH				pP	sP	07 24 18.3	-0.6
LZH				ePP	**PP**	**07 25 39.5**	**+1.6**
LZH				pmax	pmax		
	comp=Z,23nm,1.0s						
LZH				pmax	pmax		
	comp=Z,78nm,4.9s						
LZH				LR	LR		
	comp=Z,370nm,13.3s						
LZH				LR	LR		
	comp=Z,380nm,13.1s						
LZH				LR	LR		
	comp=Z,580nm,16.5s						
NIL	**Nilore**	**36.39**	**334**	P	**P**	**07 24 16.3**	**+0.9**
NIL				IAmb	IAmb	07 24 17.3	
	comp=Z,31nm,1.1s						
NACB	**Ninganchiao**	**36.82**	**50**	P	**P**	**07 24 19.2**	**0.0**
NACB				IAmb	IAmb	07 24 20.4	
	comp=Z,20nm,1.0s						
GTA	**Gaotai**	**38.57**	**10**	*eP*	**P**	**07 24 35.8**	**+1.9**
GTA				pP	pwP	07 24 40.5	-2.1
GTA				sP	sP	07 24 42.6	+4.8
GTA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,91nm,7.5s						
GTA				LR	LR		
	comp=Z,85nm,18.4s						
GTA				LR	LR		
	comp=Z,150nm,18.7s						
KBL	**Kabul**	**39.11**	**330**	P	**P**	**07 24 38.2**	**-0.4**
NJ2	**Nanjing**	**39.88**	**37**	*eP*	**P**	**07 24 46.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KSH	**Kashi**	**40.52**	**341**	P	**P**	**07 24 49.8**	**-0.3**
KSH				pP	pwP	07 24 59.8	+0.8
KSH				PP	**PnPn**	**07 26 27.3**	**-0.2**
KSH				S	**S**	**07 30 57.1**	**-1.9**
KSH				sS	sS	07 31 04.1	+0.6
KSH				SS	**SS**	**07 33 52.5**	**-6.4**
KSH				ScS	**ScS**	**07 34 55.1**	**-1.1**
KSH				pmax	pmax		
	comp=Z,28nm,0.6s						
KSH				pmax	pmax		
	comp=Z,270nm,4.7s						
KSH				LR	LR		
	comp=Z,190nm,4.3s						
KSH				LR	LR		
	comp=Z,130nm,4.9s						
KSH				LR	LR		
	comp=Z,240nm,6.1s						
FAKI	**Fak Fak**	**40.88**	**96**	P	**P**	**07 24 52.4**	**-1.0**
FAKI				IAmb	IAmb	07 25 08.1	
	comp=Z,23nm,0.9s						
H01W3	**Cape Leeuwin H**	**41.83**	**152**	T	T	08 09 21.0	
	baz=325,slow=76,SNR=20						
H01W2	**Cape Leeuwin H**	**41.84**	**152**	T	T	08 09 22.5	
	baz=325,slow=76,SNR=31						
H01W1	**Cape Leeuwin H**	**41.84**	**152**	T	T	08 09 22.8	
	baz=325,slow=76,SNR=27						
NWAO	**Narrogin (SRO)**	**41.86**	**147**	P	**P**	**07 25 00.8**	**-0.3**
	comp=Z,14nm,1.0s,baz=57,slow=6.8,SNR=3.8						
NWAO	**Narrogin (SRO)**	**41.86**	**147**	P	**P**	**07 24 59.7**	**-1.4**
NWAO				IAmb	IAmb	07 25 04.5	
	comp=Z,19nm,1.1s						
NWAO	**Narrogin (SRO)**	**41.86**	**147**	P	**P**	**07 24 59.6**	**-1.5**
NWAO				IAmb	IAmb	07 25 04.6	
	comp=Z,22nm,1.1s						
GAR	**Garm**	**42.17**	**335**	P	**P**	**07 25 03.6**	**-0.1**
GAR				IAmb	IAmb	07 25 13.5	
	comp=Z,29nm,1.2s						
NRN	**Naryn**	**42.26**	**343**	P	**P**	**07 25 05.2**	**+0.5**
WMQ	**Urumqi**	**42.38**	**356**	*eP*	**P**	**07 25 07.1**	**+1.8**
WMQ				sP	pwP	07 25 14.8	+0.7
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.7s						
WMQ				LR	LR		
	comp=Z,520nm,28.8s						
WMQ				LR	LR		
	comp=Z,1µm,29.3s						
WMQ	**Urumqi**	**42.38**	**356**	P	**P**	**07 25 05.9**	**+0.7**
CHGR	**Chuyangaron**	**42.38**	**334**	P	**P**	**07 25 05.3**	**-0.1**
KDJ	**Kajisay**	**42.57**	**344**	P	**P**	**07 25 07.2**	**+0.3**
PRZ	**Przheval'sk**	**42.58**	**346**	P	**P**	**07 25 06.5**	**-0.6**
PRZ				IAmb	IAmb	07 25 18.7	
	comp=Z,37nm,1.2s						
HRA	**Herat**	**42.74**	**323**	P	**P**	**07 25 07.7**	**-0.9**
BTK	**Batken**	**42.86**	**336**	P	**P**	**07 25 08.9**	**-0.4**
ULHL	**Ulahol**	**42.94**	**343**	P	**P**	**07 25 11.3**	**+1.3**
	SNR=5.3						
ARSB	**Arslanbob**	**43.15**	**339**	P	**P**	**07 25 12.0**	**+0.4**
ARSB				IAmb	IAmb	07 25 22.5	
	comp=Z,18nm,0.7s						
HHC	**Hu-ho-hao-te**	**43.24**	**22**	*eP*	**P**	**07 25 14.9**	**+2.6**
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,25nm,5.1s						
BOOM	**Boomskoye usch**	**43.25**	**343**	P	**P**	**07 25 12.5**	**0.0**
JOW	**Kunigami**	**43.35**	**51**	P	**P**	**07 25 12.6**	**-0.8**
JOW				IAmb	IAmb	07 25 13.8	
	comp=Z,27nm,0.9s						
UCH	**Uchtor**	**43.44**	**342**	P	**P**	**07 25 15.8**	**+1.4**
	SNR=12						
AML	**Almayashu**	**43.62**	**341**	P	**P**	**07 25 17.2**	**+1.4**
	SNR=19						
KBK	**Karagaybulak**	**43.70**	**342**	P	**P**	**07 25 18.0**	**+1.9**
	SNR=6.5						
TKM2	**Tokmak 2**	**43.74**	**343**	P	**P**	**07 25 17.5**	**+1.0**
	SNR=8.1						
AAK	**Ala-Archa**	**43.82**	**342**	*ceP*	**P**	**07 25 15.7**	**-1.4**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AAK	**Ala-Archa**	**43.82**	**342**	P	**P**	**07 25 16.8**	**-0.2**
EKS2	**Erkin-Say**	**44.07**	**341**	P	**P**	**07 25 20.9**	**+1.8**
	SNR=10						
USP	**Ospenovka**	**44.39**	**342**	P	**P**	**07 25 22.5**	**+1.0**
	SNR=15						
BJT	**Baijiatuau**	**44.47**	**27**	P	**P**	**07 25 25.2**	**+3.1**
BJT				IAmb	IAmb	07 25 34.6	
	comp=Z,24nm,1.0s						
BJI	**Beijing**	**44.49**	**27**	P	**P**	**07 25 25.3**	**+3.1**
BJI				pmax	pmax		
	comp=Z,20nm,0.9s						
KK31	**Karatay Array**	**45.59**	**338**	P	**P**	**07 25 31.5**	**+0.4**
KK31				IAmb	IAmb	07 25 41.3	
	comp=Z,8.8nm,0.7s						
KKAR	**Karatay Array**	**45.59**	**338**	P	**P**	**07 25 31.5**	**+0.5**
KKAR				IAmb	IAmb	07 25 41.3	
	comp=Z,8.8nm,0.7s						
KKAR	**Karatay Array**	**45.59**	**338**	P	**P**	**07 25 31.6**	**+0.6**
MK31	**Makanchi Array**	**45.93**	**351**	P	**P**	**07 25 34.0**	**+0.3**
MK31				IAmb	IAmb	07 25 43.8	
	comp=Z,7.4nm,0.7s						
MKAR	**Makanchi Array**	**45.93**	**351**	P	**P**	**07 25 34.5**	**+0.9**
	comp=Z,7.3nm,0.6s,baz=169,slow=8.7,SNR=99						
MKAR				LR	LR	07 47 13.1	
	comp=Z,38nm,20.4s,baz=161,slow=39						
MKAR	**Makanchi Array**	**45.93**	**351**	P	**P**	**07 25 33.6**	**-0.1**
MAKZ	**Makanchi**	**46.00**	**351**	P	**P**	**07 25 34.2**	**+0.1**
DL2	**Dalian**	**46.34**	**33**	P	P	07 25 46.3	+9.3
DL2				pmax	pmax		
	comp=Z,50nm,1.1s						
WRA	**Warramunga Arr**	**46.98**	**119**	P	**P**	**07 25 42.9**	**+0.6**
	comp=Z,11nm,0.8s,baz=296,slow=8.7,SNR=36						
WRA				PcP	**PcP**	**07 27 14.7**	**0.0**
	comp=Z,3.0nm,0.8s,baz=299,slow=2.5,SNR=7.3						
WRA	**Warramunga Arr**	**46.98**	**119**	P	**P**	**07 25 42.5**	**+0.2**
WRAB	**Tennant Creek**	**46.98**	**119**	*ceP*	**P**	**07 25 42.0**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,53nm,2.5s						
WRAB	**Tennant Creek**	**46.98**	**119**	P	**P**	**07 25 42.2**	**-0.2**
WR0	**Warramunga Arr**	**47.16**	**119**	P	**P**	**07 25 44.2**	**+0.4**
FORT	**Forrest**	**47.20**	**136**	P	**P**	**07 25 45.3**	**+1.4**
GEYT	**Alibeck**	**47.60**	**324**	P	**P**	**07 25 48.3**	**+1.4**
	comp=Z,7.0nm,0.8s,baz=145,slow=10,SNR=16						
GEYT				LR	LR	07 47 21.4	
	comp=Z,59nm,19.2s,baz=40,slow=38						
GEYT	**Alibeck**	**47.60**	**324**	P	**P**	**07 25 47.0**	**+0.1**
GYA0B	**ALIBECK ARRAY**	**47.60**	**324**	P	**P**	**07 25 47.2**	**+0.3**
GYA0B				IAmb	IAmb	07 25 49.2	
	comp=Z,8.5nm,0.9s						
OPO	**Ambohidratompo**	**47.94**	**243**	P	**P**	**07 25 50.2**	**+0.2**
	comp=Z,4.2nm,0.8s,baz=90,slow=9.1,SNR=3.5						
SONM	**Songino Array**	**48.00**	**13**	P	**P**	**07 25 52.0**	**+2.0**
	comp=Z,17nm,0.7s,baz=193,slow=8.6,SNR=119						
SONM				PcP	**PcP**	**07 27 19.0**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=200,slow=3.6,SNR=3.1						
SONM				LR	LR	07 47 04.6	
	comp=Z,63nm,20.2s,baz=214,slow=37						
SONM	**Songino Array**	**48.00**	**13**	P	**P**	**07 25 51.9**	**+2.0**
ABPO	**Ambohimpanom**	**48.05**	**243**	P	**P**	**07 25 51.5**	**+0.7**
ABPO				IAmb	IAmb	07 25 52.5	
	comp=Z,10nm,1.1s						
AS31	**Alice Springs**	**48.09**	**124**	P	**P**	**07 25 51.6**	**+0.7**
ASAR	**Alice Springs**	**48.09**	**124**	P	**P**	**07 25 51.5**	**+0.5**
	comp=Z,2.6nm,0.9s,baz=302,slow=7.7,SNR=22						
ASAR				PcP	**PcP**	**07 27 19.3**	**+0.6**
	comp=Z,3.9nm,0.8s,baz=303,slow=3.5,SNR=19						
ASAR	**Alice Springs**	**48.09**	**124**	P	**P**	**07 25 51.9**	**+0.9**
ULN	**Ulaanbaatar**	**48.19**	**14**	*ceP*	**P**	**07 25 50.4**	**-1.0**
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
ULN	**Ulaanbaatar**	**48.19**	**14**	P	**P**	**07 25 52.3**	**+0.9**
ULN				IAmb	IAmb	07 26 02.6	
	comp=Z,14nm,1.3s						
DAMY	**Dhamar**	**48.40**	**288**	P	**P**	**07 25 53.5**	**-0.3**
KSAR	**Wonju Array Be**	**49.01**	**39**	P	**P**	**07 25 58.0**	**+0.2**
KS19	**Wonju Array Si**	**49.03**	**39**	P	**P**	**07 25

comp=Z,7.8nm,0.8s,baz=107,slow=5.6,SNR=20
KBZ LR LR 07 56 19.9
comp=Z,23nm,18.0s,baz=80,slow=39
SHA1 Shidzhatmaz 60.47 321 *i* P **P** **07 27 20.0 -1.1**
SVE Sverdlovsk 60.55 341 *eP* **P** **07 27 21.0 -0.1**
SVE pmax pmax
comp=Z,18nm,1.0s
KIV Kislovodsk 60.56 321 *eP* **P** **07 27 21.4 -0.1**
KIV pmax pmax
comp=Z,59nm,1.0s
KIV MLR MLR
comp=Z,111nm,17.0s
KIV Kislovodsk 60.56 321 P **P** **07 27 20.6 -0.9**
ARU Arti 60.93 340 *d iP* **P** **07 27 23.0 -0.6**
ARU 07 29 34.6
ARU S **S** **07 35 41.4 +0.1**
ARU SS **SS** **07 39 37.3 -3.5**
ARU pmax pmax
comp=Z,7.0nm,1.1s
ARU Arti 60.93 340 P **P** **07 27 22.9 -0.8**
ARU IAmb IAmb 07 27 32.8
comp=Z,6.3nm,0.9s
GAZ Gaziantep 61.33 312 P **P** **07 27 25.4 -1.5**
GAZ IAmb IAmb 07 27 38.2
comp=Z,11nm,0.9s
GRNR Gornyy 62.04 30 *eP* **P** **07 27 31.0 -0.3**
GRNR pmax pmax
comp=Z,2.0nm,1.2s
EIDS Eidsvold 63.34 119 P **P** **07 27 39.6 -0.8**
EIDS IAmb IAmb 07 27 42.2
comp=Z,8.6nm,0.9s
YSS Yuzh-Sakhalins 63.45 37 P **P** **07 27 41.1 +0.4**
CSS Mathiatis 63.52 309 P **P** **07 27 41.2 -0.2**
CSS IAmb IAmb 07 27 52.8
comp=Z,8.6nm,1.0s
CAN Canberra 64.77 130 P **P** **07 27 49.1 -0.6**
CAN IAmb IAmb 07 28 02.0
comp=Z,14nm,1.2s
BR131 Keskin Array S 64.87 314 P **P** **07 27 50.3 -0.2**
BR131 IAmb IAmb 07 28 00.1
comp=Z,6.0nm,1.1s
BRTR Keskin Array B 64.87 314 *ceP* **P** **07 27 50.2 -0.2**
BRTR pmax pmax
comp=Z,2.0nm,0.7s
BRTR Keskin Array B 64.87 314 P **P** **07 27 50.4 -0.1**
comp=Z,2.3nm,0.7s,baz=128,slow=7.6,SNR=14
BRTR LR LR 07 58 22.4
comp=Z,24nm,20.1s,baz=48,slow=38
BRTR Keskin Array B 64.87 314 P **P** **07 27 50.0 -0.4**
VRH Novokhopyorsk 64.89 328 *eP* **P** **07 27 49.5 -0.6**
VRH pmax pmax
comp=E,20nm,1.4s
VRH pmax pmax
comp=N,10.0nm,0.9s
VRH pmax pmax
comp=Z,10.0nm,0.9s
ARMA Armidale 65.23 124 P **P** **07 27 52.5 -0.4**
ARMA IAmb IAmb 07 27 55.8
comp=Z,8.9nm,0.9s
ILGA Ilgaz 65.29 315 P **P** **07 27 52.7 -0.5**
ILGA IAmb IAmb 07 27 54.9
comp=Z,12nm,1.2s
ANTO Ankara 65.53 314 P **P** **07 27 53.9 -0.8**
ANTO IAmb IAmb 07 28 04.7
comp=Z,8.9nm,0.8s
VSR Storozhevoye 66.27 327 *eP* **P** **07 27 58.3 -0.7**
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR pmax pmax
comp=N,3.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.2s
ELL Elmali 66.70 310 P **P** **07 28 01.2 -1.0**
MDUB Mudurnu 66.88 314 P **P** **07 28 03.1 -0.2**
YAK Yakutsk 66.90 18 *eP* **P** **07 28 02.4 -0.4**
YAK *e**PP **pwP** **07 28 11.3 -0.3**
YAK *e* 07 28 28.4
YAK *e* 07 30 29.6
YAK *eS* **S** **07 36 54.6 -0.7**
YAK *e**SS sS 07 37 18.3 +18
YAK *eSS* **SS** **07 41 19.3 +5.6**
YAK pmax pmax
comp=Z,25nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.3s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK pmax pmax
comp=Z,168nm,5.7s
YAK pmax pmax
comp=N,108nm,4.8s
YAK pmax pmax
comp=E,134nm,5.4s
YAK smax smax
comp=N,85nm,3.6s
YAK smax smax
comp=E,94nm,3.6s
YAK Yakutsk 66.90 18 P **P** **07 28 02.8 -0.1**
comp=E,9.9nm,0.6s,baz=195,slow=0.6,SNR=6.3
YAK Yakutsk 66.90 18 P **P** **07 28 02.7 -0.1**
LPSR Galich'ya Gora 67.10 328 *eP* **P** **07 28 04.0 -0.3**
LPSR pmax pmax
comp=Z,20nm,1.0s
LPSR pmax pmax
comp=N,7.0nm,0.6s
LPSR pmax pmax
comp=E,7.0nm,0.5s
MANT Manisa 68.23 311 P **P** **07 28 11.6 -0.4**
KARP Karpathos 68.53 308 P **P** **07 28 13.3 -0.4**
LBTB Lobatse 68.96 243 P **P** **07 28 16.1 -0.6**
PRGR Permogore 69.31 338 *eP* **P** **07 28 16.5 -1.5**
PRGR *eS* **S** **07 37 23.7 -0.4**
PRGR pmax pmax
comp=Z,12nm,0.7s
MOS Moscow 69.35 331 *eP* **P** **07 28 17.0 -1.3**
OBN Obninsk 69.56 330 *⇓eP* **P** **07 28 20.1 +0.5**
OBN *PP **sP** **07 28 22.0 -1.6**
OBN *e* 07 28 28.6
OBN pmax pmax
comp=Z,32nm,2.5s
OBN MLR MLR
comp=Z,48nm,13.0s
BOSA Boshof 70.04 239 P **P** **07 28 22.1 -1.2**
comp=Z,4.8nm,1.0s,baz=74,slow=3.3,SNR=6.9
BOSA Boshof 70.04 239 P **P** **07 28 22.2 -1.1**
BOSA IAmb IAmb 07 28 23.3
comp=Z,5.3nm,0.9s
CFR Carcaliu 70.53 318 ⇓P **P** **07 28 26.4 +0.6**
CFR Carcaliu 70.53 318 ⇓P **P** **07 28 26.4 +0.6**
SORM Soroca 71.36 321 ⇑P **P** **07 28 30.8 0.0**
SORM Soroca 71.36 320 ⇑P **P** **07 28 30.8 0.0**
BISRR Bisoca 71.60 318 ⇑P **P** **07 28 34.7 +2.3**
VRI Vrincioaia 71.69 318 ⇑P **P** **07 28 34.3 +1.4**
VRI Vrincioaia 71.69 318 ⇑P **P** **07 28 34.3 +1.4**
AKASG Malin Array Be 71.72 324 *ceP* **P** **07 28 31.6 -1.3**
AKASG pmax pmax
comp=Z,2.0nm,0.8s
AKASG Malin Array Be 71.72 324 P **P** **07 28 32.5 -0.4**
comp=Z,0.1nm,0.3s,baz=92,slow=4.5,SNR=11
AKASG Malin Array Be 71.72 324 P **P** **07 28 30.1 -2.8**
AKBB Malin Array Si 71.72 324 P **P** **07 28 31.6 -1.3**
AKBB IAmb IAmb 07 28 42.7
comp=Z,10nm,1.4s
MAW Mawson 71.73 191 LR LR 07 52 48.8
comp=Z,53nm,18.5s,baz=63,slow=30
PLOR Plostina 71.73 318 ⇑P **P** **07 28 34.7 +1.5**
PLOR Plostina 71.73 318 ⇑P **P** **07 28 34.7 +1.5**
TESR Tescani 71.94 319 ⇓P **P** **07 28 35.3 +0.9**
MLR Muntele Rosu 72.10 318 ⇓P **P** **07 28 37.1 +1.6**
MLR Muntele Rosu 72.10 318 ⇓P **P** **07 28 37.1 +1.6**
MLR Muntele Rosu 72.10 318 P **P** **07 28 36.7 +1.2**
BIZ Bicaz 72.42 319 ⇓P **P** **07 28 38.0 +0.8**
PLVB Pleven 72.43 315 ⇑P **P** **07 28 38.7 +1.3**
PRAR RASCA 72.47 320 ⇓P **P** **07 28 38.9 +1.4**
DOPR Dopca 72.61 318 ⇓P **P** **07 28 39.1 +0.7**
VOIR 72.69 317 ⇓P **P** **07 28 39.1 +0.2**
VOIR 72.69 317 ⇓P **P** **07 28 39.1 +0.2**
ARR Arges 72.95 317 ⇑P **P** **07 28 40.7 +0.2**
BURAR Bucovina Array 73.20 320 ⇑P **P** **07 28 43.3 +1.3**
BURAR Bucovina Array 73.20 320 ⇑P **P** **07 28 43.3 +1.3**
BURAR Bucovina Array 73.20 320 P **P** **07 28 42.6 +0.6**
BUR08 Bucovina Ar. S 73.22 320 P **P** **07 28 43.2 +1.1**
BUR08 IAmb IAmb 07 28 53.2
comp=Z,8.2nm,0.8s
VTS Vitosha 73.22 314 ⇑P **P** **07 28 42.5 +0.2**
VTS Vitosha 73.22 314 ⇑P **P** **07 28 42.5 +0.2**
VTS Vitosha 73.22 314 P **P** **07 28 42.0 -0.3**
VTS IAmb IAmb 07 28 52.3
comp=Z,6.9nm,0.9s
MA2 Magadan 73.65 27 *ceP* **P** **07 28 43.3 -0.9**
MA2 pmax pmax
comp=Z,22nm,2.5s
MA2 Magadan 73.65 27 P **P** **07 28 44.1 -0.1**
MA2 IAmb IAmb 07 28 45.9
comp=Z,7.4nm,0.9s
TIXI Tiksi 74.04 12 *i* P **P** **07 28 44.9 -1.4**
TIXI pmax pmax
comp=Z,7.0nm,0.9s
TIXI Tiksi 74.04 12 P **P** **07 28 46.2 -0.1**
comp=Z,9.5nm,0.7s,baz=180,slow=24,SNR=17
TIXI Tiksi 74.04 12 P **P** **07 28 45.8 -0.4**
TIXI IAmb IAmb 07 28 46.9
comp=Z,10nm,0.7s
GZR Gura Zlata 74.22 317 ⇓P **P** **07 28 49.6 +1.6**
GZR Gura Zlata 74.22 317 ⇓P **P** **07 28 49.6 +1.6**
HERR Herculane 74.34 316 ⇑P **P** **07 28 45.6 -3.0**
PEA0B Petropavlovsk- 74.73 35 P **P** **07 28 49.6 -1.1**
BZS Buzias 75.07 317 ⇑P **P** **07 28 53.0 +0.2**
BZS Buzias 75.07 317 ⇑P **P** **07 28 53.0 +0.2**
TRPA Tarpa 75.07 320 ⇑P **P** **07 28 54.2 +1.5**
KOLS Kolonicke sedl 75.45 320 *eP* **P** **07 28 56.1 +1.1**
KOLS pmax pmax
comp=Z,10.0nm,1.2s
KOLS Kolonicke sedl 75.45 320 *eP* **P** **07 28 56.1 +1.1**
SEY Seymchan 75.84 24 *i* P **P** **07 28 55.0 -1.8**
SEY Seymchan 75.84 24 P **P** **07 28 57.0 +0.1**
comp=Z,2.9nm,0.9s,baz=256,slow=7.2,SNR=5.9
SUW Suwalki 76.30 326 *eP* **P** **07 29 00.3 +0.6**
SUW Suwalki 76.30 326 *eP* **P** **07 29 00.3 +0.6**
SUW Suwalki 76.30 326 P **P** **07 28 59.5 -0.2**
KECS Kecovo 76.49 320 *eP* **P** **07 29 03.0 +2.1**
KECS pmax pmax
comp=Z,5.0nm,0.8s
KECS Kecovo 76.49 320 *eP* **P** **07 29 03.0 +2.1**
FINES FINESS Array B 77.26 333 *i* P **P** **07 29 05.5 +0.6**
FINES pmax pmax
comp=Z,4.0nm,0.9s
FINES FINESS Array B 77.26 333 P **P** **07 29 05.1 +0.2**
comp=Z,4.3nm,0.9s,baz=103,slow=6.1,SNR=8.7
FINES LR LR 08 05 26.5
comp=Z,59nm,18.3s,baz=115,slow=38
FINES FINESS Array B 77.26 333 P **P** **07 29 04.7 -0.3**
OJC Ojcow 77.33 321 *eP* **P** **07 29 06.8 +1.2**
OJC Ojcow 77.33 321 *eP* **P** **07 29 06.8 +1.2**
OJC Ojcow 77.33 321 P **P** **07 29 05.5 0.0**
OJC IAmb IAmb 07 29 16.5
comp=Z,9.5nm,1.1s
MODS Modra-Piesok 78.56 319 *eP* **P** **07 29 12.6 +0.1**
MODS pmax pmax
comp=Z,23nm,1.3s
MODS Modra-Piesok 78.56 319 *eP* **P** **07 29 12.5 +0.1**
KRLC Kraliky 79.20 321 *eP* **P** **07 29 17.2 +1.2**
KRLC *e* 07 29 25.9
KRLC Kraliky 79.20 321 *eP* **P** **07 29 17.2 +1.2**
KRLC *e*PCP **PcP** **07 29 25.9 +1.6**
CONA Conrad Observa 79.41 318 *eP* **P** **07 29 17.8 +0.5**
comp=Z,3.5nm,1.1s
ARSA Arzberg 79.52 318 *epP* **P** **07 29 19.0 +1.2**
comp=Z,6.7nm,0.9s
DPC Dobruska-Polom 79.54 321 *eP* **P** **07 29 19.2 +1.4**
DPC *e* 07 29 27.9
DPC Dobruska-Polom 79.54 321 *eP* **P** **07 29 19.2 +1.4**
DPC *ex* x 07 29 27.9
OSTC Ostas 79.64 321 *eP* **P** **07 29 20.1 +1.7**
OSTC *ex* x 07 29 28.0
KSP Ksiaz 79.64 321 *eP* **P** **07 29 19.0 +0.7**
KSP Ksiaz 79.64 321 *eP* **P** **07 29 19.0 +0.7**
CHVC Chvalec 79.75 321 *eP* **P** **07 29 20.2 +1.3**
CHVC *ex* x 07 29 28.7
UPC Upice 79.76 321 *eP* **P** **07 29 20.4 +1.4**
UPC *e* 07 29 29.5
UPC Upice 79.76 321 *eP* **P** **07 29 20.4 +1.4**
UPC *ex* x 07 29 29.5
ARCES ARCESS Array B 80.48 341 P **P** **07 29 22.6 +0.1**
comp=Z,3.8nm,1.0s,baz=71,slow=7.8,SNR=4.0
ARCES LR LR 08 05 29.8
comp=Z,53nm,20.6s,baz=238,slow=36
PRU Pruhonice 80.60 320 *eP* **P** **07 29 25.5 +2.0**
PRU *e* 07 29 34.0
PRU Pruhonice 80.60 320 *eP* **P** **07 29 25.5 +2.0**
PRU *ex* x 07 29 34.0
GEC2 GERESS Array S 80.97 319 *eP* **P** **07 29 26.8 +1.1**
comp=Z,14nm,0.9s,baz=97,slow=5.0
GEC2 GERESS Array S 80.97 319 P **P** **07 29 25.5 -0.1**
GERES GERESS Array B 80.97 319 P **P** **07 29 26.8 +1.1**
comp=Z,11nm,0.8s,baz=101,slow=5.6,SNR=63
GERES LR LR 08 10 34.8
comp=Z,12nm,19.6s,baz=100,slow=40
GERES GERESS Array B 80.97 319 P **P** **07 29 26.5 +0.8**
KHC Kasperske Hory 81.09 319 *i* P **P** **07 29 24.8 -1.4**
KHC pmax pmax
comp=Z,7.0nm,1.0s
KHC Kasperske Hory 81.09 319 *eP* **P** **07 29 26.9 +0.7**
KHC *ex* x 07 29 35.1
KHC *ex* x 07 29 42.0
KHC Kasperske Hory 81.09 319 P **P** **07 29 26.3 0.0**
BRG Berggiesshubel 81.12 321 *eP* **P** **07 29 27.4 +1.1**
comp=Z,10nm,1.3s
BRG *e* 07 29 36.6
comp=Z,19nm,1.5s
BRG Berggiesshubel 81.12 321 *eP* **P** **07 29 27.4 +1.1**
BRG *e* 07 29 36.6
BRG pmax pmax
comp=Z,10.0nm,1.3s
BRG pmax pmax
comp=Z,19nm,1.5s
WET Wettzell 81.55 319 *eP* **P** **07 29 30.0 +1.4**
comp=Z,7.2nm,1.0s,baz=97,slow=5.0
CLL Collm 81.77 322 *eP* **P** **07 29 30.0 +0.3**
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 81.77 322 *eP* **P** **07 29 30.0 +0.3**
comp=Z,5.0nm,0.9s
CLL *e* 07 29 40.0
CLL Collm 81.77 322 P **P** **07 29 28.4 -1.3**
CLL IAmb IAmb 07 29 40.4
comp=Z,8.3nm,1.0s
TANN Tannenbergstha 81.99 321 *eP* **P** **07 29 32.1 +1.1**
comp=Z,3.3nm,0.9s,baz=97,slow=5.0
CTI Castel Tesino 82.00 316 P **P** **07 29 30.5 -0.7**
CTI IAmb IAmb 07 29 41.9
comp=Z,11nm,0.9s
GUNZ Gunzen 82.06 321 *eP* **P** **07 29 32.7 +1.4**
comp=Z,3.1nm,0.9s,baz=97,slow=5.0
ROTZ Rotzenmuhle 82.07 320 *eP* **P** **07 29 32.9 +1.6**
comp=Z,3.0nm,0.9s,baz=97,slow=5.0
WTTA Wattenberg 82.14 317 P **P** **07 29 32.1 +0.1**
comp=Z,4.5nm,0.9s
MANZ Manzenberg 82.16 320 *eP* **P** **07 29 33.7 +1.9**
comp=Z,5.1nm,0.8s,baz=97,slow=5.0
SQTA Sankt Quirin 82.43 317 *eP* **P** **07 29 33.8 +0.4**
comp=Z,3.8nm,0.9s,SNR=4.5
FUR Furstenfeldbru 82.49 318 *eP* **P** **07 29 34.5 +0.9**
comp=Z,8.0nm,0.8s,baz=97,slow=5.0
MOTA Moosalm 82.52 317 *eP* **P** **07 29 34.2 +0.3**
comp=Z,6.1nm,0.9s
GRF Grafenberg Arr 82.69 320 *eP* **P** **07 29 36.3 +1.7**
comp=Z,5.2nm,0.9s,baz=97,slow=5.0
FETA Feichten 82.73 317 *eP* **P** **07 29 35.4 +0.3**
comp=Z,4.5nm,1.0s
RETA Reutte 82.76 318 *eP* **P** **07 29 35.9 +0.8**
comp=Z,10nm,1.1s,SNR=6.7
KEST Kesra 82.88 306 P **P** **07 29 37.7 +1.7**
comp=Z,7.4nm,0.9s,baz=162,slow=3.2,SNR=6.0
KEST Kesra 82.88 306 P **P** **07 29 34.8 -1.2**
BILL Bilibino 83.00 21 *⇑eP* **P** **07 29 36.7 +0.9**
BILL *PP **sP** **07 29 39.0 -0.8**
BILL 07 32 46.0
BILL pmax pmax
comp=Z,3.0nm,1.0s
BILL MLR MLR
comp=Z,62nm,16.0s
BILL Bilibino 83.00 21 P **P** **07 29 36.2 +0.4**
UBR Ueberruh 83.22 318 *eP* **P** **07 29 38.3 +0.8**
comp=Z,4.5nm,0.8s,baz=97,slow=5.0
DAVA Damuels 83.34 317 *epP* **P** **07 29 39.3 +1.1**
comp=Z,13nm,0.8s
CLZ Clausthal 83.46 322 *eP* **P** **07 29 39.6 +1.0**
comp=Z,5.5nm,0.8s,baz=97,slow=5.0
GTTG Gvttingen 83.69 322 *eP* **P** **07 29 40.7 +1.1**
comp=Z,18nm,1.1s,baz=97,slow=5.0
NRDL Niedersach Rie 83.69 323 *eP* **P** **07 29 41.1 +1.5**
comp=Z,5.2nm,0.9s,baz=97,slow=5.0
NOA NORSAR Array B 84.11 331 LR LR 08 09 07.7
comp=Z,18nm,19.5s,baz=345,slow=37
TNS Taunus Mts 84.53 320 *eP* **P** **07 29 45.1 +1.0**
comp=Z,4.8nm,0.9s,baz=97,slow=5.0
BUG Bochum--Univer 85.36 321 *eP* **P** **07 29 49.4 +1.3**
comp=Z,5.4nm,0.7s,baz=97,slow=5.0
SPITS Spitsbergen Ar 85.62 348 P **P** **07 29 49.2 +0.3**
comp=Z,2.6nm,0.7s,baz=103,slow=4.6,SNR=3.9
TAM Tamanrasset 85.83 293 P **P** **07 29 51.7 +0.4**
TAM IAmb IAmb 07 29 54.1
comp=Z,18nm,1.5s
BFZ Birch Farm 86.85 131 P **P** **07 29 55.0 -0.8**
NVL N'lazarevskaya 87.93 199 *eP* **P** **07 30 01.4 +1.1**
NVL pmax pmax
comp=Z,17nm,1.0s
TORD Torodi Ar. Bea 89.58 283 P **P** **07 30 08.7 -0.5**
comp=Z,0.6nm,0.9s,baz=74,slow=6.2,SNR=2.7
TORD Torodi Ar. Bea 89.58 283 P **P** **07 30 07.9 -1.4**
QSPA South Pole Qui 91.35 180 P **P** **07 30 17.4 +0.9**
comp=Z,3.7nm,0.9s,baz=270,slow=0.6,SNR=28
QSPA South Pole Qui 91.35 180 P **P** **07 30 17.4 +0.9**
QSPA IAmb IAmb 07 30 27.6
comp=Z,11nm,1.2s
ESDC Sonseca Array 93.39 310 P **P** **07 30 28.3 +1.7**
comp=Z,0.2nm,0.5s,baz=83,slow=4.0,SNR=3.7
ESDC Sonseca Array 93.39 310 P **P** **07 30 25.2 -1.4**
RDOG Red Dog Mine 94.47 21 P **P** **07 30 31.1 +0.3**
YKA Yellowknife Ar 113.27 13 PKiKP **PKiKP** **07 35 46.8 -1.6**
comp=Z,0.2nm,0.8s,baz=328,slow=2.4,SNR=2.9
YKA PP **PP** **07 36 30.8 -7.1**
comp=Z,0.2nm,0.7s,baz=330,slow=6.6,SNR=3.0
SCHQ Schefferville 121.20 346 PKP **PKPdf** **07 36 03.8 -0.1**
comp=Z,3.0nm,0.9s,baz=256,slow=2.5,SNR=4.1
SCHQ Schefferville 121.20 346 **PKiKP** **07 36 04.1 +0.1**
ULM Lac du Bonnet 128.15 6 PKP **PKPdf** **07 36 17.1 -0.2**
comp=Z,3.3nm,0.8s,baz=45,slow=1.4,SNR=6.8
ULM Lac du Bonnet 128.15 6 **PKPdf** **07 36 16.5 -0.8**
REDW Red Top Meadow 131.10 22 **PKPdf** **07 36 23.1 -0.3**
NVAR Mina Array Bea 131.74 32 PKP **PKiKP** **07 36 26.1 +0.3**
comp=Z,0.7nm,0.9s,baz=328,slow=0.1,SNR=4.2
PDAR Pinedale Array 132.08 21 PKP **PKPdf** **07 36 25.8 +0.5**
comp=Z,0.6nm,0.7s,baz=34,slow=1.6,SNR=5.3
PDAR Pinedale Array 132.08 21 **PKPdf** **07 36 24.4 -1.0**
ECSD EROS Data Cent 134.47 8 **PKPdf** **07 36 28.8 -0.7**
BDFB Brasilia 137.72 248 PKP **PKPdf** **07 36 36.2 -0.2**
comp=Z,1.0nm,0.4s,baz=153,slow=7.6,SNR=4.3
BDFB Brasilia 137.72 248 **PKPdf** **07 36 34.6 -1.7**
CPUP Villa Florida 141.17 228 PKhKP PKPpre 07 36 35.9
comp=Z,1.2nm,0.8s,baz=117,slow=5.9,SNR=3.1
CPUP PKP **PKPdf** **07 36 42.5 +0.2**
comp=Z,1.8nm,0.8s,baz=241,slow=4.8,SNR=3.5
MNTX Cornudas Mount 143.36 25 PKPbc 07 36 44.5 +1.4
MIAR Mount Ida 143.92 7 PKPbc 07 36 45.6 +1.0
ABTX Abilene, Hawle 144.53 16 PKPbc 07 36 46.7 +0.1
WLAR White Oak Lake 144.82 7 **PKPdf** **07 36 48.4 -0.1**
Z41A Richland Creek 145.28 6 **PKPdf** **07 36 49.5 +0.1**
Z51A Franklin 145.33 355 **PKPdf** **07 36 49.5 0.0**
Z50A Ashland 145.45 356 **PKPdf** **07 36 49.6 0.0**
WHTX Lake Whitney, 145.70 14 **PKPab** **07 36 51.6 +0.9**
LRAL Lakeview Retre 145.72 358 PKPdf **PKPdf** **07 36 48.7 -1.4**
LRAL **PKPbc** **07 36 50.1 -0.3**
154A Montrose 145.80 352 **PKPab** **07 36 51.4 +0.4**
152A Waverly Hall 145.94 354 **PKPab** **07 36 51.8 +0.3**
TX31 Lajitas Ar. Si 146.13 24 **PKPab** **07 36 52.6 +0.1**
TX32 Lajitas Array 146.14 24 **PKPab** **07 36 52.9 +0.3**
TXAR Lajitas Array 146.14 24 PKPbc **PKPab** **07 36 52.5 0.0**
comp=Z,5.8nm,0.7s,baz=276,slow=1.3,SNR=70
253A Americus 146.47 353 **PKPab** **07 36 53.3 -0.3**
JCT Junction City 146.49 18 **PKPbc** **07 36 52.6 -0.3**
NATX Nacogdoches 146.49 10 **PKPab** **07 36 53.5 -0.2**
435B Jarrell 146.83 15 **PKPab** **07 36 54.6 -0.4**
GO04 Tololo Observa 146.85 209 **PKPbc** **07 36 54.2 0.0**
TIGA Tifton 147.02 352 **PKPbc** **07 36 54.9 +0.6**
352A Blakely 147.13 354 **PKPbc** **07 36 55.2 +0.6**
HPIG 147.29 29 **PKPbc** **07 36 56.4 +1.0**
HKT Hockley 148.03 12 **PKiKP** **07 36 58.0 -0.9**
833A Chaparral WMA, 148.62 19 PKPdf **PKPdf** **07 36 55.4 +0.3**
833A **PKiKP** **07 36 59.7 -0.5**
MTP Monte Pirata 150.30 312 **PKiKP** **07 37 04.7 +0.8**
MTP PKPab **PKPab** **07 37 12.4 +3.1**
HUMP Col San Antoni 150.49 312 **PKPbc** **07 37 03.8 +0.2**
HUMP PKPab **PKPab** **07 37 12.8 +2.7**
OBIP Obispado Ponce 151.11 313 **PKiKP** **07 37 05.6 -0.1**
CRPR Cabo Rojo, PR 151.50 314 **PKPdf** **07 36 58.6 -1.2**
CRPR PKPbc **PKiKP** **07 37 06.5 0.0**
LVC Limon Verde 151.65 221 PKPdf **PKPdf** **07 36 59.2 -1.3**
LVC **PKPbc** **07 37 08.0 +1.3**
LVC PKPab **PKPab** **07 37 17.4 +2.2**
SAML Samuel 153.79 253 **PKPdf** **07 37 03.3 -0.1**
SAML PKPbc **PKiKP** **07 37 11.8 +0.5**
SAML PKPab **PKPab** **07 37 20.8 -3.3**
LPAZ La Paz 155.13 232 PKP **PKPdf** **07 37 06.2 +0.3**
comp=Z,2.7nm,0.9s,baz=28,slow=5.3,SNR=9.0
LPAZ La Paz 155.13 232 **PKPdf** **07 37 03.8 -2.1**
LPAZ PKPbc 07 37 14.9
LPAZ PKPab **PKPab** **07 37 29.9 -0.5**

NNC 19 07:25:45.4±0.3, 50.00N×78.63E, h0km, mb 3.6, mpv 3.2, 17C-7D, Error ellipse: s-maj=5.5km s-min=2.0km az=75.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR07	**Kurchatov Arra**	**0.59**	**353**	⇓P	Pg	07 25 57.0	+0.3
KUR07				⇑S	Sg	07 26 05.4	+1.0
KUR06	**Kurchatov Arra**	**0.61**	**353**	⇑P	Pg	07 25 57.1	0.0
KUR06				⇑S	Sg	07 26 06.4	+1.5
KUR14	**Kurchatov Arra**	**0.62**	**358**	⇑P	Pg	07 25 57.4	+0.2
KUR14				⇑S	Sg	07 26 06.0	+0.8
KUR15	**Kurchatov Arra**	**0.62**	**356**	⇑P	Pg	07 25 57.6	+0.3
KUR15				⇓S	Sg	07 26 06.8	+1.4
KURBB	**Kurchatov Arra** 25nm,0.3s	**0.63**	**354**	⇑P	Pg	07 25 57.8	+0.4
KURBB	293nm,0.6s			⇑S	Sg	07 26 06.6	+1.0
KUR16	**Kurchatov Arra**	**0.64**	**352**	⇓P	Pg	07 25 57.7	+0.1
KUR16				⇑S	Sg	07 26 06.7	+0.9
KUR17	**Kurchatov Arra**	**0.64**	**351**	⇑P	Pg	07 25 58.0	+0.3
KUR17				⇑S	Sg	07 26 07.4	+1.4
KUR05	**Kurchatov Arra**	**0.65**	**354**	⇑P	Pg	07 25 58.0	+0.2
KUR05				⇓S	Sg	07 26 06.8	+0.6
KUR04	**Kurchatov Arra**	**0.67**	**355**	⇑P	Pg	07 25 58.4	+0.3
KUR04				⇑S	Sg	07 26 07.4	+0.6
SEM	**Semipalatinsk** 4.2nm,0.1s	**1.12**	**68**	P	Pg	07 26 05.6	-1.2
SEM	40nm,0.2s			S	Sg	07 26 21.0	-0.2
BRZS	**Berezniki** 12nm,0.3s	**3.84**	**272**	Pg	Pb	07 26 56.2	+2.2
BRZS	14nm,0.4s			Lg	Lg	07 27 48.3	
MAKZ	**Makanchi** 2.4nm,0.5s	**3.89**	**144**	⇓Pg	Pb	07 26 57.0	+2.1
MAKZ	6.9nm,0.6s			⇓Lg	Lg	07 27 47.9	
MK31	**Makanchi Array** 0.2nm,0.2s,baz=328,slow=9.0,SNR=32	**4.03**	**141**	⇑Pn	Pn	07 26 50.3	+2.0
MK31	2.0nm,0.5s,baz=323,slow=15,SNR=12			⇑Pg	Pb	07 26 58.2	+1.0
MK31	6.4nm,0.5s,baz=330,slow=27,SNR=8.5			Lg	Lg	07 27 53.2	
KAPS	**Kapalarasan** 2.9nm,0.7s	**4.74**	**174**	Pg	Pb	07 27 11.4	+2.0
KAPS	7.9nm,0.8s			Lg	Lg	07 28 14.7	
ZSN	**Zaisan** 3.2nm,0.8s	**4.85**	**119**	Pg	Pb	07 27 10.3	-0.9
ZSN	8.7nm,0.7s			Lg	Lg	07 28 13.5	
BRVK	**Borovoye** 2.7nm,0.6s	**6.04**	**304**	⇓Sn	Sn	07 28 25.0	-0.8
BRVK	2.1nm,0.5s			⇑Lg	Lg	07 28 54.8	

FUNV **19** *07:40:14.1, 10.69N×62.41W, h80km, MW3.0*
TRN **19** *07:40:14.7, 10.74N×62.46W, h60km, MD3.3*

ISC 19 07:40:11.7±1.2, 10°67N±0°03 × 62°45W±0°03, h103km±10km, n31, σ1°79/58, 2C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUNV	**Guanoco**	**0.71**	**224**	*e*P	**Pn**	**07 40 30.5**	**+1.1**
GUNV				*e*S	**Sn**	**07 40 42.1**	**-0.6**
CRUV	**Carupano**	**0.78**	**270**	*e*P	**Pn**	**07 40 30.1**	**0.0**
CRUV				*e*S	**Sn**	**07 40 42.2**	**-1.6**
TRN	**Trinidad (W)**	**1.02**	**91**	*e*P	**Pn**	**07 40 33.2**	**+0.7**
TRN				*e*S	**Sn**	**07 40 46.7**	**-1.6**
TRN	**Trinidad (W)**	**1.02**	**91**	*e*P	**Pn**	**07 40 33.0**	**+0.5**
TRN				*e*S	**Sn**	**07 40 46.6**	**-1.7**
TPP	**Pointe-a-Pierr**	**1.04**	**110**	*e*P	**Pn**	**07 40 34.3**	**+1.6**
TPP				*e*S	**Sn**	**07 40 48.8**	**+0.2**
GRGR	**Grenville**	**1.65**	**28**	*e*P	**Pn**	**07 40 39.9**	**0.0**
GRGR				*e*S	**Sn**	**07 41 00.2**	**-1.1**
GRGR	**Grenville**	**1.65**	**28**	*e*P	**Pn**	**07 40 39.6**	**-0.3**
GRGR				*e*S	**Sn**	**07 41 00.2**	**-1.1**
GRHS	**Sauteurs**	**1.73**	**27**	*e*P	**Pn**	**07 40 42.7**	**+1.7**
GRHS				*e*S	**Sn**	**07 41 02.3**	**-1.0**
GRSS	**Sisters**	**1.81**	**27**	*e*P	**Pn**	**07 40 44.0**	**+2.0**
ORIV	**Oritupano**	**1.85**	**211**	*e*P	**Pn**	**07 40 44.4**	**+1.9**
ORIV				*e*S	**Sn**	**07 41 08.1**	**+2.0**
ORIV	**Oritupano**	**1.85**	**211**	*e*P	**Pn**	**07 40 44.3**	**+1.7**
ORIV				*e*S	**Sn**	**07 41 05.4**	**-0.6**
TOSP	**Speyside**	**1.98**	**71**	*e*P	**Pn**	**07 40 46.3**	**+2.3**
TOSP				*e*S	**Sn**	**07 41 08.9**	**+0.2**
TOSP	**Speyside**	**1.98**	**71**	*e*P	**Pn**	**07 40 44.8**	**+0.7**
TOSP				*e*S	**Sn**	**07 41 07.2**	**-1.6**
PCRV	**Puerto La Cruz**	**2.21**	**257**	*e*P	**Pn**	**07 40 48.5**	**+1.4**
PCRV				*e*S	**Sn**	**07 41 13.3**	**-0.9**
RIOV	**Rio Grande**	**2.66**	**166**	*e*P	**Pn**	**07 40 54.7**	**+1.7**
RIOV				*e*S	**Sn**	**07 41 24.1**	**-0.7**
SVB	**Belmont**	**2.83**	**24**	*e*P	**Pn**	**07 40 58.0**	**+2.7**
SVB				*e*S	**Sn**	**07 41 28.3**	**-0.6**
SVCV	**St. Vincent, C**	**2.88**	**26**	*e*P	**Pn**	**07 40 57.7**	**+1.7**
SVCV				*e*S	**Sn**	**07 41 30.0**	**0.0**
PRGV	**PARIAGUAN**	**2.88**	**229**	*e*P	**Pn**	**07 40 57.3**	**+1.3**
PRGV				*e*S	**Sn**	**07 41 30.4**	**+0.3**
SVV	**Soufriere Volc**	**2.89**	**24**	*e*P	**Pn**	**07 40 57.8**	**+1.7**
CUPV	**Cpira**	**3.34**	**260**	*e*P	**Pn**	**07 41 03.9**	**+1.7**
CUPV				*e*S	**Sn**	**07 41 40.5**	**-0.7**
SLB	**Belfond**	**3.42**	**24**	*e*P	**Pn**	**07 41 05.4**	**+2.2**
SLB				*e*S	**Sn**	**07 41 42.7**	**-0.3**
SLBI	**Saint Lucia, B**	**3.63**	**23**	*e*P	**Pn**	**07 41 08.6**	**+2.7**
SLBI				*e*S	**Sn**	**07 41 47.0**	**-0.8**
BIRV	**Birongo**	**3.77**	**267**	*e*P	**Pn**	**07 41 10.5**	**+2.7**
BIRV				*e*S	**Sn**	**07 41 49.4**	**-1.8**
MERV	**Las Mercedes**	**4.05**	**250**	*e*P	**Pn**	**07 41 12.6**	**+1.0**
MERV				*e*S	**Sn**	**07 41 56.7**	**-1.3**
LUEV	**Luepa**	**4.90**	**168**	*e*P	**Pn**	**07 41 23.6**	**+0.4**
LUEV				*e*S	**Sn**	**07 42 14.8**	**-4.1**
TURV	**Turiamo**	**5.31**	**268**	*e*P	**Pn**	**07 41 29.8**	**+1.1**
TURV				*e*S	**Sn**	**07 42 25.8**	**-2.8**
BAUV	**El Baul**	**5.78**	**253**	*e*P	**Pn**	**07 41 38.7**	**+3.7**
BAUV	**El Baul**	**5.78**	**253**	*e*S	**Sn**	**07 42 40.1**	**+0.1**
BAUV	**El Baul**	**5.78**	**253**	*e*P	**Pn**	**07 41 35.3**	**+0.3**
BAUV				*e*S	**Sn**	**07 42 37.1**	**-2.8**
MAPV	**Macapo**	**5.98**	**262**	*e*P	**Pn**	**07 41 38.4**	**+0.7**
MAPV				*e*S	**Sn**	**07 42 41.5**	**-3.3**
PAYV	**Puerto Ayacuch**	**7.34**	**225**	*e*P	**Pn**	**07 41 56.9**	**+0.7**
PAYV				*e*S	**Sn**	**07 43 13.7**	**-4.3**

IDC 19 07:42:23.9±2.1, 20°94S × 173°10E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/35, mbtmp3.7/5, ML2.9/1, MS3.5/15, Ms1 3.5/15, ms1mx3.3/30, Error ellipse: s-maj=118.7km s-min=28.0km az=152.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.30**	**259**	Pn	Pn	07 43 56.3	-1.9
	0.3nm,0.3s,baz=46,slow=14,SNR=2.4						
RAO	**Raoul Island**	**11.60**	**137**	LR	LR	07 48 08.8	
	comp=Z,98nm,22.0s,baz=132,slow=30						
AFI	**Afiamalu**	**16.03**	**67**	LR	LR	07 51 18.1	
	comp=Z,142nm,20.0s,baz=252,slow=33						
HNR	**Honiara**	**17.07**	**310**	LR	LR	07 51 44.1	
	comp=Z,170nm,19.2s,baz=148,slow=33						
URZ	**Urewera**	**17.60**	**170**	LR	LR	07 52 16.8	
	comp=Z,70nm,19.9s,baz=353,slow=34						
RAR	**Rarotonga**	**25.30**	**96**	LR	LR	07 56 28.7	
	comp=Z,21nm,18.1s,baz=258,slow=33						
KRVT	**Keravat (AS076**	**26.32**	**306**	LR	LR	07 57 32.9	
	comp=Z,179nm,21.4s,baz=117,slow=34						
PMG	**Port Moresby**	**27.49**	**291**	LR	LR	07 57 09.0	
	comp=Z,106nm,20.7s,baz=122,slow=32						
STKA	**Stephens Creek**	**30.14**	**242**	P	P	07 48 35.7	0.0
	2.2nm,0.8s,baz=103,slow=11,SNR=3.9						
STKA				LR	LR	07 59 20.7	
	comp=Z,143nm,20.5s,baz=30,slow=34						
ASAR	**Alice Springs**	**36.29**	**258**	P	P	07 49 29.6	+0.2
	0.9nm,1.0s,baz=83,slow=8.7,SNR=5.9						
ASAR				LR	LR	08 03 25.1	
	comp=Z,83nm,19.9s,baz=98,slow=35						
JAY	**Jayapura**	**36.49**	**296**	LR	LR	08 04 11.8	
	comp=Z,76nm,19.9s,baz=194,slow=36						
RPN	**Rapa Nui**	**70.09**	**112**	LR	LR	08 17 15.5	
	comp=Z,142nm,21.6s,baz=186,slow=30						
KSRS	**Korea Array**	**71.99**	**324**	LR	LR	08 21 04.2	
	comp=Z,7.8nm,21.7s,baz=20,slow=32						
NVAR	**Mina Array Bea**	**87.25**	**47**	LR	LR	08 25 59.7	
	comp=Z,55nm,20.4s,baz=230,slow=30						
ILAR	**Eielson Array**	**90.82**	**16**	P	P	07 55 28.0	-0.7
	0.4nm,0.9s,baz=220,slow=5.4,SNR=2.8						
TXAR	**Lajitas Array**	**94.42**	**60**	P	P	07 55 45.5	-0.8
	0.2nm,0.8s,baz=231,slow=4.3,SNR=2.2						
TXAR				LR	LR	08 29 19.9	
	comp=Z,29nm,22.0s,baz=0.0,slow=30						
PLCA	**Paso Flores**	**94.83**	**137**	LR	LR	08 31 00.6	
	comp=Z,29nm,21.1s,baz=227,slow=31						
GERES	**GERESS Array B**	**147.65**	**334**	PKPbc	PKPbc	08 02 11.0	+0.5
	0.5nm,0.7s,baz=27,slow=4.5,SNR=4.7						

IDC 19 07:48:00.8±2.4, 5°25S × 152°79E, h58km±20km, mb3.4/6, mb1 3.6/7, mb1mx3.4/37, mbtmp3.7/7, ML1.8/1, Error ellipse: s-maj=27.7km s-min=13.8km az=94.0

ISC 19 07:47:59.3±1.0, 5°21S±0°08 × 152°9E±0°1, h43km, n9, σ1°21/11, mb3.6/6, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.24**	**316**	P	**Pn**	**07 48 20.2**	**+0.1**
	230nm,0.3s,baz=232,slow=3.2,SNR=56						
KRVT				S	**Sn**	**07 48 37.1**	**+1.4**
	386nm,0.3s,baz=341,slow=23,SNR=30						
PMG	**Port Moresby**	**7.05**	**233**	P	**Pn**	**07 49 41.3**	**+1.3**
	0.9nm,0.3s,baz=60,slow=14,SNR=2.8						
PMG				S	**Sn**	**07 50 58.3**	**-0.6**
	1.0nm,0.3s,baz=94,slow=19,SNR=2.8						
DZM	**Mont Dzumac**	**21.29**	**143**	P	**P**	**07 52 43.7**	**+1.3**
	4.7nm,0.6s,baz=318,slow=15,SNR=4.4						
WRA	**Warramunga Arr**	**23.25**	**229**	P	**P**	**07 53 01.4**	**-1.6**
	1.3nm,0.7s,baz=54,slow=9.4,SNR=4.7						
ASAR	**Alice Springs**	**25.91**	**223**	P	**P**	**07 53 27.0**	**-0.6**
	1.0nm,0.7s,baz=59,slow=8.4,SNR=10						
SONM	**Songino Array**	**66.72**	**328**	P	**P**	**07 58 47.0**	**+0.9**
	0.3nm,0.5s,baz=131,slow=6.5,SNR=2.4						
ZALV	**Zalesovo Beam**	**81.54**	**326**	P	**P**	**08 00 11.0**	**-1.3**
	0.4nm,0.3s,baz=140,slow=4.7,SNR=2.7						
ILAR	**Eielson Array**	**82.50**	**22**	P	**P**	**08 00 16.9**	**-0.2**
	0.2nm,0.6s,baz=246,slow=6.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**150.52**	**288**	PKPbc	**PKPbc**	**08 07 46.7**	**-0.8**
	0.4nm,0.7s,baz=65,slow=2.4,SNR=3.2						

KRSC 19 08:25:51.4±2.1, 49°10N × 157°10E, h31km±33km, ML4.4
SKHL 19 08:25:53.5±0.7, 49°00N × 156°40E, h65km±5km, mb4.2/4
MOS 19 08:25:53.2±1.2, 49°17N × 156°23E, h53km, mb4.2/4, Error ellipse: s-maj=12.3km s-min=4.0km az=76.6
NEIC 19 08:25:53.3±1.9, 49°05N±0°09 × 156°2E±0°1, h35km±3km, mb4.1/10, Error ellipse: s-maj=16.3km s-min=10.4km az=134.0
IDC 19 08:25:56.4±2.8, 49°19N × 156°10E, h62km±22km, mb3.5/11, mb1 3.7/18, mb1mx3.5/38, mbtmp3.8/18, ML4.6/3, MS3.2/9, Ms1 3.2/9, ms1mx3.0/38, Error ellipse: s-maj=27.4km s-min=13.4km az=139.0

ISC 19 08:25:54.2±1.3, 49°08N±0°08 × 156°39E±0°08, h49km±12km, n119, σ1°18/123, mb4.0/17, MS3.3/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.61**	**354**	*e*PN	**Pn**	**08 26 19.7**	**-0.5**
SKR				*e*S	**Sn**	**08 26 40.1**	**+0.3**
SKR				pmax	pmax		
	comp=Z,183nm,0.6s						
SKR				smax	smax		
	comp=E,882nm,0.8s						
SKR				smax	smax		
	comp=N,1μm,0.9s						
SKR	**Severo-Kuril's**	**1.61**	**354**	*e*P	**Pn**	**08 26 18.9**	**-1.3**
SKR				*e*S	**Sn**	**08 26 40.5**	**+0.7**
SKR	**Severo-Kuril's**	**1.61**	**354**	*e*P	**Pn**	**08 26 19.5**	**-0.7**
SKR				AMB	AMB	08 26 24.0	
	comp=N,180nm,0.6s						
SKR				*e*S	**Sn**	**08 26 39.5**	**-0.3**
SKR				A	A	08 26 56.0	
	comp=N,1μm,0.9s						
SKR				A	A	08 26 56.0	
	comp=N,880nm,0.9s						
PAU	**Pauzhetka**	**2.40**	**6**	PN	**Pn**	**08 26 30.6**	**-0.4**
PAU				S	**Sn**	**08 27 00.1**	**+0.9**
PAU	**Pauzhetka**	**2.40**	**6**	*e*P	**Pn**	**08 26 30.6**	**-0.4**
PAU				*e*S	**Sn**	**08 27 00.1**	**+0.9**
PAU	**Pauzhetka**	**2.40**	**6**	*e*P	**Pn**	**08 26 30.6**	**-0.4**
PAU				*e*S	**Sn**	**08 27 00.1**	**+0.9**
KDTR	**Khodutka, Kamc**	**2.94**	**21**	PN	**Pn**	**08 26 36.7**	**-1.6**
KDTR				S	**Sn**	**08 27 11.2**	**-1.1**
KDTR	**Khodutka, Kamc**	**2.94**	**21**	*e*P	**Pn**	**08 26 36.7**	**-1.6**
KDTR				*e*S	**Sn**	**08 27 11.2**	**-1.1**
ASAK	**Asacha**	**3.44**	**16**	PN	**Pn**	**08 26 45.3**	**-0.1**
ASAK	**Asacha**	**3.44**	**16**	*e*P	**Pn**	**08 26 45.3**	**-0.1**
MTVR	**Mutnovka**	**3.59**	**18**	PN	**Pn**	**08 26 46.6**	**-0.9**
MTVR	**Mutnovka**	**3.59**	**18**	*e*P	**Pn**	**08 26 46.6**	**-0.9**
RUS	**Russkaya**	**3.62**	**21**	PN	**Pn**	**08 26 46.6**	**-1.1**
RUS	**Russkaya**	**3.62**	**21**	*e*P	**Pn**	**08 26 46.6**	**-1.1**
RUS	**Russkaya**	**3.62**	**21**	*e*P	**Pn**	**08 26 46.6**	**-1.1**
GRL	**Gorelyy**	**3.63**	**16**	PN	**Pn**	**08 26 47.7**	**-0.4**
GRL	**Gorelyy**	**3.63**	**16**	*e*P	**Pn**	**08 26 47.7**	**-0.4**
APC	**Apacha**	**3.88**	**7**	PN	**Pn**	**08 26 53.0**	**+1.7**
APC	**Apacha**	**3.88**	**7**	*e*P	**Pn**	**08 26 53.0**	**+1.7**
KRMR	**Karymshinskiy**	**3.91**	**16**	PN	**Pn**	**08 26 51.9**	**+0.2**
KRMR	**Karymshinskiy**	**3.91**	**16**	*e*P	**Pn**	**08 26 51.9**	**+0.2**
PEA0B	**Petropavlovsk-**	**4.12**	**11**	PN	**Pn**	**08 26 55.3**	**+0.8**
PEA0B	**Petropavlovsk-**	**4.12**	**11**		**Pn**	**08 26 55.3**	**+0.8**
PETK	**Petropavlovsk-**	**4.12**	**11**	P	**Pn**	**08 26 54.8**	**+0.2**
	comp=N,0.6nm,0.3s,baz=190,slow=10,SNR=20						
PETK				S	**Sn**	**08 27 43.8**	**+2.4**
	comp=N,0.7nm,0.3s,baz=167,slow=14,SNR=3.6						
PETK				LR	LR	08 28 41.3	
	comp=N,174nm,20.5s,baz=76,slow=41						
PETK	**Petropavlovsk-**	**4.12**	**11**		**Pn**	**08 26 54.8**	**+0.2**
PETK					**Sn**	**08 27 42.0**	**+0.6**
PET	**Petropavlovsk**	**4.20**	**19**	PN	**Pn**	**08 26 56.1**	**+0.5**
PET	**Petropavlovsk**	**4.20**	**19**	*e*P	**Pn**	**08 26 56.1**	**+0.5**
PET	**Petropavlovsk**	**4.20**	**19**	*e*P	**Pn**	**08 26 55.9**	**+0.3**
PET				AMB	AMB	08 26 58.7	
	comp=N,20nm,0.6s						
PET				*e*S	**Sn**	**08 27 42.2**	**-1.1**
PET				A	A	08 27 59.2	
	comp=N,80nm,0.6s						
PET				A	A	08 27 59.2	
	comp=N,90nm,0.6s						
PET	**Petropavlovsk**	**4.20**	**19**		**Pn**	**08 26 55.7**	**+0.1**
UGLR	**Uglovaya**	**4.41**	**19**	PN	**Pn**	**08 26 58.6**	**0.0**
UGLR	**Uglovaya**	**4.41**	**19**	*e*P	**Pn**	**08 26 58.6**	**0.0**
AVH	**Avacha**	**4.44**	**19**	PN	**Pn**	**08 26 59.3**	**+0.2**
AVH	**Avacha**	**4.44**	**19**	*e*P	**Pn**	**08 26 59.3**	**+0.2**
KOK	**Koryaka**	**4.45**	**18**	PN	**Pn**	**08 26 59.8**	**+0.6**
KOK	**Koryaka**	**4.45**	**18**	*e*P	**Pn**	**08 26 59.8**	**+0.6**
KOK	**Koryaka**	**4.45**	**18**	*e*P	**Pn**	**08 26 59.8**	**+0.6**
SMAR	**Somma**	**4.45**	**19**	PN	**Pn**	**08 26 59.8**	**+0.4**
SMAR	**Somma**	**4.45**	**19**	*e*P	**Pn**	**08 26 59.8**	**+0.4**
KRER	**Koryakskii**	**4.48**	**18**	PN	**Pn**	**08 27 00.4**	**+0.7**
KRER	**Koryakskii**	**4.48**	**18**	*e*P	**Pn**	**08 27 00.4**	**+0.7**
SDLR	**Sedlovina**	**4.49**	**20**	PN	**Pn**	**08 26 59.3**	**-0.4**
SDLR	**Sedlovina**	**4.49**	**20**	*e*P	**Pn**	**08 26 59.3**	**-0.4**
KRX	**Arik**	**4.51**	**17**	PN	**Pn**	**08 27 01.3**	**+1.2**
KRX	**Arik**	**4.51**	**17**	*e*P	**Pn**	**08 27 01.3**	**+1.2**
SPN	**Mys Shipunski**	**4.63**	**28**	PN	**Pn**	**08 27 00.7**	**-0.8**
SPN				S	**Sn**	**08 27 52.2**	**-1.7**
SPN	**Mys Shipunski**	**4.63**	**28**	*e*P	**Pn**	**08 27 00.7**	**-0.8**
SPN				*e*S	**Sn**	**08 27 52.2**	**-1.7**
MKZ	**Mys Kozlova**	**6.40**	**29**	PN	**Pn**	**08 27 23.9**	**-1.9**
MKZ	**Mys Kozlova**	**6.40**	**29**	*e*P	**Pn**	**08 27 23.9**	**-1.9**
KZV	**Kizimen**	**6.50**	**20**	PN	**Pn**	**08 27 29.4**	**+2.0**
KZV	**Kizimen**	**6.50**	**20**	*e*P	**Pn**	**08 27 29.4**	**+2.0**
TUMD	**Tumrok D**	**6.61**	**20**	*e*P	**Pn**	**08 27 29.1**	**+0.4**
TUMR	**Tumrok**	**6.63**	**19**	PN	**Pn**	**08 27 29.1**	**+0.1**
KUR	**Kuril'sk**	**6.97**	**240**	PN	**Pn**	**08 27 34.4**	**+0.7**
KUR				pmax	pmax		
	comp=Z,42nm,0.5s						
KUR	**Kuril'sk**	**6.97**	**240**	*e*P	**Pn**	**08 27 34.4**	**+0.7**
KUR				AMB	AMB	08 27 39.1	
	comp=Z,10.0nm,0.5s						
KUR				*e*S	**Sn**	**08 28 50.1**	**-1.4**
KBTR	**Krutoberegovo**	**8.13**	**26**	PN	**Pn**	**08 27 47.9**	**-1.7**
KBTR	**Krutoberegovo**	**8.13**	**26**	*e*P	**Pn**	**08 27 47.9**	**-1.7**
SHO	**Shikotan**	**8.40**	**235**	PN	**Pn**	**08 27 56.1**	**+2.8**
SHO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SHO	**Shikotan**	**8.40**	**235**	*e*P	**Pn**	**08 27 53.0**	**-0.3**
SHO				AMB	AMB	08 27 57.1	
	comp=Z,4.0nm,0.4s						
NMR	**Nemuro--Hokkai**	**9.34**	**236**	*e*PN	**Pn**	**08 28 06.0**	**-0.1**
NMR	**Nemuro--Hokkai**	**9.34**	**236**	*e*P	**Pn**	**08 28 06.0**	**-0.1**
YSS	**Yuzh-Sakhalins**	**9.38**	**262**	PN	**Pn**	**08 28 06.2**	**-0.5**
YSS	**Yuzh-Sakhalins**	**9.38**	**262**	*e*P	**Pn**	**08 28 06.2**	**-0.5**
YSS	**Yuzh-Sakhalins**	**9.38**	**262**	Pn	**Pn**	**08 28 06.2**	**-0.5**
JKA	**Kamikawa-asahi**	**10.71**	**248**	*e*P	**Pn**	**08 28 25.6**	**+0.8**
JKA	**Kamikawa-asahi**	**10.71**	**248**		**Pn**	**08 28 25.6**	**+0.8**
ASAJ	**Asahikawa**	**10.71**	**248**	P	**Pn**	**08 28 25.6**	**+0.7**
	comp=Z,2.5nm,0.3s,baz=82,slow=17,SNR=21						
ASAJ				LR	LR	08 32 11.6	
	comp=Z,106nm,18.8s,baz=59,slow=36						
MA2	**Magadan**	**11.01**	**345**	PN	**Pn**	**08 28 27.5**	**-1.4**
MA2	**Magadan**	**11.01**	**345**	P	**Pn**	**08 28 28.1**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=163,slow=7.2,SNR=3.9						
MA2				LR	LR	08 33 11.4	
	comp=Z,115nm,18.1s,baz=168,slow=40						
MA2	**Magadan**	**11.01**	**345**		**Pn**	**08 28 27.4**	**-1.4**
SEY	**Seymchan**	**14.06**	**352**	P	**Pn**	**08 29 10.2**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=107,slow=19,SNR=1.9						
KLR	**Kul'dur**	**16.11**	**280**	P	**Pn**	**08 29 37.6**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=90,slow=18,SNR=1.8						
MJAR	**Matsushiro Arr**	**18.24**	**233**	P	**Pn**	**08 30 03.6**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=46,slow=8.3,SNR=3.6						
YAK	**Yakutsk**	**19.72**	**321**	P	**P**	**08 30 17.8**	**-1.5**
YAK				pmax	pmax		
	comp=Z,13nm,0.6s						
YAK	**Yakutsk**	**19.72**	**321**	P	**P**	**08 30 17.5**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=115,slow=1.0,SNR=5.8						
YAK	**Yakutsk**	**19.72**	**321**	P	**P**	**08 30 17.8**	**-1.5**
KSRS	**Korea Array**	**23.62**	**251**	P	**P**	**08 31 00.0**	**-0.7**
	comp=Z,2.1nm,0.8s,baz=47,slow=10,SNR=6.1						
KSRS				LR	LR	08 39 43.8	
	comp=Z,48nm,19.9s,baz=52,slow=35						
ANM	**Nome**	**25.50**	**38**	P	**P**	**08 31 19.1**	**+1.5**
ANM				pmax	pmax		
	comp=Z,10.0nm,1.5s						
ANM	**Nome**	**25.50**	**38**	P	**P**	**08 31 19.1**	**+1.5**
ANM				lAmb	lAmb	08 31 35.6	
	comp=Z,9.9nm,1.5s						
TIXI	**Tiksi**	**25.93**	**340**	P	**P**	**08 31 19.5**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TIXI	**Tiksi**	**25.93**	**340**	P	**P**	**08 31 19.0**	**-2.4**
	comp=Z,1.6nm,0.3s,baz=180,slow=24,SNR=3.9						
TIXI	**Tiksi**	**25.93**	**340**	*e*P	**P**	**08 31 19.5**	**-1.9**
TIXI	**Tiksi**	**25.93**	**340**	P	**P**	**08 31 19.5**	**-1.9**
TIXI				lAmb	lAmb	08 31 20.6	
	comp=Z,4.2nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**30.48**	**160**	T	T	09 04 27.9	
	baz=0.9						
H11N1	**WAKE ISLAND Hy**	**30.49**	**160**	T	T	09 04 26.3	
	baz=0.9						
H11N3	**WAKE ISLAND Hy**	**30.49**	**160**	T	T	09 04 25.1	
	baz=0.9						
H11S1	**WAKE ISLAND Hy**	**31.62**	**161**	T	T	09 05 48.3	
	baz=344,slow=76,SNR=27						
H11S3	**WAKE ISLAND Hy**	**31.63**	**161**	T	T	09 05 48.2	
	baz=344						
H11S2	**WAKE ISLAND Hy**	**31.64**	**161**	T	T	09 05 49.2	
	baz=344,slow=76,SNR=15						
EGAK	**Eagle**	**35.80**	**41**	P	**P**	**08 32 50.0**	**+1.6**
EGAK				lAmb	lAmb	08 33 02.5	
	comp=Z,1.8nm,1.0s						
INK	**Inuvik**	**38.49**	**34**	P	**P**	**08 33 13.5**	**+2.4**
INK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
INK	**Inuvik**	**38.49**	**34**	P	**P**	**08 33 12.3**	**+1.2**
	comp=Z,0.8nm,0.9s,baz=255,slow=6.9,SNR=2.8						
INK	**Inuvik**	**38.49**	**34**	P	**P**	**08 33 13.5**	**+2.4**
YKA	**Yellowknife Ar**	**47.73**	**39**	P	**P**	**08 34 27.2**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=296,slow=7.9,SNR=3.4						
MK31	**Makanchi Array**	**47.84**	**297**	P	**P**	**08 34 25.7**	**-1.2**
MK31				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MK31	**Makanchi Array**	**47.84**	**297**	P	**P**	**08 34 25.7**	**-1.2**
MK31				lAmb	lAmb	08 34 27.1	
	comp=Z,2.1nm,1.0s						
MKAR	**Makanchi Array**	**47.84**	**297**	P	**P**	**08 34 26.0**	**-0.9**
MKAR	**Makanchi Array**	**47.84**	**297**	P	**P**	**08 34 25.6**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=68,slow=8.0,SNR=13						
MKAR				LR	LR	08 56 08.4	
	comp=Z,82nm,18.3s,baz=37,slow=38						
MKAR	**Makanchi Array**	**47.84**	**297**	*e*P	**P**	**08 34 26.0**	**-0.9**
MKAR	**Makanchi Array**	**47.84**	**297**	P	**P**	**08 34 26.0**	**-0.9**
ARU	**Arti**	**54.78**	**318**	P	**P**	**08 35 17.1**	**-1.5**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ARU	**Arti**	**54.78**	**318**	*e*P	**P**	**08 35 17.1**	**-1.5**
ARU	**Arti**	**54.78**	**318**	P	**P**	**08 35 17.1**	**-1.5**
CMAR	**Chiang Mai Arr**	**55.05**	**257**	P	**P**	**08 35 22.0**	**+1.0**
CMAR	**Chiang Mai Arr**	**55.05**	**257**	P	**P**	**08 35 22.0**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=35,slow=6.9,SNR=4.1						
KIRV	**Kirov**	**57.23**	**323**	LR	LR	09 00 30.6	
	comp=Z,7.2nm,19.0s,baz=143,slow=36						
ABKAR	**Akbulak array**	**58.61**	**310**	P	**P**	**08 35 45.2**	**-0.7**
ABKAR				lAmb	lAmb	08 35 47.9	
	comp=Z,2.8nm,1.2s						
PDAR	**Pinedale Array**	**61.60**	**57**	P	**P**	**08 36 07.9**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=305,slow=3.2,SNR=2.4						
OBN	**Obninsk**	**64.61**	**327**	LR	LR	09 06 31.0	
	comp=Z,1.1nm,18.9s,baz=238,slow=38						
HFS	**Hagfors**	**67.01**	**341**	LR	LR	09 12 48.1	
	comp=Z,35nm,18.8s,baz=310,slow=42						
GEYT	**Alibeck**	**67.27**	**302**	LR	LR	09 07 38.6	
	comp=Z,28nm,18.1s,baz=20,slow=37						
AKASG	**Malin Array Be**	**70.80**	**328**	P	**P**	**08 37 03.9**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=34,slow=6.7,SNR=2.8						
TX31	**Lajitas Ar. Si**	**74.45**	**63**	P	**P**	**08 37 28.0**	**+0.6**
TX31				lAmb	lAmb	08 37 42.9	
	comp=Z,3.3nm,1.5s						
TXAR	**Lajitas Array**	**74.45**	**63**	P	**P**	**08 37 28.3**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=302,slow=5.2,SNR=3.9						
BURAR	**Bucovina Array**	**74.81**	**328**	P	**P**	**08 37 29.8**	**+0.6**
AS31	**Alice Springs**	**75.15**	**201**	P	**P**	**08 37 28.9**	**-2.3**
ASAR	**Alice Springs**	**75.15**	**201**	P	**P**	**08 37 29.5**	**-1.7**
ASAR	**Alice Springs**	**75.15**	**201**	P	**P**	**08 37 29.4**	**-1.7**
GERES	**GERESS Array B**	**77.28**	**336**	P	**P**	**08 37 43.8**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=27,slow=3.3,SNR=

AZAP	**Zapla**		**4.57**	**134**	⇓*i*P	**Pn**	**08 32 41.9**	**-0.1**
LPAZ	**La Paz**		**4.79**	**6**	P	**Pn**	**08 32 47.1**	**+1.8**
	comp=N,1.1nm,0.3s,baz=182,slow=6.7,SNR=35							
LPAZ					S	**Sn**	**08 33 39.1**	**-1.5**
	baz=209,slow=19,SNR=2.4							
LPAZ					LR	LR	08 34 50.2	
	comp=N,49nm,21.6s,baz=216,slow=41							
AGUA	**GUANDACOL**		**8.38**	**179**	*i* P	**Pn**	**08 33 32.7**	**+0.1**
PLCA	**Paso Flores**		**19.66**	**184**	P	**Pn**	**08 35 54.5**	**-0.1**
	comp=N,0.1nm,0.3s,baz=22,slow=10.0,SNR=9.2							
BDFB	**Brasilia**		**20.33**	**78**	P	**P**	**08 35 57.2**	**-1.8**
	comp=N,0.1nm,0.3s,baz=307,slow=13,SNR=2.3							
TORD	**Torodi Ar. Bea**		**77.00**	**70**	P	**P**	**08 43 11.9**	**+0.7**
	comp=N,0.4nm,0.6s,baz=250,slow=5.5,SNR=4.8							
MKAR	**Makanchi Array**		**145.16**	**36**	PKP	**PKPdf**	**08 50 55.8**	**+1.6**
	comp=N,0.2nm,0.5s,baz=323,slow=2.2,SNR=2.0							

IDC ***19*** *08:49:34.8±2.6, 15°.97S×70°.16W, h224km±21km, mb3.0/2, mb1 3.1/4, mb1mx2.9/31, mbtmp3.5/4, Error ellipse: s-maj=44.5km s-min=19.6km az=111.0*

ISC 19 08:49:31.9±1.4**, 15°.82S**±0°.08×**70°.6W**±0°.1**, h200**km**, n12,** σ1**9**9**4**/**21, 6C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.40**	**101**	P	**Pn**	**08 50 16.4**	**+1.1**
	3.6nm,0.3s,baz=278,slow=9.8,SNR=146						
LPAZ				S	**Sn**	**08 50 47.7**	**-1.3**
	1.8nm,0.3s,baz=307,slow=5.1,SNR=15						
PB16	**IPOC Station P**	**2.70**	**158**	⇑*i*P	**Pn**	**08 50 21.2**	**+2.5**
PB16				*e*S	**Sn**	**08 50 57.8**	**+2.6**
MNMC	**Minye Minye**	**3.42**	**164**	⇑*i*P	**Pn**	**08 50 28.3**	**+1.5**
MNMC				*e*S	**Sn**	**08 51 10.2**	**+0.2**
MNMC				IAML		08 51 13.0	
	comp=E,190nm,0.4s						
PSGC	**Pisagua**	**3.78**	**173**	⇑*i*P	**Pn**	**08 50 31.3**	**+0.2**
PSGC				*e*S	**Sn**	**08 51 14.9**	**-2.8**
PB11	**IPOC Station P**	**4.01**	**168**	⇑*i*P	**Pn**	**08 50 34.6**	**+0.6**
PB11				*e*S	**Sn**	**08 51 21.4**	**-1.5**
PB11				IAML		08 51 24.4	
	comp=N,112nm,0.5s						
GO01	**Chusmiza**	**4.05**	**161**	*e*P	**Pn**	**08 50 36.7**	**+2.0**
GO01				*e*S	**Sn**	**08 51 25.8**	**+1.7**
GO01				IAML		08 51 30.0	
	comp=N,178nm,0.2s						
PB08	**IPOC Station P**	**4.50**	**163**	⇑*i*P	**Pn**	**08 50 42.0**	**+1.6**
PB08				*e*S	**Sn**	**08 51 34.3**	**0.0**
PB08				IAML		08 51 38.5	
	comp=N,74nm,0.2s						
TA01	**Diego Aracena**	**4.73**	**175**	⇑*i*P	**Pn**	**08 50 43.1**	**+0.2**
TA01				*e*S	**Sn**	**08 51 35.1**	**-3.8**
TA01				IAML		08 51 38.6	
	comp=N,109nm,0.2s						
LVC	**Limon Verde**	**6.93**	**167**	P	**Pn**	**08 51 13.4**	**+1.7**
	comp=N,1.4nm,0.3s,baz=336,slow=12,SNR=22						
LVC				S	**Sn**	**08 52 28.2**	**-2.6**
	comp=N,3.5nm,0.3s,baz=301,slow=5.9,SNR=15						
SIV	**San Ignacio**	**9.15**	**92**	P	**Pn**	**08 51 38.7**	**-1.5**
	comp=N,0.1nm,0.3s,baz=290,slow=15,SNR=2.7						
TORD	**Torodi Ar. Bea**	**77.04**	**72**	P	**P**	**09 01 01.8**	**-1.6**
	comp=N,0.5nm,0.9s,baz=258,slow=6.4,SNR=2.5						
YKA	**Yellowknife Ar**	**85.33**	**341**	P	**P**	**09 01 46.9**	**+0.9**
	comp=N,0.2nm,0.6s,baz=138,slow=5.1,SNR=6.1						

IDC ***19*** *08:53:04.7±0.8, 4°.32S×127°.24E, h0km, mb3.9/11, mb1 4.1/14, mb1mx3.9/44, mbtmp4.0/14, ML3.5/3, MS3.2/8, Ms1 3.2/8, ms1mx2.9/32, Error ellipse: s-maj=33.4km s-min=15.1km az=67.0*

NEIC ***19*** *08:53:10.4±1.9, 4°.51S±0°.07×127°.42E±0°.07, h58km±11km, mb4.4/12, Error ellipse: s-maj=11.2km s-min=10.1km az=144.0*

DJA ***19*** *08:53:12.1±0.4, 4°.5S×12°.7E±°, h53km±6km, M4.2/9, mb4.5/9, mB4.8/2, MLv4.0/8, Mw(mB)4.0/2*

ISC 19 08:53:09.5±0.5**, 4°.39S**±0°.06×**127°.37E**±0°.05**, h35**km**, n50,** σ1**9**7**5**/**49, mb4.1**/15**, MS3.2**/7**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**1.08**	**50**	P	**Pn**	**08 53 27.8**	**-0.3**
NLAI	**Namlea**	**1.18**	**347**	P	**Pn**	**08 53 28.3**	**-1.1**
MSAI	**Masohi**	**1.87**	**56**	P	**Pn**	**08 53 40.5**	**+1.5**
MSAI				S	**Sn**	**08 54 02.2**	**+0.8**
SANI	**Sanana**	**2.71**	**329**	P	**Pn**	**08 53 49.7**	**-0.8**
FAKI	**Fak Fak**	**5.08**	**73**	P	**Pn**	**08 54 26.0**	**+2.8**
	0.3nm74nm,0.9s						
FAKI	**Fak Fak**	**5.08**	**73**		**Pn**	**08 54 25.0**	**+1.8**
FAKI				Sn	**Sn**	**08 55 21.2**	**+0.5**
TNTI	**Ternate**	**5.13**	**360**	Pn	**Pn**	**08 54 26.5**	**+2.6**
SWI	**Sorong**	**5.23**	**48**	P	**Pn**	**08 54 26.4**	**+1.1**
	0.4nm101nm,0.8s						
SIJI	**Sorong**	**5.23**	**48**	Pn	**Pn**	**08 54 25.1**	**-0.1**
	6.4nm,0.3s,baz=230,slow=22,SNR=10						
SIJI				Sn	**Sn**	**08 55 22.9**	**-1.5**
	2.5nm,0.3s,baz=187,slow=19,SNR=9.0						
LUWI	**Luwuk**	**5.67**	**306**	Pn	**Pn**	**08 54 34.0**	**+2.7**
SOEI	**Soe**	**6.16**	**210**	Pn	**Pn**	**08 54 37.7**	**-0.4**
APSI	**Ampana**	**6.68**	**301**	P	**Pn**	**08 54 45.6**	**+0.4**
	0.2nm761nm64nm,0.8s						
RKPI	**Ransiki, Papua**	**7.37**	**67**	P	Pn	08 55 05.5	+11
SPSI	**Sidrap Palu**	**7.59**	**273**	P	**Pn**	**08 55 02.0**	**+4.3**
	0.1nm24nm,0.5s						
BKB	**Balikpapan**	**10.91**	**286**	Pn	**Pn**	**08 55 46.3**	**+3.1**
KNRA	**Kununurra**	**11.30**	**173**	Pn	**Pn**	**08 55 49.0**	**+0.5**
DAV	**Davao City (W)**	**11.53**	**351**	LR	LR	09 00 33.6	
	comp=Z,122nm,19.5s,baz=9.5,slow=39						
FITZ	**Fitzroy Crossi**	**13.73**	**187**	Pn	**Pn**	**08 56 20.4**	**-1.3**
	0.2nm,0.3s,baz=10,slow=11,SNR=3.0						
FITZ				LR	LR	09 02 30.5	
	comp=Z,128nm,19.6s,baz=30,slow=41						
WRAB	**Tennant Creek**	**16.88**	**157**	P	**Pn**	**08 57 02.2**	**-0.9**
WRAB				IAmb	IAmb	08 57 10.8	
	comp=Z,18nm,0.9s						
WRA	**Warramunga Arr**	**16.88**	**157**	P	**Pn**	**08 57 03.0**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=340,slow=13,SNR=6.5						
WR0	**Warramunga Arr**	**16.98**	**156**	P	**Pn**	**08 57 03.3**	**-1.1**
WR0				IAmb	IAmb	08 57 12.0	
	comp=Z,20nm,1.1s						
KSM	**Kuching**	**18.02**	**289**	P	**Pn**	**08 57 14.7**	**-2.6**
KSM				IAmb	IAmb	08 57 15.7	
	comp=Z,60nm,1.3s						
COEN	**Coen**	**18.25**	**122**	P	**P**	**08 57 17.4**	**-2.7**
PSAB2	**Pilbara Seismi**	**18.55**	**202**	P	**P**	**08 57 22.3**	**-1.1**
PSAB2				IAmb	IAmb	08 57 40.7	
	comp=Z,46nm,1.4s						
ASAR	**Alice Springs**	**20.17**	**162**	P	Pn	08 57 43.8	+0.6
	comp=Z,7.0nm,0.7s,baz=343,slow=9.6,SNR=55						
ASAR				LR	LR	09 07 06.1	
	comp=Z,48nm,18.4s,baz=350,slow=42						
PMG	**Port Moresby**	**20.26**	**105**	P	**P**	**08 57 38.2**	**-3.9**
PMG				IAmb	IAmb	08 57 52.6	
	comp=Z,38nm,1.4s						
CTA	**Charters Tower**	**24.12**	**132**	P	**P**	**08 58 23.5**	**+1.3**
	comp=Z,7.8nm,1.0s,baz=337,slow=7.7,SNR=2.8						
STKA	**Stephens Creek**	**30.43**	**156**	P	**P**	**08 59 19.9**	**+1.2**
	comp=Z,2.3nm,0.9s,baz=315,slow=7.1,SNR=3.4						
HNR	**Honiara**	**32.71**	**101**	LR	LR	09 13 11.4	
	comp=Z,64nm,18.4s,baz=347,slow=37						
CMAR	**Chiang Mai Arr**	**36.06**	**310**	P	**P**	**09 00 08.0**	**0.0**
	comp=Z,0.7nm,0.3s,baz=134,slow=6.8,SNR=2.4						
CMAR				LR	LR	09 15 16.7	
	comp=Z,38nm,21.9s,baz=120,slow=37						
CMAR	**Chiang Mai Arr**	**36.06**	**310**	P	**P**	**09 00 08.0**	**0.0**
KSRS	**Korea Array**	**41.63**	**1**	P	**P**	**09 00 54.0**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=171,slow=9.6,SNR=7.6						
KSRS				LR	LR	09 17 55.3	
	comp=Z,16nm,21.8s,baz=157,slow=36						
DZM	**Mont Dzumac**	**41.72**	**119**	LR	LR	09 19 04.4	
	comp=Z,34nm,18.3s,baz=340,slow=37						
XAN	**Xi'an**	**42.01**	**337**	P	P	09 01 04.5	+6.9
XAN				pP	sP	09 01 10.6	+0.2
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LZH	**Lanzhou**	**45.90**	**333**	*e*P	**P**	**09 01 29.8**	**+0.9**
LZH				pP	pwP	09 01 47.0	+4.5
LZH				sP	sP	09 01 55.3	+13
LZH				*e*PP	**PP**	**09 03 19.0**	**+2.0**
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,56nm,6.2s						
HHC	**Hu-ho-hao-te**	**47.29**	**344**	*e*P	**P**	**09 01 41.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,61nm,5.3s						
USRK	**Ussuriysk Ar.**	**48.55**	**4**	P	**P**	**09 01 49.3**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=136,slow=6.0,SNR=5.1						
MDJ	**Mudanjiang**	**48.83**	**2**	P	**P**	**09 01 49.8**	**-1.5**
ULN	**Ulaanbaatar**	**55.01**	**343**	P	**P**	**09 02 37.0**	**-0.7**
ULN				IAmb	IAmb	09 02 41.3	
	comp=Z,2.9nm,1.1s						
SONM	**Songino Array**	**55.17**	**343**	P	**P**	**09 02 39.1**	**+0.3**
	comp=Z,0.8nm,1.0s,baz=160,slow=4.6,SNR=3.4						
WMQ	**Urumqi**	**59.80**	**328**	*e*P	**P**	**09 03 12.1**	**+0.7**
WMQ				LR	LR		
	comp=N,360nm,29.1s						
WMQ				LR	LR		
	comp=E,730nm,29.2s						
WMQ				LR	LR		
	comp=Z,25nm,28.8s						
KSH	**Kashi**	**64.34**	**318**	P	**P**	**09 03 40.8**	**-1.2**
KSH				pP	pwP	09 04 02.6	+6.5
KSH				PP	**PP**	**09 06 06.1**	**+2.2**
KSH				S	**S**	**09 12 14.9**	**-3.1**
KSH				sS	sS	09 12 47.4	+14
MK31	**Makanchi Array**	**64.63**	**327**	P	**P**	**09 03 43.2**	**-0.4**
MKAR	**Makanchi Array**	**64.63**	**327**	P	**P**	**09 03 43.5**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=115,slow=8.2,SNR=11						
YAK	**Yakutsk**	**66.26**	**1**	P	**P**	**09 03 53.4**	**-0.3**
ZALV	**Zalesovo Beam**	**68.11**	**334**	P	**P**	**09 04 05.3**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=116,slow=6.6,SNR=2.6						
KURBB	**Kurchatov Arra**	**68.94**	**329**	P	**P**	**09 04 10.5**	**-0.4**
	comp=Z,1.8nm,0.9s,baz=133,slow=5.5,SNR=6.8						
KURK	**Kurchatov**	**68.95**	**329**	P	**P**	**09 04 08.0**	**-3.0**
KURK				IAmb	IAmb	09 04 17.7	
	comp=Z,3.5nm,0.8s						
BVAR	**Borovoye Array**	**74.48**	**328**	P	**P**	**09 04 42.6**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=108,slow=4.7,SNR=2.6						
BRTR	**Keskin Array B**	**95.65**	**309**	LR	LR	09 59 22.6	
	comp=Z,8.0nm,18.6s,baz=330,slow=42						

IDC ***19*** *08:56:47.2±1.2, 40°.29N×47°.06E, h0km, mb3.4/5, mb1 3.5/8, mb1mx3.3/34, mbtmp3.4/8, ML2.6/2, Error ellipse: s-maj=21.0km s-min=9.4km az=176.0*

NSSP ***19*** *08:56:49.0, 40°.52N×46°.88E, h15km, Ms3.4*

AZER ***19*** *08:56:50.9, 40°.54N×46°.93E, h32km, ML3.6*

DRS ***19*** *08:56:50.0±0.0, 40°.59N×46°.81E, h12km*

TIF ***19*** *08:56:50.9, 40°.55N×46°.98E, h9km±4km*

DDA ***19*** *08:56:50.9, 40°.86N×46°.96E, h0km±1km, ML3.2*

THR ***19*** *08:56:51.5±0.4, 40°.30N×47°.03E, h14km±9km, ML3.0*

MOS ***19*** *08:56:52.3±1.4, 40°.64N×46°.83E, h10km, mb3.6/3, Error ellipse: s-maj=10.9km s-min=6.3km az=120.9*

ISC 19 08:56:50.7±1.0**, 40°.54N**±0°.01×**46°.96E**±0°.01**, h12**km±8km**, n106,** σ1**9**1**6**/**187, mb3.5**/4**, 10C, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNGR	**Mingechevir, A**	**0.25**	**22**	P	**Pn**	**08 56 59.1**	**-1.2**
	SNR=27						
MNGR				S	**Sb**	**08 57 04.9**	**+3.3**
BRDA	**Brd**	**0.32**	**148**	P	**Pn**	**08 56 59.9**	**-1.3**
	SNR=36						
BRDA				S	**Sb**	**08 57 07.5**	**+3.9**
AGDM	**Agdam**	**0.44**	**165**	P	**Pb**	**08 57 01.2**	**+0.8**
	SNR=81						
AGDM				S	**Sb**	**08 57 09.2**	**+2.1**
GANJ	**Ganja**	**0.50**	**283**	P	**Pb**	**08 57 01.5**	**+0.1**
	SNR=197						
GANJ				S	**Sb**	**08 57 09.0**	**+0.4**
ZRD	**Zardab**	**0.61**	**115**	P	**Pn**	**08 57 04.4**	**-0.8**
	SNR=39						
ZRD				S	**Sn**	**08 57 15.1**	**+0.2**
SEKA	**Sheki**	**0.69**	**15**	P	**Pb**	**08 57 05.2**	**+0.4**
	SNR=27						
SEKA				S	**Sn**	**08 57 15.7**	**-1.5**
QBL	**Gabala**	**0.78**	**58**	P	**Pb**	**08 57 06.7**	**+0.5**
	SNR=40						
QBL				S	**Sn**	**08 57 18.5**	**-0.8**
GDB	**GEDABAY**	**0.94**	**282**	P	**Pg**	**08 57 08.6**	**-0.1**
	SNR=345						
GDB				S	**Sg**	**08 57 21.1**	**+0.2**
BLQ	**Beylaqan**	**0.94**	**150**	P	**Pg**	**08 57 08.4**	**-0.3**
	SNR=14						
BLQ				S	**Sb**	**08 57 21.5**	**+0.2**
KDMR	**Kurdemir**	**0.95**	**99**	P	**Pn**	**08 57 09.6**	**-0.2**
	SNR=10						
KDMR				S	**Sn**	**08 57 24.0**	**+0.7**
IML	**Ismayilli**	**0.96**	**74**	P	**Pb**	**08 57 09.3**	**-0.1**
	SNR=8.9						
IML				S	**Sn**	**08 57 23.0**	**-0.8**
XNQ	**Khinaliq**	**1.10**	**54**	P	**Pb**	**08 57 11.3**	**-0.5**
	SNR=245						
XNQ				S	**Sg**	**08 57 26.5**	**+0.4**
AKT	**Akhty**	**1.11**	**32**	*e*PG	**Pn**	**08 57 12.0**	**-0.1**
AKT	**Akhty**	**1.11**	**32**	*i* Pg	**Pn**	**08 57 12.0**	**-0.1**
AKT				*e*Sg	**Sn**	**08 57 27.7**	**+0.2**
DDFL	**Dedoflistskaro**	**1.11**	**325**	P	**Pn**	**08 57 14.0**	**+1.9**
DDFL				S	**Sn**	**08 57 28.2**	**+0.8**
DDFL	**Dedoflistskaro**	**1.11**	**325**	PG	**Pn**	**08 57 14.0**	**+1.9**
DDFL				S	**Sn**	**08 57 28.2**	**+0.8**
DDFL	**Dedoflistskaro**	**1.11**	**325**	*i* P	**Pn**	**08 57 14.1**	**+2.0**
QRD	**Qoradiz**	**1.11**	**165**	P	**Pb**	**08 57 11.4**	**-0.4**
	SNR=11						
QRD				S	**Sg**	**08 57 26.4**	**-0.1**
ZKTA	**Zakatala**	**1.13**	**347**	P	**Pg**	**08 57 12.5**	**+0.1**
	SNR=42						
ZKTA				S	**Sn**	**08 57 28.9**	**+1.1**
PQL	**Pirkuli**	**1.27**	**78**	P	**Pb**	**08 57 14.4**	**-0.3**
	SNR=22						
PQL				S	**Sg**	**08 57 31.9**	**+0.4**
SAAT	**Saatly**	**1.31**	**121**	P	**Pn**	**08 57 13.0**	**-1.8**
	SNR=6.0						
SAAT				S	**Sb**	**08 57 30.8**	**-1.2**
QZX	**Qazax, Azerbai**	**1.31**	**294**	P	**Pn**	**08 57 14.9**	**0.0**
	SNR=56						
QZX				S	**Sb**	**08 57 32.3**	**+0.2**
QSAR	**Qusar**	**1.39**	**45**	Pn	**Pg**	**08 57 16.9**	**-0.5**
	SNR=24						
QSAR				Sn	**Sg**	**08 57 35.6**	**+0.3**
LGD	**Lagodekhi**	**1.40**	**338**	P	**Pg**	**08 57 17.7**	**+0.1**
LGD				S	**Sg**	**08 57 37.8**	**+1.9**
LGD	**Lagodekhi**	**1.40**	**338**	PG	**Pg**	**08 57 17.7**	**+0.1**
LGD				S	**Sg**	**08 57 37.8**	**+1.9**
LGD	**Lagodekhi**	**1.40**	**338**	*e*Pg	**Pg**	**08 57 17.7**	**+0.1**
LGD				*e*Sg	**Sg**	**08 57 37.8**	**+1.9**
QUBA	**Quba, Azerbaij**	**1.42**	**54**	Pn	**Pb**	**08 57 17.3**	**+0.2**
	SNR=10						
QUBA				Sn	**Sg**	**08 57 37.2**	**+0.8**
GBS	**Qobustan**	**1.51**	**89**	Pg	**Pg**	**08 57 20.4**	**+0.7**
	SNR=16						
GBS				Sg	**Sg**	**08 57 40.4**	**+1.1**
ATGJ	**Altiaghaj**	**1.54**	**77**	Pn	**Pb**	**08 57 19.3**	**+0.1**
	SNR=12						
ATGJ				Sn	**Sg**	**08 57 40.2**	**0.0**
SIZA	**Siyzn**	**1.57**	**69**	Pg	**Pg**	**08 57 20.4**	**-0.3**
	SNR=7.3						
SIZA				Sg	**Sg**	**08 57 42.0**	**+0.9**
SBZ	**Shahbuz**	**1.57**	**224**	Pn	**Pb**	**08 57 19.8**	**+0.1**
	SNR=180						
SBZ				Sn	**Sg**	**08 57 41.0**	**-0.2**
KMKR	**Kumukh**	**1.59**	**4**	*e*PG	**Pg**	**08 57 21.0**	**-0.3**
KMKR				*e*S	**Sg**	**08 57 42.0**	**0.0**
KMKR				pmax	pmax		
	comp=Z,44nm,0.4s						
KMKR	**Kumukh**	**1.59**	**4**	*e*Pg	**Pg**	**08 57 21.0**	**-0.3**
KMKR				*e*Sg	**Sg**	**08 57 42.0**	**0.0**
ALIB	**Äli-Bayra**	**1.67**	**110**	Pg	**Pg**	**08 57 22.3**	**-0.4**
	SNR=10						
ALIB				Sg	**Sg**	**08 57 46.3**	**+1.9**
GLBA	**Clilabad**	**1.70**	**139**	Pn	**Pn**	**08 57 20.0**	**-0.2**
	SNR=13						
GLBA				Sn	**Sb**	**08 57 42.9**	**-0.4**
GNI	**Garni**	**1.74**	**258**	*c i*PN	**Pb**	**08 57 22.8**	**+0.2**
GNI	**Garni**	**1.74**	**258**	Pg	**Pb**	**08 57 22.4**	**-0.2**
	comp=Z,30nm,0.3s,baz=85,slow=4.0,SNR=86						
GNI				Lg	Lg	08 57 45.4	
	comp=Z,34nm,0.3s,baz=54,slow=19,SNR=8.8						
GNI	**Garni**	**1.74**	**258**	⇑*i*P	**Pb**	**08 57 23.0**	**+0.3**
GNI				⇑*i*S	**Sg**	**08 57 47.1**	**+0.5**
GNI	**Garni**	**1.74**	**258**	*e*Pg	**Pb**	**08 57 22.9**	**+0.3**
GNI				*e*Sg	**Sg**	**08 57 45.8**	**-0.8**
KAPZ	**Kaputan**	**1.74**	**264**	⇑*i*P	**Pb**	**08 57 22.5**	**-0.1**
KAPZ				⇑*i*S	**Sg**	**08 57 47.0**	**+0.5**
NAX	**Nakhchivan**	**1.77**	**220**	Pn	**Pb**	**08 57 23.0**	**-0.1**
	SNR=30						
NAX				Sn	**Sb**	**08 57 45.4**	**+0.1**
ORD	**Ordubad**	**1.77**	**205**	Pn	**Pb**	**08 57 22.4**	**-0.8**
	SNR=36						
ORD				Sn	**Sb**	**08 57 44.9**	**-0.5**
HYR	**Heyderabad**	**1.81**	**244**	Pg	**Pb**	**08 57 23.9**	**+0.1**
	SNR=14						
HYR				Sg	**Sg**	**08 57 49.7**	**+0.8**
DRN	**Derbent**	**1.81**	**34**	*e*PN	**Pg**	**08 57 25.9**	**+0.4**
DRN				*e*S	**Sg**	**08 57 51.4**	**+2.4**
DRN				pmax	pmax		
	comp=Z,180nm,0.3s						
NRKZ	**NAREK**	**1.84**	**254**	⇑*i*P	**Pb**	**08 57 24.2**	**-0.1**
NRKZ				⇑*i*S	**Sg**	**08 57 49.9**	**+0.1**
GNBR	**Gunib**	**1.85**	**0**	*e*Pg	**Pn**	**08 57 23.1**	**+0.8**
GNBR				*e*Sg	**Sg**	**08 57 50.5**	**+0.4**
GRMI	**Germi**	**1.87**	**157**	*e*Pg	**Pn**	**08 57 21.3**	**-1.4**
GRMI				IAML		08 57 47.6	
	comp=N,256nm,0.3s						
YRD	**Yardimli**	**1.90**	**148**	Pn	**Pn**	**08 57 23.1**	**0.0**
YRD				Sn	**Sn**	**08 57 46.5**	**-0.5**
BTNK	**Botanikuri**	**1.99**	**306**	P	**Pb**	**08 57 25.8**	**-1.1**
BTNK				S	**Sb**	**08 57 52.3**	**+0.5**
BTNK	**Botanikuri**	**1.99**	**306**	PN	**Pb**	**08 57 25.8**	**-1.1**
BTNK				S	**Sb**	**08 57 52.2**	**+0.5**
BTNK	**Botanikuri**	**1.99**	**306**	*e*Pg	**Pb**	**08 57 25.8**	**-1.1**
BTNK				*e*Sg	**Sb**	**08 57 52.3**	**+0.5**
BTNK	**Botanikuri**	**1.99**	**306**	*i* P	**Pb**	**08 57 25.8**	**-1.1**
BTNK				IAML		08 57 52.0	
	comp=E,346nm,0.4s						
BTNK				*i* S	**Sb**	**08 57 52.4**	**+0.7**
BTNK				IAML		08 57 53.0	
	comp=N,189nm,0.2s						
STE	**Stepanavan**	**2.02**	**284**	⇑*i*P	**Pn**	**08 57 23.6**	**-1.1**
STE				⇑S	**Sn**	**08 57 51.0**	**+1.0**
TBLG	**Delisi**	**2.06**	**306**	P	**Pb**	**08 57 26.9**	**-1.1**
TBLG				S	**Sb**	**08 57 53.7**	**+0.1**
TBLG	**Delisi**	**2.06**	**306**	PN	**Pb**	**08 57 26.9**	**-1.1**
TBLG				S	**Sb**	**08 57 53.7**	**+0.1**
TBLG	**Delisi**	**2.06**	**306**	*e*Pg	**Pb**	**08 57 26.9**	**-1.1**
TBLG				*e*Sg	**Sb**	**08 57 53.7**	**+0.1**
TBLG	**Delisi**	**2.06**	**306**	*i* P	**Pb**	**08 57 26.9**	**-1.1**
TBLG				*i* S	**Sb**	**08 57 53.4**	**-0.2**
TBLG				IAML		08 57 54.0	
	comp=N,130nm,0.4s						
TBLG				IAML		08 57 54.0	
	comp=E,176nm,0.6s						
MAKU	**Maku**	**2.11**	**237**	*e*Pn	**Pn**	**08 57 27.4**	**+1.4**
MAKU				*e*Sg	**Sb**	**08 57 55.8**	**+0.6**
MAKU				IAML		08 57 59.5	
	comp=N,77nm,0.2s						
KZRT	**Kazreti**	**2.12**	**294**	P	**Pn**	**08 57 26.2**	**+0.2**
KZRT				S	**Sb**	**08 57 54.3**	**-0.9**
KZRT	**Kazreti**	**2.12**	**294**	PN	**Pn**	**08 57 26.2**	**+0.2**
KZRT				S	**Sb**	**08 57 54.3**	**-0.9**
KZRT	**Kazreti**	**2.12**	**294**	*e*Pg	**Pn**	**08 57 26.2**	**+0.2**
KZRT				*e*Sg	**Sb**	**08 57 54.3**	**-0.9**
KZRT	**Kazreti**	**2.12**	**294**	*i* P	**Pn**	**08 57 26.9**	**+0.9**
KZRT				*i* S	**Sb**	**08 57 54.6**	**-0.6**
LRK	**Lerik**	**2.17**	**150**	Pn	**Pn**	**08 57 27.9**	**+1.0**
	SNR=11						
LRK				Sn	**Sn**	**08 57 54.7**	**+0.9**
BTLR	**Botlikh**	**2.19**	**346**	*i* PN	**Pn**	**08 57 24.3**	**-2.8**
BTLR	**Botlikh**	**2.19**	**346**	*e*Pg	**Pn**	**08 57 28.2**	**+1.2**
BTLR				*e*Sg	**Sb**	**08 57 58.8**	**+1.2**
METS	**Metsamor**	**2.23**	**261**	*i* P	**Pb**	**08 57 30.2**	**-0.8**
METS				*i* S	**Sg**	**08 58 01.4**	**-1.0**
LKRN	**Lenkeran, Azer**	**2.30**	**142**	Pn	**Pn**	**08 57 28.6**	**+0.2**
	SNR=5.9						
LKRN				Sn	**Sn**	**08 57 57.1**	**+0.4**
NDR	**Nardaran**	**2.31**	**88**	Pn	**Pn**	**08 57 28.6**	**+0.1**
NDR				Sn	**Sn**	**08 57 57.0**	**+0.2**
TRLG	**Trialeti**	**2.38**	**296**	P	**Pb**	**08 57 32.4**	**-1.2**
TRLG				S	**Sb**	**08 58 03.3**	**+0.3**
TRLG	**Trialeti**	**2.38**	**296**	*e*Pn	**Pb**	**08 57 32.4**	**-1.2**
TRLG				*e*Sn	**Sb**	**08 58 03.3**	**+0.3**
GMRZ	**Gyumri**	**2.39**	**278**	*e*P	**Sg**	**08 58 10.0**	**+2.4**
ASTR	**Astara**	**2.43**	**144**	Pn	**Pn**	**08 57 30.2**	**0.0**
	SNR=9.8						
ASTR				Sn	**Sn**	**08 58 01.6**	**+1.7**
VNNZ	**Vanand**	**2.44**	**261**	*i* P	**Pb**	**08 57 32.7**	**-1.8**
VNNZ				*i* S	**Sb**	**08 58 05.1**	**+0.6**
**DBC

mb4.5/67, Error ellipse: s-maj=10.6km s-min=5.9km az=147.0
TRN ***19*** *09:25:22.5, 10′.27N×62′.51W, h62km, MD4.2*
IDC ***19*** *09:25:23.4±2.6, 10′.44N×62′.68W, h41km±23km, mb3.8/21, mb1 4.0/24, mb1mx3.9/40, mbtmp4.1/24, ML2.9/3, MS3.4/7, Ms1 3.4/7, ms1mx2.9/44, Error ellipse: s-maj=15.3km s-min=12.0km az=88.0*

ISC 19 09:25:23.4±0.5, 10′.35N±0′.03×62′.59W±0′.03, h38km±1km, n194, σ1§54/228, mb4.4/53, MS3.4/5, 3C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUNV	**Guanoco**	**0.39**	**241**	*i*P	**Pn**	**09 25 29.6**	**-2.8**
GUNV				eS	**Sn**	**09 25 37.0**	**-2.1**
CRUV	**Carupano**	**0.71**	**297**	*e*P	**Pn**	**09 25 34.8**	**-2.1**
CRUV				eS	**Sn**	**09 25 45.0**	**-1.6**
TPP	**Pointe-a-Pierr**	**1.13**	**92**	*e*P	**Pn**	**09 25 42.6**	**0.0**
TRN	**Trinidad (W)**	**1.21**	**76**	*e*P	**Pn**	**09 25 42.6**	**-1.2**
TRN				eS	**Sn**	**09 25 59.4**	**+0.5**
TRN	**Trinidad (W)**	**1.21**	**76**	*i*eP	**Pn**	**09 25 41.2**	**-2.5**
TRN				eS	**Sn**	**09 25 58.1**	**-0.8**
ORIV	**Oritupano**	**1.50**	**212**	*e*P	**Pn**	**09 25 49.7**	**+1.9**
ORIV				eS	**Sn**	**09 26 11.3**	**+5.0**
ORIV	**Oritupano**	**1.50**	**212**	*i*eP	**Pn**	**09 25 49.4**	**+1.5**
ORIV				eS	**Sn**	**09 26 10.8**	**+4.6**
TBH	**Brigand Hill**	**1.51**	**85**	*e*P	**Pn**	**09 25 48.3**	**+0.4**
PLCV	**Puerto La Cruz**	**1.97**	**265**		**Pn**	**09 25 55.0**	**+0.7**
PLCV					**Sn**	**09 26 16.1**	**-1.7**
GRGR	**Grenville**	**2.00**	**27**	*e*P	**Pn**	**09 25 56.0**	**+1.3**
GRGR				eS	**Sn**	**09 26 20.0**	**+1.6**
GRGR	**Grenville**	**2.00**	**27**	*e*P	**Pn**	**09 25 54.0**	**-0.7**
GRGR				eS	**Sn**	**09 26 19.2**	**+0.8**
GRGR	**Grenville**	**2.00**	**27**		**Pn**	**09 25 54.3**	**-0.3**
GRGR				Sn	**Sn**	**09 26 19.6**	**+1.2**
PCRV	**Puerto La Cruz**	**2.02**	**265**	P	**Pn**	**09 25 55.0**	**+0.1**
	26nm,0.3s,baz=58,slow=5.1,SNR=132						
PCRV				S	**Sn**	**09 26 16.1**	**-2.8**
	72nm,0.3s,baz=64,slow=2.7,SNR=7.1						
PCRV	**Puerto La Cruz**	**2.02**	**265**	*e*P	**Pn**	**09 25 54.8**	**-0.1**
PCRV				eS	**Sn**	**09 26 20.1**	**+1.2**
GRHS	**Sauteurs**	**2.08**	**27**	*e*P	**Pn**	**09 25 57.4**	**+1.6**
GRHS				eS	**Sn**	**09 26 22.8**	**+2.3**
GRSS	**Sisters**	**2.16**	**26**	*e*P	**Pn**	**09 25 58.3**	**+1.4**
GRSS				eS	**Sn**	**09 26 25.5**	**+3.1**
TOSP	**Speyside**	**2.23**	**65**	*e*P	**Pn**	**09 25 58.6**	**+0.8**
TOSP				eS	**Sn**	**09 26 26.0**	**+1.8**
TOSP	**Speyside**	**2.23**	**65**	*e*P	**Pn**	**09 25 57.4**	**-0.4**
TOSP				eS	**Sn**	**09 26 24.8**	**+0.6**
TOSP	**Speyside**	**2.23**	**65**		**Pn**	**09 25 58.0**	**+0.1**
RIOV	**Rio Grande**	**2.39**	**161**	*e*P	**Pn**	**09 25 59.1**	**-1.0**
RIOV				eS	**Sn**	**09 26 28.4**	**+0.2**
PRGV	**PARIAGUAN**	**2.57**	**232**	*e*P	**Pn**	**09 26 03.3**	**+0.8**
PRGV				eS	**Sn**	**09 26 35.4**	**+2.9**
CUPV	**Cpira**	**3.16**	**265**	*e*P	**Pn**	**09 26 12.1**	**+1.5**
CUPV				eS	**Sn**	**09 26 49.1**	**+2.0**
SVB	**Belmont**	**3.19**	**24**	*e*P	**Pn**	**09 26 12.3**	**+1.3**
SVB				eS	**Sn**	**09 26 51.3**	**+3.5**
SVB	**Belmont**	**3.19**	**24**		**Pn**	**09 26 11.4**	**+0.4**
SVCV	**St. Vincent, C**	**3.23**	**26**	*e*P	**Pn**	**09 26 13.0**	**+1.3**
SVCV				eS	**Sn**	**09 26 50.7**	**+1.8**
BIRV	**Birongo**	**3.62**	**272**	*e*P	**Pn**	**09 26 19.4**	**+2.5**
BIRV				eS	**Sn**	**09 27 00.8**	**+2.4**
SLB	**Belfond**	**3.77**	**24**	*e*P	**Pn**	**09 26 21.2**	**+2.1**
SLB				eS	**Sn**	**09 27 03.4**	**+1.0**
MERV	**Las Mercedes**	**3.81**	**254**	*e*P	**Pn**	**09 26 20.4**	**+0.8**
MERV				eS	**Sn**	**09 27 03.9**	**+0.7**
SLBI	**Saint Lucia, B**	**3.98**	**23**	*e*P	**Pn**	**09 26 22.6**	**+0.7**
SLBI	**Saint Lucia, B**	**3.98**	**23**	eS	**Sn**	**09 27 08.2**	**+0.9**
BBGH	**Gun Hill**	**4.07**	**47**	*e*P	**Pn**	**09 26 24.0**	**+0.9**
CARV	**Caracas**	**4.27**	**272**	*e*P	**Pn**	**09 26 26.4**	**+0.5**
H05S1	**Guadeloupe/Mar**	**4.40**	**23**	P	**Pn**	**09 26 28.0**	**+0.4**
	SNR=8.2						
MPOM	**Morne Pois Mar**	**4.41**	**22**	*e*P	**Pn**	**09 26 28.5**	**+0.7**
TRMF	**Trois Ilets**	**4.42**	**20**	*e*P	**Pn**	**09 26 28.8**	**+0.7**
FDF	**Fort de France**	**4.58**	**18**	*e*P	**Pn**	**09 26 31.1**	**+1.0**
FDF	**Fort de France**	**4.58**	**18**	eS	**Sn**	**09 27 22.2**	**0.0**
FDF	**Fort de France**	**4.58**	**18**	*e*P	**Pn**	**09 26 29.8**	**-0.3**
FDF				eS	**Sn**	**09 27 20.2**	**-1.9**
FDF	**Fort de France**	**4.58**	**18**		**Pn**	**09 26 31.2**	**+1.0**
PML	**Morne Lenard**	**4.61**	**17**	*e*P	**Pn**	**09 26 31.6**	**+0.9**
LUEV	**Luepa**	**4.62**	**166**	*e*P	**Pn**	**09 26 28.2**	**-2.6**
GBMF	**Grand Be**	**4.63**	**17**	*e*P	**Pn**	**09 26 32.1**	**+1.1**
PCM	**Pelee Case Pet**	**4.64**	**17**	*e*P	**Pn**	**09 26 31.2**	**+0.3**
CXM	**Morne La Croix**	**4.65**	**17**	*e*P	**Pn**	**09 26 33.5**	**+2.3**
BAMF	**Morne Balai**	**4.66**	**17**	*e*P	**Pn**	**09 26 32.5**	**+1.2**
SVN	**Savane Anatole**	**4.68**	**17**	*e*P	**Pn**	**09 26 32.6**	**+1.1**
TURV	**Turiamo**	**5.16**	**272**	*e*P	**Pn**	**09 26 38.6**	**+0.5**
BBL	**Barber's Block**	**5.26**	**12**	*e*P	**Pn**	**09 26 42.4**	**+2.8**
MDPO	**Dominica; Chan**	**5.31**	**12**	*e*	**Pn**	**09 26 41.6**	**+1.4**
DWS	**Wesley**	**5.33**	**13**	*e*	**Pn**	**09 26 39.3**	**-1.2**
BAUV	**El Baul**	**5.55**	**256**	*e*P	**Pn**	**09 26 45.0**	**+1.5**
BAUV	**El Baul**	**5.55**	**256**	eS	**Sn**	**09 27 46.4**	**+0.3**
BAUV	**El Baul**	**5.55**	**256**	*e*P	**Pn**	**09 26 44.1**	**+0.6**
BAUV				eS	**Sn**	**09 27 45.2**	**-0.9**
CBE	**Ff. Capester**	**5.76**	**9**	*e*P	**Pn**	**09 26 47.9**	**+1.4**
MAPV	**Macapo**	**5.80**	**265**	*e*P	**Pn**	**09 26 48.2**	**+1.3**
H05N1	**Guadeloupe/Mar**	**6.12**	**14**	P	**Pn**	**09 26 51.4**	**+0.1**
	SNR=9.5						
ABD	**La Joyeuse, An**	**6.18**	**10**	*e*P	**Pn**	**09 26 55.2**	**+3.0**
MLYT	**Lee's Yard**	**6.34**	**4**	*e*P	**Pn**	**09 26 56.2**	**+1.7**
SKI	**Saint Kitts**	**6.94**	**359**	*e*P	**Pn**	**09 27 04.7**	**+2.1**
SKI	**Saint Kitts**	**6.94**	**359**	Pn	**Pn**	**09 27 05.4**	**+2.7**
PAYV	**Puerto Ayacuch**	**7.01**	**226**	*e*P	**Pn**	**09 27 02.8**	**-0.8**
PAYV				eS	**Sn**	**09 28 18.3**	**-3.7**
SEUS	**St. Eustatius**	**7.11**	**357**	Pn	**Pn**	**09 27 06.1**	**+1.2**
CURV	**Curarigua**	**7.26**	**268**	*e*P	**Pn**	**09 27 07.8**	**+0.7**
CURV				eS	**Sn**	**09 28 25.4**	**-2.9**
MONV	**Montecano**	**7.41**	**283**	*e*P	**Pn**	**09 27 08.5**	**-0.6**
MONV				eS	**Sn**	**09 28 28.4**	**-3.5**
SMRT	**St. Maarten**	**7.67**	**357**	Pn	**Pn**	**09 27 15.8**	**+3.2**
SDV	**Santo Domingo**	**8.06**	**260**	P	**Pn**	**09 27 18.2**	**+0.1**
	2.8nm,0.3s,baz=82,slow=8.4,SNR=20						
SDV				S	**Sn**	**09 28 45.5**	**-2.7**
	14nm,0.3s,baz=360,slow=12,SNR=9.0						
SDV	**Santo Domingo**	**8.06**	**260**		**Pn**	**09 27 18.1**	**0.0**
MTP	**Monte Pirata**	**8.22**	**340**	Pn	**Pn**	**09 27 21.6**	**+1.4**
HUMP	**Col San Antoni**	**8.36**	**338**	Pn	**Pn**	**09 27 21.2**	**-0.9**
SJG	**San Juan**	**8.45**	**336**	P	**Pn**	**09 27 20.5**	**-2.8**
	0.3nm,0.3s,baz=122,slow=16,SNR=1.9						
SJG				LR	LR	09 30 27.1	
	comp=Z,88nm,20.6s,baz=166,slow=36						
SJG	**San Juan**	**8.45**	**336**	Pn	**Pn**	**09 27 23.5**	**+0.2**
CBYP	**Canovanas**	**8.48**	**339**	Pn	**Pn**	**09 27 25.5**	**+1.6**
OBIP	**Obispado Ponce**	**8.58**	**333**	Pn	**Pn**	**09 27 24.4**	**+1.3**
GCPR	**Guaynabo City**	**8.60**	**337**	Pn	**Pn**	**09 27 29.7**	**+4.2**
MLPR	**Magueyes Islan**	**8.72**	**331**	Pn	**Pn**	**09 27 29.2**	**+2.2**
CRPR	**Cabo Rojo, PR**	**8.78**	**331**	Pn	**Pn**	**09 27 29.0**	**+1.1**
AOPR	**Arecibo Observ**	**8.91**	**334**	Pn	**Pn**	**09 27 31.4**	**+1.7**
MPR	**Mayaguez**	**8.97**	**331**	Pn	**Pn**	**09 27 31.7**	**+1.3**
AGPR	**Aguadilla, PR**	**9.18**	**332**	Pn	**Pn**	**09 27 35.1**	**+1.8**
DR12	**Loma Pena Alta**	**10.65**	**323**	Pn	**Pn**	**09 27 55.4**	**+1.9**
MDP	**Montagnes des**	**11.15**	**117**	P	**Pn**	**09 27 57.6**	**-2.8**
	0.6nm,0.3s,baz=296,slow=15,SNR=7.4						
MDP				S	Sn	09 29 53.2	-11
	1.3nm,0.3s,baz=225,slow=19,SNR=4.0						
MDP				LR	LR	09 33 04.8	
	comp=Z,98nm,18.1s,baz=294,slow=41						
RUSC	**La Rusia**	**11.29**	**248**		**Pn**	**09 28 01.6**	**-1.1**
SDDR	**Presa de Saban**	**12.01**	**317**	Pn	**Pn**	**09 28 14.5**	**+2.4**
LGNH	**Logne**	**12.64**	**311**	Pn	**Pn**	**09 28 23.4**	**+2.8**
ROSC	**El Rosal**	**12.84**	**246**	P	**Pn**	**09 28 24.1**	**+0.2**
	0.8nm,0.3s,baz=102,slow=16,SNR=4.5						
ROSC				LR	LR	09 34 19.6	
	comp=Z,329nm,19.0s,baz=14,slow=42						
ROSC	**El Rosal**	**12.84**	**246**		**Pn**	**09 28 24.2**	**+0.4**
OTAV	**Otavalo**	**18.70**	**238**		**Pn**	**09 29 42.0**	**+2.2**
SAML	**Samuel**	**19.18**	**182**	P	**P**	**09 29 44.2**	**+0.2**
ATAH	**Atahualpa**	**23.44**	**223**	P	**P**	**09 30 29.8**	**-0.1**
	6.6nm,0.8s,baz=350,slow=18,SNR=3.4						
SIV	**San Ignacio**	**26.22**	**177**	P	**P**	**09 30 55.6**	**+0.7**
	2.4nm,0.7s,baz=22,slow=9.8,SNR=11						
NNA	**Nana**	**26.32**	**213**	LR	LR	09 42 37.5	
	comp=Z,76nm,18.6s,baz=30,slow=39						
LPAZ	**La Paz**	**27.03**	**192**	P	**P**	**09 31 04.2**	**+1.2**
	1.7nm,0.9s,baz=82,slow=4.6,SNR=6.5						
LPAZ				LR	LR	09 42 12.1	
	comp=Z,67nm,18.4s,baz=248,slow=37						
HODGE	**Hodges**	**29.82**	**326**	P	**P**	**09 31 30.1**	**+3.2**
HODGE				IAmb	IAmb	09 31 42.8	
	comp=Z,15nm,1.4s						
MNMC	**Minye Minye**	**30.10**	**193**	P	**P**	**09 31 31.6**	**+1.7**
MNMC				IAmb	IAmb	09 31 31.7	
	comp=Z,5.8nm,0.8s						
152A	**Waverly Hall**	**30.15**	**321**	P	**P**	**09 31 32.3**	**+2.3**
T57A	**Hurt**	**30.50**	**333**	P	**P**	**09 31 34.0**	**+1.1**
T57A				IAmb	IAmb	09 31 51.9	
	comp=Z,8.9nm,1.1s						
250A	**Grady**	**30.69**	**318**	P	**P**	**09 31 36.6**	**+1.8**
PB11	**IPOC Station P**	**30.72**	**193**	P	**P**	**09 31 33.9**	**-1.3**
PB11				IAmb	IAmb	09 31 36.4	
	comp=Z,13nm,1.1s						
LRAL	**Lakeview Retre**	**31.84**	**319**	P	**P**	**09 31 46.1**	**+1.3**
LRAL				IAmb	IAmb	09 31 50.5	
	comp=Z,6.4nm,1.1s						
FPAL	**Fort Paine**	**31.97**	**322**	P	**P**	**09 31 48.6**	**+2.6**
FPAL				IAmb	IAmb	09 31 49.7	
	comp=Z,6.5nm,1.4s						
Y49A	**Blount Mountai**	**32.00**	**321**	P	**P**	**09 31 47.4**	**+1.1**
Y49A				IAmb	IAmb	09 31 58.9	
	comp=Z,7.5nm,1.1s						
Q56A	**Snyder Ridge,**	**32.19**	**335**	P	**P**	**09 31 50.4**	**+2.6**
Q56A				IAmb	IAmb	09 31 57.8	
	comp=Z,13nm,1.1s						
LVC	**Limon Verde**	**33.34**	**191**	P	**P**	**09 31 57.4**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=86,slow=14,SNR=2.7						
V48A	**Smith Brothers**	**33.51**	**323**	P	**P**	**09 32 01.7**	**+2.3**
V48A				IAmb	IAmb	09 32 01.8	
	comp=Z,5.2nm,0.8s						
PLAL	**Pickwick Lake**	**33.77**	**321**	P	**P**	**09 32 03.3**	**+1.6**
M56A	**Emporium**	**33.91**	**339**	P	**P**	**09 32 04.6**	**+1.7**
M56A				IAmb	IAmb	09 32 13.6	
	comp=Z,15nm,1.5s						
OXF	**Oxford**	**34.33**	**319**	P	**P**	**09 32 07.3**	**+0.8**
N53A	**Lisbon**	**34.35**	**335**	P	**P**	**09 32 09.5**	**+2.8**
WVT	**Waverly**	**34.38**	**322**	P	**P**	**09 32 07.6**	**+0.7**
WVT				IAmb	IAmb	09 32 08.7	
	comp=Z,4.9nm,0.8s						
M54A	**Oil Creek Stat**	**34.48**	**337**	P	**P**	**09 32 09.4**	**+1.6**
M54A				IAmb	IAmb	09 32 23.1	
	comp=Z,9.9nm,1.3s						
LMN	**Caledonia Moun**	**35.43**	**357**	P	**P**	**09 32 16.9**	**+1.1**
S44A	**Carbondale**	**36.27**	**323**	P	**P**	**09 32 24.5**	**+1.3**
WLAR	**White Oak Lake**	**36.36**	**314**	P	**P**	**09 32 26.0**	**+2.0**
WLAR				IAmb	IAmb	09 32 32.2	
	comp=Z,9.1nm,0.9s						
PBMO	**Poplar Bluff**	**36.39**	**321**	P	**P**	**09 32 24.1**	**-0.1**
PBMO				IAmb	IAmb	09 32 25.4	
	comp=Z,5.8nm,0.8s						
LCAR	**Lake Charles**	**36.41**	**319**	P	**P**	**09 32 25.1**	**+0.8**
HKT	**Hockley**	**36.59**	**307**	P	**P**	**09 32 26.9**	**+1.0**
WHAR	**Wooly Hollow**	**36.69**	**317**	P	**P**	**09 32 28.1**	**+1.3**
MGMO	**Mountain Grove**	**37.78**	**320**	P	**P**	**09 32 37.5**	**+1.4**
MGMO				IAmb	IAmb	09 32 38.0	
	comp=Z,6.5nm,1.1s						
HHAR	**Hobbs**	**38.36**	**317**	P	**P**	**09 32 41.1**	**+0.2**
HHAR				IAmb	IAmb	09 32 41.4	
	comp=Z,4.2nm,0.7s						
833A	**Chaparral WMA,**	**38.84**	**303**	P	**P**	**09 32 45.2**	**+0.1**
833A				IAmb	IAmb	09 32 46.1	
	comp=Z,13nm,0.9s						
DRLN	**Deer Lake**	**39.02**	**5**	P	**P**	**09 32 46.9**	**+0.6**
TUL1	**Leonard**	**39.41**	**316**	P	**P**	**09 32 49.5**	**-0.2**
TUL1				IAmb	IAmb	09 32 50.0	
	comp=Z,9.2nm,0.9s						
JCT	**Junction City**	**39.95**	**306**	P	**P**	**09 32 54.7**	**+0.3**
JCT				IAmb	IAmb	09 32 55.1	
	comp=Z,5.5nm,0.7s						
X34A	**Smith Ranch, M**	**40.20**	**312**	P	**P**	**09 32 56.5**	**+0.1**
ABTX	**Abilene, Hawle**	**40.67**	**309**	P	**P**	**09 33 00.5**	**+0.2**
ABTX				IAmb	IAmb	09 33 00.9	
	comp=Z,5.0nm,0.8s						
WMOK	**Wichita Mounta**	**40.95**	**312**	P	**P**	**09 33 01.7**	**-0.9**
CFA	**Coronel Fontan**	**42.06**	**187**	P	**P**	**09 33 11.2**	**-0.5**
	comp=Z,1.8nm,0.6s,baz=357,slow=10,SNR=3.7						
G40A	**Rib Lake**	**42.09**	**331**	P	**P**	**09 33 12.3**	**+0.5**
G40A				IAmb	IAmb	09 33 20.6	
	comp=Z,9.9nm,1.4s						
D41A	**Chassel**	**42.69**	**334**	P	**P**	**09 33 17.8**	**+1.2**
TXAR	**Lajitas Array**	**42.72**	**302**	P	**P**	**09 33 16.8**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=115,slow=9.2,SNR=21						
TXAR				PcP	**PcP**	**09 35 08.1**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=114,slow=6.3,SNR=6.9						
TXAR	**Lajitas Array**	**42.72**	**302**	P	**P**	**09 33 17.4**	**+0.1**
TXAR					**PcP**	**09 35 08.0**	**-0.5**
TX31	**Lajitas Ar. Si**	**42.72**	**302**	P	**P**	**09 33 17.9**	**+0.7**
HPIG		**43.77**	**298**	P	**P**	**09 33 24.8**	**-1.0**
SCHQ	**Schefferville**	**44.49**	**357**	P	**P**	**09 33 30.6**	**-0.3**
	comp=Z,2.2nm,0.4s,baz=189,slow=6.4,SNR=12						
SCHQ	**Schefferville**	**44.49**	**357**	P	**P**	**09 33 31.6**	**+0.6**
MNTX	**Cornudas Mount**	**44.86**	**305**	P	**P**	**09 33 34.2**	**-0.1**
ANMO	**Albuquerque**	**46.80**	**309**	P	**P**	**09 33 50.1**	**+0.3**
AGMN	**Agassiz Nation**	**46.98**	**330**	P	**P**	**09 33 49.5**	**-1.3**
AGMN				IAmb	IAmb	09 33 50.6	
	comp=Z,5.4nm,0.8s						
121A	**Cookes Peak, D**	**47.05**	**305**	P	**P**	**09 33 52.1**	**+0.3**
121A				IAmb	IAmb	09 33 54.0	
	comp=Z,3.3nm,1.0s						
ULM	**Lac du Bonnet**	**48.32**	**332**	P	**P**	**09 33 59.1**	**-2.0**
	comp=Z,4.4nm,0.6s,baz=130,slow=7.4,SNR=13						
ULM	**Lac du Bonnet**	**48.32**	**332**	P	**P**	**09 33 59.9**	**-1.2**
ULM				IAmb	IAmb	09 34 00.4	
	comp=Z,5.2nm,0.6s						
PLCA	**Paso Flores**	**51.35**	**188**	P	**P**	**09 34 24.6**	**+0.3**
	comp=Z,2.0nm,0.9s,baz=38,slow=7.1,SNR=6.3						
PLCA	**Paso Flores**	**51.35**	**188**	P	**P**	**09 34 25.4**	**+1.1**
DGMT	**Dagmar**	**51.47**	**326**	P	**P**	**09 34 25.2**	**+0.1**
PD31	**Pinedale Array**	**52.03**	**317**	P	**P**	**09 34 28.4**	**-1.2**
PDAR	**Pinedale Array**	**52.03**	**317**	P	**P**	**09 34 28.6**	**-1.1**
	comp=Z,1.6nm,0.8s,baz=119,slow=9.6,SNR=17						
PDAR				PcP	**PcP**	**09 35 38.8**	**-2.8**
	comp=Z,0.5nm,0.7s,baz=147,slow=5.4,SNR=2.8						
PDAR	**Pinedale Array**	**52.03**	**317**	P	**P**	**09 34 28.1**	**-1.5**
PDAR					**PcP**	**09 35 39.1**	**-2.4**
HWUT	**Hardware Ranch**	**52.95**	**315**	P	**P**	**09 34 35.4**	**-1.1**
DUG	**Dugway, Tooele**	**53.34**	**313**	P	**P**	**09 34 38.5**	**-0.8**
BGU	**Big Grassy Mou**	**53.75**	**314**	P	**P**	**09 34 41.6**	**-0.6**
YHL	**Hebgen Lake**	**53.95**	**319**	P	**P**	**09 34 43.7**	**-0.2**
FFC	**Flin Flon**	**54.09**	**333**	P	**P**	**09 34 43.2**	**-1.1**
FFC				IAmb	IAmb	09 34 43.7	
	comp=Z,5.2nm,1.4s						
NV11	**Mina Array Sit**	**56.80**	**309**	P	**P**	**09 35 04.9**	**+0.6**
NVAR	**Mina Array Bea**	**56.91**	**309**	P	**P**	**09 35 04.8**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=110,slow=7.1,SNR=5.0						
NVAR				PcP	**PcP**	**09 35 59.9**	**-0.5**
	comp=Z,0.3nm,0.7s,baz=106,slow=5.2,SNR=3.0						
I07A	**Izee**	**59.28**	**315**	P	**P**	**09 35 20.6**	**-0.9**
I07A				IAmb	IAmb	09 35 23.0	
	comp=Z,5.7nm,1.3s						
ESDC	**Sonseca Array**	**59.42**	**50**	P	**P**	**09 35 22.2**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=264,slow=10,SNR=4.0						
GDXM	**Geysers**	**60.43**	**309**		**PcP**	**09 36 17.5**	**+3.4**
BORG	**Borgarnes**	**61.41**	**19**	LR	LR	09 57 15.8	
	comp=Z,45nm,19.4s,baz=300,slow=31						
TORD	**Torodi Ar. Bea**	**62.86**	**80**	P	**P**	**09 35 46.1**	**0.0**
	comp=Z,0.8nm,0.6s,baz=285,slow=5.6,SNR=4.1						
YKA	**Yellowknife Ar**	**63.94**	**336**	P	**P**	**09 35 50.6**	**-1.8**
	comp=Z,3.3nm,0.8s,baz=110,slow=7.2,SNR=34						
YKA				LR	LR	10 07 53.0	
	comp=Z,23nm,18.0s,baz=0.0,slow=40						
NB2	**NORSAR Subarra**	**73.17**	**29**	P	**P**	**09 36 51.6**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=261,slow=6.2						
NOA	**NORSAR Array B**	**73.17**	**29**	P	**P**	**09 36 51.2**	**+1.0**
	comp=Z,2.3nm,0.7s,baz=262,slow=6.0,SNR=7.4						
GERES	**GERESS Array B**	**73.26**	**42**	P	**P**	**09 36 49.0**	**-1.9**
	comp=Z,0.2nm,0.4s,baz=260,slow=5.9,SNR=6.3						
GERES	**GERESS Array B**	**73.26**	**42**	P	**P**	**09 36 52.0**	**+1.0**
NC303	**NORSAR Array S**	**73.28**	**29**	P	**P**	**09 36 52.0**	**+1.3**
INK	**Inuvik**	**73.43**	**338**	P	**P**	**09 36 49.6**	**-1.8**
DAWY	**Dawson**	**74.98**	**334**	P	**P**	**09 37 00.2**	**-0.4**
DAWY				IAmb	IAmb	09 37 03.7	
	comp=Z,3.9nm,1.2s						
EGAK	**Eagle**	**75.83**	**334**	P	**P**	**09 37 04.7**	**-0.8**
EGAK				IAmb	IAmb	09 37 05.5	
	comp=Z,8.2nm,0.9s						
SCRK	**Sand Creek**	**76.99**	**333**	P	**P**	**09 37 11.7**	**-0.5**
SCRK				IAmb	IAmb	09 37 12.0	
	comp=Z,4.1nm,0.8s						
ILAR	**Eielson Array**	**78.28**	**334**	P	**P**	**09 37 17.9**	**-1.3**
	comp=Z,2.0nm,0.7s,baz=105,slow=4.3,SNR=16						
WRH	**Wood River Hil**	**78.79**	**334**	P	**P**	**09 37 21.4**	**-0.6**
WRH				IAmb	IAmb	09 37 22.5	
	comp=Z,7.4nm,1.1s						
NEA	**Nenana**	**79.22**	**334**	P	**P**	**09 37 23.8**	**-0.6**
GHO	**Glory Hole Cre**	**79.22**	**331**	P	**P**	**09 37 24.5**	**-0.1**
ARCES	**ARCESS Array B**	**79.71**	**21**	P	**P**	**09 37 26.2**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=178,slow=6.8,SNR=4.1						
ARCES	**ARCESS Array B**	**79.71**	**21**	P	**P**	**09 37 26.8**	**-0.2**
TRF	**Thorofare Moun**	**79.79**	**333**	P	**P**	**09 37 27.6**	**-0.2**
TRF				IAmb	IAmb	09 37 28.5	
	comp=Z,7.9nm,0.8s						
BPAW	**Bear Paw Mtn.**	**80.07**	**334**	P	**P**	**09 37 28.2**	**-0.8**
BPAW				IAmb	IAmb	09 37 28.8	
	comp=Z,7.8nm,1.0s						
SUA	**Susitna One**	**80.11**	**331**	P	**P**	**09 37 29.7**	**+0.3**
FINES	**FINESS Array B**	**80.36**	**29**	P	**P**	**09 37 30.6**	**0.0**
	comp=Z,1.4nm,0.7s,baz=276,slow=3.6,SNR=8.5						
FINES	**FINESS Array B**	**80.36**	**29**	P	**P**	**09 37 30.7**	**+0.1**
FIA1	**FINESS Array S**	**80.36**	**29**	P	**P**	**09 37 30.9**	**+0.3**
SKT	**Skwentna**	**80.45**	**331**	P	**P**	**09 37 30.9**	**-0.2**
SKT				IAmb	IAmb	09 37 31.1	
	comp=Z,5.7nm,0.8s						
CNPM	**China Poot**	**80.47**	**329**	P	**P**	**09 37 31.7**	**+0.4**
AKASG	**Malin Array Be**	**83.23**	**40**	P	**P**	**09 37 45.3**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=292,slow=3.7,SNR=4.7						
BRTR	**Keskin Array B**	**88.21**	**50**	P	**P**	**09 38 09.6**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=266,slow=3.5,SNR=4.0						
BRTR	**Keskin Array B**	**88.21**	**50**	P	**P**	**09 38 10.2**	**-0.9**
WMQ	**Urumqi**	**119.70**	**24**	*e*P	**PKiKP**	**09 44 10.4**	**+0.5**
WMQ				pmax	pmax		
	comp=Z,52nm,5.7s						
WMQ				LR	LR		
	comp=N,540nm,28.8s						
WMQ				LR	LR		
	comp=E,1μm,28.9s						
WMQ				LR	LR		
	comp=Z,87nm,29.2s						
LZH	**Lanzhou**	**132.07**	**15**	*e*PKP	**PKiKP**	**09 44 35.1**	**+0.2**
LZH				pPKP	PKPdf	09 44 38.3	+4.5
LZH				sPKP		09 44 39.8	
CD2	**Chengdu**	**136.93**	**17**	PKP	**PKPdf**	**09 44 42.3**	**-0.6**
NJ2	**Nanjing**	**137.82**	**358**	*e*P	**PKPdf**	**09 44 43.9**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**146.07**	**33**	PKPbc	**PKPdf**	**09 44 59.2**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=318,slow=5.2,SNR=5.1						
CMAR	**Chiang Mai Arr**	**146.07**	**33**		**PKPdf**	**09 44 59.6**	**+0.1**
STKA	**Stephens Creek**	**149.03**	**223**	PKP	**PKPdf**	**09 45 04.0**	**-0.1**
	comp=Z,2.4nm

comp=Z,0.9nm,1.0s,baz=24,slow=9.9,SNR=3.5

FITZ	**Fitzroy Crossi**	**34.53**	**211**	P	**P**	09 45 41.1	**-0.1**
FITZ				IAmb	IAmb	09 45 47.4	

comp=Z,16nm,1.5s

ASAR	**Alice Springs**	**36.48**	**195**	P	**P**	09 45 58.9	**+0.9**

comp=Z,0.3nm,0.8s,baz=19,slow=10,SNR=4.0

ASAR	**Alice Springs**	**36.48**	**195**	P	**P**	09 45 58.4	**+0.5**
DZM	**Mont Dzumac**	**40.52**	**146**	P	**P**	09 46 30.7	**-1.3**
STKA	**Stephens Creek**	**43.47**	**182**	LR	LR	10 06 59.2	

comp=Z,50nm,18.8s,baz=174,slow=39

KURK	**Kurchatov**	**65.07**	**321**	P	**P**	09 49 32.9	**0.0**
KURK				IAmb	IAmb	09 49 33.6	

comp=Z,2.3nm,1.1s

KURBB	**Kurchatov Arra**	**65.11**	**320**	P	**P**	09 49 33.1	**-0.1**

comp=Z,0.8nm,0.5s,baz=106,slow=6.6,SNR=4.0

PPLA	**Purkeypile**	**67.98**	**26**	P	**P**	09 49 52.3	**+0.7**
IMAR	**Indian Mountai**	**68.36**	**23**	P	**P**	09 49 54.8	**+1.1**
MLY	**Manley**	**69.24**	**24**	P	**P**	09 49 59.9	**+0.7**
MLY				IAmb	IAmb	09 50 05.0	

comp=Z,3.5nm,1.4s

BVAR	**Borovoye Array**	**70.48**	**322**	P	**P**	09 50 06.2	**-0.8**

comp=Z,1.0nm,0.5s,baz=79,slow=7.7,SNR=3.6

ILAR	**Eielson Array**	**70.75**	**25**	P	**P**	09 50 07.5	**-1.0**

comp=Z,0.7nm,0.6s,baz=252,slow=5.9,SNR=13

ILAR	**Eielson Array**	**70.75**	**25**	P	**P**	09 50 07.3	**-1.2**
SCRK	**Sand Creek**	**71.82**	**26**	P	**P**	09 50 15.8	**+0.7**
ABKAR	**Akbulak array**	**76.94**	**318**	P	**P**	09 50 44.9	**-0.1**
ABKAR	**Akbulak array**	**76.94**	**318**	P	**P**	09 50 45.4	**+0.4**
ABKAR				IAmb	IAmb	09 50 47.4	

comp=Z,2.7nm,1.4s

YKA	**Yellowknife Ar**	**85.06**	**27**	P	**P**	09 51 28.4	**+0.4**

comp=Z,0.3nm,0.5s,baz=286,slow=5.1,SNR=9.4

ARCES	**ARCESS Array B**	**88.35**	**342**	P	**P**	09 51 43.5	**-0.5**

comp=Z,1.9nm,0.9s,baz=68,slow=6.5,SNR=4.4

NVAR	**Mina Array Bea**	**89.10**	**51**	P	**P**	09 51 49.9	**+1.5**

comp=Z,0.5nm,0.6s,baz=273,slow=5.7,SNR=7.1

NVAR	**Mina Array Bea**	**89.10**	**51**	P	**P**	09 51 51.0	**+2.5**
FINES	**FINESS Array B**	**92.19**	**335**	P	**P**	09 52 00.9	**-1.1**

comp=Z,1.9nm,0.9s,baz=57,slow=5.1,SNR=3.4

IDC 19 09:40:01.7±2.0, 15°72S×75°69W, h0km, mb3.5/3, mb1 3.7/7, mb1mx3.5/44, mbtmp3.6/7, ML3.4/4, MS3.4/1, Ms1 3.4/1, ms1mx2.4/27, Error ellipse: s-maj=55.9km s-min=21.0km az=39.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.88**	**343**	Pn	Pn	09 41 03.5	+0.8

0.7nm,0.3s,baz=108,slow=20,SNR=2.1

NNA				Pg	Pb	09 41 08.8	-2.3

6.7nm,0.3s,baz=135,slow=15,SNR=13

NNA				Sn	Sn	09 41 49.5	+0.5

4.9nm,0.3s,baz=198,slow=16,SNR=4.4

NNA				Lg	Lg	09 42 00.8	

14nm,0.3s,baz=168,slow=9.3,SNR=7.1

LPAZ	**La Paz**	**7.29**	**95**	Pn	Pn	09 41 51.5	+1.4

0.5nm,0.3s,baz=280,slow=7.0,SNR=11

LPAZ				Sn	Sn	09 43 16.3	+2.3

baz=283,slow=18,SNR=1.3

LVC	**Limon Verde**	**9.38**	**138**	Pn	Pn	09 42 19.2	+0.7

1.9nm,0.3s,baz=321,slow=9.3,SNR=15

SIV	**San Ignacio**	**14.07**	**93**	Pn	Pn	09 43 23.3	+0.8

0.2nm,0.3s,baz=277,slow=17,SNR=2.8

SJG	**San Juan**	**34.91**	**16**	LR	LR	10 03 06.0	

comp=Z,54nm,18.1s,baz=272,slow=40

TXAR	**Lajitas Array**	**52.31**	**329**	P	P	09 49 16.4	+1.0

0.1nm,0.6s,baz=161,slow=6.5,SNR=2.7

TORD	**Torodi Ar. Bea**	**81.72**	**74**	P	P	09 52 21.3	-1.6

0.6nm,0.6s,baz=249,slow=4.0,SNR=3.3

YKA	**Yellowknife Ar**	**83.72**	**343**	P	P	09 52 31.7	-0.4

0.3nm,0.8s,baz=136,slow=4.9,SNR=5.4

H11N3	**WAKE ISLAND Hyd**	**20.52**	**284**	T	T	12 11 13.3	

baz=97,slow=74,SNR=6.3

H11N2	**WAKE ISLAND Hyd**	**20.53**	**284**	T	T	12 11 14.0	

baz=97,slow=74,SNR=7.8

H11N1	**WAKE ISLAND Hyd**	**20.54**	**284**	T	T	12 11 15.0	

baz=97,slow=74,SNR=6.0

H11S2	**WAKE ISLAND Hyd**	**20.55**	**282**	T	T	12 11 18.1	

baz=99,slow=75,SNR=8.2

H11S1	**WAKE ISLAND Hyd**	**20.56**	**282**	T	T	12 11 21.7	

baz=99,slow=75,SNR=6.8

H11S3	**WAKE ISLAND Hyd**	**20.57**	**282**	T	T	12 11 19.4	

baz=99,slow=75,SNR=7.3

*NEIC **19** 09:46:09.2±2.7, 30°11S±0°07×179°5W±0°2, h352km±7km, mb4.2/19, Error ellipse: s-maj=22.4km s-min=8.5km az=103.0*
*IDC **19** 09:46:10.0±1.2, 29°98S×179°41W, h355km±11km, mb3.6/9, mb1 3.7/12, mb1mx3.5/35, mbtmp4.3/12, Error ellipse: s-maj=21.6km s-min=12.9km az=143.0*

ISC 19 09:46:08.9±0.5, 30°20S±0°05×179°25W±0°08, h350km, n116, σ1s81/134, mb4.0/19, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.49**	**51**	P	**Pn**	09 46 59.4	**+2.4**
GLKZ				S	**S**	09 47 32.4	**-3.1**
RAO	**Raoul Island**	**1.50**	**51**	P	**Pn**	09 46 58.7	**+1.6**

334nm,0.3s,baz=198,slow=20,SNR=9.6

RAO				S	**S**	09 47 34.2	**-1.4**

590nm,0.3s,baz=177,slow=6.7,SNR=10

RAO	**Raoul Island**	**1.50**	**51**		**Pn**	09 46 58.5	**+1.4**
RAO				S	**S**	09 47 34.5	**-1.2**
MXZ	**Matakaoa Point**	**7.62**	**195**	P	**Pn**	09 48 01.3	**+2.9**
MXZ				S	**S**	09 48 24.7	**-3.0**
MXZ	**Matakaoa Point**	**7.62**	**195**	Pn	**Pn**	09 48 01.0	**+2.5**
MXZ				S	**S**	09 48 24.0	**-3.6**
KUZ	**Kuaotunu**	**7.76**	**211**	P	**Pn**	09 48 02.8	**+2.7**
OUZ	**Omahuta**	**7.83**	**228**	P	Pn	09 48 06.3	+5.3
OUZ	**Omahuta**	**7.83**	**228**		**Pn**	09 48 04.9	**+3.9**
WMGZ	**Waiomatatini S**	**7.84**	**194**	P	**Pn**	09 48 01.3	**+0.2**
WMGZ				S	**S**	09 49 30.7	**-1.8**
HAZ	**Te Kaha**	**7.93**	**197**	P	**Pn**	09 48 02.3	**+0.2**
HAZ				S	**S**	09 49 31.7	**-2.6**
PKGZ	**Pakihiroa**	**7.98**	**195**	P	**Pn**	09 48 05.5	**+2.7**
PKGZ				S	**S**	09 49 34.9	**-0.8**
PUZ	**Puketiti**	**8.12**	**194**	P	**Pn**	09 48 06.0	**+1.6**
PUZ				S	**S**	09 49 33.7	**-4.9**
RUGZ	**Raukumara Rang**	**8.15**	**197**	P	**Pn**	09 48 05.4	**+0.5**
TWGZ	**Tauwhareparae**	**8.28**	**195**	P	**P**	09 48 10.1	**+0.9**
CNGZ	**Carnagh Statio**	**8.53**	**194**	P	**Pn**	09 48 10.5	**+1.3**
MWZ	**Matawai**	**8.54**	**197**	P	**Pn**	09 48 08.1	**-1.3**
MWZ				S	**S**	09 49 46.2	**-1.6**
TKGZ	**Te Karaka**	**8.56**	**195**	P	**Pn**	09 48 08.5	**-1.1**
TKGZ				S	**S**	09 49 44.8	**-3.3**
URZ	**Urewera**	**8.59**	**200**	P	**Pn**	09 48 08.9	**-1.0**

1.9nm,0.3s,baz=55,slow=4.7,SNR=42

URZ				S	**S**	09 49 45.9	**-2.8**

8.4nm,0.3s,baz=96,slow=23,SNR=14

URZ	**Urewera**	**8.59**	**200**	P	**Pn**	09 48 08.8	**-1.0**
URZ				S	**S**	09 49 48.6	**0.0**
RIGZ	**Rimuhau**	**8.84**	**195**	P	**P**	09 48 16.0	**+0.7**
MUGZ	**Murupara**	**8.89**	**201**	P	**Pn**	09 48 15.0	**+1.5**
RTZ	**Ruatahuna**	**8.95**	**199**	P	**Pn**	09 48 15.3	**+1.0**
SNGZ	**Shannon Statio**	**9.01**	**197**	P	**Pn**	09 48 14.8	**-0.2**
PRGZ	**Paritu Road**	**9.02**	**194**	P	**P**	09 48 16.9	**-0.4**
KNZ	**Kokohu**	**9.16**	**195**	P	**Pn**	09 48 16.9	**+0.3**
TLZ	**Tolley Road**	**9.18**	**207**	P	**P**	09 48 21.5	**+2.3**
RAHZ	**Arahi**	**9.21**	**198**	P	**Pn**	09 48 17.8	**+0.5**
MTHZ	**Maungataniwha**	**9.21**	**199**	P	**P**	09 48 19.5	**-0.1**
KUTZ	**Kaahu Road**	**9.22**	**205**	P	**P**	09 48 21.8	**+2.3**
MHGZ	**Mahia Peninsul**	**9.23**	**194**	P	**P**	09 48 20.4	**+0.7**
ARHZ	**Aropaoanui**	**9.55**	**198**	P	**Pn**	09 48 21.3	**-0.1**
BKZ	**Black Stump Fm**	**9.61**	**200**	P	**Pn**	09 48 20.4	**-1.7**
BKZ	**Black Stump Fm**	**9.61**	**200**		**Pn**	09 48 23.4	**+1.4**
BKZ				S	**S**	09 50 09.4	**-1.8**
HIZ	**Hauiti**	**9.62**	**209**	P	**P**	09 48 26.1	**+2.2**
HIZ	**Hauiti**	**9.62**	**209**		**P**	09 48 26.1	**+2.2**
HIZ				S	**S**	09 50 03.9	**-7.4**
MCHZ	**McNeill Hill**	**9.81**	**199**	P	**Pn**	09 48 25.4	**+1.0**
WTVZ	**West Tongariro**	**9.86**	**204**	P	**Pn**	09 48 25.2	**+0.1**
NGZ	**Ngauruhoe**	**9.90**	**204**	P	**Pn**	09 48 26.3	**+0.6**
CKHZ	**Cape Kidnapper**	**9.91**	**197**	P	**Pn**	09 48 26.2	**+0.6**
TUVZ	**Tukino**	**9.97**	**203**	P	**Pn**	09 48 25.6	**-0.9**
BHHZ	**Black Hill Sta**	**10.04**	**201**	P	**Pn**	09 48 26.4	**-0.8**
MOVZ	**Moawhango**	**10.06**	**203**	P	**Pn**	09 48 27.2	**-0.3**
KRHZ	**Kereru**	**10.08**	**200**	P	**Pn**	09 48 26.1	**-1.6**
KAHZ	**Kahuranaki**	**10.09**	**197**	P	**Pn**	09 48 26.6	**-1.2**
PKVZ	**Pokaka**	**10.10**	**205**	P	**P**	09 48 29.4	**+0.1**
VRZ	**Vera Road**	**10.18**	**207**	P	**P**	09 48 31.1	**+0.9**
PNHZ	**Pukenui**	**10.38**	**200**	P	**Pn**	09 48 30.3	**-1.0**
WPHZ	**Waipukurau**	**10.45**	**199**	P	**Pn**	09 48 33.1	**+0.9**
PKE	**Pukeiti**	**10.56**	**210**	P	**P**	09 48 36.7	**+2.3**
DVHZ	**Dannevirke**	**10.75**	**199**	P	**Pn**	09 48 34.9	**-0.8**
PRWZ	**Pori Road**	**11.04**	**199**	P	**Pn**	09 48 38.5	**-0.6**
BFZ	**Birch Farm**	**11.08**	**198**	Pn	**Pn**	09 48 38.5	**-1.2**
TUWZ	**Tuamarina**	**12.49**	**204**	P	**P**	09 48 54.8	**-0.9**
NNZ	**Nelson**	**12.51**	**207**	P	**P**	09 48 55.1	**-0.9**
QRZ	**Quartz Range**	**12.53**	**210**	P	**P**	09 48 56.2	**-0.1**
MSVF	**Nonsavu**	**12.65**	**348**	P	**P**	09 48 57.7	**-0.2**
DZM	**Mont Dzumac**	**15.17**	**299**	P	**P**	09 49 23.7	**-1.9**

0.2nm,0.3s,baz=107,slow=19,SNR=1.8

RPZ	**Rata Peaks**	**15.54**	**207**	P	**P**	09 49 30.1	**+0.8**

0.4nm,0.3s,baz=37,slow=5.1,SNR=2.7

RPZ				S	**S**	09 52 10.4	**-5.0**

0.7nm,0.3s,baz=317,slow=19,SNR=5.7

RPZ	**Rata Peaks**	**15.54**	**207**	P	**Pn**	09 49 31.4	**-0.5**
AFI	**Afiamalu**	**17.62**	**25**	P	**P**	09 49 50.9	**-1.1**

1.7nm,0.3s,baz=190,slow=6.1,SNR=3.1

AFI				S	**S**	09 52 54.1	**-2.8**

1.2nm,0.3s,baz=233,slow=20,SNR=3.0

AFI	**Afiamalu**	**17.62**	**25**	P	**P**	09 49 51.0	**-1.0**
ARMA	**Armidale**	**25.11**	**262**	P	**P**	09 51 05.9	**+2.5**
ARMA				IAmb	IAmb	09 51 14.7	

comp=Z,11nm,1.4s

EIDS	**Eidsvold**	**26.64**	**273**	P	**P**	09 51 18.5	**+1.6**
CAN	**Canberra**	**27.12**	**251**	P	**P**	09 51 23.7	**+2.6**
CAN				IAmb	IAmb	09 51 29.0	

comp=Z,18nm,1.3s

CTA	**Charters Tower**	**32.70**	**280**	P	**P**	09 52 09.6	**-0.4**

comp=Z,3.7nm,0.6s,baz=112,slow=10,SNR=7.7

STKA	**Stephens Creek**	**33.47**	**257**	P	**P**	09 52 17.7	**+1.2**

comp=Z,6.1nm,0.7s,baz=104,slow=9.5,SNR=9.5

STKA	**Stephens Creek**	**33.47**	**257**	P	**P**	09 52 17.9	**+1.4**
BBOO	**Buckleboo**	**37.98**	**254**	P	**P**	09 52 54.2	**-0.2**
BBOO				IAmb	IAmb	09 52 56.5	

comp=Z,8.8nm,0.8s

AS31	**Alice Springs**	**42.04**	**267**	P	**P**	09 53 27.1	**-0.5**
ASAR	**Alice Springs**	**42.04**	**267**	P	**P**	09 53 26.6	**-1.1**

comp=Z,2.8nm,0.7s,baz=105,slow=7.4,SNR=35

ASAR				PcP	**PP**	09 55 14.9	**+1.4**

comp=Z,0.4nm,0.6s,baz=109,slow=5.3,SNR=3.4

ASAR	**Alice Springs**	**42.04**	**267**	P	**P**	09 53 26.4	**-1.2**
WR0	**Warramunga Arr**	**42.83**	**273**	P	**P**	09 53 32.8	**-1.1**
WR0				IAmb	IAmb	09 53 34.5	

comp=Z,9.3nm,0.9s

WRA	**Warramunga Arr**	**43.01**	**273**	P	**P**	09 53 34.2	**-1.1**

comp=Z,9.9nm,0.6s,baz=111,slow=7.5,SNR=36

WRA	**Warramunga Arr**	**43.01**	**273**	P	**P**	09 53 34.3	**-1.1**
FORT	**Forrest**	**45.05**	**255**	P	**P**	09 53 50.8	**-0.5**
KNRA	**Kununurra**	**49.61**	**275**	P	**P**	09 54 25.1	**-1.1**
FITZ	**Fitzroy Crossi**	**51.28**	**270**	P	**P**	09 54 38.9	**+0.3**
FITZ				IAmb	IAmb	09 54 58.0	

comp=Z,25nm,1.4s

NWAO	**Narrogin (SRO)**	**53.45**	**250**	P	**P**	09 54 52.1	**-2.2**
NWAO				IAmb	IAmb	09 54 58.0	

comp=Z,19nm,1.1s

MORW	**Morawa**	**55.55**	**254**	P	**P**	09 55 08.5	**-0.7**
MORW				IAmb	IAmb	09 55 26.3	

comp=Z,5.6nm,1.1s

QSPA	**South Pole Qui**	**59.91**	**180**	P	**P**	09 55 41.7	**+2.9**
QSPA				IAmb	IAmb	09 55 42.9	

comp=Z,7.7nm,0.8s

MAW	**Mawson**	**72.11**	**201**	P	**P**	09 56 56.8	**+1.3**

comp=Z,1.6nm,0.6s,baz=119,slow=13,SNR=2.7

MAW	**Mawson**	**72.11**	**201**	P	**P**	09 56 56.8	**+1.3**
SNAA	**Sanae**	**78.38**	**179**	P	**P**	09 57 32.9	**+1.9**
SNAA				IAmb	IAmb	09 57 33.5	

comp=Z,4.5nm,1.1s

KSRS	**Korea Array**	**83.50**	**320**	P	**P**	09 57 56.9	**-1.2**

comp=Z,1.2nm,0.8s,baz=151,slow=3.4,SNR=4.3

PETK	**Petropavlovsk-**	**85.35**	**346**	P	**P**	09 58 07.2	**+0.3**

comp=Z,2.3nm,0.7s,baz=145,slow=5.4,SNR=5.3

PETK	**Petropavlovsk-**	**85.35**	**346**	P	**P**	09 58 07.5	**+0.5**
NVAR	**Mina Array Bea**	**88.83**	**43**	P	**P**	09 58 26.2	**+2.1**

comp=Z,0.6nm,0.9s,baz=209,slow=8.9,SNR=4.4

PINE	**Pine Mountain**	**90.90**	**38**	P	**P**	09 58 36.4	**+2.8**
PINE				IAmb	IAmb	09 58 37.0	

comp=Z,4.0nm,0.8s

CMAR	**Chiang Mai Arr**	**92.31**	**290**	P	**P**	09 58 41.1	**+0.7**

comp=Z,0.4nm,0.4s,baz=116,slow=4.1,SNR=2.9

SONM	**Songino Array**	**102.27**	**318**	PP	**PKiKP**	10 03 45.6	**+1.0**

comp=Z,0.2nm,0.4s,baz=134,slow=8.3,SNR=3.7

MKAR	**Makanchi Array**	**116.82**	**310**	PKP	**PKPdf**	10 04 11.2	**-0.7**

comp=Z,0.4nm,0.7s,baz=124,slow=0.5,SNR=5.4

MKAR	**Makanchi Array**	**116.82**	**310**		**PKPdf**	10 04 11.5	**-0.3**
ZALV	**Zalesovo Beam**	**117.16**	**319**	PKP	**PKPdf**	10 04 10.8	**-1.4**

comp=Z,0.4nm,0.4s,baz=80,slow=1.6,SNR=2.5

KURK	**Kurchatov**	**120.13**	**314**		**PKPdf**	10 04 17.7	**-0.3**
KURBB	**Kurchatov Arra**	**120.17**	**314**	PKP	**PKPdf**	10 04 17.4	**-0.7**

comp=Z,1.4nm,0.7s,baz=107,slow=1.7,SNR=12

BVAR	**Borovoye Array**	**125.51**	**316**	PKP	**PKPdf**	10 04 28.3	**0.0**

comp=Z,1.6nm,0.6s,baz=111,slow=3.3,SNR=11

ARCES	**ARCESS Array B**	**138.16**	**347**	PKhKP	PKPpre	10 04 44.1	

comp=Z,2.9nm,0.9s,baz=20,slow=1.4,SNR=5.3

ARCES				PKP	**PKiKP**	10 04 53.6	**-0.2**

comp=Z,1.8nm,0.7s,baz=42,slow=2.0,SNR=6.2

ARCES	**ARCESS Array B**	**138.16**	**347**		**PKPdf**	10 04 51.5	**-0.2**
KBZ	**Khabaz**	**144.10**	**304**	PKP	**PKPab**	10 05 01.8	**0.0**

comp=Z,4.0nm,0.8s,baz=125,slow=1.2,SNR=8.8

FIA1	**FINESS Array S**	**144.58**	**339**		PKPbc	10 05 02.4	-0.6
FINES	**FINESS Array B**	**144.58**	**339**	PKP	PKPbc	10 05 02.6	-0.3

comp=Z,11nm,0.5s,baz=58,slow=4.0,SNR=110

FINES	**FINESS Array B**	**144.58**	**339**		PKPbc	10 05 02.4	-0.6
NB2	**NORSAR Subarra**	**148.38**	**350**	PKP	**PKPbc**	10 05 13.8	**0.0**

comp=Z,1.6nm,0.5s,baz=13,slow=2.6

NOA	**NORSAR Array B**	**148.38**	**350**	PKPbc	**PKPbc**	10 05 13.4	**-0.3**

comp=Z,3.2nm,0.7s,baz=16,slow=4.2,SNR=8.8

AKASG	**Malin Array Be**	**150.48**	**322**	PKPbc	**PKPbc**	10 05 19.0	**-0.1**

comp=Z,7.8nm,0.7s,baz=50,slow=2.9,SNR=27

AKASG				PKPab	**PKPab**	10 05 26.4	**-0.7**

comp=Z,2.3nm,0.8s,baz=48,slow=4.9,SNR=6.2

AKASG	**Malin Array Be**	**150.48**	**322**		**PKPbc**	10 05 18.3	**-0.8**
AKASG					**PKPab**	10 05 26.1	**-1.0**
AKBB	**Malin Array Si**	**150.48**	**322**		**PKPbc**	10 05 18.0	**-1.1**
BR131	**Keskin Array S**	**151.55**	**298**		**PKPbc**	10 05 21.5	**-0.6**
BRTR	**Keskin Array B**	**151.55**	**298**	PKPbc	**PKPbc**	10 05 21.6	**-0.6**

comp=Z,1.6nm,0.7s,baz=126,slow=3.2,SNR=10

BRTR				PKPab	**PKPab**	10 05 31.6	**-0.6**

comp=Z,1.2nm,0.7s,baz=128,slow=3.7,SNR=6.3

BRTR	**Keskin Array B**	**151.55**	**298**		**PKPbc**	10 05 21.0	**-1.2**
BRTR					**PKPab**	10 05 31.0	**-1.2**
BUR08	**Bucovina Ar. S**	**154.37**	**320**		**PKPab**	10 05 43.8	**-0.1**
DPC	**Dobruska-Polom**	**156.72**	**334**	*e*PKP	**PKPab**	10 05 54.1	**+0.4**
KHC	**Kasperske Hory**	**158.72**	**336**	*e*PKP	**PKPab**	10 05 55.8	**-6.6**
KHC				*ex*	x	10 06 01.6	
GERES	**GERESS Array B**	**158.92**	**336**	PKPab	**PKPab**	10 06 02.5	**-0.9**

comp=Z,0.2nm,0.4s,baz=21,slow=4.6,SNR=3.9

GERES	**GERESS Array B**	**158.92**	**336**		**PKPab**	10 06 02.7	**-0.7**
TORD	**Torodi Ar. Bea**	**163.01**	**183**	PKPab	**PKPab**	10 06 23.1	**+1.3**

comp=Z,1.8nm,0.6s,baz=173,slow=4.5,SNR=8.3

*INET **19** 09:47:50.2, 11°91N×88°09W, h0km, MD3.5, ML3.3*
*IDC **19** 09:47:51.2±2.2, 12°57N×87°55W, h0km, mb3.7/4, mb1 3.7/7, mb1mx3.5/47, mbtmp3.5/7, ML2.8/3, MS3.3/4, Ms1 3.3/4, ms1mx2.7/35, Error ellipse: s-maj=60.4km s-min=25.5km az=38.0*

ISC 19 09:47:52.1±1.1, 12°5N±0°2×87°6W±0°2, h10km, n10, σ1s36/8, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	**Las Juntas de**	**3.36**	**131**	Pn	**Pn**	09 48 45.6	**+0.8**

1.7nm,0.3s,baz=354,slow=18,SNR=12

JTS				Sn	**Sn**	09 49 23.4	**-1.4**

4.2nm,0.3s,baz=341,slow=15,SNR=4.8

APG	**El Apazote**	**3.77**	**312**	Pn	**Pn**	09 48 49.0	**-1.5**

0.1nm,0.3s,baz=220,slow=19,SNR=2.3

CMIG	**Matias Romero**	**8.43**	**304**	Pn	**Pn**	09 49 54.9	**+0.4**

0.2nm,0.3s,baz=126,slow=11,SNR=5.6

ROSC	**El Rosal**	**15.12**	**119**	LR	LR	09 57 48.0	

comp=Z,156nm,18.4s,baz=36,slow=39

ATAH	**Atahualpa**	**21.53**	**155**	LR	LR	09 58 56.6	

comp=Z,74nm,18.5s,baz=337,slow=31

TXAR	**Lajitas Array**	**22.47**	**321**	P	**P**	09 52 52.8	**+1.0**

0.6nm,0.5s,baz=137,slow=11,SNR=13

NNA	**Nana**	**26.55**	**156**	LR	LR	10 03 38.4	

comp=Z,35nm,18.0s,baz=352,slow=36

ULM	**Lac du Bonnet**	**38.25**	**351**	P	**P**	09 55 11.1	**-1.3**

1.9nm,0.7s,baz=188,slow=7.1,SNR=4.8

SCHQ	**Schefferville**	**45.25**	**17**	P	**P**	09 56 10.8	**+1.2**

2.2nm,0.8s,baz=228,slow=7.9,SNR=3.5

YKA	**Yellowknife Ar**	**53.53**	**345**	P	**P**	09 57 12.7	**0.0**

0.3nm,0.7s,baz=140,slow=7.8,SNR=7.9

YKA				LR	LR	10 24 01.5	

comp=Z,27nm,18.7s,baz=0.0,slow=41

*OSPL **19** 10:11:20.3±1.5, 18°89N×66°42W, h15km±21km, MD3.8, ML3.3*
*RSPR **19** 10:11:21.6, 19°15N×66°67W, h35km±4km, MD3.4/12*
*NEIC **19** 10:11:21.1±1.3, 19°05N±0°04×66°59W±0°03, h27km±9km, Error ellipse: s-maj=6.8km s-min=3.0km az=143.0*

**ISC 19 10:11:

IDC 19 10:42:34.6±1.5,5°09S×152°92E,h0km,mb3.3/3, mb1 3.7/3,mb1mx3.4/38,mbtmp3.4/3,Error ellipse: s-maj=29.7km s-min=23.6km az=75.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.19**	**311**	Pn	Pn	10 42 59.8	+1.3
	284nm,0.3s,baz=133,slow=4.0,SNR=78						
KRVT				Sn	Sb	10 43 14.6	+0.6
	294nm,0.3s,baz=204,slow=23,SNR=37						
WRA	**Warramunga Arr**	**23.34**	**229**	P	P	10 47 44.9	+0.1
	0.6nm,0.7s,baz=53,slow=10,SNR=3.5						
ASAR	**Alice Springs**	**26.02**	**223**	P	P	10 48 10.2	+0.6
	0.2nm,0.5s,baz=58,slow=9.3,SNR=6.4						
ILAR	**Eielson Array**	**82.38**	**22**	P	P	10 54 58.3	+0.1
	0.6nm,0.8s,baz=237,slow=5.0,SNR=8.9						
TORD	**Torodi Ar. Bea**	**150.51**	**288**	PKPbc	PKPbc	11 02 27.6	-1.9
	0.2nm,0.4s,baz=79,slow=2.2,SNR=3.2						

IDC 19 10:45:02.4±1.8,0°93N×100°00E,h197km±13km,mb3.1/4, mb1 3.2/5,mb1mx3.0/45,mbtmp3.6/5,Error ellipse: s-maj=90.2km s-min=16.6km az=48.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.15**	**330**	P	Pn	10 45 42.8	+0.4
	5.1nm,0.3s,baz=146,slow=7.3,SNR=9.3						
PSI				S	Sn	10 46 11.9	-1.7
	0.6nm,0.3s,baz=180,slow=20,SNR=2.2						
WRA	**Warramunga Arr**	**39.53**	**124**	P	P	10 52 14.3	-0.1
	1.0nm,0.4s,baz=302,slow=9.0,SNR=9.5						
ASAR	**Alice Springs**	**41.02**	**129**	P	P	10 52 26.3	-0.3
	0.2nm,0.4s,baz=305,slow=7.9,SNR=9.3						
MKAR	**Makanchi Array**	**48.23**	**344**	P	P	10 53 23.4	+0.2
	0.2nm,0.3s,baz=164,slow=7.3,SNR=6.4						
BRTR	**Keskin Array B**	**71.37**	**312**	P	P	10 56 00.9	-0.3
	0.5nm,0.6s,baz=134,slow=6.4,SNR=3.9						

IDC 19 10:50:38.1±1.5,27°28N×101°46E,h0km,mb3.3/3, mb1 3.6/3,mb1mx3.2/43,mbtmp3.3/3,Error ellipse: s-maj=77.6km s-min=27.6km az=60.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**9.08**	**195**	Pg	Pn	10 53 25.4	+35
	0.1nm,0.3s,baz=5.4,slow=16,SNR=4.2						
CMAR				Lg	Lg	10 55 17.5	
	0.1nm,0.3s,baz=25,slow=30,SNR=4.6						
MKAR	**Makanchi Array**	**24.66**	**327**	P	P	10 56 00.6	+0.2
	0.4nm,0.7s,baz=130,slow=10,SNR=4.5						
WRA	**Warramunga Arr**	**56.73**	**142**	P	P	11 00 23.4	-0.5
	0.8nm,0.9s,baz=313,slow=5.7,SNR=3.3						
ASAR	**Alice Springs**	**59.55**	**145**	P	P	11 00 43.7	+0.1
	0.2nm,0.5s,baz=326,slow=6.9,SNR=3.7						

*SNET **19** 10:58:12.3±1.1, 12°84N×88°93W, h35km±16km, ML4.8*
*IDC **19** 10:58:12.3±0.4, 13°14N×88°45W, h45km±3km, mb4.2/26, mb1 4.4/28,mb1mx4.3/37,mbtmp4.5/28,MS4.0/25, Ms1 4.0/25,ms1mx4.0/28,Error ellipse: s-maj=18.7km s-min=7.8km az=55.0*
*NEIC **19** 10:58:13.3±2.7, 12°91N±0°06×88°80W±0°06, h56km±4km, mb4.8/302,Mwr4.9/17,Md4.8(SNET),Error ellipse: s-maj=9.9km s-min=6.0km az=221.0,Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}=0.59; $M_{\theta\theta}$=0.95; $M_{\phi\phi}$=0.35; $M_{r\theta}$=2.21; $M_{r\phi}$=-1.23; $M_{\theta\phi}$=-0.88; Fault plane solution: M_o=2.80000×10^{16} NP1:φ=102.12000°, δ=83.30000°, λ=120.81000°. NP2:φ=203.18000°, δ=31.45000°, λ=12.91000°. Principal axes: T 2.9602, Plg43.0000°, Azm42.0000°; N -0.3468, Plg31.0000°, Azm278.0000°; P -2.6134, Plg31.0000°, Azm167.0000°;*
*GCMT **19** 10:58:13.3±0.2, 12°77N±0°01×89°14W±0°02, h45km, MW5.0/86,Moment Tensor Solution. s86,c114; s82,c115; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}=4.61±.14; $M_{\theta\theta}$=3.74±.10; $M_{\phi\phi}$=-0.87±.10; $M_{r\theta}$=0.91±.08; $M_{\theta\phi}$=1.39±.08; $M_{r\phi}$=0.19±.08; Best double couple: M_o=4.55200×10^{16} NP1:φ=294.00000°, δ=39.00000°, λ=93.00000°. NP2:φ=110.00000°, δ=51.00000°, λ=88.00000°. Principal axes: T 4.7080, Plg84.0000°, Azm4.0000°; N -0.3150, Plg2.0000°, Azm112.0000°; P -4.3960, Plg6.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*UCR **19** 10:58:13.0±1.4, 12°88N×88°93W, h42km±27km, ML4.7, mb4.9(NEIC)*
*INET **19** 10:58:14.0, 12°85N×88°75W, h17km, MD4.4, ML4.4*
*UPA **19** 10:58:16.7±2.8, 11°19N×89°40W, h10km, MW5.0*
*MEX **19** 10:58:18.5±0.5, 13°35N×88°90W, h36km±6km, MD4.3*
*GCG **19** 10:58:21.3±0.6, 13°16N×89°44W, h50km, MD4.6*

ISC 19 10:58:12.3±0.3, 12°91N±0°04×88°86W±0°03, h50km±2km, h50km:pP-P,n756,σ1%56/774,mb4.8/146,MS4.1/28,2D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.50**	**34**	*e*P	**Pn**	**10 58 24.6**	**+1.0**
ALJI				*e*S	**Sn**	**10 58 34.4**	**+2.8**
COEB	**Comit de Eme**	**0.67**	**28**	*e*P	**Pn**	**10 58 26.7**	**+1.0**
COEB				*e*S	**Sn**	**10 58 37.6**	**+2.2**
COEB				IAML		10 58 41.1	
	comp=Z,36μm,0.6s						
TECA	**Tecapa**	**0.68**	**30**	*i*P	**Pn**	**10 58 27.1**	**+1.2**
TECA	**Tecapa**	**0.68**	**30**	*i*P	**Pn**	**10 58 27.1**	**+1.2**
COEG	**Centro de Oper**	**0.71**	**358**	*e*P	**Pn**	**10 58 26.8**	**+0.6**
COEG				*e*S	**Sn**	**10 58 38.0**	**+1.7**
COEG				IAML		10 58 39.9	
	comp=Z,18μm,0.5s						
UESV	**Universidad de**	**0.73**	**5**	*e*P	**Pn**	**10 58 27.5**	**+1.1**
UESV				*e*S	**Sn**	**10 58 38.9**	**+2.2**
UESV				IAML		10 58 46.9	
	comp=Z,30μm,0.8s						
UESV	**Universidad de**	**0.73**	**5**	*e*P	**Pn**	**10 58 27.5**	**+1.1**
UESV				*e*S	**Sn**	**10 58 38.9**	**+2.2**
UESV				IAML		10 58 46.9	
	comp=Z,30μm,0.8s						
LFRS	**El Faro**	**0.74**	**344**	*e*P	**Pn**	**10 58 26.9**	**+0.3**
LCY	**Lacayo**	**0.75**	**47**	*e*P	**Pn**	**10 58 27.9**	**+1.1**
LCY	**Lacayo**	**0.75**	**47**	*e*P	**Pn**	**10 58 27.9**	**+1.1**
PACA	**Pacayal**	**0.76**	**43**	*e*P	**Pn**	**10 58 28.2**	**+1.2**
PACA				*e*S	**Sn**	**10 58 40.2**	**+2.6**
PACA	**Pacayal**	**0.76**	**43**	*e*P	**Pn**	**10 58 28.2**	**+1.2**
PACA				*e*S	**Sn**	**10 58 40.2**	**+2.6**
BLLM	**Bellamira**	**0.80**	**48**	*e*P	**Pn**	**10 58 28.4**	**+0.9**
BLLM	**Bellamira**	**0.80**	**48**	*e*P	**Pn**	**10 58 28.4**	**+0.9**
PAVA	**Las Pavas**	**0.81**	**354**	*e*P	**Pn**	**10 58 28.4**	**+0.9**
PAVA				*e*S	**Sn**	**10 58 40.9**	**+2.3**
PAVA				IAML		10 58 42.5	
	comp=Z,26μm,0.3s						
PAVA	**Las Pavas**	**0.81**	**354**	*e*P	**Pn**	**10 58 28.4**	**+0.9**
PAVA				*e*S	**Sn**	**10 58 40.9**	**+2.3**
PAVA				IAML		10 58 42.5	
	comp=Z,26μm,0.3s						
AEIL	**Aeropuerto Ilo**	**0.82**	**342**	*e*P	**Pn**	**10 58 28.4**	**+0.7**
AEIL				*e*S	**Sn**	**10 58 41.0**	**+2.0**
AEIL				IAML		10 58 52.9	
	comp=Z,27μm,0.3s						
LBRS	**Las Brisas**	**0.85**	**348**	*e*P	**Pn**	**10 58 28.9**	**+0.9**
UDBS	**Universidad Do**	**0.85**	**340**	*e*P	**Pn**	**10 58 28.8**	**+0.6**
UDBS	**Universidad Do**	**0.85**	**340**	*e*P	**Pn**	**10 58 28.8**	**+0.6**
SNET	**Serv Nac Est T**	**0.86**	**335**	*e*P	**Pn**	**10 58 28.6**	**+0.4**
SNET				*e*S	**Sn**	**10 58 40.7**	**+0.9**
SNET				IAML		10 58 52.1	
	comp=Z,20μm,0.3s						
SNET	**Serv Nac Est T**	**0.86**	**335**	*e*P	**Pn**	**10 58 28.6**	**+0.4**
SNET				*e*S	**Sn**	**10 58 40.7**	**+0.9**
SNET				IAML		10 58 52.1	
	comp=Z,20μm,0.3s						
SNET	**Serv Nac Est T**	**0.86**	**335**		**Pn**	**10 58 28.6**	**+0.4**
SNET				Sn	**Sn**	**10 58 40.7**	**+0.9**
OPAM	**Oficina de Pla**	**0.87**	**337**	*e*P	**Pn**	**10 58 28.9**	**+0.6**
OPAM				*e*S	**Sn**	**10 58 41.1**	**+1.2**
OPAM	**Oficina de Pla**	**0.87**	**337**	*e*P	**Pn**	**10 58 28.9**	**+0.6**
OPAM				*e*S	**Sn**	**10 58 41.1**	**+1.2**
LFU	**La Fuente**	**0.87**	**343**	*e*P	**Pn**	**10 58 29.1**	**+0.7**
LFU	**La Fuente**	**0.87**	**343**	*e*P	**Pn**	**10 58 29.1**	**+0.7**
UEES	**Universidad Ev**	**0.89**	**335**	*e*P	**Pn**	**10 58 29.1**	**+0.5**
UEES				*e*S	**Sn**	**10 58 41.5**	**+1.0**
UEES	**Universidad Ev**	**0.89**	**335**	*e*P	**Pn**	**10 58 29.1**	**+0.5**
UEES				*e*S	**Sn**	**10 58 41.5**	**+1.0**
BOQS	**Boqueron**	**0.92**	**333**	*e*P	**Pn**	**10 58 29.9**	**+0.7**
LCND	**La Caada**	**1.02**	**67**	*e*P	**Pn**	**10 58 31.5**	**+1.2**
LCND				*e*S	**Sn**	**10 58 46.2**	**+2.6**
LCND	**La Caada**	**1.02**	**67**	*e*P	**Pn**	**10 58 31.5**	**+1.2**
LCND				*e*S	**Sn**	**10 58 46.2**	**+2.6**
FAGO	**Alcalda de S**	**1.07**	**43**	*e*P	**Pn**	**10 58 32.7**	**+1.8**
FAGO				*e*S	**Sn**	**10 58 48.4**	**+3.6**
CEVE	**Cerro Verde**	**1.18**	**321**	*e*P	**Pn**	**10 58 33.3**	**+0.6**
CEVE				IAML		10 58 55.8	
	comp=Z,36μm,0.4s						
CEVE	**Cerro Verde**	**1.18**	**321**	*e*P	**Pn**	**10 58 33.3**	**+0.6**
CEVE				IAML		10 58 55.8	
	comp=Z,36μm,0.4s						
SNJE	**San Jose**	**1.20**	**323**	*e*P	**Pn**	**10 58 33.5**	**+0.6**
SNJE	**San Jose**	**1.20**	**323**	*e*P	**Pn**	**10 58 33.5**	**+0.6**
LLGN	**La Laguna**	**1.25**	**356**	*e*P	**Pn**	**10 58 35.1**	**+1.6**
LLGN				*e*S	**Sn**	**10 58 53.1**	**+3.8**
LLGN	**La Laguna**	**1.25**	**356**	*e*P	**Pn**	**10 58 35.1**	**+1.6**
LLGN				*e*S	**Sn**	**10 58 53.1**	**+3.8**
CRIN	**San Cristobal**	**1.77**	**96**	*e*P	**Pn**	**10 58 41.5**	**+0.9**
TGUH	**Tegucigalpa,Un**	**1.92**	**53**	*i*P	**Pn**	**10 58 44.7**	**+2.1**
TGUH				*i*S	**Sn**	**10 59 04.7**	**-0.9**
TGUH	**Tegucigalpa,Un**	**1.92**	**53**		**Pn**	**10 58 44.4**	**+1.8**
IXQ	**Ixpaco**	**1.99**	**309**	*e*P	**Pn**	**10 58 44.8**	**+1.1**
NBG	**Las Nubes**	**2.21**	**319**	*e*P	**Pn**	**10 58 49.2**	**+2.4**
ESTN	**Estel**	**2.43**	**85**	*e*P	**Pn**	**10 58 50.7**	**+1.1**
ESTN	**Estel**	**2.43**	**85**		**Pn**	**10 58 50.5**	**+0.9**
ESTN				Sn	**Sn**	**10 59 19.5**	**+1.3**
FUG	**Fuego 3**	**2.46**	**309**	*e*P	**Pn**	**10 58 51.8**	**+1.6**
APG	**El Apazote**	**2.60**	**323**	P	**Pn**	**10 58 53.6**	**+1.4**
	comp=Z,9.1nm,0.3s,baz=140,slow=4.1,SNR=89						
APG				LR	LR	10 59 27.7	
	comp=Z,653nm,20.7s,baz=128,slow=28						
MASN	**Masaya**	**2.79**	**109**	*e*P	**Pn**	**10 58 55.7**	**+1.1**
STG3	**Santiaguito 3,**	**3.19**	**305**	*e*P	**Pn**	**10 59 03.5**	**+3.4**
ACON	**Acoyapa**	**3.72**	**104**	*e*P	**Pn**	**10 59 07.8**	**+0.7**
ACON	**Acoyapa**	**3.72**	**104**		**Pn**	**10 59 07.5**	**+0.3**
ACON				Sn	**Sn**	**10 59 48.4**	**-1.3**
THIG		**3.86**	**301**	*i*P	**Pn**	**10 59 10.4**	**+1.2**
THIG				*i*S	**Sn**	**10 59 51.8**	**-1.6**
NY14	**Universidad de**	**3.95**	**124**	*e*P	**Pn**	**10 59 12.1**	**+1.7**
LAPC	**Finca la Perla**	**3.97**	**122**	*e*P	**Pn**	**10 59 12.8**	**+2.1**
GB1A	**Borinquen Arri**	**3.97**	**121**	*e*P	**Pn**	**10 59 12.0**	**+1.2**
BUEV	**Buena Vista**	**3.97**	**121**	*e*P	**Pn**	**10 59 13.6**	**+2.7**
BUAI	**Buenos Aires**	**4.00**	**120**	*e*P	**Pn**	**10 59 13.1**	**+2.0**
LIM1	**Limonal**	**4.16**	**122**	*e*P	**Pn**	**10 59 15.7**	**+2.4**
MESS	**Mesas**	**4.18**	**121**	*e*P	**Pn**	**10 59 14.9**	**+1.2**
HORNC	**Hornillas**	**4.21**	**121**	*e*P	**Pn**	**10 59 15.6**	**+1.5**
PLVR	**Palo Verde**	**4.27**	**126**	*e*P	**Pn**	**10 59 17.2**	**+2.2**
PTEN	**Parque Tenorio**	**4.37**	**120**	*e*P	**Pn**	**10 59 17.5**	**+1.2**
ACAL	**Aguas Claras**	**4.37**	**121**	*e*P	**Pn**	**10 59 18.1**	**+1.8**
AMAS	**Alto Masis**	**4.42**	**121**	*e*P	**Pn**	**10 59 19.8**	**+2.8**
JTS	**Las Juntas de**	**4.62**	**124**	P	**Pn**	**10 59 21.7**	**+2.0**
	comp=Z,28nm,0.3s,baz=13,slow=20,SNR=53						
JTS				S	**Sn**	**11 00 09.1**	**-3.0**
	comp=Z,54nm,0.3s,baz=224,slow=17,SNR=4.7						
JTS	**Las Juntas de**	**4.62**	**124**	*e*P	**Pn**	**10 59 21.8**	**+2.0**
JTS	**Las Juntas de**	**4.62**	**124**	*e*P	**Pn**	**10 59 22.4**	**+2.7**
JTS				*e*S	**Sn**	**11 00 14.9**	**+2.7**
JTS	**Las Juntas de**	**4.62**	**124**		**Pn**	**10 59 22.1**	**+2.4**
JTS				Sn	**Sn**	**11 00 10.4**	**-1.8**
ARE1	**Arenal 1**	**4.72**	**121**	*e*P	**Pn**	**10 59 23.9**	**+2.8**
CEDE	**Laguna Cedeo**	**4.72**	**120**	*e*P	**Pn**	**10 59 24.2**	**+3.1**
FORC	**Fortuna**	**4.76**	**120**	*e*P	**Pn**	**10 59 24.1**	**+2.5**
PCIG		**5.06**	**304**	*e*P	**Pn**	**10 59 27.6**	**+2.0**
PCIG				*i*S	**Sn**	**11 00 21.2**	**-1.6**
HDC	**Heredia**	**5.47**	**121**	*e*P	**Pn**	**10 59 33.4**	**+1.9**
HDC	**Heredia**	**5.47**	**121**	*e*P	Pn	10 59 37.2	+5.7
HDC					**Sn**	**11 00 37.9**	**+4.7**
HDC	**Heredia**	**5.47**	**121**		**Pn**	**10 59 33.5**	**+2.1**
HDC				Sn	**Sn**	**11 00 33.2**	**0.0**
SJS	**Escuela Geolog**	**5.55**	**122**	*e*P	**Pn**	**10 59 36.5**	**+3.9**
LCR2	**La Lucha 2**	**5.71**	**123**	*e*P	**Pn**	**10 59 38.1**	**+3.4**
CVTR	**Volcan Turrial**	**5.76**	**119**	*e*P	**Pn**	**10 59 39.3**	**+3.7**
CMIG	**Matias Romero**	**7.16**	**306**	P	**Pn**	**10 59 56.7**	**+2.2**
	comp=Z,2.6nm,0.3s,baz=143,slow=8.8,SNR=57						
CMIG				S	**Sn**	**11 01 17.1**	**+2.7**
	comp=Z,2.3nm,0.3s,baz=110,slow=16,SNR=1.8						
TEIG	**Tepich**	**7.30**	**4**	P	**Pn**	**10 59 59.2**	**+2.9**
	comp=Z,6.7nm,0.3s,baz=322,slow=0.8,SNR=50						
BRU2	**Volcan**	**7.30**	**123**	*e*P	**Pn**	**10 59 59.3**	**+2.7**
BRU2	**Volcan**	**7.30**	**123**	*e*P	**Pn**	**10 59 58.5**	**+1.9**
BRU2				*e*S	**Sn**	**11 01 16.3**	**-2.0**
BCO2	**Palmira**	**7.48**	**123**	*e*P	**Pn**	**11 00 01.3**	**+2.2**
BCO2				*e*S	**Sn**	**11 01 22.4**	**-0.3**
ICCO	**Coco Island**	**7.53**	**166**	*e*P	**Pn**	**11 00 01.6**	**+2.1**
BAGA3	**Bagala, Chiriq**	**7.62**	**125**	*e*P	**Pn**	**11 00 04.5**	**+3.6**
CHGR2	**Aguacate**	**7.68**	**120**	*e*P	**Pn**	**11 00 04.0**	**+2.3**
CHGR2				*e*S	**Sn**	**11 01 27.3**	**0.0**
DVD	**David**	**7.71**	**125**	*e*P	Pn	11 00 06.8	+4.8
DVD				*e*S	**Sn**	**11 01 24.6**	**-3.3**
BCIP	**Isla Barro Col**	**9.60**	**112**	Pn	**Pn**	**11 00 30.0**	**+2.1**
CACAO	**El Cacao, Vera**	**9.62**	**124**	*e*P	Pn	11 00 39.9	+12
CACAO				*e*S	**Sn**	**11 02 20.9**	**+6.1**
FSCY	**Frank Sound, G**	**9.74**	**48**		**Pn**	**11 00 34.3**	**+4.5**
TLIG	**Tlapa**	**10.45**	**297**		**Pn**	**11 00 42.0**	**+2.3**
MTDJ	**Mount Denham**	**12.12**	**63**	Pn	**Pn**	**11 01 06.5**	**+4.0**
PAYG	**Puerto Ayora**	**13.57**	**186**		**Pn**	**11 01 25.6**	**+3.4**
MOIG	**Morelia**	**13.62**	**301**	Pn	**Pn**	**11 01 25.8**	**+2.8**
SJCC	**San Jacinto, C**	**13.74**	**101**	*e*P	**Pn**	**11 01 23.7**	**-0.9**
UREC	**San Jos de Ur**	**14.07**	**110**	*e*P	**Pn**	**11 01 29.5**	**+0.5**
CBOC	**Ciudad Bolivar**	**14.47**	**118**	*e*P	**Pn**	**11 01 36.6**	**+2.1**
HELC	**Santa Helena**	**14.73**	**116**	*e*P	**Pn**	**11 01 39.3**	**+1.2**
PLMC	**San Jos del P**	**14.74**	**122**	*e*P	**P**	**11 01 41.8**	**-1.2**
ZARC	**Zaragoza, Cauc**	**14.79**	**110**	*e*P	**P**	**11 01 42.4**	**-1.1**
061Z	**Ochoppi**	**14.90**	**29**	P	**P**	**11 01 44.9**	**+0.2**
GTBY	**Guantanamo Bay**	**14.91**	**60**	P	**P**	**11 01 47.1**	**+2.3**
SMLC	**San Martn de**	**15.08**	**104**	*e*P	**Pn**	**11 01 42.4**	**0.0**
YOTC	**Yotoco, Valle**	**15.21**	**125**	*e*P	**Pn**	**11 01 45.2**	**+1.0**
GUY2C	**Guyana, Caldas**	**15.35**	**119**	*e*P	**P**	**11 01 49.5**	**-0.6**
CODC	**Agustn Codazz**	**15.39**	**99**	*e*P	**P**	**11 01 49.4**	**-0.8**
PTBC	**PUERTO BERRIO,**	**15.53**	**113**	*e*P	**Pn**	**11 01 47.6**	**-0.6**
NORC	**Norcasia**	**15.61**	**117**	*e*P	**P**	**11 01 51.3**	**-1.3**
BBAC	**Balboa, Cauca**	**15.78**	**132**	*e*P	**P**	**11 01 54.8**	**+0.1**
OCAC	**Ocana**	**15.96**	**105**	*e*P	**P**	**11 01 55.4**	**-1.3**
ORTC	**Ortega, Tolima**	**16.15**	**122**	*e*P	**P**	**11 01 57.8**	**-0.8**
OTAV	**Otavalo**	**16.27**	**140**	*e*P	**P**	**11 02 04.0**	**+3.6**
OTAV	**Otavalo**	**16.27**	**140**	P	**P**	**11 02 03.3**	**+2.9**
CRUC	**La Cruz**	**16.31**	**133**	*e*P	**P**	**11 02 04.1**	**+3.4**
ZAIG	**Zacatecas**	**16.31**	**309**	P	**P**	**11 02 03.3**	**+2.6**
ROSC	**El Rosal**	**16.44**	**118**	P	**Pn**	**11 01 59.6**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=266,slow=15,SNR=1.8						
ROSC				LR	LR	11 10 11.1	
	comp=Z,398nm,18.4s,baz=348,slow=44						
ROSC	**El Rosal**	**16.44**	**118**	P	**P**	**11 02 04.1**	**+1.9**
DWPF	**Disney Wildern**	**16.64**	**23**	P	**P**	**11 02 03.6**	**-0.3**
DWPF				IAmb	IAmb	11 02 08.8	
	comp=Z,107nm,0.9s						
DWPF	**Disney Wildern**	**16.64**	**23**	P	**P**	**11 02 05.1**	**+1.2**
	baz=206						
BARC	**Barichara**	**16.67**	**111**	*e*P	**Pn**	**11 02 03.4**	**+0.6**
KVTX	**Kingsville**	**16.84**	**331**	P	**P**	**11 02 08.1**	**+2.0**
KVTX				IAmb	IAmb	11 02 21.1	
	comp=Z,129nm,1.1s						
RUSC	**La Rusia**	**17.04**	**113**	*e*P	**Pn**	**11 02 05.1**	**-2.6**
RUSC	**La Rusia**	**17.04**	**113**	P	**Pn**	**11 02 06.5**	**-1.3**
CHIC	**Chingaza**	**17.05**	**118**	*e*P	**P**	**11 02 10.0**	**+1.0**
VILC	**Villavicencio,**	**17.34**	**119**	*e*P	**P**	**11 02 13.0**	**+1.1**
656A	**Willston**	**17.40**	**19**	IAmb	IAmb	11 02 29.5	
	comp=Z,102nm,0.9s						
SDDR	**Presa de Saban**	**17.93**	**68**	P	**P**	**11 02 20.7**	**+2.4**
HKT	**Hockley**	**18.15**	**340**	P	**Pn**	**11 02 23.1**	**+2.4**
HKT				IAmb	IAmb	11 02 40.0	
	comp=Z,62nm,1.4s						
833A	**Chaparral WMA,**	**18.22**	**329**	IAmb	IAmb	11 02 25.6	
	comp=Z,50nm,0.9s						
833A	**Chaparral WMA,**	**18.22**	**329**	P	**Pn**	**11 02 23.3**	**+1.7**
	baz=145,SNR=26						
MACC	**Macarena, Meta**	**18.30**	**125**	*e*P	**Pn**	**11 02 23.9**	**+1.1**
SDV	**Santo Domingo**	**18.33**	**101**	P	**P**	**11 02 22.6**	**-0.3**
	comp=Z,2.0nm,0.3s,baz=278,slow=9.8,SNR=78						
SDV				PcP	**PcP**	**11 06 54.3**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=339,slow=3.1,SNR=3.7						
SDV				pPcP		11 07 07.9	
	comp=Z,0.2nm,0.3s,baz=326,slow=1.4,SNR=5.4						
SDV				LR	LR	11 11 14.0	
	comp=Z,167nm,18.0s,baz=280,slow=43						
SDV	**Santo Domingo**	**18.33**	**101**	*e*P	**P**	**11 02 22.8**	**-0.1**
SDV	**Santo Domingo**	**18.33**	**101**	P	**P**	**11 02 22.7**	**-0.3**
SDV				IAmb	IAmb	11 02 24.2	
	comp=Z,54nm,0.8s						
SC01	**Santiago de lo**	**18.57**	**67**	IAmb	IAmb	11 02 34.2	
	comp=Z,80nm,0.7s						
PTLC	**Puerto Leguiza**	**18.83**	**131**	*e*P	**Pn**	**11 02 33.4**	**+4.3**
352A	**Blakely**	**18.83**	**10**	P	**Pn**	**11 02 31.9**	**+2.9**
	baz=192,SNR=20						
353A	**Camilla**	**18.84**	**12**	P	**Pn**	**11 02 32.0**	**+2.9**
	baz=194,SNR=14						
TIGA	**Tifton**	**19.07**	**14**	P	**Pn**	**11 02 34.4**	**+2.5**
	baz=196						
250A	**Grady**	**19.13**	**7**	P	**Pn**	**11 02 34.0**	**+1.5**
250A				IAmb	IAmb	11 02 49.2	
	comp=Z,31nm,0.8s						
250A					**PcP**	**11 06 54.9**	**+0.9**
VBMS	**Vicksburg**	**19.28**	**356**	P	**Pn**	**11 02 37.0**	**+2.6**
	baz=175,SNR=9.0						
252A	**Lumpkin**	**19.37**	**11**	P	**Pn**	**11 02 37.4**	**+1.9**
	baz=192,SNR=39						
NATX	**Nacogdoches**	**19.51**	**345**	P	**Pn**	**11 02 38.3**	**+1.2**
NATX	**Nacogdoches**	**19.51**	**345**	P	**Pn**	**11 02 38.7**	**+1.6**
	baz=163,SNR=17						
435B	**Jarrell**	**19.53**	**337**	IAmb	IAmb	11 02 38.3	
	comp=Z,43nm,0.7s						
435B	**Jarrell**	**19.53**	**337**	P	**Pn**	**11 02 37.8**	**+0.4**
	baz=154,SNR=18						
253A	**Americus**	**19.55**	**12**	P	**Pn**	**11 02 39.1**	**+1.5**
	baz=198,SNR=20						
254A	**Abbeville**	**19.63**	**14**	P	**Pn**	**11 02 39.3**	**+0.9**
	baz=196,SNR=12						
255A	**Hazlehurst**	**19.82**	**16**	P	**Pn**	**11 02 41.2**	**+0.5**
	baz=198						
152A	**Waverly Hall**	**20.03**	**10**	IAmb	IAmb	11 02 58.9	
	comp=Z,72nm,1.1s						
152A	**Waverly Hall**	**20.03**	**10**	P	Pn	11 02 44.2	+0.9
	baz=192,SNR=21						
256A	**Glennville**	**20.03**	**18**	P	Pn	11 02 44.3	+1.1
	baz=200,SNR=8.2						
LRAL	**Lakeview Retre**	**20.11**	**5**	IAmb	IAmb	11 03 02.3	
	comp=Z,48nm,1.1s						
LRAL	**Lakeview Retre**	**20.11**	**5**	P	Pn	11 02 44.4	+0.3
	baz=185,SNR=16						
153A	**Fort Valley**	**20.18**	**12**	P	Pn	11 02 46.4	+1.4
	baz=194,SNR=9.1						
JCT	**Junction City**	**20.20**	**332**	P	**P**	**11 02 44.1**	**+1.0**
JCT				IAmb	IAmb	11 02 59.2	
	comp=Z,63nm,1.1s						
JCT	**Junction City**	**20.20**	**332**	P	Pn	11 02 44.4	-1.0
	baz=148,SNR=25						
154A	**Montrose**	**20.31**	**14**	P	Pn	11 02 47.0	+0.5
	baz=196,SNR=21						
Z50A	**Ashland**	**20.43**	**7**	IAmb	IAmb	11 03 05.4	
	comp=Z,44nm,0.9s						
Z50A	**Ashland**	**20.43**	**7**	P	Pn	11 02 48.6	+0.6
	baz=188,SNR=12						
155A	**Kite**	**20.48**	**16**	P	Pn	11 02 49.0	+0.5
	baz=198,SNR=30						
WHTX	**Lake Whitney,**	**20.57**	**339**	P	**P**	**11 02 48.1**	**+1.1**
	baz=155,SNR=18						
Z41A	**Richland Creek**	**20.58**	**351**	IAmb	IAmb	11 02 55.5	
	comp=Z,66nm,0.9s						
Z41A	**Richland Creek**	**20.58**	**351**	P	Pn	11 02 52.0	+2.4
	baz=169,SNR=7.3

W41B pP **sP** **11 03 22.0 -2.2**
W41B **PcP** **11 07 00.6 +0.5**
W41B **Gary Mavity, V** 22.38 353 P **P** **11 03 08.2 +1.8**
baz=171,SNR=9.0
Y57A **Sumter** 22.38 19 P **P** **11 03 08.8 +2.4**
baz=202,SNR=18
W50A **Signal Mountai** 22.43 8 IAmb IAmb 11 03 27.2
comp=Z,33nm,1.1s
W50A **Signal Mountai** 22.43 8 P **P** **11 03 07.9 +0.9**
baz=189
X55A **Gracelyn & Ava** 22.45 16 P **P** **11 03 09.2 +2.1**
baz=198,SNR=9.8
ATAH **Atahualpa** 22.46 152 P **P** **11 03 10.3 +2.5**
comp=Z,111nm,0.9s,baz=311,slow=12,SNR=6.5
ATAH LR LR 11 10 53.4
comp=Z,656nm,21.7s,baz=340,slow=34
W51A **Cleveland** 22.46 9 P **P** **11 03 08.8 +1.5**
baz=190,SNR=8.9
SJG **San Juan** 22.47 74 P **P** **11 03 06.1 -1.5**
comp=Z,9.1nm,0.7s,baz=247,slow=7.4,SNR=6.7
SJG **San Juan** 22.47 74 P **P** **11 03 06.3 -1.2**
Y58A **Scranton** 22.52 20 P **P** **11 03 10.2 +2.3**
baz=204
W52A **Murphy** 22.53 11 IAmb IAmb 11 03 28.9
comp=Z,95nm,1.5s
W52A **Murphy** 22.53 11 P **P** **11 03 10.4 +2.3**
baz=192,SNR=5.3
X56A **White Oak** 22.63 17 P **P** **11 03 11.1 +2.0**
baz=200,SNR=12
BG3 **Lake Jocassee** 22.63 13 IAmb IAmb 11 03 26.0
comp=Z,56nm,1.4s
LPAR **Lepanto** 22.63 357 P **P** **11 03 10.1 +1.0**
W39A **Magazine** 22.63 349 IAmb IAmb 11 03 14.0
comp=Z,46nm,1.1s
W39A **Magazine** 22.63 349 P **P** **11 03 10.4 +1.3**
baz=167,SNR=17
W53A **Cullowhee** 22.75 12 P **P** **11 03 12.1 +1.6**
baz=194
CPCT **Cooper Cave** 22.78 9 P **P** **11 03 11.3 +0.6**
CPCT pP **pP** **11 03 25.2 +2.9**
CPCT IAmb IAmb 11 03 26.8
comp=Z,43nm,1.1s
V48A **Smith Brothers** 22.81 4 IAmb IAmb 11 03 26.6
comp=Z,23nm,0.8s
Y59A **Loris** 22.87 22 P **P** **11 03 13.2 +1.7**
baz=206
X57A **Johnson Farm,** 22.89 19 P **P** **11 03 13.4 +1.7**
baz=202,SNR=5.9
W54A **Cherokee Point** 22.89 14 P **P** **11 03 13.5 +1.7**
baz=197,SNR=16
V49A **McMinnville** 22.91 6 P **P** **11 03 12.6 +0.6**
baz=187,SNR=7.7
V50A **Pikevile** 22.92 8 P **P** **11 03 12.9 +0.8**
baz=189
GNAR **Gosnell** 22.98 358 P **P** **11 03 13.4 +0.8**
GNAR **pP** **11 03 27.0 +2.6**
MTP **Monte Pirata** 23.03 74 P **P** **11 03 11.6 -1.8**
MTP IAmb IAmb 11 03 27.6
comp=Z,38nm,0.7s
TKL **Tuckaleechee C** 23.11 11 P **P** **11 03 14.8 +0.7**
comp=Z,23nm,0.8s,baz=183,slow=12,SNR=27
TKL **Tuckaleechee C** 23.11 11 P **P** **11 03 15.0 +1.0**
PEBM **Pemiscott Bayo** 23.12 358 P **P** **11 03 14.9 +0.8**
PEBM **pP** **11 03 28.8 +2.9**
WVT **Waverly** 23.14 2 P **P** **11 03 15.4 +1.1**
WVT IAmb IAmb 11 03 30.9
comp=Z,41nm,1.4s
WVT **Waverly** 23.14 2 P **P** **11 03 15.4 +1.1**
baz=182
LCAR **Lake Charles** 23.16 355 IAmb IAmb 11 03 30.0
comp=Z,73nm,1.2s
LPIG **La Paz** 23.16 302 P **P** **11 03 17.8 +3.3**
comp=Z,15nm,0.7s,baz=287,slow=4.2,SNR=6.3
V51A **Loudon** 23.16 9 P **P** **11 03 16.0 +1.5**
baz=191
KMSC **Kings Mountain** 23.16 16 IAmb IAmb 11 03 31.3
comp=Z,58nm,1.1s
KMSC **Kings Mountain** 23.16 16 P **P** **11 03 15.8 +1.3**
baz=199,SNR=16
X58A **Rowland** 23.22 20 IAmb IAmb 11 03 17.1
comp=Z,45nm,0.8s
X58A **Rowland** 23.22 20 P **P** **11 03 16.2 +1.1**
baz=204,SNR=8.1
W35A **Tecumseh** 23.31 343 P **P** **11 03 15.9 -0.1**
V53A **Saluda** 23.31 13 P **P** **11 03 17.3 +1.3**
baz=195,SNR=12
V52A **Sevierville** 23.32 11 IAmb IAmb 11 03 34.0
comp=Z,36nm,1.1s
V52A **Sevierville** 23.32 11 P **P** **11 03 16.9 +0.8**
baz=193
UTMT **University of** 23.34 360 P **P** **11 03 18.4 +2.3**
UTMT **sP** **11 03 31.2 -3.1**
W56A **Indian Trail** 23.36 17 P **P** **11 03 17.7 +1.2**
baz=200,SNR=8.1
X59A **McDuffie Farm,** 23.49 22 P **P** **11 03 18.8 +1.1**
baz=206
WMOK **Wichita Mounta** 23.52 339 IAmb IAmb 11 03 32.8
comp=Z,54nm,1.4s
WMOK **Wichita Mounta** 23.52 339 P **P** **11 03 18.9 +0.8**
baz=155,SNR=23
W57A **Gilead** 23.55 18 IAmb IAmb 11 03 34.6
comp=Z,85nm,1.5s
W57A **Gilead** 23.55 18 P **P** **11 03 18.9 +0.6**
baz=202
V54A **Nebo** 23.61 14 P **P** **11 03 19.9 +1.1**
baz=197,SNR=16
U40A **Yellville** 23.62 352 IAmb IAmb 11 03 38.1
comp=Z,40nm,0.9s
U40A **Yellville** 23.62 352 P **P** **11 03 20.6 +1.7**
baz=170,SNR=24
U49A **Red Boiling Sp** 23.67 6 P **P** **11 03 19.5 +0.2**
baz=187,SNR=9.6
W58A **Raeford** 23.68 20 P **P** **11 03 20.3 +0.9**
baz=204,SNR=14
U50A **Jamestown** 23.68 8 P **P** **11 03 20.0 +0.4**
baz=190,SNR=6.1
OKCFA **Oklahoma City** 23.72 342 IAmb IAmb 11 03 21.4
comp=Z,41nm,0.8s
HHAR **Hobbs** 23.72 350 IAmb IAmb 11 03 36.5
comp=Z,49nm,1.4s
X60A **Albert Glenn T** 23.73 23 P **P** **11 03 20.8 +0.9**
baz=207,SNR=6.2
TUL1 **Leonard** 23.74 346 P **P** **11 03 20.2 +0.2**
TUL1 IAmb IAmb 11 03 34.8
comp=Z,26nm,0.7s
TUL1 **Leonard** 23.74 346 P **P** **11 03 20.8 +0.7**
baz=163,SNR=9.5
U51A **La Follette** 23.77 10 P **P** **11 03 21.2 +0.9**
baz=192,SNR=6.5
V55A **Taylorsville** 23.86 15 IAmb IAmb 11 03 25.5
comp=Z,19nm,0.8s
V55A **Taylorsville** 23.86 15 P **P** **11 03 22.3 +1.2**
baz=198,SNR=7.3
PCRV **Puerto La Cruz** 23.88 94 P **P** **11 03 20.5 -1.1**
comp=Z,13nm,0.6s,baz=248,slow=5.9,SNR=12
U52A **Thorn Hill** 23.90 11 P **P** **11 03 22.1 +0.5**
baz=193
PLCV **Puerto La Cruz** 23.93 94 P **P** **11 03 20.5 -1.5**
TZTN **Tazewell** 24.01 11 IAmb IAmb 11 03 40.9
comp=Z,52nm,1.3s
TZTN **Tazewell** 24.01 11 P **P** **11 03 22.6 +0.1**
baz=193
V56A **Mocksville** 24.02 17 P **P** **11 03 23.7 +1.1**
baz=200,SNR=14
U53A **Fall Branch** 24.03 13 P **P** **11 03 23.5 +0.8**
baz=195,SNR=15
MNTX **Cornudas Mount** 24.10 324 P **P** **11 03 23.6 +0.2**
baz=137,SNR=21
W60A **Pink Hill** 24.25 23 P **P** **11 03 25.6 +1.0**
baz=207
T49A **Edmonton** 24.28 6 IAmb IAmb 11 03 41.8
comp=Z,21nm,0.8s
T49A **Edmonton** 24.28 6 P **P** **11 03 25.2 +0.3**
baz=188,SNR=13
T50A **Nancy** 24.28 8 P **P** **11 03 25.3 +0.3**
baz=189
V57A **Coltrane Farms** 24.30 18 P **P** **11 03 25.8 +0.7**
baz=202,SNR=7.5
MGMO **Mountain Grove** 24.34 353 P **P** **11 03 26.1 +0.7**
MGMO pP **pP** **11 03 40.4 +2.1**
MGMO **PcP** **11 07 03.8 -0.4**
CNNC **Cliffs of the** 24.35 22 P **P** **11 03 26.5 +0.9**
baz=206
U54A **Nelsons Funny** 24.35 14 P **P** **11 03 26.1 +0.4**
U54A **Nelsons Funny** 24.35 14 P **P** **11 03 26.2 +0.5**
baz=197,SNR=11
T51A **Gray** 24.36 10 P **P** **11 03 25.9 +0.3**
baz=192
V58A **Windy Hill, Pi** 24.42 19 P **P** **11 03 27.0 +0.8**
baz=203,SNR=13
MSTX **Muleshoe** 24.50 331 P **P** **11 03 27.6 +0.5**
baz=146
U55A **TA2, Sparta** 24.52 15 P **P** **11 03 28.0 +0.8**
baz=198,SNR=6.6
U56A **King** 24.55 17 IAmb IAmb 11 03 46.5
comp=Z,33nm,1.0s
U56A **King** 24.55 17 P **P** **11 03 28.6 +1.1**
baz=200,SNR=6.5
T53A **Wise** 24.63 12 P **P** **11 03 28.9 +0.7**
baz=195
T52A **Hallie** 24.67 11 P **P** **11 03 29.1 +0.7**
baz=194
S44A **Carbondale** 24.69 359 IAmb IAmb 11 03 46.9
comp=Z,32nm,0.8s
V59A **Middlesex** 24.69 21 P **P** **11 03 29.5 +0.9**
baz=205
AMTX **Amarillo** 24.77 334 P **P** **11 03 31.0 +1.4**
baz=149
T54A **Tazewell** 24.92 14 P **P** **11 03 31.5 +0.7**
baz=197,SNR=6.0
U57A **Blanch** 24.94 18 P **P** **11 03 32.0 +1.0**
baz=202,SNR=9.2
USIN **University of** 24.98 2 P **P** **11 03 32.8 +1.5**
USIN **pP** **11 03 45.1 +1.2**
USIN IAmb IAmb 11 03 51.2
comp=Z,40nm,0.9s
S49A **Springfield** 24.98 7 P **P** **11 03 31.4 +0.1**
baz=188
S50A **Richmond** 24.99 8 P **P** **11 03 32.4 +1.1**
baz=190
V60A **Jim Taylor Roa** 25.05 23 IAmb IAmb 11 03 49.1
comp=Z,36nm,0.7s
V60A **Jim Taylor Roa** 25.05 23 P **P** **11 03 34.0 +2.1**
baz=207
S51A **Beattyville** 25.07 10 IAmb IAmb 11 03 50.6
comp=Z,19nm,0.8s
S51A **Beattyville** 25.07 10 P **P** **11 03 32.6 +0.4**
baz=192
U32A **Winter Ranch,** 25.09 340 P **P** **11 03 32.2 -0.2**
U32A **pP** **11 03 45.2 +0.1**
U32A IAmb IAmb 11 03 46.3
comp=Z,41nm,1.1s
CCM **Cathedral Cave** 25.14 356 P **P** **11 03 32.6 -0.1**
CCM **Cathedral Cave** 25.14 356 P **P** **11 03 33.3 +0.6**
baz=174
U58A **Oxford** 25.16 20 P **P** **11 03 33.5 +0.6**
baz=204,SNR=5.3
T55A **Pulaski** 25.17 15 P **P** **11 03 34.2 +1.1**
baz=199
S52A **Salyersville** 25.20 11 P **P** **11 03 33.8 +0.5**
baz=193
WCI **Wyandotte Cave** 25.32 5 P **P** **11 03 34.1 -0.2**
WCI IAmb IAmb 11 03 51.3
comp=Z,28nm,0.8s
WCI **Wyandotte Cave** 25.32 5 P **P** **11 03 34.5 +0.1**
baz=186
BLA **Blacksburg** 25.35 16 P **P** **11 03 34.9 +0.2**
BLA IAmb IAmb 11 03 51.3
comp=Z,32nm,1.0s
BLA **Blacksburg** 25.35 16 P **P** **11 03 35.4 +0.7**
baz=199
U59A **Littleton** 25.38 21 IAmb IAmb 11 03 51.4
comp=Z,25nm,0.8s
U59A **Littleton** 25.38 21 P **P** **11 03 35.7 +0.8**
baz=206
S53A **Williamson** 25.39 13 P **P** **11 03 35.8 +0.7**
baz=195
T57A **Hurt** 25.49 18 IAmb IAmb 11 03 52.5
comp=Z,53nm,1.0s
T57A **Hurt** 25.49 18 P **P** **11 03 36.9 +1.0**
baz=202,SNR=8.3
R49A **Shelbyville** 25.49 7 P **P** **11 03 35.4 -0.5**
R49A **pP** **11 03 48.6 0.0**
R49A **Shelbyville** 25.49 7 P **P** **11 03 35.7 -0.2**
baz=188
R50A **Paris** 25.59 8 P **P** **11 03 37.2 +0.4**
R50A **pP** **11 03 50.3 +0.7**
SLM **Saint Louis** 25.65 358 P **P** **11 03 38.1 +0.8**
SLM IAmb IAmb 11 03 53.8
comp=Z,29nm,0.8s
T58A **Grand View Acr** 25.66 19 P **P** **11 03 38.1 +0.6**
baz=204
S54A **Dingess, Beckl** 25.69 14 IAmb IAmb 11 03 57.1
comp=Z,18nm,0.8s
S54A **Dingess, Beckl** 25.69 14 P **P** **11 03 37.9 +0.1**
baz=197
U60A **Pendleton** 25.71 22 P **P** **11 03 38.7 +0.8**
baz=207
R51A **Hillsboro** 25.72 10 P **P** **11 03 38.4 +0.4**
baz=192
OLIL **Olney** 25.73 1 IAmb IAmb 11 03 57.8
comp=Z,21nm,0.8s
S55A **Lewisburg** 25.86 15 P **P** **11 03 40.2 +0.8**
baz=199
T59A **Double "B" Far** 26.02 21 P **P** **11 03 41.2 +0.5**
T59A **pP** **11 03 54.5 +1.0**
T59A **Double "B" Far** 26.02 21 P **P** **11 03 41.7 +1.0**
baz=206,SNR=8.2
S56A **Natural Bridge** 26.02 17 P **P** **11 03 41.8 +1.0**
baz=201,SNR=8.5
HSIG 26.05 311 P **P** **11 03 41.5 +0.3**
HSIG **pP** **11 03 53.5 -0.3**
R53A **Hurricane** 26.05 12 P **P** **11 03 41.5 +0.4**
baz=195
Q48A **North Vernon** 26.07 6 P **P** **11 03 40.8 -0.3**
baz=187
121A **Cookes Peak, D** 26.12 322 P **P** **11 03 44.3 +2.4**
baz=134,SNR=7.5
R54A **Victor** 26.13 14 P **P** **11 03 40.9 -0.8**
baz=197
SRIG **Santa Rosalia** 26.16 307 P **P** **11 03 43.1 +1.0**
SRIG **pP** **11 03 55.4 +0.6**
Q49A **Aurora** 26.23 7 P **P** **11 03 42.4 -0.3**
baz=189
S57A **Dark Hollow, R** 26.28 18 P **P** **11 03 42.6 -0.5**
S57A **pP** **11 03 55.6 -0.2**
S57A IAmb IAmb 11 03 59.4
comp=Z,18nm,0.9s
S57A **Dark Hollow, R** 26.28 18 P **P** **11 03 43.5 +0.4**
baz=202
S58A **Poland Farm, P** 26.43 20 P **P** **11 03 44.6 +0.2**
S58A **pP** **11 03 57.2 +0.1**
S58A **Poland Farm, P** 26.43 20 P **P** **11 03 45.1 +0.6**
baz=204
R55A **Marlinton** 26.44 16 IAmb IAmb 11 04 03.7
comp=Z,29nm,0.9s
R55A **Marlinton** 26.44 16 P **P** **11 03 45.7 +1.1**
baz=199
Q51A **Peebles** 26.47 10 IAmb IAmb 11 03 45.5
comp=Z,18nm,0.8s
Q51A **Peebles** 26.47 10 P **P** **11 03 45.1 +0.3**
baz=192,SNR=6.7
Q52A **Bidwell** 26.60 12 P **P** **11 03 46.4 +0.5**
baz=194
P48A **Milroy** 26.62 6 IAmb IAmb 11 04 02.9
comp=Z,20nm,1.2s
P48A **Milroy** 26.62 6 P **P** **11 03 45.3 -0.8**
baz=187
Q53A **Leroy** 26.65 13 P **P** **11 03 47.0 +0.6**
baz=196
R56A **Bull Pasture M** 26.75 17 P **P** **11 03 48.5 +1.0**
baz=201
R58B **Mineral** 26.80 19 IAmb IAmb 11 04 04.5
comp=Z,59nm,1.4s
R58B **Mineral** 26.80 19 P **P** **11 03 48.7 +0.9**
baz=204,SNR=5.4
S59A **Mechanicsville** 26.82 21 P **P** **11 03 47.6 -0.3**
baz=205
R57A **Stanardsville** 26.91 18 P **P** **11 03 49.5 +0.8**
baz=202,SNR=8.2
Q54A **Coxs Mills** 26.93 14 IAmb IAmb 11 04 05.9
comp=Z,26nm,0.8s
Q54A **Coxs Mills** 26.93 14 P **P** **11 03 49.5 +0.6**
baz=197,SNR=7.4
P51A **Williamsport** 26.96 10 IAmb IAmb 11 03 49.9
comp=Z,12nm,0.7s
P51A **Williamsport** 26.96 10 P **P** **11 03 49.3 +0.1**
baz=192
KSU1 **Kansas State U** 26.98 347 P **P** **11 03 50.3 +0.9**
baz=163,SNR=5.2
R58A **Rapidan** 27.07 19 P **P** **11 03 51.2 +1.0**
baz=204
ANMO **Albuquerque** 27.12 327 P **P** **11 03 52.5 +1.6**
comp=Z,2.8nm,0.8s,baz=152,slow=13,SNR=12
ANMO PcP **PcP** **11 07 11.7 +0.9**
comp=Z,6.0nm,0.9s,baz=190,slow=7.1,SNR=7.6
ANMO pPcP 11 07 25.9
comp=Z,5.6nm,1.0s,baz=142,slow=10.0,SNR=4.4
ANMO **Albuquerque** 27.12 327 P **P** **11 03 51.9 +0.9**
ANMO **PcP** **11 07 11.2 +0.4**
ANMO **Albuquerque** 27.12 327 P **P** **11 03 53.0 +2.1**
baz=140
Q55A **Buckhannon** 27.12 15 P **P** **11 03 51.5 +0.8**
baz=199
CBN **Corbin Frederi** 27.19 20 P **P** **11 03 52.5 +1.3**
baz=205
R59A **King George, V** 27.27 20 P **P** **11 03 53.3 +1.3**
baz=205,SNR=8.4
P52A **Corning** 27.27 11 P **P** **11 03 52.2 +0.2**
baz=194
P53A **Whipple** 27.28 13 P **P** **11 03 52.9 +0.8**
baz=196,SNR=6.9
Q56A **Snyder Ridge,** 27.40 17 IAmb IAmb 11 04 10.3
comp=Z,23nm,0.8s
Q56A **Snyder Ridge,** 27.40 17 P **P** **11 03 54.5 +1.3**
baz=201
SFIN **Lafayette** 27.41 3 P **P** **11 03 52.6 -0.6**
baz=184
NNA **Nana** 27.46 154 LR LR 11 13 11.9
comp=Z,238nm,21.4s,baz=322,slow=33
R60A **Leonardtown, M** 27.52 21 P **P** **11 03 55.5 +1.3**
baz=206
O50A **Cable** 27.52 9 P **P** **11 03 54.0 -0.2**
baz=191,SNR=9.0
CBKS **Cedar Bluff** 27.55 341 P **P** **11 03 55.5 +0.9**
baz=156,SNR=8.1
P54A **Burton** 27.60 14 P **P** **11 03 55.9 +0.9**
baz=198,SNR=6.0
Q57A **Strasburg** 27.62 18 P **P** **11 03 56.1 +0.9**
baz=202
P55A **Reedsville** 27.67 15 P **P** **11 03 56.2 +0.6**
baz=199
O51A **Pataskala** 27.69 10 P **P** **11 03 55.7 0.0**
baz=193
ACSO **Alum Creek Sta** 27.70 10 IAmb IAmb 11 03 57.0
comp=Z,14nm,0.8s
ACSO **Alum Creek Sta** 27.70 10 P **P** **11 03 56.1 +0.2**
baz=192,SNR=5.5
Q58A **Fox Den Farm,** 27.76 19 P **P** **11 03 56.8 +0.4**
baz=204
O52A **Adamsville** 27.80 12 P **P** **11 03 56.7 0.0**
O52A IAmb IAmb 11 03 57.6
comp=Z,19nm,0.8s
O52A **pP** **11 04 10.7 +1.2**
O52A **Adamsville** 27.80 12 P **P** **11 03 57.0 +0.3**
baz=195,SNR=5.7
MCWV **Mont Chateau** 27.81 15 P **P** **11 03 57.3 +0.5**
baz=199
T25A **Trinidad** 27.86 333 IAmb IAmb 11 04 01.0
comp=Z,24nm,0.8s
T25A **Trinidad** 27.86 333 P **P** **11 03 59.6 +2.0**
baz=146,SNR=26
TUC **Tucson** 27.87 317 P **P** **11 04 01.2 +3.7**
TUC **Tucson** 27.87 317 P **P** **11 03 59.6 +2.1**
baz=129
P56A **Dayton Farm, R** 27.93 17 P **P** **11 03 58.7 +0.8**
baz=201
N47A **Urbana** 28.00 5 P **P** **11 03 57.5 -1.0**
baz=186
N48A **Decatur** 28.05 6 P **P** **11 03 58.0 -0.8**
baz=188
O53A **New Philadelph** 28.05 12 P **P** **11 03 59.3 +0.3**
baz=196,SNR=6.7
P57A **Homestead Farm** 28.15 18 IAmb IAmb 11 04 01.8
comp=Z,28nm,0.7s
P57A **Homestead Farm** 28.15 18 P **P** **11 04 01.2 +1.3**
baz=203,SNR=11
O54A **Avella** 28.18 14 IAmb IAmb 11 04 01.3
comp=Z,18nm,0.8s
O54A **Avella** 28.18 14 P **P** **11 04 00.3 +0.2**
baz=198,SNR=5.7
N50A **Nevada** 28.20 9 P **P** **11 04 00.4 +0.1**
baz=192
N49A **Columbus Grove** 28.21 8 P **P** **11 03 59.7 -0.6**
baz=190
P58A **Pank, Wackersv** 28.38 19 P **P** **11 04 03.0 +1.2**
baz=204,SNR=6.0
SDMD **Soldier's Deli** 28.46 20 IAmb IAmb 11 04 04.6
comp=Z,15nm,0.7s
N51A **Ashland** 28.48 10 P **P** **11 04 02.8 0.0**
baz=193
M47A **Cromwell** 28.48 5 P **P** **11 04 02.2 -0.6**
baz=186
N52A **McGinn's Farm,** 28.50 11 P **P** **11 04 03.0 0.0**
baz=195,SNR=7.9
N53A **Lisbon** 28.67 13 IAmb IAmb 11 04 05.2
comp=Z,13nm,0.8s
N53A **Lisbon** 28.67 13 P **P** **11 04 04.6 +0.2**
baz=196
KSCO **Kaye Shedlock'** 28.72 337 P **P** **11 04 06.2 +1.1**
baz=151,SNR=9.6
P59A **Jarrettsville** 28.77 20 P **P** **11 04 06.1 +0.7**
baz=206
M50A **Fremont** 28.84 9 P **P** **11 04 05.5 -0.4**
M50A IAmb IAmb 11 04 06.5
comp=Z,27nm,0.8s
M50A **pP** **11 04 18.6 -0.1**
M50A **Fremont** 28.84 9 P **P** **11 04 05.7 -0.3**
baz=192,SNR=5.9
SDCO **Great Sand Dun** 28.85 332 P **P** **11 04 08.2 +1.8**
baz=145,SNR=9.4
O57A **Amberson** 28.93 18 P **P** **11 04 07.4 +0.6**
baz=203
N54A **Moraine State** 29.01 14 P **P** **11 04 07.0 -0.5**
N54A IAmb IAmb 11 04 08.4
comp=Z,22nm,0.7s
N54A **pP** **11 04 20.9 +0.6**
N54A **Moraine State** 29.01 14 P **P** **11 04 07.6 +0.2**
baz=198,SNR=6.2
214A **Organ Pipe Nat** 29.03 315 IAmb IAmb 11 04 22.9
comp=Z,11nm,0.8s
214A **Organ Pipe Nat** 29.03 315 P **P** **11 04 10.3 +2.4**
baz=125,SNR=7.2
O58A **Lewisberry** 29.07 19 P **P** **11 04 08.9 +0.9**
baz=204
N55A **Marion Center** 29.09 16 P **P** **11 04 08.6 +0.4**
baz=200
L40A **Anamosa** 29.12 356 P **P** **11 04 09.1 +0.6**
L40A IAmb IAmb 11 04 10.4
comp=Z,20nm,0.8s
L40A **pP** **11 04 22.1 +0.8**
L47A **Sherwood** 29.13 6 P **P** **11 04 07.9 -0.7**
baz=187
P60A **Greenville** 29.23 21 IAmb IAmb 11 04 28.2
comp=Z,18nm,0.8s
P60A **Greenville** 29.23 21 P **P** **11 04 10.2 +0.8**
baz=207
PAGS **Pennsylvania G** 29.23 19 P **P** **11 04 09.8 +0.4**
PAGS **pP** **11 04 23.7 +1.4**
PAGS IAmb IAmb 11 04 28.4
comp=Z,24nm,0.9s
SSPA **Standing Stone** 29.25 17 P **P** **11 04 10.3 +0.7**
baz=202
M52A **Chesterland** 29.27 12 P **P** **11 04 09.9 +0.1**
baz=195
N56A **West Decatur** 29.40 16 P **P** **11 04 11.4 +0.5**
baz=201
L49A **Milan** 29.43 8 P **P** **11 04 11.0 -0.1**
baz=190
S22A **4UR Ranch, Cre** 29.48 330 P **P** **11 04 13.3 +1.3**
S22A IAmb IAmb 11 04 15.9
comp=Z,15nm,0.8s
S22A **PcP** **11 07 18.0 +1.3**
S22A **4UR Ranch, Cre** 29.48 330 P **P** **11 04 13.8 +1.7**
baz=142,SNR=29
O59A **Robesonia** 29.48 20 P **P** **11 04 12.6 +0.9**
baz=206
L50A **Kingsville** 29.50 9 P **P** **11 04 11.9 +0.1**
baz=192
BGNE **Belgrade** 29.53 346 P **P** **11 04 13.2 +1.0**
baz=161
M54A **Oil Creek Stat** 29.60 14 IAmb IAmb 11 04 14.0
comp=Z,15nm,0.7s
M54A **Oil Creek Stat** 29.60 14 P **P** **11 04 12.9 +0.2**
baz=198
X16A **Lo Mia Camp, P** 29.64 320 P **P** **11 04 14.8 +1.4**
X16A **PcP** **11 07 18.2 +1.1**
M55A **Ridgway** 29.79 15 P **P** **11 04 14.3 -0.1**
baz=200
K47A **Vermontville** 29.84 6 P **P** **11 04 13.7 -1.1**
baz=187

O61A	Allentown	29.87	22	P	P	11 04 15.8	+0.8
	baz=209						
L53A	Girard	29.89	13	P	P	11 04 15.0	-0.3
	baz=197						
MVCO	Mesa Verde	29.91	327	IAmb	IAmb	11 04 20.8	
	comp=Z,10.0nm,0.8s						
MVCO	Mesa Verde	29.91	327	P	P	11 04 17.7	+1.9
	baz=139,SNR=8.9						
JFWS	Jewell Farm	29.92	358	P	P	11 04 16.7	+1.2
	baz=177						
M56A	Emporium	29.96	16	P	P	11 04 16.0	+0.1
	baz=201						
LUPA	Lehigh Univers	30.02	21	P	P	11 04 16.6	+0.2
LUPA					pP	11 04 32.0	+2.7
K48A	Perry	30.07	7	P	P	11 04 16.1	-0.7
	baz=189						
ERPA	Erie	30.11	13	IAmb	IAmb	11 04 18.1	
	comp=Z,19nm,0.7s						
ERPA	Erie	30.11	13	P	P	11 04 17.5	+0.3
	baz=197						
M57A	Sunshine Farm,	30.12	18	IAmb	IAmb	11 04 18.8	
	comp=Z,15nm,0.8s						
M57A	Sunshine Farm,	30.12	18	P	P	11 04 17.8	+0.5
	baz=203						
K49A	Clarkson	30.13	8	P	P	11 04 16.6	-0.8
	baz=190						
113A	Mohawk Valley,	30.16	315	P	P	11 04 19.4	+1.6
113A					pP	11 04 31.9	+1.3
113A					PcP	11 07 18.7	+0.6
N59A	State Game Lan	30.17	20	IAmb	IAmb	11 04 19.6	
	comp=Z,18nm,0.7s						
N59A	State Game Lan	30.17	20	P	P	11 04 18.7	+1.0
	baz=206						
WUAZ	Wupatki	30.33	322	P	P	11 04 20.6	+1.1
WUAZ					PcP	11 07 20.0	+1.2
WUAZ	Wupatki	30.33	322	P	P	11 04 21.7	+2.3
	baz=132						
N60A	Cedar Hill Far	30.35	21	P	P	11 04 19.6	+0.3
	baz=207						
M58A	Price's Panora	30.36	19	P	P	11 04 19.8	+0.4
	baz=204						
L54A	Sinclairville	30.37	14	P	P	11 04 19.6	0.0
	baz=198						
J47A	Sunmer	30.42	6	P	P	11 04 19.2	-0.7
	baz=188						
L55A	Hinsdale	30.54	15	P	P	11 04 21.2	+0.1
	baz=200						
ISCO	Idaho Springs	30.59	334	IAmb	IAmb	11 04 25.4	
	comp=Z,9.4nm,0.8s						
ISCO	Idaho Springs	30.59	334	P	P	11 04 23.4	+1.6
	baz=146,SNR=13						
SMCO	Snowmass	30.69	332	IAmb	IAmb	11 04 26.9	
	comp=Z,14nm,0.8s						
M59A	Waymart	30.84	20	P	P	11 04 24.3	+0.6
	baz=206,SNR=5.2						
K54A	Basiliko Farm,	30.88	15	P	P	11 04 24.2	+0.2
	baz=199						
PAL	Palisades	30.90	22	P	P	11 04 24.6	+0.4
	baz=209						
M60A	Port Jervis	30.92	21	P	P	11 04 24.8	+0.4
	baz=208						
GLA	Glamis	31.05	315	P	P	11 04 27.5	+1.8
GLA					pP	11 04 39.7	+1.1
GLA				IAmb	IAmb	11 04 41.0	
	comp=Z,14nm,0.8s						
L58A	Harry Jones Me	31.16	19	P	P	11 04 26.8	+0.3
	baz=205						
M61A	Granite Spring	31.22	22	P	P	11 04 27.4	+0.4
	baz=209						
Y12C	Blythe	31.24	316	P	P	11 04 28.1	+0.8
Y12C					pP	11 04 40.0	-0.2
Y12C					PcP	11 07 21.5	+0.5
Y12C	Blythe	31.24	316	P	P	11 04 29.9	+2.6
	baz=126						
BINY	Binghamton	31.26	19	P	P	11 04 27.7	+0.4
	baz=205						
K56A	Middlesex	31.32	16	P	P	11 04 27.9	0.0
	baz=202						
ECSD	EROS Data Cent	31.43	349	P	P	11 04 28.8	-0.1
	baz=165,SNR=5.8						
J54A	Appleton	31.52	14	P	P	11 04 29.7	+0.2
	baz=199						
L59A	Walton	31.55	20	P	P	11 04 30.4	+0.5
	baz=206						
K57A	Scipio Center	31.58	17	P	P	11 04 30.0	-0.2
	baz=203						
W13A	Hualapai Mount	31.63	319	P	P	11 04 31.9	+0.9
N23A	Red Feather La	31.65	335	IAmb	IAmb	11 04 45.5	
	comp=Z,9.2nm,0.7s						
N23A	Red Feather La	31.65	335	P	P	11 04 32.6	+1.4
	baz=147,SNR=8.5						
L60A	Shokan	31.65	21	P	P	11 04 31.5	+0.7
	baz=208						
SWSC	Sam W. Stewart	31.68	313	P	P	11 04 33.6	+2.4
	baz=123,SNR=9.9						
IKP	In-Ko-Pah, Jac	31.74	313	P	P	11 04 34.4	+2.6
	baz=122,SNR=11						
PHWY	Pilot Hill	31.79	336	IAmb	IAmb	11 04 35.7	
	comp=Z,7.6nm,0.7s						
BC3	Big Chuckawall	31.82	315	P	P	11 04 35.6	+3.0
	baz=124,SNR=13						
K58A	Earlville	31.87	19	P	P	11 04 32.9	+0.1
	baz=205						
IRM	Iron Mountain	31.90	316	P	P	11 04 35.7	+2.5
	baz=125						
I52A	Shelburne	31.93	12	P	P	11 04 33.1	-0.1
	baz=196						
J56A	Wolcott	31.98	17	P	P	11 04 33.7	0.0
	baz=202						
O20A	White River Ci	32.04	331	P	P	11 04 37.0	+2.5
O20A					PcP	11 07 24.2	+0.9
O20A	White River Ci	32.04	331	P	P	11 04 37.2	+2.7
	baz=142,SNR=36						
MONP2	Monument Peak	32.09	313	P	P	11 04 37.4	+2.4
	baz=122,SNR=19						
SPMN	Marine on St.	32.38	355	P	P	11 04 36.7	-0.4
	baz=173,SNR=20						
BELC	Belle Mtn. Jos	32.39	315	P	P	11 04 40.4	+2.8
	baz=124,SNR=7.1						
LCMT	Little Creek M	32.45	322	P	P	11 04 40.3	+2.2
LCMT					pP	11 04 51.2	+0.3
TPFO	Pinon Flats	32.49	314	P	P	11 04 40.9	+2.4
	baz=123,SNR=6.8						
XPFO	Pion Flat	32.50	314	P	P	11 04 40.7	+2.2
XPFO					PcP	11 07 26.0	+1.3
PFO	Pinyon Flats O	32.50	314	P	P	11 04 40.5	+1.9
PFO					PcP	11 07 26.2	+1.6
PFO	Pinyon Flats O	32.50	314	P	P	11 04 40.9	+2.4
	baz=123,SNR=6.5						
109C	Camp Elliot, M	32.58	312	P	P	11 04 40.0	+0.9
109C					pP	11 04 52.8	+0.9
109C				IAmb	IAmb	11 04 54.2	
	comp=Z,11nm,0.8s						
SZCU	Shurtz Canyon	32.74	323	P	P	11 04 42.4	+1.7
SZCU					PcP	11 07 26.6	+1.2
H53A	Bobcaygeon	32.76	14	P	P	11 04 39.9	-0.5
	baz=199						
SADO	Sadowa	32.82	13	P	P	11 04 40.3	-0.7
SADO					pP	11 04 53.6	-0.3
CCUT	Cedar City	32.88	323	P	P	11 04 43.6	+1.7
CCUT					pP	11 04 57.1	+2.3
CCUT					PcP	11 07 27.3	+1.6
MURC	Murrieta	33.02	313	P	P	11 04 45.3	+2.3
	baz=122						
COWI	Conover	33.09	360	P	P	11 04 42.4	-1.0
COWI					pP	11 04 57.1	+0.9
COWI				IAmb	IAmb	11 04 60.0	
	comp=Z,17nm,0.8s						
HEC	Hector,Ludlow	33.09	316	P	P	11 04 46.7	+3.1
	baz=124						
G53A	Haliburton	33.27	13	P	P	11 04 44.5	-0.4
	baz=198						
SHPR	Sheep Range	33.31	319	P	P	11 04 47.1	+1.5
K22A	Casper	33.36	336	IAmb	IAmb	11 04 48.0	
	comp=Z,17nm,0.9s						
K22A	Casper	33.36	336	P	P	11 04 47.3	+1.4
	baz=147,SNR=9.3						
SAML	Samuel	33.49	129	eP	P	11 04 46.7	-0.5
SAML	Samuel	33.49	129	P	P	11 04 45.9	-1.3
GSC	Goldstone, Bar	33.67	316	P	P	11 04 49.7	+1.0
GSC					pP	11 05 02.9	+1.3
GSC					PcP	11 07 28.6	+0.8
GSC	Goldstone, Bar	33.67	316	P	P	11 04 50.7	+2.0
	baz=124						
BFSC	Mount Baldy Ra	33.68	314	P	P	11 04 50.9	+2.1
	baz=122,SNR=7.4						
RSSD	Black Hills	33.72	340	P	P	11 04 50.0	+0.8
RSSD	Black Hills	33.72	340	P	P	11 04 50.7	+1.5
	baz=153						
CIS	Catalina Islan	33.79	312	P	P	11 04 51.9	+2.2
	baz=120,SNR=7.0						
H58A	Gabriels	33.83	19	P	P	11 04 49.4	-0.4
	baz=206						
G55A	Calabogie	33.85	15	P	P	11 04 49.5	-0.5
	baz=201						
LONY	Lake Ozonia	33.88	18	P	P	11 04 49.9	-0.3
	baz=205						
MWC	Mount Wilson	33.95	314	IAmb	IAmb	11 05 06.6	
	comp=Z,15nm,0.9s						
DECC	Green Verdugo	34.16	313	P	P	11 04 55.8	+2.9
	baz=121						
ALGO	Algonquin Park	34.19	13	P	P	11 04 52.4	-0.5
	baz=199						
EDW2	Edwards Air Fo	34.26	315	P	P	11 04 56.0	+2.3
	baz=122,SNR=6.0						
TPNV	Topopah Spring	34.27	319	P	P	11 04 56.2	+2.2
TPNV					IAmb	IAmb	11 05 09.9
	comp=Z,8.5nm,1.1s						
TPNV					PcP	11 07 30.6	+1.0
TPNV	Topopah Spring	34.27	319	P	P	11 04 56.4	+2.4
	baz=127						
I62A	Tamworth	34.34	23	P	P	11 04 55.7	+1.5
	baz=211						
LRMC	Laurel Mtn Rad	34.37	316	P	P	11 04 57.3	+2.5
	baz=124						
FURC	Furnace Creek,	34.38	318	P	P	11 04 56.6	+1.9
	baz=126						
DUG	Dugway, Tooele	34.39	327	P	P	11 04 56.2	+1.3
	baz=136						
E51A	G1948 Merrick	34.44	11	P	P	11 04 54.6	-0.4
	baz=196						
F55A	Otter Lake	34.49	16	P	P	11 04 55.4	-0.1
	baz=202						
MPMC	Manual Prospec	34.56	317	P	P	11 04 57.9	+1.3
	baz=125						
OSI	Osito Audit: C	34.62	314	P	P	11 04 59.0	+2.0
OSI					pP	11 05 11.4	+1.5
OSI				IAmb	IAmb	11 05 12.1	
	comp=Z,12nm,0.7s						
R11A	Troy Canyon, C	34.73	322	P	P	11 04 59.5	+1.6
R11A					pP	11 05 11.8	+1.0
R11A					PcP	11 07 31.5	+0.6
R11A	Troy Canyon, C	34.73	322	P	P	11 04 59.9	+2.0
	baz=130						
BW06	Boulder Array	34.73	333	IAmb	IAmb	11 05 00.7	
	comp=Z,6.3nm,0.8s						
BW06	Boulder Array	34.73	333	P	P	11 04 59.9	+1.9
	baz=143,SNR=8.6						
PD31	Pinedale Array	34.73	333	P	P	11 04 57.4	-0.6
PD31				IAmb	IAmb	11 05 00.8	
	comp=Z,5.4nm,0.8s						
PD31					PcP	11 07 30.1	-0.8
PDAR	Pinedale Array	34.73	333	P	P	11 04 58.3	+0.4
	comp=Z,4.3nm,0.7s,baz=121,slow=9.5,SNR=40						
PDAR				pP	pP	11 05 11.0	+0.1
	comp=Z,3.6nm,0.6s,baz=125,slow=11,SNR=12						
PDAR				PcP	PcP	11 07 30.6	-0.3
	comp=Z,4.0nm,0.6s,baz=148,slow=5.2,SNR=15						
PDAR				pPcP		11 07 44.7	
	comp=Z,6.2nm,0.6s,baz=154,slow=5.7,SNR=16						
PDAR				LR	LR	11 22 05.9	
	comp=Z,228nm,19.8s,baz=150,slow=41						
PDAR	Pinedale Array	34.73	333	P	P	11 04 57.5	-0.4
PDAR					pP	11 05 10.4	-0.5
DAC	Darwin (Calif)	34.75	317		P	11 04 58.9	+0.7
DAC					sP	11 05 14.8	-2.2
HWUT	Hardware Ranch	34.78	329	IAmb	IAmb	11 05 12.7	
	comp=Z,20nm,1.2s						
E54A	Lac Daplat, Po	34.84	14	P	P	11 04 57.9	-0.6
	baz=200						
ARVC	Arvin	34.97	314	P	P	11 05 02.7	+2.9
	baz=122,SNR=7.3						
D51A	Lot 18 Range I	34.99	11	P	P	11 04 59.4	-0.5
	baz=196						
EYMN	Ely	35.00	357	IAmb	IAmb	11 05 18.8	
	comp=Z,9.7nm,0.6s						
EYMN	Ely	35.00	357	P	P	11 04 59.0	-0.9
	baz=175						
D53A	Lac Vacive, Po	35.33	13	IAmb	IAmb	11 05 04.0	
	comp=Z,13nm,0.7s						
D53A	Lac Vacive, Po	35.33	13	P	P	11 05 02.6	-0.1
	baz=199						
LPAZ	La Paz	35.52	144	P	P	11 05 06.1	+0.7
	comp=Z,6.3nm,0.6s,baz=328,slow=6.5,SNR=34						
LPAZ				pPcP		11 07 48.3	
	comp=Z,1.8nm,0.5s,baz=346,slow=4.6,SNR=4.7						
LPAZ				LR	LR	11 20 00.1	
	comp=Z,372nm,20.5s,baz=306,slow=37						
LPAZ	La Paz	35.52	144	eP	P	11 05 06.3	+0.9
LPAZ	La Paz	35.52	144	P	P	11 05 05.6	+0.3
LPAZ				IAmb	IAmb	11 05 07.1	
	comp=Z,7.0nm,0.7s						
VES	Vestal, Richgr	35.52	315	P	P	11 05 07.6	+3.1
	baz=122						
PKM	Mcpherson Peak	35.54	313	P	P	11 05 07.4	+2.4
	baz=120,SNR=6.8						
D54A	Lac Fusel, La	35.64	14	P	P	11 05 04.9	-0.5
	baz=201						
AGMN	Agassiz Nation	35.76	352	P	P	11 05 06.2	-0.3
	baz=168,SNR=15						
G62A	West of Eustis	35.78	22	P	P	11 05 07.8	+1.1
	baz=211						
D55A	Sainte-Anne-du	35.82	16	P	P	11 05 06.5	-0.5
	baz=202						
SMMC	Simmler	35.88	314	P	P	11 05 11.0	+3.3
	baz=121						
MDND	Maddock	35.97	348	P	P	11 05 08.9	+0.6
	baz=162						
MOOW	Moose Ponds	36.04	333	P	P	11 05 09.4	+0.3
MOOW				IAmb	IAmb	11 05 24.0	
	comp=Z,6.7nm,0.7s						
MOOW					PcP	11 07 34.2	-0.5
D57A	Chemin Vers le	36.26	17	P	P	11 05 10.1	-0.5
	baz=205						
PAGB	Antelope Grade	36.27	314	P	P	11 05 12.1	+1.1
PAGB					pP	11 05 25.7	+1.7
FLWY	Flagg Ranch	36.28	333	IAmb	IAmb	11 05 27.0	
	comp=Z,11nm,0.6s						
VLDQ	Val d'Or	36.36	13	IAmb	IAmb	11 05 27.4	
	comp=Z,19nm,1.4s						
OMMB	Old Mammoth Mi	36.44	318	P	P	11 05 14.3	+1.6
OMMB					pP	11 05 27.3	+1.6
NVAR	Mina Array Bea	36.46	319	P	P	11 05 14.8	+2.0
	comp=Z,3.0nm,0.7s,baz=131,slow=7.0,SNR=31						
NVAR				pP	pP	11 05 26.7	+0.9
	comp=Z,3.3nm,0.7s,baz=131,slow=8.1,SNR=11						
NVAR				PcP	PcP	11 07 37.3	+1.2
	comp=Z,9.4nm,0.7s,baz=137,slow=4.2,SNR=28						
NVAR				pPcP		11 07 50.8	
	comp=Z,10nm,0.8s,baz=136,slow=3.9,SNR=16						
NVAR				ScP	ScP	11 11 18.4	-0.3
	comp=Z,1.2nm,0.8s,baz=148,slow=5.3,SNR=3.8						
NVAR				LR	LR	11 22 19.1	
	comp=Z,462nm,19.8s,baz=136,slow=40						
NVAR	Mina Array Bea	36.46	319	P	P	11 05 13.9	+1.1
NVAR					pP	11 05 26.3	+0.4
NVAR					PcP	11 07 36.1	0.0
H17A	Grant Village	36.48	333	IAmb	IAmb	11 05 29.9	
	comp=Z,11nm,1.2s						
H17A	Grant Village	36.48	333	P	P	11 05 14.3	+1.4
	baz=143						
G64A	Maxfield	36.49	24	P	P	11 05 13.2	+0.5
	baz=214						
MDPB	Devils Postpil	36.50	318	P	P	11 05 13.3	+0.1
MDPB					pP	11 05 27.5	+1.2
MDPB				IAmb	IAmb	11 05 28.9	
	comp=Z,8.4nm,0.9s						
MDPB					PcP	11 07 37.5	+1.2
RLMT	Red Lodge	36.51	335	IAmb	IAmb	11 05 27.2	
	comp=Z,17nm,0.8s						
RLMT	Red Lodge	36.51	335	P	P	11 05 14.1	+0.9
	baz=145,SNR=31						
D58A	Chemin du LacG	36.63	18	P	P	11 05 13.4	-0.4
	baz=207						
H66A	Whiting	36.71	26	P	P	11 05 15.2	+0.7
	baz=217						
MNMC	Minye Minye	37.06	149	P	P	11 05 18.5	+0.3
F64A	Sherman	37.16	24	P	P	11 05 19.2	+0.9
	baz=214						
WAKR	Walker	37.23	319		P	11 05 18.8	-0.5
WAKR					pP	11 05 35.0	+2.6
LSQQ	Lebel-sur-Quev	37.36	13	P	P	11 05 19.3	-0.7
	baz=199						
PB11	IPOC Station P	37.56	149	P	P	11 05 22.2	-0.1
PB11					PcP	11 07 40.1	+0.6
CMB	Columbia Colle	37.58	317	P	P	11 05 21.0	-1.2
CMB					pP	11 05 36.5	+1.3
CMB					PcP	11 07 39.5	+0.2
DGMT	Dagmar	37.68	343	P	P	11 05 23.7	+0.9
	baz=155,SNR=15						
ULM	Lac du Bonnet	37.68	353	P	P	11 05 21.4	-1.3
	comp=Z,15nm,0.9s,baz=172,slow=9.1,SNR=23						
ULM				pP	pP	11 05 33.7	-2.0
	comp=Z,6.1nm,0.5s,baz=172,slow=12,SNR=6.8						
ULM				LR	LR	11 22 46.3	
	comp=Z,506nm,20.7s,baz=142,slow=39						
GO01	Chusmiza	37.72	149	IAmb	IAmb	11 05 44.6	
	comp=Z,9.3nm,0.7s						
MATQ	Matagami	37.89	12	P	P	11 05 23.6	-0.9
	baz=198,SNR=7.5						
D62A	Allapoint, All	37.91	22	P	P	11 05 25.2	+0.5
	baz=212						
RUBR	Rubicon Trail	38.00	319	P	P	11 05 26.7	+0.8
RUBR					pP	11 05 41.4	+2.4
RUBR				IAmb	IAmb	11 05 44.9	
	comp=Z,15nm,1.2s						
DLMT	Dillon	38.12	333	IAmb	IAmb	11 05 42.4	
	comp=Z,8.6nm,0.9s						
D63A	Stockholm	38.23	23	P	P	11 05 27.6	+0.3
	baz=214						
EGMT	Eagleton	39.10	338	P	P	11 05 36.1	+1.2
	baz=146						
J08A	Circle Bar Ran	39.64	326	IAmb	IAmb	11 05 45.2	
	comp=Z,5.7nm,0.7s						
SIV	San Ignacio	39.74	135	P	P	11 05 40.9	+0.4
	comp=Z,21nm,0.8s,baz=319,slow=9.3,SNR=89						
SIV				pP	pP	11 05 52.7	-0.9
	comp=Z,41nm,0.8s,baz=323,slow=9.3,SNR=24						
SIV				PcP	PcP	11 07 47.1	+0.8
	comp=Z,9.4nm,0.7s,baz=306,slow=5.4,SNR=6.5						
SIV				pPcP		11 08 00.4	
	comp=Z,9.1nm,0.7s,baz=265,slow=3.3,SNR=4.8						
MSO	Missoula	39.85	333	IAmb	IAmb	11 05 55.0	
	comp=Z,9.1nm,1.0s						
MSO	Missoula	39.85	333	P	P	11 05 41.8	+0.7
	baz=140						
LVC	Limon Verde	40.35	151	P	P	11 05 46.0	+0.3
	comp=Z,5.3nm,0.8s,baz=337,slow=4.5,SNR=3.9						
LVC	Limon Verde	40.35	151	eP	P	11 05 47.8	+2.1
CLDB	Colider	40.44	124	eP	P	11 05 43.8	-2.5
M04C	Macdoel	40.62	321	P	P	11 05 48.4	+0.8
	baz=125						
F10A	Beach Ranch, E	40.77	330	IAmb	IAmb	11 06 03.5	
	comp=Z,12nm,0.9s						
L04D	Klamath Falls	41.15	322	P	P	11 05 52.1	+0.1
	baz=125						
PINE	Pine Mountain	41.30	324	P	P	11 05 52.9	-0.2
PINE					pP	11 06 06.5	+0.2
GO02	Mina Guanaco	42.25	154	P	P	11 06 02.6	+1.4
GO02				IAmb	IAmb	11 06 03.4	
	comp=Z,9.2nm,0.8s						
NEW	Newport	42.36	332	P	P	11 06 00.8	-0.8
NEW					pP	11 06 14.8	0.0
NEW					PcP	11 07 52.7	-1.7
NEW	Newport	42.36	332	P	P	11 06 01.4	-0.2
	baz=137						
G05D	Wamic, OR	42.41	326	P	P	11 06 03.0	+0.9
	baz=129						
FFC	Flin Flon	42.98	349	P	P	11 06 06.1	-0.4
FFC				IAmb	IAmb	11 06 07.4	
	comp=Z,16nm,0.6s						
LTY	Liberty	43.37	328	P	P	11 06 10.1	+0.2
SALV	Santo Antonio	43.53	130	eP	P	11 06 10.6	-0.8
B06A	Marblemount	44.62	329	IAmb	IAmb	11 06 33.3	
	comp=Z,12nm,0.8s						
B05A	Bryant	44.76	329	P	P	11 06 20.2	-0.6
	baz=131						
D03D	Eldon	44.81	327	P	P	11 06 21.1	-0.2
	baz=129						
PP1B	Ponte de Pedra	45.21	131	eP	P	11 06 24.4	-0.4
SCHQ	Schefferville	45.25	18	P	P	11 06 23.3	-1.4
	comp=Z,15nm,0.7s,baz=216,slow=6.0,SNR=46						
SCHQ				PcP	PcP	11 08 03.0	-1.0
	comp=Z,6.1nm,0.6s,baz=225,slow=3.6,SNR=7.1						
SCHQ				LR	LR	11 26 37.7	
	comp=Z,266nm,18.2s,baz=283,slow=38						
SCHQ	Schefferville	45.25	18	P	P	11 06 23.3	-1.4
SCHQ				IAmb	IAmb	11 06 24.2	
	comp=Z,16nm,0.8s						
SMTB	Santa Maria do	46.35	116	eP	P	11 06 31.4	-2.6
ARAG	Araguaiana, MT	46.38	127	eP	P	11 06 32.8	-1.3
AQDB	Aquidauana	46.52	135	eP	P	11 06 34.5	-0.5
PEXB	Peixe	47.29	120	eP	P	11 06 38.9	-2.4
C2SB	Chapadao do Su	47.45	131	eP	P	11 06 42.9	+0.5
CFA	Coronel Fontan	48.48	156	P	P	11 06 51.1	+0.9
	comp=Z,3.0nm,0.6s,baz=341,slow=5.9,SNR=9.6						
CFA				PcP	PcP	11 08 16.1	+0.4
	comp=Z,4.3nm,0.6s,baz=343,slow=1.9,SNR=5.4						
BDFB	Brasilia	49.37	124	P	P	11 06 55.7	-1.6
	comp=Z,14nm,0.6s,baz=295,slow=8.9,SNR=25						
BDFB				LR	LR	11 29 10.7	
	comp=Z,120nm,18.6s,baz=300,slow=38						
BDFB	Brasilia	49.37	124	P	P	11 06 55.9	-1.4
CPUP	Villa Florida	49.61	142	P	P	11 06 58.2	-0.7
	comp=Z,7.1nm,0.7s,baz=336,slow=8.9,SNR=19						
CPUP				LR	LR	11 29 11.6	
	comp=Z,169nm,18.9s,baz=318,slow=38						
CPUP	Villa Florida	49.61	142	eP	P	11 06 57.6	-1.3
CPUP	Villa Florida	49.61	142	P	P	11 06 57.7	-1.2
ITRB	Iturama	49.87	130	eP	P	11 06 59.9	-1.1
NBPS	Pedro II - PI	50.13	107	eP	P	11 07 01.1	-2.1
TRCB	Terra Rica	50.18	135	eP	P	11 07 03.1	-0.3
GO05	Huala	50.29	162	P	P	11 07 03.9	0.0
GO05				IAmb	IAmb	11 07 05.4	
	comp=Z,11nm,0.8s						
PCMB	Pacaembu	50.38	133	eP	P	11 07 04.0	-0.9
IPMB	Ipameri, GO	50.50	127	eP	P	11 07 04.8	-1.1
NBMO	Morrinhos-CE	51.08	105	eP	P	11 07 07.4	-2.8
PTGB	Pitanga	51.84	136	eP	P	11 07 14.9	-1.0
BB19B	Bebedouro	52.05	130	eP	P	11 07 16.7	-0.7
JANB	Januaria	52.12	121	eP	P	11 07 15.8	-2.2
PMNB	Patos De Minas	52.21	126	eP	P	11 07 17.4	-1.3
NBPB	Pedra_Branca-C	52.27	107	eP	P	11 07 17.4	-1.7
ITQB	Itaqui	52.52	144	eP	P	11 07 21.2	+0.5
FRTB	Fartura	52.69	133	eP	P	11 07 21.5	-0.6
YKA	Yellowknife Ar	52.82	345	P	P	11 07 21.8	-0.6
	comp=Z,24nm,0.8s,baz=141,slow=7.8,SNR=381						
YKA				pP	pP	11 07 35.0	-1.0
	comp=Z,13nm,0.7s,baz=151,slow=6.7,SNR=17						
YKA				PcP	PcP	11 08 30.1	-1.1
	comp=Z,2.2nm,0.6s,baz=150,slow=3.6,SNR=6.6						
YKA				pPcP		11 08 44.0	
	comp=Z,3.5nm,0.7s,baz=148,slow=3.8,SNR=6.2						
YKA				LR	LR	11 32 26.8	
	comp=Z,302nm,20.4s,baz=0.0,slow=39						
NBCL	Cascavel-CE	53.02	105	eP	P	11 07 22.1	-2.6
ITAB	Concordia	53.50	139	eP	P	11 07 27.6	-0.4
NBMA	Muriti-CE	53.69	109	eP	P	11 07 28.2	-1.5

C36M	**Paulatuk**	**60.65**	**346**		IAmb	IAmb	11 08 29.9	
	comp=Z,18nm,1.5s							
C36M	**Paulatuk**	**60.65**	**346**		P	**P**	**11 08 16.7**	**-1.2**
	baz=140							
EPYK	**Eagle Plains**	**62.17**	**340**		IAmb	IAmb	11 08 41.4	
	comp=Z,9.3nm,1.1s							
EPYK	**Eagle Plains**	**62.17**	**340**		P	**P**	**11 08 28.0**	**-0.3**
	baz=125							
INK	**Inuvik**	**62.36**	**343**		P	**P**	**11 08 28.5**	**-0.9**
EGAK	**Eagle**	**62.87**	**338**		IAmb	IAmb	11 08 47.9	
	comp=Z,9.8nm,1.4s							
TULEG	**Thule**	**64.51**	**5**		P	**P**	**11 08 42.5**	**-1.0**
TULEG						**pP**	**11 08 56.0**	**-1.4**
TULEG					IAmb	IAmb	11 08 58.5	
	comp=Z,7.9nm,0.9s							
HDA	**Harding Lake**	**64.93**	**336**		P	**P**	**11 08 45.8**	**-0.6**
	baz=114							
IL31		**65.05**	**336**		IAmb	IAmb	11 09 00.6	
	comp=Z,20nm,1.4s							
ILAR	**Eielson Array**	**65.05**	**336**		P	**P**	**11 08 46.5**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=167,slow=5.4,SNR=26							
ILAR					pP	**pP**	**11 08 59.6**	**-1.6**
	comp=Z,3.8nm,0.6s,baz=162,slow=4.5,SNR=10							
ILAR					pPcP		11 09 32.8	
	comp=Z,2.1nm,0.8s,baz=155,slow=2.1,SNR=4.6							
RND	**Reindeer**	**65.31**	**335**		P	**P**	**11 08 48.6**	**-0.5**
CCB	**Clear Creek Bu**	**65.36**	**336**		P	**P**	**11 08 47.8**	**-1.5**
MEH	**Mehetia**	**65.95**	**244**	*e*T		T	12 20 11.5	
	comp=Z,12nm,0.2s							
BPAW	**Bear Paw Mtn.**	**66.45**	**335**		IAmb	IAmb	11 09 09.3	
	comp=Z,10nm,0.8s							
SUMG	**Summit**	**66.49**	**15**	*i* P		**P**	**11 08 55.4**	**-1.4**
SUMG	**Summit**	**66.49**	**15**		P	**P**	**11 08 55.5**	**-1.4**
SUMG					IAmb	IAmb	11 09 10.7	
	comp=Z,19nm,1.2s							
MLY	**Manley**	**66.67**	**336**		IAmb	IAmb	11 09 10.9	
	comp=Z,11nm,0.8s							
TVO	**Taravao**	**66.95**	**244**	*e*T		T	12 21 26.7	
	comp=Z,2.1nm,0.4s							
PPT	**Papeete**	**67.15**	**245**		LR	LR	11 29 54.7	
	comp=Z,325nm,18.9s,baz=54,slow=28							
PPT2	**Papeete2**	**67.16**	**245**	*e*LR		LR	11 29 11.6	
	comp=Z,539nm,25.5s							
COLD	**Coldfoot**	**67.27**	**338**		IAmb	IAmb	11 09 20.5	
	comp=Z,7.2nm,1.1s							
TBI	**Tubuai**	**69.37**	**239**	*e*LR		LR	11 30 15.0	
	comp=Z,312nm,25.0s							
TBI	**Tubuai**	**69.37**	**239**	*e*T		T	12 24 26.5	
	comp=Z,11nm,0.2s							
DAG	**Danmarks Havn**	**73.02**	**13**	*i* P		**P**	**11 09 34.4**	**-2.0**
	comp=Z,4.8nm,0.7s							
NOR	**Nord**	**74.72**	**8**	*i* P		**P**	**11 09 45.0**	**-1.4**
	comp=Z,2.4nm,0.9s							
ESDC	**Sonseca Array**	**77.99**	**52**		P	**P**	**11 10 03.1**	**-2.7**
	comp=Z,1.0nm,0.6s,baz=287,slow=5.1,SNR=5.6							
ESDC					pP	**PcP**	**11 10 17.2**	**+1.9**
	comp=Z,2.5nm,0.8s,baz=287,slow=5.3,SNR=4.1							
ESDC					LR	LR	11 38 53.2	
	comp=Z,97nm,21.0s,baz=300,slow=32							
ESDC	**Sonseca Array**	**77.99**	**52**		P	**P**	**11 10 03.2**	**-2.5**
DBIC	**Dimbokro**	**82.71**	**85**		P	**P**	**11 10 29.2**	**-2.3**
	comp=Z,2.6nm,0.9s,baz=229,slow=9.3,SNR=2.8							
DBIC					LR	LR	11 44 20.1	
	comp=Z,62nm,18.9s,baz=266,slow=34							
DBIC	**Dimbokro**	**82.71**	**85**		P	**P**	**11 10 29.5**	**-2.0**
DBIC					IAmb	IAmb	11 10 34.7	
	comp=Z,12nm,1.5s							
NOA	**NORSAR Array B**	**83.63**	**29**		P	**P**	**11 10 35.7**	**+0.3**
	comp=Z,0.8nm,0.8s,baz=286,slow=5.0,SNR=2.9							
NOA					LR	LR	11 43 49.4	
	comp=Z,94nm,21.8s,baz=280,slow=33							
ARCES	**ARCESS Array B**	**86.20**	**19**		P	**P**	**11 10 47.6**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=290,slow=3.7,SNR=4.5							
ARCES					pP	**pP**	**11 11 00.6**	**-1.9**
	comp=Z,2.2nm,0.6s,baz=288,slow=3.7,SNR=2.6							
ARCES					LR	LR	11 48 17.2	
	comp=Z,58nm,20.3s,baz=328,slow=35							
ARCES	**ARCESS Array B**	**86.20**	**19**		P	**P**	**11 10 48.4**	**+0.3**
ARCES						**pP**	**11 11 02.1**	**-0.5**
TORD	**Torodi Ar. Bea**	**87.65**	**77**		P	**P**	**11 10 53.3**	**-2.9**
	comp=Z,0.5nm,0.8s,baz=264,slow=5.1,SNR=3.1							
TORD					LR	LR	11 46 47.0	
	comp=Z,63nm,21.2s,baz=295,slow=33							
TORD	**Torodi Ar. Bea**	**87.65**	**77**		P	**P**	**11 10 54.6**	**-1.6**
GERES	**GERESS Array B**	**88.48**	**40**		P	**P**	**11 10 58.2**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=299,slow=4.0,SNR=3.0							
GERES					pP	**pP**	**11 11 11.6**	**-2.5**
	comp=Z,0.9nm,0.8s,baz=242,slow=2.9,SNR=4.5							
GERES					LR	LR	11 45 40.2	
	comp=Z,125nm,21.8s,baz=287,slow=32							
KEST	**Kesra**	**89.09**	**54**		LR	LR	11 45 15.5	
	comp=Z,77nm,21.4s,baz=314,slow=32							
FINES	**FINESS Array B**	**90.16**	**26**		pP	**pP**	**11 11 19.0**	**-2.6**
	comp=Z,2.5nm,0.9s,baz=322,slow=8.8,SNR=2.8							
FINES					LR	LR	11 49 41.3	
	comp=Z,63nm,21.3s,baz=294,slow=34							
SEY	**Seymchan**	**90.99**	**336**		P	**P**	**11 11 10.1**	**-0.8**
	comp=Z,3.4nm,0.6s,baz=149,slow=2.9,SNR=13							
SEY					pP	**pP**	**11 11 23.9**	**-1.5**
	comp=Z,5.3nm,0.6s,baz=90,slow=5.0,SNR=5.8							
TIXI	**Tiksi**	**91.94**	**349**		P	**P**	**11 11 13.3**	**-1.8**
TIXI					IAmb	IAmb	11 11 27.8	
	comp=Z,4.3nm,0.8s							
AKASG	**Malin Array Be**	**96.92**	**34**		LR	LR	11 52 59.4	
	comp=Z,56nm,20.6s,baz=325,slow=34							
DZM	**Mont Dzumac**	**108.21**	**251**	*e*LR		LR	11 48 21.1	
	comp=Z,102nm,22.4s							
ZALV	**Zalesovo Beam**	**113.19**	**4**	PKiKP		**PKiKP**	**11 16 42.8**	**-1.5**
	comp=Z,1.6nm,0.6s,baz=306,slow=2.0,SNR=7.6							
BOSA	**Boshof**	**117.13**	**116**		PKP	**PKPdf**	**11 16 52.4**	**-0.3**
	comp=Z,4.5nm,0.9s,baz=218,slow=3.5,SNR=6.9							
BOSA					pPKP	**pPKPdf**	**11 17 06.8**	**-0.9**
	comp=Z,4.9nm,0.9s,baz=300,slow=1.0,SNR=4.4							
BOSA	**Boshof**	**117.13**	**116**			**PKPdf**	**11 16 52.0**	**-0.7**
SONM	**Songino Array**	**118.02**	**348**		PKP	**PKPdf**	**11 16 53.4**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=348,slow=2.5,SNR=16							
SONM					pPKP	**pPKPdf**	**11 17 07.4**	**-1.6**
	comp=Z,2.6nm,0.7s,baz=342,slow=1.4,SNR=10							
SONM					PP	**PP**	**11 18 07.4**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=354,slow=7.2,SNR=3.7							
SONM					PKKPbc	**PKKPbc**	**11 27 12.5**	**-2.7**
	comp=Z,0.7nm,0.7s,baz=212,slow=2.9,SNR=5.8							
SONM	**Songino Array**	**118.02**	**348**			**PKPdf**	**11 16 52.7**	**-1.3**
KSRS	**Korea Array**	**119.15**	**327**		PKP	**PKPdf**	**11 16 56.3**	**+0.1**
	comp=Z,3.0nm,0.8s,baz=12,slow=1.6,SNR=11							
KSRS					pPKP	**pPKPdf**	**11 17 10.8**	**-0.4**
	comp=Z,2.9nm,0.7s,baz=5.4,slow=1.6,SNR=7.6							
MKAR	**Makanchi Array**	**120.04**	**7**		PKP	**PKPdf**	**11 16 55.9**	**-1.9**
	comp=Z,1.4nm,0.7s,baz=342,slow=2.2,SNR=18							
MKAR					pPKP	**pPKPdf**	**11 17 10.3**	**-2.5**
	comp=Z,0.7nm,0.6s,baz=316,slow=2.4,SNR=5.3							
MKAR	**Makanchi Array**	**120.04**	**7**			**PKPdf**	**11 16 55.4**	**-2.3**
MAW	**Mawson**	**122.28**	**168**		PKP	**PKiKP**	**11 17 01.7**	**+0.3**
	comp=Z,4.2nm,0.8s,baz=166,slow=3.4,SNR=8.4							
HHC	**Hu-ho-hao-te**	**123.27**	**342**	*e*PKP		**PKiKP**	**11 17 06.4**	**+1.9**
WMQ	**Urumqi**	**123.46**	**3**	*e*PKP		**PKPdf**	**11 17 04.3**	**-0.2**
WMQ					LR	LR		
	comp=Z,460nm,25.9s							
WMQ					LR	LR		
	comp=Z,980nm,29.2s							
WMQ					LR	LR		
	comp=Z,300nm,25.3s							
GAR	**Garm**	**124.82**	**20**			**PKPdf**	**11 17 06.9**	**-0.4**
KSH	**Kashi**	**125.96**	**14**		PKP	**PKiKP**	**11 17 13.3**	**+3.4**
KSH					PP	PP	11 19 12.8	+11
GTA	**Gaotai**	**127.33**	**352**	*e*PKP		**PKPdf**	**11 17 12.3**	**+0.2**
GTA					LR	LR		
	comp=Z,98nm,19.4s							
GTA					LR	LR		
	comp=Z,100nm,20.0s							
GTA					LR	LR		
	comp=Z,170nm,18.1s							
NJ2	**Nanjing**	**128.01**	**330**	*e*PKP		**PKPdf**	**11 17 13.4**	**0.0**
LZH	**Lanzhou**	**129.81**	**347**	*e*PKP		**PKiKP**	**11 17 18.4**	**+0.7**
LZH				sPKP			11 17 41.3	
LZH					LR	LR		
	comp=Z,96nm,18.1s							
LZH					LR	LR		
	comp=Z,100nm,18.2s							
LZH					LR	LR		
	comp=Z,150nm,20.0s							
XAN	**Xi'an**	**130.34**	**341**		PKP	**PKiKP**	**11 17 19.0**	**+0.3**
ENH	**Enshi**	**133.58**	**338**			**PKPdf**	**11 17 22.8**	**-1.3**
CD2	**Chengdu**	**134.78**	**345**		PKP	**PKPdf**	**11 17 24.8**	**-1.5**
WRA	**Warramunga Arr**	**138.07**	**255**		PKP	**PKPdf**	**11 17 33.2**	**+0.6**
	comp=Z,7.3nm,1.0s,baz=94,slow=1.4,SNR=20							
WRA					pPKP	**pPKPdf**	**11 17 47.1**	**-0.6**
	comp=Z,3.7nm,0.6s,baz=91,slow=2.5,SNR=5.8							
ASAR	**Alice Springs**	**138.16**	**249**		PKhKP	PKPpre	11 17 24.7	
	comp=Z,1.2nm,0.8s,baz=106,slow=3.4,SNR=10							
ASAR					PKP	**PKPdf**	**11 17 33.4**	**+0.7**
	comp=Z,2.8nm,1.0s,baz=89,slow=1.9,SNR=9.5							
ASAR	**Alice Springs**	**138.16**	**249**			PKPpre	11 17 22.9	
SHL	**Shillong**	**141.75**	**359**			**PKPdf**	**11 17 36.1**	**-3.3**
HYB	**Hyderabad**	**147.40**	**23**	*i* PKP		**PKPdf**	**11 17 49.0**	**-0.2**
CHTO	**Chiang Mai**	**147.56**	**346**			**PKPdf**	**11 17 49.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**147.90**	**346**		PKPbc	**PKPdf**	**11 17 51.2**	**+1.3**
	comp=Z,8.0nm,0.7s,baz=340,slow=3.4,SNR=37							
CMAR					pPKPbc	**pPKPdf**	**11 18 06.3**	**+1.3**
	comp=Z,8.8nm,0.6s,baz=325,slow=2.4,SNR=10							
NWAO	**Narrogin (SRO)**	**148.93**	**226**			**PKPbc**	**11 17 54.8**	**-0.4**
NWAO	**Narrogin (SRO)**	**148.93**	**226**			**PKPbc**	**11 17 55.0**	**-0.3**
PBKT	**Sadao Pong**	**149.14**	**341**			**PKPbc**	**11 17 54.5**	**-1.6**
PSI	**Prapat**	**162.59**	**333**		PKP	**PKPdf**	**11 18 09.4**	**-0.5**
	comp=Z,12nm,1.0s,baz=205,slow=5.8,SNR=5.2							

MAN 19 11:02:13.2, 10°.16N×124°.19E, h1km, mb4.5, ML3.4, MS3.2, 3C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.27**	**306**	⇓	*i* P	Pg	11 02 19.1	+0.6
LLP					*i* S	Sg	11 02 23.4	+1.5
MSLP	**Maasin**	**0.66**	**92**		*e*P	Pg	11 02 26.4	+0.4
MSLP					*e*S	Sb	11 02 37.4	0.0
OCLP	**Ormoc**	**0.98**	**25**		*e*P	Pg	11 02 31.9	-0.2
OCLP					*e*S	Sn	11 02 49.4	+0.7
SNPH	**Sibulan**	**1.24**	**229**	⇑	*i* P	Pb	11 02 37.6	+0.1
SNPH					*i* S	Sn	11 02 56.2	+1.0
GUIM	**Jordan**	**1.64**	**287**		*e*P	Pn	11 02 41.9	-1.4
GUIM					*e*S	Sb	11 03 05.4	-0.1
DCPH	**Dipolog City**	**1.77**	**208**	⇑	*e*P	Pb	11 02 45.9	-0.6
RCP	**Roxas**	**1.99**	**315**	⇑	*e*P	Pn	11 02 48.8	+0.7
RCP					*e*S	Sg	11 03 16.5	-0.6
BUKP	**Musuan**	**2.42**	**159**		*e*P	Pn	11 02 55.1	+1.0
BUKP					*e*S	Sb	11 03 29.1	+0.9
PAGZ	**Pagadian**	**2.43**	**199**		*e*P	Pn	11 02 54.7	+0.6
PAGZ					*e*S	Sn	11 03 24.7	+0.2

IDC 19 11:05:26.7±2.7, 21°.58N×142°.92E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.3/39, mbtmp3.5/3, MS2.8/3, Ms1 2.8/3, ms1mx2.5/21, Error ellipse: s-maj=217.5km s-min=35.7km az=112.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**8.16**	**167**		LR	LR	11 09 58.5	
	comp=Z,32nm,19.3s,baz=334,slow=33							
KSRS	**Korea Array**	**20.46**	**324**		LR	LR	11 17 11.3	
	comp=Z,18nm,21.1s,baz=10.0,slow=34							
H11N1	**WAKE ISLAND Hy 22.50**	**90**			T	T	11 33 01.9	
	baz=278,slow=75,SNR=6.1							
H11N2	**WAKE ISLAND Hy 22.51**	**90**			T	T	11 33 01.0	
	baz=278,slow=75,SNR=4.2							
H11N3	**WAKE ISLAND Hy 22.52**	**90**			T	T	11 33 02.3	
	baz=278,slow=75,SNR=5.6							
H11S3	**WAKE ISLAND Hy 22.53**	**94**			T	T	11 33 06.8	
	baz=281,slow=75,SNR=6.6							
H11S1	**WAKE ISLAND Hy 22.54**	**94**			T	T	11 33 09.9	
	baz=281,slow=75,SNR=5.8							
H11S2	**WAKE ISLAND Hy 22.55**	**94**			T	T	11 33 07.9	
	baz=281,slow=75,SNR=5.1							
KLR	**Kul'dur**	**28.99**	**345**		LR	LR	11 21 41.9	
	comp=Z,37nm,18.7s,baz=147,slow=34							
ASAR	**Alice Springs**	**45.82**	**192**		P	P	11 13 50.4	-0.2
	0.3nm,0.7s,baz=8.4,slow=9.6,SNR=1.9							
YKA	**Yellowknife Ar**	**76.67**	**28**		P	P	11 17 19.3	0.0
	0.2nm,0.6s,baz=292,slow=5.9,SNR=5.7							
NVAR	**Mina Array Bea**	**83.41**	**51**		P	P	11 17 56.5	0.0
	0.7nm,0.8s,baz=269,slow=5.9,SNR=6.8							

*NEIC **19** 11:13:13.4±1.6, 17°.12N±0°.05×101°.21W±0°.05, h19km±7km, Error ellipse: s-maj=9.4km s-min=1.8km az=220.0*
*MEX **19** 11:13:14.7±0.4, 17°.09N×101°.26W, h15km±4km, MD4.2*
ISC 19 11:13:12.3±3.1, 17°.15N±0°.05×101°.22W±0°.04, h17km±23km, n29, σ0°93/46, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.51**	**332**		*e*P	**Pb**	**11 13 23.8**	**+0.9**
ZIIG					*i* S	**Sb**	**11 13 31.2**	**+1.3**
ZIIG	**Zihuatanejo**	**0.51**	**332**			**Pb**	**11 13 23.8**	**+0.9**
ZIIG						**Sn**	**11 13 31.8**	**-1.4**
CAIG	**El Cayaco**	**0.91**	**97**		*e*P	**Pb**	**11 13 29.6**	**-0.2**
CAIG					*i* S	**Sb**	**11 13 41.2**	**-0.4**
CAIG	**El Cayaco**	**0.91**	**97**			**Pb**	**11 13 29.6**	**-0.2**
CAIG						**Sb**	**11 13 42.0**	**+0.4**
ACP2	**Acapulco**	**1.30**	**102**		*i* P	**Pn**	**11 13 35.4**	**-0.4**
ACP2					*i* S	**Sn**	**11 13 51.5**	**-1.4**
ACP2	**Acapulco**	**1.30**	**102**			**Pn**	**11 13 36.2**	**+0.5**
ARIG	**Puente Sto Nin**	**1.39**	**36**		*e*P	**Pn**	**11 13 37.1**	**+0.1**
ARIG					*i* S	**Sn**	**11 13 54.6**	**-0.5**
ARIG	**Puente Sto Nin**	**1.39**	**36**			**Pn**	**11 13 37.1**	**+0.1**
ARIG						**Sn**	**11 13 54.3**	**-0.8**
MEIG	**Mezcala**	**1.71**	**63**		*e*P	**Pn**	**11 13 41.8**	**+0.4**
MEIG					*i* S	**Sn**	**11 14 02.8**	**-0.1**
MEIG	**Mezcala**	**1.71**	**63**			**Pn**	**11 13 41.8**	**+0.4**
MEIG						**Sb**	**11 14 05.4**	**-0.1**
PLIG	**Platanillo**	**2.05**	**53**		*e*P	**Pn**	**11 13 46.6**	**+0.6**
PLIG					*i* S	**Sn**	**11 14 10.8**	**-0.5**
PLIG	**Platanillo**	**2.05**	**53**			**Pn**	**11 13 46.6**	**+0.6**
PLIG						**Sb**	**11 14 15.5**	**+1.2**
MMIG	**Aquila**	**2.32**	**299**		*i* P	**Pn**	**11 13 49.6**	**-0.1**
MMIG					*i* S	**Sn**	**11 14 16.5**	**-1.4**
MMIG	**Aquila**	**2.32**	**299**			**Pn**	**11 13 50.7**	**+0.9**
MOIG	**Morelia**	**2.51**	**1**		*i* P	**Pn**	**11 13 52.4**	**-0.2**
MOIG					*i* S	**Sn**	**11 14 23.4**	**+0.4**
MOIG	**Morelia**	**2.51**	**1**			**Pb**	**11 13 56.3**	**-0.8**
MOIG	**Morelia**	**2.51**	**1**			**Pb**	**11 13 56.9**	**-0.2**
TLIG	**Tlapa**	**2.56**	**80**		*e*P	**Pn**	**11 13 54.4**	**+1.2**
TLIG					*i* S	**Sn**	**11 14 23.9**	**-0.2**
TLIG	**Tlapa**	**2.56**	**80**			**Pn**	**11 13 54.4**	**+1.2**
TLIG	**Tlapa**	**2.56**	**80**		Pn	**Pn**	**11 13 54.1**	**+0.8**
YAIG	**Yautepec**	**2.66**	**50**		*e*P	**Pn**	**11 13 54.5**	**-0.1**
YAIG					*i* S	**Sn**	**11 14 27.8**	**+1.2**
YAIG	**Yautepec**	**2.66**	**50**			**Pn**	**11 13 54.5**	**-0.1**
UNM	**Universidad Na**	**2.90**	**42**			**Pn**	**11 13 59.4**	**+1.3**
PNIG	**Pinotepa**	**3.06**	**104**		*e*P	**Pn**	**11 14 00.5**	**+0.6**
PNIG					*e*S	**Sn**	**11 14 35.9**	**-0.2**
PNIG	**Pinotepa**	**3.06**	**104**			**Pn**	**11 14 00.5**	**+0.6**
PPM	**Popocatepetl**	**3.11**	**52**		*e*P	**Pn**	**11 14 01.6**	**+0.5**
PPM					*e*S	**Sn**	**11 14 39.2**	**+1.0**
JRQG	**Juriquilla Cam**	**3.60**	**12**		*i* P	**Pb**	**11 14 12.3**	**-3.5**
JRQG	**Juriquilla Cam**	**3.60**	**12**			**Pb**	**11 14 15.5**	**-0.3**
ZAIG	**Zacatecas**	**5.73**	**347**		Pn	**Pn**	**11 14 36.7**	**-0.2**

*IDC **19** 11:40:53.6±1.6, 51°.04N×177°.73W, h0km, mb3.1/5, mb1 3.5/5, mb1mx3.3/32, mbtmp3.1/5, Error ellipse: s-maj=79.6km s-min=29.5km az=138.0*
*NEIC **19** 11:40:54.4±1.0, 51°.41N±0°.04×178°.09W±0°.04, h9km±6km, Error ellipse: s-maj=5.8km s-min=2.3km az=212.0*
*AEIC **19** 11:40:55.3±2.2, 51°.54N±0°.04×178°.12W±0°.03, h12km±5km, ML3.4/22, mb3.9/8(NEIC), Error ellipse: s-maj=5.4km s-min=2.6km az=201.0*
ISC 19 11:40:54.9±0.9, 51°.50N±0°.09×178°.13W±0°.05, h10km, n39, σ1s36/35, mb3.6/7, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**0.34**	**10**			**Pb**	**11 41 02.6**	**-0.4**
TAPA	**Tanaga Point A**	**0.37**	**33**			**Pb**	**11 41 03.1**	**-0.5**
TAFP	**Tanaga Falls P**	**0.41**	**13**			**Pb**	**11 41 03.6**	**-0.6**
TAFP						**Sb**	**11 41 10.0**	**-0.4**
GAEA	**Gareloi East**	**0.47**	**306**			**Pb**	**11 41 05.0**	**-0.3**
GALAA	**Gareloi Lava P**	**0.47**	**303**			**Pb**	**11 41 05.0**	**-0.3**
KIMD	**Kanaga Island**	**0.62**	**65**			**Pg**	**11 41 06.9**	**0.0**
KIMD						**Sb**	**11 41 15.8**	**-0.6**
KIWB	**Kanaga Island**	**0.70**	**60**			**Pg**	**11 41 08.2**	**-0.3**
KIKV	**Kanaga Island**	**0.71**	**58**			**Pg**	**11 41 08.4**	**-0.1**
ADK	**Adak**	**0.98**	**67**			**Pg**	**11 41 12.5**	**-1.2**
ADAG	**Mount Adagdak**	**1.06**	**63**			**Pg**	**11 41 14.8**	**-0.5**
GSTD	**Great Sitkin T**	**1.35**	**65**			**Pn**	**11 41 19.6**	**-0.2**
GSTD						**Sg**	**11 41 38.3**	**-0.1**
GSMY	**Great Sitkin M**	**1.40**	**66**			**Pn**	**11 41 19.9**	**-0.6**
GSTR	**Great Sitkin T**	**1.42**	**65**			**Pn**	**11 41 20.3**	**-0.4**
GSIG	**Igitkin Island**	**1.46**	**70**			**Pn**	**11 41 20.7**	**-0.5**
ATKA	**Atka Island**	**2.54**	**72**			**Pn**	**11 41 36.5**	**+0.4**
ATKA	**Atka Island**	**2.54**	**72**			**Sn**	**11 42 08.0**	**+0.9**
KOKL	**Mount Kliuchef**	**2.57**	**70**			**Pn**	**11 41 37.1**	**+0.5**
KOFP	**Korovin Flat P**	**2.62**	**71**			**Pn**	**11 41 37.9**	**+0.6**
NIKH	**Nikolski High**	**5.89**	**72**		Pn	**Pn**	**11 42 18.7**	**-3.4**
UNV	**Unalaska Valle**	**7.45**	**67**		Pn	**Pn**	**11 42 48.0**	**+4.5**
KDAK	**Kodiak Island**	**16.01**	**57**		Pn	**Pn**	**11 44 39.4**	**-0.5**
SKT	**Skwentna**	**17.82**	**44**			**P**	**11 45 05.2**	**+1.8**
SEW	**Seward**	**18.14**	**51**			**P**	**11 45 07.0**	**+0.1**
MLY	**Manley**	**19.55**	**36**		Pn	**Pn**	**11 45 24.0**	**+0.3**
MLY					IAmb	IAmb	11 45 30.9	
	comp=Z,7.8nm,1.4s							
MCK	**McKinley**	**19.64**	**40**		Pn	**Pn**	**11 45 24.7**	**0.0**
ILAR	**Eielson Array**	**20.89**	**39**		P	Pn	11 45 38.5	-0.9
	comp=Z,0.2nm,0.7s,baz=234,slow=9.7,SNR=2.7							
GLB	**Gilahina Butte**	**21.15**	**49**		Pn	**P**	**11 45 42.2**	**+2.3**
GLB					IAmb	IAmb	11 46 00.7	
	comp=Z,7.8nm,1.2s							
SCRK	**Sand Creek**	**21.76**	**42**		P	**P**	**11 45 45.3**	**-1.1**
SCRK					IAmb	IAmb	11 45 54.7	
	comp=Z,8.6nm,1.5s							
EGAK	**Eagle**	**23.18**	**41**		P	**P**	**11 46 01.7**	**+0.5**
EGAK					IAmb	IAmb	11 46 10.1	
	comp=Z,2.8nm,1.1s							
H11N2	**WAKE ISLAND Hy**	**33.82**	**206**		T	T	12 23 14.0	
	baz=17,slow=76,SNR=93							
H11N3	**WAKE ISLAND Hy**	**33.83**	**206**		T	T	12 23 17.9	
	baz=17,slow=76,SNR=83							
H11N1	**WAKE ISLAND Hy**	**33.84**	**206**		T	T	12 23 17.2	
	baz=17,slow=76,SNR=90							
YKA	**Yellowknife Ar**	**34.84**	**47**		P	**P**	**11 47 48.3**	**+2.7**
	comp=Z,0.1nm,0.6s,baz=283,slow=9.1,SNR=3.9							
H11S1	**WAKE ISLAND Hy**	**35.04**	**206**		T	T	12 24 45.1	
	baz=17,slow=76,SNR=298							
H11S2	**WAKE ISLAND Hy**	**35.06**	**206**		T	T	12 24 47.7	
	baz=17,slow=76,SNR=195							
H11S3	**WAKE ISLAND Hy**	**35.06**	**206**		T	T	12 24 46.6	
	baz=17,slow=76,SNR=160							
PDAR	**Pinedale Array**	**45.87**	**73**		P	**P**	**11 49 15.6**	**-1.8**
	comp=Z,0.3nm,0.5s,baz=328,slow=3.2,SNR=3.9							
TXAR	**Lajitas Array**	**58.22**	**82**		P	**P**	**11 50 49.0**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=289,slow=5.4,SNR=3.4							
ASAR	**Alice Springs**	**85.86**	**223**		P	**P**	**11 53 34.0**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=23,slow=5.3,SNR=6.4							

*NEIC **19** 12:09:45.2±2.2, 24°.40S±0°.05×67°.84W±0°.08, h112km±3km, Error ellipse: s-maj=11.1km s-min=7.4km az=90.0*
*SJA **19** 12:09:45.5±0.7, 24°.44S×68°.03W, h139km±6km, ML3.4, MW3.7*
*GUC **19** 12:09:46.5±0.7, 24°.36S×68°.31W, h159km±9km, ML4.1*
*IDC **19** 12:09:46.6±1.3, 24°.37S×67°.80W, h120km±10km, mb3.9/8, mb1 3.8/14, mb1mx3.8/26, mbtmp4.1/14, MS2.5/2, Ms1 2.6/2, ms1mx2.4/24, Error ellipse: s-maj=19.9km s-min=13.2km az=55.0*
*VAO **19** 12:09:50.6±1.9, 24°.22S×68°.33W, h216km±12km, mb4.1*
**ISC 19 12:09:46.0±0.7, 24°.

GO01	**Chusmiza**	**4.87**	**347**			**Pn**	**12 10 56.6**	**-1.2**
GO01				Sn		**Sn**	**12 11 52.1**	**-1.4**
PB11	**IPOC Station P**	**4.90**	**342**			**Pn**	**12 10 55.9**	**-1.9**
PB11				Sn		**Sn**	**12 11 51.4**	**-2.2**
PB11	**IPOC Station P**	**4.90**	**342**	*eP*		**Pn**	**12 10 58.0**	**+0.2**
PB11				*eS*		**Sn**	**12 11 51.2**	**-2.3**
PSGCX	**Pisagua**	**5.20**	**338**	*eP*		**Pn**	**12 10 59.9**	**-1.9**
MNMC	**Minye Minye**	**5.48**	**344**			**Pn**	**12 11 05.0**	**-0.8**
MNMC				Sn		**Sn**	**12 12 04.3**	**-3.6**
MNMCX	**Minye Minye**	**5.48**	**344**	*eP*		**Pn**	**12 11 05.1**	**-0.7**
MNMCX				*eS*		**Sn**	**12 12 04.8**	**-3.1**
GO04	**Tololo Observa**	**6.21**	**203**			**Pn**	**12 11 14.5**	**-0.9**
GO04				Sn		**Sn**	**12 12 24.3**	**-1.0**
GO04	**Tololo Observa**	**6.21**	**203**	*eP*		**Pn**	**12 11 14.6**	**-0.9**
GO04				*eS*		**Sn**	**12 12 25.0**	**-0.3**
GO04	**Tololo Observa**	**6.21**	**203**	*i* P		**Pn**	**12 11 14.7**	**-0.8**
GO04				*i* S		**Sn**	**12 12 23.4**	**-1.9**
PB16	**IPOC Station P**	**6.23**	**347**	*eP*		**Pn**	**12 11 15.8**	**-0.3**
AMOG	**MOGNA**	**6.48**	**183**	*eP*		**Pn**	**12 11 18.7**	**-0.3**
AMOG				*eS*		**Sn**	**12 12 28.8**	**-2.8**
RTLL	**Cerro Villicun**	**6.87**	**183**	*eP*		**Pn**	**12 11 24.5**	**+0.3**
RTLL				*i* S		**Sn**	**12 12 38.0**	**-3.0**
ZON	**Zonda**	**7.10**	**184**	*i* P		**Pn**	**12 11 24.6**	**-2.7**
CFA	**Coronel Fontan**	**7.13**	**181**	P		**Pn**	**12 11 28.1**	**+0.3**
	comp=Z,4.0nm,0.3s,baz=7.2,slow=16,SNR=58							
CFA				S		**Sn**	**12 12 43.8**	**-3.6**
	comp=Z,1.6nm,0.3s,baz=240,slow=20,SNR=12							
CFA	**Coronel Fontan**	**7.13**	**181**	*i* P		**Pn**	**12 11 28.2**	**+0.3**
CFA				*i* S		**Sn**	**12 12 43.6**	**-3.8**
RTCV	**Cerro Valdivia**	**7.40**	**183**	*eP*		**Pn**	**12 11 31.0**	**-0.4**
RTCV				*eS*		**Sn**	**12 12 50.0**	**-3.9**
RTCV	**Cerro Valdivia**	**7.40**	**183**	*eP*		**Pn**	**12 11 31.6**	**+0.1**
RTCV				*i* S		**Sn**	**12 12 51.2**	**-2.7**
RTLS	**Leoncito**	**7.41**	**188**	*eP*		**Pn**	**12 11 32.0**	**+0.3**
RTLS				*eS*		**Sn**	**12 12 52.4**	**-2.1**
RTLS				IAML			12 12 59.0	
	comp=Z,11nm,0.5s							
RTLS	**Leoncito**	**7.41**	**188**	*i* P		**Pn**	**12 11 32.1**	**+0.3**
RTLS				*i* S		Sn	12 12 41.8	-13
TCA	**Tanti**	**7.51**	**157**	*i* P		**Pn**	**12 11 32.8**	**-0.1**
TCA				IAML			12 11 34.6	
	comp=Z,4.3nm,0.5s							
TCA				*i* S		**Sn**	**12 12 53.0**	**-3.6**
ACAN	**Cantantal**	**7.84**	**175**	*i* P		**Pn**	**12 11 37.8**	**+0.5**
LPAZ	**La Paz**	**8.12**	**359**	P		**Pn**	**12 11 41.4**	**-0.3**
	comp=Z,1.3nm,0.3s,baz=144,slow=5.8,SNR=25							
LPAZ				S		**Sn**	**12 13 10.2**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=39,slow=16,SNR=2.8							
LPAZ				LR		LR	12 14 56.4	
	comp=Z,30nm,20.5s,baz=78,slow=38							
LPAZ	**La Paz**	**8.12**	**359**	*eP*		**Pn**	**12 11 42.4**	**+0.7**
LPAZ	**La Paz**	**8.12**	**359**			**Pn**	**12 11 41.2**	**-0.4**
LPAZ	**La Paz**	**8.12**	**359**	*i* P		**Pn**	**12 11 41.6**	**-0.1**
ASAL	**Salagasta**	**8.15**	**185**	*eP*		**Pn**	**12 11 42.0**	**+0.5**
MRA	**San Martin**	**8.20**	**166**	*eP*		**Pn**	**12 11 42.9**	**+0.6**
MRA				IAML			12 13 13.4	
	comp=E,3.2nm,0.5s							
ARCO	**CERRO ARCO**	**8.40**	**185**	*i* P		**Pn**	**12 11 45.0**	**0.0**
AAGR	**Agrelo**	**8.64**	**184**	*i* P		**Pn**	**12 11 48.8**	**+0.7**
ROC1	**El Roble**	**8.89**	**196**	Pn		**Pn**	**12 11 50.8**	**-0.9**
ROC1	**El Roble**	**8.89**	**196**	*i* P		**Pn**	**12 11 49.5**	**-2.2**
ROC1				*i* S		**Sn**	**12 13 25.6**	**-4.6**
CPUP	**Villa Florida**	**9.87**	**103**	P		**Pn**	**12 12 04.4**	**-0.3**
	comp=E,0.2nm,0.3s,baz=273,slow=11,SNR=3.7							
CPUP	**Villa Florida**	**9.87**	**103**			**Pn**	**12 12 03.8**	**-0.9**
SIV	**San Ignacio**	**10.65**	**39**	P		**Pn**	**12 12 11.5**	**-3.9**
	comp=E,4.7nm,0.3s,baz=230,slow=11,SNR=96							
SIV				LR		LR	12 15 43.5	
	comp=E,37nm,21.5s,baz=210,slow=34							
PP1B	**Ponte de Pedra**	**14.04**	**64**	*eP*		**P**	**12 13 01.9**	**-1.7**
TRCB	**Terra Rica**	**14.22**	**86**	*eP*		**P**	**12 13 06.5**	**+0.9**
PTGB	**Pitanga**	**14.54**	**94**	*eP*		**P**	**12 13 09.6**	**+0.4**
PCMB	**Pacaembu**	**15.71**	**83**	*eP*		**P**	**12 13 23.9**	**+1.9**
CNLB	**Canela**	**16.08**	**111**	*eP*		**P**	**12 13 28.1**	**+1.9**
SAML	**Samuel**	**16.09**	**18**	*eP*		**Pn**	**12 13 23.5**	**-1.9**
SAML	**Samuel**	**16.09**	**18**			**Pn**	**12 13 23.4**	**-1.9**
PLCA	**Paso Flores**	**16.38**	**187**	P		**P**	**12 13 30.6**	**+1.2**
	comp=E,0.0nm,0.3s,baz=312,slow=5.6,SNR=2.8							
PLCA	**Paso Flores**	**16.38**	**187**	P		**P**	**12 13 31.0**	**+1.6**
FRTB	**Fartura**	**16.94**	**90**	*eP*		**Pn**	**12 13 37.2**	**+1.6**
ARAG	**Araguaiana, MT**	**17.54**	**63**	*eP*		**P**	**12 13 41.9**	**-0.4**
CLDB	**Colider**	**17.82**	**43**	*eP*		**P**	**12 13 44.1**	**-1.3**
BB19B	**Bebedouro**	**18.31**	**83**	*eP*		**P**	**12 13 50.2**	**-0.5**
SPB	**Sao Paulo**	**18.85**	**92**	*eP*		**Pn**	**12 13 58.1**	**-0.4**
BDFB	**Brasilia**	**20.73**	**69**	P		**P**	**12 14 15.3**	**-1.7**
	comp=E,27nm,0.8s,baz=245,slow=10,SNR=43							
BDFB	**Brasilia**	**20.73**	**69**	P		**P**	**12 14 15.4**	**-1.7**
BDFB				IAmb		IAmb	12 14 16.4	
	comp=Z,22nm,0.8s							
PMNB	**Patos De Minas**	**20.93**	**78**	*eP*		**P**	**12 14 17.8**	**-1.5**
PEXB	**Peixe**	**22.37**	**60**	*eP*		**P**	**12 14 31.3**	**-2.9**
JANB	**Januaria**	**24.18**	**72**	*eP*		**P**	**12 14 49.3**	**-1.9**
SMTB	**Santa Maria do**	**24.93**	**55**	*eP*		**P**	**12 14 55.3**	**-2.6**
RUSC	**La Rusia**	**30.55**	**350**			**P**	**12 15 49.5**	**+0.9**
MLPR	**Magueyes Islan**	**42.17**	**1**	P		**P**	**12 17 25.6**	**-1.0**
MLPR				IAmb		IAmb	12 17 38.9	
	comp=Z,19nm,1.1s							
OBIP	**Obispado Ponce**	**42.25**	**2**	P		**P**	**12 17 25.9**	**-1.4**
OBIP				IAmb		IAmb	12 17 35.5	
	comp=Z,31nm,1.4s							
TEIG	**Tepich**	**48.58**	**334**	P		**P**	**12 18 17.9**	**+0.8**
Y49A	**Blount Mountai**	**60.56**	**342**	P		**P**	**12 19 43.2**	**-0.2**
Y49A				IAmb		IAmb	12 19 49.2	
	comp=Z,8.5nm,1.2s							
W50A	**Signal Mountai**	**61.54**	**344**	P		**P**	**12 19 50.5**	**+0.4**
W50A				IAmb		IAmb	12 20 01.6	
	comp=Z,12nm,1.3s							
SWET	**Sewanee**	**61.71**	**343**	P		**P**	**12 19 51.6**	**+0.3**
SWET				IAmb		IAmb	12 19 51.7	
	comp=Z,3.1nm,0.7s							
WVT	**Waverly**	**63.08**	**342**	P		**P**	**12 19 59.7**	**-0.6**
WVT				IAmb		IAmb	12 20 00.6	
	comp=Z,4.0nm,0.8s							
S54A	**Dingess, Beckl**	**63.16**	**348**	P		**P**	**12 20 01.3**	**+0.5**
S54A				IAmb		IAmb	12 20 01.5	
	comp=Z,7.4nm,0.8s							
TXAR	**Lajitas Array**	**63.49**	**325**	P		**P**	**12 20 04.0**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=139,slow=8.4,SNR=2.8							
TXAR	**Lajitas Array**	**63.49**	**325**	P		**P**	**12 20 04.7**	**+1.4**
MCWV	**Mont Chateau**	**64.72**	**350**	P		**P**	**12 20 12.0**	**+1.1**
MCWV				IAmb		IAmb	12 20 18.2	
	comp=Z,5.6nm,1.3s							
LUPA	**Lehigh Univers**	**65.07**	**354**	P		**P**	**12 20 13.1**	**-0.1**
BRNJ	**Basking Ridge**	**65.08**	**355**	P		**P**	**12 20 13.3**	**+0.1**
FVM	**French Village**	**65.56**	**341**	P		**P**	**12 20 17.1**	**+0.6**
FVM				IAmb		IAmb	12 20 17.2	
	comp=Z,6.0nm,0.7s							
QSPA	**South Pole Qui**	**65.76**	**180**	P		**P**	**12 20 19.7**	**+2.1**
CCM	**Cathedral Cave**	**65.88**	**340**	P		**P**	**12 20 18.8**	**+0.4**
BRYW	**Bryant College**	**66.11**	**357**	P		**P**	**12 20 20.8**	**+0.9**
J58A	**Remsen**	**67.80**	**354**	P		**P**	**12 20 31.5**	**+1.0**
J59A	**Piesco**	**67.83**	**355**	P		**P**	**12 20 32.3**	**+1.5**
J59A				IAmb		IAmb	12 20 46.5	
	comp=Z,22nm,1.4s							
DBIC	**Dimbokro**	**68.84**	**72**	P		**P**	**12 20 37.0**	**-0.7**
	comp=Z,1.6nm,0.5s,baz=228,slow=6.1,SNR=5.5							
DBIC	**Dimbokro**	**68.84**	**72**	P		**P**	**12 20 37.4**	**-0.3**
DBIC				IAmb		IAmb	12 20 41.7	
	comp=Z,10nm,1.4s							
F64A	**Sherman**	**69.97**	**360**	P		**P**	**12 20 44.8**	**+0.9**
LMN	**Caledonia Moun**	**70.02**	**2**	P		**P**	**12 20 45.0**	**+0.8**
JFWS	**Jewell Farm**	**70.08**	**343**	P		**P**	**12 20 45.1**	**+0.5**
JFWS				IAmb		IAmb	12 20 58.9	
	comp=Z,16nm,1.4s							
I42A	**Draeger Farm,**	**70.65**	**344**	P		**P**	**12 20 48.4**	**+0.3**
TOA0	**Torodi Ar. Sit**	**77.62**	**69**	P		**P**	**12 21 28.7**	**-0.5**
TOA0				IAmb		IAmb	12 21 29.8	
	comp=Z,12nm,0.7s							
TORD	**Torodi Ar. Bea**	**77.62**	**69**	P		**P**	**12 21 29.0**	**-0.2**
	comp=Z,9.8nm,0.6s,baz=254,slow=5.2,SNR=50							
ULM	**Lac du Bonnet**	**78.35**	**342**	P		**P**	**12 21 32.7**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=161,slow=7.3,SNR=4.8							
ULM	**Lac du Bonnet**	**78.35**	**342**	P		**P**	**12 21 32.1**	**-0.3**
SCHQ	**Schefferville**	**78.96**	**1**	P		**P**	**12 21 36.1**	**+0.4**
	comp=Z,1.7nm,0.7s,baz=158,slow=3.8,SNR=4.3							
SCHQ	**Schefferville**	**78.96**	**1**	P		**P**	**12 21 35.4**	**-0.3**
SCHQ				IAmb		IAmb	12 21 43.9	
	comp=Z,5.1nm,1.1s							
ESDC	**Sonseca Array**	**87.38**	**44**	P		**P**	**12 22 20.1**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=209,slow=6.8,SNR=3.5							
YKA	**Yellowknife Ar**	**94.22**	**340**	P		**P**	**12 22 51.4**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=136,slow=4.1,SNR=12							
ASAR	**Alice Springs**	**127.65**	**206**	PKP		**PKiKP**	**12 28 38.3**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=163,slow=1.8,SNR=2.7							
ZALV	**Zalesovo Beam**	**144.23**	**27**	PKP		**PKPdf**	**12 29 06.8**	**-0.2**
	comp=Z,2.8nm,0.6s,baz=300,slow=4.1,SNR=14							
MKAR	**Makanchi Array**	**147.47**	**39**	PKP		**PKPdf**	**12 29 14.2**	**+1.3**
	comp=Z,1.8nm,0.7s,baz=347,slow=2.0,SNR=25							
MKAR				PKPbc		**PKPbc**	**12 29 16.3**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=338,slow=5.2,SNR=5.1							
SONM	**Songino Array**	**156.24**	**9**	PKPab		**PKPab**	**12 29 55.4**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=323,slow=4.3,SNR=3.4							
SONM	**Songino Array**	**156.24**	**9**			**PKPab**	**12 29 54.6**	**+0.1**

DDA ***19*** *12:17:09.1,36°.76N×31°.15E,h51km±3km,ML2.0*
ISK ***19*** *12:17:09.4,36°.76N×31°.19E,h26km,ML2.4/8*
NIC ***19*** *12:17:09.7±0.0,36°.69N×31°.39E,h26km±2km,Ml2.5/2*

ISC 19 12:17:09.6±1.1,36°.72N±0°.03×31°.20E±0°.03,h29km±13km, n24,σ1§41/41,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEPZ	**Antalya-Kepez**	**0.37**	**60**	*i* P	**Pn**	**12 17 20.2**	**+1.1**
KEPZ				IAML		12 17 29.0	
	comp=N,73nm,0.1s						
KEPZ				IAML		12 17 30.0	
	comp=E,63nm,0.2s						
ANTB	**Antalya**	**0.48**	**293**	PG	**Pn**	**12 17 20.2**	**-0.3**
ALAN	**Alanya-ANTALYA**	**0.69**	**103**	PG	**Pn**	**12 17 23.9**	**+0.5**
ALAN				SG	**Sn**	**12 17 34.5**	**+1.4**
KORT	**Korkueli**	**0.74**	**293**	PG	**Pb**	**12 17 23.6**	**-0.4**
KORT	**Korkueli**	**0.74**	**293**	*i* P	**Pn**	**12 17 23.8**	**-0.5**
KORT				IAML		12 17 41.0	
	comp=E,54nm,0.4s						
KORT				IAML		12 17 42.0	
	comp=N,38nm,0.5s						
BCK	**Bucak**	**0.89**	**327**	PG	**Pn**	**12 17 26.3**	**0.0**
BCK				SG	**Sn**	**12 17 37.9**	**-0.4**
GAZI	**Gazipasa**	**1.02**	**118**	PG	**Pb**	**12 17 29.2**	**+0.6**
GAZI				SG	**Sn**	**12 17 43.4**	**+2.1**
GAZI	**Gazipasa**	**1.02**	**118**	*i* P	**Pn**	**12 17 28.5**	**+0.6**
GAZI				*i* S	**Sb**	**12 17 41.2**	**-0.4**
GAZI				IAML		12 17 46.0	
	comp=N,52nm,0.5s						
GAZI				IAML		12 17 46.0	
	comp=E,54nm,0.4s						
ELL	**Elmali**	**1.04**	**272**	PG	**Pb**	**12 17 29.2**	**+0.1**
ELL	**Elmali**	**1.04**	**272**	P	**Pb**	**12 17 30.2**	**+1.1**
ELL				S	**Sn**	**12 17 46.9**	**+4.9**
ISP	**Isparta**	**1.23**	**334**	PN	**Pn**	**12 17 30.8**	**-0.2**
ISP				SN	**Sb**	**12 17 46.4**	**-1.4**
BAGO	**Egridir - ISPA**	**1.31**	**346**	*i* P	**Pn**	**12 17 31.6**	**-0.5**
BAGO				*i* S	**Sb**	**12 17 49.4**	**-0.8**
AKAS	**Kas**	**1.38**	**250**	PN	**Pn**	**12 17 33.3**	**+0.3**
AKAS				SN	**Sb**	**12 17 51.3**	**-0.7**
ERMK	**Ermenek**	**1.38**	**93**	*i* P	**Pn**	**12 17 33.9**	**+0.8**
ERMK				*i* S	**Sb**	**12 17 53.4**	**+1.3**
ERMK				IAML		12 17 56.0	
	comp=N,58nm,0.5s						
ERMK				IAML		12 17 59.0	
	comp=E,49nm,0.3s						
GOLH	**Golhisar**	**1.41**	**292**	*i* P	**Pb**	**12 17 35.4**	**0.0**
GOLH				IAML		12 17 55.0	
	comp=E,41nm,1.1s						
GOLH				*i* S	**Sb**	**12 17 56.0**	**+2.9**
GOLH				IAML		12 17 59.0	
	comp=N,31nm,0.3s						
DOGA	**KONYA_Doganhis**	**1.44**	**15**	*i* P	**Pn**	**12 17 33.5**	**-0.3**
DOGA				*i* S	**Sn**	**12 17 51.5**	**-0.4**
DOGA				IAML		12 17 52.0	
	comp=N,35nm,0.5s						
DOGA				IAML		12 17 55.0	
	comp=E,19nm,0.9s						
FETY	**Fethiye**	**1.71**	**268**	PN	**Pn**	**12 17 37.5**	**+0.1**
FETY	**Fethiye**	**1.71**	**268**	*i* P	**Pn**	**12 17 37.2**	**-0.2**
FETY				*i* S	**Sn**	**12 17 59.1**	**+0.8**
FETY				IAML		12 18 05.0	
	comp=N,8.6nm,0.3s						
FETY				IAML		12 18 07.0	
	comp=E,8.3nm,0.5s						
ALFC	**Alefka**	**1.93**	**144**	P	**Pn**	**12 17 39.4**	**-1.0**
ALFC				S	**Sn**	**12 18 01.3**	**-2.4**
ALFC				AML	AML	12 18 04.2	
	comp=E,0.2nm,0.1s						
ALFC				AML	AML	12 18 04.2	
	comp=E,0.2nm,0.1s						
ALFC				AML	AML	12 18 05.9	
	comp=E,0.2nm,0.2s						
ALFC				AML	AML	12 18 05.9	
	comp=E,0.2nm,0.2s						
AKMS	**Akamas**	**1.93**	**151**	P	**Pn**	**12 17 39.8**	**-0.7**
AKMS				S	**Sn**	**12 18 02.5**	**-1.3**
AKMS				AML	AML	12 18 04.5	
	comp=E,0.1nm,0.4s						
AKMS				AML	AML	12 18 04.5	
	comp=E,0.1nm,0.4s						
AKMS				AML	AML	12 18 06.5	
	comp=E,0.1nm,0.3s						
AKMS				AML	AML	12 18 06.5	
	comp=E,0.1nm,0.3s						
TAVA	**DENIZLI_Tavas**	**1.98**	**293**	*i* P	**Pn**	**12 17 42.0**	**+0.8**
TAVA				*i* S	**Sb**	**12 18 06.5**	**-2.7**
TAVA				IAML		12 18 11.0	
	comp=N,21nm,0.4s						
TAVA				IAML		12 18 12.0	
	comp=E,31nm,0.6s						
KHAL	**Karahalli**	**2.14**	**321**	*i* P	**Pn**	**12 17 42.7**	**-0.8**
KHAL				*i* S	**Sn**	**12 18 08.2**	**-0.9**
KHAL				IAML		12 18 12.0	
	comp=N,4.3nm,0.3s						
KHAL				IAML		12 18 12.0	
	comp=E,7.3nm,0.3s						
YER	**Yerkesik**	**2.38**	**281**	PN	**Pn**	**12 17 46.6**	**-0.1**
MVOU	**Mavrovouni**	**2.60**	**130**	P	**Pn**	**12 17 48.1**	**-1.6**
MVOU				S	**Sn**	**12 18 18.6**	**-1.7**

KRSC ***19*** *12:22:27.5±1.2,49°.01N×156°.95E,h35km±23km,ML4.7*
BJI ***19*** *12:22:28.6±0.0,49°.31N×156°.34E,h41km,mB4.9/21, mb4.4/30,Ms4.2/8,Ms7 4.0/8*
SKHL ***19*** *12:22:29.5±0.1,48°.90N×156°.60E,h49km±5km,mb4.6/7*
MOS ***19*** *12:22:30.0±1.2,49°.17N×156°.08E,h38km,mb4.5/20,Error ellipse: s-maj=9.4km s-min=3.7km az=77.8*
IDC ***19*** *12:22:34.0±2.5,49°.24N×156°.09E,h56km±21km,mb3.7/17, mb1 3.8/25,mb1mx3.7/60,mbtmp4.0/25,ML4.6/3,MS3.3/9, Ms1 3.3/9,ms1mx3.0/48,Error ellipse: s-maj=20.4km s-min=12.9km az=142.0*
NEIC ***19*** *12:22:33.3±2.1,49°.25N±0°.08×156°.1E±0°.2,h47km±7km, mb4.5/29,Error ellipse: s-maj=15.9km s-min=9.6km az=123.0*

ISC 19 12:22:31.1±0.6,49°.10N±0°.06×156°.23E±0°.06,h36km±2km, n205,σ1§27/211,mb4.4/53,MS3.4/8,2C,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.59**	**357**	*e*PN	**Pn**	**12 22 57.4**	**+0.7**
SKR				*eS*	**Sn**	**12 23 18.0**	**+2.1**
SKR				pmax	pmax		
	comp=Z,404nm,0.6s						
SKR				smax	smax		
	comp=E,1μm,0.5s						
SKR				smax	smax		
	comp=N,1μm,0.6s						
SKR	**Severo-Kuril's**	**1.59**	**357**	*eP*	**Pn**	**12 22 56.9**	**+0.2**
SKR				*eS*	**Sn**	**12 23 19.1**	**+3.2**
SKR	**Severo-Kuril's**	**1.59**	**357**	*eP*	**Pn**	**12 22 57.4**	**+0.7**
SKR				AMB	AMB	12 23 02.0	
	comp=N,400nm,0.6s						
SKR				*eS*	**Sn**	**12 23 18.2**	**+2.3**
SKR				A	A	12 23 29.4	
	comp=N,1μm,0.8s						
SKR				A	A	12 23 29.4	
	comp=N,1μm,0.8s						
PAU	**Pauzhetka**	**2.40**	**9**	PN	**Pn**	**12 23 08.3**	**+0.5**
PAU				S	**Sn**	**12 23 37.6**	**+1.6**
PAU	**Pauzhetka**	**2.40**	**9**	*eP*	**Pn**	**12 23 08.3**	**+0.5**
PAU				*eS*	**Sn**	**12 23 37.6**	**+1.6**
PAU	**Pauzhetka**	**2.40**	**9**	*eP*	**Pn**	**12 23 08.3**	**+0.5**
PAU				*eS*	**Sn**	**12 23 37.5**	**+1.6**
KDTR	**Khodutka, Kamc**	**2.96**	**23**	PN	**Pn**	**12 23 14.4**	**-1.1**
KDTR				S	**Sn**	**12 23 49.6**	**-0.1**
KDTR	**Khodutka, Kamc**	**2.96**	**23**	*eP*	**Pn**	**12 23 14.4**	**-1.1**
KDTR				*eS*	**Sn**	**12 23 49.6**	**-0.1**
ASAK	**Asacha**	**3.46**	**17**	PN	**Pn**	**12 23 22.9**	**+0.5**
ASAK	**Asacha**	**3.46**	**17**	*eP*	**Pn**	**12 23 22.9**	**+0.5**
MTVR	**Mutnovka**	**3.61**	**19**	PN	**Pn**	**12 23 24.1**	**-0.5**
MTVR	**Mutnovka**	**3.61**	**19**	*eP*	**Pn**	**12 23 24.1**	**-0.5**
RUS	**Russkaya**	**3.64**	**23**	PN	**Pn**	**12 23 24.7**	**-0.1**
RUS				S	**Sn**	**12 24 06.1**	**-0.4**
RUS	**Russkaya**	**3.64**	**23**	*eP*	**Pn**	**12 23 24.7**	**-0.1**
RUS				*eS*	**Sn**	**12 24 06.1**	**-0.4**
RUS	**Russkaya**	**3.64**	**23**	*eP*	**Pn**	**12 23 24.7**	**-0.1**
GRL	**Gorelyy**	**3.65**	**18**	PN	**Pn**	**12 23 25.4**	**+0.3**
GRL	**Gorelyy**	**3.65**	**18**	*eP*	**Pn**	**12 23 25.4**	**+0.3**
APC	**Apacha**	**3.88**	**8**	PN	**Pn**	**12 23 30.3**	**+2.2**
APC	**Apacha**	**3.88**	**8**	*eP*	**Pn**	**12 23 30.3**	**+2.2**
KRMR	**Karymshinskiy**	**3.92**	**17**	PN	**Pn**	**12 23 29.2**	**+0.4**
KRMR				S	**Sn**	**12 24 14.1**	**+0.6**
KRMR	**Karymshinskiy**	**3.92**	**17**	*eP*	**Pn**	**12 23 29.3**	**+0.4**
KRMR				*eS*	**Sn**	**12 24 14.1**	**+0.6**
PEA0B	**Petropavlovsk-**	**4.12**	**12**	PN	**Pn**	**12 23 32.5**	**+1.0**
PEA0B	**Petropavlovsk-**	**4.12**	**12**	Pn	**Pn**	**12 23 32.5**	**+1.0**
PETK	**Petropavlovsk-**	**4.12**	**12**	P	**Pn**	**12 23 32.6**	**+1.1**
	comp=N,1.3nm,0.3s,baz=194,slow=12,SNR=37						
PETK				LR	LR	12 24 51.2	
	comp=N,82nm,18.5s,baz=95,slow=34						
PETK	**Petropavlovsk-**	**4.12**	**12**		**Pn**	**12 23 32.4**	**+0.9**
PET	**Petropavlovsk**	**4.22**	**20**	PN	**Pn**	**12 23 32.8**	**0.0**
PET	**Petropavlovsk**	**4.22**	**20**	*eP*	**Pn**	**12 23 32.8**	**0.0**
PET	**Petropavlovsk**	**4.22**	**20**	*eP*	**Pn**	**12 23 33.1**	**+0.3**
PET				AMB	AMB	12 23 36.0	
	comp=N,40nm,0.6s						
PET				*eS*	**Sn**	**12 24 21.9**	**+1.2**
PET				A	A	12 24 33.3	
	comp=N,150nm,0.6s						
PET				A	A	12 24 33.3	
	comp=N,200nm,0.6s						
PET	**Petropavlovsk**	**4.22**	**20**	Pn	**Pn**	**12 23 32.6**	**-0.1**
UGLR	**Uglovaya**	**4.43**	**21**	PN	**Pn**	**12 23 36.3**	**+0.5**
UGLR				S	**Sn**	**12 24 27.2**	**+1.1**
UGLR	**Uglovaya**	**4.43**	**21**	*eP*	**Pn**	**12 23 36.3**	**+0.5**
UGLR				*eS*	**Sn**	**12 24 27.2**	**+1.1**
AVH	**Avacha**	**4.46**	**20**	PN	**Pn**	**12 23 37.5**	**+1.3**
AVH	**Avacha**	**4.46**	**20**	*eP*	**Pn**	**12 23 37.5**	**+1.3**
KOK	**Koryaka**	**4.46**	**19**	PN	**Pn**	**12 23 37.4**	**+1.1**
KOK	**Koryaka**	**4.46**	**19**	*eP*	**Pn**	**12 23 37.4**	**+1.1**
KOK	**Koryaka**	**4.46**	**19**	*eP*	**Pn**	**12 23 37.4**	**+1.1**
SMAR	**Somma**	**4.47**	**20**	PN	**Pn**	**12 23 37.4**	**+0.9**
SMAR	**Somma**	**4.47**	**20**	*eP*	**Pn**	**12 23 37.4**	**+0.9**
KRER	**Koryakskii**	**4.50**	**20**	PN	**Pn**	**12 23 37.8**	**+0.9**
KRER	**Koryakskii**	**4.50**	**20**	*eP*	**Pn**	**12 23 37.8**	**+0.9**
SDLR	**Sedlovina**	**4.50**	**21**	PN	**Pn**	**12 23 37.0**	**+0.1**
SDLR	**Sedlovina**	**4.50**	**21**	*eP*	**Pn**	**12 23 37.0**	**+0.1**
KRX	**Arik**	**4.53**	**19**	PN	**Pn**	**12 23 38.0**	**+0.8**
KRX	**Arik**	**4.53**	**19**	*eP*	**Pn**	**12 23 38.0**	**+0.8**
SPN	**Mys Shipunski**	**4.66**	**29**	PN	**Pn**	**12 23 37.8**	**-1.1**
SPN	**Mys Shipunski**	**4.66**	**29**	*eP*	**Pn**	**12 23 37.8**	**-1.1**
SPN				*eS*	**Sn**	**12 24 29.6**	**-2.1**
MKZ	**Mys Kozlova**	**6.44**	**30**	PN	**Pn**	**12 24 01.8**	**-1.5**
MKZ	**Mys Kozlova**	**6.44**	**30**	*eP*	**Pn**	**12 24 01.8**	**-1.5**
KZV	**Kizimen**	**6.52**	**21**	PN	**Pn**	**12 24 04.8**	**+0.2**
KZV	**Kizimen**	**6.52**	**21**	*eP*	**Pn**	**12 24 04.8**	**+0.2**
TUMD	**Tumrok D**	**6.63**	**21**	*eP*	**Pn**	**12 24 06.7**	**+0.8**

comp=N,37nm,2.9s
YAK smax smax

comp=E,52nm,3.2s
YAK Yakutsk 19.64 321 P Pn 12 26 54.5 -3.3
comp=E,0.1nm,0.3s,baz=233,slow=1.7,SNR=8.2
YAK Yakutsk 19.64 321 P P 12 26 54.4 -2.0
YAK IAmb IAmb 12 26 56.1

comp=Z,14nm,0.7s
BILL Bilibino 19.65 11⇑ eP Pn 12 26 56.2 -1.8
BILL pmax pmax

comp=Z,4.0nm,1.0s
BILL MLR MLR

comp=Z,85nm,18.0s
KSRS Korea Array 23.52 251 P P 12 27 38.4 +0.6
comp=Z,3.8nm,0.9s,baz=47,slow=8.9,SNR=9.3
KSRS LR LR 12 36 31.3

comp=Z,79nm,19.1s,baz=59,slow=36
JNU Nakatsue 24.73 239 P P 12 27 50.3 +1.3
comp=Z,4.0nm,0.8s,baz=16,slow=8.1,SNR=3.0
JNU LR LR 12 37 42.5

comp=Z,36nm,18.6s,baz=52,slow=37
JNU Nakatsue 24.73 239 P P 12 27 52.3 +3.3
ANM Nome 25.55 38 P P 12 27 58.3 +2.1
ANM pmax pmax

comp=Z,10.0nm,1.3s
ANM Nome 25.55 38 P 12 27 58.3 +2.1
ANM IAmb IAmb 12 28 05.8

comp=Z,10nm,1.3s
TIXI Tiksi 25.88 341 *i* P **P 12 27 55.8 -3.2**
TIXI pmax pmax

comp=Z,3.0nm,0.8s
BJI Beijing 29.64 267 *eP* **P 12 28 32.0 -0.9**
BJI pmax pmax

comp=Z,4.0nm,0.7s
H11N2 WAKE ISLAND Hy 30.53 160 T T 13 01 33.5
baz=345,slow=74,SNR=7.2
H11N1 WAKE ISLAND Hy 30.54 160 T T 13 01 06.2
baz=345,SNR=5.1
H11N3 WAKE ISLAND Hy 30.54 160 T T 13 01 48.0
baz=345,slow=74,SNR=6.9
RSO Redoubt South 30.74 49 P P 12 28 42.0 -0.8
H11S1 WAKE ISLAND Hy 31.67 161 T T 13 03 09.3
baz=347,slow=74
H11S3 WAKE ISLAND Hy 31.68 161 T T 13 03 06.3
baz=347,slow=74
H11S2 WAKE ISLAND Hy 31.69 161 T T 13 02 43.7
baz=347
BRLK Bradley Lake 31.71 50 P P 12 28 55.6 +4.5
HHC Hu-ho-hao-te 32.26 272 *eP* **P 12 28 57.1 +0.9**
HHC pmax pmax

comp=Z,3.0nm,1.1s
HHC pmax pmax

comp=Z,40nm,5.2s
SONM Songino Array 32.59 287 LR LR 12 43 11.4
comp=Z,69nm,19.1s,baz=351,slow=38
NJ2 Nanjing 32.70 253 *eP* **P 12 29 00.1 +0.2**
NJ2 pmax pmax

comp=Z,7.0nm,0.5s
SML Sawmill 32.83 46 P P 12 29 00.8 -0.1
SML IAmb IAmb 12 29 10.1

comp=Z,11nm,1.0s
COLA College 32.99 40 *i* P **P 12 29 02.2 0.0**
COLA pmax pmax

comp=Z,3.0nm,1.0s
TLY Talaya 33.03 295 *eP* **P 12 29 00.7 -2.0**
TLY pmax pmax

comp=Z,3.0nm,0.8s
BARN Barnard Glacie 36.09 47 P P 12 29 30.3 +1.0
NACB Ninganchiao 36.79 240 P P 12 29 41.6 +6.2
HYT Haines Junctio 38.13 47 P P 12 29 48.8 +2.3
HYT IAmb IAmb 12 29 56.5

comp=Z,6.2nm,1.3s
INK Inuvik 38.53 34 P P 12 29 50.3 +0.7
INK pmax pmax

comp=Z,2.0nm,1.2s
INK Inuvik 38.53 34 P P 12 29 50.2 +0.6
comp=Z,0.6nm,0.6s,baz=288,slow=5.8,SNR=5.6
INK Inuvik 38.53 34 P P 12 29 50.3 +0.7
LZH Lanzhou 39.92 271 *eP* **P 12 30 03.1 +1.3**
LZH pP sP 12 30 14.3 -2.1
LZH sP pP 12 30 19.5 +7.8
LZH *eP*P **PnPn 12 31 39.3 +2.0**
LZH pmax pmax

comp=Z,20nm,1.3s
LZH pmax pmax

comp=Z,65nm,5.2s
LZH LR LR

comp=Z,230nm,13.2s
LZH LR LR

comp=Z,250nm,13.4s
LZH LR LR

comp=Z,360nm,16.7s
GTA Gaotai 40.69 278 *eP* **P 12 30 08.4 +0.3**
GTA pP sP 12 30 20.1 -2.6
GTA sP pP 12 30 24.9 +6.9
ZALV Zalesovo Beam 42.97 305 LR LR 12 48 11.3
comp=Z,25nm,18.7s,baz=49,slow=36
CD2 Chengdu 43.17 265 P P 12 30 27.8 -0.5
CD2 pmax pmax

comp=Z,10.0nm,0.5s
WMQ Urumqi 46.04 291 *eP* P 12 30 54.3 +3.2
WMQ pmax pmax

comp=Z,7.0nm,0.9s
WMQ pmax pmax

comp=Z,52nm,4.9s
WMQ LR LR

comp=Z,450nm,29.0s
WMQ LR LR

comp=Z,120nm,29.1s
WMQ LR LR

comp=Z,140nm,29.2s
MK31 Makanchi Array 47.74 297 P P 12 31 03.8 -0.5
MK31 pmax pmax

comp=Z,1.0nm,0.7s
MK31 Makanchi Array 47.74 297 P P 12 31 03.8 -0.5
MKAR Makanchi Array 47.74 297 P P 12 31 03.5 -0.8
comp=Z,1.5nm,0.7s,baz=74,slow=13,SNR=16
MKAR LR LR 12 52 38.4

comp=Z,77nm,19.6s,baz=86,slow=38
YKA Yellowknife Ar 47.78 39 P P 12 31 04.7 +0.4
comp=Z,0.8nm,0.8s,baz=292,slow=7.5,SNR=7.2
KURK Kurchatov 47.82 303 *i* P **P 12 31 02.6 -2.2**
KURK pmax pmax

comp=Z,4.0nm,0.9s
KURK Kurchatov 47.82 303 P P 12 31 04.1 -0.7
KURK IAmb IAmb 12 31 05.0

comp=Z,3.8nm,0.8s
MAKZ Makanchi 47.91 297 P P 12 31 05.2 -0.4
MAKZ pmax pmax

comp=Z,6.0nm,1.5s
MAKZ Makanchi 47.91 297 P P 12 31 05.2 -0.4
MAKZ IAmb IAmb 12 31 22.1

comp=Z,5.8nm,1.5s
BVAR Borovoye Array 50.99 309 P P 12 31 28.2 -0.8
comp=Z,1.1nm,0.5s,baz=60,slow=8.8,SNR=12
BRVK Borovoye 51.03 309 P P 12 31 28.5 -0.7
BRVK pmax pmax

comp=Z,2.0nm,0.8s
BRVK Borovoye 51.03 309 P P 12 31 28.5 -0.7
AAK Ala-Archa 54.66 296 *i* P **P 12 31 53.7 -2.7**
AAK pmax pmax

comp=Z,3.0nm,1.4s
ARU Arti 54.70 318 *c i* P **P 12 31 54.9 -1.3**
ARU 12 33 56.4
ARU S **S 12 39 34.3 +0.7**
ARU SS **SS 12 43 19.1 +3.0**
ARU pmax pmax

comp=Z,8.0nm,0.6s
ARU Arti 54.70 318 P P 12 31 55.2 -1.0
comp=Z,2.6nm,0.5s,baz=360,slow=2.5,SNR=15
ARU Arti 54.70 318 P P 12 31 55.3 -0.9
CMAR Chiang Mai Arr 54.95 257 P P 12 32 00.9 +2.4
CMAR Chiang Mai Arr 54.95 257 P P 12 32 00.1 +1.5
comp=Z,1.1nm,0.7s,baz=30,slow=7.1,SNR=8.1
CMAR Chiang Mai Arr 54.95 257 P P 12 32 00.9 +2.4
F10A Beach Ranch, E 55.41 58 P P 12 32 03.0 +1.4
KSH Kashi 55.69 293 P P 12 32 07.1 +3.3
KSH pP sP 12 32 21.9 +3.3
KIRV Kirov 57.15 323 P P 12 32 12.9 -0.8
comp=Z,6.5nm,0.5s,baz=59,slow=5.9,SNR=4.4
SUMG Summit 58.19 5 P P 12 32 22.4 +1.0
SUMG pmax pmax

comp=Z,5.0nm,0.9s
SUMG Summit 58.19 5 P P 12 32 22.4 +1.0
SUMG IAmb IAmb 12 32 33.7

comp=Z,4.6nm,0.9s
PNTR Pine Nut 58.32 65 P P 12 32 23.9 +1.3
PNTR IAmb IAmb 12 32 38.2

comp=Z,6.0nm,1.3s
ABKAR Akbulak array 58.52 310 P P 12 32 23.2 -0.3
ABKAR IAmb IAmb 12 32 23.5

comp=Z,2.5nm,0.7s
GAR Garm 59.41 295 P P 12 32 30.2 +0.1
GAR IAmb IAmb 12 32 30.3

comp=Z,3.4nm,0.7s
NV11 Mina Array Sit 59.60 65 P P 12 32 31.2 -0.2
CHGR Chuyangaron 60.32 296 P P 12 32 36.2 0.0
PDAR Pinedale Array 61.68 57 P P 12 32 46.6 +1.0
comp=Z,0.3nm,0.7s,baz=358,slow=6.5,SNR=3.7
PDAR Pinedale Array 61.68 57 P P 12 32 46.4 +0.7
FIA1 FINESS Array S 62.78 336 P P 12 32 51.0 -1.3
FINES FINESS Array B 62.79 336 P P 12 32 51.7 -0.6
comp=Z,1.7nm,0.7s,baz=38,slow=9.6,SNR=8.1
FINES FINESS Array B 62.79 336 P P 12 32 52.1 -0.2
VSR Storozhevoye 66.56 322 *i* P **P 12 33 14.7 -2.4**
VSR pmax pmax

comp=Z,6.0nm,0.9s
NOA NORSAR Array B 66.65 342 LR LR 13 06 40.2
comp=Z,29nm,18.8s,baz=340,slow=40
KBZ Khabaz 70.71 315 P P 12 33 43.2 +0.1
comp=Z,0.9nm,0.6s,baz=93,slow=10,SNR=4.3
AKASG Malin Array Be 70.73 327 P P 12 33 42.0 -1.0
comp=Z,0.7nm,0.4s,baz=34,slow=6.9,SNR=5.3
TXAR Lajitas Array 74.53 63 P P 12 34 06.5 +0.2
comp=Z,0.2nm,0.4s,baz=302,slow=5.6,SNR=7.7
TXAR Lajitas Array 74.53 63 P P 12 34 06.3 +0.1
BUR08 Bucovina Ar. S 74.72 328 P P 12 34 07.3 +0.3
BUR08 IAmb IAmb 12 34 19.9

comp=Z,5.0nm,1.2s
BURAR Bucovina Array 74.74 328 P P 12 34 07.1 -0.1
ASAR Alice Springs 75.13 201 P P 12 34 10.0 +0.6
comp=Z,0.3nm,0.8s,baz=13,slow=5.4,SNR=4.8
ASAR Alice Springs 75.13 201 P P 12 34 10.2 +0.8
CLL Collm 75.15 337 *eP* **P 12 34 09.0 -0.3**
CLL pmax pmax

comp=Z,4.0nm,0.7s
CLL Collm 75.15 337 *eP* **P 12 34 09.0 -0.3**
comp=Z,4.0nm,0.7s
LANS Liptovska Anna 75.28 332 *eP* **P 12 34 11.3 +1.1**
LANS pmax pmax

comp=Z,4.0nm,0.8s
LANS Liptovska Anna 75.28 332 *eP* **P 12 34 11.3 +1.1**
MORC Moravsky Berou 75.30 334 P P 12 34 11.4 +1.2
MORC pmax pmax

comp=Z,4.0nm,0.7s
MORC Moravsky Berou 75.30 334 P P 12 34 11.4 +1.2
MORC IAmb IAmb 12 34 12.1

comp=Z,4.3nm,0.7s
BRG Berggiesshubel 75.31 336 *eP* **P 12 34 10.0 -0.2**
comp=Z,3.4nm,1.1s
BRG Berggiesshubel 75.31 336 *eP* **P 12 34 10.0 -0.2**
BRG pmax pmax

comp=Z,3.0nm,1.1s
PRU Pruhonice 75.95 336 *eP* **P 12 34 14.6 +0.7**
PRU Pruhonice 75.95 336 *eP* **P 12 34 14.6 +0.7**
VYHS Vyhne 76.06 332 *eP* **P 12 34 15.1 +0.5**
VYHS Vyhne 76.06 332 *eP* **P 12 34 15.1 +0.5**
MLR Muntele Rosu 76.31 326 P P 12 34 17.2 +1.0
MLR pmax pmax

comp=Z,7.0nm,0.9s
MLR Muntele Rosu 76.31 326 P P 12 34 17.2 +1.0
MLR IAmb IAmb 12 34 17.9

comp=Z,7.0nm,0.9s
MODS Modra-Piesok 76.63 333 *eP* **P 12 34 18.1 +0.3**
MODS Modra-Piesok 76.63 333 *eP* **P 12 34 18.1 +0.3**
KHC Kasperske Hory 76.99 336 P P 12 34 20.8 +0.9
KHC pmax pmax

comp=Z,2.0nm,0.8s
KHC Kasperske Hory 76.99 336 *eP* **P 12 34 20.2 +0.3**
KHC Kasperske Hory 76.99 336 P P 12 34 20.8 +0.9
GERES GERESS Array B 77.22 336 P P 12 34 21.6 +0.4
GERES GERESS Array B 77.22 336 P P 12 34 21.4 +0.2
comp=Z,1.6nm,0.7s,baz=33,slow=5.4,SNR=16
GERES GERESS Array B 77.22 336 P P 12 34 21.6 +0.4
MEM Membach 77.44 341 P P 12 34 22.5 +0.2
CONA Conrad Observa 77.45 334 *eP* **P 12 34 23.6 +1.1**
comp=Z,3.9nm,0.7s,SNR=6.4
BR131 Keskin Array S 78.07 318 P P 12 34 26.3 +0.1
BR131 pmax pmax

comp=Z,4.0nm,1.1s
BR131 Keskin Array S 78.07 318 P P 12 34 26.3 +0.1
BR131 IAmb IAmb 12 34 27.9

comp=Z,4.4nm,1.1s
BRTR Keskin Array B 78.07 318 P P 12 34 26.6 +0.4
comp=Z,2.7nm,0.8s,baz=62,slow=3.5,SNR=15
SOKA Soboth 78.82 334 *eP* **P 12 34 30.8 +0.6**
comp=Z,6.5nm,1.0s,SNR=4.5
KBA Koelnbreinsper 78.93 335 *eP* **P 12 34 31.9 +1.1**
comp=Z,8.4nm,0.6s
WATA Walderalm 79.17 336 *eP* **P 12 34 33.0 +0.8**
comp=Z,7.8nm,1.0s
WTTA Wattenberg 79.22 336 *eP* **P 12 34 33.5 +1.0**
comp=Z,4.8nm,0.7s,SNR=5.5
SQTA Sankt Quirin 79.38 337 *eP* **P 12 34 34.1 +0.9**
comp=Z,5.6nm,0.8s
VTS Vitosha 79.77 327 P P 12 34 36.5 +1.0
VTS pmax pmax

comp=Z,5.0nm,0.8s
VTS Vitosha 79.77 327 P P 12 34 36.5 +1.0
VTS IAmb IAmb 12 34 36.8

comp=Z,4.6nm,0.8s

MAN 19 12:23:32.5, 9.89N×124.10E, h5km, mb4.3, ML3.1, MS2.9, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.45**	**343**	*i* P	Pg	12 23 42.0	+0.8
LLP				*i* S	Sb	12 23 48.7	-1.3
MSLP	**Maasin**	**0.78**	**72**	*eP*	Pg	12 23 47.4	-0.2
MSLP				*eS*	Sb	12 23 59.7	+0.1
SNPH	**Sibulan**	**1.01**	**238**	*i* P	Pn	12 23 53.2	-0.2
SNPH				*i* S	Sn	12 24 07.9	-0.2
OCLP	**Ormoc**	**1.26**	**23**	*eP*	Pg	12 23 55.5	-1.2
OCLP				*eS*	Sn	12 24 14.8	+0.7
DCPH	**Dipolog City**	**1.49**	**210**	*eP*	Pn	12 23 59.7	-0.3
GUIM	**Jordan**	**1.66**	**296**	*eP*	Pn	12 24 00.8	-1.5
GUIM				*eS*	Sn	12 24 21.2	-2.9
PAGZ	**Pagadian**	**2.15**	**199**	*eP*	Pn	12 24 09.1	+0.1
PAGZ				*eS*	Sn	12 24 35.4	-0.6
BUKP	**Musuan**	**2.21**	**155**	*eP*	Pn	12 24 09.8	-0.1
BUKP				*eS*	Sn	12 24 38.7	+1.0

*JMA **19** 12:25:00.4±0.1, 23.86N×121.66E, h40km±1km, M2.6*
*TAP **19** 12:25:01.1, 23.91N×121.63E, h39km, ML3.1, C*
ISC 19 12:25:01.9±1.2, 23.89N±0.02×121.68E±0.02, h35km±3km, n85, σ1.905/132, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENLB	**Shoufeng**	**0.07**	**281**	P	**Pn**	**12 25 07.0**	**-0.8**
ENLB	baz=250			S	**Sn**	**12 25 12.6**	**+0.6**
HWA	**Hwalien**	**0.11**	**323**	P	**Pn**	**12 25 08.3**	**-0.8**
HWA	baz=347			*eS*	**Sn**	**12 25 15.0**	**+0.4**
TWD	**Chiawan**	**0.20**	**339**	*i* P	**Pn**	**12 25 08.3**	**-0.8**
TWD	baz=352			S	**Sn**	**12 25 14.0**	**-0.5**
ESL	**Shilin**	**0.24**	**251**	*i* P	**Pn**	**12 25 08.4**	**-1.0**
ESL	baz=239			*eS*	**Sn**	**12 25 13.5**	**-1.2**
NACB	**Ninganchiao**	**0.29**	**345**	P	**Pn**	**12 25 09.0**	**-0.9**
NACB	baz=353			S	**Sn**	**12 25 15.0**	**-0.5**
EGFH	**Guangfu**	**0.32**	**226**	*eP*	**Pn**	**12 25 09.2**	**-1.0**
EGFH	baz=217			*eS*	**Sn**	**12 25 16.8**	**+0.9**
ETLH	**Xiulin Townshi**	**0.36**	**331**	*eP*	**Pn**	**12 25 10.0**	**-0.8**
ETLH	baz=335			*eS*	**Sn**	**12 25 15.9**	**-1.1**
WHF	**Hehuan Shan**	**0.45**	**304**	P	**Pn**	**12 25 11.2**	**-1.2**
WHF	baz=305			S	**Sn**	**12 25 18.0**	**-1.5**
HGSD	**Ruisui**	**0.46**	**210**	*eP*	**Pn**	**12 25 11.6**	**-0.4**
HGSD	baz=204			*eS*	**Sn**	**12 25 21.2**	**+2.2**
OWD	**Renai**	**0.46**	**278**	*eP*	**Pn**	**12 25 11.2**	**-0.9**
OWD	baz=275			*eS*	**Sn**	**12 25 18.3**	**-1.0**
CHGB	**Renai**	**0.49**	**290**	*eP*	**Pn**	**12 25 11.8**	**-0.9**
CHGB	baz=289			*eS*	**Sn**	**12 25 19.0**	**-1.1**
EHY	**Hungye**	**0.50**	**220**	*eP*	**Pn**	**12 25 11.0**	**-1.6**
EHY	baz=213			*eS*	**Sn**	**12 25 18.4**	**-1.7**
VWDT	**VWDT**	**0.51**	**255**	P	**Pn**	**12 25 12.1**	**-0.6**
VWDT	baz=250			*eS*	**Sn**	**12 25 19.5**	**-0.7**
ENA	**Nanau**	**0.54**	**6**	*eP*	**Pn**	**12 25 12.5**	**-0.7**
ENA	baz=12			*eS*	**Sn**	**12 25 21.7**	**+0.7**
NANB	**Nanao**	**0.54**	**7**	*eP*	**Pn**	**12 25 12.5**	**-0.7**
NANB	baz=12			*eS*	**Sn**	**12 25 20.5**	**-0.5**
TWT	**Tachien**	**0.58**	**308**	*eP*	**Pn**	**12 25 13.7**	**-0.2**
TWT	baz=308			*eS*	**Sn**	**12 25 21.3**	**-1.0**
TDCB	**Techi**	**0.60**	**307**	*eP*	**Pn**	**12 25 13.4**	**-0.7**
TDCB	baz=308			*eS*	**Sn**	**12 25 21.1**	**-1.5**
NNSH	**Datong**	**0.60**	**333**	*eP*	**Pn**	**12 25 13.2**	**-1.0**
NNSH	baz=336			*eS*	**Sn**	**12 25 21.6**	**-1.0**
YULB	**Yu-li**	**0.61**	**215**	*eP*	Pn	12 25 12.4	-1.7
YULB	baz=210			*eS*	**Sn**	**12 25 20.4**	**-2.2**
NNS	**Nan Shan**	**0.61**	**333**	P	**Pn**	**12 25 13.3**	**-1.0**
NNS	baz=336			S	**Sn**	**12 25 22.0**	**-1.0**
TWF1	**Yuli**	**0.64**	**213**	*eP*	Pn	12 25 12.8	-1.8
TWF1	baz=207			*eS*	**Sn**	**12 25 21.3**	**-2.2**
SSLB	**Suanglung**	**0.67**	**261**	*eP*	**Pn**	**12 25 14.2**	**-0.8**
DPDB	**Guoxing**	**0.70**	**282**	*eP*	**Pn**	**12 25 14.8**	**-0.6**
NDT	**Datong Townshi**	**0.72**	**348**	*eP*	**Pn**	**12 25 14.9**	**-0.8**
NDT	baz=351			*eS*	**Sn**	**12 25 24.6**	**-1.0**
TWC	**Suao**	**0.73**	**12**	*eP*	**Pn**	**12 25 15.8**	**0.0**
TWC	baz=16			*eS*	**Sn**	**12 25 26.2**	**+0.4**
TYC	**Yuchr**	**0.75**	**271**	*eP*	**Pn**	**12 25 15.6**	**-0.4**
ENTT	**Nioudou**	**0.75**	**352**	P	**Pn**	**12 25 15.2**	**-0.9**
ENTT	baz=356			*eS*	**Sn**	**12 25 25.7**	**-0.6**
WHP	**Taichung City**	**0.77**	**300**	*eP*	**Pn**	**12 25 17.3**	**+0.9**
FULB	**Fuli**	**0.77**	**207**	*eP*	**Pn**	**12 25 16.0**	**-0.4**
EOS1	**EOS1**	**0.78**	**32**	*eP*	**Pn**	**12 25 17.3**	**+0.9**
YUS	**Yu-Shan**	**0.78**	**239**	P	**Pn**	**12 25 16.4**	**-0.4**
YUS	baz=235			S	**Sn**	**12 25 26.8**	**-0.7**
WHYT	**Xinyi Township**	**0.78**	**256**	*eP*	**Pn**	**12 25 16.1**	**-0.4**
WHYT	baz=253			*eS*	**Sn**	**12 25 27.5**	**+0.6**
YHNB	**Yeheng**	**0.82**	**341**	*eP*	**Pn**	**12 25 16.4**	**-0.8**
YHNB	baz=342			*eS*	**Sn**	**12 25 26.7**	**-1.4**
TWE	**Neicheng**	**0.83**	**359**	*eP*	**Pn**	**12 25 16.2**	**-0.9**
TWE	baz=3.0			*eS*	**Sn**	**12 25 29.8**	**+1.7**
NSK	**Sanguang**	**0.83**	**340**	P	**Pn**	**12 25 16.4**	**-0.9**
NSK	baz=342			*eS*	**Sn**	**12 25 27.2**	**-1.2**
CHKT	**Chengkung**	**0.84**	**200**	*eP*	**Pn**	**12 25 16.7**	**-0.6**
SLBB	**Yuanshan**	**0.86**	**358**	*eP*	Pn	12 25 15.9	-1.7
WJS	**Zhushan**	**0.87**	**266**	*eP*	**Pn**	**12 25 18.1**	**+0.4**
ALS	**Alishan**	**0.88**	**245**	*eP*	**Pn**	**12 25 18.2**	**0.0**
NWLT	**Wulai**	**0.90**	**350**	*eP*	**Pn**	**12 25 17.0**	**-1.1**
NWLT	baz=352			*eS*	**Sn**	**12 25 28.8**	**-1.1**
WNT	**Mingjian**	**0.91**	**269**	*eP*	**Pn**	**12 25 18.6**	**+0.4**
WNT	baz=267			*eS*	**Sn**	**12 25 30.8**	**+0.7**
ELDTW	**Lidau**	**0.92**	**221**	P	**Pn**	**12 25 17.8**	**-0.8**
ELDTW	baz=217			S	**Sn**	**12 25 29.7**	**-1.0**
TCU	**Taichung**	**0.95**	**286**	*eP*	**Pn**	**12 25 19.5**	**+0.7**
TCU	baz=285			*eS*	**Sn**	**12 25 32.4**	**+1.2**
CHN5	**Tsauling**	**0.96**	**252**	*eP*	**Pn**	**12 25 19.3**	**+0.3**
CHN5	baz=250			*eS*	**Sn**	**12 25 33.0**	**+1.5**
NSTT	**Nanjuang**	**0.96**	**320**	*eP*	**Pn**	**12 25 19.4**	**+0.4**
NSTT	baz=321			*eS*	**Sn**	**12 25 31.4**	**0.0**
LIOB	**Emei**	**0.96**	**321**	*eP*	**Pn**	**12 25 19.6**	**+0.5**
LIOB	baz=322			*eS*	**Sn**	**12 25 31.9**	**+0.4**
NTC	**Toucheng**	**0.97**	**8**	*eP*	**Pn**	**12 25 19.6**	**+0.6**
NTC	baz=11			*eS*	**Sn**	**12 25 33.5**	**+1.9**
EGS		**0.98**	**14**	*eP*	**Pn**	**12 25 19.3**	**+0.1**
NSY	**Sanyi**	**0.99**	**302**	*eP*	**Pn**	**12 25 19.3**	**0.0**
NSY	baz=302			*eS*	**Sn**	**12 25 33.2**	**+1.2**
WLTB	**Daxi**	**1.03**	**338**	*eP*	**Pn**	**12 25 20.2**	**+0.3**
WLTB	baz=339			*eS*	**Sn**	**12 25 34.8**	**+1.7**
NMLH	**Miaoli**	**1.03**	**309**	*eP*	**Pn**	**12 25 19.6**	**-0.3**
NMLH	baz=309			*eS*	**Sn**	**12 25 33.4**	**+0.2**
NHDH	**Xindian Distri**	**1.08**	**353**	*eP*	**Pn**	**12 25 20.3**	**-0.2**
TIPB	**Shuangxi**	**1.08**	**7**	*eP*	**Pn**	**12 25 21.0**	**+0.3**
TIPB	baz=9.0			*eS*	**Sn**	**12 25 36.4**	**+1.9**
TWA	**Mucha**	**1.09**	**356**	*eP*	**Pn**	**12 25 20.0**	**-0.7**
TWA	baz=358			*eS*	**Sn**	**12 25 34.9**	**+0.3**
TATO	**Taipei**	**1.09**	**351**	*eP*	**Pn**	**12 25 20.1**	**-0.7**
STYT	**Tauyuan**	**1.11**	**230**	*eP*	**Pn**	**12 25 21.4**	**+0.3**
TPUB	**Ta-pu**	**1.13**	**239**	*eP*	**Pn**	**12 25 21.7**	**+0.5**
	baz=236						

CHN4	**Tsaushan**	**1.13**	**242**	*e*P		**Pn**	**12 25 22.0**	**+0.7**
	baz=239								
CHN4				e	S	**Sn**	**12 25 38.1**	**+2.5**
	baz=239								
WTP	**Ta-pu**	**1.17**	**237**	*e*P		**Pn**	**12 25 22.7**	**+0.8**
	baz=234								
NWF	**Wu-fen Shan**	**1.18**	**5**	*e*P		**Pn**	**12 25 22.0**	**0.0**
	baz=6.0								
NWF				e	S	**Sn**	**12 25 37.8**	**+0.8**
	baz=6.0								
WFSB	**Wu-fen Shan**	**1.18**	**5**	*e*P		**Pn**	**12 25 22.1**	**+0.1**
	baz=6.0								
WFSB				e	S	**Sn**	**12 25 39.6**	**+2.8**
	baz=6.0								
TWH	**Lutao**	**1.19**	**189**	*e*P		**Pn**	**12 25 20.8**	**-1.3**
	baz=186								
TWGBT	**Beinan**	**1.20**	**207**	*e*P		Pn	12 25 20.7	-1.5
	baz=204								
TWG	**Pinlang**	**1.20**	**208**	*e*P		Pn	12 25 20.5	-1.8
	baz=204								
RLNB	**Erlin**	**1.21**	**270**	*e*S		**Sn**	**12 25 39.2**	**+1.9**
	baz=268								
TWS1	**Kuangyinshan**	**1.23**	**349**	*e*S		**Sn**	**12 25 40.2**	**+2.3**
	baz=351								
TWK	**Hsinying**	**1.25**	**241**	*e*P		**Pn**	**12 25 23.7**	**+0.6**
	baz=238								
YM10	**YM10**	**1.26**	**355**	*e*P		**Pn**	**12 25 22.6**	**-0.6**
	baz=357								
CHN1	**Nanshi**	**1.27**	**237**	*e*P		**Pn**	**12 25 24.6**	**+1.4**
	baz=234								
SNST	**Tainan City**	**1.27**	**239**	*e*P		**Pn**	**12 25 24.8**	**+1.6**
	baz=236								
YM05	**YM05**	**1.27**	**355**	*e*P		**Pn**	**12 25 22.1**	**-1.2**
	baz=357								
SGST	**Jiashian**	**1.29**	**232**	*e*P		**Pn**	**12 25 23.2**	**-0.3**
	baz=228								
SLGT	**Liugui**	**1.30**	**227**	*e*P		**Pn**	**12 25 24.5**	**+0.9**
	baz=224								
YOJ	**Yonaguni jima**	**1.34**	**65**	S		**Sn**	**12 25 40.0**	**-0.8**
ECL	**Taimali**	**1.45**	**207**	*e*P		**Pn**	**12 25 24.5**	**-1.1**
	baz=205								
SSD	**Sandimen**	**1.49**	**220**	*e*P		**Pn**	**12 25 27.0**	**+0.8**
	baz=218								
MASBT	**Mashibuluo**	**1.59**	**217**	*e*P		**Pn**	**12 25 27.8**	**+0.2**
	baz=215								
MASBT				e	S	**Sn**	**12 25 48.7**	**+1.7**
	baz=215								
EAST	**Anshuo**	**1.68**	**207**	*e*P		**Pn**	**12 25 30.2**	**+1.3**
	baz=205								
SCZT	**Fangliau**	**1.80**	**213**	*e*P		**Pn**	**12 25 32.4**	**+2.0**
	baz=210								
IRIF	**Iriomote-Funau**	**1.93**	**76**	P		**Pn**	**12 25 32.3**	**+0.1**
IRIF				e	S	**Sn**	**12 25 54.9**	**-0.3**
HATJ	**Hateruma jima**	**1.95**	**85**	P		**Pn**	**12 25 33.7**	**+1.1**
HATJ				S		**Sn**	**12 25 56.2**	**+0.3**
JKRS	**Kuro-shima**	**2.16**	**80**	P		**Pn**	**12 25 35.8**	**+0.4**
JKRS				e	S	**Sn**	**12 26 01.8**	**+0.8**
JIJ	**Ishigaki jima**	**2.30**	**78**	P		**Pn**	**12 25 36.9**	**-0.5**
JIJ				e	S	**Sn**	**12 26 02.9**	**-1.6**
JISG	**Ishigakijimahi**	**2.50**	**73**	P		**Pn**	**12 25 39.7**	**-0.4**
JISG				e	S	**Sn**	**12 26 07.6**	**-1.8**
JTJ	**Tarama**	**2.86**	**74**	P		**Pn**	**12 25 44.8**	**-0.3**
JTJ				S		**Sn**	**12 26 18.1**	**-0.2**

IDC 19 12:31:10.0±2.0, 0°.97N×125°.37E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/34, mbtmp3.3/3, Error ellipse: s-maj=190.8km s-min=25.9km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.57**	**158**	P	P	12 36 10.2	-1.9
	0.4nm,0.3s,baz=335,slow=11,SNR=4.6						
ASAR	**Alice Springs**	**25.86**	**162**	P	P	12 36 44.8	+1.3
	0.4nm,0.7s,baz=350,slow=15,SNR=12						
MKAR	**Makanchi Array**	**59.07**	**327**	P	P	12 41 11.9	-0.2
	0.1nm,0.3s,baz=132,slow=7.1,SNR=5.4						

*TRN **19** 12:31:17.8, 10°.81N×62°.71W, h24km, MD3.0*
*FUNV **19** 12:31:20.8, 10°.35N×62°.52W, h5km, MW2.7*
ISC 19 12:31:18.5±1.6, 10°.59N±0°.07×62°.62W±0°.04, h3km±13km, n8, σ0°78/15, 2C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.39**	**81**	*e*P		**Pb**	**12 31 28.7**	**+0.6**
GUIV				e	S	**Sb**	**12 31 35.7**	**+1.1**
GUIV	**Guiria**	**0.39**	**81**	*e*P		**Pb**	**12 31 28.8**	**+0.6**
GUIV				e	S	**Sb**	**12 31 35.0**	**+0.3**
GUNV	**Guanoco**	**0.53**	**217**	*i*P		**Pg**	**12 31 29.0**	**+0.3**
GUNV				e	S	**Sg**	**12 31 36.2**	**+0.7**
CRUV	**Carupano**	**0.61**	**278**	*e*P		**Pn**	**12 31 34.2**	**+0.1**
CRUV				e	S	**Sn**	**12 31 44.8**	**+0.3**
TRN	**Trinidad (W)**	**1.20**	**87**	*e*P		**Pg**	**12 31 40.1**	**-1.4**
TRN				e	S	**Sb**	**12 31 58.0**	**+0.3**
ORIV	**Oritupano**	**1.70**	**207**	*e*P		**Pn**	**12 31 49.0**	**0.0**
ORIV				e	S	**Sn**	**12 32 11.1**	**-0.2**
ORIV	**Oritupano**	**1.70**	**207**	*e*P		**Pn**	**12 31 48.8**	**-0.2**
ORIV				e	S	**Sn**	**12 32 10.1**	**-1.2**
PCRV	**Puerto La Cruz**	**2.03**	**259**	*e*P		**Pb**	**12 31 55.3**	**-0.7**

*IDC **19** 12:45:02.5±0.7, 6°.76N×72°.94W, h165km±8km, mb3.3/7, mb1 3.6/11, mb1mx3.3/35, mbtmp3.9/11, Error ellipse: s-maj=22.7km s-min=7.2km az=133.0*
*RSNC **19** 12:45:02.8±1.0, 6°.81N×73°.12W, h153km±4km, ML3.9, Mw3.8*
*FUNV **19** 12:45:02.5, 6°.82N×73°.13W, h163km, MW3.6*
*NEIC **19** 12:45:02.4±1.6, 6°.85N±0°.08×73°.02W±0°.06, h152km±7km, Error ellipse: s-maj=14.1km s-min=3.7km az=146.0*
ISC 19 12:45:02.5±0.6, 6°.85N±0°.03×73°.07W±0°.03, h156km±5km, n94, σ1°66/141, mb4.0/14, 9C-12D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.28**	**203**	*i*P	P	**12 45 23.5**	**-0.6**
BARC				e	S	**Sn**	**12 45 38.6**	**-1.8**
BARC				*i*		12 45 41.0	
	comp=Z,2μm,0.3s						
PAMC	**Pamplona, Colo**	**0.61**	**37**	*i*P		**Pn**	**12 45 26.2**	**+0.5**
PAMC				e	S	**Sn**	**12 45 43.6**	**+0.2**
PAMC				*i*		12 45 45.5	
	comp=Z,2μm,0.5s						
BRRC	**Barranca, Sant**	**0.69**	**292**	*i* P		**Pn**	**12 45 25.2**	**-0.3**
BRRC				e	S	**Sn**	**12 45 42.8**	**-0.4**
BRRC				*i*		12 45 45.8	
	comp=Z,748nm,0.4s						
BRRC				*i*		12 45 46.3	
	comp=Z,878nm,0.1s						
RUSC	**La Rusia**	**0.96**	**181**	*i*P		**Pn**	**12 45 27.3**	**-0.8**
RUSC				e	S	**Sn**	**12 45 46.0**	**-1.6**
RUSC				*i*		12 45 48.5	
	comp=Z,1μm,0.5s						
RUSC	**La Rusia**	**0.96**	**181**	*e*P		**Pn**	**12 45 27.0**	**-1.1**
RUSC				e	S	**Sn**	**12 45 46.1**	**-1.6**
RUSC	**La Rusia**	**0.96**	**181**			**Pn**	**12 45 27.2**	**-0.9**
RUSC					Sn	**Sn**	**12 45 45.1**	**-2.5**
TAMC	**Tame, Arauca**	**1.34**	**108**	*i*P		**Pn**	**12 45 31.6**	**+0.7**
TAMC				e	S	**Sn**	**12 45 53.2**	**+0.5**
TAMC				*i*		12 46 02.5	
	comp=Z,234nm,0.8s						
OCAC	**Ocana**	**1.40**	**350**	*e*P		**Pn**	**12 45 31.6**	**-0.1**
OCAC				e	S	**Sn**	**12 45 53.4**	**-0.8**
OCAC				*i*		12 45 57.9	
	comp=Z,899nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.41**	**257**	*i*P		**Pn**	**12 45 29.9**	**-1.8**
PTBC				e	S	**Sn**	**12 45 51.0**	**-3.0**
PTBC				*i*		12 45 52.9	
	comp=Z,993nm,0.3s						
SPBC	**San Pablo de B**	**1.56**	**220**	*i*P		**Pn**	**12 45 32.2**	**-1.0**
SPBC				e	S	**Sn**	**12 45 54.6**	**-2.2**
SPBC				*i*		12 45 59.9	
	comp=Z,2μm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.89**	**290**	*e*P		**Pn**	**12 45 35.8**	**-0.9**
ZARC				e	S	**Sn**	**12 46 01.6**	**-1.4**
ZARC				*i*		12 46 08.1	
	comp=Z,729nm,0.5s						
ZARC				*i*		12 46 10.0	
	comp=Z,727nm,0.3s						
SMLC	**San Martn de**	**2.17**	**333**	*e*P		**Pn**	**12 45 39.7**	**-0.3**
SMLC				e	S	**Sn**	**12 46 08.2**	**-0.8**
SMLC				*i*		12 46 11.3	
	comp=Z,1μm,0.1s						
NORC	**Norcasia**	**2.20**	**234**	*i*P		**Pn**	**12 45 39.0**	**-1.4**
NORC				e	S	**Sn**	**12 46 07.7**	**-1.9**
NORC				*i*		12 46 11.7	
	comp=Z,706nm,0.2s						
NORC				*i*		12 46 12.7	
	comp=Z,653nm,0.3s						
CHIC	**Chingaza**	**2.31**	**197**	*i*P		**Pn**	**12 45 41.1**	**-1.0**
CHIC				e	S	**Sn**	**12 46 10.6**	**-1.9**
CHIC				*i*		12 46 15.9	
	comp=Z,344nm,0.6s						
ROSC	**El Rosal**	**2.36**	**212**	P		**Pn**	**12 45 43.6**	**+1.0**
	comp=Z,176nm,0.3s,baz=192,slow=0.9,SNR=153						
ROSC				S		**Sn**	**12 46 14.6**	**+1.0**
	comp=Z,224nm,0.3s,baz=179,slow=23,SNR=22						
ROSC	**El Rosal**	**2.36**	**212**	*i*P		**Pn**	**12 45 43.0**	**+0.4**
ROSC				e	S	**Sn**	**12 46 15.2**	**+1.7**
ROSC				*i*		12 46 18.4	
	comp=Z,678nm,0.6s						
ROSC	**El Rosal**	**2.36**	**212**			**Pn**	**12 45 42.9**	**+0.3**
ROSC					Sn	**Sn**	**12 46 15.1**	**+1.7**
CVER	**Cruz Verde, Cu**	**2.52**	**203**	*e*P		**Pn**	**12 45 43.6**	**-1.2**
HELC	**Santa Helena**	**2.53**	**255**	*e*P		**Pn**	**12 45 44.2**	**-0.5**
HELC				e	S	**Sn**	**12 46 15.8**	**-1.3**
HELC				*i*		12 46 21.7	
	comp=Z,496nm,0.3s						
HELC				*i*		12 46 21.7	
	comp=Z,414nm,0.3s						
HELC	**Santa Helena**	**2.53**	**255**	*e*P		**Pn**	**12 45 43.4**	**-1.3**
HELC				e	S	**Sn**	**12 46 14.4**	**-2.8**
VIGV	**El Vigia**	**2.60**	**40**	*e*P		**Pn**	**12 45 45.7**	**+0.5**
VIGV				e	S	**Sn**	**12 46 17.0**	**-1.2**
URCC	**San Jos de Ur**	**2.60**	**290**	*e*P		**Pn**	**12 45 43.2**	**-2.0**
URCC				e	S	**Sn**	**12 46 14.3**	**-3.8**
URCC				*i*		12 46 26.8	
	comp=Z,381nm,0.2s						
SOCV	**Socops**	**2.61**	**57**	*e*P		**Pn**	**12 45 45.5**	**+0.2**
SOCV				e	S	**Sn**	**12 46 17.2**	**-1.2**
VILC	**Villavicencio,**	**2.79**	**193**	*e*P		**Pn**	**12 45 46.5**	**-1.3**
VILC				e	S	**Sn**	**12 46 21.0**	**-1.7**
VILC				*i*		12 46 36.1	
	comp=Z,415nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.80**	**161**	*i*P		**Pn**	**12 45 46.3**	**-1.4**
PTGC				e	S	**Sn**	**12 46 19.6**	**-3.0**
PTGC				*i*		12 46 21.9	
	comp=Z,284nm,0.4s						
GUY2C	**Guyana, Caldas**	**2.80**	**235**	*e*P		**Pn**	**12 45 47.3**	**-0.8**
GUY2C				e	S	**Sn**	**12 46 21.4**	**-1.8**
GUY2C				*i*		12 46 28.8	
	comp=Z,489nm,0.7s						
GUY2C				*i*		12 46 28.8	
	comp=Z,473nm,0.3s						
RREF	**El Recreo**	**2.98**	**230**	*e*P		**Pn**	**12 45 50.1**	**-0.4**
RREF				e	S	**Sn**	**12 46 26.8**	**-0.8**
RREF				*i*		12 46 34.4	
	comp=Z,652nm,0.3s						
CODC	**Agustn Codazz**	**3.08**	**353**	*i* P		**Pn**	**12 45 50.6**	**-0.6**
CODC				e	S	**Sn**	**12 46 28.5**	**-0.5**
CODC				*i*		12 46 36.1	
	comp=Z,125nm,0.4s						
CODC				*i*		12 46 36.8	
	comp=Z,176nm,0.5s						
CBOC	**Ciudad Bolivar**	**3.09**	**252**	*e*P		**Pn**	**12 45 51.1**	**-0.3**
CBOC				e	S	**Sn**	**12 46 28.0**	**-1.2**
CBOC				*i*		12 46 31.5	
	comp=Z,131nm,0.2s						
DBBC	**Dabeiba**	**3.12**	**273**	*i*P		**Pn**	**12 45 50.9**	**-0.9**
DBBC				e	S	**Sn**	**12 46 26.6**	**-3.3**
DBBC				*i*		12 46 29.3	
	comp=Z,461nm,0.3s						
SDV	**Santo Domingo**	**3.15**	**50**	P		**Pn**	**12 45 52.6**	**+0.5**
	comp=Z,60nm,0.3s,baz=217,slow=5.2,SNR=392							
SDV				S		**Sn**	**12 46 30.5**	**-0.1**
	comp=Z,66nm,0.3s,baz=318,slow=5.5,SNR=31							
SDV	**Santo Domingo**	**3.15**	**50**	*e*P		**Pn**	**12 45 52.4**	**+0.2**
SDV				e	S	**Sn**	**12 46 28.8**	**-1.8**
SDV	**Santo Domingo**	**3.15**	**50**			**Pn**	**12 45 52.7**	**+0.5**
SDV					Sn	**Sn**	**12 46 29.8**	**-0.8**
ARGC	**Ariguani, Magd**	**3.20**	**339**	*e*P		**Pn**	**12 45 52.9**	**+0.2**
ARGC				e	S	**Sn**	**12 46 31.6**	**0.0**
ARGC				*i*		12 46 40.7	
	comp=Z,174nm,0.3s						
ARGC				*i*		12 46 40.7	
	comp=Z,176nm,0.3s						
ELOV	**Elorza**	**3.56**	**87**	*i*P		**Pn**	**12 45 57.3**	**0.0**
ELOV	**Elorza**	**3.56**	**87**	*e*P		**Pn**	**12 45 57.3**	**0.0**
ELOV				e	S	**Sn**	**12 46 37.3**	**-2.5**
ORTC	**Ortega, Tolima**	**3.64**	**217**	*e*P		**Pn**	**12 45 57.5**	**-0.9**
ORTC				e	S	**Sn**	**12 46 39.8**	**-1.9**
ORTC				*i*		12 46 46.8	
	comp=Z,241nm,0.7s						
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P		**Pn**	**12 45 57.2**	**-1.6**
SJCC				e	S	**Sn**	**12 46 38.7**	**-3.8**
SJCC				*i*		12 46 42.5	
	comp=Z,170nm,0.8s						
PLMC	**San Jos del P**	**3.74**	**239**	*e*P		**Pn**	**12 45 59.1**	**-0.5**
PLMC				e	S	**Sn**	**12 46 42.9**	**-1.1**
PLMC				*i*		12 46 47.5	
	comp=Z,243nm,0.2s						
QARV	**Quebrada Arrib**	**4.17**	**37**	*i*P		**Pn**	**12 46 05.6**	**+0.3**
QARV				e	S	**Sn**	**12 46 51.1**	**-3.1**
GUVC	**San Jose del G**	**4.30**	**174**	*e*P		**Pn**	**12 46 05.5**	**-1.5**
GUVC				e	S	**Sn**	**12 46 54.3**	**-2.8**
GUVC				*i*		12 46 58.4	
	comp=Z,197nm,0.4s						
YOTC	**Yotoco, Valle**	**4.33**	**229**	*e*P		**Pn**	**12 46 05.9**	**-1.5**
YOTC				e	S	**Sn**	**12 46 55.8**	**-2.1**
YOTC				*i*		12 47 09.5	
	comp=Z,32nm,0.6s						
CURV	**Curarigua**	**4.39**	**44**	*e*P		**Pn**	**12 46 07.9**	**-0.3**
CURV				e	S	**Sn**	**12 46 56.0**	**-3.4**
SMRC	**Santa Marta, M**	**4.43**	**345**	*e*P		**Pn**	**12 46 08.0**	**-0.6**
SMRC				e	S	**Sn**	**12 46 56.4**	**-3.7**
SMRC				*i*		12 47 01.8	
	comp=Z,126nm,0.2s						
DABV	**Dabajuro**	**4.70**	**31**	*e*P		**Pn**	**12 46 12.0**	**-0.1**
DABV				e	S	**Sn**	**12 47 02.2**	**-4.3**
MACC	**Macarena, Meta**	**4.74**	**189**	*e*P		**Pn**	**12 46 10.2**	**-2.5**
MACC				e	S	**Sn**	**12 47 01.7**	**-5.8**
MACC				*i*		12 47 06.8	
	comp=Z,82nm,0.9s						
TEPV	**Terepaima**	**4.92**	**51**	*e*P		**Pn**	**12 46 14.8**	**-0.3**
URIC	**Uribia, Colomb**	**4.93**	**12**			**Pn**	**12 46 13.5**	**-1.7**
SIQV	**Siquisique**	**4.96**	**40**	*e*P		**Pn**	**12 46 14.8**	**-0.8**
BAUV	**El Baul**	**5.39**	**67**	*e*P		**Pn**	**12 46 19.1**	**-2.1**
BAUV	**El Baul**	**5.39**	**67**	*e*P		**Pn**	**12 46 19.1**	**-2.1**
BAUV				e	S	**Sn**	**12 47 18.1**	**-4.7**
MAPV	**Macapo**	**5.44**	**57**	*e*P		**Pn**	**12 46 21.1**	**-0.8**
MAPV				e	S	**Sn**	**12 47 19.2**	**-4.7**
PAYV	**Puerto Ayacuch**	**5.57**	**105**	*i*P		**Pn**	**12 46 21.8**	**-1.8**
MONV	**Montecano**	**5.92**	**31**	*e*P		**Pn**	**12 46 27.2**	**-1.0**
TURV	**Turiamo**	**6.28**	**55**	*e*P		**Pn**	**12 46 31.9**	**-1.2**
BCIP	**Isla Barro Col**	**7.08**	**289**	Pn		**Pn**	**12 46 41.2**	**-2.6**
MERV	**Las Mercedes**	**7.12**	**70**	*e*P		**Pn**	**12 46 41.9**	**-2.3**
OTAV	**Otavalo**	**8.49**	**219**	Pn		**Pn**	**12 47 03.0**	**+0.2**
PCRV	**Puerto La Cruz**	**8.97**	**68**	P		**Pn**	**12 47 09.5**	**+0.6**
	comp=Z,1.2nm,0.3s,baz=328,slow=1.4,SNR=8.4							
PLCV	**Puerto La Cruz**	**9.01**	**68**			**Pn**	**12 47 09.5**	**+0.1**
MTDJ	**Mount Denham**	**12.11**	**339**	Pn		**Pn**	**12 47 52.7**	**+2.5**
GTBY	**Guantanamo Bay**	**13.14**	**352**			**P**	**12 48 07.0**	**-0.7**
GCPR	**Guaynabo City**	**13.27**	**30**	Pn		**Pn**	**12 48 04.6**	**-0.3**
APG	**El Apazote**	**18.89**	**297**	P		**P**	**12 49 13.9**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=141,slow=13,SNR=4.3							
TEIG	**Tepich**	**19.86**	**314**	P		**P**	**12 49 23.1**	**+1.5**
	comp=Z,12nm,1.0s,baz=308,slow=0.5,SNR=4.9							
TEIG	**Tepich**	**19.86**	**314**	P		**P**	**12 49 23.2**	**+1.7**
O54A	**Avella**	**33.83**	**350**	P		**P**	**12 51 30.3**	**+0.4**
U40A	**Yellville**	**34.49**	**331**	P		**P**	**12 51 36.3**	**+0.6**
U40A					IAmb	IAmb	12 51 49.3	
	comp=Z,5.7nm,1.5s							
CCM	**Cathedral Cave**	**35.16**	**335**	P		**P**	**12 51 42.0**	**+0.6**
CCM					IAmb	IAmb	12 51 44.4	
	comp=Z,4.4nm,1.3s							
TXAR	**Lajitas Array**	**36.48**	**312**	P		**P**	**12 51 53.0**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=127,slow=9.5,SNR=9.9							
TXAR					PcP	**PcP**	**12 54 14.2**	**+0.8**
	comp=Z,0.1nm,0.6s,baz=116,slow=6.3,SNR=2.6							
TX31	**Lajitas Ar. Si**	**36.48**	**312**	P		**P**	**12 51 53.2**	**+0.3**
TX32	**Lajitas Array**	**36.48**	**312**	P		**P**	**12 51 52.9**	**0.0**
EMMW	**East Machias**	**38.02**	**6**	P		**P**	**12 52 06.5**	**+1.0**
MNTX	**Cornudas Mount**	**38.98**	**314**	P		**P**	**12 52 14.4**	**+0.6**
E63A	**Oxbow**	**39.62**	**5**	P		**P**	**12 52 19.7**	**+0.9**
D62A	**Allapoint, All**	**40.23**	**4**	P		**P**	**12 52 24.9**	**+1.1**
D62A					IAmb	IAmb	12 52 37.2	
	comp=Z,5.3nm,1.2s							
BATG	**Bathurst New B**	**40.72**	**7**	P		**P**	**12 52 28.6**	**+0.8**
MTPU	**Mount Pierson**	**47.08**	**317**	P		**P**	**12 53 19.8**	**+0.7**
ULM	**Lac du Bonnet**	**47.27**	**340**	P		**P**	**12 53 19.0**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=135,slow=9.6,SNR=3.0							
SZCU	**Shurtz Canyon**	**47.46**	**316**	P		**P**	**12 53 22.3**	**+0.3**
PDAR	**Pinedale Array**	**48.08**	**324**	P		**P**	**12 53 26.5**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=126,slow=6.1,SNR=3.1							
PDAR	**Pinedale Array**	**48.08**	**324**	P		**P**	**12 53 26.6**	**-0.1**
SCHQ	**Schefferville**	**48.10**	**5**	P		**P**	**12 53 26.7**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=194,slow=7.5,SNR=11							
SCHQ	**Schefferville**	**48.10**	**5**	P		**P**	**12 53 26.8**	**+0.4**
SCHQ					IAmb	IAmb	12 53 26.8	
	comp=Z,12nm,1.3s							
REDW	**Red Top Meadow**	**49.20**	**324**	P		**P**	**12 53 35.7**	**+0.6**
NVAR	**Mina Array Bea**	**51.50**	**315**	P		**P**	**12 53 52.4**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=103,slow=7.5,SNR=3.1							
WVOR	**Wild Horse Val**	**53.54**	**319**	P		**P**	**12 54 07.7**	**+0.4**
WVOR					IAmb	IAmb	12 54 20.1	
	comp=Z,1.7nm,1.1s							
I07A	**Izee**	**54.88**	**320**	P		**P**	**12 54 17.2**	**+0.3**
I07A					IAmb	IAmb	12 54 32.5	
	comp=Z,3.8nm,1.5s							
PINE	**Pine Mountain**	**55.66**	**319**	P		**P**	**12 54 23.2**	**+0.5**
PINE					IAmb	IAmb	12 54 24.1	
	comp=Z,1.7nm,0.8s							
YKA	**Yellowknife Ar**	**63.25**	**340**	P		**P**	**12 55 13.6**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=134,slow=6.5,SNR=17							
DLBC	**Dease Lake**	**67.32**	**331**	P		**P**	**12 55 41.5**	**+1.0**
DLBC					IAmb	IAmb	12 55 41.8	
	comp=Z,8.0nm,1.1s							
PPLA	**Purkeypile**	**78.97**	**333**	P		**P**	**12 56 49.1**	**+0.2**
PPLA					IAmb	IAmb	12 57 05.5	
	comp=Z,11nm,1.4s							
ASAR	**Alice Springs**	**149.17**	**234**	PKPbc		**PKPdf**	**13 04 31.6**	**+2.5**
	comp=Z,0.9nm,0.7s,baz=118,slow=3.3,SNR=12							
WRA	**Warramunga Arr**	**150.40**	**241**	PKPbc		**PKPbc**	**13 04 34.8**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=109,slow=2.6,SNR=5.3							

*KRSC **19** 13:15:10.0±1.7, 49°.08N×157°.12E, h30km±23km, ML4.5*
*SKHL **19** 13:15:11.3±0.3, 49°.00N×156°.50E, h54km±5km, mb4.3/6*
*MOS **19** 13:15:12.5±0.9, 49°.19N×156°.14E, h47km, mb4.4/3, Error ellipse: s-maj=13.0km s-min=4.1km az=77.7*
*NEIC **19** 13:15:14.0±1.6, 49°.2N±0°.1×156°.1E±0°.2, h44km±8km, mb4.5/11, Error ellipse: s-maj=18.4km s-min=11.7km az=130.0*
*IDC **19** 13:15:16.2±2.7, 49°.21N×155°.98E, h59km±24km, mb3.5/14, mb1 3.6/19, mb1mx3.5/51, mbtmp3.8/19, ML4.4/3, MS3.2/2, Ms1 3.2/2, ms1mx2.6/39, Error ellipse: s-maj=22.6km s-min=13.9km az=145.0*
ISC 19 13:15:12.5±0.6, 49°.11N±0°.06×156°.25E±0°.07, h34km, n125, σ1°33/137, mb4.1/20, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.58**	**357**	*e*PN		**Pn**	**13 15 38.9**	**+0.9**
SKR				e	S	**Sb**	**13 15 58.8**	**-1.8**
SKR				pmax	pmax			
	comp=Z,261nm,0.5s							
SKR				smax	smax			
	comp=N,1μm,0.5s							
SKR				smax	smax			
	comp=E,693nm,0.2s							
SKR	**Severo-Kuril's**	**1.58**	**357**	*e*P		**Pn**	**13 15 38.4**	**+0.4**
SKR				e	S	**Sb**	**13 15 59.9**	**-0.7**
SKR	**Severo-Kuril's**	**1.58**	**357**	*e*P		**Pn**	**13 15 38.4**	**+0.4**
SKR				AMB	AMB	13 15 43.0		
	comp=E,260nm,0.5s							
SKR				e	S	**Sb**	**13 15 58.5**	**-2.1**
SKR				A	A	13 16 02.0		
	comp=E,1μm,0.5s							
SKR				A	A	13 16 02.0		
	comp=E,690nm,0.5s							
PAU	**Pauzhetka**	**2.39**	**8**	PN		**Pn**	**13 15 49.8**	**+0.7**
PAU				S		**Sn**	**13 16 18.9**	**+1.8**
PAU	**Pauzhetka**	**2.39**	**8**	*e*P		**Pn**	**13 15 49.8**	**+0.7**
PAU				e	S	**Sn**	**13 16 18.9**	**+1.8**
PAU	**Pauzhetka**	**2.39**	**8**	*e*P		**Pn**	**13 15 49.8**	**+0.7**
PAU				e	S	**Sn**	**13 16 18.9**	**+1.8**
KDTR	**Khodutka, Kamc**	**2.94**	**23**	PN		**Pn**	**13 15 56.0**	**-0.7**
KDTR	**Khodutka, Kamc**	**2.94**	**23**	*e*P		**Pn**	**13 15 56.0**	**-0.7**
ASAK	**Asacha**	**3.44**	**17**	PN		**Pn**	**13 16 04.5**	**+0.8**
ASAK				S		**Sn**	**13 16 44.7**	**+1.5**
ASAK	**Asacha**	**3.44**	**17**	*e*P		**Pn**	**13 16 04.5**	**+0.8**
ASAK				e	S	**Sn**	**13 16 44.7**	**+1.

SHO	**Shikotan**	**8.35**	**235**	PN	**Pn**	**13 17 13.2**	**+2.2**
SHO				pmax	pmax		
	comp=N,15nm,0.7s						
SHO				pmax	pmax		
	comp=Z,17nm,0.7s						
SHO				pmax	pmax		
	comp=E,5.0nm,0.2s						
SHO	**Shikotan**	**8.35**	**235**	*eP*	**Pn**	**13 17 12.0**	**+1.0**
SHO				AMB	AMB	13 17 14.5	
	comp=E,10.0nm,0.7s						
SHO				*eS*	**Sn**	**13 18 40.9**	**-3.1**
TYV	**Tymovskoe**	**8.94**	**286**	*eP*	**Pn**	**13 17 22.2**	**+3.2**
TYV				AMB	AMB	13 17 24.8	
	comp=E,10.0nm,0.8s						
NMR	**Nemuro--Hokkai**	**9.28**	**236**	*eP*	**Pn**	**13 17 23.5**	**-0.2**
YSS	**Yuzh-Sakhalins**	**9.30**	**262**	*e*PN	Pn	13 17 40.9	+17
YSS				MLR	MLR		
	comp=Z,100nm,15.0s						
YSS	**Yuzh-Sakhalins**	**9.30**	**262**	*eP*	**Pn**	**13 17 26.1**	**+2.1**
JKA	**Kamikawa-asahi**	**10.63**	**247**	*eP*	**Pn**	**13 17 44.5**	**+2.2**
JKA	**Kamikawa-asahi**	**10.63**	**247**		**Pn**	**13 17 44.5**	**+2.2**
ASAJ	**Asahikawa**	**10.64**	**247**	P	**Pn**	**13 17 44.5**	**+2.2**
	comp=Z,2.2nm,0.3s,baz=74,slow=14,SNR=20						
MA2	**Magadan**	**10.96**	**345**	P	**Pn**	**13 17 49.0**	**+2.4**
	comp=Z,0.5nm,0.3s,baz=151,slow=13,SNR=4.7						
MA2	**Magadan**	**10.96**	**345**	Pn	**Pn**	**13 17 46.3**	**-0.3**
ERM	**Erimo**	**11.59**	**237**	PN	**Pn**	**13 17 54.9**	**-0.5**
ERM	**Erimo**	**11.59**	**237**	Pn	**Pn**	**13 17 54.9**	**-0.5**
EKMR	**Ekimchan**	**15.15**	**294**	*eP*	**Pn**	**13 18 43.1**	**-0.6**
EKMR				AMB	AMB	13 18 54.9	
	comp=Z,4.0nm,0.8s						
KLR	**Kul'dur**	**16.01**	**280**	P	**P**	**13 18 57.0**	**-1.1**
KLR	**Kul'dur**	**16.01**	**280**	P	**P**	**13 18 57.0**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=100,slow=16,SNR=2.2						
BMKR	**Bomnak**	**17.75**	**299**	*eP*	**Pn**	**13 19 15.2**	**-1.4**
KROS	**Kirovskiy**	**18.81**	**298**	*eP*	**Pn**	**13 19 31.4**	**+1.9**
BILL	**Bilibino**	**19.64**	**11**	P	**Pn**	**13 19 39.8**	**+0.4**
BILL				pmax	pmax		
	comp=Z,16nm,1.8s						
BILL	**Bilibino**	**19.64**	**11**	*eP*	**Pn**	**13 19 39.8**	**+0.4**
BILL	**Bilibino**	**19.64**	**11**	P	**Pn**	**13 19 39.8**	**+0.4**
YAK	**Yakutsk**	**19.64**	**321**	P	**P**	**13 19 36.8**	**-1.1**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YAK	**Yakutsk**	**19.64**	**321**	P	**P**	**13 19 37.0**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=85,slow=2.7,SNR=3.7						
YAK	**Yakutsk**	**19.64**	**321**	P	**P**	**13 19 36.8**	**-1.1**
KSRS	**Korea Array**	**23.54**	**251**	P	**P**	**13 20 19.9**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=44,slow=10,SNR=4.4						
KSRS				LR	LR	13 29 01.4	
	comp=Z,34nm,18.7s,baz=112,slow=35						
H11N2	**WAKE ISLAND Hy**	**30.53**	**160**	T	T	13 54 32.7	
	baz=344						
H11N1	**WAKE ISLAND Hy**	**30.55**	**160**	T	T	13 54 03.9	
	baz=344						
H11N3	**WAKE ISLAND Hy**	**30.55**	**160**	T	T	13 54 23.8	
	baz=344						
H11S1	**WAKE ISLAND Hy**	**31.67**	**161**	T	T	13 55 48.8	
	baz=347,slow=76,SNR=26						
H11S3	**WAKE ISLAND Hy**	**31.68**	**161**	T	T	13 55 49.7	
	baz=347,slow=76,SNR=38						
H11S2	**WAKE ISLAND Hy**	**31.69**	**161**	T	T	13 55 50.2	
	baz=347,slow=76,SNR=19						
NEA	**Nenana**	**32.44**	**41**	P	**P**	**13 21 38.3**	**-0.6**
NEA				IAmb	IAmb	13 22 03.9	
	comp=Z,22nm,2.0s						
GHO	**Glory Hole Cre**	**32.53**	**46**	P	**P**	**13 21 40.6**	**+0.8**
ILAR	**Eielson Array**	**33.38**	**41**	P	**P**	**13 21 49.1**	**+1.9**
	comp=Z,0.1nm,0.5s,baz=255,slow=5.5,SNR=2.9						
BMAR	**Burnt Mountain**	**34.37**	**36**	P	**P**	**13 21 57.3**	**+1.5**
DOT	**Dot Lake**	**34.66**	**43**	P	**P**	**13 21 58.0**	**-0.2**
BCAR	**Beaver Creek A**	**35.73**	**43**	P	**P**	**13 22 08.3**	**+0.7**
INK	**Inuvik**	**38.52**	**34**	P	**P**	**13 22 32.4**	**+1.4**
	comp=Z,1.5nm,1.0s,baz=302,slow=6.1,SNR=4.5						
INK	**Inuvik**	**38.52**	**34**	IAmb	IAmb	13 22 37.2	
	comp=Z,15nm,1.8s						
MK31	**Makanchi Array**	**47.75**	**297**	P	**P**	**13 23 44.8**	**-1.1**
MK31				pmax	pmax		
	comp=Z,7.0nm,2.0s						
MK31	**Makanchi Array**	**47.75**	**297**	P	**P**	**13 23 44.8**	**-1.1**
MK31				IAmb	IAmb	13 24 14.6	
	comp=Z,7.4nm,1.9s						
MKAR	**Makanchi Array**	**47.75**	**297**	P	**P**	**13 23 44.7**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=66,slow=7.1,SNR=9.6						
MKAR				LR	LR	13 44 58.7	
	comp=Z,48nm,19.1s,baz=54,slow=38						
YKA	**Yellowknife Ar**	**47.76**	**39**	P	**P**	**13 23 46.3**	**+0.6**
	comp=Z,0.4nm,0.8s,baz=291,slow=7.3,SNR=4.1						
KURK	**Kurchatov**	**47.83**	**303**	P	**P**	**13 23 44.7**	**-1.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	**Kurchatov**	**47.83**	**303**	P	**P**	**13 23 44.7**	**-1.7**
KURK				IAmb	IAmb	13 23 45.7	
	comp=Z,1.9nm,0.9s						
MAKZ	**Makanchi**	**47.92**	**297**	P	**P**	**13 23 46.2**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
MAKZ	**Makanchi**	**47.92**	**297**	P	**P**	**13 23 46.2**	**-1.0**
MAKZ				IAmb	IAmb	13 24 33.2	
	comp=Z,4.4nm,1.5s						
SPITS	**Spitsbergen Ar**	**50.66**	**350**	P	**P**	**13 24 07.1**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=60,slow=8.5,SNR=5.8						
ARU	**Arti**	**54.70**	**318**	P	**P**	**13 24 36.5**	**-1.3**
ARU	**Arti**	**54.70**	**318**	P	**P**	**13 24 36.5**	**-1.3**
ARU				IAmb	IAmb	13 24 37.5	
	comp=Z,4.7nm,0.7s						
YBH	**Yreka Blue Hor**	**54.79**	**65**	P	**P**	**13 24 41.4**	**+2.5**
	comp=Z,0.7nm,0.4s,baz=252,slow=14,SNR=4.2						
CMAR	**Chiang Mai Arr**	**54.97**	**257**	P	**P**	**13 24 41.2**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=30,slow=8.0,SNR=4.8						
ARCES	**ARCESS Array B**	**56.30**	**341**	P	**P**	**13 24 49.8**	**+0.6**
	comp=Z,3.0nm,1.0s,baz=38,slow=10,SNR=4.9						
ABKAR	**Akbulak array**	**58.52**	**310**	P	**P**	**13 25 04.1**	**-1.0**
ABKAR				IAmb	IAmb	13 26 05.1	
	comp=Z,10nm,1.9s						
FINES	**FINESS Array B**	**62.78**	**336**	P	**P**	**13 25 32.8**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=46,slow=9.9,SNR=3.7						
TXAR	**Lajitas Array**	**74.52**	**63**	P	**P**	**13 26 48.2**	**+0.5**
TXAR	**Lajitas Array**	**74.52**	**63**	P	**P**	**13 26 50.0**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=344,slow=3.0,SNR=3.6						
TXAR	**Lajitas Array**	**74.52**	**63**	P	**P**	**13 26 48.1**	**+0.5**
ASAR	**Alice Springs**	**75.15**	**201**	P	**P**	**13 26 51.2**	**+0.1**
	comp=Z,0.2nm,0.8s,baz=14,slow=6.2,SNR=2.9						
KHC	**Kasperske Hory**	**76.99**	**336**	*eP*	**P**	**13 27 01.5**	**+0.1**
KHC	**Kasperske Hory**	**76.99**	**336**	*eP*	**P**	**13 27 01.5**	**+0.1**
GERES	**GERESS Array B**	**77.22**	**336**	P	**P**	**13 27 02.5**	**-0.3**
GERES	**GERESS Array B**	**77.22**	**336**	P	**P**	**13 27 03.0**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=52,slow=5.2,SNR=7.4						
GERES	**GERESS Array B**	**77.22**	**336**	P	**P**	**13 27 02.5**	**-0.3**
BRTR	**Keskin Array B**	**78.07**	**318**	P	**P**	**13 27 07.5**	**-0.3**
BRTR	**Keskin Array B**	**78.07**	**318**	P	**P**	**13 27 08.1**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=63,slow=3.4,SNR=7.4						
BRTR	**Keskin Array B**	**78.07**	**318**	P	**P**	**13 27 07.5**	**-0.3**

IDC ***19*** *13:17:35.8±0.7,0,51.56N×177.91W,h0km,mb3.2/4, mb1 3.7/5,mb1mx3.3/49,mbtmp3.4/5,ML4.0/1,Error ellipse: s-maj=134.2km s-min=67.4km az=96.0*

NEIC ***19*** *13:17:49.7±1.2,52.0N±0.3×177.6W±0.1,h96km±6km, Error ellipse: s-maj=37.2km s-min=7.9km az=169.0*

AEIC ***19*** *13:17:49.9±1.8,52.0N±0.2×177.6W±0.1,h87km±6km, ML3.5/30,mb3.6/19(NEIC),Error ellipse: s-maj=27.8km s-min=7.0km az=165.0*

ISC 19 13:17:49.4±0.8,52.1N±0.2×177.64W±0.06,h93km±9km, n54,σ1§16/54,mb3.4/5,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAFP	**Tanaga Falls P**	**0.29**	**226**		**Pn**	**13 18 03.4**	**+0.2**
TAFP					**Sn**	**13 18 14.2**	**+0.8**
TAPA	**Tanaga Point A**	**0.31**	**200**		**Pn**	**13 18 03.2**	**-0.1**
TAPA					**Sn**	**13 18 13.4**	**-0.1**
KICM	**Kanaga Island**	**0.33**	**123**		**Pn**	**13 18 03.7**	**+0.3**
TANO	**Tanaga North**	**0.35**	**238**		**Pn**	**13 18 04.0**	**+0.6**
TASE	**Tanaga Southea**	**0.36**	**222**		**Pn**	**13 18 03.8**	**+0.2**
KIKV	**Kanaga Island**	**0.37**	**127**		**Pn**	**13 18 03.8**	**+0.3**
KIKV					**Sn**	**13 18 15.0**	**+0.9**
KIWB	**Kanaga Island**	**0.39**	**129**		**Pn**	**13 18 03.8**	**+0.1**
KIRH	**Kanaga Island**	**0.40**	**121**		**Pn**	**13 18 04.2**	**+0.5**
KIMD	**Kanaga Island**	**0.42**	**143**		**Pn**	**13 18 03.6**	**-0.3**
KIMD					**Sn**	**13 18 14.0**	**-0.7**
ADK	**Adak**	**0.63**	**110**		**Pn**	**13 18 05.7**	**+0.2**
ADAG	**Mount Adagdak**	**0.66**	**100**		**Pn**	**13 18 06.1**	**+0.4**
GAEA	**Gareloi East**	**0.76**	**245**		**Pn**	**13 18 06.9**	**+0.2**
GSTD	**Great Sitkin T**	**0.93**	**92**		**Pn**	**13 18 08.7**	**+0.2**
GSTD					**Sn**	**13 18 23.8**	**+0.9**
GSTR	**Great Sitkin T**	**0.98**	**90**	Pn	**Pn**	**13 18 09.3**	**+0.3**
GSMY	**Great Sitkin M**	**0.98**	**93**		**Pn**	**13 18 09.4**	**+0.3**
GSMY					**Sn**	**13 18 24.7**	**+0.8**
GSIG	**Igitkin Island**	**1.07**	**96**		**Pn**	**13 18 10.2**	**+0.2**
KOWE	**Korovin West**	**2.10**	**81**		**Pn**	**13 18 23.6**	**+0.6**
ATKA	**Atka Island**	**2.13**	**86**		**Pn**	**13 18 23.4**	**+0.2**
ATKA	**Atka Island**	**2.13**	**86**		**Sn**	**13 18 50.2**	**+1.0**
KOKL	**Mount Kliuchef**	**2.13**	**83**		**Pn**	**13 18 24.1**	**+0.7**
KOFP	**Korovin Flat P**	**2.19**	**84**		**Pn**	**13 18 25.0**	**+0.9**
MSW	**Makushin Switc**	**6.80**	**70**		**Pn**	**13 19 28.7**	**+2.3**
MREP	**Makushin Rep't**	**6.80**	**71**		**Pn**	**13 19 28.8**	**+2.3**
UNV	**Unalaska Valle**	**6.95**	**71**		**Pn**	**13 19 30.4**	**+2.0**
KDAK	**Kodiak Island**	**15.43**	**59**	P	**Pn**	**13 21 19.7**	**-1.8**
KDAK	**Kodiak Island**	**15.43**	**59**	Pn	**Pn**	**13 21 19.7**	**-1.8**
	0.5nm,0.3s,baz=246,slow=3.0,SNR=14						
KDAK					**Sn**	**13 24 06.4**	**-5.2**
	0.0nm,0.3s,baz=306,slow=18,SNR=2.7						
SKT	**Skwentna**	**17.18**	**45**		**P**	**13 21 45.7**	**+2.2**
SKT				IAmb	IAmb	13 21 47.2	
	comp=Z,6.9nm,1.2s						
SEW	**Seward**	**17.53**	**52**	P	**Pn**	**13 21 47.8**	**+0.4**
KTH	**Kantishna Hill**	**18.11**	**40**	P	**Pn**	**13 21 55.5**	**+1.1**
KTH				IAmb	IAmb	13 22 07.2	
	comp=Z,3.9nm,1.1s						
PMR	**Palmer**	**18.11**	**47**	P	**P**	**13 21 54.0**	**+0.5**
PMR				IAmb	IAmb	13 22 43.0	
	comp=Z,7.8nm,1.1s						
GHO	**Glory Hole Cre**	**18.26**	**47**	P	**P**	**13 21 56.0**	**+0.7**
GHO				IAmb	IAmb	13 22 42.6	
	comp=Z,7.3nm,1.0s						
BPAW	**Bear Paw Mtn.**	**18.33**	**39**	P	**Pn**	**13 21 57.6**	**+0.4**
RND	**Reindeer**	**18.88**	**42**	P	**P**	**13 22 02.7**	**+0.6**
RND				IAmb	IAmb	13 22 40.2	
	comp=Z,2.8nm,1.0s						
MLY	**Manley**	**18.89**	**36**	P	**Pn**	**13 22 04.0**	**+0.2**
SCM	**Sheep Creek Mo**	**19.00**	**47**	P	**P**	**13 22 03.2**	**-0.2**
NEA	**Nenana**	**19.29**	**39**	P	**P**	**13 22 07.9**	**+1.4**
NEA				IAmb	IAmb	13 22 22.9	
	comp=Z,3.0nm,1.0s						
DHY	**Denali Highway**	**19.38**	**44**	P	**P**	**13 22 08.5**	**+0.9**
WRH	**Wood River Hil**	**19.63**	**40**	P	**P**	**13 22 10.4**	**+0.3**
WRH				IAmb	IAmb	13 22 31.8	
	comp=Z,4.2nm,1.2s						
ILAR	**Eielson Array**	**20.23**	**39**	P	Pn	13 22 18.6	-0.7
	comp=Z,0.5nm,0.8s,baz=232,slow=7.4,SNR=3.5						
GLB	**Gilahina Butte**	**20.53**	**50**	P	**P**	**13 22 20.0**	**0.0**
RIDG	**Independent Ri**	**20.68**	**43**	P	**P**	**13 22 21.4**	**-0.1**
RIDG				IAmb	IAmb	13 22 24.1	
	comp=Z,2.4nm,1.0s						
SCRK	**Sand Creek**	**21.11**	**43**	P	**P**	**13 22 26.7**	**+0.4**
EGAK	**Eagle**	**22.53**	**42**	P	**P**	**13 22 41.0**	**-0.1**
EGAK				IAmb	IAmb	13 23 38.7	
	comp=Z,2.3nm,1.1s						
DAWY	**Dawson**	**23.09**	**44**	P	**P**	**13 22 46.0**	**-0.7**
DAWY				IAmb	IAmb	13 23 14.5	
	comp=Z,2.8nm,1.1s						
YKA	**Yellowknife Ar**	**34.21**	**47**	P	**P**	**13 24 25.5**	**0.0**
	comp=Z,0.1nm,0.4s,baz=277,slow=9.4,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**34.50**	**206**	T	T	14 00 56.0	
	baz=18,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	**34.51**	**206**	T	T	14 01 04.2	
	baz=18,slow=76,SNR=19						
H11N1	**WAKE ISLAND Hy**	**34.51**	**206**	T	T	14 01 07.4	
	baz=18,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**35.71**	**206**	T	T	14 02 35.5	
	baz=18,slow=74						
H11S2	**WAKE ISLAND Hy**	**35.73**	**206**	T	T	14 02 40.0	
	baz=18,slow=74						
H11S3	**WAKE ISLAND Hy**	**35.73**	**206**	T	T	14 02 49.1	
	baz=18						
PD31	**Pinedale Array**	**45.41**	**74**	P	**P**	**13 25 58.4**	**-0.4**
PD31				IAmb	IAmb	13 27 06.8	
	comp=Z,0.8nm,1.1s						
PDAR	**Pinedale Array**	**45.41**	**74**	P	**P**	**13 25 58.2**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=307,slow=3.3,SNR=4.0						
TXAR	**Lajitas Array**	**57.84**	**82**	P	**P**	**13 27 31.7**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=325,slow=7.7,SNR=2.5						

IDC ***19*** *13:41:53.8±0.5,9.00N×138.19E,h0km,mb4.6/25, mb1 4.7/27,mb1mx4.6/41,mbtmp4.6/27,ML4.6/2,MS3.6/29, Ms1 3.6/29,ms1mx3.6/41,Error ellipse: s-maj=18.8km s-min=11.6km az=85.0*

MOS ***19*** *13:41:56.2±0.9,9.03N×138.13E,h31km,mb5.1/49,Error ellipse: s-maj=9.4km s-min=5.2km az=106.8*

BJI ***19*** *13:41:56.5±0.0,8.95N×138.35E,h35km,mB5.1/39, mb4.9/55,Ms4.5/24,Ms7 4.2/26*

GCMT ***19*** *13:41:57.4±0.3,8.96N±0.04×138.11E±0.03,h19km±1km, MW4.8/81,Moment Tensor Solution. s17,c19; s81,c103; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr2.19±.17; Mθθ-0.77±.09; Mϕϕ-1.42±.11; Mrθ0.58±.24; Mrϕ-0.67±.07; Mθϕ0.40±.21; Best double couple: Mo2.13100×10^16 NP1:ϕ207.00000°,δ36.00000°,λ81.00000°. NP2: ϕ39.00000°,δ54.00000°,λ97.00000°. Principal axes: T 2.3200, Plg79.0000°, Azm336.0000°; N -0.3820, Plg6.0000°, Azm215.0000°; P -1.9420, Plg9.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***19*** *13:41:58.4±1.9,9.07N±0.07×138.20E±0.09,h34km±4km, mb4.9/105 Error ellipse: s-maj=13.2km s-min=9.4km az=113.0*

DJA ***19*** *13:42:02.5±0.8,9°N±4°×13°8E±°,h69km±8km,M4.8/24, mb4.9/24,mB5.3/10,Mw(mB)4.8/10*

ISC 19 13:41:59.8±0.6,9.04N±0.04×138.27E±0.05,h45km±5km, n295,σ1§44/291,mb4.8/128,MS3.8/35,13C-1D,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**7.90**	**54**	Pn	**Pn**	**13 43 52.9**	**+0.7**
	12nm,0.3s,baz=13,slow=1.2,SNR=6.8						
GUMO				Sn	Sn	13 45 13.7	-6.5
	6.8nm,0.3s,baz=114,slow=19,SNR=3.6						
GUMO				LR	LR	13 46 42.6	
	comp=Z,449nm,18.6s,baz=244,slow=36						
GUMO	**Guam**	**7.90**	**54**	Pn	Pn	13 43 49.4	-2.7
GUMO					**Sn**	**13 45 17.2**	**-3.0**
SMPI	**Sarmi**	**10.96**	**178**	P	**Pn**	**13 44 34.5**	**+0.4**
	2µm174nm,0.5s						
GENI	**Genyem**	**11.71**	**171**	P	**Pn**	**13 44 45.3**	**+1.0**
	3µm131nm,0.7s						
JAY	**Jayapura**	**11.73**	**168**	Pn	**Pn**	**13 44 44.8**	**+0.2**
	8.7nm,0.3s,baz=336,slow=6.4,SNR=24						
JAY					**Sn**	**13 46 53.2**	**-1.0**
	1.1nm,0.3s,baz=246,slow=20,SNR=3.7						
JAY				LR	LR	13 48 40.5	
	comp=Z,573nm,18.3s,baz=0.0,slow=35						
SWI	**Sorong**	**12.06**	**216**	P	**Pn**	**13 44 50.1**	**+1.0**
	60nm,1.1s						
SIJI	**Sorong**	**12.06**	**216**	Pn	**Pn**	**13 44 46.9**	**-2.3**
	2.9nm,0.3s,baz=23,slow=15,SNR=11						
SIJI				LR	LR	13 49 00.3	
	comp=Z,134nm,19.3s,baz=52,slow=36						
DAV	**Davao City (W)**	**12.72**	**262**	LR	LR	13 48 49.0	
	comp=Z,296nm,20.0s,baz=90,slow=33						
KCP	**Kidapawan**	**13.21**	**262**	*i*P	**Pn**	**13 45 05.3**	**+0.4**
FAKI	**Fak Fak**	**13.30**	**207**	P	**Pn**	**13 45 07.8**	**+1.6**
	50nm,1.0s						
FAKI	**Fak Fak**	**13.30**	**207**		**Pn**	**13 45 06.2**	**+0.1**
AAI	**Ambon**	**16.14**	**219**	P	**Pn**	**13 45 45.6**	**+1.9**
	1µm74nm,0.8s						
MRSI	**Marisa**	**18.35**	**243**	P	**P**	**13 46 11.1**	**+0.4**
	1µm88nm,1.4s						
LUWI	**Luwuk**	**18.40**	**238**	P	**P**	**13 46 12.3**	**+1.0**
	2µm77nm,0.8s						
LUWI	**Luwuk**	**18.40**	**238**	P	**P**	**13 46 09.6**	**-1.7**
LUWI				IAmb	IAmb	13 46 18.6	
	comp=Z,66nm,0.9s						
KRVT	**Keravat (AS076**	**19.07**	**133**	LR	LR	13 52 10.3	
	comp=Z,348nm,22.0s,baz=316,slow=32						
JOW	**Kunigami**	**20.07**	**333**	P	**P**	**13 46 28.4**	**-1.1**
JOW				IAmb	IAmb	13 46 44.0	
	comp=Z,56nm,1.0s						
PMG	**Port Moresby**	**20.35**	**154**	*ce*P	**P**	**13 46 32.6**	**+0.1**
PMG				pmax	pmax		
	comp=Z,280nm,1.7s						
PMG	**Port Moresby**	**20.35**	**154**	P	**P**	**13 46 32.3**	**-0.2**
	comp=Z,35nm,0.9s,baz=353,slow=5.7,SNR=10						
PMG				LR	LR	13 54 12.6	
	comp=Z,455nm,18.0s,baz=320,slow=36						
PMG	**Port Moresby**	**20.35**	**154**	P	**P**	**13 46 32.8**	**+0.3**
PMG				IAmb	IAmb	13 46 33.8	
	comp=Z,59nm,1.1s						
YOJ	**Yonaguni jima**	**21.15**	**318**	P	**P**	**13 46 41.0**	**-0.1**
YOJ				pmax	pmax		
	comp=Z,252nm,1.0s						
YOJ	**Yonaguni jima**	**21.15**	**318**	P	**P**	**13 46 41.0**	**-0.1**
YULB	**Yu-li**	**21.63**	**313**	P	**P**	**13 46 46.5**	**+0.2**
YULB				IAmb	IAmb	13 47 05.3	
	comp=Z,83nm,1.2s						
NACB	**Ninganchiao**	**21.91**	**315**	P	**P**	**13 46 48.7**	**-0.7**
TTSI	**Tana Toraja**	**21.96**	**238**	P	**P**	**13 46 51.0**	**+1.1**
	comp=Z,1µmcomp=Z,60nm,1.5s						
TPUB	**Ta-pu**	**22.06**	**312**	P	**P**	**13 46 50.4**	**-0.5**
KKM	**Kota Kinabalu**	**22.06**	**264**	P	**P**	**13 46 49.8**	**-1.4**
SSLB	**Suanglung**	**22.12**	**314**	P	**P**	**13 46 50.6**	**-1.1**
SSLB				IAmb	IAmb	13 47 03.7	
	comp=Z,49nm,1.0s						
YHNB	**Yeheng**	**22.39**	**316**	P	**P**	**13 46 54.4**	**-0.1**
YHNB				IAmb	IAmb	13 46 56.8	
	comp=Z,53nm,0.9s						
BNSI	**Bone**	**22.49**	**234**	P	**P**	**13 46 57.1**	**+1.4**
	comp=Z,919nmcomp=Z,46nm,1.4s						
SPSI	**Sidrap Palu**	**22.51**	**236**	P	**P**	**13 46 56.8**	**+0.9**
	comp=Z,34nm,1.2s						
SOEI	**Soe**	**23.30**	**217**	P	**P**	**13 47 02.3**	**-1.7**
COEN	**Coen**	**23.36**	**168**	P	**P**	**13 47 03.8**	**-0.6**
BKB	**Balikpapan**	**23.62**	**245**	P	**P**	**13 47 05.3**	**-1.7**
MMRI	**Maumere**	**23.73**	**223**	P	**P**	**13 47 07.8**	**-0.2**
KNMB	**Chin-men Tao**	**24.40**	**311**	P	**P**	**13 47 11.9**	**-2.2**
KNMB				IAmb	IAmb	13 47 24.7	
	comp=Z,71nm,1.2s						
JNU	**Nakatsue**	**24.92**	**345**	P	**P**	**13 47 19.3**	**+0.5**
	comp=Z,12nm,0.9s,baz=173,slow=12,SNR=6.3						
JNU				LR	LR	13 55 57.0	
	comp=Z,140nm,18.6s,baz=160,slow=34						
JNU	**Nakatsue**	**24.92**	**345**	P	**P**	**13 47 17.0**	**-1.8**
JNU				IAmb	IAmb	13 47 32.7	
	comp=Z,40nm,1.2s						
INU	**Inuyama**	**26.22**	**358**	P	**P**	**13 47 29.5**	**-0.9**
INU				IAmb	IAmb	13 47 43.9	
	comp=Z,44nm,1.4s						
KNRA	**Kununurra**	**26.30**	**201**	P	**P**	**13 47 32.0**	**+0.7**
KNRA				IAmb	IAmb	13 47 34.6	
	comp=Z,32nm,0.8s						
MJAR	**Matsushiro Arr**	**27.38**	**360**	P	**P**	**13 47 41.6**	**+0.7**
	comp=Z,2.1nm,0.8s,baz=178,slow=8.8,SNR=4.1						
MJAR				LR	LR	13 57 14.0	
	comp=Z,84nm,19.6s,baz=160,slow=34						
MAJO	**Matsushiro**	**27.38**	**360**	*i*P	**P**	**13 47 40.0**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HNR	**Honiara**	**28.33**	**130**	LR	LR	13 57 33.7	
	comp=Z,213nm,19.0s,baz=294,slow=33						
WRAB	**Tennant Creek**	**29.04**	**188**	*ce*P	**P**	**13 47 56.4**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,16nm,1.7s						
WR0	**Warramunga Arr**	**29.05**	**187**	P	**P**	**13 47 54.9**	**-1.0**
WR0				IAmb	IAmb	13 48 12.2	
	comp=Z,32nm,1.4s						
WRA	**Warramunga Arr**	**29.05**	**188**	P	**P**	**13 47 54.3**	**-1.7**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
WRA	**Warramunga Arr**	**29.05**	**188**	P	**P**	**13 47 54.3**	**-1.7**
	comp=Z,4.8nm,1.0s,baz=6.2,slow=9.2,SNR=11						
H11S3	**WAKE ISLAND Hy**	**29.12**	**68**	T	T	14 18 12.4	
	baz=253,slow=75,SNR=7.2						
H11S1	**WAKE ISLAND Hy**	**29.14**	**68**	T	T	14 18 24.9	
	baz=253,slow=75,SNR=8.4						
H11S2	**WAKE ISLAND Hy**	**29.14**	**68**	T	T	14 18 23.3	
	baz=253,slow=75,SNR=18						
NJ2	**Nanjing**	**29.14**	**325**	*e*P	**P**	**13 47 56.5**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**29.64**	**66**	T	T	14 19 07.7	
	baz=254,slow=75,SNR=2.3						
H11N2	**WAKE ISLAND Hy**	**29.65**	**66**	T	T	14 19 08.4	
	baz=254,slow=75,SNR=1.3						
H11N3	**WAKE ISLAND Hy**	**

CD2 LR LR
comp=Z,230nm,5.0s
CD2 LR LR
comp=Z,290nm,10.5s
CD2 LR LR
comp=Z,320nm,13.2s
CD2 LR LR
comp=Z,310nm,17.7s
CM31 Chiang Mai Arr 39.25 288 P **P** **13 49 22.8 -1.6**
CMAR Chiang Mai Arr 39.25 288 P **P** **13 49 24.3 -0.1**
comp=Z,7.8nm,0.8s,baz=96,slow=6.8,SNR=63
CMAR LR LR 14 04 51.0
comp=Z,90nm,19.7s,baz=95,slow=35
CHTO Chiang Mai 39.31 289 P **P** **13 49 23.5 -1.3**
CHTO pmax pmax
comp=Z,5.0nm,0.9s
CHTO Chiang Mai 39.31 289 P **P** **13 49 23.5 -1.3**
HHC Hu-ho-hao-te 39.55 328 *eP* **P** **13 49 27.9 +1.2**
HHC pmax pmax
comp=Z,8.0nm,1.0s
HHC pmax pmax
comp=Z,76nm,5.6s
PSI Prapat 39.60 263 P **P** **13 49 24.8 -2.6**
PSI pmax pmax
comp=Z,21nm,1.0s
PSI Prapat 39.60 263 LR LR 14 09 34.8
comp=Z,41nm,18.2s,baz=46,slow=42
RPSI Rantau Prapat 39.62 263 P **P** **13 49 24.8 -2.6**
RPSI IAmb IAmb 13 49 26.6
comp=Z,21nm,1.0s
BTO Baotou 40.22 326 *eP* **P** **13 49 33.0 +0.8**
KLR Kul'dur 40.44 353 *i* P **P** **13 49 34.0 +0.3**
KLR pmax pmax
comp=Z,21nm,1.1s
FORT Forrest 40.78 194 P **P** **13 49 37.3 +0.6**
STKA Stephens Creek 40.80 176 P **P** **13 49 36.6 -0.4**
STKA pmax pmax
comp=Z,2.0nm,1.0s
STKA Stephens Creek 40.80 176 P **P** **13 49 36.5 -0.4**
comp=Z,7.6nm,0.8s,baz=339,slow=7.4,SNR=11
STKA LR LR 14 07 24.2
comp=Z,155nm,19.2s,baz=20,slow=38
STKA Stephens Creek 40.80 176 P **P** **13 49 36.6 -0.4**
LZH Lanzhou 41.28 316 ⇑P **P** **13 49 41.4 +0.3**
LZH pP pP 13 49 52.5 +0.2
LZH sP pwP 13 49 57.1 -0.1
LZH SS SS 13 58 50.9 -6.2
LZH pmax pmax
comp=Z,26nm,1.1s
LZH pmax pmax
comp=Z,210nm,5.4s
LZH LR LR
comp=Z,230nm,13.3s
LZH LR LR
comp=Z,220nm,13.6s
LZH LR LR
comp=Z,290nm,16.8s
DZM Mont Dzumac 41.46 139 *e*S S 13 56 05.5 +10
comp=Z,80nm,25.4s
DZM *e*LR LR 14 01 31.4
comp=Z,482nm,26.3s
GRNR Gornyy 41.63 358 *eP* **P** **13 49 41.6 -1.9**
GRNR pmax pmax
comp=Z,3.0nm,1.2s
GRNR MLR MLR
comp=Z,70nm,15.0s
BBOO Buckleboo 41.66 183 P **P** **13 49 43.9 -0.1**
BBOO IAmb IAmb 13 49 46.3
comp=Z,34nm,0.9s
PBA Port Blair 44.83 277 P P 13 50 08.8 -1.0
ZEA Zeya 45.45 351 *eP* **P** **13 50 14.2 0.0**
ZEA pmax pmax
comp=Z,12nm,1.0s
GTA Gaotai 45.74 318 ⇑P **P** **13 50 17.3 +0.4**
GTA pP pP 13 50 26.9 -1.4
GTA sP pwP 13 50 30.8 -2.3
GTA PcP **PcP** **13 51 56.0 +1.8**
GTA S **S** **13 56 58.4 +1.0**
GTA sS sS 13 57 16.0 +0.7
GTA SS **ScS** **14 00 14.3 +4.8**
GTA pmax pmax
comp=Z,15nm,1.3s
GTA pmax pmax
comp=Z,140nm,8.6s
GTA LR LR
comp=Z,130nm,16.8s
GTA LR LR
comp=Z,140nm,17.8s
GTA LR LR
comp=Z,150nm,19.4s
PETK Petropavlovsk- 46.68 16 P **P** **13 50 24.4 +0.5**
comp=Z,5.1nm,0.9s,baz=173,slow=5.8,SNR=3.3
PETK LR LR 14 10 28.6
comp=Z,35nm,19.1s,baz=243,slow=37
ULN Ulaanbaatar 46.83 331 *ceP* **P** **13 50 26.1 +0.7**
ULN pmax pmax
comp=Z,22nm,0.8s
ULN Ulaanbaatar 46.83 331 P **P** **13 50 24.9 -0.4**
PET Petropavlovsk 46.87 17 *i* P **P** **13 50 25.0 -0.4**
PET pmax pmax
comp=Z,35nm,1.3s
SHL Shillong 46.97 297 P **P** **13 50 25.3 -1.6**
SHL pmax pmax
comp=Z,8.0nm,0.7s
SHL Shillong 46.97 297 P **P** **13 50 25.3 -1.6**
SHL IAmb IAmb 13 50 26.7
comp=Z,8.1nm,0.7s
SONM Songino Array 47.12 331 P **P** **13 50 28.5 +0.9**
SONM pmax pmax
comp=Z,16nm,0.9s
SONM Songino Array 47.12 331 P **P** **13 50 28.5 +0.9**
comp=Z,17nm,0.9s,baz=139,slow=6.5,SNR=88
SONM LR LR 14 10 02.6
comp=Z,101nm,21.8s,baz=162,slow=36
SONM Songino Array 47.12 331 IAmb IAmb 13 50 29.8
comp=Z,16nm,0.9s
LSA Lhasa 48.57 302 P **P** **13 50 40.3 +0.8**
ZAK Zakamensk 50.36 332 *eP* **P** **13 50 52.6 +0.2**
ZAK pmax pmax
comp=Z,20nm,1.1s
TAPN Taplejung 50.99 298 *eP* **P** **13 50 56.4 -1.4**
comp=Z,42nm,1.3s
TLY Talaya 51.09 333 *eP* **P** **13 50 58.9 +1.1**
TLY *e*S **S** **13 58 14.8 +2.6**
TLY pmax pmax
comp=Z,23nm,0.9s
TLY MLR MLR
comp=Z,143nm,7.0s
TLY Talaya 51.09 333 P **P** **13 50 57.1 -0.7**
ODAN Odare 51.18 297 *eP* **P** **13 50 58.2 -1.0**
comp=Z,31nm,0.9s
MA2 Magadan 51.31 8 *i* P **P** **13 51 00.3 +1.0**
MA2 pmax pmax
comp=Z,8.0nm,1.3s
RAMN Ramite 51.89 297 *eP* **P** **13 51 03.6 -0.9**
BOD Bodaibo 52.14 344 *eP* **P** **13 51 05.3 -0.2**
BOD pmax pmax
comp=Z,10.0nm,1.3s
MOY Mondy 52.30 332 *eP* **P** **13 51 08.0 +1.1**
MOY pmax pmax
comp=Z,26nm,2.6s
SMY Shemya 52.35 27 P **P** **13 51 06.8 -0.2**
SMY pmax pmax
comp=Z,228nm,1.3s
SMY Shemya 52.35 27 P **P** **13 51 06.8 -0.2**
JIRN Jiri 52.38 298 *eP* **P** **13 51 07.5 -0.7**
GUN Gumba 52.69 298 *eP* **P** **13 51 10.5 0.0**
comp=Z,80nm,0.9s
PKIN Phulchoki 53.05 298 *eP* **P** **13 51 12.4 -0.7**
KKN Kakani 53.19 298 *eP* **P** **13 51 13.6 -0.5**
comp=Z,36nm,0.9s
YAK Yakutsk 53.27 355 *eP* **P** **13 51 13.0 -0.7**
YAK *e**PP **pP** **13 51 23.9 -0.5**
YAK *e* 13 52 21.0
YAK *e* 13 53 19.0
YAK *e*S **S** **13 58 43.3 +1.6**
YAK *e* 14 01 05.4
YAK *e*SS **SS** **14 02 20.6 -1.2**
YAK pmax pmax
comp=Z,8.0nm,1.0s
YAK pmax pmax
comp=N,9.0nm,1.5s
YAK pmax pmax
comp=E,1.0nm,0.8s
YAK pmax pmax
comp=Z,155nm,4.5s
YAK pmax pmax
comp=N,119nm,5.1s
YAK pmax pmax
comp=E,108nm,5.1s
YAK smax smax
comp=N,58nm,4.3s
YAK smax smax
comp=E,98nm,5.0s
YAK Yakutsk 53.27 355 P **P** **13 51 13.3 -0.4**
YAK IAmb IAmb 13 51 29.5
comp=Z,12nm,1.1s
DMN Daman 53.31 298 *eP* **P** **13 51 14.8 -0.2**
comp=Z,36nm,1.0s
GKN Gorkha 53.79 298 *eP* **P** **13 51 18.0 -0.4**
DANN Dangsing 54.61 298 *eP* **P** **13 51 24.2 -0.3**
comp=Z,49nm,0.8s
KOLN Koldanda 54.66 298 *eP* **P** **13 51 24.0 -0.8**
comp=Z,37nm,0.9s
SEY Seymchan 54.76 8 ⇑*i*P **P** **13 51 25.6 +1.0**
WMQ Urumqi 55.83 317 *eP* **P** **13 51 34.0 +1.3**
WMQ sP pP 13 51 49.6 +5.2
WMQ pmax pmax
comp=Z,27nm,0.9s
WMQ pmax pmax
comp=Z,55nm,3.7s
WMQ LR LR
comp=Z,360nm,28.9s
WMQ LR LR
comp=Z,990nm,29.3s
WMQ LR LR
comp=Z,130nm,28.8s
WMQ Urumqi 55.83 317 P **P** **13 51 30.4 -2.4**
WMQ pmax pmax
comp=Z,37nm,0.9s
WMQ Urumqi 55.83 317 P **P** **13 51 30.4 -2.4**
PALK Pallekele 56.97 273 LR LR 14 16 36.3
comp=Z,6.1nm,20.2s,baz=91,slow=37
ATKA Atka Island 57.77 32 P **P** **13 51 46.5 +0.3**
HYB Hyderabad 58.54 285 *i* P **P** **13 51 52.5 +0.2**
MK31 Makanchi Array 60.46 319 P **P** **13 52 05.1 0.0**
MK31 pmax pmax
comp=Z,18nm,0.9s
MK31 Makanchi Array 60.46 319 P **P** **13 52 05.0 0.0**
MKAR Makanchi Array 60.46 319 *i* P **P** **13 52 05.6 +0.6**
MKAR pmax pmax
comp=Z,22nm,0.8s
MKAR Makanchi Array 60.46 319 P **P** **13 52 05.7 +0.7**
comp=Z,22nm,0.8s,baz=106,slow=8.7,SNR=188
MKAR LR LR 14 19 10.5
comp=Z,86nm,18.5s,baz=72,slow=37
MAKZ Makanchi 60.67 319 P **P** **13 52 07.1 +0.7**
MAKZ Makanchi 60.67 319 P **P** **13 52 06.6 +0.2**
PDGK Podgornoye 61.30 315 P **P** **13 52 11.3 +0.4**
ZAA0 Zalesovo Array 61.74 327 P **P** **13 52 12.7 -0.8**
ZAA0 IAmb IAmb 13 52 14.4
comp=Z,8.4nm,0.8s
ZALV Zalesovo Beam 61.74 327 P **P** **13 52 13.3 -0.1**
comp=Z,7.8nm,0.8s,baz=102,slow=5.5,SNR=31
ZALV LR LR 14 20 28.8
comp=Z,64nm,18.5s,baz=100,slow=38
BILL Bilibino 61.80 12 ⇑*i*P **P** **13 52 13.5 -0.2**
BILL *e**PP **pP** **13 52 23.8 -1.0**
BILL *SP sP 13 52 29.0 -0.4
BILL 13 52 55.0
BILL *e*S **S** **14 00 27.5 -5.9**
BILL SSS SSS 14 07 24.0
BILL pmax pmax
comp=Z,18nm,2.5s
BILL Bilibino 61.80 12 P **P** **13 52 13.3 -0.3**
BILL IAmb IAmb 13 52 14.7
comp=Z,9.4nm,1.1s
KDJ Kajisay 62.65 313 P **P** **13 52 20.1 0.0**
KDJ pmax pmax
comp=Z,9.0nm,1.0s
KDJ Kajisay 62.65 313 P **P** **13 52 20.1 0.0**
KDJ IAmb IAmb 13 52 22.1
comp=Z,8.5nm,0.9s
TIXI Tiksi 62.83 357 *ceP* **P** **13 52 19.0 -1.5**
TIXI pmax pmax
comp=Z,4.0nm,1.0s
TIXI Tiksi 62.83 357 P **P** **13 52 19.3 -1.2**
KSH Kashi 62.99 310 P **P** **13 52 25.0 +2.6**
KSH pP pP 13 52 35.4 +1.4
KSH PP **PP** **13 54 46.3 +5.0**
KSH S **S** **14 00 51.8 +2.1**
KSH sS pS 14 01 10.9 +6.4
KSH ScS **ScS** **14 02 12.4 +0.6**
KSH SS **SS** **14 05 01.4 +5.6**
KSH pmax pmax
comp=Z,26nm,0.7s
KSH pmax pmax
comp=Z,290nm,5.6s
KSH LR LR
comp=Z,150nm,5.8s
KSH LR LR
comp=Z,120nm,4.0s
KSH LR LR
comp=Z,220nm,5.7s
ULHL Ulahol 63.35 313 P **P** **13 52 26.0 +1.2**
SNR=6.4
NRN Naryn 63.36 312 P **P** **13 52 23.9 -1.1**
NRN pmax pmax
comp=Z,8.0nm,1.0s
NRN Naryn 63.36 312 P **P** **13 52 23.9 -1.1**
NRN IAmb IAmb 13 52 26.8
comp=Z,8.4nm,0.9s
TKM2 Tokmak 2 63.96 313 P **P** **13 52 29.0 +0.2**
TKM2 Tokmak 2 63.96 313 P **P** **13 52 29.5 +0.7**
SNR=8.1
KZA Kyzart 64.04 312 P **P** **13 52 31.2 +1.7**
SNR=16
KURK Kurchatov 64.04 322 P **P** **13 52 28.9 0.0**
KURK Kurchatov 64.04 322 P **P** **13 52 28.5 -0.4**
NIL Nilore 64.28 303 P **P** **13 52 30.7 -0.1**
NIL pmax pmax
comp=Z,81nm,0.9s
NIL Nilore 64.28 303 P **P** **13 52 30.7 -0.1**
KBK Karagaybulak 64.38 313 P **P** **13 52 32.7 +1.3**
SNR=7.4
CHMS Chumysh 64.59 313 P **P** **13 52 33.3 +0.6**
SNR=10
UCH Uchtor 64.60 312 P **P** **13 52 34.8 +1.5**
SNR=15
AAK Ala-Archa 64.70 313 P **P** **13 52 34.3 +0.7**
AAK Ala-Archa 64.70 313 P **P** **13 52 33.2 -0.4**
USP Ospenovka 64.82 314 P **P** **13 52 34.9 +0.7**
SNR=8.1
AML Almayashu 65.18 312 P **P** **13 52 37.7 +0.6**
SNR=14
EKS2 Erkin-Say 65.22 313 P **P** **13 52 37.7 +0.8**
SNR=7.0
ARSB Arslanbob 65.57 311 P **P** **13 52 38.4 -0.8**
ARSB IAmb IAmb 13 52 41.1
comp=Z,13nm,0.9s
BTK Batken 67.00 310 P **P** **13 52 46.3 -2.1**
BTK pmax pmax
comp=Z,8.0nm,1.1s
BTK Batken 67.00 310 P **P** **13 52 46.2 -2.1**
GAR Garm 67.25 308 P **P** **13 52 49.1 -0.9**
KK31 Karatay Array 67.66 313 P **P** **13 52 51.8 -0.6**
KK31 pmax pmax
comp=Z,7.0nm,1.0s
KK31 Karatay Array 67.66 313 P **P** **13 52 51.8 -0.6**
KKAR Karatay Array 67.66 313 P **P** **13 52 51.7 -0.7**
KKAR pmax pmax
comp=Z,7.0nm,1.0s
KKAR Karatay Array 67.66 313 P **P** **13 52 51.7 -0.7**
KBL Kabul 67.84 304 P **P** **13 52 52.2 -1.7**
KBL pmax pmax
comp=Z,11nm,1.0s
KBL Kabul 67.84 304 P **P** **13 52 52.2 -1.7**
KBL IAmb IAmb 13 52 54.6
comp=Z,11nm,1.0s
ANM Nome 67.85 23 P **P** **13 52 53.0 -0.1**
ANM pmax pmax
comp=Z,8.0nm,1.0s
ANM Nome 67.85 23 P **P** **13 52 53.0 -0.1**
ANM IAmb IAmb 13 52 55.1
comp=Z,8.3nm,1.0s
CHGR Chuyangaron 68.11 308 P **P** **13 52 53.4 -2.0**
BRVK Borovoye 69.64 323 P **P** **13 53 04.5 0.0**
BRVK Borovoye 69.64 323 P **P** **13 53 03.5 -1.0**
BRVK IAmb IAmb 13 53 06.1
comp=Z,17nm,0.9s
RSO Redoubt South 71.88 29 P **P** **13 53 18.5 +0.3**
SKT Skwentna 72.81 28 P **P** **13 53 24.1 +0.6**
SKT IAmb IAmb 13 53 25.4
comp=Z,13nm,1.0s
SUA Susitna One 73.06 28 P **P** **13 53 25.1 -0.1**
SUA IAmb IAmb 13 53 28.1
comp=Z,12nm,0.9s
HRA Herat 73.44 303 P **P** **13 53 27.1 -0.9**
HRA IAmb IAmb 13 53 29.2
comp=Z,12nm,0.8s
KTH Kantishna Hill 73.45 26 P **P** **13 53 27.5 +0.2**
BPAW Bear Paw Mtn. 73.55 26 P **P** **13 53 28.5 +0.6**
BPAW IAmb IAmb 13 53 30.2
comp=Z,16nm,0.9s
TRF Thorofare Moun 73.70 26 P **P** **13 53 29.0 +0.1**
TRF IAmb IAmb 13 53 32.1
comp=Z,11nm,0.8s
PMR Palmer 73.84 28 P **P** **13 53 29.8 +0.3**
PMR pmax pmax
comp=Z,14nm,0.8s
PMR Palmer 73.84 28 P **P** **13 53 29.8 +0.3**
PMR IAmb IAmb 13 53 31.0
comp=Z,14nm,0.8s
MLY Manley 73.87 25 P **P** **13 53 30.6 +0.8**
MLY IAmb IAmb 13 53 32.2
comp=Z,9.6nm,0.8s
GHO Glory Hole Cre 73.97 28 P **P** **13 53 31.1 +0.6**
GHO IAmb IAmb 13 53 33.5
comp=Z,18nm,1.0s
KNK Knik Glacier 74.13 29 P **P** **13 53 32.0 +0.7**
SML Sawmill 74.26 28 P **P** **13 53 32.9 +0.8**
RND Reindeer 74.32 27 P **P** **13 53 33.0 +0.6**
RND pmax pmax
comp=Z,17nm,1.0s
RND Reindeer 74.32 27 P **P** **13 53 33.0 +0.6**
RND IAmb IAmb 13 53 34.0
comp=Z,18nm,1.0s
MCK McKinley 74.35 26 P **P** **13 53 32.8 +0.3**
MCK pmax pmax
comp=Z,32nm,1.0s
MCK McKinley 74.35 26 P **P** **13 53 32.8 +0.3**
COLD Coldfoot 74.60 23 P **P** **13 53 33.2 -0.6**
SCM Sheep Creek Mo 74.73 28 P **P** **13 53 35.3 +0.5**
SCM pmax pmax
comp=Z,36nm,0.8s
SCM Sheep Creek Mo 74.73 28 P **P** **13 53 35.3 +0.5**
WRH Wood River Hil 74.86 26 P **P** **13 53 35.8 +0.3**
DHY Denali Highway 74.92 27 P **P** **13 53 36.2 +0.2**
DHY IAmb IAmb 13 53 38.3
comp=Z,12nm,1.0s
CCB Clear Creek Bu 75.02 25 P **P** **13 53 36.3 0.0**
COLA College 75.04 25 *i* P **P** **13 53 36.6 +0.2**
COLA pmax pmax
comp=Z,4.0nm,0.9s
HDA Harding Lake 75.34 26 P **P** **13 53 37.5 -0.7**
IL31 75.43 25 P **P** **13 53 37.7 -0.9**
ILAR Eielson Array 75.43 25 P **P** **13 53 38.5 -0.1**
comp=Z,4.5nm,0.7s,baz=245,slow=5.8,SNR=49
ABKAR Akbulak array 75.59 319 P **P** **13 53 39.5 -0.4**
ABKAR IAmb IAmb 13 53 41.1
comp=Z,8.7nm,0.8s
SVE Sverdlovsk 75.72 326 ⇑*eP* **P** **13 53 41.3 +0.8**
SVE pmax pmax
comp=Z,12nm,1.3s
PAX Paxson 75.76 27 P **P** **13 53 40.7 -0.1**
PAX pmax pmax
comp=Z,9.0nm,0.8s
PAX Paxson 75.76 27 P **P** **13 53 40.7 -0.1**
PAX IAmb IAmb 13 53 43.0
comp=Z,8.9nm,0.8s
RAGM Ragged Mountai 75.80 30 P **P** **13 53 39.1 -1.9**
PPT Papeete 76.00 111 LR LR 14 23 25.4
comp=Z,52nm,18.7s,baz=240,slow=33
PPT2 Papeete2 76.00 111 *e*LR LR 14 17 15.3
comp=Z,92nm,24.0s
RIDG Independent Ri 76.15 27 P **P** **13 53 43.4 +0.5**
GLB Gilahina Butte 76.34 29 P **P** **13 53 44.6 +0.6**
GLB IAmb IAmb 13 53 47.9
comp=Z,10nm,0.8s
FYU Fort Yukon 76.40 24 P **P** **13 53 45.4 +1.3**
FYU IAmb IAmb 13 53 47.9
comp=Z,20nm,1.3s
DOT Dot Lake 76.48 27 P **P** **13 53 44.1 -0.6**
DOT IAmb IAmb 13 53 46.6
comp=Z,9.8nm,0.9s
VRDI Verde Repeater 76.49 29 P **P** **13 53 45.4 +0.4**
VRDI IAmb IAmb 13 53 47.9
comp=Z,10.0nm,0.8s
SCRK Sand Creek 76.56 26 P **P** **13 53 45.5 +0.2**
CRQM Cirque 76.59 30 P **P** **13 53 46.4 +0.8**
GEYT Alibeck 76.76 307 P **P** **13 53 47.7 +0.9**
comp=Z,4.3nm,0.9s,baz=97,slow=6.0,SNR=13
GEYT LR LR 14 29 59.7
comp=Z,25nm,20.8s,baz=85,slow=38
GEYT Alibeck 76.76 307 IAmb IAmb 13 53 49.1
comp=Z,5.8nm,1.1s
GYA0B ALIBECK ARRAY 76.76 307 P **P** **13 53 46.3 -0.6**
GYA0B IAmb IAmb 13 53 49.1
comp=Z,13nm,1.1s
ARU Arti 76.83 326 *c i*P **P** **13 53 46.5 -0.3**
ARU 13 56 35.7
ARU S **S** **14 03 31.7 +0.7**
ARU SS **SS** **14 08 23.3 -4.3**
ARU pmax pmax
comp=Z,11nm,1.0s
ARU Arti 76.83 326 P **P** **13 53 46.1 -0.7**
TBI Tubuai 77.58 116 *e*LR LR 14 17 58.6
comp=Z,174nm,32.0s
HYT Haines Junctio 79.36 30 P **P** **13 54 01.2 +0.3**
HYT IAmb IAmb 13 54 06.5
comp=Z,16nm,1.2s
WHY Whitehorse 80.65 30 P **P** **13 54 07.7 -0.2**
WHY IAmb IAmb 13 54 10.5
comp=Z,13nm,1.0s
INK Inuvik 81.01 22 P **P** **13 54 10.3 +0.8**
comp=Z,5.9nm,0.8s,baz=272,slow=5.9,SNR=20
INK Inuvik 81.01 22 P **P** **13 54 08.0 -1.5**
DLBC Dease Lake 83.27 32 P **P** **13 54 23.9 +2.2**
comp=Z,5.1nm,0.7s,baz=295,slow=1.5,SNR=3.4
DLBC Dease Lake 83.27 32 IAmb IAmb 13 54 38.6
comp=Z,21nm,1.4s
PRGR Permogore 83.38 331 *eP* **P** **13 54 21.8 -0.2**
PRGR *e**PP **PcP** **13 54 31.8 +5.5**
PRGR *e**SP **pP** **13 54 37.8 +4.1**
PRGR pmax pmax
comp=Z,24nm,0.9s
C36M Paulatuk 84.31 21 P **P** **13 54 26.1 -0.5**
C36M IAmb IAmb 13 54 28.5
comp=Z,11nm,0.9s
TMCR Tamitsa 86.37 334 *eP* **P** **13 54 36.0 -1.0**
TMCR pmax pmax
comp=Z,15nm,0.8s
GNI Garni 86.93 310 *i* P **P** **13 54 40.3 -0.2**
GNI pmax pmax
comp=Z,19nm,1.4s
ZEI Tsey 87.12 313 *eP* **P** **13 54 38.1 -3.3**
ZEI pmax pmax
comp=Z,5.0nm,0.9s
VNDA Vanda 87.44 175 P **P** **13 54 43.1 +1.3**
comp=Z,3.7nm,1.0s,baz=306,slow=3.8,SNR=3.8
KBZ Khabaz 87.68 314 P **P** **13 54 44.0 +0.2**
comp=Z,1.4nm,0.9s,baz=135,slow=7.1,SNR=3.2
KBZ LR LR 14 37 03.3
comp=Z,46nm,19.5s,baz=81,slow=38
KIV Kislovodsk 87.79 314 *eP* **P** **13 54 43.5 -1.0**
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,118nm,20.0s
NEY Neytrino 87.89 313 *i* P **P** **13 54 44.4 -0.7**
NEY pmax pmax
comp=Z,1.0nm,0.9s
RAYN Ar Rayn 88.96 294 P **P** **13 54 49.2 -1.2**
RAYN pmax pmax
comp=Z,9.0nm,1.1s
RAYN Ar Rayn 88.96 294 P **P** **13 54 49.1 -1.2**
RAYN IAmb IAmb 13 54 52.0
comp=Z,9.3nm,1.1s
OBN Obninsk 89.28 326 ⇓*eP* **P** **13 54 50.3 -0.8**
OBN *PP PcP 13 55 00.0 +7.5
OBN pmax pmax
comp=Z,5.0nm,0.4s
ARCES ARCESS Array B 89.33 341 P **P** **13 54 51.0 -0.1**
comp=Z,3.7nm,0.7s,baz=64,slow=8.1,SNR=8.9
ARCES LR LR 14 38 41.3
comp=Z,63nm,20.0s,baz=22,slow=38

YKA	Yellowknife Ar	89.82	26	P	P	13 54 54.2	+0.7	
	comp=Z,2.5nm,0.8s,baz=291,slow=5.3,SNR=34							
RES	Resolute Bay	90.40	12	P	P	13 54 56.1	+0.2	
RES				pmax	pmax			
	comp=Z,4.0nm,0.8s							
RES	Resolute Bay	90.40	12	P	P	13 54 56.1	+0.2	
B08A	Colville Reser	91.44	41	P	P	13 55 02.0	+0.6	
ORV	Oroville	92.10	50	P	P	13 55 04.5	-0.1	
ORV				pmax	pmax			
	comp=Z,3.0nm,1.2s							
ORV	Oroville	92.10	50	P	P	13 55 04.5	-0.1	
FINES	FINESS Array B	92.43	334	*i* P	P	13 55 04.8	-0.8	
FINES				pmax	pmax			
	comp=Z,3.0nm,0.7s							
FINES	FINESS Array B	92.43	334	P	P	13 55 04.5	-1.1	
	comp=Z,3.7nm,0.9s,baz=72,slow=6.2,SNR=8.0							
FINES				LR	LR	14 40 14.8		
	comp=Z,50nm,19.7s,baz=26,slow=38							
NEW	Newport	92.89	40	P	P	13 55 09.7	+1.6	
NEW				pmax	pmax			
	comp=Z,5.0nm,1.2s							
NEW	Newport	92.89	40	P	P	13 55 09.7	+1.6	
	comp=Z,1.7nm,0.8s,baz=253,slow=6.7,SNR=3.6							
NEW	Newport	92.89	40	IAmb	IAmb	13 55 24.3		
	comp=Z,5.0nm,1.1s							
DAG	Danmarks Havn	93.29	355	*i* P	P	13 55 09.0	-0.3	
DAG				pmax	pmax			
	comp=Z,6.0nm,0.8s							
DAG	Danmarks Havn	93.29	355	*i* P	P	13 55 09.0	-0.3	
	comp=Z,5.8nm,0.8s							
NVAR	Mina Array Bea	94.79	50	P	P	13 55 16.5	-0.8	
	comp=Z,1.2nm,0.6s,baz=244,slow=20,SNR=20							
AKASG	Malin Array Be	94.85	323	LR	LR	14 42 04.0		
	comp=Z,32nm,18.2s,baz=350,slow=38							
BRTR	Keskin Array B	95.34	311	P	P	13 55 18.7	-1.0	
	comp=Z,0.6nm,0.9s,baz=108,slow=4.7,SNR=3.6							
BRTR				LR	LR	14 41 49.5		
	comp=Z,16nm,21.6s,baz=334,slow=38							
NOA	NORSAR Array B	96.82	337	LR	LR	14 42 49.2		
	comp=Z,30nm,21.4s,baz=5.0,slow=37							
TORD	Torodi Ar. Bea	131.57	296	PKP	PKiKP	14 01 09.3	-0.3	
	comp=Z,0.5nm,0.6s,baz=29,slow=3.3,SNR=3.2							
TORD				PP	PP	14 03 26.4	-1.6	
	comp=Z,0.7nm,0.8s,baz=82,slow=6.2,SNR=3.8							
PLCA	Paso Flores	139.38	146	PKP	PKiKP	14 01 24.8	-0.1	
	comp=Z,2.9nm,0.9s,baz=222,slow=2.6,SNR=7.5							
POPC	Popayan, Colom	143.32	73	*e*P	PKPbc	14 01 28.2	+0.4	
GUY2C	Guyana, Caldas	143.60	68	*e*P	PKPdf	14 01 30.3	-1.1	
PTBC	PUERTO BERRIO	143.90	66	*e*P	PKPab	14 01 28.1	-0.5	
NORC	Norcasia	143.92	68	*e*P	PKPdf	14 01 30.6	-0.8	
PEL	Peldehue	144.10	136	PKiKP	PKPdf	14 01 31.0	-0.2	
PEL	Peldehue	144.10	136		PKPdf	14 01 31.0	-0.2	
OCAC	Ocana	144.16	62	*e*P	PKPdf	14 01 31.2	-0.7	
ORTC	Ortega, Tolima	144.20	70	*e*P	PKPdf	14 01 30.9	-1.0	
BRRC	Barranca, Sant	144.32	64	*e*P	PKPbc	14 01 30.3	-0.1	
ROSC	El Rosal	144.71	68	PKP	PKPdf	14 01 34.3	+1.1	
	comp=Z,11nm,0.4s,baz=58,slow=19,SNR=4.1							
BARC	Barichara	145.02	65	*e*P	PKPdf	14 01 33.7	+0.1	
CHIC	Chingaza	145.33	68	*e*P	PKPab	14 01 34.8	+0.4	
RUSC	La Rusia	145.41	66	*e*P	PKPab	14 01 35.4	+0.6	
GO04	Tololo Observa	145.65	132		PKPab	14 01 34.2	-0.7	
GO03	Copiap	147.38	128		PKPbc	14 01 37.9	-1.5	
GO02	Mina Guanaco	149.02	125		PKPbc	14 01 43.2	-0.9	
PB11	IPOC Station P	150.97	115		PKPbc	14 01 48.7	-0.1	
MNMC	Minye Minye	151.21	113		PKPbc	14 01 49.2	-0.3	
GO01	Chusmiza	151.42	115		PKPbc	14 01 49.5	-0.7	
LPAZ	La Paz	153.27	108	PKP	PKPdf	14 01 49.2	+2.1	
	comp=Z,1.4nm,0.9s,baz=28,slow=6.5,SNR=3.5							
LPAZ				PKPbc	PKiKP	14 01 55.6	+0.8	
	comp=Z,4.4nm,0.8s,baz=297,slow=2.7,SNR=12							
CPUP	Villa Florida	157.31	141	PKP2	PKPab	14 02 25.0	+2.2	
CPUP	Villa Florida	157.31	141	PKPab	PKPab	14 02 24.9	+2.2	
	comp=Z,2.2nm,0.8s,baz=232,slow=4.1,SNR=6.0							

IDC ***19*** *13:58:32.5±4.5, 19°.43S×87°.46E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/31, mbtmp3.7/4, Error ellipse: s-maj=156.2km s-min=32.1km az=45.0*

NEIC ***19*** *13:58:34.5±0.2, 19°.4S±0°.4×87°.4E±0°.3, h14km±9km, mb4.3/4, Error ellipse: s-maj=60.2km s-min=17.3km az=213.0*

ISC 19 13:58:34.2±4.8, 19°.4S±0°.8×87°.5E±0°.8, h10km, n18, σ0°45/9, mb3.8/6, South Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	18.68	307	T	T	14 22 28.4	
	baz=128,slow=75,SNR=56						
H08S1	Diego Garcia H	18.70	307	T	T	14 22 27.4	
	baz=128,slow=75,SNR=61						
H08S3	Diego Garcia H	18.70	307	T	T	14 22 07.0	
	baz=128,slow=75,SNR=85						
H08N1	Diego Garcia H	20.64	307	T	T	14 24 48.0	
	baz=146,slow=75,SNR=13						
H08N3	Diego Garcia H	20.66	307	T	T	14 24 43.1	
	baz=146,slow=75,SNR=21						
H08N2	Diego Garcia H	20.66	307	T	T	14 24 42.8	
	baz=146,slow=75,SNR=12						
H01W3	Cape Leeuwin H	28.15	129	T	T	14 33 47.5	
	baz=298,slow=75,SNR=3.5						
H01W2	Cape Leeuwin H	28.16	129	T	T	14 33 57.4	
	baz=298,slow=75,SNR=3.7						
H01W1	Cape Leeuwin H	28.17	129	T	T	14 33 56.2	
	baz=298,slow=75,SNR=4.0						
ASAR	Alice Springs	43.22	104	P	P	14 06 36.1	+0.2
	0.4nm,0.5s,baz=272,slow=7.5,SNR=18						
AS31	Alice Springs	43.22	104	P	P	14 06 36.2	+0.2
AS31				IAmb	IAmb	14 06 57.2	
	comp=Z,2.8nm,1.3s						
WRA	Warramunga Arr	43.98	99	P	P	14 06 42.1	0.0
	comp=Z,0.9nm,0.7s,baz=267,slow=9.0,SNR=2.8						
WRA	Warramunga Arr	43.98	99	P	P	14 06 41.3	-0.8
WR0	Warramunga Arr	44.17	99	P	P	14 06 44.0	+0.4
WR0				IAmb	IAmb	14 07 07.5	
	comp=Z,26nm,1.7s						
SONM	Songino Array	69.04	14	P	P	14 09 40.1	0.0
	comp=Z,0.2nm,0.4s,baz=185,slow=5.2,SNR=2.1						
ZALV	Zalesovo Beam	73.08	358	P	P	14 10 04.8	+0.4
	comp=Z,1.0nm,0.6s,baz=176,slow=5.8,SNR=5.3						
ZALV	Zalesovo Beam	73.08	358	P	P	14 10 04.2	-0.1
NVAR	Mina Array Bea	150.66	44	PKPbc	PKPbc	14 18 26.8	-0.4
	comp=Z,0.1nm,0.3s,baz=261,slow=1.7,SNR=2.7						

DJA 19 14:02:32.0±0.7, 4°S±7°×133°E±°, h180km±7km, M4.0/6, mb4.1/2, MLv4.0/6, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	Sarmi	2.42	42	P	Pn	14 03 14.5	+0.7
SMPI				S	Sn	14 03 46.4	+0.1
GENI	Genyem	3.29	69	P	Pn	14 03 25.0	+0.7
GENI				S	Sn	14 04 05.7	+0.7
RKPI	Ransiki, Papua	3.71	308	P	Pn	14 03 29.7	+0.3
FAKI	Fak Fak	4.92	280	P	Pn	14 03 44.4	-0.6
SWI	Sorong	6.53	296	P	Pn	14 04 05.8	-0.2

SKHL ***19*** *14:11:36.1±0.7, 45°.40N×151°.80E, h52km±3km, mb3.6/1*

JMA 19 14:11:33.7±0.7, 45°.99N×151°.78E, h30km, M4.3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.85	256	*e*P	Pn	14 12 18.0	+0.9
KUR				AMB	AMB	14 12 21.2	
	7.0nm,0.3s						
KUR				*e*S	Sn	14 12 50.0	-0.3
KUR				A	A	14 12 55.8	
	50nm,0.3s						
KUR				A	A	14 12 55.8	
	50nm,0.3s						
SHO	Shikotan	4.11	241	*e*P	Pn	14 12 33.6	-0.7
SHO				*e*S	Sn	14 13 16.5	-4.8
SHO				A	A	14 13 26.6	
	20nm,0.3s						
SHO				A	A	14 13 26.6	
	20nm,0.3s						
YUK	Yuzh-Kuril'sk	4.63	247	*e*P	Pn	14 12 42.2	+0.7
YUK				*e*S	Sn	14 13 31.4	-2.8
YUK				A	A	14 13 47.0	
	40nm,0.4s						
YUK				A	A	14 13 47.0	
	30nm,0.4s						
NEM2	Nemuro 2	5.04	241	P	Pn	14 12 46.6	-0.6
NEM2				*e*S	Sn	14 13 40.7	-3.7
JRA	Rausu	5.15	249	P	Pn	14 12 50.8	+2.1
JNK	Nakash	5.57	247	P	Pn	14 12 55.5	+1.0
JNK				*e*S	Sn	14 13 56.0	-1.5
JAK	Akkeshi	5.88	242	P	Pn	14 12 58.1	-0.7
JAK				*e*S	Sn	14 13 59.7	-5.4
JTKR	Abashiri--Toko	5.94	253	P	Pn	14 13 01.7	+2.2
JAR	Ashorobuto	6.32	248	P	Pn	14 13 06.1	+1.4
JAR				*e*S	Sn	14 14 15.3	-0.5
JOB	Onbets	6.47	244	P	Pn	14 13 07.0	+0.2
JOB				*e*S	Sn	14 14 16.9	-2.7
JKK2	Kamakawa 2	6.75	255	P	Pn	14 13 13.8	+3.1
JCH	Churui	6.92	244	P	Pn	14 13 12.3	-0.7
JCH				*e*S	Sn	14 14 25.7	-4.9
JFR	Furan	7.14	250	P	Pn	14 13 19.3	+3.2
JBT2	Biratori 2	7.47	248	P	Pn	14 13 20.0	-0.6
JNBK	Urakawa-nobuka	7.48	243	P	Pn	14 13 19.6	-1.0
JNBK				*e*S	Sn	14 14 39.5	-4.9
JNB	Noboribetsu	8.48	249	P	Pn	14 13 34.0	-0.4
JNB				*e*S	Sn	14 15 05.4	-3.6
JKB	Kayabe	8.77	246	*e*S	Sn	14 15 08.9	-7.2
JYM2	Yakumo 2	9.08	249	P	Pn	14 13 41.9	-0.7
JANG	Nango	9.36	237	P	Pn	14 13 43.1	-3.4
JANG				*e*S	Sn	14 15 19.4	-11

INET ***19*** *14:29:35.3, 11°.12N×87°.97W, h15km, MD3.7, ML3.5*

IDC ***19*** *14:29:36.1±1.7, 11°.72N×87°.55W, h0km, mb3.6/6, mb1 3.9/10, mb1mx3.7/39, mbtmp3.7/10, ML3.3/4, MS2.4/1, Ms1 2.4/1, ms1mx2.0/41, Error ellipse: s-maj=52.9km s-min=18.5km az=36.0*

UCR ***19*** *14:29:39.3±2.2, 11°.35N×87°.76W, h20km±124km, MD4.0, mb4.5(NEIC)*

NEIC ***19*** *14:29:39.9±2.1, 11°.44N±0°.08×87°.76W±0°.04, h46km±10km, mb4.5/6, Error ellipse: s-maj=12.8km s-min=3.8km az=198.0*

ISC 19 14:29:39.0±0.7, 11°.48N±0°.08×87°.78W±0°.07, h30km, n33, σ19°22/35, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESTN	Estel	2.12	40	*e*P	Pn	14 30 14.4	+1.9
ESTN	Estel	2.12	40	Pn	Pn	14 30 14.0	+1.5
NY14	Universidad de	2.35	110	*i* P	Pn	14 30 16.3	+0.7
NY14				*i* S	Sn	14 30 44.1	+0.6
ACON	Acoyapa	2.59	79	Pn	Pn	14 30 18.5	-0.4
TGUH	Tegucigalpa,Un	2.61	11		Pn	14 30 20.7	+1.4
PLVR	Palo Verde	2.63	115	*e*P	Pn	14 30 18.9	-0.7
CUI	Cuipilapa	2.69	107	*i* P	Pn	14 30 22.2	+1.8
JTS	Las Juntas de	3.01	113	Pn	Pn	14 30 24.9	+0.1
	7.0nm,0.3s,baz=18,slow=20,SNR=17						
JTS				Sn	Sn	14 30 59.3	-0.6
	17nm,0.3s,baz=327,slow=18,SNR=9.1						
JTS	Las Juntas de	3.01	113	*e*P	Pn	14 30 24.8	0.0
JTS	Las Juntas de	3.01	113		Pn	14 30 24.1	-0.7
HDC	Heredia	3.89	112	Pn	Pn	14 30 36.9	0.0
LCR2	La Lucha 2	4.09	115	*e*P	Pn	14 30 41.0	+1.2
APG	El Apazote	4.37	324	Pn	Pn	14 30 44.2	+0.5
	1.0nm,0.3s,baz=123,slow=11,SNR=4.7						
APG				LR	LR	14 31 51.1	
	comp=Z,39nm,18.1s,baz=108,slow=31						
TEIG	Tepich	8.71	357	Pn	Pn	14 31 42.7	-0.4
CMIG	Matias Romero	8.86	310	Pn	Pn	14 31 45.6	+0.5
	0.3nm,0.3s,baz=123,slow=12,SNR=4.2						
CMIG				Sn	Sn	14 33 20.4	-3.7
	0.2nm,0.3s,baz=239,slow=18,SNR=2.0						
FSCY	Frank Sound, G	10.05	38	Pn	Pn	14 32 01.1	-0.3
PAYG	Puerto Ayora	12.33	192	Pn	Pn	14 32 33.9	+1.2
ROSC	El Rosal	14.86	115	Pn	Pn	14 33 08.1	+0.6
	3.3nm,0.3s,baz=27,slow=18,SNR=3.0						
ROSC	El Rosal	14.86	115		Pn	14 33 05.3	-2.2
TX31	Lajitas Ar. Si	23.13	323	P	P	14 34 44.1	+1.1
TX31				IAmb	IAmb	14 34 56.8	
	comp=Z,22nm,1.9s						
TX32	Lajitas Array	23.13	323	P	P	14 34 43.6	+0.6
TX32				IAmb	IAmb	14 34 56.8	
	comp=Z,22nm,1.9s						
TXAR	Lajitas Array	23.13	323	P	P	14 34 43.6	+0.6
	comp=Z,0.6nm,0.5s,baz=131,slow=9.7,SNR=6.5						
TXAR	Lajitas Array	23.13	323	P	P	14 34 43.2	+0.2
MIAR	Mount Ida	23.56	348	P	P	14 34 46.7	-0.4
TKL	Tuckaleechee C	24.34	8	P	P	14 34 53.5	-0.8
	comp=Z,1.3nm,0.6s,baz=216,slow=14,SNR=2.2						
TKL	Tuckaleechee C	24.34	8	IAmb	IAmb	14 35 39.6	
	comp=Z,28nm,1.6s						
PDAR	Pinedale Array	36.48	333	P	P	14 36 42.0	+0.2
	comp=Z,0.1nm,0.4s,baz=116,slow=10,SNR=2.8						
NVAR	Mina Array Bea	38.23	320	P	P	14 36 59.0	+2.4
	comp=Z,1.2nm,0.7s,baz=134,slow=7.0,SNR=16						
SCHQ	Schefferville	46.30	17	P	P	14 38 01.1	-0.7
	comp=Z,3.7nm,1.0s,baz=215,slow=4.2,SNR=3.6						
SCHQ	Schefferville	46.30	17	IAmb	IAmb	14 38 26.1	
	comp=Z,29nm,1.8s						
YKA	Yellowknife Ar	54.46	345	P	P	14 39 03.3	-0.1
	comp=Z,0.4nm,0.9s,baz=134,slow=6.9,SNR=4.9						
YKA				PcP	PcP	14 40 07.2	+0.6
	comp=Z,0.2nm,0.7s,baz=144,slow=4.2,SNR=5.4						
CMAR	Chiang Mai Arr	149.53	347	PKPbc	PKPbc	14 49 26.3	-0.1
	comp=Z,0.9nm,0.8s,baz=349,slow=2.6,SNR=6.4						
CMAR	Chiang Mai Arr	149.53	347		PKPbc	14 49 24.9	-1.5

IDC ***19*** *14:56:57.2±0.8, 19°.98N×121°.50E, h0km, mb3.8/10, mb1 3.9/11, mb1mx3.8/39, mbtmp3.8/11, ML3.6/1, MS2.8/2, Ms1 2.9/2, ms1mx2.6/33, Error ellipse: s-maj=26.3km s-min=17.2km az=75.0*

NIED ***19*** *14:57:00, 20°.40N×121°.80E, h32km, Mw3.8 Best double couple: M0 6.43000×10^14 NP1:φs=4.00000°, δ62.00000°, λ=115.00000°. NP2:φs=229.00000°, δ37.00000°, λ=-52.00000°.*

MAN ***19*** *14:57:00.3, 20°.24N×121°.26E, h36km, mb4.9, ML3.9, MS3.9*

JMA ***19*** *14:57:02.8±0.6, 20°.37N×121°.78E, h0km, M4.3*

NEIC ***19*** *14:57:03.0±2.2, 20°.06N±0°.06×121°.42E±0°.05, h44km±9km, mb4.3/9, Error ellipse: s-maj=11.0km s-min=1.8km az=141.0*

ISC 19 14:57:03.3±0.6, 20°.12N±0°.04×121°.43E±0°.06, h40km, n65, σ19°31/73, mb3.9/14, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBP	Basco	0.60	57	*e*P	Pn	14 57 13.8	-1.6
BBP				*e*S	Sn	14 57 24.7	+0.7
SGCP	Mt. Cagua	1.95	162	*e*P	Pn	14 57 34.0	+0.1
SGCP				*e*S	Sn	14 58 00.1	+2.9
APYP	Conner	2.25	184	*e*P	Pn	14 57 37.3	-0.6
SIPP	Brgy, Tapao	2.37	203	*e*P	Pn	14 57 39.1	-0.5
SIPP				*e*S	Sn	14 58 07.7	+0.3
ABRA	Dolores	2.54	196	*e*P	Pn	14 57 41.2	-0.8
ABRA				*e*S	Sn	14 58 11.4	-0.4
SZP	Santa	2.71	200	Pn	Pn	14 57 44.0	-0.4
TWG	Pinlang	2.71	353		Pn	14 57 46.5	+2.1
CAUP	Cauayan	3.18	173	*e*P	Pn	14 57 52.2	+1.5
PALP	Palanan	3.18	162	*e*P	Pn	14 57 51.5	+0.7
TPUB	Ta-pu	3.25	347		Pn	14 57 51.2	-0.7
YULB	Yu-li	3.26	358		Pn	14 57 52.1	+0.1
SSLB	Suanglung	3.68	353		Pn	14 57 58.6	+0.8
SMPP	San Manuel, Pa	4.01	190	*e*P	Pn	14 58 01.8	-0.4
NACB	Ninganchiao	4.04	2		Pn	14 58 02.3	-0.3
HATJ	Hateruma jima	4.50	29	P	Pn	14 58 09.6	+0.7
HATJ				*e*S	Sn	14 58 57.7	-2.3
YHNB	Yeheng	4.53	359		Pn	14 58 11.3	+1.9
JYNG	Yonagunijimaku	4.54	18	P	Pn	14 58 09.4	-0.1
JYNG				*e*S	Sn	14 59 00.5	-0.5
YOJ	Yonaguni jima	4.57	18	P	Pn	14 58 09.7	-0.2
YOJ				*e*S	Sn	14 59 01.5	-0.2
YOJ	Yonaguni jima	4.57	18	Pn	Pn	14 58 11.7	+1.8
IRIF	Iriomote-Funau	4.71	27	P	Pn	14 58 12.7	+0.9
IRIF				*e*S	Sn	14 59 04.3	-0.9
JKRS	Kuro-shima	4.75	30	P	Pn	14 58 13.2	+0.8
JKRS				*e*S	Sn	14 59 07.0	+0.8
JIJ	Ishigaki jima	4.92	30	P	Pn	14 58 14.6	-0.1
JIJ				S	Sn	14 59 06.7	-3.7
KNMB	Chin-men Tao	5.16	328	Pn	Pn	14 58 17.1	-0.9
JISG	Ishigakijimahi	5.19	30	P	Pn	14 58 18.7	+0.3
JISG				*e*S	Sn	14 59 14.7	-2.3
JTJ	Tarama	5.43	33	P	Pn	14 58 22.6	+0.9
JTJ				S	Sn	14 59 21.3	-1.6
JIRB	Irabujima	5.83	36	P	Pn	14 58 28.1	+0.9
JIRB				*e*S	Sn	14 59 30.9	-1.9
JOGS	Gusukube	5.91	38	*e*S	Sn	14 59 36.2	+1.4
HKPS	Hong Kong Po S	7.13	289	Pn	Pn	14 58 44.9	-0.1
JKE	Kume jima 2	7.91	38	P	Pn	14 58 57.0	+1.3
JKE				*e*S	Sn	15 00 22.9	-1.0
JOW	Kunigami	9.18	42	P	Pn	14 59 13.4	+0.3
JOW	Kunigami	9.18	42	Pn	Pn	14 59 13.2	+0.1
JTK	Tokunoshima	10.28	41	P	Pn	14 59 26.9	-1.3
JAMN	Amaminishikomi	10.74	40	P	Pn	14 59 36.2	+1.6
KSRS	Korea Array	18.18	17	P	Pn	15 01 13.1	+0.5
	0.2nm,0.3s,baz=195,slow=11,SNR=4.7						
KSRS				LR	LR	15 09 15.0	
	comp=Z,21nm,18.0s,baz=15,slow=40						
CMAR	Chiang Mai Arr	21.28	269	P	P	15 01 47.5	+0.9
	0.5nm,0.6s,baz=75,slow=8.2,SNR=5.0						
CMAR				LR	LR	15 10 02.3	
	comp=Z,33nm,18.2s,baz=110,slow=37						
CMAR	Chiang Mai Arr	21.28	269	P	P	15 01 46.9	+0.4
MJAR	Matsushiro Arr	21.99	38	P	P	15 01 55.8	+1.8
	1.0nm,0.8s,baz=211,slow=8.5,SNR=4.2						
SONM	Songino Array	30.22	340	P	P	15 03 12.9	+2.8
	0.2nm,0.3s,baz=150,slow=11,SNR=2.8						
KNRA	Kunundura	36.29	168	P	P	15 04 00.8	-2.3
MK31	Makanchi Array	41.48	319	P	P	15 04 46.9	+0.6
MKAR	Makanchi Array	41.48	319	P	P	15 04 47.2	+0.8
	1.0nm,0.5s,baz=107,slow=9.1,SNR=18						
MKAR	Makanchi Array	41.48	319	P	P	15 04 46.8	+0.5
MAKZ	Makanchi	41.68	319	P	P	15 04 48.6	+0.7
MAKZ				IAmb	IAmb	15 05 27.1	
	comp=Z,3.0nm,1.4s						
WRAB	Tennant Creek	41.77	162	P	P	15 04 47.1	-1.8
WRAB				IAmb	IAmb	15 05 33.0	
	comp=Z,9.9nm,0.6s						
WRA	Warramunga Arr	41.77	162	P	P	15 04 46.9	-2.0
	comp=Z,1.4nm,0.3s,baz=333,slow=10,SNR=18						
WRA	Warramunga Arr	41.77	162	P	P	15 04 46.7	-2.3
WR0	Warramunga Arr	41.85	161	P	P	15 04 47.6	-2.0
WR0				IAmb	IAmb	15 04 57.1	
	comp=Z,15nm,1.4s						
H11N1	WAKE ISLAND Hy	42.65	82	T	T	15 50 25.9	
	baz=268,slow=75						
H11N2	WAKE ISLAND Hy	42.65	82	T	T	15 50 19.6	
	baz=268,slow=75						
H11S3	WAKE ISLAND Hy	42.65	84	T	T	15 50 18.4	
	baz=281,slow=74,SNR=11						
H11S1	WAKE ISLAND Hy	42.66	84	T	T	15 50 09.6	
	baz=281,slow=74,SNR=9.0						
H11N3	WAKE ISLAND Hy	42.66	82	T	T	15 50 26.4	
	baz=268,slow=75						
H11S2	WAKE ISLAND Hy	42.67	84	T	T	15 50 08.1	
	baz=281,slow=74,SNR=7.9						
PETK	Petropavlovsk-	43.15	31	P	P	15 04 58.9	-0.9
	comp=Z,3.0nm,1.0s,baz=269,slow=5.8,SNR=3.3						
ZAA0	Zalesovo Array	43.81	329	P	P	15 05 04.7	-0.4
ZAA0				IAmb	IAmb	15 05 05.9	
	comp=Z,2.4nm,0.9s						
ZALV	Zalesovo Beam	43.81	329	P	P	15 05 05.2	+0.2
	comp=Z,1.6nm,0.7s,baz=117,slow=9.3,SNR=8.5						
ZALV	Zalesovo Beam	43.81	329	P	P	15 05 04.6	-0.5
AS31	Alice Springs	45.18	164	P	P	15 05 15.1	-1.3
ASAR	Alice Springs	45.19	164	P	P	15 05 15.6	-0.9
	comp=Z,1.7nm,0.4s,baz=345,slow=6.9,SNR=109						
ASAR	Alice Springs	45.19	164	P	P	15 05 15.0	-1.4
KKAR	Karatay Array	48.19	310	P	P	15 05 40.0	+0.2
FORT	Forrest	51.00	173	P	P	15 06 00.1	-1.1
ABKAR	Akbulak array	58.46	316	P	P	15 06 42.2	+1.1
AKASG	Malin Array Be	76.06	319	P	P	15 08 45.8	-0.8
	comp=Z,0.1nm,0.3s,baz=58,slow=4.9,SNR=2.4						
YKA	Yellowknife Ar	86.62	23	P	P	15 09 41.8	-0.5
	comp=Z,0.6nm,0.8s,baz=308,slow=4.6,SNR=6.6						

NEIC ***19*** *15:18:23.3±0.9, 24°.0S±0°.1×179°.8W±0°.1, h471km±11km, mb4.1/20, Error ellipse: s-maj=17.3km s-min=15.5km az=221.0*

IDC ***19*** *15:18:27.1±11.0, 24°.22S×179°.89E, h487km±141km, mb3.1/4, mb1 3.3/5, mb1mx3.1/23, mbtmp4.0/5, Error ellipse: s-maj=87.8km s-min=29.0km az=6.0*

ISC 19 15:18:22.6±0.7, 24°.0S±0°.1×179°.9W±0°.1, h450km, n28, σ19°01/29, mb3.8/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	12.65	39	P	P	15 21 09.1	+0.4
URZ	Urewera	14.41	190	P	P	15 21 28.8	+1.5
	0.7nm,0.3s,baz=0.0,slow=20,SNR=6.7						
URZ				S	S	15 23 57.9	-1.9
	0.3nm,0.3s,baz=75,slow=20,SNR=4.0						
HIZ	Hauiti	15.12	196	P	P	15 21 35.5	+0.7
BKZ	Black Stump Fm	15.40	191	P	P	15 21 38.3	+0.5
BFZ	Birch Farm	16.92	190	P	P	15 21 54.8	+1.0
QRZ	Quartz Range	17.91	199	P	P	15 22 04.8	+0.5
NNZ	Nelson	18.04	197	P	P	15 22 06.2	+0.7
TUWZ	Tuamarina	18.10	195	P	P	15 22 06.6	+0.5
THZ	Taphouse	18.58	197	P	P	15 22 11.0	-0.7
KHZ

LSA smax smax
comp=N,1µm,0.9s
LSA smax smax
comp=E,3µm,1.0s
LSA Lhasa 3.89 217 P **Pn** **15 34 16.1 +4.2**
LSA Lhasa 3.89 217 **Pn** **15 34 16.1 +4.2**
LKP Lekhapani 5.79 162 *eP* **Pn** **15 34 39.8 +2.3**
LKP *i* x x 15 37 02.8
TEZP TEZPUR 6.29 188 *eP* **Pn** **15 34 46.3 +1.9**
TEZP *i* Rg Rg 15 37 01.0
KOHI KOHIMA 7.12 178 *eP* **Pn** **15 34 57.5 +1.5**
KOHI *i* x x 15 38 48.7
GTK Tadong 7.13 221 *eP* **Pn** **15 34 56.0 -0.1**
GTK *i* x x 15 37 06.7
GTK *ex* x 15 37 06.9
SHL Shillong 7.46 194 P **Pn** **15 35 01.2 +0.5**
SHL Shillong 7.46 194 *eP* **Pn** **15 35 01.3 +0.6**
SHL *i* x x 15 37 25.7
SHL Shillong 7.46 194 **Pn** **15 35 01.2 +0.5**
TAPN Taplejung 7.62 225 *eP* **Pn** **15 35 02.7 -0.3**
77nm,0.5s
GTA Gaotai 8.14 35 *eP* **Pn** **15 35 10.4 +0.5**
GTA pP 15 35 15.0
GTA sP 15 35 17.8
GTA S **Sn** **15 36 47.0 +6.4**
GTA sS 15 36 56.5
GTA pmax pmax
comp=Z,9.0nm,1.7s
GTA pmax pmax
comp=Z,95nm,7.5s
GTA LR LR
comp=N,1µm,12.7s
GTA LR LR
comp=E,2µm,12.4s
GTA LR LR
comp=Z,2µm,13.3s
ODAN Odare 8.18 225 *eP* **Pn** **15 35 09.5 -1.1**
129nm,0.4s
JIRN Jiri 8.39 234 *eP* **Pn** **15 35 13.8 +0.2**
83nm,0.5s
GUN Gumba 8.44 236 *eP* **Pn** **15 35 15.3 +1.0**
RAMN Ramite 8.60 229 *eP* **Pn** **15 35 14.6 -1.7**
74nm,0.5s
CD2 Chengdu 8.68 100⇓ *iP* Pn 15 35 22.8 +5.6
CD2 S Sn 15 37 07.1 +13
CD2 smax smax
comp=E,30nm,1.6s
LZH Lanzhou 8.88 66 *eP* **Pn** **15 35 20.5 +0.4**
LZH pP 15 35 29.5
LZH sP 15 35 35.0
LZH *eS* **Sn** **15 36 59.8 +0.7**
LZH sS 15 37 11.1
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,100nm,4.5s
LZH smax smax
comp=N,150nm,1.2s
LZH smax smax
comp=E,160nm,1.2s
LZH LR LR
comp=E,2µm,9.5s
LZH LR LR
comp=Z,3µm,10.2s
KKN Kakani 8.94 238 *eP* **Pn** **15 35 21.7 +0.7**
81nm,0.4s
PKI Pulchoki 8.98 236 *eP* **Pn** **15 35 22.2 +0.5**
44nm,0.5s
PKIN Phulchoki 8.99 236 *eP* **Pn** **15 35 22.1 +0.4**
258nm,0.5s
DMN Daman 9.17 237 *eP* **Pn** **15 35 24.3 +0.1**
68nm,0.5s
GKN Gorkha 9.28 241 *eP* **Pn** **15 35 26.0 +0.3**
85nm,0.5s
DANN Dangsing 9.76 245 *eP* **Pn** **15 35 32.5 +0.2**
338nm,0.8s
KOLN Koldanda 10.18 243 *eP* **Pn** **15 35 36.6 -1.4**
107nm,0.8s
KMI Kunming 10.97 132 P **Pn** **15 35 50.5 +1.6**
KMI PP **PnPn** **15 36 00.9 +4.2**
KMI sP 15 36 02.3
KMI S **Sn** **15 37 53.9 +3.3**
KMI pmax pmax
comp=Z,14nm,0.5s
KMI pmax pmax
comp=Z,110nm,4.5s
KMI LR LR
comp=N,4µm,10.8s
KMI LR LR
comp=E,4µm,11.4s
KMI LR LR
comp=Z,760nm,12.3s
BOK Bokaro 11.41 220 *eP* **Pn** **15 35 53.0 -1.7**
BOK *ex* x 15 38 00.0
BOK *i* x x 15 39 09.4
BOK *i* Rg Rg 15 40 14.6
WMQ Urumqi 11.94 338 *eP* **Pn** **15 36 03.4 +1.5**
WMQ PP **PnPn** **15 36 13.3 +3.5**
WMQ pmax pmax
comp=Z,9.0nm,1.3s
WMQ pmax pmax
comp=Z,73nm,4.5s
WMQ LR LR
comp=N,900nm,9.5s
WMQ LR LR
comp=E,1µm,14.9s
WMQ LR LR
comp=Z,280nm,12.1s
WMQ Urumqi 11.94 338 P **Pn** **15 36 00.5 -1.4**
WMQ Urumqi 11.94 338 Pn **Pn** **15 36 00.5 -1.4**
JOSI Joshimath 12.36 263 *eP* **Pn** **15 36 09.5 +1.8**
XAN Xi'an 12.67 81 P **Pn** **15 36 11.5 -0.4**
XAN S **Sn** **15 38 31.9 +0.1**
XAN pmax pmax
comp=Z,7.0nm,1.0s
XAN pmax pmax
comp=Z,50nm,3.5s
XAN LR LR
comp=N,2µm,10.3s
XAN LR LR
comp=E,2µm,9.6s
XAN LR LR
comp=Z,1µm,12.6s
XAN Xi'an 12.67 81 P **Pn** **15 36 11.1 -0.8**
XAN Xi'an 12.67 81 Pn **Pn** **15 36 11.1 -0.8**
ENH Enshi 13.61 97 Pn **Pn** **15 36 25.7 +1.0**
SMLA Simla 14.23 267 *eP* **Pn** **15 36 33.1 -0.1**
SMLA IAmb IAmb 15 36 35.1
comp=Z,11nm,0.6s
SMLA *i* x x 15 41 19.1
BWNR Bhubaneshwar 14.41 212 *eP* **Pn** **15 36 34.1 -1.5**
CHTO Chiang Mai 14.73 161 P **P** **15 36 45.7 +0.1**
CHTO Chiang Mai 14.73 161 P **P** **15 36 45.7 +0.1**
CM31 Chiang Mai Arr 15.07 161 **Pn** **15 36 43.3 -1.3**
CMAR Chiang Mai Arr 15.07 161 Pn **Pn** **15 36 44.4 -0.2**
comp=Z,0.1nm,0.3s,baz=327,slow=11,SNR=10
CMAR LR LR 15 42 30.3
comp=Z,314nm,18.8s,baz=350,slow=37
PDGK Podgornoye 15.35 317 P **Pn** **15 36 44.5 -3.7**
KSH Kashi 15.85 300 P **P** **15 37 00.8 +2.7**
KSH pP pP 15 37 04.9 -3.7
KSH sP sP 15 37 12.8 -0.8
KSH S **S** **15 39 58.5 -4.3**
KSH sS sS 15 40 06.0 -13
KSH SS **SnSn** **15 40 12.8 +11**
KSH pmax pmax
comp=Z,26nm,0.7s
KSH pmax pmax
comp=Z,320nm,4.2s
KSH LR LR
comp=Z,2µm,10.3s
KSH LR LR
comp=Z,2µm,10.4s
KSH LR LR
comp=Z,1µm,8.9s
KDJ Kajisay 16.09 310 P **Pn** **15 36 58.4 +0.5**
KDJ pmax pmax
comp=Z,9.0nm,0.8s
KDJ Kajisay 16.09 310 Pn **Pn** **15 36 58.4 +0.5**
HHC Hu-ho-hao-te 16.27 56 *eP* **P** **15 37 05.4 +2.6**
HHC pmax pmax
comp=Z,12nm,1.9s
HHC pmax pmax
comp=Z,55nm,5.3s
HHC LR LR
comp=Z,930nm,14.4s
HHC LR LR
comp=Z,850nm,13.5s
MK31 Makanchi Array 16.46 331 *i* P **Pn** **15 37 00.2 -2.1**
MK31 Makanchi Array 16.46 331 **Pn** **15 37 00.7 -1.7**
MKAR Makanchi Array 16.46 331 *i* P **Pn** **15 37 01.3 -1.0**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 16.46 331 Pn **Pn** **15 36 59.2 -3.2**
comp=Z,0.2nm,0.3s,baz=138,slow=14,SNR=12
MKAR LR LR 15 43 30.4
comp=Z,276nm,19.6s,baz=148,slow=38
NRN Naryn 16.56 306 P **Pn** **15 37 02.6 -1.3**
NRN pmax pmax
comp=Z,12nm,0.9s
NRN Naryn 16.56 306 P **Pn** **15 37 02.5 -1.3**
MAKZ Makanchi 16.60 330 P **P** **15 37 05.0 -1.3**
MAKZ Makanchi 16.60 330 **Pn** **15 37 01.6 -2.5**
CHLP Challavanipeta 16.77 214 *eP* **Pn** **15 37 06.6 +0.3**
CHLP IAmb IAmb 15 37 10.2
comp=Z,5.0nm,0.8s
NIL Nilore 17.22 278 P **Pn** **15 37 12.0 0.0**
NIL pmax pmax
comp=Z,21nm,0.8s
NIL Nilore 17.22 278 **Pn** **15 37 12.0 0.0**
NIL IAmb IAmb 15 37 17.0
comp=Z,21nm,0.8s
BHPL Bhopal 17.34 241 *eP* **Pn** **15 37 10.2 -3.2**
BHPL IAmb IAmb 15 37 13.0
comp=Z,29nm,0.9s
PBKT Sadao Pong 17.47 157 **P** **15 37 16.3 +0.4**
TKM2 Tokmak 2 17.50 310 P **P** **15 37 18.7 +2.2**
NGP Nagpur 17.56 232 *ex* **Pn** **15 37 13.0 -3.2**
NGP *ex* x 15 37 18.9
NGP *ex* x 15 37 19.6
comp=N,43nm,0.9s
SONM Songino Array 17.73 29 P **Pn** **15 37 17.2 -1.0**
SONM pmax pmax
comp=Z,6.0nm,1.1s
SONM Songino Array 17.73 29 P **Pn** **15 37 17.2 -1.0**
comp=Z,0.3nm,0.3s,baz=215,slow=11,SNR=23
SONM LR LR 15 44 35.0
comp=Z,612nm,20.4s,baz=195,slow=39
SONM Songino Array 17.73 29 IAmb IAmb 15 37 20.2
comp=Z,5.6nm,1.1s
ULN Ulaanbaatar 18.02 30*ce*P **Pn** **15 37 21.5 -0.4**
ULN pmax pmax
comp=Z,16nm,2.5s
ULN Ulaanbaatar 18.02 30 **Pn** **15 37 20.5 -1.4**
AAK Ala-Archa 18.09 308 P **P** **15 37 25.3 +2.4**
AAK Ala-Archa 18.09 308 P **P** **15 37 23.3 +0.4**
comp=Z,0.2nm,0.3s,baz=104,slow=8.4,SNR=15
AAK LR LR 15 45 38.9
comp=Z,729nm,19.8s,baz=103,slow=41
AAK Ala-Archa 18.09 308 P **P** **15 37 22.7 -0.2**
ARSB Arslanbob 18.61 303 P **Pn** **15 37 29.4 +0.4**
ARSB IAmb IAmb 15 37 44.0
comp=Z,46nm,1.6s
ZAK Zakamensk 18.85 19 *eP* **P** **15 37 30.2 -0.9**
ZAK pmax pmax
comp=Z,6.0nm,1.7s
PVM Polavaram 19.04 218 *eP* **P** **15 37 33.9 +0.5**
PVM IAmb IAmb 15 37 37.8
comp=Z,5.5nm,0.8s
RPR Rampur 19.08 227 *eP* **P** **15 37 33.5 -0.3**
RPR IAmb IAmb 15 37 36.5
comp=Z,5.4nm,0.7s
BJI Beijing 19.33 62 *eP* **Pn** **15 37 36.9 -0.7**
BJI S **S** **15 41 11.8 -1.4**
BJI pmax pmax
comp=Z,4.0nm,1.2s
BJI LR LR
comp=Z,740nm,13.3s
BJI LR LR
comp=Z,280nm,23.5s
GGR Gangavaram 19.35 223 *eP* **P** **15 37 36.5 -0.3**
GGR IAmb IAmb 15 37 40.1
comp=Z,6.8nm,1.0s
SRSP Sriramsagar 19.62 229 *eP* **P** **15 37 38.9 -0.8**
SRSP IAmb IAmb 15 37 42.5
comp=Z,12nm,1.4s
BTK Batken 19.81 298 P **P** **15 37 41.8 +0.1**
BTK pmax pmax
comp=Z,149nm,2.0s
BTK Batken 19.81 298 P **P** **15 37 41.8 +0.1**
BTK IAmb IAmb 15 37 48.7
comp=Z,148nm,1.9s
QIZ Qiongzhong 19.90 130 P **P** **15 37 42.0 -0.7**
QIZ S **S** **15 41 25.3 +0.4**
QIZ LR LR
comp=N,1µm,13.3s
QIZ LR LR
comp=E,960nm,14.7s
QIZ LR LR
comp=Z,760nm,13.2s
GAR Garm 19.96 294 P **P** **15 37 41.8 -1.6**
GAR IAmb IAmb 15 37 57.3
comp=Z,40nm,1.0s
MYLAV Mylavaram 19.98 220 *eP* **P** **15 37 43.8 +0.2**
MYLAV IAmb IAmb 15 37 47.8
comp=Z,12nm,1.4s
TLY Talaya 20.13 18 *eP* **P** **15 37 44.1 -0.9**
TLY pmax pmax
comp=Z,22nm,1.4s
TLY MLR MLR
comp=Z,1µm,13.0s
TLY Talaya 20.13 18 LR LR 15 46 04.2
comp=Z,487nm,21.1s,baz=187,slow=38
TLY Talaya 20.13 18 P **P** **15 37 42.8 -2.2**
UBPT Khong Chiam 20.46 146 P **P** **15 37 47.1 -1.7**
UBPT IAmb IAmb 15 38 26.5
comp=Z,53nm,1.4s
HYB Hyderabad 20.63 225 *i* P **P** **15 37 50.0 -0.7**
HYBB Hyderabad (bro 20.63 225 *eP* **P** **15 37 50.5 -0.2**
HYBB IAmb IAmb 15 37 51.5
comp=Z,9.1nm,0.7s
KBL Kabul 20.67 281 P **P** **15 37 50.6 -0.6**
KBL pmax pmax
comp=Z,17nm,0.8s
KBL Kabul 20.67 281 P **P** **15 37 50.6 -0.6**
KBL IAmb IAmb 15 37 53.2
comp=Z,17nm,0.8s
CHGR Chuyangaron 20.80 293 P **P** **15 37 50.7 -1.8**
CHGR IAmb IAmb 15 38 11.7
comp=Z,38nm,1.0s
IRK Irkutsk 20.80 18 *eP* Pn 15 37 54.7 -0.1
IRK pmax pmax
comp=Z,40nm,2.7s
NJS Nagarjunasagar 20.87 222 *eP* **P** **15 37 53.2 0.0**
NJS IAmb IAmb 15 37 54.2
comp=Z,6.9nm,1.0s
KK31 Karatay Array 20.96 306 P **P** **15 37 53.8 -0.3**
KK31 pmax pmax
comp=Z,13nm,0.8s
KK31 Karatay Array 20.96 306 P **P** **15 37 53.8 -0.3**
KK31 IAmb IAmb 15 37 58.6
comp=Z,13nm,0.8s
KKAR Karatay Array 20.96 306 P **P** **15 37 53.8 -0.2**
KKAR pmax pmax
comp=Z,13nm,0.8s
KKAR Karatay Array 20.96 306 P **P** **15 37 53.8 -0.2**
KKAR IAmb IAmb 15 37 58.6
comp=Z,13nm,0.8s
KURBB Kurchatov Arra 21.02 332 P **P** **15 37 54.6 0.0**
comp=Z,14nm,0.7s,baz=139,slow=11,SNR=77
KURK Kurchatov 21.06 332*ce*P **P** **15 37 54.0 -1.0**
KURK pmax pmax
comp=Z,19nm,0.7s
KURK Kurchatov 21.06 332 P **P** **15 37 53.9 -1.0**
KURK IAmb IAmb 15 38 00.1
comp=Z,22nm,0.8s
ADKI Addanki 21.09 220 *eP* **P** **15 37 55.6 +0.1**
ADKI IAmb IAmb 15 38 01.3
comp=Z,9.3nm,1.1s
NJ2 Nanjing 21.14 85 *eP* **P** **15 37 56.3 +0.3**
NJ2 pP **pP** **15 38 04.0 -2.6**
NJ2 sP **sP** **15 38 08.3 -3.4**
NJ2 S **S** **15 41 46.6 -2.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 LR LR
comp=Z,460nm,7.9s
NJ2 LR LR
comp=Z,1µm,10.6s
NJ2 LR LR
comp=Z,1µm,12.2s
KLRI Killari 21.37 231 *eP* **P** **15 37 58.5 -0.2**
KLRI IAmb IAmb 15 38 03.4
comp=Z,18nm,0.9s
SRLM Srisailam 21.47 223 *eP* **P** **15 38 00.1 +0.3**
SRLM IAmb IAmb 15 38 04.5
comp=Z,6.2nm,0.5s
ZAA0 Zalesovo Array 22.03 346 P **P** **15 38 03.9 -1.5**
ZALV Zalesovo Beam 22.03 346 *i* P **P** **15 38 07.5 +2.1**
ZALV pmax pmax
comp=Z,7.0nm,0.8s
ZALV Zalesovo Beam 22.03 346 P **P** **15 38 04.6 -0.8**
comp=Z,5.4nm,0.8s,baz=167,slow=11,SNR=21
ZALV LR LR 15 47 07.8
comp=Z,135nm,19.8s,baz=172,slow=38
POO Poona 22.91 236 *ex* **P** **15 38 19.2 +4.1**
SKHT Srikalahasti 22.98 217 *eP* **P** **15 38 16.2 +0.4**
SKHT IAmb IAmb 15 38 17.2
comp=Z,5.5nm,0.9s
URV Uravakonda 23.33 224 *eP* **P** **15 38 18.8 -0.6**
URV IAmb IAmb 15 38 26.3
comp=Z,42nm,1.1s
BVAR Borovoye Array 26.25 327 P **P** **15 38 47.1 +1.3**
comp=Z,1.8nm,0.7s,baz=139,slow=10,SNR=15
BVAR PcP **PcP** **15 42 11.7 +0.1**
comp=Z,0.3nm,0.5s,baz=176,slow=3.9,SNR=2.4
BRVK Borovoye 26.32 327 P **P** **15 38 46.5 +0.1**
BRVK Borovoye 26.32 327 P **P** **15 38 47.3 +0.8**
LHMI Lhok Sumawe 27.65 173 P **P** **15 39 01.1 +2.4**
comp=Z,78nm,1.0s
KS19 Wonju Array Si 28.12 71 P **P** **15 39 03.1 +0.3**
KS19 IAmb IAmb 15 39 47.3
comp=Z,91nm,1.9s
KSRS Korea Array 28.17 71 P **P** **15 39 02.9 -0.2**
comp=Z,2.0nm,0.5s,baz=262,slow=8.7,SNR=11
KSRS LR LR 15 51 13.2
comp=Z,182nm,18.3s,baz=267,slow=39
PALK Pallekele 28.23 208 LR LR 15 52 06.4
comp=Z,71nm,21.5s,baz=47,slow=40
IPM Ipoh 29.03 165 P **P** **15 39 10.9 -0.2**
IPM IAmb IAmb 15 40 02.8
comp=Z,28nm,1.4s
GEYT Alibeck 29.42 290 P **P** **15 39 13.1 -1.2**
comp=Z,1.6nm,0.7s,baz=144,slow=3.5,SNR=4.3
GEYT LR LR 15 53 21.1
comp=Z,563nm,19.6s,baz=80,slow=41
GEYT Alibeck 29.42 290 IAmb IAmb 15 39 18.2
comp=Z,2.1nm,1.0s
AB31 Akbulak array 30.02 313 *eP* **P** **15 39 20.2 +0.7**
ABKAR Akbulak array 30.02 313 P **P** **15 39 20.3 +0.8**
GSI Gunungsitoli 31.59 173 P **P** **15 39 35.0 +1.4**
comp=Z,43nm,0.8s
GSI Gunungsitoli 31.59 173 P **P** **15 39 34.0 +0.3**
GSI IAmb IAmb 15 39 36.2
comp=Z,27nm,0.7s
AKTO Aktyubinsk 31.60 314 P **P** **15 39 34.3 +0.9**
AKTO Aktyubinsk 31.60 314 LR LR 15 53 13.9
comp=Z,194nm,18.3s,baz=115,slow=38
USRK Ussuriysk Ar. 31.67 58 P **P** **15 39 34.7 +0.6**
comp=Z,0.6nm,0.5s,baz=274,slow=4.2,SNR=2.3
WSAR Wadi Sarin 32.37 262 P **P** **15 39 42.0 +1.6**
comp=Z,6.8nm,0.9s,baz=27,slow=11,SNR=3.1
KLR Kul'dur 32.54 49 *i* P **P** **15 39 41.9 +0.2**
KLR pmax pmax
comp=Z,3.0nm,1.0s
PBSI Pulau Batu 33.01 172 P **P** **15 39 48.1 +2.0**
comp=Z,38nm,1.6s
SVE Sverdlovsk 33.03 327 *eP* P 15 39 51.4 +5.5
SVE pmax pmax
comp=Z,8.0nm,1.0s
ARU Arti 33.81 325*d* *iP* **P** **15 39 53.5 +0.8**
ARU 15 41 06.2
ARU S **S** **15 45 16.7 +2.6**
ARU SS **SnSn** **15 47 18.1 -2.5**
ARU pmax pmax
comp=Z,6.0nm,1.0s
ARU Arti 33.81 325 LR LR 15 54 17.8
comp=Z,99nm,19.2s,baz=114,slow=38
ARU Arti 33.81 325 P **P** **15 39 52.1 -0.5**
ARU IAmb IAmb 15 39 58.7
comp=Z,5.0nm,0.9s
MJAR Matsushiro Arr 36.44 72 LR LR 15 55 03.7
comp=Z,168nm,18.2s,baz=260,slow=36
YAK Yakutsk 37.08 27 *i* P **P** **15 40 20.8 +0.2**
YAK pmax pmax
comp=Z,3.0nm,0.8s
KIRV Kirov 39.19 325 LR LR 15 57 44.1
comp=Z,227nm,18.8s,baz=190,slow=38
GNI Garni 39.69 295*ce*P **P** **15 40 44.8 +1.6**
GNI pmax pmax
comp=Z,56nm,1.3s
GNI Garni 39.69 295 LR LR 16 01 44.2
comp=Z,120nm,18.4s,baz=100,slow=43
GNI Garni 39.69 295 P **P** **15 40 43.8 +0.6**
GNI IAmb IAmb 15 40 57.3
comp=Z,16nm,1.1s
KBZ Khabaz 40.83 301 LR LR 16 00 27.7
comp=Z,131nm,18.4s,baz=70,slow=40
KVAR Kislovodsk Arr 40.97 301 LR LR 15 59 34.1
comp=Z,180nm,20.2s,baz=162,slow=39
KIV Kislovodsk 40.97 301 *eP* **P** **15 40 54.3 +0.7**
KIV pmax pmax
comp=Z,7.0nm,0.9s
KIV MLR MLR
comp=Z,240nm,16.0s
SOCY Socotra 41.82 250 P **P** **15 40 57.3 -3.5**
SOCY IAmb IAmb 15 41 05.7
comp=Z,44nm,1.2s
TIXI Tiksi 43.07 15*ce*P **P** **15 41 10.1 -0.1**
TIXI pmax pmax
comp=Z,15nm,2.5s
TIXI Tiksi 43.07 15 P **P** **15 41 10.0 -0.1**
comp=Z,1.9nm,0.4s,baz=255,slow=3.8,SNR=7.5
TIXI Tiksi 43.07 15 P **P** **15 41 09.5 -0.7**
TIXI IAmb IAmb 15 41 14.0
comp=Z,19nm,1.8s
RAYN Ar Rayn 43.27 270 P **P** **15 41 11.6 -1.0**
RAYN pmax pmax
comp=Z,17nm,2.0s
RAYN Ar Rayn 43.27 270 P **P** **15 41 11.6 -1.0**
RAYN IAmb IAmb 15 41 18.7
comp=Z,17nm,1.9s
LUWI Luwuk 43.41 135 P **P** **15 41 13.0 -0.6**
LUWI IAmb IAmb 15 42 36.0
comp=Z,76nm,1.5s
DGAR Diego Garcia 44.92 211 P **P** **15 41 25.3 -0.4**
DGAR pmax pmax
comp=Z,136nm,1.4s
DGAR Diego Garcia 44.92 211 P **P** **15 41 25.3 -0.4**
OBN Obninsk 45.28 317⇓ *eP* **P** **15 41 29.7 +1.6**
OBN *e* 15 41 34.6
OBN pmax pmax
comp=Z,6.0nm,1.1s
OBN MLR MLR
comp=Z,148nm,16.0s
OBN Obninsk 45.28 317 LR LR 16 01 47.4
comp=Z,47nm,18.2s,baz=201,slow=38
TMCR Tamitsa 46.14 330 *eP* **P** **15 41 36.9 +2.1**
SEY Seymchan 47.08 32 *i* P **P** **15 41 41.9 -0.2**
BR131 Keskin Array S 48.19 296 P **P** **15 41 50.9 -0.5**
BR131 pmax pmax
comp=Z,4.0nm,1.4s
BR131 Keskin Array S 48.19 296 P **P** **15 41 50.9 -0.5**
BRTR Keskin Array B 48.19 296*ce*P **P** **15 41 52.0 +0.6**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 48.19 296 P **P** **15 41 51.8 +0.4**
comp=Z,1.2nm,0.8s,baz=103,slow=5.6,SNR=8.0
BRTR LR LR 16 05 55.8
comp=Z,62nm,19.4s,baz=92,slow=41
MMAI Mount Meron Ar 48.45 287 LR LR 16 05 49.3
comp=Z,92nm,18.4s,baz=25,slow=40
PETK Petropavlovsk- 49.14 46 LR LR 16 03 03.2
comp=Z,108nm,18.0s,baz=329,slow=36
AKASG Malin Array Be 49.72 311 P **P** **15 42 02.7 0.0**
AKASG pmax pmax
comp=Z,2.0nm,1.5s
AKASG Malin Array Be 49.72 311 P **P** **15 42 02.7 0.0**
comp=Z,1.0nm,0.6s,baz=73,slow=7.1,SNR=7.0
AKASG LR LR 16 06 49.7
comp=Z,185nm,19.3s,baz=80,slow=41
AKASG Malin Array Be 49.72 311 IAmb IAmb 15 42 09.7
comp=Z,2.4nm,1.4s
AKBB Malin Array Si 49.72 311 P **P** **15 42 02.9 +0.2**
AKBB pmax pmax
comp=Z,6.0nm,1.0s

AKBB	**Malin Array Si**	**49.72 311**	P	**P**	**15 42 02.9**	**+0.2**
AKBB			IAmb	IAmb	15 42 10.0	
	comp=Z,5.6nm,1.0s					
EIL	**Elat**	**49.85 283**	LR	LR	16 07 16.2	
	comp=Z,155nm,19.9s,baz=94,slow=41					
MDUB	**Mudurnu**	**49.87 298**	P	**P**	**15 42 02.4**	**-1.8**
FINES	**FINESS Array B**	**51.18 325**	P	**P**	**15 42 13.8**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=76,slow=8.0,SNR=7.9					
FINES			LR	LR	16 07 18.0	
	comp=Z,96nm,18.1s,baz=88,slow=40					
VRI	**Vrincioaia**	**52.02 305** ⇑	P	**P**	**15 42 20.6**	**+0.4**
VRI	**Vrincioaia**	**52.02 305** ⇑	P	**P**	**15 42 20.6**	**+0.4**
ARCES	**ARCESS Array B**	**52.05 336**	P	**P**	**15 42 20.7**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=90,slow=7.3,SNR=6.4					
ARCES			PcP	**PcP**	**15 43 31.4**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=105,slow=2.9,SNR=4.2					
ARCES			LR	LR	16 06 44.3	
	comp=Z,110nm,18.2s,baz=112,slow=39					
PLOR	**Plostina**	**52.08 305** ⇑	P	**P**	**15 42 21.7**	**+1.1**
PLOR	**Plostina**	**52.08 305** ⇑	P	**P**	**15 42 21.7**	**+1.1**
BIZ	**Bicaz**	**52.26 307** ⇓	P	**P**	**15 42 21.8**	**-0.1**
ISR	**Istrita**	**52.29 304** ⇓	P	**P**	**15 42 23.4**	**+1.2**
ISR	**Istrita**	**52.29 304** ⇓	P	**P**	**15 42 23.4**	**+1.2**
MLR	**Muntele Rosu**	**52.63 305** ⇑	P	**P**	**15 42 26.0**	**+1.2**
MLR	**Muntele Rosu**	**52.63 305**	LR	LR	16 07 55.2	
	comp=Z,188nm,20.2s,baz=97,slow=40					
MLR	**Muntele Rosu**	**52.63 305** ⇑	P	**P**	**15 42 26.0**	**+1.2**
MLR	**Muntele Rosu**	**52.63 305**	P	**P**	**15 42 25.1**	**+0.3**
MLR			IAmb	IAmb	15 42 28.1	
	comp=Z,12nm,1.1s					
BURAR	**Bucovina Array**	**52.73 308** ⇑	P	**P**	**15 42 25.7**	**+0.2**
BURAR	**Bucovina Array**	**52.73 308** ⇑	P	**P**	**15 42 25.7**	**+0.2**
DOPR	**Dopca**	**52.92 306** ⇓	P	**P**	**15 42 27.2**	**+0.4**
VOIR		**53.26 305** ⇓	P	**P**	**15 42 29.9**	**+0.5**
VOIR		**53.26 305** ⇓	P	**P**	**15 42 29.9**	**+0.5**
ARCR	**ARCALIA**	**53.41 307** ⇓	P	**P**	**15 42 30.3**	**-0.1**
BILL	**Bilibino**	**53.43 27** ⇓	*i* P	**P**	**15 42 30.8**	**+0.7**
BILL			*e**PP	**pP**	**15 42 39.5**	**-2.7**
BILL			S	**S**	**15 49 55.0**	**-4.8**
BILL			pmax	pmax		
	comp=Z,12nm,2.5s					
BILL			MLR	MLR		
	comp=Z,312nm,17.0s					
BILL	**Bilibino**	**53.43 27**	P	**P**	**15 42 30.2**	**+0.1**
BILL			IAmb	IAmb	15 42 32.9	
	comp=Z,4.5nm,1.0s					
ARR	**Arges**	**53.56 305** ⇓	P	**P**	**15 42 31.5**	**-0.1**
TRPA	**Tarpa**	**54.41 309** ⇓	P	**P**	**15 42 34.2**	**-3.4**
SPA0	**Spitsbergen Ar**	**55.51 346**	P	**P**	**15 42 46.0**	**+0.8**
SPITS	**Spitsbergen Ar**	**55.51 346**	LR	LR	16 11 06.1	
	comp=Z,181nm,18.3s,baz=55,slow=41					
VYHS	**Vyhne**	**56.74 310**	*e*P	**P**	**15 42 53.3**	**-1.2**
VYHS	**Vyhne**	**56.74 310**	*e*P	**P**	**15 42 53.2**	**-1.2**
AGG	**Agios Georgios**	**56.85 298**	P	**P**	**15 42 54.0**	**-1.3**
AGG			pmax	pmax		
	comp=Z,46nm,1.7s					
AGG	**Agios Georgios**	**56.85 298**	P	**P**	**15 42 54.0**	**-1.3**
HFS	**Hagfors**	**57.33 324**	LR	LR	16 09 36.5	
	comp=Z,164nm,18.6s,baz=80,slow=38					
ITM	**Ithomi**	**57.73 296**	P	**P**	**15 42 59.7**	**-1.8**
VRAC	**Vranov**	**57.98 311**	LR	LR	16 12 25.7	
	comp=Z,182nm,19.5s,baz=87,slow=41					
NC405	**NORSAR Array S**	**58.11 325**	P	**P**	**15 43 03.9**	**+0.1**
NC303	**NORSAR Array S**	**58.25 326**	P	**P**	**15 43 05.2**	**+0.4**
NC602	**NORSAR Array S**	**58.27 325**	P	**P**	**15 43 04.6**	**-0.3**
NB201	**NORSAR Array S**	**58.32 325**	P	**P**	**15 43 05.2**	**-0.1**
NB2	**NORSAR Subarra**	**58.36 325**	P	**P**	**15 43 05.6**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=78,slow=6.9					
NOA	**NORSAR Array B**	**58.36 325**	P	**P**	**15 43 05.5**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=73,slow=8.8,SNR=12					
NOA			LR	LR	16 10 42.4	
	comp=Z,65nm,20.5s,baz=80,slow=39					
NC204	**NORSAR Array S**	**58.53 326**	P	**P**	**15 43 06.8**	**0.0**
KONO	**Kongsberg**	**59.45 324**	P	**P**	**15 43 13.3**	**+0.2**
KONO			pmax	pmax		
	comp=Z,94nm,1.6s					
KONO	**Kongsberg**	**59.45 324**	P	**P**	**15 43 13.3**	**+0.2**
PSAC1	**Pilbara Seismi**	**59.52 152**	P	**P**	**15 43 13.9**	**-0.1**
GERES	**GERESS Array B**	**59.94 311**	P	**P**	**15 43 17.4**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=61,slow=6.3,SNR=7.8					
GERES			LR	LR	16 13 42.1	
	comp=Z,154nm,18.5s,baz=85,slow=41					
DAVOX	**Davos/Dischmat**	**63.03 310**	LR	LR	16 15 23.5	
	comp=Z,153nm,19.6s,baz=78,slow=40					
KMBO	**Kilima Mbogo**	**63.05 249**	*i* P	**P**	**15 43 39.5**	**+1.0**
KMBO			pmax	pmax		
	comp=Z,2.0nm,0.9s					
KMBO	**Kilima Mbogo**	**63.05 249**	P	**P**	**15 43 36.6**	**-1.9**
	comp=Z,2.2nm,0.9s,baz=53,slow=9.5,SNR=4.2					
PMG	**Port Moresby**	**65.92 120**	*ce*P	**P**	**15 43 58.6**	**+1.8**
PMG			pmax	pmax		
	comp=Z,93nm,1.7s					
KEST	**Kesra**	**67.67 299**	P	**P**	**15 44 08.9**	**+1.0**
	comp=Z,4.7nm,0.9s,baz=66,slow=12,SNR=3.2					
KEST			LR	LR	16 18 36.6	
	comp=Z,40nm,19.0s,baz=284,slow=40					
ASAR	**Alice Springs**	**67.99 140**	P	**P**	**15 44 10.9**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=324,slow=6.5,SNR=26					
COLD	**Coldfoot**	**69.27 22**	P	**P**	**15 44 16.1**	**-1.1**
COLD			IAmb	IAmb	15 44 54.7	
	comp=Z,11nm,1.6s					
BPAW	**Bear Paw Mtn.**	**70.86 25**	P	**P**	**15 44 27.6**	**+0.4**
BPAW			IAmb	IAmb	15 45 22.3	
	comp=Z,34nm,2.0s					
COLA	**College**	**71.47 23**	*i* P	**P**	**15 44 30.0**	**-0.7**
COLA			pmax	pmax		
	comp=Z,8.0nm,1.0s					
ILAR	**Eielson Array**	**71.85 23**	P	**P**	**15 44 32.8**	**-0.3**
	comp=Z,2.7nm,0.9s,baz=277,slow=3.7,SNR=18					
ILAR			PP	**PP**	**15 47 12.7**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=306,slow=7.7,SNR=4.8					
CTA	**Charters Tower**	**72.67 129**	P	**P**	**15 44 39.0**	**+0.4**
CTA	**Charters Tower**	**72.67 129**	P	**P**	**15 44 39.0**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=302,slow=19,SNR=2.0					
INK	**Inuvik**	**73.18 17**	P	**P**	**15 44 40.9**	**0.0**
INK			pmax	pmax		
	comp=Z,4.0nm,0.9s					
INK	**Inuvik**	**73.18 17**	P	**P**	**15 44 41.0**	**+0.2**
	comp=Z,3.9nm,1.0s,baz=333,slow=6.6,SNR=9.2					
INK	**Inuvik**	**73.18 17**	P	**P**	**15 44 40.9**	**0.0**
INK			IAmb	IAmb	15 44 43.7	
	comp=Z,3.7nm,0.9s					
RIDG	**Independent Ri**	**73.20 23**	P	**P**	**15 44 39.8**	**-1.4**
RIDG			IAmb	IAmb	15 44 43.6	
	comp=Z,16nm,1.2s					
SCRK	**Sand Creek**	**73.33 23**	P	**P**	**15 44 41.6**	**-0.4**
SCRK			IAmb	IAmb	15 44 52.9	
	comp=Z,31nm,1.8s					
C36M	**Paulatuk**	**74.38 13**	P	**P**	**15 44 47.2**	**-0.6**
C36M			IAmb	IAmb	15 44 50.9	
	comp=Z,33nm,1.8s					
ESDC	**Sonseca Array**	**75.19 308**	P	**P**	**15 44 53.0**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=50,slow=6.8,SNR=5.3					
ESDC	**Sonseca Array**	**75.19 308**	IAmb	IAmb	15 45 00.3	
	comp=Z,1.9nm,1.0s					
STKA	**Stephens Creek**	**78.62 140**	P	**P**	**15 45 10.7**	**-1.6**
STKA			pmax	pmax		
	comp=Z,7.0nm,2.0s					
STKA	**Stephens Creek**	**78.62 140**	P	**P**	**15 45 10.7**	**-1.6**
	comp=Z,1.8nm,0.7s,baz=314,slow=9.1,SNR=2.9					
STKA	**Stephens Creek**	**78.62 140**	IAmb	IAmb	15 46 57.1	
	comp=Z,7.0nm,1.9s					
YKA	**Yellowknife Ar**	**82.26 13**	P	**P**	**15 45 31.2**	**-0.3**
	comp=Z,2.7nm,0.9s,baz=328,slow=5.0,SNR=25					
TOA0	**Torodi Ar. Sit**	**84.73 282**	P	**P**	**15 45 44.3**	**-0.8**
TOA0			IAmb	IAmb	15 46 06.6	
	comp=Z,23nm,2.0s					
TORD	**Torodi Ar. Bea**	**84.73 282**	P	**P**	**15 45 45.0**	**-0.1**
	comp=Z,2.1nm,0.7s,baz=51,slow=4.4,SNR=14					
TORD			LR	LR	16 25 57.1	
	comp=Z,57nm,18.9s,baz=5.0,slow=37					
TORD	**Torodi Ar. Bea**	**84.73 282**	IAmb	IAmb	15 45 45.6	
	comp=Z,2.2nm,0.7s					
BOSA	**Boshof**	**89.24 235**	P	**P**	**15 46 06.6**	**-0.1**
BOSA			pmax	pmax		
	comp=Z,33nm,1.8s					
BOSA	**Boshof**	**89.24 235**	P	**P**	**15 46 06.6**	**-0.1**
	comp=Z,2.8nm,0.9s,baz=0.0,slow=1.0,SNR=3.7					
DBIC	**Dimbokro**	**93.65 280**	LR	LR	16 31 35.3	
	comp=Z,67nm,18.8s,baz=32,slow=37					
SAML	**Samuel**	**148.09 313**	PKP2	**PKPdf**	**15 52 55.0**	**+1.4**
SAML	**Samuel**	**148.09 313**		**PKPdf**	**15 52 55.0**	**+1.4**

*BJI **19** 15:35:13.4±0.0,24°.91S×176°.96W,h108km,mB5.4/15,*
mb5.1/25
*NEIC **19** 15:35:13.9±2.0,25°.19S±0°.08×176°.9W±0°.1,h114km±5km,*
mb4.7/53,Error ellipse: s-maj=15.0km s-min=10.9km
az=114.0
*IDC **19** 15:35:14.5±3.6,25°.05S×177°.14W,h110km±34km,*
mb4.1/17,mb1 4.3/19,mb1mx4.1/45,mbtmp4.5/19,MS5.4/1,
Ms1 5.4/1,ms1mx3.0/32,Error ellipse: s-maj=28.1km
s-min=15.6km az=177.0

ISC 19 15:35:15.0±0.4,**25°.21S**±0°.06×**176°.78W**±0°.08,**h126**km,
n129,σ1⅑51/131,**mb4.6**/40,**1D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.15**	**194**	P		**Pn**	**15 36 16.4**	**-0.2**
	228nm,0.3s,baz=54,slow=12,SNR=7.8							
RAO				S		**Sn**	**15 37 06.5**	**+2.1**
	442nm,0.3s,baz=85,slow=23,SNR=8.6							
RAO	**Raoul Island**	**4.15**	**194**			**Pn**	**15 36 16.2**	**-0.4**
NIUE	**Niue**	**8.81**	**47**	Pn		**Pn**	**15 37 17.7**	**-1.7**
MSVF	**Nonsavu**	**8.86**	**326**			**Pn**	**15 37 21.0**	**+0.8**
AFI	**Afiamalu**	**12.19**	**24**	P		Pn	15 37 59.0	-5.7
	6.0nm,0.3s,baz=189,slow=3.7,SNR=11							
AFI				S		Sn	15 39 59.5	-20
	5.4nm,0.3s,baz=49,slow=19,SNR=5.8							
AFI	**Afiamalu**	**12.19**	**24**	Pn		Pn	15 37 57.2	-7.5
WMGZ	**Waiomatatini S**	**13.21**	**197**	P		**P**	**15 38 25.7**	**+2.7**
TWGZ	**Tauwhareparae**	**13.67**	**198**	P		**P**	**15 38 28.4**	**+0.3**
CNGZ	**Carnagh Statio**	**13.90**	**197**	P		**P**	**15 38 29.0**	**-1.5**
MWZ	**Matawai**	**13.94**	**199**	P		**P**	**15 38 30.1**	**-1.0**
TKGZ	**Te Karaka**	**13.95**	**198**	P		**P**	**15 38 29.5**	**-1.6**
URZ	**Urewera**	**14.00**	**200**	P		**Pn**	**15 38 29.7**	**+1.9**
	1.8nm,0.3s,baz=167,slow=0.7,SNR=12							
URZ				S		Sn	15 40 47.3	-15
	1.5nm,0.3s,baz=261,slow=19,SNR=8.6							
URZ	**Urewera**	**14.00**	**200**	P		**Pn**	**15 38 27.1**	**-0.7**
URZ	**Urewera**	**14.00**	**200**	P		**Pn**	**15 38 29.6**	**+1.8**
SNGZ	**Shannon Statio**	**14.41**	**199**	P		**Pn**	**15 38 34.3**	**+1.2**
KNZ	**Kokohu**	**14.54**	**197**	P		**P**	**15 38 39.1**	**+1.4**
WPRZ	**Whakapapatarin**	**14.55**	**203**	P		**Pn**	**15 38 35.0**	**+0.2**
RAHZ	**Arahi**	**14.61**	**199**	P		**P**	**15 38 37.8**	**-0.8**
WHHZ	**Waihua**	**14.72**	**199**	P		**Pn**	**15 38 33.9**	**-3.0**
WHTZ	**Whakaora**	**14.75**	**203**	P		**Pn**	**15 38 35.0**	**-2.4**
BKZ	**Black Stump Fm**	**15.02**	**201**	P		**Pn**	**15 38 38.9**	**-1.9**
BKZ						IAmb	15 39 25.1	
	comp=Z,52nm,1.6s							
HIZ	**Hauiti**	**15.03**	**206**	P		**P**	**15 38 43.9**	**+0.7**
HIZ	**Hauiti**	**15.03**	**206**	P		**Pn**	**15 38 40.4**	**-0.5**
HIZ						IAmb	15 39 30.5	
	comp=Z,63nm,1.4s							
KRVZ	**Karewarewa**	**15.25**	**203**	P		Pn	15 38 35.2	-8.5
BHHZ	**Black Hill Sta**	**15.46**	**201**	P		**Pn**	**15 38 44.3**	**-1.9**
KAHZ	**Kahuranaki**	**15.48**	**199**	P		**Pn**	**15 38 43.1**	**-3.5**
DZM	**Mont Dzumac**	**15.68**	**278**	P		**P**	**15 38 53.8**	**+3.2**
	comp=Z,0.6nm,0.3s,baz=87,slow=18,SNR=6.1							
DZM	**Mont Dzumac**	**15.68**	**278**	P		**P**	**15 38 54.0**	**+3.3**
DZM						IAmb	15 39 38.1	
	comp=Z,174nm,2.0s							
NOUC	**Port Laguerre**	**15.80**	**278**	P		**P**	**15 38 55.0**	**+3.2**
NOUC						IAmb	15 39 01.2	
	comp=Z,57nm,1.3s							
QRZ	**Quartz Range**	**17.94**	**207**	P		**P**	**15 39 12.0**	**-3.2**
QRZ						IAmb	15 39 14.1	
	comp=Z,74nm,1.4s							
MLZ	**Mavora Lakes**	**23.51**	**207**	P		**P**	**15 40 13.2**	**-0.3**
MLZ						IAmb	15 40 44.9	
	comp=Z,117nm,1.7s							
DCZ	**Deep Cove**	**24.00**	**209**	P		**P**	**15 40 17.6**	**-0.3**
WHZ	**Wether Hill Ro**	**24.01**	**207**	P		**P**	**15 40 17.0**	**-1.0**
HNR	**Honiara**	**27.12**	**301**	P		**P**	**15 40 44.8**	**-1.6**
TARA	**Tarawa**	**28.23**	**338**	P		**P**	**15 40 55.8**	**-0.4**
CAN	**Canberra**	**31.09**	**243**	P		**P**	**15 41 23.3**	**+1.8**
MCQ	**Macquarie Isla**	**34.33**	**205**	P		**P**	**15 41 49.2**	**-0.1**
CTA	**Charters Tower**	**34.42**	**271**	P		**P**	**15 41 50.5**	**-0.1**
	comp=Z,5.5nm,0.4s,baz=105,slow=10,SNR=26							
STKA	**Stephens Creek**	**36.99**	**250**	P		**P**	**15 42 11.3**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=98,slow=11,SNR=4.4							
STKA	**Stephens Creek**	**36.99**	**250**	P		**P**	**15 42 11.9**	**-0.5**
PMG	**Port Moresby**	**37.69**	**288**	P		**P**	**15 42 16.6**	**-1.8**
	comp=Z,25nm,0.9s,baz=132,slow=5.5,SNR=10							
PMG	**Port Moresby**	**37.69**	**288**	P		**P**	**15 42 17.0**	**-1.4**
TAOE	**Nuku Hiva Isla**	**38.45**	**71**	P		**P**	**15 42 24.6**	**-0.4**
COEN	**Coen**	**39.21**	**279**	P		**P**	**15 42 30.6**	**-0.6**
COEN						IAmb	15 43 17.3	
	comp=Z,35nm,1.7s							
BBOO	**Buckleboo**	**41.65**	**248**	P		**P**	**15 42 50.2**	**-0.9**
BBOO						IAmb	15 44 25.6	
	comp=Z,33nm,1.4s							
AS31	**Alice Springs**	**44.72**	**261**	P		**P**	**15 43 14.7**	**-1.2**
ASAR	**Alice Springs**	**44.72**	**261**	P		**P**	**15 43 13.8**	**-2.2**
	comp=Z,2.1nm,0.8s,baz=93,slow=7.3,SNR=24							
WR0	**Warramunga Arr**	**45.06**	**266**	P		**P**	**15 43 16.1**	**-2.5**
WR0						IAmb	15 43 32.6	
	comp=Z,23nm,1.6s							
WRA	**Warramunga Arr**	**45.24**	**266**	P		**P**	**15 43 16.9**	**-3.2**
	comp=Z,1.5nm,0.4s,baz=101,slow=7.9,SNR=19							
JAY	**Jayapura**	**46.72**	**292**	LR		LR	15 59 01.7	
	comp=Z,5μm,20.2s,baz=300,slow=31							
KNRA	**Kununurra**	**51.61**	**270**	P		**P**	**15 44 07.2**	**-1.6**
SIJI	**Sorong**	**55.62**	**287**	P		**P**	**15 44 36.5**	**-1.7**
	comp=Z,8.7nm,0.8s,baz=68,slow=4.6,SNR=7.4							
MORW	**Morawa**	**59.18**	**250**	P		**P**	**15 45 01.6**	**-1.4**
MJAR	**Matsushiro Arr**	**74.66**	**324**	P		**P**	**15 46 39.4**	**-1.3**
	comp=Z,2.4nm,0.7s,baz=157,slow=5.9,SNR=7.2							
PETK	**Petropavlovsk-**	**81.09**	**345**	P		**P**	**15 47 16.2**	**+0.4**
	comp=Z,6.5nm,0.9s,baz=160,slow=4.0,SNR=18							
KSRS	**Korea Array**	**81.14**	**319**	P		**P**	**15 47 17.1**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=194,slow=4.6,SNR=3.3							
ISA	**Isabella, Lake**	**81.86**	**44**	P		**P**	**15 47 21.0**	**+0.6**
CMB	**Columbia Colle**	**82.19**	**42**	P		**P**	**15 47 23.1**	**+1.0**
AFDM	**Fore Hills D**	**82.43**	**41**	P		**P**	**15 47 24.6**	**+1.3**
GSC	**Goldstone, Bar**	**82.70**	**46**	P		**P**	**15 47 24.9**	**+0.1**
MDPB	**Devils Postpil**	**82.72**	**43**	P		**P**	**15 47 25.4**	**+0.3**
PNTR	**Pine Nut**	**83.34**	**41**	P		**P**	**15 47 28.6**	**+0.4**
PNTR						IAmb	15 47 31.2	
	comp=Z,7.5nm,0.9s							
USRK	**Ussuriysk Ar.**	**83.47**	**326**	P		**P**	**15 47 29.2**	**+0.8**
	comp=Z,6.3nm,0.9s,baz=123,slow=4.0,SNR=12							
NVAR	**Mina Array Bea**	**83.70**	**42**	P		**P**	**15 47 32.3**	**+2.3**
	comp=Z,2.7nm,0.9s,baz=223,slow=8.5,SNR=18							
NJ2	**Nanjing**	**83.74**	**310**	*e*P		**P**	**15 47 31.4**	**+1.3**
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
NV11	**Mina Array Sit**	**83.79**	**42**	P		**P**	**15 47 31.6**	**+1.1**
TPNV	**Topopah Spring**	**84.06**	**45**	P		**P**	**15 47 32.1**	**+0.2**
KVN	**Kaiserville**	**84.22**	**42**	P		**P**	**15 47 33.4**	**+0.8**
KVN						IAmb	15 47 35.3	
	comp=Z,4.7nm,1.0s							
Y14A	**Wickenburg**	**84.42**	**49**	P		**P**	**15 47 33.8**	**+0.2**
MOD	**Modoc Plateau**	**84.75**	**39**	P		**P**	**15 47 35.9**	**+0.8**
MOD						IAmb	15 47 38.5	
	comp=Z,6.2nm,1.1s							
MDJ	**Mudanjiang**	**85.00**	**325**	P		**P**	**15 47 36.5**	**+0.4**
MDJ						IAmb	15 47 37.3	
	comp=Z,9.6nm,1.0s							
TUC	**Tucson**	**85.03**	**51**	P		**P**	**15 47 36.5**	**-0.2**
X16A	**Lo Mia Camp, P**	**85.75**	**49**	P		**P**	**15 47 41.1**	**+0.7**
X16A						IAmb	15 47 44.2	
	comp=Z,3.7nm,0.9s							
WUAZ	**Wupatki**	**86.42**	**48**	P		**P**	**15 47 44.0**	**+0.4**
WUAZ						IAmb	15 50 58.9	
	comp=Z,16nm,1.9s							
SZCU	**Shurtz Canyon**	**86.47**	**46**	P		**P**	**15 47 45.5**	**+1.6**
CN2	**Changchun**	**86.70**	**322**	*e*P		**P**	**15 47 44.6**	**+0.1**
PKCU	**Pink Cliffs**	**86.89**	**46**	P		**P**	**15 47 46.6**	**+0.5**
E07A	**Sunnyside**	**88.02**	**35**	P		**P**	**15 47 51.8**	**+1.0**
E07A						IAmb	15 47 53.7	
	comp=Z,3.8nm,0.8s							
TXAR	**Lajitas Array**	**88.67**	**57**	P		**P**	**15 47 57.0**	**+2.6**
	comp=Z,0.7nm,1.0s,baz=224,slow=5.2,SNR=5.3							
E09A	**Wood Farm, Sta**	**88.90**	**36**	P		**P**	**15 47 55.9**	**+1.0**
E09A						IAmb	15 47 57.9	
	comp=Z,4.4nm,0.9s							
SRU	**San Rafael Swe**	**88.99**	**45**	P		**P**	**15 47 56.4**	**+0.6**
F10A	**Beach Ranch, E**	**89.06**	**37**	P		**P**	**15 47 56.9**	**+1.1**
F10A						IAmb	15 47 57.9	
	comp=Z,4.5nm,0.8s							
RAGM	**Ragged Mountai**	**89.23**	**15**	P		**P**	**15 47 56.2**	**0.0**
B08A	**Colville Reser**	**89.46**	**34**	P		**P**	**15 47 58.1**	**+0.5**
B08A						IAmb	15 47 59.6	
	comp=Z,3.0nm,0.8s							
ANMO	**Albuquerque**	**89.49**	**51**	P		**P**	**15 48 00.8**	**+2.6**
	comp=Z,2.2nm,0.9s,baz=212,slow=6.2,SNR=6.9							
ANMO	**Albuquerque**	**89.49**	**51**	P		**P**	**15 47 57.2**	**-1.1**
ANMO						IAmb	15 48 01.5	
ENH	**Enshi**	**89.59**	**304**	P		**P**	**15 47 57.9**	**-0.8**
ENH						IAmb	15 48 00.1	
	comp=Z,12nm,1.0s							
MCMT	**McKenzie Canyo**	**90.83**	**40**	P		**P**	**15 48 02.7**	**-1.6**
PDAR	**Pinedale Array**	**91.63**	**43**	P		**P**	**15 48 09.2**	**+1.1**
	comp=Z,1.9nm,0.9s,baz=215,slow=4.0,SNR=13							
YHL	**Hebgen Lake**	**91.81**	**40**	P		**P**	**15 48 09.9**	**+0.9**
XAN	**Xi'an**	**91.86**	**307**	P		**P**	**15 48 10.0**	**+0.9**
XAN				pmax		pmax		
	comp=Z,12nm,0.8s							
KMI	**Kunming**	**92.47**	**297**	P		**P**	**15 48 13.9**	**+1.6**
KMI				pmax		pmax		
	comp=Z,14nm,0.9s							
KMI				LR		LR		
	comp=Z,170nm,24.3s							
YNE	**Yellowstone No**	**92.59**	**41**	P		**P**	**15 48 13.9**	**+1.5**
ILAR	**Eielson Array**	**92.65**	**12**	P		**P**	**15 48 11.9**	**0.0**
	comp=Z,0.5nm,0.6s,baz=225,slow=5.2,SNR=8.7							
CM31	**Chiang Mai Arr**	**92.72**	**289**	P		**P**	**15 48 14.4**	**+1.0**
CM31				IAmb		IAmb	15 48 16.1	
	comp=Z,7.1nm,0.9s							
CMAR	**Chiang Mai Arr**	**92.72**	**289**	P		**P**	**15 48 14.6**	**+1.2**
	comp=Z,4.2nm,0.8s,baz=136,slow=3.4,SNR=32							
CHTO	**Chiang Mai**	**92.88**	**289**	P		**P**	**15 48 14.0**	**-0.1**
CHTO				IAmb		IAmb	15 48 16.4	
	comp=Z,6.6nm,0.8s							
RLMT	**Red Lodge**	**93.09**	**41**	P		**P**	**15 48 16.5**	**+1.7**
RLMT				IAmb		IAmb	15 49 21.3	
	comp=Z,11nm,1.1s							
HHC	**Hu-ho-hao-te**	**93.42**	**314**	*e*P		**P**	**15 48 17.4**	**+1.2**
HHC				pmax		pmax		
	comp=Z,6.0nm,1.0s							
HHC				pmax		pmax		
	comp=Z,89nm,5.3s							
CD2	**Chengdu**	**94.25**	**302**	P		**P**	**15 48 19.8**	**-0.4**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
LZH	**Lanzhou**	**96.49**	**307**	⇓P		**P**	**15 48 31.8**	**+1.3**
LZH				pP		pP	15 49 02.0	-0.5
LZH				PP		**PP**	**15 52 30.5**	**+4.0**
LZH				pmax		pmax		
	comp=Z,18nm,1.4s							
LZH				pmax		pmax		
	comp=Z,86nm,6.2s							
SONM	**Songino Array**	**100.01**	**318**	P		**Pdif**	**15 48 47.4**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=104,slow=3.0,SNR=2.9							
WMQ	**Urumqi**	**110.82**	**310**	*e*PKP		**PKiKP**	**15 53 33.3**	**+0.2**
WMQ				LR		LR		
	comp=Z,590nm,29.1s							
WMQ				LR		LR		
	comp=Z,690nm,29.0s							
WMQ				LR		LR		
	comp=Z,130nm,28.1s							
MKAR	**Makanchi Array**	**115.20**	**312**	PKP		**PKPdf**	**15 53 40.1**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=208,slow=2.1,SNR=3.7							
KSH	**Kashi**	**118.44**	**303**	PKP		**PKiKP**	**15 53 50.0**	**+2.0**
KSH				PP		PP	15 55 15.3	+8.6
KSH				AMB		AMB		
	comp=Z,320nm,6.5s							
BVAR	**Borovoye Array**	**123.36**	**318**	PKP		**PKPdf**	**15 53 56.7**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=153,slow=1.6,SNR=3.8							
ARU	**Arti**	**129.67**	**324**	PKP		**PKiKP**	**15 54 09.3**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=198,slow=3.2,SNR=2.9							
ARCES	**ARCESS Array B**	**133.74**	**349**	PKP		**PKPdf**	**15 54 16.2**	**+0.1**
	comp=Z,

KUR				*e*S		**Sg**	**15 43 15.6**	**-1.1**
KUR				A		A	15 43 17.3	
	460nm,0.2s							
KUR				A		A	15 43 17.3	
	260nm,0.2s							
SHO	**Shikotan**	**1.13**	**251**	*i* P		**Pn**	**15 43 05.8**	**0.0**
SHO				AMB		AMB	15 43 06.0	
	50nm,0.3s							
SHO				*i* S		**Sg**	**15 43 19.5**	**-0.1**
SHO				A		A	15 43 24.0	
	530nm,0.3s							
SHO				A		A	15 43 24.0	
	290nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**1.77**	**264**	*e*P		**Pn**	**15 43 15.2**	**+0.5**
YUK				AMB		AMB	15 43 16.0	
	30nm,0.2s							
YUK				*e*S		**Sn**	**15 43 37.5**	**-0.1**
YUK				A		A	15 43 43.3	
	340nm,0.4s							
YUK				A		A	15 43 43.3	
	70nm,0.4s							
GRPR	**Tuman**	**1.84**	**263**	*e*P		**Pn**	**15 43 16.2**	**+0.5**
GRPR				AMB		AMB	15 43 17.0	
	30nm,0.3s							
GRPR				*e*S		**Sn**	**15 43 38.8**	**-0.6**
GRPR				A		A	15 43 48.0	
	220nm,0.3s							
GRPR				A		A	15 43 48.0	
	220nm,0.3s							
NEM2	**Nemuro 2**	**2.05**	**246**	P		**Pn**	**15 43 18.8**	**+0.3**
NEM2				*e*S		**Sn**	**15 43 42.8**	**-1.7**
NMR	**Nemuro--Hokkai**	**2.06**	**246**	*i* P		**Pn**	**15 43 19.0**	**+0.3**
NMR				*e*S		**Sn**	**15 43 43.2**	**-1.5**
GLVR	**Golovnino**	**2.07**	**257**	*e*P		**Pn**	**15 43 19.4**	**+0.6**
GLVR				*e*S		**Sn**	**15 43 45.2**	**+0.2**
GLVR				A		A	15 43 56.0	
	500nm,0.5s							
GLVR				A		A	15 43 56.0	
	260nm,0.5s							
JRA	**Rausu**	**2.31**	**264**	P		**Pn**	**15 43 23.6**	**+1.5**
JRA				*e*S		**Sn**	**15 43 51.3**	**+0.3**
JNSB	**Nemuroshibetsu**	**2.43**	**260**	P		**Pn**	**15 43 25.1**	**+1.4**
JKHN	**Kushirohamanak**	**2.56**	**244**	P		**Pn**	**15 43 26.2**	**+0.7**
JKHN				*e*S		**Sn**	**15 43 56.2**	**-0.9**
JNK	**Nakash**	**2.67**	**257**	P		**Pn**	**15 43 28.4**	**+1.3**
JNK				*e*S		**Sn**	**15 43 58.4**	**-1.5**
JAK	**Akkeshi**	**2.90**	**246**	P		**Pn**	**15 43 30.9**	**+0.7**
JAK				*e*S		**Sn**	**15 44 03.9**	**-1.6**
JAR	**Ashorobuto**	**3.42**	**255**	P		**Pn**	**15 43 39.4**	**+2.0**
JAR				*e*S		**Sn**	**15 44 19.0**	**+0.7**
JCH	**Churui**	**3.95**	**247**	P		**Pn**	**15 43 46.0**	**+1.3**
JCH				*e*S		**Sn**	**15 44 29.9**	**-1.5**
JNBK	**Urakawa-nobuka**	**4.50**	**246**	P		**Pn**	**15 43 53.9**	**+1.6**

*IDC **19** 15:42:29.2±3.2,57˚.35S×26˚.46W,h0km,mb4.2/2, mb1 4.4/2,mb1mx3.8/22,mbtmp4.2/2, Error ellipse: s-maj=113.1km s-min=47.9km az=173.0*
*NEIC **19** 15:42:45.5±0.8,56˚.97S±0˚.07×26˚.8W±0˚.2,h120km±8km, mb4.6/11, Error ellipse: s-maj=18.4km s-min=10.0km az=83.0*
ISC 19 15:42:44.9±0.9,**56˚.7S**±0˚.1×**26˚.7W**±0˚.1,**h100**km,**n22,** σ1§**90**/19,**mb4.7**/6,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**6.06**	**289**	Pn	**Pn**	**15 44 13.9**	**+2.0**
VNA1	**Neumayer--Stat**	**16.13**	**158**	P	**P**	**15 46 30.8**	**+4.2**
VNA3	**Neumayer Olymp**	**16.33**	**160**	P	**P**	**15 46 32.8**	**+3.9**
SNAA	**Sanae**	**18.07**	**156**	P	Pn	15 46 57.3	+8.2
EFI	**East Falkland**	**18.93**	**272**	Pn	**P**	**15 46 57.9**	**+0.3**
PMSA	**Palmer Station**	**19.73**	**230**	Pn	**P**	**15 47 04.9**	**-1.2**
PMSA				IAmb	IAmb	15 47 26.5	
	comp=Z,97nm,1.4s						
QSPA	**South Pole Qui**	**33.60**	**180**	P	**P**	**15 49 11.7**	**-3.5**
QSPA				IAmb	IAmb	15 49 56.2	
	comp=Z,9.5nm,1.6s						
CPUP	**Villa Florida**	**37.42**	**311**	P	**P**	**15 49 48.4**	**+0.3**
CPUP				IAmb	IAmb	15 50 44.4	
	comp=Z,14nm,1.7s						
LVC	**Limon Verde**	**45.85**	**300**	P	**P**	**15 50 57.9**	**+0.6**
H10S2	**ASCENSION HYDR**	**48.50**	**16**	T	T	16 44 19.8	
	baz=31,slow=74,SNR=5.1						
H10S3	**ASCENSION HYDR**	**48.50**	**16**	T	T	16 44 15.1	
	baz=189,slow=74,SNR=5.5						
GO01	**Chusmiza**	**48.51**	**302**	P	**P**	**15 51 17.2**	**-0.8**
GO01				IAmb	IAmb	15 52 24.3	
	comp=Z,20nm,1.8s						
PB11	**IPOC Station P**	**48.64**	**301**	P	**P**	**15 51 18.1**	**-0.6**
PB11				IAmb	IAmb	15 52 42.0	
	comp=Z,13nm,1.2s						
MNMC	**Minye Minye**	**49.16**	**302**	P	**P**	**15 51 22.3**	**-0.5**
LPAZ	**La Paz**	**50.96**	**305**	P	**P**	**15 51 36.8**	**0.0**
	comp=Z,3.4nm,0.5s,baz=151,slow=5.6,SNR=16						
LPAZ	**La Paz**	**50.96**	**305**	P	**P**	**15 51 36.2**	**-0.6**
LPAZ				IAmb	IAmb	15 51 37.2	
	comp=Z,4.9nm,0.6s						
SAML	**Samuel**	**55.43**	**314**	P	**P**	**15 52 07.7**	**-1.1**
TORD	**Torodi Ar. Bea**	**73.44**	**29**	P	**P**	**15 54 06.4**	**+0.3**
	comp=Z,0.6nm,0.4s,baz=197,slow=6.9,SNR=6.8						
TORD	**Torodi Ar. Bea**	**73.44**	**29**	P	**P**	**15 54 06.1**	**0.0**
YKA	**Yellowknife Ar**	**136.81**	**317**	PKP	**PKPdf**	**16 01 53.2**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=136,slow=2.1,SNR=4.7						
ILAR	**Eielson Array**	**150.73**	**311**	PKPbc	**PKPbc**	**16 02 22.6**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=109,slow=0.3,SNR=6.6						
ILAR	**Eielson Array**	**150.73**	**311**		**PKPbc**	**16 02 22.4**	**-1.3**

*IDC **19** 15:44:40.3±5.6,4˚.83S×153˚.60E,h51km±41km,mb3.6/4, mb1 3.7/5,mb1mx3.4/36,mbtmp3.8/5,ML1.9/1, Error ellipse: s-maj=40.7km s-min=19.3km az=79.0*
ISC 19 15:44:41.0±1.5,**4˚.8S**±0˚.1×**153˚.6E**±0˚.1,**h56**km,**n7,** σ0§**69**/9, **mb3.7**/**4,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.60**	**287**	P	**Pn**	**15 45 06.5**	**-0.4**
	57nm,0.3s,baz=346,slow=2.1,SNR=11						
KRVT				S	**Sn**	**15 45 27.2**	**+0.7**
	81nm,0.3s,baz=311,slow=24,SNR=16						
PMG	**Port Moresby**	**7.84**	**234**	P	**Pn**	**15 46 33.3**	**+0.9**
	0.9nm,0.3s,baz=47,slow=13,SNR=8.0						
PMG				S	**Sn**	**15 47 58.9**	**-0.9**
	0.3nm,0.3s,baz=324,slow=19,SNR=2.4						
WRA	**Warramunga Arr**	**24.03**	**230**	P	**P**	**15 49 50.8**	**-0.2**
	1.0nm,0.4s,baz=54,slow=9.9,SNR=10						
ASAR	**Alice Springs**	**26.68**	**223**	P	**P**	**15 50 14.6**	**-0.5**
	0.3nm,0.4s,baz=55,slow=9.0,SNR=12						
MKAR	**Makanchi Array**	**80.81**	**319**	P	**P**	**15 56 49.3**	**+0.5**
	0.5nm,0.5s,baz=94,slow=8.3,SNR=6.8						
BVAR	**Borovoye Array**	**89.68**	**323**	P	**P**	**15 57 32.6**	**-0.3**
	1.2nm,0.7s,baz=116,slow=6.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**151.02**	**289**	PKPbc	**PKPbc**	**16 04 28.6**	**-0.1**
	0.8nm,0.7s,baz=74,slow=2.9,SNR=5.6						

*IDC **19** 15:48:25.0±1.5,38˚.64N×70˚.48E,h0km,mb3.8/5, mb1 3.9/13,mb1mx3.6/54,mbtmp3.8/13,ML3.2/6, Error ellipse: s-maj=23.6km s-min=12.8km az=152.0*
*NNC **19** 15:48:30.7±1.8,39˚.18N×70˚.08E,h0km,mb4.4,mpv4.1, Error ellipse: s-maj=15.4km s-min=11.1km az=161.0*
*KRNET **19** 15:48:32.1±0.1,39˚.02N×70˚.79E,mb4.0*
*SOME **19** 15:48:32.0,39˚.30N×71˚.60E,h10km*
*NEIC **19** 15:48:32.0±3.1,39˚.05N±0˚.06×70˚.22E±0˚.08,h24km±4km, mb4.1/5, Error ellipse: s-maj=10.3km s-min=7.4km az=126.0*
ISC 19 15:48:31.6±0.8,**38˚.99N**±0˚.04×**70˚.42E**±0˚.03,**h28**km±6km, **n91,** σ2§**90**/126,**mb4.0**/**7,32C-23D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAR	**Garm**	**0.08**	**278**	Pg	**Pb**	**15 48 36.5**	**-0.3**
GAR				Sg	**Sb**	**15 48 39.7**	**-0.5**
CHGR	**Chuyangaron**	**1.04**	**252**		**Pn**	**15 48 50.9**	**+0.5**
BTK	**Batken**	**1.11**	**16**	*i* P	**Pb**	**15 48 51.9**	**-0.4**
	baz=1.0						
BTK				*i* S	**Sb**	**15 49 06.3**	**-0.1**
	baz=1.0						
BTK	**Batken**	**1.11**	**16**		**Pn**	**15 48 51.8**	**+0.3**
FRG	**Fergana**	**2.04**	**31**	P	**Pn**	**15 49 03.8**	**-0.3**
FRG				S	**Sn**	**15 49 27.3**	**-1.3**
ANR	**Andizhan**	**2.31**	**40**	P	**Pb**	**15 49 12.3**	**-0.3**
ANR				S	**Sb**	**15 49 42.8**	**+2.0**
TAS	**Tashkent**	**2.49**	**340**	Pn	**Pn**	**15 49 11.8**	**+1.6**
TAS	**Tashkent**	**2.49**	**340**	*e*P	**Pb**	**15 49 13.8**	**-1.8**
TAS				*e*S	**Sb**	**15 49 49.4**	**+3.6**
CHRV	**Charvak**	**2.67**	**352**	P	**Pb**	**15 49 16.3**	**-2.5**
CHRV				S	**Sb**	**15 49 55.7**	**+4.5**
SAM	**Samarkand**	**2.75**	**285**	*i* P	**Pb**	**15 49 21.4**	**+1.4**
SAM				*i* S	**Sb**	**15 49 59.3**	**+6.0**
ARK	**Arkit**	**3.04**	**22**	⇓*i*P	**Pn**	**15 49 21.5**	**+3.5**
	baz=18						
ARK				⇓*i*S	**Sb**	**15 49 57.9**	**-4.0**
	baz=18						
ARSB	**Arslanbob**	**3.05**	**39**	⇓*i*P	**Pn**	**15 49 21.0**	**+2.9**
	baz=35						
ARSB				⇓*i*S	**Sn**	**15 49 56.4**	**+2.7**
	baz=35						
ARSB	**Arslanbob**	**3.05**	**39**		**Pn**	**15 49 20.8**	**+2.7**
IUG	**luzhnay**	**3.17**	**355**	*e*P	**Pb**	**15 49 28.1**	**+0.9**
	8.9nm,0.3s						
IUG				*e*S	**Sb**	**15 50 10.4**	**+4.9**
	487nm,0.5s						
IUG	**luzhnay**	**3.17**	**355**	Pg	**Pn**	**15 49 22.4**	**+2.7**
	9.5nm,0.3s						
IUG				Lg	Lg	15 50 02.5	
	264nm,0.4s						
JBG	**Jabagly**	**3.43**	**2**	Pg	**Pn**	**15 49 26.0**	**+2.6**
	31nm,0.2s						
JBG				Lg	Lg	15 50 08.7	
	200nm,0.5s						
DZA	**Taraz**	**3.96**	**10**	*e*P	**Pb**	**15 49 37.2**	**-3.5**
	34nm,0.1s						
DZA				*e*S	**Sb**	**15 50 26.0**	**-2.2**
	178nm,0.5s						
DZA	**Taraz**	**3.96**	**10**	Pg	**Pn**	**15 49 34.3**	**+3.8**
	97nm,0.4s						
DZA				Lg	Lg	15 50 22.8	
	224nm,0.4s						
AML	**Almayashu**	**4.01**	**37**	⇓*i*P	**Pn**	**15 49 34.7**	**+3.2**
	baz=35						
AML				⇓*i*S	**Sn**	**15 50 21.0**	**+3.2**
	baz=35						
AML	**Almayashu**	**4.01**	**37**	P	**Pn**	**15 49 34.5**	**+2.9**
	SNR=88						
KK31	**Karatay Array**	**4.11**	**1**	⇓Pn	**Pn**	**15 49 33.5**	**+0.9**
	12nm,0.3s,baz=199,slow=13,SNR=519						
KK31				⇓Pg	**Pb**	**15 49 43.6**	**+0.4**
	4.8nm,0.2s,baz=195,slow=14,SNR=5.9						
KK31				⇓Sn	**Sn**	**15 50 21.9**	**+2.2**
	15nm,0.4s						
KK31				⇑Lg	Lg	15 50 37.8	
	95nm,0.4s						
KK31	**Karatay Array**	**4.11**	**1**		**Pn**	**15 49 35.1**	**+2.5**
KKAR	**Karatay Array**	**4.11**	**1**		**Pn**	**15 49 35.1**	**+2.5**
ARLS	**Aral**	**4.14**	**45**	⇓*i*P	**Pn**	**15 49 35.5**	**+2.4**
	baz=42						
ARLS				⇓*i*S	**Sn**	**15 50 22.4**	**+1.8**
	baz=42						
MRKS	**Merke**	**4.31**	**29**	*e*P	**Pn**	**15 49 38.7**	**+3.3**
	28nm,0.4s						
MRKS				*e*S	**Sn**	**15 50 28.7**	**+3.8**
	82nm,0.6s						
MRKS	**Merke**	**4.31**	**29**	Pg	**Pn**	**15 49 38.4**	**+2.9**
	28nm,0.4s						
MRKS				Lg	Lg	15 50 30.2	
	82nm,0.6s						
KSH	**Kashi**	**4.34**	**81**	Pn	Pn	15 49 40.9	+5.0
KSH				Sn	**Sb**	**15 50 39.6**	**+0.3**
KSH				smax	smax		
	comp=N,80nm,0.5s						
KSH				smax	smax		
	comp=E,81nm,1.0s						
EKS2	**Erkin-Say**	**4.47**	**34**	⇑*i*P	**Pn**	**15 49 40.9**	**+3.3**
	baz=31						
EKS2				⇑*i*S	**Sn**	**15 50 31.8**	**+3.1**
	baz=31						
EKS2	**Erkin-Say**	**4.47**	**34**	P	**Pn**	**15 49 41.7**	**+4.1**
	SNR=22						
UCH	**Uchtor**	**4.49**	**43**	⇑*i*P	**Pn**	**15 49 41.6**	**+3.4**
	baz=40						
UCH				⇑*i*S	**Sn**	**15 50 32.7**	**+3.0**
	baz=40						
UCH	**Uchtor**	**4.49**	**43**	P	**Pn**	**15 49 42.0**	**+3.7**
	SNR=34						
KBL	**Kabul**	**4.58**	**194**		**Pn**	**15 49 42.6**	**+3.4**
AAK	**Ala-Archa**	**4.78**	**39**	Pn	**Pn**	**15 49 45.9**	**+4.0**
	comp=E,14nm,0.3s,baz=220,slow=7.1,SNR=97						
AAK				Sn	**Sn**	**15 50 42.3**	**+5.9**
	comp=E,3.0nm,0.3s,baz=342,slow=20,SNR=2.8						
AAK				Lg	Lg	15 51 01.4	
	comp=E,5.8nm,0.3s,baz=68,slow=18,SNR=3.0						
AAK	**Ala-Archa**	**4.78**	**39**	⇑*i*P	**Pn**	**15 49 45.5**	**+3.6**
	baz=37						
AAK				⇑*i*S	**Sn**	**15 50 39.3**	**+2.9**
	baz=37						
AAK	**Ala-Archa**	**4.78**	**39**	P	**Pn**	**15 49 45.0**	**+3.1**
	SNR=64						
AAK	**Ala-Archa**	**4.78**	**39**	⇓Pn	**Pn**	**15 49 44.6**	**+2.7**
	comp=E,18nm,0.3s						
AAK				⇑Sn	**Sn**	**15 50 42.3**	**+5.9**
	comp=E,38nm,0.8s						
AAK				⇑Lg	Lg	15 51 03.7	
	comp=E,44nm,0.6s						
AAK	**Ala-Archa**	**4.78**	**39**		**Pn**	**15 49 44.9**	**+3.1**
KZA	**Kyzart**	**4.80**	**48**	⇑*i*P	**Pn**	**15 49 45.9**	**+3.5**
	baz=47						
KZA				⇑*i*S	**Sn**	**15 50 40.0**	**+2.7**
	baz=47						
KZA	**Kyzart**	**4.80**	**48**	P	Pn	15 49 48.3	+5.9
	SNR=91						
NRN	**Naryn**	**4.92**	**58**	⇑*i*P	**Pn**	**15 49 45.9**	**+1.9**
	baz=57						
NRN				⇑*i*S	**Sn**	**15 50 40.1**	**0.0**
	baz=57						
NRN	**Naryn**	**4.92**	**58**		**Pn**	**15 49 46.5**	**+2.5**
FRU1	**Bishkek**	**4.97**	**39**	⇓*i*P	**Pn**	**15 49 48.0**	**+3.5**
	baz=36						
FRU1				⇓*i*S	**Sn**	**15 50 42.8**	**+1.7**
	baz=36						
FRU1	**Bishkek**	**4.97**	**39**		**Pn**	**15 49 46.8**	**+2.3**
KBK	**Karagaybulak**	**5.02**	**42**	⇑*i*P	**Pn**	**15 49 48.7**	**+3.5**
	baz=40						
KBK				⇑*i*S	**Sn**	**15 50 45.0**	**+2.6**
	baz=40						
KBK	**Karagaybulak**	**5.02**	**42**	P	**Pn**	**15 49 49.1**	**+3.8**
	SNR=42						
CHMS	**Chumysh**	**5.17**	**38**	⇑*i*P	**Pn**	**15 49 50.5**	**+3.2**
	baz=36						
CHMS				⇑*i*S	**Sn**	**15 50 48.5**	**+2.5**
	baz=36						
CHMS	**Chumysh**	**5.17**	**38**	P	**Pn**	**15 49 50.4**	**+3.2**
	SNR=33						
USP	**Ospenovka**	**5.27**	**34**	⇓*i*P	**Pn**	**15 49 51.9**	**+3.4**
	baz=32						
USP				⇓*i*S	**Sn**	**15 50 50.8**	**+2.5**
	baz=32						
USP	**Ospenovka**	**5.27**	**34**	P	**Pn**	**15 49 51.1**	**+2.6**
	SNR=38						
CEP	**Cherat**	**5.29**	**166**	P	**Pn**	**15 49 52.6**	**+3.6**
CEP				S	**Sn**	**15 50 55.0**	**+5.9**
SGDS	**Sogindy**	**5.47**	**34**	Pg	**Pn**	**15 49 53.8**	**+2.5**
	comp=E,12nm,0.5s						
SGDS				Lg	Lg	15 50 56.9	
	comp=E,37nm,1.0s						
ULHL	**Ulahol**	**5.50**	**52**	⇑*i*P	**Pn**	**15 49 55.2**	**+3.4**
	baz=50						
ULHL				⇑*i*S	**Sn**	**15 50 56.1**	**+1.9**
	baz=50						
TKM2	**Tokmak 2**	**5.55**	**43**	⇑*i*P	**Pn**	**15 49 55.6**	**+3.1**
	baz=42						
TKM2				⇑*i*S	**Sn**	**15 50 57.5**	**+2.1**
	baz=42						
TKM2	**Tokmak 2**	**5.55**	**43**	P	**Pn**	**15 49 55.6**	**+3.1**
	SNR=65						
TKM2	**Tokmak 2**	**5.55**	**43**	⇑Pn	**Pn**	**15 49 55.4**	**+2.9**
	comp=E,11nm,0.3s						
TKM2				⇑Sn	**Sn**	**15 51 01.2**	**+5.8**
	comp=E,22nm,0.8s						
TKM2				⇑Lg	Lg	15 51 29.0	
	comp=E,26nm,0.6s						
NIL	**Nilore**	**5.80**	**156**		**Pn**	**15 49 59.4**	**+3.6**
KST	**Kastek**	**5.83**	**44**	*e*P	Pn	15 50 02.8	+6.5
	comp=E,6.4nm,0.3s						
KST				*e*S	**Sn**	**15 51 10.8**	**+8.6**
	comp=E,17nm,0.7s						
KST	**Kastek**	**5.83**	**44**	Pg	**Pn**	**15 49 59.5**	**+3.2**
	comp=E,8.8nm,0.7s						
KST				Lg	Lg	15 51 05.8	
	comp=E,17nm,0.8s						
KDJ	**Kajisay**	**6.03**	**56**	⇑*i*P	**Pn**	**15 50 01.0**	**+1.9**
	baz=56						
KDJ				⇑*i*S	**Sn**	**15 51 06.3**	**-0.9**
	baz=56						
KDJ	**Kajisay**	**6.03**	**56**		**Pn**	**15 50 02.5**	**+3.4**
THW	**Thamme Wali**	**6.27**	**170**	P	**Pn**	**15 50 04.8**	**+2.5**
KNDC	**Almaty**	**6.50**	**47**	⇓Lg	Lg	15 51 58.8	
MDOK	**Medeo**	**6.52**	**48**	⇓Pn	**Pn**	**15 50 09.0**	**+3.3**
	comp=E,5.3nm,0.5s						
MDOK				⇑Pg	Pb	15 50 30.2	+5.9
	comp=E,6.2nm,0.6s						
MDOK				⇑Lg	Lg	15 52 00.0	
	comp=E,26nm,0.7s						
HRA	**Herat**	**8.01**	**238**	Pn	**Pn**	**15 50 26.8**	**+0.5**
PDGK	**Podgornoye**	**8.10**	**55**	⇑Pn	**Pn**	**15 50 30.5**	**+3.0**
	comp=E,3.3nm,0.9s						
PDGK				⇓Lg	Lg	15 52 51.0	
	comp=E,18nm,1.0s						
GEYT	**Alibeck**	**9.71**	**268**	Pn	**Pn**	**15 50 46.9**	**-2.6**
	comp=E,0.4nm,0.3s,baz=88,slow=8.5,SNR=4.7						
GEYT				Sn	**Sn**	**15 52 32.8**	**-4.7**
	comp=E,0.8nm,0.3s,baz=122,slow=20,SNR=3.4						
GYA0B	**ALIBECK ARRAY**	**9.71**	**268**	⇑P	**Pn**	**15 50 47.7**	**-1.8**
GYA0B				⇓S	**Sn**	**15 52 36.0**	**-1.5**
GYA0B	**ALIBECK ARRAY**	**9.71**	**268**	Pn	**Pn**	**15 50 48.2**	**-1.2**
MAKZ	**Makanchi**	**11.52**	**44**	Pn	**Pn**	**15 51 16.0**	**+1.8**
MK31	**Makanchi Array**	**11.68**	**44**	Pn	**Pn**	**15 51 17.7**	**+1.4**
MKAR	**Makanchi Array**	**11.68**	**44**	Pn	**Pn**	**15 51 15.9**	**-0.5**
	comp=E,0.1nm,0.3s,baz=232,slow=14,SNR=5.4						
MKAR				Lg	Lg	15 54 42.4	
	comp=E,0.1nm,0.3s,baz=246,slow=27,SNR=3.1						
AB31	**Akbulak array**	**12.71**	**327**	⇓P	**Pn**	**15 51 28.5**	**-1.9**
	comp=E,4.2nm,0.3s,baz=176,slow=8.8,SNR=260						
AB31				⇑S	**Sn**	**15 53 48.5**	**-2.4**
	comp=E,2.7nm,0.5s						
ABKAR	**Akbulak array**	**12.71**	**327**		**Pn**	**15 51 28.6**	**-1.8**
KURBB	**Kurchatov Arra**	**12.97**	**24**	Pn	**Pn**	**15 51 32.4**	**-1.5**
	baz=210,slow=13,SNR=2.8						
KURBB				Lg	Lg	15 55 22.9	
	comp=E,0.1nm,0.3s,baz=216,slow=31,SNR=5.1						
KURK	**Kurchatov**	**13.08**	**24**		**Pn**	**15 51 32.4**	**-3.0**
BVAR	**Borovoye Array**	**14.04**	**360**	Pn	**Pn**	**15 51 47.5**	**-1.0**
	comp=E,0.4nm,0.3s,baz=167,slow=11,SNR=15						
BVAR				Lg	Lg	15 56 03.8	
	comp=E,0.1nm,0.3s,baz=163,slow=25,SNR=4.1						
BRVK	**Borovoye**	**14.07**	**360**	⇑P	**Pn**	**15 51 47.9**	**-1.0**
	comp=E,1.8nm,0.6s						
BRVK	**Borovoye**	**14.07**	**360**		**Pn**	**15 51 47.3**	**-1.7**
AKTO	**Aktyubinsk**	**14.42**	**327**	Pn	**Pn**	**15 51 52.2**	**-1.6**
	comp=E,1.1nm,0.3s,baz=128,slow=12,SNR=21						
AKTO				Sn	**Sn**	**15 54 28.8**	**-3.9**
	comp=E,0.5nm,0.3s,baz=53,slow=20,SNR=4.8						
AKTO	**Aktyubinsk**	**14.42**	**327**	⇓P	**Pn**	**15 51 52.1**	**-1.6**
	comp=E,6.1nm,0.7s						
AKTO				⇓S	**Sn**	**15 54 32.0**	**-0.7**
	comp=E,6.0nm,0.8s						
ZAA0	**Zalesovo Array**	**17.90**	**29**	Pn	**Pn**	**15 52 37.6**	**-0.6**
ZALV	**Zalesovo Beam**	**17.90**	**29**	P	**Pn**	**15 52 37.5**	**-0.8**
	comp=E,0.3nm,0.3s,baz=224,slow=12,SNR=7.2						
ARU	**Arti**	**19.14**	**340**	P	**P**	**15 52 52.7**	**+0.3**
	comp=E,0.0nm,0.3s,baz=159,slow=5.7,SNR=6.9						
ARU	**Arti**	**19.14**	**340**	P	**P**	**15 52 52.1**	**-0.2**
RAYN	**Ar Rayn**	**26.18**	**241**	P	**P**	**15 54 04.6**	**+0.8**
RAYN				IAmb	IAmb	15 54 32.4	
	comp=Z,6.3nm,1.5s						
TLY	**Talaya**	**26.33**	**50**	P	**P**	**15 54 06.3**	**+1.4**
TLY				IAmb	IAmb	15 54 35.0	
	comp=Z,7.7nm,1.2s						
FINES	**FINESS Array B**	**35.18**	**324**	P	**P**	**15 55 22.7**	**-0.1**
	comp=Z,5.5nm,1.2s,baz=104,slow=8.9,SNR=2.6						
ARCES	**ARCESS Array B**	**38.68**	**337**	P	**P**	**15 55 52.3**	**-0.1**
	comp=Z,2.2nm,0.8s,baz=97,slow=7.4,SNR=5.7						
NOA	**NORSAR Array B**	**42.13**	**321**	P	**P**	**15 56 20.4**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=108,slow=7.8,SNR=2.6						
TORD	**Torodi Ar. Bea**	**65.35**	**267**	P	**P**	**15 59 09.2**	**-2.4**
	comp=Z,0.4nm,0.5s,baz=71,slow=4.9,SNR=3.5						
YKA	**Yellowknife Ar**	**78.78**	**2**	P	**P**	**16 00 31.2**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=350,slow=5.3,SNR=9.5						

*BJI **19** 15:54:37.6±0.0,6˚.01S×149˚.49E,h88km,mB5.1/29, mb4.8/46,Ms4.6/13,Ms7 4.3/11*
*NEIC **19** 15:54:38.5±2.1,5˚.93S±0˚.07×149˚.41E±0˚.08,h76km±6km, mb5.1/68, Error ellipse: s-maj=11.9km s-min=10.5km az=109.0*
*MOS **19** 15:54:38.3±1.1,5˚.90S×149˚.34E,h83km,mb4.8/18, Error ellipse: s-maj=10.4km s-min=6.5km az=91.9*
*IDC **19** 15:54:38.6±0.6,5˚.94S×149˚.40E,h73km±5km, mb4.2/22, mb1 4.4/27,mb1mx4.2/42,mbtmp4.6/27,MS3.6/4, Ms1 3.7/4,ms1mx3.3/17, Error ellipse: s-maj=14.1km s-min=9.5km az=93.0*
*DJA **19** 15:54:41.5±1.1,6˚.S±6˚×14˚.9E±˚,h91km±9km,M5.3/20, mb5.0/20,mB5.5/6,MLv5.6/1,Mw(mB)5.0/6*
ISC 19 15:54:38.8±0.5,**5˚.95S**±0˚.04×**149˚.37E**±0˚.05,**h74**km±4km, **h74**km**:pP-P,n182,** σ1§**22**/194,**mb4.9**/**72,3D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**3.10**	**58**	P	**Pn**	**15 55 25.6**	**+0.1**
	160nm,0.3s,baz=248,slow=2.3,

baz=21,SNR=18
KNRA Kununurra 22.41 243 P P 15 59 29.0 -2.5
baz=22,SNR=17
KNRA Kununurra 22.41 243 P P 15 59 30.6 -0.9
KNRA IAmb IAmb 15 59 34.3
comp=Z,64nm,0.6s
NOUC Port Laguerre 22.93 136 P P 15 59 37.0 +0.2
NOUC IAmb IAmb 15 59 39.2
comp=Z,80nm,1.5s
DZM Mont Dzumac 23.00 136 P P 15 59 37.9 +0.2
comp=Z,17nm,0.5s,baz=274,slow=8.6,SNR=34
DZM LR LR 16 07 18.0
comp=Z,247nm,18.0s,baz=352,slow=33
DZM Mont Dzumac 23.00 136 P P 15 59 37.7 0.0
DZM IAmb IAmb 15 59 38.9
comp=Z,116nm,1.6s
AS31 Alice Springs 23.06 219 P P 15 59 38.2 0.0
ASAR Alice Springs 23.06 219 P P 15 59 38.5 +0.2
comp=Z,20nm,0.5s,baz=53,slow=9.0,SNR=194
KWAJ Kwajalein Atol 23.35 51 P P 15 59 41.1 +0.1
KWAJ pmax pmax
comp=Z,178nm,0.9s
KWAJ Kwajalein Atol 23.35 51 P P 15 59 41.1 +0.1
ARMA Armidale 24.43 175 P P 15 59 51.7 +1.1
baz=25,SNR=29
ARMA Armidale 24.43 175 P P 15 59 51.8 +1.1
TARA Tarawa 24.61 74 P P 15 59 51.2 -1.2
CMSA Cobar Meteorol 25.69 187 P P 16 00 02.5 +0.6
baz=26,SNR=35
FITZ Fitzroy Crossi 26.12 240 P P 16 00 04.9 -1.2
baz=26,SNR=69
FITZ Fitzroy Crossi 26.12 240 P P 16 00 06.2 +0.1
comp=Z,67nm,0.6s,baz=53,slow=6.9,SNR=112
FITZ Fitzroy Crossi 26.12 240 P P 16 00 05.8 -0.3
FITZ IAmb IAmb 16 00 09.0
comp=Z,79nm,0.8s
STKA Stephens Creek 26.80 195 P P 16 00 11.7 -0.3
STKA pmax pmax
comp=Z,17nm,1.8s
STKA Stephens Creek 26.80 195 P P 16 00 11.9 -0.1
comp=Z,12nm,0.5s,baz=20,slow=8.7,SNR=14
STKA Stephens Creek 26.80 195 P P 16 00 11.7 -0.3
MGCD Mangrove Creek 27.17 177 P P 16 00 16.5 +1.2
baz=27,SNR=5.7
WRKA Warakurna 27.72 225 P P 16 00 20.3 -0.1
baz=28,SNR=54
YNG Young 28.22 182 P P 16 00 25.4 +0.6
baz=28,SNR=5.2
HTT Hallett 29.02 198 P P 16 00 32.0 +0.2
baz=29,SNR=7.3
CAN Canberra 29.23 181 P P 16 00 34.6 +0.9
CAN pmax pmax
comp=Z,130nm,2.0s
CAN Canberra 29.23 181 P P 16 00 34.6 +0.9
CAN IAmb IAmb 16 01 37.7
comp=Z,130nm,2.0s
BBOO Buckleboo 29.46 203 P P 16 00 36.3 +0.6
baz=30,SNR=6.3
BBOO Buckleboo 29.46 203 P P 16 00 35.7 -0.1
BBOO IAmb IAmb 16 01 22.6
comp=Z,101nm,1.9s
ARPS Mount Arapiles 31.44 192 P P 16 00 54.6 +1.4
baz=32,SNR=16
TOO Toolangi 31.67 186 P P 16 00 54.5 -0.7
baz=32,SNR=11
TOO Toolangi 31.67 186 P P 16 00 55.9 +0.7
TOO pmax pmax
comp=Z,20nm,0.9s
TOO Toolangi 31.67 186 P P 16 00 55.9 +0.7
TOO IAmb IAmb 16 00 57.2
comp=Z,20nm,0.8s
FORT Forrest 31.79 216 P P 16 00 56.7 +0.4
baz=32,SNR=10
FORT Forrest 31.79 216 P P 16 00 56.4 0.0
PSA00 Pilbara Seismi 32.52 239 P P 16 01 02.4 -0.4
PSA00 IAmb IAmb 16 01 03.5
comp=Z,33nm,0.9s
SMKI Samarinda 32.56 278 P P 16 01 04.0 +0.7
MEEK Meekatharra 35.81 231 P P 16 01 31.1 -0.2
baz=36,SNR=46
KMBL Kambalda 36.09 222 P P 16 01 33.7 +0.1
baz=36,SNR=13
MOO Moorlands 36.39 183 P P 16 01 37.6 +1.7
baz=37,SNR=8.2
OUZ Omahuta 36.70 146 P P 16 01 40.0 +1.3
GIRL Giralia 37.73 240 P P 16 01 48.5 +0.9
baz=38,SNR=3.6
GIRL Giralia 37.73 240 P P 16 01 48.1 +0.5
MORW Morawa 38.99 230 P P 16 01 57.9 -0.2
baz=39,SNR=5.1
MORW Morawa 38.99 230 P P 16 01 57.7 -0.4
MORW IAmb IAmb 16 03 13.2
comp=Z,58nm,1.6s
KLBR Kellerberrin 39.06 225 P P 16 01 58.3 -0.4
baz=39,SNR=16
YULB Yu-li 40.03 318 P P 16 02 06.5 -0.3
NWAO Narrogin (SRO) 40.18 224 P P 16 02 08.1 +0.2
NWAO pmax pmax
comp=Z,122nm,2.0s
NWAO Narrogin (SRO) 40.18 224 P P 16 02 07.7 -0.2
comp=Z,8.8nm,0.7s,baz=46,slow=10,SNR=5.5
NWAO LR LR 16 19 44.4
comp=Z,137nm,21.7s,baz=107,slow=38
NWAO Narrogin (SRO) 40.18 224 P P 16 02 08.1 +0.2
NWAO Narrogin (SRO) 40.18 224 P P 16 02 07.8 -0.1
NWAO IAmb IAmb 16 03 08.8
comp=Z,97nm,1.9s
MUN Mundaring 40.37 226 P P 16 02 09.6 0.0
baz=40,SNR=3.1
NACB Ninganchiao 40.37 319 P P 16 02 10.3 +0.6
NACB IAmb IAmb 16 02 12.0
comp=Z,20nm,0.9s
TPUB Ta-pu 40.42 317 P P 16 02 09.9 -0.2
URZ Urewera 40.84 146 P P 16 02 13.9 +0.6
comp=Z,2.9nm,0.5s,baz=236,slow=11,SNR=4.2
URZ Urewera 40.84 146 IAmb IAmb 16 03 34.4
comp=Z,57nm,1.6s
TNG Tangerang 42.48 267 P P 16 02 26.4 -0.7
comp=Z,11µmcomp=Z,842nm,0.5s
JNU Nakatsue 42.64 337 P P 16 02 28.8 +0.8
comp=Z,16nm,0.8s,baz=135,slow=5.6,SNR=12
JNU Nakatsue 42.64 337 P P 16 02 28.9 +0.8
JNU IAmb IAmb 16 02 46.1
comp=Z,43nm,1.3s
MJAR Matsushiro Arr 43.54 347 P P 16 02 36.7 +1.4
comp=Z,1.7nm,0.5s,baz=167,slow=8.1,SNR=8.3
MJAR PcP **PcP** 16 04 22.1 +0.1
comp=Z,1.6nm,0.7s,baz=165,slow=5.0,SNR=4.7
MAJO Matsushiro 43.55 347 *i* P **P 16 02 34.1 -1.2**
MAJO pmax pmax
comp=Z,27nm,1.4s
KSRS Korea Array 47.59 337 P P 16 03 06.4 -0.8
comp=Z,3.7nm,0.6s,baz=154,slow=8.3,SNR=17
KSRS pP **pP** 16 03 24.8 -0.8
comp=Z,2.3nm,0.6s,baz=158,slow=8.7,SNR=4.2
NJ2 Nanjing 47.68 324 *eP* **P 16 03 08.1 +0.1**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
JKA Kamikawa-asahi 50.21 354 P P 16 03 28.5 +1.4
ASAJ Asahikawa 50.21 354 P P 16 03 28.5 +1.4
comp=Z,9.7nm,0.8s,baz=225,slow=9.2,SNR=9.6
USA0B Ussuriysk Arra 52.32 344 *i* P **P 16 03 41.5 -1.4**
USRK Ussuriysk Ar. 52.32 344 P P 16 03 44.0 +1.1
comp=Z,6.5nm,0.6s,baz=185,slow=6.9,SNR=18
YSS Yuzh-Sakhalins 53.00 354 *eP* **P 16 03 49.5 +1.6**
MDJ Mudanjiang 53.39 342 P P 16 03 52.0 +1.2
MDJ sP sP 16 04 24.6 +6.6
MDJ pmax pmax
comp=Z,10.0nm,1.1s
MDJ pmax pmax
comp=Z,300nm,5.3s
MDJ Mudanjiang 53.39 342 P P 16 03 50.2 -0.5
MDJ IAmb IAmb 16 03 53.0
comp=Z,34nm,1.7s
KMI Kunming 54.85 306 P P 16 04 03.0 +0.9
KMI pP sP 16 04 25.8 -3.8
KMI sP pP 16 04 34.6 +13
KMI pmax pmax
comp=Z,190nm,4.4s
BJI Beijing 55.04 329 *eP* **P 16 04 03.1 +0.2**
BJI pmax pmax
comp=Z,7.0nm,0.9s
BJI LR LR
comp=Z,120nm,6.1s
CMAR Chiang Mai Arr 55.32 297 P P 16 04 04.9 -0.4
comp=Z,1.4nm,0.8s,baz=124,slow=5.7,SNR=9.5

CMAR pP **pP** 16 04 24.1 -0.2
comp=Z,2.2nm,0.8s,baz=126,slow=6.0,SNR=6.0
TYV Tymovskoe 56.88 355 *eP* **P** 16 04 15.3 -0.5
TYV pmax pmax
comp=Z,16nm,1.3s
CD2 Chengdu 56.95 313 P P 16 04 15.9 -0.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s
KLR Kul'dur 57.06 346 *i* P **P** 16 04 17.6 +0.4
KLR pmax pmax
comp=Z,10.0nm,1.3s
KLR Kul'dur 57.06 346 P **P** 16 04 18.1 +1.0
comp=Z,3.7nm,0.8s,baz=166,slow=4.7,SNR=12
KLR PcP **PcP** 16 05 11.2 -0.2
comp=Z,2.5nm,0.7s,baz=156,slow=4.3,SNR=3.5
GRNR Gornyy 57.59 350 *eP* **P** 16 04 21.2 +0.4
GRNR pmax pmax
comp=Z,6.0nm,1.3s
HHC Hu-ho-hao-te 58.06 327 *eP* **P** 16 04 26.1 +1.6
HHC pmax pmax
comp=Z,7.0nm,1.0s
HHC pmax pmax
comp=Z,86nm,5.0s
PEA0B Petropavlovsk- 59.26 6 P P 16 04 32.7 +0.3
PEA0B pmax pmax
comp=Z,106nm,1.6s
PEA0B Petropavlovsk- 59.26 6 P P 16 04 32.7 +0.3
PETK Petropavlovsk- 59.26 6 P P 16 04 32.7 +0.3
comp=Z,12nm,0.5s,baz=170,slow=8.3,SNR=79
PETK pP **pP** 16 04 50.1 -1.4
comp=Z,5.3nm,0.8s,baz=163,slow=7.5,SNR=2.7
PET Petropavlovsk 59.27 7 P P 16 04 32.8 +0.3
PET pmax pmax
comp=Z,238nm,2.0s
PET Petropavlovsk 59.27 7 P P 16 04 32.8 +0.3
LZH Lanzhou 59.73 318 *eP* **P** 16 04 37.3 +1.1
LZH pP pP 16 04 56.6 +1.2
LZH sP sP 16 05 10.5 +6.8
LZH PP **PP** 16 06 52.3 +3.4
LZH pmax pmax
comp=Z,25nm,1.1s
LZH pmax pmax
comp=Z,97nm,6.5s
LZH LR LR
comp=Z,220nm,17.3s
LZH LR LR
comp=Z,290nm,19.0s
MWH Moku'aweowe 59.75 63 P P 16 04 35.5 -1.6
HIA Hailar 60.75 338 P P 16 04 42.4 -0.4
HIA pmax pmax
comp=Z,19nm,0.8s
HIA Hailar 60.75 338 P P 16 04 42.4 -0.4
HIA IAmb IAmb 16 04 44.6
comp=Z,19nm,0.8s
ZEA Zeya 62.32 345 *eP* **P** 16 04 54.4 +1.2
ZEA pmax pmax
comp=N,21nm,0.8s
ZEA pmax pmax
comp=Z,35nm,1.0s
GTA Gaotai 64.23 319 *eP* **P** 16 05 07.3 +1.0
GTA pP pP 16 05 25.3 -0.4
GTA sP sP 16 05 34.6 +0.6
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA pmax pmax
comp=Z,110nm,8.4s
GTA LR LR
comp=Z,120nm,19.0s
GTA LR LR
comp=Z,150nm,19.0s
GTA LR LR
comp=Z,130nm,19.7s
ULN Ulaanbaatar 65.22 330 *i* P **P** 16 05 14.3 +1.7
ULN pmax pmax
comp=Z,4.0nm,0.6s
ULN Ulaanbaatar 65.22 330 P P 16 05 13.5 +0.9
MA2 Magadan 65.33 1 P P 16 05 13.1 +0.3
MA2 pmax pmax
comp=Z,8.0nm,0.8s
MA2 Magadan 65.33 1 P P 16 05 13.1 +0.3
SONM Songino Array 65.53 330 P P 16 05 15.6 +1.0
comp=Z,2.6nm,0.6s,baz=140,slow=4.7,SNR=25
SONM pP **pP** 16 05 33.1 -0.9
comp=Z,3.2nm,0.9s,baz=136,slow=5.0,SNR=7.6
ZAK Zakamensk 68.75 330 *eP* **P** 16 05 34.3 -0.5
ZAK *e* 16 05 51.1
ZAK pmax pmax
comp=Z,5.0nm,1.0s
ZAK pmax pmax
comp=Z,5.0nm,1.0s
YAK Yakutsk 69.47 350 *i* P **P** 16 05 39.3 +0.4
YAK pmax pmax
comp=Z,4.0nm,0.6s
VNDA Vanda 71.83 177 P P 16 05 54.1 +1.0
comp=Z,5.9nm,0.6s,baz=335,slow=7.0,SNR=24
WMQ Urumqi 74.31 319 *eP* **P** 16 06 09.1 +0.7
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ pmax pmax
comp=Z,22nm,4.1s
WMQ LR LR
comp=Z,550nm,29.0s
WMQ LR LR
comp=Z,750nm,29.3s
WMQ LR LR
comp=Z,130nm,29.1s
BILL Bilibino 74.78 7 *de*P **P** 16 06 10.7 +0.2
BILL *e**PP **pP** 16 06 30.6 +0.3
BILL SSS SSS 16 23 47.0
BILL pmax pmax
comp=Z,8.0nm,1.2s
ANM Nome 77.91 18 P P 16 06 28.2 -0.1
ANM pmax pmax
comp=Z,7.0nm,1.2s
ANM Nome 77.91 18 P P 16 06 28.2 -0.1
TIXI Tiksi 78.61 354 *i* P **P** 16 06 32.9 +0.9
TIXI pmax pmax
comp=Z,2.0nm,0.7s
TIXI Tiksi 78.61 354 P P 16 06 32.5 +0.5
MK31 Makanchi Array 78.97 320 P P 16 06 34.2 -0.4
MK31 pmax pmax
comp=Z,30nm,1.1s
MK31 Makanchi Array 78.97 320 P P 16 06 34.1 -0.4
MKAR Makanchi Array 78.97 320 P P 16 06 33.0 -1.6
comp=Z,0.8nm,0.5s,baz=99,slow=8.3,SNR=13
MKAR pP **pP** 16 06 54.3 -0.3
comp=Z,0.6nm,0.6s,baz=108,slow=7.8,SNR=2.6
MAKZ Makanchi 79.18 320 P P 16 06 35.3 -0.4
MAKZ pmax pmax
comp=Z,45nm,0.9s
MAKZ Makanchi 79.18 320 P P 16 06 35.3 -0.4
RSO Redoubt South 80.06 25 P P 16 06 36.3 -4.1
ZAA0 Zalesovo Array 80.24 327 P P 16 06 40.5 -0.7
ZAA0 IAmb IAmb 16 09 23.1
comp=Z,15nm,0.9s
ZALV Zalesovo Beam 80.24 327 P P 16 06 39.6 -1.6
comp=Z,5.3nm,0.6s,baz=114,slow=5.6,SNR=23
RDOG Red Dog Mine 81.02 16 P P 16 06 43.7 -1.4
KSH Kashi 81.11 311 P P 16 06 48.9 +2.5
KSH pP sP 16 07 12.8 -1.8
KSH PP **PP** 16 09 55.4 +2.9
KSH S **S** 16 16 52.5 +2.0
KSH sS sS 16 17 35.8 +11
KSH SS **SS** 16 22 10.8 +3.7
KSH pmax pmax
comp=Z,51nm,1.2s
KSH pmax pmax
comp=Z,300nm,6.6s
KSH LR LR
comp=Z,190nm,5.7s
KSH LR LR
comp=Z,180nm,4.0s
KSH LR LR
comp=Z,310nm,8.0s
NIL Nilore 81.82 305 P P 16 06 47.9 -2.3
NIL pmax pmax
comp=Z,27nm,0.6s
NIL Nilore 81.82 305 P P 16 06 47.9 -2.3
NIL IAmb IAmb 16 09 25.0
comp=Z,27nm,0.6s
KTH Kantishna Hill 82.38 23 P P 16 06 50.7 -1.8
KURK Kurchatov 82.59 323 *i* P **P** 16 06 53.5 -0.2
KURK pmax pmax
comp=Z,3.0nm,0.9s
KURBB Kurchatov Arra 82.61 323 P P 16 06 53.2 -0.6
comp=Z,1.0nm,0.5s,baz=114,slow=3.8,SNR=7.0
BPAW Bear Paw Mtn. 82.63 22 P P 16 06 51.9 -1.8
RND Reindeer 83.12 24 P P 16 06 54.4 -2.0
RND pmax pmax
comp=Z,16nm,0.8s
RND Reindeer 83.12 24 P P 16 06 54.4 -2.0
RND IAmb IAmb 16 06 56.4
comp=Z,16nm,0.8s
MLY Manley 83.19 22 P P 16 06 55.6 -1.0
MCK McKinley 83.24 23 P P 16 06 55.1 -1.8
MCK pmax pmax
comp=Z,23nm,0.9s
MCK McKinley 83.24 23 P P 16 06 55.1 -1.8
MCK IAmb IAmb 16 06 57.1
comp=Z,23nm,0.9s
DHY Denali Highway 83.56 24 P P 16 06 57.6 -1.1
NEA Nenana 83.59 22 P P 16 06 56.9 -1.7
NEA IAmb IAmb 16 06 58.4
comp=Z,10nm,0.9s
WRH Wood River Hil 83.92 23 P P 16 06 58.5 -1.7
WRH IAmb IAmb 16 07 00.3
comp=Z,12nm,1.0s
QSPA South Pole Qui 84.02 180 P P 16 07 00.4 -0.6
QSPA IAmb IAmb 16 07 02.0
comp=Z,9.0nm,0.8s
CCB Clear Creek Bu 84.11 23 P P 16 06 59.3 -1.9
COLA College 84.19 22 *i* P **P 16 07 00.3 -1.3**
COLA pmax pmax
comp=Z,12nm,0.8s
COLA College 84.19 22 P P 16 06 59.9 -1.8
COLA IAmb IAmb 16 07 01.1
comp=Z,15nm,0.9s
HDA Harding Lake 84.33 23 P P 16 07 00.5 -1.9
IL31 84.52 23 P P 16 07 00.9 -2.4
IL31 IAmb IAmb 16 07 02.4
comp=Z,10nm,0.8s
ILAR Eielson Array 84.52 23 P P 16 07 01.4 -1.9
comp=Z,8.6nm,0.8s,baz=251,slow=4.8,SNR=80
DOT Dot Lake 85.16 24 P P 16 07 05.5 -1.1
DOT IAmb IAmb 16 07 07.6
comp=Z,9.3nm,0.8s
SCRK Sand Creek 85.32 24 P P 16 07 06.4 -1.2
EGAK Eagle 86.76 24 P P 16 07 13.8 -0.6
EGAK IAmb IAmb 16 07 15.3
comp=Z,11nm,0.9s
HYT Haines Junctio 87.03 28 P P 16 07 15.6 -0.4
HYT IAmb IAmb 16 07 17.6
comp=Z,10nm,0.8s
DAWY Dawson 87.24 25 P P 16 07 16.4 -0.4
DAWY IAmb IAmb 16 07 18.1
comp=Z,8.8nm,0.9s
BVAR Borovoye Array 88.12 324 P P 16 07 19.7 -1.5
comp=Z,1.2nm,0.7s,baz=112,slow=5.1,SNR=12
EPYK Eagle Plains 89.03 23 P P 16 07 24.6 -0.8
INK Inuvik 90.75 21 P P 16 07 31.8 -1.4
INK pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 90.75 21 P P 16 07 31.8 -1.4
ABKAR Akbulak array 94.09 319 P P 16 07 46.7 -2.4
NVAR Mina Array Bea 95.47 52 P P 16 07 54.6 -1.4
comp=Z,0.9nm,0.8s,baz=246,slow=5.7,SNR=7.4
NVAR LR LR 16 44 27.5
comp=Z,29nm,19.2s,baz=274,slow=31
YKA Yellowknife Ar 98.03 28 P P 16 08 06.0 -0.6
comp=Z,0.2nm,0.6s,baz=269,slow=4.7,SNR=5.1
YKA pP **pP 16 08 26.5 -0.6**
comp=Z,0.2nm,0.5s,baz=266,slow=4.6,SNR=3.1
YKA PKKPbc **PKKPbc 16 24 38.4 -4.1**
comp=Z,0.1nm,0.4s,baz=91,slow=2.6,SNR=4.3
PDAR Pinedale Array 102.14 48 P Pdif 16 08 24.4 -1.3
comp=Z,2.5nm,0.8s,baz=243,slow=2.9,SNR=3.2
ARCES ARCESS Array B 106.94 342 Pdiff Pdif 16 08 46.5 +0.3
comp=Z,2.5nm,0.8s,baz=65,slow=8.7,SNR=5.3
GERES GERESS Array B 123.19 327 PKP PKPdf 16 13 27.0 -0.2
comp=Z,0.4nm,0.5s,baz=62,slow=3.2,SNR=4.1
TOA0 Torodi Ar. Sit 147.36 285 PKPbc 16 14 14.7 -0.4
TORD Torodi Ar. Bea 147.36 285 PKPbc PKPbc 16 14 14.5 -0.7
comp=Z,3.3nm,0.5s,baz=60,slow=3.1,SNR=24
BDFB Brasilia 152.49 141 PKPbc PKPbc 16 14 26.6 -1.1
comp=Z,3.1nm,0.5s,baz=342,slow=5.7,SNR=8.0

IDC ***19*** *15:57:55.5±0.4,2˚.40S×139˚.95E,h0km,mb4.7/24, mb1 4.8/26,mb1mx4.7/41,mbtmp4.7/26,ML4.7/2,MS3.7/11, Ms1 3.7/11,ms1mx3.6/19,Error ellipse: s-maj=12.4km s-min=7.5km az=24.0*
DJA ***19*** *15:57:56.6±0.3,2˚S±3˚×14˚0E±˚,h10km,M4.9/31, mb5.0/31,mB5.2/7,MLv5.0/6,Mw(mB)4.6/7*
BJI ***19*** *15:57:59.7±0.0,2˚.48S×140˚.21E,h57km,mB5.1/38, mb5.0/54,Ms4.6/21,Ms7 4.4/14*
MOS ***19*** *15:58:00.2±0.9,2˚.46S×139˚.96E,h52km,mb5.2/34,Error ellipse: s-maj=11.4km s-min=5.6km az=114.2*
NEIC ***19*** *15:58:01.9±1.9,2˚.48S±0˚.07×139˚.91E±0˚.07,h52km±4km, mb5.1/95,Error ellipse: s-maj=11.0km s-min=9.6km az=223.0*

ISC 19 15:57:58.9±0.3,2˚.44S±0˚.04×140˚.00E±0˚.03,h25km,n293, σ1s47/290,mb5.1/95,MS3.8/13,9C-3D,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.23**	**133**	P	**Pb**		**15 58 04.9**	**0.0**
GENI				S	**Sb**		**15 58 10.6**	**+1.6**
JAY	**Jayapura**	**0.71**	**96**	Pg	**Pb**		**15 58 10.8**	**-1.9**
	2µm,0.3s,baz=237,slow=12,SNR=1438							
JAY				Lg	Lg		15 58 20.8	
	2µm,0.3s,baz=131,slow=19,SNR=35							
JAY	**Jayapura**	**0.71**	**96**	P	**Pb**		**15 58 10.6**	**-2.0**
JAY				S	**Sb**		**15 58 20.0**	**-2.0**
SMPI	**Sarmi**	**1.36**	**289**	P	**Pn**		**15 58 21.7**	**-0.6**
SMPI				S	**Sb**		**15 58 42.6**	**+1.8**
WAMI	**Wamena**	**1.93**	**222**	P	**Pb**		**15 58 32.2**	**-1.2**
WAMI				S	**Sb**		**15 59 02.2**	**+5.1**
BAKI	**Biak**	**4.08**	**288**	P	**Pn**		**15 58 57.8**	**-2.0**
RKPI	**Ransiki, Papua**	**5.89**	**279**	P	**Pn**		**15 59 24.0**	**-0.7**
	0.6nm138nm,0.7s							
FAKI	**Fak Fak**	**7.76**	**266**	P	**Pn**		**15 59 51.3**	**+1.0**
	0.4nm105nm,0.7s							
FAKI	**Fak Fak**	**7.76**	**266**		**Pn**		**15 59 50.3**	**0.0**
SIJI	**Sorong**	**8.87**	**280**	Pn	**Pn**		**16 00 06.8**	**+1.2**
	4.6nm,0.3s,baz=48,slow=22,SNR=11							
SIJI				Sn	**Sn**		**16 01 46.4**	**+1.6**
	baz=66,slow=20,SNR=1.9							
SIJI				LR	LR		16 04 02.2	
	comp=Z,920nm,19.6s,baz=82,slow=42							
SWI	**Sorong**	**8.88**	**280**	P	**Pn**		**16 00 06.6**	**+1.0**
	54nm,0.7s							
PMG	**Port Moresby**	**9.93**	**135**	*ce*P	**Pn**		**16 00 24.4**	**+4.3**
PMG				pmax	pmax			
	comp=Z,128nm,1.0s							
PMG	**Port Moresby**	**9.93**	**135**	Pn	**Pn**		**16 00 24.6**	**+4.5**
	comp=Z,1.2nm,0.3s,baz=310,slow=17,SNR=2.5							
PMG				LR	LR		16 05 08.6	
	comp=Z,692nm,20.9s,baz=329,slow=43							
PMG	**Port Moresby**	**9.93**	**135**	Pn	**Pn**		**16 00 23.0**	**+2.9**
MSAI	**Masohi**	**11.09**	**265**	P	**Pn**		**16 00 38.2**	**+2.1**
	comp=Z,29nm,1.1s							
I39PW	**PALAU INFRASON**	**11.30**	**331**	*i*			17 08 20.0	
	baz=154,slow=314,SNR=1.8							
AAI	**Ambon**	**11.85**	**264**	P	**Pn**		**16 00 48.2**	**+1.7**
	comp=Z,62nm,0.6s							
COEN	**Coen**	**11.87**	**165**	Pn	**Pn**		**16 00 50.4**	**+3.7**
NLAI	**Namlea**	**12.91**	**266**	P	**Pn**		**16 01 02.2**	**+1.3**
	comp=Z,39nm,0.6s							
TNTI	**Ternate**	**13.03**	**284**	P	**P**		**16 01 10.6**	**-2.1**
MTN	**Manton Dam**	**13.56**	**220**		**Pn**		**16 01 08.1**	**-1.8**
SANI	**Sanana**	**14.01**	**271**	P	**Pn**		**16 01 14.5**	**-1.4**
	comp=Z,49nm,1.0s							
KMSI	**Cibinong**	**16.29**	**280**	P	**Pn**		**16 01 46.6**	**+0.4**
	comp=Z,2µmcomp=Z,200nm,0.7s							
MATI	**Mati**	**16.58**	**304**	*eP*	**Pn**		**16 01 50.2**	**+0.3**
DDMP	**Don Marcelino,**	**16.60**	**301**	*eP*	**P**		**16 01 54.3**	**+1.9**
KNRA	**Kununurra**	**17.20**	**219**		**Pn**		**16 01 56.6**	**-1.0**
KNRA				IAmb	IAmb		16 02 09.4	
	comp=Z,187nm,1.4s							
DAV	**Davao City (W)**	**17.21**	**303**	LR	LR		16 08 29.9	
	comp=Z,212nm,19.9s,baz=134,slow=37							
DAV	**Davao City (W)**	**17.21**	**303**	Pn	**Pn**		**16 01 56.2**	**-1.6**
SOEI	**Soe**	**17.24**	**244**	P	**P**		**16 02 01.5**	**+1.8**
	comp=Z,479nm,0.9s							
SOEI	**Soe**	**17.24**	**244**		**Pn**		**16 01 58.4**	**+0.1**
LUWI	**Luwuk**	**17.27**	**274**	P	**P**		**16 01 59.3**	**-0.6**
	comp=Z,2µmcomp=Z,107nm,0.8s							
LUWI	**Luwuk**	**17.27**	**274**		**Pn**		**16 01 58.3**	**-0.3**

LUWI IAmb IAmb 16 02 23.4
comp=Z,77nm,0.7s
SKMP Bagumbayan, Su 17.81 300 *e*P **P 16 02 07.0 +1.2**
BUKP Musuan 18.08 305 *e*P **Pn 16 02 05.4 -3.2**
WR0 Warramunga Arr 18.21 197 P **Pn 16 02 09.2 -1.0**
WRAB Tennant Creek 18.25 197 *ce*P **Pn 16 02 09.2 -1.4**
WRAB pmax pmax
comp=Z,74nm,0.8s
WRAB Tennant Creek 18.25 197 P **Pn 16 02 09.9 -0.7**
WRA Warramunga Arr 18.26 197 P **Pn 16 02 10.3 -0.4**
comp=Z,2.8nm,0.3s,baz=17,slow=12,SNR=26
WRA S **Sn 16 05 24.5 -10**
comp=Z,0.4nm,0.3s,baz=20,slow=24,SNR=6.0
WRA Warramunga Arr 18.26 197 IAmb IAmb 16 02 15.6
comp=Z,2.4nm,0.9s
MRSI Marisa 18.29 279 P **P 16 02 10.9 -0.2**
comp=Z,1µmcomp=Z,94nm,0.6s
APSI Ampana 18.41 274 P **Pn 16 02 13.8 +1.3**
comp=Z,1µmcomp=Z,103nm,1.1s
CTA Charters Tower 18.58 161 P **Pn 16 02 16.4 +1.8**
comp=Z,1.1nm,0.3s,baz=337,slow=11,SNR=9.9
CTA LR LR 16 10 31.9
comp=Z,578nm,18.0s,baz=352,slow=41
MMRI Maumere 18.71 250 P **P 16 02 15.2 -0.6**
MMRI IAmb IAmb 16 02 44.0
comp=Z,81nm,0.8s
PAGZ Pagadian 19.47 302 *e*P **P 16 02 24.5 +0.4**
ANA2 Anatahan 19.49 17 Pn **Pn 16 02 27.1 +1.4**
MSLP Maasin 19.58 310 *e*P **P 16 02 24.8 -0.5**
BNSI Bone 19.95 264 P **Pn 16 02 31.8 +0.7**
comp=Z,62nm,0.9s
BKSI Bulukumba 20.04 261 P Pn 16 02 31.6 -0.5
comp=Z,51nm,1.0s
TTSI Tana Toraja 20.17 268 P Pn 16 02 33.2 -0.5
comp=Z,75nm,1.1s
SPSI Sidrap Palu 20.26 265 P Pn 16 02 34.0 -0.7
comp=Z,58nm,0.8s
MPSI Mapaga 20.28 278 P **P 16 02 34.0 +1.0**
comp=Z,31nm,0.9s
OCLP Ormoc 20.35 311 *e*P **P 16 02 34.3 +0.7**
FITZ Fitzroy Crossi 20.99 221 P **P 16 02 41.0 +0.4**
comp=Z,39nm,1.1s,baz=45,slow=11,SNR=5.7
FITZ S **S 16 06 24.9 -8.4**
comp=Z,12nm,0.9s,baz=243,slow=8.7,SNR=3.6
FITZ Fitzroy Crossi 20.99 221 P **P 16 02 40.9 +0.4**
FITZ IAmb IAmb 16 02 44.5
comp=Z,89nm,1.4s
HNR Honiara 21.01 110 P **P 16 02 41.9 +1.0**
HNR pmax pmax
comp=Z,111nm,0.8s
HNR Honiara 21.01 110 P **P 16 02 41.9 +1.0**
HNR IAmb IAmb 16 03 01.1
comp=Z,111nm,0.8s
AS31 Alice Springs 21.91 195 P **P 16 02 50.1 -0.4**
ASAR Alice Springs 21.91 195 P **P 16 02 50.2 -0.3**
comp=Z,24nm,0.6s,baz=27,slow=9.9,SNR=24
ASAR S **S 16 06 53.3 +1.7**
comp=Z,4.9nm,0.9s,baz=12,slow=27,SNR=3.9
SPMM Sapulut 24.56 287 P **P 16 03 18.0 +0.9**
TGY Tagaytay City 25.04 312 P **P 16 03 23.1 +1.6**
comp=Z,97nm,0.4s,baz=88,slow=15,SNR=3.2
TGY LR LR 16 13 15.4
comp=Z,243nm,21.9s,baz=112,slow=37
EIDS Eidsvold 25.18 156 P **P 16 03 23.5 +1.1**
EIDS IAmb IAmb 16 03 27.3
comp=Z,38nm,0.7s
KKM Kota Kinabalu 25.20 290 P **P 16 03 22.4 -0.6**
KKM IAmb IAmb 16 03 25.3
comp=Z,89nm,1.1s
PSA00 Pilbara Seismi 27.32 224 P **P 16 03 41.1 -0.9**
PSA00 IAmb IAmb 16 03 47.9
comp=Z,57nm,1.2s
STKA Stephens Creek 29.32 177 P **P 16 03 58.9 -0.8**
comp=Z,2.1nm,0.6s,baz=7.2,slow=9.9,SNR=3.7
STKA Stephens Creek 29.32 177 P **P 16 03 58.7 -1.0**
ARMA Armidale 29.93 160 P **P 16 04 06.0 +0.7**
KSM Kuching 29.94 277 P **P 16 04 05.0 -0.3**
KSM IAmb IAmb 16 04 20.2
comp=Z,70nm,1.5s
FORT Forrest 30.37 201 P **P 16 04 08.8 -0.2**
FORT IAmb IAmb 16 05 14.6
comp=Z,40nm,0.8s
BBOO Buckleboo 30.44 187 P **P 16 04 10.1 +0.5**
GIRL Giralia 32.07 229 P **P 16 04 25.2 +1.2**
LEM Lembang 32.56 261 LR LR 16 20 11.5
comp=Z,109nm,18.1s,baz=228,slow=41
H11S3 WAKE ISLAND Hy 33.51 51 T T 16 39 53.8
baz=231,slow=76,SNR=53
H11S2 WAKE ISLAND Hy 33.52 51 T T 16 39 48.6
baz=231,slow=76,SNR=21
H11S1 WAKE ISLAND Hy 33.52 51 T T 16 39 51.7
baz=231,slow=76,SNR=18
H11N1 WAKE ISLAND Hy 34.38 49 T T 16 41 05.3
baz=233,slow=75,SNR=32
H11N2 WAKE ISLAND Hy 34.39 49 T T 16 40 53.7
baz=233,slow=75,SNR=28
H11N3 WAKE ISLAND Hy 34.40 49 T T 16 40 60.0
baz=233,slow=75,SNR=27
DLV T Lat 34.42 295 P **P 16 04 44.1 -0.8**
MORW Morawa 34.95 218 P **P 16 04 48.0 -1.1**
MORW IAmb IAmb 16 05 15.8
comp=Z,22nm,1.1s
MDSI Maura Dua 35.81 266 P **P 16 04 56.0 -0.7**
comp=Z,21nm,1.0s
JNU Nakatsue 36.40 347 P **P 16 05 01.3 -0.2**
comp=Z,20nm,1.0s,baz=178,slow=2.7,SNR=8.7
JNU Nakatsue 36.40 347 P **P 16 05 01.5 0.0**
JNU IAmb IAmb 16 05 02.6
comp=Z,36nm,1.1s
JRMM Jerantut 38.02 279 P **P 16 05 14.0 -1.5**
UBPT Khong Chiam 38.44 298 P **P 16 05 18.5 -0.4**
MJAR Matsushiro Arr 38.81 358 P **P 16 05 20.9 -0.9**
comp=Z,2.3nm,0.6s,baz=176,slow=9.3,SNR=15
MAJO Matsushiro 38.81 358 P **P 16 05 21.0 -0.9**
MAJO pmax pmax
comp=Z,8.0nm,0.8s
MAJO Matsushiro 38.81 358 P **P 16 05 20.9 -0.9**
IPM Ipoh 39.55 280 P **P 16 05 26.7 -1.6**
PDSI Padang 39.55 272 P **P 16 05 28.8 +0.4**
comp=Z,9.7nm,0.9s
NJ2 Nanjing 39.74 331 *e*P **P 16 05 30.6 +1.0**
NJ2 pmax pmax
comp=Z,9.0nm,0.6s
KULM Kulim 40.05 281 P **P 16 05 31.4 -1.1**
KULM IAmb IAmb 16 05 33.2
comp=Z,33nm,1.1s
KULM Kulim 40.05 281 P **P 16 05 32.0 -0.5**
SISI Saibi 40.90 271 P **P 16 05 40.0 +0.5**
comp=Z,27nm,0.9s
KSRS Korea Array 41.24 345 P **P 16 05 42.1 +0.2**
comp=Z,4.0nm,0.8s,baz=160,slow=9.0,SNR=11
KSRS PcP **PcP 16 07 42.9 +2.3**
comp=Z,1.8nm,1.0s,baz=164,slow=3.4,SNR=4.1
KS19 Wonju Array Si 41.30 345 P **P 16 05 42.8 +0.3**
KS19 IAmb IAmb 16 06 02.2
comp=Z,52nm,1.4s
RPSI Rantau Prapat 41.38 277 P **P 16 05 42.0 -1.5**
RPSI IAmb IAmb 16 05 43.3
comp=Z,48nm,1.0s
RPSI Rantau Prapat 41.38 277 P **P 16 05 42.3 -1.2**
PSI Prapat 41.39 277 P **P 16 05 42.3 -1.4**
comp=Z,30nm,0.8s,baz=107,slow=5.3,SNR=18
INCN Inchon 41.61 344 P **P 16 05 44.5 -0.5**
INCN pmax pmax
comp=Z,77nm,1.5s
INCN Inchon 41.61 344 P **P 16 05 44.5 -0.5**
INCN IAmb IAmb 16 06 44.0
comp=Z,77nm,1.5s
GSI Gunungsitoli 42.58 275 P **P 16 05 53.2 -0.1**
comp=Z,56nm,1.0s
GSI Gunungsitoli 42.58 275 P **P 16 05 50.8 -2.5**
GSI IAmb IAmb 16 05 52.8
comp=Z,36nm,0.7s
PBKT Sadao Pong 42.92 298 P **P 16 05 54.8 -1.1**
LHMI Lhok Sumawe 43.68 280 P **P 16 06 00.0 -2.1**
MLSI Meulaboh, Aceh 44.07 279 P **P 16 06 03.8 -1.5**
comp=Z,58nm,1.2s
KMI Kunming 45.33 309 P **P 16 06 16.8 +1.3**
KMI pP sP 16 06 29.1 +2.9
KMI sP pP 16 06 36.1 +13
KMI PP **PP 16 08 03.9 +2.1**
KMI S **S 16 12 55.5 +0.3**
KMI pmax pmax
comp=Z,25nm,0.9s
KMI pmax pmax
comp=Z,120nm,4.3s
KMI LR LR
comp=Z,170nm,5.2s
KMI LR LR
comp=Z,160nm,4.6s
KMI LR LR
comp=Z,160nm,5.1s
KMI Kunming 45.33 309 P **P 16 06 15.8 +0.3**
KMI pmax pmax
comp=Z,22nm,0.9s
KMI Kunming 45.33 309 P **P 16 06 15.8 +0.3**
KMI IAmb IAmb 16 06 17.4
comp=Z,22nm,0.9s
CM31 Chiang Mai Arr 45.43 299 P **P 16 06 16.0 -0.1**
CM31 IAmb IAmb 16 06 17.5
comp=Z,24nm,0.8s
CMAR Chiang Mai Arr 45.43 299 *i* P **P 16 06 16.2 +0.2**
CMAR pmax pmax
comp=Z,24nm,1.1s
CMAR Chiang Mai Arr 45.43 299 P **P 16 06 16.3 +0.2**
comp=Z,23nm,1.1s,baz=120,slow=6.1,SNR=46
CMAR PcP **PcP 16 07 57.1 +1.9**
comp=Z,1.0nm,0.6s,baz=154,slow=2.5,SNR=5.7
CMAR LR LR 16 24 36.1
comp=Z,51nm,21.4s,baz=122,slow=35
CHTO Chiang Mai 45.56 299 P **P 16 06 16.7 -0.5**
CHTO pmax pmax
comp=Z,22nm,1.1s
CHTO Chiang Mai 45.56 299 P **P 16 06 16.7 -0.5**
CHTO IAmb IAmb 16 06 18.2
comp=Z,22nm,1.1s
ASAJ Asahikawa 46.40 3 P **P 16 06 24.0 +0.7**
ASAJ Asahikawa 46.40 3 P **P 16 06 24.0 +0.7**
comp=Z,7.9nm,0.8s,baz=209,slow=8.6,SNR=5.0
JKA Kamikawa-asahi 46.40 3 P **P 16 06 24.0 +0.6**
XAN Xi'an 46.60 324 P **P 16 06 25.1 -0.1**
XAN pmax pmax
comp=Z,8.0nm,1.1s
XAN Xi'an 46.60 324 P **P 16 06 24.8 -0.4**
XAN pmax pmax
comp=Z,25nm,1.4s
XAN Xi'an 46.60 324 P **P 16 06 24.8 -0.4**
XAN IAmb IAmb 16 06 26.3
comp=Z,25nm,1.4s
USA0B Ussuriysk Arra 46.98 352 P **P 16 06 28.7 +0.9**
USA0B pmax pmax
comp=Z,25nm,1.5s
USA0B Ussuriysk Arra 46.98 352 P **P 16 06 28.7 +0.9**
USA0B IAmb IAmb 16 06 43.7
comp=Z,25nm,1.5s
USRK Ussuriysk Ar. 46.98 352 P **P 16 06 28.8 +1.0**
comp=Z,5.6nm,1.0s,baz=172,slow=8.7,SNR=6.0
BJI Beijing 47.58 335 *e*P **P 16 06 32.8 +0.2**
BJI pmax pmax
comp=Z,5.0nm,1.3s
BJI LR LR
comp=Z,170nm,16.2s
BJI LR LR
comp=Z,130nm,11.8s
MDJ Mudanjiang 47.76 350 P **P 16 06 34.3 +0.4**
MDJ pP sP 16 06 47.3 +2.7
MDJ pmax pmax
comp=Z,11nm,1.1s
MDJ pmax pmax
comp=Z,150nm,6.1s
MDJ Mudanjiang 47.76 350 P **P 16 06 34.7 +0.8**
MDJ IAmb IAmb 16 06 35.5
comp=Z,31nm,1.6s
CN2 Changchun 47.85 346 *e*P **P 16 06 34.3 -0.3**
CD2 Chengdu 47.85 317 ⇓*i*P **P 16 06 35.9 +0.9**
CD2 S **S 16 13 25.9 -4.9**
CD2 pmax pmax
comp=Z,30nm,0.6s
CD2 pmax pmax
comp=Z,140nm,4.5s
CD2 LR LR
comp=Z,310nm,21.4s
CD2 LR LR
comp=Z,270nm,11.0s
QRZ Quartz Range 48.18 147 P **P 16 06 36.9 -0.4**
DCZ Deep Cove 49.03 155 P **P 16 06 44.0 +0.3**
YSS Yuzh-Sakhalins 49.24 2 *e*P **P 16 06 45.3 0.0**
YSS pmax pmax
comp=Z,20nm,0.7s
YSS Yuzh-Sakhalins 49.24 2 P **P 16 06 45.0 -0.2**
YSS IAmb IAmb 16 06 46.1
comp=Z,18nm,0.9s
MLZ Mavora Lakes 49.37 154 P **P 16 06 45.6 -0.8**
TUWZ Tuamarina 49.38 146 P **P 16 06 46.5 +0.1**
BKZ Black Stump Fm 49.38 142 P **P 16 06 47.0 +0.3**
LTZ Lake Taylor 49.42 149 P **P 16 06 47.7 +0.8**
RPZ Rata Peaks 49.48 151 P **P 16 06 48.1 +0.8**
comp=Z,19nm,0.7s,baz=294,slow=4.6,SNR=9.9
RPZ Rata Peaks 49.48 151 P **P 16 06 47.8 +0.5**
BSWZ Blackbirch Sta 49.53 147 P **P 16 06 47.7 +0.1**
LBZ Lake Benmore 49.56 152 P **P 16 06 48.0 +0.1**
KHZ Kahutara 49.83 148 P **P 16 06 49.4 -0.5**
HHC Hu-ho-hao-te 50.28 332 *e*P **P 16 06 56.9 +3.4**
HHC pmax pmax
comp=Z,6.0nm,1.1s
HHC pmax pmax
comp=Z,50nm,5.2s
LZH Lanzhou 51.05 322 ⇓P **P 16 07 00.5 +1.1**
LZH pP sP 16 07 15.0 +4.8
LZH sP pP 16 07 21.5 +14
LZH PP **PP 16 08 59.3 +3.1**
LZH pmax pmax
comp=Z,41nm,1.0s
LZH pmax pmax
comp=Z,76nm,5.7s
LZH LR LR
comp=Z,290nm,16.3s
LZH LR LR
comp=Z,230nm,16.8s
LZH LR LR
comp=Z,320nm,19.0s
KLR Kul'dur 51.95 353 *i* P **P 16 07 05.4 -0.3**
KLR pmax pmax
comp=Z,5.0nm,1.0s
KLR Kul'dur 51.95 353 P **P 16 07 04.9 -0.8**
comp=Z,3.2nm,0.6s,baz=187,slow=5.3,SNR=10
SHL Shillong 54.24 304 P **P 16 07 22.3 -1.0**
SHL pmax pmax
comp=Z,63nm,1.6s
SHL Shillong 54.24 304 P **P 16 07 22.3 -1.0**
GTA Gaotai 55.62 323 ⇑P **P 16 07 33.8 +0.8**
GTA S **S 16 15 16.8 -0.9**
GTA pmax pmax
comp=Z,14nm,0.9s
GTA pmax pmax
comp=Z,120nm,8.9s
GTA LR LR
comp=Z,79nm,17.1s
GTA LR LR
comp=Z,110nm,18.7s
LSA Lhasa 56.55 308 P **P 16 07 38.4 -1.8**
LSA pmax pmax
comp=Z,13nm,1.2s
LSA Lhasa 56.55 308 P **P 16 07 38.4 -1.8**
ZEA Zeya 56.98 351 *e*P **P 16 07 43.2 +1.0**
ZEA pmax pmax
comp=Z,14nm,1.2s
PEA0B Petropavlovsk- 57.31 13 P **P 16 07 45.2 +0.7**
PETK Petropavlovsk- 57.31 13 P **P 16 07 45.2 +0.7**
comp=Z,5.5nm,0.9s,baz=174,slow=5.9,SNR=4.5
PETK LR LR 16 32 50.5
comp=Z,35nm,19.2s,baz=238,slow=37
ULN Ulaanbaatar 57.77 334 *ce*P **P 16 07 48.4 +0.3**
ULN pmax pmax
comp=Z,4.0nm,0.8s
ULN Ulaanbaatar 57.77 334 P **P 16 07 48.5 +0.3**
SONM Songino Array 58.03 334 P **P 16 07 50.5 +0.6**
comp=Z,1.1nm,0.6s,baz=145,slow=7.3,SNR=5.6
SONM Songino Array 58.03 334 IAmb IAmb 16 07 55.7
comp=Z,2.7nm,1.2s
TAPN Taplejung 58.38 304 *e*P **P 16 07 52.4 -0.5**
ODAN Odare 58.47 304 *e*P **P 16 07 52.6 -0.9**
comp=Z,29nm,0.7s
RAMN Ramite 59.16 303 *e*P **P 16 07 57.9 -0.4**
comp=Z,13nm,0.5s
JIRN Jiri 59.75 304 *e*P **P 16 08 01.9 -0.6**
GUN Gumba 60.10 304 *e*P **P 16 08 05.1 +0.2**
PKIN Phulchoki 60.38 304 *e*P **P 16 08 06.4 -0.3**
KKN Kakani 60.55 304 *e*P **P 16 08 08.0 +0.2**
comp=Z,23nm,0.8s
DMN Daman 60.63 304 *e*P **P 16 08 08.6 +0.2**
comp=Z,71nm,1.2s
GKN Gorkha 61.16 304 *e*P **P 16 08 12.1 +0.2**
ZAK Zakamensk 61.30 334 *e*P **P 16 08 12.3 0.0**
ZAK pmax pmax
comp=Z,15nm,1.1s
KOLN Koldanda 61.94 303 *e*P **P 16 08 16.8 -0.5**
DANN Dangsing 62.00 304 *e*P **P 16 08 17.8 0.0**
comp=Z,26nm,0.6s
TLY Talaya 62.10 335 *e*P **P 16 08 19.4 +1.8**
TLY pmax pmax
comp=Z,27nm,0.9s
TLY MLR MLR
comp=Z,161nm,13.0s
TLY Talaya 62.10 335 P **P 16 08 19.1 +1.5**
comp=Z,5.2nm,0.6s,baz=228,slow=7.4,SNR=3.0
TLY Talaya 62.10 335 IAmb IAmb 16 08 19.9
comp=Z,9.0nm,0.9s
MOY Mondy 63.22 334 *e*P **P 16 08 26.4 +1.2**
MOY pmax pmax
comp=Z,27nm,1.3s
BOD Bodaibo 63.58 345 *e*P **P 16 08 27.5 +0.2**
BOD pmax pmax
comp=Z,7.0nm,1.4s
YAK Yakutsk 64.77 355 *e*P **P 16 08 34.2 -0.8**
YAK pmax pmax
comp=Z,7.0nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.5s
YAK pmax pmax
comp=E,2.0nm,1.4s
YAK Yakutsk 64.77 355 P **P 16 08 34.5 -0.5**
YAK IAmb IAmb 16 08 53.8
comp=Z,10.0nm,0.7s
WMQ Urumqi 65.60 321 *e*P **P 16 08 42.0 +1.1**
WMQ PcP **PcP 16 09 11.5 -0.9**
WMQ pmax pmax
comp=Z,27nm,1.1s
WMQ pmax pmax
comp=Z,98nm,3.7s
WMQ LR LR
comp=Z,500nm,29.0s
WMQ LR LR
comp=Z,1µm,28.3s
WMQ Urumqi 65.60 321 P **P 16 08 41.1 +0.2**
WMQ pmax pmax
comp=Z,42nm,1.1s
WMQ Urumqi 65.60 321 P **P 16 08 41.1 +0.2**
SEY Seymchan 65.86 6 *i* P **P 16 08 42.1 0.0**
MK31 Makanchi Array 70.36 322 P **P 16 09 11.0 +0.2**
MK31 pmax pmax
comp=Z,30nm,1.1s
MK31 Makanchi Array 70.36 322 P **P 16 09 11.0 +0.2**
MK31 IAmb IAmb 16 09 13.2
comp=Z,30nm,1.1s
MKAR Makanchi Array 70.36 322 P **P 16 09 11.5 +0.8**
comp=Z,20nm,0.7s,baz=108,slow=7.8,SNR=106
MAKZ Makanchi 70.56 322 P **P 16 09 12.9 +0.9**
MAKZ Makanchi 70.56 322 P **P 16 09 12.4 +0.4**
PPT Papeete 70.61 108 LR LR 16 37 06.8
comp=Z,50nm,19.5s,baz=249,slow=33
PDGK Podgornoye 70.73 318 P **P 16 09 13.5 +0.3**
KSH Kashi 71.84 313 P **P 16 09 22.0 +2.0**
KSH PP **PP 16 12 04.8 +5.1**
KSH S **S 16 18 40.8 +1.4**
KSH pmax pmax
comp=Z,51nm,1.2s
KSH pmax pmax
comp=Z,300nm,5.6s
KSH LR LR
comp=Z,230nm,5.2s
KSH LR LR
comp=Z,170nm,5.5s
KSH LR LR
comp=Z,280nm,5.7s
KDJ Kajisay 71.86 316 P **P 16 09 18.9 -1.2**
KDJ pmax pmax
comp=Z,20nm,1.1s
KDJ Kajisay 71.86 316 P **P 16 09 18.9 -1.2**
KDJ IAmb IAmb 16 09 22.3
comp=Z,20nm,1.1s
NIL Nilore 72.20 306 P **P 16 09 22.1 0.0**
NIL pmax pmax
comp=Z,27nm,0.6s
NIL Nilore 72.20 306 P **P 16 09 22.1 0.0**
ZAA0 Zalesovo Array 72.35 329 P **P 16 09 21.8 -0.7**
ZALV Zalesovo Beam 72.35 329 P **P 16 09 22.1 -0.4**
comp=Z,11nm,0.7s,baz=114,slow=5.8,SNR=38
NRN Naryn 72.45 315 P **P 16 09 23.1 -0.7**
NRN pmax pmax
comp=Z,10.0nm,1.0s
NRN Naryn 72.45 315 P **P 16 09 23.1 -0.7**
BILL Bilibino 72.67 10 ⇓*e*P **P 16 09 24.5 +0.3**
BILL 16 09 46.5
BILL pmax pmax
comp=Z,3.0nm,1.1s
TKM2 Tokmak 2 73.24 316 P **P 16 09 29.4 +1.1**
AAK Ala-Archa 73.91 316 P **P 16 09 32.9 +0.7**
comp=Z,2.9nm,0.6s,baz=100,slow=5.9,SNR=10
AAK Ala-Archa 73.91 316 P **P 16 09 32.3 +0.1**
KURK Kurchatov 74.24 325 P **P 16 09 34.4 +0.7**
KURK Kurchatov 74.24 325 P **P 16 09 33.5 -0.2**
KURK IAmb IAmb 16 09 35.1
comp=Z,27nm,0.9s
KURBB Kurchatov Arra 74.25 324 P **P 16 09 34.0 +0.2**
comp=Z,20nm,1.0s,baz=113,slow=5.6,SNR=39
TIXI Tiksi 74.31 356 *ce*P **P 16 09 31.9 -1.8**
TIXI pmax pmax
comp=Z,12nm,1.7s
TIXI Tiksi 74.31 356 P **P 16 09 32.7 -1.0**
ARSB Arslanbob 74.57 314 P **P 16 09 36.5 +0.4**
BTK Batken 75.79 312 P **P 16 09 43.1 0.0**
BTK pmax pmax
comp=Z,18nm,1.3s
BTK Batken 75.79 312 P **P 16 09 43.0 0.0**
KBL Kabul 75.80 306 P **P 16 09 42.6 -0.8**
KBL pmax pmax
comp=Z,6.0nm,0.7s
KBL Kabul 75.80 306 P **P 16 09 42.6 -0.8**
GAR Garm 75.89 311 P **P 16 09 43.6 -0.1**
CHGR Chuyangaron 76.68 311 P **P 16 09 48.2 0.0**
KK31 Karatay Array 76.84 315 P **P 16 09 49.0 +0.1**
KK31 pmax pmax
comp=Z,22nm,1.5s
KK31 Karatay Array 76.84 315 P **P 16 09 49.0 +0.1**
KK31 IAmb IAmb 16 09 50.5
comp=Z,22nm,1.4s
KKAR Karatay Array 76.84 315 P **P 16 09 48.9 0.0**
KKAR pmax pmax
comp=Z,22nm,1.5s
KKAR Karatay Array 76.84 315 P **P 16 09 48.9 0.0**
KKAR IAmb IAmb 16 09 50.5
comp=Z,22nm,1.4s
BVAR Borovoye Array 79.83 325 P **P 16 10 05.6 +0.5**
comp=Z,21nm,0.8s,baz=112,slow=6.3,SNR=72
BRVK Borovoye 79.90 325 P **P 16 10 06.1 +0.6**
BRVK Borovoye 79.90 325 P **P 16 10 05.8 +0.2**
BRVK IAmb IAmb 16 10 07.2
comp=Z,24nm,0.9s
RDOG Red Dog Mine 80.51 19 P **P 16 10 09.3 +0.7**
PMR Palmer 83.14 27 P **P 16 10 22.1 -0.4**
PMR pmax pmax
comp=Z,39nm,1.6s
PMR Palmer 83.14 27 P **P 16 10 22.1 -0.4**
PMR IAmb IAmb 16 11 10.5
comp=Z,39nm,1.6s
KNK Knik Glacier 83.39 27 P **P 16 10 23.7 -0.1**
KNK IAmb IAmb 16 10 39.6
comp=Z,40nm,1.4s
SML Sawmill 83.56 27 P **P 16 10 24.9 +0.1**
SML IAmb IAmb 16 11 08.8
comp=Z,37nm,1.3s
MLY Manley 83.57 24 P **P 16 10 25.3 +0.5**
MLY IAmb IAmb 16 10 26.7
comp=Z,41nm,1.9s
RND Reindeer 83.82 25 P **P 16 10 25.7 -0.4**
RND pmax pmax
comp=Z,11nm,0.9s
RND Reindeer 83.82 25 P **P 16 10 25.7 -0.4**
NEA Nenana 84.09 24 P **P 16 10 28.1 +0.7**
NEA IAmb IAmb 16 10 43.2
comp=Z,27nm,1.7s
DHY Denali Highway 84.36 26 P **P 16 10 28.8 -0.1**
DHY IAmb IAmb 16 10 35.4
comp=Z,12nm,0.9s
CCB Clear Creek Bu 84.64 24 P **P 16 10 29.1 -1.0**

CCB						IAmb	IAmb	16 10 35.6			
	comp=Z,11nm,0.9s										
COLA	**College**	**84.69**	**24**	*i*	P	**P**	**16 10 28.5**	**-1.8**			
COLA					pmax	pmax					
	comp=Z,6.0nm,0.9s										
HDA	**Harding Lake**	**84.92**	**25**		P	**P**	**16 10 31.1**	**-0.5**			
HDA					IAmb	IAmb	16 13 06.5				
	comp=Z,38nm,2.0s										
IL31		**85.05**	**24**		P	**P**	**16 10 30.8**	**-1.4**			
ILAR	**Eielson Array**	**85.05**	**24**		P	**P**	**16 10 31.1**	**-1.1**			
	comp=Z,5.1nm,0.8s,baz=261,slow=4.6,SNR=29										
GEYT	**Alibeck**	**85.08**	**308**		P	**P**	**16 10 33.9**	**+0.9**			
	comp=Z,11nm,1.0s,baz=151,slow=3.4,SNR=21										
GEYT	**Alibeck**	**85.08**	**308**		IAmb	IAmb	16 10 35.0				
	comp=Z,8.5nm,0.9s										
AB31	**Akbulak array**	**85.35**	**320**	*i*	P	**P**	**16 10 33.4**	**-0.6**			
ABKAR	**Akbulak array**	**85.35**	**320**		P	**P**	**16 10 32.9**	**-1.1**			
ABKAR					IAmb	IAmb	16 10 34.7				
	comp=Z,8.9nm,0.7s										
DOT	**Dot Lake**	**85.95**	**26**		P	**P**	**16 10 36.7**	**-0.1**			
DOT					IAmb	IAmb	16 12 49.1				
	comp=Z,27nm,1.9s										
BALM	**Baldy**	**86.15**	**28**		P	**P**	**16 10 37.9**	**0.0**			
SVE	**Sverdlovsk**	**86.21**	**327**	*e*	P	**P**	**16 10 37.9**	**-0.2**			
SVE					pmax	pmax					
	comp=Z,8.0nm,1.0s										
BARN	**Barnard Glacie**	**86.48**	**29**		P	**P**	**16 10 40.2**	**+0.6**			
BARN					IAmb	IAmb	16 10 41.7				
	comp=Z,12nm,0.8s										
SOCY	**Socotra**	**86.61**	**282**		P	**P**	**16 10 39.5**	**-1.6**			
CTGM	**Chitina Glacie**	**86.62**	**29**		P	**P**	**16 10 40.6**	**+0.4**			
CTGM					IAmb	IAmb	16 10 44.0				
	comp=Z,16nm,1.0s										
AKTO	**Aktyubinsk**	**86.75**	**321**		P	**P**	**16 10 39.9**	**-1.0**			
	comp=Z,1.9nm,0.9s,baz=130,slow=4.8,SNR=7.1										
ARU	**Arti**	**87.28**	**327**	*c*	*i* P	**P**	**16 10 41.6**	**-1.7**			
ARU							16 14 08.2				
ARU					S	**SKSac**	**16 21 04.6**	**-4.6**			
ARU					SS	**SS**	**16 27 05.0**	**-1.3**			
ARU					pmax	pmax					
	comp=Z,9.0nm,1.0s										
ARU	**Arti**	**87.28**	**327**		P	**P**	**16 10 41.6**	**-1.7**			
ARU					IAmb	IAmb	16 10 43.4				
	comp=Z,17nm,1.4s										
QSPA	**South Pole Qui**	**87.51**	**180**		P	**P**	**16 10 43.5**	**-0.9**			
DAWY	**Dawson**	**88.06**	**26**		P	**P**	**16 10 47.5**	**+0.4**			
DAWY					IAmb	IAmb	16 10 49.2				
	comp=Z,9.7nm,0.8s										
HYT	**Haines Junctio**	**88.44**	**29**		P	**P**	**16 10 49.1**	**+0.1**			
HYT					IAmb	IAmb	16 10 55.3				
	comp=Z,11nm,1.1s										
RAYN	**Ar Rayn**	**95.09**	**293**		P	**P**	**16 11 19.0**	**-1.5**			
RAYN					pmax	pmax					
	comp=Z,4.0nm,1.0s										
RAYN	**Ar Rayn**	**95.09**	**293**		P	**P**	**16 11 19.0**	**-1.5**			
KBZ	**Khabaz**	**96.81**	**314**		LR	LR	16 58 48.1				
	comp=Z,22nm,21.6s,baz=38,slow=38										
KIV	**Kislovodsk**	**96.95**	**314**	*e*	P	**P**	**16 11 28.3**	**-0.3**			
KIV					pmax	pmax					
	comp=Z,10.0nm,1.0s										
SPITS	**Spitsbergen Ar**	**98.94**	**350**		P	Pdif	16 11 39.9	+3.2			
	comp=Z,10nm,1.0s,baz=75,slow=16,SNR=6.4										
YKA	**Yellowknife Ar**	**99.24**	**27**		P	**Pdif**	**16 11 37.0**	**-1.3**			
	comp=Z,0.4nm,0.8s,baz=285,slow=5.1,SNR=7.1										
YKA					LR	LR	16 56 49.8				
	comp=Z,25nm,19.2s,baz=0.0,slow=36										
ARCES	**ARCESS Array B**	**100.67**	**341**		P	**Pdif**	**16 11 43.5**	**-1.1**			
	comp=Z,2.7nm,0.7s,baz=79,slow=6.3,SNR=6.7										
NVAR	**Mina Array Bea**	**100.67**	**52**		P	**Pdif**	**16 11 46.6**	**+1.1**			
	comp=Z,0.5nm,0.7s,baz=261,slow=6.9,SNR=4.5										
FINES	**FINESS Array B**	**103.40**	**333**		P	**Pdif**	**16 11 56.0**	**-0.8**			
FINES	**FINESS Array B**	**103.40**	**333**		Pdiff	**Pdif**	**16 11 56.0**	**-0.8**			
	comp=Z,0.7nm,0.6s,baz=74,slow=7.8,SNR=3.0										
BRTR	**Keskin Array B**	**104.12**	**310**		Pdiff	**Pdif**	**16 11 58.6**	**-2.1**			
	comp=Z,0.3nm,0.5s,baz=107,slow=1.3,SNR=3.7										
AKASG	**Malin Array Be**	**104.95**	**322**		Pdiff	**Pdif**	**16 12 02.5**	**-1.4**			
	comp=Z,0.1nm,0.3s,baz=194,slow=26,SNR=4.4										
PDAR	**Pinedale Array**	**106.59**	**46**		Pdiff	**Pdif**	**16 12 12.2**	**+0.4**			
	comp=Z,0.1nm,0.3s,baz=354,slow=4.1,SNR=2.3										
NOA	**NORSAR Array B**	**109.97**	**336**		Pdiff	**Pdif**	**16 12 25.8**	**-0.4**			
	comp=Z,0.7nm,0.8s,baz=46,slow=5.1,SNR=2.8										
LANS	**Liptovska Anna**	**111.41**	**323**	*e*	P	**Pdif**	**16 12 30.9**	**-2.0**			
LANS	**Liptovska Anna**	**111.41**	**323**	*e*	PDIFF	**Pdif**	**16 12 30.9**	**-2.0**			
VYHS	**Vyhne**	**112.05**	**322**	*i*	P	**Pdif**	**16 12 34.7**	**-1.0**			
VYHS	**Vyhne**	**112.05**	**322**	*e*	PDIFF	**Pdif**	**16 12 34.7**	**-1.0**			
TXAR	**Lajitas Array**	**114.05**	**59**		PKP	**PKiKP**	**16 16 41.1**	**+4.3**			
	comp=Z,0.1nm,0.6s,baz=222,slow=1.7,SNR=3.8										
GERES	**GERESS Array B**	**114.99**	**324**		PKP	PKPdf	16 16 38.1	+0.1			
	comp=Z,0.4nm,0.7s,baz=5.7,slow=3.0,SNR=2.7										
PLCA	**Paso Flores**	**128.79**	**150**		PKP	**PKiKP**	**16 17 05.7**	**+0.3**			
	comp=Z,2.6nm,0.9s,baz=157,slow=2.5,SNR=4.3										
TORD	**Torodi Ar. Bea**	**137.41**	**287**		PKP	**PKiKP**	**16 17 23.8**	**+0.4**			
	comp=Z,1.4nm,0.7s,baz=68,slow=2.6,SNR=4.4										
TORD					PP	**PP**	**16 20 08.6**	**+1.5**			
	comp=Z,0.7nm,0.9s,baz=61,slow=3.3,SNR=2.9										
PB11	**IPOC Station P**	**143.47**	**128**			PKPbc	16 17 30.4	+0.6			
MNMC	**Minye Minye**	**143.86**	**128**			PKPbc	16 17 32.1	+1.0			
GO01	**Chusmiza**	**143.88**	**129**			PKPbc	16 17 31.9	+0.5			
FLOC	**Florencia**	**144.36**	**91**			PKPbc	16 17 32.7	+0.2			
KIC	**Kosan Boka**	**144.64**	**278**	⇑	*i* PKP1	**PKPab**	**16 17 32.8**	**-0.4**			
	comp=Z,44nm,0.7s										
KIC	**Kosan Boka**	**144.64**	**278**			**PKPab**	**16 17 32.8**	**-0.4**			
DBIC	**Dimbokro**	**144.73**	**278**		PKP	**PKPab**	**16 17 33.2**	**-0.2**			
	comp=Z,28nm,0.8s,baz=75,slow=4.1,SNR=44										
DBIC	**Dimbokro**	**144.73**	**278**			**PKPab**	**16 17 33.0**	**-0.4**			
TIC	**Toumodi**	**144.89**	**278**	⇑	*i* PKP1	**PKPab**	**16 17 33.6**	**-0.5**			
	comp=Z,76nm,1.0s										
TIC	**Toumodi**	**144.89**	**278**		PKIKP	**PKPab**	**16 17 33.6**	**-0.5**			
TIC	**Toumodi**	**144.89**	**278**			**PKPab**	**16 17 33.6**	**-0.5**			
LIC	**Lamto**	**144.93**	**277**	⇑	*i* PKP1	**PKPab**	**16 17 33.6**	**-0.7**			
	comp=Z,76nm,0.9s										
LIC	**Lamto**	**144.93**	**277**			**PKPab**	**16 17 33.6**	**-0.7**			
SDDR	**Presa de Saban**	**145.25**	**60**			**PKPbc**	**16 17 34.0**	**-1.2**			
ROSC	**El Rosal**	**145.67**	**85**		PKPbc	**PKPab**	**16 17 38.0**	**+0.5**			
	comp=Z,9.3nm,0.5s,baz=53,slow=18,SNR=2.6										
LPAZ	**La Paz**	**146.55**	**125**		PKPbc	**PKPab**	**16 17 40.8**	**-0.1**			
	comp=Z,6.6nm,1.0s,baz=260,slow=2.0,SNR=13										
LPAZ	**La Paz**	**146.55**	**125**		PKPbc	**PKPbc**	**16 17 40.0**	**0.0**			
RUSC	**La Rusia**	**146.83**	**83**			**PKPdf**	**16 17 38.7**	**-0.3**			
CPUP	**Villa Florida**	**146.86**	**151**		PKPbc	**PKPbc**	**16 17 40.2**	**+0.4**			
	comp=Z,13nm,0.8s,baz=224,slow=3.1,SNR=34										
CPUP	**Villa Florida**	**146.86**	**151**			**PKPdf**	**16 17 38.9**	**+0.9**			
SDV	**Santo Domingo**	**148.87**	**77**			**PKPdf**	**16 17 42.6**	**+0.7**			
BDFB	**Brasilia**	**160.37**	**156**		PKPab	**PKPab**	**16 18 38.7**	**+0.6**			
	comp=Z,1.2nm,0.4s,baz=166,slow=7.3,SNR=3.0										

MAN 19 16:01:13.9, 6.42N×127.78E, h208km, mb4.4, ML3.2, MS3.0, Philippine Islands region

*NNC **19** 16:18:37.5±0.5, 42.90N×78.26E, h0km, mb2.9, mpv2.8, Error ellipse: s-maj=4.6km s-min=1.4km az=169.0*
*KRNET **19** 16:18:38.2±0.1, 42.91N×78.25E, h18km, mb2.6*
*SOME **19** 16:18:38.2, 42.88N×78.25E, h15km*
ISC 19 16:18:37.9±1.1, 42.89N±0.02×78.23E±0.02, h1km±10km, n67, σ1°21/129, 22C-9D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.21**	**38**		*e*P	**Pg**	**16 18 42.4**	**+0.4**
	65nm,0.1s							
SATY					*e*S	**Sg**	**16 18 45.3**	**+0.6**
	716nm,0.1s							
SATY	**Saty**	**0.21**	**38**		P	**Pg**	**16 18 42.3**	**+0.4**
	65nm,0.1s							
SATY					S	**Sg**	**16 18 45.3**	**+0.6**
	716nm,0.1s							
ZHN	**Zhinishke**	**0.31**	**29**		*e*P	**Pg**	**16 18 44.2**	**+0.2**
	baz=27							
ZHN					*e*S	**Sg**	**16 18 48.6**	**+0.5**
	baz=27							
ZHN	**Zhinishke**	**0.31**	**29**		*e*P	**Pg**	**16 18 44.1**	**+0.2**
	11nm,0.1s							
ZHN					*e*S	**Sg**	**16 18 48.5**	**+0.5**
	204nm,0.2s							
ZHN	**Zhinishke**	**0.31**	**29**		P	**Pg**	**16 18 44.2**	**+0.2**
	11nm,0.1s							
ZHN					S	**Sg**	**16 18 48.5**	**+0.5**
	204nm,0.2s							
PRZ	**Przheval'sk**	**0.43**	**163**	⇓	*i* P	**Pb**	**16 18 47.4**	**-1.0**
	baz=64							
PRZ				⇓	*i* S	**Sg**	**16 18 53.2**	**+1.6**
	baz=64							
ANVS	**Anan'yevo**	**0.43**	**255**	⇑	*i* P	**Pg**	**16 18 47.0**	**+0.9**
	baz=55							
ANVS				⇑	*i* S	**Sg**	**16 18 53.2**	**+1.5**
	baz=55							
KURS	**Kuram**	**0.60**	**356**		*e*P	**Pg**	**16 18 49.6**	**+0.3**
	8.7nm,0.1s							
KURS					*e*S	**Sg**	**16 18 57.8**	**+0.7**
	5.4nm,0.2s							
UZB	**Uzynbulak**	**0.63**	**66**		*e*P	**Pg**	**16 18 49.6**	**-0.5**
	baz=67							
UZB					*e*S	**Sg**	**16 18 57.8**	**-0.5**
	baz=67							
UZB	**Uzynbulak**	**0.63**	**66**		*e*P	**Pg**	**16 18 49.6**	**-0.5**
	12nm,0.1s							
UZB					*e*S	**Sg**	**16 18 57.6**	**-0.7**
	24nm,0.1s							
UZB	**Uzynbulak**	**0.63**	**66**		P	**Pg**	**16 18 49.6**	**-0.5**
	12nm,0.1s							
UZB					S	**Sg**	**16 18 57.8**	**-0.5**
	24nm,0.1s							
KPKS	**Kokpek**	**0.66**	**30**		*e*P	**Pg**	**16 18 50.1**	**-0.5**
	baz=30							
KPKS					*e*S	**Sg**	**16 18 58.9**	**-0.4**
	baz=30							
KPKS	**Kokpek**	**0.66**	**30**		*e*P	**Pg**	**16 18 50.1**	**-0.5**
	3.3nm,0.1s							
KPKS					*e*S	**Sg**	**16 18 58.8**	**-0.4**
	36nm,0.3s							
KOTS	**Kotyrbulak**	**0.89**	**293**		*e*P	**Pb**	**16 18 55.2**	**-1.0**
	baz=92							
KOTS					*e*S	**Sb**	**16 19 07.4**	**-1.3**
	baz=92							
KOTS	**Kotyrbulak**	**0.89**	**293**		*e*P	**Pb**	**16 18 55.2**	**-1.0**
	4.4nm,0.1s							
KOTS					*e*S	**Sb**	**16 19 07.5**	**-1.3**
	13nm,0.3s							
KOTS	**Kotyrbulak**	**0.89**	**293**		P	**Pb**	**16 18 55.2**	**-1.0**
	4.4nm,0.1s							
KOTS					S	**Sb**	**16 19 07.5**	**-1.3**
	13nm,0.3s							
MDOK	**Medeo**	**0.91**	**288**		*e*P	**Pb**	**16 18 55.2**	**-1.4**
	baz=87							
MDOK					*e*S	**Sb**	**16 19 07.4**	**-1.8**
	baz=87							
MDOK	**Medeo**	**0.91**	**288**		*e*P	**Pb**	**16 18 55.2**	**-1.4**
	0.7nm,0.1s							
MDOK					*e*S	**Sb**	**16 19 07.4**	**-1.8**
	4.8nm,0.2s							
MDOK	**Medeo**	**0.91**	**288**		P	**Pg**	**16 18 56.4**	**+1.1**
MDOK					S	**Sb**	**16 19 08.0**	**-1.3**
	3.1nm,0.4s							
MDOK	**Medeo**	**0.91**	**288**		Pg	**Pb**	**16 18 55.2**	**-1.4**
	0.7nm,0.1s							
MDOK					Lg	Lg	16 19 07.4	
	4.8nm,0.2s							
SHLS	**Shalkode**	**0.94**	**73**		*e*P	**Pn**	**16 19 00.7**	**+2.3**
	2.0nm,0.1s							
SHLS					*e*S	**Sn**	**16 19 16.4**	**+3.8**
	6.4nm,0.2s							
TNSS	**Tian-Shan**	**0.95**	**279**		*e*P	**Pb**	**16 18 56.3**	**-1.2**
	baz=78							
TNSS					*e*S	**Sb**	**16 19 09.5**	**-1.3**
	baz=78							
TNSS	**Tian-Shan**	**0.95**	**279**		*e*P	**Pb**	**16 18 56.3**	**-1.2**
	1.5nm,0.1s							
TNSS					*e*S	**Sb**	**16 19 09.5**	**-1.3**
	5.7nm,0.3s							
TNSS	**Tian-Shan**	**0.95**	**279**		P	**Pb**	**16 18 56.3**	**-1.2**
	1.5nm,0.1s							
TNSS					S	**Sb**	**16 19 09.5**	**-1.3**
	5.7nm,0.3s							
PDGK	**Podgornoye**	**1.02**	**64**	⇓	P	**Pb**	**16 18 56.2**	**-2.3**
	1.3nm,0.4s							
PDGK				⇑	S	**Sb**	**16 19 09.6**	**-2.9**
	3.4nm,0.5s							
KDJ	**Kajisay**	**1.09**	**226**	⇓	*i* P	**Pb**	**16 18 58.9**	**-0.8**
	baz=26							
KDJ				⇓	*i* S	**Sb**	**16 19 13.2**	**-1.3**
	baz=26							
IZV	**Izvestkoviy**	**1.20**	**277**		*e*P	**Pb**	**16 19 00.9**	**-0.6**
	baz=77							
IZV					*e*S	**Sn**	**16 19 17.2**	**-1.8**
	baz=77							
IZV	**Izvestkoviy**	**1.20**	**277**		*e*P	**Pb**	**16 19 00.9**	**-0.6**
	1.8nm,0.1s							
IZV					*e*S	**Sn**	**16 19 17.2**	**-1.8**
	11nm,0.2s							
IZV	**Izvestkoviy**	**1.20**	**277**		P	**Pb**	**16 19 00.9**	**-0.6**
	1.8nm,0.1s							
IZV					S	**Sn**	**16 19 17.2**	**-1.8**
	11nm,0.2s							
CHKK	**Chushkaly**	**1.32**	**317**		*e*P	**Pb**	**16 19 02.9**	**-0.7**
	baz=17							
CHKK					*e*S	**Sg**	**16 19 20.5**	**+0.1**
	baz=17							
CHKK	**Chushkaly**	**1.32**	**317**		*e*P	**Pb**	**16 19 02.9**	**-0.7**
	1.5nm,0.1s							
CHKK					*e*S	**Sg**	**16 19 20.5**	**+0.1**
	21nm,0.3s							
CHKK	**Chushkaly**	**1.32**	**317**		P	**Pb**	**16 19 02.9**	**-0.7**
	1.5nm,0.1s							
CHKK					S	**Sg**	**16 19 20.5**	**+0.1**
	21nm,0.3s							
MTBS	**Maitube**	**1.34**	**281**		*e*P	**Pb**	**16 19 03.4**	**-0.6**
	baz=80							
MTBS					*e*S	**Sg**	**16 19 21.4**	**+0.3**
	baz=80							
MTBS	**Maitube**	**1.34**	**281**		*e*P	**Pb**	**16 19 03.4**	**-0.6**
	2.4nm,0.1s							
MTBS					*e*S	**Sg**	**16 19 21.3**	**+0.3**
	7.3nm,0.4s							
MTBS	**Maitube**	**1.34**	**281**		P	**Pb**	**16 19 03.3**	**-0.6**
	2.4nm,0.1s							
MTBS					S	**Sg**	**16 19 21.3**	**+0.3**
	7.3nm,0.4s							
ARXS	**Arharly**	**1.35**	**348**		*e*P	**Pb**	**16 19 03.2**	**-0.9**
	3.8nm,0.3s							
ARXS					*e*S	**Sb**	**16 19 21.1**	**-0.9**
	14nm,0.3s							
ARXS	**Arharly**	**1.35**	**348**		P	**Pb**	**16 19 03.2**	**-0.9**
	3.8nm,0.3s							
ARXS					S	**Sb**	**16 19 21.1**	**-0.9**
	14nm,0.3s							
KTBS	**Karatobe**	**1.40**	**306**		*e*P	**Pb**	**16 19 04.2**	**-0.6**
	1.6nm,0.1s							
KTBS					*e*S	**Sg**	**16 19 22.9**	**+0.1**
	16nm,0.3s							
KTBS	**Karatobe**	**1.40**	**306**		P	**Pb**	**16 19 04.2**	**-0.6**
	1.6nm,0.1s							
KTBS					S	**Sg**	**16 19 22.9**	**+0.1**
	16nm,0.3s							
ULHL	**Ulahol**	**1.60**	**247**	⇑	*i* P	**Pb**	**16 19 08.0**	**-0.5**
	baz=47							
ULHL				⇑	*i* S	**Sb**	**16 19 29.1**	**-0.3**
	baz=47							
KST	**Kastek**	**1.67**	**276**		*e*P	**Pb**	**16 19 09.3**	**-0.3**
	baz=75							
KST					*e*S	**Sg**	**16 19 31.8**	**+0.2**
	baz=75							
KST	**Kastek**	**1.67**	**276**		*e*P	**Pb**	**16 19 09.3**	**-0.3**
	1.7nm,0.2s							
KST					*e*S	**Sg**	**16 19 31.8**	**+0.2**
	3.5nm,0.3s							
KST	**Kastek**	**1.67**	**276**		P	**Pb**	**16 19 09.3**	**-0.3**
	1.7nm,0.2s							
KST					S	**Sg**	**16 19 31.8**	**+0.2**
	3.5nm,0.3s							
KUU	**Kurty**	**1.70**	**307**		*e*P	**Pb**	**16 19 09.6**	**-0.5**
	baz=6.0							
KUU					*e*S	**Sg**	**16 19 32.1**	**-0.5**
	baz=6.0							
KUU	**Kurty**	**1.70**	**307**		*e*P	**Pb**	**16 19 09.6**	**-0.5**
	1.3nm,0.1s							
KUU					*e*S	**Sg**	**16 19 32.1**	**-0.5**
	19nm,0.2s							
KUU	**Kurty**	**1.70**	**307**		P	**Pb**	**16 19 09.6**	**-0.5**
	1.3nm,0.1s							
KUU					S	**Sg**	**16 19 32.1**	**-0.5**
	19nm,0.2s							
DJR	**Jarkent**	**1.83**	**38**		*e*P	**Pb**	**16 19 11.5**	**-0.8**
	0.8nm,0.2s							
DJR					*e*S	**Sb**	**16 19 35.3**	**-0.5**
	13nm,0.4s							
DJR	**Jarkent**	**1.83**	**38**		P	**Pb**	**16 19 11.5**	**-0.8**
	0.8nm,0.2s							
DJR					S	**Sb**	**16 19 35.3**	**-0.5**
	13nm,0.4s							
DGS	**Degeres**	**1.83**	**282**		*e*P	**Pb**	**16 19 12.3**	**-0.1**
	baz=81							
DGS					*e*S	**Sg**	**16 19 36.7**	**-0.2**
	baz=81							
DGS	**Degeres**	**1.83**	**282**		*e*P	**Pb**	**16 19 12.3**	**-0.1**
	2.4nm,0.3s							
DGS					*e*S	**Sg**	**16 19 36.7**	**-0.2**
	10nm,0.5s							
DGS	**Degeres**	**1.83**	**282**		P	**Pb**	**16 19 12.3**	**-0.1**
	2.4nm,0.3s							
DGS					S	**Sg**	**16 19 36.7**	**-0.2**
	10nm,0.5s							
TKM2	**Tokmak 2**	**1.94**	**272**	⇑	*i* P	**Pb**	**16 19 13.6**	**-0.5**
	baz=71							
TKM2				⇑	*i* S	**Sb**	**16 19 38.6**	**-0.3**
	baz=71							
TKM2	**Tokmak 2**	**1.94**	**272**	⇓	P	**Pb**	**16 19 12.9**	**-1.3**
	0.8nm,0.3s							
TKM2				⇑	S	**Sb**	**16 19 39.3**	**+0.4**
	5.7nm,0.6s							
KRBS	**Karabastau**	**2.03**	**294**		*e*P	**Pb**	**16 19 15.2**	**-0.5**
	1.1nm,0.2s							
KRBS					*e*S	**Sb**	**16 19 42.1**	**+0.6**
	4.0nm,0.3s							
KRBS	**Karabastau**	**2.03**	**294**		Pg	**Pb**	**16 19 15.2**	**-0.5**
	1.1nm,0.2s							
KRBS					Lg	Lg	16 19 42.1	
	4.0nm,0.3s							
NRN	**Naryn**	**2.21**	**229**	⇑	*i* P	**Pb**	**16 19 17.4**	**-1.5**
	baz=30							
NRN				⇑	*i* S	**Sb**	**16 19 45.5**	**-1.3**
	baz=30							
KZA	**Kyzart**	**2.35**	**251**	⇑	*i* P	**Pb**	**16 19 19.4**	**-1.9**
	baz=51							
KZA				⇑	*i* S	**Sb**	**16 19 48.7**	**-2.3**
	baz=51							
KBK	**Karagaybulak**	**2.43**	**266**	⇑	*i* P	**Pb**	**16 19 20.6**	**-1.9**
	baz=65							
KBK				⇑	*i* S	**Sb**	**16 19 50.5**	**-2.5**
	baz=65							
KAPS	**Kapalarasan**	**2.53**	**18**		*e*P	**Pb**	**16 19 23.3**	**-0.8**
	2.1nm,0.4s							
KAPS					*e*S	**Sb**	**16 19 56.1**	**+0.3**
	5.8nm,0.2s							
KAPS	**Kapalarasan**	**2.53**	**18**		Pg	**Pb**	**16 19 23.3**	**-0.8**
	2.1nm,0.4s							
KAPS					Lg	Lg	16 19 56.1	
	5.8nm,0.2s							
SGDS	**Sogindy**	**2.69**	**283**		Pg	**Pb**	**16 19 26.8**	**-0.1**
	1.6nm,0.5s							
SGDS					Lg	Lg	16 20 01.6	
	1.9nm,0.3s							
USP	**Ospenovka**	**2.76**	**279**	⇑	*i* P	**Pb**	**16 19 25.0**	**-3.1**
	baz=79							
USP				⇑	*i* S	**Sb**	**16 19 58.6**	**-3.8**
	baz=79							
AAK	**Ala-Archa**	**2.76**	**266**	⇑	*i* P	**Pb**	**16 19 25.0**	**-3.2**
	baz=66							
AAK				⇑	*i* S	**Sn**	**16 19 58.6**	**+1.0**
	baz=66							
AAK	**Ala-Archa**	**2.76**	**266**		Pg	**Pb**	**16 19 29.5**	**+1.3**
	0.5nm,0.3s							
AAK				⇓	Lg	Lg	16 20 07.0	
	2.1nm,0.6s							
UCH	**Uchtor**	**2.83**	**258**	⇑	*i* P	**Pb**	**16 19 26.4**	**-3.1**
	baz=57							
UCH				⇑	*i* S	**Sn**	**16 20 00.6**	**+1.0**
	baz=57							
EKS2	**Erkin-Say**	**3.29**	**267**	⇑	*i* P	**Pn**	**16 19 32.6**	**+1.9**
	baz=67							
EKS2				⇑	*i* S	**Sn**	**16 20 11.4**	**+0.9**
	baz=67							
AML	**Almayashu**	**3.44**	**259**	⇓	*i* P	**Pn**	**16 19 34.9**	**+1.9**
	baz=59							
AML				⇓	*i* S	**Sn**	**16 20 15.2**	**+0.6**
	baz=59							

*KRNET **19** 16:31:33.8±0.1, 40.85N×74.19E, h18km, mb3.4*
*NNC **19** 16:31:34.9±0.6, 40.84N×74.21E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=4.7km s-min=2.7km az=170.0*
*SOME **19** 16:31:34.3, 40.88N×74.22E, h5km*
ISC 19 16:31:33.6±1.3, 40.86N±0.04×74.21E±0.02, h3km±12km, n85, σ1°54/128, 36C-10D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.04**	**297**	⇑	*i* P	**Pg**	**16 31 53.3**	**-0.2**
	baz=98							
ARSB				⇑	*i* S	**Sb**	**16 32 07.9**	**-0.5**
	baz=98							
AML	**Almayashu**	**1.32**	**343**	⇑	*i* P	**Pn**	**16 31 59.1**	**-0.3**
	baz=44							
AML				⇑	*i* S	**Sn**	**16 32 17.5**	**-0.3**
	baz=44							
AML	**Almayashu**	**1.32**	**343**		P	**Pb**	**16 31 59.3**	**0.0**
	SNR=36	

TKM2	**Tokmak 2**	**2.30**	**26**	P	**Pg**	**16 32 17.4**	**-0.2**
	SNR=12							
TKM2	**Tokmak 2**	**2.30**	**26**	⇓Pn	**Pb**	**16 32 15.6**	**-0.3**
	3.2nm,0.3s							
TKM2				⇑Sn	**Sg**	**16 32 46.6**	**-0.9**
	22nm,0.7s							
USP	**Ospenovka**	**2.41**	**5**	⇑*iP*	**Pb**	**16 32 16.4**	**-1.2**
	baz=5.0							
USP				⇑*iS*	**Sb**	**16 32 48.1**	**+0.3**
	baz=5.0							
USP	**Ospenovka**	**2.41**	**5**	P	**Pb**	**16 32 18.6**	**+1.0**
	SNR=34							
KST	**Kastek**	**2.54**	**30**	*eP*	**Pg**	**16 32 21.7**	**-0.5**
	23nm,0.4s							
KST				*eS*	**Sg**	**16 32 55.8**	**+0.6**
	33nm,0.4s							
KST	**Kastek**	**2.54**	**30**	Pg	**Pg**	**16 32 21.7**	**-0.5**
	23nm,0.4s							
KST				Lg	Lg	16 32 55.8		
	33nm,0.4s							
KDJ	**Kajisay**	**2.56**	**59**	⇑*iP*	**Pb**	**16 32 19.1**	**-1.2**
	baz=59							
KDJ				⇑*iS*	**Sb**	**16 32 52.1**	**-0.2**
	baz=59							
SGDS	**Sogindy**	**2.60**	**7**	Pg	**Pg**	**16 32 22.9**	**-0.6**
	15nm,0.3s							
SGDS				Lg	Lg	16 32 57.4		
	18nm,0.4s							
DGS	**Degeres**	**2.65**	**26**	*eP*	**Pg**	**16 32 23.8**	**-0.4**
	22nm,0.4s							
DGS				*eS*	**Sg**	**16 32 59.5**	**+1.0**
	32nm,0.7s							
DGS	**Degeres**	**2.65**	**26**	Pg	**Pg**	**16 32 23.8**	**-0.4**
	22nm,0.4s							
DGS				Lg	Lg	16 32 59.5		
	32nm,0.7s							
BTK	**Batken**	**2.71**	**254**	⇑*iP*	**Pn**	**16 32 20.4**	**+2.2**
	baz=54							
BTK				⇑*iS*	**Sb**	**16 32 54.3**	**-2.2**
	baz=54							
MTBS	**Maitube**	**2.80**	**35**	*eP*	**Pg**	**16 32 26.8**	**-0.5**
	9.2nm,0.2s							
MTBS				*eS*	**Sg**	**16 33 04.6**	**+1.0**
	46nm,0.4s							
MTBS	**Maitube**	**2.80**	**35**	Pg	**Pg**	**16 32 26.8**	**-0.5**
	9.2nm,0.2s							
MTBS				Lg	Lg	16 33 04.6		
	46nm,0.4s							
IZV	**Izvestkoviy**	**2.81**	**39**	*eP*	**Pg**	**16 32 26.6**	**-0.9**
	16nm,0.4s							
IZV				*eS*	**Sg**	**16 33 04.2**	**+0.3**
	44nm,0.4s							
IZV	**Izvestkoviy**	**2.81**	**39**	Pg	**Pg**	**16 32 26.6**	**-0.9**
	16nm,0.4s							
IZV				Lg	Lg	16 33 04.2		
	44nm,0.4s							
TNSS	**Tian-Shan**	**2.98**	**42**	*eP*	**Pg**	**16 32 30.4**	**-0.3**
	20nm,0.3s							
TNSS				*eS*	**Sg**	**16 33 10.4**	**+1.2**
	52nm,0.3s							
TNSS	**Tian-Shan**	**2.98**	**42**	Pg	**Pg**	**16 32 30.4**	**-0.3**
	20nm,0.3s							
TNSS				Lg	Lg	16 33 10.4		
	52nm,0.3s							
KRBS	**Karabastau**	**3.03**	**20**	Pg	**Pg**	**16 32 30.5**	**-1.1**
	12nm,0.4s							
KRBS				Lg	Lg	16 33 10.9		
	5.2nm,0.3s							
AAA	**Alma-Ata**	**3.09**	**40**	*eP*	**Pg**	**16 32 32.2**	**-0.5**
	14nm,0.1s							
AAA				*eS*	**Sg**	**16 33 13.9**	**+1.2**
	43nm,0.2s							
AAA	**Alma-Ata**	**3.09**	**40**	Pg	**Pg**	**16 32 32.2**	**-0.5**
	14nm,0.1s							
AAA				Lg	Lg	16 33 13.9		
	43nm,0.2s							
KNDC	**Almaty**	**3.12**	**40**	⇑Pg	**Pg**	**16 32 32.5**	**-0.9**
	12nm,0.5s							
KNDC				⇑Lg	Lg	16 33 15.8		
	53nm,0.3s							
MDOK	**Medeo**	**3.12**	**42**	*eP*	**Pg**	**16 32 32.2**	**-1.1**
	7.2nm,0.5s							
MDOK				*eS*	**Sg**	**16 33 14.2**	**+0.4**
	46nm,0.4s							
MDOK	**Medeo**	**3.12**	**42**	⇓Pg	**Pg**	**16 32 31.8**	**-1.5**
	5.4nm,0.6s							
MDOK				⇓Lg	Lg	16 33 14.8		
	32nm,0.5s							
MDOK	**Medeo**	**3.12**	**42**	Pg	**Pg**	**16 32 32.3**	**-1.1**
	7.2nm,0.5s							
MDOK				Lg	Lg	16 33 14.2		
	46nm,0.4s							
JBG	**Jabagly**	**3.16**	**301**	Pg	**Pg**	**16 32 32.9**	**-1.2**
	9.9nm,0.3s							
JBG				Lg	Lg	16 33 15.1		
	41nm,0.5s							
KOTS	**Kotyrbulak**	**3.21**	**41**	*eP*	**Pg**	**16 32 34.1**	**-0.8**
	15nm,0.3s							
KOTS				*eS*	**Sg**	**16 33 17.2**	**+0.7**
	257nm,0.5s							
KOTS	**Kotyrbulak**	**3.21**	**41**	Pg	**Pg**	**16 32 34.1**	**-0.8**
	15nm,0.3s							
KOTS				Lg	Lg	16 33 17.2		
	257nm,0.5s							
ANVS	**Anan'yevo**	**3.21**	**52**	⇑*iP*	**Pn**	**16 32 27.8**	**+2.6**
	baz=52							
ANVS				⇑*iS*	**Sb**	**16 33 07.6**	**-3.5**
	baz=52							
KTBS	**Karatobe**	**3.38**	**32**	*eP*	**Pg**	**16 32 36.8**	**-1.6**
	6.5nm,0.3s							
KTBS				*eS*	**Sg**	**16 33 21.6**	**-0.7**
	51nm,0.5s							
KTBS	**Karatobe**	**3.38**	**32**	Pg	**Pg**	**16 32 36.8**	**-1.6**
	6.5nm,0.3s							
KTBS				Lg	Lg	16 33 21.6		
	51nm,0.5s							
IUG	**Iuzhnay**	**3.39**	**294**	*eP*	**Pb**	**16 32 36.6**	**+2.2**
	2.4nm,0.2s							
IUG				*eS*	**Sg**	**16 33 21.1**	**-1.4**
	47nm,0.6s							
IUG	**Iuzhnay**	**3.39**	**294**	Pg	**Pb**	**16 32 36.6**	**+2.2**
	2.4nm,0.2s							
IUG				Lg	Lg	16 33 21.1		
	47nm,0.6s							
KUU	**Kurty**	**3.41**	**27**	*eP*	**Pb**	**16 32 36.8**	**+2.2**
	4.4nm,0.4s							
KUU				*eS*	**Sg**	**16 33 21.4**	**-1.8**
	32nm,0.5s							
KUU	**Kurty**	**3.41**	**27**	Pg	**Pb**	**16 32 36.8**	**+2.2**
	4.4nm,0.4s							
KUU				Lg	Lg	16 33 21.4		
	32nm,0.5s							
KK31	**Karatay Array**	**3.55**	**310**	⇑Pn	**Pn**	**16 32 30.9**	**+1.2**
	0.2nm,0.3s,baz=127,slow=12,SNR=29							
KK31				Pg	**Pb**	**16 32 39.1**	**+2.0**
	1.3nm,0.3s,baz=130,slow=14,SNR=28							
KK31				⇑Lg	Lg	16 33 27.4		
	22nm,0.7s							
CHKK	**Chushkaly**	**3.63**	**34**	*eP*	**Pg**	**16 32 41.3**	**-1.7**
	4.0nm,0.2s							
CHKK				*eS*	**Sg**	**16 33 29.6**	**-0.5**
	23nm,0.3s							
CHKK	**Chushkaly**	**3.63**	**34**	Pg	**Pg**	**16 32 41.3**	**-1.7**
	4.0nm,0.2s							
CHKK				Lg	Lg	16 33 29.6		
	23nm,0.3s							
SATY	**Saty**	**3.82**	**54**	*eP*	**Pg**	**16 32 44.7**	**-2.1**
	9.5nm,0.6s							
SATY				*eS*	**Sg**	**16 33 34.9**	**-1.3**
	42nm,0.5s							
SATY	**Saty**	**3.82**	**54**	Pg	**Pg**	**16 32 44.7**	**-2.1**
	9.5nm,0.6s							
SATY				Lg	Lg	16 33 34.9		
	42nm,0.5s							
ZHN	**Zhinishke**	**3.90**	**52**	*eP*	**Pg**	**16 32 46.0**	**-2.2**
	2.4nm,0.2s							
ZHN				*eS*	**Sg**	**16 33 37.6**	**-1.2**
	9.2nm,0.3s							
ZHN	**Zhinishke**	**3.90**	**52**	Pg	**Pg**	**16 32 46.0**	**-2.2**
	2.4nm,0.2s							
ZHN				Lg	Lg	16 33 37.6		
	9.2nm,0.3s							
KURS	**Kuram**	**3.94**	**47**	*eP*	**Pg**	**16 32 46.9**	**-2.2**
	4.1nm,0.7s							
KURS				*eS*	**Sg**	**16 33 38.8**	**-1.3**
	9.5nm,0.8s							
KURS	**Kuram**	**3.94**	**47**	Pg	**Pg**	**16 32 46.9**	**-2.2**
	4.1nm,0.7s							
KURS				Lg	Lg	16 33 38.8		
	9.5nm,0.8s							
BTLS	**Baital**	**4.18**	**358**	*eP*	**Pg**	**16 32 51.6**	**-1.9**
	0.8nm,0.1s							
BTLS				*eS*	**Sg**	**16 33 47.2**	**-0.5**
	3.7nm,0.4s							
BTLS	**Baital**	**4.18**	**358**	Pg	**Pg**	**16 32 51.6**	**-1.9**
	0.8nm,0.1s							
BTLS				Lg	Lg	16 33 47.2		
	3.7nm,0.4s							
KPKS	**Kokpek**	**4.22**	**50**	*eP*	**Pb**	**16 32 51.6**	**+3.1**
	6.6nm,0.3s							
KPKS				*eS*	**Sg**	**16 33 47.0**	**-2.0**
	53nm,0.4s							
UZB	**Uzynbulak**	**4.25**	**56**	*eP*	**Pb**	**16 32 51.8**	**+2.8**
	1.8nm,0.2s							
UZB				*eS*	**Sg**	**16 33 47.1**	**-2.9**
	17nm,0.3s							
UZB	**Uzynbulak**	**4.25**	**56**	Pg	**Pb**	**16 32 51.8**	**+2.8**
	1.8nm,0.2s							
UZB				Lg	Lg	16 33 47.1		
	17nm,0.3s							
ARXS	**Arharly**	**4.28**	**37**	*eP*	**Pg**	**16 32 53.2**	**-2.4**
	6.1nm,0.6s							
ARXS				*eS*	**Sg**	**16 33 49.7**	**-1.3**
	19nm,0.5s							
ARXS	**Arharly**	**4.28**	**37**	Pg	**Pg**	**16 32 53.2**	**-2.4**
	6.1nm,0.6s							
ARXS				Lg	Lg	16 33 49.7		
	19nm,0.5s							
MNBS	**Baschi**	**4.46**	**43**	*eP*	**Pg**	**16 32 56.7**	**-2.3**
	3.1nm,0.2s							
MNBS				*eS*	**Sg**	**16 33 56.1**	**-0.7**
	35nm,0.5s							
MNBS	**Baschi**	**4.46**	**43**	Pg	**Pg**	**16 32 56.7**	**-2.3**
	3.1nm,0.2s							
MNBS				Lg	Lg	16 33 56.1		
	35nm,0.5s							
SHLS	**Shalkode**	**4.53**	**58**	*eP*	**Pg**	**16 33 01.9**	**+1.5**
	3.4nm,0.2s							
SHLS				*eS*	**Sg**	**16 34 04.8**	**+5.7**
	29nm,0.6s							
SHLS	**Shalkode**	**4.53**	**58**	Pg	**Pg**	**16 33 01.9**	**+1.5**
	3.4nm,0.2s							
SHLS				Lg	Lg	16 34 04.8		
	29nm,0.6s							
PDGK	**Podgornoye**	**4.63**	**56**	Pg	**Pg**	**16 33 00.2**	**-2.2**
	0.9nm,0.4s							
PDGK				Lg	Lg	16 34 01.8		
	8.4nm,0.7s							
PDGK	**Podgornoye**	**4.63**	**56**	⇑Pg	**Pg**	**16 33 00.5**	**-1.9**
	2.1nm,0.4s							
PDGK				⇑Lg	Lg	16 34 02.2		
	16nm,0.6s							
TDK	**Taldyqorghan**	**5.16**	**35**	Pg	**Pg**	**16 33 09.8**	**-2.5**
	3.9nm,0.1s							
TDK				Lg	Lg	16 34 18.2		
	16nm,0.2s							
DJR	**Jarkent**	**5.38**	**48**	Pg	**Pg**	**16 33 13.3**	**-3.3**
	0.5nm,0.1s							
DJR				Lg	Lg	16 34 24.3		
	9.8nm,0.5s							
KAPS	**Kapalarasan**	**5.81**	**39**	Pg	**Pg**	**16 33 21.1**	**-3.6**
	1.5nm,0.4s							
AB31	**Akbulak array**	**13.10**	**315**	⇓Pn	**Pn**	**16 34 39.9**	**-0.6**
	0.8nm,0.8s,baz=114,slow=13,SNR=5.1							

IDC 19 16:32:20.1±5.2, 28°49N×142°05E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/36, mbtmp3.6/6, ML2.8/1, Error ellipse: s-maj=210.4km s-min=22.6km az=74.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.39**	**175**	Sn	Sn	16 33 07.5	+1.6
	26nm,0.3s,baz=285,slow=20,SNR=2.1						
MJAR	**Matsushiro Arr**	**8.66**	**339**	Pn	Pn	16 34 26.5	-0.3
	0.1nm,0.3s,baz=146,slow=11,SNR=8.1						
SONM	**Songino Array**	**33.64**	**315**	P	P	16 39 02.2	-0.4
	0.3nm,0.7s,baz=69,slow=7.9,SNR=2.5						
ZALV	**Zalesovo Beam**	**48.37**	**318**	P	P	16 41 03.5	-0.1
	0.4nm,0.4s,baz=86,slow=8.8,SNR=3.7						
WRA	**Warramunga Arr**	**48.72**	**190**	P	P	16 41 06.5	-0.1
	1.5nm,0.7s,baz=12,slow=8.3,SNR=7.0						
MKAR	**Makanchi Array**	**49.51**	**309**	P	P	16 41 12.6	+0.1
	0.4nm,0.6s,baz=90,slow=9.7,SNR=4.8						
ASAR	**Alice Springs**	**52.44**	**189**	P	P	16 41 34.5	-0.2
	0.2nm,0.5s,baz=8.5,slow=6.6,SNR=1.9						

*IDC **19** 16:41:18.9±3.1, 7°68S×127°33E, h148km±35km, mb3.3/2, mb1 3.7/5, mb1mx3.3/30, mbtmp4.1/5, Error ellipse: s-maj=51.1km s-min=20.5km az=86.0*
*NEIC **19** 16:41:20.8±0.7, 7°53S±0°10×127°62E±0°09, h173km±12km, mb4.5/7, Error ellipse: s-maj=15.2km s-min=11.6km az=153.0*

ISC 19 16:41:19.4±0.8, 7°72S±0°06×127°66E±0°09, h162km, n22, σ2§19/25, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**3.62**	**94**	Pn	**Pn**	**16 42 17.8**	**+2.8**
SOEI	**Soe**	**3.92**	**239**	Pn	**Pn**	**16 42 21.5**	**+2.5**
MTN	**Manton Dam**	**6.13**	**146**		**Pn**	**16 42 49.5**	**+1.5**
FAKI	**Fak Fak**	**6.61**	**44**	Pn	**Pn**	**16 42 53.1**	**-1.2**
SIJI	**Sorong**	**7.70**	**28**	P	**Pn**	**16 43 09.9**	**+1.1**
	4.0nm,0.3s,baz=216,slow=14,SNR=25						
SIJI				S	**Sn**	**16 44 32.4**	**-2.6**
	0.3nm,0.3s,baz=253,slow=19,SNR=1.7						
KNRA	**Kununurra**	**7.98**	**172**		**Pn**	**16 43 13.3**	**+0.8**
FITZ	**Fitzroy Crossi**	**10.50**	**191**	P	**Pn**	**16 43 45.1**	**-0.7**
	1.3nm,0.3s,baz=3.5,slow=11,SNR=16						
FITZ				S	**Sn**	**16 45 38.0**	**-4.2**
	1.4nm,0.3s,baz=83,slow=6.1,SNR=5.2						
WRAB	**Tennant Creek**	**13.76**	**153**	Pn	**Pn**	**16 44 27.5**	**-0.4**
WRA	**Warramunga Arr**	**13.77**	**153**	P	**Pn**	**16 44 27.0**	**-1.0**
	2.0nm,0.3s,baz=326,slow=13,SNR=38						
WRA				S	Sn	16 46 50.2	-11
	0.4nm,0.3s,baz=330,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**13.77**	**153**	Pn	**Pn**	**16 44 26.7**	**-1.3**
WR0	**Warramunga Arr**	**13.87**	**152**	Pn	**Pn**	**16 44 28.2**	**-1.0**
COEN	**Coen**	**16.44**	**113**	P	**Pn**	**16 45 03.1**	**+2.0**
COEN				IAmb	IAmb	16 45 19.8	
	comp=Z,29nm,1.6s						
AS31	**Alice Springs**	**16.95**	**160**	P	**Pn**	**16 45 08.9**	**+1.8**
AS31				IAmb	IAmb	16 45 12.0	
	comp=Z,3.8nm,0.4s						
ASAR	**Alice Springs**	**16.95**	**160**	P	**Pn**	**16 45 09.9**	**+2.8**
	comp=Z,1.6nm,0.3s,baz=341,slow=12,SNR=101						
ASAR				S	**Sn**	**16 48 10.1**	**-4.7**
	comp=Z,0.2nm,0.3s,baz=323,slow=15,SNR=2.6						
ASAR	**Alice Springs**	**16.95**	**160**	P	**Pn**	**16 45 09.1**	**+2.0**
PMG	**Port Moresby**	**19.35**	**96**	P	**Pn**	**16 45 37.6**	**+2.1**
PMG				IAmb	IAmb	16 46 19.9	
	comp=Z,30nm,1.3s						
BBOO	**Buckleboo**	**26.15**	**164**	P	**P**	**16 46 40.5**	**+1.9**
BBOO				IAmb	IAmb	16 47 01.9	
	comp=Z,26nm,1.2s						
STKA	**Stephens Creek**	**27.32**	**153**	P	**P**	**16 46 51.1**	**+2.1**
	comp=Z,1.3nm,0.6s,baz=328,slow=12,SNR=5.9						
MAJO	**Matsushiro**	**45.13**	**12**	P	**P**	**16 49 18.6**	**-1.1**
MJB9	**Matsu-Tunnel**	**45.13**	**12**	P	**P**	**16 49 18.6**	**-1.1**
MJB9				IAmb	IAmb	16 49 40.7	
	comp=Z,47nm,1.8s						
MKAR	**Makanchi Array**	**67.58**	**328**	P	**P**	**16 51 58.2**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=120,slow=5.2,SNR=2.2						
MKAR	**Makanchi Array**	**67.58**	**328**	P	**P**	**16 51 57.6**	**-0.8**

*RSNC **19** 16:41:47.8±0.9, 6°83N×73°15W, h145km±4km, ML2.6*
*FUNV **19** 16:41:47.5, 6°82N×73°06W, h164km, MW2.6*

ISC 19 16:41:45.5±1.3, 6°87N±0°03×73°12W±0°03, h158km±8km, n28, σ1§19/50, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.28**	**193**	*eP*	**Pn**	**16 42 07.3**	**0.0**
BARC				*eS*	**Sn**	**16 42 22.2**	**-1.7**
BARC				*i*		16 42 23.1	
	comp=Z,89nm,0.1s						
PAMC	**Pamplona, Colo**	**0.62**	**42**	⇑*iP*	**Pn**	**16 42 10.2**	**+1.2**
PAMC				*eS*	**Sn**	**16 42 27.0**	**0.0**
PAMC				*i*		16 42 29.0	
	comp=Z,81nm,0.4s						
BRRC	**Barranca, Sant**	**0.63**	**292**	*eP*	**Pn**	**16 42 09.1**	**+0.6**
BRRC				*eS*	**Sn**	**16 42 25.9**	**-0.1**
BRRC				*i*		16 42 30.5	
	comp=Z,97nm,0.1s						
RUSC	**La Rusia**	**0.97**	**178**	*eP*	**Pn**	**16 42 11.6**	**+0.2**
RUSC				*eS*	**Sn**	**16 42 30.0**	**-1.2**
RUSC				*i*		16 42 31.5	
	comp=Z,22nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.37**	**256**	*eP*	**Pn**	**16 42 14.0**	**-0.4**
PTBC				*eS*	**Sn**	**16 42 35.5**	**-1.1**
PTBC				*i*		16 42 41.3	
	comp=Z,42nm,0.1s						
OCAC	**Ocana**	**1.37**	**352**	*eP*	**Pn**	**16 42 15.4**	**+0.8**
OCAC				*eS*	**Sn**	**16 42 37.0**	**0.0**
OCAC				*i*		16 42 42.1	
	comp=Z,56nm,0.4s						
TAMC	**Tame, Arauca**	**1.39**	**108**	⇑*iP*	**Pn**	**16 42 15.7**	**+1.1**
TAMC				*i*		16 42 36.1	
	comp=Z,21nm,0.4s						
TAMC				*eS*	**Sn**	**16 42 37.2**	**+0.2**
SPBC	**San Pablo de B**	**1.54**	**218**	*eP*	**Pn**	**16 42 16.3**	**0.0**
SPBC				*eS*	**Sn**	**16 42 38.5**	**-1.3**
SPBC				*i*		16 42 47.3	
	comp=Z,57nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.83**	**290**	*eP*	**Pn**	**16 42 20.0**	**+0.8**
ZARC				*eS*	**Sn**	**16 42 45.7**	**+0.5**
ZARC				*i*		16 42 50.6	
	comp=Z,50nm,0.2s						
SMLC	**San Martn de**	**2.14**	**334**	*eP*	**Pn**	**16 42 23.6**	**+0.8**
SMLC				*eS*	**Sn**	**16 42 52.0**	**+0.5**
SMLC				*i*		16 42 54.5	
	comp=Z,74nm,0.4s						
NORC	**Norcasia**	**2.17**	**233**	*eP*	**Pn**	**16 42 23.4**	**+0.2**
NORC				*eS*	**Sn**	**16 42 51.1**	**-1.1**
NORC				*i*		16 42 53.9	
	comp=Z,41nm,0.2s						
CHIC	**Chingaza**	**2.31**	**195**	*eP*	**Pn**	**16 42 25.8**	**+0.6**
CHIC				*eS*	**Sn**	**16 42 55.0**	**-0.7**
CHIC				*i*		16 43 01.5	
	comp=Z,15nm,0.6s						
ROSC	**El Rosal**	**2.34**	**211**	*eP*	**Pn**	**16 42 27.8**	**+2.2**
ROSC				*eS*	**Sn**	**16 42 58.2**	**+1.7**
HELC	**Santa Helena**	**2.49**	**254**	*eP*	**Pn**	**16 42 28.1**	**+0.8**
HELC				*eS*	**Sn**	**16 42 59.6**	**+0.1**
HELC				*i*		16 43 05.8	
	comp=Z,26nm,0.3s						
UREC	**San Jos de Ur**	**2.55**	**290**	*eP*	**Pn**	**16 42 27.6**	**-0.1**
UREC				*eS*	**Sn**	**16 42 56.9**	**-3.3**
VIGV	**El Vigia**	**2.62**	**42**	*eP*	**Pn**	**16 42 29.8**	**+1.2**
VIGV				*eS*	**Sn**	**16 43 01.1**	**-0.7**
SOCV	**Socops**	**2.65**	**58**	*eP*	**Pn**	**16 42 29.9**	**+1.0**
SOCV				*eS*	**Sn**	**16 43 01.3**	**-1.1**
GUY2C	**Guyana, Caldas**	**2.77**	**234**	*eP*	**Pn**	**16 42 32.0**	**+1.2**
GUY2C				*eS*	**Sn**	**16 43 06.1**	**+0.3**
GUY2C				*i*		16 43 11.5	
	comp=Z,22nm,0.6s						
CODC	**Agustn Codazz**	**3.06**	**354**	*eP*	**Pn**	**16 42 35.3**	**+1.3**
CODC				*eS*	**Sn**	**16 43 13.9**	**+2.2**
CODC				*i*		16 43 21.8	
	comp=Z,6.3nm,0.4s						
SDV	**Santo Domingo**	**3.17**	**51**	*eP*	**Pn**	**16 42 36.7**	**+1.1**
SDV				*eS*	**Sn**	**16 43 12.6**	**-1.9**
ORTC	**Ortega, Tolima**	**3.62**	**216**	*eP*	**Pn**	**16 42 42.4**	**+1.2**
ORTC				*eS*	**Sn**	**16 43 24.4**	**-0.2**
ORTC				*i*		16 43 29.9	
	comp=Z,7.6nm,0.2s						
SJCC	**San Jacinto, C**	**3.63**	**326**	*eP*	**Pn**	**16 42 41.4**	**+0.1**
SJCC				*eS*	**Sn**	**16 43 21.6**	**-3.2**
CURV	**Curarigua**	**4.42**	**45**	*eP*	**Pn**	**16 42 52.1**	**+0.6**
DABV	**Dabajuro**	**4.71**	**31**	*eP*	**Pn**	**16 42 56.3**	**+0.9**
BAUV	**El Baul**	**5.43**	**67**	*eP*	**Pn**	**16 43 04.6**	**-0.2**
MAPV	**Macapo**	**5.47**	**57**	*eP*	**Pn**	**16 43 05.8**	**+0.4**
PAYV	**Puerto Ayacuch**	**5.62**	**105**	*eP*	**Pn**	**16 43 06.4**	**-0.9**
MONV	**Montecano**	**5.93**	**31**	*eP*	**Pn**	**16 43 11.2**	**-0.2**

*RSPR **19** 16:56:57.7, 19°18N×66°67W, h36km±5km, MD3.3/18*
*NEIC **19** 16:56:57.8±1.2, 19°07N±0°03×66°64W±0°04, h38km±48km, Error ellipse: s-maj=5.3km s-min=4.0km az=130.0*
*OSPL **19** 16:56:59.2±0.8, 18°88N×66°54W, h35km±34km, ML3.0*

ISC 19 16:56:57.5±1.3, 19°04N±0°06×66°64W±0°03, h28km, n59, σ0§73/73, 11C-7D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.57**	**170**	⇑*eP*	**Pn**	**16 57 10.1**	**+0.2**
EMPR	**Esperanza - Ma**	**0.57**	**170**	*eS*	**Sn**	**16 57 19.8**	**+1.4**
EMPR	**Esperanza - Ma**	**0.57**	**170**		**Pn**	**16 57 10.1**	**+0.2**
EMPR					**Sn**	**16 57 19.8**	**+1.4**
AOPR	**Arecibo Observ**	**0.70**	**189**	⇑*eP*	**Pn**	**16 57 11.6**	**-0.1**
AOPR	**Arecibo Observ**	**0.70**	**189**	*eS*	**Sn**	**16 57 22.9**	**+1.3**
AOPR	**Arecibo Observ**	**0.70**	**189**		**Pn**	**16 57 11.6**	**-0.1**
AOPR					**Sn**	**16 57 22.9**	**+1.3**
AGPR	**Aguadilla, PR**	**0.73**	**218**	⇓*eP*	**Pn**	**16 57 10.8**	**-0.9**
AGPR	**Aguadilla, PR**	**0.73**	**218**	*eS*	**Sn**	**16 57 21.9**	**-0.3**
AGPR	**Aguadilla, PR**	**0.73**	**218**	*i* P	**Pb**	**16 57 10.8**	**-0.9**
AGPR				*eS*	**Sb**	**16 57 20.5**	**-0.8**
AGPR				IAML		16 57 33.4	
	comp=Z,346nm,0.3s						
AGPR	**Aguadilla, PR**	**0.73**	**218**		**Pb**	**16 57 10.8**	**-0.9**
AGPR					**Sn**	**16 57 21.9**	**-0.3**
UUPR	**Utuado, UPR, P**	**0.79**	**186**		**Pn**	**16 57 12.8**	**0.0**
GCPR	**Guaynabo City**	**0.90**	**144**		**Pn**	**16 57 14.0**	**-0.3**
MPR	**Mayaguez**	**0.95**	**210**	*i* P	**Pn**	**16 57 14.4**	**-0.6**
MPR				*eS*	**Sn**	**16 57 24.8**	**-2.9**
MPR				IAML		16 57 36.6	
	comp=Z,279nm,0.5s						
MPR	**Mayaguez**	**0.95**	**210**		**Pn**	**16 57 14.3**	**-0.8**
LSP	**Las Mesas**	**0.96**	**206**	⇓*eP*	**Pn**	**16 57 14.9**	**-0.3**
LSP	**Las Mesas**	**0.96**	**206**		**Pn**	**16 57 14.9**	**-0.3**
CELP	**Cerrillos**	**0.97**	**177**	⇑*eP*	**Pb**	**16 57 15.4**	**-0.3**
CELP	**Cerrillos**	**0.97**	**177**		**Pb**	**16 57 15.4**	**-0.3**
OBIP	**Obispado Ponce**	**1.00**	**178**	⇑*eP*	**Pn**	**16 57 15.8**	**+0.2**
OBIP	**Obispado

SDDR	**Presa de Saban**	**4.40**	**270**	*i* P	**Pn**	**16 58 03.6**	**+1.1**
SDDR				IAML		16 59 19.4	
	comp=Z,26nm,0.6s						
SDDR	**Presa de Saban**	**4.40**	**270**		**Pn**	**16 58 03.5**	**+1.0**

IDC 19 17:10:13.2±6.2, 17.76S×178.72W, h608km±71km, mb2.8/6, mb1 3.2/6, mb1mx2.9/25, mbtmp3.7/6, Error ellipse: s-maj=100.0km s-min=23.8km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.37**	**259**	P	P	17 17 31.1	-0.4
	0.5nm,0.8s,baz=97,slow=7.2,SNR=6.0						
WRA				PcP	PcP	17 19 01.4	-0.5
	0.4nm,0.8s,baz=103,slow=3.6,SNR=2.6						
ASAR	**Alice Springs**	**44.55**	**254**	P	P	17 17 33.0	+0.2
	1.3nm,0.5s,baz=87,slow=9.4,SNR=41						
ASAR				PcP	PcP	17 19 02.0	-0.4
	0.2nm,0.5s,baz=102,slow=4.6,SNR=6.1						
NVAR	**Mina Array Bea**	**79.52**	**44**	P	P	17 21 18.7	+0.2
	0.2nm,0.5s,baz=231,slow=6.5,SNR=4.0						
ILAR	**Eielson Array**	**85.81**	**13**	P	P	17 21 48.6	-0.4
	0.3nm,0.7s,baz=217,slow=5.1,SNR=4.3						
TXAR	**Lajitas Array**	**86.16**	**58**	P	P	17 21 51.7	0.0
	0.6nm,0.7s,baz=214,slow=5.4,SNR=10						
PDAR	**Pinedale Array**	**87.44**	**44**	P	P	17 21 57.4	-0.2
	0.3nm,0.6s,baz=224,slow=2.5,SNR=3.5						
GERES	**GERESS Array B**	**147.39**	**345**	PKPbc	PKPbc	17 28 49.8	-0.1
	0.1nm,0.3s,baz=28,slow=3.2,SNR=4.5						

IDC 19 17:24:46.9±2.4, 31.00N×139.82E, h153km±21km, mb3.2/11, mb1 3.4/15, mb1mx3.2/59, mbtmp3.7/15, Error ellipse: s-maj=23.6km s-min=14.4km az=80.0
JMA 19 17:24:51.5±0.3, 31.36N×140.13E, h186km±2km, M4.0
ISC 19 17:24:51.6±0.8, 31.38N±0.07×140.07E±0.08, h200km, n42, σ1°63/55, mb3.4/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.12**	**346**	P	**Pn**	**17 25 20.9**	**-1.3**
JAOM				S	**Sn**	**17 25 43.2**	**-2.9**
JHCJ	**Hachijojimakas**	**1.71**	**352**	P	**Pn**	**17 25 26.8**	**-0.4**
JHCJ				eS	**Sn**	**17 25 53.2**	**-1.8**
JHJ2	**Mitsune**	**1.74**	**353**	P	**Pn**	**17 25 27.1**	**-0.4**
JMKN	**Mikurajimanish**	**2.54**	**351**	S	**Sn**	**17 26 09.5**	**-1.2**
JKO	**Kozu shima**	**2.91**	**345**	P	**Pn**	**17 25 40.5**	**+0.4**
TK02	**Tokai 2**	**3.22**	**323**	P	**Pn**	**17 25 44.2**	**+0.6**
BSO1	**Boso 1**	**3.36**	**13**	P	**Pn**	**17 25 44.6**	**-0.3**
BSO1				eS	**Sn**	**17 26 25.7**	**-1.2**
BSO3	**Boso 3**	**3.44**	**6**	P	**Pn**	**17 25 45.9**	**-0.2**
BSO3				S	**Sn**	**17 26 28.1**	**-1.0**
TTO1	**TONANKAI O.B.S**	**3.57**	**310**	P	**Pn**	**17 25 47.8**	**+0.1**
BSO4	**Boso 4**	**3.61**	**3**	P	**Pn**	**17 25 48.5**	**+0.1**
BSO4				eS	**Sn**	**17 26 32.3**	**-0.8**
JOD2	**Odawara 2**	**3.96**	**348**	P	**Pn**	**17 25 53.5**	**+0.6**
JOD2				eS	**Sn**	**17 26 41.3**	**+0.1**
HMMJ	**Hamamatsu 2**	**3.99**	**331**	P	**Pn**	**17 25 53.9**	**+0.7**
JIE	**Ise**	**4.13**	**318**	P	**Pn**	**17 25 55.3**	**+0.4**
JKN2	**Miekihoku**	**4.29**	**313**	P	**Pn**	**17 25 56.8**	**-0.1**
JKN2				S	**Sn**	**17 26 48.0**	**-0.3**
JNY	**Yasuok**	**4.38**	**336**	P	**Pn**	**17 25 58.9**	**+0.7**
JHU	**Hanno**	**4.51**	**352**	P	**Pn**	**17 25 59.6**	**-0.1**
JHU				S	**Sn**	**17 26 51.4**	**-2.1**
JAO	**Obara**	**4.54**	**329**	P	**Pn**	**17 26 01.2**	**+1.1**
JRY	**Ryogami san**	**4.73**	**348**	P	**Pn**	**17 26 02.9**	**+0.4**
JYT	**Yasato**	**4.84**	**1**	P	**Pn**	**17 26 02.5**	**-1.4**
JYT				S	**Sn**	**17 26 58.8**	**-2.2**
JEG	**Eigenji**	**4.86**	**322**	P	**Pn**	**17 26 05.5**	**+1.4**
JAG	**Ashikaga**	**5.06**	**354**	P	**Pn**	**17 26 05.5**	**-1.2**
JHO	**Hitachi**	**5.24**	**4**	P	**Pn**	**17 26 07.8**	**-1.2**
MJAR	**Matsushiro Arr**	**5.38**	**344**	P	**Pn**	**17 26 10.8**	**0.0**
	0.7nm,0.3s,baz=140,slow=11,SNR=59						
MJAR				S	**Sn**	**17 27 12.8**	**-0.6**
	0.2nm,0.3s,baz=195,slow=18,SNR=4.1						
MAT	**Matsushiro**	**5.38**	**344**	P	**Pn**	**17 26 11.2**	**+0.4**
MAT				eS	**Sn**	**17 27 12.0**	**-1.5**
JFK	**Kawauchi**	**6.01**	**6**	P	**Pn**	**17 26 17.4**	**-1.6**
JMK	**Ichinoseki**	**7.62**	**7**	P	**Pn**	**17 26 38.5**	**-1.2**
JMK				eS	**Sn**	**17 27 59.8**	**-6.0**
KSRS	**Korea Array**	**11.72**	**304**	P	**Pn**	**17 27 30.3**	**-2.5**
	0.2nm,0.3s,baz=114,slow=13,SNR=3.4						
ASAJ	**Asahikawa**	**12.87**	**8**	P	**Pn**	**17 27 46.8**	**-0.6**
	0.9nm,0.3s,baz=212,slow=13,SNR=17						
USRK	**Ussuriysk Ar.**	**14.30**	**336**	P	**Pn**	**17 28 03.5**	**-1.6**
	baz=144,slow=12,SNR=4.4						
KLR	**Kul'dur**	**18.91**	**343**	P	**Pn**	**17 28 59.3**	**-0.7**
	0.7nm,0.3s,baz=151,slow=8.5,SNR=13						
SONM	**Songino Array**	**30.41**	**312**	P	**P**	**17 30 45.1**	**-0.1**
	0.3nm,0.6s,baz=111,slow=7.9,SNR=3.3						
CMAR	**Chiang Mai Arr**	**39.23**	**261**	P	**P**	**17 31 59.3**	**-1.5**
	0.3nm,0.5s,baz=54,slow=6.8,SNR=4.3						
ZALV	**Zalesovo Beam**	**45.09**	**317**	PcP	**PcP**	**17 34 24.8**	**+0.2**
	0.4nm,0.3s,baz=90,slow=4.5,SNR=3.7						
MKAR	**Makanchi Array**	**46.39**	**307**	P	**P**	**17 32 58.3**	**+0.4**
	0.1nm,0.4s,baz=83,slow=12,SNR=3.0						
MKAR				PcP	**PcP**	**17 34 30.3**	**+0.9**
	0.2nm,0.3s,baz=90,slow=4.3,SNR=4.2						
KURBB	**Kurchatov Arra**	**48.78**	**312**	P	**P**	**17 33 16.4**	**+0.3**
	0.1nm,0.3s,baz=90,slow=9.1,SNR=5.0						
WRA	**Warramunga Arr**	**51.32**	**187**	P	**P**	**17 33 32.1**	**-3.4**
	0.7nm,0.3s,baz=2.2,slow=7.6,SNR=12						
ASAR	**Alice Springs**	**55.05**	**187**	P	**P**	**17 33 59.6**	**-3.1**
	0.4nm,0.5s,baz=0.8,slow=7.1,SNR=15						
FINES	**FINESS Array B**	**73.31**	**333**	P	**P**	**17 36 02.8**	**+2.0**
	4.1nm,1.1s,baz=46,slow=6.0,SNR=3.6						
AKASG	**Malin Array Be**	**78.10**	**323**	P	**P**	**17 36 28.8**	**+0.7**
	0.3nm,0.3s,baz=52,slow=5.9,SNR=3.2						
NVAR	**Mina Array Bea**	**79.32**	**52**	P	**P**	**17 36 38.5**	**+3.1**
	0.4nm,0.5s,baz=285,slow=6.4,SNR=5.1						
BRTR	**Keskin Array B**	**81.77**	**312**	P	**P**	**17 36 49.6**	**+1.3**
	0.4nm,0.6s,baz=52,slow=4.3,SNR=3.1						
TXAR	**Lajitas Array**	**94.47**	**52**	P	**P**	**17 37 52.4**	**+2.9**
	0.2nm,0.6s,baz=329,slow=4.4,SNR=3.5						

IDC 19 17:32:41.2±2.2, 14.35N×54.99E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.4/42, mbtmp3.6/6, MS2.8/2, Ms1 2.8/2, ms1mx2.4/35, Error ellipse: s-maj=61.8km s-min=32.7km az=73.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**9.49**	**21**	LR	LR	17 38 13.1	
	comp=Z,37nm,20.1s,baz=227,slow=35						
GEYT	**Alibeck**	**23.65**	**6**	P	P	17 37 55.0	+0.8
	1.9nm,0.8s,baz=131,slow=5.9,SNR=4.8						
GEYT				LR	LR	17 48 20.7	
	comp=Z,36nm,19.3s,baz=5.0,slow=40						
H08N2	**Diego Garcia H**	**25.97**	**141**	T	T	18 05 21.8	
	baz=323,slow=76,SNR=10						
H08N3	**Diego Garcia H**	**25.98**	**141**	T	T	18 05 28.8	
	baz=323,slow=76,SNR=8.4						
H08N1	**Diego Carcia H**	**25.99**	**141**	T	T	18 05 23.5	
	baz=323,slow=76,SNR=9.5						
MKAR	**Makanchi Array**	**39.59**	**30**	P	P	17 40 14.0	-0.2
	0.1nm,0.6s,baz=209,slow=9.1,SNR=3.0						
CMAR	**Chiang Mai Arr**	**42.29**	**78**	P	P	17 40 37.8	+0.8
	0.9nm,0.7s,baz=278,slow=9.4,SNR=9.3						
ZALV	**Zalesovo Beam**	**45.92**	**24**	P	P	17 41 03.6	-1.9
	0.2nm,0.3s,baz=218,slow=9.1,SNR=2.4						
WRA	**Warramunga Arr**	**85.12**	**112**	P	P	17 45 19.0	-0.7
	0.9nm,1.0s,baz=294,slow=3.8,SNR=2.6						
ASAR	**Alice Springs**	**85.84**	**116**	P	P	17 45 22.9	-0.4
	0.4nm,0.8s,baz=299,slow=5.7,SNR=4.9						
NVAR	**Mina Array Bea**	**127.12**	**353**	PKP	PKiKP	17 51 48.9	+0.2
	0.4nm,0.8s,baz=310,slow=2.0,SNR=3.4						

IDC 19 17:56:52.8±3.4, 1.06S×134.21E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.3/34, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=167.6km s-min=27.7km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.76**	**180**	P	P	18 01 13.6	0.0
	0.2nm,0.3s,baz=359,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**22.47**	**181**	P	P	18 01 53.9	0.0
	0.6nm,0.8s,baz=7.9,slow=11,SNR=14						
MKAR	**Makanchi Array**	**65.78**	**324**	P	P	18 07 39.7	-0.1
	0.4nm,0.6s,baz=110,slow=8.0,SNR=5.2						

OSPL 19 17:57:54.9±0.8, 19.03N×66.46W, h0km±14km, ML3.0
NEIC 19 17:57:56.0±1.4, 19.16N±0.07×66.67W±0.04, h36km±36km, Error ellipse: s-maj=10.0km s-min=5.6km az=185.0
RSPR 19 17:57:57.6, 19.12N×66.68W, h44km±3km, MD3.4/15
ISC 19 17:57:53.0±1.6, 19.14N±0.05×66.55W±0.03, h1km±11km, n62, σ0°87/76, 13C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.66**	**178**	*eS*	**Sn**	**17 58 19.4**	**-1.0**
EMPR	**Esperanza - Ma**	**0.66**	**178**	*eP*	**Pn**	**17 58 09.6**	**+0.1**
EMPR	**Esperanza - Ma**	**0.66**	**178**		**Pn**	**17 58 09.6**	**+0.1**
EMPR					**Sn**	**17 58 19.4**	**-1.0**
AOPR	**Arecibo Observ**	**0.81**	**194**	*iP*	**Pb**	**17 58 11.0**	**+1.1**
AOPR	**Arecibo Observ**	**0.81**	**194**	*eS*	**Sb**	**17 58 21.6**	**+0.3**
AOPR	**Arecibo Observ**	**0.81**	**194**		**Pb**	**17 58 11.0**	**+1.1**
AOPR					**Sb**	**17 58 21.6**	**+0.3**
AGPR	**Aguadilla, PR**	**0.85**	**219**	*iP*	**Pg**	**17 58 10.9**	**+1.6**
AGPR	**Aguadilla, PR**	**0.85**	**219**	*i P*	**Pg**	**17 58 10.1**	**+0.8**
AGPR				*eS*	**Sg**	**17 58 20.4**	**+0.1**
AGPR				IAML		17 58 26.9	
	comp=Z,301nm,0.2s						
AGPR	**Aguadilla, PR**	**0.85**	**219**		**Pg**	**17 58 10.9**	**+1.6**
AGPR					**Sg**	**17 58 20.9**	**+0.6**
UUPR	**Utuado, UPR, P**	**0.89**	**191**		**Pb**	**17 58 12.4**	**+1.1**
UUPR					**Sb**	**17 58 24.2**	**+0.5**
GCPR	**Guaynabo City**	**0.93**	**152**		**Pn**	**17 58 13.6**	**+0.4**
CELP	**Cerrillos**	**1.06**	**182**	*iP*	**Pb**	**17 58 14.9**	**+0.8**
CELP				*eS*	**Sb**	**17 58 28.6**	**+0.2**
CELP	**Cerrillos**	**1.06**	**182**		**Pb**	**17 58 14.9**	**+0.8**
CELP					**Sb**	**17 58 28.6**	**+0.2**
MPR	**Mayaguez**	**1.08**	**211**	*i* P	**Pg**	**17 58 13.6**	**0.0**
MPR				IAML		17 58 26.9	
	comp=Z,138nm,0.2s						
MPR	**Mayaguez**	**1.08**	**211**		**Pg**	**17 58 13.8**	**+0.2**
CBYP	**Canovanas**	**1.08**	**143**	*iP*	**Pn**	**17 58 15.9**	**+0.5**
CBYP	**Canovanas**	**1.08**	**143**	*iP*	**Pn**	**17 58 16.0**	**+0.7**
CBYP				*eS*	**Sn**	**17 58 30.2**	**-0.8**
CBYP	**Canovanas**	**1.08**	**143**		**Pn**	**17 58 16.0**	**+0.7**
CBYP					**Sn**	**17 58 30.5**	**-0.5**
LSP	**Las Mesas**	**1.08**	**208**	*iP*	**Pg**	**17 58 14.3**	**+0.6**
LSP	**Las Mesas**	**1.08**	**208**	*eS*	**Sg**	**17 58 27.8**	**0.0**
LSP	**Las Mesas**	**1.08**	**208**		**Pg**	**17 58 14.3**	**+0.6**
LSP					**Sg**	**17 58 27.8**	**0.0**
SJG	**San Juan**	**1.09**	**160**		**Pn**	**17 58 16.3**	**+0.9**
OBIP	**Obispado Ponce**	**1.09**	**183**	*iP*	**Pn**	**17 58 15.6**	**+0.2**
OBIP	**Obispado Ponce**	**1.09**	**183**	*eS*	**Sb**	**17 58 28.8**	**-0.6**
OBIP	**Obispado Ponce**	**1.09**	**183**		**Pn**	**17 58 15.6**	**+0.2**
OBIP					**Sb**	**17 58 28.8**	**-0.6**
IDE	**Isla Desecheo**	**1.15**	**230**	*iP*	**Pg**	**17 58 14.7**	**-0.4**
IDE	**Isla Desecheo**	**1.15**	**230**	*eS*	**Sg**	**17 58 28.6**	**-1.4**
IDE	**Isla Desecheo**	**1.15**	**230**		**Pg**	**17 58 14.7**	**-0.4**
IDE					**Sg**	**17 58 28.6**	**-1.4**
HUMP	**Col San Antoni**	**1.19**	**146**	*iP*	**Pn**	**17 58 18.0**	**+1.2**
HUMP	**Col San Antoni**	**1.19**	**146**	*eS*	**Sn**	**17 58 33.2**	**-0.4**
HUMP	**Col San Antoni**	**1.19**	**146**		**Pn**	**17 58 17.2**	**+0.4**
HUMP	**Col San Antoni**	**1.19**	**146**		**Sn**	**17 58 33.2**	**-0.4**
GBPR	**Guanica, Bosqu**	**1.20**	**195**	*iP*	**Pb**	**17 58 16.9**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.20**	**195**	*eS*	**Sg**	**17 58 31.1**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.20**	**195**		**Pb**	**17 58 16.9**	**+0.5**
GBPR					**Sg**	**17 58 31.1**	**-0.3**
IGPR	**InterUniversit**	**1.24**	**160**	*iP*	**Pn**	**17 58 18.2**	**+0.8**
IGPR	**InterUniversit**	**1.24**	**160**	*eS*	**Sn**	**17 58 33.7**	**-1.1**
IGPR	**InterUniversit**	**1.24**	**160**		**Pn**	**17 58 19.9**	**+2.5**
CRPR	**Cabo Rojo, PR**	**1.24**	**205**	*iP*	**Pg**	**17 58 16.8**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.24**	**205**	*eS*	**Sg**	**17 58 31.4**	**-1.5**
CRPR	**Cabo Rojo, PR**	**1.24**	**205**		**Pg**	**17 58 16.8**	**0.0**
CRPR					**Sg**	**17 58 31.4**	**-1.5**
ICMP	**Isla Caja de M**	**1.24**	**179**	*iP*	**Pb**	**17 58 17.6**	**+0.3**
ICMP	**Isla Caja de M**	**1.24**	**179**	*eS*	**Sb**	**17 58 32.8**	**-1.0**
MLPR	**Magueyes Islan**	**1.25**	**202**	*iP*	**Pg**	**17 58 16.5**	**-0.5**
MLPR	**Magueyes Islan**	**1.25**	**202**	*eS*	**Sg**	**17 58 31.4**	**-1.8**
MLPR	**Magueyes Islan**	**1.25**	**202**		**Pg**	**17 58 16.0**	**-1.0**
MLPR	**Magueyes Islan**	**1.25**	**202**		**Sg**	**17 58 31.4**	**-1.8**
MTP	**Monte Pirata**	**1.40**	**137**	*iP*	**Pn**	**17 58 20.9**	**+1.2**
MTP	**Monte Pirata**	**1.40**	**137**	*eS*	**Sn**	**17 58 38.5**	**-0.3**
MTP	**Monte Pirata**	**1.40**	**137**		**Pn**	**17 58 20.9**	**+0.9**
MTP	**Monte Pirata**	**1.40**	**137**		**Sn**	**17 58 38.5**	**-0.3**
PCDR	**Punta Cana, DR**	**1.84**	**251**	*i P*	**Pn**	**17 58 26.2**	**+0.4**
PCDR				*eS*	**Sn**	**17 58 50.1**	**+0.4**
PCDR				IAML		17 59 03.9	
	comp=Z,467nm,1.1s						
PCDR	**Punta Cana, DR**	**1.84**	**251**		**Pn**	**17 58 25.0**	**-0.8**
TBVI	**Tortola**	**1.96**	**111**	*iP*	**Pb**	**17 58 29.8**	**+0.3**
TBVI	**Tortola**	**1.96**	**111**	*eS*	**Sb**	**17 58 53.7**	**-0.8**
TBVI	**Tortola**	**1.96**	**111**		**Pb**	**17 58 29.8**	**+0.3**
TBVI					**Sb**	**17 58 53.7**	**-0.8**
DR12	**Loma Pena Alta**	**2.70**	**263**		**Pn**	**17 58 37.2**	**-0.4**
SDDR	**Presa de Saban**	**4.49**	**269**	*i P*	**Pn**	**17 59 03.0**	**+0.8**
SDDR				*eS*	**Sn**	**17 59 54.0**	**-1.0**
SDDR				IAML		18 00 28.9	
	comp=Z,23nm,0.6s						
SDDR	**Presa de Saban**	**4.49**	**269**		**Pn**	**17 59 03.4**	**+1.2**
GTBY	**Guantanamo Bay**	**8.11**	**277**	Pn	Pn	17 59 48.5	-3.5
CBCY	**The Bluff, Cay**	**12.48**	**275**	Pn	Pn	18 00 46.3	-5.5
BBSR	**BB Station**	**13.29**	**7**	Pn	Pn	18 00 58.9	-3.9

KRSC 19 18:12:09.2±1.3, 53.21N×162.00E, h42km±25km, ML4.3
MOS 19 18:12:12.7±0.8, 53.28N×161.77E, h40km, mb3.9/1, Error ellipse: s-maj=7.4km s-min=4.8km az=90.8
IDC 19 18:12:15.7±0.8, 53.60N×161.66E, h41km±4km, mb3.5/15, mb1 3.7/18, mb1mx3.5/59, mbtmp3.7/18, ML3.2/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/39, Error ellipse: s-maj=21.8km s-min=8.6km az=161.0
ISC 19 18:12:14.3±0.6, 53.27N±0.04×161.84E±0.04, h42km±4km, n104, σ1°45/143, mb3.8/15, MS3.4/3, 2C, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**1.10**	**262**	PN	**Pn**	**18 12 30.8**	**-2.5**
SPN				S	**Sn**	**18 12 45.4**	**-1.9**
SPN	**Mys Shipunski**	**1.10**	**262**	*eP*	**Pn**	**18 12 30.8**	**-2.5**
SPN				*eS*	**Sn**	**18 12 45.4**	**-1.9**
MKZ	**Mys Kozlova**	**1.29**	**357**	PN	**Pn**	**18 12 33.1**	**-2.7**
MKZ	**Mys Kozlova**	**1.29**	**357**	*eP*	**Pn**	**18 12 33.1**	**-2.7**
NLC	**Nalytchevo**	**1.50**	**267**	PN	**Pn**	**18 12 36.6**	**-2.1**
NLC				S	**Sn**	**18 12 56.0**	**-1.0**
NLC	**Nalytchevo**	**1.50**	**267**	*eP*	**Pn**	**18 12 36.6**	**-2.1**
NLC				*eS*	**Sn**	**18 12 56.0**	**-1.0**
SDLR	**Sedlovina**	**1.77**	**271**	PN	**Pn**	**18 12 41.1**	**-1.5**
SDLR	**Sedlovina**	**1.77**	**271**	*eP*	**Pn**	**18 12 41.1**	**-1.5**
UGLR	**Uglovaya**	**1.81**	**269**	PN	**Pn**	**18 12 41.8**	**-1.3**
UGLR				S	**Sn**	**18 13 05.4**	**+0.5**
UGLR	**Uglovaya**	**1.81**	**269**	*eP*	**Pn**	**18 12 41.8**	**-1.3**
UGLR				*eS*	**Sn**	**18 13 05.4**	**+0.5**
SMAR	**Somma**	**1.82**	**271**	PN	**Pn**	**18 12 41.5**	**-1.9**
SMAR				S	**Sn**	**18 13 04.1**	**-1.2**
SMAR	**Somma**	**1.82**	**271**	*eP*	**Pn**	**18 12 41.5**	**-1.9**
SMAR				*eS*	**Sn**	**18 13 04.1**	**-1.2**
KRER	**Koryakskii**	**1.85**	**272**	PN	**Pn**	**18 12 42.3**	**-1.5**
KRER				S	**Sn**	**18 13 06.3**	**+0.2**
KRER	**Koryakskii**	**1.85**	**272**	*eP*	**Pn**	**18 12 42.3**	**-1.5**
KRER				*eS*	**Sn**	**18 13 06.3**	**+0.2**
AVH	**Avacha**	**1.86**	**271**	PN	**Pn**	**18 12 42.4**	**-1.4**
AVH				S	**Sn**	**18 13 05.9**	**-0.2**
AVH	**Avacha**	**1.86**	**271**	*eP*	**Pn**	**18 12 42.4**	**-1.4**
AVH				*eS*	**Sn**	**18 13 05.9**	**-0.2**
KRX	**Arik**	**1.91**	**274**	PN	**Pn**	**18 12 42.9**	**-1.6**
KRX				S	**Sn**	**18 13 07.1**	**-0.4**
KRX	**Arik**	**1.91**	**274**	*eP*	**Pn**	**18 12 42.9**	**-1.6**
KRX				*eS*	**Sn**	**18 13 07.1**	**-0.4**
KOK	**Koryaka**	**1.92**	**272**	PN	**Pn**	**18 12 43.1**	**-1.5**
KOK				S	**Sn**	**18 13 09.6**	**+2.0**
KOK	**Koryaka**	**1.92**	**272**	*eP*	**Pn**	**18 12 43.1**	**-1.5**
KOK				*eS*	**Sn**	**18 13 09.6**	**+2.0**
PET	**Petropavlovsk**	**1.93**	**264**	PN	**Pn**	**18 12 42.6**	**-2.0**
PET				S	**Sn**	**18 13 07.5**	**-0.2**
PET	**Petropavlovsk**	**1.93**	**264**	*eP*	**Pn**	**18 12 42.6**	**-2.0**
PET				*eS*	**Sn**	**18 13 07.5**	**-0.2**
KZV	**Kizimen**	**2.06**	**334**	PN	**Pn**	**18 12 45.0**	**-1.5**
KZV				S	**Sn**	**18 13 10.0**	**-1.0**
KZV	**Kizimen**	**2.06**	**334**	*eP*	**Pn**	**18 12 45.0**	**-1.5**
KZV				*eS*	**Sn**	**18 13 10.0**	**-1.0**
TUMD	**Tumrok D**	**2.11**	**337**	*eP*	**Pn**	**18 12 45.0**	**-2.2**
TUMD				*eS*	**Sn**	**18 13 11.2**	**-1.0**
RUS	**Russkaya**	**2.18**	**249**	PN	**Pn**	**18 12 46.4**	**-1.7**
RUS				S	**Sn**	**18 13 13.0**	**-0.8**
RUS	**Russkaya**	**2.18**	**249**	*eP*	**Pn**	**18 12 46.4**	**-1.7**
RUS				*eS*	**Sn**	**18 13 13.0**	**-0.8**
TUMR	**Tumrok**	**2.25**	**335**	PN	**Pn**	**18 12 47.8**	**-1.3**
TUMR				S	**Sn**	**18 13 16.5**	**+0.9**
TUMR	**Tumrok**	**2.25**	**335**	*eP*	**Pn**	**18 12 47.8**	**-1.3**
TUMR				*eS*	**Sn**	**18 13 16.5**	**+0.9**
KRMR	**Karymshinskiy**	**2.28**	**260**	PN	**Pn**	**18 12 47.4**	**-2.0**
KRMR				S	**Sn**	**18 13 16.5**	**+0.3**
KRMR	**Karymshinskiy**	**2.28**	**260**	*eP*	**Pn**	**18 12 47.4**	**-2.0**
KRMR				*eS*	**Sn**	**18 13 16.5**	**+0.3**
MTVR	**Mutnovka**	**2.35**	**252**	PN	**Pn**	**18 12 49.4**	**-1.1**
MTVR	**Mutnovka**	**2.35**	**252**	*eP*	**Pn**	**18 12 49.4**	**-1.1**
GRL	**Gorelyy**	**2.39**	**254**	PN	**Pn**	**18 12 50.4**	**-0.7**
GRL	**Gorelyy**	**2.39**	**254**	*eP*	**Pn**	**18 12 50.4**	**-0.7**
PETK	**Petropavlovsk-**	**2.49**	**268**	P	**Pn**	**18 12 51.7**	**-0.7**
	18nm,0.3s,baz=91,slow=20,SNR=794						
PETK				S	**Sn**	**18 13 22.9**	**+1.3**
	15nm,0.3s,baz=198,slow=25,SNR=10						
PETK				LR	LR	18 13 43.6	
	comp=Z,44nm,20.4s,baz=60,slow=36						
ASAK	**Asacha**	**2.55**	**251**	PN	**Pn**	**18 12 52.5**	**-0.7**
ASAK				S	**Sn**	**18 13 23.3**	**+0.3**
ASAK	**Asacha**	**2.55**	**251**	*eP*	**Pn**	**18 12 52.5**	**-0.7**
ASAK				*eS*	**Sn**	**18 13 23.3**	**+0.3**
KMNR	**Kamenistaya**	**2.66**	**340**	PN	**Pn**	**18 12 54.3**	**-0.4**
KMNR				S	**Sn**	**18 13 28.4**	**+2.7**
KMNR	**Kamenistaya**	**2.66**	**340**	*eP*	**Pn**	**18 12 54.3**	**-0.4**
KMNR				*eS*	**Sn**	**18 13 28.4**	**+2.7**
KDTR	**Khodutka, Kamc**	**2.72**	**239**	PN	**Pn**	**18 12 54.0**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.72**	**239**	*eP*	**Pn**	**18 12 54.0**	**-1.5**
BZGR	**Bezymyannyi-Gr**	**2.75**	**347**	PN	**Pn**	**18 12 55.0**	**-1.1**
BZGR	**Bezymyannyi-Gr**	**2.75**	**347**	*eP*	**Pn**	**18 12 55.0**	**-1.1**
BZMR	**Bezymyannaya**	**2.78**	**344**	PN	**Pn**	**18 12 59.7**	**+3.2**
BZMR	**Bezymyannaya**	**2.78**	**344**	*eP*	**Pn**	**18 12 59.7**	**+3.2**
ZLN	**Zelenaya**	**2.82**	**348**	PN	**Pn**	**18 12 56.4**	**-0.5**
ZLN	**Zelenaya**	**2.82**	**348**	*eP*	**Pn**	**18 12 56.4**	**-0.5**
KIRR	**Kirishev**	**2.82**	**343**	PN	**Pn**	**18 12 56.5**	**-0.6**
KIRR	**Kirishev**	**2.82**	**343**	*eP*	**Pn**	**18 12 56.5**	**-0.6**
APC	**Apacha**	**2.84**	**265**	PN	**Pn**	**18 12 57.5**	**+0.4**
APC				S	**Sn**	**18 13 32.7**	**+2.6**
APC	**Apacha**	**2.84**	**265**	*eP*	**Pn**	**18 12 57.5**	**+0.4**
APC				*eS*	**Sn**	**18 13 32.7**	**+2.6**
KPT	**Kopyto**	**2.86**	**341**	PN	**Pn**	**18 12 56.8**	**-0.7**
KPT	**Kopyto**	**2.86**	**341**	*eP*	**Pn**	**18 12 56.8**	**-0.7**
KBTR	**Krutoberegovo**	**3.00**	**11**	PN	**Pn**	**18 12 58.5**	**-0.8**
KBTR	**Krutoberegovo**	**3.00**	**11**	*eP*	**Pn**	**18 12 58.5**	**-0.8**
KOZ	**Kozyrevsk**	**3.02**	**339**	PN	**

1.4nm,0.3s,baz=254,slow=15,SNR=28
STKA Pg **Pb** 18 14 19.0 **+0.4**
4.7nm,0.3s,baz=241,slow=14,SNR=41
STKA Lg Lg 18 14 55.9
6.8nm,0.3s,baz=338,slow=13,SNR=8.0
MULG Mulgathing 4.57 306 P **Pn** **18 14 35.2 +1.3**
baz=4.6
ARPS Mount Arapiles 4.69 143 P **Pn** **18 14 34.5 -1.0**
baz=4.6,SNR=32
INKA Innaminka 5.72 22 P **Pn** **18 14 52.9 +3.2**
baz=5.8,SNR=4.3
OOD Oodnadatta 5.73 336 P **Pn** **18 14 53.4 +3.6**
baz=5.8
CMSA Cobar Meteorol 6.43 78 P **Pn** **18 14 59.8 +0.3**
baz=6.4
FORT Forrest 9.01 282 P **Pn** **18 15 34.9 0.0**
baz=9.0
ASAR Alice Springs 10.14 336 Pn **Pn** **18 15 51.5 +1.0**
0.1nm,0.3s,baz=166,slow=9.0,SNR=14
ASAR Sn **Sn** **18 17 39.3 -5.1**
0.1nm,0.3s,baz=157,slow=21,SNR=3.5
WRKA Warakurna 11.87 310 P **Pn** **18 16 15.8 +1.8**
baz=12
WRA Warramunga Arr 13.55 344 Pn **Pn** **18 16 36.4 -0.7**
0.1nm,0.3s,baz=160,slow=13,SNR=3.3
WRA Sn **Sn** **18 19 04.7 -3.2**
0.1nm,0.3s,baz=139,slow=26,SNR=3.1

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*NEIC **19** 18:14:43.6±1.0, 17.7°N±0.1°×68.93°W±0.05, h85km±23km, Error ellipse: s-maj=21.0km s-min=5.9km az=192.0*
*RSPR **19** 18:14:44.9, 17.70°N×68.90°W, h84km±4km, MD3.5/3*
ISC 19 18:14:43.5±1.2, 17.53°N±0.07°×68.97°W±0.05, h35km, n15, σ0.967/19, 2C-1D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**1.12**	**30**	*eS*		**Sn**	**18 15 17.0**	**0.0**
PCDR	**Punta Cana, DR**	**1.12**	**30**	*eP*		**Pn**	**18 15 03.1**	**+0.3**
PCDR	**Punta Cana, DR**	**1.12**	**30**			**Pn**	**18 15 03.1**	**+0.3**
PCDR						**Sn**	**18 15 17.0**	**0.0**
DR12	**Loma Pena Alta**	**1.31**	**343**	Pn	Pn	**Pn**	**18 15 05.3**	**-0.1**
DR12				Sn	Sn	**Sn**	**18 15 21.8**	**+0.1**
BANI	**BANI**	**1.57**	**303**	Pn	Pn	**Pn**	**18 15 09.6**	**+0.5**
CRPR	**Cabo Rojo, PR**	**1.83**	**75**	*eP*		**Pn**	**18 15 12.9**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.83**	**75**	*eS*		**Sn**	**18 15 34.5**	**0.0**
CRPR	**Cabo Rojo, PR**	**1.83**	**75**			**Pn**	**18 15 12.9**	**+0.4**
CRPR						**Sn**	**18 15 34.5**	**0.0**
AOPR	**Arecibo Observ**	**2.26**	**69**	*eP*		**Pn**	**18 15 18.1**	**-0.4**
AOPR	**Arecibo Observ**	**2.26**	**69**	*eS*		**Sn**	**18 15 44.4**	**-0.7**
AOPR	**Arecibo Observ**	**2.26**	**69**			**Pn**	**18 15 18.1**	**-0.4**
AOPR						**Sn**	**18 15 44.4**	**-0.7**
EMPR	**Esperanza - Ma**	**2.50**	**68**	Pn	Pn	**Pn**	**18 15 22.1**	**+0.3**
SDDR	**Presa de Saban**	**2.63**	**304**	Pn	Pn	**Pn**	**18 15 22.1**	**-1.5**
CBYP	**Canovanas**	**3.05**	**76**	Pn	Pn	**Pn**	**18 15 27.9**	**-1.5**
SDV	**Santo Domingo**	**8.74**	**191**	Pn	Pn	**Pn**	**18 16 48.4**	**+0.7**

IDC 19 18:20:44.8±1.7, 10.41°S×124.71°E, h0km, mb3.6/1, mb1 4.0/4, mb1mx3.6/30, mbtmp3.8/4, ML3.8/3, Error ellipse: s-maj=102.0km s-min=27.0km az=64.0, Timor region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**7.69**	**173**	Pn	Pn		18 22 38.5	+0.3
	1.2nm,0.3s,baz=5.2,slow=12,SNR=16							
FITZ				Sn	Sn		18 24 01.3	-4.7
	1.4nm,0.3s,baz=94,slow=19,SNR=5.6							
WRA	**Warramunga Arr**	**13.26**	**137**	Pn	Pn		18 23 54.1	-0.4
	0.4nm,0.3s,baz=311,slow=12,SNR=12							
WRA				Sn	Sn		18 26 17.4	-5.4
	0.3nm,0.3s,baz=316,slow=22,SNR=5.6							
ASAR	**Alice Springs**	**15.83**	**148**	Pn	Pn		18 24 29.2	+0.1
	0.4nm,0.3s,baz=320,slow=11,SNR=42							
ASAR				Sn	Sn		18 27 18.3	-7.2
	0.2nm,0.3s,baz=315,slow=22,SNR=4.0							
MKAR	**Makanchi Array**	**68.38**	**330**	P	P		18 31 48.3	0.0
	0.4nm,0.6s,baz=132,slow=7.7,SNR=6.4							

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*MEX **19** 18:22:16.7±0.8, 14.66°N×93.30°W, h19km±30km, MD3.8*
*GCG **19** 18:22:17.9±0.6, 15.30°N×93.05°W, h33km±999km, MD4.2*
ISC 19 18:22:14.1±2.9, 14.9°N±0.1°×93.3°W±0.1, h8km±14km, n6, σ0.995/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PCIG		**0.85**	**2**	*eP*		**Pn**	**18 22 32.6**	**+0.2**
PCIG				*i S*		**Sn**	**18 22 45.7**	**+0.6**
THIG		**0.96**	**86**	*eP*		**Pg**	**18 22 32.5**	**-0.1**
THIG				*eS*		**Sg**	**18 22 44.7**	**-0.3**
STG3	**Santiaguito 3,**	**1.64**	**95**	*eP*		**Pn**	**18 22 43.5**	**+0.2**
FUG	**Fuego 3**	**2.37**	**99**	*eP*		**Pn**	**18 22 54.3**	**+0.9**
FUG				*eS*		**Sn**	**18 23 22.4**	**-0.4**
CMIG	**Matias Romero**	**2.73**	**325**	*eP*		**Pn**	**18 22 58.1**	**-0.1**
CMIG				*i S*		**Sn**	**18 23 31.2**	**-0.2**
IXG	**Ixpaco**	**2.81**	**103**	*eP*		**Pn**	**18 23 00.8**	**+1.3**
IXG				*eS*		**Sn**	**18 23 31.8**	**-1.8**

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*IDC **19** 18:25:14.6±2.2, 43.63°N×105.16°W, h0km, mb1 3.5/2, mb1mx3.2/35, mbtmp3.3/2, ML3.0/2, Error ellipse: s-maj=55.4km s-min=8.7km az=152.0*
*NEIC **19** 18:25:18.8±2.5, 44.05°N±0.05°×105.30°W±0.04, h0km±2km, ML3.1/37, Error ellipse: s-maj=9.2km s-min=3.1km az=28.0*
ISC 19 18:25:18.0±1.1, 44.05°N±0.06°×105.33°W±0.05, h0km, n26, σ1.968/26, Wyoming

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.94**	**85**			**Pg**	**18 25 36.6**	**+0.7**
K22A	**Casper**	**1.65**	**212**			**Pn**	**18 25 47.7**	**-0.6**
K22A					IAML		18 26 11.8	
	comp=N,296nm,0.2s							
K22A					IAML		18 26 15.1	
	comp=E,272nm,0.2s							
LAO	**LASA Array**	**2.71**	**347**			**Pn**	**18 26 02.5**	**-0.4**
LAO					IAML		18 27 01.7	
	comp=E,104nm,1.1s							
RWWY	**Rawlins**	**2.73**	**211**	Pn	Pn	**Pn**	**18 26 04.8**	**+1.4**
RWWY					IAML		18 26 41.8	
	comp=E,43nm,0.9s							
RWWY					IAML		18 26 50.9	
	comp=E,50nm,1.2s							
PHWY	**Pilot Hill**	**2.75**	**182**	Pn	Pn	**Pn**	**18 26 03.7**	**+0.1**
RLMT	**Red Lodge**	**3.01**	**292**			**Pn**	**18 26 07.5**	**+0.4**
RLMT					IAML		18 27 07.8	
	comp=E,48nm,2.2s							
RLMT					IAML		18 27 41.3	
	comp=E,33nm,1.8s							
N23A	**Red Feather La**	**3.18**	**188**	Pn	Pn	**Pn**	**18 26 10.2**	**+0.6**
N23A					IAML		18 26 56.7	
	comp=N,31nm,0.9s							
N23A					IAML		18 28 00.8	
	comp=E,31nm,2.1s							
BW06	**Boulder Array**	**3.34**	**249**			**Pn**	**18 26 11.8**	**+0.1**
BW06					IAML		18 27 02.7	
	comp=E,27nm,0.5s							
BW06					IAML		18 27 05.5	
	comp=N,32nm,1.2s							
PD31	**Pinedale Array**	**3.34**	**249**			**Pn**	**18 26 12.1**	**+0.4**
PDAR	**Pinedale Array**	**3.34**	**249**	Pn	Pn	**Pn**	**18 26 12.1**	**+0.4**
	comp=N,1.6nm,0.3s,baz=70,slow=15,SNR=43							
PDAR					Pg	**Pb**	**18 26 16.9**	**-1.2**
	comp=N,5.0nm,0.3s,baz=68,slow=18,SNR=58							
PDAR					Lg	Lg	18 26 58.9	
	comp=N,8.5nm,0.3s,baz=75,slow=35,SNR=15							
YNE	**Yellowstone No**	**3.48**	**288**			**Pn**	**18 26 13.3**	**-0.3**
H17A	**Grant Village**	**3.79**	**277**			**Pn**	**18 26 19.6**	**+1.8**
FLWY	**Flagg Ranch**	**3.87**	**272**			**Pn**	**18 26 21.6**	**+2.7**
MOOW	**Moose Ponds**	**3.93**	**268**			**Pn**	**18 26 21.5**	**+1.8**
OGNE	**Ogallala**	**3.94**	**141**	Pn	Pn	**Pn**	**18 26 21.1**	**+1.3**
REDW	**Red Top Meadow**	**4.06**	**262**			**Pn**	**18 26 24.1**	**+2.5**
REDW					IAML		18 27 39.2	
	comp=N,34nm,1.6s							
REDW					IAML		18 27 40.3	
	comp=N,34nm,2.1s							
TPAW	**Teton Pass**	**4.11**	**264**			**Pn**	**18 26 25.1**	**+2.8**
TPAW					IAML		18 27 46.2	
	comp=N,20nm,1.8s							
TPAW					IAML		18 27 55.5	
	comp=N,17nm,3.0s							

ISCO	**Idaho Springs**	**4.25**	**183**			**Pn**	**18 26 25.8**	**+1.5**
ISCO					IAML		18 27 34.1	
	comp=N,15nm,2.8s							
AHID	**Auburn Hatcher**	**4.40**	**255**			**Pn**	**18 26 27.6**	**+1.4**
AHID					IAML		18 27 50.1	
	comp=E,26nm,1.7s							
AHID					IAML		18 28 12.4	
	comp=N,22nm,1.9s							
O20A	**White River Ci**	**4.47**	**210**	Pn		**Pn**	**18 26 28.7**	**+1.5**
O20A					IAML		18 28 52.9	
	comp=E,27nm,4.6s							
DGMT	**Dagmar**	**4.49**	**10**			**Pn**	**18 26 31.5**	**+4.2**
KSCO	**Kaye Shedlock'**	**5.42**	**157**	Pn		**Pn**	**18 26 40.6**	**+0.4**
CTU	**Camp Tracy**	**5.82**	**237**	Pn		**Pn**	**18 26 46.1**	**+0.5**
DUG	**Dugway, Tooele**	**6.76**	**238**			**Pn**	**18 26 58.8**	**+0.1**
I10CA	**LAC DU BONNET**	**8.83**	**43**	*i*			19 22 10.0	
	baz=219,slow=326,SNR=1.8							
ULM	**Lac du Bonnet**	**8.94**	**43**	Pn		**Pn**	**18 27 25.9**	**-2.4**
	comp=E,0.3nm,0.3s,baz=230,slow=11,SNR=8.1							
ULM					Lg	Lg	18 29 55.6	
	comp=E,0.2nm,0.3s,baz=44,slow=9.9,SNR=3.1							

IDC 19 18:43:24.0±2.3, 1.68°N×126.92°E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/38, mbtmp3.5/3, Error ellipse: s-maj=191.2km s-min=25.9km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.69**	**162**	P	P	P	18 48 26.2	-1.1
	0.5nm,0.4s,baz=340,slow=11,SNR=5.5							
ASAR	**Alice Springs**	**26.09**	**165**	P	P		18 49 00.6	+0.9
	0.2nm,0.4s,baz=346,slow=12,SNR=6.0							
MKAR	**Makanchi Array**	**59.34**	**326**	P	P		18 53 27.9	-0.1
	0.3nm,0.5s,baz=113,slow=7.4,SNR=6.2							

GCMT 19 18:48:48.0±0.3, 42.72°S±0.03°×83.64°W±0.03, h17km±1km, MW4.9/82, Moment Tension Solution. s27,c30; s82,c113; Duration: 0 Moment tensor: Scale 10^{16} Nm; M_{rr}-2.90±.19; $M_{\theta\theta}$0.51±.10; $M_{\phi\phi}$2.38±.12; $M_{r\theta}$0.58±.40; $M_{r\phi}$-0.63±.08; $M_{\theta\phi}$0.35±.27; Best double couple: $M_0$2.80500×10^{16} NP1:ϕ_s332.00000°,δ44.00000°, λ-106.00000°. NP2:ϕ_s174.00000°,δ48.00000°, λ-75.00000°. Principal axes: T 2.5780, Plg2.0000°, Azm254.0000°; N 0.4440, Plg11.0000°, Azm344.0000°; P -3.0330, Plg79.0000°, Azm154.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TBI	**Tubuai**	**57.06**	**268**	*eLR*	LR	LR	19 15 14.8	
	comp=Z,333nm,30.8s							
TAOE	**Nuku Hiva Isla**	**59.65**	**287**	*eLR*	LR	LR	19 16 36.8	
	comp=Z,346nm,25.0s							
PPT2	**Papeete2**	**60.68**	**273**	*eS*	S	S	19 07 16.5	+1.8
	79nm,26.8s							
PPT2				*eLR*	LR	LR	19 16 51.6	
	comp=Z,309nm,29.0s							
DZM	**Mont Dzumac**	**88.87**	**241**	*eLR*	LR	LR	19 29 37.9	
	comp=Z,235nm,24.6s							

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*IDC **19** 18:52:46.4±0.9, 14.62°N×55.09°E, h0km, mb3.6/13, mb1 3.8/13, mb1mx3.6/36, mbtmp3.6/13, MS3.1/5, Ms1 3.1/5, ms1mx2.7/29 Error ellipse: s-maj=24.2km s-min=19.5km az=175.0*
ISC 19 18:52:48.6±0.9, 14.6°N±0.2°×55.1°E±0.1, h14km, n23, σ1.919/15, mb3.5/13, MS3.0/4, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**9.20**	**21**		LR	LR	18 58 18.6	
	comp=Z,99nm,20.9s,baz=195,slow=36							
GEYT	**Alibeck**	**23.37**	**6**	P		**P**	**18 57 55.8**	**-1.0**
	0.9nm,0.7s,baz=169,slow=10,SNR=3.6							
GEYT					LR	LR	19 08 27.1	
	comp=Z,38nm,20.5s,baz=180,slow=40							
KMBO	**Kilima Mbogo**	**23.59**	**230**	P		**P**	**18 58 00.7**	**+1.3**
	1.4nm,0.8s,baz=54,slow=12,SNR=3.8							
MMAI	**Mount Meron Ar**	**25.60**	**319**	P		**P**	**18 58 18.0**	**+0.4**
	0.3nm,0.3s,baz=146,slow=16,SNR=2.3							
H08N2	**Diego Garcia H**	**26.12**	**142**	T		T	19 25 33.7	
	baz=324,slow=76,SNR=35							
H08N3	**Diego Garcia H**	**26.13**	**142**	T		T	19 25 34.8	
	baz=324,slow=76,SNR=33							
H08N1	**Diego Garcia H**	**26.14**	**142**	T		T	19 25 26.1	
	baz=324,slow=76,SNR=30							
KBZ	**Khabaz**	**30.83**	**343**	LR		LR	19 13 01.2	
	comp=Z,37nm,18.7s,baz=134,slow=39							
BRTR	**Keskin Array B**	**31.29**	**327**	LR		LR	19 13 05.6	
	comp=Z,23nm,18.2s,baz=132,slow=39							
MKAR	**Makanchi Array**	**39.35**	**30**	P		**P**	**19 00 16.8**	**-0.3**
	0.4nm,0.6s,baz=217,slow=7.6,SNR=7.1							
MKAR					PcP	**PcP**	**19 02 26.2**	**+0.4**
	0.1nm,0.5s,baz=244,slow=2.3,SNR=2.9							
AKASG	**Malin Array Be**	**41.62**	**335**	P		**P**	**19 00 37.5**	**+1.3**
	0.1nm,0.3s,baz=136,slow=8.4,SNR=4.0							
CMAR	**Chiang Mai Arr**	**42.14**	**79**	P		**P**	**19 00 41.5**	**+0.6**
	1.8nm,0.7s,baz=278,slow=9.1,SNR=15							
ZALV	**Zalesovo Beam**	**45.64**	**24**	P		**P**	**19 01 07.9**	**-0.6**
	0.9nm,0.6s,baz=251,slow=9.1,SNR=4.9							
GERES	**GERESS Array B**	**48.08**	**324**	P		**P**	**19 01 28.9**	**+1.0**
	0.2nm,0.6s,baz=125,slow=8.5,SNR=2.1							
TORD	**Torodi Ar. Bea**	**51.76**	**275**	P		**P**	**19 01 55.1**	**-1.1**
	0.5nm,0.8s,baz=60,slow=7.6,SNR=3.4							
SONM	**Songino Array**	**53.62**	**41**	P		**P**	**19 02 11.2**	**+1.6**
	0.4nm,0.8s,baz=250,slow=7.5,SNR=4.5							
ARCES	**ARCESS Array B**	**57.93**	**348**	P		**P**	**19 02 38.4**	**-1.6**
	2.6nm,0.9s,baz=145,slow=5.5,SNR=6.3							
ARCES					LR	LR	19 28 26.9	
	comp=Z,26nm,20.1s,baz=216,slow=37							
KSRS	**Korea Array**	**67.71**	**55**	P		**P**	**19 03 46.0**	**+0.3**
	1.4nm,0.8s,baz=273,slow=6.0,SNR=4.0							
H01W3	**Cape Leeuwin H**	**74.55**	**133**	T		T	20 25 52.0	
	baz=301,slow=75,SNR=7.6							
H01W2	**Cape Leeuwin H**	**74.55**	**133**	T		T	20 25 52.0	
	baz=301,slow=75,SNR=6.9							
H01W1	**Cape Leeuwin H**	**74.56**	**133**	T		T	20 25 53.3	
	baz=301,slow=75,SNR=7.5							
ASAR	**Alice Springs**	**85.87**	**116**	P		**P**	**19 05 27.5**	**-1.0**
	0.6nm,0.8s,baz=276,slow=5.0,SNR=6.9							
PDAR	**Pinedale Array**	**121.18**	**347**	PKP		**PKPdf**	**19 11 40.0**	**-1.7**
	0.4nm,0.8s,baz=64,slow=2.1,SNR=3.9							

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*IDC **19** 18:53:59.7±7.2, 5.29°S×105.00°W, h0km, mb3.7/2, mb1 4.1/2, mb1mx3.6/28, mbtmp3.7/2, MS3.7/8, Ms1 3.8/8, ms1mx3.4/25, Error ellipse: s-maj=401.3km s-min=92.0km az=103.0*
*NEIC **19** 18:53:59.7±2.4, 4.75°S±0.2°×102.04°W±0.08, h10km±2km, mb4.5/6, Error ellipse: s-maj=36.6km s-min=9.6km az=164.0*
ISC 19 18:54:03.0±1.4, 4.48°S±0.2°×101.7°W±0.2, h10km, n28, σ2.975/12, mb4.3/5, MS3.6/8, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**22.14**	**49**		LR	LR	19 07 00.2	
	comp=Z,291nm,19.2s,baz=140,slow=31							
JTS	**Las Juntas de**	**22.14**	**49**	P	P	**P**	**18 59 03.1**	**+4.0**
APG	**El Apazote**	**22.24**	**30**	LR	LR		19 06 58.9	
	comp=Z,250nm,21.7s,baz=212,slow=32							
CMIG	**Matias Romero**	**22.36**	**17**	LR	LR		19 06 42.4	
	comp=Z,118nm,19.4s,baz=194,slow=31							
ATAH	**Atahualpa**	**23.34**	**98**	LR	LR		19 08 11.9	
	comp=Z,81nm,18.3s,baz=223,slow=32							
MOIG	**Morelia**	**23.91**	**1**	P		**P**	**18 59 14.2**	**-3.1**
H06S1	**SOCORRO T**	**24.71**	**339**	T		T	19 23 36.3	
	SNR=33							
H06E1	**SOCORRO T-PHAS**	**24.74**	**339**	T		T	19 23 50.7	
	SNR=11							
NNA	**Nana**	**25.72**	**109**	P		**P**	**18 59 33.9**	**0.0**
NNA						IAmb	IAmb	18 59 44.7
	comp=Z,23nm,1.4s							
TEIG	**Tepich**	**27.77**	**28**	LR		LR	19 10 35.4	
	comp=Z,166nm,20.4s,baz=49,slow=33							
ROSC	**El Rosal**	**28.84**	**72**	P		**P**	**19 00 00.2**	**-2.1**
ROSC						IAmb	IAmb	19 00 05.2
	comp=Z,5.4nm,1.1s							
LPIG	**La Paz**	**29.52**	**344**	LR		LR	19 08 39.9	
	comp=Z,162nm,18.8s,baz=190,slow=30							
RUSC	**La Rusia**	**30.34**	**71**	P		**P**	**19 00 14.9**	**-0.8**
MNMC	**Minye Minye**	**34.58**	**118**	P		**P**	**19 00 51.7**	**-0.9**
MNMC						IAmb	IAmb	19 01 08.1
	comp=Z,4.8nm,0.8s							
NVAR	**Mina Array Bea**	**45.28**	**342**	LR		LR	19 19 12.4	
	comp=Z,103nm,18.2s,baz=218,slow=34							
PLCA	**Paso Flores**	**45.75**	**147**	LR		LR	19 18 12.0	
	comp=Z,126nm,18.9s,baz=316,slow=31							
YKA	**Yellowknife Ar**	**67.41**	**354**	P		**P**	**19 05 00.5**	**+2.1**
	comp=Z,0.6nm,0.7s,baz=166,slow=5.9,SNR=7.5							
YKA	**Yellowknife Ar**	**67.41**	**354**	P		**P**	**19 05 00.5**	**+2.1**
ILAR	**Eielson Array**	**76.54**	**342**	P		**P**	**19 05 50.7**	**-2.4**
	comp=Z,0.7nm,0.9s,baz=147,slow=5.1,SNR=6.0							
ILAR	**Eielson Array**	**76.54**	**342**	P		**P**	**19 05 50.7**	**-2.4**
H11N3	**WAKE ISLAND Hy**	**92.77**	**289**	T		T	20 45 23.8	
	baz=96,slow=75,SNR=77							
H11N2	**WAKE ISLAND Hy**	**92.78**	**289**	T		T	20 45 24.8	
	baz=96,slow=75,SNR=46							
H11N1	**WAKE ISLAND Hy**	**92.79**	**289**	T		T	20 45 25.0	
	baz=96,slow=75,SNR=39							
H11S2	**WAKE ISLAND Hy**	**92.88**	**288**	T		T	20 45 32.6	
	baz=101,slow=74,SNR=18							
H11S1	**WAKE ISLAND Hy**	**92.89**	**288**	T		T	20 45 37.8	
	baz=101,slow=74,SNR=14							
H11S3	**WAKE ISLAND Hy**	**92.90**	**288**	T		T	20 45 34.0	
	baz=101,slow=74,SNR=12							
CMAR	**Chiang Mai Arr**	**155.45**	**306**	PKPbc		**PKPdf**	**19 14 00.7**	**+2.8**
	comp=Z,0.5nm,0.9s,baz=66,slow=2.2,SNR=3.0							
CMAR	**Chiang Mai Arr**	**155.45**	**306**			**PKPdf**	**19 14 00.7**	**+2.8**

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*IDC **19** 19:17:01.1±1.0, 14.65°N×54.94°E, h0km, mb3.7/13, mb1 3.8/13, mb1mx3.6/42, mbtmp3.7/13, MS3.2/14, Ms1 3.2/14, ms1mx3.1/36, Error ellipse: s-maj=27.1km s-min=18.6km az=12.0*
ISC 19 19:17:03.2±1.0, 14.7°N±0.2°×54.9°E±0.1, h14km, n29, σ0.959/16, mb3.7/13, MS3.2/13, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WSAR	**Wadi Sarin**	**9.22**	**22**		LR	LR	19 22 34.0	
	comp=Z,215nm,20.8s,baz=193,slow=36							
GEYT	**Alibeck**	**23.35**	**6**	P		**P**	**19 22 11.2**	**-0.1**
	2.5nm,1.0s,baz=176,slow=8.6,SNR=4.5							
GEYT					LR	LR	19 32 30.6	
	comp=Z,85nm,21.8s,baz=335,slow=40							
EIL	**Elat**	**23.73**	**312**	LR	LR		19 32 00.5	
	comp=Z,32nm,18.8s,baz=114,slow=38							
MMAI	**Mount Meron Ar**	**25.48**	**319**	P		**P**	**19 22 30.6**	**-0.6**
	0.3nm,0.4s,baz=160,slow=9.0,SNR=2.4							
MMAI					LR	LR	19 33 21.6	
	comp=Z,51nm,18.2s,baz=240,slow=38							
H08N2	**Diego Garcia H**	**26.23**	**142**	T		T	19 49 41.9	
	baz=323,slow=76,SNR=54							
H08N3	**Diego Garcia H**	**26.25**	**142**	T		T	19 49 48.6	
	baz=323,slow=76,SNR=59							
H08N1	**Diego Garcia H**	**26.26**	**142**	T		T	19 49 43.6	
	baz=323,slow=76,SNR=54							
PALK	**Pallekele**	**26.32**	**103**	LR		LR	19 30 19.2	
	comp=Z,31nm,20.5s,baz=209,slow=30							
GNI	**Garni**	**26.92**	**343**	LR		LR	19 35 20.5	
	comp=Z,82nm,19.1s,baz=152,slow=41							
KBZ	**Khabaz**	**30.75**	**343**	LR		LR	19 37 17.2	
	comp=Z,45nm,18.5s,baz=138,slow=40							
BRTR	**Keskin Array B**	**31.18**	**327**	LR		LR	19 37 12.0	
	comp=Z,14nm,20.5s,baz=173,slow=39							
MKAR	**Makanchi Array**	**39.35**	**30**	P		**P**	**19 24 32.6**	**+0.5**
	0.5nm,0.6s,baz=213,slow=9.1,SNR=10.0							
MKAR					PcP	**PcP**	**19 26 40.4**	**-0.1**
	0.2nm,0.5s,baz=245,slow=3.7,SNR=4.1							
MKAR					LR	LR	19 41 19.1	
	comp=Z,54nm,20.5s,baz=210,slow=37							
AKASG	**Malin Array Be**	**41.53**	**335**	P		**P**	**19 24 49.2**	**-0.9**
	0.3nm,0.5s,baz=147,slow=7.4,SNR=4.2							
CMAR	**Chiang Mai Arr**	**42.27**	**79**	P		**P**	**19 24 57.1**	**+0.4**
	1.1nm,0.6s,baz=274,slow=9.7,SNR=11							
CMAR					LR	LR	19 43 10.6	
	comp=Z,10.0nm,19.1s,baz=235,slow=37							
ZALV	**Zalesovo Beam**	**45.66**	**24**	P		**P**	**19 25 22.9**	**-0.4**
	0.6nm,0.6s,baz=232,slow=8.1,SNR=4.5							
ZALV					LR	LR	19 44 29.2	
	comp=Z,26nm,18.1s,baz=242,slow=36							
GERES	**GERESS Array B**	**47.97**	**324**	P		**P**	**19 25 42.6**	**+1.0**
	0.1nm,0.3s,baz=123,slow=8.4,SNR=2.4							
FINES	**FINESS Array B**	**51.11**	**343**	P		**P**	**19 26 05.1**	**-0.1**
	1.6nm,0.6s,baz=128,slow=9.0,SNR=6.0							
TORD	**Torodi Ar. Bea**	**51.61**	**275**	P		**P**	**19 26 09.7**	**0.0**
	0.5nm,1.0s,baz=100,slow=8.1,SNR=3.0							
TORD					PcP	**PcP**	**19 27 24.1**	**+0.6**
	0.2nm,0.6s,baz=91,slow=5.4,SNR=2.7							
BOSA	**Boshof**	**51.72**	**214**	LR	LR	LR	19 48 30.2	
	comp=Z,45nm,18.0s,baz=227,slow=36							
SONM	**Songino Array**	**53.69**	**41**	P		**P**	**19 26 25.4**	**+0.6**
	0.2nm,0.5s,baz=243,slow=6.5,SNR=5.6							
ARCES	**ARCESS Array B**	**57.87**	**348**	P		**P**	**19 26 54.1**	**-0.2**
	3.5nm,1.0s,baz=139,slow=7.6,SNR=6.7							
KSRS	**Korea Array**	**67.81**	**55**	P		**P**	**19 28 00.4**	**-0.6**
	1.0nm,0.6s,baz=278,slow=5.9,SNR=3.8							
H01W3	**Cape Leeuwin H**	**74.67**	**133**	T		T	20 50 07.6	
	baz=301,slow=75,SNR=17							
H01W2	**Cape Leeuwin H**	**74.68**	**133**	T		T	20 50 08.1	
	baz=301,slow=75,SNR=13							
H01W1	**Cape Leeuwin H**

IDC 19 19:32:30.4±4.2,5°43S×151°91E,h59km±28km,mb3.3/2,mb1 3.6/3,mb1mx3.2/26,mbtmp3.6/3,ML1.6/1,Error ellipse: s-maj=109.0km s-min=18.2km az=114.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.13**	**6**	P	Pn	19 32 49.5	-0.6
	124nm,0.3s,baz=135,slow=5.7,SNR=57						
KRVT				S	Sn	19 33 04.9	+0.2
	553nm,0.3s,baz=328,slow=22,SNR=98						
PMG	**Port Moresby**	**6.15**	**230**	P	Pn	19 33 59.6	+1.0
	1.0nm,0.3s,baz=40,slow=17,SNR=5.4						
PMG				S	Sn	19 35 04.4	-3.2
	0.3nm,0.3s,baz=258,slow=19,SNR=1.8						
WRA	**Warramunga Arr**	**22.36**	**228**	P	P	19 37 23.5	-0.3
	0.9nm,0.8s,baz=53,slow=10,SNR=4.4						
ASAR	**Alice Springs**	**25.09**	**222**	P	P	19 37 49.6	-0.1
	1.5nm,0.7s,baz=56,slow=9.0,SNR=23						
TORD	**Torodi Ar. Bea**	**149.65**	**287**	PKPbc	PKPbc	19 52 14.4	-0.2
	0.3nm,0.4s,baz=84,slow=2.7,SNR=5.8						

*NEIC **19** 19:37:49.4±3.6,37°82S±0.08×74°4W±0.2,h43km±14km, Error ellipse: s-maj=22.0km s-min=11.0km az=97.0*
*IDC **19** 19:37:50.1±1.1,37°75S×73°63W,h0km,mb3.7/4, mb1 3.9/6,mb1mx3.7/21,mbtmp3.6/6,ML3.5/2,MS3.3/3, Ms1 3.3/3,ms1mx2.8/23,Error ellipse: s-maj=39.7km s-min=16.8km az=57.0*
*GUC **19** 19:37:50.8±0.6,37°75S×74°21W,h39km±4km,ML4.2*

ISC 19 19:37:48.9±1.4,37°70S±0°03×74°17W±0°08,h19km±5km, n29,σ1s97/32,mb3.6/8,1C-1D,Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI04	**Isla Mocha**	**0.75**	**163**	⇓*iP*	**Pg**	**19 38 04.0**	**+0.3**
BI04				*i*S	**Sg**	**19 38 13.6**	**-0.1**
BI04				IAML		19 38 14.7	
	comp=E,18μm,0.2s						
CCSP	**San Pedro de C**	**1.20**	**45**	*e*P	**Pg**	**19 38 11.9**	**-0.2**
CCSP				*i*S	**Sg**	**19 38 28.4**	**+0.6**
CCSP				IAML		19 38 32.1	
	comp=E,9μm,0.5s						
BI03	**Tigo**	**1.25**	**47**	*e*P	**Pg**	**19 38 13.2**	**+0.1**
BI03				*i*S	**Sg**	**19 38 29.7**	**+0.4**
BI03				IAML		19 38 35.0	
	comp=N,12μm,0.4s						
COCH	**Cobquecura**	**1.91**	**36**	*e*P	**Pg**	**19 38 25.8**	**+0.1**
COCH				*i*S	**Sg**	**19 38 51.6**	**+1.0**
CCHI	**Chillan**	**2.00**	**58**	*e*P	**Pg**	**19 38 26.0**	**-1.3**
CCHI				*i*S	**Sg**	**19 38 53.7**	**+0.5**
CCHI				IAML		19 38 58.5	
	comp=E,3μm,0.5s						
LC01	**Cunco**	**2.17**	**124**	⇑*iP*	**Pn**	**19 38 23.9**	**-0.2**
LC01				*i*S	**Sn**	**19 38 49.7**	**-0.7**
GO06	**Curarrehue**	**2.83**	**133**	*i*P	**Pn**	**19 38 33.8**	**+0.5**
GO06				*i*S	**Sn**	**19 39 07.6**	**+0.6**
GO06	**Curarrehue**	**2.83**	**133**		**Pn**	**19 38 33.8**	**+0.5**
GO05	**Huala**	**3.23**	**35**	*e*P	**Pg**	**19 38 48.8**	**-2.1**
GO05				*i*S	**Sg**	**19 39 33.9**	**+1.1**
GO05				IAML		19 39 39.9	
	comp=E,382nm,0.7s						
GO05	**Huala**	**3.23**	**35**		**Pn**	**19 38 41.6**	**+2.9**
PLCA	**Paso Flores**	**4.13**	**138**	Pn	**Pn**	**19 38 52.2**	**+1.1**
	comp=E,0.5nm,0.3s,baz=324,slow=11,SNR=19						
PLCA				Pg	Pg	19 39 00.4	-7.7
	comp=E,1.9nm,0.3s,baz=337,slow=16,SNR=27						
PLCA				Lg	Lg	19 39 52.2	
	comp=E,2.3nm,0.3s,baz=48,slow=19,SNR=3.0						
PLCA	**Paso Flores**	**4.13**	**138**		**Pn**	**19 38 52.4**	**+1.3**
PEL	**Peldehue**	**5.36**	**33**		**Pn**	**19 39 10.2**	**+2.2**
ROC1	**El Roble**	**5.37**	**30**		**Pn**	**19 39 10.6**	**+2.3**
CFA	**Coronel Fontan**	**7.80**	**41**	Pn	**Pn**	**19 39 43.1**	**+1.7**
	comp=E,1.4nm,0.3s,baz=207,slow=9.7,SNR=17						
CFA				Sn	**Sn**	**19 41 08.9**	**-0.3**
	comp=E,0.5nm,0.3s,baz=97,slow=19,SNR=2.5						
CFA				LR	LR	19 43 07.9	
	comp=E,53nm,19.5s,baz=262,slow=42						
GO04	**Tololo Observa**	**8.01**	**21**		**Pn**	**19 39 46.6**	**+2.0**
GO02	**Mina Guanaco**	**13.09**	**19**	Pn	**Pn**	**19 40 50.8**	**-3.3**
GO09	**Cerro Castillo**	**13.64**	**175**	Pn	Pn	19 40 56.0	-5.2
LPAZ	**La Paz**	**21.98**	**16**	P	**P**	**19 42 39.8**	**-2.7**
LPAZ				IAmb	IAmb	19 42 58.2	
	comp=Z,1.3nm,0.8s						
SIV	**San Ignacio**	**24.52**	**32**	P	P	19 43 14.9	+7.6
	comp=Z,0.4nm,0.5s,baz=241,slow=13,SNR=2.6						
PAYG	**Puerto Ayora**	**39.72**	**334**	P	**P**	**19 45 17.3**	**-3.0**
PAYG				IAmb	IAmb	19 45 35.2	
	comp=Z,24nm,1.2s						
ROSC	**El Rosal**	**42.32**	**360**	P	**P**	**19 45 38.9**	**-3.2**
ROSC				IAmb	IAmb	19 45 52.8	
	comp=Z,4.3nm,0.5s						
VNDA	**Vanda**	**60.14**	**192**	LR	LR	20 09 45.3	
	comp=Z,34nm,20.5s,baz=278,slow=32						
LPIG	**La Paz**	**70.23**	**325**	LR	LR	20 14 07.6	
	comp=Z,48nm,18.7s,baz=287,slow=31						
TXAR	**Lajitas Array**	**72.18**	**333**	P	P	19 49 18.5	+6.0
	comp=Z,0.2nm,0.7s,baz=158,slow=9.7,SNR=3.7						
BOSA	**Boshof**	**79.87**	**118**	P	**P**	**19 49 56.9**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=211,slow=5.9,SNR=3.5						
NVAR	**Mina Array Bea**	**85.97**	**327**	P	P	19 50 34.7	+6.8
	comp=Z,0.2nm,0.5s,baz=158,slow=7.6,SNR=3.0						
PDAR	**Pinedale Array**	**86.31**	**335**	P	**P**	**19 50 34.3**	**+4.8**
	comp=Z,0.3nm,0.7s,baz=152,slow=5.8,SNR=2.9						
BRTR	**Keskin Array B**	**125.08**	**64**	PKP	**PKiKP**	**19 56 51.4**	**+3.1**
	comp=Z,0.3nm,0.5s,baz=276,slow=3.4,SNR=3.1						

*RSPR **19** 19:54:34.5,18°26N×68°83W,h146km±1km,MD3.4/9*
*NEIC **19** 19:54:34.7±1.1,18°2N±0°2×68°83W±0°10,h142km±10km, Error ellipse: s-maj=33.6km s-min=11.3km az=193.0*
*OSPL **19** 19:54:35.2±1.4,17°81N×68°79W,h134km±17km,MD3.2, ML2.7*

ISC 19 19:54:36.6±1.6,18°3N±0°2×68°77W±0°05,h132km±11km, n50,σ0s98/60,17C-1D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCDR	**Punta Cana, DR**	**0.46**	**54**	⇑*eP*	**Pn**	**19 54 55.1**	**-0.5**
PCDR				*e*S	**Sn**	**19 55 11.1**	**+1.0**
PCDR	**Punta Cana, DR**	**0.46**	**54**	⇑*eP*	**Pn**	**19 54 55.1**	**-0.5**
PCDR	**Punta Cana, DR**	**0.46**	**54**	*i*P	**Pn**	**19 54 55.0**	**-0.7**
PCDR				*e*S	**Sn**	**19 55 10.6**	**+0.5**
PCDR				IAML		19 55 14.7	
	comp=Z,140nm,0.5s						
PCDR	**Punta Cana, DR**	**0.46**	**54**		**Sn**	**19 55 10.8**	**+0.7**
PCDR	**Punta Cana, DR**	**0.46**	**54**		**Pn**	**19 54 55.1**	**-0.5**
DR12	**Loma Pena Alta**	**0.79**	**313**		**Pn**	**19 54 56.6**	**-1.4**
SDD	**Santo Domingo**	**1.11**	**281**	*i*P	**Pn**	**19 54 59.9**	**-0.8**
SDD				*e*S	**Sn**	**19 55 18.2**	**-0.8**
SDD				IAML		19 55 20.2	
	comp=Z,14nm,0.5s						
IDE	**Isla Desecheo**	**1.24**	**83**	⇑*eP*	**Pn**	**19 55 01.8**	**-0.3**
IDE	**Isla Desecheo**	**1.24**	**83**	*e*S	**Sn**	**19 55 22.7**	**+1.3**
IDE	**Isla Desecheo**	**1.24**	**83**		**Pn**	**19 55 01.8**	**-0.3**
IDE					**Sn**	**19 55 22.7**	**+1.3**
AGPR	**Aguadilla, PR**	**1.59**	**82**	*e*S	**Sn**	**19 55 29.0**	**+0.8**
AGPR	**Aguadilla, PR**	**1.59**	**82**	⇑*eP*	**Pn**	**19 55 05.3**	**-0.5**
AGPR	**Aguadilla, PR**	**1.59**	**82**	*i*P	**Pn**	**19 55 05.3**	**-0.5**
AGPR				*e*S	**Sn**	**19 55 27.4**	**-0.8**
AGPR				IAML		19 55 32.9	
	comp=Z,54nm,0.4s						
AGPR	**Aguadilla, PR**	**1.59**	**82**		**Sn**	**19 55 29.0**	**+0.8**
AGPR	**Aguadilla, PR**	**1.59**	**82**		**Pn**	**19 55 05.0**	**-0.8**
CRPR	**Cabo Rojo, PR**	**1.60**	**98**	⇑*eP*	**Pn**	**19 55 05.0**	**-1.0**
CRPR	**Cabo Rojo, PR**	**1.60**	**98**		**Pn**	**19 55 04.8**	**-1.2**
LSP	**Las Mesas**	**1.60**	**92**	*e*S	**Sn**	**19 55 29.8**	**+1.3**
LSP	**Las Mesas**	**1.60**	**92**	⇑*eP*	**Pn**	**19 55 05.8**	**-0.3**
LSP	**Las Mesas**	**1.60**	**92**		**Pn**	**19 55 05.8**	**-0.3**
LSP					**Sn**	**19 55 29.8**	**+1.3**
MLPR	**Magueyes Islan**	**1.66**	**99**	⇑*eP*	**Pn**	**19 55 05.8**	**-0.9**
MLPR	**Magueyes Islan**	**1.66**	**99**		**Pn**	**19 55 04.4**	**-2.3**
GBPR	**Guanica, Bosqu**	**1.82**	**98**	*e*S	**Sn**	**19 55 34.1**	**+1.2**
GBPR	**Guanica, Bosqu**	**1.82**	**98**	⇓*eP*	**Pn**	**19 55 07.9**	**-0.6**
GBPR	**Guanica, Bosqu**	**1.82**	**98**		**Pn**	**19 55 07.9**	**-0.6**
GBPR					**Sn**	**19 55 34.1**	**+1.2**
AOPR	**Arecibo Observ**	**1.92**	**87**	*e*S	**Sn**	**19 55 36.0**	**+0.9**
AOPR	**Arecibo Observ**	**1.92**	**87**	⇑*eP*	**Pn**	**19 55 08.9**	**-0.8**
AOPR	**Arecibo Observ**	**1.92**	**87**		**Pn**	**19 55 08.3**	**-1.4**
AOPR	**Arecibo Observ**	**1.92**	**87**		**Sn**	**19 55 36.0**	**+0.9**
OBIP	**Obispado Ponce**	**2.07**	**95**	⇑*eP*	**Pn**	**19 55 10.9**	**-0.6**
OBIP	**Obispado Ponce**	**2.07**	**95**	*e*S	**Sn**	**19 55 38.8**	**+0.5**
OBIP	**Obispado Ponce**	**2.07**	**95**		**Pn**	**19 55 10.4**	**-1.1**
OBIP	**Obispado Ponce**	**2.07**	**95**		**Sn**	**19 55 38.8**	**+0.5**
CELP	**Cerrillos**	**2.09**	**94**	⇑*eP*	**Pn**	**19 55 10.9**	**-0.9**
CELP				*e*S	**Sn**	**19 55 39.6**	**+0.9**
CELP	**Cerrillos**	**2.09**	**94**		**Pn**	**19 55 10.9**	**-0.9**
CELP					**Sn**	**19 55 39.6**	**+0.9**
EMPR	**Esperanza - Ma**	**2.14**	**83**	⇑*eP*	**Pn**	**19 55 11.4**	**-1.0**
EMPR	**Esperanza - Ma**	**2.14**	**83**		**Pn**	**19 55 11.4**	**-1.0**
SC01	**Santiago de lo**	**2.19**	**303**	*e*S	**Sn**	**19 55 41.4**	**+0.2**
SC01				IAML		19 55 44.4	
	comp=Z,51nm,0.7s						
SJG	**San Juan**	**2.49**	**93**	Pn	**Pn**	**19 55 15.9**	**-0.9**
SDDR	**Presa de Saban**	**2.50**	**287**	*i*P	**Pn**	**19 55 18.0**	**+1.1**
SDDR				*e*S	**Sn**	**19 55 48.9**	**+0.9**
SDDR				IAML		19 55 52.2	
	comp=Z,20nm,0.5s						
IGPR	**InterUniversit**	**2.55**	**96**	⇑*eP*	**Pn**	**19 55 17.2**	**-0.2**
IGPR	**InterUniversit**	**2.55**	**96**	⇑*eP*	**Pn**	**19 55 17.0**	**-0.5**
IGPR	**InterUniversit**	**2.55**	**96**	*e*S	**Sn**	**19 55 49.7**	**+0.8**
CBYP	**Canovanas**	**2.77**	**89**	⇑*eP*	**Pn**	**19 55 19.4**	**-1.0**
CBYP	**Canovanas**	**2.77**	**89**	Pn	**Pn**	**19 55 18.7**	**-1.7**
HUMP	**Col San Antoni**	**2.78**	**92**	⇑*eP*	**Pn**	**19 55 19.4**	**-1.0**
HUMP	**Col San Antoni**	**2.78**	**92**	⇑*eP*	**Pn**	**19 55 19.7**	**-0.7**
HUMP	**Col San Antoni**	**2.78**	**92**	Pn	**Pn**	**19 55 18.6**	**-1.8**
HUMP					Pn	19 55 19.0	-1.4
MTP	**Monte Pirata**	**3.06**	**92**	⇑*eP*	**Pn**	**19 55 23.2**	**-0.9**
MTP	**Monte Pirata**	**3.06**	**92**		**Pn**	**19 55 23.5**	**-0.6**

*IDC **19** 19:55:25.7±2.4,20°09S×172°41E,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.8/29,mbtmp3.7/4,MS3.4/2,Ms1 3.4/2, ms1mx2.9/21,Error ellipse: s-maj=146.0km s-min=33.9km az=157.0*

ISC 19 19:55:31.1±2.0,20°0S±0°9×172°3E±0°4,h35km,n8, σ0s40/6,mb3.8/4,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**35.79**	**257**	P	**P**	**20 02 27.3**	**0.0**
	0.6nm,0.9s,baz=90,slow=9.5,SNR=4.9						
VNDA	**Vanda**	**57.75**	**183**	LR	LR	20 24 02.6	
	comp=Z,38nm,20.9s,baz=192,slow=30						
PETK	**Petropavlovsk-**	**73.94**	**351**	LR	LR	20 35 36.1	
	comp=Z,19nm,19.3s,baz=60,slow=33						
NVAR	**Mina Array Bea**	**87.16**	**47**	P	**P**	**20 08 14.5**	**+0.5**
	0.7nm,0.8s,baz=240,slow=7.4,SNR=5.5						
ILAR	**Eielson Array**	**90.15**	**16**	P	**P**	**20 08 27.0**	**-0.2**
	0.6nm,0.8s,baz=224,slow=5.0,SNR=4.9						
TXAR	**Lajitas Array**	**94.59**	**61**	P	**P**	**20 08 48.3**	**-0.4**
	0.3nm,0.8s,baz=223,slow=7.4,SNR=4.9						
BRG	**Berggiesshubel**	**144.83**	**336**	*e*PKP	**PKPdf**	**20 15 04.2**	**0.0**
	7.4nm,1.1s						
GERES	**GERESS Array B**	**146.53**	**334**	PKPbc	**PKPbc**	**20 15 08.8**	**0.0**
	1.0nm,0.7s,baz=33,slow=4.0,SNR=8.9						

*NEIC **19** 20:01:01.1±1.6,43°79N±0°05×105°23W±0°08,h0km±2km, ML3.4/51,Error ellipse: s-maj=9.5km s-min=8.8km az=96.0*
*IDC **19** 20:01:02.1±0.9,44°03N×105°68W,h0km,mb3.6/1, mb1 3.6/7,mb1mx3.4/39,mbtmp3.3/7,ML3.0/5,Error ellipse: s-maj=24.0km s-min=7.3km az=148.0*

ISC 19 20:01:00.5±0.8,43°80N±0°06×105°23W±0°05,h0km,n48, σ0s86/50,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.92**	**69**		**Pb**	**20 01 19.4**	**0.0**
K22A	**Casper**	**1.49**	**220**		**Pn**	**20 01 27.2**	**-1.5**
K22A				IAML		20 01 49.9	
	comp=E,397nm,0.4s						
K22A				IAML		20 01 53.5	
	comp=N,479nm,0.4s						
PHWY	**Pilot Hill**	**2.50**	**184**		**Pn**	**20 01 43.0**	**+0.3**
RWWY	**Rawlins**	**2.57**	**215**		**Pn**	**20 01 43.8**	**+0.2**
RWWY				IAML		20 02 21.1	
	comp=N,167nm,0.8s						
RWWY				IAML		20 02 21.2	
	comp=N,258nm,0.8s						
N23A	**Red Feather La**	**2.95**	**191**		**Pn**	**20 01 49.9**	**+1.0**
N23A				IAML		20 02 34.3	
	comp=E,107nm,0.5s						
N23A				IAML		20 02 34.5	
	comp=N,85nm,0.6s						
LAO	**LASA Array**	**2.97**	**347**		**Pn**	**20 01 49.3**	**+0.3**
RLMT	**Red Lodge**	**3.18**	**296**		**Pn**	**20 01 52.3**	**+0.4**
RLMT				IAML		20 02 41.1	
	comp=N,93nm,0.4s						
RLMT				IAML		20 02 46.3	
	comp=N,78nm,0.4s						
BW06	**Boulder Array**	**3.33**	**253**		**Pn**	**20 01 54.9**	**+1.0**
BW06				IAML		20 02 46.5	
	comp=N,92nm,0.3s						
BW06				IAML		20 02 48.3	
	comp=E,63nm,0.4s						
PD31	**Pinedale Array**	**3.33**	**253**		**Pn**	**20 01 54.9**	**+0.9**
PDAR	**Pinedale Array**	**3.33**	**253**	Pn	**Pn**	**20 01 55.4**	**+1.4**
	comp=E,5.7nm,0.3s,baz=70,slow=16,SNR=106						
PDAR				Pg	**Pb**	**20 02 00.4**	**-0.1**
	comp=E,24nm,0.3s,baz=70,slow=19,SNR=79						
PDAR				Sn	**Sn**	**20 02 34.1**	**-0.2**
	comp=E,3.8nm,0.3s,baz=74,slow=24,SNR=3.8						
PDAR				Lg	Lg	20 02 39.8	
	comp=E,18nm,0.3s,baz=67,slow=31,SNR=12						
YNE	**Yellowstone No**	**3.63**	**291**		**Pn**	**20 01 58.2**	**0.0**
YMP	**Mirror Lake PI**	**3.66**	**287**		**Pn**	**20 01 59.4**	**+0.7**
OGNE	**Ogallala**	**3.71**	**139**		**Pn**	**20 02 00.5**	**+1.5**
LKWY	**Lake**	**3.80**	**283**		**Pn**	**20 02 01.7**	**+1.2**
LKWY				IAML		20 02 27.7	
	comp=E,39nm,0.4s						
LKWY				IAML		20 02 27.8	
	comp=E,54nm,0.6s						
H17A	**Grant Village**	**3.90**	**281**		**Pn**	**20 02 03.0**	**+1.1**
FLWY	**Flagg Ranch**	**3.96**	**276**		**Pn**	**20 02 02.4**	**-0.3**
FLWY				IAML		20 03 11.2	
	comp=E,72nm,2.4s						
FLWY				IAML		20 03 16.6	
	comp=E,56nm,1.1s						
MOOW	**Moose Ponds**	**4.00**	**271**		**Pn**	**20 02 04.1**	**+0.9**
ISCO	**Idaho Springs**	**4.01**	**184**		**Pn**	**20 02 04.3**	**+0.9**
REDW	**Red Top Meadow**	**4.11**	**266**		**Pn**	**20 02 05.4**	**+0.7**
REDW				IAML		20 03 10.6	
	comp=E,46nm,0.5s						
REDW				IAML		20 03 17.1	
	comp=E,63nm,1.1s						
TPAW	**Teton Pass**	**4.17**	**268**		**Pn**	**20 02 06.6**	**+1.0**
TPAW				IAML		20 03 22.7	
	comp=E,32nm,0.9s						
TPAW				IAML		20 03 24.2	
	comp=E,53nm,1.0s						
O20A	**White River Ci**	**4.30**	**213**		**Pn**	**20 02 06.9**	**-0.4**
O20A				IAML		20 03 28.7	
	comp=E,48nm,1.0s						
O20A				IAML		20 03 30.2	
	comp=N,63nm,2.2s						
YHB	**Horse Butte**	**4.39**	**285**		**Pn**	**20 02 08.4**	**-0.2**
YHL	**Hebgen Lake**	**4.40**	**286**		**Pn**	**20 02 08.3**	**-0.5**
AHID	**Auburn Hatcher**	**4.41**	**258**		**Pn**	**20 02 09.1**	**+0.2**
AHID				IAML		20 03 35.0	
	comp=E,41nm,1.1s						
RDMU	**Red Mountain**	**4.56**	**226**		**Pn**	**20 02 12.4**	**+1.5**
QLMT	**Earthquake Lak**	**4.57**	**285**		**Pn**	**20 02 10.4**	**-0.6**
DGMT	**Dagmar**	**4.73**	**8**		**Pn**	**20 02 14.5**	**+1.5**
KSCO	**Kaye Shedlock'**	**5.17**	**157**		**Pn**	**20 02 19.5**	**+0.3**
TCUT	**Toone Canyon**	**5.30**	**242**		**Pn**	**20 02 22.2**	**+1.1**
SPUT	**South Promonto**	**5.88**	**247**		**Pn**	**20 02 29.7**	**+0.6**
P17A	**Butcher Ranch,**	**5.98**	**226**		**Pn**	**20 02 30.5**	**+0.1**
SRU	**San Rafael Swe**	**6.14**	**222**		**Pn**	**20 02 32.0**	**-0.7**
ECSD	**EROS Data Cent**	**6.24**	**88**		**Pn**	**20 02 33.7**	**0.0**
TMUT	**Trail Mountain**	**6.35**	**227**		**Pn**	**20 02 36.4**	**+0.8**
BGU	**Big Grassy Mou**	**6.45**	**246**		**Pn**	**20 02 37.4**	**+0.5**
Q16A	**Castle Valley**	**6.62**	**225**		**Pn**	**20 02 39.5**	**+0.4**
T25A	**Trinidad**	**6.68**	**174**		**Pn**	**20 02 40.7**	**+0.6**
DUG	**Dugway, Tooele**	**6.70**	**240**		**Pn**	**20 02 40.7**	**+0.5**
MSO	**Missoula**	**6.85**	**299**		**Pn**	**20 02 42.3**	**+0.1**
MSU	**Marysvale**	**7.44**	**227**		**Pn**	**20 02 51.3**	**+0.8**
MTPU	**Mount Pierson**	**7.80**	**225**		**Pn**	**20 02 54.1**	**-1.4**
ELK	**Elko**	**8.03**	**251**	Pn	**Pn**	**20 03 00.2**	**+1.7**
	comp=E,0.5nm,0.3s,baz=68,slow=8.1,SNR=11						
ELK				Lg	Lg	20 05 09.6	
	comp=E,0.1nm,0.3s,baz=65,slow=5.3,SNR=2.5						
PSUT	**Pine Spring**	**8.37**	**234**		**Pn**	**20 03 04.1**	**+1.0**
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**Pn**	**20 03 13.2**	**+0.6**
	comp=E,0.8nm,0.3s,baz=229,slow=11,SNR=10						
ULM				Lg	Lg	20 05 44.0	
	comp=E,0.5nm,0.3s,baz=131,slow=19,SNR=4.4						
NVAR	**Mina Array Bea**	**11.22**	**246**	Pn	**Pn**	**20 03 43.2**	**+0.9**
	comp=E,0.1nm,0.3s,baz=61,slow=14,SNR=4.8						
TXAR	**Lajitas Array**	**14.49**	**175**	Pn	**P**	**20 04 33.7**	**-0.1**
	comp=E,0.0nm,0.3s,baz=356,slow=6.4,SNR=4.3						
YKA	**Yellowknife Ar**	**19.51**	**347**	P	**P**	**20 05 27.6**	**-1.4**
	comp=E,0.1nm,0.3s,baz=162,slow=12,SNR=3.9						
MKAR	**Makanchi Array**	**89.55**	**355**	P	**P**	**20 13 59.5**	**-0.1**
	comp=E,0.4nm,0.8s,baz=25,slow=6.2,SNR=3.8						

*GCG **19** 20:10:40.7±0.8,14°56N×93°00W,h31km±999km,MD3.8*
*MEX **19** 20:10:41.5±0.6,14°40N×92°99W,h12km±25km,MD3.8*

ISC 19 20:10:44.4±2.2,14°7N±0°2×92°8W±0°1,h51km,n6, σ1s35/11,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**0.59**	**71**	*i*P	**Pn**	**20 10 54.9**	**-1.9**
THIG				*e*S	**Sn**	**20 11 06.8**	**+1.2**
PCIG		**1.05**	**340**	*e*P	**Pn**	**20 11 02.2**	**-0.6**
PCIG				*i*S	**Sn**	**20 11 17.2**	**+0.9**
STG3	**Santiaguito 3,**	**1.23**	**90**	*e*P	**Pn**	**20 11 04.2**	**-1.1**
FUG	**Fuego 3**	**1.95**	**98**	*e*P	**Pn**	**20 11 14.9**	**-0.4**
FUG				*e*S	**Sn**	**20 11 40.8**	**+2.1**
IXG	**Ixpaco**	**2.39**	**103**	*e*P	**Pn**	**20 11 20.1**	**-1.1**
IXG				*e*S	**Sn**	**20 11 50.5**	**+1.2**
CMIG	**Matias Romero**	**3.07**	**320**	*i*P	**Pn**	**20 11 30.1**	**-0.4**
CMIG				*i*S	**Sn**	**20 12 06.4**	**+0.5**

JMA 19 20:15:40.8±0.2,35°45N×140°90E,h22km±2km,M1.3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.25**	**352**	P	Pb	20 15 46.8	-0.2
CHOJ				*e*S	Sb	20 15 51.3	+0.1
JYT	**Yasato**	**0.96**	**324**	*e*S	Sb	20 16 10.7	-0.4

JMA 19 20:16:11.5±0.1,36°93N×138°28E,h19km±2km,M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJN	**Nakama**	**0.20**	**332**	P	Pg	20 16 16.6	+0.1
JJN				S	Sg	20 16 20.6	+0.7
MAT	**Matsushiro**	**0.39**	**189**	P	Pg	20 16 18.9	-0.8
MAT				S	Sg	20 16 24.1	-1.1
MAT	**Matsushiro**	**0.39**	**189**	P	Pg	20 16 18.9	-0.8
MAT				S	Sg	20 16 24.0	-1.2
JGK	**Kuni**	**0.47**	**142**	P	Pg	20 16 21.1	0.0
JNG	**Nsakai**	**0.54**	**196**	P	Pb	20 16 21.3	-1.1
JNG				S	Sb	20 16 28.2	-1.6
JHK	**Hiroka**	**0.67**	**61**	P	Pb	20 16 24.3	-0.2
JHK				*e*S	Sg	20 16 34.2	+0.5
JKT	**Katashina**	**0.79**	**102**	P	Pb	20 16 26.5	-0.2
JKT				S	Sb	20 16 36.8	-0.3
JTT	**Ttatey**	**0.83**	**247**	P	Pg	20 16 27.8	+0.1
JSZ	**Suzu**	**0.90**	**306**	P	Pb	20 16 27.7	-0.7
JSZ				S	Sb	20 16 40.0	0.0
JRY	**Ryogami san**	**1.04**	**151**	P	Pb	20 16 30.0	-0.9
JSD	**Sado**	**1.10**	**359**	P	Pn	20 16 31.1	-0.9
JSD				S	Sb	20 16 46.1	+0.1

JMA 19 20:16:12.2±0.2,31°32N×142°58E,h49km,M3.8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.59**	**338**	*e*S	Sn	20 17 47.6	+2.0
BSO3	**Boso 3**	**3.88**	**334**	P	Pn	20 17 11.5	+2.4
BSO3				*e*S	Sn	20 17 56.2	+2.9
BSO4	**Boso 4**	**4.12**	**333**	*e*S	Sn	20 18 01.5	+2.3
JOD2	**Odawara 2**	**4.90**	**324**	P	Pn	20 17 25.5	+2.2
JOD2				*e*S	Sn	20 18 21.0	+2.3
JHU	**Hanno**	**5.29**	**330**	P	Pn	20 17 30.7	+2.0
JHU				*e*S	Sn	20 18 30.4	+2.1
JHO	**Hitachi**	**5.54**	**343**	P	Pn	20 17 34.0	+2.0
JHO				*e*S	Sn	20 18 34.9	+0.6
JRY	**Ryogami san**	**5.60**	**328**	P	Pn	20 17 35.1	+2.2
JRY				*e*S	Sn

		12nm,0.5s							
IZV	**Izvestkoviy**		**2.36**	**332**	Pg	**Pb**	**20**	**27**	**58.9 -0.1**
		5.5nm,0.3s							
IZV					Lg	Lg	20	28	32.5
		12nm,0.5s							
KOTS	**Kotyrbulak**		**2.40**	**342**	*e*P	**Pb**	**20**	**27**	**59.6 +0.1**
		22nm,0.3s							
KOTS					*e*S	**Sg**	**20**	**28**	**33.7 +0.6**
		12nm,0.5s							
KOTS	**Kotyrbulak**		**2.40**	**342**	Pg	**Pb**	**20**	**27**	**59.6 +0.1**
		22nm,0.3s							
KOTS					Lg	Lg	20	28	33.7
		12nm,0.5s							
SHLS	**Shalkode**		**2.41**	**24**	*e*P	**Pg**	**20**	**28**	**01.0 -1.4**
		2.0nm,0.2s							
SHLS					*e*S	**Sg**	**20**	**28**	**36.1 +2.5**
		14nm,0.4s							
SHLS	**Shalkode**		**2.41**	**24**	Pg	**Pg**	**20**	**28**	**01.0 -1.4**
		2.0nm,0.2s							
SHLS					Lg	Lg	20	28	36.1
		14nm,0.4s							
KZA	**Kyzart**		**2.43**	**298**	⇑*i*P	**Pb**	**20**	**27**	**58.1 -2.2**
		baz=99							
KZA					⇑*i*S	**Sb**	**20**	**28**	**30.2 -0.3**
		baz=99							
MTBS	**Maitube**		**2.51**	**330**	*e*P	**Pb**	**20**	**28**	**01.4 0.0**
		5.5nm,0.2s							
MTBS					*e*S	**Sg**	**20**	**28**	**36.5 -0.3**
		7.3nm,0.2s							
MTBS	**Maitube**		**2.51**	**330**	Pg	**Pb**	**20**	**28**	**01.4 0.0**
		5.5nm,0.2s							
MTBS					Lg	Lg	20	28	36.5
		7.3nm,0.2s							
KURS	**Kuram**		**2.53**	**1**	*e*P	**Pb**	**20**	**28**	**01.8 +0.1**
		6.8nm,0.5s							
KURS					*e*S	**Sg**	**20**	**28**	**37.5 +0.1**
		6.2nm,1.1s							
KURS	**Kuram**		**2.53**	**1**	Pg	**Pb**	**20**	**28**	**01.7 +0.1**
		6.8nm,0.5s							
KURS					Lg	Lg	20	28	37.5
		6.2nm,1.1s							
KPKS	**Kokpek**		**2.54**	**9**	*e*P	**Pb**	**20**	**28**	**01.7 -0.2**
		7.8nm,0.3s							
KPKS					*e*S	**Sg**	**20**	**28**	**37.2 -0.6**
		19nm,0.5s							
PDGK	**Podgornoye**		**2.58**	**23**	Pg	**Pb**	**20**	**28**	**01.3 -1.2**
		2.5nm,0.4s							
PDGK					Lg	Lg	20	28	36.7
		4.8nm,0.6s							
PDGK	**Podgornoye**		**2.58**	**23**	⇑Pg	**Pb**	**20**	**28**	**02.0 -0.5**
		3.6nm,0.5s							
PDGK					⇓Lg	Lg	20	28	38.4
		17nm,1.0s							
KST	**Kastek**		**2.63**	**323**	*e*P	**Pb**	**20**	**28**	**03.5 0.0**
		6.5nm,0.4s							
KST					*e*S	**Sg**	**20**	**28**	**40.6 -0.2**
		8.0nm,0.6s							
KST	**Kastek**		**2.63**	**323**	Pg	**Pb**	**20**	**28**	**03.5 0.0**
		6.5nm,0.4s							
KST					Lg	Lg	20	28	40.6
		8.0nm,0.6s							
TKM2	**Tokmak 2**		**2.72**	**317**	⇑*i*P	**Pb**	**20**	**28**	**02.3 -2.8**
		baz=17							
TKM2					⇑*i*S	**Sb**	**20**	**28**	**37.0 -1.6**
		baz=17							
TKM2	**Tokmak 2**		**2.72**	**317**	⇓Pg	**Pb**	**20**	**28**	**05.4 +0.4**
		0.9nm,0.4s							
TKM2					⇓Lg	Lg	20	28	44.5
		3.2nm,0.5s							
DGS	**Degeres**		**2.88**	**323**	*e*P	**Pb**	**20**	**28**	**07.7 0.0**
		3.7nm,0.3s							
DGS					*e*S	**Sg**	**20**	**28**	**47.8 -0.8**
		8.0nm,0.5s							
DGS	**Degeres**		**2.88**	**323**	Pg	**Pb**	**20**	**28**	**07.7 0.0**
		3.7nm,0.3s							
DGS					Lg	Lg	20	28	47.8
		8.0nm,0.5s							
KTBS	**Karatobe**		**2.95**	**339**	*e*P	**Pb**	**20**	**28**	**09.0 +0.1**
		3.7nm,0.5s							
KTBS					*e*S	**Sg**	**20**	**28**	**50.0 -1.0**
		12nm,0.3s							
KTBS	**Karatobe**		**2.95**	**339**	Pg	**Pb**	**20**	**28**	**09.0 +0.1**
		3.7nm,0.5s							
KTBS					Lg	Lg	20	28	50.1
		12nm,0.3s							
UCH	**Uchtor**		**2.99**	**296**	⇑*i*P	**Pb**	**20**	**28**	**06.0 -3.8**
		baz=97							
UCH					⇑*i*S	**Sb**	**20**	**28**	**43.5 -3.1**
		baz=97							
CHKK	**Chushkaly**		**3.01**	**344**	*e*P	**Pb**	**20**	**28**	**10.8 +0.9**
		2.1nm,0.1s							
CHKK					*e*S	**Sg**	**20**	**28**	**53.0 +0.1**
		9.3nm,0.2s							
CHKK	**Chushkaly**		**3.01**	**344**	Pg	**Pb**	**20**	**28**	**10.9 +0.9**
		2.1nm,0.1s							
CHKK					Lg	Lg	20	28	53.0
		9.3nm,0.2s							
AAK	**Ala-Archa**		**3.19**	**303**	⇑*i*P	**Pb**	**20**	**28**	**08.7 -4.4**
		baz=3.0							
AAK					⇑*i*S	**Sn**	**20**	**28**	**48.0 +3.2**
		baz=3.0							
AAK	**Ala-Archa**		**3.19**	**303**	⇑Pg	**Pb**	**20**	**28**	**13.2 +0.1**
		0.9nm,0.3s							
AAK					⇑Lg	Lg	20	28	57.1
		7.0nm,0.8s							
KUU	**Kurty**		**3.22**	**336**	*e*P	**Pb**	**20**	**28**	**14.1 +0.7**
		1.1nm,0.4s							
KUU					*e*S	**Sg**	**20**	**28**	**58.1 -1.3**
		1.7nm,0.3s							
KUU	**Kurty**		**3.22**	**336**	Pg	**Pb**	**20**	**28**	**14.1 +0.7**
		1.1nm,0.4s							
KUU					Lg	Lg	20	28	58.1
		1.7nm,0.3s							
ARXS	**Arharly**		**3.26**	**356**	*e*P	**Pb**	**20**	**28**	**14.2 0.0**
		3.3nm,0.3s							
ARXS					*e*S	**Sg**	**20**	**28**	**58.7 -2.2**
		5.5nm,0.5s							
ARXS	**Arharly**		**3.26**	**356**	Pg	**Pb**	**20**	**28**	**14.2 0.0**
		3.3nm,0.3s							
ARXS					Lg	Lg	20	28	58.7
		5.5nm,0.5s							
KRBS	**Karabastau**		**3.29**	**327**	*e*P	**Pb**	**20**	**28**	**14.2 -0.4**
		1.5nm,0.4s							
KRBS					*e*S	**Sg**	**20**	**28**	**58.6 -3.1**
		2.3nm,0.6s							
KRBS	**Karabastau**		**3.29**	**327**	Pg	**Pb**	**20**	**28**	**14.2 -0.4**
		1.5nm,0.4s							
KRBS					Lg	Lg	20	28	58.6
		2.3nm,0.6s							
AML	**Almayashu**		**3.53**	**291**	⇓*i*P	**Pn**	**20**	**28**	**13.4 +2.0**
		baz=92							
AML					⇓*i*S	**Sn**	**20**	**28**	**56.4 +3.0**
		baz=92							
USP	**Ospenovka**		**3.55**	**312**	⇑*i*P	**Pn**	**20**	**28**	**13.5 +2.1**
		baz=12							
USP					⇑*i*S	**Sn**	**20**	**28**	**56.5 +3.1**
		baz=12							
DJR	**Jarkent**		**3.59**	**19**	*e*P	**Pb**	**20**	**28**	**19.8 +0.1**
		0.3nm,0.1s							
DJR					*e*S	**Sg**	**20**	**29**	**08.6 -2.8**
		4.9nm,0.6s							
DJR	**Jarkent**		**3.59**	**19**	Pg	**Pb**	**20**	**28**	**19.8 +0.1**
		0.3nm,0.1s							
DJR					Lg	Lg	20	29	08.6
		4.9nm,0.6s							
SGDS	**Sogindy**		**3.60**	**315**	Pg	**Pb**	**20**	**28**	**20.5 +0.6**
		1.6nm,0.2s							
SGDS					Lg	Lg	20	29	09.4
		2.1nm,0.3s							
EKS2	**Erkin-Say**		**3.67**	**299**	⇓*i*P	**Pn**	**20**	**28**	**15.1 +2.0**
		baz=0.0							
EKS2					⇓*i*S	**Sn**	**20**	**28**	**59.4 +2.9**
		baz=0.0							
MRKS	**Merke**		**4.07**	**298**	*e*P	**Pb**	**20**	**28**	**29.8 +1.8**
		1.0nm,0.1s							
MRKS					*e*S	**Sg**	**20**	**29**	**25.6 -1.3**
		2.2nm,0.3s							
MRKS	**Merke**		**4.07**	**298**	Pg	**Pb**	**20**	**28**	**29.8 +1.8**
		1.0nm,0.1s							
MRKS					Lg	Lg	20	29	25.6
		2.2nm,0.3s							
KAPS	**Kapalarasan**		**4.42**	**11**	*e*P	**Pb**	**20**	**28**	**34.7 +0.8**
		0.2nm,0.2s							
KAPS					*e*S	**Sg**	**20**	**29**	**33.9 -4.0**
		1.9nm,0.4s							
KAPS	**Kapalarasan**		**4.42**	**11**	Pg	**Pb**	**20**	**28**	**34.7 +0.8**
		0.2nm,0.2s							
KAPS					Lg	Lg	20	29	33.9
		1.9nm,0.4s							

IDC ***19*** *21:23:09.7±4.7,36°.91N×70°.88E,h125km±33km,mb3.5/1, mb1 3.1/8,mb1mx2.8/54,mbtmp3.6/8,MS3.6/1,Ms1 3.6/1, ms1mx2.3/39,Error ellipse: s-maj=51.7km s-min=19.2km az=156.0*

NNC ***19*** *21:23:15.0±4.7,37°.16N×70°.90E,h139km±70km,mb2.9, mpv3.6,Error ellipse: s-maj=42.0km s-min=25.6km az=28.0*

ISC 19 21:23:11.5±1.6,**37°.0N**±0°.1×**70°.85E**±0°.08,**h150**km,**n15, s19**60/21,**5C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.10**	**358**	⇓P			**Pn**	**21 24 39.9**	**+0.5**
	3.9nm,0.6s,baz=183,slow=13,SNR=29								
KK31				S			**Sn**	**21 25 50.1**	**+1.8**
	6.0nm,0.6s,baz=186,slow=25,SNR=9.6								
AAK	**Ala-Archa**	**6.29**	**25**	P			**Pn**	**21 24 43.0**	**+0.9**
	1.2nm,0.3s,baz=182,slow=8.3,SNR=18								
AAK				S			**Sn**	**21 25 52.1**	**-0.9**
	1.2nm,0.3s,baz=107,slow=19,SNR=13								
AAK	**Ala-Archa**	**6.29**	**25**	⇓P			**Pn**	**21 24 43.9**	**+1.9**
	1.5nm,0.3s								
AAK				⇑S			**Sn**	**21 25 51.5**	**-1.5**
	8.5nm,0.7s								
TKM2	**Tokmak 2**	**6.94**	**30**	⇑P			**Pn**	**21 24 52.3**	**+1.4**
	4.0nm,0.6s								
GEYT	**Alibeck**	**10.16**	**279**	P			**Pn**	**21 25 31.1**	**-2.5**
	0.2nm,0.3s,baz=92,slow=13,SNR=3.6								
GEYT				S			**Sn**	**21 27 26.7**	**+0.6**
	0.2nm,0.3s,baz=118,slow=22,SNR=3.4								
MK31	**Makanchi Array**	**12.96**	**37**	⇑P			**P**	**21 26 13.6**	**-1.3**
	0.3nm,0.5s,baz=211,slow=10.0,SNR=5.8								
MKAR	**Makanchi Array**	**12.96**	**37**	P			**Pn**	**21 26 09.9**	**-0.1**
	0.0nm,0.3s,baz=225,slow=14,SNR=2.6								
AB31	**Akbulak array**	**14.59**	**331**	⇑P			**P**	**21 26 32.8**	**0.0**
	0.2nm,0.3s,baz=159,slow=12,SNR=18								
AB31				⇑S			**Sn**	**21 29 10.4**	**-1.8**
	1.1nm,0.6s,baz=143,slow=22,SNR=8.5								
KURBB	**Kurchatov Arra**	**14.69**	**20**	P			**P**	**21 26 33.7**	**-0.3**
	0.1nm,0.3s,baz=207,slow=10.0,SNR=3.0								
BVAR	**Borovoye Array**	**16.02**	**359**	P			**P**	**21 26 49.2**	**+0.4**
	0.3nm,0.3s,baz=160,slow=11,SNR=8.9								
BVAR				S			**S**	**21 29 43.9**	**-2.6**
	0.1nm,0.3s,baz=170,slow=25,SNR=3.8								
AKTO	**Aktyubinsk**	**16.28**	**330**	P			**P**	**21 26 53.4**	**+1.7**
	0.3nm,0.3s,baz=139,slow=9.1,SNR=9.5								
AKTO				S			**Sn**	**21 29 53.9**	**+1.0**
	0.1nm,0.3s,baz=37,slow=17,SNR=3.5								
AKTO	**Aktyubinsk**	**16.28**	**330**	⇓P			**P**	**21 26 54.4**	**+2.8**
	3.7nm,0.9s								
WSAR	**Wadi Sarin**	**17.29**	**221**	LR			LR	21 34 44.7	
	comp=2,175nm,18.3s,baz=326,slow=40								
ZALV	**Zalesovo Beam**	**19.51**	**25**	P			**P**	**21 27 26.6**	**-0.3**
	0.2nm,0.3s,baz=226,slow=12,SNR=6.2								
ARCES	**ARCESS Array B**	**40.63**	**337**	P			**P**	**21 30 38.1**	**+1.8**
	2.1nm,1.0s,baz=111,slow=9.0,SNR=2.9								

MEX ***19*** *21:32:22.3±0.5,14°.81N×93°.19W,h6km±10km,MD3.8*

GCG ***19*** *21:32:22.1±0.6,15°.11N×93°.16W,h35km±999km,MD3.8*

ISC 19 21:32:22.1±2.6,**15°.0N**±0°.2×**93°.1W**±0°.1,**h14**km±14km,**n6, s0**67/12,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PCIG		**0.70**	**349**	*e*P			**Pn**	**21 32 37.3**	**-0.4**
PCIG				*e*S			**Sn**	**21 32 49.2**	**+0.8**
THIG		**0.79**	**97**	*i* P			**Pg**	**21 32 37.6**	**+0.1**
THIG				*i* S			**Sn**	**21 32 49.9**	**-0.7**
STG3	**Santiaguito 3,**	**1.49**	**101**	*e*P			**Pn**	**21 32 48.0**	**-0.6**
STG3				*e*S			**Sn**	**21 33 07.6**	**-0.5**
FUG	**Fuego 3**	**2.23**	**104**	*e*P			**Pn**	**21 32 59.1**	**+0.1**
FUG				*e*S			**Sn**	**21 33 27.3**	**+0.8**
IXG	**Ixpaco**	**2.69**	**108**	*e*P			**Pn**	**21 33 05.0**	**-0.1**
IXG				*e*S			**Sn**	**21 33 38.5**	**+0.9**
CMIG	**Matias Romero**	**2.70**	**320**	*i* P			**Pn**	**21 33 05.2**	**-0.1**
CMIG				*i* S			**Sn**	**21 33 37.5**	**-0.3**

ANF ***19*** *22:47:48.6±1.4,36°.84N×121°.47W,h0km,ML3.1/8,Error ellipse: s-maj=15.9km s-min=5.1km az=118.0*

NCEDC ***19*** *22:47:49.0±2.2,36°.983N±0°.009×121°.47W±0°.01, h4km±5km,ML3.1/44,Error ellipse: s-maj=1.5km s-min=1.2km az=222.0*

NEIC ***19*** *22:47:48.8±1.1,36°.968N±0°.007×121°.48W±0°.02, h14km±2km,Error ellipse: s-maj=2.5km s-min=1.0km az=80.0*

ISC 19 22:47:48.5±0.9,**36°.99N**±0°.02×**121°.48W**±0°.02,**h12**km±5km, **n209,s0**69/218,**Central California**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CDC	**Canada Road**	**0.04**	**350**				**Pg**	**22 47 50.0**	**-0.7**
HCAM	**Canada Road**	**0.04**	**350**				**Pg**	**22 47 50.0**	**-0.7**
GHS	**Gilroy Hot Spr**	**0.11**	**12**				**Pg**	**22 47 51.1**	**-0.4**
HSPM	**Sheep**	**0.13**	**346**				**Pg**	**22 47 51.8**	**0.0**
ANZ	**Anzar Road**	**0.14**	**223**				**Pg**	**22 47 52.3**	**+0.5**
HLPM	**Lions Peak**	**0.14**	**294**				**Pg**	**22 47 51.7**	**-0.1**
HBTM	**San Juan Bauti**	**0.15**	**204**				**Pg**	**22 47 52.6**	**+0.7**
PACP	**Pacheco Peak**	**0.15**	**81**				**Pg**	**22 47 54.2**	**+2.2**
CBC	**Chamberlain**	**0.16**	**250**				**Pg**	**22 47 52.5**	**+0.4**
HLTM	**Lone Tree Road**	**0.17**	**127**				**Pg**	**22 47 52.0**	**-0.2**
HPCM	**Pacheco Lake**	**0.18**	**65**				**Pg**	**22 47 52.1**	**-0.3**
HTUM	**Tustin Road**	**0.21**	**220**				**Pg**	**22 47 53.3**	**+0.5**
HCOM	**Corn Cob Canyo**	**0.21**	**243**				**Pg**	**22 47 53.6**	**+0.6**
CADM	**Anderson Res.**	**0.21**	**326**				**Pg**	**22 47 53.3**	**+0.2**
SAO	**San Andreas Ge**	**0.22**	**174**				**Pg**	**22 47 53.6**	**+0.5**
SLD	**San Luis Dam**	**0.22**	**66**				**Pg**	**22 47 53.0**	**-0.2**
SLD							**Sg**	**22 47 56.5**	**+0.1**
FRP	**Fremont Peak**	**0.23**	**183**				**Pg**	**22 47 53.8**	**+0.4**
BSLM	**Silva Ranch**	**0.23**	**154**				**Pg**	**22 47 53.9**	**+0.5**
BVYM	**Vineyard**	**0.24**	**168**				**Pg**	**22 47 54.1**	**+0.6**
SFJWR	**San Luis Fatjo**	**0.25**	**75**				**Pg**	**22 47 53.5**	**-0.2**
HERM	**Elkhorn Road**	**0.27**	**225**				**Pg**	**22 47 54.6**	**+0.7**
JLAB	**Laurel Hill**	**0.27**	**309**				**Pg**	**22 47 54.3**	**+0.3**
JELB	**Ellicott, Sant**	**0.29**	**259**				**Pg**	**22 47 55.0**	**+0.7**
JELB							**Sb**	**22 48 00.4**	**0.0**
BCGM	**Cienega Road**	**0.29**	**159**				**Pg**	**22 47 55.1**	**+0.6**
BHRM	**Hodges Ranch**	**0.31**	**146**				**Pg**	**22 47 55.0**	**+0.3**
JHLM	**Holstrom Ranch**	**0.31**	**294**				**Pg**	**22 47 55.0**	**+0.1**
CCOB	**Coe Ranch Numb**	**0.32**	**330**				**Pg**	**22 47 55.9**	**+1.0**
BSRM	**Salinas Radio**	**0.32**	**186**				**Pg**	**22 47 55.3**	**+0.3**
JTGM	**Trout Gulch Ro**	**0.33**	**278**				**Pg**	**22 47 55.6**	**+0.6**
JSTM	**Santa Teresa H**	**0.34**	**311**				**Pg**	**22 47 55.6**	**+0.3**
AMC	**Almaden**	**0.34**	**300**				**Pg**	**22 47 55.5**	**+0.1**
BLRM	**Lewis Ranch**	**0.36**	**153**				**Pb**	**22 47 56.4**	**-0.4**
ARN	**Arnold Ranch**	**0.37**	**353**				**Pg**	**22 47 56.2**	**+0.4**
BJOM	**Mount Johnson**	**0.38**	**160**				**Pg**	**22 47 56.5**	**+0.5**
MHC	**Mount Hamilton**	**0.38**	**340**				**Pg**	**22 47 56.5**	**+0.4**
JUMM	**Mount Umunhum**	**0.38**	**298**				**Pg**	**22 47 56.2**	**+0.1**
SCZ	**Santa Cruz**	**0.39**	**171**				**Pg**	**22 47 56.3**	**+0.1**
BEHM	**Elkhorn Ranch**	**0.40**	**143**				**Pg**	**22 47 56.6**	**+0.2**
BPCNC	**Pine Canyon**	**0.43**	**197**				**Pg**	**22 47 57.5**	**+0.6**
SCCS	**Santa Clara Co**	**0.43**	**314**				**Pg**	**22 47 57.5**	**+0.5**
BJCM	**Johnson Can.**	**0.44**	**171**				**Pg**	**22 47 57.2**	**+0.1**
BEMM	**Emmet**	**0.44**	**137**				**Pg**	**22 47 57.4**	**+0.2**
JJOM	**Saint Joseph's**	**0.46**	**299**				**Pg**	**22 47 57.5**	**0.0**
CMMM	**Mount Mocho**	**0.47**	**358**				**Pg**	**22 47 58.1**	**+0.4**
BAVM	**Antelope Valle**	**0.49**	**133**				**Pg**	**22 47 58.1**	**0.0**
CMLM	**Mount Lewis**	**0.51**	**344**				**Pg**	**22 47 59.1**	**+0.6**
HMOM	**Monterey**	**0.52**	**223**				**Pg**	**22 47 59.1**	**+0.4**
BBGB	**Big Mountain B**	**0.54**	**139**				**Pg**	**22 47 59.4**	**+0.4**
BRMM	**Rolling Bench**	**0.54**	**106**				**Pg**	**22 47 59.7**	**+0.6**
JSGM	**Saratoga Golf**	**0.55**	**303**				**Pg**	**22 47 59.7**	**+0.5**
JBNB	**Ben Lomond Mou**	**0.56**	**284**				**Pg**	**22 47 59.5**	**0.0**
BBNM	**San Benito**	**0.57**	**146**				**Pg**	**22 48 00.2**	**+0.6**
BSGM	**Shirttail Gulc**	**0.60**	**163**				**Pg**	**22 47 59.9**	**-0.2**
HAST	**Hastings Reser**	**0.60**	**186**				**Pg**	**22 48 00.3**	**+0.2**
BSMM	**Soledad Missio**	**0.60**	**176**				**Pg**	**22 48 00.5**	**+0.3**
CMJM	**Mission San Jo**	**0.62**	**329**				**Pg**	**22 48 01.1**	**+0.6**
MOBB	**Monterey Bay O**	**0.63**	**242**				**Pb**	**22 48 01.6**	**+0.3**
JBMM	**Black Mountain**	**0.64**	**302**				**Pg**	**22 48 00.9**	**+0.1**
BMSM	**Mercy Hot Spri**	**0.64**	**121**				**Pg**	**22 48 01.1**	**+0.2**
JPC	**Peters Creek,**	**0.66**	**296**				**Pg**	**22 48 01.2**	**+0.1**
LRV	**Little Rabbit**	**0.67**	**147**				**Pb**	**22 48 02.0**	**-0.1**
WENL	**Wente Vineyard**	**0.68**	**341**				**Pg**	**22 48 02.4**	**+0.8**
BCWM	**Chews Ridge**	**0.68**	**186**				**Pg**	**22 48 01.9**	**+0.2**
JJRM	**Joaquin Road**	**0.68**	**302**				**Pg**	**22 48 02.0**	**+0.3**
JFP	**Foothills Park**	**0.68**	**304**				**Pg**	**22 48 01.8**	**+0.1**
JSFB	**Stanford Teles**	**0.70**	**307**				**Pg**	**22 48 02.2**	**+0.2**

JPSM			**0.73**	**287**			**Pg**	**22**	**48 02.9 +0.3**
CNIC	**Niles Canyon**		**0.73**	**328**			**Pg**	**22**	**48 03.3 +0.6**
JRSC	**Jasper Ridge**		**0.74**	**305**			**Pg**	**22**	**48 02.7 -0.1**
CYD1	**Coyote D'meter**		**0.76**	**320**			**Pg**	**22**	**48 03.3 +0.2**
BGH	**Bear Gulch**		**0.78**	**298**			**Pg**	**22**	**48 03.5 0.0**
BPOM	**Post Ranch**		**0.79**	**197**			**Pg**	**22**	**48 03.6 -0.1**
JHPM	**Huddart Park**		**0.80**	**305**			**Pg**	**22**	**48 04.1 +0.1**
LRC	**Lone Oak Road**		**0.81**	**155**			**Pg**	**22**	**48 04.3 +0.1**
BAPM	**Anderson Peak**		**0.82**	**190**			**Pg**	**22**	**48 04.2 -0.1**
CBSNC	**Byron Hot Spri**		**0.84**	**351**			**Pg**	**22**	**48 05.6 +0.8**
CMOB	**Morgan Territo**		**0.86**	**343**			**Pg**	**22**	**48 06.1 +0.9**
CLCB	**Lake Chabot**		**0.89**	**328**			**Pg**	**22**	**48 06.3 +0.8**
JCPM	**Coyote Point**		**0.91**	**312**			**Pg**	**22**	**48 05.7 -0.2**
OXMT	**Ox Mountain**		**0.92**	**304**			**Pg**	**22**	**48 05.9 -0.2**
PCCM	**Crazy Canyon**		**0.93**	**164**			**Pg**	**22**	**48 06.3 -0.1**
MYLM	**Yosemite Lake**		**0.93**	**64**			**Pg**	**22**	**48 06.0 -0.5**
PMPB	**Monarch Peak**		**0.94**	**145**			**Pg**	**22**	**48 06.7 +0.1**
PMPB						Sg	**Sg**	**22**	**48 19.1 +0.3**
BGC	**Bolinger Road**		**0.95**	**331**			**Pg**	**22**	**48 07.1 +0.2**
SAC	**San Andreas**		**0.96**	**309**			**Pg**	**22**	**48 06.6 -0.3**
CRHM	**Round Hill Res**		**0.96**	**335**			**Pg**	**22**	**48 07.5 +0.4**
CMCM	**Mills College**		**0.97**	**325**			**Pg**	**22**	**48 07.7 +0.5**
CRPB	**Russellman Par**		**0.99**	**340**			**Pg**	**22**	**48 07.4 -0.1**
SMCB	**Saint Mary's C**		**0.99**	**329**			**Pg**	**22**	**48 07.8 +0.2**
BDM	**Black Diamond**		**1.02**	**342**			**Pg**	**22**	**48 07.9 -0.2**
PAPM	**Alder Peak**		**1.07**	**175**			**Pg**	**22**	**48 08.5 -0.7**
BKS	**Berkeley--Byer**		**1.08**	**326**			**Pg**	**22**	**48 08.7 -0.5**
BRIB	**Briones**		**1.08**	**330**			**Pg**	**22**	**48 08.9 -0.3**
CVPM	**Vollmer Peak**		**1.08**	**327**			**Pg**	**22**	**48 08.8 -0.3**
BL67	**Building 67, L**		**1.08**	**325**			**Pg**	**22**	**48 09.3 0.0**
VAK	**Adit at Lawren**		**1.08**	**326**			**Pg**	**22**	**48 08.9 -0.5**
BRK	**Berkeley--Havi**		**1.08**	**325**			**Pg**	**22**	**48 09.1 -0.3**
CYBM	**Yerba Buena Is**		**1.08**	**320**			**Pg**	**22**	**48 08.8 -0.6**
CPIM	**Pinole Ridge**		**1.16**	**330**			**Pg**	**22**	**48 10.4 -0.4**
PARM	**Anticline Ridg**		**1.17**	**128**			**Pg**	**22**	**48 10.5 -0.5**
CSPM	**San Pablo Ridg**		**1.18**	**326**			**Pg**	**22**	**48 10.4 -0.7**
MCUB	**Copperopolis B**		**1.20**	**34**			**Pg**	**22**	**48 10.4 -1.2**
HERB	**Hercules**		**1.20**	**329**			**Pg**	**22**	**48 10.8 -0.8**
PHSB	**Hesperia Broad**		**1.21**	**164**			**Pg**	**22**	**48 10.5 -1.2**
CPMM	**Point Molate**		**1.22**	**323**			**Pg**	**22**	**48 10.9 -0.9**
NLHM	**Lake Herman**		**1.25**	**335**			**Pg**	**22**	**48 12.0 -0.6**
MHDM	**Hidden Dam**		**1.27**	**84**			**Pg**	**22**	**48 11.0 -1.9**
MNHB	**New Hogan Dam**		**1.27**	**24**			**Pg**	**22**	**48 11.8 -1.1**
PVCM	**Vineyard Canyo**		**1.30**	**144**			**Pg**	**22**	**48 12.1 -1.4**
PSTM	**Stockdale Moun**		**1.31**	**143**			**Pg**	**22**	**48 12.2 -1.5**
PPO	**Portuguese Can**		**1.31**	**148**			**Pg**	**22**	**48 12.5 -1.2**
PHCM	**Hearst Castle**		**1.33**	**169**			**Pg**	**22**	**48 12.3 -1.6**
CMB	**Columbia Colle**		**1.36**	**39**			**Pn**	**22**	**48 13.0 -0.3**
CTM	**Castle Mountai**		**1.40**	**139**			**Pn**	**22**	**48 14.5 +0.5**
PWKM	**Work Ranch**		**1.40**	**146**			**Pn**	**22**	**48 13.7 -0.2**
FRI	**Friant**		**1.42**	**89**			**Pn**	**22**	**48 13.4 -0.7**
SNT

NEIC ***19*** *22:48:33.0±1.4, 32°.2S×0°.2×179°.4W×0°.2, h403km±17km, mb4.1/15, Error ellipse: s-maj=34.3km s-min=21.3km az=134.0*

IDC ***19*** *22:48:37.2±5.2, 32°.28S×179°.84E, h370km±56km, mb3.7/4, mb1 3.8/6, mb1mx3.4/37, mbtmp4.5/6, Error ellipse: s-maj=62.2km s-min=27.6km az=10.0*

WEL ***19*** *22:48:40.0±0.4, 32°S±3°×17°8E±°, h33km, M4.5/31, mB5.0/14, ML4.9/13, ML4.8/21, MLv4.7/31, MLv4.7/26, Mw(mB)4.3/14*

ISC 19 22:48:33.7±0.8, 32°.33S±0°.07×179°.6W±0°.1, h400km, n108, σ2s82/118, mb4.0/12, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**3.39**	**26**	P		**Pn**	**22 49 43.1**	**+2.8**
GLKZ				S		**S**	**22 50 27.5**	**-6.7**
MXZ	**Matakaoa Point**	**5.49**	**197**	P		**Pn**	**22 50 05.3**	**+4.6**
MXZ				S		**S**	**22 51 09.5**	**-2.1**
MXZ	**Matakaoa Point**	**5.49**	**197**	Pn		**Pn**	**22 50 01.9**	**+1.2**
MXZ				S		**S**	**22 51 08.2**	**-3.4**
WMGZ	**Waiomatatini S**	**5.71**	**196**	P		**Pn**	**22 50 07.4**	**+4.3**
WMGZ				S		**S**	**22 51 16.0**	**+0.1**
PKGZ	**Pakihiroa**	**5.86**	**198**	P		**Pn**	**22 50 08.1**	**+3.4**
PUZ	**Puketiti**	**5.99**	**196**	P		**Pn**	**22 50 10.3**	**+4.2**
PUZ				S		**S**	**22 51 20.2**	**-1.3**
RUGZ	**Raukumara Rang**	**6.04**	**201**	P		**Pn**	**22 50 09.4**	**+2.6**
RUGZ				S		**S**	**22 51 19.3**	**-3.3**
TWGZ	**Tauwhareparae**	**6.15**	**198**	P		**Pn**	**22 50 12.1**	**+4.2**
TWGZ				S		**S**	**22 51 26.0**	**+1.2**
WHRZ	**Whale Island**	**6.18**	**206**	P		Pn	22 50 14.1	+5.9
OPRZ	**Ohinepanea**	**6.33**	**209**	P		**Pn**	**22 50 14.1**	**+4.3**
CNGZ	**Carnagh Statio**	**6.39**	**195**	P		**Pn**	**22 50 14.3**	**+3.9**
TKGZ	**Te Karaka**	**6.43**	**198**	P		**Pn**	**22 50 14.1**	**+3.2**
URZ	**Urewera**	**6.49**	**203**	P		**P**	**22 50 13.9**	**+2.4**
	17nm,0.3s,baz=262,slow=7.1,SNR=82							
URZ				S		**S**	**22 51 29.3**	**-2.2**
	7.5nm,0.3s,baz=71,slow=23,SNR=16							
URZ	**Urewera**	**6.49**	**203**	P		**P**	**22 50 14.0**	**+2.4**
URZ				S		**S**	**22 51 28.7**	**-2.7**
URZ	**Urewera**	**6.49**	**203**			**Pn**	**22 50 11.8**	**+0.2**
URZ						**S**	**22 51 28.9**	**-2.6**
TOZ	**Tahuroa Road**	**6.71**	**215**	P		**P**	**22 50 18.9**	**+4.4**
RIGZ	**Rimuhau**	**6.71**	**198**	P		**P**	**22 50 16.8**	**+2.1**
RIGZ				S		**S**	**22 51 34.2**	**-1.8**
BKZ	**Black Stump Fm**	**7.51**	**204**	P		**P**	**22 50 24.4**	**+0.7**
BKZ				S		**S**	**22 51 49.2**	**-3.4**
BKZ	**Black Stump Fm**	**7.51**	**204**	P		**Pn**	**22 50 22.6**	**-0.5**
BKZ				S		**S**	**22 51 51.3**	**-1.4**
HIZ	**Hauiti**	**7.63**	**215**	P		P	22 50 29.7	+4.8
HIZ	**Hauiti**	**7.63**	**215**	P		**P**	**22 50 27.0**	**+2.1**
WTVZ	**West Tongariro**	**7.81**	**208**	P		**P**	**22 50 29.0**	**+2.1**
TWVZ	**Taurewa**	**7.83**	**209**	P		**P**	**22 50 29.3**	**+2.1**
NGZ	**Ngauruhoe**	**7.85**	**208**	P		**P**	**22 50 30.2**	**+2.7**
FWVZ	**Far West T-bar**	**7.94**	**208**	P		**P**	**22 50 30.4**	**+1.8**
WHVZ	**Whangaehu Hut**	**7.95**	**208**	P		**P**	**22 50 31.0**	**+2.4**
BHHZ	**Black Hill Sta**	**7.95**	**205**	P		**Pn**	**22 50 28.0**	**-0.1**
TRVZ	**Turoa**	**7.98**	**208**	P		**P**	**22 50 34.0**	**+1.4**
KRHZ	**Kereru**	**7.99**	**203**	P		**P**	**22 50 29.4**	**+0.6**
MOVZ	**Moawhango**	**7.99**	**207**	P		**P**	**22 50 30.1**	**+1.1**
PKVZ	**Pokaka**	**8.05**	**209**	P		**P**	**22 50 32.2**	**+2.6**
MTVZ	**Mangateitei**	**8.08**	**208**	P		**P**	**22 50 31.8**	**+1.8**
VRZ	**Vera Road**	**8.17**	**212**	P		**P**	**22 50 34.5**	**+3.7**
PXZ	**Pawanui**	**8.19**	**199**	P		**P**	**22 50 33.9**	**+2.8**
PNHZ	**Pukenui**	**8.29**	**203**	P		**S**	**22 50 32.6**	**+0.4**
PNHZ	**Pukenui**	**8.29**	**203**	P		**S**	**22 52 05.8**	**-2.9**
PRHZ	**Porangahau**	**8.47**	**200**	P		**P**	**22 50 37.0**	**+2.7**
TSZ	**Takapari Road**	**8.50**	**204**	P		**Pn**	**22 50 34.2**	**-0.1**
PKE	**Pukeiti**	**8.59**	**215**	P		P	22 50 40.9	+5.4
WAZ	**Wanganui**	**8.60**	**209**	P		**P**	**22 50 37.3**	**+1.7**
DVHZ	**Dannevirke**	**8.65**	**202**	P		**P**	**22 50 37.9**	**+1.8**
ANWZ	**Angora Road**	**8.70**	**200**	P		**P**	**22 50 39.5**	**+2.8**
POWZ	**Post Office Ro**	**8.86**	**203**	P		**P**	**22 50 40.3**	**+1.7**
POWZ	**Post Office Ro**	**8.86**	**203**	P		**S**	**22 52 19.2**	**-1.6**
PRWZ	**Pori Road**	**8.94**	**202**	P		**P**	**22 50 42.4**	**+3.0**
PRWZ	**Pori Road**	**8.94**	**202**	P		**S**	**22 52 17.0**	**-5.5**
BFZ	**Birch Farm**	**8.97**	**200**	P		**P**	**22 50 41.1**	**+1.3**
BFZ	**Birch Farm**	**8.97**	**200**	P		**S**	**22 52 16.5**	**-6.7**
BFZ	**Birch Farm**	**8.97**	**200**	P		**P**	**22 50 41.3**	**+1.6**
MRZ	**Mangatainoka R**	**9.16**	**203**	P		**Pn**	**22 50 42.9**	**+1.0**
MRZ	**Mangatainoka R**	**9.16**	**203**	P		S	22 52 17.7	-10
TIWZ	**Tintock**	**9.17**	**202**	P		**Pn**	**22 50 44.2**	**+2.1**
TIWZ	**Tintock**	**9.17**	**202**	P		**S**	**22 52 24.0**	**-3.4**
CPWZ	**Castlepoint**	**9.20**	**200**	P		**Pn**	**22 50 45.6**	**+3.3**
CPWZ	**Castlepoint**	**9.20**	**200**	P		**S**	**22 52 24.4**	**-3.4**
HOWZ	**Holdsworth Sta**	**9.40**	**203**	P		**Pn**	**22 50 45.2**	**+0.6**
HOWZ	**Holdsworth Sta**	**9.40**	**203**	P		**S**	**22 52 26.7**	**-5.4**
OGWZ	**Otaki Gorge**	**9.44**	**205**	P		**P**	**22 50 45.1**	**+0.1**
OGWZ	**Otaki Gorge**	**9.44**	**205**	P		**S**	**22 52 28.4**	**-4.7**
TMWZ	**Te Maipa**	**9.47**	**201**	P		**Pn**	**22 50 47.6**	**+2.1**
TMWZ	**Te Maipa**	**9.47**	**201**	P		**S**	**22 52 28.2**	**-5.4**
KIW	**Kapiti Island**	**9.58**	**206**	P		**Pn**	**22 50 47.3**	**+0.5**
KIW	**Kapiti Island**	**9.58**	**206**	P		**S**	**22 52 29.7**	**-6.1**
MTW	**Mount Morrison**	**9.64**	**202**	P		**Pn**	**22 50 48.5**	**+1.1**
MTW	**Mount Morrison**	**9.64**	**202**	P		**S**	**22 52 29.9**	**-7.1**
CAW	**Cannon Point**	**9.74**	**204**	P		**P**	**22 50 48.3**	**+0.1**
CAW	**Cannon Point**	**9.74**	**204**	P		**S**	**22 52 35.0**	**-4.1**
TRWZ	**Traveller**	**9.80**	**201**	P		**Pn**	**22 50 51.5**	**+2.3**
PAWZ	**Paruwai Farm**	**9.86**	**202**	P		**Pn**	**22 50 52.0**	**+2.0**
PAWZ	**Paruwai Farm**	**9.86**	**202**	P		**S**	**22 52 37.6**	**-4.1**
DUWZ	**D'Urville Isla**	**9.91**	**210**	P		**S**	**22 52 37.4**	**-5.4**
MSWZ	**Moikau Station**	**9.95**	**203**	P		**S**	**22 52 38.5**	**-5.0**
MSWZ	**Moikau Station**	**9.95**	**203**			**Pn**	**22 50 51.1**	**+0.1**
BHW	**Baring Head**	**10.07**	**204**	P		**Pn**	**22 50 53.1**	**+0.6**
BHW	**Baring Head**	**10.07**	**204**	P		**S**	**22 52 41.9**	**-4.0**
TUWZ	**Tuamarina**	**10.44**	**208**	P		**Pn**	**22 50 57.0**	**+0.4**
TUWZ				S		**S**	**22 52 49.1**	**-4.2**
QRZ	**Quartz Range**	**10.56**	**214**	P		**P**	**22 50 56.4**	**-1.0**
THZ	**Tophouse**	**11.14**	**210**	P		**Pn**	**22 51 04.8**	**-0.1**
THZ				S		**S**	**22 53 05.2**	**-2.5**
KHZ	**Kahutara**	**11.44**	**206**	P		**Pn**	**22 51 08.2**	**0.0**
KHZ				S		**S**	**22 53 11.3**	**-2.3**
LTZ	**Lake Taylor**	**12.25**	**209**	P		**Pn**	**22 51 18.2**	**+0.5**
OXZ	**Oxford**	**12.79**	**209**	P		**Pn**	**22 51 23.8**	**-0.1**
MQZ	**McQueen's Vall**	**12.88**	**206**	P		**P**	**22 51 23.6**	**+0.8**
RPZ	**Rata Peaks**	**13.52**	**210**	P		**Pn**	**22 51 32.8**	**+0.4**
	0.9nm,0.3s,baz=4.4,slow=3.6,SNR=5.2							
RPZ				S		**S**	**22 53 51.8**	**-4.0**
	0.4nm,0.3s,baz=90,slow=19,SNR=3.7							
RPZ	**Rata Peaks**	**13.52**	**210**	P		**P**	**22 51 31.2**	**+1.3**
RPZ				S		**S**	**22 53 53.9**	**-1.8**
ODZ	**Otahua Downs**	**14.78**	**208**	P		**P**	**22 51 44.2**	**+0.6**
STKA	**Stephens Creek**	**32.73**	**260**	P		**P**	**22 54 34.1**	**+3.1**
	1.5nm,0.3s,baz=95,slow=12,SNR=8.2							
STKA	**Stephens Creek**	**32.73**	**260**	P		**P**	**22 54 31.8**	**+0.7**
CTA	**Charters Tower**	**32.80**	**283**	P		**P**	**22 54 34.1**	**+2.3**
	2.0nm,0.4s,baz=117,slow=7.8,SNR=7.5							
BBOO	**Buckleboo**	**37.13**	**257**	P		**P**	**22 55 08.4**	**+0.1**
BBOO				IAmb		IAmb	22 55 11.0	
	comp=Z,5.1nm,0.8s							
COEN	**Coen**	**38.52**	**290**	P		**P**	**22 55 20.2**	**+0.3**
AS31	**Alice Springs**	**41.66**	**270**	P		**P**	**22 55 46.1**	**+0.9**
ASAR	**Alice Springs**	**41.66**	**270**	P		**P**	**22 55 47.0**	**+1.7**
	comp=Z,1.9nm,0.4s,baz=105,slow=7.3,SNR=32							
ASAR	**Alice Springs**	**41.66**	**270**	P		**P**	**22 55 46.2**	**+1.0**
WR0	**Warramunga Arr**	**42.64**	**275**	P		**P**	**22 55 54.4**	**+1.3**
WRAB	**Tennant Creek**	**42.82**	**275**	P		**P**	**22 55 55.7**	**+1.2**
WRA	**Warramunga Arr**	**42.82**	**275**	P		**P**	**22 55 56.0**	**+1.5**
	comp=Z,7.3nm,0.3s,baz=112,slow=8.0,SNR=102							
WRA	**Warramunga Arr**	**42.82**	**275**	P		**P**	**22 55 55.0**	**+0.4**
FITZ	**Fitzroy Crossi**	**51.00**	**272**	P		**P**	**22 56 55.9**	**-1.0**
GUMO	**Guam**	**56.91**	**318**	P		**P**	**22 57 37.9**	**-1.1**
PFO	**Pinyon Flats O**	**88.53**	**48**	P		**P**	**23 00 40.3**	**-2.0**
PFO				IAmb		IAmb	23 00 41.5	
	comp=Z,2.4nm,1.0s							
XPFO	**Pion Flat**	**88.53**	**48**	P		**P**	**23 00 40.3**	**-2.1**
XPFO				IAmb		IAmb	23 00 41.5	
	comp=Z,2.3nm,0.9s							
ISA	**Isabella, Lake**	**88.64**	**46**	P		**P**	**23 00 41.2**	**-1.6**
ISA				IAmb		IAmb	23 00 49.0	
	comp=Z,5.9nm,1.1s							
DAC	**Darwin (Calif)**	**89.59**	**46**	IAmb		IAmb	23 01 00.4	
	comp=Z,2.3nm,1.1s							
WAKR	**Walker**	**89.99**	**43**	IAmb		IAmb	23 00 48.2	
	comp=Z,4.3nm,1.1s							
BEKR	**Beckworth**	**90.39**	**41**	IAmb		IAmb	23 00 50.6	
	comp=Z,2.9nm,1.1s							
NV11	**Mina Array Sit**	**90.69**	**44**	IAmb		IAmb	23 00 45.1	
	comp=Z,3.4nm,1.1s							
FINES	**FINESS Array B**	**146.43**	**338**	PKPbc		**PKiKP**	**23 07 33.2**	**+3.0**
	comp=Z,1.3nm,0.4s,baz=52,slow=4.7,SNR=11							
NOA	**NORSAR Array B**	**150.41**	**349**	PKPbc		**PKPab**	**23 07 43.8**	**-2.3**
	comp=Z,0.3nm,0.6s,baz=19,slow=4.3,SNR=2.7							

MOS ***19*** *22:50:17.6±1.0, 26°.44N×44°.61W, h10km, mb5.0/19, Error ellipse: s-maj=10.2km s-min=6.9km az=62.7*

NEIC ***19*** *22:50:18.9±1.8, 26°.47N±0°.10×44°.49W±0°.07, h10km±1km, mb4.9/116, Error ellipse: s-maj=18.0km s-min=6.8km az=151.0*

IDC ***19*** *22:50:18.8±0.5, 26°.46N×44°.48W, h0km, mb4.3/32, mb1 4.4/32, mb1mx4.3/53, mbtmp4.3/32, MS3.7/27, Ms1 3.7/27, ms1mx3.6/48, Error ellipse: s-maj=13.7km s-min=11.4km az=174.0*

BJI ***19*** *22:50:20.0±0.0, 26°.60N×44°.60W, h15km, mb4.9/5, Ms5.0/2, Ms7 4.8/2*

ISC 19 22:50:19.8±0.4, 26°.42N±0°.07×44°.55W±0°.07, h11km, n224, σ1s11/178, mb4.8/112, MS3.8/31, 12C-7D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SJG	**San Juan**	**21.61**	**252**	LR		LR	23 01 43.5	
	comp=Z,177nm,21.4s,baz=76,slow=32							
SCHQ	**Schefferville**	**32.75**	**336**	P		**P**	**22 56 53.2**	**+0.6**
	2.8nm,0.8s,baz=126,slow=9.2,SNR=3.9							
SCHQ				LR		LR	23 08 38.6	
	comp=Z,81nm,20.5s,baz=68,slow=34							
SCHQ	**Schefferville**	**32.75**	**336**	P		**P**	**22 56 53.1**	**+0.6**
SADO	**Sadowa**	**33.23**	**312**	LR		LR	23 08 10.0	
	comp=Z,229nm,20.4s,baz=148,slow=32							
TKL	**Tuckaleechee C**	**34.66**	**295**	LR		LR	23 09 06.0	
	comp=Z,267nm,18.2s,baz=110,slow=32							
ROSC	**El Rosal**	**35.63**	**238**	LR		LR	23 11 55.2	
	comp=Z,106nm,19.8s,baz=50,slow=36							
ESDC	**Sonseca Array**	**36.20**	**58**	LR		LR	23 09 06.9	
	comp=Z,47nm,18.5s,baz=320,slow=31							
SAML	**Samuel**	**39.54**	**210**	P		**P**	**22 57 51.3**	**+0.3**
SAML				pmax		pmax		
	comp=Z,6.0nm,1.0s							
SAML	**Samuel**	**39.54**	**210**	P		**P**	**22 57 51.3**	**+0.3**
FRB	**Frobisher Bay**	**40.47**	**344**	P		**P**	**22 57 58.6**	**+0.5**
	comp=Z,8.4nm,1.0s,baz=155,slow=8.7,SNR=11							
TEIG	**Tepich**	**40.48**	**271**	P		**P**	**22 57 59.8**	**+1.0**
	comp=Z,13nm,0.9s,baz=319,slow=5.8,SNR=5.1							
TEIG	**Tepich**	**40.48**	**271**	P		**P**	**22 57 58.0**	**-0.8**
TEIG				IAmb		IAmb	22 58 02.4	
	comp=Z,26nm,1.1s							
BORG	**Borgarnes**	**41.12**	**15**	LR		LR	23 09 48.3	
	comp=Z,29nm,21.7s,baz=256,slow=28							
JTS	**Las Juntas de**	**41.36**	**255**	LR		LR	23 14 20.3	
	comp=Z,32nm,20.2s,baz=122,slow=35							
W41B	**Gary Mavity, V**	**41.56**	**294**	P		**P**	**22 58 06.7**	**-0.9**
W41B				IAmb		IAmb	22 58 15.9	
	comp=Z,24nm,1.4s							
BDFB	**Brasilia**	**41.95**	**185**	P		**P**	**22 58 09.8**	**-1.1**
BDFB				pmax		pmax		
	comp=Z,10.0nm,1.1s							
BDFB	**Brasilia**	**41.95**	**185**	P		**P**	**22 58 11.8**	**+0.9**
	comp=Z,6.6nm,1.0s,baz=23,slow=5.1,SNR=9.1							
BDFB				LR		LR	23 13 47.4	
	comp=Z,80nm,19.2s,baz=108,slow=34							
BDFB	**Brasilia**	**41.95**	**185**	P		**P**	**22 58 09.8**	**-1.1**
U40A	**Yellville**	**42.04**	**296**	P		**P**	**22 58 10.8**	**-0.7**
DBIC	**Dimbokro**	**42.57**	**110**	P		**P**	**22 58 16.6**	**+0.6**
DBIC				pmax		pmax		
	comp=Z,13nm,1.3s							
DBIC	**Dimbokro**	**42.57**	**110**	P		**P**	**22 58 16.4**	**+0.4**
	comp=Z,6.0nm,1.2s,baz=282,slow=7.1,SNR=3.3							
DBIC				LR		LR	23 13 04.5	
	comp=Z,212nm,19.4s,baz=278,slow=32							
DBIC	**Dimbokro**	**42.57**	**110**	P		**P**	**22 58 16.6**	**+0.6**
APG	**El Apazote**	**44.21**	**264**	P		**P**	**22 58 31.0**	**+1.5**
	comp=Z,7.8nm,0.9s,baz=13,slow=8.7,SNR=6.8							
H10N2	**ASCENSION HYDR**	**44.84**	**135**	T		T	23 46 13.3	
	baz=320,slow=75,SNR=634							
H10N3	**ASCENSION HYDR**	**44.84**	**135**	T		T	23 46 13.4	
	baz=320,slow=75,SNR=627							
H10N1	**ASCENSION HYDR**	**44.86**	**135**	T		T	23 46 14.7	
	baz=320,slow=75,SNR=530							
HKT	**Hockley**	**45.04**	**287**	P		**P**	**22 58 35.9**	**+0.3**
HKT				pmax		pmax		
	comp=Z,11nm,1.4s							
HKT	**Hockley**	**45.04**	**287**	P		**P**	**22 58 35.9**	**+0.3**
TORD	**Torodi Ar. Bea**	**45.24**	**98**	P		**P**	**22 58 35.9**	**-1.6**
	comp=Z,2.6nm,1.2s,baz=299,slow=4.8,SNR=5.1							
TORD				LR		LR	23 16 50.6	
	comp=Z,243nm,18.4s,baz=315,slow=35							
TORD	**Torodi Ar. Bea**	**45.24**	**98**	P		**P**	**22 58 35.7**	**-1.8**
AGMN	**Agassiz Nation**	**45.27**	**313**	P		**P**	**22 58 35.9**	**-1.4**
AGMN				IAmb		IAmb	22 58 39.5	
	comp=Z,24nm,1.4s							
H10S3	**ASCENSION HYDR**	**45.60**	**136**	T		T	23 47 12.7	
	baz=319,slow=74,SNR=715							
H10S2	**ASCENSION HYDR**	**45.61**	**136**	T		T	23 47 14.0	
	baz=261,slow=74,SNR=726							
ULM	**Lac du Bonnet**	**45.65**	**315**	P		**P**	**22 58 39.5**	**-0.8**
ULM				pmax		pmax		
	comp=Z,43nm,1.8s							
ULM	**Lac du Bonnet**	**45.65**	**315**	P		**P**	**22 58 40.8**	**+0.5**
	comp=Z,2.4nm,0.7s,baz=113,slow=10.0,SNR=5.0							
ULM				LR		LR	23 17 21.2	
	comp=Z,82nm,18.1s,baz=120,slow=36							
ULM	**Lac du Bonnet**	**45.65**	**315**	P		**P**	**22 58 39.5**	**-0.8**
WHTX	**Lake Whitney,**	**46.14**	**290**	P		**P**	**22 58 43.9**	**-0.6**
X34A	**Smith Ranch, M**	**46.18**	**294**	P		**P**	**22 58 43.8**	**-1.0**
X34A				IAmb		IAmb	22 58 47.8	
	comp=Z,17nm,1.1s							
BFO	**Black Forest**	**46.31**	**47**	P		**P**	**22 58 45.4**	**-0.2**
BFO				pmax		pmax		
	comp=Z,39nm,1.8s							
BFO	**Black Forest**	**46.31**	**47**	P		**P**	**22 58 45.4**	**-0.2**
SUMG	**Summit**	**46.32**	**3**	*i* P		**P**	**22 58 45.9**	**+0.2**
SUMG				pmax		pmax		
	comp=Z,30nm,1.1s							
SUMG	**Summit**	**46.32**	**3**	*i* P		**P**	**22 58 45.9**	**+0.2**
	comp=Z,30nm,1.1s							
SUMG	**Summit**	**46.32**	**3**	P		**P**	**22 58 43.9**	**-1.9**
KEST	**Kesra**	**46.59**	**65**	P		**P**	**22 58 48.3**	**+0.3**
	comp=Z,14nm,1.1s,baz=276,slow=10,SNR=4.2							
KEST				LR		LR	23 17 45.2	
	comp=Z,76nm,18.4s,baz=290,slow=35							
ATAH	**Atahualpa**	**46.80**	**229**	LR		LR	23 17 57.4	
	comp=Z,46nm,20.7s,baz=24,slow=35							
WMOK	**Wichita Mounta**	**46.94**	**294**	P		**P**	**22 58 50.3**	**-0.5**
WMOK				pmax		pmax		
	comp=Z,20nm,1.5s							
WMOK	**Wichita Mounta**	**46.94**	**294**	P		**P**	**22 58 50.3**	**-0.5**
WMOK				IAmb		IAmb	22 58 59.1	
	comp=Z,20nm,1.4s							
FCC	**Fort Churchill**	**47.08**	**327**	P		**P**	**22 58 50.8**	**-0.6**
FCC				pmax		pmax		
	comp=Z,46nm,1.7s							
FCC	**Fort Churchill**	**47.08**	**327**	P		**P**	**22 58 50.8**	**-0.6**
DAVA	**Damuels**	**47.21**	**49**	*es*P		**P**	**22 58 54.6**	**+1.7**
	comp=Z,14nm,1.3s							
CMIG	**Matias Romero**	**47.41**	**269**	LR		LR	23 17 48.4	
	comp=Z,51nm,19.0s,baz=32,slow=35							
FETA	**Feichten**	**47.76**	**49**	sP		**P**	**22 58 58.9**	**+1.8**
	comp=Z,7.2nm,1.2s							
RETA	**Reutte**	**47.83**	**49**	*es*P		**P**	**22 58 59.0**	**+1.5**
	comp=Z,20nm,1.5s							
MOTA	**Moosalm**	**48.05**	**49**	*es*P		**P**	**22 59 02.1**	**+2.8**
	comp=Z,18nm,1.5s							
SQTA	**Sankt Quirin**	**48.11**	**49**	*es*P		**P**	**22 59 01.3**	**+1.6**
	comp=Z,12nm,1.2s							
LPAZ	**La Paz**	**48.25**	**211**	P		**P**	**22 59 01.2**	**-0.4**
LPAZ				pmax		pmax		
	comp=Z,9.0nm,1.1s							
LPAZ	**La Paz**	**48.25**	**211**	P		**P**	**22 59 02.5**	**+0.8**
	comp=Z,5.3nm,0.9s,baz=34,slow=9.9,SNR=14							
LPAZ				LR		LR	23 18 10.1	
	comp=Z,57nm,20.2s,baz=20,slow=35							
LPAZ	**La Paz**	**48.25**	**211**	P		**P**	**22 59 01.2**	**-0.4**
LPAZ				IAmb		IAmb	22 59 05.4	
	comp=Z,8.6nm,1.1s							
JCT	**Junction City**	**48.35**	**288**	P		**P**	**22 59 01.2**	**-0.5**
JCT				pmax		pmax		
	comp=Z,21nm,1.5s							
JCT	**Junction City**	**48.35**	**288**	P		**P**	**22 59 01.2**	**-0.5**
JCT				IAmb		IAmb	22 59 03.8	
	comp=Z,22nm,1.5s							
WATA	**Walderalm**	**48.37**	**49**	*es*P		**P**	**22 59 03.1**	**+1.3**
	comp=Z,7.1nm,0.7s							
ABTA	**Abfaltersbach**	**48.96**	**50**	*es*P		**P**	**22 59 07.0**	**+0.7**
	comp=Z,13nm,1.4s							
CLL	**Collm**	**49.72**	**44**	*e*P		**P**	**22 59 10.0**	**-1.9**
CLL				pmax		pmax		
	comp=Z,20nm,1.5s							
CLL	**Collm**	**49.72**	**44**	*e*P		**P**	**22 59 10.0**	**-1.9**
	comp=Z,20nm,1.5s							
KHC	**Kasperske Hory**	**49.85**	**47**	P		**P**	**22 59 13.6**	**+0.6**
KHC				pmax		pmax		
	comp=Z,7.0nm,1.5s							
KHC	**Kasperske Hory**	**49.85**	**47**	*e*P		**P**	**22 59 13.5**	**+0.6**
KHC	**Kasperske Hory**	**49.85**	**47**	P		**P**	**22 59 13.6**	**+0.6**
GERES	**GERESS Array B**	**49.91**	**47**	P		**P**	**22 59 13.2**	**-0.3**
GERES	**GERESS Array B**	**49.91**	**47**	P		**P**	**22 59 13.5**	**0.0**
	comp=Z,1.5nm,0.8s,baz=275,slow=5.6,SNR=10.0							
GERES	**GERESS Array B**	**49.91**	**47**	P		**P**	**22 59 13.2**	**-0.3**
FFC	**Flin Flon**	**50.17**	**320**	P		**P**	**22 59 13.9**	**-1.3**
FFC				pmax		pmax		
	comp=Z,28nm,1.7s							
FFC	**Flin Flon**	**50.17**	**320**	P		**P**	**22 59 13.9**	**-1.3**
FFC				IAmb		IAmb	22 59 17.2	
	comp=Z,28nm,1.7s							
MOA	**Molln**	**50.22**	**49**	*e*pP		**P**	**22 59 16.1**	**+0.3**
	comp=Z,12nm,1.6s							
BRG	**Berggiesshubel**	**50.26**	**45**	*e*(P)		**P**	**22 59 17.1**	**+1.1**
	comp=Z,27nm,1.9s							
BRG	**Berggiesshubel**	**50.26**	**45**	*e*P		**P**	**22 59 17.1**	**+1.1**
BRG				pmax		pmax		
	comp=Z,27nm,1.9s							
MSTX	**Muleshoe**	**50.31**	**293**	P		**P**	**22 59 16.6**	**-0.2**
MSTX				IAmb		IAmb	22 59 19.2	
	comp=Z,19nm,1.4s							
NOA	**NORSAR Array B**	**50.79**	**31**	P		**P**	**22 59 21.2**	**+1.3**
	comp=Z,2.5nm,1.0s,baz=250,slow=6.6,SNR=3.0							
NOA				LR		LR	23 16 20.0	
	comp=Z,55nm,20.7s,baz=255,slow=31							
ARSA	**Arzberg**	**51.04**	**49**	*es*P		P	22 59 26.8	+4.8
	comp=Z,14nm,1.4s							
CONA	**Conrad Observa**	**51.30**	**49**	*es*P		P	22 59 29.3	+5.3
	comp=Z,10nm,2.0s							
TULEG	**Thule**	**51.55**	**353**	P		**P**	**22 59 25.3**	**0.0**
TULEG				IAmb		IAmb	22 59 27.7	
	comp=Z,28nm,1.3s							
GO01	**Chusmiza**	**51.68**	**210**	P		**P**	**22 59 27.6**	**+0.1**
GO01				IAmb		IAmb	22 59 28.8	
	comp=Z,16nm,1.0s							
TXAR	**Lajitas Array**	**51.86**	**288**	P		**P**	**22 59 28.6**	**+0.1**
TXAR	**Lajitas Array**	**51.86**	**288**	P		**P**	**22 59 29.3**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=96,slow=8.1,SNR=17							
TXAR				PcP		**PcP**	**23 00 42.1**	**+0.8**
	comp=Z,1.4nm,1.0s,baz=112,slow=5.6,SNR=5.6							
TXAR	**Lajitas Array**	**51.86**	**288**	P		**P**	**22 59 28.6**	**+0.1**
TXAR						**PcP**	**23 00 41.4**	**+0.1**
TX31	**Lajitas Ar. Si**	**51.86**	**288**	P		**P**	**22 59 27.4**	**-1.0**
TX32	**Lajitas Array**	**51.86**	**288**	P		**P**	**22 59 28.4**	**-0.1**
DAG	**Danmarks Havn**	**51.94**	**7**	*i* P		**P**	**22 59 28.6**	**+0.4**
DAG				pmax	

	comp=Z,2.2nm,0.8s,baz=276,slow=5.7,SNR=10							
AKASG	**Malin Array Be**	**59.94**	**45**	P	**P**	**23 00 25.1**	**-0.8**	
AKBB	**Malin Array Si**	**59.94**	**45**	IAmb	IAmb	23 00 31.4		
	comp=Z,11nm,1.3s							
C09A	**Chrisman Ranch**	**60.24**	**312**	IAmb	IAmb	23 00 34.9		
	comp=Z,15nm,1.5s							
E09A	**Wood Farm, Sta**	**60.33**	**310**	IAmb	IAmb	23 00 35.7		
	comp=Z,12nm,1.4s							
TPNV	**Topopah Spring**	**60.63**	**299**	IAmb	IAmb	23 00 40.2		
	comp=Z,11nm,1.4s							
E08A	**Dider Farm, El**	**60.96**	**310**	IAmb	IAmb	23 00 35.2		
	comp=Z,9.7nm,1.1s							
HAWA	**Hanford**	**61.30**	**310**	IAmb	IAmb	23 00 37.6		
	comp=Z,13nm,1.1s							
PFO	**Pinyon Flats O**	**61.56**	**296**	P	**P**	**23 00 38.9**	**+1.5**	
	comp=Z,1.6nm,0.8s,baz=40,slow=3.6,SNR=6.0							
KVN	**Kaiserville**	**61.61**	**302**	P	**P**	**23 00 36.2**	**-1.6**	
KVN				pmax	pmax			
	comp=Z,9.0nm,1.3s							
KVN	**Kaiserville**	**61.61**	**302**	P	**P**	**23 00 36.2**	**-1.6**	
KVN				IAmb	IAmb	23 00 40.5		
	comp=Z,8.8nm,1.3s							
NVAR	**Mina Array Bea**	**61.90**	**301**	P	**P**	**23 00 40.5**	**+0.8**	
	comp=Z,1.2nm,0.8s,baz=79,slow=6.1,SNR=9.2							
NVAR				LR	LR	23 25 38.0		
	comp=Z,161nm,21.0s,baz=28,slow=34							
NVAR	**Mina Array Bea**	**61.90**	**301**	P	**P**	**23 00 38.1**	**-1.6**	
LTY	**Liberty**	**61.93**	**311**	IAmb	IAmb	23 00 41.3		
	comp=Z,17nm,1.4s							
PAHR	**Pah Rah Range**	**62.45**	**303**	IAmb	IAmb	23 00 45.5		
	comp=Z,9.0nm,1.1s							
MOD	**Modoc Plateau**	**62.66**	**305**	IAmb	IAmb	23 00 47.3		
	comp=Z,9.4nm,1.1s							
H04A	**Detroit Lake**	**63.44**	**309**	IAmb	IAmb	23 00 51.7		
	comp=Z,15nm,1.2s							
OBN	**Obninsk**	**63.78**	**39**	*e*P	**P**	**23 00 51.1**	**-0.6**	
OBN				*e**PP	**pwP**	**23 00 57.3**	**-1.2**	
OBN						23 01 30.0		
OBN				S	S	23 09 16.0	-10	
OBN				pmax	pmax			
	comp=Z,25nm,1.7s							
OBN				MLR	MLR			
	comp=Z,40nm,13.0s							
ORV	**Oroville**	**64.07**	**303**	P	**P**	**23 00 52.2**	**-1.7**	
ORV				pmax	pmax			
	comp=Z,12nm,1.2s							
ORV	**Oroville**	**64.07**	**303**	P	**P**	**23 00 52.2**	**-1.7**	
ORV				IAmb	IAmb	23 00 56.2		
	comp=Z,12nm,1.2s							
MOS	**Moscow**	**64.28**	**38**	*e*P	**P**	**23 00 54.4**	**-0.5**	
YBH	**Yreka Blue Hor**	**64.46**	**306**	LR	LR	23 28 07.0		
	comp=Z,102nm,19.5s,baz=75,slow=35							
BR131	**Keskin Array S**	**64.96**	**56**	P	**P**	**23 00 58.3**	**-1.6**	
BR131				pmax	pmax			
	comp=Z,10.0nm,1.3s							
BR131	**Keskin Array S**	**64.96**	**56**	P	**P**	**23 00 58.3**	**-1.6**	
BR131				IAmb	IAmb	23 01 02.1		
	comp=Z,10nm,1.2s							
BRTR	**Keskin Array B**	**64.96**	**56**	P	**P**	**23 01 00.2**	**+0.3**	
	comp=Z,7.3nm,1.1s,baz=284,slow=5.0,SNR=25							
BRTR	**Keskin Array B**	**64.96**	**56**	P	**P**	**23 00 58.6**	**-1.3**	
INK	**Inuvik**	**65.37**	**336**	P	**P**	**23 01 00.6**	**-1.2**	
INK				pmax	pmax			
	comp=Z,14nm,1.3s							
INK	**Inuvik**	**65.37**	**336**	P	**P**	**23 01 00.6**	**-1.2**	
INK				IAmb	IAmb	23 01 03.1		
	comp=Z,14nm,1.2s							
VSR	**Storozhevoye**	**66.06**	**43**	*i* P	**P**	**23 01 06.5**	**-0.1**	
VSR				pmax	pmax			
	comp=Z,9.0nm,1.2s							
ANN	**Anapa**	**66.43**	**50**	*e*P	**P**	**23 01 07.4**	**-1.7**	
ANN				pmax	pmax			
	comp=Z,40nm,1.5s							
DAWY	**Dawson**	**68.64**	**332**	P	**P**	**23 01 22.2**	**-0.6**	
DAWY				IAmb	IAmb	23 01 24.6		
	comp=Z,12nm,1.2s							
H09W1	**TRISTAN DA CUN**	**70.07**	**153**	T	T	00 17 53.3		
	SNR=2.1							
KIV	**Kislovodsk**	**70.28**	**50**	*e*P	**P**	**23 01 32.2**	**-1.2**	
KIV				pmax	pmax			
	comp=Z,21nm,1.0s							
KIV	**Kislovodsk**	**70.28**	**50**	P	**P**	**23 01 31.9**	**-1.5**	
KIV				IAmb	IAmb	23 01 40.8		
	comp=Z,20nm,1.5s							
SHA1	**Shidzhatmaz**	**70.33**	**50**	*i* P	**P**	**23 01 34.3**	**+0.4**	
KBZ	**Khabaz**	**70.50**	**50**	P	**P**	**23 01 36.1**	**+1.6**	
	comp=Z,2.2nm,1.0s,baz=297,slow=2.3,SNR=3.1							
PRP	**Porcupine Dome**	**70.66**	**334**	IAmb	IAmb	23 01 37.1		
	comp=Z,11nm,1.2s							
PLCA	**Paso Flores**	**71.05**	**201**	P	**P**	**23 01 36.4**	**-1.4**	
PLCA				pmax	pmax			
	comp=Z,9.0nm,1.2s							
PLCA	**Paso Flores**	**71.05**	**201**	P	**P**	**23 01 39.3**	**+1.5**	
	comp=Z,3.8nm,1.0s,baz=27,slow=5.6,SNR=4.2							
PLCA	**Paso Flores**	**71.05**	**201**	P	**P**	**23 01 36.4**	**-1.4**	
PLCA				IAmb	IAmb	23 01 39.9		
	comp=Z,8.5nm,1.1s							
IL31		**71.47**	**334**	IAmb	IAmb	23 01 41.5		
	comp=Z,8.9nm,1.1s							
ILAR	**Eielson Array**	**71.47**	**334**	P	**P**	**23 01 39.5**	**-0.6**	
ILAR	**Eielson Array**	**71.47**	**334**	P	**P**	**23 01 41.0**	**+0.9**	
	comp=Z,4.2nm,1.0s,baz=72,slow=4.4,SNR=25							
ILAR				LR	LR	23 32 32.9		
	comp=Z,65nm,18.8s,baz=114,slow=36							
ILAR	**Eielson Array**	**71.47**	**334**	P	**P**	**23 01 39.5**	**-0.6**	
COLA	**College**	**71.81**	**334**	*i* P	**P**	**23 01 42.0**	**-0.1**	
COLA				pmax	pmax			
	comp=Z,8.0nm,1.2s							
GNI	**Garni**	**72.98**	**53**	*ce*P	**P**	**23 01 48.7**	**-1.1**	
GNI				pmax	pmax			
	comp=Z,81nm,1.7s							
GNI	**Garni**	**72.98**	**53**	P	**P**	**23 01 48.6**	**-1.1**	
ARU	**Arti**	**75.23**	**34**	*i* P	**P**	**23 02 02.9**	**+0.5**	
ARU				pmax	pmax			
	comp=Z,4.0nm,1.4s							
RDOG	**Red Dog Mine**	**75.52**	**340**	IAmb	IAmb	23 02 06.5		
	comp=Z,11nm,0.8s							
SVE	**Sverdlovsk**	**76.08**	**33**	*e*P	**P**	**23 02 08.3**	**+1.0**	
TIXI	**Tiksi**	**82.09**	**2**	*ce*P	**P**	**23 02 40.8**	**+0.9**	
TIXI				pmax	pmax			
	comp=Z,8.0nm,1.3s							
TIXI	**Tiksi**	**82.09**	**2**	P	**P**	**23 02 38.7**	**-1.2**	
TIXI				IAmb	IAmb	23 02 47.0		
	comp=Z,12nm,1.4s							
BRVK	**Borovoye**	**82.79**	**34**	P	**P**	**23 02 42.8**	**-1.1**	
BRVK				pmax	pmax			
	comp=Z,7.0nm,1.3s							
BRVK	**Borovoye**	**82.79**	**34**	P	**P**	**23 02 42.8**	**-1.1**	
BILL	**Bilibino**	**83.08**	**349**	*e*P	**P**	**23 02 46.2**	**+1.0**	
BILL				*e*		23 02 51.0		
BILL				*e*S	S	**23 13 05.5**	**+1.1**	
BILL				pmax	pmax			
	comp=Z,6.0nm,1.0s							
BILL				MLR	MLR			
	comp=Z,72nm,17.0s							
BILL	**Bilibino**	**83.08**	**349**	P	**P**	**23 02 44.6**	**-0.5**	
KMBO	**Kilima Mbogo**	**83.15**	**95**	P	**P**	**23 02 49.2**	**+2.4**	
	comp=Z,0.5nm,0.4s,baz=292,slow=8.9,SNR=3.2							
KMBO	**Kilima Mbogo**	**83.15**	**95**	P	**P**	**23 02 44.2**	**-2.6**	
KMBO				IAmb	IAmb	23 02 50.4		
	comp=Z,10nm,1.7s							
GEYT	**Alibeck**	**83.37**	**51**	P	**P**	**23 02 48.6**	**+1.3**	
	comp=Z,0.5nm,0.5s,baz=270,slow=4.3,SNR=4.3							
GEYT	**Alibeck**	**83.37**	**51**	P	**P**	**23 02 45.1**	**-2.2**	
BOSA	**Boshof**	**86.48**	**124**	LR	LR	23 36 05.4		
	comp=Z,62nm,19.1s,baz=307,slow=32							
KURK	**Kurchatov**	**88.30**	**32**	*i* P	**P**	**23 03 12.1**	**+0.7**	
KURK				pmax	pmax			
	comp=Z,3.0nm,1.2s							
ZAA0	**Zalesovo Array**	**88.81**	**27**	P	**P**	**23 03 13.3**	**-0.4**	
ZAA0				IAmb	IAmb	23 03 15.8		
	comp=Z,7.0nm,1.3s							
ZALV	**Zalesovo Beam**	**88.81**	**27**	P	**P**	**23 03 14.4**	**+0.6**	
	comp=Z,2.7nm,0.9s,baz=296,slow=4.8,SNR=8.5							
ZALV				LR	LR	23 40 45.5		
	comp=Z,31nm,18.4s,baz=52,slow=34							
SEY	**Seymchan**	**89.94**	**352**	*i* P	**P**	**23 03 18.1**	**-0.7**	
AAK	**Ala-Archa**	**91.29**	**40**	*i* P	**P**	**23 03 26.0**	**+0.2**	
AAK				pmax	pmax			
	comp=Z,1.0nm,1.1s							
YAK	**Yakutsk**	**91.74**	**3**	*i* P	**P**	**23 03 27.1**	**-0.1**	
YAK				pmax	pmax			
	comp=Z,2.0nm,0.7s							
MKAR	**Makanchi Array**	**92.74**	**33**	*ce*P	**P**	**23 03 33.4**	**+1.2**	
MKAR	**Makanchi Array**	**92.74**	**33**	P	**P**	**23 03 32.2**	**-0.1**	
	comp=Z,0.5nm,0.9s,baz=320,slow=3.8,SNR=4.0							
MA2	**Magadan**	**93.39**	**352**	*i* P	**P**	**23 03 34.8**	**-0.1**	
MA2				pmax	pmax			
	comp=Z,6.0nm,1.3s							
KSH	**Kashi**	**94.12**	**42**	*e*P	**P**	**23 03 40.3**	**+1.5**	
KSH				*es*P	pwP	23 03 54.9	+9.2	
KSH				*e*PP	**PP**	**23 07 28.3**	**+3.7**	
TLY	**Talaya**	**97.36**	**19**	*i* P	**P**	**23 03 53.0**	**-0.2**	
TLY				pmax	pmax			
	comp=Z,5.0nm,1.0s							
WMQ	**Urumqi**	**97.53**	**33**	*e*P	Pdif	23 03 56.9	+2.6	
WMQ				pmax	pmax			
	comp=Z,8.0nm,0.7s							
WMQ				LR	LR			
	comp=Z,460nm,29.3s							
WMQ				LR	LR			
	comp=Z,520nm,29.2s							
LZH	**Lanzhou**	**111.04**	**27**	*e*PKP	**PKiKP**	**23 08 55.3**	**+1.4**	
LZH				sPKP		23 08 59.8		
LZH				LR	LR			
	comp=Z,140nm,18.0s							
LZH				LR	LR			
	comp=Z,140nm,18.1s							
LZH				LR	LR			
	comp=Z,200nm,19.8s							
CD2	**Chengdu**	**115.44**	**30**	PKP	**PKiKP**	**23 09 01.5**	**-0.8**	
NJ2	**Nanjing**	**119.74**	**16**	*e*PKP	**PKPdf**	**23 09 10.1**	**-0.3**	
CMAR	**Chiang Mai Arr**	**123.02**	**42**	PKP	**PKPdf**	**23 09 17.1**	**0.0**	
	comp=Z,0.9nm,0.6s,baz=313,slow=2.1,SNR=5.1							
DZM	**Mont Dzumac**	**151.45**	**272**	PKPbc	**PKiKP**	**23 10 16.3**	**+1.3**	
	comp=Z,21nm,1.1s,baz=67,slow=9.2,SNR=4.1							
DZM	**Mont Dzumac**	**151.45**	**272**		**PKPbc**	**23 10 13.3**	**-1.3**	

*IDC **19** 23:08:00.9±1.7, 17°.09S×72°.59W, h82km±17km, mb3.6/4, mb1 3.6/8, mb1mx3.4/42, mbtmp3.9/8, Error ellipse: s-maj=27.9km s-min=13.4km az=53.0*

ISC 19 23:07:58.6±0.9, 17°.22S±0°.08×72°.74W±0°.09, h49km, n14, σ2s78/11, mb3.8/4, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.51**	**79**	P	**Pn**	**23 09 06.8**	**+1.8**
	2.4nm,0.3s,baz=253,slow=11,SNR=48						
LPAZ				S	**Sn**	**23 09 59.8**	**+3.3**
	baz=180,slow=19,SNR=0.9						
LVC	**Limon Verde**	**6.46**	**147**	P	**Pn**	**23 09 33.2**	**+1.7**
	0.9nm,0.3s,baz=326,slow=9.4,SNR=14						
LVC				S	**Sn**	**23 10 46.4**	**+2.4**
	2.6nm,0.3s,baz=87,slow=17,SNR=7.7						
NNA	**Nana**	**6.55**	**322**	P	**Pn**	**23 09 33.9**	**+1.4**
	2.2nm,0.3s,baz=134,slow=12,SNR=4.3						
NNA				S	**Sn**	**23 10 49.1**	**+3.2**
	3.4nm,0.3s,baz=229,slow=20,SNR=4.6						
SIV	**San Ignacio**	**11.25**	**85**	P	**Pn**	**23 10 35.7**	**-1.1**
	0.3nm,0.3s,baz=275,slow=14,SNR=6.3						
PLCA	**Paso Flores**	**23.50**	**176**	P	**P**	**23 13 06.3**	**+2.1**
	0.8nm,0.4s,baz=3.4,slow=7.3,SNR=3.9						
DBIC	**Dimbokro**	**71.12**	**77**	P	**P**	**23 19 10.2**	**-2.4**
	1.0nm,0.5s,baz=243,slow=5.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**79.43**	**73**	P	**P**	**23 19 58.2**	**-2.1**
	1.5nm,0.6s,baz=253,slow=4.7,SNR=11						
YKA	**Yellowknife Ar**	**86.00**	**342**	P	**P**	**23 20 30.0**	**-3.3**
	0.3nm,0.7s,baz=136,slow=4.9,SNR=5.4						
H11N3	**WAKE ISLAND Hyd**	**23.62**	**283**	T	T	01 42 09.9	
	baz=98,slow=75,SNR=9.5						
H11N2	**WAKE ISLAND Hyd**	**23.63**	**283**	T	T	01 42 10.9	
	baz=98,slow=75,SNR=11						
H11S2	**WAKE ISLAND Hyd**	**23.63**	**281**	T	T	01 42 12.3	
	baz=99,slow=75,SNR=34						
H11N1	**WAKE ISLAND Hyd**	**23.64**	**283**	T	T	01 42 11.6	
	baz=98,slow=75,SNR=6.5						
H11S1	**WAKE ISLAND Hyd**	**23.64**	**281**	T	T	01 42 11.5	
	baz=99,slow=75,SNR=28						
H11S3	**WAKE ISLAND Hyd**	**23.65**	**281**	T	T	01 42 13.6	
	baz=99,slow=75,SNR=41						

*NEIC **19** 23:08:48.9±2.0, 30°.18S±0°.09×179°.8W±0°.1, h422km±7km, mb4.5/19, Error ellipse: s-maj=15.4km s-min=10.4km az=53.0*
*IDC **19** 23:08:56.0±8.0, 30°.90S×179°.41W, h539km±108km, mb2.9/2, mb1 3.2/3, mb1mx2.8/38, mbtmp3.9/3, Error ellipse: s-maj=125.2km s-min=41.5km az=4.0*

ISC 19 23:08:47.8±0.7, 30°.08S±0°.08×179°.9W±0°.1, h400km, n43, σ1s48/42, mb4.4/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUZ	**Omahuta**	**7.51**	**225**	P	**Pn**	**23 10 37.6**	**+0.5**
MXZ	**Matakaoa Point**	**7.61**	**191**	P	**Pn**	**23 10 37.8**	**-0.4**
URZ	**Urewera**	**8.53**	**196**	P	**P**	**23 10 50.2**	**+1.4**
	1.5nm,0.3s,baz=270,slow=4.4,SNR=9.1						
URZ				S	**S**	**23 12 30.5**	**+2.6**
	1.5nm,0.3s,baz=110,slow=21,SNR=7.5						
URZ	**Urewera**	**8.53**	**196**	P	**P**	**23 10 49.6**	**+0.7**
HIZ	**Hauiti**	**9.47**	**206**	P	**P**	**23 10 57.9**	**-1.4**
BKZ	**Black Stump Fm**	**9.54**	**197**	P	**Pn**	**23 11 01.4**	**+1.0**
BFZ	**Birch Farm**	**11.04**	**196**	P	**P**	**23 11 16.9**	**+0.2**
MSWZ	**Moikau Station**	**11.98**	**198**	P	**P**	**23 11 26.3**	**-0.8**
SNZO	**South Karori**	**12.03**	**200**	P	**P**	**23 11 27.7**	**+0.1**
BHW	**Baring Head**	**12.08**	**199**	P	**P**	**23 11 25.8**	**-2.3**
PLWZ	**Palliser**	**12.12**	**198**	P	**P**	**23 11 29.1**	**+0.5**
QRZ	**Quartz Range**	**12.37**	**208**	P	**P**	**23 11 31.0**	**-0.3**
TUWZ	**Tuamarina**	**12.38**	**202**	P	**P**	**23 11 31.4**	**0.0**
NNZ	**Nelson**	**12.38**	**204**	P	**P**	**23 11 31.9**	**+0.4**
CMWZ	**Cape Campbell**	**12.58**	**201**	P	**P**	**23 11 31.5**	**-2.2**
THZ	**Tophouse**	**13.03**	**205**	P	**P**	**23 11 38.7**	**0.0**
KHZ	**Kahutara**	**13.40**	**201**	P	**P**	**23 11 40.5**	**-2.1**
NIUE	**Niue**	**14.21**	**42**	P	**P**	**23 11 51.0**	**-0.8**
MQZ	**McQueen's Vall**	**14.84**	**202**	P	**P**	**23 11 58.2**	**-0.1**
FOZ	**Fox Glacier**	**15.74**	**209**	P	**P**	**23 12 03.5**	**-4.5**
FOZ				IAmb	IAmb	23 12 06.2	
	comp=Z,20nm,1.0s						
DCZ	**Deep Cove**	**18.42**	**210**	P	**P**	**23 12 33.2**	**-3.4**
DCZ				IAmb	IAmb	23 12 46.2	
	comp=Z,13nm,1.0s						
WHZ	**Wether Hill Ro**	**18.43**	**208**	P	**P**	**23 12 36.3**	**-0.4**
WHZ				IAmb	IAmb	23 12 50.8	
	comp=Z,3.5nm,0.7s						
TOO	**Toolangi**	**29.59**	**246**	P	**P**	**23 14 16.2**	**-1.7**
COEN	**Coen**	**37.61**	**287**	P	**P**	**23 15 27.1**	**+0.6**
ASAR	**Alice Springs**	**41.49**	**267**	P	**P**	**23 15 59.8**	**+1.8**
	comp=Z,0.9nm,0.5s,baz=99,slow=6.9,SNR=11						
PATS	**Pohnpei**	**42.25**	**327**	P	**P**	**23 16 05.9**	**+1.9**
WR0	**Warramunga Arr**	**42.27**	**273**	P	**P**	**23 16 04.7**	**+0.6**
WRA	**Warramunga Arr**	**42.45**	**273**	P	**P**	**23 16 06.7**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=112,slow=6.7,SNR=10.0						
FITZ	**Fitzroy Crossi**	**50.72**	**271**	P	**P**	**23 17 08.8**	**-0.1**
PUH	**Pauahi**	**54.61**	**29**	P	**P**	**23 17 39.1**	**+2.1**
HUH	**Hualalai**	**54.63**	**28**	P	**P**	**23 17 37.0**	**-0.3**
HUH				IAmb	IAmb	23 17 55.9	
	comp=Z,26nm,0.7s						
CASY	**Casey**	**54.66**	**208**	P	**P**	**23 17 35.5**	**-1.1**
CASY				IAmb	IAmb	23 17 47.1	
	comp=Z,13nm,0.9s						
GIRL	**Giralia**	**58.79**	**260**	P	**P**	**23 18 05.3**	**-0.7**
QSPA	**South Pole Qui**	**60.03**	**180**	P	**P**	**23 18 13.9**	**+0.1**
JOW	**Kunigami**	**75.24**	**313**	P	**P**	**23 19 47.0**	**-1.0**
JOW				IAmb	IAmb	23 19 48.4	
	comp=Z,8.9nm,0.6s						
YULB	**Yu-li**	**77.55**	**306**	P	**P**	**23 20 00.2**	**-0.8**
YULB				IAmb	IAmb	23 20 11.7	
	comp=Z,6.6nm,0.9s						
NACB	**Ninganchiao**	**77.85**	**307**	P	**P**	**23 20 01.8**	**-0.8**
NACB				IAmb	IAmb	23 20 02.3	
	comp=Z,15nm,0.8s						
TPUB	**Ta-pu**	**77.96**	**306**	P	**P**	**23 20 02.7**	**-0.6**
TPUB				IAmb	IAmb	23 20 04.2	
	comp=Z,7.6nm,0.9s						
SSE	**Sheshan**	**82.67**	**312**	P	**P**	**23 20 26.9**	**-0.9**
SSE				IAmb	IAmb	23 20 29.0	
	comp=Z,15nm,0.8s						
MOD	**Modoc Plateau**	**90.24**	**40**		pP	23 22 40.9	+5.1
SRU	**San Rafael Swe**	**94.34**	**47**	P	**P**	**23 21 24.5**	**+1.3**
FLWY	**Flagg Ranch**	**97.11**	**43**	P	**P**	**23 21 34.5**	**-1.1**
FINES	**FINESS Array B**	**144.27**	**339**	PKPbc	PKPbc	23 27 31.8	-3.6
	comp=Z,0.6nm,0.3s,baz=31,slow=3.3,SNR=6.9						

*UCR **19** 23:21:09.1±1.0, 13°.73N×91°.02W, h19km±5km, ML3.5*
SNET 19 23:21:09.1±0.7, 13°.68N×90°.99W, h15km±3km, ML3.6, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcalda de S**	**0.96**	**80**	*e*P	**Pg**	23 21 27.0	-0.5
FAME				*e*S	Sg	23 21 40.5	+0.1
RTR	**El Retiro**	**1.33**	**81**	*e*P	**Pn**	23 21 32.7	-0.6
RTR				*e*S	Sn	23 21 51.3	+0.5
RTR	**El Retiro**	**1.33**	**81**	*e*P	**Pn**	23 21 32.7	-0.6
RTR				*e*S	Sn	23 21 51.3	+0.5
CEVE	**Cerro Verde**	**1.34**	**84**	*e*P	**Pn**	23 21 33.1	-0.4
CEVE	**Cerro Verde**	**1.34**	**84**	*e*P	**Pn**	23 21 33.1	-0.4
SBLS	**San Blas**	**1.34**	**83**	*e*P	**Pn**	23 21 33.1	-0.4
SBLS				*e*S	Sg	23 21 52.3	-0.2
SBLS	**San Blas**	**1.34**	**83**	*e*P	**Pn**	23 21 33.1	-0.4
SBLS				*e*S	Sg	23 21 52.3	-0.2
SNJE	**San Jose**	**1.36**	**82**	*e*P	**Pn**	23 21 33.5	-0.3
SNJE				*e*S	Sg	23 21 52.7	-0.4
SNJE	**San Jose**	**1.36**	**82**	*e*P	**Pn**	23 21 33.5	-0.3
SNJE				*e*S	Sg	23 21 52.7	-0.4
BOQS	**Boqueron**	**1.67**	**88**	*e*P	**Pn**	23 21 38.1	+0.1
BOQS				*e*S	Sb	23 22 00.9	+0.4
MTO3	**Montecristo**	**1.74**	**66**	*e*P	**Pn**	23 21 39.5	+0.5
MTO3				*e*S	Sb	23 22 02.4	-0.2
MTO3	**Montecristo**	**1.74**	**66**	*e*P	**Pn**	23 21 39.5	+0.5
MTO3				*e*S	Sb	23 22 02.4	-0.2
LFU	**La Fuente**	**1.83**	**88**	*e*P	**Pn**	23 21 40.1	+0.1
LFU				*e*S	Sb	23 22 04.1	-0.9
LFU	**La Fuente**	**1.83**	**88**	*e*P	**Pn**	23 21 40.1	+0.1
LFU				*e*S	Sb	23 22 04.1	-0.9
LFRS	**El Faro**	**1.88**	**92**	*e*P	**Pn**	23 21 41.0	+0.2
LFRS				*e*S	Sn	23 22 05.2	+0.9
LFRS				IAML		23 22 06.6	
	comp=Z,485nm,0.3s						
LBRS	**Las Brisas**	**1.90**	**88**	*e*P	**Pn**	23 21 40.6	-0.4
COEG	**Centro de Oper**	**2.06**	**91**	*e*P	**Pn**	23 21 43.2	0.0

ISC 19 23:24:13.2±0.9, 50°.07N±0°.04×18°.45E±0°.02, h0km, n18, σ0s87/34, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.30**	**221**	*e*PG	**Pg**	**23 24 19.7**	**+0.7**
OKC				*e*SG	**Sb**	**23 24 24.4**	**-2.6**
	comp=Z,45nm,0.6s						
MORC	**Moravsky Berou**	**0.66**	**244**	*e*PG	**Pg**	**23 24 26.0**	**+0.3**
MORC				*e*SG	**Sg**	**23 24 34.8**	**+0.6**
OJC	**Ojcow**	**0.88**	**79**	*e*Pg	**Pg**	**23 24 29.4**	**-0.6**
OJC				*e*Sg	**Sg**	**23 24 41.8**	**+0.4**
KRLC	**Kraliky**	**1.08**	**271**	*e*PG	**Pg**	**23 24 32.9**	**-0.9**
KRLC				*e*SG	**Sb**	**23 24 48.6**	**-0.7**
	comp=Z,10nm,0.4s						
LANS	**Liptovska Anna**	**1.13**	**144**	*e*PG	**Pg**	**23 24 35.1**	**+0.3**
LANS				*e*SG	**Sb**	**23 24 51.0**	**+0.1**
LANS				eLG	Lg	23 24 55.2	
NIE	**Niedzica**	**1.36**	**118**	*e*Pg	**Pg**	**23 24 39.4**	**+0.1**
NIE				*e*Sg	**Sn**	**23 24 59.0**	**+0.7**
DPC	**Dobruska-Polom**	**1.40**	**283**	*e*PG	**Pg**	**23 24 39.3**	**-0.7**
DPC				*e*SG	**Sn**	**23 24 59.3**	**+0.1**
	comp=Z,18nm,0.6s						
VRAC	**Vranov**	**1.43**	**239**	*e*PG	**Pn**	**23 24 39.7**	**-0.6**
VRAC				*e*SG	**Sg**	**23 24 58.5**	**-0.5**
OSTC	**Ostas**	**1.52**	**290**	*e*PG	**Pn**	**23 24 40.5**	**-1.1**
OSTC				*e*SG	**Sn**	**23 25 03.2**	**+1.2**
KSP	**Ksiaz**	**1.58**	**300**	*e*Pg	**Pn**	**23 24 41.8**	**-0.7**
KSP				*e*Sg	**Sn**	**23 25 04.0**	**+0.4**
VYHS	**Vyhne**	**1.59**	**171**	*e*PG	**Pn**	**23 24 42.1**	**-0.6**
VYHS				*e*SG	**Sn**	**23 25 03.1**	**-0.9**
CHVC	**Chvalec**	**1.62**	**290**	*e*PG	**Pn**	**23 24 42.5**	**-0.6**
CHVC				*e*SG	**Pg**	**23 25 06.6**	**+1.3**
UPC	**Upice**	**1.63**	**287**	*e*PG	**Pn**	**23 24 42.8**	**-0.3**
UPC				*e*SG	**Sg**	**23 25 05.9**	**+0.5**
	comp=Z,8.3nm,0.9s						
KRUC	**Moravsky**	**1.67**	**234**	*e*PN	**Pn**	**23 24 43.4**	**-0.3**
KRUC				*e*SG	**Sb**	**23 25 06.0**	**-0.5**
SMOL	**Smolenice**	**1.69**	**204**	*e*SG	**Sb**	**23 25 06.7**	**-0.3**
SMOL				*e*LG	Lg	23 25 08.9	
BRG	**Berggiesshubel**	**2.99**	**287**	SG	**Sg**	**23 25 47.9**	**-1.3**
	6.6nm,1.1s						
KHC	**Kasperske Hory**	**3.31**	**255**	*e*PG	**Pb**	**23 25 14.0**	**+1.3**
KHC				*e*SG	**Sg**	**23 25 59.3**	**0.0**
CLL	**Collm**	**3.68**	**292**	*e*Pg	**Pg**	**23 25 25.0

KCP Kidapawan 10.88 336⇑*i*P **Pn 23 32 45.4 +2.9**
JAY Jayapura 11.10 88 Pn **Pn 23 32 47.0 +1.6**
KNRA Kununurra 12.66 184 P **Pn 23 33 06.4 -0.3**
baz=13,SNR=40
KNRA Kununurra 12.66 184 Pn 23 33 07.4 +0.7
BKB Balikpapan 12.81 277 Pn **Pn 23 33 09.5 +0.8**
PLAI Plampang 13.12 243 P **Pn 23 33 15.3 +2.3**
55nm,1.4s
FITZ Fitzroy Crossi 15.53 194 P **Pn 23 33 44.1 -1.4**
baz=16,SNR=30
FITZ Fitzroy Crossi 15.53 194 Pn **Pn 23 33 44.7 -0.8**
1.2nm,0.3s,baz=26,slow=16,SNR=15
FITZ Fitzroy Crossi 15.53 194 Pn 23 33 45.0 -0.5
FITZ IAmb IAmb 23 33 49.2
comp=Z,55nm,0.8s
KKM Kota Kinabalu 16.09 304 Pn **Pn 23 33 52.4 -0.4**
JAGI Jajag, Banyuwa 16.31 250 P **Pn 23 33 56.8 +1.2**
comp=Z,93nm,0.9s
JAGI Jajag, Banyuwa 16.31 250 P **Pn 23 33 55.8 +0.2**
JAGI IAmb IAmb 23 33 57.8
comp=Z,78nm,0.9s
COEN Coen 17.29 130 P **Pn 23 34 07.9 0.0**
baz=17,SNR=24
COEN Coen 17.29 130 Pn 23 34 08.0 0.0
WB9 Warramunga Arr 17.36 165 P **Pn 23 34 06.6 -2.2**
baz=17
WRAB Tennant Creek 17.49 165*ce*P **Pn 23 34 09.2 -1.2**
WRAB pmax pmax
comp=Z,85nm,1.7s
WRAB Tennant Creek 17.49 165 Pn **Pn 23 34 09.1 -1.3**
WRAB IAmb IAmb 23 34 13.0
comp=Z,44nm,1.0s
WRA Warramunga Arr 17.50 165 P **Pn 23 34 07.7 -2.8**
comp=Z,1.2nm,0.3s,baz=347,slow=12,SNR=26
WRA S **Sn 23 37 27.0 +2.6**
comp=Z,0.5nm,0.3s,baz=344,slow=20,SNR=9.0
GRJI Gresik 17.50 256 P **Pn 23 34 10.7 +0.2**
comp=Z,218nm,0.9s
WR0 Warramunga Arr 17.56 164 P **Pn 23 34 10.5 -0.8**
SBUM Sibu 18.19 287 P **Pn 23 34 17.7 -1.3**
SBUM Sibu 18.19 287 P **P 23 34 22.0 +3.0**
NGJI Ngawi 18.58 256 P **Pn 23 34 28.2 +4.4**
comp=Z,88nm,1.2s
PMG Port Moresby 18.58 111 P **P 23 34 23.1 -0.3**
PMG pmax pmax
comp=Z,18nm,0.9s
PMG Port Moresby 18.58 111 P **Pn 23 34 23.9 +0.1**
comp=Z,1.4nm,0.3s,baz=278,slow=14,SNR=2.5
PMG LR LR 23 44 19.7
comp=Z,363nm,20.6s,baz=325,slow=46
PMG Port Moresby 18.58 111 P **P 23 34 23.1 -0.3**
PCJI Pacitan 19.05 253 P **Pn 23 34 31.1 +1.6**
comp=Z,132nm,0.8s
WOJI Wonogiri, Jawa 19.21 255 P **Pn 23 34 33.0 +1.6**
SMRI Semarang 19.51 257 P **P 23 34 32.2 -1.4**
UGM Wanagama 19.61 255 P **P 23 34 34.4 -0.3**
KSM Kuching 19.78 283 P **P 23 34 36.1 -0.5**
KSM IAmb IAmb 23 34 42.7
comp=Z,49nm,1.0s
QIS Mount Isa 20.02 152 P **P 23 34 39.3 +0.2**
baz=20,SNR=49
PSA00 Pilbara Seismi 20.79 206 P **P 23 34 45.7 -1.7**
PSA00 IAmb IAmb 23 34 50.4
comp=Z,65nm,1.1s
MTSU Mount Surprise 20.86 137 P **P 23 34 49.5 +1.3**
baz=21,SNR=14
AS31 Alice Springs 20.99 169 P **P 23 34 49.2 -0.4**
ASAR Alice Springs 20.99 169 P **P 23 34 50.0 +0.3**
comp=Z,228nm,0.7s,baz=349,slow=10,SNR=1189
ASAR S **S 23 38 40.6 -1.4**
comp=Z,8.4nm,1.0s,baz=352,slow=21,SNR=6.7
ASAR PcP **PcP 23 38 56.9 +0.4**
comp=Z,2.7nm,0.5s,baz=3.1,slow=1.6,SNR=6.6
KPJI Karang Pucung 21.03 257 P **P 23 34 51.3 +1.2**
comp=Z,77nm,1.2s
WRKA Warakurna 21.98 183 P **P 23 34 59.4 -0.8**
baz=22,SNR=139
CISI Cisompet, Garu 22.16 257 P **P 23 35 01.1 -1.2**
LEM Lembang 22.23 259 P **P 23 35 01.9 -1.3**
comp=Z,62nm,1.0s,baz=20,slow=15,SNR=5.1
KRVT Keravat (AS076 22.42 94 LR LR 23 44 16.4
comp=Z,357nm,18.3s,baz=155,slow=38
CNJI Cibinong 22.79 258 P **P 23 35 05.6 -3.3**
comp=Z,194nm,1.1s
CTA Charters Tower 23.53 138 P **P 23 35 17.3 +0.9**
baz=24
CTA Charters Tower 23.53 138 P **P 23 35 17.0 +0.6**
comp=Z,21nm,1.0s,baz=326,slow=12,SNR=22
GIRL Giralia 24.59 216 P **P 23 35 24.6 -1.5**
MDSI Maura Dua 25.41 266 P **P 23 35 35.3 +1.6**
comp=Z,29nm,1.0s
MEEK Meekatharra 25.79 203 P **P 23 35 35.3 -1.8**
baz=26,SNR=6.0
MYKOM Kota Tinggi 26.17 280 P **P 23 35 41.0 +0.4**
MNAI Manna 26.62 266 P **P 23 35 43.0 -1.8**
YULB Yu-li 27.42 343 P **P 23 35 48.9 -2.8**
FORT Forrest 27.70 183 P **P 23 35 53.0 -1.1**
baz=28,SNR=14
FORT Forrest 27.70 183 P **P 23 35 53.2 -1.0**
MORW Morawa 28.98 205 P **P 23 36 03.1 -2.5**
KMBL Kambalda 29.17 194 P **P 23 36 05.9 -1.4**
baz=29,SNR=11
IPM Ipoh 29.50 284 P **P 23 36 09.7 -0.7**
IPM IAmb IAmb 23 36 25.5
comp=Z,20nm,1.0s
IPM Ipoh 29.50 284 P **P 23 36 10.0 -0.4**
KULM Kulim 30.06 286 P **P 23 36 15.8 +0.4**
KULM IAmb IAmb 23 36 19.1
comp=Z,9.3nm,0.8s
BBOO Buckleboo 30.30 169 P **P 23 36 16.6 -0.7**
baz=30,SNR=11
BBOO Buckleboo 30.30 169 P **P 23 36 16.7 -0.5**
BBOO IAmb IAmb 23 36 17.2
comp=Z,12nm,0.7s
SISI Saibi 30.53 272 P **P 23 36 21.5 +1.9**
STKA Stephens Creek 30.89 160 P **P 23 36 22.6 +0.1**
STKA pmax pmax
comp=Z,2.0nm,1.0s
STKA Stephens Creek 30.89 160 P **P 23 36 22.9 +0.4**
comp=Z,5.5nm,0.7s,baz=339,slow=12,SNR=7.1
STKA Stephens Creek 30.89 160 P **P 23 36 22.6 +0.1**
RPSI Rantau Prapat 31.18 280 IAmb IAmb 23 36 27.1
comp=Z,21nm,1.0s
HTT Hallett 31.54 165 P **P 23 36 28.2 0.0**
baz=32,SNR=4.8
NWAO Narrogin (SRO) 31.98 200 P **P 23 36 30.3 -1.8**
NWAO pmax pmax
comp=Z,19nm,1.2s
NWAO Narrogin (SRO) 31.98 200 P **P 23 36 30.3 -1.8**
NWAO IAmb IAmb 23 36 40.3
comp=Z,19nm,1.1s
JCJ Chichijima 32.26 21 LR LR 23 47 36.1
comp=Z,103nm,19.6s,baz=240,slow=33
GSI Gunungsitoli 32.29 277 P **P 23 36 34.5 -0.6**
PBKT Sadao Pong 34.30 305 P **P 23 36 52.4 -0.1**
ARMA Armidale 34.35 145 P **P 23 36 54.2 +1.3**
baz=34,SNR=5.5
ARMA Armidale 34.35 145 P **P 23 36 53.1 +0.2**
ARPS Mount Arapiles 35.48 163 P **P 23 37 03.3 +0.8**
baz=36,SNR=6.9
JNU Nakatsue 35.91 2 LR LR 23 50 50.7
comp=Z,65nm,19.5s,baz=174,slow=35
NJ2 Nanjing 36.29 344 *e*P **P 23 37 11.3 +1.9**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
WHN Wuhan 36.37 337⇑P **P 23 37 13.6 +3.5**
WHN pP **pP 23 37 19.1 -0.2**
CAN Canberra 36.88 153 P **P 23 37 15.3 +0.8**
CAN pmax pmax
comp=Z,14nm,1.1s
CAN Canberra 36.88 153 P **P 23 37 15.3 +0.8**
CAN IAmb IAmb 23 37 23.1
comp=Z,14nm,1.1s
CM31 Chiang Mai Arr 36.94 306 IAmb IAmb 23 37 19.0
comp=Z,12nm,0.9s
CMAR Chiang Mai Arr 36.94 306 P **P 23 37 16.6 +1.3**
comp=Z,5.0nm,0.7s,baz=132,slow=6.6,SNR=34
CMAR PcP **PcP 23 39 38.0 +1.7**
comp=Z,1.1nm,0.6s,baz=171,slow=2.5,SNR=5.1
CMAR LR LR 23 54 00.5
comp=Z,46nm,20.2s,baz=145,slow=39
CHTO Chiang Mai 37.13 307 P **P 23 37 18.0 +1.2**
CHTO pmax pmax
comp=Z,21nm,0.9s
CHTO Chiang Mai 37.13 307 P **P 23 37 18.0 +1.2**
CHTO IAmb IAmb 23 37 19.1
comp=Z,21nm,0.9s
TOO Toolangi 37.40 159 P **P 23 37 17.7 -1.2**
TOO pmax pmax
comp=Z,14nm,1.0s
TOO Toolangi 37.40 159 P **P 23 37 17.7 -1.2**
TOO IAmb IAmb 23 37 35.3
comp=Z,14nm,1.0s
KMI Kunming 38.20 319 P **P 23 37 28.1 +2.1**
KMI pP pP 23 37 36.3 +1.0
KMI pmax pmax
comp=Z,13nm,0.9s
KMI pmax pmax
comp=Z,180nm,4.2s
KWAJ Kwajalein Atol 39.66 73 P **P 23 37 35.1 -3.0**
KWAJ pmax pmax
comp=Z,203nm,1.1s
KWAJ Kwajalein Atol 39.66 73 P **P 23 37 35.1 -3.0**
MJAR Matsushiro Arr 40.12 11 P **P 23 37 40.6 -1.1**
comp=Z,6.1nm,0.7s,baz=184,slow=9.0,SNR=15
MJAR LR LR 23 52 54.7
comp=Z,78nm,20.6s,baz=70,slow=34
MAJO Matsushiro 40.12 11 *i*P **P 23 37 40.6 -1.1**
MAJO pmax pmax
comp=Z,10.0nm,0.9s
KSRS Korea Array 40.25 358 P **P 23 37 42.3 -0.3**
comp=Z,1.1nm,0.7s,baz=177,slow=9.7,SNR=4.3
KSRS LR LR 23 53 44.8
comp=Z,75nm,20.2s,baz=176,slow=35
XAN Xi'an 41.65 334 P **P 23 37 58.1 +3.7**
XAN pP pP 23 38 04.4 +0.7
XAN pmax pmax
comp=Z,4.0nm,0.8s
CD2 Chengdu 41.73 326 P **P 23 37 57.5 +2.4**
CD2 pmax pmax
comp=Z,20nm,0.5s
WAKE Wake Island 42.61 57 P **P 23 38 00.8 -1.5**
LZH Lanzhou 45.70 331 *e*P **P 23 38 27.3 +0.2**
LZH pP sP 23 38 39.5 -0.8
LZH sP pP 23 38 44.3 +7.8
LZH *e*PP **PP 23 40 15.4 +0.9**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,92nm,6.2s
LZH LR LR
comp=Z,370nm,14.2s
LZH LR LR
comp=Z,380nm,14.1s
LZH LR LR
comp=Z,560nm,17.3s
SHL Shillong 46.25 310 P **P 23 38 31.8 +0.2**
SHL pmax pmax
comp=Z,14nm,1.0s
SHL Shillong 46.25 310 P **P 23 38 31.8 +0.2**
SHL IAmb IAmb 23 38 33.1
comp=Z,14nm,1.0s
ERM Erimo 46.43 14 P **P 23 38 32.7 +0.2**
ERM pmax pmax
comp=Z,25nm,1.0s
ERM Erimo 46.43 14 P **P 23 38 32.7 +0.2**
HHC Hu-ho-hao-te 46.62 341 *e*P **P 23 38 36.0 +1.8**
HHC pmax pmax
comp=Z,4.0nm,1.0s
HHC pmax pmax
comp=Z,98nm,5.5s
USA0B Ussuriysk Arra 47.00 2 P **P 23 38 37.5 +0.6**
USA0B pmax pmax
comp=Z,6.0nm,0.7s
USA0B Ussuriysk Arra 47.00 2 P **P 23 38 37.5 +0.6**
USA0B IAmb IAmb 23 38 38.5
comp=Z,5.7nm,0.7s
USRK Ussuriysk Ar. 47.00 2 P **P 23 38 37.5 +0.6**
comp=Z,3.5nm,0.6s,baz=183,slow=10,SNR=11
USRK LR LR 23 59 08.9
comp=Z,65nm,19.5s,baz=133,slow=37
LSA Lhasa 49.07 314 P **P 23 38 54.2 +0.4**
LSA pmax pmax
comp=Z,5.0nm,0.7s
LSA Lhasa 49.07 314 P **P 23 38 54.2 +0.4**
LSA IAmb IAmb 23 38 59.8
comp=Z,4.8nm,0.7s
GTA Gaotai 50.29 330 *e*P **P 23 39 02.8 +0.3**
GTA pP sP 23 39 15.0 -0.8
GTA sP pP 23 39 20.8 +8.8
GTA S **S 23 46 14.4 +1.1**
GTA SS **SS 23 49 43.9 -3.4**
GTA pmax pmax
comp=Z,10.0nm,1.1s
GTA pmax pmax
comp=Z,120nm,7.0s
GTA LR LR
comp=Z,89nm,18.7s
GTA LR LR
comp=Z,130nm,20.6s
GTA LR LR
comp=Z,68nm,20.6s
TAPN Taplejung 50.37 310 *e*P **P 23 39 03.5 -0.1**
comp=Z,14nm,0.7s
ODAN Odare 50.38 309 *e*P **P 23 39 03.8 +0.3**
comp=Z,16nm,0.6s
RAMN Ramite 51.04 308 *e*P **P 23 39 09.0 +0.5**
comp=Z,49nm,0.6s
JIRN Jiri 51.70 309 *e*P **P 23 39 13.7 +0.1**
comp=Z,25nm,0.6s
KLR Kul'dur 52.02 2 *i*P **P 23 39 15.3 +0.2**
KLR pmax pmax
comp=Z,3.0nm,0.9s
GUN Gumba 52.06 309 *e*P **P 23 39 16.3 0.0**
comp=Z,26nm,0.6s
PKIN Phulchoki 52.28 309 *e*P **P 23 39 17.4 -0.4**
comp=Z,6.4nm,0.5s
KKN Kakani 52.47 309 *e*P **P 23 39 18.7 -0.5**
comp=Z,15nm,0.7s
GKN Gorkha 53.07 309 *e*P **P 23 39 23.4 -0.2**
comp=Z,24nm,0.6s
KOLN Koldanda 53.78 308 *e*P **P 23 39 29.0 +0.2**
comp=Z,41nm,0.7s
DANN Dangsing 53.92 309 *e*P **P 23 39 29.9 0.0**
comp=Z,57nm,0.6s
QRZ Quartz Range 53.96 140 P **P 23 39 28.0 -1.6**
QRZ IAmb IAmb 23 39 42.0
comp=Z,11nm,1.1s
MLZ Mavora Lakes 54.03 147 P **P 23 39 29.4 -0.8**
WKZ Wanaka 54.19 146 P **P 23 39 31.2 -0.1**
WKZ IAmb IAmb 23 39 44.0
comp=Z,19nm,1.2s
HYB Hyderabad 54.26 294 *i*P **P 23 39 30.0 -2.3**
WHZ Wether Hill Ro 54.28 148 P **P 23 39 32.4 +0.5**
ULN Ulaanbaatar 54.34 341*ce*P **P 23 39 32.9 +0.5**
ULN pmax pmax
comp=Z,5.0nm,0.6s
ULN Ulaanbaatar 54.34 341 P **P 23 39 33.2 +0.8**
ULN IAmb IAmb 23 39 34.0
comp=Z,5.6nm,0.6s
SONM Songino Array 54.52 341 P **P 23 39 34.5 +0.8**
comp=Z,2.3nm,0.7s,baz=150,slow=7.2,SNR=20
SONM PcP **PcP 23 40 37.7 +0.9**
comp=Z,0.7nm,0.7s,baz=171,slow=2.1,SNR=3.1
LBZ Lake Benmore 54.57 145 P **P 23 39 34.7 +0.6**
THZ Tophouse 54.70 141 P **P 23 39 33.4 -1.7**
THZ IAmb IAmb 23 39 37.3
comp=Z,11nm,1.0s
LTZ Lake Taylor 54.87 142 P **P 23 39 33.1 -3.2**
LTZ IAmb IAmb 23 39 38.3
comp=Z,10nm,1.0s
TUWZ Tuamarina 55.18 140 P **P 23 39 38.5 0.0**
ODZ Otahua Downs 55.23 145 P **P 23 39 38.2 -0.6**
KHZ Kahutara 55.45 141 P **P 23 39 40.9 +0.5**
KHZ IAmb IAmb 23 39 57.6
comp=Z,13nm,1.0s
BFZ Birch Farm 56.30 138 P **P 23 39 46.8 +0.2**
BFZ IAmb IAmb 23 39 51.6
comp=Z,20nm,1.1s
MOY Mondy 59.62 340 *e*P **P 23 40 11.1 +1.4**
MOY pmax pmax
comp=Z,22nm,1.8s
WMQ Urumqi 59.83 326 *e*P **P 23 40 12.1 +0.8**
WMQ pP pP 23 40 20.3 -0.7
WMQ sP sP 23 40 26.9 +2.2
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ pmax pmax
comp=Z,74nm,4.1s
WMQ LR LR
comp=Z,580nm,29.0s
WMQ LR LR
comp=Z,900nm,28.9s
WMQ LR LR
comp=Z,140nm,28.9s
PEA0B Petropavlovsk- 60.65 19 P **P 23 40 18.1 +1.5**
PEA0B pmax pmax
comp=Z,49nm,1.2s
PEA0B Petropavlovsk- 60.65 19 P **P 23 40 18.1 +1.5**
PETK Petropavlovsk- 60.65 19 P **P 23 40 18.3 +1.7**
comp=Z,12nm,0.7s,baz=196,slow=7.9,SNR=11
BOD Bodaibo 61.88 351 *e*P **P 23 40 25.4 +0.6**
BOD pmax pmax
comp=Z,6.0nm,1.5s
MA2 Magadan 64.55 12*ce*P **P 23 40 42.0 -0.5**
MA2 pmax pmax
comp=Z,14nm,1.7s
MA2 Magadan 64.55 12 P **P 23 40 43.2 +0.7**
comp=Z,5.3nm,0.5s,baz=170,slow=17,SNR=4.6
CASY Casey 64.60 188 P **P 23 40 41.7 -1.1**
CASY IAmb IAmb 23 40 42.6
comp=Z,11nm,0.8s
MK31 Makanchi Array 64.67 326 P **P 23 40 43.6 0.0**
MK31 pmax pmax
comp=Z,4.0nm,0.9s
MK31 Makanchi Array 64.67 326 P **P 23 40 43.6 0.0**
MK31 **P 23 40 43.8 +0.2**
MK31 IAmb IAmb 23 40 45.0
comp=Z,3.7nm,0.8s
MKAR Makanchi Array 64.67 326*ce*P **P 23 40 43.7 +0.1**
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 64.67 326 P **P 23 40 44.0 +0.4**
comp=Z,3.0nm,0.6s,baz=116,slow=8.8,SNR=38
KSH Kashi 64.81 317 P **P 23 40 46.3 +1.5**
KSH pP sP 23 41 01.1 +2.8
KSH S **S 23 49 22.5 -1.5**
KSH sS sS 23 49 44.3 +4.3
KSH SS **SS 23 53 37.3 +1.4**
KSH pmax pmax
comp=Z,210nm,5.7s
KSH LR LR
comp=Z,150nm,4.2s
KSH LR LR
comp=Z,170nm,4.9s
KSH LR LR
comp=Z,270nm,6.4s
YAK Yakutsk 64.82 0 *e*P **P 23 40 43.9 -0.3**
YAK *e**PP **sP 23 40 56.4 -1.2**
YAK *e* 23 41 15.9
YAK *e* 23 43 03.5
YAK *e*S **S 23 49 23.4 +0.6**
YAK *e**SS **sS 23 49 38.5 -0.3**
YAK *e* 23 50 35.3
YAK *e*SS **SS 23 53 30.9 -3.8**
YAK pmax pmax
comp=Z,24nm,0.8s
YAK pmax pmax
comp=N,2.0nm,0.9s
YAK pmax pmax
comp=Z,71nm,3.1s
YAK pmax pmax
comp=E,63nm,3.4s
YAK pmax pmax
comp=N,47nm,3.2s
YAK smax smax
comp=N,123nm,4.7s
YAK smax smax
comp=E,107nm,3.8s
YAK Yakutsk 64.82 0 P **P 23 40 44.7 +0.5**
MAKZ Makanchi 64.85 326 P **P 23 40 44.7 -0.1**
MAKZ **P 23 40 44.9 +0.1**
MAKZ IAmb IAmb 23 40 46.1
comp=Z,4.6nm,0.7s
NRN Naryn 65.69 318 P **P 23 40 50.7 0.0**
NRN pmax pmax
comp=Z,2.0nm,1.0s
NRN Naryn 65.69 318 P **P 23 40 50.7 0.0**
AAK Ala-Archa 67.24 319*ce*P **P 23 41 00.2 -0.2**
AAK pmax pmax
comp=Z,9.0nm,2.5s
AAK Ala-Archa 67.24 319 P **P 23 41 01.3 +0.9**
ZAA0 Zalesovo Array 67.82 333 IAmb IAmb 23 41 04.9
comp=Z,8.4nm,1.0s
ZALV Zalesovo Beam 67.82 333 P **P 23 41 03.4 -0.2**
comp=Z,12nm,1.1s,baz=105,slow=5.1,SNR=22
KBL Kabul 67.90 309 P **P 23 41 03.8 -1.0**
KBL pmax pmax
comp=Z,3.0nm,0.8s
KBL Kabul 67.90 309 P **P 23 41 03.8 -1.0**
KBL **P 23 41 04.6 -0.2**
SEY Seymchan 67.95 11 *i*P **P 23 41 02.6 -1.6**
GAR Garm 68.58 314 P **P 23 41 07.8 -1.1**
GAR IAmb IAmb 23 41 10.7
comp=Z,7.2nm,1.0s
KURK Kurchatov 68.90 328 P **P 23 41 10.3 -0.1**
KURK pmax pmax
comp=Z,12nm,1.0s
KURK Kurchatov 68.90 328 P **P 23 41 10.3 -0.1**
KURK IAmb IAmb 23 41 20.6
comp=Z,12nm,0.9s
ATKA Atka Island 72.46 32 P **P 23 41 31.4 -0.6**
XMAS Kiritimati 73.10 87 P **P 23 41 32.3 -4.3**
HRA Herat 73.20 307 P **P 23 41 36.2 -1.0**
TIXI Tiksi 74.48 360*ce*P **P 23 41 43.3 -0.3**
TIXI pmax pmax
comp=Z,6.0nm,0.8s
TIXI Tiksi 74.48 360 P **P 23 41 43.4 -0.2**
TIXI IAmb IAmb 23 41 44.7
comp=Z,5.1nm,0.6s
BRVK Borovoye 74.54 327 P **P 23 41 44.6 +0.3**
BRVK pmax pmax
comp=Z,7.0nm,0.9s
BRVK Borovoye 74.54 327 P **P 23 41 44.6 +0.3**
BRVK IAmb IAmb 23 41 48.8
comp=Z,7.5nm,0.8s
VNDA Vanda 76.47 173 P **P 23 41 55.0 0.0**
VNDA pmax pmax
comp=Z,4.0nm,0.9s
VNDA Vanda 76.47 173 P **P 23 41 55.1 +0.2**
comp=Z,3.0nm,0.8s,baz=318,slow=7.5,SNR=5.9
VNDA Vanda 76.47 173 P **P 23 41 55.0 0.0**
SOCY Socotra 76.59 283 P **P 23 41 56.2 -0.8**
SOCY IAmb IAmb 23 41 58.7
comp=Z,12nm,0.9s
GEYT Alibeck 77.33 310 P **P 23 42 01.4 +0.8**
comp=Z,1.6nm,0.8s,baz=158,slow=4.8,SNR=6.0
MAW Mawson 78.54 201 P **P 23 42 06.7 0.0**
baz=78,SNR=5.6
MAW Mawson 78.54 201 P **P 23 42 06.8 +0.2**
MAW pmax pmax
comp=Z,1.0nm,0.8s
MAW Mawson 78.54 201 P **P 23 42 06.6 0.0**
comp=Z,4.9nm,0.6s,baz=106,slow=4.9,SNR=11
MAW LR LR 00 15 28.0
comp=Z,46nm,18.1s,baz=66,slow=35
MAW Mawson 78.54 201 P **P 23 42 06.8 +0.2**
ABKAR Akbulak array 79.13 321 IAmb IAmb 23 42 15.0
comp=Z,4.1nm,0.7s
SVE Sverdlovsk 81.13 329 *e*P **P 23 42 20.9 0.0**
ARU Arti 82.10 328*c i*P **P 23 42 25.1 -0.9**
ARU 23 45 30.7
ARU S **S 23 52 39.5 +1.0**
ARU SS **SS 23 58 01.4 +3.1**
ARU pmax pmax
comp=Z,11nm,1.1s
ARU Arti 82.10 328 P **P 23 42 25.2 -0.9**
ARU IAmb IAmb 23 42 28.1
comp=Z,10nm,1.1s
RAYN Ar Rayn 85.76 294 P **P 23 42 45.6 +0.1**
RAYN pmax pmax
comp=Z,19nm,0.9s
RAYN Ar Rayn 85.76 294 P **P 23 42 45.6 +0.1**
QSPA South Pole Qui 86.98 180 P **P 23 42 50.5 -0.3**
QSPA IAmb IAmb 23 42 53.1
comp=Z,7.5nm,1.0s
SYO Syowa Base 87.25 201⇑*e*P **P 23 42 50.0 -1.8**
SYO Syowa Base 87.25 201⇓*e*PcP **PcP 23 42 54.0 +0.1**
GNI Garni 87.96 310 *i*P **P 23 42 56.3 +0.2**
GNI pmax pmax
comp=Z,15nm,1.2s
KBZ Khabaz 89.64 314 P **P 23 43 03.3 -0.3**
comp=Z,2.7nm,1.0s,baz=100,slow=6.1,SNR=3.3
ILAR Eielson Array 89.89 25 P **P 23 43 03.4 -1.0**
comp=Z,0.5nm,0.8s,baz=248,slow=5.1,SNR=6.6
KMBO Kilima Mbogo 92.29 269 P **P 23 43 18.4 +1.5**
KMBO pmax pmax

comp=Z,4.0nm,1.1s
KMBO Kilima Mbogo 92.29 269 P **P** **23 43 17.8 +0.8**
comp=Z,4.6nm,1.1s,baz=60,slow=5.0,SNR=4.7
KMBO Kilima Mbogo 92.29 269 P **P** **23 43 18.4 +1.5**
KMBO IAmb IAmb 23 43 18.6
comp=Z,4.2nm,1.1s
INK Inuvik 95.29 22 P **P** **23 43 29.1 -0.1**
comp=Z,0.8nm,0.6s,baz=300,slow=3.4,SNR=6.9
BRTR Keskin Array B 96.47 309 P **P** **23 43 36.6 +1.2**
comp=Z,0.3nm,0.6s,baz=111,slow=5.5,SNR=3.7
ARCES ARCESS Array B 97.68 340 P Pdif 23 43 41.0 +0.9
comp=Z,2.0nm,0.7s,baz=82,slow=6.6,SNR=5.7
VYHS Vyhne 105.90 320 *eP* **Pdif** **23 44 16.9 -0.2**
TXAR Lajitas Array 123.14 57 PKP **PKiKP** **23 49 04.1 +0.8**
comp=Z,0.2nm,0.5s,baz=189,slow=1.2,SNR=4.1
TXAR PKKPbc **PKKPbc** **23 58 54.2 -0.1**
comp=Z,0.2nm,0.7s,baz=117,slow=1.7,SNR=4.0
TORD Torodi Ar. Bea 127.54 284 PKP **PKiKP** **23 49 12.0 -0.2**
comp=Z,1.4nm,0.8s,baz=60,slow=2.4,SNR=7.6
PLCA Paso Flores 132.77 159 PKP **PKiKP** **23 49 22.0 -0.2**
comp=Z,1.9nm,0.8s,baz=342,slow=4.1,SNR=4.3
CFA Coronel Fontan 141.66 155 PKhKP PKPpre 23 49 33.5
comp=Z,2.6nm,0.6s,baz=260,slow=3.7,SNR=6.6
GO03 Copiap 144.10 149 **PKPdf** **23 49 42.0 -0.2**
LVC Limon Verde 148.81 145 PKPbc **PKPbc** **23 49 54.8 +0.3**
comp=Z,6.4nm,0.8s,baz=218,slow=1.2,SNR=5.4
CPUP Villa Florida 150.11 167 PKiKP **PKiKP** **23 49 58.1 +0.1**
CPUP Villa Florida 150.11 167 PKPbc **PKiKP** **23 49 58.0 -0.1**
comp=Z,13nm,0.9s,baz=203,slow=2.9,SNR=21
CPUP Villa Florida 150.11 167 **PKiKP** **23 49 58.0 +0.1**
ATAH Atahualpa 150.31 110 PKPbc **PKiKP** **23 50 00.8 +1.5**
comp=Z,6.0nm,0.6s,baz=162,slow=3.2,SNR=4.1
PB11 IPOC Station P 150.54 141 **PKiKP** **23 49 59.3 +0.1**
LPAZ La Paz 154.05 138 PKPbc **PKiKP** **23 50 08.8 +1.6**
comp=Z,1.6nm,0.9s,baz=347,slow=2.5,SNR=4.0
SIV San Ignacio 158.41 151 PKPab **PKPab** **23 50 39.5 +1.1**
comp=Z,2.8nm,0.9s,baz=222,slow=4.7,SNR=10

*IDC **19** 23:34:43.8±1.1, 11.°06S×164.°03E, h0km, mb4.0/8, mb1 4.3/10, mb1mx4.0/45, mbtmp4.1/10, ML4.6/2, MS3.8/2, Ms1 3.8/2, ms1mx2.9/29, Error ellipse: s-maj=36.6km s-min=20.4km az=144.0*
*NEIC **19** 23:34:49.2±2.4, 11.°15S±0.°09×163.°94E±0.°09, h40km±8km, mb4.5/15, Error ellipse: s-maj=14.5km s-min=10.9km az=50.0*
ISC 19 23:34:47.6±0.6, 11.°09S±0.°07×164.°01E±0.°07, h29km, n37, σ1§78/33, mb4.4/16, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**4.33**	**292**	Pn		**Pn**	**23 35 51.9**	**+0.4**
	104nm,0.3s,baz=174,slow=10,SNR=12							
HNR				Sn		**Sn**	**23 36 43.0**	**+2.0**
	62nm,0.3s,baz=31,slow=23,SNR=5.9							
HNR				LR		LR	23 37 37.0	
	comp=Z,964nm,18.5s,baz=126,slow=40							
HNR	**Honiara**	**4.33**	**292**	P		**Pn**	**23 35 51.0**	**-0.5**
HNR	**Honiara**	**4.33**	**292**			**Pn**	**23 35 51.0**	**-0.5**
HNR						**Sn**	**23 36 40.7**	**-0.3**
DZM	**Mont Dzumac**	**11.16**	**168**	Pn		**Pn**	**23 37 29.7**	**+4.2**
	0.4nm,0.3s,baz=4.2,slow=11,SNR=6.5							
DZM				Sn		**Sn**	**23 39 30.0**	**+0.6**
	0.7nm,0.3s,baz=157,slow=15,SNR=3.7							
DZM	**Mont Dzumac**	**11.16**	**168**			**Pn**	**23 37 27.8**	**+2.3**
NOUC	**Port Laguerre**	**11.17**	**169**	Pn		**Pn**	**23 37 26.2**	**+0.8**
FUNA	**Funafuti**	**15.18**	**82**	Pn		**Pn**	**23 38 20.5**	**+0.4**
TARA	**Tarawa**	**15.21**	**36**	Pn		**Pn**	**23 38 19.1**	**-1.4**
EIDS	**Eidsvold**	**18.75**	**219**	P		**Pn**	**23 39 04.6**	**-0.4**
CTA	**Charters Tower**	**19.29**	**240**	P		**Pn**	**23 39 12.5**	**+1.0**
	0.6nm,0.3s,baz=75,slow=13,SNR=5.9							
COEN	**Coen**	**20.54**	**260**	P		**P**	**23 39 24.1**	**+0.1**
COEN				IAmb		IAmb	23 39 26.1	
	comp=Z,17nm,1.1s							
OUZ	**Omahuta**	**25.55**	**162**	P		**P**	**23 40 11.1**	**-2.9**
OUZ				IAmb		IAmb	23 40 17.4	
	comp=Z,21nm,1.1s							
STKA	**Stephens Creek**	**29.26**	**222**	P		**P**	**23 40 49.0**	**+1.7**
	comp=Z,5.6nm,0.9s,baz=30,slow=8.1,SNR=4.4							
STKA				LR		LR	23 51 41.0	
	comp=Z,191nm,18.1s,baz=357,slow=35							
STKA	**Stephens Creek**	**29.26**	**222**	P		**P**	**23 40 47.6**	**+0.3**
H11S2	**WAKE ISLAND Hy**	**29.51**	**5**	T		T	00 11 38.8	
	baz=188,slow=76,SNR=13							
H11S3	**WAKE ISLAND Hy**	**29.52**	**5**	T		T	00 11 59.3	
	baz=188,slow=76,SNR=9.9							
H11S1	**WAKE ISLAND Hy**	**29.53**	**5**	T		T	00 11 28.7	
	baz=188,slow=76,SNR=7.5							
WR0	**Warramunga Arr**	**29.69**	**249**	P		**P**	**23 40 51.0**	**-0.3**
WR0				IAmb		IAmb	23 41 00.7	
	comp=Z,8.7nm,1.1s							
WRA	**Warramunga Arr**	**29.87**	**249**	P		**P**	**23 40 52.5**	**-0.5**
	comp=Z,3.6nm,0.6s,baz=79,slow=9.1,SNR=7.1							
H11N1	**WAKE ISLAND Hy**	**30.74**	**5**	T		T	00 12 59.1	
	baz=184,slow=76,SNR=6.9							
H11N3	**WAKE ISLAND Hy**	**30.75**	**5**	T		T	00 13 09.0	
	baz=184,slow=76,SNR=7.8							
H11N2	**WAKE ISLAND Hy**	**30.76**	**5**	T		T	00 12 59.8	
	baz=184,slow=76,SNR=5.3							
TOO	**Toolangi**	**31.18**	**209**	P		**P**	**23 41 00.9**	**-3.3**
TOO				IAmb		IAmb	23 41 08.8	
	comp=Z,7.3nm,1.0s							
ASAR	**Alice Springs**	**31.26**	**242**	P		**P**	**23 41 04.6**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=60,slow=10,SNR=6.0							
THZ	**Tophouse**	**31.53**	**167**	P		**P**	**23 41 06.2**	**-1.1**
THZ				IAmb		IAmb	23 41 11.0	
	comp=Z,11nm,1.1s							
LTZ	**Lake Taylor**	**32.38**	**169**	P		**P**	**23 41 12.4**	**-2.4**
MQZ	**McQueen's Vall**	**33.35**	**169**	P		**P**	**23 41 19.8**	**-3.3**
MQZ				IAmb		IAmb	23 41 29.7	
	comp=Z,9.0nm,0.9s							
BBOO	**Buckleboo**	**33.57**	**226**	P		**P**	**23 41 21.5**	**-3.8**
BBOO				IAmb		IAmb	23 41 29.7	
	comp=Z,5.4nm,0.8s							
WKZ	**Wanaka**	**33.89**	**174**	P		**P**	**23 41 26.6**	**-1.3**
WKZ				IAmb		IAmb	23 41 37.6	
	comp=Z,11nm,0.9s							
KNRA	**Kununurra**	**34.57**	**258**	P		**P**	**23 41 33.1**	**-1.0**
FITZ	**Fitzroy Crossi**	**37.73**	**255**	P		**P**	**23 42 00.1**	**-1.0**
FITZ				IAmb		IAmb	23 42 01.5	
	comp=Z,11nm,1.0s							
SONM	**Songino Array**	**77.70**	**324**	P		**P**	**23 46 43.1**	**+1.3**
	comp=Z,0.6nm,0.9s,baz=138,slow=5.1,SNR=4.3							
ILAR	**Eielson Array**	**84.10**	**19**	P		**P**	**23 47 15.9**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=248,slow=4.8,SNR=4.3							
BEKR	**Beckworth**	**86.24**	**48**			pP	23 47 38.0	+3.9
NVAR	**Mina Array Bea**	**87.36**	**50**	P		**P**	**23 47 33.6**	**+1.1**
	comp=Z,0.3nm,0.7s,baz=258,slow=4.5,SNR=3.5							
MKAR	**Makanchi Array**	**92.39**	**317**	P		**P**	**23 47 55.9**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=94,slow=5.6,SNR=4.8							
YKA	**Yellowknife Ar**	**95.80**	**27**	P		**P**	**23 48 10.5**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=252,slow=4.8,SNR=3.8							

*ATH **19** 23:41:10.2, 37.°82N×21.°02E, h22km±1km, ML3.2/20, Error ellipse: s-maj=1.7km s-min=0.8km az=357.0*
*IDC **19** 23:41:10.5±1.4, 37.°97N×20.°92E, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.4/40, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=32.3km s-min=24.6km az=113.0*
*THE **19** 23:41:11.4, 37.°83N×21.°04E, h0km±3km, ML3.3/10, Error ellipse: s-maj=3.3km s-min=0.8km az=223.0*
ISC 19 23:41:11.1±1.0, 37.°84N±0.°02×21.°05E±0.°02, h12km±7km, n80, σ0§78/104, mb3.7/4, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KFL	**Anninata**	**0.34**	**323**	P		**Pg**	**23 41 18.1**	**+0.2**
KFL				S		**Sg**	**23 41 23.2**	**+0.7**
	7μm,0.3s							
KFL	**Anninata**	**0.34**	**323**	P		**Pg**	**23 41 17.7**	**-0.2**
KFL				S		**Sb**	**23 41 24.2**	**-0.2**
KFL				AML		AML	23 41 26.3	
	comp=E,18442μm,0.4s							
KFL				AML		AML	23 41 32.9	
	comp=N,8767μm,0.4s							
RLS	**Riolos of Patr**	**0.40**	**57**	P		**Pg**	**23 41 18.5**	**-0.5**
RLS				S		**Sg**	**23 41 25.3**	**+0.9**
	comp=N,16μm,0.4s							
RLS	**Riolos of Patr**	**0.40**	**57**	P		**Pg**	**23 41 18.5**	**-0.5**
RLS				S		**Sb**	**23 41 26.1**	**-0.1**
RLS				AML		AML	23 41 27.9	
	comp=N,25489μm,0.4s							
RLS				AML		AML	23 41 28.1	
	comp=E,36297μm,0.4s							
VLS	**Valsamata**	**0.49**	**313**	P		**Pg**	**23 41 20.8**	**0.0**
VLS				S		**Sb**	**23 41 28.7**	**-0.2**
	comp=E,3μm,0.3s							
VLS	**Valsamata**	**0.49**	**313**	P		**Pg**	**23 41 20.6**	**-0.2**
VLS				S		**Sg**	**23 41 28.1**	**+0.8**
VLS				AML		AML	23 41 29.5	
	comp=E,5326μm,0.4s							
VLS				AML		AML	23 41 30.1	
	comp=N,8010μm,0.3s							
DRO	**Drossia**	**0.54**	**78**	P		**Pg**	**23 41 20.5**	**-1.1**
DRO				S		**Sg**	**23 41 29.5**	**+0.7**
	comp=N,10μm,0.3s							
DRO	**Drossia**	**0.54**	**78**	P		**Pg**	**23 41 20.9**	**-0.7**
DRO				S		**Sb**	**23 41 30.8**	**+0.6**
DRO				AML		AML	23 41 32.9	
	comp=E,20101μm,0.3s							
DRO				AML		AML	23 41 35.3	
	comp=N,20639μm,0.4s							
AMT	**Artemida-Makis**	**0.61**	**120**	P		**Pg**	**23 41 22.5**	**-0.5**
AMT				S		**Sb**	**23 41 32.2**	**0.0**
	comp=N,3μm,0.4s							
AMT	**Artemida-Makis**	**0.61**	**120**	P		**Pg**	**23 41 22.3**	**-0.7**
AMT				AML		AML	23 41 36.3	
	comp=E,5395μm,0.4s							
AMT				AML		AML	23 41 42.6	
	comp=N,5773μm,0.4s							
FSK	**Fiskardo**	**0.73**	**329**	P		**Pg**	**23 41 24.5**	**-0.7**
FSK	**Fiskardo**	**0.73**	**329**	P		**Pg**	**23 41 24.5**	**-0.7**
UPR	**University Cam**	**0.73**	**53**	P		**Pb**	**23 41 26.2**	**+0.4**
UPR				S		**Sn**	**23 41 37.2**	**-1.2**
PDO	**Prodromos**	**0.77**	**8**	P		**Pg**	**23 41 25.8**	**-0.1**
PDO	**Prodromos**	**0.77**	**8**	P		**Pg**	**23 41 25.7**	**-0.3**
PDO				AML		AML	23 41 48.4	
	comp=N,6721μm,0.3s							
PDO				AML		AML	23 41 49.0	
	comp=E,4239μm,0.4s							
EVGI	**Lefkada island**	**0.84**	**339**	P		**Pg**	**23 41 26.5**	**-0.8**
EVGI	**Lefkada island**	**0.84**	**339**	P		**Pg**	**23 41 26.4**	**-0.8**
LAKA	**Lakka**	**0.84**	**61**	P		**Pg**	**23 41 26.3**	**-1.0**
LAKA				S		**Sb**	**23 41 39.7**	**+0.9**
	comp=E,1μm,0.6s							
LAKA	**Lakka**	**0.84**	**61**	P		**Pg**	**23 41 26.8**	**-0.5**
LAKA				S		**Sb**	**23 41 39.7**	**+0.9**
LAKA				AML		AML	23 41 42.7	
	comp=E,3823μm,0.6s							
LAKA				AML		AML	23 41 43.1	
	comp=N,2910μm,0.7s							
PVO	**Paravola**	**0.86**	**26**	P		**Pg**	**23 41 27.6**	**-0.2**
PVO	**Paravola**	**0.86**	**26**	P		**Pg**	**23 41 27.8**	**0.0**
PVO				AML		AML	23 41 47.8	
	comp=E,2774μm,0.6s							
PVO				AML		AML	23 41 50.2	
	comp=N,3620μm,0.5s							
EFP	**Efpalio**	**0.90**	**49**	P		**Pg**	**23 41 27.8**	**-0.6**
EFP				S		**Sn**	**23 41 41.9**	**-0.5**
	comp=N,3μm,0.5s							
EFP	**Efpalio**	**0.90**	**49**	P		**Pg**	**23 41 27.8**	**-0.6**
EFP				S		**Sb**	**23 41 41.1**	**+0.6**
EFP				AML		AML	23 41 44.0	
	comp=N,6733μm,0.6s							
EFP				AML		AML	23 41 50.5	
	comp=E,3378μm,0.5s							
KLV	**Kalavryta, Ach**	**0.90**	**77**	P		**Pg**	**23 41 27.8**	**-0.6**
KLV	**Kalavryta, Ach**	**0.90**	**77**	P		**Pg**	**23 41 27.7**	**-0.7**
KLV				S		**Sb**	**23 41 40.9**	**+0.3**
KLV				AML		AML	23 41 46.4	
	comp=N,2296μm,0.7s							
KLV				AML		AML	23 41 47.0	
	comp=E,1822μm,0.5s							
ALIK	**Aliki, Aigiali**	**0.94**	**63**	P		**Pb**	**23 41 28.9**	**-0.4**
ITM	**Ithomi**	**0.96**	**133**	P		**Pb**	**23 41 28.9**	**-0.8**
ITM	**Ithomi**	**0.96**	**133**	P		**Pb**	**23 41 29.1**	**-0.6**
ITM				S		**Sb**	**23 41 42.5**	**+0.1**
ITM				AML		AML	23 41 50.6	
	comp=E,1421μm,0.5s							
ITM				AML		AML	23 41 50.9	
	comp=N,1454μm,0.8s							
TRIZ	**Trizonia**	**0.97**	**57**	P		**Pb**	**23 41 28.7**	**-1.0**
TRIZ				S		**Sn**	**23 41 44.6**	**+0.5**
	comp=N,2μm,0.4s							
TRIZ	**Trizonia**	**0.97**	**57**	P		**Pb**	**23 41 28.9**	**-0.8**
SERG	**Sergoula**	**0.98**	**54**	P		**Pb**	**23 41 29.2**	**-0.9**
SERG				S		**Sn**	**23 41 44.2**	**-0.4**
	comp=N,2μm,0.5s							
SERG	**Sergoula**	**0.98**	**54**	P		**Pb**	**23 41 29.2**	**-0.9**
SERG				S		**Sn**	**23 41 43.9**	**-0.6**
SERG				AML		AML	23 41 46.2	
	comp=N,4443μm,0.3s							
SERG				AML		AML	23 41 49.2	
	comp=E,4629μm,0.6s							
LKD2	**Lefkada island**	**0.99**	**342**	P		**Pb**	**23 41 29.3**	**-1.0**
LKD2	**Lefkada island**	**0.99**	**342**	P		**Pb**	**23 41 29.2**	**-1.1**
LKD2				AML		AML	23 41 52.8	
	comp=E,2022μm,0.6s							
LKD2				AML		AML	23 41 54.8	
	comp=N,2218μm,0.5s							
ANX	**Ano Chora**	**1.02**	**42**	P		**Pb**	**23 41 30.2**	**-0.6**
ANX	**Ano Chora**	**1.02**	**42**	P		**Pb**	**23 41 30.0**	**-0.8**
ANX				AML		AML	23 41 48.6	
	comp=N,6281μm,0.6s							
ANX				AML		AML	23 41 49.7	
	comp=E,5035μm,0.6s							
KALE	**Kalithea**	**1.02**	**57**	P		**Pb**	**23 41 30.0**	**-0.8**
KALE				S		**Sn**	**23 41 45.7**	**+0.1**
	comp=E,2μm,0.4s							
KALE	**Kalithea**	**1.02**	**57**	P		**Pb**	**23 41 29.9**	**-0.9**
KALE				S		**Sn**	**23 41 45.2**	**-0.4**
KALE				AML		AML	23 41 52.1	
	comp=E,3446μm,0.5s							
KALE				AML		AML	23 41 52.8	
	comp=N,3673μm,0.5s							
TSLK	**Tsoukalades, L**	**1.03**	**343**	P		**Pb**	**23 41 30.0**	**-0.9**
TSLK	**Tsoukalades, L**	**1.03**	**343**	P		**Pb**	**23 41 29.9**	**-1.0**
PYL	**PYLOS**	**1.09**	**149**	P		**Pb**	**23 41 30.8**	**-1.1**
PYL	**PYLOS**	**1.09**	**149**	P		**Pb**	**23 41 30.8**	**-1.1**
PYL				S		**Sg**	**23 41 46.4**	**0.0**
PYL				AML		AML	23 41 58.0	
	comp=E,1014μm,0.5s							
PYL				AML		AML	23 42 01.9	
	comp=N,684μm,0.7s							
KLMT	**Kalamata**	**1.12**	**134**	P		**Pn**	**23 41 32.6**	**0.0**
VLX	**Vlachokerasia**	**1.16**	**113**	P		**Pb**	**23 41 32.4**	**-0.7**
VLX	**Vlachokerasia**	**1.16**	**113**	P		**Pb**	**23 41 32.6**	**-0.5**
VLX				S		**Sb**	**23 41 48.0**	**-0.1**
VLX				AML		AML	23 42 00.6	
	comp=N,1511μm,0.5s							
VLX				AML		AML	23 42 02.1	
	comp=E,1162μm,0.5s							
EVR	**Evrytania**	**1.23**	**29**	P		**Pn**	**23 41 33.9**	**-0.3**
EVR	**Evrytania**	**1.23**	**29**	P		**Pn**	**23 41 33.9**	**-0.3**
EVR				S		**Sg**	**23 41 51.3**	**+0.5**
EVR				AML		AML	23 42 01.4	
	comp=E,846μm,0.8s							
EVR				AML		AML	23 42 06.5	
	comp=N,1218μm,0.7s							
MAKR	**Makrakomi, Fth**	**1.45**	**36**	P		**Pb**	**23 41 38.0**	**0.0**
MAKR	**Makrakomi, Fth**	**1.45**	**36**	P		**Pb**	**23 41 37.8**	**-0.2**
PROD	**Prodromos**	**1.52**	**74**	P		**Pb**	**23 41 39.7**	**+0.4**
PROD	**Prodromos**	**1.52**	**74**	P		**Pb**	**23 41 39.1**	**-0.2**
PROD				AML		AML	23 42 08.5	
	comp=E,1420μm,0.6s							
PROD				AML		AML	23 42 11.5	
	comp=N,1236μm,0.7s							
LTK	**Loutraki**	**1.53**	**83**	P		**Pn**	**23 41 38.3**	**0.0**
LOUT	**Loutraki**	**1.53**	**84**	P		**Pn**	**23 41 39.1**	**-0.3**
AGG	**Agios Georgios**	**1.55**	**40**	P		**Pn**	**23 41 39.1**	**+0.5**
AGG	**Agios Georgios**	**1.55**	**40**	P		**Pn**	**23 41 38.7**	**+0.2**
AGG				AML		AML	23 42 08.9	
	comp=E,999μm,0.6s							
AGG				AML		AML	23 42 16.8	
	comp=N,826μm,0.9s							
AXAR	**Agios Charalam**	**1.57**	**53**	P		**Pb**	**23 41 39.8**	**-0.3**
KRND	**KRANIDI**	**1.73**	**105**	P		**Pb**	**23 41 43.6**	**+0.8**
LKR	**Lokris**	**1.74**	**62**	P		**Pb**	**23 41 42.5**	**-0.4**
LKR	**Lokris**	**1.74**	**62**	P		**Pb**	**23 41 42.1**	**-0.8**
DID	**Didima**	**1.77**	**100**	P		**Pb**	**23 41 43.8**	**+0.3**
DID	**Didima**	**1.77**	**100**	P		**Pn**	**23 41 42.3**	**+0.8**
VILL	**Villia**	**1.82**	**79**	P		**Pb**	**23 41 43.9**	**-0.5**
VLI	**Veliai**	**1.88**	**126**	P		**Pb**	**23 41 44.9**	**-0.4**
VLI	**Veliai**	**1.88**	**126**	P		**Pn**	**23 41 44.1**	**+1.1**
THL	**Klokotos Trika**	**1.88**	**23**	P		**Pb**	**23 41 45.5**	**+0.1**
THL	**Klokotos Trika**	**1.88**	**23**	P		**Pb**	**23 41 44.7**	**-0.7**
KPRO	**Kipourio**	**2.13**	**7**	P		**Pb**	**23 41 49.7**	**+0.1**
VLY	**Voula,Athens**	**2.18**	**89**	P		**Pn**	**23 41 48.6**	**+1.5**
MRKA	**Markates**	**2.18**	**66**	P		**Pb**	**23 41 49.4**	**-1.1**
PTL	**Penteli**	**2.24**	**84**	P		**Pb**	**23 41 50.9**	**-0.6**
NEO	**Neokhori**	**2.25**	**49**	P		**Pb**	**23 41 50.6**	**-1.1**
XOR	**Xorichti**	**2.27**	**47**	P		**Pb**	**23 41 51.0**	**-1.0**
EREA	**Eretria**	**2.35**	**75**	P		**Pb**	**23 41 52.3**	**-1.1**
LIT	**Litokhoron**	**2.52**	**26**	P		**Pb**	**23 41 56.2**	**-0.1**
GERES	**GERESS Array B**	**12.22**	**336**	Pn		**Pn**	**23 44 05.4**	**+0.4**
	comp=N,0.1nm,0.3s,baz=156,slow=12,SNR=3.4							
AKASG	**Malin Array Be**	**14.12**	**22**	Pn		**P**	**23 44 35.0**	**-3.4**
	comp=N,0.5nm,0.3s,baz=211,slow=8.9,SNR=5.0							
TORD	**Torodi Ar. Bea**	**30.03**	**220**	P		**P**	**23 47 21.5**	**+1.6**
	comp=N,0.5nm,0.7s,baz=32,slow=8.4,SNR=3.5							
ARCES	**ARCESS Array B**	**31.85**	**3**	P		**P**	**23 47 35.5**	**0.0**
	comp=N,1.5nm,0.9s,baz=189,slow=11,SNR=2.9							
MKAR	**Makanchi Array**	**45.13**	**58**	P		**P**	**23 49 28.4**	**+1.1**
	comp=N,0.2nm,0.5s,baz=282,slow=6.6,SNR=5.9							
ZALV	**Zalesovo Beam**	**45.61**	**48**	P		**P**	**23 49 32.5**	**+1.6**
	comp=N,0.7nm,0.5s,baz=277,slow=7.9,SNR=4.0							

*NIED **19** 23:43:00, 37.°70N×144.°00E, h8km, Mw3.7 Best double couple: M0 3.63000×10^14 NP1:φ=242.00000°, δ=53.00000°, λ=-63.00000°. NP2:φ=21.00000°, δ=44.00000°, λ=-122.00000°.*
*IDC **19** 23:43:15.2±0.8, 37.°52N×144.°18E, h0km, mb3.7/8, mb1 3.9/10, mb1mx3.7/40, mbtmp3.7/10, ML3.8/2, Error ellipse: s-maj=21.5km s-min=18.5km az=123.0*
*JMA **19** 23:43:19.5±0.2, 37.°70N×143.°99E, h54km, M4.2*
*NEIC **19** 23:43:21.7±2.0, 37.°82N±0.°08×144.°0E±0.°1, h35km±3km, mb4.3/10, Error ellipse: s-maj=15.7km s-min=9.6km az=113.0*
ISC 19 23:43:20.5±0.8, 37.°73N±0.°05×144.°04E±0.°07, h35km, n42, σ1§52/60, mb4.0/14, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JIKH	**Ishinomakibobu**	**2.12**	**287**	P		**Pn**	**23 43 53.0**	**-0.3**
JIKH				S		**Sn**	**23 44 17.6**	**-0.8**
JIO	**Ouri**	**2.25**	**290**	P		**Pn**	**23 43 55.2**	**+0.1**
JIO				S		**Sn**	**23 44 21.1**	**-0.5**
JKMT	**Kesennumamotoy**	**2.29**	**299**	P		**Pn**	**23 43 55.6**	**-0.2**
JKMT				S		**Sn**	**23 44 22.4**	**-0.4**
OFUJ	**Ofunato**	**2.30**	**307**	P		**Pn**	**23 43 55.7**	**-0.2**
OFUJ				*eS*		**Sn**	**23 44 22.6**	**-0.4**
JMK	**Ichinoseki**	**2.53**	**300**	P		**Pn**	**23 43 59.3**	**+0.2**
JMK				*eS*		**Sn**	**23 44 28.7**	**0.0**
JOM	**Ohasama**	**2.77**	**310**	P		**Pn**	**23 44 02.6**	**+0.2**
JOM				S		**Sn**	**23 44 35.1**	**+0.5**
JFT	**Otama**	**2.95**	**267**	P		**Pn**	**23 44 04.8**	**0.0**
JFT				S		**Sn**	**23 44 38.2**	**-0.8**
JYK	**Kaneyama**	**3.13**	**293**	P		**Pn**	**23 44 07.5**	**+0.2**
JYK				S		**Sn**	**23 44 44.5**	**+1.0**
JANG	**Nango**	**3.29**	**324**	P		**Pn**	**23 44 10.1**	**+0.5**
JANG				*eS*		**Sn**	**23 44 47.4**	**-0.1**
JOT	**Ohata**	**4.32**	**329**	P		**Pn**	**23 44 24.7**	**+1.1**
JOT				*eS*		**Sn**	**23 45 11.1**	**-1.7**
ERM	**Erimo**	**4.34**	**351**	Pn		**Pn**	**23 44 23.9**	**+0.1**
JRY	**Ryogami san**	**4.46**	**249**	P		**Pn**	**23 44 24.6**	**-1.0**
JRY				*eS*		**Sn**	**23 45 12.7**	**-3.6**
JOD2	**Odawara 2**	**4.69**	**240**	P		**Pn**	**23 44 26.8**	**-1.9**
JOD2				*eS*		**Sn**	**23 45 17.6**	**-4.3**
JKB	**Kayabe**	**4.76**	**332**	P		**Pn**	**23 44 30.7**	**+1.1**
JKB				*eS*		**Sn**	**23 45 21.9**	**-1.6**
MJAR	**Matsushiro Arr**	**4.81**	**258**	Pn		**Pn**	**23 44 30.9**	**+0.5**
	0.6nm,0.3s,baz=86,slow=15,SNR=22							
MJAR				Sn		**Sn**	**23 45 26.9**	**+2.0**
	0.4nm,0.3s,baz=98,slow=23,SNR=5.9							
MAJO	**Matsushiro**	**4.81**	**258**			**Pn**	**23 44 32.0**	**+1.5**
MAT	**Matsushiro**	**4.81**	**258**	P		**Pn**	**23 44 31.7**	**+1.3**
MAT				S		**Sn**	**23 45 26.8**	**+1.9**
MJB9	**Matsu-Tunnel**	**4.81**	**258**	Pn		**Pn**	**23 44 31.5**	**+1.0**
JCH	**Churui**	**4.91**	**354**	P		**Pn**	**23 44 30.7**	**-1.0**
JCH				*eS*		**Sn**	**23 45 24.2**	**-3.0**
JHJ2	**Mitsune**	**5.75**	**218**	Pn		**Pn**	**23 44 46.0**	**+2.7**
ASAJ	**Asahikawa**	**6.47**	**351**	Pn		**Pn**	**23 44 53.3**	**0.0**
	4.1nm,0.3s,baz=191,slow=7.6,SNR=15							
ASAJ				Sn		**Sn**	**23 46 03.7**	**-2.2**
	0.5nm,0.3s,baz=97,slow=16,SNR=2.3							
JKA	**Kamikawa-asahi**	**6.47**	**351**			**Pn**	**23 44 53.3**	**+0.1**
JKA						**Sn**	**23 46 03.7**	**-2.1**
ULN	**Ulaanbaatar**	**28.72**	**303**	P		**P**	**23 49 13.7**	**-0.9**
SONM	**Songino Array**	**29.16**	**302**	P		**P**	**23 49 20.1**	**+1.8**
	0.

ZALV	**Zalesovo Beam**	**57.27**	**322**	P	**P**	**00**	**11**	**23.2 -0.1**
	comp=Z,2.3nm,0.6s,baz=103,slow=7.4,SNR=9.2							
MK31	**Makanchi Array**	**58.06**	**313**	P	**P**	**00**	**11**	**30.7 +1.6**
MK31				IAmb	IAmb	00	11	34.6
	comp=Z,1.6nm,1.1s							
MKAR	**Makanchi Array**	**58.06**	**313**	P	**P**	**00**	**11**	**30.2 +1.1**
	comp=Z,0.7nm,0.6s,baz=92,slow=8.9,SNR=8.0							
MAKZ	**Makanchi**	**58.27**	**313**	P	**P**	**00**	**11**	**32.2 +1.6**
MAKZ				IAmb	IAmb	00	11	36.3
	comp=Z,1.4nm,0.8s							
RAR	**Rarotonga**	**66.56**	**126**	LR	LR	00	35	58.2
	comp=Z,37nm,21.4s,baz=147,slow=31							
YKA	**Yellowknife Ar**	**75.64**	**28**	P	**P**	**00**	**13**	**22.4 +1.8**
	comp=Z,0.4nm,0.7s,baz=286,slow=5.8,SNR=4.4							
GDXM	**Geysers**	**77.44**	**53**	P	**P**	**00**	**13**	**29.7 -1.7**
NVAR	**Mina Array Bea**	**80.90**	**52**	P	**P**	**00**	**13**	**53.4 +2.9**
	comp=Z,0.5nm,0.8s,baz=270,slow=6.1,SNR=3.9							
FINES	**FINESS Array B**	**85.64**	**336**	P	**P**	**00**	**14**	**15.2 +1.1**
	comp=Z,1.2nm,0.7s,baz=48,slow=2.1,SNR=3.2							
NC303	**NORSAR Array S**	**90.98**	**340**	P	**P**	**00**	**14**	**39.3 -0.3**
LPAZ	**La Paz**	**146.36**	**89**	PKPbc	**PKiKP**	**00**	**21**	**21.9 +0.8**
	comp=Z,0.6nm,0.4s,baz=327,slow=6.8,SNR=4.1							

*JMA **20** 00:09:52.6±0.2,24.°69N×122.°57E,h18km,M2.0*
*TAP **20** 00:09:57.3,24.°76N×122.°24E,h12km±1km,ML2.6,D*
ISC 20 00:09:51.4±1.1**,24.°78N**±0.°06×**122.°56E**±0.°03**,h10**km**,n33,** σ1§**02**/36**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
EOS1	**EOS1**	**0.45**	**240**	P		**Pb**	**00**	**10**	**01.9**	**+0.5**
	baz=205									
EOS1				*e*S		**Sg**	**00**	**10**	**05.6**	**-0.6**
	baz=205									
JYNG	**Yonagunijimaku**	**0.48**	**132**	P		**Pg**	**00**	**10**	**01.0**	**+0.2**
JYNG				*e*S		**Sg**	**00**	**10**	**06.3**	**-0.9**
TWB1	**Santiao Chiao**	**0.56**	**294**	*e*P		**Pg**	**00**	**10**	**02.5**	**+0.1**
	baz=318									
EGS		**0.57**	**277**	*e*P		**Pg**	**00**	**10**	**03.3**	**+0.8**
	baz=287									
TWC	**Suao**	**0.66**	**256**	P		**Pg**	**00**	**10**	**04.7**	**+0.4**
	baz=246									
TWC				*e*S		**Sg**	**00**	**10**	**09.8**	**-3.2**
	baz=246									
NTC	**Toucheng**	**0.66**	**277**	*e*P		**Pg**	**00**	**10**	**04.5**	**+0.2**
	baz=284									
TIPB	**Shuangxi**	**0.69**	**287**	*e*P		**Pg**	**00**	**10**	**04.0**	**-0.8**
	baz=299									
TWE	**Neicheng**	**0.81**	**266**	*e*P		**Pg**	**00**	**10**	**07.4**	**+0.3**
	baz=265									
NANB	**Nanao**	**0.81**	**245**	P		**Pg**	**00**	**10**	**08.0**	**+0.9**
	baz=233									
ENA	**Nanau**	**0.82**	**245**	*e*P		**Pg**	**00**	**10**	**07.2**	**0.0**
	baz=233									
ENTT	**Nioudou**	**0.91**	**262**	P		**Pg**	**00**	**10**	**09.8**	**+0.8**
	baz=258									
NHDH	**Xindian Distri**	**0.95**	**281**	*e*S		**Sg**	**00**	**10**	**19.7**	**-2.6**
	baz=287									
NWLT	**Wulai**	**0.96**	**270**	P		**Pg**	**00**	**10**	**09.6**	**-0.2**
	baz=271									
NDT	**Datong Townshi**	**0.96**	**260**	P		**Pg**	**00**	**10**	**10.9**	**+0.9**
	baz=256									
YM01	**YM01**	**0.97**	**293**	*e*P		**Pg**	**00**	**10**	**11.0**	**+0.9**
	baz=302									
YM08	**YM08**	**0.97**	**295**	*e*P		**Pg**	**00**	**10**	**10.8**	**+0.7**
	baz=306									
YM05	**YM05**	**0.98**	**293**	*e*P		**Pg**	**00**	**10**	**11.2**	**+0.9**
	baz=303									
YM10	**YM10**	**0.98**	**293**	*e*P		**Pg**	**00**	**10**	**11.0**	**+0.7**
	baz=302									
TWY	**Chenhua**	**1.00**	**300**	*e*P		**Pg**	**00**	**10**	**12.8**	**+2.2**
	baz=311									
NACB	**Ninganchiao**	**1.06**	**236**	P		**Pb**	**00**	**10**	**12.5**	**+0.6**
	baz=225									
YHNB	**Yeheng**	**1.08**	**265**	*i* P		**Pg**	**00**	**10**	**11.9**	**-0.2**
	baz=263									
NSK	**Sanguang**	**1.09**	**265**	P		**Pb**	**00**	**10**	**12.3**	**-0.2**
	baz=264									
NNSH	**Datong**	**1.12**	**252**	*e*P		**Pg**	**00**	**10**	**13.0**	**-0.1**
	baz=247									
ETLH	**Xiulin Townshi**	**1.13**	**240**	P		**Pg**	**00**	**10**	**13.8**	**+0.6**
	baz=231									
IRIF	**Iriomote-Funau**	**1.16**	**112**	P		**Pb**	**00**	**10**	**13.0**	**-0.5**
WHF	**Hehuan Shan**	**1.33**	**242**	*e*P		**Pn**	**00**	**10**	**16.9**	**+0.4**
	baz=235									
TWT	**Tachien**	**1.36**	**248**	*e*P		**Pn**	**00**	**10**	**17.6**	**+0.9**
	baz=242									
TDCB	**Techi**	**1.38**	**248**	*e*P		**Pn**	**00**	**10**	**17.3**	**+0.5**
	baz=242									
LIOB	**Emei**	**1.41**	**265**	*e*P		**Pn**	**00**	**10**	**17.3**	**+0.2**
	baz=264									
CHGB	**Renai**	**1.45**	**241**	*e*P		**Pn**	**00**	**10**	**18.6**	**+0.7**
	baz=234									
OWD	**Renai**	**1.50**	**237**	*e*P		**Pb**	**00**	**10**	**19.8**	**+0.3**
	baz=230									
DPDB	**Guoxing**	**1.66**	**244**	*e*P		**Pn**	**00**	**10**	**22.1**	**+1.4**
	baz=238									
SSLB	**Suanglung**	**1.76**	**236**	*e*P		**Pb**	**00**	**10**	**24.3**	**+0.4**
	baz=230									

*TAP **20** 00:14:15.0,24.°91N×122.°68E,h12km±1km,ML2.6,D*
*JMA **20** 00:14:16.8±0.2,24.°75N×122.°74E,h47km±4km*
ISC 20 00:14:13.0±1.9**,24.°91N**±0.°07×**122.°75E**±0.°07**,h8**km±17km**,**
n19,σ0§**54**/26**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
JYNG	**Yonagunijimaku**	**0.49**	**158**	P		**Pn**	**00**	**14**	**26.0**	**-0.3**
YOJ	**Yonaguni jima**	**0.51**	**152**	P		**Pn**	**00**	**14**	**25.3**	**-1.2**
	baz=145									
YOJ				*e*S		**Sb**	**00**	**14**	**32.6**	**+0.9**
	baz=145									
EOS1	**EOS1**	**0.67**	**237**	P		**Pb**	**00**	**14**	**26.9**	**+0.1**
	baz=234									
EOS1				*e*S		**Sg**	**00**	**14**	**35.4**	**+0.8**
	baz=234									
TWB1	**Santiao Chiao**	**0.69**	**278**	*e*P		**Pg**	**00**	**14**	**26.9**	**+0.5**
	baz=279									
TWB1				*e*S		**Sg**	**00**	**14**	**34.8**	**-0.6**
	baz=279									
EGS		**0.74**	**265**	*e*P		**Pg**	**00**	**14**	**27.7**	**+0.4**
	baz=264									
EGS				*e*S		**Sg**	**00**	**14**	**36.8**	**-0.2**
	baz=264									
TIPB	**Shuangxi**	**0.84**	**274**	*e*P		**Pg**	**00**	**14**	**29.6**	**+0.4**
	baz=274									
TIPB				*e*S		**Sg**	**00**	**14**	**40.1**	**0.0**
	baz=274									
TWC	**Suao**	**0.87**	**250**	*e*P		**Pg**	**00**	**14**	**30.1**	**+0.4**
	baz=248									
NWF	**Wu-fen Shan**	**0.89**	**280**	*e*P		**Pb**	**00**	**14**	**30.5**	**-0.2**
	baz=281									
WFSB	**Wu-fen Shan**	**0.89**	**280**	*e*P		**Pg**	**00**	**14**	**30.2**	**+0.1**
	baz=281									
NANB	**Nanao**	**1.03**	**242**	*e*P		**Pg**	**00**	**14**	**32.0**	**-0.7**
	baz=240									
NANB				*e*S		**Sg**	**00**	**14**	**46.0**	**-0.1**
	baz=240									
ENA	**Nanau**	**1.03**	**242**	*e*P		**Pg**	**00**	**14**	**32.2**	**-0.6**
	baz=240									
ENA				*e*S		**Sg**	**00**	**14**	**45.7**	**-0.6**
	baz=240									
IRIF	**Iriomote-Funau**	**1.06**	**122**	P		**Pn**	**00**	**14**	**34.4**	**+0.3**
YM11	**YM11**	**1.09**	**284**	*e*P		**Pg**	**00**	**14**	**33.4**	**-0.6**
	baz=284									
YM05	**YM05**	**1.10**	**283**	*e*P		**Pg**	**00**	**14**	**33.9**	**-0.3**
	baz=284									
YHNB	**Yeheng**	**1.27**	**259**	*e*P		**Pg**	**00**	**14**	**37.6**	**+0.3**
	baz=258									
NACB	**Ninganchiao**	**1.28**	**235**	*e*P		**Pn**	**00**	**14**	**36.8**	**-0.4**
	baz=233									
NSK	**Sanguang**	**1.28**	**260**	*e*P		**Pb**	**00**	**14**	**37.6**	**+0.2**
	baz=258									
ETLH	**Xiulin Townshi**	**1.35**	**239**	*e*P		**Pb**	**00**	**14**	**38.5**	**0.0**
	baz=237									
WHF	**Hehuan Shan**	**1.55**	**241**	*e*P		**Pn**	**00**	**14**	**41.5**	**+0.3**
	baz=239									

*ISN **20** 00:17:02.4±0.7,34.°47N×45.°47E,h16km±4km,ML2.6*
*TEH **20** 00:17:03.3,34.°49N×45.°45E,h15km,ML2.7*
ISC 20 00:17:03.5±0.9**,34.°46N**±0.°06×**45.°48E**±0.°04**,h18**km**,n9,** σ0§**73**/13**,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
IDHR	**Dehrash**	**0.78**	**72**	*e*Sg		**Sn**	**00**	**17**	**30.6**	**-0.6**
IDHR				*e*			00	17	32.4	
IGHG	**Ghaleghazi**	**0.91**	**98**	*e*Pg		**Pb**	**00**	**17**	**20.9**	**+0.1**
IGHG				*e*			00	17	41.4	
IVIS	**Veis**	**1.13**	**86**	*e*Pg		**Pg**	**00**	**17**	**25.1**	**-0.3**
IVIS				*e*			00	17	44.0	
KCHF	**Cheshme Sefid,**	**1.30**	**98**	*e*Pg		**Pg**	**00**	**17**	**28.8**	**+0.2**
KCHF				*e*			00	17	49.4	
IKRK	**Kirkuk**	**1.33**	**315**	*e*Pg		**Pn**	**00**	**17**	**26.5**	**-0.7**
IKRK				*e*Sg		**Sb**	**00**	**17**	**44.0**	**-0.6**
KER	**Kermanshah**	**1.36**	**93**	*e*Pg		**Pg**	**00**	**17**	**29.6**	**-0.2**
KER				*e*			00	17	50.5	
IBDR	**Badra**	**1.39**	**164**	*e*Pn		**Pb**	**00**	**17**	**29.8**	**+0.9**
IBDR				*e*Sn		**Sg**	**00**	**17**	**48.5**	**0.0**
BHD	**Baghdad**	**1.50**	**218**	*e*Pn		**Pb**	**00**	**17**	**30.5**	**-0.2**
BHD				*e*Sn		**Sg**	**00**	**17**	**51.0**	**-0.8**
MSL	**Mosul**	**2.74**	**316**	*e*Pn		**Pn**	**00**	**17**	**47.5**	**+0.9**
MSL				AML		AML	00	18	02.6	
	comp=Z,50nm,0.4s									
MSL				*e*Sn		**Sn**	**00**	**18**	**20.5**	**+1.2**

*NIED **20** 00:17:00,33.°20N×140.°00E,h110km,Mw3.9 Best double couple: M0 7.17000×10^19 NP1:φs117.00000°, δ74.00000°, λ140.00000°. NP2:φs220.00000°, δ52.00000°, λ21.00000°.*
*IDC **20** 00:17:38.5±1.9,33.°04N×139.°92E,h137km±18km,mb3.4/7, mb1 3.7/12,mb1mx3.3/65,mbtmp4.0/12,Error ellipse: s-maj=25.3km s-min=13.7km az=95.0*
*NEIC **20** 00:17:39.9±2.6,33.°01N±0.°07×140.°0E±0.°1,h160km±3km, mb4.3/21,Error ellipse: s-maj=15.8km s-min=8.8km az=70.0*
*JMA **20** 00:17:40.5±0.1,33.°19N×140.°04E,h148km±1km,M3.7*
ISC 20 00:17:39.3±0.6**,33.°10N**±0.°04×**140.°04E**±0.°05**,h153**km±5km**,**
n66,σ1§**39**/78**,mb4.2**/16**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
JHJ2	**Mitsune**	**0.19**	**275**	P		**Pn**	**00**	**18**	**00.8**	**+0.9**
JHJ2				S		**Sn**	**00**	**18**	**16.1**	**+0.5**
JHJ2	**Mitsune**	**0.19**	**275**			**Pn**	**00**	**18**	**01.0**	**+1.1**
JHCJ	**Hachijojimakas**	**0.20**	**264**	P		**Pn**	**00**	**18**	**00.9**	**+0.9**
JHCJ				*e*S		**Sn**	**00**	**18**	**16.4**	**+0.7**
JAOM	**Aogashimamukai**	**0.67**	**200**	P		**Pn**	**00**	**18**	**03.4**	**+1.4**
JAOM				*e*S		**Sn**	**00**	**18**	**20.5**	**+1.2**
JMKN	**Mikurajimanish**	**0.88**	**335**	P		**Pn**	**00**	**18**	**03.6**	**+0.2**
JMKN				*e*S		**Sn**	**00**	**18**	**20.6**	**-1.3**
JKO	**Kozu shima**	**1.32**	**326**	P		**Pn**	**00**	**18**	**07.9**	**+0.6**
JKO				*e*S		**Sn**	**00**	**18**	**28.6**	**-0.2**
JTHY	**Toshimahigashi**	**1.56**	**337**	*e*S		**Sn**	**00**	**18**	**32.4**	**-0.7**
JIM2	**Oshima 3**	**1.70**	**343**	P		**Pn**	**00**	**18**	**11.6**	**+0.4**
JIM2				*e*S		**Sn**	**00**	**18**	**35.2**	**-0.6**
BSO1	**Boso 1**	**1.74**	**26**	P		**Pn**	**00**	**18**	**11.9**	**+0.8**
BSO1				*e*S		**Sn**	**00**	**18**	**35.6**	**0.0**
BSO3	**Boso 3**	**1.75**	**13**	P		**Pn**	**00**	**18**	**12.0**	**+0.6**
BSO3				*e*S		**Sn**	**00**	**18**	**35.4**	**-0.9**
JIZS	**Izushimoda**	**1.89**	**329**	P		**Pn**	**00**	**18**	**13.8**	**+0.5**
TK02	**Tokai 2**	**2.09**	**295**	P		**Pn**	**00**	**18**	**16.3**	**+0.9**
TK02				*e*S		**Sn**	**00**	**18**	**43.1**	**-0.1**
TK04	**Tokai 4**	**2.22**	**306**	P		**Pn**	**00**	**18**	**18.1**	**+1.1**
TK04				*e*S		**Sn**	**00**	**18**	**46.8**	**+0.7**
JOD2	**Odawara 2**	**2.30**	**340**	P		**Pn**	**00**	**18**	**18.6**	**+0.4**
JOD2				*e*S		**Sn**	**00**	**18**	**47.8**	**-0.4**
JFNN	**Fujinakano**	**2.38**	**332**	P		**Pn**	**00**	**18**	**20.0**	**+1.0**
SHZ3	**Shizuoka 3**	**2.48**	**323**	P		**Pn**	**00**	**18**	**21.3**	**+0.9**
SHZ3				*e*S		**Sn**	**00**	**18**	**52.6**	**+0.4**
TTO2	**TONANKAI O.B.S**	**2.60**	**285**	P		**Pn**	**00**	**18**	**22.2**	**+0.7**
TTO2				*e*S		**Sn**	**00**	**18**	**54.4**	**+0.3**
JYN	**Shimob**	**2.70**	**333**	P		**Pn**	**00**	**18**	**23.8**	**+0.7**
TTO1	**TONANKAI O.B.S**	**2.77**	**282**	P		**Pn**	**00**	**18**	**24.4**	**+0.8**
INU	**Inuyama**	**3.37**	**313**			**Pn**	**00**	**18**	**32.3**	**+0.9**
MJAR	**Matsushiro Arr**	**3.75**	**337**	P		**Pn**	**00**	**18**	**35.6**	**-0.8**
	1.7nm,0.3s,baz=156,slow=12,SNR=47									
MJAR				S		**Sn**	**00**	**19**	**18.9**	**-2.0**
	baz=192,slow=18,SNR=2.8									
MAJO	**Matsushiro**	**3.76**	**337**			**Pn**	**00**	**18**	**36.4**	**-0.1**
MAT	**Matsushiro**	**3.76**	**337**	P		**Pn**	**00**	**18**	**36.2**	**-0.2**
MAT				S		**Sn**	**00**	**19**	**19.5**	**-1.4**
MJB9	**Matsu-Tunnel**	**3.76**	**337**			**Pn**	**00**	**18**	**36.7**	**+0.2**
JCJ	**Chichijima**	**6.26**	**162**	P		**Pn**	**00**	**19**	**08.3**	**-1.2**
	34nm,0.3s,baz=266,slow=22,SNR=5.9									
JCJ				S		**Sn**	**00**	**20**	**13.2**	**-7.0**
	14nm,0.3s,baz=282,slow=19,SNR=2.8									
JNU	**Nakatsue**	**7.69**	**273**	P		**Pn**	**00**	**19**	**27.8**	**-0.7**
	0.3nm,0.3s,baz=98,slow=4.3,SNR=2.0									
ERM	**Erimo**	**9.24**	**15**	Pn		**Pn**	**00**	**19**	**47.8**	**-1.3**
JKA	**Kamikawa-asahi**	**11.18**	**10**			**Pn**	**00**	**20**	**13.6**	**-1.2**
ASAJ	**Asahikawa**	**11.19**	**10**	P		**Pn**	**00**	**20**	**13.6**	**-1.2**
	1.6nm,0.3s,baz=186,slow=14,SNR=4.5									
KLR	**Kul'dur**	**17.27**	**341**	P		**P**	**00**	**21**	**29.5**	**-0.6**
	0.3nm,0.3s,baz=173,slow=5.1,SNR=11									
H11N2	**WAKE ISLAND Hy**	**27.40**	**112**	T		T	00	52	22.2	
	baz=306,slow=75									
H11N1	**WAKE ISLAND Hy**	**27.40**	**112**	T		T	00	52	31.4	
	baz=306,slow=75									
H11N3	**WAKE ISLAND Hy**	**27.41**	**112**	T		T	00	52	36.2	
	baz=306,slow=75									
MKAR	**Makanchi Array**	**45.36**	**305**	P		**P**	**00**	**25**	**42.2**	**+0.1**
	0.2nm,0.4s,baz=87,slow=10,SNR=5.3									
ANM	**Nome**	**45.55**	**30**	P		**P**	**00**	**25**	**45.3**	**+1.9**
MAKZ	**Makanchi**	**45.58**	**305**	P		**P**	**00**	**25**	**44.4**	**+0.6**
COEN	**Coen**	**46.88**	**176**	P		**P**	**00**	**25**	**54.4**	**+0.2**
COEN				IAmb		IAmb	00	26	05.7	
	comp=Z,7.4nm,1.1s									
RDOG	**Red Dog Mine**	**47.53**	**25**	P		**P**	**00**	**25**	**59.3**	**+0.6**
RDOG				IAmb		IAmb	00	26	00.5	
	comp=Z,3.3nm,0.6s									
KDJ	**Kajisay**	**49.60**	**300**	P		**P**	**00**	**26**	**15.0**	**-0.2**
KDJ				IAmb		IAmb	00	26	33.9	
	comp=Z,4.7nm,1.1s									
KNRA	**Kununurra**	**49.68**	**194**	P		**P**	**00**	**26**	**14.2**	**-1.4**
PPLA	**Purkeypile**	**51.06**	**33**	P		**P**	**00**	**26**	**26.8**	**+1.1**
PPLA				IAmb		IAmb	00	26	36.8	
	comp=Z,6.4nm,1.2s									
BPAW	**Bear Paw Mtn.**	**51.65**	**32**	P		**P**	**00**	**26**	**31.5**	**+1.5**
BPAW				IAmb		IAmb	00	26	32.9	
	comp=Z,3.6nm,0.8s									
SUA	**Susitna One**	**51.70**	**35**	P		**P**	**00**	**26**	**32.6**	**+2.1**
MLY	**Manley**	**51.80**	**30**	P		**P**	**00**	**26**	**33.9**	**+2.9**
RC01	**Rabbit Creek A**	**52.19**	**35**	P		**P**	**00**	**26**	**34.4**	**+0.4**
RC01				IAmb		IAmb	00	26	43.4	
	comp=Z,10nm,1.0s									
RND	**Reindeer**	**52.58**	**32**	P		**P**	**00**	**26**	**37.0**	**+0.1**
WR0	**Warramunga Arr**	**53.02**	**186**	P		**P**	**00**	**26**	**40.6**	**+0.1**
WR0				IAmb		IAmb	00	26	41.4	
	comp=Z,4.6nm,0.6s									
WRA	**Warramunga Arr**	**53.02**	**187**	P		**P**	**00**	**26**	**40.1**	**-0.4**
	comp=Z,3.9nm,0.6s,baz=3,9,slow=7.7,SNR=31									
ILAR	**Eielson Array**	**53.43**	**31**	P		**P**	**00**	**26**	**44.3**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=260,slow=5.6,SNR=4.2									
SCRK	**Sand Creek**	**54.73**	**32**	P		**P**	**00**	**26**	**54.2**	**+1.7**
MENT	**Mentasta**	**54.93**	**33**	P		**P**	**00**	**26**	**55.3**	**+1.4**
MENT				IAmb		IAmb	00	27	00.5	
	comp=Z,6.0nm,1.1s									
BALM	**Baldy**	**55.78**	**35**	P		**P**	**00**	**27**	**01.6**	**+1.5**
BALM				IAmb		IAmb	00	27	15.2	
	comp=Z,8.7nm,1.1s									
EGAK	**Eagle**	**55.88**	**31**	P		**P**	**00**	**27**	**01.5**	**+0.9**
ASAR	**Alice Springs**	**56.75**	**187**	P		**P**	**00**	**27**	**07.7**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=0,0,slow=6.7,SNR=12									
INK	**Inuvik**	**58.41**	**26**	P		**P**	**00**	**27**	**19.9**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=281,slow=5.5,SNR=5.9									
INK	**Inuvik**	**58.41**	**26**	IAmb		IAmb	00	27	21.2	
	comp=Z,1.3nm,1.1s									
C36M	**Paulatuk**	**61.48**	**24**	P		**P**	**00**	**27**	**40.8**	**+1.6**
MSVF	**Nonsavu**	**62.24**	**138**	P		**P**	**00**	**27**	**45.4**	**+0.4**
KBS	**Kingsbay**	**64.34**	**350**	P		**P**	**00**	**27**	**55.0**	**-2.9**
FORT	**Forrest**	**64.53**	**191**	P		**P**	**00**	**27**	**59.8**	**0.0**
YMP	**Mirror Lake Pl**	**79.72**	**43**	P		**P**	**00**	**29**	**28.8**	**-1.7**
THZ	**Tophouse**	**80.39**	**156**	P		**P**	**00**	**29**	**31.9**	**-1.6**
TPNV	**Topopah Spring**	**80.45**	**52**	P		**P**	**00**	**29**	**34.6**	**+0.3**
PDAR	**Pinedale Array**	**81.25**	**44**	P		**P**	**00**	**29**	**40.3**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=199,slow=1.9,SNR=3.5									
TXAR	**Lajitas Array**	**93.43**	**52**	P		**P**	**00**	**30**	**40.0**	**+2.3**
	comp=Z,0.8nm,0.7s,baz=305,slow=3.2,SNR=12									
LPAZ	**La Paz**	**149.56**	**63**	PKPbc		**PKiKP**	**00**	**37**	**13.7**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=270,slow=3.0,SNR=4.8									

IDC 20 00:17:43.0±2.2**,4.°00N**×123.°62E**,h0**km**,mb3.7**/3**,**
mb1 3.9/3**,mb1mx3.4**/50**,mbtmp3.7**/3**,Error ellipse: s-maj=307.6km s-min=24.8km az=63.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
WRA	**Warramunga Arr**	**26.02**	**156**	P		P	00	23	18.1	+0.1
	1.5nm,1.0s,baz=335,slow=10.0,SNR=5.3									
ASAR	**Alice Springs**	**29.27**	**160**	P		P	00	23	47.0	-0.1
	0.3nm,0.4s,baz=337,slow=7.6,SNR=5.6									
MKAR	**Makanchi Array**	**55.60**	**327**	P		P	00	27	20.4	-0.1
	0.7nm,0.5s,baz=120,slow=8.3,SNR=14									

*NIED **20** 00:56:00,46.°40N×153.°90E,h17km,Mw4.5 Best double couple: M0 6.72000×10^15 NP1:φs149.00000°, δ85.00000°, λ-20.00000°. NP2:φs240.00000°, δ70.00000°, λ-175.00000°.*
*JMA **20** 00:56:30.4±1.0,46.°39N×153.°91E,h30km,M5.1*
*IDC **20** 00:56:30.1±0.4,46.°57N×153.°35E,h0km,mb4.6/36, mb1 4.7/41,mb1mx4.7/52,mbtmp4.6/41,ML3.3/4,MS4.1/34, Ms1 4.1/34,ms1mx4.0/49,Error ellipse: s-maj=12.5km s-min=10.0km az=128.0*
*BJI **20** 00:56:31.4±0.0,46.°70N×153.°56E,h27km,mB5.0/52, mb4.9/64,Ms4.6/47,Ms7 4.4/46*
*SKHL **20** 00:56:33.5±0.7,46.°30N×153.°80E,h67km±4km,mb5.1/16, mbv5.5/8,ms4.5/10*
*NEIC **20** 00:56:36.1±1.8,46.°56N±0.°08×153.°40E±0.°09,h35km±1km, mb4.8/266,Error ellipse: s-maj=12.3km s-min=7.4km az=153.0*
*MOS **20** 00:56:36.5±1.4,46.°53N×153.°23E,h60km,mb5.0/61, MS3.9/12,Error ellipse: s-maj=5.2km s-min=4.2km az=96.4*
*BGR **20** 00:56:44.7±0.0,47.°73N×152.°16E,h33km,mb5.0,Ms4.3*
ISC 20 00:56:36.2±0.5**,46.°45N**±0.°04×**153.°43E**±0.°04**,h43**km±4km**,**
n694,σ1§**44**/687**,mb4.8**/231**,MS4.3**/43**,72C-8D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
KUR	**Kuril'sk**	**4.07**	**255**	*c i* PN		**Pn**	**00**	**57**	**36.9**	**+1.0**
KUR				*e*S		**Sn**	**00**	**58**	**23.5**	**+1.2**
KUR				pmax		pmax				
	comp=Z,900nm,0.8s									
KUR				pmax		pmax				
	comp=E,150nm,0.7s									
KUR				pmax		pmax				
	comp=N,122nm,0.3s									
KUR				smax		smax				
	comp=N,5μm,1.7s									
KUR				smax		smax				
	comp=N,722nm,0.6s									
KUR				smax		smax				
	comp=E,321nm,0.4s									
KUR				MLR		MLR				
	comp=Z,2μm,10.0s									
KUR	**Kuril'sk**	**4.07**	**255**	*i* P		**Pn**	**00**	**57**	**36.7**	**+0.8**
KUR				AMB		AMB	00	57	37.0	
KUR				AMB		AMB	00	57	37.0	
	comp=Z,150nm,0.8s									
KUR				AMB		AMB	00	57	37.0	
	comp=Z,900nm,0.8s									
KUR				*i* S		**Sn**	**00**	**58**	**23.5**	**+1.2**
KUR				A		A	00	58	41.5	
	comp=Z,5μm,2.0s									
KUR				A		A	00	58	43.7	
	comp=Z,720nm,0.5s									
KUR				A		A	00	58	43.7	
	comp=Z,320nm,0.5s									
KUR				AMS		AMS	00	58	57.0	
	comp=Z,6μm,15.0s									
KUR				AMS		AMS	00	58	57.0	
	comp=Z,5μm,15.0s									
KUR				AMS		AM

YUK				AMB	AMB	00 58 12.0			
	comp=Z,400nm,1.0s								
YUK			*i*	S	**Sn**	**00 59 06.0**	**-0.3**		
YUK				A	A	00 59 21.6			
	comp=Z,700nm,0.7s								
YUK				A	A	00 59 21.6			
	comp=Z,360nm,0.7s								
YUK				AMS	AMS	01 00 17.0			
	comp=Z,4μm,13.0s								
YUK				AMS	AMS	01 00 17.0			
	comp=Z,3μm,13.0s								
YUK				AMS	AMS	01 00 17.0			
	comp=Z,2μm,13.0s								
GRPR	**Tuman**	**5.94 248**	*c*	*i*	PN	**Pn**	**00 58 01.7**	**+0.2**	
GRPR				*i*	S	**Sn**	**00 59 06.9**	**-1.3**	
GRPR					pmax	pmax			
	comp=Z,510nm,1.6s								
GRPR					pmax	pmax			
	comp=Z,452nm,0.9s								
GRPR					pmax	pmax			
	comp=N,335nm,0.8s								
GRPR					pmax	pmax			
	comp=E,149nm,0.6s								
GRPR					smax	smax			
	comp=N,411nm,0.6s								
GRPR					smax	smax			
	comp=E,155nm,0.4s								
GRPR					smax	smax			
	comp=N,545nm,1.3s								
GRPR					smax	smax			
	comp=E,470nm,2.0s								
GRPR	**Tuman**	**5.94 248**	*i*	P		**Pn**	**00 58 01.7**	**+0.2**	
GRPR					AMB	AMB	00 58 12.0		
	comp=E,500nm,2.0s								
GRPR					AMB	AMB	00 58 14.0		
	comp=E,450nm,0.9s								
GRPR				*i*	S	**Sn**	**00 59 06.9**	**-1.3**	
GRPR					A	A	00 59 22.2		
	comp=E,410nm,0.6s								
GRPR					A	A	00 59 22.2		
	comp=E,160nm,0.6s								
GLVR	**Golovnino**	**6.22 247**	*e*	PN		**Pn**	**00 58 05.0**	**-0.4**	
GLVR					pmax	pmax			
	comp=Z,518nm,0.9s								
GLVR					pmax	pmax			
	comp=N,218nm,0.7s								
GLVR					pmax	pmax			
	comp=E,331nm,1.0s								
GLVR	**Golovnino**	**6.22 247**	*e*	P		**Pn**	**00 58 05.0**	**-0.4**	
GLVR					AMB	AMB	00 58 18.0		
	comp=E,520nm,0.8s								
GLVR				*i*	S	**Sn**	**00 59 13.0**	**-2.1**	
GLVR					A	A	00 59 27.0		
	comp=E,150nm,0.8s								
GLVR					A	A	00 59 27.0		
	comp=E,570nm,0.8s								
NEM2	**Nemuro 2**	**6.27 243**		P		**Pn**	**00 58 03.7**	**-2.3**	
NEM2				eS		**Sn**	**00 59 12.8**	**-3.5**	
NMR	**Nemuro--Hokkai**	**6.27 243**	⇑	*i*	PN	**Pn**	**00 58 03.8**	**-2.3**	
NMR	**Nemuro--Hokkai**	**6.27 243**		*i*	P	**Pn**	**00 58 04.1**	**-2.0**	
JNK	**Nakash**	**6.80 248**		P		**Pn**	**00 58 12.3**	**-1.1**	
JAK	**Akkeshi**	**7.11 244**		P		**Pn**	**00 58 15.5**	**-2.1**	
JAK				eS		**Sn**	**00 59 32.2**	**-4.9**	
JTKR	**Abashiri--Toko**	**7.17 253**		P		**Pn**	**00 58 18.9**	**+0.6**	
PEA0B	**Petropavlovsk-**	**7.22 21**		*i*	PN	**Pn**	**00 58 18.8**	**-0.2**	
PEA0B	**Petropavlovsk-**	**7.22 21**				**Pn**	**00 58 17.4**	**-1.6**	
PETK	**Petropavlovsk-**	**7.22 21**		Pn		**Pn**	**00 58 16.9**	**-2.2**	
	comp=E,1.6nm,0.3s,baz=182,slow=14,SNR=22								
PETK				Sn		**Sn**	**00 59 33.8**	**-5.9**	
	baz=184,slow=19,SNR=1.9								
YSS	**Yuzh-Sakhalins**	**7.36 278**	⇓	*e*	PN	**Pn**	**00 58 23.4**	**+2.4**	
YSS				eS		**Sn**	**00 59 47.4**	**+4.3**	
YSS					pmax	pmax			
	comp=Z,60nm,1.1s								
YSS					pmax	pmax			
	comp=N,20nm,0.9s								
YSS					pmax	pmax			
	comp=E,70nm,0.9s								
YSS					pmax	pmax			
	comp=Z,300nm,3.3s								
YSS					pmax	pmax			
	comp=N,200nm,4.5s								
YSS					pmax	pmax			
	comp=E,200nm,3.6s								
YSS					smax	smax			
	comp=N,20nm,1.3s								
YSS					smax	smax			
	comp=E,30nm,0.7s								
YSS					MLR	MLR			
	comp=Z,2μm,16.0s								
YSS					MLR	MLR			
	comp=N,1μm,14.0s								
YSS					MLR	MLR			
	comp=E,1μm,14.0s								
YSS	**Yuzh-Sakhalins**	**7.36 278**		*e*	P	**Pn**	**00 58 22.5**	**+1.5**	
YSS					AMB	AMB	00 58 24.0		
	comp=E,60nm,0.9s								
YSS					AMB	AMB	00 58 29.0		
	comp=E,300nm,4.0s								
YSS				eS		**Sn**	**00 59 43.7**	**+0.6**	
YSS				A		A	00 59 48.0		
	comp=E,20nm,0.9s								
YSS				A		A	00 59 48.0		
	comp=E,30nm,0.9s								
YSS					AMS	AMS	01 01 04.0		
	comp=E,1μm,15.0s								
YSS					AMS	AMS	01 01 04.0		
	comp=E,1μm,15.0s								
YSS					AMS	AMS	01 01 04.0		
	comp=E,2μm,15.0s								
YSS	**Yuzh-Sakhalins**	**7.36 278**				**Pn**	**00 58 20.5**	**-0.4**	
PET	**Petropavlovsk**	**7.40 25**		*e*	PN	**Pn**	**00 58 21.0**	**-0.5**	
PET					pmax	pmax			
	comp=Z,71nm,0.9s								
PET					MLR	MLR			
	comp=Z,900nm,11.0s								
PET					MLR	MLR			
	comp=Z,900nm,12.0s								
PET	**Petropavlovsk**	**7.40 25**		*e*	P	**Pn**	**00 58 20.8**	**-0.7**	
PET					AMB	AMB	00 58 25.3		
	comp=Z,400nm,2.0s								
PET					AMB	AMB	00 58 30.6		
	comp=Z,50nm,0.7s								
PET				eS		**Sn**	**00 59 41.2**	**-2.9**	
PET				A		A	01 00 09.0		
	comp=Z,220nm,1.0s								
PET				A		A	01 00 09.0		
	comp=Z,170nm,1.0s								
PET					AMS	AMS	01 01 28.0		
	comp=Z,1μm,16.0s								
PET					AMS	AMS	01 01 28.0		
	comp=Z,2μm,16.0s								
PET					AMS	AMS	01 01 28.0		
	comp=Z,1μm,16.0s								
PET	**Petropavlovsk**	**7.40 25**				**Pn**	**00 58 20.8**	**-0.7**	
JMP	**Maruseppu**	**7.52 255**		P		**Pn**	**00 58 24.3**	**+1.1**	
JAR	**Ashorobuto**	**7.55 249**		P		**Pn**	**00 58 23.4**	**-0.2**	
JAR				eS		**Sn**	**00 59 47.9**	**+0.1**	
JOB	**Onbets**	**7.70 246**		P		**Pn**	**00 58 24.2**	**-1.5**	
JOB				eS		**Sn**	**00 59 47.9**	**-3.6**	
JSE	**Soyaes**	**7.74 263**		P		**Pn**	**00 58 28.9**	**+2.7**	
JKK2	**Kamakawa 2**	**7.97 255**		P		**Pn**	**00 58 30.6**	**+1.1**	
JKA	**Kamikawa-asahi**	**7.99 257**		*e*	P	**Pn**	**00 58 30.7**	**+1.1**	
JKA	**Kamikawa-asahi**	**7.99 257**				**Pn**	**00 58 30.7**	**+1.1**	
JKA						**Sn**	**00 59 58.9**	**+0.3**	
ASAJ	**Asahikawa**	**7.99 257**		P		**Pn**	**00 58 31.3**	**+1.7**	
ASAJ	**Asahikawa**	**7.99 257**		Pn		**Pn**	**00 58 30.7**	**+1.1**	
	comp=Z,4.4nm,0.3s,baz=108,slow=9.5,SNR=45								
ASAJ				Sn		**Sn**	**00 59 58.9**	**+0.3**	
	comp=Z,0.9nm,0.3s,baz=51,slow=17,SNR=1.6								
ASAJ				LR		LR	01 01 26.8		
	comp=Z,917nm,19.4s,baz=62,slow=37								
UGL	**Uglegorsk**	**8.10 293**	⇑	*i*	PN	**Pn**	**00 58 34.3**	**+3.2**	
UGL					pmax	pmax			
	comp=Z,312nm,1.0s								
UGL					MLR	MLR			
	comp=E,3μm,17.0s								
UGL					MLR	MLR			
	comp=N,2μm,14.0s								
UGL	**Uglegorsk**	**8.10 293**		*i*	P	**Pn**	**00 58 32.8**	**+1.7**	
UGL					AMB	AMB	00 58 36.0		
	comp=N,90nm,0.8s								
UGL				eS		**Sn**	**01 00 02.0**	**+0.8**	
UGL					AMS	AMS	01 01 39.0		
	comp=N,2μm,19.0s								
UGL					AMS	AMS	01 01 39.0		
	comp=N,3μm,19.0s								
UGL					AMS	AMS	01 01 39.0		
	comp=N,3μm,19.0s								
JWK2	**Keihoku**	**8.13 266**		P		**Pn**	**00 58 35.8**	**+4.3**	
JCH	**Churui**	**8.15 246**		P		**Pn**	**00 58 29.8**	**-2.0**	
JCH				eS		**Sn**	**00 59 58.0**	**-4.5**	
JFR	**Furan**	**8.37 251**		P		**Pn**	**00 58 35.3**	**+0.4**	
TYV	**Tymovskoe**	**8.39 306**		*e*	PN	**Pn**	**00 58 37.2**	**+2.1**	
TYV				eS		**Sn**	**01 00 11.1**	**+2.8**	
TYV					pmax	pmax			
	comp=Z,62nm,1.0s								
TYV					smax	smax			
	comp=E,15nm,1.1s								
TYV	**Tymovskoe**	**8.39 306**		*e*	P	**Pn**	**00 58 37.0**	**+1.9**	
TYV					AMB	AMB	00 58 39.0		
	comp=E,60nm,0.9s								
TYV				eS		**Sn**	**01 00 10.0**	**+1.7**	
TYV				A		A	01 00 31.5		
	comp=E,20nm,0.9s								
TYV					AMS	AMS	01 01 55.5		
	comp=E,5μm,19.0s								
TYV					AMS	AMS	01 01 55.5		
	comp=E,6μm,19.0s								
TYV					AMS	AMS	01 01 55.5		
	comp=E,4μm,19.0s								
JAB	**Ashibetsu**	**8.47 254**		P		**Pn**	**00 58 37.7**	**+1.4**	
ERM	**Erimo**	**8.60 243**		*i*	PN	**Pn**	**00 58 37.4**	**-0.6**	
ERM	**Erimo**	**8.60 243**				**Pn**	**00 58 37.6**	**-0.4**	
JRBN	**Rebuntou**	**8.68 268**		P		**Pn**	**00 58 43.2**	**+4.1**	
JBT2	**Biratori 2**	**8.70 249**		P		**Pn**	**00 58 38.2**	**-1.2**	
JNBK	**Urakawa-nobuka**	**8.71 245**		P		**Pn**	**00 58 37.2**	**-2.3**	
JNBK				eS		**Sn**	**01 00 11.5**	**-4.8**	
JEW	**Eniwo**	**9.27 251**		P		**Pn**	**00 58 47.8**	**+0.6**	
OKH	**Okha**	**9.80 320**		*de*	PN	Pn	00 58 59.5	+5.1	
OKH					MLR	MLR			
	comp=Z,1μm,16.0s								
OKH	**Okha**	**9.80 320**		*e*	P	**Pn**	**00 58 56.5**	**+2.1**	
OKH					AMB	AMB	00 59 00.8		
	comp=Z,720nm,3.0s								
OKH				eS		**Sn**	**01 00 44.5**	**+1.6**	
OKH					AMS	AMS	01 03 16.5		
	comp=Z,2μm,17.0s								
OKH					AMS	AMS	01 03 16.5		
	comp=Z,2μm,17.0s								
OKH					AMS	AMS	01 03 16.5		
	comp=Z,1μm,17.0s								
JKB	**Kayabe**	**10.00 247**		P		**Pn**	**00 58 55.0**	**-2.2**	
JKB				eS		**Sn**	**01 00 40.7**	**-7.3**	
JYM2	**Yakumo 2**	**10.31 250**		P		**Pn**	**00 58 59.7**	**-1.8**	
JANG	**Nango**	**10.58 239**		eS		Sn	01 00 52.3	-10	
JTM	**Tenmabayashi**	**10.59 242**		P		**Pn**	**00 59 02.0**	**-3.3**	
JTM				eS		**Sn**	**01 00 54.1**	**-8.4**	
NKL	**Nikolayevsk**	**10.62 314**		*e*	PN	**Pn**	**00 59 04.0**	**-1.5**	
NKL					pmax	pmax			
	comp=Z,71nm,1.2s								
NKL					pmax	pmax			
	comp=N,5.0nm,0.7s								
NKL					pmax	pmax			
	comp=E,18nm,1.2s								
NKL	**Nikolayevsk**	**10.62 314**		*e*	P	**Pn**	**00 59 05.8**	**+0.3**	
NKL					AMB	AMB	00 59 10.2		
	comp=E,70nm,1.0s								
NKL					AMS	AMS	01 04 19.3		
	comp=E,80nm,15.0s								
NKL					AMS	AMS	01 04 19.3		
	comp=E,70nm,15.0s								
NKL					AMS	AMS	01 04 19.3		
	comp=E,2μm,15.0s								
JOSM	**Okushiri--Mats**	**10.91 251**		P		**Pn**	**00 59 07.6**	**-2.1**	
TEY	**Ternei**	**11.84 269**	⇑	*e*	PN	Pn	00 59 27.4	+5.0	
TEY					pmax	pmax			
	comp=N,10.0nm,1.1s								
TEY					pmax	pmax			
	comp=Z,40nm,1.0s								
TEY	**Ternei**	**11.84 269**		*e*	P	**Pn**	**00 59 24.2**	**+1.8**	
TEY					AMB	AMB	00 59 28.9		
	comp=Z,40nm,1.0s								
GRNR	**Gornyy**	**12.05 297**	⇑	*i*	PN	**Pn**	**00 59 27.9**	**+2.7**	
GRNR				eS		**Sn**	**01 01 42.2**	**+4.0**	
GRNR					pmax	pmax			
	comp=Z,10.0nm,0.8s								
GRNR					smax	smax			
	comp=N,5.0nm,0.9s								
GRNR					MLR	MLR			
	comp=Z,1μm,16.0s								
GRNR	**Gornyy**	**12.05 297**		*e*	P	**Pn**	**00 59 27.9**	**+2.7**	
GRNR					AMB	AMB	00 59 30.0		
	comp=Z,10.0nm,0.8s								
GRNR					AMS	AMS	01 04 07.0		
	comp=Z,1μm,16.0s								
MA2	**Magadan**	**13.25 354**		*i*	PN	**Pn**	**00 59 40.0**	**-1.4**	
MA2	**Magadan**	**13.25 354**		Pn		**Pn**	**00 59 39.7**	**-1.7**	
	comp=Z,1.1nm,0.3s,baz=157,slow=17,SNR=2.0								
MA2				LR		LR	01 05 11.8		
	comp=Z,547nm,18.2s,baz=172,slow=40								
MA2	**Magadan**	**13.25 354**				**Pn**	**00 59 40.8**	**-0.6**	
EKMR	**Ekimchan**	**14.77 304**		*e*	P	**Pn**	**01 00 00.5**	**-1.6**	
EKMR					AMB	AMB	01 00 08.0		
	comp=Z,30nm,0.9s								
SMY	**Shemya**	**14.78 57**		P		**Pn**	**01 00 01.9**	**-0.2**	
SMY	**Shemya**	**14.78 57**		Pn		**Pn**	**01 00 01.9**	**-0.2**	
KLR	**Kul'dur**	**14.81 289**		*i*	P	**Pn**	**01 00 01.8**	**-0.9**	
KLR					pmax	pmax			
	comp=Z,14nm,1.2s								
KLR	**Kul'dur**	**14.81 289**		Pn		**Pn**	**01 00 03.7**	**+1.0**	
	comp=Z,0.1nm,0.3s,baz=88,slow=12,SNR=9.7								
KLR				LR		LR	01 05 55.7		
	comp=Z,1μm,18.5s,baz=96,slow=38								
KLR	**Kul'dur**	**14.81 289**		*e*	P	**Pn**	**01 00 01.8**	**-0.9**	
MAJO	**Matsushiro**	**15.07 234**		P		**Pn**	**01 00 05.8**	**-0.4**	
MAJO					pmax	pmax			
	comp=Z,47nm,0.7s								
MAJO	**Matsushiro**	**15.07 234**				**Pn**	**01 00 05.8**	**-0.4**	
MAJO					IAmb	IAmb	01 00 13.1		
	comp=Z,47nm,0.7s								
MAT	**Matsushiro**	**15.07 234**		P		**Pn**	**01 00 02.4**	**-3.8**	
MAT				S		**Sn**	**01 02 49.4**	**-2.5**	
MJAR	**Matsushiro Arr**	**15.07 234**		Pn		**Pn**	**01 00 02.6**	**-3.6**	
	comp=Z,0.1nm,0.3s,baz=27,slow=12,SNR=11								
MJAR				LR		LR	01 07 11.5		
	comp=Z,306nm,18.1s,baz=45,slow=42								
MJB9	**Matsu-Tunnel**	**15.07 234**				**Pn**	**01 00 06.8**	**+0.6**	
MJB9					IAmb	IAmb	01 00 13.1		
	comp=Z,48nm,0.7s								
USA0B	**Ussuriysk Arra**	**15.24 269**		P		**Pn**	**01 00 08.0**	**-0.3**	
USA0B					pmax	pmax			
	comp=Z,48nm,1.2s								
USA0B	**Ussuriysk Arra**	**15.24 269**				**Pn**	**01 00 08.0**	**-0.3**	
USA0B					IAmb	IAmb	01 00 11.8		
	comp=Z,48nm,1.1s								
USRK	**Ussuriysk Ar.**	**15.24 269**		Pn		**Pn**	**01 00 07.4**	**-0.9**	
	baz=79,slow=12,SNR=25								
USRK				LR		LR	01 05 52.1		
	comp=Z,460nm,19.4s,baz=64,slow=37								
VLA	**Vladivostok**	**15.65 266**		*i*	P	**Pn**	**01 00 12.0**	**-1.5**	
VLA	**Vladivostok**	**15.65 266**		*e*	P	**Pn**	**01 00 12.0**	**-1.5**	
MSHR	**Mys Shultsa**	**16.34 264**		*i*	P	**Pn**	**01 00 20.3**	**-2.0**	
SEY	**Seymchan**	**16.53 358**		*i*	P	**Pn**	**01 00 24.7**	**+0.1**	
SEY	**Seymchan**	**16.53 358**		Pn		**Pn**	**01 00 22.6**	**-2.0**	
	comp=Z,0.3nm,0.3s,baz=149,slow=12,SNR=6.9								
SEY				LR		LR	01 07 26.6		
	comp=Z,670nm,20.3s,baz=210,slow=40								
INU	**Inuyama**	**16.60 234**		P		**Pn**	**01 00 24.4**	**-1.4**	
MDJ	**Mudanjiang**	**16.79 272**		P		**Pn**	**01 00 27.8**	**-0.2**	
MDJ				PP		**PnPn**	**01 00 38.3**	**+0.4**	
MDJ				S		**Sn**	**01 03 29.8**	**-3.6**	
MDJ					pmax	pmax			
	comp=Z,31nm,1.1s								
MDJ					pmax	pmax			
	comp=Z,140nm,4.2s								
MDJ					LR	LR			
	comp=Z,730nm,14.5s								
MDJ					LR	LR			
	comp=Z,720nm,15.3s								
MDJ					LR	LR			
	comp=Z,1μm,17.2s								
MDJ	**Mudanjiang**	**16.79 272**		P		**Pn**	**01 00 27.0**	**-1.0**	
BMKR	**Bomnak**	**17.59 307**		*e*	P	**Pn**	**01 00 37.0**	**-1.0**	
BMKR					AMB	AMB	01 00 44.8		
	comp=Z,20nm,0.8s								
ZEA	**Zeya**	**18.24 303**		*e*	P	**P**	**01 00 45.3**	**-0.3**	
ZEA					pmax	pmax			
	comp=Z,29nm,1.0s								
ZEA					pmax	pmax			
	comp=Z,400nm,6.0s								
ZEA					MLR	MLR			
	comp=Z,1μm,16.0s								
ZEA					MLR	MLR			
	comp=E,800nm,15.0s								
ZEA	**Zeya**	**18.24 303**		*e*	P	**Pn**	**01 00 46.0**	**+0.2**	
ZEA					AMB	AMB	01 00 50.3		
	comp=E,30nm,1.0s								
ZEA					AMB	AMB	01 00 52.0		
	comp=E,400nm,6.0s								
ZEA					AMS	AMS	01 08 15.0		
	comp=E,800nm,16.0s								
ZEA					AMS	AMS	01 08 15.0		
	comp=E,1μm,16.0s								
KROS	**Kirovskiy**	**18.56 305**		*e*	P	**P**	**01 00 49.3**	**+0.1**	
KROS					AMB	AMB	01 00 54.0		
	comp=E,40nm,0.9s								
YAK	**Yakutsk**	**20.69 328**		*e*	P	**P**	**01 01 11.2**	**-1.1**	
YAK				*e*			01 01 30.6		
YAK				eS		**S**	**01 05 00.2**	**-0.6**	
YAK				*e*			01 05 20.7		
YAK				*e*			01 12 33.6		
YAK					pmax	pmax			
	comp=N,9.0nm,1.0s								
YAK					pmax	pmax			
	comp=Z,30nm,0.9s								
YAK					pmax	pmax			
	comp=E,12nm,1.1s								
YAK					pmax	pmax			
	comp=Z,73nm,1.7s								
YAK					pmax	pmax			
	comp=N,47nm,1.7s								
YAK					pmax	pmax			
	comp=E,60nm,1.8s								
YAK					smax	smax			
	comp=E,134nm,3.4s								
YAK					smax	smax			
	comp=N,62nm,2.6s								
YAK					MLR	MLR			
	comp=Z,456nm,19.0s								
YAK					MLR	MLR			
	comp=N,509nm,15.0s								
YAK					MLR	MLR			
	comp=E,199nm,17.0s								
YAK	**Yakutsk**	**20.69 328**		P		**P**	**01 01 11.5**	**-0.7**	
	comp=E,10nm,0.5s,baz=104,slow=2.9,SNR=9.2								
YAK					LR	LR	01 09 24.3		
	comp=E,392nm,18.1s,baz=90,slow=38								
YAK	**Yakutsk**	**20.69 328**		*e*	P	**P**	**01 01 11.2**	**-1.1**	
YAK	**Yakutsk**	**20.69 328**		IAmb		IAmb	01 01 19.5		
	comp=Z,36nm,0.8s								
KSRS	**Korea Array**	**20.92 254**		P		**P**	**01 01 15.6**	**+0.7**	
	comp=Z,26nm,0.9s,baz=57,slow=10,SNR=38								
KSRS					LR	LR	01 08 15.9		
	comp=Z,281nm,20.9s,baz=62,slow=34								
KS19	**Wonju Array Si**	**20.93 254**		P		**P**	**01 01 14.2**	**-0.8**	
KS19				IAmb		IAmb	01 01 19.6		
	comp=Z,54nm,1.1s								
JCJ	**Chichijima**	**21.27 209**		LR		LR	01 10 19.2		
	comp=Z,168nm,19.3s,baz=118,slow=39								
ATKA	**Atka Island**	**21.75 63**		P		**P**	**01 01 23.1**	**-0.7**	
ATKA				IAmb		IAmb	01 01 34.0		
	comp=Z,35nm,0.9s								
JNU	**Nakatsue**	**21.75 240**		P		**P**	**01 01 24.1**	**+0.1**	
	comp=Z,12nm,0.9s,baz=25,slow=19,SNR=3.1								
JNU				LR		LR	01 09 59.4		
	comp=Z,266nm,20.6s,baz=36,slow=37								
JNU	**Nakatsue**	**21.75 240**		P		**P**	**01 01 23.6**	**-0.4**	
JNU				IAmb		IAmb	01 01 35.5		
	comp=Z,41nm,1.1s								
INCN	**Inchon**	**21.76 255**		P		**P**	**01 01 22.5**	**-1.5**	
INCN				pmax		pmax			
	comp=Z,76nm,0.9s								
INCN	**Inchon**	**21.76 255**		P		**P**	**01 01 22.5**	**-1.5**	
SNY	**Shenyang**	**21.84 269**	⇓	P		**P**	**01 01 23.4**	**-1.4**	
SNY					pmax	pmax			
	comp=Z,52nm,0.8s								
TJN	**Taejon**	**21.89 252**		*i*	P	**P**	**01 01 23.8**	**-1.6**	
BILL	**Bilibino**	**22.64 13**		*i*	P	**P**	**01 01 32.4**	**-0.7**	
BILL					pmax	pmax			
	comp=Z,11nm,0.9s								
BILL	**Bilibino**	**22.64 13**		*e*	P	**P**	**01 01 32.4**	**-0.7**	
BILL	**Bilibino**	**22.64 13**		P		**P**	**01 01 33.4**	**+0.3**	
HIA	**Hailar**	**22.67 290**		*i*	P	**P**	**01 01 29.9**	**-3.8**	
HIA					pmax	pmax			
	comp=Z,96nm,1.0s								
HIA	**Hailar**	**22.67 290**		P		**P**	**01 01 30.1**	**-3.5**	
DL2	**Dalian**	**24.44 264**		P		**P**	**01 01 50.8**	**+0.1**	
DL2				eS		**S**	**01 06 09.0**	**+1.3**	
DL2					pmax	pmax			
	comp=Z,52nm,1.0s								
DL2					pmax	pmax			
	comp=Z,340nm,5.0s								
DL2					LR	LR			
	comp=Z,520nm,12.0s								
DL2					LR	LR			
	comp=Z,520nm,12.1s								
DL2					LR	LR			
	comp=Z,460nm,14.4s								
NIKH	**Nikolski High**	**25.02 61**		P		**P**	**01 01 56.8**	**+0.9**	
GAMB	**Gambell**	**25.94 35**		P		**P**	**01 02 04.6**	**+0.6**	
BOD	**Bodaibo**	**26.35 310**		*e*	P	**P**	**01 02 05.4**	**-2.4**	
BOD					pmax	pmax			
	comp=Z,15nm,1.3s								
BOD	**Bodaibo**	**26.35 310**		*e*	P	**P**	**01 02 05.4**	**-2.4**	
UNV	**Unalaska Valle**	**26.43 59**		P		**P**	**01 02 07.3**	**-1.2**	
BJI	**Beijing**	**27.69 270**		*e*	P	**P**	**01 02 22.6**	**+2.5**	
BJI					pmax	pmax			
	comp=Z,14nm,0.9s								
BJI					LR	LR			
	comp=Z,260nm,15.2s								
BJI					LR	LR			
	comp=Z,460nm,16.9s								
BJI					LR	LR			
	comp=Z,500nm,19.6s								
BJT	**Baijiatuau**	**27.71 270**		P		**P**	**01 02 19.6**	**-0.7**	
BJT					pmax	pmax			
	comp=Z,11nm,0.9s								
BJT	**Baijiatuau**	**27.71 270**		P		**P**	**01 02 19.6**	**-0.7**	
BJT					IAmb	IAmb	01 02 24.2		
	comp=Z,11nm,0.9s								
TIXI	**Tiksi**	**27.82 344**		*i*	P	**P**	**01 02 18.5**	**-2.4**	
TIXI					pmax	pmax			
	comp=Z,4.0nm,1.1s								
TIXI	**Tiksi**	**27.82 344**		P		**P**	**01 02 19.0**	**-1.9**	
	comp=Z,3.3nm,0.5s,baz=132,slow=5.6,SNR=5.5								
TIXI					LR	LR	01 14 35.6		
	comp=Z,469nm,18.1s,baz=148,slow=39								
TIXI	**Tiksi**	**27.82 344**		P		**P**	**01 02 19.0**	**-1.9**	
JOW	**Kunigami**	**27.92 234**		P		**P**	**01 02 21.9**	**-0.3**	
JOW					IAmb	IAmb	01 02 38.3		
	comp=Z,16nm,1.0s								
ANM	**Nome**	**28.80 36**		P		**P**	**01 02 30.1**	**+0.4**	
ANM					pmax	pmax			
	comp=Z,12nm,1.2s								
ANM	**Nome**	**28.80 36**	

ULN Ulaanbaatar 31.20 290 P P 01 02 50.7 -0.7
ULN IAmb IAmb 01 02 56.4
comp=Z,16nm,1.0s
SONM Songino Array 31.64 290 P P 01 02 53.6 -1.6
comp=Z,1.9nm,0.8s,baz=59,slow=7.8,SNR=13
SONM PcP PcP **01 05 46.6 +0.3**
comp=Z,1.6nm,0.8s,baz=106,slow=2.1,SNR=4.9
SONM LR LR 01 16 49.8
comp=Z,760nm,18.0s,baz=86,slow=39
TLY Talaya 32.51 298 *e*P **P 01 03 01.2 -1.4**
TLY pmax pmax
comp=Z,40nm,1.3s
TLY MLR MLR
comp=Z,2µm,15.0s
TLY Talaya 32.51 298 P P 01 03 00.2 -2.4
comp=Z,6.4nm,0.9s,baz=25,slow=4.6,SNR=4.4
TLY Talaya 32.51 298 *e*P **P 01 03 01.2 -1.4**
TLY Talaya 32.51 298 P P **01 03 01.6 -1.1**
TLY IAmb IAmb 01 03 01.8
comp=Z,5.9nm,0.8s
ZAK Zakamensk 33.00 296 *e*P **P 01 03 05.6 -1.4**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
ZAK Zakamensk 33.00 296 *e*P **P 01 03 05.6 -1.4**
NACB Ninganchiao 33.83 240 P P **01 03 13.5 -0.8**
NACB IAmb IAmb 01 03 27.0
comp=Z,15nm,0.9s
RSO Redoubt South 33.92 46 P P **01 03 15.7 +0.7**
WHN Wuhan 34.07 256 ⇑P P **01 03 16.9 +0.6**
WHN pmax pmax
comp=Z,38nm,0.6s
PPLA Purkeypile 34.24 41 P P **01 03 17.2 -0.6**
PPLA IAmb IAmb 01 03 33.1
comp=Z,22nm,1.2s
SUA Susitna One 34.90 44 P P **01 03 24.4 +1.0**
SUA IAmb IAmb 01 03 29.4
comp=Z,7.3nm,1.0s
MLY Manley 35.02 38 P P **01 03 24.8 +0.5**
TRF Thorofare Moun 35.13 41 P P **01 03 25.9 +0.5**
TRF IAmb IAmb 01 03 36.0
comp=Z,8.7nm,1.2s
COLD Coldfoot 35.46 34 P P **01 03 28.6 +0.6**
BWN Browne 35.52 39 P P **01 03 27.8 -0.7**
KNMB Chin-men Tao 35.57 244 P P **01 03 28.4 -0.9**
SEW Seward 35.58 46 P P **01 03 30.5 +1.5**
XAN Xi'an 35.71 266 P P **01 03 30.9 +0.4**
XAN pP pP 01 03 37.0 -4.2
XAN pmax pmax
comp=Z,11nm,1.3s
XAN pmax pmax
comp=Z,100nm,3.9s
XAN LR LR
comp=Z,240nm,14.5s
XAN LR LR
comp=Z,340nm,14.7s
XAN LR LR
comp=Z,310nm,17.3s
XAN Xi'an 35.71 266 P P **01 03 31.4 +0.9**
XAN pmax pmax
comp=Z,12nm,0.9s
XAN Xi'an 35.71 266 P P **01 03 31.4 +0.9**
XAN IAmb IAmb 01 03 37.9
comp=Z,12nm,0.9s
MCK McKinley 35.74 40 P P **01 03 32.0 +1.5**
MCK pmax pmax
comp=Z,7.0nm,1.0s
MCK McKinley 35.74 40 P P **01 03 32.0 +1.5**
MCK IAmb IAmb 01 03 48.3
comp=Z,7.5nm,1.0s
GHO Glory Hole Cre 35.76 43 P P **01 03 31.8 +1.1**
GHO IAmb IAmb 01 03 47.2
comp=Z,17nm,1.1s
KNK Knik Glacier 36.00 44 P P **01 03 32.8 +0.2**
KNK IAmb IAmb 01 03 32.9
comp=Z,21nm,1.1s
SML Sawmill 36.04 43 P P **01 03 33.1 +0.1**
WRH Wood River Hil 36.13 39 P P **01 03 33.9 +0.2**
WRH IAmb IAmb 01 03 44.2
comp=Z,9.9nm,1.1s
COLA College 36.24 38 *i*P P **01 03 31.4 -3.2**
COLA pmax pmax
comp=Z,7.0nm,0.9s
CCB Clear Creek Bu 36.25 39 P P **01 03 36.5 +1.7**
SCM Sheep Creek Mo 36.52 43 P P **01 03 37.0 -0.1**
SCM pmax pmax
comp=Z,24nm,1.2s
SCM Sheep Creek Mo 36.52 43 P P **01 03 37.0 -0.1**
SCM IAmb IAmb 01 03 37.3
comp=Z,24nm,1.2s
IL31 36.65 38 P P **01 03 38.4 +0.2**
ILAR Eielson Array 36.65 38 P P **01 03 36.6 -1.5**
comp=Z,4.2nm,1.2s,baz=248,slow=4.9,SNR=13
FYU Fort Yukon 37.37 35 P P **01 03 45.6 +1.5**
FYU IAmb IAmb 01 03 57.1
comp=Z,30nm,1.2s
RIDG Independent Ri 37.56 40 P P **01 03 46.2 +0.3**
RIDG IAmb IAmb 01 04 04.2
comp=Z,14nm,1.2s
DOT Dot Lake 37.91 40 P P **01 03 48.2 -0.7**
DOT IAmb IAmb 01 03 52.8
comp=Z,10nm,1.2s
SCRK Sand Creek 37.93 40 P P **01 03 49.3 +0.2**
LZH Lanzhou 38.12 272 ⇑P P **01 03 52.4 +1.3**
LZH pP pP 01 04 02.1 +0.2
LZH sP pwP 01 04 06.1 -0.1
LZH PP **PnPn** **01 05 25.0 +4.6**
LZH pmax pmax
comp=Z,29nm,1.0s
LZH pmax pmax
comp=Z,120nm,6.0s
LZH LR LR
comp=Z,330nm,13.6s
LZH LR LR
comp=Z,380nm,16.8s
LZH LR LR
comp=Z,420nm,14.1s
GLB Gilahina Butte 38.22 44 P P **01 03 53.0 +1.4**
VRDI Verde Repeater 38.42 44 P P **01 03 53.7 +0.3**
VRDI IAmb IAmb 01 03 59.5
comp=Z,10nm,1.0s
MCARA McCarthy VSAT 38.60 44 P P **01 03 56.6 +1.9**
MCARA IAmb IAmb 01 04 06.7
comp=Z,11nm,1.0s
CRQM Cirque 38.63 45 P P **01 03 55.8 +0.6**
TGL Tana Glacier 38.78 45 P P **01 03 55.7 -0.6**
TGL IAmb IAmb 01 03 57.4
comp=Z,14nm,1.0s
BALM Baldy 38.98 44 P P **01 03 58.5 +0.5**
GTA Gaotai 39.23 280 ⇑P P **01 04 01.0 +0.6**
GTA pP pP 01 04 11.8 +0.6
GTA sP pwP 01 04 15.6 0.0
GTA PcP **PcP** **01 06 10.6 +1.9**
GTA PcS **PcS** **01 10 00.8 +2.2**
GTA sS sS 01 10 15.4 +0.3
GTA pmax pmax
comp=Z,11nm,1.1s
GTA pmax pmax
comp=Z,110nm,7.3s
GTA LR LR
comp=Z,260nm,17.1s
GTA LR LR
comp=Z,290nm,16.2s
GTA LR LR
comp=Z,330nm,15.2s
BARN Barnard Glacie 39.30 44 P P **01 04 01.5 +0.7**
BARN IAmb IAmb 01 04 08.3
comp=Z,15nm,1.0s
CTGM Chitina Glacie 39.47 44 P P **01 04 03.2 +1.0**
CTGM IAmb IAmb 01 04 21.2
comp=Z,17nm,0.9s
DAWY Dawson 39.94 39 P P **01 04 07.1 +1.3**
CD2 Chengdu 41.07 266 ⇑*i*P P **01 04 16.5 +0.9**
CD2 S S **01 10 22.5 -2.8**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,290nm,4.6s
CD2 LR LR
comp=Z,350nm,12.8s
CD2 LR LR
comp=Z,350nm,14.8s
CD2 LR LR
comp=Z,420nm,15.1s
HYT Haines Junctio 41.34 44 P P **01 04 18.5 +0.9**
HYT IAmb IAmb 01 04 37.4
comp=Z,13nm,1.0s
DHAK Deception Hill 41.38 47 P P **01 04 15.9 -1.9**
INK Inuvik 41.79 32 P P **01 04 21.5 +0.6**
INK pmax pmax
comp=Z,5.0nm,0.8s
INK Inuvik 41.79 32 P P **01 04 20.5 -0.4**
comp=Z,2.8nm,0.7s,baz=315,slow=8.2,SNR=12
INK Inuvik 41.79 32 P P **01 04 21.5 +0.6**
WHY Whitehorse 42.63 44 P P **01 04 28.3 +0.2**
ZALV Zelesovo Beam 42.96 306 P P **01 04 28.2 -2.5**
comp=Z,2.5nm,0.6s,baz=54,slow=7.5,SNR=13
ZALV PcP PcP **01 06 20.6 +0.1**
comp=Z,3.5nm,0.9s,baz=77,slow=3.3,SNR=6.5
ZALV LR LR 01 23 38.8
comp=Z,873nm,18.4s,baz=70,slow=38
C36M Paulatuk 44.97 30 P P **01 04 47.3 +0.8**
C36M IAmb IAmb 01 04 51.3
comp=Z,11nm,0.9s
WMQ Urumqi 45.24 292 *e*P **P 01 04 48.3 -0.8**
WMQ sP pP 01 05 01.8 +1.6
WMQ PcP **PcP** **01 06 30.1 +1.6**
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ pmax pmax
comp=Z,100nm,4.7s
WMQ LR LR
comp=Z,360nm,12.1s
WMQ LR LR
comp=Z,400nm,17.1s
WMQ LR LR
comp=Z,1µm,20.9s
WMQ Urumqi 45.24 292 P P **01 04 48.6 -0.6**
WMQ pmax pmax
comp=Z,15nm,1.1s
WMQ Urumqi 45.24 292 P P **01 04 48.6 -0.6**
WMQ IAmb IAmb 01 04 50.1
comp=Z,15nm,1.1s
KMI Kunming 45.40 260 P P **01 04 51.5 +0.7**
KMI pP pP 01 05 01.3 -0.3
KMI sP pwP 01 05 05.8 -0.8
KMI pmax pmax
comp=Z,27nm,1.2s
KMI pmax pmax
comp=Z,120nm,3.5s
KMI LR LR
comp=Z,170nm,21.7s
KMI LR LR
comp=Z,260nm,19.2s
KMI LR LR
comp=Z,210nm,26.4s
KMI Kunming 45.40 260 P P **01 04 51.3 +0.5**
KMI pmax pmax
comp=Z,31nm,1.1s
KMI Kunming 45.40 260 P P **01 04 51.3 +0.5**
MK31 Makanchi Array 47.27 298 *i*P P **01 05 03.7 -1.3**
MK31 Makanchi Array 47.27 298 IAmb IAmb 01 05 05.3
comp=Z,18nm,0.9s
MKAR Makanchi Array 47.27 298 *i*P P **01 05 04.1 -0.9**
MKAR pmax pmax
comp=Z,15nm,0.8s
MKAR Makanchi Array 47.27 298 P P **01 05 03.9 -1.2**
comp=Z,15nm,0.8s,baz=65,slow=7.8,SNR=130
MKAR LR LR 01 26 05.0
comp=Z,862nm,18.3s,baz=69,slow=38
MKAR Makanchi Array 47.27 298 *e*P **P 01 05 04.1 -0.9**
MAKZ Makanchi 47.46 298 P P **01 05 05.3 -1.2**
MAKZ pmax pmax
comp=Z,17nm,1.0s
MAKZ Makanchi 47.46 298 P P **01 05 05.3 -1.2**
MAKZ IAmb IAmb 01 05 06.9
comp=Z,17nm,1.0s
KURK Kurchatov 47.71 304 P P **01 05 05.9 -2.4**
KURK Kurchatov 47.71 304 *e*P **P 01 05 05.9 -2.4**
KURK Kurchatov 47.71 304 P P **01 05 06.3 -2.0**
KURBB Kurchatov Arra 47.80 304 P P **01 05 07.5 -1.6**
comp=Z,15nm,0.8s,baz=67,slow=8.2,SNR=38
KURBB PcP **PcP** **01 06 37.2 -0.1**
comp=Z,0.7nm,0.2s,baz=72,slow=2.9,SNR=3.7
HLK Haleakala 48.11 105 P P **01 05 10.9 -1.2**
JAY Jayapura 50.03 197 P P **01 05 26.6 +0.1**
comp=Z,13nm,0.8s,baz=9.5,slow=12,SNR=10.0
SRPI Serui, Papua 50.45 203 P P **01 05 31.7 +2.1**
comp=Z,16µmcomp=Z,633nm,0.4s
LSA Lhasa 50.51 274 P P **01 05 32.3 +1.7**
PDGK Podgornoye 50.69 295 P P **01 05 30.5 -0.8**
TNTI Ternate 50.90 214 P P **01 05 35.6 +2.6**
comp=Z,86nm,1.3s
SWI Sorong 50.99 209 P P **01 05 37.0 +3.3**
YKA Yellowknife Ar 51.04 37 P P **01 05 33.5 0.0**
comp=Z,6.7nm,0.8s,baz=296,slow=7.2,SNR=54
RES Resolute Bay 51.05 19 P P **01 05 33.0 -0.4**
comp=Z,5.5nm,0.8s,baz=315,slow=7.8,SNR=25
RES Resolute Bay 51.05 19 IAmb IAmb 01 05 34.9
comp=Z,7.4nm,0.9s
BRVK Borovoye 51.26 310 P P **01 05 34.1 -1.2**
BRVK pmax pmax
comp=Z,16nm,0.9s
BRVK Borovoye 51.26 310 *e*P **P 01 05 34.1 -1.2**
BRVK Borovoye 51.26 310 P P **01 05 34.1 -1.2**
BRVK IAmb IAmb 01 05 35.0
comp=Z,16nm,0.9s
CHTO Chiang Mai 52.26 257 P P **01 05 44.9 +1.7**
CHTO pmax pmax
comp=Z,39nm,0.9s
CHTO Chiang Mai 52.26 257 P P **01 05 44.9 +1.7**
PBKT Sadao Pong 52.50 253 P P **01 05 46.6 +1.7**
PBKT IAmb IAmb 01 05 47.1
comp=Z,12nm,0.8s
CMAR Chiang Mai Arr 52.51 257 P P **01 05 46.5 +1.5**
comp=Z,13nm,0.7s,baz=36,slow=7.4,SNR=64
CMAR LR LR 01 28 53.5
comp=Z,65nm,19.3s,baz=40,slow=37
KBS Kingsbay 52.83 351 P P **01 05 45.4 -1.2**
KBS pmax pmax
comp=Z,19nm,1.1s
KBS Kingsbay 52.83 351 P P **01 05 45.4 -1.2**
KBS IAmb IAmb 01 05 52.8
comp=Z,19nm,1.1s
SPA0 Spitsbergen Ar 52.95 350 P P **01 05 46.5 -1.0**
SPA0 IAmb IAmb 01 05 58.1
comp=Z,22nm,1.2s
ULHL Ulahol 53.29 295 P P **01 05 51.2 +0.4**
SNR=8.9
TKM2 Tokmak 2 53.33 296 P P **01 05 50.5 -0.6**
TKM2 Tokmak 2 53.33 296 P P **01 05 51.2 +0.1**
SNR=14
BOOM Boomskoye usch 53.35 296 IAmb IAmb 01 05 52.3
comp=Z,15nm,0.9s
MRSI Marisa 53.45 221 P P **01 05 53.1 +1.2**
CHMS Chumysh 53.81 297 P P **01 05 54.9 +0.5**
SNR=5.1
USP Ospenovka 53.82 297 P P **01 05 54.5 0.0**
SNR=38
KBK Karagaybulak 53.87 296 P P **01 05 54.6 -0.4**
SNR=17
KZA Kyzart 54.00 296 P P **01 05 57.2 +0.9**
SNR=17
AAK Ala-Archa 54.16 297 *i*P P **01 05 53.7 -3.4**
AAK pmax pmax
comp=Z,17nm,1.0s
AAK Ala-Archa 54.16 297 P P **01 05 57.0 -0.2**
SNR=17
AAK Ala-Archa 54.16 297 *i*P P **01 05 57.0 -0.2**
SNR=30
AAK Ala-Archa 54.16 297 P P **01 05 56.9 -0.2**
AAK IAmb IAmb 01 05 58.3
comp=Z,15nm,0.9s
SVE Sverdlovsk 54.20 317 ⇑*e*P P **01 05 56.1 -0.9**
SVE pmax pmax
comp=Z,12nm,1.0s
SVE Sverdlovsk 54.20 317 *e*P P **01 05 56.1 -0.9**
TAPN Taplejung 54.33 274 *e*P P **01 06 00.0 +1.3**
comp=Z,33nm,0.8s
TULEG Thule 54.38 11 IAmb IAmb 01 06 01.4
comp=Z,8.7nm,1.1s
EKS2 Erkin-Say 54.59 297 P P **01 06 00.2 0.0**
SNR=17
ODAN Odare 54.86 273 *e*P P **01 06 03.6 +1.1**
comp=Z,41nm,1.0s
AML Almayashu 54.94 297 P P **01 06 03.3 +0.2**
SNR=12
KSH Kashi 54.97 293 ⇓*i*P P **01 06 07.1 +4.1**
KSH sP pP 01 06 14.4 +0.2
KSH PP **PP** **01 08 11.6 +5.6**
KSH S S **01 13 44.1 +2.3**
KSH SS SS **01 17 28.4 +3.1**
KSH pmax pmax
comp=Z,25nm,1.0s
KSH pmax pmax
comp=Z,390nm,5.0s
KSH LR LR
comp=Z,240nm,6.7s
KSH LR LR
comp=Z,210nm,5.7s
KSH LR LR
comp=Z,600nm,7.5s
JIRN Jiri 55.19 275 *e*P **P 01 06 06.3 +1.3**
comp=Z,95nm,0.8s
GUN Gumba 55.24 275 *e*P **P 01 06 06.4 +1.0**
comp=Z,65nm,0.9s
RAMN Ramite 55.35 274 *e*P **P 01 06 07.0 +1.0**
comp=Z,80nm,0.8s
ARU Arti 55.38 318 *c i*P **P 01 06 04.0 -1.5**
ARU *PP **sP** **01 06 21.7 +0.7**
ARU 01 08 06.0
ARU S **S** **01 13 44.3 -2.3**
ARU SS **SS** **01 17 34.9 +4.1**
ARU pmax pmax
comp=Z,15nm,0.8s
ARU MLR MLR
comp=Z,300nm,17.0s
ARU Arti 55.38 318 *e*P **P 01 06 03.3 -2.2**
ARU Arti 55.38 318 P P **01 06 04.1 -1.4**
ARU IAmb IAmb 01 06 04.9
comp=Z,13nm,0.8s
KKN Kakani 55.73 276 *e*P **P 01 06 10.0 +1.3**
comp=Z,70nm,0.8s
PKIN Phulchoki 55.79 275 *e*P **P 01 06 10.0 +0.8**
HNR Honiara 55.93 172 LR LR 01 31 10.8
comp=Z,62nm,18.1s,baz=330,slow=37
DMN Daman 55.97 276 *e*P **P 01 06 11.9 +1.4**
comp=Z,80nm,0.8s
GKN Gorkha 56.04 276 *e*P **P 01 06 12.2 +1.3**
KK31 Karatay Array 56.34 299 *i*P **P 01 06 11.9 -0.7**
DANN Dangsing 56.43 277 *e*P **P 01 06 15.3 +1.5**
comp=Z,107nm,0.8s
KOLN Koldanda 56.90 277 *e*P **P 01 06 18.4 +1.4**
comp=Z,151nm,1.2s
DAG Danmarks Havn 56.95 358 *i*P **P 01 06 14.8 -1.6**
DAG pmax pmax
comp=Z,20nm,1.1s
DAG Danmarks Havn 56.95 358 *i*P **P 01 06 14.8 -1.6**
comp=Z,20nm,1.1s
PINE Pine Mountain 57.56 59 P P **01 06 22.7 +1.2**
PINE IAmb IAmb 01 06 36.9
comp=Z,8.5nm,1.1s
KHMM Horse Mountain 57.57 63 P P **01 06 22.6 +1.1**
KHMM IAmb IAmb 01 06 36.6
comp=Z,14nm,1.2s
YBH Yreka Blue Hor 57.70 62 P P **01 06 23.6 +1.3**
YBH Yreka Blue Hor 57.70 62 P P **01 06 23.6 +1.3**
PRGR Permogore 57.74 327 *e*P **P 01 06 20.5 -1.6**
PRGR pmax pmax
comp=Z,27nm,0.9s
KIRV Kirov 58.15 323 LR LR 01 33 46.7
comp=Z,241nm,18.2s,baz=78,slow=38
ARCES ARCESS Array B 58.21 341 P P **01 06 23.7 -1.7**
comp=Z,3.5nm,0.8s,baz=16,slow=6.3,SNR=7.1
ARCES LR LR 01 34 35.4
comp=Z,168nm,20.5s,baz=14,slow=39
ARE0 ARCESS Array S 58.21 341 P P **01 06 25.5 +0.1**
K05A Summer Lake 58.21 60 P P **01 06 27.5 +1.5**
K05A IAmb IAmb 01 06 31.3
comp=Z,4.7nm,0.9s
WALA Waterton Lakes 58.47 50 P P **01 06 29.0 +1.4**
WALA IAmb IAmb 01 06 40.4
comp=Z,8.8nm,1.1s
WDC Whiskeytown Da 58.47 63 P P **01 06 29.0 +1.3**
WDC pmax pmax
comp=Z,4.0nm,1.2s
WDC Whiskeytown Da 58.47 63 P P **01 06 29.0 +1.3**
TMCR Tamitsa 58.70 332 *e*P **P 01 06 27.3 -1.5**
TMCR pmax pmax
comp=Z,10.0nm,0.9s
AB31 Akbulak array 58.79 310 *i*P **P 01 06 28.4 -1.3**
ABKAR Akbulak array 58.79 310 IAmb IAmb 01 06 29.6
comp=Z,12nm,1.0s
GAR Garm 58.84 295 P P **01 06 30.8 +0.4**
MOD Modoc Plateau 59.05 60 P P **01 06 31.6 -0.3**
BMO Blue Mountains 59.06 56 P P **01 06 32.9 +1.1**
BMO pmax pmax
comp=Z,6.0nm,1.0s
BMO Blue Mountains 59.06 56 P P **01 06 32.9 +1.1**
BMO IAmb IAmb 01 06 45.9
comp=Z,6.4nm,0.9s
AKTO Aktyubinsk 59.09 312 P P **01 06 30.6 -1.2**
KTK1 Kautokeino 59.13 341 *e*P **P 01 06 31.8 0.0**
TRO Tromso 59.53 343 *e*P **P 01 06 33.1 -1.4**
ORV Oroville 59.73 63 P P **01 06 37.1 +0.7**
ORV pmax pmax
comp=Z,3.0nm,0.9s
ORV Oroville 59.73 63 P P **01 06 37.1 +0.7**
WVOR Wild Horse Val 59.73 59 P P **01 06 37.3 +0.8**
WVOR pmax pmax
comp=Z,3.0nm,1.0s
WVOR Wild Horse Val 59.73 59 P P **01 06 37.3 +0.8**
CHGR Chuyangaron 59.77 296 P P **01 06 36.5 -0.3**
MSO Missoula 59.77 53 P P **01 06 37.9 +1.2**
NIL Nilore 60.21 289 P P **01 06 40.8 +1.0**
NIL pmax pmax
comp=Z,80nm,0.9s
NIL Nilore 60.21 289 P P **01 06 40.8 +1.0**
BEKR Beckworth 60.24 62 P P **01 06 41.8 +1.7**
AFDM Forest Hills D 60.42 63 P P **01 06 41.6 +0.4**
MFID Camas Ranch 60.78 57 P P **01 06 43.9 +0.3**
MFID IAmb IAmb 01 06 57.6
comp=Z,4.7nm,1.1s
FFC Flin Flon 60.83 40 P P **01 06 44.1 +0.5**
FFC pmax pmax
comp=Z,12nm,1.0s
FFC Flin Flon 60.83 40 P P **01 06 44.1 +0.5**
FFC IAmb IAmb 01 06 45.0
comp=Z,12nm,1.0s
RUBR Rubicon Trail 60.86 63 P P **01 06 45.0 +0.6**
RUBR IAmb IAmb 01 06 48.8
comp=Z,4.3nm,0.9s
PAHR Pah Rah Range 60.93 62 P P **01 06 45.9 +1.1**
SUMG Summit 60.99 4 P P **01 06 45.1 +0.2**
SUMG pmax pmax
comp=Z,38nm,0.9s
SUMG Summit 60.99 4 *i*P P **01 06 44.4 -0.5**
comp=Z,110nm,1.0s
SUMG Summit 60.99 4 P P **01 06 45.1 +0.2**
PNTR Pine Nut 61.18 63 P P **01 06 47.5 +1.0**
PNTR IAmb IAmb 01 06 51.2
comp=Z,6.4nm,0.8s
LRM Limekiln Ridge 61.20 53 P P **01 06 43.4 -3.2**
EGMT Eagleton 61.29 49 P P **01 06 47.1 +0.1**
EGMT IAmb IAmb 01 06 51.6
comp=Z,10nm,1.0s
CMB Columbia Colle 61.34 64 P P **01 06 47.7 +0.2**
CMB pmax pmax
comp=Z,3.0nm,0.9s
CMB Columbia Colle 61.34 64 P P **01 06 47.7 +0.2**
FCC Fort Churchill 61.40 33 P P **01 06 47.5 +0.1**
FCC pmax pmax
comp=Z,9.0nm,1.2s
FCC Fort Churchill 61.40 33 P P **01 06 47.5 +0.1**
FCC IAmb IAmb 01 06 48.2
comp=Z,8.7nm,1.1s
DLMT Dillon 61.41 53 P P **01 06 49.6 +1.6**
YERR Yerington 61.46 62 P P **01 06 49.3 +0.9**
YERR IAmb IAmb 01 06 54.7
comp=Z,8.8nm,1.2s
MCMT McKenzie Canyo 61.60 54 P P **01 06 50.0 +0.6**
WAKR Walker 61.64 63 P P **01 06 51.0 +1.4**
WAKR IAmb IAmb 01 07 07.3
comp=Z,4.7nm,1.1s
LOF Lofoten 61.85 344 *e*P **P 01 06 49.0 -1.3**
KVN Kaiserville 62.12 62 IAmb IAmb 01 06 57.9
comp=Z,4.1nm,0.9s
RYN Ryan 62.12 62 P P **01 06 54.3 +1.4**
RYN IAmb IAmb 01 06 57.5
comp=Z,3.9nm,0.9s
KBL Kabul 62.38 292 P P **01 06 54.0 -0.7**
KBL pmax pmax
comp=Z,28nm,1.0s
KBL Kabul 62.38 292 P P **01 06 54.0 -0.7**
NVAR Mina Array Bea 62.38 62 P P **01 06 55.1 +0.5**
comp=Z,2.9nm,0.8s,baz=290,slow=6.6,SNR=20
QLMT Earthquake Lak 62.39 53 P P **01 06 55.3 +0.7**

MDPB Devils Postpil 62.40 64 P **P** **01 06 56.2 +1.4**
MDPB IAmb IAmb 01 07 00.3
comp=Z,5,6nm,1.0s
OMMB Old Mammoth Mi 62.46 63 P **P** **01 06 56.0 +0.6**
YHB Horse Butte 62.57 53 P **P** **01 06 57.1 +1.3**
YMR Madison River 62.75 53 P **P** **01 06 57.6 +0.6**
ELK Elko 62.77 59 P **P** **01 06 57.9 +0.6**
ELK pmax pmax
comp=Z,3.0nm,1.0s
ELK Elko 62.77 59 P **P** **01 06 57.9 +0.6**
YNM Yellowstone No 62.85 53 P **P** **01 06 56.8 -1.0**
PAGB Antelope Grade 62.86 66 P **P** **01 06 57.0 -0.7**
PAGB IAmb IAmb 01 07 02.7
comp=Z,8.9nm,1.2s
YNR Norris Junctio 62.87 53 P **P** **01 06 58.9 +1.0**
YUF Upper Falls 62.97 53 P **P** **01 06 59.2 +0.7**
YNE Yellowstone No 63.06 52 P **P** **01 06 59.0 -0.1**
YPP Pitchstone Pla 63.09 53 P **P** **01 07 00.1 +0.8**
LKWY Lake 63.12 53 P **P** **01 07 00.4 +0.8**
LKWY pmax pmax
comp=Z,6.0nm,1.2s
LKWY Lake 63.12 53 P **P** **01 07 00.4 +0.8**
LKWY IAmb IAmb 01 07 19.2
comp=Z,6.4nm,1.1s
H17A Grant Village 63.13 53 P **P** **01 07 00.3 +0.7**
H17A IAmb IAmb 01 07 13.8
comp=Z,4.5nm,1.1s
YMP Mirror Lake Pl 63.15 53 P **P** **01 07 00.1 +0.4**
ILULI Ilulissat 63.24 10 P **P** **01 07 00.1 +0.6**
ILULI pmax pmax
comp=Z,19nm,1.1s
ILULI Ilulissat 63.24 10 P **P** **01 07 00.1 +0.6**
FLWY Flagg Ranch 63.27 53 P **P** **01 07 01.5 +1.1**
KONS Konsvik 63.36 343 *eP* **P** **01 06 59.6 -0.8**
MOR8 Moi Rana 63.38 343 *eP* **P** **01 06 58.7 -1.9**
RLMT Red Lodge 63.39 52 IAmb IAmb 01 07 07.9
comp=Z,7.7nm,1.0s
MOOW Moose Ponds 63.45 54 IAmb IAmb 01 07 16.3
comp=Z,5.3nm,1.0s
SNOW Snow King Moun 63.63 54 P **P** **01 07 04.1 +1.2**
SNOW IAmb IAmb 01 07 16.0
comp=Z,6.2nm,1.1s
REDW Red Top Meadow 63.64 54 IAmb IAmb 01 07 18.1
comp=Z,14nm,1.0s
DGMT Dagmar 63.86 46 P **P** **01 07 04.1 +0.1**
DGMT IAmb IAmb 01 07 10.2
comp=Z,8.2nm,0.9s
AHID Auburn Hatcher 63.88 55 P **P** **01 07 05.9 +1.4**
AHID IAmb IAmb 01 07 18.6
comp=Z,6.7nm,1.1s
BGU Big Grassy Mou 63.96 57 P **P** **01 07 06.0 +1.0**
LAO LASA Array 63.99 49 IAmb IAmb 01 07 24.1
comp=Z,6.0nm,0.9s
ISA Isabella, Lake 64.02 65 P **P** **01 07 05.8 +0.4**
ISA pmax pmax
comp=Z,2.0nm,0.9s
ISA Isabella, Lake 64.02 65 P **P** **01 07 05.8 +0.4**
DAC Darwin (Calif) 64.18 64 P **P** **01 07 06.0 -0.5**
DAC pmax pmax
comp=Z,3.0nm,1.0s
DAC Darwin (Calif) 64.18 64 P **P** **01 07 06.0 -0.5**
HWUT Hardware Ranch 64.36 56 P **P** **01 07 08.7 +1.0**
HWUT IAmb IAmb 01 07 14.1
comp=Z,4.9nm,1.1s
FINES FINESS Array B 64.41 335 P **P** **01 07 06.6 -0.7**
comp=Z,16nm,0.8s,baz=35,slow=7.9,SNR=37
FINES LR LR 01 38 07.3
comp=Z,286nm,18.8s,baz=31,slow=39
DUG Dugway, Tooele 64.55 58 P **P** **01 07 10.1 +1.2**
DUG pmax pmax
comp=Z,5.0nm,0.9s
DUG Dugway, Tooele 64.55 58 P **P** **01 07 10.1 +1.2**
DUG IAmb IAmb 01 07 23.7
comp=Z,5.3nm,0.9s
TPNV Topopah Spring 64.58 62 IAmb IAmb 01 07 22.2
comp=Z,8.2nm,1.1s
PDAR Pinedale Array 64.75 54 P **P** **01 07 10.4 +0.2**
comp=Z,2.9nm,0.8s,baz=265,slow=1.7,SNR=18
PDAR LR LR 01 32 58.9
comp=Z,45nm,20.9s,baz=360,slow=34
TCUT Toone Canyon 64.77 56 P **P** **01 07 12.3 +1.9**
CTU Camp Tracy 64.85 57 P **P** **01 07 11.6 +0.7**
JAGI Jajag, Banyuwa 64.93 224 P **P** **01 07 11.3 0.0**
JLU Jordanelle 65.08 57 P **P** **01 07 12.8 +0.4**
NLU North Lily Min 65.14 58 P **P** **01 07 12.2 -0.6**
MWC Mount Wilson 65.21 66 P **P** **01 07 13.0 -0.3**
MWC pmax pmax
comp=Z,6.0nm,1.1s
MWC Mount Wilson 65.21 66 P **P** **01 07 13.0 -0.3**
MWC IAmb IAmb 01 07 30.9
comp=Z,6.1nm,1.1s
GSC Goldstone, Bar 65.30 64 P **P** **01 07 14.1 +0.4**
GSC pmax pmax
comp=Z,4.0nm,0.9s
GSC Goldstone, Bar 65.30 64 P **P** **01 07 14.1 +0.4**
GSC IAmb IAmb 01 07 18.7
comp=Z,4.2nm,0.9s
SHPR Sheep Range 65.53 62 P **P** **01 07 15.2 -0.1**
OBN Obninsk 65.68 326 *eP* **P** **01 07 13.6 -2.1**
OBN *e* 01 07 30.6
OBN *e**PP **sP** **01 07 34.6 +3.1**
OBN *e* 01 07 47.3
OBN *e* 01 09 37.2
OBN pmax pmax
comp=Z,8.0nm,0.8s
OBN MLR MLR
comp=Z,199nm,17.0s
OBN Obninsk 65.68 326 LR LR 01 38 30.2
comp=Z,48nm,19.4s,baz=359,slow=38
OBN Obninsk 65.68 326 *eP* **P** **01 07 11.9 -3.8**
OBN Obninsk 65.68 326 P **P** **01 07 13.3 -2.4**
OBN IAmb IAmb 01 07 15.2
comp=Z,11nm,0.8s
CCUT Cedar City 65.94 60 P **P** **01 07 19.1 +1.1**
MSU Marysvale 66.02 59 P **P** **01 07 19.6 +1.1**
MSU Marysvale 66.02 59 P **P** **01 07 19.6 +1.1**
TMUT Trail Mountain 66.08 58 P **P** **01 07 19.9 +1.0**
SZCU Shurtz Canyon 66.08 60 P **P** **01 07 20.0 +1.1**
GSI Gunungsitoli 66.15 245 P **P** **01 07 19.9 +0.6**
GSI IAmb IAmb 01 07 34.2
comp=Z,6.8nm,0.8s
RDMU Red Mountain 66.18 56 P **P** **01 07 20.4 +0.9**
P17A Butcher Ranch, 66.23 57 P **P** **01 07 20.9 +1.1**
Q16A Castle Valley 66.34 58 P **P** **01 07 21.2 +0.7**
K22A Casper 66.50 52 P **P** **01 07 22.3 +0.9**
K22A IAmb IAmb 01 07 34.1
comp=Z,11nm,1.1s
MDND Maddock 66.54 45 P **P** **01 07 21.7 +0.2**
MDND IAmb IAmb 01 07 36.6
comp=Z,13nm,0.9s
LPSR Galich'ya Gora 66.57 323 *eP* **P** **01 07 20.5 -1.0**
LPSR pmax pmax
comp=N,3.0nm,0.7s
LPSR pmax pmax
comp=Z,10.0nm,0.7s
LPSR pmax pmax
comp=E,4.0nm,0.8s
VSU Vasula 66.58 333 *i* P **P** **01 07 18.0 -3.4**
VSU pmax pmax
comp=Z,50nm,0.9s
ULM Lac du Bonnet 66.61 41 P **P** **01 07 21.2 -0.6**
comp=Z,3.1nm,0.8s,baz=304,slow=6.2,SNR=7.2
ULM Lac du Bonnet 66.61 41 IAmb IAmb 01 07 34.2
comp=Z,4.5nm,0.8s
PFO Pinyon Flats O 66.61 65 P **P** **01 07 24.0 +1.8**
PFO pmax pmax
comp=Z,1.0nm,0.8s
PFO Pinyon Flats O 66.61 65 P **P** **01 07 24.0 +1.8**
KNB Kanab 66.62 60 P **P** **01 07 24.0 +1.7**
KNB pmax pmax
comp=Z,9.0nm,1.2s
KNB Kanab 66.62 60 P **P** **01 07 24.0 +1.7**
XPFO Pion Flat 66.62 65 P **P** **01 07 23.8 +1.5**
RSSD Black Hills 66.85 50 P **P** **01 07 24.0 +0.3**
RSSD pmax pmax
comp=Z,12nm,1.1s
RSSD Black Hills 66.85 50 P **P** **01 07 24.0 +0.3**
RSSD IAmb IAmb 01 07 37.5
comp=Z,12nm,1.1s
GEYT Alibeck 66.95 301 P **P** **01 07 24.5 +0.3**
comp=Z,7.1nm,0.7s,baz=24,slow=4.0,SNR=29
GEYT LR LR 01 38 44.2
comp=Z,301nm,19.1s,baz=20,slow=38
GYA0B ALIBECK ARRAY 66.95 301 IAmb IAmb 01 07 26.1
comp=Z,8.8nm,0.9s
BAR Barrett 67.09 66 P **P** **01 07 26.4 +1.2**
HYB Hyderabad 67.22 272 *i* P **P** **01 07 26.0 -0.2**
O20A White River Ci 67.23 55 P **P** **01 07 27.1 +1.0**
U15A North Rim 67.33 61 P **P** **01 07 27.9 +1.0**
VSR Storozhevoye 67.48 322 *eP* **P** **01 07 26.2 -1.1**
VSR pmax pmax
comp=Z,6.0nm,0.6s
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.6s
AGMN Agassiz Nation 68.01 42 P **P** **01 07 30.6 0.0**
AGMN **P** **01 07 30.9 +0.2**
AGMN IAmb IAmb 01 07 42.8
comp=Z,7.5nm,0.9s
GLA Glamis 68.01 65 P **P** **01 07 31.6 +0.6**
GLA pmax pmax
comp=Z,5.0nm,0.8s
GLA Glamis 68.01 65 P **P** **01 07 31.6 +0.6**
GLA IAmb IAmb 01 07 36.8
comp=Z,4.7nm,0.8s
N23A Red Feather La 68.01 53 P **P** **01 07 31.6 +0.4**
N23A IAmb IAmb 01 07 48.6
comp=Z,4.4nm,0.8s
DOMB Dombas 68.14 343 *eP* **P** **01 07 31.1 -0.2**
WR0 Warramunga Arr 68.27 199 P **P** **01 07 32.6 +0.1**
WR0 IAmb IAmb 01 07 46.6
comp=Z,6.8nm,0.9s
WRAB Tennant Creek 68.29 199 *i* P **P** **01 07 30.0 -2.6**
WRAB pmax pmax
comp=Z,10.0nm,1.0s
WRA Warramunga Arr 68.30 199 P **P** **01 07 32.8 +0.1**
comp=Z,7.5nm,1.0s,baz=17,slow=6.7,SNR=18
NC303 NORSAR Array S 68.38 341 P **P** **01 07 32.8 0.0**
NC405 NORSAR Array S 68.41 341 P **P** **01 07 32.9 0.0**
AKN Aaknes 68.43 344 *eP* **P** **01 07 34.1 +1.0**
NB2 NORSAR Subarra 68.58 341 P **P** **01 07 33.6 -0.5**
comp=Z,5.3nm,0.6s,baz=28,slow=6.5
NB2 NORSAR Subarra 68.58 341 P **P** **01 07 33.6 -0.5**
baz=28,slow=6.5
NOA NORSAR Array B 68.58 341 P **P** **01 07 33.2 -0.9**
comp=Z,8.1nm,0.7s,baz=28,slow=6.4,SNR=30
NOA LR LR 01 42 01.4
comp=Z,177nm,18.1s,baz=35,slow=40
SMCO Snowmass 68.60 55 IAmb IAmb 01 07 40.2
comp=Z,4.0nm,0.8s
NBO00 NORSAR Array S 68.69 342 *eP* **P** **01 07 34.9 +0.2**
NBO00 NORSAR Array S 68.69 342 P **P** **01 07 34.4 -0.3**
NC602 NORSAR Array S 68.78 341 P **P** **01 07 33.4 -1.9**
HFS Hagfors 68.82 340 LR LR 01 42 56.7
comp=Z,147nm,18.8s,baz=10.0,slow=41
NAO01 NORSAR Array S 68.83 341 P **P** **01 07 35.1 -0.5**
ISCO Idaho Springs 68.94 54 P **P** **01 07 39.8 +2.8**
ISCO pmax pmax
comp=Z,3.0nm,0.9s
ISCO Idaho Springs 68.94 54 P **P** **01 07 39.8 +2.8**
FITZ Fitzroy Crossi 68.98 208 P **P** **01 07 37.5 +0.5**
comp=Z,9.5nm,0.9s,baz=356,slow=6.6,SNR=4.7
FITZ Fitzroy Crossi 68.98 208 IAmb IAmb 01 07 42.0
comp=Z,13nm,1.1s
MVCO Mesa Verde 69.05 58 P **P** **01 07 39.1 +1.4**
MVCO IAmb IAmb 01 07 42.1
comp=Z,5.5nm,0.8s
DZM Mont Dzumac 69.21 167 *e*LR LR 01 28 57.3
comp=Z,121nm,22.2s
DZM Mont Dzumac 69.21 167 LR LR 01 33 27.9
comp=Z,85nm,20.4s,baz=26,slow=32
DZM Mont Dzumac 69.21 167 P **P** **01 07 40.2 +1.8**
DZM IAmb IAmb 01 07 40.8
comp=Z,9.0nm,1.1s
S22A 4UR Ranch, Cre 69.66 56 IAmb IAmb 01 07 58.8
comp=Z,5.5nm,1.1s
OSL Oslo 69.68 341 *eP* **P** **01 07 41.7 +0.9**
POO Poona 69.70 276 *eP* **P** **01 07 40.8 -0.9**
W18A Petrified Fore 69.74 60 P **P** **01 07 42.3 +0.4**
214A Organ Pipe Nat 70.00 65 P **P** **01 07 43.8 +0.5**
OGNE Ogallala 70.11 51 P **P** **01 07 44.1 +0.1**
GOF Gofitskoye 70.19 315 ⇑ *eP* **P** **01 07 44.5 +0.3**
GOF pmax pmax
comp=Z,23nm,0.8s
KONO Kongsberg 70.19 341 *eP* **P** **01 07 44.0 +0.1**
ASK Askoy 70.33 344 *eP* **P** **01 07 45.5 +0.7**
SDCO Great Sand Dun 70.42 56 P **P** **01 07 47.0 +0.8**
ODD1 Odda 70.58 343 *eP* **P** **01 07 47.1 +0.7**
ECSD EROS Data Cent 70.94 46 IAmb IAmb 01 08 02.3
comp=Z,11nm,1.1s
TUC Tucson 71.02 63 P **P** **01 07 50.3 +0.7**
TUC pmax pmax
comp=Z,3.0nm,1.1s
TUC Tucson 71.02 63 P **P** **01 07 50.3 +0.7**
KSCO Kaye Shedlock' 71.15 53 P **P** **01 07 50.0 -0.4**
KSCO IAmb IAmb 01 08 08.6
comp=Z,6.8nm,0.9s
KIV Kislovodsk 71.17 314 *eP* **P** **01 07 47.3 -3.0**
KIV pmax pmax
comp=Z,34nm,0.9s
KIV MLR MLR
comp=Z,1µm,17.0s
KIV Kislovodsk 71.17 314 *eP* **P** **01 07 47.3 -3.0**
KIV Kislovodsk 71.17 314 P **P** **01 07 49.9 -0.4**
KIV IAmb IAmb 01 07 53.7
comp=Z,8.5nm,0.7s
KBZ Khabaz 71.23 314 P **P** **01 07 50.6 +0.1**
comp=Z,10nm,0.8s,baz=37,slow=1.9,SNR=24
KBZ LR LR 01 42 43.0
comp=Z,190nm,19.2s,baz=32,slow=39
E38A The Farm, Brul 71.23 41 IAmb IAmb 01 08 02.9
comp=Z,12nm,0.8s
SUW Suwalki 71.36 332 P **P** **01 07 49.7 -1.5**
SUW pmax pmax
comp=Z,40nm,1.0s
SUW Suwalki 71.36 332 P **P** **01 07 49.7 -1.5**
ZEI Tsey 71.41 313 *eP* **P** **01 07 51.9 -0.1**
ZEI pmax pmax
comp=Z,6.0nm,0.9s
NEY Neytrino 71.66 314 *i* P **P** **01 07 49.9 -3.6**
NEY pmax pmax
comp=Z,1.0nm,0.9s
ANMO Albuquerque 71.81 58 *i* P **P** **01 07 51.2 -3.3**
ANMO pmax pmax
comp=Z,3.0nm,0.9s
ANMO Albuquerque 71.81 58 P **P** **01 07 54.7 +0.2**
KLNR Kaliningrad 71.81 333 *i* P **P** **01 07 50.2 -3.7**
KLNR pmax pmax
comp=Z,116nm,1.1s
BGNE Belgrade 71.84 49 P **P** **01 07 54.7 +0.3**
AKASG Malin Array Be 71.92 326 *i* P **P** **01 07 53.7 -0.8**
AKASG pmax pmax
comp=Z,23nm,0.8s
AKASG Malin Array Be 71.92 326 P **P** **01 07 53.8 -0.8**
comp=Z,26nm,0.8s,baz=34,slow=6.4,SNR=65
AKASG LR LR 01 41 56.9
comp=Z,153nm,18.4s,baz=35,slow=38
AS31 Alice Springs 71.99 199 P **P** **01 07 56.5 +1.2**
ASAR Alice Springs 71.99 199 P **P** **01 07 56.2 +1.0**
comp=Z,4.8nm,0.3s,baz=11,slow=5.6,SNR=59
319A Douglas 72.59 63 P **P** **01 07 59.9 +0.8**
319A IAmb IAmb 01 08 04.7
comp=Z,11nm,0.8s
AKH Akhalkalaki 72.62 312 P **P** **01 07 57.7 -1.5**
AKH pmax pmax
comp=Z,11nm,1.0s
AKH Akhalkalaki 72.62 312 ⇓ P **P** **01 08 01.2 +2.0**
AKH Akhalkalaki 72.62 312 P **P** **01 07 57.7 -1.5**
AKH IAmb IAmb 01 08 01.6
comp=Z,11nm,1.0s
121A Cookes Peak, D 72.70 61 P **P** **01 08 01.2 +1.4**
121A IAmb IAmb 01 08 13.3
comp=Z,5.6nm,0.9s
PALK Pallekele 72.87 262 P **P** **01 07 59.9 -0.9**
PALK pmax pmax
comp=Z,23nm,1.1s
PALK Pallekele 72.87 262 P **P** **01 07 59.9 -0.9**
CBKS Cedar Bluff 72.87 51 P **P** **01 08 00.3 -0.3**
CBKS pmax pmax
comp=Z,8.0nm,1.1s
CBKS Cedar Bluff 72.87 51 P **P** **01 08 00.3 -0.3**
CBKS IAmb IAmb 01 08 13.5
comp=Z,8.2nm,1.1s
GNI Garni 72.89 311 *i* P **P** **01 07 57.0 -3.8**
GNI pmax pmax
comp=Z,42nm,1.1s
GNI Garni 72.89 311 LR LR 01 43 25.2
comp=Z,193nm,18.1s,baz=20,slow=39
GNI Garni 72.89 311 *i* P **P** **01 08 02.6 +1.8**
SNR=9.2
GNI Garni 72.89 311 P **P** **01 08 02.5 +1.7**
GNI IAmb IAmb 01 08 15.6
comp=Z,16nm,1.0s
SCHQ Schefferville 73.50 23 P **P** **01 08 03.5 -0.5**
comp=Z,2.7nm,0.9s,baz=270,slow=8.1,SNR=3.3
SCHQ Schefferville 73.50 23 IAmb IAmb 01 08 10.5
comp=Z,6.0nm,1.0s
SIM Simferopol' 74.44 320 *eP* **P** **01 08 10.3 +0.7**
SIM pmax pmax
comp=Z,17nm,0.7s
SIM MLR MLR
comp=Z,110nm,15.6s
LVV L'vov 74.56 329 *eP* **P** **01 08 10.1 -0.1**
MNTX Cornudas Mount 74.73 60 P **P** **01 08 12.5 +1.0**
MILM Milestii Mici 75.12 324 ⇑ P **P** **01 08 13.7 +0.3**
BSEG Bad Segeberg 75.19 338 *e*L L 01 43 02.5
comp=Z,134nm,20.7s
KWP Kalwaria Pacla 75.19 329 *eP* **P** **01 08 14.9 +1.0**
KWP Kalwaria Pacla 75.19 329 *eP* **P** **01 08 14.9 +1.0**
OJC Ojcow 75.69 331 *eP* **P** **01 08 16.7 0.0**
OJC Ojcow 75.69 331 *eP* **P** **01 08 16.7 0.0**
OJC Ojcow 75.69 331 IAmb IAmb 01 08 29.1
comp=Z,9.4nm,0.9s
LEOM Leova 75.71 324 ⇑ P **P** **01 08 17.3 +0.5**
LEOM Leova 75.71 324 ⇑ P **P** **01 08 17.3 +0.5**
KOLS Kolonicke sedl 75.94 329 *eP* **P** **01 08 18.2 +0.1**
KOLS pmax pmax
comp=Z,16nm,1.4s
KOLS Kolonicke sedl 75.94 329 *eP* **P** **01 08 18.2 +0.1**
BUR08 Bucovina Ar. S 75.94 327 IAmb IAmb 01 08 34.8
comp=Z,14nm,0.8s
BURAR Bucovina Array 75.96 327 ⇑ P **P** **01 08 18.6 +0.2**
BURAR Bucovina Array 75.96 327 ⇑ P **P** **01 08 18.6 +0.2**
N41A Harden Midland 76.04 45 P **P** **01 08 17.5 -1.4**
BIR Birlad 76.13 325 ⇑ P **P** **01 08 20.6 +1.3**
BIR Birlad 76.13 325 ⇑ P **P** **01 08 20.6 +1.3**
BIZ Bicaz 76.18 326 ⇑ P **P** **01 08 19.8 +0.3**
UZH Uzhgorod 76.18 329 ⇓ *eP* **P** **01 08 18.0 -1.5**
UZH *i* 01 08 32.3
UZH *i* 01 08 43.8
NIE Niedzica 76.21 331 *eP* **P** **01 08 20.6 +0.9**
NIE Niedzica 76.21 331 *eP* **P** **01 08 20.6 +0.9**
KSP Ksiaz 76.27 334 *eP* **P** **01 08 19.9 -0.1**
KSP Ksiaz 76.27 334 *eP* **P** **01 08 19.9 -0.1**
BANOM Banah 76.30 293 P **P** **01 08 21.5 +0.8**
SHME Shamm 76.31 293 P **P** **01 08 20.3 -0.4**
TESR Tescani 76.32 325 ⇑ P **P** **01 08 20.5 +0.1**
TRPA Tarpa 76.52 329 ⇓ *eP* **P** **01 08 21.8 +0.4**
TRPA Tarpa 76.52 329 ⇑ P **P** **01 08 22.1 +0.7**
TLCR 76.53 323 ⇑ P **P** **01 08 22.2 +0.7**
TLCR 76.53 323 ⇑ P **P** **01 08 22.2 +0.7**
OSTC Ostas 76.54 334 *eP* **P** **01 08 22.2 +0.6**
OKC Ostrava-Krasne 76.56 332 *eP* **P** **01 08 22.0 +0.4**
OKC *e* 01 08 26.5
OKC Ostrava-Krasne 76.56 332 *eP* **P** **01 08 22.0 +0.4**
OKC *ex* x 01 08 26.5
CHVC Chvalec 76.56 334 *eP* **P** **01 08 21.5 -0.2**
OKCFA Oklahoma City 76.60 52 P **P** **01 08 22.5 +0.4**
UPC Upice 76.65 334 *eP* **P** **01 08 22.4 +0.2**
UPC Upice 76.65 334 *eP* **P** **01 08 22.4 +0.2**
DPC Dobruska-Polom 76.69 333 *eP* **P** **01 08 22.7 +0.2**
DPC Dobruska-Polom 76.69 333 *eP* **P** **01 08 22.7 +0.2**
LANS Liptovska Anna 76.72 331 *eP* **P** **01 08 23.9 +1.3**
LANS pmax pmax
comp=Z,11nm,0.9s
LANS Liptovska Anna 76.72 331 *eP* **P** **01 08 23.9 +1.3**
ARCR ARCALIA 76.73 327 ⇑ P **P** **01 08 23.6 +1.0**
PETR Petresti 76.73 324 ⇑ P **P** **01 08 23.6 +0.9**
KRLC Kraliky 76.79 333 *eP* **P** **01 08 23.2 +0.2**
KRLC Kraliky 76.79 333 *eP* **P** **01 08 23.2 +0.2**
MORC Moravsky Berou 76.81 332 ⇑ P **P** **01 08 24.0 +0.9**
MORC Moravsky Berou 76.81 332 ⇑ P **P** **01 08 24.0 +0.9**
MORC Moravsky Berou 76.81 332 *eP* **P** **01 08 23.2 +0.1**
MORC Moravsky Berou 76.81 332 IAmb IAmb 01 08 25.4
comp=Z,16nm,1.0s
CFR Carcaliu 76.81 324 ⇑ P **P** **01 08 23.8 +0.7**
CFR Carcaliu 76.81 324 ⇑ P **P** **01 08 23.8 +0.7**
VRI Vrincioaia 76.82 325 ⇑ P **P** **01 08 24.1 +0.9**
VRI Vrincioaia 76.82 325 ⇑ P **P** **01 08 24.1 +0.9**
BZK Bozkurt 76.83 318 ⇑ P **P** **01 08 24.0 +0.7**
CLL Collm 76.83 336 ⇑ *iP* **P** **01 08 22.8 -0.3**
CLL *i* *PP **pP** **01 08 36.5 +2.0**
CLL pmax pmax
comp=Z,21nm,0.8s
CLL Collm 76.83 336 ⇑ *iP* **P** **01 08 22.8 -0.3**
comp=Z,21nm,0.8s
CLL *i* pP **pP** **01 08 36.5 +2.0**
CLL LmV 01 46 00.0
comp=Z,200nm,18.6s
CLL Collm 76.83 336 *eP* **P** **01 08 22.6 -0.5**
comp=Z,21nm,0.8s,baz=26,slow=5.6
PLOR Plostina 76.86 325 ⇑ P **P** **01 08 24.3 +0.8**
PLOR Plostina 76.86 325 ⇑ P **P** **01 08 24.3 +0.8**
HDIL Hopedale 76.91 44 P **P** **01 08 24.7 +0.9**
KECS Kecovo 76.94 330 *eP* **P** **01 08 23.6 -0.2**
KECS pmax pmax
comp=Z,6.0nm,0.9s
KECS Kecovo 76.94 330 *eP* **P** **01 08 23.6 -0.2**
BRG Berggiesshubel 76.95 335 *eP* **P** **01 08 24.1 +0.3**
comp=Z,6.3nm,1.0s
BRG Berggiesshubel 76.95 335 *eP* **P** **01 08 24.1 +0.3**
BRG pmax pmax
comp=Z,6.0nm,1.0s
TOPG Topolog 76.96 323 ⇑ P **P** **01 08 25.1 +1.2**
OZUR 77.00 326 ⇑ P **P** **01 08 25.8 +1.6**
UOSS Minazif 77.05 292 P **P** **01 08 25.8 +1.0**
PVCC Panska Ves 77.07 334 *eP* **P** **01 08 24.9 +0.4**
PVCC Panska Ves 77.07 334 *eP* **P** **01 08 24.9 +0.4**
CLZ Clausthal 77.07 338 *eP* **P** **01 08 24.9 +0.4**
comp=Z,17nm,0.9s,baz=26,slow=5.6
W35A Tecumseh 77.11 52 P **P** **01 08 24.2 -0.8**
TUL1 Leonard 77.13 51 P **P** **01 08 25.2 0.0**
TUL1 IAmb IAmb 01 08 32.1
comp=Z,9.2nm,1.1s
HATD Hatta, Dubai 77.18 292 P **P** **01 08 27.2 +1.6**
HARR Harsova 77.29 323 ⇑ P **P** **01 08 26.7 +0.9**
HARR Harsova 77.29 323 ⇑ P **P** **01 08 26.7 +0.9**
CJR Cluj-Napoca 77.32 327 ⇑ P **P** **01 08 26.7 +0.6**
CJR Cluj-Napoca 77.32 327 ⇑ P **P** **01 08 26.7 +0.6**
ASHO Ashiyiah 77.33 292 P **P** **01 08 27.8 +1.4**
NAZ Nazwa, Dubai 77.37 293 P **P** **01 08 28.0 +1.4**
LTVH Ltavrtes, Hu 77.38 329 *eP* P 01 08 36.1 +10
MLR Muntele Rosu 77.44 325 ⇑ P **P** **01 08 27.7 +0.9**
MLR Muntele Rosu 77.44 325 ⇑ P **P** **01 08 27.7 +0.9**
MLR Muntele Rosu 77.44 325 P **P** **01 08 27.3 +0.4**
TX31 Lajitas Ar. Si 77.45 61 IAmb IAmb 01 08 31.6
comp=Z,8.4nm,0.8s
TX32 Lajitas Array 77.45 61 IAmb IAmb 01 08 31.6
comp=Z,8.7nm,0.8s
TXAR Lajitas Array 77.45 61 P **P** **01 08 27.6 +0.5**
comp=Z,8.1nm,0.7s,baz=299,slow=4.2,SNR=31
VYHS Vyhne 77.50 331 *eP* **P** **01 08 27.4 +0.4**
VYHS pmax pmax
comp=Z,10.0nm,1.0s
VYHS Vyhne 77.50 331 *eP* **P** **01 08 27.4 +0.4**
VRAC Vranov 77.52 333 ⇑ P **P** **01 08 27.7 +0.6**
VRAC Vranov 77.52 333 P **P** **01 08 27.2 +0.2**
comp=Z,8.8nm,0.8s,baz=28,slow=6.4,SNR=8.5
VRAC Vranov 77.52 333 ⇑ P **P** **01 08 27.7 +0.6**
VRAC Vranov 77.52 333 *eP* **P** **01 08 27.4 +0.3**
PRU Pruhonice 77.55 334 *eP* **P** **01 08 27.6 +0.4**
PRU *e* 01 08 32.3
PRU Pruhonice 77.55 334 *eP* **P** **01 08 27.6 +0.4**
PRU *ex* x 01 08 32.3
JAVC Velka Javorina 77.56 332 *eP* **P** **01 08 28.2 +0.8**
PSZ Piszkesteto 77.63 330 ⇑ P **P** **01 08 28.2 +0.4**
PSZ Piszkesteto 77.63 330 ⇑ P **P** **01 08 28.2 +0.4**
PSZ Piszkesteto 77.63 330 IAmb IAmb 01 08 30.5
comp=Z,9.9nm,0.9s
KRUC Moravsky 77.80 333 *eP* **P** **01 08 28.8 +0.2**
MOX Moxa 77.81 336 *eP* **P** **01 08 28.8 +0.1**
comp=Z,10nm,1.0s,baz=26,slow=5.6
MOX *e*L L 01 45 28.7
comp=Z,122nm,20.4s
ICOR Ion Corvin 77.82 323 ⇑ P **P** **01 08 30.4 +1.6**
VOIR 77.83 326 ⇑ P **P** **01 08 29.7 +0.7**
VOIR 77.83 326 ⇑ P **P** **01 08 29.7 +0.7**
ASUD Al Ashush, Dub 77.84 293 P **P** **01 08 31.3 +2.1**
GUNZ Gunzen 77.86 336 *eP* **P** **01 08 29.2 +0.2**
comp=Z,7.0nm,0.9s,baz=26,slow=5.6

WERN Wernitzgruen 77.92 336 *e*P **P** **01 08 29.5 +0.2**
comp=Z,9.9nm,0.8s,baz=26,slow=5.6
SMOL Smolenice 77.94 332 *e*P **P** **01 08 30.3 +0.9**
SMOL pmax pmax
comp=Z,4.0nm,0.8s
SMOL Smolenice 77.94 332 *e*P **P** **01 08 30.3 +0.9**
NKC Novy Kostel 77.95 336 *e*P **P** **01 08 30.2 +0.7**
NKC Novy Kostel 77.95 336 *e*P **P** **01 08 30.2 +0.7**
PBCC Pribram 77.99 334 *e*P **P** **01 08 29.8 +0.1**
MTUR Matau 78.00 325 ⇑P **P** **01 08 30.3 +0.4**
MTUR Matau 78.00 325 ⇑P **P** **01 08 30.3 +0.4**
ARR Arges 78.05 326 ⇑P **P** **01 08 31.8 +1.7**
MODS Modra-Piesok 78.12 332 *e*P **P** **01 08 30.2 -0.2**
MODS pmax pmax
comp=Z,11nm,0.9s
MODS Modra-Piesok 78.12 332 *e*P **P** **01 08 30.2 -0.2**
SRO Srobarova 78.26 331 *e*P **P** **01 08 32.0 +0.8**
SRO pmax pmax
comp=Z,15nm,0.7s
SRO Srobarova 78.26 331 *e*P **P** **01 08 32.0 +0.8**
MANZ Manzenberg 78.27 336 *e*P **P** **01 08 31.3 +0.1**
comp=Z,5.5nm,0.9s,baz=26,slow=5.6
DEV Deva 78.28 327 ⇑P **P** **01 08 32.0 +0.7**
DEV Deva 78.28 327 ⇑P **P** **01 08 32.0 +0.7**
BUD Budapest 78.31 330 *e*P **P** **01 08 32.3 +0.9**
U40A Yellville 78.35 49 IAmb IAmb 01 08 44.3
comp=Z,11nm,0.8s
ROTZ Rotzenmuhle 78.44 336 *e*P **P** **01 08 32.5 +0.4**
comp=Z,9.9nm,1.1s,baz=26,slow=5.6
KHC Kasperske Hory 78.60 334 *e*P **P** **01 08 33.2 +0.1**
KHC *e* 01 08 37.4
KHC Kasperske Hory 78.60 334 *e*P **P** **01 08 33.2 +0.1**
KHC *ex* x 01 08 37.4
CSKK Cskako 78.67 331 *e*P **P** **01 08 34.9 +1.4**
STKA Stephens Creek 78.69 190 P **P** **01 08 34.1 +0.6**
comp=Z,3.1nm,0.8s,baz=75,slow=10.0,SNR=4.0
STKA LR LR 01 43 05.5
comp=Z,33nm,19.7s,baz=25,slow=36
GZR Gura Zlata 78.74 327 ⇑P **P** **01 08 34.5 +0.5**
GZR Gura Zlata 78.74 327 ⇑P **P** **01 08 34.5 +0.5**
BR131 Keskin Array S 78.76 317 IAmb IAmb 01 08 36.1
comp=Z,12nm,1.1s
BRTR Keskin Array B 78.76 317 P **P** **01 08 34.4 +0.1**
comp=Z,10nm,1.1s,baz=64,slow=3.1,SNR=43
BRTR LR LR 01 48 46.7
comp=Z,69nm,18.2s,baz=18,slow=40
GRF Grafenberg Arr 78.78 336 *e*P **P** **01 08 34.2 +0.1**
comp=Z,28nm,1.1s,baz=26,slow=5.6
GRF *e*L L 01 46 35.8
comp=Z,112nm,18.4s
WET Wettzell 78.80 335 *e*P **P** **01 08 34.6 +0.4**
comp=Z,8.6nm,1.0s,baz=26,slow=5.6
WET *e*L L 01 49 57.2
comp=Z,151nm,18.2s
RAZG Razgrad 78.80 324 ⇑P **P** **01 08 34.1 -0.1**
GEC2 GERESS Array S 78.82 334 *e*P **P** **01 08 34.3 -0.1**
comp=Z,4.3nm,0.8s,baz=26,slow=5.6
GEC2 *e*L L 01 46 49.0
comp=Z,170nm,19.8s
GEC2 GERESS Array S 78.82 334 IAmb IAmb 01 08 35.7
comp=Z,4.2nm,0.7s
GERES GERESS Array B 78.82 334 P **P** **01 08 33.7 -0.7**
comp=Z,4.1nm,0.8s,baz=34,slow=5.3,SNR=30
GERES LR LR 01 47 08.8
comp=Z,206nm,18.4s,baz=28,slow=39
COPA Copaceanca 78.85 325 ⇑P **P** **01 08 34.8 +0.3**
SOP Sopron 78.95 332 *e*P **P** **01 08 36.0 +1.0**
CONA Conrad Observa 78.96 332 *e*P **P** **01 08 35.8 +0.6**
comp=Z,9.1nm,0.8s
BZS Buzias 78.98 328 ⇑P **P** **01 08 35.0 -0.2**
BZS Buzias 78.98 328 ⇑P **P** **01 08 35.0 -0.2**
GAZ Gaziantep 79.01 313 IAmb IAmb 01 08 38.3
comp=Z,16nm,1.2s
TNS Taunus Mts 79.05 338 *e*P **P** **01 08 35.8 +0.2**
comp=Z,12nm,1.0s,baz=26,slow=5.6
TNS *e*L L 01 47 15.1
comp=Z,168nm,18.9s
MPLH Magyarpolny 79.08 331 *e*P **P** **01 08 36.0 +0.3**
MPLH Magyarpolny 79.08 331 *e*P P 01 08 28.4 -7.3
VLAD Vladila 79.29 325 ⇑P **P** **01 08 37.2 +0.3**
MEM Membach 79.31 340 P **P** **01 08 37.0 +0.1**
comp=Z,15nm,1.1s
HERR Herculane 79.31 327 ⇓P **P** **01 08 37.1 +0.1**
BSTI Sart Tilman 79.44 340 P **P** **01 08 38.9 +1.4**
MORH Mrgy, Hungar 79.53 330 *e*P **P** **01 08 38.0 -0.2**
MOA Molln 79.54 333 *e*P **P** **01 08 38.4 +0.1**
comp=Z,5.1nm,0.8s
ELND Elena 79.59 324 ⇑P **P** **01 08 38.4 -0.2**
PUNG Punghina 79.62 326 ⇑P **P** **01 08 38.9 +0.2**
BCLA Clavier 79.65 340 P **P** **01 08 38.3 -0.5**
ARSA Arzberg 79.67 332 *e*P **P** **01 08 39.4 +0.5**
comp=Z,4.0nm,0.8s
PLVB Pleven 79.71 325 ⇑P **P** **01 08 39.2 0.0**
BMRD Maredsous 79.89 340 P **P** **01 08 40.0 -0.1**
comp=Z,11nm,0.9s
FUR Furstenfeldbru 80.15 335 *e*L L 01 49 00.6
comp=Z,103nm,20.2s
FORT Forrest 80.22 202 P **P** **01 08 41.2 -0.7**
SOKA Soboth 80.33 332 *e*P **P** **01 08 42.9 +0.3**
comp=Z,15nm,0.9s
KBA Koelnbreinsper 80.51 334 *e*P **P** **01 08 44.4 +0.7**
comp=Z,18nm,1.0s,SNR=7.4
TAOE Nuku Hiva Isla 80.63 113 *e*LR LR 01 33 46.1
comp=Z,165nm,21.9s
WATA Walderalm 80.81 335 *e*P **P** **01 08 45.8 +0.6**
comp=Z,19nm,1.1s,SNR=7.9
BFO Black Forest 80.81 337 P **P** **01 08 45.2 +0.1**
BFO pmax pmax
comp=Z,14nm,1.0s
BFO Black Forest 80.81 337 *e*P **P** **01 08 45.2 +0.1**
comp=Z,14nm,1.1s,baz=26,slow=5.6
BFO *e*L L 01 50 18.4
comp=Z,96nm,18.8s
BFO Black Forest 80.81 337 P **P** **01 08 45.2 +0.1**
BFO IAmb IAmb 01 08 46.2
comp=Z,14nm,1.0s
WTTA Wattenberg 80.86 335 *e*P **P** **01 08 46.2 +0.7**
comp=Z,24nm,1.2s,SNR=7.9
NATX Nacogdoches 80.87 53 P **P** **01 08 45.7 +0.1**
RETA Reutte 80.91 335 *e*P **P** **01 08 46.1 +0.4**
comp=Z,6.8nm,0.9s
VTS Vitosha 80.91 325 ⇑P **P** **01 08 46.1 +0.2**
VTS Vitosha 80.91 325 ⇑P **P** **01 08 46.1 +0.2**
Q51A Peebles 80.91 41 P **P** **01 08 44.9 -0.9**
Q51A IAmb IAmb 01 08 46.4
comp=Z,12nm,0.9s
MOTA Moosalm 80.94 335 *e*P **P** **01 08 46.3 +0.3**
comp=Z,26nm,1.0s,SNR=5.7
SQTA Sankt Quirin 81.02 335 *e*P **P** **01 08 46.8 +0.4**
comp=Z,11nm,0.9s,SNR=6.0
ABTA Abfaltersbach 81.06 334 *i* P **P** **01 08 46.9 +0.4**
comp=Z,10nm,1.1s
ECH Echery 81.23 338 IAmb IAmb 01 08 48.3
comp=Z,14nm,1.0s
FETA Feichten 81.34 335 *e*P **P** **01 08 48.3 +0.2**
comp=Z,9.5nm,1.0s
DAVA Damuels 81.34 336 *e*P **P** **01 08 47.6 -0.5**
comp=Z,9.0nm,0.9s
ISP Isparta 81.74 318 IAmb IAmb 01 08 52.8
comp=Z,9.7nm,0.8s
DAVOX Davos/Dischmat 81.80 336 P **P** **01 08 50.9 +0.3**
comp=Z,6.4nm,0.9s,baz=329,slow=5.9
PPT Papeete 81.81 126 LR LR 01 39 22.8
comp=Z,122nm,19.1s,baz=360,slow=31
PPT2 Papeete2 81.82 126 *e*LR LR 01 34 29.0
comp=Z,213nm,23.8s
FUORN Ofenpass-Fuorn 81.84 335 IAmb IAmb 01 08 56.3
comp=Z,16nm,1.1s
CLTN Cedars of Leba 81.86 45 P **P** **01 08 50.6 -0.2**
VAY Valandovo 82.27 325 *i* P **P** **01 08 52.8 0.0**
Z50A Ashland 84.32 46 IAmb IAmb 01 09 09.7
comp=Z,8.5nm,0.9s
RAYN Ar Rayn 84.76 299 P **P** **01 09 06.9 +0.9**
RAYN pmax pmax
comp=Z,12nm,1.1s
RAYN Ar Rayn 84.76 299 *i* P **P** **01 09 06.7 +0.7**
SNR=14
RAYN Ar Rayn 84.76 299 P **P** **01 09 06.9 +0.9**
RAYN IAmb IAmb 01 09 09.1
comp=Z,12nm,1.1s
TBI Tubuai 86.54 129 *e*T T 02 44 58.4
comp=Z,3.8nm,0.3s
ESDC Sonseca Array 91.91 343 P **P** **01 09 38.7 -1.2**
comp=Z,1.2nm,0.8s,baz=15,slow=3.9,SNR=6.2
ESDC LR LR 01 57 13.6
comp=Z,79nm,18.1s,baz=130,slow=40

KEST Kesra 92.04 331 P **P** **01 09 41.3 +0.7**
comp=Z,4.9nm,0.8s,baz=22,slow=11,SNR=3.5
KEST LR LR 01 55 39.6
comp=Z,151nm,18.6s,baz=323,slow=39
TORD Torodi Ar. Bea 115.46 329 PKP **PKiKP** **01 15 13.0 -0.6**
comp=Z,1.5nm,1.0s,baz=12,slow=3.1,SNR=5.1
DBIC Dimbokro 123.69 334 PKP **PKPdf** **01 15 28.6 -0.8**
comp=Z,2.8nm,0.8s,baz=333,slow=0.9,SNR=4.3
VNDA Vanda 123.80 178 PKP **PKiKP** **01 15 30.9 +3.0**
comp=Z,1.8nm,0.8s,baz=351,slow=1.4,SNR=3.5
LPAZ La Paz 134.29 63 PKIKP **PKiKP** **01 15 52.0 +0.4**
LPAZ La Paz 134.29 63 PKP **PKiKP** **01 15 52.0 +0.4**
comp=Z,0.8nm,0.7s,baz=349,slow=5.0,SNR=4.3
BDFB Brasilia 144.45 37 PKP **PKPab** **01 16 06.1 -0.3**
comp=Z,2.6nm,0.9s,baz=34,slow=2.1,SNR=2.5
PLCA Paso Flores 147.96 96 PKPbc **PKPbc** **01 16 17.2 +0.8**
comp=Z,3.9nm,0.8s,baz=346,slow=0.9,SNR=8.0
PLCA Paso Flores 147.96 96 **PKiKP** **01 16 17.6 -0.6**
CPUP Villa Florida 148.42 61 PKPbc **PKPbc** **01 16 17.5 -0.4**
comp=Z,3.6nm,0.8s,baz=296,slow=4.0,SNR=8.7
SNAA Sanae 152.32 196 P **PKPbc** **01 16 25.6 -0.4**
SNAA Sanae 152.32 196 PKIKP **PKPbc** **01 16 25.9 -0.1**
SNAA Sanae 152.32 196 **PKPbc** **01 16 25.9 -0.1**
VNA3 Neumayer Olymp 153.84 192 P **PKiKP** **01 16 32.1 +2.8**

*STR **20** 01:11:51.9±1.0,44°N±17°×1°E±2°,2,h23km±27km, mb3.4/1,mB5.0/1,MLv2.7/7,Mw(mB)4.3/1*
*GEN **20** 01:11:53.8,43.99N×10.16E,h5km±4km,Ml2.4*
*ROM **20** 01:11:53.5±0.2,44.020N±0.007×10.172E±0.009, h6km,ML2.5/19,Error ellipse: s-maj=0.9km s-min=0.3km az=39.0*
*LDG **20** 01:11:54.4±0.1,43.97N×10.18E,h5km,Md2.5/2,Ml2.5/22, Error ellipse: s-maj=2.2km s-min=1.5km az=177.0*
*PRU **20** 01:11:57.9±0.0,44.10N×10.44E,h0km*
ISC 20 01:11:52.5±1.1,43.93N±0.02×10.04E±0.02,h1km±10km, n84,σ1°56/134,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
EQUI	**Equi**	**0.25**	**19**	P	**Pg**	**01 11 57.2**	**-0.1**
EQUI				S	**Sg**	**01 11 59.4**	**-1.1**
EQUI				AML	AML		
	comp=N,3170μm,0.2s						
EQUI				AML	AML		
	comp=E,3570μm,0.2s						
EQUI	**Equi**	**0.25**	**19**	P	**Pg**	**01 11 57.2**	**-0.1**
EQUI				S	**Sg**	**01 11 59.4**	**-1.1**
FIVI	**Fivizzano**	**0.31**	**11**	P	**Pg**	**01 11 58.8**	**+0.2**
FIVI				S	**Sg**	**01 12 02.2**	**-0.4**
FIVI				AML	AML		
	comp=E,2765μm,0.4s						
FIVI				AML	AML		
	comp=E,2760μm,0.4s						
FIVI				AML	AML		
	comp=N,3085μm,1.3s						
MAIM	**Mastiano**	**0.33**	**93**	P	**Pg**	**01 11 59.2**	**+0.4**
MAIM				AML	AML		
	comp=E,2680μm,0.2s						
MAIM				AML	AML		
	comp=N,2050μm,0.2s						
MAIM	**Mastiano**	**0.33**	**93**	P	**Pg**	**01 11 59.0**	**+0.3**
MAIM				S	**Sg**	**01 12 02.5**	**-0.5**
CARD	**Cardoso**	**0.33**	**73**	P	**Pg**	**01 11 58.7**	**-0.2**
CARD				S	**Sg**	**01 12 02.0**	**-1.2**
CARD				AML	AML		
	comp=N,9720μm,0.3s						
CARD				AML	AML		
	comp=E,5770μm,0.2s						
CARD	**Cardoso**	**0.33**	**73**	P	**Pg**	**01 11 58.6**	**-0.2**
CARD				S	**Sg**	**01 12 02.0**	**-1.2**
VLC	**Villacollemand**	**0.34**	**48**	P	**Pg**	**01 11 58.6**	**-0.4**
VLC				S	**Sg**	**01 12 01.8**	**-1.6**
VLC				AML	AML		
	comp=N,1725μm,0.7s						
VLC				AML	AML		
	comp=E,1190μm,0.2s						
VLC				AML	AML		
	comp=N,1840μm,0.7s						
VLC				AML	AML		
	comp=N,1720μm,0.7s						
VLC				AML	AML		
	comp=E,1190μm,0.2s						
BDI	**Bagni Di Lucca**	**0.42**	**72**	P	**Pg**	**01 12 00.3**	**-0.3**
BDI				S	**Sg**	**01 12 04.8**	**-1.3**
BDI				AML	AML		
	comp=N,1715μm,0.8s						
BDI				AML	AML		
	comp=N,1655μm,0.8s						
BDI				AML	AML		
	comp=N,1710μm,0.8s						
BDI				AML	AML		
	comp=E,3030μm,0.4s						
BDI				AML	AML		
	comp=E,2930μm,0.4s						
ERBM	**Eremo**	**0.56**	**29**	P	**Pg**	**01 12 03.1**	**0.0**
ERBM				S	**Sg**	**01 12 09.5**	**-0.9**
ERBM				AML	AML		
	comp=N,527μm,0.7s						
ERBM				AML	AML		
	comp=E,771μm,0.2s						
GRAM	**Graiana**	**0.56**	**2**	P	**Pg**	**01 12 03.6**	**+0.4**
GRAM				S	**Sg**	**01 12 10.8**	**+0.3**
GRAM				AML	AML		
	comp=E,1345μm,0.8s						
GRAM				AML	AML		
	comp=N,1765μm,1.1s						
GRAM	**Graiana**	**0.56**	**2**	P	**Pg**	**01 12 03.6**	**+0.4**
GRAM				S	**Sg**	**01 12 10.8**	**+0.3**
MTCR	**Monte La Croce**	**0.70**	**82**	P	**Pg**	**01 12 05.6**	**-0.2**
MTCR				S	**Sg**	**01 12 14.4**	**-0.6**
MTCR				AML	AML		
	comp=E,804μm,0.2s						
MTCR				AML	AML		
	comp=N,1035μm,1.6s						
PTF	**Prato**	**0.74**	**88**	P	**Pg**	**01 12 06.9**	**+0.1**
PTF				S	**Sg**	**01 12 16.2**	**-0.2**
ZCCA	**Zocca**	**0.79**	**58**	AML	AML		
	comp=N,240μm,1.3s						
ZCCA				AML	AML		
	comp=E,232μm,0.4s						
GORR	**Gorreto**	**0.86**	**322**	P	**Pb**	**01 12 10.1**	**-0.2**
GORR				AML	AML		
	comp=N,232μm,0.7s						
GORR				AML	AML		
	comp=E,210μm,0.9s						
GORR				AML	AML		
	comp=N,232μm,0.7s						
GORR	**Gorreto**	**0.86**	**322**	P	**Pb**	**01 12 10.2**	**-0.2**
GORR				S	**Sb**	**01 12 22.7**	**+0.4**
BOB	**Bobbio (Coli)**	**0.94**	**333**	P	**Pg**	**01 12 11.0**	**+0.5**
BOB				S	**Sb**	**01 12 24.3**	**-0.3**
SEI	**Scarperia**	**0.96**	**82**	P	**Pg**	**01 12 10.7**	**-0.2**
SEI				AML	AML		
	comp=E,550μm,0.5s						
SEI				AML	AML		
	comp=N,1375μm,1.5s						
OSSC	**Osservatorio P**	**0.96**	**115**	P	**Pg**	**01 12 11.6**	**+0.7**
OSSC				AML	AML		
	comp=E,188μm,1.2s						
OSSC				AML	AML		
	comp=N,220μm,1.6s						
OSSC				AML	AML		
	comp=E,159μm,1.2s						
OSSC				AML	AML		
	comp=N,192μm,1.0s						
OSSC				AML	AML		
	comp=N,191μm,1.0s						
NOVE	**Novellara**	**0.99**	**29**	P	**Pb**	**01 12 12.8**	**+0.4**
NOVE				AML	AML		
	comp=E,478μm,0.3s						
NOVE				AML	AML		
	comp=E,479μm,0.3s						
NOVE				AML	AML		
	comp=N,460μm,0.3s						
BRIS	**BRISIGHELLA**	**1.08**	**78**	P	**Pn**	**01 12 17.6**	**+2.8**
FROS	**Frosini**	**1.09**	**131**	P	**Pg**	**01 12 13.9**	**+0.6**
CAVE	**Cavezzo**	**1.16**	**36**	AML	AML		
	comp=E,692μm,0.8s						
CAVE				AML	AML		
	comp=E,693μm,0.8s						
CAVE				AML	AML		
	comp=N,1072μm,0.5s						
FINB	**Finale Ligure**	**1.26**	**282**	P	**Pn**	**01 12 17.4**	**+0.1**
FINB				AML	AML		
	comp=E,58μm,1.6s						
FINB				AML	AML		
	comp=N,51μm,1.5s						
ASQU	**Asqua**	**1.27**	**95**	P	**Pg**	**01 12 16.1**	**-0.8**
ASQU				AML	AML		
	comp=E,97μm,0.8s						
ASQU				AML	AML		
	comp=N,78μm,1.6s						
QLNO	**Quiliano**	**1.28**	**288**	P	**Pg**	**01 12 17.7**	**+0.6**
CRE	**Caprese Michel**	**1.42**	**102**	P	**Pn**	**01 12 18.5**	**-1.0**
CRE				AML	AML		
	comp=E,88μm,1.5s						
CRE				AML	AML		
	comp=N,98μm,0.6s						
RORO	**Rocca Rossa**	**1.44**	**278**	AML	AML		
	comp=N,55μm,1.6s						
RORO				AML	AML		
	comp=E,42μm,1.5s						
RORO				AML	AML		
	comp=N,55μm,1.6s						
RORO				AML	AML		
	comp=E,42μm,1.6s						
PGF	**Pioggiola**	**1.58**	**209**	*e*Pn	**Pb**	**01 12 22.5**	**0.0**
PGF	**Pioggiola**	**1.58**	**209**	*e*Pg	**Pg**	**01 12 25.4**	**+2.6**
PGF				*e*Sn	**Sn**	**01 12 42.7**	**-0.1**
	comp=E,12nm,0.3s						
SAOF	**Saorge**	**1.80**	**273**	Pn	**Pb**	**01 12 25.7**	**-0.5**
SAOF				Sn	**Sn**	**01 12 47.8**	**-0.3**
BALD	**Monte Baldo**	**1.84**	**17**	*e*Pg	**Pn**	**01 12 26.2**	**+0.9**
BALD				*e*Sg	**Sb**	**01 12 50.5**	**-0.1**
TEOL	**Teolo**	**1.84**	**39**	*e*Pg	**Pb**	**01 12 26.7**	**-0.3**
TEOL				*e*Sg	**Sn**	**01 12 48.4**	**-0.7**
SBF	**Sospel**	**1.89**	**269**	*e*Pn	**Pn**	**01 12 26.2**	**+0.3**
SBF				*e*Sn	**Sn**	**01 12 50.6**	**+0.3**
	comp=E,14nm,0.3s						
MARN	**Marana (Italy)**	**1.90**	**26**	*e*Pg	**Pb**	**01 12 27.4**	**-0.5**
MARN				*e*Sg	**Sn**	**01 12 50.2**	**-0.4**
TURF	**col de Turini**	**1.91**	**272**	Pn	**Pn**	**01 12 27.0**	**+0.6**
TURF				Sn	**Sn**	**01 12 50.7**	**-0.5**
DOSS	**Dosso del Somm**	**2.11**	**22**	*e*Pn	**Pn**	**01 12 29.6**	**+0.5**
GAGG	**Gaggia**	**2.25**	**17**	*e*Pn	**Pn**	**01 12 31.8**	**+0.8**
GAGG				*e*Sn	**Sn**	**01 12 59.1**	**-0.3**
CALF	**Calern**	**2.26**	**267**	Pn	**Pn**	**01 12 32.0**	**+0.8**
PANI	**Panarotta**	**2.31**	**23**	*e*Pn	**Pn**	**01 12 32.3**	**+0.5**
SURF	**Saint Ours**	**2.38**	**284**	Pn	**Pn**	**01 12 34.0**	**+1.1**
SURF				Sn	**Sn**	**01 13 03.3**	**+0.5**
FDMO	**Fiordimonte**	**2.39**	**111**	AML	AML		
	comp=N,47μm,1.6s						
FDMO				AML	AML		
	comp=E,45μm,1.6s						
MBDF	**Montbardon**	**2.48**	**290**	*e*Pn	**Pn**	**01 12 35.8**	**+1.7**
MBDF				*e*Sn	**Sn**	**01 13 04.7**	**-0.4**
	comp=E,6.9nm,0.5s						
FRF	**La Foret Royal**	**2.49**	**263**	*e*Pn	**Pn**	**01 12 34.9**	**+0.8**
FRF				*e*Sn	**Sn**	**01 13 04.9**	**-0.2**
	comp=E,4.3nm,0.2s						
LMR	**La Mourre**	**2.63**	**258**	*e*Pn	**Pn**	**01 12 36.5**	**+0.4**
LMR				*e*Sn	**Sn**	**01 13 07.3**	**-1.3**
	comp=E,3.2nm,0.2s						
LPG	**La Plagne**	**2.82**	**305**	*e*Pn	**Pn**	**01 12 39.9**	**+1.0**
LPG	**La Plagne**	**2.82**	**305**	*e*Pg	**Pg**	**01 12 48.2**	**+1.7**
LPG				*e*Sn	**Sn**	**01 13 12.6**	**-1.1**
	comp=E,2.4nm,0.4s						
LPL	**La Plagne**	**2.84**	**305**	*e*Pn	**Pn**	**01 12 39.3**	**+0.1**
LPL	**La Plagne**	**2.84**	**305**	*e*Pg	**Pg**	**01 12 48.9**	**+1.9**
LPL				*e*Sn	**Sn**	**01 13 12.7**	**-1.4**
	comp=E,2.3nm,0.4s						
FETA	**Feichten**	**3.13**	**9**	*e*Pn	**Pn**	**01 12 44.5**	**+1.5**
	comp=E,0.7nm,0.3s						
FETA				Sn	**Sn**	**01 13 22.8**	**+1.7**
	comp=E,2.2nm,0.5s						
ORIF	**Oris-en-Rattie**	**3.14**	**290**	*e*P	**Pb**	**01 12 46.7**	**-2.4**
ORIF				*e*Sn	**Sn**	**01 13 20.2**	**-1.1**
	comp=E,4.0nm,0.5s						
SMRF	**Simiane la Rot**	**3.23**	**272**	*e*Pn	**Pn**	**01 12 46.1**	**+1.8**
SMRF				*e*Sn	**Sn**	**01 13 22.8**	**-0.5**
	comp=E,3.9nm,0.5s						
ABTA	**Abfaltersbach**	**3.31**	**31**	*e*Pn	**Pn**	**01 12 47.3**	**+1.8**
	comp=E,0.3nm,0.1s						
ABTA				*e*Sn	**Sn**	**01 13 26.8**	**+1.3**
	comp=E,2.4nm,0.2s						
DAVA	**Damuels**	**3.36**	**358**	*e*Pn	**Pn**	**01 12 48.6**	**+2.4**
	comp=E,1.0nm,0.2s,SNR=5.5						
DAVA				*e*Sn	**Sn**	**01 13 28.9**	**+2.2**
	comp=E,6.3nm,0.3s						
SQTA	**Sankt Quirin**	**3.39**	**14**	*e*Pn	**Pn**	**01 12 48.5**	**+1.9**
	comp=E,2.2nm,0.2s,SNR=7.4						
SQTA				Sn	**Sn**	**01 13 29.5**	**+2.0**
	comp=E,8.4nm,0.3s						
MOTA	**Moosalm**	**3.49**	**12**	*e*Pn	**Pn**	**01 12 50.8**	**+2.8**
	comp=E,1.4nm,0.2s						
MOTA				*e*Sn	**Sn**	**01 13 32.3**	**+2.2**
	comp=E,3.6nm,0.4s						
WTTA	**Wattenberg**	**3.52**	**18**	*e*Pn	**Pn**	**01 12 50.9**	**+2.5**
	comp=E,2.3nm,0.3s,SNR=8.3						
WTTA				*e*Sn	**Sn**	**01 13 32.3**	**+1.6**
	comp=E,4.9nm,0.4s						
WATA	**Walderalm**	**3.57**	**17**	*e*Pn	**Pn**	**01 12 51.8**	**+2.7**
	comp=E,2.1nm,0.2s,SNR=6.6						
WATA				*e*Sn	**Sn**	**01 13 34.3**	**+2.3**
	comp=E,5.8nm,0.4s						
RETA	**Reutte**	**3.59**	**8**	*e*Pn	**Pn**	**01 12 52.2**	**+2.8**
	comp=E,0.6nm,0.2s						
RETA				*e*Sn	**Sn**	**01 13 34.6**	**+2.1**
	comp=E,3.5nm,0.4s						
MYKA	**Terra Mystica**	**3.71**	**42**	Sn	**Sn**	**01 13 34.7**	**-0.5**
	comp=E,4.4nm,0.5s						
CABF	**La Chapelle**	**3.87**	**315**	*e*Pn	**Pn**	**01 12 55.3**	**+2.1**
CABF				*e*Sn	**Sn**	**01 13 37.1**	**-2.2**
	comp=E,3.8nm,0.6s						
KBA	**Koelnbreinsper**	**3.91**	**35**	*e*Pn	**Pn**	**01 12 55.5**	**+1.7**
	comp=E,1.0nm,0.3s						
KBA				*e*Sn	**Sn**	**01 13 39.1**	**-1.3**
	comp=E,2.1nm,0.3s						
VIVF	**Saint-Julien-l**	**3.96**	**285**	*e*Pn	**Pn**	**01 12 55.2**	**+0.9**
CHMF	**Charmoille**	**4.08**	**326**	Pn	**Pn**	**01 12 57.4**	**+1.4**
CHMF				Sn	**Sn**	**01 13 44.4**	**-0.1**
OBKA	**Obir**	**4.10**	**49**	*e*Pn	**Pn**	**01 12 57.0**	**+0.7**
	comp=E,0.4nm,0.2s						
OBKA				Sn	**Sn**	**01 13 43.5**	**-1.4**
	comp=E,2.1nm,0.4s						
KIZ	**Kirchzarten**	**4.29**	**341**	Pn	**Pn**	**01 12 59.7**	**+0.9**
KIZ				Sn	**Sn**	**01 13 48.9**	**-0.6**
LASF	**Ste Croix**	**4.46**	**274**	*e*Pn	**Pn**	**01 13 00.4**	**-0.9**
LASF				*e*Sn	**Sn**	**01 13 52.1**	**-1.8**
	comp=E,2.5nm,0.6s						
HINF	**Hinteralfeld**	**4.48**	**331**	*e*Pn	**Pn**	**01 12 58.9**	**-2.6**
HINF				*e*Sn	**Sn**	**01 13 52.5**	**-1.7**
	comp=E,2.3nm,0.3s						
ECH	**Echery**	**4.73**	**336**	Pn	**Pn**	**01 13 05.7**	**+0.8**
HAU	**Haudompre**	**4.82**	**329**	*e*Pn	**Pn**	**01 13 05.5**	**-0.7**
HAU	**Haudompre**	**4.82**	**329**	*e*P	**Pn**	**01 13 09.5**	**+3.3**
HAU				*e*Sn	**Sn**	**01 14 00.8**	**-1.8**
	comp=E,4.1nm,0.3s						
CDF	**Champ du Feu**	**4.88**	**338**	*e*Pn	**Pn**	**01 13 07.7**	**+0.7**
CDF	**Champ du Feu**	**4.88**	**338**	*e*P	**Pn**	**01 13 09.7**	**+2.7**
CDF				*e*Sn	**Sn**	**01 14 00.3**	**-3.8**
	comp=E,1.2nm,0.2s						
MOA	**Molln**	**4.90**	**35**	*e*Pn	**Pn**	**01 13 08.7**	**+1.4**
	comp=E,0.9nm,0.2s						
MOA				*e*Sn	**Sn**	**01 14 04.7**	**0.0**
	comp=E,2.3nm,0.3s						
SMF	**Signal de Mont**	**5.15**	**304**	*e*Pn	**Pn**	**01 13 11.8**	**+1.1**
SMF				*e*Sn	**Sn**	**01 14 08.0**	**-2.7**
	comp=E,0.6nm,0.2s						
LOR	**Lormes**	**5.47**	**310**	*e*Pn	**Pn**	**01 13 15.3**	**+0.2**
LOR	**Lormes**	**5.47**	**310**	*e*P	**Pn**	**01 13 19.3**	**+4.2**
	baz=127						
LOR				*e*Sn	**Sn**	**01 14 15.3**	**-3.4**
	comp=E,0.7nm,0.2s						
PAGF	**Fort de Pagny**	**5.51**	**329**	*e*P	Pn	01 13 20.6	+5.0
AVF	**Avril sur Loir**	**5.51**	**304**	*e*Pn	**Pn**	**01 13 17.5**	**+1.9**
SSF	**Saint Saulge**	**5.56**	**307**	*e*P	**Pn**	**01 13 20.7**	**+4.4**
SSF				*e*Sn	**Sn**	**01 14 17.2**	**-3.6**
	comp=E,0.3nm,0.2s						
MTLF	**Montolieu**	**5.71**	**267**	*e*Pn	**Pn**	**01 13 19.4**	**+1.0**
MTLF				*e*Sn	**Sn**	**01 14 22.2**	**-2.3**
	comp=E,0.3nm,0.3s						
BGF	**Bois d'Agland**	**5.72**	**300**	*e*Pn	**Pn**	**01 13 18.7**	**+0.2**
BGF				*e*Sn	**Sn**	**01 14 21.8

NEIC ***20*** *01:19:35.3±1.7, 22°.82S±0°.08×174°.3W±0°.1, h10km±2km, mb4.2/4, Error ellipse: s-maj=18.8km s-min=13.4km az=89.0.*
IDC ***20*** *01:19:38.1±1.4, 22°.68S×174°.93W, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.1/24, mbtmp4.0/9, Error ellipse: s-maj=68.5km s-min=24.4km az=153.0*

ISC 20 01:19:41.0±0.7, 22°.9S±0°.1×174°.8W±0°.1, h22km, n22, σ1§34/21, mb4.1/10, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**5.89**	**51**	Pn	Pn	Pn	01 20 58.1	-8.9
NIUE						Sn	01 21 53.6	-20
MSVF	**Nonsavu**	**8.47**	**306**	Pn	Pn	Pn	**01 21 44.8**	**+2.3**
FUNA	**Funafuti**	**15.41**	**337**	Pn	Pn	Pn	**01 23 13.6**	**-3.5**
BKZ	**Black Stump Fm**	**17.86**	**203**			Pn	**01 23 47.3**	**-0.8**
THZ	**Tophouse**	**21.48**	**206**	P	P	P	**01 24 26.4**	**-1.7**
THZ	comp=Z,9.1nm,1.0s			IAmb	IAmb		01 24 26.4	
KHZ	**Kahutara**	**21.79**	**204**	P	P	P	**01 24 32.5**	**+1.2**
KHZ	comp=Z,10nm,1.0s			IAmb	IAmb		01 24 46.1	
ASAR	**Alice Springs**	**46.95**	**258**	P	P	P	**01 28 09.8**	**-0.7**
	comp=Z,1.3nm,0.8s,baz=89,slow=8.4,SNR=12							
WRA	**Warramunga Arr**	**47.29**	**263**	P	P	P	**01 28 11.8**	**-1.4**
WRA	comp=Z,1.5nm,0.8s,baz=98,slow=8.4,SNR=5.8			PcP	PcP	PcP	01 29 45.2	+1.1
	comp=Z,0.6nm,0.8s,baz=106,slow=3.0,SNR=2.8							
PETK	**Petropavlovsk-**	**79.36**	**344**	P	P	P	**01 31 43.7**	**-1.2**
	comp=Z,3.4nm,0.8s,baz=141,slow=12,SNR=3.6							
NVAR	**Mina Array Bea**	**80.74**	**42**	P	P	P	**01 31 53.1**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=207,slow=12,SNR=4.2							
USRK	**Ussuriysk Ar.**	**82.63**	**324**	P	P	P	**01 32 02.4**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=114,slow=3.5,SNR=7.0							
TXAR	**Lajitas Array**	**85.84**	**56**	P	P	P	**01 32 20.3**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=214,slow=6.1,SNR=4.4							
ILAR	**Eielson Array**	**90.00**	**12**	P	P	P	**01 32 38.4**	**+0.2**
	comp=Z,1.1nm,1.0s,baz=229,slow=5.5,SNR=6.6							
CMAR	**Chiang Mai Arr**	**93.73**	**288**	P	P	P	**01 32 58.2**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=129,slow=2.7,SNR=5.8							
YKA	**Yellowknife Ar**	**97.43**	**24**	P	Pdif		01 33 12.1	-0.4
	comp=Z,0.3nm,0.8s,baz=237,slow=4.8,SNR=3.6							
MKAR	**Makanchi Array**	**115.02**	**312**	PKP		PKPdf	**01 38 20.2**	**0.0**
	comp=Z,0.2nm,0.6s,baz=93,slow=2.9,SNR=2.6							
KURBB	**Kurchatov Arra**	**117.83**	**316**	PKP		PKPdf	**01 38 25.2**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=100,slow=2.0,SNR=3.6							
BVAR	**Borovoye Array**	**122.83**	**319**	PKP		PKPdf	**01 38 35.1**	**0.0**
	comp=Z,0.4nm,0.6s,baz=90,slow=2.0,SNR=3.3							
ARCES	**ARCESS Array B**	**131.77**	**351**	PKP		PKiKP	**01 38 52.7**	**+0.1**
	comp=Z,2.9nm,1.1s,baz=49,slow=2.7,SNR=4.3							
AKASG	**Malin Array Be**	**146.53**	**332**	PKPbc		PKPdf	**01 39 19.7**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=40,slow=4.0,SNR=11							
BRTR	**Keskin Array B**	**150.66**	**312**	PKPbc		PKPbc	**01 39 31.9**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=144,slow=3.8,SNR=8.2							
MMAI	**Mount Meron Ar**	**151.59**	**297**	PKPbc		PKPbc	**01 39 33.3**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=71,slow=5.2,SNR=4.9							

NNC ***20*** *01:20:16.9±14.0, 37°.23N×71°.09E, h237km±195km, mb3.1, mpv4.1, Error ellipse: s-maj=153.7km s-min=91.6km az=0.0*

ISC 20 01:20:17.0±3.3, 37°.2N±0°.2×71°.4E±0°.1, h250km, n14, σ2§13/17, 2C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.26**	**19**	P	P	Pn	**01 21 35.1**	**-1.1**
	SNR=50							
UCH	**Uchtor**	**5.59**	**24**	P	P	Pn	**01 21 39.8**	**-0.5**
	SNR=11							
KZA	**Kyzart**	**5.73**	**30**	P	P	Pn	**01 21 41.4**	**-0.6**
	SNR=9.4							
EKS2	**Erkin-Say**	**5.78**	**18**	P	P	Pn	**01 21 42.5**	**+0.1**
	SNR=12							
AAK	**Ala-Archa**	**5.95**	**22**	P	P	Pn	**01 21 44.9**	**+0.3**
	SNR=16							
AAK	**Ala-Archa**	**5.95**	**22**	⇓P	P	Pn	**01 21 44.7**	**+0.2**
	5.6nm,0.4s							
AAK				⇓S	S	S	**01 22 58.7**	**+4.1**
	7.5nm,0.8s							
KK31	**Karatay Array**	**5.97**	**354**	⇓P	P	Pn	**01 21 43.8**	**-0.8**
	13nm,0.3s,baz=178,slow=12,SNR=368							
KK31				S	S	S	**01 22 54.6**	**-0.1**
	5.2nm,0.3s,baz=183,slow=22,SNR=7.3							
KBK	**Karagaybulak**	**6.12**	**25**	P	P	Pn	**01 21 47.0**	**+0.4**
	SNR=5.6							
CHMS	**Chumysh**	**6.36**	**23**	P	P	Pn	**01 21 50.1**	**+0.6**
	SNR=7.6							
USP	**Ospenovka**	**6.53**	**20**	P	P	Pn	**01 21 52.5**	**+0.8**
	SNR=8.4							
TKM2	**Tokmak 2**	**6.58**	**28**	P	P	Pn	**01 21 53.1**	**+0.6**
	SNR=14							
TKM2	**Tokmak 2**	**6.58**	**28**	⇑P	P	Pn	**01 21 52.9**	**+0.5**
	5.1nm,0.5s							
TKM2				⇓S	S	S	**01 23 04.5**	**-4.5**
	0.3nm,0.3s							
AB31	**Akbulak array**	**14.67**	**329**	P	P	P	**01 23 35.5**	**+2.5**
	0.8nm,0.3s,baz=144,slow=12,SNR=70							
AKTO	**Aktyubinsk**	**16.38**	**328**	⇑P	P	P	**01 23 47.7**	**-4.0**
	19nm,0.8s							

IDC 20 02:27:03.0±1.8, 0°.48S×124°.78E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/38, mbtmp3.4/3, Error ellipse: s-maj=213.5km s-min=25.1km az=63.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.49**	**155**	P	P	P	02 31 52.8	-0.7
	0.7nm,0.6s,baz=332,slow=10,SNR=4.8							
ASAR	**Alice Springs**	**24.69**	**160**	P	P	P	02 32 26.5	+0.5
	0.6nm,0.7s,baz=344,slow=10.0,SNR=5.6							
MKAR	**Makanchi Array**	**59.96**	**328**	P	P	P	02 37 11.2	-0.1
	0.5nm,0.5s,baz=124,slow=7.8,SNR=12							

NAO ***20*** *02:30:43.9±4.3, 74°.62N×9°.29E, ML3.7*
IDC ***20*** *02:30:44.7±1.2, 74°.61N×8°.93E, h0km, mb3.6/10, mb1 3.8/13, mb1mx3.6/45, mbtmp3.7/13, ML3.7/3, MS3.1/19, Ms1 3.1/19, ms1mx3.0/49, Error ellipse: s-maj=25.5km s-min=13.0km az=78.0*
BER ***20*** *02:30:45.5±3.8, 74°.71N×9°.03E, h10km, ML2.2, ML3.7(NAO), Confirmed Earthquake*
IEPN ***20*** *02:30:47.0, 74°.78N×9°.73E, h15km*

ISC 20 02:30:44.9±0.7, 74°.72N±0°.04×9°.11E±0°.06, h10km, n61, σ2§81/65, mb3.5/10, MS3.0/13, 4C-1D, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
BJO1	**Bjornoya**	**2.65**	**90**	Pn	Pn	Pn	**02 31 26.7**	**-0.8**
BJO1						Sn	**02 31 55.9**	**-3.7**
BJO1	**Bjornoya**	**2.65**	**90**	*e*P	Pn	Pn	**02 31 26.8**	**-0.6**
BJO1				*e*S	Sn	Sn	**02 31 55.9**	**-3.7**
BJO1	comp=Z,79nm,0.6s			IAML			02 31 60.0	
BJO1	**Bjornoya**	**2.65**	**90**	*e*P	Pn	Pn	**02 31 27.0**	**-0.5**
BJO1				*e*S	Sn	Sn	**02 31 56.3**	**-3.2**
HSPB	**Hornsund (broa**	**2.79**	**31**	Pn	Pn	Pn	**02 31 29.1**	**-0.3**
HSPB				Sn	Sn	Sn	**02 31 58.7**	**-4.3**
HSPB	**Hornsund (broa**	**2.79**	**31**	*e*P	Pn	Pn	**02 31 28.8**	**-0.5**
HSPB				*e*S	Sn	Sn	**02 31 59.2**	**-3.8**
HSPB	comp=Z,12nm,0.5s			IAML			02 32 04.0	
HSPB	**Hornsund (broa**	**2.79**	**31**	⇓*i*P	Pn	Pn	**02 31 28.9**	**-0.5**
HSPB				*e*S	Sn	Sn	**02 32 00.7**	**-2.3**
BRBA	**Barentsburg A**	**3.57**	**17**	Pn	Pn	Pn	**02 31 40.2**	**0.0**
BRBA				Sn	Sn	Sn	**02 32 19.8**	**-2.5**
BRBA	**Barentsburg A**	**3.57**	**17**	Pn	Pn	Pn	**02 31 40.2**	**0.0**
BRBA				Sn	Sn	Sn	**02 32 19.8**	**-2.5**
SPA0	**Spitsbergen Ar**	**3.87**	**23**	Pn	Pn	Pn	**02 31 44.9**	**+0.5**
	baz=191,slow=22							
SPA0				Sn	Sn	Sn	**02 32 28.9**	**-1.0**
SPA0	**Spitsbergen Ar**	**3.87**	**23**	Pn	Pn	Pn	**02 31 44.9**	**+0.5**
	baz=191,slow=22							
SPA0				*e*S	Sn	Sn	**02 32 26.1**	**-3.8**
SPA0				IAML			02 32 33.8	
	comp=Z,18nm,0.7s							
SPA0	**Spitsbergen Ar**	**3.87**	**23**	⇑*i*P	Pn	Pn	**02 31 44.8**	**+0.5**
SPA0				*i* S	Sn	Sn	**02 32 26.6**	**-3.3**
SPITS	**Spitsbergen Ar**	**3.87**	**23**	Pn	Pn	Pn	**02 31 44.9**	**+0.5**
	baz=201,slow=15,SNR=266							
SPITS						Sn	**02 32 26.7**	**-3.1**
	baz=195,slow=28,SNR=2.0							
SPITS						LR	LR	02 33 08.3
	comp=Z,40nm,19.5s,baz=205,slow=36							
KBS	**Kingsbay**	**4.28**	**7**	Pn	Pn	Pn	**02 31 49.3**	**-0.7**
KBS	**Kingsbay**	**4.28**	**7**	*e*P	Pn	Pn	**02 31 49.3**	**-0.7**
KBS				*e*S	Sn	Sn	**02 32 35.4**	**-4.5**
KBS	comp=Z,15nm,0.5s			IAML			02 32 40.5	
KBS	**Kingsbay**	**4.28**	**7**	⇑*i*P	Pn	Pn	**02 31 49.3**	**-0.7**
KBS				*e*S	Sn	Sn	**02 32 35.4**	**-4.5**
HOPEN	**Hopen**	**4.35**	**58**	Pn	Pn	Pn	**02 31 51.0**	**+0.2**
HOPEN				Sn	Sn	Sn	**02 32 37.8**	**-3.6**
HOPEN	**Hopen**	**4.35**	**58**	⇑*i*P	Pn	Pn	**02 31 51.3**	**+0.5**
HOPEN				*e*S	Sn	Sn	**02 32 36.8**	**-4.7**
HOPEN	comp=Z,34nm,0.4s			IAML			02 32 41.5	
HOPEN	**Hopen**	**4.35**	**58**	⇑*i*P	Pn	Pn	**02 31 51.3**	**+0.5**
HOPEN				*e*S	Sn	Sn	**02 32 37.3**	**-4.1**
TRO	**Tromso**	**5.92**	**145**	*e*P	Pn	Pn	**02 32 11.1**	**-1.3**
HAMF	**Hammerfest**	**5.96**	**126**	Pn	Pn	Pn	**02 32 10.4**	**-2.5**
HAMF				Sn	Sn	Sn	**02 32 13.8**	**-7.3**
HAMF	**Hammerfest**	**5.96**	**126**	*e*P	Pn	Pn	**02 32 11.0**	**-2.0**
HAMF				*e*S	Sn	Sn	**02 32 13.3**	**-7.8**
HAMF	comp=Z,6.6nm,0.4s			IAML			02 33 15.4	
JMIC	**Jan Mayen**	**6.39**	**243**	LR	LR	LR	02 33 52.8	
	comp=Z,142nm,18.7s,baz=44,slow=30							
LOF	**Lofoten**	**6.77**	**166**	*e*P	Pn	Pn	**02 32 23.1**	**-0.9**
KIF	**Kilpisjarvi**	**6.79**	**142**	*e*P	Pn	Pn	**02 32 24.6**	**+0.3**
DAG	**Danmarks Havn**	**7.11**	**300**	*i* P	Pn	Pn	02 32 24.0	-4.7
DAG				*i* S	Sn	Sn	02 32 35.7	-14
DAG	**Danmarks Havn**	**7.11**	**300**	*i* P	Pn	Pn	02 32 24.0	-4.7
DAG				*i* S	Sn	Sn	02 32 35.7	-14
DAG	comp=Z,3.7nm,0.4s			IAML			02 33 37.9	
KTK1	**Kautokeino**	**7.21**	**135**	*e*P	Pn	Pn	**02 32 29.2**	**-0.8**
KTK1				*e*S	Sn	Sn	02 33 43.6	-8.2
KTK1	comp=Z,2.7nm,0.3s			IAML			02 33 51.2	
ARA0	**ARCESS Array S**	**7.22**	**128**	Pn	Pn	Pn	**02 32 28.5**	**-1.7**
	baz=326,slow=11							
ARA0				Sn	Sn	Sn	02 33 43.6	-8.5
	baz=337,slow=22							
ARA0	**ARCESS Array S**	**7.22**	**128**	Pn	Pn	Pn	**02 32 28.5**	**-1.7**
	baz=326,slow=11							
ARA0				Sn	Sn	Sn	02 33 43.6	-8.5
	baz=337,slow=22							
ARCES	**ARCESS Array B**	**7.22**	**128**	Pn	Pn	Pn	**02 32 29.1**	**-1.2**
	comp=Z,3.8nm,0.3s,baz=325,slow=11,SNR=57							
ARCES				Sn	Sn	Sn	02 33 43.0	-9.2
	comp=Z,1.5nm,0.3s,baz=314,slow=20,SNR=6.7							
ARCES				LR	LR	LR	02 35 33.1	
	comp=Z,130nm,20.3s,baz=340,slow=40							
ARE0	**ARCESS Array S**	**7.22**	**128**	*e*P	Pn	Pn	**02 32 29.4**	**-0.8**
ARE0				IAML			02 33 55.3	
	comp=Z,0.2nm,0.8s							
HEF	**Hetta**	**7.81**	**137**	*e*P	Pn	Pn	**02 32 36.3**	**-2.1**
DBG	**Daneborg**	**7.81**	**281**	*i* P	Pn	Pn	02 32 32.1	-6.2
DBG				*e*S	Sn	Sn	02 33 48.9	-18
DBG				IAML			02 33 57.0	
	comp=Z,2.6nm,0.4s							
ZFI2	**Zemlya Franca-**	**9.94**	**35**	*e*P	Pn	Pn	**02 33 07.3**	**-0.1**
ZFI2				*e*S	Sn	Sn	**02 34 51.2**	**-7.6**
	comp=Z,3.3nm,0.8s							
SCO	**Scoresbysund**	**10.11**	**261**	*i* P	Pn	Pn	**02 33 06.2**	**-3.6**
SCO	**Scoresbysund**	**10.11**	**261**	*i* P	Pn	Pn	**02 33 06.2**	**-3.6**
SCO				IAML			02 34 55.2	
	comp=Z,0.6nm,0.5s							
NOA	**NORSAR Array B**	**13.76**	**176**	LR	LR	LR	02 38 38.1	
	comp=Z,45nm,22.0s,baz=340,slow=35							
BORG	**Borgarnes**	**14.29**	**242**	LR	LR	LR	02 37 57.7	
	comp=Z,88nm,18.9s,baz=10,slow=30							
FIA0	**FINESS Array S**	**14.65**	**146**	P	Pn	Pn	**02 34 10.7**	**-1.1**
	baz=343,slow=16							
FIA0	**FINESS Array S**	**14.65**	**146**	P	Pn	Pn	**02 34 10.7**	**-1.1**
	baz=343,slow=16							
FINES	**FINESS Array B**	**14.65**	**146**	Pn	Pn	Pn	**02 34 09.9**	**-1.9**
	comp=Z,0.2nm,0.3s,baz=351,slow=13,SNR=9.0							
HFS	**Hagfors**	**14.75**	**171**	LR	LR	LR	02 38 42.7	
	comp=Z,79nm,19.3s,baz=330,slow=33							
SFJD	**Kangerlussuaq**	**20.09**	**279**	LR	LR	LR	02 41 39.9	
	comp=Z,68nm,21.4s,baz=58,slow=33							
KIRV	**Kirov**	**21.98**	**115**	LR	LR	LR	02 43 42.3	
	comp=Z,88nm,19.3s,baz=244,slow=35							
OBN	**Obninsk**	**22.42**	**136**	LR	LR	LR	02 44 20.6	
	comp=Z,12nm,19.6s,baz=116,slow=36							
RES	**Resolute Bay**	**24.16**	**321**	LR	LR	LR	02 44 38.5	
	comp=Z,42nm,21.1s,baz=54,slow=34							
AKASG	**Malin Array Be**	**25.51**	**149**	P	P	P	**02 36 12.7**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=338,slow=9.7,SNR=4.7							
VRAC	**Vranov**	**25.70**	**169**	LR	LR	LR	02 47 02.7	
	comp=Z,37nm,19.0s,baz=356,slow=38							
GERES	**GERESS Array B**	**26.04**	**173**	P	P	P	**02 36 19.3**	**+1.4**
	comp=Z,0.9nm,0.9s,baz=355,slow=10.0,SNR=2.7							
GERES				LR	LR	LR	02 46 39.2	
	comp=Z,42nm,18.1s,baz=7.5,slow=37							
ARU	**Arti**	**26.17**	**107**	P	P	P	**02 36 21.1**	**+2.2**
	comp=Z,0.8nm,0.2s,baz=306,slow=7.9,SNR=5.0							
ARU				LR	LR	LR	02 46 51.4	
	comp=Z,45nm,20.5s,baz=334,slow=37							
FRB	**Frobisher Bay**	**27.28**	**289**	LR	LR	LR	02 46 01.5	
	comp=Z,87nm,19.4s,baz=14,slow=34							
DAVOX	**Davos/Dischmat**	**28.03**	**179**	LR	LR	LR	02 46 56.0	
	comp=Z,34nm,19.6s,baz=54,slow=35							
MLR	**Muntele Rosu**	**30.24**	**156**	LR	LR	LR	02 48 09.3	
	comp=Z,44nm,19.4s,baz=308,slow=35							
KBZ	**Khabaz**	**34.52**	**135**	LR	LR	LR	02 52 07.0	
	comp=Z,80nm,18.6s,baz=360,slow=37							
ZALV	**Zalesovo Beam**	**35.27**	**83**	P	P	P	**02 37 41.0**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=311,slow=11,SNR=3.1							
ZALV				LR	LR	LR	02 54 50.9	
	comp=Z,21nm,19.6s,baz=32,slow=41							
BRTR	**Keskin Array B**	**36.88**	**148**	P	P	P	**02 37 54.4**	**+1.1**
	comp=Z,0.9nm,1.0s,baz=320,slow=6.0,SNR=3.8							
BRTR				LR	LR	LR	02 54 44.6	
	comp=Z,21nm,18.8s,baz=10,slow=39							
ILAR	**Eielson Array**	**39.89**	**344**	P	P	P	**02 38 19.5**	**+1.4**
	comp=Z,0.8nm,0.8s,baz=5.2,slow=7.2,SNR=9.2							
MKAR	**Makanchi Array**	**41.12**	**90**	P	P	P	**02 38 30.8**	**+2.2**
	comp=Z,0.6nm,0.7s,baz=1.0,slow=7.5,SNR=7.6							
GEYT	**Alibeck**	**43.30**	**120**	P	P	P	**02 38 48.4**	**+2.0**
	comp=Z,1.2nm,0.6s,baz=302,slow=8.4,SNR=3.8							
SONM	**Songino Array**	**46.38**	**67**	P	P	P	**02 39 14.7**	**+3.8**
	comp=Z,0.3nm,0.8s,baz=345,slow=10,SNR=3.0							
TORD	**Torodi Ar. Bea**	**61.70**	**188**	P	P	P	**02 41 03.2**	**+0.4**
	comp=Z,0.2nm,0.8s,baz=6.5,slow=8.6,SNR=2.7							

KRSC 20 02:46:35.8±0.6, 49°.15N×157°.00E, h6km±10km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.64**	**340**	*e*P	Pn	Pn	02 47 05.0	-0.1
SKR				*e*S	Sn	Sn	02 47 26.8	+0.3
PAU	**Pauzhetka**	**2.32**	**357**	*e*P	Pn	Pn	02 47 16.1	+1.5
PAU				*e*S	Sb	Sb	02 47 45.8	-1.2
KDTR	**Khodutka, Kamc**	**2.75**	**14**	*e*P	Pn	Pn	02 47 22.4	+2.0
KDTR				*e*S	Sb	Sb	02 47 56.8	-2.5
ASAK	**Asacha**	**3.29**	**10**	*e*P	Pn	Pn	02 47 31.2	+3.3
MTVR	**Mutnovka**	**3.42**	**12**	*e*P	Pn	Pn	02 47 32.5	+2.7
GRL	**Gorelyy**	**3.48**	**11**	*e*P	Pn	Pn	02 47 33.7	+3.2
UGLR	**Uglovaya**	**4.22**	**15**	*e*P	Pn	Pn	02 47 44.6	+3.8
AVH	**Avacha**	**4.26**	**14**	*e*P	Pn	Pn	02 47 45.8	+4.5
SMAR	**Somma**	**4.27**	**15**	*e*P	Pn	Pn	02 47 45.8	+4.3
KOK	**Koryaka**	**4.27**	**13**	*e*P	Pn	Pn	02 47 45.5	+4.1
KZV	**Kizimen**	**6.31**	**17**	*e*P	Pn	Pn	02 48 14.3	+4.9

BJI ***20*** *02:52:44.2±0.0, 40°.67S×175°.78E, h30km, mB6.3/60, mb5.8/36, Ms6.3/72, Ms7 6.2/66*
NEIC ***20*** *02:52:44.4±1.9, 40°.66S±0°.04×175°.81E±0°.07, h28km±1km, mb5.8/130, Ms_20 6.2/726, Mwb6.2/36, Mww6.1, ML6.2(WEL), Mwc6.3(GCMT), Error ellipse: s-maj=9.6km s-min=4.6km az=117.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=1.19; Mθθ 0.22; Mφφ 0.97; Mrθ 0.92; Mrφ -0.05; Mθφ 1.59; Fault plane solution: M₀ 2.14000×10¹⁸ NP1:φs 350.26000°, δ 17.26000°, λ -122.85000°. NP2:φs 204.32000°, δ 75.57000°, λ -80.44000°. Principal axes: T 1.9144, Plg30.0000°, Azm287.0000°; N 0.4013, Plg9.0000°, Azm22.0000°; P -2.3157, Plg58.0000°, Azm127.0000°;*
WEL ***20*** *02:52:46.0, 40°.6S±0°.7×17°.6E±°, h34km±1km, M6.1/124, ML6.5/12, ML6.0/1, MLv6.2/124, MLv6.0/7 Error ellipse: s-maj=0.0km s-min=0.0km az=97.1*
MOS ***20*** *02:52:45.1±1.2, 40°.66S×175°.66E, h36km, mb6.0/28, MS6.2/35, Error ellipse: s-maj=11.4km s-min=8.2km az=111.8*
IDC ***20*** *02:52:45.9±1.9, 40°.59S×175°.75E, h33km±13km, mb5.6/34, mb1 5.5/36, mb1mx5.5/41, mbtmp5.7/36, ML5.0/2, MS6.1/25, Ms1 6.1/25, ms1mx6.1/27, Error ellipse: s-maj=11.2km s-min=9.8km az=63.0*
NEIC ***20*** *02:52:49, 40°.63S×175°.88E, h26km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=1.61; Mθθ 0.91; Mφφ 0.70; Mrθ 1.31; Mrφ 0.84; Mθφ 0.84; Mφ/2 2.23; Fault plane solution: M₀ 3.06000×10¹⁸ NP1:φs 62.00000°, δ 18.00000°, λ -63.00000°. NP2:φs 213.00000°, δ 74.00000°, λ -98.00000°. Principal axes: T 3.0231, Plg29.0000°, Azm310.0000°; N 0.0699, Plg8.0000°, Azm216.0000°; P -3.0930, Plg60.0000°, Azm112.0000°;*
GCMT ***20*** *02:52:49.3±0.1, 40°.67S×175°.80E, h24km, MW6.3/160, Moment Tensor Solution. s160,c371; s158,c575; Duration: 3§4 Moment tensor: Scale 10¹⁸Nm; Mrr=1.54±.01; Mθθ 0.90±.01; Mφφ 0.64±.01; Mrθ 1.33±.03; Mrφ 0.79±.01; Mθφ 2.75±.04; Best double couple: M₀ 3.42400×10¹⁸ NP1:φs 65.00000°, δ 16.00000°, λ -55.00000°. NP2:φs 209.00000°, δ 77.00000°, λ -99.00000°. Principal axes: T 3.3340, Plg32.0000°, Azm307.0000°; N 0.1790, Plg9.0000°, Azm211.0000°; P -3.5140, Plg57.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*
NEIC ***20*** *02:52:50, 40°.65S×176°.00E, h20km, Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr=1.65; Mθθ 0.81; Mφφ 0.84; Mrθ 0.45; Mrφ 0.86; Mθφ 1.21; Fault plane solution: M₀ 2.11000×10¹⁸ NP1:φs 58.00000°, δ 29.00000°, λ -65.00000°. NP2:φs 210.00000°, δ 64.00000°, λ -102.00000°. Principal axes: T 2.0785, Plg18.0000°, Azm310.0000°; N 0.0705, Plg11.0000°, Azm216.0000°; P -2.1490, Plg68.0000°, Azm96.0000°;*

ISC 20 02:52:45.6±0.3, 40°.64S±0°.02×175°.79E±0°.02, h33km±1km, h34km:pP-P, n1747, σ1§93/1513, mb5.9/156, MS6.2/417, 40C-35D, North Island

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
TIWZ	**Tintock**	**0.16**	**152**	P	P	Pb	**02 52 52.6**	**+0.8**
TIWZ				S	S	Sb	**02 52 57.6**	**+1.6**
PRWZ	**Pori Road**	**0.16**	**59**	P	P	Pb	**02 52 52.1**	**+0.3**
PRWZ				S	S	Sb	**02 52 57.6**	**+1.6**
MRZ	**Mangatainoka R**	**0.16**	**262**	P	P	Pb	**02 52 53.1**	**+1.3**
MRZ				S	S	Sb	**02 52 58.8**	**+2.8**
POWZ	**Post Office Ro**	**0.25**	**356**	P	P	Pb	**02 52 53.4**	**+0.7**
POWZ				S	S	Sb	**02 52 59.1**	**+1.7**
HOWZ	**Holdsworth Sta**	**0.33**	**219**	P	P	Pn	**02 52 55.5**	**+1.3**
HOWZ				S	S	Sb	**02 53 01.2**	**+1.8**
BFZ	**Birch Farm**	**0.35**	**97**	P	P	Pb	**02 52 54.1**	**+0.2**
BFZ				S	S	Sb	**02 52 59.9**	**+0.1**
BFZ	**Birch Farm**	**0.35**	**97**			Pb	**02 52 53.9**	**-0.1**
CPWZ	**Castlepoint**	**0.41**	**131**	P	P	Pb	**02 52 56.2**	**+0.9**
CPWZ				S	S	Sn	**02 53 04.9**	**+3.1**
DVHZ	**Dannevirke**	**0.44**	**41**	P	P	Pb	**02 52 55.0**	**-0.3**
DVHZ				S	S	Sn	**02 53 02.0**	**-0.6**
TMWZ	**Te Maipa**	**0.47**	**171**	P	P	Pn	**02 52 56.9**	**+0.8**
TMWZ				S	S	Sn	**02 53 05.9**	**+2.6**
OGWZ	**Otaki Gorge**	**0.50**	**249**	P	P	Pb	**02 52 58.3**	**+2.1**
OGWZ				S	S	Sn	**02 53 06.5**	**+2.5**
ANWZ	**Angora Road**	**0.55**	**71**	P	P	Pn	**02 52 56.9**	**-0.2**
ANWZ				S	S	Sn	**02 53 05.4**	**+0.3**
MTW	**Mount Morrison**	**0.56**	**203**	P	P	Pb	**02 52 58.8**	**+1.6**
MTW				S	S	Sb	**02 53 08.0**	**+2.9**
KIW	**Kapiti Island**	**0.70**	**251**	P	P	Pb	**02 53 01.4**	**+1.9**
KIW				S	S	Sb	**02 53 12.0**	**+3.1**
WPHZ	**Waipukurau**	**0.76**	**41**	P	P	Pb	**02 53 00.6**	**+0.2**
WPHZ				S	S	Sb	**02 53 12.0**	**+1.6**
PNHZ	**Pukenui**	**0.79**	**24**	P	P	Pb	**02 53 00.6**	**-0.3**
PNHZ				S	S	Sb	**02 53 12.0**	**+0.7**
MSWZ	**Moikau Station**	**0.88**	**208**			Pn	**02 53 02.0**	**+0.4**
MSWZ						Sn	**02 53 10.1**	**-3.2**
WEL	**Wellington**	**1.01**	**230**	P	P	Pn	**02 53 04.4**	**+1.0**
WEL				S	S	Sb	**02 53 18.9**	**+1.4**
PLWZ	**Palliser**	**1.01**	**203**			Pn	**02 53 03.8**	**+0.2**
BHW	**Baring Head**	**1.04**	**222**			Pn	**02 53 04.4**	**+0.6**
SNZO	**South Karori**	**1.06**	**230**			Pn	**02 53 05.0**	**+0.9**
TRVZ	**Turoa**	**1.35**	**352**	P	P	Pn	**02 53 09.6**	**+1.3**
TRVZ				S	S	Sb	**02 53 28.3**	**

URZ Sn **Sn** **02 53 54.0 -1.4**
2µm,0.3s,baz=267,slow=19,SNR=14
URZ Lg Lg 02 54 03.9
1µm,0.3s,baz=33,slow=5.0,SNR=5.8
URZ LR LR 02 54 15.0
comp=Z,139µm,20.6s,baz=218,slow=35
URZ Urewera 2.59 24 P **Pn** **02 53 23.4 -1.7**
URZ Urewera 2.59 24 **Pn** **02 53 23.3 -1.7**
URZ **Sn** **02 53 53.1 -2.2**
EDRZ Edgecumbe 2.63 17 P **Pn** **02 53 25.0 -0.8**
KARZ Kaharoa 2.64 8 P **Pn** **02 53 25.8 -0.1**
MWZ Matawai 2.67 31 P **Pn** **02 53 24.4 -1.8**
LIRZ Lichensteins R 2.67 10 P **Pn** **02 53 27.9 +1.6**
TKGZ Te Karaka 2.71 37 P **Pn** **02 53 25.1 -1.7**
MARZ Manawahe 2.74 15 P **Pn** **02 53 26.9 -0.3**
KMRZ Kaimai 2.79 2 P **Pn** **02 53 28.5 +0.6**
OPRZ Ohinepanea 2.85 12 P **Pn** **02 53 28.2 -0.6**
TOZ Tahuroa Road 2.91 356 P **Pn** **02 53 30.0 +0.4**
WHRZ Whale Island 2.93 19 P **Pn** **02 53 28.9 -0.9**
TGRZ Tauranga 2.93 7 P **Pn** **02 53 29.7 -0.1**
RUGZ Raukumara Rang 3.04 29 P **Pn** **02 53 29.6 -1.9**
GVZ Greta Valley S 3.11 221 P **Pn** **02 53 31.4 -0.9**
PUZ Puketiti 3.20 38 P **Pn** **02 53 31.2 -2.4**
DSZ Denniston Nort 3.20 248 P **Pn** **02 53 33.9 +0.3**
HAZ Te Kaha 3.27 29 P **Pn** **02 53 31.8 -2.6**
PKGZ Pakihiroa 3.27 34 P **Pn** **02 53 32.9 -1.6**
WIZ White Island 3.29 20 P **Pn** **02 53 33.9 -0.8**
LTZ Lake Taylor 3.40 230 P **Pn** **02 53 35.3 -0.9**
LTZ Lake Taylor 3.40 230 **Pn** **02 53 35.4 -0.9**
LTZ **Sn** **02 54 14.7 -0.8**
AMCZ Amberley 3.45 222 P **Pn** **02 53 35.7 -1.2**
WMGZ Waiomatatini S 3.48 37 P **Pn** **02 53 34.9 -2.4**
MKAZ Moumakai 3.56 352 P **Pn** **02 53 39.1 +0.6**
KBAZ Karaka Road Bo 3.61 348 P **Pn** **02 53 41.0 +1.9**
MXZ Matakaoa Point 3.64 33 P **Pn** **02 53 37.8 -1.8**
MXZ Matakaoa Point 3.64 33 **Pn** **02 53 37.7 -1.9**
AWAZ Awhitu Peninsu 3.68 346 P **Pn** **02 53 41.9 +1.8**
OKCZ Okains Bay 3.69 212 P **Pn** **02 53 38.9 -1.4**
ETAZ East Tamaki Re 3.74 349 P **Pn** **02 53 42.4 +1.5**
WTAZ Waiatarua 3.82 345 P **Pn** **02 53 44.0 +2.0**
EPAZ Eden Park BICE 3.84 347 P **Pn** **02 53 44.0 +1.7**
MQZ McQueen's Vall 3.85 216 P **Pn** **02 53 40.2 -2.2**
MQZ McQueen's Vall 3.85 216 **Pn** **02 53 40.4 -2.0**
MQZ **Sn** **02 54 21.8 -4.8**
INZ Inchbonnie 3.87 236 P **Pn** **02 53 42.0 -0.7**
HBAZ Herne Bay Bore 3.87 347 P **Pn** **02 53 44.1 +1.4**
WIAZ Waiheke Island 3.87 352 P **Pn** **02 53 44.2 +1.4**
AKCZ Akaroa Harbour 3.88 213 P **Pn** **02 53 41.1 -1.7**
OXZ Oxford 3.88 225 P **Pn** **02 53 40.9 -1.9**
OXZ Oxford 3.88 225 **Pn** **02 53 40.8 -2.1**
KUZ Kuaotunu 3.89 359 P **Pn** **02 53 43.4 +0.4**
MBAZ Motutapu North 3.92 349 P **Pn** **02 53 44.7 +1.2**
ABAZ Army Bay 4.10 349 P **Pn** **02 53 48.0 +2.1**
GRZ Great Barrier 4.39 356 P **Pn** **02 53 50.4 +0.5**
WVZ Waitaha Valley 4.49 236 P **Pn** **02 53 50.5 -0.7**
RPZ Rata Peaks 4.67 227 Pn **Pn** **02 53 52.4 -1.4**
83nm,0.3s,baz=74,slow=4.4,SNR=170
RPZ Pg Pb 02 54 12.5 +5.7
837nm,0.3s,baz=321,slow=4.5,SNR=63
RPZ Sn **Sn** **02 54 43.8 -3.0**
590nm,0.3s,baz=108,slow=2.7,SNR=26
RPZ Lg Lg 02 55 10.9
264nm,0.3s,baz=110,slow=12,SNR=5.4
RPZ Rata Peaks 4.67 227 P **Pn** **02 53 51.9 -1.9**
RPZ Rata Peaks 4.67 227 **Pn** **02 53 52.2 -1.6**
WCZ Waipu Caves 4.83 346 P **Pn** **02 53 57.1 +1.3**
FOZ Fox Glacier 5.30 235 P **Pn** **02 54 00.8 -1.6**
FOZ Fox Glacier 5.30 235 **Pn** **02 54 00.8 -1.6**
LBZ Lake Benmore 5.58 226 P **Pn** **02 54 05.2 -1.1**
OUZ Omahuta 5.68 342 P **Pn** **02 54 09.0 +1.4**
OUZ Omahuta 5.68 342 **Pn** **02 54 08.7 +1.1**
ODZ Otahua Downs 5.80 219 P **Pn** **02 54 07.5 -1.8**
ODZ Otahua Downs 5.80 219 **Pn** **02 54 08.1 -1.2**
JCZ Jackson Bay 6.22 234 P **Pn** **02 54 13.2 -1.9**
HHSZ Highcliff Hill 6.47 214 P **Pn** **02 54 17.6 -0.8**
WKZ Wanaka 6.51 228 P **Pn** **02 54 16.5 -2.5**
WKZ Wanaka 6.51 228 **Pn** **02 54 16.1 -2.9**
I36NZ CHATHAM INFRAS 6.60 122 *i* 03 26 30.0
baz=299,slow=320,SNR=2.3
EAZ Earnscleugh 6.61 224 P **Pn** **02 54 18.9 -1.5**
TUZ Tuapeka 6.96 218 P **Pn** **02 54 23.9 -1.2**
MLZ Mavora Lakes 7.34 227 P **Pn** **02 54 30.0 -0.5**
MLZ Mavora Lakes 7.34 227 **Pn** **02 54 28.3 -2.1**
SYZ Scrubby Hill 7.62 217 P **Pn** **02 54 33.4 -0.7**
WHZ Wether Hill Ro 7.77 225 P **Pn** **02 54 34.1 -2.1**
WHZ Wether Hill Ro 7.77 225 **Pn** **02 54 33.7 -2.5**
DCZ Deep Cove 7.95 230 P **Pn** **02 54 37.3 -1.5**
DCZ Deep Cove 7.95 230 **Pn** **02 54 36.5 -2.2**
DCZ **Sn** **02 56 01.8 -5.7**
APZ The Paps 8.38 220 P **Pn** **02 54 43.2 -1.4**
PYZ Puysegur Point 8.63 227 **Pn** **02 54 46.0 -2.0**
RAO Raoul Island 12.47 26 Sn Sn 02 57 46.4 -12
132nm,0.3s,baz=307,slow=20,SNR=4.6
NFK Norfolk Island 13.23 329 P **Pn** **02 55 55.6 +4.5**
baz=13,SNR=3.8
LHI Lord Howe Isla 16.28 299 P **P** **02 56 34.7 +0.4**
baz=16,SNR=4.0
LHI Lord Howe Isla 16.28 299 **Pn** **02 56 33.4 +1.8**
MCQ Macquarie Isla 17.86 213 P **P** **02 56 54.9 +3.2**
baz=18,SNR=5.8
MCQ Macquarie Isla 17.86 213 P **Pn** **02 56 49.8 -1.4**
MCQ pmax pmax
comp=Z,223nm,1.1s
MCQ Macquarie Isla 17.86 213 **Pn** **02 56 49.8 -1.4**
DZM Mont Dzumac 20.13 334 *e*P Pn 02 57 18.3 -0.6
comp=Z,2µm,1.2s
DZM *e*S **S** **03 00 55.8 -5.5**
comp=Z,57µm,25.2s
DZM *e*LR LR 03 02 01.2
comp=Z,227µm,25.4s
DZM Mont Dzumac 20.13 334 P **P** **02 57 16.6 -0.3**
comp=Z,187nm,1.0s,baz=141,slow=11,SNR=50
DZM LR LR 03 04 17.9
comp=Z,105µm,21.4s,baz=154,slow=34
DZM Mont Dzumac 20.13 334 P **P** **02 57 17.1 +0.2**
DZM IAmb IAmb 02 57 33.0
comp=Z,1µm,1.1s
DZM IAMs_20 IAMs_20 03 04 06.4
comp=Z,95µm,20.0s
NOUC Port Laguerre 20.15 334 P **P** **02 57 16.8 -0.2**
NOUC IAmb IAmb 02 57 32.2
comp=Z,320nm,1.0s
MILA Mila 21.02 271 P **P** **02 57 28.2 +1.8**
baz=21,SNR=12
MGCD Mangrove Creek 21.04 283 P **P** **02 57 28.8 +2.2**
baz=21,SNR=19
I05AU HOBART INFRASC 21.08 256 *i* 04 46 40.0
baz=94,slow=299,SNR=1.4
MOO Moorlands 21.44 256 P **P** **02 57 33.0 +2.1**
baz=21,SNR=16
CNB Canberra Magne 21.46 276 P **P** **02 57 33.8 +2.6**
baz=21,SNR=48
CAN Canberra 21.73 276 P **P** **02 57 34.7 +0.6**
CAN pmax pmax
comp=Z,273nm,1.1s
CAN MLR MLR
comp=Z,109µm,20.0s
CAN Canberra 21.73 276 P **P** **02 57 34.7 +0.6**
CAN IAmb IAmb 02 57 49.6
comp=Z,273nm,1.1s
CAN IAMs_20 IAMs_20 03 04 52.6
comp=Z,109µm,20.0s
ARMA Armidale 22.09 290 P **P** **02 57 40.8 +2.9**
baz=22,SNR=37
ARMA Armidale 22.09 290 P **P** **02 57 39.3 +1.3**
ARMA IAMs_20 IAMs_20 03 05 21.5
comp=Z,101µm,19.0s
YNG Young 22.59 277 P **P** **02 57 45.5 +2.2**
baz=22,SNR=15
MSVF Nonsavu 22.91 6 *i* P **P** **02 57 44.7 -2.0**
MSVF pmax pmax
comp=Z,166nm,0.9s
MSVF Nonsavu 22.91 6 P **P** **02 57 45.7 -1.0**
MSVF IAmb IAmb 02 57 50.9
comp=Z,164nm,0.8s
TOO Toolangi 23.66 268 P **P** **02 57 55.3 +1.4**
baz=24,SNR=104
TOO Toolangi 23.66 268 P **P** **02 57 54.2 +0.2**
TOO pmax pmax
comp=Z,421nm,1.1s
TOO MLR MLR
comp=Z,86µm,19.0s
TOO Toolangi 23.66 268 P **P** **02 57 54.2 +0.2**

TOO IAmb IAmb 02 58 01.0
comp=Z,420nm,1.1s
TOO IAMs_20 IAMs_20 03 06 20.1
comp=Z,86µm,19.0s
NIUE Niue 24.74 34 P **P** **02 58 06.4 +2.4**
baz=25,SNR=4.5
NIUE Niue 24.74 34 P **P** **02 58 04.1 +0.1**
NIUE IAmb IAmb 02 58 21.0
comp=Z,506nm,1.1s
EIDS Eidsvold 25.59 299 P **P** **02 58 13.2 +1.5**
baz=26,SNR=47
EIDS Eidsvold 25.59 299 IAmb IAmb 02 58 27.6
comp=Z,203nm,1.0s
CMSA Cobar Meteorol 25.86 281 P **P** **02 58 15.3 +1.2**
baz=26,SNR=51
SANVU Saraoutou 26.19 341 P **P** **02 58 17.1 0.0**
SANVU IAMs_20 IAMs_20 03 08 41.0
comp=Z,64µm,20.0s
RMQ Roma 26.45 294 P **P** **02 58 22.3 +2.7**
baz=26,SNR=24
ARPS Mount Arapiles 26.68 267 P **P** **02 58 23.4 +2.0**
baz=27,SNR=40
RAR Rarotonga 28.38 54 P **P** **02 58 37.2 +0.4**
RAR pmax pmax
comp=Z,343nm,1.2s
RAR Rarotonga 28.38 54 P **P** **02 58 36.9 +0.1**
comp=Z,229nm,1.1s,baz=201,slow=7.1,SNR=24
RAR LR LR 03 09 19.8
comp=Z,21µm,18.6s,baz=220,slow=35
RAR Rarotonga 28.38 54 P **P** **02 58 37.2 +0.4**
RAR IAmb IAmb 02 58 40.4
comp=Z,343nm,1.1s
AFI Afiamalu 28.76 26 P **P** **02 58 38.9 -1.4**
AFI pmax pmax
comp=Z,129nm,1.1s
AFI MLR MLR
comp=Z,13µm,22.0s
AFI Afiamalu 28.76 26 P **P** **02 58 40.1 -0.2**
comp=Z,29nm,0.6s,baz=141,slow=13,SNR=3.9
AFI Afiamalu 28.76 26 P **P** **02 58 38.9 -1.4**
AFI IAmb IAmb 02 58 58.0
comp=Z,129nm,1.1s
STKA Stephens Creek 28.78 277 P **P** **02 58 42.0 +1.6**
baz=29,SNR=52
STKA Stephens Creek 28.78 277 P **P** **02 58 39.9 -0.4**
STKA pmax pmax
comp=Z,42nm,1.0s
STKA MLR MLR
comp=Z,15µm,19.0s
STKA Stephens Creek 28.78 277 P **P** **02 58 41.6 +1.3**
comp=Z,59nm,0.8s,baz=112,slow=10,SNR=52
STKA LR LR 03 09 59.9
comp=Z,69µm,18.6s,baz=108,slow=36
STKA Stephens Creek 28.78 277 P **P** **02 58 39.9 -0.4**
QLP Quilpie 29.61 288 P **P** **02 58 49.2 +1.5**
baz=30,SNR=37
HTT Hallett 30.13 272 P **P** **02 58 54.1 +1.8**
baz=30,SNR=14
CTA Charters Tower 32.45 300 P **P** **02 59 14.0 +1.2**
comp=Z,41nm,0.7s,baz=132,slow=11,SNR=19
CTA S **S** **03 04 25.9 +0.5**
comp=Z,2.5nm,0.4s,baz=214,slow=3.6,SNR=4.1
CTA LR LR 03 11 36.0
comp=Z,95µm,20.6s,baz=132,slow=35
BBOO Buckleboo 32.57 271 P **P** **02 59 14.1 +0.3**
baz=32,SNR=73
BBOO Buckleboo 32.57 271 P **P** **02 59 14.0 +0.3**
TBI Tubuai 33.87 70 *e*P **P** **02 59 26.7 +1.6**
comp=Z,800nm,1.2s
TBI *e*S **S** **03 04 50.0 +2.7**
comp=Z,3µm,26.2s
TBI *e*LR LR 03 08 24.3
comp=Z,71µm,27.2s,baz=231
TBI Tubuai 33.87 70 *e*T T 03 33 54.4
comp=Z,142nm,0.3s
HNR Honiara 34.11 331 P **P** **02 59 27.3 0.0**
HNR pmax pmax
comp=Z,712nm,1.0s
HNR Honiara 34.11 331 P **P** **02 59 26.7 -0.6**
comp=Z,226nm,0.7s,baz=236,slow=9.2,SNR=5.2
HNR LR LR 03 11 44.1
comp=Z,34µm,21.7s,baz=151,slow=33
HNR Honiara 34.11 331 *e*P **P** **02 59 29.0 +1.7**
HNR Honiara 34.11 331 P **P** **02 59 27.3 0.0**
MTSU Mount Surprise 35.12 300 P **P** **02 59 37.3 +1.2**
baz=35,SNR=123
QIS Mount Isa 36.67 292 P **P** **02 59 50.0 +0.6**
baz=37,SNR=62
VNDA Vanda 37.45 185 P **P** **02 59 57.6 +2.3**
VNDA pmax pmax
comp=Z,53nm,1.0s
VNDA Vanda 37.45 185 P **P** **02 59 57.1 +1.9**
comp=Z,31nm,0.8s,baz=1.6,slow=7.7,SNR=53
VNDA LR LR 03 13 27.2
comp=Z,19µm,19.4s,baz=26,slow=33
VNDA Vanda 37.45 185 P **P** **02 59 57.6 +2.3**
PAE Paea 37.56 63 *e*P **P** **02 59 58.8 +1.9**
comp=Z,105nm,1.3s
PAE Paea 37.56 63 *e*T T 03 38 29.0
comp=Z,67nm,0.3s
PPT2 Papeete2 37.62 63 *e*P **P** **02 59 59.7 +2.3**
comp=Z,574nm,1.3s
PPT2 *e*S **S** **03 05 47.4 +2.4**
comp=Z,14µm,25.0s
PPT2 *e*LR LR 03 10 06.4
comp=Z,47µm,24.5s,baz=221
PPT2 Papeete2 37.62 63 *e*T T 03 38 33.5
comp=Z,42nm,0.4s
PPTF Pamatai, Papee 37.63 63 P **P** **02 59 57.9 +0.4**
PPTF PP **PP** **03 01 19.9 -3.7**
PPT Papeete 37.63 63 P **P** **02 59 59.4 +1.9**
comp=Z,514nm,1.1s,baz=230,slow=4.9,SNR=20
PPT LR LR 03 12 44.8
comp=Z,16µm,19.3s,baz=242,slow=32
TVO Taravao 37.70 63 *e*P **P** **03 00 00.3 +2.2**
comp=Z,112nm,1.3s
TVO Taravao 37.70 63 *e*T T 03 38 39.6
comp=Z,8.4nm,0.3s
TIAR Tiarei 37.80 63 *e*P **P** **03 00 01.2 +2.3**
comp=Z,190nm,1.2s
TIAR Tiarei 37.80 63 *e*T T 03 38 45.9
comp=Z,5.8nm,0.3s
MEH Mehetia 38.45 65 *e*P **P** **03 00 06.7 +2.3**
comp=Z,248nm,1.3s
AS31 Alice Springs 38.88 283 P **P** **03 00 08.4 +0.4**
AS31 IAmb IAmb 03 00 13.6
comp=Z,61nm,0.5s
ASAR Alice Springs 38.88 283 P **P** **03 00 08.0 -0.1**
ASAR 03 02 18.0
ASAR Alice Springs 38.88 283 P **P** **03 00 08.0 -0.1**
comp=Z,86nm,0.5s,baz=120,slow=6.9,SNR=1259
ASAR PcP **PcP** **03 02 18.0 -0.6**
comp=Z,25nm,0.7s,baz=116,slow=4.2,SNR=4.3
ASAR S **S** **03 06 00.3 -3.8**
comp=Z,31nm,0.9s,baz=129,slow=14,SNR=13
ASAR PKiKP **PKiKP** **03 09 30.7 -1.2**
comp=Z,3.4nm,0.8s,baz=121,slow=1.2,SNR=6.8
ASAR LR LR 03 16 45.0
comp=Z,76µm,18.9s,baz=132,slow=37
COEN Coen 38.94 304 P **P** **03 00 08.9 +0.4**
baz=39,SNR=386
COEN Coen 38.94 304 P **P** **03 00 08.4 -0.1**
COEN IAmb IAmb 03 00 10.5
comp=Z,142nm,0.7s
COEN IAMs_20 IAMs_20 03 16 02.0
comp=Z,45µm,19.0s
FORT Forrest 39.57 269 P **P** **03 00 13.9 +0.3**
baz=40,SNR=33
FORT Forrest 39.57 269 P **P** **03 00 11.9 -1.7**
FORT IAmb IAmb 03 00 30.8
comp=Z,189nm,0.8s
FORT PcP **PcP** **03 02 19.9 -0.6**
PMG Port Moresby 40.14 313 *c* *i* P **P** **03 00 20.0 +1.5**
PMG pmax pmax
comp=Z,2µm,0.9s
PMG Port Moresby 40.14 313 P **P** **03 00 19.7 +1.2**
comp=Z,388nm,0.7s,baz=106,slow=3.9,SNR=74
PMG LR LR 03 16 16.9
comp=Z,60µm,20.1s,baz=144,slow=35
PMG Port Moresby 40.14 313 P **P** **03 00 18.3 -0.2**
PMG PcP **PcP** **03 02 18.4 -4.1**
WR0 Warramunga Arr 40.68 288 IAmb IAmb 03 00 34.9
comp=Z,224nm,1.1s
WRAB Tennant Creek 40.84 288 *c* *i* P **P** **03 00 24.2 0.0**
WRAB pmax pmax
comp=Z,217nm,0.9s
WRAB Tennant Creek 40.84 288 P **P** **03 00 24.1 -0.1**

WR1 Warramunga Arr 40.84 288 IAMs_20 IAMs_20 03 17 08.2
comp=Z,50µm,20.0s
WRA Warramunga Arr 40.84 288 P **P** **03 00 24.0 -0.3**
comp=Z,177nm,0.5s,baz=126,slow=8.0,SNR=489
WRA ScP **ScP** **03 06 10.8 -1.0**
comp=Z,8.9nm,0.9s,baz=124,slow=4.1,SNR=5.4
WRA S **S** **03 06 31.3 -2.0**
comp=Z,17nm,0.9s,baz=130,slow=14,SNR=7.4
WRA LR LR 03 17 38.6
comp=Z,55µm,19.1s,baz=135,slow=37
WB7 Warramunga Arr 40.87 288 IAMs_20 IAMs_20 03 17 19.7
comp=Z,50µm,20.0s
TARA Tarawa 41.88 356 P **P** **03 00 33.9 +1.2**
TARA IAmb IAmb 03 00 43.6
comp=Z,334nm,1.1s
KRVT Keravat (AS076 42.02 323 LR LR 03 17 23.8
comp=Z,19µm,21.1s,baz=162,slow=35
WRKA Warakurna 42.31 277 P **P** **03 00 35.4 -0.9**
baz=42,SNR=67
CASY Casey 43.77 212 P **P** **03 00 48.2 +0.7**
CASY IAmb IAmb 03 00 50.8
comp=Z,255nm,1.0s
KMBL Kambalda 43.99 264 P **P** **03 00 50.0 +0.2**
baz=44,SNR=45
RKGY Rocky Gully 46.22 258 P **P** **03 01 07.3 -0.2**
baz=46,SNR=18
NWAO Narrogin (SRO) 46.78 260 P **P** **03 01 11.8 -0.1**
baz=47,SNR=5.6
NWAO Narrogin (SRO) 46.78 260 LR LR 03 17 37.7
comp=Z,34µm,21.2s,baz=113,slow=32
NWAO Narrogin (SRO) 46.78 260 P **P** **03 01 10.7 -1.1**
NWAO IAmb IAmb 03 01 14.4
comp=Z,141nm,1.0s
NWAO PcP **PcP** **03 02 41.8 -2.9**
NWAO Narrogin (SRO) 46.78 260 P **P** **03 01 10.8 -1.1**
NWAO IAmb IAmb 03 01 14.4
comp=Z,104nm,0.9s
NWAO PcP **PcP** **03 02 41.9 -2.8**
NWAO Narrogin (SRO) 46.78 260 IAMs_20 IAMs_20 03 17 04.0
comp=Z,37µm,22.0s
KLBR Kellerberrin 47.00 262 P **P** **03 01 13.1 -0.6**
baz=47,SNR=82
KDU Kakadu 47.01 294 P **P** **03 01 13.9 +0.1**
baz=47,SNR=15
KNRA Kununurra 47.63 287 P **P** **03 01 18.9 +0.3**
baz=48,SNR=82
KNRA Kununurra 47.63 287 P **P** **03 01 18.3 -0.3**
MTN Manton Dam 47.84 292 P **P** **03 01 20.3 +0.1**
baz=48,SNR=38
MTN Manton Dam 47.84 292 P **P** **03 01 19.9 -0.3**
MTN IAmb IAmb 03 01 38.0
comp=Z,116nm,0.8s
MUN Mundaring 47.98 261 P **P** **03 01 21.5 +0.3**
baz=48,SNR=42
BLDU Ballidu 48.25 262 P **P** **03 01 23.3 0.0**
baz=48,SNR=62
FITZ Fitzroy Crossi 48.38 282 P **P** **03 01 24.5 +0.1**
baz=48,SNR=105
FITZ Fitzroy Crossi 48.38 282 S **S** **03 08 19.8 -3.0**
comp=Z,4.2nm,0.9s,baz=234,slow=19,SNR=5.3
FITZ LR LR 03 22 11.0
comp=Z,42µm,19.7s,baz=121,slow=36
FITZ Fitzroy Crossi 48.38 282 P **P** **03 01 24.6 +0.1**
FITZ IAmb IAmb 03 01 26.9
comp=Z,117nm,0.8s
FITZ PcP **PcP** **03 02 49.7 -0.9**
FITZ Fitzroy Crossi 48.38 282 IAMs_20 IAMs_20 03 21 50.0
comp=Z,38µm,20.0s
MEEK Meekatharra 48.81 268 P **P** **03 01 27.2 -0.5**
baz=49,SNR=168
QSPA South Pole Qui 49.49 180 P **P** **03 01 34.3 +1.8**
comp=Z,157nm,1.0s,baz=0.6,slow=0.6,SNR=135
QSPA LR LR 03 18 39.6
comp=Z,16µm,21.6s,baz=40,slow=31
QSPA South Pole Qui 49.49 180 P **P** **03 01 34.4 +1.8**
QSPA IAmb IAmb 03 01 50.4
comp=Z,198nm,0.9s
QSPA PcP **PcP** **03 02 55.3 +1.3**
MORW Morawa 49.52 264 P **P** **03 01 33.5 +0.4**
baz=49,SNR=38
MORW Morawa 49.52 264 P **P** **03 01 32.3 -0.7**
MORW IAmb IAmb 03 01 35.9
comp=Z,200nm,0.9s
GENI Genyem 49.67 310 P **P** **03 01 35.9 +1.6**
comp=Z,13µmcomp=Z,6µmcomp=Z,294nm,1.1s
PATS Pohnpei 49.90 337 P **P** **03 01 37.4 +1.4**
baz=50,SNR=4.5
PATS Pohnpei 49.90 337 P **P** **03 01 35.7 -0.3**
TAOE Nuku Hiva Isla 50.24 63 *e*S **S** **03 08 50.2 +1.2**
comp=Z,15µm,24.4s
TAOE *e*LR LR 03 15 55.5
comp=Z,39µm,25.1s,baz=228
PSA00 Pilbara Seismi 50.67 274 P **P** **03 01 41.0 -0.8**
PSA00 IAmb IAmb 03 01 59.5
comp=Z,166nm,0.9s
SMPI Sarmi 51.01 309 P **P** **03 01 45.2 +0.8**
comp=Z,16µmcomp=Z,147nm,1.2s
SAUI Saumlaki 51.16 297 P **P** **03 01 47.6 +2.0**
comp=Z,19µmcomp=Z,503nm,0.8s
KMPI Kaimana, Papua 52.79 303 P **P** **03 01 57.2 -0.5**
comp=Z,5µmcomp=Z,265nm,1.2s
BAKI Biak 53.21 307 P **P** **03 02 01.6 +0.8**
comp=Z,9µmcomp=Z,567nm,1.6s
RKPI Ransiki, Papua 54.14 305 P **P** **03 02 11.4 +3.8**
comp=Z,5µmcomp=Z,194nm,0.8s
FAKI Fak Fak 54.28 302 P **P** **03 02 08.4 -0.3**
comp=Z,11µmcomp=Z,3µmcomp=Z,128nm,1.0s
FAKI Fak Fak 54.28 302 IAmb IAmb 03 02 19.8
comp=Z,110nm,1.0s
GIRL Giralia 54.32 270 P **P** **03 02 10.3 +1.4**
baz=54,SNR=56
SOEI Soe 54.83 289 P **P** **03 02 14.3 +1.5**
comp=Z,14µmcomp=Z,8µmcomp=Z,392nm,1.5s
MSAI Masohi 56.15 299 P **P** **03 02 21.3 -0.8**
comp=Z,924nmcomp=Z,63nm,0.9s
AAI Ambon 56.39 298 P **P** **03 02 24.7 +0.9**
comp=Z,11µmcomp=Z,3µmcomp=Z,109nm,1.0s
SIJI Sorong 56.48 303 P **P** **03 02 24.1 -0.4**
comp=Z,52nm,0.6s,baz=97,slow=8.1
SWI Sorong 56.48 303 P **P** **03 02 24.3 -0.2**
comp=Z,11µmcomp=Z,6µmcomp=Z,454nm,1.2s
SANI Sanana 59.08 297 P **P** **03 02 42.4 -0.3**
comp=Z,10µmcomp=Z,5µmcomp=Z,161nm,1.4s
KDI Kendari 60.03 293 P P 03 02 55.4 +6.1
PLAI Plampang 60.18 285 P **P** **03 02 54.2 +3.9**
comp=Z,11µmcomp=Z,5µmcomp=Z,258nm,0.9s
WAKE Wake Island 60.21 350 P **P** **03 02 49.6 -0.7**
WAKE IAMs_20 IAMs_20 03 23 33.8
comp=Z,20µm,21.0s
BKSI Bulukumba 60.85 290 P P 03 03 01.0 +6.1
MAW Mawson 60.94 204 P **P** **03 02 56.0 +1.2**
baz=61,SNR=51
MAW Mawson 60.94 204 P **P** **03 02 54.8 0.0**
comp=Z,73nm,0.9s,baz=121,slow=9.0,SNR=56
MAW LR LR 03 28 04.2
comp=Z,32µm,20.4s,baz=114,slow=35
MAW PKP2bc 03 32 18.0
comp=Z,6.7nm,1.1s,baz=310,slow=6.1,SNR=4.9
MAW PKP2ab 03 32 29.9
comp=Z,9.6nm,1.1s,baz=149,slow=1.1,SNR=6.1
GUMO Guam 61.10 325 IAMs_20 IAMs_20 03 30 29.1
comp=Z,15µm,19.0s
BNSI Bone 61.49 290 P **P** **03 03 00.3 +1.0**
comp=Z,4µmcomp=Z,101nm,1.6s
RPN Rapa Nui 61.89 103 IAMs_20 IAMs_20 03 22 56.7
comp=Z,19µm,21.0s
LUWI Luwuk 62.00 295 P **P** **03 03 03.0 +0.3**
comp=Z,8µmcomp=Z,535nm,1.6s
SPSI Sidrap Palu 62.04 291 P **P** **03 03 02.7 -0.2**
KMSI Cibinong 62.35 297 P **P** **03 03 06.1 +1.1**
comp=Z,6µmcomp=Z,307nm,0.9s
SRBI Singaraja 62.56 284 P **P** **03 03 06.6 +0.2**
comp=Z,13µmcomp=Z,6µmcomp=Z,173nm,0.7s
TTSI Tana Toraja 62.64 291 P **P** **03 03 07.1 +0.1**
comp=Z,7µmcomp=Z,3µmcomp=Z,188nm,1.2s
APSI Ampana 62.87 294 P **P** **03 03 09.1 +0.6**
comp=Z,6µmcomp=Z,3µmcomp=Z,155nm,1.1s
JAGI Jajag, Banyuwa 63.09 283 P **P** **03 03 12.0 +2.0**
comp=Z,5µmcomp=Z,132nm,0.9s
JAGI Jajag, Banyuwa 63.09 283 IAmb IAmb 03 03 31.2
comp=Z,72nm,0.9s
JAGI IAMs_20 IAMs_20 03 30 49.7
comp=Z,24µm,20.0s
ANA2 Anatahan 63.20 327 IAMs_20 IAMs_20 03 28 35.9
comp=Z,14µm,21.0s
MRSI Marisa 63.67 296 P **P** **03 03 14.7 +0.9**
GMJI Gumukmas 63.75 282 P **P** **03 03 15.4 +1.1**

comp=Z,6μmcomp=Z,222nm,0.9s
MPSI Mapaga 64.98 294 P **P** **03 03 24.2 +1.8**
comp=Z,3μmcomp=Z,115nm,1.5s
PMSA Palmer Station 65.02 156 P **P** **03 03 22.4 +0.6**
comp=Z,90nm,0.9s,baz=233,slow=4.0,SNR=9.6
PMSA Palmer Station 65.02 156 P **P** **03 03 22.9 +1.0**
PMSA IAmb IAmb 03 03 25.9
comp=Z,142nm,1.0s
KBKI Kotabaru 65.08 288 P **P** **03 03 26.1 +3.0**
comp=Z,2μmcomp=Z,55nm,1.4s
PCJI Pacitan 65.49 281 P **P** **03 03 27.4 +1.7**
comp=Z,6μmcomp=Z,189nm,1.2s
WRMHI West Rim 65.51 30 IAmb IAmb 03 03 42.5
comp=Z,178nm,0.9s
PUH Pauahi 65.51 30 P **P** **03 03 25.6 -0.2**
MLOA Mauna Loa Obse 65.53 30 P **P** **03 03 23.8 -2.4**
MLOA IAmb IAmb 03 03 43.0
comp=Z,87nm,1.0s
UWE Uwekahuna 65.53 30 IAmb IAmb 03 03 28.1
comp=Z,208nm,1.2s
HMH Humu'ula Sheep 65.62 30 P **P** **03 03 26.9 +0.2**
NGJI Ngawi 65.82 281 P P 03 03 37.7 +10
WOJI Wonogiri, Jawa 65.91 281 P **P** **03 03 30.2 +1.8**
comp=Z,4μmcomp=Z,189nm,1.5s
HPAH Hawaii Prepara 65.93 29 IAmb IAmb 03 03 43.0
comp=Z,130nm,1.0s
SYO Syowa Base 65.97 196⇑ *i*P **P** **03 03 26.9 -1.0**
SYO Syowa Base 65.97 196⇓ *i*pP pP 03 03 34.0 -4.2
SYO Syowa Base 65.97 196⇓ *i*P **P** **03 03 29.4 +1.5**
BKB Balikpapan 65.97 290 P **P** **03 03 31.3 +2.5**
comp=Z,15μmcomp=Z,6μmcomp=Z,339nm,1.2s
UGM Wanagama 66.16 280 IAMs_20 IAMs_20 03 31 54.1
comp=Z,23μm,21.0s
DAV Davao City (W) 66.17 304 P **P** **03 03 30.0 0.0**
comp=Z,248nm,0.4s,baz=171,slow=5.2,SNR=6.3
DAV Davao City (W) 66.17 304 P **P** **03 03 29.6 -0.4**
DAV Davao City (W) 66.17 304 IAMs_20 IAMs_20 03 34 39.7
comp=Z,15μm,20.0s
KPJI Karang Pucung 67.73 280 P **P** **03 03 42.0 +2.0**
comp=Z,5μmcomp=Z,321nm,0.9s
CMJI Cimerak 67.80 279 P **P** **03 03 41.4 +0.9**
comp=Z,4μmcomp=Z,262nm,1.2s
SNAA Sanae 67.99 180 P **P** **03 03 41.8 +0.8**
SNAA Sanae 67.99 180 *d iP* **P** **03 03 39.3 -1.6**
SNAA Sanae 67.99 180 P **P** **03 03 41.8 +0.8**
SNAA IAmb IAmb 03 03 44.1
comp=Z,170nm,1.0s
NVL N'lazarevskaya 68.30 186 *e*P **P** **03 03 39.5 -3.2**
NVL pmax pmax
comp=Z,356nm,1.2s
VNA3 Neumayer Olymp 68.36 178 P **P** **03 03 44.0 +0.8**
CISI Cisompet, Garu 68.43 279 P **P** **03 03 45.6 +1.1**
comp=Z,6μmcomp=Z,8μmcomp=Z,415nm,0.8s
CISI Cisompet, Garu 68.43 279 P **P** **03 03 43.9 -0.6**
MIDW Midway 68.80 6 IAMs_20 IAMs_20 03 29 04.8
comp=Z,16μm,21.0s
VNA1 Neumayer--Stat 68.98 179 P **P** **03 03 48.2 +1.2**
CNJI Cibinong 69.10 278 P **P** **03 03 48.9 +0.3**
comp=Z,8μmcomp=Z,573nm,1.1s
SKJI Sukabumi 69.73 278 P P 03 04 02.6 +10
DBJI Dramaga 69.88 279 P **P** **03 03 55.6 +2.2**
comp=Z,277nm,1.0s
USHA Ushuaia 70.27 146 P **P** **03 03 54.6 -0.6**
comp=Z,13nm,0.7s,baz=210,slow=8.4,SNR=7.1
GO09 Cerro Castillo 70.93 142 IAmb IAmb 03 04 02.5
comp=Z,83nm,1.1s
KKM Kota Kinabalu 71.61 295 IAmb IAmb 03 04 15.9
comp=Z,106nm,1.0s
KKM IAMs_20 IAMs_20 03 36 27.9
comp=Z,16μm,20.0s
KASI Kota Agung 72.24 278 P **P** **03 04 10.0 +2.3**
comp=Z,7μmcomp=Z,4μmcomp=Z,180nm,0.9s
KSM Kuching 72.59 288 IAmb IAmb 03 04 26.8
comp=Z,83nm,1.1s
KSM IAMs_20 IAMs_20 03 40 07.8
comp=Z,15μm,18.0s
LWLI Liwa 72.90 278 P **P** **03 04 13.2 +1.4**
comp=Z,174nm,0.8s
MDSI Maura Dua 73.16 279 P **P** **03 04 13.2 0.0**
comp=Z,4μmcomp=Z,134nm,0.9s
COCO West Island 73.82 268 P **P** **03 04 15.2 -1.8**
COCO pmax pmax
comp=Z,80nm,1.0s
COCO MLR MLR
comp=Z,14μm,18.0s
COCO West Island 73.82 268 P **P** **03 04 15.2 -1.8**
COCO IAmb IAmb 03 04 31.7
comp=Z,80nm,1.0s
COCO IAMs_20 IAMs_20 03 37 26.5
comp=Z,14μm,18.0s
MNAI Manna 74.16 278 IAMs_20 IAMs_20 03 38 21.0
comp=Z,17μm,20.0s
JCJ Chichijima 74.27 329 P **P** **03 04 19.1 -0.2**
comp=Z,187nm,0.8s,baz=91,slow=13,SNR=5.1
TGY Tagaytay City 74.45 305 P **P** **03 04 20.5 -0.2**
comp=Z,153nm,0.3s,baz=142,slow=12,SNR=3.2
KSI Kapahiang 74.89 278 P **P** **03 04 24.0 +0.6**
comp=Z,256nm,0.7s
KRJI Kerinci 76.76 279 P **P** **03 04 35.1 +1.0**
comp=Z,9μmcomp=Z,15μmcomp=Z,1μm,0.9s
EFI East Falkland 76.81 149 P **P** **03 04 32.1 -1.6**
EFI pmax pmax
comp=Z,208nm,1.0s
EFI East Falkland 76.81 149 P **P** **03 04 32.1 -1.6**
EFI IAmb IAmb 03 04 37.1
comp=Z,208nm,1.0s
EFI East Falkland 76.81 149 IAMs_20 IAMs_20 03 32 12.1
comp=Z,11μm,20.0s
PPSI Pulau Pagai 77.42 277 P **P** **03 04 39.2 +1.5**
comp=Z,7μmcomp=Z,556nm,1.0s
MYKOM Kota Tinggi 77.54 283 IAMs_20 IAMs_20 03 41 01.0
comp=Z,17μm,20.0s
SDSI Sungai Dareh 77.55 280 P **P** **03 04 38.5 +0.1**
comp=Z,3μmcomp=Z,79nm,0.9s
PDSI Padang 78.29 279 P **P** **03 04 41.3 -1.2**
comp=Z,3μmcomp=Z,148nm,0.6s
BKNI Bangkinang 78.67 280 P **P** **03 04 43.6 -1.0**
comp=Z,9μmcomp=Z,3μmcomp=Z,190nm,1.2s
BKNI Bangkinang 78.67 280 IAmb IAmb 03 05 03.9
comp=Z,225nm,1.0s
SISI Saibi 79.05 278 P **P** **03 04 48.8 +2.1**
comp=Z,4μmcomp=Z,144nm,1.5s
PLCA Paso Flores 79.07 135 P **P** **03 04 47.8 +1.2**
comp=Z,93nm,0.8s,baz=249,slow=5.6,SNR=112
PLCA PKPPKP 03 31 42.9
comp=Z,5.7nm,1.2s,baz=27,slow=4.5,SNR=3.5
PLCA LR LR 03 33 22.0
comp=Z,23μm,18.6s,baz=242,slow=31
PLCA Paso Flores 79.07 135 IAmb IAmb 03 04 50.9
comp=Z,184nm,1.1s
PBSI Pulau Batu 80.49 278 P **P** **03 04 56.6 +2.1**
comp=Z,11μmcomp=Z,10μmcomp=Z,440nm,1.3s
DLV T Lat 81.14 294 IAmb IAmb 03 05 10.4
comp=Z,63nm,1.0s
YULB Yu-li 81.37 311 IAMs_20 IAMs_20 03 37 40.6
comp=Z,11μm,20.0s
IPM Ipoh 81.43 283 P **P** **03 04 59.1 -0.4**
IPM IAmb IAmb 03 05 15.3
comp=Z,83nm,0.9s
HOPE Hope Point 81.47 162 P **P** **03 04 58.3 -0.8**
HOPE pmax pmax
comp=Z,209nm,1.1s
HOPE Hope Point 81.47 162 P **P** **03 04 58.3 -0.8**
HOPE IAmb IAmb 03 05 02.8
comp=Z,209nm,1.1s
NACB Ninganchiao 81.81 312 IAMs_20 IAMs_20 03 39 07.1
comp=Z,14μm,20.0s
RPSI Rantau Prapat 81.81 281 IAmb IAmb 03 05 16.2
comp=Z,142nm,1.0s
SSLB Suanglung 81.88 311 IAmb IAmb 03 05 14.2
comp=Z,99nm,1.0s
SSLB IAMs_20 IAMs_20 03 37 56.9
comp=Z,11μm,20.0s
GSI Gunungsitoli 81.91 279 P **P** **03 05 03.2 +1.1**
comp=Z,13μmcomp=Z,7μmcomp=Z,508nm,1.0s
KULM Kulim 82.25 284 P **P** **03 05 03.7 -0.1**
KULM IAmb IAmb 03 05 19.7
comp=Z,170nm,1.1s
GO05 Huala 82.32 130 IAmb IAmb 03 05 07.3
comp=Z,60nm,0.9s
GO05 IAMs_20 IAMs_20 03 36 31.1
comp=Z,12μm,18.0s
YHNB Yeheng 82.32 312 IAmb IAmb 03 05 14.6
comp=Z,64nm,1.0s
YHNB IAMs_20 IAMs_20 03 39 26.7
comp=Z,12μm,20.0s
TATO Taipei 82.50 312 P **P** **03 05 04.2 -0.5**
TATO IAmb IAmb 03 05 07.5
comp=Z,93nm,0.7s
SNSI Sinabang, Aceh 83.57 279 P **P** **03 05 11.5 +0.8**
comp=Z,7μmcomp=Z,235nm,1.3s
KNMB Chin-men Tao 83.89 309 IAmb IAmb 03 05 23.0
comp=Z,69nm,0.9s
QZH Quanzhou 84.14 310⇑ *i*P **P** **03 05 13.8 +0.6**
QZH S **S** **03 15 29.3 -6.4**
QZH pmax pmax
comp=Z,120nm,1.7s
QZH pmax pmax
comp=Z,3μm,6.4s
QZH LR LR
comp=Z,5μm,18.9s
QZH LR LR
comp=Z,5μm,20.8s
QZH LR LR
comp=Z,6μm,21.8s
MJAR Matsushiro Arr 84.20 330 P **P** **03 05 13.1 -0.2**
comp=Z,22nm,0.7s,baz=153,slow=5.9,SNR=45
MJAR LR LR 03 46 00.2
comp=Z,3μm,18.0s,baz=155,slow=38
MAJO Matsushiro 84.20 330 *c iP* **P** **03 05 13.0 -0.3**
MAJO pmax pmax
comp=Z,58nm,1.3s
MAJO Matsushiro 84.20 330 P **P** **03 05 13.2 -0.1**
MAT Matsushiro 84.20 330 P **P** **03 05 12.9 -0.4**
MAT S S 03 15 26.8 -9.1
JNU Nakatsue 84.29 323 P **P** **03 05 13.2 -0.7**
comp=Z,41nm,0.7s,baz=136,slow=0.9,SNR=29
PEL Peldehue 84.37 129 P **P** **03 05 15.1 +0.5**
PEL pmax pmax
comp=Z,206nm,1.0s
PEL Peldehue 84.37 129 P **P** **03 05 15.1 +0.5**
PEL IAMs_20 IAMs_20 03 37 19.0
comp=Z,11μm,18.0s
MLSI Meulaboh, Aceh 84.73 280 P **P** **03 05 16.5 -0.1**
comp=Z,6μmcomp=Z,373nm,1.1s
QIZ Qiongzhong 85.23 300 P P 03 05 24.3 +5.4
QIZ PP **PP** **03 08 38.6 +1.5**
QIZ SKS **S** **03 15 38.8 -8.1**
QIZ S **ScS** **03 15 53.5 -3.6**
QIZ SS **SS** **03 21 28.6 +6.6**
QIZ pmax pmax
comp=Z,2μm,5.9s
QIZ LR LR
comp=Z,3μm,20.6s
QIZ LR LR
comp=Z,4μm,18.6s
QIZ LR LR
comp=Z,4μm,19.1s
UBPT Khong Chiam 85.56 294 IAMs_20 IAMs_20 03 46 35.4
comp=Z,9μm,21.0s
GZH Guangzhou 85.92 305 P **P** **03 05 25.0 +2.8**
GZH PP **PP** **03 08 46.8 +4.2**
GZH S **S** **03 15 56.3 +2.9**
GZH LR LR
comp=Z,4μm,20.0s
GZH LR LR
comp=Z,5μm,19.3s
GO04 Tololo Observa 86.41 127 IAmb IAmb 03 05 29.9
comp=Z,63nm,1.1s
ERM Erimo 87.42 336 *ceP* **P** **03 05 29.7 +0.6**
ERM pmax pmax
comp=Z,102nm,1.3s
SSE Sheshan 87.44 316 P **P** **03 05 29.8 +0.4**
SSE LR LR
comp=Z,4μm,20.4s
SSE LR LR
comp=Z,5μm,20.2s
NMR Nemuro--Hokkai 87.91 339⇓ *i*P **P** **03 05 33.8 +2.4**
SHO Shikotan 88.08 339 *d iP* P 03 05 22.8 -9.4
SHO *i* S pP 03 05 38.9 -3.8
SHO pmax pmax
comp=Z,23nm,0.2s
SHO pmax pmax
comp=N,19nm,0.3s
SHO pmax pmax
comp=E,12nm,0.2s
GLVR Golovnino 88.31 339 *eP* **P** **03 05 30.6 -2.7**
CMBY CAMPBELL BAY 88.38 281 *eP* **P** **03 05 32.2 -2.2**
CMBY IAMs_20 IAMs_20 03 42 11.5
comp=Z,37μm,27.8s
GRPR Tuman 88.48 339 *eP* P 03 05 26.6 -7.5
GRPR pmax pmax
comp=Z,47nm,0.1s
YUK Yuzh-Kuril'sk 88.49 339 *c iP* **P** **03 05 33.6 -0.5**
YUK *e* 03 09 03.4
YUK *e* 03 16 15.1
GO03 Copiap 88.60 126 IAmb IAmb 03 05 49.7
comp=Z,72nm,1.1s
GO03 IAMs_20 IAMs_20 03 36 23.2
comp=Z,13μm,20.0s
TJN Taejon 88.60 323 *i* P **P** **03 05 34.8 0.0**
KUR Kuril'sk 89.08 341 *eP* **P** **03 05 37.5 +0.7**
KUR *eP* PPP 03 11 02.5
KUR *i* S **SKSac** **03 16 05.5 +1.9**
KUR pmax pmax
comp=Z,372nm,1.4s
KUR pmax pmax
comp=Z,2μm,4.8s
KUR MLR MLR
comp=Z,5μm,20.0s
KUR MLR MLR
comp=N,5μm,22.0s
KUR MLR MLR
comp=E,2μm,15.0s
KSRS Korea Array 89.23 324 P **P** **03 05 38.9 +1.1**
comp=E,67nm,1.0s,baz=145,slow=5.7,SNR=70
KSRS LR LR 03 43 16.2
comp=E,7μm,20.1s,baz=145,slow=34
NJ2 Nanjing 89.43 315⇓ *i*P **P** **03 05 39.8 +1.0**
NJ2 pP **pP** **03 05 47.3 -2.1**
NJ2 sP **sP** **03 05 50.6 -2.6**
NJ2 SKS **SKSac** **03 16 02.9 -3.5**
NJ2 S **SKKSac** **03 16 19.8 +1.0**
NJ2 sS **sS** **03 16 44.3 +0.1**
NJ2 pmax pmax
comp=E,72nm,1.5s
NJ2 pmax pmax
comp=E,2μm,7.0s
NJ2 LR LR
comp=E,9μm,19.9s
NJ2 LR LR
comp=E,8μm,19.9s
NJ2 LR LR
comp=E,15μm,21.8s
ASAJ Asahikawa 89.50 337 P **P** **03 05 40.6 +1.7**
comp=E,63nm,0.9s,baz=250,slow=5.6,SNR=28
PBKT Sadao Pong 89.59 292 IAMs_20 IAMs_20 03 51 31.2
comp=Z,11μm,19.0s
INCN Inchon 89.84 323 P **P** **03 05 40.3 -0.4**
INCN pmax pmax
comp=Z,158nm,1.0s
INCN Inchon 89.84 323 P **P** **03 05 40.3 -0.4**
LPA La Plata 90.03 139 *eP* P 03 05 35.4 -6.5
LPA pP pP 03 05 51.4 -1.1
LPA PP **PP** **03 09 12.0 -2.4**
LPA pPP 03 09 23.2
LPA PPP PPP 03 11 08.7
LPA SKS **SKSac** **03 16 05.4 -5.0**
LPA S **SKKSac** **03 16 26.8 +3.1**
LPA SCS **S** **03 16 33.1 +0.5**
LPA PS PS 03 17 40.3 -1.8
LPA SS **SS** **03 22 33.3 +3.4**
SLVN Son La 90.80 298 IAmb IAmb 03 06 00.3
comp=Z,47nm,1.1s
SLVN IAMs_20 IAMs_20 03 52 48.3
comp=Z,8μm,20.0s
WHN Wuhan 90.81 311⇓ *i*P **P** **03 05 46.0 +0.7**
WHN PP **PP** **03 09 25.1 +3.3**
WHN SKS **SKSac** **03 16 13.0 -1.5**
WHN pmax pmax
comp=Z,220nm,1.1s
WHN LR LR
comp=Z,12μm,18.6s
WHN LR LR
comp=Z,16μm,19.2s
WHN LR LR
comp=Z,28μm,20.2s
YSS Yuzh-Sakhalins 92.04 338⇓ *eP* **P** **03 05 52.0 +1.4**
YSS *e*'PP **sP** **03 06 07.6 +2.6**
YSS *e* 03 09 33.5
YSS *e* 03 16 16.4
YSS *e*S **S** **03 16 48.1 -1.7**
YSS *e*PPS PPS 03 18 29.0
YSS pmax pmax
comp=Z,2μm,5.8s
YSS pmax pmax
comp=N,500nm,3.8s
YSS pmax pmax
comp=Z,190nm,1.0s
YSS pmax pmax
comp=N,40nm,0.8s
YSS pmax pmax
comp=E,60nm,0.9s
YSS smax smax
comp=N,3μm,11.7s
YSS smax smax
comp=E,2μm,13.1s
YSS MLR MLR
comp=N,5μm,19.0s
YSS MLR MLR
comp=Z,8μm,19.0s
YSS MLR MLR
comp=E,2μm,17.0s
YSS Yuzh-Sakhalins 92.04 338 P **P** **03 05 50.6 0.0**
YSS IAMs_20 IAMs_20 03 43 56.0
comp=Z,11μm,20.0s
MSHR Mys Shultsa 92.14 329 *i* P **P** **03 05 50.1 -1.1**
TEY Ternei 92.25 333⇓ *eP* **P** **03 05 51.9 +0.3**
TEY *e* 03 06 02.4
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=Z,20nm,1.3s
CM31 Chiang Mai Arr 92.28 292 P **P** **03 05 53.9 +1.5**
SNR=11
CMAR Chiang Mai Arr 92.28 292 P **P** **03 05 53.2 +0.8**
comp=Z,14nm,0.9s,baz=151,slow=3.5,SNR=40
CMAR PP **PP** **03 09 31.0 -2.5**
comp=Z,2.5nm,0.5s,baz=120,slow=5.3,SNR=3.9
CMAR LR LR 03 52 29.7
comp=Z,6μm,18.9s,baz=156,slow=39
VLA Vladivostok 92.31 329 *i* P **P** **03 05 52.6 +0.6**
VLA pmax pmax
comp=Z,20nm,0.7s
VLA MLR MLR
comp=Z,4μm,18.0s
CHTO Chiang Mai 92.52 293 P **P** **03 05 53.7 +0.2**
CHTO IAmb IAmb 03 06 13.1
comp=Z,35nm,1.1s
CHTO PP **PP** **03 09 29.1 -6.3**
SKR Severo-Kuril's 92.56 348 *eP* **P** **03 05 57.3 +4.4**
SKR *eS* **S** **03 16 51.2 -3.1**
SKR pmax pmax
comp=Z,900nm,4.1s
SKR MLR MLR
comp=Z,3μm,17.0s
ATKA Atka Island 92.87 6 IAMs_20 IAMs_20 03 41 34.2
comp=Z,9μm,21.0s
SMY Shemya 93.00 359 IAMs_20 IAMs_20 03 42 24.8
comp=Z,11μm,22.0s
LVC Limon Verde 93.01 123 P **P** **03 05 56.7 +0.3**
LVC pmax pmax
comp=Z,19nm,1.1s
LVC Limon Verde 93.01 123 P **P** **03 05 59.1 +2.7**
comp=Z,15nm,0.9s,baz=230,slow=2.9,SNR=10
LVC Limon Verde 93.01 123 P **P** **03 05 56.7 +0.3**
DGPR DIGLIPUR 93.14 285 *eP* P 03 06 03.0 +6.6
DGPR *i* x x 03 37 48.5
DGPR IAMs_20 IAMs_20 03 45 51.1
comp=Z,18μm,21.8s
USA0B Ussuriysk Arra 93.19 330 *i* P **P** **03 05 56.7 +0.7**
USA0B Ussuriysk Arra 93.19 330 IAmb IAmb 03 06 09.0
comp=Z,68nm,1.0s
USRK Ussuriysk Ar. 93.19 330 P **P** **03 05 56.2 +0.2**
comp=Z,22nm,1.0s,baz=155,slow=3.7,SNR=23
USRK PP **PP** **03 09 44.3 +4.0**
comp=Z,5.1nm,0.9s,baz=162,slow=7.2,SNR=4.6
USRK LR LR 03 46 43.8
comp=Z,3μm,19.2s,baz=144,slow=35
DL2 Dalian 93.33 321 P **P** **03 05 55.3 -1.5**
DL2 PP **PP** **03 09 45.0 +3.5**
DL2 S **S** **03 16 59.8 -2.0**
DL2 pmax pmax
comp=Z,52nm,1.4s
DL2 pmax pmax
comp=Z,920nm,7.7s
DL2 LR LR
comp=Z,4μm,20.7s
DL2 LR LR
comp=Z,7μm,19.7s
DL2 LR LR
comp=Z,11μm,27.1s
ENH Enshi 93.49 307 IAmb IAmb 03 06 17.4
comp=Z,31nm,0.9s
TIA Tai'an 93.53 316 P **P** **03 05 57.9 +0.1**
TIA pmax pmax
comp=Z,43nm,1.5s
TIA pmax pmax
comp=Z,1μm,5.9s
TIA LR LR
comp=Z,8μm,19.1s
TIA LR LR
comp=Z,10μm,19.1s
TIA LR LR
comp=Z,16μm,19.0s
LPIG La Paz 94.05 62 P **P** **03 06 01.6 +1.1**
comp=Z,22nm,0.3s,baz=277,slow=2.7,SNR=7.9
KMI Kunming 94.17 300 P **P** **03 06 03.3 +2.0**
KMI pP pP 03 06 12.5 +0.6
KMI sP sP 03 06 18.0 +2.3
KMI PP **PP** **03 09 54.8 +6.2**
KMI SKS **SKSac** **03 16 32.6 -1.5**
KMI S **S** **03 17 11.3 +1.0**
KMI sS pS 03 17 26.9 +2.9
KMI SS **SS** **03 23 33.6 +1.4**
KMI pmax pmax
comp=Z,990nm,7.4s
KMI LR LR
comp=Z,5μm,19.8s
KMI LR LR
comp=Z,7μm,18.2s
KMI LR LR
comp=Z,8μm,20.3s
KMI Kunming 94.17 300 IAMs_20 IAMs_20 03 52 37.2
comp=Z,9μm,20.0s
PET Petropavlovsk 94.46 350 *eP* **P** **03 06 04.0 +2.4**
PET *e* 03 09 57.2
PET *e* 03 16 34.4
PET *eS* **S** **03 17 12.5 +1.6**
PET pmax pmax
comp=Z,900nm,13.9s
PET pmax pmax
comp=Z,1μm,12.4s
PET MLR MLR
comp=Z,5μm,19.0s
PET MLR MLR
comp=Z,4μm,18.0s
PET Petropavlovsk 94.46 350 IAMs_20 IAMs_20 03 41 17.2
comp=Z,9μm,21.0s
MDJ Mudanjiang 94.47 329 P **P** **03 06 02.8 +0.9**
MDJ pP pP 03 06 11.9 -0.6
MDJ sP sP 03 06 15.3 -1.0
MDJ PP **PP** **03 09 54.8 +4.5**
MDJ SKS **SKSac** **03 16 30.3 -3.9**
MDJ S **ScS** **03 17 18.8 +6.2**
MDJ pmax pmax
comp=Z,26nm,1.2s
MDJ LR LR
comp=Z,4μm,18.5s
MDJ LR LR
comp=Z,4μm,19.6s
MDJ LR LR
comp=Z,6μm,28.0s
MDJ Mudanjiang 94.47 329 IAmb IAmb 03 06 16.0
comp=Z,35nm,1.0s
PB11 IPOC Station P 94.58 121 IAmb IAmb 03 06 07.6
comp=Z,45nm,1.0s
SNCC San Nicolas Is 94.67 49 IAMs_20 IAMs_20 03 39 08.2
comp=Z,9μm,22.0s
SNCC San Nicolas Is 94.67 49 P **P** **03 06 07.7 +4.6**
baz=224
PEA0B Petropavlovsk- 94.67 349 P **P** **03 06 02.4 -0.2**
PEA0B pmax pmax
comp=Z,71nm,1.2s
PEA0B Petropavlovsk- 94.67 349 P **P** **03 06 02.4 -0.2**
PEA0B IAmb IAmb 03 06 14.3
comp=Z,71nm,1.1s
PEA0B IAMs_20 IAMs_20 03 41 46.9

comp=Z,13µm,22.0s
PETK Petropavlovsk- 94.67 349 P **P** **03 06 02.2 -0.4**
comp=Z,6.8nm,0.7s,baz=135,slow=8.4,SNR=7.0
PETK LR LR 03 42 08.9
comp=Z,12µm,21.8s,baz=160,slow=31
SRIG Santa Rosalia 94.97 58 IAmb IAmb 03 06 23.6
comp=Z,30nm,1.1s
SRIG IAMs_20 IAMs_20 03 39 06.9
comp=Z,12µm,22.0s
SCI2 San Clemente I 95.04 50 P **P** **03 06 07.5 +2.7**
baz=224
MNMC Minye Minye 95.07 120 IAmb IAmb 03 06 10.2
comp=Z,38nm,1.1s
MNMC IAMs_20 IAMs_20 03 39 40.9
comp=Z,10µm,20.0s
SCZ2 Santa Cruz Isl 95.14 49 P **P** **03 06 08.6 +3.3**
baz=224,SNR=7.4
DGAR Diego Garcia 95.22 256 *i* P **P** **03 06 05.5 -0.7**
DGAR pmax pmax
comp=Z,68nm,1.2s
DGAR Diego Garcia 95.22 256 P **P** **03 06 06.2 0.0**
DGAR IAmb IAmb 03 06 19.7
comp=Z,43nm,0.8s
DGAR Diego Garcia 95.22 256 IAMs_20 IAMs_20 03 43 35.5
comp=Z,9µm,20.0s
CIS Catalina Islan 95.42 50 P **P** **03 06 09.1 +2.5**
baz=224,SNR=8.0
BLG Laguna Peak, P 95.55 49 P **P** **03 06 11.0 +3.9**
baz=224
PKM Mcpherson Peak 95.69 48 P **P** **03 06 10.9 +2.9**
baz=224,SNR=11
FMP Fort Macarthur 95.71 50 P **P** **03 06 10.8 +2.9**
baz=224
109C Camp Elliot, M 95.83 51 IAmb IAmb 03 06 22.8
comp=Z,26nm,1.1s
109C IAMs_20 IAMs_20 03 42 27.6
comp=Z,7µm,20.0s
109C Camp Elliot, M 95.83 51 P **P** **03 06 11.2 +2.8**
baz=225
BAR Barrett 95.94 52 IAmb IAmb 03 06 12.9
comp=Z,30nm,1.1s
PAGB Antelope Grade 96.05 47 IAMs_20 IAMs_20 03 40 20.8
comp=Z,9µm,21.0s
DECC Green Verdugo 96.08 49 P **P** **03 06 12.0 +2.4**
baz=224
PMPB Monarch Peak 96.09 47 IAMs_20 IAMs_20 03 40 34.0
comp=Z,9µm,22.0s
PASC Pasadena Art C 96.10 50 IAMs_20 IAMs_20 03 40 23.3
comp=Z,9µm,21.0s
OSI Osito Audit: C 96.11 49 IAMs_20 IAMs_20 03 40 14.5
comp=Z,9µm,21.0s
SAO San Andreas Ge 96.14 46 IAMs_20 IAMs_20 03 44 44.8
comp=Z,8µm,19.0s
MWC Mount Wilson 96.22 50 IAMs_20 IAMs_20 03 40 28.3
comp=Z,9µm,22.0s
MONP2 Monument Peak 96.23 52 P **P** **03 06 13.1 +2.5**
baz=225,SNR=42
IKP In-Ko-Pah, Jac 96.25 52 P **P** **03 06 13.3 +2.8**
baz=225,SNR=28
MURC Murrieta 96.28 51 P **P** **03 06 12.9 +2.4**
baz=225,SNR=18
MCCM Marconi Confer 96.38 44 IAMs_20 IAMs_20 03 41 23.6
comp=Z,7µm,19.0s
ARVC Arvin 96.42 49 P **P** **03 06 13.7 +2.7**
baz=224,SNR=6.5
BFSC Mount Baldy Ra 96.46 50 P **P** **03 06 13.5 +2.1**
baz=224,SNR=36
XAN Xi'an 96.50 310 P **P** **03 06 12.3 +0.8**
XAN pP pP 03 06 22.1 0.0
XAN SKS **SKSac** **03 16 40.3 -5.3**
XAN S **ScS** **03 17 34.6 +4.4**
XAN SS **SS** **03 24 07.1 +2.4**
XAN pmax pmax
comp=Z,890nm,7.1s
XAN LR LR
comp=Z,4µm,18.4s
XAN LR LR
comp=Z,5µm,19.8s
XAN LR LR
comp=Z,10µm,20.4s
XAN Xi'an 96.50 310 IAMs_20 IAMs_20 03 48 59.0
comp=Z,11µm,20.0s
SWSC Sam W. Stewart 96.64 52 P **P** **03 06 15.2 +3.1**
baz=225,SNR=16
TPFO Pinon Flats 96.72 51 P **P** **03 06 14.8 +2.2**
baz=225,SNR=25
PFO Pinyon Flats O 96.72 51 P **P** **03 06 11.7 -0.9**
PFO pmax pmax
comp=Z,22nm,1.1s
PFO Pinyon Flats O 96.72 51 P **P** **03 06 13.9 +1.3**
comp=Z,17nm,1.0s,baz=230,slow=1.9,SNR=24
PFO Pinyon Flats O 96.72 51 P **P** **03 06 11.7 -0.9**
PFO IAmb IAmb 03 06 16.6
comp=Z,22nm,1.1s
PFO Pinyon Flats O 96.72 51 IAMs_20 IAMs_20 03 43 03.3
comp=Z,9µm,19.0s
PFO Pinyon Flats O 96.72 51 P **P** **03 06 14.8 +2.2**
baz=225,SNR=22
EDW2 Edwards Air Fo 96.72 49 P **P** **03 06 15.1 +2.6**
baz=224,SNR=15
XPFO Pion Flat 96.72 51 P **P** **03 06 11.8 -0.8**
XPFO IAmb IAmb 03 06 16.6
comp=Z,22nm,1.1s
XPFO PP **PP** **03 10 05.1 -3.1**
XPFO Pion Flat 96.72 51 IAMs_20 IAMs_20 03 43 02.3
comp=Z,9µm,19.0s
VES Vestal, Richgr 96.78 48 P **P** **03 06 15.5 +2.8**
baz=224,SNR=7.5
BJT Baijiatuau 96.89 318 IAMs_20 IAMs_20 03 45 32.7
comp=Z,9µm,22.0s
BJI Beijing 96.90 318⇑ *i* P **P** **03 06 14.0 +0.9**
BJI PP **PP** **03 10 13.0 +3.7**
BJI S **S** **03 17 36.6 +3.9**
BJI pmax pmax
comp=Z,620nm,10.3s
BJI LR LR
comp=Z,6µm,26.5s
BJI LR LR
comp=Z,12µm,26.5s
BBRC Big Bear Solar 96.91 50 P **P** **03 06 16.5 +2.9**
baz=225
HOPS Hopland Field 96.91 43 IAMs_20 IAMs_20 03 42 11.5
comp=Z,8µm,20.0s
GDXM Geysers 96.92 44 IAMs_20 IAMs_20 03 41 49.7
comp=Z,9µm,19.0s
HSIG 96.96 58 IAMs_20 IAMs_20 03 40 05.6
comp=Z,10µm,21.0s
VOG Valley Oaks Go 96.96 47 P **P** **03 06 16.8 +3.3**
baz=224
ISA Isabella, Lake 97.00 48 IAMs_20 IAMs_20 03 40 52.1
comp=Z,9µm,22.0s
ISA Isabella, Lake 97.00 48 P **P** **03 06 16.4 +2.7**
baz=224,SNR=18
RER Riviere de l'E 97.06 235 P **P** **03 06 14.0 -0.5**
RER IAMs_20 IAMs_20 03 44 53.5
comp=Z,8µm,18.0s
CPUP Villa Florida 97.10 134 P Pdif 03 06 14.9 +0.2
comp=Z,7.1nm,0.8s,baz=249,slow=3.9,SNR=14
CPUP PKKP **PKKPbc** **03 22 53.3 +0.4**
comp=Z,1.8nm,0.8s,baz=159,slow=2.8,SNR=4.3
CPUP LR LR 03 44 33.5
comp=Z,8µm,18.8s,baz=222,slow=32
TIY Taiyuan 97.15 314 *eP* Pdif 03 06 22.9 +8.4
TIY PP **PP** **03 10 06.5 -4.8**
TIY Taiyuan 97.15 314 S **S** **03 17 42.9 +7.7**
TIY pmax pmax
comp=Z,510nm,5.4s
TIY LR LR
comp=N,8µm,20.7s
TIY LR LR
comp=E,4µm,20.2s
TIY LR LR
comp=Z,10µm,20.7s
KCPM Cahto Peak 97.16 43 IAMs_20 IAMs_20 03 43 00.0
comp=Z,9µm,20.0s
BELC Belle Mtn. Jos 97.26 51 P Pdif 03 06 17.3 +2.2
baz=225,SNR=34
RRX Edison Barstow 97.29 50 P Pdif 03 06 18.6 +3.4
baz=225
GLA Glamis 97.30 52 IAMs_20 IAMs_20 03 40 32.3
comp=Z,8µm,22.0s
GLA Glamis 97.30 52 P Pdif 03 06 17.7 +2.5
baz=226,SNR=20
LRMC Laurel Mtn Rad 97.32 49 P Pdif 03 06 18.1 +2.7
baz=225,SNR=27
GRNR Gornyy 97.33 336⇓ *i* P **P** **03 06 15.0 +0.2**
GRNR *e* 03 10 09.3
GRNR *eS* **S** **03 17 38.8 +2.8**
GRNR *eSS* **SS** **03 24 17.8 +2.1**
GRNR pmax pmax
comp=Z,10.0nm,1.5s
GRNR smax smax
comp=N,5.0nm,0.9s
BC3 Big Chuckawall 97.35 52 P Pdif 03 06 18.2 +2.7
baz=226,SNR=40
CD2 Chengdu 97.46 304⇑ P Pdif 03 06 17.8 +1.8
CD2 pP pP 03 06 24.5 -2.1
CD2 SKS **SKSac** **03 16 47.1 -3.6**
CD2 S **S** **03 17 38.4 +0.3**
CD2 SS **SS** **03 24 19.3 +1.0**
CD2 pmax pmax
comp=N,30nm,0.9s
CD2 pmax pmax
comp=N,130nm,6.7s
CD2 LR LR
comp=N,9µm,20.4s
CD2 LR LR
comp=N,7µm,20.0s
CD2 LR LR
comp=N,11µm,20.0s
KMRM Mail Ridge 97.49 42 IAMs_20 IAMs_20 03 42 48.5
comp=Z,10µm,19.0s
KLR Kul'dur 97.54 333 *i* P **P** **03 06 14.6 -1.2**
KLR pmax pmax
comp=Z,12nm,1.1s
KLR MLR MLR
comp=Z,5µm,20.0s
KLR Kul'dur 97.54 333 P **P** **03 06 15.4 -0.4**
comp=Z,11nm,1.1s,baz=155,slow=4.2,SNR=11
KLR PP **PP** **03 10 13.0 -1.1**
comp=Z,2.7nm,0.9s,baz=140,slow=5.3,SNR=3.6
HEC Hector,Ludlow 97.65 50 P Pdif 03 06 19.5 +2.7
baz=225,SNR=9.0
GSC Goldstone, Bar 97.70 50 IAmb IAmb 03 06 32.3
comp=Z,28nm,1.1s
GSC IAMs_20 IAMs_20 03 45 19.7
comp=Z,10µm,19.0s
GSC Goldstone, Bar 97.70 50 P Pdif 03 06 19.7 +2.6
baz=225,SNR=16
113A Mohawk Valley, 97.75 53 IAMs_20 IAMs_20 03 44 23.6
comp=Z,7µm,19.0s
214A Organ Pipe Nat 97.78 54 P Pdif 03 06 20.5 +3.1
baz=227,SNR=11
CWC Cottonwood Cre 97.78 48 P Pdif 03 06 21.2 +3.7
baz=224
MPMC Manual Prospec 97.84 49 P Pdif 03 06 21.6 +3.8
baz=225,SNR=13
IRM Iron Mountain 97.88 51 P Pdif 03 06 20.3 +2.5
baz=226,SNR=52
O02D Mt. Diablo Mer 97.93 43 P Pdif 03 06 20.8 +2.8
baz=222,SNR=9.0
DAC Darwin (Calif) 97.94 48 IAMs_20 IAMs_20 03 41 47.9
comp=Z,10µm,22.0s
KHMM Horse Mountain 97.97 42 IAMs_20 IAMs_20 03 43 13.3
comp=Z,8µm,21.0s
Y12C Blythe 97.97 52 IAmb IAmb 03 06 36.7
comp=Z,22nm,1.0s
Y12C IAMs_20 IAMs_20 03 48 30.4
comp=Z,7µm,18.0s
Y12C Blythe 97.97 52 P Pdif 03 06 20.6 +2.4
baz=226,SNR=12
AFDM Forest Hills D 97.99 45 IAMs_20 IAMs_20 03 42 24.1
comp=Z,8µm,21.0s
GMRC Granite Mounta 98.01 51 P Pdif 03 06 20.7 +2.2
baz=226,SNR=17
TLIG Tlapa 98.02 74 IAMs_20 IAMs_20 03 40 16.6
comp=Z,9µm,21.0s
MDPB Devils Postpil 98.07 47 IAMs_20 IAMs_20 03 41 45.3
comp=Z,9µm,22.0s
LPAZ La Paz 98.08 119 PP **PP** **03 10 20.8 +2.1**
comp=Z,8.6nm,1.3s,baz=201,slow=6.0,SNR=4.0
LPAZ LR LR 03 40 44.9
comp=Z,10µm,21.9s,baz=196,slow=29
OMMB Old Mammoth Mi 98.10 47 IAMs_20 IAMs_20 03 41 47.1
comp=Z,10µm,22.0s
TIN Tinemaha, Big 98.13 48 Pdif Pdif 03 06 22.4 +3.4
baz=224
MLAC Mammoth, Mammo 98.20 47 Pdiff Pdif 03 06 23.3 +3.9
baz=224
NKL Nikolayevsk 98.22 340 *eP* Pdif 03 06 24.1 +5.4
NKL *e* 03 10 20.8
NKL *ePS* PS 03 19 09.0 -3.2
NKL pmax pmax
comp=Z,6.0nm,1.5s
NKL pmax pmax
comp=E,1.0nm,1.3s
NKL pmax pmax
comp=N,6.0nm,0.7s
TUQ Turquoise Moun 98.31 50 Pdiff Pdif 03 06 22.7 +2.9
baz=226
WDC Whiskeytown Da 98.36 43 IAMs_20 IAMs_20 03 43 29.7
comp=Z,8µm,20.0s
KRMB Red Mountain, 98.36 41 IAMs_20 IAMs_20 03 42 02.7
comp=Z,9µm,22.0s
SHOC Shoshone, Teco 98.43 50 Pdiff Pdif 03 06 22.7 +2.5
baz=225
ZAIG Zacatecas 98.49 67 IAMs_20 IAMs_20 03 42 34.1
comp=Z,8µm,20.0s
FURC Furnace Creek, 98.49 49 Pdiff Pdif 03 06 23.1 +2.8
baz=225
RUBR Rubicon Trail 98.50 45 IAMs_20 IAMs_20 03 42 29.7
comp=Z,8µm,21.0s
O03E Paynes Creek 98.53 43 Pdiff Pdif 03 06 23.4 +2.8
baz=223
PALK Pallekele 98.54 272 *i* P **P** **03 06 18.6 -2.6**
PALK pmax pmax
comp=Z,35nm,1.2s
PALK Pallekele 98.54 272 P Pdif 03 06 22.8 +1.6
comp=Z,15nm,1.1s,baz=162,slow=3.2,SNR=3.4
PALK Pallekele 98.54 272 P **P** **03 06 20.9 -0.3**
PALK IAmb IAmb 03 06 39.2
comp=Z,19nm,0.9s
N02D Trinity Center 98.56 42 Pdiff Pdif 03 06 24.8 +4.1
baz=222
GRAC Grapevine Rang 98.58 48 Pdiff Pdif 03 06 24.4 +3.6
baz=225
NEE2 Needles Airpor 98.62 51 Pdiff Pdif 03 06 24.2 +3.2
baz=226
UNM Universidad Na 98.70 72 IAMs_20 IAMs_20 03 40 41.7
comp=Z,11µm,21.0s
KBO Bosley Butte 98.71 41 IAMs_20 IAMs_20 03 43 32.7
comp=Z,8µm,21.0s
M02C Callahan 98.79 42 Pdiff Pdif 03 06 26.1 +4.4
baz=222
PNTR Pine Nut 98.83 45 IAMs_20 IAMs_20 03 42 40.3
comp=Z,7µm,21.0s
VCNR Virginia City 98.95 45 IAMs_20 IAMs_20 03 42 32.5
comp=Z,7µm,21.0s
BEKR Beckworth 98.98 44 IAMs_20 IAMs_20 03 42 54.3
comp=Z,7µm,21.0s
Y14A Wickenburg 99.02 53 IAMs_20 IAMs_20 03 41 34.1
comp=Z,10µm,22.0s
NVAR Mina Array Bea 99.07 47 P **Pdif** **03 06 24.6 +1.4**
comp=Z,5.1nm,0.9s,baz=216,slow=7.4,SNR=23
NVAR PKKP **PKKPdf** **03 22 51.6 -1.6**
comp=Z,1.0nm,0.8s,baz=70,slow=4.4,SNR=3.7
NVAR PKPPKP 03 31 06.5
comp=Z,0.6nm,0.9s,baz=127,slow=2.4,SNR=4.6
NVAR LR LR 03 42 43.6
comp=Z,9µm,22.0s,baz=226,slow=30
RYN Ryan 99.09 46 IAMs_20 IAMs_20 03 42 29.2
comp=Z,8µm,22.0s
YBH Yreka Blue Hor 99.12 42 P **Pdif** **03 06 25.0 +1.8**
YBH Yreka Blue Hor 99.12 42 P **Pdif** **03 06 25.0 +1.8**
comp=Z,2.0nm,1.0s,baz=236,slow=7.3,SNR=3.7
YBH Yreka Blue Hor 99.12 42 PP **PP** **03 10 22.4 -3.9**
CHIR Chirikof Islan 99.12 16 IAMs_20 IAMs_20 03 41 23.4
comp=Z,11µm,22.0s
NV11 Mina Array Sit 99.15 47 IAMs_20 IAMs_20 03 42 19.9
comp=Z,9µm,21.0s
TPNV Topopah Spring 99.18 49 IAMs_20 IAMs_20 03 42 12.7
comp=Z,11µm,22.0s
TPNV Topopah Spring 99.18 49 Pdiff **Pdif** **03 06 27.7 +4.1**
baz=226
TUC Tucson 99.28 55 P **Pdif** **03 06 24.9 +0.8**
TUC pmax pmax
comp=Z,15nm,1.2s
TUC Tucson 99.28 55 P **Pdif** **03 06 24.9 +0.8**
TUC Tucson 99.28 55 Pdiff **Pdif** **03 06 27.1 +3.0**
baz=228
PAHR Pah Rah Range 99.39 45 IAMs_20 IAMs_20 03 42 57.2
comp=Z,8µm,21.0s
SHPR Sheep Range 99.50 50 IAMs_20 IAMs_20 03 46 25.3
comp=Z,7µm,19.0s
M04C Macdoel 99.60 42 Pdiff **Pdif** **03 06 28.1 +2.8**
baz=223
319A Douglas 99.61 57 IAMs_20 IAMs_20 03 42 00.2
comp=Z,9µm,21.0s
HUMO Hull Mountain 99.64 41 IAMs_20 IAMs_20 03 42 31.6
comp=Z,7µm,22.0s
L04D Klamath Falls 99.68 42 Pdiff **Pdif** **03 06 28.3 +2.6**
baz=223
HHC Hu-ho-hao-te 99.89 316 *eP* **Pdif** **03 06 29.3 +2.7**
HHC PP **PP** **03 10 37.8 +5.6**
HHC S **S** **03 17 59.5 +1.2**
HHC SS **SS** **03 24 57.8 +5.6**
HHC pmax pmax
comp=Z,190nm,7.3s
HHC LR LR
comp=Z,5µm,18.0s
HHC LR LR
comp=Z,5µm,19.4s
HHC LR LR
comp=Z,9µm,19.2s
AZL Aizawl 100.13 292 *eP* **Pdif** **03 06 22.1 -6.0**
AZL IAmb IAmb 03 06 40.6
comp=Z,10nm,1.1s
AZL *i* PP **PP** **03 10 33.6 -0.8**
AZL IAMs_20 IAMs_20 03 47 22.2
comp=Z,6µm,25.7s
X16A Lo Mia Camp, P 100.29 53 IAMs_20 IAMs_20 03 42 35.9
comp=Z,7µm,21.0s
KOHI KOHIMA 100.41 295 *eP* **Pdif** **03 06 36.0 +6.7**
KOHI *i* x x 03 10 35.1
KOHI IAMs_20 IAMs_20 03 50 51.2
comp=Z,8µm,30.3s
MOD Modoc Plateau 100.47 43 IAMs_20 IAMs_20 03 43 15.8
comp=Z,8µm,22.0s
J04D Umpqua Nationa 100.52 41 Pdiff **Pdif** **03 06 33.9 +4.3**
baz=223
R11A Troy Canyon, C 100.53 48 IAMs_20 IAMs_20 03 43 18.1
comp=Z,10µm,22.0s
R11A Troy Canyon, C 100.53 48 Pdiff **Pdif** **03 06 34.2 +4.6**
baz=226
K05A Summer Lake 100.76 42 IAMs_20 IAMs_20 03 45 08.4
comp=Z,9µm,21.0s
OHAK Old Harbor 100.91 17 IAMs_20 IAMs_20 03 46 13.3
comp=Z,8µm,20.0s
LZH Lanzhou 100.92 308⇑ P **Pdif** **03 06 32.0 +0.6**
LZH pP pPdif 03 06 40.3 -1.8
LZH sP sPdif 03 06 46.5 +0.7
LZH PP **PP** **03 10 46.6 +6.4**
LZH SKS 03 17 04.4
LZH S **Sdif** **03 17 57.8 -9.4**
LZH SS **SS** **03 25 11.3 +4.5**
LZH pmax pmax
comp=Z,29nm,1.4s
LZH pmax pmax
comp=Z,470nm,5.4s
LZH LR LR
comp=Z,3µm,17.1s
LZH LR LR
comp=Z,4µm,18.3s
LZH LR LR
comp=Z,7µm,19.2s
COR Corvallis 100.92 39 IAMs_20 IAMs_20 03 44 05.6
comp=Z,9µm,22.0s
J05D Fort Rock, OR 100.99 42 Pdiff **Pdif** **03 06 35.8 +4.3**
baz=224
WUAZ Wupatki 101.07 53 IAMs_20 IAMs_20 03 42 39.5
comp=Z,8µm,22.0s
WUAZ Wupatki 101.07 53 Pdiff **Pdif** **03 06 34.7 +2.6**
baz=228
X18A Snowflake 101.28 54 IAMs_20 IAMs_20 03 46 05.1
comp=Z,7µm,20.0s
121A Cookes Peak, D 101.32 57 Pdiff **Pdif** **03 06 35.9 +2.6**
baz=229
PINE Pine Mountain 101.51 41 IAMs_20 IAMs_20 03 44 07.1
comp=Z,7µm,21.0s
KDAK Kodiak Island 101.58 17 IAMs_20 IAMs_20 03 47 15.4
comp=Z,8µm,20.0s
ITAN ITANAGAR 101.58 296 *eP* **Pdif** **03 06 42.6 +8.3**
EPT El Paso 101.65 58 IAMs_20 IAMs_20 03 42 54.9
comp=Z,8µm,22.0s
WVOR Wild Horse Val 101.72 44 IAMs_20 IAMs_20 03 53 45.9
comp=Z,6µm,19.0s
F03A Seaside 101.79 38 IAMs_20 IAMs_20 03 44 18.5
comp=Z,9µm,21.0s
W18A Petrified Fore 101.80 54 Pdiff **Pdif** **03 06 39.0 +3.6**
baz=228
SHL Shillong 101.86 293 *eP* **Pdif** **03 06 34.9 -0.9**
SHL *i* x x 03 10 57.3
SHL IAMs_20 IAMs_20 03 49 14.4
comp=Z,7µm,24.3s
SHL Shillong 101.86 293 IAMs_20 IAMs_20 03 56 31.2
comp=Z,9µm,22.0s
TEZP TEZPUR 101.89 295 *eP* **Pdif** **03 06 41.7 +6.0**
TXAR Lajitas Array 101.95 62 P **Pdif** **03 06 37.2 +1.1**
comp=Z,2.4nm,1.1s,baz=199,slow=6.6,SNR=12
TXAR PP **PP** **03 10 49.2 +1.2**
comp=Z,0.6nm,1.0s,baz=271,slow=8.8,SNR=5.1
TXAR PKKPbc **PKKPbc** **03 22 41.8 +1.8**
comp=Z,4.0nm,0.6s,baz=72,slow=4.7,SNR=31
TXAR PKPPKP 03 30 57.9
comp=Z,0.2nm,0.8s,baz=27,slow=1.0,SNR=3.7
MA2 Magadan 101.97 347 IAMs_20 IAMs_20 03 45 53.0
comp=Z,10µm,22.0s
OTAV Otavalo 102.08 100 IAMs_20 IAMs_20 03 42 09.9
comp=Z,8µm,22.0s
HIA Hailar 102.23 326 IAMs_20 IAMs_20 03 48 30.7
comp=Z,10µm,22.0s
E03A Lebam 102.24 38 IAMs_20 IAMs_20 03 44 51.4
comp=Z,8µm,21.0s
MNTX Cornudas Mount 102.33 59 IAMs_20 IAMs_20 03 45 55.9
comp=Z,7µm,19.0s
MNTX Cornudas Mount 102.33 59 Pdiff **Pdif** **03 06 41.4 +3.7**
baz=230
F04A Amboy 102.33 39 IAMs_20 IAMs_20 03 44 59.9
comp=Z,10µm,21.0s
ELK Elko 102.38 47 P **Pdif** **03 06 39.7 +1.8**
comp=Z,1.3nm,0.9s,baz=239,slow=3.5,SNR=6.5
ELK PP **PP** **03 10 56.3 +5.1**
comp=Z,1.3nm,1.0s,baz=240,slow=7.4,SNR=4.3
ELK Elko 102.38 47 IAMs_20 IAMs_20 03 44 34.9
comp=Z,9µm,22.0s
I07A Izee 102.44 42 IAMs_20 IAMs_20 03 44 39.4
comp=Z,7µm,22.0s
J08A Circle Bar Ran 102.46 43 IAMs_20 IAMs_20 03 45 54.3
comp=Z,8µm,21.0s
NLWA Neilton Lookou 102.72 37 IAMs_20 IAMs_20 03 45 27.1
comp=Z,8µm,21.0s
ZEA Zeya 102.86 333 *eP* **Pdif** **03 06 31.1 -8.2**
ZEA *e* 03 10 58.0
ZEA *ePS* **SKSac** **03 17 14.0 -2.0**
ZEA *e* 03 19 54.0
ZEA *e* 03 25 36.0
ZEA pmax pmax
comp=Z,14nm,1.2s
ZEA pmax pmax
comp=Z,400nm,8.0s
Y22D IRIS PASSCAL I 102.87 56 IAMs_20 IAMs_20 03 44 37.3
comp=Z,10µm,21.0s
BWNR Bhubaneshwar 102.91 286 *eP* **Pdif** **03 06 45.4 +5.0**
BWNR *i* x x 03 42 41.0
BWNR IAMs_20 IAMs_20 03 52 32.5
comp=Z,23µm,23.3s
CTUM2 Tumaco 102.92 99 *eP* PKiKP 03 11 16.7 +16
TUMC Tumaco 102.92 99 *eP* **PKiKP** **03 10 56.8 -4.1**
CHLP Challavanipeta 103.09 283 *eP* **PKiKP** **03 10 58.2 -2.8**
CHLP *e*SKSac **SKSac** **03 17 16.1 -2.6**
CHLP IVMs_BB IVMs_BB 03 48 34.5
comp=Z,1µm,22.7s
LON Longmire 103.22 39 IAMs_20 IAMs_20 03 45 26.3
comp=Z,11µm,21.0s
DUG Dugway, Tooele 103.36 48 IAMs_20 IAMs_20 03 44 47.4
comp=Z,7µm,22.0s
SKHT Srikalahasti 103.38 277 *eP*dif **Pdif** **03 06 44.1 +1.5**
SKHT *e*SKSac **SKSac** **03 17 19.7 -0.5**
SKHT IVMs_BB IVMs_BB 03 49 29.8
comp=Z,3µm,20.5s
D05A Enumclaw 103.45 38 IAMs_20 IAMs_20 03 45 44.9
comp=Z,8µm,21.0s
CNPM China Poot 103.46 17 IAMs_20 IAMs_20 03 47 44.2
comp=Z,7µm,20.0s
JTS Las Juntas de 103.63 88 IAMs_20 IAMs_20 03 46 07.9
comp=Z,9µm,18.0s
ANMO Albuquerque 103.73 56 Pdiff **Pdif** **03 06 44.9 +0.9**
comp=Z,1.2nm,0.8s,baz=266,slow=6.5,SNR=5.7
ANMO PP **PKiKP** **03 11 01.9 -0.1**
comp=Z,4.8nm,1.2s,baz=219,slow=7.1,SNR=7.4
ANMO Albuquerque 103.73 56 IAMs_20 IAMs_20 03 45 25.9

comp=Z,9µm,21.0s
ANMO Albuquerque 103.73 56 Pdiff **Pdif 03 06 45.8 +1.8**
baz=230
BRLK Bradley Lake 103.75 17 IAMs_20 IAMs_20 03 54 15.8
comp=Z,6µm,19.0s
SUR Sutherland 103.75 202 Pdiff **Pdif 03 06 45.1 +0.7**
comp=Z,11nm,0.9s,baz=144,slow=10,SNR=6.6
SUR PP **PP 03 11 01.5 +1.4**
comp=Z,7.8nm,0.8s,baz=117,slow=8.0,SNR=3.6
SUR Sutherland 103.75 202 IAMs_20 IAMs_20 03 48 20.0
comp=Z,8µm,20.0s
ABPO Ambohimpanom 103.81 230 IAMs_20 IAMs_20 03 46 06.2
comp=Z,7µm,20.0s
MVCO Mesa Verde 103.93 53 IAMs_20 IAMs_20 03 44 41.2
comp=Z,7µm,21.0s
HMDM Hanimaadhoo 103.94 267 IAMs_20 IAMs_20 03 51 24.3
comp=Z,10µm,20.0s
E07A Sunnyside 104.02 40 IAMs_20 IAMs_20 03 45 55.6
comp=Z,8µm,22.0s
CRUC La Cruz 104.08 100 *e*P **PKiKP 03 11 00.8 -2.7**
BMO Blue Mountains 104.10 42 IAMs_20 IAMs_20 03 46 55.8
comp=Z,9µm,20.0s
LTY Liberty 104.12 39 IAMs_20 IAMs_20 03 45 56.3
comp=Z,11µm,21.0s
PVM Polavaram 104.12 281 *e*Pdif **Pdif 03 06 47.1 +1.2**
PVM *e*SKSac **SKSac 03 17 21.5 -2.0**
PVM IVMs_BB IVMs_BB 03 47 35.3
comp=Z,1µm,23.2s
BBAC Balboa, Cauca 104.16 100 *e*P **PKiKP 03 11 00.8 -2.7**
OPO Ambohidratompo 104.18 230 PP **PKiKP 03 11 04.7 +1.4**
comp=Z,3.7nm,0.8s,baz=228,slow=12,SNR=3.4
833A Chaparral WMA, 104.22 65 IAMs_20 IAMs_20 03 46 52.9
comp=Z,9µm,19.0s
TGUH Tegucigalpa,Un 104.23 84 *e*P **PKiKP 03 11 00.8 -2.5**
TGUH Tegucigalpa,Un 104.23 84 IAMs_20 IAMs_20 03 44 08.0
comp=Z,6µm,20.0s
ESTN Estel 104.32 85 IAMs_20 IAMs_20 03 43 35.3
comp=Z,7µm,22.0s
SEW Seward 104.38 17 IAMs_20 IAMs_20 03 58 49.4
comp=Z,6µm,20.0s
ADKI Addanki 104.50 279 *e*P **Pdif 03 06 56.7 +9.1**
ADKI IVMs_BB IVMs_BB 03 51 01.7
comp=Z,2µm,21.9s
SPB Sao Paulo 104.51 140 IAMs_20 IAMs_20 03 49 43.8
comp=Z,6µm,20.0s
MYLAV Mylavaram 104.56 280 *e*Pdif **Pdif 03 06 50.2 +2.4**
MYLAV *e*SKSac **SKSac 03 17 24.0 -1.5**
MYLAV IVMs_BB IVMs_BB 03 52 04.9
comp=Z,2µm,21.0s
SOTA Rioblanco 104.71 100 *e*P PKiKP 03 11 12.8 +7.9
SEY Seymchan 104.92 349 PKKPbc PKKPbc 03 22 32.3 +0.2
comp=Z,2.2nm,0.8s,baz=13,slow=2.6,SNR=4.5
LSA Lhasa 104.95 296 P **PKiKP 03 11 07.5 +2.8**
LSA S **SKSac 03 17 22.5 -5.3**
LSA pmax pmax
comp=Z,48nm,1.2s
LSA AMB AMB
comp=Z,3µm,8.9s
LSA LR LR
comp=N,12µm,28.5s
LSA LR LR
comp=E,8µm,23.8s
LSA LR LR
comp=Z,32µm,26.7s
HWUT Hardware Ranch 105.01 48 IAMs_20 IAMs_20 03 46 11.6
comp=Z,9µm,22.0s
BOK Bokaro 105.02 288 *i* PP **PKiKP 03 11 06.3 +1.9**
BOK IAMs_20 IAMs_20 03 50 36.1
comp=Z,8µm,26.1s
FLOC Florencia 105.06 101 *e*P **PKiKP 03 11 04.8 -0.1**
CRAG Craig 105.14 27 IAMs_20 IAMs_20 03 50 26.1
comp=Z,6µm,20.0s
RC01 Rabbit Creek A 105.20 17 IAMs_20 IAMs_20 03 50 57.1
comp=Z,6µm,20.0s
S22A 4UR Ranch, Cre 105.29 53 IAMs_20 IAMs_20 03 48 53.7
comp=Z,7µm,20.0s
SUA Susitna One 105.32 16 IAMs_20 IAMs_20 03 49 29.4
comp=Z,7µm,20.0s
NJS Nagarjunasagar 105.43 279 *e*Pdif **Pdif 03 06 52.4 +0.7**
NJS *e*SKSac **SKSac 03 17 27.1 -2.4**
NJS IVMs_BB IVMs_BB 03 51 28.1
comp=Z,2µm,23.9s
SRLM Srisailam 105.47 278 *e*Pdif **Pdif 03 06 53.2 +1.3**
SRLM *e*SKSac **SKSac 03 17 26.9 -2.9**
SRLM IVMs_BB IVMs_BB 03 49 00.6
comp=Z,2µm,21.4s
B08A Colville Reser 105.54 39 IAMs_20 IAMs_20 03 46 48.8
comp=Z,8µm,21.0s
GGR Gangavaram 105.54 280 *e*Pdif **Pdif 03 06 55.0 +2.8**
GGR *e*SKSac **SKSac 03 17 27.4 -2.7**
GGR IVMs_BB IVMs_BB 03 53 08.7
comp=Z,2µm,20.2s
SKT Skwentna 105.63 15 IAMs_20 IAMs_20 03 51 33.5
comp=Z,6µm,20.0s
C09A Chrisman Ranch 105.66 40 IAMs_20 IAMs_20 03 46 54.9
comp=Z,9µm,21.0s
SIT Sitka 105.66 25 IAMs_20 IAMs_20 03 53 24.5
comp=Z,6µm,20.0s
RAGM Ragged Mountai 105.76 19 IAMs_20 IAMs_20 03 47 45.0
comp=Z,9µm,21.0s
HMT Hamilton 105.82 19 IAMs_20 IAMs_20 03 47 44.6
comp=Z,7µm,21.0s
BOSA Boshof 105.87 207 P **Pdif 03 06 54.0 +0.2**
BOSA Boshof 105.87 207 Pdiff **Pdif 03 06 54.2 +0.4**
comp=Z,3.4nm,0.8s,baz=167,slow=7.3,SNR=7.4
BOSA PP **PP 03 11 16.4 +0.6**
comp=Z,9.1nm,1.1s,baz=143,slow=9.8,SNR=5.9
BOSA PKKPbc **PKKPbc 03 22 28.6 +0.6**
comp=Z,6.0nm,0.8s,baz=348,slow=3.3,SNR=12
BOSA PKKP **PKKPdf 03 22 40.0 +2.2**
comp=Z,12nm,1.1s,baz=317,slow=3.0,SNR=5.4
BOSA Boshof 105.87 207 **Pdif 03 06 54.0 +0.2**
BETC Betania 105.95 100 *e*P PKiKP 03 11 16.7 +10
O20A White River Ci 105.97 51 PKiKP **PKiKP 03 11 07.1 +1.2**
baz=230
GHO Glory Hole Cre 105.98 17 IAMs_20 IAMs_20 03 51 09.9
comp=Z,6µm,20.0s
URV Uravakonda 105.98 276 *e*Pdif **Pdif 03 06 55.8 +1.6**
URV *e*SKSac **SKSac 03 17 29.1 -3.1**
URV IVMs_BB IVMs_BB 03 54 47.9
comp=Z,4µm,19.2s
SMCO Snowmass 106.11 52 IAMs_20 IAMs_20 03 45 42.9
comp=Z,9µm,22.0s
YOTC Yotoco, Valle 106.12 99 *e*P **PKiKP 03 11 12.8 +5.8**
WRAK Wrangell Islan 106.15 27 IAMs_20 IAMs_20 03 47 57.6
comp=Z,6µm,20.0s
MESA MESA 106.28 20 IAMs_20 IAMs_20 03 55 16.9
comp=Z,7µm,19.0s
T25A Trinidad 106.40 55 IAMs_20 IAMs_20 03 47 34.6
comp=Z,6µm,21.0s
T25A Trinidad 106.40 55 PKiKP **PKiKP 03 11 10.9 +4.0**
baz=231
DHAK Deception Hill 106.42 23 IAMs_20 IAMs_20 03 54 01.5
comp=Z,6µm,18.0s
CRQM Cirque 106.47 20 IAMs_20 IAMs_20 03 51 08.9
comp=Z,7µm,20.0s
HYB Hyderabad 106.53 279 *i* Pdif **Pdif 03 07 08.0 +11**
HYB Hyderabad 106.53 279 *e*P **Pdif 03 06 49.4 -7.2**
HYB *i* x x 03 43 25.4
HYB IAMs_20 IAMs_20 03 50 04.2
comp=Z,13µm,25.5s
HYBB Hyderabad (bro 106.53 279 *e*P **Pdif 03 06 57.4 +0.7**
HYBB *e*PP **PP 03 11 22.5 +0.4**
HYBB *e*SKSac **SKSac 03 17 31.1 -3.4**
HYBB IVMs_BB IVMs_BB 03 52 35.2
comp=Z,2µm,22.6s
NEW Newport 106.54 40 PKiKP **PKiKP 03 11 07.4 +0.9**
comp=Z,1.8nm,0.7s,baz=193,slow=3.4,SNR=4.9
NEW PKKP **PKKPdf 03 22 42.3 +2.9**
comp=Z,4.9nm,1.0s,baz=23,slow=7.1,SNR=5.2
NEW Newport 106.54 40 IAMs_20 IAMs_20 03 47 22.2
comp=Z,9µm,22.0s
TGL Tana Glacier 106.55 20 IAMs_20 IAMs_20 03 51 00.7
comp=Z,7µm,20.0s
ABTX Abilene, Hawle 106.70 61 IAMs_20 IAMs_20 03 46 06.5
comp=Z,11µm,22.0s
AMTX Amarillo 106.74 58 IAMs_20 IAMs_20 03 48 54.7
comp=Z,7µm,20.0s
PLMC San Jos del P 106.77 98 *e*P **PP 03 11 20.7 -3.0**
MACC Macarena, Meta 106.78 102 *e*P **PP 03 11 24.7 +1.0**
BCIP Isla Barro Col 106.81 92 IAMs_20 IAMs_20 03 46 29.0
comp=Z,8µm,20.0s
RPR Rampur 106.86 281 *e*Pdif **Pdif 03 06 57.6 -0.4**
RPR *e*SKSac **SKSac 03 17 32.9 -2.9**
RPR IVMs_BB IVMs_BB 03 53 58.3
comp=Z,2µm,21.3s
MOOW Moose Ponds 106.86 47 IAMs_20 IAMs_20 03 47 31.7
comp=Z,6µm,22.0s
BW06 Boulder Array 106.89 48 IAMs_20 IAMs_20 03 47 22.9
comp=Z,8µm,22.0s
PDAR Pinedale Array 106.89 48 Pdiff **Pdif 03 07 00.1 +2.2**
comp=Z,0.2nm,0.7s,baz=224,slow=3.8,SNR=2.8
PDAR PKiKP **PKiKP 03 11 08.2 +0.6**
comp=Z,0.7nm,0.7s,baz=216,slow=2.9,SNR=3.5
PDAR PKKPbc **PKKPbc 03 22 25.4 -0.2**
comp=Z,2.1nm,0.7s,baz=78,slow=4.7,SNR=11
PDAR PKKP **PKKPab 03 22 37.9 -0.3**
comp=Z,4.6nm,0.8s,baz=64,slow=3.4,SNR=6.2
ORTC Ortega, Tolima 106.90 100 *e*P **PP 03 11 20.7 -3.9**
JIS Juneau Island 106.94 25 IAMs_20 IAMs_20 03 53 19.3
comp=Z,8µm,19.0s
435B Jarrell 106.97 64 IAMs_20 IAMs_20 03 45 41.8
comp=Z,10µm,22.0s
BESE Bessie Mountai 107.03 25 IAMs_20 IAMs_20 03 53 29.7
comp=Z,8µm,18.0s
Q24A Divide 107.08 53 IAMs_20 IAMs_20 03 50 15.6
comp=Z,6µm,19.0s
ULN Ulaanbaatar 107.08 319 IAMs_20 IAMs_20 03 52 36.7
comp=Z,9µm,22.0s
FLWY Flagg Ranch 107.10 46 IAMs_20 IAMs_20 03 47 28.4
comp=Z,6µm,21.0s
KTH Kantishna Hill 107.17 15 IAMs_20 IAMs_20 03 55 49.3
comp=Z,6µm,20.0s
MSO Missoula 107.17 43 IAMs_20 IAMs_20 03 49 02.1
comp=Z,10µm,20.0s
MSO Missoula 107.17 43 PKiKP **PKiKP 03 11 11.8 +3.9**
baz=228
ISCO Idaho Springs 107.32 52 IAMs_20 IAMs_20 03 46 56.9
comp=Z,9µm,21.0s
H17A Grant Village 107.37 46 IAMs_20 IAMs_20 03 47 37.5
comp=Z,7µm,21.0s
SONM Songino Array 107.39 319 Pdiff **Pdif 03 07 00.5 +0.6**
comp=Z,0.5nm,0.6s,baz=140,slow=4.5,SNR=5.0
SONM PKiKP **PKiKP 03 11 07.8 -0.4**
comp=Z,1.9nm,0.6s,baz=46,slow=0.8,SNR=9.1
SONM PKKPbc **PKKPbc 03 22 24.0 -0.1**
comp=Z,3.5nm,0.9s,baz=305,slow=3.2,SNR=12
SONM PKKP **PKKPdf 03 22 38.5 +0.6**
comp=Z,3.8nm,0.9s,baz=283,slow=3.6,SNR=8.9
RND Reindeer 107.46 16 IAMs_20 IAMs_20 03 50 44.8
comp=Z,6µm,21.0s
RWWY Rawlins 107.56 50 IAMs_20 IAMs_20 03 47 03.5
comp=Z,7µm,22.0s
SKAG Skagway 107.59 24 IAMs_20 IAMs_20 03 49 03.5
comp=Z,6µm,22.0s
CBOC Ciudad Bolivar 107.59 97 *e*P **PP 03 11 24.7 -5.2**
SRSP Sriramsagar 107.61 280 *e*Pdif **Pdif 03 07 03.0 +1.6**
SRSP *e*SKSac **SKSac 03 17 33.8 -5.3**
SRSP IVMs_BB IVMs_BB 03 53 54.4
comp=Z,2µm,21.3s
GUY2C Guyana, Caldas 107.67 98 *e*P **PP 03 11 28.7 -2.1**
MCK McKinley 107.73 16 IAMs_20 IAMs_20 03 47 52.2
comp=Z,6µm,22.0s
BWN Browne 108.02 15 IAMs_20 IAMs_20 03 50 46.5
comp=Z,6µm,21.0s
HELC Santa Helena 108.17 98 *e*P **PP 03 11 36.7 +2.3**
ROSC El Rosal 108.20 99 *e*P **PP 03 11 32.7 -1.9**
NORC Norcasia 108.26 99 *e*P **PP 03 11 32.7 -2.0**
KLRI Killari 108.40 278 *e*Pdif **Pdif 03 07 07.0 +2.1**
KLRI *e*SKSac **SKSac 03 17 38.4 -4.2**
KLRI IVMs_BB IVMs_BB 03 53 05.5
comp=Z,3µm,22.1s
CHIC Chingaza 108.51 100 *e*P **PP 03 11 32.7 -4.2**
WMOK Wichita Mounta 108.55 60 PKiKP **PKiKP 03 11 12.3 +1.7**
baz=233
K22A Casper 108.56 49 IAMs_20 IAMs_20 03 47 57.9
comp=Z,9µm,22.0s
BILL Bilibino 108.59 356 *i* P **Pdif 03 06 59.6 -4.9**
BILL *e* 03 11 35.1
BILL pmax pmax
comp=Z,1.0nm,1.0s
BILL pmax pmax
comp=Z,3.0nm,1.2s
HDA Harding Lake 108.74 16 PKiKP **PKiKP 03 11 09.9 -0.1**
baz=205
SPBC San Pablo de B 108.92 99 *e*P PP 03 11 28.7 -11
GOA Goa 108.92 274 *e*P **Pdif 03 07 14.9 +7.6**
TCOL CIGO, UAF Yank 108.96 16 PKiKP **PKiKP 03 11 10.4 0.0**
baz=208
MDM Murphy Dome 108.96 15 IAMs_20 IAMs_20 03 57 37.7
comp=Z,7µm,22.0s
ILAR Eielson Array 109.07 16 Pdiff **Pdif 03 07 10.8 +4.0**
comp=Z,0.6nm,1.0s,baz=222,slow=5.8,SNR=3.8
ILAR PKiKP **PKiKP 03 11 09.9 -0.8**
comp=Z,16nm,0.9s,baz=298,slow=2.8,SNR=49
ILAR PKKPbc **PKKPbc 03 22 18.6 -0.5**
comp=Z,1.2nm,0.7s,baz=358,slow=2.8,SNR=9.6
ILAR PKKPab **PKKPab 03 22 29.2 +2.2**
comp=Z,9.3nm,1.0s,baz=13,slow=3.4,SNR=24
UREC San Jos de Ur 109.17 96 *e*P PP 03 11 32.7 -8.6
PTBC PUERTO BERRIO 109.20 98 *e*P PP 03 11 32.7 -8.8
POKR Poker Flat Res 109.26 16 PKiKP **PKiKP 03 11 11.7 +0.7**
baz=209
MSEY Mahe Island 109.29 246 IAMs_20 IAMs_20 03 59 16.7
comp=Z,5µm,19.0s
U32A Winter Ranch, 109.38 58 IAMs_20 IAMs_20 03 47 43.0
comp=Z,6µm,21.0s
PTGC Puerto Gaitan, 109.42 101 *e*P **PP 03 11 44.6 +1.7**
RDOG Red Dog Mine 109.55 8 IAMs_20 IAMs_20 03 49 08.2
comp=Z,6µm,22.0s
NATX Nacogdoches 109.56 65 IAMs_20 IAMs_20 03 49 13.7
comp=Z,7µm,20.0s
RUSC La Rusia 109.82 99 *e*P **PP 03 11 48.6 +2.2**
OKCFA Oklahoma City 109.82 60 IAMs_20 IAMs_20 03 48 15.4
comp=Z,9µm,22.0s
EGMT Eagleton 110.12 44 IAMs_20 IAMs_20 03 50 36.0
comp=Z,6µm,21.0s
OGNE Ogallala 110.19 53 IAMs_20 IAMs_20 03 48 15.8
comp=Z,7µm,21.0s
CBKS Cedar Bluff 110.35 56 IAMs_20 IAMs_20 03 51 54.6
comp=Z,6µm,20.0s
CBKS Cedar Bluff 110.35 56 PKiKP **PKiKP 03 11 16.1 +2.2**
baz=234
COLD Coldfoot 110.61 13 IAMs_20 IAMs_20 03 54 46.2
comp=Z,6µm,20.0s
SJCC San Jacinto, C 110.81 95 *e*P **PP 03 11 48.6 -4.6**
BDFB Brasilia 110.81 134 PKKPbc PKKPbc 03 22 12.2 0.0
comp=Z,1.9nm,0.7s,baz=92,slow=5.7,SNR=5.2
BOD Bodaibo 110.82 330 *e*PKiKP **PKiKP 03 11 14.0 -0.1**
BHPL Bhopal 110.88 283 IAMs_20 IAMs_20 03 51 47.0
comp=Z,8µm,23.5s
RSSD Black Hills 110.89 49 IAMs_20 IAMs_20 03 49 44.7
comp=Z,7µm,21.0s
RSSD Black Hills 110.89 49 PKiKP **PKiKP 03 11 15.5 +0.5**
baz=233
SMLC San Martn de 110.95 96 *e*P **PP 03 11 48.6 -5.5**
LAO LASA Array 111.19 46 PKiKP **PKiKP 03 11 17.2 +1.8**
baz=233
TLY Talaya 111.25 321 *i* PKIKP PKiKP 03 11 23.2 +8.0
TLY *e* 03 12 04.9
TLY *e* 03 17 49.3
TLY *e*PS **PS 03 21 26.0 -1.2**
TLY *e*PPS PPS 03 22 28.7
TLY *e*SS SS 03 27 30.7 +3.9
TLY pmax pmax
comp=Z,23nm,1.5s
TLY MLR MLR
comp=Z,14µm,17.0s
TLY Talaya 111.25 321 IAMs_20 IAMs_20 03 59 02.7
comp=Z,7µm,20.0s
ARGC Ariguani, Magd 111.49 95 *e*P **PKiKP 03 11 16.7 -0.1**
Z41A Richland Creek 111.70 64 IAMs_20 IAMs_20 03 48 39.3
comp=Z,6µm,22.0s
MIAR Mount Ida 111.91 63 IAMs_20 IAMs_20 03 51 06.6
comp=Z,7µm,20.0s
MATP Matopo 112.05 213 PKiKP **PKiKP 03 11 18.2 +0.2**
comp=Z,3.4nm,0.7s,baz=130,slow=0.6,SNR=7.3
SMRC Santa Marta, M 112.34 94 *e*P PKiKP 03 11 04.8 -14
SMRC Santa Marta, M 112.34 94 *e*P PP 03 11 52.6 -11
KSU1 Kansas State U 112.50 57 PKiKP **PKiKP 03 11 19.8 +1.8**
baz=235
MOY Mondy 112.54 319 *e*P **Pdif 03 07 28.4 +5.8**
MOY *e* 03 12 09.3
EPYK Eagle Plains 112.73 19 PKiKP **PKiKP 03 11 18.1 +0.4**
baz=217
CCAR Cane Creek 112.78 64 IAMs_20 IAMs_20 03 49 25.2
comp=Z,9µm,22.0s
BGNE Belgrade 112.84 55 IAMs_20 IAMs_20 03 50 58.0
comp=Z,6µm,21.0s
BGNE Belgrade 112.84 55 PKiKP **PKiKP 03 11 19.4 +0.8**
baz=235
UALR University of 112.88 63 IAMs_20 IAMs_20 03 50 17.2
comp=Z,8µm,20.0s
SOCV Socops 113.04 99 *e*P PP 03 12 00.6 -8.5
W41B Gary Mavity, V 113.17 63 IAMs_20 IAMs_20 03 52 42.9
comp=Z,7µm,20.0s
W41B Gary Mavity, V 113.17 63 PKiKP **PKiKP 03 11 19.6 +0.3**
baz=236
ELOV Elorza 113.24 101 *e*P **PP 03 12 08.6 -1.9**
DGMT Dagmar 113.35 46 PKiKP **PKiKP 03 11 21.0 +1.6**
baz=235
U40A Yellville 113.42 62 PKiKP **PKiKP 03 11 19.7 -0.2**
baz=236
SDV Santo Domingo 113.60 99 IAMs_20 IAMs_20 03 50 54.5
comp=Z,8µm,20.0s
SUSD Miller 114.05 51 IAMs_20 IAMs_20 03 51 03.1
comp=Z,6µm,22.0s
SUSD Miller 114.05 51 PKiKP **PKiKP 03 11 22.4 +1.6**
baz=236
URIC Uribia, Colomb 114.37 95 *e*P PP 03 12 08.6 -10
HBAR Harrisburg 114.46 63 IAMs_20 IAMs_20 03 52 05.1
comp=Z,7µm,20.0s
DDI Dehra Dun 114.48 290 *ex* **PP 03 12 13.8 -5.6**
DDI *i* x x 03 21 50.0
LPAR Lepanto 114.73 64 IAMs_20 IAMs_20 03 52 14.2
comp=Z,8µm,21.0s
INK Inuvik 115.02 19 *i* PKIKP PKPdf 03 11 21.7 -0.1
INK Inuvik 115.02 19 PKP PKPdf 03 11 21.2 -0.7
comp=Z,36nm,0.9s,baz=149,slow=2.5,SNR=60
INK PKKPbc **PKKPbc 03 21 58.9 -0.3**
comp=Z,19nm,1.1s,baz=35,slow=4.8,SNR=5.5
INK Inuvik 115.02 19 PKIKP PKPdf 03 11 21.7 -0.2
ECSD EROS Data Cent 115.07 53 IAMs_20 IAMs_20 03 55 08.1
comp=Z,5µm,20.0s
ECSD EROS Data Cent 115.07 53 P **PKPdf 03 11 22.3 -0.5**
baz=237
GNAR Gosnell 115.12 63 IAMs_20 IAMs_20 03 55 22.5
comp=Z,6µm,19.0s
PEBM Pemiscott Bayo 115.30 63 IAMs_20 IAMs_20 03 55 37.5
comp=Z,7µm,20.0s
WMQ Urumqi 115.42 307 PKP **PKPdf 03 11 23.8 +0.3**
WMQ PP **PP 03 12 32.8 +6.9**
WMQ SKKS 03 19 17.5
WMQ AMB AMB
comp=Z,590nm,5.9s
WMQ LR LR
comp=Z,2µm,21.3s
WMQ LR LR
comp=Z,2µm,25.1s
WMQ LR LR
comp=Z,4µm,28.7s
CCM Cathedral Cave 115.42 61 PKIKP **PKPdf 03 11 22.8 -0.8**
CCM Cathedral Cave 115.42 61 **PKPdf 03 11 22.8 -0.8**
CCM Cathedral Cave 115.42 61 P **PKiKP 03 11 24.0 +0.4**
baz=237
HALT Halls 115.55 64 IAMs_20 IAMs_20 03 52 59.0
comp=Z,7µm,20.0s
LNXT Lenox 115.55 63 IAMs_20 IAMs_20 03 56 13.4
comp=Z,7µm,20.0s
MDND Maddock 115.55 48 **PKPdf 03 11 22.9 -0.6**
MDND IAMs_20 IAMs_20 04 04 07.7
comp=Z,5µm,18.0s
LRAL Lakeview Retre 115.61 68 P **PKiKP 03 11 24.9 +0.8**
baz=237
PARMO Parma 115.67 63 IAMs_20 IAMs_20 03 51 27.3
comp=Z,10µm,22.0s
GLAT Glass 115.78 63 IAMs_20 IAMs_20 03 56 20.0
comp=Z,7µm,20.0s
HENM Henderson Moun 115.89 63 IAMs_20 IAMs_20 03 51 34.5
comp=Z,10µm,22.0s
PLAL Pickwick Lake 115.92 65 IAMs_20 IAMs_20 03 51 46.7
comp=Z,8µm,22.0s
HICK Hickman 115.96 63 IAMs_20 IAMs_20 03 56 46.0
comp=Z,6µm,20.0s
SCIA State Center 116.20 56 IAMs_20 IAMs_20 03 56 33.2
comp=Z,8µm,19.0s
X48A Hartselle 116.34 66 IAMs_20 IAMs_20 03 53 40.1
comp=Z,5µm,21.0s
Y49A Blount Mountai 116.47 67 IAMs_20 IAMs_20 03 55 26.4
comp=Z,6µm,20.0s
Z50A Ashland 116.49 68 P **PKiKP 03 11 27.1 +1.3**
baz=237
252A Lumpkin 116.65 70 P **PKiKP 03 11 27.4 +1.2**
baz=237
D32A Dogwood Acres, 116.65 50 IAMs_20 IAMs_20 03 57 26.2
comp=Z,6µm,19.0s
WVT Waverly 116.70 64 PKIKP **PKPdf 03 11 24.3 -1.8**
WVT Waverly 116.70 64 **PKPdf 03 11 24.3 -1.8**
WVT Waverly 116.70 64 IAMs_20 IAMs_20 03 53 44.4
comp=Z,8µm,20.0s
WVT Waverly 116.70 64 P **PKPdf 03 11 25.9 -0.2**
baz=238
LSZ Lusaka 116.76 215 PKP **PKPdf 03 11 26.3 -0.8**
comp=Z,3.1nm,0.9s,baz=169,slow=3.3,SNR=6.1
LSZ PKKPbc **PKKPbc 03 21 50.2 -2.1**
comp=Z,3.1nm,0.9s,baz=349,slow=5.2,SNR=2.9
656A Willston 116.81 73 IAMs_20 IAMs_20 03 53 55.4
comp=Z,5µm,21.0s
YKA Yellowknife Ar 116.84 29 PKP **PKPdf 03 11 24.8 -0.8**
comp=Z,21nm,0.6s,baz=254,slow=1.6,SNR=141
YKA PKKPbc **PKKPbc 03 21 52.0 -0.7**
comp=Z,3.4nm,0.7s,baz=46,slow=4.1,SNR=34
YKA SKKPbc SKKPbc 03 25 39.5 +0.3
comp=Z,1.7nm,0.9s,baz=65,slow=5.5,SNR=5.3
GTBY Guantanamo Bay 117.01 86 *e*P **PP 03 12 32.5 -4.6**
GTBY Guantanamo Bay 117.01 86 IAMs_20 IAMs_20 03 50 22.5
comp=Z,9µm,22.0s
152A Waverly Hall 117.02 69 P **PKPdf 03 11 26.6 -0.3**
baz=237
N41A Harden Midland 117.09 58 IAMs_20 IAMs_20 03 59 32.0
comp=Z,6µm,19.0s
TSUM Tsumeb 117.11 203 **PKPdf 03 11 27.0 -0.7**
060A Indiantown 117.12 77 IAMs_20 IAMs_20 03 54 51.6
comp=Z,6µm,20.0s
253A Americus 117.12 70 P **PKiKP 03 11 28.6 +1.6**
baz=237
V48A Smith Brothers 117.19 65 IAMs_20 IAMs_20 03 52 33.8
comp=Z,9µm,21.0s
W49A Belvidere 117.24 66 P **PKiKP 03 11 27.6 +0.4**
baz=238,SNR=6.6
Y51A Rockmart 117.44 68 P **PKiKP 03 11 28.3 +0.7**
baz=238
Z52A Williamson 117.52 69 P **PKiKP 03 11 29.1 +1.3**
baz=238
SWET Sewanee 117.53 66 IAMs_20 IAMs_20 03 54 11.4
comp=Z,6µm,22.0s
L40A Anamosa 117.55 57 IAMs_20 IAMs_20 03 53 30.3
comp=Z,8µm,21.0s
T47A Sharon Grove 117.65 64 IAMs_20 IAMs_20 03 57 27.5
comp=Z,6µm,20.0s
V49A McMinnville 117.83 66 P **PKPdf 03 11 27.7 -0.6**
baz=238
AGMN Agassiz Nation 117.92 49 IAMs_20 IAMs_20 03 58 03.9
comp=Z,6µm,20.0s
AGMN Agassiz Nation 117.92 49 P **PKPdf 03 11 28.1 0.0**
baz=239
X51A Calhoun 117.93 67 IAMs_20 IAMs_20 03 56 11.2
comp=Z,5µm,21.0s
X51A Calhoun 117.93 67 P **PKiKP 03 11 28.9 +0.3**
baz=238
W50A Signal Mountai 117.95 66 IAMs_20 IAMs_20 03 54 47.6
comp=Z,8µm,22.0s
W50A Signal Mountai 117.95 66 P **PKiKP 03 11 28.9 +0.3**
baz=238
FFC Flin Flon 117.95 41 PKIKP **PKPdf 03 11 27.7 -0.2**
FFC MLR MLR
comp=Z,4µm,20.0s
FFC Flin Flon 117.95 41 **PKPdf 03 11 27.7 -0.2**
HDIL Hopedale 118.03 59 IAMs_20 IAMs_20 03 58 25.9
comp=Z,6µm,19.0s
HDIL Hopedale 118.03 59 P **PKiKP 03 11 29.7 +1.1**
baz=239
Y52A Lilburn 118.12 68 P **PKiKP 03 11 30.2 +1.3**
baz=238,SNR=6.1
154A Montrose 118.14 70 P **PKiKP 03 11 30.5 +1.5**
baz=238
Z53A Monticello 118.17 69 P **PKiKP 03 11 30.1 +1.0**
baz=238
C36M Paulatuk 118.17 20 **PKPdf 03 11 26.8 -1.2**
C36M Paulatuk 118.17 20 P **PKPdf 03 11 26.7 -1.2**
baz=228,SNR=53
SPMN Marine on St. 118.18 53 P **PKiKP 03 11 28.9 +0.2**
baz=240
GOGA Godfrey 118.31 69 P **PKiKP 03 11 29.6 +0.2**
baz=238
U49A Red Boiling Sp 118.31 65 P **PKPdf 03 11 29.0 -0.2**
baz=239,SNR=6.5
V50A Pikevile 118.34 66 P **PKiKP 03 11 30.3 +0.9**
baz=238,SNR=5.3
O44A Mansfield 118.36 60 IAMs_20 IAMs_20 03 56 13.4

	comp=Z,6µm,19.0s								
Y53A	**Monroe**	**118.46**	**68**	P	**PKiKP**	**03 11 30.8**	**+1.2**
	baz=238								
L42A	**Oliver, Polo**	**118.52**	**58**	IAMs_20	IAMs_20	03 56 30.5	
	comp=Z,7µm,20.0s								
JFWS	**Jewell Farm**	**118.61**	**57**	IAMs_20	IAMs_20	03 53 51.7	
	comp=Z,7µm,22.0s								
JFWS	**Jewell Farm**	**118.61**	**57**	P	**PKiKP**	**03 11 29.8**	**+0.2**
	baz=240								
155A	**Kite**	**118.61**	**70**	P	**PKiKP**	**03 11 31.2**	**+1.3**
	baz=238								
CPCT	**Cooper Cave**	**118.63**	**66**	IAMs_20	IAMs_20	03 55 17.6	
	comp=Z,5µm,22.0s								
X52A	**Dahlonega**	**118.63**	**68**	P	**PKiKP**	**03 11 31.3**	**+1.4**
	baz=238								
T49A	**Edmonton**	**118.78**	**64**	IAMs_20	IAMs_20	03 54 58.0	
	comp=Z,9µm,21.0s								
T49A	**Edmonton**	**118.78**	**64**	P	**PKPdf**	**03 11 30.2**	**+0.1**
	baz=239,SNR=8.2								
WCI	**Wyandotte Cave**	**118.84**	**63**	PKIKP	**PKPdf**	**03 11 29.5**	**-0.7**
WCI	**Wyandotte Cave**	**118.84**	**63**		**PKPdf**	**03 11 29.5**	**-0.7**
WCI	**Wyandotte Cave**	**118.84**	**63**	P	**PKPdf**	**03 11 29.9**	**-0.3**
	baz=239								
I40A	**Norwalk**	**118.86**	**55**	IAMs_20	IAMs_20	03 58 34.4	
	comp=Z,7µm,20.0s								
W52A	**Murphy**	**118.86**	**67**	IAMs_20	IAMs_20	03 56 47.8	
	comp=Z,5µm,20.0s								
W52A	**Murphy**	**118.86**	**67**	P	**PKiKP**	**03 11 31.4**	**+1.0**
	baz=239								
ULM	**Lac du Bonnet**	**118.90**	**47**	*i* PKIKP	**PKPdf**	**03 11 29.1**	**-0.8**
ULM	**Lac du Bonnet**	**118.90**	**47**	PKP	**PKPdf**	**03 11 28.7**	**-1.1**
	comp=Z,9.5nm,0.7s,baz=254,slow=2.9,SNR=30								
ULM					PKKPbc	**PKKPbc**	**03 21 44.1**	**-0.8**
	comp=Z,6.5nm,0.9s,baz=37,slow=3.2,SNR=8.5								
ULM	**Lac du Bonnet**	**118.90**	**47**	IAMs_20	IAMs_20	03 56 49.4	
	comp=Z,7µm,20.0s								
U50A	**Jamestown**	**118.91**	**65**	P	**PKPdf**	**03 11 29.9**	**-0.5**
	baz=239,SNR=7.9								
V51A	**Loudon**	**118.93**	**66**	IAMs_20	IAMs_20	03 54 05.6	
	comp=Z,8µm,22.0s								
X53A	**Estanollee**	**119.00**	**68**	P	**PKiKP**	**03 11 31.1**	**+0.5**
	baz=239								
ZSN	**Zaisan**	**119.00**	**309**	*e*PKIKP	**PKiKP**	**03 11 31.4**	**+1.2**
ZSN				*e*		03 12 50.8			
ZSN	**Zaisan**	**119.00**	**309**	*e*PKP	**PKiKP**	**03 11 31.5**	**+1.2**
ZSN				*e*PP	**PP**	**03 12 50.9**	**+0.2**
Y54A	**Tignall**	**119.10**	**69**	P	**PKiKP**	**03 11 32.2**	**+1.3**
	baz=238,SNR=7.4								
T50A	**Nancy**	**119.22**	**65**	P	**PKiKP**	**03 11 31.7**	**+0.7**
	baz=239								
TKL	**Tuckaleechee C**	**119.26**	**67**	IAMs_20	IAMs_20	03 55 38.3	
	comp=Z,6µm,22.0s								
M44A	**Midewin, Midew**	**119.26**	**59**	IAMs_20	IAMs_20	04 00 48.2	
	comp=Z,5µm,18.0s								
S49A	**Springfield**	**119.30**	**64**	P	**PKPdf**	**03 11 31.0**	**-0.1**
	baz=239,SNR=7.1								
SDDR	**Presa de Saban**	**119.36**	**90**	IAMs_20	IAMs_20	03 53 48.6	
	comp=Z,5µm,20.0s								
W53A	**Cullowhee**	**119.44**	**67**	P	**PKiKP**	**03 11 32.2**	**+0.6**
	baz=239,SNR=9.0								
U51A	**La Follette**	**119.46**	**66**	P	**PKiKP**	**03 11 32.0**	**+0.5**
	baz=239								
V52A	**Sevierville**	**119.48**	**67**	IAMs_20	IAMs_20	03 54 03.1	
	comp=Z,6µm,22.0s								
V52A	**Sevierville**	**119.48**	**67**	P	**PKiKP**	**03 11 32.0**	**+0.5**
	baz=239,SNR=6.3								
Q48A	**North Vernon**	**119.57**	**62**	P	**PKiKP**	**03 11 32.0**	**+0.4**
	baz=240								
HODGE	**Hodges**	**119.59**	**69**	IAMs_20	IAMs_20	03 56 56.2	
	comp=Z,6µm,20.0s								
E38A	**The Farm, Brul**	**119.62**	**52**	IAMs_20	IAMs_20	03 58 15.4	
	comp=Z,7µm,19.0s								
R49A	**Shelbyville**	**119.63**	**63**	P	**PKiKP**	**03 11 32.5**	**+0.7**
	baz=240								
X54A	**Belton**	**119.67**	**68**	P	**PKiKP**	**03 11 33.6**	**+1.7**
	baz=239								
NIL	**Nilore**	**119.71**	**290**	PKIKP	**PKPdf**	**03 11 31.4**	**-0.7**
NIL				MLR	MLR				
	comp=Z,6µm,22.0s								
NIL	**Nilore**	**119.71**	**290**		**PKPdf**	**03 11 31.4**	**-0.7**
NIL	**Nilore**	**119.71**	**290**	IAMs_20	IAMs_20	04 01 59.2	
	comp=Z,6µm,22.0s								
K43A	**Burlington**	**119.73**	**58**	IAMs_20	IAMs_20	03 54 24.4	
	comp=Z,6µm,21.0s								
Y55A	**Saluda**	**119.73**	**69**	P	**PKiKP**	**03 11 32.5**	**+0.4**
	baz=239								
L44A	**Lake County Fo**	**119.74**	**58**	IAMs_20	IAMs_20	03 57 29.8	
	comp=Z,5µm,20.0s								
G40A	**Rib Lake**	**119.80**	**54**	IAMs_20	IAMs_20	03 55 36.2	
	comp=Z,7µm,20.0s								
T51A	**Gray**	**119.81**	**65**	P	**PKiKP**	**03 11 33.5**	**+1.3**
	baz=240								
S50A	**Richmond**	**119.85**	**64**	P	**PKiKP**	**03 11 33.1**	**+0.9**
	baz=240,SNR=5.5								
TZTN	**Tazewell**	**119.87**	**66**	P	**PKiKP**	**03 11 33.3**	**+1.0**
	baz=240								
U52A	**Thorn Hill**	**119.92**	**66**	P	**PKiKP**	**03 11 34.0**	**+1.6**
	baz=240,SNR=5.6								
V53A	**Saluda**	**119.94**	**67**	P	**PKiKP**	**03 11 33.8**	**+1.3**
	baz=239,SNR=7.5								
P48A	**Milroy**	**120.04**	**62**	P	**PKiKP**	**03 11 33.2**	**+0.7**
	baz=240								
SC01	**Santiago de lo**	**120.05**	**89**	IAMs_20	IAMs_20	03 59 18.9	
	comp=Z,5µm,18.0s								
Y56A	**Pelion**	**120.05**	**70**	P	**PKiKP**	**03 11 33.2**	**+0.5**
	baz=239								
W54A	**Cherokee Point**	**120.08**	**68**	P	**PKPdf**	**03 11 32.7**	**0.0**
	baz=239								
X55A	**Gracelyn & Ava**	**120.16**	**69**	P	**PKiKP**	**03 11 34.3**	**+1.4**
	baz=239								
R50A	**Paris**	**120.20**	**64**	IAMs_20	IAMs_20	04 00 10.2	
	comp=Z,5µm,20.0s								
R50A	**Paris**	**120.20**	**64**	P	**PKiKP**	**03 11 33.5**	**+0.6**
	baz=240								
MK31	**Makanchi Array**	**120.22**	**307**	*i* PKIKP	**PKPdf**	**03 11 30.9**	**-1.7**
MKAR	**Makanchi Array**	**120.22**	**307**	PKP	**PKPdf**	**03 11 31.2**	**-1.4**
	comp=Z,17nm,0.6s,baz=196,slow=0.8,SNR=65								
MKAR					PKKPbc	**PKKPbc**	**03 21 40.5**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=312,slow=3.4,SNR=12								
MKAR					SKKPbc	SKKPbc	03 25 30.7	+3.6
	comp=Z,1.9nm,0.9s,baz=286,slow=5.4,SNR=3.5								
Z57A	**Bowman**	**120.22**	**70**	P	**PKiKP**	**03 11 33.3**	**+0.2**
	baz=239								
SHLS	**Shalkode**	**120.23**	**303**	*e*PKIKP	**PKPdf**	**03 11 29.1**	**-3.8**
SHLS				*e*		03 12 56.0			
SHLS	**Shalkode**	**120.23**	**303**	*e*PKP	**PKPdf**	**03 11 29.1**	**-3.8**
SHLS				*e*PP	**PP**	**03 12 56.1**	**-3.3**
EYMN	**Ely**	**120.30**	**51**	P	**PKPdf**	**03 11 32.8**	**+0.1**
	baz=242								
PDGK	**Podgornoye**	**120.30**	**303**	PKIKP	**PKPdf**	**03 11 32.2**	**-0.8**
S51A	**Beattyville**	**120.39**	**65**	P	**PKiKP**	**03 11 34.5**	**+1.2**
	baz=240,SNR=6.2								
MAKZ	**Makanchi**	**120.41**	**307**	PKIKP	**PKPdf**	**03 11 31.6**	**-1.4**
MAKZ				MLR	MLR				
	comp=Z,6µm,20.0s								
MAKZ	**Makanchi**	**120.41**	**307**		**PKPdf**	**03 11 31.6**	**-1.4**
MAKZ				IAMs_20	IAMs_20	04 03 45.2			
	comp=Z,7µm,20.0s								
U53A	**Fall Branch**	**120.45**	**67**	P	**PKiKP**	**03 11 34.9**	**+1.4**
	baz=240,SNR=7.5								
UZB	**Uzynbulak**	**120.51**	**302**	*e*PKIKP	**PKPdf**	**03 11 32.0**	**-1.4**
UZB				*e*		03 12 59.2			
UZB	**Uzynbulak**	**120.51**	**302**	*e*PKP	**PKPdf**	**03 11 32.0**	**-1.4**
UZB				*e*PP	**PP**	**03 12 59.3**	**-2.0**
T52A	**Hallie**	**120.54**	**66**	IAMs_20	IAMs_20	03 54 16.2	
	comp=Z,8µm,22.0s								
T52A	**Hallie**	**120.54**	**66**	P	**PKiKP**	**03 11 35.1**	**+1.5**
	baz=240								
P49A	**Miami Univ. Ec**	**120.56**	**62**	P	**PKiKP**	**03 11 33.7**	**+0.2**
	baz=241,SNR=6.6								
N47A	**Urbana**	**120.56**	**61**	P	**PKiKP**	**03 11 33.6**	**+0.1**
	baz=241								
PRZ	**Przheval'sk**	**120.59**	**302**	IAMs_20	IAMs_20	04 05 48.5	
	comp=Z,8µm,22.0s								
X56A	**White Oak**	**120.60**	**69**	P	**PKiKP**	**03 11 34.4**	**+0.6**
	baz=239								
V54A	**Nebo**	**120.60**	**67**	P	**PKiKP**	**03 11 35.1**	**+1.4**
	baz=240,SNR=5.4								
O48A	**Farmland**	**120.61**	**61**	P	**PKiKP**	**03 11 34.2**	**+0.5**
	baz=241								
L46A	**Eue Claire**	**120.71**	**59**	IAMs_20	IAMs_20	03 58 02.5	
	comp=Z,7µm,19.0s								
KMSC	**Kings Mountain**	**120.71**	**68**	IAMs_20	IAMs_20	03 56 37.8	
	comp=Z,5µm,20.0s								
KMSC	**Kings Mountain**	**120.71**	**68**	P	**PKiKP**	**03 11 35.2**	**+1.2**
	baz=240								
Q50A	**Georgetown**	**120.72**	**63**	P	**PKiKP**	**03 11 34.5**	**+0.6**
	baz=240								
R51A	**Hillsboro**	**120.72**	**64**	P	**PKiKP**	**03 11 34.3**	**+0.4**
	baz=240								
S52A	**Salyersville**	**120.76**	**65**	P	**PKiKP**	**03 11 34.4**	**+0.4**
	baz=240								
KSH	**Kashi**	**120.76**	**297**	PKP	**PKiKP**	**03 11 35.3**	**+1.2**
KSH				sPKP		03 11 45.8			
KSH				PP	**PP**	**03 13 06.9**	**+3.8**
KSH				SKS	**SKSdf**	**03 19 36.1**	**-7.4**
KSH				SKKS	**SKKSac**	**03 19 56.3**	**-3.3**
KSH				SS	**SS**	**03 29 33.8**	**+1.8**
KSH				AMB	AMB				
	comp=Z,1µm,7.8s								
KSH				LR	LR				
	comp=Z,5µm,18.4s								
KSH				LR	LR				
	comp=Z,6µm,20.1s								
KSH				LR	LR				
	comp=Z,4µm,18.4s								
T53A	**Wise**	**120.79**	**66**	P	**PKiKP**	**03 11 35.9**	**+1.7**
	baz=240,SNR=7.5								
Y57A	**Sumter**	**120.81**	**70**	IAMs_20	IAMs_20	03 59 22.5	
	comp=Z,5µm,19.0s								
M47A	**Cromwell**	**120.84**	**60**	P	**PKiKP**	**03 11 35.4**	**+1.3**
	baz=241								
COWI	**Conover**	**120.85**	**54**	IAMs_20	IAMs_20	04 01 56.0	
	comp=Z,6µm,19.0s								
SATY	**Saty**	**120.86**	**302**	*e*PKIKP	**PKPdf**	**03 11 33.7**	**-0.4**
SATY				*e*		03 13 01.4			
SATY	**Saty**	**120.86**	**302**	*e*PKP	**PKPdf**	**03 11 33.7**	**-0.4**
SATY				*e*PP	**PP**	**03 13 01.4**	**-2.3**
KPKS	**Kokpek**	**120.88**	**303**	*e*PKIKP	**PKPdf**	**03 11 31.6**	**-2.4**
KPKS				*e*		03 12 59.8			
KPKS	**Kokpek**	**120.88**	**303**	*e*PKP	**PKPdf**	**03 11 31.6**	**-2.4**
KPKS				*e*PP	**PP**	**03 12 59.9**	**-3.9**
Z58A	**St. Stephen**	**120.88**	**71**	P	**PKiKP**	**03 11 35.1**	**+0.8**
	baz=239								
H43A	**Windswept, Lux**	**120.93**	**56**	IAMs_20	IAMs_20	03 55 45.3	
	comp=Z,6µm,20.0s								
N48A	**Decatur**	**120.99**	**61**	P	**PKiKP**	**03 11 34.7**	**+0.4**
	baz=241,SNR=7.4								
U54A	**Nelsons Funny**	**121.06**	**67**	IAMs_20	IAMs_20	03 58 29.0	
	comp=Z,6µm,20.0s								
U54A	**Nelsons Funny**	**121.06**	**67**	P	**PKiKP**	**03 11 35.3**	**+0.6**
	baz=240								
BIRD	**Birdtown, Kers**	**121.08**	**69**	IAMs_20	IAMs_20	03 55 52.9	
	comp=Z,6µm,21.0s								
O49A	**Covington**	**121.13**	**62**	P	**PKPdf**	**03 11 34.7**	**+0.2**
	baz=241								
V55A	**Taylorsville**	**121.15**	**68**	IAMs_20	IAMs_20	03 57 04.8	
	comp=Z,5µm,21.0s								
P50A	**Jamestown**	**121.21**	**63**	P	**PKPdf**	**03 11 34.1**	**-0.6**
	baz=241,SNR=6.8								
Q51A	**Peebles**	**121.24**	**63**	IAMs_20	IAMs_20	03 54 50.6	
	comp=Z,7µm,22.0s								
Q51A	**Peebles**	**121.24**	**63**	P	**PKPdf**	**03 11 34.7**	**-0.1**
	baz=241,SNR=8.9								
W56A	**Indian Trail**	**121.24**	**69**	P	**PKiKP**	**03 11 35.8**	**+0.8**
	baz=240								
Y58A	**Scranton**	**121.28**	**70**	P	**PKiKP**	**03 11 35.6**	**+0.5**
	baz=239								
F42A	**Maple Grove Fa**	**121.31**	**55**	IAMs_20	IAMs_20	03 56 00.2	
	comp=Z,6µm,21.0s								
R52A	**Catlettsburg**	**121.38**	**64**	P	**PKiKP**	**03 11 35.4**	**+0.2**
	baz=241								
L47A	**Sherwood**	**121.41**	**60**	P	**PKiKP**	**03 11 35.7**	**+0.6**
	baz=242								
S53A	**Williamson**	**121.42**	**65**	P	**PKiKP**	**03 11 36.0**	**+0.7**
	baz=241								
M48A	**Edgerton**	**121.50**	**60**	P	**PKiKP**	**03 11 36.2**	**+0.9**
	baz=242								
T54A	**Tazewell**	**121.50**	**66**	P	**PKiKP**	**03 11 35.9**	**+0.3**
	baz=240,SNR=5.2								
N49A	**Columbus Grove**	**121.58**	**61**	P	**PKiKP**	**03 11 36.4**	**+0.9**
	baz=242,SNR=6.3								
O50A	**Cable**	**121.59**	**62**	P	**PKPdf**	**03 11 35.3**	**-0.1**
	baz=241,SNR=9.8								
U55A	**TA2, Sparta**	**121.59**	**67**	P	**PKiKP**	**03 11 36.4**	**+0.7**
	baz=240,SNR=7.0								
V56A	**Mocksville**	**121.64**	**68**	P	**PKiKP**	**03 11 36.3**	**+0.5**
	baz=240								
D41A	**Chassel**	**121.64**	**53**	IAMs_20	IAMs_20	04 00 46.0	
	comp=Z,6µm,20.0s								
P51A	**Williamsport**	**121.65**	**63**	P	**PKPdf**	**03 11 35.7**	**+0.1**
	baz=241								
NRN	**Naryn**	**121.67**	**299**	IAMs_20	IAMs_20	04 05 09.3	
	comp=Z,7µm,22.0s								
W57A	**Gilead**	**121.67**	**69**	IAMs_20	IAMs_20	03 56 19.1	
	comp=Z,5µm,21.0s								
W57A	**Gilead**	**121.67**	**69**	P	**PKiKP**	**03 11 36.7**	**+0.9**
	baz=240,SNR=5.8								
I45A	**Fountain**	**121.70**	**57**	IAMs_20	IAMs_20	03 58 37.8	
	comp=Z,8µm,20.0s								
MDOK	**Medeo**	**121.79**	**302**	*e*PKIKP	**PKPdf**	**03 11 35.0**	**-0.9**
MDOK	**Medeo**	**121.79**	**302**	*e*PKP	**PKPdf**	**03 11 35.0**	**-0.9**
MDOK				*e*PP	**PP**	**03 13 03.4**	**-6.7**
TNSS	**Tian-Shan**	**121.80**	**302**	*e*PKIKP	**PKPdf**	**03 11 35.4**	**-0.8**
TNSS				*e*		03 13 07.3			
TNSS	**Tian-Shan**	**121.80**	**302**	*e*PKP	**PKPdf**	**03 11 35.5**	**-0.8**
TNSS				*e*PP	**PP**	**03 13 07.4**	**-3.0**
X58A	**Rowland**	**121.84**	**70**	IAMs_20	IAMs_20	03 56 53.6	
	comp=Z,5µm,20.0s								
X58A	**Rowland**	**121.84**	**70**	P	**PKiKP**	**03 11 36.6**	**+0.4**
	baz=240								
R53A	**Hurricane**	**121.86**	**65**	IAMs_20	IAMs_20	03 57 54.0	
	comp=Z,7µm,20.0s								
K47A	**Vermontville**	**121.87**	**59**	P	**PKiKP**	**03 11 37.0**	**+1.0**
	baz=242								
SOCY	**Socotra**	**121.88**	**258**		**PKPdf**	**03 11 36.3**	**-0.5**
SOCY				IAMs_20	IAMs_20	03 54 49.0			
	comp=Z,6µm,22.0s								
SOCY	**Socotra**	**121.88**	**258**	P	**PKPdf**	**03 11 36.6**	**-0.2**
	SNR=5.5								
Y59A	**Loris**	**121.89**	**71**	IAMs_20	IAMs_20	03 56 04.9	
	comp=Z,5µm,20.0s								
Y59A	**Loris**	**121.89**	**71**	P	**PKiKP**	**03 11 37.7**	**+1.4**
	baz=240								
ULHL	**Ulahol**	**121.89**	**300**	P	**PKiKP**	**03 11 37.3**	**+0.9**
	SNR=8.9								
L48A	**N Adams**	**121.90**	**60**	P	**PKiKP**	**03 11 37.1**	**+1.0**
	baz=242								
Q52A	**Bidwell**	**121.94**	**64**	P	**PKPdf**	**03 11 36.3**	**+0.2**
	baz=241,SNR=5.2								
M49A	**Liberty Center**	**121.98**	**61**	P	**PKPdf**	**03 11 36.2**	**+0.1**
	baz=242,SNR=6.4								
U56A	**King**	**121.98**	**68**	IAMs_20	IAMs_20	03 55 57.4	
	comp=Z,5µm,22.0s								
U56A	**King**	**121.98**	**68**	P	**PKiKP**	**03 11 37.3**	**+0.9**
	baz=240,SNR=6.4								
S54A	**Dingess, Beckl**	**122.04**	**66**	IAMs_20	IAMs_20	03 57 24.9	
	comp=Z,8µm,20.0s								
S54A	**Dingess, Beckl**	**122.04**	**66**	P	**PKiKP**	**03 11 37.0**	**+0.5**
	baz=241								
ACSO	**Alum Creek Sta**	**122.06**	**62**	P	**PKPdf**	**03 11 36.0**	**-0.3**
	baz=242,SNR=9.9								
ZAA0	**Zalesovo Array**	**122.07**	**316**	IAMs_20	IAMs_20	04 03 00.9	
	comp=Z,7µm,20.0s								
ZALV	**Zalesovo Beam**	**122.07**	**316**	PKP	**PKPdf**	**03 11 33.6**	**-2.2**
	comp=Z,10nm,0.6s,baz=165,slow=2.9,SNR=29								
ZALV					SKKPbc	SKKPbc	03 25 21.7	+0.2
	comp=Z,1.3nm,0.7s,baz=152,slow=6.5,SNR=2.9								
T55A	**Pulaski**	**122.08**	**67**	P	**PKiKP**	**03 11 37.1**	**+0.4**
	baz=241,SNR=5.8								
W58A	**Raeford**	**122.14**	**69**	P	**PKiKP**	**03 11 37.1**	**+0.3**
	baz=240								
I46A	**Reed City**	**122.17**	**58**	P	**PKiKP**	**03 11 37.4**	**+0.9**
	baz=243								
V57A	**Coltrane Farms**	**122.19**	**68**	P	**PKiKP**	**03 11 37.6**	**+0.7**
	baz=240,SNR=6.1								
N50A	**Nevada**	**122.20**	**62**	P	**PKiKP**	**03 11 37.8**	**+1.1**
	baz=242								
J47A	**Sunmer**	**122.25**	**58**	IAMs_20	IAMs_20	04 02 23.1	
	comp=Z,5µm,18.0s								
J47A	**Sunmer**	**122.25**	**58**	P	**PKiKP**	**03 11 37.3**	**+0.5**
	baz=242								
O51A	**Pataskala**	**122.28**	**63**	P	**PKPdf**	**03 11 36.9**	**+0.1**
	baz=242								
E43A	**Lone Tree Farm**	**122.30**	**54**	IAMs_20	IAMs_20	03 56 50.3	
	comp=Z,7µm,22.0s								
P52A	**Corning**	**122.35**	**63**	P	**PKiKP**	**03 11 37.3**	**+0.2**
	baz=242,SNR=5.1								
BLA	**Blacksburg**	**122.38**	**67**	IAMs_20	IAMs_20	03 56 01.8	
	comp=Z,8µm,22.0s								
BLA	**Blacksburg**	**122.38**	**67**	P	**PKiKP**	**03 11 38.6**	**+1.4**
	baz=241								
Q53A	**Leroy**	**122.40**	**64**	P	**PKiKP**	**03 11 38.2**	**+1.0**
	baz=242								
GRGR	**Grenville**	**122.41**	**102**	IAMs_20	IAMs_20	03 58 35.8	
	comp=Z,7µm,20.0s								
L49A	**Milan**	**122.42**	**60**	P	**PKiKP**	**03 11 38.2**	**+1.1**
	baz=242								
KZA	**Kyzart**	**122.46**	**300**	P	**PKPdf**	**03 11 37.1**	**-0.5**
	SNR=18								
K48A	**Perry**	**122.50**	**59**	P	**PKPdf**	**03 11 36.9**	**-0.2**
	baz=243,SNR=5.5								
G45A	**Suttons Bay**	**122.53**	**56**	IAMs_20	IAMs_20	03 59 41.6	
	comp=Z,8µm,20.0s								
T56A	**Rocky Mt**	**122.56**	**67**	P	**PKiKP**	**03 11 38.9**	**+1.4**
	baz=241								
KUU	**Kurty**	**122.58**	**302**	*e*PKIKP	**PKPdf**	**03 11 34.4**	**-2.8**
KUU				*e*		03 13 11.4			
KUU	**Kurty**	**122.58**	**302**	*e*PKP	**PKPdf**	**03 11 34.4**	**-2.8**
KUU				*e*PP	**PP**	**03 13 11.4**	**-3.9**
H46A	**Fife Lake**	**122.59**	**57**	P	**PKiKP**	**03 11 38.4**	**+1.1**
	baz=243								
V58A	**Windy Hill, Pi**	**122.61**	**69**	IAMs_20	IAMs_20	04 00 06.0	
	comp=Z,5µm,20.0s								
V58A	**Windy Hill, Pi**	**122.61**	**69**	P	**PKiKP**	**03 11 38.4**	**+0.7**
	baz=241								
TKM2	**Tokmak 2**	**122.62**	**301**	PKIKP	**PKPdf**	**03 11 36.8**	**-0.8**
TKM2	**Tokmak 2**	**122.62**	**301**	P	**PKPdf**	**03 11 36.4**	**-1.2**
	SNR=25								
SJG	**San Juan**	**122.75**	**94**	IAMs_20	IAMs_20	04 05 38.2	
	comp=Z,5µm,18.0s								
U57A	**Blanch**	**122.76**	**68**	P	**PKiKP**	**03 11 39.2**	**+1.2**
	baz=241,SNR=6.9								
O52A	**Adamsville**	**122.78**	**63**	P	**PKiKP**	**03 11 37.9**	**0.0**
	baz=242,SNR=6.9								
N51A	**Ashland**	**122.79**	**62**	P	**PKiKP**	**03 11 38.6**	**+0.7**
	baz=242								
P53A	**Whipple**	**122.79**	**64**	P	**PKiKP**	**03 11 38.3**	**+0.4**
	baz=242,SNR=6.9								
I47A	**Gladwin**	**122.80**	**58**	IAMs_20	IAMs_20	03 59 12.9	
	comp=Z,6µm,20.0s								
F45A	**CMU Biological**	**122.91**	**56**	P	**PKiKP**	**03 11 38.0**	**+0.1**
	baz=244								
KBK	**Karagaybulak**	**122.93**	**300**	P	**PKPdf**	**03 11 37.8**	**-0.4**
	SNR=14								
K49A	**Clarkson**	**122.93**	**60**	P	**PKiKP**	**03 11 38.9**	**+0.8**
	baz=243								
Q54A	**Coxs Mills**	**122.94**	**65**	IAMs_20	IAMs_20	04 00 25.5	
	comp=Z,7µm,19.0s								
Q54A	**Coxs Mills**	**122.94**	**65**	P	**PKiKP**	**03 11 38.8**	**+0.6**
	baz=242,SNR=5.7								
J48A	**Bridge Port**	**122.95**	**59**	IAMs_20	IAMs_20	04 02 19.7	
	comp=Z,6µm,18.0s								
J48A	**Bridge Port**	**122.95**	**59**	P	**PKiKP**	**03 11 38.3**	**+0.2**
	baz=243								
HUMP	**Col San Antoni**	**122.99**	**94**		**PKPdf**	**03 11 38.2**	**-0.5**
L50A	**Kingsville**	**123.02**	**61**	P	**PKiKP**	**03 11 38.4**	**+0.1**
	baz=243								
UCH	**Uchtor**	**123.02**	**300**	P	**PKPdf**	**03 11 38.0**	**-0.6**
	SNR=23								
E44A	**Grand Marais A**	**123.07**	**54**	IAMs_20	IAMs_20	03 57 25.7	
	comp=Z,8µm,22.0s								
T57A	**Hurt**	**123.09**	**67**	IAMs_20	IAMs_20	03 56 38.7	
	comp=Z,7µm,22.0s								
T57A	**Hurt**	**123.09**	**67**	P	**PKPdf**	**03 11 38.4**	**0.0**
	baz=241,SNR=8.4								
GLMI	**Grayling**	**123.09**	**57**	IAMs_20	IAMs_20	03 59 48.5	
	comp=Z,7µm,19.0s								
GLMI	**Grayling**	**123.09**	**57**	P	**PKiKP**	**03 11 39.6**	**+1.2**
	baz=244								
R55A	**Marlinton**	**123.10**	**66**	IAMs_20	IAMs_20	03 57 37.9	
	comp=Z,6µm,20.0s								
R55A	**Marlinton**	**123.10**	**66**	P	**PKPdf**	**03 11 38.3**	**-0.2**
	baz=242,SNR=6.7								
M51A	**Elyria**	**123.11**	**62**	P	**PKiKP**	**03 11 39.0**	**+0.5**
	baz=243,SNR=6.3								
KBL	**Kabul**	**123.17**	**289**	PKIKP	**PKPdf**	**03 11 38.6**	**-0.3**
KBL	**Kabul**	**123.17**	**289**		**PKPdf**	**03 11 38.6**	**-0.3**
KBL				IAMs_20	IAMs_20	04 08

KURK **Kurchatov** 124.14 310 PKPdf 03 11 38.4 -1.5
KURK **Kurchatov** 124.14 310 IAms_20 IAms_20 04 12 38.9
comp=Z,6µm,20.0s
K51A **Iona Station** 124.18 60 P PKiKP 03 11 40.6 0.0
baz=244,SNR=7.0
R57A **Stanardsville** 124.21 66 P PKPdf 03 11 40.7 +0.2
baz=242,SNR=5.8
S58A **Poland Farm, P** 124.23 67 IAms_20 IAms_20 03 57 21.8
comp=Z,7µm,21.0s
S58A **Poland Farm, P** 124.23 67 P PKiKP 03 11 41.7 +0.9
baz=242,SNR=5.2
T59A **Double "B" Far** 124.28 68 IAms_20 IAms_20 03 57 29.1
comp=Z,6µm,22.0s
T59A **Double "B" Far** 124.28 68 P PKiKP 03 11 41.2 +0.3
baz=242
U60A **Pendleton** 124.32 69 P PKiKP 03 11 41.1 +0.1
baz=242
D46A **Sault St. Mari** 124.36 55 P PKPdf 03 11 40.1 -0.4
baz=245,SNR=11
V61A **Roper** 124.41 70 IAms_20 IAms_20 03 57 20.8
comp=Z,5µm,21.0s
N54A **Moraine State** 124.42 63 P PKPdf 03 11 40.9 +0.1
baz=243,SNR=11
FDF **Fort de France** 124.45 100 IAms_20 IAms_20 04 00 21.0
comp=Z,6µm,20.0s
R58B **Mineral** 124.51 67 IAms_20 IAms_20 03 57 17.3
comp=Z,6µm,22.0s
R58B **Mineral** 124.51 67 P PKPdf 03 11 41.0 -0.1
baz=242,SNR=7.5
BTK **Batken** 124.52 296 IAms_20 IAms_20 04 11 23.8
comp=Z,7µm,20.0s
O55A **Ligonier** 124.55 64 P PKPdf 03 11 41.3 +0.2
baz=243,SNR=10
P56A **Dayton Farm, R** 124.55 65 P PKPdf 03 11 41.1 0.0
baz=243,SNR=5.1
BTLS **Baital** 124.56 303 *e*PKIKP PKPdf 03 11 40.5 -0.4
BTLS *e* 03 13 25.4
BTLS **Baital** 124.56 303 *e*PKP PKPdf 03 11 40.5 -0.4
BTLS *e*PP PP 03 13 25.4 -3.1
R58A **Rapidan** 124.58 67 P PKiKP 03 11 42.0 +0.5
baz=242
BBGH **Gun Hill** 124.62 103 IAms_20 IAms_20 04 08 24.2
comp=Z,6µm,20.0s
Q57A **Strasburg** 124.63 66 P PKPdf 03 11 41.2 -0.1
baz=243,SNR=13
E47A **Iron Bridge** 124.65 56 P PKPdf 03 11 41.3 +0.2
baz=245,SNR=8.4
SABA **Saba** 124.66 96 IAms_20 IAms_20 03 57 22.7
comp=Z,6µm,22.0s
L53A **Girard** 124.68 62 P PKPdf 03 11 41.3 0.0
baz=244,SNR=13
K52A **Tillsonburg** 124.73 61 P PKiKP 03 11 42.1 +0.5
baz=244,SNR=5.8
V62A **Hyde County Ai** 124.75 70 IAms_20 IAms_20 04 00 55.7
comp=Z,6µm,20.0s
F48A **Evansville** 124.80 57 P PKiKP 03 11 42.2 +0.5
baz=245
S59A **Mechanicsville** 124.83 67 P PKiKP 03 11 42.7 +0.7
baz=242,SNR=5.4
M54A **Oil Creek Stat** 124.88 62 P PKiKP 03 11 42.2 +0.2
baz=244,SNR=8.2
ERPA **Erie** 124.93 62 P PKPdf 03 11 42.0 +0.2
baz=244,SNR=13
T60A **Surry** 124.93 68 IAms_20 IAms_20 03 59 31.6
comp=Z,5µm,21.0s
CBN **Corbin Frederi** 124.97 67 IAms_20 IAms_20 03 57 40.6
comp=Z,7µm,21.0s
CBN **Corbin Frederi** 124.97 67 P PKiKP 03 11 43.1 +0.8
baz=243
D47A **Chapleau** 125.00 55 P PKPdf 03 11 41.5 -0.2
baz=246,SNR=19
N55A **Marion Center** 125.02 63 P PKPdf 03 11 41.7 -0.4
baz=244,SNR=7.6
RBK **Rabkut** 125.05 263 P PKiKP 03 11 44.4 +1.3
SNR=7.3
O56A **Blue Knob Stat** 125.08 64 P PKiKP 03 11 42.5 -0.1
baz=244,SNR=13
Q58A **Fox Den Farm,** 125.09 66 P PKiKP 03 11 42.7 +0.2
baz=243
P57A **Homestead Farm** 125.11 65 IAms_20 IAms_20 03 58 48.1
comp=Z,7µm,20.0s
P57A **Homestead Farm** 125.11 65 P PKiKP 03 11 42.6 +0.1
baz=243,SNR=9.3
F49A **Sandfield** 125.14 57 P PKiKP 03 11 43.1 +0.7
baz=245
R59A **King George, V** 125.15 67 P PKiKP 03 11 43.9 +1.3
baz=243,SNR=6.2
S60A **Water View** 125.25 68 P PKiKP 03 11 43.7 +0.9
baz=243
E48A **Lockeyer** 125.36 56 P PKiKP 03 11 42.9 +0.1
baz=246,SNR=7.3
RCBR **Riachuelo** 125.37 140 IAms_20 IAms_20 04 13 34.8
comp=Z,7µm,18.0s
L54A **Sinclairville** 125.43 62 P PKiKP 03 11 44.0 +0.9
baz=244,SNR=8.6
M55A **Ridgway** 125.47 63 P PKPdf 03 11 43.0 +0.1
baz=244,SNR=14
N56A **West Decatur** 125.55 64 P PKPdf 03 11 43.1 +0.1
baz=244,SNR=12
P58A **Pank, Wackersv** 125.61 66 P PKPdf 03 11 43.1 0.0
baz=244,SNR=8.4
I52A **Shelburne** 125.64 59 P PKiKP 03 11 44.1 +0.6
baz=245,SNR=5.6
O57A **Amberson** 125.69 65 P PKiKP 03 11 44.4 +0.8
baz=244,SNR=6.5
SSPA **Standing Stone** 125.71 64 PKPdf 03 11 43.3 0.0
SSPA PP PP 03 13 33.2 -3.0
SSPA **Standing Stone** 125.71 64 P PKiKP 03 11 43.7 0.0
baz=244
JBG **Jabagly** 125.75 298 *e*PKIKP PKPdf 03 11 43.5 0.0
JBG *e* 03 13 35.8
D48A **Paudash Townsh** 125.86 55 P PKPdf 03 11 42.9 -0.5
baz=246,SNR=14
M56A **Emporium** 125.87 63 P PKPdf 03 11 43.6 0.0
baz=244,SNR=22
SDMD **Soldier's Deli** 125.89 66 IAms_20 IAms_20 03 59 22.8
comp=Z,5µm,21.0s
I53A **Kortright Cn E** 125.92 60 P PKPdf 03 11 43.8 +0.3
baz=245,SNR=8.5
IUG **Iuzhnay** 125.97 298 *e*PKIKP PKPdf 03 11 43.3 -0.6
IUG *e* 03 13 37.2
IUG **Iuzhnay** 125.97 298 *e*PKP PKPdf 03 11 43.4 -0.6
IUG *e*PP PP 03 13 37.2 -1.0
N57A **Milroy** 125.99 64 P PKPdf 03 11 43.8 0.0
baz=244,SNR=20
L55A **Hinsdale** 126.00 62 P PKPdf 03 11 44.0 +0.1
baz=245,SNR=7.6
K54A **Basiliko Farm,** 126.01 62 P PKPdf 03 11 43.6 -0.2
baz=245,SNR=10
KK31 **Karatay Array** 126.06 299 *i* PKIKP PKPdf 03 11 42.3 -1.6
H52A **Wyevale** 126.06 59 P PKPdf 03 11 43.7 -0.1
baz=246,SNR=7.1
O58A **Lewisberry** 126.15 65 P PKPdf 03 11 44.2 +0.1
baz=244,SNR=19
P59A **Jarrettsville** 126.26 66 P PKPdf 03 11 44.5 +0.1
baz=244
J54A **Appleton** 126.32 61 P PKiKP 03 11 45.1 +0.3
baz=245
PAGS **Pennsylvania G** 126.33 65 IAms_20 IAms_20 04 04 49.4
comp=Z,4µm,19.0s
Q60A **Greensboro** 126.40 67 IAms_20 IAms_20 03 58 32.4
comp=Z,6µm,21.0s
Q60A **Greensboro** 126.40 67 P PKiKP 03 11 45.5 +0.4
baz=244
K55A **Perry** 126.47 62 P PKiKP 03 11 45.7 +0.6
baz=245
MVL **Millersville** 126.49 65 IAms_20 IAms_20 03 59 30.6
comp=Z,7µm,20.0s
M57A **Sunshine Farm,** 126.53 64 IAms_20 IAms_20 03 58 18.6
comp=Z,7µm,22.0s
M57A **Sunshine Farm,** 126.53 64 P PKPdf 03 11 45.1 +0.3
baz=245,SNR=14
F51A **Arnstein** 126.57 57 P PKPdf 03 11 44.5 -0.3
baz=247,SNR=5.9
L56A **Greenwood** 126.57 63 P PKPdf 03 11 45.0 0.0
baz=245,SNR=13
N58A **Sunbury** 126.60 64 P PKPdf 03 11 44.9 -0.1
baz=245,SNR=9.6
O59A **Robesonia** 126.74 65 P PKPdf 03 11 43.5 -1.8
baz=244
J55A **Hilton** 126.87 61 P PKPdf 03 11 45.5 +0.1
baz=246
H53A **Bobcaygeon** 126.89 59 P PKiKP 03 11 45.9 -0.1
baz=246
P60A **Greenville** 126.90 66 IAms_20 IAms_20 04 00 02.6
comp=Z,6µm,21.0s
P60A **Greenville** 126.90 66 P PKPdf 03 11 45.4 -0.2
baz=244

K56A **Middlesex** 126.96 62 P PKiKP 03 11 47.0 +0.8
baz=246
L57A **Andrews Acres** 127.00 63 P PKPdf 03 11 45.9 +0.2
baz=245,SNR=14
M58A **Price's Panora** 127.00 64 P PKiKP 03 11 46.4 +0.1
baz=245,SNR=9.3
E51A **G1948 Merrick** 127.07 57 P PKPdf 03 11 45.8 0.0
baz=247,SNR=8.6
PSUB **Penn St. - Bra** 127.08 66 IAms_20 IAms_20 04 03 06.3
comp=Z,5µm,19.0s
G53A **Haliburton** 127.08 59 P PKiKP 03 11 46.2 -0.1
baz=247,SNR=9.5
SOHO **SOHO** 127.12 271 P PKiKP 03 11 47.1 +0.1
SNR=5.6
O60A **Telford** 127.28 65 P PKiKP 03 11 47.0 +0.2
baz=245
N59A **State Game Lan** 127.28 65 IAms_20 IAms_20 04 15 40.9
comp=Z,4µm,19.0s
N59A **State Game Lan** 127.28 65 P PKPdf 03 11 46.5 +0.2
baz=245
I55A **Frankford** 127.34 60 P PKiKP 03 11 46.8 0.0
baz=246
D51A **Lot 18 Range I** 127.36 56 P PKiKP 03 11 46.7 0.0
baz=248,SNR=7.7
BRZS **Berezniki** 127.36 308 *e*PKIKP PKPdf 03 11 44.5 -1.6
BRZS *e* 03 13 48.3
BRZS **Berezniki** 127.36 308 *e*PKP PKPdf 03 11 44.6 -1.6
BRZS *e*PP PP 03 13 48.4 +1.3
P61A **Hammonton** 127.43 66 IAms_20 IAms_20 04 00 51.6
comp=Z,5µm,20.0s
P61A **Hammonton** 127.43 66 P PKiKP 03 11 47.3 +0.2
baz=245
E52A **Mattawa** 127.51 57 P PKPdf 03 11 46.5 0.0
baz=248,SNR=13
J56A **Wolcott** 127.51 62 P PKPdf 03 11 47.0 +0.4
baz=246
K57A **Scipio Center** 127.52 62 P PKPdf 03 11 46.6 -0.1
baz=246
G54A **Lake Saint Pet** 127.53 59 P PKPdf 03 11 46.8 +0.2
baz=247,SNR=5.6
KSPA **Keystone Colle** 127.55 64 IAms_20 IAms_20 04 09 03.6
comp=Z,6µm,18.0s
BINY **Binghamton** 127.66 63 P PKPdf 03 11 47.2 +0.2
baz=246
ALNE **Al Ain** 127.68 271 PKiKP PKiKP 03 11 48.8 +0.6
L58A **Harry Jones Me** 127.69 63 P PKiKP 03 11 47.5 -0.1
baz=246
N60A **Cedar Hill Far** 127.72 65 P PKPdf 03 11 47.1 0.0
baz=245
M59A **Waymart** 127.77 64 P PKiKP 03 11 47.8 0.0
baz=246
ALGO **Algonquin Park** 127.77 58 P PKPdf 03 11 47.1 0.0
baz=248,SNR=7.1
ASHO **Ashiyiah** 127.79 272 *i* PKPdf PKPdf 03 11 47.5 -0.3
SNR=6.2
H55A **Tweed** 127.80 60 P PKPdf 03 11 46.8 -0.4
baz=247
HATD **Hatta, Dubai** 127.81 272 *i* PKPdf PKPdf 03 11 47.9 +0.1
SNR=5.8
UOSS **Minazif** 127.82 272 PKPdf PKPdf 03 11 47.7 -0.1
UOSS **Minazif** 127.82 272 PKPdf 03 11 47.8 0.0
BRNJ **Basking Ridge** 128.01 65 IAms_20 IAms_20 04 03 43.9
comp=Z,6µm,19.0s
HRA **Herat** 128.03 286 IAms_20 IAms_20 04 06 18.9
comp=Z,7µm,21.0s
MBAR **Mbarara** 128.09 227 *i* PKIKP PKPdf 03 11 45.9 -3.1
K58A **Earlville** 128.12 63 P PKiKP 03 11 48.5 0.0
baz=246
J57A **Williamstown** 128.14 62 P PKiKP 03 11 48.6 +0.2
baz=247
ODNJ **Ogdensburg** 128.15 65 IAms_20 IAms_20 04 00 41.6
comp=Z,5µm,21.0s
E53A **Dumoine, Ponti** 128.18 58 P PKPdf 03 11 48.1 +0.3
baz=248
N61A **South Mountain** 128.23 65 P PKiKP 03 11 49.3 +0.6
baz=246
M60A **Port Jervis** 128.24 65 P PKPdf 03 11 48.2 +0.1
baz=246
NAZ **Nazwa, Dubai** 128.26 272 PKPdf PKPdf 03 11 48.5 -0.2
BANOM **Banah** 128.27 273 PKiKP PKPdf 03 11 49.3 +0.6
L59A **Walton** 128.30 63 P PKPdf 03 11 48.6 +0.3
baz=246
ASUD **Al Ashush, Dub** 128.31 271 PKiKP PKiKP 03 11 49.8 +0.5
G55A **Calabogie** 128.37 59 P PKPdf 03 11 48.5 +0.3
baz=248
D53A **Lac Vacive, Po** 128.42 57 IAms_20 IAms_20 04 03 10.4
comp=Z,6µm,20.0s
D53A **Lac Vacive, Po** 128.42 57 P PKPdf 03 11 48.0 -0.2
baz=249
H56A **Elgin** 128.43 60 P PKPdf 03 11 48.2 -0.1
baz=248
E54A **Lac Daplat, Po** 128.51 58 P PKPdf 03 11 47.7 -0.7
baz=248
I57A **Carthage** 128.57 61 P PKiKP 03 11 49.1 -0.2
baz=247
J58A **Remsen** 128.60 62 P PKiKP 03 11 49.4 +0.1
baz=247
PAL **Palisades** 128.60 65 IAms_20 IAms_20 04 03 40.5
comp=Z,5µm,20.0s
PAL **Palisades** 128.60 65 P PKiKP 03 11 49.4 0.0
baz=246
LODK **Lodwar** 128.61 234 P PKPdf 03 11 50.3 +0.5
SNR=12
K59A **Cooperstown** 128.66 63 P PKiKP 03 11 49.4 -0.2
baz=247
L60A **Shokan** 128.78 64 P PKiKP 03 11 50.1 +0.3
baz=246
M61A **Granite Spring** 128.82 65 P PKiKP 03 11 50.5 +0.7
baz=246
F55A **Otter Lake** 128.83 59 P PKiKP 03 11 49.6 -0.1
baz=248
H57A **Richville** 128.95 61 P PKiKP 03 11 50.1 +0.1
baz=248
WSPT **Westport, CT** 129.07 65 IAms_20 IAms_20 04 01 17.9
comp=Z,5µm,21.0s
J59A **Piesco** 129.16 62 P PKPdf 03 11 50.0 +0.1
baz=248
E55A **Montcerf-Lytto** 129.25 58 P PKPdf 03 11 50.3 +0.5
baz=249
L61A **Hillsdale 1, H** 129.32 64 P PKPdf 03 11 50.4 +0.3
baz=247
MATQ **Matagami** 129.39 54 P PKPdf 03 11 49.9 -0.1
baz=251
M62A **Hamden** 129.47 65 P PKPdf 03 11 50.3 -0.1
baz=247
LSQQ **Lebel-sur-Quev** 129.56 55 P PKPdf 03 11 50.1 -0.3
baz=250
ATD **Arta Tunnel** 129.56 249 IAms_20 IAms_20 03 58 36.3
comp=Z,4µm,22.0s
I59A **Olmsteadville** 129.71 62 P PKiKP 03 11 51.4 -0.2
baz=248
H58A **Gabriels** 129.74 61 P PKPdf 03 11 51.3 +0.4
baz=248
BRVK **Borovoye** 129.79 311 PKIKP PKPdf 03 11 50.2 -0.5
BRVK MLR MLR
comp=Z,5µm,21.0s
BRVK **Borovoye** 129.79 311 PKPpre 03 11 40.9
BRVK PKPdf PKPdf 03 11 50.2 -0.5
BRVK **Borovoye** 129.79 311 IAms_20 IAms_20 04 09 52.6
comp=Z,5µm,21.0s
J60A **Lant Hill Farm** 129.81 63 P PKPdf 03 11 51.3 +0.3
baz=248
D55A **Sainte-Anne-du** 129.82 58 P PKPdf 03 11 51.4 +0.4
baz=250
E56A **St. Veronique** 129.94 58 P PKiKP 03 11 52.2 +0.2
baz=250
L61B **Northampton** 130.01 64 P PKiKP 03 11 52.4 +0.2
baz=248
QUA2 **Belchertown** 130.17 64 IAms_20 IAms_20 04 01 32.1
comp=Z,5µm,22.0s
D56A **ZEC Mazanza, M** 130.29 58 P PKiKP 03 11 53.3 +0.7
baz=250
DAMY **Dhamar** 130.50 253 IAms_20 IAms_20 04 02 02.4
comp=Z,7µm,21.0s
DAMY **Dhamar** 130.50 253 P PKiKP 03 11 55.7 +1.3
SNR=9.2
FURI **Furi** 130.59 242 IAms_20 IAms_20 04 19 27.9
comp=Z,6µm,18.0s
BRYW **Bryant College** 130.59 65 IAms_20 IAms_20 04 04 29.3
comp=Z,5µm,20.0s
ASCN **Ascension** 130.77 167 IAms_20 IAms_20 04 09 40.4
comp=Z,6µm,19.0s
HRV **Adam Dziewonsk** 130.80 64 IAms_20 IAms_20 04 01 12.8
comp=Z,7µm,22.0s
D57A **Chemin Vers le** 130.84 58 P PKiKP 03 11 54.1 +0.3
baz=251
WES **Weston** 130.92 65 IAms_20 IAms_20 04 11 23.9
comp=Z,4µm,18.0s

BCX **Boston College** 131.01 65 IAms_20 IAms_20 04 05 20.2
comp=Z,5µm,20.0s
E58A **La Victoria** 131.02 59 P PKiKP 03 11 54.5 +0.4
baz=250
M65A **Busby, Falmout** 131.08 66 IAms_20 IAms_20 04 05 25.1
comp=Z,4µm,20.0s
D58A **Chemin du LacG** 131.51 58 P PKiKP 03 11 54.8 -0.3
baz=251
BBSR **BB Station** 131.52 80 IAms_20 IAms_20 04 00 09.2
comp=Z,5µm,20.0s
LATQ **La Tuque** 131.67 58 P PKiKP 03 11 55.2 -0.2
baz=252
F60A **Warwick** 131.76 60 P PKiKP 03 11 55.3 -0.3
baz=251
G61A **St-Isidore-de-** 131.81 61 P PKiKP 03 11 55.8 +0.1
baz=250
I63A **Otisfield** 132.02 63 P PKiKP 03 11 58.0 +1.8
baz=250
E60A **Ste Agathe de** 132.22 60 P PKiKP 03 11 56.5 -0.1
baz=251
ASHT **Ashkhabad** 132.39 288 IAms_20 IAms_20 04 12 23.0
comp=Z,5µm,22.0s
F61A **St Evariste** 132.39 60 P PKPdf 03 11 55.8 0.0
baz=251
G62A **West of Eustis** 132.45 61 P PKiKP 03 11 57.1 0.0
baz=251
GEYT **Ailbeck** 132.58 288 PKhKP PKPpre 03 11 43.9
comp=Z,1.1nm,0.4s,baz=30,slow=8.6,SNR=4.3
GEYT PKP PKiKP 03 11 57.8 +0.2
comp=Z,13nm,0.8s,baz=153,slow=4.1,SNR=20
GEYT SKPbc SKPbc 03 15 19.8 -1.2
comp=Z,17nm,0.8s,baz=202,slow=1.6,SNR=9.3
D60A **Saint Jean D'O** 132.73 59 P PKiKP 03 11 57.4 -0.1
baz=252
E61A **Lac Etchemin** 132.87 60 P PKiKP 03 11 58.0 +0.1
baz=252
PKME **Peaks-Kenny Pk** 133.29 62 P PKiKP 03 11 58.8 0.0
baz=251
D61A **St Aubert, Com** 133.30 59 P PKiKP 03 11 58.5 -0.2
baz=253
G64A **Maxfield** 133.65 62 P PKiKP 03 11 59.7 +0.3
baz=252
D62A **Allapoint, All** 134.00 59 P PKiKP 03 12 01.3 +1.2
baz=253
D63A **Stockholm** 134.61 60 P PKiKP 03 12 01.0 -0.4
baz=254
TULEG **Thule** 135.00 17 IAms_20 IAms_20 04 08 29.7
comp=Z,5µm,22.0s
AB31 **Akbulak array** 135.03 303 *i* PKHKP PKPpre 03 11 44.6
RAYN **Ar Rayn** 135.16 263 PKIKP PKPdf 03 12 02.5 +0.7
RAYN MLR MLR
comp=Z,7µm,20.0s
RAYN **Ar Rayn** 135.16 263 *i* PKiKP PKiKP 03 12 03.3 0.0
SNR=17
RAYN **Ar Rayn** 135.16 263 PKPdf 03 12 02.5 +0.7
RAYN IAms_20 IAms_20 04 10 41.4
comp=Z,7µm,20.0s
SVE **Sverdlovsk** 136.03 314 *i* PKIKP PKPdf 03 12 03.0 +0.7
SVE *e* 03 14 44.1
SVE pmax pmax
comp=Z,52nm,1.4s
SVE MLR MLR
comp=N,3µm,22.0s
SVE MLR MLR
comp=Z,11µm,23.0s
SVE MLR MLR
comp=E,9µm,22.0s
AKTO **Aktyubinsk** 136.51 305 PKHKP PKPpre 03 11 53.9
AKTO **Aktyubinsk** 136.51 305 SKPbc SKPbc 03 15 31.6 -1.6
comp=E,6.4nm,0.8s,baz=120,slow=2.9,SNR=5.9
SCHQ **Schefferville** 137.02 49 PKP PKPdf 03 12 04.1 -0.1
comp=E,24nm,1.1s,baz=239,slow=5.9,SNR=12
SCHQ SKPbc SKPbc 03 15 34.4 -0.2
comp=E,5.9nm,0.8s,baz=305,slow=4.2,SNR=2.5
ARU **Arti** 137.13 313 *i* PKIKP PKPdf 03 12 03.3 -1.0
ARU **Arti** 137.13 313 PKPpre 03 11 53.3
KULLO **Kullorsuaq** 138.38 19 *e*PKIKP PKPdf 03 12 03.0 -3.1
KULLO **Kullorsuaq** 138.38 19 *i* P PKPdf 03 12 03.0 -3.1
NOR **Nord** 138.67 3 *i* P PKPdf 03 12 02.0 -4.6
comp=Z,4µm,19.0s
KBS **Kingsbay** 141.06 355 PKHKP PKPpre 03 12 05.9
KBS **Kingsbay** 141.06 355 *e*PKPdf pPKPdf 03 12 22.1 +0.2
KBS *e*PP PP 03 15 09.9 -3.1
KBS *e*SS SS 03 33 39.5 +1.5
KBS IVMs_BB IVMs_BB 04 07 07.8
comp=Z,1µm,23.0s
KBS **Kingsbay** 141.06 355 PKPpre 03 12 05.9
AKT **Akhty** 141.31 289 *e*PKIKP PKPdf 03 12 08.0 -4.6
AKT *e* 03 15 16.5
AKT pmax pmax
comp=Z,57nm,1.0s
SPA0 **Spitsbergen Ar** 141.42 353 *e* PKPdf 03 12 06.4 -5.3
SPA0 *e*PKPdf PKiKP 03 12 12.5 -1.9
SPA0 *e*PKSdf PKSdf 03 15 48.0 +1.0
SPA0 *e*SS SS 03 33 40.5 -1.8
SPA0 IVMs_BB IVMs_BB 04 06 08.7
comp=Z,2µm,27.2s
SPITS **Spitsbergen Ar** 141.42 353 SKPbc SKPbc 03 15 45.3 -0.8
comp=Z,34nm,0.9s,baz=68,slow=3.3,SNR=5.6
HOPEN **Hopen** 141.86 349 *e*PKPdf PKPdf 03 12 13.4 +1.0
HOPEN *e*PP PP 03 15 19.0 +1.1
HOPEN *e*SKSdf SKSdf 03 19 20.8 +1.6
HOPEN *e*SKSdf SKSdf 03 19 20.9 +1.6
HOPEN *e*SS SS 03 33 41.2 -6.2
HOPEN IVMs_BB IVMs_BB 04 07 59.3
comp=Z,2µm,27.6s
ILULI **Ilulissat** 142.34 25 *i* PKIKP PKPdf 03 12 09.4 -4.0
ILULI **Ilulissat** 142.34 25 *i* P PKPdf 03 12 09.4 -4.0
HSPB **Hornsund (broa** 142.56 353 *e*PKPdf PKPdf 03 12 14.5 +0.9
HSPB *e*SKSdf SKSdf 03 19 22.2 +1.9
HSPB *e*SS SS 03 33 46.2 -9.3
HSPB IVMs_BB IVMs_BB 04 06 40.5
comp=Z,1µm,17.3s
GNI **Garni** 143.10 286 PKHKP PKPpre 03 12 08.3
GNI 03 12 14.5
GNI **Garni** 143.10 286 PKhKP PKPbc 03 12 12.5 -0.4
comp=Z,55nm,1.2s,baz=167,slow=5.5,SNR=14
GNI **Garni** 143.10 286 *i* PKPdf PKPdf 03 12 16.0 +0.1
SNR=13
GNI **Garni** 143.10 286 PKPpre PKPpre 03 12 08.3
GNI PKPbc 03 12 14.5 +1.5
GNI **Garni** 143.10 286 IAms_20 IAms_20 04 20 43.8
comp=Z,4µm,20.0s
GROC **Groznyy** 143.15 291 *e*PKIKP PKPab 03 12 12.1 +0.8
GROC *e* 03 15 21.7
GROC pmax pmax
comp=Z,76nm,1.1s
DAG **Danmarks Havn** 143.23 6 *i* P PKPab 03 12 10.7 +0.1
SFJD **Kangerlussuaq** 143.39 29 PKhKP PKPab 03 12 10.9 -0.6
comp=Z,43nm,0.8s,baz=292,slow=1.9,SNR=19
SFJD **Kangerlussuaq** 143.39 29 *i* P PKPab 03 12 10.7 -0.8
SFJD **Kangerlussuaq** 143.39 29 IAms_20 IAms_20 04 11 07.1
comp=Z,6µm,20.0s
PRGR **Permogore** 143.55 322 *e*PKHKP PKPab 03 12 10.7 -1.6
PRGR *e* 03 15 24.5
PRGR pmax pmax
comp=Z,82nm,1.3s
SUMG **Summit** 143.91 17 *i* PKIKP PKPab 03 12 14.0 +0.1
SUMG **Summit** 143.91 17 *i* P PKPab 03 12 14.0 +0.1
AKH **Akhalkalaki** 144.36 287 ⇑P PKPbc 03 12 17.0 +0.3
AKH **Akhalkalaki** 144.36 287 IAms_20 IAms_20 04 15 25.1
comp=Z,5µm,22.0s
BJO1 **Bjornoya** 144.38 350 *e*PKPdf PKPbc 03 12 16.3 +0.9
BJO1 *e*SS SS 03 34 07.7 -8.7
ZEI **Tsey** 144.40 290 *i* PKHKP PKPab 03 12 13.4 -3.0
ZEI pmax pmax
comp=Z,172nm,1.3s
KBZ **Khabaz** 145.32 291 *d i* PKP2 PKPbc 03 12 18.3 -1.0
KBZ **Khabaz** 145.32 291 PKPbc PKPbc 03 12 18.4 -0.8
comp=Z,124nm,0.8s,baz=117,slow=2.5,SNR=136
NEY **Neytrino** 145.35 290 *i* PKIKP PKPbc 03 12 19.4 -0.3
GOF **Gofitskoye** 145.46 293 ⇓*i* PKIKP PKPdf 03 12 18.9 -0.8
GOF pmax pmax
comp=Z,882nm,1.1s
SHA1 **Shidzhatmaz** 145.49 291 *d i* PKP2 PKPdf 03 12 18.7 -1.4
KVAR **Kislovodsk Arr** 145.51 291 PKPbc PKPab 03 12 20.8 +0.4
comp=Z,12nm,0.6s,baz=90,slow=16,SNR=30
KIV **Kislovodsk** 145.51 291 *i* PKP2 PKPdf 03 12 18.8 -1.1
KIV *e* 03 28 19.3
KIV *e*SS SS 03 34 26.9 -4.9
KIV pmax pmax
comp=Z,320nm,1.1s
KIV MLR MLR
comp=Z,13µm,24.0s
KIV **Kislovodsk** 145.51 291 *i* PKPdf PKPdf 03 12 19.5 -0.4

SNR=27
KIV Kislovodsk 145.51 291 PKPbc **PKPab** 03 12 21.1 +0.8
KIV IAMs_20 IAMs_20 04 19 09.5
comp=Z,4μm,21.0s
LVZ Lovozero 145.56 335 PKP2 **PKPdf** 03 12 19.4 +0.2
LVZ Lovozero 145.56 335 **PKPdf** 03 12 19.4 +0.2
LVZ IAMs_20 IAMs_20 04 27 29.2
comp=Z,6μm,22.0s
LIC Lamto 145.73 179 *e*P **PKPdf** 03 12 19.7 -1.4
comp=Z,2μm,1.1s
KIC Kosan Boka 145.87 179 *e*P **PKPdf** 03 12 19.7 -1.7
comp=Z,1μm,1.0s
TMCR Tamitsa 146.10 328 *e*PKHKP **PKPdf** 03 12 16.6 -3.5
TMCR pmax pmax
comp=Z,648nm,1.1s
TIC Toumodi 146.15 179 *e*P **PKPdf** 03 12 22.3 +0.5
comp=Z,437nm,0.9s
DBIC Dimbokro 146.17 179 PKPbc **PKPbc** 03 12 22.9 0.0
comp=Z,188nm,0.8s,baz=154,slow=3.5,SNR=107
HAMF Hammerfest 146.71 343 *e*PKPdf **PKPdf** 03 12 21.9 +0.9
HAMF *e*PP **PP** 03 15 47.2 +0.3
HAMF *e*SS SS 03 34 43.9 +0.8
HAMF IVMs_BB IVMs_BB 04 10 25.8
comp=Z,2μm,17.1s
VRH Novokhopyorsk 146.85 304 *e*PKP2 **PKPdf** 03 12 22.5 +0.7
VRH *e* 03 15 48.7
VRH pmax pmax
comp=Z,310nm,0.7s
VRH pmax pmax
comp=N,40nm,1.6s
VRH pmax pmax
comp=E,150nm,0.9s
ARCES ARCESS Array B 147.11 341 PKPbc **PKPdf** 03 12 22.2 +0.4
comp=E,132nm,0.8s,baz=58,slow=2.6,SNR=194
ARE0 ARCESS Array S 147.11 341 *e*PKPdf **PKPdf** 03 12 22.3 +0.6
ARE0 *e*SS SS 03 34 47.6 -0.1
ARE0 IVMs_BB IVMs_BB 04 10 09.4
comp=Z,2μm,26.1s
RCY Rachaya 147.48 270 *e*P **PKPdf** 03 12 23.3 -0.3
SOC Sochi 147.56 290 *e*PKIKP **PKPdf** 03 12 22.3 -0.9
SOC *i* 03 12 27.1
SOC *e* 03 15 54.5
SOC *e*PPP PPP 03 19 20.2
SOC pmax pmax
comp=Z,48nm,0.9s
SOC pmax pmax
comp=Z,138nm,0.9s
SOC MLR MLR
comp=Z,5μm,21.0s
MMAI Mount Meron Ar 147.60 269 PKPbc **PKPbc** 03 12 26.9 +0.4
comp=Z,183nm,1.1s,baz=97,slow=3.4,SNR=79
QRWL Qaraoun 147.61 270 *e*P **PKPdf** 03 12 24.1 +0.3
NRS Narsarsuaq 147.67 37 *i* PKP2 **PKPbc** 03 12 25.0 -0.6
NRS MLR MLR
comp=Z,7μm,18.0s
NRS Narsarsuaq 147.67 37 *i* P **PKPbc** 03 12 25.0 -0.6
comp=Z,7μm,18.0s
HWQ Hawqa 147.71 272 *e*P **PKPdf** 03 12 23.4 -0.6
BHL Bhannes 147.78 271 *e*P **PKPdf** 03 12 23.6 -0.5
KTK1 Kautokeino 148.05 342 *e*PKPdf **PKPdf** 03 12 23.8 +0.6
KTK1 *ep*PKPbc **pPKPdf** 03 12 36.1 +1.9
KTK1 *e*SKPdf **SKPdf** 03 15 56.4 +1.9
KTK1 *e*SKSdf **SKSdf** 03 19 30.5 +1.8
KTK1 IVMs_BB IVMs_BB 04 11 40.9
comp=Z,2μm,16.1s
VORD Divnogorie 148.39 304 *e*PKIKP **PKPdf** 03 12 25.6 +1.3
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=Z,100nm,0.9s
VORD pmax pmax
comp=E,60nm,1.2s
VORR Voronezh 148.41 305 *e*PKHKP **PKPdf** 03 12 22.0 -2.3
VORR pmax pmax
comp=Z,300nm,1.4s
VSR Storozhevoye 148.46 304 *e*PKIKP **PKPdf** 03 12 25.3 +0.9
VSR *e*PPP PPP 03 19 21.8
VSR pmax pmax
comp=Z,190nm,1.1s
VSR pmax pmax
comp=N,10.0nm,1.6s
VSR pmax pmax
comp=E,90nm,1.1s
VSR MLR MLR
comp=Z,6μm,22.0s
VSR MLR MLR
comp=N,4μm,23.0s
VSR MLR MLR
comp=E,2μm,30.0s
TRO Tromso 148.50 345 *e*PKPdf **PKPdf** 03 12 24.2 +0.3
TRO *e*PP **PP** 03 15 58.3 +0.8
TRO *e*SKSdf **SKSdf** 03 19 31.4 +2.2
TRO *e*SS **SS** 03 35 03.4 +0.2
TRO IVMs_BB IVMs_BB 04 15 18.0
comp=Z,2μm,23.4s
LPSR Galich'ya Gora 148.52 307 *e*PKIKP **PKPdf** 03 12 25.4 +0.9
LPSR pmax pmax
comp=Z,150nm,0.9s
LPSR pmax pmax
comp=N,4.0nm,0.5s
LPSR pmax pmax
comp=E,20nm,1.0s
SCO Scoresbysund 148.72 11 *i* PKIKP **PKPdf** 03 12 24.5 +0.2
SCO Scoresbysund 148.72 11 *i* P **PKPdf** 03 12 24.5 +0.2
MOS Moscow 148.84 313 *e*PKIKP **PKPdf** 03 12 24.5 -0.4
MOS *e* 03 12 37.9
MOS *e* 03 15 59.7
MOS *e*PPP PPP 03 19 17.7
MOS *e*SS SS 03 35 11.9 +3.7
MOS pmax pmax
comp=Z,276nm,1.3s
MOS MLR MLR
comp=Z,8μm,21.0s
MOS MLR MLR
comp=N,5μm,22.0s
MOS MLR MLR
comp=E,6μm,21.0s
SACV Santiago Islan 149.35 141 **PKiKP** 03 12 32.6 0.0
ANN Anapa 149.37 292 *i* PKHKP **PKPdf** 03 12 27.4 +1.3
ANN *e* 03 15 59.8
ANN pmax pmax
comp=Z,137nm,1.0s
JMIC Jan Mayen 149.50 3 *e*PKPbc **PKiKP** 03 12 31.2 0.0
OBN Obninsk 149.55 312 *e*PKIKP **PKPdf** 03 12 24.5 -1.5
OBN *e* 03 16 03.3
OBN pmax pmax
comp=Z,142nm,1.1s
OBN MLR MLR
comp=Z,7μm,22.0s
OBN Obninsk 149.55 312 **PKPdf** 03 12 27.6 +1.6
OBN PKPbc **PKPbc** 03 12 30.3 -0.3
DIKM Dikmen 150.44 285 ⇑P **PKiKP** 03 12 34.1 +0.1
LOF Lofoten 150.81 346 *e*PKPdf **PKPdf** 03 12 27.9 +0.2
LOF *e*SKPdf **SKPdf** 03 15 57.9 -0.6
LOF *e*SKSdf **SKSdf** 03 19 34.0 +1.7
LOF *e*SS **SS** 03 35 30.2 +1.3
BR131 Keskin Array S 151.21 281 PKIKP **PKPbc** 03 12 34.5 -0.9
BR131 Keskin Array S 151.21 281 **PKPdf** 03 12 28.1 -1.3
BR131 PKPbc **PKPbc** 03 12 34.5 -0.8
BR131 Keskin Array S 151.21 281 P **PKPdf** 03 12 29.4 0.0
SNR=86
BRTR Keskin Array B 151.21 281 PKP **PKPdf** 03 12 27.9 -1.6
comp=Z,14nm,1.2s,baz=132,slow=1.8,SNR=39
BRTR PKPbc **PKPbc** 03 12 34.4 -0.9
comp=Z,71nm,0.8s,baz=146,slow=4.7,SNR=99
BRTR PKKP 03 21 09.7
comp=Z,0.7nm,0.7s,baz=208,slow=5.6,SNR=3.5
ILGA Ilgaz 151.45 283 IAMs_20 IAMs_20 04 20 47.9
comp=Z,6μm,22.0s
SIM Simferopol' 151.73 292 *d i*PKIKP **PKPdf** 03 12 28.4 -1.4
SIM *i* 03 16 23.0
SIM *i* PPP PPP 03 19 50.0
SIM pmax pmax
comp=Z,970nm,6.4s
SIM pmax pmax
comp=Z,1μm,9.2s
ANTO Ankara 151.88 281 ⇑PKIKP **PKPdf** 03 12 30.9 +0.6
ANTO Ankara 151.88 281 ⇑P **PKPdf** 03 12 30.9 +0.6
ANTO Ankara 151.88 281 **PKPdf** 03 12 29.6 -0.7
ANTO PKPbc **PKPbc** 03 12 36.6 -0.2
SEVA Sevastopol 152.00 291 ⇓P **PKPbc** 03 12 36.0 -0.8
TOA0 Torodi Ar. Sit 152.13 192 P **PKPdf** 03 12 31.3 -0.1
SNR=25
TORD Torodi Ar. Bea 152.13 192 PKP **PKPdf** 03 12 30.8 -0.6
comp=Z,24nm,1.1s,baz=220,slow=0.1,SNR=45
TORD PKPbc **PKPbc** 03 12 37.0 -1.0
comp=Z,33nm,0.6s,baz=182,slow=3.6,SNR=109
TORD PKPab **PKPab** 03 12 47.4 0.0
comp=Z,148nm,0.8s,baz=170,slow=3.3,SNR=36
FIA1 FINESS Array S 152.21 329 **PKPdf** 03 12 29.1 -0.9
FIA1 PKPbc **PKPbc** 03 12 35.1 -1.6
FINES FINESS Array B 152.21 329 PKP **PKPdf** 03 12 30.0 0.0
comp=Z,7.7nm,0.8s,baz=75,slow=2.2,SNR=11
FINES PKPbc **PKPbc** 03 12 35.7 -1.0
comp=Z,91nm,0.6s,baz=67,slow=3.6,SNR=202
FINES PKPab **PKPab** 03 12 45.8 -0.8
comp=Z,67nm,0.6s,baz=69,slow=4.6,SNR=13
KONS Konsvik 152.33 345 *e*PKPbc **PKPbc** 03 12 37.0 +0.1
MOR8 Moi Rana 152.34 344 *e*PKPbc **PKPbc** 03 12 36.0 -0.9
MOR8 *e*PP **PP** 03 16 19.7 +0.1
MOR8 *e*SS SS 03 35 44.8 -1.1
MOR8 IVMs_BB IVMs_BB 04 13 40.6
comp=Z,2μm,23.3s
STOK Stokkvaagen 152.49 345 *e*PKPbc **PKiKP** 03 12 38.2 +0.8
VSU Vasula 153.50 323 *e*P **PKPbc** 03 12 38.3 -1.4
BORG Borgarnes 153.90 17 PKP2 **PKPab** 03 12 51.6 -2.1
BORG Borgarnes 153.90 17 PKPbc **PKiKP** 03 12 41.4 +1.0
comp=Z,96nm,0.9s,baz=324,slow=1.2,SNR=20
BORG PKPab **PKPab** 03 12 53.9 +0.3
comp=Z,92nm,0.9s,baz=288,slow=2.1,SNR=7.6
BORG Borgarnes 153.90 17 PKPdf **PKPdf** 03 12 32.9 +0.5
BORG **PKPbc** 03 12 40.0 -0.3
BORG **PKPab** 03 12 51.6 -2.1
ORH Orhaniye 154.12 282 P **PKPdf** 03 12 37.7 +4.2
NSS Namsos 154.29 344 *e*PKPbc **PKiKP** 03 12 41.8 +0.6
NSS *e*SS SS 03 36 07.9 +0.8
NSS IVMs_BB IVMs_BB 04 15 32.1
comp=Z,2μm,18.1s
MICGM Minsk 154.56 314 *e*PKP2 **PKPdf** 03 12 34.0 +0.4
MICGM *e*PP **PP** 03 16 36.0 +3.3
MICGM *e*PPP PPP 03 20 06.0
MICGM *e*SKKS 03 22 18.0
MICGM *e*SKSP 03 26 50.0
MICGM *e*SS SS 03 35 24.0 -47
MICGM *e*SSS SSS 03 42 34.0
MICGM *e*LR LR 04 11 16.0
MICGM LRM MLR 04 20 26.0
comp=Z,8.7nm,25.0s
MICGM LRM MLR 04 20 36.0
comp=Z,9.8nm,14.0s
MNK Minsk 154.56 314 *e*PKIKP **PKPdf** 03 12 32.0 -1.6
MNK *e* 03 16 36.0
MNK *e*PPP PPP 03 20 06.0
PURM Purcari 154.75 295 ⇓P **PKPdf** 03 12 35.2 +1.1
AKASG Malin Array Be 154.76 305 PKP **PKPdf** 03 12 34.2 +0.3
comp=Z,2.4nm,0.6s,baz=51,slow=1.5,SNR=24
AKASG PKPbc **PKPbc** 03 12 41.4 -1.2
comp=Z,12nm,0.7s,baz=66,slow=2.8,SNR=26
IZAR Zarasai 154.96 317 *e*P **PKPbc** 03 12 42.3 -0.5
NACGM Naroch 155.01 315 *e*PKP PKPdf 03 12 43.0 +8.8
NACGM *e*SKS 03 16 12.0
NACGM *e*SKKS SKKSac 03 23 08.0 -14
NACGM *e*SKSP 03 27 02.0
NACGM *e*SS SS 03 36 02.0 -14
NACGM *e*SSS SSS 03 42 12.0
NACGM *e*LQ LQ 04 01 20.0
NACGM *e*LR LR 04 17 16.0
NACGM LRM MLR 04 21 56.0
comp=Z,15nm,22.0s
ISAL Salakas 155.09 317 *e*P PKPdf 03 12 43.1 +8.8
ISAL IAmb IAmb 03 12 45.5
comp=Z,20nm,0.7s
IIGN Ignalina 155.13 317 *e*P PKPdf 03 12 43.9 +10
IIGN IAmb IAmb 03 12 45.8
comp=Z,26nm,0.8s
KIS Kishinev 155.46 296 *e*PKP **PKPdf** 03 12 36.0 +0.9
KIS *e*SKP 03 16 04.0
KIS Kishinev 155.46 296 *e*PP PP 03 16 44.0 +5.8
KIS *e*SKKS 03 23 24.0
KIS *e*SKSP 03 25 58.0
KIS Kishinev 155.46 296 *e*PKIKP **PKPdf** 03 12 36.0 +0.9
KIS *e* 03 12 47.0
KIS *e* 03 16 44.0
KIS *e* 03 20 20.0
MILM Milestii Mici 155.47 296 ⇓P **PKPdf** 03 12 31.0 -4.1
TLCR 155.49 292 ⇑PKIKP **PKPdf** 03 12 38.3 +3.1
TLCR 155.49 292 ⇑P **PKPdf** 03 12 38.3 +3.1
LEOM Leova 155.88 295 ⇓PKIKP **PKPdf** 03 12 35.9 +0.3
LEOM Leova 155.88 295 ⇓P **PKPdf** 03 12 35.9 +0.3
CFR Carcaliu 155.97 292 ⇓PKIKP **PKPdf** 03 12 35.7 -0.1
CFR Carcaliu 155.97 292 ⇓P **PKPdf** 03 12 35.7 -0.1
HARR Harsova 156.11 290 ⇑PKIKP **PKPdf** 03 12 35.9 -0.1
HARR Harsova 156.11 290 ⇑P **PKPdf** 03 12 35.9 -0.1
ICOR Ion Corvin 156.18 289 ⇑P **PKPdf** 03 12 33.3 -2.8
PABE Paberze 156.23 318 *e*P PKPdf 03 12 45.9 +10
PABE IAmb IAmb 03 13 05.1
comp=Z,179nm,0.7s
SANT Santorini 156.45 269 IAMs_20 IAMs_20 04 35 48.2
comp=Z,4μm,20.0s
GHRR 156.47 294 ⇑P **PKPdf** 03 12 37.1 +0.7
IDI Anoyia 156.50 266 PKP **PKPdf** 03 12 37.0 +0.1
comp=Z,34nm,1.0s,baz=156,slow=7.9,SNR=7.2
IDI PKPab **PKPab** 03 13 07.2 +1.3
comp=Z,31nm,0.8s,baz=142,slow=9.3,SNR=6.0
MOL Molde 156.93 346 *ep*PKPdf **pPKPdf** 03 12 46.3 -1.1
MOL *e*SS SS 03 36 37.7 +2.2
VRI Vrincioaia 156.95 293 ⇑PKIKP **PKPdf** 03 12 39.8 +2.7
VRI Vrincioaia 156.95 293 ⇑P **PKPdf** 03 12 39.8 +2.7
TESR Tescani 156.98 295 ⇓P **PKPdf** 03 12 40.2 +3.1
PBUR Paburg 156.99 321 *e*P **PKPab** 03 13 06.1 -1.1
PLOR Plostina 157.01 293 ⇑PKIKP **PKPdf** 03 12 37.8 +0.6
PLOR Plostina 157.01 293 ⇑P **PKPdf** 03 12 37.8 +0.6
DOMB Dombas 157.11 344 *e*PKPdf **PKPdf** 03 12 37.0 +0.1
DOMB *e*SKPdf **SKPdf** 03 16 06.7 -0.1
DOMB *e*SS **SS** 03 36 35.1 -2.5
ALN Alexandroupoli 157.13 281 IAMs_20 IAMs_20 04 21 16.2
comp=Z,3μm,21.0s
PRAR RASCA 157.19 297 ⇓P **PKPdf** 03 12 37.6 +0.3
SUW Suwalki 157.29 315 *e*PKIKP **PKPdf** 03 12 37.1 -0.1
SUW *e* 03 19 44.6
SUW Suwalki 157.29 315 *e*PKPdf **PKPdf** 03 12 37.1 -0.1
SUW *e*SKSdf **SKSdf** 03 19 44.6 +4.3
BIZ Bicaz 157.32 296 ⇓P **PKPdf** 03 12 37.3 -0.2
AKN Aaknes 157.39 346 *ep*PKPdf **pPKPdf** 03 12 45.6 -2.5
AKN *e*SS SS 03 36 41.4 +0.8
AKN IVMs_BB IVMs_BB 04 14 43.8
comp=Z,2μm,3.8s
SECR 157.44 291 ⇑P **PKPdf** 03 12 39.0 +1.2
NB2 NORSAR Subarra157.48 340 PKPdf **PKPdf** 03 12 35.6 -1.7
comp=Z,770nm,3.3s,baz=28,slow=1.6
NB2 NORSAR Subarra157.48 340 PKPdf **PKPdf** 03 12 35.6 -1.7
baz=28,slow=1.6
NOA NORSAR Array B 157.48 340 PKP **PKPdf** 03 12 36.3 -1.0
comp=Z,15nm,1.1s,baz=31,slow=1.6,SNR=12
NOA PKPab **PKPab** 03 13 07.8 -1.4
comp=Z,5.4nm,0.6s,baz=29,slow=3.1,SNR=9.0
NOA PP **PP** 03 16 52.7 +4.2
comp=Z,5.3nm,1.0s,baz=41,slow=5.1,SNR=3.4
MLR Muntele Rosu 157.51 292 PKP **PKPdf** 03 12 36.7 -1.3
comp=Z,22nm,1.1s,baz=75,slow=3.6,SNR=13
MLR PKPab **PKPab** 03 13 09.8 -0.2
comp=Z,21nm,0.7s,baz=37,slow=1.7,SNR=9.7
MLR PP **PP** 03 16 50.7 +0.9
comp=Z,20nm,1.1s,baz=355,slow=4.0,SNR=5.0
MLR Muntele Rosu 157.51 292 ⇓P **PKPdf** 03 12 37.2 -0.8
HFS Hagfors 157.53 336 PKP **PKPdf** 03 12 36.3 -1.0
comp=Z,5.1nm,0.8s,baz=225,slow=1.0,SNR=4.0
HFS PKPab **PKPab** 03 13 09.1 -0.2
comp=Z,18nm,0.6s,baz=82,slow=3.1,SNR=17
NC602 NORSAR Array S 157.66 339 *e*PKPdf **PKPdf** 03 12 37.5 0.0
NC602 *e*SS SS 03 36 45.7 +2.2
NC602 IVMs_BB IVMs_BB 04 17 01.1
comp=Z,3μm,19.3s
DIM Dimitrovgrad 157.67 283 *e*P **PKPdf** 03 12 37.9 -0.2
KDZ Kurdzhali 157.71 282 *e*P **PKPdf** 03 12 36.1 -2.1
BURAR Bucovina Array 157.84 298 ⇓PKIKP **PKPdf** 03 12 37.8 -0.5
BURAR Bucovina Array 157.84 298 ⇓P **PKPdf** 03 12 37.8 -0.5
PVL Pavlikeni 157.92 286 *e*P **PKPdf** 03 12 37.6 -0.8
VOIR 158.15 292 ⇑PKIKP **PKPdf** 03 12 37.2 -1.5
VOIR 158.15 292 ⇑P **PKPdf** 03 12 37.2 -1.5
LVV L'vov 158.20 304 *e*PKIKP **PKPdf** 03 12 38.3 -0.2
LVV *e* 03 16 59.8
HUMR Humele 158.21 290 ⇑P **PKPdf** 03 12 38.4 -0.3
FOO Floro 158.26 348 *e*PKPdf **PKPdf** 03 12 39.6 +1.4
FOO *e*SS SS 03 36 54.1 +4.4
ARR Arges 158.44 292 ⇑P **PKPdf** 03 12 38.1 -0.9
PLVB Pleven 158.45 287 ⇑P **PKPdf** 03 12 38.0 -1.0
ARCR ARCALIA 158.49 297 ⇓P **PKPdf** 03 12 37.9 -1.1
SKAR Skarslia 158.49 343 *e*PKPdf **PKPdf** 03 12 38.4 -0.2
SKAR *e*PP **PP** 03 16 54.9 +1.0
SKAR *e*SKSdf **SKSdf** 03 19 42.5 +1.1
SKAR *e*SS **SS** 03 36 54.0 +1.5
OSL Oslo 158.55 339 *ep*PKPdf **pPKPdf** 03 12 48.5 -1.0
OSL *e*PP **PP** 03 16 54.1 -0.1
VLAD Vladila 158.62 289 ⇑P **PKPdf** 03 12 38.4 -0.8
PGB Panagyurishte 158.73 285 *e*P **PKPdf** 03 12 37.1 -2.4
SUE Sulen 158.82 348 *ep*PKPdf **pPKPdf** 03 12 48.6 -1.2
SUE *e*SS SS 03 36 56.9 +1.2
KWP Kalwaria Pacla 159.08 304 *e*PKIKP **PKPdf** 03 12 41.3 +1.7
KWP Kalwaria Pacla 159.08 304 *e*PKPdf **PKPdf** 03 12 41.3 +1.7
KWP *e*PKPab **PKPab** 03 13 17.8 +1.3
KONO Kongsberg 159.09 340 *e*PKPdf **PKPdf** 03 12 40.4 +1.2
KONO *e*SS SS 03 36 57.9 -0.9
H07S1 FLORES T-PHASB 59.31 85 *e*PKP **PKPdf** 03 12 43.3 +3.1
BER Bergen 159.36 346 *ep*PKPdf **pPKPdf** 03 12 48.9 -1.5
BER *e*SS SS 03 36 58.4 -3.0
ITM Ithomi 159.40 269 IAMs_20 IAMs_20 04 35 28.1
comp=Z,5μm,20.0s
VTS Vitosha 159.42 285 ⇑PKIKP **PKPdf** 03 12 38.9 -1.5
VTS Vitosha 159.42 285 ⇑P **PKPdf** 03 12 38.9 -1.5
VTS Vitosha 159.42 285 *e*P **PKPdf** 03 12 39.4 -1.0
KKB Krupnik 159.47 282 *e*P PKPdf 03 12 49.0 +8.7
BEL Belsk 159.51 311 *e*PKIKP **PKPdf** 03 12 40.8 +0.9
BEL Belsk 159.51 311 *e*PKPdf **PKPdf** 03 12 40.8 +0.9
BEL *e*PKPab **PKPab** 03 13 18.4 +0.2
KOLS Kolonicke sedl 159.53 303 *e*PKIKP **PKPdf** 03 12 40.5 +0.4
KOLS Kolonicke sedl 159.53 303 *e*PKP **PKPdf** 03 12 40.5 +0.4
KOLS *e* 03 13 19.5
AGG Agios Georgios 159.57 274 IAMs_20 IAMs_20 04 23 58.9
comp=Z,6μm,22.0s
UZH Uzhgorod 159.59 302 *i* PKIKP **PKPdf** 03 12 38.8 -1.4
UZH *e* 03 13 18.0
UZH *e* 03 17 02.2
UZH *e* 03 19 40.0
UZH *e*PPP PPP 03 20 43.4
DRGR 159.65 297 ⇓PKIKP **PKPdf** 03 12 38.1 -2.3
DRGR 159.65 297 ⇓P **PKPdf** 03 12 38.1 -2.3
LIT Litokhoron 159.67 277 PKIKP **PKPdf** 03 12 40.3 -0.3
LIT 03 13 17.7
LIT Litokhoron 159.67 277 **PKPdf** 03 12 40.3 -0.3
LIT **PKPab** 03 13 17.7 -1.7
LIT IAMs_20 IAMs_20 04 34 48.5
comp=Z,5μm,21.0s
PUNG Punghina 159.68 289 ⇑P **PKPdf** 03 12 40.7 +0.3
GZR Gura Zlata 159.75 293 ⇓PKIKP **PKPdf** 03 12 38.8 -1.8
GZR Gura Zlata 159.75 293 ⇓P **PKPdf** 03 12 38.8 -1.8
HERR Herculane 160.03 291 ⇑P **PKPdf** 03 12 38.6 -2.2
TAM Tamanrasset 160.40 208 PKIKP **PKPdf** 03 12 41.5 -0.6
TAM Tamanrasset 160.40 208 **PKPdf** 03 12 41.5 -0.6
BZS Buzias 160.54 293 ⇑PKIKP **PKPdf** 03 12 39.0 -2.3
BZS Buzias 160.54 293 ⇑P **PKPdf** 03 12 39.0 -2.3
HOMB Homborsund 160.57 340 *e*PKPdf **PKPdf** 03 12 41.5 +0.6
HOMB *e*SS SS 03 37 18.3 +4.0
NIE Niedzica 160.65 305 *e*PKIKP **PKPdf** 03 12 42.3 +0.9
NIE Niedzica 160.65 305 *e*PKPdf **PKPdf** 03 12 42.3 +0.9
NIE *e*PKPab **PKPab** 03 13 24.3 +1.0
OJC Ojcow 160.69 308 *e*PKIKP **PKPdf** 03 12 39.5 -1.9
OJC Ojcow 160.69 308 *e*PKPdf **PKPdf** 03 12 39.5 -1.9
OJC *e*PKPab **PKPab** 03 13 23.8 +0.3
BSD Bornholm Skovb 160.75 325 *e*PKIKP **PKPdf** 03 12 43.4 +2.2
BSD MLR MLR
comp=Z,7μm,26.0s
BSD Bornholm Skovb 160.75 325 *i* P **PKPdf** 03 12 43.4 +2.2
comp=Z,7μm,26.0s
GKP Gorka Klasztor 160.75 318 *e*PKIKP **PKPdf** 03 12 39.9 -1.4
GKP Gorka Klasztor 160.75 318 *e*PKPdf **PKPdf** 03 12 39.9 -1.4
KECS Kecovo 160.79 302 *e*PKP2 **PKPab** 03 13 25.2 +1.2
KECS Kecovo 160.79 302 *e*PKP **PKPab** 03 13 25.2 +1.2
SNART Snartemo 160.84 341 *e*PKPab **PKPab** 03 13 24.3 +0.5
BSZH Besenyszg 161.21 299 *e*P **PKPdf** 03 12 42.4 +0.4
PICO Pico 161.22 89 *e*PKP **PKPdf** 03 12 43.6 +1.2
LANS Liptovska Anna 161.25 305 *e*PKIKP **PKPdf** 03 12 44.0 +1.9
LANS Liptovska Anna 161.25 305 *e*PKP **PKPdf** 03 12 44.0 +1.9
LANS *e* 03 13 27.2
PSZ Piszkesteto 161.32 301 ⇑PKIKP **PKPdf** 03 12 41.3 -0.9
PSZ Piszkesteto 161.32 301 ⇑P **PKPdf** 03 12 41.3 -0.9
COP Copenhagen 161.37 329 *e*PKIKP **PKPdf** 03 12 40.6 -1.3
COP MLR MLR
comp=Z,4μm,20.0s
COP Copenhagen 161.37 329 *i* P **PKPdf** 03 12 40.6 -1.3
comp=Z,4μm,20.0s
ROSA Rosais 161.41 88 *e*PKP **PKPdf** 03 12 46.1 +3.6
PGRA Graciosa 161.68 87 *e*PKP **PKPdf** 03 12 42.1 -0.7
DIVS Divibare 161.80 289 *e*P **PKPdf** 03 12 40.2 -2.7
OKC Ostrava-Krasne 161.82 308 *e*PKIKP **PKPdf** 03 12 42.5 -0.1
OKC *e* 03 13 28.7
OKC *e* 03 17 19.8
OKC MLR MLR
comp=Z,7μm,24.0s
OKC Ostrava-Krasne 161.82 308 *e*PKPDF **PKPdf** 03 12 42.5 -0.1
OKC *e*PKPAB **PKPab** 03 13 28.7 +0.3
OKC *e*PP **PP** 03 17 19.8 +7.1
OKC AMS AMS 04 24 10.0
comp=Z,7μm,24.0s
VYHS Vyhne 161.84 303 *e*PKIKP **PKPdf** 03 12 44.7 +2.0
VYHS *e* 03 13 29.3
VYHS Vyhne 161.84 303 *e*PKP **PKPdf** 03 12 44.7 +2.0
VYHS *e* 03 13 29.3
FRGS Fruska Gora 161.85 292 *e*P **PKPdf** 03 12 40.0 -2.8
MORC Moravsky Berou 162.21 308 ⇓PKIKP **PKPdf** 03 12 40.2 -2.9
MORC Moravsky Berou 162.21 308 ⇓P **PKPdf** 03 12 40.2 -2.9
MORC Moravsky Berou 162.21 308 *e*PKP **PKPdf** 03 12 42.2 -0.8
MORC *es*PKP 03 12 53.3
MORC *e* 03 13 30.5
MORC *e*PP **PP** 03 17 17.7 +2.9
BBLS Lazići 162.24 288 *e*P **PKPdf** 03 12 41.1 -2.2
PSCM Serra do Cume 162.26 89 *e*PKP **PKPdf** 03 12 43.3 -0.1
JAVC Velka Javorina 162.46 305 *e*PKP **PKPdf** 03 12 43.5 +0.2
JAVC *es*PKP 03 12 54.9
JAVC *e* 03 13 32.6
JAVC *e*PP **PP** 03 17 14.7 -1.5
KSP Ksiaz 162.48 312 *e*PKIKP **PKPdf** 03 12 43.7 +0.5
KSP Ksiaz 162.48 312 *e*PKPdf **PKPdf** 03 12 43.7 +0.5
KSP *e*PKPab **PKPab** 03 13 32.1 +0.9
MORH Mrgy, Hungar 162.51 296 *e*P **PKPdf** 03 12 41.6 -1.8
KRLC Kraliky 162.54 310 *e*PKIKP **PKPdf** 03 12 42.8 -0.6
KRLC *e* 03 13 32.5
KRLC MLR MLR
comp=Z,7μm,23.1s
KRLC Kraliky 162.54 310 *e*PKPDF **PKPdf** 03 12 42.8 -0.6
KRLC *e*PKPAB **PKPab** 03 13 32.5 +0.9
KRLC AMS AMS 04 26 20.0
comp=Z,7μm,23.1s
HAPS Han Pijesak,Bl 162.55 289 *e*P **PKPdf** 03 12 42.6 -1.1
OSTC Ostas 162.66 312 *e*PKPDF **PKPdf** 03 12 41.9 -1.5
OSTC *e*PKPAB **PKPab** 03 13 33.9 +1.8
OSTC AMS AMS 04 29 20.0
comp=Z,8μm,21.1s
DPC Dobruska-Polom 162.69 311 *e*PKIKP **PKPdf** 03 12 42.4 -1.1
DPC *e* 03 13 32.9
DPC *e* 03 17 14.4
DPC MLR MLR
comp=Z,7μm,19.6s
DPC Dobruska-Polom 162.69 311 *e*PKPDF **PKPdf** 03 12 42.4 -1.1
DPC *e*PKPAB **PKPab** 03 13 32.9 +0.6
DPC *e*PP **PP** 03 17 14.4 -2.8
DPC *ex* x 03 20 06.9
DPC AMS AMS 04 31 50.0
comp=Z,7μm,19.6s
CHVC Chvalec 162.73 312 *e*PKPDF **PKPdf** 03 12 43.2 -0.3
CHVC *e*PKPAB **PKPab** 03 13 38.8 +6.4
CHVC AMS AMS 04 29 20.0
comp=Z,9μm,19.8s
UPC Upice 162.79 312 *e*PKP2 **PKPab** 03 13 32.7 0.0
UPC MLR MLR
comp=Z,10μm,20.2s
UPC Upice 162.79 312 *e*PKPAB **PKPab** 03 13 32.7 0.0
UPC AMS AMS 04 29 10.0
comp=Z,10μm,20.2s
MODS Modra-Piesok 162.87 304 *e*PKIKP **PKPdf** 03 12 43.4 -0.3
MODS Modra-Piesok 162.87 304 *e*PKP **PKPdf** 03 12 43.4 -0.3
TIH Tihany 162.88 299 *e*P **PKPdf** 03 12 40.9 -2.8
RUE Ruedersdorf 162.93 320 *e*P **PKPab** 03 13 32.0 -1.1
VRAC Vranov 162.96 308 ⇓PKIKP **PKPdf** 03 12 42.5 -1.2
VRAC Vranov 162.96 308 PKP **PKPdf** 03 12 42.7 -1.1
comp=Z,19nm,1.1s,baz=124,slow=0.5,SNR=18
VRAC PKPab **PKPab** 03 13 33.5 0.0
comp=Z,30nm,1.1s,baz=72,slow=6.0,SNR=9.2
VRAC Vranov 162.96 308 ⇓P **PKPdf** 03 12 42.5 -1.2

VRAC	**Vranov**	**162.96**	**308**	*e*PKP		**PKPdf**	**03 12 43.0**	**-0.8**	
VRAC				*es*PKP			03 12 54.0		
VRAC				*e*			03 13 34.0		
VRAC				*e*PP		**PP**	**03 17 15.0**	**-3.7**	
TREB	**Trebinje**	**163.02**	**284**	*e*P		**PKPdf**	**03 12 42.9**	**-1.1**	
KRUC	**Moravsky**	**163.17**	**307**	*e*PKP		**PKPdf**	**03 12 42.7**	**-1.2**	
KRUC				*es*PKP			03 12 54.1		
KRUC				*e*			03 13 34.4		
KRUC				*e*PP		**PP**	**03 17 16.1**	**-3.8**	
CMLA	**Cha da Macela**	**163.24**	**93**	*e*PKP		**PKPdf**	**03 12 45.5**	**+1.1**	
PCALD	**Caldeiras da R**	**163.27**	**93**	*e*PKP		**PKPdf**	**03 12 47.0**	**+2.6**	
PSMN	**Pico do Norte,**	**163.35**	**96**	*e*PKP		**PKPdf**	**03 12 43.3**	**-1.2**	
BART	**Pico Bartolome**	**163.51**	**93**	*e*PKP		**PKPdf**	**03 12 43.0**	**-1.8**	
PVCC	**Panska Ves**	**163.59**	**313**	*e*PKIKP		**PKPdf**	**03 12 43.6**	**-0.7**	
PVCC				*e*			03 13 36.0		
PVCC					MLR	MLR			
	comp=Z,8μm,23.7s								
PVCC	**Panska Ves**	**163.59**	**313**	*e*PKPDF		**PKPdf**	**03 12 43.6**	**-0.7**	
PVCC				*e*PKPAB		**PKPab**	**03 13 36.0**	**-0.2**	
PVCC					AMS	AMS	04 26 20.0		
	comp=Z,8μm,23.7s								
TREC	**Trest**	**163.63**	**308**	*e*PKIKP		**PKPdf**	**03 12 43.7**	**-0.7**	
TREC				*e*			03 17 30.3		
TREC					MLR	MLR			
	comp=Z,9μm,22.7s								
TREC	**Trest**	**163.63**	**308**	*e*PKPDF		**PKPdf**	**03 12 43.7**	**-0.7**	
TREC				*ep*PKP		**pPKPab**	**03 13 42.9**	**-4.2**	
TREC				*e*PP		PP	03 17 30.3	+8.0	
TREC					AMS	AMS	04 28 20.0		
	comp=Z,9μm,22.7s								
BEHE	**Becsehely**	**163.73**	**298**	*e*P		**PKPdf**	**03 12 42.4**	**-2.2**	
BEHE	**Becsehely**	**163.73**	**298**	*e*P		**PKPdf**	**03 12 42.9**	**-1.7**	
BLY	**Banja Luka**	**163.75**	**292**	*e*P		**PKPdf**	**03 12 43.9**	**-0.7**	
BRG	**Berggiesshubel**	**163.76**	**315**	*i* PKP		**PKPdf**	**03 12 43.3**	**-1.1**	
	comp=Z,109nm,1.7s								
BRG				*i*			03 12 52.9		
	comp=Z,212nm,2.1s								
BRG	**Berggiesshubel**	**163.76**	**315**	*i* PKIKP		**PKPdf**	**03 12 43.3**	**-1.1**	
BRG				*i*			03 12 52.9		
BRG				*e*			03 13 35.5		
BRG					SS	SS	03 37 40.0	-8.6	
BRG					pmax	pmax			
	comp=Z,109nm,1.7s								
BRG					pmax	pmax			
	comp=Z,212nm,2.1s								
BRG					pmax	pmax			
	comp=Z,46nm,1.3s								
BRG					MLR	MLR			
	comp=N,5μm,20.2s								
BRG					MLR	MLR			
	comp=E,5μm,20.2s								
BRG					MLR	MLR			
	comp=Z,8μm,20.3s								
MGRS	**Mrkonjic Grad**	**163.86**	**291**	*e*P		PKPdf	03 12 33.8	-11	
PRU	**Pruhonice**	**163.87**	**312**	*e*PKIKP		**PKPdf**	**03 12 44.9**	**+0.3**	
PRU				*e*			03 13 37.3		
PRU					MLR	MLR			
	comp=Z,6μm,19.1s								
PRU	**Pruhonice**	**163.87**	**312**	*e*PKPDF		**PKPdf**	**03 12 44.9**	**+0.3**	
PRU				*e*PKPAB		**PKPab**	**03 13 37.3**	**-0.1**	
PRU				*e*PP		PP	03 17 35.6	+12	
PRU					AMS	AMS	04 34 40.0		
	comp=Z,6μm,19.1s								
PRA	**Prague**	**163.89**	**312**	*e*PKP2		**PKPab**	**03 13 44.6**	**+7.1**	
PRA					MLR	MLR			
	comp=Z,6μm,22.4s								
PRA	**Prague**	**163.89**	**312**	*ep*PKP		**PKPab**	**03 13 44.6**	**+7.1**	
PRA					AMS	AMS	04 26 30.0		
	comp=Z,6μm,22.4s								
CONA	**Conrad Observa**	**163.91**	**304**	*e*PKPdf		**PKPdf**	**03 12 43.3**	**-1.5**	
	comp=Z,9.4nm,1.0s								
CONA				*e*PKPab		**PKPab**	**03 13 38.6**	**+0.8**	
	comp=Z,19nm,1.3s								
CLL	**Collm**	**164.01**	**318**	*i* PKIKP		**PKPdf**	**03 12 42.7**	**-1.9**	
CLL				*i*			03 12 54.0		
CLL				*i*			03 13 36.8		
CLL					pmax	pmax			
	comp=Z,129nm,2.1s								
CLL					pmax	pmax			
	comp=Z,55nm,1.5s								
CLL	**Collm**	**164.01**	**318**	*i* PKPdf		**PKPdf**	**03 12 42.7**	**-1.9**	
	comp=Z,129nm,2.1s								
CLL				*i* pPKPdf		**pPKPdf**	**03 12 54.0**	**-1.6**	
	comp=Z,223nm,2.3s								
CLL				*i* PKPab		**PKPab**	**03 13 36.8**	**-1.1**	
	comp=Z,55nm,1.5s								
CLL				*i* pPKPab		**pPKPab**	**03 13 46.2**	**-2.4**	
	comp=Z,87nm,1.6s								
CLL				*e*SKPdf		**SKPdf**	**03 16 13.0**	**-0.8**	
CLL				*i*			03 16 32.6		
CLL				*e*PPlp			03 17 24.0		
	comp=Z,900nm,23.3s								
CLL				*e*PP		**PP**	**03 17 28.0**	**+4.0**	
CLL				*e*PPrev			03 19 56.0		
CLL				*e*PPP		PPP	03 21 12.0		
CLL				*e*PcPPKPre			03 22 37.0		
CLL				*e*SKKSac		**SKKSac**	**03 24 06.0**	**-2.8**	
CLL				*e*PPPrev			03 24 45.0		
CLL				*e*PSKS			03 27 48.0		
CLL				*e*PPS		PPS	03 31 06.0		
CLL				*e*			03 32 06.0		
CLL				*e*SS		**SS**	**03 37 52.0**	**+1.0**	
CLL				*e*PSS		PSS	03 38 54.0		
CLL				*e*(PSPS)			03 39 48.0		
CLL				*e*SSS		SSS	03 44 06.0		
CLL				*e*SSSrev			03 51 06.0		
CLL				*e*			03 53 48.0		
CLL				*e*			04 01 48.0		
CLL					LmH		04 30 00.0		
	comp=N,5μm,20.5s								
CLL					LmH		04 30 00.0		
	comp=E,6μm,21.9s								
KOGS	**Kog**	**164.09**	**298**	*e*PKPdf		**PKPdf**	**03 12 44.9**	**0.0**	
KOGS				*ep*PKPdf		**pPKPdf**	**03 12 52.6**	**-3.2**	
KOGS				*ep*PKPab		**pPKPab**	**03 13 48.0**	**-1.2**	
KOGS				*e*PP		**PP**	**03 17 27.3**	**+2.4**	
ARSA	**Arzberg**	**164.34**	**302**	*e*PKPdf		**PKPdf**	**03 12 44.9**	**-0.3**	
	comp=E,11nm,1.5s								
ARSA				*e*PKPab		**PKPab**	**03 13 40.1**	**+0.5**	
	comp=E,15nm,1.2s								
LAWE	**Loch Awe, Argy**	**164.35**	**2**	*e*P		**PKPdf**	**03 12 44.3**	**-0.4**	
ACER	**Acerenza**	**164.71**	**277**	PKPdf		**PKPdf**	**03 12 45.5**	**-0.2**	
ACER						**PKPab**	**03 13 39.3**	**-2.3**	
CRES	**Cresnjev**	**164.77**	**296**	*e*P		**PKPdf**	**03 12 42.3**	**-3.2**	
KHC	**Kasperske Hory**	**164.83**	**310**	*e*PKIKP		**PKPdf**	**03 12 44.4**	**-1.1**	
KHC				*e*			03 12 59.0		
KHC				*e*			03 17 36.8		
KHC					MLR	MLR			
	comp=Z,8μm,21.4s								
KHC	**Kasperske Hory**	**164.83**	**310**	*e*PKPDF		**PKPdf**	**03 12 44.4**	**-1.1**	
KHC				*ex*		x	03 12 59.0		
KHC				*e*PKPAB		PKPab	03 13 33.7	-8.0	
KHC				*ep*PKP		**pPKPab**	**03 13 50.0**	**-2.4**	
KHC				*e*PP		PP	03 17 36.8	+8.3	
KHC					AMS	AMS	04 30 10.0		
	comp=Z,8μm,21.4s								
SOKA	**Soboth**	**164.84**	**300**	*e*PKPdf		**PKPdf**	**03 12 44.4**	**-1.3**	
	comp=Z,32nm,1.3s,SNR=8.7								
GERES	**GERESS Array B**	**164.88**	**309**	PKP		**PKPdf**	**03 12 44.2**	**-1.5**	
	comp=Z,4.9nm,0.8s,baz=57,slow=0.7,SNR=29								
GERES					PKPab	**PKPab**	**03 13 41.7**	**-0.4**	
	comp=Z,11nm,0.9s,baz=56,slow=5.0,SNR=15								
GERES					PKKP		03 20 48.6		
	comp=Z,1.7nm,0.9s,baz=189,slow=5.8,SNR=3.6								
NKC	**Novy Kostel**	**164.91**	**315**	*e*PKIKP		**PKPdf**	**03 12 46.3**	**+0.8**	
NKC				*e*			03 13 41.4		
NKC					MLR	MLR			
	comp=Z,8μm,20.8s								
NKC	**Novy Kostel**	**164.91**	**315**	*e*PKPDF		**PKPdf**	**03 12 46.3**	**+0.8**	
NKC				*e*PKPAB		**PKPab**	**03 13 41.4**	**-0.6**	
NKC					AMS	AMS	04 31 40.0		
	comp=Z,8μm,20.8s								
MOA	**Molln**	**164.94**	**305**	*e*PKPdf		**PKPdf**	**03 12 45.0**	**-0.6**	
	comp=Z,12nm,1.6s								
MOA				*e*PKPab		**PKPab**	**03 13 43.2**	**+0.9**	
	comp=Z,58nm,1.6s,SNR=11								
MOX	**Moxa**	**165.11**	**317**	*e*L		L	04 29 45.0		
	comp=Z,6μm,21.9s								
VAE	**Valguarnera**	**165.19**	**264**	PKP		**PKPdf**	**03 12 45.1**	**-1.1**	
	comp=Z,9.4nm,0.8s,baz=170,slow=2.4,SNR=3.2								
VAE					PKPab	**PKPab**	**03 13 42.4**	**-1.3**	
	comp=Z,25nm,1.1s,baz=108,slow=6.4,SNR=2.4								
OBKA	**Obir**	**165.20**	**300**	*e*PKPdf		**PKPdf**	**03 12 47.2**	**+1.2**	
	comp=Z,14nm,1.1s								

EKA	**Eskdalemuir Ar**	**165.28**	**358**	PKP		**PKPdf**	**03 12 43.3**	**-2.3**	
	comp=Z,5.5nm,1.0s,baz=12,slow=11,SNR=3.8								
EKA					PKPab	**PKPab**	**03 13 43.1**	**-0.2**	
	comp=Z,4.0nm,0.8s,baz=357,slow=2.8,SNR=4.9								
LJU	**Ljubljana**	**165.34**	**298**	*e*PKPdf		**PKPdf**	**03 12 44.9**	**-1.1**	
LJU				*ep*PKPdf		**pPKPdf**	**03 12 54.4**	**-2.6**	
LJU				*ep*PKPab		**pPKPab**	**03 13 53.4**	**-1.3**	
LJU				*e*PP		**PP**	**03 17 38.0**	**+6.5**	
LJU				*e*			03 44 37.2		
LJU	**Ljubljana**	**165.34**	**298**	*e*P		**PKPdf**	**03 12 44.5**	**-1.5**	
CEY	**Cerknica**	**165.49**	**297**	*e*P		**PKPdf**	**03 12 43.7**	**-2.5**	
MYKA	**Terra Mystica**	**165.76**	**301**	*e*PKPdf		**PKPdf**	**03 12 46.2**	**-0.2**	
	comp=Z,16nm,1.1s								
VOJS	**Vojsko**	**165.78**	**298**	*e*PKPdf		**PKPdf**	**03 12 45.1**	**-1.4**	
VOJS				*ep*PKPdf		**pPKPdf**	**03 12 54.8**	**-2.6**	
KBA	**Koelnbreinsper**	**165.81**	**303**	*e*PKPdf		**PKPdf**	**03 12 45.7**	**-0.8**	
	comp=Z,29nm,1.2s,SNR=5.9								
KBA				*e*PKPab		**PKPab**	**03 13 46.1**	**-0.2**	
	comp=Z,23nm,1.3s								
CADS	**Cadrg**	**165.82**	**299**	*e*PKPdf		**PKPdf**	**03 12 45.8**	**-0.6**	
CADS				*ep*PKPdf		**pPKPdf**	**03 12 54.6**	**-2.8**	
GRF	**Grafenberg Arr**	**165.86**	**315**	*e*PKPdf		**PKPdf**	**03 12 46.8**	**+0.5**	
	baz=56,slow=0.4								
GRF				*e*L		L	04 30 38.6		
	comp=Z,7μm,22.0s								
ROBS	**Robic**	**165.97**	**299**	*e*PKPdf		**PKPdf**	**03 12 45.1**	**-1.4**	
ABTA	**Abfaltersbach**	**166.46**	**302**	*e*PKPdf		**PKPdf**	**03 12 46.7**	**-0.3**	
	comp=Z,17nm,1.2s								
ABTA				*e*PKPab		**PKPab**	**03 13 48.6**	**-0.5**	
	comp=Z,27nm,1.4s								
WTTA	**Wattenberg**	**166.81**	**305**	*e*PKPdf		**PKPdf**	**03 12 46.1**	**-1.3**	
	comp=Z,51nm,1.4s,SNR=15								
WTTA				*e*PKPab		**PKPab**	**03 13 51.2**	**+0.5**	
	comp=Z,59nm,1.6s								
WATA	**Walderalm**	**166.82**	**306**	*e*PKPdf		**PKPdf**	**03 12 46.2**	**-1.1**	
	comp=Z,48nm,1.4s,SNR=13								
WATA				*e*PKPab		**PKPab**	**03 13 50.7**	**0.0**	
	comp=Z,54nm,1.8s								
PMOZ	**Porto Moniz, M**	**167.00**	**123**	*e*PKPdf		**PKPdf**	**03 12 47.0**	**-0.9**	
PMOZ	**Porto Moniz, M**	**167.00**	**123**	*e*PP		PP	03 17 43.2	+3.2	
PMOZ	**Porto Moniz, M**	**167.00**	**123**	*e*SS		SS	03 38 44.4	+22	
PMOZ	**Porto Moniz, M**	**167.00**	**123**	*e*LR		LR	04 11 25.2		
	comp=Z,5μm,20.0s								
SQTA	**Sankt Quirin**	**167.09**	**306**	*e*PKPdf		**PKPdf**	**03 12 47.7**	**+0.2**	
	comp=Z,42nm,1.3s,SNR=10.0								
SQTA				*e*PKPab		**PKPab**	**03 13 52.5**	**+0.6**	
	comp=Z,71nm,1.7s								
MOTA	**Moosalm**	**167.10**	**306**	*e*PKPdf		**PKPdf**	**03 12 47.5**	**-0.1**	
	comp=Z,32nm,1.2s,SNR=13								
MOTA				*e*PKPab		**PKPab**	**03 13 52.3**	**+0.4**	
	comp=Z,36nm,1.1s								
PMAR	**Madeira**	**167.11**	**124**	*e*PKPdf		**PKPdf**	**03 12 51.5**	**+3.4**	
LBWR	**Ladybower, Pea**	**167.12**	**353**	*e*P		**PKPdf**	**03 12 46.9**	**-0.3**	
RETA	**Reutte**	**167.25**	**307**	*e*PKPdf		**PKPdf**	**03 12 46.6**	**-0.9**	
	comp=Z,36nm,1.2s,SNR=8.2								
WACR	**West Acre**	**167.47**	**346**	*e*P		**PKPdf**	**03 12 46.8**	**-0.6**	
WACR					IAMs_20	IAMs_20	04 32 23.7		
	comp=Z,9μm,26.7s								
FETA	**Feichten**	**167.47**	**306**	*e*PKPdf		**PKPdf**	**03 12 48.2**	**+0.3**	
	comp=Z,24nm,1.2s,SNR=11								
PMPS	**Porto Santo**	**167.70**	**124**	*e*PP		PP	03 17 47.7	+4.3	
PMPST	**Porto Santo, M**	**167.71**	**124**	*e*PKPdf		**PKPdf**	**03 12 48.4**	**+0.1**	
PMPST	**Porto Santo, M**	**167.71**	**124**	*e*PP		PP	03 17 46.9	+3.4	
PMPST	**Porto Santo, M**	**167.71**	**124**	*e*SS		SS	03 39 17.3	+48	
FOEL	**Foel Wylfa**	**167.72**	**357**	*e*P		**PKPdf**	**03 12 47.4**	**-0.2**	
FOEL					IAMs_20	IAMs_20	04 29 37.9		
	comp=Z,10μm,21.3s								
CWF	**Charnwood Fore**	**167.73**	**352**	*e*P		**PKPdf**	**03 12 47.2**	**-0.3**	
CWF					IAMs_20	IAMs_20	04 33 10.1		
	comp=Z,8μm,23.5s								
DAVA	**Damuels**	**167.87**	**308**	*e*PKPdf		**PKPdf**	**03 12 47.2**	**-0.9**	
	comp=Z,42nm,1.2s,SNR=9.2								
DAVA				*e*PKPab		**PKPab**	**03 13 55.9**	**+0.6**	
	comp=Z,74nm,1.4s,SNR=7.8								
HLM1	**Long Mynd**	**168.08**	**356**	*e*P		**PKPdf**	**03 12 47.4**	**-0.5**	
HLM1					IAMs_20	IAMs_20	04 25 07.3		
	comp=Z,9μm,20.5s								
DAVOX	**Davos/Dischmat**	**168.10**	**306**	PKP		**PKPdf**	**03 12 46.0**	**-2.4**	
	comp=Z,9.4nm,0.8s,baz=118,slow=4.1,SNR=12								
DAVOX					PKPab	**PKPab**	**03 13 56.7**	**+0.3**	
	comp=Z,78nm,1.2s,baz=5.8,slow=1.0,SNR=10								
BFO	**Black Forest**	**168.21**	**315**	PKIKP		**PKPdf**	**03 12 48.0**	**-0.1**	
BFO							03 13 55.5		
BFO	**Black Forest**	**168.21**	**315**			**PKPdf**	**03 12 48.0**	**-0.1**	
BFO					PKPab	**PKPab**	**03 13 55.5**	**-1.1**	
UCC	**Uccle**	**168.21**	**332**	PKP2		**PKPab**	**03 13 55.1**	**-1.3**	
UCC							04 12 47.9		
UCC	**Uccle**	**168.21**	**332**	PKPdf		**PKPdf**	**03 12 47.9**	**-0.1**	
UCC						**PKPab**	**03 13 55.1**	**-1.3**	
KEST	**Kesra**	**168.26**	**250**	PKP		**PKPdf**	**03 12 47.4**	**-1.3**	
	comp=Z,20nm,1.1s,baz=93,slow=17,SNR=7.8								
KEST					PKPab	**PKPab**	**03 13 57.9**	**+0.5**	
	comp=Z,40nm,0.9s,baz=92,slow=0.1,SNR=11								
MCH1	**Michaelchurch**	**168.61**	**356**	*e*P		**PKPdf**	**03 12 47.7**	**-0.5**	
MCH1					IAMs_20	IAMs_20	04 28 31.0		
	comp=Z,9μm,24.2s								
MONM	**Monmouth**	**168.75**	**356**	*e*P		**PKPdf**	**03 12 46.8**	**-1.5**	
STRD	**Stroud**	**168.77**	**353**	*e*P		**PKPdf**	**03 12 45.9**	**-2.4**	
STRD					IAMs_20	IAMs_20	04 26 21.4		
	comp=Z,10μm,27.6s								
OLDB	**Oldbury-Upon-S**	**168.91**	**355**	*e*P		**PKPdf**	**03 12 48.1**	**-0.2**	
OLDB					IAMs_20	IAMs_20	04 29 01.4		
	comp=Z,10μm,19.7s								
SWN1	**Swindon**	**169.00**	**352**	*e*P		**PKPdf**	**03 12 46.8**	**-1.7**	
ZGR	**Zagora**	**169.44**	**173**	P		**PKPdf**	**03 12 52.0**	**+2.3**	
	SNR=11								
TZRR	**Tazzarine**	**170.11**	**173**	P		**PKPdf**	**03 12 53.0**	**+3.0**	
	SNR=7.6								
OUK	**Oukaimeden**	**170.14**	**161**	P		**PKPdf**	**03 12 53.0**	**+2.7**	
	SNR=8.0								
ARF	**Arif**	**170.81**	**180**	P		**PKPdf**	**03 12 53.0**	**+2.6**	
	SNR=6.3								
GOLM	**Goulmima**	**171.06**	**176**	P		**PKPdf**	**03 12 54.0**	**+3.5**	
	SNR=7.4								
FIGM	**Figuig**	**171.19**	**197**	P		**PKPdf**	**03 12 53.0**	**+2.4**	
	SNR=7.2								
CLF	**Chambon-Foret**	**171.28**	**330**			**PKPdf**	**03 12 48.9**	**-1.0**	
CLF						**PKPab**	**03 14 09.4**	**-0.7**	
JSA	**Saint Aubin**	**171.33**	**351**	*e*P		**PKPdf**	**03 12 49.2**	**-0.6**	
JSA					IAMs_20	IAMs_20	04 30 00.8		
	comp=Z,8μm,23.3s								
MDT	**Midelt**	**172.19**	**178**	PKP		**PKPdf**	**03 12 50.9**	**-0.1**	
	comp=Z,18nm,1.2s,baz=141,slow=6.5,SNR=6.7								
MDT					PKPab	**PKPab**	**03 14 15.8**	**+1.2**	
	comp=Z,24nm,1.2s,baz=191,slow=4.6,SNR=5.2								
AVE	**Averroes**	**172.24**	**160**	PKP		**PKPdf**	**03 12 55.8**	**+5.0**	
AVE	**Averroes**	**172.24**	**160**	PP		PP	03 18 04.4	-0.9	
IFR	**Ifrane**	**172.85**	**174**	PKP		**PKPdf**	**03 12 55.0**	**+3.6**	
IFR	**Ifrane**	**172.85**	**174**	PP		PP	03 18 09.0	+0.6	
MAHO	**Mahon**	**173.47**	**266**	PKP		**PKPdf**	**03 12 54.9**	**+3.8**	
MAHO	**Mahon**	**173.47**	**266**	PP		PP	03 18 18.6	+5.9	
PVLZ	**Peæn de**	**174.54**	**179**	PKP		**PKPdf**	**03 12 53.1**	**+1.5**	
PVLZ	**Peæn de**	**174.54**	**179**	PP		PP	03 18 16.5	+0.1	
MELI	**Melilla**	**174.57**	**191**	PKP		**PKPdf**	**03 12 55.3**	**+3.6**	
MELI	**Melilla**	**174.57**	**191**	PP		PP	03 18 17.6	+1.0	
PFVI	**Vila Bisbo**	**174.98**	**133**	*e*PKPdf		**PKPdf**	**03 12 52.3**	**+0.6**	
PFVI	**Vila Bisbo**	**174.98**	**133**	*e*PKPab		**PKPab**	**03 14 28.2**	**+1.3**	
PFVI	**Vila Bisbo**	**174.98**	**133**	*e*PP		PP	03 18 20.5	+1.1	
PFVI	**Vila Bisbo**	**174.98**	**133**	*e*SS		SS	03 39 32.7	-7.6	
CEU	**Ceuta**	**175.18**	**169**	PKP		**PKPdf**	**03 12 55.4**	**+3.6**	
CEU	**Ceuta**	**175.18**	**169**	PP		PP	03 18 20.6	+1.1	
MORF	**Marmelete**	**175.20**	**132**	*e*PKPdf		**PKPdf**	**03 12 51.8**	**-0.1**	
MORF				*e*PP		**PP**	**03 18 20.9**	**+0.4**	
MORF					AMS	AMS	04 30 10.1		
	comp=Z,8μm,24.3s								
MORF	**Marmelete**	**175.20**	**132**	*e*PKPdf		**PKPdf**	**03 12 53.8**	**+1.9**	
MORF	**Marmelete**	**175.20**	**132**	*e*SS		SS	03 39 37.8	-4.8	
MORF	**Marmelete**	**175.20**	**132**	*e*PKIKP		**PKPdf**	**03 12 51.7**	**-0.1**	
MORF				*e*			03 18 20.9		
PBDV	**Barranco-do-Ve**	**175.54**	**138**	*e*PKPdf		**PKPdf**	**03 12 53.0**	**+1.1**	
PBDV	**Barranco-do-Ve**	**175.54**	**138**	*e*PKPab		**PKPab**	**03 14 29.0**	**-0.4**	
PBDV	**Barranco-do-Ve**	**175.54**	**138**	*e*SS		SS	03 39 36.1	-9.4	
SFS	**San Fernando**	**175.55**	**159**	PKP		**PKPdf**	**03 12 55.0**	**+3.1**	
SFS	**San Fernando**	**175.55**	**159**	PP		PP	03 18 21.6	+0.1	
LIS	**Lisbon**	**175.73**	**115**	*e*PKPdf		**PKPdf**	**03 12 51.8**	**-0.1**	
LIS				*e*PP		**PP**	**03 18 23.1**	**-0.4**	
LIS					AMS	AMS	04 26 32.5		
	comp=Z,11μm,17.3s								
LIS	**Lisbon**	**175.73**	**115**	*e*PKIKP		**PKPdf**	**03 12 51.7**	**-0.1**	
LIS				*e*			03 18 23.0		
PMAFR	**Mafra**	**175.75**	**112**	*e*PKPab		**PKPab**	**03 14 25.3**	**-5.1**	
PMAFR	**Mafra**	**175.75**	**112**	*e*SS		SS	03 39 52.3	+3.6	
PVAQ	**Vaqueiros**	**175.77**	**139**	*e*PKPdf		**PKPdf**	**03 12 53.5**	**+1.6**	
PVAQ	**Vaqueiros**	**175.77**	**139**	*e*PKPab		**PKPab**	**03 14 31.9**	**+1.5**	

PVAQ	**Vaqueiros**	**175.77**	**139**	*e*PP		PP	03 18 24.6	+1.6	
PVAQ	**Vaqueiros**	**175.77**	**139**	*e*SS		SS	03 39 55.0	+7.4	
PVAQ	**Vaqueiros**	**175.77**	**139**	*e*LR		LR	04 14 37.2		
	comp=Z,8μm,22.0s								
PCVE	**Castro Verde**	**175.77**	**134**	*e*PKPdf		**PKPdf**	**03 12 51.5**	**-0.4**	
PCVE	**Castro Verde**	**175.77**	**134**	*e*PKPab		**PKPab**	**03 14 32.4**	**+2.0**	
PCVE	**Castro Verde**	**175.77**	**134**	*e*PP		PP	03 18 22.9	-0.3	
PCVE	**Castro Verde**	**175.77**	**134**	*e*SS		SS	03 39 39.5	-8.4	
PNCL	**Nicolau / Gran**	**175.81**	**126**	*e*PKPdf		**PKPdf**	**03 12 52.6**	**+0.7**	
PNCL	**Nicolau / Gran**	**175.81**	**126**	*e*PKPab		**PKPab**	**03 14 32.2**	**+1.6**	
PNCL	**Nicolau / Gran**	**175.81**	**126**	*e*PP		PP	03 18 23.7	+0.2	
PNCL	**Nicolau / Gran**	**175.81**	**126**	*e*SS		SS	03 39 42.9	-5.7	
CART	**Cartagena**	**176.06**	**220**	PKP		**PKPdf**	**03 12 55.7**	**+3.7**	
CART	**Cartagena**	**176.06**	**220**	PP		PP	03 18 30.5	+6.2	
EMAL	**Malaga-Limoner**	**176.13**	**177**	PKP		**PKPdf**	**03 12 55.4**	**+3.4**	
EMAL	**Malaga-Limoner**	**176.13**	**177**	PP		PP	03 18 24.1	+0.1	
PBEJ	**Beja**	**176.15**	**131**	*e*PKPdf		**PKPdf**	**03 12 53.6**	**+1.6**	
PBEJ	**Beja**	**176.15**	**131**	*e*PP		PP	03 18 26.5	+1.5	
PMTG	**Montargil**	**176.54**	**116**	*e*PKPdf		**PKPdf**	**03 12 53.2**	**+1.2**	
PMTG	**Montargil**	**176.54**	**116**	*e*PP		PP	03 18 25.8	-1.4	
PMTG	**Montargil**	**176.54**	**116**	*e*SS		SS	03 39 59.4	+3.4	
PTOM	**Tomar**	**176.62**	**106**	*e*PKPdf		**PKPdf**	**03 12 52.2**	**+0.2**	
PCAS	**Casmilo, Conde**	**176.67**	**99**	*e*PKPdf		**PKPdf**	**03 12 52.4**	**+0.3**	
PCAS	**Casmilo, Conde**	**176.67**	**99**	*e*PKPab		**PKPab**	**03 14 35.7**	**+1.2**	
PCAS	**Casmilo, Conde**	**176.67**	**99**	*e*PP		PP	03 18 27.8	-0.4	
PCAS	**Casmilo, Conde**	**176.67**	**99**	*e*SS		SS	03 39 47.6	-10	
COI	**Coimbra**	**176.76**	**96**	*e*PKPdf		PKPdf	03 13 01.5	+9.5	
COI	**Coimbra**	**176.76**	**96**	*e*PKPab		**PKPab**	**03 14 36.0**	**+1.1**	
COI	**Coimbra**	**176.76**	**96**	*e*PP		PP	03 18 31.0	+2.4	
COI	**Coimbra**	**176.76**	**96**	*e*SS		SS	03 39 50.8	-7.9	
PESTR	**Estremoz**	**176.85**	**123**			**PKPdf**	**03 12 48.9**	**-3.3**	
PCAB	**Cabril**	**176.93**	**68**	*e*PKPdf		**PKPdf**	**03 12 54.0**	**+1.9**	
PCAB	**Cabril**	**176.93**	**68**	*e*PKPab		**PKPab**	**03 14 37.3**	**+1.7**	
PCAB	**Cabril**	**176.93**	**68**	*e*PP		PP	03 18 29.8	+0

ZARC	**Zaragoza, Cauc**	**2.96**	**308**	*eP*		**Pn**	**02 54 23.0**	**+1.4**
ZARC				*eS*		**Sn**	**02 54 59.4**	**+3.5**
ZARC				*i*			02 55 08.1	
	comp=Z,204nm,0.3s							
HELC	**Santa Helena**	**3.04**	**280**	*eP*		**Pn**	**02 54 24.1**	**+1.1**
HELC				*eS*		**Sn**	**02 55 01.7**	**+3.3**
HELC				*i*			02 55 10.9	
	comp=Z,172nm,0.4s							
HELC	**Santa Helena**	**3.04**	**280**	*eP*		**Pn**	**02 54 22.4**	**-0.6**
HELC				*eS*		**Sn**	**02 54 57.8**	**-0.6**
GUVC	**San Jose del G**	**3.08**	**182**	*eP*		**Pn**	**02 54 23.4**	**+0.1**
GUVC				*eS*		**Sn**	**02 55 00.2**	**+1.2**
GUVC				*i*			02 55 17.2	
	comp=Z,494nm,0.3s							
GUVC				*i*			02 55 19.4	
	comp=Z,511nm,0.7s							
SOCV	**Socops**	**3.10**	**32**	*eP*		**Pn**	**02 54 25.5**	**+2.0**
SOCV				*eS*		**Sn**	**02 55 01.7**	**+2.5**
ORTC	**Ortega, Tolima**	**3.22**	**238**	*iP*		**Pn**	**02 54 24.8**	**-0.5**
ORTC				*eS*		**Sn**	**02 55 03.9**	**+1.5**
ORTC				*i*			02 55 18.4	
	comp=Z,113nm,0.5s							
ELOV	**Elorza**	**3.30**	**66**	*eP*		**Pn**	**02 54 28.5**	**+2.2**
ELOV				*eS*		**Sn**	**02 55 06.9**	**+2.6**
VIGV	**El Vigia**	**3.37**	**20**	*eP*		**Pn**	**02 54 29.2**	**+1.9**
VIGV				*eS*		**Sn**	**02 55 07.3**	**+1.2**
CBOC	**Ciudad Bolivar**	**3.48**	**274**	*eP*		**Pn**	**02 54 30.0**	**+1.1**
CBOC				*eS*		**Sn**	**02 55 06.1**	**-3.0**
CBOC				*i*			02 55 25.1	
	comp=Z,76nm,0.6s							
SMLC	**San Martn de**	**3.49**	**334**	*eP*		**Pn**	**02 54 29.1**	**+0.2**
SMLC				*eS*		Sn	02 55 19.6	+11
SMLC				*i*			02 55 27.2	
	comp=Z,230nm,0.3s							
UREC	**San Jos de Ur**	**3.65**	**305**	*eP*		**Pn**	**02 54 31.2**	**+0.1**
UREC				*eS*		Sn	02 55 26.8	+14
UREC				*i*			02 55 33.6	
	comp=Z,83nm,0.9s							
SDV	**Santo Domingo**	**3.72**	**30**	P		**Pn**	**02 54 34.5**	**+2.3**
	comp=Z,12nm,0.3s,baz=219,slow=6.5,SNR=67							
SDV				S		**Sn**	**02 55 16.9**	**+2.0**
	comp=Z,15nm,0.3s,baz=266,slow=16,SNR=3.0							
SDV	**Santo Domingo**	**3.72**	**30**	*eP*		**Pn**	**02 54 34.5**	**+2.3**
SDV				*eS*		**Sn**	**02 55 17.2**	**+2.3**
MACC	**Macarena, Meta**	**3.72**	**201**	*eP*		**Pn**	**02 54 31.8**	**-0.3**
MACC				*eS*		Sn	02 55 27.0	+12
MACC				*i*			02 55 40.0	
	comp=Z,604nm,0.6s							
PLMC	**San Jos del P**	**3.82**	**259**	*eP*		**Pn**	**02 54 36.0**	**+2.5**
PLMC				*eS*		Sn	02 55 30.0	+13
PLMC				*i*			02 55 48.9	
	comp=Z,40nm,0.2s							
DBBC	**Dabeiba**	**3.91**	**291**	*eP*		**Pn**	**02 54 36.0**	**+1.3**
DBBC				*eS*		**Sn**	**02 55 25.1**	**+5.5**
DBBC				*i*			02 55 42.8	
	comp=Z,130nm,0.7s							
DBBC				*i*			02 55 43.6	
	comp=Z,110nm,0.6s							
YOTC	**Yotoco, Valle**	**4.16**	**247**	*eP*		**Pn**	**02 54 38.6**	**+0.5**
YOTC				*eS*		**Sn**	**02 55 26.2**	**+0.6**
YOTC				*i*			02 55 59.6	
	comp=Z,13nm,1.3s							
CODC	**Agustn Codazz**	**4.36**	**348**	*eP*		**Pn**	**02 54 42.6**	**+1.9**
CODC				*eS*		**Sn**	**02 55 33.5**	**+3.2**
CODC				*i*			02 56 09.7	
	comp=Z,45nm,1.1s							
ARGC	**Ariguani, Magd**	**4.52**	**338**	*eP*		Pn	02 54 46.4	+3.4
ARGC				*eS*		Sn	02 55 42.2	+7.9
ARGC				*i*			02 56 13.3	
	comp=Z,34nm,0.6s							
PAYV	**Puerto Ayacuch**	**4.84**	**92**	*eP*		**Pn**	**02 54 48.6**	**+1.1**
PAYV				*eS*		**Sn**	**02 55 42.0**	**-0.4**
QARV	**Quebrada Arrib**	**4.94**	**23**	*eP*		**Pn**	**02 54 50.4**	**+1.5**
QARV				*eS*		**Sn**	**02 55 44.4**	**-0.4**
SJCC	**San Jacinto, C**	**4.98**	**328**	*eP*		**Pn**	**02 54 51.0**	**+1.7**
SJCC				*eS*		**Sn**	**02 55 47.7**	**+2.0**
SJCC				*i*			02 56 20.1	
	comp=Z,34nm,1.5s							
CURV	**Curarigua**	**5.02**	**30**	*eP*		**Pn**	**02 54 51.8**	**+1.8**
CURV				*eS*		**Sn**	**02 55 45.9**	**-0.9**
FLOC	**Florencia**	**5.11**	**218**	*eP*		**Pn**	**02 54 52.1**	**+1.0**
FLOC				*eS*		Sn	02 56 10.2	+21
FLOC				*i*			02 56 40.4	
	comp=Z,81nm,0.6s							
TEPV	**Terepaima**	**5.41**	**37**	*eP*		**Pn**	**02 54 57.0**	**+1.7**
TEPV				*eS*		**Sn**	**02 55 55.9**	**-0.4**
BAUV	**El Baul**	**5.52**	**53**	*eP*		**Pn**	**02 54 57.5**	**+0.8**
BAUV				*eS*		**Sn**	**02 55 58.6**	**-0.3**
DABV	**Dabajuro**	**5.56**	**19**	*eP*		**Pn**	**02 54 58.6**	**+1.3**
DABV				*eS*		**Sn**	**02 55 58.8**	**-1.2**
SIQV	**Siquisique**	**5.65**	**28**	*eP*		**Pn**	**02 54 60.0**	**+1.5**
SIQV				*eS*		**Sn**	**02 56 01.1**	**-1.1**
MAPV	**Macapo**	**5.78**	**44**	*eP*		**Pn**	**02 55 02.0**	**+1.6**
MAPV				*eS*		**Sn**	**02 56 04.9**	**-0.6**
URIC	**Uribia, Colomb**	**6.04**	**5**	*eP*		**Pn**	**02 55 03.9**	**+0.1**
URIC				*eS*		**Sn**	**02 56 07.5**	**-4.2**
TURV	**Turiamo**	**6.65**	**44**	*eP*		**Pn**	**02 55 13.3**	**+1.0**
TURV				*eS*		**Sn**	**02 56 24.7**	**-2.1**
MONV	**Montecano**	**6.75**	**22**	*eP*		**Pn**	**02 55 14.3**	**+0.6**
MONV				*eS*		**Sn**	**02 56 26.1**	**-3.2**
MERV	**Las Mercedes**	**7.13**	**60**	*eP*		**Pn**	**02 55 19.6**	**+0.8**
MERV				*eS*		**Sn**	**02 56 36.4**	**-2.2**
BIRV	**Birongo**	**7.83**	**52**	*eP*		**Pn**	**02 55 29.3**	**+0.9**
BIRV				*eS*		**Sn**	**02 56 52.5**	**-3.3**
CUPV	**Cpira**	**7.98**	**56**	*eP*		**Pn**	**02 55 31.6**	**+1.1**
CUPV				*eS*		**Sn**	**02 56 56.2**	**-3.3**
PCRV	**Puerto La Cruz**	**9.01**	**60**	P		**Pn**	**02 55 46.5**	**+1.8**
	comp=Z,1.3nm,0.3s,baz=237,slow=6.7,SNR=6.7							
PCRV				S		**Sn**	**02 57 23.9**	**-1.0**
	comp=Z,1.3nm,0.3s,baz=180,slow=20,SNR=2.8							
PCRV	**Puerto La Cruz**	**9.01**	**60**	*eP*		**Pn**	**02 55 45.6**	**+0.9**
PCRV				*eS*		**Sn**	**02 57 21.1**	**-3.7**
JTS	**Las Juntas de**	**13.15**	**291**	LR		LR	03 02 07.3	
	comp=Z,151nm,21.1s,baz=218,slow=39							
LPAZ	**La Paz**	**22.22**	**169**	P		**P**	**02 58 30.4**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=322,slow=17,SNR=6.0							
SIV	**San Ignacio**	**24.30**	**152**	P		**P**	**02 58 50.4**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=331,slow=8.2,SNR=6.8							
TXAR	**Lajitas Array**	**37.69**	**312**	P		**P**	**03 00 47.8**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=128,slow=10,SNR=3.4							
ULM	**Lac du Bonnet**	**48.59**	**340**	P		**P**	**03 02 15.1**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=127,slow=9.9,SNR=3.2							
PDAR	**Pinedale Array**	**49.37**	**324**	P		**P**	**03 02 21.4**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=99,slow=8.4,SNR=2.3							
YKA	**Yellowknife Ar**	**64.56**	**340**	P		**P**	**03 04 08.8**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=132,slow=6.7,SNR=7.4							
TORD	**Torodi Ar. Bea**	**73.39**	**78**	P		**P**	**03 05 05.2**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=292,slow=4.2,SNR=2.6							
ILAR	**Eielson Array**	**78.27**	**335**	P		**P**	**03 05 31.8**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=103,slow=4.1,SNR=3.6							
WRA	**Warramunga Arr**	**150.28**	**239**	PKPbc		**PKPbc**	**03 13 22.5**	**-1.8**
	comp=Z,0.7nm,0.5s,baz=110,slow=2.6,SNR=3.2							

WEL ***20*** *02:56:31.9, 40.7°S±0.7°×175.8°E±1.0, h21km±1km, M4.0/7, ML4.2/7, MLv4.0/7, Error ellipse: s-maj=0.0km s-min=0.0km az=88.9*

NEIC ***20*** *02:56:31.4±2.2, 40.65°S±0.04°×175.8°E±0.2, h26km±19km, Error ellipse: s-maj=22.8km s-min=6.5km az=88.0*

ISC 20 02:56:31.4±1.0, 40.68°S±0.03°×175.84°E±0.04, h29km±6km, n20, σ0.82/28, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIWZ	**Tintock**	**0.10**	**162**	P		**Pb**	**02 56 36.4**	**-0.2**
TIWZ				S		**Sb**	**02 56 40.0**	**-0.3**
PRWZ	**Pori Road**	**0.16**	**39**	P		**Pb**	**02 56 37.3**	**+0.3**
PRWZ				S		**Sb**	**02 56 41.7**	**+0.9**
MRZ	**Mangatainoka R**	**0.20**	**275**	P		**Pb**	**02 56 37.4**	**-0.1**
MRZ				S		**Sb**	**02 56 41.6**	**0.0**
POWZ	**Post Office Ro**	**0.29**	**349**	P		**Pb**	**02 56 39.2**	**+0.6**
POWZ				S		**Sb**	**02 56 44.0**	**+0.5**
BFZ	**Birch Farm**	**0.31**	**91**	Pg		**Pb**	**02 56 37.9**	**-0.9**
HOWZ	**Holdsworth Sta**	**0.33**	**228**	S		**Sb**	**02 56 44.8**	**+0.3**
CPWZ	**Castlepoint**	**0.36**	**131**	P		**Pn**	**02 56 41.0**	**+0.4**
TMWZ	**Te Maipa**	**0.43**	**175**	P		**Pb**	**02 56 41.5**	**+0.8**
TMWZ				S		**Sn**	**02 56 48.8**	**+0.2**
OGWZ	**Otaki Gorge**	**0.53**	**255**	P		**Pb**	**02 56 42.8**	**+0.5**
OGWZ				S		**Sn**	**02 56 50.5**	**-0.5**
MTW	**Mount Morrison**	**0.55**	**208**	P		**Pb**	**02 56 42.9**	**+0.4**
PNHZ	**Pukenui**	**0.81**	**20**	P		**Pn**	**02 56 47.8**	**+0.9**
MSWZ	**Moikau Station**	**0.86**	**211**	Pn		**Pn**	**02 56 48.4**	**+0.7**
BHW	**Baring Head**	**1.04**	**225**			**Pn**	**02 56 50.3**	**+0.3**
SNZO	**South Karori**	**1.07**	**233**			**Pb**	**02 56 51.4**	**+0.2**
SNZO						**Sb**	**02 57 04.8**	**-0.1**
MOVZ	**Moawhango**	**1.27**	**357**	P		**Pb**	**02 56 55.0**	**+0.3**
BSWZ	**Blackbirch Sta**	**1.81**	**234**	Pn		**Pn**	**02 57 00.1**	**-0.6**
BSWZ						**Sn**	**02 57 22.1**	**-0.6**
HIZ	**Hauiti**	**2.29**	**340**	Pn		**Pn**	**02 57 07.5**	**+0.2**
OUZ	**Omahuta**	**5.73**	**341**	Pn		**Pn**	**02 57 51.8**	**-2.7**
MLZ	**Mavora Lakes**	**7.35**	**228**	Pn		**Pn**	**02 58 15.2**	**-1.5**
WHZ	**Wether Hill Ro**	**7.77**	**225**	Pn		**Pn**	**02 58 23.0**	**+0.5**

NEIC ***20*** *02:58:00.2±1.2, 40.63°S±0.06°×175.82°E±0.10, h30km±11km, Error ellipse: s-maj=13.3km s-min=4.6km az=130.0*

WEL ***20*** *02:58:00.3, 40.7°S±0.6°×175.8°E±1.0, h22km, M4.2/29, ML4.5/15, MLv4.2/29, Error ellipse: s-maj=0.0km s-min=0.0km az=101.2*

ISC 20 02:58:00.2±0.9, 40.63°S±0.03°×175.81°E±0.03, h29km±6km, n43, σ0.51/54, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRWZ	**Pori Road**	**0.15**	**58**	P		**Pb**	**02 58 05.9**	**+0.1**
PRWZ				S		**Sb**	**02 58 09.8**	**+0.2**
TIWZ	**Tintock**	**0.15**	**157**	P		**Pb**	**02 58 05.4**	**-0.6**
TIWZ				S		**Sb**	**02 58 09.3**	**-0.5**
MRZ	**Mangatainoka R**	**0.17**	**261**	P		**Pb**	**02 58 06.3**	**+0.2**
MRZ				S		**Sb**	**02 58 09.9**	**-0.1**
POWZ	**Post Office Ro**	**0.24**	**353**	P		**Pn**	**02 58 07.6**	**-0.4**
POWZ				S		**Sb**	**02 58 12.0**	**+0.6**
BFZ	**Birch Farm**	**0.34**	**98**	P		**Pb**	**02 58 08.0**	**-0.1**
BFZ				S		**Sb**	**02 58 13.9**	**+0.4**
BFZ	**Birch Farm**	**0.34**	**98**	Pg		**Pb**	**02 58 08.1**	**0.0**
BFZ						**Sb**	**02 58 12.9**	**-0.6**
HOWZ	**Holdsworth Sta**	**0.34**	**220**	P		**Pb**	**02 58 08.4**	**+0.2**
HOWZ				S		**Sb**	**02 58 14.5**	**+0.8**
CPWZ	**Castlepoint**	**0.41**	**133**	P		**Pn**	**02 58 10.0**	**-0.2**
DVHZ	**Dannevirke**	**0.43**	**39**	P		**Pb**	**02 58 09.9**	**+0.3**
DVHZ				S		**Sb**	**02 58 16.7**	**+0.7**
TMWZ	**Te Maipa**	**0.48**	**172**	P		**Pb**	**02 58 10.7**	**+0.4**
TMWZ				S		**Sn**	**02 58 18.3**	**-0.3**
OGWZ	**Otaki Gorge**	**0.52**	**249**	P		**Pn**	**02 58 11.8**	**+0.1**
OGWZ				S		**Sn**	**02 58 19.2**	**-0.3**
MTW	**Mount Morrison**	**0.57**	**204**	P		**Pb**	**02 58 12.1**	**+0.3**
TSZ	**Takapari Road**	**0.59**	**12**	P		**Pn**	**02 58 12.9**	**+0.2**
KIW	**Kapiti Island**	**0.72**	**251**	P		**Pn**	**02 58 15.2**	**+0.8**
PRHZ	**Porangahau**	**0.73**	**60**	P		**Pb**	**02 58 14.5**	**+0.1**
CAW	**Cannon Point**	**0.73**	**230**	P		**Pn**	**02 58 14.9**	**+0.3**
WPHZ	**Waipukurau**	**0.75**	**41**	P		**Pn**	**02 58 15.4**	**+0.6**
TRWZ	**Traveller**	**0.77**	**187**	P		**Pn**	**02 58 15.9**	**+0.7**
PNHZ	**Pukenui**	**0.78**	**23**	P		**Pn**	**02 58 16.1**	**+0.8**
MSWZ	**Moikau Station**	**0.89**	**208**			**Pb**	**02 58 16.4**	**-0.7**
PXZ	**Pawanui**	**1.01**	**54**	P		**Pn**	**02 58 18.2**	**-0.2**
WEL	**Wellington**	**1.02**	**230**	P		**Pn**	**02 58 18.8**	**+0.2**
PLWZ	**Palliser**	**1.02**	**204**	P		**Pb**	**02 58 19.2**	**-0.2**
PLWZ	**Palliser**	**1.02**	**204**			**Pb**	**02 58 19.8**	**+0.4**
BHW	**Baring Head**	**1.05**	**222**	P		**Pn**	**02 58 18.7**	**-0.2**
BHW	**Baring Head**	**1.05**	**222**			**Pn**	**02 58 18.8**	**-0.2**
SNZO	**South Karori**	**1.07**	**231**			**Pn**	**02 58 19.2**	**-0.1**
SNZO						**Sn**	**02 58 32.9**	**-0.4**
KRHZ	**Kereru**	**1.08**	**24**	P		**Pb**	**02 58 20.3**	**0.0**
BHHZ	**Black Hill Sta**	**1.16**	**10**	P		**Pb**	**02 58 21.9**	**+0.2**
KAHZ	**Kahuranaki**	**1.17**	**45**	P		**Pn**	**02 58 20.9**	**+0.2**
TCW	**Tory Channel**	**1.29**	**243**	P		**Pn**	**02 58 21.1**	**-1.2**
WHVZ	**Whangaehu Hut**	**1.36**	**353**	P		**Pn**	**02 58 22.6**	**-0.9**
TUVZ	**Tukino**	**1.37**	**355**	P		**Pn**	**02 58 23.0**	**-0.6**
PKVZ	**Pokaka**	**1.39**	**345**	P		**Pb**	**02 58 25.2**	**-0.4**
DUVZ	**D'Urville Isla**	**1.44**	**263**	P		**Pb**	**02 58 26.3**	**-0.2**
BKZ	**Black Stump Fm**	**1.56**	**20**	Pn		**Pn**	**02 58 26.2**	**+0.1**
TUWZ	**Tuamarina**	**1.62**	**240**	Pn		**Pn**	**02 58 28.2**	**+1.4**
CMWZ	**Cape Campbell**	**1.64**	**227**	Pn		**Pn**	**02 58 27.4**	**+0.2**
BSWZ	**Blackbirch Sta**	**1.81**	**233**	Pn		**Pn**	**02 58 28.7**	**-0.8**
NNZ	**Nelson**	**1.93**	**252**	Pn		**Pn**	**02 58 31.8**	**+0.7**
HIZ	**Hauiti**	**2.24**	**341**	Pn		**Pn**	**02 58 35.9**	**+0.5**
THZ	**Tophouse**	**2.46**	**242**	Pn		**Pn**	**02 58 38.2**	**-0.2**
MXZ	**Matakaoa Point**	**3.63**	**33**	Pn		**Pn**	**02 58 54.2**	**-0.3**

WEL 20 02:59:53.6, 40.7°S±0.9°×17.6°E±°, h27km±1km, M3.1/10, ML3.7/7, MLv3.1/10, Error ellipse: s-maj=0.0km s-min=0.0km az=115.6, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIWZ	**Tintock**	**0.09**	**147**	P		Pb	02 59 58.9	+0.3
PRWZ	**Pori Road**	**0.18**	**38**	P		Pb	02 59 59.7	+0.3
PRWZ				S		Sb	03 00 04.4	+1.1
MRZ	**Mangatainoka R**	**0.19**	**282**	P		Pb	02 59 60.0	+0.6
MRZ				S		Sb	03 00 04.4	+1.0
HOWZ	**Holdsworth Sta**	**0.30**	**230**	P		Pb	03 00 01.6	+0.6
POWZ	**Post Office Ro**	**0.31**	**353**	P		Pb	03 00 01.4	+0.4
BFZ	**Birch Farm**	**0.32**	**87**	P		Pb	03 00 01.8	+0.6
DVHZ	**Dannevirke**	**0.48**	**33**	P		Pb	03 00 04.0	+0.4
OGWZ	**Otaki Gorge**	**0.51**	**257**	P		Pn	03 00 05.4	+0.2
ANWZ	**Angora Road**	**0.55**	**64**	P		Pb	03 00 03.7	-1.1
MOVZ	**Moawhango**	**1.29**	**358**	P		Pb	03 00 17.1	-0.2

WEL 20 03:00:00.5, 40.6°S±0.7°×175.8°E±0.9, h28km±1km, M3.6/7, ML4.0/7, MLv3.6/7, Error ellipse: s-maj=0.0km s-min=0.0km az=111.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PRWZ	**Pori Road**	**0.13**	**49**	P		Pb	03 00 06.3	+0.4
PRWZ				S		Sb	03 00 10.7	+1.2
TIWZ	**Tintock**	**0.14**	**166**	S		Sb	03 00 11.7	+0.9
MRZ	**Mangatainoka R**	**0.20**	**264**	P		Pb	03 00 07.0	+0.4
MRZ				S		Sb	03 00 11.6	+0.9
POWZ	**Post Office Ro**	**0.26**	**347**	P		Pb	03 00 06.7	-0.5
POWZ				S		Sn	03 00 12.8	-0.6
POWZ	**Post Office Ro**	**0.26**	**347**	S		Pb	03 00 06.5	-0.7
BFZ	**Birch Farm**	**0.31**	**98**	P		Pb	03 00 07.9	0.0
BFZ				S		Sn	03 00 14.1	-0.7
HOWZ	**Holdsworth Sta**	**0.36**	**224**	S		Sn	03 00 15.4	-0.6
DVHZ	**Dannevirke**	**0.42**	**36**	P		Pb	03 00 09.6	0.0
DVHZ				S		Sb	03 00 16.1	+0.2
ANWZ	**Angora Road**	**0.52**	**70**	P		Pn	03 00 11.8	-0.2
OGWZ	**Otaki Gorge**	**0.54**	**251**	P		Pn	03 00 12.1	-0.3
OGWZ				S		Sn	03 00 20.5	+0.1
MTW	**Mount Morrison**	**0.58**	**206**	P		Pn	03 00 12.5	-0.3
TSZ	**Takapari Road**	**0.59**	**9**	P		Pb	03 00 12.5	+0.1
PRHZ	**Porangahau**	**0.71**	**59**	P		Pb	03 00 14.4	+0.1
KIW	**Kapiti Island**	**0.74**	**252**	P		Pn	03 00 15.5	+0.4
MOVZ	**Moawhango**	**1.23**	**357**	P		Pb	03 00 22.8	-0.4

IDC ***20*** *03:04:42.8±1.7, 40.61°S×175.90E, h0km, mb4.3/3, mb1 4.4/5, mb1mx4.0/35, mbtmp4.2/5, ML3.4/2, MS5.2/1, Ms1 5.2/1, ms1mx4.5/18, Error ellipse: s-maj=43.6km s-min=24.6km az=132.0*

WEL ***20*** *03:04:48.0, 40.7°S±0.7°×175.8°E±1.0, h23km±1km, M4.2/9, ML4.6/9, MLv4.2/9, Error ellipse: s-maj=0.0km s-min=0.0km az=100.9*

NEIC ***20*** *03:04:48.0±2.3, 40.72°S±0.05°×175.88°E±0.09, h39km±11km, Error ellipse: s-maj=11.0km s-min=4.6km az=123.0*

ISC 20 03:04:47.4±0.9, 40.67°S±0.03°×175.81°E±0.03, h32km±7km, n46, σ1.31/56, mb4.3/3, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TIWZ	**Tintock**	**0.12**	**152**	P		**Pb**	**03 04 52.9**	**-0.4**
TIWZ				S		**Sn**	**03 04 56.8**	**+0.2**
PRWZ	**Pori Road**	**0.17**	**47**	P		**Pn**	**03 04 53.6**	**-0.1**
PRWZ				S		**Sn**	**03 04 57.6**	**0.0**
MRZ	**Mangatainoka R**	**0.17**	**272**	P		**Pn**	**03 04 53.9**	**+0.1**
MRZ				S		**Sn**	**03 04 58.2**	**+0.4**
POWZ	**Post Office Ro**	**0.28**	**354**	P		**Pb**	**03 04 55.0**	**+0.2**
HOWZ	**Holdsworth Sta**	**0.32**	**224**	P		**Pb**	**03 04 58.3**	**+0.5**
BFZ	**Birch Farm**	**0.33**	**92**	P		**Pb**	**03 04 55.6**	**+0.1**
BFZ	**Birch Farm**	**0.33**	**92**			**Pb**	**03 04 55.5**	**+0.1**
BFZ						**Sb**	**03 05 00.9**	**-0.1**
CPWZ	**Castlepoint**	**0.38**	**129**	P		**Pn**	**03 04 57.6**	**+0.9**
TMWZ	**Te Maipa**	**0.44**	**172**	P		**Pn**	**03 04 58.1**	**+0.5**
DVHZ	**Dannevirke**	**0.46**	**37**	P		**Pn**	**03 04 57.5**	**-0.2**
OGWZ	**Otaki Gorge**	**0.51**	**253**	P		**Pn**	**03 04 59.2**	**+0.8**
MTW	**Mount Morrison**	**0.54**	**205**	P		**Pn**	**03 04 59.7**	**+0.9**
TSZ	**Takapari Road**	**0.62**	**11**	P		**Pn**	**03 05 00.3**	**+0.3**
MSWZ	**Moikau Station**	**0.86**	**209**	Pn		**Pn**	**03 05 03.5**	**+0.3**
PLWZ	**Palliser**	**0.99**	**205**			**Pn**	**03 05 05.3**	**+0.2**
PLWZ						**Sb**	**03 05 18.8**	**0.0**
BHW	**Baring Head**	**1.02**	**224**			**Pn**	**03 05 06.1**	**+0.6**
SNZO	**South Karori**	**1.05**	**232**			**Pb**	**03 05 06.8**	**-0.3**
BKZ	**Black Stump Fm**	**1.59**	**20**			**Pn**	**03 05 14.0**	**+0.7**
TUWZ	**Tuamarina**	**1.60**	**241**			**Pn**	**03 05 12.7**	**-0.7**
CMWZ	**Cape Campbell**	**1.62**	**228**	Pn		**Pn**	**03 05 14.5**	**+0.8**
BSWZ	**Blackbirch Sta**	**1.79**	**234**			**Pn**	**03 05 16.5**	**+0.4**
NNZ	**Nelson**	**1.92**	**253**			**Pb**	**03 05 20.2**	**-1.5**
HIZ	**Hauiti**	**2.27**	**341**			**Pn**	**03 05 24.8**	**+2.1**
KHZ	**Kahutara**	**2.44**	**224**			**Pn**	**03 05 26.1**	**+1.2**
THZ	**Tophouse**	**2.45**	**243**			**Pn**	**03 05 26.6**	**+1.5**
QRZ	**Quartz Range**	**2.50**	**265**	Pn		**Pn**	**03 05 28.0**	**+2.3**
QRZ						**Sn**	**03 05 52.2**	**-2.8**
URZ	**Urewera**	**2.61**	**23**	Pn		**Pn**	**03 05 25.7**	**-1.6**
	9.0nm,0.3s,baz=222,slow=6.8,SNR=10							
URZ				Sn		**Sn**	**03 05 55.9**	**-1.9**
	20nm,0.3s,baz=93,slow=21,SNR=5.7							
URZ	**Urewera**	**2.61**	**23**	Pn		**Pn**	**03 05 27.1**	**-0.2**
LTZ	**Lake Taylor**	**3.39**	**230**	Pn		**Pn**	**03 05 37.3**	**-0.7**
MXZ	**Matakaoa Point**	**3.66**	**33**			**Pn**	**03 05 41.4**	**-0.3**
MQZ	**McQueen's Vall**	**3.83**	**217**			**Pn**	**03 05 43.3**	**-0.8**
OXZ	**Oxford**	**3.87**	**225**	Pn		**Pn**	**03 05 43.6**	**-1.0**
RPZ	**Rata Peaks**	**4.66**	**228**	Pn		**Pn**	**03 05 55.3**	**-0.2**
	1.4nm,0.3s,baz=14,slow=4.2,SNR=3.9							
RPZ				Pg		**Pb**	**03 06 10.2**	**+1.9**
	14nm,0.3s,baz=346,slow=2.4,SNR=13							
RPZ				Sn		**Sn**	**03 06 44.8**	**-3.7**
	5.5nm,0.3s,baz=307,slow=19,SNR=9.8							
RPZ				Lg		Lg	03 07 11.7	
	6.3nm,0.3s,baz=45,slow=20,SNR=2.3							
FOZ	**Fox Glacier**	**5.30**	**235**	Pn		**Pn**	**03 06 04.0**	**-0.1**
LBZ	**Lake Benmore**	**5.57**	**226**	Pn		**Pn**	**03 06 07.4**	**-0.6**
LBZ				Sn		**Sn**	**03 07 08.7**	**-2.2**
OUZ	**Omahuta**	**5.71**	**341**	Pn		**Pn**	**03 06 11.4**	**+1.4**
ODZ	**Otahua Downs**	**5.79**	**219**	Pn		**Pn**	**03 06 11.7**	**+0.8**
ODZ				Sn		**Sn**	**03 07 13.5**	**-2.8**
WKZ	**Wanaka**	**6.50**	**228**	Pn		**Pn**	**03 06 22.9**	**+2.1**
MLZ	**Mavora Lakes**	**7.33**	**228**	Pn		**Pn**	**03 06 33.9**	**+1.7**
DCZ	**Deep Cove**	**7.94**	**230**	Pn		**Pn**	**03 06 43.6**	**+3.1**
DZM	**Mont Dzumac**	**20.17**	**334**	LR		LR	03 17 34.1	
	comp=Z,6um,18.0s,baz=160,slow=38							
ASAR	**Alice Springs**	**38.91**	**283**	P		**P**	**03 12 10.8**	**+0.6**
	1.4nm,0.4s,baz=121,slow=6.9,SNR=31							
WRA	**Warramunga Arr**	**40.86**	**288**	P		**P**	**03 12 26.8**	**+0.5**
	3.0nm,0.4s,baz=126,slow=8.3,SNR=22							
FITZ	**Fitzroy Crossi**	**48.

IGPR	InterUniversit	1.30	154	ǁ *e*P		Pn	03 10 04.9	+0.1
IGPR				*e*S		Sn	03 10 21.4	+0.2
IGPR	InterUniversit	1.30	154			Pn	03 10 05.0	+0.3
IGPR					Sn	Sn	03 10 20.8	-0.3
MTP	Monte Pirata	1.51	133	*e*S		Sn	03 10 26.7	+0.3
MTP	Monte Pirata	1.51	133	ǁ *e*P		Pn	03 10 07.3	-0.4
MTP	Monte Pirata	1.51	133			Pn	03 10 07.3	-0.4
MTP						Sn	03 10 26.7	+0.3
PCDR	Punta Cana, DR	1.69	249	*i* P		Pb	03 10 13.2	+0.1
PCDR				*e*S		Sn	03 10 31.9	+0.9
PCDR				IAML			03 10 51.4	
	comp=Z,46nm,0.4s							
PCDR	Punta Cana, DR	1.69	249	Pn		Pb	03 10 13.2	+0.1

IDC 20 03:22:55.0±1.8,11°21N×125°44E,h0km,mb3.7/5, mb1 3.8/5,mb1mx3.5/27,mbtmp3.7/5,Error ellipse: s-maj=182.0km s-min=21.5km az=69.0,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.17**	**164**	P	P	03 29 24.4	-0.4
	0.4nm,0.5s,baz=347,slow=9.6,SNR=4.1						
ASAR	**Alice Springs**	**35.63**	**167**	P	P	03 29 55.3	+0.5
	0.4nm,0.5s,baz=347,slow=8.1,SNR=6.9						
SONM	**Songino Array**	**39.86**	**340**	P	P	03 30 31.1	+0.6
	0.4nm,0.6s,baz=165,slow=7.4,SNR=5.1						
MKAR	**Makanchi Array**	**50.79**	**323**	P	P	03 31 57.5	+0.3
	0.8nm,0.8s,baz=111,slow=7.9,SNR=6.8						
AKASG	**Malin Array Be**	**85.33**	**321**	P	P	03 35 32.4	-1.7
	0.4nm,0.5s,baz=73,slow=5.1,SNR=3.2						

*IDC **20** 03:57:40.1±0.8,54°91N×156°96W,h0km,mb4.0/21, mb1 4.1/23,mb1mx4.0/50,mbtmp4.0/23,ML3.9/2,Error ellipse: s-maj=24.2km s-min=12.7km az=8.0*
*AEIC **20** 03:57:43.7±2.6,54°64N±0°10×156°7W±0°1,h12km±6km, ML3.8/33,mb4.3/4(NEIC),Error ellipse: s-maj=15.0km s-min=8.0km az=156.0*
*NEIC **20** 03:57:43.5±2.5,54°83N±0°08×156°86W±0°08,h29km±7km, Error ellipse: s-maj=12.8km s-min=3.5km az=153.0*
ISC 20 03:57:43.5±0.6,54°90N±0°08×156°87W±0°05,h24km, n108,σ1$35/119,mb4.0/21,South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIR	**Chirikof Islan**	**1.17**	**37**		Pn	03 58 03.4	-0.9
CHIR					Sn	03 58 19.1	-0.3
VNSG	**Veniaminof 6**	**1.76**	**315**		Pn	03 58 12.4	-0.1
VNSG					Sn	03 58 35.3	+1.2
VNWF	**Veniaminof 8**	**1.98**	**310**		Pn	03 58 16.0	+0.5
VNFG	**Fog Glacier, M**	**2.06**	**313**		Pn	03 58 17.5	+0.8
SDPT	**Sand Point**	**2.12**	**284**		Pn	03 58 18.0	+0.7
SDPT	**Sand Point**	**2.12**	**284**		Sn	03 58 41.2	-1.7
SII	**Sitkinak Islan**	**2.25**	**41**		Pn	03 58 18.3	-0.9
SII					Sn	03 58 45.5	-0.7
PLK3	**Peulik 3**	**2.81**	**7**		Pn	03 58 28.6	+1.7
OHAK	**Old Harbor**	**3.08**	**39**		Pn	03 58 29.8	-0.7
OHAK	**Old Harbor**	**3.08**	**39**		Sn	03 59 04.2	-2.3
BLHA	**Black Hill**	**3.08**	**287**		Pn	03 58 29.5	-1.0
KABU	**Katmai Buttres**	**3.49**	**14**		Pn	03 58 37.9	+1.5
KDAK	**Kodiak Island**	**3.75**	**38**	Pn	Pn	03 58 38.4	-1.3
	2.8nm,0.3s,baz=210,slow=7.1,SNR=29						
KDAK				Sn	Sn	03 59 21.7	-1.4
	8.3nm,0.3s,baz=287,slow=22,SNR=10						
KDAK	**Kodiak Island**	**3.75**	**38**		Pn	03 58 38.6	-1.1
KDAK	**Kodiak Island**	**3.75**	**38**		Pn	03 58 38.9	-0.8
FALS	**False Pass**	**3.78**	**272**		Pn	03 58 38.8	-1.6
FALS					Sn	03 59 21.9	-2.0
KAHC	**Katmai Hardscr**	**3.89**	**15**		Pn	03 58 42.2	+0.4
SSBA	**Shishaldin**	**4.20**	**271**		Pn	03 58 44.8	-1.2
WEBT	**Westdahl Beart**	**4.58**	**269**		Pn	03 58 50.0	-1.1
AKBBA	**Akutan Broad B**	**5.34**	**265**		Pn	03 59 00.2	-1.5
HOM	**Homer**	**5.55**	**29**	Pn	Pn	03 59 04.9	+0.5
HOM					Sn	04 00 07.5	+0.1
CNPM	**China Poot**	**5.56**	**31**		Pn	03 59 04.2	-0.4
CNPM					Sn	04 00 04.6	-3.0
UNV	**Unalaska Valle**	**5.73**	**263**		Pn	03 59 05.0	-1.9
BRLK	**Bradley Lake**	**5.85**	**31**	Pn	Pn	03 59 08.0	-0.7
MSW	**Makushin Switc**	**5.87**	**264**		Pn	03 59 06.8	-2.2
BRSE	**Bradley Lake S**	**5.88**	**32**		Pn	03 59 07.9	-1.1
RSO	**Redoubt South**	**6.00**	**20**	Pn	Pn	03 59 12.2	+1.3
RDWB	**Redoubt West**	**6.00**	**19**		Pn	03 59 11.3	+0.5
DFR	**Drift River**	**6.13**	**20**		Pn	03 59 13.1	+0.5
SEW	**Seward**	**6.57**	**34**		Pn	03 59 16.8	-1.7
SLKM	**Skilak Lake**	**6.65**	**30**		Pn	03 59 18.9	-0.7
RC01	**Rabbit Creek A**	**7.27**	**29**		Pn	03 59 27.4	-0.7
SUA	**Susitna One**	**7.33**	**24**		Sn	04 00 52.5	+1.1
SKT	**Skwentna**	**7.63**	**19**	Pn	Pn	03 59 33.6	+0.6
PMR	**Palmer**	**7.85**	**28**	Pn	Pn	03 59 35.6	-0.3
KNK	**Knik Glacier**	**7.90**	**31**	Pn	Pn	03 59 37.2	+0.5
GLI	**Glacier Island**	**7.93**	**37**	Pn	Pn	03 59 36.8	-0.4
GLI					Sn	04 01 02.4	-3.7
GHO	**Glory Hole Cre**	**8.05**	**28**	Pn	Pn	03 59 39.2	+0.3
FID	**Port Fidalgo**	**8.06**	**39**	Pn	Pn	03 59 38.3	-0.7
EYAK	**Cordova Ski Ar**	**8.21**	**42**	Pn	Pn	03 59 41.5	+0.6
EYAK					Sn	04 01 11.2	-1.5
SML	**Sawmill**	**8.25**	**29**	Pn	Pn	03 59 41.6	+0.1
PPLA	**Purkeypile**	**8.38**	**15**	Pn	Pn	03 59 44.2	+0.9
SCM	**Sheep Creek Mo**	**8.56**	**32**		Pn	03 59 45.2	-0.7
SCM					Sn	04 01 22.8	+1.2
KTH	**Kantishna Hill**	**9.19**	**17**		Pn	03 59 53.4	-1.1
KTH					Sn	04 01 38.9	+1.9
TRF	**Thorofare Moun**	**9.21**	**19**	Pn	Pn	03 59 56.0	+1.2
CRQM	**Cirque**	**9.38**	**46**	Pn	Pn	03 59 58.2	+1.1
CRQM				Sn	Sn	04 01 39.0	-2.7
RND	**Reindeer**	**9.46**	**22**	Pn	Pn	03 59 57.8	-0.4
TGL	**Tana Glacier**	**9.50**	**46**	Pn	Pn	03 59 59.7	+0.9
GLB	**Gilahina Butte**	**9.51**	**41**	Pn	Pn	03 59 59.6	+0.9
VRDI	**Verde Repeater**	**9.52**	**43**	Pn	Pn	04 00 00.1	+1.1
DHY	**Denali Highway**	**9.54**	**27**		Pn	03 59 59.6	+0.3
MESA	**MESA**	**9.60**	**51**	Pn	Pn	04 00 01.0	+0.9
BPAW	**Bear Paw Mtn.**	**9.69**	**16**	Pn	Pn	04 00 01.6	+0.2
MCK	**McKinley**	**9.73**	**21**	Pn	Pn	04 00 02.5	+0.7
MCARA	**McCarthy VSAT**	**9.77**	**43**	Pn	Pn	04 00 04.3	+1.9
BALM	**Baldy**	**9.85**	**46**	Pn	Pn	04 00 04.4	+0.8
BARN	**Barnard Glacie**	**10.15**	**46**	Pn	Pn	04 00 08.8	+1.1
BARN					Sn	04 01 58.9	-1.8
CTGM	**Chitina Glacie**	**10.24**	**47**	Pn	Pn	04 00 09.7	+0.8
CTGM					Sn	04 02 02.3	-0.6
MENT	**Mentasta**	**10.52**	**35**	Pn	Pn	04 00 13.6	+1.0
ANM	**Nome**	**10.59**	**340**	Pn	Pn	04 00 14.5	+1.0
MLY	**Manley**	**10.61**	**14**	Pn	Pn	04 00 13.2	-0.7
ATKA	**Atka Island**	**10.65**	**262**	Pn	Pn	04 00 13.5	-0.9
HDA	**Harding Lake**	**10.76**	**24**		Pn	04 00 15.2	-0.6
RIDG	**Independent Ri**	**10.76**	**30**		Pn	04 00 16.9	+0.9
RIDG					Sn	04 02 17.2	+1.7
CCB	**Clear Creek Bu**	**10.78**	**21**		Pn	04 00 13.6	-2.5
DOT	**Dot Lake**	**10.93**	**31**	Pn	Pn	04 00 19.0	+0.9
IL31		**11.08**	**23**		Pn	04 00 17.8	-2.4
ILAR	**Eielson Array**	**11.08**	**23**	Pn	Pn	04 00 17.4	-2.9
	0.9nm,0.3s,baz=215,slow=12,SNR=29						
ILAR				Sn	Sn	04 02 16.1	-7.1
	0.1nm,0.3s,baz=216,slow=15,SNR=2.8						
SCRK	**Sand Creek**	**11.19**	**30**	Pn	Pn	04 00 21.9	0.0
HYT	**Haines Junctio**	**11.87**	**52**	Pn	Pn	04 00 32.3	+1.1
PRP	**Porcupine Dome**	**12.02**	**23**		Pn	04 00 32.5	-0.7
SIT	**Sitka**	**12.25**	**71**	Pn	Pn	04 00 34.3	-1.9
BESE	**Bessie Mountai**	**12.62**	**64**	Pn	Pn	04 00 42.4	+1.1
DAWY	**Dawson**	**12.73**	**37**	Pn	Pn	04 00 43.9	+1.0
FYU	**Fort Yukon**	**12.98**	**21**	Pn	Pn	04 00 46.0	-0.1
WHY	**Whitehorse**	**13.04**	**55**	Pn	Pn	04 00 47.9	+0.9
EPYK	**Eagle Plains**	**15.06**	**32**	IAmb	IAmb	04 01 25.9	
	comp=Z,14nm,0.8s						
INK	**Inuvik**	**17.26**	**30**	P	Pn	04 01 42.7	+0.2
	comp=Z,0.6nm,0.3s,baz=232,slow=13,SNR=24						
INK	**Inuvik**	**17.26**	**30**	Pn	P	04 01 43.5	-0.4
C36M	**Paulatuk**	**20.70**	**33**	P	P	04 02 22.1	+0.7
C36M				IAmb	IAmb	04 02 24.3	
	comp=Z,12nm,1.0s						
YKA	**Yellowknife Ar**	**22.86**	**54**	P	P	04 02 44.0	-0.7
	comp=Z,0.7nm,0.7s,baz=272,slow=9.8,SNR=15						
NEW	**Newport**	**25.30**	**89**	P	P	04 03 08.7	+0.7
	comp=Z,1.5nm,0.8s,baz=299,slow=13,SNR=2.9						
PETK	**Petropavlovsk-**	**26.41**	**285**	P	P	04 03 16.9	-0.9
	comp=Z,2.9nm,0.7s,baz=83,slow=11,SNR=3.6						
SEY	**Seymchan**	**26.73**	**308**	P	P	04 03 20.0	-0.7
	comp=Z,3.4nm,0.7s,baz=96,slow=11,SNR=8.0						
NVAR	**Mina Array Bea**	**30.69**	**106**	P	P	04 03 56.8	+0.5
	comp=Z,0.3nm,0.7s,baz=302,slow=8.4,SNR=3.4						
PDAR	**Pinedale Array**	**32.79**	**92**	P	P	04 04 15.4	+0.6

	comp=Z,0.5nm,0.6s,baz=308,slow=4.2,SNR=6.4							
YAK	**Yakutsk**	**37.11**	**311**	P		P	04 04 51.4	-0.1
	comp=Z,5.3nm,0.3s,baz=70,slow=3.2,SNR=4.3							
KLR	**Kul'dur**	**42.49**	**293**	P		P	04 05 35.2	-1.2
	comp=Z,0.6nm,0.5s,baz=27,slow=2.3,SNR=3.8							
H11N2	**WAKE ISLAND Hy**	**44.53**	**233**	T		T	04 53 42.1	
	baz=29,slow=76,SNR=11							
H11N3	**WAKE ISLAND Hy**	**44.54**	**233**	T		T	04 53 36.7	
	baz=29,slow=76,SNR=14							
H11N1	**WAKE ISLAND Hy**	**44.55**	**233**	T		T	04 53 42.3	
	baz=29,slow=76,SNR=11							
TXAR	**Lajitas Array**	**45.58**	**102**	P		P	04 06 02.3	+0.8
	comp=Z,0.8nm,0.6s,baz=310,slow=5.6,SNR=12							
TXAR				PcP		PcP	04 07 40.0	+0.3
	comp=Z,0.2nm,0.7s,baz=318,slow=1.2,SNR=2.4							
H11S1	**WAKE ISLAND Hy**	**45.69**	**232**	T		T	04 55 04.2	
	baz=28,slow=76,SNR=49							
H11S2	**WAKE ISLAND Hy**	**45.70**	**232**	T		T	04 55 05.5	
	baz=28,slow=76,SNR=34							
H11S3	**WAKE ISLAND Hy**	**45.71**	**232**	T		T	04 55 05.3	
	baz=28,slow=76,SNR=29							
JCT	**Junction City**	**46.92**	**97**	P		P	04 06 12.7	+0.7
SCHQ	**Schefferville**	**48.27**	**51**	P		P	04 06 22.3	+0.2
	comp=Z,2.2nm,0.9s,baz=291,slow=14,SNR=3.0							
KSRS	**Korea Array**	**52.29**	**283**	P		P	04 06 53.4	+0.8
	comp=Z,0.9nm,0.5s,baz=50,slow=6.4,SNR=3.7							
ARCES	**ARCESS Array B**	**55.86**	**359**	P		P	04 07 18.4	+0.1
	comp=Z,0.8nm,0.5s,baz=23,slow=8.5,SNR=15							
SONM	**Songino Array**	**56.11**	**306**	P		P	04 07 21.5	+0.9
	comp=Z,2.5nm,0.8s,baz=32,slow=8.3,SNR=14							
SONM				PcP		PcP	04 08 19.2	+0.8
	comp=Z,0.7nm,0.7s,baz=48,slow=3.0,SNR=2.9							
ZALV	**Zalesovo Beam**	**60.23**	**323**	P		P	04 07 49.8	+0.7
	comp=Z,1.2nm,0.7s,baz=15,slow=7.4,SNR=4.2							
FINES	**FINESS Array B**	**63.98**	**358**	P		P	04 08 14.5	+0.4
	comp=Z,3.1nm,0.8s,baz=20,slow=7.3,SNR=12							
NOA	**NORSAR Array B**	**64.02**	**6**	P		P	04 08 14.9	+0.4
	comp=Z,0.4nm,0.7s,baz=353,slow=6.6,SNR=3.3							
MKAR	**Makanchi Array**	**67.06**	**320**	P		P	04 08 34.1	-0.3
	comp=Z,0.6nm,0.7s,baz=46,slow=7.2,SNR=8.1							
AKASG	**Malin Array Be**	**74.64**	**356**	P		P	04 09 20.2	-0.1
	comp=Z,2.4nm,0.7s,baz=7.8,slow=6.0,SNR=12							
CMAR	**Chiang Mai Arr**	**82.96**	**292**	P		P	04 10 06.3	-0.2
	comp=Z,1.1nm,0.3s,baz=18,slow=4.9,SNR=6.1							
ESDC	**Soseca Array**	**82.98**	**21**	P		P	04 10 07.4	+1.1
	comp=Z,0.8nm,0.7s,baz=340,slow=4.1,SNR=5.1							
BRTR	**Keskin Array B**	**85.31**	**352**	P		P	04 10 19.6	+1.2
	comp=Z,0.8nm,1.0s,baz=27,slow=3.5,SNR=3.7							

WEL 20 04:13:15.5,40.7°S±0.7°×175.8°E±0.9,h24km±1km,M3.7/19, ML4.1/19,MLv3.7/19,Error ellipse: s-maj=0.0km s-min=0.0km az=91.4,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIWZ	**Tintock**	**0.10**	**152**	P	Pb	04 13 20.5	+0.4
TIWZ				S	Sb	04 13 24.0	+0.9
PRWZ	**Pori Road**	**0.17**	**40**	P	Pb	04 13 20.8	+0.1
PRWZ				S	Sb	04 13 25.5	+1.3
MRZ	**Mangatainoka R**	**0.19**	**278**	P	Pb	04 13 21.5	+0.6
MRZ				S	Sb	04 13 25.5	+1.0
POWZ	**Post Office Ro**	**0.30**	**352**	P	Pb	04 13 23.0	+0.6
POWZ				S	Sb	04 13 28.5	+1.4
HOWZ	**Holdsworth Sta**	**0.32**	**228**	P	Pb	04 13 23.3	+0.7
HOWZ				S	Sb	04 13 28.7	+1.1
BFZ	**Birch Farm**	**0.32**	**89**	P	Pb	04 13 23.2	+0.5
BFZ				S	Sb	04 13 29.1	+1.4
CPWZ	**Castlepoint**	**0.36**	**128**	P	Pn	04 13 24.8	-0.5
CPWZ				S	Sn	04 13 33.5	+1.8
TMWZ	**Te Maipa**	**0.42**	**173**	P	Pb	04 13 25.3	+0.9
TMWZ				S	Sn	04 13 32.4	-0.8
DVHZ	**Dannevirke**	**0.47**	**34**	P	Pb	04 13 25.6	+0.4
DVHZ				S	Sb	04 13 32.6	+0.9
OGWZ	**Otaki Gorge**	**0.51**	**255**	P	Pn	04 13 26.7	-0.6
MTW	**Mount Morrison**	**0.53**	**207**	P	Pb	04 13 26.9	+0.7
MTW				S	Sn	04 13 35.9	0.0
OHWZ	**Ohakea**	**0.62**	**321**	P	Pn	04 13 29.1	+0.3
TSZ	**Takapari Road**	**0.64**	**10**	P	Pb	04 13 28.3	+0.3
CAW	**Cannon Point**	**0.71**	**234**	P	Pn	04 13 29.9	-0.2
KIW	**Kapiti Island**	**0.71**	**256**	P	Pn	04 13 30.2	+0.1
TRWZ	**Traveller**	**0.72**	**188**	P	Pb	04 13 29.5	+0.1
PRHZ	**Porangahau**	**0.75**	**56**	P	Pb	04 13 30.0	+0.1
PAWZ	**Paruwai Farm**	**0.76**	**203**	P	Pb	04 13 30.2	+0.1
WPHZ	**Waipukurau**	**0.78**	**37**	P	Pn	04 13 31.2	+0.1
PNHZ	**Pukenui**	**0.82**	**21**	P	Pn	04 13 31.7	0.0
MSWZ	**Moikau Station**	**0.85**	**211**	P	Pb	04 13 31.1	-0.5
PLWZ	**Palliser**	**0.98**	**206**	P	Pb	04 13 32.8	-1.1
WEL	**Wellington**	**1.00**	**233**	P	Pn	04 13 33.7	-0.3
BHW	**Baring Head**	**1.02**	**225**	P	Pn	04 13 33.7	-0.7
PXZ	**Pawanui**	**1.03**	**51**	P	Pn	04 13 33.8	-0.7
KRHZ	**Kereru**	**1.12**	**22**	P	Pn	04 13 35.9	+0.1
WAZ	**Wanganui**	**1.13**	**325**	P	Pb	04 13 37.9	+1.6
KAHZ	**Kahuranaki**	**1.20**	**42**	P	Pn	04 13 36.5	-0.4
BHHZ	**Black Hill Sta**	**1.21**	**9**	P	Pb	04 13 37.4	-0.3
MOVZ	**Moawhango**	**1.28**	**358**	P	Pb	04 13 38.7	-0.3
TCW	**Tory Channel**	**1.28**	**245**	P	Pn	04 13 37.7	-0.2
MTVZ	**Mangateitei**	**1.33**	**348**	P	Pb	04 13 40.3	+0.5
KWHZ	**Kaweka Forest**	**1.34**	**20**	P	Pb	04 13 38.9	0.0
TRVZ	**Turoa**	**1.40**	**351**	P	Pb	04 13 40.9	-0.2
CKHZ	**Cape Kidnapper**	**1.41**	**43**	P	Pn	04 13 38.7	-1.0
MCHZ	**McNeill Hill**	**1.41**	**29**	P	Pn	04 13 39.7	0.0
WHVZ	**Whangaehu Hut**	**1.41**	**353**	P	Pb	04 13 41.5	+0.2
TUVZ	**Tukino**	**1.42**	**355**	P	Pb	04 13 41.6	+0.1
DRZ	**Donne Shelter**	**1.42**	**352**	P	Pb	04 13 42.0	+0.4
PKVZ	**Pokaka**	**1.44**	**345**	P	Pb	04 13 41.8	+0.1
FWVZ	**Far West T-bar**	**1.45**	**352**	P	Pb	04 13 41.5	-0.3
DUWZ	**D'Urville Isla**	**1.45**	**265**	P	Pn	04 13 40.7	+0.4
NGZ	**Ngauruhoe**	**1.52**	**353**	P	Pb	04 13 42.8	-0.3
WTVZ	**West Tongariro**	**1.58**	**353**	P	Pb	04 13 43.5	-0.6
KRVZ	**Karewarewa**	**1.60**	**355**	P	Pb	04 13 43.7	-0.6
BKZ	**Black Stump Fm**	**1.60**	**19**	P	Pn	04 13 42.1	-0.3
TUWZ	**Tuamarina**	**1.60**	**242**	P	Pn	04 13 42.3	-0.1
CMWZ	**Cape Campbell**	**1.61**	**228**	P	Pb	04 13 48.1	+3.5
LREZ	**Lake Rotokare**	**1.64**	**318**	P	Pb	04 13 45.8	+0.7
TWVZ	**Taurewa**	**1.64**	**349**	P	Pb	04 13 44.4	-0.8
ARHZ	**Aropaoanui**	**1.68**	**33**	P	Pn	04 13 43.3	-0.2
RITZ	**Rihia Road**	**1.71**	**1**	P	Pn	04 13 45.0	+1.2
KATZ	**Kakaramea**	**1.71**	**357**	P	Pb	04 13 45.2	-1.1
NMHZ	**Naumai**	**1.76**	**26**	P	Pn	04 13 45.0	+0.4
VRZ	**Vera Road**	**1.76**	**332**	P	Pb	04 13 46.7	-0.5
HATZ	**Hinemaiia**	**1.81**	**7**	P	Pb	04 13 48.1	+0.2
RATZ	**Rangitukua**	**1.82**	**359**	P	Pn	04 13 46.2	+0.8
PREZ	**Palmer Road**	**1.85**	**316**	P	Pn	04 13 48.1	-0.6
MRHZ	**Matea Rd**	**1.91**	**14**	P	Pn	04 13 46.4	-0.2
NNZ	**Nelson**	**1.93**	**253**	P	Pn	04 13 46.9	+0.2
DREZ	**Durham Road**	**1.95**	**320**	P	Pb	04 13 50.4	+0.1
NMEZ	**Namu Road**	**1.96**	**310**	P	Pb	04 13 50.7	+0.2
KHEZ	**Kahui Hut**	**1.97**	**314**	P	Pb	04 13 50.6	0.0
WATZ	**Wairara**	**1.98**	**358**	P	Pn	04 13 48.0	+0.5
MHEZ	**Mangahewa**	**1.98**	**324**	P	Pb	04 13 50.9	+0.1
MTHZ	**Maungataniwha**	**1.99**	**24**	P	Pn	04 13 48.0	+0.2
RAHZ	**Arahi**	**2.02**	**29**	P	Pn	04 13 47.6	-0.5
WHTZ	**Whakaora**	**2.02**	**3**	P	Pn	04 13 49.4	+1.2
PKE	**Pukeiti**	**2.05**	**316**	P	Pb	04 13 52.0	-0.1
NBEZ	**Newall Road No**	**2.07**	**313**	P	Pb	04 13 52.4	+0.2
ALRZ	**Allen Road**	**2.16**	**11**	P	Pb	04 13 55.0	+1.1
WPRZ	**Whakapapatarin**	**2.18**	**7**	P	Pn	04 13 50.5	+0.2
KUTZ	**Kaahu Road**	**2.19**	**360**	P	Pb	04 13 51.5	+0.9
PRRZ	**Pukatea Road**	**2.23**	**12**	P	Pb	04 13 58.1	+3.5
RTZ	**Ruatahuna**	**2.25**	**24**	P	Pn	04 13 52.3	+0.9
HIZ	**Hauiti**	**2.30**	**341**	P	Pb	04 13 54.2	-2.0
HRRZ	**Handcock Road**	**2.32**	**9**	P	Pb	04 13 59.1	+2.4
MUGZ	**Murupara**	**2.33**	**19**	P	Pn	04 13 51.8	-0.5
TLZ	**Tolley Road**	**2.37**	**355**	P	Pb	04 13 55.7	-1.7
RRRZ	**Republican Roa**	**2.41**	**13**	P	Pb	04 13 59.9	+1.8
KHZ	**Kahutara**	**2.43**	**224**	P	Pn	04 13 54.3	+0.6
THZ	**Tophouse**	**2.45**	**243**	P	Pn	04 13 52.9	-1.2
HLRZ	**Highlands Stat**	**2.47**	**10**	P	Pb	04 13 59.7	+0.6
TARZ	**Mount Tarawera**	**2.50**	**12**	P	Pn	04 13 54.5	-0.4
QRZ	**Quartz Range**	**2.51**	**266**	P	Pb	04 13 58.1	-1.7
URZ	**Urewera**	**2.62**	**23**	P	Pn	04 13 55.7	-0.6
MWZ	**Matawai**	**2.69**	**30**	P	Pn	04 13 55.6	-1.8
TOZ	**Tahuroa Road**	**2.96**	**355**	P	Pb	04 14 05.0	-2.6
RUGZ	**Raukumara Rang**	**3.08**	**28**	P	Pn	04 14 01.4	-1.3
GVZ	**Greta Valley S**	**3.09**	**222**	P	Pb	04 14 03.1	+0.3
DSZ	**Denniston Nort**	**3.21**	**249**	P	Pb	04 14 11.4	-0.4
PUZ	**Puketiti**	**3.22**	**37**	P	Pn	04 14 02.7	-2.0
HAZ	**Te Kaha**	**3.30**	**28**	P	Pn	04 14 03.5	-2.2
LTZ	**Lake Taylor**	**3.38**	**231**	P	Pn	04 14 06.0	-0.9
WMGZ	**Waiomatatini S**	**3.50**	**36**	P	Pn	04 14 06.4	-2.0
MKAZ	**Moumakai**	**3.61**	**352**	P	Pn	04 14 11.6	+1.6

OKCZ	**Okains Bay**	**3.66**	**213**	P		Pn	04 14 08.9	-1.8
MXZ	**Matakaoa Point**	**3.67**	**33**	P		Pn	04 14 09.1	-1.7
MQZ	**McQueen's Vall**	**3.83**	**217**	P		Pn	04 14 15.9	+3.0
WVZ	**Waitaha Valley**	**4.48**	**236**	P		Pn	04 14 27.6	+5.6
JCZ	**Jackson Bay**	**6.21**	**235**	P		Pn	04 14 51.4	+5.6

*OSPL **20** 04:18:14.4±0.9,18°96N×66°36W,h20km±5km,ML2.4*
*RSPR **20** 04:18:15.9,19°19N×66°72W,h28km±12km,MD3.1/12*
*NEIC **20** 04:18:15.5±1.6,19°06N±0°07×66°66W±0°02,h22km±13km, Error ellipse: s-maj=9.8km s-min=2.3km az=175.0*
ISC 20 04:18:16.4±1.5,19°01N±0°07×66°66W±0°03,h22km±7km, n48,σ0°67/61,9C-3D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.55**	**167**	ǁ *e*P	Pn	04 18 28.3	-0.6
EMPR	**Esperanza - Ma**	**0.55**	**167**	*e*S	Sn	04 18 38.2	+0.8
EMPR	**Esperanza - Ma**	**0.55**	**167**		Pn	04 18 28.3	-0.6
EMPR					Sn	04 18 38.2	+0.8
AOPR	**Arecibo Observ**	**0.67**	**188**	ǁ *e*P	Pb	04 18 29.7	+0.2
AOPR	**Arecibo Observ**	**0.67**	**188**	*e*S	Sn	04 18 41.2	+0.8
AOPR	**Arecibo Observ**	**0.67**	**188**		Pb	04 18 29.7	+0.2
AOPR					Sn	04 18 41.2	+0.8
AGPR	**Aguadilla, PR**	**0.69**	**218**	ǁ *e*P	Pb	04 18 29.1	-0.7
AGPR	**Aguadilla, PR**	**0.69**	**218**	*e*S	Sb	04 18 39.6	+0.7
AGPR	**Aguadilla, PR**	**0.69**	**218**	*i* P	Pb	04 18 29.1	-0.7
AGPR				*e*S	Sn	04 18 41.4	+0.5
AGPR				IAML		04 18 47.1	
	comp=Z,78nm,0.5s						
AGPR	**Aguadilla, PR**	**0.69**	**218**		Sb	04 18 39.1	+0.2
AGPR	**Aguadilla, PR**	**0.69**	**218**		Pb	04 18 29.1	-0.7
GCPR	**Guaynabo City**	**0.89**	**142**		Pn	04 18 33.4	-0.3
GCPR					Sn	04 18 45.5	-0.3
MPR

*IDC **20** 04:36:12.0±0.7, 1°.80S×78°.74W, h0^{km}, mb3.7/11, mb1 4.0/13,mb1mx3.8/33,mbtmp3.8/13,ML4.0/2,Error ellipse: s-maj=37.6km s-min=14.5km az=62.0*

*IGQ **20** 04:36:16.0±0.3, 2°.2N×7°.9W×°, h10^{km}*

*NEIC **20** 04:36:21.0±2.0, 1°.98S±0°.06×78°.76W±0°.10, h73^{km}±8^{km}, Error ellipse: s-maj=14.0km s-min=8.9km az=94.0*

ISC 20 04:36:14.3±1.1, 1°.99S±0°.02×79°.06W±0°.03, h17^{km}±7^{km}, n104, σ1§57/108, mb4.0/16, 1C, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
ARIO	**Riobamba**	**0.49**	**48**	P	P	**Pb**	**04 36 24.1**	**-0.6**
ARIO				S	S	**Sb**	**04 36 31.4**	**-0.4**
BBIL	**Ulba Tungurahu**	**0.78**	**47**	P	P	**Pb**	**04 36 28.9**	**-0.8**
BPAT	**Tungurahua Vol**	**0.79**	**53**	P	P	**Pb**	**04 36 29.0**	**-0.9**
BPAT				S	S	**Sb**	**04 36 40.0**	**-0.5**
RETU	**Refugio**	**0.81**	**49**	P	P	**Pb**	**04 36 29.5**	**-0.8**
AAM2	**Ambato 2 (Merc**	**0.84**	**33**	P	P	**Pn**	**04 36 31.0**	**-0.8**
AAM2				S	S	**Sn**	**04 36 43.9**	**0.0**
BULB	**Ulba Tungurahu**	**0.85**	**50**	P	P	**Pg**	**04 36 30.0**	**-1.0**
BRUN	**Tungurahua Vol**	**0.86**	**49**	P	P	**Pb**	**04 36 30.0**	**-1.0**
AGUAY	**Guayaquil**	**0.89**	**266**	P	P	**Pb**	**04 36 29.6**	**-1.7**
AGUAY				S	S	**Sb**	**04 36 41.4**	**-1.5**
SAGO	**Sagoatoa**	**0.92**	**26**	P	P	**Pn**	**04 36 32.6**	**-0.3**
AQUE	**Quevedo**	**1.02**	**335**	P	P	**Pn**	**04 36 34.2**	**+0.3**
AQUE				S	S	**Sn**	**04 36 48.8**	**+1.0**
APUJ	**Pujili**	**1.08**	**20**	P	P	**Pg**	**04 36 35.2**	**-0.2**
PIS1	**Pisayambo**	**1.14**	**36**	P	P	**Pg**	**04 36 36.1**	**-0.5**
PIS1				S	S	**Sn**	**04 36 52.1**	**+0.6**
PISA	**Pisayambo**	**1.14**	**36**	P	P	**Pg**	**04 36 35.8**	**-0.8**
APUY	**Puyo**	**1.19**	**64**	P	P	**Pg**	**04 36 36.8**	**-0.5**
APUY				S	S	**Sg**	**04 36 53.5**	**+0.6**
BOSC	**San Juan Bosco**	**1.29**	**154**	P	P	**Pb**	**04 36 38.5**	**+0.2**
BOSC				S	S	**Sg**	**04 36 56.6**	**+0.4**
ILLI	**Illinizas Sur**	**1.31**	**15**	P	P	**Pg**	**04 36 39.0**	**-0.7**
ILLI				S	S	**Sg**	**04 36 58.8**	**+2.0**
PAST	**Pastocalle**	**1.35**	**18**	P	P	**Pg**	**04 36 42.3**	**+1.8**
VCES	**Cotopaxi**	**1.35**	**30**	P	P	**Pg**	**04 36 39.7**	**-0.8**
BNAS	**Cotopaxi Volca**	**1.43**	**24**	P	P	**Pg**	**04 36 41.2**	**-0.8**
MORR	**Playas El Morr**	**1.43**	**243**	P	P	**Pn**	**04 36 38.3**	**-1.1**
BREF	**Cotopaxi Volca**	**1.45**	**26**	P	P	**Pg**	**04 36 41.9**	**-0.5**
BTAM	**Cotopaxi Volca**	**1.46**	**27**	P	P	**Pg**	**04 36 41.8**	**-0.8**
BVC2	**Cotopaxi Volca**	**1.47**	**26**	P	P	**Pg**	**04 36 42.0**	**-0.8**
BVC2				S	S	**Sg**	**04 37 01.9**	**-0.2**
VC1	**Cotopaxi 1**	**1.49**	**26**	P	P	**Pg**	**04 36 42.4**	**-0.7**
ATEN	**Tena**	**1.58**	**52**	P	P	**Pn**	**04 36 41.3**	**-0.4**
ATEN				S	S	**Sb**	**04 37 01.9**	**-1.1**
NINA	**Atacazo Ninahu**	**1.65**	**16**	P	P	**Pg**	**04 36 46.3**	**+0.2**
ANTM	**Antisana-La Mi**	**1.67**	**30**	P	P	**Pg**	**04 36 44.9**	**0.0**
ANTM				S	S	**Sg**	**04 37 06.3**	**-2.0**
ANTG	**Antisana-Guama**	**1.68**	**29**	P	P	**Pg**	**04 36 45.4**	**-1.4**
ANTG				S	S	**Sg**	**04 37 07.9**	**-0.8**
ANTS	**Antisana-Sarah**	**1.73**	**31**	P	P	**Pb**	**04 36 45.9**	**-0.1**
PPLP	**Puerto Lpez**	**1.77**	**284**	P	P	**Pn**	**04 36 42.1**	**-2.0**
ANTI	**Antisana**	**1.77**	**31**	P	P	**Pb**	**04 36 46.6**	**-0.1**
GGPC	**Guagua Pichinc**	**1.85**	**15**	P	P	**Pg**	**04 36 48.8**	**-1.3**
TERV	**Terraza Guagua**	**1.86**	**14**	P	P	**Pg**	**04 36 49.4**	**-0.7**
GGP	**Refugio Guagua**	**1.86**	**15**	P	P	**Pg**	**04 36 49.8**	**-0.4**
YANA	**Yana**	**1.92**	**15**	P	P	**Pb**	**04 36 49.5**	**+0.4**
SALI	**Salinas**	**1.94**	**264**	P	P	**Pn**	**04 36 45.2**	**-1.2**
PULU	**Pululahua**	**2.07**	**16**	P	P	**Pg**	**04 36 52.6**	**-1.6**
PAC1	**Pacto, Paraso**	**2.25**	**7**	P	P	**Pb**	**04 36 54.7**	**0.0**
PAC1				S	S	**Sg**	**04 37 26.3**	**-0.6**
GONZ	**Gonzanam**	**2.26**	**188**	P	P	**Pb**	**04 36 54.0**	**-1.0**
OTAV	**Otavalo**	**2.29**	**16**	P	P	**Pb**	**04 36 55.8**	**+0.3**
OTAV	**Otavalo**	**2.29**	**16**	P	P	**Pb**	**04 36 56.0**	**+0.6**
CAYA	**Cayambe**	**2.31**	**28**	P	P	**Pg**	**04 36 57.0**	**-1.8**
LAV4	**Lava4-Reventad**	**2.37**	**37**	P	P	**Pb**	**04 36 57.3**	**+0.7**
CUSE	**Cuicocha Este**	**2.37**	**16**	P	P	**Pb**	**04 36 57.3**	**+0.5**
CUIC	**Cuicocha-Domo**	**2.38**	**17**	P	P	**Pb**	**04 36 57.2**	**+0.2**
IMBA	**Imbabura, San**	**2.41**	**21**	P	P	**Pg**	**04 36 59.2**	**-1.4**
AIB2	**Ibarra (Univer**	**2.50**	**23**	P	P	**Pg**	**04 37 01.3**	**-1.1**
URCU	**Urcuqui**	**2.54**	**19**	P	P	**Pb**	**04 37 00.7**	**+1.0**
YAHU	**Yahuarcocha**	**2.54**	**23**	P	P	**Pg**	**04 37 01.0**	**-2.1**
CASC	**Dorado de Casc**	**2.72**	**39**	P	P	**Pb**	**04 37 01.8**	**-0.8**
ZUMB	**Zumba**	**2.86**	**182**	P	P	**Pn**	**04 37 02.1**	**+2.8**
TULM	**Tulcn-Chalpat**	**2.97**	**25**	P	P	**Pb**	**04 37 08.3**	**+1.2**
CCUFI	**Cufio, Nario**	**3.62**	**28**	*eP*	P	**Pg**	**04 37 20.5**	**-3.3**
TUMC	**Tumaco**	**3.80**	**5**	Pn	P	**Pn**	**04 37 13.8**	**+1.7**
TUMC						**Sn**	**04 37 54.9**	**-1.4**
CRUC	**La Cruz**	**4.11**	**31**	*eP*	P	**Pg**	**04 37 29.8**	**-3.4**
BBAC	**Balboa, Cauca**	**4.38**	**25**	*eP*	P	Pb	04 37 25.2	-5.7
PTLC	**Puerto Leguiza**	**4.77**	**63**	*eP*	P	**Pn**	**04 37 25.9**	**+0.3**
FLOC	**Florencia**	**4.92**	**44**	*eP*	P	**Pn**	**04 37 26.8**	**+2.3**
FLOC	**Florencia**	**4.92**	**44**		P	**Pn**	**04 37 28.8**	**+1.3**
GR1C	**Gorgona, Isla**	**5.04**	**10**	*eP*	P	Pn	04 37 33.8	+4.7
ATAH	**Atahualpa**	**5.16**	**173**	Pn	P	**Pn**	**04 37 34.1**	**+3.0**
	1.9nm,0.3s,baz=25,slow=7.7,SNR=13							
ATAH				Sn		**Sn**	**04 38 34.8**	**+4.2**
	5.2nm,0.3s,baz=143,slow=22,SNR=5.5							
ATAH				Lg		Lg	04 38 56.6	
	2.9nm,0.3s,baz=14,slow=18,SNR=3.8							
RAC02	**Cali,SGC**	**5.89**	**25**	*eP*		Sn	04 38 36.3	-12
MALC	**Bahia Malaga**	**6.20**	**16**	*eP*		Pn	04 37 37.1	-8.0
YOTC	**Yotoco, Valle**	**6.52**	**25**	*eP*		**Pn**	**04 37 53.1**	**+3.4**
MACC	**Macarena, Meta**	**6.64**	**52**	*eP*		Pn	**04 37 54.4**	**+3.3**
ORTC	**Ortega, Tolima**	**6.99**	**33**	*eP*		Pn	04 38 03.7	+7.7
GUVC	**San Jose del G**	**7.85**	**55**	*eP*		Pb	04 38 21.0	-9.1
GUY2C	**Guyana, Caldas**	**8.06**	**27**	*eP*		**Pn**	**04 38 15.0**	**+3.9**
ROSC	**El Rosal**	**8.27**	**35**	*eP*		**Pb**	**04 38 36.9**	**-0.5**
CHIC	**Chingaza**	**8.46**	**39**	*eP*		Pn	04 38 25.6	+9.1
PTBC	**PUERTO BERRIO,**	**9.64**	**28**	*eP*		Pn	04 38 38.3	+5.9
RUSC	**La Rusia**	**9.84**	**37**	*eP*		**Pn**	**04 38 39.6**	**+4.0**
RUSC	**La Rusia**	**9.84**	**37**	Pn		Pn	04 38 40.6	+5.0
NNA	**Nana**	**10.18**	**168**	Pn		**Pn**	**04 38 42.5**	**+2.7**
	4.0nm,0.3s,baz=322,slow=12,SNR=9.4							
NNA				Sn		**Sn**	**04 40 30.9**	**-2.8**
	1.0nm,0.3s,baz=300,slow=7.2,SNR=2.9							
NNA	**Nana**	**10.18**	**168**			**Pn**	**04 38 42.4**	**+2.6**
SDV	**Santo Domingo**	**13.68**	**38**	Pn		Pn	**04 39 26.6**	**-1.3**
SAML	**Samuel**	**17.25**	**114**	P		Pn	**04 40 13.3**	**-1.3**
SAML				S		**Sn**	**04 43 22.1**	**-4.1**
LPAZ	**La Paz**	**17.83**	**143**	P		**P**	**04 40 24.1**	**+1.1**
	0.1nm,0.3s,baz=346,slow=9.4,SNR=6.1							
LPAZ	**La Paz**	**17.83**	**143**	P		**Pn**	**04 40 20.6**	**-1.8**
MNMC	**Minye Minye**	**19.40**	**152**	P		**P**	**04 40 40.4**	**+0.4**
PB11	**IPOC Station P**	**19.92**	**153**	P		**P**	**04 40 44.6**	**-0.9**
PB11					IAmb	IAmb	04 41 01.6	
	comp=Z,20nm,1.1s							
GO01	**Chusmiza**	**20.05**	**152**	P		Pn	04 40 48.1	-1.0
GO01					IAmb	IAmb	04 40 59.1	
	comp=Z,19nm,1.4s							
BANI	**BANI**	**21.99**	**23**	P		**P**	**04 41 08.2**	**+0.4**
SIV	**San Ignacio**	**22.54**	**129**	P		**P**	**04 41 12.7**	**-0.9**
	comp=Z,3.2nm,1.0s,baz=312,slow=14,SNR=8.3							
SJG	**San Juan**	**23.68**	**32**	P		**P**	**04 41 25.6**	**+0.4**
	comp=Z,5.1nm,0.7s,baz=286,slow=3.6,SNR=4.3							
SJG	**San Juan**	**23.68**	**32**	P		**P**	**04 41 24.5**	**-0.7**
TEIG	**Tepich**	**23.85**	**338**	P		**P**	**04 41 29.0**	**+2.2**
	comp=Z,5.7nm,0.9s,baz=139,slow=3.9,SNR=4.6							
CBYP	**Canovanas**	**23.96**	**32**	P		**P**	**04 41 28.8**	**+0.7**
BDFB	**Brasilia**	**33.48**	**116**	P		**P**	**04 42 53.2**	**+0.1**
	comp=Z,5.9nm,1.2s,baz=282,slow=9.3,SNR=4.6							
TXAR	**Lajitas Array**	**39.04**	**325**	P		**P**	**04 43 42.8**	**+2.3**
	comp=Z,0.1nm,0.4s,baz=144,slow=10,SNR=3.5							
TXAR				PcP		**PcP**	**04 45 50.9**	**+0.3**
	comp=Z,0.1nm,0.5s,baz=162,slow=2.5,SNR=3.6							
PLCA	**Paso Flores**	**39.33**	**170**	P		**P**	**04 43 43.6**	**+0.8**
	comp=Z,2.1nm,0.9s,baz=4.1,slow=9.3,SNR=7.3							
PLCA	**Paso Flores**	**39.33**	**170**	IAmb		IAmb	04 43 43.8	
	comp=Z,8.2nm,1.4s							
ANMO	**Albuquerque**	**44.82**	**328**	P		**P**	**04 44 29.9**	**+2.1**
ANMO				IAmb		IAmb	04 44 36.6	
	comp=Z,3.1nm,0.9s							
SDCO	**Great Sand Dun**	**46.49**	**331**	IAmb		IAmb	04 44 53.2	
	comp=Z,2.9nm,1.1s							
X16A	**Lo Mia Camp, P**	**47.28**	**323**	IAmb		IAmb	04 45 01.1	
	comp=Z,2.0nm,0.8s							
PDAR	**Pinedale Array**	**52.35**	**332**	P		**P**	**04 45 26.8**	**+1.2**
	comp=Z,0.2nm,0.5s,baz=122,slow=7.2,SNR=3.2							
ULM	**Lac du Bonnet**	**54.00**	**347**	P		**P**	**04 45 36.3**	**-1.1**
	comp=Z,1.6nm,0.5s,baz=153,slow=8.2,SNR=7.9							
ULM	**Lac du Bonnet**	**54.00**	**347**	IAmb		IAmb	04 45 40.5	
	comp=Z,2.0nm,0.9s							
NVAR	**Mina Array Bea**	**54.08**	**322**	P		**P**	**04 45 40.1**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=101,slow=7.7,SNR=4.4							
YKA	**Yellowknife Ar**	**69.69**	**343**	P		**P**	**04 47 22.0**	**-0.8**
	comp=Z,0.3nm,0.6s,baz=140,slow=5.3,SNR=5.3							
TORD	**Torodi Ar. Bea**	**81.46**	**76**	P		**P**	**04 48 29.7**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=280,slow=6.3,SNR=4.6							
ILAR	**Eielson Array**	**82.50**	**336**	P		**P**	**04 48 35.4**	**-0.4**
	comp=Z,0.2nm,0.6s,baz=104,slow=5.4,SNR=4.2							
SNAA	**Sanae**	**83.81**	**162**	P		**P**	**04 48 41.8**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=297,slow=14,SNR=6.6							
SNAA	**Sanae**	**83.81**	**162**	IAmb		IAmb	04 48 43.2	
	comp=Z,3.0nm,1.3s							

*MOS **20** 04:45:11.5±1.1, 4°.64S×103°.13E, h51^{km}, mb5.2/30, Error ellipse: s-maj=11.1km s-min=5.4km az=111.3*

*BJI **20** 04:45:12.0±0.0, 4°.90S×102°.90E, h68^{km}, mB5.2/30, mb4.9/50,Ms5.1/19,Ms7 4.9/19*

*NEIC **20** 04:45:13.6±1.9, 4°.92S±0°.05×102°.85E±0°.06, h65^{km}±4^{km}, mb4.9/77, Error ellipse: s-maj=9.0km s-min=6.7km az=70.0*

*IDC **20** 04:45:13.6±1.7, 4°.74S×103°.07E, h56^{km}±14^{km}, mb4.5/24, mb1 4.6/25,mb1mx4.4/35,mbtmp4.7/25,MS4.0/9, Ms1 4.1/9,ms1mx3.8/39,Error ellipse: s-maj=18.0km s-min=10.9km az=54.0*

*DJA **20** 04:45:14.6±0.2, 5°.5S±2°×10°.3E±°, h54^{km}±2^{km}, M5.0/42, mb5.1/42, mB5.4/15, MLv5.3/20, Mw(mB)4.9/15*

*KLM **20** 04:45:15.0, 4°.93S×102°.76E, h31^{km}, mb4.8*

*GCMT **20** 04:45:16.6±0.4, 5°.22S±0°.03×102°.94E±0°.03, h54^{km}±2^{km}, MW5.2/55, Moment Tensor Solution. s37,c45; s55,c67; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.13±.47; M$_{\theta\theta}$-5.04±.30; M$_{\phi\phi}$-1.10±.34; M$_{r\theta}$2.81±.27; M$_{r\phi}$2.24±.26; M$_{\theta\phi}$-2.04±.26; Best double couple: M$_0$7.01100×10^{16} NP1:ϕ$_0$289.00000°, δ31.00000°, λ.80.00000°. NP2: ϕ$_0$120.00000°, δ60.00000°, λ.96.00000°. Principal axes: T 7.0790, Plg75.0000°, Azm45.0000°; N -0.1470, Plg5.0000°, Azm297.0000°; P -6.9430, Plg15.0000°, Azm206.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 04:45:13.3±0.7, 4°.96S±0°.04×102°.88E±0°.04, h62^{km}±5^{km}, n484, σ1§18/483, mb4.9/94, 16C-17D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.60**	**7**	P	P	**Pn**	**04 45 26.5**	**0.0**
MNAI				S	S	**Sn**	**04 45 36.2**	**0.0**
MNAI	**Manna**	**0.60**	**7**		P	**Pn**	**04 45 26.7**	**+0.1**
MNAI				Sn		**Sn**	**04 45 35.3**	**-0.9**
LWLI	**Liwa**	**1.17**	**93**	P	P	**Pn**	**04 45 33.1**	**-0.7**
LWLI				S	S	**Sn**	**04 45 46.8**	**-2.3**
KSI	**Kapahiang**	**1.33**	**347**	P	P	**Pn**	**04 45 36.1**	**+0.3**
KSI				S	S	**Sn**	**04 45 53.9**	**+1.2**
MDSI	**Maura Dua**	**1.38**	**70**	P	P	**Pn**	**04 45 35.9**	**-0.4**
MDSI				S	S	**Sn**	**04 45 52.5**	**-1.2**
KASI	**Kota Agung**	**1.70**	**109**	P	P	**Pn**	**04 45 40.3**	**-0.5**
KASI				S	S	**Sn**	**04 45 59.1**	**-2.5**
KLSI		**1.86**	**82**	P	P	**Pn**	**04 45 42.8**	**-0.1**
KLSI				S	S	**Sn**	**04 46 06.1**	**+0.7**
PMBI	**Palembang**	**2.76**	**43**	P	P	**Pn**	**04 45 56.9**	**+1.7**
PMBI	**Palembang**	**2.76**	**43**		P	**Pn**	**04 45 55.4**	**+0.3**
KRJI	**Kerinci**	**3.18**	**334**	P	P	**Pn**	**04 46 03.6**	**+2.6**
PPSI	**Pulau Pagai**	**3.60**	**307**	P	P	**Pn**	**04 46 08.9**	**+2.2**
DBJI	**Dramaga**	**4.16**	**113**	P	P	**Pn**	**04 46 16.3**	**+2.0**
SKJI	**Sukabumi**	**4.18**	**119**	P	P	**Pn**	**04 46 15.5**	**+0.9**
SDSI	**Sungai Dareh**	**4.25**	**340**	P	P	**Pn**	**04 46 18.7**	**+3.1**
PDSI	**Padang**	**4.69**	**329**	P	P	**Pn**	**04 46 23.2**	**+1.6**
DSRI	**Dabo**	**4.76**	**21**	P	P	**Pn**	**04 46 24.1**	**+1.5**
CNJI	**Cibinong**	**4.83**	**119**	P	P	**Pn**	**04 46 23.1**	**-0.3**
LEM	**Lembang**	**5.06**	**112**	P	P	**Pn**	**04 46 29.3**	**+2.5**
	15nm,0.3s,baz=197,slow=13,SNR=15							
LEM				S		**Sn**	**04 47 22.0**	**-2.1**
	21nm,0.3s,baz=249,slow=19,SNR=2.5							
LEM				LR	LR		04 48 46.8	
	comp=Z,2μm,18.9s,baz=288,slow=43							
LEM	**Lembang**	**5.06**	**112**	P		**Pn**	**04 46 29.5**	**+2.7**
	1.5nm3μm252nm,0.8s							
SISI	**Saibi**	**5.23**	**314**	P	P	**Pn**	**04 46 30.6**	**+1.6**
	1.8nm3μm223nm,0.7s							
CISI	**Cisompet, Garu**	**5.54**	**118**	P	P	**Pn**	**04 46 33.1**	**-0.2**
	5.1nm13μm343nm,0.6s							
CISI	**Cisompet, Garu**	**5.54**	**118**			**Pn**	**04 46 33.3**	**0.0**
CISI						**Sn**	**04 47 31.9**	**-3.8**
BKNI	**Bangkinang**	**5.56**	**341**	P	P	**Pn**	**04 46 36.5**	**+3.0**
	2.0nm4μm294nm,0.6s							
BKNI	**Bangkinang**	**5.56**	**341**			**Pn**	**04 46 32.6**	**-1.0**
CMJI	**Cimerak**	**6.20**	**117**	P		**Pn**	**04 46 42.4**	**+0.1**
	1.8nm6μm184nm,0.7s							
KPJI	**Karang Pucung**	**6.46**	**112**	P	P	**Pn**	**04 46 48.6**	**+2.8**
	0.8nm3μm113nm,0.7s							
PBSI	**Pulau Batu**	**6.70**	**317**	P	P	**Pn**	**04 46 50.5**	**+1.4**
	1.5nm3μm178nm,0.6s							
MYKOM	**Kota Tinggi**	**6.77**	**8**			**Pn**	**04 46 50.0**	**-0.1**
MYKOM	**Kota Tinggi**	**6.77**	**8**	P	P	**Pn**	**04 46 52.0**	**+1.9**
SMRI	**Semarang**	**7.80**	**106**	Pn	P	**Pn**	**04 47 04.6**	**+0.4**
YOGI	**Yogyakarta**	**7.89**	**111**	P	P	**Pn**	**04 47 07.4**	**+1.9**
	1.0nm185nm,1.5s							
UGM	**Wanagama**	**8.14**	**112**	P	P	**Pn**	**04 47 10.9**	**+2.0**
	320nm,1.1s							
UGM	**Wanagama**	**8.14**	**112**			**Pn**	**04 47 10.2**	**+1.3**
GSI	**Gunungsitoli**	**8.17**	**319**	P	P	**Pn**	**04 47 09.5**	**+0.1**
	2μm150nm,0.5s							
GSI	**Gunungsitoli**	**8.17**	**319**			**Pn**	**04 47 09.4**	**+0.1**
GSI						**Sn**	**04 48 37.0**	**-3.2**
RPSI	**Rantau Prapat**	**8.57**	**332**	Pn	P	**Pn**	**04 47 13.8**	**-0.9**
RPSI	**Rantau Prapat**	**8.57**	**332**		P	**Pn**	**04 47 15.2**	**+0.5**
PSI	**Prapat**	**8.66**	**333**	P	P	**Pn**	**04 47 15.2**	**-0.9**
	2.0nm,0.3s,baz=157,slow=14,SNR=3.4							
JRMM	**Jerantut**	**8.80**	**357**	P	P	**Pn**	**04 47 20.0**	**+2.2**
COCO	**West Island**	**9.35**	**219**	P	P	**Pn**	**04 47 25.3**	**0.0**
COCO	**West Island**	**9.35**	**219**			**Pn**	**04 47 25.3**	**0.0**
COCO						**Sn**	**04 49 04.1**	**-4.8**
IPM	**Ipoh**	**9.56**	**349**			Pn	04 47 34.0	+5.7
IPM	**Ipoh**	**9.56**	**349**	P		**Pn**	**04 47 31.0**	**+2.7**
KSM	**Kuching**	**9.79**	**49**	Pn		**Pn**	**04 47 31.3**	**-0.1**
KULM	**Kulim**	**10.42**	**348**			**Pn**	**04 47 41.1**	**+1.0**
KULM	**Kulim**	**10.42**	**348**	P		**Pn**	**04 47 41.0**	**+1.5**
MLSI	**Meulaboh, Aceh**	**11.22**	**325**	P		**Pn**	**04 47 50.9**	**0.0**
JAGI	**Jajag, Banyuwa**	**11.72**	**108**	P		**Pn**	**04 47 58.3**	**+0.5**
	3μm128nm,1.0s							
JAGI	**Jajag, Banyuwa**	**11.72**	**108**			**Pn**	**04 47 57.7**	**-0.1**
SBUM	**Sibu**	**11.88**	**52**			**Pn**	**04 48 01.0**	**+1.0**
SBUM	**Sibu**	**11.88**	**52**	P		**Pn**	**04 48 02.0**	**+2.0**
SRBI	**Singaraja**	**12.64**	**105**	P		**Pn**	**04 48 11.1**	**+0.8**
	78nm,0.6s							
IGBI	**Denpasar**	**12.76**	**108**	P		**Pn**	**04 48 12.3**	**+0.3**
	127nm,1.0s							
KBKI	**Kotabaru**	**13.35**	**83**	P		**P**	**04 48 31.1**	**+3.6**
PLAI	**Plampang**	**15.28**	**105**	P		**Pn**	**04 48 46.6**	**+1.3**
	145nm,0.8s							
SPMM	**Sapulut**	**16.62**	**55**	P		**P**	**04 49 08.0**	**+4.1**
SPSI	**Sidrap Palu**	**16.86**	**87**	P		**P**	**04 49 07.4**	**+0.8**
	56nm,0.9s							
TTSI	**Tana Toraja**	**17.00**	**84**	P		**P**	**04 49 10.3**	**+2.2**
	2μm57nm,0.9s							
BKSI	**Bulukumba**	**17.18**	**92**	P		**P**	**04 49 10.0**	**0.0**
	892nm53nm,0.8s							
BNSI	**Bone**	**17.18**	**89**	P		**P**	**04 49 12.2**	**+2.2**
KKM	**Kota Kinabalu**	**17.23**	**51**	P		**Pn**	**04 49 09.4**	**-0.5**
MPSI	**Mapaga**	**17.79**	**73**	P		**P**	**04 49 19.3**	**+2.5**
APSI	**Ampana**	**19.16**	**78**	P		**Pn**	**04 49 33.0**	**-0.4**
	908nm84nm,0.8s							
PBA	**Port Blair**	**19.34**	**329**	P		P	04 49 32.1	-1.7
MMRI	**Maumere**	**19.56**	**102**	P		**Pn**	**04 49 37.3**	**-0.8**
MMRI					IAmb	IAmb	04 49 44.6	
	comp=Z,77nm,0.7s							
KDI	**Kendari**	**19.70**	**88**	P		**Pn**	**04 49 38.6**	**-1.1**
	comp=Z,2μmcomp=Z,99nm,1.2s							
MRSI	**Marisa**	**19.79**	**75**	P		**Pn**	**04 49 40.0**	**-0.7**
LUWI	**Luwuk**	**20.24**	**80**	P		Pn	04 49 53.4	+7.4
LUWI	**Luwuk**	**20.24**	**80**	P		**P**	**04 49 44.1**	**+0.6**
LUWI					IAmb	IAmb	04 49 54.1	
	comp=Z,84nm,0.9s							
UBPT	**Khong Chiam**	**20.27**	**7**	P		**P**	**04 49 42.3**	**-1.6**
GIRL	**Giralia**	**20.73**	**149**	P		Pn	04 49 51.3	-0.4
GIRL					IAmb	IAmb	04 50 06.2	
	comp=Z,102nm,1.1s							
PBKT	**Sadao Pong**	**21.48**	**355**	P		**P**	**04 49 56.6**	**-0.2**
SOEI	**Soe**	**21.73**	**104**	P		**P**	**04 50 02.9**	**+3.1**
	comp=Z,152nm,0.8s							
SOEI	**Soe**	**21.73**	**104**	P		**P**	**04 49 59.5**	**-0.2**
SANI	**Sanana**	**23.24**	**84**	P		**P**	**04 50 15.0**	**-0.5**
	comp=Z,36nm,0.9s							
PSA00	**Pilbara Seismi**	**23.31**	**137**	P		**P**	**04 50 16.6**	**+0.6**
PSA00					IAmb	IAmb	04 50 17.9	
	comp=Z,33nm,1.1s							
CMAR	**Chiang Mai Arr**	**23.59**	**351**	*ce*P		**P**	**04 50 18.0**	**-0.7**
CMAR					pmax	pmax		
	comp=Z,14nm,0.4s							
CMAR	**Chiang Mai Arr**	**23.59**	**351**	P		**P**	**04 50 17.9**	**-0.7**
	comp=Z,13nm,0.6s,baz=182,slow=8.9,SNR=43							
CMAR					LR	LR	05 00 46.9	
	comp=Z,456nm,18.2s,baz=227,slow=40							
CHTO	**Chiang Mai**	**23.94**	**351**	P		**P**	**04 50 20.9**	**-0.9**
CHTO					pmax	pmax		
	comp=Z,13nm,0.8s							
CHTO	**Chiang Mai**	**23.94**	**351**	P		**P**	**04 50 20.9**	**-0.9**
LBMI	**Labuha**	**24.96**	**81**	P		**P**	**04 50 33.4**	**+2.2**
	comp=Z,418nm,0.9s							
DAV	**Davao City (W)**	**25.61**	**62**	LR		LR	05 01 35.4	
	comp=Z,417nm,19.1s,baz=213,slow=39							
FITZ	**Fitzroy Crossi**	**25.79**	**122**	P		**P**	**04 50 38.9**	**+0.2**
	baz=26,SNR=13							
FITZ	**Fitzroy Crossi**	**25.79**	**122**	P		**P**	**04 50 38.8**	**+0.1**
	comp=Z,29nm,0.8s,baz=320,slow=7.2,SNR=45							
FITZ					LR	LR	05 03 07.4	
	comp=Z,237nm,18.1s,baz=307,slow=42							
FITZ	**Fitzroy Crossi**	**25.79**	**122**		IAmb	IAmb	04 50 42.8	
	comp=Z,33nm,0.8s							
SLVN	**Son La**	**26.15**	**2**		IAmb	IAmb	04 50 38.3	
	comp=Z,14nm,0.6s							
MORW	**Morawa**	**27.03**	**154**	P		**P**	**04 50 50.8**	**+1.1**
KNRA	**Kununurra**	**27.56**	**115**	P		**P**	**04 50 53.8**	**-0.8**
	baz=28,SNR=17							
KNRA	**Kununurra**	**27.56**	**115**	IAmb		IAmb	04 50 55.5	
	comp=Z,30nm,0.8s							
SIJI	**Sorong**	**28.63**	**83**	LR		LR	05 03 00.2	
	comp=Z,398nm,18.3s,baz=338,slow=38							
MTN	**Manton Dam**	**28.96**	**108**	P		**P**	**04 51 07.0**	**-0.1**
MTN					IAmb	IAmb	04 51 17.2	
	comp=Z,12nm,0.7s							
KMI	**

HTT **Hallett** 43.88 135 P P 04 53 16.0 +2.1
baz=44,SNR=5.5
PMG **Port Moresby** 44.13 98 P P 04 53 14.6 -1.4
PMG pmax pmax
comp=Z,17nm,0.8s
PMG **Port Moresby** 44.13 98 P P 04 53 14.6 -1.4
PMG IAmb IAmb 04 53 28.6
comp=Z,17nm,0.8s
GTA **Gaotai** 44.24 357 ⇑P P 04 53 16.3 -0.4
GTA pP pP 04 53 32.4 0.0
GTA sP sP 04 53 42.3 +2.7
GTA PcP **PP** 04 55 01.1 +0.2
GTA pmax pmax
comp=Z,8.0nm,0.8s
GTA pmax pmax
comp=Z,250nm,7.0s
GTA LR LR
comp=Z,1μm,19.7s
GTA LR LR
comp=Z,800nm,19.4s
GTA LR LR
comp=Z,1μm,19.7s
QLP **Quilpie** 44.93 123 P P 04 53 23.7 +1.4
baz=45,SNR=5.1
STKA **Stephens Creek** 45.05 131 P P 04 53 24.5 +1.3
baz=45,SNR=48
STKA **Stephens Creek** 45.05 131 P P 04 53 24.4 +1.3
comp=Z,23nm,0.6s,baz=303,slow=8.1,SNR=51
JNU **Nakatsue** 46.25 33 P P 04 53 31.5 -1.1
comp=Z,16nm,0.9s,baz=225,slow=2.1,SNR=5.6
JNU **Nakatsue** 46.25 33 P P 04 53 31.6 -1.0
JNU IAmb IAmb 04 53 36.3
comp=Z,19nm,1.1s
HHC **Hu-ho-hao-te** 46.28 9 eP P 04 53 35.3 +2.6
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,110nm,7.2s
BJI **Beijing** 46.42 14 eP P 04 53 33.4 -0.3
BJI pmax pmax
comp=Z,9.0nm,0.7s
BJI LR LR
comp=Z,590nm,18.6s
BJI LR LR
comp=Z,740nm,19.6s
BJI LR LR
comp=Z,860nm,23.5s
TJN **Taejon** 47.08 27 eP P 04 53 36.4 -2.5
NIL **Nilore** 47.54 326 P P 04 53 42.9 +0.2
NIL pmax pmax
comp=Z,28nm,0.6s
NIL **Nilore** 47.54 326 P P 04 53 42.9 +0.2
CMSA **Cobar Meteorol** 48.03 129 P P 04 53 48.1 +1.6
baz=48,SNR=19
KSRS **Korea Array** 48.22 27 P P 04 53 47.2 -0.5
comp=Z,5.5nm,0.6s,baz=228,slow=7.3,SNR=22
KS19 **Wonju Array Si** 48.23 27 P P 04 53 47.2 -0.7
EIDS **Eidsvold** 50.41 119 P P 04 54 06.1 +1.4
baz=50,SNR=3.2
EIDS **Eidsvold** 50.41 119 P P 04 54 04.6 -0.2
WMQ **Urumqi** 50.45 346 eP P 04 54 05.3 +0.5
WMQ pP pP 04 54 20.6 -0.3
WMQ sP sP 04 54 29.4 +1.4
WMQ pmax pmax
comp=Z,16nm,0.7s
WMQ pmax pmax
comp=Z,740nm,11.7s
WMQ LR LR
comp=Z,880nm,15.9s
WMQ LR LR
comp=Z,1μm,19.5s
WMQ LR LR
comp=Z,1μm,19.5s
TOO **Toolangi** 50.60 136 P P 04 54 07.0 +0.9
TOO pmax pmax
comp=Z,7.0nm,0.9s
TOO **Toolangi** 50.60 136 P P 04 54 07.0 +0.9
TOO IAmb IAmb 04 54 22.1
comp=Z,7.1nm,0.9s
KBL **Kabul** 50.60 323 P P 04 54 05.9 -0.4
KBL pmax pmax
comp=Z,6.0nm,0.6s
KBL **Kabul** 50.60 323 P P 04 54 05.9 -0.4
KBL IAmb IAmb 04 54 14.3
comp=Z,5.7nm,0.6s
KSH **Kashi** 50.74 333 P P 04 54 06.1 -1.0
KSH pP sP 04 54 27.9 -2.1
KSH S **S** 05 01 13.8 -4.4
KSH sS sS 05 01 44.3 -0.6
KSH pmax pmax
comp=Z,29nm,0.5s
KSH pmax pmax
comp=Z,540nm,7.3s
KSH LR LR
comp=Z,370nm,5.1s
KSH LR LR
comp=Z,380nm,6.6s
KSH LR LR
comp=Z,1μm,17.9s
YNG **Young** 51.23 131 P P 04 54 12.7 +1.9
baz=51,SNR=9.2
ARMA **Armidale** 52.36 125 P P 04 54 21.6 +2.2
baz=52,SNR=4.7
ARMA **Armidale** 52.36 125 P P 04 54 21.1 +1.7
ARMA IAmb IAmb 04 54 23.0
comp=Z,14nm,1.1s
PDGK **Podgornoye** 52.52 339 P P 04 54 20.3 0.0
CN2 **Changchun** 52.63 20 eP P 04 54 19.4 -1.6
CN2 pmax pmax
comp=Z,10.0nm,0.6s
SONM **Songino Array** 52.66 3 P P 04 54 21.4 +0.2
comp=Z,9.8nm,0.5s,baz=183,slow=8.8,SNR=89
SONM PcP **PcP** 04 55 30.6 +0.1
comp=Z,3.8nm,0.4s,baz=190,slow=3.7,SNR=11
ULN **Ulaanbaatar** 52.73 4⇑eP P 04 54 21.5 -0.3
ULN pmax pmax
comp=Z,8.0nm,1.1s
ULN **Ulaanbaatar** 52.73 4 P P 04 54 21.8 0.0
ULN IAmb IAmb 04 54 24.0
comp=Z,8.3nm,1.1s
ULN PcP **PcP** 04 55 29.5 -1.2
MAT **Matsushiro** 52.86 36 P P 04 54 20.4 -2.5
MJAR **Matsushiro Arr** 52.86 36 P P 04 54 20.7 -2.1
comp=Z,5.3nm,0.8s,baz=221,slow=6.8,SNR=11
KZA **Kyzart** 53.15 334 P P 04 54 25.9 +0.6
SNR=7.2
UCH **Uchtor** 53.59 334 P P 04 54 29.0 +0.4
SNR=10
BTK **Batken** 53.63 330 IAmb IAmb 04 54 30.4
comp=Z,14nm,1.1s
TKM2 **Tokmak 2** 53.69 335 P P 04 54 28.9 -0.2
TKM2 **Tokmak 2** 53.69 335 P P 04 54 29.2 +0.2
SNR=96
KBK **Karagaybulak** 53.75 335 P P 04 54 30.1 +0.6
SNR=29
AML **Almayashu** 53.87 333 P P 04 54 31.3 +0.7
SNR=6.5
AAK **Ala-Archa** 53.93 334 P P 04 54 30.7 0.0
AAK **Ala-Archa** 53.93 334 P P 04 54 31.2 +0.5
SNR=7.6
AAK **Ala-Archa** 53.93 334 P P 04 54 31.1 +0.5
AAK IAmb IAmb 04 54 32.9
comp=Z,5.2nm,0.5s
AAK PcP **PcP** 04 55 37.2 +1.7
EKS2 **Erkin-Say** 54.26 334 P P 04 54 33.7 +0.6
SNR=26
USP **Ospenovka** 54.43 335 P P 04 54 34.2 0.0
SNR=16
MK31 **Makanchi Array** 54.66 343 i P P 04 54 34.9 -0.9
MK31 **Makanchi Array** 54.66 343 IAmb IAmb 04 54 36.3
comp=Z,7.0nm,0.6s
MKAR **Makanchi Array** 54.66 343 P P 04 54 35.3 -0.5
comp=Z,11nm,0.6s,baz=144,slow=7.7,SNR=182
MAKZ **Makanchi** 54.77 343 P P 04 54 35.5 -1.1
MAKZ **Makanchi** 54.77 343 P P 04 54 35.9 -0.6
ZAK **Zakamensk** 55.12 0 eP P 04 54 37.6 -1.6
ZAK pmax pmax
comp=Z,3.0nm,1.1s
USA0B **Ussuriysk Arra** 55.50 25 eP P 04 54 40.8 -1.0
USA0B **Ussuriysk Arra** 55.50 25 P P 04 54 41.2 -0.7
USA0B IAmb IAmb 04 54 42.5
comp=Z,16nm,0.8s
USRK **Ussuriysk Ar.** 55.50 25 P P 04 54 41.0 -0.9
USRK **Ussuriysk Ar.** 55.50 25 P P 04 54 41.0 -0.9
comp=Z,8.4nm,0.5s,baz=211,slow=3.6,SNR=28
KK31 **Karatay Array** 56.09 332 P P 04 54 44.3 -1.9
KK31 pmax pmax
comp=Z,3.0nm,0.6s
KK31 **Karatay Array** 56.09 332 P P 04 54 44.3 -1.9
KKAR pmax pmax
comp=Z,3.0nm,0.6s
KKAR **Karatay Array** 56.09 332 P P 04 54 44.3 -1.9
TLY **Talaya** 56.42 1 eP P 04 54 48.9 +0.5
TLY pmax pmax
comp=Z,23nm,0.8s
MOY **Mondy** 56.43 359 eP P 04 54 48.7 +0.2
HNR **Honiara** 56.74 98 LR LR 05 20 56.3
comp=Z,153nm,19.2s,baz=288,slow=38
KURK **Kurchatov** 59.26 342⇑eP P 04 55 07.2 -1.0
KURK pmax pmax
comp=Z,10.0nm,0.7s
KURK **Kurchatov** 59.26 342 P P 04 55 07.8 -0.4
KURK IAmb IAmb 04 55 27.2
comp=Z,12nm,0.8s
ERM **Erimo** 59.39 34 eP P 04 55 08.2 -1.1
KLR **Kul'dur** 59.53 22⇑eP P 04 55 08.9 -1.2
KLR pmax pmax
comp=Z,28nm,1.6s
GEYT **Alibeck** 59.55 320 P P 04 55 11.2 +0.7
comp=Z,5.8nm,0.5s,baz=146,slow=3.1,SNR=11
GYA0B **ALIBECK ARRAY** 59.55 320 P P 04 55 08.3 -2.3
GYA0B IAmb IAmb 04 55 11.7
comp=Z,8.9nm,0.6s
ZALV **Zalesovo Beam** 60.62 348 P P 04 55 16.8 -0.7
comp=Z,14nm,0.4s,baz=170,slow=5.8,SNR=40
ZEA **Zeya** 61.96 16 eP P 04 55 25.9 -0.6
ZEA pmax pmax
comp=Z,32nm,1.2s
YSS **Yuzh-Sakhalins** 62.53 30⇑eP P 04 55 29.0 -1.5
YSS e 04 55 48.1
YSS pmax pmax
comp=Z,20nm,0.5s
YSS MLR MLR
comp=Z,1μm,16.0s
YSS **Yuzh-Sakhalins** 62.53 30 P P 04 55 30.2 -0.3
GRNR **Gornyy** 62.55 23 eP P 04 55 29.9 -0.7
GRNR MLR MLR
comp=Z,780nm,17.0s
RAYN **Ar Rayn** 62.68 300 P P 04 55 32.4 +0.3
RAYN pmax pmax
comp=Z,4.0nm,0.6s
RAYN **Ar Rayn** 62.68 300 P P 04 55 32.4 +0.3
RAYN IAmb IAmb 04 55 35.4
comp=Z,3.9nm,0.6s
BOD **Bodaibo** 63.22 7 eP P 04 55 33.9 -0.9
BRVK **Borovoye** 64.01 339 P P 04 55 39.5 -0.7
BRVK pmax pmax
comp=Z,14nm,0.5s
BRVK **Borovoye** 64.01 339 P P 04 55 39.5 -0.7
AB31 **Akbulak array** 65.61 331 eP P 04 55 50.0 -0.6
ABKAR **Akbulak array** 65.61 331 IAmb IAmb 04 56 09.5
comp=Z,8.8nm,0.8s
AKTO **Aktyubinsk** 67.32 331 P P 04 56 00.8 -0.8
AKT **Akhty** 68.22 318 eP P 04 56 08.8 +1.3
AKT e 04 56 36.0
AKT pmax pmax
comp=Z,9.0nm,0.5s
YAK **Yakutsk** 69.91 13 eP P 04 56 15.7 -1.7
YAK e 04 56 35.1
YAK e*PP **PcP** 04 56 39.8 +0.4
YAK eS **S** 05 05 21.5 -0.8
YAK e*SS **SKiKP** 05 06 02.4 +3.8
YAK e 05 06 14.5
YAK eSS **SS** 05 09 53.5 +0.9
YAK pmax pmax
comp=Z,27nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.3s
YAK pmax pmax
comp=Z,217nm,4.8s
YAK pmax pmax
comp=N,154nm,5.3s
YAK smax smax
comp=N,150nm,4.9s
YAK smax smax
comp=E,144nm,4.8s
YAK **Yakutsk** 69.91 13 P P 04 56 16.3 -1.1
SVE **Sverdlovsk** 70.50 337 eP P 04 56 21.4 +0.2
ARU **Arti** 71.06 336⇑eP P 04 56 24.3 -0.3
ARU pmax pmax
comp=Z,25nm,1.8s
ARU **Arti** 71.06 336 P P 04 56 24.4 -0.1
ARU IAmb IAmb 04 56 26.7
comp=Z,8.0nm,0.6s
ZEI **Tsey** 71.35 318 eP P 04 56 25.5 -1.4
ZEI pmax pmax
comp=Z,7.0nm,0.6s
KBZ **Khabaz** 72.41 319 P P 04 56 34.1 +1.2
comp=Z,3.7nm,0.5s,baz=124,slow=4.6,SNR=25
KIV **Kislovodsk** 72.65 319 eP P 04 56 33.2 -1.3
KIV pmax pmax
comp=Z,17nm,1.0s
HIZ **Hauiti** 72.83 129 P P 04 56 34.8 -0.8
PETK **Petropavlovsk-** 73.88 31 P P 04 56 40.3 -1.2
comp=Z,2.0nm,0.7s,baz=210,slow=3.2,SNR=5.2
BKZ **Black Stump Fm** 74.18 129 P P 04 56 43.9 +0.2
BKZ IAmb IAmb 04 56 45.9
comp=Z,21nm,1.0s
VRH **Novokhopyorsk** 76.37 325 eP P 04 56 55.8 0.0
VRH pmax pmax
comp=Z,20nm,0.6s
VRH pmax pmax
comp=N,10.0nm,0.7s
VRH pmax pmax
comp=E,20nm,1.2s
BOSA **Boshof** 76.78 242 P P 04 57 01.5 +2.6
BOSA pmax pmax
comp=Z,6.0nm,1.0s
BOSA **Boshof** 76.78 242 P P 04 57 01.5 +2.6
comp=Z,2.6nm,0.7s,baz=106,slow=5.8,SNR=6.6
SEY **Seymchan** 77.31 21⇑eP P 04 56 59.7 -1.1
SEY **Seymchan** 77.31 21 P P 04 57 00.1 -0.8
comp=Z,4.0nm,0.6s,baz=242,slow=5.5,SNR=8.1
BR131 **Keskin Array S** 77.43 312 eP P 04 57 02.3 +0.1
BRTR **Keskin Array B** 77.43 312 P P 04 57 02.5 +0.3
comp=Z,3.6nm,0.6s,baz=136,slow=7.1,SNR=48
BRTR LR LR 05 33 34.9
comp=Z,75nm,20.7s,baz=290,slow=38
VSR **Storozhevoye** 77.83 325 eP P 04 57 03.7 -0.3
VSR pmax pmax
comp=Z,10.0nm,0.4s
VSR pmax pmax
comp=N,9.0nm,0.8s
VSR pmax pmax
comp=E,3.0nm,0.5s
LPSR **Galich'ya Gora** 78.53 326 eP P 04 57 08.1 +0.3
LPSR pmax pmax
comp=Z,10.0nm,0.6s
LPSR pmax pmax
comp=N,2.0nm,1.1s
LPSR pmax pmax
comp=E,4.0nm,0.8s
VNDA **Vanda** 78.72 169 P P 04 57 10.6 +2.1
comp=E,1.9nm,0.9s,baz=301,slow=5.8,SNR=3.5
VNDA **Vanda** 78.72 169 P P 04 57 08.7 +0.2
PRGR **Permogore** 79.52 336 eP P 04 57 12.2 -0.8
PRGR e 04 57 17.9
PRGR pmax pmax
comp=Z,20nm,0.7s
MOS **Moscow** 80.50 329 eP P 04 57 18.1 -0.3
SUR **Sutherland** 80.67 238 P P 04 57 18.7 -1.5
SUR IAmb IAmb 04 57 27.4
comp=Z,8.0nm,0.9s
OBN **Obninsk** 80.81 328 eP P 04 57 19.6 -0.5
OBN pmax pmax
comp=Z,6.0nm,0.9s
OBN **Obninsk** 80.81 328 LR LR 05 38 52.0
comp=Z,50nm,18.9s,baz=10.0,slow=40
ALN **Alexandroupoli** 83.34 312 P P 04 57 33.5 -0.2
ALN pmax pmax
comp=Z,14nm,1.1s
ALN **Alexandroupoli** 83.34 312 P P 04 57 33.5 -0.2
ALN IAmb IAmb 04 57 37.7
comp=Z,14nm,1.1s
AKASG **Malin Array Be** 83.57 322 P P 04 57 34.9 +0.2
comp=Z,2.9nm,0.5s,baz=87,slow=4.7,SNR=25
AKBB **Malin Array Si** 83.57 322 IAmb IAmb 04 57 35.4
comp=Z,5.9nm,0.6s
VRI **Vrincioaia** 83.96 317 ⇑P P 04 57 38.5 +1.6
VRI **Vrincioaia** 83.96 317 ⇑P P 04 57 38.5 +1.6
TESR **Tescani** 84.17 318 ⇓P P 04 57 39.2 +1.4
MLR **Muntele Rosu** 84.41 316 ⇓P P 04 57 41.1 +1.8
MLR **Muntele Rosu** 84.41 316 ⇓P P 04 57 41.1 +1.8
MLR **Muntele Rosu** 84.41 316 IAmb IAmb 04 57 49.7
comp=Z,6.2nm,0.8s
VOIR 85.02 316 ⇓P P 04 57 43.1 +0.8
VOIR 85.02 316 ⇓P P 04 57 43.1 +0.8
BURAR **Bucovina Array** 85.37 318 ⇑P P 04 57 45.8 +1.8
BURAR **Bucovina Array** 85.37 318 ⇑P P 04 57 45.8 +1.8
VTS **Vitosha** 85.74 313 ⇓P P 04 57 47.5 +1.5
VTS **Vitosha** 85.74 313 ⇓P P 04 57 47.5 +1.5
AGG **Agios Georgios** 85.78 310 P P 04 57 45.9 -0.2
AGG pmax pmax
comp=Z,6.0nm,0.9s
AGG **Agios Georgios** 85.78 310 P P 04 57 45.9 -0.2
AGG IAmb IAmb 04 57 57.6
comp=Z,5.5nm,0.9s
ITM **Ithomi** 85.79 308 P P 04 57 47.0 +0.7
LVZ **Lovozero** 86.54 339 P P 04 57 49.1 -0.2
LVZ pmax pmax
comp=Z,21nm,1.1s
LVZ **Lovozero** 86.54 339 P P 04 57 49.0 -0.2
GZR **Gura Zlata** 86.58 316 ⇓P P 04 57 52.7 +2.7
GZR **Gura Zlata** 86.58 316 ⇓P P 04 57 52.7 +2.7
DRGR 86.88 317 ⇑P P 04 57 54.0 +2.6
DRGR 86.88 317 ⇑P P 04 57 54.0 +2.6
TRPA **Tarpa** 87.24 319 ⇓P P 04 57 54.2 +1.3
BZS **Buzias** 87.42 316 ⇓P P 04 57 55.6 +1.7
BZS **Buzias** 87.42 316 ⇓P P 04 57 55.6 +1.7
UZH **Uzhgorod** 87.49 319 eP P 04 57 55.4 +1.2
UZH i 04 58 09.4
UZH e 04 58 14.0
KOLS **Kolonicke sedl** 87.56 319 eP P 04 57 56.6 +2.1
KOLS pmax pmax
comp=Z,47nm,1.8s
KOLS **Kolonicke sedl** 87.56 319 eP P 04 57 56.6 +2.1
TIR **Tirane** 88.01 312 ⇓P P 04 58 00.8 +3.9
TIR **Tirane** 88.01 312 ⇓P P 04 58 00.8 +3.9
FIA1 **FINESS Array S** 88.05 332 P P 04 57 57.6 +1.0
FINES **FINESS Array B** 88.05 332 P P 04 57 57.4 +0.8
comp=Z,8.3nm,0.5s,baz=114,slow=5.9,SNR=69
PDG **Podgorica** 88.62 313 P P 04 58 00.0 +0.3
PDG IAmb IAmb 04 58 18.3
comp=Z,10nm,1.0s
VYHS **Vyhne** 89.73 319 eP P 04 58 06.7 +1.9
VYHS **Vyhne** 89.73 319 eP P 04 58 06.7 +1.9
ARCES **ARCESS Array B** 90.22 340 P P 04 58 06.9 +0.2
comp=Z,3.4nm,0.5s,baz=106,slow=5.2,SNR=53
ARE0 **ARCESS Array S** 90.22 340 P P 04 58 06.8 +0.2
MODS **Modra-Piesok** 90.75 318 eP P 04 58 10.9 +1.3
MODS **Modra-Piesok** 90.75 318 eP P 04 58 10.9 +1.3
GERES **GERESS Array B** 93.16 319 P P 04 58 21.8 +1.0
comp=Z,0.7nm,0.5s,baz=97,slow=3.1,SNR=8.8
NB2 **NORSAR Subarra** 95.11 331 P P 04 58 30.0 +0.6
comp=Z,0.5nm,0.6s,baz=90,slow=4.6
NOA **NORSAR Array B** 95.11 331 P P 04 58 29.4 0.0
comp=Z,0.6nm,0.6s,baz=94,slow=6.1,SNR=3.6
YKA **Yellowknife Ar** 116.30 18 PKP PKPdf 05 03 48.9 -0.5
comp=Z,0.3nm,0.6s,baz=341,slow=2.7,SNR=7.5
B05A **Bryant** 122.33 34 P PKiKP 05 04 02.2 +0.6
baz=304
H04D **Lebanon** 123.95 38 P PKiKP 05 04 06.0 +1.0
baz=301
I03D **Drain, OR** 123.99 39 P PKiKP 05 04 05.9 +0.9
baz=300
I04A **Tendick Farm,** 124.53 39 P PKiKP 05 04 06.4 +0.2
baz=301
J04D **Umpqua Nationa** 125.00 39 P PKiKP 05 04 08.3 +1.0
baz=301
YBH **Yreka Blue Hor** 125.36 41 PKP PKiKP 05 04 08.8 +0.8
comp=Z,0.9nm,0.6s,baz=297,slow=9.0,SNR=3.9
L04D **Klamath Falls** 125.39 40 P PKiKP 05 04 08.3 +0.2
baz=300
M02C **Callahan** 125.44 41 P PKiKP 05 04 09.1 +1.0
baz=299
J05D **Fort Rock, OR** 125.52 39 P PKiKP 05 04 09.3 +1.0
baz=302
O02D **Mt. Diablo Mer** 126.06 43 P PKiKP 05 04 10.8 +1.4
baz=298
O03E **Paynes Creek** 126.67 42 P PKiKP 05 04 10.7 +0.1
baz=299
MOD **Modoc Plateau** 126.83 40 PKiKP 05 04 12.1 +1.1
PNTR **Pine Nut** 128.74 42 PKiKP 05 04 16.3 +1.3
SCHQ **Schefferville** 129.58 352 PKP PKPdf 05 04 15.5 +0.4
comp=Z,1.6nm,0.5s,baz=26,slow=0.7,SNR=10
NVAR **Mina Array Bea** 129.94 42 P PKiKP 05 04 17.9 +0.5
comp=Z,1.0nm,0.6s,baz=321,slow=2.4,SNR=15
NVAR SKPbc SKPbc 05 07 34.4 +0.3
comp=Z,0.5nm,0.6s,baz=271,slow=5.5,SNR=4.6
ELK **Elko** 130.64 38 PKP PKiKP 05 04 19.3 +0.6
comp=Z,1.0nm,0.4s,baz=302,slow=5.5,SNR=9.5
REDW **Red Top Meadow** 131.53 33 PKiKP 05 04 21.5 +1.0
MPMC **Manual Prospec** 131.71 45 P PKiKP 05 04 21.4 +0.3
baz=300
R11A **Troy Canyon, C** 131.79 41 P PKiKP 05 04 22.0 +0.9
baz=304
ULM **Lac du Bonnet** 132.18 16 PKP PKPdf 05 04 20.5 +0.3
comp=Z,1.8nm,0.6s,baz=330,slow=2.3,SNR=5.8
ULM SKPbc SKPbc 05 07 39.7 -1.7
comp=Z,1.1nm,0.5s,baz=314,slow=5.6,SNR=5.9
DUG **Dugway, Tooele** 132.45 37 P PKiKP 05 04 23.3 +1.0
baz=308
GSC **Goldstone, Bar** 132.57 45 P PKiKP 05 04 24.1 +1.4
baz=300
PDAR **Pinedale Array** 132.63 32 PKP PKPdf 05 04 21.9 +0.2
comp=Z,0.5nm,0.5s,baz=84,slow=1.2,SNR=8.0
PDAR SKPbc SKPab 05 07 44.8 -0.1
comp=Z,0.5nm,0.8s,baz=352,slow=2.2,SNR=4.0
GMRC **Granite Mounta** 133.64 45 P PKiKP 05 04 26.7 +1.8
baz=301,SNR=5.9
PFO **Pinyon Flats O** 133.66 47 PKP PKiKP 05 04 24.6 -0.4
comp=Z,1.6nm,0.8s,baz=285,slow=3.0,SNR=3.7
BELC **Belle Mtn. Jos** 133.80 46 P PKiKP 05 04 26.5 +1.3
baz=300
PLCA **Paso Flores** 134.13 187 PKP PKiKP 05 04 26.8 +1.1
comp=Z,0.6nm,0.5s,baz=154,slow=3.6,SNR=5.9
RSSD **Black Hills** 134.38 27 P PKiKP 05 04 25.8 -0.4
baz=321
U15A **North Rim** 135.04 41 PKiKP 05 04 28.4 +0.5
O20A **White River Ci** 135.16 34 P PKiKP 05 04 28.6 +0.7
baz=313
ANMO **Albuquerque** 139.68 38 c i PKiKP PKiKP 05 04 38.3 +1.0
ANMO pmax pmax
comp=Z,4.0nm,2.5s
ANMO **Albuquerque** 139.68 38 PKP PKPdf 05 04 34.0 -0.8
comp=Z,1.2nm,0.9s,baz=355,slow=3.6,SNR=3.6
MNTX **Cornudas Mount** 142.46 41 PKPdf 05 04 37.8 -2.0
MNTX **Cornudas Mount** 142.46 41 P PKPdf 05 04 38.9 -0.9
baz=309
CPUP **Villa Florida** 143.46 211 PKP PKiKP 05 04 45.7 +0.7
comp=Z,0.6nm,0.4s,baz=166,slow=4.2,SNR=3.3
N50A **Nevada** 143.94 8 P PKPab 05 04 39.6 +0.3
baz=350
N52A **McGinn's Farm,** 144.07 6 P PKPab 05 04 39.8 0.0
baz=352
N59A **State Game Lan** 144.18 358 P PKPbc 05 04 40.9 +0.2
baz=2.3
WMOK **Wichita Mounta** 144.22 31 P PKPab 05 04 40.5 -0.1
baz=321,SNR=8.9
N58A **Sunbury** 144.28 359 P PKPbc 05 04 40.8 -0.1
baz=0.7
O49A **Covington** 144.33 10 P PKPab 05 04 40.5 -0.3
baz=348
N57A **Milroy** 144.36 1 P PKPbc 05 04 41.1 -0.1
baz=359
O50A **Cable** 144.48 9 P PKPab 05 04 41.1 -0.3
baz=349
ACSO **Alum Creek Sta** 144.49 8 P PKPab 05 04 41.1 -0.3
baz=350
O51A **Pataskala** 144.62 7 P PKPab 05 04 41.7 -0.2
baz=351,SNR=8.6
CCM **Cathedral Cave** 144.63 19 PKIKP PKPab 05 04 41.7 -0.3
CCM **Cathedral Cave** 144.63 19 PKPab 05 04 41.7 -0.3
CCM **Cathedral Cave** 144.63 19 P PKPab 05 04 41.6 -0.4
baz=335
BDFB **Brasilia** 144.65 234 PKIKP PKPdf 05 04 45.5 +1.4
BDFB **Brasilia** 144.65 234 PKP PKPdf 05 04 45.2 +1.1
comp=Z,6.3nm,0.5s,baz=124,slow=2.6,SNR=28
BDFB **Brasilia** 144.65 234 PKPdf 05 04 45.5 +1.4
O53A **New Philadelph** 144.67 5 P PKPab 05 04 41.7 -0.4
baz=353,SNR=5.1
TUL1 **Leonard** 144.72 27 P PKPab 05 04 42.3 -0.1
baz=327,SNR=11
O52A **Adamsville** 144.74 6 P PKPab 05 04 41.8 -0.5

baz=352,SNR=6.0
O59A Robesonia 144.79 359 P PKPab 05 04 42.1 -0.4
baz=1.6
O54A Avella 144.81 4 P PKPab 05 04 42.5 -0.1
baz=354
O56A Blue Knob Stat 144.82 2 P PKPab 05 04 42.6 -0.1
baz=358
P48A Milroy 144.84 11 P PKPab 05 04 42.1 -0.6
baz=346,SNR=7.6
O55A Ligonier 144.85 3 P PKPab 05 04 42.3 -0.5
baz=356
P49A Miami Univ. Ec 144.90 10 P PKPab 05 04 42.5 -0.5
baz=347
P50A Jamestown 144.98 9 P PKPab 05 04 42.6 -0.6
baz=348,SNR=9.8
O58A Lewisberry 144.99 360 P PKPab 05 04 42.9 -0.4
baz=0.3
TX31 Lajitas Ar. Si 145.09 43 PKPab 05 04 44.0 -0.1
TX32 Lajitas Array 145.09 43 PKPab 05 04 44.1 0.0
TXAR Lajitas Array 145.09 43 PKP PKPdf 05 04 44.5 0.0
comp=Z,6.0nm,0.4s,baz=289,slow=0.7,SNR=194
P52A Corning 145.19 7 P PKPbc 05 04 43.1 -0.8
baz=351,SNR=5.9
P51A Williamsport 145.22 8 P PKPbc 05 04 43.0 -0.9
baz=350
P60A Greenville 145.28 358 PKPbc 05 04 43.7 -0.5
P60A Greenville 145.28 358 P PKPbc 05 04 43.8 -0.3
baz=2.6
Q48A North Vernon 145.29 12 P PKPbc 05 04 44.0 -0.2
baz=345,SNR=26
ABTX Abilene, Hawle 145.35 35 P PKPab 05 04 45.1 +0.2
baz=318
MCWV Mont Chateau 145.37 4 P PKPbc 05 04 44.5 0.0
baz=355,SNR=8.0
P54A Burton 145.38 5 P PKPbc 05 04 44.4 -0.2
baz=354,SNR=7.3
Q49A Aurora 145.38 11 P PKPbc 05 04 44.0 -0.5
baz=346,SNR=7.0
P53A Whipple 145.41 6 P PKPbc 05 04 44.4 -0.2
baz=352,SNR=7.0
P59A Jarrettsville 145.50 359 P PKPdf 05 04 44.6 -0.1
baz=1.2
P55A Reedsville 145.52 4 P PKPdf 05 04 44.7 -0.2
baz=355
U40A Yellville 145.57 23 P PKPdf 05 04 44.6 -0.4
baz=332,SNR=44
P56A Dayton Farm, R 145.57 2 P PKPdf 05 04 45.0 +0.1
baz=357,SNR=5.6
Q51A Peebles 145.62 9 P PKPdf 05 04 44.8 -0.2
baz=349,SNR=7.7
P57A Homestead Farm 145.62 1 P PKPdf 05 04 45.1 +0.1
baz=358,SNR=9.9
P58A Pank, Wackersv 145.63 0 P PKPdf 05 04 45.0 0.0
baz=360,SNR=8.4
Q50A Georgetown 145.70 10 P PKPdf 05 04 45.1 -0.1
baz=348
Q52A Bidwell 145.83 7 P PKPdf 05 04 45.5 +0.2
baz=351
WCI Wyandotte Cave 145.85 13 PKIKP PKPbc 05 04 45.7 -0.3
WCI Wyandotte Cave 145.85 13 PKPbc 05 04 45.7 -0.3
WCI Wyandotte Cave 145.85 13 P PKPbc 05 04 45.9 -0.1
baz=344
Q54A Coxs Mills 145.96 5 P PKPbc 05 04 46.1 -0.3
baz=353,SNR=8.8
Q55A Buckhannon 146.01 4 P PKPbc 05 04 46.4 -0.1
baz=355
Q53A Leroy 146.02 6 P PKPdf 05 04 46.1 +0.4
baz=352
R49A Shelbyville 146.02 11 P PKPdf 05 04 46.0 +0.3
baz=346,SNR=11
Q56A Snyder Ridge, 146.02 3 P PKPbc 05 04 46.3 -0.2
baz=356
Q57A Strasburg 146.06 2 P PKPbc 05 04 46.3 -0.4
baz=358,SNR=7.8
Q60A Greensboro 146.09 358 P PKPbc 05 04 46.6 -0.1
baz=2.3
Q58A Fox Den Farm, 146.17 1 P PKPbc 05 04 46.7 -0.3
baz=359
R50A Paris 146.19 10 P PKPdf 05 04 46.3 +0.3
baz=347
W39A Magazine 146.20 25 P PKPbc 05 04 46.9 -0.2
baz=329
R51A Hillsboro 146.29 9 P PKPdf 05 04 46.6 +0.5
baz=348
R52A Catlettsburg 146.40 8 P PKPbc 05 04 47.1 -0.6
baz=350
S49A Springfield 146.49 12 P PKPbc 05 04 47.9 0.0
baz=345,SNR=8.3
R53A Hurricane 146.49 7 P PKPbc 05 04 47.7 -0.3
baz=351,SNR=10
R56A Bull Pasture M 146.64 3 P PKPbc 05 04 48.4 -0.1
baz=356
R54A Victor 146.75 6 P PKPdf 05 04 47.8 +0.9
baz=353
S50A Richmond 146.76 11 P PKPbc 05 04 48.1 -0.7
baz=347,SNR=5.6
R57A Stanardsville 146.79 2 P PKPbc 05 04 48.9 +0.1
baz=357
R58A Rapidan 146.81 1 P PKPbc 05 04 48.6 -0.2
baz=358
JCT Junction City 146.82 37 P PKPbc 05 04 49.5 +0.3
baz=316
W41B Gary Mavity, V 146.84 23 P PKPbc 05 04 49.3 +0.3
baz=332
MIAR Mount Ida 146.84 25 P PKPbc 05 04 49.2 +0.1
baz=329,SNR=17
S51A Beattyville 146.94 9 P PKPbc 05 04 48.8 -0.5
baz=348,SNR=9.1
S52A Salyersville 146.98 9 P PKPbc 05 04 49.0 -0.4
baz=349
S54A Dingess, Beckl 147.09 6 P PKPbc 05 04 49.1 -0.6
baz=352
T49A Edmonton 147.09 12 P PKPbc 05 04 49.9 +0.2
baz=344
R58B Mineral 147.14 1 P PKPbc 05 04 49.6 -0.2
baz=359
S55A Lewisburg 147.19 5 P PKPbc 05 04 49.3 -0.7
baz=354
S57A Dark Hollow, R 147.31 3 P PKPbc 05 04 50.0 -0.3
baz=357
T50A Nancy 147.32 11 P PKPbc 05 04 49.4 -0.9
baz=346
S59A Mechanicsville 147.35 0 P PKPbc 05 04 50.0 -0.3
baz=360
S56A Natural Bridge 147.36 4 P PKPbc 05 04 50.2 -0.2
baz=356
WVT Waverly 147.45 16 PKP2 PKPbc 05 04 50.6 -0.1
WVT Waverly 147.45 16 PKPbc 05 04 50.6 -0.1
WVT Waverly 147.45 16 P PKPbc 05 04 50.7 -0.1
baz=340
S58A Poland Farm, P 147.49 1 P PKPbc 05 04 50.6 -0.2
baz=358
T51A Gray 147.54 10 P PKPbc 05 04 50.4 -0.6
baz=347
T52A Hallie 147.56 9 P PKPbc 05 04 50.5 -0.5
baz=349
U49A Red Boiling Sp 147.60 13 P PKPbc 05 04 50.6 -0.5
baz=344,SNR=17
T53A Wise 147.74 8 P PKPbc 05 04 51.4 -0.2
baz=350
T54A Tazewell 147.79 7 P PKPbc 05 04 51.0 -0.7
baz=352
T55A Pulaski 147.82 6 P PKPbc 05 04 51.3 -0.4
baz=353
U50A Jamestown 147.90 12 P PKPbc 05 04 51.7 -0.3
baz=346,SNR=25
T56A Rocky Mt 147.97 4 P PKPbc 05 04 51.7 -0.5
baz=354
TZTN Tazewell 148.02 10 P PKPbc 05 04 51.9 -0.3
baz=348
T57A Hurt 148.05 3 P PKPbc 05 04 52.3 0.0
baz=356
T59A Double "B" Far 148.14 1 P PKPbc 05 04 52.8 +0.2
baz=359
T58A Grand View Acr 148.14 2 P PKPbc 05 04 52.7 +0.1
baz=357
U52A Thorn Hill 148.19 10 P PKPbc 05 04 52.4 -0.3
baz=348
V49A McMinnville 148.29 14 P PKPbc 05 04 52.2 -0.8
baz=343
U54A Nelsons Funny 148.29 7 P PKPbc 05 04 52.5 -0.6
baz=351
U53A Fall Branch 148.34 8 P PKPbc 05 04 53.1 -0.1
baz=350
U55A TA2, Sparta 148.40 6 P PKPbc 05 04 53.0 -0.4
baz=353
OXF Oxford 148.46 20 P PKPbc 05 04 53.1 -0.3
baz=336
V50A Pikevile 148.56 13 P PKPbc 05 04 53.3 -0.4
baz=345,SNR=8.0
833A Chaparral WMA, 148.58 40 P PKPbc 05 04 53.9 0.0
baz=314
V51A Loudon 148.59 11 P PKPbc 05 04 53.4 -0.4
baz=346
U57A Blanch 148.61 3 P PKPbc 05 04 53.7 -0.1
baz=356
U56A King 148.62 5 P PKPbc 05 04 53.3 -0.6
baz=354
U60A Pendleton 148.64 0 P PKPbc 05 04 53.5 -0.3
baz=360
U58A Oxford 148.69 2 P PKPbc 05 04 53.8 -0.1
baz=357
V52A Sevierville 148.69 10 P PKPbc 05 04 53.6 -0.4
baz=348
W49A Belvidere 148.82 15 P PKPbc 05 04 53.7 -0.6
baz=342
TKL Tuckaleechee C 148.84 11 PKPbc PKPbc 05 04 54.2 -0.2
comp=Z,8.3nm,0.5s,baz=8.5,slow=3.3,SNR=26
W50A Signal Mountai 148.97 13 PKPbc 05 04 54.1 -0.7
W50A Signal Mountai 148.97 13 P PKPbc 05 04 54.1 -0.7
baz=344
V53A Saluda 148.99 9 P PKPbc 05 04 54.6 -0.3
baz=349
V54A Nebo 149.01 8 P PKPbc 05 04 54.5 -0.4
baz=351
V55A Taylorsville 149.03 6 P PKPbc 05 04 54.3 -0.6
baz=352
V57A Coltrane Farms 149.12 4 P PKPbc 05 04 54.2 -0.9
baz=355
W51A Cleveland 149.13 12 P PKPbc 05 04 54.2 -0.9
baz=345
V59A Middlesex 149.33 2 P PKPbc 05 04 55.5 -0.1
baz=358
W52A Murphy 149.36 11 P PKPbc 05 04 55.6 -0.2
baz=347
W53A Cullowhee 149.42 10 P PKPbc 05 04 56.1 0.0
baz=348
W54A Cherokee Point 149.66 8 P PKPbc 05 04 56.2 -0.2
baz=350
X51A Calhoun 149.68 13 P PKPab 05 05 00.7 -1.0
baz=345
KMSC Kings Mountain 149.71 7 P PKPbc 05 04 56.4 -0.2
baz=352
X52A Dahlonega 149.84 11 P PKPbc 05 04 57.0 0.0
baz=346
W58A Raeford 150.02 3 P PKPbc 05 04 57.4 0.0
baz=356
W60A Pink Hill 150.05 1 P PKPbc 05 04 57.5 +0.1
baz=359
X53A Estanollee 150.05 10 P PKPbc 05 04 57.4 0.0
baz=348
VBMS Vicksburg 150.12 23 P PKPbc 05 04 58.1 +0.4
baz=332
X54A Belton 150.16 9 P PKPbc 05 04 57.7 0.0
baz=350
Y51A Rockmart 150.27 13 P PKPbc 05 04 57.6 -0.4
baz=344
X55A Gracelyn & Ava 150.34 8 P PKPbc 05 04 58.0 -0.1
baz=351
X56A White Oak 150.39 7 P PKPbc 05 04 58.0 -0.3
baz=352
Y52A Lilburn 150.52 12 P PKPbc 05 04 58.9 +0.3
baz=346
LRAL Lakeview Retre 150.59 17 P PKPbc 05 04 58.3 -0.4
baz=340
Y53A Monroe 150.63 11 P PKPbc 05 04 58.9 +0.1
baz=347
Z50A Ashland 150.68 15 P PKPbc 05 04 58.6 -0.4
baz=342
Y54A Tignall 150.78 10 P PKPbc 05 04 59.2 0.0
baz=349
Y55A Saluda 150.83 8 P PKPbc 05 04 59.3 0.0
baz=350
Y57A Sumter 150.93 6 P PKPbc 05 04 59.6 +0.1
baz=353
GOGA Godfrey 151.08 11 P PKPbc 05 04 59.9 0.0
baz=347
Z52A Williamson 151.10 13 P PKiKP 05 05 00.4 -0.1
baz=345
Z53A Monticello 151.19 11 P PKPbc 05 05 00.2 +0.1
baz=347
Z54A Sparta 151.37 10 P PKPbc 05 05 00.5 0.0
baz=348
152A Waverly Hall 151.53 14 P PKPbc 05 05 01.1 +0.2
baz=344
253A Americus 152.25 13 P PKiKP 05 05 03.0 +0.1
baz=345
254A Abbeville 152.54 11 P PKPbc 05 05 03.3 +0.1
baz=347
352A Blakely 152.62 15 P PKiKP 05 05 03.9 +0.2
baz=343

*NEIC **20** 04:59:53.8±0.6, 15.4°S±0.1°×72.09°W±0.10, h89km±31km, Error ellipse: s-maj=20.0km s-min=8.1km az=215.0*
ARE 20 04:59:53±4.6, **15°2S**±0.1°×**71°97W**±0.08, **h39**km±9km, **ML4.1, mb4.0**/1(NEIC), **Error ellipse: s-maj=0.0km s-min=0.0km az=119.0, macroseismic, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**3.85**	**107**		Pn	05 00 52.1	+1.8
MNMC	**Minye Minye**	**4.53**	**150**		Pn	05 00 58.5	-0.9
MNMC					Sn	05 01 47.1	-3.8
PB11	**IPOC Station P**	**5.05**	**154**		Pn	05 01 05.4	-1.0
PB11					Sn	05 01 58.0	-5.7
GO01	**Chusmiza**	**5.18**	**150**		Pn	05 01 09.2	+0.8
GO01					Sn	05 02 04.9	-2.4
NNA	**Nana**	**5.71**	**303**		Pn	05 01 16.6	+1.3
PB04	**IPOC Station P**	**7.31**	**167**	Pn	Pn	05 01 35.1	-2.4
PB04					Sn	05 02 52.2	-7.1
LVC	**Limon Verde**	**7.93**	**159**	Pn	Pn	05 01 44.7	-1.3
LVC					Sn	05 03 10.5	-4.2
GO02	**Mina Guanaco**	**10.17**	**168**	Pn	Pn	05 02 14.2	-2.5
ROSC	**El Rosal**	**20.04**	**353**	P	Pn	05 04 24.5	-0.7
ROSC				IAmb	IAmb	05 04 31.9	
	comp=Z,4.7nm,0.7s						

*IDC **20** 05:06:26.3±8.5, 31.98S×179.85E, h315km±95km, mb2.9/2, mb1 3.2/3, mb1mx3.0/24, mbtmp3.7/3, Error ellipse: s-maj=101.9km s-min=49.1km az=180.0*
*WEL **20** 05:06:28.9, 32°S±39'×18°0E±99'9, h318km±38km, M3.9/12, mB4.3/6, ML4.3/11, MLv4.3/12, Mw(mB)3.4/6, Error ellipse: s-maj=24.8km s-min=0.1km az=90.0*
ISC 20 05:06:28.3±1.0, **31°95S**±0.09°×**179°3E**±0°2, **h300**km, **n22,** σ1**§32/27, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**3.57**	**42**	P	**Pn**	**05 07 31.0**	**+1.1**
GLKZ				S	**S**	**05 08 19.4**	**+0.2**
MXZ	**Matakaoa Point**	**5.67**	**188**	P	**Pn**	**05 07 55.1**	**+1.6**
WMGZ	**Waiomatatini S**	**5.91**	**187**	P	**Pn**	**05 07 56.4**	**+0.1**
WMGZ				S	**S**	**05 08 07.4**	**0.0**
HAZ	**Te Kaha**	**5.94**	**192**	P	**Pn**	**05 07 56.6**	**0.1**
HAZ				S	**S**	**05 09 09.2**	**+1.3**
RUGZ	**Raukumara Rang**	**6.16**	**192**	P	**Pn**	**05 07 60.0**	**+0.5**
RUGZ				S	**S**	**05 09 13.6**	**+0.6**
TWGZ	**Tauwhareparae**	**6.32**	**190**	P	**Pn**	**05 08 03.6**	**+2.3**
MWZ	**Matawai**	**6.54**	**193**	P	**Pn**	**05 08 03.2**	**-0.8**
URZ	**Urewera**	**6.56**	**195**	P	**Pn**	**05 08 04.9**	**+0.8**
	1.6nm,0.3s,baz=294,slow=2.6,SNR=19						
URZ				S	**S**	**05 09 21.0**	**-0.5**
	0.8nm,0.3s,baz=52,slow=19,SNR=6.8						
URZ	**Urewera**	**6.56**	**195**	P	**Pn**	**05 08 04.7**	**+0.6**
CNGZ	**Carnagh Statio**	**6.59**	**188**	P	**Pn**	**05 08 04.2**	**-0.3**
TKGZ	**Te Karaka**	**6.59**	**190**	P	**Pn**	**05 08 04.9**	**+0.4**
RAGZ	**Rawiri**	**6.72**	**192**	P	**Pn**	**05 08 05.2**	**-1.0**
MUGZ	**Murupara**	**6.84**	**197**	P	**Pn**	**05 08 08.7**	**+1.1**
RIGZ	**Rimuhau**	**6.87**	**190**	P	**Pn**	**05 08 08.0**	**+0.1**
RTZ	**Ruatahuna**	**6.93**	**195**	P	**Pn**	**05 08 08.9**	**+0.2**
KNZ	**Kokohu**	**7.19**	**190**	P	**Pn**	**05 08 08.0**	**-3.8**
RAHZ	**Arahi**	**7.19**	**194**	P	**Pn**	**05 08 12.4**	**+0.6**
MHGZ	**Mahia Peninsul**	**7.28**	**189**	P	**Pn**	**05 08 11.5**	**-1.5**
WHHZ	**Waihua**	**7.32**	**193**	P	**Pn**	**05 08 13.8**	**+0.4**
ASAR	**Alice Springs**	**40.78**	**270**	P	**P**	**05 13 41.6**	**+0.5**
	0.4nm,0.6s,baz=103,slow=7.3,SNR=4.6						
WRA	**Warramunga Arr**	**41.91**	**275**	P	**P**	**05 13 50.2**	**0.0**
	0.2nm,0.3s,baz=113,slow=8.0,SNR=5.8						
FINES	**FINESS Array B**	**145.75**	**337**	PKPbc	**PKPdf**	**05 25 27.3**	**-3.0**
	1.5nm,0.8s,baz=96,slow=1.4,SNR=4.0						

*NEIC **20** 05:16:34.0±2.7, 27.64N±0.05×105.31W±0.09, h5km±2km, Md4.0/8(MEX), Error ellipse: s-maj=14.8km s-min=5.3km az=120.0*
*MEX **20** 05:16:35.6±0.3, 26.89N×104.81W, h5km, MD4.0*
ISC 20 05:16:32.6±1.0, **27.61N**±0.05×**105.14W**±0.06, **h10**km, **n11,** σ1**§29**/19, **Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HPIG		**0.82**	**215**	eP	**Pb**	**05 16 49.2**	**+0.2**
	baz=94,slow=16						
HPIG				eS	**Sb**	**05 16 59.7**	**-0.5**
HPIG		**0.82**	**215**		**Pb**	**05 16 49.0**	**-0.1**
HPIG				Sg	**Sg**	**05 16 58.7**	**-0.4**
HPIG		**0.82**	**215**		**Pb**	**05 16 49.2**	**+0.2**
HPIG					**Sb**	**05 16 59.7**	**-0.5**
TX31	**Lajitas Ar. Si**	**2.15**	**37**		**Pg**	**05 17 12.8**	**-1.1**
TX31				Sn	**Sb**	**05 17 38.2**	**-0.5**
TX32	**Lajitas Array**	**2.15**	**37**		**Pg**	**05 17 12.8**	**-1.2**
TX32				Sn	**Sb**	**05 17 38.2**	**-0.5**
CGIG		**3.71**	**319**		Pn	05 17 23.7	-6.4
CGIG					**Sn**	**05 18 16.3**	**+2.3**
MNTX	**Cornudas Mount**	**4.08**	**357**		**Pn**	**05 17 36.5**	**+1.3**
MNTX				Sn	**Sn**	**05 18 25.4**	**+2.4**
HSIG		**5.31**	**287**	eP	Pb	05 18 00.8	-4.8
HSIG				*i* S	**Sb**	**05 19 07.0**	**-2.4**
HSIG		**5.31**	**287**		**Pn**	**05 17 54.1**	**+2.0**
121A	**Cookes Peak, D**	**5.42**	**336**	Pn	**Pn**	**05 17 53.3**	**-0.4**
121A				Sn	**Sn**	**05 18 56.5**	**+0.3**
TUC	**Tucson**	**6.78**	**315**	Pn	**Pn**	**05 18 12.2**	**-0.1**
TUC				Sn	**Sn**	**05 19 29.5**	**-0.1**

*PAS **20** 05:27:47.9±1.2, 34.143N±0.009×117.44W±0.01, h15km±1km, ML2.0/118, Error ellipse: s-maj=1.5km s-min=1.2km az=46.0*
NEIC 20 05:27:47.1±0.7, **34°14N**±0.01°×**117°44W**±0°02, **h19**km±1km, **Error ellipse: s-maj=2.1km s-min=1.9km az=222.0, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FON	**Fontana**	**0.04**	**183**		Pg	05 27 52.3	+1.8
SS2	**San Sevaine**	**0.08**	**321**		Pg	05 27 50.8	+0.1
CLTC	**Calectric**	**0.11**	**117**		Pg	05 27 51.3	+0.2
CFSC	**Central Fire S**	**0.13**	**106**		Pg	05 27 51.5	+0.2
RVR	**Riverside**	**0.16**	**161**		Sg	05 27 54.4	-0.2
CSP	**Cedar Springs**	**0.17**	**23**		Pg	05 27 51.7	-0.1
MLSC	**Mira Loma**	**0.17**	**217**		Sg	05 27 54.9	-0.1
RSBC	**Riverside Bore**	**0.19**	**152**		Pg	05 27 52.1	0.0
RSBC					Sg	05 27 55.2	-0.2
RSBC	**Riverside Bore**	**0.19**	**152**		Pg	05 27 52.1	0.0
RSBC					Sg	05 27 55.4	-0.1
BFSC	**Mount Baldy Ra**	**0.21**	**297**		Sg	05 27 55.5	-0.5
SSK	**Sunset Peak**	**0.22**	**288**		Pg	05 27 52.7	0.0
SVD	**Seven Oaks Dam**	**0.28**	**97**		Pb	05 27 53.8	+0.3
CFT	**Crafton Hills**	**0.29**	**112**		Pb	05 27 53.9	+0.2
CFT					Sg	05 27 58.4	+0.3
PSRC	**Puddingstone R**	**0.31**	**261**		Sb	05 27 58.7	0.0
SME	**Santa Rosa Min**	**0.33**	**168**		Pg	05 27 54.2	0.0
PEC	**Perris**	**0.34**	**138**		Sg	05 27 59.3	-0.1
PEM	**Pine Mountain**	**0.36**	**274**		Pb	05 27 54.9	0.0
BTL	**Butler Peak**	**0.38**	**72**		Pb	05 27 55.5	+0.1
XTL	**Crystal Lake,**	**0.39**	**293**		Pg	05 27 55.1	-0.2
ADO	**Adelanto Recei**	**0.41**	**0**		Pg	05 27 55.7	+0.1
VTV	**Victorville**	**0.43**	**12**		Pg	05 27 55.7	-0.2
VTV					Sg	05 28 01.5	-0.4
BBRC	**Big Bear Solar**	**0.44**	**74**		Pb	05 27 56.5	0.0
BBRC					Sb	05 28 02.7	-0.1
HOLC	**Holcomb Ridge**	**0.46**	**313**		Pg	05 27 56.6	0.0
MWC	**Mount Wilson**	**0.52**	**279**		Pb	05 27 57.5	-0.2
MWC				Sg	Sb	05 28 04.9	0.0
CHFC	**Chilao Flat St**	**0.52**	**291**		Pb	05 27 57.3	-0.4
CHFC					Sg	05 28 04.7	-0.2
GVRC	**Garvey Reservo**	**0.57**	**261**		Pg	05 27 58.9	+0.3
MURC	**Murrieta**	**0.58**	**160**		Pb	05 27 58.4	-0.1
MURC					Sb	05 28 06.1	-0.1
DGR	**Domenigoni Val**	**0.61**	**144**		Pb	05 27 58.8	-0.2
DGR					Sb	05 28 06.8	-0.3
LRRC	**Littlerock Res**	**0.62**	**308**		Pb	05 27 59.3	+0.1
PASC	**Pasadena Art C**	**0.62**	**273**		Pb	05 27 59.2	-0.1
PASC				Sg	Sg	05 28 07.9	+0.1
BACC	**Bachelor Mtn.**	**0.62**	**148**		Pb	05 27 58.9	-0.4
BACC					Sb	05 28 07.3	-0.3
POB	**Polly Butte**	**0.62**	**137**		Pb	05 27 58.9	-0.4
SBB	**Saddle Back Bu**	**0.63**	**330**		Pb	05 27 59.3	-0.1
SBB					Sb	05 28 07.5	-0.4
HYS	**Haystack Butte**	**0.73**	**351**		Pb	05 28 01.1	0.0
DECC	**Green Verdugo**	**0.75**	**279**		Pb	05 28 01.6	0.0
DECC					Sg	05 28 12.2	+0.2
RRX	**Edison Barstow**	**0.81**	**26**		Pg	05 28 02.9	-0.2
RRX					Sg	05 28 14.1	+0.2
CRY	**Cary Ranch**	**0.82**	**135**		Pb	05 28 02.7	0.0
CRY					Sb	05 28 13.3	-0.1
IR2C	**Iron Canyon**	**0.83**	**287**		Pb	05 28 02.8	-0.2
DJJ	**Donna J Jenkin**	**0.85**	**268**		Pb	05 28 02.9	-0.2
LEOC	**Leona Valley**	**0.87**	**304**		Pb	05 28 03.6	+0.1
EDW2	**Edwards Air Fo**	**0.87**	**328**		Pb	05 28 03.4	-0.2
EDW2					Sb	05 28 14.8	0.0
BLAC	**Blackrock camp**	**0.87**	**95**		Pg	05 28 04.0	-0.1
BLAC					Sg	05 28 15.9	+0.2
EW2	**E Wide Canyon**	**0.88**	**103**		Pb	05 28 03.7	0.0
EW2					Sg	05 28 16.2	+0.3
DNR	**Dunn Ranch,Anz**	**0.88**	**130**		Pb	05 28 04.1	+0.2
SNDA	**J Saunders Pla**	**0.90**	**130**		Pn	05 28 05.0	+0.1
SNDA					Sb	05 28 16.1	+0.2
BZNA	**Buzz No.'s Pla**	**0.91**	**135**		Sb	05 28 16.5	+0.4
PLM	**Palomar**	**0.92**	**149**		Pb	05 28 04.3	-0.3
PLM					Sb	05 28 16.6	+0.1
FRD	**Ford Ranch, An**	**0.95**	**133**		Pb	05 28 05.0	0.0
FRD					Sb	05 28 17.3	+0.2
FRD	**Ford Ranch, An**	**0.95**	**133**		Pb	05 28 05.3	-0.2
FRD					Sb	05 28 17.0	-0.2
PFO	**Pinyon Flats O**	**0.97**	**123**	Pg	Pn	05 28 05.6	-0.2
PFO				Sg	Sb	05 28 17.9	+0.1
PFO	**Pinyon Flats O**	**0.97**	**123**		Pb	05 28 05.3	0.0
PFO					Sb	05 28 17.9	+0.1
XPFO	**Pion Flat**	**0.97**	**123**		Pb	05 28 05.3	-0.1
XPFO					Sb	05 28 17.8	-0.1
XPFO	**Pion Flat**	**0.97**	**123**	Pg	Pb	05 28 05.6	+0.2
XPFO				Sg	Sb	05 28 17.9	+0.1
OAT	**Oat Mountain**	**1.00**	**282**		Pg	05 28 07.4	+0.9
GORC	**Green Oak Ranc**	**1.00**	**170**		Pb	05 28 05.5	-0.3
GORC					Sb	05 28 18.7	+0.2
BTPC	**Burnt Peak**	**1.08**	**300**		Pg	05 28 07.8	-0.3
TPC	**Twentynine Pal**	**1.15**	**91**		Pg	05 28 09.1	-0.3
OSI	**Osito Audit: C**	**1.16**	**294**	Pn	Pb	05 28 08.6	0.0
OSI				Sn	Sn	05 28 24.3	+0.5
DTP	**Desert Tortois**	**1.17**	**343**		Pb	05 28 09.0	+0.3
HWB	**Hans Werner Br**	**1.18**	**160**		Pn	05 28 08.4	-0.2
HWB					Sb	05 28 23.9	+0.1
DPP	**Dos Picos Cty**	**1.21**	**160**		Sb	05 28 24.5	-0.2
BORC	**Borrego Spring**	**1.22**	**135**		Sg	05 28 25.9	-0.7
GSC	**Goldstone, Bar**	**1.27**	**24**		Pn	05 28 09.6	-0.3
GSC				Sn	Sb	05 28 26.0	-0.4
EML	**El Monte Cty P**	**1.34**	**158**		Pn	05 28 11.0	+0.3
EML					Sn	05 28 28.2	+0.1
SDRC	**San Diego Road**	**1.46**	**163**		Sb	05 28 31.8	-0.1
DSCC	**Desert Studies**	**1.48**	**47**		Sg	05 28 34.4	-0.6
BAR	**Barrett**	**1.59**	**156**	Pn	Pb	05 28 15.2	-0.7
BAR					Sb	05 28 35.4	-0.2
ISA	**Isabella, Lake**	**1.74**	**331**	Pn	Pn	05 28 16.6	+0.2
ISA					Sn	05 28 38.0	0.0
CARC	**Carrizo Plain**	**2.30**	**301**		Pb	05 28 29.1	+1.2
GVN	**Grapevine**	**2.85**	**1**		Pb	05 28 38.3	+0.9
TPNV	**Topopah Spring**	**2.96**	**19**	Pn	Pn	05 28 34.2	+1.0
TPNV					Sn	05 29 09.6	+1.3
SHPR	**Sheep Range**	**3.00**	**38**	Pn	Pn	05 28 32.9	-0.8
SHPR					Sn	05 29 08.5	-0.8

*ECX **20** 05:56:20.4±0.4, 31.23N×115.59W, h6km, MD1.9, ML2.1*
*MEX **20** 05:56:20.7±0.5, 31.22N×115.38W, h14km±20km, MD3.5*
ISC 20 05:56:18.8±1.0, **31°16N**±0.07°×**115°50W**±0°05, **h28**km±7km, **n9,** σ0**§55**/16, **4C-2D, Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPIG	**San Pedro Mart**	**0.12**	**168**	eP	**Pb**	**05 56 24.6**	**+0.3**

SPIG				*e*S	**Sb**	**05 56 28.0**	**-0.1**
SPX	**San Pedro Mart**	**0.13**	**168**	*e*P	**Pb**	**05 56 24.4**	**0.0**
SPX				*e*S	**Sb**	**05 56 27.7**	**-0.6**
SPX	**San Pedro Mart**	**0.13**	**168**⇓	*e*P	**Pb**	**05 56 24.6**	**+0.2**
SPX				*e*S	**Sb**	**05 56 28.1**	**-0.2**
SPX				⇓*e*		05 56 28.6	
SPX				IAML		05 56 28.6	
	comp=N,301nm,0.1s						
SPX				⇑*e*		05 56 28.8	
SPX				IAML		05 56 28.8	
	comp=E,201nm,0.2s						
ECBX	**El Chinero**	**0.49**	**51**⇑	*e*P	**Pn**	**05 56 29.8**	**-0.1**
ECBX				*e*S	**Sn**	**05 56 36.7**	**-0.8**
SFX	**San Felipe**	**0.57**	**103**	*e*P	**Pn**	**05 56 31.3**	**+0.4**
SFX				*e*S	**Sn**	**05 56 40.1**	**+0.7**
SQX	**San Quintin**	**0.67**	**209**⇑	*e*P	**Pb**	**05 56 31.5**	**-0.5**
SQX				*e*S	**Sb**	**05 56 40.7**	**-0.2**
SQX				IAML		05 56 41.7	
	comp=N,94nm,0.1s						
VTX	**Valle De La Tr**	**0.81**	**198**⇑	*e*P	Pb	05 56 24.8	-10
VTX				*e*S	Sb	05 56 28.3	-17
CBX	**Cerro Bola**	**1.52**	**319**	*e*P	**Pn**	**05 56 44.6**	**+0.3**
CBX				*e*S	**Sn**	**05 57 02.4**	**-0.7**
TJIG	**Tijuana**	**1.62**	**322**	*i* P	**Pn**	**05 56 46.4**	**+0.9**
TJIG				*i* S	**Sn**	**05 57 05.6**	**+0.2**

BGR ***20*** *06:00:09.1±0.8, 40.°91N×20.°03E, h10km, ML4.7, Error ellipse: s-maj=21.1km s-min=10.0km az=56.0*

IDC ***20*** *06:00:12.1±0.6, 41.°42N×19.°51E, h0km, mb4.1/22, mb1 4.2/32, mb1mx4.1/46, mbtmp4.1/32, ML3.9/8, MS3.5/8, Ms1 3.5/8, ms1mx3.2/54, Error ellipse: s-maj=12.6km s-min=9.5km az=40.0*

MOS ***20*** *06:00:12.4±1.2, 41.°32N×19.°40E, h12km, mb4.8/11, Error ellipse: s-maj=5.9km s-min=3.9km az=79.8*

TIR ***20*** *06:00:13.9, 41.°36N×19.°46E, h12km, Md4.2/8*

ATH ***20*** *06:00:13.8, 41.°36N×19.°46E, h19km±1km, ML3.8/4, Error ellipse: s-maj=3.0km s-min=1.0km az=354.0*

SKO ***20*** *06:00:13.7, 41.°22N×19.°31E, h8km*

RHSSO ***20*** *06:00:13.4±0.6, 41.°21N×19.°54E, h6km±2km, ML4.5/16*

THE ***20*** *06:00:14.8, 41.°50N×19.°45E, h9km, ML3.5/7, Error ellipse: s-maj=1.3km s-min=0.6km az=312.0*

LDG ***20*** *06:00:14.6±0.1, 41.°41N×19.°57E, h4km, Ml4.2/26, Error ellipse: s-maj=4.2km s-min=2.8km az=10.0*

PDG ***20*** *06:00:14.8±0.5, 41.°34N×19.°44E, h15km, MD4.2/11, ML4.3/11, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

MED_RC ***20*** *06:00:15.0±0.9, 41.°37N×19.°62E, h22km±9km, MW4.6/8, Moment Tensor Solution. Mantle waves: s8,c8; Duration: 1s0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.85±.43; $M_{\theta\theta}$-0.19±.23; $M_{\phi\phi}$-0.66±.28; $M_{r\theta}$0.59±.41; $M_{\theta\phi}$0.18±.11; $M_{\phi r}$-0.57±.32; Best double couple: $M_0$1.12000×10^{16} NP1:ϕ_s143.00000°,δ68.00000°,λ79.00000°. Principal axes: T 1.2200, Plg65.0000°, Azm35.0000°; N -0.2000, Plg10.0000°, Azm147.0000°; P -1.0300, Plg23.0000°, Azm241.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

PRU ***20*** *06:00:15.4±0.0, 41.°23N×19.°37E, h10km, M4.5*

ROM ***20*** *06:00:15.0, 41.°27N×19.°46E, h10km, ML4.5*

NEIC ***20*** *06:00:15.2±2.7, 41.°33N±0.°03×19.°43E±0.°03, h12km±3km, mb4.5/27, Mwr4.3/23, ML4.3/1(BUC), ML4.2(TIR), Error ellipse: s-maj=4.9km s-min=3.3km az=177.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}3.13; $M_{\theta\theta}$0.02; $M_{\theta\phi}$-3.16; $M_{r\theta}$1.13; $M_{\theta\phi}$1.66; $M_{\phi r}$-0.85; Fault plane solution: $M_0$3.83000×10^{15} NP1: ϕ_s351.57000°,δ37.15000°,λ112.77000°. NP2: ϕ_s143.80000°,δ56.16000°,λ73.66000°. Principal axes: T 3.5130, Plg73.0000°, Azm10.0000°; N 0.5623, Plg14.0000°, Azm153.0000°; P -4.0753, Plg10.0000°, Azm245.0000°;*

BEO ***20*** *06:00:16.9±0.3, 41.°49N×19.°69E, h4km±2km, ML4.1/21*

ISC 20 06:00:15.1±0.8, 41.°42N±0.°02×19.°44E±0.°02, h18km±5km, n515, σ2.3 33/650, mb4.5/44, 39C-25D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.33**	**102**	P		**Pg**	**Pn**	**06 00 20.9**	**-1.1**
TIR				S		**Sg**	**Sn**	**06 00 27.2**	**+0.5**
TIR	**Tirane**	**0.33**	**102**	*e*Pg		**Pg**	**Pn**	**06 00 20.5**	**-1.5**
TIR				*e*Sg		**Sg**	**Sn**	**06 00 23.8**	**-2.9**
TIR	**Tirane**	**0.33**	**102**	*i* PG		**Pg**	**Pn**	**06 00 20.8**	**-1.3**
TIR				*i* PG		**Pn**	**Pn**	**06 00 25.1**	**+0.1**
TIR	**Tirane**	**0.33**	**102**	P		**Pg**	**Pn**	**06 00 20.8**	**-1.3**
TIR				S		**Sg**	**Sn**	**06 00 24.7**	**-2.0**
TIR				AML		AML		06 00 26.0	
	comp=E,68949μm,0.4s								
TIR				AML		AML		06 00 26.8	
	comp=N,86253μm,0.6s								
TIR	**Tirane**	**0.33**	**102**	⇓P		**Pg**	**Pn**	**06 00 20.9**	**-1.1**
TIR	**Tirane**	**0.33**	**102**			**Pg**	**Pn**	**06 00 20.7**	**-1.3**
TIR				Sg		**Sg**	**Sn**	**06 00 25.3**	**-1.5**
ULC	**Ulcinj**	**0.56**	**345**	*e*Pg		**Pn**	**Pn**	**06 00 27.0**	**-1.4**
ULC				*e*Sg		**Sb**	**Sb**	**06 00 37.2**	**+2.9**
PUK	**Puka**	**0.71**	**28**	*i* PG		**Pb**	**Pb**	**06 00 29.1**	**0.0**
PUK				*i* PG		**Sn**	**Sn**	**06 00 40.1**	**+0.9**
DRME	**Dracevica, Mon**	**0.79**	**346**⇑	*i* PG		**Sn**	**Pn**	**06 00 31.6**	**+0.1**
DRME				*e*Sg		**Sn**	**Sn**	**06 00 45.1**	**+2.2**
DRME	**Dracevica, Mon**	**0.79**	**346**	*e*Pg		**Sn**	**Pn**	**06 00 31.7**	**+0.2**
DRME				*e*Sg		**Sn**	**Sn**	**06 00 45.2**	**+2.3**
PHP	**Peshkopia**	**0.79**	**70**	P		**Pg**	**Pn**	**06 00 29.3**	**-1.4**
PHP				S		**Sg**	**Sn**	**06 00 39.5**	**-1.7**
PHP	**Peshkopia**	**0.79**	**70**	*i* PG		**Pg**	**Pn**	**06 00 29.0**	**-1.6**
PHP				*i* PG		**Sb**	**Sb**	**06 00 41.8**	**+0.8**
VLO	**Vlora**	**0.95**	**178**	P		**Pb**	**Pb**	**06 00 34.8**	**+1.7**
VLO				S		**Sb**	**Sb**	**06 00 49.3**	**+4.0**
VLO	**Vlora**	**0.95**	**178**	*i* PG		**Sn**	**Pn**	**06 00 45.0**	**-1.7**
BUM	**Brajici-Budva**	**0.97**	**335**	*e*Pg		**Pn**	**Pn**	**06 00 35.5**	**+1.5**
BUM				*e*Sg		**Sn**	**Sn**	**06 00 51.6**	**+4.2**
PDG	**Podgorica**	**1.02**	**352**	*e*Pg		**Pn**	**Pn**	**06 00 35.3**	**+0.7**
PDG				*e*Sg		**Sn**	**Sn**	**06 00 48.4**	**-0.1**
PDG	**Podgorica**	**1.02**	**352**	⇓P		**Pn**	**Pn**	**06 00 37.0**	**+2.4**
PDG	**Podgorica**	**1.02**	**352**	⇓S		**Sn**	**Sn**	**06 00 53.0**	**+4.5**
PDG	**Podgorica**	**1.02**	**352**	⇓Pg		**Pn**	**Pn**	**06 00 35.3**	**+0.7**
PDG				*e*Sg		**Sn**	**Sn**	**06 00 53.4**	**+4.9**
PDG	**Podgorica**	**1.02**	**352**			**Pn**	**Pn**	**06 00 35.4**	**+0.8**
PDG				Sn		**Sn**	**Sn**	**06 00 51.9**	**+3.4**
TTG	**Podgorica**	**1.02**	**352**	*e*Pg		**Pn**	**Pn**	**06 00 35.1**	**+0.5**
TTG	**Podgorica**	**1.02**	**352**	*e*Pg		**Pn**	**Pn**	**06 00 36.4**	**+1.8**
TTG				*e*Sg		**Sn**	**Sn**	**06 00 52.6**	**+4.1**
BCI	**Bajram Curri**	**1.06**	**26**	*i* PG		**Pn**	**Pn**	**06 00 34.9**	**-0.2**
BCI				*i* PG		**Sn**	**Sn**	**06 00 51.4**	**+2.0**
OHR	**Ohrid**	**1.07**	**106**	*i* Pg		**Pg**	**Pn**	**06 00 33.7**	**-2.1**
OHR				*i* Sg		**Sb**	**Sb**	**06 00 50.3**	**+1.6**
OHR				*e*Lg		Lg		06 00 50.8	
	comp=N,6μm,0.9s								
OHR				*e*Lg		Lg		06 00 51.1	
	comp=E,3μm,0.7s								
CEME	**Cevo**	**1.19**	**341**	*e*Pg		**Pn**	**Pn**	**06 00 38.5**	**+1.4**
CEME				*e*Sg		**Sn**	**Sn**	**06 00 57.9**	**+5.0**
TPE	**Tepelena**	**1.20**	**159**	P		**Pn**	**Pn**	**06 00 37.7**	**+0.6**
TPE				S		**Sb**	**Sb**	**06 00 55.2**	**+2.6**
TPE	**Tepelena**	**1.20**	**159**	*i* PG		**Pn**	**Pn**	**06 00 37.1**	**+0.1**
TPE				*i* PG		**Sn**	**Sn**	**06 00 53.2**	**+0.2**
PVY	**Plav**	**1.24**	**18**	*e*Pg		**Pn**	**Pn**	**06 00 38.2**	**+0.5**
PVY				*e*Sg		**Sn**	**Sn**	**06 00 59.5**	**+5.5**
HCY	**Herceg Novi**	**1.25**	**326**⇑	*i*Pg		**Pn**	**Pn**	**06 00 39.8**	**+2.0**
HCY				*e*Sg		**Sn**	**Sn**	**06 00 59.3**	**+5.1**
HCY	**Herceg Novi**	**1.25**	**326**	*e*Pg		**Pn**	**Pn**	**06 00 39.4**	**+1.6**
HCY				*e*Sg		**Sn**	**Sn**	**06 00 59.6**	**+5.4**
NKME	**Niksic**	**1.40**	**345**	*e*Pg		**Pg**	**Pn**	**06 00 42.0**	**-0.1**
NKME				*e*Sg		**Sn**	**Sn**	**06 01 03.5**	**+5.6**
NKY	**Niksic**	**1.43**	**347**	*e*Pg		**Pg**	**Pn**	**06 00 42.5**	**-0.3**
NKY				*e*Sg		**Sg**	**Sn**	**06 01 04.6**	**+3.1**
IVA	**Berane**	**1.49**	**13**	*e*Pg		**Pg**	**Pn**	**06 00 43.2**	**-0.7**
IVA	**Berane**	**1.49**	**13**	*e*Pg		**Pg**	**Pn**	**06 00 43.5**	**-0.4**
IVA				*e*Sg		**Sg**	**Sn**	**06 01 05.9**	**+2.6**
TREB	**Trebinje**	**1.53**	**328**	*e*Pg		**Pg**	**Pn**	**06 00 45.1**	**+0.5**
TREB				*e*Sg		**Sg**	**Sn**	**06 01 07.3**	**+2.7**
TREB	**Trebinje**	**1.53**	**328**⇑	*i*Pn		**Pg**	**Pn**	**06 00 43.6**	**-1.0**
TREB				*e*Sn		**Sg**	**Sn**	**06 01 05.8**	**+1.2**
SCTE	**Santa Cesarea**	**1.54**	**209**	*i* PN		**Pn**	**Pn**	**06 00 42.5**	**+0.9**
SCTE	**Santa Cesarea**	**1.54**	**209**	P		**Pn**	**Pn**	**06 00 42.5**	**+0.9**
SCTE	**Santa Cesarea**	**1.54**	**209**			**Pn**	**Pn**	**06 00 42.4**	**+0.7**
SCTE				Sn		**Sn**	**Sn**	**06 01 01.7**	**+0.5**
NEST	**Nestorio**	**1.58**	**129**	P		**Pn**	**Pn**	**06 00 44.1**	**+1.8**
NEST				S		**Sn**	**Sn**	**06 01 05.1**	**+2.8**
	comp=E,1μm,0.9s								
NEST	**Nestorio**	**1.58**	**129**	P		**Pn**	**Pn**	**06 00 43.3**	**+1.0**
NEST				AML		AML		06 01 10.4	
	comp=E,2983μm,0.9s								
NEST				AML		AML		06 01 23.8	
	comp=N,3411μm,1.9s								
DBRK	**Dubrovnik**	**1.58**	**323**	*e*Pn		**Pg**	**Pn**	**06 00 44.6**	**-0.9**
FNA	**Florina**	**1.59**	**113**	P		**Pn**	**Pn**	**06 00 43.5**	**+1.0**
FNA				S		**Sb**	**Sb**	**06 01 05.5**	**+1.6**
FNA	**Florina**	**1.59**	**113**	P		**Pn**	**Pn**	**06 00 43.2**	**+0.7**
FNA								06 01 04.6	
FNA	**Florina**	**1.59**	**113**	*i* PN		**Pn**	**Pn**	**06 00 43.6**	**+1.1**
FNA				*i* PN		**Sb**	**Sb**	**06 01 06.3**	**+2.4**
FNA	**Florina**	**1.59**	**113**	P		**Pn**	**Pn**	**06 00 43.4**	**+0.9**
FNA	**Florina**	**1.59**	**113**			**Pn**	**Pn**	**06 00 43.2**	**+0.7**
FNA				Sn		**Sn**	**Sn**	**06 01 04.6**	**+1.9**
SKO	**Skopje**	**1.59**	**69**	*i* Pn		**Pg**	**Pn**	**06 00 44.3**	**-1.5**
SRN	**Sarande**	**1.59**	**164**	P		**Pn**	**Pn**	**06 00 42.8**	**+0.3**
SRN				S		**Sn**	**Sn**	**06 01 05.7**	**+3.1**
	comp=N,950nm,0.6s								
SRN	**Sarande**	**1.59**	**164**	*i* PN		**Pn**	**Pn**	**06 00 42.7**	**+0.3**
SRN				*i* PN		**Sb**	**Sb**	**06 01 04.8**	**+0.9**
BRY	**Bratogost**	**1.63**	**336**	*e*Pn		**Pg**	**Pn**	**06 00 45.1**	**-1.4**
BRY				*e*Sn		**Sg**	**Sn**	**06 01 09.6**	**+1.9**
CGL1	**Ceglie Messapi**	**1.67**	**244**	*e*Pn		**Pn**	**Pn**	**06 00 44.1**	**+0.5**
KASA	**Kassiopi**	**1.71**	**167**	P		**Pn**	**Pn**	**06 00 44.5**	**+0.5**
KASA				AML		AML		06 01 10.6	
	comp=E,4362μm,0.4s								
KASA				AML		AML		06 01 14.5	
	comp=N,3778μm,0.6s								
UPM	**Unac-Piva**	**1.83**	**348**	*e*Pn		**Pg**	**Pn**	**06 00 48.3**	**-2.0**
UPM				*e*Sn		**Sg**	**Sn**	**06 01 14.2**	**+0.1**
TAR1	**Taranto**	**1.86**	**242**	*e*Pn		**Pn**	**Pn**	**06 00 46.7**	**+0.6**
TAR1				Sn		**Sg**	**Sn**	**06 01 18.3**	**+3.2**
SJES	**Sjenica**	**1.88**	**12**	*e*Pg		**Pg**	**Pn**	**06 00 50.0**	**-1.3**
SJES				*e*Sg		**Sg**	**Sn**	**06 01 13.1**	**-2.7**
NOCI	**Noci**	**1.91**	**252**	P		**Pn**	**Pn**	**06 00 47.2**	**+0.5**
MASS	**Massafra**	**1.91**	**246**	*e*Pn		**Pn**	**Pn**	**06 00 48.1**	**+1.3**
PLE	**Pljevlja**	**1.91**	**359**	*e*Pn		**Pg**	**Pn**	**06 00 49.3**	**-2.6**
PLE				*e*Sn		**Sg**	**Sn**	**06 01 16.0**	**-0.7**
STON	**Ston**	**1.95**	**319**	*i* Pn		**Pb**	**Pb**	**06 00 49.3**	**-0.8**
STON	**Ston**	**1.95**	**319**⇓	*i*Pn		**Pb**	**Pb**	**06 00 49.1**	**-1.0**
STON				*e*Sn		**Sg**	**Sn**	**06 01 16.2**	**-1.6**
IGT	**Igoumenitsa**	**2.00**	**160**	P		**Pn**	**Pn**	**06 00 48.7**	**+0.6**
IGT	**Igoumenitsa**	**2.00**	**160**	P		**Pn**	**Pn**	**06 00 48.3**	**+0.2**
JAN	**Janina**	**2.06**	**148**	P		**Pn**	**Pn**	**06 00 50.2**	**+1.3**
JAN	**Janina**	**2.06**	**148**	P		**Pn**	**Pn**	**06 00 49.6**	**+0.7**
KPRO	**Kipourio**	**2.06**	**134**	P		**Pn**	**Pn**	**06 00 50.6**	**+1.6**
KPRO	**Kipourio**	**2.06**	**134**	P		**Pn**	**Pn**	**06 00 50.0**	**+1.0**
KZN	**Kozani**	**2.08**	**121**	P		**Pn**	**Pn**	**06 00 50.3**	**+1.0**
KZN				S		**Sn**	**Sn**	**06 01 17.6**	**+2.7**
	comp=N,980nm,0.8s								
KZN	**Kozani**	**2.08**	**121**	P		**Pn**	**Pn**	**06 00 49.6**	**+0.3**
KZN				S		**Sn**	**Sn**	**06 01 15.2**	**+0.3**
KZN				AML		AML		06 01 23.4	
	comp=N,2272μm,0.8s								
KZN				AML		AML		06 01 30.9	
	comp=E,2446μm,1.3s								
SELS	**Selova**	**2.19**	**34**	*e*Pn		**Pb**	**Pb**	**06 00 52.5**	**-1.7**
SELS				*e*Sg		**Sg**	**Sb**	**06 01 21.7**	**-3.8**
RUDO	**Rudo**	**2.20**	**359**	*e*Pn		**Pb**	**Pb**	**06 00 53.2**	**-1.2**
RUDO				*e*Sn		**Sg**	**Sb**	**06 01 23.7**	**-2.2**
MATE	**Matera**	**2.21**	**251**	⇑P		**Pn**	**Pn**	**06 00 51.7**	**+0.7**
MATE	**Matera**	**2.21**	**251**	⇓S		**Sn**	**Sn**	**06 01 20.4**	**+2.7**
MATE	**Matera**	**2.21**	**251**			**Pn**	**Pn**	**06 00 51.6**	**+0.7**
MATE						**Sn**	**Sn**	**06 01 20.4**	**+2.7**
IVAS	**Ivanjica**	**2.22**	**13**	*e*Pn		**Pb**	**Pb**	**06 00 53.4**	**-1.4**
IVAS				*e*Sg		**Sg**	**Sb**	**06 01 23.8**	**-3.4**
BARS	**Barje**	**2.25**	**51**	*e*Pg		**Pb**	**Pb**	**06 00 53.2**	**-2.1**
BARS	**Barje**	**2.25**	**51**	*e*Pn		Pg		06 01 05.9 +7.6	
BARS				*e*Sg		**Sb**	**Sb**	**06 01 23.0**	**+0.2**
GRG	**Griva**	**2.28**	**101**	P		**Pn**	**Pn**	**06 00 52.9**	**+1.0**
GRG				S		**Sn**	**Sn**	**06 01 21.2**	**+1.6**
	comp=E,1μm,0.8s								
GRG	**Griva**	**2.28**	**101**	P		**Pn**	**Pn**	**06 00 52.7**	**+0.8**
VAY	**Valandovo**	**2.35**	**91**	*e*Pn		**Pn**	**Pn**	**06 00 53.8**	**+0.9**
VAY				*e*Sg		**Sb**	**Sb**	**06 01 26.2**	**+0.4**
VAY	**Valandovo**	**2.35**	**91**	*i* Pn		**Pn**	**Pn**	**06 00 53.6**	**+0.7**
BBLS	**Lazići**	**2.45**	**359**	*e*Pn		**Pb**	**Pb**	**06 00 57.1**	**-1.6**
BBLS	**Lazići**	**2.45**	**359**⇑	*i* Pn		**Pb**	**Pb**	**06 00 57.1**	**-1.6**
BBLS				*e*Sn		**Sb**	**Sb**	**06 01 28.7**	**+0.2**
MAKA	**Makarska**	**2.59**	**317**	*i* Pn		**Pn**	**Pn**	**06 00 58.2**	**+2.0**
MAKA				Sn		**Sn**	**Sn**	**06 01 29.4**	**+2.2**
KNT	**Kendrikon**	**2.62**	**94**	P		**Pn**	**Pn**	**06 00 57.3**	**+0.8**
KNT				S		**Sn**	**Sn**	**06 01 30.1**	**+2.2**
	comp=E,438nm,0.9s								
KNT	**Kendrikon**	**2.62**	**94**	P		**Pn**	**Pn**	**06 00 57.4**	**+0.8**
GRUS	**Gruza**	**2.64**	**20**	*e*Pn		**Pb**	**Pb**	**06 00 59.2**	**-2.7**
GRUS				*e*Sg		**Sg**	**Sb**	**06 01 35.8**	**-4.2**
LIT	**Litokhoron**	**2.66**	**119**	P		**Pn**	**Pn**	**06 00 57.6**	**+0.4**
LIT	**Litokhoron**	**2.66**	**119**	P		**Pn**	**Pn**	**06 00 57.1**	**-0.1**
LIT	**Litokhoron**	**2.66**	**119**	P		**Pn**	**Pn**	**06 00 57.5**	**+0.3**
LIT	**Litokhoron**	**2.66**	**119**			**Pn**	**Pn**	**06 00 57.1**	**-0.1**
HAPS	**Han Pijesak,Bl**	**2.69**	**352**	*e*Pn		**Pb**	**Pb**	**06 00 59.6**	**-3.2**
HAPS	**Han Pijesak,Bl**	**2.69**	**352**⇑	*i* Pn		**Pb**	**Pb**	**06 00 59.6**	**-3.2**
HAPS				*e*Sn		**Sb**	**Sb**	**06 01 34.4**	**-1.2**
THL	**Klokotos Trika**	**2.70**	**133**	P		**Pn**	**Pn**	**06 00 58.7**	**+1.1**
THL	**Klokotos Trika**	**2.70**	**133**	P		**Pn**	**Pn**	**06 00 58.6**	**+1.0**
DIVS	**Divibare**	**2.71**	**8**	*e*Pn		**Pb**	**Pb**	**06 01 00.2**	**-2.9**
DIVS				*e*Sg		**Sg**	**Sb**	**06 01 38.8**	**-3.4**
DIVS	**Divibare**	**2.71**	**8**⇑	*i* Pn		**Pb**	**Pb**	**06 01 00.0**	**-3.1**
DIVS				*e*Sn		**Sb**	**Sb**	**06 01 35.4**	**-0.7**
ACER	**Acerenza**	**2.72**	**258**			**Pn**	**Pn**	**06 00 59.4**	**+1.4**
TSLK	**Tsoukalades, L**	**2.75**	**160**	P		**Pn**	**Pn**	**06 00 58.7**	**+0.3**
TSLK	**Tsoukalades, L**	**2.75**	**160**	P		**Pn**	**Pn**	**06 00 58.1**	**-0.2**
BOVS	**Bovan**	**2.78**	**36**	*e*Pn		**Pb**	**Pb**	**06 01 01.0**	**-3.2**
BOVS				*e*Sg		**Sg**	**Sb**	**06 01 40.0**	**-4.3**
THE	**Thessaloniki**	**2.78**	**105**	P		**Pn**	**Pn**	**06 00 59.5**	**+0.8**
THE				S		**Sn**	**Sn**	**06 01 34.6**	**+2.8**
	comp=E,270nm,0.7s								
THE	**Thessaloniki**	**2.78**	**105**	P		**Pn**	**Pn**	**06 00 59.1**	**+0.4**
LKD2	**Lefkada island**	**2.79**	**160**	P		**Pn**	**Pn**	**06 00 58.7**	**-0.2**
LKD2	**Lefkada island**	**2.79**	**160**	P		**Pn**	**Pn**	**06 00 58.5**	**-0.4**
SGRT	**San Giovanni R**	**2.80**	**278**			**Pn**	**Pn**	**06 00 59.9**	**+0.8**
SGRT				Sn		**Sn**	**Sn**	**06 01 34.3**	**+1.8**
HVAR	**Hvar**	**2.83**	**309**	*e*Pn		**Pn**	**Pn**	**06 01 01.0**	**+1.5**
HORT	**Hortiatis**	**2.88**	**105**	P		**Pn**	**Pn**	**06 01 00.6**	**+0.3**
HORT				S		**Sn**	**Sn**	**06 01 36.5**	**+1.9**
	comp=E,215nm,1.0s								
HORT	**Hortiatis**	**2.88**	**105**	P		**Pn**	**Pn**	**06 01 00.6**	**+0.3**
TRUS	**Trudelj**	**2.89**	**14**	*e*Pn		**Pb**	**Pb**	**06 01 02.6**	**-3.6**
TRUS				*e*Sg		**Sg**	**Sb**	**06 01 45.8**	**-2.2**
EVGI	**Lefkada island**	**2.94**	**161**	P		**Pn**	**Pn**	**06 01 01.5**	**+0.5**
EVGI	**Lefkada island**	**2.94**	**161**	P		**Pn**	**Pn**	**06 01 00.2**	**-0.8**
ZAPS	**Zavoj**	**3.00**	**51**	*e*Pn		**Pn**	**Pn**	**06 01 02.6**	**+0.7**
ZAPS				*e*Sn		**Sn**	**Sn**	**06 01 35.8**	**-1.7**
SOH	**Sokhos**	**3.01**	**100**	P		**Pn**	**Pn**	**06 01 02.7**	**+0.7**
SOH				S		**Sn**	**Sn**	**06 01 39.3**	**+1.6**
SOH	**Sokhos**	**3.01**	**100**	P		**Pn**	**Pn**	**06 01 02.7**	**+0.7**
TIP	**Timpagrande**	**3.04**	**223**	P		**Pn**	**Pn**	**06 01 02.4**	**0.0**
TIP	**Timpagrande**	**3.04**	**223**	⇑P		**Pn**	**Pn**	**06 01 02.7**	**+0.3**
TIP	**Timpagrande**	**3.04**	**223**			**Pn**	**Pn**	**06 01 02.5**	**+0.1**
VTS	**Vitosha**	**3.07**	**66**	*e*Pn		**Pn**	**Pn**	**06 01 04.7**	**+1.8**
VTS				*e*Sg		**Sb**	**Sb**	**06 01 45.9**	**-0.6**
VTS	**Vitosha**	**3.07**	**66**	⇑P		**Pn**	**Pn**	**06 01 04.8**	**+1.8**
VTS	**Vitosha**	**3.07**	**66**	⇓S		**Sn**	**Sn**	**06 01 40.8**	**+1.5**
VTS	**Vitosha**	**3.07**	**66**			**Pn**	**Pn**	**06 01 05.0**	**+2.1**
VTS				Sn		**Sn**	**Sn**	**06 01 40.7**	**+1.5**
FSK	**Fiskardo**	**3.08**	**163**	P		**Pn**	**Pn**	**06 01 02.0**	**-0.8**
EVR	**Evrytania**	**3.09**	**143**	P		**Pn**	**Pn**	**06 01 04.6**	**+1.5**
EVR	**Evrytania**	**3.09**	**143**	P		**Pn**	**Pn**	**06 01 04.5**	**+1.4**
CUC	**Castrocucco**	**3.10**	**244**	P		**Pn**	**Pn**	**06 01 04.0**	**+0.7**
PDO	**Prodromos**	**3.12**	**154**	P		**Pn**	**Pn**	**06 01 03.6**	**+0.2**
PDO	**Prodromos**	**3.12**	**154**	P		**Pn**	**Pn**	**06 01 03.3**	**-0.1**
SVIS	**Svilajnac**	**3.13**	**24**	*e*Pn		**Pn**	**Pn**	**06 01 03.4**	**-0.2**
TEKS	**Tekeris**	**3.13**	**1**	*e*Pn		**Pn**	**Pn**	**06 01 05.7**	**+2.1**
TEKS				*e*Sg		**Sg**	**Sg**	**06 01 54.7**	**-1.0**
TEKS	**Tekeris**	**3.13**	**1**⇑	*i* Pn		**Pn**	**Pn**	**06 01 05.4**	**+1.8**
TEKS				*e*Sn		**Sb**	**Sb**	**06 01 45.5**	**-2.6**
SRS	**Serrai**	**3.14**	**94**	P		**Pn**	**Pn**	**06 01 04.4**	**+0.6**
SRS	**Serrai**	**3.14**	**94**	P		**Pn**	**Pn**	**06 01 04.2**	**+0.5**
ZAGS	**Zajecar**	**3.16**	**40**	*e*Pn		**Pn**	**Pn**	**06 01 05.6**	**+1.7**
ZAGS				*e*Sn		**Sn**	**Sn**	**06 01 41.2**	**0.0**
MAKR	**Makrakomi, Fth**	**3.16**	**139**	P		**Pn**	**Pn**	**06 01 05.3**	**+1.2**
MAKR				S		**Sn**	**Sn**	**06 01 44.8**	**+3.4**
MAKR	**Makrakomi, Fth**	**3.16**	**139**	P		**Pn**	**Pn**	**06 01 05.2**	**+1.2**
PLG	**Polygyros**	**3.21**	**108**	P		**Pn**	**Pn**	**06 01 05.2**	**+0.5**
PLG				S		**Sn**	**Sn**	**06 01 45.4**	**+2.9**
PLG	**Polygyros**	**3.21**	**108**	P		**Pn**	**Pn**	**06 01 05.8**	**+1.1**
PVO	**Paravola**	**3.22**	**150**	P		**Pn**	**Pn**	**06 01 05.5**	**+0.6**
PVO	**Paravola**	**3.22**	**150**	P		**Pn**	**Pn**	**06 01 05.5**	**+0.6**
BLKB	**Belogradchik**	**3.25**	**46**	⇑S		**Sb**	**Sb**	**06 01 48.2**	**-3.4**
AGG	**Agios Georgios**	**3.26**	**136**	P		**Pn**	**Pn**	**06 01 06.1**	**+0.7**
AGG	**Agios Georgios**	**3.26**	**136**	P		**Pn**	**Pn**	**06 01 06.1**	**+0.7**
AGG	**Agios Georgios**	**3.26**	**136**	P		**Pn**	**Pn**	**06 01 06.2**	**+0.7**
AGG	**Agios Georgios**	**3.26**	**136**			**Pn**	**Pn**	**06 01 06.1**	**+0.7**
VLS	**Valsamata**	**3.35**	**164**	P		**Pn**	**Pn**	**06 01 06.8**	**+0.1**
VLS	**Valsamata**	**3.35**	**164**	P		**Pn**	**Pn**	**06 01 05.9**	**-0.8**
ANX	**Ano Chora**	**3.40**	**145**	P		**Pn**	**Pn**	**06 01 08.8**	**+1.4**
ANX	**Ano Chora**	**3.40**	**145**	P		**Pn**	**Pn**	**06 01

MLR Sn **06 03 00.2 +2.8**
DOPR Dopca 6.26 41 ⇑P Pn **06 01 49.5 +2.8**
DOPR Dopca 6.26 41 Pn **06 01 49.5 +2.8**
APE Apeiranthos 6.42 131⇑ eP Pn **06 01 48.3 -0.5**
OSSC Osservatorio P 6.42 292 Pn **06 01 50.5 +1.8**
ARSA Arzberg 6.47 336 ePn Pn **06 01 51.5 +1.9**
SNR=7.8
ARSA Arzberg 6.47 336 ePn Pn **06 01 51.2 +1.7**
comp=Z,5.4nm,0.3s,SNR=8.2
PSZ Piszkesteto 6.51 3 P Pn **06 01 51.7 +1.6**
PSZ Piszkesteto 6.51 3 ⇑P Pn **06 01 52.4 +2.3**
PSZ Piszkesteto 6.51 3 Pn **06 01 51.6 +1.6**
PSZ Piszkesteto 6.51 3 Pn **06 01 52.4 +2.3**
OZUR 6.55 42 ⇓P Pn **06 01 53.4 +2.8**
OZUR 6.55 42 Pn **06 01 53.4 +2.8**
MYKA Terra Mystica 6.68 323 ePn Pn **06 01 53.9 +1.5**
comp=Z,3.6nm,0.2s,SNR=7.5
MYKA Sn Sn **06 03 09.2 +1.1**
comp=Z,33nm,0.5s
PLOR Plostina 6.85 47 P Pn **06 01 57.4 +2.7**
PLOR Plostina 6.85 47 ⇑P Pn **06 01 57.4 +2.7**
PLOR Plostina 6.85 47 Pn **06 01 57.4 +2.7**
STAL STALIGIAL 6.86 317 Pn Pn **06 01 56.9 +2.0**
STAL Sn Sn **06 03 11.6 -1.0**
ZCCA Zocca 6.88 298 Pn **06 01 56.9 +1.8**
ZCCA Sn Sn **06 03 14.4 +1.5**
TEOL Teolo 6.90 307 Pn **06 01 56.3 +1.0**
TEOL Sn Sn **06 03 09.9 -3.4**
VRI Vrincioaia 6.90 47 P Pn **06 01 57.4 +2.0**
VRI Vrincioaia 6.90 47 ⇑P Pn **06 01 57.4 +2.0**
VRI Vrincioaia 6.90 47 Pn **06 01 57.4 +2.0**
CONA Conrad Observa 6.99 340 ePn Pn **06 01 60.0 +3.3**
comp=Z,0.7nm,0.2s
HARR Harsova 7.02 59 P Pn **06 01 59.9 +2.9**
HARR Harsova 7.02 59 ⇑P Pn **06 01 59.9 +2.9**
HARR Harsova 7.02 59 Pn **06 01 59.9 +2.9**
TRPA Tarpa 7.06 17 ⇑P Pn **06 02 00.3 +2.8**
TRPA Tarpa 7.06 17 Pn **06 02 00.3 +2.8**
VYHS Vyhne 7.09 357 eP Pn **06 02 00.7 +2.7**
VYHS e **06 03 29.9**
VYHS Vyhne 7.09 357 ePN Pn **06 02 00.7 +2.7**
VYHS eSN Sn **06 03 20.9 +2.8**
KECS Kecovo 7.10 6 eP Pn 06 02 02.5 +4.3
KECS e 06 03 23.1
KECS Kecovo 7.10 6 ePN Pn 06 02 02.5 +4.3
KECS eSN Sn **06 03 23.1 +4.7**
KECS eLG Lg 06 03 31.7
MODS Modra-Piesok 7.12 348 eP Pn **06 02 01.0 +2.6**
MODS e 06 03 22.1
MODS Modra-Piesok 7.12 348 ePN Pn **06 02 01.0 +2.6**
MODS eSN Sn **06 03 22.1 +3.2**
MODS eLG Lg 06 03 35.9
KBA Koelnbreinsper 7.15 324 ePn Pn **06 02 00.3 +1.3**
SNR=12
KBA eSn Sn **06 03 20.9 +1.0**
SNR=2.6
KBA Koelnbreinsper 7.15 324 ePn Pn **06 02 00.6 +1.6**
comp=Z,5.4nm,0.3s,SNR=16
KBA Sn Sn **06 03 21.4 +1.5**
comp=Z,23nm,0.5s
SMOL Smolenice 7.24 349 eP Pn 06 02 07.7 +7.7
SMOL Smolenice 7.24 349 ePN Pn 06 02 07.7 +7.7
SMOL ePG Pg 06 02 36.7 +3.1
TIRR Tirgusor 7.25 62 P Pn **06 02 01.5 +1.4**
TIRR 06 03 25.2
TIRR Tirgusor 7.25 62 Pn Pn **06 02 01.5 +1.4**
TIRR Sn Sn **06 03 25.2 +3.2**
ABTA Abfaltersbach 7.30 319 ePn Pn **06 02 01.7 +0.8**
comp=Z,6.6nm,0.2s,SNR=22
ABTA eSn Sn **06 03 24.5 +1.2**
comp=Z,44nm,0.6s
CTI Castel Tesino 7.30 312 P Pn **06 02 02.0 +1.1**
CTI 06 03 22.8
CTI Castel Tesino 7.30 312 Pn **06 02 02.0 +1.1**
CTI Sn Sn **06 03 22.8 -0.6**
BIZ Bicaz 7.30 39 ⇓P Pn **06 02 03.9 +3.0**
BIZ Bicaz 7.30 39 Pn **06 02 03.9 +3.0**
CFR Carcaliu 7.37 56 P Pn **06 02 04.3 +2.5**
CFR Carcaliu 7.37 56 ⇓P Pn **06 02 04.3 +2.5**
CFR Carcaliu 7.37 56 Pn **06 02 04.3 +2.5**
MOA Molln 7.41 332 ePn Pn **06 02 05.3 +2.9**
MOA Molln 7.41 332 ePn Pn **06 02 04.8 +2.3**
SNR=16
MOA eSn Sn **06 03 28.7 +2.6**
SNR=3.8
MOA Molln 7.41 332 ePn Pn **06 02 05.3 +2.9**
comp=Z,1.8nm,0.2s
MOA Sn Sn **06 03 29.2 +3.1**
comp=Z,33nm,0.5s
BURAR Bucovina Array 7.44 32 ⇑P Pn **06 02 06.1 +3.2**
BURAR Bucovina Array 7.44 32 Pn **06 02 06.1 +3.2**
BUR08 Bucovina Ar. S 7.46 31 Pn **06 02 06.9 +3.7**
IDI Anoyia 7.47 143 Pn Pn **06 02 00.8 -2.4**
comp=Z,0.6nm,0.3s,baz=339,slow=15,SNR=4.0
IDI Sn Sn 06 03 21.2 -6.3
comp=Z,0.5nm,0.3s,baz=324,slow=19,SNR=2.4
IDI LR LR 06 06 01.6
comp=Z,99nm,19.7s,baz=147,slow=47
PRMA PARMA 7.47 300 Pn Pn **06 02 05.0 +1.8**
UZH Uzhgorod 7.49 15 eP Pn 06 02 08.4 +5.0
UZH eS Sn **06 03 35.6 +7.7**
UZH MLR MLR
comp=N,190nm,15.0s
UZH MLR MLR
comp=E,87nm,15.0s
UZH MLR MLR
comp=Z,110nm,15.0s
JAVC Velka Javorina 7.55 351 ePN Pn **06 02 06.3 +2.0**
LANS Liptovska Anna 7.73 0 ePG 06 02 43.1
LANS eSN Sn **06 03 39.3 +5.3**
LANS eLG Lg 06 03 48.5
KOLS Kolonicke sedl 7.78 14 eP Pn **06 02 10.4 +3.0**
KOLS e 06 03 38.1
KOLS Kolonicke sedl 7.78 14 ePN Pn **06 02 10.4 +3.0**
KOLS ePG 06 02 53.4
KOLS eSN Sn **06 03 38.1 +3.1**
KOLS eLG Lg 06 03 39.4
PGF Pioggiola 7.86 282 ePn Pn **06 02 09.0 +0.3**
PGF eSn Sn **06 03 31.8 -5.5**
comp=Z,18nm,0.8s
RJOB Jochberg 7.90 325 ePn Pn **06 02 11.8 +2.6**
SNR=14
RJOB eSn Sn **06 03 39.8 +1.7**
SNR=3.6
WTTA Wattenberg 8.09 319 ePn Pn **06 02 14.6 +2.8**
SNR=18
WTTA eSn Sn **06 03 43.9 +1.0**
SNR=8.5
WTTA Wattenberg 8.09 319 ePn Pn **06 02 13.9 +2.1**
comp=Z,19nm,0.3s
WTTA Sn Sn **06 03 42.8 -0.1**
comp=Z,87nm,0.5s
VRAC Vranov 8.14 347 P Pn **06 02 12.0 -0.4**
VRAC Vranov 8.14 347 Pn Pn **06 02 12.0 -0.4**
comp=Z,0.8nm,0.3s,baz=185,slow=11,SNR=2.6
WATA Walderalm 8.17 319 ePn Pn **06 02 15.6 +2.8**
comp=Z,11nm,0.2s,SNR=15
WATA Sn Sn **06 03 46.1 +1.3**
comp=Z,61nm,0.6s
SQTA Sankt Quirin 8.27 317 ePn Pn **06 02 16.9 +2.6**
comp=Z,6.9nm,0.2s,SNR=15
SQTA *i* Sn Sn **06 03 48.2 +0.8**
comp=Z,36nm,0.5s
FETA Feichten 8.40 315 ePn Pn **06 02 18.2 +2.1**
comp=Z,2.0nm,0.3s,SNR=6.9
FETA Sn Sn **06 03 50.6 +0.2**
comp=Z,35nm,0.6s
MOTA Moosalm 8.41 318 ePn Pn **06 02 18.3 +2.1**
comp=Z,7.7nm,0.2s,SNR=18
MOTA Sn Sn **06 03 53.0 +2.3**
comp=Z,132nm,0.8s
FUORN Ofenpass-Fuorn 8.41 311 Pn **06 02 18.5 +2.1**
FUORN Sn Sn **06 03 50.9 -0.1**
KARP Karpathos 8.42 132 Pn Pn **06 02 17.6 +1.3**
KARP Sn Sn **06 03 52.6 +1.6**
GEC2 GERESS Array S 8.46 333 ePn Pn **06 02 18.2 +1.4**
SNR=3.2
GEC2 eSn Sn **06 03 54.8 +2.9**
SNR=3.0
GEC2 GERESS Array S 8.46 333 Pn **06 02 18.8 +1.9**
GEC2 Sn Sn **06 03 52.5 +0.6**
GERES GERESS Array B 8.46 333 Pn Pn **06 02 17.6 +0.7**
comp=Z,1.0nm,0.3s,baz=160,slow=14,SNR=18
GERES Sn Sn **06 03 51.4 -0.5**
comp=Z,4.4nm,0.3s,baz=152,slow=22,SNR=12
GERES LR LR 06 06 24.3
comp=Z,477nm,19.1s,baz=162,slow=44
MORC Moravsky Berou 8.46 352 Pn Pn **06 02 20.4 +3.6**
MORC eSn Sn **06 03 56.5 +4.6**
KWP Kalwaria Pacla 8.53 14 P Pn 06 02 22.5 +4.8
KWP Kalwaria Pacla 8.53 14 Pn 06 02 22.5 +4.9
RETA Reutte 8.68 317 ePn Pn **06 02 21.7 +1.9**
comp=Z,2.3nm,0.3s
RETA eSn Sn **06 03 57.9 +0.7**
comp=Z,39nm,0.5s
DAVOX Davos/Dischmat 8.72 311 Pn Pn **06 02 22.1 +1.6**
comp=Z,2.1nm,0.3s,baz=114,slow=19,SNR=16
DAVOX Sn Sn **06 03 57.2 -1.3**
comp=Z,1.5nm,0.3s,baz=135,slow=20,SNR=2.8
DAVOX LR LR 06 06 48.3
comp=Z,254nm,18.4s,baz=123,slow=45
KIS Kishinev 8.74 47 *e* 06 03 50.0
KIS LRM MLR 06 06 16.0
comp=Z,2µm,16.0s
KHC Kasperske Hory 8.75 334 eP Pn **06 02 21.8 +1.0**
KHC *e* 06 03 58.5
KHC MLR MLR
comp=Z,700nm,10.5s
KHC Kasperske Hory 8.75 334 ePN Pn **06 02 21.8 +1.0**
KHC *ex* x 06 02 38.5
KHC *eSN* Sn **06 03 58.5 -0.4**
KHC *ex* x 06 04 33.5
KHC AMS AMS 06 06 10.0
comp=Z,700nm,10.5s
KHC Kasperske Hory 8.75 334 Pn **06 02 22.3 +1.6**
KHC Sn Sn **06 04 02.1 +3.2**
OJC Ojcow 8.81 1 P Pn 06 02 26.3 +4.8
OJC 06 04 04.0
OJC Ojcow 8.81 1 Pn Pn 06 02 26.3 +4.8
OJC Sn Sn **06 04 04.0 +3.7**
TUE Stuetta 8.86 308 Pn Pn **06 02 24.6 +2.2**
TUE Sn **06 04 00.1 -1.8**
LVV L'vov 8.99 19 eP Pn 06 02 11.5 -13
WET Wettzell 9.00 331 ePn Pn **06 02 25.1 +0.9**
SNR=3.8
WET eSn Sn **06 04 05.4 +0.3**
SNR=1.1
DAVA Damuels 9.02 314 ePn Pn **06 02 26.4 +1.8**
SNR=5.7
DAVA eSn Sn **06 04 06.2 +0.6**
SNR=4.2
DAVA Damuels 9.02 314 ePn Pn **06 02 27.3 +2.7**
comp=Z,2.0nm,0.2s
DAVA Sn Sn **06 04 05.2 -0.4**
comp=Z,57nm,0.6s
UBR Ueberruh 9.14 316 ePn Pn **06 02 27.8 +1.6**
SNR=2.5
PLONS Plons/SG 9.15 311 ePn Pn **06 02 29.0 +2.6**
SNR=3.5
SBF Sospel 9.18 289 ePn Pn **06 02 26.9 +0.2**
SBF Sospel 9.18 289 eP Pn 06 02 31.9 +5.2
SBF eSn Sn **06 04 03.7 -5.9**
comp=Z,7.7nm,0.3s
PRU Pruhonice 9.23 340 eP Pn **06 02 30.0 +2.7**
PRU Pruhonice 9.23 340 ePN Pn **06 02 30.0 +2.7**
UPC Upice 9.40 346 AMS AMS 06 07 00.0
comp=Z,900nm,8.9s
CHVC Chvalec 9.47 347 AMS AMS 06 07 00.0
comp=Z,800nm,15.1s
WILA Wila 9.63 312 ePn Pn **06 02 36.3 +3.4**
SNR=2.3
FRF La Foret Royal 9.69 287 ePn Pn **06 02 33.9 +0.2**
FRF eSn Sn **06 04 16.5 -5.6**
comp=Z,4.5nm,0.3s
KEST Kesra 9.73 238 LR LR 06 07 24.7
comp=Z,537nm,18.4s,baz=4.0,slow=44
LMR La Mourre 9.76 286 ePn Pn **06 02 34.3 -0.3**
LMR eSn Sn **06 04 18.2 -5.6**
comp=Z,1.7nm,0.3s
MBDF Montbardon 9.85 294 ePn Pn **06 02 35.8 -0.1**
MBDF eSn Sn **06 04 20.3 -5.7**
comp=Z,24nm,0.5s
BNI Bardonecchia 10.00 296 P Pn **06 02 39.0 +1.0**
BNI 06 04 28.7
BNI Bardonecchia 10.00 296 Pn Pn **06 02 39.0 +1.0**
BNI Sn Sn **06 04 28.7 -1.1**
SLE Schleitheim 10.06 313 ePn Pn **06 02 40.6 +1.9**
SNR=3.6
SENIN Lac Senin/Sane 10.06 303 Pn **06 02 39.7 +0.8**
SENIN Sn Sn **06 04 27.2 -4.2**
LPG La Plagne 10.09 298 ePn Pn **06 02 38.7 -0.6**
LPG eSn Sn **06 04 26.2 -6.0**
comp=Z,31nm,0.4s
LPL La Plagne 10.11 298 ePn Pn **06 02 39.7 +0.2**
LPL eSn Sn **06 04 26.3 -6.2**
comp=Z,26nm,0.4s
BRG Berggiesshubel 10.19 340 eP Pn 06 02 48.1 +7.6
comp=Z,7.8nm,0.9s
BRG Berggiesshubel 10.19 340 eP Pn 06 02 48.1 +7.6
BRG pmax pmax
comp=Z,8.0nm,0.9s
BALST Balsthal 10.28 309 ePn Pn **06 02 43.5 +1.7**
SNR=2.7
BALST eSn Sn **06 04 36.1 -0.4**
SNR=3.1
BFO Black Forest 10.48 315 P Pn **06 02 45.6 +1.1**
BFO 06 04 38.1
BFO Black Forest 10.48 315 ePn Pn **06 02 44.7 +0.3**
SNR=8.2
BFO eSn Sn **06 04 38.1 -3.3**
SNR=1.9
BFO Black Forest 10.48 315 Pn **06 02 45.6 +1.1**
BFO Sn Sn **06 04 38.1 -3.3**
ORIF Oris-en-Rattie 10.51 294 ePn Pn **06 02 44.7 -0.2**
ORIF eSn Sn **06 04 35.8 -6.4**
comp=Z,30nm,0.6s
SMRF Simiane la Rot 10.53 289 eP Pn 06 02 50.7 +5.6
CLL Collm 10.84 338 eP Pn **06 02 53.0 +3.7**
CLL MLR MLR
comp=Z,400nm,18.0s
CLL Collm 10.84 338 ePn Pn **06 02 53.0 +3.7**
CLL *e* 06 03 00.0
CLL *eSn* Sn 06 04 39.0 -11
CLL *eSb* 06 05 31.0
CLL *eSg* 06 06 04.0
CLL Lm MLR 06 07 00.0
comp=Z,400nm,18.0s
CABF La Chapelle 10.93 303 ePn Pn **06 02 50.7 +0.1**
CABF La Chapelle 10.93 303 eP Pn 06 02 56.5 +5.9
CABF eSn Sn **06 04 46.7 -5.7**
comp=Z,16nm,0.7s
BRTR Keskin Array B 10.93 94 Pn Pn **06 02 52.1 +1.3**
comp=Z,0.1nm,0.3s,baz=286,slow=10,SNR=3.8
HINF Hinteralfeld 11.01 310 ePn Pn **06 02 52.4 +0.6**
HINF Hinteralfeld 11.01 310 eP Pn 06 02 58.1 +6.3
HINF eSn Sn **06 04 47.7 -6.8**
comp=Z,28nm,0.6s
ECH Echery 11.05 312 Pn Pn **06 02 54.4 +2.1**
ECH Sn Sn **06 04 49.3 -6.1**
CDF Champ du Feu 11.10 313 ePn Pn **06 02 53.6 +0.6**
CDF eSn Sn **06 04 50.6 -6.0**
comp=Z,4.0nm,0.4s
HAU Haudompre 11.40 310 ePn Pn **06 02 57.4 +0.3**
HAU eSn Sn **06 04 58.2 -5.8**
comp=Z,36nm,0.6s
AKASG Malin Array Be 11.49 33 P Pn **06 02 58.0 -0.3**
AKASG Malin Array Be 11.49 33 Pn Pn **06 02 58.0 -0.3**
comp=Z,0.3nm,0.3s,baz=221,slow=12,SNR=3.8
SFTF Sexfontaines 12.27 308 ePn Pn **06 03 09.0 +0.1**
baz=128
SFTF eSn Sn **06 05 17.8 -7.3**
comp=Z,6.6nm,0.5s
SMF Signal de Mont 12.38 300 ePn Pn **06 03 09.5 -0.9**
SMF eSn Sn **06 05 20.7 -7.2**
comp=Z,23nm,0.6s
MEZF Maizieres J'vi 12.40 310 ePn Pn **06 03 11.3 +0.6**
baz=128
MEZF eSn Sn **06 05 22.1 -6.2**
comp=Z,11nm,0.5s
LOR Lormes 12.59 303 ePn Pn **06 03 12.9 -0.4**
baz=120
LOR eSn Sn **06 05 25.5 -7.5**
comp=Z,35nm,0.6s
SSF Saint Saulge 12.74 302 ePn Pn **06 03 14.3 -1.0**
SSF eSn Sn **06 05 28.9 -7.7**
comp=Z,13nm,0.5s
AVF Avril sur Loir 12.74 300 ePn Pn **06 03 14.9 -0.5**
AVF eSn Sn **06 05 29.0 -7.8**
comp=Z,11nm,0.7s
BGF Bois d'Agland 13.00 299 ePn Pn **06 03 18.3 -0.6**
BGF eSn Sn 06 05 34.6 -8.5
comp=Z,18nm,0.5s
TCF Toulx Ste Croi 13.35 297 ePn Pn **06 03 23.2 -0.5**
TCF eSn Sn **06 05 44.0 -7.6**
comp=Z,9.6nm,0.6s
HYF Humbligny 13.36 302 ePn Pn **06 03 23.5 -0.4**
HYF eSn Sn **06 05 43.5 -8.4**
DOU Dourbes 13.50 315 P Pn **06 03 25.4 -0.2**
ANN Anapa 13.57 70 eP Pn 06 03 20.9 -5.7
ANN eS Sn **06 05 50.4 -6.5**
ANN pmax pmax
comp=Z,48nm,1.4s
ETSF Etsaut 14.91 282 eSn Sn 06 06 20.1 -10
comp=Z,4.3nm,0.7s
SOC Sochi 15.11 75 eP Pn **06 03 48.2 +0.6**
SOC *e* 06 06 38.1
SOC pmax pmax
comp=Z,55nm,0.7s
SOC MLR MLR
comp=Z,174nm,15.0s
MMAI Mount Meron Ar 15.21 118 Pn Pn **06 03 45.9 -3.3**
comp=Z,2.9nm,0.3s,baz=301,slow=12,SNR=2.9
LDF La Druitiere 15.56 304 ePn Pn **06 03 54.4 +0.9**
LDF eSn Sn **06 06 36.5 -8.9**
comp=Z,2.1nm,0.5s
FLN La Foliniere 15.85 304 ePn Pn **06 03 58.0 +0.8**
baz=120
GRR Gorron 15.96 303 ePn Pn **06 03 59.4 +0.8**
GRR eSn Sn **06 06 45.9 -9.1**
comp=Z,1.7nm,0.3s
SGMF Saint Gilles 17.00 301 ePn Pn **06 04 13.2 +1.3**
KIV Kislovodsk 17.27 74 eP Pn **06 04 14.0 -1.3**
KIV pmax pmax
comp=Z,23nm,1.0s
KBZ Khabaz 17.42 75 P P **06 04 18.8 +0.5**
comp=Z,0.2nm,0.3s,baz=280,slow=11,SNR=12
KBZ LR LR 06 12 38.2
comp=Z,144nm,19.7s,baz=12,slow=43
GOF Gofitskoye 17.56 70‖ eP Pn **06 04 19.6 +0.7**
GOF pmax pmax
comp=Z,16nm,0.6s
VSU Vasula 17.68 13*d* eP P **06 04 22.2 +1.2**
VSU pmax pmax
comp=Z,179nm,0.7s
OBN Obninsk 17.75 34 eP Pn **06 04 21.3 +0.1**
OBN pmax pmax
comp=Z,32nm,1.0s
OBN MLR MLR
comp=Z,205nm,17.0s
OBN Obninsk 17.75 34 P Pn **06 04 21.3 +0.1**
comp=Z,0.4nm,0.3s,baz=245,slow=4.7,SNR=6.9
OBN LR LR 06 11 38.3
comp=Z,60nm,18.4s,baz=347,slow=39
OBN Obninsk 17.75 34 Pn Pn **06 04 21.1 -0.1**
OBN IAmb IAmb 06 04 23.1
comp=Z,31nm,1.0s
ESDC Sonseca Array 17.87 272 P P **06 04 25.6 +2.2**
comp=Z,0.3nm,0.3s,baz=127,slow=13,SNR=3.6
ZEI Tsey 18.19 78 eP P **06 04 29.4 +2.3**
ZEI pmax pmax
comp=Z,5.0nm,0.6s
MOS Moscow 18.62 34 eP P **06 04 30.9 -0.6**
HFS Hagfors 19.07 351 P P **06 04 36.6 +0.2**
comp=Z,0.5nm,0.3s,baz=171,slow=10,SNR=9.9
GNI Garni 19.18 85*c* eP P **06 04 38.7 +0.7**
GNI pmax pmax
comp=Z,100nm,1.7s
GNI Garni 19.18 85 P P **06 04 37.9 -0.1**
comp=Z,1.1nm,0.3s,baz=261,slow=17,SNR=8.2
GNI Garni 19.18 85 P P **06 04 38.6 +0.7**
GNI IAmb IAmb 06 04 39.6
comp=Z,24nm,1.1s
NC602 NORSAR Array S 19.94 349 P Pn **06 04 47.5 -0.1**
NC405 NORSAR Array S 20.28 349 P Pn 06 04 52.7 +1.1
NC405 IAmb IAmb 06 05 03.9
comp=Z,21nm,1.0s
NB201 NORSAR Array S 20.28 349 P Pn 06 04 51.7 +0.1
NB201 IAmb IAmb 06 05 10.7
comp=Z,28nm,1.1s
NB2 NORSAR Subarra 20.28 348 P P **06 04 50.4 +0.8**
comp=Z,1.2nm,0.7s,baz=162,slow=11
NOA NORSAR Array B 20.28 348 P P **06 04 49.9 +0.3**
comp=Z,0.4nm,0.6s,baz=156,slow=10,SNR=5.1
NBO00 NORSAR Array S 20.34 348 P Pn 06 04 53.2 +0.9
NBO00 IAmb IAmb 06 05 00.1
comp=Z,26nm,1.1s
EKA Eskdalemuir Ar 20.35 321 P P **06 04 51.5 +1.1**
comp=Z,2.1nm,0.6s,baz=110,slow=9.5,SNR=8.8
NC303 NORSAR Array S 20.44 349 P P **06 04 52.2 +1.0**
NC303 IAmb IAmb 06 04 59.7
comp=Z,30nm,1.1s
FINES FINESS Array B 20.45 9 P P **06 04 50.9 -0.6**
comp=Z,7.4nm,0.5s,baz=174,slow=11,SNR=29
FINES LR LR 06 14 38.7
comp=Z,129nm,18.3s,baz=192,slow=42
FIA1 FINESS Array S 20.46 9 P P **06 04 51.1 -0.3**
FIA1 IAmb IAmb 06 05 01.6
comp=Z,14nm,0.7s
NC204 NORSAR Array S 20.58 348 P Pn 06 04 54.5 -0.6
MDT Midelt 20.96 254 P P **06 04 57.9 +0.6**
comp=Z,2.1nm,1.0s,baz=110,slow=12,SNR=2.1
TMCR Tamitsa 25.21 19 eP P **06 05 39.0 -0.4**
TMCR pmax pmax
comp=Z,44nm,1.2s
KIRV Kirov 25.49 37 LR LR 06 17 05.9
comp=Z,196nm,19.1s,baz=326,slow=40
PRGR Permogore 25.66 29 eP P **06 05 40.7 -2.9**
PRGR pmax pmax
comp=Z,23nm,0.6s
AKTO Aktyubinsk 28.03 58 P P **06 06 03.8 -1.3**
comp=Z,1.5nm,0.6s,baz=285,slow=8.0,SNR=6.5
ARCES ARCESS Array B 28.36 4 P P **06 06 05.8 -2.0**
comp=Z,1.0nm,0.8s,baz=197,slow=9.0,SNR=5.1
ABKAR Akbulak array 29.24 61 P P **06 06 15.7 -0.2**
ARU Arti 29.29 46*c i* P P **06 06 15.5 -0.7**
ARU S S **06 11 10.7 +2.4**
ARU SS SnSn **06 12 35.1 +1.1**
ARU pmax pmax
comp=Z,13nm,0.8s
ARU Arti 29.29 46 P P **06 06 14.8 -1.4**
comp=Z,2.9nm,0.7s,baz=257,slow=6.8,SNR=14
ARU Arti 29.29 46 P P **06 06 16.2 0.0**
GEYT Alibeck 29.80 84 P P **06 06 19.1 -1.9**
comp=Z,2.1nm,0.7s,baz=300,slow=13,SNR=3.7
SVE Sverdlovsk 30.50 46‖ eP P **06 06 27.1 +0.2**
SVE pmax pmax
comp=Z,23nm,0.8s
TOA0 Torodi Ar. Sit 32.14 214 P P **06 06 42.4 +0.7**
TOA0 IAmb IAmb 06 06 50.5
comp=Z,4.9nm,1.1s
TORD Torodi Ar. Bea 32.14 214 P P **06 06 41.9 +0.1**
comp=Z,0.9nm,0.7s,baz=14,slow=10.0,SNR=6.2
BRVK Borovoye 35.70 53 P P **06 07 12.9 +0.6**
BRVK pmax pmax
comp=Z,11nm,0.8s
BRVK Borovoye 35.70 53 P P **06 07 12.9 +0.6**
KK31 Karatay Array 37.36 70 P P **06 07 25.3 -1.3**
KK31 pmax pmax
comp=Z,1.0nm,0.6s
KK31 Karatay Array 37.36 70 P P **06 07 25.3 -1.3**
KKAR Karatay Array 37.36 70 P P **06 07 25.5 -1.1**
KKAR pmax pmax
comp=Z,1.0nm,0.6s
KKAR Karatay Array 37.36 70 P P **06 07 25.5 -1.1**
CHGR Chuyangaron 37.74 77 P P **06 07 28.6 -1.4**
CHGR IAmb IAmb 06 07 29.5
comp=Z,5.8nm,0.7s
GAR Garm 38.47 76 P P **06 07 35.6 -0.6**
GAR IAmb IAmb 06 07 40.2
comp=Z,5.8nm,1.0s
DBIC Dimbokro 40.80 219 P P **06 07 55.3 -0.3**
comp=Z,2.6nm,0.9s,baz=16,slow=7.4,SNR=2.4
DBIC Dimbokro 40.80 219 P P **06 07 55.3 -0.3**
TIC Toumodi 40.91 219 eP P 06 08 05.0 +8.5
comp=Z,2.3nm,0.2s
KIC Kosan Boka 41.02 218 eP P 06 08 05.2 +7.8
comp=Z,26nm,1.1s
KURK Kurchatov 41.09 56⇓ eP P **06 07 56.6 -1.0**
KURK pmax pmax
comp=Z,5.0nm,1.0s
KURK Kurchatov 41.09 56 P P **06 07 57.4 -0.2**
LIC Lamto 41.28 219 eP P 06 08 07.2 +7.7
comp=Z,3.7nm,0.3s
KSH Kashi 42.39 73 eP P **06 08 07.8 -0.8**
KSH *e*PP PP **06 09 50.3 +3.5**

KSH				*e*S	**S**	**06 14 24.3**	**-5.0**
KSH				*es*S	sS	06 14 37.6	-0.7
KSH				pmax	pmax		
	comp=Z,490nm,5.2s						
KSH				LR	LR		
	comp=N,200nm,6.1s						
KSH				LR	LR		
	comp=E,220nm,4.9s						
KSH				LR	LR		
	comp=Z,360nm,5.2s						
MAKZ	**Makanchi**	**44.17**	**61**	P	**P**	**06 08 22.7**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAKZ	**Makanchi**	**44.17**	**61**	P	**P**	**06 08 22.7**	**-0.1**
MAKZ				IAmb	IAmb	06 08 23.5	
	comp=Z,7.2nm,1.1s						
ZAA0	**Zalesovo Array**	**44.21**	**50**	P	**P**	**06 08 22.8**	**-0.1**
ZALV	**Zalesovo Beam**	**44.21**	**50**	P	**P**	**06 08 22.6**	**-0.2**
	comp=Z,10.0nm,0.5s,baz=280,slow=8.8,SNR=48						
MK31	**Makanchi Array**	**44.38**	**61**	P	**P**	**06 08 24.3**	**-0.1**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MK31	**Makanchi Array**	**44.38**	**61**	P	**P**	**06 08 24.3**	**-0.1**
MK31				IAmb	IAmb	06 08 25.0	
	comp=Z,6.9nm,0.8s						
MKAR	**Makanchi Array**	**44.38**	**61**	P	**P**	**06 08 24.1**	**-0.3**
	comp=Z,8.3nm,0.6s,baz=283,slow=7.0,SNR=110						
MKAR				PcP	**PP**	**06 10 07.2**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=286,slow=3.7,SNR=4.0						
WMQ	**Urumqi**	**48.97**	**63**	*e*P	**P**	**06 09 03.3**	**+2.8**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.7s						
WMQ				LR	LR		
	comp=N,730nm,29.0s						
WMQ				LR	LR		
	comp=E,990nm,29.3s						
WMQ				LR	LR		
	comp=Z,110nm,24.9s						
SCHQ	**Schefferville**	**55.54**	**316**	P	**P**	**06 09 49.8**	**+0.7**
	comp=Z,2.6nm,0.9s,baz=82,slow=7.1,SNR=3.6						
SCHQ	**Schefferville**	**55.54**	**316**	P	**P**	**06 09 49.6**	**+0.6**
TLY	**Talaya**	**55.73**	**49**⇓	*e*P	**P**	**06 09 51.7**	**+1.2**
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA	**Gaotai**	**59.06**	**63**	*e*P	**P**	**06 10 14.3**	**0.0**
GTA				pP	sP	06 10 18.5	-3.5
GTA				sP	pP	06 10 21.3	+1.4
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM	**Songino Array**	**59.07**	**52**	P	**P**	**06 10 14.1**	**-0.1**
	comp=Z,3.8nm,0.9s,baz=289,slow=8.3,SNR=22						
SONM				PcP	**PcP**	**06 11 02.7**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=289,slow=4.4,SNR=2.5						
ULN	**Ulaanbaatar**	**59.44**	**51**⇓	*e*P	**P**	**06 10 17.2**	**+0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LZH	**Lanzhou**	**63.52**	**64**	*e*P	**P**	**06 10 44.8**	**+0.2**
LZH				pP	sP	06 10 52.5	+0.2
LZH				sP	pP	06 10 57.1	+6.9
LZH				PP	**PP**	**06 13 07.0**	**+3.0**
LZH				pmax	pmax		
	comp=Z,12nm,1.2s						
LZH				pmax	pmax		
	comp=Z,69nm,4.9s						
HHC	**Hu-ho-hao-te**	**65.90**	**56**	*e*P	**P**	**06 11 00.0**	**0.0**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,94nm,6.2s						
FCC	**Fort Churchill**	**66.05**	**328**	P	**P**	**06 11 01.6**	**+1.2**
FCC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FCC	**Fort Churchill**	**66.05**	**328**	P	**P**	**06 11 01.6**	**+1.2**
C36M	**Paulatuk**	**66.32**	**347**	P	**P**	**06 11 02.3**	**+0.3**
C36M				IAmb	IAmb	06 11 03.5	
	comp=Z,4.6nm,1.1s						
CD2	**Chengdu**	**66.36**	**69**	P	**P**	**06 11 01.3**	**-1.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BILL	**Bilibino**	**68.05**	**13**	*e*P	**P**	**06 11 13.6**	**+0.6**
BILL				*e*		06 11 39.7	
YKA	**Yellowknife Ar**	**70.07**	**339**	P	**P**	**06 11 25.6**	**0.0**
	comp=Z,3.0nm,0.8s,baz=35,slow=5.4,SNR=41						
CMAR	**Chiang Mai Arr**	**70.28**	**83**	P	**P**	**06 11 25.9**	**-1.7**
	comp=Z,1.5nm,0.3s,baz=311,slow=7.1,SNR=4.0						
KLR	**Kul'dur**	**71.91**	**40**⇑	*e*P	**P**	**06 11 36.2**	**-0.8**
KLR				pmax	pmax		
	comp=Z,9.0nm,2.5s						
FFC	**Flin Flon**	**71.98**	**329**	P	**P**	**06 11 38.6**	**+1.2**
FFC				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FFC	**Flin Flon**	**71.98**	**329**	P	**P**	**06 11 38.6**	**+1.2**
ULM	**Lac du Bonnet**	**72.61**	**323**	P	**P**	**06 11 41.5**	**+0.3**
	comp=Z,3.9nm,0.7s,baz=47,slow=6.4,SNR=9.1						
ULM	**Lac du Bonnet**	**72.61**	**323**	P	**P**	**06 11 42.0**	**+0.8**
ULM				IAmb	IAmb	06 11 52.3	
	comp=Z,5.0nm,0.9s						
ILAR	**Eielson Array**	**73.61**	**354**	P	**P**	**06 11 47.1**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=3.5,slow=5.3,SNR=6.5						
PPLA	**Purkeypile**	**75.82**	**356**	P	**P**	**06 12 01.1**	**+1.2**
YSS	**Yuzh-Sakhalins**	**78.63**	**36**	*e*P	**P**	**06 12 12.7**	**-3.0**
YSS				*e*		06 12 16.0	
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
JTMT	**Jette**	**82.21**	**331**	P	**P**	**06 12 36.3**	**+1.1**
YNE	**Yellowstone No**	**82.79**	**326**	P	**P**	**06 12 40.5**	**+2.1**
BDFB	**Brasilia**	**84.19**	**243**	P	**P**	**06 12 45.9**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=48,slow=7.4,SNR=3.5						
MJAR	**Matsushiro Arr**	**84.31**	**45**	P	**P**	**06 12 45.4**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=328,slow=4.4,SNR=4.0						
PDAR	**Pinedale Array**	**84.42**	**325**	P	**P**	**06 12 47.2**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=64,slow=7.7,SNR=4.9						
TXAR	**Lajitas Array**	**92.15**	**313**	P	**P**	**06 13 24.6**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=70,slow=4.4,SNR=7.3						
ASAR	**Alice Springs**	**123.27**	**93**	PKP	**PKPdf**	**06 19 10.0**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=312,slow=1.5,SNR=11						

*SJA **20** 06:02:28.5±0.8,21.49S×68.47W,h148km±5km, ML2.4, MW2.8*
*GUC **20** 06:02:30.0±0.8,21.46S×68.64W,h140km±5km, ML3.4*
ISC 20 06:02:29.6±1.6,**21.48S**±0.03×**68.53W**±0.06,
h145km±13km,**n24**,σ0.49/44,**12C-2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.73**	**244**⇓	*e*P	**Pn**	**06 02 52.1**	**+0.1**
PB09				*e*S	**Sn**	**06 03 08.6**	**-0.4**
PB09				IAML		06 03 09.7	
	comp=N,398nm,0.2s						
PB09	**IPOC Station P**	**0.73**	**244**	*i* P	**Pn**	**06 02 52.0**	**+0.1**
PB09				*e*S	**Sn**	**06 03 09.3**	**+0.3**
LVC	**Limon Verde**	**1.18**	**197**	*i* P	**Pn**	**06 02 55.6**	**-0.3**
LVC				IAML		06 02 56.2	
	comp=Z,35nm,0.3s						
LVC				*e*S	**Sn**	**06 03 16.0**	**-0.1**
PB03	**IPOC Station P**	**1.27**	**243**⇑	*i* P	**Pn**	**06 02 56.7**	**+0.1**
PB03				*e*S	**Sn**	**06 03 16.6**	**-0.6**
PB03				IAML		06 03 18.1	
	comp=E,370nm,0.2s						
PB08	**IPOC Station P**	**1.45**	**336**⇑	*e*P	**Pn**	**06 02 59.3**	**+0.6**
PB08				*e*S	**Sn**	**06 03 20.9**	**0.0**
PB06	**IPOC Station P**	**1.56**	**218**⇓	*e*P	**Pn**	**06 02 59.8**	**+0.3**
PB06				*e*S	**Sn**	**06 03 22.4**	**-0.2**
PB06				IAML		06 03 23.5	
	comp=E,299nm,0.2s						
PB06	**IPOC Station P**	**1.56**	**218**	*i* P	**Pn**	**06 02 59.9**	**+0.3**
PB06				*e*S	**Sn**	**06 03 22.6**	**+0.1**
PATCX	**Punta Patache**	**1.65**	**293**⇑	*i*P	**Pn**	**06 03 00.9**	**+0.5**
PATCX				*e*S	**Sn**	**06 03 23.2**	**-0.9**
PB04	**IPOC Station P**	**1.73**	**240**⇑	*e*P	**Pn**	**06 03 01.7**	**+0.3**
PB04				⇑*i*P	**Pn**	**06 03 01.7**	**+0.3**
PB04				*e*S	**Sn**	**06 03 25.3**	**-0.5**
PB04				IAML		06 03 26.7	
	comp=N,1μm,0.0s						
PB04	**IPOC Station P**	**1.73**	**240**	*i* P	**Pn**	**06 03 01.6**	**+0.3**
PB04				*e*S	**Sn**	**06 03 26.4**	**+0.5**
TA01	**Diego Aracena**	**1.79**	**300**⇑	*i*P	**Pn**	**06 03 02.0**	**+0.1**
TA01				*e*S	**Sn**	**06 03 25.4**	**-1.3**
TA01				IAML		06 03 27.3	
	comp=N,296nm,0.3s						
GO01	**Chusmiza**	**1.90**	**341**⇑	*i*P	**Pn**	**06 03 04.1**	**+0.3**
GO01				*e*S	**Sn**	**06 03 30.1**	**+0.2**
GO01				IAML		06 03 33.2	
	comp=E,255nm,0.1s						
PB15	**IPOC Station P**	**1.93**	**207**⇑	*i*P	**Pn**	**06 03 04.3**	**+0.5**
PB15				*e*S	**Sn**	**06 03 31.1**	**+1.0**
PB15				IAML		06 03 36.6	
	comp=E,684nm,0.1s						
PB15	**IPOC Station P**	**1.93**	**207**	*i* P	**Pn**	**06 03 04.3**	**+0.5**
PB15				*e*S	**Sn**	**06 03 30.5**	**+0.4**
PB11	**IPOC Station P**	**2.00**	**328**⇑	*i*P	**Pn**	**06 03 04.0**	**-0.1**
PB11				*e*S	**Sn**	**06 03 31.4**	**-0.2**
PB11				IAML		06 03 32.8	
	comp=E,130nm,0.2s						
PB05	**IPOC Station P**	**2.07**	**228**⇑	*i*P	**Pn**	**06 03 05.7**	**+0.4**
PB05				*e*S	**Sn**	**06 03 32.1**	**-0.7**
PB05	**IPOC Station P**	**2.07**	**228**	*i* P	**Pn**	**06 03 05.7**	**+0.4**
PB05				*e*S	**Sn**	**06 03 33.2**	**+0.4**
PSGC	**Pisagua**	**2.39**	**321**⇑	*i*P	**Pn**	**06 03 08.6**	**-0.7**
PSGC				*e*S	**Sn**	**06 03 39.2**	**-0.5**
MNMC	**Minye Minye**	**2.54**	**337**⇑	*i*P	**Pn**	**06 03 11.7**	**+0.5**
MNMC				*e*S	**Sn**	**06 03 44.0**	**+0.7**
MNMC				IAML		06 03 47.6	
	comp=E,201nm,0.2s						
PB10	**IPOC Station P**	**2.76**	**222**	*i* P	**Pn**	**06 03 13.7**	**0.0**
YJA	**Yavi**	**2.89**	**104**	*i* P	**Pn**	**06 03 15.5**	**-0.3**
PB14	**IPOC Station P**	**3.58**	**208**	*i* P	**Pn**	**06 03 24.0**	**-0.5**
AZAP	**Zapla**	**4.21**	**131**	*i* P	**Pn**	**06 03 32.4**	**-0.2**
LPAZ	**La Paz**	**5.18**	**4**	*i* P	**Pn**	**06 03 46.4**	**+0.5**

*SJA **20** 06:09:26.8±0.6,21.61S×68.80W,h69km±11km, ML3.2, MW3.4*
*GUC **20** 06:09:27.7±0.7,21.78S×68.85W,h100km±4km, ML3.4*
ISC 20 06:09:29.6±1.5,**21.76S**±0.03×**68.86W**±0.06,**h90**km±12km, **n18**,σ0.88/33,**7C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.36**	**264**⇓	*e*P	**Pn**	**06 09 43.2**	**-0.3**
PB09				*e*S	**Sn**	**06 09 54.9**	**+0.9**
PB09				IAML		06 09 55.9	
	comp=N,2μm,0.2s						
LVC	**Limon Verde**	**0.85**	**183**⇓	*i*P	**Pn**	**06 09 47.0**	**-1.1**
LVC				*e*S	**Sn**	**06 10 01.4**	**-0.4**
PB03	**IPOC Station P**	**0.88**	**251**⇑	*i*P	**Pn**	**06 09 47.5**	**-0.6**
PB03				*e*S	**Sn**	**06 10 02.2**	**+0.2**
PB03				IAML		06 10 04.1	
	comp=E,2μm,0.2s						
PB06	**IPOC Station P**	**1.15**	**215**⇑	*i*P	**Pn**	**06 09 50.4**	**-0.7**
PB06				*e*S	**Sn**	**06 10 07.9**	**+0.4**
PB06				IAML		06 10 08.8	
	comp=E,895nm,0.3s						
PB06	**IPOC Station P**	**1.15**	**215**	*i* P	**Pn**	**06 09 50.5**	**-0.7**
PB06				*e*S	**Sn**	**06 10 08.4**	**+0.9**
PB06				IAML		06 10 09.4	
	comp=Z,416nm,0.2s						
PB04	**IPOC Station P**	**1.32**	**244**⇑	*i*P	**Pn**	**06 09 52.5**	**-0.9**
PB04				*e*S	**Sn**	**06 10 11.5**	**+0.3**
PB04				IAML		06 10 13.4	
	comp=E,934nm,0.1s						
PB04	**IPOC Station P**	**1.32**	**244**	*i* P	**Pn**	**06 09 52.5**	**-0.9**
PB04				*e*S	**Sn**	**06 10 11.8**	**+0.6**
PATCX	**Punta Patache**	**1.52**	**308**	*e*P	**Pn**	**06 09 55.5**	**-0.2**
PATCX				*e*S	**Sn**	**06 10 16.5**	**+1.0**
PATCX				IAML		06 10 22.9	
	comp=E,1μm,0.4s						
PB15	**IPOC Station P**	**1.55**	**201**⇓	*e*P	**Pn**	**06 09 55.6**	**-0.6**
PB15				*e*S	**Sn**	**06 10 16.6**	**+0.3**
PB15	**IPOC Station P**	**1.55**	**201**	*i* P	**Pn**	**06 09 56.1**	**-0.1**
PB15				*e*S	**Sn**	**06 10 18.0**	**+1.7**
PB08	**IPOC Station P**	**1.63**	**350**⇑	*i*P	**Pn**	**06 09 57.5**	**0.0**
PB08				*e*S	**Sn**	**06 10 19.4**	**+0.9**
PB08				IAML		06 10 23.3	
	comp=E,249nm,0.4s						
PB05	**IPOC Station P**	**1.65**	**229**⇑	*i*P	**Pn**	**06 09 56.2**	**-1.2**
PB05				*e*S	**Sn**	**06 10 18.5**	**0.0**
PB05				IAML		06 10 24.4	
	comp=E,372nm,0.3s						
PB05	**IPOC Station P**	**1.65**	**229**	*e*S	**Sn**	**06 10 20.3**	**+1.8**
PB05				IAML		06 10 23.6	
	comp=Z,231nm,0.4s						
TA01	**Diego Aracena**	**1.71**	**314**⇑	*i*P	**Pn**	**06 09 56.9**	**-1.2**
TA01				*e*S	**Sn**	**06 10 20.0**	**+0.4**
TA01				IAML		06 10 24.1	
	comp=E,518nm,0.3s						
PB11	**IPOC Station P**	**2.12**	**339**⇑	*i*P	**Pn**	**06 10 02.5**	**-1.1**
PB11				*e*S	**Sn**	**06 10 30.5**	**+1.0**
PB11				IAML		06 10 36.0	
	comp=E,403nm,0.2s						
PB10	**IPOC Station P**	**2.34**	**222**	*i* P	**Pn**	**06 10 06.7**	**+0.3**
PB10				IAML		06 10 43.5	
	comp=Z,77nm,0.5s						
MNMC	**Minye Minye**	**2.70**	**345**	*e*P	**Pn**	**06 10 10.3**	**-1.2**
MNMC				*e*S	**Sn**	**06 10 44.3**	**+0.7**
YJA	**Yavi**	**3.13**	**98**	*i* P	**Pn**	**06 10 17.0**	**-0.4**

WEL 20 06:14:44.4,40.6S±0.6×175.9E±0.8,h27km±1km,M3.2/13, ML3.5/13,MLv3.2/13,Error ellipse: s-maj=0.0km s-min=0.0km az=89.8,North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRWZ	**Pori Road**	**0.09**	**55**	P	Pb	06 14 49.5	+0.3
PRWZ				S	Sb	06 14 53.6	+1.1
TIWZ	**Tintock**	**0.17**	**177**	P	Pb	06 14 50.2	+0.3
TIWZ				S	Sb	06 14 55.0	+1.3
POWZ	**Post Office Ro**	**0.23**	**339**	P	Pb	06 14 51.1	+0.5
POWZ				S	Sb	06 14 56.5	+1.7
MRZ	**Mangatainoka R**	**0.23**	**257**	P	Pb	06 14 51.1	+0.5
MRZ				S	Sb	06 14 55.8	+1.0
BFZ	**Birch Farm**	**0.29**	**105**	P	Pb	06 14 51.6	+0.2
BFZ				S	Sn	06 14 57.7	-0.8
DVHZ	**Dannevirke**	**0.38**	**36**	P	Pb	06 14 52.9	+0.1
DVHZ				S	Sb	06 14 59.2	+0.8
CPWZ	**Castlepoint**	**0.39**	**141**	P	Pn	06 14 54.0	-0.3
CPWZ				S	Sn	06 15 03.3	+2.4
HOWZ	**Holdsworth Sta**	**0.40**	**223**	P	Pb	06 14 53.6	+0.5
HOWZ				S	Sn	06 15 00.6	-0.5
ANWZ	**Angora Road**	**0.48**	**72**	P	Pb	06 14 54.8	+0.5
ANWZ				S	Sn	06 15 03.1	+0.1
TMWZ	**Te Maipa**	**0.50**	**179**	P	Pn	06 14 55.3	-0.5
TMWZ				S	Sn	06 15 04.5	+0.9
TSZ	**Takapari Road**	**0.55**	**7**	P	Pb	06 14 55.8	+0.3
TSZ				S	Sb	06 15 03.9	+0.8
OGWZ	**Otaki Gorge**	**0.57**	**248**	P	Pn	06 14 56.6	-0.2
OHWZ	**Ohakea**	**0.59**	**313**	P	Pn	06 14 57.5	+0.6
MTW	**Mount Morrison**	**0.62**	**207**	P	Pb	06 14 56.9	+0.3
PRHZ	**Porangahau**	**0.67**	**60**	P	Pb	06 14 57.7	+0.2
WPHZ	**Waipukurau**	**0.69**	**39**	P	Pn	06 14 58.5	+0.1
PNHZ	**Pukenui**	**0.74**	**20**	P	Pn	06 14 59.2	+0.1
KIW	**Kapiti Island**	**0.78**	**251**	P	Pn	06 15 00.0	+0.5
CAW	**Cannon Point**	**0.79**	**231**	P	Pn	06 14 59.8	+0.1
TRWZ	**Traveller**	**0.80**	**190**	P	Pb	06 14 59.3	-0.4
PAWZ	**Paruwai Farm**	**0.84**	**203**	P	Pb	06 15 00.4	0.0
MSWZ	**Moikau Station**	**0.94**	**210**	P	Pn	06 15 01.0	-0.8
PXZ	**Pawanui**	**0.95**	**53**	P	Pn	06 15 01.5	-0.5
KRHZ	**Kereru**	**1.03**	**22**	P	Pb	06 15 03.5	-0.2
PLWZ	**Palliser**	**1.07**	**206**	P	Pn	06 15 02.7	-1.0
WEL	**Wellington**	**1.08**	**231**	P	Pn	06 15 03.8	+0.1
WAZ	**Wanganui**	**1.09**	**321**	P	Pb	06 15 06.1	+1.5
BHW	**Baring Head**	**1.10**	**223**	P	Pn	06 15 03.5	-0.5
KAHZ	**Kahuranaki**	**1.12**	**44**	P	Pn	06 15 04.0	-0.3
BHHZ	**Black Hill Sta**	**1.13**	**7**	P	Pb	06 15 05.1	-0.1
MOVZ	**Moawhango**	**1.20**	**356**	P	Pb	06 15 06.5	0.0
KWHZ	**Kaweka Forest**	**1.25**	**20**	P	Pn	06 15 06.5	+0.3
MTVZ	**Mangateitei**	**1.26**	**346**	P	Pb	06 15 08.0	+0.5
TRVZ	**Turoa**	**1.33**	**349**	P	Pb	06 15 09.1	+0.3
WHVZ	**Whangaehu Hut**	**1.34**	**350**	P	Pb	06 15 09.2	+0.3
TUVZ	**Tukino**	**1.35**	**353**	P	Pb	06 15 09.3	+0.3
TCW	**Tory Channel**	**1.35**	**243**	P	Pn	06 15 07.9	+0.4
FWVZ	**Far West T-bar**	**1.37**	**350**	P	Pb	06 15 09.6	+0.1
NGZ	**Ngauruhoe**	**1.45**	**352**	P	Pb	06 15 10.6	-0.1
DUWZ	**D'Urville Isla**	**1.50**	**262**	P	Pn	06 15 10.1	+0.6
WTVZ	**West Tongariro**	**1.51**	**352**	P	Pb	06 15 11.9	+0.2
BKZ	**Black Stump Fm**	**1.52**	**18**	P	Pn	06 15 10.4	+0.6
TUWZ	**Tuamarina**	**1.68**	**240**	P	Pn	06 15 11.5	-0.4
MRHZ	**Matea Rd**	**1.82**	**13**	P	Pn	06 15 14.1	+0.1
PREZ	**Palmer Road**	**1.83**	**313**	P	Pb	06 15 17.5	+0.4
KHEZ	**Kahui Hut**	**1.94**	**312**	P	Pb	06 15 19.1	+0.1
NNZ	**Nelson**	**1.99**	**251**	P	Pb	06 15 18.9	-0.9
PKE	**Pukeiti**	**2.02**	**314**	P	Pb	06 15 20.5	0.0
NBEZ	**Newall Road No**	**2.04**	**310**	P	Pb	06 15 24.2	+3.5
MHGZ	**Mahia Peninsul**	**2.13**	**48**	P	Pn	06 15 17.0	-1.3
HIZ	**Hauiti**	**2.23**	**339**	P	Pb	06 15 24.6	+0.6
TUZ	**Tuapeka**	**7.02**	**218**	P	Pn	06 16 27.5	+2.1

TIR 20 06:17:02.8,41.25N×19.46E,h7km,Md2.6/3,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.32**	**72**	*i* PG	Pb	06 17 10.3	-0.6
TIR				*i* SG	Sb	06 17 15.1	-1.1
PHP	**Peshkopia**	**0.86**	**59**	*i* PG	Pg	06 17 19.6	+0.4
PHP				*i* SG	Sb	06 17 32.9	+1.2
PUK	**Puka**	**0.86**	**22**	*i* PG	Pg	06 17 18.9	-0.4
PUK				*i* SG	Sb	06 17 31.7	-0.1

*TAP **20** 06:18:12.1,24.19N×121.78E,h9km, ML3.4,C*
*JMA **20** 06:18:12.3,24.18N×121.76E,h0km, M3.0*
ISC 20 06:18:12.4±1.0,**24.18N**±0.02×**121.79E**±0.02,**h6**km±8km, **n107**,σ0.61/158,**20D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NACB	**Ninganchiao**	**0.17**	**267**	⇓P	**Pg**	**06 18 15.9**	**0.0**
NACB	baz=264			S	**Sg**	**06 18 18.1**	**-0.1**
TWD	**Chiawan**	**0.20**	**239**	P	**Pg**	**06 18 16.6**	**+0.2**
TWD	baz=243			S	**Sg**	**06 18 19.6**	**+0.6**
NANB	**Nanao**	**0.25**	**352**⇓	*i*P	**Pg**	**06 18 17.1**	**-0.2**
NANB	baz=354			*i* S	**Sg**	**06 18 20.6**	**0.0**
ENA	**Nanau**	**0.25**	**351**⇓	*i*P	**Pg**	**06 18 17.1**	**-0.2**
ENA	baz=354			S	**Sg**	**06 18 20.8**	**+0.2**
HWA	**Hwalien**	**0.26**	**219**	*e*P	**Pb**	**06 18 18.6**	**-0.9**
ETLH	baz=228			*e*S	**Sg**	**06 18 22.0**	**+0.4**
ETLH	**Xiulin Townshi**	**0.28**	**275**	*e*P	**Pg**	**06 18 17.9**	**+0.1**
ENLB	**Shoufeng**	**0.32**	**211**	⇓P	**Pb**	**06 18 19.6**	**-0.9**
ENLB	baz=223			S	**Sb**	**06 18 26.4**	**+0.4**
TWC	**Suao**	**0.43**	**8**⇓	*i*P	**Pg**	**06 18 20.5**	**-0.2**
TWC	baz=6.0			S	**Sg**	**06 18 26.2**	**-0.2**
NNSB	**Datong**	**0.44**	**304**	⇓P	**Pg**	**06 18 21.1**	**+0.1**
NNSB	baz=304			S	**Sg**	**06 18 26.9**	**+0.1**
NNSH	**Datong**	**0.44**	**304**	⇓P	**Pg**	**06 18 21.1**	**+0.1**
NNSH	baz=304			S	**Sg**	**06 18 27.0**	**+0.2**
NNS	**Nan Shan**	**0.46**	**304**	P	**Pg**	**06 18 21.3**	**0.0**
NNS	baz=305			S	**Sg**	**06 18 27.4**	**+0.2**
WHF	**Hehuan Shan**	**0.48**	**266**	⇓P	**Pg**	**06 18 21.7**	**0.0**
WHF	baz=266			*e*S	**Sg**	**06 18 28.6**	**+0.7**
EOS1	**EOS1**	**0.48**	**41**	⇓P	**Pg**	**06 18 22.2**	**+0.5**
EOS1	baz=30			*e*S	**Sb**	**06 18 29.6**	**-0.9**
NDT	**Datong Townshi**	**0.49**	**329**	⇓P	**Pg**	**06 18 22.0**	**+0.2**
NDT	baz=330			S	**Sg**	**06 18 28.8**	**+0.6**
ESL	**Shilin**	**0.49**	**221**	*e*P	**Pg**	**06 18 22.3**	**+0.5**
ENTT	**Nioudou**	**0.50**	**336**	⇓P	**Pg**	**06 18 22.0**	**0.0**
ENTT	baz=338			S	**Sg**	**06 18 29.1**	**+0.5**
TWE	**Neicheng**	**0.55**	**349**	⇓P	**Pg**	**06 18 23.0**	**0.0**
TWE	baz=351			S	**Sg**	**06 18 30.3**	**+0.2**
TWT	**Tachien**	**0.56**	**277**	*e*P	**Pb**	**06 18 24.0**	**-0.8**
TWT	baz=277			*e*S	**Sg**	**06 18 31.0**	**+0.4**
CHGB	**Renai**	**0.57**	**258**	⇓P	**Pg**	**06 18 23.6**	**+0.2**
CHGB	baz=250			*e*S	**Sg**	**06 18 31.2**	**+0.2**
TDCB	**Techi**	**0.58**	**277**	*e*P	**Pb**	**06 18 23.9**	**-1.1**
TDCB	baz=277			*e*S	**Sg**	**06 18 30.8**	**-0.3**
ILA	**Ilan**	**0.58**	**357**	⇓P	**Pg**	**06 18 23.9**	**+0.2**
ILA	baz=351			S	**Sg**	**06 18 32.1**	**+0.8**
SLBB	**Yuanshan**	**0.58**	**347**	⇓P	**Pg**	**06 18 22.9**	**-0.8**
SLBB	baz=355			*e*S	**Sg**	**06 18 31.2**	**-0.2**
OWD	**Renai**	**0.60**	**248**	*e*P	**Pg**	**06 18 23.9**	**-0.1**
EGFH	baz=249			*e*S	**Sb**	**06 18 34.1**	**-0.1**
EGFH	**Guangfu**	**0.61**	**213**	*e*P	**Pb**	**06 18 24.6**	**-0.8**
YHNB	**Yeheng**	**0.61**	**323**	⇓P	**Pg**	**06 18 24.5**	**+0.3**
YHNB	baz=323			S	**Sg**	**06 18 32.6**	**+0.3**
NSK	**Sanguang**	**0.63**	**322**	⇓P	**Pg**	**06 18 24.6**	**+0.1**
NSK	baz=323			S	**Sg**	**06 18 32.7**	**0.0**
NWLT	**Wulai**	**0.65**	**337**⇓	*e*P	**Pg**	**06 18 25.0**	**+0.2**
NWLT	baz=337			*e*S	**Sg**	**06 18 33.4**	**+0.1**
NTC	**Toucheng**	**0.67**	**3**	*e*P	**Pg**	**06 18 25.2**	**-0.1**
NTC	baz=4.0			*e*S	**Sg**	**06 18 33.8**	**

	baz=303							
TWB1	**Santiao Chiao**	**0.84**	**13**	*e*P		**Pg**	**06 18 28.2**	**-0.4**
	baz=14							
TWB1				*e*S		**Sg**	**06 18 39.0**	**-0.6**
	baz=14							
SSLB	**Suanglung**	**0.86**	**243**	P		**Pg**	**06 18 28.8**	**-0.1**
	baz=254							
SSLB				*e*S		**Sg**	**06 18 39.8**	**-0.1**
	baz=254							
NWF	**Wu-fen Shan**	**0.89**	**360**	P		**Pb**	**06 18 29.6**	**-0.6**
	baz=352							
NWF				S		**Sg**	**06 18 41.2**	**+0.3**
	baz=352							
WFSB	**Wu-fen Shan**	**0.89**	**360**	⇓P		**Pg**	**06 18 29.5**	**+0.1**
	baz=352							
WFSB				S		**Sg**	**06 18 40.9**	**0.0**
	baz=352							
TAP1	**Taipei**	**0.89**	**344**	*e*P		**Pg**	**06 18 28.9**	**-0.6**
	baz=345							
TYC	**Yuchr**	**0.89**	**252**	*e*P		**Pb**	**06 18 29.9**	**-0.4**
	baz=244							
TYC				*e*S		**Sb**	**06 18 41.9**	**-0.5**
	baz=244							
YULB	**Yu-li**	**0.90**	**210**	*e*P		**Pg**	**06 18 29.3**	**-0.5**
	baz=223							
YULB				*e*S		**Sb**	**06 18 42.4**	**-0.4**
	baz=223							
TWF1	**Yuli**	**0.94**	**209**	*e*P		**Pg**	**06 18 29.9**	**-0.5**
	baz=221							
TWF1				*e*S		**Sb**	**06 18 43.9**	**+0.1**
	baz=221							
SBCB	**Hsinchu**	**0.95**	**310**	*e*P		**Pn**	**06 18 32.2**	**0.0**
	baz=312							
NCUH	**Zhongli**	**0.95**	**325**	*e*P		**Pn**	**06 18 31.8**	**-0.5**
	baz=320							
NCU	**National Centr**	**0.95**	**325**	*e*P		**Pb**	**06 18 31.5**	**+0.2**
	baz=326							
NCU				*e*S		**Sb**	**06 18 45.0**	**+0.8**
	baz=326							
NSY	**Sanyi**	**0.96**	**284**	*e*P		**Pn**	**06 18 32.0**	**-0.5**
	baz=286							
NMLH	**Miaoli**	**0.97**	**291**	*e*P		**Pn**	**06 18 33.2**	**+0.7**
	baz=301							
TWS1	**Kuangyinshan**	**0.97**	**340**	*e*P		**Pn**	**06 18 32.1**	**-0.5**
	baz=342							
WHYT	**Xinyi Township**	**0.98**	**241**	*e*P		**Pb**	**06 18 32.1**	**+0.3**
	baz=243							
YM01	**YM01**	**0.98**	**349**	*e*P		**Pb**	**06 18 31.4**	**-0.4**
	baz=349							
YM01				S		**Sg**	**06 18 43.9**	**-0.1**
	baz=349							
YM10	**YM10**	**0.99**	**348**	*e*P		**Pb**	**06 18 31.9**	**-0.1**
	baz=349							
YM11	**YM11**	**1.00**	**349**	*e*P		**Pb**	**06 18 31.8**	**-0.3**
	baz=350							
TCU	**Taichung**	**1.01**	**268**	*e*P		**Pn**	**06 18 34.0**	**+0.9**
	baz=271							
YM03	**YM03**	**1.02**	**347**	*e*P		**Pb**	**06 18 32.1**	**-0.4**
	baz=348							
YM08	**YM08**	**1.02**	**350**	*e*P		**Pb**	**06 18 32.0**	**-0.4**
	baz=351							
PTSB	**Yuanli**	**1.02**	**285**	*e*P		**Pb**	**06 18 32.5**	**0.0**
	baz=287							
ANP	**Anpu**	**1.03**	**346**	*e*P		**Pb**	**06 18 32.2**	**-0.5**
	baz=348							
YUS	**Yu-Shan**	**1.03**	**228**	*e*P		**Pb**	**06 18 32.7**	**-0.2**
	baz=231							
WJS	**Zhushan**	**1.03**	**250**	*e*P		**Pn**	**06 18 33.0**	**-0.4**
	baz=245							
WNT	**Mingjian**	**1.05**	**253**	*e*P		**Pn**	**06 18 33.4**	**-0.3**
	baz=250							
WDJ	**Daijia District**	**1.06**	**279**	*e*P		**Pn**	**06 18 34.2**	**+0.5**
	baz=281							
FULB	**Fuli**	**1.08**	**205**	*e*P		**Pg**	**06 18 32.9**	**-0.2**
	baz=225							
JYNG	**Yonagunijimaku**	**1.09**	**76**	P		**Pn**	**06 18 34.2**	**0.0**
JYNG				S		**Sn**	**06 18 49.7**	**+0.1**
TWY	**Chenhua**	**1.10**	**351**	*e*P		**Pn**	**06 18 34.6**	**+0.2**
	baz=337							
ALS	**Alishan**	**1.12**	**233**	*e*P		**Pn**	**06 18 34.4**	**-0.4**
	baz=245							
WCHH	**Zhanghua**	**1.12**	**265**	*e*P		**Pn**	**06 18 35.0**	**+0.3**
	baz=268							
YOJ	**Yonaguni jima**	**1.15**	**76**	*e*P		**Pg**	**06 18 34.3**	**-0.2**
	baz=63							
YOJ				*e*S		**Sb**	**06 18 50.5**	**+0.7**
	baz=63							
YOJ	**Yonaguni jima**	**1.15**	**76**	P		**Pb**	**06 18 35.0**	**+0.3**
YOJ				*e*S		**Sn**	**06 18 51.1**	**0.0**
CHN5	**Tsauling**	**1.17**	**240**	*e*P		**Pn**	**06 18 35.5**	**+0.2**
	baz=245							
ELDTW	**Lidau**	**1.21**	**216**	*e*P		**Pg**	**06 18 34.6**	**-1.1**
	baz=204							
WDLH	**Douliu**	**1.24**	**247**	*e*P		**Pn**	**06 18 37.1**	**+0.9**
	baz=251							
RLNB	**Erlin**	**1.33**	**258**	*e*P		**Pg**	**06 18 39.1**	**+1.1**
	baz=262							
CHN4	**Tsaushan**	**1.37**	**233**	*e*P		**Pg**	**06 18 38.8**	**+0.1**
	baz=236							
CHN4				*e*S		**Sn**	**06 18 59.3**	**+2.8**
	baz=236							
TPUB	**Ta-pu**	**1.38**	**231**	*e*P		**Pg**	**06 18 38.6**	**-0.1**
	baz=236							
WTP	**Ta-pu**	**1.42**	**229**	*e*P		**Pg**	**06 18 39.5**	**-0.2**
	baz=233							
WTP				*e*S		**Sn**	**06 18 59.0**	**+1.2**
	baz=233							
TWH	**Lutao**	**1.49**	**191**	*e*P		**Pn**	**06 18 38.1**	**-1.6**
	baz=178							
TWK	**Hsinying**	**1.50**	**233**	*e*P		**Pg**	**06 18 41.0**	**-0.2**
	baz=236							
TWK				*e*S		**Sg**	**06 19 01.0**	**+0.4**
	baz=236							
TWG	**Pinlang**	**1.50**	**206**	*e*P		**Pn**	**06 18 39.5**	**-0.4**
	baz=209							
TWG				*e*S		**Sn**	**06 18 58.3**	**-1.6**
	baz=209							
TWGBT	**Beinan**	**1.50**	**206**	*e*P		**Pn**	**06 18 38.9**	**-1.0**
	baz=191							
SNST	**Tainan City**	**1.52**	**231**	*e*P		**Pb**	**06 18 40.6**	**-0.4**
	baz=237							
CHN1	**Nanshi**	**1.52**	**230**	*e*P		**Pg**	**06 18 41.4**	**-0.2**
	baz=235							
SGST	**Jiashian**	**1.55**	**225**	*e*P		**Pb**	**06 18 41.5**	**-0.1**
	baz=231							
SLGT	**Liugui**	**1.58**	**222**	*e*P		**Pg**	**06 18 42.1**	**-0.6**
	baz=227							
IRIF	**Iriomote-Funau**	**1.78**	**85**	P		**Pb**	**06 18 44.9**	**-0.5**
MASBT	**Mashibuluo**	**1.89**	**214**	*e*P		**Pn**	**06 18 45.3**	**+0.2**
	baz=220							
EAST	**Anshuo**	**1.99**	**206**	*e*P		**Pn**	**06 18 47.4**	**+0.8**
	baz=197							
JKRS	**Kuro-shima**	**2.03**	**88**	P		**Pn**	**06 18 47.3**	**+0.2**
JKRS				*e*S		**Sn**	**06 19 13.8**	**+1.0**
PNG	**Penghu**	**2.13**	**254**	*e*P		**Pn**	**06 18 48.0**	**-0.5**
	baz=260							
PHUB	**P'eng-hu**	**2.13**	**252**	*e*P		**Pn**	**06 18 49.1**	**+0.6**
	baz=258							
WDGT	**Dungji**	**2.15**	**245**	*e*P		**Pn**	**06 18 49.6**	**+0.9**
	baz=252							
JIJ	**Ishigaki jima**	**2.16**	**85**	P		**Pn**	**06 18 50.1**	**+1.2**
JIJ				*e*S		**Sb**	**06 19 17.9**	**-1.0**
PTTC	**Pingtan**	**2.25**	**306**	*e*P		**Pn**	**06 18 49.6**	**-0.5**
	baz=308							
VWUC	**VWUC**	**2.27**	**291**	*e*P		**Pn**	**06 18 49.8**	**-0.6**
	baz=282							
JISG	**Ishigakijimahi**	**2.34**	**80**	P		**Pn**	**06 18 52.8**	**+1.5**
JISG				*e*S		**Sb**	**06 19 22.8**	**-1.2**
VCHM	**Qimei**	**2.37**	**246**	*e*P		**Pn**	**06 18 51.9**	**+0.2**
	baz=237							
PTMZ	**Houxiangcun**	**2.57**	**290**	*e*P		**Pn**	**06 18 54.4**	**-0.2**
	baz=293							
MATB	**Ma-tsu**	**2.57**	**320**	*e*P		**Pn**	**06 18 53.9**	**-0.7**
	baz=321							
JTJ	**Tarama**	**2.70**	**80**	P		**Pn**	**06 18 58.2**	**+1.9**
XPSS	**Dashiqiu**	**3.09**	**333**	*e*P		**Pn**	**06 19 01.8**	**+0.1**
	baz=333							
KNMB	**Chin-men Tao**	**3.11**	**276**	*e*P		**Pn**	**06 19 01.7**	**-0.2**
	baz=279							
ZPLA	**Ao Xicun**	**3.70**	**267**	*e*P		**Pn**	**06 19 10.8**	**+0.7**
	baz=271							

*DDA **20** 06:18:18.9,36°.51N×27°.55E,h7km±1km,ML1.9*
*ISK **20** 06:18:19.1,36°.57N×27°.58E,h13km,ML2.5/10*
ISC 20 06:18:19.5±1.1,36.56N±0°.04×27.59E±0°.04,h11km±7km, n19,σ1°95/25,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.17**	**355**	PG	**Pg**	**06 18 23.4**	**+0.1**
DAT				SG	**Sg**	**06 18 26.2**	**+0.2**
DAT	**Datca**	**0.17**	**355**	*i* P	**Pg**	**06 18 23.4**	**+0.1**
DAT				*i* S	**Sg**	**06 18 26.7**	**+0.7**
DAT				IAML		06 18 27.0	
	comp=E,308nm,0.5s						
DAT				IAML		06 18 27.0	
	comp=N,380nm,0.2s						
DATC	**Datca-Mugla**	**0.20**	**15**	PG	**Pg**	**06 18 23.8**	**0.0**
DATC				SG	**Sg**	**06 18 27.8**	**+1.0**
BDRM	**Kayabasi**	**0.52**	**347**	*i* P	**Pg**	**06 18 29.9**	**+0.3**
BDRM				*i* S	**Sb**	**06 18 37.9**	**-0.2**
BDRM				IAML		06 18 41.0	
	comp=E,81nm,0.4s						
BODT	**Bodrum**	**0.55**	**336**	PG	**Pg**	**06 18 30.3**	**+0.1**
ARG	**Arkhangelos**	**0.55**	**129**	PG	**Pg**	**06 18 30.7**	**+0.5**
MLSB	**Milas**	**0.75**	**11**	PG	**Pg**	**06 18 33.9**	**0.0**
YER	**Yerkesik**	**0.80**	**44**	PG	**Pg**	**06 18 34.6**	**-0.3**
TURN	**Turunc**	**0.87**	**69**	PG	Pg	06 18 30.8	-5.4
TURN	**Turunc**	**0.87**	**69**	*i* P	Pg	06 18 30.6	-5.7
TURN				*i* S	**Sg**	**06 18 39.9**	**-7.6**
TURN				IAML		06 18 41.0	
	comp=N,94nm,0.2s						
TURN				IAML		06 18 43.0	
	comp=E,92nm,0.3s						
KARP	**Karpathos**	**1.07**	**199**	PG	**Pb**	**06 18 39.8**	**-0.3**
AYDN	**Tasoluk**	**1.12**	**12**	*i* P	**Pb**	**06 18 40.7**	**-0.2**
GCAM	**G?zelcaml?**	**1.17**	**346**	PN	**Pg**	**06 18 41.9**	**-0.1**
GCAM	**G?zelcaml?**	**1.17**	**346**	*i* P	**Pb**	**06 18 41.1**	**-0.7**
GCAM				IAML		06 19 04.0	
	comp=E,32nm,0.4s						
FETY	**Fethiye**	**1.20**	**86**	*i* P	**Pg**	**06 18 43.1**	**+0.5**
FETY				*i* S	**Sn**	**06 19 00.4**	**+1.9**
TAVA	**DENIZLI_Tavas**	**1.39**	**49**	*i* P	**Pg**	**06 18 47.1**	**+0.9**
TAVA				*i* S	**Sg**	**06 19 06.0**	**+1.8**
TAVA				IAML		06 19 13.0	
	comp=E,11nm,0.7s						
AYDB	**Zeytinkoy-Aydi**	**1.40**	**10**	PN	**Pn**	**06 18 44.6**	**-0.5**
AKAS	**Kas**	**1.66**	**101**	*i* P	**Pg**	**06 18 51.1**	**-0.1**
GOLH	**Golhisar**	**1.71**	**66**	*i* P	**Pg**	**06 18 53.0**	**+0.6**
GOLH				*i* S	**Sg**	**06 19 17.9**	**+3.2**
GOLH				IAML		06 19 22.0	
	comp=N,13nm,0.8s						

*TIR **20** 06:20:21.6,41°.34N×19°.50E,h19km,Md2.8/5*
*ATH **20** 06:20:23.5,41°.34N×19°.58E,h18km±2km,ML2.6/1,Error ellipse: s-maj=5.2km s-min=1.8km az=22.0*
*PDG **20** 06:20:23.9±0.2,41°.36N×19°.55E,h9km,ML3.0/10,Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
ISC 20 06:20:23.7±1.1,41.34N±0°.03×19.56E±0°.04,h12km±8km, n23,σ0°95/41,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.23**	**88**	*i* PG	**Pg**	**06 20 27.9**	**-0.6**
TIR				*i* PG	**Sg**	**06 20 32.6**	**+0.7**
TIR	**Tirane**	**0.23**	**88**	P	**Pg**	**06 20 28.5**	**-0.1**
TIR				S	**Sg**	**06 20 32.5**	**+0.7**
TIR				AML	AML	06 20 33.6	
	comp=E,4310μm,0.4s						
TIR				AML	AML	06 20 33.9	
	comp=N,4558μm,0.4s						
ULC	**Ulcinj**	**0.67**	**339**	*e*Pg	**Pg**	**06 20 36.1**	**-0.6**
ULC				*e*Sg	**Sg**	**06 20 45.8**	**+0.4**
PUK	**Puka**	**0.74**	**19**	*i* PG	**Pg**	**06 20 37.4**	**-0.8**
PUK				*i* PG	**Sg**	**06 20 47.8**	**-0.1**
PHP	**Peshkopia**	**0.74**	**62**	*i* PG	**Pg**	**06 20 36.9**	**-1.3**
PHP				*i* PG	**Sg**	**06 20 48.7**	**+0.8**
DRME	**Dracevica, Mon**	**0.89**	**342**	*e*Pg	**Pg**	**06 20 40.3**	**-0.6**
DRME				*e*Sg	**Sn**	**06 20 53.9**	**-1.0**
BUM	**Brajici-Budva**	**1.08**	**333**	*e*Pg	**Pb**	**06 20 43.7**	**-0.7**
BUM				*e*Sg	**Sn**	**06 21 00.3**	**+0.6**
BCI	**Bajram Curri**	**1.09**	**20**	*i* PG	**Pb**	**06 20 42.9**	**-1.7**
BCI				*i* PG	**Sb**	**06 20 58.9**	**+0.2**
TTG	**Podgorica**	**1.11**	**348**	*e*Pg	**Pb**	**06 20 44.3**	**-0.6**
TTG				*e*Sg	**Sn**	**06 21 01.5**	**+1.2**
PVY	**Plav**	**1.29**	**13**	*e*Pg	**Pn**	**06 20 47.2**	**-0.4**
PVY				*e*Sg	**Sg**	**06 21 07.6**	**+2.4**
CEME	**Cevo**	**1.30**	**338**	*e*Pg	**Pn**	**06 20 47.2**	**-0.5**
CEME				*e*Sg	**Sg**	**06 21 06.6**	**+1.1**
HCY	**Herceg Novi**	**1.36**	**325**	*e*Pg	**Pn**	**06 20 48.4**	**-0.1**
HCY				*e*Sg	**Sg**	**06 21 09.5**	**+1.9**
NEST	**Nestorio**	**1.46**	**129**	P	**Pb**	**06 20 50.6**	**-0.2**
FNA	**Florina**	**1.48**	**112**	*i* PN	**Pb**	**06 20 51.0**	**-0.1**
FNA				*i* PN	**Sg**	**06 21 12.2**	**+0.8**
FNA	**Florina**	**1.48**	**112**	P	**Pg**	**06 20 51.6**	**-0.6**
FNA				S	**Sg**	**06 21 11.7**	**+0.4**
NKME	**Niksic**	**1.50**	**343**	*e*Pg	**Pn**	**06 20 50.5**	**+0.1**
NKME				*e*Sg	**Sg**	**06 21 12.0**	**+0.2**
NKY	**Niksic**	**1.53**	**344**	*e*Pg	**Pb**	**06 20 51.6**	**-0.5**
NKY				*e*Sg	**Sg**	**06 21 14.3**	**+1.3**
IVA	**Berane**	**1.55**	**9**	*e*Pg	**Pb**	**06 20 52.0**	**-0.4**
IVA				*e*Sg	**Sg**	**06 21 15.0**	**+1.4**
IGT	**Igoumenitsa**	**1.90**	**162**	P	**Pb**	**06 20 56.9**	**-1.5**
NOCI	**Noci**	**1.97**	**255**	P	**Pb**	**06 20 59.1**	**-0.4**
PLE	**Pljevlja**	**1.99**	**356**	*e*Pn	**Pb**	**06 20 58.7**	**-1.2**
PLE				*e*Sn	**Sb**	**06 21 25.6**	**+0.9**
GRG	**Griva**	**2.18**	**99**	P	**Pn**	**06 21 00.7**	**+0.9**
KNT	**Kendrikon**	**2.52**	**93**	P	**Pn**	**06 21 05.0**	**+0.5**

*MOS **20** 06:26:47.4±0.9,41°.26N×19°.33E,h10km,mb4.4/5,Error ellipse: s-maj=7.2km s-min=5.1km az=73.8*
*IDC **20** 06:26:48.0±0.9,41°.36N×19°.44E,h0km,mb3.8/11, mb1 3.9/17,mb1mx3.8/42,mbtmp3.8/17,ML3.5/6,MS3.2/2, Ms1 3.2/2,ms1mx2.7/49,Error ellipse: s-maj=18.0km s-min=13.5km az=21.0*
*ATH **20** 06:26:49.2,41°.44N×19°.44E,h19km±1km,ML3.7/4,Error ellipse: s-maj=4.3km s-min=1.4km az=350.0*
*BEO **20** 06:26:49.8±0.7,41°.31N×19°.44E,h4km±2km,ML3.7/20*
*NEIC **20** 06:26:50.7±2.2,41°.35N±0°.04×19°.40E±0°.04,h13km±2km, Error ellipse: s-maj=5.4km s-min=4.5km az=173.0*
*SKO **20** 06:26:50.1,41°.27N×19°.36E,h11km*
*TIR **20** 06:26:50.8,41°.39N×19°.58E,h17km,Md3.9/8*
*LDG **20** 06:26:51.4±0.1,41°.40N×19°.57E,h10km,Ml3.9/21,Error ellipse: s-maj=2.6km s-min=1.8km az=27.0*
*THE **20** 06:26:51.8,41°.44N×19°.51E,h4km,ML3.4/5,Error ellipse: s-maj=1.5km s-min=0.6km az=312.0*
*ROM **20** 06:26:52.0,41°.25N×19°.58E,h10km,ML4.1*
*PRU **20** 06:26:52.6±0.0,41°.37N×19°.46E,h10km,M4.2*
ISC 20 06:26:50.0±0.4,41.38N±0°.02×19.49E±0°.02,h12km,n335, σ2°16/419,mb4.3/19,32C-10D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**96**	P	**Pg**	**06 26 56.7**	**+0.8**
TIR				S	**Sb**	**06 27 01.5**	**-0.3**
TIR	**Tirane**	**0.29**	**96**	*e*Pg	**Pg**	**06 26 56.3**	**+0.4**
TIR				*e*Sg	**Sb**	**06 27 01.1**	**-0.7**
TIR	**Tirane**	**0.29**	**96**	*i* PG	**Pg**	**06 26 56.3**	**+0.4**
TIR				*i* PG	**Sb**	**06 27 00.2**	**-1.7**
TIR	**Tirane**	**0.29**	**96**	P	**Pg**	**06 26 56.4**	**+0.5**
TIR				S	**Sg**	**06 27 01.0**	**+1.1**
TIR				AML	AML	06 27 01.8	
	comp=N,44471μm,0.5s						
TIR				AML	AML	06 27 02.0	
	comp=E,52266μm,0.7s						
TIR	**Tirane**	**0.29**	**96**	⇓P	**Pg**	**06 26 56.4**	**+0.4**
TIR				⇑S	**Sg**	**06 27 00.9**	**+1.1**
TIR	**Tirane**	**0.29**	**96**		**Pg**	**06 26 56.3**	**+0.4**
TIR				Sg	**Sb**	**06 27 02.5**	**+0.7**
PUK	**Puka**	**0.73**	**25**	*i* PG	**Pg**	**06 27 04.6**	**+0.4**
PUK				*i* PG	**Sg**	**06 27 15.2**	**+1.5**
PHP	**Peshkopia**	**0.78**	**67**	P	**Pg**	**06 27 05.2**	**+0.1**
PHP				S	**Sb**	**06 27 17.5**	**+1.4**
PHP	**Peshkopia**	**0.78**	**67**	*i* PG	**Pg**	**06 27 04.7**	**-0.4**
PHP				*i* PG	**Sb**	**06 27 15.8**	**-0.3**
DRME	**Dracevica, Mon**	**0.84**	**345**	*e*Pn	**Pn**	**06 27 07.8**	**+0.2**
VLO	**Vlora**	**0.91**	**179**	P	**Pn**	**06 27 10.0**	**+1.4**
VLO				S	**Sn**	**06 27 24.4**	**+2.8**
VLO	**Vlora**	**0.91**	**179**	*i* PG	**Pg**	**06 27 06.7**	**-0.9**
VLO				*i* PG	**Sg**	**06 27 22.6**	**+3.2**
OHR	**Ohrid**	**1.03**	**105**	⇓*i* Pg	**Pg**	**06 27 10.3**	**+0.5**
OHR				*i* Sg	**Sn**	**06 27 25.7**	**+1.1**
OHR				*e*Lg	Lg	06 27 26.9	
	comp=N,3μm,0.8s						
OHR				*e*Lg	Lg	06 27 27.9	
	comp=E,2μm,0.6s						
PDG	**Podgorica**	**1.06**	**351**	*e*Pg	**Pb**	**06 27 10.1**	**-0.2**
PDG				*e*Sg	**Sn**	**06 27 26.9**	**+1.5**
PDG	**Podgorica**	**1.06**	**351**	⇑P	**Pn**	**06 27 11.8**	**+1.1**
PDG	**Podgorica**	**1.06**	**351**	⇑S	**Sn**	**06 27 27.6**	**+2.2**
PDG	**Podgorica**	**1.06**	**351**	*e*Pn	**Pn**	**06 27 11.7**	**+1.0**
PDG	**Podgorica**	**1.06**	**351**		**Pn**	**06 27 11.8**	**+1.1**
PDG					**Sg**	**06 27 24.9**	**+0.6**
BCI	**Bajram Curri**	**1.08**	**24**	*i* PG	**Pb**	**06 27 10.3**	**-0.3**
BCI				*i* PG	**Sg**	**06 27 26.3**	**+1.5**
TPE	**Tepelena**	**1.15**	**160**	P	**Pg**	**06 27 13.7**	**+1.4**
TPE	**Tepelena**	**1.15**	**160**	*i* PG	**Pg**	**06 27 13.7**	**+1.6**
TPE				*i* PG	**Sg**	**06 27 29.2**	**+2.0**
HCY	**Herceg Novi**	**1.30**	**326**	*e*Pn	**Pg**	**06 27 15.3**	**+0.4**
SCTE	**Santa Cesarea**	**1.52**	**211**	P	**Pb**	**06 27 18.7**	**+0.6**
SCTE	**Santa Cesarea**	**1.52**	**211**		**Pn**	**06 27 16.6**	**-0.3**
SCTE				Sn	**Sn**	**06 27 36.0**	**-0.6**
NEST	**Nestorio**	**1.53**	**129**	P	**Pg**	**06 27 19.8**	**+0.5**
NEST				S	**Sg**	**06 27 40.1**	**+0.9**
	comp=E,945nm,0.7s						
NEST	**Nestorio**	**1.53**	**129**	P	**Pb**	**06 27 19.1**	**+0.8**
FNA	**Florina**	**1.55**	**112**	P	**Pb**	**06 27 19.4**	**+0.8**
FNA				S	**Sg**	**06 27 40.9**	**+1.1**
	comp=E,2μm,0.9s						
FNA	**Florina**	**1.55**	**112**	*i* PN	**Pb**	**06 27 19.2**	**+0.6**
FNA				*i* PN	**Sg**	**06 27 39.7**	**-0.1**
FNA	**Florina**	**1.55**	**112**	P	**Pb**	**06 27 19.2**	**+0.6**
FNA				S	**Sg**	**06 27 39.7**	**-0.1**
FNA				AML	AML	06 27 44.4	
	comp=N,4648μm,0.8s						
FNA				AML	AML	06 27 48.5	
	comp=E,4014μm,0.5s						
FNA	**Florina**	**1.55**	**112**		**Pb**	**06 27 18.4**	**-0.2**
FNA				Sn	**Sg**	**06 27 39.4**	**-0.5**
SRN	**Sarande**	**1.55**	**165**	P	**Pg**	**06 27 20.4**	**+0.7**
SRN				S	**Sg**	**06 27 41.6**	**+1.8**
	comp=E,658nm,0.6s						
SRN	**Sarande**	**1.55**	**165**	*i* PN	**Pg**	**06 27 20.2**	**+0.5**
SRN				*i* PN	**Sg**	**06 27 41.4**	**+1.6**
SKO	**Skopje**	**1.58**	**67**	*i* Pn	**Pb**	**06 27 19.7**	**+0.6**
TREB	**Trebinje**	**1.58**	**328**	*e*Pg	**Pb**	**06 27 19.2**	**+0.1**
TREB				*e*Sg	**Sg**	**06 27 41.0**	**+0.1**
TREB	**Trebinje**	**1.58**	**328**	*e*Pn	**Pb**	**06 27 19.2**	**+0.1**
DBRK	**Dubrovnik**	**1.63**	**323**	*e*Pn	**Pb**	**06 27 20.2**	**+0.2**
KASA	**Kassiopi**	**1.67**	**168**	P	**Pb**	**06 27 21.5**	**+0.9**
BRY	**Bratogost**	**1.68**	**335**	*e*Pn	**Pg**	**06 27 22.1**	**0.0**
CGL1	**Ceglie Messapi**	**1.68**	**245**	*e*Pn	**Pn**	**06 27 19.4**	**+0.2**
TAR1	**Taranto**	**1.87**	**244**	*e*Pn	**Pn**	**06 27 21.8**	**0.0**
TAR1				Sn	**Sg**	**06 27 54.3**	**+4.2**
UPM	**Unac-Piva**	**1.87**	**347**	*e*Pn	**Pb**	**06 27 24.9**	**+0.7**
SJES	**Sjenica**	**1.92**	**11**	*e*Pg	**Pb**	**06 27 26.2**	**+1.3**
SJES				*e*Sg	**Sg**	**06 27 52.0**	**+0.4**
MASS	**Massafra**	**1.92**	**248**	*e*Pn	**Pg**	**06 27 28.3**	**+1.5**
NOCI	**Noci**	**1.92**	**253**	P	**Pn**	**06 27 22.7**	**+0.1**
IGT	**Igoumenitsa**	**1.96**	**160**	P	**Pb**	**06 27 26.5**	**+1.0**
IGT				S	**Sg**	**06 27 53.0**	**+0.2**
IGT	**Igoumenitsa**	**1.96**	**160**	P	**Pn**	**06 27 24.0**	**+1.0**
BAI	**Bari**	**1.98**	**263**	⇓*i* Pn	**Pn**	**06 27 23.7**	**+0.4**
STON	**Ston**	**2.00**	**319**	*e*Pn	**Pn**	**06 27 24.8**	**+1.3**
STON	**Ston**	**2.00**	**319**	*e*Pn	**Pn**	**06 27 24.5**	**+1.0**
JAN	**Janina**	**2.01**	**148**	P	**Pb**	**06 27 26.8**	**+0.3**
JAN				S	**Sg**	**06 27 53.8**	**-0.8**
	comp=E,808nm,0.5s						
JAN	**Janina**	**2.01**	**148**	P	**Pb**	**06 27 26.2**	**-0.3**
JAN				AML	AML	06 28 00.9	
	comp=E,2143μm,0.6s						
JAN				AML	AML	06 28 13.3	
	comp=N,1372μm,1.2s						
KPRO	**Kipourio**	**2.02**	**134**	P	**Pb**	**06 27 26.4**	**-0.2**
KPRO	**Kipourio**	**2.02**	**134**	P	**Pb**	**06 27 26.2**	**-0.4**
KZN	**Kozani**	**2.04**	**121**	P	**Pb**	**06 27 27.4**	**+0.4**
KZN				S	**Sg**	**06 27 54.2**	**-1.3**
	comp=N,512nm,0.6s						
KZN	**Kozani**	**2.04**	**121**	P	**Pb**	**06 27 26.8**	**-0.2**
KZN				AML	AML	06 28 01.9	
	comp=N,1222μm,0.7s						
KZN				AML	AML	06 28 09.1	
	comp=E,1396μm,0.8s						
SG1	**Sgolgore (BA)**	**2.19**	**257**	⇑*i* Pn	**Pn**	**06 27 26.5**	**+0.3**
SELS	**Selova**	**2.20**	**33**	*e*Pn	**Pn**	**06 27 27.9**	**+1.5**
MATE	**Matera**	**2.23**	**252**	⇑P	**Pn**	**06 27 27.1**	**+0.5**
MATE	**Matera**	**2.23**	**252**	⇑S	**Sn**	**06 27 55.7**	**+1.6**
MATE	**Matera**	**2.23**	**252**		**Pn**	**06 27 27.1**	**+0.5**
MATE					**Sn**	**06 27 55.7**	**+1.6**
RUDO	**Rudo**	**2.24**	**358**	*e*Pn	**Pn**	**06 27 28.8**	**+1.9**
GRG	**Griva**	**2.24**	**100**	P	**Pn**	**06 27 28.6**	**+1.7**
GRG	**Griva**	**2.24**	**100**	P	**Pn**	**06 27 28.2**	**+1.2**
IVAS	**Ivanjica**

KIJV Sn **Sn** 06 28 25.8 +1.0
XOR Xorichti 3.47 124 P **Pn** 06 27 44.0 +0.2
EFP Efpalio 3.49 147 P **Pn** 06 27 46.5 +2.5
PAIG Paliouri 3.50 113 P **Pn** 06 27 46.1 +1.8
PAIG Paliouri 3.50 113 P **Pn** 06 27 45.9 +1.7
MGRS Mrkonjic Grad 3.51 331 *e*Pn **Pn** 06 27 47.2 +2.8
SERG Sergoula 3.56 145 P **Pn** 06 27 47.8 +2.7
KALE Kalithea 3.62 145 P **Pn** 06 27 48.5 +2.6
ZIRJ Zirje 3.64 310 *e*Pn **Pn** 06 27 47.2 +1.1
ZIRJ Sn **Sn** 06 28 29.4 +0.5
PAOL Paolisi 3.73 266 **Pn** 06 27 48.1 +0.8
MORI Morici 3.73 313 *e*Pn **Pn** 06 27 49.1 +1.7
SKIA Skiathos 3.76 125 P **Pn** 06 27 50.3 +2.5
BLY Banja Luka 3.77 334 *e*Pn **Pn** 06 27 49.9 +2.1
BLY Banja Luka 3.77 334 ⇑P **Pn** 06 27 49.7 +1.8
BLY Banja Luka 3.77 334 *e*Pn **Pn** 06 27 49.8 +2.0
BLY Banja Luka 3.77 334 **Pn** 06 27 49.3 +1.5
MDVR Moldovita 3.77 25 ⇑P **Pn** 06 27 49.6 +1.6
MDVR Moldovita 3.77 25 **Pn** 06 27 49.5 +1.6
FRGS Fruska Gora 3.78 3 *e*Pn **Pn** 06 27 48.6 +0.4
FRGS Fruska Gora 3.78 3 *e*Pn **Pn** 06 27 48.5 +0.4
KAVA Kavala 3.81 94 P **Pn** 06 27 50.0 +1.5
KAVA Kavala 3.81 94 P **Pn** 06 27 50.0 +1.5
DRO Drossia 3.83 153 P **Pn** 06 27 50.6 +1.8
PUNG Punghina 3.85 40 ⇑P **Pn** 06 27 50.4 +1.4
PUNG Punghina 3.85 40 **Pn** 06 27 50.4 +1.4
KLV Kalavryta, Ach 3.92 147 P **Pn** 06 27 52.2 +2.2
DJES Djerdap 3.97 33 *e*Pn **Pn** 06 27 52.2 +1.6
HERR Herculane 4.11 31 ⇑P **Pn** 06 27 54.2 +1.7
HERR Herculane 4.11 31 **Pn** 06 27 54.2 +1.7
CEL Celeste 4.17 223 Pn **Pn** 06 27 52.7 -0.7
UDBI Udbina 4.17 320 *i* Pn **Pn** 06 27 56.0 +2.6
DUGI Dugi Otok 4.18 310 *i* Pn **Pn** 06 27 55.0 +1.5
INTR Introdacqua 4.23 280 **Pn** 06 27 55.7 +1.4
SRE Strehaia 4.27 38 P **Pn** 06 27 56.8 +2.1
SRE Strehaia 4.27 38 ⇑P **Pn** 06 27 56.8 +2.1
SRE Strehaia 4.27 38 **Pn** 06 27 56.8 +2.1
PLVB Pleven 4.30 60 ⇑P **Pn** 06 27 57.3 +2.2
PLVB Pleven 4.30 60 **Pn** 06 27 57.3 +2.2
BZS Buzias 4.51 19 *e*Pn **Pn** 06 27 59.2 +1.1
BZS Buzias 4.51 19 P **Pn** 06 27 59.4 +1.3
BZS Buzias 4.51 19 ⇑P **Pn** 06 27 59.4 +1.3
BZS Buzias 4.51 19 **Pn** 06 27 59.4 +1.3
ITM Ithomi 4.60 155 Pn **Pn** 06 27 60.0 +0.6
AQU L'Aquila 4.64 284 *e*Pn **Pn** 06 27 58.9 -1.1
AQU L'Aquila 4.64 284 **Pn** 06 28 00.8 +0.8
AQU Sn **Sn** 06 28 52.3 -1.6
NVLJ Novalja 4.65 315 *i* Pn **Pn** 06 28 01.2 +1.3
GZR Gura Zlata 4.67 30 P **Pn** 06 28 01.7 +1.3
GZR Gura Zlata 4.67 30 ⇓P **Pn** 06 28 01.7 +1.3
GZR Gura Zlata 4.67 30 **Pn** 06 28 01.7 +1.3
MORH Mrgy, Hungar 4.87 353 *e*Pn **Pn** 06 28 04.1 +1.1
ALN Alexandroupoli 4.98 93 P **Pn** 06 28 04.2 -0.3
ALN Alexandroupoli 4.98 93 Pn **Pn** 06 28 04.2 -0.3
ELND Elena 5.00 70 ⇑P **Pn** 06 28 06.5 +1.8
ELND Elena 5.00 70 **Pn** 06 28 06.5 +1.8
HUMR Humele 5.12 50 ⇑P **Pn** 06 28 07.9 +1.5
HUMR Humele 5.12 50 **Pn** 06 28 07.9 +1.5
BOJS Bojanci 5.15 325 *i* Pn **Pn** 06 28 08.4 +1.6
BOJS *i* Sn **Sn** 06 29 04.4 -1.7
comp=Z,45nm,0.4s
KAL Kalocsa 5.16 356 *i* Pn **Pn** 06 28 09.2 +2.2
KAL *e*Sn **Sn** 06 29 07.0 +0.6
CRES Cresnjev 5.32 328 *e*Pn **Pn** 06 28 10.0 +0.8
RIJ Rijeka 5.37 319 *e*Pn **Pn** 06 28 11.0 +1.1
ARR Arges 5.47 42 ⇑P **Pn** 06 28 13.9 +2.5
ARR Arges 5.47 42 **Pn** 06 28 13.9 +2.5
BRJN Brijuni 5.48 312 *e*Pn **Pn** 06 28 12.4 +1.1
MURB Monte Urbino 5.49 292 **Pn** 06 28 13.4 +1.8
MURB Sn **Sn** 06 29 13.2 -1.6
MTUR Matau 5.60 45 P **Pn** 06 28 15.5 +2.4
MTUR Matau 5.60 45 ⇑P **Pn** 06 28 15.5 +2.4
MTUR Matau 5.60 45 **Pn** 06 28 15.5 +2.4
CEY Cerknica 5.70 322 *e*Pn **Pn** 06 28 15.8 +1.4
VOIR 5.73 43 P **Pn** 06 28 17.0 +2.1
VOIR 5.73 43 ⇑P **Pn** 06 28 17.0 +2.1
VOIR 5.73 43 **Pn** 06 28 17.0 +2.1
LATE Laterza 5.85 285 Pn **Pn** 06 28 17.6 +1.0
LJU Ljubljana 5.88 324 *e*Pn **Pn** 06 28 18.4 +1.4
SOKA Soboth 6.19 330 *e*Pn **Pn** 06 28 22.5 +1.2
comp=Z,2.2nm,0.2s
SOKA *e*Sn **Sn** 06 29 29.4 -2.6
comp=Z,7.7nm,0.4s
OBKA Obir 6.24 327 *e*Pn **Pn** 06 28 23.6 +1.6
comp=Z,2.2nm,0.1s,SNR=4.1
OBKA Sn **Sn** 06 29 32.7 -0.5
comp=Z,39nm,0.5s
MLR Muntele Rosu 6.24 47 P **Pn** 06 28 25.3 +3.3
MLR 06 29 32.4
MLR Muntele Rosu 6.24 47 Pn **Pn** 06 28 24.7 +2.7
comp=Z,3.0nm,0.3s,baz=222,slow=4.4,SNR=27
MLR Sn **Sn** 06 29 34.5 +1.2
comp=Z,0.9nm,0.3s,baz=239,slow=17,SNR=2.1
MLR Muntele Rosu 6.24 47 ⇑P **Pn** 06 28 25.6 +3.6
MLR Muntele Rosu 6.24 47 **Pn** 06 28 25.3 +3.3
MLR Sn **Sn** 06 29 32.4 -1.0
DOPR Dopca 6.27 41 ⇑P **Pn** 06 28 25.2 +2.9
DOPR Dopca 6.27 41 **Pn** 06 28 25.1 +2.9
APE Apeiranthos 6.37 131⇓ *e*P **Pn** 06 28 24.0 +0.4
OSSC Osservatorio P 6.46 292 Pn **Pn** 06 28 25.3 +0.4
OSSC Sn **Sn** 06 29 37.3 -1.2
ARSA Arzberg 6.52 336 Pn **Pn** 06 28 27.4 +1.7
comp=Z,3.2nm,0.3s
PSZ Piszkesteto 6.54 2 P **Pn** 06 28 27.3 +1.2
PSZ 06 29 40.9
PSZ Piszkesteto 6.54 2 ⇓P **Pn** 06 28 28.9 +2.9
PSZ Piszkesteto 6.54 2 **Pn** 06 28 27.3 +1.2
PSZ Sn **Sn** 06 29 40.9 +0.2
PSZ Piszkesteto 6.54 2 **Pn** 06 28 28.9 +2.9
MYKA Terra Mystica 6.73 323 *e*Pn **Pn** 06 28 30.3 +1.7
comp=Z,4.2nm,0.5s
PLOR Plostina 6.86 47 P **Pn** 06 28 33.3 +3.0
PLOR Plostina 6.86 47 ⇑P **Pn** 06 28 33.3 +3.0
PLOR Plostina 6.86 47 **Pn** 06 28 33.3 +3.0
VRI Vrincioaia 6.91 47 P **Pn** 06 28 34.1 +3.1
VRI Vrincioaia 6.91 47 ⇑P **Pn** 06 28 34.1 +3.1
VRI Vrincioaia 6.91 47 **Pn** 06 28 34.1 +3.1
TEOL Teolo 6.95 308 **Pn** 06 28 31.9 +0.4
TEOL Sn **Sn** 06 29 45.5 -4.9
HARR Harsova 7.02 59 P **Pn** 06 28 34.8 +2.3
HARR Harsova 7.02 59 ⇑P **Pn** 06 28 34.8 +2.3
HARR Harsova 7.02 59 **Pn** 06 28 34.8 +2.3
CONA Conrad Observa 7.04 340 *e*Pn **Pn** 06 28 37.3 +4.5
comp=Z,0.2nm,0.2s
TRPA Tarpa 7.09 17 ⇑P **Pn** 06 28 35.6 +2.2
TRPA Tarpa 7.09 17 **Pn** 06 28 35.6 +2.2
VYHS Vyhne 7.13 357 *e*SN **Sn** 06 29 54.0 -0.9
KECS Kecovo 7.14 5 *e*SN **Sn** 06 29 53.9 -1.3
KECS *e*LG Lg 06 30 09.4
MODS Modra-Piesok 7.17 348 *e*SN **Sn** 06 29 53.6 -2.3
KBA Koelnbreinsper 7.20 324 *e*Pn **Pn** 06 28 36.9 +1.7
comp=Z,2.1nm,0.3s
KBA Sn **Sn** 06 29 55.1 -1.9
comp=Z,6.6nm,0.3s
BIZ Bicaz 7.32 38 ⇓P **Pn** 06 28 39.2 +2.6
BIZ Bicaz 7.32 38 **Pn** 06 28 39.2 +2.6
CTI Castel Tesino 7.35 312 P **Pn** 06 28 37.7 +0.6
CTI 06 29 57.7
CTI Castel Tesino 7.35 312 **Pn** 06 28 37.6 +0.6
CTI Sn **Sn** 06 29 57.7 -2.8
ABTA Abfaltersbach 7.35 319 *e*Pn **Pn** 06 28 38.8 +1.7
comp=Z,1.7nm,0.2s
CFR Carcaliu 7.37 56 P **Pn** 06 28 38.8 +1.6
CFR Carcaliu 7.37 56 ⇑P **Pn** 06 28 38.8 +1.6
CFR Carcaliu 7.37 56 **Pn** 06 28 38.8 +1.6
TOPG Topolog 7.38 59 ⇑P **Pn** 06 28 39.1 +1.6
IDI Anoyia 7.42 143 Pn **Pn** 06 28 37.8 -0.3
comp=Z,0.3nm,0.3s,baz=328,slow=15,SNR=2.5
IDI Sn **Sn** 06 29 59.6 -2.6
comp=Z,0.4nm,0.3s,baz=40,slow=17,SNR=2.7
BURAR Bucovina Array 7.46 31 ⇑P **Pn** 06 28 42.2 +3.6
BURAR Bucovina Array 7.46 31 **Pn** 06 28 42.2 +3.6
MOA Molln 7.46 332 *e*Pn **Pn** 06 28 41.3 +2.7
comp=Z,1.8nm,0.2s
BUR08 Bucovina Ar. S 7.47 31 **Pn** 06 28 39.7 +0.8
BUR08 Sn **Sn** 06 30 03.6 0.0
UZH Uzhgorod 7.52 14 *e*P Pn 06 28 45.0 +5.7
KOLS Kolonicke sedl 7.81 14 *e*P **Pn** 06 28 45.9 +2.6
KOLS *e* 06 30 09.8
KOLS Kolonicke sedl 7.81 14 *e*PN **Pn** 06 28 45.9 +2.6
KOLS *e*SN **Sn** 06 30 09.8 -1.8

PGF Pioggiola 7.90 282 *e*Pn **Pn** 06 28 45.9 +1.2
PGF *e*Sn **Sn** 06 30 08.8 -5.3
comp=Z,4.5nm,0.6s
WTTA Wattenberg 8.14 319 *e*Pn **Pn** 06 28 49.6 +1.6
comp=Z,9.9nm,0.4s,SNR=6.7
WTTA Sn **Sn** 06 30 17.8 -2.2
comp=Z,37nm,0.6s
VRAC Vranov 8.19 347 LR LR 06 32 38.0
comp=Z,117nm,18.6s,baz=155,slow=43
SQTA Sankt Quirin 8.32 317 *e*Pn **Pn** 06 28 52.4 +1.8
comp=Z,4.1nm,0.3s,SNR=6.2
SQTA Sn **Sn** 06 30 24.4 -0.1
comp=Z,8.0nm,0.3s
FETA Feichten 8.45 315 *e*Pn **Pn** 06 28 53.8 +1.5
comp=Z,1.3nm,0.4s
MOTA Moosalm 8.46 318 *e*Pn **Pn** 06 28 54.3 +1.9
comp=Z,5.1nm,0.4s,SNR=6.1
MOTA *e*Sn **Sn** 06 30 26.7 -1.1
comp=Z,27nm,0.8s
FUORN Ofenpass-Fuorn 8.46 311 **Pn** 06 28 53.5 +0.9
FUORN Sn **Sn** 06 30 25.6 -2.4
GEC2 GERESS Array S 8.51 333 Pn **Pn** 06 28 53.6 +0.6
GEC2 **Sn** 06 30 29.5 +0.6
GERES GERESS Array B 8.51 333 Pn **Pn** 06 28 53.8 +0.7
comp=Z,0.4nm,0.3s,baz=160,slow=14,SNR=7.1
GERES Sn **Sn** 06 30 28.9 -0.1
comp=Z,1.6nm,0.3s,baz=152,slow=23,SNR=7.3
RETA Reutte 8.73 317 *e*Pn **Pn** 06 28 58.7 +2.7
comp=Z,1.3nm,0.4s
RETA *e*Sn **Sn** 06 30 33.2 -1.1
comp=Z,10nm,0.3s
DAVOX Davos/Dischmat 8.77 311 Pn **Pn** 06 28 59.3 +2.6
comp=Z,1.7nm,0.3s,baz=152,slow=17,SNR=9.7
DAVOX Sn **Sn** 06 30 32.9 -2.6
comp=Z,0.9nm,0.3s,baz=163,slow=19,SNR=3.6
KHC Kasperske Hory 8.80 334 *e*P **Pn** 06 28 58.4 +1.5
KHC *e* 06 30 33.7
KHC Kasperske Hory 8.80 334 *e*PN **Pn** 06 28 58.4 +1.5
KHC *e*SN **Sn** 06 30 33.7 -2.3
KHC Kasperske Hory 8.80 334 Pn **Pn** 06 28 56.8 -0.1
KHC Sn **Sn** 06 30 36.8 +0.9
TUE Stuetta 8.91 308 Pn **Pn** 06 28 59.0 +0.3
TUE Sn **Sn** 06 30 36.7 -2.3
DAVA Damuels 9.06 314 *e*Pn **Pn** 06 29 02.2 +1.5
comp=Z,2.1nm,0.2s
DAVA Sn **Sn** 06 30 40.7 -2.1
comp=Z,10nm,0.5s
SBF Sospel 9.22 290 *e*Pn **Pn** 06 29 03.3 +0.5
SBF *e*Sn **Sn** 06 30 40.5 -6.0
comp=Z,11nm,0.4s
FRF La Foret Royal 9.73 287 *e*Pn **Pn** 06 29 10.5 +0.7
FRF *e*Sn **Sn** 06 30 53.8 -5.2
comp=Z,3.8nm,0.3s
MBDF Montbardon 9.89 294 *e*Pn **Pn** 06 29 11.5 -0.5
MBDF *e*Sn **Sn** 06 30 57.2 -5.8
comp=Z,2.6nm,0.3s
BNI Bardonecchia 10.04 296 P **Pn** 06 29 13.0 -1.1
BNI Bardonecchia 10.04 296 Pn **Pn** 06 29 13.0 -1.1
SENIN Lac Senin/Sane 10.11 304 **Pn** 06 29 15.4 +0.4
LPG La Plagne 10.13 298 *e*Pn **Pn** 06 29 14.2 -1.3
LPG *e*Sn **Sn** 06 31 02.5 -6.7
comp=Z,7.4nm,0.4s
LPL La Plagne 10.15 298 *e*Pn **Pn** 06 29 14.8 -0.9
LPL *e*Sn **Sn** 06 31 02.3 -7.2
comp=Z,8.2nm,0.3s
BFO Black Forest 10.53 315 P **Pn** 06 29 20.6 -0.1
BFO Black Forest 10.53 315 Pn **Pn** 06 29 20.6 -0.1
ORIF Oris-en-Rattie 10.55 294 *e*Pn **Pn** 06 29 20.7 -0.3
ORIF *e*Sn **Sn** 06 31 12.5 -6.6
comp=Z,4.2nm,0.3s
SMRF Simiane la Rot 10.57 289 *e*Pn **Pn** 06 29 21.2 0.0
CLL Collm 10.89 338 *e*(Sb) Sn 06 32 12.0 +45
CLL *e*Sg 06 32 42.0
BRTR Keskin Array B 10.90 94 Pn **Pn** 06 29 27.8 +2.0
comp=Z,0.1nm,0.3s,baz=288,slow=9.0,SNR=3.2
CABF La Chapelle 10.97 303 *e*Pn **Pn** 06 29 25.8 -1.0
CABF La Chapelle 10.97 303 *e*P Pn 06 29 32.8 +6.0
CABF *e*Sn **Sn** 06 31 22.4 -7.0
comp=Z,2.4nm,0.4s
HINF Hinteralfeld 11.06 310 *e*Pn **Pn** 06 29 27.6 -0.4
HINF Hinteralfeld 11.06 310 *e*P Pn 06 29 33.7 +5.7
HINF *e*Sn **Sn** 06 31 24.2 -7.4
comp=Z,2.1nm,0.2s
CDF Champ du Feu 11.15 313 *e*Pn **Pn** 06 29 28.7 -0.5
CDF *e*Sn **Sn** 06 31 26.2 -7.5
comp=Z,0.9nm,0.2s
HAU Haudompre 11.45 310 *e*Pn **Pn** 06 29 33.3 0.0
HAU *e*Sn **Sn** 06 31 33.2 -7.8
comp=Z,10nm,0.4s
SSB Saint Sauveur 11.56 295 P **Pn** 06 29 34.1 -0.7
SSB Saint Sauveur 11.56 295 Pn **Pn** 06 29 34.0 -0.7
SFTF Sexfontaines 12.31 309 *e*Pn **Pn** 06 29 45.2 +0.2
baz=127
SFTF *e*Sn **Sn** 06 31 54.1 -8.0
comp=Z,3.0nm,0.3s
SMF Signal de Mont 12.43 300 *e*Pn **Pn** 06 29 45.2 -1.4
SMF *e*Sn **Sn** 06 31 57.6 -7.3
comp=Z,3.0nm,0.3s
MEZF Maizieres J'vi 12.45 310 *e*Pn **Pn** 06 29 47.5 +0.6
baz=126
LOR Lormes 12.63 303 *e*Pn **Pn** 06 29 48.7 -0.7
baz=124
LOR *e*Sn **Sn** 06 32 02.0 -8.0
comp=Z,11nm,0.5s
SSF Saint Saulge 12.78 302 *e*Pn **Pn** 06 29 50.0 -1.5
SSF Saint Saulge 12.78 302 *e*P Pn 06 29 56.5 +5.0
SSF *e*Sn Sn 06 32 05.0 -8.6
comp=Z,3.9nm,0.4s
AVF Avril sur Loir 12.79 300 *e*Pn **Pn** 06 29 51.1 -0.4
AVF *e*Sn **Sn** 06 32 05.7 -8.1
comp=Z,0.7nm,0.2s
BGF Bois d'Agland 13.05 299 *e*Pn **Pn** 06 29 54.0 -1.1
BGF *e*Sn **Sn** 06 32 11.8 -8.3
comp=Z,9.8nm,0.5s
TCF Toulx Ste Croi 13.39 297 *e*Pn **Pn** 06 29 59.3 -0.5
TCF *e*Sn **Sn** 06 32 20.5 -8.1
comp=Z,1.2nm,0.3s
HYF Humbligny 13.41 302 *e*Pn **Pn** 06 29 59.7 -0.3
HYF *e*Sn **Sn** 06 32 20.8 -8.1
KIV Kislovodsk 17.25 74 *e*P **P** 06 30 52.3 +0.1
KIV pmax pmax
comp=Z,13nm,1.0s
KIV MLR MLR
comp=Z,129nm,14.0s
KBZ Khabaz 17.40 74 P **P** 06 30 55.1 +1.4
comp=Z,0.1nm,0.3s,baz=300,slow=11,SNR=6.0
VSU Vasula 17.71 13⇓ *e*P **P** 06 30 58.1 +1.1
OBN Obninsk 17.77 34 *e*P **P** 06 30 57.8 +0.1
OBN pmax pmax
comp=Z,7.0nm,0.4s
OBN MLR MLR
comp=Z,80nm,17.0s
HFS Hagfors 19.12 351 P **P** 06 31 12.6 +0.1
comp=Z,0.2nm,0.3s,baz=182,slow=15,SNR=4.1
GNI Garni 19.16 85⇓ *e*P **Pn** 06 31 14.4 +0.2
GNI pmax pmax
comp=Z,38nm,1.1s
GNI Garni 19.16 85 P **Pn** 06 31 14.1 0.0
comp=Z,0.7nm,0.3s,baz=339,slow=5.7,SNR=3.4
GNI Garni 19.16 85 P **P** 06 31 13.3 0.0
EKA Eskdalemuir Ar 20.40 321 P **P** 06 31 27.8 +1.3
comp=Z,1.9nm,0.8s,baz=108,slow=10,SNR=2.6
FINES FINESS Array B 20.49 9 P **P** 06 31 26.6 -0.9
comp=Z,1.5nm,0.4s,baz=180,slow=11,SNR=15
FIA1 FINESS Array S 20.49 9 P **P** 06 31 27.5 +0.1
FIA1 IAmb IAmb 06 31 27.8
comp=Z,19nm,1.4s
KIRV Kirov 25.50 37 LR LR 06 41 47.7
comp=Z,77nm,18.8s,baz=132,slow=35
PRGR Permogore 25.68 29 *e*P **P** 06 32 16.9 -2.6
PRGR pmax pmax
comp=Z,11nm,0.8s
ARU Arti 29.29 46*c* *i*P **P** 06 32 51.5 -0.4
ARU S **S** 06 37 46.0 +1.4
ARU pmax pmax
comp=Z,6.0nm,0.9s
ARU Arti 29.29 46 P **P** 06 32 50.4 -1.5
comp=Z,0.9nm,0.3s,baz=295,slow=7.0,SNR=5.6
ARU Arti 29.29 46 P **P** 06 32 51.8 -0.1
ARU IAmb IAmb 06 32 52.2
comp=Z,5.4nm,1.0s
TORD Torodi Ar. Bea 32.13 214 P **P** 06 33 17.4 +0.1
comp=Z,0.3nm,0.6s,baz=22,slow=10,SNR=3.0
BRVK Borovoye 35.69 53 *e*P **P** 06 33 48.5 +0.5
BRVK Borovoye 35.69 53 P **P** 06 33 48.4 +0.5

KURK Kurchatov 41.08 56⇑ *e*P **P** 06 34 34.9 +1.6
KURK pmax pmax
comp=Z,3.0nm,1.8s
KURK Kurchatov 41.08 56 P **P** 06 34 33.9 +0.6
KSH Kashi 42.38 73 P P 06 34 49.4 +5.2
KSH S **S** 06 41 01.3 -4.0
KSH sS sS 06 41 12.4 +0.9
KSH pmax pmax
comp=Z,8.0nm,0.5s
KSH pmax pmax
comp=Z,230nm,5.1s
KSH LR LR
comp=N,170nm,4.4s
KSH LR LR
comp=E,270nm,4.4s
MAKZ Makanchi 44.16 61 P **P** 06 34 57.9 -0.5
MAKZ pmax pmax
comp=Z,4.0nm,1.1s
MAKZ Makanchi 44.16 61 P **P** 06 34 57.9 -0.5
MAKZ IAmb IAmb 06 34 59.0
comp=Z,3.8nm,1.1s
ZAA0 Zalesovo Array 44.21 50 P **P** 06 34 58.1 -0.5
ZALV Zalesovo Beam 44.21 50 P **P** 06 34 58.5 -0.2
comp=Z,4.1nm,0.4s,baz=280,slow=8.7,SNR=18
MK31 Makanchi Array 44.37 61 P **P** 06 35 00.1 0.0
MK31 pmax pmax
comp=Z,4.0nm,0.9s
MK31 Makanchi Array 44.37 61 P **P** 06 35 00.1 0.0
MK31 IAmb IAmb 06 35 00.5
comp=Z,3.6nm,0.8s
MKAR Makanchi Array 44.37 61 P **P** 06 34 59.9 -0.2
comp=Z,4.0nm,0.6s,baz=282,slow=6.8,SNR=38
MKAR PcP **PP** 06 36 43.2 -0.2
comp=Z,0.4nm,0.6s,baz=304,slow=3.3,SNR=3.0
WMQ Urumqi 48.96 63 *e*P **P** 06 35 39.6 +3.5
WMQ pmax pmax
comp=Z,9.0nm,0.7s
WMQ pmax pmax
comp=Z,67nm,3.9s
WMQ LR LR
comp=N,720nm,28.9s
WMQ LR LR
comp=E,1μm,28.8s
WMQ LR LR
comp=Z,680nm,28.9s
GTA Gaotai 59.05 63 *e*P **P** 06 36 50.1 +0.2
GTA pP sP 06 36 57.4 +2.1
GTA sP pP 06 37 00.5 +6.7
GTA pmax pmax
comp=Z,3.0nm,0.8s
SONM Songino Array 59.07 52 P **P** 06 36 50.2 +0.2
comp=Z,1.0nm,0.8s,baz=282,slow=9.2,SNR=7.0
ULN Ulaanbaatar 59.44 51⇑ *e*P **P** 06 36 53.4 +0.8
ULN pmax pmax
comp=Z,5.0nm,2.1s
LZH Lanzhou 63.51 64 *e*P **P** 06 37 22.0 +1.8
LZH pP sP 06 37 25.3 -0.3
LZH sP pP 06 37 28.5 +4.4
LZH PP **PP** 06 39 41.3 +1.7
LZH pmax pmax
comp=Z,18nm,1.0s
LZH pmax pmax
comp=Z,53nm,4.9s
HHC Hu-ho-hao-te 65.90 56 *e*P **P** 06 37 36.3 +0.6
HHC pmax pmax
comp=Z,8.0nm,0.7s
HHC pmax pmax
comp=Z,72nm,5.7s
YKA Yellowknife Ar 70.11 339 P **P** 06 38 01.8 +0.1
comp=Z,0.8nm,0.8s,baz=33,slow=5.4,SNR=10
KLR Kul'dur 71.92 40⇓ *e*P **P** 06 38 13.4 +0.5
ULM Lac du Bonnet 72.66 323 P **P** 06 38 17.8 +0.5
comp=Z,0.9nm,0.6s,baz=65,slow=7.5,SNR=2.9
ILAR Eielson Array 73.65 354 P **P** 06 38 23.7 +0.9
comp=Z,0.3nm,0.9s,baz=347,slow=3.7,SNR=2.5
PDAR Pinedale Array 84.46 325 P **P** 06 39 23.5 +0.7
comp=Z,0.1nm,0.5s,baz=45,slow=6.3,SNR=2.4
ASAR Alice Springs 123.24 93 PKP **PKPdf** 06 45 45.3 -1.6
comp=Z,0.4nm,0.8s,baz=328,slow=1.9,SNR=4.5

TIR ***20*** *06:29:51.8, 41°.40N ± 19°.51E, h10km, Md3.2/9*
ATH ***20*** *06:29:52.0, 41°.39N ± 19°.43E, h17km ± 1km, ML3.1/4, Error ellipse: s-maj=3.4km s-min=1.2km az=357.0*
PDG ***20*** *06:29:53.7 ± 0.2, 41°.31N ± 19°.52E, h17km, MD3.4/4, ML3.4/10, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
THE ***20*** *06:29:55.0, 41°.42N ± 19°.54E, h10km, ML2.9/4, Error ellipse: s-maj=1.6km s-min=0.7km az=138.0*

ISC 20 06:29:53.4±1.1, **41°.38N**±0°.02 × **19°.52E**±0°.02, **h5**km±10km, **n95**, σ1**°17**/128, **7C-3D, Albania**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.26**	**98**	P		**Pb**	**06 29 59.4**	**-1.1**
TIR				S		**Sb**	**06 30 04.0**	**-1.3**
TIR	**Tirane**	**0.26**	**98**	*i* PG		**Pg**	**06 29 58.9**	**+0.5**
TIR				*i* PG		**Pn**	**06 30 03.4**	**-0.5**
TIR	**Tirane**	**0.26**	**98**	P		**Pb**	**06 29 59.2**	**-1.3**
TIR				S		**Pn**	**06 30 03.4**	**-0.5**
TIR				AML		AML	06 30 04.3	
	comp=E,12221μm,0.3s							
TIR				AML		AML	06 30 04.4	
	comp=N,8895μm,0.5s							
ULC	**Ulcinj**	**0.62**	**340**	*e*Pg		**Pb**	**06 30 06.5**	**-0.2**
ULC				*e*Sg		**Sn**	**06 30 17.9**	**-1.3**
PUK	**Puka**	**0.71**	**23**	*i* PG		**Pb**	**06 30 07.1**	**-1.3**
PUK				*i* PG		**Sb**	**06 30 18.6**	**+0.1**
PHP	**Peshkopia**	**0.75**	**66**	*i* PG		**Pg**	**06 30 07.5**	**-0.3**
PHP				*i* PG		**Sb**	**06 30 19.0**	**-0.5**
DRME	**Dracevica, Mon**	**0.84**	**343**	*e*Pg		**Pn**	**06 30 10.9**	**-1.0**
DRME				*e*Sg		**Sn**	**06 30 25.5**	**+0.8**
VLO	**Vlora**	**0.91**	**181**	P		**Pn**	**06 30 13.1**	**+0.3**
VLO				S		**Sn**	**06 30 27.0**	**+0.7**
VLO	**Vlora**	**0.91**	**181**	*i* PG		**Pn**	**06 30 12.4**	**-0.4**
VLO				*i* PG		**Sb**	**06 30 25.1**	**+1.0**
BUM	**Brajici-Budva**	**1.03**	**333**	*e*Pg		**Pn**	**06 30 14.4**	**-0.2**
BUM				*e*Sg		**Sn**	**06 30 31.4**	**+2.0**
BCI	**Bajram Curri**	**1.06**	**22**	*i* PG		**Pb**	**06 30 13.5**	**-0.8**
BCI				*i* PG		**Sb**	**06 30 29.3**	**+0.8**
TTG	**Podgorica**	**1.07**	**349**	*e*Pg		**Pn**	**06 30 14.7**	**-0.3**
TTG				*e*Sg		**Sn**	**06 30 32.8**	**+2.6**
TPE	**Tepelena**	**1.15**	**161**	P		**Pn**	**06 30 15.9**	**-0.2**
TPE				S		**Sn**	**06 30 33.5**	**+1.3**
TPE	**Tepelena**	**1.15**	**161**	*i* PG		**Pn**	**06 30 16.0**	**0.0**
TPE				*i* PG		**Sb**	**06 30 32.9**	**+2.1**
CEME	**Cevo**	**1.25**	**339**	*e*Pg		**Pn**	**06 30 18.0**	**+0.5**
CEME				*e*Sg		**Sn**	**06 30 37.3**	**+2.5**
PVY	**Plav**	**1.25**	**15**	*e*Pg		**Pn**	**06 30 17.8**	**+0.1**
PVY				*e*Sg		**Sn**	**06 30 38.4**	**+3.4**
HCY	**Herceg Novi**	**1.31**	**324**	*e*Pg		**Pb**	**06 30 19.0**	**+0.5**
HCY				*e*Sg		**Sn**	**06 30 39.1**	**+2.8**
NKME	**Niksic**	**1.45**	**343**	*e*Pg		**Pg**	**06 30 21.2**	**+0.1**
NKME				*e*Sg		**Sn**	**06 30 42.9**	**+3.2**
NKY	**Niksic**	**1.48**	**345**	*e*Pg		**Pg**	**06 30 21.5**	**-0.3**
NKY				*e*Sg		**Sg**	**06 30 44.0**	**+3.0**
NEST	**Nestorio**	**1.51**	**129**	P		**Pg**	**06 30 22.2**	**0.0**
NEST	**Nestorio**	**1.51**	**129**	P		**Pg**	**06 30 21.9**	**-0.4**
NEST				AML		AML	06 30 45.3	
	comp=N,401μm,0.7s							
NEST				AML		AML	06 30 48.6	
	comp=E,636μm,0.7s							
IVA	**Berane**	**1.51**	**10**	*e*Pn		**Pg**	**06 30 21.9**	**-0.5**
IVA				*e*Sn		**Sg**	**06 30 44.9**	**+2.9**
FNA	**Florina**	**1.52**	**113**	P		**Pg**	**06 30 22.2**	**-0.3**
FNA				S		**Sg**	**06 30 42.6**	**+0.3**
	comp=E,580nm,0.4s							
FNA	**Florina**	**1.52**	**113**	P		**Pb**	**06 30 21.9**	**-0.2**
FNA				S		**Sg**	**06 30 43.0**	**+0.7**
FNA				AML		AML	06 30 45.8	
	comp=N,1424μm,0.5s							
FNA				AML		AML	06 30 49.6	
	comp=E,1112μm,0.4s							
SCTE	**Santa Cesarea**	**1.54**	**212**	*i* PN		**Pg**	**06 30 22.2**	**-0.6**
SCTE	**Santa Cesarea**	**1.54**	**212**	P		**Pn**	**06 30 19.9**	**-1.5**
SRN	**Sarande**	**1.54**	**166**	P		**Pb**	**06 30 21.7**	**-0.7**
SRN				S		**Sg**	**06 30 43.3**	**+0.3**
SRN	**Sarande**	**1.54**	**166**	*i* PN		**Pn**	**06 30 21.3**	**-0.2**
SRN				*i* PN		**Sb**	**06 30 44.6**	**+2.4**
DBRK	**Dubrovnik**	**1.64**	**322**	*i* Pn		**Pb**	**06 30 23.0**	**-1.2**
DBRK				Sg		**Sg**	**06 30 45.0**	**-1.2**
KASA	**Kassiopi**	**1.67**	**169**	P		**Pb**	**06 30 23.9**	**-0.6**
IGT	**Igoumenitsa**	**1.95**	**161**	P	

	comp=E,180nm,0.4s							
IGT	**Igoumenitsa**	**1.95**	**161**	P	**Pn**	**06 30 27.1**	**0.0**
IGT				S	**Sn**	**06 30 52.9**	**+0.9**
IGT				AML	AML	06 30 55.7	
	comp=N,480μm,0.5s						
IGT				AML	AML	06 31 01.3	
	comp=E,405μm,0.5s						
PLE	**Pljevlja**	**1.95**	**357**	*e*Pn	**Pb**	**06 30 27.9**	**-1.5**
PLE				*e*Sn	**Sg**	**06 30 55.4**	**-0.6**
NOCI	**Noci**	**1.95**	**253**	P	**Pb**	**06 30 25.4**	**-1.8**
KPRO	**Kipourio**	**2.00**	**135**	P	**Pb**	**06 30 29.3**	**-0.9**
KPRO	**Kipourio**	**2.00**	**135**	P	**Pb**	**06 30 28.8**	**-1.4**
JAN	**Janina**	**2.00**	**149**	P	**Pn**	**06 30 28.6**	**+0.8**
JAN	**Janina**	**2.00**	**149**	P	**Pn**	**06 30 27.7**	**-0.1**
STON	**Ston**	**2.01**	**318**	*e*Pn	**Pn**	**06 30 27.5**	**-0.5**
KZN	**Kozani**	**2.02**	**121**	P	**Pb**	**06 30 29.7**	**-0.8**
KZN				S	**Sb**	**06 30 55.0**	**-0.9**
	comp=E,195nm,0.6s						
KZN	**Kozani**	**2.02**	**121**	P	**Pb**	**06 30 29.1**	**-1.4**
GRG	**Griva**	**2.21**	**100**	P	**Pn**	**06 30 31.4**	**+0.6**
GRG				S	**Sb**	**06 30 59.9**	**-1.7**
	comp=E,90nm,0.4s						
GRG	**Griva**	**2.21**	**100**	P	**Pn**	**06 30 31.3**	**+0.5**
KNT	**Kendrikon**	**2.55**	**94**	P	**Pn**	**06 30 36.0**	**+0.5**
KNT	**Kendrikon**	**2.55**	**94**	P	**Pn**	**06 30 35.9**	**+0.5**
LIT	**Litokhoron**	**2.59**	**119**	P	**Pn**	**06 30 36.4**	**+0.4**
LIT	**Litokhoron**	**2.59**	**119**	P	**Pn**	**06 30 36.1**	**+0.1**
THL	**Klokotos Trika**	**2.63**	**133**	P	**Pn**	**06 30 37.3**	**+0.9**
MAKA	**Makarska**	**2.66**	**317**	*e*Pn	**Pn**	**06 30 36.6**	**-0.2**
MAKA				Sn	**Sn**	**06 31 08.6**	**-0.9**
TSLK	**Tsoukalades, L**	**2.70**	**161**	P	**Pn**	**06 30 36.9**	**-0.5**
THE	**Thessaloniki**	**2.71**	**105**	P	**Pn**	**06 30 37.6**	**0.0**
LKD2	**Lefkada island**	**2.73**	**161**	P	**Pn**	**06 30 37.1**	**-0.8**
HORT	**Hortiatis**	**2.82**	**105**	P	**Pn**	**06 30 39.6**	**+0.5**
EVGI	**Lefkada island**	**2.89**	**162**	P	**Pn**	**06 30 39.9**	**-0.2**
EVGI				S	**Sn**	**06 31 16.4**	**+1.2**
EVGI	**Lefkada island**	**2.89**	**162**	P	**Pn**	**06 30 39.5**	**-0.6**
HVAR	**Hvar**	**2.90**	**309**	*e*Pn	**Pn**	**06 30 39.3**	**-0.9**
SOH	**Sokhos**	**2.95**	**100**	P	**Pn**	**06 30 41.0**	**+0.1**
FSK	**Fiskardo**	**3.03**	**164**	P	**Pn**	**06 30 41.5**	**-0.4**
VTS	**Vitosha**	**3.03**	**65**	P	**Pn**	**06 30 43.0**	**+0.9**
VTS	**Vitosha**	**3.03**	**65**	⇑S	**Sn**	**06 31 19.5**	**+0.7**
TIP	**Timpagrande**	**3.05**	**225**	P	**Pn**	**06 30 41.0**	**-1.3**
PDO	**Prodromos**	**3.06**	**155**	P	**Pn**	**06 30 42.0**	**-0.4**
SRS	**Serrai**	**3.08**	**94**	P	**Pn**	**06 30 42.7**	**0.0**
SRS	**Serrai**	**3.08**	**94**	P	**Pn**	**06 30 42.7**	**0.0**
MAKR	**Makrakomi, Fth**	**3.10**	**139**	P	**Pn**	**06 30 44.4**	**+1.4**
MAKR	**Makrakomi, Fth**	**3.10**	**139**	P	**Pn**	**06 30 44.3**	**+1.4**
PLG	**Polygyros**	**3.14**	**107**	P	**Pn**	**06 30 44.0**	**+0.5**
PLG	**Polygyros**	**3.14**	**107**	P	**Pn**	**06 30 44.5**	**+1.0**
CUC	**Castrocucco**	**3.14**	**245**	P	**Pn**	**06 30 43.9**	**+0.3**
PVO	**Paravola**	**3.16**	**150**	P	**Pn**	**06 30 44.3**	**+0.5**
AGG	**Agios Georgios**	**3.19**	**137**	P	**Pn**	**06 30 45.1**	**+0.9**
AGG	**Agios Georgios**	**3.19**	**137**	P	**Pn**	**06 30 44.9**	**+0.7**
BLKB	**Belogradchik**	**3.23**	**45**	⇑S	**Sb**	**06 31 27.3**	**-3.6**
VLS	**Valsamata**	**3.31**	**165**	P	**Pn**	**06 30 44.6**	**-1.2**
ANX	**Ano Chora**	**3.34**	**146**	P	**Pn**	**06 30 48.0**	**+1.7**
ANX	**Ano Chora**	**3.34**	**146**	P	**Pn**	**06 30 47.5**	**+1.3**
XOR	**Xorichti**	**3.45**	**125**	P	**Pn**	**06 30 47.5**	**-0.3**
EFP	**Efpalio**	**3.47**	**147**	P	**Pn**	**06 30 49.1**	**+1.0**
PAIG	**Paliouri**	**3.48**	**113**	P	**Pn**	**06 30 48.3**	**+0.2**
KIJV	**Kijevo**	**3.49**	**320**	*i* Pn	**Pn**	**06 30 48.3**	**+0.1**
ZIRJ	**Zirje**	**3.66**	**310**	*i* Pn	**Pn**	**06 30 50.2**	**-0.3**
MORI	**Morici**	**3.75**	**313**	*i* Pn	**Pn**	**06 30 52.3**	**+0.4**
MORI				Sn	**Sn**	**06 31 35.9**	**-0.6**
MDVR	**Moldovita**	**3.76**	**25**	⇓P	**Pn**	**06 30 52.7**	**+0.7**
MDVR	**Moldovita**	**3.76**	**25**	⇓S	**Sn**	**06 31 34.6**	**-2.1**
DRO	**Drossia**	**3.82**	**153**	P	**Pn**	**06 30 54.2**	**+1.4**
HERR	**Herculane**	**4.09**	**30**	⇑P	**Pn**	**06 30 57.1**	**+0.6**
HERR	**Herculane**	**4.09**	**30**	⇑S	**Sn**	**06 31 43.1**	**-1.6**
UDBI	**Udbina**	**4.18**	**320**	*e*Pn	**Pn**	**06 30 59.0**	**+1.1**
DUGI	**Dugi Otok**	**4.20**	**310**	*i* Pn	**Pn**	**06 30 58.0**	**-0.1**
BZS	**Buzias**	**4.50**	**19**	⇑P	**Pn**	**06 31 02.5**	**+0.4**
BZS	**Buzias**	**4.50**	**19**	⇓S	**Sn**	**06 31 53.1**	**-1.7**
GZR	**Gura Zlata**	**4.66**	**30**	⇑P	**Pn**	**06 31 05.5**	**+1.1**
GZR	**Gura Zlata**	**4.66**	**30**	⇑S	**Sn**	**06 31 59.5**	**+0.6**
NVLJ	**Novalja**	**4.66**	**315**	*e*Pn	**Pn**	**06 31 04.8**	**+0.4**
BRJN	**Brijuni**	**5.50**	**312**	*e*Pn	**Pn**	**06 31 15.6**	**-0.3**

IDC ***20*** *06:55:11.2±2.7, 3°.25S×146°.09E, h0km, mb4.0/6, mb1 4.2/7, mb1mx3.8/41, mbtmp4.1/7, ML3.7/1, MS3.0/3, Ms1 3.0/3, ms1mx2.8/27, Error ellipse: s-maj=76.7km s-min=23.2km az=93.0*

NEIC ***20*** *06:55:16.6±1.0, 3°.4S±0°.2×146°.1E±0°.2, h35km±2km, mb4.2/6, Error ellipse: s-maj=41.5km s-min=26.7km az=77.0*

ISC 20 06:55:14.8±2.1, 3°.3S±0°.1×146°.2E±0°.4, h25km, n16, σ0s62/13, mb4.0/7, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**14.97**	**115**	LR	LR	07 04 29.6	
	comp=Z,48nm,18.1s,baz=354,slow=37						
CTA	**Charters Tower**	**16.67**	**190**	Pn	**P**	**06 59 09.1**	**0.0**
	0.2nm,0.3s,baz=4.6,slow=16,SNR=5.1						
WR0	**Warramunga Arr**	**20.06**	**214**	P	**P**	**06 59 46.3**	**-0.1**
WR0				IAmb	IAmb	06 59 50.0	
	comp=Z,28nm,1.3s						
WRAB	**Tennant Creek**	**20.15**	**214**	P	**P**	**06 59 47.4**	**+0.1**
WRAB				IAmb	IAmb	06 59 50.8	
	comp=Z,13nm,1.0s						
WRA	**Warramunga Arr**	**20.16**	**214**	P	**P**	**06 59 46.9**	**-0.6**
	comp=Z,9.0nm,1.0s,baz=37,slow=12,SNR=17						
DAV	**Davao City (W)**	**23.00**	**297**	LR	LR	07 07 21.1	
	comp=Z,46nm,18.9s,baz=312,slow=32						
AS31	**Alice Springs**	**23.45**	**209**	P	**P**	**07 00 22.7**	**+0.2**
ASAR	**Alice Springs**	**23.45**	**209**	P	**P**	**07 00 21.6**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=39,slow=8.5,SNR=16						
FITZ	**Fitzroy Crossi**	**24.91**	**232**	P	**P**	**07 00 37.0**	**+1.0**
	comp=Z,2.6nm,0.6s,baz=63,slow=6.8,SNR=4.1						
FITZ	**Fitzroy Crossi**	**24.91**	**232**	P	**P**	**07 00 36.8**	**+0.7**
KSRS	**Korea Array**	**43.97**	**339**	LR	LR	07 20 08.2	
	comp=Z,21nm,19.9s,baz=85,slow=34						
CMAR	**Chiang Mai Arr**	**51.29**	**297**	P	**P**	**07 04 16.6**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=126,slow=7.3,SNR=8.1						
MK31	**Makanchi Array**	**74.92**	**320**	P	**P**	**07 06 54.2**	**+0.4**
MK31				IAmb	IAmb	07 06 56.4	
	comp=Z,1.5nm,1.0s						
MKAR	**Makanchi Array**	**74.92**	**320**	P	**P**	**07 06 53.2**	**-0.5**
	comp=Z,1.4nm,0.9s,baz=104,slow=6.1,SNR=7.8						
MAKZ	**Makanchi**	**75.12**	**320**	P	**P**	**07 06 54.7**	**-0.2**
MAKZ				IAmb	IAmb	07 06 58.1	
	comp=Z,4.0nm,1.4s						
BVAR	**Borovoye Array**	**84.13**	**324**	P	**P**	**07 07 44.1**	**+0.4**
	comp=Z,0.9nm,0.7s,baz=102,slow=5.1,SNR=5.8						

NEIC ***20*** *06:56:04.4±1.6, 18°.45N±0°.06×72°.41W±0°.04, h15km±1km, ML3.4/17, Error ellipse: s-maj=9.0km s-min=5.5km az=179.0*

OSPL ***20*** *06:56:05.0±2.1, 18°.45N×72°.50W, h20km±102km, ML2.9*

ISC 20 06:56:04.2±0.9, 18°.47N±0°.04×72°.42W±0°.04, h16km±5km, n21, σ1s19/34, Haiti region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NQWLB	**Fermate**	**0.10**	**74**	Pg	**Pg**	**06 56 07.2**	**-0.5**
NQWLB				Sg	**Sg**	**06 56 09.9**	**0.0**
NQBME	**Bureau des Min**	**0.15**	**50**	Pg	**Pg**	**06 56 08.4**	**-0.3**
NQBME				Sg	**Sg**	**06 56 11.5**	**+0.7**
JAKH	**Jacmel**	**0.25**	**203**	*i* P	**Pg**	**06 56 09.4**	**-0.3**
JAKH				*e*S	**Sg**	**06 56 13.7**	**+0.3**
JAKH				IAML		06 56 13.9	
	comp=Z,3μm,0.1s						
JAKH	**Jacmel**	**0.25**	**203**		**Pg**	**06 56 09.3**	**-0.3**
JAKH				Sg	**Sg**	**06 56 13.6**	**+0.3**
LONE1	**Neyba**	**0.94**	**89**	*e*S	**Sb**	**06 56 35.5**	**+1.0**
SDDR	**Presa de Saban**	**1.19**	**64**	*i* P	**Pb**	**06 56 25.5**	**-0.9**
SDDR				*e*S	**Sb**	**06 56 40.8**	**-0.7**
SDDR				IAML		06 56 59.8	
	comp=Z,110nm,0.6s						
SDDR	**Presa de Saban**	**1.19**	**64**		**Pb**	**06 56 25.1**	**-1.3**
SDDR				Sn	**Sg**	**06 56 42.4**	**-0.2**
SC01	**Santiago de Io**	**1.86**	**59**	*i* P	**Pn**	**06 56 36.9**	**+1.4**
SC01				IAML		06 57 24.5	
	comp=Z,91nm,0.5s						
SC01	**Santiago de Io**	**1.86**	**59**		**Pn**	**06 56 36.6**	**+1.1**
SC01				Sn	**Sn**	**06 56 59.3**	**+0.5**
SC01				IAML		06 57 20.9	
	comp=E,181nm,0.8s						
SC01				IAML		06 57 24.5	
	comp=N,170nm,0.8s						
BANI	**BANI**	**1.96**	**92**		**Pn**	**06 56 38.1**	**+1.2**
BANI				Sn	**Sn**	**06 57 00.3**	**-1.0**
SDD	**Santo Domingo**	**2.38**	**90**	Pn	**Pn**	**06 56 42.7**	**+0.1**
SDD				IAML		06 57 19.2	
	comp=N,232nm,1.2s						
SDD				IAML		06 57 32.6	
	comp=E,159nm,1.8s						
DR12	**Loma Pena Alta**	**2.90**	**83**		**Pn**	**06 56 51.9**	**+2.1**
DR12				Sn	**Sn**	**06 57 24.5**	**+0.1**
GTBY	**Guantanamo Bay**	**2.93**	**300**	Pn	**Pn**	**06 56 52.3**	**+2.0**
GTBY				Sn	**Sn**	**06 57 25.3**	**+0.2**
GRTK	**Grand Turk**	**3.26**	**22**	Pn	**Pn**	**06 56 54.2**	**-0.6**
GRTK				IAML		06 58 07.6	
	comp=E,120nm,2.9s						
GRTK				IAML		06 58 51.9	
	comp=E,106nm,3.1s						
MTDJ	**Mount Denham**	**4.87**	**268**	Pn	**Pn**	**06 57 17.6**	**+0.6**
MTDJ				Sn	**Sn**	**06 58 13.0**	**-0.1**
CRPR	**Cabo Rojo, PR**	**5.06**	**94**	Pn	**Pn**	**06 57 20.2**	**+0.7**
CRPR				IAML		06 58 42.4	
	comp=E,24nm,2.4s						
MLPR	**Magueyes Islan**	**5.13**	**95**	Pn	**Pn**	**06 57 21.2**	**+0.8**
MLPR				IAML		06 58 16.0	
	comp=N,23nm,3.1s						
MLPR				IAML		06 59 37.0	
	comp=E,20nm,2.9s						
CBYP	**Canovanas**	**6.23**	**91**		**Pn**	**06 57 39.2**	**+3.5**
HUMP	**Col San Antoni**	**6.25**	**92**	Pn	**Pn**	**06 57 36.1**	**+0.3**
HUMP				Sn	**Sn**	**06 58 46.1**	**-0.8**
MTP	**Monte Pirata**	**6.53**	**92**	Pn	**Pn**	**06 57 41.9**	**+2.1**
SDV	**Santo Domingo**	**9.68**	**169**	Pn	**Pn**	**06 58 23.6**	**+0.5**
SDV				Sn	**Sn**	**07 00 10.0**	**-1.8**

IDC 20 06:57:30.8±7.0, 5°.69S×145°.56E, h60km±62km, mb3.7/3, mb1 3.9/5, mb1mx3.4/41, mbtmp4.0/5, ML4.3/1, Error ellipse: s-maj=70.2km s-min=40.3km az=41.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.02**	**157**	P	Pn	06 58 30.4	+0.5
	4.2nm,0.3s,baz=0.0,slow=7.1,SNR=20						
PMG				S	Sn	06 59 16.1	+0.3
	1.6nm,0.3s,baz=253,slow=19,SNR=4.3						
WRA	**Warramunga Arr**	**17.88**	**217**	P	Pn	07 01 36.7	+1.1
	1.0nm,0.3s,baz=41,slow=12,SNR=27						
ASAR	**Alice Springs**	**21.11**	**211**	P	P	07 02 09.9	-0.7
	3.5nm,1.0s,baz=48,slow=8.8,SNR=12						
FITZ	**Fitzroy Crossi**	**23.03**	**236**	P	P	07 02 30.2	-0.9
	2.1nm,0.5s,baz=49,slow=7.6,SNR=6.0						
STKA	**Stephens Creek**	**26.32**	**188**	P	P	07 03 02.0	+0.9
	1.1nm,0.4s,baz=5.7,slow=10,SNR=3.5						

TIR 20 06:57:30.2, 41°.33N×19°.51E, h10km, Md2.6/5, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.27**	**86**	*i* PG	Pg	06 57 36.3	+0.6
TIR				*i* SG	Sg	06 57 40.4	+1.0
PUK	**Puka**	**0.77**	**22**	*i* PG	Pb	06 57 45.6	-0.2
PHP	**Peshkopia**	**0.78**	**63**	*i* PG	Pg	06 57 45.7	+0.3
PHP				*i* SG	Sb	06 57 57.7	+1.0
BCI	**Bajram Curri**	**1.12**	**22**	*i* PG	Pn	06 57 52.8	+0.8
BCI				*i* SG	Sn	06 58 08.8	+1.3
FNA	**Florina**	**1.51**	**111**	*i* PN	Pg	06 57 59.4	+0.1
FNA				*i* SN	Sg	06 58 20.8	+1.9

ATH 20 06:58:09.0, 38°.64N×21°.78E, h17km±3km, ML1.6/2, Error ellipse: s-maj=3.5km s-min=1.0km az=228.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANX	**Ano Chora**	**0.12**	**110**	P	Pg	06 58 12.7	-0.2
ANX				S	Sg	06 58 15.1	-0.4
ANX				AML	AML	06 58 15.8	
	comp=N,1010μm,0.2s						
ANX				AML	AML	06 58 16.0	
	comp=E,842μm,0.4s						
PVO	**Paravola**	**0.20**	**265**	P	Pg	06 58 13.9	+0.1
PVO				S	Sg	06 58 17.0	0.0
EFP	**Efpalio**	**0.23**	**154**	P	Pg	06 58 14.3	0.0
EFP				S	Sg	06 58 18.6	+0.1
EFP				AML	AML	06 58 19.2	
	comp=N,163μm,0.2s						
EFP				AML	AML	06 58 19.9	
	comp=E,279μm,0.1s						
EVR	**Evrytania**	**0.28**	**5**	P	Pg	06 58 15.2	-0.1
EVR				S	Sg	06 58 19.5	0.0
SERG	**Sergoula**	**0.31**	**135**	P	Pg	06 58 15.7	0.0
SERG				S	Sb	06 58 20.7	-0.3
TRIZ	**Trizonia**	**0.35**	**139**	P	Pg	06 58 16.2	-0.2
TRIZ				S	Sg	06 58 21.3	-0.1
KALE	**Kalithea**	**0.38**	**130**	P	Pg	06 58 16.8	0.0
KALE				S	Sg	06 58 22.3	+0.2
LAKA	**Lakka**	**0.42**	**158**	P	Pg	06 58 17.5	-0.2
MAKR	**Makrakomi, Fth**	**0.47**	**36**	P	Pg	06 58 17.6	-0.9
AGG	**Agios Georgios**	**0.58**	**48**	P	Pg	06 58 20.3	-0.3
AGG				S	Sb	06 58 29.8	+1.1

DDA ***20*** *07:05:05.7, 37°.17N×28°.75E, h7km±3km, MD2.5*

ISK ***20*** *07:05:06.1, 37°.22N×28°.78E, h5km, ML2.2/8*

ISC 20 07:05:06.0±0.9, 37°.20N±0°.03×28°.78E±0°.04, h7km, n13, σ0s77/17, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAVA	**DENIZLI_Tavas**	**0.29**	**21**	*i* P	**Pg**	**07 05 11.8**	**+0.1**
TAVA				*i* S	**Sg**	**07 05 16.4**	**+0.7**
TAVA				IAML		07 05 17.0	
	comp=N,168nm,0.2s						
DENT	**Denizli**	**0.59**	**20**	PG	**Pg**	**07 05 17.6**	**+0.2**
DENT				SG	**Sg**	**07 05 25.8**	**+0.6**
FETY	**Fethiye**	**0.61**	**156**	PG	**Pg**	**07 05 18.1**	**+0.3**
FETY	**Fethiye**	**0.61**	**156**	*i* P	**Pg**	**07 05 16.0**	**-1.8**
FETY				*i* S	**Sg**	**07 05 26.1**	**+0.3**
GOLH	**Golhisar**	**0.62**	**86**	*i* P	**Pg**	**07 05 18.1**	**+0.1**
GOLH				*i* S	**Sb**	**07 05 28.2**	**-0.2**
GOLH				IAML		07 05 31.0	
	comp=N,30nm,0.4s						
AYDN	**Tasoluk**	**0.85**	**303**	*i* P	**Pb**	**07 05 22.7**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**1.03**	**317**	PG	**Pb**	**07 05 25.9**	**-0.3**
DAT	**Datca**	**1.07**	**245**	PG	**Pb**	**07 05 26.8**	**-0.1**
AKAS	**Kas**	**1.17**	**145**	PN	**Pn**	**07 05 29.8**	**+0.9**
BODT	**Bodrum**	**1.18**	**264**	PN	**Pn**	**07 05 29.2**	**+0.2**
KORT	**Korkueli**	**1.27**	**98**	PN	**Pg**	**07 05 31.1**	**+0.7**
KHAL	**Karahalli**	**1.30**	**25**	*i* P	**Pn**	**07 05 29.3**	**-1.4**
GCAM	**G?zelcaml?**	**1.33**	**293**	PN	**Pg**	**07 05 31.9**	**+0.4**

NEIC ***20*** *07:09:53.9±2.3, 27°.92S±0°.06×66°.57W±0°.09, h153km±6km, mb4.2/8, Md3.8(SJA), Error ellipse: s-maj=12.2km s-min=8.2km az=89.0*

SJA ***20*** *07:09:54.5±0.8, 28°.00S×66°.66W, h185km±4km, ML3.8, MW3.6*

IDC ***20*** *07:09:55.1±1.5, 27°.95S×66°.45W, h157km±14km, mb3.9/5, mb1 3.8/11, mb1mx3.6/32, mbtmp4.3/11, Error ellipse: s-maj=23.3km s-min=14.7km az=110.0*

VAO ***20*** *07:10:02.6±0.6, 27°.85S×66°.63W, h263km, mb4.2*

ISC 20 07:09:54.7±0.5, 27°.91S±0°.04×66°.72W±0°.04, h167km, n90, σ1s46/117, mb4.1/6, 3C-2D, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CYA	**Choya**	**0.96**	**123**	*i* P	**Pn**	**07 10 21.9**	**+1.1**
CYA				IAML		07 10 22.7	
	comp=Z,510nm,0.4s						
CYA				*e*S	**Sn**	**07 10 42.4**	**+1.4**
ACLC	**CERRO LA CRUZ**	**1.52**	**188**	*i* P	**Pn**	**07 10 27.3**	**+1.4**
ACLC				*e*S	**Sn**	**07 10 51.1**	**+0.9**
VCA	**Vinchina**	**1.55**	**238**	*i* P	**Pn**	**07 10 28.6**	**+2.4**
VCA				*e*S	**Sn**	**07 10 53.5**	**+2.9**
APLL	**PUNTA DE LOS L**	**2.48**	**176**	*i* P	**Pn**	**07 10 37.0**	**+0.5**
APLL				*e*S	**Sn**	**07 11 08.2**	**-0.7**
GO03	**Copiap**	**3.13**	**275**	⇑*i* P	**Pn**	**07 10 46.3**	**+1.8**
GO03				*i* S	**Sn**	**07 11 23.9**	**+0.7**
GO03				IAML		07 11 26.0	
	comp=N,1μm,0.4s						
GO03	**Copiap**	**3.13**	**275**	Pn	**Pn**	**07 10 46.6**	**+2.2**
GO03				Sn	**Sn**	**07 11 24.2**	**+1.1**
GO03	**Copiap**	**3.13**	**275**	*i* P	**Pn**	**07 10 46.2**	**+1.8**
GO03				⇓*e*S	**Sn**	**07 11 24.4**	**+1.2**
SLA	**San Lorenzo**	**3.36**	**19**	*e*P	**Pn**	**07 10 49.7**	**+2.3**
SLA				IAML		07 10 51.6	
	comp=Z,51nm,0.4s						
SLA				*e*S	**Sn**	**07 11 31.2**	**+2.7**
GO02	**Mina Guanaco**	**3.76**	**316**		**Pn**	**07 10 55.0**	**+2.4**
GO02				Sn	**Sn**	**07 11 38.5**	**+0.7**
TCA	**Tanti**	**3.88**	**152**	*i* P	**Pn**	**07 10 54.0**	**+0.1**
TCA				IAML		07 10 54.7	
	comp=Z,271nm,0.3s						
CFA	**Coronel Fontan**	**3.91**	**199**	P	**Pn**	**07 10 54.6**	**+0.4**
	comp=Z,29nm,0.3s,baz=46,slow=17,SNR=550						
CFA				S	**Sn**	**07 11 38.6**	**-2.1**
	comp=Z,28nm,0.3s,baz=13,slow=16,SNR=12						
AZAP	**Zapla**	**3.96**	**22**	⇓*i* P	**Pn**	**07 10 57.3**	**+2.1**
ZON	**Zonda**	**4.00**	**205**	*i* P	**Pn**	**07 10 56.0**	**+0.6**
ZON				IAML		07 11 44.2	
	comp=Z,162nm,0.2s						
GO04	**Tololo Observa**	**4.22**	**237**	⇑*i* P	**Pn**	**07 10 59.1**	**+0.7**
GO04				*i* S	**Sn**	**07 11 49.6**	**+1.3**
GO04				IAML		07 11 51.2	
	comp=E,2μm,0.5s						
GO04	**Tololo Observa**	**4.22**	**237**	Pn	**Pn**	**07 10 59.5**	**+1.1**
GO04				Sn	**Sn**	**07 11 48.1**	**-0.2**
GO04	**Tololo Observa**	**4.22**	**237**	*i* P	**Pn**	**07 10 59.0**	**+0.6**
LSCH	**La Serena**	**4.44**	**242**	*i* P	**Pn**	**07 11 00.8**	**-0.2**
LSCH				*i* S	**Sn**	**07 11 51.3**	**-1.6**
LSCH				IAML		07 11 53.0	
	comp=E,102nm,0.3s						
MRA	**San Martin**	**4.57**	**169**	*i* P	**Pn**	**07 11 02.5**	**-0.3**
PB14	**IPOC Station P**	**4.66**	**314**	*i* P	**Pn**	**07 11 06.4**	**+2.2**
PB14				*e*S	**Sn**	**07 11 59.6**	**+1.1**
CO02	**Combarbal**	**4.97**	**228**	⇑*i* P	**Pn**	**07 11 07.8**	**-0.2**
CO02				*i* S	**Sn**	**07 12 05.0**	**-0.5**
CO02				IAML		07 12 06.2	
	comp=N,1μm,0.2s						
ASAL	**Salagasta**	**5.01**	**201**	*i* P	**Pn**	**07 11 09.1**	**+0.5**
ARCO	**CERRO ARCO**	**5.27**	**201**	*i* P	**Pn**	**07 11 12.5**	**+0.4**
PB10	**IPOC Station P**	**5.58**	**321**		**Pn**	**07 11 17.1**	**+1.0**
PB10				Sn	**Sn**	**07 12 21.7**	**+1.8**
PB10	**IPOC Station P**	**5.58**	**321**	*i* P	**Pn**	**07 11 17.9**	**+1.9**
LVC	**Limon Verde**	**5.64**	**339**	P	**Pn**	**07 11 19.2**	**+2.0**
	comp=N,14nm,0.3s,baz=165,slow=9.2,SNR=102						
LVC				S	**Sn**	**07 12 21.6**	**-0.2**
	comp=N,9.3nm,0.3s,baz=73,slow=19,SNR=16						
LVC	**Limon Verde**	**5.64**	**339**	Pn	**Pn**	**07 11 19.6**	**+2.4**
LVC					**Sn**	**07 12 20.7**	**-1.2**
PEL	**Peldehue**	**6.24**	**212**	Pn	**Pn**	**07 11 24.0**	**-0.6**
PEL				Sn	**Sn**	**07 12 33.5**	**-1.9**
ROC1	**El Roble**	**6.26**	**215**		**Pn**	**07 11 24.2**	**-1.0**
ROC1				Sn	**Sn**	**07 12 33.4**	**-2.9**
PB04	**IPOC Station P**	**6.37**	**330**		**Pn**	**07 11 27.3**	**+0.7**
PB04				Sn	**Sn**	**07 12 34.9**	**-3.9**
GO05	**Huala**	**8.36**	**211**		**Pn**	**07 11 50.2**	**-2.5**
CPUP	**Villa Florida**	**8.51**	**81**	P	**Pn**	**07 11 53.6**	**-1.2**
	comp=N,0.3nm,0.3s,baz=261,slow=12,SNR=10						
CPUP	**Villa Florida**	**8.51**	**81**		**Pn**	**07 11 52.3**	**-2.5**
GO01	**Chusmiza**	**8.52**	**344**		**Pn**	**07 11 55.5**	**+0.1**
GO01				Sn	**Sn**	**07 13 29.6**	**-1.1**
PB11	**IPOC Station P**	**8.55**	**341**		**Pn**	**07 11 54.4**	**-1.1**
PB11				Sn	**Sn**	**07 13 30.3**	**-0.7**
MNMC	**Minye Minye**	**9.13**	**343**		**Pn**	**07 12 02.3**	**-1.0**
MNMC				Sn	**Sn**	**07 13 41.1**	**-4.0**
LPAZ	**La Paz**	**11.64**	**353**	P	**Pn**	**07 12 37.2**	**+0.7**
	comp=N,1.9nm,0.3s,baz=159,slow=5.4,SNR=40						
LPAZ				S	**Sn**	**07 14 41.6**	**-4.3**
	comp=N,0.0nm,0.3s,baz=233,slow=20,SNR=3.2						
LPAZ	**La Paz**	**11.64**	**353**		**Pn**	**07 12 36.4**	**-0.1**
LPAZ					**Sn**	**07 14 43.9**	**-2.1**
LPAZ	**La Paz**	**11.64**	**353**	*i* P	**Pn**	**07 12 37.2**	**+0.7**
GO06	**Curarrehue**	**12.29**	**198**	Pn	**Pn**	**07 12 44.4**	**+0.2**
ITAB	**Concordia**	**12.96**	**90**	*e*P	**P**	**07 12 57.4**	**+0.4**
SIV	**San Ignacio**	**12.97**	**25**	P	**Pn**	**07 12 53.2

s-min=0.1km az=15.0,Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}-2.29; $M_{\theta\theta}$1.46; $M_{\phi\phi}$0.83; $M_{r\theta}$0.65; $M_{r\phi}$-1.63; $M_{\theta\phi}$-1.03; Fault plane solution: M_o2.82933×10^{15} NP1:ϕ_s319.00000°,δ58.00000°, λ-79.00000°. NP2:ϕ_s118.00000°,δ34.00000°, λ-108.00000°.

PDG ***20*** *07:12:40.4±0.6,41°.39N×14°.49E,h20km,MD3.6/4, ML4.4/11 Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

MED_RC ***20*** *07:12:40.0±0.8,41°.51N×14°.36E,h11km±3km, MW4.4/7, Moment Tensor Solution.Mantle waves: s7,c7; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-3.68±.97; $M_{\theta\theta}$2.33±.62; $M_{\phi\phi}$1.35±.52; $M_{r\theta}$2.72±1.67; $M_{\theta\phi}$-1.40±.48; $M_{r\phi}$-0.28±1.75; Best double couple: M_o4.42000×10^{15} NP1:ϕ_s137.00000°,δ29.00000°,λ-65.00000°. NP2: ϕ_s289.00000°,δ64.00000°,λ-103.00000°. Principal axes: T 4.1000, Plg18.0000°, Azm29.0000°; N 0.6400, Plg12.0000°, Azm295.0000°; P -4.7400, Plg68.0000°, Azm174.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

NEIC ***20*** *07:12:40.0±2.0,41°.36N±0°.04×14°.47E±0°.06,h8km±4km Error ellipse: s-maj=6.5km s-min=5.0km az=53.0*

LDG ***20*** *07:12:40.1±0.1,41°.37N×14°.53E,h11km,Ml3.6/18,Error ellipse: s-maj=4.2km s-min=2.3km az=33.0*

PRU ***20*** *07:12:43.4±0.0,41°.62N×14°.63E,h0km,M4.5*

ISC 20 07:12:40.7±0.6,41°.37N±0°.02×14°.43E±0°.02,h14km±3km, n474,σ1ŝ66/521,mb4.3/43,MS3.8/5,63C-12D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h	m	s	Res ISC
T1011	**San Potito San**	**0.02**	**215**	*eP*		**Pg**	**07**	**12**	**43.1**	**-0.2**
T1011				S		**Sg**	**07**	**12**	**45.3**	**+0.3**
T1012	**Faicchio (BN)**	**0.12**	**156**	*i* P		**Pg**	**07**	**12**	**43.7**	**-0.3**
T1012				S		**Sg**	**07**	**12**	**45.9**	**-0.5**
VAGA	**Valle Agricola**	**0.15**	**286**	*eP*		**Pg**	**07**	**12**	**44.8**	**+0.3**
VAGA				S		**Sb**	**07**	**12**	**48.5**	**0.0**
VAGA	**Valle Agricola**	**0.15**	**286**	S		**Sb**	**07**	**12**	**48.9**	**+0.4**
SACR	**S. Croce Del S**	**0.21**	**83**	P		**Pg**	**07**	**12**	**44.8**	**-0.6**
SACR				S		**Sg**	**07**	**12**	**48.6**	**0.0**
SACR					AML	AML				
SACR					AML	AML				
SACR					AML	AML				
SACR					AML	AML				
SACR					AML	AML				
SACR	**S. Croce Del S**	**0.21**	**83**	S		**Sg**	**07**	**12**	**48.7**	**+0.1**
BSSO	**Busso**	**0.21**	**35**	*eP*		**Pg**	**07**	**12**	**45.4**	**-0.1**
BSSO				S		**Sg**	**07**	**12**	**49.4**	**+0.7**
BSSO					AML	AML				
	comp=E,91100μm,1.3s									
BSSO					AML	AML				
BSSO					AML	AML				
BSSO					AML	AML				
	comp=E,91100μm,1.3s									
BSSO					AML	AML				
BSSO					AML	AML				
BSSO	**Busso**	**0.21**	**35**	S		**Sb**	**07**	**12**	**49.7**	**-0.6**
MIDA	**Miranda**	**0.30**	**334**	*eP*		**Pg**	**07**	**12**	**46.7**	**-0.2**
MIDA					AML	AML				
	comp=E,76600μm,0.8s									
MIDA					AML	AML				
	comp=N,69150μm,0.6s									
MIDA					AML	AML				
	comp=E,77850μm,0.8s									
MIDA					AML	AML				
	comp=E,76600μm,0.8s									
MIDA					AML	AML				
	comp=N,69300μm,0.5s									
MIDA					AML	AML				
	comp=E,76600μm,0.8s									
MIDA					AML	AML				
	comp=N,69150μm,0.6s									
MIDA					AML	AML				
	comp=E,77850μm,0.8s									
MIDA					AML	AML				
	comp=N,69300μm,0.5s									
PSB1	**Pescosannita**	**0.32**	**117**	P		**Pg**	**07**	**12**	**46.6**	**-0.8**
PSB1				S		**Sg**	**07**	**12**	**51.8**	**0.0**
PSB1					AML	AML				
	comp=E,74250μm,0.6s									
PSB1					AML	AML				
	comp=N,99900μm,0.7s									
PSB1					AML	AML				
	comp=E,76000μm,0.6s									
PSB1					AML	AML				
PAOL	**Paolisi**	**0.36**	**163**	*eP*		**Pg**	**07**	**12**	**47.0**	**-0.9**
PAOL				S		**Sg**	**07**	**12**	**52.7**	**-0.1**
PAOL					AML	AML				
	comp=E,63350μm,0.5s									
PAOL					AML	AML				
	comp=N,62100μm,1.3s									
PAOL					AML	AML				
	comp=N,62100μm,1.3s									
PAOL					AML	AML				
	comp=E,66100μm,0.5s									
PAOL					AML	AML				
	comp=N,62100μm,1.3s									
PAOL					AML	AML				
	comp=N,64500μm,1.3s									
PAOL					AML	AML				
	comp=E,63350μm,0.5s									
PAOL					AML	AML				
	comp=E,66100μm,0.5s									
PAOL					AML	AML				
	comp=N,62100μm,1.3s									
PAOL	**Paolisi**	**0.36**	**163**			**Pg**	**07**	**12**	**47.0**	**-0.9**
PAOL				Sg		**Sg**	**07**	**12**	**51.7**	**-1.1**
CERA	**Filignano**	**0.38**	**306**	P		**Pg**	**07**	**12**	**48.6**	**+0.2**
CERA					AML	AML				
	comp=E,67900μm,0.7s									
CERA					AML	AML				
	comp=N,54800μm,1.2s									
CERA					AML	AML				
	comp=E,68750μm,0.7s									
CERA					AML	AML				
	comp=N,44450μm,0.4s									
CERA					AML	AML				
	comp=E,67900μm,0.7s									
CERA					AML	AML				
	comp=N,54800μm,1.2s									
GATE	**Gambatesa**	**0.39**	**69**	P		**Pg**	**07**	**12**	**48.4**	**-0.1**
GATE					AML	AML				
	comp=N,52950μm,0.9s									
GATE					AML	AML				
	comp=E,54500μm,0.5s									
GATE					AML	AML				
	comp=N,53000μm,0.9s									
GATE					AML	AML				
	comp=E,59800μm,0.6s									
GATE					AML	AML				
	comp=E,59800μm,0.6s									
GATE					AML	AML				
	comp=N,52950μm,0.9s									
RNI2	**Rionero Sannit**	**0.39**	**328**	*eP*		**Pg**	**07**	**12**	**48.6**	**+0.1**
RNI2					AML	AML				
	comp=N,39300μm,0.7s									
RNI2					AML	AML				
	comp=N,39250μm,0.7s									
RNI2					AML	AML				
	comp=E,74450μm,0.4s									
RNI2					AML	AML				
	comp=N,39200μm,0.7s									
RNI2					AML	AML				
	comp=E,74450μm,0.4s									
RNI2					AML	AML				
	comp=N,39300μm,0.7s									
RNI2					AML	AML				
	comp=E,73000μm,0.4s									
RNI2					AML	AML				
	comp=N,39200μm,0.7s									
TRIV	**Trivento**	**0.40**	**13**	P		**Pg**	**07**	**12**	**48.5**	**-0.3**
TRIV					AML	AML				
	comp=E,53100μm,0.6s									
TRIV					AML	AML				
	comp=N,50450μm,0.6s									
TRIV					AML	AML				
	comp=E,55150μm,0.4s									
TRIV					AML	AML				
	comp=N,44050μm,0.6s									
TRIV					AML	AML				
	comp=N,44050μm,0.6s									
TRIV					AML	AML				
	comp=E,55150μm,0.4s									
CIGN	**Sant'Elia a Pi**	**0.45**	**52**	P		**Pg**	**07**	**12**	**49.3**	**-0.4**
CIGN					AML	AML				
	comp=E,31850μm,1.4s									
CIGN					AML	AML				
	comp=N,35450μm,0.6s									
CIGN					AML	AML				
	comp=N,35450μm,0.6s									
CIGN					AML	AML				
	comp=E,31850μm,1.4s									
NL9	**Nola**	**0.46**	**169**	P		**Pg**	**07**	**12**	**48.8**	**-1.0**
MODR	**Mondragone**	**0.47**	**242**	*eP*		**Pg**	**07**	**12**	**50.0**	**0.0**
MODR					AML	AML				
MODR					AML	AML				
MRB1	**Monte Rocchett**	**0.48**	**121**	P		**Pg**	**07**	**12**	**49.3**	**-0.8**
MRB1				S		**Sg**	**07**	**12**	**56.4**	**-0.2**
MRB1					AML	AML				
	comp=E,67100μm,0.4s									
MRB1					AML	AML				
	comp=N,90900μm,0.6s									
MRB1					AML	AML				
	comp=N,93000μm,0.7s									
MRB1					AML	AML				
	comp=N,90950μm,0.6s									
MRB1					AML	AML				
	comp=E,67150μm,0.4s									
MRB1					AML	AML				
	comp=N,90950μm,0.7s									
MRB1					AML	AML				
	comp=E,68800μm,0.4s									
MRB1					AML	AML				
	comp=N,93050μm,0.7s									
MRB1					AML	AML				
	comp=N,90950μm,0.7s									
MRB1					AML	AML				
	comp=E,68800μm,0.4s									
MRB1					AML	AML				
	comp=E,67150μm,0.4s									
MRB1					AML	AML				
	comp=N,93050μm,0.7s									
OVO	**Vesuviano**	**0.55**	**183**	P		**Pg**	**07**	**12**	**50.9**	**-0.6**
OVO					AML	AML				
	comp=E,80350μm,0.6s									
OVO					AML	AML				
	comp=N,91800μm,0.6s									
OVO					AML	AML				
	comp=N,95600μm,0.8s									
OVO					AML	AML				
	comp=E,80350μm,0.6s									
OVO					AML	AML				
	comp=N,95600μm,0.8s									
MOCO	**Biccari - m.te**	**0.55**	**90**	P		**Pg**	**07**	**12**	**50.9**	**-0.6**
MOCO					AML	AML				
	comp=E,35400μm,0.5s									
MOCO					AML	AML				
	comp=E,35400μm,0.5s									
MOCO					AML	AML				
	comp=E,35750μm,0.5s									
MOCO					AML	AML				
	comp=E,35400μm,0.5s									
MOCO					AML	AML				
	comp=N,12950μm,1.4s									
MOCO					AML	AML				
	comp=N,12350μm,1.5s									
BIOG	**Biogem**	**0.56**	**108**	P		**Pg**	**07**	**12**	**51.3**	**-0.3**
BIOG					AML	AML				
	comp=E,44700μm,0.5s									
BIOG					AML	AML				
	comp=N,71700μm,0.6s									
BIOG					AML	AML				
	comp=E,45100μm,0.5s									
BIOG					AML	AML				
	comp=E,45100μm,0.5s									
BIOG					AML	AML				
	comp=N,71700μm,0.6s									
BIOG					AML	AML				
	comp=N,71250μm,0.6s									
BIOG					AML	AML				
	comp=E,44700μm,0.5s									
IPOZ	**Pozzuoli**	**0.60**	**203**	P		**Pb**	**07**	**12**	**53.1**	**+0.2**
MELA	**Melanico ??? S**	**0.62**	**57**	P		**Pg**	**07**	**12**	**51.3**	**-1.5**
MELA					AML	AML				
MELA					AML	AML				
	comp=N,68600μm,0.6s									
MELA					AML	AML				
	comp=N,74200μm,0.6s									
MELA					AML	AML				
MELA					AML	AML				
	comp=N,68600μm,0.6s									
MELA					AML	AML				
MELA					AML	AML				
MELA					AML	AML				
	comp=N,68600μm,0.6s									
MELA					AML	AML				
	comp=N,74200μm,0.6s									
MELA					AML	AML				
FRES	**Fresagrandinar**	**0.63**	**17**	P		**Pg**	**07**	**12**	**51.8**	**-1.2**
FRES					AML	AML				
	comp=N,11230μm,0.7s									
FRES					AML	AML				
	comp=E,14750μm,0.5s									
LPEL	**Lama dei Pelig**	**0.70**	**345**	P		**Pg**	**07**	**12**	**53.2**	**-1.1**
LPEL					AML	AML				
	comp=N,18100μm,0.8s									
LPEL					AML	AML				
	comp=E,20300μm,1.5s									
CAFE	**Carife**	**0.70**	**119**	P		**Pg**	**07**	**12**	**52.9**	**-1.4**
CAFE					AML	AML				
	comp=E,32650μm,0.8s									
CAFE					AML	AML				
	comp=N,18850μm,0.5s									
CAFE					AML	AML				
	comp=E,32650μm,0.7s									
CAFE					AML	AML				
	comp=E,32950μm,0.7s									
CAFE					AML	AML				
	comp=N,19200μm,0.5s									
CAFE					AML	AML				
	comp=E,32650μm,0.7s									
CAFE					AML	AML				
	comp=E,32950μm,0.7s									
SNAL	**S. Angelo Dei**	**0.74**	**127**	P		**Pg**	**07**	**12**	**54.1**	**-1.0**
SNAL					AML	AML				
	comp=E,6395μm,0.8s									
SNAL					AML	AML				
	comp=N,648μm,0.2s									
OC9	**Casamicciola**	**0.74**	**213**	P		**Pg**	**07**	**12**	**54.7**	**-0.4**
SGTA	**Sant Agata di**	**0.74**	**108**	P		**Pg**	**07**	**12**	**53.6**	**-1.5**
SGTA					AML	AML				
	comp=E,22650μm,0.4s									
SGTA					AML	AML				
	comp=N,22550μm,0.6s									
SGTA					AML	AML				
	comp=E,21850μm,0.4s									
SGTA					AML	AML				
	comp=N,24400μm,0.6s									
SGTA					AML	AML				
	comp=E,22650μm,0.4s									
SGTA					AML	AML				
	comp=E,21850μm,0.4s									
SGTA					AML	AML				
	comp=N,22500μm,0.6s									
INTR	**Introdacqua**	**0.75**	**328**	P		**Pg**	**07**	**12**	**54.2**	**-1.1**
INTR					AML	AML				
	comp=E,52200μm,0.7s									
INTR					AML	AML				
	comp=N,56400μm,1.4s									
INTR					AML	AML				
	comp=E,52200μm,0.7s									
INTR					AML	AML				
	comp=N,56400μm,1.4s									
INTR	**Introdacqua**	**0.75**	**328**			**Pg**	**07**	**12**	**54.2**	**-1.1**
INTR					Sg	**Sg**	**07**	**13**	**05.3**	**+0.2**
VVLD	**Villa Vallelon**	**0.78**	**310**	P		**Pg**	**07**	**12**	**54.9**	**-1.0**
VVLD					AML	AML				
	comp=E,19250μm,0.6s									
VVLD					AML	AML				
	comp=N,14500μm,0.9s									
MCRV	**Calabrutti - M**	**0.81**	**136**	AML		AML				
	comp=N,31350μm,0.3s									
MCRV					AML	AML				
	comp=N,31350μm,0.3s									
MCRV					AML	AML				
	comp=E,29900μm,0.6s									
MCRV					AML	AML				
	comp=E,29900μm,0.6s									
CAFR	**Castel Frentan**	**0.86**	**356**	AML		AML				
	comp=N,37900μm,0.9s									
CAFR					AML	AML				
	comp=E,51550μm,1.3s									
CAFR					AML	AML				
	comp=E,51550μm,1.3s									
CAFR					AML	AML				
	comp=N,37900μm,0.9s									
GIUL	**Giuliano Di Ro**	**0.90**	**282**	P		**Pb**	**07**	**12**	**57.9**	**-0.2**
GIUL					AML	AML				
	comp=N,10750μm,0.8s									
GIUL					AML	AML				
	comp=E,6860μm,0.7s									
VENT	**Ventotene**	**0.96**	**233**	P		**Pb**	**07**	**12**	**57.6**	**-1.5**
VENT					AML	AML				
	comp=E,23350μm,0.5s									
VENT					AML	AML				
	comp=N,26200μm,0.5s									
VENT					AML	AML				
	comp=E,23400μm,0.5s									
VENT					AML	AML				
	comp=N,26200μm,0.5s									
VENT					AML	AML				
	comp=E,23400μm,0.5s									
MRLC	**Muro Lucano**	**1.01**	**127**	P		**Pb**	**07**	**12**	**58.9**	**-1.0**
MRLC					AML	AML				
	comp=E,12450μm,1.1s									
MRLC					AML	AML				
	comp=E,11900μm,1.1s									
MRLC					AML	AML				
	comp=N,12050μm,0.5s									
MRLC					AML	AML				
	comp=N,11850μm,0.5s									
MRLC	**Muro Lucano**	**1.01**	**127**	P		**Pb**	**07**	**12**	**58.9**	**-1.0**
MRLC	**Muro Lucano**	**1.01**	**127**	P		**Pb**	**07**	**12**	**58.9**	**-1.0**
SGRT	**San Giovanni R**	**1.06**	**68**	P		**Pb**	**07**	**12**	**59.6**	**-1.2**
SGRT	**San Giovanni R**	**1.06**	**68**			**Pb**	**07**	**12**	**59.5**	**-1.3**
SGRT					Sg	**Sb**	**07**	**13**	**13.3**	**-1.2**
FAGN	**Fagnano**	**1.09**	**325**		AML	AML				
	comp=N,18350μm,0.6s									
FAGN					AML	AML				
	comp=E,26550μm,0.5s									
FAGN					AML	AML				
	comp=E,26550μm,0.5s									
CDRU	**Civita di Ruta**	**1.10**	**143**	P		**Pb**	**07**	**13**	**00.0**	**-1.6**
CDRU					AML	AML				
	comp=E,8050μm,0.7s									
CDRU					AML	AML				
	comp=N,7235μm,1.1s									
LATB	**Latina**	**1.11**	**277**	*eP*		**Pb**	**07**	**13**	**00.5**	**-1.1**
LATB					AML	AML				
	comp=N,2085μm,1.1s									
LATB					AML	AML				
	comp=E,3900μm,0.9s									
LATB					AML	AML				
	comp=N,2080μm,1.1s									
VCEL	**Villa Celiera**	**1.11**	**337**	*eP*		**Pn**	**07**	**13**	**02.2**	**+0.2**
VCEL					AML	AML				
	comp=E,18600μm,1.2s									
VCEL					AML	AML				
	comp=E,18650μm,1.2s									
VCEL					AML	AML				
	comp=N,14250μm,0.8s									
MSAG	**Monte S. Angel**	**1.16**	**73**	P		**Pb**	**07**	**13**	**01.2**	**-1.4**
PALZ	**Palazzo San Ge**	**1.23**	**110**		AML	AML				
	comp=N,16800μm,0.6s									
PALZ					AML	AML				
	comp=E,13100μm,0.7s									
PALZ					AML	AML				
	comp=N,16800μm,0.6s									
PALZ					AML	AML				
	comp=E,14850μm,0.7s									
AQU	**L'Aquila**	**1.25**	**322**	*i*Pn		**Pn**	**07**	**13**	**03.7**	**-0.1**
AQU	**L'Aquila**	**1.25**	**322**			**Pn**	**07**	**13**	**03.7**	**-0.1**
AQU					Sn	**Sb**	**07**	**13**	**19.1**	**-0.9**
CMPR	**Campora**	**1.25**	**148**		AML	AML				
	comp=N,5275μm,0.6s									
CMPR					AML	AML				
	comp=E,6545μm,0.7s									
T0104	**Madonna delle**	**1.28**	**321**	*eP*		**Pb**	**07**	**13**	**04.9**	**+0.3**
ACER	**Acerenza**	**1.28**	**117**		AML	AML				
	comp=N,12600μm,0.6s									
ACER					AML	AML				
	comp=E,13600μm,0.7s									
ACER					AML	AML				
	comp=N,12950μm,0.6s									
ACER					AML	AML				
	comp=E,13350μm,0.7s									
ACER	**Acerenza**	**1.28**	**117**			**Pn**	**07**	**13**	**03.4**	**-0.9**
ACER					Sn	**Sg**	**07**	**13**	**23.3**	**+1.2**
LAV9	**Lanuvio**	**1.33**	**284**		AML	AML				
	comp=E,12600μm,1.5s									
LAV9					AML	AML				
	comp=N,12950μm,1.1s									
LAV9					AML	AML				
	comp=E,11845μm,1.5s									
LAV9					AML	AML				
	comp=N,12850μm,1.1s									
SLCN	**Sala Consilina**	**1.34**	**137**		AML	AML				
	comp=N,14050μm,0.7s									
SLCN					AML	AML				
	comp=E,20350μm,0.6s									
SLCN					AML	AML				
	comp=E,20350μm,0.6s									
MRVN	**Minervino Murg**	**1.37**	**103**		AML	AML				
	comp=E,4785μm,0.7s									
MRVN					AML	AML				
	comp=N,5470μm,0.5s									
RMP	**Rome, Mte Porz**	**1.37**	**289**		AML	AML				
	comp=N,9785μm,0.6s									
RMP					AML	AML				
	comp=E,7570μm,0.6s									
CAMP	**Campotosto**	**1.39**	**327**		AML	AML				
	comp=E,6750μm,1.1s									
CAMP					AML	AML				
	comp=N,5390μm,1.0s									
TERO	**Teramo**	**1.39**	**334**		AML	AML				
	comp=E,2280μm,0.8s									
TERO					AML	AML				
	comp=N,3640μm,0.7s									
TERO					AML	AML				
	comp=E,5720μm,0.8s									
TERO					AML	AML				
	comp=N,8935μm,0.7s									
MTCE	**Montecelio**	**1.42**	**298**	P		**Pn**	**07**	**13**	**05.3**	**-0.8**
SMA1	**SAN MARTINO**	**1.50**	**327**		AML	AML				
	comp=E,7820μm,0.7s									
SMA1					AML	AML				
	comp=N,11350μm,0.8s									
MGR	**Morigerati**	**1.50**	**145**		AML	AML				
	comp=N,4215μm,0.9s									
MGR					AML	AML				
	comp=E,4465μm,0.9s									
MGR					AML	AML				
	comp=N,4215μm,0.6s									
MGR					AML	AML				
	comp=E,4130μm,0.7s									
LNSS	**Leonessa**	**1.61**	**320**		AML	AML				
	comp=N,6575μm,1.1s									
LNSS					AML	AML				
	comp=E,6555μm,0.9s									
OFFI	**Offida**	**1.66**	**341**		AML	AML				
	comp=E,17300μm,0.8s									
OFFI					AML	AML				
	comp=N,24800μm,0.7s									
OFFI					AML	AML				
	comp=E,17300μm,0.8s									
AMUR	**Altamura**	**1.71**	**105**		AML	AML				
	comp=N,6255μm,0.5s									
AMUR					AML	AML				
	comp=E,4805μm,0.6s									
GUMA	**Gualdo di Mace**	**1.73**	**348**		AML	AML				
	comp=E,9510μm,0.9s									
GUMA					AML	AML				
	comp=N,9970μm,1.1s									
GUMA					AML	AML				
	comp=E,13750μm,0.6s									
GUMA					AML	AML				
	comp=N,12450μm,0.6s									
CUC	**Castrocucco**	**1.73**	**142**		AML	AML				
	comp=N,4125μm,1.1s									
CUC					AML	AML				
	comp=N,4960μm,1.1s									
CUC					AML	AML				
	comp=E,4580μm,1.2s									
CUC					AML	AML				
	comp=E,5635μm,1.2s									
NRCA	**Norcia**	**1.76**	**327**			**Pn**	**07**	**13**	**11.8**	**+1.0**
NRCA					Sn	**Sn**	**07**	**13**	**32.5**	**-0.6**
SG1	**Sgolgore (BA)**	**1.78**	**107**	*ePn*		**Pn**	**07**	**13**	**10.6**	**-0.5**

SG1 Sn **Sb** 07 13 34.5 -0.8
BAI Bari 1.87 97⇑*i* Pn **Pn** 07 13 11.6 -0.6
FDMO Fiordimonte 1.94 329 AML AML
comp=E,2210µm,0.8s
FDMO AML AML
comp=N,2905µm,0.8s
TOLF Tolfa 1.95 292 AML AML
comp=N,1475µm,1.2s
TOLF AML AML
comp=E,1440µm,0.7s
CESI CEŠI - Serrava 1.99 326 AML AML
comp=N,1785µm,1.1s
CESI AML AML
comp=E,719µm,0.9s
NOCI Noci 2.08 105 AML AML
comp=E,3165µm,0.5s
NOCI AML AML
comp=N,4285µm,0.8s
SALB San Lorenzo Be 2.09 135 AML AML
comp=N,1580µm,0.7s
SALB AML AML
comp=E,1625µm,0.6s
SALB AML AML
comp=N,1620µm,0.7s
SALB AML AML
comp=E,1600µm,1.1s
SNTG Esanatoglia 2.18 330 AML AML
comp=N,1540µm,1.3s
SNTG AML AML
comp=E,2090µm,1.1s
MASS Massafra 2.18 109 *e*Pn **Pn** 07 13 17.1 +0.5
EL6 Elcito 2.19 334 AML AML
comp=E,4400µm,1.6s
EL6 AML AML
comp=N,5750µm,0.8s
ATCC AVT- Casa Cast 2.25 324 AML AML
comp=N,3765µm,0.9s
ATCC AML AML
comp=E,4755µm,0.8s
TAR1 Taranto 2.32 110 *e*Pn **Pn** 07 13 18.6 +0.1
TAR1 Sn **Sg** 07 13 56.9 +1.6
HVAR Hvar 2.34 39 *e*Pn **Pn** 07 13 18.1 -0.7
HVAR Sn **Sn** 07 13 48.4 +1.0
MURB Monte Urbino 2.36 324 AML AML
comp=N,5305µm,1.6s
MURB AML AML
comp=N,4995µm,1.6s
MURB AML AML
comp=E,3630µm,0.8s
MURB AML AML
comp=E,3730µm,0.8s
MURB Monte Urbino 2.36 324 **Pn** 07 13 19.8 +0.8
MURB Sn **Sn** 07 13 48.5 +0.7
SACS San Casciano d 2.39 309 AML AML
comp=N,1560µm,1.1s
SACS AML AML
comp=E,1965µm,1.2s
SACS AML AML
comp=E,1850µm,1.2s
SACS AML AML
comp=N,1555µm,1.2s
ATTE AVT- Monte Tez 2.39 320 AML AML
comp=E,2950µm,1.0s
ATTE AML AML
comp=N,2070µm,1.5s
ARVD Arcevia 2.39 333 AML AML
comp=E,1395µm,1.2s
ARVD AML AML
comp=N,1305µm,1.4s
CGL1 Ceglie Messapi 2.41 106 *e*Pn **Pn** 07 13 19.8 0.0
ZIRJ Zirje 2.45 21 *e*Pn **Pn** 07 13 19.7 -0.5
MCIV Monte Civitell 2.48 305 AML AML
comp=E,590µm,0.7s
MCIV AML AML
comp=N,642µm,1.6s
ATVO AVT- Monte Val 2.51 324 AML AML
comp=N,1635µm,1.2s
ATVO AML AML
comp=E,1925µm,0.9s
CAR1 CAROLEI 2.52 147 AML AML
comp=E,2390µm,1.3s
CAR1 AML AML
comp=E,2065µm,0.8s
CAR1 AML AML
comp=N,1850µm,0.7s
CAR1 AML AML
comp=N,1690µm,0.7s
PIEI Pieia 2.58 328 AML AML
comp=E,750µm,1.0s
PIEI AML AML
comp=N,1195µm,1.5s
FSSB Fossombrone 2.62 333 *e*P **Pn** 07 13 24.2 +1.6
FSSB AML AML
comp=E,1604µm,1.3s
FSSB AML AML
comp=N,2695µm,1.6s
DUGI Dugi Otok 2.66 10 *i* Pn **Pn** 07 13 21.8 -1.3
MORI Morici 2.66 20 *i* Pn **Pn** 07 13 22.9 -0.3
BADI Badiali 2.68 324 AML AML
comp=E,1980µm,1.3s
BADI AML AML
comp=N,1730µm,1.6s
MAON Monte Argentar 2.68 294 AML AML
comp=E,570µm,1.0s
MAON AML AML
comp=N,426µm,1.6s
MAKA Makarska 2.71 44 *e*Pn **Pn** 07 13 23.4 -0.4
MAKA Sn **Sn** 07 13 55.4 -1.0
PE3 Peglio 2.73 329 AML AML
comp=N,2980µm,1.2s
PE3 AML AML
comp=E,3260µm,1.6s
PARC Parchiule 2.79 325 AML AML
comp=N,880µm,1.0s
PARC AML AML
comp=E,1680µm,1.2s
TIP Timpagrande 2.82 140 **Pn** 07 13 25.1 -0.3
TIP Sn **Sn** 07 13 56.2 -3.1
STON Ston 2.86 57 *e*Pn **Pn** 07 13 25.6 -0.2
STON Ston 2.86 57 P **Pn** 07 13 25.4 -0.4
STON AML AML
comp=N,1545µm,0.7s
STON AML AML
comp=E,1495µm,0.6s
STON Ston 2.86 57 *e*Pn **Pn** 07 13 25.5 -0.3
CPGN Carpegna, Ital 2.88 328 *e*P **Pn** 07 13 29.0 +2.6
CPGN AML AML
comp=N,2920µm,1.2s
CPGN AML AML
comp=N,2930µm,1.3s
CPGN AML AML
comp=E,2890µm,1.6s
CPGN AML AML
comp=E,3215µm,1.6s
CRE Caprese Michel 2.90 322 AML AML
comp=E,883µm,1.6s
CRE AML AML
comp=N,874µm,1.4s
KIJV Kijevo 3.01 28 *i* Pn **Pn** 07 13 27.7 -0.2
DBRK Dubrovnik 3.06 64 *i* Pn **Pn** 07 13 29.0 +0.4
DBRK Sn **Sn** 07 14 04.7 -0.3
TRIF Trifonti 3.14 305 P **Pn** 07 13 29.8 0.0
TRIF AML AML
comp=N,316µm,0.7s
TRIF AML AML
comp=E,323µm,0.9s
OSSC Osservatorio P 3.19 313 **Pn** 07 13 31.8 +1.4
OSSC Sn **Sn** 07 14 06.4 -1.9
NVLJ Novalja 3.21 6 *e*Pn **Pn** 07 13 30.5 -0.1
NVLJ Sn **Sn** 07 14 08.7 +0.1
TREB Trebinje 3.21 64 *e*Pn **Pn** 07 13 30.5 -0.2
HCY Herceg Novi 3.22 69⇑*i* Pn **Pn** 07 13 30.2 -0.6
HCY Herceg Novi 3.22 69 *e*Pn **Pn** 07 13 30.3 -0.5
HCY *e*Sn **Sn** 07 14 08.6 -0.3
UDBI Udbina 3.30 17 *e*Pn **Pn** 07 13 32.9 +0.8
CEL Celeste 3.31 160 **Pn** 07 13 32.3 +0.2
CEL Sn **Sn** 07 14 08.7 -2.5
SCTE Santa Cesarea 3.33 112 **Pn** 07 13 30.8 -1.6
SCTE Sn **Sn** 07 14 10.2 -1.5
BRY Bratogost 3.42 62 *e*Pn **Pn** 07 13 33.6 -0.1
BUM Brajici-Budva 3.46 73 *e*Pn **Pn** 07 13 33.8 -0.4
BUM *e*Sn **Sn** 07 14 14.6 -0.4
CEME Cevo 3.55 69 *e*Pn **Pn** 07 13 35.3 -0.1
CEME *e*Sn **Sn** 07 14 16.7 -0.4
BRJN Brijuni 3.57 352 *i* Pn **Pn** 07 13 36.3 +0.7
BRJN Sn **Sn** 07 14 17.1 -0.4

CORL Corleone 3.58 194 **Pn** 07 13 36.8 +0.9
MGRS Mrkonjic Grad 3.61 32⇑*i* Pn **Pn** 07 13 38.0 +1.7
NKME Niksic 3.64 66 *e*Pn **Pn** 07 13 36.6 -0.1
NKME *e*Sn **Sn** 07 14 18.8 -0.7
DRME Dracevica, Mon 3.65 76⇑*i* Pn **Pn** 07 13 36.6 -0.1
DRME Dracevica, Mon 3.65 76 *e*Pn **Pn** 07 13 36.6 -0.1
DRME *e*Sn **Sn** 07 14 19.0 -0.5
ULC Ulcinj 3.65 79⇑*i* Pn **Pn** 07 13 36.8 0.0
ULC *e*Sn **Sn** 07 14 19.5 -0.3
MTCR Monte La Croce 3.67 317 *e*P **Pn** 07 13 38.3 +1.2
NKY Niksic 3.69 66 *e*Pn **Pn** 07 13 37.0 -0.4
NKY *e*Sn **Sn** 07 14 20.6 -0.1
PDG Podgorica 3.75 72 P **Pn** 07 13 38.3 +0.1
PDG AML AML
comp=E,780µm,0.9s
PDG AML AML
comp=N,1110µm,0.5s
PDG AML AML
comp=N,1420µm,0.5s
PDG AML AML
comp=E,1006µm,0.9s
PDG Podgorica 3.75 72⇑*i* Pn **Pn** 07 13 38.0 -0.1
PDG Podgorica 3.75 72 **Pn** 07 13 38.3 +0.1
PDG Sn **Sn** 07 14 21.2 -1.0
TTG Podgorica 3.75 72 *e*Pn **Pn** 07 13 38.1 -0.1
TTG *e*Sn **Sn** 07 14 21.5 -0.6
UPM Unac-Piva 3.79 60 *e*Pn **Pn** 07 13 39.6 +0.8
VAE Valguarnera 3.89 180 Pn **Pn** 07 13 43.5 +3.4
comp=E,1.1nm,0.3s,baz=5.6,slow=3.5,SNR=6.1
CLTB Caltabellotta 3.90 194 **Pn** 07 13 42.3 +1.9
ZCCA Zocca 3.91 321 Pn **Pn** 07 13 43.7 +3.4
SMPL Sampolo 3.92 282 *e*P **Pn** 07 13 39.5 -0.9
SMPL AML AML
comp=N,5665µm,1.6s
SMPL AML AML
comp=E,8025µm,1.4s
BLY Banja Luka 3.93 30 *e*P **Pn** 07 13 41.1 +0.6
BLY AML AML
comp=E,2205µm,0.8s
BLY AML AML
comp=E,2195µm,0.8s
BLY AML AML
comp=N,1445µm,1.2s
BLY AML AML
comp=N,1415µm,1.2s
BLY Banja Luka 3.93 30⇑*i* Pn **Pn** 07 13 41.2 +0.6
BLY Banja Luka 3.93 30 **Pn** 07 13 40.9 +0.3
BLY Sn **Sn** 07 14 26.1 -0.4
RIY Rijeka 3.95 1 *e*Pn **Pn** 07 13 40.9 +0.1
RIY Rijeka 3.95 1 *e*Pn **Pn** 07 13 40.0 -0.9
PLE Pljevlja 4.16 60 *e*Pn **Pn** 07 13 44.0 +0.1
PLE *e*Sn **Sn** 07 14 32.0 -0.4
BOJS Bojanci 4.17 8 *i* Pn **Pn** 07 13 43.7 -0.3
BOJS *i* Sn **Sn** 07 14 31.9 -0.6
comp=Z,682nm,1.1s
BOJS Bojanci 4.17 8 AML AML
comp=E,866µm,0.7s
BOJS AML AML
comp=N,536µm,1.4s
SKDS Skadanscina 4.18 356 *i* Pn **Pn** 07 13 43.5 -0.6
comp=Z,118nm,0.4s
PGF Pioggiola 4.22 288 *e*Pn **Pn** 07 13 44.1 -0.5
PGF *e*Sn **Sn** 07 14 32.8 -0.9
comp=Z,109nm,0.5s
RUDO Rudo 4.29 57 *e*Pn **Pn** 07 13 45.4 -0.1
HAPS Han Pijesak,BI 4.29 49⇑*i* Pn **Pn** 07 13 44.9 -0.8
PVY Plav 4.30 72 *e*Pn **Pn** 07 13 45.4 -0.4
PVY *e*Sn **Sn** 07 14 34.9 -0.9
DOB Doboj 4.30 37 *e*Pn **Pn** 07 13 44.1 -1.6
OZLJ Ozalj 4.31 10 *i* Pn **Pn** 07 13 45.8 +0.1
IVA Berane 4.33 68 *e*Pn **Pn** 07 13 45.9 -0.3
IVA *e*Sn **Sn** 07 14 35.8 -0.7
CEY Cerknica 4.36 360 *e*Pn **Pn** 07 13 46.8 +0.2
BBLS Lazići 4.44 54⇑*i* Pn **Pn** 07 13 48.0 +0.4
TEOL Teolo 4.46 334 **Pn** 07 13 47.7 -0.2
TEOL Sn **Sn** 07 14 39.6 0.0
CRES Cresnjev 4.51 9 *e*Pn **Pn** 07 13 47.6 -1.0
MOSL Moslavina 4.56 21 *e*Pn **Pn** 07 13 48.8 -0.5
ZAG Zagreb 4.59 14 *e*Pn **Pn** 07 13 49.5 -0.2
PTJ Puntijarka 4.67 13 *e*Pn **Pn** 07 13 50.2 -0.6
LJU Ljubljana 4.67 1 *e*Pn **Pn** 07 13 51.3 +0.5
LJU Ljubljana 4.67 1 AML AML
comp=E,1260µm,1.5s
LJU AML AML
comp=N,1520µm,1.1s
LJU Ljubljana 4.67 1 *e*Pn **Pn** 07 13 50.8 0.0
CRNS Crni Vrh 4.71 359 *e*Pn **Pn** 07 13 50.7 -0.6
OHR Ohrid 4.81 91 *i* P **Pn** 07 13 53.9 +1.2
CADS Cadrg 4.88 354 *e*Pn **Pn** 07 13 53.0 -0.7
CADS *e*Sn **Sn** 07 14 44.8 -5.1
TEKS Tekeris 4.91 48 *e*Pn **Pn** 07 13 53.1 -0.9
DIVS Divibare 4.92 55⇑*i* Pn **Pn** 07 13 53.8 -0.5
GORS Gorjuse 4.95 357 *e*Pn **Pn** 07 13 55.2 +0.5
KALN Kalnik 4.98 16 *e*Pn **Pn** 07 13 54.5 -0.5
STAL STALIGIAL 5.04 346 **Pn** 07 13 56.0 +0.1
STAL Sn **Sn** 07 14 55.2 +1.3
CTI Castel Tesino 5.09 338 **Pn** 07 13 56.2 -0.4
CTI Sn **Sn** 07 14 52.9 -2.4
OBKA Obir 5.13 1 *e*Pn **Pn** 07 13 57.7 +0.5
SNR=4.7
OBKA Obir 5.13 1 *e*Pn **Pn** 07 13 57.2 0.0
comp=N,46nm,0.3s,SNR=21
MAGA Magasa 5.20 329 P **Pn** 07 13 57.5 -0.6
ACOM Acomizza, Ital 5.22 353 *e*P **Pn** 07 13 58.4 0.0
FNA Florina 5.28 94 P **Pn** 07 14 00.5 +1.3
FNA 07 14 57.8
FNA Florina 5.28 94 Pn **Pn** 07 14 00.5 +1.3
FNA Sn **Sn** 07 14 57.8 -2.1
SKO Skopje 5.28 81 *i* P **Pn** 07 13 56.3 -2.9
MYKA Terra Mystica 5.29 354 *e*Pn **Pn** 07 13 59.7 +0.4
comp=N,17nm,0.4s,SNR=8.5
SOKA Soboth 5.32 4 *e*Pn **Pn** 07 13 59.2 -0.6
comp=N,39nm,0.4s,SNR=25
SOKA Sn **Sn** 07 15 01.7 +0.8
comp=N,28nm,0.7s
BEHE Becsehely 5.37 18 *e*Pn **Pn** 07 13 59.2 -1.2
FRGS Fruska Gora 5.45 44⇑*i* Pn **Pn** 07 13 59.6 -1.9
ABTA Abfaltersbach 5.55 346 *e*Pn **Pn** 07 14 03.1 +0.2
comp=N,34nm,0.5s,SNR=17
ABTA *e*Sn **Sn** 07 15 08.1 +1.6
comp=N,135nm,0.8s
VLS Valsamata 5.72 122 P **Pn** 07 14 05.2 0.0
MORH Mrgy, Hungar 5.72 31 *e*Pn **Pn** 07 14 04.1 -1.0
SBF Sospel 5.73 298 *e*Pn **Pn** 07 14 05.1 -0.3
SBF *e*Sn **Sn** 07 15 08.4 -2.5
comp=N,12nm,0.3s
KBA Koelnbreinsper 5.76 353 *e*Pn **Pn** 07 14 06.9 +1.1
SNR=6.5
KBA Koelnbreinsper 5.76 353 *e*Pn **Pn** 07 14 05.7 -0.2
comp=N,8.4nm,0.3s,SNR=17
RISI Rein 5.82 344 P **Pn** 07 14 06.8 0.0
STIP Stip 5.83 84⇓*i* P **Pn** 07 14 09.4 +2.7
ARSA Arzberg 5.93 7 *e*Pn **Pn** 07 14 07.5 -0.5
SNR=5.1
ARSA Arzberg 5.93 7 *e*Pn **Pn** 07 14 07.1 -0.9
comp=N,18nm,0.3s,SNR=17
GRG Griva 6.03 91 *e*P **Pn** 07 14 09.6 +0.1
FUORN Ofenpass-Fuorn 6.04 332 **Pn** 07 14 10.9 +1.1
VAY Valandovo 6.13 88 *i* P **Pn** 07 14 10.4 -0.4
FRF La Foret Royal 6.16 293 *e*Pn **Pn** 07 14 10.4 -0.8
FRF *e*Sn **Sn** 07 15 17.5 -3.9
comp=N,12nm,0.3s
LMR La Mourre 6.19 291 *e*Pn **Pn** 07 14 10.6 -1.0
LMR *e*Sn **Sn** 07 15 18.5 -3.6
comp=N,12nm,0.4s
WTTA Wattenberg 6.22 342 *e*Pn **Pn** 07 14 14.2 +2.0
SNR=2.0
WTTA Wattenberg 6.22 342 *e*Pn **Pn** 07 14 14.0 +1.8
comp=N,6.7nm,0.4s
WTTA Sn **Sn** 07 15 24.8 +1.6
comp=N,44nm,0.5s
FETA Feichten 6.24 336 *e*Pn **Pn** 07 14 13.1 +0.6
comp=N,19nm,0.6s
LIT Litokhoron 6.25 99 P **Pn** 07 14 13.4 +0.9
LIT Litokhoron 6.25 99 **Pn** 07 14 13.4 +0.9
SQTA Sankt Quirin 6.29 340 *e*Pn **Pn** 07 14 13.8 +0.8
comp=N,4.5nm,0.2s
SQTA Sn **Sn** 07 15 26.0 +1.2
comp=N,57nm,0.5s
WATA Walderalm 6.30 342 *e*Pn **Pn** 07 14 14.5 +1.2
comp=N,5.3nm,0.2s
DAVOX Davos/Dischmat 6.32 330 Pn **Pn** 07 14 14.6 +1.0
comp=N,2.4nm,0.3s,baz=152,slow=14,SNR=33
DAVOX Sn **Sn** 07 15 25.3 -0.4

comp=N,1.5nm,0.3s,baz=184,slow=13,SNR=2.1
MDVR Moldovita 6.33 55 ⇑P **Pn** 07 14 13.3 -0.2
MDVR Moldovita 6.33 55 ⇓S **Sn** 07 15 21.6 -4.1
MOTA Moosalm 6.43 339 *e*Pn **Pn** 07 14 15.8 +0.7
comp=N,18nm,0.6s
RJOB Jochberg 6.47 350 *e*Pn **Pn** 07 14 16.0 +0.5
SNR=5.0
RJOB *e*Sn **Sn** 07 15 31.4 +2.2
SNR=2.6
MOA Molln 6.48 359 *e*Pn **Pn** 07 14 16.5 +0.9
SNR=9.4
MOA *e*Sn **Sn** 07 15 27.7 -1.5
SNR=3.9
MOA Molln 6.48 359 *e*Pn **Pn** 07 14 16.3 +0.7
comp=N,16nm,0.3s,SNR=51
MOA Sn **Sn** 07 15 28.2 -1.1
comp=N,45nm,0.6s
AGG Agios Georgios 6.49 109 P **Pn** 07 14 17.1 +1.3
AGG Agios Georgios 6.49 109 *e*P **Pn** 07 14 17.6 +1.8
AGG Agios Georgios 6.49 109 **Pn** 07 14 17.1 +1.3
KKB Krupnik 6.50 83 *e*P **Pn** 07 14 16.9 +0.9
MBDF Montbardon 6.54 303 *e*P **Pn** 07 14 19.1 +2.6
MBDF *e*Sn **Sn** 07 15 26.8 -4.1
comp=N,7.9nm,0.5s
HORT Hortiatis 6.61 94 *e*P **Pn** 07 14 16.8 -0.6
CONA Conrad Observa 6.63 8 *i* Pn **Pn** 07 14 16.9 -0.9
comp=N,13nm,0.4s,SNR=37
RETA Reutte 6.65 338 *e*Pn **Pn** 07 14 19.6 +1.6
comp=N,5.3nm,0.3s
VTS Vitosha 6.68 76 ⇑P **Pn** 07 14 18.6 +0.1
VTS Vitosha 6.68 76 ⇑P **Pn** 07 14 18.6 +0.1
VTS Vitosha 6.68 76 *e*P **Pn** 07 14 18.3 -0.1
VTS Vitosha 6.68 76 *e*P **Pn** 07 14 18.9 +0.4
VTS Vitosha 6.68 76 **Pn** 07 14 18.6 +0.1
VTS Sn **Sn** 07 15 29.9 -4.5
BZS Buzias 6.73 49 ⇑P **Pn** 07 14 18.7 -0.3
BZS Buzias 6.73 49 ⇑P **Pn** 07 14 18.7 -0.3
PLONS Plons/SG 6.73 329 *e*Pn **Pn** 07 14 21.6 +2.4
SNR=2.4
DAVA Damuels 6.75 333 *e*Pn **Pn** 07 14 22.6 +3.1
SNR=3.0
DAVA Damuels 6.75 333 *e*Pn **Pn** 07 14 22.0 +2.6
comp=N,17nm,0.4s,SNR=10
HERR Herculane 6.81 56 ⇓P **Pn** 07 14 20.3 +0.2
PUNG Punghina 6.89 62 ⇑P **Pn** 07 14 22.0 +0.8
KEST Kesra 6.90 217 Pn **Pn** 07 14 23.1 +1.6
comp=N,7.7nm,0.3s,baz=308,slow=4.8,SNR=45
KEST Sn **Sn** 07 15 37.3 -2.5
baz=22,slow=19,SNR=1.2
KEST LR LR 07 17 12.0
comp=N,879nm,18.2s,baz=316,slow=40
KEST Kesra 6.90 217 **Pn** 07 14 24.0 +2.6
LPG La Plagne 6.94 309 *e*P **Pn** 07 14 25.7 +3.5
LPG *e*Sn **Sn** 07 15 36.8 -4.4
comp=N,13nm,0.6s
LPL La Plagne 6.96 309 *e*Pn **Pn** 07 14 21.9 -0.6
LPL *e*Sn **Sn** 07 15 37.2 -4.4
comp=N,1.8nm,0.3s
MMB Musomiste 6.99 85 *e*P **Pn** 07 14 23.1 +0.5
UBR Ueberruh 7.02 335 *e*Pn **Pn** 07 14 26.0 +2.9
SNR=2.0
SMRF Simiane la Rot 7.03 295 *e*Pn **Pn** 07 14 22.9 -0.2
SMRF *e*Sn **Sn** 07 15 39.4 -3.4
comp=N,3.9nm,0.5s
ZST Bratislava 7.08 15 *e*P **Pn** 07 14 23.1 -0.7
ZST Bratislava 7.08 15 *e*PN **Pn** 07 14 23.1 -0.7
ITM Ithomi 7.16 123 *e*P **Pn** 07 14 26.0 +0.9
ITM Ithomi 7.16 123 **Pn** 07 14 26.0 +0.9
SENIN Lac Senin/Sane 7.17 316 Pn **Pn** 07 14 28.2 +2.9
ORIF Oris-en-Rattie 7.19 302 *e*P **Pn** 07 14 29.3 +3.9
ORIF *e*Sn **Sn** 07 15 42.0 -4.9
comp=N,3.7nm,0.4s
SRE Strehaia 7.22 60 ⇑P **Pn** 07 14 26.9 +1.1
SRE Strehaia 7.22 60 ⇑P **Pn** 07 14 26.9 +1.1
GZR Gura Zlata 7.29 54 ⇓P **Pn** 07 14 26.6 -0.2
GZR Gura Zlata 7.29 54 ⇓P **Pn** 07 14 26.6 -0.2
MODS Modra-Piesok 7.29 15 *e*P **Pn** 07 14 24.7 -2.0
MODS *e* 07 15 43.1
MODS Modra-Piesok 7.29 15 *e*PN **Pn** 07 14 24.7 -2.0
MODS *e*PG **Pg** 07 14 58.7 -1.4
MODS *e*SN **Sn** 07 15 43.1 -6.1
MODS *e*LG Lg 07 15 47.9
PGB Panagyurishte 7.35 78 *e*P **Pn** 07 14 28.5 +0.9
SMOL Smolenice 7.45 16 *e*P **Pn** 07 14 29.2 +0.3
SMOL Smolenice 7.45 16 *e*PN **Pn** 07 14 29.2 +0.3
GEC2 GERESS Array S 7.49 356 *e*Pn **Pn** 07 14 29.1 -0.4
SNR=4.7
GEC2 GERESS Array S 7.49 356 **Pn** 07 14 29.0 -0.6
GERES GERESS Array B 7.49 356 Pn **Pn** 07 14 28.4 -1.1
comp=N,4.0nm,0.3s,baz=172,slow=13,SNR=57
GERES Sn Sn 07 15 42.6 -12
baz=172,slow=21,SNR=2.3
GERES LR LR 07 17 52.5
comp=N,175nm,19.9s,baz=176,slow=42
AOS Alonnisos 7.55 104 *e*P **Pn** 07 14 30.6 +0.3
PSZ Piszkesteto 7.61 29 P **Pn** 07 14 30.4 -0.8
PSZ Piszkesteto 7.61 29 **Pn** 07 14 30.4 -0.8
DEV Deva 7.62 51 ⇑P **Pn** 07 14 31.3 +0.1
DEV Deva 7.62 51 ⇑P **Pn** 07 14 31.3 +0.1
BALST Balsthal 7.67 323 *e*Sn **Sn** 07 16 00.1 +1.5
SNR=4.3
PLD Plovdiv 7.72 81 *e*P **Pn** 07 14 33.9 +1.3
RZN Rozhen 7.72 84 *e*P **Pn** 07 14 33.6 +0.7
VYHS Vyhne 7.78 22 *e*P **Pn** 07 14 33.2 -0.2
VYHS *e* 07 15 56.8
VYHS Vyhne 7.78 22 *e*PN **Pn** 07 14 33.2 -0.2
VYHS *e*SN **Sn** 07 15 56.8 -4.4
KHC Kasperske Hory 7.78 356 P **Pn** 07 14 32.7 -0.8
KHC Kasperske Hory 7.78 356 *e*PN **Pn** 07 14 32.3 -1.2
KHC *ex* x 07 14 42.0
KHC *e*PG **Pg** 07 15 06.5 -3.0
KHC *e*SN **Sn** 07 15 56.9 -4.5
KHC Kasperske Hory 7.78 356 **Pn** 07 14 32.7 -0.8
VLAD Vladila 7.80 67 ⇑P **Pn** 07 14 34.6 +0.9
PLVB Pleven 7.81 72 ⇓P **Pn** 07 14 35.2 +1.4
KRUC Moravsky 7.81 10 *e*PN **Pn** 07 14 34.1 +0.2
KRUC *e*SN **Sn** 07 15 58.0 -4.1
JAVC Velka Javorina 7.83 16 *e*PN **Pn** 07 14 34.1 0.0
JAVC *e*SN **Sn** 07 16 02.7 +0.1
WET Wettzell 7.85 353 *e*Pn **Pn** 07 14 34.5 +0.1
SNR=2.6
VIVF Saint-Julien-l 7.94 299 *e*Pn **Pn** 07 14 34.5 -1.2
VIVF Saint-Julien-l 7.94 299 *e*P **Pn** 07 14 39.6 +3.9
VIVF *e*Sn **Sn** 07 16 00.5 -4.8
comp=N,3.5nm,0.4s
TREC Trest 7.96 5 *e*P **Pn** 07 14 36.3 +0.4
TREC Trest 7.96 5 *e*PN **Pn** 07 14 36.3 +0.4
CABF La Chapelle 7.97 314 *e*P **Pn** 07 14 40.0 +3.8
CABF *e*Sn **Sn** 07 16 00.9 -5.3
comp=N,6.9nm,0.6s
DRGR 8.05 45 ⇑P **Pn** 07 14 38.5 +1.2
DRGR 8.05 45 ⇑P **Pn** 07 14 38.5 +1.2
VRAC Vranov 8.08 10 ⇑P **Pn** 07 14 39.0 +1.4
VRAC Vranov 8.08 10 Pn **Pn** 07 14 37.8 +0.3
comp=N,2.0nm,0.3s,baz=194,slow=12,SNR=9.7
VRAC LR LR 07 17 42.8
comp=N,196nm,19.6s,baz=184,slow=38
VRAC Vranov 8.08 10 ⇑P **Pn** 07 14 39.0 +1.4
VRAC Vranov 8.08 10 *e*PN **Pn** 07 14 36.8 -0.8
VRAC *e*SN **Sn** 07 16 02.9 -5.8
BFO Black Forest 8.19 330 P **Pn** 07 14 40.0 +0.9
BFO Black Forest 8.19 330 *e*Pn Pn 07 14 44.9 +5.8
SNR=1.4
BFO Black Forest 8.19 330 Pn **Pn** 07 14 40.0 +0.9
LASF Ste Croix 8.24 293 *e*Pn **Pn** 07 14 39.2 -0.6
LASF *e*Sn **Sn** 07 16 07.8 -4.9
comp=N,2.1nm,0.3s
KDZ Kurdzhali 8.25 84 *e*P **Pn** 07 14 39.4 -0.5
KDZ Kurdzhali 8.25 84 *e*P **Pn** 07 14 39.1 -0.8
KECS Kecovo 8.30 29 *e*P **Pn** 07 14 41.7 +1.1
KECS Kecovo 8.30 29 *e*PN **Pn** 07 14 41.7 +1.1
HUMR Humele 8.36 64 ⇑P **Pn** 07 14 41.3 0.0
RDO Rodhopi 8.37 88 *e*P **Pn** 07 14 41.5 -0.1
HINF Hinteralfeld 8.41 323 *e*Pn **Pn** 07 14 40.9 -1.2
HINF *e*Sn **Sn** 07 16 11.3 -5.5
comp=N,20nm,0.6s
ARR Arges 8.44 58 ⇑P **Pn** 07 14 43.8 +1.3
CJR Cluj-Napoca 8.49 48 ⇑P **Pn** 07 14 43.9 +0.7
CJR Cluj-Napoca 8.49 48 ⇑P **Pn** 07 14 43.9 +0.7
LANS Liptovska Anna 8.55 23 *e*P **Pn** 07 14 44.4 +0.4
LANS Liptovska Anna 8.55 23 *e*PN **Pn** 07 14 44.4 +0.4
ECH Echery 8.57 325 P **Pn** 07 14 44.6 +0.3
ECH 07 16 19.8

ECH	**Echery**	**8.57**	**325**			**Pn**	**07 14 44.6**	**+0.3**
ECH					Sn	**Sn**	**07 16 19.8**	**-1.0**
PRU	**Pruhonice**	**8.62**	**0**	*eP*		**Pn**	**07 14 43.7**	**-1.2**
PRU	**Pruhonice**	**8.62**	**0**	*e*PN		**Pn**	**07 14 43.7**	**-1.2**
ELND	**Elena**	**8.64**	**76**	⇑P		**Pn**	**07 14 45.5**	**+0.2**
MTUR	**Matau**	**8.66**	**60**	⇑P		**Pn**	**07 14 46.9**	**+1.4**
MTUR	**Matau**	**8.66**	**60**	⇑P		**Pn**	**07 14 46.9**	**+1.4**
CDF	**Champ du Feu**	**8.68**	**327**	*e*Pn		**Pn**	**07 14 44.4**	**-1.4**
CDF				*e*Sn		**Sn**	**07 16 17.6**	**-5.8**
	comp=N,16nm,0.5s							
MORC	**Moravsky Berou**	**8.68**	**13**	⇑P		**Pn**	**07 14 47.2**	**+1.4**
MORC	**Moravsky Berou**	**8.68**	**13**	⇑P		**Pn**	**07 14 47.2**	**+1.4**
MORC	**Moravsky Berou**	**8.68**	**13**	*e*PN		**Pn**	**07 14 46.9**	**+1.1**
MORC				*e*SN		**Sn**	**07 16 20.0**	**-3.5**
MORC	**Moravsky Berou**	**8.68**	**13**			**Pn**	**07 14 46.0**	**+0.2**
VOIR		**8.73**	**59**	⇑P		**Pn**	**07 14 47.4**	**+0.8**
VOIR		**8.73**	**59**	⇑P		**Pn**	**07 14 47.4**	**+0.8**
HAU	**Haudompre**	**8.78**	**322**	*e*Pn		**Pn**	**07 14 45.8**	**-1.3**
HAU	**Haudompre**	**8.78**	**322**	*e*P		**Pn**	**07 14 51.0**	**+3.9**
HAU				*e*Sn		**Sn**	**07 16 19.9**	**-6.0**
	comp=N,45nm,0.4s							
ALN	**Alexandroupoli**	**8.78**	**89**	P		**Pn**	**07 14 46.8**	**-0.3**
ALN							07 16 21.5	
ALN	**Alexandroupoli**	**8.78**	**89**	*e*P		**Pn**	**07 14 47.1**	**-0.1**
ALN	**Alexandroupoli**	**8.78**	**89**			**Pn**	**07 14 46.8**	**-0.3**
ALN					Sn	**Sn**	**07 16 21.4**	**-4.4**
KRLC	**Kraliky**	**8.86**	**10**	*e*P		**Pn**	**07 14 47.3**	**-0.9**
KRLC	**Kraliky**	**8.86**	**10**	*e*PN		**Pn**	**07 14 47.3**	**-0.9**
SIGR	**SIGRI**	**8.99**	**100**	*e*P		**Pn**	**07 14 50.6**	**+0.5**
NIE	**Niedzica**	**9.04**	**25**	*e*P		**Pn**	**07 14 53.4**	**+2.6**
NIE	**Niedzica**	**9.04**	**25**	*e*P		**Pn**	**07 14 53.4**	**+2.6**
DPC	**Dobruska-Polom**	**9.07**	**8**	*e*P		**Pn**	**07 14 52.0**	**+0.8**
DPC	**Dobruska-Polom**	**9.07**	**8**	*e*PN		**Pn**	**07 14 52.0**	**+0.8**
ARCR	**ARCALIA**	**9.13**	**48**	⇑P		**Pn**	**07 14 52.5**	**+0.6**
UZH	**Uzhgorod**	**9.14**	**35**	*e*P		**Pn**	**07 14 53.5**	**+1.4**
UZH				*e*S		**Sn**	**07 16 37.5**	**+2.7**
UZH					MLR	MLR		
	comp=Z,220nm,12.0s							
ERIK	**Erikli-Kesan**	**9.16**	**90**	*e*P		**Pn**	**07 14 51.4**	**-1.0**
DOPR	**Dopca**	**9.17**	**56**	⇑P		**Pn**	**07 14 53.3**	**+0.7**
EZN	**Ezine**	**9.18**	**96**	*e*P		**Pn**	**07 14 52.2**	**-0.4**
RAZG	**Razgrad**	**9.19**	**72**	⇑P		**Pn**	**07 14 53.1**	**+0.3**
EDRB	**Edirne**	**9.24**	**83**	*e*P		**Pn**	**07 14 53.1**	**-0.3**
SECR	**SIGRI**	**9.25**	**63**	⇑P		**Pn**	**07 14 54.9**	**+1.3**
MTLF	**Montolieu**	**9.25**	**286**	*e*Pn		**Pn**	**07 14 52.1**	**-1.6**
MTLF				*e*Sn		**Sn**	**07 16 31.9**	**-5.7**
	comp=Z,1.1nm,0.3s							
OSTC	**Ostas**	**9.27**	**7**	*e*PN		**Pn**	**07 14 53.8**	**-0.1**
CHVC	**Chvalec**	**9.29**	**6**	*e*PN		**Pn**	**07 14 52.7**	**-1.4**
MLR	**Muntele Rosu**	**9.33**	**60**	⇑P		**Pn**	**07 14 56.1**	**+1.2**
MLR	**Muntele Rosu**	**9.33**	**60**	Pn		**Pn**	**07 14 55.6**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=343,slow=9.6,SNR=14							
MLR	**Muntele Rosu**	**9.33**	**60**	⇑P		**Pn**	**07 14 56.1**	**+1.2**
MLR	**Muntele Rosu**	**9.33**	**60**			**Pn**	**07 14 55.9**	**+1.0**
RODP	**Rodopos**	**9.33**	**125**	*e*P		**Pn**	**07 14 56.3**	**+1.5**
KOLS	**Kolonicke sedl**	**9.37**	**34**	*e*P		**Pn**	**07 14 56.6**	**+1.4**
KOLS	**Kolonicke sedl**	**9.37**	**34**	*e*PN		**Pn**	**07 14 56.6**	**+1.4**
LPK	**Lapseki**	**9.39**	**92**	*e*P		**Pn**	**07 14 55.1**	**-0.5**
OZUR		**9.48**	**56**	⇑P		**Pn**	**07 14 58.0**	**+1.3**
BRG	**Berggiesshubel**	**9.51**	**358**	PN		**Pn**	**07 14 56.0**	**-1.1**
BRG				SN		**Sn**	**07 16 41.4**	**-2.3**
BRG				SG			07 17 40.5	
	comp=Z,15nm,1.0s							
	comp=N,714nm,19.1s							
	comp=E,645nm,18.2s							
	comp=Z,937nm,11.7s							
BRG	**Berggiesshubel**	**9.51**	**358**	P		**Pn**	**07 14 56.0**	**-1.1**
BRG							07 16 41.4	
BRG				smax		smax		
	comp=N,15nm,1.0s							
BRG				MLR		MLR		
	comp=N,714nm,19.1s							
BRG				MLR		MLR		
	comp=E,645nm,18.2s							
BRG				MLR		MLR		
	comp=Z,937nm,11.7s							
KSP	**Ksiaz**	**9.56**	**7**	*e*P		**Pn**	**07 15 00.3**	**+2.5**
KSP	**Ksiaz**	**9.56**	**7**	*e*P		**Pn**	**07 15 00.3**	**+2.5**
OJC	**Ojcow**	**9.61**	**21**	*e*P		**Pn**	**07 14 59.9**	**+1.4**
OJC	**Ojcow**	**9.61**	**21**	*e*P		**Pn**	**07 14 59.9**	**+1.4**
APE	**Apeiranthos**	**9.62**	**113**⇑	*e*P		**Pn**	**07 14 59.6**	**+0.8**
CAF	**Calviac**	**9.71**	**296**	*e*Pn		**Pn**	**07 14 58.6**	**-1.3**
KRBG	**Karabiga-Canak**	**9.80**	**92**	*e*P		**Pn**	**07 15 00.4**	**-0.7**
PHSR	**Pinarhisar**	**9.83**	**84**	*e*P		**Pn**	**07 15 01.8**	**+0.3**
BURAR	**Bucovina Array**	**9.91**	**47**	⇑P		**Pn**	**07 15 04.5**	**+1.8**
BURAR	**Bucovina Array**	**9.91**	**47**	⇑P		**Pn**	**07 15 04.5**	**+1.8**
BUR08	**Bucovina Ar. S**	**9.92**	**47**			**Pn**	**07 15 04.1**	**+1.2**
PLOR	**Plostina**	**9.93**	**59**	⇑P		**Pn**	**07 15 03.4**	**+0.5**
PLOR	**Plostina**	**9.93**	**59**	⇑P		**Pn**	**07 15 03.4**	**+0.5**
VRI	**Vrincioaia**	**9.98**	**59**	⇑P		**Pn**	**07 15 04.1**	**+0.4**
VRI	**Vrincioaia**	**9.98**	**59**	⇑P		**Pn**	**07 15 04.1**	**+0.4**
VRI	**Vrincioaia**	**9.98**	**59**	*e*P		**Pn**	**07 15 05.3**	**+1.7**
CLL	**Collm**	**9.99**	**355**	*e*P		**Pn**	**07 15 04.0**	**+0.4**
CLL				*e*			07 16 51.0	
CLL				MLR		MLR		
	comp=Z,300nm,18.7s							
CLL	**Collm**	**9.99**	**355**	*e*Pn		**Pn**	**07 15 04.0**	**+0.4**
CLL				*e*			07 15 09.0	
CLL				*e*Sn		**Sn**	**07 16 51.0**	**-4.4**
CLL				*e*			07 17 13.0	
CLL				*e*			07 17 54.0	
CLL				*e*Sg			07 18 07.0	
CLL				*e*Sglp			07 18 20.0	
	comp=E,700nm,22.1s							
CLL	**Collm**	**9.99**	**355**	Pn		**Pn**	**07 15 03.4**	**-0.2**
MRMT	**Marmara Adasi**	**9.99**	**90**	*e*P		**Pn**	**07 15 02.2**	**-1.6**
BIZ	**Bicaz**	**10.06**	**53**	⇓P		**Pn**	**07 15 06.1**	**+1.4**
TESR	**Tescani**	**10.20**	**56**	⇑P		**Pn**	**07 15 07.3**	**+0.7**
IDI	**Anoyia**	**10.21**	**123**	Pn		**Pn**	**07 15 07.7**	**+0.8**
	comp=E,0.8nm,0.3s,baz=338,slow=16,SNR=4.6							
HARR	**Harsova**	**10.43**	**67**	⇓P		**Pn**	**07 15 10.7**	**+1.0**
HARR	**Harsova**	**10.43**	**67**	⇓P		**Pn**	**07 15 10.7**	**+1.0**
TIRR	**Tirgusor**	**10.71**	**69**	⇑P		**Pn**	**07 15 14.2**	**+0.7**
TIRR	**Tirgusor**	**10.71**	**69**	⇑P		**Pn**	**07 15 14.2**	**+0.7**
TIRR	**Tirgusor**	**10.71**	**69**	Pn		**Pn**	**07 15 14.0**	**+0.5**
TOPG	**Topolog**	**10.78**	**66**	⇑P		**Pn**	**07 15 15.3**	**+0.8**
LVV	**L'vov**	**10.79**	**35**	*e*P		**Pn**	**07 15 17.5**	**+2.9**
LVV				*e*S		**Sn**	**07 17 20.3**	**+5.2**
LVV				MLR		MLR		
	comp=Z,400nm,11.0s							
SRCK	**Saricakaya, Es**	**12.37**	**91**	*e*P		**Pn**	**07 15 37.3**	**+1.0**
YUVA	**Yuva-Kibriscik**	**13.10**	**89**	*e*P		**Pn**	**07 15 47.4**	**+1.0**
AKASG	**Malin Array Be**	**13.86**	**43**	*i* P		**Pn**	**07 15 55.5**	**-1.0**
AKASG				pmax		pmax		
	comp=Z,3.0nm,0.7s							
AKASG	**Malin Array Be**	**13.86**	**43**	Pn		**Pn**	**07 15 55.9**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=234,slow=13,SNR=8.3							
ESDC	**Sonseca Array**	**14.10**	**269**	Pn		**Pn**	**07 15 59.8**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=73,slow=14,SNR=16							
BRTR	**Keskin Array B**	**14.70**	**90**	Pn		**Pn**	**07 16 09.1**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=272,slow=11,SNR=12							
BRTR					LR	LR	07 23 30.3	
	comp=Z,204nm,19.4s,baz=272,slow=44							
ANN	**Anapa**	**17.14**	**71**	*e*P		**Pn**	**07 16 34.1**	**-5.5**
ANN				*e*S		**Sn**	**07 19 40.9**	**-9.0**
ANN				pmax		pmax		
	comp=Z,48nm,1.0s							
MDT	**Midelt**	**17.40**	**247**	LR		LR	07 22 11.1	
	comp=Z,174nm,21.0s,baz=80,slow=33							
EKA	**Eskdalemuir Ar**	**18.14**	**326**	P		**Pn**	**07 16 52.0**	**+0.1**
	baz=135,slow=12,SNR=3.6							
MMAI	**Mount Meron Ar**	**18.64**	**110**	P		**Pn**	**07 17 00.2**	**+1.8**
	comp=Z,1.6nm,0.3s,baz=296,slow=11,SNR=2.2							
HFS	**Hagfors**	**18.79**	**359**	P		**P**	**07 16 58.8**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=202,slow=11,SNR=5.3							
HFS					LR	LR	07 25 05.3	
	comp=Z,187nm,20.2s,baz=176,slow=40							
VSU	**Vasula**	**18.80**	**20**⇑	*e*P		**Pn**	**07 16 59.8**	**-0.1**
NC602	**NORSAR Array S**	**19.47**	**356**	P		**P**	**07 17 07.1**	**+0.3**
NAO01	**NORSAR Array S**	**19.62**	**355**	P		**P**	**07 17 08.6**	**+0.1**
NB2	**NORSAR Subarra**	**19.79**	**355**	P		**P**	**07 17 09.5**	**-0.9**
	comp=Z,11nm,1.1s,baz=171,slow=12							
NOA	**NORSAR Array B**	**19.79**	**355**	P		**P**	**07 17 10.1**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=181,slow=12,SNR=4.1							
NOA					LR	LR	07 26 06.0	
	comp=Z,144nm,18.9s,baz=175,slow=41							
NB201	**NORSAR Array S**	**19.80**	**355**	P		**P**	**07 17 09.9**	**-0.5**
NB201					IAmb	IAmb	07 17 12.7	
	comp=Z,49nm,1.2s							
NC405	**NORSAR Array S**	**19.84**	**356**	P		**P**	**07 17 11.2**	**+0.3**
OBN	**Obninsk**	**20.04**	**39**	*e*P		**P**	**07 17 13.0**	**0.0**
OBN				*e*PPP		PPP	07 17 36.4	
OBN				pmax		pmax		
	comp=Z,9.0nm,0.4s							
NC204	**NORSAR Array S**	**20.06**	**355**	P		**P**	**07 17 12.9**	**-0.3**
NC204					IAmb	IAmb	07 17 19.5	
	comp=Z,33nm,1.2s							
MOS	**Moscow**	**20.89**	**39**	*e*P		**P**	**07 17 19.3**	**-3.0**
MOS				*e*			07 17 27.1	
KIV	**Kislovodsk**	**20.90**	**73**	*e*P		**P**	**07 17 23.7**	**+1.1**
KIV				pmax		pmax		
	comp=Z,38nm,1.0s							
KIV				MLR		MLR		
	comp=Z,117nm,14.0s							
NEY	**Neytrino**	**20.97**	**75**⇓	*e*P		Pn	07 17 26.4	+0.3
NEY				pmax		pmax		
	comp=Z,2.0nm,1.2s							
KBZ	**Khabaz**	**21.06**	**74**	P		**P**	**07 17 25.7**	**+1.5**
	comp=Z,6.6nm,0.9s,baz=303,slow=6.5,SNR=13							
GOF	**Gofitskoye**	**21.13**	**70**⇑	*e*P		P	07 17 33.3	+8.4
FINES	**FINESS Array B**	**21.31**	**15**	P		**P**	**07 17 25.8**	**-0.9**
	comp=Z,8.9nm,0.7s,baz=185,slow=8.5,SNR=21							
FINES					LR	LR	07 27 28.4	
	comp=Z,203nm,19.4s,baz=146,slow=42							
FIA1	**FINESS Array S**	**21.31**	**15**	P		**P**	**07 17 27.2**	**+0.5**
FIA1					IAmb	IAmb	07 17 39.0	
	comp=Z,20nm,1.1s							
ZEI	**Tsey**	**21.87**	**76**	*e*P		**P**	**07 17 35.3**	**+2.1**
ZEI				pmax		pmax		
	comp=Z,7.0nm,1.1s							
GNI	**Garni**	**22.94**	**83**⇑	*e*P		**P**	**07 17 46.6**	**+2.0**
GNI				pmax		pmax		
	comp=Z,51nm,1.3s							
GNI	**Garni**	**22.94**	**83**	P		**P**	**07 17 46.1**	**+1.6**
	comp=Z,6.3nm,0.6s,baz=280,slow=17,SNR=5.1							
PRGR	**Permogore**	**27.63**	**32**	*e*P		**P**	**07 18 25.1**	**-2.4**
PRGR				pmax		pmax		
	comp=Z,24nm,0.7s							
ARCES	**ARCESS Array B**	**28.82**	**8**	P		**P**	**07 18 39.3**	**+1.3**
	comp=Z,1.4nm,0.9s,baz=204,slow=10,SNR=2.9							
TOA0	**Torodi Ar. Sit**	**30.24**	**205**	P		**P**	**07 18 50.9**	**-0.2**
TOA0					IAmb	IAmb	07 19 00.6	
	comp=Z,5.4nm,0.9s							
TORD	**Torodi Ar. Bea**	**30.24**	**205**	P		**P**	**07 18 51.5**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=17,slow=9.3,SNR=16							
TORD					LR	LR	07 32 50.2	
	comp=Z,177nm,18.2s,baz=10.0,slow=40							
AKTO	**Aktyubinsk**	**31.26**	**58**	P		**P**	**07 19 00.3**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=270,slow=2.0,SNR=3.2							
ARU	**Arti**	**32.05**	**47**	P		**P**	**07 19 07.8**	**+1.1**
ARU							07 20 15.0	
ARU					S	**S**	**07 24 22.9**	**+4.9**
ARU					SS	**SnSn**	**07 26 10.2**	**+2.8**
ARU					MLR	MLR		
	comp=Z,241nm,17.0s							
ARU	**Arti**	**32.05**	**47**	P		**P**	**07 19 07.3**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=222,slow=12,SNR=3.8							
GEYT	**Alibeck**	**33.55**	**81**	P		**P**	**07 19 20.3**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=292,slow=7.6,SNR=2.8							
DBIC	**Dimbokro**	**38.59**	**212**	P		**P**	**07 20 03.2**	**-0.1**
DBIC				pmax		pmax		
	comp=Z,5.0nm,0.6s							
DBIC	**Dimbokro**	**38.59**	**212**	P		**P**	**07 20 03.4**	**+0.1**
	comp=Z,5.6nm,0.7s,baz=12,slow=9.0,SNR=15							
DBIC	**Dimbokro**	**38.59**	**212**	P		**P**	**07 20 03.2**	**-0.1**
DBIC					IAmb	IAmb	07 20 04.3	
	comp=Z,5.3nm,0.6s							
TIC	**Toumodi**	**38.68**	**212**	*e*P		**P**	**07 20 04.5**	**+0.4**
	comp=Z,3.0nm,0.4s							
TIC	**Toumodi**	**38.68**	**212**	P		**P**	**07 20 04.5**	**+0.4**
TIC	**Toumodi**	**38.68**	**212**	P		**P**	**07 20 04.5**	**+0.4**
BRVK	**Borovoye**	**38.74**	**53**	P		**P**	**07 20 04.4**	**+0.2**
BRVK				pmax		pmax		
	comp=Z,7.0nm,0.9s							
BRVK	**Borovoye**	**38.74**	**53**	P		**P**	**07 20 04.4**	**+0.2**
BVAR	**Borovoye Array**	**38.81**	**53**	P		**P**	**07 20 04.8**	**0.0**
	comp=Z,1.8nm,0.7s,baz=264,slow=7.1,SNR=3.8							
KIC	**Kosan Boka**	**38.83**	**211**	*e*P		**P**	**07 20 05.5**	**+0.2**
	comp=Z,8.1nm,0.6s							
KIC	**Kosan Boka**	**38.83**	**211**	P		**P**	**07 20 05.5**	**+0.2**
LIC	**Lamto**	**39.07**	**212**	*e*P		**P**	**07 20 07.4**	**+0.1**
	comp=Z,34nm,0.7s							
LIC	**Lamto**	**39.07**	**212**	P		**P**	**07 20 07.4**	**+0.1**
AAK	**Ala-Archa**	**43.82**	**67**⇑	*e*P		**P**	**07 20 48.7**	**+2.4**
AAK				pmax		pmax		
	comp=Z,8.0nm,2.5s							
AAK	**Ala-Archa**	**43.82**	**67**	P		**P**	**07 20 48.0**	**+1.7**
	comp=Z,1.2nm,0.4s,baz=239,slow=5.9,SNR=4.8							
AAK	**Ala-Archa**	**43.82**	**67**	P		**P**	**07 20 47.8**	**+1.5**
KURBB	**Kurchatov Arra**	**44.19**	**55**	P		**P**	**07 20 49.9**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=291,slow=10,SNR=4.2							
KURK	**Kurchatov**	**44.23**	**55**⇓	*e*P		**P**	**07 20 52.1**	**+2.9**
KURK	**Kurchatov**	**44.23**	**55**	P		**P**	**07 20 50.6**	**+1.4**
KSH	**Kashi**	**46.00**	**71**	P		**P**	**07 21 08.0**	**+4.4**
KSH				S		**S**	**07 27 50.3**	**+2.0**
KSH				sS		pS	07 27 53.8	+0.2
KSH				SS		**ScS**	**07 31 01.3**	**+2.2**
KSH				pmax		pmax		
	comp=Z,13nm,0.7s							
KSH				pmax		pmax		
	comp=Z,390nm,5.1s							
KSH				LR		LR		
	comp=N,130nm,6.6s							
KSH				LR		LR		
	comp=E,150nm,4.6s							
KSH				LR		LR		
	comp=Z,180nm,5.7s							
ZALV	**Zalesovo Beam**	**47.12**	**49**	P		**P**	**07 21 12.9**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=294,slow=7.6,SNR=3.4							
MKAR	**Makanchi Array**	**47.68**	**59***c*	*e*P		**P**	**07 21 18.2**	**+1.6**
MKAR				pmax		pmax		
	comp=Z,3.0nm,0.8s							
MKAR	**Makanchi Array**	**47.68**	**59**	P		**P**	**07 21 16.1**	**-0.5**
	comp=Z,0.9nm,0.5s,baz=284,slow=6.7,SNR=12							
WMQ	**Urumqi**	**52.32**	**61**	*e*P		**P**	**07 21 52.3**	**+0.4**
WMQ				pP		pP	07 21 57.4	+0.9
WMQ				PP		**PP**	**07 23 52.3**	**+2.0**
WMQ				pmax		pmax		
	comp=Z,24nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,61nm,3.6s							
WMQ				LR		LR		
	comp=N,630nm,29.1s							
WMQ				LR		LR		
	comp=E,2μm,28.9s							
WMQ				LR		LR		
	comp=Z,2μm,28.9s							
SCHQ	**Schefferville**	**52.90**	**314**	P		**P**	**07 21 54.0**	**-1.9**
	comp=Z,6.7nm,1.2s,baz=30,slow=5.3,SNR=7.3							
SCHQ	**Schefferville**	**52.90**	**314**	P		**P**	**07 21 55.0**	**-0.9**
SCHQ					IAmb	IAmb	07 22 05.6	
	comp=Z,9.3nm,1.1s							
TLY	**Talaya**	**58.55**	**47**⇓	*e*P		**P**	**07 22 39.7**	**+3.1**
TLY				pmax		pmax		
	comp=Z,4.0nm,0.9s							
SONM	**Songino Array**	**62.02**	**50**	P		**P**	**07 23 00.4**	**-0.2**
	comp=Z,1.2nm,1.1s,baz=282,slow=7.4,SNR=5.8							
ULN	**Ulaanbaatar**	**62.38**	**49**⇑	*e*P		**P**	**07 23 02.0**	**-1.0**
ULN				pmax		pmax		
	comp=Z,1.0nm,0.6s							
GTA	**Gaotai**	**62.40**	**61**	*e*P		**P**	**07 23 05.8**	**+2.6**
GTA				pP		sP	07 23 11.6	+1.9
GTA				sP		pP	07 23 14.3	+6.4
GTA				pmax		pmax		
	comp=Z,3.0nm,1.3s							
LZH	**Lanzhou**	**66.90**	**62**	*e*P		**P**	**07 23 33.3**	**+0.6**
LZH				pP		pP	07 23 37.5	+0.1
LZH				sP		sP	07 23 40.6	+1.4
LZH				PP		**PP**	**07 26 02.6**	**+2.9**
LZH				pmax		pmax		
	comp=Z,16nm,1.1s							
LZH				pmax		pmax		
	comp=Z,72nm,5.4s							
INK	**Inuvik**	**68.03**	**348**	P		**P**	**07 23 38.3**	**-0.8**
INK				pmax		pmax		
	comp=Z,8.0nm,1.4s							
INK	**Inuvik**	**68.03**	**348**	P		**P**	**07 23 38.3**	**-0.8**
INK				IAmb		IAmb	07 23 39.1	
	comp=Z,7.7nm,1.4s							
YKA	**Yellowknife Ar**	**68.71**	**337**	P		**P**	**07 23 42.9**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=40,slow=5.7,SNR=26							
HHC	**Hu-ho-hao-te**	**69.02**	**54**	*e*P		**P**	**07 23 46.8**	**+1.0**
HHC				pmax		pmax		
	comp=Z,4.0nm,0.6s							
HHC				pmax		pmax		
	comp=Z,59nm,7.2s							
CD2	**Chengdu**	**69.87**	**66**	P		**P**	**07 23 49.9**	**-1.3**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
ULM	**Lac du Bonnet**	**70.30**	**320**	P		**P**	**07 23 53.6**	**+0.2**
ULM				pmax		pmax		
	comp=Z,3.0nm,1.0s							
ULM	**Lac du Bonnet**	**70.30**	**320**	P		**P**	**07 23 52.5**	**-0.9**
	comp=Z,1.6nm,0.6s,baz=10.0,slow=17,SNR=3.5							
ULM	**Lac du Bonnet**	**70.30**	**320**	P		**P**	**07 23 53.6**	**+0.2**
ULM				IAmb		IAmb	07 23 59.7	
	comp=Z,3.4nm,0.9s							
BOSA	**Boshof**	**70.35**	**170**	P		**P**	**07 23 53.4**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=352,slow=6.5,SNR=2.9							
DAWY	**Dawson**	**72.88**	**348**	P		**P**	**07 24 09.5**	**+0.7**
DAWY				IAmb		IAmb	07 24 11.5	
	comp=Z,7.8nm,1.4s							
ILAR	**Eielson Array**	**73.18**	**352**	P		**P**	**07 24 10.4**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=346,slow=4.8,SNR=7.3							
MLY	**Manley**	**73.30**	**353**	P		**P**	**07 24 13.1**	**+1.8**
MLY				IAmb		IAmb	07 24 32.0	
	comp=Z,8.7nm,1.4s							
RIDG	**Independent Ri**	**73.94**	**351**	P		**P**	**07 24 15.6**	**+0.5**
DHY	**Denali Highway**	**74.88**	**352**	P		**P**	**07 24 21.4**	**+0.7**
PPLA	**Purkeypile**	**75.53**	**354**	P		**P**	**07 24 24.4**	**0.0**
JTMT	**Jette**	**80.31**	**328**	P		**P**	**07 24 51.9**	**+0.6**
JTMT				IAmb		IAmb	07 24 58.2	
	comp=Z,4.1nm,0.8s							
YNE	**Yellowstone No**	**80.67**	**324**	P		**P**	**07 24 54.3**	**+0.9**
YSS	**Yuzh-Sakhalins**	**80.79**	**33**⇑	*e*P		**P**	**07 24 55.3**	**+1.6**
PDAR	**Pinedale Array**	**82.20**	**322**	P		**P**	**07 25 01.8**	**+0.2**
	comp=Z,0.2nm,0.6s,baz=60,slow=5.3,SNR=3.9							
BMO	**Blue Mountains**	**83.89**	**328**	P		**P**	**07 25 09.6**	**-0.5**
BMO				pmax		pmax		
	comp=Z,5.0nm,0.9s							
BMO	**Blue Mountains**	**83.89**	**328**	P		**P**	**07 25 09.6**	**-0.5**
TXAR	**Lajitas Array**	**89.34**	**310**	P		**P**	**07 25 36.6**	**-0.4**
	comp=Z,0.3nm,0.9s,baz=48,slow=6.7,SNR=3.4							

NNC ***20*** *07:12:52.2±2.0, 49.°63N×83.°94E, h0km, mb3.2, mpv2.9, Error ellipse: s-maj=17.7km s-min=7.1km az=59.0, Suspected Mining explosion.*

SOME ***20*** *07:12:54.5, 49.83N×83.82E, h10km*

ISC 20 07:12:56.6±3.1, 49.9N±0.2×83.8E±0.2, h0km, n6, σ0s 70/8, 3C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SEM	**Semipalatinsk**	**2.35**	**285**	*e*P	**Pb**	**07 13 38.9**	**-1.0**
SEM	8.6nm,0.3s			*e*S	**Sb**	**07 14 10.4**	**+0.9**
ZSN	18nm,0.2s **Zaisan**	**2.50**	**163**	*e*P	**Pn**	**07 13 38.7**	**+0.1**
ZSN	23nm,0.4s			*e*S	**Sn**	**07 14 10.1**	**+0.3**
MK31	33nm,0.8s **Makanchi Array**	**3.22**	**199**	⇑Pg	**Pn**	**07 13 48.0**	**-0.4**
MK31	0.3nm,0.2s,baz=24,slow=13,SNR=60			⇓Lg	Lg	07 14 29.1	
MAKZ	2.8nm,0.3s,baz=22,slow=31,SNR=5.4 **Makanchi**	**3.27**	**202**	⇑Pg	**Pn**	**07 13 48.9**	**-0.2**
MAKZ	3.6nm,0.5s			⇑Lg	Lg	07 14 31.0	
KURK	8.1nm,0.5s **Kurchatov**	**3.43**	**287**	⇓Pg	**Pb**	**07 13 57.8**	**-0.4**
KURK	0.8nm,0.4s			⇓Lg	Lg	07 14 44.3	
KURBB	5.8nm,0.4s **Kurchatov Arra**	**3.47**	**285**	⇓Pg	**Pb**	**07 13 59.2**	**+0.5**
KURBB	2.

NEST S Sg 07 15 54.8 +1.6
comp=E,3µm,0.8s
NEST Nestorio 1.45 130 P Pg 07 15 34.7 +0.4
NEST S Sg 07 15 54.2 +1.1
NEST AML AML 07 15 58.9
comp=N,5444µm,0.9s
NEST AML AML 07 16 01.3
comp=E,6704µm,0.8s
FNA Florina 1.46 112 P Pg 07 15 34.5 -0.1
FNA S Sg 07 15 55.4 +1.8
FNA Florina 1.46 112 P Pg 07 15 34.2 -0.3
FNA 07 15 51.9
FNA Florina 1.46 112 *i* PN Pg 07 15 34.2 -0.3
FNA *i* PN Sg 07 15 55.4 +1.8
FNA Florina 1.46 112 P Pg 07 15 34.4 -0.2
FNA AML AML 07 15 58.4
comp=N,27553µm,0.5s
FNA AML AML 07 15 59.6
comp=E,17263µm,0.5s
FNA Florina 1.46 112 Pn Pg 07 15 34.2 -0.3
FNA Sn Sb 07 15 51.9 +0.7
NKME Niksic 1.49 342 *e*Pg Pb 07 15 33.8 +0.3
NKME *e*Sg Sg 07 15 55.8 +1.1
SRN Sarande 1.50 168 P Pb 07 15 33.8 +0.2
SRN Sarande 1.50 168 *i* PN Pg 07 15 35.9 +0.6
SRN *i* PN Sg 07 15 57.0 +2.1
SKO Skopje 1.52 65 *e*Pn Pb 07 15 34.3 +0.4
SKO *e*Sn Sg 07 15 55.4 0.0
SKO Skopje 1.52 65 *i* Pn Pg 07 15 35.3 -0.3
NKY Niksic 1.53 343 *e*Pg Pb 07 15 34.5 +0.3
NKY *e*Sg Sg 07 15 56.9 +1.1
SCTE Santa Cesarea 1.54 214 P Pn 07 15 32.3 -0.5
SCTE S Sb 07 15 53.3 +0.1
SCTE AML AML 07 15 57.4
comp=E,3376µm,0.4s
SCTE AML AML 07 16 00.5
comp=N,3861µm,0.5s
SCTE Santa Cesarea 1.54 214 Pb 07 15 34.4 +0.2
SCTE Sn Sg 07 15 55.1 -0.9
IVA Berane 1.54 8 *e*Pg Pb 07 15 34.7 +0.4
IVA *e*Sg Sg 07 15 57.6 +1.5
KASA Kassiopi 1.62 171 P Pb 07 15 35.2 -0.4
KASA S Sg 07 15 57.4 -1.3
KASA AML AML 07 16 01.3
comp=E,12802µm,0.3s
KASA AML AML 07 16 02.1
comp=N,8384µm,0.3s
TREB Trebinje 1.65 326 *e*Pn Pb 07 15 35.3 -0.9
TREB *e*Sn Sb 07 15 58.0 +1.4
DBRK Dubrovnik 1.70 321 *i* Pn Pn 07 15 35.1 +0.1
DBRK Sn Sb 07 15 57.6 -0.5
CGL1 Ceglie Messapi 1.75 247 *e*Pn Pn 07 15 34.9 -0.7
IGT Igoumenitsa 1.90 162 P Pb 07 15 40.1 -0.3
IGT Igoumenitsa 1.90 162 P Pb 07 15 39.9 -0.5
IGT AML AML 07 16 08.8
comp=N,4533µm,0.5s
IGT AML AML 07 16 15.2
comp=E,8103µm,0.6s
SJES Sjenica 1.93 8 *e*Pn Pb 07 15 41.9 +0.9
SJES *e*Sn Sb 07 16 05.4 +0.6
TAR1 Taranto 1.93 246 *e*Pn Pn 07 15 38.0 -0.2
KPRO Kipourio 1.94 135 P Pb 07 15 41.9 +0.8
KPRO Kipourio 1.94 135 P Pb 07 15 41.3 +0.2
KPRO AML AML 07 16 18.3
comp=E,4594µm,0.6s
KPRO AML AML 07 16 22.9
comp=N,4761µm,0.6s
JAN Janina 1.94 150 P Pb 07 15 41.2 0.0
JAN Janina 1.94 150 P Pb 07 15 40.9 -0.3
JAN AML AML 07 16 19.9
comp=E,3902µm,0.4s
JAN AML AML 07 16 23.2
comp=N,3284µm,0.4s
KZN Kozani 1.95 122 P Pb 07 15 42.0 +0.6
KZN S Sg 07 16 07.8 -1.5
KZN Kozani 1.95 122 P Pb 07 15 41.6 +0.3
KZN S Sg 07 16 07.5 -1.8
KZN AML AML 07 16 11.4
comp=N,5250µm,0.6s
KZN AML AML 07 16 13.2
comp=E,6228µm,0.5s
PLE Pljevlja 1.98 356 *e*Pn Pb 07 15 41.5 -0.4
PLE *e*Sn Sb 07 16 08.3 +2.0
MASS Massafra 1.99 250 *e*Pn Pb 07 15 42.1 +0.2
NOCI Noci 1.99 254 *i* PN Sg 07 16 13.1 +2.6
NOCI Noci 1.99 254 P Pn 07 15 38.2 -0.8
NOCI AML AML 07 16 14.1
comp=N,5662µm,0.3s
NOCI AML AML 07 16 18.6
comp=E,6438µm,0.4s
BAI Bari 2.06 264 *e*Pn Pn 07 15 39.2 -0.7
BAI Sn Sn 07 16 03.5 -1.6
STON Ston 2.07 318 *i* Pn Pn 07 15 40.4 +0.3
STON Sn Sn 07 16 05.4 0.0
STON Ston 2.07 318 *e*Pn Pn 07 15 40.4 +0.3
STON *e*Sn Sb 07 16 09.8 +1.1
GRG Griva 2.16 100 P Pb 07 15 44.0 -0.8
GRG S Sb 07 16 12.5 +1.3
GRG Griva 2.16 100 P Pb 07 15 43.8 -1.0
GRG AML AML 07 16 18.4
comp=E,3211µm,0.9s
GRG AML AML 07 16 22.4
comp=N,4159µm,0.8s
SELS Selova 2.19 31 *e*Pn Pn 07 15 43.5 +1.8
BARS Barje 2.21 48 *e*Pn Pn 07 15 43.1 +1.1
BARS Barje 2.21 48 *e*Pn Pg 07 16 00.3 +12
BARS *e*Sn Sb 07 16 13.1 +0.4
VAY Valandovo 2.24 90 *e*Pn Pn 07 15 43.9 +1.5
VAY *e*Sn Sb 07 16 12.4 -1.2
VAY Valandovo 2.24 90 *i* Pn Pb 07 15 44.5 -1.7
SG1 Sgolgore (BA) 2.26 258 *e*Pn Pn 07 15 42.8 +0.1
SG1 Sn Sb 07 16 15.5 +1.4
KNT Kendrikon 2.50 93 P Pb 07 15 48.6 -2.0
KNT S Sb 07 16 20.7 -0.3
comp=N,590nm,0.6s
KNT Kendrikon 2.50 93 P Pb 07 15 48.5 -2.2
KNT AML AML 07 16 21.5
comp=E,1189µm,0.7s
KNT AML AML 07 16 33.1
comp=N,1282µm,0.9s
LIT Litokhoron 2.53 119 P Pb 07 15 49.4 -1.8
LIT Litokhoron 2.53 119 P Pb 07 15 49.0 -2.2
LIT 07 16 19.0
LIT Litokhoron 2.53 119 P Pb 07 15 49.1 -2.0
LIT AML AML 07 16 39.9
comp=E,1783µm,0.6s
LIT AML AML 07 16 41.6
comp=N,2274µm,0.7s
LIT Litokhoron 2.53 119 Pn Pb 07 15 49.0 -2.2
LIT Sn Sn 07 16 19.0 +2.3
THL Klokotos Trika 2.57 133 P Pb 07 15 49.4 -2.4
THL S Sb 07 16 24.1 +1.1
THL Klokotos Trika 2.57 133 P Pn 07 15 49.2 +2.3
THL AML AML 07 16 28.7
comp=E,1273µm,0.5s
THL AML AML 07 16 40.0
comp=N,1452µm,0.7s
TSLK Tsoukalades, L 2.65 162 P Pn 07 15 50.0 +1.9
TSLK Tsoukalades, L 2.65 162 P Pn 07 15 49.4 +1.4
TSLK AML AML 07 16 38.0
comp=E,2335µm,0.5s
TSLK AML AML 07 16 42.5
comp=N,2414µm,0.6s
THE Thessaloniki 2.65 105 P Pn 07 15 50.1 +2.0
THE S Sb 07 16 25.3 -0.1
comp=N,590nm,0.8s
THE Thessaloniki 2.65 105 P Pn 07 15 49.9 +1.9
THE AML AML 07 16 26.1
comp=N,1567µm,0.7s
THE AML AML 07 16 27.7
comp=E,811µm,0.5s
LKD2 Lefkada island 2.69 162 P Pn 07 15 49.9 +1.3
LKD2 Lefkada island 2.69 162 P Pn 07 15 49.6 +1.0
LKD2 AML AML 07 16 40.9
comp=N,2558µm,0.7s
LKD2 AML AML 07 16 41.1
comp=E,3482µm,0.5s
MAKA Makarska 2.72 316 *e*Pn Pn 07 15 49.2 +0.3
HORT Hortiatis 2.76 105 P Pn 07 15 51.5 +1.8
HORT S Sb 07 16 27.6 -1.0
comp=E,332nm,0.6s
HORT Hortiatis 2.76 105 P Pn 07 15 51.5 +1.8
HORT AML AML 07 16 32.9
comp=E,548µm,0.7s
HORT AML AML 07 16 45.1
comp=N,901µm,0.7s
BOVS Bovan 2.77 34 *e*Pn Pn 07 15 52.2 +2.5
BOVS *e*Sn Sb 07 16 26.0 -2.7
ACER Acerenza 2.82 260 Pn Pn 07 15 51.2 +0.8
MGNA Meganis 2.84 161 P Pn 07 15 51.6 +0.9
EVGI Lefkada island 2.84 163 P Pn 07 15 52.4 +1.7
EVGI Lefkada island 2.84 163 P Pn 07 15 51.4 +0.6
SOH Sokhos 2.89 99 P Pn 07 15 54.0 +2.6
SOH S Sb 07 16 31.4 -0.9
comp=N,572nm,0.6s
SOH Sokhos 2.89 99 P Pn 07 15 53.9 +2.4
SOH AML AML 07 16 33.7
comp=E,1322µm,0.6s
SOH AML AML 07 16 47.7
comp=N,1195µm,0.7s
SGRT San Giovanni R 2.92 279 Pn Pn 07 15 51.2 -0.6
HVAR Hvar 2.96 309 *i* Pn Pn 07 15 52.0 -0.4
ZAPS Zavoj 2.96 49 *e*Pn Pn 07 15 54.9 +2.5
EVR Evrytania 2.96 144 P Pb 07 15 55.8 -2.9
FSK Fiskardo 2.98 165 P Pn 07 15 54.3 +1.7
FSK Fiskardo 2.98 165 P Pn 07 15 53.0 +0.3
VTS Vitosha 3.00 64 *e*Pn Pn 07 15 55.7 +2.8
VTS Vitosha 3.00 64 ⇑P Pn 07 15 55.8 +2.8
VTS Vitosha 3.00 64 ⇑P Pn 07 15 55.8 +2.8
VTS Vitosha 3.00 64 Pn Pn 07 15 56.0 +3.1
PDO Prodromos 3.01 155 P Pn 07 15 55.1 +2.1
PDO Prodromos 3.01 155 P Pn 07 15 54.4 +1.5
SRS Serrai 3.03 93 P Pn 07 15 55.6 +2.4
SRS S Sb 07 16 33.7 -2.5
comp=N,378nm,0.7s
SRS Serrai 3.03 93 P Pn 07 15 55.5 +2.3
SRS AML AML 07 16 49.4
comp=N,884µm,0.8s
SRS AML AML 07 16 56.6
comp=E,884µm,1.0s
MAKR Makrakomi, Fth 3.04 139 P Pn 07 15 55.8 +2.3
TIP Timpagrande 3.07 226 P Pn 07 15 53.3 -0.6
TIP Timpagrande 3.07 226 Pn Pn 07 15 53.4 -0.5
PLG Polygyros 3.08 107 P Pn 07 15 56.6 +2.6
PLG AML AML 07 16 38.0
comp=E,1184µm,0.5s
PLG AML AML 07 16 39.4
comp=N,1504µm,0.8s
PVO Paravola 3.11 151 P Pn 07 15 56.8 +2.4
PVO Paravola 3.11 151 P Pn 07 15 56.8 +2.4
AGG Agios Georgios 3.13 137 P Pn 07 15 57.3 +2.5
AGG Agios Georgios 3.13 137 P Pn 07 15 57.2 +2.5
AGG Agios Georgios 3.13 137 Pn Pn 07 15 57.2 +2.5
AGG Sn Sn 07 16 32.0 +0.5
ZAGS Zajecar 3.14 38 *e*Pn Pn 07 15 56.0 +1.2
CUC Castrocucco 3.18 246 P Pn 07 15 55.0 -0.3
TEKS Tekeris 3.20 359 *e*Pn Pn 07 15 57.2 +1.6
VLS Valsamata 3.26 166 P Pn 07 15 56.6 +0.1
VLS Valsamata 3.26 166 P Pn 07 15 56.6 +0.1
ANX Ano Chora 3.28 146 P Pn 07 16 00.3 +3.4
KFL Anninata 3.37 164 P Pn 07 15 58.3 +0.4
KFL Anninata 3.37 164 P Pn 07 15 58.4 +0.6
XOR Xorichti 3.39 125 P Pn 07 15 59.9 +1.6
EFP Efpalio 3.42 148 P Pn 07 16 01.3 +2.7
PAIG Paliouri 3.42 113 P Pn 07 16 01.4 +2.7
KUBS Kucevo 3.42 26 *e*Pn Pn 07 16 02.3 +3.6
NEO Neokhori 3.44 125 P Pn 07 16 00.7 +1.7
AXAR Agios Charalam 3.49 137 P Pn 07 16 02.4 +2.7
SERG Sergoula 3.49 148 P Pn 07 16 02.7 +3.0
TRIZ Trizonia 3.54 147 P Pn 07 16 03.6 +3.3
TRIZ Trizonia 3.54 147 P Pn 07 16 03.3 +3.0
KIJV Kijevo 3.54 320 *e*Pn Pn 07 16 00.9 +0.6
KALE Kalithea 3.55 146 P Pn 07 16 02.9 +2.5
KALE Kalithea 3.55 146 P Pn 07 16 02.6 +2.2
RLS Riolos of Patr 3.59 156 P Pn 07 16 02.4 +1.5
LAKA Lakka 3.61 149 P Pn 07 16 03.7 +2.4
SKIA Skiathos 3.68 125 P Pn 07 16 04.3 +2.0
ZIRJ Zirje 3.72 310 *e*Pn Pn 07 16 02.6 -0.1
ZIRJ Sn Sn 07 16 44.0 -2.0
KAVA Kavala 3.73 94 P Pn 07 16 05.1 +2.2
KAVA Kavala 3.73 94 P Pn 07 16 05.2 +2.3
LKR Lokris 3.76 135 P Pn 07 16 05.8 +2.5
LKR Lokris 3.76 135 P Pn 07 16 05.5 +2.3
MDVR Moldovita 3.77 24 ⇑P Pb 07 16 14.9 +2.7
DRO Drossia 3.77 154 P Pn 07 16 05.1 +1.7
DRO S Sb 07 16 54.5 -3.0
PAOL Paolisi 3.81 267 Pn Pn 07 16 04.7 +0.7
MORI Morici 3.81 313 *e*Pn Pn 07 16 04.6 +0.5
PUNG Punghina 3.82 39 ⇑P Pn 07 16 06.8 +2.6
BLY Banja Luka 3.83 333 Pn Pn 07 16 05.4 +1.2
KLV Kalavryta, Ach 3.85 148 P Pn 07 16 07.7 +3.1
KLV Kalavryta, Ach 3.85 148 P Pn 07 16 07.2 +2.6
AOS Alonnisos 3.94 122 P Pn 07 16 08.3 +2.6
DJES Djerdap 3.95 32 *e*Pn Pn 07 16 09.1 +3.2
THAS Thassos island 3.95 99 P Pn 07 16 07.8 +1.9
HERR Herculane 4.09 29 ⇑P Pn 07 16 09.7 +1.9
AMT Artemida-Makis 4.15 156 P Pn 07 16 10.3 +1.6
AMT S Sb 07 17 03.0 -5.5
CEL Celeste 4.20 224 Pn Pn 07 16 08.8 -0.6
SRE Strehaia 4.24 37 ⇑P Pn 07 16 12.7 +2.8
UDBI Udbina 4.24 320 *e*Pn Pn 07 16 11.5 +1.5
DUGI Dugi Otok 4.26 310 *e*Pn Pn 07 16 10.5 +0.3
INTR Introdacqua 4.31 281 Pn Pn 07 16 11.4 +0.5
VLAD Vladila 4.43 52 ⇑P Pn 07 16 15.7 +3.3
RDO Rodhopi 4.49 91 P Pn 07 16 15.3 +3.0
BZS Buzias 4.51 18 *e*Pn Pn 07 16 16.1 +2.5
ITM Ithomi 4.54 156 Pn Pn 07 16 16.1 +2.0
ITM Sn Sn 07 17 07.5 +1.2
NVLJ Novalja 4.72 314 *e*Pn Pn 07 16 16.7 +0.2
AQU L'Aquila 4.73 284 Pn Pn 07 16 18.7 +2.0
AQU Sn Sn 07 17 15.5 +4.5
MOSL Moslavina 4.74 335 *e*Pn Pn 07 16 17.1 +0.3
ELND Elena 4.93 69 ⇑P Pb 07 16 29.6 -2.5
NRCA Norcia 5.04 289 Pn Pn 07 16 21.6 +0.6
NRCA Sn Sn 07 17 19.8 +1.0
HUMR Humele 5.07 49 ⇑P Pn 07 16 24.9 +3.6
OZLJ Ozalj 5.21 326 *e*Pn Pn 07 16 23.7 +0.5
PTJ Puntijarka 5.26 331 *i* Pn Pn 07 16 23.9 -0.1
KALN Kalnik 5.29 336 *e*Pn Pn 07 16 24.4 0.0
ARR Arges 5.44 41 ⇑P Pn 07 16 29.1 +2.6
BRJN Brijuni 5.56 312 *e*Pn Pn 07 16 28.1 +0.1
MTUR Matau 5.56 44 ⇑P Pn 07 16 31.4 +3.2
MURB Monte Urbino 5.58 292 Pn Pn 07 16 29.0 +0.7
VOIR 5.70 42 ⇑P Pn 07 16 31.5 +1.5
CORL Corleone 5.96 237 Pn Pn 07 16 33.7 +0.2
SECR 6.00 50 ⇑P Pn 07 16 38.5 +4.4
CLTB Caltabellotta 6.21 235 Pn Pn 07 16 38.1 +1.1
MLR Muntele Rosu 6.21 46 Pn Pn 07 16 41.5 +4.4
comp=N,1.0nm,0.3s,baz=260,slow=6.1,SNR=11
MLR Sn Sn 07 17 50.2 +2.7
comp=N,0.5nm,0.3s,baz=288,slow=20,SNR=1.7
MLR Muntele Rosu 6.21 46 ⇑P Pn 07 16 41.2 +4.2
MLR Muntele Rosu 6.21 46 Pn 07 16 41.4 +4.4
MLR Sn 07 17 48.6 +1.1
DOPR Dopca 6.24 40 ⇑P Pn 07 16 41.6 +4.2
OBKA Obir 6.31 326 Sn Sn 07 17 49.7 -0.3
comp=N,42nm,0.4s
ISR Istrita 6.32 51 ⇑P Pn 07 16 42.1 +3.6
OZUR 6.53 41 ⇑P Pn 07 16 45.1 +3.8
OSSC Osservatorio P 6.55 292 Pn Pn 07 16 42.1 +0.5
PSZ Piszkesteto 6.57 2 Pn Pn 07 16 46.6 +4.6
PSZ Sn Sn 07 18 00.2 +3.8
MYKA Terra Mystica 6.80 323 Sn Sn 07 18 01.3 -0.7
comp=N,11nm,0.5s
PLOR Plostina 6.82 46 ⇑P Pn 07 16 48.1 +2.8
VRI Vrincioaia 6.87 47 ⇑P Pn 07 16 49.6 +3.6
HARR Harsova 6.96 59 ⇑P Pn 07 16 50.8 +3.6
STAL STALIGIAL 6.99 317 Pn Pn 07 16 50.0 +2.3
ZCCA Zocca 7.00 298 Pn Pn 07 16 50.6 +2.6
TEOL Teolo 7.03 307 Pn Pn 07 16 47.8 -0.4
VYHS Vyhne 7.16 356 *e*SN Sn 07 18 11.9 +1.0
TIRR Tirgusor 7.18 61 P Pn 07 16 53.6 +3.3
TIRR Tirgusor 7.18 61 ⇑P Pn 07 16 55.9 +5.7
TIRR Tirgusor 7.18 61 Pn Pn 07 16 53.6 +3.3
MODS Modra-Piesok 7.21 348 *e*SN Sn 07 18 12.4 +0.3
KBA Koelnbreinsper 7.27 324 Sn Sn 07 18 12.2 -1.6
comp=N,10nm,0.4s
CFR Carcaliu 7.32 56 ⇑P Pn 07 16 55.1 +3.0
TOPG Topolog 7.33 58 ⇑P Pn 07 16 55.8 +3.4
IDI Anoyia 7.34 144 Pn Pn 07 16 51.7 -0.9
comp=N,2.4nm,0.3s,baz=325,slow=9.9,SNR=7.7
IDI Sn Sn 07 18 09.7 -5.8
comp=N,2.5nm,0.3s,baz=288,slow=20,SNR=3.0
ABTA Abfaltersbach 7.42 319 Sn Sn 07 18 16.4 -0.9
comp=N,26nm,0.4s
CTI Castel Tesino 7.43 312 P Pn 07 16 54.3 +0.6
CTI Castel Tesino 7.43 312 Pn Pn 07 16 54.3 +0.6
BURAR Bucovina Array 7.44 31 ⇑P Pn 07 16 59.1 +5.1
BUR08 Bucovina Ar. S 7.46 31 Pn Pn 07 16 58.0 +3.8
MOA Molln 7.53 331 Sn Sn 07 18 19.2 -0.6
comp=N,21nm,0.6s
UZH Uzhgorod 7.53 14 *e*P Pb 07 17 12.7 -3.5
TLCR 7.75 57 P Pn 07 17 03.8 +5.8
TLCR 7.75 57 ⇑P Pn 07 17 01.7 +3.7
PGF Pioggiola 7.99 282 *e*Pn Pn 07 17 01.4 -0.1
PGF *e*Sn Sn 07 18 23.3 -8.0
comp=N,9.2nm,0.7s
WTTA Wattenberg 8.21 319 *e*Sn Sn 07 18 33.8 -3.1
comp=N,32nm,0.4s
WATA Walderalm 8.29 319 *e*Sn Sn 07 18 37.1 -1.8
comp=N,17nm,0.5s
KARP Karpathos 8.29 132 Pn Pn 07 17 07.2 +1.5
FETA Feichten 8.52 315 Sn Sn 07 18 41.7 -2.9
comp=N,18nm,0.6s
MOTA Moosalm 8.54 317 *e*Sn Sn 07 18 43.4 -1.4
comp=N,43nm,0.7s
GERES GERESS Array B 8.57 333 Pn Pn 07 17 09.8 +0.4
baz=158,slow=14,SNR=4.0
GERES Sn Sn 07 18 42.3 -3.3
comp=N,0.9nm,0.3s,baz=141,slow=24,SNR=3.8
DAVOX Davos/Dischmat 8.85 311 Pn Pn 07 17 13.7 +0.3
baz=139,slow=20,SNR=2.5
DAVOX Sn Sn 07 18 50.7 -1.9
comp=N,1.2nm,0.3s,baz=121,slow=19,SNR=3.7
KHC Kasperske Hory 8.86 333 ⇑*e*P Pn 07 17 12.4 -0.9
KHC Kasperske Hory 8.86 333 *e*SN Sn 07 18 50.6 -2.0
DAVA Damuels 9.14 314 Sn Sn 07 18 58.7 -1.1
comp=N,19nm,0.6s
SBF Sospel 9.31 290 *e*Pn Pn 07 17 19.7 +0.1
SBF *e*Sn Sn 07 18 55.6 -8.2
FRF La Foret Royal 9.82 287 *e*Pn Pn 07 17 25.7 -0.8
FRF La Foret Royal 9.82 287 *e*P Pn 07 17 30.7 +4.2
FRF *e*Sn Sn 07 19 08.0 -8.2
comp=N,3.6nm,0.2s
LMR La Mourre 9.89 286 *e*Pn Pn 07 17 26.4 -1.0
LMR *e*Sn Sn 07 19 09.7 -8.1
comp=N,2.6nm,0.3s
MBDF Montbardon 9.97 294 *e*Pn Pn 07 17 27.1 -1.6
MBDF *e*Sn Sn 07 19 11.9 -8.3
comp=N,5.9nm,0.4s
SENIN Lac Senin/Sane 10.19 304 Pn Pn 07 17 33.0 +1.3
LPG La Plagne 10.22 298 *e*Pn Pn 07 17 30.0 -2.2
LPG *e*Sn Sn 07 19 18.7 -7.6
comp=N,7.2nm,0.3s
LPL La Plagne 10.24 298 *e*Pn Pn 07 17 31.1 -1.3
LPL *e*Sn Sn 07 19 18.3 -8.4
comp=N,21nm,0.3s
ORIF Oris-en-Rattie 10.64 294 *e*Pn Pn 07 17 36.2 -1.5
ORIF *e*Sn Sn 07 19 27.8 -8.5
comp=N,8.7nm,0.4s
SMRF Simiane la Rot 10.65 289 *e*Pn Pn 07 17 36.7 -1.2
SMRF *e*Sn Sn 07 19 28.2 -8.4
comp=N,0.3nm,0.2s
BRTR Keskin Array B 10.82 94 Pn Pn 07 17 42.2 +2.0
comp=N,0.1nm,0.3s,baz=285,slow=11,SNR=3.3
CLL Collm 10.95 338 *e*Sn Sn 07 19 23.0 -21
CLL *e* 07 20 26.0
CLL Lm MLR 07 22 00.0
comp=Z,300nm,18.7s
CABF La Chapelle 11.06 303 *e*Pn Pn 07 17 41.8 -1.7
CABF La Chapelle 11.06 303 *e*P Pn 07 17 47.7 +4.2
CABF *e*Sn Sn 07 19 37.9 -8.7
comp=Z,1.8nm,0.3s
HINF Hinteralfeld 11.14 310 *e*Pn Pn 07 17 43.0 -1.6
HINF Hinteralfeld 11.14 310 *e*P Pn 07 17 49.3 +4.7
HINF *e*Sn Sn 07 19 39.7 -8.9
comp=Z,7.5nm,0.4s
CDF Champ du Feu 11.22 313 *e*Pn Pn 07 17 44.6 -1.2
CDF *e*Sn Sn 07 19 43.1 -7.6
comp=Z,4.6nm,0.4s
AKASG Malin Array Be 11.49 32 Pn Pn 07 17 47.2 -2.1
comp=Z,0.4nm,0.3s,baz=221,slow=12,SNR=2.6
AKBB Malin Array Si 11.49 32 P Pn 07 17 51.2 +1.9
AKBB Malin Array Si 11.49 32 Pn Pn 07 17 51.2 +1.9
HAU Haudompre 11.53 310 *e*Pn Pn 07 17 48.4 -1.5
HAU *e*Sn Sn 07 19 49.5 -8.6
comp=Z,9.3nm,0.3s
SFTF Sexfontaines 12.39 308 *e*Pn Pn 07 18 00.2 -1.5
baz=130
SMF Signal de Mont 12.51 300 *e*Pn Pn 07 18 00.4 -2.9
SMF *e*Sn Sn 07 20 12.8 -9.2
comp=Z,3.8nm,0.3s
LOR Lormes 12.72 303 *e*Pn Pn 07 18 04.1 -2.0
baz=124
LOR *e*Sn Sn 07 20 17.7 -9.4
comp=Z,8.0nm,0.3s
SSF Saint Saulge 12.87 302 *e*Pn Pn 07 18 06.0 -2.2
SSF *e*Sn Sn 07 20 20.3 -10
comp=Z,5.5nm,0.4s
AVF Avril sur Loir 12.88 300 *e*Pn Pn 07 18 06.8 -1.4
AVF *e*Sn Sn 07 20 21.3 -10
comp=Z,0.6nm,0.2s
BGF Bois d'Agland 13.13 299 *e*Pn Pn 07 18 10.0 -1.8
BGF *e*Sn Sn 07 20 26.1 -11
comp=Z,9.5nm,0.5s
TCF Toulx Ste Croi 13.48 297 *e*Pn Pn 07 18 15.0 -1.5
TCF *e*Sn Sn 07 20 35.4 -10
comp=Z,3.4nm,0.4s
HYF Humbligny 13.49 302 *e*Sn Sn 07 20 36.8 -9.3
SOC Sochi 15.02 75 *e*P Pn 07 18 38.0 +0.5
SOC *e* 07 21 26.0
SOC pmax pmax
comp=Z,47nm,0.7s
SOC MLR MLR
comp=Z,229nm,18.0s
MMAI Mount Meron Ar 15.08 118 Pn Pn 07 18 37.5 -0.9
comp=Z,1.1nm,0.3s,baz=309,slow=9.1,SNR=2.0
GRR Gorron 16.09 303 *e*Pn Pn 07 18 51.0 -0.4
KIV Kislovodsk 17.18 74 *e*P P 07 19 07.0 +0.2
KIV pmax pmax
comp=Z,24nm,1.0s
KBZ Khabaz 17.33 74 Pn P 07 19 10.3 +2.0
comp=Z,0.3nm,0.3s,baz=291,slow=9.0,SNR=6.1
GOF Gofitskoye 17.48 70 ⇑*e*P P 07 19 10.7 +0.7
VSU Vasula 17.72 12 ⇑*e*P P 07 19 13.5 +1.0
VSU pmax pmax
comp=Z,140nm,0.6s
OBN Obninsk 17.75 33 *e*P P 07 19 13.4 +0.5
OBN pmax pmax
comp=Z,19nm,0.9s
ESDC Sonseca Array 17.98 272 P P 07 19 16.4 +0.7
comp=Z,0.2nm,0.3s,baz=83,slow=12,SNR=3.6
ZEI Tsey 18.09 77 *e*P P 07 19 19.7 +2.6
ZEI pmax pmax
comp=Z,7.0nm,0.6s
MOS Moscow 18.62 33 *e*P P 07 19 21.6 -0.9
TBLG Delisi 18.81 80 P Pn 07 19 26.7 +1.4
TBLG pmax pmax
comp=Z,15nm,0.4s
TBLG Delisi 18.81 80 P Pn 07 19 26.7 +1.4
TBLG IAmb IAmb 07 19 28.8
comp=Z,15nm,0.4s
GNI Garni 19.08 85 *e*P Pn 07 19 29.3 +0.6
GNI pmax pmax
comp=Z,70nm,0.9s
GNI Garni 19.08 85 P Pn 07 19 29.9 +1.2
comp=Z,1.1nm,0.3s,baz=207,slow=11,SNR=7.8
GNI Garni 19.08 85 P Pn 07 19 29.9 +1.2
GNI IAmb IAmb 07 19 31.0
comp=Z,25nm,0.9s
HFS Hagfors 19.16 351 P P 07 19 27.9 -0.4
comp=Z,0.3nm,0.3s,baz=165,slow=12,SNR=5.6
NB2 NORSAR Subarra 20.37 348 P P 07 19 41.1 -0.5
comp=Z,1.2nm,0.6s,baz=150,slow=11
NOA NORSAR Array B 20.37 348 P P 07 19 40.0 -1.7
NOA NORSAR Array B 20.37 348 P P 07 19 40.0 -1.7
comp=Z,0.8nm,0.8s,baz=159,slow=7.7,SNR=2.4
EKA Eskdalemuir Ar 20.47 321 P P 07 19 42.1 -0.6
comp=Z,2.7nm,0.6s,baz=112,slow=8.9,SNR=6.1
FINES FINESS Array B 20.50 9 P P 07 19 41.9 -1.1
comp=Z,7.2nm,0.6s,baz=178,slow=9.7,SNR=13
FIA1 FINESS Array S 20.51 9 P P 07 19 42.0 -1.0
MDT Midelt 21.05 254 P P 07 19 50.0 +0.7
comp=Z,1.6nm,0.9s,baz=53,slow=5.1,SNR=2.2
TMCR Tamitsa 25.24 19 *e*P P 07 20 30.5 -0.2
TMCR pmax pmax
comp=Z,59nm,1.0s
PRGR Permogore 25.67 29 *e*P P 07 20 32.5 -2.2
PRGR pmax pmax

comp=Z,18nm,0.7s
AKTO Aktyubinsk 27.97 58 P **P 07 20 54.6 -1.0**
comp=Z,1.9nm,0.6s,baz=303,slow=8.6,SNR=4.8
ARCES ARCESS Array B 28.42 4 P **P 07 20 56.9 -2.5**
comp=Z,1.7nm,0.9s,baz=194,slow=9.8,SNR=2.8
ABKAR Akbulak array 29.18 60 P **P 07 21 06.4 +0.1**
ARU Arti 29.26 46*c iP* **P 07 21 06.3 -0.6**
ARU 07 21 56.3
ARU S **S 07 26 01.2 +2.6**
ARU SS **SnSn 07 27 24.2 0.0**
ARU pmax pmax
comp=Z,11nm,0.8s
ARU Arti 29.26 46 P **P 07 21 06.1 -0.8**
comp=Z,2.9nm,0.6s,baz=233,slow=8.6,SNR=9.0
ARU Arti 29.26 46 P **P 07 21 07.5 +0.6**
ARU IAmb IAmb 07 21 07.7
comp=Z,8.7nm,0.8s
GEYT Alibeck 29.70 84 P **P 07 21 10.5 -0.6**
comp=Z,2.4nm,0.5s,baz=316,slow=6.2,SNR=4.2
SVE Sverdlovsk 30.47 45⇑*eP* **P 07 21 18.0 +0.4**
SVE pmax pmax
comp=Z,20nm,0.8s
TOA0 Torodi Ar. Sit 32.15 214 P **P 07 21 33.6 +0.8**
TOA0 IAmb IAmb 07 21 34.7
comp=Z,4.7nm,0.9s
BRVK Borovoye 35.65 53 P **P 07 22 03.9 +1.1**
BRVK pmax pmax
comp=Z,12nm,0.6s
BRVK Borovoye 35.65 53 P **P 07 22 03.9 +1.1**
BVAR Borovoye Array 35.71 53 P **P 07 22 03.5 0.0**
comp=Z,7.3nm,0.8s,baz=275,slow=7.3,SNR=15
SPA0 Spitsbergen Ar 36.97 359 P **P 07 22 16.4 +2.6**
KK31 Karatay Array 37.27 70 P **P 07 22 16.6 -0.3**
KK31 pmax pmax
comp=Z,2.0nm,0.8s
KK31 Karatay Array 37.27 70 P **P 07 22 16.6 -0.3**
CHGR Chuyangaron 37.65 77 P **P 07 22 19.8 -0.5**
CHGR IAmb IAmb 07 22 20.8
comp=Z,6.5nm,0.7s
AAK Ala-Archa 40.22 69 P **P 07 22 42.1 +0.4**
comp=Z,1.2nm,0.6s,baz=270,slow=2.0,SNR=3.4
KURBB Kurchatov Arra 40.99 56 P **P 07 22 47.1 -0.7**
comp=Z,1.5nm,0.4s,baz=286,slow=9.4,SNR=7.3
KURBB PcP **PcP 07 24 47.5 -0.2**
comp=Z,0.7nm,0.2s,baz=292,slow=4.2,SNR=3.1
KURK Kurchatov 41.03 56 *eP* **P 07 22 48.0 -0.2**
KURK pmax pmax
comp=Z,6.0nm,1.1s
KURK Kurchatov 41.03 56 P **P 07 22 48.4 +0.2**
MAKZ Makanchi 44.11 61 P **P 07 23 13.2 -0.1**
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
MAKZ Makanchi 44.11 61 P **P 07 23 13.2 -0.1**
MAKZ IAmb IAmb 07 23 14.4
comp=Z,6.1nm,0.9s
ZAA0 Zalesovo Array 44.16 50 P **P 07 23 13.8 +0.3**
ZALV Zalesovo Beam 44.16 50 P **P 07 23 13.6 +0.1**
comp=Z,15nm,0.5s,baz=282,slow=8.7,SNR=34
MK31 Makanchi Array 44.32 61 P **P 07 23 15.4 +0.4**
MK31 pmax pmax
comp=Z,9.0nm,0.8s
MK31 Makanchi Array 44.32 61 P **P 07 23 15.4 +0.4**
MK31 IAmb IAmb 07 23 15.9
comp=Z,9.0nm,0.8s
MKAR Makanchi Array 44.32 61 P **P 07 23 15.1 +0.1**
comp=Z,10nm,0.6s,baz=284,slow=7.8,SNR=46
MKAR PcP **PP 07 24 58.3 +0.1**
comp=Z,1.1nm,0.6s,baz=299,slow=3.3,SNR=5.1
DANN Dangsing 53.13 83 *eP* **P 07 24 22.3 -0.9**
comp=Z,83nm,0.8s
KOLN Koldanda 53.31 83 *eP* **P 07 24 23.2 -1.3**
comp=Z,20nm,0.7s
GKN Gorkha 53.97 82 *eP* **P 07 24 28.2 -1.0**
comp=Z,55nm,0.7s
DMN Daman 54.53 83 *eP* **P 07 24 32.6 -0.8**
comp=Z,50nm,0.9s
KKN Kakani 54.56 82 *eP* **P 07 24 32.2 -1.4**
comp=Z,30nm,0.7s
PKIN Phulchoki 54.76 82 *eP* **P 07 24 34.0 -1.1**
comp=Z,20nm,0.6s
GUN Gumba 54.94 82 *eP* **P 07 24 35.5 -1.0**
comp=Z,44nm,0.7s
JIRN Jiri 55.31 82 *eP* **P 07 24 38.2 -1.0**
SCHQ Schefferville 55.67 316 P **P 07 24 40.4 -0.6**
comp=Z,2.5nm,1.0s,baz=34,slow=11,SNR=3.3
SCHQ Schefferville 55.67 316 P **P 07 24 40.8 -0.2**
TLY Talaya 55.70 49 P **P 07 24 42.1 +0.9**
comp=Z,5.3nm,0.8s,baz=285,slow=7.1,SNR=5.8
RAMN Ramite 56.00 82 *eP* **P 07 24 42.7 -1.3**
comp=Z,69nm,0.7s
TAPN Taplejung 56.61 81 *eP* **P 07 24 47.5 -0.9**
comp=Z,16nm,0.6s
ODAN Odare 56.64 82 *eP* **P 07 24 47.5 -1.1**
GTA Gaotai 58.99 63 *eP* **P 07 25 04.9 +0.1**
GTA pP sP 07 25 12.3 -0.9
GTA sP pP 07 25 15.8 +4.9
GTA pmax pmax
comp=Z,6.0nm,1.2s
SONM Songino Array 59.03 52 P **P 07 25 05.1 +0.2**
comp=Z,3.5nm,0.9s,baz=293,slow=8.9,SNR=15
SONM PcP **PcP 07 25 53.4 -0.4**
comp=Z,0.7nm,0.9s,baz=278,slow=4.2,SNR=2.2
ULN Ulaanbaatar 59.40 51⇑*eP* **P 07 25 07.8 +0.2**
ULN pmax pmax
comp=Z,3.0nm,1.0s
XAN Xi'an 68.04 64 P **P 07 26 05.0 +0.3**
XAN pP sP 07 26 12.3 -0.8
XAN pmax pmax
comp=Z,12nm,1.2s
XAN Xi'an 68.04 64 P **P 07 26 04.9 +0.3**
XAN pmax pmax
comp=Z,14nm,1.1s
XAN Xi'an 68.04 64 P **P 07 26 04.9 +0.3**
YKA Yellowknife Ar 70.17 339 P **P 07 26 17.0 -0.2**
comp=Z,3.1nm,0.8s,baz=35,slow=5.4,SNR=24
FFC Flin Flon 72.09 329 P **P 07 26 29.9 +0.8**
FFC pmax pmax
comp=Z,3.0nm,0.8s
FFC Flin Flon 72.09 329 P **P 07 26 29.9 +0.8**
FFC IAmb IAmb 07 26 30.0
comp=Z,3.1nm,0.8s
ULM Lac du Bonnet 72.73 323 *eP* **P 07 26 32.3 -0.7**
ULM Lac du Bonnet 72.73 323 P **P 07 26 33.0 0.0**
comp=Z,2.7nm,0.8s,baz=50,slow=8.2,SNR=6.5
ULM Lac du Bonnet 72.73 323 P **P 07 26 33.2 +0.2**
ULM IAmb IAmb 07 26 34.1
comp=Z,4.6nm,0.9s
PRP Porcupine Dome 72.84 354 P **P 07 26 35.8 +2.3**
DAWY Dawson 73.62 351 P **P 07 26 37.9 -0.1**
DAWY IAmb IAmb 07 26 38.8
comp=Z,12nm,1.4s
ILAR Eielson Array 73.69 354 P **P 07 26 38.6 +0.3**
comp=Z,0.6nm,0.8s,baz=5.5,slow=4.5,SNR=5.8
KSRS Korea Array 77.87 51 P **P 07 27 02.5 -0.2**
comp=Z,1.1nm,0.7s,baz=294,slow=5.3,SNR=3.1
BDFB Brasilia 84.26 244 P **P 07 27 38.3 +1.2**
comp=Z,1.6nm,0.7s,baz=71,slow=13,SNR=3.2
BDFB Brasilia 84.26 244 IAmb IAmb 07 27 47.7
comp=Z,8.5nm,1.4s
PDAR Pinedale Array 84.53 325 P **P 07 27 38.0 -0.4**
comp=Z,0.5nm,0.6s,baz=56,slow=6.5,SNR=5.4
TXAR Lajitas Array 92.28 313 P **P 07 28 15.6 +0.1**
comp=Z,0.6nm,0.8s,baz=75,slow=5.3,SNR=6.3
ASAR Alice Springs 123.16 94 PKP **PKPdf 07 34 00.8 -1.1**
comp=Z,1.1nm,0.7s,baz=312,slow=1.6,SNR=15

WEL 20 07:18:06.7, 40.7°S±0.6°×175.8°E±0.7°, h27km, M3.8/94, ML4.1/14, MLv3.8/94, Error ellipse: s-maj=0.0km s-min=0.0km az=98.2, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIWZ	**Tintock**	**0.13**	**166**	P	**Pb**	07 18 12.4	+0.5
TIWZ				S	Sb	07 18 16.5	+1.0
PRWZ	**Pori Road**	**0.14**	**46**	P	**Pb**	07 18 12.3	+0.4
PRWZ				S	Sb	07 18 16.6	+1.2
MRZ	**Mangatainoka R**	**0.20**	**267**	P	**Pb**	07 18 13.1	+0.4
MRZ				S	Sb	07 18 17.7	+1.0
POWZ	**Post Office Ro**	**0.26**	**347**	P	**Pb**	07 18 13.7	+0.3
POWZ				S	Sb	07 18 18.9	+1.0
BFZ	**Birch Farm**	**0.31**	**96**	P	**Pb**	07 18 14.4	+0.4
BFZ				S	Sn	07 18 20.4	-0.8
HOWZ	**Holdsworth Sta**	**0.35**	**225**	P	**Pb**	07 18 15.3	+0.6
CPWZ	**Castlepoint**	**0.38**	**134**	P	**Pn**	07 18 16.2	-0.2
DVHZ	**Dannevirke**	**0.43**	**35**	P	**Pb**	07 18 15.9	0.0
DVHZ				S	Sb	07 18 22.4	+0.4
TMWZ	**Te Maipa**	**0.46**	**176**	P	**Pn**	07 18 17.1	-0.5
ANWZ	**Angora Road**	**0.52**	**69**	P	**Pb**	07 18 17.7	+0.4
ANWZ				S	Sn	07 18 26.1	-0.2
OGWZ	**Otaki Gorge**	**0.54**	**252**	P	**Pn**	07 18 18.3	-0.3
MTW	**Mount Morrison**	**0.57**	**207**	P	**Pb**	07 18 18.6	+0.4
TSZ	**Takapari Road**	**0.60**	**9**	P	**Pb**	07 18 18.7	+0.1
OHWZ	**Ohakea**	**0.60**	**317**	P	**Pn**	07 18 19.6	+0.1
PRHZ	**Porangahau**	**0.71**	**58**	P	**Pb**	07 18 20.7	+0.1
KIW	**Kapiti Island**	**0.74**	**253**	P	**Pn**	07 18 21.6	+0.1
WPHZ	**Waipukurau**	**0.74**	**38**	P	**Pn**	07 18 21.4	0.0
CAW	**Cannon Point**	**0.75**	**232**	P	**Pn**	07 18 21.4	-0.1
TRWZ	**Traveller**	**0.76**	**189**	P	**Pb**	07 18 21.0	-0.3
PNHZ	**Pukenui**	**0.78**	**20**	P	**Pb**	07 18 21.8	0.0
PAWZ	**Paruwai Farm**	**0.80**	**203**	P	**Pb**	07 18 21.5	-0.5
MSWZ	**Moikau Station**	**0.89**	**210**	P	**Pn**	07 18 22.7	-0.8
PXZ	**Pawanui**	**0.99**	**52**	P	**Pn**	07 18 24.3	-0.6
PLWZ	**Palliser**	**1.02**	**206**	P	**Pn**	07 18 24.4	-1.0
WEL	**Wellington**	**1.03**	**232**	P	**Pn**	07 18 25.2	-0.2
BHW	**Baring Head**	**1.06**	**224**	P	**Pn**	07 18 25.2	-0.5
KRHZ	**Kereru**	**1.08**	**22**	P	**Pn**	07 18 25.9	-0.2
WAZ	**Wanganui**	**1.11**	**323**	P	**Pb**	07 18 28.3	+1.0
KAHZ	**Kahuranaki**	**1.16**	**43**	P	**Pn**	07 18 26.8	-0.5
BHHZ	**Black Hill Sta**	**1.17**	**8**	P	**Pn**	07 18 27.6	+0.2
MOVZ	**Moawhango**	**1.24**	**357**	P	**Pn**	07 18 28.9	+0.5
MTVZ	**Mangateitei**	**1.29**	**347**	P	**Pb**	07 18 30.2	-0.3
KWHZ	**Kaweka Forest**	**1.30**	**20**	P	**Pn**	07 18 29.2	-0.1
TCW	**Tory Channel**	**1.31**	**244**	P	**Pn**	07 18 29.1	-0.3
CKHZ	**Cape Kidnapper**	**1.37**	**44**	P	**Pn**	07 18 29.1	-0.9
TRVZ	**Turoa**	**1.37**	**350**	P	**Pb**	07 18 31.1	-0.7
MCHZ	**McNeill Hill**	**1.37**	**29**	P	**Pn**	07 18 30.0	-0.1
WHVZ	**Whangaehu Hut**	**1.38**	**352**	P	**Pb**	07 18 31.5	-0.5
TUVZ	**Tukiti**	**1.39**	**354**	P	**Pb**	07 18 31.5	-0.6
DRZ	**Dome Shelter**	**1.39**	**351**	P	**Pb**	07 18 32.2	0.0
FWVZ	**Far West T-bar**	**1.41**	**351**	P	**Pb**	07 18 31.8	-0.8
PKVZ	**Pokaka**	**1.41**	**344**	P	**Pb**	07 18 31.8	-0.6
DUWZ	**D'Urville Isla**	**1.47**	**263**	P	**Pn**	07 18 31.6	+0.1
NGZ	**Ngauruhoe**	**1.48**	**353**	P	**Pb**	07 18 33.1	-0.6
WTVZ	**West Tongariro**	**1.54**	**353**	P	**Pb**	07 18 33.8	-1.0
KRVZ	**Karewarewa**	**1.56**	**354**	P	**Pb**	07 18 34.1	-0.9
BKZ	**Black Stump Fm**	**1.56**	**19**	P	**Pn**	07 18 32.5	-0.3
TWVZ	**Taurewa**	**1.61**	**349**	P	**Pb**	07 18 34.7	-1.1
LREZ	**Lake Rotokare**	**1.62**	**317**	P	**Pb**	07 18 36.5	+0.5
TUWZ	**Tuamarina**	**1.64**	**241**	P	**Pn**	07 18 32.9	-0.9
ARHZ	**Aropaoanui**	**1.64**	**33**	P	**Pn**	07 18 33.4	-0.4
RITZ	**Rihia Road**	**1.67**	**0**	P	**Pn**	07 18 35.1	+0.9
KATZ	**Kakaramea**	**1.68**	**356**	P	**Pb**	07 18 36.1	-0.9
NMHZ	**Naumai**	**1.72**	**26**	P	**Pn**	07 18 34.7	-0.3
VRZ	**Vera Road**	**1.74**	**331**	P	**Pb**	07 18 36.8	-1.2
HATZ	**Hinemaiaia**	**1.77**	**6**	P	**Pn**	07 18 35.7	+0.2
RATZ	**Rangitukua**	**1.78**	**358**	P	**Pn**	07 18 36.7	+0.9
BSWZ	**Blackbirch Sta**	**1.83**	**234**	P	**Pn**	07 18 35.5	-0.9
PREZ	**Palmer Road**	**1.84**	**315**	P	**Pb**	07 18 39.3	-0.4
MRHZ	**Matea Rd**	**1.87**	**14**	P	**Pn**	07 18 36.7	-0.3
WHHZ	**Waihua**	**1.90**	**35**	P	**Pn**	07 18 36.7	-0.6
DREZ	**Durham Road**	**1.93**	**319**	P	**Pb**	07 18 41.0	-0.3
WATZ	**Wairara**	**1.94**	**357**	P	**Pn**	07 18 38.3	+0.4
NMEZ	**Namu Road**	**1.95**	**309**	P	**Pb**	07 18 41.2	-0.3
KHEZ	**Kahui Hut**	**1.95**	**313**	P	**Pb**	07 18 41.1	-0.5
MTHZ	**Maungataniwha**	**1.95**	**23**	P	**Pn**	07 18 37.4	-0.7
NNZ	**Nelson**	**1.95**	**252**	P	**Pn**	07 18 38.1	0.0
MHEZ	**Mangahewa**	**1.96**	**323**	P	**Pb**	07 18 40.9	-0.8
RAHZ	**Arahi**	**1.98**	**29**	P	**Pn**	07 18 37.6	-0.9
NBEZ	**Newall Road No**	**2.05**	**312**	P	**Pb**	07 18 42.3	-1.0
ALRZ	**Allen Road**	**2.12**	**11**	P	**Pn**	07 18 39.8	-0.7
WPRZ	**Whakapapatarin**	**2.14**	**7**	P	**Pn**	07 18 40.4	-0.3
KNZ	**Kokohu**	**2.15**	**41**	P	**Pn**	07 18 39.3	-1.5
MHGZ	**Mahia Peninsul**	**2.18**	**47**	P	**Pn**	07 18 39.9	-1.3
PRRZ	**Plateau Road**	**2.19**	**11**	P	**Pn**	07 18 40.7	-0.6
RTZ	**Ruatahuna**	**2.21**	**24**	P	**Pn**	07 18 41.1	-0.7
HIZ	**Hauiti**	**2.27**	**340**	P	**Pn**	07 18 43.6	+1.1
MUGZ	**Murupara**	**2.28**	**19**	P	**Pn**	07 18 42.0	-0.7
TLZ	**Tolley Road**	**2.33**	**354**	P	**Pn**	07 18 45.1	+1.8
PRGZ	**Paritu Road**	**2.33**	**43**	P	**Pn**	07 18 41.8	-1.6
RIGZ	**Rimuhau**	**2.44**	**38**	P	**Pn**	07 18 43.3	-1.6
KHZ	**Kahutara**	**2.47**	**224**	P	**Pn**	07 18 43.4	-1.8
THZ	**Tophouse**	**2.48**	**242**	P	**Pn**	07 18 44.3	-1.1
QRZ	**Quartz Range**	**2.52**	**265**	P	**Pn**	07 18 45.8	-0.2
URZ	**Urewera**	**2.58**	**23**	P	**Pn**	07 18 44.9	-1.8
MWZ	**Matawai**	**2.65**	**30**	P	**Pn**	07 18 45.9	-1.9
TKGZ	**Te Karaka**	**2.70**	**36**	P	**Pn**	07 18 46.4	-1.9
CNGZ	**Carnagh Statio**	**2.83**	**41**	P	**Pn**	07 18 49.0	-1.2
TOZ	**Tahuroa Road**	**2.93**	**355**	P	**Pn**	07 18 52.0	+0.5
RUGZ	**Raukumara Rang**	**3.03**	**29**	P	**Pn**	07 18 51.2	-1.9
GVZ	**Greta Valley S**	**3.18**	**221**	P	**Pn**	07 18 53.2	-1.0
PUZ	**Putaiti**	**3.18**	**37**	P	**Pn**	07 18 52.7	-2.3
DSZ	**Dennistoun Nort**	**3.24**	**249**	P	**Pn**	07 18 55.6	-0.3
HAZ	**Te Kaha**	**3.26**	**28**	P	**Pn**	07 18 54.0	-2.0
LTZ	**Lake Taylor**	**3.42**	**230**	P	**Pn**	07 18 56.3	-2.1
WMGZ	**Waiomatatini S**	**3.46**	**36**	P	**Pn**	07 18 56.4	-2.4
MXZ	**Matakaoa Point**	**3.63**	**33**	P	**Pn**	07 18 59.7	-1.5
AWAZ	**Awhitu Peninsu**	**3.70**	**345**	P	**Pn**	07 19 03.8	+1.6
OKCZ	**Okains Bay**	**3.70**	**213**	P	**Pn**	07 18 59.5	-2.7
MQZ	**McQueen's Vall**	**3.87**	**217**	P	**Pn**	07 19 01.3	-3.1
AKCZ	**Akaroa Harbour**	**3.89**	**213**	P	**Pn**	07 19 03.8	-1.0
INZ	**Inchbonnie**	**3.89**	**236**	P	**Pn**	07 19 02.9	-1.9
OXZ	**Oxford**	**3.90**	**225**	P	**Pn**	07 19 03.4	-1.5
RPZ	**Rata Peaks**	**4.70**	**228**	P	**Pn**	07 19 14.2	-1.6
LBZ	**Lake Benmore**	**5.61**	**226**	P	**Pn**	07 19 26.3	-2.0
ODZ	**Otahua Downs**	**5.82**	**219**	P	**Pn**	07 19 28.8	-2.4

*ATH **20** 07:27:26.0, 40.96°N×19.84°E, h19km±5km, ML2.8/2, Error ellipse: s-maj=6.6km s-min=2.2km az=14.0*
*TIR **20** 07:27:29.2, 41.28°N×19.66°E, h28km, Md2.8/5*
*SKO **20** 07:27:30.5, 41.36°N×19.50°E, h15km*
ISC 20 07:27:29.2±1.0, 41.26°N±0.04°×19.56°E±0.03°, h23km±8km, n26, σ1ᵎ52/38, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.25**	**69**	P	**Pb**	**07 27 35.1**	**-0.2**
TIR				S	**Sb**	**07 27 40.4**	**+1.0**
TIR	**Tirane**	**0.25**	**69**	*i* PG	**Pb**	**07 27 35.0**	**-0.2**
TIR				*i* PG	**Sb**	**07 27 39.4**	**0.0**
TIR	**Tirane**	**0.25**	**69**	P	**Pb**	**07 27 35.0**	**-0.2**
TIR				S	**Sb**	**07 27 39.2**	**-0.2**
TIR				AML	AML	07 27 40.0	
	comp=E,8115μm,0.4s						
TIR				AML	AML	07 27 40.8	
	comp=N,5464μm,0.2s						
PHP	**Peshkopia**	**0.79**	**57**	P	**Pb**	**07 27 43.5**	**-0.8**
PHP				S	**Sb**	**07 27 54.1**	**-0.4**
PHP	**Peshkopia**	**0.79**	**57**	*i* PG	**Pn**	**07 27 44.9**	**-0.1**
PHP				*i* PG	**Sn**	**07 27 56.2**	**0.0**
VLO	**Vlora**	**0.79**	**183**	P	**Pn**	**07 27 46.4**	**+1.4**
PUK	**Puka**	**0.82**	**18**	*i* PG	**Pb**	**07 27 43.3**	**-1.5**
PUK				*i* PG	**Sb**	**07 27 54.3**	**-1.3**
OHR	**Ohrid**	**0.95**	**99**	*i* Pg	**Pn**	**07 27 48.5**	**+1.3**
OHR				*i* Sg	**Sn**	**07 28 03.9**	**+3.8**
OHR				*e*Lg	Lg	07 28 05.8	
	comp=N,82nm,0.3s						
OHR				*e*Lg	Lg	07 28 06.9	
	comp=E,106nm,0.3s						
BCI	**Bajram Curri**	**1.17**	**19**	*i* PG	**Pn**	**07 27 50.5**	**+0.2**
BCI				*i* PG	**Sn**	**07 28 06.7**	**+1.2**
NEST	**Nestorio**	**1.41**	**126**	P	**Pn**	**07 27 51.5**	**-2.1**
SCTE	**Santa Cesarea**	**1.45**	**215**	P	**Pn**	**07 27 52.2**	**-1.8**
FNA	**Florina**	**1.46**	**108**	P	Pn	07 27 47.8	-6.4
FNA				AML	AML	07 28 21.5	
	comp=N,539μm,0.5s						
FNA				AML	AML	07 28 22.7	
	comp=E,339μm,0.5s						
SKO	**Skopje**	**1.58**	**63**	*i* Pg	**Pb**	**07 27 58.5**	**+0.8**
SKO				*i* Sg	**Sb**	**07 28 20.4**	**+3.2**
DBRK	**Dubrovnik**	**1.76**	**324**	*e*Pn	**Pn**	**07 27 58.8**	**+0.5**
DBRK				Sn	**Sn**	**07 28 20.5**	**+0.5**
IGT	**Igoumenitsa**	**1.82**	**161**	P	Pn	07 27 54.0	-5.2
NOCI	**Noci**	**1.94**	**257**	*i* PN	**Pb**	**07 28 04.0**	**+0.1**
NOCI	**Noci**	**1.94**	**257**	P	**Pn**	**07 28 01.5**	**+0.7**
STIP	**Stip**	**2.02**	**77**	*i* Pn	**Pb**	**07 28 07.2**	**+1.9**
STON	**Ston**	**2.12**	**320**	*e*Pn	**Pn**	**07 28 03.5**	**+0.2**
STON				Sn	**Sn**	**07 28 27.9**	**-1.0**
GRG	**Griva**	**2.17**	**97**	P	**Pn**	**07 28 01.0**	**-3.0**
VAY	**Valandovo**	**2.27**	**87**	*e*Pn	**Pb**	**07 28 07.6**	**-1.9**
VAY				*e*Lg	Lg	07 28 37.7	
	comp=E,18nm,0.7s						
VAY				*e*Lg	Lg	07 28 37.8	
	comp=N,22nm,0.8s						
KNT	**Kendrikon**	**2.52**	**91**	P	**Pn**	**07 28 06.0**	**-2.8**
KIJV	**Kijevo**	**3.60**	**321**	*i* Pn	**Pn**	**07 28 24.4**	**+0.8**
KIJV				Sn	**Sn**	**07 29 05.0**	**-0.4**
ZIRJ	**Zirje**	**3.76**	**311**	*i* Pn	**Pn**	**07 28 26.5**	**+0.8**
ZIRJ				Sn	**Sn**	**07 29 07.2**	**-2.0**
MORI	**Morici**	**3.86**	**314**	*i* Pn	**Pn**	**07 28 27.9**	**+0.8**
MORI				Sn	**Sn**	**07 29 10.8**	**-0.9**
DUGI	**Dugi Otok**	**4.30**	**311**	*e*Pn	**Pn**	**07 28 34.3**	**+1.2**

NNC 20 07:28:12.6±0.6, 50.02°N×78.72°E, h0km, mb3.8, mpv3.4, 16C-8D, Error ellipse: s-maj=6.0km s-min=2.8km az=66.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.58**	**347**	⇑P	Pg	07 28 23.9	+0.1
KUR07				⇑S	Sg	07 28 32.9	+1.5
KUR06	**Kurchatov Arra**	**0.60**	**348**	⇓P	Pg	07 28 24.4	+0.2
KUR06				⇑S	Sg	07 28 33.4	+1.4
KUR14	**Kurchatov Arra**	**0.61**	**352**	⇓P	Pg	07 28 24.2	0.0
KUR14				⇓S	Sg	07 28 33.1	+1.1
KUR15	**Kurchatov Arra**	**0.61**	**351**	⇑P	Pg	07 28 24.3	-0.1
KUR15				⇓S	Sg	07 28 33.6	+1.2
KURBB	**Kurchatov Arra**	**0.62**	**349**	⇑P	Pg	07 28 24.5	0.0
	36nm,0.3s						
KURBB				⇑S	Sg	07 28 33.7	+1.1
	50nm,0.3s						
KUR16	**Kurchatov Arra**	**0.63**	**347**	⇑P	Pg	07 28 24.7	0.0
KUR16				⇓S	Sg	07 28 34.0	+1.2
KUR17	**Kurchatov Arra**	**0.64**	**346**	⇑P	Pg	07 28 25.0	+0.2
KUR17				⇑S	Sg	07 28 34.6	+1.4
KUR05	**Kurchatov Arra**	**0.64**	**350**	⇑P	Pg	07 28 24.8	-0.1
KUR05				⇑S	Sg	07 28 33.9	+0.8
KUR04	**Kurchatov Arra**	**0.66**	**350**	⇑P	Pg	07 28 25.3	0.0
KUR04				⇓S	Sg	07 28 34.7	+0.9
KURK	**Kurchatov**	**0.70**	**355**	⇑P	Pg	07 28 25.8	-0.3
	17nm,0.4s						
KURK				⇑S	Sg	07 28 36.0	+0.8
	24nm,0.5s						
SEM	**Semipalatinsk**	**1.06**	**68**	P	Pg	07 28 32.7	-0.3
	9.4nm,0.1s						
SEM				S	Sb	07 28 48.0	-0.5
	142nm,0.5s						
MAKZ	**Makanchi**	**3.87**	**145**	⇑Pg	Pg	07 29 25.0	-1.9
	1.1nm,0.4s						
MAKZ				⇓Lg	Lg	07 30 12.1	
	6.4nm,0.5s						
MK31	**Makanchi Array**	**4.01**	**142**	Pn	Pn	07 29 16.8	+1.6
	0.1nm,0.1s,baz=332,slow=11,SNR=30						
MK31				⇓Pg	Pb	07 29 25.7	+1.6
	0.4nm,0.2s,baz=335,slow=12,SNR=9.4						
MK31				⇑Lg	Lg	07 30 18.5	
	5.4nm,0.4s,baz=330,slow=28,SNR=13						
KAPS	**Kapalarasan**	**4.75**	**175**	Pg	Pb	07 29 38.6	+1.8
	2.2nm,0.3s						
KAPS				Lg	Lg	07 30 40.2	
	11nm,0.5s						
ZSN	**Zaisan**	**4.81**	**120**	Pg	Pb	07 29 38.8	+1.1
	4.1nm,0.3s						
ZSN				Lg	Lg	07 30 42.1	
	14nm,0.5s						
ARXS	**Arharly**	**5.84**	**186**	Pg	Pb	07 29 59.4	+4.1
	1.2nm,0.4s						
ARXS				Lg	Lg	07 31 15.8	
	12nm,0.5s						
KUU	**Kurty**	**6.34**	**196**	Pg	Pb	07 30 08.5	+4.7
	0.9nm,0.2s						
KUU				Lg	Lg	07 31 31.2	
	6.9nm,0.4s						
KOTS	**Kotyrbulak**	**6.87**	**190**	Pg	Pb	07 30 17.6	+4.6
	5.2nm,0.3s						
KOTS				Lg	Lg	07 31 48.4	
	19nm,0.5s						
DGS	**Degeres**	**7.07**	**198**	Pg	Pb	07 30 22.0	+5.6
	2.4nm,0.3s						
DGS				Lg	Lg	07 31 54.4	
	11nm,0.6s						
IZV	**Izvestkoviy**	**7.13**	**193**	Pg	Pg	07 30 23.5	-5.7
	0.6nm,0.1s						
IZV				Lg	Lg	07 31 57.2	
	5.9nm,0.9s						

ROM 20 07:29:08.7±0.3, 41.37°N±0.01°×14.470°E±0.010, h16km±2km, Md1.4/4, Error ellipse: s-maj=1.1km s-min=0.7km az=343.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T1011	**San Potito San**	**0.04**	**259**	P	Pg	07 29 11.6	-0.1
T1011				S	Sg	07 29 13.9	+0.2
T1011				END			
SACR	**S. Croce Del S**	**0.18**	**80**	P	Pg	07 29 13.3	+0.1
SACR				S	Sb	07 29 17.1	0.0
SACR				END			
VAGA	**Valle Agricola**	**0.18**	**285**	P	Pg	07 29 13.3	+0.1
VAGA				S	Sb	07 29 17.3	+0.1
VAGA				END			
BSSO	**Busso**	**0.20**	**27**	P	Pg	07 29 13.8	+0.3
BSSO				S	Sg	07 29 17.1	+0.4
BSSO				END			

*IDC **20** 07:39:10.3±1.2, 41.31°N×19.37°E, h0km, mb4.0/8, mb1 4.1/13, mb1mx3.8/44, mbtmp4.0/13, ML3.5/5, MS2.5/1, Ms1 2.5/1, ms1mx2.1/56, Error ellipse: s-maj=23.2km s-min=15.9km az=27.0*
*MOS **20** 07:39:10.6±0.8, 41.33°N×19.32°E, h11km

OHR	**Ohrid**	**0.98**	**106**	*i* Pg	**Pn**	**07 39 32.0**	**-0.2**
OHR				*i* Sg	**Sn**	**07 39 48.8**	**+3.0**
OHR				*e*Lg	Lg	07 39 49.4	
	comp=N,2µm,0.6s						
OHR				*e*Lg	Lg	07 39 51.1	
	comp=E,2µm,0.5s						
BUM	**Brajici-Budva**	**1.03**	**332**	*e*Pg	**Pn**	**07 39 33.1**	**+0.2**
BUM				*e*Sg	**Sn**	**07 39 49.6**	**+2.7**
BCI	**Bajram Curri**	**1.05**	**22**	*i* PG	**Pg**	**07 39 33.3**	**-0.4**
BCI				*i* PG	**Sn**	**07 39 48.3**	**+0.9**
PDG	**Podgorica**	**1.06**	**348**	*e*Pg	**Pg**	**07 39 34.4**	**+0.5**
PDG				*e*Sg	**Sg**	**07 39 49.8**	**+1.9**
PDG	**Podgorica**	**1.06**	**348**	*e*Pn	**Pg**	**07 39 34.3**	**+0.4**
PDG	**Podgorica**	**1.06**	**348**		**Pg**	**07 39 34.9**	**+1.0**
PDG				Sg	**Sg**	**07 39 51.1**	**+3.3**
TTG	**Podgorica**	**1.06**	**348**	*e*Pg	**Pg**	**07 39 33.7**	**-0.2**
TTG				*e*Sg	**Sg**	**07 39 51.6**	**+3.7**
TPE	**Tepelena**	**1.15**	**162**	P	**Pg**	**07 39 37.8**	**+2.3**
TPE				S	**Sg**	**07 39 55.0**	**+4.5**
TPE	**Tepelena**	**1.15**	**162**	*i* PG	**Pb**	**07 39 35.1**	**+0.6**
TPE				*i* PG	**Sn**	**07 39 45.5**	**-4.1**
PVY	**Plav**	**1.24**	**14**	*e*Pg	**Pb**	**07 39 36.6**	**+0.3**
PVY				*e*Sg	**Sg**	**07 39 58.0**	**+4.3**
CEME	**Cevo**	**1.25**	**338**	*e*Pg	**Pg**	**07 39 37.4**	**0.0**
CEME				*e*Sg	**Sg**	**07 39 56.7**	**+2.9**
HCY	**Herceg Novi**	**1.32**	**324**	*e*Pn	**Pg**	**07 39 38.2**	**-0.5**
HCY	**Herceg Novi**	**1.32**	**324**	*e*Pg	**Pb**	**07 39 37.7**	**+0.2**
HCY				*e*Sg	**Sg**	**07 39 58.3**	**+2.4**
NKME	**Niksic**	**1.45**	**342**	⇑*i* Pg	**Pg**	**07 39 40.9**	**-0.3**
NKME				*e*Sg	**Sg**	**07 40 02.1**	**+2.0**
NKY	**Niksic**	**1.48**	**344**	*e*Pg	**Pb**	**07 39 41.0**	**+0.7**
NKY				*e*Sg	**Sg**	**07 40 03.1**	**+1.9**
NEST	**Nestorio**	**1.50**	**130**	P	**Pg**	**07 39 42.7**	**+0.5**
NEST	**Nestorio**	**1.50**	**130**	P	**Pb**	**07 39 40.6**	**0.0**
NEST				AML	AML	07 40 06.6	
	comp=N,1537µm,0.5s						
NEST				AML	AML	07 40 09.1	
	comp=E,2446µm,0.6s						
IVA	**Berane**	**1.50**	**10**	*e*Pg	**Pg**	**07 39 41.5**	**-0.8**
IVA	**Berane**	**1.50**	**10**	*e*Pg	**Pg**	**07 39 42.3**	**0.0**
IVA				*e*Sg	**Sg**	**07 40 04.3**	**+2.4**
FNA	**Florina**	**1.51**	**113**	P	**Pg**	**07 39 42.4**	**0.0**
FNA				S	**Sg**	**07 40 03.9**	**+1.8**
	comp=E,2µm,0.3s						
FNA	**Florina**	**1.51**	**113**	*i* PN	**Pg**	**07 39 41.9**	**-0.5**
FNA				*i* PN	**Sg**	**07 40 02.9**	**+0.8**
FNA	**Florina**	**1.51**	**113**	P	**Pg**	**07 39 41.9**	**-0.5**
FNA				S	**Sg**	**07 40 02.9**	**+0.8**
FNA				AML	AML	07 40 05.5	
	comp=N,7342µm,0.5s						
FNA				AML	AML	07 40 08.4	
	comp=E,5270µm,0.6s						
FNA	**Florina**	**1.51**	**113**		**Pg**	**07 39 42.0**	**-0.5**
FNA				Sn	**Sb**	**07 40 00.5**	**+0.9**
SKO	**Skopje**	**1.53**	**67**	*e*Pn	**Pg**	**07 39 42.8**	**0.0**
SKO				*e*Sn	**Sg**	**07 40 03.8**	**+1.0**
SKO	**Skopje**	**1.53**	**67**	*i* Pg	**Pg**	**07 39 42.8**	**0.0**
SKO				*i* Sg	**Sg**	**07 40 04.7**	**+1.9**
SRN	**Sarande**	**1.55**	**167**	P	**Pg**	**07 39 42.8**	**-0.3**
SRN	**Sarande**	**1.55**	**167**	*i* PN	**Pb**	**07 39 42.4**	**+1.1**
SRN				*i* PN	**Sb**	**07 40 03.7**	**+3.2**
SCTE	**Santa Cesarea**	**1.55**	**212**	*i* PN	**Pb**	**07 39 42.1**	**+0.7**
SCTE				*i* PN	**Sb**	**07 40 04.0**	**+3.3**
SCTE	**Santa Cesarea**	**1.55**	**212**	P	**Pn**	**07 39 38.8**	**-1.1**
SCTE				AML	AML	07 40 08.7	
	comp=N,1428µm,0.5s						
SCTE				AML	AML	07 40 09.2	
	comp=E,1468µm,0.6s						
SCTE	**Santa Cesarea**	**1.55**	**212**		**Pb**	**07 39 41.0**	**-0.4**
SCTE				Sn	**Sn**	**07 39 58.0**	**-1.5**
TREB	**Trebinje**	**1.60**	**327**	*e*Pn	**Pb**	**07 39 41.9**	**-0.3**
TREB				*e*Sn	**Sg**	**07 40 03.6**	**-1.3**
TREB	**Trebinje**	**1.60**	**327**	*e*Pn	**Pb**	**07 39 41.9**	**-0.3**
DBRK	**Dubrovnik**	**1.65**	**321**	*i* Pn	**Pb**	**07 39 42.6**	**-0.5**
DBRK				Sn	**Sb**	**07 40 05.0**	**+1.4**
KASA	**Kassiopi**	**1.67**	**170**	P	**Pn**	**07 39 42.3**	**+0.8**
KASA				AML	AML	07 40 10.7	
	comp=N,2374µm,0.3s						
KASA				AML	AML	07 40 12.0	
	comp=E,2795µm,0.5s						
BRY	**Bratogost**	**1.69**	**334**	*e*Pn	**Pb**	**07 39 43.9**	**+0.1**
CGL1	**Ceglie Messapi**	**1.73**	**246**	*e*Pn	**Pb**	**07 39 42.4**	**+1.0**
UPM	**Unac-Piva**	**1.87**	**346**	*e*Pn	**Pb**	**07 39 42.3**	**+0.2**
SJES	**Sjenica**	**1.90**	**9**	*e*Pn	**Pg**	**07 39 48.7**	**-1.1**
SJES				*e*Sn	**Sg**	**07 40 12.8**	**-1.7**
TAR1	**Taranto**	**1.92**	**244**	*e*Pn	**Pb**	**07 39 48.7**	**+1.1**
TAR1				Sn	**Sg**	**07 40 16.4**	**+1.4**
PLE	**Pljevlja**	**1.94**	**357**	*e*Pn	**Pb**	**07 39 47.6**	**-0.6**
PLE				*e*Sn	**Sg**	**07 40 14.2**	**-1.7**
IGT	**Igoumenitsa**	**1.95**	**162**	P	**Pb**	**07 39 47.8**	**-0.4**
IGT				S	**Sg**	**07 40 15.5**	**-0.5**
	comp=E,732nm,0.6s						
IGT	**Igoumenitsa**	**1.95**	**162**	P	**Pn**	**07 39 46.9**	**+1.4**
IGT				AML	AML	07 40 20.6	
	comp=N,1540µm,0.6s						
IGT				AML	AML	07 40 22.4	
	comp=E,1934µm,0.6s						
MASS	**Massafra**	**1.97**	**248**	*e*Pn	**Pg**	**07 39 50.8**	**-0.3**
NOCI	**Noci**	**1.97**	**253**	*i* PN	**Pb**	**07 39 48.7**	**+0.2**
NOCI	**Noci**	**1.97**	**253**	P	**Pn**	**07 39 45.6**	**-0.1**
NOCI				AML	AML	07 40 27.8	
	comp=N,2654µm,0.4s						
NOCI				AML	AML	07 40 28.9	
	comp=E,2459µm,0.4s						
KPRO	**Kipourio**	**1.99**	**135**	P	**Pb**	**07 39 49.3**	**+0.3**
KPRO	**Kipourio**	**1.99**	**135**	P	**Pb**	**07 39 48.9**	**-0.1**
KPRO				AML	AML	07 40 22.9	
	comp=E,1339µm,0.5s						
KPRO				AML	AML	07 40 28.1	
	comp=N,1222µm,0.7s						
JAN	**Janina**	**2.00**	**150**	P	**Pb**	**07 39 49.1**	**+0.1**
JAN				S	**Sg**	**07 40 16.7**	**-0.9**
	comp=N,660nm,0.6s						
JAN	**Janina**	**2.00**	**150**	P	**Pb**	**07 39 48.0**	**-1.0**
JAN				AML	AML	07 40 25.3	
	comp=E,1447µm,0.4s						
JAN				AML	AML	07 40 31.1	
	comp=N,1539µm,0.5s						
KZN	**Kozani**	**2.00**	**122**	P	**Pb**	**07 39 49.7**	**+0.5**
KZN				S	**Sg**	**07 40 16.8**	**-1.0**
	comp=N,802nm,0.5s						
KZN	**Kozani**	**2.00**	**122**	P	**Pb**	**07 39 48.1**	**-1.1**
KZN				AML	AML	07 40 21.0	
	comp=E,2160µm,0.5s						
KZN				AML	AML	07 40 27.1	
	comp=N,1088µm,0.6s						
STIP	**Stip**	**2.01**	**80**	*e*Pn	**Pg**	**07 39 51.2**	**-0.6**
STIP				*e*Sn	**Sg**	**07 40 20.1**	**+2.2**
STON	**Ston**	**2.02**	**318**	*i* Pn	**Pn**	**07 39 47.1**	**+0.7**
STON				Sn	**Sn**	**07 40 12.1**	**+1.0**
STON	**Ston**	**2.02**	**318**	*e*Pn	**Pn**	**07 39 47.9**	**+1.5**
STON				*e*Sn	**Sb**	**07 40 14.8**	**+0.6**
STON	**Ston**	**2.02**	**318**	*e*Pn	**Pn**	**07 39 46.7**	**+0.3**
BAI	**Bari**	**2.03**	**263**	*e*Pn	**Pn**	**07 39 46.8**	**+0.3**
BAI				Sn	**Sn**	**07 40 10.7**	**-0.7**
SELS	**Selova**	**2.17**	**32**	*e*Pn	**Pb**	**07 39 50.5**	**-1.5**
GRG	**Griva**	**2.20**	**100**	P	**Pb**	**07 39 51.6**	**-0.9**
GRG				S	**Sb**	**07 40 19.5**	**+0.1**
	comp=N,442nm,0.6s						
GRG	**Griva**	**2.20**	**100**	P	**Pb**	**07 39 51.4**	**-1.1**
GRG				AML	AML	07 40 27.0	
	comp=E,1193µm,0.7s						
GRG				AML	AML	07 40 29.0	
	comp=N,1078µm,0.8s						
BARS	**Barje**	**2.21**	**49**	*e*Pn	**Pb**	**07 39 52.5**	**-0.2**
BARS	**Barje**	**2.21**	**49**	*e*Pn	Pg	07 40 04.4	+8.7
BARS				*e*Sn	**Sb**	**07 40 19.6**	**-0.1**
IVAS	**Ivanjica**	**2.23**	**11**	*e*Pn	**Pb**	**07 39 51.7**	**-1.4**
RUDO	**Rudo**	**2.23**	**357**	*e*Pn	**Pb**	**07 39 51.7**	**-1.4**
SG1	**Sgolgore (BA)**	**2.23**	**257**	*e*Pn	**Pn**	**07 39 49.5**	**+0.1**
SG1				Sn	**Sg**	**07 40 23.3**	**-1.8**
MATE	**Matera**	**2.27**	**252**	⇓P	**Pn**	**07 39 50.0**	**+0.2**
MATE	**Matera**	**2.27**	**252**	⇑S	**Sn**	**07 40 16.7**	**-0.6**
MATE	**Matera**	**2.27**	**252**		**Pn**	**07 39 50.0**	**+0.2**
MATE					**Sn**	**07 40 16.7**	**-0.6**
VAY	**Valandovo**	**2.28**	**91**	*e*Pn	**Pb**	**07 39 52.3**	**-1.5**
VAY				*e*Sn	**Sb**	**07 40 21.5**	**-0.1**
VAY	**Valandovo**	**2.28**	**91**	*i* Pn	**Pb**	**07 39 52.0**	**-1.8**
VAY				*e*Sn	**Sb**	**07 40 21.7**	**0.0**
VAY				*e*Lg	Lg	07 40 22.7	
	comp=E,229nm,0.6s						
VAY				*e*Lg	Lg	07 40 27.6	
	comp=N,264nm,0.6s						
BBLS	**Lazići**	**2.48**	**358**	*e*Pn	**Pb**	**07 39 56.2**	**-1.1**
BBLS	**Lazići**	**2.48**	**358**	*e*Pn	**Pb**	**07 39 55.5**	**-1.8**
KNT	**Kendrikon**	**2.54**	**94**	P	**Pb**	**07 39 56.1**	**-2.2**
KNT				S	**Sb**	**07 40 28.8**	**-0.3**
KNT	**Kendrikon**	**2.54**	**94**	P	**Pb**	**07 39 56.1**	**-2.2**
KNT				AML	AML	07 40 40.6	
	comp=N,378µm,0.7s						
KNT				AML	AML	07 40 44.2	
	comp=E,354µm,0.6s						
LIT	**Litokhoron**	**2.58**	**119**	P	**Pb**	**07 39 56.7**	**-2.3**
LIT	**Litokhoron**	**2.58**	**119**	P	**Pn**	**07 39 56.3**	**+2.2**
LIT	**Litokhoron**	**2.58**	**119**	P	**Pn**	**07 39 56.5**	**+2.4**
LIT	**Litokhoron**	**2.58**	**119**		**Pn**	**07 39 56.3**	**+2.2**
THL	**Klokotos Trika**	**2.62**	**133**	P	**Pn**	**07 39 57.1**	**+2.5**
THL	**Klokotos Trika**	**2.62**	**133**	P	**Pn**	**07 39 56.6**	**+1.9**
GRUS	**Gruza**	**2.64**	**19**	*e*Pn	**Pb**	**07 39 58.2**	**-1.9**
GRUS				*e*Sn	**Sb**	**07 40 30.5**	**-1.7**
MAKA	**Makarska**	**2.67**	**316**	*i* Pn	**Pn**	**07 39 56.5**	**+1.2**
MAKA				Sn	**Sn**	**07 40 28.2**	**+1.2**
THE	**Thessaloniki**	**2.70**	**105**	P	**Pn**	**07 39 57.8**	**+2.1**
THE	**Thessaloniki**	**2.70**	**105**	P	**Pn**	**07 39 57.6**	**+1.9**
THE				AML	AML	07 40 35.4	
	comp=E,210µm,0.4s						
THE				AML	AML	07 40 35.4	
	comp=N,464µm,0.5s						
TSLK	**Tsoukalades, L**	**2.70**	**161**	P	**Pn**	**07 39 57.3**	**+1.6**
TSLK	**Tsoukalades, L**	**2.70**	**161**	P	**Pn**	**07 39 57.0**	**+1.3**
DIVS	**Divibare**	**2.73**	**7**	*e*Pn	**Pn**	**07 39 58.7**	**+2.5**
DIVS	**Divibare**	**2.73**	**7**	*e*Pn	**Pn**	**07 39 58.3**	**+2.1**
HAPS	**Han Pijesak,BI**	**2.73**	**351**	*e*Pn	**Pn**	**07 39 58.2**	**+1.9**
HAPS	**Han Pijesak,BI**	**2.73**	**351**	*e*Pn	**Pn**	**07 39 58.2**	**+1.9**
LKD2	**Lefkada island**	**2.73**	**161**	P	**Pn**	**07 39 57.4**	**+1.2**
LKD2	**Lefkada island**	**2.73**	**161**	P	**Pn**	**07 39 57.2**	**+1.0**
BOVS	**Bovan**	**2.75**	**35**	*e*Pn	**Pb**	**07 39 59.5**	**-2.5**
BOVS				*e*Sn	**Sb**	**07 40 32.6**	**-2.8**
ACER	**Acerenza**	**2.79**	**259**		**Pn**	**07 39 57.8**	**+0.8**
ACER				Sn	**Sn**	**07 40 27.1**	**-3.1**
HORT	**Hortiatis**	**2.80**	**105**	P	**Pn**	**07 39 59.6**	**+2.3**
HORT	**Hortiatis**	**2.80**	**105**	P	**Pn**	**07 39 59.2**	**+1.9**
SGRT	**San Giovanni R**	**2.88**	**279**		**Pn**	**07 39 58.4**	**+0.2**
SGRT				Sn	**Sn**	**07 40 31.0**	**-1.4**
EVGI	**Lefkada island**	**2.89**	**162**	P	**Pn**	**07 39 59.8**	**+1.4**
EVGI	**Lefkada island**	**2.89**	**162**	P	**Pn**	**07 39 59.0**	**+0.6**
TRUS	**Trudelj**	**2.90**	**12**	*e*Pn	**Pn**	**07 40 01.3**	**+2.7**
HVAR	**Hvar**	**2.91**	**309**	*e*Pn	**Pn**	**07 39 59.2**	**+0.6**
SOH	**Sokhos**	**2.93**	**100**	P	**Pn**	**07 40 01.9**	**+2.9**
SOH				S	**Sb**	**07 40 39.4**	**-1.1**
	comp=N,160nm,0.6s						
SOH	**Sokhos**	**2.93**	**100**	P	**Pn**	**07 40 01.6**	**+2.6**
ZAPS	**Zavoj**	**2.96**	**50**	*e*Pn	**Pb**	**07 40 02.8**	**-2.8**
VTS	**Vitosha**	**3.01**	**65**	*e*Pn	**Pn**	**07 40 03.0**	**+2.8**
VTS				*e*Sn	**Sn**	**07 40 37.4**	**+1.5**
VTS	**Vitosha**	**3.01**	**65**	P	**Pn**	**07 40 02.9**	**+2.8**
VTS						07 40 38.5	
VTS	**Vitosha**	**3.01**	**65**	⇑P	**Pn**	**07 40 03.0**	**+2.8**
VTS	**Vitosha**	**3.01**	**65**	⇑S	**Sb**	**07 40 40.0**	**-2.9**
VTS	**Vitosha**	**3.01**	**65**		**Pn**	**07 40 02.9**	**+2.8**
VTS					**Sn**	**07 40 38.5**	**+2.6**
EVR	**Evrytania**	**3.02**	**144**	P	**Pn**	**07 40 03.4**	**+3.2**
EVR	**Evrytania**	**3.02**	**144**	P	**Pn**	**07 40 02.7**	**+2.5**
FSK	**Fiskardo**	**3.03**	**165**	P	**Pn**	**07 40 01.3**	**+1.0**
FSK	**Fiskardo**	**3.03**	**165**	P	**Pn**	**07 40 00.5**	**+0.3**
PDO	**Prodromos**	**3.06**	**155**	P	**Pn**	**07 40 02.4**	**+1.7**
PDO	**Prodromos**	**3.06**	**155**	P	**Pn**	**07 40 02.0**	**+1.3**
SRS	**Serrai**	**3.06**	**94**	P	**Pn**	**07 40 03.2**	**+2.4**
SRS	**Serrai**	**3.06**	**94**	P	**Pn**	**07 40 03.0**	**+2.3**
TIP	**Timpagrande**	**3.07**	**225**	P	**Pn**	**07 40 01.0**	**+0.1**
TIP	**Timpagrande**	**3.07**	**225**		**Pn**	**07 40 00.9**	**+0.1**
TIP				Sn	**Sn**	**07 40 34.3**	**-2.9**
MAKR	**Makrakomi, Fth**	**3.09**	**139**	P	**Pn**	**07 40 03.9**	**+2.7**
MAKR				S	**Sb**	**07 40 43.8**	**-1.3**
MAKR	**Makrakomi, Fth**	**3.09**	**139**	P	**Pn**	**07 40 03.8**	**+2.6**
PLG	**Polygyros**	**3.13**	**108**	P	**Pn**	**07 40 04.1**	**+2.5**
PLG	**Polygyros**	**3.13**	**108**	P	**Pn**	**07 40 03.9**	**+2.2**
PLG				AML	AML	07 40 45.7	
	comp=E,330µm,0.4s						
PLG				AML	AML	07 40 45.8	
	comp=N,297µm,0.5s						
ZAGS	**Zajecar**	**3.13**	**38**	*e*Pn	**Pn**	**07 40 04.1**	**+2.4**
CUC	**Castrocucco**	**3.16**	**245**	P	**Pn**	**07 40 02.2**	**+0.1**
PVO	**Paravola**	**3.16**	**151**	P	**Pn**	**07 40 04.3**	**+2.3**
TEKS	**Tekeris**	**3.16**	**360**	*e*Pn	**Pn**	**07 40 04.0**	**+1.9**
AGG	**Agios Georgios**	**3.18**	**137**	P	**Pn**	**07 40 04.9**	**+2.5**
AGG				S	**Sb**	**07 40 46.3**	**-1.4**
AGG	**Agios Georgios**	**3.18**	**137**	P	**Pn**	**07 40 04.6**	**+2.2**
AGG						07 40 42.7	
AGG	**Agios Georgios**	**3.18**	**137**	P	**Pn**	**07 40 04.7**	**+2.3**
AGG	**Agios Georgios**	**3.18**	**137**		**Pn**	**07 40 04.6**	**+2.2**
AGG				Sn	**Sn**	**07 40 42.7**	**+2.8**
VLS	**Valsamata**	**3.31**	**166**	P	**Pn**	**07 40 04.0**	**-0.1**
ANX	**Ano Chora**	**3.33**	**146**	P	**Pn**	**07 40 07.6**	**+3.0**
ANX	**Ano Chora**	**3.33**	**146**	P	**Pn**	**07 40 07.0**	**+2.5**
KUBS	**Kucevo**	**3.40**	**27**	*e*Pn	**Pn**	**07 40 06.7**	**+1.3**
XOR	**Xorichti**	**3.44**	**125**	P	**Pn**	**07 40 07.8**	**+1.8**
XOR	**Xorichti**	**3.44**	**125**	P	**Pn**	**07 40 07.6**	**+1.6**
EFP	**Efpalio**	**3.47**	**148**	P	**Pn**	**07 40 09.0**	**+2.7**
EFP	**Efpalio**	**3.47**	**148**	P	**Pn**	**07 40 08.7**	**+2.4**
KIJV	**Kijevo**	**3.49**	**320**	*e*Pn	**Pn**	**07 40 08.2**	**+1.5**
KIJV				Sn	**Sn**	**07 40 49.2**	**+1.7**
NEO	**Neokhori**	**3.50**	**125**	P	**Pn**	**07 40 09.0**	**+2.3**
NEO				S	**Sb**	**07 40 54.1**	**-2.6**
	comp=N,115nm,0.5s						
NEO	**Neokhori**	**3.50**	**125**	P	**Pn**	**07 40 08.4**	**+1.7**
NEO				AML	AML	07 40 56.1	
	comp=N,397µm,0.6s						
NEO				AML	AML	07 40 56.9	
	comp=E,368µm,0.7s						
MGRS	**Mrkonjic Grad**	**3.52**	**330**	*e*Pn	**Pn**	**07 40 09.6**	**+2.5**
SERG	**Sergoula**	**3.54**	**146**	P	**Pn**	**07 40 11.3**	**+3.9**
SERG	**Sergoula**	**3.54**	**146**	P	**Pn**	**07 40 09.5**	**+2.2**
AXAR	**Agios Charalam**	**3.54**	**137**	P	**Pn**	**07 40 08.9**	**+1.5**
TRIZ	**Trizonia**	**3.59**	**146**	P	**Pn**	**07 40 10.9**	**+3.0**
KALE	**Kalithea**	**3.60**	**145**	P	**Pn**	**07 40 11.9**	**+3.7**
KALE	**Kalithea**	**3.60**	**145**	P	**Pn**	**07 40 09.5**	**+1.3**
LAKA	**Lakka**	**3.66**	**148**	P	**Pn**	**07 40 11.7**	**+2.7**
LAKA	**Lakka**	**3.66**	**148**	P	**Pn**	**07 40 11.0**	**+2.0**
ZIRJ	**Zirje**	**3.67**	**309**	*i* Pn	**Pn**	**07 40 09.8**	**+0.8**
ZIRJ				Sn	**Sn**	**07 40 52.8**	**+1.1**
SKIA	**Skiathos**	**3.73**	**125**	P	**Pn**	**07 40 11.3**	**+1.3**
MDVR	**Moldovita**	**3.75**	**24**	⇑P	**Pn**	**07 40 12.4**	**+2.3**
MDVR	**Moldovita**	**3.75**	**24**		**Pn**	**07 40 12.4**	**+2.3**
MORI	**Morici**	**3.76**	**312**	*i* Pn	**Pn**	**07 40 11.9**	**+1.6**
KAVA	**Kavala**	**3.77**	**94**	P	**Pn**	**07 40 12.9**	**+2.5**
PAOL	**Paolisi**	**3.77**	**266**		**Pn**	**07 40 10.9**	**+0.4**
FRGS	**Fruska Gora**	**3.77**	**3**	*e*Pn	**Pn**	**07 40 11.4**	**+0.9**
FRGS	**Fruska Gora**	**3.77**	**3**	*e*Pn	**Pn**	**07 40 11.3**	**+0.8**
BLY	**Banja Luka**	**3.78**	**334**	*e*Pn	**Pn**	**07 40 11.5**	**+0.9**
BLY	**Banja Luka**	**3.78**	**334**	*e*Pn	**Pn**	**07 40 12.5**	**+1.9**
BLY	**Banja Luka**	**3.78**	**334**		**Pn**	**07 40 11.6**	**+1.1**
LKR	**Lokris**	**3.81**	**135**	P	**Pn**	**07 40 14.6**	**+3.6**
LKR	**Lokris**	**3.81**	**135**	P	**Pn**	**07 40 12.9**	**+1.9**
PUNG	**Punghina**	**3.81**	**40**	⇑P	**Pn**	**07 40 13.8**	**+2.7**
PUNG	**Punghina**	**3.81**	**40**		**Pn**	**07 40 13.8**	**+2.7**
DRO	**Drossia**	**3.82**	**153**	P	**Pn**	**07 40 12.5**	**+1.4**
KLV	**Kalavryta, Ach**	**3.90**	**148**	P	**Pn**	**07 40 15.4**	**+3.1**
KLV	**Kalavryta, Ach**	**3.90**	**148**	P	**Pn**	**07 40 14.7**	**+2.4**
PROD	**Prodromos**	**4.05**	**139**	P	**Pn**	**07 40 16.0**	**+1.6**
HERR	**Herculane**	**4.07**	**30**	⇑P	**Pn**	**07 40 17.1**	**+2.5**
HERR	**Herculane**	**4.07**	**30**		**Pn**	**07 40 17.1**	**+2.5**
MRKA	**Markates**	**4.10**	**129**	P	**Pn**	**07 40 17.3**	**+2.3**
UDBI	**Udbina**	**4.19**	**320**	*e*Pn	**Pn**	**07 40 18.6**	**+2.3**
CEL	**Celeste**	**4.20**	**223**	Pn	**Pn**	**07 40 15.9**	**-0.5**
DUGI	**Dugi Otok**	**4.21**	**310**	*i* Pn	**Pn**	**07 40 17.9**	**+1.5**
SRE	**Strehaia**	**4.23**	**38**	P	**Pn**	**07 40 20.1**	**+3.3**
SRE	**Strehaia**	**4.23**	**38**	⇑P	**Pn**	**07 40 20.1**	**+3.3**
SRE	**Strehaia**	**4.23**	**38**		**Pn**	**07 40 20.1**	**+3.3**
PLVB	**Pleven**	**4.26**	**60**	⇑P	**Pn**	**07 40 21.0**	**+3.9**
PLVB	**Pleven**	**4.26**	**60**		**Pn**	**07 40 21.0**	**+3.9**
INTR	**Introdacqua**	**4.27**	**280**		**Pn**	**07 40 18.6**	**+1.3**
INTR				Sn	**Sn**	**07 41 04.7**	**-2.1**
VILL	**Villia**	**4.33**	**137**	P	**Pn**	**07 40 21.1**	**+2.8**
BZS	**Buzias**	**4.49**	**19**	*e*Pn	**Pn**	**07 40 22.5**	**+2.2**
BZS				*e*Sn	**Sn**	**07 41 13.1**	**+1.1**
BZS	**Buzias**	**4.49**	**19**	P	**Pn**	**07 40 22.2**	**+1.9**
BZS	**Buzias**	**4.49**	**19**	⇑P	**Pn**	**07 40 22.2**	**+1.9**
BZS	**Buzias**	**4.49**	**19**		**Pn**	**07 40 22.2**	**+1.9**
RDO	**Rodhopi**	**4.52**	**91**	P	**Pn**	**07 40 23.1**	**+2.3**
ITM	**Ithomi**	**4.59**	**156**	Pn	**Pn**	**07 40 23.1**	**+1.4**
GZR	**Gura Zlata**	**4.64**	**29**	P	**Pn**	**07 40 25.9**	**+3.4**
GZR	**Gura Zlata**	**4.64**	**29**	⇑P	**Pn**	**07 40 25.9**	**+3.4**
NVLJ	**Novalja**	**4.67**	**314**	*i* Pn	**Pn**	**07 40 24.0**	**+1.2**
NVLJ				Sn	**Sn**	**07 41 16.4**	**-0.1**
MOSL	**Moslavina**	**4.69**	**335**	*e*Pn	**Pn**	**07 40 24.2**	**+1.1**
AQU	**L'Aquila**	**4.69**	**284**	P	**Pn**	**07 40 21.8**	**-1.3**
AQU						07 41 15.4	
AQU	**L'Aquila**	**4.69**	**284**		**Pn**	**07 40 21.8**	**-1.3**
AQU				Sn	**Sn**	**07 41 15.3**	**-1.7**
MORH	**Mrgy, Hungar**	**4.87**	**353**	*e*Pn	**Pn**	**07 40 27.3**	**+1.8**
ALN	**Alexandroupoli**	**4.93**	**94**	P	**Pn**	**07 40 28.9**	**+2.5**
ALN	**Alexandroupoli**	**4.93**	**94**	Pn	**Pn**	**07 40 28.9**	**+2.5**
ELND	**Elena**	**4.95**	**70**	⇓P	**Pn**	**07 40 29.8**	**+3.1**
ELND	**Elena**	**4.95**	**70**		**Pn**	**07 40 29.8**	**+3.1**
NRCA	**Norcia**	**5.00**	**289**		**Pn**	**07 40 28.6**	**+1.2**
NRCA					**Sn**	**07 41 23.7**	**-1.0**
HUMR	**Humele**	**5.08**	**50**	⇓P	**Pn**	**07 40 32.7**	**+4.3**
HUMR	**Humele**	**5.08**	**50**		**Pn**	**07 40 32.7**	**+4.3**
OZLJ	**Ozalj**	**5.16**	**326**	*e*Pn	**Pn**	**07 40 30.9**	**+1.4**
BOJS	**Bojanci**	**5.17**	**324**	*i* Pn	**Pn**	**07 40 31.2**	**+1.6**
BOJS				*i* Sn	**Sn**	**07 41 28.1**	**-0.6**
PTJ	**Puntijarka**	**5.21**	**331**	*e*Pn	**Pn**	**07 40 31.3**	**+1.0**
KALN	**Kalnik**	**5.24**	**336**	*i* Pn	**Pn**	**07 40 31.5**	**+0.8**
CRES	**Cresnjev**	**5.34**	**328**	*e*Pn	**Pn**	**07 40 33.1**	**+1.1**
RIY	**Rijeka**	**5.39**	**319**	*e*Pn	**Pn**	**07 40 33.4**	**+0.7**
BRJN	**Brijuni**	**5.51**	**312**	*e*Pn	**Pn**	**07 40 35.2**	**+1.0**
MURB	**Monte Urbino**	**5.53**	**292**		**Pn**	**07 40 36.5**	**+1.8**
MURB				Sn	**Sn**	**07 41 36.7**	**-1.1**
VOIR		**5.70**	**43**	P	**Pn**	**07 40 40.6**	**+3.6**
VOIR		**5.70**	**43**	⇑P	**Pn**	**07 40 40.6**	**+3.6**
VOIR		**5.70**	**43**		**Pn**	**07 40 40.6**	**+3.6**
CEY	**Cerknica**	**5.72**	**321**	*e*Pn	**Pn**	**07 40 38.5**	**+1.2**
LJU	**Ljubljana**	**5.90**	**324**	*e*Pn	**Pn**	**07 40 41.2**	**+1.4**
MLR	**Muntele Rosu**	**6.21**	**47**	Pn	**Pn**	**07 40 47.5**	**+3.5**
	comp=E,1.8nm,0.3s,baz=146,slow=8.9,SNR=20						
MLR				Sn	**Sn**	**07 41 55.8**	**+1.3**
	com

comp=E,1.9nm,0.3s
HINF Hinteralfeld 11.09 310 *e*Pn Pn 07 41 51.6 +0.7
HINF *e*Sn **Sn 07 43 46.9 -7.5**
comp=E,4.0nm,0.3s
ECH Echery 11.13 312 P **Pn 07 41 52.4 +1.0**
ECH Echery 11.13 312 Pn **Pn 07 41 52.4 +1.0**
CDF Champ du Feu 11.17 313 *e*Pn Pn 07 41 52.6 +0.5
CDF *e*Sn **Sn 07 43 48.0 -8.5**
comp=E,1.4nm,0.3s
HAU Haudompre 11.48 310 *e*Pn Pn 07 41 56.3 +0.1
HAU *e*Sn **Sn 07 43 55.5 -8.4**
comp=E,9.8nm,0.3s
PAGF Fort de Pagny 12.12 311 *e*Sn Sn 07 44 11.4 -8.1
comp=E,2.5nm,0.3s
SMF Signal de Mont 12.46 300 *e*Pn Pn 07 42 08.3 -1.3
SMF *e*Sn **Sn 07 44 20.0 -7.9**
comp=E,2.0nm,0.3s
LOR Lormes 12.67 303 *e*Pn Pn 07 42 13.6 +1.2
baz=120
LOR *e*Sn **Sn 07 44 24.7 -8.2**
comp=E,7.9nm,0.4s
SSF Saint Saulge 12.82 302 *e*Pn Pn 07 42 14.2 -0.3
SSF *e*Sn Sn 07 44 27.7 -8.9
comp=E,3.9nm,0.4s
AVF Avril sur Loir 12.82 300 *e*Pn Pn 07 42 14.8 +0.2
AVF *e*Sn **Sn 07 44 28.3 -8.4**
comp=E,1.4nm,0.4s
TCF Toulx Ste Croi 13.43 297 *e*Pn Pn 07 42 23.1 +0.2
TCF *e*Sn **Sn 07 44 43.3 -8.3**
comp=E,1.3nm,0.2s
KIV Kislovodsk 17.20 74 *e*P Pn 07 43 11.4 -1.2
KIV pmax pmax
comp=Z,9.0nm,1.0s
KBZ Khabaz 17.35 74 P **Pn 07 43 12.7 -1.7**
comp=Z,0.1nm,0.3s,baz=288,slow=3.2,SNR=2.6
VSU Vasula 17.69 13⇓ *e*P P 07 43 20.0 +0.8
VSU pmax pmax
comp=Z,196nm,2.7s
OBN Obninsk 17.74 34 *e*P P 07 43 21.6 +1.8
OBN pmax pmax
comp=Z,4.0nm,0.9s
GNI Garni 19.11 85⇓ *e*P Pn 07 43 37.5 +1.4
GNI pmax pmax
comp=Z,31nm,1.0s
GNI Garni 19.11 85 P **Pn 07 43 37.2 +1.1**
comp=Z,0.7nm,0.3s,baz=284,slow=16,SNR=4.2
GNI Garni 19.11 85 P **Pn 07 43 37.1 +1.1**
GNI IAmb IAmb 07 43 38.6
comp=Z,12nm,1.1s
HFS Hagfors 19.12 351 P **P 07 43 34.9 -0.1**
comp=Z,0.1nm,0.3s,baz=164,slow=7.5,SNR=3.3
FINES FINESS Array B 20.47 9 P **P 07 43 49.4 -0.3**
comp=Z,1.4nm,0.4s,baz=181,slow=11,SNR=10
FIA1 FINESS Array S 20.47 9 P **P 07 43 50.3 +0.7**
FIA1 IAmb IAmb 07 44 06.9
comp=Z,17nm,1.2s
TMCR Tamitsa 25.21 19 *e*P P 07 44 36.4 -1.1
PRGR Permogore 25.65 29 *e*P P 07 44 38.7 -2.9
PRGR pmax pmax
comp=Z,9.0nm,0.5s
ABKAR Akbulak array 29.19 61 P **P 07 45 13.8 +0.4**
ARU Arti 29.26 46 *c i*P P 07 45 14.7 +0.8
ARU S **S 07 50 08.5 +2.8**
ARU pmax pmax
comp=Z,6.0nm,1.1s
BRVK Borovoye 35.65 53 P **P 07 46 11.2 +1.3**
BRVK pmax pmax
comp=Z,4.0nm,0.8s
BRVK Borovoye 35.65 53 P **P 07 46 11.2 +1.3**
BVAR Borovoye Array 35.72 53 P **P 07 46 11.5 +1.0**
comp=Z,1.8nm,0.7s,baz=270,slow=5.9,SNR=8.3
KURBB Kurchatov Arra 41.00 56 P **P 07 46 56.5 +1.5**
comp=Z,0.6nm,0.2s,baz=262,slow=8.6,SNR=5.4
KURK Kurchatov 41.04 56⇑ *e*P P 07 46 56.3 +1.1
KURK pmax pmax
comp=Z,2.0nm,1.1s
KURK Kurchatov 41.04 56 P **P 07 46 56.5 +1.3**
KURK IAmb IAmb 07 47 07.3
comp=Z,4.5nm,1.4s
ZALV Zalesovo Beam 44.17 50 P **P 07 47 21.0 +0.4**
comp=Z,3.0nm,0.4s,baz=276,slow=8.5,SNR=5.6
MK31 Makanchi Array 44.33 61 P **P 07 47 23.2 +1.1**
MK31 pmax pmax
comp=Z,2.0nm,0.9s
MK31 Makanchi Array 44.33 61 P **P 07 47 23.2 +1.1**
MK31 IAmb IAmb 07 47 23.9
comp=Z,2.3nm,0.8s
MKAR Makanchi Array 44.33 61 P **P 07 47 22.6 +0.5**
comp=Z,3.4nm,0.7s,baz=284,slow=6.7,SNR=35
MKAR PcP **PcP 07 49 05.9 -0.1**
comp=Z,0.3nm,0.6s,baz=280,slow=3.2,SNR=3.1
SONM Songino Array 59.03 52 P **P 07 49 12.9 +0.9**
comp=Z,0.9nm,0.7s,baz=299,slow=9.5,SNR=6.2
YKA Yellowknife Ar 70.12 339 P **P 07 50 24.4 +0.5**
comp=Z,0.7nm,0.8s,baz=38,slow=5.6,SNR=10
PDAR Pinedale Array 84.48 325 P **P 07 51 45.5 +0.3**
comp=Z,0.4nm,0.8s,baz=74,slow=7.0,SNR=3.8
QSPA South Pole Qui 131.24 180 PKP **PKPdf 07 58 22.5 -0.5**
comp=Z,0.9nm,0.4s,baz=286,slow=4.1,SNR=4.6

ROM 20 07:55:09.2±0.1, 41°.353N±0°.006×14°.439E±0°.006, h17km±1km, ML2.4/1, Error ellipse: s-maj=0.5km s-min=0.5km az=27.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1011	**San Potito San**	**0.02**	**291**	P	Pg	07 55 12.3	0.0
T1011				S	Sg	07 55 14.5	+0.1
VAGA	**Valle Agricola**	**0.17**	**292**	P	Pb	07 55 14.0	+0.1
VAGA				S	Sb	07 55 17.2	+0.2
SACR	**S. Croce Del S**	**0.20**	**77**	P	Pg	07 55 14.2	+0.1
SACR				S	Sb	07 55 17.9	-0.3
SACR				AML	AML		
	comp=E,1980µm,0.8s						
SACR				AML	AML		
	comp=E,49200µm,0.7s						
SACR				AML	AML		
	comp=N,43100µm,0.5s						
SACR				AML	AML		
	comp=E,49350µm,0.7s						
SACR				AML	AML		
	comp=N,44650µm,0.5s						
SACR				AML	AML		
	comp=N,2405µm,0.6s						
SACR				AML	AML		
	comp=N,2480µm,0.6s						
SACR				AML	AML		
	comp=E,1940µm,0.8s						
BSSO	**Busso**	**0.23**	**31**	P	Pg	07 55 14.7	+0.2
BSSO				S	Sb	07 55 19.1	+0.3
BSSO				AML	AML		
	comp=E,3020µm,0.3s						
BSSO				AML	AML		
	comp=E,36000µm,0.4s						
BSSO				AML	AML		
	comp=N,58200µm,0.9s						
BSSO				AML	AML		
	comp=E,17000µm,0.8s						
BSSO				AML	AML		
	comp=N,22100µm,0.8s						
BSSO				AML	AML		
	comp=E,1330µm,0.3s						
BSSO				AML	AML		
	comp=N,1306µm,0.6s						
BSSO				AML	AML		
	comp=N,3295µm,0.6s						
PSB1	**Pescosannita**	**0.31**	**115**	P	Pg	07 55 15.9	+0.1
PSB1				AML	AML		
	comp=N,632µm,0.4s						
PSB1				AML	AML		
	comp=E,21450µm,0.5s						
PSB1				AML	AML		
	comp=N,30200µm,0.4s						
PSB1				AML	AML		
	comp=E,22050µm,0.5s						
PSB1				AML	AML		
	comp=N,30650µm,0.4s						
PSB1				AML	AML		
	comp=E,552µm,1.1s						
MIDA	**Miranda**	**0.32**	**334**	P	Pg	07 55 15.9	-0.1
MIDA				S	Sg	07 55 21.0	+0.3
PAOL	**Paolisi**	**0.34**	**163**	P	Pb	07 55 16.6	-0.2
CERA	**Filignano**	**0.40**	**308**	AML	AML		
	comp=E,13450µm,0.8s						
CERA				AML	AML		
	comp=E,440µm,0.7s						
CERA				AML	AML		
	comp=N,468µm,0.4s						
CERA				AML	AML		
	comp=N,13200µm,0.4s						
CERA				AML	AML		
	comp=E,13800µm,0.8s						
CERA				AML	AML		
	comp=N,13650µm,0.4s						
CERA				AML	AML		
	comp=N,478µm,0.3s						
CERA				AML	AML		
	comp=E,448µm,0.7s						
TRIV	**Trivento**	**0.42**	**11**	P	Pg	07 55 17.8	0.0
TRIV				AML	AML		
	comp=E,566µm,0.4s						
TRIV				AML	AML		
	comp=N,490µm,0.4s						
TRIV				AML	AML		
	comp=E,581µm,0.4s						
TRIV				AML	AML		
	comp=E,10490µm,0.4s						
TRIV				AML	AML		
	comp=N,8105µm,1.0s						
TRIV				AML	AML		
	comp=E,10760µm,0.4s						
TRIV				AML	AML		
	comp=N,8990µm,0.8s						
TRIV				AML	AML		
	comp=N,512µm,0.3s						
CDRU	**Civita di Ruta**	**1.08**	**142**	AML	AML		
	comp=N,1670µm,0.6s						
CDRU				AML	AML		
	comp=E,2565µm,1.5s						

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*IDC **20** 07:55:56.1±1.0, 41°.47N×14°.38E, h0km, mb3.4/6, mb1 3.8/12, mb1mx3.6/38, mbtmp3.6/12, ML3.9/6, MS3.0/2, Ms1 3.0/2, ms1mx2.4/41, Error ellipse: s-maj=17.2km s-min=16.8km az=92.0*

*ROM **20** 07:55:57.4±0.1, 41°.365N±0°.004×14°.450E±0°.006, h18km, ML3.7/24, Mw3.7, Error ellipse: s-maj=0.5km s-min=0.1km az=32.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-2.59; $M_{\theta\theta}$0.36; $M_{\phi\phi}$2.24; $M_{r\theta}$0.57; $M_{\theta\phi}$-2.25; $M_{\phi r}$-2.93; Fault plane solution: M_o4.41194×10^{14} NP1:ϕ_s345.00000°, δ68.00000°, λ-71.00000°. NP2:ϕ_s122.00000°, δ29.00000°, λ-129.00000°.*

*PDG **20** 07:55:57.7±0.3, 41°.36N×14°.47E, h20km, ML4.1/11 Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*

*LDG **20** 07:55:58.5±0.2, 41°.36N×14°.64E, h18km, Ml3.1/12, Error ellipse: s-maj=9.1km s-min=4.8km az=32.0*

*PRU **20** 07:55:59.6±0.0, 41°.48N×14°.70E, h10km*

ISC 20 07:55:58.1±0.7, 41°.37N±0°.02×14°.45E±0°.02, h18km±3km, n180, σ1°49/184, mb3.5/6, 21C-4D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1011	**San Potito San**	**0.03**	**244**	P	Pg	**07 56 00.6**	**-0.9**
T1011				S	Sg	**07 56 03.2**	**-0.5**
VAGA	**Valle Agricola**	**0.17**	**285**	P	Pb	**07 56 02.1**	**-0.3**
VAGA				S	Sg	**07 56 06.3**	**+0.5**
VAGA				AML	AML		
	comp=E,41550µm,0.6s						
VAGA				AML	AML		
	comp=N,80900µm,0.4s						
VAGA				AML	AML		
	comp=E,41550µm,0.6s						
VAGA				AML	AML		
	comp=N,80900µm,0.4s						
VAGA				AML	AML		
	comp=E,43350µm,0.6s						
VAGA				AML	AML		
	comp=N,83200µm,0.4s						
VAGA				AML	AML		
	comp=E,41550µm,0.6s						
VAGA				AML	AML		
	comp=N,83200µm,0.4s						
VAGA				AML	AML		
	comp=N,80900µm,0.4s						
VAGA				AML	AML		
	comp=E,43350µm,0.6s						
SACR	**S. Croce Del S**	**0.19**	**82**	P	Pb	**07 56 02.3**	**-0.6**
SACR				S	Sb	**07 56 06.0**	**-0.1**
SACR				AML	AML		
	comp=E,49250µm,0.7s						
SACR				AML	AML		
	comp=E,49350µm,0.7s						
SACR				AML	AML		
	comp=E,49200µm,0.7s						
SACR				AML	AML		
	comp=N,43150µm,0.5s						
SACR				AML	AML		
	comp=N,44650µm,0.5s						
SACR				AML	AML		
	comp=E,49250µm,0.7s						
SACR				AML	AML		
	comp=N,43100µm,0.5s						
SACR				AML	AML		
	comp=E,49200µm,0.7s						
SACR				AML	AML		
	comp=N,44650µm,0.5s						
SACR				AML	AML		
	comp=E,49350µm,0.7s						
SACR				AML	AML		
	comp=N,43150µm,0.5s						
BSSO	**Busso**	**0.20**	**32**	*e*P	**Pb**	**07 56 02.8**	**-0.4**
BSSO				S	**Sg**	**07 56 07.5**	**+0.7**
BSSO				AML	AML		
	comp=E,36050µm,0.4s						
BSSO				AML	AML		
	comp=N,58200µm,0.9s						
BSSO				AML	AML		
	comp=E,17000µm,0.8s						
BSSO				AML	AML		
	comp=N,22100µm,0.8s						
BSSO				AML	AML		
	comp=N,58250µm,0.9s						
BSSO				AML	AML		
	comp=E,36050µm,0.4s						
BSSO				AML	AML		
	comp=N,22100µm,0.8s						
BSSO				AML	AML		
	comp=N,58200µm,0.9s						
MIDA	**Miranda**	**0.31**	**331**	P	**Pg**	**07 56 04.1**	**-0.8**
MIDA				S	**Sb**	**07 56 09.8**	**-0.2**
MIDA				AML	AML		
	comp=E,14450µm,0.6s						
MIDA				AML	AML		
	comp=E,14400µm,0.6s						
MIDA				AML	AML		
	comp=N,9190µm,0.6s						
MIDA				AML	AML		
	comp=E,14450µm,0.6s						
MIDA				AML	AML		
	comp=N,9490µm,0.6s						
MIDA				AML	AML		
	comp=N,9175µm,0.6s						
MIDA				AML	AML		
	comp=E,14850µm,0.6s						
PSB1	**Pescosannita**	**0.31**	**119**	P	**Pg**	**07 56 04.2**	**-0.6**
PSB1				S	**Sg**	**07 56 09.4**	**0.0**
PSB1				AML	AML		
	comp=E,21450µm,0.5s						
PSB1				AML	AML		
	comp=N,30150µm,0.4s						
PSB1				AML	AML		
	comp=N,30650µm,0.4s						
PSB1				AML	AML		
	comp=N,30150µm,0.4s						
PSB1				AML	AML		
	comp=E,22050µm,0.5s						
PSB1				AML	AML		
	comp=E,21500µm,0.5s						
PAOL	**Paolisi**	**0.35**	**165**	P	**Pg**	**07 56 04.5**	**-1.1**
PAOL				AML	AML		
	comp=E,18750µm,0.3s						
PAOL				AML	AML		
	comp=E,18700µm,0.3s						
PAOL				AML	AML		
	comp=N,14800µm,0.9s						
PAOL				AML	AML		
	comp=N,14800µm,0.9s						
PAOL				AML	AML		
	comp=E,18750µm,0.3s						
GATE	**Gambatesa**	**0.37**	**68**	P	**Pg**	**07 56 05.8**	**-0.2**
GATE				AML	AML		
	comp=E,14950µm,0.9s						
GATE				AML	AML		
	comp=N,12650µm,0.5s						
GATE				AML	AML		
	comp=N,12550µm,0.5s						
GATE				AML	AML		
	comp=E,14950µm,0.9s						
GATE				AML	AML		
	comp=E,10125µm,0.5s						
GATE				AML	AML		
	comp=N,12600µm,0.5s						
GATE				AML	AML		
	comp=E,14950µm,0.9s						
GATE				AML	AML		
	comp=N,12650µm,0.5s						
CERA	**Filignano**	**0.40**	**305**	P	**Pg**	**07 56 05.6**	**-0.8**
CERA				AML	AML		
	comp=E,13395µm,0.8s						
CERA				AML	AML		
	comp=E,13385µm,0.8s						
CERA				AML	AML		
	comp=N,13200µm,0.4s						
CERA				AML	AML		
	comp=N,13650µm,0.4s						
CERA				AML	AML		
	comp=E,13800µm,0.8s						
CERA				AML	AML		
	comp=N,13250µm,0.4s						
RNI2	**Rionero Sannit**	**0.40**	**326**	P	**Pg**	**07 56 05.8**	**-0.6**
RNI2				AML	AML		
	comp=E,11150µm,0.6s						
RNI2				AML	AML		
	comp=E,11200µm,0.6s						
RNI2				AML	AML		
	comp=N,7785µm,0.5s						
RNI2				AML	AML		
	comp=E,11450µm,0.6s						
RNI2				AML	AML		
	comp=N,8205µm,0.5s						
TRIV	**Trivento**	**0.40**	**11**	P	**Pg**	**07 56 05.8**	**-0.7**
TRIV				AML	AML		
	comp=E,10760µm,0.4s						
TRIV				AML	AML		
	comp=N,8995µm,0.8s						
TRIV				AML	AML		
	comp=E,10490µm,0.4s						
TRIV				AML	AML		
	comp=N,8370µm,0.5s						
TRIV				AML	AML		
	comp=E,10495µm,0.4s						
TRIV				AML	AML		
	comp=N,8375µm,0.5s						
CIGN	**Sant'Elia a Pi**	**0.44**	**50**	P	**Pg**	**07 56 06.7**	**-0.5**
CIGN				AML	AML		
	comp=N,6725µm,1.3s						
CIGN				AML	AML		
	comp=E,5435µm,1.6s						
CIGN				AML	AML		
	comp=N,6720µm,1.3s						
NL9	**Nola**	**0.46**	**171**	P	**Pg**	**07 56 06.6**	**-0.8**
MRB1	**Monte Rocchett**	**0.46**	**122**	P	**Pg**	**07 56 06.7**	**-0.9**
MRB1				AML	AML		
	comp=N,22250µm,0.8s						
MRB1				AML	AML		
	comp=E,21650µm,0.4s						
MRB1				AML	AML		
	comp=N,22800µm,0.8s						
MRB1				AML	AML		
	comp=E,21650µm,0.4s						
MRB1				AML	AML		
	comp=E,21450µm,0.4s						
MODR	**Mondragone**	**0.49**	**243**	P	**Pg**	**07 56 07.4**	**-0.6**
MODR				AML	AML		
	comp=E,40600µm,0.8s						
MODR				AML	AML		
	comp=N,40350µm,0.4s						
MODR				AML	AML		
	comp=N,40350µm,0.4s						
MODR				AML	AML		
	comp=E,40600µm,0.8s						
MOCO	**Biccari - m.te**	**0.53**	**90**	P	**Pg**	**07 56 08.3**	**-0.5**
MOCO				AML	AML		
	comp=N,5565µm,0.4s						
MOCO				AML	AML		
	comp=N,5695µm,0.4s						
MOCO				AML	AML		
	comp=E,7755µm,0.4s						
MOCO				AML	AML		
	comp=E,8050µm,0.4s						
OVO	**Vesuviano**	**0.55**	**184**	P	**Pg**	**07 56 08.2**	**-0.9**
MELA	**Melanico ??? S**	**0.61**	**56**	P	**Pg**	**07 56 08.6**	**-1.6**
MELA				AML	AML		
	comp=N,11220µm,0.4s						
MELA				AML	AML		
	comp=E,20250µm,0.6s						
MELA				AML	AML		
	comp=N,11540µm,0.4s						
MELA				AML	AML		
	comp=E,20250µm,0.7s						
MELA				AML	AML		
	comp=E,20750µm,0.6s						
FRES	**Fresagrandinar**	**0.62**	**15**	P	**Pg**	**07 56 09.1**	**-1.4**
FRES				AML	AML		
	comp=N,2315µm,0.5s						
FRES				AML	AML		
	comp=E,3640µm,0.6s						
CAFE	**Carife**	**0.69**	**120**	P	**Pb**	**07 56 10.3**	**-1.3**
CAFE				AML	AML		
	comp=E,16250µm,0.7s						
CAFE				AML	AML		
	comp=E,16100µm,0.7s						
CAFE				AML	AML		
	comp=N,7270µm,0.6s						
CAFE				AML	AML		
	comp=E,16100µm,0.7s						
CAFE				AML	AML		
	comp=N,7425µm,0.6s						
CAFE				AML	AML		
	comp=N,7270µm,0.5s						
LPEL	**Lama dei Pelig**	**0.70**	**344**	P	**Pb**	**07 56 10.6**	**-1.3**
LPEL				AML	AML		
	comp=N,3845µm,1.2s						
LPEL				AML	AML		
	comp=E,5310µm,0.6s						
SNAL	**S. Angelo Dei**	**0.73**	**128**	P	**Pb**	**07 56 11.4**	**-0.9**
SNAL				AML	AML		
	comp=E,6700µm,1.1s						
SNAL				AML	AML		
	comp=N,7410µm,0.8s						
SNAL				AML	AML		
	comp=N,7405µm,0.8s						
SNAL				AML	AML		
	comp=E,6695µm,1.1s						
SGTA	**Sant Agata di**	**0.73**	**109**	P	**Pb**	**07 56 11.2**	**-1.2**
SGTA				AML	AML		
	comp=N,6560µm,0.5s						
SGTA				AML	AML		
	comp=N,7310µm,0.5s						
SGTA				AML	AML		
	comp=N,6560µm,0.6s						
SGTA				AML	AML		
	comp=E,8530µm,0.5s						
SGTA				AML	AML		
	comp=E,8790µm,0.5s						
OC9	**Casamicciola**	**0.75**	**214**	P	**Pb**	**07 56 12.3**	**-0.4**
INTR	**Introdacqua**	**0.76**	**328**	P	**Pb**	**07 56 11.5**	**-1.3**
INTR				AML	AML		
	comp=N,8170µm,0.8s						
INTR				AML	AML		
	comp=E,9300µm,0.8s						
INTR				AML	AML		
	comp=N,8125µm,0.7s						
VVLD	**Villa Vallelon**	**0.80**	**309**	P	**Pb**	**07 56 12.0**	**-1.5**
VVLD				AML	AML		
	comp=E,3675µm,0.5s						
VVLD				AML	AML		
	comp=E,3680µm,0.5s						
VVLD				AML	AML		
	comp=N,3635µm,1.0s						
MCRV	**Calabrutti - M**	**0.80**	**137**	P	**Pb**	**07 56 12.8**	**-0.8**
MCRV				AML	AML		
	comp=E,15550µm,0.4s						
MCRV				AML	AML		

comp=N,15650µm,0.5s
MCRV AML AML
comp=E,15550µm,0.4s
CAFR Castel Frentan 0.86 355 AML AML
comp=E,10245µm,1.1s
CAFR AML AML
comp=N,8455µm,0.5s
GIUL Giuliano Di Ro 0.92 282 P **Pb 07 56 14.7 -0.8**
GIUL AML AML
comp=E,1875µm,1.2s
GIUL AML AML
comp=N,2265µm,0.5s
VENT Ventotene 0.97 234 P **Pb 07 56 15.4 -1.0**
VENT AML AML
comp=E,6430µm,1.0s
VENT AML AML
comp=N,6820µm,0.3s
VENT AML AML
comp=E,6425µm,1.0s
VULT Monte Vulture 0.97 115 AML AML
comp=E,5800µm,0.7s
VULT AML AML
comp=E,5805µm,0.7s
VULT AML AML
comp=N,12350µm,0.5s
VULT AML AML
comp=E,5985µm,0.6s
VULT AML AML
comp=N,12650µm,0.5s
MRLC Muro Lucano 1.00 128 AML AML
comp=E,3460µm,0.5s
MRLC AML AML
comp=E,3580µm,0.5s
MRLC AML AML
comp=N,3130µm,0.4s
MRLC AML AML
comp=N,3315µm,0.4s
CDRU Civita di Ruta 1.09 143 AML AML
comp=E,2560µm,1.5s
CDRU AML AML
comp=N,1860µm,1.2s
FAGN Fagnano 1.10 324 AML AML
comp=E,6630µm,0.6s
FAGN AML AML
comp=N,4240µm,0.5s
VCEL Villa Celiera 1.12 336 AML AML
comp=N,2705µm,0.9s
VCEL AML AML
comp=E,3950µm,0.6s
LATB Latina 1.13 277 P **Pn 07 56 17.8 -1.2**
LATB AML AML
comp=E,988µm,0.8s
LATB AML AML
comp=E,984µm,0.8s
LATB AML AML
comp=N,514µm,1.1s
MSAG Monte S. Angel 1.15 72 P **Pn 07 56 18.6 -0.7**
MSAG AML AML
comp=N,15300µm,0.5s
MSAG AML AML
comp=E,10550µm,1.5s
MSAG AML AML
comp=E,11270µm,1.5s
MSAG AML AML
comp=E,11275µm,1.5s
MSAG AML AML
comp=E,10560µm,1.5s
MSAG AML AML
comp=N,15300µm,0.5s
MSAG AML AML
comp=N,15300µm,0.5s
PALZ Palazzo San Ge 1.22 110 AML AML
comp=E,4465µm,1.6s
PALZ AML AML
comp=N,6605µm,1.0s
CMPR Campora 1.23 148 AML AML
comp=E,1995µm,0.7s
CMPR AML AML
comp=N,1775µm,1.1s
CERT Cerreto 1.24 298 AML AML
comp=N,1155µm,0.8s
CERT AML AML
comp=E,1315µm,1.2s
AQU L'Aquila 1.26 322 *e*Pn **Pb 07 56 21.8 +0.5**
ACER Acerenza 1.27 117 AML AML
comp=E,4335µm,1.2s
ACER AML AML
comp=N,5555µm,0.6s
ACER AML AML
comp=E,4450µm,1.2s
ACER AML AML
comp=N,5695µm,0.6s
MRVN Minervino Murg 1.35 103 AML AML
comp=E,1540µm,0.7s
MRVN AML AML
comp=N,2210µm,0.8s
TERO Teramo 1.40 333 AML AML
comp=E,460µm,0.8s
TERO AML AML
comp=N,606µm,0.6s
SIRI Monte Sirino - 1.60 137 AML AML
comp=E,1400µm,0.4s
SIRI AML AML
comp=N,1165µm,1.0s
SIRI AML AML
comp=E,1415µm,0.4s
SIRI AML AML
comp=N,1180µm,1.0s
LNSS Leonessa 1.62 320 AML AML
comp=N,1020µm,0.8s
LNSS AML AML
comp=E,1118µm,1.0s
AMUR Altamura 1.69 105 AML AML
comp=E,1850µm,0.5s
AMUR AML AML
comp=N,1780µm,1.4s
SG1 Sgolgore (BA) 1.77 107 *e*Pn **Pn 07 56 28.4 +0.6**
NRCA Norcia 1.77 326 AML AML
comp=N,451µm,0.9s
NRCA AML AML
comp=E,780µm,0.9s
BAI Bari 1.85 97 *e*Pn **Pn 07 56 29.1 +0.2**
MATE Matera 1.85 112 ⇑P **Pg 07 56 33.0 -0.7**
MATE ⇑S **Sg 07 56 56.2 -1.6**
FDMO Fiordimonte 1.95 329 AML AML
comp=N,537µm,0.9s
FDMO AML AML
comp=E,446µm,1.1s
TOLF Tolfa 1.96 291 AML AML
comp=N,468µm,1.1s
TOLF AML AML
comp=E,328µm,1.4s
NOCI Noci 2.06 106 AML AML
comp=N,1765µm,0.8s
NOCI AML AML
comp=E,1174µm,0.6s
T0702 Acquaformosa (2.07 142 AML AML
comp=N,618µm,0.8s
T0702 AML AML
comp=E,625µm,1.3s
MASS Massafra 2.17 109 *e*Pn **Pn 07 56 34.1 +0.8**
SNTG Esanatoglia 2.19 330 AML AML
comp=N,287µm,0.8s
SNTG AML AML
comp=E,375µm,0.8s
TAR1 Taranto 2.31 111 *e*Pn **Pn 07 56 35.9 +0.7**
MGAB Montegabbione 2.32 312 AML AML
comp=N,324µm,1.2s
MGAB AML AML
comp=E,326µm,0.6s
MGAB AML AML
comp=E,352µm,0.6s
MGAB AML AML
comp=N,282µm,1.3s
HVAR Hvar 2.34 39 *e*Pn **Pn 07 56 35.5 -0.1**
CGL1 Ceglie Messapi 2.40 106 *e*Pn **Pn 07 56 37.2 +0.7**
SACS San Casciano d 2.40 309 AML AML
comp=E,319µm,1.6s
SACS AML AML
comp=E,338µm,1.6s
SACS AML AML
comp=N,366µm,1.1s
SACS AML AML
comp=N,365µm,1.1s
ARVD Arcevia 2.40 333 AML AML
comp=N,222µm,1.2s
ARVD AML AML
comp=E,276µm,1.2s

ZIRJ Zirje 2.45 21 *e*Pn **Pn 07 56 37.2 +0.1**
PIEI Pieia 2.59 327 AML AML
comp=N,195µm,1.3s
PIEI AML AML
comp=E,165µm,1.3s
DUGI Dugi Otok 2.66 9 *e*Pn **Pn 07 56 39.9 -0.2**
MORI Morici 2.66 20 *e*Pn **Pn 07 56 40.0 -0.1**
MAKA Makarska 2.70 44 *i* Pn **Pn 07 56 40.7 0.0**
MAKA Sn **Sn 07 57 11.6 -1.3**
PE3 Peglio 2.73 329 AML AML
comp=E,636µm,0.8s
PE3 AML AML
comp=N,754µm,0.8s
STON Ston 2.84 57 *e*Pn **Pn 07 56 43.4 +0.8**
STON Ston 2.84 57 AML AML
comp=N,360µm,0.5s
STON AML AML
comp=E,441µm,1.3s
STON Ston 2.84 57 *e*Pn **Pn 07 56 42.7 +0.1**
CRE Caprese Michel 2.91 321 AML AML
comp=E,152µm,1.6s
CRE AML AML
comp=N,126µm,0.7s
GRI Girifalco 2.96 149 AML AML
comp=E,182µm,1.6s
GRI AML AML
comp=N,165µm,0.6s
KIJV Kijevo 3.00 28 *e*Pn **Pn 07 56 45.4 +0.6**
DBRK Dubrovnik 3.04 64 *e*Pn **Pn 07 56 46.3 +0.9**
DBRK Sn **Sn 07 57 21.6 +0.2**
TREB Trebinje 3.20 64 *e*Pn **Pn 07 56 48.0 +0.5**
HCY Herceg Novi 3.20 69 *e*Pn **Pn 07 56 47.9 +0.3**
HCY Herceg Novi 3.20 69 *e*Pn **Pn 07 56 48.0 +0.4**
HCY *e*Sn **Sn 07 57 26.1 +0.8**
NVLJ Novalja 3.21 5 *e*Pn **Pn 07 56 48.2 +0.6**
UDBI Udbina 3.30 17 *e*Pn **Pn 07 56 50.4 +1.4**
BRY Bratogost 3.40 62 *e*Pn **Pn 07 56 51.0 +0.5**
BUM Brajici-Budva 3.45 73 ⇓*i*Pn **Pn 07 56 51.3 +0.3**
BUM *e*Sn **Sn 07 57 32.0 +0.6**
CEME Cevo 3.53 69 *e*Pn **Pn 07 56 52.8 +0.6**
CEME *e*Sn **Sn 07 57 34.8 +1.3**
MGRS Mrkonjic Grad 3.61 32 *e*Pn **Pn 07 56 55.1 +2.0**
NKME Niksic 3.63 66 *e*Pn **Pn 07 56 54.2 +0.7**
NKME *e*Sn **Sn 07 57 36.6 +0.7**
DRME Dracevica, Mon 3.63 75 ⇑*i*Pn **Pn 07 56 53.6 +0.1**
DRME Dracevica, Mon 3.63 75 *e*Pn **Pn 07 56 54.3 +0.8**
DRME *e*Sn **Sn 07 57 37.0 +1.1**
ULC Ulcinj 3.64 79 *e*Pn **Pn 07 56 54.1 +0.5**
ULC *e*Sn **Sn 07 57 37.3 +1.2**
NKY Niksic 3.67 65 *e*Pn **Pn 07 56 55.0 +0.8**
NKY *e*Sn **Sn 07 57 37.9 +0.8**
PDG Podgorica 3.74 72 ⇑*i*Pn **Pn 07 56 55.6 +0.7**
TTG Podgorica 3.74 72 *e*Pn **Pn 07 56 55.5 +0.6**
TTG *e*Sn **Sn 07 57 39.4 +0.9**
UPM Unac-Piva 3.78 60 *e*Pn **Pn 07 56 57.0 +1.4**
BLY Banja Luka 3.92 30 *e*Pn **Pn 07 56 58.6 +1.1**
RIY Rijeka 3.95 0 *e*Pn **Pn 07 57 00.3 +2.5**
PUK Puka 4.13 79 AML AML
comp=E,300µm,0.5s
PUK AML AML
comp=N,322µm,0.7s
PLE Pljevlja 4.15 60 *e*Pn **Pn 07 57 01.2 +0.5**
PLE *e*Sn **Sn 07 57 49.2 +0.4**
BOJS Bojanci 4.17 8 *i* Pn **Pn 07 57 01.3 +0.4**
BOJS *e*Sn **Sn 07 57 48.7 -0.4**
comp=Z,135nm,0.8s
PGF Pioggiola 4.23 288 *e*Pn **Pn 07 57 02.1 +0.3**
PGF *e*Sn **Sn 07 57 51.2 +0.4**
comp=Z,21nm,0.4s
RUDO Rudo 4.27 57 *e*Pn **Pn 07 57 03.0 +0.7**
HAPS Han Pijesak,BI 4.28 49 *e*Pn **Pn 07 57 02.6 +0.1**
PVY Plav 4.28 72 *e*Pn **Pn 07 57 03.4 +0.9**
PVY *e*Sn **Sn 07 57 52.8 +0.7**
IVA Berane 4.32 68 *e*Pn **Pn 07 57 03.8 +0.8**
IVA Berane 4.32 68 *e*Pn **Pn 07 57 04.1 +1.1**
IVA *e*Sn **Sn 07 57 53.8 +0.9**
CEY Cerknica 4.37 360 *e*Pn **Pn 07 57 04.1 +0.5**
BBLS Lazići 4.42 54 ⇑*i*Pn **Pn 07 57 05.4 +1.0**
CRES Cresnjev 4.51 9 *e*Pn **Pn 07 57 05.9 +0.3**
LJU Ljubljana 4.67 1 AML AML
comp=N,270µm,1.5s
LJU AML AML
comp=E,284µm,0.8s
LJU Ljubljana 4.67 1 *e*Pn **Pn 07 57 08.6 +0.8**
OHR Ohrid 4.79 91 *i* P **Pn 07 57 11.3 +1.8**
TEKS Tekeris 4.89 48 *e*Pn **Pn 07 57 10.5 -0.4**
DIVS Divibare 4.91 54 ⇑*i*Pn **Pn 07 57 11.4 +0.3**
OBKA Obir 5.14 1 *e*Pn **Pn 07 57 15.1 +0.9**
comp=E,8.1nm,0.3s,SNR=9.2
SKO Skopje 5.27 81 *i* P **Pn 07 57 17.4 +1.4**
MYKA Terra Mystica 5.29 354 Pn **Pn 07 57 16.6 +0.3**
comp=E,3.0nm,0.3s,SNR=4.1
SOKA Soboth 5.32 4 *e*Pn **Pn 07 57 15.9 -0.8**
comp=E,4.6nm,0.3s
FRGS Fruska Gora 5.44 44 *e*Pn **Pn 07 57 17.5 -0.9**
ABTA Abfaltersbach 5.55 346 *e*Pn **Pn 07 57 21.6 +1.6**
comp=E,3.0nm,0.3s
MORH Mrgy, Hungar 5.71 31 *e*Pn **Pn 07 57 21.2 -0.8**
SBF Sospel 5.74 298 *e*Pn **Pn 07 57 23.7 +1.2**
SBF *e*Sn **Sn 07 58 26.9 -1.1**
comp=E,4.5nm,0.3s
KBA Koelnbreinsper 5.76 352 Pn **Pn 07 57 24.9 +2.0**
SNR=9.2
KBA Sn **Sn 07 58 28.9 +0.3**
comp=E,11nm,0.7s
STIP Stip 5.81 84 ⇓*i*P **Pn 07 57 26.9 +3.5**
ARSA Arzberg 5.93 7 *e*Pn **Pn 07 57 24.9 -0.1**
comp=E,6.6nm,0.4s
VAY Valandovo 6.11 88 *i* P **Pn 07 57 27.9 +0.4**
FRF La Foret Royal 6.17 293 *e*Pn **Pn 07 57 28.3 -0.1**
LMR La Mourre 6.20 291 *e*Pn **Pn 07 57 28.4 -0.4**
LMR *e*Sn **Sn 07 58 37.0 -2.2**
comp=E,4.7nm,0.4s
WTTA Wattenberg 6.23 342 Pn **Pn 07 57 32.6 +3.3**
comp=E,1.6nm,0.2s
FETA Feichten 6.25 336 *e*Pn **Pn 07 57 32.1 +2.5**
comp=E,1.6nm,0.3s
MDVR Moldovita 6.32 55 ⇑P **Pn 07 57 31.0 +0.6**
DAVOX Davos/Dischmat 6.33 330 Pn **Pn 07 57 32.4 +1.7**
comp=E,0.2nm,0.3s,baz=152,slow=18,SNR=2.6
DAVOX Sn **Sn 07 58 42.8 +0.2**
comp=E,0.5nm,0.3s,baz=62,slow=17,SNR=2.0
MOA Molln 6.48 359 *e*Pn **Pn 07 57 32.4 -0.2**
comp=E,3.0nm,0.3s,SNR=11
MOA Sn **Sn 07 58 46.9 +0.8**
comp=E,7.0nm,0.4s
KKB Krupnik 6.49 83 *e*P **Pn 07 57 34.5 +1.8**
MBDF Montbardon 6.55 303 *e*Pn **Pn 07 57 34.4 +0.7**
MBDF Montbardon 6.55 303 *e*P Pn 07 57 39.8 +6.1
MBDF *e*Sn **Sn 07 58 45.6 -2.3**
comp=E,0.5nm,0.3s
CONA Conrad Observa 6.63 8 *e*Pn **Pn 07 57 34.4 -0.4**
comp=E,4.0nm,0.3s,SNR=13
VTS Vitosha 6.66 76 ⇑P **Pn 07 57 36.4 +1.1**
VTS Vitosha 6.66 76 ⇑S Sn 07 58 40.1 -11
VTS Vitosha 6.66 76 *e*P **Pn 07 57 36.5 +1.3**
BZS Buzias 6.72 48 ⇑P **Pn 07 57 36.0 +0.1**
HERR Herculane 6.80 56 ⇓P **Pn 07 57 37.4 +0.4**
KEST Kesra 6.91 217 Pn **Pn 07 57 40.4 +1.9**
comp=E,2.0nm,0.3s,baz=322,slow=7.8,SNR=10
KEST LR LR 08 00 29.2
comp=E,128nm,18.3s,baz=344,slow=39
LPG La Plagne 6.96 309 *e*Pn **Pn 07 57 40.3 +0.9**
LPG *e*Sn **Sn 07 58 57.0 -1.2**
comp=E,0.5nm,0.2s
MMB Musomiste 6.97 85 *e*P **Pn 07 57 40.7 +1.3**
LPL La Plagne 6.98 309 *e*Pn **Pn 07 57 40.3 +0.7**
LPL *e*Sn **Sn 07 58 58.1 -0.5**
comp=E,0.5nm,0.2s
ORIF Oris-en-Rattie 7.20 302 *e*P Pn 07 57 48.9 +6.3
ORIF *e*Sn **Sn 07 59 02.6 -1.3**
comp=E,1.3nm,0.3s
GZR Gura Zlata 7.28 54 ⇑P **Pn 07 57 44.0 +0.5**
MODS Modra-Piesok 7.28 15 *e*PN **Pn 07 57 43.1 -0.5**
MODS *e*SN **Sn 07 59 00.7 -5.1**
MODS eLG Lg 07 59 01.1
GERES GERESS Array B 7.49 356 Pn **Pn 07 57 46.0 -0.5**
comp=E,1.1nm,0.3s,baz=173,slow=13,SNR=17
GERES Sn **Sn 07 59 03.1 -8.0**
comp=E,0.1nm,0.3s,baz=170,slow=24,SNR=2.4
RZN Rozhen 7.71 84 *e*P **Pn 07 57 51.1 +1.5**
VYHS Vyhne 7.77 22 *e*PN **Pn 07 57 50.6 +0.3**
VYHS *e*SN **Sn 07 59 15.5 -2.3**
KHC Kasperske Hory 7.78 356 *e*PN **Pn 07 57 49.6 -0.9**
KHC *e*x x 07 57 59.0
KHC *e*SN **Sn 07 59 14.4 -3.7**
KHC *e*x x 07 59 30.0
JAVC Velka Javorina 7.83 16 *e*PN **Pn 07 57 52.1 +1.0**
VIVF Saint-Julien-l 7.96 299 *e*Pn **Pn 07 57 53.2 +0.3**
VIVF *e*Sn **Sn 07 59 20.1 -2.3**
comp=E,1.8nm,0.3s
CABF La Chapelle 7.98 314 *e*Pn **Pn 07 57 54.9 +1.6**
CABF *e*Sn **Sn 07 59 22.2 -1.0**
comp=E,1.2nm,0.3s
DRGR 8.04 45 ⇑P **Pn 07 57 55.4 +1.3**
VRAC Vranov 8.08 10 LR LR 08 02 01.0
comp=E,78nm,18.3s,baz=180,slow=46
ELND Elena 8.63 76 ⇑P **Pn 07 58 03.7 +1.7**
MORC Moravsky Berou 8.68 13 ⇓P **Pn 07 58 05.5 +2.7**
MORC Moravsky Berou 8.68 13 *e*PN **Pn 07 58 03.9 +1.1**
CDF Champ du Feu 8.69 327 *e*Pn **Pn 07 58 03.7 +0.8**
CDF *e*Sn **Sn 07 59 38.9 -1.5**
comp=E,2.0nm,0.3s
VOIR 8.72 59 ⇑P **Pn 07 58 05.5 +2.1**
HAU Haudompre 8.79 322 *e*P Pn 07 58 10.5 +6.2
HAU *e*Sn **Sn 07 59 41.3 -1.5**
comp=E,13nm,0.6s
ARCR ARCALIA 9.12 48 ⇑P **Pn 07 58 10.7 +2.0**
DOPR Dopca 9.16 56 ⇑P **Pn 07 58 11.2 +1.8**
RAZG Razgrad 9.18 72 ⇑P **Pn 07 58 11.4 +1.8**
MLR Muntele Rosu 9.32 60 Pn **Pn 07 58 13.5 +1.8**
comp=E,0.4nm,0.3s,baz=198,slow=9.6,SNR=3.9
MLR Muntele Rosu 9.32 60 ⇑P **Pn 07 58 13.7 +2.0**
OZUR 9.46 56 ⇑P **Pn 07 58 14.9 +1.4**
BURAR Bucovina Array 9.90 47 ⇑P **Pn 07 58 21.6 +2.0**
CLL Collm 9.99 355 *e*(Pn) **Pn 07 58 22.0 +1.3**
CLL *e* 08 00 34.0
CLL *i* Sg 08 01 17.9
BIZ Bicaz 10.05 52 ⇑P **Pn 07 58 23.3 +1.8**
IDI Anoyia 10.20 123 Pn **Pn 07 58 27.0 +3.3**
comp=E,0.4nm,0.3s,baz=309,slow=14,SNR=3.5
IDI Sn **Sn 08 00 10.2 -7.5**
comp=E,0.3nm,0.3s,baz=287,slow=16,SNR=5.2
ESDC Sonseca Array 14.11 269 Pn **Pn 07 59 17.4 +0.3**
comp=E,0.3nm,0.3s,baz=72,slow=14,SNR=3.0
BRTR Keskin Array B 14.68 90 Pn **Pn 07 59 25.5 +0.4**
comp=E,0.1nm,0.3s,baz=274,slow=13,SNR=3.0
KBZ Khabaz 21.05 74 P **P 08 00 43.4 +2.4**
comp=E,2.4nm,0.9s,baz=296,slow=5.1,SNR=5.7
FINES FINESS Array B 21.30 15 P **P 08 00 43.8 +0.3**
comp=E,0.5nm,0.4s,baz=185,slow=11,SNR=3.2
TORD Torodi Ar. Bea 30.25 205 P **P 08 02 08.8 +0.9**
comp=E,0.5nm,0.6s,baz=23,slow=8.3,SNR=3.3
MKAR Makanchi Array 47.66 59 P **P 08 04 33.6 +0.4**
comp=E,0.3nm,0.6s,baz=281,slow=8.2,SNR=4.0
SONM Songino Array 62.01 50 P **P 08 06 17.8 +0.6**
comp=E,0.2nm,0.5s,baz=318,slow=7.8,SNR=2.3
YKA Yellowknife Ar 68.72 337 P **P 08 07 00.0 -0.2**
comp=E,0.2nm,0.5s,baz=39,slow=5.9,SNR=6.8

MEX ***20*** *08:07:26.6±0.5, 14°.55N×92°.11W, h86km±5km, MD3.8*
GCG ***20*** *08:07:28.9±0.4, 14°.88N×92°.10W, h72km±9km, MD4.0*
ISC 20 08:07:28.7±3.2, 14°.6N±0°.5×92°.3W±0°.3, h68km±18km, n6,
σ0°.59/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
THIG		**0.29**	**359**	*e*P	**Pn**		**08 07 38.9**	**-0.6**
THIG				*e*S	**Sn**		**08 07 48.3**	**+0.9**
STGG	**Santiaguito 3,**	**0.67**	**82**	*e*P	**Pn**		**08 07 42.9**	**-0.4**
FUG	**Fuego 3**	**1.38**	**97**	*e*P	**Pn**		**08 07 51.9**	**-0.3**
FUG				*e*S	**Sn**		**08 08 09.6**	**-0.2**
PCIG		**1.42**	**319**	*e*P	**Pn**		**08 07 52.0**	**-0.5**
PCIG				*e*S	**Sn**		**08 08 11.0**	**+0.5**
IXG	**Ixpaco**	**1.82**	**104**	*e*P	**Pn**		**08 07 57.9**	**-0.1**
IXG				*e*S	**Sn**		**08 08 20.8**	**+0.6**
CMIG	**Matias Romero**	**3.52**	**315**	*e*P	**Pn**		**08 08 21.0**	**0.0**
CMIG				*i* S	**Sn**		**08 09 01.7**	**+0.1**

NEIC ***20*** *08:26:20.4±1.0, 20°.25S±0°.1×177°.1W±0°.2, h523km±15km, mb4.5/16, Error ellipse: s-maj=25.7km s-min=8.9km az=121.0*
IDC ***20*** *08:26:21.5±3.9, 20°.25S×177°.39W, h512km±42km, mb3.2/3, mb1 3.3/4, mb1mx2.9/39, mbtmp4.1/4, Error ellipse: s-maj=147.4km s-min=31.1km az=148.0*
ISC 20 08:26:19.8±0.9, 20°.4S±0°.1×177°.1W±0°.1, h500km, n23,
σ1s32/25, mb4.5/10, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.32**	**299**	P	**P**	**P**	**08 27 50.7**	**+0.8**
MSVF				S	**S**	**S**	**08 29 04.9**	**+1.6**
AFI	**Afiamalu**	**8.21**	**39**	P	**P**	**P**	**08 28 21.3**	**+2.7**
	2.4nm,0.3s,baz=241,slow=13,SNR=3.4							
AFI				S	**S**	**S**	**08 29 55.4**	**-0.6**
	1.4nm,0.3s,baz=180,slow=20,SNR=2.9							
AFI	**Afiamalu**	**8.21**	**39**	P	**P**	**P**	**08 28 18.1**	**-0.5**
AFI						**S**	**08 29 54.2**	**-1.8**
BKZ	**Black Stump Fm**	**19.49**	**195**	P	**P**	**P**	**08 30 13.7**	**+0.1**
BKZ					IAmb	IAmb	08 30 19.9	
	comp=Z,16nm,1.5s							
QRZ	**Quartz Range**	**22.19**	**201**	P	**P**	**P**	**08 30 40.1**	**+2.1**
NNZ	**Nelson**	**22.27**	**199**	P	**P**	**P**	**08 30 41.1**	**+2.3**
STKA	**Stephens Creek**	**38.60**	**244**	P	**P**	**P**	**08 32 58.8**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=73,slow=11,SNR=4.4							
STKA	**Stephens Creek**	**38.60**	**244**	P	**P**	**P**	**08 32 59.1**	**-0.3**
BBOO	**Buckleboo**	**43.36**	**244**	P	**P**	**P**	**08 33 36.4**	**-0.9**
WR0	**Warramunga Arr**	**45.28**	**262**	P	**P**	**P**	**08 33 50.9**	**-1.5**
ASAR	**Alice Springs**	**45.38**	**257**	P	**P**	**P**	**08 33 52.0**	**-1.1**
	comp=Z,6.1nm,0.8s,baz=100,slow=7.6,SNR=62							
WRA	**Warramunga Arr**	**45.47**	**262**	P	**P**	**P**	**08 33 52.4**	**-1.5**
	comp=Z,1.1nm,0.7s,baz=96,slow=7.2,SNR=8.4							
FITZ	**Fitzroy Crossi**	**53.90**	**262**	P	**P**	**P**	**08 34 54.2**	**-1.7**
PSAC2	**Pilbara Seismi**	**58.48**	**257**	P	**P**	**P**	**08 35 27.4**	**-0.4**
PSAC2					IAmb	IAmb	08 35 38.6	
	comp=Z,27nm,1.3s							
PSAB3	**Pilbara Seismi**	**58.52**	**257**	P	**P**	**P**	**08 35 27.4**	**-0.5**
PSAB3					IAmb	IAmb	08 35 36.5	
	comp=Z,36nm,1.4s							
PSAA3	**Pilbara Seismi**	**58.52**	**257**	P	**P**	**P**	**08 35 27.2**	**-0.8**
PSAA3					IAmb	IAmb	08 35 33.2	
	comp=Z,35nm,1.3s							
PSA00	**Pilbara Seismi**	**58.53**	**257**	P	**P**	**P**	**08 35 27.6**	**-0.5**
PSA00					IAmb	IAmb	08 35 32.1	
	comp=Z,30nm,1.4s							
PSAC3	**Pilbara Seismi**	**58.53**	**257**	P	**P**	**P**	**08 35 27.4**	**-0.7**
PSAC3					IAmb	IAmb	08 35 30.2	
	comp=Z,23nm,1.1s							
PSAA1	**Pilbara Seismi**	**58.54**	**257**	P	**P**	**P**	**08 35 27.5**	**-0.6**
PSAB1	**Pilbara Seismi**	**58.55**	**257**	P	**P**	**P**	**08 35 27.1**	**-1.1**
PSAB1					IAmb	IAmb	08 35 36.2	
	comp=Z,26nm,1.2s							
PSAD1	**Pilbara Seismi**	**58.57**	**257**	P	**P**	**P**	**08 35 27.7**	**-0.6**
PSAD3	**Pilbara Seismi**	**58.58**	**257**	P	**P**	**P**	**08 35 27.9**	**-0.5**
PSAD3					IAmb	IAmb	08 35 28.4	
	comp=Z,42nm,1.4s							
AKASG	**Malin Array Be**	**143.35**	**332**	PKP		PKPbc	08 44 56.0	+1.1
	comp=Z,0.2nm,0.3s,baz=41,slow=3.6,SNR=3.2							

IDC ***20*** *08:38:37.1±2.5, 27°.75N×105°.60W, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.3/35, mbtmp3.1/4, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/18, Error ellipse: s-maj=28.5km s-min=14.0km az=158.0*
NEIC ***20*** *08:38:37.1±2.4, 27°.68N±0°.04×105°.71W±0°.07, h11km±3km, Md4.5/16(MEX), Error ellipse: s-maj=9.1km s-min=4.6km az=70.0*
MEX ***20*** *08:38:39.9±0.3, 27°.66N×105°.82W, h5km±6km, MD4.5*
ISC 20 08:38:37.2±0.7, 27°.79N±0°.04×105°.77W±0°.04, h10km, n33,
σ1s91/50, Northern Mexico

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
HPIG		**0.85**	**174**	*e*P	**Pg**	**Pg**	**08 38 52.8**	**-0.8**
HPIG				*e*S	**Sg**	**Sg**	**08 39 03.4**	**-1.4**
HPIG		**0.85**	**174**		**Pg**	**Pg**	**08 38 51.8**	**-1.8**
HPIG				Sg	**Sg**	**Sg**	**08 39 03.1**	**-1.7**
HPIG		**0.85**	**174**		**Pg**	**Pg**	**08 38 52.8**	**-0.8**
HPIG					**Sg**	**Sg**	**08 39 03.4**	**-1.4**
TXAR	**Lajitas Array**	**2.41**	**50**	Pn		**Pn**	**08 39 16.0**	**-0.7**
	4.6nm,0.3s,baz=219,slow=14,SNR=145							
TXAR				Lg		Lg	08 39 50.5	
	55nm,0.3s,baz=225,slow=29,SNR=32							
CGIG		**3.22**	**324**	*i* P		**Pn**	**08 39 29.6**	**+1.7**
CGIG				*i* S		**Sn**	**08 40 08.1**	**+1.7**

CGIG		**3.22**	**324**			**Pn**	**08 39 29.6**	**+1.7**
CGIG						**Sn**	**08 40 08.1**	**+1.7**
MNTX	**Cornudas Mount**	**3.91**	**5**	*eP*		**Pn**	**08 39 39.9**	**+2.6**
MNTX	**Cornudas Mount**	**3.91**	**5**			**Pn**	**08 39 38.8**	**+1.4**
MNTX					Sn	**Sn**	**08 40 24.8**	**+1.4**
GUYB	**Guaymas**	**4.52**	**273**	*i* P		**Pn**	**08 39 45.1**	**-0.6**
GUYB				*i* S		**Sn**	**08 40 37.4**	**-0.9**
319A	**Douglas**	**4.71**	**320**			**Pn**	**08 39 49.9**	**+1.5**
319A					Sn	**Sn**	**08 40 43.9**	**+0.8**
HSIG		**4.73**	**286**	*eP*		**Pn**	**08 39 50.2**	**+1.6**
HSIG				*i* S		**Sn**	**08 40 42.8**	**-0.6**
HSIG		**4.73**	**286**	Pn		**Pn**	**08 39 49.2**	**+0.7**
HSIG				Sn		**Sn**	**08 40 41.6**	**-1.9**
HSIG		**4.73**	**286**			**Pn**	**08 39 50.2**	**+1.6**
HSIG						**Sn**	**08 40 42.8**	**-0.6**
121A	**Cookes Peak, D**	**5.04**	**340**	*eP*		**Pn**	**08 39 54.6**	**+1.6**
121A	**Cookes Peak, D**	**5.04**	**340**			**Pn**	**08 39 54.4**	**+1.4**
121A					Sn	**Sn**	**08 40 53.6**	**+2.1**
833A	**Chaparral WMA,**	**5.66**	**83**			**Pn**	**08 40 00.8**	**-0.6**
833A						LR	08 41 35.9	
ZAIG	**Zacatecas**	**5.77**	**149**	Pn		**Pn**	**08 40 02.4**	**-0.8**
ZAIG						LR	08 41 35.1	
JCT	**Junction City**	**5.87**	**61**	Pn		**Pn**	**08 40 05.3**	**+1.0**
JCT				Sg		**Sg**	**08 41 39.3**	**-6.2**
TUC	**Tucson**	**6.26**	**317**			**Pn**	**08 40 09.4**	**-0.3**
TUC					Sn	**Sn**	**08 41 24.7**	**+3.3**
LNIG	**Linares**	**6.34**	**116**	*eP*		**Pn**	**08 40 12.1**	**+1.3**
LNIG				*i* S		**Sn**	**08 41 24.0**	**+0.7**
LNIG	**Linares**	**6.34**	**116**			**Pn**	**08 40 12.1**	**+1.3**
LNIG						**Sn**	**08 41 24.0**	**+0.7**
Y22D	**IRIS PASSCAL I**	**6.34**	**351**	Pn		**Pn**	**08 40 11.9**	**+0.9**
MSTX	**Muleshoe**	**6.68**	**22**	Pn		**Pn**	**08 40 15.7**	**+0.2**
ANMO	**Albuquerque**	**7.16**	**355**	Pn		**Pn**	**08 40 22.4**	**+0.2**
	0.1nm,0.3s,baz=183,slow=17,SNR=1.9							
ANMO					Lg	Lg	08 42 26.0	
	0.5nm,0.3s,baz=102,slow=19,SNR=3.7							
214A	**Organ Pipe Nat**	**7.39**	**306**	Pn		**Pn**	**08 40 27.5**	**+2.3**
214A					Sg	**Sg**	**08 42 28.7**	**-5.8**
X18A	**Snowflake**	**7.62**	**333**			**Pn**	**08 40 28.4**	**0.0**
AMTX	**Amarillo**	**7.89**	**25**	Pn		**Pn**	**08 40 33.6**	**+1.6**
X16A	**Lo Mia Camp, P**	**8.21**	**325**			**Pn**	**08 40 37.5**	**+1.0**
X16A					Sn	**Sn**	**08 42 11.7**	**+2.3**
Y14A	**Wickenburg**	**8.73**	**316**	Pn		**Pn**	**08 40 45.2**	**+1.6**
WMOK	**Wichita Mounta**	**9.15**	**39**			**Pn**	**08 40 49.2**	**-0.1**
PDAR	**Pinedale Array**	**15.26**	**349**	Pn		**P**	**08 42 18.6**	**+0.8**
	0.1nm,0.3s,baz=156,slow=14,SNR=2.3							
TKL	**Tuckaleechee C**	**20.26**	**62**	LR		LR	08 52 01.3	
	comp=Z,78nm,22.0s,baz=316,slow=40							
YKA	**Yellowknife Ar**	**35.20**	**353**	P		**P**	**08 45 33.7**	**+2.6**
	0.2nm,0.6s,baz=167,slow=9.2,SNR=6.9							

*IDC **20** 08:43:26.6±8.9, 41˚.41N×19˚.42E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.3/31, mbtmp3.5/3, ML2.9/1, Error ellipse: s-maj=165.6km s-min=32.0km az=32.0*
*ATH **20** 08:43:27.0, 41˚.48N×19˚.38E, h14km±1km, ML3.1/4, Error ellipse: s-maj=3.8km s-min=1.3km az=4.0*
*TIR **20** 08:43:29.4, 41˚.40N×19˚.51E, h13km, Md3.2/9*
*THE **20** 08:43:29.3, 41˚.47N×19˚.42E, h0km±1km, ML2.8/3, Error ellipse: s-maj=2.5km s-min=0.9km az=310.0*
*SKO **20** 08:43:30.6, 41˚.37N×19˚.49E, h12km*
*PDG **20** 08:43:31.0±0.3, 41˚.43N×19˚.60E, h9km, MD3.4/3, ML3.3/10, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*BEO **20** 08:43:32.0±0.4, 41˚.45N×19˚.72E, h13km±2km, ML2.9/15*

ISC 20 08:43:30.3±0.9, 41˚.39N±0˚.02×19˚.52E±0˚.02, h17km±6km, n121, σ1§24/174, 13C-3D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.27**	**99**	P		P	**Pg**	**08 43 35.4**	**-0.8**
TIR				S		S	**Sb**	**08 43 41.1**	**+0.1**
TIR	**Tirane**	**0.27**	**99**	*e*Pg		**Pg**	**08 43 35.3**	**-0.8**
TIR				*e*Sg		**Sg**	**08 43 39.8**	**-0.4**
TIR	**Tirane**	**0.27**	**99**	*i* PG		**Pg**	**08 43 35.4**	**-0.8**
TIR				*i* PG		**Pn**	**08 43 40.0**	**+0.5**
TIR	**Tirane**	**0.27**	**99**	P		**Pg**	**08 43 35.3**	**-0.8**
TIR				S		**Pn**	**08 43 40.0**	**+0.5**
TIR				AML		AML	08 43 40.7	
	comp=N,10630μm,0.7s							
TIR				AML		AML	08 43 44.7	
	comp=E,9967μm,0.3s							
TIR	**Tirane**	**0.27**	**99**	⇓P		**Pg**	**08 43 35.3**	**-0.8**
ULC	**Ulcinj**	**0.61**	**341**	*e*Pg		**Pb**	**08 43 42.0**	**-0.6**
ULC				*e*Sg		**Sb**	**08 43 52.0**	**+1.1**
PUK	**Puka**	**0.71**	**23**	*i* PG		**Pg**	**08 43 43.5**	**-0.8**
PUK				*i* PG		**Sg**	**08 43 54.1**	**+0.4**
PHP	**Peshkopia**	**0.75**	**67**	P		**Pg**	**08 43 44.5**	**-0.6**
PHP				S		**Sb**	**08 43 56.2**	**+1.1**
PHP	**Peshkopia**	**0.75**	**67**	*i* PG		**Pg**	**08 43 43.7**	**-1.4**
PHP				*i* PG		**Sb**	**08 43 55.9**	**+0.8**
DRME	**Dracevica, Mon**	**0.83**	**343**	*e*Pn		**Pg**	**08 43 46.0**	**-0.6**
DRME	**Dracevica, Mon**	**0.83**	**343**	*e*Pg		**Pb**	**08 43 46.6**	**+0.2**
DRME				*e*Sg		**Sn**	**08 43 59.3**	**0.0**
VLO	**Vlora**	**0.92**	**181**	*i* PG		**Pb**	**08 43 47.9**	**0.0**
VLO				*i* PG		**Sg**	**08 44 01.6**	**+1.4**
OHR	**Ohrid**	**1.01**	**106**	*i* Pg		**Pb**	**08 43 48.2**	**-1.1**
OHR				*i* Sg		**Sn**	**08 44 04.3**	**+0.7**
OHR				*e*Lg		Lg	08 44 05.4	
	comp=N,630nm,1.0s							
OHR				*e*Lg		Lg	08 44 05.8	
	comp=E,562nm,1.0s							
BUM	**Brajici-Budva**	**1.02**	**333**	*e*Pg		**Pn**	**08 43 50.0**	**0.0**
BUM				*e*Sg		**Sn**	**08 44 06.3**	**+2.3**
PDG	**Podgorica**	**1.06**	**349**	*e*Pg		**Pn**	**08 43 51.3**	**+0.9**
PDG				*e*Sg		**Sn**	**08 44 04.8**	**+0.1**
PDG	**Podgorica**	**1.06**	**349**	⇑P		**Pn**	**08 43 51.2**	**+0.8**
PDG	**Podgorica**	**1.06**	**349**	⇑S		**Sn**	**08 44 08.9**	**+4.2**
PDG	**Podgorica**	**1.06**	**349**	⇑*i*Pn		**Pn**	**08 43 51.0**	**+0.6**
TTG	**Podgorica**	**1.06**	**349**	*e*Pg		**Pg**	**08 43 50.1**	**-0.7**
TTG				*e*Sg		**Sn**	**08 44 06.8**	**+2.0**
BCI	**Bajram Curri**	**1.06**	**23**	*i* PG		**Pb**	**08 43 49.3**	**-0.9**
BCI				*i* PG		**Sg**	**08 44 05.6**	**+0.8**
TPE	**Tepelena**	**1.16**	**161**	P		**Pg**	**08 43 53.0**	**+0.4**
TPE	**Tepelena**	**1.16**	**161**	*i* PG		**Pn**	**08 43 52.0**	**+0.3**
TPE				*i* PG		**Sg**	**08 44 09.0**	**+1.2**
CEME	**Cevo**	**1.24**	**339**	*e*Pg		**Pg**	**08 43 53.7**	**-0.6**
CEME				*e*Sg		**Sg**	**08 44 13.0**	**+2.5**
PVY	**Plav**	**1.25**	**15**	*e*Pg		**Pb**	**08 43 53.3**	**-0.2**
PVY				*e*Sg		**Sg**	**08 44 12.2**	**+1.4**
HCY	**Herceg Novi**	**1.30**	**325**	*e*Pn		**Pb**	**08 43 54.1**	**-0.3**
HCY	**Herceg Novi**	**1.30**	**325**	⇑*i*Pg		**Pg**	**08 43 54.6**	**-0.9**
HCY				*e*Sg		**Sg**	**08 44 15.7**	**+3.2**
NKME	**Niksic**	**1.44**	**343**	*e*Pg		**Pg**	**08 43 57.1**	**-0.9**
NKME				*e*Sg		**Sg**	**08 44 19.4**	**+2.6**
NKY	**Niksic**	**1.48**	**345**	*e*Pg		**Pg**	**08 43 57.8**	**-0.9**
NKY				*e*Sg		**Sg**	**08 44 20.2**	**+2.2**
IVA	**Berane**	**1.51**	**11**	*e*Pg		**Pg**	**08 43 58.3**	**-1.1**
IVA				*e*Sg		**Sg**	**08 44 20.3**	**+1.3**
NEST	**Nestorio**	**1.52**	**129**	P		**Pb**	**08 43 58.7**	**+0.6**
NEST				S		**Sg**	**08 44 21.6**	**+2.4**
	comp=E,150nm,0.5s							
NEST	**Nestorio**	**1.52**	**129**	P		**Pb**	**08 43 58.3**	**+0.2**
NEST				S		**Sg**	**08 44 20.3**	**+1.0**
NEST				AML		AML	08 44 22.5	
	comp=E,200μm,0.5s							
NEST				AML		AML	08 44 26.1	
	comp=N,369μm,0.6s							
FNA	**Florina**	**1.53**	**113**	P		**Pb**	**08 43 58.1**	**-0.2**
FNA				S		**Sg**	**08 44 20.9**	**+1.2**
	comp=N,302nm,0.4s							
FNA	**Florina**	**1.53**	**113**	*i* PN		**Pb**	**08 43 58.3**	**0.0**
FNA				*i* PN		**Sg**	**08 44 20.4**	**+0.7**
FNA	**Florina**	**1.53**	**113**	P		**Pn**	**08 43 57.8**	**+0.9**
FNA				S		**Sg**	**08 44 19.7**	**0.0**
FNA				AML		AML	08 44 21.8	
	comp=N,1390μm,0.8s							
FNA				AML		AML	08 44 27.1	
	comp=E,810μm,0.6s							
SCTE	**Santa Cesarea**	**1.54**	**212**	P		**Pn**	**08 43 56.7**	**-0.2**
SRN	**Sarande**	**1.55**	**166**	P		**Pb**	**08 43 59.1**	**+0.5**
SRN	**Sarande**	**1.55**	**166**	*i* PN		**Pb**	**08 43 59.1**	**+0.5**
SRN				*i* PN		**Sg**	**08 44 21.6**	**+1.3**
SKO	**Skopje**	**1.55**	**67**	*i* Pg		**Pb**	**08 43 58.7**	**+0.1**
SKO				*i* Sg		**Sg**	**08 44 20.5**	**+0.1**
TREB	**Trebinje**	**1.59**	**327**	*e*Pn		**Pg**	**08 44 00.3**	**-0.5**
TREB				*e*Sg		**Sg**	**08 44 23.2**	**+1.8**
TREB	**Trebinje**	**1.59**	**327**	*e*Pn		**Pn**	**08 43 57.8**	**+0.1**
DBRK	**Dubrovnik**	**1.64**	**322**	*i* Pn		**Sb**	**08 43 58.7**	**+0.4**
DBRK					Sn	**Sb**	**08 44 20.6**	**+0.2**
KASA	**Kassiopi**	**1.67**	**169**	P		**Pn**	**08 43 59.9**	**+1.1**
BRY	**Bratogost**	**1.68**	**335**	*e*Pn		**Pb**	**08 44 00.4**	**-0.4**
CGL1	**Ceglie Messapi**	**1.71**	**245**	*e*Pn		**Pn**	**08 43 58.7**	**-0.7**
UPM	**Unac-Piva**	**1.87**	**346**	*e*Pn		**Pn**	**08 44 02.5**	**+0.8**
SJES	**Sjenica**	**1.90**	**10**	*e*Pn		**Pn**	**08 44 02.9**	**+0.8**
PLE	**Pljevlja**	**1.94**	**357**	*e*Pn		**Pb**	**08 44 04.9**	**-0.4**
PLE				*e*Sn		**Sg**	**08 44 31.7**	**-1.1**
NOCI	**Noci**	**1.95**	**253**	*i* PN		**Pb**	**08 44 04.5**	**-0.9**
NOCI				*i* PN		**Sg**	**08 44 31.7**	**-1.3**
NOCI	**Noci**	**1.95**	**253**	P		**Pn**	**08 44 01.0**	**-1.6**
NOCI				S		**Sn**	**08 44 25.0**	**-1.8**
NOCI				AML		AML	08 44 38.7	
	comp=E,993μm,0.3s							
NOCI				AML		AML	08 44 41.8	
	comp=N,1120μm,0.3s							
IGT	**Igoumenitsa**	**1.96**	**161**	P		**Pn**	**08 44 03.4**	**+0.6**
IGT				S		**Sb**	**08 44 30.8**	**+1.2**
STON	**Ston**	**2.00**	**318**	*i* Pn		**Pn**	**08 44 03.6**	**+0.2**
STON					Sn	**Sn**	**08 44 28.2**	**+0.2**
STON	**Ston**	**2.00**	**318**	*e*Pn		**Pn**	**08 44 02.7**	**-0.7**
KPRO	**Kipourio**	**2.01**	**135**	P		**Pn**	**08 44 05.1**	**+1.6**
KPRO	**Kipourio**	**2.01**	**135**	P		**Pn**	**08 44 04.6**	**+1.1**
BAI	**Bari**	**2.01**	**263**	*e*Pn		**Pg**	**08 44 08.7**	**-0.2**
BAI					Sn	**Sn**	**08 44 26.4**	**-1.8**
KZN	**Kozani**	**2.02**	**122**	P		**Pb**	**08 44 06.0**	**-0.7**
KZN				S		**Sg**	**08 44 34.4**	**-1.0**
	comp=N,135nm,0.6s							
STIP	**Stip**	**2.03**	**80**	*e*Pn		**Pb**	**08 44 07.3**	**+0.6**
SELS	**Selova**	**2.18**	**32**	*e*Pn		**Pn**	**08 44 06.8**	**+0.9**
SELS				*e*Sn		**Sn**	**08 44 31.4**	**-1.1**
SG1	**Sgolgore (BA)**	**2.21**	**257**	*e*Pn		**Pb**	**08 44 10.8**	**+0.9**
SG1					Sn	**Sb**	**08 44 39.0**	**+2.0**
GRG	**Griva**	**2.22**	**100**	P		**Pn**	**08 44 07.6**	**+1.2**
GRG				S		**Sb**	**08 44 38.3**	**+1.0**
GRG	**Griva**	**2.22**	**100**	P		**Pn**	**08 44 07.5**	**+1.0**
BARS	**Barje**	**2.23**	**49**	*e*Pn		**Pn**	**08 44 07.5**	**+1.0**
BARS				*e*Sn		**Sn**	**08 44 31.6**	**-2.0**
RUDO	**Rudo**	**2.23**	**357**	*e*Pn		**Pn**	**08 44 07.5**	**+1.0**
IVAS	**Ivanjica**	**2.24**	**12**	*e*Pn		**Pn**	**08 44 07.6**	**+0.9**
IVAS				*e*Sn		**Sn**	**08 44 33.8**	**-0.1**
MATE	**Matera**	**2.25**	**252**	⇑P		**Pn**	**08 44 06.9**	**+0.1**
VAY	**Valandovo**	**2.30**	**91**	*e*Pn		**Pn**	**08 44 08.4**	**+0.9**
VAY				*e*Lg		Lg	08 44 43.7	
	comp=N,56nm,0.6s							
VAY				*e*Lg		Lg	08 44 44.8	
	comp=E,38nm,0.7s							
BBLS	**Lazići**	**2.48**	**358**	*e*Pn		**Pn**	**08 44 11.2**	**+1.2**
BBLS	**Lazići**	**2.48**	**358**	*e*Pn		**Pn**	**08 44 10.4**	**+0.4**
KNT	**Kendrikon**	**2.56**	**94**	P		**Pn**	**08 44 12.3**	**+1.2**
KNT	**Kendrikon**	**2.56**	**94**	P		**Pn**	**08 44 11.8**	**+0.8**
LIT	**Litokhoron**	**2.60**	**119**	P		**Pn**	**08 44 13.6**	**+2.0**
GRUS	**Gruza**	**2.65**	**19**	*e*Pn		**Pn**	**08 44 13.0**	**+0.7**
MAKA	**Makarska**	**2.65**	**317**	*e*Pn		**Pn**	**08 44 12.7**	**+0.5**
MAKA					Sn	**Sn**	**08 44 44.1**	**+0.1**
KKB	**Krupnik**	**2.72**	**79**	*e*P		**Sb**	**08 44 49.1**	**-2.4**
HAPS	**Han Pijesak,Bl**	**2.73**	**351**	*e*Pn		**Pn**	**08 44 15.4**	**+1.9**
HAPS	**Han Pijesak,Bl**	**2.73**	**351**	⇑*i*Pn		**Pn**	**08 44 14.0**	**+0.5**
DIVS	**Divibare**	**2.73**	**7**	*e*Pn		**Pn**	**08 44 14.5**	**+1.0**
DIVS	**Divibare**	**2.73**	**7**	*e*Pn		**Pn**	**08 44 14.1**	**+0.6**
LKD2	**Lefkada island**	**2.74**	**161**	P		**Pn**	**08 44 14.4**	**+0.8**
BOVS	**Bovan**	**2.77**	**35**	*e*Pn		**Pn**	**08 44 15.2**	**+1.3**
BOVS				*e*Sn		**Sn**	**08 44 46.0**	**-0.9**
HORT	**Hortiatis**	**2.83**	**105**	P		**Pn**	**08 44 15.8**	**+1.0**
HVAR	**Hvar**	**2.89**	**309**	*e*Pn		**Pn**	**08 44 15.5**	**-0.1**
HVAR					Sn	**Sn**	**08 44 48.7**	**-1.3**
EVGI	**Lefkada island**	**2.90**	**162**	P		**Pn**	**08 44 17.1**	**+1.4**
ZAPS	**Zavoj**	**2.98**	**50**	*e*Pn		**Pn**	**08 44 16.4**	**-0.5**
ZAPS				*e*Sn		**Sn**	**08 44 50.7**	**-1.6**
VTS	**Vitosha**	**3.03**	**65**	*e*Pn		**Pn**	**08 44 16.7**	**-1.0**
VTS				*e*Sg		**Sb**	**08 45 02.4**	**+1.7**
VTS	**Vitosha**	**3.03**	**65**	⇓P		**Pn**	**08 44 19.0**	**+1.3**
VTS	**Vitosha**	**3.03**	**65**	⇑S		**Sn**	**08 44 55.9**	**+2.2**
VTS	**Vitosha**	**3.03**	**65**	*e*P		**Sn**	**08 44 55.2**	**+1.5**
TIP	**Timpagrande**	**3.05**	**225**	⇑P		**Pn**	**08 44 17.2**	**-0.7**
ZAGS	**Zajecar**	**3.14**	**39**	*e*Pn		**Pn**	**08 44 19.9**	**+0.8**
ZAGS				*e*Sn		**Sn**	**08 44 54.3**	**-1.9**
PLG	**Polygyros**	**3.15**	**108**	P		**Pn**	**08 44 21.2**	**+2.0**
TEKS	**Tekeris**	**3.16**	**0**	*e*Pn		**Pn**	**08 44 15.9**	**-3.4**
PVO	**Paravola**	**3.17**	**150**	P		**Pn**	**08 44 20.4**	**+1.0**
AGG	**Agios Georgios**	**3.20**	**137**	P		**Pn**	**08 44 21.8**	**+1.9**
ANX	**Ano Chora**	**3.35**	**146**	P		**Pn**	**08 44 23.9**	**+1.9**
KIJV	**Kijevo**	**3.48**	**320**	*i* Pn		**Pn**	**08 44 24.5**	**+0.8**
KIJV					Sn	**Sn**	**08 45 05.0**	**+0.5**
MGRS	**Mrkonjic Grad**	**3.51**	**330**	*e*Pn		**Pn**	**08 44 25.0**	**+0.8**
ZIRJ	**Zirje**	**3.65**	**310**	*e*Pn		**Pn**	**08 44 26.2**	**+0.2**
ZIRJ					Sn	**Sn**	**08 45 08.1**	**-0.5**
MORI	**Morici**	**3.75**	**313**	*e*Pn		**Pn**	**08 44 28.2**	**+0.9**
BLY	**Banja Luka**	**3.77**	**334**	⇑P		**Pn**	**08 44 28.6**	**+0.9**
BLY	**Banja Luka**	**3.77**	**334**	*e*Pn		**Pn**	**08 44 28.4**	**+0.8**
FRGS	**Fruska Gora**	**3.77**	**3**	*e*Pn		**Pn**	**08 44 26.8**	**-0.9**
HERR	**Herculane**	**4.08**	**30**	⇑P		**Pn**	**08 44 32.6**	**+0.7**
UDBI	**Udbina**	**4.17**	**320**	*i* Pn		**Pn**	**08 44 34.9**	**+1.6**
DUGI	**Dugi Otok**	**4.19**	**310**	*e*Pn		**Pn**	**08 44 34.1**	**+0.6**
DUGI					Sn	**Sn**	**08 45 22.1**	**+0.1**
BZS	**Buzias**	**4.49**	**19**	⇓P		**Pn**	**08 44 38.4**	**+0.8**
GZR	**Gura Zlata**	**4.65**	**30**	⇑P		**Pn**	**08 44 41.9**	**+2.0**
NVLJ	**Novalja**	**4.66**	**315**	*e*Pn		**Pn**	**08 44 40.0**	**+0.2**
NVLJ					Sn	**Sn**	**08 45 32.4**	**-1.1**
MORH	**Mrgy, Hungar**	**4.87**	**353**	*e*Pn		**Pn**	**08 44 38.9**	**-3.8**
CRES	**Cresnjev**	**5.32**	**328**	*e*Pn		**Pn**	**08 44 47.9**	**-1.1**
BRJN	**Brijuni**	**5.49**	**312**	*e*Pn		**Pn**	**08 44 51.1**	**-0.2**
CEY	**Cerknica**	**5.71**	**321**	*e*Pn		**Pn**	**08 44 53.8**	**-0.5**
VOIR		**5.71**	**43**	⇑P		**Pn**	**08 44 56.1**	**+1.7**
SOKA	**Soboth**	**6.20**	**330**	*e*Pn		**Pn**	**08 45 01.3**	**+0.3**
	comp=E,1.4nm,0.2s							
MLR	**Muntele Rosu**	**6.22**	**47**	⇑P		**Pn**	**08 45 04.5**	**+3.0**
OBKA	**Obir**	**6.25**	**327**	*e*Pn		**Pn**	**08 45 02.7**	**+0.9**
	comp=E,0.8nm,0.2s							
KBA	**Koelnbreinsper**	**7.21**	**324**	Pn		**Pn**	**08 45 14.5**	**-0.6**
	comp=E,0.5nm,0.2s							
WTTA	**Wattenberg**	**8.14**	**319**	*e*Pn		**Pn**	**08 45 29.5**	**+1.5**
	comp=E,4.6nm,0.4s							
GERES	**GERESS Array B**	**8.51**	**333**	Pn		**Pn**	**08 45 31.9**	**-0.9**
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=2.1							
FINES	**FINESS Array B**	**20.48**	**9**	P		**P**	**08 48 05.3**	**-1.6**
	comp=E,2.4nm,0.9s,baz=180,slow=11,SNR=4.7							
MKAR	**Makanchi Array**	**44.35**	**61**	P		**P**	**08 51 38.8**	**-0.7**
	comp=E,0.8nm,0.6s,baz=288,slow=6.5,SNR=5.8							

*NEIC **20** 08:45:47.6±1.2, 27˚.71N±0˚.04×105˚.6W±0˚.1, h14km±8km, Md4.0/7(MEX), Error ellipse: s-maj=15.0km s-min=6.4km az=91.0*

MEX 20 08:45:49.2±0.3, 27˚.70N×105˚.62W, h5km, MD4.0, Northern Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HPIG		**0.76**	**183**	*e*P		Pg		08 46 02.7	-1.1
	baz=2.9,slow=12								
HPIG				*e*S		Sg		08 46 13.2	-0.5
HPIG		**0.76**	**183**			Pg		08 46 02.6	-1.2
HPIG					Sg	Sg		08 46 13.3	-0.4
HPIG		**0.76**	**183**			Pg		08 46 02.7	-1.1
HPIG						Sg		08 46 13.2	-0.5
CGIG		**3.37**	**323**	*e*P		Pn		08 46 39.6	-3.0
CGIG				*i* S		Sn		08 47 19.9	-3.1
CGIG		**3.37**	**323**			Pn		08 46 39.6	-3.0
CGIG						Sn		08 47 20.9	-2.2
MNTX	**Cornudas Mount**	**3.99**	**3**	*i* P		Pn		08 46 48.8	-2.3
MNTX				*i* S		Sn		08 47 34.4	-4.0
MNTX	**Cornudas Mount**	**3.99**	**3**			Pn		08 46 48.8	-2.3
MNTX					Sn	Sn		08 47 34.0	-4.3
319A	**Douglas**	**4.86**	**320**	Pn		Pn		08 47 00.5	-2.6
319A					Sn	Sn		08 47 55.1	-4.7
121A	**Cookes Peak, D**	**5.17**	**339**	*i* P		Pn		08 47 04.6	-2.9
121A	**Cookes Peak, D**	**5.17**	**339**			Pn		08 47 04.3	-3.2

*NNC **20** 08:50:31.8±13.0, 37˚.23N×70˚.66E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=144.9km s-min=81.2km az=147.0*
*IDC **20** 08:50:35.1±14.0, 34˚.96N×70˚.20E, h398km±118km, mb3.1/1, mb1 2.8/3, mb1mx2.4/29, mbtmp3.6/3, Error ellipse: s-maj=268.0km s-min=64.1km az=160.0*

ISC 20 08:50:31.4±3.8, 36˚.7N±0˚.3×70˚.5E±0˚.2, h110km, n7, σ2§98/7, 2C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.38**	**0**	Pn		Pn	**Pn**	**08 52 01.7**	**-1.1**
	0.8nm,0.2s,baz=174,slow=12,SNR=31								
KK31					⇑Sn	Sn		08 53 11.7	-2.5
	1.5nm,0.3s,baz=185,slow=25,SNR=4.7								
AAK	**Ala-Archa**	**6.66**	**26**	⇓Pn			**Pn**	**08 52 03.9**	**-2.9**
	4.0nm,0.7s								
AAK					⇓Sn	Sn		08 53 10.6	-11
	5.6nm,1.1s								
TKM2	**Tokmak 2**	**7.33**	**31**	⇓Pn			**Pn**	**08 52 12.5**	**-3.4**
	3.2nm,0.7s								
TKM2					⇓Sn		**Sn**	**08 53 39.1**	**+1.5**
	1.4nm,0.6s								
GEYT	**Alibeck**	**9.95**	**281**	P		Pn		08 52 54.5	+3.3
	0.6nm,0.3s,baz=104,slow=10,SNR=3.4								
MKAR	**Makanchi Array**	**13.35**	**37**	P			**P**	**08 53 45.4**	**+3.4**
	0.0nm,0.3s,baz=218,slow=11,SNR=3.8								
AB31	**Akbulak array**	**14.71**	**332**	⇑P			**Pn**	**08 53 53.7**	**-0.1**
	0.2nm,0.3s,baz=172,slow=9.9,SNR=15								
ZALV	**Zalesovo Beam**	**19.89**	**25**	P			**P**	**08 54 54.0**	**+0.2**
	1.2nm,0.4s,baz=223,slow=10,SNR=5.0								

*IGIL **20** 08:51:57.6, 37˚.24N×14˚.37W, h21km, ML3.2*
*MDD **20** 08:51:57.4±1.6, 37˚.25N×14˚.32W, h22km±17km, mb4.4/17, Error ellipse: s-maj=14.6km s-min=9.8km az=108.0, PRXIMO*
*INMG **20** 08:51:59.8±1.6, 37˚.20N×14˚.48W, h10km, ML2.9, Error ellipse: s-maj=5.8km s-min=5.1km az=69.0*
*CNRM **20** 08:52:06.0±1.3, 37˚.12N×13˚.56W, h146km±31km, Error ellipse: s-maj=14.7km s-min=8.9km az=58.0*

ISC 20 08:51:53.9±1.7, 37˚.26N±0˚.06×14˚.21W±0˚.09, h10km, n69, σ2§67/129, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**4.24**	**65**	*e*P			**Pn**	**08 53 01.4**	**+2.9**
PMAFR				*e*S			**Sn**	**08 53 48.7**	**+0.7**
PMAFR				A			A	08 53 57.3	
	32nm,0.2s								
PMAFR	**Mafra**	**4.24**	**65**	P			**Pn**	**08 53 01.3**	**+2.9**
	24nm,0.1s,SNR=20								
PMAFR				S			**Sn**	**08 53 48.2**	**+0.1**
	21nm,0.3s,SNR=8.9								
PFVI	**Vila Bisbo**	**4.30**	**90**	*e*P			**Pn**	**08 53 02.1**	**+2.8**
PFVI				*e*S			**Sn**	**08 53 48.1**	**-1.4**
PFVI				A			A	08 53 55.3	
	9.1nm,0.8s								
PFVI	**Vila Bisbo**	**4.30**	**90**	P			**Pn**	**08 53 02.0**	**+2.7**
	8.1nm,0.1s,SNR=21								
PFVI

	comp=E,3.7nm,0.3s							
EMIN	**Mina Concepcio**	**6.01**	**83**	P		**Pn**	**08 53 25.7**	**+2.9**
	comp=E,1.3nm,0.1s,SNR=12							
EMIN				S		**Sn**	**08 54 29.3**	**-2.4**
	comp=E,3.9nm,0.3s,SNR=12							
MTE	**Manteigas**	**6.07**	**57**	*e*S		**Sn**	**08 54 33.1**	**-0.3**
MTE				A		A	08 54 33.5	
	comp=E,9.2nm,0.2s							
MTE	**Manteigas**	**6.07**	**57**	S		**Sn**	**08 54 33.1**	**-0.3**
	comp=E,4.6nm,0.2s							
EZAM	**Zamans**	**6.47**	**39**	P		**Pn**	**08 53 31.0**	**+1.8**
	comp=E,5.6nm,0.3s,SNR=7.9							
EZAM				S		**Sn**	**08 54 38.7**	**-4.4**
	comp=E,19nm,0.6s,SNR=7.9							
PCAB	**Cabril**	**6.53**	**45**	*e*P		**Pn**	**08 53 31.8**	**+1.8**
PCAB				*e*S		**Sn**	**08 54 41.6**	**-2.9**
PCAB	**Cabril**	**6.53**	**45**	P		**Pn**	**08 53 31.8**	**+1.8**
PCAB				S		**Sn**	**08 54 41.6**	**-2.9**
ELOB	**Lobios**	**6.61**	**44**	P		**Pn**	**08 53 32.6**	**+1.4**
	comp=E,2.9nm,0.1s,SNR=9.6							
ELOB				S		**Sn**	**08 54 44.2**	**-2.4**
	comp=E,70nm,1.4s							
MVO	**Moncorvo**	**6.80**	**53**	*e*P		**Pn**	**08 53 36.2**	**+2.4**
MVO				*e*S		**Sn**	**08 54 48.0**	**-3.3**
MVO				A		A	08 54 51.4	
	comp=E,8.7nm,0.6s							
MVO	**Moncorvo**	**6.80**	**53**	P		**Pn**	**08 53 36.0**	**+2.3**
	comp=E,2.9nm,0.1s,SNR=6.9							
MVO				S		**Sn**	**08 54 48.7**	**-2.6**
	comp=E,4.3nm,0.3s,SNR=7.0							
EPLA	**Plasencia**	**6.95**	**64**	P		**Pn**	**08 53 38.4**	**+2.6**
	comp=E,3.1nm,0.3s,SNR=7.9							
EPLA				S		**Sn**	**08 54 52.1**	**-2.7**
	comp=E,3.7nm,0.2s,SNR=7.9							
ECAB	**El Cabril**	**7.02**	**81**	P		**Pn**	**08 53 39.0**	**+2.3**
	comp=E,1.8nm,0.1s,SNR=7.9							
ECAB				S		**Sn**	**08 54 54.0**	**-2.6**
	comp=E,7.3nm,0.3s,SNR=7.9							
HORN	**Hornachuelos**	**7.13**	**83**	P		**Pn**	**08 53 40.1**	**+1.9**
HORN				S		**Sn**	**08 54 56.6**	**-2.8**
EAGO	**Agolada(Pontev**	**7.26**	**38**	P		**Pn**	**08 53 40.9**	**+0.9**
	comp=E,2.3nm,0.1s,SNR=7.9							
EAGO				S		**Sn**	**08 54 58.3**	**-4.1**
	comp=E,18nm,0.7s,SNR=7.9							
PBRG	**Braganca**	**7.34**	**49**	*e*P		**Pn**	**08 53 43.6**	**+2.5**
PBRG				*e*S		**Sn**	**08 55 02.1**	**-2.4**
PBRG				A		A	08 55 03.0	
	comp=E,3.0nm,0.4s							
PBRG	**Braganca**	**7.34**	**49**	P		**Pn**	**08 53 43.6**	**+2.5**
PBRG				S		**Sn**	**08 55 02.1**	**-2.4**
	comp=E,1.5nm,0.4s							
EADA	**Adamuz**	**7.69**	**80**	P		**Pn**	**08 53 48.5**	**+2.6**
	comp=E,4.6nm,0.2s,SNR=23							
EADA				S		**Sn**	**08 55 09.8**	**-3.2**
	comp=E,5.3nm,0.4s,SNR=7.9							
EPON	**Pontenova**	**8.11**	**39**	P		**Pn**	**08 53 52.4**	**+0.8**
	comp=E,1.2nm,0.2s,SNR=7.9							
EPON				S		**Sn**	**08 55 18.9**	**-4.5**
	comp=E,15nm,0.6s,SNR=7.9							
ESDC	**Sonseca Array**	**8.39**	**70**	P		**Pn**	**08 53 57.7**	**+2.2**
	comp=E,0.9nm,0.2s,baz=258,slow=13,SNR=18							
ESDC				S		**Sn**	**08 55 25.9**	**-4.4**
	comp=E,0.4nm,0.3s,baz=255,slow=23,SNR=3.8							
ELGU	**Los Guajares,**	**8.47**	**89**	P		**Pn**	**08 53 59.6**	**+3.0**
	comp=E,3.4nm,3.3s,SNR=7.9							
GUD	**Guadarrama**	**8.53**	**64**	P		**Pn**	**08 54 00.4**	**+2.8**
	comp=E,2.5nm,5.0s,SNR=7.9							
GUD				S		**Sn**	**08 55 29.6**	**-4.2**
	comp=E,6.3nm,5.5s,SNR=7.9							
EQES	**Quesada**	**8.87**	**83**	P		**Pn**	**08 54 04.8**	**+2.7**
	comp=E,0.4nm,0.2s,SNR=7.9							
EQES				S		**Sn**	**08 55 37.9**	**-4.2**
	comp=E,3.1nm,0.7s,SNR=7.9							
MD31	**MD31**	**8.90**	**117**	P		**Pn**	**08 54 04.8**	**+2.3**
MD31				S		**Sn**	**08 55 39.4**	**-3.5**
MDT	**Midelt**	**9.03**	**117**	P		**Pn**	**08 54 06.5**	**+2.1**
MDT				S		**Sn**	**08 55 39.7**	**-6.6**
EARI	**Arriondas**	**9.14**	**46**	P		**Pn**	**08 54 08.2**	**+2.4**
	comp=E,0.9nm,0.2s,SNR=6.9							
EARI				S		**Sn**	**08 55 43.9**	**-5.0**
	comp=E,15nm,0.9s,SNR=4.3							
ETOB	**Tobarra**	**10.10**	**78**	P		**Pn**	**08 54 21.5**	**+2.5**
	comp=E,0.7nm,0.2s,SNR=7.9							
ETOR	**Torete**	**10.10**	**66**	P		**Pn**	**08 54 21.6**	**+2.6**
	comp=E,5.5nm,0.2s,SNR=9.8							
ETOR				S		**Sn**	**08 56 06.8**	**-5.6**
	comp=E,53nm,1.5s							
ELAN	**Lanestosa**	**10.16**	**51**	P		**Pn**	**08 54 22.5**	**+2.7**
	comp=E,4.4nm,3.3s,SNR=7.9							

TIR 20 09:03:01.0, 41°35N×19°52E, h7km, Md2.2/3, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.26**	**90**	*i* PG	Pg	09 03 06.5	+0.3
TIR				*i* SG	Sg	09 03 10.8	+1.2
PUK	**Puka**	**0.75**	**22**	*i* PG	Pb	09 03 16.1	-0.3
PUK				*i* SG	Sb	09 03 26.9	0.0
PHP	**Peshkopia**	**0.77**	**64**	*i* PG	Pg	09 03 15.2	-0.6
PHP				*i* SG	Sb	09 03 27.9	+0.5

ATH 20 09:03:38.3, 40.40N×21.86E, h0km±6km, ML0.0, Error ellipse: s-maj=7.0km s-min=1.6km az=214.0, Suspected Mining explosion., Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.12**	**214**	P	Pg	09 03 40.5	0.0
FNA	**Florina**	**0.53**	**316**	P	Pg	09 03 49.0	+0.5
LIT	**Litokhoron**	**0.57**	**122**	P	Pg	09 03 49.5	+0.2
KPRO	**Kipourio**	**0.59**	**220**	P	Pg	09 03 49.7	+0.1
NEST	**Nestorio**	**0.62**	**271**	P	Pg	09 03 50.2	+0.1
GRG	**Griva**	**0.69**	**37**	P	Pg	09 03 51.6	0.0
THL	**Klokotos Trika**	**0.85**	**172**	P	Pg	09 03 54.8	+0.3
AGG	**Agios Georgios**	**1.43**	**165**	P	Pb	09 04 06.1	+0.3

*NNC **20** 09:31:41.4±2.7, 39.33N×73.02E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=20.1km s-min=10.2km az=171.0*
*SOME **20** 09:31:41.1, 39.28N×73.05E, h20km*
*KRNET **20** 09:31:49.7±0.1, 39.53N×73.38E, mb2.6*
ISC 20 09:31:53.1±1.7, 39.68N±0.08×73.37E±0.04, h10km, n28, σ1§60/47, 12C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.67**	**350**	⇑*e*P	**Pb**	**09 32 23.6**	**-0.4**
	baz=50						
ARSB				⇑*i*S	**Sg**	**09 32 48.7**	**+1.8**
	baz=50						
BTK	**Batken**	**2.00**	**282**	⇑*i*P	**Pn**	**09 32 27.4**	**+0.4**
	baz=86						
BTK				⇑*i*S	**Sb**	**09 32 55.3**	**+0.7**
	baz=86						
ARLS	**Aral**	**2.30**	**18**	⇓*i*P	**Pb**	**09 32 33.1**	**-1.6**
	baz=17						
ARLS				⇓*i*S	**Sb**	**09 33 04.6**	**+1.3**
	baz=17						
ARK	**Arkit**	**2.37**	**334**	⇑*i*P	**Pn**	**09 32 33.5**	**+1.3**
	baz=35						
ARK				⇑*i*S	**Sb**	**09 33 05.7**	**+0.3**
	baz=35						
AML	**Almayashu**	**2.46**	**6**	⇓*i*P	**Pn**	**09 32 35.6**	**+1.9**
	baz=5.0						
AML				⇓*i*S	**Sb**	**09 33 09.2**	**+0.9**
	baz=5.0						
NRN	**Naryn**	**2.66**	**48**	⇑*i*P	**Pn**	**09 32 37.2**	**+0.8**
	baz=45						
NRN				⇑*i*S	**Sb**	**09 33 11.6**	**-2.3**
	baz=45						
UCH	**Uchtor**	**2.69**	**18**	⇑*i*P	**Pn**	**09 32 38.6**	**+1.7**
	baz=17						
UCH				⇑*i*S	**Sb**	**09 33 14.1**	**-0.8**
	baz=17						
KZA	**Kyzart**	**2.79**	**30**	⇓*i*P	**Pn**	**09 32 39.6**	**+1.4**
	baz=28						
KZA				⇓*i*S	**Sb**	**09 33 16.2**	**-1.5**
	baz=28						
EKS2	**Erkin-Say**	**3.00**	**6**	⇑*e*P	**Pn**	**09 32 42.7**	**+1.9**
	baz=5.0						
EKS2				⇑*e*S	**Sb**	**09 33 21.3**	**-2.1**
	baz=5.0						
MRKS	**Merke**	**3.07**	**358**	*e*P	**Pb**	**09 32 44.9**	**-2.9**
	3.6nm,0.3s						
MRKS				*e*S	**Sg**	**09 33 30.9**	**-0.7**
	5.2nm,0.4s						
MRKS	**Merke**	**3.07**	**358**	Pg	**Pb**	**09 32 45.2**	**-2.6**
	3.6nm,0.3s						
MRKS				Lg	Lg	09 33 32.2	
	5.2nm,0.4s						
AAK	**Ala-Archa**	**3.08**	**16**	⇓*i*P	**Pn**	**09 32 43.9**	**+2.0**
	baz=15						
AAK				⇓*i*S	**Sb**	**09 33 23.2**	**-2.5**
	baz=15						
ULHL	**Ulahol**	**3.36**	**39**	⇓*e*P	**Pn**	**09 32 47.3**	**+1.4**
	baz=38						
ULHL				⇓*e*S	**Sn**	**09 33 29.5**	**+3.5**
	baz=38						
IUG	**luzhnay**	**3.53**	**315**	*e*P	**Pn**	**09 32 48.0**	**-0.1**
	1.0nm,0.4s						
IUG				*e*S	**Sb**	**09 33 36.2**	**-2.5**
	13nm,0.5s						
IUG	**luzhnay**	**3.53**	**315**	Pg	**Pn**	**09 32 48.0**	**-0.1**
	0.6nm,0.2s						
IUG				Lg	Lg	09 33 36.2	
	12nm,0.7s						
KST	**Kastek**	**3.89**	**29**	*e*P	**Pb**	**09 33 00.3**	**-1.5**
	0.9nm,0.2s						
KST				*e*S	**Sg**	**09 33 57.7**	**-0.2**
	5.2nm,0.6s						
KST	**Kastek**	**3.89**	**29**	Pg	**Pb**	**09 33 00.3**	**-1.5**
	1.6nm,0.2s						
KST				Lg	Lg	09 33 57.7	
	4.7nm,0.6s						
DGS	**Degeres**	**3.99**	**26**	*e*P	**Pb**	**09 33 02.1**	**-1.5**
	2.6nm,0.5s						
DGS				*e*S	**Sg**	**09 34 01.0**	**-0.3**
	6.2nm,0.9s						
DGS	**Degeres**	**3.99**	**26**	Pg	**Pb**	**09 33 02.1**	**-1.5**
	2.6nm,0.5s						
DGS				Lg	Lg	09 34 01.0	
	6.2nm,0.9s						
KK31	**Karatay Array**	**4.04**	**329**	⇓Pg	**Pn**	**09 32 57.8**	**+2.7**
	0.5nm,0.3s,baz=152,slow=14,SNR=6.6						
KK31				⇓Lg	Lg	09 33 51.3	
	1.0nm,0.4s,baz=156,slow=25,SNR=4.0						
IZV	**Izvestkoviy**	**4.15**	**35**	*e*P	**Pb**	**09 33 04.8**	**-1.5**
	2.1nm,0.5s						
IZV				*e*S	**Sg**	**09 34 05.0**	**-1.3**
	9.5nm,0.7s						
IZV	**Izvestkoviy**	**4.15**	**35**	Pg	**Pb**	**09 33 04.8**	**-1.5**
	2.1nm,0.5s						
IZV				Lg	Lg	09 34 05.0	
	9.5nm,0.7s						
KOTS	**Kotyrbulak**	**4.53**	**37**	*e*P	**Pb**	**09 33 12.3**	**-0.4**
	3.1nm,0.4s						
KOTS				*e*S	**Sg**	**09 34 18.3**	**-0.3**
	22nm,0.6s						
KOTS	**Kotyrbulak**	**4.53**	**37**	Pg	**Pb**	**09 33 12.3**	**-0.4**
	3.1nm,0.4s						
KOTS				Lg	Lg	09 34 18.3	
	22nm,0.6s						
KTBS	**Karatobe**	**4.73**	**31**	*e*P	**Pb**	**09 33 15.6**	**-0.5**
	1.0nm,0.6s						
KTBS				*e*S	**Sg**	**09 34 23.9**	**-1.2**
	6.7nm,0.6s						
KTBS	**Karatobe**	**4.73**	**31**	Pg	**Pb**	**09 33 15.6**	**-0.5**
	1.0nm,0.6s						
KTBS				Lg	Lg	09 34 24.6	
	6.7nm,0.6s						
KUU	**Kurty**	**4.76**	**27**	*e*P	**Pb**	**09 33 15.9**	**-0.8**
	1.6nm,1.4s						
KUU				*e*S	**Sg**	**09 34 24.4**	**-1.6**
	5.5nm,0.6s						
KUU	**Kurty**	**4.76**	**27**	Pg	**Pb**	**09 33 15.9**	**-0.8**
	1.0nm,0.4s						
KUU				Lg	Lg	09 34 24.4	
	4.6nm,0.6s						

*NEIC **20** 09:32:58.1±1.3, 36.78N±0.04×121.57W±0.05, h8km±5km, Error ellipse: s-maj=7.5km s-min=2.3km az=223.0*
*NCEDC **20** 09:32:58.2±2.0, 36.82N±0.03×121.54W±0.06, h5km±4km, ML3.1/42, Error ellipse: s-maj=7.5km s-min=2.4km az=61.0*
*ANF **20** 09:32:58.1±2.6, 36.64N×121.73W, h11km±27km, ML3.2/14, Error ellipse: s-maj=17.4km s-min=8.0km az=87.0*
ISC 20 09:32:57.5±0.9, 36.79N±0.02×121.58W±0.02, h9km±6km, n226, σ1§07/229, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTUM	**Tustin Road**	**0.06**	**308**		**Pg**	**09 33 00.4**	**+0.9**
FRP	**Fremont Peak**	**0.08**	**115**		**Pg**	**09 32 60.0**	**+0.2**
SAO	**San Andreas Ge**	**0.11**	**103**	Pg	**Pg**	**09 33 00.3**	**+0.1**
SAO				Sg	Sg	**09 33 01.4**	**-0.6**
BVYM	**Vineyard**	**0.14**	**106**		**Pg**	**09 33 00.9**	**+0.3**
OCR	**O'Connell Ranc**	**0.14**	**25**		**Pg**	**09 33 01.1**	**+0.5**
CBC	**Chamberlain**	**0.16**	**336**		**Pg**	**09 33 01.4**	**+0.5**
CSR	**Chase Ranch**	**0.17**	**359**		**Pg**	**09 33 01.9**	**+0.8**
BSLM	**Silva Ranch**	**0.19**	**94**		**Pg**	**09 33 02.5**	**+1.1**
BCGM	**Cienega Road**	**0.21**	**112**		**Pg**	**09 33 02.2**	**+0.4**
HLTM	**Lone Tree Road**	**0.24**	**66**		**Pg**	**09 33 03.0**	**+0.6**
SCZ	**Santa Cruz**	**0.24**	**143**		**Pg**	**09 33 03.0**	**+0.7**
HFEM	**San Felipe**	**0.24**	**37**		**Pg**	**09 33 03.0**	**+0.6**
CDC	**Canada Road**	**0.25**	**18**		**Pg**	**09 33 03.2**	**+0.7**
HCAM	**Canada Road**	**0.25**	**18**		**Pg**	**09 33 03.2**	**+0.7**
HLPM	**Lions Peak**	**0.26**	**351**		**Pg**	**09 33 03.5**	**+0.8**
BHRM	**Hodges Ranch**	**0.26**	**103**		**Pg**	**09 33 04.0**	**+1.2**
BJOM	**Mount Johnson**	**0.27**	**127**		**Pg**	**09 33 03.6**	**+0.7**
BLRM	**Lewis Ranch**	**0.28**	**116**		**Pg**	**09 33 03.7**	**+0.6**
BJCM	**Johnson Can.**	**0.29**	**148**		**Pg**	**09 33 04.0**	**+0.8**
PACP	**Pacheco Peak**	**0.32**	**47**		**Pg**	**09 33 04.7**	**+0.7**
GHS	**Gilroy Hot Spr**	**0.33**	**19**		**Pg**	**09 33 04.7**	**+0.7**
HSPM	**Sheep**	**0.33**	**9**		**Pg**	**09 33 05.1**	**+1.0**
JTGM	**Trout Gulch Ro**	**0.34**	**315**		**Pg**	**09 33 05.3**	**+1.1**
BEHM	**Elkhorn Ranch**	**0.35**	**111**		**Pb**	**09 33 05.7**	**-0.3**
HPCM	**Pacheco Lake**	**0.36**	**42**		**Pg**	**09 33 05.5**	**+0.7**
CADM	**Anderson Res.**	**0.38**	**355**		**Pg**	**09 33 05.8**	**+0.8**
JHLM	**Holstrom Ranch**	**0.38**	**328**		**Pg**	**09 33 06.4**	**+1.4**
JLAB	**Laurel Hill**	**0.39**	**341**		**Pg**	**09 33 06.0**	**+0.9**
HAST	**Hastings Reser**	**0.40**	**176**		**Sb**	**09 33 12.9**	**-0.1**
SLD	**San Luis Dam**	**0.41**	**45**		**Pg**	**09 33 06.2**	**+0.6**
BEMM	**Emmet**	**0.41**	**108**		**Pg**	**09 33 06.6**	**+1.1**
SFJWR	**San Luis Fatjo**	**0.42**	**51**		**Pg**	**09 33 06.3**	**+0.6**
AMC	**Almaden**	**0.42**	**330**		**Pg**	**09 33 07.2**	**+1.4**
JUMM	**Mount Umunhum**	**0.45**	**326**		**Pg**	**09 33 07.3**	**+1.0**
JSTM	**Santa Teresa H**	**0.45**	**338**		**Pg**	**09 33 07.2**	**+0.9**
BSGM	**Shirttail Gulc**	**0.46**	**145**		**Pg**	**09 33 07.0**	**+0.5**
BAVM	**Antelope Valle**	**0.47**	**108**		**Pg**	**09 33 07.6**	**+1.0**
CCOB	**Coe Ranch Numb**	**0.47**	**351**		**Pb**	**09 33 08.4**	**+0.3**
MOBB	**Monterey Bay O**	**0.48**	**258**		**Pb**	**09 33 09.1**	**+1.1**
BBGB	**Big Mountain B**	**0.48**	**116**		**Pb**	**09 33 08.2**	**-0.1**
BBNM	**San Benito**	**0.49**	**124**		**Pg**	**09 33 07.9**	**+0.8**
SCCB	**Santa Clara Co**	**0.55**	**336**		**Pg**	**09 33 09.5**	**+1.4**
MHC	**Mount Hamilton**	**0.55**	**355**		**Pg**	**09 33 09.5**	**+1.2**
ARN	**Arnold Ranch**	**0.56**	**4**		**Pg**	**09 33 09.4**	**+1.0**
SCKWR	**San Luis Creek**	**0.57**	**46**		**Pg**	**09 33 09.7**	**+1.1**
JBNB	**Ben Lomond Mou**	**0.57**	**306**		**Pg**	**09 33 09.1**	**+0.5**
LRV	**Little Rabbit**	**0.58**	**129**		**Pg**	**09 33 09.5**	**+0.7**
BRMM	**Rolling Bench**	**0.61**	**85**		**Pb**	**09 33 10.6**	**+0.3**
JSGM	**Saratoga Golf**	**0.62**	**323**		**Pg**	**09 33 10.6**	**+1.1**
BMSM	**Mercy Hot Spri**	**0.65**	**101**		**Pb**	**09 33 11.0**	**0.0**
CMMM	**Mount Mocho**	**0.67**	**6**		**Pg**	**09 33 11.4**	**+1.0**
CALM	**Calaveras Res.**	**0.68**	**345**		**Pg**	**09 33 11.9**	**+1.2**
CMLM	**Mount Lewis**	**0.69**	**355**		**Pb**	**09 33 12.2**	**+0.4**
LRC	**Lone Oak Road**	**0.69**	**141**		**Pg**	**09 33 11.3**	**+0.4**
JPC	**Peters Creek,**	**0.70**	**314**		**Pg**	**09 33 11.7**	**+0.7**
JBMM	**Black Mountain**	**0.70**	**319**		**Pg**	**09 33 12.4**	**+1.4**
JJRM	**Joaquin Road**	**0.74**	**318**		**Pg**	**09 33 12.6**	**+0.8**
JFP	**Foothills Park**	**0.75**	**320**		**Pg**	**09 33 12.6**	**+0.6**
CMJM	**Mission San Jo**	**0.77**	**342**		**Pg**	**09 33 13.3**	**+1.0**
PCCM	**Crazy Canyon**	**0.78**	**154**		**Pb**	**09 33 13.4**	**+0.2**
JSFB	**Stanford Teles**	**0.78**	**322**		**Pg**	**09 33 13.4**	**+1.0**
JRSC	**Jasper Ridge**	**0.81**	**320**		**Pg**	**09 33 13.2**	**+0.2**
BGH	**Bear Gulch**	**0.82**	**313**		**Pg**	**09 33 13.9**	**+0.6**
WENL	**Wente Vineyard**	**0.84**	**351**		**Pb**	**09 33 15.1**	**+0.7**
PMPB	**Monarch Peak**	**0.85**	**132**		**Pg**	**09 33 14.2**	**+0.3**
JHPM	**Huddart Park**	**0.87**	**319**		**Pg**	**09 33 14.8**	**+0.5**
CNIC	**Niles Canyon**	**0.87**	**340**		**Pg**	**09 33 14.9**	**+0.6**
CYD1	**Coyote D'meter**	**0.88**	**332**		**Pg**	**09 33 14.9**	**+0.5**
PAPM	**Alder Peak**	**0.89**	**168**		**Pb**	**09 33 15.7**	**+0.5**
PSAM	**San Ardo**	**0.95**	**144**		**Pg**	**09 33 16.0**	**+0.3**
OXMT	**Ox Mountain**	**0.98**	**317**		**Pg**	**09 33 16.2**	**-0.1**
JCPM	**Coyote Point**	**0.99**	**324**		**Pg**	**09 33 16.7**	**+0.1**
CLCB	**Lake Chabot**	**1.02**	**338**		**Pg**	**09 33 17.9**	**+0.7**
CBSNC	**Byron Hot Spri**	**1.03**	**357**		**Pn**	**09 33 18.9**	**+0.8**
CMOB	**Morgan Territo**	**1.03**	**350**		**Pg**	**09 33 17.7**	**+0.3**
SAC	**San Andreas**	**1.04**	**320**		**Pg**	**09 33 17.7**	**+0.2**
PHSB	**Hesperia Broad**	**1.05**	**156**		**Pg**	**09 33 18.2**	**+0.4**
BGC	**Bolinger Road**	**1.09**	**340**		**Pg**	**09 33 18.3**	**-0.3**
CMCM	**Mills College**	**1.10**	**335**		**Pg**	**09 33 18.2**	**-0.4**
MYLM	**Yosemite Lake**	**1.10**	**57**		**Pg**	**09 33 18.2**	**-0.5**
CRHM	**Round Hill Res**	**1.12**	**343**		**Pg**	**09 33 19.4**	**+0.4**
PARM	**Anticline Ridg**	**1.14**	**118**		**Pn**	**09 33 20.2**	**+0.5**
PANM	**San Antonio Re**	**1.15**	**151**		**Pb**	**09 33 20.0**	**+0.5**
CRPB	**Russellman Par**	**1.15**	**347**		**Pg**	**09 33 18.8**	**-0.9**
PHCM	**Hearst Castle**	**1.16**	**162**		**Pg**	**09 33 19.8**	**0.0**
PWMM	**Westland Maint**	**1.16**	**107**		**Pn**	**09 33 20.4**	**+0.4**
BDM	**Black Diamond**	**1.19**	**349**		**Pb**	**09 33 19.5**	**-0.6**
CYBM	**Yerba Buena Is**	**1.20**	**329**		**Pb**	**09 33 20.2**	**-0.1**
BKS	**Berkeley--Byer**	**1.20**	**335**		**Pb**	**09 33 19.6**	**-0.9**
CVPM	**Vollmer Peak**	**1.21**	**335**		**Pb**	**09 33 19.8**	**-0.7**
PPO	**Portuguese Can**	**1.21**	**139**		**Pg**	**09 33 20.3**	**-0.4**
PVCM	**Vineyard Canyo**	**1.21**	**135**		**Pg**	**09 33 20.1**	**-0.6**
BRK	**Berkeley--Havi**	**1.21**	**334**		**Pb**	**09 33 21.1**	**+0.5**
VAK	**Adit at Lawren**	**1.21**	**334**		**Pb**	**09 33 20.1**	**-0.5**
BRIB	**Briones**	**1.22**	**338**		**Pb**	**09 33 20.1**	**-0.6**
RAMR	**Ramage Ranch**	**1.29**	**153**		**Pn**	**09 33 21.5**	**-0.2**
CPIM	**Pinole Ridge**	**1.30**	**337**		**Pn**	**09 33 21.4**	**-0.5**
CSPM	**San Pablo Ridg**	**1.30**	**334**		**Pn**	**09 33 21.4**	**-0.5**
PHFM	**Heflinger Ranc**	**1.31**	**133**		**Pn**	**09 33 21.9**	**-0.2**
CTM	**Castle Mountai**	**1.32**	**130**		**Pb**	**09 33 22.9**	**+0.4**
CPMM	**Point Molate**	**1.33**	**331**		**Pn**	**09 33 22.6**	**+0.3**
PCBM	**Cambria**	**1.34**	**161**		**Pn**	**09 33 22.3**	**-0.1**
PCMM	**Cholame Hills**	**1.36**	**136**		**Pn**	**09 33 22.5**	**-0.3**
BLDC	**Black Mountain**	**1.37**	**156**		**Pn**	**09 33 22.9**	**+0.1**
BLDC	**Black Mountain**	**1.37**	**156**		**Pn**	**09 33 23.0**	**+0.1**
GHC	**Gold Hill**	**1.38**	**134**		**Pn**	**09 33 22.7**	**-0.2**
MHDM	**Hidden Dam**	**1.39**	**76**		**Pn**	**09 33 22.4**	**-0.7**
PKEM	**Kettleman Hill**	**1.39**	**121**		**Pb**	**09 33 24.3**	**+0.6**
NLHM	**Lake Herman**	**1.40**	**341**		**Pn**	**09 33 22.7**	**-0.5**
PSRM	**Scobie Ranch**	**1.40**	**131**		**Pn**	**09 33 23.2**	**-0.2**
ARDC	**Alexander Ranc**	**1.41**	**160**		**Pn**	**09 33 23.2**	**-0.1**
MCUB	**Copperopolis B**	**1.41**	**33**		**Pn**	**09 33 22.5**	**-1.0**
PKLM	**Kerr Lake**	**1.43**	**135**		**Pn**	**09 33 23.6**	**-0.1**
PSNM	**Stone Corral**	**1.44**	**133**		**Pn**	**09 33 23.6**	**-0.2**
PMCM	**McMillan Canyo**	**1.44**	**137**		**Pn**	**09 33 23.9**	**0.0**
TCHL	**Shandon**	**1.46**	**139**		**Pn**	**09 33 24.1**	**+0.1**
PMRM	**Maxey Ranch**	**1.48**	**132**		**Pn**	**09 33 24.2**	**-0.1**
MNHB	**New Hogan Dam**	**1.49**	**24**		**Pn**	**09 33 23.6**	**-0.9**
PAGB	**Antelope Grade**	**1.51**	**134**		**Pn**	**09 33 24.6**	**-0.2**
FRI	**Friant**	**1.52**	**82**		**Pn**	**09 33 24.3**	**-0.5**
THIS	**South End of C**	**1.52**	**134**		**Pn**	**09 33 25.1**	**+0.1**
TRAM	**Private Proper**	**1.53**	**136**		**Pn**	**09 33 25.1**	**0.0**
SNT	**Sears Point**	**1.55**	**334**		**Pn**	**09 33 24.5**	**-0.8**
PTAM	**Tassajara Cree**	**1.56**	**153**		**Pn**	**09 33 25.5**	**-0.1**
CMB	**Columbia Colle**	**1.57**	**37**	Pn	**Pn**	**09 33 25.2**	**-0.4**
NOLM	**Olema**	**1.58**	**323**		**Pn**	**09 33 24.9**	**-0.7**
PTRM	**Twissleman Ran**	**1.58**	**135**		**Pn**	**09 33 25.6**	**-0.3**
TSCN	**Private Proper**	**1.59**	**141**		**Pn**	**09 33 25.9**	**0.0**
MMIM	**Miami Mountain**	**1.60**	**66**		**Pn**	**09 33 26.2**	**+0.1**
VPDC	**Valencia Peak**	**1.65**	**159**		**Pn**	**09 33 27.1**	**+0.4**
AASM	**Arroyo Seco**	**1.68**	**13**		**Pn**	**09 33 26.3**	**-0.8**
DPD	**Davis Peak**	**1.68**	**157**		**Pn**	**09 33 27.4**	**+0.2**
NADM	**Allendale**	**1.70**	**350**		**Pn**	**09 33 27.7**	**+0.4**
CVS	**Carmenet Viney**	**1.70**	**336**		**Pn**	**09 33 26.5**	**-0.9**
MCCM	**Marconi Confer**	**1.70**	**323**		**Pn**	**09 33 27.3**	**-0.1**
MCCM	**Marconi Confer**	**1.70**	**323**	Pn	**P

R11A	**Troy Canyon, C**	**5.01**	**70**	Pb	**Pb**	**09 34 29.1**	**+3.6**
	baz=254							
R11A				Sb	**Sg**	**09 35 34.5**	**-3.9**
	baz=254							
MOD	**Modoc Plateau**	**5.20**	**11**	Pn	**Pn**	**09 34 17.1**	**+1.4**
GMRC	**Granite Mounta**	**5.21**	**111**	P	**Pn**	**09 34 16.3**	**+0.5**
	baz=295							
PFO	**Pinyon Flats O**	**5.26**	**126**	Pn	**Pn**	**09 34 16.8**	**+0.4**
XPFO	**Pion Flat**	**5.26**	**126**	Pn	**Pn**	**09 34 16.8**	**+0.3**
BELC	**Belle Mtn. Jos**	**5.34**	**120**	P	**Pn**	**09 34 18.4**	**+0.8**
	baz=304							
L02E	**Cave Junction**	**5.58**	**344**	P	**Pn**	**09 34 24.0**	**+3.2**
	baz=163							
MONP2	**Monument Peak**	**5.75**	**131**	P	**Pn**	**09 34 24.1**	**+0.8**
	baz=314							

*NEIC **20** 09:37:56.3±1.0,51.41N±0.02×178.04W±0.03,h16km±5km, Error ellipse: s-maj=3.8km s-min=2.1km az=136.0*
*AEIC **20** 09:37:57.7±2.5,51.55N±0.03×178.01W±0.03,h13km±3km, ML3.4/19, Error ellipse: s-maj=4.8km s-min=2.5km az=192.0*
*IDC **20** 09:38:04.5±7.2,51.20N×175.67W,h0km,mb3.1/4, mb1 3.8/5,mb1mx3.3/52,mbtmp3.4/5,ML3.8/1, Error ellipse: s-maj=136.8km s-min=64.4km az=94.0*

ISC 20 09:37:55.9±1.3,**51.41N**±0.09×**178.04W**±0.05,**h10**km,**n26,** σ0**95**/23,**mb3.4**/3,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**0.43**	**0**		**Pg**	**09 38 04.7**	**+0.3**
TAFP	**Tanaga Falls P**	**0.50**	**4**		**Pg**	**09 38 05.6**	**0.0**
TAFP					**Sg**	**09 38 11.9**	**-0.2**
GAEA	**Gareloi East**	**0.58**	**311**		**Pg**	**09 38 07.3**	**+0.1**
KIMD	**Kanaga Island**	**0.62**	**54**		**Pg**	**09 38 08.5**	**+0.6**
KIMD					**Sg**	**09 38 16.7**	**+0.8**
KIWB	**Kanaga Island**	**0.71**	**51**		**Pg**	**09 38 09.9**	**+0.2**
KIKV	**Kanaga Island**	**0.72**	**49**		**Pg**	**09 38 10.1**	**+0.2**
KIKV					**Sg**	**09 38 19.7**	**+0.5**
KICM	**Kanaga Island**	**0.74**	**45**		**Pg**	**09 38 10.5**	**+0.4**
ADK	**Adak**	**0.97**	**60**		**Pg**	**09 38 13.9**	**-0.7**
ADAG	**Mount Adagdak**	**1.06**	**57**		**Pg**	**09 38 16.1**	**-0.3**
GSTD	**Great Sitkin T**	**1.35**	**60**		**Pn**	**09 38 20.5**	**-0.4**
GSTD					**Sb**	**09 38 38.1**	**-0.5**
GSMY	**Great Sitkin M**	**1.39**	**62**		**Pn**	**09 38 21.1**	**-0.2**
GSTR	**Great Sitkin T**	**1.41**	**60**		**Pn**	**09 38 21.9**	**+0.2**
ATKA	**Atka Island**	**2.52**	**70**		**Pn**	**09 38 37.8**	**+1.0**
KOKL	**Mount Kliuchef**	**2.55**	**67**		**Pn**	**09 38 38.5**	**+1.1**
KOFP	**Korovin Flat P**	**2.60**	**69**		**Pn**	**09 38 39.6**	**+1.6**
KDAK	**Kodiak Island**	**16.01**	**57**	Pn	**Pn**	**09 41 38.1**	**-2.8**
	0.4nm,0.3s,baz=186,slow=9.2,SNR=2.9							
ILAR	**Eielson Array**	**20.93**	**38**	P	Pn	09 42 40.4	-0.5
	0.5nm,1.0s,baz=230,slow=12,SNR=2.7							
H11N2	**WAKE ISLAND Hy**	**33.76**	**206**	T	T	10 20 16.0	
	baz=17,slow=76,SNR=79							
H11N3	**WAKE ISLAND Hy**	**33.77**	**206**	T	T	10 20 19.4	
	baz=17,slow=76,SNR=123							
H11N1	**WAKE ISLAND Hy**	**33.78**	**206**	T	T	10 20 22.4	
	baz=17,slow=76,SNR=79							
YKA	**Yellowknife Ar**	**34.87**	**47**	P	**P**	**09 44 48.4**	**+1.6**
	0.1nm,0.4s,baz=281,slow=8.6,SNR=3.3							
H11S1	**WAKE ISLAND Hy**	**34.98**	**206**	T	T	10 21 51.1	
	baz=17,slow=76,SNR=265							
H11S2	**WAKE ISLAND Hy**	**34.99**	**206**	T	T	10 21 52.2	
	baz=17,slow=76,SNR=154							
H11S3	**WAKE ISLAND Hy**	**34.99**	**206**	T	T	10 21 51.9	
	baz=17,slow=76,SNR=133							
PDAR	**Pinedale Array**	**45.85**	**73**	P	**P**	**09 46 17.7**	**-0.6**
	0.5nm,0.7s,baz=295,slow=4.4,SNR=5.7							
TXAR	**Lajitas Array**	**58.18**	**82**	P	**P**	**09 47 49.9**	**-0.2**
	0.2nm,0.5s,baz=318,slow=6.6,SNR=2.8							

IDC 20 09:38:22.5±7.2,**15.34S**×**173.20W**,**h0**km,**mb3.7**/2, **mb1 4.0**/2,**mb1mx3.5**/38,**mbtmp3.7**/2,**Error ellipse: s-maj=387.5km s-min=26.3km az=144.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.98**	**44**	Pn	Pn	09 38 56.9	-0.6
	83nm,0.3s,baz=197,slow=3.2,SNR=155						
AFI				Sn	Sn	09 39 15.4	-7.6
	191nm,0.3s,baz=192,slow=20,SNR=21						
H11S2	**WAKE ISLAND Hy**	**39.01**	**329**	T	T	10 26 33.3	
	baz=146,slow=76,SNR=5.2						
H11S3	**WAKE ISLAND Hy**	**39.02**	**329**	T	T	10 26 34.4	
	baz=146,slow=76,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**39.03**	**329**	T	T	10 26 35.0	
	baz=146,slow=76,SNR=7.1						
H11N3	**WAKE ISLAND Hy**	**39.95**	**330**	T	T	10 27 42.6	
	baz=146						
H11N1	**WAKE ISLAND Hy**	**39.96**	**330**	T	T	10 27 42.2	
	baz=146						
H11N2	**WAKE ISLAND Hy**	**39.97**	**330**	T	T	10 27 40.2	
	baz=146						
WRA	**Warramunga Arr**	**50.04**	**257**	P	P	09 47 19.0	-0.4
	0.3nm,0.6s,baz=91,slow=7.2,SNR=3.3						
ASAR	**Alice Springs**	**50.31**	**252**	P	P	09 47 21.0	-0.4
	0.9nm,0.6s,baz=85,slow=8.0,SNR=22						
BRTR	**Keskin Array B**	**146.23**	**321**	PKPbc	PKPbc	09 58 05.7	+0.2
	0.9nm,0.8s,baz=48,slow=2.1,SNR=4.6						

*TEH **20** 09:58:14.7,36.75N×54.81E,h12km,ML3.9*
*THR **20** 09:58:15.5±0.5,36.69N×54.84E,h14km±6km, ML4.0*

ISC 20 09:58:15.9±0.8,**36.76N**±0.05×**54.85E**±0.03,**h15**km,**n91,** σ1**57**/92,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMND	**Minoodasht**	**0.67**	**42**	*e*Pg	**Pg**	**09 58 27.8**	**-1.2**
IMND				*e*		09 58 29.3	
IMND				*e*Sg	**Sb**	**09 58 38.5**	**+0.2**
IGLO	**Ghaloghah**	**0.86**	**253**	*e*Pg	**Pb**	**09 58 30.1**	**-2.2**
IGLO				*e*Sg	**Sg**	**09 58 44.3**	**+0.3**
IGLO				*e*		09 58 56.8	
SHRO	**Shahrood**	**1.22**	**129**	*e*Pg	**Pn**	**09 58 37.0**	**-1.5**
SHRO	**Shahrood**	**1.22**	**129**	*e*Pg	**Pn**	**09 58 37.0**	**-1.5**
SHRO				*e*Sg	**Sb**	**09 58 53.1**	**-1.1**
IANJ	**Anjilo**	**1.50**	**211**	*e*	Pg	09 58 54.0	+9.2
ISHM	**Shahmirzad**	**1.58**	**233**	*e*	**Sn**	**09 59 01.4**	**-2.5**
IALA	**Alasht**	**1.78**	**248**	*e*Pn	**Pn**	**09 58 47.7**	**+1.3**
IFIR	**Firoozkooh**	**2.03**	**237**	*e*Pn	**Pn**	**09 58 51.7**	**+1.9**
ILAS	**Lasjerd**	**2.06**	**229**	*e*	Pn	09 58 41.4	-8.8
IPRN	**Peran**	**2.09**	**256**	*e*Pn	**Pn**	**09 58 52.5**	**+2.0**
BJRD	**Bojnurd**	**2.25**	**65**	*e*Pn	**Pb**	**09 58 54.9**	**-1.4**
BJRD	**Bojnurd**	**2.25**	**65**	*e*Pn	**Pb**	**09 58 54.9**	**-1.4**
SBZV	**Sabzevar**	**2.26**	**99**	*e*Pn	**Pb**	**09 58 54.9**	**-1.6**
SBZV				*e*		09 59 37.4	
ISFR	**Sfrayin**	**2.54**	**83**	*e*Pn	**Pb**	**09 58 59.3**	**-2.1**
ISFR				*e*		09 59 43.0	
IDMV	**Damavand**	**2.57**	**243**	*e*Pn	**Pn**	**09 58 59.4**	**+2.2**
IDMV				*e*		09 59 05.5	
IKRD	**Kardeh**	**2.94**	**89**	*e*Pn	**Pg**	**09 59 16.0**	**+3.6**
IKRD				*e*		10 00 37.5	
IVRN	**Varamin**	**3.09**	**236**	*e*Pn	**Pn**	**09 59 05.9**	**+1.7**
IVRN				*e*		09 59 54.2	
IEMG	**Emamgholi**	**3.11**	**77**	*e*Pn	**Pn**	**09 59 07.1**	**+2.4**
IEMG				*e*		10 00 03.6	
CHTH	**Charan**	**3.12**	**255**	*e*Pn	**Pn**	**09 59 05.9**	**+1.0**
CHTH	**Charan**	**3.12**	**255**	*e*Pn	**Pn**	**09 59 05.9**	**+1.0**
TNSJ	**Nastanj**	**3.14**	**152**	*e*		09 59 53.3	
TNSJ				*e*Pn	**Pn**	**09 59 06.1**	**+1.1**
IAKL	**Akhelmad**	**3.15**	**92**	*e*Pn	**Pn**	**09 59 07.5**	**+2.3**
IAKL				*e*		10 00 00.1	
IHSB	**Hasanabad**	**3.18**	**246**	*e*		09 59 16.5	
IHSB				*e*Pn	**Pn**	**09 59 07.0**	**+1.5**
THKV	**Tehran--Karaj**	**3.31**	**256**	*e*Pn	**Pn**	**09 59 08.7**	**+1.3**
THKV	**Tehran--Karaj**	**3.31**	**256**	*e*Pn	**Pn**	**09 59 08.7**	**+1.3**
THKV				IAML		10 00 06.4	
	comp=E,292nm,0.3s						
IPAY	**Payeh**	**3.35**	**94**	*e*Pn	**Pn**	**09 59 10.5**	**+2.5**
IPAY				*e*		10 00 01.7	
QALM	**Alamut, Qazvin**	**3.40**	**266**	*e*Pn	**Pn**	**09 59 11.0**	**+2.4**
QALM				*e*		10 00 07.5	
IMHD	**Mahdasht**	**3.55**	**254**	*e*Pn	**Pn**	**09 59 13.3**	**+2.8**
IMHD				*e*		09 59 22.2	
KRSH	**Karshahi**	**3.56**	**219**	*e*Pn	**Pn**	**09 59 12.1**	**+1.3**
KRSH				*e*		10 00 07.0	
IQOM	**Qom**	**3.62**	**239**	*e*Pn	**Pn**	**09 59 13.3**	**+1.6**
IQOM				*e*		09 59 27.9	
TABS	**Tabas**	**3.62**	**148**	*e*Pn	**Pn**	**09 59 12.7**	**+1.1**
TABS	**Tabas**	**3.62**	**148**	*e*Pn	**Pn**	**09 59 12.7**	**+1.1**
TKDS	**Koohdasht(Taba**	**3.65**	**149**	*e*Pn	**Pn**	**09 59 13.1**	**+1.1**
TKDS				*e*		10 00 19.3	
IMOG	**Moghan**	**3.68**	**99**	*e*Pn	**Pn**	**09 59 15.2**	**+2.6**
IMOG				*e*		10 00 22.3	
ANAR	**Anarak**	**3.68**	**195**	*e*Pn	**Pn**	**09 59 12.7**	**+0.3**
ANAR				*e*		10 00 19.4	
GHVR	**GHOM**	**3.68**	**233**	*e*Pn	**Pn**	**09 59 14.1**	**+1.7**
GHVR	**GHOM**	**3.68**	**233**	*e*Pn	**Pn**	**09 59 14.1**	**+1.7**
TPRV	**Parvadeh(Tabas**	**4.02**	**157**	*e*Pn	**Pn**	**09 59 18.8**	**+1.7**
TPRV				*e*		10 00 32.9	
QAM	**Ghamsar**	**4.09**	**224**	*e*Pn	**Pn**	**09 59 19.3**	**+1.1**
QAM				*e*		10 00 36.4	
IRAZ	**Razeghan**	**4.21**	**253**	*e*Pn	**Pn**	**09 59 22.5**	**+2.8**
IRAZ				*e*		09 59 40.0	
IMYA	**Miami**	**4.25**	**94**	*e*Pn	**Pn**	**09 59 22.2**	**+1.9**
IMYA				*e*		10 00 47.9	
IKLH	**Kolahrood**	**4.36**	**219**	*e*Pn	**Pn**	**09 59 23.5**	**+1.6**
IKLH				*e*		10 00 33.0	
YZKH	**Yazd**	**4.37**	**183**	*e*Pn	**Pn**	**09 59 22.4**	**+0.6**
YZKH	**Yazd**	**4.37**	**183**	*e*Pn	**Pn**	**09 59 22.4**	**+0.6**
IZEF	**Zefreh**	**4.38**	**209**	*e*Pn	**Pn**	**09 59 23.1**	**+0.9**
QABG	**Abgarm-Qazvin**	**4.38**	**258**	*e*Pn	**Pn**	**09 59 24.8**	**+2.6**
QABG				*e*		09 59 36.5	
ASAO	**Ashtian**	**4.51**	**242**	*e*Pn	**Pn**	**09 59 25.1**	**+1.2**
ASAO	**Ashtian**	**4.51**	**242**	*e*Pn	**Pn**	**09 59 25.1**	**+1.2**
ICHK	**Chekchek**	**4.52**	**185**	*e*Pn	**Pn**	**09 59 25.1**	**+1.0**
ICHK				*e*		10 00 41.3	
AFRZ	**Afriz**	**4.77**	**133**	*e*Pn	**Pn**	**09 59 29.0**	**+1.6**
ISAD	**Sadrabad**	**4.93**	**192**	*e*Pn	**Pn**	**09 59 30.5**	**+0.7**
ZNJK	**Zanjan**	**4.95**	**271**	*e*Pn	**Pn**	**09 59 31.9**	**+1.9**
ZNJK	**Zanjan**	**4.95**	**271**	*e*Pn	**Pn**	**09 59 31.9**	**+1.9**
KHMZ	**Khomeyn**	**5.01**	**234**	*e*Pn	**Pn**	**09 59 35.5**	**+0.7**
KHMZ	**Khomeyn**	**5.01**	**234**	*e*Pn	**Pn**	**09 59 35.5**	**+0.7**
ITEG	**Tejag**	**5.02**	**139**	*e*Pn	**Pn**	**09 59 32.3**	**+1.4**
LKRN	**Lenkeran, Azer**	**5.19**	**294**	*e*Pn	**Pn**	**09 59 33.0**	**0.0**
IBAF	**Bafgh**	**5.20**	**173**	*e*Pn	**Pn**	**09 59 34.3**	**+1.0**
IBAF				*e*		10 01 08.5	
IPIR	**Pirpir**	**5.21**	**220**	*e*Pn	**Pn**	**09 59 36.4**	**+2.8**
IPIR				*e*		09 59 58.9	
IRAM	**Ramesheh**	**5.35**	**203**	*e*Pn	**Pn**	**09 59 36.9**	**+1.5**
IMEH	**Mehriz**	**5.36**	**182**	*e*Pn	**Pn**	**09 59 36.3**	**+0.6**
NDR	**Nardaran**	**5.38**	**317**	*e*Pn	**Pn**	**09 59 36.3**	**+0.7**
SHRT	**Shahrakht**	**5.43**	**123**	*e*Pn	**Pn**	**09 59 37.6**	**+1.1**
SHRT	**Shahrakht**	**5.43**	**123**	*e*Pn	**Pn**	**09 59 37.6**	**+1.1**
LRK	**Lerik**	**5.49**	**292**	*e*Pn	**Pn**	**09 59 37.4**	**+0.1**
IKOO	**Kooshah**	**5.52**	**140**	*e*Pn	**Pn**	**09 59 38.9**	**+1.1**
ALIB	**Äli-Bayra**	**5.59**	**307**	*e*Pn	**Pn**	**09 59 38.6**	**+0.1**
BDRS	**Dareh Seyedi**	**5.62**	**242**	*e*Pn	**Pn**	**09 59 40.5**	**+1.2**
YRD	**Yardimli**	**5.65**	**294**	*e*Pn	**Pn**	**09 59 39.2**	**-0.4**
GLBA	**Ciilabad**	**5.67**	**298**	*e*Pn	**Pn**	**09 59 39.6**	**+0.1**
IDAH	**Dahanechah**	**5.76**	**133**	*e*Pn	**Pn**	**09 59 42.9**	**+1.8**
BSRN	**Basiran**	**5.95**	**142**	*e*Pn	**Pn**	**09 59 44.8**	**+1.1**
BSRN	**Basiran**	**5.95**	**142**	*e*Pn	**Pn**	**09 59 44.8**	**+1.1**
ATGJ	**Altiaghaj**	**6.17**	**313**	*e*Pn	**Pn**	**09 59 47.6**	**+1.1**
IDOB	**Doab**	**6.21**	**243**	*e*Pn	**Pn**	**09 59 49.8**	**+2.5**
PQL	**Pirkuli**	**6.33**	**311**	*e*Pn	**Pn**	**09 59 49.0**	**+0.2**
SIZA	**Siyzn**	**6.33**	**315**	*e*Pn	**Pn**	**09 59 49.1**	**+0.4**
KLNJ	**Kolanjah**	**6.35**	**206**	*e*Pn	**Pn**	**09 59 51.1**	**+1.8**
IHRS	**Heris**	**6.39**	**286**	*e*Pn	**Pn**	**09 59 52.2**	**+2.4**
KHGB	**Koh Gabri**	**6.51**	**167**	*e*Pn	**Pn**	**09 59 52.8**	**+1.3**
IKOM	**Komasi**	**6.52**	**249**	*e*Pn	**Pn**	**09 59 54.2**	**+2.7**
IML	**Ismayilli**	**6.58**	**310**	*e*Pn	**Pn**	**09 59 52.9**	**+0.8**
XNQ	**Khinaliq**	**6.83**	**312**	*e*Pn	**Pn**	**09 59 56.8**	**+1.0**
QSAR	**Qusar**	**6.98**	**315**	*e*Pn	**Pn**	**09 59 58.7**	**+1.1**
ORD	**Ordubad**	**7.33**	**290**	*e*Pn	**Pn**	**10 00 03.4**	**+0.9**
SEKA	**Sheki**	**7.43**	**309**	*e*Pn	**Pn**	**10 00 04.0**	**+0.2**
IMRD	**Marand**	**7.50**	**288**	*e*Pn	**Pn**	**10 00 06.8**	**+1.9**
GANJ	**Ganja**	**7.71**	**303**	*e*Pn	**Pn**	**10 00 08.5**	**+0.9**
SBZ	**Shahbuz**	**7.79**	**293**	*e*Pn	**Pn**	**10 00 08.7**	**-0.1**
ZKT	**Zaqatala**	**8.01**	**310**	*e*Pn	**Pn**	**10 00 12.6**	**+0.9**
GDB	**GEDABAY**	**8.13**	**302**	*e*Pn	**Pn**	**10 00 13.7**	**+0.2**

*IDC **20** 10:00:13.6±1.6,9.31N×126.55E,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.6/39,mbtmp3.8/4,MS3.0/1,Ms1 3.0/1, ms1mx2.3/42,Error ellipse: s-maj=174.5km s-min=22.7km az=68.0*
*MAN **20** 10:00:18.6,9.14N×126.42E,h1km,MS3.6*

ISC 20 10:00:14.7±1.9,**9.21N**±0.04×**126.54E**±0.07,**h6**km±12km, **n24,** σ1**17**/28,**mb3.7**/4,**3C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.94**	**256**	*e*P	**Pn**	**10 00 34.8**	**+0.3**
BUTP				*e*S	**Sn**	**10 00 47.4**	**+0.7**
BIPH	**Bislig**	**1.03**	**190**	*e*P	**Pn**	**10 00 36.5**	**+0.7**
BIPH				*i* S	**Sb**	**10 00 48.1**	**-0.6**
MSLP	**Maasin**	**1.90**	**299**	*e*P	**Pg**	**10 00 51.1**	**0.0**
MSLP				*e*S	**Sg**	**10 01 15.6**	**-0.2**
BUKP	**Musuan**	**1.97**	**228**	*e*P	**Pb**	**10 00 50.9**	**-0.1**
BUKP				*e*S	**Sb**	**10 01 16.2**	**+0.3**
CGP	**Cagayan de Oro**	**1.97**	**248**	*e*P	**Pb**	**10 00 50.8**	**-0.2**
CGP				*i* S	**Sn**	**10 01 13.5**	**-0.3**
MATI	**Mati**	**2.26**	**187**	*e*P	**Pb**	**10 00 56.5**	**+0.5**
MATI				*e*S	**Sn**	**10 01 22.1**	**+1.1**
DAV	**Davao City (W)**	**2.33**	**204**	Sn	**Sb**	**10 01 26.1**	**0.0**
	54nm,0.3s,baz=54,slow=19,SNR=6.1						
DMPH	**Davao City--Mi**	**2.34**	**206**	*i* P	**Sn**	**10 01 25.0**	**+2.0**
OCLP	**Ormoc**	**2.64**	**314**	*e*P	**Pb**	**10 01 03.0**	**+0.5**
OCLP				*e*S	**Sn**	**10 01 31.2**	**+0.8**
LLP	**Lapu-Lapu**	**2.77**	**294**	*e*P	**Pb**	**10 01 04.4**	**-0.2**
LLP				*e*S	**Sb**	**10 01 37.6**	**-1.3**
DDMP	**Don Marcelino,**	**3.19**	**195**	*e*P	**Pb**	**10 01 10.2**	**-1.7**
DDMP				*e*S	**Sb**	**10 01 48.5**	**-2.5**
PAGZ	**Pagadian**	**3.40**	**247**	*e*P	**Pn**	**10 01 11.2**	**+2.8**
PAGZ				*e*S	Sn	10 01 36.7	-12
GUIM	**Jordan**	**4.14**	**290**	*e*P	**Pn**	**10 01 19.9**	**+1.3**
PSI	**Prapat**	**28.18**	**259**	LR	LR	10 19 30.5	
	comp=Z,27nm,18.6s,baz=89,slow=41						
WRA	**Warramunga Arr**	**29.96**	**165**	P	**P**	**10 06 25.3**	**+1.2**
	0.6nm,0.8s,baz=344,slow=8.8,SNR=3.0						
ASAR	**Alice Springs**	**33.45**	**168**	P	**P**	**10 06 55.4**	**+0.6**
	0.2nm,0.4s,baz=349,slow=7.3,SNR=8.6						
ASAR				PcP	**PcP**	**10 09 35.0**	**-1.1**
	0.4nm,0.9s,baz=354,slow=2.8,SNR=2.9						
H11S3	**WAKE ISLAND Hy**	**39.98**	**72**	T	T	10 50 53.8	
	baz=262,slow=75,SNR=102						
H11S1	**WAKE ISLAND Hy**	**39.99**	**72**	T	T	10 50 54.2	
	baz=262,slow=75,SNR=101						
H11S2	**WAKE ISLAND Hy**	**39.99**	**72**	T	T	10 50 55.1	
	baz=262,slow=75,SNR=101						
H11N1	**WAKE ISLAND Hy**	**40.34**	**70**	T	T	10 51 30.3	
	baz=266,slow=74,SNR=22						
H11N2	**WAKE ISLAND Hy**	**40.35**	**70**	T	T	10 51 29.7	
	baz=266,slow=74,SNR=17						
H11N3	**WAKE ISLAND Hy**	**40.36**	**70**	T	T	10 51 28.9	
	baz=266,slow=74,SNR=30						
MKAR	**Makanchi Array**	**53.03**	**323**	P	**P**	**10 09 31.7**	**-0.9**
	1.0nm,0.6s,baz=123,slow=8.2,SNR=14						
MKAR				PcP	**PcP**	**10 10 41.0**	**-0.3**
	0.6nm,0.8s,baz=114,slow=3.5,SNR=3.2						
ARCES	**ARCESS Array B**	**85.28**	**340**	P	**P**	**10 12 51.7**	**-0.6**
	2.6nm,1.1s,baz=74,slow=6.7,SNR=5.0						

IDC 20 10:06:33.8±4.9,**53.82N**×**88.49E**,**h0**km,**mb1 2.6**/2, **mb1mx2.6**/43,**mbtmp2.6**/2,**ML2.0**/2,**Error ellipse: s-maj=52.7km s-min=26.1km az=78.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**2.18**	**275**	*i*		10 23 50.0	
	baz=88,slow=324,SNR=2.9						
ZALV	**Zalesovo Beam**	**2.18**	**275**	Pn	Pn	10 07 11.6	+0.4
	1.0nm,0.3s,baz=95,slow=12,SNR=28						
ZALV				Sn	Sn	10 07 39.1	+0.2
	3.0nm,0.3s,baz=90,slow=24,SNR=16						
MKAR	**Makanchi Array**	**8.07**	**212**	Pn	Pn	10 08 33.6	+1.3
	0.1nm,0.3s,baz=27,slow=14,SNR=3.1						
MKAR				Lg	Lg	10 10 46.3	
	0.0nm,0.3s,baz=28,slow=31,SNR=2.9						

*BEO **20** 10:13:18.9±0.8,41.31N×19.50E,h5km±3km,ML2.3/5*
*TIR **20** 10:13:18.9,41.35N×19.60E,h19km,Md2.6/4*
*PDG **20** 10:13:19.0±0.2,41.31N×19.42E,h12km,ML2.5/11,Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*

ISC 20 10:13:18.2±1.7,**41.29N**±0.07×**19.48E**±0.05,**h10**km±9km, **n24,** σ0**95**/43,**Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.29**	**78**	*e*Pg	**Pg**	**10 13 24.1**	**0.0**
TIR				*e*Sg	**Sg**	**10 13 28.6**	**+0.6**
TIR	**Tirane**	**0.29**	**78**	*i* PG	**Pg**	**10 13 24.3**	**+0.2**
TIR				*i* SG	**Sg**	**10 13 28.1**	**+0.1**
ULC	**Ulcinj**	**0.70**	**345**	*e*Pg	**Pg**	**10 13 31.4**	**-0.3**
ULC				*e*Sg	**Sb**	**10 13 42.1**	**-0.2**
PUK	**Puka**	**0.82**	**22**	*i* PG	**Pg**	**10 13 33.3**	**-0.6**
PUK				*i* SG	**Sg**	**10 13 44.7**	**+0.1**
PHP	**Peshkopia**	**0.82**	**61**	*i* PG	**Pg**	**10 13 33.1**	**-0.9**
PHP				*i* SG	**Sg**	**10 13 43.8**	**-0.9**
DRME	**Dracevica, Mon**	**0.93**	**346**	*e*Pg	**Pg**	**10 13 35.5**	**-0.5**
DRME				*e*Sg	**Sn**	**10 13 49.6**	**-1.1**
BUM	**Brajici-Budva**	**1.10**	**337**	*e*Pg	**Pb**	**10 13 38.9**	**-0.5**
BUM				*e*Sg	**Sn**	**10 13 55.1**	**+0.3**
PDG	**Podgorica**	**1.16**	**352**	*e*Pg	**Pg**	**10 13 39.8**	**-0.6**
PDG				*e*Sg	**Sn**	**10 13 55.6**	**-0.7**
TTG	**Podgorica**	**1.16**	**352**	*e*Pg	**Pn**	**10 13 39.9**	**-0.5**
TTG				*e*Sg	**Sn**	**10 13 57.4**	**+1.1**
BCI	**Bajram Curri**	**1.16**	**22**	*i* PG	**Pg**	**10 13 40.2**	**-0.3**
BCI				*i* SG	**Sb**	**10 13 55.1**	**-0.5**
CEME	**Cevo**	**1.33**	**342**	*e*Pg	**Pg**	**10 13 42.9**	**-0.8**
CEME				*e*Sg	**Sg**	**10 14 02.6**	**+1.7**
PVY	**Plav**	**1.35**	**15**	*e*Pg	**Pg**	**10 13 44.3**	**+0.1**
PVY				*e*Sg	**Sg**	**10 14 04.4**	**+2.6**
HCY	**Herceg Novi**	**1.38**	**328**	*e*Pg	**Pb**	**10 13 43.6**	**-0.4**
HCY				*e*Sg	**Sg**	**10 14 04.6**	**+2.2**
NKME	**Niksic**	**1.53**	**345**	*e*Pg	**Pb**	**10 13 46.2**	**-0.5**
NKME				*e*Sg	**Sg**	**10 14 08.3**	**+0.9**
IVA	**Berane**	**1.61**	**11**	*e*Pn	**Pg**	**10 13 48.7**	**-0.4**
IVA				*e*Sn	**Sg**	**10 14 11.2**	**+1.1**
TREB	**Trebinje**	**1.66**	**330**	*e*Pg	**Pb**	**10 13 48.4**	**-0.5**
TREB				*e*Sg	**Sg**	**10 14 11.3**	**-0.2**
BRY	**Bratogost**	**1.76**	**337**	*e*Pn	**Pb**	**10 13 50.0**	**-0.7**
BRY				*e*Sn	**Sg**	**10 14 14.0**	**-0.8**
SJES	**Sjenica**	**2.01**	**10**	*e*Pn	**Pn**	**10 13 52.4**	**+0.1**
SJES				*e*Sg	**Sg**	**10 14 21.5**	**-1.2**
PLE	**Pljevlja**	**2.04**	**358**	*e*Pn	**Pb**	**10 13 54.0**	**-1.5**
PLE				*e*Sn	**Sb**	**10 14 21.0**	**0.0**
SELS	**Selova**	**2.28**	**32**	*e*Pn	**Pn**	**10 13 56.7**	**+0.7**
IVAS	**Ivanjica**	**2.34**	**12**	*e*Sn	**Pn**	**10 13 57.8**	**+1.0**
IVAS	**Ivanjica**	**2.34**	**12**	*e*Pn	**Sn**	**10 14 26.8**	**+1.1**
DIVS	**Divibare**	**2.83**	**7**	*e*Pn	**Pn**	**10 14 04.9**	**+1.3**
ZAPS	**Zavoj**	**3.07**	**49**	*e*Pn	**Pn**	**10 14 07.9**	**+1.1**

ROM 20 10:15:13.9±0.1,**41.370N**±0.007×**14.447E**±0.006, **h18**km±1km,**ML2.0/7,Error ellipse: s-maj=0.8km s-min=0.0km az=194.0,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
T1011	**San Potito San**	**0.02**	**245**	P	Pg	10 15 17.1	-0.1
T1011				S

	comp=N,76μm,0.1s						
ATVO	**AVT- Monte Val**	**0.10**	**269**	P	Pg	10 15 41.8	+0.2
ATVO				S	Sg	10 15 43.7	+0.5
ATVO				AML	AML		
	comp=E,116μm,1.1s						
ATVO				AML	AML		
	comp=N,76μm,0.1s						
MURB	**Monte Urbino**	**0.12**	**188**	P	Pg	10 15 42.4	+0.4
MURB	**Monte Urbino**	**0.12**	**188**	P	Pg	10 15 42.4	+0.4
MURB				AML	AML		
	comp=E,196μm,1.1s						
MURB				AML	AML		
	comp=N,185μm,0.8s						
MURB				AML	AML		
	comp=N,185μm,0.8s						
MURB				AML	AML		
	comp=E,196μm,1.1s						
MURB	**Monte Urbino**	**0.12**	**188**	P	Pg	10 15 42.4	+0.4
MURB				S	Sg	10 15 44.7	+1.0
MURB				AML	AML		
	comp=N,185μm,0.8s						
MURB				AML	AML		
	comp=E,196μm,1.1s						
ATPI	**Pietralunga -**	**0.12**	**302**	P	Pg	10 15 42.4	+0.4
ATPI	**Pietralunga -**	**0.12**	**302**	P	Pg	10 15 42.4	+0.4
ATPI	**Pietralunga -**	**0.12**	**302**	P	Pg	10 15 42.4	+0.3
ATPI				S	Sg	10 15 44.8	+1.0
PIEI	**Pieia**	**0.15**	**357**	P	Pg	10 15 43.2	+0.6
PIEI	**Pieia**	**0.15**	**357**	P	Pg	10 15 43.2	+0.6
PIEI				AML	AML		
	comp=E,121μm,0.3s						
PIEI				AML	AML		
	comp=N,114μm,0.2s						
PIEI	**Pieia**	**0.15**	**357**	P	Pg	10 15 43.1	+0.6
PIEI				S	Sg	10 15 46.0	+1.4
PIEI				AML	AML		
	comp=N,114μm,0.2s						
PIEI				AML	AML		
	comp=N,114μm,0.2s						
PIEI				AML	AML		
	comp=E,121μm,0.3s						
FRON	**Frontone**	**0.19**	**44**	P	Pg	10 15 41.9	-1.2
FRON	**Frontone**	**0.19**	**44**	P	Pg	10 15 41.9	-1.2
ATCC	**AVT- Casa Cast**	**0.21**	**161**	P	Pg	10 15 44.1	+0.5
ATCC	**AVT- Casa Cast**	**0.21**	**161**	P	Pg	10 15 44.1	+0.5
ATCC	**AVT- Casa Cast**	**0.21**	**161**	P	Pg	10 15 44.1	+0.6
ATCC				S	Sg	10 15 48.4	+2.1
BADI	**Badiali**	**0.25**	**300**	P	Pg	10 15 45.0	+0.6
BADI	**Badiali**	**0.25**	**300**	P	Pg	10 15 45.0	+0.6
BADI	**Badiali**	**0.25**	**300**	P	Pg	10 15 45.0	+0.6
BADI				S	Sg	10 15 49.4	+1.7
MPAG	**Monte Paganucc**	**0.29**	**32**	P	Pg	10 15 46.0	+0.9
MPAG				AML	AML		
	comp=E,31μm,1.6s						
MPAG				AML	AML		
	comp=N,39μm,1.6s						
MPAG	**Monte Paganucc**	**0.29**	**32**	P	Pg	10 15 46.0	+0.9
MPAG	**Monte Paganucc**	**0.29**	**32**	P	Pg	10 15 46.0	+0.9
MPAG	**Monte Paganucc**	**0.29**	**32**	P	Pg	10 15 46.0	+0.9
ARVD	**Arcevia**	**0.31**	**68**	P	Pg	10 15 46.0	+0.6
ARVD	**Arcevia**	**0.31**	**68**	P	Pg	10 15 46.0	+0.6
ARVD	**Arcevia**	**0.31**	**68**	P	Pg	10 15 46.0	+0.5
SNTG	**Esanatoglia**	**0.32**	**114**	P	Pg	10 15 46.3	+0.7
SNTG	**Esanatoglia**	**0.32**	**114**	P	Pg	10 15 46.3	+0.7
SNTG	**Esanatoglia**	**0.32**	**114**	P	Pg	10 15 46.3	+0.7
SNTG	**Esanatoglia**	**0.32**	**114**	P	Pg	10 15 46.3	+0.7

ROM 20 10:33:48.6±0.1, 43°.388N×0°.003×12°.515E±0°.004, h6km, ML0.9/4, Error ellipse: s-maj=0.3km s-min=0.1km az=49.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.05**	**117**	P	Pg	10 33 50.2	0.0
ATFO				S	Sg	10 33 51.4	+0.1
ATFO				AML	AML		
	comp=N,271μm,0.4s						
ATFO				AML	AML		
	comp=E,239μm,0.7s						
ATVO	**AVT- Monte Val**	**0.08**	**266**	P	Pg	10 33 50.7	+0.2
ATVO				S	Sg	10 33 52.2	+0.3
ATVO				AML	AML		
	comp=N,62μm,0.5s						
ATVO				AML	AML		
	comp=E,109μm,0.3s						
ATPI	**Pietralunga -**	**0.10**	**308**	P	Pg	10 33 51.2	+0.3
ATPI				S	Sg	10 33 53.2	+0.7
MURB	**Monte Urbino**	**0.12**	**177**	P	Pg	10 33 51.7	+0.4
MURB				S	Sg	10 33 54.2	+1.1
MURB				AML	AML		
	comp=E,107μm,0.3s						
MURB				AML	AML		
	comp=N,87μm,1.4s						
PIEI	**Pieia**	**0.15**	**6**	P	Pg	10 33 52.1	+0.4
PIEI				S	Sg	10 33 55.1	+1.3
PIEI				AML	AML		
	comp=E,62μm,0.2s						
PIEI				AML	AML		
	comp=N,48μm,0.5s						
FRON	**Frontone**	**0.20**	**50**	P	Pg	10 33 53.0	+0.4
FRON				S	Sg	10 33 56.6	+1.2
NARO	**Abbazia di Nar**	**0.23**	**12**	P	Pg	10 33 53.6	+0.5
BADI	**Badiali**	**0.23**	**302**	P	Pg	10 33 53.8	+0.5
BADI				S	Sg	10 33 57.8	+1.5
BADI				AML	AML		
	comp=E,86μm,1.6s						
BADI				AML	AML		
	comp=N,95μm,1.6s						

MAN 20 11:34:20.7, 9°.97N×124°.04E, h17km, mb3.8, ML2.5, MS2.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.35**	**348**	*eP*	Pb	11 34 28.6	+0.1
LLP				*eS*	Sn	11 34 39.0	+1.3
MSLP	**Maasin**	**0.82**	**79**	*eP*	Pb	11 34 36.3	-0.2
MSLP				*eS*	Sn	11 34 49.5	+0.1

*IDC **20** 11:41:15.4±2.2, 40°.71S×176°.05E, h0km, mb3.9/2, mb1 4.0/4, mb1mx3.7/25, mbtmp3.7/4, ML3.0/2, MS3.0/3, Ms1 3.0/3, ms1mx2.8/23, Error ellipse: s-maj=61.4km s-min=28.6km az=134.0*

*WEL **20** 11:41:21.8, 40°.6S±0°.5×175°.9E±0°.8, h35km, M4.0/117, ML4.3/19, MLv4.0/117, Error ellipse: s-maj=0.0km s-min=0.0km az=85.3*

*NEIC **20** 11:41:21.9±0.8, 40°.62S±0°.04×175°.90E±0°.09, h39km±13km, Error ellipse: s-maj=11.1km s-min=1.5km az=121.0*

ISC 20 11:41:21.8±0.8, 40°.67S±0°.02×175°.95E±0°.03, h40km±5km, n151, σ1§26/177, mb3.9/5, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRWZ	**Pori Road**	**0.11**	**8**	P	**Pn**	**11 41 27.9**	**-0.6**
PRWZ				S	**Sn**	11 41 32.5	**-0.7**
TIWZ	**Tintock**	**0.12**	**204**	P	**Pn**	**11 41 28.7**	**+0.1**
TIWZ				S	**Sn**	**11 41 33.6**	**+0.2**
BFZ	**Birch Farm**	**0.23**	**94**	P	**Pn**	**11 41 29.7**	**+0.3**
BFZ				S	**Sn**	**11 41 35.7**	**+1.1**
BFZ	**Birch Farm**	**0.23**	**94**		**Pn**	**11 41 29.6**	**+0.3**
BFZ					**Sn**	**11 41 35.2**	**+0.6**
MRZ	**Mangatainoka R**	**0.28**	**271**	P	**Pn**	**11 41 29.3**	**-0.6**
MRZ				S	**Sn**	**11 41 34.6**	**-0.9**
POWZ	**Post Office Ro**	**0.31**	**333**	P	**Pn**	**11 41 29.1**	**-1.1**
POWZ				S	**Sn**	**11 41 34.4**	**-1.6**
CPWZ	**Castlepoint**	**0.31**	**142**	P	**Pn**	**11 41 31.9**	**+1.7**
DVHZ	**Dannevirke**	**0.40**	**24**	P	**Sn**	**11 41 30.5**	**-0.8**
DVHZ				S	**Sn**	**11 41 37.0**	**-1.0**
HOWZ	**Holdsworth Sta**	**0.40**	**235**	P	**Pn**	**11 41 31.6**	**+0.3**
HOWZ				S	**Sn**	**11 41 38.6**	**+0.6**
TMWZ	**Te Maipa**	**0.44**	**186**	P	**Pn**	**11 41 33.0**	**+1.2**
TMWZ				S	**Sn**	**11 41 41.8**	**+2.9**
ANWZ	**Angora Road**	**0.45**	**63**	P	**Pn**	**11 41 32.4**	**+0.5**
ANWZ				S	**Sn**	**11 41 40.6**	**+1.7**
MTW	**Mount Morrison**	**0.60**	**215**	P	**Pn**	**11 41 34.6**	**+0.8**
TSZ	**Takapari Road**	**0.61**	**1**	P	**Pn**	**11 41 33.4**	**-0.7**
TSZ				S	**Sn**	**11 41 41.4**	**-1.3**
OGWZ	**Otaki Gorge**	**0.61**	**256**	P	**Pn**	**11 41 34.3**	**+0.3**
PRHZ	**Porangahau**	**0.66**	**53**	P	**Pn**	**11 41 35.0**	**+0.4**
OHWZ	**Ohakea**	**0.67**	**313**	P	**Pn**	**11 41 35.1**	**+0.3**
WPHZ	**Waipukurau**	**0.71**	**32**	P	**Pn**	**11 41 35.8**	**+0.4**
WPHZ				S	**Sn**	**11 41 46.7**	**+1.6**
TRWZ	**Traveller**	**0.76**	**195**	P	**Pn**	**11 41 37.0**	**+0.9**
TRWZ				S	**Sn**	**11 41 48.0**	**+1.7**
PNHZ	**Pukenui**	**0.78**	**14**	P	**Pn**	**11 41 36.2**	**-0.1**
PNHZ				S	**Sn**	**11 41 46.7**	**0.0**
CAW	**Cannon Point**	**0.80**	**236**	P	**Pn**	**11 41 37.2**	**+0.6**
KIW	**Kapiti Island**	**0.81**	**256**	P	**Pn**	**11 41 37.4**	**+0.6**
KIW				S	**Sn**	**11 41 48.8**	**+1.1**
PAWZ	**Paruwai Farm**	**0.82**	**209**	P	**Pn**	**11 41 37.6**	**+0.7**
MSWZ	**Moikau Station**	**0.92**	**215**	P	**Pn**	**11 41 38.6**	**+0.4**
MSWZ	**Moikau Station**	**0.92**	**215**		**Pn**	**11 41 38.5**	**+0.2**
MSWZ					**Sn**	**11 41 50.7**	**+0.4**
PXZ	**Pawanui**	**0.94**	**48**	P	**Pn**	**11 41 38.7**	**+0.2**
PLWZ	**Palliser**	**1.04**	**210**	P	**Pn**	**11 41 40.3**	**+0.3**
PLWZ	**Palliser**	**1.04**	**210**		**Pn**	**11 41 40.2**	**+0.3**
PLWZ					**Sn**	**11 41 54.0**	**+0.7**
KRHZ	**Kereru**	**1.07**	**18**	P	**Pn**	**11 41 40.3**	**0.0**
WEL	**Wellington**	**1.09**	**235**	P	**Pn**	**11 41 40.9**	**+0.4**
BHW	**Baring Head**	**1.10**	**227**	P	**Pn**	**11 41 40.9**	**+0.2**
BHW	**Baring Head**	**1.10**	**227**		**Pn**	**11 41 40.9**	**+0.2**
BHW					**Sn**	**11 41 55.3**	**+0.6**
KAHZ	**Kahuranaki**	**1.12**	**39**	P	**Pn**	**11 41 41.2**	**+0.2**
SNZO	**South Karori**	**1.14**	**235**		**Pn**	**11 41 41.5**	**+0.2**
SNZO					**Sn**	**11 41 56.6**	**+0.9**
WAZ	**Wanganui**	**1.17**	**321**	P	**Pn**	**11 41 42.9**	**+1.2**
BHHZ	**Black Hill Sta**	**1.18**	**4**	P	**Pn**	**11 41 42.0**	**+0.1**
MOVZ	**Moawhango**	**1.27**	**353**	P	**Pn**	**11 41 43.2**	**+0.2**
KWHZ	**Kaweka Forest**	**1.29**	**16**	P	**Pn**	**11 41 43.5**	**+0.1**
CKHZ	**Cape Kidnapper**	**1.33**	**41**	P	**Pn**	**11 41 43.5**	**-0.3**
MTVZ	**Mangateitei**	**1.33**	**344**	P	**Pn**	**11 41 44.6**	**+0.6**
MCHZ	**McNeill Hill**	**1.35**	**25**	P	**Pn**	**11 41 44.2**	**+0.1**
TCW	**Tory Channel**	**1.38**	**246**	P	**Pn**	**11 41 44.7**	**+0.1**
TRVZ	**Turoa**	**1.40**	**347**	P	**Pn**	**11 41 46.0**	**+0.9**
WHVZ	**Whangaehu Hut**	**1.41**	**349**	P	**Pn**	**11 41 46.0**	**+0.9**
TUVZ	**Tukino**	**1.42**	**351**	P	**Pn**	**11 41 46.1**	**+1.0**
DRZ	**Dome Shelter**	**1.42**	**348**	P	**Pn**	**11 41 46.5**	**+1.1**
FWVZ	**Far West T-bar**	**1.44**	**348**	P	**Pn**	**11 41 46.2**	**+0.6**
PKVZ	**Pokaka**	**1.45**	**341**	P	**Pn**	**11 41 46.2**	**+0.6**
NGZ	**Ngauruhoe**	**1.51**	**350**	P	**Pn**	**11 41 47.6**	**+1.1**
DUWZ	**D'Urville Isla**	**1.55**	**264**	P	**Pn**	**11 41 47.2**	**+0.3**
BKZ	**Black Stump Fm**	**1.56**	**16**	P	**Pn**	**11 41 46.8**	**-0.2**
BKZ	**Black Stump Fm**	**1.56**	**16**		**Pn**	**11 41 46.9**	**-0.2**
BKZ					**Sn**	**11 42 06.3**	**+0.3**
WTVZ	**West Tongariro**	**1.57**	**350**	P	**Pn**	**11 41 48.2**	**+0.9**
KRVZ	**Karewarewa**	**1.59**	**351**	P	**Pn**	**11 41 48.8**	**+1.3**
ARHZ	**Aropaoanui**	**1.61**	**30**	P	**Pn**	**11 41 47.8**	**+0.1**
TWVZ	**Taurewa**	**1.64**	**346**	P	**Pn**	**11 41 49.2**	**+0.9**
RITZ	**Rihia Road**	**1.69**	**358**	P	**Pn**	**11 41 49.6**	**+0.8**
LREZ	**Lake Rotokare**	**1.69**	**315**	P	**Pn**	**11 41 51.0**	**+2.2**
CMWZ	**Cape Campbell**	**1.70**	**230**	P	**Pn**	**11 41 48.0**	**-0.9**
CMWZ	**Cape Campbell**	**1.70**	**230**		**Pn**	**11 41 49.0**	**+0.1**
CMWZ					**Sn**	**11 42 08.9**	**-0.5**
TUWZ	**Tuamarina**	**1.70**	**243**	P	**Pn**	**11 41 48.5**	**-0.4**
TUWZ	**Tuamarina**	**1.70**	**243**		**Pn**	**11 41 48.6**	**-0.4**
NMHZ	**Naumai**	**1.70**	**23**	P	**Pn**	**11 41 49.1**	**+0.1**
KATZ	**Kakaramea**	**1.70**	**353**	P	**Pn**	**11 41 51.3**	**+2.2**
HATZ	**Hinemaiaia**	**1.78**	**4**	P	**Pn**	**11 41 50.0**	**0.0**
VRZ	**Vera Road**	**1.79**	**329**	P	**Pn**	**11 41 51.1**	**+0.9**
RATZ	**Rangitukua**	**1.80**	**356**	P	**Pn**	**11 41 50.9**	**+0.5**
MRHZ	**Matea Rd**	**1.86**	**11**	P	**Pn**	**11 41 51.0**	**-0.3**
WHHZ	**Waihua**	**1.87**	**32**	P	**Pn**	**11 41 51.9**	**+0.6**
BSWZ	**Blackbirch Sta**	**1.88**	**236**	P	**Pn**	**11 41 51.2**	**-0.3**
BSWZ	**Blackbirch Sta**	**1.88**	**236**		**Pn**	**11 41 51.1**	**-0.3**
PREZ	**Palmer Road**	**1.91**	**313**	P	**Pn**	**11 41 53.8**	**+1.9**
MTHZ	**Maungataniwha**	**1.94**	**21**	P	**Pn**	**11 41 52.0**	**-0.2**
RAHZ	**Arahi**	**1.96**	**27**	P	**Pn**	**11 41 52.1**	**-0.4**
WATZ	**Wairara**	**1.96**	**355**	P	**Pn**	**11 41 52.7**	**+0.1**
DREZ	**Durham Road**	**2.00**	**317**	P	**Pn**	**11 41 55.9**	**+2.9**
WHTZ	**Whakaora**	**2.00**	**0**	P	**Pn**	**11 41 57.2**	**+4.1**
KHEZ	**Kahui Hut**	**2.02**	**312**	P	**Pn**	**11 41 55.8**	**+2.4**
MHEZ	**Mangahewa**	**2.02**	**321**	P	**Pn**	**11 41 56.4**	**+3.1**
NNZ	**Nelson**	**2.02**	**253**	P	**Pn**	**11 41 53.4**	**0.0**
NNZ	**Nelson**	**2.02**	**253**	Pn	**Pn**	**11 41 53.6**	**+0.2**
NMEZ	**Namu Road**	**2.02**	**308**	P	**Pn**	**11 41 55.3**	**+1.9**
PKE	**Pukeiti**	**2.11**	**314**	P	**Pn**	**11 41 57.5**	**+3.0**
KNZ	**Kokohu**	**2.11**	**39**	P	**Pn**	**11 41 53.6**	**-1.0**
ALRZ	**Allen Road**	**2.12**	**8**	P	**Pn**	**11 41 54.1**	**-0.7**
NBEZ	**Newall Road No**	**2.12**	**310**	P	**Pn**	**11 41 57.7**	**+2.9**
MHGZ	**Mahia Peninsul**	**2.13**	**45**	P	**Pn**	**11 41 54.0**	**-0.9**
WPRZ	**Whakapapatarin**	**2.15**	**4**	P	**Pn**	**11 41 54.6**	**-0.5**
SNGZ	**Shannon Statio**	**2.17**	**30**	P	**Pn**	**11 41 54.6**	**-0.7**
KUTZ	**Kaahu Road**	**2.18**	**357**	P	**Pn**	**11 41 55.6**	**+0.1**
PRRZ	**Plateau Road**	**2.19**	**9**	P	**Pn**	**11 41 55.1**	**-0.6**
RTZ	**Ruatahuna**	**2.20**	**22**	P	**Pn**	**11 41 56.3**	**+0.5**
MUGZ	**Murupara**	**2.28**	**16**	P	**Pn**	**11 41 56.0**	**-0.8**
HRRZ	**Handcock Road**	**2.29**	**7**	P	**Pn**	**11 41 56.8**	**-0.2**
PRGZ	**Paritu Road**	**2.29**	**41**	P	**Pn**	**11 41 56.3**	**-0.7**
HIZ	**Hauiti**	**2.31**	**338**	P	**Pn**	**11 41 57.9**	**+0.5**
HIZ	**Hauiti**	**2.31**	**338**		**Pn**	**11 41 57.8**	**+0.5**
GRRZ	**Galatos Road**	**2.32**	**3**	P	**Pn**	**11 41 59.0**	**+1.6**
TLZ	**Tolley Road**	**2.36**	**352**	P	**Pn**	**11 41 57.9**	**-0.1**
HSRZ	**Hossack Road**	**2.36**	**6**	P	**Pn**	**11 41 57.7**	**-0.3**
RRRZ	**Republican Roa**	**2.37**	**11**	P	**Pn**	**11 42 01.6**	**+3.5**
RIGZ	**Rimuhau**	**2.41**	**36**	P	**Pn**	**11 41 57.8**	**-0.9**
RAGZ	**Rawiri**	**2.45**	**28**	P	**Pn**	**11 41 58.0**	**-1.3**
TARZ	**Mount Tarawera**	**2.46**	**10**	P	**Pn**	**11 41 59.0**	**-0.5**
KHZ	**Kahutara**	**2.52**	**225**	P	**Pn**	**11 41 59.0**	**-1.1**
THZ	**Tophouse**	**2.54**	**244**	P	**Pn**	**11 41 59.8**	**-0.8**
THZ	**Tophouse**	**2.54**	**244**		**Pn**	**11 42 00.0**	**-0.6**
URZ	**Urewera**	**2.57**	**21**	Pn	**Pn**	**11 41 59.1**	**-1.6**
	1.9nm,0.3s,baz=227,slow=4.9,SNR=24						
URZ					**Sn**	**11 42 28.4**	**-2.4**
	13nm,0.3s,baz=258,slow=14,SNR=6.9						
URZ				LR	LR	11 43 18.0	
	comp=Z,121nm,19.9s,baz=247,slow=48						
URZ	**Urewera**	**2.57**	**21**	P	**Pn**	**11 41 59.2**	**-1.6**
URZ	**Urewera**	**2.57**	**21**		**Pn**	**11 41 59.3**	**-1.6**
QRZ	**Quartz Range**	**2.60**	**265**	P	**Pn**	**11 42 01.4**	**0.0**
QRZ	**Quartz Range**	**2.60**	**265**	Pn	**Pn**	**11 42 01.1**	**-0.3**
MWZ	**Matawai**	**2.63**	**28**	P	**Pn**	**11 42 00.1**	**-1.6**
CNGZ	**Carnagh Statio**	**2.79**	**39**	P	**Pn**	**11 42 03.3**	**-0.6**
TWGZ	**Tauwhareparae**	**2.94**	**33**	P	**Pn**	**11 42 05.5**	**-0.5**
TOZ	**Tahuroa Road**	**2.95**	**353**	P	**Pn**	**11 42 06.3**	**+0.2**
RUGZ	**Raukumara Rang**	**3.01**	**27**	P	**Pn**	**11 42 05.5**	**-1.5**
PUZ	**Puketiti**	**3.15**	**35**	P	**Pn**	**11 42 06.9**	**-2.0**
PKGZ	**Pakihiroa**	**3.23**	**31**	P	**Pn**	**11 42 09.5**	**-0.5**
HAZ	**Te Kaha**	**3.24**	**27**	P	**Pn**	**11 42 09.4**	**-0.6**
DSZ	**Denniston Nort**	**3.31**	**250**	P	**Pn**	**11 42 10.8**	**-0.2**
WMGZ	**Waiomatatini S**	**3.43**	**35**	P	**Pn**	**11 42 11.1**	**-1.5**
LTZ	**Lake Taylor**	**3.47**	**231**	P	**Pn**	**11 42 11.9**	**-1.4**
MKAZ	**Moumakai**	**3.61**	**350**	P	**Pn**	**11 42 15.1**	**-0.1**
KBAZ	**Karaka Road Bo**	**3.66**	**347**	P	**Pn**	**11 42 16.6**	**+0.7**
OKCZ	**Okains Bay**	**3.73**	**214**	P	**Pn**	**11 42 15.2**	**-1.7**
AWAZ	**Awhitu Peninsu**	**3.74**	**344**	P	**Pn**	**11 42 17.9**	**+0.9**
ETAZ	**East Tamaki Re**	**3.79**	**348**	P	**Pn**	**11 42 18.4**	**+0.7**
WTAZ	**Waiatarua**	**3.88**	**343**	P	**Pn**	**11 42 20.2**	**+1.3**
EPAZ	**Eden Park BICE**	**3.90**	**346**	P	**Pn**	**11 42 21.6**	**+2.5**
MQZ	**McQueen's Vall**	**3.90**	**218**	Pn	**Pn**	**11 42 17.8**	**-1.4**
MQZ					**Sn**	**11 43 00.1**	**-3.6**
AKCZ	**Akaroa Harbour**	**3.92**	**214**	P	**Pn**	**11 42 17.8**	**-1.6**
OXZ	**Oxford**	**3.94**	**226**	P	**Pn**	**11 42 17.3**	**-2.5**
OXZ	**Oxford**	**3.94**	**226**	Pn	**Pn**	**11 42 18.4**	**-1.4**
OXZ					**Sn**	**11 43 04.3**	**-0.5**
INZ	**Inchbonnie**	**3.95**	**237**	P	**Pn**	**11 42 18.4**	**-1.5**
WVZ	**Waitaha Valley**	**4.58**	**237**	P	**Pn**	**11 42 27.1**	**-1.3**
RPZ	**Rata Peaks**	**4.74**	**228**	Pn	**Pn**	**11 42 29.2**	**-1.6**
	0.9nm,0.3s,baz=232,slow=2.0,SNR=21						
RPZ					**Sn**	**11 43 20.3**	**-4.2**
	6.8nm,0.3s,baz=119,slow=21,SNR=15						
RPZ	**Rata Peaks**	**4.74**	**228**	P	**Pn**	**11 42 29.4**	**-1.4**
RPZ	**Rata Peaks**	**4.74**	**228**		**Pn**	**11 42 29.4**	**-1.4**
RPZ					**Sn**	**11 43 22.4**	**-2.1**
WCZ	**Waipu Caves**	**4.89**	**345**	P	**Pn**	**11 42 33.2**	**+0.5**
FOZ	**Fox Glacier**	**5.39**	**236**	P	**Pn**	**11 42 37.9**	**-1.6**
LBZ	**Lake Benmore**	**5.65**	**227**	P	**Pn**	**11 42 41.8**	**-1.4**
ODZ	**Otahua Downs**	**5.86**	**220**	P	**Pn**	**11 42 44.0**	**-2.0**
JCZ	**Jackson Bay**	**6.30**	**235**	P	**Pn**	**11 42 50.2**	**-2.0**
AS31	**Alice Springs**	**39.01**	**283**	P	**P**	**11 48 44.5**	**0.0**
AS31				IAmb	IAmb	11 48 48.9	
	comp=Z,0.7nm,0.9s						
ASAR	**Alice Springs**	**39.01**	**283**	P	**P**	**11 48 44.4**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=117,slow=6.6,SNR=38						
ASAR				PcP	**PcP**	**11 50 53.2**	**-1.0**
	comp=Z,0.2nm,0.8s,baz=135,slow=3.9,SNR=3.2						
ASAR				LR	LR	12 05 29.1	
	comp=Z,30nm,18.7s,baz=115,slow=37						
WR0	**Warramunga Arr**	**40.81**	**288**	P	**P**	**11 48 59.2**	**-0.2**
WR0				IAmb	IAmb	11 49 14.3	
	comp=Z,8.8nm,1.4s						
WRA	**Warramunga Arr**	**40.96**	**288**	P	**P**	**11 49 00.4**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=126,slow=8.2,SNR=6.7						
QSPA	**South Pole Qui**	**49.46**	**180**	P	**P**	**11 50 10.6**	**+2.9**
QSPA				IAmb	IAmb	11 50 26.0	
	comp=Z,3.2nm,1.2s						
JCJ	**Chichijima**	**74.36**	**329**	LR	LR	12 24 50.8	
	comp=Z,17nm,20.0s,baz=130,slow=35						
ARCES	**ARCESS Array B**	**147.18**	**341**	PKPbc	**PKPbc**	**12 00 59.0**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=29,slow=2.8,SNR=5.3						
BRTR	**Keskin Array B**	**151.34**	**281**	PKPbc	**PKPbc**	**12 01 10.7**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=132,slow=2.1,SNR=3.3						

*IDC **20** 11:41:41.8±17.0, 36°.94N×72°.05E, h135km±88km, mb3.4/2, mb1 3.2/7, mb1mx3.0/39, mbtmp3.6/7, Error ellipse: s-maj=180.3km s-min=43.0km az=179.0*

*NNC **20** 11:41:47.4±7.6, 37°.79N×71°.83E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=74.0km s-min=41.2km az=150.0*

ISC 20 11:41:44.2±2.0, 37°.3N±0°.2×72°.0E±0°.1, h130km, n20, σ1§53/24, 1C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.01**	**15**	P	**Pn**	**11 42 59.4**	**+1.7**
	SNR=160						
UCH	**Uchtor**	**5.30**	**21**	P	**Pn**	**11 43 03.4**	**+1.8**
	SNR=43						
KZA	**Kyzart**	**5.40**	**27**	P	**Pn**	**11 43 04.2**	**+1.2**
	SNR=15						
EKS2	**Erkin-Say**	**5.53**	**14**	P	**Pn**	**11 43 06.8**	**+2.3**
	SNR=32						
AAK	**Ala-Archa**	**5.67**	**19**	P	**Pn**	**11 43 08.4**	**+2.0**
	3.5nm,0.3s,baz=186,slow=9.1,SNR=40						
AAK				S	**Sn**	**11 44 10.3**	**-0.2**
	0.9nm,0.3s,baz=196,slow=7.4,SNR=13						
AAK	**Ala-Archa**	**5.67**	**19**	P	**Pn**	**11 43 08.4**	**+2.0**
	SNR=14						
AAK	**Ala-Archa**	**5.67**	**19**	⇓P	**Pn**	**11 43 08.2**	**+1.9**
	6.5nm,0.6s						
AAK				⇓S	**Sn**	**11 44 11.1**	**+0.6**
	12nm,0.6s						
KBK	**Karagaybulak**	**5.82**	**22**	P	**Pn**	**11 43 10.3**	**+1.9**
	SNR=8.3						
KK31	**Karatay Array**	**5.91**	**349**	⇓P	**Pn**	**11 43 10.6**	**+1.2**
	2.9nm,0.4s,baz=176,slow=12,SNR=88						
KK31				⇓S	**Sn**	**11 44 13.8**	**-2.2**
	6.7nm,0.3s,baz=168,slow=23,SNR=5.5						
ULHL	**Ulahol**	**5.93**	**32**	P	**Pn**	**11 43 10.7**	**+0.8**
	SNR=6.7						
CHMS	**Chumysh**	**6.08**	**20**	P	**Pn**	**11 43 13.6**	**+1.9**
	SNR=9.1						
TKM2	**Tokmak 2**	**6.26**	**25**	P	**Pn**	**11 43 15.8**	**+1.4**
	SNR=5.7						
TKM2	**Tokmak 2**	**6.26**	**25**	⇑P	**Pn**	**11 43 15.3**	**+1.0**
	2.5nm,0.6s						
TKM2				⇓S	**Sn**	**11 44 22.6**	**-2.2**
	4.8nm,1.1s						
MKAR	**Makanchi Array**	**12.19**	**36**	P	**Pn**	**11 44 34.0**	**+0.6**
	0.0nm,0.3s,baz=227,slow=12,SNR=3.1						
KURBB	**Kurchatov Arra**	**14.12**	**17**	P	**P**	**11 45 01.0**	**-0.8**
	0.0nm,0.3s,baz=203,slow=11,SNR=2.8						
AB31	**Akbulak array**	**14.80**	**328**	P	**Pn**	**11 45 07.2**	**+0.4**
	0.1nm,0.3s,baz=199,slow=6.9,SNR=12						
AKTO	**Aktyubinsk**	**16.51**	**327**	P	**Pn**	**11 45 28.1**	**+0.1**
	0.2nm,0.3s,baz=159,slow=10,SNR=3.4						
ZALV	**Zal

AWAZ	**Awhitu Peninsu**	**3.03**	**358**	P	Pn	11 46 44.9 +1.4
RUGZ	**Raukumara Rang**	**3.11**	**48**	P	Pn	11 46 45.9 +1.2
ETAZ	**East Tamaki Re**	**3.14**	**2**	P	Pn	11 46 46.0 +1.0
GVZ	**Greta Valley S**	**3.15**	**204**	P	Pn	11 46 44.4 -0.6
TWGZ	**Tauwhareparae**	**3.15**	**54**	P	Pn	11 46 45.7 +0.5
WTAZ	**Waiatarua**	**3.17**	**357**	P	Pn	11 46 47.1 +1.8
LTZ	**Lake Taylor**	**3.27**	**214**	P	Pn	11 46 47.0 +0.2
PKGZ	**Pakihiroa**	**3.40**	**51**	P	Pn	11 46 48.2 -0.3
INZ	**Inchbonnie**	**3.62**	**222**	P	Pn	11 46 52.7 +1.2
WMGZ	**Waiomatatini S**	**3.65**	**53**	P	Pn	11 46 51.1 -0.8
WCZ	**Waipu Caves**	**4.17**	**355**	P	Pn	11 47 00.2 +1.2
FOZ	**Fox Glacier**	**5.04**	**226**	P	Pn	11 47 11.8 +0.7
JCZ	**Jackson Bay**	**5.96**	**226**	P	Pn	11 47 25.1 +1.3

*BEO **20** 11:47:10.9±0.9, 41°.20N×19°.39E, h0km, ML2.4/5*
*TIR **20** 11:47:13.2, 41°.39N×19°.63E, h19km, Md2.6/4*
*PDG **20** 11:47:13.4±0.2, 41°.35N×19°.65E, h14km, ML2.7/12, Error ellipse: s-maj=1.0km s-min=1.0km az=90.0*
*SKO **20** 11:47:14.3, 41°.40N×19°.53E, h11km*

ISC 20 11:47:13.0±1.2, **41°.36N**±0°.04×**19°.52E**±0°.03, **h10**km±9km, **n34**, σ1§**26**/62, **1D**, **Albania**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
TIR	**Tirane**	**0.26**	**92**	*e*Pg		**Pg**		**11 47 18.7**	**+0.3**
TIR				*e*Sg		**Sg**		**11 47 22.3**	**+0.4**
TIR	**Tirane**	**0.26**	**92**	*i* Pg		**Pg**		**11 47 18.4**	**0.0**
TIR				*i* Sg		**Sg**		**11 47 21.9**	**0.0**
ULC	**Ulcinj**	**0.64**	**341**	*e*Pg		**Pb**		**11 47 26.2**	**-0.1**
ULC				*e*Sg		**Sn**		**11 47 36.9**	**-1.5**
PUK	**Puka**	**0.74**	**22**	*i* Pg		**Pg**		**11 47 26.7**	**-0.6**
PUK				*i* Sg		**Sb**		**11 47 37.2**	**-1.1**
PHP	**Peshkopia**	**0.77**	**64**	*i* Pg		**Pg**		**11 47 26.2**	**-1.6**
PHP				*i* Sg		**Sg**		**11 47 37.0**	**-0.9**
DRME	**Dracevica, Mon**	**0.87**	**343**	*e*Pg		**Pb**		**11 47 30.2**	**+0.1**
DRME				*e*Sg		**Sn**		**11 47 44.6**	**+0.7**
OHR	**Ohrid**	**1.00**	**104**	*e*Pg		**Pb**		**11 47 32.7**	**+0.3**
OHR				*e*Sg		**Sb**		**11 47 46.2**	**+0.7**
OHR				*e*Lg		Lg		11 47 47.8	
	comp=N,46nm,0.5s								
OHR				*e*Lg		Lg		11 47 50.5	
	comp=E,72nm,0.5s								
BUM	**Brajici-Budva**	**1.05**	**334**	*e*Pg		**Pn**		**11 47 34.3**	**+0.4**
BUM				*e*Sg		**Sn**		**11 47 51.3**	**+2.7**
BCI	**Bajram Curri**	**1.09**	**22**	*i* PG		**Pg**		**11 47 33.7**	**-1.0**
BCI				*i* SG		**Sn**		**11 47 48.6**	**-0.8**
PDG	**Podgorica**	**1.09**	**350**	*e*Pg		**Pb**		**11 47 33.6**	**-0.3**
PDG				*e*Sg		**Sn**		**11 47 50.3**	**+0.9**
TTG	**Podgorica**	**1.09**	**350**	*e*Pg		**Pn**		**11 47 34.6**	**+0.3**
TTG				*e*Sg		**Sn**		**11 47 51.9**	**+2.5**
CEME	**Cevo**	**1.27**	**340**	*e*Pg		**Pg**		**11 47 37.6**	**+0.1**
CEME				*e*Sg		**Sn**		**11 47 57.1**	**+3.1**
PVY	**Plav**	**1.28**	**15**	*e*Pg		**Pn**		**11 47 36.5**	**-0.6**
PVY				*e*Sg		**Sn**		**11 47 57.0**	**+2.7**
HCY	**Herceg Novi**	**1.33**	**325**	*e*Pg		**Pg**		**11 47 38.7**	**+0.1**
NKME	**Niksic**	**1.47**	**344**	*e*Pg		**Pg**		**11 47 40.9**	**-0.4**
NKME				*e*Sg		**Sg**		**11 48 03.0**	**+2.6**
KOME	**Kolasin**	**1.49**	**360**	*e*Pg		**Pg**		**11 47 41.4**	**-0.3**
KOME				*e*Sg		**Sg**		**11 48 03.1**	**+2.0**
IVA	**Berane**	**1.54**	**10**	*e*Pg		**Pb**		**11 47 41.5**	**-0.2**
IVA				*e*Sg		**Sg**		**11 48 03.2**	**+0.6**
TREB	**Trebinje**	**1.61**	**328**	*e*Pn		**Pn**		**11 47 41.1**	**-0.4**
TREB				*e*Sn		**Sb**		**11 48 03.4**	**+0.1**
DBRK	**Dubrovnik**	**1.66**	**323**	*e*Pn		**Pg**		**11 47 44.1**	**-0.8**
DBRK				Sn		**Sb**		**11 48 04.6**	**-0.1**
BRY	**Bratogost**	**1.71**	**335**	*i*Pn		**Pb**		**11 47 44.7**	**+0.1**
BRY				*e*Sn		**Sg**		**11 48 09.2**	**+1.3**
SJES	**Sjenica**	**1.93**	**10**	*e*Pn		**Pn**		**11 47 46.4**	**+0.4**
SJES				*e*Sn		**Sg**		**11 48 14.9**	**-0.3**
PLE	**Pljevlja**	**1.97**	**357**	*e*Pn		**Pb**		**11 47 47.7**	**-1.4**
PLE				*e*Sn		**Sg**		**11 48 14.8**	**-1.7**
STON	**Ston**	**2.03**	**319**	*i* Pn		**Pb**		**11 47 49.8**	**-0.1**
STON				Sn		**Sn**		**11 48 12.6**	**+0.1**
SELS	**Selova**	**2.21**	**32**	*e*Pn		**Pb**		**11 47 52.3**	**-0.7**
IVAS	**Ivanjica**	**2.27**	**12**	*e*Pn		**Pn**		**11 47 51.8**	**+1.2**
BBLS	**Lazić**	**2.51**	**358**	*e*Pn		**Pb**		**11 47 56.1**	**-2.1**
MAKA	**Makarska**	**2.67**	**317**	*e*Pn		**Pn**		**11 47 56.6**	**+0.5**
MAKA				Sn		**Sn**		**11 48 28.1**	**-0.3**
GRUS	**Gruza**	**2.68**	**19**	*e*Pn		**Pn**		**11 47 56.7**	**+0.5**
DIVS	**Divibare**	**2.76**	**7**	*e*Pn		**Pn**		**11 47 59.5**	**+2.1**
HVAR	**Hvar**	**2.92**	**310**	*e*Pn		**Pn**		**11 48 00.2**	**+0.8**
HVAR				Sn		**Sn**		**11 48 32.8**	**-1.6**
KIJV	**Kijevo**	**3.50**	**320**	*i* Pn		**Pn**		**11 48 08.3**	**+0.8**
KIJV				Sn		**Sn**		**11 48 48.9**	**-0.1**
ZIRJ	**Zirje**	**3.67**	**310**	*e*Pn		**Pn**		**11 48 10.1**	**+0.3**
ZIRJ				Sn		**Sn**		**11 48 50.0**	**-3.1**
MORI	**Morici**	**3.77**	**313**	*e*Pn		**Pn**		**11 48 11.0**	**-0.1**
MORI				Sn		**Sn**		**11 48 54.6**	**-0.8**
DUGI	**Dugi Otok**	**4.21**	**310**	*i* Pn		**Pn**		**11 48 18.1**	**+0.9**
DUGI				Sn		**Sn**		**11 49 04.2**	**-2.3**

*DRS **20** 11:48:27.7±0.0, 42°.27N×45°.63E, h12km*
*NORS **20** 11:48:28.4±0.0, 42°.16N×45°.67E, h4km, MPVA3.8*
*TIF **20** 11:48:28.7, 42°.28N×45°.72E, h19km±2km*
*DDA **20** 11:48:29.9, 42°.30N×45°.41E, h5km±1km, ML2.7*
*MOS **20** 11:48:29.3±0.8, 42°.23N×45°.71E, h11km, mb3.7/1, Error ellipse: s-maj=5.0km s-min=4.2km az=126.8*

ISC 20 11:48:28.7±1.0, **42°.24N**±0°.01×**45°.68E**±0°.01, **h7**km±9km, **n109**, σ1§**14**/188, **7C-11D**, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
BTLR	**Botlikh**	**0.58**	**43**	*i*PG		**Pg**		**11 48 40.0**	**+0.1**
BTLR				*e*S		**Sg**		**11 48 47.7**	**+0.2**
BTLR	**Botlikh**	**0.58**	**43**	*i* Pg		**Pg**		**11 48 40.0**	**+0.1**
LGD	**Lagodekhi**	**0.58**	**134**	P		**Pb**		**11 48 41.2**	**0.0**
LGD				S		**Sb**		**11 48 49.6**	**-0.1**
LGD	**Lagodekhi**	**0.58**	**134**	PG		**Pb**		**11 48 41.2**	**0.0**
LGD				S		**Sb**		**11 48 49.6**	**-0.1**
LGD	**Lagodekhi**	**0.58**	**134**	*e*Pg		**Pb**		**11 48 41.2**	**0.0**
LGD				*e*Sg		**Sb**		**11 48 49.6**	**-0.1**
XNZR	**Khunzakh**	**0.81**	**68**	*e*PG		**Pg**		**11 48 44.5**	**+0.1**
XNZR				*e*				11 48 55.8	
XNZR	**Khunzakh**	**0.81**	**68**	*e*Pg		**Pg**		**11 48 44.4**	**0.0**
XNZR				*e*Sg		**Sg**		**11 48 55.4**	**+0.4**
DDFL	**Dedoflistskaro**	**0.86**	**158**	*i* P		**Pn**		**11 48 48.1**	**+0.8**
DDFL				*i* S		**Sn**		**11 49 04.0**	**+3.8**
BTNK	**Botanikuri**	**0.86**	**230**	P		**Pb**		**11 48 46.1**	**0.0**
BTNK				S		**Sn**		**11 48 59.0**	**-1.2**
BTNK	**Botanikuri**	**0.86**	**230**	PG		**Pb**		**11 48 46.1**	**0.0**
BTNK				S		**Sn**		**11 48 59.0**	**-1.2**
BTNK	**Botanikuri**	**0.86**	**230**	*e*Pg		**Pb**		**11 48 46.1**	**0.0**
BTNK				*e*Sg		**Sn**		**11 48 59.0**	**-1.2**
BTNK	**Botanikuri**	**0.86**	**230**	*i* P		**Pb**		**11 48 46.0**	**0.0**
TBLG	**Delisi**	**0.87**	**234**	P		**Pb**		**11 48 46.2**	**+0.1**
TBLG				S		**Sn**		**11 48 59.5**	**-0.8**
TBLG	**Delisi**	**0.87**	**234**	*e*PG		**Pb**		**11 48 46.2**	**+0.1**
TBLG	**Delisi**	**0.87**	**234**	*e*Pg		**Pb**		**11 48 46.2**	**+0.1**
TBLG				*e*Sg		**Sn**		**11 48 59.5**	**-0.8**
GUDG	**Gudauri**	**0.92**	**284**	P		**Pg**		**11 48 45.1**	**-1.3**
GUDG				S		**Sg**		**11 48 58.1**	**-0.2**
GUDG	**Gudauri**	**0.92**	**284**	*e*PG		**Pg**		**11 48 45.2**	**-1.2**
GUDG				*e*S		**Sg**		**11 48 57.8**	**-0.5**
UNCR	**Uncukul**	**0.95**	**60**	*i*PG		**Pg**		**11 48 46.5**	**-0.4**
UNCR				*e*S		**Sb**		**11 49 00.0**	**-0.3**
UNCR					pmax	pmax			
	comp=Z,166nm,0.5s								
UNCR	**Uncukul**	**0.95**	**60**	*i* Pg		**Pg**		**11 48 46.5**	**-0.4**
UNCR				*e*Sg		**Sb**		**11 49 00.0**	**-0.3**
GNBR	**Gunib**	**0.96**	**81**	*e*PG		**Pg**		**11 48 46.9**	**-0.3**
GNBR				*e*				11 48 59.5	
GNBR					pmax	pmax			
	comp=Z,137nm,0.6s								
GNBR					smax	smax			
	comp=N,891nm,0.8s								
GNBR	**Gunib**	**0.96**	**81**	*e*Pg		**Pg**		**11 48 46.9**	**-0.3**
GNBR				*e*Sg		**Sg**		**11 48 59.5**	**-0.2**
GROC	**Groznyy**	**0.96**	**5**	*i*PG		**Pg**		**11 48 48.2**	**-0.5**
GROC				*e*S		**Sn**		**11 49 02.4**	**-0.3**
GROC	**Groznyy**	**0.96**	**5**	*i* Pg		**Pn**		**11 48 48.2**	**-0.5**
GROC				*e*Sg		**Sn**		**11 49 02.4**	**-0.3**
KMGR	**Komgaron**	**1.01**	**324**	*i*PG		**Pn**		**11 48 48.9**	**-0.5**
KMGR				*e*S		**Sn**		**11 49 04.8**	**+0.8**
KMGR	**Komgaron**	**1.01**	**324**	*e*Pg		**Pn**		**11 48 48.7**	**-0.7**
KMGR				*e*Sg		**Sn**		**11 49 04.8**	**+0.8**
ARKR	**Arakani**	**1.04**	**69**	*i* PG		**Pg**		**11 48 48.5**	**-0.1**
ARKR				*e*S		**Sb**		**11 49 02.5**	**-0.4**
ARKR					pmax	pmax			
	comp=Z,349nm,0.1s								
ARKR	**Arakani**	**1.04**	**69**	*i* Pg		**Pg**		**11 48 48.5**	**-0.1**
ARKR				*e*Sg		**Sb**		**11 49 02.5**	**-0.4**
KMKR	**Kumukh**	**1.06**	**96**	*e*PG		**Pg**		**11 48 48.5**	**-0.5**
KMKR				*e*S		**Sg**		**11 49 02.5**	**-0.3**
KMKR					pmax	pmax			
	comp=Z,55nm,0.3s								
KMKR	**Kumukh**	**1.06**	**96**	*e*Pg		**Pg**		**11 48 48.5**	**-0.5**
KMKR				*e*Sg		**Sg**		**11 49 02.5**	**-0.3**
KRNR	**Karanay**	**1.08**	**57**	*i* PG		**Pb**		**11 48 48.3**	**-1.5**
KRNR				*e*S		**Sg**		**11 49 03.0**	**-0.4**
KRNR					pmax	pmax			
	comp=Z,78nm,0.2s								
KRNR	**Karanay**	**1.08**	**57**	*i* Pg		**Pb**		**11 48 48.3**	**-1.5**
KRNR				*e*Sg		**Sg**		**11 49 03.0**	**-0.4**
DLMR	**Dylym**	**1.08**	**40**	*i* PG		**Pb**		**11 48 49.0**	**-0.8**
DLMR				*e*S		**Sn**		**11 49 05.0**	**-0.6**
DLMR	**Dylym**	**1.08**	**40**	*i* Pg		**Pb**		**11 48 49.0**	**-0.8**
DLMR				*e*Sg		**Sn**		**11 49 05.0**	**-0.6**
VLKR	**Vladikavkaz**	**1.09**	**318**	*e*PG		**Pn**		**11 48 50.7**	**+0.2**
VLKR				*e*S		**Sn**		**11 49 06.3**	**+0.4**
VLKR	**Vladikavkaz**	**1.09**	**318**	*e*Pg		**Pn**		**11 48 49.9**	**-0.6**
VLKR				*e*Sg		**Sn**		**11 49 05.6**	**-0.3**
DBC	**Dubki**	**1.15**	**47**	*i*PG		**Pb**		**11 48 50.0**	**-1.0**
DBC				*e*				11 49 05.5	
DBC	**Dubki**	**1.15**	**47**	*e*Pg		**Pb**		**11 48 50.0**	**-1.0**
DBC				*e*Sg		**Sn**		**11 49 05.9**	**-1.5**
LACR	**Lac**	**1.18**	**300**	*i* PG		**Pb**		**11 48 50.6**	**-0.9**
LACR					pmax	pmax			
	comp=Z,87nm,0.3s								
LACR	**Lac**	**1.18**	**300**	*e*Pg		**Pb**		**11 48 50.6**	**-0.9**
BUJR	**Buynaksk**	**1.21**	**61**	*i*ePG		**Pg**		**11 48 52.2**	**+0.4**
BUJR				*e*				11 49 08.4	
BUJR	**Buynaksk**	**1.21**	**61**	*e*Pg		**Pg**		**11 48 52.0**	**+0.2**
BUJR				*e*Sg		**Sn**		**11 49 08.2**	**-0.4**
KZRT	**Kazreti**	**1.28**	**229**	P		**Pn**		**11 48 52.9**	**-0.3**
KZRT				S		**Sg**		**11 49 10.5**	**+0.5**
KZRT	**Kazreti**	**1.28**	**229**	PG		**Pn**		**11 48 52.8**	**-0.3**
KZRT				S		**Sg**		**11 49 10.5**	**+0.5**
KZRT	**Kazreti**	**1.28**	**229**	*e*Pg		**Pn**		**11 48 52.9**	**-0.3**
KZRT				*e*Sg		**Sg**		**11 49 10.5**	**+0.5**
KZRT	**Kazreti**	**1.28**	**229**	*i* P		**Pn**		**11 48 52.9**	**-0.3**
KZRT				*i* S		**Sn**		**11 49 10.0**	**-0.6**
TRLG	**Trialeti**	**1.37**	**240**	P		**Pg**		**11 48 55.4**	**+0.4**
TRLG				S		**Sg**		**11 49 14.5**	**+1.7**
TRLG	**Trialeti**	**1.37**	**240**	*e*Pg		**Pg**		**11 48 55.4**	**+0.4**
TRLG				*e*Sg		**Sg**		**11 49 14.5**	**+1.7**
ARNR	**Ardon**	**1.39**	**313**	*e*PG		**Pg**		**11 48 55.7**	**+0.3**
ARNR				*e*S		**Sg**		**11 49 15.2**	**+1.7**
ARNR	**Ardon**	**1.39**	**313**	*e*Pg		**Pg**		**11 48 55.5**	**+0.1**
ARNR				*e*Sg		**Sg**		**11 49 15.1**	**+1.6**
BTKR	**Batakoyurt**	**1.41**	**324**	*e*PG		**Pg**		**11 48 55.3**	**-0.4**
BTKR				*e*S		**Sg**		**11 49 16.3**	**+2.4**
BTKR	**Batakoyurt**	**1.41**	**324**	*e*Pg		**Pg**		**11 48 55.3**	**-0.4**
BTKR				*e*Sg		**Sg**		**11 49 16.3**	**+2.4**
ZEI	**Tsey**	**1.42**	**293**	*ce*PG		**Pb**		**11 48 55.1**	**-0.6**
ZEI	**Tsey**	**1.42**	**293**	*e*Pg		**Pb**		**11 48 54.9**	**-0.8**
URKR	**Urkarakh**	**1.45**	**92**	*i*ePG		**Pb**		**11 48 56.3**	**+0.1**
URKR				*e*				11 49 17.5	
URKR	**Urkarakh**	**1.45**	**92**	*e*Pg		**Pn**		**11 48 55.6**	**+0.1**
URKR				*e*Sg		**Sg**		**11 49 16.8**	**+1.4**
KORR	**Kora**	**1.46**	**306**	*i*PG		**Pg**		**11 48 56.8**	**+0.1**
KORR				*e*S		**Sg**		**11 49 17.8**	**+2.2**
KORR	**Kora**	**1.46**	**306**	*e*Pg		**Pg**		**11 48 56.7**	**+0.1**
KORR				*e*Sg		**Sg**		**11 49 17.6**	**+2.0**
MAK	**Makhachkala**	**1.53**	**61**	*e*PG		**Pb**		**11 48 57.2**	**-0.1**
MAK				*e*S		**Sg**		**11 49 18.1**	**+0.3**
MAK	**Makhachkala**	**1.53**	**61**	*e*Pg		**Pb**		**11 48 57.2**	**-0.1**
MAK				*e*Sg		**Sg**		**11 49 18.1**	**+0.3**
SEKA	**Sheki**	**1.54**	**132**	PG		**Pb**		**11 48 57.4**	**-0.1**
TRKR	**Terskaya**	**1.64**	**335**	*e*PN		**Pg**		**11 49 01.8**	**+1.7**
TRKR				*e*S		**Sg**		**11 49 23.4**	**+2.1**
TRKR	**Terskaya**	**1.64**	**335**	*e*Pg		**Pg**		**11 49 00.7**	**+0.6**
TRKR				*e*Sg		**Sg**		**11 49 22.8**	**+1.5**
STDR	**Stavd-Durt**	**1.64**	**314**	*e*PN		**Pg**		**11 48 59.3**	**-0.8**
STDR				*e*S		**Sg**		**11 49 22.8**	**+1.4**
STDR	**Stavd-Durt**	**1.64**	**314**	*e*Pg		**Pg**		**11 48 59.3**	**-0.8**
STDR				*e*Sg		**Sg**		**11 49 22.8**	**+1.4**
GANJ	**Ganja**	**1.67**	**163**	PN		**Pn**		**11 48 59.0**	**+0.6**
DIGR	**Digorskoe uzhe**	**1.69**	**294**	*e*PN		**Pb**		**11 48 59.8**	**-0.4**
DIGR				*e*S		**Sg**		**11 49 22.3**	**-0.6**
DIGR	**Digorskoe uzhe**	**1.69**	**294**	*e*Pg		**Pb**		**11 48 59.7**	**-0.5**
DIGR				*e*Sg		**Sg**		**11 49 22.0**	**-0.9**
ONI	**Oni**	**1.69**	**283**	P		**Pb**		**11 48 59.7**	**-0.4**
ONI				S		**Sg**		**11 49 23.2**	**+0.3**
ONI	**Oni**	**1.69**	**283**	*e*PN		**Pb**		**11 48 59.7**	**-0.4**
ONI	**Oni**	**1.69**	**283**	*e*Pg		**Pb**		**11 48 59.7**	**-0.4**
ONI				*e*Sg		**Sg**		**11 49 22.4**	**-0.5**
AKT	**Akhty**	**1.71**	**116**	*e*PN		**Pb**		**11 49 00.4**	**-0.1**
AKT				*e*				11 49 23.9	
AKT					pmax	pmax			
	comp=Z,37nm,0.3s								
AKT					smax	smax			
	comp=N,111nm,0.3s								
AKT					smax	smax			
	comp=E,132nm,0.3s								
AKT					smax	smax			
	comp=E,120nm,0.3s								
AKT	**Akhty**	**1.71**	**116**	*e*Pg		**Pb**		**11 49 00.5**	**-0.1**
AKT				*e*Sg		**Sg**		**11 49 23.9**	**+0.2**
LSNR	**Lesken**	**1.71**	**308**	*ce*PN		**Pg**		**11 49 01.3**	**-0.2**
LSNR	**Lesken**	**1.71**	**308**	*e*Pg		**Pg**		**11 49 01.4**	**-0.2**
LSNR				*e*Sg		**Sg**		**11 49 24.7**	**+0.9**
MNGR	**Mingechevir, A**	**1.81**	**144**	PN		**Pb**		**11 49 01.7**	**-0.4**
PRTR	**Priterechnaya**	**1.82**	**326**	*e*PN		**Pb**		**11 49 02.3**	**-0.1**
PRTR				*e*S		**Sg**		**11 49 28.6**	**+1.3**
AKH	**Akhalkalaki**	**1.83**	**244**	P		**Pb**		**11 49 01.7**	**-1.0**
AKH				S		**Sb**		**11 49 25.9**	**-0.1**
AKH	**Akhalkalaki**	**1.83**	**244**	*e*PN		**Pb**		**11 49 01.7**	**-1.0**
AKH	**Akhalkalaki**	**1.83**	**244**	*e*Pg		**Pb**		**11 49 01.5**	**-1.2**
AKH				*e*Sg		**Sb**		**11 49 25.8**	**-0.1**
BGD	**Bogdanovka**	**1.84**	**239**	P		**Pb**		**11 49 02.0**	**-0.8**
BGD				S		**Sg**		**11 49 27.1**	**-0.7**
BGD	**Bogdanovka**	**1.84**	**239**	PN		**Pb**		**11 49 02.0**	**-0.8**
BGD				S		**Sg**		**11 49 27.1**	**-0.7**
BGD	**Bogdanovka**	**1.84**	**239**	*e*Pg		**Pb**		**11 49 02.0**	**-0.8**
BGD				*e*Sg		**Sg**		**11 49 27.1**	**-0.7**
DRN	**Derbent**	**1.98**	**95**	*e*PN		**Pg**		**11 49 07.4**	**+0.7**
DRN				*e*S		**Sg**		**11 49 34.4**	**+2.0**
DRN					pmax	pmax			
	comp=Z,41nm,0.5s								
EAK	**Akyaka**	**2.20**	**226**	*i* P		**Pb**		**11 49 08.4**	**-0.6**
EAK				*i* S		**Sb**		**11 49 37.3**	**+0.8**
GNI	**Garni**	**2.21**	**199**	*ce*PN		**Pb**		**11 49 08.8**	**-0.2**
GNI	**Garni**	**2.21**	**199**	*e*Pg		**Pb**		**11 49 08.5**	**-0.6**
GNI				*e*Sg		**Sb**		**11 49 37.7**	**+1.1**
KBTC	**Kuba-Taba**	**2.29**	**314**	*e*PN		**Pn**		**11 49 07.4**	**+0.4**
KBTC				*e*S		**Sb**		**11 49 37.0**	**-2.0**
KBTC	**Kuba-Taba**	**2.29**	**314**	*e*Pn		**Pn**		**11 49 07.4**	**+0.4**
KBTC				*e*Sn		**Sb**		**11 49 37.0**	**-2.0**
EPOS	**Posof**	**2.33**	**252**	*i* P		**Pb**		**11 49 09.1**	**-2.0**
EPOS				*i* S		**Sb**		**11 49 40.7**	**+0.7**
NEY	**Neytrino**	**2.40**	**296**	*i*ePN		**Pb**		**11 49 12.9**	**+0.6**
NEY					pmax	pmax			
	comp=Z,16nm,0.5s								
DIGO	**Kars**	**2.52**	**224**	*i* P		**Pb**		**11 49 13.5**	**-0.9**
DIGO				*i* S		**Sb**		**11 49 45.7**	**-0.1**
DIGO					IAML			11 49 51.0	
	comp=E,67nm,0.6s								
DIGO					IAML			11 49 52.0	
	comp=N,74nm,0.6s								
KBZ	**Khabaz**	**2.52**	**307**	*i*ePN		**Pb**		**11 49 13.3**	**-1.0**
IGDI	**IGDIR**	**2.66**	**208**	*i* P		**Pb**		**11 49 16.6**	**-0.2**
IGDI				*i* S		**Sb**		**11 49 49.2**	**-0.5**
SHA1	**Shidzhatmaz**	**2.67**	**305**	*e*PN		**Pb**		**11 49 15.3**	**-1.8**
SHA1				*e*S		**Sb**		**11 49 50.4**	**+0.2**
BEYR	**Belyy Ugol+**	**2.74**	**311**	*e*PN		**Pn**		**11 49 14.7**	**+1.5**
BEYR				*e*S		**Sn**		**11 49 47.1**	**+0.5**
BEYR	**Belyy Ugol+**	**2.74**	**311**	*e*Pn		**Pn**		**11 49 14.7**	**+1.5**
BEYR				*e*Sn		**Sn**		**11 49 47.1**	**+0.5**
KIV0	**Kislovodsk Arr**	**2.78**	**309**	*e*Pn		**Pn**		**11 49 15.2**	**+1.5**
KIV	**Kislovodsk**	**2.78**	**309**	*e*PN		**Pb**		**11 49 15.2**	**+1.4**
KIV				*e*S		**Sb**		**11 49 51.8**	**-1.3**
DAGI	**Agillar**	**3.05**	**249**	*i* P		**Pb**		**11 49 21.8**	**-1.6**
DAGI				*i* S		**Sb**		**11 50 02.2**	**+1.3**
DAGI					IAML			11 50 14.0	
	comp=N,8.6nm,0.9s								
NAX	**Nakhchivan**	**3.07**	**183**	PN		**Pn**		**11 49 18.6**	**+0.9**
DBOC	**Borcka**	**3.13**	**255**	*i* P		**Pb**		**11 49 22.7**	**-2.0**
DBOC				*i* S		**Sb**		**11 50 01.9**	**-1.2**
DBOC					IAML			11 50 18.0	
	comp=E,22nm,0.6s								
DBAD	**Bademkaya**	**3.23**	**249**	*i* P		**Pb**		**11 49 23.5**	**-2.9**
GOF	**Gofitskoye**	**3.40**	**327**	*i*ePN		**Pg**		11 49 38.8	+4.9
GOF				*e*S		**Sg**		**11 50 24.9**	**+6.9**
GOF					pmax	pmax			
	comp=Z,41nm,0.7s								
GOF					smax	smax			
	comp=E,94nm,0.9s								
GOF					smax	smax			
	comp=N,54nm,0.6s								
GOF	**Gofitskoye**	**3.40**	**327**	*e*Pn		**Pn**		**11 49 24.5**	**+2.3**
GOF				*e*Sn		**Sn**		**11 50 04.8**	**+1.9**
LKRN	**Lenkeran, Azer**	**4.25**	**145**	PN		**Pn**		**11 49 35.0**	**+1.2**
ANN	**Anapa**	**6.52**	**296**	*e*P		**Pn**		**11 50 06.4**	**+1.4**
ANN				*e*S		**Sn**		**11 51 22.8**	**+3.3**
ANN					pmax	pmax			
	comp=Z,30nm,1.0s								
OBN	**Obninsk**	**14.20**	**338**	*e*P		**Pn**		**11 51 49.0**	**-1.0**
OBN					pmax	pmax			
	comp=Z,7.0nm,0.6s								
ARU	**Arti**	**16.45**	**26**	*i*eP		**Pn**		**11 52 18.2**	**-1.6**
ARU					pmax	pmax			
	comp=Z,3.0nm,1.5s								
AAK	**Ala-Archa**	**21.23**	**79**	*i*eP		**P**		**11 53 16.1**	**+0.8**
AAK					pmax	pmax			
	comp=Z,4.0nm,1.8s								

WEL 20 11:56:34.1, 40°.6S±0°.6×**17°.6E**±°, **h32**km±1km, **M3.6**/15, **ML4.0**/15, **MLv3.6**/15, **Error ellipse: s-maj=0.0km s-min=0.0km az=95.6, North Island**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
PRWZ	**Pori Road**	**0.11**	**53**	P		**Pb**		11 56 40.1	+0.3
PRWZ				S		**Sb**		11 56 44.5	+0.9
TIWZ	**Tintock**	**0.16**	**172**	P		**Pn**		11 56 40.5	+0.2
TIWZ				S		**Sb**		11 56 45.3	+1.0
MRZ	**Mangatainoka R**	**0.21**	**259**	P		**Pn**		11 56 41.0	0.0
MRZ				S		**Sn**		11 56 46

PB09					IAML		12 08 18.1		
	comp=E,3μm,0.2s								
PB09	**IPOC Station P**	**0.60**	**86**	*i* P	**Pn**	**12 08 08.0**	**-0.4**		
PB09				*i* S	**Sn**	**12 08 17.4**	**-0.3**		
PB09				IAML		12 08 17.9			
	comp=Z,3μm,0.2s								
PB06	**IPOC Station P**	**0.92**	**161**	⇓*i* P	**Pn**	**12 08 11.3**	**-0.9**		
PB06				*e*S	**Sn**	**12 08 24.2**	**-0.4**		
PB06				IAML		12 08 25.9			
	comp=N,928nm,0.2s								
PB06	**IPOC Station P**	**0.92**	**161**	*i* P	**Pn**	**12 08 11.4**	**-0.9**		
PB06				*i* S	**Sn**	**12 08 24.9**	**+0.2**		
PB06				IAML		12 08 25.6			
	comp=Z,741nm,0.2s								
PATCX	**Punta Patache**	**1.04**	**346**	⇓*i* P	**Pn**	**12 08 13.3**	**-0.6**		
PATCX				*e*S	**Sn**	**12 08 27.9**	**+0.4**		
PATCX				IAML		12 08 30.6			
	comp=N,1μm,0.2s								
PB05	**IPOC Station P**	**1.05**	**196**	⇑*i* P	**Pn**	**12 08 13.8**	**-0.3**		
PB05				*e*S	**Sn**	**12 08 28.4**	**+0.6**		
PB05				IAML		12 08 32.4			
	comp=E,2μm,0.2s								
PB05	**IPOC Station P**	**1.05**	**196**	*i* P	**Pn**	**12 08 13.8**	**-0.3**		
PB05				*i* S	**Sn**	**12 08 28.4**	**+0.6**		
LVC	**Limon Verde**	**1.19**	**130**	*i* P	**Pn**	**12 08 16.3**	**+0.1**		
LVC				*i* S	**Sn**	**12 08 32.0**	**+0.5**		
TA01	**Diego Aracena**	**1.29**	**348**	⇓*i* P	**Pn**	**12 08 16.6**	**-0.6**		
TA01				*e*S	**Sn**	**12 08 33.9**	**+0.5**		
TA01				IAML		12 08 37.7			
	comp=E,770nm,0.3s								
PB15	**IPOC Station P**	**1.42**	**164**	*i* P	**Pn**	**12 08 18.7**	**-0.4**		
PB15				*i* S	**Sn**	**12 08 37.1**	**+0.3**		
PB10	**IPOC Station P**	**1.78**	**200**	*i* P	**Pn**	**12 08 22.5**	**-1.3**		
GO01	**Chusmiza**	**2.25**	**17**	*e*P	**Pn**	**12 08 30.7**	**0.0**		
GO01				*e*S	**Sn**	**12 08 58.0**	**+0.4**		
ASTB	**Santa Barbara**	**5.44**	**114**	⇓*i* P	**Pn**	**12 09 14.8**	**+0.7**		

IDC 20 12:10:33.6±1.1, 31°16N×110°88E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.5/38, mbtmp3.6/7, ML3.8/2, Error ellipse: s-maj=36.3km s-min=22.6km az=64.0, Southeastern China

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**15.41**	**61**	Pn	Pn	12 14 11.7	-0.7
	0.1nm,0.3s,baz=242,slow=12,SNR=2.8						
CMAR	**Chiang Mai Arr**	**16.64**	**223**	Pn	Pn	12 14 28.9	+0.6
	0.3nm,0.3s,baz=26,slow=10.0,SNR=14						
MKAR	**Makanchi Array**	**26.97**	**314**	P	P	12 16 16.4	-0.5
	0.7nm,0.5s,baz=110,slow=11,SNR=12						
ZALV	**Zalesovo Beam**	**29.48**	**328**	P	P	12 16 39.9	+0.6
	0.6nm,0.3s,baz=144,slow=10,SNR=3.1						
ASAR	**Alice Springs**	**58.81**	**155**	P	P	12 20 33.8	-0.1
	0.1nm,0.3s,baz=340,slow=6.6,SNR=12						
ARCES	**ARCESS Array B**	**59.58**	**336**	P	P	12 20 38.4	-0.4
	1.8nm,0.8s,baz=84,slow=8.6,SNR=4.0						
YKA	**Yellowknife Ar**	**79.81**	**20**	P	P	12 22 43.7	+0.3
	0.1nm,0.6s,baz=325,slow=5.3,SNR=2.4						

ROM 20 12:12:40.4±0.2, 43°40N±0°01×12°502E±0°010, h9km, ML1.4/3, Error ellipse: s-maj=1.2km s-min=0.6km az=18.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**120**	P	Pg	12 12 42.6	+0.1
ATFO				S	Sg	12 12 43.7	-0.2
ATFO				AML	AML		
	comp=N,621μm,0.3s						
ATFO				AML	AML		
	comp=E,626μm,0.3s						
ATVO	**AVT- Monte Val**	**0.07**	**259**	P	Pg	12 12 43.0	+0.5
ATVO				S	Sg	12 12 44.6	+0.5
ATVO				AML	AML		
	comp=E,220μm,0.3s						
ATVO				AML	AML		
	comp=N,180μm,0.1s						
MURB	**Monte Urbino**	**0.13**	**173**	P	Pg	12 12 44.0	+0.5
MURB				S	Sg	12 12 46.4	+0.7
MURB				AML	AML		
	comp=E,329μm,0.3s						
MURB				AML	AML		
	comp=N,211μm,0.2s						
FOSV	**Fossato di Vic**	**0.21**	**118**	P	Pg	12 12 45.6	+0.8
FOSV				S	Sg	12 12 49.7	+1.9
ATCC	**AVT- Casa Cast**	**0.23**	**154**	P	Pg	12 12 46.0	+0.8
ATCC				S	Sg	12 12 50.3	+1.9
ASSB	**Assisi San Ben**	**0.37**	**162**	P	Pg	12 12 48.4	+0.7
ASSB				S	Sb	12 12 54.0	-1.1
EL6	**Elcito**	**0.44**	**98**	S	Sb	12 12 58.0	+0.8

ROM 20 12:19:30.4±0.2, 43°417N±0°004×12°519E±0°007, h5km±1km, ML0.8/2, Error ellipse: s-maj=0.6km s-min=0.1km az=247.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**143**	P	Pg	12 19 31.8	-0.1
ATFO				S	Sg	12 19 33.3	+0.3
ATVO	**AVT- Monte Val**	**0.09**	**247**	P	Pg	12 19 32.4	+0.1
ATVO				S	Sg	12 19 34.1	+0.5
ATVO				AML	AML		
	comp=E,60μm,0.9s						
ATVO				AML	AML		
	comp=N,63μm,0.8s						
PIEI	**Pieia**	**0.12**	**6**	P	Pg	12 19 33.1	+0.2
PIEI				S	Sg	12 19 35.5	+1.0
MURB	**Monte Urbino**	**0.15**	**179**	P	Pg	12 19 34.0	+0.5
MURB				S	Sg	12 19 36.9	+1.3
MURB				AML	AML		
	comp=N,152μm,1.4s						
MURB				AML	AML		
	comp=E,124μm,1.0s						
BADI	**Badiali**	**0.22**	**295**	P	Pg	12 19 35.1	+0.4
BADI				S	Sg	12 19 39.4	+1.7
ATCC	**AVT- Casa Cast**	**0.25**	**159**	P	Pg	12 19 35.7	+0.5
ATCC				S	Sg	12 19 40.2	+1.8

*ATH **20** 12:20:01.4, 41°29N×19°44E, h18km±2km, ML3.0/2, Error ellipse: s-maj=4.8km s-min=1.4km az=334.0*
*BEO **20** 12:20:01.9±0.6, 41°23N×19°47E, h3km±2km, ML2.8/13*
*TIR **20** 12:20:02.2, 41°35N×19°57E, h19km, Md3.1/7*
*SKO **20** 12:20:02.1, 41°34N×19°40E, h1km*
*PDG **20** 12:20:03.2±0.5, 41°36N×19°56E, h14km±1km, MD3.5/3, ML3.2/7, Error ellipse: s-maj=1.0km s-min=1.8km az=0.0*
*THE **20** 12:20:03.2, 41°46N×19°53E, h11km±1km, ML2.7/2, Error ellipse: s-maj=2.1km s-min=1.0km az=134.0*

ISC 20 12:20:02.5±1.0, 41°34N±0°02×19°47E±0°02, h9km±8km, n89, σ0s86/128, 14C-2D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.30**	**89**	P	**Pg**	**12 20 08.4**	**0.0**
TIR				S	**Sg**	**12 20 13.0**	**+0.6**
	1μm,0.3s						
TIR	**Tirane**	**0.30**	**89**	*e*Pg	**Pg**	**12 20 08.3**	**-0.1**
TIR				*e*Sg	**Sg**	**12 20 12.2**	**-0.2**
TIR	**Tirane**	**0.30**	**89**	*i* PG	**Pg**	**12 20 08.3**	**-0.1**
TIR				*i* PG	**Pn**	**12 20 12.0**	**-1.1**
TIR	**Tirane**	**0.30**	**89**	P	**Pg**	**12 20 08.4**	**-0.1**
TIR				S	**Sg**	**12 20 12.6**	**+0.2**
TIR				AML	AML	12 20 13.8	
	comp=E,8385μm,0.3s						
TIR				AML	AML	12 20 14.8	
	comp=N,6106μm,0.3s						
TIR	**Tirane**	**0.30**	**89**	⇑P	**Pg**	**12 20 08.3**	**-0.1**
TIR				⇑S	**Sg**	**12 20 13.2**	**+0.9**
ULC	**Ulcinj**	**0.64**	**345**	*e*Pg	**Pg**	**12 20 15.0**	**+0.1**
ULC				*i* Sg	**Sb**	**12 20 25.1**	**0.0**
PUK	**Puka**	**0.77**	**24**	*i* PG	**Pg**	**12 20 16.9**	**-0.4**
PUK				*i* PG	**Sg**	**12 20 27.8**	**+0.5**
PHP	**Peshkopia**	**0.81**	**65**	P	**Pg**	**12 20 16.8**	**-1.2**
PHP	**Peshkopia**	**0.81**	**65**	*i* PG	**Pg**	**12 20 16.7**	**-1.3**
PHP				*i* PG	**Sg**	**12 20 27.9**	**-0.6**
DRME	**Dracevica, Mon**	**0.87**	**346**	*e*Pn	**Pb**	**12 20 19.6**	**-0.2**
VLO	**Vlora**	**0.87**	**179**	P	**Pn**	**12 20 22.2**	**+1.2**
VLO				S	**Sn**	**12 20 36.3**	**+2.5**
OHR	**Ohrid**	**1.03**	**103**	*i* Pg	**Pg**	**12 20 21.8**	**-0.5**
OHR				*i* Sg	**Sn**	**12 20 37.2**	**-0.6**
OHR				*e*Rg	Rg	12 20 39.2	
	comp=N,298nm,0.8s						
OHR				*e*Rg	Rg	12 20 39.9	
	comp=E,196nm,0.5s						
BUM	**Brajici-Budva**	**1.05**	**336**	⇓*i* Pg	**Pn**	**12 20 23.2**	**-0.3**
BUM				*e*Sg	**Sn**	**12 20 39.8**	**+1.5**
PDG	**Podgorica**	**1.10**	**352**	*e*Pg	**Pn**	**12 20 24.5**	**+0.4**
PDG				*e*Sg	**Sn**	**12 20 40.5**	**+1.1**
PDG	**Podgorica**	**1.10**	**352**	⇑P	**Pn**	**12 20 24.3**	**+0.2**
PDG				⇑S	**Sn**	**12 20 41.2**	**+1.8**
PDG	**Podgorica**	**1.10**	**352**	*e*Pn	**Pn**	**12 20 24.0**	**-0.1**
TTG	**Podgorica**	**1.10**	**352**	*e*Pg	**Pn**	**12 20 23.7**	**-0.4**
TTG				*e*Sg	**Sn**	**12 20 40.9**	**+1.5**
BCI	**Bajram Curri**	**1.12**	**23**	*i* PG	**Pb**	**12 20 23.1**	**-0.9**
BCI				*i* PG	**Sg**	**12 20 38.8**	**+0.3**
TPE	**Tepelena**	**1.12**	**158**	P	**Pn**	**12 20 24.9**	**+0.5**
TPE	**Tepelena**	**1.12**	**158**	*i* PG	**Pg**	**12 20 23.9**	**-0.2**
TPE				*i* PG	**Sg**	**12 20 39.4**	**+0.8**
PVY	**Plav**	**1.30**	**16**	⇑*i* Pg	**Pn**	**12 20 26.8**	**-0.2**
PVY				*e*Sg	**Sg**	**12 20 46.4**	**+2.0**
HCY	**Herceg Novi**	**1.32**	**327**	*e*Pn	**Pb**	**12 20 27.3**	**-0.2**
HCY	**Herceg Novi**	**1.32**	**327**	⇑*i* Pg	**Pg**	**12 20 27.6**	**-0.3**
HCY				*e*Sg	**Sg**	**12 20 48.4**	**+3.4**
SCTE	**Santa Cesarea**	**1.48**	**211**	P	**Pn**	**12 20 28.7**	**-0.6**
SRN	**Sarande**	**1.52**	**164**	P	**Pb**	**12 20 30.6**	**-0.2**
SRN	**Sarande**	**1.52**	**164**	*i* PN	**Pb**	**12 20 30.7**	**-0.1**
SRN				*i* PN	**Sg**	**12 20 52.1**	**+0.9**
FNA	**Florina**	**1.55**	**111**	P	**Pb**	**12 20 30.7**	**-0.6**
FNA				S	**Sb**	**12 20 51.2**	**+0.1**
	comp=E,395nm,0.5s						
FNA	**Florina**	**1.55**	**111**	*i* PN	**Pb**	**12 20 30.8**	**-0.6**
FNA				*i* PN	**Sg**	**12 20 51.6**	**-0.6**
FNA	**Florina**	**1.55**	**111**	P	**Pb**	**12 20 30.8**	**-0.6**
FNA				AML	AML	12 20 54.9	
	comp=N,924μm,0.5s						
FNA				AML	AML	12 20 55.2	
	comp=E,647μm,0.3s						
IVA	**Berane**	**1.56**	**12**	⇑*i* Pg	**Pg**	**12 20 32.0**	**-0.4**
IVA				*i* Sg	**Sg**	**12 20 53.9**	**+1.2**
TREB	**Trebinje**	**1.61**	**329**	*e*Pn	**Pn**	**12 20 31.3**	**+0.2**
TREB				*e*Sn	**Sg**	**12 20 54.5**	**+0.3**
TREB	**Trebinje**	**1.61**	**329**	*e*Pn	**Pn**	**12 20 31.0**	**-0.1**
DBRK	**Dubrovnik**	**1.65**	**324**	*e*Pn	**Pb**	**12 20 32.1**	**-1.0**
DBRK				Sn	**Sb**	**12 20 54.2**	**+0.1**
BRY	**Bratogost**	**1.71**	**336**	*e*Pn	**Pb**	**12 20 33.6**	**-0.5**
BRY	**Bratogost**	**1.71**	**336**	⇑*i* Pn	**Pb**	**12 20 33.2**	**-0.9**
BRY				*e*Sn	**Sg**	**12 20 57.9**	**+0.6**
NOCI	**Noci**	**1.90**	**254**	P	**Pn**	**12 20 34.4**	**-0.7**
UPM	**Unac-Piva**	**1.91**	**347**	*e*Pn	**Pb**	**12 20 36.8**	**-0.8**
IGT	**Igoumenitsa**	**1.92**	**160**	P	**Pn**	**12 20 34.1**	**-1.4**
SJES	**Sjenica**	**1.95**	**11**	*e*Pn	**Pb**	**12 20 38.1**	**-0.2**
SJES				*e*Sn	**Sg**	**12 21 04.9**	**-0.4**
PLE	**Pljevlja**	**1.99**	**358**	⇓*i* Pn	**Pb**	**12 20 37.6**	**-1.3**
PLE				*i* Sn	**Sb**	**12 21 03.6**	**-0.2**
KPRO	**Kipourio**	**2.00**	**133**	P	**Pn**	**12 20 37.4**	**+0.9**
STON	**Ston**	**2.02**	**320**	*e*Pn	**Pn**	**12 20 37.0**	**+0.3**
STON				Sn	**Sn**	**12 21 01.6**	**-0.5**
STON	**Ston**	**2.02**	**320**	*e*Pn	**Pg**	**12 20 40.9**	**-0.3**
STON				*e*Sn	**Sb**	**12 21 04.2**	**-0.3**
STON	**Ston**	**2.02**	**320**	*e*Pn	**Pn**	**12 20 35.5**	**-1.2**
STIP	**Stip**	**2.07**	**79**	*e*Pn	**Pb**	**12 20 40.4**	**+0.2**
SELS	**Selova**	**2.24**	**33**	*e*Pn	**Pn**	**12 20 39.8**	**0.0**
GRG	**Griva**	**2.25**	**99**	P	**Pn**	**12 20 40.4**	**+0.5**
RUDO	**Rudo**	**2.27**	**358**	*e*Pn	**Pn**	**12 20 41.5**	**+1.2**
BARS	**Barje**	**2.28**	**49**	*e*Pn	**Pb**	**12 20 43.0**	**-0.9**
BARS	**Barje**	**2.28**	**49**	*e*Pn	Pg	12 20 56.4	+10
BARS				*e*Sn	**Sb**	**12 21 11.0**	**-1.3**
IVAS	**Ivanjica**	**2.29**	**13**	*e*Pn	**Pn**	**12 20 41.3**	**+0.8**
VAY	**Valandovo**	**2.33**	**90**	*e*Pn	**Pn**	**12 20 41.3**	**+0.2**
VAY	**Valandovo**	**2.33**	**90**	*e*Pn	**Pn**	**12 20 41.2**	**+0.1**
VAY				*e*Rg	Rg	12 21 16.8	
	comp=N,27nm,0.6s						
VAY				*e*Rg	Rg	12 21 16.9	
	comp=E,29nm,0.8s						
BBLS	**Lazići**	**2.52**	**359**	*e*Pn	**Pn**	**12 20 44.1**	**+0.3**
BBLS				*e*Sn	**Sb**	**12 21 18.3**	**-0.9**
BBLS	**Lazići**	**2.52**	**359**	*e*Pn	**Pn**	**12 20 44.4**	**+0.7**
KNT	**Kendrikon**	**2.59**	**93**	P	**Pn**	**12 20 45.1**	**+0.4**
LIT	**Litokhoron**	**2.61**	**117**	P	**Pn**	**12 20 44.0**	**-0.9**
THL	**Klokotos Trika**	**2.63**	**132**	P	**Pn**	**12 20 46.5**	**+1.3**
MAKA	**Makarska**	**2.66**	**318**	*e*Pn	**Pn**	**12 20 45.9**	**+0.3**
MAKA				Sn	**Sn**	**12 21 17.5**	**-0.5**
TSLK	**Tsoukalades, L**	**2.67**	**160**	P	**Pn**	**12 20 45.9**	**+0.2**
GRUS	**Gruza**	**2.71**	**19**	*e*Pn	**Pn**	**12 20 46.7**	**+0.5**
LKD2	**Lefkada island**	**2.71**	**160**	P	**Pn**	**12 20 46.1**	**-0.1**
HAPS	**Han Pijesak,BI**	**2.77**	**352**	*e*Pn	**Pn**	**12 20 47.5**	**+0.3**
HAPS	**Han Pijesak,BI**	**2.77**	**352**	*e*Pn	**Pn**	**12 20 46.4**	**-0.8**
DIVS	**Divibare**	**2.78**	**8**	*e*Pn	**Pn**	**12 20 48.2**	**+0.9**
DIVB	**Divibare**	**2.78**	**8**	*e*Pn	**Pn**	**12 20 46.8**	**-0.5**
BOVS	**Bovan**	**2.83**	**35**	*e*Pn	**Pn**	**12 20 49.4**	**+2.0**
BOVS				*e*Sn	**Sn**	**12 21 24.3**	**+2.3**
HORT	**Hortiatis**	**2.85**	**104**	P	**Pn**	**12 20 49.0**	**+0.8**
EVGI	**Lefkada island**	**2.87**	**161**	P	**Pn**	**12 20 47.9**	**-0.6**
HVAR	**Hvar**	**2.90**	**310**	*e*Pn	**Pn**	**12 20 48.7**	**-0.1**
HVAR				Sn	**Sn**	**12 21 23.5**	**-0.2**
TIP	**Timpagrande**	**3.00**	**225**	P	**Pn**	**12 20 49.7**	**-0.5**
TIP	**Timpagrande**	**3.00**	**225**	⇑P	**Pn**	**12 20 49.9**	**-0.4**
ZAPS	**Zavoj**	**3.04**	**50**	*e*Pn	**Pn**	**12 20 52.3**	**+1.5**
VTS	**Vitosha**	**3.08**	**64**	*e*Pn	**Pn**	**12 20 52.2**	**+0.7**
VTS				*e*Sn	**Sn**	**12 21 29.2**	**+0.6**
VTS	**Vitosha**	**3.08**	**64**	⇑P	**Pn**	**12 20 52.1**	**+0.5**
VTS	**Vitosha**	**3.08**	**64**	⇑S	**Sn**	**12 21 29.6**	**+1.0**
SRS	**Serrai**	**3.12**	**93**	P	**Pn**	**12 20 51.7**	**-0.1**
AGG	**Agios Georgios**	**3.19**	**136**	P	**Pn**	**12 20 54.0**	**+1.1**
ZAGS	**Zajecar**	**3.20**	**39**	*e*Pn	**Pn**	**12 20 53.0**	**0.0**
VLS	**Valsamata**	**3.28**	**164**	P	**Pn**	**12 20 53.1**	**-0.9**
KIJV	**Kijevo**	**3.49**	**321**	*i* Pn	**Pn**	**12 21 57.5**	**+0.5**
KIJV				Sn	**Sn**	**12 21 39.2**	**+0.8**
ZIRJ	**Zirje**	**3.65**	**311**	*e*Pn	**Pn**	**12 20 59.2**	**+0.1**
ZIRJ				Sn	**Sn**	**12 21 41.3**	**-1.0**
MORI	**Morici**	**3.75**	**313**	*e*Pn	**Pn**	**12 21 01.3**	**+0.8**
MORI				Sn	**Sn**	**12 21 43.6**	**-1.3**
UDBI	**Udbina**	**4.19**	**321**	*e*Pn	**Pn**	**12 21 08.0**	**+1.4**
DUGI	**Dugi Otok**	**4.19**	**311**	*e*Pn	**Pn**	**12 21 06.7**	**+0.1**
DUGI				Sn	**Sn**	**12 21 55.9**	**+0.1**
BZS	**Buzias**	**4.55**	**19**	⇑P	**Pn**	**12 21 12.0**	**+0.5**
NVLJ	**Novalja**	**4.66**	**315**	*i* Pn	**Pn**	**12 21 13.4**	**+0.3**
NVLJ				Sn	**Sn**	**12 22 05.8**	**-1.5**
GZR	**Gura Zlata**	**4.71**	**30**	⇑P	**Pn**	**12 21 14.0**	**+0.2**
VOIR		**5.77**	**43**	⇑P	**Pn**	**12 21 28.4**	**+0.1**

*BEO **20** 12:39:02.3±1.0, 41°21N×19°45E, h0km, ML2.3/4*
*TIR **20** 12:39:02.5, 41°33N×19°60E, h29km, Md2.5/5*

ISC 20 12:39:02.7±1.4, 41°34N±0°06×19°51E±0°04, h19km±2km, n13, σ0s87/23, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.27**	**88**	*e*Pg	**Pg**	**12 39 08.6**	**-0.3**
TIR				*e*Sg	**Sg**	**12 39 12.6**	**-0.5**
TIR	**Tirane**	**0.27**	**88**	*i* PG	**Pg**	**12 39 08.8**	**0.0**
TIR				*i* SG	**Sb**	**12 39 13.7**	**+0.7**
PUK	**Puka**	**0.76**	**22**	*i* PG	**Pb**	**12 39 17.3**	**-0.1**
PUK				*i* SG	**Sg**	**12 39 28.5**	**+0.6**
PHP	**Peshkopia**	**0.78**	**64**	*i* PG	**Pb**	**12 39 17.0**	**-0.8**
PHP				*i* SG	**Sg**	**12 39 27.9**	**-0.1**
PDG	**Podgorica**	**1.11**	**350**	*e*Pg	**Pg**	**12 39 24.3**	**+0.1**
PDG				*e*Sg	**Sg**	**12 39 40.9**	**+2.2**
BCI	**Bajram Curri**	**1.11**	**22**	*i* PG	**Pn**	**12 39 22.7**	**-0.6**
BCI				*i* SG	**Sg**	**12 39 39.2**	**+0.4**
FNA	**Florina**	**1.52**	**111**	*i* PN	**Pn**	**12 39 29.4**	**+0.4**
FNA				*i* SN	**Sb**	**12 39 50.0**	**+0.7**
TREB	**Trebinje**	**1.62**	**328**	*e*Pn	**Pg**	**12 39 33.5**	**-0.5**
TREB				*e*Sn	**Sg**	**12 39 55.3**	**+0.1**
DBRK	**Dubrovnik**	**1.67**	**323**	Sn	**Sg**	**12 39 58.7**	**+2.0**
SJES	**Sjenica**	**1.95**	**10**	*e*Pn	**Pb**	**12 39 37.9**	**+0.1**
SJES				*e*Sn	**Sg**	**12 40 05.9**	**+0.2**
STON	**Ston**	**2.04**	**319**	*e*Pn	**Pb**	**12 39 39.0**	**-0.1**
STON				Sn	**Sb**	**12 40 02.8**	**-1.3**
SELS	**Selova**	**2.23**	**32**	*e*Pn	**Pb**	**12 39 42.5**	**+0.1**
IVAS	**Ivanjica**	**2.29**	**12**	*e*Pn	**Pb**	**12 39 42.6**	**-0.8**

ROM 20 12:40:40.5±0.1, 41°353N±0°005×14°467E±0°007, h19km, ML2.2/12, Error ellipse: s-maj=0.6km s-min=0.3km az=59.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
T1011	**San Potito San**	**0.04**	**280**	P	Pg	12 40 43.8	-0.3
T1011				S	Sg	12 40 46.5	-0.1
T1011				AML	AML		
	comp=E,7515μm,0.2s						
T1011				AML	AML		
	comp=N,7510μm,0.1s						
T1011				AML	AML		
	comp=E,7775μm,0.2s						
T1011				AML	AML		
	comp=N,7650μm,0.1s						
T1011				AML	AML		
	comp=E,7780μm,0.2s						
T1011				AML	AML		
	comp=N,7660μm,0.1s						
T1011				AML	AML		
	comp=E,7865μm,0.2s						
T1011				AML	AML		
	comp=N,7510μm,0.1s						
SACR	**S. Croce Del S**	**0.18**	**76**	P	Pg	12 40 45.5	0.0
SACR				S	Sg	12 40 49.2	+0.4
SACR				AML	AML		
	comp=E,872μm,1.6s						
SACR				AML	AML		
	comp=N,1027μm,0.4s						
VAGA	**Valle Agricola**	**0.19**	**290**	P	Pg	12 40 45.5	0.0
VAGA				S	Sg	12 40 49.8	+0.9
VAGA				AML	AML		
	comp=E,1435μm,0.6s						
VAGA				AML	AML		
	comp=E,1434μm,0.6s						
VAGA				AML	AML		
	comp=N,1925μm,1.2s						
VAGA				AML	AML		
	comp=N,1835μm,1.2s						
VAGA				AML	AML		
	comp=E,1535μm,0.6s						
BSSO	**Busso**	**0.21**	**26**	P	Pg	12 40 46.1	+0.1
BSSO				S	Sg	12 40 50.5	+0.9
BSSO				AML	AML		
	comp=N,604μm,0.8s						
BSSO				AML	AML		
	comp=N,1425μm,0.8s						
BSSO				AML	AML		
	comp=E,1270μm,0.5s						
BSSO				AML	AML		
	comp=E,518μm,0.5s						
PSB1	**Pescosannita**	**0.29**	**116**	P	Pb	12 40 47.4	+0.3
PSB1				S	Sg	12 40 52.3	+0.8
PSB1				AML	AML		
	comp=E,350μm,0.8s						
PSB1				AML	AML		
	comp=E,350μm,0.8s						
PSB1				AML	AML		
	comp=N,306μm,0.5s						
MIDA	**Miranda**	**0.33**	**331**	P	Pg	12 40 47.5	-0.2
MIDA				S	Sb	12 40 53.1	+0.3
MIDA				AML	AML		
	comp=E,380μm,0.5s						
MIDA				AML	AML		
	comp=N,312μm,0.3s						
PAOL	**Paolisi**	**0.33**	**167**	P	Pg	12 40 47.5	-0.2
PAOL				S	Sb	12 40 53.5	+0.7
PAOL				AML	AML		
	comp=N,320μm,1.3s						
PAOL				AML	AML		
	comp=E,309μm,0.2s						
CERA	**Filignano**	**0.42**	**306**	P	Pb	12 40 49.3	-0.1
CERA				AML	AML		
	comp=N,240μm,0.5s						
CERA				AML	AML		
	comp=E,275μm,0.6s						
TRIV	**Trivento**	**0.42**	**9**	P	Pb	12 40 49.4	-0.1
TRIV				AML	AML		
	comp=E,276μm,1.5s						
TRIV				AML	AML		
	comp=N,218μm,1.2s						
MODR	**Mondragone**	**0.49**	**245**	P	Pb	12 40 50.7	+0.1
MODR				AML	AML		
	comp=N,454μm,1.0s						
MODR				AML	AML		
	comp=N,455μm,1.0s						
MODR				AML	AML		
	comp=E,468μm,0.7s						
MELA	**Melanico ??? S**	**0.61**	**54**	P	Pb	12 40 52.1	-0.4
LPEL	**Lama dei Pelig**	**0.72**	**343**	AML	AML		
	comp=N,119μm,1.2s						
LPEL				AML	AML		
	comp=E,152μm,1.5s						
INTR	**Introdacqua**	**0.78**	**328**	AML	AML		
	comp=E,160μm,0.9s						
INTR				AML	AML		
	comp=N,197μm,0.6s						
FAGN	**Fagnano**	**1.13**	**324**	AML	AML		
	comp=E,130μm,0.5s						
FAGN				AML	AML		
	comp=N,95μm,0.4s						
PZUN	**Potenza**	**1.24**	**124**	P	Pb	12 41 03.4	+0.2
PZUN	**Potenza**	**1.24**	**124**	P	Pb	12 41 03.4	+0.2
PZUN				AML	AML		
	comp=E,182μm,1.1s						
PZUN				AML	AML		
	comp=N,352μm,1.6s						
T0721	**Laino Castello**	**1.82**	**140**	P	Pg	12 41 16.1	+0.4
T0721	**Laino Castello**	**1.82**	**140**	P	Pg	12 41 16.1	+0.4
CAR1	**CAROLEI**	**2.49**	**147**	S	Sg	12 41 59.0	-1.5
CAR1	**CAROLEI**	**2.49**	**147**	S	Sg	12 41 59.0	-1.5
GIB	**Gibilmanna**	**3.38**	**186**	P	Pn	12 41 34.9	+2.6
GIB	**Gibilmanna**	**3.38**	**186**	P	Pn	12 41 34.9	+2.6

*HLW **20** 12:45:47.3, 31°26N×35°25E, h10km±10km, Md3.2, Ml3.8*

**ISC 20 12:45:48.3±1.1, 31°26N±0°07×35°3E±0°2, h18km, n7, σ

LCY				*eS*		**Sn**	12 55 08.3	+1.4	
LFRS	**El Faro**	**0.71**	**341**	*eP*		**Pn**	12 54 56.1	-0.2	
PACA	**Pacayal**	**0.71**	**43**	*eP*		**Pn**	12 54 56.7	+0.4	
PACA				IAML			12 55 09.9		
	comp=Z,34µm,0.2s								
PACA	**Pacayal**	**0.71**	**43**	*eP*		**Pn**	12 54 56.7	+0.4	
PACA				IAML			12 55 09.9		
	comp=Z,34µm,0.2s								
VSM	**San Miguel**	**0.71**	**48**	*eP*		**Pn**	12 54 57.0	+0.4	
VSM	**San Miguel**	**0.71**	**48**	*eP*		**Pn**	12 54 57.0	+0.4	
BLLM	**Bellamira**	**0.75**	**49**	*eP*		**Pn**	12 54 57.0	+0.2	
BLLM	**Bellamira**	**0.75**	**49**	*eP*		**Pn**	12 54 57.0	+0.2	
PAVA	**Las Pavas**	**0.76**	**352**	*eP*		**Pn**	12 54 57.3	+0.3	
PAVA				*eS*		**Sn**	12 55 08.3	0.0	
PAVA	**Las Pavas**	**0.76**	**352**	*eP*		**Pn**	12 54 57.3	+0.3	
PAVA				*eS*		**Sn**	12 55 08.3	0.0	
LBRS	**Las Brisas**	**0.81**	**345**	*eP*		**Pn**	12 54 57.9	+0.4	
LBRS				*eS*		**Sn**	12 55 09.3	+0.1	
SNET	**Serv Nac Est T**	**0.83**	**332**	*eP*		**Pn**	12 54 57.7	0.0	
SNET				IAML			12 55 11.0		
	comp=Z,4µm,0.3s								
SNET	**Serv Nac Est T**	**0.83**	**332**	*eP*		**Pn**	12 54 57.7	0.0	
SNET				IAML			12 55 11.0		
	comp=Z,4µm,0.3s								
SNET	**Serv Nac Est T**	**0.83**	**332**	Pn		**Pn**	12 54 57.8	0.0	
SNET				Sn		**Sn**	12 55 08.9	-0.8	
OPAM	**Oficina de Pla**	**0.84**	**334**	*eP*		**Pn**	12 54 58.1	+0.2	
OPAM				IAML			12 55 14.8		
	comp=Z,4µm,0.3s								
OPAM	**Oficina de Pla**	**0.84**	**334**	*eP*		**Pn**	12 54 58.1	+0.2	
OPAM				IAML			12 55 14.8		
	comp=Z,4µm,0.3s								
LFU	**La Fuente**	**0.84**	**340**	*eP*		**Pn**	12 54 58.2	+0.3	
LFU				*eS*		**Sn**	12 55 10.4	+0.5	
LFU	**La Fuente**	**0.84**	**340**	*eP*		**Pn**	12 54 58.2	+0.3	
LFU				*eS*		**Sn**	12 55 10.4	+0.5	
BOQS	**Boqueron**	**0.90**	**330**	*eP*		**Pn**	12 54 58.9	+0.2	
BOQS				*eS*		**Sn**	12 55 12.0	+0.7	
LCND	**La Caada**	**0.98**	**69**	*eP*		**Pn**	12 55 00.1	+0.6	
LCND				*eS*		**Sn**	12 55 14.2	+1.4	
LCND				IAML			12 55 18.0		
	comp=Z,8µm,0.3s								
LCND	**La Caada**	**0.98**	**69**	*eP*		**Pn**	12 55 00.1	+0.6	
LCND				*eS*		**Sn**	12 55 14.2	+1.4	
LCND				IAML			12 55 18.0		
	comp=Z,8µm,0.3s								
CEVE	**Cerro Verde**	**1.17**	**318**	*eP*		**Pn**	12 55 03.3	+1.0	
CEVE				*eS*		**Sn**	12 55 18.4	+0.8	
CEVE				IAML			12 55 30.9		
	comp=Z,5µm,0.4s								
CEVE	**Cerro Verde**	**1.17**	**318**	*eP*		**Pn**	12 55 03.3	+1.0	
CEVE				*eS*		**Sn**	12 55 18.4	+0.8	
CEVE				IAML			12 55 30.9		
	comp=Z,5µm,0.4s								
SBLS	**San Blas**	**1.18**	**319**	*eP*		**Pn**	12 55 03.1	+0.7	
SBLS				*eS*		**Sn**	12 55 19.0	+1.3	
SBLS	**San Blas**	**1.18**	**319**	*eP*		**Pn**	12 55 03.1	+0.7	
SBLS				*eS*		**Sn**	12 55 19.0	+1.3	
SNJE	**San Jose**	**1.19**	**320**	*eP*		**Pn**	12 55 03.0	+0.6	
SNJE	**San Jose**	**1.19**	**320**	*eP*		**Pn**	12 55 03.0	+0.6	
RTR	**El Retiro**	**1.23**	**320**	*eP*		**Pn**	12 55 04.0	+1.0	
RTR				*eS*		**Sn**	12 55 19.0	0.0	
RTR	**El Retiro**	**1.23**	**320**	*eP*		**Pn**	12 55 04.0	+1.0	
RTR				*eS*		**Sn**	12 55 19.0	0.0	
FAME	**Alcalda de S**	**1.46**	**308**	*eP*		**Pn**	12 55 07.1	+1.3	
MTO3	**Montecristo**	**1.53**	**340**	*eP*		**Pn**	12 55 07.7	+0.7	
MTO3	**Montecristo**	**1.53**	**340**	*eP*		**Pn**	12 55 07.7	+0.7	
TGUH	**Tegucigalpa,Un**	**1.87**	**54**	*eP*		**Pn**	12 55 12.3	+0.9	
TGUH	**Tegucigalpa,Un**	**1.87**	**54**	*eP*		**Pn**	12 55 12.3	+0.9	
TGUH	**Tegucigalpa,Un**	**1.87**	**54**			**Pn**	12 55 12.0	+0.6	
ESTN	**Estel**	**2.40**	**86**	Pn		**Pn**	12 55 19.4	+0.8	
ESTN				Sn		**Sn**	12 55 47.5	+0.5	
APG	**El Apazote**	**2.59**	**322**	P		**Pn**	12 55 22.7	+1.4	
	comp=Z,1.6nm,0.3s,baz=135,slow=8.8,SNR=5.3								
APG				LR		LR	12 56 13.6		
	comp=Z,44nm,21.0s,baz=116,slow=35								
ACON	**Acoyapa**	**3.70**	**105**	Pn		**Pn**	12 55 37.2	+0.9	
JTS	**Las Juntas de**	**4.62**	**124**	P		**Pn**	12 55 51.3	+2.3	
	comp=Z,2.7nm,0.3s,baz=164,slow=21,SNR=8.4								
JTS				S		**Sn**	12 56 40.1	-1.4	
	baz=314,slow=20,SNR=1.4								
JTS	**Las Juntas de**	**4.62**	**124**	Pn		**Pn**	12 55 50.6	+1.6	
CMIG	**Matias Romero**	**7.16**	**306**	P		**Pn**	12 56 26.0	+2.4	
	comp=Z,0.3nm,0.3s,baz=130,slow=17,SNR=3.0								
CMIG				S		**Sn**	12 57 43.7	+0.2	
	comp=Z,0.3nm,0.3s,baz=162,slow=13,SNR=1.5								
CMIG				LR		LR	12 59 24.0		
	comp=Z,53nm,21.3s,baz=76,slow=39								
TEIG	**Tepich**	**7.25**	**4**	P		**Pn**	12 56 26.5	+1.5	
	comp=Z,2.2nm,0.3s,baz=138,slow=0.5,SNR=11								
TEIG	**Tepich**	**7.25**	**4**			**Pn**	12 56 26.1	+1.1	
HKT	**Hockley**	**18.12**	**340**	P		**P**	12 58 48.7	+0.3	
HKT				IAmb		IAmb	12 58 49.7		
	comp=Z,5.1nm,0.6s								
SDV	**Santo Domingo**	**18.31**	**101**	P		**P**	12 58 51.0	+0.1	
	comp=Z,0.7nm,0.3s,baz=294,slow=19,SNR=4.4								
TX32	**Lajitas Array**	**21.35**	**322**	P		**P**	12 59 25.6	+1.9	
TX32				IAmb		IAmb	12 59 27.0		
	comp=Z,2.7nm,1.1s								
TXAR	**Lajitas Array**	**21.35**	**322**	P		**P**	12 59 24.2	+0.5	
	comp=Z,0.6nm,0.6s,baz=145,slow=10,SNR=12								
TXAR				PcP		**PcP**	13 03 26.7	+0.9	
	comp=Z,0.1nm,0.4s,baz=134,slow=3.9,SNR=2.1								
SJG	**San Juan**	**22.43**	**74**	LR		LR	13 07 49.0		
	comp=Z,29nm,18.3s,baz=258,slow=35								
U40A	**Yellville**	**23.58**	**352**	P		**P**	12 59 48.0	+1.4	
U40A				IAmb		IAmb	12 59 50.4		
	comp=Z,3.7nm,0.8s								
PCRV	**Puerto La Cruz**	**23.85**	**94**	LR		LR	13 10 30.7		
	comp=Z,316nm,20.1s,slow=40								
PDAR	**Pinedale Array**	**34.71**	**333**	P		**P**	13 01 25.9	+0.3	
	comp=Z,0.3nm,0.6s,baz=137,slow=9.2,SNR=3.8								
PDAR				PcP		**PcP**	13 03 57.6	-0.8	
	comp=Z,0.2nm,0.7s,baz=151,slow=3.9,SNR=2.9								
NVAR	**Mina Array Bea**	**36.45**	**319**	P		**P**	13 01 40.5	-0.1	
	comp=Z,0.2nm,0.5s,baz=140,slow=5.9,SNR=3.1								
NVAR				PcP		**PcP**	13 04 01.4	-2.2	
	comp=Z,0.4nm,0.6s,baz=141,slow=3.1,SNR=4.4								
ULM	**Lac du Bonnet**	**37.64**	**353**	P		**P**	13 01 49.0	-1.3	
	comp=Z,0.6nm,0.4s,baz=157,slow=11,SNR=2.9								
YKA	**Yellowknife Ar**	**52.78**	**345**	P		**P**	13 03 49.7	-0.2	
	comp=Z,1.5nm,0.6s,baz=143,slow=7.5,SNR=37								
YKA				PcP		**PcP**	13 04 57.5	-1.1	
	comp=Z,0.2nm,0.7s,baz=151,slow=2.8,SNR=2.7								
RES	**Resolute Bay**	**61.81**	**358**	P		**P**	13 04 52.5	-0.9	
	comp=Z,0.4nm,0.4s,baz=200,slow=4.2,SNR=4.5								
INK	**Inuvik**	**62.33**	**343**	P		**P**	13 04 56.6	-0.3	
	comp=Z,1.6nm,0.8s,baz=114,slow=6.1,SNR=12								
ILAR	**Eielson Array**	**65.02**	**336**	P		**P**	13 05 14.4	-0.4	
	comp=Z,0.3nm,0.8s,baz=159,slow=5.7,SNR=6.0								
WRA	**Warramunga Arr**	**138.12**	**255**	PKP		**PKPdf**	13 13 59.6	-0.6	
	comp=Z,0.4nm,0.7s,baz=92,slow=2.5,SNR=4.2								
ASAR	**Alice Springs**	**138.20**	**249**	PKP		**PKPdf**	13 13 58.8	-1.5	
	comp=Z,0.4nm,1.0s,baz=97,slow=2.0,SNR=2.8								
CMAR	**Chiang Mai Arr**	**147.86**	**346**	PKPbc		**PKPdf**	13 14 19.1	+1.6	
	comp=Z,0.6nm,0.7s,baz=345,slow=3.1,SNR=3.4								

*IDC **20** 13:18:22.3±1.3,21°.95N×92°.61E,h0km, mb3.7/3, mb1 3.8/4,mb1mx3.4/41,mbtmp3.6/4,ML3.5/1,Error ellipse: s-maj=68.9km s-min=16.5km az=45.0*
*NDI **20** 13:18:25.0±3.4,22°.12N×92°.93E,h15km±60km,ML3.0*
*NEIC **20** 13:18:26.9±0.9,22°.12N±0°.07×92°.7E±0°.1,h32km±5km, mb4.1/2, Error ellipse: s-maj=16.6km s-min=7.1km az=62.0*

ISC 20 13:18:23.8±0.9,22°.11N±0°.07×92°.75E±0°.07,h10km,n18, σ1§85/22,mb3.7/4,India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**1.17**	**299**			Pg	**Pn**	**13 18 45.2**	**-1.0**
	0.5nm,0.3s,baz=0.0,slow=20,SNR=1.8								
BRDH						Lg	Lg	13 19 05.1	
	1.4nm,0.3s,baz=180,slow=24,SNR=40								
BELO	**BELONIA**	**1.66**	**314**	*eP*			**Pn**	**13 18 54.6**	**+1.7**
BELO				*eS*			**Sn**	**13 19 18.6**	**+4.3**
SIMRM	**Sittwe**	**1.97**	**176**	Pn			**Pn**	**13 18 58.5**	**+1.3**
SHL	**Shillong**	**3.54**	**347**	*eP*			**Pn**	**13 19 20.3**	**+1.4**
SHL				IAML				13 19 23.5	
	comp=N,32nm,0.0s								
SHL				*eS*			**Sn**	**13 19 57.5**	**-3.4**
SHL	**Shillong**	**3.54**	**347**	Pn			**Pn**	**13 19 19.6**	**+0.6**
KOHI	**KOHIMA**	**3.81**	**19**	*eP*			**Pn**	**13 19 24.9**	**+2.2**
KOHI				*ex*			x	13 20 00.5	
KOHI				IAML				13 20 10.1	
	comp=N,55nm,0.4s								
KOHI				IAML				13 20 53.4	
	comp=E,18nm,0.3s								
TEZP	**TEZPUR**	**4.49**	**1**	*eP*			**Pn**	**13 19 33.3**	**+1.4**
TEZP				*eS*			**Sn**	**13 20 21.8**	**-2.4**
TEZP				IAML				13 20 26.1	
	comp=E,38nm,0.2s								
GTK	**Tadong**	**6.42**	**325**	*eP*			**Pn**	**13 19 59.4**	**+0.9**
GTK				*eS*			**Sn**	**13 21 10.7**	**-1.2**
GTK				IAML				13 21 15.2	
	comp=N,17nm,0.0s								
GTK				IAML				13 21 15.4	
	comp=E,28nm,0.3s								
BOK	**Bokaro**	**6.55**	**286**	*eS*			**Sn**	**13 21 13.5**	**-1.5**
CHTO	**Chiang Mai**	**6.67**	**118**	Pn			**Pn**	**13 20 01.4**	**-0.5**
CM31	**Chiang Mai Arr**	**6.85**	**121**	Pn			**Pn**	**13 20 05.6**	**+1.2**
CMAR	**Chiang Mai Arr**	**6.85**	**121**	Pn			**Pn**	**13 20 06.0**	**+1.6**
	comp=E,0.2nm,0.3s,baz=294,slow=13,SNR=22								
CMAR				Lg			Lg	13 21 56.3	
	comp=E,0.2nm,0.3s,baz=304,slow=33,SNR=1.5								
LSA	**Lhasa**	**7.70**	**350**	Pn			**Pn**	**13 20 17.8**	**+1.3**
QIZ	**Qiongzhong**	**16.30**	**98**	Pn			**Pn**	**13 22 11.1**	**-1.8**
QIZ				IAmb		IAmb		13 22 57.2	
	comp=Z,126nm,1.7s								
MK31	**Makanchi Array**	**26.05**	**343**	P			**P**	**13 23 57.2**	**0.0**
MK31				IAmb		IAmb		13 24 00.9	
	comp=Z,1.0nm,0.8s								
MKAR	**Makanchi Array**	**26.05**	**343**	P			**P**	**13 23 57.6**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=158,slow=9.0,SNR=12								
WRA	**Warramunga Arr**	**58.29**	**133**	P			**P**	**13 28 18.8**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=318,slow=7.8,SNR=5.2								
ASAR	**Alice Springs**	**60.60**	**136**	P			**P**	**13 28 34.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=317,slow=6.9,SNR=7.9								

*SJA **20** 13:19:51.8±0.8,25°.50S×71°.11W,h20km,ML3.5,MW3.9*
*GUC **20** 13:19:54.5±0.5,25°.52S×71°.06W,h45km±2km,ML3.6*
*IDC **20** 13:19:55.9±1.3,25°.45S×70°.03W,h0km,mb4.1/1, mb1 3.6/5,mb1mx3.5/29,mbtmp3.5/5,ML3.4/4,Error ellipse: s-maj=61.8km s-min=25.0km az=104.0*

ISC 20 13:19:56.1±1.6,25°.50S±0°.04×71°.1W±0°.1,h46km±16km, n28,σ1§34/36,3C-2D,Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB14	**IPOC Station P**	**1.10**	**37**	*eP*			**Pn**	**13 20 14.3**	**-1.0**
PB14				*eS*			**Sn**	**13 20 29.5**	**-0.1**
PB14	**IPOC Station P**	**1.10**	**37**	*i* P			**Pn**	**13 20 14.7**	**-0.7**
PB14				*i* S			**Sn**	**13 20 30.5**	**+1.0**
GO02	**Mina Guanaco**	**1.44**	**77**	*i* P			**Pn**	**13 20 18.7**	**-1.3**
GO02				*i* S			**Sn**	**13 20 37.1**	**-0.7**
GO02				IAML				13 20 42.0	
	comp=N,2µm,0.4s								
PB10	**IPOC Station P**	**2.05**	**15**	*i* P			**Pn**	**13 20 27.5**	**-0.6**
PB10				*eS*			**Sn**	**13 20 53.1**	**+0.6**
PB10	**IPOC Station P**	**2.05**	**15**	*i* P			**Pn**	**13 20 27.6**	**-0.6**
PB10				*eS*			**Sn**	**13 20 53.6**	**+1.0**
GO03	**Copiap**	**2.23**	**159**	*i* P			**Pn**	**13 20 29.9**	**-0.8**
GO03				*i* S			**Sn**	**13 20 56.9**	**-0.2**
GO03				IAML				13 21 03.8	
	comp=E,363nm,0.5s								
GO03	**Copiap**	**2.23**	**159**	*i* P			**Pn**	**13 20 30.0**	**-0.7**
GO03				*i* S			**Sn**	**13 20 58.2**	**+1.1**
PB05	**IPOC Station P**	**2.77**	**18**	*i* P			**Pn**	**13 20 37.7**	**-0.5**
PB05				*i* S			**Sn**	**13 21 10.4**	**-0.1**
PB05				IAML				13 21 11.8	
	comp=E,149nm,0.7s								
PB05	**IPOC Station P**	**2.77**	**18**	*i* P			**Pn**	**13 20 37.8**	**-0.4**
PB05				*i* S			**Sn**	**13 21 10.1**	**-0.4**
PB06	**IPOC Station P**	**3.13**	**27**	*eP*			**Pn**	**13 20 44.1**	**+1.0**
PB06				*i* S			**Sn**	**13 21 19.8**	**+0.4**
PB06				IAML				13 21 42.3	
	comp=N,182nm,0.4s								
PB06	**IPOC Station P**	**3.13**	**27**	*i* P			**Pn**	**13 20 44.1**	**+1.0**
PB06				*i* S			**Sn**	**13 21 20.3**	**+1.0**
PB06				IAML				13 21 41.9	
	comp=Z,107nm,0.5s								
PB04	**IPOC Station P**	**3.28**	**16**	*i* P			**Pn**	**13 20 44.7**	**-0.5**
PB04				IAML				13 21 42.8	
	comp=Z,76nm,0.4s								
LVC	**Limon Verde**	**3.52**	**36**	Pn			**Pn**	**13 20 44.5**	**-4.2**
	comp=Z,1.6nm,0.3s,baz=207,slow=5.1,SNR=8.7								
PB03	**IPOC Station P**	**3.66**	**20**	*i* P			**Pn**	**13 20 50.5**	**0.0**
PB03				*i* S			**Sn**	**13 21 30.2**	**-2.3**
PB09	**IPOC Station P**	**4.08**	**26**	*i* P			**Pn**	**13 20 57.3**	**+1.2**
PB09				IAML				13 22 15.2	
	comp=Z,105nm,0.6s								
VCA	**Vinchina**	**4.14**	**142**	*i* P			Pn	13 21 00.8	+3.8
GO04	**Tololo Observa**	**4.66**	**176**	*i* P			**Pn**	**13 21 02.9**	**-1.4**
AROD	**Rodeo**	**4.87**	**163**	*i* P			**Pn**	**13 21 09.2**	**+2.0**
CFA	**Coronel Fontan**	**6.59**	**158**	Pn			**Pn**	**13 21 30.9**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=18,slow=16,SNR=6.6								
CFA				Sn			Sn	13 22 51.4	+7.0
	comp=Z,0.8nm,0.3s,baz=6.3,slow=18,SNR=2.0								
CFA	**Coronel Fontan**	**6.59**	**158**	*i* P			**Pn**	**13 21 30.8**	**+0.4**
TCA	**Tanti**	**8.18**	**137**	*i* P			**Pn**	**13 21 53.1**	**+0.8**
LPAZ	**La Paz**	**9.59**	**18**	Pn			**Pn**	**13 22 13.8**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=200,slow=6.7,SNR=14								
SIV	**San Ignacio**	**13.34**	**47**	Pn			Pn	13 22 57.0	-6.0
	comp=Z,0.1nm,0.3s,baz=239,slow=11,SNR=2.2								
TORD	**Torodi Ar. Bea**	**80.61**	**71**	P			**P**	**13 32 06.1**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=224,slow=6.8,SNR=4.2								
ASAR	**Alice Springs**	**125.44**	**208**	PKP			PKiKP	13 39 01.7	+8.5
	comp=Z,0.5nm,0.9s,baz=131,slow=1.3,SNR=3.7								
WRA	**Warramunga Arr**	**128.49**	**211**	PKP			PKiKP	13 39 06.3	+6.9
	comp=Z,0.4nm,0.7s,baz=153,slow=2.1,SNR=5.2								
ZALV	**Zalesovo Beam**	**146.43**	**26**	PKPbc			**PKiKP**	**13 39 35.0**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=311,slow=3.0,SNR=3.1								
MKAR	**Makanchi Array**	**150.04**	**38**	PKPbc			**PKPab**	**13 39 44.8**	**-2.7**
	comp=Z,0.6nm,0.6s,baz=303,slow=2.9,SNR=4.3								

*IDC **20** 13:30:08.3±2.0,62°.84N×149°.86W,h84km±19km,mb3.3/9, mb1 3.5/13,mb1mx3.3/37,mbtmp3.7/13,Error ellipse: s-maj=20.9km s-min=19.3km az=44.0*
*NEIC **20** 13:30:08.3±1.3,62°.82N±0°.02×149°.75W±0°.06,h84km±4km, Error ellipse: s-maj=4.5km s-min=1.6km az=61.0*
*AEIC **20** 13:30:08.4±1.4,62°.83N±0°.03×149°.78W±0°.06,h77km±4km, ML3.7/120, Error ellipse: s-maj=4.7km s-min=3.5km az=199.0*

ISC 20 13:30:07.9±0.7,62°.82N±0°.03×149°.75W±0°.03,h82km±5km, n113,σ0§96/136,mb3.6/9,Central Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HUR	**Hurricane**	**0.17**	**18**				**Pn**	**13 30 20.1**	**+0.3**
HUR							**Sn**	**13 30 28.7**	**+0.1**
WAT1	**Susitna Watana**	**0.55**	**88**				**Pn**	**13 30 22.5**	**+0.2**
WAT2	**Susitna Watana**	**0.55**	**74**				**Pn**	**13 30 22.6**	**+0.2**
WAT2							**Sn**	**13 30 33.3**	**+0.2**
TRF	**Thorofare Moun**	**0.68**	**339**				**Pn**	**13 30 24.3**	**+0.6**
RND	**Reindeer**	**0.72**	**34**				**Pn**	**13 30 24.6**	**+0.6**
RND							**Sn**	**13 30 36.3**	**+0.4**
KTH	**Kantishna Hill**	**0.91**	**325**				**Pn**	**13 30 26.8**	**+0.7**
WAT6	**Susitna Watana**	**0.96**	**104**				**Pn**	**13 30 26.7**	**0.0**
WAT6							**Sn**	**13 30 40.3**	**-0.4**
MCK	**McKinley**	**0.99**	**22**				**Pn**	**13 30 27.9**	**+1.0**
DHY	**Denali Highway**	**1.12**	**76**				**Pn**	**13 30 29.0**	**+0.4**
DHY							**Sn**	**13 30 44.9**	**+0.8**
GHO	**Glory Hole Cre**	**1.12**	**159**				**Pn**	**13 30 29.1**	**+0.5**
PPLA	**Purkeypile**	**1.12**	**275**				**Pn**	**13 30 29.1**	**+0.5**
PPLA							**Sn**	**13 30 44.5**	**+0.4**
SKT	**Skwentna**	**1.18**	**225**				**Pn**	**13 30 29.2**	**0.0**
SKT							**Sn**	**13 30 44.8**	**-0.5**
SML	**Sawmill**	**1.21**	**146**				**Pn**	**13 30 30.2**	**+0.5**
SML							**Sn**	**13 30 46.4**	**+0.4**
CAST	**Castle Rocks**	**1.22**	**301**				**Pn**	**13 30 29.9**	**+0.2**
CAST							**Sn**	**13 30 45.5**	**-0.7**
PMR	**Palmer**	**1.27**	**166**				**Pn**	**13 30 30.9**	**+0.6**
BWN	**Browne**	**1.36**	**5**				**Pn**	**13 30 32.6**	**+1.1**
BPAW	**Bear Paw Mtn.**	**1.40**	**337**				**Pn**	**13 30 32.5**	**+0.5**
BPAW							**Sn**	**13 30 49.5**	**-0.7**
SUA	**Susitna One**	**1.44**	**199**				**Pn**	**13 30 33.1**	**+0.5**
SUA							**Sn**	**13 30 51.7**	**+0.5**
SCM	**Sheep Creek Mo**	**1.50**	**130**				**Pn**	**13 30 34.2**	**+0.9**
KNK	**Knik Glacier**	**1.54**	**156**				**Pn**	**13 30 34.6**	**+0.9**
CHUM	**Lake Minchumin**	**1.57**	**314**				**Pn**	**13 30 35.0**	**+0.8**
CHUM							**Sn**	**13 30 53.8**	**-0.3**
RC01	**Rabbit Creek A**	**1.74**	**180**				**Pn**	**13 30 37.5**	**+1.1**
NEA	**Nenana**	**1.79**	**9**				**Pn**	**13 30 37.6**	**+0.6**
WRH	**Wood River Hil**	**1.82**	**23**				**Pn**	**13 30 38.0**	**+0.7**
WRH							**Sn**	**13 30 59.2**	**-0.5**
SPCG	**Spurr Capps Gl**	**1.87**	**216**				**Pn**	**13 30 38.8**	**+0.6**
PS10	**TAPS Pump St10**	**1.91**	**70**				**Pn**	**13 30 40.4**	**+1.7**
PAX	**Paxson**	**1.97**	**84**				**Pn**	**13 30 40.9**	**+1.4**
SPBG	**Spurr Blockage**	**1.99**	**219**				**Pn**	**13 30 40.6**	**+0.8**
SPCR	**Spurr Chakacha**	**2.00**	**217**				**Pn**	**13 30 40.4**	**+0.5**
CCB	**Clear Creek Bu**	**2.03**	**24**				**Pn**	**13 30 40.8**	**+0.7**
CCB							**Sn**	**13 31 04.1**	**-0.7**
HDA	**Harding Lake**	**2.03**	**37**				**Pn**	**13 30 41.0**	**+0.8**
HDA							**Sn**	**13 31 04.4**	**-0.4**
PWL	**Port Wells**	**2.08**	**161**				**Pn**	**13 30 41.3**	**+0.4**
PS11	**TAPS Pump St11**	**2.12**	**109**				**Pn**	**13 30 43.3**	**+1.9**
CAPN	**Captain Cook N**	**2.16**	**199**				**Pn**	**13 30 44.4**	**+2.4**
PS08	**TAPS Pump Stn8**	**2.17**	**36**				**Pn**	**13 30 42.9**	**+0.9**
PS08							**Sn**	**13 31 07.9**	**-0.2**
TCOL	**CIGO, UAF Yank**	**2.23**	**21**				**Pn**	**13 30 43.8**	**+1.0**
COLA	**College**	**2.23**	**21**				**Pn**	**13 30 43.6**	**+0.8**
COLA							**Sn**	**13 31 09.0**	**-0.5**
MDM	**Murphy Dome**	**2.25**	**17**				**Pn**	**13 30 44.0**	**+0.9**
MDM							**Sn**	**13 31 09.5**	**-0.6**
MLY	**Manley**	**2.26**	**349**				**Pn**	**13 30 44.4**	**+1.0**
JPK	**Jack Peak**	**2.31**	**139**				**Pn**	**13 30 44.2**	**+0.1**
GLI	**Glacier Island**	**2.32**	**146**				**Pn**	**13 30 44.2**	**+0.2**
SLKM	**Skilak Lake**	**2.33**	**186**				**Pn**	**13 30 45.2**	**+0.9**
IL31		**2.34**	**32**				**Pn**	**13 30 45.0**	**+0.7**
ILAR	**Eielson Array**	**2.34**	**32**	P			**Pn**	**13 30 45.0**	**+0.7**
	16nm,0.3s,baz=214,slow=14,SNR=620								
ILAR				S			**Sn**	**13 31 11.1**	**-1.0**
	49nm,0.3s,baz=215,slow=22,SNR=29								
RIDG	**Independent Ri**	**2.40**	**65**				**Pn**	**13 30 47.0**	**+1.8**
POKR	**Poker Plat Res**	**2.52**	**23**				**Pn**	**13 30 47.9**	**+1.1**
POKR							**Sn**	**13 31 15.6**	**-1.0**
FID	**Port Fidalgo**	**2.59**	**142**				**Pn**	**13 30 47.8**	**0.0**
DFR	**Drift River**	**2.64**	**213**				**Pn**	**13 30 48.9**	**+0.5**
RDJH	**Redoubt Jeurge**	**2.67**	**214**				**Pn**	**13 30 49.2**	**+0.3**
DOT	**Dot Lake**	**2.71**	**70**				**Pn**	**13 30 50.7**	**+1.4**
SEW	**Seward**	**2.73**	**177**				**Pn**	**13 30 50.5**	**+0.9**
RDWB	**Redoubt West**	**2.77**	**214**				**Pn**	**13 30 50.6**	**+0.4**
MENT	**Mentasta**	**2.77**	**85**				**Pn**	**13 30 51.4**	**+1.3**
RSO	**Redoubt South**	**2.77**	**213**				**Pn**	**13 30 50.3**	**

comp=Z,5.6nm,0.5s,baz=56,slow=11,SNR=16
FITZ Fitzroy Crossi 24.41 237 P P 14 11 50.6 -0.2
FITZ IAmb IAmb 14 11 52.2
comp=Z,20nm,1.2s
LUWI Luwuk 24.73 280 P P 14 11 51.0 -2.8
DZM Mont Dzumac 24.87 133 P P 14 11 55.2 +0.1
DZM IAmb IAmb 14 12 20.3
comp=Z,32nm,1.6s
ARMA Armidale 25.09 171 P P 14 11 58.1 +1.1
ARMA IAmb IAmb 14 12 51.6
comp=Z,23nm,1.6s
TIXI Tiksi 77.98 354 P P 14 18 28.6 +2.3
TIXI IAmb IAmb 14 18 31.6
comp=Z,4.8nm,0.7s
ILAR Eielson Array 85.02 23 P P 14 19 02.0 -1.3
comp=Z,0.6nm,0.8s,baz=243,slow=5.8,SNR=4.2
TORD Torodi Ar. Bea 145.11 285 PKP PKPbc 14 26 03.6 -1.6
comp=Z,0.3nm,0.6s,baz=85,slow=2.0,SNR=4.2

*WEL **20** 14:27:37.8, 40.6°S±0.7°×17.7°E±°, h28km±1km, ML4.5/16, MLv4.1/109, Error ellipse: s-maj=0.0km s-min=0.0km az=97.1*
*NEIC **20** 14:27:37.4±2.1, 40.68°S±0.07°×175.91°E±0.09, h43km±3km, mb4.5/4, Error ellipse: s-maj=12.5km s-min=6.0km az=133.0*
*IDC **20** 14:27:40.8±3.4, 40.39°S×175.84°E, h60km±30km, mb4.0/4, mb1 4.2/5, mb1mx3.8/28, mbtmp4.2/5, ML3.5/1, MS3.1/4, Ms1 3.0/4, ms1mx2.9/22, Error ellipse: s-maj=28.6km s-min=22.5km az=146.0*
ISC 20 14:27:37.2±0.9, 40.67S±0.02×175.92E±0.03, h32km±7km, n164, σ1§15/175, mb4.4/6, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIWZ	**Tintock**	**0.11**	**192**	P	**Pn**	**14 27 43.9**	**+1.1**
PRWZ	**Pori Road**	**0.12**	**21**	P	**Pn**	**14 27 43.3**	**+0.5**
BFZ	**Birch Farm**	**0.25**	**94**	P	**Pn**	**14 27 45.3**	**+0.6**
BFZ	**Birch Farm**	**0.25**	**94**	Pn	**Pn**	**14 27 45.2**	**+0.5**
BFZ				Sn	**Sn**	**14 27 50.6**	**+1.1**
MRZ	**Mangatainoka R**	**0.26**	**271**	P	Pn	14 27 44.7	-0.1
POWZ	**Post Office Ro**	**0.30**	**338**	P	**Pb**	**14 27 44.9**	**+0.1**
CPWZ	**Castlepoint**	**0.33**	**138**	P	**Pn**	**14 27 47.4**	**+1.7**
CPWZ				S	**Sn**	**14 27 55.8**	**+4.5**
HOWZ	**Holdsworth Sta**	**0.38**	**233**	P	**Pn**	**14 27 47.0**	**+0.5**
HOWZ				S	**Sn**	**14 27 53.6**	**+0.8**
DVHZ	**Dannevirke**	**0.41**	**28**	P	**Pn**	**14 27 46.6**	**+0.1**
DVHZ				S	**Sb**	**14 27 52.8**	**0.0**
TMWZ	**Te Maipa**	**0.44**	**183**	P	**Pn**	**14 27 48.7**	**+1.3**
TMWZ				S	**Sn**	**14 27 57.2**	**+2.9**
ANWZ	**Angora Road**	**0.47**	**64**	P	**Pn**	**14 27 48.3**	**+0.6**
MTW	**Mount Morrison**	**0.58**	**212**	P	**Pn**	**14 27 50.2**	**+1.0**
OGWZ	**Otaki Gorge**	**0.59**	**255**	P	**Pn**	**14 27 50.0**	**+0.7**
OGWZ				S	**Sn**	**14 27 58.4**	**+0.7**
TSZ	**Takapari Road**	**0.61**	**3**	P	**Pb**	**14 27 49.5**	**0.0**
TSZ				S	**Sb**	**14 27 57.6**	**-0.3**
OHWZ	**Ohakea**	**0.65**	**315**	P	**Pn**	**14 27 51.2**	**+1.1**
PRHZ	**Porangahau**	**0.68**	**54**	P	**Pn**	**14 27 51.1**	**+0.5**
WPHZ	**Waipukurau**	**0.72**	**34**	P	**Pn**	**14 27 52.0**	**+0.8**
TRWZ	**Traveller**	**0.75**	**193**	P	**Pn**	**14 27 52.7**	**+1.1**
CAW	**Cannon Point**	**0.78**	**235**	P	**Pb**	**14 27 53.1**	**+0.7**
CAW				S	**Sn**	**14 28 04.2**	**+1.7**
PNHZ	**Pukenui**	**0.78**	**16**	P	**Pb**	**14 27 52.5**	**+0.1**
PNHZ				S	**Sn**	**14 28 03.6**	**+1.0**
KIW	**Kapiti Island**	**0.79**	**255**	P	**Pb**	**14 27 53.3**	**+0.8**
KIW				S	**Sn**	**14 28 04.3**	**+1.5**
PAWZ	**Paruwai Farm**	**0.81**	**207**	P	**Pb**	**14 27 53.3**	**+0.5**
MSWZ	**Moikau Station**	**0.90**	**214**	P	**Pb**	**14 27 54.4**	**-0.1**
MSWZ	**Moikau Station**	**0.90**	**214**	Pn	**Pb**	**14 27 54.1**	**-0.3**
PXZ	**Pawanui**	**0.96**	**49**	P	**Pn**	**14 27 54.8**	**+0.4**
PLWZ	**Palliser**	**1.03**	**209**	P	**Pn**	**14 27 55.9**	**+0.5**
PLWZ				S	**Sb**	**14 28 10.0**	**+0.2**
PLWZ	**Palliser**	**1.03**	**209**		**Pn**	**14 27 55.8**	**+0.3**
KRHZ	**Kereru**	**1.08**	**19**	P	**Pn**	**14 27 56.7**	**+0.6**
BHW	**Baring Head**	**1.08**	**226**	P	**Pb**	**14 27 56.8**	**-0.6**
BHW	**Baring Head**	**1.08**	**226**		**Pn**	**14 27 56.6**	**+0.5**
SNZO	**South Karori**	**1.12**	**235**		**Pn**	**14 27 57.1**	**+0.5**
KAHZ	**Kahuranaki**	**1.14**	**41**	P	**Pn**	**14 27 57.4**	**+0.5**
WAZ	**Wanganui**	**1.16**	**322**	P	**Pb**	**14 27 59.7**	**+1.1**
BHHZ	**Black Hill Sta**	**1.18**	**6**	P	**Pn**	**14 27 58.5**	**+1.0**
MOWZ	**Moawhango**	**1.26**	**354**	P	**Pb**	**14 28 00.0**	**-0.5**
KWHZ	**Kaweka Forest**	**1.30**	**18**	P	**Pn**	**14 27 59.9**	**+0.7**
MTVZ	**Mangateitei**	**1.32**	**345**	P	**Pb**	**14 28 01.5**	**0.0**
CKHZ	**Cape Kidnapper**	**1.34**	**42**	P	**Pn**	**14 27 59.6**	**-0.1**
TCW	**Tory Channel**	**1.36**	**246**	P	**Pn**	**14 28 00.6**	**+0.8**
MCHZ	**McNeill Hill**	**1.36**	**26**	P	**Pn**	**14 28 00.7**	**+0.7**
TRVZ	**Turoa**	**1.39**	**348**	P	**Pb**	**14 28 02.8**	**0.0**
WHVZ	**Whangaehu Hut**	**1.40**	**350**	P	**Pb**	**14 28 02.8**	**-0.2**
TUVZ	**Tukino**	**1.41**	**352**	P	**Pb**	**14 28 02.8**	**-0.2**
DRZ	**Dome Shelter**	**1.42**	**349**	P	**Pb**	**14 28 04.7**	**+1.5**
FWVZ	**Far West T-bar**	**1.44**	**349**	P	**Pb**	**14 28 03.2**	**-0.3**
PKVZ	**Pokaka**	**1.44**	**342**	P	**Pb**	**14 28 03.4**	**-0.1**
NGZ	**Ngauruhoe**	**1.51**	**351**	P	**Pb**	**14 28 04.1**	**-0.6**
DUWZ	**D'Urville Isla**	**1.52**	**264**	P	**Pn**	**14 28 03.3**	**+1.1**
BKZ	**Black Stump Fm**	**1.56**	**17**	P	**Pn**	**14 28 03.2**	**+0.4**
BKZ	**Black Stump Fm**	**1.56**	**17**	Pn	**Pn**	**14 28 03.1**	**+0.3**
WTVZ	**West Tongariro**	**1.57**	**351**	P	**Pb**	**14 28 04.9**	**-0.8**
KRVZ	**Karewarewa**	**1.58**	**352**	P	**Pb**	**14 28 05.4**	**-0.6**
ARHZ	**Aropaoanui**	**1.63**	**31**	P	**Pn**	**14 28 04.1**	**+0.5**
TWVZ	**Taurewa**	**1.64**	**347**	P	**Pb**	**14 28 06.3**	**+0.5**
LREZ	**Lake Rotokare**	**1.67**	**316**	P	**Pb**	**14 28 08.1**	**+0.7**
TUWZ	**Tuamarina**	**1.68**	**242**	P	**Pn**	**14 28 04.5**	**+0.2**
TUWZ	**Tuamarina**	**1.68**	**242**	Pn	**Pn**	**14 28 04.3**	**0.0**
CMWZ	**Cape Campbell**	**1.68**	**229**	P	**Pn**	**14 28 05.1**	**+0.8**
CMWZ	**Cape Campbell**	**1.68**	**229**		**Pn**	**14 28 04.6**	**+0.3**
RITZ	**Rihia Road**	**1.69**	**358**	P	**Pb**	**14 28 07.1**	**-0.5**
KATZ	**Kakaramea**	**1.70**	**354**	P	**Pb**	**14 28 10.0**	**+2.2**
NMHZ	**Naumai**	**1.71**	**24**	P	**Pn**	**14 28 05.5**	**+0.7**
HATZ	**Hinemaiaia**	**1.78**	**4**	P	**Pn**	**14 28 06.7**	**+1.0**
VRZ	**Vera Road**	**1.78**	**330**	P	**Pb**	**14 28 08.5**	**-0.6**
RATZ	**Rangitukua**	**1.80**	**356**	P	**Pb**	**14 28 11.7**	**+2.1**
BSWZ	**Blackbirch Sta**	**1.86**	**235**	P	**Pn**	**14 28 07.1**	**+0.3**
BSWZ	**Blackbirch Sta**	**1.86**	**235**		**Pn**	**14 28 06.8**	**-0.1**
MRHZ	**Matea Rd**	**1.87**	**12**	P	**Pn**	**14 28 07.5**	**+0.5**
WHHZ	**Waihua**	**1.88**	**33**	P	**Pn**	**14 28 07.3**	**+0.2**
PREZ	**Palmer Road**	**1.89**	**314**	P	**Pb**	**14 28 11.1**	**0.0**
MTHZ	**Maungataniwha**	**1.95**	**22**	P	**Pn**	**14 28 08.4**	**+0.3**
WATZ	**Wairara**	**1.96**	**356**	P	**Pn**	**14 28 09.4**	**+1.2**
RAHZ	**Arahi**	**1.97**	**28**	P	**Pn**	**14 28 08.4**	**+0.1**
DREZ	**Durham Road**	**1.98**	**318**	P	**Pb**	**14 28 12.9**	**+0.4**
NNZ	**Nelson**	**2.00**	**253**	P	**Pn**	**14 28 09.6**	**+1.0**
NNZ	**Nelson**	**2.00**	**253**	Pn	**Pn**	**14 28 09.4**	**+0.7**
KHEZ	**Kahui Hut**	**2.00**	**313**	P	**Pb**	**14 28 13.4**	**+0.4**
NMEZ	**Namu Road**	**2.00**	**308**	P	**Pb**	**14 28 12.8**	**-0.1**
PKE	**Pukeiti**	**2.09**	**314**	P	**Pb**	**14 28 14.7**	**+0.3**
NBEZ	**Newall Road No**	**2.10**	**311**	P	**Pb**	**14 28 18.1**	**+3.4**
ALRZ	**Allen Road**	**2.13**	**9**	P	**Pn**	**14 28 10.6**	**+0.1**
KNZ	**Kokohu**	**2.13**	**40**	P	**Pn**	**14 28 09.6**	**-0.8**
MHGZ	**Mahia Peninsul**	**2.15**	**46**	P	**Pn**	**14 28 10.2**	**-0.6**
WPRZ	**Whakapapataria**	**2.15**	**5**	P	**Pn**	**14 28 12.4**	**+1.6**
SNGZ	**Shannon Statio**	**2.18**	**31**	P	**Pn**	**14 28 11.2**	**0.0**
PRRZ	**Plateau Road**	**2.19**	**10**	P	**Pn**	**14 28 11.9**	**+0.5**
RTZ	**Ruatahuna**	**2.21**	**22**	P	**Pn**	**14 28 11.8**	**+0.2**
MUZ	**Murupara**	**2.22**	**17**	P	**Pn**	**14 28 12.5**	**-0.1**
HRRZ	**Handcock Road**	**2.29**	**7**	P	**Pn**	**14 28 13.3**	**+0.5**
HIZ	**Hauiti**	**2.30**	**339**	P	**Pb**	**14 28 20.4**	**+2.4**
PRGZ	**Paritu Road**	**2.31**	**42**	P	**Pn**	**14 28 12.1**	**-0.9**
GRRZ	**Galatos Road**	**2.32**	**4**	P	**Pb**	**14 28 19.9**	**+1.6**
TLZ	**Tolley Road**	**2.35**	**353**	P	**Pb**	**14 28 19.4**	**+0.5**
HSRZ	**Hossack Road**	**2.37**	**6**	P	**Pn**	**14 28 14.4**	**+0.7**
RRRZ	**Republican Roa**	**2.37**	**11**	P	**Pn**	**14 28 14.2**	**+0.4**
RIGZ	**Rimuhau**	**2.42**	**37**	P	**Pn**	**14 28 13.9**	**-0.7**
RAGZ	**Rawiri**	**2.46**	**29**	P	**Pn**	**14 28 14.4**	**-0.7**
TARZ	**Mount Tarawera**	**2.47**	**11**	P	**Pn**	**14 28 15.4**	**+0.1**
KHZ	**Kahutara**	**2.50**	**225**	P	**Pn**	**14 28 14.9**	**-0.6**
KHZ	**Kahutara**	**2.50**	**225**	Pn	**Pn**	**14 28 14.7**	**-0.8**
THZ	**Tophouse**	**2.52**	**243**	P	**Pn**	**14 28 16.0**	**+0.1**
THZ	**Tophouse**	**2.52**	**243**	Pn	**Pn**	**14 28 15.5**	**-0.4**
URZ	**Urewera**	**2.58**	**21**	P	**Pn**	**14 28 15.6**	**-1.0**
13nm,0.3s,baz=252,slow=6.6,SNR=17							
URZ				S	**Sn**	**14 28 45.5**	**-1.3**
19nm,0.3s,baz=0.4,slow=13,SNR=6.8							
URZ				LR	LR	14 29 34.5	
comp=Z,136nm,19.0s,baz=188,slow=48							
URZ	**Urewera**	**2.58**	**21**	P	**Pn**	**14 28 15.6**	**-1.0**
URZ	**Urewera**	**2.58**	**21**		**Pn**	**14 28 15.3**	**-1.3**
QRZ	**Quartz Range**	**2.58**	**265**	P	**Pb**	**14 28 24.0**	**+1.3**
QRZ	**Quartz Range**	**2.58**	**265**	Pn	**Pn**	**14 28 16.4**	**-0.2**
MWZ	**Matawai**	**2.64**	**29**	P	**Pn**	**14 28 16.5**	**-1.1**
TKGZ	**Te Karaka**	**2.68**	**35**	P	**Pn**	**14 28 17.1**	**-0.9**
CNGZ	**Carnagh Statio**	**2.81**	**40**	P	**Pn**	**14 28 19.0**	**-0.9**
TWGZ	**Tauwhareparae**	**2.96**	**33**	P	**Pn**	**14 28 21.4**	**-0.5**
RUGZ	**Raukumara Rang**	**3.02**	**27**	P	**Pn**	**14 28 21.9**	**-1.0**
PUZ	**Puketiti**	**3.16**	**36**	P	**Pn**	**14 28 23.2**	**-1.6**
HAZ	**Te Kaha**	**3.25**	**27**	P	**Pn**	**14 28 25.2**	**-0.6**
DSZ	**Denniston Nort**	**3.28**	**249**	P	**Pn**	**14 28 27.2**	**+0.8**
WMGZ	**Waiomatatini S**	**3.44**	**35**	P	**Pn**	**14 28 27.3**	**-1.2**
LTZ	**Lake Taylor**	**3.45**	**231**	P	**Pn**	**14 28 27.7**	**-1.0**
LTZ	**Lake Taylor**	**3.45**	**231**		**Pn**	**14 28 27.7**	**-1.0**
AMCZ	**Amberley**	**3.50**	**223**	P	**Pn**	**14 28 27.9**	**-1.4**
MKAZ	**Moumakai**	**3.60**	**350**	P	**Pn**	**14 28 35.3**	**+4.5**
MXZ	**Matakaoa Point**	**3.61**	**32**	P	**Pn**	**14 28 30.1**	**-0.8**
MXZ	**Matakaoa Point**	**3.61**	**32**	Pn	**Pn**	**14 28 30.1**	**-0.8**
OKCZ	**Okains Bay**	**3.72**	**214**	P	**Pn**	**14 28 31.1**	**-1.3**
MQZ	**McQueen's Vall**	**3.89**	**118**	Pn	**Pn**	**14 28 32.5**	**-2.2**
OXZ	**Oxford**	**3.93**	**226**	P	**Pn**	**14 28 34.2**	**-1.0**
OXZ	**Oxford**	**3.93**	**226**		**Pn**	**14 28 33.9**	**-1.3**
INZ	**Inchbonnie**	**3.93**	**237**	P	**Pn**	**14 28 34.4**	**-0.8**
WVZ	**Waitaha Valley**	**4.55**	**236**	P	**Pn**	**14 28 42.8**	**-1.0**
RPZ	**Rata Peaks**	**4.72**	**228**	P	**Pn**	**14 28 45.8**	**-0.4**
3.2nm,0.3s,baz=241,slow=2.0,SNR=24							
RPZ				S	**Sn**	**14 29 35.7**	**-4.2**
12nm,0.3s,baz=94,slow=2.7,SNR=27							
RPZ				LR	LR	14 31 08.8	
comp=Z,214nm,20.8s,baz=54,slow=43							
RPZ	**Rata Peaks**	**4.72**	**228**	P	**Pn**	**14 28 45.3**	**-0.9**
RPZ	**Rata Peaks**	**4.72**	**228**		**Pn**	**14 28 45.0**	**-1.2**
FOZ	**Fox Glacier**	**5.37**	**236**	P	**Pn**	**14 28 53.6**	**-0.4**
FOZ	**Fox Glacier**	**5.37**	**236**	Pn	**Pn**	**14 28 54.4**	**-0.5**
LBZ	**Lake Benmore**	**5.63**	**227**	P	**Pn**	**14 28 57.8**	**-0.9**
LBZ	**Lake Benmore**	**5.63**	**227**	Pn	**Pn**	**14 28 57.6**	**-1.1**
ODZ	**Otahua Downs**	**5.84**	**220**	P	**Pn**	**14 28 59.8**	**-1.8**
ODZ	**Otahua Downs**	**5.84**	**220**	Pn	**Pn**	**14 28 59.7**	**-1.8**
JCZ	**Jackson Bay**	**6.28**	**235**	P	**Pn**	**14 29 06.1**	**-1.6**
WKZ	**Wanaka**	**6.56**	**228**	P	**Pn**	**14 29 09.7**	**-1.7**
WKZ	**Wanaka**	**6.56**	**228**	Pn	**Pn**	**14 29 09.2**	**-2.2**
TUZ	**Tuapeka**	**7.00**	**219**	P	**Pn**	**14 29 16.1**	**-1.2**
MLZ	**Mavora Lakes**	**7.40**	**228**	P	**Pn**	**14 29 21.5**	**-1.4**
MLZ	**Mavora Lakes**	**7.40**	**228**	Pn	**Pn**	**14 29 21.2**	**-1.6**
SYZ	**Scrubby Hill**	**7.66**	**218**	P	**Pn**	**14 29 25.9**	**-0.4**
WHZ	**Wether Hill Ro**	**7.81**	**225**	Pn	**Pn**	**14 29 28.0**	**-0.6**
DCZ	**Deep Cove**	**8.01**	**230**	Pn	**Pn**	**14 29 30.7**	**-0.5**
RAO	**Raoul Island**	**12.45**	**26**	LR	LR	14 34 48.3	
comp=Z,176nm,21.4s,baz=1.5,slow=35							
STKA	**Stephens Creek**	**28.88**	**277**	LR	LR	14 44 09.5	
comp=Z,37nm,18.9s,baz=23,slow=34							
AS31	**Alice Springs**	**38.98**	**283**	P	**P**	**14 35 00.4**	**-0.2**
ASAR	**Alice Springs**	**38.98**	**283**	P	**P**	**14 35 00.5**	**-0.1**
2.6nm,0.4s,baz=122,slow=6.7,SNR=162							
ASAR				PcP	**PcP**	**14 37 09.5**	**-1.1**
0.2nm,0.5s,baz=119,slow=3.8,SNR=5.2							
COEN	**Coen**	**39.03**	**304**	P	**P**	**14 35 01.4**	**+0.4**
WR0	**Warramunga Arr**	**40.78**	**288**	P	**P**	**14 35 15.3**	**-0.2**
WR0				IAmb	IAmb	14 35 37.2	
comp=Z,10nm,1.2s							
WRAB	**Tennant Creek**	**40.94**	**288**	P	**P**	**14 35 16.4**	**-0.4**
WRAB				IAmb	IAmb	14 36 44.1	
comp=Z,17nm,1.4s							
WRA	**Warramunga Arr**	**40.94**	**288**	P	**P**	**14 35 16.6**	**-0.2**
comp=Z,4.4nm,0.4s,baz=126,slow=8.1,SNR=34							
FITZ	**Fitzroy Crossi**	**48.48**	**282**	P	**P**	**14 36 16.6**	**-0.4**
comp=Z,3.8nm,1.1s,baz=109,slow=6.6,SNR=6.1							
FITZ	**Fitzroy Crossi**	**48.48**	**282**	P	**P**	**14 36 15.9**	**-1.1**
QSPA	**South Pole Qui**	**49.46**	**180**	P	**P**	**14 36 27.4**	**+3.3**
comp=Z,0.7nm,0.8s,baz=216,slow=2.6,SNR=6.1							
YKA	**Yellowknife Ar**	**116.81**	**29**	PKP	**PKPdf**	**14 46 16.1**	**-1.2**
comp=Z,0.1nm,0.4s,baz=254,slow=1.8,SNR=4.0							
MKAR	**Makanchi Array**	**120.31**	**307**	PKP	**PKPdf**	**14 46 23.8**	**-0.7**
comp=Z,0.1nm,0.6s,baz=131,slow=4.0,SNR=3.0							
KIRV	**Kirov**	**142.18**	**317**	PKP	**PKPdf**	**14 47 03.1**	**-2.1**
comp=Z,3.3nm,0.5s,baz=51,slow=6.5,SNR=2.8							
KBZ	**Khabaz**	**145.42**	**291**	PKPbc	**PKPdf**	**14 47 11.1**	**-0.2**
comp=Z,2.3nm,0.9s,baz=69,slow=4.9,SNR=4.0							
ARCES	**ARCESS Array B**	**147.17**	**341**	PKPbc	**PKPbc**	**14 47 15.2**	**-0.7**
comp=Z,1.2nm,0.5s,baz=65,slow=1.7,SNR=13							
BRTR	**Keskin Array B**	**151.31**	**281**	PKPbc	**PKPbc**	**14 47 26.6**	**-0.7**
comp=Z,0.7nm,0.7s,baz=157,slow=6.7,SNR=4.2							
FINES	**FINESS Array B**	**152.29**	**329**	PKPbc	**PKPbc**	**14 47 28.1**	**-0.5**
comp=Z,1.1nm,0.6s,baz=57,slow=5.1,SNR=3.4							

*MOS **20** 14:40:44.9±1.2, 41.29N×19.38E, h10km, mb4.6/11, Error ellipse: s-maj=6.2km s-min=4.5km az=76.4*
*IDC **20** 14:40:44.6±0.8, 41.28N×19.51E, h0km, mb3.8/16, mb1 3.9/25, mb1mx3.8/52, mbtmp3.8/25, ML3.4/8, MS3.4/21, Ms1 3.4/21, ms1mx3.2/53, Error ellipse: s-maj=14.3km s-min=11.4km az=178.0*
*LDG **20** 14:40:46.9±0.1, 41.36N×19.42E, h8km, Ml4.1/22, Error ellipse: s-maj=3.0km s-min=2.0km az=26.0*
*ATH **20** 14:40:46.9, 41.36N×19.43E, h19km±1km, ML3.7/6, Error ellipse: s-maj=2.5km s-min=0.6km az=6.0*
*TIR **20** 14:40:47.0, 41.38N×19.49E, h13km, Md3.7/7*
*THE **20** 14:40:47.7, 41.40N×19.45E, h0km±1km, ML3.5/6, Error ellipse: s-maj=2.4km s-min=0.7km az=308.0*
*BEO **20** 14:40:47.3±0.5, 41.31N×19.43E, h4km±2km, ML3.8/23*
*ROM **20** 14:40:48.0, 41.38N×19.45E, h8km, ML3.9*
*PDG **20** 14:40:48.5±0.9, 41.39N×19.49E, h16km±1km, MD4.0/12, ML4.0/11, Error ellipse: s-maj=0.8km s-min=1.4km az=0.0*
*SKO **20** 14:40:48.4, 41.35N×19.45E, h13km*
*NEIC **20** 14:40:49.4±1.8, 41.30N±0.05×19.45E±0.06, h28km±4km, mb4.4/11, ML4.0/1(BUC), ML3.7(TIR), Error ellipse: s-maj=6.9km s-min=6.1km az=210.0*
*PRU **20** 14:40:50.9±0.0, 41.50N×19.60E, h0km, M4.4*
ISC 20 14:40:47.7±0.8, 41.33N±0.01×19.47E±0.02, h19km±2km, n414, σ1§88/506, mb4.2/28, MS3.3/11, 33C-20D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.30**	**86**	P	**Pg**	**14 40 53.7**	**-0.6**
TIR				S	**Sg**	**14 40 58.5**	**-0.3**
9µm,0.4s							
TIR	**Tirane**	**0.30**	**86**	*e*Pg	**Pg**	**14 40 53.7**	**-0.6**
TIR				*e*Sg	**Sg**	**14 40 58.4**	**-0.3**
TIR	**Tirane**	**0.30**	**86**	P	**Pg**	**14 40 53.7**	**-0.6**
TIR	**Tirane**	**0.30**	**86**	*i* PG	**Pg**	**14 40 53.8**	**-0.6**
TIR				*i* PG	**Sg**	**14 40 58.3**	**-0.5**
TIR	**Tirane**	**0.30**	**86**	P	**Pg**	**14 40 53.8**	**-0.6**
TIR				S	**Sb**	**14 40 59.2**	**+0.4**
TIR				AML	AML	14 40 59.9	
comp=E,58777µm,0.4s							
TIR				AML	AML	14 41 00.0	
comp=N,35857µm,0.4s							
TIR	**Tirane**	**0.30**	**86**		**Pg**	**14 40 53.7**	**-0.6**
ULC	**Ulcinj**	**0.66**	**345**	‖ *i* Pg	**Pg**	**14 41 00.4**	**-0.4**
ULC				*e*Sg	**Sb**	**14 41 10.0**	**+0.8**
ULC	**Ulcinj**	**0.66**	**345**	*e*Pg	**Pg**	**14 41 00.4**	**-0.4**
ULC				*e*Sg	**Sb**	**14 41 10.4**	**+1.2**
PUK	**Puka**	**0.78**	**24**	*i* PG	**Pb**	**14 41 01.9**	**-0.8**
PUK				*i* PG	**Sg**	**14 41 12.6**	**-0.8**
PHP	**Peshkopia**	**0.81**	**64**	P	**Pb**	**14 41 01.7**	**-1.5**
PHP				S	**Sg**	**14 41 15.0**	**+0.6**
PHP	**Peshkopia**	**0.81**	**64**	*i* PG	**Pb**	**14 41 02.1**	**-1.1**
PHP				*i* PG	**Sg**	**14 41 14.0**	**-0.3**
VLO	**Vlora**	**0.86**	**179**	*i* PG	**Pn**	**14 41 06.6**	**+1.8**
VLO				*i* PG	**Sn**	**14 41 17.9**	**+1.2**
DRME	**Dracevica, Mon**	**0.88**	**346**	*e*Pn	**Pb**	**14 41 04.5**	**+0.1**
DRME	**Dracevica, Mon**	**0.88**	**346**	‖ *i* Pg	**Pg**	**14 41 04.7**	**-0.3**
DRME				*e*Sg	**Sn**	**14 41 17.5**	**+0.1**
DRME	**Dracevica, Mon**	**0.88**	**346**	*e*Pg	**Pb**	**14 41 04.5**	**+0.1**
DRME				*e*Sg	**Sn**	**14 41 17.7**	**+0.3**
OHR	**Ohrid**	**1.02**	**102**	*i* Pg	**Pb**	**14 41 06.6**	**-0.2**
OHR				*i* Sg	**Sn**	**14 41 23.4**	**+2.5**
OHR				*e*Lg	Lg	14 41 24.8	
comp=N,4µm,1.1s							
OHR				*e*Lg	Lg	14 41 25.1	
comp=E,2µm,0.8s							
BUM	**Brajici-Budva**	**1.06**	**336**	‖ *i* Pg	**Pg**	**14 41 08.8**	**+0.4**
BUM				*e*Sg	**Sn**	**14 41 23.9**	**+2.0**
BUM	**Brajici-Budva**	**1.06**	**336**	*e*Pg	**Pg**	**14 41 08.4**	**0.0**
BUM				*e*Sg	**Sn**	**14 41 24.1**	**+2.2**
TPE	**Tepelena**	**1.11**	**158**	P	**Pg**	**14 41 10.3**	**+1.0**
TPE				S	**Sg**	**14 41 26.7**	**+2.8**
comp=E,5µm,1.2s							
TPE	**Tepelena**	**1.11**	**158**	*i* PG	**Pg**	**14 41 10.3**	**+1.0**
TPE				*i* PG	**Sg**	**14 41 26.4**	**+2.5**
PDG	**Podgorica**	**1.11**	**352**	*e*Pg	**Pb**	**14 41 08.4**	**+0.1**
PDG				*e*Sg	**Sn**	**14 41 23.1**	**+0.1**
PDG	**Podgorica**	**1.11**	**352**	‖ P	**Pg**	**14 41 09.6**	**+0.3**
PDG	**Podgorica**	**1.11**	**352**	‖ S	**Sg**	**14 41 25.5**	**+1.6**
PDG	**Podgorica**	**1.11**	**352**	*e*Pn	**Pb**	**14 41 07.4**	**-0.9**
PDG	**Podgorica**	**1.11**	**352**		**Pg**	**14 41 09.6**	**+0.3**
PDG					**Sg**	**14 41 23.9**	**0.0**
TTG	**Podgorica**	**1.11**	**352**	‖ *i* Pg	**Pg**	**14 41 08.8**	**-0.5**
TTG				*e*Sg	**Sg**	**14 41 25.1**	**+1.1**
TTG	**Podgorica**	**1.11**	**352**	*e*Pg	**Pb**	**14 41 08.2**	**-0.1**
TTG				*e*Sg	**Sg**	**14 41 25.0**	**+1.1**
BCI	**Bajram Curri**	**1.13**	**23**	*i* PG	**Pb**	**14 41 07.8**	**-0.8**
BCI				*i* PG	**Sn**	**14 41 23.8**	**+0.4**
CEME	**Cevo**	**1.28**	**341**	‖ *i* Pg	**Pg**	**14 41 12.1**	**-0.5**
CEME				*e*Sg	**Sg**	**14 41 31.0**	**+1.6**
CEME	**Cevo**	**1.28**	**341**	*e*Pg	**Pb**	**14 41 11.7**	**+0.4**
CEME				*e*Sg	**Sg**	**14 41 30.8**	**+1.4**
PVY	**Plav**	**1.31**	**16**	‖ *i* Pg	**Pn**	**14 41 11.6**	**+0.4**
PVY				*e*Sg	**Sg**	**14 41 31.5**	**+1.1**
PVY	**Plav**	**1.31**	**16**	*e*Pg	**Pn**	**14 41 11.6**	**+0.4**
PVY				*e*Sg	**Sg**	**14 41 31.5**	**+1.1**
HCY	**Herceg Novi**	**1.33**	**327**	*e*Pn	**Pb**	**14 41 12.6**	**+0.5**
HCY	**Herceg Novi**	**1.33**	**327**	‖ *i* Pg	**Pb**	**14 41 12.7**	**+0.6**
HCY				*e*Sg	**Sg**	**14 41 32.9**	**+1.9**
HCY	**Herceg Novi**	**1.33**	**327**	*e*Pg	**Pb**	**14 41 12.8**	**+0.6**
HCY				*e*Sg	**Sg**	**14 41 32.4**	**+1.4**
SCTE	**Santa Cesarea**	**1.47**	**212**	P	**Pb**	**14 41 14.5**	**+0.1**
SCTE				S	**Sg**	**14 41 35.2**	**-0.1**
SCTE				AML	AML	14 41 45.9	
comp=E,1884µm,0.7s							
SCTE				AML	AML	14 41 53.5	
comp=N,1991µm,1.1s							
SCTE	**Santa Cesarea**	**1.47**	**212**		**Pg**	**14 41 16.1**	**0.0**
NKME	**Niksic**	**1.49**	**345**	‖ *i* Pg	**Pb**	**14 41 15.1**	**+0.3**
NKME				*e*Sg	**Sg**	**14 41 36.5**	**+0.6**
NKME	**Niksic**	**1.49**	**345**	*e*Pg	**Pb**	**14 41 14.7**	**-0.1**
NKME				*e*Sg	**Sg**	**14 41 35.8**	**-0.1

GRUS Gruza 2.72 19 *e*Pn **Pn** 14 41 32.0 +1.7
ACER Acerenza 2.72 260 **Pn** 14 41 32.1 +1.7
THE Thessaloniki 2.73 104 P **Pn** 14 41 32.3 +1.8
HAPS Han Pijesak,BI 2.78 352 *e*Pn **Pn** 14 41 32.6 +1.3
HAPS *e*Sn **Sn** 14 42 07.1 +2.7
HAPS Han Pijesak,BI 2.78 352⇑ *i*Pn **Pn** 14 41 32.6 +1.3
DIVS Divibare 2.79 8 *e*Pn **Pn** 14 41 32.8 +1.4
DIVS Divibare 2.79 8⇑ *i*Pn **Pn** 14 41 32.8 +1.4
SGRT San Giovanni R 2.83 280 **Pn** 14 41 32.7 +0.8
BOVS Bovan 2.83 35 *e*Pn **Pn** 14 41 33.7 +1.8
HORT Hortiatis 2.84 104 P **Pn** 14 41 33.8 +1.7
HORT Hortiatis 2.84 104 P **Pn** 14 41 33.8 +1.7
EVGI Lefkada island 2.85 161 P **Pn** 14 41 33.7 +1.5
HVAR Hvar 2.91 310 *e*Pn **Pn** 14 41 33.7 +0.8
HVAR *e*Sn **Sn** 14 42 07.2 0.0
TRUS Trudelj 2.97 13 *e*Pn **Pn** 14 41 35.3 +1.5
SOH Sokhos 2.98 99 P **Pn** 14 41 35.9 +1.9
SOH Sokhos 2.98 99 P **Pn** 14 41 35.8 +1.9
FSK Fiskardo 2.99 163 P **Pn** 14 41 35.3 +1.3
TIP Timpagrande 2.99 225 P **Pn** 14 41 35.3 +1.1
TIP Timpagrande 2.99 225 P **Pn** 14 41 35.5 +1.4
TIP Timpagrande 2.99 225 ⇑P **Pn** 14 41 35.0 +0.9
TIP Timpagrande 2.99 225 **Pn** 14 41 35.2 +1.1
EVR Evrytania 3.00 143 P **Pn** 14 41 37.7 +3.4
EVR Evrytania 3.00 143 P **Pn** 14 41 37.5 +3.2
PDO Prodromos 3.03 154 P **Pn** 14 41 36.7 +2.1
PDO Prodromos 3.03 154 P **Pn** 14 41 36.6 +2.0
ZAPS Zavoj 3.04 49 *e*Pn **Pn** 14 41 37.4 +2.6
CUC Castrocucco 3.09 246 P **Pn** 14 41 38.0 +2.6
VTS Vitosha 3.09 64 P **Pn** 14 41 37.4 +1.9
VTS Vitosha 3.09 64 *e*Pn **Pn** 14 41 37.4 +1.9
VTS Vitosha 3.09 64 P **Pn** 14 41 37.1 +1.6
VTS Vitosha 3.09 64 **Pn** 14 41 37.1 +1.6
SRS Serrai 3.11 93 P **Pn** 14 41 37.2 +1.4
SRS Serrai 3.11 93 P **Pn** 14 41 37.4 +1.6
PVO Paravola 3.13 149 P **Pn** 14 41 39.0 +3.0
PVO Paravola 3.13 149 P **Pn** 14 41 38.6 +2.6
PLG Polygyros 3.16 106 P **Pn** 14 41 38.6 +2.2
PLG Polygyros 3.16 106 P **Pn** 14 41 38.7 +2.2
AGG Agios Georgios 3.18 136 P **Pn** 14 41 38.5 +1.8
AGG Agios Georgios 3.18 136 **Pn** 14 41 38.5 +1.8
ZAGS Zajecar 3.21 38 *e*Pn **Pn** 14 41 38.6 +1.5
TEKS Tekeris 3.22 1 *e*Pn **Pn** 14 41 38.6 +1.4
TEKS Tekeris 3.22 1 *e*Pn **Pn** 14 41 38.6 +1.4
VLS Valsamata 3.26 164 P **Pn** 14 41 38.7 +0.8
BLKB Belogradchik 3.30 45 ⇑S **Sn** 14 42 21.2 +4.2
BLKB Belogradchik 3.30 45 **Sn** 14 42 21.2 +4.2
ANX Ano Chora 3.32 145 P **Pn** 14 41 42.3 +3.6
EFP Efpalio 3.45 146 P **Pn** 14 41 43.3 +2.9
EFP Efpalio 3.45 146 P **Pn** 14 41 41.5 +1.1
XOR Xorichti 3.45 123 P **Pn** 14 41 42.8 +2.4
XOR Xorichti 3.45 123 P **Pn** 14 41 42.1 +1.7
KUBS Kucevo 3.48 27 *e*Pn **Pn** 14 41 41.5 +0.7
PAIG Paliouri 3.49 112 P **Pn** 14 41 43.4 +2.5
KIJV Kijevo 3.50 321 *i* Pn **Pn** 14 41 43.0 +1.9
KIJV Sn **Sn** 14 42 23.1 +1.1
NEO Neokhori 3.51 124 P **Pn** 14 41 42.0 +0.8
SERG Sergoula 3.53 145 P **Pn** 14 41 45.1 +3.6
SERG Sergoula 3.53 145 P **Pn** 14 41 43.1 +1.6
DOB Doboj 3.55 344 *e*Pn **Pb** 14 41 51.0 +1.2
MGRS Mrkonjic Grad 3.55 331 *e*Pn **Pn** 14 41 44.2 +2.4
TRIZ Trizonia 3.57 145 P **Pn** 14 41 44.6 +2.5
TRIZ Trizonia 3.57 145 P **Pn** 14 41 45.2 +3.2
KALE Kalithea 3.58 144 P **Pn** 14 41 45.4 +3.2
KALE Kalithea 3.58 144 P **Pn** 14 41 45.4 +3.2
RLS Riolos of Patr 3.61 154 P **Pn** 14 41 44.8 +2.2
LAKA Lakka 3.64 147 P **Pn** 14 41 45.3 +2.3
ZIRJ Zirje 3.66 311 *e*Pn **Pn** 14 41 44.5 +1.2
ZIRJ Sn **Sn** 14 42 26.4 +0.5
PAOL Paolisi 3.71 267 **Pn** 14 41 45.7 +1.7
SKIA Skiathos 3.74 124 P **Pn** 14 41 45.9 +1.5
MORI Morici 3.76 314 *i* Pn **Pn** 14 41 46.5 +1.8
MORI Sn **Sn** 14 42 28.8 +0.4
BLY Banja Luka 3.81 335 *e*Pn **Pn** 14 41 47.5 +2.3
BLY Banja Luka 3.81 335 ⇓P **Pn** 14 41 47.6 +2.3
BLY Banja Luka 3.81 335 *e*Pn **Pn** 14 41 46.9 +1.7
BLY Banja Luka 3.81 335 **Pn** 14 41 47.0 +1.7
KAVA Kavala 3.82 93 P **Pn** 14 41 47.1 +1.7
MDVR Moldovita 3.82 25 ⇓P **Pn** 14 41 47.2 +1.6
MDVR Moldovita 3.82 25 **Pn** 14 41 47.2 +1.6
FRGS Fruska Gora 3.83 4 *e*Pn **Pn** 14 41 46.1 +0.4
FRGS Fruska Gora 3.83 4⇑ *i*Pn **Pn** 14 41 45.7 0.0
KLV Kalavryta, Ach 3.88 147 P **Pn** 14 41 49.5 +3.1
PUNG Punghina 3.89 40 ⇑P **Pn** 14 41 49.2 +2.8
PUNG Punghina 3.89 40 **Pn** 14 41 49.2 +2.8
DJES Djerdap 4.01 33 *e*Pn **Pn** 14 41 50.0 +1.9
PROD Prodromos 4.05 138 P **Pn** 14 41 50.6 +2.0
MRKA Markates 4.10 128 P **Pn** 14 41 51.7 +2.3
CEL Celeste 4.12 223 Pn **Pn** 14 41 50.1 +0.4
HERR Herculane 4.15 30 ⇑P **Pn** 14 41 51.6 +1.6
HERR Herculane 4.15 30 **Pn** 14 41 51.6 +1.6
AMT Artemida-Makis 4.17 155 P **Pn** 14 41 52.5 +2.2
UDBI Udbina 4.20 321 *e*Pn **Pn** 14 41 53.4 +2.7
UDBI Sn **Sn** 14 42 41.2 +2.0
DUGI Dugi Otok 4.20 311 *e*Pn **Pn** 14 41 52.6 +1.9
DUGI Sn **Sn** 14 42 40.8 +1.5
INTR Introdacqua 4.23 281 **Pn** 14 41 52.1 +1.0
SRE Strehaia 4.31 38 P **Pn** 14 41 54.1 +1.9
SRE Strehaia 4.31 38 ⇓P **Pn** 14 41 54.1 +1.9
SRE Strehaia 4.31 38 **Pn** 14 41 54.1 +1.9
PLVB Pleven 4.33 60 ⇑P **Pn** 14 41 55.2 +2.7
PLVB Pleven 4.33 60 **Pn** 14 41 55.1 +2.7
BZS Buzias 4.55 19 *e*Pn **Pn** 14 41 56.7 +1.1
BZS Buzias 4.56 19 P **Pn** 14 41 56.6 +1.0
BZS Buzias 4.56 19 ⇑P **Pn** 14 41 56.6 +1.0
BZS Buzias 4.56 19 **Pn** 14 41 56.6 +1.0
AQU L'Aquila 4.65 285 P **Pn** 14 41 57.9 +1.0
AQU L'Aquila 4.65 285 *e*Pn **Pn** 14 41 58.8 +1.9
AQU L'Aquila 4.65 285 **Pn** 14 41 57.9 +1.0
NVLJ Novalja 4.67 315 *i* Pn **Pn** 14 41 58.5 +1.3
NVLJ Sn **Sn** 14 42 51.1 +0.3
MOSL Moslavina 4.72 336 *e*Pn **Pn** 14 41 58.8 +1.0
MOSL Sn **Sn** 14 42 51.2 -0.7
GZR Gura Zlata 4.72 30 P **Pn** 14 41 59.8 +1.9
GZR Gura Zlata 4.72 30 ⇓P **Pn** 14 41 59.8 +1.9
GZR Gura Zlata 4.72 30 **Pn** 14 41 59.8 +1.9
MORH Mrgy, Hungar 4.92 353 *e*Pn **Pn** 14 42 00.8 +0.2
NRCA Norcia 4.96 290 **Pn** 14 42 02.5 +1.2
ALN Alexandroupoli 4.98 93 P **Pn** 14 42 03.5 +2.1
ALN Alexandroupoli 4.98 93 Pn **Pn** 14 42 03.5 +2.1
ELND Elena 5.02 69 ⇓P **Pn** 14 42 04.5 +2.5
ELND Elena 5.02 69 **Pn** 14 42 04.5 +2.5
HUMR Humele 5.15 50 ⇓P **Pn** 14 42 06.9 +3.1
HUMR Humele 5.15 50 **Pn** 14 42 06.9 +3.1
BOJS Bojanci 5.18 325 *i* Pn **Pn** 14 42 05.8 +1.6
BOJS *e*Sn **Sn** 14 43 01.5 -1.8
comp=Z,625nm,2.6s
PTJ Puntijarka 5.24 332 *e*Pn **Pn** 14 42 05.6 +0.6
KALN Kalnik 5.27 337 *e*Pn **Pn** 14 42 06.6 +1.1
CRES Cresnjev 5.36 328 *e*Pn **Pn** 14 42 07.6 +1.0
GBRS Gornja Briga 5.40 323 *i* Pn **Pn** 14 42 09.2 +2.0
GBRS *e*Sn **Sn** 14 43 07.6 -1.2
comp=Z,57nm,0.5s
RIY Rijeka 5.40 319 *e*Pn **Pn** 14 42 07.8 +0.6
VAE Valgurarnera 5.49 227 Pn **Pn** 14 42 12.9 +4.5
comp=Z,2.5nm,0.3s,baz=51,slow=18,SNR=1.4
MURB Monte Urbino 5.50 293 **Pn** 14 42 10.3 +1.7
ARR Arges 5.52 41 ⇑P **Pn** 14 42 11.7 +2.9
ARR Arges 5.52 41 **Pn** 14 42 11.7 +2.9
CEY Cerknica 5.73 322 *e*Pn **Pn** 14 42 12.8 +1.0
VOIR 5.78 43 P **Pn** 14 42 14.8 +2.4
VOIR 5.78 43 ⇓P **Pn** 14 42 14.8 +2.4
VOIR 5.78 43 **Pn** 14 42 14.8 +2.4
LATE Laterza 5.86 285 Pn **Pn** 14 42 14.8 +1.3
CORL Corleone 5.87 236 Pn **Pn** 14 42 15.1 +1.5
LJU Ljubljana 5.92 324 *e*Pn **Pn** 14 42 15.1 +0.8
DRGR 5.94 22 P **Pn** 14 42 16.0 +1.4
DRGR 5.94 22 ⇑P **Pn** 14 42 16.0 +1.4
DRGR 5.94 22 **Pn** 14 42 16.0 +1.4
JAVS Javornik 6.02 321 *e*Pn **Pn** 14 42 16.8 +1.1
CLTB Caltabellotta 6.12 234 Pn **Pn** 14 42 17.6 +0.5
SOKA Soboth 6.23 331 *e*Pn **Pn** 14 42 20.0 +1.4
comp=Z,2.7nm,0.2s
SOKA *e*Sn **Sn** 14 43 26.7 -2.6
comp=Z,20nm,0.6s
OBKA Obir 6.28 327 *i* Pn **Pn** 14 42 21.1 +1.8
comp=Z,2.7nm,0.2s
OBKA *e*Sn **Sn** 14 43 28.6 -1.9
comp=Z,51nm,0.5s
MLR Muntele Rosu 6.29 46 Pn **Pn** 14 42 21.7 +2.3
comp=Z,1.8nm,0.3s,baz=167,slow=9.4,SNR=16
MLR Sn **Sn** 14 43 32.8 +2.1
comp=Z,0.5nm,0.3s,baz=261,slow=21,SNR=1.3
MLR LR LR 14 45 35.6
comp=Z,335nm,18.6s,baz=123,slow=46
MLR Muntele Rosu 6.29 46 ⇑P **Pn** 14 42 22.0 +2.5
DOPR Dopca 6.32 41 ⇑P **Pn** 14 42 22.9 +3.2
DOPR Dopca 6.32 41 **Pn** 14 42 22.9 +3.2
APE Apeiranthos 6.34 130⇑ *e*P **Pn** 14 42 22.2 +2.0
OSSC Osservatorio P 6.47 293 **Pn** 14 42 22.3 +0.4
ARSA Arzberg 6.56 336 *e*Pn **Pn** 14 42 24.8 +1.7
comp=Z,4.1nm,0.4s
PSZ Piszkesteto 6.59 2 P **Pn** 14 42 24.9 +1.3
PSZ Piszkesteto 6.59 2 ⇑P **Pn** 14 42 24.9 +1.3
PSZ Piszkesteto 6.59 2 **Pn** 14 42 24.4 +0.8
PSZ Piszkesteto 6.59 2 **Pn** 14 42 24.9 +1.3
WDD Wied Dalam 6.71 217 Pn **Pn** 14 42 25.7 +0.5
MYKA Terra Mystica 6.76 324 *i* Pn **Pn** 14 42 27.0 +1.1
comp=Z,1.9nm,0.3s
MYKA Sn **Sn** 14 43 42.3 -0.1
comp=Z,11nm,0.4s
PLOR Plostina 6.90 47 P **Pn** 14 42 31.6 +3.8
PLOR Plostina 6.90 47 ⇓P **Pn** 14 42 31.6 +3.8
PLOR Plostina 6.90 47 **Pn** 14 42 31.6 +3.8
ZCCA Zocca 6.94 299 **Pn** 14 42 29.6 +1.3
VRI Vrincioaia 6.95 47 P **Pn** 14 42 33.0 +4.5
VRI Vrincioaia 6.95 47 ⇓P **Pn** 14 42 33.0 +4.5
VRI Vrincioaia 6.95 47 **Pn** 14 42 33.0 +4.5
TEOL Teolo 6.97 308 **Pn** 14 42 29.0 +0.3
CONA Conrad Observa 7.08 340 *e*Pn **Pn** 14 42 31.4 +1.1
comp=Z,1.4nm,0.4s
CONA *e*Sn **Sn** 14 43 51.5 +1.3
comp=Z,8.1nm,0.5s
TRPA Tarpa 7.14 17 ⇑P **Pn** 14 42 34.1 +3.1
TRPA Tarpa 7.14 17 **Pn** 14 42 34.1 +3.1
VYHS Vyhne 7.18 357 *e*P **Pn** 14 42 34.9 +3.3
VYHS *e* 14 43 53.5
VYHS Vyhne 7.18 357 *e*PN **Pn** 14 42 34.9 +3.3
VYHS *e*SN **Sn** 14 43 53.5 +1.0
KECS Kecovo 7.19 5 *e*P **Pn** 14 42 36.4 +4.7
KECS *e* 14 43 51.9
KECS Kecovo 7.19 5 *e*PN **Pn** 14 42 36.4 +4.7
KECS *e*PG **Pg** 14 43 07.1 +1.9
KECS *e*SN **Sn** 14 43 51.9 -0.9
KECS *e*LG Lg 14 44 08.0
MODS Modra-Piesok 7.21 348 *e*P **Pn** 14 42 35.6 +3.5
MODS *e* 14 43 53.7
MODS Modra-Piesok 7.21 348 *e*PN **Pn** 14 42 35.6 +3.5
MODS *e*SN **Sn** 14 43 53.7 +0.3
KBA Koelnbreinsper 7.24 325 *e*Pn **Pn** 14 42 33.8 +1.3
comp=Z,7.0nm,0.5s
KBA *e*Sn **Sn** 14 43 52.0 -2.2
comp=Z,9.3nm,0.4s
TIRR Tirgusor 7.27 62 P **Pn** 14 42 34.0 +1.2
TIRR Tirgusor 7.27 62 Pn **Pn** 14 42 34.0 +1.2
CTI Castel Tesino 7.37 312 P **Pn** 14 42 34.7 +0.3
CTI Castel Tesino 7.37 312 **Pn** 14 42 34.7 +0.3
ABTA Abfaltersbach 7.38 320 *e*Pn **Pn** 14 42 36.8 +2.3
comp=Z,3.2nm,0.2s
ABTA *e*Sn **Sn** 14 43 54.7 -2.9
comp=Z,45nm,0.7s
IDI Anoyia 7.38 143 Pn **Pn** 14 42 32.4 -2.0
comp=Z,0.3nm,0.3s,baz=326,slow=11,SNR=2.6
IDI Sn **Sn** 14 43 53.5 -4.2
comp=Z,0.2nm,0.3s,baz=303,slow=12,SNR=1.8
CFR Carcaliu 7.40 56 P **Pn** 14 42 36.5 +1.9
CFR Carcaliu 7.40 56 ⇓P **Pn** 14 42 36.5 +1.9
CFR Carcaliu 7.40 56 **Pn** 14 42 36.5 +1.9
MOA Molln 7.50 332 *i* Pn **Pn** 14 42 40.0 +3.9
comp=Z,3.0nm,0.3s
MOA *e*Sn **Sn** 14 43 59.3 -1.2
comp=Z,7.5nm,0.5s
BUR01 Bucovina Ar. S 7.50 31 **Pn** 14 42 37.4 +1.2
BURAR Bucovina Array 7.50 31 ⇓P **Pn** 14 42 37.4 +1.2
PRMA PARMA 7.54 300 Pn **Pn** 14 42 37.1 +0.7
UZH Uzhgorod 7.57 14⇑ *e*P **Pn** 14 42 41.0 +4.1
SALO Salr 7.79 306 **Pn** 14 42 40.2 +0.2
KOLS Kolonicke sedl 7.86 14 *e*P **Pn** 14 42 43.7 +2.8
KOLS *e* 14 44 07.2
KOLS Kolonicke sedl 7.86 14 *e*PN **Pn** 14 42 43.7 +2.8
KOLS *e*PG Pb 14 43 13.7 +11
KOLS *e*SN **Sn** 14 44 07.2 -2.0
MSSA Maissana 7.90 295 **Pn** 14 42 41.9 +0.3
PGF Pioggiola 7.90 282 *e*Pn **Pn** 14 42 39.1 -2.5
PGF Pioggiola 7.90 282 *e*P **Pn** 14 42 43.7 +2.1
PGF *e*Sn **Sn** 14 44 03.2 -7.3
comp=Z,1.6nm,0.4s
WTTA Wattenberg 8.17 319 *e*Pn **Pn** 14 42 48.0 +2.7
comp=Z,5.9nm,0.2s,SNR=7.1
WTTA *e*Sn **Sn** 14 44 16.4 -0.8
comp=Z,54nm,0.6s
VRAC Vranov 8.23 347 LR LR 14 46 24.9
comp=Z,146nm,19.5s,baz=161,slow=41
WATA Walderalm 8.25 319 *i* Pn **Pn** 14 42 48.0 +1.6
comp=Z,4.6nm,0.2s
WATA *i* Sn **Sn** 14 44 18.8 -0.3
comp=Z,24nm,0.4s
SQTA Sankt Quirin 8.35 318 *e*Pn **Pn** 14 42 50.2 +2.4
comp=Z,3.2nm,0.2s
SQTA *e*Sn **Sn** 14 44 20.5 -1.1
comp=Z,23nm,0.5s
FETA Feichten 8.47 315 *e*Pn **Pn** 14 42 51.0 +1.5
comp=Z,8.7nm,0.8s
FETA *e*Sn **Sn** 14 44 23.3 -1.3
comp=Z,12nm,0.5s
FUORN Ofenpass-Fuorn 8.49 312 **Pn** 14 42 51.2 +1.4
MOTA Moosalm 8.49 318 *i* Pn **Pn** 14 42 52.5 +2.8
comp=Z,5.0nm,0.3s
MOTA *e*Sn **Sn** 14 44 25.4 +0.4
comp=Z,75nm,0.8s
GEC2 GERESS Array S 8.55 333 Pn **Pn** 14 42 51.6 +1.1
GERES GERESS Array B 8.55 333 Pn **Pn** 14 42 51.3 +0.8
comp=Z,0.4nm,0.3s,baz=156,slow=13,SNR=9.1
GERES Sn **Sn** 14 44 23.5 -2.8
comp=Z,2.1nm,0.3s,baz=152,slow=23,SNR=11
GERES LR LR 14 46 57.6
comp=Z,236nm,19.1s,baz=142,slow=43
RETA Reutte 8.76 318 *i* Sn **Sn** 14 44 31.7 +0.2
comp=Z,3.3nm,0.2s
DAVOX Davos/Dischmat 8.79 311 Pn **Pn** 14 42 54.3 +0.3
comp=Z,0.6nm,0.3s,baz=131,slow=20,SNR=6.1
DAVOX Sn **Sn** 14 44 29.5 -3.0
comp=Z,1.5nm,0.3s,baz=165,slow=23,SNR=1.6
DAVOX LR LR 14 47 15.6
comp=Z,138nm,18.3s,baz=110,slow=44
KHC Kasperske Hory 8.84 334 *e*P **Pn** 14 42 57.8 +3.4
KHC *e* 14 44 31.6
KHC Kasperske Hory 8.84 334 *e*PN **Pn** 14 42 57.8 +3.4
KHC *ex* x 14 43 28.0
KHC *e*SN **Sn** 14 44 31.6 -1.8
KHC Kasperske Hory 8.84 334 Pn **Pn** 14 42 55.6 +1.2
TUE Stuetta 8.93 309 Pn **Pn** 14 42 57.2 +1.4
DAVA Damuels 9.09 314 *e*Sn **Sn** 14 44 38.4 -1.5
comp=Z,30nm,0.6s
SBF Sospel 9.23 290 *e*Pn **Pn** 14 42 57.4 -2.4
SBF *e*Sn **Sn** 14 44 34.9 -8.2
comp=Z,8.0nm,0.3s
KEST Kesra 9.70 238 LR LR 14 47 54.6
comp=Z,231nm,19.5s,baz=260,slow=44
FRF La Foret Royal 9.74 287 *e*Pn **Pn** 14 43 05.0 -1.7
FRF La Foret Royal 9.74 287 *e*P **Pn** 14 43 09.6 +2.9
FRF *e*Sn **Sn** 14 44 47.0 -8.5
comp=Z,5.7nm,0.3s
LMR La Mourre 9.81 286 *e*Pn **Pn** 14 43 04.8 -2.8
LMR *e*Sn **Sn** 14 44 48.7 -8.5
comp=Z,1.7nm,0.3s
MBDF Montbardon 9.90 294 *e*Pn **Pn** 14 43 06.6 -2.4
MBDF *e*Sn Sn 14 44 51.0 -8.7
comp=Z,8.6nm,0.4s
SENIN Lac Senin/Sane 10.13 304 **Pn** 14 43 12.6 +0.4
LPG La Plagne 10.15 298 *e*Pn **Pn** 14 43 09.8 -2.8
LPG *e*Sn Sn 14 44 57.1 -8.8
comp=Z,29nm,0.5s
LPL La Plagne 10.17 299 *e*Pn **Pn** 14 43 10.5 -2.3
LPL *e*Sn Sn 14 44 57.6 -8.7
comp=Z,32nm,0.4s
BFO Black Forest 10.56 315 *e*P **Pn** 14 43 19.4 +1.5
BFO Black Forest 10.56 315 **Pn** 14 43 18.5 +0.6
ORIF Oris-en-Rattie 10.56 294 *e*Pn **Pn** 14 43 15.9 -2.2
ORIF *e*Sn Sn 14 45 06.7 -9.1
comp=Z,18nm,0.5s
SMRF Simiane la Rot 10.57 289 *e*Pn **Pn** 14 43 15.2 -3.0
SMRF *e*Sn Sn 14 45 06.9 -9.1
comp=Z,0.5nm,0.2s
BRTR Keskin Array B 10.90 94 Pn **Pn** 14 43 22.9 +0.1
comp=Z,0.1nm,0.3s,baz=281,slow=11,SNR=2.7
BRTR LR LR 14 48 29.2
comp=Z,165nm,18.1s,baz=267,slow=43
CLL Collm 10.93 338 *e*Sn Sn 14 45 00.0 -25
CLL *e*Sb 14 45 55.0
CLL *e* 14 46 10.0
CLL *e*Sg 14 46 34.0
CABF La Chapelle 10.99 303 *e*Pn **Pn** 14 43 21.8 -2.1
CABF *e*Sn Sn 14 45 17.0 -9.3
comp=Z,5.1nm,0.4s
HINF Hinteralfeld 11.09 310 *e*Pn **Pn** 14 43 23.6 -1.6
HINF *e*Sn Sn 14 45 19.3 -9.3
comp=Z,11nm,0.4s
ECH Echery 11.13 312 P **Pn** 14 43 26.8 +1.1
ECH Echery 11.13 312 Pn **Pn** 14 43 26.8 +1.1
VIVF Saint-Julien-l 11.38 293 *e*Pn **Pn** 14 43 26.6 -2.6
VIVF *e*Sn Sn 14 45 26.3 -9.5
comp=Z,3.1nm,0.3s
HAU Haudompre 11.48 310 *e*Pn **Pn** 14 43 28.5 -2.0
HAU *e*Sn Sn 14 45 28.5 -10
comp=Z,16nm,0.4s
AKASG Malin Array Be 11.56 33 Pn **Pn** 14 43 30.8 -0.7
comp=Z,0.2nm,0.3s,baz=223,slow=11,SNR=2.9
SMF Signal de Mont 12.44 301 *e*Pn **Pn** 14 43 41.2 -2.5
SMF *e*Sn Sn 14 45 51.6 -10
comp=Z,7.9nm,0.3s
LOR Lormes 12.65 303 *e*Pn **Pn** 14 43 44.2 -2.4
LOR *e*Sn Sn 14 45 56.6 -10
comp=Z,21nm,0.5s
SSF Saint Saulge 12.80 302 *e*Pn **Pn** 14 43 45.7 -2.9
SSF *e*Sn Sn 14 46 00.1 -10
comp=Z,10nm,0.5s
AVF Avril sur Loir 12.81 301 *e*Pn **Pn** 14 43 46.6 -2.0
AVF *e*Sn Sn 14 46 00.2 -10
comp=Z,5.9nm,0.6s
SUW Suwalki 12.93 10 P **Pn** 14 43 50.2 -0.1
SUW Suwalki 12.93 10 Pn **Pn** 14 43 50.2 -0.1
BGF Bois d'Agland 13.06 299 *e*Pn **Pn** 14 43 49.5 -2.7
BGF *e*Sn Sn 14 46 06.4 -10
comp=Z,9.7nm,0.3s
TCF Toulx Ste Croi 13.41 297 *e*Pn **Pn** 14 43 53.9 -3.0
TCF *e*Sn Sn 14 46 14.7 -11
comp=Z,3.9nm,0.4s
HYF Humbligny 13.43 302 *e*Pn **Pn** 14 43 54.3 -2.8
HYF *e*Sn Sn 14 46 15.1 -11
MMAI Mount Meron Ar 15.15 118 LR LR 14 51 45.3
comp=Z,62nm,18.5s,baz=330,slow=44
KIV Kislovodsk 17.27 74 *e*P **Pn** 14 44 47.7 0.0
KIV pmax pmax
comp=Z,12nm,0.9s
KIV MLR MLR
comp=Z,47nm,14.0s
KBZ Khabaz 17.42 74 P **Pn** 14 44 48.4 -1.1
comp=Z,0.1nm,0.3s,baz=247,slow=13,SNR=1.8
VSU Vasula 17.76 13*de*P **P** 14 44 55.5 +1.2
OBN Obninsk 17.82 34*de*P **Pn** 14 44 54.9 +0.6
OBN pmax pmax
comp=Z,15nm,0.5s
OBN MLR MLR
comp=Z,85nm,14.0s
OBN Obninsk 17.82 34 LR LR 14 52 13.9
comp=Z,37nm,18.8s,baz=28,slow=39
ESDC Sonseca Array 17.89 272 LR LR 14 52 47.8
comp=Z,71nm,18.4s,baz=70,slow=40
ZEI Tsey 18.19 77 *e*P **P** 14 45 02.5 +3.1
ZEI pmax pmax
comp=Z,4.0nm,0.9s
HFS Hagfors 19.16 351 P **P** 14 45 09.2 -0.6
comp=Z,0.1nm,0.3s,baz=164,slow=12,SNR=2.8
HFS LR LR 14 54 11.7
comp=Z,101nm,19.2s,baz=195,slow=42
GNI Garni 19.17 85*de*P **Pn** 14 45 11.9 +0.8
GNI pmax pmax
comp=Z,56nm,1.3s
GNI Garni 19.17 85 P **P** 14 45 09.6 -0.5
comp=Z,0.5nm,0.3s,baz=298,slow=8.9,SNR=5.9
GNI Garni 19.17 85 P **P** 14 45 10.9 +0.8
GNI IAmb IAmb 14 45 13.2
comp=Z,17nm,1.1s
NOA NORSAR Array B 20.37 348 P **P** 14 45 23.1 +0.2
comp=Z,0.6nm,0.7s,baz=152,slow=10.0,SNR=2.7
NOA LR LR 14 54 31.9
comp=Z,65nm,20.4s,baz=160,slow=40
EKA Eskdalemuir Ar 20.43 321 P **P** 14 45 23.9 +0.3
comp=Z,0.3nm,0.4s,baz=107,slow=9.0,SNR=4.0
FINES FINESS Array B 20.54 9 P **P** 14 45 23.9 -0.8
comp=Z,4.5nm,0.7s,baz=168,slow=9.8,SNR=11
FINES LR LR 14 54 17.0
comp=Z,141nm,19.4s,baz=203,slow=40
FIA1 FINESS Array S 20.54 9 P **P** 14 45 25.1 +0.4
FIA1 IAmb IAmb 14 45 32.0
comp=Z,70nm,1.9s
MDT Midelt 20.96 254 P **P** 14 45 30.7 +1.1
comp=Z,3.2nm,1.0s,baz=56,slow=11,SNR=2.4
MDT LR LR 14 53 43.0
comp=Z,48nm,18.2s,baz=60,slow=37
DSB Dublin 21.07 313 P **P** 14 45 30.9 +0.4
KIRV Kirov 25.55 37 P **P** 14 46 14.0 -0.9
comp=Z,5.7nm,0.7s,baz=225,slow=14,SNR=3.0
KIRV LR LR 14 56 56.1
comp=Z,94nm,19.4s,baz=107,slow=38
PRGR Permogore 25.73 29 *e*P **P** 14 46 09.8 -6.7
PRGR pmax pmax
comp=Z,18nm,0.9s
AKTO Aktyubinsk 28.06 58 P **P** 14 46 36.6 -1.0
comp=Z,0.5nm,0.4s,baz=254,slow=9.6,SNR=3.5
AKTO LR LR 15 01 01.4
comp=Z,56nm,18.2s,baz=268,slow=43
ARU Arti 29.34 46*c i*P **P** 14 46 48.6 -0.3
ARU S **S** 14 51 42.2 +1.1
ARU pmax pmax
comp=Z,6.0nm,0.8s
ARU Arti 29.34 46 P **P** 14 46 48.3 -0.6
comp=Z,1.3nm,0.5s,baz=233,slow=9.5,SNR=6.7
ARU LR LR 14 59 35.8
comp=Z,135nm,19.0s,baz=266,slow=38
GEYT Alibeck 29.79 84 LR LR 15 01 41.9
comp=Z,32nm,18.4s,baz=220,slow=42
SVE Sverdlovsk 30.54 45⇑ *e*P **P** 14 47 00.0 +0.4
SVE pmax pmax
comp=Z,13nm,0.9s
TORD Torodi Ar. Bea 32.08 214 P **P** 14 47 13.5 0.0
comp=Z,1.3nm,1.1s,baz=21,slow=8.6,SNR=4.2
BRVK Borovoye 35.73 53 P **P** 14 47 45.2 +0.3
BRVK pmax pmax
comp=Z,8.0nm,0.9s
BRVK Borovoye 35.73 53 P **P** 14 47 45.1 +0.3
BRVK IAmb IAmb 14 47 46.9
comp=Z,8.1nm,0.9s
AAK Ala-Archa 40.31 69 P **P** 14 48 24.3 +0.5
AAK pmax pmax
comp=Z,5.0nm,1.8s
AAK Ala-Archa 40.31 69 P **P** 14 48 24.3 +0.5
KURBB Kurchatov Arra 41.08 56 P **P** 14 48 29.6 -0.2
comp=Z,1.3nm,0.9s,baz=284,slow=8.7,SNR=7.2
KURK Kurchatov 41.12 56*de*P **P** 14 48 30.4 +0.2
KURK pmax pmax
comp=Z,6.0nm,1.7s
KURK Kurchatov 41.12 56 P **P** 14 48 30.6 +0.4
KURK IAmb IAmb 14 48 31.2
comp=Z,3.9nm,1.1s
NIL Nilore 42.77 82 P **P** 14 48 44.7 +0.7
NIL pmax pmax
comp=Z,5.0nm,1.0s
NIL Nilore 42.77 82 P **P** 14 48 44.7 +0.7
NIL IAmb IAmb 14 48 45.7
comp=Z,5.2nm,0.9s
MAKZ Makanchi 44.20 61 P **P** 14 48 55.3 0.0
MAKZ pmax pmax
comp=Z,2.0nm,0.9s
MAKZ Makanchi 44.20 61 P **P** 14 48 55.3 0.0
ZAA0 Zalesovo Array 44.25 50 P **P** 14 48 55.3 -0.2
ZAA0 IAmb IAmb 14 48 56.4
comp=Z,6.1nm,0.8s
ZALV Zalesovo Beam 44.25 50 P **P** 14 48 55.8 +0.2
comp=Z,4.0nm,0.6s,baz=280,slow=8.9,SNR=19
ZALV LR LR 15 09 47.0
comp=Z,96nm,18.3s,baz=326,slow=39
MK31 Makanchi Array 44.41 61 P **P** 14 48 56.9 -0.1
MK31 pmax pmax
comp=Z,4.0nm,0.9s
MK31 Makanchi Array 44.41 61 P **P** 14 48 56.9 -0.1
MK31 IAmb IAmb 14 48 58.0
comp=Z,4.0nm,0.8s
MKAR Makanchi Array 44.41 61 *cc*P **P** 14 48 57.2 +0.2

MKAR				pmax	pmax			
	comp=Z,5.0nm,0.8s							
MKAR	**Makanchi Array**	**44.41**	**61**	P	**P**	**14 48 56.8**	**-0.1**	
	comp=Z,4.9nm,0.8s,baz=282,slow=6.4,SNR=56							
MKAR				PcP	**PP**	**14 50 40.4**	**-0.1**	
	comp=Z,0.4nm,0.7s,baz=301,slow=3.0,SNR=2.8							
MKAR				LR	LR	15 10 31.0		
	comp=Z,51nm,19.4s,baz=354,slow=40							
DANN	**Dangsing**	**53.22**	**83**	*e*P	**P**	**14 50 04.4**	**-0.8**	
	comp=Z,36nm,0.9s							
KOLN	**Koldanda**	**53.41**	**83**	*e*P	**P**	**14 50 05.2**	**-1.3**	
GKN	**Gorkha**	**54.06**	**82**	*e*P	**P**	**14 50 10.1**	**-1.1**	
DMN	**Daman**	**54.62**	**83**	*e*P	**P**	**14 50 14.7**	**-0.7**	
	comp=Z,16nm,0.8s							
PKIN	**Phulchoki**	**54.85**	**82**	*e*P	**P**	**14 50 16.0**	**-1.1**	
GUN	**Gumba**	**55.03**	**82**	*e*P	**P**	**14 50 17.5**	**-1.0**	
	comp=Z,27nm,1.0s							
JIRN	**Jiri**	**55.40**	**82**	*e*P	**P**	**14 50 20.4**	**-0.8**	
	comp=Z,30nm,1.0s							
RAMN	**Ramite**	**56.09**	**82**	*e*P	**P**	**14 50 24.8**	**-1.2**	
	comp=Z,26nm,0.9s							
TAPN	**Taplejung**	**56.70**	**81**	*e*P	**P**	**14 50 29.4**	**-1.0**	
ODAN	**Odare**	**56.73**	**82**	*e*P	**P**	**14 50 29.6**	**-0.9**	
TIXI	**Tiksi**	**56.99**	**21**⇑	*e*P	**P**	**14 50 29.8**	**-1.6**	
TIXI				pmax	pmax			
	comp=Z,5.0nm,2.5s							
SONM	**Songino Array**	**59.11**	**52**	P	**P**	**14 50 47.0**	**+0.2**	
SONM	**Songino Array**	**59.11**	**52**	P	**P**	**14 50 47.0**	**+0.2**	
	comp=Z,1.7nm,1.0s,baz=292,slow=9.4,SNR=9.7							
SONM				LR	LR	15 18 41.3		
	comp=Z,68nm,19.8s,baz=36,slow=38							
ULN	**Ulaanbaatar**	**59.48**	**51**⇓	*e*P	**P**	**14 50 50.4**	**+1.0**	
ULN				pmax	pmax			
	comp=Z,1.0nm,0.7s							
BOSA	**Boshof**	**69.80**	**175**	LR	LR	15 25 15.1		
	comp=Z,40nm,18.0s,baz=32,slow=38							
YKA	**Yellowknife Ar**	**70.16**	**339**	P	**P**	**14 51 59.1**	**+0.6**	
	comp=Z,0.9nm,0.8s,baz=34,slow=5.7,SNR=14							
CMAR	**Chiang Mai Arr**	**70.27**	**82**	P	**P**	**14 51 59.1**	**-0.8**	
	comp=Z,0.3nm,0.4s,baz=311,slow=7.1,SNR=3.8							
ILAR	**Eielson Array**	**73.70**	**354**	P	**P**	**14 52 20.7**	**+1.0**	
	comp=Z,0.2nm,0.5s,baz=15,slow=3.7,SNR=2.4							
BWN	**Browne**	**74.48**	**355**	P	**P**	**14 52 25.3**	**+1.0**	
PDAR	**Pinedale Array**	**84.50**	**325**	P	**P**	**14 53 20.6**	**+1.1**	
	comp=Z,0.1nm,0.5s,baz=50,slow=8.4,SNR=3.1							
ASAR	**Alice Springs**	**123.24**	**94**	PKP	**PKPdf**	**14 59 42.9**	**-0.5**	
	comp=Z,0.4nm,0.8s,baz=302,slow=1.7,SNR=2.6							

*NEIC **20** 14:52:28.3±1.2, 5°.8S±0°.2×154°.3E±0°.1, h78km±13km, mb4.3/5, Error ellipse: s-maj=33.6km s-min=16.2km az=180.0*

*IDC **20** 14:52:36.1±9.4, 5°.86S×153°.60E, h115km±63km, mb3.3/2, mb1 3.5/4, mb1mx3.2/25, mbtmp3.8/4, MS3.0/4, Ms1 3.0/4, ms1mx2.7/19, Error ellipse: s-maj=111.7km s-min=60.6km az=108.0*

ISC 20 14:52:31.3±1.5, 6°.1S±0°.2×154°.27E±0°.08, h100km, n14, σ1ˢ09/14, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HNR	**Honiara**	**6.52**	**121**	P		**Pn**	**14 54 05.0**	**+0.2**
HNR	**Honiara**	**6.52**	**121**			**Pn**	**14 54 04.1**	**-0.6**
PMG	**Port Moresby**	**7.78**	**245**	P		**Pn**	**14 54 20.1**	**-1.7**
	1.3nm,0.3s,baz=61,slow=12,SNR=5.4							
PMG				S		**Sn**	**14 55 47.9**	**-0.3**
	2.9nm,0.3s,baz=164,slow=18,SNR=11							
PMG				LR		LR	14 57 07.9	
	comp=Z,39nm,20.3s,baz=64,slow=37							
CTA	**Charters Tower**	**15.94**	**209**	P		**P**	**14 56 12.9**	**+1.4**
	0.1nm,0.3s,baz=34,slow=14,SNR=4.9							
EIDS	**Eidsvold**	**19.40**	**189**	P		**P**	**14 56 50.5**	**+0.9**
EIDS				IAmb		IAmb	14 57 21.1	
	comp=Z,22nm,1.6s							
DZM	**Mont Dzumac**	**19.76**	**145**	LR		LR	15 03 29.9	
	comp=Z,72nm,21.1s,baz=36,slow=32							
GUMO	**Guam**	**21.68**	**335**	LR		LR	15 05 38.9	
	comp=Z,57nm,18.0s,baz=156,slow=37							
WRAB	**Tennant Creek**	**23.74**	**233**	P		**P**	**14 57 35.4**	**+0.8**
WRAB				IAmb		IAmb	14 58 00.9	
	comp=Z,7.9nm,0.9s							
WRA	**Warramunga Arr**	**23.76**	**233**	P		**P**	**14 57 35.0**	**+0.2**
	comp=Z,2.4nm,1.0s,baz=54,slow=9.4,SNR=5.0							
WRA				PcP		**PcP**	**15 01 18.1**	**+2.0**
	comp=Z,0.8nm,0.9s,baz=66,slow=2.5,SNR=3.8							
ASAR	**Alice Springs**	**26.25**	**226**	P		**P**	**14 57 57.6**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=60,slow=8.2,SNR=14							
ASAR				LR		LR	15 07 12.4	
	comp=Z,25nm,19.5s,baz=46,slow=34							
KNRA	**Kununurra**	**26.77**	**247**	P		**P**	**14 58 02.1**	**+0.1**
KNRA				IAmb		IAmb	14 58 26.0	
	comp=Z,42nm,1.3s							
FITZ	**Fitzroy Crossi**	**30.37**	**244**	P		**P**	**14 58 34.3**	**+0.3**
AFI	**Afiamalu**	**34.29**	**106**	P		**P**	**14 59 07.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**152.09**	**287**	PKPbc		**PKiKP**	**15 12 17.0**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=53,slow=4.0,SNR=3.1							

*PRE **20** 14:53:18.0±64.0, 25°.26S×27°.88E, h2km, ML2.4*

*BUL **20** 14:53:20.5±0.7, 28°.13S×30°.51E, h0km±94km, MD4.0*

*EAF **20** 14:53:51.4±1.6, 26°.42S×27°.98E, h10km, MD3.3*

ISC 20 14:53:55.9±1.3, 26°.34S±0°.03×27°.38E±0°.04, h0km±12km, n12, σ1ˢ01/20, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WDLM	**Western Deep L**	**0.09**	**157**	*e*P		**Pg**	**14 53 58.9**	**+1.1**
WDLM				*e*S		**Sg**	**14 53 59.6**	**+0.6**
WDLM				AML		AML	14 54 02.1	
	comp=Z,2μm,0.5s							
KLOF	**Kloof**	**0.21**	**93**	*e*P		**Pg**	**14 53 59.9**	**0.0**
KLOF				*e*S		**Sg**	**14 54 01.4**	**-1.2**
KLOF				AML		AML	14 54 03.6	
	comp=Z,2μm,0.2s							
PRYS	**Parys**	**0.58**	**182**	*e*P		**Pg**	**14 54 07.0**	**-0.1**
PRYS				*e*S		**Sg**	**14 54 14.0**	**-0.7**
PRYS				AML		AML	14 54 23.9	
	comp=Z,28nm,0.2s							
SWZ	**Schweizer**	**2.02**	**245**	*e*P		**Pb**	**14 54 33.6**	**+0.1**
SWZ				*e*S		**Sb**	**14 54 59.3**	**+0.1**
SWZ				AML		AML	14 55 11.9	
	comp=Z,12nm,0.5s							
LBTB	**Lobatse**	**2.08**	**309**	*e*P		**Pg**	**14 54 35.6**	**-0.2**
LBTB				*e*S		**Sg**	**14 55 03.6**	**+0.8**
LBTB				AML		AML	14 55 06.9	
	comp=Z,44nm,0.7s							
LBTB	**Lobatse**	**2.08**	**309**	*i* P		**Pb**	**14 54 34.0**	**-0.5**
LBTB				*i* S		**Sg**	**14 55 02.8**	**0.0**
BOSA	**Boshof**	**2.95**	**219**	*i* P		Pn	14 54 30.3	-14
BOSA				*i* S		**Sn**	**14 55 21.6**	**+1.3**
BOSA	**Boshof**	**2.95**	**219**	*e*P		**Pn**	**14 54 44.9**	**+0.7**
BOSA				*e*S		**Sn**	**14 55 20.7**	**+0.4**
BOSA				AML		AML	14 55 38.1	
	comp=Z,5.8nm,0.3s							
BOSA	**Boshof**	**2.95**	**219**	*i* P		**Pn**	**14 54 42.7**	**-1.4**
BOSA				*i* S		**Sn**	**14 55 18.7**	**-1.6**
HVD	**Gariep Dam**	**4.56**	**201**	*e*P		**Pn**	**14 55 07.0**	**+0.6**
HVD				*e*S		**Sn**	**14 55 58.6**	**-1.5**
HVD				AML		AML	14 55 59.1	
	comp=Z,4.1nm,0.5s							
MATP	**Matopo**	**5.97**	**10**	*i* P		Pn	14 55 12.7	-13
MATP				*i* S		**Sn**	**14 56 36.5**	**+1.6**
MATP	**Matopo**	**5.97**	**10**	*i* P		Pn	14 55 20.0	-5.7
MATP				*i* S		Sn	14 56 22.1	-13

MAN 20 14:55:52.4, 17°.56N×119°.89E, h24km, MS3.0, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SIPP	**Brgy, Tapao**	**0.65**	**56**⇑	*e*P		Pb	14 56 05.4	+0.2
ABRA	**Dolores**	**0.79**	**83**	*e*P		Pb	14 56 06.8	-0.7
ABRA				*e*S		Sb	14 56 16.6	-1.2
APYP	**Conner**	**1.32**	**77**	*e*P		Pn	14 56 15.8	+0.4
APYP				*e*S		Sn	14 56 31.0	-1.4
SMPP	**San Manuel, Pa**	**1.59**	**152**	*e*P		Pn	14 56 19.3	+0.1
SMPP				*e*S		Sn	14 56 39.0	0.0
CAUP	**Cauayan**	**1.95**	**108**	*e*P		Pn	14 56 25.0	+1.0
CAUP				*e*S		Sb	14 56 50.0	-1.1

WEL 20 15:05:07.7, 40°.6S±0°.6×175°.9E±0°.9, h31km±1km, ML4.1/15, MLv3.7/86, Error ellipse: s-maj=0.0km s-min=0.0km az=100.5, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PRWZ	**Pori Road**	**0.09**	**55**	P		Pb	15 05 13.6	+0.4
PRWZ				S		Sb	15 05 17.8	+0.9
TIWZ	**Tintock**	**0.17**	**176**	P		Pn	15 05 14.2	0.0
MRZ	**Mangatainoka R**	**0.23**	**257**	P		Pn	15 05 14.7	-0.2
MRZ				S		Sn	15 05 19.7	+0.2
POWZ	**Post Office Ro**	**0.23**	**340**	P		Pn	15 05 14.7	-0.2
BFZ	**Birch Farm**	**0.29**	**104**	P		Pb	15 05 15.4	+0.2
BFZ				S		Sn	15 05 21.2	-0.1
DVHZ	**Dannevirke**	**0.38**	**36**	P		Pb	15 05 16.4	0.0
DVHZ				S		Sb	15 05 22.6	+0.2
CPWZ	**Castlepoint**	**0.39**	**140**	P		Pn	15 05 17.6	+0.4
HOWZ	**Holdsworth Sta**	**0.40**	**223**	P		Pn	15 05 17.1	-0.1
ANWZ	**Angora Road**	**0.48**	**72**	P		Pn	15 05 18.3	-0.2
ANWZ				S		Sn	15 05 26.4	+0.5
TMWZ	**Te Maipa**	**0.50**	**178**	P		Pn	15 05 18.7	-0.1
TSZ	**Takapari Road**	**0.55**	**7**	P		Pb	15 05 19.3	+0.2
TSZ				S		Sn	15 05 27.4	-0.2
OGWZ	**Otaki Gorge**	**0.57**	**248**	P		Pn	15 05 19.9	+0.2
OGWZ				S		Sn	15 05 28.2	+0.2
OHWZ	**Ohakea**	**0.58**	**313**	P		Pn	15 05 20.8	+1.0
MTW	**Mount Morrison**	**0.62**	**207**	P		Pb	15 05 20.1	0.0
MTW				S		Sn	15 05 29.8	+0.6
PRHZ	**Porangahau**	**0.68**	**60**	P		Pb	15 05 20.9	-0.1
WPHZ	**Waipukurau**	**0.70**	**39**	P		Pb	15 05 21.7	+0.3
PNHZ	**Pukenui**	**0.74**	**20**	P		Pb	15 05 22.1	0.0
PNHZ				S		Sn	15 05 33.1	+0.9
KIW	**Kapiti Island**	**0.77**	**251**	P		Pb	15 05 23.3	+0.6
KIW				S		Sn	15 05 33.9	+0.9
CAW	**Cannon Point**	**0.79**	**230**	P		Pb	15 05 22.9	0.0
TRWZ	**Traveller**	**0.80**	**190**	P		Pn	15 05 22.6	-0.2
PAWZ	**Paruwai Farm**	**0.84**	**203**	P		Pn	15 05 23.1	-0.3
MSWZ	**Moikau Station**	**0.93**	**210**	P		Pn	15 05 24.1	-0.6
PXZ	**Pawanui**	**0.95**	**53**	P		Pn	15 05 24.6	-0.3
KRHZ	**Kereru**	**1.04**	**22**	P		Pn	15 05 26.2	+0.1
PLWZ	**Palliser**	**1.07**	**206**	P		Pn	15 05 25.8	-0.7
WAZ	**Wanganui**	**1.09**	**321**	P		Pb	15 05 28.7	+0.7
BHW	**Baring Head**	**1.10**	**223**	P		Pn	15 05 26.6	-0.3
KAHZ	**Kahuranaki**	**1.12**	**44**	P		Pn	15 05 27.2	0.0
BHHZ	**Black Hill Sta**	**1.13**	**8**	P		Pn	15 05 27.9	+0.5
MOVZ	**Moawhango**	**1.20**	**356**	P		Pb	15 05 29.2	-0.7
KWHZ	**Kaweka Forest**	**1.26**	**20**	P		Pn	15 05 29.4	+0.3
MTVZ	**Mangateitei**	**1.26**	**346**	P		Pb	15 05 30.8	-0.1
MCHZ	**McNeill Hill**	**1.32**	**29**	P		Pn	15 05 30.2	+0.1
CKHZ	**Cape Kidnapper**	**1.33**	**45**	P		Pn	15 05 29.4	-0.6
TRVZ	**Turoa**	**1.33**	**349**	P		Pb	15 05 31.9	-0.3
WHVZ	**Whangaehu Hut**	**1.34**	**351**	P		Pb	15 05 32.0	-0.4
TCW	**Tory Channel**	**1.35**	**243**	P		Pn	15 05 30.3	0.0
TUVZ	**Tukino**	**1.35**	**353**	P		Pb	15 05 32.1	-0.4
DRZ	**Dome Shelter**	**1.35**	**350**	P		Pb	15 05 32.4	-0.2
FWVZ	**Far West T-bar**	**1.37**	**350**	P		Pb	15 05 32.2	-0.8
PKVZ	**Pokaka**	**1.38**	**343**	P		Pb	15 05 32.3	-0.6
NGZ	**Ngauruhoe**	**1.45**	**352**	P		Pb	15 05 33.5	-0.6
DUWZ	**D°Urville Isla**	**1.49**	**262**	P		Pn	15 05 33.0	+0.6
WTVZ	**West Tongariro**	**1.51**	**352**	P		Pb	15 05 34.0	-1.1
BKZ	**Black Stump Fm**	**1.52**	**19**	P		Pn	15 05 32.7	0.0
KRVZ	**Karewarewa**	**1.52**	**353**	P		Pb	15 05 34.3	-1.1
TWVZ	**Taurewa**	**1.57**	**348**	P		Pb	15 05 34.9	-1.3
ARHZ	**Aropaoanui**	**1.60**	**33**	P		Pn	15 05 33.9	+0.1
LREZ	**Lake Rotokare**	**1.61**	**315**	P		Pb	15 05 36.9	+0.1
RITZ	**Rihia Road**	**1.63**	**360**	P		Pn	15 05 35.4	+1.2
NMHZ	**Naumai**	**1.67**	**26**	P		Pn	15 05 34.9	0.0
TUWZ	**Tuamarina**	**1.67**	**240**	P		Pn	15 05 34.1	-0.7
CMWZ	**Cape Campbell**	**1.69**	**227**	P		Pn	15 05 36.1	+1.0
VRZ	**Vera Road**	**1.71**	**330**	P		Pn	15 05 34.8	-0.5
HATZ	**Hinemaiaia**	**1.72**	**6**	P		Pn	15 05 36.0	+0.4
RATZ	**Rangitukua**	**1.74**	**357**	P		Pn	15 05 36.8	+1.0
MRHZ	**Matea Rd**	**1.82**	**14**	P		Pn	15 05 36.9	0.5
PREZ	**Palmer Road**	**1.82**	**313**	P		Pb	15 05 40.5	0.0
WHHZ	**Waihua**	**1.86**	**35**	P		Pn	15 05 37.0	-0.3
BSWZ	**Blackbirch Sta**	**1.87**	**233**	P		Pn	15 05 36.8	-0.7
WATZ	**Wairara**	**1.90**	**357**	P		Pn	15 05 38.6	+0.6
MTHZ	**Maungataniwha**	**1.91**	**23**	P		Pn	15 05 37.8	-0.3
RAHZ	**Arahi**	**1.93**	**29**	P		Pn	15 05 37.9	-0.5
KHEZ	**Kahui Hut**	**1.94**	**312**	P		Pb	15 05 42.0	-0.4
MHEZ	**Mangahewa**	**1.94**	**322**	P		Pb	15 05 42.1	-0.3
NMEZ	**Namu Road**	**1.94**	**307**	P		Pb	15 05 42.2	-0.2
NNZ	**Nelson**	**1.98**	**251**	P		Pn	15 05 39.3	+0.2
PKE	**Pukeiti**	**2.02**	**314**	P		Pb	15 05 43.3	-0.5
NBEZ	**Newall Road No**	**2.04**	**310**	P		Pb	15 05 43.5	-0.5
WPRZ	**Whakapapatarin**	**2.10**	**6**	P		Pn	15 05 40.1	-0.6
KNZ	**Kokohu**	**2.11**	**42**	P		Pn	15 05 39.6	-1.1
PRRZ	**Plateau Road**	**2.15**	**11**	P		Pn	15 05 41.1	-0.2
SNGZ	**Shannon Statio**	**2.15**	**32**	P		Pn	15 05 40.5	-0.9
RTZ	**Ruatahuna**	**2.17**	**24**	P		Pn	15 05 41.0	-0.7
HIZ	**Haiti**	**2.23**	**339**	P		Pn	15 05 43.9	+1.4
HRRZ	**Handcock Road**	**2.24**	**8**	P		Pn	15 05 42.8	+0.2
TLZ	**Tolley Road**	**2.29**	**353**	P		Pn	15 05 43.6	+0.2
HSRZ	**Hossack Road**	**2.31**	**7**	P		Pn	15 05 43.8	+0.1
RRRZ	**Republican Roa**	**2.32**	**13**	P		Pn	15 05 43.2	-0.6
RIGZ	**Rimuhau**	**2.40**	**38**	P		Pn	15 05 43.7	-1.1
TARZ	**Mount Tarawera**	**2.42**	**12**	P		Pn	15 05 44.9	-0.3
KHZ	**Kahutara**	**2.52**	**223**	P		Pn	15 05 44.7	-1.6
THZ	**Tophouse**	**2.52**	**242**	P		Pn	15 05 45.5	-0.9
URZ	**Urewera**	**2.54**	**23**	P		Pn	15 05 45.2	-1.5
QRZ	**Quartz Range**	**2.55**	**264**	P		Pn	15 05 47.0	+0.2
MWZ	**Matawai**	**2.61**	**30**	P		Pn	15 05 46.1	-1.6
TKGZ	**Te Karaka**	**2.65**	**36**	P		Pn	15 05 46.7	-1.5
TOZ	**Tahuroa Road**	**2.89**	**354**	P		Pn	15 05 51.9	+0.4
TWGZ	**Tauwhareparae**	**2.93**	**35**	P		Pn	15 05 50.3	-1.8
RUGZ	**Raukumara Rang**	**2.99**	**29**	P		Pn	15 05 51.4	-1.6
PKGZ	**Pakihiroa**	**3.21**	**33**	P		Pn	15 05 54.5	-1.5
HAZ	**Te Kaha**	**3.21**	**28**	P		Pn	15 05 54.6	-1.4
DSZ	**Denniston Nort**	**3.27**	**248**	P		Pn	15 05 57.4	+0.5
WMGZ	**Waiomatatini S**	**3.42**	**36**	P		Pn	15 05 56.6	-2.1
LTZ	**Lake Taylor**	**3.46**	**230**	P		Pn	15 05 57.4	-2.0
MKAZ	**Moumakai**	**3.54**	**351**	P		Pn	15 06 01.8	+1.3
OKCZ	**Okains Bay**	**3.75**	**213**	P		Pn	15 06 00.8	-2.6
WTAZ	**Waiatarua**	**3.81**	**344**	P		Pn	15 06 06.0	+1.8
MQZ	**McQueen's Vall**	**3.91**	**217**	P		Pn	15 06 02.4	-3.2
INZ	**Inchbonnie**	**3.93**	**236**	P		Pn	15 06 04.1	-1.7
AKCZ	**Akaroa Harbour**	**3.93**	**213**	P		Pn	15 06 03.4	-2.5
OXZ	**Oxford**	**3.94**	**225**	P		Pn	15 06 03.0	-3.0
RPZ	**Rata Peaks**	**4.74**	**227**	P		Pn	15 06 15.1	-1.9
ODZ	**Otahua Downs**	**5.87**	**219**	P		Pn	15 06 30.0	-2.4

*FUNV **20** 15:21:13.2, 10°.34N×62°.29W, h22km, MW2.3*

*TRN **20** 15:21:13.9, 10°.35N×62°.28W, h11km, MD3.1*

ISC 20 15:21:13.6±1.1, 10°.40N±0°.05×62°.34W±0°.04, h17km±10km, n9, σ0ˢ92/16, 1C, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUIV	**Guiria**	**0.27**	**24**	*e*P		**Pg**	**15 21 19.7**	**0.0**
GUIV				*e*S		**Sb**	**15 21 25.2**	**+0.6**
GUIV	**Guiria**	**0.27**	**24**⇑	*e*P		**Pg**	**15 21 19.7**	**0.0**
GUIV				*e*S		**Sb**	**15 21 25.1**	**+0.6**
GUNV	**Guanoco**	**0.64**	**249**	*e*P		**Pg**	**15 21 25.6**	**-0.6**
GUNV				*e*S		**Sg**	**15 21 35.6**	**+0.8**
CRUV	**Carupano**	**0.93**	**287**	*e*P		**Pb**	**15 21 30.1**	**-1.2**
CRUV				*e*S		**Sb**	**15 21 43.4**	**+0.1**
TRN	**Trinidad (W)**	**0.95**	**75**	*e*P		**Pb**	**15 21 31.0**	**-0.8**
TRN				*e*S		**Sn**	**15 21 45.1**	**-0.4**
TRN	**Trinidad (W)**	**0.95**	**75**	*e*P		**Pb**	**15 21 30.8**	**-1.0**
ORIV	**Oritupano**	**1.69**	**219**	*e*P		**Pn**	**15 21 43.1**	**+0.6**
ORIV				*e*S		**Sb**	**15 22 06.5**	**+1.1**
GRGR	**Grenville**	**1.85**	**21**	*e*P		**Pn**	**15 21 45.9**	**+1.2**
GRGR				*e*S		**Sb**	**15 22 09.6**	**-0.4**
TOSP	**Speyside**	**1.98**	**63**	*e*P		**Pb**	**15 21 48.0**	**-1.4**

*IDC **20** 15:25:15.1±0.7, 9°.08N×138°.20E, h0km, mb4.1/10, mb1 4.3/12, mb1mx4.1/34, mbtmp4.2/12, ML4.1/2, Error ellipse: s-maj=28.0km s-min=15.0km az=77.0*

*NEIC **20** 15:25:20.0±1.1, 9°.01N±0°.08×138°.17E±0°.10, h32km±2km, mb4.6/24, Error ellipse: s-maj=14.2km s-min=10.5km az=111.0*

ISC 20 15:25:19.6±0.5, 9°.01N±0°.06×138°.19E±0°.09, h29km, n44, σ1ˢ02/40, mb4.5/20, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**7.97**	**55**	Pn		**Pn**	**15 27 14.4**	**+0.8**
JAY	**Jayapura**	**11.72**	**168**	Pn		**Pn**	**15 28 04.8**	**-0.2**
	1.6nm,0.3s,baz=296,slow=6.4,SNR=8.0							
JAY				Sn		**Sn**	**15 30 13.2**	**-1.7**
	1.1nm,0.3s,baz=169,slow=13,SNR=1.7							
SIJI	**Sorong**	**12.00**	**215**	Pn		**Pn**	**15 28 08.4**	**-0.4**
	0.9nm,0.3s,baz=44,slow=12,SNR=5.4							
FAKI	**Fak Fak**	**13.25**	**207**	Pn		**Pn**	**15 28 28.8**	**+2.9**
LUWI	**Luwuk**	**18.32**	**238**			**P**	**15 29 30.0**	**-1.7**
LUWI				IAmb		IAmb	15 30 00.1	
	comp=Z,54nm,1.3s							
PMG	**Port Moresby**	**20.35**	**154**	P		**P**	**15 29 54.2**	**+0.3**
PMG				IAmb		IAmb	15 30 18.9	
	comp=Z,20nm,1.1s							
YULB	**Yu-li**	**21.59**	**313**	P		**P**	**15 30 08.8**	**+1.5**
YULB				IAmb		IAmb	15 30 23.7	
	comp=Z,20nm,1.1s							
NACB	**Ninganchiao**	**21.88**	**316**	P		**P**	**15 30 11.0**	**+0.7**
KKM	**Kota Kinabalu**	**21.99**	**264**	P		**P**	**15 30 12.5**	**+0.8**
KKM				IAmb		IAmb	15 30 32.2	
	comp=Z,44nm,1.2s							
SOEI	**Soe**	**23.23**	**217**	P		**P**	**15 30 24.9**	**+0.1**
INU	**Inuyama**	**26.24**	**358**	P		**P**	**15 30 51.0**	**-1.2**
WRAB	**Tennant Creek**	**29.01**	**187**	P		**P**	**15 31 15.4**	**-1.7**
WR0	**Warramunga Arr**	**29.01**	**187**	P		**P**	**15 31 18.7**	**+1.6**
WR0				IAmb		IAmb	15 31 27.4	
	comp=Z,26nm,1.8s							
WRA	**Warramunga Arr**	**29.02**	**187**	P		**P**	**15 31 16.5**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=1,slow=11,SNR=3.0							
H11S3	**WAKE ISLAND Hy**	**29.20**	**68**	T		T	16 01 56.4	
	baz=254,slow=74,SNR=4.9							
H11S1	**WAKE ISLAND Hy**	**29.21**	**68**	T		T	16 01 48.5	
	baz=254,slow=74,SNR=4.3							
H11S2	**WAKE ISLAND Hy**	**29.21**	**68**	T		T	16 01 45.3	
	baz=254,slow=74,SNR=5.3							
H11N1	**WAKE ISLAND Hy**	**29.72**	**66**	T		T	16 02 27.4	
	baz=254							
H11N2	**WAKE ISLAND Hy**	**29.73**	**66**	T		T	16 02 23.7	
	baz=254							
H11N3	**WAKE ISLAND Hy**	**29.73**	**66**	T		T	16 02 27.2	
	baz=254							
CTAO	**Charters Tower**	**29.98**	**165**	P		**P**	**15 31 25.6**	**-0.2**
AS31	**Alice Springs**	**32.74**	**187**	P		**P**	**15 31 50.5**	**+0.4**
ASAR	**Alice Springs**	**32.74**	**187**	P		**P**	**15 31 49.7**	**-0.4**
	comp=Z,1.5nm,0.9s,baz=18,slow=12,SNR=20							
ASAR				PcP		**PcP**	**15 34 35.4**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=1,9,slow=2.8,SNR=2.7							
CMAR	**Chiang Mai Arr**	**39.19**	**288**	P		**P**	**15 32 45.5**	**0.0**
	comp=Z,2.1nm,0.8s,baz=96,slow=7.0,SNR=18							
CM31	**Chiang Mai Arr**	**39.19**	**288**	P		**P**	**15 32 45.0**	**-0.5**
STKA	**Stephens Creek**	**40.78**	**176**	P		**P**	**15 32 59.6**	**+1.2**
	comp=Z,3.2nm,0.7s,baz=2.6,slow=8.8,SNR=6.0							
STKA	**Stephens Creek**	**40.78**	**176**	P		**P**	**15 33 00.0**	**+1.6**
DZM	**Mont Dzumac**	**41.49**	**138**	P		**P**	**15 33 05.9**	**+1.4**
	comp=Z,3.4nm,0.8s,baz=288,slow=20,SNR=3.0							
BBOO	**Buckleboo**	**41.63**	**183**	P		**P**	**15 33 06.4**	**+1.0**
BBOO				IAmb		IAmb	15 33 25.1	
	comp=Z,24nm,1.2s							
ULN	**Ul

AAI **Ambon** 16.07 219 P **P** 15 37 01.0 -0.5
1µm103nm,0.9s
OTRP **Odiongan** 16.27 283 *eP* **P** 15 37 03.6 -0.2
SANI **Sanana** 16.39 229 P **Pn** 15 37 00.2 -2.3
1µm35nm,1.5s
NLAI **Namlea** 16.44 223 P **P** 15 37 05.0 -0.6
1µm33nm,1.9s
BOAC **Boac** 16.67 287 *eP* **P** 15 37 07.9 -0.2
POLP **Polillo Island** 16.92 291 *eP* **P** 15 37 11.7 +0.7
SJMP **San Jose** 17.16 283 *eP* **P** 15 37 14.8 +1.2
TGY **Tagaytay City** 17.68 288 P **Pn** 15 37 18.9 +0.2
21nm,0.3s,baz=93,slow=6.1,SNR=6.1
CAUP **Cauayan** 17.82 298 *eP* **P** 15 37 23.3 +2.3
PCPH **Palayan** 17.96 293⇓ *eP* **Pn** 15 37 22.2 +0.1
SGCP **Mt. Cagua** 18.20 302 *eP* **P** 15 37 27.6 +2.4
MRSI **Marisa** 18.28 243 P **Pn** 15 37 27.2 +1.2
4µm102nm,1.5s
LUWI **Luwuk** 18.33 238 P **Pn** 15 37 27.8 +1.1
2µm124nm,1.2s
LUWI **Luwuk** 18.33 238 P **P** 15 37 25.4 -1.1
SMPP **San Manuel, Pa** 18.54 294 *eP* **P** 15 37 26.5 -2.3
APYP **Conner** 18.71 300 *eP* **Pn** 15 37 31.2 -0.1
ABRA **Dolores** 19.08 299 *eP* **P** 15 37 34.7 -0.1
SCZP **Santa Cruz** 19.11 292 *eP* **Pn** 15 37 37.5 +1.5
APSI **Ampana** 19.21 240 P **P** 15 37 34.6 -1.7
2µm1µm74nm,1.1s
PATS **Pohnpei** 20.01 95 P **P** 15 37 43.9 -1.1
JOW **Kunigami** 20.10 333 P **P** 15 37 46.6 +0.7
MPSI **Mapaga** 20.16 246 P Pn 15 37 54.5 +5.8
BATP **Bataraza** 20.18 271 *eP* Pn 15 37 48.5 -0.4
PMG **Port Moresby** 20.32 154 *deP* **P** 15 37 48.6 +0.3
PMG pmax pmax
comp=Z,302nm,1.0s
PMG **Port Moresby** 20.32 154 P **P** 15 37 48.7 +0.4
comp=Z,67nm,1.0s,baz=349,slow=7.4,SNR=12
PMG **Port Moresby** 20.32 154 P **P** 15 37 46.8 -1.5
PMG IAmb IAmb 15 38 08.6
comp=Z,113nm,1.1s
YOJ **Yonaguni jima** 21.16 319 P **P** 15 37 58.0 +0.6
YOJ pmax pmax
comp=Z,422nm,1.3s
YOJ **Yonaguni jima** 21.16 319 P **P** 15 37 58.0 +0.6
TWG **Pinlang** 21.45 312 P **P** 15 38 00.8 +0.4
YULB **Yu-li** 21.63 313 P **P** 15 38 03.6 +1.1
YULB IAmb IAmb 15 38 12.5
comp=Z,141nm,1.2s
TTSI **Tana Toraja** 21.89 238 P **P** 15 38 07.0 +1.7
comp=Z,2µmcomp=Z,86nm,1.1s
NACB **Ninganchiao** 21.92 316 P **P** 15 38 06.9 +1.4
NACB IAmb IAmb 15 38 27.1
comp=Z,204nm,1.6s
KKM **Kota Kinabalu** 22.01 264 P **P** 15 38 07.5 +0.8
KKM IAmb IAmb 15 38 12.3
comp=Z,151nm,1.1s
TPUB **Ta-pu** 22.06 312 P **P** 15 38 07.6 +0.5
SSLB **Suanglung** 22.12 314 P **P** 15 38 08.8 +1.0
SSLB IAmb IAmb 15 38 15.4
comp=Z,167nm,1.3s
YHNB **Yeheng** 22.40 316 P **P** 15 38 11.2 +0.5
YHNB IAmb IAmb 15 38 13.7
comp=Z,188nm,1.2s
BNSI **Bone** 22.42 234 P **P** 15 38 13.9 +2.9
comp=Z,3µmcomp=Z,122nm,1.9s
SPSI **Sidrap Palu** 22.44 236 P **P** 15 38 13.3 +2.1
comp=Z,2µmcomp=Z,44nm,1.8s
TATO **Taipei** 22.52 317 P **P** 15 38 12.8 +0.8
MTN **Manton Dam** 22.79 198 P **P** 15 38 14.7 -0.2
MTN IAmb IAmb 15 39 01.4
comp=Z,162nm,1.8s
COEN **Coen** 23.31 168 P **P** 15 38 20.4 +0.2
BKB **Balikpapan** 23.56 245 P **P** 15 38 22.6 0.0
KNMB **Chin-men Tao** 24.40 312 P **P** 15 38 31.3 +0.9
KNMB IAmb IAmb 15 38 32.6
comp=Z,114nm,1.3s
QZH **Quanzhou** 24.53 313⇑ *iP* **P** 15 38 30.3 -1.3
QZH S **S** 15 42 50.3 -0.3
QZH pmax pmax
comp=Z,940nm,5.8s
QZH LR LR
comp=Z,1µm,12.0s
QZH LR LR
comp=Z,960nm,14.4s
QZH LR LR
comp=Z,1µm,12.4s
JNU **Nakatsue** 24.97 345 P **P** 15 38 34.6 -0.9
comp=Z,41nm,1.2s,baz=203,slow=13,SNR=3.2
JNU LR LR 15 48 25.7
comp=Z,892nm,18.1s,baz=152,slow=37
JNU **Nakatsue** 24.97 345 P **P** 15 38 36.3 +0.8
KBKI **Kotabaru** 25.14 242 P **P** 15 38 38.7 +1.5
comp=Z,20nm,1.0s
KNRA **Kununurra** 26.23 201 P **P** 15 38 47.6 +0.6
KNRA IAmb IAmb 15 38 58.9
comp=Z,50nm,0.9s
INU **Inuyama** 26.27 358 P **P** 15 38 46.7 -0.6
INU IAmb IAmb 15 38 48.8
comp=Z,85nm,1.5s
HKPS **Hong Kong Po S** 26.64 303 P **P** 15 38 49.7 -1.0
SBUM **Sibu** 26.66 257 P **P** 15 38 49.0 -2.0
SSE **Sheshan** 27.13 327 P **P** 15 38 55.3 +0.2
SSE S **S** 15 43 31.0 -0.7
SSE pmax pmax
comp=Z,10.0nm,1.3s
SSE pmax pmax
comp=Z,410nm,6.3s
SSE LR LR
comp=Z,600nm,17.9s
SSE LR LR
comp=Z,810nm,19.7s
MJAR **Matsushiro Arr** 27.44 360 P **P** 15 38 56.5 -1.3
comp=Z,1.8nm,0.8s,baz=182,slow=10.0,SNR=3.8
MJAR LR LR 15 48 29.8
comp=Z,585nm,19.5s,baz=180,slow=34
MAJO **Matsushiro** 27.44 360⇓ *eP* **P** 15 38 55.6 -2.2
MAJO pmax pmax
comp=Z,26nm,2.0s
MAJO **Matsushiro** 27.44 360 P **P** 15 38 56.0 -1.8
MAT **Matsushiro** 27.44 360 P **P** 15 38 57.4 -0.4
MAT S **S** 15 43 38.8 +2.2
MJB9 **Matsu-Tunnel** 27.44 360 P **P** 15 38 56.0 -1.8
HNR **Honiara** 28.33 130 LR LR 15 49 03.6
comp=Z,1µm,21.8s,baz=286,slow=34
KSM **Kuching** 28.76 257 P **P** 15 39 09.4 -0.4
WRAB **Tennant Creek** 28.98 188 *eP* **P** 15 39 13.3 +1.6
WRAB pmax pmax
comp=Z,43nm,3.0s
WRAB **Tennant Creek** 28.98 188 P **P** 15 39 08.9 -2.7
WR0 **Warramunga Arr** 28.98 187 P **P** 15 39 08.8 -2.9
WRA **Warramunga Arr** 28.99 188 *i* P **P** 15 39 13.0 +1.2
WRA pmax pmax
comp=Z,6.0nm,1.0s
WRA **Warramunga Arr** 28.99 188 P **P** 15 39 12.2 +0.4
comp=Z,5.7nm,1.0s,baz=3.4,slow=9.7,SNR=14
WRA LR LR 15 51 05.6
comp=Z,690nm,18.6s,baz=15,slow=37
NJ2 **Nanjing** 29.16 325 *eP* **P** 15 39 12.5 -0.6
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 pmax pmax
comp=Z,620nm,6.4s
NJ2 LR LR
comp=Z,1µm,18.5s
NJ2 LR LR
comp=Z,1µm,11.4s
NJ2 LR LR
comp=Z,2µm,19.4s
H11S3 **WAKE ISLAND Hy** 29.18 68 T T 16 09 59.4
baz=253,slow=74
H11S1 **WAKE ISLAND Hy** 29.20 68 T T 16 09 55.8
baz=253
H11S2 **WAKE ISLAND Hy** 29.20 68 T T 16 09 53.8
baz=253,slow=74
QIZ **Qiongzhong** 29.25 293 P **P** 15 39 14.3 +0.2
QIZ S **S** 15 44 08.8 +3.4
QIZ LR LR
comp=Z,1µm,17.7s
QIZ LR LR
comp=Z,760nm,22.1s
QIZ LR LR
comp=Z,1µm,26.5s
DLV **T Lat** 29.38 278 P **P** 15 39 13.0 -2.5
DLV IAmb IAmb 15 39 20.9
comp=Z,57nm,1.3s
JAGI **Jajag, Banyuwa** 29.59 235 P **P** 15 39 14.3 -2.9
FITZ **Fitzroy Crossi** 29.63 205 P **P** 15 39 17.3 -0.1
comp=Z,5.9nm,1.1s,baz=30,slow=8.1,SNR=2.5
FITZ **Fitzroy Crossi** 29.63 205 P **P** 15 39 14.7 -2.8
H11N1 **WAKE ISLAND Hy** 29.70 66 T T 16 10 22.7
baz=254,slow=74,SNR=10.0
H11N2 **WAKE ISLAND Hy** 29.71 66 T T 16 10 32.5
baz=254,slow=74,SNR=9.6
H11N3 **WAKE ISLAND Hy** 29.72 66 T T 16 10 32.9
baz=254,slow=74,SNR=8.6
KSRS **Korea Array** 29.84 343 P **P** 15 39 18.0 -1.1
KSRS **Korea Array** 29.84 343 P **P** 15 39 18.0 -1.1
comp=Z,1.9nm,0.8s,baz=143,slow=11,SNR=5.3
KSRS LR LR 15 51 10.2
comp=Z,759nm,18.1s,baz=157,slow=36
CTA **Charters Tower** 29.95 165 P **P** 15 39 21.3 +1.0
comp=Z,4.7nm,1.0s,baz=350,slow=12,SNR=3.1
CTA LR LR 15 49 57.0
comp=Z,970nm,21.8s,baz=17,slow=34
WHN **Wuhan** 30.93 317 ⇓P **P** 15 39 30.4 +1.5
WHN S **S** 15 44 35.6 +4.1
WHN pmax pmax
comp=Z,120nm,1.1s
WHN LR LR
comp=Z,2µm,12.5s
WHN LR LR
comp=Z,2µm,14.7s
WHN LR LR
comp=Z,5µm,27.2s
AS31 **Alice Springs** 32.72 187 P **P** 15 39 45.2 +0.5
ASAR **Alice Springs** 32.72 187 P **P** 15 39 45.2 +0.6
comp=Z,9.4nm,0.9s,baz=28,slow=11,SNR=32
ASAR PcP **PcP** 15 42 30.7 +0.7
comp=Z,1.7nm,1.1s,baz=13,slow=1.9,SNR=2.7
ASAR LR LR 15 53 20.1
comp=Z,998nm,18.8s,baz=14,slow=37
ERM **Erimo** 33.19 7⇓ *eP* **P** 15 39 47.5 -1.0
ERM pmax pmax
comp=Z,17nm,1.1s
DL2 **Dalian** 33.31 336 P **P** 15 39 50.8 +1.1
DL2 PP **PP** 15 41 01.3 -4.0
DL2 S **S** 15 45 10.1 +1.6
DL2 pmax pmax
comp=Z,35nm,1.0s
DL2 pmax pmax
comp=Z,660nm,7.2s
DL2 LR LR
comp=Z,900nm,12.4s
DL2 LR LR
comp=Z,1µm,13.8s
DL2 LR LR
comp=Z,1µm,13.6s
MSHR **Mys Shultsa** 34.04 351 *eP* **P** 15 39 55.3 -0.6
ENH **Enshi** 34.19 312 P **P** 15 39 56.4 -1.1
ENH IAmb IAmb 15 40 00.7
comp=Z,43nm,1.1s
SNY **Shenyang** 35.18 341 ⇑P **P** 15 40 02.8 -3.0
SNY S **S** 15 45 44.3 +7.1
SNY pmax pmax
comp=Z,650nm,5.9s
SNY LR LR
comp=Z,1µm,15.1s
SNY LR LR
comp=Z,710nm,10.6s
SNY LR LR
comp=Z,2µm,17.5s
ASAJ **Asahikawa** 35.21 5 P **P** 15 40 06.7 +0.7
comp=Z,25nm,1.3s,baz=230,slow=17,SNR=4.3
ASAJ LR LR 15 53 16.6
comp=Z,387nm,20.8s,baz=212,slow=34
JKA **Kamikawa-asahi** 35.21 5 P **P** 15 40 06.7 +0.7
SLVN **Son La** 35.23 294 P **P** 15 40 06.8 +0.2
SLVN IAmb IAmb 15 40 26.5
comp=Z,35nm,1.5s
PSA00 **Pilbara Seismi** 35.31 211 P **P** 15 40 06.7 -0.5
PSA00 IAmb IAmb 15 40 16.6
comp=Z,76nm,1.4s
USA0B **Ussuriysk Arra** 35.51 352 P **P** 15 40 08.2 -0.4
USA0B pmax pmax
comp=Z,30nm,1.6s
USA0B **Ussuriysk Arra** 35.51 352 P **P** 15 40 08.2 -0.4
USRK **Ussuriysk Ar.** 35.51 352 P **P** 15 40 09.0 +0.4
USRK **Ussuriysk Ar.** 35.51 352 P **P** 15 40 09.0 +0.4
comp=Z,2.1nm,0.9s,baz=174,slow=5.6,SNR=5.7
USRK LR LR 15 51 58.3
comp=Z,967nm,20.7s,baz=152,slow=32
YUK **Yuzh-Kuril'sk** 35.55 9 *eP* P 15 40 03.5 -5.5
YUK *eS* **S** 15 45 43.0 +0.1
YUK *eSS* **SS** 15 48 04.4 -14
YUK *eSSS* SSS 15 48 24.5
YUK MLR MLR
comp=Z,229nm,15.0s
TEY **Ternei** 35.95 358⇓ *eP* P 15 40 18.7 +6.3
TEY pmax pmax
comp=N,10.0nm,1.0s
TEY pmax pmax
comp=E,10.0nm,1.8s
TEY pmax pmax
comp=Z,20nm,1.7s
MDJ **Mudanjiang** 36.29 350 P **P** 15 40 14.8 -0.5
MDJ pP pP 15 40 21.9 -0.4
MDJ sP sP 15 40 26.8 +1.5
MDJ PP **PP** 15 41 39.6 +1.5
MDJ S **S** 15 45 59.6 +5.5
MDJ pmax pmax
comp=Z,10.0nm,1.3s
MDJ pmax pmax
comp=Z,460nm,4.2s
MDJ LR LR
comp=Z,1µm,8.5s
MDJ LR LR
comp=Z,430nm,7.9s
MDJ LR LR
comp=Z,1µm,15.0s
CN2 **Changchun** 36.43 344 *eP* **P** 15 40 18.0 +1.5
CN2 pmax pmax
comp=Z,10.0nm,0.5s
BJT **Baijiatuau** 36.63 331 P **P** 15 40 17.1 -1.2
BJT pmax pmax
comp=Z,89nm,1.3s
BJT **Baijiatuau** 36.63 331 P **P** 15 40 17.1 -1.2
BJI **Beijing** 36.65 331 P **P** 15 40 19.0 +0.6
BJI sP **sP** 15 40 28.8 +0.2
BJI PP **PnPn** 15 41 41.0 -1.1
BJI S **S** 15 46 06.8 +7.0
BJI sS **sS** 15 46 14.5 +1.5
BJI pmax pmax
comp=Z,52nm,1.2s
BJI pmax pmax
comp=Z,470nm,5.8s
BJI LR LR
comp=Z,790nm,17.7s
BJI LR LR
comp=Z,1µm,26.0s
XAN **Xi'an** 36.70 317 P **P** 15 40 19.1 +0.1
XAN pP sP 15 40 28.4 -0.8
XAN PP **PnPn** 15 41 40.8 -2.1
XAN S **S** 15 46 05.6 +4.7
XAN pmax pmax
comp=Z,30nm,1.4s
XAN pmax pmax
comp=Z,510nm,5.5s
XAN LR LR
comp=Z,680nm,17.7s
XAN LR LR
comp=Z,980nm,14.7s
XAN LR LR
comp=Z,1µm,18.4s
XAN **Xi'an** 36.70 317 P **P** 15 40 17.4 -1.6
XAN pmax pmax
comp=Z,43nm,1.2s
XAN **Xi'an** 36.70 317 P **P** 15 40 17.4 -1.6
XAN IAmb IAmb 15 40 28.8
comp=Z,43nm,1.2s
TIY **Taiyuan** 36.88 325 *eP* **P** 15 40 21.8 +1.3
TIY PP **PnPn** 15 41 48.8 +3.7
TIY S **S** 15 46 08.8 +5.2
TIY pmax pmax
comp=Z,360nm,5.7s
TIY LR LR
comp=Z,530nm,9.5s
TIY LR LR
comp=Z,500nm,13.4s
TIY LR LR
comp=Z,500nm,11.4s
IPM **Ipoh** 37.19 266 P **P** 15 40 21.9 -1.6
KMI **Kunming** 37.37 300 P **P** 15 40 25.5 +0.4
KMI pP sP 15 40 34.6 -0.6
KMI sP pwP 15 40 37.1 -1.4
KMI PP **PnPn** 15 41 52.8 +1.4
KMI S **S** 15 46 14.5 +2.8
KMI SS **SS** 15 48 49.3 -6.8
KMI pmax pmax
comp=Z,10.0nm,2.0s
KMI pmax pmax
comp=Z,440nm,7.1s
KMI LR LR
comp=Z,920nm,17.8s
KMI LR LR
comp=Z,1µm,19.9s
KMI LR LR
comp=Z,2µm,19.4s
YSS **Yuzh-Sakhalins** 38.04 5⇑ *eP* **P** 15 40 29.5 -0.7
YSS *e* 15 40 44.9
YSS *e* 15 41 57.1
YSS *eS* **S** 15 46 16.1 -4.6
YSS pmax pmax
comp=Z,20nm,1.3s
YSS MLR MLR
comp=Z,400nm,17.0s
YSS **Yuzh-Sakhalins** 38.04 5 P **P** 15 40 29.4 -0.7
CD2 **Chengdu** 38.80 309⇑ *iP* **P** 15 40 37.4 +0.5
CD2 sP sP 15 40 46.4 -0.6
CD2 PP **PnPn** 15 42 10.8 +2.4
CD2 S **S** 15 46 27.9 -5.0
CD2 pmax pmax
comp=Z,50nm,0.9s
CD2 pmax pmax
comp=Z,940nm,7.2s
CD2 LR LR
comp=Z,2µm,14.1s
CD2 LR LR
comp=Z,2µm,22.9s
CD2 LR LR
comp=Z,2µm,19.2s
CM31 **Chiang Mai Arr** 39.23 288 P **P** 15 40 38.7 -1.8
CMAR **Chiang Mai Arr** 39.23 288 P **P** 15 40 40.4 -0.2
comp=Z,12nm,0.9s,baz=96,slow=6.8,SNR=68
CMAR LR LR 15 55 17.7
comp=Z,555nm,21.3s,baz=96,slow=34
CHTO **Chiang Mai** 39.28 289 P **P** 15 40 39.1 -1.9
CHTO pmax pmax
comp=Z,7.0nm,0.9s
CHTO **Chiang Mai** 39.28 289 P **P** 15 40 39.1 -1.9
PSI **Prapat** 39.54 264 P **P** 15 40 41.4 -2.0
PSI pmax pmax
comp=Z,40nm,1.1s
RPSI **Rantau Prapat** 39.56 263 P **P** 15 40 41.4 -2.0
RPSI IAmb IAmb 15 40 42.5
comp=Z,40nm,1.1s
HHC **Hu-ho-hao-te** 39.58 328 *eP* **P** 15 40 45.8 +2.5
HHC PP **PnPn** 15 42 21.8 +4.3
HHC S **S** 15 46 47.8 +3.4
HHC pmax pmax
comp=Z,6.0nm,0.6s
HHC pmax pmax
comp=Z,290nm,5.8s
HHC LR LR
comp=Z,420nm,18.1s
HHC LR LR
comp=Z,440nm,17.2s
HHC LR LR
comp=Z,660nm,16.7s
BTO **Baotou** 40.24 326 *eP* **P** 15 40 45.1 -3.6
KLR **Kul'dur** 40.49 353 *ceP* **P** 15 40 50.8 +0.3
KLR pmax pmax
comp=Z,47nm,1.1s
FORT **Forrest** 40.72 193 P **P** 15 40 52.9 +0.3
FORT IAmb IAmb 15 40 59.3
comp=Z,63nm,1.1s
STKA **Stephens Creek** 40.75 176 P **P** 15 40 53.0 +0.1
STKA pmax pmax
comp=Z,3.0nm,1.1s
STKA **Stephens Creek** 40.75 176 P **P** 15 40 53.5 +0.6
comp=Z,11nm,1.0s,baz=337,slow=11,SNR=6.9
STKA LR LR 15 58 31.8
comp=Z,1µm,19.6s,baz=8.2,slow=37
STKA **Stephens Creek** 40.75 176 P **P** 15 40 53.0 +0.1
GSI **Gunungsitoli** 41.16 262 P **P** 15 40 54.3 -2.3
comp=Z,57nm,1.5s
GSI **Gunungsitoli** 41.16 262 P **P** 15 40 53.6 -3.0
GSI IAmb IAmb 15 40 55.3
comp=Z,107nm,1.4s
ARMA **Armidale** 41.23 162 P **P** 15 40 56.2 -0.9
LZH **Lanzhou** 41.29 316 ⇑P **P** 15 40 58.3 +0.7
LZH sP sP 15 41 08.0 +0.2
LZH PP **PP** 15 42 40.4 +7.2
LZH sS sS 15 47 25.5 +2.7
LZH SS **SS** 15 50 10.8 -3.5
LZH pmax pmax
comp=Z,39nm,1.5s
LZH pmax pmax
comp=Z,400nm,5.4s
LZH LR LR
comp=Z,740nm,15.7s
LZH LR LR
comp=Z,980nm,16.3s
LZH LR LR
comp=Z,1µm,15.2s
DZM **Mont Dzumac** 41.45 138 *eP* **P** 15 40 59.7 +0.8
comp=Z,59nm,1.4s
DZM *eS* **S** 15 47 17.8 +5.1
comp=Z,1µm,23.9s
DZM *eLR* LR 15 52 29.5
comp=Z,4µm,27.9s
DZM **Mont Dzumac** 41.45 138 P **P** 15 41 00.6 +1.6
comp=Z,9.3nm,1.0s,baz=83,slow=8.1,SNR=3.2
BBOO **Buckleboo** 41.60 183 P **P** 15 40 59.2 -0.7
GRNR **Gornyy** 41.69 358⇑ *iP* **P** 15 41 00.4 0.0
GRNR *i* 15 41 08.9
GRNR *eS* **S** 15 47 17.4 +2.1
GRNR pmax pmax
comp=Z,9.0nm,1.4s
GRNR smax smax
comp=N,2.0nm,1.2s
GRNR MLR MLR
comp=Z,320nm,18.0s
NKL **Nikolayevsk** 44.09 2 *eP* **P** 15 41 16.8 -3.0
NKL pmax pmax
comp=Z,26nm,1.8s
NKL pmax pmax
comp=N,7.0nm,0.6s
NKL pmax pmax
comp=E,2.0nm,1.3s
OKH **Okha** 44.61 4 *deP* **P** 15 41 26.6 +2.7
OKH *eS* **S** 15 47 59.3 +1.3
OKH pmax pmax
comp=Z,200nm,9.1s
OKH smax smax
comp=E,500nm,13.1s
OKH smax smax
comp=N,500nm,16.8s
CAN **Canberra** 45.22 168 P **P** 15 41 29.0 -0.1
CAN pmax pmax
comp=Z,49nm,1.5s
CAN **Canberra** 45.22 168 P **P** 15 41 29.0 -0.1
CAN IAmb IAmb 15 41 42.0
comp=Z,49nm,1.5s
ZEA **Zeya** 45.50 351 *eP* **P** 15 41 30.7 -0.4
ZEA *e* 15 43 16.0
ZEA *eS* **S** 15 48 16.0 +5.0
ZEA pmax pmax
comp=Z,73nm,1.6s
ZEA pmax pmax
comp=Z,500nm,8.0s
ZEA pmax pmax
comp=Z,400nm,6.0s
ZEA smax smax
comp=Z,400nm,8.0s
ZEA smax smax
comp=N,600nm,16.0s
GTA **Gaotai** 45.75 318 ⇑P **P** 15 41 33.8 +0.3
GTA pP pP 15 41 40.5 -0.2
GTA sP sP 15 41 43.3 -0.4
GTA PcP **PcP** 15 43 11.4 +0.5
GTA PP **PP** 15 43 20.4 -0.5
GTA S **S** 15 48 15.1 -0.2
GTA sS sS 15 48 29.1 +0.9
GTA SS **ScS** 15 51 30.5 +2.6
GTA pmax pmax
comp=N,28nm,1.3s
GTA pmax pmax
comp=N,430nm,7.8s

GTA LR LR
comp=N,330nm,20.6s
GTA LR LR
comp=N,670nm,19.0s
GTA LR LR
comp=N,610nm,20.0s
PETK Petropavlovsk- 46.75 16 P **P** **15 41 40.3 -0.6**
comp=N,7.5nm,1.1s,baz=210,slow=8.6,SNR=4.2
PETK LR LR 16 00 47.4
comp=N,214nm,18.4s,baz=227,slow=36
ULN Ulaanbaatar 46.86 331 *de*P **P** **15 41 40.6 -1.4**
ULN pmax pmax
comp=Z,40nm,1.1s
ULN Ulaanbaatar 46.86 331 P **P** **15 41 42.2 +0.1**
ULN IAmb IAmb 15 41 44.1
comp=Z,32nm,1.0s
PET Petropavlovsk 46.94 17 *e*P **P** **15 41 44.0 +1.7**
PET *e*S **S** **15 48 34.9 +3.3**
PET pmax pmax
comp=Z,200nm,13.0s
SONM Songino Array 47.15 331 P **P** **15 41 44.9 +0.6**
comp=Z,22nm,1.0s,baz=143,slow=7.9,SNR=103
SONM LR LR 16 01 07.5
comp=Z,774nm,21.9s,baz=142,slow=36
LSA Lhasa 48.56 302 P **P** **15 41 56.4 +0.5**
LSA Lhasa 48.56 302 P **P** **15 41 54.7 -1.2**
LSA pmax pmax
comp=Z,21nm,1.1s
LSA Lhasa 48.56 302 *i* P **P** **15 41 56.7 +0.8**
SNR=12
LSA Lhasa 48.56 302 P **P** **15 41 54.7 -1.2**
LSA IAmb IAmb 15 42 10.7
comp=Z,21nm,1.1s
ZAK Zakamensk 50.39 332 *e*P **P** **15 42 08.9 -0.2**
ZAK pmax pmax
comp=Z,33nm,1.2s
TAPN Taplejung 50.98 298 *e*P **P** **15 42 13.8 -0.4**
comp=Z,114nm,1.4s
TLY Talaya 51.12 333 *e*P **P** **15 42 15.5 +1.0**
TLY *e*S **S** **15 49 32.3 +1.8**
TLY *e*SS **SS** **15 53 01.9 -4.0**
TLY *e*SSS SSS 15 54 31.4
TLY pmax pmax
comp=Z,34nm,1.1s
TLY MLR MLR
comp=Z,1μm,14.0s
TLY Talaya 51.12 333 P **P** **15 42 13.6 -0.9**
ODAN Odare 51.16 297 *e*P **P** **15 42 15.2 -0.3**
comp=Z,190nm,1.7s
IRK Irkutsk 51.23 334 *e*P **P** **15 42 16.1 +0.8**
IRK *e* 15 43 34.8
IRK pmax pmax
comp=Z,71nm,1.8s
MA2 Magadan 51.37 8⇓ *e*P **P** **15 42 16.4 +0.2**
MA2 pmax pmax
comp=Z,39nm,1.8s
MA2 Magadan 51.37 8 P **P** **15 42 16.3 0.0**
MA2 IAmb IAmb 15 42 32.8
comp=Z,59nm,1.6s
RAMN Ramite 51.87 297 *e*P **P** **15 42 20.5 -0.3**
comp=Z,75nm,1.4s
BOD Bodaibo 52.18 344 *e*P **P** **15 42 21.2 -1.1**
MOY Mondy 52.32 332 *e*P **P** **15 42 24.0 +0.4**
MOY pmax pmax
comp=Z,90nm,2.8s
JIRN Jiri 52.36 298 *e*P **P** **15 42 24.4 -0.2**
comp=Z,140nm,1.1s
GUN Gumba 52.67 298 *e*P **P** **15 42 26.7 -0.2**
comp=Z,234nm,1.3s
PKIN Phulchoki 53.04 298 *e*P **P** **15 42 28.7 -0.8**
comp=Z,84nm,1.6s
KKN Kakani 53.18 298 *e*P **P** **15 42 29.9 -0.5**
comp=Z,118nm,1.4s
CHLP Challavanipeta 53.29 286 *e*P **P** **15 42 31.6 +0.5**
CHLP IAmb IAmb 15 42 32.2
comp=Z,11nm,1.1s
DMN Daman 53.30 298 *e*P **P** **15 42 30.9 -0.5**
comp=Z,192nm,1.4s
YAK Yakutsk 53.32 355 *c i*P **P** **15 42 29.8 -0.8**
YAK *e**PP **sP** **15 42 39.9 -0.6**
YAK *e* 15 43 36.1
YAK *e* 15 44 38.2
YAK *e*S **S** **15 50 03.2 +3.0**
YAK *e**SS sS 15 50 20.3 +7.9
YAK *e* 15 52 20.6
YAK *e*SS **SKiKP** **15 53 43.5 -2.0**
YAK pmax pmax
comp=Z,14nm,1.0s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK pmax pmax
comp=Z,132nm,3.7s
YAK pmax pmax
comp=N,124nm,3.7s
YAK pmax pmax
comp=E,60nm,3.9s
YAK smax smax
comp=N,409nm,6.9s
YAK smax smax
comp=E,175nm,5.6s
YAK Yakutsk 53.32 355 P **P** **15 42 29.6 -1.0**
YAK IAmb IAmb 15 42 31.5
comp=Z,41nm,1.3s
GKN Gorkha 53.77 298 *e*P **P** **15 42 34.2 -0.6**
comp=Z,158nm,1.3s
AFI Afiamalu 54.58 114 P **P** **15 42 41.6 +0.9**
AFI pmax pmax
comp=Z,38nm,1.3s
AFI Afiamalu 54.58 114 P **P** **15 42 41.5 +0.9**
comp=Z,14nm,0.6s,baz=212,slow=15,SNR=3.1
AFI Afiamalu 54.58 114 IAmb IAmb 15 43 13.0
comp=Z,38nm,1.2s
DANN Dangsing 54.59 298 *e*P **P** **15 42 40.4 -0.5**
comp=Z,207nm,1.5s
KOLN Koldanda 54.64 298 *e*P **P** **15 42 40.8 -0.3**
comp=Z,213nm,1.5s
SEY Seymchan 54.83 8 *e*P **P** **15 42 42.3 +0.7**
PVM Polavaram 55.57 285 *e*P **P** **15 42 47.8 +0.1**
PVM IAmb IAmb 15 42 48.4
comp=Z,6.0nm,0.9s
WMQ Urumqi 55.84 318⇑ *i*P **P** **15 42 50.1 +0.8**
WMQ sP sP 15 43 00.5 +0.8
WMQ S **S** **15 50 32.5 -2.4**
WMQ pmax pmax
comp=Z,41nm,1.7s
WMQ pmax pmax
comp=Z,400nm,5.7s
WMQ LR LR
comp=Z,330nm,15.5s
WMQ LR LR
comp=Z,270nm,13.7s
WMQ LR LR
comp=Z,460nm,19.5s
WMQ Urumqi 55.84 318 P **P** **15 42 49.1 -0.2**
WMQ pmax pmax
comp=Z,59nm,1.0s
WMQ Urumqi 55.84 318 P **P** **15 42 49.1 -0.2**
ADK Adak 56.36 32 P **P** **15 42 52.2 -0.6**
ADK pmax pmax
comp=Z,125nm,1.6s
ADK Adak 56.36 32 P **P** **15 42 52.2 -0.6**
MYLAV Mylavaram 56.51 284 *e*P **P** **15 42 54.7 +0.3**
MYLAV IAmb IAmb 15 42 55.3
comp=Z,8.0nm,1.1s
PALK Pallekele 56.92 273 P **P** **15 42 57.3 -0.2**
GGR Gangavaram 56.94 285 *e*P **P** **15 42 57.4 -0.1**
GGR IAmb IAmb 15 42 58.0
comp=Z,14nm,1.1s
ADKI Addanki 57.15 283 *e*P **P** **15 42 59.3 +0.3**
ADKI IAmb IAmb 15 42 59.8
comp=Z,9.4nm,1.2s
NJS Nagarjunasagar 57.78 284 *e*P **P** **15 43 03.3 -0.2**
NJS IAmb IAmb 15 43 03.8
comp=Z,9.5nm,1.1s
RPR Rampur 57.81 287 *e*P **P** **15 43 03.6 0.0**
RPR IAmb IAmb 15 43 04.0
comp=Z,12nm,1.1s
SRLM Srisailam 58.19 283 *e*P **P** **15 43 05.9 -0.4**
SRLM IAmb IAmb 15 43 06.5
comp=Z,10nm,1.0s
HYB Hyderabad 58.50 285 *i* P **P** **15 43 08.0 -0.6**
HYBB Hyderabad (bro 58.51 285 *e*P **P** **15 43 08.2 -0.4**
HYBB IAmb IAmb 15 43 08.6
comp=Z,19nm,1.3s

SRSP Sriramsagar 58.72 287 *e*P **P** **15 43 09.0 -1.0**
SRSP IAmb IAmb 15 43 10.0
comp=Z,13nm,1.4s
URV Uravakonda 59.78 282 *e*P **P** **15 43 17.2 -0.2**
URV IAmb IAmb 15 43 17.8
comp=Z,12nm,0.9s
KLRI Killari 60.37 286 *e*P **P** **15 43 20.6 -0.8**
KLRI IAmb IAmb 15 43 21.0
comp=Z,19nm,1.3s
MK31 Makanchi Array 60.47 319 *i* P **P** **15 43 21.9 +0.3**
MK31 Makanchi Array 60.47 319 P **P** **15 43 21.6 -0.1**
MKAR Makanchi Array 60.47 319 P **P** **15 43 22.0 +0.3**
MKAR Makanchi Array 60.47 319 P **P** **15 43 22.0 +0.3**
comp=Z,29nm,0.9s,baz=108,slow=8.2,SNR=196
MKAR LR LR 16 10 27.1
comp=Z,607nm,18.7s,baz=90,slow=37
MAKZ Makanchi 60.68 319 P **P** **15 43 23.1 0.0**
MAKZ pmax pmax
comp=Z,61nm,1.1s
MAKZ Makanchi 60.68 319 P **P** **15 43 23.1 0.0**
ZAA0 Zalesovo Array 61.76 327 P **P** **15 43 28.6 -1.5**
ZAA0 IAmb IAmb 15 43 30.3
comp=Z,18nm,1.2s
ZALV Zalesovo Beam 61.76 327 P **P** **15 43 29.7 -0.4**
comp=Z,7.5nm,0.8s,baz=94,slow=4.9,SNR=26
ZALV LR LR 16 11 35.7
comp=Z,432nm,18.5s,baz=120,slow=37
PRZ Przheval'sk 61.86 314 P **P** **15 43 31.6 +0.3**
PRZ pmax pmax
comp=Z,65nm,1.1s
PRZ Przheval'sk 61.86 314 P **P** **15 43 31.6 +0.3**
KDJ Kajisay 62.65 313 P **P** **15 43 36.3 -0.4**
KDJ pmax pmax
comp=Z,21nm,1.2s
KDJ Kajisay 62.65 313 P **P** **15 43 36.2 -0.4**
KDJ IAmb IAmb 15 43 38.0
comp=Z,21nm,1.1s
TIXI Tiksi 62.88 357 *e*P **P** **15 43 35.5 -1.9**
TIXI pmax pmax
comp=Z,10.0nm,1.4s
TIXI Tiksi 62.88 357 P **P** **15 43 35.7 -1.7**
TIXI IAmb IAmb 15 43 54.0
comp=Z,20nm,1.4s
POO Poona 62.97 286 *e*P **P** **15 43 36.0 -3.0**
KSH Kashi 62.99 310⇑ *i*P **P** **15 43 40.6 +1.7**
KSH sP pwP 15 43 51.8 -0.6
KSH PP **PP** **15 46 03.8 +6.2**
KSH S **S** **15 52 02.1 -5.6**
KSH ScS **SKSac** **15 53 25.1 -5.0**
KSH pmax pmax
comp=Z,44nm,0.9s
KSH pmax pmax
comp=Z,860nm,6.6s
KSH LR LR
comp=Z,350nm,6.9s
KSH LR LR
comp=Z,490nm,5.1s
KSH LR LR
comp=Z,400nm,6.3s
ULHL Ulahol 63.35 313 P **P** **15 43 41.9 +0.6**
SNR=9.7
NRN Naryn 63.36 312 P **P** **15 43 40.8 -0.7**
NRN pmax pmax
comp=Z,24nm,1.3s
NRN Naryn 63.36 312 P **P** **15 43 40.8 -0.7**
NRN IAmb IAmb 15 43 42.7
comp=Z,24nm,1.2s
TKM2 Tokmak 2 63.97 313 P **P** **15 43 43.1 -2.3**
TKM2 Tokmak 2 63.97 313 P **P** **15 43 45.8 +0.4**
SNR=11
KZA Kyzart 64.04 312 P **P** **15 43 47.4 +1.2**
SNR=25
KURK Kurchatov 64.06 322 *e*P **P** **15 43 44.3 -1.2**
KURK pmax pmax
comp=Z,48nm,1.1s
KURK Kurchatov 64.06 322 P **P** **15 43 45.2 -0.3**
NIL Nilore 64.27 303 P **P** **15 43 47.2 -0.1**
NIL pmax pmax
comp=Z,104nm,0.9s
NIL Nilore 64.27 303 P **P** **15 43 47.2 -0.1**
KBK Karagaybulak 64.38 313 P **P** **15 43 48.6 +0.6**
SNR=8.5
UCH Uchtor 64.61 313 P **P** **15 43 50.8 +0.9**
SNR=23
AAK Ala-Archa 64.70 313 *e*P **P** **15 43 50.3 +0.1**
AAK pmax pmax
comp=Z,5.0nm,1.0s
AAK Ala-Archa 64.70 313 *i* P **P** **15 43 50.3 +0.1**
SNR=7.4
AAK Ala-Archa 64.70 313 P **P** **15 43 49.6 -0.6**
USP Ospenovka 64.83 314 P **P** **15 43 51.0 +0.2**
SNR=9.1
AML Almayashu 65.19 312 P **P** **15 43 54.5 +0.8**
SNR=22
EKS2 Erkin-Say 65.23 313 P **P** **15 43 54.7 +1.1**
SNR=8.5
BTK Batken 67.00 310 P **P** **15 44 04.6 -0.3**
BTK pmax pmax
comp=Z,100nm,2.0s
BTK Batken 67.00 310 P **P** **15 44 04.5 -0.3**
GAR Garm 67.25 308 P **P** **15 44 05.6 -1.0**
KK31 Karatay Array 67.67 313 *i* P **P** **15 44 08.7 -0.3**
KK31 Karatay Array 67.67 313 P **P** **15 44 08.6 -0.3**
KKAR Karatay Array 67.67 313 P **P** **15 44 08.7 -0.3**
KKAR pmax pmax
comp=Z,101nm,2.0s
KKAR Karatay Array 67.67 313 P **P** **15 44 08.7 -0.3**
KBL Kabul 67.83 304 P **P** **15 44 08.9 -1.5**
KBL pmax pmax
comp=Z,19nm,1.1s
KBL Kabul 67.83 304 P **P** **15 44 08.9 -1.5**
KBL IAmb IAmb 15 44 11.1
comp=Z,19nm,1.1s
CHGR Chuyangaron 68.11 308 P **P** **15 44 11.6 -0.4**
BRVK Borovoye 69.66 323 P **P** **15 44 20.9 -0.3**
BRVK pmax pmax
comp=Z,40nm,1.1s
BRVK Borovoye 69.66 323 P **P** **15 44 20.9 -0.3**
RDOG Red Dog Mine 70.39 20 P **P** **15 44 25.7 +0.3**
HRA Herat 73.43 303 P **P** **15 44 44.2 -0.4**
HRA IAmb IAmb 15 44 45.8
comp=Z,24nm,1.1s
KTH Kantishna Hill 73.52 26 P **P** **15 44 44.4 +0.1**
KTH IAmb IAmb 15 44 46.0
comp=Z,51nm,1.2s
BPAW Bear Paw Mtn. 73.62 26 P **P** **15 44 45.2 +0.4**
BPAW IAmb IAmb 15 44 47.0
comp=Z,51nm,1.2s
TRF Thorofare Moun 73.77 26 P **P** **15 44 45.7 -0.3**
TRF IAmb IAmb 15 45 07.6
comp=Z,36nm,1.3s
MLY Manley 73.94 25 P **P** **15 44 47.1 +0.3**
KNK Knik Glacier 74.20 29 P **P** **15 44 48.5 +0.2**
KNK IAmb IAmb 15 45 02.4
comp=Z,36nm,1.2s
SML Sawmill 74.33 28 P **P** **15 44 49.2 +0.1**
RND Reindeer 74.40 27 P **P** **15 44 49.0 -0.5**
RND pmax pmax
comp=Z,39nm,1.2s
RND Reindeer 74.40 27 P **P** **15 44 49.0 -0.5**
RND IAmb IAmb 15 44 50.6
comp=Z,39nm,1.2s
MCK McKinley 74.42 26 P **P** **15 44 49.2 -0.4**
MCK pmax pmax
comp=Z,40nm,1.0s
MCK McKinley 74.42 26 P **P** **15 44 49.2 -0.4**
MCK IAmb IAmb 15 44 51.0
comp=Z,40nm,1.0s
COLD Coldfoot 74.67 23 P **P** **15 44 50.9 0.0**
SCM Sheep Creek Mo 74.80 28 P **P** **15 44 51.6 -0.2**
SCM Sheep Creek Mo 74.80 28 P **P** **15 44 51.6 -0.2**
WRH Wood River Hil 74.93 26 P **P** **15 44 52.7 +0.2**
WRH IAmb IAmb 15 44 53.5
comp=Z,25nm,1.2s
DHY Denali Highway 74.99 27 P **P** **15 44 54.2 +1.2**
DHY IAmb IAmb 15 44 55.0
comp=Z,25nm,1.2s
CCB Clear Creek Bu 75.09 25 P **P** **15 44 53.0 -0.3**
CCB IAmb IAmb 15 44 54.3
comp=Z,22nm,1.2s
COLA College 75.11 25⇓ *e*P **P** **15 44 53.1 -0.3**
COLA pmax pmax
comp=Z,5.0nm,1.1s
POKR Poker Plat Res 75.33 25 P **P** **15 44 55.9 +1.1**
baz=260

HDA Harding Lake 75.41 26 P **P** **15 44 55.0 -0.2**
HDA IAmb IAmb 15 45 08.0
comp=Z,30nm,1.6s
HDA Harding Lake 75.41 26 P **P** **15 44 55.1 -0.2**
baz=260
IL31 75.50 25 P **P** **15 44 54.3 -1.3**
ILAR Eielson Array 75.50 25 P **P** **15 44 55.0 -0.7**
ILAR Eielson Array 75.50 25 P **P** **15 44 55.0 -0.7**
comp=Z,3.1nm,0.8s,baz=254,slow=6.0,SNR=26
ILAR LR LR 16 14 45.0
comp=Z,177nm,20.9s,baz=168,slow=33
AB31 Akbulak array 75.60 319 *i* P **P** **15 44 56.0 -0.6**
ABKAR Akbulak array 75.60 319 P **P** **15 44 56.0 -0.6**
ABKAR IAmb IAmb 15 44 57.7
comp=Z,21nm,1.1s
SVE Sverdlovsk 75.74 326⇓ *e*P **P** **15 44 57.3 +0.1**
SVE pmax pmax
comp=Z,43nm,1.8s
PPT Papeete 76.02 111 LR LR 16 16 08.7
comp=Z,221nm,18.4s,baz=271,slow=34
PPT2 Papeete2 76.03 111 *e*S **S** **15 54 42.8 +1.1**
comp=Z,310nm,26.5s
PPT2 Papeete2 76.03 111 *e*LQ LQ 16 05 17.0
comp=Z,330nm,24.0s
PPT2 *e*LR LR 16 08 23.3
comp=Z,698nm,26.0s,baz=284
RIDG Independent Ri 76.22 26 P **P** **15 44 59.5 -0.5**
RIDG IAmb IAmb 15 45 01.6
comp=Z,50nm,1.4s
GLB Gilahina Butte 76.41 29 P **P** **15 45 01.1 +0.1**
GLB IAmb IAmb 15 45 03.2
comp=Z,26nm,1.1s
FYU Fort Yukon 76.47 24 P **P** **15 45 01.7 +0.5**
DOT Dot Lake 76.55 27 P **P** **15 45 01.6 -0.2**
DOT IAmb IAmb 15 45 22.0
comp=Z,51nm,1.8s
SCRK Sand Creek 76.63 26 P **P** **15 45 02.3 -0.1**
SCRK IAmb IAmb 15 45 03.2
comp=Z,50nm,1.8s
GEYT Alibeck 76.75 307 P **P** **15 45 03.9 +0.5**
comp=Z,8.2nm,1.0s,baz=83,slow=3.4,SNR=24
GEYT LR LR 16 21 05.3
comp=Z,148nm,21.0s,baz=105,slow=38
GYA0B ALIBECK ARRAY 76.75 307 P **P** **15 45 03.3 -0.2**
GYA0B IAmb IAmb 15 45 05.6
comp=Z,41nm,1.3s
ARU Arti 76.86 326 *c i*P **P** **15 45 02.9 -0.7**
ARU 15 47 54.8
ARU S **S** **15 54 50.5 +1.2**
ARU SS **SS** **15 59 48.4 +2.8**
ARU pmax pmax
comp=Z,42nm,1.9s
ARU MLR MLR
comp=Z,894nm,24.0s
ARU Arti 76.86 326 P **P** **15 45 02.1 -1.5**
TBI Tubuai 77.60 116 *e*S **S** **15 55 03.3 +4.8**
comp=Z,824nm,30.5s
TBI Tubuai 77.60 116 *e*LR LR 16 09 06.3
comp=Z,1μm,34.0s,baz=290
BANOM Banah 78.91 295 P **P** **15 45 16.2 +0.5**
SHME Shamm 79.04 295 P **P** **15 45 16.0 -0.4**
UOSS Minazif 79.07 294 P **P** **15 45 15.9 -0.7**
HATD Hatta, Dubai 79.15 294 P **P** **15 45 16.6 -0.3**
ASHO Ashiyiah 79.23 293 P **P** **15 45 17.1 -0.4**
NAZ Nazwa, Dubai 79.56 294 P **P** **15 45 18.3 -0.9**
ALNE Al Ain 79.56 293 *i* P **P** **15 45 19.5 +0.3**
SNR=6.4
EPYK Eagle Plains 79.85 24 P **P** **15 45 19.7 -0.3**
EPYK IAmb IAmb 15 45 22.3
comp=Z,42nm,1.5s
EPYK Eagle Plains 79.85 24 P **P** **15 45 20.3 +0.3**
baz=269
ASUD Al Ashush, Dub 79.89 293 P **P** **15 45 20.9 -0.1**
SKAG Skagway 80.53 31 P **P** **15 45 22.7 -1.0**
SKAG IAmb IAmb 15 45 26.8
comp=Z,73nm,1.8s
TAOE Nuku Hiva Isla 83.20 100 *e*LR LR 16 11 44.7
comp=Z,1μm,25.6s
PRGR Permogore 83.40 331 *e*P **P** **15 45 36.8 -2.0**
PRGR pmax pmax
comp=Z,39nm,1.0s
C36M Paulatuk 84.38 21 P **P** **15 45 43.2 -0.4**
C36M IAmb IAmb 15 45 44.4
comp=Z,22nm,1.2s
C36M Paulatuk 84.38 21 P **P** **15 45 43.6 +0.1**
baz=280
AKT Akhty 84.49 311 *e*P **P** **15 45 44.8 -0.2**
AKT *e* 15 48 58.6
AKT pmax pmax
comp=Z,35nm,1.4s
GROC Groznyy 85.69 313 *e*P **P** **15 45 49.3 -1.4**
GROC *e* 15 49 07.4
GROC pmax pmax
comp=Z,24nm,1.1s
TMCR Tamitsa 86.40 334 *e*P **P** **15 45 52.1 -1.7**
TMCR pmax pmax
comp=Z,15nm,1.0s
GNI Garni 86.93 310 *de*P **P** **15 45 56.0 -1.1**
GNI pmax pmax
comp=Z,51nm,1.7s
GNI Garni 86.93 310 P **P** **15 45 57.8 +0.7**
GNI Garni 86.93 310 P **P** **15 45 55.8 -1.4**
ZEI Tsey 87.12 313 *e*P **P** **15 45 56.0 -2.1**
ZEI pmax pmax
comp=Z,11nm,1.1s
APA Apatity 87.35 338⇓ *i*P **P** **15 46 01.8 +3.4**
APA pmax pmax
comp=Z,5.0nm,1.0s
APA MLR MLR
comp=Z,800nm,17.0s
GOF Gofitskoye 87.35 315⇑ *e*P **P** **15 45 59.3 +0.4**
VNDA Vanda 87.39 175 P **P** **15 45 58.6 +0.4**
comp=Z,2.2nm,0.9s,baz=310,slow=12,SNR=3.6
VNDA LR LR 16 22 20.4
comp=Z,260nm,21.7s,baz=346,slow=34
AKH Akhalkalaki 87.66 311 P **P** **15 46 00.3 -0.4**
AKH pmax pmax
comp=Z,16nm,1.1s
AKH Akhalkalaki 87.66 311 P **P** **15 46 00.3 -0.4**
AKH IAmb IAmb 15 46 03.7
comp=Z,16nm,1.1s
KBZ Khabaz 87.69 314 *e*P **P** **15 46 00.4 -0.1**
KBZ Khabaz 87.69 314 P **P** **15 46 00.5 +0.1**
comp=Z,4.6nm,1.2s,baz=146,slow=13,SNR=5.2
KBZ LR LR 16 27 21.6
comp=Z,295nm,21.5s,baz=74,slow=37
KIV Kislovodsk 87.80 314 *e*P **P** **15 45 59.3 -1.9**
KIV *e*SS SS 16 02 27.2 -1.7
KIV pmax pmax
comp=Z,17nm,1.0s
KIV MLR MLR
comp=Z,284nm,20.0s
KIV Kislovodsk 87.80 314 P **P** **15 46 01.0 -0.1**
MOS Moscow 88.56 326 *e*P **P** **15 46 01.8 -2.6**
MOS MLR MLR
comp=Z,700nm,22.0s
RAYN Ar Rayn 88.94 294 P **P** **15 46 06.1 -0.8**
RAYN pmax pmax
comp=Z,20nm,1.1s
RAYN Ar Rayn 88.94 294 *i* P **P** **15 46 06.5 -0.4**
SNR=15
RAYN Ar Rayn 88.94 294 P **P** **15 46 06.1 -0.8**
RAYN IAmb IAmb 15 46 08.5
comp=Z,20nm,1.1s
D03D Eldon 89.26 42 P **P** **15 46 10.1 +2.2**
baz=282
OBN Obninsk 89.30 326 *e*P **P** **15 46 06.2 -1.6**
OBN *e* 15 49 35.2
OBN *e*PPP PPP 15 51 32.6
OBN pmax pmax
comp=Z,11nm,1.3s
OBN MLR MLR
comp=Z,315nm,17.0s
ARCES ARCESS Array B 89.37 341 P **P** **15 46 07.7 -0.2**
comp=Z,5.1nm,1.0s,baz=66,slow=5.9,SNR=6.3
ARCES LR LR 16 30 07.1
comp=Z,379nm,20.2s,baz=49,slow=38
YKA Yellowknife Ar 89.89 26 P **P** **15 46 10.6 +0.1**
comp=Z,1.8nm,0.8s,baz=291,slow=5.3,SNR=21
YKA LR LR 16 28 02.2
comp=Z,48nm,18.8s,baz=0.0,slow=37
H04A Detroit Lake 90.50 45 P **P** **15 46 12.6 -1.2**
H04A IAmb IAmb 15 46 16.2
comp=Z,33nm,1.7s
J04D Umpqua Nationa 90.89 46 P **P** **15 46 16.8 +1.0**

	baz=283							
O02D	**Mt. Diablo Mer**	**91.07**	**49**	P		**P**	**15 46 19.0**	**+2.4**
	baz=283							
WDC	**Whiskeytown Da**	**91.17**	**49**	P		**P**	**15 46 17.2**	**+0.3**
WDC				pmax		pmax		
	comp=Z,26nm,1.8s							
WDC	**Whiskeytown Da**	**91.17**	**49**	P		**P**	**15 46 17.1**	**+0.3**
WDC				IAmb		IAmb	15 46 20.0	
	comp=Z,26nm,1.8s							
O03E	**Paynes Creek**	**91.78**	**49**	P		**P**	**15 46 21.0**	**+1.1**
	baz=283							
ORV	**Oroville**	**92.17**	**50**	P		**P**	**15 46 21.4**	**-0.2**
ORV				pmax		pmax		
	comp=Z,9.0nm,0.8s							
ORV	**Oroville**	**92.17**	**50**	P		**P**	**15 46 21.4**	**-0.2**
ORV				IAmb		IAmb	15 47 21.9	
	comp=Z,8.6nm,0.8s							
FINES	**FINESS Array B**	**92.46**	**334**	P		**P**	**15 46 21.1**	**-1.4**
	comp=Z,5.3nm,0.9s,baz=27,slow=9.0,SNR=7.1							
FINES				LR		LR	16 31 20.4	
	comp=Z,294nm,19.9s,baz=63,slow=38							
MOD	**Modoc Plateau**	**92.50**	**47**	P		**P**	**15 46 22.5**	**-0.8**
MOD				IAmb		IAmb	15 46 26.0	
	comp=Z,21nm,1.7s							
AFDM	**Forest Hills D**	**92.72**	**50**	P		**P**	**15 46 24.4**	**+0.2**
MAW	**Mawson**	**92.72**	**202**	P		**P**	**15 46 23.3**	**0.0**
	comp=Z,2.5nm,0.9s,baz=50,slow=9.7,SNR=3.6							
MAW				LR		LR	16 27 12.3	
	comp=Z,145nm,18.3s,baz=62,slow=35							
E09A	**Wood Farm, Sta**	**92.79**	**42**	P		**P**	**15 46 24.8**	**+0.5**
E09A				IAmb		IAmb	15 46 36.1	
	comp=Z,13nm,1.3s							
DAG	**Danmarks Havn**	**93.35**	**355**	*i* P		**P**	**15 46 25.2**	**-1.0**
DAG				pmax		pmax		
	comp=Z,11nm,1.0s							
DAG	**Danmarks Havn**	**93.35**	**355**	*i* P		**P**	**15 46 25.2**	**-1.0**
	comp=Z,11nm,1.0s							
BMO	**Blue Mountains**	**93.82**	**44**	P		**P**	**15 46 27.7**	**-1.5**
BMO				pmax		pmax		
	comp=Z,19nm,1.9s							
BMO	**Blue Mountains**	**93.82**	**44**	P		**P**	**15 46 27.7**	**-1.5**
BMO				IAmb		IAmb	15 46 31.5	
	comp=Z,19nm,1.9s							
AKASG	**Malin Array Be**	**94.87**	**323**	LR		LR	16 31 09.1	
	comp=Z,266nm,20.7s,baz=85,slow=37							
MFID	**Camas Ranch**	**95.26**	**45**	P		**P**	**15 46 35.7**	**-0.2**
BRTR	**Keskin Array B**	**95.34**	**311**	P		**P**	**15 46 35.6**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=79,slow=7.5,SNR=3.3							
BRTR				LR		LR	16 33 27.1	
	comp=Z,69nm,21.9s,baz=35,slow=38							
MPMC	**Manual Prospec**	**96.13**	**52**	P		**P**	**15 46 40.8**	**+0.7**
	baz=286							
R11A	**Troy Canyon, C**	**96.94**	**50**	P		**P**	**15 46 45.4**	**+1.7**
	baz=287							
NOA	**NORSAR Array B**	**98.86**	**337**	LR		LR	16 34 04.8	
	comp=Z,231nm,21.3s,baz=50,slow=37							
PDAR	**Pinedale Array**	**99.80**	**44**	LR		LR	16 27 11.0	
	comp=Z,105nm,19.8s,baz=320,slow=32							
VYHS	**Vyhne**	**101.93**	**324**	*e*P		**Pdif**	**15 47 03.3**	**-2.3**
CLL	**Collm**	**103.70**	**328**	*e*PP		**PP**	**15 51 30.0**	**+0.5**
CLL				*e*(PS)			16 00 29.0	
CLL				*e*PPS		PPS	16 01 35.0	
CLL				*e*			16 04 54.0	
CLL				*e*SS		SS	16 06 12.0	-1.3
CLL				*e*SSS		SSS	16 10 06.0	
CLL				Lm		MLR	16 38 00.0	
	comp=Z,700nm,18.9s							
TORD	**Torodi Ar. Bea**	**131.55**	**296**	PKP		**PKPdf**	**15 52 25.6**	**+0.2**
	comp=Z,1.0nm,0.9s,baz=31,slow=1.8,SNR=5.4							
PLCA	**Paso Flores**	**139.36**	**146**	PKP		**PKiKP**	**15 52 41.0**	**-0.6**
	comp=Z,2.6nm,0.9s,baz=266,slow=4.0,SNR=3.4							
YOTC	**Yotoco, Valle**	**143.37**	**71**	*e*P		PKPbc	15 52 43.9	-0.2
POPC	**Popayan, Colom**	**143.38**	**73**	*e*P		PKPbc	15 52 45.2	+0.6
GUY2C	**Guyana, Caldas**	**143.67**	**68**	*e*P		**PKPdf**	**15 52 47.0**	**-1.3**
ATAH	**Atahualpa**	**143.71**	**90**	PKP		**PKPdf**	**15 52 48.0**	**-0.3**
	comp=Z,16nm,0.9s,baz=272,slow=5.7,SNR=12							
NORC	**Norcasia**	**143.99**	**68**	*e*P		PKPbc	15 52 46.4	+0.1
PEL	**Peldehue**	**144.09**	**136**	PKIKP		**PKPab**	**15 52 45.5**	**0.0**
PEL	**Peldehue**	**144.09**	**136**			**PKPab**	**15 52 45.5**	**0.0**
OCAC	**Ocana**	**144.22**	**62**	*e*P		**PKPdf**	**15 52 48.5**	**-0.3**
ORTC	**Ortega, Tolima**	**144.26**	**70**	*e*P		PKPbc	15 52 47.3	+0.2
BETC	**Betania**	**144.50**	**72**	*e*P		**PKPdf**	**15 52 49.6**	**+0.4**
FLOC	**Florencia**	**144.65**	**74**	*e*P		**PKPdf**	**15 52 50.2**	**+0.8**
FLOC	**Florencia**	**144.65**	**74**			PKPbc	15 52 48.2	0.0
SPBC	**San Pablo de B**	**144.68**	**67**	*e*P		PKPbc	15 52 48.5	+0.1
ROSC	**El Rosal**	**144.78**	**68**	PKP		PKPbc	15 52 49.3	+0.2
	comp=Z,17nm,0.3s,baz=36,slow=5.0,SNR=9.2							
BARC	**Barichara**	**145.09**	**65**	*e*P		**PKPdf**	**15 52 50.6**	**+0.2**
PAMC	**Pamplona, Colo**	**145.18**	**63**	*e*P		**PKPdf**	**15 52 51.0**	**+0.1**
CHIC	**Chingaza**	**145.40**	**68**	*e*P		**PKPab**	**15 52 51.9**	**+0.6**
NNA	**Nana**	**145.41**	**98**	PKPbc		**PKPbc**	**15 52 50.2**	**-0.5**
	comp=Z,4.5nm,0.2s,baz=235,slow=5.9,SNR=6.2							
NNA	**Nana**	**145.41**	**98**			**PKPbc**	**15 52 49.7**	**-1.0**
RUSC	**La Rusia**	**145.47**	**66**	*e*P		**PKPbc**	**15 52 51.4**	**0.0**
RUSC	**La Rusia**	**145.47**	**66**			**PKPdf**	**15 52 50.1**	**-1.3**
VILC	**Villavicencio,**	**145.63**	**69**	*e*P		**PKPab**	**15 52 53.0**	**+1.1**
SDV	**Santo Domingo**	**146.22**	**59**	PKPbc	PKPdf	**PKPdf**	**15 52 51.5**	**-0.8**
	comp=Z,6.9nm,1.0s,baz=175,slow=1.1,SNR=7.1							
SDV	**Santo Domingo**	**146.22**	**59**	PKPdf		**PKPdf**	**15 52 51.1**	**-1.2**
CFA	**Coronel Fontan**	**146.67**	**136**	PKPbc		**PKPbc**	**15 52 54.0**	**-0.1**
	comp=Z,7.5nm,0.7s,baz=250,slow=3.8,SNR=12							
GO03	**Copiap**	**147.38**	**128**			**PKPdf**	**15 52 54.3**	**+0.5**
PB11	**IPOC Station P**	**151.00**	**115**			**PKPbc**	**15 53 04.4**	**-1.3**
MNMC	**Minye Minye**	**151.23**	**114**			**PKiKP**	**15 53 06.6**	**-0.3**
GO01	**Chusmiza**	**151.44**	**115**			**PKiKP**	**15 53 07.8**	**+0.3**
LPAZ	**La Paz**	**153.30**	**108**	PKP		**PKPdf**	**15 53 04.9**	**+1.0**
	comp=Z,1.5nm,1.0s,baz=9.9,slow=2.4,SNR=5.3							
LPAZ				PKPbc		**PKiKP**	**15 53 12.7**	**+1.1**
	comp=Z,5.9nm,0.9s,baz=322,slow=3.6,SNR=11							
CPUP	**Villa Florida**	**157.30**	**141**	PKPab		**PKPab**	**15 53 38.0**	**-1.4**
	comp=Z,1.6nm,0.8s,baz=295,slow=19,SNR=1.6							
SIV	**San Ignacio**	**159.93**	**112**	PKPab		**PKPab**	**15 53 51.3**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=282,slow=9.3,SNR=2.7							

*IDC **20** 15:39:49.1±9.7,35°.87N×20°.54E,h0km,mb3.7/3, mb1 3.6/4,mb1mx3.3/39,mbtmp3.5/4,ML2.8/1,Error ellipse: s-maj=175.4km s-min=45.5km az=28.0*
*ATH **20** 15:40:02.2,37°.01N×21°.44E,h15km±1km,ML3.1/19,Error ellipse: s-maj=1.6km s-min=0.9km az=45.0*
*THE **20** 15:40:03.2,37°.06N×21°.47E,h0km±1km,ML3.1/11,Error ellipse: s-maj=2.2km s-min=0.7km az=245.0*

ISC 20 15:40:02.9±1.0,37°.04N±0°.03×21°.45E±0°.03,h14km±7km, n69,σ0°.87/99,mb3.7/3,Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PYL	**PYLOS**	**0.27**	**122**	P		**Pg**	**15 40 08.7**	**0.0**
PYL				S		**Sg**	**15 40 12.7**	**+0.1**
	5μm,0.2s							
PYL	**PYLOS**	**0.27**	**122**	P		**Pg**	**15 40 08.7**	**0.0**
PYL				S		**Sg**	**15 40 12.8**	**+0.2**
PYL				AML		AML	15 40 13.5	
	comp=E,8093μm,0.2s							
PYL				AML		AML	15 40 13.7	
	comp=N,11119μm,0.2s							
ITM	**Ithomi**	**0.40**	**70**	P		**Pg**	**15 40 10.2**	**-0.8**
ITM				S		**Sg**	**15 40 15.7**	**-0.8**
	comp=N,7μm,0.2s							
ITM	**Ithomi**	**0.40**	**70**	P		**Pg**	**15 40 10.1**	**-0.8**
ITM				S		**Sg**	**15 40 16.3**	**-0.2**
ITM				AML		AML	15 40 16.6	
	comp=N,18738μm,0.2s							
ITM				AML		AML	15 40 16.6	
	comp=E,9973μm,0.2s							
KLMT	**Kalamata**	**0.49**	**88**	P		**Pg**	**15 40 12.2**	**-0.3**
KLMT				S		**Sb**	**15 40 19.5**	**-0.6**
	comp=E,5μm,0.5s							
AMT	**Artemida-Makis**	**0.53**	**23**	P		**Pg**	**15 40 12.7**	**-0.7**
AMT				S		**Sg**	**15 40 20.6**	**+0.1**
	comp=E,8μm,0.6s							
AMT	**Artemida-Makis**	**0.53**	**23**	P		**Pg**	**15 40 12.6**	**-0.7**
AMT				S		**Sg**	**15 40 20.7**	**+0.2**
AMT				AML		AML	15 40 25.8	
	comp=E,12176μm,0.7s							
AMT				AML		AML	15 40 26.1	
	comp=N,17395μm,0.4s							
DYR	**Agios Nikonas**	**0.76**	**111**	P		**Pg**	**15 40 17.5**	**-0.2**
DYR				S		**Sb**	**15 40 27.7**	**-0.4**
	comp=N,605nm,0.4s							
DYR	**Agios Nikonas**	**0.76**	**111**	P		**Pg**	**15 40 17.5**	**-0.2**
DYR				S		**Sb**	**15 40 27.8**	**-0.2**
DYR				AML		AML	15 40 30.2	
	comp=N,1384μm,0.3s							
DYR				AML		AML	15 40 30.3	
	comp=E,950μm,0.5s							
VLX	**Vlachokerasia**	**0.81**	**66**	P		**Pg**	**15 40 17.4**	**-1.2**
VLX				S		**Sg**	**15 40 29.4**	**+0.1**
	comp=E,6μm,0.6s							
VLX	**Vlachokerasia**	**0.81**	**66**	P		**Pg**	**15 40 17.5**	**-1.2**
VLX				S		**Sb**	**15 40 29.6**	**0.0**
VLX				AML		AML	15 40 32.5	
	comp=E,14181μm,0.6s							
VLX				AML		AML	15 40 33.1	
	comp=N,8255μm,0.6s							
DRO	**Drossia**	**0.93**	**13**	P		**Pb**	**15 40 20.5**	**-0.3**
DRO	**Drossia**	**0.93**	**13**	P		**Pb**	**15 40 20.3**	**-0.5**
RLS	**Riolos of Patr**	**1.01**	**1**	P		**Pb**	**15 40 22.0**	**-0.2**
RLS	**Riolos of Patr**	**1.01**	**1**	P		**Pb**	**15 40 21.9**	**-0.2**
RLS				S		**Sn**	**15 40 37.2**	**+0.5**
RLS				AML		AML	15 40 44.2	
	comp=E,1300μm,0.5s							
RLS				AML		AML	15 40 47.1	
	comp=N,1706μm,0.8s							
VLMS	**Volimes, Zakyn**	**1.04**	**323**	P		**Pb**	**15 40 22.5**	**-0.3**
VLMS				S		**Sg**	**15 40 37.4**	**+0.7**
VLMS				AML		AML	15 40 46.5	
	comp=E,1973μm,0.4s							
VLMS				AML		AML	15 40 52.4	
	comp=N,2263μm,0.5s							
KLV	**Kalavryta, Ach**	**1.14**	**29**	P		**Pb**	**15 40 23.2**	**-1.3**
KLV				S		**Sn**	**15 40 41.4**	**+1.4**
	comp=N,485nm,0.4s							
KLV	**Kalavryta, Ach**	**1.14**	**29**	P		**Pb**	**15 40 23.7**	**-0.7**
KLV				S		**Sn**	**15 40 41.3**	**+1.3**
KLV				AML		AML	15 40 45.3	
	comp=N,783μm,0.4s							
KLV				AML		AML	15 40 46.2	
	comp=E,1138μm,0.5s							
KFL	**Anninata**	**1.19**	**334**	P		**Pn**	**15 40 24.8**	**-0.3**
VLI	**Veliai**	**1.23**	**105**	P		**Pb**	**15 40 26.1**	**+0.2**
VLI	**Veliai**	**1.23**	**105**	P		**Pb**	**15 40 26.1**	**+0.2**
VLI				S		**Sn**	**15 40 41.9**	**-0.2**
VLI				AML		AML	15 40 50.4	
	comp=N,969μm,0.4s							
VLI				AML		AML	15 40 51.7	
	comp=E,1900μm,0.6s							
LAKA	**Lakka**	**1.27**	**19**	P		**Pn**	**15 40 25.9**	**-0.3**
LAKA				S		**Sg**	**15 40 44.8**	**+1.0**
	comp=E,525nm,0.5s							
LAKA	**Lakka**	**1.27**	**19**	P		**Pn**	**15 40 25.9**	**-0.3**
LAKA				S		**Sg**	**15 40 45.4**	**+1.5**
LAKA				AML		AML	15 40 48.0	
	comp=E,823μm,0.5s							
LAKA				AML		AML	15 40 49.9	
	comp=N,1382μm,0.5s							
ALIK	**Aliki, Aigiali**	**1.32**	**23**	P		**Pb**	**15 40 28.1**	**+0.6**
ALIK				S		**Sg**	**15 40 47.5**	**+1.9**
VLS	**Valsamata**	**1.32**	**329**	P		**Pn**	**15 40 27.0**	**+0.1**
VLS	**Valsamata**	**1.32**	**329**	P		**Pn**	**15 40 27.0**	**+0.1**
VLS				S		**Sg**	**15 40 46.3**	**+0.6**
KRND	**KRANIDI**	**1.40**	**75**	P		**Pb**	**15 40 28.6**	**-0.1**
KRND	**KRANIDI**	**1.40**	**75**	P		**Pb**	**15 40 29.0**	**+0.3**
KRND				AML		AML	15 40 51.8	
	comp=E,1212μm,0.5s							
KRND				AML		AML	15 40 53.1	
	comp=N,1525μm,0.6s							
TRIZ	**Trizonia**	**1.41**	**20**	P		**Pn**	**15 40 28.9**	**+0.8**
EFP	**Efpalio**	**1.43**	**14**	P		**Pb**	**15 40 29.7**	**+0.4**
EFP				S		**Sg**	**15 40 49.9**	**+1.0**
SERG	**Sergoula**	**1.45**	**19**	P		**Pb**	**15 40 30.0**	**+0.3**
KALE	**Kalithea**	**1.45**	**22**	P		**Pn**	**15 40 28.9**	**+0.1**
KALE				S		**Sg**	**15 40 50.3**	**+0.5**
	comp=N,505nm,0.6s							
KALE	**Kalithea**	**1.45**	**22**	P		**Pn**	**15 40 29.5**	**+0.8**
KALE				S		**Sg**	**15 40 51.4**	**+1.6**
KALE				AML		AML	15 40 55.0	
	comp=E,831μm,0.8s							
KALE				AML		AML	15 40 56.1	
	comp=N,1123μm,0.5s							
KTHR	**Kythira**	**1.47**	**122**	P		**Pb**	**15 40 30.4**	**+0.4**
KTHR				S		**Sg**	**15 40 52.0**	**+1.7**
	comp=N,475nm,0.4s							
DID	**Didima**	**1.50**	**71**	P		**Pb**	**15 40 30.1**	**-0.4**
DID				S		**Sg**	**15 40 51.2**	**+0.1**
	comp=N,798nm,0.5s							
DID	**Didima**	**1.50**	**71**	P		**Pb**	**15 40 30.4**	**-0.1**
DID				S		**Sg**	**15 40 51.5**	**+0.4**
DID				AML		AML	15 40 56.5	
	comp=E,1561μm,0.7s							
DID				AML		AML	15 40 56.6	
	comp=N,1463μm,0.4s							
KTHA	**Kythira Island**	**1.51**	**121**	P		**Pb**	**15 40 30.9**	**+0.2**
LOUT	**Loutraki**	**1.54**	**52**	P		**Pb**	**15 40 31.8**	**+0.8**
LTK	**Loutraki**	**1.55**	**50**	P		**Pn**	**15 40 30.6**	**+0.5**
LTK	**Loutraki**	**1.55**	**50**	P		**Pb**	**15 40 32.1**	**+0.7**
LTK				S		**Sg**	**15 40 53.8**	**+0.9**
LTK				AML		AML	15 41 02.4	
	comp=N,889μm,0.4s							
LTK				AML		AML	15 41 08.4	
	comp=E,1058μm,0.6s							
PDO	**Prodromos**	**1.57**	**352**	P		**Pn**	**15 40 31.5**	**+1.2**
PDO	**Prodromos**	**1.57**	**352**	P		**Pb**	**15 40 31.7**	**0.0**
PDO				AML		AML	15 41 05.0	
	comp=E,1216μm,0.7s							
PDO				AML		AML	15 41 08.6	
	comp=N,1824μm,0.6s							
PVO	**Paravola**	**1.57**	**2**	P		**Pb**	**15 40 32.2**	**+0.5**
PVO	**Paravola**	**1.57**	**2**	P		**Pb**	**15 40 32.9**	**+1.2**
FSK	**Fiskardo**	**1.58**	**334**	P		**Pb**	**15 40 31.9**	**0.0**
ANX	**Ano Chora**	**1.59**	**13**	P		**Pb**	**15 40 32.1**	**0.0**
PROD	**Prodromos**	**1.67**	**43**	P		**Pb**	**15 40 33.1**	**-0.3**
PROD				S		**Sg**	**15 40 55.9**	**-0.8**
PROD	**Prodromos**	**1.67**	**43**	P		**Pb**	**15 40 33.1**	**-0.3**
PROD				S		**Sb**	**15 40 55.6**	**+1.3**
PROD				AML		AML	15 41 01.2	
	comp=E,687μm,0.5s							
PROD				AML		AML	15 41 03.8	
	comp=N,906μm,0.5s							
VILL	**Villia**	**1.85**	**52**	P		**Pn**	**15 40 35.3**	**+1.0**
LKD2	**Lefkada island**	**1.85**	**340**	P		**Pn**	**15 40 35.9**	**+1.6**
VIL2	**Platees**	**1.85**	**50**	P		**Pn**	**15 40 35.4**	**+1.2**
VIL2				S		**Sg**	**15 41 01.5**	**-1.0**
VIL2				AML		AML	15 41 07.3	
	comp=E,1190μm,0.9s							
VIL2				AML		AML	15 41 14.6	
	comp=N,639μm,0.8s							
EVR	**Evrytania**	**1.89**	**8**	P		**Pb**	**15 40 37.8**	**+0.6**
AXAR	**Agios Charalam**	**1.97**	**29**	P		**Pb**	**15 40 38.9**	**+0.4**
LKR	**Lokris**	**2.02**	**37**	P		**Pn**	**15 40 38.1**	**+1.6**
LKR	**Lokris**	**2.02**	**37**	P		**Pn**	**15 40 38.2**	**+1.8**
LKR				AML		AML	15 41 15.9	
	comp=E,441μm,0.5s							
LKR				AML		AML	15 41 21.3	
	comp=N,441μm,1.0s							
VLY	**Voula,Athens**	**2.03**	**66**	P		**Pn**	**15 40 37.5**	**+0.8**
VLY	**Voula,Athens**	**2.03**	**66**	P		**Pn**	**15 40 37.7**	**+1.0**
VLY				S		**Sb**	**15 41 05.5**	**+0.8**
VLY				AML		AML	15 41 09.3	
	comp=N,556μm,0.5s							
VLY				AML		AML	15 41 10.7	
	comp=E,624μm,0.4s							
ATHU	**Athens Univers**	**2.07**	**63**	P		**Pn**	**15 40 38.2**	**+1.0**
AGG	**Agios Georgios**	**2.10**	**19**	P		**Pb**	**15 40 40.7**	**0.0**
MRKA	**Markates**	**2.37**	**45**	P		**Pn**	**15 40 42.9**	**+1.6**
EREA	**Eretria**	**2.40**	**54**	P		**Pn**	**15 40 42.5**	**+0.8**
SERI	**Serifos**	**2.43**	**86**	P		**Pn**	**15 40 43.3**	**+1.1**
KARY	**Karystos**	**2.57**	**66**	P		**Pn**	**15 40 44.9**	**+0.8**
SKIA	**Skiathos**	**2.65**	**36**	P		**Pn**	**15 40 46.7**	**+1.5**
XOR	**Xorichti**	**2.69**	**30**	P		**Pn**	**15 40 47.8**	**+2.0**
BRTR	**Keskin Array B**	**9.94**	**71**	Pn		Pn	15 42 30.0	+4.6
	comp=E,0.1nm,0.3s,baz=252,slow=14,SNR=2.9							
FINES	**FINESS Array B**	**24.60**	**5**	P		**P**	**15 45 20.9**	**-1.4**
	comp=E,0.7nm,0.6s,baz=171,slow=9.8,SNR=5.2							
ARCES	**ARCESS Array B**	**32.63**	**3**	P		**P**	**15 46 33.5**	**-0.2**
	comp=E,0.7nm,0.7s,baz=190,slow=10.0,SNR=3.8							
MKAR	**Makanchi Array**	**45.27**	**58**	P		**P**	**15 48 18.0**	**-1.9**
	comp=E,0.3nm,0.3s,baz=270,slow=8.2,SNR=14							

MAN 20 15:40:52.5,9°.91N×123°.99E,h33km,mb3.6,ML2.3,MS1.8, 1D,Negros

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LLP	**Lapu-Lapu**	**0.40**	**356**	*e*P		Pn	15 41 03.3	+1.2
LLP				*i* S		Sn	15 41 10.2	+1.8
MSLP	**Maasin**	**0.88**	**76**	*e*P		Pn	15 41 08.8	+0.3
MSLP				*e*S		Sb	15 41 20.7	-0.2

*NEIC **20** 15:44:31.2±1.4,21°.68S±0°.07×66°.63W±0°.04,h193km±8km, mb4.6/2,ML4.4(GUC),Error ellipse: s-maj=11.5km s-min=4.0km az=157.0*
*IDC **20** 15:44:32.1±1.3,21°.67S×66°.60W,h200km±15km,mb3.7/2, mb1 3.9/6,mb1mx3.4/27,mbtmp4.3/6,Error ellipse: s-maj=30.5km s-min=19.8km az=115.0*
*SJA **20** 15:44:32.3±0.8,21°.61S×67°.19W,h270km±18km,ML4.2, MW4.3*
*GUC **20** 15:44:33.7±0.7,21°.56S×67°.30W,h232km±9km,ML4.4*

ISC 20 15:44:31.8±0.8,21°.60S±0°.05×66°.79W±0°.08,h205km±9km, n47,σ1°.67/65,mb4.5/4,3D,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LVC	**Limon Verde**	**2.21**	**242**	*e*P		**Pn**	**15 45 14.7**	**+1.4**
LVC				*e*S		**S**	**15 45 46.0**	**+1.0**
LVC	**Limon Verde**	**2.21**	**242**	P		**Pn**	**15 45 14.7**	**+1.4**
	18nm,0.3s,baz=51,slow=8.2,SNR=57							
LVC				S		**S**	**15 45 45.6**	**+0.6**
	34nm,0.3s,baz=236,slow=21,SNR=60							
LVC	**Limon Verde**	**2.21**	**242**			**Pn**	**15 45 14.6**	**+1.3**
PB09	**IPOC Station P**	**2.29**	**265**	⇓ *i* P		**Pn**	**15 45 15.3**	**+1.3**
PB09				*i* S		**S**	**15 45 49.0**	**+2.9**
PB08	**IPOC Station P**	**2.64**	**303**	⇓ *i* P		**Pn**	**15 45 19.5**	**+1.4**
PB08				*e*S		**S**	**15 45 54.0**	**+0.5**
PB08				IAML			15 46 00.9	
	comp=E,306nm,0.3s							
PB03	**IPOC Station P**	**2.79**	**260**	*e*P		**Pn**	**15 45 20.1**	**+0.6**
PB03				*i* S		**S**	**15 45 55.2**	**-0.8**
PB03				IAML			15 45 58.0	
	comp=N,638nm,0.2s							
PB06	**IPOC Station P**	**2.81**	**246**	*e*P		**Pn**	**15 45 20.2**	**+0.5**
PB06				*e*S		**S**	**15 45 56.6**	**+0.2**
PB06				IAML			15 45 57.7	
	comp=E,619nm,0.2s							
PB15	**IPOC Station P**	**2.95**	**237**	*e*P		**Pn**	**15 45 22.7**	**+1.3**
PB15				*e*S		**S**	**15 46 00.2**	**+0.6**
GO01	**Chusmiza**	**2.96**	**310**	*e*P		**Pn**	**15 45 23.0**	**+1.2**
GO01	**Chusmiza**	**2.96**	**310**			**Pn**	**15 45 22.8**	**+1.0**
PB04	**IPOC Station P**	**3.20**	**256**	*e*P		**Pn**	**15 45 24.8**	**+0.5**
PB04				*i* S		**S**	**15 46 03.0**	**-1.7**
PB04				IAML			15 46 04.4	
	comp=N,558nm,0.3s							
PB04	**IPOC Station P**	**3.20**	**256**			**Pn**	**15 45 24.6**	**+0.2**
PB11	**IPOC Station P**	**3.25**	**304**	⇓ *i* P		**Pn**	**15 45 25.3**	**+0.4**
PB11				*e*S		**S**	**15 46 04.9**	**-0.8**
PB11				IAML			15 46 07.4	
	comp=N,2μm,0.1s							
PB11	**IPOC Station P**	**3.25**	**304**			**Pn**	**15 45 25.2**	**+0.4**
TA01	**Diego Aracena**	**3.33**	**287**	*e*P		**Pn**	**15 45 25.3**	**-0.3**
TA01				*e*S		**S**	**15 46 04.5**	**-2.7**
TA01				IAML			15 46 05.6	
	comp=N,461nm,0.3s							
PB05	**IPOC Station P**	**3.40**	**248**	*e*P		**Pn**	**15 45 27.2**	**+0.7**
PB05				*i* S		**S**	**15 46 07.0**	**-2.0**
PB05	**IPOC Station P**	**3.40**	**248**	*i* P		**Pn**	**15 45 27.3**	**+0.7**
PB05				*i* S		**S**	**15 46 06.9**	**-2.0**
MNMC	**Minye Minye**	**3.60**	**313**			**Pn**	**15 45 30.0**	**+0.8**
PSGC	**Pisagua**	**3.70**	**302**	*e*P		**Pn**	**15 45 29.7**	**-0.6**
PSGC				*e*S		**S**	**15 46 12.6**	**-3.0**
PB10	**IPOC Station P**	**3.97**	**241**			**Pn**	**15 45 33.6**	**+0.2**
PB10	**IPOC Station P**	**3.97**	**241**	*i* P		**Pn**	**15 45 33.7**	**+0.3**
PB10				*i* S		**S**	**15 46 18.3**	**-3.0**
PB10				IAML			15 46 22.9	
	comp=Z,104nm,0.4s							
GO02	**Mina Guanaco**	**4.38**	**215**			**Pn**	**15 45 39.5**	**+0.7**
PB14	**IPOC Station P**	**4.49**	**227**	*i* P		**Pn**	**15 45 40.5**	**+0.3**
PB14				*i* S		**S**	**15 46 30.7**	**-2.8**
PB14				IAML			15 46 33.9	
	comp=Z,203nm,0.5s							
LPAZ	**La Paz**	**5.43**	**346**	P		**Pn**	**15 45 54.0**	**+1.5**
	comp=Z,10nm,0.3s,baz=156,slow=10.0,SNR=206							
LPAZ				S		**S**	**15 46 54.5**	**-1.4**
	baz=324,slow=4.4,SNR=0.9							
LPAZ	**La Paz**	**5.43**	**346**			**Pn**	**15 45 53.9**	**+1.4**
LPAZ	**La Paz**	**5.43**	**346**	⇑ *i* P		**Pn**	**15 45 54.3**	**+1.7**
GO03	**Copiap**	**6.74**	**

σ0^{9}71/25, **mb4.3**/15, **MS3.2/3**, **Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**11.71**	**167**	Pn	**Pn**	**16 05 03.7**	**+0.6**
	1.3nm,0.3s,baz=354,slow=7.8,SNR=7.4						
JAY				Sn	**Sn**	**16 07 11.8**	**-1.1**
	1.4nm,0.3s,baz=119,slow=19,SNR=4.1						
JAY				LR	LR	16 08 40.4	
	comp=Z,331nm,18.1s,baz=340,slow=33						
SIJI	**Sorong**	**11.96**	**215**	Pn	**Pn**	**16 05 05.4**	**-1.0**
	0.8nm,0.3s,baz=356,slow=17,SNR=3.2						
DAV	**Davao City (W)**	**12.59**	**262**	LR	LR	16 08 55.9	
	comp=Z,176nm,21.1s,baz=128,slow=32						
JOW	**Kunigami**	**20.06**	**333**	P	**P**	**16 06 47.6**	**-1.2**
JOW				IAmb	IAmb	16 07 41.9	
	comp=Z,101nm,1.6s						
WRA	**Warramunga Arr**	**28.99**	**187**	P	**P**	**16 08 15.0**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=2.9,slow=9.7,SNR=4.8						
H11S3	**WAKE ISLAND Hy**	**29.25**	**68**	T	T	16 39 31.9	
	baz=254,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.26**	**68**	T	T	16 39 15.6	
	baz=254						
H11S2	**WAKE ISLAND Hy**	**29.26**	**68**	T	T	16 38 59.7	
	baz=254,slow=74						
KSRS	**Korea Array**	**29.81**	**343**	LR	LR	16 20 03.9	
	comp=Z,57nm,18.4s,baz=165,slow=36						
AS31	**Alice Springs**	**32.72**	**187**	P	**P**	**16 08 49.0**	**+0.9**
ASAR	**Alice Springs**	**32.72**	**187**	P	**P**	**16 08 48.5**	**+0.4**
	comp=Z,1.7nm,0.8s,baz=20,slow=12,SNR=14						
CMAR	**Chiang Mai Arr**	**39.15**	**288**	P	**P**	**16 09 43.9**	**+0.5**
	comp=Z,1.5nm,0.9s,baz=103,slow=6.4,SNR=12						
CMAR				LR	LR	16 24 48.4	
	comp=Z,38nm,20.3s,baz=148,slow=34						
STKA	**Stephens Creek**	**40.77**	**176**	P	**P**	**16 09 56.5**	**0.0**
	comp=Z,1.4nm,0.8s,baz=336,slow=13,SNR=3.6						
STKA	**Stephens Creek**	**40.77**	**176**	P	**P**	**16 09 56.8**	**+0.4**
BBOO	**Buckleboo**	**41.61**	**183**	P	**P**	**16 10 02.9**	**-0.6**
BBOO				IAmb	IAmb	16 10 39.2	
	comp=Z,60nm,1.8s						
FUNA	**Funafuti**	**44.44**	**112**	P	**P**	**16 10 26.1**	**-0.5**
LHI	**Lord Howe Isla**	**44.98**	**154**	P	**P**	**16 10 32.1**	**+1.4**
ULN	**Ulaanbaatar**	**46.81**	**332**	P	**P**	**16 10 45.5**	**+0.4**
ULN				IAmb	IAmb	16 10 46.9	
	comp=Z,3.1nm,0.8s						
SONM	**Songino Array**	**47.10**	**331**	P	**P**	**16 10 47.5**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=138,slow=7.1,SNR=16						
MK31	**Makanchi Array**	**60.41**	**319**	P	**P**	**16 12 25.1**	**+0.4**
MK31				IAmb	IAmb	16 12 26.2	
	comp=Z,3.2nm,0.9s						
MKAR	**Makanchi Array**	**60.41**	**319**	P	**P**	**16 12 25.4**	**+0.7**
	comp=Z,4.3nm,0.8s,baz=106,slow=8.9,SNR=44						
MAKZ	**Makanchi**	**60.62**	**319**	P	**P**	**16 12 26.2**	**+0.1**
MAKZ				IAmb	IAmb	16 12 27.7	
	comp=Z,4.6nm,0.9s						
ZALV	**Zalesovo Beam**	**61.71**	**327**	P	**P**	**16 12 32.3**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=110,slow=8.3,SNR=4.2						
KURK	**Kurchatov**	**64.00**	**322**	P	**P**	**16 12 48.1**	**-0.5**
KURK				IAmb	IAmb	16 12 49.7	
	comp=Z,4.3nm,0.9s						
NIL	**Nilore**	**64.20**	**303**	P	**P**	**16 12 50.8**	**+0.5**
RAR	**Rarotonga**	**67.93**	**117**	LR	LR	16 36 05.0	
	comp=Z,62nm,20.0s,baz=314,slow=30						
BRVK	**Borovoye**	**69.61**	**323**	P	**P**	**16 13 24.7**	**+0.4**
BRVK				IAmb	IAmb	16 13 25.4	
	comp=Z,5.0nm,1.1s						
ILAR	**Eielson Array**	**75.52**	**25**	P	**P**	**16 13 58.6**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=258,slow=6.4,SNR=7.8						
ABKAR	**Akbulak array**	**75.55**	**319**	P	**P**	**16 13 59.6**	**-0.1**
YKA	**Yellowknife Ar**	**89.91**	**26**	P	**P**	**16 15 13.7**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=294,slow=5.7,SNR=4.2						

IDC 20 16:10:10.0±2.3, 9°75.5′×119°26.6′E, h0^{km}, mb3.5/2, mb1 3.5/5, mb1mx3.4/30, mbtmp3.4/5, ML3.3/3, Error ellipse: s-maj=148.7km s-min=22.1km az=55.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.35**	**144**	Pn	Pn	16 12 38.3	-1.6
	0.2nm,0.3s,baz=322,slow=17,SNR=4.1						
FITZ				Sn	Sn	16 14 26.0	-11
	0.5nm,0.3s,baz=171,slow=16,SNR=8.7						
WRA	**Warramunga Arr**	**17.73**	**127**	P	Pn	16 14 17.9	-0.7
	0.1nm,0.3s,baz=298,slow=13,SNR=5.0						
WRA				S	Sn	16 17 25.3	-12
	0.1nm,0.3s,baz=294,slow=26,SNR=3.8						
ASAR	**Alice Springs**	**19.68**	**136**	P	Pn	16 14 42.3	+0.1
	0.2nm,0.3s,baz=325,slow=13,SNR=16						
ASAR				S	S	16 18 10.1	-14
	0.0nm,0.3s,baz=304,slow=22,SNR=3.0						
SONM	**Songino Array**	**58.46**	**350**	P	P	16 20 07.9	0.0
	0.3nm,0.5s,baz=165,slow=6.8,SNR=3.1						
MKAR	**Makanchi Array**	**65.24**	**333**	P	P	16 20 53.2	-0.2
	0.4nm,0.6s,baz=139,slow=7.5,SNR=7.3						

*TIR **20** 16:25:50.3, 41°.38N×19°.51E, h18^{km}, Md2.5/4*
*BEO **20** 16:25:53.3±0.4, 41°.51N×19°.74E, h0^{km}, ML2.1/8*
ISC 20 16:25:52.5±1.3, 41°.47N±0°.05×19°.62E±0°.05, h4^{km}±11^{km}, n13, σ0^{9}91/25, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.22**	**122**	*e*Pg	**Pg**	**16 25 56.5**	**-0.3**
TIR				*e*Sg	**Sg**	**16 25 59.3**	**-0.4**
TIR	**Tirane**	**0.22**	**122**	*i* SG	**Sg**	**16 26 01.2**	**+1.6**
PHP	**Peshkopia**	**0.65**	**70**	*i* PG	**Pg**	**16 26 04.8**	**-0.3**
PHP				*i* SG	**Sb**	**16 26 16.8**	**+0.8**
BCI	**Bajram Curri**	**0.96**	**20**	*i* PG	**Pg**	**16 26 10.9**	**-0.1**
BCI				*i* SG	**Sn**	**16 26 26.5**	**-0.5**
PDG	**Podgorica**	**1.00**	**344**	*e*Pg	**Pg**	**16 26 11.8**	**+0.1**
PDG				*e*Sg	**Sg**	**16 26 24.4**	**-0.3**
FNA	**Florina**	**1.49**	**117**	*i* PN	**Pn**	**16 26 19.3**	**-0.8**
FNA				*i* SN	**Sg**	**16 26 40.9**	**+0.4**
TREB	**Trebinje**	**1.57**	**323**	*e*Pg	**Pb**	**16 26 21.7**	**-0.4**
TREB				*e*Sg	**Sg**	**16 26 44.5**	**+1.6**
SJES	**Sjenica**	**1.81**	**8**	*e*Pg	**Pb**	**16 26 26.0**	**-0.3**
SJES				*e*Sg	**Sn**	**16 26 47.9**	**-0.2**
STON	**Ston**	**2.00**	**315**	*e*Pg	**Pb**	**16 26 29.1**	**-0.4**
STON				*e*Sg	**Sg**	**16 26 56.7**	**-0.1**
IVAS	**Ivanjica**	**2.15**	**10**	*e*Pg	**Pb**	**16 26 31.4**	**-0.6**
IVAS				*e*Sg	**Sb**	**16 26 59.2**	**+0.2**
BOSS	**Bosilegrad**	**2.37**	**63**	*e*Pg	**Pn**	**16 26 32.9**	**+0.7**
BOSS				*e*Sg	**Sb**	**16 27 05.9**	**+0.6**
BBLS	**Lazići**	**2.40**	**356**	*e*Pg	**Pb**	**16 26 36.8**	**+0.4**
BBLS				*e*Sg	**Sg**	**16 27 08.2**	**-1.6**
ZAGS	**Zajecar**	**3.04**	**39**	*e*Pg	**Pb**	**16 26 45.9**	**-1.2**
ZAGS				*e*Sg	**Sb**	**16 27 26.6**	**+2.1**

*IDC **20** 16:27:23.6±1.7, 2°.44S×141°.20E, h0^{km}, mb3.5/2, mb1 3.9/3, mb1mx3.5/29, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=29.3km s-min=12.9km az=173.0*
*NEIC **20** 16:27:28.8±1.6, 2°.55S±0°.1×140°.9E±0°.2, h30^{km}±9^{km}, mb4.2/6, Error ellipse: s-maj=26.3km s-min=19.9km az=84.0*
*DJA **20** 16:27:29.7±1.4, 2°.5S±5°×14°.0E±°, h10^{km}, M3.5/3, MLv3.5/3*
ISC 20 16:27:29.4±1.0, 2°.6S±0°.1×140°.53E±0°.06, h31^{km}, n13, σ1^{9}57/15, mb3.6/3, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.18**	**77**	Pg	**Pb**	**16 27 34.5**	**-1.1**
	232nm,0.3s,baz=271,slow=5.5,SNR=1275						
JAY				Lg	Lg	16 27 38.9	
	2µm,0.3s,baz=98,slow=19,SNR=216						
GENI	**Genyem**	**0.36**	**264**	P	**Pb**	**16 27 36.7**	**-1.1**
GENI				S	**Sb**	**16 27 43.2**	**-0.3**
SMPI	**Sarmi**	**1.90**	**287**	P	**Pn**	**16 27 59.3**	**-0.4**
SMPI				S	**Sn**	**16 28 22.4**	**-0.3**
WAMI	**Wamena**	**2.24**	**234**	P	**Pb**	**16 28 08.1**	**-1.2**
KNRA	**Kununurra**	**17.45**	**221**	Pn	**P**	**16 31 32.0**	**+0.5**
KNRA				IAmb	IAmb	16 31 45.6	
	comp=Z,188nm,2.0s						
WR0	**Warramunga Arr**	**18.26**	**198**	P	**P**	**16 31 41.8**	**+1.2**
WR0				IAmb	IAmb	16 32 16.9	
	comp=Z,26nm,1.9s						
WRAB	**Tennant Creek**	**18.30**	**199**	P	**P**	**16 31 43.0**	**+2.0**
WRAB				IAmb	IAmb	16 31 49.6	
	comp=Z,36nm,1.9s						
WRA	**Warramunga Arr**	**18.31**	**199**	P	**P**	**16 31 42.4**	**+1.3**
	comp=Z,0.2nm,0.3s,baz=24,slow=12,SNR=5.1						
AS31	**Alice Springs**	**21.94**	**196**	P	**P**	**16 32 22.3**	**+1.7**
ASAR	**Alice Springs**	**21.94**	**196**	P	**P**	**16 32 22.1**	**+1.5**
	comp=Z,1.8nm,0.9s,baz=27,slow=11,SNR=26						
JAGI	**Jajag, Banyuwa**	**26.89**	**256**	P	**P**	**16 33 10.8**	**+2.9**
STKA	**Stephens Creek**	**29.18**	**178**	P	**P**	**16 33 26.0**	**-2.1**
STKA				IAmb	IAmb	16 34 31.3	
	comp=Z,2.5nm,1.5s						
MKAR	**Makanchi Array**	**70.78**	**322**	P	**P**	**16 38 43.4**	**+0.5**
	comp=Z,0.5nm,0.9s,baz=110,slow=7.1,SNR=3.6						

*IDC **20** 16:27:30.4±1.0, 31°.20N×143°.09E, h0^{km}, mb3.7/9, mb1 3.8/13, mb1mx3.7/36, mbtmp3.7/13, ML3.2/4, Error ellipse: s-maj=26.7km s-min=18.9km az=78.0*
*JMA **20** 16:27:34.0±0.3, 31°.52N×142°.56E, h0^{km}, M4.2*
*NEIC **20** 16:27:34.5±2.6, 31°.32N±0°.09×143°.12E±0°.08, h31^{km}±4^{km}, mb4.7/7, Error ellipse: s-maj=13.2km s-min=9.5km az=161.0*
ISC 20 16:27:35.3±0.7, 31°.42N±0°.06×143°.09E±0°.09, h35^{km}, n32, σ1^{9}52/38, mb3.5/11, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.68**	**332**	P	**Pn**	**16 28 29.9**	**+0.7**
BSO3	**Boso 3**	**4.01**	**328**	P	**Pn**	**16 28 34.2**	**+0.2**
JOD2	**Odawara 2**	**5.09**	**320**	P	**Pn**	**16 28 49.0**	**-0.1**
JOD2				S	**Sn**	**16 29 45.0**	**-1.7**
JHU	**Hanno**	**5.44**	**325**	P	**Pn**	**16 28 53.4**	**-0.6**
JHO	**Hitachi**	**5.59**	**339**	P	**Pn**	**16 28 56.4**	**+0.5**
JRY	**Ryogami san**	**5.76**	**324**	P	**Pn**	**16 28 58.4**	**0.0**
JRY				S	**Sn**	**16 30 01.8**	**-1.5**
JAG	**Ashikaga**	**5.84**	**330**	P	**Pn**	**16 28 59.5**	**+0.1**
JAG				S	**Sn**	**16 30 03.9**	**-1.2**
INU	**Inuyama**	**6.41**	**309**	Pn	**Pn**	**16 29 07.8**	**+0.5**
MJAR	**Matsushiro Arr**	**6.52**	**323**	Pn	**Pn**	**16 29 09.2**	**+0.4**
	0.3nm,0.3s,baz=150,slow=10,SNR=17						
MJAR				Sn	**Sn**	**16 30 20.9**	**-1.1**
	0.2nm,0.3s,baz=214,slow=10,SNR=5.1						
MAJO	**Matsushiro**	**6.52**	**323**	Pn	**Pn**	**16 29 10.1**	**+1.3**
MJB9	**Matsu-Tunnel**	**6.53**	**323**	Pn	**Pn**	**16 29 10.2**	**+1.3**
ERM	**Erimo**	**10.58**	**0**	Pn	**Pn**	**16 30 03.4**	**-1.0**
JKA	**Kamikawa-asahi**	**12.68**	**358**		**Pn**	**16 30 33.0**	**-0.1**
JKA					**Sn**	**16 32 49.4**	**-3.6**
ASAJ	**Asahikawa**	**12.69**	**358**	Pn	**Pn**	**16 30 33.0**	**-0.2**
	0.2nm,0.3s,baz=217,slow=11,SNR=5.1						
ASAJ				Sn	**Sn**	**16 32 49.4**	**-3.6**
	0.1nm,0.3s,baz=226,slow=13,SNR=2.7						
KSRS	**Korea Array**	**13.88**	**300**	Pn	**Pn**	**16 30 49.3**	**-0.3**
	0.1nm,0.3s,baz=115,slow=13,SNR=3.1						
KLR	**Kul'dur**	**19.74**	**338**	P	**Pn**	**16 32 03.2**	**-0.4**
	0.1nm,0.3s,baz=143,slow=14,SNR=2.6						
PET	**Petropavlovsk**	**24.37**	**23**	P	**P**	**16 32 51.6**	**+1.6**
SONM	**Songino Array**	**32.31**	**311**	P	**P**	**16 34 03.6**	**+2.5**
	0.4nm,0.6s,baz=99,slow=8.9,SNR=3.5						
SAUI	**Saumlaki**	**40.77**	**198**	P	**P**	**16 35 13.1**	**-0.1**
PMG	**Port Moresby**	**40.78**	**174**	P	**P**	**16 35 12.4**	**-0.9**
PMG				IAmb	IAmb	16 36 19.9	
	comp=Z,19nm,1.1s						
CMAR	**Chiang Mai Arr**	**41.79**	**263**	P	**P**	**16 35 20.7**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=57,slow=6.6,SNR=3.7						
KSM	**Kuching**	**42.96**	**233**	P	**P**	**16 35 29.1**	**-2.1**
ZALV	**Zalesovo Beam**	**46.83**	**316**	P	**P**	**16 36 03.6**	**+2.1**
	comp=Z,0.7nm,0.3s,baz=110,slow=7.8,SNR=2.6						
MKAR	**Makanchi Array**	**48.43**	**307**	P	**P**	**16 36 16.0**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=91,slow=9.1,SNR=20						
WR0	**Warramunga Arr**	**51.74**	**190**	P	**P**	**16 36 38.1**	**-1.2**
WR0				IAmb	IAmb	16 37 39.6	
	comp=Z,12nm,1.3s						
WRAB	**Tennant Creek**	**51.74**	**190**	P	**P**	**16 36 37.5**	**-1.8**
WRA	**Warramunga Arr**	**51.75**	**190**	P	**P**	**16 36 38.0**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=6.1,slow=7.5,SNR=7.2						
NEA	**Nenana**	**52.62**	**30**	P	**P**	**16 36 44.5**	**-1.0**
ASAR	**Alice Springs**	**55.47**	**190**	P	**P**	**16 37 05.5**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=15,slow=14,SNR=6.8						
YKA	**Yellowknife Ar**	**67.99**	**29**	P	**P**	**16 38 31.4**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=290,slow=6.3,SNR=4.6						
NVAR	**Mina Array Bea**	**77.26**	**53**	P	**P**	**16 39 28.7**	**+2.3**
	comp=Z,0.2nm,0.5s,baz=307,slow=6.7,SNR=2.4						
BRTR	**Keskin Array B**	**83.65**	**313**	P	**P**	**16 40 01.9**	**+1.3**
	comp=Z,0.3nm,0.7s,baz=105,slow=2.9,SNR=3.9						

*FUNV **20** 16:34:25.6, 5°.01N×73°.78W, h153^{km}, MW3.4*
*IDC **20** 16:34:26.5±0.7, 5°.29N×73°.66W, h156^{km}±5^{km}, mb3.0/3, mb1 3.4/4, mb1mx3.0/28, mbtmp3.6/4, Error ellipse: s-maj=24.1km s-min=12.1km az=131.0*
*RSNC **20** 16:34:27.8±1.9, 5°.28N×73°.73W, h146^{km}±6^{km}, ML3.6, Mw3.6, Fault plane solution: NP1:φ$_{b}$46.00000°, δ66.00000°, λ-122.00000°.*
ISC 20 16:34:26.2±0.8, 5°.30N±0°.04×73°.68W±0°.03, h162^{km}±5^{km}, n52, σ1^{9}72/98, mb3.4/3, 13C-8D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTAU	**Tausa, Cundina**	**0.38**	**255**	*e*S	**Sn**	**16 35 07.3**	**+0.9**
SPBC	**San Pablo de B**	**0.52**	**311**	↓*i*P	**Pn**	**16 34 49.0**	**-0.1**
SPBC				*e*S	**Sn**	**16 35 04.8**	**-1.8**
SPBC				*i*		16 35 07.2	
	comp=Z,1µm,0.4s						
CTAB	**Cerro Tablazo,**	**0.60**	**241**	*e*P	**Pn**	**16 34 50.5**	**+0.6**
CTAB				*e*S	**Sn**	**16 35 04.9**	**-3.2**
CHIC	**Chingaza**	**0.67**	**185**	↓*i*P	**Pn**	**16 34 50.2**	**-0.1**
CHIC				*e*S	**Sn**	**16 35 06.2**	**-2.6**
CHIC				*i*		16 35 07.9	
	comp=Z,818nm,0.4s						
ROSC	**El Rosal**	**0.79**	**234**	P	**Pn**	**16 34 52.0**	**+1.0**
	comp=Z,68nm,0.3s,baz=236,slow=7.1,SNR=33						
ROSC				S	**Sn**	**16 35 09.5**	**-0.4**
	comp=Z,262nm,0.3s,baz=217,slow=20,SNR=54						
ROSC	**El Rosal**	**0.79**	**234**	↓*i*P	**Pn**	**16 34 52.0**	**+1.0**
ROSC				*e*S	**Sn**	**16 35 07.5**	**-2.5**
ROSC				*i*		16 35 12.0	
	comp=Z,564nm,0.6s						
RUSC	**La Rusia**	**0.83**	**45**	↓*i*P	**Pn**	**16 34 52.4**	**+0.9**
RUSC				*e*S	**Sn**	**16 35 10.6**	**-0.1**
RUSC				*i*		16 35 12.1	
	comp=Z,375nm,0.3s						
RUSC	**La Rusia**	**0.83**	**45**	*e*P	**Pn**	**16 34 52.1**	**+0.7**
RUSC				*e*S	**Sn**	**16 35 10.7**	**0.0**
CVER	**Cruz Verde, Cu**	**0.87**	**207**	*i* P	**Pn**	**16 34 52.1**	**+0.4**
CVER				*e*S	**Sn**	**16 35 07.6**	**-3.6**
VILC	**Villavicencio,**	**1.18**	**181**	↓*i*P	**Pn**	**16 34 53.5**	**-0.3**
VILC				*e*S	**Sn**	**16 35 12.8**	**-2.3**
NORC	**Norcasia**	**1.22**	**282**	↑*i*P	**Pn**	**16 34 53.6**	**-0.4**
NORC				*e*S	**Sn**	**16 35 13.1**	**-2.2**
NORC				*i*		16 35 15.0	
	comp=Z,493nm,0.1s						
BARC	**Barichara**	**1.37**	**21**	↑*i*P	**Pn**	**16 34 56.2**	**+0.5**
BARC				*e*S	**Sn**	**16 35 16.9**	**-1.5**
PTBC	**PUERTO BERRIO,**	**1.45**	**328**	↑*i*P	**Pn**	**16 34 55.8**	**-0.5**
PTBC				*e*S	**Sn**	**16 35 17.5**	**-1.9**
PTBC				*i*		16 35 20.6	
	comp=Z,594nm,0.1s						
GUY2C	**Guyana, Caldas**	**1.68**	**267**	↑*i*P	**Pn**	**16 34 58.8**	**-0.3**
GUY2C				*e*S	**Sn**	**16 35 22.4**	**-1.9**
GUY2C				*i*		16 35 30.8	
	comp=Z,163nm,0.3s						
BRRC	**Barranca, Sant**	**1.79**	**359**	↑*i*P	**Pn**	**16 35 00.8**	**+1.0**
BRRC				*e*S	**Sn**	**16 35 25.7**	**0.0**
BRRC				*i*		16 35 29.2	
	comp=Z,402nm,0.2s						
PTGC	**Puerto Gaitan,**	**1.89**	**125**	*e*P	**Pn**	**16 35 01.4**	**+0.5**
PTGC				*e*S	**Sn**	**16 35 26.3**	**-1.2**
PTGC				*i*		16 35 30.9	
	comp=Z,595nm,0.4s						
HELC	**Santa Helena**	**2.04**	**296**	↑*i*P	**Pn**	**16 35 03.0**	**+0.1**
HELC				*e*S	**Sn**	**16 35 29.8**	**-1.4**
HELC				*i*		16 35 38.2	
	comp=Z,206nm,0.3s						
HELC	**Santa Helena**	**2.04**	**296**	↑*e*P	**Pn**	**16 35 03.0**	**+0.1**
HELC				*e*S	**Sn**	**16 35 28.9**	**-2.3**
ORTC	**Ortega, Tolima**	**2.09**	**229**	↑*i*P	**Pn**	**16 35 02.8**	**-0.4**
ORTC				*e*S	**Sn**	**16 35 29.4**	**-2.3**
ORTC				*i*		16 35 33.6	
	comp=Z,176nm,0.4s						
TAMC	**Tame, Arauca**	**2.19**	**59**	↓*i*P	**Pn**	**16 35 06.0**	**+1.7**
TAMC				*e*S	**Sn**	**16 35 33.7**	**+0.1**
TAMC				*i*		16 35 38.9	
	comp=Z,97nm,0.8s						
PAMC	**Pamplona, Colo**	**2.24**	**26**	↑*i*P	**Pn**	**16 35 06.7**	**+1.3**
PAMC				*e*S	**Sn**	**16 35 36.9**	**+1.3**
PAMC				*i*		16 35 41.2	
	comp=Z,183nm,0.8s						
CBOC	**Ciudad Bolivar**	**2.39**	**284**	*e*P	**Pn**	**16 35 07.0**	**+0.2**
CBOC				*e*S	**Sn**	**16 35 36.1**	**-2.0**
ZARC	**Zaragoza, Cauc**	**2.47**	**332**	↑*i*P	**Pn**	**16 35 06.6**	**-1.0**
ZARC				*e*S	**Sn**	**16 35 37.3**	**-2.4**
ZARC				*i*		16 35 45.1	
	comp=Z,519nm,0.3s						
GUVC	**San Jose del G**	**2.93**	**159**	*e*P	**Pn**	**16 35 13.1**	**-0.2**
GUVC				*e*S	**Sn**	**16 35 48.0**	**-1.8**
GUVC				*i*		16 35 53.1	
	comp=Z,313nm,0.2s						
OCAC	**Ocana**	**2.94**	**7**	↑*i*P	**Pn**	**16 35 14.5**	**+1.1**
OCAC				*e*S	**Sn**	**16 35 49.9**	**-0.2**
OCAC				*i*		16 35 59.0	
	comp=Z,354nm,0.4s						
DBBC	**Dabeiba**	**3.04**	**304**	↑*i*P	**Pn**	**16 35 15.1**	**+0.4**
DBBC				*e*S	**Sn**	**16 35 48.7**	**-3.5**
DBBC				*i*		16 35 53.8	
	comp=Z,159nm,0.4s						
UREC	**San Jos de Ur**	**3.05**	**323**	↑*i*P	**Pn**	**16 35 13.2**	**-1.5**
UREC				*e*S	**Sn**	**16 35 49.2**	**-3.2**
UREC				*i*		16 35 50.8	
	comp=Z,292nm,0.2s						
SMLC	**San Martn de**	**3.50**	**354**	*e*P	**Pn**	**16 35 19.8**	**-0.6**
SMLC				*e*S	**Sn**	**16 36 01.7**	**-0.8**
SOCV	**Socops**	**4.08**	**43**	↓*i*P	**Pn**	**16 35 28.2**	**+0.4**
SOCV				*e*S	**Sn**	**16 36 13.3**	**-2.5**
SOCV	**Socops**	**4.08**	**43**	↓*e*P	**Pn**	**16 35 28.3**	**+0.5**
SOCV				*e*S	**Sn**	**16 36 15.0**	**-0.9**
VIGV	**El Vigia**	**4.20**	**33**	*e*P	**Pn**	**16 35 30.4**	**+1.0**
VIGV				*e*S	**Sn**	**16 36 19.2**	**+0.6**
ELOV	**Elorza**	**4.50**	**68**	*e*P	**Pn**	**16 35 33.9**	**+0.6**
ELOV				*e*S	**Sn**	**16 36 19.4**	**-6.2**
ELOV	**Elorza**	**4.50**	**68**	*e*P	**Pn**	**16 35 33.9**	**+0.6**
ELOV				*e*S	**Sn**	**16 36 24.0**	**-1.6**
ARGC	**Ariguani, Magd**	**4.56**	**353**	*e*P	**Pn**	**16 35 35.4**	**+1.3**
ARGC				*e*S	**Sn**	**16 36 25.0**	**-2.2**
ARGC				*i*		16 36 41.0	
	comp=Z,68nm,0.6s						
CODC	**Agustn Codazz**	**4.61**	**3**	*e*P	**Pn**	**16 35 35.0**	**+0.3**
CODC				*e*S	**Sn**	**16 36 26.6**	**-1.6**
CODC				*i*		16 36 46.6	
	comp=Z,42nm,0.3s						
SDV	**Santo Domingo**	**4.67**	**40**	P	**Pn**	**16 35 36.7**	**+1.0**
	comp=Z,7.7nm,0.3s,baz=234,slow=12,SNR=46						
SDV				S	**Sn**	**16 36 29.5**	**-0.5**
	comp=Z,8.6nm,0.3s,baz=55,slow=22,SNR=18						
SDV	**Santo Domingo**	**4.67**	**40**	*e*P	**Pn**	**16 35 36.5**	**+0.9**
SDV				*e*S	**Sn**	**16 36 28.7**	**-1.2**
SDV				*i*		16 36 36.9	
	comp=Z,36nm,0.3s						
SDV	**Santo Domingo**	**4.67**	**40**	*e*P	**Pn**	**16 35 36.7**	**+1.0**
SDV				*e*S	**Sn**	**16 36 29.8**	**-0.1**
QARV	**Quebrada Arrib**	**5.79**	**32**	*e*P	**Pn**	**16 35 51.4**	**+1.0**
QARV				*e*S	**Sn**	**16 36 55.5**	**-0.7**
CURV	**Curarigua**	**5.95**	**38**	*e*P	**Pn**	**16 35 53.3**	**+0.8**
CURV				*e*S	**Sn**	**16 36 59.0**	**-1.3**
PAYV	**Puerto Ayacuch**	**6.00**	**89**	*e*P	**Pn**	**16 35 52.6**	**-0.4**
TEPV	**Terepaima**	**6.42**	**44**	*e*P	**Pn**	**16 35 59.0**	**+0.3**
TEPV				*e*S	**Sn**	**16 37 09.4**	**-1.8**
SIQV	**Siquisique**	**6.55**	**36**	*e*P	**Pn**	**16 36 00.9**	**+0.5**
SIQV				*e*S	**Sn**	**16 37 12.4**	**-2.0**
BAUV	**El Baul**	**6.66**	**57**	*e*P	**Pn**	**16 36 01.0**	**-0.8**
BAUV				*e*S	**Sn**	**16 37 13.8**	**-3.1**
MAPV	**Macapo**	**6.86**	**49**	*e*P	**Pn**	**16 36 05.2**	**+0.7**
MAPV				*e*S	**Sn**	**16 37 18.5**	**-3.1**
MONV	**Montecano**	**7.55**	**29**	*e*P	**Pn**	**16 36 13.8**	**+0.1**
MONV				*e*S	**Sn**	**16 37 36.0**	**-2.3**
BIRV	**Birongo**	**8.96**	**55**	*e*P	**Pn**	**16 36 32.1**	**-0.2**
BIRV				*e*S	**Sn**	**16 38 05.4**	**-6.7**
SIV	**San Ignacio**	**24.56**	**150**	P	**P**	**16 39

TTG	**Podgorica**	**1.08**	**348**	*e*Pg	**Pb**	**16 52 34.3**	**-0.7**
TTG				*e*Sg	**Sn**	**16 52 51.3**	**+1.3**
TPE	**Tepelena**	**1.13**	**163**	P	**Pg**	**16 52 36.2**	**-0.1**
TPE				S	**Sn**	**16 52 52.5**	**+1.3**
	comp=E,148nm,0.6s						
TPE	**Tepelena**	**1.13**	**163**	*i* PN	**Pg**	**16 52 36.5**	**+0.3**
TPE				*i* SN	**Sn**	**16 52 53.2**	**+2.1**
PVY	**Plav**	**1.25**	**13**	*e*Pg	**Pn**	**16 52 36.8**	**-0.9**
PVY				*e*Sg	**Sg**	**16 52 55.9**	**+0.9**
CEME	**Cevo**	**1.27**	**338**	*e*Pg	**Pn**	**16 52 37.6**	**-0.3**
CEME				*e*Sg	**Sg**	**16 52 57.4**	**+1.9**
HCY	**Herceg Novi**	**1.34**	**324**	*e*Pg	**Pg**	**16 52 39.4**	**-0.9**
HCY				*e*Sg	**Sg**	**16 53 00.2**	**+2.5**
NKME	**Niksic**	**1.47**	**342**	*e*Pg	**Pb**	**16 52 41.4**	**-0.2**
NKME				*e*Sg	**Sg**	**16 53 03.0**	**+1.3**
KOME	**Kolasin**	**1.48**	**358**	*e*Pg	**Pn**	**16 52 41.0**	**+0.3**
KOME				*e*Sg	**Sg**	**16 53 03.0**	**+0.9**
NEST	**Nestorio**	**1.48**	**130**	P	**Pb**	**16 52 41.3**	**-0.5**
NEST				S	**Sg**	**16 53 01.6**	**-0.5**
FNA	**Florina**	**1.49**	**113**	P	**Pn**	**16 52 40.0**	**-0.9**
FNA				S	**Sg**	**16 53 03.0**	**+0.5**
	comp=E,140nm,0.4s						
FNA	**Florina**	**1.49**	**113**	*i* PN	**Pb**	**16 52 41.9**	**0.0**
FNA				*i* SN	**Sg**	**16 53 03.4**	**+0.9**
FNA	**Florina**	**1.49**	**113**	P	**Pb**	**16 52 41.8**	**-0.1**
FNA				S	**Sg**	**16 53 02.5**	**+0.1**
FNA				AML	AML	16 53 05.9	
	comp=N,308µm,0.5s						
FNA				AML	AML	16 53 06.2	
	comp=E,248µm,0.3s						
IVA	**Berane**	**1.52**	**9**	*e*Pg	**Pn**	**16 52 41.7**	**+0.4**
IVA				*e*Sg	**Sg**	**16 53 03.7**	**+0.3**
SKO	**Skopje**	**1.52**	**66**	*e*Pg	**Pg**	**16 52 43.9**	**+0.1**
SRN	**Sarande**	**1.53**	**167**	*i* PN	**Pg**	**16 52 43.4**	**-0.5**
SRN				*i* SN	**Sg**	**16 53 04.8**	**+1.0**
TREB	**Trebinje**	**1.62**	**326**	*e*Pg	**Pb**	**16 52 43.9**	**-0.3**
TREB				*e*Sg	**Sg**	**16 53 06.4**	**-0.3**
DBRK	**Dubrovnik**	**1.67**	**321**	*i* Pn	**Pn**	**16 52 43.1**	**-0.2**
DBRK				Sn	**Sn**	**16 53 04.4**	**-0.2**
BRY	**Bratogost**	**1.71**	**334**	*e*Pn	**Pb**	**16 52 45.0**	**-0.7**
BRY				*e*Sn	**Sg**	**16 53 08.8**	**-0.7**
UPM	**Unac-Piva**	**1.89**	**345**	*e*Pn	**Pn**	**16 52 47.2**	**+0.6**
UPM				*e*Sn	**Sb**	**16 53 13.3**	**+0.8**
SJES	**Sjenica**	**1.91**	**9**	*e*Pg	**Pb**	**16 52 49.0**	**-0.2**
SJES				*e*Sg	**Sg**	**16 53 17.1**	**+1.1**
IGT	**Igoumenitsa**	**1.93**	**162**	P	**Pn**	**16 52 47.0**	**+0.1**
IGT				S	**Sn**	**16 53 10.9**	**0.0**
PLE	**Pljevlja**	**1.96**	**356**	*e*Pn	**Pb**	**16 52 48.6**	**-1.4**
PLE				*e*Sn	**Sb**	**16 53 14.6**	**+0.3**
NOCI	**Noci**	**1.98**	**254**	P	**Pn**	**16 52 47.0**	**-0.6**
STON	**Ston**	**2.04**	**318**	*e*Pn	**Pn**	**16 52 47.7**	**-0.7**
STON				Sn	**Sn**	**16 53 11.6**	**-2.1**
SELS	**Selova**	**2.17**	**31**	*e*Pg	**Pg**	**16 52 55.1**	**-1.1**
IVAS	**Ivanjica**	**2.24**	**11**	*e*Pn	**Pn**	**16 52 51.9**	**+0.6**
BOSS	**Bosilegrad**	**2.44**	**62**	*e*Pn	**Pn**	**16 52 55.2**	**+1.2**
BBLS	**Lazići**	**2.49**	**357**	*e*Pn	**Pb**	**16 52 57.5**	**-1.6**
GRUS	**Gruza**	**2.65**	**18**	*e*Pn	**Pn**	**16 52 58.5**	**+1.7**
MAKA	**Makarska**	**2.69**	**316**	Sn	**Sn**	**16 53 28.1**	**-1.4**
LKD2	**Lefkada island**	**2.71**	**162**	P	**Pn**	**16 52 57.3**	**-0.4**
LKD2				S	**Sn**	**16 53 28.9**	**-1.4**
ZAGS	**Zajecar**	**3.13**	**38**	*e*Pn	**Pn**	**16 53 04.9**	**+1.5**
KIJV	**Kijevo**	**3.51**	**319**	*e*Pn	**Pn**	**16 53 08.7**	**0.0**
KIJV				Sn	**Sn**	**16 53 49.0**	**-1.0**
MORI	**Morici**	**3.78**	**312**	*i* Pn	**Pn**	**16 53 12.7**	**+0.3**

*IDC **20** 17:01:23.2±0.7,6.°15N×126.°93E, h0km, mb3.8/13, mb1 3.9/13, mb1mx3.7/36, mbtmp3.8/13, MS3.2/2, Ms1 3.2/2, ms1mx2.6/41, Error ellipse: s-maj=35.3km s-min=13.5km az=62.0*

*NEIC **20** 17:01:28.9±1.1,6.°1N±0.°2×126.°9E±0.°2, h42km±8km, mb4.5/8, Error ellipse: s-maj=30.3km s-min=13.4km az=49.0*

*MAN **20** 17:01:30.2,6.°14N×126.°41E, h1km, MS3.8*

ISC 20 17:01:27.2±1.9,5.°94N±0.°06×126.°77E±0.°07, h29km±13km, n34, σ1s91/43, mb4.1/17, 2C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
DDMP	**Don Marcelino,**	**1.06**	**279**	*e*P		**Pn**	**17 01 43.3**	**-2.9**
DDMP				*e*S		**Sn**	**17 02 01.2**	**+1.1**
MATI	**Mati**	**1.12**	**333**	*e*P		**Pn**	**17 01 45.1**	**-1.9**
MATI				*e*S		**Sn**	**17 02 02.0**	**+0.5**
DAV	**Davao City (W)**	**1.63**	**314**	Pn		**Pn**	**17 01 54.3**	**+0.3**
	147nm,0.3s,baz=20,slow=2.1,SNR=8.3							
DAV				Sn		**Sb**	**17 02 17.2**	**+0.4**
	92nm,0.3s,baz=250,slow=19,SNR=7.1							
DMPH	**Davao City--Mi**	**1.69**	**312**	*i*P		**Pb**	**17 01 58.9**	**+1.2**
GSPH	**General Santos**	**1.81**	**275**	*e*P		**Pn**	**17 01 53.6**	**-3.0**
GSPH				*e*S		Sb	17 02 39.8	+18
KCP	**Kidapawan**	**1.98**	**303**	*i* P		**Pn**	**17 01 59.4**	**+0.5**
KCP				*i* S		Sb	17 02 35.9	+9.0
SKMP	**Bagumbayan, Su**	**2.29**	**285**	*e*P		**Pn**	**17 02 04.0**	**+1.0**
SKMP				*e*S		**Sn**	**17 02 29.3**	**-1.0**
BUKP	**Musuan**	**2.57**	**319**	*e*P		**Pn**	**17 02 07.8**	**+0.9**
BUKP				*e*S		**Sn**	**17 02 38.5**	**+1.3**
CTBH	**Cotabato--PC H**	**2.81**	**297**	*i*P		**Pn**	**17 02 12.1**	**+1.8**
CTBH				*i* S		**Sn**	**17 02 43.9**	**+0.7**
BUTP	**Butuan**	**3.22**	**339**	*e*P		**Pb**	**17 02 19.2**	**-4.6**
BUTP				*e*S		**Sb**	**17 03 05.7**	**+3.2**
CGP	**Cagayan de Oro**	**3.24**	**321**	*e*P		**Pn**	**17 02 18.7**	**+2.5**
PAGZ	**Pagadian**	**3.86**	**300**	*e*P		**Pn**	**17 02 28.0**	**+3.3**
PAGZ				*e*S		**Sn**	**17 03 03.7**	**-5.5**
KNRA	**Kununurra**	**21.57**	**175**	P		**P**	**17 06 16.9**	**+2.3**
FITZ	**Fitzroy Crossi**	**23.91**	**183**	P		**P**	**17 06 40.8**	**+2.0**
	5.6nm,1.2s,baz=354,slow=10,SNR=3.0							
WRA	**Warramunga Arr**	**26.77**	**164**	P		**P**	**17 07 08.1**	**+3.3**
	0.5nm,0.4s,baz=345,slow=10,SNR=5.5							
WRA				PcP		**PcP**	**17 10 28.6**	**+0.9**
	0.4nm,0.3s,baz=337,slow=2.6,SNR=5.3							
WR0	**Warramunga Arr**	**26.85**	**164**	P		**P**	**17 07 06.7**	**+1.2**
WR0				IAmb		IAmb	17 07 17.4	
	comp=Z,32nm,1.9s							
CMAR	**Chiang Mai Arr**	**29.85**	**297**	P		**P**	**17 07 32.1**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=112,slow=8.9,SNR=2.7							
CMAR				LR		LR	17 19 50.4	
	comp=Z,17nm,20.2s,baz=20,slow=37							
ASAR	**Alice Springs**	**30.24**	**167**	P		**P**	**17 07 37.2**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=345,slow=7.8,SNR=6.9							
ASAR				PcP		**PcP**	**17 10 37.1**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=338,slow=2.1,SNR=6.4							
STKA	**Stephens Creek**	**40.17**	**160**	P		**P**	**17 09 01.2**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=347,slow=14,SNR=2.8							
STKA	**Stephens Creek**	**40.17**	**160**	P		**P**	**17 09 01.2**	**+0.2**
SONM	**Songino Array**	**45.23**	**341**	P		**P**	**17 09 42.5**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=161,slow=9.2,SNR=2.7							
MK31	**Makanchi Array**	**55.78**	**324**	P		**P**	**17 11 01.1**	**-0.6**
MKAR	**Makanchi Array**	**55.78**	**324**	P		**P**	**17 11 01.2**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=119,slow=7.7,SNR=10							
MKAR				PcP		**PcP**	**17 12 00.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=108,slow=4.7,SNR=2.9							
MAKZ	**Makanchi**	**55.97**	**324**	P		**P**	**17 11 02.9**	**-0.1**
MAKZ				IAmb		IAmb	17 11 41.6	
	comp=Z,11nm,2.0s							
ZALV	**Zalesovo Beam**	**58.66**	**332**	P		**P**	**17 11 21.4**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=120,slow=5.5,SNR=3.1							
KURK	**Kurchatov**	**59.92**	**327**	P		**P**	**17 11 29.7**	**-0.9**
KURK				IAmb		IAmb	17 11 38.6	
	comp=Z,5.8nm,1.4s							
KURBB	**Kurchatov Arra**	**59.92**	**327**	P		**P**	**17 11 30.0**	**-0.6**
	comp=Z,1.5nm,1.0s,baz=128,slow=6.0,SNR=8.1							
BVAR	**Borovoye Array**	**65.51**	**326**	P		**P**	**17 12 07.8**	**0.0**
	comp=Z,1.7nm,0.9s,baz=134,slow=6.4,SNR=7.7							
BRVK	**Borovoye**	**65.58**	**326**	IAmb		IAmb	17 12 10.5	
	comp=Z,4.2nm,1.2s							
NIUE	**Niue**	**67.09**	**113**	P		**P**	**17 12 16.6**	**-2.0**
AKTO	**Aktyubinsk**	**71.97**	**321**	LR		LR	17 46 22.8	
	comp=Z,36nm,21.1s,baz=17,slow=38							
ILAR	**Eielson Array**	**83.11**	**26**	P		**P**	**17 13 49.7**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=243,slow=5.4,SNR=9.7							
BRTR	**Keskin Array B**	**88.65**	**310**	P		**P**	**17 14 17.9**	**-0.3**
	comp=Z,0.8nm,0.9s,baz=90,slow=2.5,SNR=4.4							
FINES	**FINESS Array B**	**89.92**	**332**	P		**P**	**17 14 22.9**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=76,slow=5.9,SNR=4.0							

*NEIC **20** 17:11:57.6±1.7,18.°82N±0.°08×145.°3E±0.°2, h360km±6km, mb4.4/11, Error ellipse: s-maj=24.5km s-min=11.2km az=93.0*

*IDC **20** 17:12:02.8±12.0,18.°83N×145.°22E, h415km±142km, mb3.0/9, mb1 3.3/9, mb1mx3.0/37, mbtmp3.8/9, Error ellipse: s-maj=48.0km s-min=16.2km az=74.0*

ISC 20 17:11:56.7±0.7,18.°85N±0.°10×145.°3E±0.°2, h350km, n21, σ0s74/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ANA2	**Anatahan**	**2.52**	**171**	Pn		**Pn**	**17 12 53.2**	**+1.1**
FAKI	**Fak Fak**	**25.17**	**212**	P		**P**	**17 16 51.6**	**0.0**
FAKI				IAmb		IAmb	17 17 43.9	
	comp=Z,42nm,1.4s							
COEN	**Coen**	**32.67**	**184**	P		**P**	**17 17 56.8**	**-0.7**
COEN				IAmb		IAmb	17 18 29.7	
	comp=Z,25nm,1.6s							
MTN	**Manton Dam**	**34.46**	**205**	P		**P**	**17 18 12.2**	**-0.6**
WR0	**Warramunga Arr**	**39.99**	**196**	P		**P**	**17 18 59.4**	**+0.6**
WR0				IAmb		IAmb	17 19 09.1	
	comp=Z,32nm,1.9s							
WRA	**Warramunga Arr**	**40.03**	**196**	P		**P**	**17 18 59.6**	**+0.5**
	comp=Z,3.0nm,0.5s,baz=13,slow=8.8,SNR=21							
SANVU	**Saraoutou**	**40.32**	**146**	P		**P**	**17 18 59.8**	**-1.8**
SANVU				IAmb		IAmb	17 19 01.6	
	comp=Z,14nm,1.1s							
FITZ	**Fitzroy Crossi**	**41.50**	**209**	P		**P**	**17 19 11.3**	**+0.3**
	comp=Z,1.3nm,0.3s,baz=16,slow=8.7,SNR=11							
FITZ	**Fitzroy Crossi**	**41.50**	**209**	P		**P**	**17 19 11.2**	**+0.2**
FITZ				IAmb		IAmb	17 20 32.5	
	comp=Z,55nm,1.9s							
SONM	**Songino Array**	**42.80**	**321**	P		**P**	**17 19 21.2**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=129,slow=5.1,SNR=3.9							
AS31	**Alice Springs**	**43.70**	**195**	P		**P**	**17 19 29.1**	**+0.5**
ASAR	**Alice Springs**	**43.70**	**195**	P		**P**	**17 19 29.1**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=18,slow=6.4,SNR=51							
NOUC	**Port Laguerre**	**45.58**	**152**	P		**P**	**17 19 43.0**	**-0.2**
NOUC				IAmb		IAmb	17 20 14.9	
	comp=Z,36nm,1.7s							
DZM	**Mont Dzumac**	**45.62**	**152**	P		**P**	**17 19 43.8**	**+0.2**
DZM				IAmb		IAmb	17 20 37.3	
	comp=Z,57nm,2.0s							
STKA	**Stephens Creek**	**50.56**	**184**	P		**P**	**17 20 20.5**	**-0.4**
	comp=Z,1.6nm,0.9s,baz=27,slow=11,SNR=3.1							
STKA	**Stephens Creek**	**50.56**	**184**	P		**P**	**17 20 20.3**	**-0.6**
MKAR	**Makanchi Array**	**58.10**	**314**	P		**P**	**17 21 15.0**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=91,slow=8.4,SNR=4.7							
NNZ	**Nelson**	**65.19**	**157**	P		**P**	**17 22 01.8**	**+0.5**
YKA	**Yellowknife Ar**	**78.02**	**28**	P		**P**	**17 23 16.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=285,slow=5.2,SNR=2.6							
NVAR	**Mina Array Bea**	**83.33**	**52**	P		**P**	**17 23 46.6**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=270,slow=4.9,SNR=3.8							
FINES	**FINESS Array B**	**86.60**	**335**	P		**P**	**17 23 59.8**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=70,slow=4.6,SNR=5.4							

*IDC **20** 17:23:06.8±0.5,0.°80N×125.°87E, h0km, mb4.3/23, mb1 4.3/25, mb1mx4.2/51, mbtmp4.2/25, ML3.7/2, MS2.7/1, Ms1 2.7/1, ms1mx2.5/35, Error ellipse: s-maj=22.5km s-min=11.5km az=74.0*

*BJI **20** 17:23:07.7±0.0,0.°12N×126.°20E, h60km, mB5.1/18, mb4.6/20, Ms4.7/7, Ms7 4.4/7*

*DJA **20** 17:23:11.0±0.2,1.°1N±3.°3×126.°6E±.°, h10km, M4.5/18, mB4.8/5, mb4.6/10, MLv4.4/18, MLv4.8/3, Mw(mB)4.1/5*

*NEIC **20** 17:23:13.4±1.6,0.°84N±0.°06×126.°12E±0.°06, h50km±8km, mb4.7/26, Error ellipse: s-maj=9.8km s-min=7.7km az=219.0*

ISC 20 17:23:13.2±0.4,0.°85N±0.°05×126.°05E±0.°05, h44km, n91, σ1s30/98, mb4.5/46, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TNTI	**Ternate**	**1.32**	**93**	P		**Pn**	**17 23 34.5**	**-0.7**
TNTI				S		**Sn**	**17 23 53.3**	**+1.7**
TNTI	**Ternate**	**1.32**	**93**			**Pn**	**17 23 34.8**	**-0.4**
LBMI	**Labuha**	**2.07**	**135**	P		**Pn**	**17 23 45.8**	**+0.3**
KMSI	**Cibinong**	**2.09**	**263**	P		**Pn**	**17 23 45.4**	**-0.3**
KMSI				S		**Sn**	**17 24 11.5**	**+1.0**
SANI	**Sanana**	**2.88**	**181**	P		**Pn**	**17 23 55.2**	**-1.4**
LUWI	**Luwuk**	**3.78**	**240**	P		**Pn**	**17 24 10.1**	**+1.2**
LUWI	**Luwuk**	**3.78**	**240**			**Pn**	**17 24 11.0**	**+2.0**
MRSI	**Marisa**	**4.12**	**265**	P		**Pn**	**17 24 14.3**	**+0.6**
NLAI	**Namlea**	**4.19**	**165**	P		**Pn**	**17 24 14.2**	**-0.5**
APSI	**Ampana**	**4.73**	**248**	P		**Pn**	**17 24 23.1**	**+1.0**
AAI	**Ambon**	**4.99**	**155**	P		**Pn**	**17 24 26.6**	**+1.0**
	0.3nm45nm,0.6s							
MSAI	**Masohi**	**5.06**	**145**	P		**Pn**	**17 24 28.7**	**+2.1**
	0.1nm331nm20nm,0.5s							
GSPH	**General Santos**	**5.32**	**348**	*e*P		**Pn**	**17 24 31.9**	**+1.6**
SIJI	**Sorong**	**5.48**	**108**	Pn		**Pn**	**17 24 33.0**	**+0.5**
	0.8nm,0.3s,baz=156,slow=2.0,SNR=3.3							
SKMP	**Bagumbayan, Su**	**5.83**	**345**	*e*P		**Pn**	**17 24 36.9**	**-0.3**
SKMP				*e*S		**Sn**	**17 25 40.9**	**-1.8**
KDI	**Kendari**	**5.88**	**216**	P		**Pn**	**17 24 37.7**	**-0.1**
	0.2nm43nm,0.6s							
MATI	**Mati**	**6.06**	**2**	*e*P		**Pn**	**17 24 41.9**	**+1.5**
MPSI	**Mapaga**	**6.17**	**265**	P		**Pn**	**17 24 41.5**	**-0.3**
	0.2nm0.2nm684nm50nm,1.1s							
KCP	**Kidapawan**	**6.19**	**351**	*e*P		**Pn**	**17 24 46.4**	**+4.1**
BUKP	**Musuan**	**7.05**	**352**	*e*P		Pn	17 25 00.3	+6.3
TTSI	**Tana Toraja**	**7.33**	**238**	P		**Pn**	**17 24 58.1**	**+0.3**
	0.3nm1µm90nm,0.8s							
PAGZ	**Pagadian**	**7.44**	**339**	*e*P		**Pn**	**17 24 59.6**	**+0.3**
SPSI	**Sidrap Palu**	**7.89**	**233**	P		**Pn**	**17 25 05.7**	**+0.3**
	0.4nm1µm105nm,0.5s							
BNSI	**Bone**	**7.90**	**229**	P		**Pn**	**17 25 05.7**	**+0.1**
	0.2nm66nm,0.7s							
BKSI	**Bulukumba**	**8.52**	**224**	P		**Pn**	**17 25 14.2**	**+0.1**
SBUM	**Sibu**	**13.91**	**277**	P		**P**	**17 26 36.2**	**+1.1**
FITZ	**Fitzroy Crossi**	**18.83**	**181**	P		**P**	**17 27 27.8**	**-1.7**
	0.4nm,0.3s,baz=26,slow=10,SNR=5.3							
FITZ				LR		LR	17 34 47.8	
	comp=Z,25nm,21.4s,baz=7.0,slow=37							
FITZ	**Fitzroy Crossi**	**18.83**	**181**	P		**P**	**17 27 28.5**	**-1.0**
WRAB	**Tennant Creek**	**22.20**	**159**	P		**P**	**17 28 04.7**	**-1.3**
WRA	**Warramunga Arr**	**22.20**	**159**	P		**P**	**17 28 04.5**	**-1.5**
	50nm,0.8s,baz=338,slow=11,SNR=86							
WR0	**Warramunga Arr**	**22.29**	**159**	P		**P**	**17 28 05.5**	**-1.5**
WR0				IAmb		IAmb	17 28 11.1	
	comp=Z,30nm,1.0s							
COEN	**Coen**	**22.45**	**132**	P		**P**	**17 28 08.6**	**-0.2**
COEN				IAmb		IAmb	17 28 15.0	
	comp=Z,14nm,0.8s							
AS31	**Alice Springs**	**25.54**	**163**	P		**P**	**17 28 37.1**	**-0.8**
ASAR	**Alice Springs**	**25.54**	**163**	P		**P**	**17 28 37.2**	**-0.7**
	comp=Z,5.6nm,0.3s,baz=342,slow=11,SNR=129							
ASAR				PcP		**PcP**	**17 32 09.3**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=339,slow=2.1,SNR=4.8							
PDSI	**Padang**	**25.65**	**266**	P		**P**	**17 28 41.5**	**+2.4**
FORT	**Forrest**	**31.51**	**177**	P		**P**	**17 29 30.7**	**-0.4**
CMAR	**Chiang Mai Arr**	**31.84**	**305**	P		**P**	**17 29 33.1**	**-1.1**
	comp=Z,0.9nm,0.8s,baz=129,slow=8.7,SNR=7.4							
ENH	**Enshi**	**33.23**	**333**	P		**P**	**17 29 46.2**	**0.0**
ENH				IAmb		IAmb	17 29 53.2	
	comp=Z,12nm,1.2s							
STKA	**Stephens Creek**	**35.73**	**157**	P		**P**	**17 30 07.3**	**-0.4**
	comp=Z,5.6nm,0.5s,baz=334,slow=8.0,SNR=24							
STKA	**Stephens Creek**	**35.73**	**157**	P		**P**	**17 30 07.4**	**-0.4**
KSRS	**Korea Array**	**36.47**	**3**	P		**P**	**17 30 14.2**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=184,slow=9.1,SNR=3.6							
MJAR	**Matsushiro Arr**	**37.26**	**16**	P		**P**	**17 30 20.4**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=174,slow=9.6,SNR=3.4							
USRK	**Ussuriysk Ar.**	**43.49**	**6**	P		**P**	**17 31 12.9**	**+0.8**
	comp=Z,3.0nm,0.6s,baz=192,slow=6.2,SNR=8.2							
LSA	**Lhasa**	**43.88**	**314**	P		**P**	**17 31 16.5**	**+0.3**
TAPN	**Taplejung**	**45.23**	**309**	*e*P		**P**	**17 31 25.7**	**-1.1**
	comp=Z,8.5nm,0.4s							
GTA	**Gaotai**	**45.24**	**331**	P		**P**	**17 31 26.9**	**+0.4**
GTA				pmax	pmax			
	comp=Z,2.0nm,0.7s							
GTA				pmax	pmax			
	comp=Z,59nm,6.8s							
GTA				LR	LR			
	comp=Z,110nm,14.6s							
GTA				LR	LR			
	comp=Z,280nm,17.8s							
GTA				LR	LR			
	comp=Z,130nm,15.9s							
ASAJ	**Asahikawa**	**45.53**	**17**	P		**P**	**17 31 27.9**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=122,slow=9.5,SNR=3.0							
JKA	**Kamikawa-asahi**	**45.53**	**17**	P		**P**	**17 31 27.9**	**-0.6**
RAMN	**Ramite**	**45.91**	**308**	*e*P		**P**	**17 31 31.2**	**-0.9**
	comp=Z,9.2nm,0.6s							
JIRN	**Jiri**	**46.56**	**308**	*e*P		**P**	**17 31 36.3**	**-1.1**
	comp=Z,7.2nm,0.3s							
GUN	**Gumba**	**46.92**	**309**	*e*P		**P**	**17 31 38.9**	**-1.2**
	comp=Z,12nm,0.4s							
PKIN	**Phulchoki**	**47.15**	**308**	*e*P		**P**	**17 31 40.0**	**-1.8**
	comp=Z,2.7nm,0.3s							
KKN	**Kakani**	**47.33**	**308**	*e*P		**P**	**17 31 41.2**	**-2.0**
	comp=Z,3.5nm,0.3s							
KLR	**Kul'dur**	**48.45**	**5**	P		**P**	**17 31 51.7**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=200,slow=3.2,SNR=8.4							
KOLN	**Koldanda**	**48.66**	**307**	*e*P		**P**	**17 31 52.3**	**-1.1**
	comp=Z,11nm,0.6s							
DANN	**Dangsing**	**48.78**	**308**	*e*P		**P**	**17 31 53.1**	**-1.4**
	comp=Z,22nm,0.7s							
SONM	**Songino Array**	**49.81**	**343**	P		**P**	**17 32 01.7**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=155,slow=7.1,SNR=9.9							
SONM				PcP		**PcP**	**17 33 22.0**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=164,slow=1.9,SNR=2.3							
PETK	**Petropavlovsk-**	**58.34**	**22**	P		**P**	**17 33 05.1**	**+1.3**
	comp=Z,2.6nm,0.9s,baz=204,slow=5.1,SNR=3.2							
PRZ	**Przheval'sk**	**59.46**	**321**	P		**P**	**17 33 12.2**	**+0.3**
MK31	**Makanchi Array**	**59.54**	**327**	P		**P**	**17 33 11.2**	**-1.0**
MK31				IAmb		IAmb	17 33 14.1	
	comp=Z,4.0nm,0.8s							
MKAR	**Makanchi Array**	**59.54**	**327**	P		**P**	**17 33 11.5**	**-0.7**
	comp=Z,5.3nm,0.5s,baz=122,slow=7.2,SNR=82							
MKAR				PcP		**PcP**	**17 34 01.1**	**+1.7**
	comp=Z,1.4nm,0.7s,baz=132,slow=3.2,SNR=2.0							
KSH	**Kashi**	**59.62**	**317**	P		**P**	**17 33 14.1**	**+1.0**
KSH				pP		sP	17 33 31.0	+1.2
KSH				S		**S**	**17 41 16.0**	**-4.5**
KSH				sS		sS	17 41 49.0	+8.4
KSH				SS		**SS**	**17 45 22.6**	**+5.9**
KSH				pmax	pmax			
	comp=Z,6.0nm,0.8s							
KSH				pmax	pmax			
	comp=Z,290nm,4.9s							
KSH				LR	LR			
	comp=Z,200nm,4.8s							
KSH				LR	LR			
	comp=Z,220nm,4.8s							
KSH				LR	LR			
	comp=Z,460nm,6.0s							
MAKZ	**Makanchi**	**59.73**	**326**	P		**P**	**17 33 12.8**	**-0.7**
MAKZ				IAmb		IAmb	17 33 17.1	
	comp=Z,5.4nm,0.6s							
KDJ	**Kajisay**	**60.06**	**320**	P		**P**	**17 33 15.6**	**-0.5**
KDJ				IAmb		IAmb	17 33 20.3	
	comp=Z,12nm,1.4s							
NRN	**Naryn**	**60.50**	**319**	P		**P**	**17 33 18.5**	**-0.8**
NRN				IAmb		IAmb	17 33 21.0	
	comp=Z,7.0nm,1.4s							
YAK	**Yakutsk**	**61.09**	**2**	P		**P**	**17 33 22.7**	**+0.2**
	comp=Z,2.3nm,0.4s,baz=323,slow=1.4,SNR=8.8							
YAK	**Yakutsk**	**61.09**	**2**	P		**P**	**17 33 22.2**	**-0.2**
AAK	**Ala-Archa**	**62.05**	**319**	P		**P**	**17 33 29.9**	**+0.3**
AAK				IAmb		IAmb	17 33 31.4	
	comp=Z,5.9nm,1.4s							
ZALV	**Zalesovo Beam**	**62.85**	**334**	P		**P**	**17 33 33.1**	**-1.4**
	comp=Z,0.8nm,0.4s,baz=131,slow=8.3,SNR=4.7							
GAR	**Garm**	**63.39**	**314**	P		**P**	**17 33 37.9**	**-0.6**
BTK	**Batken**	**63.44**	**315**	P		**P**	**17 33 38.9

NIL	**Nilore**	**64.24**	**303**	P	**P**	**17 40 02.0**	**0.0**
KK31	**Karatay Array**	**67.64**	**313**	P	**P**	**17 40 23.7**	**0.0**
KKAR	**Karatay Array**	**67.64**	**313**	P	**P**	**17 40 23.7**	**0.0**
KBL	**Kabul**	**67.80**	**304**	P	**P**	**17 40 24.7**	**-0.4**
KBL				IAmb	IAmb	17 40 25.3	
	comp=Z,2.8nm,0.7s						
CHGR	**Chuyangaron**	**68.08**	**308**	P	**P**	**17 40 27.1**	**+0.4**
CHGR				IAmb	IAmb	17 40 27.9	
	comp=Z,5.6nm,0.8s						
BVAR	**Borovoye Array**	**69.57**	**323**	P	**P**	**17 40 35.5**	**0.0**
	comp=Z,3.0nm,0.9s,baz=107,slow=7.9,SNR=14						
BRVK	**Borovoye**	**69.64**	**323**	P	**P**	**17 40 36.3**	**+0.3**
BRVK				IAmb	IAmb	17 40 37.2	
	comp=Z,4.8nm,0.9s						
MLY	**Manley**	**73.95**	**25**	P	**P**	**17 41 01.8**	**+0.1**
MLY				IAmb	IAmb	17 41 03.5	
	comp=Z,6.5nm,1.1s						
GHO	**Glory Hole Cre**	**74.05**	**28**	P	**P**	**17 41 02.4**	**0.0**
KNK	**Knik Glacier**	**74.20**	**29**	P	**P**	**17 41 03.2**	**0.0**
SML	**Sawmill**	**74.34**	**28**	P	**P**	**17 41 04.2**	**+0.2**
SML				IAmb	IAmb	17 41 18.7	
	comp=Z,19nm,1.3s						
RND	**Reindeer**	**74.40**	**27**	P	**P**	**17 41 04.5**	**+0.1**
RND				IAmb	IAmb	17 41 28.9	
	comp=Z,10nm,1.3s						
SCM	**Sheep Creek Mo**	**74.81**	**28**	P	**P**	**17 41 07.6**	**+0.8**
DHY	**Denali Highway**	**75.00**	**27**	P	**P**	**17 41 07.5**	**-0.4**
DHY				IAmb	IAmb	17 41 10.0	
	comp=Z,5.9nm,1.0s						
EYAK	**Cordova Ski Ar**	**75.37**	**30**	P	**P**	**17 41 10.0**	**+0.1**
IL31		**75.50**	**25**	P	**P**	**17 41 10.0**	**-0.6**
ILAR	**Eielson Array**	**75.50**	**25**	P	**P**	**17 41 10.2**	**-0.5**
	comp=Z,1.5nm,0.7s,baz=246,slow=5.8,SNR=22						
ABKAR	**Akbulak array**	**75.58**	**319**	P	**P**	**17 41 11.3**	**-0.1**
VRDI	**Verde Repeater**	**76.57**	**29**	P	**P**	**17 41 18.1**	**+1.1**
SCRK	**Sand Creek**	**76.63**	**26**	P	**P**	**17 41 16.9**	**-0.3**
SCRK				IAmb	IAmb	17 41 32.2	
	comp=Z,6.8nm,1.3s						
AKTO	**Aktyubinsk**	**76.88**	**320**	P	**P**	**17 41 18.4**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=72,slow=7.2,SNR=6.8						
EPYK	**Eagle Plains**	**79.86**	**24**	P	**P**	**17 41 35.2**	**+0.3**
EPYK				IAmb	IAmb	17 41 38.6	
	comp=Z,7.8nm,1.4s						
ARCES	**ARCESS Array B**	**89.36**	**341**	P	**P**	**17 42 22.3**	**-0.5**
	comp=Z,4.0nm,1.0s,baz=84,slow=8.3,SNR=4.3						
YKA	**Yellowknife Ar**	**89.90**	**26**	P	**P**	**17 42 25.1**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=292,slow=5.2,SNR=8.6						
FINES	**FINESS Array B**	**92.44**	**334**	P	**P**	**17 42 35.6**	**-1.6**
	comp=Z,0.8nm,0.6s,baz=51,slow=7.3,SNR=3.2						
NVAR	**Mina Array Bea**	**94.88**	**50**	P	**P**	**17 42 49.9**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=256,slow=6.2,SNR=4.7						
HODGE	**Hodges**	**122.41**	**40**		**PKPdf**	**17 48 22.3**	**0.0**
LPAZ	**La Paz**	**153.33**	**108**	PKPbc	**PKPbc**	**17 49 26.1**	**-0.3**
	comp=Z,1.7nm,1.0s,baz=0.0,slow=3.0,SNR=4.8						

IDC ***20*** *17:33:48.0±0.6,9.˚01N×138.˚17E, h0km, mb4.4/19, mb1 4.6/22, mb1mx4.4/42, mbtmp4.5/22, ML5.3/4, MS4.0/30, Ms1 4.0/30, ms1mx4.0/38, Error ellipse: s-maj=20.4km s-min=12.8km az=75.0*

MOS ***20*** *17:33:50.3±0.8, 8.˚99N×138.˚23E, h27km, mb5.0/9, Error ellipse: s-maj=14.5km s-min=6.6km az=118.2*

BJI ***20*** *17:33:52.0±0.0, 9.˚10N×138.˚30E, h35km, mB5.2/46, mb4.7/56, Ms4.5/36, Ms7 4.3/36*

NEIC ***20*** *17:33:52.3±1.5, 8.˚99N±0.˚08×138.˚16E±0.˚09, h26km±4km, mb4.9/43, Error ellipse: s-maj=13.6km s-min=11.6km az=101.0*

DJA ***20*** *17:33:53.1±2.2, 9.˚N±5.˚×13.˚8E±.˚, h21km±18km, M5.2/19, mb4.8/19, mB5.4/9, MLv5.9/1, Mw(mB)4.8/9*

GCMT ***20*** *17:33:53.3±0.2, 9.˚00N±0.˚02×137.˚99E±0.˚03, h16km±1km, MW4.9/86, Moment Tensor Solution. s33,c44; s86,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.00±.17; $M_{\theta\theta}$-1.03±.10; $M_{\phi\phi}$-0.97±.12; $M_{r\theta}$0.78±.31; $M_{\theta\phi}$-2.01±.09; $M_{\phi r}$-0.48±.29; Best double couple: M_o2.77500×10^{16} NP1:ϕ_s198.00000°,δ50.00000°,λ49.00000°. NP2: ϕ_s72.00000°,δ55.00000°,λ128.00000°. Principal axes: T 2.5290, Plg60.0000°, Azm42.0000°; N 0.4900, Plg30.0000°, Azm228.0000°; P -3.0210, Plg3.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 20 17:33:53.3±0.4, 9.˚00N±0.˚05×138.˚10E±0.˚06, h29km, n171, σ1.9/72/158, mb4.8/66, MS4.2/39, 2C-1D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**8.05**	**55**	LR	LR	17 38 05.4	
	comp=Z,321nm,20.6s,baz=252,slow=32						
ANA2	**Anatahan**	**10.40**	**45**	Pn	**Pn**	**17 36 20.0**	**-0.7**
SMPI	**Sarmi**	**10.94**	**177**	P	**Pn**	**17 36 28.4**	**+0.4**
	3μm215nm,0.6s						
RKPI	**Ransiki, Papua**	**11.15**	**201**	P	**Pn**	**17 36 32.3**	**+1.3**
	53nm,1.2s						
GENI	**Genyem**	**11.70**	**170**	P	**Pn**	**17 36 39.7**	**+1.2**
	178nm,1.3s						
JAY	**Jayapura**	**11.73**	**167**	Pn	**Pn**	**17 36 38.3**	**-0.6**
	12nm,0.3s,baz=343,slow=6.3,SNR=24						
JAY				LR	LR	17 40 34.8	
	comp=Z,1μm,18.3s,baz=355,slow=35						
SWI	**Sorong**	**11.94**	**215**	P	**Pn**	**17 36 42.0**	**+0.3**
	44nm,1.0s						
SIJI	**Sorong**	**11.94**	**215**	Pn	**Pn**	**17 36 41.2**	**-0.5**
	5.9nm,0.3s,baz=14,slow=17,SNR=18						
SIJI				LR	LR	17 41 11.5	
	comp=Z,575nm,18.2s,baz=74,slow=37						
DAV	**Davao City (W)**	**12.55**	**262**	Pn	**Pn**	**17 36 50.2**	**+0.2**
	28nm,0.3s,baz=136,slow=18,SNR=2.6						
DAV				LR	LR	17 40 31.8	
	comp=Z,886nm,21.7s,baz=94,slow=32						
DAV	**Davao City (W)**	**12.55**	**262**	Pn	**Pn**	**17 36 50.0**	**0.0**
BUKP	**Musuan**	**12.95**	**266**	*e*P	**Pn**	**17 36 57.6**	**+2.1**
KCP	**Kidapawan**	**13.04**	**262**	‖*e*P	**Pn**	**17 36 59.1**	**+2.3**
FAKI	**Fak Fak**	**13.21**	**206**	P	**Pn**	**17 37 00.7**	**+1.7**
	52nm,1.6s						
FAKI	**Fak Fak**	**13.21**	**206**		**Pn**	**17 37 00.1**	**+1.1**
SKMP	**Bagumbayan, Su**	**13.66**	**261**	*e*P	**P**	**17 37 10.9**	**-2.8**
LBMI	**Labuha**	**14.26**	**228**	P	**Pn**	**17 37 16.7**	**+3.3**
	380nm,0.8s						
PAGZ	**Pagadian**	**14.61**	**267**	*e*P	**P**	**17 37 25.9**	**+1.7**
MSAI	**Masohi**	**15.30**	**217**	P	**P**	**17 37 31.1**	**-0.9**
	310nm24nm,1.0s						
GUIM	**Jordan**	**15.37**	**277**	*e*P	**Pn**	**17 37 28.9**	**+0.6**
AAI	**Ambon**	**16.02**	**218**	P	**P**	**17 37 41.2**	**+1.3**
	56nm,1.0s						
SANI	**Sanana**	**16.32**	**228**	P	**Pn**	**17 37 39.3**	**-1.3**
KMSI	**Cibinong**	**16.37**	**240**	P	**P**	**17 37 44.0**	**+0.2**
	4μm90nm,0.9s						
TGY	**Tagaytay City**	**17.56**	**288**	P	**P**	**17 37 57.0**	**-0.1**
TGY	**Tagaytay City**	**17.56**	**288**	P	**P**	**17 37 57.0**	**-0.1**
	26nm,0.3s,baz=93,slow=16,SNR=3.4						
TGY				LR	LR	17 43 26.5	
	comp=Z,798nm,20.1s,baz=110,slow=33						
MRSI	**Marisa**	**18.19**	**243**	P	**P**	**17 38 06.2**	**+2.3**
	2μm137nm,1.5s						
LUWI	**Luwuk**	**18.25**	**238**	P	**Pn**	**17 38 05.0**	**+0.4**
	2μm104nm,1.3s						
LUWI	**Luwuk**	**18.25**	**238**	P	**P**	**17 38 03.5**	**-1.1**
LUWI				IAmb	IAmb	17 38 30.1	
	comp=Z,75nm,0.9s						
JCJ	**Chichijima**	**18.40**	**12**	LR	LR	17 43 11.8	
	comp=Z,479nm,19.8s,baz=180,slow=31						
APSI	**Ampana**	**19.13**	**240**	P	**Pn**	**17 38 15.9**	**+0.7**
	comp=Z,527nmcomp=Z,41nm,1.2s						
KRVT	**Keravat (AS076**	**19.17**	**133**	LR	LR	17 44 25.4	
	comp=Z,576nm,18.8s,baz=313,slow=33						
MPSI	**Mapaga**	**20.07**	**246**	P	Pn	17 38 28.0	+1.5
	comp=Z,37nm,2.2s						
PMG	**Port Moresby**	**20.39**	**154**	P	**P**	**17 38 27.1**	**-0.9**
PMG				pmax	pmax		
	comp=Z,85nm,1.2s						
PMG	**Port Moresby**	**20.39**	**154**	P	**P**	**17 38 27.0**	**-0.9**
	comp=Z,37nm,1.0s,baz=355,slow=11,SNR=8.4						
PMG				LR	LR	17 46 07.6	
	comp=Z,863nm,18.8s,baz=316,slow=36						
PMG	**Port Moresby**	**20.39**	**154**	P	**P**	**17 38 27.1**	**-0.9**
PMG				IAmb	IAmb	17 38 28.6	
	comp=Z,85nm,1.2s						
YULB	**Yu-li**	**21.53**	**314**	P	**P**	**17 38 41.3**	**+0.9**
YULB				IAmb	IAmb	17 39 04.1	
	comp=Z,62nm,1.2s						
TTSI	**Tana Toraja**	**21.81**	**238**	P	**P**	**17 38 45.9**	**+2.6**
	comp=Z,1μmcomp=Z,65nm,1.7s						
KKM	**Kota Kinabalu**	**21.90**	**264**	P	**P**	**17 38 45.2**	**+0.8**
KKM				IAmb	IAmb	17 38 55.6	
	comp=Z,62nm,1.1s						
TPUB	**Ta-pu**	**21.96**	**312**	P	**P**	**17 38 44.7**	**-0.2**
SSLB	**Suanglung**	**22.02**	**314**	P	**P**	**17 38 45.8**	**+0.2**
SSLB				IAmb	IAmb	17 38 53.6	
	comp=Z,48nm,1.2s						
YHNB	**Yeheng**	**22.30**	**316**	P	**P**	**17 38 49.3**	**+0.7**
YHNB				IAmb	IAmb	17 39 05.0	
	comp=Z,76nm,1.1s						
BNSI	**Bone**	**22.34**	**234**	P	**P**	**17 38 49.4**	**+0.3**
	comp=Z,2μmcomp=Z,90nm,1.2s						
SPSI	**Sidrap Palu**	**22.36**	**236**	P	**P**	**17 38 49.0**	**-0.3**
	comp=Z,54nm,1.3s						
SOEI	**Soe**	**23.18**	**217**	P	**P**	**17 38 58.0**	**+0.1**
	comp=Z,65nm,0.8s						
SOEI	**Soe**	**23.18**	**217**	P	**P**	**17 38 56.9**	**-1.0**
COEN	**Coen**	**23.36**	**168**	P	**P**	**17 38 58.6**	**-1.0**
JNU	**Nakatsue**	**24.91**	**345**	LR	LR	17 49 04.7	
	comp=Z,342nm,18.3s,baz=158,slow=37						
KNRA	**Kununurra**	**26.21**	**201**	P	**P**	**17 39 26.0**	**+0.3**
MJAR	**Matsushiro Arr**	**27.41**	**0**	LR	LR	17 49 08.5	
	comp=Z,171nm,19.2s,baz=185,slow=34						
HNR	**Honiara**	**28.43**	**130**	LR	LR	17 49 30.4	
	comp=Z,355nm,21.1s,baz=301,slow=33						
WR0	**Warramunga Arr**	**29.00**	**187**	P	**P**	**17 39 49.1**	**-1.6**
WRA	**Warramunga Arr**	**29.00**	**187**	P	**P**	**17 39 49.5**	**-1.3**
	comp=Z,3.8nm,0.9s,baz=360,slow=9.5,SNR=10						
NJ2	**Nanjing**	**29.07**	**325**	*e*P	**P**	**17 39 52.1**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,450nm,15.2s						
NJ2				LR	LR		
	comp=Z,630nm,15.2s						
NJ2				LR	LR		
	comp=Z,650nm,17.1s						
QIZ	**Qiongzhong**	**29.13**	**293**	P	**P**	**17 39 50.8**	**-1.2**
QIZ				S	**S**	**17 44 45.4**	**+2.9**
QIZ				LR	LR		
	comp=Z,600nm,17.2s						
H11S3	**WAKE ISLAND Hy**	**29.28**	**68**	T	T	18 11 14.0	
	baz=254,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.30**	**68**	T	T	18 11 06.8	
	baz=254,slow=75,SNR=9.3						
H11S2	**WAKE ISLAND Hy**	**29.30**	**68**	T	T	18 11 16.0	
	baz=254,slow=75,SNR=11						
FITZ	**Fitzroy Crossi**	**29.61**	**205**	LR	LR	17 54 03.8	
	comp=Z,148nm,18.1s,baz=22,slow=41						
KSRS	**Korea Array**	**29.78**	**344**	LR	LR	17 51 40.1	
	comp=Z,258nm,18.1s,baz=160,slow=36						
H11N1	**WAKE ISLAND Hy**	**29.80**	**66**	T	T	18 11 09.5	
	baz=254,slow=74,SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**29.81**	**66**	T	T	18 11 04.9	
	baz=254,slow=74,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**29.82**	**66**	T	T	18 11 13.1	
	baz=254,slow=74,SNR=8.0						
AS31	**Alice Springs**	**32.73**	**187**	P	**P**	**17 40 22.4**	**-1.2**
ASAR	**Alice Springs**	**32.73**	**187**	P	**P**	**17 40 22.9**	**-0.8**
	comp=Z,4.5nm,0.9s,baz=21,slow=12,SNR=36						
ASAR				LR	LR	17 53 48.1	
	comp=Z,310nm,20.0s,baz=12,slow=37						
MSHR	**Mys Shultsa**	**34.00**	**351**	*e*P	**P**	**17 40 34.3**	**-0.2**
ENH	**Enshi**	**34.09**	**312**	P	**P**	**17 40 34.6**	**-0.9**
ENH				IAmb	IAmb	17 40 51.9	
	comp=Z,18nm,1.3s						
USRK	**Ussuriysk Ar.**	**35.46**	**352**	LR	LR	17 52 36.9	
	comp=Z,312nm,20.9s,baz=151,slow=32						
CN2	**Changchun**	**36.38**	**344**	*e*P	**P**	**17 40 56.8**	**+1.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJT	**Baijiatuan**	**36.55**	**331**	P	**P**	**17 40 56.7**	**+0.1**
BJT				pmax	pmax		
	comp=Z,35nm,1.3s						
BJT	**Baijiatuan**	**36.55**	**331**	P	**P**	**17 40 56.7**	**+0.1**
BJI	**Beijing**	**36.57**	**331**	P	**P**	**17 40 56.5**	**-0.2**
BJI				pmax	pmax		
	comp=Z,14nm,1.4s						
BJI				pmax	pmax		
	comp=Z,170nm,4.5s						
BJI				LR	LR		
	comp=Z,280nm,13.3s						
BJI				LR	LR		
	comp=Z,280nm,11.2s						
XAN	**Xi'an**	**36.60**	**317**	P	**P**	**17 40 57.8**	**+0.7**
XAN				pP	sP	17 41 06.6	-1.2
XAN				S	**S**	**17 46 43.3**	**+5.0**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,290nm,6.0s						
XAN				LR	LR		
	comp=Z,190nm,20.2s						
XAN				LR	LR		
	comp=Z,230nm,16.7s						
XAN				LR	LR		
	comp=Z,450nm,18.6s						
XAN	**Xi'an**	**36.60**	**317**	P	**P**	**17 40 57.3**	**+0.2**
XAN				pmax	pmax		
	comp=Z,14nm,1.2s						
XAN	**Xi'an**	**36.60**	**317**	P	**P**	**17 40 57.3**	**+0.2**
XAN				IAmb	IAmb	17 41 14.4	
	comp=Z,14nm,1.2s						
KMI	**Kunming**	**37.26**	**300**	P	**P**	**17 41 05.3**	**+2.2**
KMI				pP	pwP	17 41 14.9	+0.9
KMI				sP	sP	17 41 18.6	+5.3
KMI				S	**S**	**17 46 47.3**	**-1.6**
KMI				SS	**SnSn**	**17 49 23.3**	**-2.4**
KMI				pmax	pmax		
	comp=Z,5.0nm,1.9s						
KMI				pmax	pmax		
	comp=Z,80nm,6.5s						
KMI				LR	LR		
	comp=Z,340nm,20.6s						
KMI				LR	LR		
	comp=Z,300nm,19.9s						
KMI				LR	LR		
	comp=Z,470nm,20.9s						
YSS	**Yuzh-Sakhalins**	**38.02**	**5**	*e*P	**P**	**17 41 12.2**	**+3.3**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
CD2	**Chengdu**	**38.70**	**309**	P	**P**	**17 41 17.3**	**+2.4**
CD2				S	**S**	**17 47 12.4**	**+2.2**
CD2				PcS	**PcS**	**17 47 15.9**	**-0.2**
CD2				pmax	pmax		
	comp=Z,60nm,0.5s						
CD2				pmax	pmax		
	comp=Z,300nm,7.6s						
CD2				LR	LR		
	comp=Z,490nm,14.7s						
CD2				LR	LR		
	comp=Z,440nm,22.9s						
CD2				LR	LR		
	comp=Z,530nm,17.4s						
CM31	**Chiang Mai Arr**	**39.11**	**288**	P	**P**	**17 41 18.3**	**-0.2**
CMAR	**Chiang Mai Arr**	**39.11**	**288**	P	**P**	**17 41 18.7**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=98,slow=6.5,SNR=24						
CMAR				LR	LR	17 57 03.7	
	comp=Z,156nm,19.3s,baz=91,slow=36						
GIRL	**Giralia**	**39.19**	**216**	P	**P**	**17 41 18.9**	**-0.1**
PSI	**Prapat**	**39.43**	**263**	P	**P**	**17 41 19.7**	**-1.7**
	comp=Z,11nm,1.0s,baz=325,slow=2.0,SNR=4.5						
RPSI	**Rantau Prapat**	**39.45**	**263**	P	**P**	**17 41 19.7**	**-1.7**
HHC	**Hu-ho-hao-te**	**39.49**	**328**	*e*P	**P**	**17 41 24.6**	**+3.1**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
HHC				LR	LR		
	comp=Z,190nm,17.7s						
HHC				LR	LR		
	comp=Z,160nm,17.7s						
HHC				LR	LR		
	comp=Z,220nm,16.9s						
KLR	**Kul'dur**	**40.45**	**354**	*e*P	**P**	**17 41 28.9**	**-0.2**
KLR				pmax	pmax		
	comp=Z,20nm,1.1s						
STKA	**Stephens Creek**	**40.79**	**175**	P	**P**	**17 41 31.2**	**-0.9**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STKA	**Stephens Creek**	**40.79**	**175**	P	**P**	**17 41 31.0**	**-1.1**
	comp=Z,8.1nm,1.0s,baz=6.0,slow=7.9,SNR=8.1						
STKA				LR	LR	17 59 19.4	
	comp=Z,360nm,19.2s,baz=20,slow=38						
STKA	**Stephens Creek**	**40.79**	**175**	P	**P**	**17 41 31.2**	**-0.9**
GSI	**Gunungsitoli**	**41.05**	**262**	P	**P**	**17 41 32.0**	**-2.6**
GSI				IAmb	IAmb	17 41 33.2	
	comp=Z,16nm,1.0s						
LZH	**Lanzhou**	**41.19**	**316**	⇑P	**P**	**17 41 37.0**	**+1.3**
LZH				pP	sP	17 41 46.3	-0.2
LZH				sP	pwP	17 41 50.4	+2.5
LZH				sS	sS	17 48 04.3	+3.4
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,6.0s						
LZH				LR	LR		
	comp=Z,230nm,13.0s						
LZH				LR	LR		
	comp=Z,260nm,13.6s						
LZH				LR	LR		
	comp=Z,400nm,15.2s						
DZM	**Mont Dzumac**	**41.55**	**138**	*e*S	**S**	**17 48 01.1**	**+8.1**
	comp=Z,328nm,25.2s						
DZM				*e*LR	LR	17 53 17.2	
	comp=Z,908nm,25.9s						
BBOO	**Buckleboo**	**41.63**	**183**	P	**P**	**17 41 38.3**	**-0.7**
BBOO				IAmb	IAmb	17 41 38.8	
	comp=Z,24nm,1.1s						
GRNR	**Gornyy**	**41.66**	**358**	*e*P	**P**	**17 41 37.3**	**-1.8**
GRNR				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GRNR				MLR	MLR		
	comp=Z,110nm,13.0s						
ZEA	**Zeya**	**45.46**	**351**	*e*P	**P**	**17 42 05.3**	**-4.3**
ZEA				*e*		17 49 06.0	
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
GTA	**Gaotai**	**45.66**	**318**	P	**P**	**17 42 12.0**	**+0.4**
GTA				pP	pP	17 42 18.6	-0.7
GTA				sP	sP	17 42 21.8	-0.3
GTA				S	**S**	**17 48 55.6**	**+2.7**
GTA				sS	sS	17 49 07.0	+0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,130nm,7.8s						
GTA				LR	LR		
	comp=Z,130nm,21.9s						
GTA				LR	LR		
	comp=Z,190nm,20.6s						
GTA				LR	LR		
	comp=Z,190nm,18.7s						
PETK	**Petropavlovsk-**	**46.76**	**16**	LR	LR	18 01 05.6	
	comp=Z,76nm,19.1s,baz=237,slow=35						
ULN	**Ulaanbaatar**	**46.78**	**332**	⇑*e*P	**P**	**17 42 20.7**	**+0.3**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ULN	**Ulaanbaatar**	**46.78**	**332**	P	**P**	**17 42 20.6**	**+0.2**
ULN				IAmb	IAmb	17 42 21.6	
	comp=Z,8.6nm,0.9s						
TOO	**Toolangi**	**46.84**	**172**	P	**P**	**17 42 20.8**	**0.0**
TOO				pmax	pmax		
	comp=Z,25nm,1.3s						
TOO	**Toolangi**	**46.84**	**172**	P	**P**	**17 42 20.8**	**0.0**
TOO				IAmb	IAmb	17 42 22.9	
	comp=Z,25nm,1.2s						
SONM	**Songino Array**	**47.07**	**331**	P	**P**	**17 42 23.3**	**+0.7**
	comp=Z,6.5nm,0.9s,baz=140,slow=7.9,SNR=25						
SONM				LR	LR	18 01 45.7	
	comp=Z,199nm,21.8s,baz=152,slow=36						
LSA	**Lhasa**	**48.45**	**302**	P	**P**	**17 42 33.9**	**-0.1**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LSA	**Lhasa**	**48.45**	**302**	P	**P**	**17 42 33.9**	**-0.1**
LSA				IAmb	IAmb	17 42 48.8	
	comp=Z,10nm,1.2s						
ZAK	**Zakamensk**	**50.31**	**332**	*e*P	**P**	**17 42 47.5**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BOD	**Bodaibo**	**52.13**	**344**	*e*P	**P**	**17 42 59.7**	**-1.1**
MOY	**Mondy**	**52.25**	**332**	*e*P	**P**	**17 43 02.3**	**+0.4**
MOY				pmax	pmax		
	comp=Z,31nm,2.4s						
SEY	**Seymchan**	**54.82**	**8**	*e*P	**P**	**17 43 17.8**	**-2.6**
WMQ	**Urumqi**	**55.74**	**318**	*e*P	**P**	**17 43 28.6**	**+1.1**
WMQ				pP	pP	17 43 35.4	0.0
WMQ				sP	pwP	17 43 43.8	+4.0
WMQ				PP	**PP**	**17 45 34.4**	**+2.3**
WMQ				S	**S**	**17 51 10.1**	**-2.4**
WMQ				pmax	pmax		
	comp=Z,21nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.9s						
WMQ				LR	LR		
	comp=Z,190nm,6.7s						
WMQ				LR	LR		
	comp=Z,200nm,18.5s						
WMQ				LR	LR		
	comp=Z,98nm,16.1s						
MK31	**Makanchi Array**	**60.37**	**319**	P	**P**	**17 43 59.5**	**-0.4**
MK31				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MK31	**Makanchi Array**	**60.37**	**319**	P	**P**	**17 43 59.5**	**-0.4**
MK31				IAmb	IAmb	17 44 01.5	
	comp=Z,9.3nm,0.9s						
MKAR	**Makanchi Array**	**60.37**	**319**	P	**P**	**17 44 00.4**	**+0.5**
	comp=Z,8.1nm,0.7s,baz=105,slow=9.1,SNR=80						
MKAR				LR	LR	18 11 04.8	
	comp=Z,206nm,19.0s,baz=64,slow=37						
MAKZ	**Makanchi**	**60.58**	**319**	P	**P**	**17 44 01.3**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,16nm,1.1s						
MAKZ	**Makanchi**	**60.58**	**319**	P	**P**	**17 44 01.3**	**0.0**
MAKZ				IAmb	IAmb	17 44 03.0	
	comp=Z,16nm,1.1s						
ZALV	**Zalesovo Beam**	**61.67**	**327**	P	**P**	**17 44 07.9**	**-0.7**
	comp=Z,2.0nm,0.6s,baz=113,slow=5.6,SNR=8.5						
ZALV				LR	LR	18 12 32.3	
	comp=Z,148nm,18.6s,baz=80,slow=38						
PRZ	**Przheval'sk**	**61.75**	**314**	P	**P**	**17 44 11.0**	**+1.4**
PRZ				pmax	pmax		
	comp=Z,32nm,1.4s						
PRZ	**Przheval'sk**	**61.75**	**314**	P	**P**	**17 44 11.0**	**+1.4**
KSH	**Kashi**	**62.89**	**310**	P	**P**	**17 44 18.3**	**+1.2**
KSH				pP	sP	17 44 28.1	+0.3
KSH				sP	pwP	17 44 37.4	+7.1
KSH				S	**S**	**17 52 42.9**	**-2.4**
KSH				sS	sS	17 53 06.0	+7.3
KSH				SS	**SS**	**17 56 56.6**	**+5.8**
KSH				pmax	pmax		
	comp=Z,15nm,1.0s						
KSH				pmax	pmax	

comp=Z,6.0nm,1.1s
KKAR Karatay Array 67.56 313 P **P** **17 44 46.9 -0.4**
KKAR IAmb IAmb 17 44 48.0
comp=Z,6.4nm,1.1s
CHGR Chuyangaron 68.00 308 P **P** **17 44 50.0 -0.3**
BVAR Borovoye Array 69.50 323 P **P** **17 44 58.7 -0.4**
comp=Z,4.7nm,0.8s,baz=111,slow=8.1,SNR=20
BRVK Borovoye 69.57 323 P **P** **17 44 59.2 -0.3**
BRVK pmax pmax
comp=Z,10.0nm,1.0s
BRVK Borovoye 69.57 323 P **P** **17 44 59.2 -0.3**
BRVK IAmb IAmb 17 45 11.4
comp=Z,10nm,1.0s
BPAW Bear Paw Mtn. 73.64 26 P **P** **17 45 23.9 -0.1**
BPAW IAmb IAmb 17 45 40.0
comp=Z,21nm,1.4s
MLY Manley 73.97 25 P **P** **17 45 25.5 -0.3**
MLY IAmb IAmb 17 45 32.3
comp=Z,13nm,1.2s
MCK McKinley 74.45 26 P **P** **17 45 27.4 -1.3**
MCK pmax pmax
comp=Z,13nm,0.9s
MCK McKinley 74.45 26 P **P** **17 45 27.4 -1.3**
MCK IAmb IAmb 17 45 30.1
comp=Z,13nm,0.9s
ABKAR Akbulak array 75.51 319 P **P** **17 45 34.2 -0.8**
IL31 75.52 25 P **P** **17 45 32.7 -2.0**
ILAR Eielson Array 75.52 25 P **P** **17 45 33.4 -1.4**
comp=Z,2.6nm,0.6s,baz=246,slow=5.8,SNR=22
PPT Papeete 76.14 111 LR LR 18 15 03.1
comp=Z,66nm,18.6s,baz=307,slow=32
PPT2 Papeete2 76.14 111 *e*S **S** **17 55 27.2 +5.3**
comp=Z,266nm,26.2s
PPT2 Papeete2 76.14 111 *e*LR LR 18 09 09.5
comp=Z,156nm,24.8s
GEYT Alibeck 76.64 307 P **P** **17 45 41.0 -0.7**
comp=Z,2.1nm,0.8s,baz=222,slow=2.0,SNR=11
GEYT LR LR 18 21 43.2
comp=Z,35nm,20.8s,baz=20,slow=38
ARU Arti 76.77 326 P **P** **17 45 41.2 -0.8**
ARU S **S** **17 55 28.1 +0.8**
ARU Arti 76.77 326 P **P** **17 45 40.9 -1.1**
comp=Z,0.5nm,0.3s,baz=344,slow=22,SNR=5.0
AKTO Aktyubinsk 76.80 320 P **P** **17 45 40.9 -1.5**
comp=Z,2.1nm,0.6s,baz=89,slow=7.2,SNR=7.6
TBI Tubuai 77.72 116 *e*S **S** **17 55 44.8 +6.1**
comp=Z,84nm,38.2s
TBI Tubuai 77.72 116 *e*LR LR 18 10 00.0
comp=Z,270nm,29.6s
TAOE Nuku Hiva Isla 83.32 100 *e*LR LR 18 12 27.5
comp=Z,291nm,25.7s
PRGR Permogore 83.33 331 *e*P **P** **17 46 16.5 -0.8**
PRGR pmax pmax
comp=Z,17nm,1.5s
C36M Paulatuk 84.40 21 P **P** **17 46 22.0 -0.7**
C36M IAmb IAmb 17 46 23.6
comp=Z,5.3nm,0.9s
VNDA Vanda 87.42 175 P **P** **17 46 35.2 -2.2**
comp=Z,3.4nm,1.0s,baz=315,slow=5.7,SNR=2.4
VNDA LR LR 18 25 49.8
comp=Z,100nm,18.0s,baz=350,slow=36
KBZ Khabaz 87.59 314 *e*P **P** **17 46 39.2 +0.3**
KBZ Khabaz 87.59 314 LR LR 18 27 59.6
comp=Z,72nm,21.5s,baz=60,slow=37
OBN Obninsk 89.21 326 *e*P **P** **17 46 47.3 +1.0**
OBN *e* 17 50 16.7
OBN pmax pmax
comp=Z,6.0nm,1.0s
ARCES ARCESS Array B 89.31 341 P **P** **17 46 45.8 -0.8**
comp=Z,1.6nm,0.7s,baz=61,slow=7.6,SNR=6.6
ARCES LR LR 18 30 45.3
comp=Z,127nm,19.9s,baz=347,slow=38
YKA Yellowknife Ar 89.92 26 P **P** **17 46 49.0 -0.5**
comp=Z,1.0nm,0.7s,baz=290,slow=5.2,SNR=15
FINES FINESS Array B 92.39 334 *i* P **P** **17 47 00.0 -1.0**
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 92.39 334 P **P** **17 46 59.0 -2.0**
comp=Z,2.4nm,0.9s,baz=66,slow=6.5,SNR=5.3
FINES LR LR 18 30 07.1
comp=Z,92nm,21.1s,baz=53,slow=37
AKASG Malin Array Be 94.78 323 LR LR 18 31 58.2
comp=Z,78nm,20.1s,baz=30,slow=37
NVAR Mina Array Bea 94.94 50 P **P** **17 47 14.1 +0.5**
comp=Z,1.1nm,0.7s,baz=266,slow=6.9,SNR=7.8
BRTR Keskin Array B 95.24 311 LR LR 18 33 53.3
comp=Z,19nm,21.9s,baz=44,slow=38
NOA NORSAR Array B 98.79 337 LR LR 18 36 08.5
comp=Z,69nm,19.0s,baz=55,slow=38
FLOC Florencia 144.76 74 **PKPab** **17 53 27.1 -0.3**
GO02 Mina Guanaco 149.13 125 **PKiKP** **17 53 41.6 +0.3**
PB11 IPOC Station P 151.11 115 **PKPbc** **17 53 43.6 -1.2**
MNMC Minye Minye 151.35 114 **PKPbc** **17 53 45.4 -0.2**
LPAZ La Paz 153.42 108 PKIKP **PKPbc** **17 53 47.6 -3.1**
LPAZ La Paz 153.42 108 PKPbc **PKiKP** **17 53 50.8 0.0**
comp=Z,1.7nm,0.7s,baz=298,slow=2.7,SNR=7.3
LPAZ La Paz 153.42 108 **PKPbc** **17 53 47.6 -3.1**

IDC 20 17:40:49.8±1.3, 9.13N×138.32E, h0km, mb3.6/8, mb1 3.7/8, mb1mx3.6/32, mbtmp3.6/8, Error ellipse: s-maj=48.7km s-min=20.8km az=81.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**29.16**	**188**	P		P	17 46 52.5 -0.4
	0.4nm,0.8s,baz=23,slow=8.0,SNR=2.4						
ASAR	**Alice Springs**	**32.88**	**187**	P		P	17 47 26.4 +0.7
	0.5nm,0.7s,baz=21,slow=11,SNR=5.4						
CMAR	**Chiang Mai Arr**	**39.27**	**288**	P		P	17 48 19.5 -1.1
	0.4nm,0.8s,baz=87,slow=7.3,SNR=3.2						
SONM	**Songino Array**	**47.06**	**331**	P		P	17 49 24.2 +0.8
	0.7nm,0.8s,baz=137,slow=7.6,SNR=3.6						
MKAR	**Makanchi Array**	**60.42**	**319**	P		P	17 51 01.6 +0.4
	1.0nm,0.7s,baz=105,slow=8.4,SNR=12						
ZALV	**Zalesovo Beam**	**61.68**	**327**	P		P	17 51 09.7 +0.2
	0.6nm,0.3s,baz=116,slow=8.8,SNR=3.2						
BVAR	**Borovoye Array**	**69.53**	**323**	P		P	17 51 59.7 -0.7
	0.3nm,0.5s,baz=107,slow=7.7,SNR=2.9						
ILAR	**Eielson Array**	**75.32**	**25**	P		P	17 52 34.1 -0.5
	0.3nm,0.8s,baz=246,slow=6.8,SNR=3.1						

*IDC **20** 17:41:06.5±1.0, 9.09N×138.37E, h0km, mb3.8/9, mb1 4.0/10, mb1mx3.8/33, mbtmp3.9/10, ML3.9/1, Error ellipse: s-maj=34.2km s-min=18.8km az=87.0*
*NEIC **20** 17:41:11.5±1.8, 9.0N±0.1×138.4E±0.1, h34km±5km, mb4.4/5, Error ellipse: s-maj=23.4km s-min=16.9km az=128.0*
ISC 20 17:41:11.7±1.0, 9.1N±0.1×138.4E±0.2, h35km, n15, σ0s81/15, mb4.0/12, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**12.14**	**216**	Pn	**Pn**	**17 44 03.1**	**+0.8**
	0.7nm,0.3s,baz=36,slow=14,SNR=2.9						
WRA	**Warramunga Arr**	**29.10**	**188**	P	**P**	**17 47 08.7**	**-0.6**
	0.5nm,0.7s,baz=4.2,slow=10.0,SNR=2.8						
AS31	**Alice Springs**	**32.82**	**188**	P	**P**	**17 47 40.7**	**-1.4**
ASAR	**Alice Springs**	**32.82**	**188**	P	**P**	**17 47 42.4**	**+0.3**
	0.6nm,0.7s,baz=18,slow=12,SNR=9.8						
CMAR	**Chiang Mai Arr**	**39.33**	**288**	P	**P**	**17 48 37.3**	**-0.6**
	1.1nm,0.8s,baz=98,slow=6.6,SNR=9.0						
SONM	**Songino Array**	**47.14**	**331**	P	**P**	**17 49 41.7**	**+0.9**
	1.7nm,0.9s,baz=139,slow=8.3,SNR=7.4						
MK31	**Makanchi Array**	**60.49**	**319**	P	**P**	**17 51 17.8**	**-0.6**
MK31				IAmb	IAmb	17 51 19.7	
	comp=Z,1.8nm,0.8s						
MKAR	**Makanchi Array**	**60.49**	**319**	P	**P**	**17 51 18.6**	**+0.2**
	comp=Z,2.4nm,0.7s,baz=105,slow=9.2,SNR=19						
MAKZ	**Makanchi**	**60.70**	**319**	P	**P**	**17 51 18.4**	**-1.3**
MAKZ				IAmb	IAmb	17 51 21.5	
	comp=Z,3.1nm,0.9s						
ZALV	**Zalesovo Beam**	**61.76**	**327**	P	**P**	**17 51 25.6**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=99,slow=4.5,SNR=3.4						
KURK	**Kurchatov**	**64.07**	**322**	P	**P**	**17 51 42.2**	**0.0**
KURK				IAmb	IAmb	17 51 43.1	
	comp=Z,3.9nm,1.1s						
NIL	**Nilore**	**64.34**	**303**	P	**P**	**17 51 44.4**	**+0.1**
BVAR	**Borovoye Array**	**69.61**	**323**	P	**P**	**17 52 17.0**	**-0.4**
	comp=Z,1.1nm,0.7s,baz=110,slow=8.0,SNR=7.0						
ILAR	**Eielson Array**	**75.36**	**25**	P	**P**	**17 52 51.6**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=244,slow=5.9,SNR=7.4						
YKA	**Yellowknife Ar**	**89.75**	**26**	P	**P**	**17 54 06.6**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=291,slow=5.2,SNR=3.2						

*GCG **20** 17:53:50.4±0.3, 13.72N×92.39W, h18km, MD3.9*
*MEX **20** 17:53:55.4±1.0, 14.00N×92.25W, h10km±92km, MD4.0*
ISC 20 17:53:56.7±2.3, 14.1N±0.2×92.29W±0.08, h46km, n6, σ1s83/11, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.80**	**2**	*i* P	**Pn**	**17 54 10.1**	**-1.6**
THIG				*i* S	**Sn**	**17 54 21.7**	**-0.9**
STG3	**Santiaguito 3,**	**0.92**	**49**	*e*P	**Pn**	**17 54 13.3**	**-0.2**
FUG	**Fuego 3**	**1.44**	**76**	*e*P	**Pn**	**17 54 20.7**	**+0.2**
FUG				*e*S	**Sn**	**17 54 41.5**	**+3.0**
IXG	**Ixpaco**	**1.79**	**87**	*e*P	**Pn**	**17 54 23.0**	**-2.4**
IXG				*e*S	**Sn**	**17 54 47.1**	**+0.1**
PCIG		**1.83**	**331**	*e*P	**Pn**	**17 54 24.2**	**-1.5**
PCIG				*i* S	**Sn**	**17 54 48.5**	**+0.8**
CMIG	**Matias Romero**	**3.89**	**320**	*e*P	**Pn**	**17 54 54.2**	**+0.3**
CMIG				*i* S	**Sn**	**17 55 40.7**	**+2.3**

MAN 20 17:58:54.5, 10.06N×124.06E, h32km, mb3.9, ML2.7, MS2.3, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.27**	**340**	⇓*i* P	Pn	17 59 03.3	+1.0
LLP				*i* S	Sn	17 59 09.4	+2.0
MSLP	**Maasin**	**0.79**	**85**	*e*P	Pn	17 59 09.6	+0.1
MSLP				*e*S	Sn	17 59 17.6	-2.6

*INMG **20** 17:59:28.6±1.6, 37.50N×7.60W, h20km±2km, MD2.9, ML3.2, Error ellipse: s-maj=2.5km s-min=1.8km az=145.0*
*SFS **20** 17:59:28.0, 37.50N×7.50W, h21km, ML3.2, MRTOLA (PORTUGAL)*
*CNRM **20** 17:59:28.8±1.4, 37.34N×7.61W, h50km±79km, Error ellipse: s-maj=13.2km s-min=8.3km az=113.0*
*MDD **20** 17:59:28.6±0.2, 37.52N×7.61W, h22km, mbLg3.1/41, Error ellipse: s-maj=2.6km s-min=2.0km az=4.0, PRXIMO*
*IGIL **20** 17:59:29.0, 37.50N×7.60W, h20km, ML3.6*
ISC 20 17:59:27.6±0.9, 37.50N±0.02×7.60W±0.02, h25km±6km, n104, σ2s90/197, 5C-3D, Portugal

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EGRO	**El Granado**	**0.10**	**70**	⇑Pg	**Pb**	**17 59 32.6**	**+0.4**
	13nm,0.1s,SNR=18						
EGRO				Lg	Lg	17 59 35.1	
	4μm,0.1s,SNR=11						
PVAQ	**Vaqueiros**	**0.14**	**225**	⇑*e*Pg	**Pb**	**17 59 33.0**	**+0.4**
PVAQ				*e*Sg	**Sb**	**17 59 36.0**	**0.0**
PVAQ				A	A	17 59 37.1	
	2μm,0.1s						
PVAQ	**Vaqueiros**	**0.14**	**225**	Pg	**Pb**	**17 59 33.0**	**+0.4**
PVAQ				Lg	Lg	17 59 36.0	
	2μm,0.1s						
PBDV	**Barranco-do-Ve**	**0.37**	**226**	⇑*e*Pg	**Pb**	**17 59 36.2**	**+0.4**
PBDV				*e*Sg	**Sb**	**17 59 41.4**	**+0.1**
PBDV				A	A	17 59 44.2	
	327nm,0.5s						
PBDV	**Barranco-do-Ve**	**0.37**	**226**	Pg	**Pb**	**17 59 36.2**	**+0.4**
PBDV				Lg	Lg	17 59 41.4	
	327nm,0.5s						
PCVE	**Castro Verde**	**0.38**	**290**	⇓*i* Pg	**Pb**	**17 59 36.2**	**+0.4**
PCVE				*e*Sg	**Sb**	**17 59 41.5**	**+0.1**
PCVE				A	A	17 59 41.7	
	1μm,0.2s						
PCVE	**Castro Verde**	**0.38**	**290**	Pg	**Pb**	**17 59 36.2**	**+0.4**
PCVE				Lg	Lg	17 59 41.5	
	1μm,0.2s						
PBEJ	**Beja**	**0.57**	**338**	⇓*e*Pg	**Pb**	**17 59 39.4**	**+0.4**
PBEJ				*e*Sg	**Sb**	**17 59 46.9**	**+0.2**
PBEJ				A	A	17 59 48.5	
	848nm,0.2s						
PBEJ	**Beja**	**0.57**	**338**	Pg	**Pb**	**17 59 39.4**	**+0.4**
PBEJ				Lg	Lg	17 59 46.9	
	424nm,0.2s						
EMIN	**Mina Concepcio**	**0.78**	**70**	⇑Pg	**Pn**	**17 59 42.3**	**-0.6**
	38nm,0.1s,SNR=18						
EMIN				Lg	Lg	17 59 52.5	
	362nm,0.2s						
PBAR	**Barrancos**	**0.80**	**33**	*e*P	**Pb**	**17 59 43.2**	**+0.3**
PBAR				*e*S	**Sn**	**17 59 54.7**	**+0.2**
PBAR				A	A	17 59 56.0	
	351nm,0.3s						
PBAR	**Barrancos**	**0.80**	**33**	Pg	**Pb**	**17 59 43.2**	**+0.3**
PBAR				Lg	Lg	17 59 54.7	
	351nm,0.3s						
MORF	**Marmelete**	**0.86**	**257**	*e*P	**Pn**	**17 59 44.1**	**-0.1**
MORF				*e*S	**Sb**	**17 59 55.4**	**+0.2**
MORF				AML	AML	17 59 57.2	
	comp=N,1μm,0.3s						
MORF	**Marmelete**	**0.86**	**257**	*e*P	**Pn**	**17 59 44.1**	**-0.1**
MORF				*e*S	**Sb**	**17 59 55.8**	**+0.7**
MORF				A	A	17 59 57.3	
	comp=N,845nm,0.2s						
MORF	**Marmelete**	**0.86**	**257**	Pg	**Pn**	**17 59 44.1**	**-0.1**
MORF				Lg	Lg	17 59 55.8	
	comp=N,845nm,0.2s						
PTEO	**Sao Teotonio**	**0.90**	**273**	*e*P	**Pb**	**17 59 45.1**	**+0.6**
PTEO				*e*S	**Sb**	**17 59 56.8**	**+0.7**
PTEO				A	A	17 59 59.7	
	comp=N,468nm,0.8s						
PTEO	**Sao Teotonio**	**0.90**	**273**	Pg	**Pb**	**17 59 45.1**	**+0.6**
PTEO				Lg	Lg	17 59 56.8	
	comp=N,234nm,0.8s						
PNCL	**Nicolau / Gran**	**0.96**	**310**	⇓*e*P	**Pn**	**17 59 45.3**	**-0.1**
PNCL				*e*S	**Sb**	**17 59 58.5**	**+0.7**
PNCL				A	A	17 59 59.3	
	comp=N,215nm,0.2s						
PNCL	**Nicolau / Gran**	**0.96**	**310**	Pg	**Pn**	**17 59 45.3**	**-0.1**
PNCL				Lg	Lg	17 59 58.5	
	comp=N,215nm,0.2s						
PFVI	**Vila Bisbo**	**1.05**	**250**	*e*P	**Pn**	**17 59 46.2**	**-0.5**
PFVI				*e*S	**Sn**	**18 00 00.6**	**+0.1**
PFVI				A	A	18 00 03.6	
	comp=N,282nm,0.1s						
PFVI	**Vila Bisbo**	**1.05**	**250**	Pn	**Pn**	**17 59 46.2**	**-0.5**
	comp=N,1.8nm,0.0s,SNR=86						
PFVI				Pg	**Pb**	**17 59 47.3**	**+0.2**
	comp=N,17nm,0.1s,SNR=7.9						
PFVI				Lg	Lg	18 00 01.2	
	comp=N,443nm,0.2s,SNR=31						
PFVI	**Vila Bisbo**	**1.05**	**250**	P	**Pn**	**17 59 47.1**	**+0.4**
PFVI				S	**Sn**	**18 00 00.2**	**-0.4**
EBAD	**Badajoz**	**1.33**	**20**	⇑Pn	**Pn**	**17 59 50.2**	**-0.4**
	comp=N,0.7nm,0.1s,SNR=18						
EBAD				Pg	**Pb**	**17 59 52.2**	**+0.3**
	comp=N,33nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**18 00 06.8**	**-0.7**
	comp=N,21nm,0.0s,SNR=7.9						
EBAD				Lg	Lg	18 00 09.3	
	comp=N,341nm,0.1s,SNR=16						
PESTR	**Estremoz**	**1.36**	**0**	*e*P	**Pn**	**17 59 50.8**	**-0.3**
PESTR				*e*S	**Sb**	**18 00 09.5**	**0.0**
PESTR				A	A	18 00 10.5	
	comp=N,177nm,0.5s						
PESTR	**Estremoz**	**1.36**	**0**	P	**Pb**	**17 59 52.4**	**-0.1**
PESTR				S	**Sb**	**18 00 09.3**	**-0.2**
GIBL	**Gibalbin**	**1.46**	**117**	*e*P	**Pb**	**17 59 55.0**	**+0.9**
GIBL				*i* S	**Sb**	**18 00 14.8**	**+2.4**
GIBL	**Gibalbin**	**1.46**	**117**	Pg	**Pb**	**17 59 55.0**	**+0.9**
GIBL				Lg	Lg	18 00 14.9	
PMTG	**Montargil**	**1.64**	**343**	*e*Pn	**Pn**	**17 59 54.7**	**-0.2**
PMTG				*e*Sg	**Sb**	**18 00 18.3**	**+0.9**
PMTG				A	A	18 00 21.9	
	comp=N,206nm,0.4s						
PMTG	**Montargil**	**1.64**	**343**	Pn	**Pn**	**17 59 54.7**	**-0.2**
PMTG				Lg	Lg	18 00 18.3	
	comp=N,206nm,0.4s						
ECAB	**El Cabril**	**1.82**	**71**	Pn	**Pn**	**17 59 56.9**	**-0.4**
	comp=N,11nm,0.3s,SNR=46						
ECAB				Pg	**Pb**	**18 00 00.5**	**+0.3**
	comp=N,4.7nm,0.3s,SNR=21						
ECAB				Sn	**Sn**	**18 00 19.3**	**-0.3**
	comp=N,41nm,0.2s,SNR=5.0						
ECAB				Lg	Lg	18 00 24.3	
	comp=N,114nm,0.2s,SNR=7.9						
ALJ	**Aljibe**	**1.83**	**121**	*e*P	**Pb**	**18 00 02.0**	**+1.5**
ALJ				*e*S	**Sb**	**18 00 29.0**	**+6.0**
ALJ	**Aljibe**	**1.83**	**121**	Pg	**Pb**	**18 00 02.0**	**+1.5**
HORN	**Hornachuelos**	**1.89**	**79**	P	**Pb**	**18 00 00.5**	**-0.9**
HORN				S	**Sb**	**18 00 23.9**	**-0.6**
PMRV	**Marv??o**	**1.93**	**5**	*e*Pn	**Pn**	**17 59 58.7**	**-0.2**
PMRV				*e*Sg	**Sb**	**18 00 26.2**	**+0.4**
PMRV				A	A	18 00 32.1	
	comp=N,264nm,0.5s						
PMRV	**Marv??o**	**1.93**	**5**	Pn	**Pn**	**17 59 58.7**	**-0.2**
PMRV				Lg	Lg	18 00 26.2	
	comp=N,264nm,0.5s						
PMAFR	**Mafra**	**1.97**	**318**	*e*Pn	**Pn**	**17 59 59.6**	**+0.2**
PMAFR	**Mafra**	**1.97**	**318**	*e*Pg	**Pb**	**18 00 04.6**	**+1.9**
PMAFR				*e*Sg	**Sb**	**18 00 29.8**	**+3.0**
PMAFR				A	A	18 00 36.0	
	comp=N,97nm,0.3s						
PMAFR	**Mafra**	**1.97**	**318**	Pn	**Pn**	**17 59 59.7**	**+0.3**
	comp=N,42nm,0.3s,SNR=9.4						
PMAFR				Pg	**Pb**	**18 00 03.0**	**+0.3**
	comp=N,6.4nm,0.1s,SNR=26						
PMAFR				Lg	Lg	18 00 28.7	
	comp=N,82nm,0.1s,SNR=5.0						
PTOM	**Tomar**	**2.21**	**343**	*e*Pn	**Pn**	**18 00 02.3**	**-0.3**
PTOM				*e*Sg	**Sb**	**18 00 35.8**	**+2.1**
PTOM				A	A	18 00 38.3	
	comp=N,150nm,0.2s						
PTOM	**Tomar**	**2.21**	**343**	Pn	**Pn**	**18 00 02.3**	**-0.3**
PTOM				Lg	Lg	18 00 35.8	
	comp=N,75nm,0.2s						
PCBR	**Castelo Branco**	**2.34**	**2**	*e*Pn	**Pn**	**18 00 04.5**	**+0.1**
PCBR				*e*Sn	**Sn**	**18 00 30.1**	**-2.2**
PCBR				*e*Sg	**Sb**	**18 00 39.1**	**+1.7**
PCBR				A	A	18 00 43.7	
	comp=N,69nm,0.7s						
PCBR	**Castelo Branco**	**2.34**	**2**	Pn	**Pn**	**18 00 04.5**	**+0.1**
PCBR				Sn	**Sn**	**18 00 30.1**	**-2.2**
PCBR				Lg	Lg	18 00 39.1	
	comp=N,35nm,0.7s						
ECEU	**Ceuta**	**2.40**	**131**	Pn	**Pn**	**18 00 06.2**	**+1.0**
	comp=N,0.1nm,0.1s,SNR=7.9						
ECEU				Pg	**Pb**	**18 00 11.3**	**+1.2**
	comp=N,12nm,2.4s,SNR=7.9						
ECEU				Sn	**Sn**	**18 00 33.6**	**-0.2**
	comp=N,3.9nm,0.7s,SNR=7.9						
EMIJ	**Mijas**	**2.44**	**112**	Pn	**Pn**	**18 00 05.7**	**-0.2**
	comp=N,3.2nm,0.3s,SNR=8.6						
EMIJ				Pg	**Pb**	**18 00 12.0**	**+1.2**
	comp=N,9.7nm,3.0s,SNR=7.9						
EMIJ				Sn	**Sn**	**18 00 35.2**	**+0.1**
	comp=N,34nm,0.8s,SNR=7.1						
EMIJ				Lg	Lg	18 00 43.9	
	comp=N,55nm,0.6s,SNR=33						
EADA	**Adamuz**	**2.48**	**74**	Pn	**Pn**	**18 00 06.3**	**-0.1**
	comp=N,9.2nm,0.5s,SNR=39						
EADA				Pg	**Pb**	**18 00 12.0**	**+0.5**
	comp=N,7.1nm,0.3s,SNR=53						
EADA				Sn	**Sn**	**18 00 35.0**	**-0.9**
	comp=N,7.2nm,0.3s,SNR=5.2						
EADA				Lg	Lg	18 00 44.5	
	comp=N,93nm,0.2s,SNR=22						
EMAL	**Malaga-Limoner**	**2.64**	**105**	*e*P	**Pb**	**18 00 12.1**	**-2.1**
EMAL				*e*S	**Sb**	**18 00 47.2**	**+1.2**
EMAL	**Malaga-Limoner**	**2.64**	**105**	Pg	**Pb**	**18 00 12.1**	**-2.1**
EMAL				Lg	Lg	18 00 47.2	
PCAS	**Casmilo, Conde**	**2.64**	**345**	*e*Pn	**Pn**	**18 00 08.9**	**+0.3**
PCAS	**Casmilo, Conde**	**2.64**	**345**	*e*Pg	**Pb**	**18 00 16.8**	**+2.6**
PCAS				*e*Sg	**Sb**	**18 00 50.2**	**+3.9**
PCAS				A	A	18 00 53.9	
	comp=N,92nm,0.5s						
PCAS	**Casmilo, Conde**	**2.64**	**345**	Pn	**Pn**	**18 00 08.9**	**+0.3**
PCAS				Lg	Lg	18 00 50.2	
	comp=N,92nm,0.5s						
COI	**Coimbra**	**2.78**	**347**	*e*Sg	**Sb**	**18 00 55.2**	**+5.1**
COI				A	A	18 00 57.2	
	comp=N,95nm,0.6s						
COI	**Coimbra**	**2.78**	**347**	Lg	Lg	18 00 55.2	
	comp=N,48nm,0.6s						
EGOR	**Sierra Gorda,**	**2.81**	**97**	Pn	**Pn**	**18 00 11.1**	**0.0**
	comp=N,0.1nm,0.3s,SNR=7.9						
EGOR				Pg	**Pb**	**18 00 17.3**	**+0.2**
	comp=N,1.4nm,0.3s,SNR=7.9						
EGOR				Sn	**Sn**	**18 00 43.6**	**-0.5**
	comp=N,3.1nm,0.8s,SNR=4.0						
EGOR				Lg	Lg	18 00 55.2	
	comp=N,49nm,0.4s,SNR=7.9						
EPLA	**Plasencia**	**2.82**	**24**	Pn	**Pn**	**18 00 10.6**	**-0.5**
	comp=N,1.5nm,0.3s,SNR=12						
EPLA				Pg	**Pb**	**18 00 16.6**	**-0.7**
	comp=N,4.4nm,0.2s,SNR=7.9						
EPLA				Sn	**Sn**	**18 00 42.9**	**-1.4**
	comp=N,4.3nm,0.4s,SNR=7.9						
MTE	**Manteigas**	**2.89**	**1**	*e*Pn	**Pn**	**18 00 12.0**	**-0.1**
MTE	**Manteigas**	**2.89**	**1**	*e*Pg	**Pb**	**18 00 21.2**	**+2.6**
MTE				*e*Sg	**Sb**	**18 00 55.9**	**+2.4**
MTE				A	A	18 01 00.5	
	comp=N,189nm,0.6s						
MTE	**Manteigas**	**2.89**	**1**	Pn	**Pn**	**18 00 12.0**	**-0.1**
MTE				Pg	**Pb**	**18 00 21.2**	**+2.6**
MTE				Lg	Lg	18 00 55.9	
	comp=N,94nm,0.6s						
RSA	**Sarsar**	**2.98**	**151**	S	**Sn**	**18 00 47.4**	**-0.9**
CHEFC	**Chefchaouen**	**3.00**	**142**	P	**Pn**	**18 00 14.0**	**+0.3**
CHEFC				S	**Sn**	**18 00 44.1**	**-4.9**
PVIS	**Viseu**	**3.22**	**356**	*e*Pn	**Pn**	**18 00 16.4**	**-0.2**
PVIS	**Viseu**	**3.22**	**356**	*e*Pg	**Pb**	**18 00 26.0**	**+1.9**
PVIS				*e*Sn	**Sn**	**18 00 51.8**	**-2.3**
PVIS				*e*Sg	**Sb**	**18 01 07.2**	**+4.4**
PVIS				A	A	18 01 14.5	
	comp=N,28nm,0.2s						
PVIS	**Viseu**	**3.22**	**356**	Pn	**Pn**	**18 00 16.4**	**-0.2**
PVIS				Pg	**Pb**	**18 00 26.0**	**+1.9**
PVIS				Sn	**Sn**	**18 00 51.8**	**-2.3**
PVIS				Lg	Lg	18 01 07.2	
	comp=N,14nm,0.2s						
ELGU	**Los Guajares,**	**3.23**	**100**	Pn	**Pn**	**18 00 18.0**	**+1.2**
	comp=N,4.6nm,1.1s,SNR=7.9						
ELGU				Pg	**Pb**	**18 00 25.6**	**+1.3**
	comp=N,26nm,2.7s,SNR=7.9						
ELGU				Sn	**Sn**	**18 00 53.4**	**-1.2**
	comp=N,12nm,0.5s,SNR=7.9						
ELGU				Lg	Lg	18 01 07.8	
	comp=N,29nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**3.32**	**94**	Pg	**Pb**	**18 00 26.8**	**+0.9**
	comp=N,0.1nm,0.1s,SNR=4.7						
EQUE				Sn	**Sn**	**18 00 54.6**	**-2.2**
	comp=N,8.0nm,0.6s,SNR=7.9						
EQUE				Lg	Lg	18 01 10.8	
	comp=N,24nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**3.58**	**52**	Pn	**Pn**	**18 00 21.3**	**-0.2**
	comp=N,2.5nm,0.2s,baz=235,slow=

PVRL				Pg	**Pb**	**18 00 33.3**	**-0.2**
PVRL				Sn	**Sn**	**18 01 05.7**	**-2.0**
PVRL				Lg	Lg	18 01 22.6	
	comp=N,19nm,0.3s						
EBER	**Berja**	**3.81**	**98**	Pn	**Pn**	**18 00 25.2**	**+0.4**
	comp=N,3.6nm,0.5s,SNR=7.9						
EBER				Pg	**Pb**	**18 00 34.5**	**+0.4**
	comp=N,0.6nm,0.4s,SNR=7.9						
EBER				Sn	**Sn**	**18 01 07.5**	**-1.3**
	comp=N,29nm,4.1s,SNR=7.9						
EBER				Lg	Lg	18 01 25.0	
	comp=N,15nm,0.4s,SNR=4.0						
EALB	**Alboran**	**3.98**	**112**	Pn	**Pn**	**18 00 27.4**	**+0.4**
	comp=N,37nm,1.6s,SNR=7.9						
EALB				Pg	**Pb**	**18 00 38.1**	**+1.0**
	comp=N,25nm,0.5s,SNR=7.9						
SESP	**Santiago Espad**	**4.05**	**80**	Pg	**Pb**	**18 00 38.6**	**+0.4**
	comp=N,12nm,4.6s,SNR=7.9						
SESP				Sn	**Sn**	**18 01 12.8**	**-2.0**
	comp=N,9.3nm,0.3s,SNR=7.9						
SESP				Lg	Lg	18 01 32.2	
	comp=N,39nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**4.05**	**80**	P	**Pn**	**18 00 31.8**	**+3.7**
ZHG	**ZHG**	**4.12**	**169**	P	**Pn**	**18 00 29.6**	**+0.5**
ZHG				S	**Sn**	**18 01 14.5**	**-2.0**
GUD	**Guadarrama**	**4.12**	**39**	Pn	**Pn**	**18 00 29.0**	**-0.1**
	comp=N,4.0nm,0.3s,SNR=15						
GUD				Sn	**Sn**	**18 01 14.3**	**-2.3**
	comp=N,3.5nm,0.3s,SNR=6.9						
PCAB	**Cabril**	**4.22**	**356**	*e*Pn	**Pn**	**18 00 30.1**	**-0.2**
PCAB				*e*Sn	**Sn**	**18 01 14.4**	**-4.3**
PCAB				*e*Sg	**Sb**	**18 01 38.9**	**+7.4**
PCAB				A	A	18 01 49.1	
	comp=N,47nm,0.5s						
PCAB	**Cabril**	**4.22**	**356**	Pn	**Pn**	**18 00 30.1**	**-0.2**
PCAB				Sn	**Sn**	**18 01 14.4**	**-4.3**
AKLM	**AKL**	**4.25**	**134**	P	**Pn**	**18 00 31.1**	**+0.3**
ENIJ	**Nijar**	**4.33**	**95**	Pn	**Pn**	**18 00 32.7**	**+0.8**
	comp=N,3.2nm,1.1s,SNR=7.9						
PBRG	**Braganca**	**4.35**	**8**	*e*Pn	**Pn**	**18 00 31.9**	**-0.2**
PBRG				*e*Sn	**Sn**	**18 01 17.8**	**-4.2**
PBRG				*e*Sg	Sb	18 01 44.7	+9.4
PBRG				A	A	18 01 50.0	
	comp=N,22nm,0.5s						
PBRG	**Braganca**	**4.35**	**8**	Pn	**Pn**	**18 00 31.9**	**-0.2**
PBRG				Sn	**Sn**	**18 01 17.8**	**-4.2**
ELOB	**Lobios**	**4.37**	**355**	Pn	**Pn**	**18 00 32.3**	**-0.2**
	comp=N,0.4nm,0.1s,SNR=7.9						
ELOB				Pg	**Pb**	**18 00 44.4**	**+0.6**
	SNR=7.9						
ELOB				Sn	**Sn**	**18 01 19.8**	**-2.9**
	comp=N,18nm,0.3s,SNR=5.0						
ELOB				Lg	Lg	18 01 40.6	
	comp=N,18nm,0.3s,SNR=7.9						
UCM	**Universidad Co**	**4.40**	**49**	*e*P	**Pn**	**18 00 32.8**	**0.0**
UCM				*i* S	**Sn**	**18 01 21.2**	**-2.1**
UCM				*e*L	L	18 01 42.8	
UCM	**Universidad Co**	**4.40**	**49**	Pn	**Pn**	**18 00 32.8**	**0.0**
UCM				Sn	**Sn**	**18 01 21.2**	**-2.1**
UCM				Lg	Lg	18 01 42.8	
ETOB	**Tobarra**	**4.91**	**75**	Pn	**Pn**	**18 00 39.5**	**-0.3**
	comp=N,0.1nm,0.2s,SNR=7.9						
ETOB				Sn	**Sn**	**18 01 33.0**	**-2.8**
	comp=N,7.9nm,0.5s,SNR=7.9						
ETOB				Lg	Lg	18 01 57.1	
	comp=N,16nm,0.4s,SNR=7.9						
EMUR	**La Murta**	**5.05**	**84**	Pn	**Pn**	**18 00 42.2**	**+0.4**
	comp=N,12nm,1.8s,SNR=7.9						
EMUR				Sn	**Sn**	**18 01 36.7**	**-2.7**
	comp=N,35nm,3.1s,SNR=7.9						
EMUR				Lg	Lg	18 02 01.9	
	comp=N,13nm,0.4s,SNR=7.9						
JBK	**JBK**	**5.16**	**126**	P	**Pn**	**18 00 42.4**	**-1.0**
JBK				S	**Sn**	**18 01 37.2**	**-5.1**
MD31	**MD31**	**5.17**	**153**	P	**Pn**	**18 00 42.7**	**-0.8**
MD31				S	**Sn**	**18 01 38.1**	**-4.4**
MDT	**Midelt**	**5.28**	**152**	P	**Pn**	**18 00 43.1**	**-1.9**
MDT				S	**Sn**	**18 01 40.1**	**-5.0**
EAGO	**Agolada(Pontev**	**5.31**	**356**	Pn	**Pn**	**18 00 45.1**	**-0.2**
	comp=N,0.4nm,0.3s,SNR=7.9						
EAGO				Pg	**Pb**	**18 00 59.7**	**0.0**
	comp=N,6.4nm,2.6s,SNR=7.9						
EAGO				Sn	**Sn**	**18 01 40.9**	**-4.7**
	comp=N,2.4nm,0.3s,SNR=7.9						
ETOR	**Torete**	**5.43**	**51**	Pn	**Pn**	**18 00 46.8**	**-0.3**
	comp=N,4.8nm,0.4s,SNR=6.2						
ETOR				Sn	**Sn**	**18 01 45.6**	**-3.1**
	comp=N,19nm,0.4s,SNR=6.5						
ETOR				Lg	Lg	18 02 13.5	
	comp=N,22nm,0.4s,SNR=7.9						
EPON	**Pontenova**	**5.83**	**3**	Pn	**Pn**	**18 00 52.8**	**+0.4**
	comp=N,0.5nm,2.1s,SNR=7.9						
EPON				Pg	**Pb**	**18 01 08.9**	**+0.4**
	comp=N,20nm,1.9s,SNR=7.9						
EPON				Sn	**Sn**	**18 01 54.3**	**-4.1**
	comp=N,6.6nm,7.9s,SNR=7.9						
EPON				Lg	Lg	18 02 24.5	
	comp=N,25nm,0.6s,SNR=7.9						
EARI	**Arriondas**	**6.07**	**17**	Pn	**Pn**	**18 00 55.8**	**0.0**
	comp=N,1.4nm,3.7s,SNR=7.9						
EARI				Sn	**Sn**	**18 01 59.9**	**-4.6**
	comp=N,4.0nm,0.6s,SNR=7.9						
EARI				Lg	Lg	18 02 31.2	
	comp=N,4.3nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**6.24**	**61**	Pn	**Pn**	**18 00 58.5**	**+0.2**
	comp=N,0.6nm,2.6s,SNR=7.9						
EMOS				Sn	**Sn**	**18 02 04.8**	**-4.1**
	comp=N,0.7nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	18 02 37.8	
	comp=N,6.2nm,0.5s,SNR=7.9						
OUK	**Oukaimeden**	**6.28**	**182**	P	**Pn**	**18 00 58.1**	**-1.0**
EIBI	**Ibiza**	**7.20**	**75**	Pn	**Pn**	**18 01 11.3**	**+0.1**
	comp=N,18nm,2.2s,SNR=7.9						
EALK	**Alkurruntz**	**7.36**	**37**	Pn	**Pn**	**18 01 13.2**	**-0.4**
	comp=N,1.5nm,3.2s,SNR=7.9						
EALK				Sn	**Sn**	**18 02 31.2**	**-5.1**
	comp=N,1.4nm,5.7s,SNR=7.9						
ATE	**Arette**	**7.67**	**41**	Pn	**Pn**	**18 01 18.1**	**+0.4**
	comp=N,0.5nm,2.6s,SNR=7.9						
ATE				Sn	**Sn**	**18 02 38.2**	**-5.6**
	comp=N,0.9nm,10.2s,SNR=7.9						
ECHI	**Chisagues Biel**	**7.89**	**47**	Pn	**Pn**	**18 01 20.4**	**-0.4**
	comp=N,1.0nm,1.6s,SNR=7.9						
ECHI				Sn	**Sn**	**18 02 44.3**	**-4.9**
	comp=N,1.1nm,1.0s,SNR=7.9						

*NEIC **20** 18:00:07.7±2.1,51.4°N±0.1°×178.92°E±0.05, h66km±9km, Error ellipse: s-maj=18.9km s-min=2.5km az=190.0*
*AEIC **20** 18:00:08.2±2.1,51.7°N±0.1°×179.01°E±0.08, h86km±6km, ML3.3/18, Error ellipse: s-maj=18.8km s-min=6.8km az=178.0*
*IDC **20** 18:00:12.8±6.3,51.70°N×178.72°E, h114km±59km, mb3.1/8, mb1 3.5/10, mb1mx3.3/63, mbtmp3.7/10, Error ellipse: s-maj=45.3km s-min=15.5km az=173.0*

ISC 20 18:00:05.4±0.9, 51.6°N±0.2°×178.64°E±0.05, h45km, n42, σ1§48/40, mb3.6/8, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALAA	**Gareloi Lava P**	**1.62**	**84**		**Pn**	**18 00 32.6**	**+1.1**
GALAA					**Sn**	**18 00 52.6**	**+1.5**
GAEA	**Gareloi East**	**1.64**	**84**		**Pn**	**18 00 33.3**	**+1.6**
TASE	**Tanaga Southea**	**2.08**	**83**		**Pn**	**18 00 39.0**	**+1.1**
TAFP	**Tanaga Falls P**	**2.12**	**81**		**Pn**	**18 00 38.9**	**+0.5**
TAFP					**Sn**	**18 01 03.2**	**-0.2**
KIMD	**Kanaga Island**	**2.57**	**85**		**Pn**	**18 00 45.4**	**+0.9**
KIMD					**Sn**	**18 01 14.3**	**-0.3**
KIKV	**Kanaga Island**	**2.62**	**83**		**Pn**	**18 00 46.3**	**+1.1**
KIWB	**Kanaga Island**	**2.63**	**83**		**Pn**	**18 00 46.0**	**+0.7**
ADK	**Adak**	**2.92**	**83**		**Pn**	**18 00 50.2**	**+0.9**
ADAG	**Mount Adagdak**	**2.98**	**81**		**Pn**	**18 00 51.9**	**+1.8**
SMY	**Shemya**	**3.00**	**293**		Pn	18 00 57.6	+7.2
SMY					Sn	18 01 34.7	+10
GSTD	**Great Sitkin T**	**3.27**	**80**		**Pn**	**18 00 55.3**	**+1.1**
GSTD					**Sn**	**18 01 32.3**	**+0.5**
GSMY	**Great Sitkin M**	**3.32**	**81**		**Pn**	**18 00 56.0**	**+1.2**
GSTR	**Great Sitkin T**	**3.32**	**80**	Pn	**Pn**	**18 00 55.4**	**+0.5**
ATKA	**Atka Island**	**4.47**	**80**		**Pn**	**18 01 11.8**	**+1.2**
PETK	**Petropavlovsk-**	**12.88**	**285**	P	**P**	**18 03 13.1**	**-2.2**
	0.1nm,0.3s,baz=85,slow=18,SNR=4.6						
PETK				S	**Sn**	**18 05 29.9**	**+2.5**
	0.2nm,0.3s,baz=108,slow=31,SNR=3.9						
SVW2	**Sparrevohn**	**17.03**	**46**	P	**Pn**	**18 03 58.5**	**-1.5**
KDAK	**Kodiak Island**	**17.64**	**58**	P	**Pn**	**18 04 08.8**	**+1.2**
	0.8nm,0.3s,baz=252,slow=3.2,SNR=4.3						
KDAK	**Kodiak Island**	**17.64**	**58**	P	**Pn**	**18 04 05.1**	**-2.5**
SKT	**Skwentna**	**19.16**	**46**	P	**P**	**18 04 23.0**	**-1.7**
PPLA	**Purkeypile**	**19.20**	**43**	P	**P**	**18 04 23.9**	**-1.4**
SUA	**Susitna One**	**19.35**	**48**	Pn	**Pn**	**18 04 30.7**	**+2.3**
KTH	**Kantishna Hill**	**19.98**	**42**	P	**P**	**18 04 31.5**	**-2.3**
GHO	**Glory Hole Cre**	**20.27**	**47**		**P**	**18 04 38.1**	**+1.1**
KNK	**Knik Glacier**	**20.40**	**49**		**P**	**18 04 36.2**	**-2.0**
RND	**Reindeer**	**20.79**	**43**	P	**P**	**18 04 43.8**	**+1.3**
SCM	**Sheep Creek Mo**	**21.02**	**48**	P	**P**	**18 04 42.3**	**-2.8**
DHY	**Denali Highway**	**21.33**	**44**	P	**P**	**18 04 46.0**	**-2.3**
ILAR	**Eielson Array**	**22.07**	**40**	P	**P**	**18 04 56.4**	**+0.3**
	0.3nm,0.5s,baz=236,slow=8.5,SNR=7.1						
BALM	**Baldy**	**23.25**	**51**	P	**P**	**18 05 07.5**	**-1.1**
KLR	**Kul'dur**	**29.57**	**284**	P	**P**	**18 06 07.1**	**+1.4**
	1.2nm,0.5s,baz=68,slow=4.8,SNR=7.5						
H11N2	**WAKE ISLAND Hy**	**33.14**	**201**	T	T	18 41 44.2	
	baz=11,slow=76						
H11N3	**WAKE ISLAND Hy**	**33.15**	**200**	T	T	18 41 50.5	
	baz=11,slow=76						
H11N1	**WAKE ISLAND Hy**	**33.16**	**201**	T	T	18 41 48.5	
	baz=11,slow=76						
H11S1	**WAKE ISLAND Hy**	**34.37**	**200**	T	T	18 43 24.3	
	baz=19,slow=74						
H11S3	**WAKE ISLAND Hy**	**34.38**	**200**	T	T	18 43 21.5	
	baz=19,slow=74						
H11S2	**WAKE ISLAND Hy**	**34.38**	**200**	T	T	18 43 19.7	
	baz=19						
YKA	**Yellowknife Ar**	**36.22**	**46**	P	**P**	**18 07 04.0**	**+0.5**
	0.4nm,0.5s,baz=280,slow=7.8,SNR=5.6						
NVAR	**Mina Array Bea**	**45.10**	**81**	P	**P**	**18 08 16.3**	**-1.0**
	0.4nm,0.6s,baz=305,slow=7.1,SNR=3.3						
PDAR	**Pinedale Array**	**47.75**	**71**	P	**P**	**18 08 38.5**	**+0.5**
	0.4nm,0.6s,baz=299,slow=3.3,SNR=5.7						
MKAR	**Makanchi Array**	**58.61**	**307**	P	**P**	**18 09 57.2**	**-0.3**
	0.2nm,0.4s,baz=52,slow=4.4,SNR=6.3						
TXAR	**Lajitas Array**	**60.19**	**79**	P	**P**	**18 10 08.7**	**-0.1**
	0.3nm,0.4s,baz=305,slow=4.9,SNR=7.7						
ASAR	**Alice Springs**	**84.61**	**220**	P	**P**	**18 12 33.3**	**-0.6**
	0.5nm,0.8s,baz=29,slow=5.6,SNR=3.3						

*TIR **20** 18:30:43.9, 41.36°N×19.48E, h18km, Md2.5/4*
*BEO **20** 18:30:46.4±1.1, 41.39°N×19.87E, h25km±9km, ML1.8/5*

ISC 20 18:30:47.7±1.4, 41.38°N±0.08°×19.64°E±0.06, h10km±8km, n12, σ1§00/23, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.17**	**101**	*e*Pg	**Pg**	**18 30 50.9**	**-0.5**
TIR				*e*Sg	**Sg**	**18 30 54.6**	**+0.6**
TIR	**Tirane**	**0.17**	**101**	*i* PG	**Pg**	**18 30 50.9**	**-0.5**
TIR				*i* SG	**Sg**	**18 30 55.4**	**+1.5**
PHP	**Peshkopia**	**0.67**	**63**	*i* PG	**Pg**	**18 30 59.2**	**-1.6**
PHP				*i* SG	**Sb**	**18 31 11.7**	**+0.7**
BCI	**Bajram Curri**	**1.04**	**18**	*i* PG	**Pb**	**18 31 07.0**	**-0.7**
BCI				*i* SG	**Sb**	**18 31 20.9**	**-0.5**
PDG	**Podgorica**	**1.09**	**345**	*e*Pg	**Pb**	**18 31 07.3**	**-1.3**
PDG				*e*Sg	**Sb**	**18 31 21.9**	**-1.0**
FNA	**Florina**	**1.44**	**114**	*i* PN	**Pn**	**18 31 13.8**	**-0.1**
FNA				*i* SN	**Sg**	**18 31 34.6**	**+0.6**
TREB	**Trebinje**	**1.65**	**325**	*e*Pg	**Pb**	**18 31 18.0**	**-0.1**
TREB				*e*Sg	**Sg**	**18 31 41.3**	**+0.7**
SJES	**Sjenica**	**1.90**	**7**	*e*Pg	**Pn**	**18 31 21.3**	**+1.1**
SJES				*e*Sg	**Sb**	**18 31 46.7**	**+0.5**
SELS	**Selova**	**2.14**	**30**	*e*Pg	**Pn**	**18 31 23.7**	**+0.2**
SELS				*e*Sg	**Sn**	**18 31 50.7**	**+0.6**
IVAS	**Ivanjica**	**2.23**	**10**	*e*Pg	**Pn**	**18 31 26.5**	**+1.8**
IVAS				*e*Sg	**Sb**	**18 31 56.8**	**+1.1**
BOSS	**Bosilegrad**	**2.39**	**61**	*e*Pg	**Pn**	**18 31 26.8**	**-0.2**
BOSS				*e*Sg	**Sn**	**18 31 57.2**	**+0.9**
BBLS	**Lazići**	**2.49**	**356**	*e*Pg	**Pb**	**18 31 31.2**	**-1.4**

*UCR **20** 18:36:04.6±2.2, 7.98°N×83.01°W, h12km±8km*
*UPA **20** 18:36:06.3±2.1, 8.08°N×83.03°W, h19km±5km, MW4.0*

ISC 20 18:36:03.9±1.5, 7.97°N±0.07°×82.97°W±0.04, h22km±5km, n26, σ0§95/40, 1C-3D, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBAR3	**San Bartolo, C**	**0.36**	**14**	*e*P	**Pb**	**18 36 12.3**	**+0.7**
PTJ1	**Puerto Jimnez**	**0.65**	**330**	*e*P	**Pb**	**18 36 16.1**	**-0.6**
PTJ1				*e*S	**Sb**	**18 36 26.1**	**+0.7**
PTJ1	**Puerto Jimnez**	**0.65**	**330**	*i* P	**Pb**	**18 36 16.2**	**-0.6**
PTJ1				*i* S	**Sb**	**18 36 25.3**	**-0.1**
PEDE3	**Pedregal, Chir**	**0.68**	**53**	*i* P	**Pn**	**18 36 18.2**	**-0.1**
PEDE3				*i* S	**Sn**	**18 36 28.4**	**+0.2**
DVD	**David**	**0.69**	**48**	*e*P	**Pb**	**18 36 17.9**	**+0.6**
DVD				*i* S	**Sn**	**18 36 28.9**	**+0.4**
LOCO3	**Loma Colorada,**	**0.70**	**51**	*e*P	**Pn**	**18 36 19.9**	**+1.4**
LOCO3				*e*S	**Sn**	**18 36 29.4**	**+0.7**
PTAR3	**Potrerillos Ar**	**0.86**	**33**	*e*P	**Pn**	**18 36 21.1**	**+0.2**
PTAR3				*i* S	**Sn**	**18 36 32.6**	**-0.1**
BCO2	**Palmira**	**0.86**	**30**	*i* P	**Pn**	**18 36 21.0**	**+0.1**
BCO2				*i* S	**Sn**	**18 36 33.4**	**+0.4**
BRU2	**Volcan**	**0.86**	**18**	*e*P	**Pb**	**18 36 20.5**	**+0.1**
BRU2				*e*S	**Sn**	**18 36 33.6**	**+0.6**
BRU2	**Volcan**	**0.86**	**18**	*i* P	**Pb**	**18 36 20.8**	**+0.4**
	baz=208,slow=2.5						
GUAL3	**Gualaca, Chiri**	**0.87**	**50**	*e*P	**Pb**	**18 36 19.2**	**-1.1**
GUAL3				*e*S	**Sn**	**18 36 32.7**	**-0.1**
EDPN	**Palmar Norte**	**1.10**	**334**	*e*P	**Pn**	**18 36 23.6**	**-0.5**
EDPN				*e*S	**Sb**	**18 36 38.1**	**-0.1**
EDBA	**Buenos Aires**	**1.23**	**346**	*e*P	**Pn**	**18 36 25.9**	**+0.1**
EDBA				*e*S	**Sn**	**18 36 42.3**	**+0.6**
CHGR2	**Aguacate**	**1.26**	**40**	*i* P	**Pn**	**18 36 26.8**	**+0.5**
CHGR2				*i* S	**Sb**	**18 36 43.0**	**+0.2**
CNI2	**El Empalme, Bo**	**1.53**	**19**	*e*P	**Pn**	**18 36 30.7**	**+0.8**
GMAL	**Guarumal, Vera**	**1.73**	**97**	*e*P	**Pb**	**18 36 36.0**	**+1.0**
STIA3	**Santiago, Vera**	**1.98**	**86**	*e*P	**Pn**	**18 36 36.6**	**+0.5**
LCR2	**La Lucha 2**	**2.04**	**330**	*e*P	**Pn**	**18 36 38.1**	**+1.0**
LCR2				*e*S	**Sn**	**18 37 03.0**	**+1.0**
OCU3	**Ocu, Herrera**	**2.17**	**90**	*e*P	**Pb**	**18 36 43.6**	**+1.1**
CACAO	**El Cacao, Vera**	**2.18**	**106**	*e*P	**Pb**	**18 36 41.1**	**-1.5**
CVTR	**Volcan Turrial**	**2.18**	**339**	*e*P	**Pb**	**18 36 41.6**	**-1.4**
CVTR				*e*S	**Sb**	**18 37 09.2**	**-0.6**
AZU	**Azuero**	**2.67**	**94**	*e*P	**Pb**	**18 36 50.7**	**-0.4**
ARE1	**Arenal 1**	**3.02**	**325**	*e*P	**Pb**	**18 36 56.3**	**-0.7**
JTS	**Las Juntas de**	**3.03**	**320**	*e*P	**Pn**	**18 36 51.7**	**+1.1**
JTS	**Las Juntas de**	**3.03**	**320**	*e*P	**Pn**	**18 36 51.8**	**+1.1**
BCIP	**Isla Barro Col**	**3.32**	**69**	*e*P	**Pb**	**18 36 58.5**	**-3.5**

*IDC **20** 18:55:19.4±1.0, 32.75°N×103.63E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.4/45, mbtmp3.5/8, ML3.1/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/53, Error ellipse: s-maj=48.2km s-min=18.2km az=62.0*
*BJI **20** 18:55:20.0±0.0, 32.93°N×103.97E, h14km, mB3.9/1, mb3.7/3, ML3.6/19, Ms3.4/6, Ms7 3.2/4*

ISC 20 18:55:20.0±0.7, 32.91°N±0.04°×104.11°E±0.05, h9km, n15, σ1§94/20, mb3.7/6, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**2.01**	**189**	*i* Pn	**Pb**	**18 55 56.8**	**-0.1**
CD2				Pg	**Pg**	**18 55 57.9**	**-0.8**
CD2				Sg	**Sg**	**18 56 25.1**	**+0.3**
CD2				smax	smax		
	comp=N,1μm,0.8s						
CD2				smax	smax		
	comp=E,850nm,0.8s						
LZH	**Lanzhou**	**3.18**	**356**	*e*Pn	**Pn**	**18 56 12.1**	**+1.7**
LZH				Pg	**Pb**	**18 56 18.1**	**+1.3**
LZH				Sg	**Sg**	**18 56 59.4**	**-2.8**
LZH				smax	smax		
	comp=N,390nm,0.9s						
LZH				smax	smax		
	comp=E,550nm,0.9s						
LZH				LR	LR		
	comp=E,830nm,5.7s						
LZH				LR	LR		
	comp=Z,810nm,5.7s						
XAN	**Xi'an**	**4.18**	**73**	Pn	**Pn**	**18 56 26.3**	**+2.3**
XAN				Pg	**Pg**	**18 56 37.8**	**-2.3**
XAN				Sn	**Sn**	**18 57 10.1**	**-2.9**
XAN				Sg	**Sg**	**18 57 35.1**	**+0.8**
XAN				smax	smax		
	comp=N,220nm,0.9s						
XAN				smax	smax		
	comp=E,190nm,0.9s						
XAN				LR	LR		
	comp=E,500nm,6.3s						
XAN				LR	LR		
	comp=Z,230nm,11.8s						
GTA	**Gaotai**	**7.36**	**333**	*e*Pn	**Pn**	**18 57 07.0**	**-0.8**
SONM	**Songino Array**	**15.01**	**6**	Pn	**Pn**	**18 58 53.6**	**+1.1**
	0.1nm,0.3s,baz=191,slow=15,SNR=5.0						
SONM				LR	LR	19 05 31.6	
	comp=Z,85nm,18.9s,baz=7.0,slow=40						
CMAR	**Chiang Mai Arr**	**15.12**	**199**	Pn	**Pn**	**18 58 49.9**	**-4.0**
	0.0nm,0.3s,baz=6.3,slow=9.1,SNR=3.1						
CMAR				LR	LR	19 05 16.9	
	comp=Z,22nm,18.0s,baz=120,slow=40						
WMQ	**Urumqi**	**16.83**	**315**	*e*P	**Pn**	**18 59 15.3**	**-0.7**
MKAR	**Makanchi Array**	**21.65**	**316**	P	**P**	**19 00 10.5**	**-0.2**
	1.9nm,1.0s,baz=115,slow=14,SNR=16						
ZALV	**Zalesovo Beam**	**25.11**	**333**	P	**P**	**19 00 44.5**	**-0.6**
	0.9nm,0.3s,baz=147,slow=3.5,SNR=4.6						
KURBB	**Kurchatov Arra**	**25.82**	**321**	P	**P**	**19 00 51.0**	**-0.5**
	1.5nm,0.8s,baz=124,slow=11,SNR=14						
KLR	**Kul'dur**	**26.26**	**43**	LR	LR	19 12 24.5	
	comp=Z,50nm,18.7s,baz=44,slow=38						
MJAR	**Matsushiro Arr**	**28.18**	**73**	LR	LR	19 12 33.9	
	comp=Z,45nm,19.2s,baz=35,slow=36						
WRA	**Warramunga Arr**	**59.97**	**147**	P	**P**	**19 05 28.1**	**+1.2**
	0.8nm,0.9s,baz=344,slow=7.5,SNR=4.0						
ASAR	**Alice Springs**	**63.03**	**149**	P	**P**	**19 05 49.1**	**+1.5**
	0.5nm,1.0s,baz=333,slow=6.6,SNR=6.1						
YKA	**Yellowknife Ar**	**79.97**	**17**	P	**P**	**19 07 32.3**	**+3.0**
	0.2nm,0.5s,baz=330,slow=5.4,SNR=3.9						

*IDC **20** 19:07:44.9±0.8, 31.75°N×143.01E, h0km, mb3.8/17, mb1 3.9/20, mb1mx3.8/48, mbtmp3.8/20, ML3.4/3, MS2.9/2, Ms1 2.9/2, ms1mx2.5/42, Error ellipse: s-maj=26.9km s-min=16.8km az=71.0*
*JMA **20** 19:07:47.4±0.5, 31.60°N×142.85E, h0km, M4.3*
*NEIC **20** 19:07:48.2±2.1, 31.3°N±0.1°×142.9°E±0.1, h17km±5km, mb4.4/11, Error ellipse: s-maj=17.3km s-min=15.2km az=56.0*

ISC 20 19:07:46.7±0.7, 31.29°N±0.08°×142.9°E±0.1, h10km, n55, σ1§30/55, mb4.0/23, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.19**	**306**	P	**Pn**	**19 08 37.3**	**+0.4**
JHJ2	**Mitsune**	**3.19**	**306**	Pn	**Pn**	**19 08 36.2**	**-0.7**
BSO1	**Boso 1**	**3.73**	**335**	P	**Pn**	**19 08 44.3**	**+0.5**
BSO3	**Boso 3**	**4.04**	**331**	P	**Pn**	**19 08 48.5**	**+0.1**
BSO4	**Boso 4**	**4.27**	**330**	P	**Pn**	**19 08 52.3**	**+0.6**
JOD2	**Odawara 2**	**5.09**	**322**	P	**Pn**	**19 09 03.1**	**0.0**
JOD2				*e*S	**Sn**	**19 09 59.3**	**-2.7**
JHU	**Hanno**	**5.46**	**327**	P	**Pn**	**19 09 08.2**	**0.0**
JHU				*e*S	**Sn**	**19 10 09.0**	**-2.1**
JRY	**Ryogami san**	**5.78**	**326**	P	**Pn**	**19 09 12.8**	**+0.3**
JRY				*e*S	**Sn**	**19 10 17.3**	**-1.6**
JAG	**Ashikaga**	**5.87**	**332**	P	**Pn**	**19 09 14.1**	**+0.3**
JAG				*e*S	**Sn**	**19 10 17.8**	**-3.4**
INU	**Inuyama**	**6.38**	**311**	Pn	**Pn**	**19 09 19.4**	**-1.4**
MJAR	**Matsushiro Arr**	**6.53**	**325**	Pn	**Pn**	**19 09 23.6**	**+0.7**
	0.6nm,0.3s,baz=146,slow=11,SNR=28						
MJAR				Sn	**Sn**	**19 10 36.2**	**-1.3**
	0.2nm,0.3s,baz=151,slow=22,SNR=3.9						
MAJO	**Matsushiro**	**6.53**	**325**		**Pn**	**19 09 23.8**	**+0.9**
MAT	**Matsushiro**	**6.53**	**325**	P	**Pn**	**19 09 23.9**	**+1.0**
MAT				S	**Sn**	**19 10 35.3**	**-2.2**
MJB9	**Matsu-Tunnel**	**6.54**	**325**		**Pn**	**19 09 23.6**	**+0.5**
ERM	**Erimo**	**10.71**	**1**	Pn	**Pn**	**19 10 17.2**	**-2.9**
JKA	**Kamikawa-asahi**	**12.81**	**359**		**Pn**	**19 10 47.7**	**-1.2**
JKA					Sn	19 13 02.3	-9.1
ASAJ	**Asahikawa**	**12.81**	**359**	Pn	**Pn**	**19 10 47.7**	**-1.2**
	0.4nm,0.3s,baz=194,slow=14,SNR=7.0						
ASAJ				Sn	Sn	19 13 02.3	-9.1
	0.1nm,0.3s,baz=94,slow=15,SNR=2.2						
KSRS	**Korea Array**	**13.81**	**300**	Pn	**Pn**	**19 11 05.1**	**+2.5**
	0.2nm,0.3s,baz=110,slow=13,SNR=4.9						
KSRS				LR	LR	19 15 56.8	
	comp=Z,

YULB	**Yu-li**	**20.72**	**253**	P	**P**	**19 12 25.8**	**-1.7**
YULB				IAmb	IAmb	19 12 44.3	
	comp=Z,31nm,1.2s						
H11N2	**WAKE ISLAND Hy**	**24.46**	**112**	T	T	19 37 34.6	
	baz=304						
H11N1	**WAKE ISLAND Hy**	**24.47**	**112**	T	T	19 37 36.8	
	baz=304						
H11N3	**WAKE ISLAND Hy**	**24.48**	**112**	T	T	19 37 37.0	
	baz=304						
H11S3	**WAKE ISLAND Hy**	**24.99**	**115**	T	T	19 38 16.1	
	baz=308						
H11S1	**WAKE ISLAND Hy**	**24.99**	**115**	T	T	19 38 16.6	
	baz=308						
H11S2	**WAKE ISLAND Hy**	**25.00**	**115**	T	T	19 38 16.2	
	baz=308						
ULN	**Ulaanbaatar**	**31.86**	**312**	P	**P**	**19 14 13.6**	**+1.5**
SONM	**Songino Array**	**32.27**	**311**	P	**P**	**19 14 17.3**	**+1.6**
	comp=Z,0.9nm,0.7s,baz=106,slow=7.7,SNR=7.9						
CMAR	**Chiang Mai Arr**	**41.62**	**263**	P	**P**	**19 15 35.3**	**0.0**
	comp=Z,0.2nm,0.3s,baz=56,slow=7.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**46.81**	**317**	P	**P**	**19 16 17.4**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=109,slow=13,SNR=2.6						
MK31	**Makanchi Array**	**48.38**	**307**	P	**P**	**19 16 29.8**	**+0.9**
MK31				IAmb	IAmb	19 16 33.9	
	comp=Z,2.2nm,0.8s						
MKAR	**Makanchi Array**	**48.38**	**307**	P	**P**	**19 16 30.1**	**+1.2**
	comp=Z,2.4nm,0.6s,baz=91,slow=8.9,SNR=31						
MAKZ	**Makanchi**	**48.60**	**307**	P	**P**	**19 16 31.4**	**+0.9**
MAKZ				IAmb	IAmb	19 16 35.2	
	comp=Z,2.7nm,0.5s						
KURK	**Kurchatov**	**50.57**	**312**	P	**P**	**19 16 46.3**	**+0.9**
KURBB	**Kurchatov Arra**	**50.64**	**312**	P	**P**	**19 16 46.6**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=89,slow=7.8,SNR=12						
WRA	**Warramunga Arr**	**51.60**	**190**	P	**P**	**19 16 52.2**	**-1.2**
	comp=Z,1.0nm,0.6s,baz=7.2,slow=7.8,SNR=4.5						
FITZ	**Fitzroy Crossi**	**51.83**	**201**	LR	LR	19 39 29.2	
	comp=Z,35nm,19.5s,baz=33,slow=37						
AAK	**Ala-Archa**	**54.46**	**303**	P	**P**	**19 17 14.2**	**-0.4**
AAK				IAmb	IAmb	19 18 43.0	
	comp=Z,7.5nm,1.8s						
ASAR	**Alice Springs**	**55.32**	**190**	P	**P**	**19 17 19.8**	**-0.9**
	comp=Z,0.6nm,0.9s,baz=5.7,slow=5.2,SNR=6.8						
BVAR	**Borovoye Array**	**55.44**	**316**	P	**P**	**19 17 22.1**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=88,slow=8.2,SNR=6.4						
BVAR				PcP	**PcP**	**19 18 22.1**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=90,slow=5.0,SNR=2.9						
KK31	**Karatay Array**	**57.21**	**304**	P	**P**	**19 17 34.0**	**-0.2**
KK31				IAmb	IAmb	19 17 39.6	
	comp=Z,3.1nm,0.8s						
KKAR	**Karatay Array**	**57.21**	**304**	P	**P**	**19 17 33.7**	**-0.4**
KKAR				IAmb	IAmb	19 17 39.6	
	comp=Z,3.1nm,0.8s						
CHGR	**Chuyangaron**	**59.40**	**299**	P	**P**	**19 17 50.8**	**+1.2**
ARU	**Arti**	**61.54**	**321**	P	**P**	**19 18 04.4**	**+0.7**
	comp=Z,0.8nm,0.5s,baz=37,slow=5.6,SNR=5.1						
ARU	**Arti**	**61.54**	**321**	P	**P**	**19 18 03.1**	**-0.6**
ABKAR	**Akbulak array**	**62.67**	**313**	P	**P**	**19 18 11.6**	**+0.1**
ABKAR				IAmb	IAmb	19 18 25.5	
	comp=Z,4.5nm,1.5s						
STKA	**Stephens Creek**	**62.84**	**181**	P	**P**	**19 18 10.2**	**-2.4**
	comp=Z,2.2nm,1.0s,baz=342,slow=20,SNR=1.9						
AKTO	**Aktyubinsk**	**63.51**	**315**	P	**P**	**19 18 17.6**	**+0.6**
	comp=Z,0.7nm,0.7s,baz=77,slow=13,SNR=3.7						
YKA	**Yellowknife Ar**	**68.17**	**29**	P	**P**	**19 18 46.2**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=293,slow=6.3,SNR=5.1						
KBZ	**Khabaz**	**75.63**	**313**	P	**P**	**19 19 33.4**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=86,slow=5.4,SNR=5.0						
NVAR	**Mina Array Bea**	**77.46**	**53**	P	**P**	**19 19 44.3**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=289,slow=5.6,SNR=1.4						
AKASG	**Malin Array Be**	**79.62**	**324**	P	**P**	**19 19 54.5**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=48,slow=6.0,SNR=3.4						
NOA	**NORSAR Array B**	**79.96**	**338**	P	**P**	**19 19 56.3**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=36,slow=7.1,SNR=2.5						
BRTR	**Keskin Array B**	**83.62**	**313**	P	**P**	**19 20 16.2**	**+0.5**
	comp=Z,1.1nm,0.9s,baz=57,slow=4.6,SNR=6.2						
CLL	**Collm**	**86.70**	**331**	*eP*	**P**	**19 20 30.0**	**-0.7**

*IGIL **20** 19:12:17.8,37.°49N×7.°54W,h15km,ML1.3*
*INMG **20** 19:12:17.3±0.7,37.°51N×7.°60W,h20km±2km, Error ellipse: s-maj=1.7km s-min=1.5km az=106.0*

MDD 20 19:12:17.5±0.4,37.°46N×7.°56W,h20km±2km,mbLg1.4/10, 2C,Error ellipse: s-maj=5.1km s-min=2.4km az=154.0, PRXIMO,Portugal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EGRO	**El Granado**	**0.10**	**39**	⇑Pg	Pb	19 12 21.2	-0.3
	0.2nm,0.1s,SNR=18						
EGRO				Lg	Lg	19 12 23.9	
	20nm,0.0s,SNR=9.8						
PVAQ	**Vaqueiros**	**0.14**	**246**	⇑*i*Pg	Pb	19 12 21.6	-1.5
PVAQ				*e*Sg	Sb	19 12 24.6	-2.5
PVAQ	**Vaqueiros**	**0.14**	**246**	*e*Pg	Pb	19 12 22.8	-0.3
PVAQ				*e*Sg	Sb	19 12 25.8	-1.3
PVAQ				A	A	19 12 26.9	
	33nm,0.1s						
PVAQ	**Vaqueiros**	**0.14**	**246**	Pg	Pb	19 12 21.6	-1.5
PVAQ				Lg	Lg	19 12 24.6	
PBDV	**Barranco-do-Ve**	**0.37**	**234**	*e*Pg	Pb	19 12 24.9	-0.4
PBDV				*e*Sg	Sb	19 12 30.3	-0.2
PBDV	**Barranco-do-Ve**	**0.37**	**234**	*e*Pg	Pb	19 12 26.1	+0.8
PBDV				*e*Sg	Sb	19 12 31.4	+0.9
PBDV				A	A	19 12 33.0	
	4.9nm,0.1s						
PBDV	**Barranco-do-Ve**	**0.37**	**234**	Pg	Pb	19 12 24.9	-0.4
PBDV				Lg	Lg	19 12 30.3	
PCVE	**Castro Verde**	**0.42**	**294**	*e*Pg	Pb	19 12 24.8	-1.3
PCVE				*e*Sg	Sb	19 12 30.0	-2.0
PCVE	**Castro Verde**	**0.42**	**294**	*e*Pg	Pb	19 12 26.2	+0.1
PCVE				*e*Sg	Sb	19 12 31.3	-0.7
PCVE				A	A	19 12 31.5	
	10nm,0.1s						
PCVE	**Castro Verde**	**0.42**	**294**	Pg	Pb	19 12 26.2	+0.1
PCVE				Lg	Lg	19 12 31.3	
	10nm,0.1s						
PBEJ	**Beja**	**0.62**	**337**	*e*Sg	Sb	19 12 35.6	-2.3
PBEJ	**Beja**	**0.62**	**337**	*e*Pg	Pb	19 12 29.0	-0.7
PBEJ				*e*Sg	Sb	19 12 36.7	-1.2
PBEJ				A	A	19 12 38.0	
	7.2nm,0.5s						
PBEJ	**Beja**	**0.62**	**337**	Pg	Pb	19 12 29.0	-0.7
PBEJ				Lg	Lg	19 12 36.7	
	3.6nm,0.5s						
EMIN	**Mina Concepcio**	**0.77**	**66**	Pg	Pb	19 12 31.4	-0.7
	1.0nm,0.1s,SNR=7.9						
EMIN				Lg	Lg	19 12 42.4	
	1.8nm,0.0s,SNR=22						
PBAR	**Barrancos**	**0.82**	**30**	*e*P	Pn	19 12 34.0	+0.1
PBAR				*e*S	Sn	19 12 45.0	-0.5
PBAR	**Barrancos**	**0.82**	**30**	Pg	Pn	19 12 34.0	+0.1
PBAR				Lg	Lg	19 12 45.0	
MORF	**Marmelete**	**0.88**	**260**	*e*P	Pb	19 12 33.8	-0.4
MORF				*e*S	Sb	19 12 45.4	-0.2
MORF				AML	AML	19 12 47.0	
	comp=E,7.0nm,0.3s						
MORF	**Marmelete**	**0.88**	**260**	*e*P	Pb	19 12 34.0	-0.2
MORF				*e*S	Sb	19 12 45.8	+0.3
MORF				A	A	19 12 47.5	
	comp=E,9.7nm,1.6s						
MORF	**Marmelete**	**0.88**	**260**	Pg	Pb	19 12 33.8	-0.4
MORF				Lg	Lg	19 12 45.4	
	comp=E,7.0nm,0.3s						
PTEO	**Sao Teotonio**	**0.93**	**276**	*e*P	Pb	19 12 35.0	+0.1
PTEO				*e*S	Sb	19 12 47.0	+0.2
PTEO	**Sao Teotonio**	**0.93**	**276**	Pg	Pb	19 12 35.0	+0.1
PTEO				Lg	Lg	19 12 47.0	
PNCL	**Nicolau / Gran**	**1.01**	**311**	*e*P	Pb	19 12 34.3	-1.9
PNCL				*e*S	Sb	19 12 46.5	-2.5
PNCL	**Nicolau / Gran**	**1.01**	**311**	*e*P	Pb	19 12 35.6	-0.6
PNCL				*e*S	Sb	19 12 49.1	+0.1
PNCL				A	A	19 12 49.7	
	comp=E,1.6nm,0.4s						
PNCL	**Nicolau / Gran**	**1.01**	**311**	Pg	Pb	19 12 35.6	-0.6
PNCL				Lg	Lg	19 12 49.1	
	comp=E,1.6nm,0.4s						
PFVI	**Vila Bisbo**	**1.06**	**252**	*e*P	Pn	19 12 37.6	+0.4
PFVI				*e*S	Sb	19 12 50.8	+0.2
PFVI				A	A	19 12 52.7	
	comp=E,3.7nm,0.1s						
PFVI	**Vila Bisbo**	**1.06**	**252**	Pg	Pb	19 12 36.5	-0.7
	comp=E,2.9nm,0.3s,SNR=7.9						
PFVI				Lg	Lg	19 12 50.7	
	comp=E,1.8nm,0.1s,SNR=8.6						
EBAD	**Badajoz**	**1.36**	**18**	Pg	Pn	19 12 41.0	-0.4
	comp=E,0.3nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	19 12 59.6	
	comp=E,2.3nm,0.1s,SNR=8.8						
PESTR	**Estremoz**	**1.41**	**359**	*e*S	Sn	19 12 59.8	-0.1
PMTG	**Montargil**	**1.69**	**342**	*e*Sn	Sn	19 13 06.5	-0.4
PMTG				*e*Sg	Sb	19 13 09.2	+0.5
PMTG				A	A	19 13 16.3	
	comp=E,1.8nm,0.5s						
PMTG	**Montargil**	**1.69**	**342**	Sn	Sn	19 13 06.5	-0.4
PMTG				Lg	Lg	19 13 09.2	
	comp=E,1.8nm,0.5s						
ECAB	**El Cabril**	**1.80**	**69**	Pg	Pb	19 12 49.0	-0.8
	comp=E,0.1nm,3.7s,SNR=7.9						
ECAB				Sn	Sn	19 13 07.6	-2.2
	comp=E,0.1nm,0.1s,SNR=7.9						
ECAB				Lg	Lg	19 13 12.5	
	comp=E,1.0nm,0.3s,SNR=7.9						
PMRV	**Marv??o**	**1.97**	**4**	*e*Sg	Sb	19 13 16.9	+0.1
PMRV	**Marv??o**	**1.97**	**4**	Lg	Lg	19 13 16.9	

IDC 20 19:17:37.6±2.6,6.°53S×129.°80E,h0km,mb3.6/1, mb1 3.6/3,mb1mx3.2/34,mbtmpg3.4/3,ML3.5/2,Error ellipse: s-maj=185.0km s-min=32.8km az=69.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.04**	**162**	Pn	Pn	19 20 57.7	-0.2
	0.3nm,0.3s,baz=342,slow=10,SNR=5.0						
WRA				Sn	Sn	19 23 17.8	-17
	0.2nm,0.3s,baz=337,slow=21,SNR=4.4						
ASAR	**Alice Springs**	**17.48**	**167**	P	Pn	19 21 43.2	+0.2
	0.2nm,0.3s,baz=342,slow=9.5,SNR=19						
ASAR				S	Sn	19 24 45.8	-13
	0.1nm,0.3s,baz=320,slow=16,SNR=5.0						
MKAR	**Makanchi Array**	**67.73**	**327**	P	P	19 28 37.0	0.0
	0.4nm,0.7s,baz=131,slow=6.5,SNR=3.7						

*IPEC **20** 19:23:27.3±0.3,51.°64N×16.°37E,h0km, ML2.0/4, Error ellipse: s-maj=2.4km s-min=1.3km az=44.0*
*IDC **20** 19:23:31.0±1.1,51.°47N×16.°03E,h0km,mb1 3.2/4, mb1mx2.9/49,mbtmp3.0/4,ML2.4/4, Error ellipse: s-maj=17.6km s-min=9.6km az=122.0*
*PRU **20** 19:23:30.9±0.0,51.°47N×16.°08E,h0km*
*VIE **20** 19:23:32.1±0.9,51.°32N×16.°15E,h0km,mb2.1/2,ml2.6/5, Error ellipse: s-maj=8.8km s-min=5.7km az=55.0 65 km WNW of Wroclaw Suspected Mining induced.*

ISC 20 19:23:29.1±0.9,51.°50N±0.°04×16.°14E±0.°03,h0km,n33, σ0°86/65,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.67**	**172**	*i* Pg	**Pg**	**19 23 42.7**	**+0.8**
KSP				*i* Sg	**Sg**	**19 23 50.5**	**-0.1**
CHVC	**Chvalec**	**0.92**	**183**	*e*PG	**Pb**	**19 23 47.6**	**-0.3**
CHVC				*e*SG	**Sb**	**19 23 59.8**	**-0.9**
	comp=Z,28nm,0.4s						
OSTC	**Ostas**	**0.95**	**177**	*e*PG	**Pb**	**19 23 48.1**	**-0.3**
OSTC				*e*SG	**Sg**	**19 24 00.5**	**+0.9**
	comp=Z,32nm,0.4s						
UPC	**Upice**	**1.00**	**185**	*e*PG	**Pg**	**19 23 48.8**	**+0.5**
UPC				*e*SG	**Sg**	**19 24 01.7**	**+0.5**
	comp=Z,58nm,0.4s						
DPC	**Dobruska-Polom**	**1.16**	**174**	*e*PG	**Pg**	**19 23 51.6**	**+0.3**
DPC				*e*SG	**Sg**	**19 24 06.2**	**-0.2**
	comp=Z,21nm,0.6s						
PVCC	**Panska Ves**	**1.39**	**226**	*e*PG	**Pn**	**19 23 55.8**	**0.0**
PVCC				*e*SG	**Sb**	**19 24 14.5**	**+0.2**
	comp=Z,86nm,0.2s						
KRLC	**Kraliky**	**1.49**	**164**	*e*PG	**Pn**	**19 23 56.9**	**-0.2**
KRLC				*e*SG	**Sg**	**19 24 16.7**	**-0.1**
	comp=Z,36nm,0.6s						
BRG	**Berggiesshubel**	**1.52**	**246**	PN	**Pb**	**19 23 58.3**	**+0.1**
BRG				PG	**Pg**	**19 23 58.8**	**+0.6**
BRG				SG	**Sn**	**19 24 18.5**	**+0.5**
	58nm,0.5s						
PRU	**Pruhonice**	**1.82**	**214**	*e*PG	**Pb**	**19 24 03.4**	**0.0**
PRU				*e*SG	**Sb**	**19 24 26.9**	**+0.2**
	comp=Z,20nm,0.5s						
MORC	**Moravsky Berou**	**1.95**	**152**	*e*PN	**Pn**	**19 24 02.9**	**-0.5**
MORC				*e*SG	**Sb**	**19 24 30.3**	**0.0**
MORC	**Moravsky Berou**	**1.95**	**152**	*e*Pn	**Pn**	**19 24 02.8**	**-0.6**
	baz=339						
MORC				*e*Sg	**Sb**	**19 24 30.2**	**0.0**
	9.2nm,0.3s,baz=339						
CLL	**Collm**	**1.97**	**266**	*e*Pn	**Pn**	**19 24 03.0**	**-0.8**
CLL				*e*Pg	**Pb**	**19 24 06.0**	**+0.1**
CLL				*e*		19 24 09.0	
CLL				*i*		19 24 21.3	
CLL				*e*Sg	**Sg**	**19 24 33.0**	**+0.5**
	comp=Z,17nm,0.4s						
OKC	**Ostrava-Krasne**	**2.10**	**142**	*e*PG	**Pg**	**19 24 09.6**	**+0.2**
VRAC	**Vranov**	**2.22**	**172**	Pn	**Pn**	**19 24 08.2**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=350,slow=16,SNR=12						
VRAC				Sn	**Sb**	**19 24 37.3**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=221,slow=22,SNR=3.9						
VRAC	**Vranov**	**2.22**	**172**	*e*PN	**Pn**	**19 24 06.9**	**-0.2**
VRAC				*e*SG	**Sg**	**19 24 40.4**	**+0.1**
VRAC	**Vranov**	**2.22**	**172**	*e*Pn	**Pn**	**19 24 06.8**	**-0.3**
	baz=357						
VRAC				*e*Sg	**Sg**	**19 24 40.4**	**+0.1**
	comp=Z,7.3nm,0.2s,baz=357						
KRUC	**Moravsky**	**2.45**	**176**	*e*PN	**Pn**	**19 24 10.5**	**+0.2**
KRUC				*e*SG	**Sg**	**19 24 47.9**	**+0.1**
KRUC	**Moravsky**	**2.45**	**176**	*e*Pn	**Pn**	**19 24 10.5**	**+0.2**
	baz=360						
KRUC				*e*Sg	**Sg**	**19 24 47.9**	**+0.1**
	comp=Z,5.4nm,0.3s,baz=360						
NKC	**Novy Kostel**	**2.66**	**243**	*e*PN	**Pn**	**19 24 13.4**	**+0.1**
NKC				*e*PG	**Pb**	**19 24 19.0**	**+1.4**
NKC				*e*SG	**Sg**	**19 24 56.1**	**+1.5**
JAVC	**Velka Javorina**	**2.83**	**159**	*e*PN	**Pn**	**19 24 15.0**	**-0.5**
JAVC				*e*SG	**Sg**	**19 24 58.6**	**-1.3**
JAVC	**Velka Javorina**	**2.83**	**159**	*e*Pn	**Pn**	**19 24 15.0**	**-0.5**
	baz=344						
JAVC				*e*Sg	**Sg**	**19 24 58.5**	**-1.3**
	comp=Z,4.4nm,0.5s,baz=344						
KHC	**Kasperske Hory**	**2.89**	**216**	*e*PN	**Pn**	**19 24 16.5**	**+0.1**
KHC				*e*PG	**Pb**	**19 24 22.5**	**+1.0**
KHC				*e*SN	**Sn**	**19 24 51.3**	**-0.5**
KHC				*e*SG	**Sg**	**19 25 00.8**	**-1.0**
	comp=Z,13nm,0.6s						
GERES	**GERESS Array B**	**3.09**	**211**	Pn	**Pn**	**19 24 20.1**	**+0.9**
	comp=Z,0.5nm,0.3s,baz=27,slow=13,SNR=14						
GERES				Pg	**Pb**	**19 24 26.2**	**+1.3**
	comp=Z,1.3nm,0.3s,baz=29,slow=16,SNR=23						
GERES				Lg	Lg	19 25 05.5	
	comp=Z,1.4nm,0.3s,baz=32,slow=27,SNR=4.5						
SMOL	**Smolenice**	**3.11**	**164**	*e*SG	**Sg**	**19 25 10.1**	**+1.2**
LANS	**Liptovska Anna**	**3.18**	**137**	*e*PN	**Pn**	**19 24 20.8**	**+0.4**
LANS				*e*PG	**Pg**	**19 24 32.9**	**+2.9**
LANS				*e*SG	**Sg**	**19 25 12.6**	**+1.5**
LANS				*e*LG	Lg	19 25 15.2	
MODS	**Modra-Piesok**	**3.22**	**166**	*e*PG	**Pg**	**19 24 29.8**	**-1.0**
MODS				*e*SG	**Sg**	**19 25 12.1**	**-0.4**
VYHS	**Vyhne**	**3.48**	**149**	*e*PG	**Pg**	**19 24 37.0**	**+1.2**
CONA	**Conrad Observa**	**3.58**	**183**	*i* Pn	**Pn**	**19 24 26.6**	**+0.6**
	comp=Z,0.2nm,0.1s						
CONA				Sg	**Sg**	**19 25 23.7**	**-0.5**
	comp=Z,5.8nm,0.4s						
MOA	**Molln**	**3.85**	**199**	*i* Pn	**Pn**	**19 24 30.4**	**+0.7**
	comp=Z,0.7nm,0.2s						
MOA				Sg	**Sg**	**19 25 32.3**	**-0.6**
	comp=Z,11nm,0.6s						
ARSA	**Arzberg**	**4.28**	**186**	Sg	**Sg**	**19 25 45.6**	**-0.8**
	comp=Z,3.6nm,0.4s						
KOLS	**Kolonicke sedl**	**4.70**	**121**	*e*PG	**Pg**	**19 25 01.2**	**+2.0**
AKASG	**Malin Array Be**	**8.28**	**90**	Pn	**Pn**	**19 25 29.0**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=283,slow=12,SNR=3.1						
FINES	**FINESS Array B**	**11.36**	**25**	Pn	**Pn**	**19 26 10.6**	**-1.8**
	comp=Z,0.0nm,0.3s,baz=215,slow=9.5,SNR=3.2						

*ZUR **20** 19:31:19.6,47.°16N×7.°15E,h9km±1km,MLh1.9/31,Error ellipse: s-maj=2.6km s-min=0.6km az=235.0*
*BGR **20** 19:31:19.9±0.7,47.°18N×7.°13E,h15km±3km,ML2.0/12, Error ellipse: s-maj=4.4km s-min=2.2km az=37.0*
*STR **20** 19:31:20.3±0.4,47.°N±°×±°,h13km±3km,MLv2.0/7*
*LDG **20** 19:31:20.1±0.1,47.°17N×7.°16E,h9km,Md2.6/3,Ml2.5/20, Error ellipse: s-maj=1.0km s-min=0.9km az=120.0*
ISC 20 19:31:19.4±0.9,47.°18N±0.°01×7.°11E±0.°01,h18km±4km,

n83,σ0°84/166,31C-6D,Switzerland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOURR	**Bourrignon**	**0.23**	**21**	⇓Pg	**Pg**	**19 31 25.1**	**+0.2**
BOURR				⇓Pg	**Pg**	**19 31 25.1**	**+0.2**
	0.4nm,SNR=5.8						
LOMF	**Lomont**	**0.26**	**313**	Pg	**Pg**	**19 31 26.1**	**+0.8**
LOMF				Sg	**Sg**	**19 31 30.1**	**+0.8**
SCOU	**Cournillens**	**0.32**	**180**	⇑Pg	**Pg**	**19 31 25.9**	**-0.4**
	0.2nm,SNR=1.7						
STAF	**Tafers**	**0.38**	**168**	⇑Pg	**Pg**	**19 31 26.9**	**-0.4**
	0.3nm,SNR=1.7						
STAF				Sg	**Sg**	**19 31 32.0**	**-0.6**
TORNY	**Torny/Romont**	**0.41**	**194**	⇑Pg	**Pb**	**19 31 27.8**	**-0.4**
	0.2nm,SNR=1.5						
TORNY				⇑Pg	**Pb**	**19 31 27.8**	**-0.4**
TORNY				Sg	**Sg**	**19 31 33.7**	**+0.1**
BALST	**Balsthal**	**0.43**	**68**	⇑Pg	**Pb**	**19 31 28.0**	**-0.6**
	0.2nm,SNR=2.2						
BALST				⇑Pg	**Pb**	**19 31 28.0**	**-0.6**
BALST	**Balsthal**	**0.43**	**68**	*e*Pg	**Pb**	**19 31 28.0**	**-0.6**
BALST				*e*Sg	**Sg**	**19 31 33.3**	**-0.9**
SRER	**Reinach, Raine**	**0.47**	**45**	⇑Pg	**Pb**	**19 31 29.3**	**+0.1**
	0.2nm,SNR=1.5						
BRANT	**Les Verrieres**	**0.49**	**241**	⇑Pg	**Pb**	**19 31 29.9**	**+0.3**
	0.1nm,SNR=1.1						
BRANT				⇑Pg	**Pb**	**19 31 29.9**	**+0.3**
OTER2	**Otterbach 2 (B**	**0.53**	**40**	Pg	**Pb**	**19 31 29.7**	**-0.4**
	88nm,SNR=3.4						
OTER2				Pg	**Pb**	**19 31 29.7**	**-0.4**
DAGMA	**Lutertal, Dagm**	**0.62**	**85**	Pg	**Pg**	**19 31 31.3**	**-0.4**
DAGMA				Pg	**Pg**	**19 31 31.3**	**-0.4**
	0.2nm,SNR=2.2						
DAGMA				PmP		19 31 33.4	
WIMIS	**Wimmis**	**0.62**	**145**	⇓Pg	**Pg**	**19 31 31.1**	**-0.6**
WIMIS				⇓Pg	**Pg**	**19 31 31.1**	**-0.6**
	0.1nm,SNR=1.4						
WIMIS				PmP		19 31 33.6	
HINF	**Hinteralfeld**	**0.66**	**345**	*e*Pg	**Pn**	**19 31 33.0**	**-1.0**
HINF				*e*Sg	**Sb**	**19 31 41.8**	**+0.4**
	83nm,0.2s						
EMMET	**Emmethof**	**0.67**	**67**	⇑Pg	**Pb**	**19 31 32.4**	**-0.1**
	0.3nm,SNR=2.8						
EMMET				⇑Pg	**Pb**	**19 31 32.4**	**-0.1**
MOF	**Molkenrain**	**0.68**	**2**	Pg	**Pn**	**19 31 33.5**	**-0.7**
MOF				Sg	**Sb**	**19 31 42.9**	**+1.1**
SULZ	**Cheisacher**	**0.77**	**62**	⇑Pg	**Pb**	**19 31 34.3**	**+0.1**
	0.1nm,SNR=1.7						
SULZ				⇑Pg	**Pb**	**19 31 34.3**	**+0.1**
SULZ	**Cheisacher**	**0.77**	**62**	*e*Pg	**Pb**	**19 31 34.3**	**+0.1**
SULZ				*e*Sg	**Sb**	**19 31 44.7**	**+0.3**
HAMIK	**Hmikon, Dlik**	**0.80**	**85**	⇑Pg	**Pg**	**19 31 34.5**	**-0.5**
	3.6nm,SNR=3.1						
HAMIK				⇑Pg	**Pg**	**19 31 34.5**	**-0.5**
CABF	**La Chapelle**	**0.90**	**231**	*e*Pg	**Pn**	**19 31 37.2**	**0.0**
CABF				*e*Sg	**Sb**	**19 31 49.2**	**+1.1**
	8.9nm,0.2s						
FELD	**Feldberg im Sc**	**0.93**	**41**	⇑Pn	**Pb**	**19 31 37.2**	**+0.1**
	0.1nm,SNR=1.8						
FELD				⇑Pn	**Pb**	**19 31 37.2**	**+0.1**
FELD				PmP		19 31 37.6	
METMA	**Mettma DE**	**0.95**	**55**	⇑Pn	**Pb**	**19 31 37.4**	**+0.1**
	0.1nm,SNR=1.1						
METMA				⇑Pn	**Pb**	**19 31 37.4**	**+0.1**
METMA	**Mettma DE**	**0.95**	**55**	*e*Pg	**Pb**	**19 31 37.4**	**+0.1**
METMA				*e*Sg	**Sg**	**19 31 49.6**	**-0.6**
KIZ	**Kirchzarten**	**0.96**	**35**	Pg	**Pb**	**19 31 37.6**	**+0.1**
KIZ				Sg	**Sb**	**19 31 50.1**	**+0.4**
KIZ	**Kirchzarten**	**0.96**	**35**	⇑Pn	**Pb**	**19 31 37.4**	**0.0**
	0.2nm,SNR=2.7						
KIZ				⇑Pn	**Pb**	**19 31 37.4**	**0.0**
KIZ				PmP		19 31 38.1	
HAU	**Haudompre**	**0.98**	**329**	*e*Pg	**Pn**	**19 31 38.7**	**+0.5**
HAU				*e*Sg	**Sn**	**19 31 51.7**	**+0.1**
	28nm,0.2s						
BERGE	**Lenzkirch (DE)**	**1.01**	**46**	⇑Pn	**Pb**	**19 31 38.1**	**-0.2**
	0.1nm,SNR=2.7						
BERGE				⇑Pn	**Pb**	**19 31 38.1**	**-0.2**
BERGE				PmP		19 31 39.0	
BERGE	**Lenzkirch (DE)**	**1.01**	**46**	*e*Pn	**Pb**	**19 31 38.2**	**-0.2**
BERGE				*e*Pg	**Pn**	**19 31 39.0**	**+0.3**
BER

	5.6nm,0.3s							
UBR	**Ueberruh**	**2.10**	**75**	*e*Pg		**Pg**	**19 31 58.9**	**-0.8**
UBR				*e*Sg		**Sg**	**19 32 25.9**	**-1.1**
LOR	**Lormes**	**2.21**	**274**	*e*Pn		**Pn**	**19 31 56.4**	**+1.2**
LOR	**Lormes**	**2.21**	**274**	*e*Pg		**Pg**	**19 32 01.8**	**0.0**
	baz=101							
LOR				*e*Sn		**Sn**	**19 32 23.0**	**+0.9**
LOR				*e*Sg		**Sg**	**19 32 30.5**	**-0.1**
	4.6nm,0.2s							
SMF	**Signal de Mont**	**2.30**	**258**	*e*Pn		**Pn**	**19 31 57.5**	**+1.1**
SMF	**Signal de Mont**	**2.30**	**258**	*e*Pg		**Pg**	**19 32 02.8**	**-0.7**
SMF				*e*Sn		**Sn**	**19 32 23.3**	**-0.9**
SMF				*e*Sg		**Sg**	**19 32 33.0**	**-0.3**
	3.7nm,0.2s							
ORIF	**Oris-en-Rattie**	**2.41**	**201**	*e*Pn		**Pn**	**19 31 58.5**	**+0.5**
ORIF	**Oris-en-Rattie**	**2.41**	**201**	*e*Pg		**Pg**	**19 32 04.2**	**-1.4**
ORIF				*e*Sg		**Sg**	**19 32 35.3**	**-1.6**
	5.0nm,0.2s							
MBDF	**Montbardon**	**2.46**	**186**	*e*Pn		**Pn**	**19 31 59.6**	**+0.9**
MBDF	**Montbardon**	**2.46**	**186**	*e*Pg		**Pg**	**19 32 05.7**	**-0.8**
MBDF				*e*Sn		**Sn**	**19 32 28.2**	**-0.2**
MBDF				*e*Sg		**Sg**	**19 32 37.4**	**-1.1**
	2.2nm,0.3s							
SSF	**Saint Saulge**	**2.46**	**269**	*e*Pn		**Pn**	**19 31 59.5**	**+0.9**
SSF	**Saint Saulge**	**2.46**	**269**	*e*Pg		**Pg**	**19 32 06.2**	**-0.3**
SSF				*e*Sn		**Sn**	**19 32 28.8**	**+0.6**
SSF				*e*Sg		**Sg**	**19 32 38.2**	**-0.2**
	1.4nm,0.2s							
AVF	**Avril sur Loir**	**2.60**	**263**	*e*Pn		**Pn**	**19 32 01.5**	**+1.1**
AVF	**Avril sur Loir**	**2.60**	**263**	*e*Pg		**Pg**	**19 32 08.7**	**-0.5**
AVF				*e*Sn		**Sn**	**19 32 32.2**	**+0.7**
AVF				*e*Sg		**Sg**	**19 32 42.5**	**-0.3**
	1.6nm,0.2s							
VIVF	**Saint-Julien-l**	**2.87**	**217**	*e*Pn		**Pn**	**19 32 05.1**	**+0.8**
VIVF	**Saint-Julien-l**	**2.87**	**217**	*e*Pg		**Pg**	**19 32 13.4**	**-1.0**
VIVF				*e*Sn		**Sn**	**19 32 38.2**	**-0.2**
VIVF				*e*Sg		**Sg**	**19 32 50.7**	**-0.9**
	5.6nm,0.2s							
BGF	**Bois d'Agland**	**2.99**	**260**	*e*Pn		**Pn**	**19 32 07.9**	**+2.1**
BGF	**Bois d'Agland**	**2.99**	**260**	*e*Pg		**Pg**	**19 32 15.5**	**-1.1**
BGF				*e*Sn		**Sn**	**19 32 41.3**	**+0.2**
BGF				*e*Sg		**Sg**	**19 32 54.5**	**-0.8**
	2.0nm,0.2s							
HYF	**Humbligny**	**3.04**	**273**	*e*Pn		**Pn**	**19 32 07.6**	**+1.0**
HYF	**Humbligny**	**3.04**	**273**	*e*Pg		**Pg**	**19 32 16.9**	**-0.8**
HYF				*e*Sn		**Sn**	**19 32 42.8**	**+0.2**
HYF				*e*Sg		**Sg**	**19 32 56.5**	**-0.6**
TCF	**Toulx Ste Croi**	**3.48**	**257**	*e*Pn		**Pn**	**19 32 13.6**	**+1.0**
TCF	**Toulx Ste Croi**	**3.48**	**257**	*e*Pg		**Pg**	**19 32 24.7**	**-1.3**
TCF				*e*Sn		**Sn**	**19 32 53.0**	**-0.4**
TCF				*e*Sg		**Sg**	**19 33 10.0**	**-1.1**
	0.9nm,0.2s							
LASF	**Ste Croix**	**3.85**	**217**	*e*Pn		**Pn**	**19 32 18.2**	**+0.5**
LASF	**Ste Croix**	**3.85**	**217**	*e*Pg		**Pg**	**19 32 31.1**	**-1.9**
LASF				*e*Sn		**Sn**	**19 33 01.4**	**-1.0**
LASF				*e*Sg		**Sg**	**19 33 20.9**	**-1.9**
	1.7nm,0.2s							

NEIC ***20*** *19:40:07.8±1.0,32°.93N±0°.03×115°.66W±0°.03,h19km±2km, Error ellipse: s-maj=4.2km s-min=3.3km az=199.0*
ANF ***20*** *19:40:08.1±0.3,32°.94N×115°.67W,h10km±2km, ML2.1/11, Error ellipse: s-maj=3.3km s-min=1.7km az=165.0*
SCEDC ***20*** *19:40:08.7,32°.95N×115°.66W,h3km*
PAS ***20*** *19:40:08.6±2.0,32°.92N±0°.01×115°.658W±0°.010, h7km±4km, ML2.5/98, Error ellipse: s-maj=2.0km s-min=1.2km az=175.0*

ISC 20 19:40:08.4±0.9,32°.93N±0°.02×115°.68W±0°.02,h14km±6km, n54,σ0°.68/69,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COK2	**Cook Ranch 2**	**0.09**	**210**		**Pg**	**19 40 10.9**	**-0.4**
SWSC	**Sam W. Stewart**	**0.11**	**279**		**Pb**	**19 40 13.0**	**+0.8**
SWSC	**Sam W. Stewart**	**0.11**	**279**	P	**Pg**	**19 40 11.0**	**-0.5**
	baz=89,SNR=299						
SWSC				S	**Pb**	**19 40 12.9**	**+0.8**
	baz=89						
SUP	**Superstition M**	**0.13**	**282**		**Pg**	**19 40 11.3**	**-0.5**
SUP					**Sg**	**19 40 14.1**	**-0.1**
WESC	**Westside Schoo**	**0.18**	**196**		**Pg**	**19 40 12.3**	**-0.2**
ERPC	**Ernies Place**	**0.18**	**177**		**Pg**	**19 40 12.7**	**0.0**
SNR	**Schaffner Ranc**	**0.21**	**108**		**Pg**	**19 40 13.1**	**0.0**
ERRC	**Elmore Ranch**	**0.23**	**327**		**Pg**	**19 40 14.1**	**-0.2**
DREC	**Desert Rsrch C**	**0.23**	**123**		**Pg**	**19 40 13.6**	**+0.2**
CLIC	**Calipatria**	**0.24**	**30**		**Pg**	**19 40 13.9**	**+0.2**
CRR	**Carrizo Plain**	**0.25**	**260**		**Pg**	**19 40 13.8**	**0.0**
SGL	**Mount Signal**	**0.28**	**189**		**Pg**	**19 40 13.7**	**-0.6**
YUH	**Yuha Desert**	**0.35**	**217**		**Pg**	**19 40 15.2**	**-0.3**
IKP	**In-Ko-Pah, Jac**	**0.46**	**233**		**Pg**	**19 40 17.4**	**-0.1**
IKP	**In-Ko-Pah, Jac**	**0.46**	**233**	P	**Pg**	**19 40 17.4**	**-0.1**
	baz=52,SNR=43						
IKP				S	**Sg**	**19 40 24.2**	**+0.5**
	baz=52						
COA	**Coachella**	**0.47**	**98**		**Pg**	**19 40 17.2**	**-0.4**
RMX	**La Rumorosa**	**0.47**	**226**		**Pg**	**19 40 17.6**	**-0.2**
RMX					**Sg**	**19 40 24.4**	**+0.3**
FRK	**Frink**	**0.47**	**4**		**Pg**	**19 40 17.5**	**-0.2**
CBKC	**Canebrake**	**0.49**	**267**		**Pg**	**19 40 18.3**	**+0.3**
BATC	**Bat Cave Butte**	**0.55**	**345**		**Pg**	**19 40 19.4**	**+0.2**
MONP2	**Monument Peak**	**0.63**	**267**		**Pg**	**19 40 20.6**	**-0.1**
MONP2					**Sg**	**19 40 29.5**	**+0.4**
MONP2	**Monument Peak**	**0.63**	**267**	P	**Pg**	**19 40 20.6**	**-0.1**
	baz=85,SNR=47						
MONP2				S	**Sg**	**19 40 29.7**	**+0.5**
	baz=85						
BORC	**Borrego Spring**	**0.71**	**299**		**Pg**	**19 40 22.1**	**-0.1**
GLA	**Glamis**	**0.72**	**80**		**Pg**	**19 40 21.5**	**-1.0**
GLA	**Glamis**	**0.72**	**80**	P	**Pg**	**19 40 21.5**	**-1.0**
	baz=262,SNR=25						
GLA				S	**Sg**	**19 40 32.1**	**+0.1**
	baz=262						
BC3	**Big Chuckawall**	**0.75**	**14**	P	**Pg**	**19 40 22.7**	**-0.3**
	baz=194,SNR=27						
CTCC	**Cactus City**	**0.77**	**340**		**Pg**	**19 40 22.9**	**-0.4**
BAR	**Barrett**	**0.88**	**254**		**Pg**	**19 40 24.8**	**-0.5**
BAR					**Sg**	**19 40 36.9**	**+0.1**
XPFO	**Pion Flat**	**0.94**	**316**		**Pg**	**19 40 25.6**	**-1.1**
XPFO	**Pion Flat**	**0.94**	**316**		**Pg**	**19 40 25.6**	**-1.1**
PFO	**Pinyon Flats O**	**0.95**	**316**		**Pg**	**19 40 25.6**	**-1.1**
PFO	**Pinyon Flats O**	**0.95**	**316**		**Pg**	**19 40 25.6**	**-1.1**
PFO	**Pinyon Flats O**	**0.95**	**316**	P	**Pg**	**19 40 25.6**	**-1.1**
	baz=135,SNR=25						
PFO				S	**Sg**	**19 40 38.9**	**-0.2**
	baz=135						
ESJX	**Sierra Juarez**	**0.95**	**194**		**Pg**	**19 40 25.8**	**-1.0**
ESJX					**Sg**	**19 40 38.4**	**-0.8**
FRD	**Ford Ranch, An**	**0.96**	**306**		**Pg**	**19 40 26.1**	**-0.8**
EML	**El Monte Cty P**	**0.98**	**268**		**Pg**	**19 40 26.4**	**-1.1**
EML					**Sg**	**19 40 39.6**	**-0.7**
SNDA	**J Saunders Pla**	**1.00**	**309**		**Pg**	**19 40 26.8**	**-1.0**
BZNA	**Buzz No.'s Pla**	**1.00**	**304**		**Pg**	**19 40 26.7**	**-1.1**
DNR	**Dunn Ranch,Anz**	**1.02**	**309**		**Pg**	**19 40 27.2**	**-1.0**
CBX	**Cerro Bola**	**1.04**	**234**		**Pg**	**19 40 27.3**	**-1.1**
DPP	**Dos Picos Cty**	**1.07**	**274**		**Pb**	**19 40 27.8**	**-0.8**
DPP					**Sg**	**19 40 42.6**	**-0.3**
HWB	**Hans Werner Br**	**1.08**	**275**		**Pb**	**19 40 28.6**	**-0.3**
HWB					**Sg**	**19 40 43.0**	**-0.4**
SDRC	**San Diego Road**	**1.08**	**260**		**Sg**	**19 40 42.7**	**-0.7**
BELC	**Belle Mtn. Jos**	**1.10**	**346**	P	**Pg**	**19 40 29.6**	**0.0**
	baz=165,SNR=10						
OLP	**Otay Lakes Par**	**1.10**	**253**		**Pb**	**19 40 29.1**	**-0.2**
109C	**Camp Elliot, M**	**1.20**	**268**		**Pn**	**19 40 31.6**	**+0.8**
109C	**Camp Elliot, M**	**1.20**	**268**	Pg	**Pg**	**19 40 32.3**	**+0.8**
	baz=87,SNR=5.0						
109C				S	**Sb**	**19 40 46.4**	**+0.1**
	baz=87						
Y12C	**Blythe**	**1.27**	**49**		**Pn**	**19 40 31.7**	**0.0**
Y12C	**Blythe**	**1.27**	**49**	P	**Pn**	**19 40 31.6**	**0.0**
	baz=230,SNR=21						
Y12C				S	**Sn**	**19 40 49.4**	**+1.0**
	baz=230						
IRM	**Iron Mountain**	**1.30**	**20**	P	**Pn**	**19 40 32.0**	**-0.2**
	baz=200,SNR=32						
MURC	**Murrieta**	**1.44**	**298**	S	**Sb**	**19 40 54.6**	**+1.4**
	baz=117						
113A	**Mohawk Valley,**	**1.61**	**95**		**Pn**	**19 40 36.2**	**-0.3**
GMRC	**Granite Mounta**	**1.85**	**0**	Pg	**Pg**	**19 40 44.5**	**+0.6**
	baz=180,SNR=13						
EDW2	**Edwards Air Fo**	**2.74**	**316**	Sb	**Sg**	**19 41 34.6**	**-1.9**
	baz=134						

NIED ***20*** *19:41:00,40°.80N×143°.40E,h17km,Mw4.0 Best double couple: Mo1.02000×10^15 NP1:φs90.00000°,δ47.00000°, λ-101.00000°. NP2:φs285.00000°,δ44.00000°, λ-79.00000°.*
IDC ***20*** *19:41:47.6±0.7,40°.83N×143°.35E,h0km,mb3.9/18, mb1 4.1/21,mb1mx4.0/35,mbtmp3.9/21,ML2.9/3,MS3.2/7, Ms1 3.2/7,ms1mx3.0/34,Error ellipse: s-maj=17.9km s-min=14.6km az=133.0*
JMA ***20*** *19:41:50.9±0.1,40°.83N×143°.39E,h52km,M3.8*
MOS ***20*** *19:41:50.9±1.1,40°.91N×143°.38E,h34km,mb4.4/11,Error ellipse: s-maj=10.6km s-min=5.9km az=79.2*
NEIC ***20*** *19:41:55.5±1.3,41°.09N±0°.07×143°.2E±0°.1,h48km±7km, mb4.6/22,Error ellipse: s-maj=15.5km s-min=9.4km az=110.0*

ISC 20 19:41:49.4±2.4,40°.86N±0°.04×143°.49E±0°.05,h14km±14km, n110,σ1s79/121,mb4.3/38,6C-8D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	**Erimo**	**1.18**	**348**	⇓*e*P	**Pn**	**19 42 11.9**	**+0.5**
ERM	**Erimo**	**1.18**	**348**		**Pn**	**19 42 11.5**	**+0.1**
JEM	**Erimo**	**1.18**	**348**	P	**Pn**	**19 42 11.6**	**+0.2**
JTHR	**Tokachihiroo**	**1.43**	**354**	P	**Pb**	**19 42 15.1**	**-0.8**
JTHR				*e*S	**Sn**	**19 42 32.8**	**-0.8**
JKEN	**Kujiedanarisaw**	**1.50**	**245**	P	**Pn**	**19 42 14.5**	**-1.4**
JNBK	**Urakawa-nobuka**	**1.52**	**339**	⇑P	**Pb**	**19 42 16.6**	**-0.7**
JNBK				*e*S	**Sb**	**19 42 36.2**	**-0.2**
JTH	**Tanohata**	**1.54**	**234**	P	**Pn**	**19 42 15.6**	**-0.9**
JTH				*e*S	**Sn**	**19 42 33.7**	**-2.6**
JANG	**Nango**	**1.58**	**253**	⇓P	**Pn**	**19 42 16.2**	**-0.7**
JCH	**Churui**	**1.75**	**357**	P	**Pn**	**19 42 19.6**	**+0.3**
JCH				*e*S	**Sn**	**19 42 40.6**	**-0.9**
JOT	**Ohata**	**1.91**	**287**	P	**Pn**	**19 42 21.5**	**0.0**
JKB	**Kayabe**	**2.11**	**300**	P	**Pn**	**19 42 24.7**	**+0.4**
JOM	**Ohasama**	**2.18**	**231**	P	**Pn**	**19 42 25.4**	**+0.2**
JAK	**Akkeshi**	**2.31**	**23**	P	**Pn**	**19 42 27.3**	**+0.2**
JAK				*e*S	**Sn**	**19 42 54.0**	**-1.3**
JAR	**Ashorobuto**	**2.44**	**5**	⇑⇑P	**Pn**	**19 42 28.8**	**0.0**
JAR				*e*S	**Sn**	**19 42 56.5**	**-2.0**
JEW	**Eniwo**	**2.49**	**323**	P	**Pb**	**19 42 31.3**	**-2.6**
JMK	**Ichinoseki**	**2.58**	**223**	P	**Pn**	**19 42 31.1**	**+0.3**
JMK				*e*S	**Sn**	**19 43 00.3**	**-1.7**
NMR	**Nemuro--Hokkai**	**3.01**	**33**	⇓*i*P	**Pn**	**19 42 37.0**	**+0.4**
NMR				*i* S	**Sn**	**19 43 09.2**	**-3.2**
NEM2	**Nemuro 2**	**3.01**	**33**	P	**Pn**	**19 42 36.6**	**0.0**
NEM2				*e*S	**Sn**	**19 43 09.3**	**-3.2**
JKK2	**Kamakawa 2**	**3.06**	**350**	P	**Pn**	**19 42 38.3**	**+1.0**
JYK	**Kaneyama**	**3.09**	**232**	P	**Pn**	**19 42 38.4**	**+0.6**
JTKR	**Abashiri--Toko**	**3.12**	**6**	⇑⇑P	**Pn**	**19 42 38.5**	**+0.4**
JTKR				*e*S	**Sn**	**19 43 13.4**	**-1.8**
JHR	**Hokuryu**	**3.16**	**336**	P	**Pn**	**19 42 41.3**	**+2.6**
JHR				*e*S	**Sn**	**19 43 17.7**	**+1.5**
GLVR	**Golovnino**	**3.25**	**27**	⇓*i*P	**Pn**	**19 42 40.6**	**+0.8**
GLVR				*i* S	**Sn**	**19 43 16.2**	**-2.1**
GLVR				pmax	pmax		
	comp=E,105nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,131nm,0.3s						
GLVR				pmax	pmax		
	comp=N,47nm,0.4s						
GLVR				smax	smax		
	comp=E,1μm,0.2s						
GLVR				smax	smax		
	comp=N,648nm,0.3s						
JOSM	**Okushiri--Mats**	**3.25**	**293**	P	**Pn**	**19 42 40.4**	**+0.5**
JKA	**Kamikawa-asahi**	**3.32**	**349**		**Pn**	**19 42 42.2**	**+1.4**
JKA					**Sn**	**19 43 19.9**	**-0.2**
ASAJ	**Asahikawa**	**3.32**	**349**	Pn	**Pn**	**19 42 42.2**	**+1.4**
	comp=N,3.2nm,0.3s,baz=196,slow=13,SNR=60						
ASAJ				Sn	**Sn**	**19 43 19.9**	**-0.2**
	comp=N,5.9nm,0.3s,baz=74,slow=28,SNR=7.8						
GRPR	**Tuman**	**3.56**	**28**	*e*P	**Pn**	**19 42 44.9**	**+0.8**
GRPR				*i* S	**Sn**	**19 43 23.2**	**-2.7**
GRPR				pmax	pmax		
	comp=N,91nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,206nm,0.3s						
GRPR				pmax	pmax		
	comp=E,50nm,0.2s						
GRPR				smax	smax		
	comp=N,297nm,0.3s						
GRPR				smax	smax		
	comp=E,774nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.62**	**28**	*d*iP	**Pn**	**19 42 45.7**	**+0.6**
YUK				*i* S	**Sn**	**19 43 25.1**	**-2.5**
YUK				pmax	pmax		
	comp=Z,231nm,0.2s						
YUK				pmax	pmax		
	comp=E,63nm,0.1s						
YUK				pmax	pmax		
	comp=N,79nm,0.2s						
YUK				smax	smax		
	comp=N,798nm,0.5s						
YUK				smax	smax		
	comp=E,547nm,0.2s						
YUK				MLR	MLR		
	comp=E,154nm,15.0s						
YUK				MLR	MLR		
	comp=Z,263nm,15.0s						
YUK				MLR	MLR		
	comp=N,175nm,17.0s						
SHO	**Shikotan**	**3.90**	**38**	*c* iP	**Pn**	**19 42 48.6**	**-0.2**
SHO				*i* S	**Sn**	**19 43 29.8**	**-4.5**
SHO				pmax	pmax		
	comp=Z,59nm,0.3s						
SHO				pmax	pmax		
	comp=N,14nm,0.2s						
SHO				pmax	pmax		
	comp=E,25nm,0.2s						
SHO				smax	smax		
	comp=N,346nm,0.3s						
SHO				smax	smax		
	comp=E,232nm,0.2s						
SHO				MLR	MLR		
	comp=Z,128nm,13.0s						
SHO				MLR	MLR		
	comp=N,83nm,10.0s						
SHO				MLR	MLR		
	comp=E,121nm,13.0s						
KUR	**Kuril'sk**	**5.42**	**35**	*d* iP	**Pn**	**19 43 11.4**	**+1.7**
KUR				*i* S	**Sn**	**19 44 10.7**	**-1.1**
KUR				pmax	pmax		
	comp=Z,79nm,0.6s						
KUR				pmax	pmax		
	comp=N,25nm,0.4s						
KUR				pmax	pmax		
	comp=E,45nm,0.4s						
KUR				smax	smax		
	comp=N,251nm,0.4s						
KUR				smax	smax		
	comp=E,94nm,0.4s						
MJA0	**Matsu Arr-Jizo**	**5.95**	**225**	*e*P	**Pn**	**19 43 19.4**	**+2.3**
MJB9	**Matsu-Tunnel**	**5.97**	**225**		Pn	19 43 22.0	+4.6
MAJO	**Matsushiro**	**5.97**	**225**	P	**Pn**	**19 43 21.9**	**+4.6**
MAJO	**Matsushiro**	**5.97**	**225**		**Pn**	**19 43 21.9**	**+4.6**
MAT	**Matsushiro**	**5.97**	**225**	P	**Pn**	**19 43 18.8**	**+1.5**
MAT				*e*S	**Sn**	**19 44 23.5**	**-2.0**
MJAR	**Matsushiro Arr**	**5.97**	**225**	Pn	**Pn**	**19 43 17.1**	**-0.3**
	comp=E,0.2nm,0.3s,baz=41,slow=12,SNR=9.5						
MJAR				Sn	**Sn**	**19 44 31.7**	**+6.2**
	comp=E,0.1nm,0.3s,baz=46,slow=18,SNR=2.8						
MJAR				LR	LR	19 45 54.1	
	comp=E,136nm,18.0s,baz=65,slow=42						
YSS	**Yuzh-Sakhalins**	**6.11**	**355**	⇓*e*P	**Pn**	**19 43 20.3**	**+1.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
USRK	**Ussuriysk Ar.**	**9.12**	**295**	Pn	**Pn**	**19 44 00.1**	**-0.4**
	baz=98,slow=15,SNR=2.7						
KLR	**Kul'dur**	**11.77**	**319**	LR	LR	19 49 14.1	
	comp=Z,79nm,18.3s,baz=124,slow=38						
KSRS	**Korea Array**	**12.55**	**259**	LR	LR	19 49 22.9	
	comp=Z,79nm,19.7s,baz=70,slow=36						
JNU	**Nakatsue**	**12.69**	**236**	LR	LR	19 49 39.7	
	comp=Z,69nm,21.3s,baz=6.5,slow=38						
PETK	**Petropavlovsk-**	**15.59**	**33**	LR	LR	19 51 33.6	
	comp=Z,58nm,18.3s,baz=60,slow=37						
SEY	**Seymchan**	**22.73**	**11**	P	**P**	**19 46 50.1**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=186,slow=16,SNR=4.1						
YAK	**Yakutsk**	**22.78**	**343**	*e*P	**P**	**19 46 55.2**	**+4.1**
YAK				*e*		19 50 53.5	
YAK				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK	**Yakutsk**	**22.78**	**343**	P	**P**	**19 46 46.4**	**-4.8**
BOD	**Bodaibo**	**25.33**	**322**	*e*P	**P**	**19 47 13.6**	**-1.8**
ULN	**Ulaanbaatar**	**26.78**	**297**	⇓*e*P	**P**	**19 47 29.6**	**+0.7**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULN	**Ulaanbaatar**	**26.78**	**297**	P	**P**	**19 47 25.8**	**-3.1**
SONM	**Songino Array**	**27.22**	**297**	*e*P	**P**	**19 47 32.6**	**-0.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	**Songino Array**	**27.22**	**297**	P	**P**	**19 47 32.8**	**0.0**
	comp=Z,0.9nm,0.5s,baz=82,slow=8.2,SNR=10						
SONM				LR	LR	19 58 38.0	
	comp=Z,93nm,18.7s,baz=200,slow=37						
H11N2	**WAKE ISLAND Hy**	**29.03**	**130**	T	T	20 18 25.3	
	baz=322,slow=74,SNR=44						
H11N1	**WAKE ISLAND Hy**	**29.04**	**130**	T	T	20 18 24.7	
	baz=322,slow=74,SNR=42						
H11N3	**WAKE ISLAND Hy**	**29.05**	**130**	T	T	20 18 20.4	
	baz=322,slow=74,SNR=40						
H11S1	**WAKE ISLAND Hy**	**29.88**	**131**	T	T	20 19 35.2	
	baz=320,slow=74						
H11S3	**WAKE ISLAND Hy**	**29.88**	**131**	T	T	20 20 23.3	
	baz=320						
H11S2	**WAKE ISLAND Hy**	**29.90**	**131**	T	T	20 19 28.3	
	baz=320,slow=74						
ZALV	**Zalesovo Beam**	**40.64**	**309**	*e*P	**P**	**19 49 28.5**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	**Zalesovo Beam**	**40.64**	**309**	P	**P**	**19 49 28.7**	**0.0**
	comp=Z,1.9nm,0.6s,baz=94,slow=8.1,SNR=5.8						
MK31	**Makanchi Array**	**43.56**	**299**	P	**P**	**19 49 50.1**	**-2.6**
MK31				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MK31	**Makanchi Array**	**43.56**	**299**	P	**P**	**19 49 50.1**	**-2.6**
MKAR	**Makanchi Array**	**43.56**	**299**	P	**P**	**19 49 52.2**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=84,slow=9.4,SNR=8.5						
MKAR				PcP	**PcP**	**19 51 40.4**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=89,slow=1.8,SNR=3.6						
MAKZ	**Makanchi**	**43.77**	**299**	P	**P**	**19 49 53.3**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.4s						
MAKZ	**Makanchi**	**43.77**	**299**	P	**P**	**19 49 53.3**	**-1.0**
BRLK	**Bradley Lake**	**43.90**	**42**		PP	19 51 38.6	+1.3
CMAR	**Chiang Mai Arr**	**44.09**	**253**	*e*P	**P**	**19 49 58.0**	**+0.8**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**44.09**	**253**	P	**P**	**19 49 57.8**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=50,slow=6.6,SNR=5.6						
KURK	**Kurchatov**	**44.94**	**305**	⇑*e*P	**P**	**19 50 03.2**	**-0.4**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
KURK	**Kurchatov**	**44.94**	**305**	P	**P**	**19 50 03.1**	**-0.4**
SHL	**Shillong**	**45.15**	**267**	P	**P**	**19 50 05.9**	**0.0**
SHL				pmax	pmax		
	comp=Z,11nm,0.4s						
SHL	**Shillong**	**45.15**	**267**	P	**P**	**19 50 05.9**	**0.0**
ILAR	**Eielson Array**	**45.41**	**34**	P	**P**	**19 50 08.7**	**+1.5**
	comp=Z,1.7nm,0.7s,baz=263,slow=6.0,SNR=17						
ILAR				LR	LR	20 09 52.9	
	comp=Z,91nm,18.2s,baz=152,slow=37						
FYU	**Fort Yukon**	**46.00**	**32**	P	**P**	**19 50 13.3**	**+1.6**
FYU				IAmb	IAmb	19 50 34.3	
	comp=Z,7.1nm,1.3s						
SCRK	**Sand Creek**	**46.74**	**35**	P	**P**	**19 50 18.4**	**+0.6**
SCRK				IAmb	IAmb	19 50 19.6	
	comp=Z,3.1nm,0.8s						
RAGM	**Ragged Mountai**	**46.91**	**40**	P	**P**	**19 50 20.3**	**+1.1**
VRDI	**Verde Repeater**	**47.37**	**39**	P	**P**	**19 50 24.1**	**+1.3**
CTGM	**Chitina Glacie**	**48.43**	**39**	P	**P**	**19 50 32.9**	**+1.9**
INK	**Inuvik**	**50.25**	**29**	P	**P**	**19 50 46.3**	**+1.7**
INK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
INK	**Inuvik**	**50.25**	**29**	P	**P**	**19 50 46.1**	**+1.6**
	comp=Z,2.1nm,0.5s,baz=306,slow=6.0,SNR=16						
INK	**Inuvik**	**50.25**	**29**	P	**P**	**19 50 46.3**	**+1.7**
INK				IAmb	IAmb	19 51 03.1	
	comp=Z,5.6nm,1.1s						
HYT	**Haines Junctio**	**50.28**	**39**	P	**P**	**19 50 48.6**	**+3.4**
HYT				IAmb	IAmb	19 50 48.9	
	comp=Z,8.2nm,0.9s						
C36M	**Paulatuk**	**53.28**	**26**	P	**P**	**19 51 08.8**	**+1.6**
C36M				IAmb	IAmb	19 51 09.0	
	comp=Z,3.2nm,0.6s						
ARU	**Arti**	**54.61**	**317**	*c* iP	**P**	**19 51 17.2**	**+0.1**
ARU						19 53 17.4	
ARU				S	**S**	**19 58 56.4**	**+0.4**
ARU				SS	**SS**	**20 02 35.4**	**-2.8**
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ABKAR	**Akbulak array**	**56.75**	**309**	P	**P**	**19 51 32.7**	**+0.1**
ABKAR				IAmb	IAmb	19 51 33.2	
	comp=Z,2.6nm,0.6s						
RES	**Resolute Bay**	**58.49**	**15**	P	**P**	**19 51 45.0**	**+0.6**
RES				pm

Ms1 3.5/10,ms1mx3.2/38,Error ellipse: s-maj=38.3km s-min=29.3km az=142.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDV	**Santo Domingo**	**30.12**	**239**	LR	LR	20 27 19.2	
	comp=Z,32nm,19.0s,baz=62,slow=38						
ROSC	**El Rosal**	**35.51**	**238**	LR	LR	20 29 56.9	
	comp=Z,51nm,19.8s,baz=39,slow=36						
DBIC	**Dimbokro**	**42.86**	**110**	LR	LR	20 31 13.6	
	comp=Z,90nm,19.9s,baz=288,slow=32						
H10N2	**ASCENSION HYDR**	**45.13**	**135**	T	T	21 04 25.5	
	baz=320,slow=75,SNR=49						
H10N3	**ASCENSION HYDR**	**45.14**	**135**	T	T	21 04 25.6	
	baz=320,slow=75,SNR=48						
H10N1	**ASCENSION HYDR**	**45.15**	**135**	T	T	21 04 26.9	
	baz=320,slow=75,SNR=65						
TORD	**Torodi Ar. Bea**	**45.51**	**98**	LR	LR	20 34 48.7	
	comp=Z,98nm,18.6s,baz=325,slow=35						
H10S3	**ASCENSION HYDR**	**45.89**	**136**	T	T	21 05 31.1	
	baz=261,slow=74,SNR=49						
H10S2	**ASCENSION HYDR**	**45.91**	**136**	T	T	21 05 23.7	
	baz=319,slow=74,SNR=64						
CMIG	**Matias Romero**	**47.16**	**269**	LR	LR	20 33 46.7	
	comp=Z,220nm,19.9s,baz=59,slow=32						
LPAZ	**La Paz**	**48.26**	**211**	P	P	20 17 06.7	-0.1
	0.9nm,0.7s,baz=46,slow=4.9,SNR=3.6						
LPAZ				LR	LR	20 37 33.2	
	comp=Z,34nm,18.0s,baz=8.5,slow=36						
NOA	**NORSAR Array B**	**50.78**	**31**	LR	LR	20 35 08.3	
	comp=Z,24nm,18.4s,baz=340,slow=32						
TXAR	**Lajitas Array**	**51.57**	**287**	P	P	20 17 31.1	-0.3
	0.1nm,0.4s,baz=91,slow=3.6,SNR=2.4						
LVC	**Limon Verde**	**54.18**	**208**	LR	LR	20 39 37.1	
	comp=Z,30nm,19.9s,baz=284,slow=35						
PDAR	**Pinedale Array**	**54.36**	**305**	LR	LR	20 40 28.0	
	comp=Z,75nm,18.1s,baz=330,slow=35						
YKA	**Yellowknife Ar**	**57.45**	**329**	P	P	20 18 12.8	-0.7
	0.4nm,0.7s,baz=92,slow=7.1,SNR=7.2						
ARCES	**ARCESS Array B**	**58.49**	**23**	P	P	20 18 20.7	0.0
	1.9nm,0.9s,baz=263,slow=7.2,SNR=3.7						
NVAR	**Mina Array Bea**	**61.60**	**301**	LR	LR	20 44 33.3	
	comp=Z,145nm,18.7s,baz=340,slow=35						
BRTR	**Keskin Array B**	**65.08**	**56**	P	P	20 19 05.6	-0.1
	0.4nm,0.7s,baz=282,slow=7.2,SNR=3.4						
ILAR	**Eielson Array**	**71.21**	**334**	P	P	20 19 44.4	+0.7
	0.6nm,0.8s,baz=61,slow=5.3,SNR=7.2						

*IDC **20** 20:10:00.5±4.5,2°.04S×27°.68E,h0km,mb3.4/3,mb1 3.4/4, mb1mx3.2/37,mbtmp3.4/4,ML3.2/1,Error ellipse: s-maj=108.9km s-min=27.2km az=5.0*

ISC 20 20:10:02.0±2.0,2°.1S±0°.3×27°.6E±0°.1,h10km,n5,σ1s32/6, mb3.5/3,1D,Zaire

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBAR	**Mbarara**	**3.43**	**65**	eP	**Pn**	**20 10 56.9**	**+1.2**
MBAR				eS	**Sb**	**20 11 44.6**	**-0.2**
KMBO	**Kilima Mbogo**	**9.65**	**84**	Pn	**Pn**	**20 12 21.9**	**+0.6**
	0.2nm,0.3s,baz=240,slow=16,SNR=2.5						
KMBO				Lg	Lg	20 15 07.5	
	0.5nm,0.3s,baz=225,slow=21,SNR=5.3						
TORD	**Torodi Ar. Bea**	**29.87**	**301**	P	**P**	**20 16 10.7**	**+0.6**
	0.5nm,0.7s,baz=117,slow=8.8,SNR=2.6						
BRTR	**Keskin Array B**	**41.97**	**7**	P	**P**	**20 17 53.6**	**+0.1**
	0.5nm,0.7s,baz=182,slow=9.7,SNR=4.3						
MKAR	**Makanchi Array**	**68.22**	**37**	P	**P**	**20 21 01.2**	**-1.8**
	0.2nm,0.6s,baz=249,slow=4.5,SNR=1.8						

*IDC **20** 20:43:27.0±0.9,9°.74N×122°.46E,h0km,mb4.0/7, mb1 4.2/7,mb1mx3.8/43,mbtmp3.9/7,MS3.4/4,Ms1 3.4/4, ms1mx2.9/37,Error ellipse: s-maj=54.4km s-min=17.5km az=62.0*

*MAN **20** 20:43:28.9,9°.82N×122°.07E,h15km,MS3.5*

*NEIC **20** 20:43:28.4±1.4,9°.8N±0°.1×122°.52E±0°.08,h10km±1km, mb4.6/7,Error ellipse: s-maj=24.3km s-min=12.9km az=192.0*

ISC 20 20:43:28.9±1.5,9°.79N±0°.03×122°.40E±0°.05,h13km±9km, n33,σ1s25/41,mb4.2/12,MS3.5/3,4C-2D,Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**0.85**	**13**	eP	**Pn**	**20 43 46.7**	**0.0**
GUIM				eS	**Sn**	**20 43 59.3**	**+0.2**
SNPH	**Sibulan**	**0.94**	**118**	eP	**Pn**	**20 43 50.4**	**+2.6**
SNPH				i S	Sn	20 44 09.8	+8.6
DCPH	**Dipolog City**	**1.52**	**142**	eP	**Pg**	**20 43 59.4**	**+1.2**
LLP	**Lapu-Lapu**	**1.63**	**71**	iP	**Pg**	**20 44 01.1**	**+0.9**
LLP				i S	**Sg**	**20 44 22.4**	**+1.0**
RCP	**Roxas**	**1.79**	**11**	eP	**Pg**	**20 44 03.1**	**-0.2**
RCP				eS	**Sg**	**20 44 27.2**	**+0.5**
KALP	**Kalibo**	**1.88**	**358**	eP	**Sn**	**20 44 24.2**	**-0.2**
PAGZ	**Pagadian**	**2.16**	**153**	eP	**Pb**	**20 44 07.1**	**-0.8**
PAGZ				eS	**Sb**	**20 44 32.3**	**-2.3**
MSLP	**Maasin**	**2.45**	**82**	eP	**Pb**	**20 44 12.6**	**-0.2**
MSLP				eS	**Sb**	**20 44 41.6**	**-1.4**
OCLP	**Ormoc**	**2.51**	**60**	eP	**Pb**	**20 44 12.7**	**-1.2**
OCLP				eS	**Sg**	**20 44 48.2**	**-1.4**
OTRP	**Odiongan**	**2.59**	**352**	eP	**Pn**	**20 44 10.7**	**+0.2**
OTRP				eS	**Sg**	**20 44 52.5**	**+0.5**
CGP	**Cagayan de Oro**	**2.62**	**120**	eP	**Pb**	**20 44 14.9**	**-0.9**
CGP				eS	**Sg**	**20 44 51.9**	**-1.4**
BUKP	**Musuan**	**3.24**	**126**	eP	**Pb**	**20 44 24.9**	**-1.5**
BUKP				eS	**Sb**	**20 45 06.9**	**+1.0**
BUTP	**Butuan**	**3.28**	**104**	eP	**Pb**	**20 44 24.1**	**-2.9**
BUTP				eS	**Sb**	**20 45 08.6**	**+1.7**
KCP	**Kidapawan**	**3.83**	**136**	eP	**Pb**	**20 44 34.0**	**-2.5**
DAV	**Davao City (W)**	**4.15**	**130**	LR	LR	20 46 35.5	
	comp=Z,541nm,18.2s,baz=261,slow=46						
CMAR	**Chiang Mai Arr**	**24.30**	**293**	P	**P**	**20 48 46.7**	**+0.3**
	1.0nm,0.8s,baz=125,slow=7.4,SNR=7.6						
CMAR				LR	LR	20 57 39.8	
	comp=Z,42nm,20.3s,baz=131,slow=35						
WRAB	**Tennant Creek**	**31.79**	**158**	P	**P**	**20 49 52.5**	**-0.9**
WRAB				IAmb	IAmb	20 50 02.6	
	comp=Z,24nm,1.9s						
WRA	**Warramunga Arr**	**31.80**	**158**	P	**P**	**20 49 52.1**	**-1.3**
	comp=Z,2.0nm,0.6s,baz=339,slow=9.2,SNR=11						
WR0	**Warramunga Arr**	**31.89**	**158**	P	**P**	**20 49 53.5**	**-0.6**
WR0				IAmb	IAmb	20 50 16.3	
	comp=Z,19nm,1.6s						
AS31	**Alice Springs**	**35.10**	**161**	P	**P**	**20 50 22.3**	**+0.1**
AS31				IAmb	IAmb	20 50 23.4	
	comp=Z,1.9nm,0.6s						
ASAR	**Alice Springs**	**35.10**	**161**	P	**P**	**20 50 22.3**	**+0.1**
	comp=Z,4.6nm,0.6s,baz=346,slow=7.4,SNR=81						
ASAR				PcP	**PcP**	**20 52 53.5**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=348,slow=1.9,SNR=7.6						
SONM	**Songino Array**	**40.26**	**343**	P	**P**	**20 51 06.2**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=171,slow=10.0,SNR=4.0						
STKA	**Stephens Creek**	**45.32**	**157**	P	**P**	**20 51 46.0**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=323,slow=11,SNR=7.7						
STKA	**Stephens Creek**	**45.32**	**157**	P	**P**	**20 51 46.2**	**-0.5**
ARMA	**Armidale**	**48.86**	**146**	P	**P**	**20 52 14.9**	**+0.3**
ARMA				IAmb	IAmb	20 52 24.1	
	comp=Z,43nm,1.8s						
MKAR	**Makanchi Array**	**50.16**	**325**	P	**P**	**20 52 25.3**	**+1.1**
	comp=Z,1.3nm,0.9s,baz=119,slow=8.6,SNR=5.9						
MKAR				LR	LR	21 14 46.7	
	comp=Z,46nm,18.4s,baz=8.5,slow=37						
KDJ	**Kajisay**	**51.00**	**317**	P	**P**	**20 52 33.5**	**+2.6**
KDJ				IAmb	IAmb	20 52 34.0	
	comp=Z,2.4nm,0.8s						
DHAK	**Deception Hill**	**86.47**	**31**	P	**P**	**20 56 10.7**	**-0.7**
NOA	**NORSAR Array B**	**91.48**	**333**	LR	LR	21 40 28.9	
	comp=Z,17nm,19.0s,baz=290,slow=37						
YKA	**Yellowknife Ar**	**95.72**	**23**	P	**P**	**20 56 54.1**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=302,slow=4.7,SNR=4.7						
LONY	**Lake Ozonia**	**123.71**	**15**		**PKPdf**	**21 02 26.6**	**-0.2**
S51A	**Beattyville**	**126.91**	**26**		PKPpre	21 02 25.5	
PLCA	**Paso Flores**	**147.11**	**162**	PKPbc	**PKPbc**	**21 03 12.1**	**-0.1**
	comp=Z,2.4nm,0.8s,baz=256,slow=2.3,SNR=5.1						

MAN 20 20:43:32.6,9°.88N×122°.27E,h27km,mb4.6,ML3.5,MS3.4, Negros

*IDC **20** 21:04:36.9±1.1,29°.31N×130°.52E,h0km,mb3.5/6, mb1 3.6/8,mb1mx3.4/40,mbtmp3.5/8,ML2.9/2,MS3.0/8, Ms1 3.0/8,ms1mx2.9/31,Error ellipse: s-maj=45.5km s-min=19.1km az=79.0*

*JMA **20** 21:04:41.3±0.1,29°.32N×130°.60E,h31km,M3.3*

ISC 20 21:04:41.1±1.4,29°.31N±0°.03×130°.60E±0°.07,h27km±11km, n30,σ1s25/38,mb3.5/7,MS3.1/4,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.83**	**310**	P	**Pn**	**21 04 56.4**	**-0.7**
JNN				S	**Sb**	**21 05 08.6**	**+0.9**
JYAK	**Yakushimahirau**	**0.93**	**355**	P	**Pn**	**21 04 58.2**	**-0.2**
JYAK				eS	**Sn**	**21 05 10.3**	**-0.6**
JMTN	**Minamitane**	**1.11**	**13**	P	**Pn**	**21 05 00.7**	**-0.3**
JMTN				eS	**Sn**	**21 05 15.2**	**-0.3**
JZK	**Kikaishima**	**1.14**	**209**	P	**Pb**	**21 05 02.9**	**+0.8**
JZK				eS	**Sb**	**21 05 16.6**	**+0.1**
JKC	**Kuchinoerabu**	**1.20**	**343**	P	**Pn**	**21 05 02.4**	**+0.2**
JKC				eS	**Sb**	**21 05 18.5**	**+0.1**
JTAJ	**Takarajima**	**1.23**	**263**	P	**Pb**	**21 05 02.8**	**-1.0**
JTAJ				eS	**Sb**	**21 05 19.6**	**+0.3**
JAM	**Amami Oshima**	**1.25**	**225**	P	**Pn**	**21 05 02.9**	**0.0**
JAM				eS	**Sb**	**21 05 18.7**	**-1.1**
JTN	**Tanegashima 3**	**1.38**	**14**	P	**Pn**	**21 05 04.5**	**-0.1**
JTN				eS	**Sb**	**21 05 23.2**	**-0.3**
JAMN	**Amaminishikomi**	**1.64**	**230**	P	**Pn**	**21 05 08.2**	**-0.1**
JAMN				eS	**Sn**	**21 05 29.0**	**+0.5**
JTSR	**Tashiro 2**	**1.87**	**8**	P	**Pn**	**21 05 11.4**	**0.0**
JTSR				S	**Sn**	**21 05 35.1**	**+0.9**
JTK	**Tokunoshima**	**2.10**	**224**	P	**Pn**	**21 05 15.2**	**+0.6**
JTK				eS	**Sn**	**21 05 40.9**	**+1.0**
JSU	**Suzuyama**	**2.19**	**357**	P	**Pn**	**21 05 17.1**	**+1.2**
JSU				eS	**Sn**	**21 05 43.3**	**+1.2**
JNAR	**Kushima--Naru**	**2.28**	**14**	P	**Pn**	**21 05 17.6**	**+0.5**
JNAR				eS	**Sn**	**21 05 44.5**	**+0.2**
JYRO	**Yoronjima**	**2.97**	**220**	P	**Pn**	**21 05 26.1**	**-0.3**
JYRO				eS	**Sn**	**21 06 00.1**	**-1.0**
JNU	**Nakatsue**	**3.81**	**3**	Pn	**Pn**	**21 05 38.9**	**+0.8**
	0.9nm,0.3s,baz=342,slow=22,SNR=13						
JNU				Sn	**Sn**	**21 06 20.9**	**-1.1**
	0.3nm,0.3s,baz=29,slow=19,SNR=1.2						
KSRS	**Korea Array**	**8.43**	**345**	LR	LR	21 09 38.6	
	comp=Z,54nm,20.2s,baz=182,slow=36						
MJAR	**Matsushiro Arr**	**9.63**	**40**	LR	LR	21 10 17.2	
	comp=Z,28nm,18.4s,baz=40,slow=35						
JCJ	**Chichijima**	**10.45**	**99**	LR	LR	21 10 35.9	
	comp=Z,46nm,19.7s,baz=299,slow=34						
ASAJ	**Asahikawa**	**17.60**	**30**	LR	LR	21 15 59.1	
	comp=Z,54nm,18.7s,baz=212,slow=39						
KLR	**Kul'dur**	**19.91**	**2**	P	**P**	**21 09 08.3**	**-2.2**
	0.1nm,0.3s,baz=176,slow=15,SNR=2.3						
GUMO	**Guam**	**20.48**	**137**	LR	LR	21 15 06.8	
	comp=Z,29nm,19.3s,baz=144,slow=31						
SONM	**Songino Array**	**26.29**	**321**	P	**P**	**21 10 14.9**	**+0.5**
	0.8nm,0.7s,baz=122,slow=12,SNR=8.1						
SONM				LR	LR	21 22 10.5	
	comp=Z,75nm,18.7s,baz=168,slow=40						
GTA	**Gaotai**	**27.23**	**300**	eP	**P**	**21 10 28.0**	**+5.0**
GTA				pP	pP	21 10 31.6	+1.0
GTA				sP	sP	21 10 34.8	+1.1
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TLY	**Talaya**	**30.03**	**326**	LR	LR	21 23 36.4	
	comp=Z,72nm,18.2s,baz=80,slow=38						
CMAR	**Chiang Mai Arr**	**30.81**	**257**	LR	LR	21 24 26.0	
	comp=Z,31nm,21.1s,baz=19,slow=39						
KURBB	**Kurchatov Arra**	**44.16**	**314**	P	**P**	**21 12 46.1**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=100,slow=9.4,SNR=4.1						
WRA	**Warramunga Arr**	**49.10**	**175**	P	**P**	**21 13 24.4**	**-2.0**
	comp=Z,0.4nm,0.9s,baz=353,slow=8.3,SNR=3.3						
ASAR	**Alice Springs**	**52.77**	**176**	P	**P**	**21 13 55.6**	**+1.7**
	comp=Z,0.2nm,0.5s,baz=7.4,slow=15,SNR=3.3						
YKA	**Yellowknife Ar**	**74.85**	**26**	P	**P**	**21 16 18.9**	**0.0**
	comp=Z,0.1nm,0.3s,baz=300,slow=6.3,SNR=2.3						
BRTR	**Keskin Array B**	**76.80**	**308**	P	**P**	**21 16 29.7**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=81,slow=2.6,SNR=2.4						

*IDC **20** 21:07:20.4±1.2,26°.33N×94°.74E,h0km,mb3.6/5, mb1 3.9/5,mb1mx3.4/45,mbtmp3.7/5,MS2.8/1,Ms1 2.8/1, ms1mx2.4/43,Error ellipse: s-maj=51.3km s-min=22.4km az=62.0*

*BJI **20** 21:07:24.3±0.0,26°.55N×94°.82E,h6km,mb3.9/4,ML3.7/1*

ISC 20 21:07:26.2±1.1,26°.3N±0°.1×94°.64E±0°.08,h35km,n18, σ2s61/26,mb4.0/5,Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**4.56**	**318**	Pn	**Pn**	**21 08 37.0**	**+3.8**
TAPN	**Taplejung**	**6.27**	**281**	ePn	**Pn**	**21 08 59.8**	**+3.2**
TAPN				eSn	**Sn**	**21 10 07.9**	**+0.7**
	236nm,0.4s						
ODAN	**Odare**	**6.51**	**276**	ePn	**Pn**	**21 09 03.5**	**+3.7**
ODAN				eSn	**Sn**	**21 10 13.9**	**+0.9**
	370nm,0.4s						
RAMN	**Ramite**	**7.22**	**277**	ePn	**Pn**	**21 09 13.0**	**+3.4**
JIRN	**Jiri**	**7.65**	**282**	ePn	**Pn**	**21 09 18.5**	**+2.9**
JIRN				eSn	**Sn**	**21 10 39.1**	**-2.2**
	365nm,0.3s						
GUN	**Gumba**	**7.96**	**283**	ePn	**Pn**	**21 09 22.9**	**+3.1**
GUN				eSn	**Sn**	**21 10 47.2**	**-1.7**
	290nm,0.5s						
PKIN	**Phulchoki**	**8.34**	**281**	ePn	**Pn**	**21 09 27.0**	**+2.0**
PKIN				eSn	**Sn**	**21 10 56.2**	**-1.9**
	128nm,0.4s						
KKN	**Kakani**	**8.47**	**282**	ePn	**Pn**	**21 09 29.0**	**+2.3**
KKN				eSn	**Sn**	**21 10 59.4**	**-1.8**
	89nm,0.2s						
DMN	**Daman**	**8.60**	**281**	ePn	**Pn**	**21 09 30.9**	**+2.4**
GKN	**Gorkha**	**9.06**	**283**	ePn	**Pn**	**21 09 37.4**	**+2.6**
GKN				eSn	**Sn**	**21 11 12.9**	**-2.8**
	204nm,0.2s						
DANN	**Dangsing**	**9.88**	**284**	ePn	**Pn**	**21 09 46.9**	**+0.8**
DANN				eSn	**Sn**	**21 11 31.2**	**-4.7**
	106nm,0.3s						
KOLN	**Koldanda**	**9.95**	**281**	ePn	**Pn**	**21 09 48.7**	**+1.8**
KOLN				eSn	**Sn**	**21 11 34.1**	**-3.3**
	121nm,0.4s						
MKAR	**Makanchi Array**	**22.65**	**338**	P	**P**	**21 12 22.8**	**-1.6**
	0.9nm,0.5s,baz=140,slow=12,SNR=20						
SONM	**Songino Array**	**23.37**	**20**	P	**P**	**21 12 31.1**	**-0.7**
	0.1nm,0.4s,baz=212,slow=9.8,SNR=2.2						
KSRS	**Korea Array**	**30.21**	**60**	LR	LR	21 26 58.3	
	comp=Z,19nm,20.0s,baz=285,slow=39						
WRA	**Warramunga Arr**	**60.00**	**136**	P	**P**	**21 17 28.0**	**-1.6**
	1.3nm,0.4s,baz=322,slow=7.5,SNR=10						
ASAR	**Alice Springs**	**62.55**	**139**	P	**P**	**21 17 46.3**	**-0.5**
	0.8nm,0.5s,baz=323,slow=6.6,SNR=11						
TORD	**Torodi Ar. Bea**	**86.86**	**283**	P	**P**	**21 20 08.6**	**+0.7**
	0.8nm,0.9s,baz=51,slow=4.0,SNR=4.2						

*GCG **20** 21:28:17.0±0.5,12°.82N×90°.86W,h55km±54km,MD4.0*
*UCR **20** 21:28:18.8±0.8,13°.08N×90°.76W,h26km±7km,ML3.6*
*SNET **20** 21:28:18.1±0.6,12°.96N×90°.65W,h10km±12km,ML3.6*

ISC 20 21:28:17.0±3.8,12°.9N±0°.2×90°.74W±0°.08,h23km±21km, n16,σ0s82/24,1D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcalda de S**	**1.18**	**37**	eP	**Pn**	**21 28 37.4**	**-0.7**
FAME				eS	**Sn**	**21 28 52.7**	**-0.7**
IXG	**Ixpaco**	**1.30**	**13**	eP	**Pn**	**21 28 39.9**	**-0.1**
IXG				eS	**Sb**	**21 28 59.8**	**+2.5**
CEVE	**Cerro Verde**	**1.43**	**49**	eP	**Pn**	**21 28 42.1**	**+0.4**
CEVE				eS	**Sb**	**21 29 00.8**	**-0.2**
CEVE				IAML		21 29 04.6	
	comp=Z,976nm,0.3s						
CEVE	**Cerro Verde**	**1.43**	**49**	eP	**Pn**	**21 28 42.1**	**+0.4**
CEVE				eS	**Sb**	**21 29 00.8**	**-0.2**
CEVE				IAML		21 29 04.6	
	comp=Z,976nm,0.3s						
SBLS	**San Blas**	**1.44**	**49**	eP	**Pn**	**21 28 42.2**	**+0.3**
SBLS				eS	**Sb**	**21 29 01.2**	**0.0**
SBLS	**San Blas**	**1.44**	**49**	eP	**Pn**	**21 28 42.2**	**+0.3**
SBLS				eS	**Sb**	**21 29 01.2**	**0.0**
RTR	**El Retiro**	**1.46**	**47**	eP	**Pn**	**21 28 42.7**	**+0.6**
RTR	**El Retiro**	**1.46**	**47**	eP	**Pn**	**21 28 42.7**	**+0.6**
SNJE	**San Jose**	**1.47**	**49**	eP	**Pn**	**21 28 42.7**	**+0.5**
SNJE	**San Jose**	**1.47**	**49**	eP	**Pn**	**21 28 42.7**	**+0.5**
FUG	**Fuego 3**	**1.55**	**356**	eP	**Pn**	**21 28 43.6**	**+0.2**
FUG				eS	**Sb**	**21 29 04.8**	**+0.4**
NBG	**Las Nubes**	**1.73**	**13**	eP	**Pb**	**21 28 47.3**	**-0.9**
NBG				eS	**Sb**	**21 29 10.6**	**+1.0**
LFRS	**El Faro**	**1.79**	**66**	eP	**Pn**	**21 28 47.8**	**+1.2**
STG3	**Santiaguito 3,**	**1.98**	**336**	eP	**Pn**	**21 28 49.4**	**+0.2**
MTO3	**Montecristo**	**2.01**	**42**	eP	**Pn**	**21 28 50.5**	**+0.8**
MTO3	**Montecristo**	**2.01**	**42**	eP	**Pn**	**21 28 50.5**	**+0.8**

*IDC **20** 21:28:38.8±6.3,34°.17N×142°.66E,h0km,mb3.4/4, mb1 3.6/5,mb1mx3.4/46,mbtmp3.4/5,ML2.7/1,Error ellipse: s-maj=212.6km s-min=24.7km az=62.0*

*JMA **20** 21:28:47.2±0.4,33°.98N×141°.43E,h40km±4km,M3.6*

ISC 20 21:28:45.7±1.3,33°.94N±0°.06×141°.58E±0°.1,h21km,n21, σ1s49/29,mb3.4/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**0.87**	**325**	P	**Pn**	**21 29 01.6**	**-0.6**
BSO3	**Boso 3**	**1.23**	**315**	P	**Pn**	**21 29 07.4**	**0.0**
BSO4	**Boso 4**	**1.47**	**316**	P	**Pn**	**21 29 11.2**	**+0.4**
JMKN	**Mikurajimanish**	**1.65**	**269**	P	**Pn**	**21 29 12.9**	**-0.5**
JHJ2	**Mitsune**	**1.68**	**241**	P	**Pn**	**21 29 14.0**	**+0.1**
JHCJ	**Hachijojimakas**	**1.72**	**240**	P	**Pn**	**21 29 14.3**	**0.0**
JHCJ				eS	**Sn**	**21 29 34.6**	**-1.0**
JIM2	**Oshima 3**	**1.94**	**294**	P	**Pn**	**21 29 16.8**	**-0.6**
JTHY	**Toshimahigashi**	**1.98**	**288**	P	**Pn**	**21 29 18.2**	**+0.2**
JTHY				eS	**Sn**	**21 29 41.5**	**-0.7**
KTJ3	**Kamata3**	**2.30**	**296**	P	**Pn**	**21 29 21.2**	**-1.1**
KTJ3				S	**Sn**	**21 29 46.8**	**-3.1**
JIZS	**Izushimoda**	**2.36**	**290**	P	**Pn**	**21 29 23.1**	**-0.1**
JIZS				eS	**Sn**	**21 29 49.8**	**-1.8**
JOD2	**Odawara 2**	**2.44**	**304**	P	**Pn**	**21 29 23.5**	**-0.8**
JOD2				eS	**Sn**	**21 29 51.3**	**-2.2**
JHU	**Hanno**	**2.68**	**316**	P	**Pn**	**21 29 27.5**	**-0.1**
JHO	**Hitachi**	**2.79**	**343**	P	**Pn**	**21 29 28.5**	**-0.6**
JHO				eS	**Sn**	**21 29 58.9**	**-3.3**
JAG	**Ashikaga**	**3.03**	**326**	P	**Pn**	**21 29 32.6**	**+0.2**
MJAR	**Matsushiro Arr**	**3.79**	**314**	**Pn**	**Pn**	**21 29 43.6**	**+0.8**
	0.4nm,0.3s,baz=201,slow=16,SNR=17						
MJAR				Sn	**Sn**	**21 30 27.6**	**+0.8**
	0.5nm,0.3s,baz=15,slow=24,SNR=4.6						
MAT	**Matsushiro**	**3.79**	**314**	P	**Pn**	**21 29 44.0**	**+1.1**
MAT				S	**Sn**	**21 30 28.9**	**+2.1**
JKN2	**Miekihoku**	**4.41**	**275**	P	**Pn**	**21 29 52.0**	**+0.6**
SONM	**Songino Array**	**29.72**	**308**	P	**P**	**21 34 53.6**	**+3.2**
	0.2nm,0.8s,baz=110,slow=9.2,SNR=1.7						
MKAR	**Makanchi Array**	**45.93**	**305**	P	**P**	**21 37 06.7**	**-0.2**
	0.3nm,0.7s,baz=76,slow=12,SNR=1.7						
WRA	**Warramunga Arr**	**54.02**	**188**	P	**P**	**21 38 06.0**	**-2.5**
	0.5nm,0.3s,baz=16,slow=9.4,SNR=6.2						
ASAR	**Alice Springs**	**57.75**	**188**	P	**P**	**21 38 35.6**	**+0.5**
	0.3nm,0.6s,baz=3.1,slow=5.9,SNR=6.8						

IDC 20 21:36:04.1±9.7,20°.97S×178°.77W,h665km±109km, mb2.7/4,mb1 3.0/4,mb1mx2.7/38,mbtmp3.7/4,Error ellipse: s-maj=187.9km s-min=47.7km az=151.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.72**	**257**	P	P	21 43 13.7	-0.2
	0.3nm,0.4s,baz=105,slow=8.1,SNR=7.6						
WRA	**Warramunga Arr**	**43.83**	**263**	P	P	21 43 15.1	+0.4
	0.4nm,0.7s,baz=96,slow=7.6,SNR=2.1						
ILAR	**Eielson Array**	**88.93**	**13**	P	P	21 47 48.7	-0.8
	0.7nm,0.9s,baz=218,slow=6.1,SNR=4.3						
PDAR	**Pinedale Array**	**89.79**	**44**	P	P	21 47 55.3	+1.0
	0.3nm,0.6s,baz=189,slow=4.6,SNR=2.8						
AKASG	**Malin Array Be**	**143.07**	**330**	PKP	PKPab	21 54 21.2	-1.2
	0.7nm,0.4s,baz=47,slow=3.4,SNR=4.7						
BRTR	**Keskin Array B**	**146.62**	**311**	PKPbc	PKiKP	21 54 34.8	-0.7
	0.4nm,0.6s,baz=126,slow=3.8,SNR=2.7						

WEL 20 22:03:16.8,40°.7S±0°.6×175°.8E±0°.8,h24km,ML3.9/15, MLv3.6/64,Error ellipse: s-maj=0.0km s-min=0.0km az=106.5,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIWZ	**Tintock**	**0.11**	**159**	P	Pb	22 03 21.9	+0.4
TIWZ				S	Sb	22 03 25.7	+1.0
PRWZ	**Pori Road**	**0.16**	**43**	P	Pb	22 03 22.3	+0.4
PRWZ				S	Sb	22 03 26.6	+1.3
MRZ	**Mangatainoka R**	**0.19**	**273**	P	Pb	22 03 22.8	+0

KHZ	Kahutara	2.45	224	P		Pn	22 03 53.3	-1.9
THZ	Tophouse	2.46	243	P		Pn	22 03 54.4	-1.1
RIGZ	Rimuhau	2.46	38	P		Pn	22 03 53.8	-1.7
RAGZ	Rawiri	2.49	30	P		Pn	22 03 54.3	-1.6
QRZ	Quartz Range	2.51	265	P		Pb	22 03 59.3	-1.9
URZ	Urewera	2.60	23	P		Pn	22 03 55.4	-1.9
MWZ	Matawai	2.68	30	P		Pn	22 03 56.4	-2.0
TWGZ	Tauwhareparae	3.00	34	P		Pn	22 04 01.3	-1.5
PUZ	Puketiti	3.20	37	P		Pn	22 04 03.1	-2.5
HAZ	Te Kaha	3.28	28	P		Pn	22 04 05.0	-1.6
LTZ	Lake Taylor	3.40	230	P		Pn	22 04 06.1	-2.2
WMGZ	Waiomatatini S	3.48	36	P		Pn	22 04 07.2	-2.2
OKCZ	Okains Bay	3.68	213	P		Pn	22 04 10.3	-1.9
AKCZ	Akaroa Harbour	3.87	213	P		Pn	22 04 13.8	-0.9
INZ	Inchbonnie	3.87	237	P		Pn	22 04 12.9	-1.9
JCZ	Jackson Bay	6.23	235	P		Pn	22 04 52.1	+4.8

*ATH **20** 22:14:19.7,41°.47N×19°.35E,h17km±2km,ML2.4/2,Error ellipse: s-maj=6.4km s-min=1.4km az=6.0*
*TIR **20** 22:14:20.9,41°.33N×19°.46E,h19km,Md2.7/5*
*THE **20** 22:14:22.0,41°.43N×19°.43E,h4km±2km,ML2.2/3,Error ellipse: s-maj=3.1km s-min=1.5km az=117.0*
*PDG **20** 22:14:22.3±0.2,41°.32N×19°.49E,h12km,ML2.7/11,Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*
*SKO **20** 22:14:23.7,41°.38N×19°.50E,h12km*
*BEO **20** 22:14:24.4±0.6,41°.41N×19°.62E,h4km±2km,ML2.2/7*

ISC 20 22:14:22.3±1.1,41°.38N±0°.02×19°.49E±0°.02,h9km±8km, n56,σ1s34/95,Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TIR	Tirane	0.28	96	P			Pg	22 14 28.1	+0.1
TIR				S			Sb	22 14 33.4	-1.1
	235nm,0.4s								
TIR	Tirane	0.28	96	*e*Pg			Pg	22 14 28.1	+0.1
TIR				*e*Sg			Sg	22 14 31.5	-0.4
TIR	Tirane	0.28	96	*i* PG			Pg	22 14 28.1	+0.1
TIR				*i* SG			Sg	22 14 32.9	+1.1
TIR	Tirane	0.28	96	P			Pg	22 14 28.1	+0.1
TIR				AML		AML	AML	22 14 33.4	
	comp=N,1360μm,0.4s								
TIR				S			Sb	22 14 33.5	-1.1
TIR				AML		AML	AML	22 14 36.5	
	comp=E,1130μm,0.3s								
ULC	Ulcinj	0.61	343	*e*Pg			Pb	22 14 34.9	-0.3
ULC				*e*Sg			Sn	22 14 46.0	-1.2
PUK	Puka	0.73	24	*i* PG			Pg	22 14 36.4	0.0
PUK				*i* SG			Sn	22 14 48.9	-1.3
PHP	Peshkopia	0.78	67	P			Pg	22 14 36.3	-1.0
PHP				S			Sb	22 14 49.1	+0.4
PHP	Peshkopia	0.78	67	*i* PG			Pg	22 14 36.2	-1.1
PHP				*i* SG			Sb	22 14 48.2	-0.5
DRME	Dracevica, Mon	0.84	344	*e*Pg			Pb	22 14 39.2	+0.1
DRME				*e*Sg			Sn	22 14 53.5	+0.7
BUM	Brajici-Budva	1.02	334	*e*Pg			Pn	22 14 42.5	-0.4
BUM				*e*Sg			Sn	22 14 59.3	+1.9
OHR	Ohrid	1.02	105	*i* Pg			Pn	22 14 42.7	-0.2
OHR				*e*Sg			Sn	22 14 57.6	+0.2
OHR				*e*Lg			Lg	22 14 58.0	
	comp=N,93nm,0.8s								
OHR				*e*Lg			Lg	22 14 58.6	
	comp=E,86nm,0.8s								
PDG	Podgorica	1.06	351	*e*Pg			Pn	22 14 44.2	+0.8
PDG				*e*Sg			Sn	22 14 59.0	+0.7
TTG	Podgorica	1.06	351	*e*Pg			Pn	22 14 42.9	-0.5
TTG				*e*Sg			Sn	22 15 01.1	+2.8
BCI	Bajram Curri	1.08	23	*i* PG			Pg	22 14 42.2	-0.8
BCI				*i* SG			Sn	22 14 58.6	-0.1
TPE	Tepelena	1.15	160	P			Pb	22 14 44.6	+0.2
TPE				S			Sn	22 15 02.5	+2.0
	comp=E,140nm,0.8s								
CEME	Cevo	1.24	340	*e*Pg			Pg	22 14 46.7	+0.5
CEME				*e*Sg			Sn	22 15 06.5	+3.7
PVY	Plav	1.26	16	*e*Pg			Pg	22 14 47.0	+0.4
PVY				*e*Sg			Sn	22 15 07.3	+3.8
HCY	Herceg Novi	1.30	325	*e*Pg			Pg	22 14 47.4	+0.1
HCY				*e*Sg			Sn	22 15 08.6	+4.4
NKME	Niksic	1.44	344	*e*Pg			Pg	22 14 50.0	0.0
NKME				*e*Sg			Sg	22 15 12.2	+3.5
IVA	Berane	1.52	11	*e*Pn			Pg	22 14 51.1	-0.4
IVA				*e*Sn			Sg	22 15 14.3	+3.0
NEST	Nestorio	1.53	129	P			Pb	22 14 51.1	+0.3
NEST	Nestorio	1.53	129	P			Pb	22 14 50.9	+0.1
NEST				S			Sg	22 15 13.0	+1.6
FNA	Florina	1.55	112	P			Pn	22 14 50.6	+0.5
FNA				S			Sb	22 15 11.6	+0.7
	comp=E,95nm,0.6s								
FNA	Florina	1.55	112	*i* PN			Pn	22 14 50.3	+0.2
FNA				*i* SN			Sg	22 15 12.1	0.0
FNA	Florina	1.55	112	P			Pn	22 14 50.2	+0.1
FNA				AML		AML	AML	22 15 14.1	
	comp=N,238μm,0.5s								
FNA				AML		AML	AML	22 15 14.7	
	comp=E,143μm,0.6s								
SKO	Skopje	1.58	67	*i* Pg			Pg	22 14 52.1	-0.5
SKO				*e*Sg			Sg	22 15 13.2	+0.2
TREB	Trebinje	1.58	328	*e*Pg			Pg	22 14 52.8	+0.1
TREB				*e*Sg			Sg	22 15 14.8	+1.6
DBRK	Dubrovnik	1.63	323	*e*Pn			Pb	22 14 51.8	-0.8
DBRK				Sn			Sg	22 15 13.8	-0.9
BRY	Bratogost	1.68	335	*e*Pn			Pb	22 14 53.1	-0.4
BRY				*e*Sn			Sg	22 15 17.7	+1.4
UPM	Unac-Piva	1.87	347	*e*Pn			Pb	22 14 55.8	-1.0
UPM				*e*Sn			Sg	22 15 22.5	0.0
SJES	Sjenica	1.91	11	*e*Pg			Pg	22 14 58.1	-0.9
SJES				*e*Sg			Sg	22 15 23.6	-0.3
NOCI	Noci	1.93	253	P			Pn	22 14 53.8	-1.5
NOCI				S			Sn	22 15 16.6	-3.0
PLE	Pljevlja	1.95	358	*e*Pn			Pb	22 14 57.5	-0.6
PLE				*e*Sn			Sg	22 15 24.5	-0.5
IGT	Igoumenitsa	1.96	161	P			Pn	22 14 55.9	+0.2
STON	Ston	2.00	319	*e*Pn			Pn	22 14 55.9	-0.3
STON				Sn			Sn	22 15 20.6	-0.8
SELS	Selova	2.20	33	*e*Pn			Pb	22 15 00.6	-1.7
GRG	Griva	2.24	100	P			Pn	22 15 00.0	+0.4
BARS	Barje	2.25	50	*e*Pn			Pb	22 15 01.8	-1.3
IVAS	Ivanjica	2.25	12	*e*Pn			Pb	22 15 01.4	-1.8
IVAS				*e*Sg			Sg	22 15 33.8	-0.8
BBLS	Lazići	2.48	359	*e*Pn			Pb	22 15 05.2	-2.0
BOSS	Bosilegrad	2.49	62	*e*Pn			Pn	22 15 04.0	+0.9
KNT	Kendrikon	2.58	94	P			Pn	22 15 04.5	+0.3
MAKA	Makarska	2.64	317	*e*Pn			Pn	22 15 05.1	0.0
MAKA				Sn			Sn	22 15 37.1	-0.1
GRUS	Gruza	2.67	19	*e*Pn			Pn	22 15 07.1	+1.7
DIVS	Divibare	2.74	8	*e*Pn			Pb	22 15 09.8	-1.8
BOVS	Bovan	2.79	35	*e*Pn			Pb	22 15 09.6	-2.7
HVAR	Hvar	2.88	310	*e*Pn			Pn	22 15 08.1	-0.3
HVAR				Sn			Sn	22 15 42.2	-1.0
TRUS	Trudelj	2.92	13	*e*Pn			Pb	22 15 11.5	-3.1
ZAPS	Zavoj	3.00	50	*e*Pn			Pn	22 15 11.0	+0.9
VTS	Vitosha	3.05	65	*e*Pn			Pn	22 15 11.6	+0.7
ZAGS	Zajecar	3.16	39	*e*Pn			Pn	22 15 12.7	+0.4
KIJV	Kijevo	3.47	320	*e*Pn			Pn	22 15 17.1	+0.6
KIJV				Sn			Sn	22 15 58.4	+0.6
ZIRJ	Zirje	3.64	310	*e*Pn			Pn	22 15 19.3	+0.5
ZIRJ				Sn			Sn	22 16 01.7	-0.1
MORI	Morici	3.74	313	*i* Pn			Pn	22 15 21.1	+1.0
MORI				Sn			Sn	22 16 04.6	+0.4
DUGI	Dugi Otok	4.18	310	*e*Pn			Pn	22 15 26.9	+0.6
DUGI				Sn			Sn	22 16 15.4	+0.1
NVLJ	Novalja	4.65	315	*e*Pn			Pn	22 15 33.2	+0.6

WEL 20 22:28:49.6,40°.6S±0°.7×17°6E±°,h31km±1km,M3.5/65, ML3.9/12,MLv3.5/65,Error ellipse: s-maj=0.0km s-min=0.0km az=100.4,North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PRWZ	Pori Road	0.14	49	P			Pn	22 28 55.8	+0.2
PRWZ				S			Sb	22 29 00.6	+1.3
TIWZ	Tintock	0.14	165	P			Pn	22 28 55.8	0.0
TIWZ				S			Sb	22 29 00.3	+0.8
MRZ	Mangatainoka R	0.20	265	P			Pn	22 28 56.3	-0.2
POWZ	Post Office Ro	0.26	348	P			Pn	22 28 57.0	-0.3
BFZ	Birch Farm	0.31	97	P			Pb	22 28 57.6	+0.2
BFZ				S			Sn	22 29 03.9	+0.3
HOWZ	Holdsworth Sta	0.35	224	P			Pn	22 28 58.4	-0.2
CPWZ	Castlepoint	0.38	134	P			Pn	22 28 59.3	+0.3
DVHZ	Dannevirke	0.43	36	P			Pb	22 28 59.1	+0.1
TMWZ	Te Maipa	0.47	175	P			Pn	22 29 00.2	0.0
TMWZ				S			Sn	22 29 08.8	+1.3
ANWZ	Angora Road	0.52	70	P			Pn	22 29 00.8	-0.1
OGWZ	Otaki Gorge	0.54	251	P			Pn	22 29 01.3	+0.2
MTW	Mount Morrison	0.57	206	P			Pn	22 29 01.6	0.0
OHWZ	Ohakea	0.59	317	P			Pn	22 29 02.9	+1.1
TSZ	Takapari Road	0.59	9	P			Pn	22 29 01.9	0.0
PRHZ	Porangahau	0.72	59	P			Pn	22 29 03.5	-0.1
KIW	Kapiti Island	0.74	253	P			Pn	22 29 04.5	+0.4
WPHZ	Waipukurau	0.74	39	P			Pb	22 29 04.4	+0.3
CAW	Cannon Point	0.75	231	P			Pb	22 29 04.2	0.0
TRWZ	Traveller	0.76	188	P			Pn	22 29 04.2	-0.1
PNHZ	Pukenui	0.78	21	P			Pn	22 29 04.9	+0.1
PAWZ	Paruwai Farm	0.80	203	P			Pn	22 29 05.0	+0.1
MSWZ	Moikau Station	0.89	210	P			Pn	22 29 05.7	-0.4
PXZ	Pawanui	0.99	52	P			Pn	22 29 07.2	-0.2
PLWZ	Palliser	1.02	205	P			Pn	22 29 07.4	-0.5
BHW	Baring Head	1.06	223	P			Pn	22 29 08.0	-0.3
KRHZ	Kereru	1.08	22	P			Pn	22 29 08.9	+0.3
WAZ	Wanganui	1.10	323	P			Pb	22 29 10.7	+0.6
KAHZ	Kahuranaki	1.16	44	P			Pn	22 29 09.7	-0.1
BHHZ	Black Hill Sta	1.17	9	P			Pb	22 29 10.6	-0.7
MOVZ	Moawhango	1.24	357	P			Pb	22 29 11.9	-0.5
MTVZ	Mangateitei	1.29	347	P			Pb	22 29 13.5	+0.2
KWHZ	Kaweka Forest	1.30	20	P			Pn	22 29 12.1	+0.4
TCW	Tory Channel	1.31	244	P			Pn	22 29 11.8	+0.1
TRVZ	Turoa	1.36	351	P			Pn	22 29 14.3	-0.3
MCHZ	McNeill Hill	1.37	29	P			Pn	22 29 12.8	+0.3
CKHZ	Cape Kidnapper	1.37	44	P			Pn	22 29 11.9	-0.6
WHVZ	Whangaehu Hut	1.37	352	P			Pn	22 29 14.8	0.0
TUVZ	Tukino	1.38	354	P			Pn	22 29 13.8	-0.1
DRZ	Dome Shelter	1.38	351	P			Pb	22 29 15.6	+0.5
FWVZ	Far West T-bar	1.40	351	P			Pb	22 29 15.1	-0.3
PKVZ	Pokaka	1.40	344	P			Pb	22 29 15.0	-0.3
DUWZ	D'Urville Isla	1.46	263	P			Pn	22 29 14.4	+0.5
NGZ	Ngauruhoe	1.48	353	P			Pb	22 29 16.0	-0.5
WTVZ	West Tongariro	1.54	353	P			Pb	22 29 16.7	-0.9
KRVZ	Karewarewa	1.55	354	P			Pb	22 29 17.0	-0.8
BKZ	Black Stump Fm	1.56	19	P			Pn	22 29 15.3	+0.1
TWVZ	Taurewa	1.60	349	P			Pb	22 29 17.4	-1.2
LREZ	Lake Rotokare	1.61	317	P			Pb	22 29 19.3	+0.5
TUWZ	Tuamarina	1.63	241	P			Pn	22 29 15.7	-0.5
ARHZ	Aropaoanui	1.64	33	P			Pn	22 29 16.5	+0.1
RITZ	Rihia Road	1.66	1	P			Pn	22 29 18.1	+1.4
KATZ	Kakaramea	1.67	356	P			Pb	22 29 18.7	-1.1
NMHZ	Naumai	1.71	26	P			Pn	22 29 17.9	+0.5
VRZ	Vera Road	1.73	331	P			Pb	22 29 19.8	-1.0
RATZ	Rangitukua	1.77	358	P			Pb	22 29 22.0	+0.5
BSWZ	Blackbirch Sta	1.83	233	P			Pn	22 29 18.1	-0.8
MRHZ	Matea Rd	1.86	14	P			Pn	22 29 19.6	+0.2
WHHZ	Waihua	1.90	35	P			Pn	22 29 19.7	-0.2
WATZ	Wairara	1.93	358	P			Pn	22 29 21.3	+0.9
NMEZ	Namu Road	1.94	309	P			Pb	22 29 24.0	-0.4
KHEZ	Kahui Hut	1.94	313	P			Pb	22 29 24.3	-0.1
NNZ	Nelson	1.95	252	P			Pn	22 29 20.9	+0.3
MTHZ	Maungataniwha	1.95	24	P			Pn	22 29 20.6	0.0
RAHZ	Arahi	1.98	30	P			Pn	22 29 20.5	-0.4
PKE	Pukeiti	2.03	315	P			Pb	22 29 25.6	-0.3
NBEZ	Newall Road No	2.04	312	P			Pb	22 29 26.2	+0.1
KNZ	Kokohu	2.15	42	P			Pn	22 29 22.0	-1.3
MHGZ	Mahia Peninsul	2.18	48	P			Pn	22 29 22.5	-1.2
SNGZ	Shannon Statio	2.19	32	P			Pn	22 29 23.2	-0.7
RTZ	Ruatahuna	2.21	24	P			Pn	22 29 23.9	-0.3
HIZ	Hauiti	2.26	340	P			Pn	22 29 27.1	+2.3
TLZ	Tolley Road	2.32	354	P			Pn	22 29 29.3	-1.6
RIGZ	Rimuhau	2.44	38	P			Pn	22 29 28.6	-1.2
TARZ	Mount Tarawera	2.46	12	P			Pn	22 29 27.8	+0.4
RAGZ	Rawiri	2.47	30	P			Pn	22 29 26.0	-1.7
KHZ	Kahutara	2.47	223	P			Pn	22 29 26.2	-1.6
THZ	Tophouse	2.48	242	P			Pn	22 29 27.2	-0.7
QRZ	Quartz Range	2.52	265	P			Pn	22 29 28.6	+0.1
URZ	Urewera	2.58	23	P			Pn	22 29 27.8	-1.4
MWZ	Matawai	2.65	30	P			Pn	22 29 28.7	-1.5
TKGZ	Te Karaka	2.69	36	P			Pn	22 29 29.3	-1.5
CNGZ	Carnagh Statio	2.83	41	P			Pn	22 29 31.8	-0.8
TOZ	Tahuroa Road	2.92	355	P			Pb	22 29 41.5	+0.5
TWGZ	Tauwhareparae	2.97	35	P			Pn	22 29 34.1	-0.6
RUGZ	Raukumara Rang	3.03	29	P			Pn	22 29 34.2	-1.4
PUZ	Puketiti	3.18	37	P			Pn	22 29 35.5	-2.1
PKGZ	Pakihiroa	3.25	33	P			Pn	22 29 37.5	-1.1
HAZ	Te Kaha	3.25	28	P			Pn	22 29 37.2	-1.3
LTZ	Lake Taylor	3.42	230	P			Pn	22 29 40.0	-0.8
WMGZ	Waiomatatini S	3.46	36	P			Pn	22 29 39.7	-1.6
OKCZ	Okains Bay	3.71	214	P			Pn	22 29 43.8	-0.9
MQZ	McQueen's Vall	3.87	217	P			Pn	22 29 43.2	-1.7
AKCZ	Akaroa Harbour	3.89	213	P			Pn	22 29 47.6	+0.3
INZ	Inchbonnie	3.89	236	P			Pn	22 29 45.8	-1.4
JCZ	Jackson Bay	6.25	234	P			Pn	22 30 24.4	+4.7

*NEIC **20** 22:37:19.1±1.8,40°.78S±0°.07×176°.0E±0°.1,h54km±7km, Error ellipse: s-maj=16.6km s-min=5.8km az=122.0*
*WEL **20** 22:37:20.5,40°.7S±0°.6×175°.8E±0°.9,h28km±1km,ML4.4/12, MLv4.0/93,Error ellipse: s-maj=0.0km s-min=0.0km az=103.3*

ISC 20 22:37:19.1±1.1,40°.83S±0°.03×175°.98E±0°.03,h37km,n147, σ1s25/163,North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TIWZ	Tintock	0.09	308	P			Pn	22 37 30.0	+0.6
TIWZ				S			Sn	22 37 30.3	+0.6
CPWZ	Castlepoint	0.18	115	P			Pn	22 37 29.9	+1.0
BFZ	Birch Farm	0.25	53	P			Pn	22 37 28.5	+1.0
BFZ				S			Sn	22 37 34.7	-0.5
BFZ	Birch Farm	0.25	53				Pn	22 37 28.5	+1.0
BFZ							Sn	22 37 34.3	-0.8
PRWZ	Pori Road	0.28	358	P			Pn	22 37 26.6	-0.7
PRWZ				S			Sn	22 37 31.4	-3.3
TMWZ	Te Maipa	0.28	194	P			Pn	22 37 30.5	+3.1
TMWZ				S			Sn	22 37 38.4	+3.7
MRZ	Mangatainoka R	0.35	299	P			Pn	22 37 26.8	-0.8
MRZ				S			Sn	22 37 31.3	-3.0
HOWZ	Holdsworth Sta	0.36	260	P			Pn	22 37 28.7	+1.0
HOWZ				S			Sn	22 37 35.0	+0.5
POWZ	Post Office Ro	0.47	340	P			Pn	22 37 28.0	-1.2
MTW	Mount Morrison	0.49	228	P			Pn	22 37 31.9	+2.4
MTW				S			Sn	22 37 41.1	+4.3
ANWZ	Angora Road	0.53	45	P			Pn	22 37 29.0	+1.8
DVHZ	Dannevirke	0.55	15	P			Pn	22 37 30.4	-0.2
DVHZ				S			Sn	22 37 37.6	-1.0
TRWZ	Traveller	0.61	201	P			Pn	22 37 34.4	+2.9
OGWZ	Otaki Gorge	0.62	271	P			Pn	22 37 31.8	+0.3
OGWZ				S			Sn	22 37 39.8	-0.3
PAWZ	Paruwai Farm	0.69	217	P			Pn	22 37 34.8	+2.4
CAW	Cannon Point	0.74	248	P			Pn	22 37 34.7	+1.6
PRHZ	Porangahau	0.75	42	P			Pn	22 37 34.7	+1.5
TSZ	Takapari Road	0.77	359	P			Pn	22 37 33.2	-0.4
TSZ				S			Sn	22 37 42.2	-1.8
MSWZ	Moikau Station	0.80	223	P			Pn	22 37 35.9	+2.0
MSWZ	Moikau Station	0.80	223				Pn	22 37 35.9	+2.0
OHWZ	Ohakea	0.81	321	P			Pn	22 37 34.0	0.0
KIW	Kapiti Island	0.81	268	P			Pn	22 37 35.1	+1.1
KIW				S			Sn	22 37 45.7	+0.7
WPHZ	Waipukurau	0.84	25	P			Pn	22 37 35.8	+1.3
WPHZ				S			Sn	22 37 47.8	+2.1
PLWZ	Palliser	0.92	216	P			Pn	22 37 37.7	+2.1
PLWZ	Palliser	0.92	216				Pn	22 37 37.6	+2.1
PLWZ							Sn	22 37 49.7	+2.1
PNHZ	Pukenui	0.93	10	P			Pn	22 37 36.2	+0.5
PNHZ				S			Sn	22 37 48.5	+0.5
BHW	Baring Head	1.02	235	P			Pn	22 37 38.5	+1.7
BHW	Baring Head	1.02	235				Pn	22 37 38.5	+1.7
PXZ	Pawanui	1.05	40	P			Pn	22 37 38.4	+1.2
SNZO	South Karori	1.08	243				Pn	22 37 39.0	+1.4
KRHZ	Kereru	1.23	14	P			Pn	22 37 40.2	+0.5
KAHZ	Kahuranaki	1.24	34	P			Pn	22 37 41.1	+1.1
WAZ	Wanganui	1.32	324	P			Pn	22 37 42.1	+1.1
BHHZ	Black Hill Sta	1.34	3	P			Pn	22 37 41.9	+0.5
TCW	Tory Channel	1.34	253	P			Pn	22 37 42.5	+1.1
MOVZ	Moawhango	1.44	353	P			Pn	22 37 43.1	+0.5
CKHZ	Cape Kidnapper	1.44	36	P			Pn	22 37 43.4	+0.8
KWHZ	Kaweka Forest	1.45	14	P			Pn	22 37 43.4	+0.6
MCHZ	McNeill Hill	1.49	22	P			Pn	22 37 44.2	+0.8
MTVZ	Mangateitei	1.50	345	P			Pn	22 37 44.4	+0.9
DUWZ	D'Urville Isla	1.56	270	P			Pn	22 37 45.2	+0.8
TRVZ	Turoa	1.57	348	P			Pn	22 37 45.5	+0.9
WHVZ	Whangaehu Hut	1.58	349	P			Pn	22 37 45.9	+1.1
TUVZ	Tukino	1.58	351	P			Pn	22 37 46.1	+1.3
DRZ	Dome Shelter	1.59	348	P			Pn	22 37 46.4	+1.4
FWVZ	Far West T-bar	1.61	348	P			Pn	22 37 46.1	+0.9
CMWZ	Cape Campbell	1.62	235	P			Pn	22 37 51.4	+6.3
PKVZ	Pokaka	1.62	342	P			Pn	22 37 46.1	+1.0
TUWZ	Tuamarina	1.65	248	P			Pn	22 37 46.2	+0.7
TUWZ	Tuamarina	1.65	248				Pn	22 37 46.1	+0.5
NGZ	Ngauruhoe	1.68	350	P			Pn	22 37 47.1	+1.0
BKZ	Black Stump Fm	1.71	13	P			Pn	22 37 46.7	+0.3
BKZ	Black Stump Fm	1.71	13				Pn	22 37 46.8	+0.3
WTVZ	West Tongariro	1.74	350	P			Pn	22 37 47.8	+0.9
ARHZ	Aropaoanui	1.75	27	P			Pn	22 37 47.8	+0.9
KRVZ	Karewarewa	1.76	351	P			Pn	22 37 48.1	+1.0
TWVZ	Taurewa	1.81	346	P			Pn	22 37 48.5	+0.6
BSWZ	Blackbirch Sta	1.81	240	P			Pn	22 37 48.9	+1.1
BSWZ	Blackbirch Sta	1.81	240				Pn	22 37 48.7	+0.9
LREZ	Lake Rotokare	1.83	318	P			Pn	22 37 50.1	+2.1
NMHZ	Naumai	1.85	20	P			Pn	22 37 48.4	+0.1
RITZ	Rihia Road	1.86	357	P			Pn	22 37 49.3	+0.9
KATZ	Kakaramea	1.87	353	P			Pn	22 37 49.6	+0.9
HATZ	Hinemaiaia	1.94	3	P			Pn	22 37 50.2	+0.6
VRZ	Vera Road	1.95	331	P			Pn	22 37 50.7	+1.0
RATZ	Rangitukua	1.97	355	P			Pn	22 37 50.6	+0.6
WHHZ	Waihua	2.00	29	P			Pn	22 37 51.8	+1.4
NNZ	Nelson	2.01	258	P			Pn	22 37 51.5	+1.1
NNZ	Nelson	2.01	258				Pn	22 37 51.7	+1.3
MRHZ	Matea Rd	2.02	10	P			Pn	22 37 50.9	+0.1
PREZ	Palmer Road	2.04	316	P			Pn	22 37 54.0	+3.0
MTHZ	Maungataniwha	2.09	19	P			Pn	22 37 52.0	+0.4
RAHZ	Arahi	2.10	24	P			Pn	22 37 51.9	+0.2
WATZ	Wairara	2.13	355	P			Pn	22 37 52.5	+0.3
NMEZ	Namu Road	2.15	311	P			Pn	22 37 54.4	+2.5
KHEZ	Kahui Hut	2.15	315	P			Pn	22 37 55.4	+2.9
WHTZ	Whakaora	2.17	359	P			Pn	22 37 53.1	+0.4
MHEZ	Mangahewa	2.17	323	P			Pn	22 37 55.7	+3.0
KNZ	Kokohu	2.23	36	P			Pn	22 37 53.7	+0.2
MHGZ	Mahia Peninsul	2.24	42	P			Pn	22 37 54.2	+0.6
PKE	Pukeiti	2.24	316	P			Pn	22 37 55.8	+2.1
NBEZ	Newall Road No	2.25	313	P			Pn	22 37 56.9	+3.0
ALRZ	Allen Road	2.29	7	P			Pn	22 37 54.7	+0.4
SNGZ	Shannon Statio	2.30	27	P			Pn	22 37 54.6	+0.1
WPRZ	Whakapapataran	2.31	4	P			Pn	22 37 54.7	0.0
KUTZ	Kaahu Road	2.34	357	P			Pn	22 37 55.4	+0.3
RTZ	Ruatahuna	2.34	19	P			Pn	22 37 55.2	+0.1
PRGZ	Paritu Road	2.41	38	P			Pn	22 37 56.4	+0.4
KHZ	Kahutara	2.42

MTVZ	**Mangateitei**	**1.35**	**340**	P	Pn	23 22 33.7	+1.8
TRVZ	**Turoa**	**1.41**	**343**	P	Pn	23 22 34.6	+1.6
TRVZ				S	Sn	23 22 52.4	+2.0
WHVZ	**Whangaehu Hut**	**1.42**	**345**	P	Pn	23 22 34.8	+1.8
WHVZ				S	Sn	23 22 52.0	+1.5
TUVZ	**Tukino**	**1.42**	**347**	P	Pn	23 22 34.6	+1.6
DRZ	**Dome Shelter**	**1.43**	**344**	P	Pn	23 22 35.1	+1.8
FWVZ	**Far West T-bar**	**1.45**	**344**	P	Pn	23 22 35.0	+1.5
TCW	**Tory Channel**	**1.47**	**247**	P	Pn	23 22 33.6	+0.1
PKVZ	**Pokaka**	**1.47**	**338**	P	Pn	23 22 35.0	+1.4
NGZ	**Ngauruhoe**	**1.52**	**346**	P	Pn	23 22 36.0	+1.6
BKZ	**Black Stump Fm**	**1.52**	**12**	P	Pn	23 22 34.7	+0.4
ARHZ	**Aropaoanui**	**1.56**	**27**	P	Pn	23 22 35.2	+0.4
WTVZ	**West Tongariro**	**1.58**	**346**	P	Pn	23 22 36.6	+1.5
KRVZ	**Karewarewa**	**1.59**	**348**	P	Pn	23 22 37.0	+1.7
DUWZ	**D'Urville Isla**	**1.64**	**264**	P	Pn	23 22 36.5	+0.7
TWVZ	**Taurewa**	**1.65**	**343**	P	Pn	23 22 37.3	+1.1
RITZ	**Rihia Road**	**1.68**	**354**	P	Pn	23 22 38.0	+1.5
KATZ	**Kakaramea**	**1.70**	**350**	P	Pn	23 22 38.2	+1.4
LREZ	**Lake Rotokare**	**1.75**	**312**	P	Pn	23 22 40.0	+2.6
TUWZ	**Tuamarina**	**1.79**	**244**	P	Pn	23 22 37.3	-0.5
RATZ	**Rangitukua**	**1.80**	**353**	P	Pn	23 22 39.3	+1.2
VRZ	**Vera Road**	**1.83**	**326**	P	Pn	23 22 40.1	+1.6
MRHZ	**Matea Rd**	**1.84**	**9**	P	Pn	23 22 39.1	+0.5
MTHZ	**Maungataniwha**	**1.90**	**19**	P	Pn	23 22 39.6	+0.2
RAHZ	**Arahi**	**1.90**	**25**	P	Pn	23 22 39.8	+0.3
WATZ	**Wairara**	**1.96**	**352**	P	Pn	23 22 41.2	+0.9
BSWZ	**Blackbirch Sta**	**1.97**	**237**	P	Pn	23 22 39.9	-0.5
KNZ	**Kokohu**	**2.04**	**38**	P	Pn	23 22 40.5	-0.9
MHGZ	**Mahia Peninsul**	**2.06**	**44**	P	Pn	23 22 40.9	-0.8
NNZ	**Nelson**	**2.11**	**254**	P	Pn	23 22 42.7	+0.4
RTZ	**Ruatahuna**	**2.15**	**19**	P	Pn	23 22 42.9	-0.1
KUTZ	**Kaahu Road**	**2.17**	**355**	P	Pn	23 22 44.0	+0.8
PRGZ	**Paritu Road**	**2.22**	**40**	P	Pn	23 22 43.6	-0.3
MUGZ	**Murupara**	**2.24**	**14**	P	Pn	23 22 44.1	0.0
HIZ	**Hauiti**	**2.33**	**336**	P	Pn	23 22 47.4	+2.0
RIGZ	**Rimuhau**	**2.34**	**34**	P	Pn	23 22 44.9	-0.7
TLZ	**Tolley Road**	**2.36**	**350**	P	Pn	23 22 47.4	+1.6
RAGZ	**Rawiri**	**2.39**	**26**	P	Pn	23 22 45.6	-0.7
TARZ	**Mount Tarawera**	**2.44**	**8**	P	Pn	23 22 47.0	+0.1
MWZ	**Matawai**	**2.58**	**26**	P	Pn	23 22 47.7	-1.1
KHZ	**Kahutara**	**2.59**	**226**	P	Pn	23 22 48.1	-0.8
THZ	**Tophouse**	**2.63**	**244**	P	Pn	23 22 48.8	-0.8
LIRZ	**Lichensteins R**	**2.66**	**5**	P	Pn	23 22 52.7	+2.8
RUGZ	**Raukumara Rang**	**2.96**	**25**	P	Pn	23 22 53.3	-0.8
HAZ	**Te Kaha**	**3.19**	**25**	P	Pn	23 22 56.8	-0.2
LTZ	**Lake Taylor**	**3.55**	**232**	P	Pn	23 23 00.8	-1.4
OKCZ	**Okains Bay**	**3.80**	**215**	P	Pn	23 23 04.1	-1.4
MQZ	**McQueen's Vall**	**3.97**	**219**	P	Pn	23 23 06.3	-1.5
AKCZ	**Akaroa Harbour**	**3.98**	**215**	P	Pn	23 23 07.8	-0.2
OXZ	**Oxford**	**4.02**	**227**	P	Pn	23 23 08.2	-2.3
MLZ	**Mavora Lakes**	**7.49**	**228**	P	Pn	23 24 00.0	+3.8

*NEIC **20** 23:27:37.2±2.6, 6°.5N±0°.1×95°.4E±0°.1, h233km±10km, mb4.5/5, Error ellipse: s-maj=22.9km s-min=11.2km az=57.0*
*DJA **20** 23:27:39.5±1.6, 7°N±11°×9°6E±1°2, h219km±5km, M4.5/12, mb4.6/12, mB4.8/5, MLv4.7/6, Mw(mB)4.0/5*
*IDC **20** 23:27:45.1±4.0, 6.73N×96.12E, h291km±43km, mb3.4/7, mb1 3.6/9, mb1mx3.1/50, mbtmp4.1/9, Error ellipse: s-maj=33.6km s-min=13.1km az=62.0*

ISC 20 23:27:38.5±0.5, 6°.51N±0°.05×95°.56E±0°.07, h239km, n51, σ1$70/54, mb3.6/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LHMI	**Lhok Sumawe**	**1.88**	**132**	P	**Pn**	**23 28 20.0**	**+1.0**
LHMI				S	**S**	**23 28 50.8**	**+0.1**
LHMI	**Lhok Sumawe**	**1.88**	**132**		**Pn**	**23 28 21.1**	**+2.1**
MLSI	**Meulaboh, Aceh**	**2.38**	**159**	P	**Pn**	**23 28 23.7**	**-0.1**
MLSI				S	**S**	**23 28 58.0**	**-1.4**
SNSI	**Sinabang, Aceh**	**4.14**	**169**	P	**Pn**	**23 29 43.6**	**0.0**
RPSI	**Rantau Prapat**	**5.06**	**138**		**Pn**	**23 28 55.0**	**+0.3**
RPSI					**S**	**23 29 52.7**	**-2.6**
KULM	**Kulim**	**5.21**	**103**		**Pn**	**23 28 58.3**	**+1.7**
GSI	**Gunungsitoli**	**5.55**	**159**	P	**Pn**	**23 29 01.0**	**+0.2**
	1.5nm22nm,0.8s						
GSI	**Gunungsitoli**	**5.55**	**159**		**Pn**	**23 29 00.0**	**-0.8**
GSI				S	**S**	**23 30 01.9**	**-4.5**
IPM	**Ipoh**	**5.80**	**110**		**Pn**	**23 29 05.3**	**+1.3**
PBA	**Port Blair**	**5.82**	**332**	*e*P	Pn	23 28 56.1	-8.1
PBA				*e*SG	S	23 30 04.3	-8.3
PBA				IAML		23 30 11.4	
	comp=N,131nm,0.1s						
PBA				IAML		23 30 14.7	
	comp=E,109nm,0.3s						
PBA	**Port Blair**	**5.82**	**332**	Pn	Pn	23 29 01.4	-2.8
PBSI	**Pulau Batu**	**7.06**	**157**	P	**Pn**	**23 29 21.3**	**+1.4**
	comp=E,0.8nmcomp=E,60nm,1.2s						
DGPR	**DIGLIPUR**	**7.12**	**339**	*e*P	**Pn**	**23 29 16.9**	**-3.6**
DGPR				*e*S	S	23 30 31.1	-11
DGPR				IAML		23 30 38.4	
	comp=E,154nm,0.3s						
DGPR				IAML		23 30 38.6	
	comp=N,111nm,0.2s						
SISI	**Saibi**	**8.54**	**156**	P	**Pn**	**23 29 40.2**	**+1.4**
	comp=N,10nm,0.5s						
PDSI	**Padang**	**8.85**	**146**	P	**Pn**	**23 29 43.1**	**+0.4**
	comp=N,678nmcomp=N,24nm,0.6s						
RGRI	**Rengat**	**9.60**	**135**	P	Pn	23 29 45.0	-7.2
PPSI	**Pulau Pagai**	**10.22**	**154**	P	**Pn**	**23 30 01.8**	**+1.7**
	comp=N,159nm,1.4s						
DSRI	**Dabo**	**11.37**	**127**	P	**P**	**23 30 17.7**	**-1.1**
	comp=N,221nm,0.8s						
KSI	**Kapahiang**	**12.29**	**145**	P	**P**	**23 30 29.8**	**+0.6**
	comp=N,9nmcomp=N,100nm,0.5s						
CMAR	**Chiang Mai Arr**	**12.33**	**15**	P	**Pn**	**23 30 27.9**	**+1.4**
	comp=N,1,3nm,0.3s,baz=205,slow=12,SNR=42						
CHTO	**Chiang Mai**	**12.67**	**15**	P	**Pn**	**23 30 31.8**	**+1.1**
MNAI	**Manna**	**13.08**	**145**	P	**P**	**23 30 39.9**	**+2.1**
	comp=N,397nm,1.2s						
MDSI	**Maura Dua**	**13.90**	**142**	P	**P**	**23 30 48.8**	**+1.8**
PALK	**Pallekele**	**14.77**	**274**	P	P	23 31 07.2	+11
	comp=N,0.4nm,0.3s,baz=80,slow=17,SNR=3.9						
PALK				S	**S**	**23 33 39.9**	**-0.1**
	comp=N,0.8nm,0.3s,baz=38,slow=9.9,SNR=6.4						
PALK	**Pallekele**	**14.77**	**274**	Pn	**P**	**23 31 01.1**	**+4.4**
CHLP	**Challavanipeta**	**16.37**	**318**	*e*P	**P**	**23 31 14.1**	**0.0**
SLVN	**Son La**	**16.81**	**28**	P	**Pn**	**23 31 21.0**	**+0.2**
PVM	**Polavaram**	**17.30**	**309**	*e*P	**P**	**23 31 24.8**	**+0.4**
MYLAV	**Mylavaram**	**17.80**	**306**	*e*P	**P**	**23 31 28.4**	**-1.4**
ADKI	**Addanki**	**17.88**	**303**	*e*P	**P**	**23 31 31.6**	**+1.0**
GGR	**Gangavaram**	**18.74**	**308**	*e*P	**P**	**23 31 39.9**	**0.0**
NJS	**Nagarjunasagar**	**18.78**	**304**	*e*P	**P**	**23 31 40.5**	**+0.1**
KOHI	**KOHIMA**	**19.16**	**356**	*ex*	**P**	**23 31 42.5**	**-1.9**
KOHI				*e*P	**P**	**23 31 43.2**	**-1.3**
KOHI				*e*S	**S**	**23 35 04.1**	**-4.7**
KOHI				IAML		23 35 11.8	
	comp=N,16nm,0.5s						
KOHI				IAML		23 35 12.2	
	comp=E,13nm,0.7s						
SHL	**Shillong**	**19.28**	**350**	P	**P**	**23 31 45.3**	**-0.4**
SHL				IAmb	IAmb	23 31 49.3	
	comp=Z,11nm,0.7s						
URV	**Uravakonda**	**19.82**	**297**	*e*P	**P**	**23 31 49.8**	**-1.8**
HYB	**Hyderabad**	**19.84**	**305**	*i* P	**Pn**	**23 31 57.0**	**+0.6**
HYBB	**Hyderabad (bro**	**19.84**	**305**	*e*P	**P**	**23 31 51.5**	**-0.3**
RPR	**Rampur**	**20.04**	**309**	*e*P	**P**	**23 31 53.7**	**-0.1**
SRSP	**Sriramsagar**	**20.82**	**308**	*e*P	**P**	**23 32 01.5**	**-0.6**
ZIRO	**ZIRO**	**20.97**	**356**	*e*P	**P**	**23 32 03.0**	**-0.8**
ZIRO				*e*S	**S**	**23 35 42.4**	**+0.1**
ZIRO				IAML		23 35 54.2	
	comp=E,37nm,0.2s						
ZIRO				IAML		23 35 55.4	
	comp=N,29nm,1.5s						
KLRI	**Killari**	**21.77**	**304**	*e*P	**P**	**23 32 08.1**	**-3.5**
PSA00	**Pilbara Seismi**	**36.69**	**140**	P	**P**	**23 34 22.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**38.46**	**130**	P	**P**	**23 34 37.5**	**-0.2**
MKAR	**Makanchi Array**	**41.73**	**346**	P	**P**	**23 35 03.7**	**-0.6**
	comp=N,0.6nm,0.7s,baz=181,slow=8.6,SNR=6.1						
SONM	**Songino Array**	**42.21**	**11**	P	**P**	**23 35 07.6**	**-0.6**
	comp=N,0.3nm,0.6s,baz=192,slow=6.7,SNR=2.6						
NWAO	**Narrogin (SRO)**	**44.30**	**154**	P	**P**	**23 35 25.8**	**+0.8**
	comp=N,6.9nm,0.5s,baz=330,slow=7.6,SNR=6.9						
NWAO	**Narrogin (SRO)**	**44.30**	**154**	IAmb	IAmb	23 35 31.6	
	comp=Z,29nm,1.4s						
WRA	**Warramunga Arr**	**46.33**	**125**	P	**P**	**23 35 40.5**	**-0.6**
	comp=Z,3.0nm,0.3s,baz=302,slow=10.0,SNR=27						
ASAR	**Alice Springs**	**47.97**	**130**	P	**P**	**23 35 53.1**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=302,slow=8.0,SNR=24						
ZALV	**Zalesovo Beam**	**48.10**	**351**	P	**P**	**23 35 55.7**	**+1.6**

	comp=Z,0.8nm,0.3s,baz=166,slow=7.2,SNR=2.7						
ARCES	**ARCESS Array B**	**77.02**	**340**	P	**P**	**23 39 06.4**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=97,slow=7.4,SNR=5.3						

*IDC **20** 23:39:58.7±1.1, 3°.25S×146°.35E, h0km, mb4.0/9, mb1 4.2/11, mb1mx4.1/31, mbtmp4.0/11, ML2.5/2, MS3.5/8, Ms1 3.5/8, ms1mx3.3/25, Error ellipse: s-maj=37.3km s-min=18.4km az=100.0*
*NEIC **20** 23:40:03.2±1.8, 3°.40S±0°.09×146°.4E±0°.1, h35km±2km, mb4.5/8, Error ellipse: s-maj=21.3km s-min=10.6km az=52.0*

ISC 20 23:40:01.3±0.8, 3°.36S±0°.08×146°.4E±0°.2, h20km, n27, σ1$90/23, mb4.3/11, MS3.5/7, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**5.77**	**278**	LR	LR	23 43 25.5	
	comp=Z,370nm,19.1s,baz=227,slow=36						
PMG	**Port Moresby**	**6.05**	**173**	Pn	**Pn**	**23 41 33.2**	**+3.6**
	2.5nm,0.3s,baz=15,slow=10.0,SNR=7.6						
PMG	**Port Moresby**	**6.05**	**173**		**Pn**	**23 41 33.5**	**+3.9**
PMG				Sn	**Sn**	**23 42 34.5**	**-3.8**
COEN	**Coen**	**11.00**	**197**		**Pn**	**23 42 41.3**	**+3.6**
CTA	**Charters Tower**	**16.62**	**181**	Pn	**P**	**23 43 55.4**	**-0.2**
	0.0nm,0.3s,baz=359,slow=12,SNR=2.0						
WR0	**Warramunga Arr**	**20.16**	**214**	P	**P**	**23 44 35.0**	**+0.4**
WRA	**Warramunga Arr**	**20.26**	**215**	P	**P**	**23 44 36.6**	**+1.0**
	3.7nm,0.9s,baz=38,slow=11,SNR=12						
KNRA	**Kununurra**	**21.25**	**234**	P	**P**	**23 44 44.6**	**-1.8**
EIDS	**Eidsvold**	**22.34**	**169**	P	**P**	**23 44 55.2**	**-2.8**
EIDS				IAmb	IAmb	23 45 09.4	
	comp=Z,27nm,1.4s						
AS31	**Alice Springs**	**23.53**	**210**	P	**P**	**23 45 10.3**	**-0.1**
ASAR	**Alice Springs**	**23.53**	**210**	P	**P**	**23 45 10.2**	**-0.2**
	comp=Z,2.3nm,1.0s,baz=38,slow=6.6,SNR=20						
ASAR				LR	LR	23 55 05.2	
	comp=Z,69nm,21.1s,baz=38,slow=38						
FITZ	**Fitzroy Crossi**	**25.07**	**233**	P	**P**	**23 45 25.6**	**+0.9**
	comp=Z,5.3nm,0.9s,baz=43,slow=5.4,SNR=3.2						
FITZ	**Fitzroy Crossi**	**25.07**	**233**	P	**P**	**23 45 24.4**	**-0.2**
FITZ				IAmb	IAmb	23 45 35.4	
	comp=Z,17nm,1.0s						
STKA	**Stephens Creek**	**28.72**	**189**	LR	LR	23 59 05.4	
	comp=Z,170nm,18.8s,baz=19,slow=40						
STKA	**Stephens Creek**	**28.72**	**189**	P	**P**	**23 45 56.9**	**-0.5**
KSRS	**Korea Array**	**44.10**	**339**	LR	LR	00 06 09.9	
	comp=Z,44nm,18.1s,baz=140,slow=36						
CMAR	**Chiang Mai Arr**	**51.53**	**297**	P	**P**	**23 49 05.2**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=107,slow=4.8,SNR=4.7						
CMAR				LR	LR	00 10 51.5	
	comp=Z,25nm,18.8s,baz=163,slow=36						
PETK	**Petropavlovsk-**	**57.06**	**8**	LR	LR	00 08 46.5	
	comp=Z,42nm,21.8s,baz=238,slow=30						
SONM	**Songino Array**	**61.84**	**331**	P	**P**	**23 50 19.2**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=123,slow=5.3,SNR=5.5						
SONM				LR	LR	00 16 38.2	
	comp=Z,57nm,19.8s,baz=94,slow=36						
MK31	**Makanchi Array**	**75.11**	**320**	P	**P**	**23 51 42.2**	**+0.2**
MK31				IAmb	IAmb	23 51 49.6	
	comp=Z,5.7nm,1.2s						
MKAR	**Makanchi Array**	**75.11**	**320**	P	**P**	**23 51 42.7**	**+0.6**
	comp=Z,3.2nm,1.0s,baz=108,slow=5.9,SNR=9.8						
MAKZ	**Makanchi**	**75.32**	**320**	P	**P**	**23 51 43.0**	**-0.3**
MAKZ				IAmb	IAmb	23 51 50.1	
	comp=Z,8.2nm,1.2s						
ZALV	**Zalesovo Beam**	**76.49**	**328**	P	**P**	**23 51 50.7**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=138,slow=8.9,SNR=3.5						
ILAR	**Eielson Array**	**83.30**	**23**	P	**P**	**23 52 25.9**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=246,slow=5.5,SNR=8.3						
GEYT	**Alibeck**	**90.70**	**308**	LR	LR	00 35 46.3	
	comp=Z,47nm,20.4s,baz=150,slow=37						
YKA	**Yellowknife Ar**	**97.12**	**28**	P	**P**	**23 53 32.4**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=271,slow=4.6,SNR=4.8						
TORD	**Torodi Ar. Bea**	**143.81**	**288**	PKP	**PKPdf**	**23 59 35.5**	**-0.7**
	comp=Z,0.6nm,0.9s,baz=99,slow=2.5,SNR=2.8						

*NCEDC **20** 23:47:33.8±1.6, 36°.82N±0°.02×121°.54W±0°.03, h4km±4km, Md2.7/149, Error ellipse: s-maj=3.6km s-min=2.5km az=47.0*

NEIC 20 23:47:33.9±1.6, 36°.81N±0°.01×121°.55W±0°.03, h8km±7km, Error ellipse: s-maj=3.8km s-min=1.5km az=65.0, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HBTM	**San Juan Bauti**	**0.04**	**4**		Pg	23 47 34.8	-0.8
HTUM	**Tustin Road**	**0.07**	**281**		Pg	23 47 35.9	0.0
ANZ	**Anzar Road**	**0.08**	**338**		Pg	23 47 35.5	-0.5
SAO	**San Andreas Ge**	**0.10**	**128**	Pg	Pg	23 47 35.8	-0.5
OCR	**O'Connell Ranc**	**0.11**	**20**		Pg	23 47 36.2	+0.1
HERM	**Elkhorn Road**	**0.13**	**263**		Pg	23 47 37.2	+0.5
BVYM	**Vineyard**	**0.13**	**119**		Pg	23 47 36.4	-0.4
HCOM	**Corn Cob Canyo**	**0.14**	**301**		Pg	23 47 37.3	+0.3
CBC	**Chamberlain**	**0.15**	**324**		Pg	23 47 36.9	-0.2
BSRM	**Salinas Radio**	**0.15**	**169**		Pg	23 47 36.9	-0.2
BSLM	**Silva Ranch**	**0.17**	**103**		Pg	23 47 38.0	+0.6
BCGM	**Cienega Road**	**0.20**	**121**		Pg	23 47 37.7	-0.3
HFEM	**San Felipe**	**0.21**	**36**		Pg	23 47 38.5	+0.3
HLTM	**Lone Tree Road**	**0.21**	**70**		Pg	23 47 38.5	+0.3
CDC	**Canada Road**	**0.22**	**15**		Pg	23 47 38.7	+0.3
HCAM	**Canada Road**	**0.22**	**15**		Pg	23 47 38.7	+0.4
HLPM	**Lions Peak**	**0.24**	**345**		Pg	23 47 39.0	+0.3
BPCNC	**Pine Canyon**	**0.25**	**194**		Pg	23 47 39.2	+0.4
JELB	**Ellicott, Sant**	**0.25**	**298**		Pg	23 47 39.2	+0.4
SCZ	**Santa Cruz**	**0.25**	**150**		Pg	23 47 38.5	-0.4
BHRM	**Hodges Ranch**	**0.25**	**110**		Pg	23 47 39.5	+0.6
BJOM	**Mount Johnson**	**0.27**	**134**		Pg	23 47 39.0	-0.2
BLRM	**Lewis Ranch**	**0.27**	**123**		Pg	23 47 39.1	-0.1
PACP	**Pacheco Peak**	**0.29**	**48**		Pg	23 47 40.1	+0.4
GHS	**Gilroy Hot Spr**	**0.29**	**17**		Pg	23 47 40.2	+0.4
BJCM	**Johnson Can.**	**0.30**	**154**		Pg	23 47 39.5	-0.3
HSPM	**Sheep**	**0.30**	**6**		Pg	23 47 40.5	+0.6
HPCM	**Pacheco Lake**	**0.33**	**42**		Pg	23 47 40.9	+0.4
JTGM	**Trout Gulch Ro**	**0.34**	**310**		Pg	23 47 40.8	+0.2
BEHM	**Elkhorn Ranch**	**0.34**	**116**		Pg	23 47 41.1	+0.6
CADM	**Anderson Res.**	**0.35**	**351**		Pg	23 47 41.4	+0.5
HMOM	**Monterey**	**0.36**	**234**		Pg	23 47 41.4	+0.5
JHLM	**Holstrom Ranch**	**0.37**	**323**		Pg	23 47 41.1	-0.1
JLAB	**Laurel Hill**	**0.37**	**337**		Pg	23 47 41.4	+0.2
SLD	**San Luis Dam**	**0.37**	**46**		Pg	23 47 41.6	+0.4
SFJWR	**San Luis Fatjo**	**0.39**	**52**		Pg	23 47 41.8	+0.3
BEMM	**Emmet**	**0.40**	**112**		Pg	23 47 42.1	+0.4
AMC	**Almaden**	**0.42**	**326**		Pg	23 47 42.6	+0.6
HAST	**Hastings Reser**	**0.42**	**180**		Pg	23 47 42.2	0.0
JSTM	**Santa Teresa H**	**0.44**	**334**		Pg	23 47 43.0	+0.6
BSMM	**Soledad Missio**	**0.44**	**167**		Pg	23 47 42.6	+0.1
BPIM	**Pinnacles**	**0.45**	**136**		Pg	23 47 42.1	-0.5
BAVM	**Antelope Valle**	**0.45**	**111**		Pg	23 47 43.1	+0.4
BSGM	**Shirttail Gulc**	**0.47**	**149**		Pg	23 47 42.5	-0.5
BBGB	**Big Mountain B**	**0.47**	**119**		Pg	23 47 43.7	+0.6
BBNM	**San Benito**	**0.49**	**128**		Pg	23 47 43.4	0.0
BCWM	**Chews Ridge**	**0.51**	**181**		Pg	23 47 43.8	+0.1
MOBB	**Monterey Bay O**	**0.51**	**256**		Pb	23 47 44.6	-0.3
JJOM	**Saint Joseph's**	**0.52**	**319**		Pb	23 47 44.7	-0.6
MHC	**Mount Hamilton**	**0.53**	**352**		Pb	23 47 45.1	-0.5
SCCB	**Santa Clara Co**	**0.54**	**332**		Pb	23 47 45.0	-0.5
SCKWR	**San Luis Creek**	**0.54**	**46**		Pb	23 47 46.0	+0.5
ARN	**Arnold Ranch**	**0.54**	**2**		Pg	23 47 44.9	+0.6
JBNB	**Ben Lomond Mou**	**0.57**	**303**		Pg	23 47 44.4	-0.6
LRV	**Little Rabbit**	**0.58**	**132**		Pg	23 47 44.9	-0.2
BRMM	**Rolling Bench**	**0.59**	**88**		Pb	23 47 46.1	-0.3
BPOM	**Post Ranch**	**0.61**	**196**		Pg	23 47 45.6	0.0
JSGM	**Saratoga Golf**	**0.61**	**320**		Pg	23 47 46.2	+0.4
BMSM	**Mercy Hot Spri**	**0.63**	**104**		Pg	23 47 46.6	+0.5
BAPM	**Anderson Peak**	**0.64**	**186**		Pg	23 47 46.2	-0.1
CMMM	**Mount Mocho**	**0.64**	**4**		Pb	23 47 46.9	-0.5
CALM	**Calaveras Res.**	**0.67**	**343**		Pb	23 47 47.6	-0.2
CMLM	**Mount Lewis**	**0.67**	**353**		Pb	23 47 47.7	-0.2
JBMM	**Black Mountain**	**0.70**	**317**		Pg	23 47 47.4	+0.1
JPC	**Peters Creek,**	**0.70**	**311**		Pg	23 47 47.2	-0.1
JJRM	**Joaquin Road**	**0.74**	**316**		Pg	23 47 48.1	-0.1
JPSM		**0.74**	**301**		Pg	23 47 47.8	-0.4
CMJM	**Mission San Jo**	**0.75**	**340**		Pb	23 47 48.9	-0.3
JSFB	**Stanford Teles**	**0.77**	**320**		Pb	23 47 49.4	-0.2
PCCM	**Crazy Canyon**	**0.79**	**156**		Pg	23 47 48.9	-0.2
JRSC	**Jasper Ridge**	**0.80**	**317**		Pg	23 47 49.0	-0.4
BGH	**Bear Gulch**	**0.82**	**310**		Pg	23 47 49.8	+0.1
WENL	**Wente Vineyard**	**0.82**	**349**		Pb	23 47 50.9	+0.4
PMPB	**Monarch Peak**	**0.85**	**134**		Pg	23 47 49.9	-0.3
CNIC	**Niles Canyon**	**0.86**	**338**		Pg	23 47 50.6	+0.1
JHPM	**Huddart Park**	**0.87**	**317**		Pg	23 47 50.4	-0.2
PAPM	**Alder Peak**	**0.91**	**170**		Pg	23 47 51.2	-0.3
PSAM	**San Ardo**	**0.95**	**145**		Pg	23 47 51.9	-0.3
OXMT	**Ox Mountain**	**0.98**	**315**		Pg	23 47 51.8	-0.9
JCPM	**Coyote Point**	**0.99**	**322**		Pg	23 47 52.8	-0.1
CBSNC	**Byron Hot Spri**	**1.00**	**356**		Pn	23 47 54.4	+0.1
CLCB	**Lake Chabot**	**1.01**	**336**		Pg	23 47 53.3	0.0
CMOB	**Morgan Territo**	**1.01**	**349**		Pn	23 47 55.0	+0.5
SAC	**San Andreas**	**1.03**	**318**		Pg	23 47 53.1	-0.6
PHSB	**Hesperia Broad**	**1.07**	**158**		Pg	23 47 53.6	-0.7
MYLM	**Yosemite Lake**	**1.07**	**58**		Pg	23 47 53.7	-0.8
BGC	**Bolinger Road**	**1.08**	**338**		Pn	23 47 55.4	0.0
CRHM	**Round Hill Res**	**1.10**	**342**		Pn	23 47 56.2	+0.6
PARM	**Anticline Ridg**	**1.13**	**120**		Pb	23 47 55.7	+0.1
CRPB	**Russellman Par**	**1.13**	**346**		Pg	23 47 55.0	-0.7
PANM	**San Antonio Re**	**1.16**	**153**		Pg	23 47 55.3	-0.8
PHCM	**Hearst Castle**	**1.17**	**164**		Pb	23 47 55.9	-0.5
CYBM	**Yerba Buena Is**	**1.19**	**327**		Pb	23 47 56.1	-0.5
BKS	**Berkeley--Byer**	**1.19**	**333**		Pb	23 47 55.4	-1.4
CVPM	**Vollmer Peak**	**1.19**	**334**		Pb	23 47 55.5	-1.3
VAK	**Adit at Lawren**	**1.20**	**333**		Pb	23 47 56.7	-0.2
BRIB	**Briones**	**1.20**	**337**		Pb	23 47 55.8	-1.1
PPO	**Portuguese Can**	**1.21**	**141**		Pb	23 47 56.1	-1.0
PVCM	**Vineyard Canyo**	**1.21**	**137**		Pb	23 47 55.7	-1.3
PSTM	**Stockdale Moun**	**1.22**	**136**		Pb	23 47 55.8	-1.4
CPIM	**Pinole Ridge**	**1.29**	**336**		Pn	23 47 57.0	-1.2
RAMR	**Ramage Ranch**	**1.30**	**155**		Pn	23 47 57.7	-0.6
PWKM	**Work Ranch**	**1.30**	**139**		Pn	23 47 57.2	-1.2
CTM	**Castle Mountai**	**1.32**	**131**		Pn	23 47 58.4	-0.3
MHDM	**Hidden Dam**	**1.36**	**77**		Pn	23 47 57.8	-1.4
PCMM	**Cholame Hills**	**1.37**	**137**		Pn	23 47 58.2	-1.0
MCUB	**Coppermopolis B**	**1.38**	**32**		Pn	23 47 58.0	-1.4
GHC	**Gold Hill**	**1.38**	**135**		Pn	23 47 58.1	-1.3
BLDC	**Black Mountain**	**1.38**	**157**		Pn	23 47 58.4	-1.0
BLDC	**Black Mountain**	**1.38**	**157**		Pn	23 47 58.3	-1.1
PSRM	**Scobie Ranch**	**1.40**

*JMA **20** 23:52:32.7±0.2,27.°0E×127.°39E, h91km±3km, M3.5*
*IDC **20** 23:52:39.2±9.7,26.°93N×127.°13E, h161km±90km, mb3.3/9, mb1 3.5/9, mb1mx3.2/35, mbtmp3.7/9, Error ellipse: s-maj=53.1km s-min=19.4km az=66.0*
ISC 20 23:52:32.1±0.8, 27.°08N±0.°08×127.°38E±0.°07, h95km±8km, n19, σ0⁵74/29, mb3.6/9, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.51**	**194**	P	**Pn**	**23 52 47.6**	**+0.2**
JAGN				eS	**Sn**	**23 52 58.6**	**-0.3**
JIH	**Iheya**	**0.53**	**95**	P	**Pn**	**23 52 48.1**	**+0.6**
JIH				S	**Sn**	**23 52 59.4**	**+0.3**
JNTH	**Nagotoyohara**	**0.80**	**134**	P	**Pn**	**23 52 50.3**	**+0.2**
JNTH				S	**Sn**	**23 53 02.9**	**-0.6**
JOW	**Kunigami**	**0.84**	**107**	P	**Pn**	**23 52 50.7**	**+0.3**
JOW				S	**Sn**	**23 53 03.3**	**-0.9**
JKE	**Kume jima 2**	**0.92**	**215**	P	**Pn**	**23 52 51.4**	**+0.1**
JKE				S	**Sn**	**23 53 05.2**	**-0.6**
JYRO	**Yoronjima**	**0.95**	**93**	P	**Pn**	**23 52 52.0**	**+0.4**
JYRO				S	**Sn**	**23 53 05.4**	**-1.0**
JJT3	**Tamagusuku3**	**1.00**	**159**	P	**Pn**	**23 52 52.9**	**+0.7**
JJT3				eS	**Sn**	**23 53 07.9**	**+0.6**
JOKE	**Okinoerabujima**	**1.09**	**75**	P	**Pn**	**23 52 53.7**	**+0.5**
JOKE				eS	**Sn**	**23 53 08.5**	**-0.7**
JTK	**Tokunoshima**	**1.56**	**63**	P	**Pn**	**23 52 59.3**	**+0.5**
JTK				S	**Sn**	**23 53 18.8**	**-0.4**
JAMN	**Amaminishikomi**	**1.97**	**54**	P	**Pn**	**23 53 04.3**	**+0.3**
JAMN				eS	**Sn**	**23 53 27.5**	**-0.9**
SONM	**Songino Array**	**26.43**	**327**	P	**P**	**23 58 02.1**	**+2.2**
	0.7nm,0.4s,baz=141,slow=9.7,SNR=15						
MKAR	**Makanchi Array**	**40.40**	**311**	P	**P**	**23 59 59.8**	**-1.0**
	0.2nm,0.3s,baz=92,slow=9.7,SNR=6.0						
KURBB	**Kurchatov Area**	**43.71**	**316**	P	**P**	**00 00 27.1**	**-0.5**
	0.8nm,0.5s,baz=105,slow=9.1,SNR=6.0						
WRA	**Warramunga Arr**	**47.23**	**171**	P	**P**	**00 00 55.1**	**-0.5**
	1.1nm,0.8s,baz=355,slow=8.2,SNR=7.2						
FINES	**FINESS Array B**	**71.75**	**330**	P	**P**	**00 03 43.3**	**-0.4**
	1.5nm,0.7s,baz=86,slow=5.7,SNR=6.1						
BRTR	**Keskin Array B**	**75.91**	**307**	P	**P**	**00 04 08.8**	**+0.2**
	1.0nm,0.7s,baz=124,slow=4.1,SNR=7.3						
YKA	**Yellowknife Ar**	**78.07**	**25**	P	**P**	**00 04 21.0**	**+0.9**
	0.1nm,0.5s,baz=304,slow=6.2,SNR=2.7						
NOA	**NORSAR Array B**	**78.21**	**333**	P	**P**	**00 04 20.5**	**-0.4**
	0.9nm,0.9s,baz=56,slow=5.3,SNR=3.0						
GERES	**GERESS Array B**	**84.06**	**323**	P	**P**	**00 04 51.7**	**-0.6**
	0.3nm,0.6s,baz=44,slow=4.4,SNR=3.6						

*KRNET **20** 23:53:20.0±0.1,41.°21N×79.°40E, mb2.4*
*NNC **20** 23:53:20.4±1.9,41.°41N×79.°07E, h0km, mb2.9, mpv2.7, Error ellipse: s-maj=13.0km s-min=10.4km az=164.0*
*SOME **20** 23:53:20.6,41.°48N×79.°07E, h10km*
ISC 20 23:53:20.5±2.6,41.°29N±0.°09×79.°27E±0.°08, h17km±11km, n17, σ1⁵26/30, 8C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.35**	**332**	⇑*i*P	**Pg**	**23 53 46.9**	**+0.2**
	baz=30						
PRZ				⇑*i*S	**Sg**	**23 54 06.5**	**+2.1**
	baz=30						
KDJ	**Kajisay**	**1.77**	**299**	⇑*e*P	**Pg**	**23 53 54.0**	**-0.6**
	baz=0.0						
KDJ				⇑*i*S	**Sg**	**23 54 18.9**	**+1.2**
	baz=0.0						
SHLS	**Shalkode**	**1.87**	**4**	*e*P	**Pn**	**23 53 53.0**	**+1.1**
	3.2nm,0.3s						
SHLS				*e*S	**Sb**	**23 54 16.5**	**-1.0**
	28nm,0.5s						
SATY	**Saty**	**1.88**	**340**	*e*P	**Pn**	**23 53 52.2**	**+0.2**
	0.6nm,0.1s						
SATY				*e*S	**Sn**	**23 54 14.9**	**-0.5**
	5.5nm,0.1s						
SATY	**Saty**	**1.88**	**340**	P	**Pn**	**23 53 52.2**	**+0.2**
	0.6nm,0.1s						
SATY				S	**Sn**	**23 54 14.9**	**-0.5**
	5.5nm,0.1s						
ANVS	**Anan'yevo**	**1.91**	**322**	⇑*i*P	**Pg**	**23 53 56.0**	**-1.2**
	baz=21						
ANVS				⇑*i*S	**Sg**	**23 54 22.4**	**+0.4**
	baz=21						
PDGK	**Podgornoye**	**2.04**	**5**	⇓Pn	**Pn**	**23 53 53.2**	**-1.0**
	1.0nm,0.4s						
PDGK				⇓Sn	**Sb**	**23 54 21.8**	**-0.6**
	6.4nm,0.6s						
KPKS	**Kokpek**	**2.22**	**349**	*e*P	**Pn**	**23 53 57.4**	**+0.8**
	2.5nm,0.2s						
KPKS				*e*S	**Sn**	**23 54 24.1**	**+0.5**
	7.7nm,0.4s						
NRN	**Naryn**	**2.46**	**274**	⇑*i*P	**Pb**	**23 54 03.9**	**-0.6**
	baz=76						
NRN				⇑*i*S	**Sb**	**23 54 35.6**	**+0.9**
	baz=76						
KOTS	**Kotyrbulak**	**2.52**	**321**	*e*P	**Pn**	**23 54 03.0**	**+2.2**
	2.0nm,0.3s						
KOTS				*e*S	**Sn**	**23 54 33.2**	**+2.1**
	4.6nm,0.4s						
KOTS	**Kotyrbulak**	**2.52**	**321**	Pg	**Pb**	**23 54 04.0**	**-1.3**
	2.0nm,0.3s						
KOTS				Lg	Lg	23 54 34.4	
	4.6nm,0.4s						
BOOM	**Boomskoye usch**	**2.76**	**297**	⇓*e*P	**Pb**	**23 54 08.1**	**-1.4**
	baz=97						
BOOM				⇓*e*S	**Sb**	**23 54 42.9**	**-0.1**
	baz=97						
KST	**Kastek**	**3.02**	**307**	*e*P	**Pb**	**23 54 12.0**	**-1.9**
	0.5nm,0.2s						
KST				*e*S	**Sb**	**23 54 48.9**	**-1.5**
	3.4nm,0.6s						
KST	**Kastek**	**3.02**	**307**	Pg	**Pb**	**23 54 12.5**	**-1.3**
	0.5nm,0.2s						
KST				Lg	Lg	23 54 49.5	
	3.0nm,0.8s						
KTBS	**Karatobe**	**3.08**	**323**	*e*P	**Pb**	**23 54 13.8**	**-1.1**
	1.0nm,0.3s						
KTBS				*e*S	**Sb**	**23 54 52.1**	**-0.1**
	3.4nm,0.4s						
KTBS	**Karatobe**	**3.08**	**323**	Pg	**Pb**	**23 54 13.0**	**-2.0**
	1.0nm,0.3s						
KTBS				Lg	Lg	23 54 51.7	
	3.4nm,0.4s						
KAPS	**Kapalarasan**	**3.99**	**1**	Pg	**Pb**	**23 54 31.5**	**+1.0**
	0.4nm,0.3s						
KAPS				Lg	Lg	23 55 23.7	
	0.8nm,0.6s						

*IDC **21** 00:09:51.9±1.7,3.°29S×146.°82E, h0km, mb4.0/7, mb1 4.3/7, mb1mx4.0/24, mbtmp4.0/7, MS3.7/12, Ms1 3.7/12, ms1mx3.6/23, Error ellipse: s-maj=52.7km s-min=21.5km az=109.0*
*NEIC **21** 00:09:55.0±1.8,3.°4S±0.°1×146.°7E±0.°1, h25km±8km, mb4.5/6, Error ellipse: s-maj=19.8km s-min=15.1km az=108.0*
ISC 21 00:09:54.6±0.9,3.°5S±0.°1×146.°9E±0.°1, h25km, n25, σ1⁵61/14, mb4.1/8, MS3.7/11, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.92**	**178**	LR	LR	00 13 46.0	
	comp=Z,404nm,18.9s,baz=338,slow=38						
PMG	**Port Moresby**	**5.92**	**178**	Pn	**Pn**	**00 11 20.9**	**+0.2**
COEN	**Coen**	**11.07**	**199**	Pn	**Pn**	**00 12 31.4**	**0.0**
FAKI	**Fak Fak**	**14.65**	**272**	P	**Pn**	**00 13 20.7**	**+0.3**
PATS	**Pohnpei**	**15.30**	**48**	P	**P**	**00 13 34.0**	**+0.4**
PATS				IAmb	IAmb	00 13 34.3	
	comp=Z,57nm,1.3s						
WR0	**Warramunga Arr**	**20.36**	**215**		Pn	00 14 31.2	-0.4
WR0				PcP	**PcP**	**00 18 37.9**	**-4.2**
WRA	**Warramunga Arr**	**20.47**	**216**	P	Pn	00 14 32.3	-0.5
	comp=Z,12nm,0.9s,baz=37,slow=12,SNR=30						
KNRA	**Kununurra**	**21.60**	**235**	P	**P**	**00 14 41.7**	**-1.1**
KNRA				IAmb	IAmb	00 14 47.3	
	comp=Z,40nm,1.3s						
AS31	**Alice Springs**	**23.70**	**211**	P	**P**	**00 15 05.3**	**+0.6**
ASAR	**Alice Springs**	**23.70**	**211**	P	**P**	**00 15 06.6**	**+1.8**
	comp=Z,8.1nm,1.0s,baz=39,slow=8.5,SNR=29						
ASAR				LR	LR	00 24 46.5	
	comp=Z,202nm,18.1s,baz=42,slow=38						
FITZ	**Fitzroy Crossi**	**25.41**	**234**	P	**P**	**00 15 21.5**	**+1.1**
	comp=Z,5.5nm,0.7s,baz=62,slow=12,SNR=7.2						
FITZ	**Fitzroy Crossi**	**25.41**	**234**	IAmb	IAmb	00 15 25.1	
	comp=Z,9.6nm,0.9s						

STKA	**Stephens Creek**	**28.71**	**189**	LR	LR	00 29 08.3	
	comp=Z,185nm,18.4s,baz=15,slow=40						
KSRS	**Korea Array**	**44.36**	**338**	LR	LR	00 34 18.1	
	comp=Z,55nm,20.4s,baz=166,slow=33						
CMAR	**Chiang Mai Arr**	**52.01**	**297**	P	**P**	**00 19 01.7**	**-0.7**
	comp=Z,1.7nm,0.8s,baz=123,slow=7.4,SNR=6.2						
CMAR				LR	LR	00 42 11.2	
	comp=Z,17nm,18.2s,baz=166,slow=37						
PETK	**Petropavlovsk-**	**57.08**	**8**	LR	LR	00 39 17.0	
	comp=Z,47nm,22.0s,baz=242,slow=31						
SONM	**Songino Array**	**62.16**	**330**	P	**P**	**00 20 13.3**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=145,slow=5.3,SNR=3.5						
SONM				LR	LR	00 46 45.1	
	comp=Z,69nm,19.8s,baz=127,slow=36						
PPT	**Papeete**	**63.73**	**108**	LR	LR	00 44 37.8	
	comp=Z,44nm,18.0s,baz=359,slow=33						
VNDA	**Vanda**	**74.44**	**177**	LR	LR	00 51 48.1	
	comp=Z,70nm,18.9s,baz=314,slow=34						
MKAR	**Makanchi Array**	**75.50**	**320**	P	**P**	**00 21 38.2**	**+1.3**
	comp=Z,1.5nm,1.0s,baz=104,slow=7.6,SNR=9.4						
MAKZ	**Makanchi**	**75.70**	**320**	P	**P**	**00 21 39.4**	**+1.3**
MAKZ				IAmb	IAmb	00 21 51.0	
	comp=Z,2.4nm,0.9s						
ILAR	**Eielson Array**	**83.19**	**23**	P	**P**	**00 22 18.9**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=251,slow=4.7,SNR=3.9						
MAW	**Mawson**	**84.55**	**203**	LR	LR	00 58 04.9	
	comp=Z,39nm,19.5s,baz=56,slow=34						
BBB	**Bella Bella**	**89.62**	**38**	LR	LR	00 57 33.2	
	comp=Z,166nm,18.4s,baz=202,slow=32						
GEYT	**Alibeck**	**91.15**	**308**	LR	LR	01 05 39.8	
	comp=Z,50nm,20.3s,baz=0.0,slow=37						

*IDC **21** 00:24:37.2±8.1,40.°55S×175.°84E, h27km±52km, mb4.6/2, mb1 4.6/4, mb1mx4.0/24, mbtmp4.4/4, ML3.5/2, MS3.4/7, Ms1 3.3/7, ms1mx3.2/24, Error ellipse: s-maj=36.3km s-min=22.3km az=133.0*
*NEIC **21** 00:24:37.3±1.9,40.°66S±0.°04×175.°9E±0.°1, h32km±5km, Error ellipse: s-maj=12.5km s-min=1.1km az=114.0*
*WEL **21** 00:24:38.5,40.°6S±0.°7×17.°6E±°, h37km±1km, M4.5/120, ML4.8/22, MLv4.5/120, Error ellipse: s-maj=0.0km s-min=0.0km az=91.2*
ISC 21 00:24:38.1±0.7, 40.°69S±0.°03×175.°96E±0.°03, h44km±5km, n180, σ1⁹34/189, mb4.6/4, MS3.3/4, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIWZ	**Tintock**	**0.10**	**213**	P	**Pn**	**00 24 45.5**	**+0.2**
PRWZ	**Pori Road**	**0.14**	**5**	P	Pn	00 24 44.9	-0.5
BFZ	**Birch Farm**	**0.22**	**87**	P	**Pn**	**00 24 46.7**	**+0.7**
BFZ				S	**Sn**	**00 24 52.7**	**+1.2**
BFZ	**Birch Farm**	**0.22**	**87**		**Pn**	**00 24 46.7**	**+0.7**
BFZ					**Sn**	**00 24 48.7**	**-2.8**
CPWZ	**Castlepoint**	**0.29**	**139**	P	**Pn**	**00 24 48.7**	**+2.1**
MRZ	**Mangatainoka R**	**0.29**	**276**	P	**Pn**	**00 24 46.0**	**-0.6**
MRZ				S	**Sn**	**00 24 51.3**	**-1.3**
POWZ	**Post Office Ro**	**0.33**	**334**	P	**Pn**	**00 24 45.9**	**-1.1**
POWZ				S	**Sn**	**00 24 51.3**	**-2.0**
HOWZ	**Holdsworth Sta**	**0.39**	**238**	P	**Pn**	**00 24 48.3**	**+0.5**
TMWZ	**Te Maipa**	**0.42**	**187**	P	**Pn**	**00 24 49.7**	**+1.6**
DVHZ	**Dannevirke**	**0.42**	**22**	P	**Pn**	**00 24 47.5**	**-0.7**
DVHZ				S	**Sn**	**00 24 53.8**	**-1.4**
ANWZ	**Angora Road**	**0.46**	**60**	P	**Pn**	**00 24 49.2**	**+0.7**
ANWZ				S	**Sn**	**00 24 57.8**	**+2.0**
MTW	**Mount Morrison**	**0.58**	**216**	P	**Pn**	**00 24 51.1**	**+1.0**
MTW				S	**Sn**	**00 25 01.1**	**+2.5**
OGWZ	**Otaki Gorge**	**0.61**	**258**	P	**Pn**	**00 24 50.9**	**+0.5**
TSZ	**Takapari Road**	**0.63**	**0**	P	**Pn**	**00 24 50.2**	**-0.6**
PRHZ	**Porangahau**	**0.67**	**51**	P	**Pn**	**00 24 51.8**	**+0.5**
OHWZ	**Ohakea**	**0.69**	**315**	P	**Pn**	**00 24 51.8**	**+0.3**
WPHZ	**Waipukurau**	**0.73**	**31**	P	**Pn**	**00 24 52.6**	**+0.6**
TRWZ	**Traveller**	**0.73**	**196**	P	**Pn**	**00 24 53.4**	**+1.3**
CAW	**Cannon Point**	**0.79**	**238**	P	**Pn**	**00 24 53.7**	**+0.8**
PAWZ	**Paruwai Farm**	**0.80**	**210**	P	**Pn**	**00 24 54.0**	**+1.0**
PNHZ	**Pukenui**	**0.80**	**14**	P	**Pn**	**00 24 53.0**	**0.0**
KIW	**Kapiti Island**	**0.81**	**258**	P	**Pn**	**00 24 53.9**	**+0.7**
MSWZ	**Moikau Station**	**0.90**	**216**	P	**Pn**	**00 24 55.1**	**+0.7**
MSWZ	**Moikau Station**	**0.90**	**216**		**Pn**	**00 24 55.1**	**+0.7**
MSWZ					**Sn**	**00 25 03.0**	**-3.3**
PXZ	**Pawanui**	**0.96**	**47**	P	**Pn**	**00 24 55.4**	**+0.3**
PLWZ	**Palliser**	**1.02**	**211**	P	**Pn**	**00 24 56.8**	**+0.6**
PLWZ	**Palliser**	**1.02**	**211**		**Pn**	**00 24 56.7**	**+0.6**
PLWZ	**Palliser**	**1.02**	**211**		**Pn**	**00 24 56.7**	**+0.6**
PLWZ				Sn	**Sn**	**00 25 10.9**	**+1.6**
WEL	**Wellington**	**1.08**	**236**	P	**Pn**	**00 24 57.5**	**+0.7**
BHW	**Baring Head**	**1.09**	**229**	P	**Pn**	**00 24 57.5**	**+0.6**
BHW	**Baring Head**	**1.09**	**229**		**Pn**	**00 24 57.5**	**+0.6**
KRHZ	**Kereru**	**1.09**	**17**	P	**Pn**	**00 24 57.1**	**+0.1**
SNZO	**South Karori**	**1.13**	**236**		**Pn**	**00 24 58.1**	**+0.6**
SNZO					**Sn**	**00 25 13.1**	**+1.3**
KAHZ	**Kahuranaki**	**1.14**	**38**	P	**Pn**	**00 24 57.9**	**+0.3**
BHHZ	**Black Hill Sta**	**1.20**	**4**	P	**Pn**	**00 24 58.7**	**+0.1**
MOVZ	**Moawhango**	**1.29**	**353**	P	**Pn**	**00 24 59.9**	**+0.1**
KWHZ	**Kaweka Forest**	**1.32**	**16**	P	**Pn**	**00 25 00.2**	**+0.1**
CKHZ	**Cape Kidnapper**	**1.34**	**40**	P	**Pn**	**00 25 00.2**	**-0.2**
MTVZ	**Mangateitei**	**1.36**	**344**	P	**Pn**	**00 25 01.2**	**+0.5**
MCHZ	**McNeill Hill**	**1.37**	**25**	P	**Pn**	**00 25 01.0**	**+0.2**
TCW	**Tory Channel**	**1.37**	**247**	P	**Pn**	**00 25 01.2**	**+0.4**
TRVZ	**Turoa**	**1.43**	**347**	P	**Pn**	**00 25 02.2**	**+0.4**
WHAZ	**Whangaehu Hut**	**1.44**	**349**	P	**Pn**	**00 25 02.7**	**+0.8**
TUVZ	**Tukino**	**1.44**	**351**	P	**Pn**	**00 25 02.5**	**+0.6**
DRZ	**Dome Shelter**	**1.45**	**348**	P	**Pn**	**00 25 03.0**	**+0.9**
FWVZ	**Far West T-bar**	**1.47**	**348**	P	**Pn**	**00 25 03.0**	**+0.7**
PKVZ	**Pokaka**	**1.48**	**341**	P	**Pn**	**00 25 02.9**	**+0.5**
NGZ	**Ngauruhoe**	**1.54**	**350**	P	**Pn**	**00 25 03.9**	**+0.6**
DUWZ	**D'Urville Isla**	**1.55**	**265**	P	**Pn**	**00 25 03.6**	**+0.4**
BKZ	**Black Stump Fm**	**1.58**	**15**	P	**Pn**	**00 25 03.6**	**-0.1**
BKZ	**Black Stump Fm**	**1.58**	**15**		**Pn**	**00 25 03.5**	**-0.2**
BKZ					**Sn**	**00 25 22.3**	**-0.7**
WTVZ	**West Tongariro**	**1.60**	**350**	P	**Pn**	**00 25 04.8**	**+0.7**
KRVZ	**Karewarewa**	**1.61**	**351**	P	**Pn**	**00 25 04.9**	**+0.7**
ARHZ	**Aropaoanui**	**1.64**	**30**	P	**Pn**	**00 25 04.5**	**+0.1**
TWVZ	**Taurewa**	**1.67**	**346**	P	**Pn**	**00 25 05.4**	**+0.4**
CMWZ	**Cape Campbell**	**1.69**	**231**	P	**Pn**	**00 25 05.9**	**+0.8**
CMWZ	**Cape Campbell**	**1.69**	**231**		**Pn**	**00 25 05.7**	**+0.6**
CMWZ					**Sn**	**00 25 23.2**	**-2.3**
TUWZ	**Tuamarina**	**1.69**	**244**	P	**Pn**	**00 25 05.0**	**-0.1**
TUWZ	**Tuamarina**	**1.69**	**244**		**Pn**	**00 25 05.0**	**-0.1**
LREZ	**Lake Rotokare**	**1.71**	**315**	P	**Pn**	**00 25 07.8**	**+2.4**
RITZ	**Rihia Road**	**1.71**	**357**	P	**Pn**	**00 25 06.2**	**+0.7**
NMHZ	**Naumai**	**1.72**	**23**	P	**Pn**	**00 25 06.1**	**+0.4**
KATZ	**Kakaramea**	**1.73**	**353**	P	**Pn**	**00 25 06.5**	**+0.7**
HATZ	**Hinemaiaia**	**1.80**	**3**	P	**Pn**	**00 25 09.6**	**+2.9**
VRZ	**Vera Road**	**1.82**	**329**	P	**Pn**	**00 25 07.7**	**+0.8**
RATZ	**Rangitukua**	**1.83**	**355**	P	**Pn**	**00 25 07.5**	**+0.4**
BSWZ	**Blackbirch Sta**	**1.87**	**236**	P	**Pn**	**00 25 07.8**	**+0.1**
BSWZ	**Blackbirch Sta**	**1.87**	**236**		**Pn**	**00 25 07.9**	**+0.2**
MRHZ	**Matea Rd**	**1.89**	**11**	P	**Pn**	**00 25 07.8**	**-0.1**
WHHZ	**Waihua**	**1.89**	**32**	P	**Pn**	**00 25 07.9**	**0.0**
PREZ	**Palmer Road**	**1.93**	**314**	P	**Pn**	**00 25 11.1**	**+2.6**
MTHZ	**Maungataniwha**	**1.96**	**21**	P	**Pn**	**00 25 08.7**	**-0.2**
RAHZ	**Arahi**	**1.98**	**26**	P	**Pn**	**00 25 08.7**	**-0.4**
WATZ	**Wairara**	**1.99**	**355**	P	**Pn**	**00 25 09.4**	**+0.1**
DREZ	**Durham Road**	**2.02**	**317**	P	**Pn**	**00 25 12.5**	**+2.8**
NNZ	**Nelson**	**2.02**	**254**	P	**Pn**	**00 25 10.6**	**+1.0**
NNZ	**Nelson**	**2.02**	**254**		**Pn**	**00 25 10.3**	**+0.6**
WHTZ	**Whakaora**	**2.02**	**0**	P	**Pn**	**00 25 10.2**	**+0.4**
KHEZ	**Kahui Hut**	**2.04**	**312**	P	**Pn**	**00 25 12.6**	**+2.5**
NMEZ	**Namu Road**	**2.04**	**308**	P	**Pn**	**00 25 12.7**	**+2.7**
MHEZ	**Mangahewa**	**2.05**	**322**	P	**Pn**	**00 25 12.6**	**+2.5**
KNZ	**Kokohu**	**2.13**	**39**	P	**Pn**	**00 25 10.2**	**-1.0**
PKE	**Pukeiti**	**2.13**	**314**	P	**Pn**	**00 25 14.2**	**+3.0**
NBEZ	**Newall Road No**	**2.15**	**311**	P	**Pn**	**00 25 14.3**	**+2.9**
ALRZ	**Allen Road**	**2.15**	**8**	P	**Pn**	**00 25 11.0**	**-0.5**
MHGZ	**Mahia Peninsul**	**2.15**	**45**	P	**Pn**	**00 25 10.7**	**-0.7**
WPRZ	**Whakapapatarin**	**2.18**	**4**	P	**Pn**	**00 25 12.0**	**+0.1**
SNGZ	**Shannon Statio**	**2.19**	**30**	P	**Pn**	**00 25 11.6**	**-0.4**
KUTZ	**Kaahu Road**	**2.20**	**357**	P	**Pn**	**00 25 12.4**	**+0.2**
PRRZ	**Plateau Road**	**2.22**	**9**	P	**Pn**	**00 25 12.5**	**+0.1**
RTZ	**Ruatahuna**	**2.22**	**21**	P	**Pn**	**00 25 12.1**	**-0.4**
MUGZ	**Murupara**	**2.30**	**16**	P	**Pn**	**00 25 13.1**	**-0.5**
PRGZ	**Paritu Road**	**2.31**	**41**	P	**Pn**	**00 25 12.7**	**-1.0**
HRRZ	**Handcock Road**	**2.31**	**6**	P	**Pn**	**00 25 13.7**	**-0.1**
HIZ	**Hauiti**	**2.34**	**338**	P	**Pn**	**00 25 14.8**	**+0.7**
HIZ	**Hauiti**	**2.34**	**338**		**Pn**	**00 25 15.6**	**+1.5**
HIZ					**Sn**	**00 25 35.3**	**-6.2**
GRRZ	**Galatos Road**	**2.34**	**3**	P	**Pn**	**00 25 17.1**	**+2.9**
TLZ	**Tolley Road**	**2.38**	**352**	P	**Pn**	**00 25 15.4**	**+0.7**
HSRZ	**Hossack Road**	**2.39**	**5**	P	**Pn**	**00 25 14.8**	**0.0**
RRRZ	**Republican Roa**	**2.39**	**11**	P	**Pn**	**00 25 16.8**	**+2.0**
RIGZ	**Rimuhau**	**2.42**	**36**	P	**Pn**	**00 25 14.3**	**-0.9**
RAGZ	**Rawiri**	**2.47**	**28**	P	**Pn**	**00 25 14.8**	**-1.1**
TARZ	**Mount Tarawera**	**2.49**	**10**	P	**Pn**	**00 25 15.7**	**-0.5**
KHZ	**Kahutara**	**2.50**	**226**	P	**Pn**	**00 25 15.7**	**-0.6**
KHZ	**Kahutara**	**2.50**	**226**		**Pn**	**00 25 15.6**	**-0.6**
THZ	**Tophouse**	**2.54**	**244**	P	**Pn**	**00 25 16.4**	**-0.4**
THZ	**Tophouse**	**2.54**	**244**		**Pn**	**00 25 16.7**	**-0.1**
MKRZ	**Makatiti**	**2.58**	**9**	P	Pn	00 25 23.3	+5.8
URZ	**Urewera**	**2.59**	**21**	Pn	**Pn**	**00 25 16.0**	**-1.5**
	9.4nm,0.3s,baz=248,slow=6.5,SNR=32						
URZ				Sn	**Sn**	**00 25 45.8**	**-1.9**
	38nm,0.3s,baz=252,slow=2.9,SNR=15						
URZ				LR	LR	00 26 37.4	
	comp=Z,613nm,18.2s,baz=229,slow=48						
URZ	**Urewera**	**2.59**	**21**	P	**Pn**	**00 25 16.0**	**-1.5**
URZ	**Urewera**	**2.59**	**21**		**Pn**	**00 25 16.3**	**-1.2**
OMRZ	**Omania**	**2.60**	**7**	P	**Pn**	**00 25 19.5**	**+1.7**
QRZ	**Quartz Range**	**2.61**	**266**	P	**Pn**	**00 25 17.9**	**+0.2**
QRZ	**Quartz Range**	**2.61**	**266**		**Pn**	**00 25 18.0**	**+0.2**
MWZ	**Matawai**	**2.65**	**28**	P	**Pn**	**00 25 16.9**	**-1.4**
TKGZ	**Te Karaka**	**2.68**	**34**	P	**Pn**	**00 25 17.7**	**-1.1**
CNGZ	**Carnagh Statio**	**2.81**	**39**	P	**Pn**	**00 25 19.8**	**-0.7**
TWGZ	**Tauwhareparae**	**2.96**	**33**	P	**Pn**	**00 25 22.0**	**-0.7**
TOZ	**Tahuroa Road**	**2.98**	**353**	P	**Pn**	**00 25 23.0**	**+0.2**
RUGZ	**Raukumara Rang**	**3.03**	**27**	P	**Pn**	**00 25 22.3**	**-1.4**
GVZ	**Greta Valley S**	**3.15**	**223**	P	**Pn**	**00 25 24.4**	**-0.9**
PUZ	**Puketiti**	**3.17**	**35**	P	**Pn**	**00 25 23.9**	**-1.6**
PKGZ	**Pakihiroa**	**3.25**	**31**	P	**Pn**	**00 25 25.5**	**-1.1**
HAZ	**Te Kaha**	**3.26**	**26**	P	**Pn**	**00 25 25.6**	**-1.0**
DSZ	**Dennistone Nort**	**3.30**	**250**	P	**Pn**	**00 25 27.8**	**+0.5**
WMGZ	**Waiomatatini S**	**3.45**	**34**	P	**Pn**	**00 25 27.5**	**-1.8**
LTZ	**Lake Taylor**	**3.46**	**232**	P	**Pn**	**00 25 28.5**	**-1.0**
LTZ	**Lake Taylor**	**3.46**	**232**		**Pn**	**00 25 28.6**	**-0.8**
MKAZ	**Moumakai**	**3.64**	**350**	P	**Pn**	**00 25 32.2**	**+0.3**
OKCZ	**Okains Bay**	**3.71**	**214**	P	**Pn**	**00 25 31.7**	**-1.3**
AWAZ	**Awhitu Peninsu**	**3.77**	**344**	P	**Pn**	**00 25 34.5**	**+0.9**
MQZ	**McQueen's Vall**	**3.88**	**218**	P	**Pn**	**00 25 33.2**	**-2.1**
MQZ	**McQueen's Vall**	**3.88**	**218**		**Pn**	**00 25 33.2**	**-2.1**
AKCZ	**Akaroa Harbour**	**3.90**	**214**	P	**Pn**	**00 25 34.0**	**-1.5**
WTAZ	**Waiatarua**	**3.91**	**344**	P	**Pn**	**00 25 39.5**	**+3.9**
OXZ	**Oxford**	**3.93**	**227**	P	**Pn**	**00 25 34.6**	**-1.3**
OXZ	**Oxford**	**3.93**	**227**		**Pn**	**00 25 33.8**	**-2.1**
INZ	**Inchbonnie**	**3.94**	**238**	P	**Pn**	**00 25 35.0**	**-1.0**
KUTZ	**Kuaotunu**	**3.95**	**357**	P	**Pn**	**00 25 37.1**	**+1.5**
WVZ	**Waitaha Valley**	**4.57**	**237**	P	**Pn**	**00 25 45.6**	**+1.0**
RPZ	**Rata Peaks**	**4.73**	**229**	Pn	**Pn**	**00 25 46.0**	**-0.9**
	1.9nm,0.3s,baz=219,slow=1.9,SNR=13						
RPZ				Sn	**Sn**	**00 26 37.1**	**-3.4**
	32nm,0.3s

BFZ	**Birch Farm**	**1.56**	**90**	P	Pn	00 34 53.5	-0.7
MHEZ	**Mangahewa**	**1.62**	**4**	P	Pn	00 34 55.8	+0.8
VRZ	**Vera Road**	**1.63**	**16**	P	Pn	00 34 55.5	+0.3
MTVZ	**Mangateitei**	**1.64**	**37**	P	Pn	00 34 55.8	+0.5
PKVZ	**Pokaka**	**1.66**	**33**	P	Pn	00 34 55.9	+0.2
PNHZ	**Pukenui**	**1.72**	**64**	P	Pn	00 34 55.9	-0.6
TRVZ	**Turoa**	**1.74**	**37**	P	Pn	00 34 57.4	+0.5
MOVZ	**Moawhango**	**1.76**	**43**	P	Pn	00 34 57.0	0.0
DRZ	**Dome Shelter**	**1.77**	**37**	P	Pn	00 34 58.5	+1.2
WHVZ	**Whangaehu Hut**	**1.77**	**38**	P	Pn	00 34 58.2	+0.9
FWVZ	**Far West T-bar**	**1.78**	**36**	P	Pn	00 34 58.1	+0.7
KHZ	**Kahutara**	**1.79**	**196**	P	Pn	00 34 58.2	+0.9
TUVZ	**Tukino**	**1.81**	**39**	P	Pn	00 34 58.4	+0.5
NGZ	**Ngauruhoe**	**1.82**	**36**	P	Pn	00 34 58.8	+0.3
BHHZ	**Black Hill Sta**	**1.87**	**51**	P	Pn	00 34 58.2	-0.3
TWVZ	**Taurewa**	**1.88**	**31**	P	Pn	00 34 58.6	-0.1
WTVZ	**West Tongariro**	**1.91**	**35**	P	Pn	00 34 59.4	+0.3
KRVZ	**Karewarewa**	**1.95**	**35**	P	Pn	00 34 59.6	+0.1
KRHZ	**Kereru**	**1.97**	**58**	P	Pn	00 34 59.0	-0.9
KATZ	**Kakaramea**	**2.07**	**34**	P	Pn	00 35 01.5	+0.2
KWHZ	**Kaweka Forest**	**2.13**	**54**	P	Pn	00 35 01.2	-0.8
RITZ	**Rihia Road**	**2.14**	**37**	P	Pn	00 35 03.8	+1.7
PXZ	**Pawanui**	**2.14**	**73**	P	Pn	00 35 00.8	-1.3
HIZ	**Hauiti**	**2.24**	**13**	P	Pn	00 35 03.3	-0.1
KAHZ	**Kahuranaki**	**2.24**	**67**	P	Pn	00 35 02.7	-0.8
MCHZ	**McNeill Hill**	**2.29**	**58**	P	Pn	00 35 05.3	+1.2
WATZ	**Wairara**	**2.31**	**31**	P	Pn	00 35 05.6	+1.1
BKZ	**Black Stump Fm**	**2.34**	**50**	P	Pn	00 35 03.8	-0.9
GVZ	**Greta Valley S**	**2.43**	**200**	P	Pn	00 35 06.1	0.0
LTZ	**Lake Taylor**	**2.53**	**214**	P	Pn	00 35 07.6	+0.1
NMHZ	**Naumai**	**2.57**	**52**	P	Pn	00 35 06.9	-1.1
TLZ	**Tolley Road**	**2.58**	**24**	P	Pn	00 35 08.0	-0.1
MTHZ	**Maungataniwha**	**2.75**	**49**	P	Pn	00 35 08.9	-1.5
RAHZ	**Arahi**	**2.85**	**52**	P	Pn	00 35 17.0	+5.3
INZ	**Inchbonnie**	**2.89**	**225**	P	Pn	00 35 12.5	+0.3
RTZ	**Ruatahuna**	**2.99**	**47**	P	Pn	00 35 16.0	+2.3
OXZ	**Oxford**	**3.08**	**211**	P	Pn	00 35 13.5	-1.3
TOZ	**Tahuroa Road**	**3.13**	**19**	P	Pn	00 35 15.5	0.0
OKCZ	**Okains Bay**	**3.14**	**195**	P	Pn	00 35 14.7	-1.0
MQZ	**McQueen's Vall**	**3.22**	**200**	P	Pn	00 35 14.9	-1.8
MHGZ	**Mahia Peninsul**	**3.25**	**63**	P	Pn	00 35 14.9	-2.2
AKCZ	**Akaroa Harbour**	**3.31**	**196**	P	Pn	00 35 16.9	-1.2
MARZ	**Manawahe**	**3.32**	**36**	P	Pn	00 35 19.8	+1.7
RAGZ	**Rawiri**	**3.32**	**50**	P	Pn	00 35 22.1	+3.9
RIGZ	**Rimuhau**	**3.40**	**55**	P	Pn	00 35 16.7	-2.4
MWZ	**Matawai**	**3.49**	**49**	P	Pn	00 35 25.5	+5.0
AWAZ	**Awhitu Peninsu**	**3.64**	**6**	P	Pn	00 35 22.5	-0.1
MKAZ	**Moumakai**	**3.66**	**12**	P	Pn	00 35 22.6	-0.2
TWGZ	**Tauwhareparae**	**3.86**	**51**	P	Pn	00 35 23.5	-2.1
FOZ	**Fox Glacier**	**4.32**	**228**	P	Pn	00 35 31.3	-0.4
ODZ	**Otahua Downs**	**5.07**	**210**	P	Pn	00 35 40.8	-1.2
JCZ	**Jackson Bay**	**5.24**	**228**	P	Pn	00 35 43.5	-0.9

IDC 21 00:45:52.4±1.7, 31°39'S×58°82'E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.5/41, mbtmp3.8/3, Error ellipse: s-maj=72.1km s-min=35.7km az=14.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	**Cape Leeuwin H**	**45.96**	**110**	T	T	01 43 28.2	
	baz=257,slow=75,SNR=6.5						
H01W3	**Cape Leeuwin H**	**45.96**	**110**	T	T	01 43 29.0	
	baz=257,slow=75,SNR=7.3						
H01W1	**Cape Leeuwin H**	**45.97**	**110**	T	T	01 43 29.6	
	baz=257,slow=75,SNR=7.6						
CMAR	**Chiang Mai Arr**	**62.77**	**43**	P	P	00 56 19.7	-0.1
	1.4nm,0.5s,baz=228,slow=6.5,SNR=8.4						
ASAR	**Alice Springs**	**65.88**	**104**	P	P	00 56 40.4	+0.1
	0.4nm,0.6s,baz=242,slow=5.9,SNR=5.4						
TORD	**Torodi Ar. Bea**	**70.42**	**300**	P	P	00 57 08.8	0.0
	0.3nm,0.7s,baz=125,slow=6.1,SNR=3.7						
YKA	**Yellowknife Ar**	**148.59**	**354**	PKPbc	PKPbc	01 05 40.0	-0.6
	0.8nm,0.6s,baz=358,slow=2.7,SNR=21						

*IDC **21** 00:57:47.4±1.0, 9°05'N×138°31'E, h0km, mb4.1/9, mb1 4.3/9, mb1mx3.9/44, mbtmp4.1/9, MS3.3/11, Ms1 3.3/11, ms1mx3.2/40, Error ellipse: s-maj=35.2km s-min=20.1km az=84.0*

*NEIC **21** 00:57:52.4±2.1, 9°.1'N±0°.1×138°.2'E±0°.1, h34km±5km, mb4.4/7, Error ellipse: s-maj=18.3km s-min=13.4km az=136.0*

ISC 21 00:57:53.1±1.0, 9°04'N±0°09'×138°1'E±0°2', h35km, n31, σ1s51/18, mb4.3/11, MS3.2/7, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**8.07**	**55**	LR	LR	01 02 35.5	
	comp=Z,158nm,19.0s,baz=182,slow=37						
JAY	**Jayapura**	**11.77**	**167**	LR	LR	01 04 11.2	
	comp=Z,170nm,20.3s,baz=262,slow=33						
DAV	**Davao City (W)**	**12.51**	**262**	LR	LR	01 04 42.3	
	comp=Z,119nm,20.2s,baz=90,slow=32						
FAKI	**Fak Fak**	**13.21**	**206**	Pn	**Pn**	**01 01 01.3**	**+2.9**
FAKI				Sn	**Sn**	**01 03 20.8**	**-3.4**
KRVT	**Keravat (AS076**	**19.23**	**133**	LR	LR	01 07 60.0	
	comp=Z,175nm,20.5s,baz=323,slow=32						
YULB	**Yu-li**	**21.48**	**314**	P	**P**	**01 02 36.9**	**-1.9**
JNU	**Nakatsue**	**24.87**	**346**	LR	LR	01 11 21.9	
	comp=Z,65nm,19.2s,baz=169,slow=33						
MJAR	**Matsushiro Arr**	**27.38**	**0**	LR	LR	01 13 09.3	
	comp=Z,35nm,20.8s,baz=120,slow=34						
HNR	**Honiara**	**28.49**	**130**	LR	LR	01 15 00.3	
	comp=Z,64nm,18.8s,baz=342,slow=36						
WRA	**Warramunga Arr**	**29.03**	**187**	P	**P**	**01 03 50.0**	**-0.1**
	0.6nm,0.8s,baz=6.1,slow=9.4,SNR=4.8						
H11S3	**WAKE ISLAND Hy**	**29.31**	**68**	T	T	01 35 06.6	
	baz=256,slow=73,SNR=10.0						
H11S1	**WAKE ISLAND Hy**	**29.33**	**68**	T	T	01 35 06.9	
	baz=256,slow=73,SNR=7.6						
H11S2	**WAKE ISLAND Hy**	**29.33**	**68**	T	T	01 35 10.8	
	baz=256,slow=73,SNR=8.1						
KSRS	**Korea Array**	**29.74**	**344**	LR	LR	01 15 40.2	
	comp=Z,54nm,18.6s,baz=174,slow=36						
H11N1	**WAKE ISLAND Hy**	**29.83**	**66**	T	T	01 35 03.0	
	baz=254,SNR=3.6						
H11N2	**WAKE ISLAND Hy**	**29.84**	**66**	T	T	01 35 03.9	
	baz=254						
H11N3	**WAKE ISLAND Hy**	**29.85**	**66**	T	T	01 35 04.2	
	baz=254						
ASAR	**Alice Springs**	**32.76**	**187**	P	**P**	**01 04 22.5**	**-0.4**
	0.9nm,0.6s,baz=16,slow=12,SNR=7.6						
ASAR				LR	LR	01 18 03.6	
	comp=Z,52nm,19.5s,baz=41,slow=37						
CMAR	**Chiang Mai Arr**	**39.05**	**288**	P	**P**	**01 05 17.6**	**+0.6**
	1.9nm,0.3s,baz=91,slow=7.0,SNR=7.2						
CMAR				LR	LR	01 20 06.0	
	comp=Z,22nm,20.2s,baz=66,slow=34						
SONM	**Songino Array**	**47.02**	**331**	P	**P**	**01 06 22.0**	**+0.8**
	4.2nm,1.0s,baz=135,slow=5.3,SNR=18						
SONM				LR	LR	01 25 55.3	
	comp=Z,60nm,20.8s,baz=141,slow=36						
MK31	**Makanchi Array**	**60.32**	**319**	P	**P**	**01 07 57.7**	**-0.8**
MKAR	**Makanchi Array**	**60.32**	**319**	P	**P**	**01 07 59.4**	**+0.8**
	5.2nm,0.9s,baz=107,slow=8.1,SNR=35						
MAKZ	**Makanchi**	**60.53**	**319**	P	**P**	**01 07 59.4**	**-0.5**
ZALV	**Zalesovo Beam**	**61.62**	**327**	P	**P**	**01 08 06.8**	**-0.3**
	0.8nm,0.4s,baz=115,slow=5.4,SNR=4.4						
KURK	**Kurchatov**	**63.91**	**322**	P	**P**	**01 08 21.4**	**-1.1**
BRVK	**Borovoye**	**69.52**	**323**	P	**P**	**01 08 58.7**	**+0.5**
BRVK				IAmb	IAmb	01 09 10.7	
	comp=Z,4.6nm,1.1s						
HRA	**Herat**	**73.27**	**303**	P	**P**	**01 09 20.9**	**-0.5**
HRA				IAmb	IAmb	01 09 22.6	
	comp=Z,3.7nm,1.1s						
ABKAR	**Akbulak array**	**75.45**	**319**	P	**P**	**01 09 33.7**	**+0.1**
ILAR	**Eielson Array**	**75.51**	**25**	P	**P**	**01 09 32.0**	**-1.7**
	comp=Z,0.8nm,0.7s,baz=247,slow=5.5,SNR=9.9						
KIRV	**Kirov**	**81.65**	**328**	P	**P**	**01 10 09.3**	**+1.8**
	comp=Z,8.9nm,0.6s,baz=80,slow=3.0,SNR=3.8						
YKA	**Yellowknife Ar**	**89.91**	**26**	P	**P**	**01 10 48.3**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=288,slow=5.2,SNR=4.9						

TIR 21 00:58:57.3, 41°28N×19°59E, h19km, Md2.3/4, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.22**	**72**	*i* PG	Pg	00 59 02.7	+0.1
TIR				*i* SG	Sg	00 59 06.9	+0.7
PHP	**Peshkopia**	**0.76**	**57**	*i* PG	Pn	00 59 13.0	0.0
PHP				*i* SG	Sn	00 59 23.6	-0.3
PUK	**Puka**	**0.80**	**16**	*i* PG	Pg	00 59 13.0	+0.1
PUK				*i* SG	Sn	00 59 24.8	-0.1
BCI	**Bajram Curri**	**1.14**	**18**	*i* PG	Pg	00 59 19.4	0.0
BCI				*i* SG	Sg	00 59 35.6	+1.2

ROM 21 01:00:16.6±0.1, 43°.386N±0°.004×12°.510E±0°.004, h7km, ML1.1/2, Error ellipse: s-maj=0.3km s-min=0.1km az=10.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.05**	**114**	P	Pg	01 00 18.4	+0.1
ATFO				S	Sg	01 00 19.6	+0.1
ATFO	**Monte Foce - G**	**0.05**	**114**	P	Pg	01 00 18.4	+0.1
ATFO	**Monte Foce - G**	**0.05**	**114**	S	Sg	01 00 19.6	+0.1
ATVO	**AVT- Monte Val**	**0.07**	**267**	P	Pg	01 00 18.8	+0.2
ATVO				S	Sg	01 00 20.2	+0.2
ATVO				AML	AML		
	comp=E,163μm,0.3s						
ATVO				AML	AML		
	comp=N,140μm,0.2s						
ATVO	**AVT- Monte Val**	**0.07**	**267**	P	Pg	01 00 18.8	+0.2
ATVO	**AVT- Monte Val**	**0.07**	**267**	S	Sg	01 00 20.2	+0.2
ATPI	**Pietralunga -**	**0.10**	**309**	P	Pg	01 00 19.3	+0.3
ATPI				S	Sg	01 00 21.3	+0.7
ATPI	**Pietralunga -**	**0.10**	**309**	P	Pg	01 00 19.3	+0.3
ATPI	**Pietralunga -**	**0.10**	**309**	S	Sg	01 00 21.3	+0.7
MURB	**Monte Urbino**	**0.12**	**175**	P	Pg	01 00 19.8	+0.5
MURB				S	Sg	01 00 22.5	+1.4
MURB				AML	AML		
	comp=N,158μm,1.5s						
MURB				AML	AML		
	comp=E,172μm,0.2s						
PIEI	**Pieia**	**0.15**	**7**	P	Pg	01 00 20.3	+0.5
PIEI				S	Sg	01 00 23.2	+1.3
PIEI	**Pieia**	**0.15**	**7**	P	Pg	01 00 20.3	+0.5
FRON	**Frontone**	**0.20**	**50**	P	Pg	01 00 21.2	+0.5
FRON	**Frontone**	**0.20**	**50**	P	Pg	01 00 21.2	+0.5
FRON				S	Sg	01 00 25.0	+1.4
FRON	**Frontone**	**0.20**	**50**	S	Sg	01 00 25.0	+1.4
SSFR	**Montelago di S**	**0.20**	**76**	P	Pg	01 00 21.2	+0.4
SSFR				S	Sg	01 00 24.9	+1.3
SSFR	**Montelago di S**	**0.20**	**76**	P	Pg	01 00 21.2	+0.4
SSFR	**Montelago di S**	**0.20**	**76**	S	Sg	01 00 24.8	+1.3
BADI	**Badiali**	**0.23**	**303**	P	Pg	01 00 21.8	+0.6
BADI				S	Sg	01 00 25.9	+1.6

*IDC **21** 01:13:15.4±15.0, 15°.13S×174°.82W, h183km±152km, mb3.6/7, mb1 4.0/7, mb1mx3.7/35, mbtmp4.1/7, MS3.4/2, Ms1 3.4/2, ms1mx3.1/35, Error ellipse: s-maj=95.8km s-min=23.4km az=157.0*

ISC 21 01:13:16.9±1.7, 15°.0S±0°.6×175°.0W±0°.3, h200km, n20, σ1s06/18, mb3.6/7, 6C-3D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.29**	**71**	LR	LR	01 15 09.5	
	comp=Z,124nm,19.4s,baz=249,slow=36						
WRA	**Warramunga Arr**	**48.45**	**257**	P	**P**	**01 21 40.7**	**+1.1**
	0.8nm,0.3s,baz=98,slow=5.8,SNR=18						
ASAR	**Alice Springs**	**48.79**	**252**	P	**P**	**01 21 42.8**	**+0.7**
	6.2nm,0.5s,baz=88,slow=7.8,SNR=106						
RPN	**Rapa Nui**	**61.84**	**113**	LR	LR	01 42 27.8	
	comp=Z,173nm,20.8s,baz=60,slow=28						
NVAR	**Mina Array Bea**	**75.07**	**43**	P	**P**	**01 24 38.0**	**+0.8**
	1.2nm,0.7s,baz=230,slow=9.5,SNR=9.3						
TXAR	**Lajitas Array**	**81.66**	**57**	P	**P**	**01 25 13.5**	**+0.2**
	0.5nm,0.8s,baz=223,slow=6.6,SNR=6.0						
ILAR	**Eielson Array**	**82.37**	**12**	P	**P**	**01 25 16.7**	**+0.7**
	0.6nm,0.5s,baz=222,slow=5.7,SNR=14						
PDAR	**Pinedale Array**	**83.00**	**42**	P	**P**	**01 25 19.8**	**-0.3**
	1.8nm,0.6s,baz=211,slow=3.0,SNR=22						
YKA	**Yellowknife Ar**	**90.35**	**24**	P	**P**	**01 25 55.9**	**+1.0**
	0.3nm,0.8s,baz=244,slow=4.4,SNR=5.5						
TRPA	**Tarpa**	**143.94**	**340**	⇑P	**PKPdf**	**01 32 27.2**	**-1.3**
ODBI	**Odobesti**	**144.18**	**333**	⇑P	**PKPdf**	**01 32 29.0**	**+0.1**
ARCR	**ARCALIA**	**144.19**	**337**	⇑P	**PKPdf**	**01 32 28.7**	**-0.3**
PLOR	**Plostina**	**144.28**	**334**	⇑P	**PKPdf**	**01 32 28.4**	**-0.8**
HARR	**Harsova**	**144.61**	**331**	⇓P	**PKPdf**	**01 32 29.7**	**-0.1**
DOPR	**Dopca**	**144.71**	**335**	⇓P	**PKPdf**	**01 32 30.0**	**+0.1**
MLR	**Muntele Rosu**	**144.87**	**334**	⇑P	**PKPbc**	**01 32 27.5**	**-2.5**
BRTR	**Keskin Array B**	**144.89**	**320**	PKPbc	**PKPab**	**01 32 30.3**	**0.0**
	1.8nm,0.7s,baz=105,slow=2.3,SNR=15						
DRGR		**145.04**	**339**	⇑P	**PKPab**	**01 32 30.7**	**+0.2**
ARR	**Arges**	**145.51**	**335**	⇓P	**PKiKP**	**01 32 33.4**	**-2.1**
GERES	**GERESS Array B**	**145.51**	**350**	PKPbc	**PKPab**	**01 32 32.0**	**-0.3**
	0.5nm,0.4s,baz=23,slow=4.4,SNR=5.9						

IDC 21 01:22:44.2±2.1, 2°.09N×127°.88E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.5/36, mbtmp3.6/3, MS3.8/2, Ms1 3.8/2, ms1mx3.0/45, Error ellipse: s-maj=144.1km s-min=26.0km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LEM	**Lembang**	**22.08**	**246**	LR	LR	01 36 27.2	
	comp=Z,50nm,19.8s,baz=232,slow=37						
WRA	**Warramunga Arr**	**22.80**	**164**	P	P	01 27 49.3	+0.6
	2.4nm,0.5s,baz=344,slow=11,SNR=16						
ASAR	**Alice Springs**	**26.26**	**167**	P	P	01 28 20.7	-0.7
	0.6nm,0.5s,baz=347,slow=7.2,SNR=9.3						
MKAR	**Makanchi Array**	**59.55**	**325**	P	P	01 32 49.9	+0.2
	0.1nm,0.3s,baz=122,slow=7.3,SNR=4.9						
KIRV	**Kirov**	**82.21**	**329**	LR	LR	02 12 33.4	
	comp=Z,309nm,21.8s,baz=47,slow=36						

*ISK **21** 01:26:28.9, 39°.80N×26°.13E, h5km, ML2.8/30*

*ATH **21** 01:26:29.0, 39°.78N×26°.10E, h30km±1km, ML2.5/4, Error ellipse: s-maj=2.4km s-min=1.0km az=90.0*

*DDA **21** 01:26:29.0, 39°.79N×26°.16E, h7km±2km, ML2.5*

*THE **21** 01:26:29.4, 39°.81N×26°.11E, h5km±2km, ML2.5/5, Error ellipse: s-maj=2.4km s-min=0.7km az=61.0*

ISC 21 01:26:29.2±0.8, 39.79N±0°.02×26.13E±0°.02, h11km±5km, n57, σ0s68/86, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.08**	**312**	PG	**Pg**	**01 26 31.5**	**-0.1**
BOZC				SG	**Sg**	**01 26 33.1**	**-0.3**
BOZC	**Bozcaada**	**0.08**	**312**	*i* P	**Pg**	**01 26 31.6**	**-0.1**
BOZC				IAML		01 26 33.0	
	comp=N,6μm,0.3s						
BOZC				IAML		01 26 33.0	
	comp=E,4μm,0.2s						
BOZC				*i* S	**Sg**	**01 26 33.1**	**-0.3**
EZN	**Ezine**	**0.16**	**77**	P	**Pg**	**01 26 32.6**	**-0.2**
EZN				S	**Sg**	**01 26 35.1**	**-0.1**
	comp=E,2μm,0.1s						
EZN	**Ezine**	**0.16**	**77**	PG	**Pg**	**01 26 32.5**	**-0.2**
EZN				SG	**Sg**	**01 26 35.2**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.33**	**99**	*i* P	**Pg**	**01 26 35.8**	**0.0**
BAYC				*i* S	**Sg**	**01 26 39.7**	**-0.5**
GADA	**Gvkgeada**	**0.44**	**336**	PG	**Pg**	**01 26 37.8**	**0.0**
GADA				SG	**Sg**	**01 26 43.9**	**+0.3**
PRK	**Paraskevi**	**0.56**	**168**	P	**Pb**	**01 26 41.1**	**+0.1**
PRK				S	**Sb**	**01 26 49.5**	**+0.6**
	comp=E,592nm,0.2s						
PRK	**Paraskevi**	**0.56**	**168**	P	**Pb**	**01 26 41.0**	**0.0**
PRK				S	**Sb**	**01 26 49.4**	**+0.4**
PRK				AML	AML	01 26 49.5	
	comp=N,1092μm,0.3s						
PRK				AML	AML	01 26 53.8	
	comp=E,1262μm,0.2s						
SIGR	**SIGRI**	**0.62**	**200**	P	**Pg**	**01 26 40.9**	**-0.3**
SIGR				S	**Sb**	**01 26 50.2**	**-0.5**
	comp=E,780nm,0.4s						
SIGR	**SIGRI**	**0.62**	**200**	P	**Pg**	**01 26 40.9**	**-0.3**
SIGR				S	**Sb**	**01 26 50.1**	**-0.5**
SIGR				AML	AML	01 26 52.6	
	comp=N,1673μm,0.2s						
SIGR				AML	AML	01 26 52.6	
	comp=E,1662μm,0.3s						
SIGR	**SIGRI**	**0.62**	**200**	PG	**Pg**	**01 26 40.9**	**-0.3**
SIGR				SG	**Sb**	**01 26 50.2**	**-0.5**
AYVA	**Ayvalik**	**0.65**	**138**	*i* P	**Pg**	**01 26 41.7**	**-0.1**
AYVA				*i* S	**Sg**	**01 26 50.7**	**+0.3**
AYVA				IAML		01 26 54.0	
	comp=N,402nm,0.3s						
AYVA				IAML		01 26 56.0	
	comp=E,175nm,0.7s						
GELI	**Tayfur-Gelibol**	**0.66**	**24**	PG	**Pg**	**01 26 41.9**	**-0.2**
GELI				SG	**Sb**	**01 26 51.8**	**-0.2**
LPK	**Lapseki**	**0.76**	**40**	PG	**Pg**	**01 26 43.7**	**-0.2**
LPK				SG	**Sb**	**01 26 54.6**	**-0.2**
SMTH	**Samothraki Isl**	**0.82**	**326**	P	**Pg**	**01 26 44.9**	**-0.1**
SMTH				S	**Sg**	**01 26 55.9**	**+0.2**
	comp=E,295nm,0.1s						
SMTH	**Samothraki Isl**	**0.82**	**326**	P	**Pg**	**01 26 44.8**	**-0.1**
SMTH				S	**Sb**	**01 26 56.4**	**-0.1**
SMTH				AML	AML	01 26 59.0	
	comp=E,582μm,0.1s						
SMTH				AML	AML	01 27 00.2	
	comp=N,610μm,0.2s						
EFSA	**Agios Efstrati**	**0.91**	**254**	P	**Pg**	**01 26 46.6**	**-0.2**
EFSA				S	**Sb**	**01 26 59.5**	**+0.3**
ERIK	**Erikli-Kesan**	**0.93**	**19**	PG	**Pg**	**01 26 46.2**	**-0.9**
ERIK				SG	**Sb**	**01 26 59.9**	**+0.3**
DKL	**Dikili**	**0.94**	**140**	PG	**Pb**	**01 26 47.4**	**-0.1**
DKL				SG	**Sb**	**01 27 01.1**	**+1.2**
ENEZ	**Enez**	**0.94**	**1**	PG	**Pb**	**01 26 47.4**	**-0.2**
KRBG	**Karabiga-Canak**	**1.08**	**56**	PG	**Pg**	**01 26 49.3**	**-0.7**
ZEDA	**zmir-Bergama**	**1.10**	**138**	*i* P	**Pg**	**01 26 50.2**	**-0.3**
ZEDA				*i* S	**Sb**	**01 27 05.1**	**+0.4**
ZEDA				IAML		01 27 07.0	
	comp=N,135nm,0.4s						
ZEDA				IAML		01 27 07.0	
	comp=E,76nm,0.5s						
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pg**	**01 26 49.6**	**-0.9**
ALN	**Alexandroupoli**	**1.11**	**357**	P	**Pg**	**01 26 49.6**	**-0.9**
ALN				S	**Sb**	**01 27 05.4**	**+0.6**
ALN				AML	AML	01 27 06.3	
	comp=E,425μm,0.4s						
ALN				AML	AML	01 27 06.8	
	comp=N,431μm,0.5s						
ALN	**Alexandroupoli**	**1.11**	**357**	PN	**Pg**	**01 26 49.8**	**-0.7**
ALN				SN	**Sb**	**01 27 05.6**	**+0.8**
KESN	**Edirne-Kesan**	**1.12**	**22**	*i* P	**Pb**	**01 26 51.0**	**+0.2**
KESN				*i* S	**Sg**	**01 27 05.2**	**-0.2**
KESN				IAML		01 27 08.0	
	comp=E,348nm,0.3s						
KESN				IAML		01 27 09.0	
	comp=N,242nm,0.2s						
BALY	**Balya**	**1.15**	**92**	*i* P	**Pn**	**01 26 51.4**	**+0.1**
BALY				*i* S	**Sg**	**01 27 05.9**	**-0.4**
BALY				IAML		01 27 08.0	
	comp=N,96nm,0.6s						
BALY				IAML		01 27 12.0	
	comp=E,49nm,0.2s						
KNL	**Balıkesir**	**1.18**	**66**	*i* P	**Pg**	**01 26 51.0**	**-0.9**
KNL				*i* S	**Sg**	**01 27 06.8**	**-0.4**
KNL				IAML		01 27 20.0	
	comp=N,89nm,0.6s						
KNL				IAML		01 27 24.0	
	comp=E,166nm,0.9s						
RKY	**Sarkoy-Tekirda**	**1.20**	**42**	PN	**Pg**	**01 26 51.6**	**-0.8**
SART	**Tekirdag**	**1.21**	**42**	*i* P	**Pg**	**01 26 51.7**	**-0.7**
SART				*i* S	**Sn**	**01 27 08.7**	**+0.2**
SART				IAML		01 27 09.0	
	comp=E,91nm,1.0s						
SART				IAML		01 27 09.0	
	comp=N,120nm,1.0s						
STEP	**BALIKESIR_Sava**	**1.30**	**108**	*i* P	**Pb**	**01 26 53.7**	**+0.1**
STEP				*i* S	**Sb**	**01 27 09.9**	**-0.4**
STEP				IAML		01 27 17.0	
	comp=E,58nm,0.6s						
STEP				IAML		01 27 19.0	
	comp=N,92nm,0.6s						
BALB	**Balikesir**	**1.36**	**96**	PN	**Pg**	**01 26 55.0**	**-0.3**
MRMT	**Marmara Adasi**	**1.39**	**54**	PN	**Pn**	**01 26 54.3**	**-0.3**
UKOP	**Uzunkopru-Edir**	**1.39**	**16**	PN	**Pn**	**01 26 54.9**	**+0.3**
CHOS	**Chios island**	**1.40**	**182**	P	**Pn**	**01 26 54.4**	**-0.4**
CHOS				S	**Sg**	**01 27 14.8**	**+0.4**
	comp=N,165nm,0.3s						
CHOS	**Chios island**	**1.40**	**182**	P	**Pn**	**01 26 54.0**	**-0.8**
CHOS	**Chios island**	**1.40**	**182**	PN	**Pb**	**01 26 55.4**	**-0.1**
RDO	**Rodhopi**	**1.43**	**342**	P	**Pn**	**01 26 55.1**	**+0.1**
RDO	**Rodhopi**	**1.43**	**342**	PN	**Pb**	**01 26 55.6**	**-0.2**
BLCB	**Balcova**	**1.57**	**153**	PN	**Pb**	**01 26 58.5**	**+0.2**
TKR	**Tekirdag**	**1.61**	**42**	PN	**Pb**	**01 26 58.7**	**-0.3**
KAVA	**Kavala**	**1.72**	**315**	P	**Pn**	**01 26 59.3**	**+0.1**
KCTX	**Karacabey (Bur**	**1.78**	**74**	PN	**Pb**	**01 27 01.1**	**-0.7**

plane solution: M₀2.80000×10¹⁸ NP1:ϕ₀110.89000°, δ76.62000°, λ-17.67000°. NP2:ϕ₀205.11000°, δ72.82000°, λ-165.99000°. Principal axes: T 2.6283, Plg3.0000°, Azm158.0000°; N 0.3414, Plg68.0000°, Azm255.0000°; P -2.9698, Plg22.0000°, Azm67.0000°;

ISC 21 01:29:11.9±0.2,15'30S±0'03×175'01W±0'03,h10km, h10km:pP-P,n1157,σ2936/655,mb5.3/157,MS6.1/461, 33C-24D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.42**	**67**	P	Pn	01 29 55.9	-10
AFI						01 30 32.5	
AFI	**Afiamalu**	**3.42**	**67**	Pn	Pn	01 29 59.3	-6.1
	32nm,0.3s,baz=305,slow=1.3,SNR=108						
AFI				LR	LR	01 31 15.2	
	comp=Z,236µm,21.9s,baz=180,slow=36						
AFI	**Afiamalu**	**3.42**	**67**	Pn	Pn	01 29 55.9	-9.5
AFI				Sn	Sn	01 30 32.5	-14
NIUE	**Niue**	**6.14**	**128**	P	**Pn**	**01 30 40.1**	**-2.7**
	baz=6.0,SNR=5.1						
NIUE	**Niue**	**6.14**	**128**		Pn	01 30 35.9	-6.9
NIUE				Sn	Sn	01 31 43.8	-9.4
MSVF	**Nonsavu**	**7.08**	**249**	P	**Pn**	**01 30 56.7**	**+1.0**
MSVF						01 32 22.4	
MSVF	**Nonsavu**	**7.08**	**249**	Pn	**Pn**	**01 30 56.7**	**+1.0**
MSVF				Sn	**Sn**	**01 32 22.4**	**+6.0**
FUNA	**Funafuti**	**8.79**	**319**	Pn	**Pn**	**01 31 15.3**	**-3.9**
FUNA				Sn	**Sn**	**01 32 54.4**	**-4.1**
KNTN	**Kanton**	**12.86**	**15**	Pn	Pn	01 32 07.5	-7.4
KNTN				Sn	**Sn**	**01 34 30.8**	**-7.4**
RAO	**Raoul Island**	**14.15**	**190**	LR	LR	01 37 08.9	
	comp=Z,81µm,19.7s,baz=16,slow=34						
RAR	**Rarotonga**	**15.62**	**114**	P	**Pn**	**01 32 45.2**	**-7.1**
RAR						01 35 34.4	
RAR				pmax	pmax		
	comp=Z,64nm,1.1s						
RAR	**Rarotonga**	**15.62**	**114**	Pn	**Pn**	**01 32 53.9**	**+1.6**
	comp=Z,1.3nm,0.3s,baz=298,slow=5.6,SNR=3.1						
RAR	**Rarotonga**	**15.62**	**114**		**Pn**	**01 32 45.2**	**-7.1**
RAR				Sn	Sn	01 35 34.4	-11
SANVU	**Saraoutou**	**17.15**	**267**	Pn	**Pn**	**01 33 10.8**	**-1.1**
DZM	**Mont Dzumac**	**18.81**	**246**	*e*P	**Pn**	**01 33 33.4**	**+1.1**
	comp=Z,2µm,1.2s						
DZM				*e*LR	LR	01 37 29.0	
	comp=Z,201µm,25.1s						
DZM	**Mont Dzumac**	**18.81**	**246**	P	**Pn**	**01 33 33.8**	**+1.5**
	comp=Z,1.8nm,0.3s,baz=80,slow=13,SNR=49						
DZM				LR	LR	01 39 38.0	
	comp=Z,108µm,20.3s,baz=77,slow=33						
DZM	**Mont Dzumac**	**18.81**	**246**	P	**P**	**01 33 29.2**	**-2.7**
DZM				Sn	**S**	**01 37 03.4**	**-2.6**
NOUC	**Port Laguerre**	**18.94**	**246**	P	**Pn**	**01 33 32.4**	**-1.5**
TARA	**Tarawa**	**20.40**	**323**	P	**P**	**01 33 45.9**	**-3.3**
TARA				IAmb	IAmb	01 34 01.4	
	comp=Z,133nm,1.1s						
TARA	**Tarawa**	**20.40**	**323**	IAMs_20	IAMs_20	01 39 36.0	
	comp=Z,68µm,20.0s						
OUZ	**Omahuta**	**22.32**	**205**	IAMs_20	IAMs_20	01 41 08.4	
	comp=Z,79µm,20.0s						
MXZ	**Matakaoa Point**	**22.96**	**194**	IAMs_20	IAMs_20	01 41 55.4	
	comp=Z,98µm,20.0s						
URZ	**Urewera**	**23.91**	**195**	P	**P**	**01 34 24.0**	**-1.9**
	comp=Z,70nm,0.8s,baz=20,slow=5.8,SNR=11						
URZ				LR	LR	01 43 15.1	
	comp=Z,78µm,19.6s,baz=22,slow=35						
URZ	**Urewera**	**23.91**	**195**	P	**P**	**01 34 24.1**	**-1.9**
URZ				IAmb	IAmb	01 34 31.2	
	comp=Z,183nm,1.1s						
URZ				IAMs_20	IAMs_20	01 42 43.7	
	comp=Z,82µm,20.0s						
PAE	**Paea**	**24.50**	**99**	*e*P	**P**	**01 34 33.0**	**+1.4**
	comp=Z,13nm,1.3s						
PAE	**Paea**	**24.50**	**99**	*e*T	T	01 59 29.0	
	comp=Z,22nm,0.4s						
PPT	**Papeete**	**24.50**	**99**	P	**P**	**01 34 33.8**	**+2.2**
	comp=Z,20nm,0.6s,baz=261,slow=19,SNR=2.5						
PPT				LR	LR	01 41 31.1	
	comp=Z,15µm,20.4s,baz=269,slow=30						
PPT2	**Papeete2**	**24.50**	**99**	*e*P	**P**	**01 34 33.5**	**+1.8**
	comp=Z,91nm,1.2s						
PPT2				*e*LQ	LQ	01 39 24.1	
	comp=Z,169µm,25.8s						
PPT2				*e*LR	LR	01 40 27.1	
	comp=Z,58µm,25.8s,baz=264						
PPT2	**Papeete2**	**24.50**	**99**	*e*T	T	01 59 30.4	
	comp=Z,34nm,0.4s						
TIAR	**Tiarei**	**24.72**	**99**	*e*P	**P**	**01 34 35.2**	**+1.6**
	comp=Z,27nm,1.1s						
TIAR	**Tiarei**	**24.72**	**99**	*e*T	T	01 59 45.2	
	comp=Z,15nm,0.3s						
HIZ	**Hauiti**	**24.79**	**199**	P	**P**	**01 34 31.3**	**-2.8**
HIZ				IAMs_20	IAMs_20	01 42 51.6	
	comp=Z,78µm,21.0s						
TVO	**Taravao**	**24.81**	**99**	*e*P	**P**	**01 34 36.2**	**+1.7**
	comp=Z,28nm,1.1s						
TVO	**Taravao**	**24.81**	**99**	*e*T	T	01 59 51.3	
	comp=Z,7.6nm,0.3s						
BKZ	**Black Stump Fm**	**24.92**	**196**	P	**P**	**01 34 32.3**	**-3.0**
BKZ				IAmb	IAmb	01 34 50.6	
	comp=Z,70nm,1.1s						
BKZ				IAMs_20	IAMs_20	01 43 37.6	
	comp=Z,66µm,21.0s						
HNR	**Honiara**	**25.13**	**280**	P	**P**	**01 34 35.7**	**-1.7**
HNR				pmax	pmax		
	comp=Z,44nm,0.7s						
HNR				MLR	MLR		
	comp=Z,70µm,20.0s						
HNR	**Honiara**	**25.13**	**280**	P	**P**	**01 34 41.2**	**+3.8**
	comp=Z,38nm,0.6s,baz=141,slow=14,SNR=7.4						
HNR				LR	LR	01 43 02.4	
	comp=Z,74µm,19.5s,baz=120,slow=33						
HNR	**Honiara**	**25.13**	**280**	P	P	01 34 43.0	+5.6
HNR	**Honiara**	**25.13**	**280**	P	**P**	**01 34 35.7**	**-1.7**
HNR				IAmb	IAmb	01 34 41.2	
	comp=Z,44nm,0.7s						
HNR	**Honiara**	**25.13**	**280**	IAMs_20	IAMs_20	01 42 41.6	
	comp=Z,69µm,20.0s						
TBI	**Tubuai**	**25.38**	**112**	*e*P	**P**	**01 34 41.8**	**+2.3**
	comp=Z,328nm,1.1s						
TBI				*e*LQ	LQ	01 39 47.8	
	comp=Z,164µm,27.2s						
TBI				*e*LR	LR	01 40 58.2	
	comp=Z,20µm,28.2s						
TBI	**Tubuai**	**25.38**	**112**	*e*T	T	02 00 35.4	
	comp=Z,121nm,0.4s						
MEH	**Mehetia**	**25.94**	**99**	*e*T	T	02 01 18.0	
	comp=Z,24nm,0.3s						
BFZ	**Birch Farm**	**26.41**	**195**	P	**P**	**01 34 46.4**	**-2.3**
NNZ	**Nelson**	**27.72**	**199**	IAMs_20	IAMs_20	01 45 28.1	
	comp=Z,64µm,19.0s						
TUWZ	**Tuamarina**	**27.74**	**198**	P	**P**	**01 34 58.0**	**-2.7**
THZ	**Tophouse**	**28.37**	**199**	P	**P**	**01 35 04.4**	**-1.9**
THZ				IAMs_20	IAMs_20	01 45 48.2	
	comp=Z,60µm,22.0s						
LTZ	**Lake Taylor**	**29.49**	**199**	P	**P**	**01 35 14.2**	**-2.0**
LTZ				IAmb	IAmb	01 35 33.2	
	comp=Z,71nm,1.1s						
LTZ				IAMs_20	IAMs_20	01 47 19.4	
	comp=Z,42µm,20.0s						
KWAJ	**Kwajalein Atol**	**29.49**	**323**	IAMs_20	IAMs_20	01 44 20.7	
	comp=Z,55µm,20.0s						
OXZ	**Oxford**	**30.05**	**199**	P	**P**	**01 35 19.3**	**-1.9**
OXZ				IAmb	IAmb	01 35 26.4	
	comp=Z,60nm,0.9s						
OXZ				IAMs_20	IAMs_20	01 47 01.8	
	comp=Z,35µm,18.0s						
RPZ	**Rata Peaks**	**30.72**	**200**	P	**P**	**01 35 28.0**	**+0.9**
	comp=Z,10nm,0.7s,baz=85,slow=1.8,SNR=5.7						
RPZ	**Rata Peaks**	**30.72**	**200**	IAmb	IAmb	01 35 37.6	
	comp=Z,36nm,1.0s						
RPZ				IAMs_20	IAMs_20	01 46 26.5	
	comp=Z,51µm,22.0s						
LBZ	**Lake Benmore**	**31.60**	**200**	IAMs_20	IAMs_20	01 48 16.0	
	comp=Z,56µm,19.0s						
WKZ	**Wanaka**	**32.39**	**201**	IAMs_20	IAMs_20	01 48 29.0	
	comp=Z,50µm,20.0s						
MLZ	**Mavora Lakes**	**33.18**	**202**	P	**P**	**01 35 47.0**	**-1.8**
MLZ				IAmb	IAmb	01 36 04.7	
	comp=Z,62nm,1.1s						
MLZ				IAMs_20	IAMs_20	01 48 08.9	
	comp=Z,46µm,21.0s						
EIDS	**Eidsvold**	**33.25**	**247**	P	**P**	**01 35 50.4**	**+0.8**
	baz=34,SNR=9.1						
EIDS	**Eidsvold**	**33.25**	**247**	P	**P**	**01 35 48.9**	**-0.7**
EIDS				IAMs_20	IAMs_20	01 46 59.6	
	comp=Z,43µm,21.0s						
DCZ	**Deep Cove**	**33.62**	**203**	P	**P**	**01 35 51.0**	**-1.5**
DCZ				IAmb	IAmb	01 35 57.8	
	comp=Z,40nm,1.1s						
DCZ				IAMs_20	IAMs_20	01 50 27.1	
	comp=Z,31µm,20.0s						
WHZ	**Wether Hill Ro**	**33.69**	**202**	P	**P**	**01 35 51.4**	**-1.8**
WHZ				IAMs_20	IAMs_20	01 48 34.4	
	comp=Z,36µm,20.0s						
ARMA	**Armidale**	**34.07**	**238**	P	**P**	**01 35 58.0**	**+1.2**
	baz=34,SNR=10						
ARMA	**Armidale**	**34.07**	**238**	P	**P**	**01 35 55.2**	**-1.6**
ARMA				IAmb	IAmb	01 36 01.9	
	comp=Z,41nm,1.0s						
ARMA				IAMs_20	IAMs_20	01 47 18.2	
	comp=Z,34µm,20.0s						
PATS	**Pohnpei**	**34.38**	**308**	IAMs_20	IAMs_20	01 46 18.8	
	comp=Z,43µm,21.0s						
PYZ	**Puysegur Point**	**34.39**	**203**	IAMs_20	IAMs_20	01 49 57.0	
	comp=Z,36µm,22.0s						
TAOE	**Nuku Hiva Isla**	**34.66**	**83**	*e*T	T	02 12 09.5	
	comp=Z,127nm,0.2s						
TAOE	**Nuku Hiva Isla**	**34.66**	**83**	IAMs_20	IAMs_20	01 46 10.8	
	comp=Z,31µm,21.0s						
RMQ	**Roma**	**35.52**	**246**	P	**P**	**01 36 10.7**	**+1.5**
	baz=36,SNR=13						
CTA	**Charters Tower**	**37.15**	**257**	P	**P**	**01 36 22.6**	**-0.6**
	comp=Z,31nm,0.9s,baz=84,slow=10,SNR=20						
CTAO	**Charters Tower**	**37.15**	**257**	IAMs_20	IAMs_20	01 49 52.3	
	comp=Z,23µm,18.0s						
PMG	**Port Moresby**	**37.38**	**274**	P	**P**	**01 36 23.0**	**-2.2**
PMG				pmax	pmax		
	comp=Z,214nm,1.1s						
PMG	**Port Moresby**	**37.38**	**274**	P	**P**	**01 36 25.1**	**-0.1**
	comp=Z,32nm,0.7s,baz=106,slow=7.4,SNR=4.3						
PMG	**Port Moresby**	**37.38**	**274**	P	**P**	**01 36 23.0**	**-2.2**
PMG	**Port Moresby**	**37.38**	**274**	IAMs_20	IAMs_20	01 48 00.7	
	comp=Z,35µm,22.0s						
CNB	**Canberra Magne**	**37.59**	**231**	P	**P**	**01 36 27.4**	**+0.5**
	baz=38,SNR=13						
CAN	**Canberra**	**37.87**	**232**	IAMs_20	IAMs_20	01 52 40.1	
	comp=Z,30µm,19.0s						
H11S2	**WAKE ISLAND Hy**	**38.10**	**331**	T	T	02 17 02.4	
	baz=149,slow=76,SNR=495						
H11S3	**WAKE ISLAND Hy**	**38.11**	**331**	T	T	02 17 13.1	
	baz=149,slow=76,SNR=538						
H11S1	**WAKE ISLAND Hy**	**38.12**	**331**	T	T	02 17 13.5	
	baz=149,slow=76,SNR=716						
MTSU	**Mount Surprise**	**39.00**	**260**	P	**P**	**01 36 40.1**	**+1.1**
	baz=39,SNR=46						
H11N3	**WAKE ISLAND Hy**	**39.07**	**332**	T	T	02 18 27.5	
	baz=151,slow=76,SNR=1552						
H11N1	**WAKE ISLAND Hy**	**39.08**	**332**	T	T	02 18 16.2	
	baz=151,slow=76,SNR=1339						
H11N2	**WAKE ISLAND Hy**	**39.09**	**332**	T	T	02 18 16.0	
	baz=151,slow=76,SNR=1471						
CMSA	**Coxar Meteorol**	**39.27**	**239**	P	**P**	**01 36 41.5**	**+0.5**
	baz=40,SNR=35						
QLP	**Quilpie**	**39.53**	**247**	P	**P**	**01 36 44.0**	**+0.8**
	baz=40,SNR=13						
SDHHI	**Sand Hill**	**39.55**	**30**	P	P	01 36 35.9	-7.7
WRMHI	**West Rim**	**39.56**	**30**	P	P	01 36 38.0	-5.6
SBLHI	**Steaming Bluff**	**39.60**	**30**	P	P	01 36 37.9	-6.0
HMH	**Humu'ula Sheep**	**39.65**	**30**	P	P	01 36 36.9	-7.6
HMH				IAmb	IAmb	01 36 48.2	
	comp=Z,161nm,1.2s						
COEN	**Coen**	**40.44**	**266**	P	**P**	**01 36 52.4**	**+1.6**
	baz=41,SNR=17						
COEN	**Coen**	**40.44**	**266**	P	**P**	**01 36 49.2**	**-1.7**
COEN				IAmb	IAmb	01 36 54.9	
	comp=Z,62nm,1.0s						
TOO	**Toolangi**	**41.33**	**230**	P	**P**	**01 36 58.1**	**0.0**
	baz=42,SNR=41						
TOO	**Toolangi**	**41.33**	**230**	P	**P**	**01 36 55.9**	**-2.2**
TOO				pmax	pmax		
	comp=Z,209nm,1.2s						
TOO				MLR	MLR		
	comp=Z,25µm,20.0s						
TOO	**Toolangi**	**41.33**	**230**	P	**P**	**01 36 55.9**	**-2.2**
TOO				IAMs_20	IAMs_20	01 53 42.8	
	comp=Z,25µm,20.0s						
STKA	**Stephens Creek**	**42.75**	**239**	P	**P**	**01 37 10.5**	**+0.9**
	baz=43,SNR=41						
STKA	**Stephens Creek**	**42.75**	**239**	P	**P**	**01 37 07.9**	**-1.8**
STKA				pmax	pmax		
	comp=Z,26nm,1.2s						
STKA	**Stephens Creek**	**42.75**	**239**	P	**P**	**01 37 10.2**	**+0.5**
	comp=Z,24nm,0.9s,baz=64,slow=7.3,SNR=17						
STKA				LR	LR	01 53 00.9	
	comp=Z,27µm,21.3s,baz=78,slow=34						
STKA	**Stephens Creek**	**42.75**	**239**	P	**P**	**01 37 07.9**	**-1.8**
QIS	**Mount Isa**	**43.39**	**256**	P	**P**	**01 37 16.7**	**+1.6**
	baz=44,SNR=4.2						
ARPS	**Mount Arapiles**	**43.81**	**232**	P	**P**	**01 37 18.9**	**+0.7**
	baz=44,SNR=16						
JAY	**Jayapura**	**45.44**	**282**	P	**P**	**01 37 32.7**	**+1.1**
	comp=Z,16nm,0.9s,baz=115,slow=17,SNR=2.0						
JAY				LR	LR	01 55 01.2	
	comp=Z,9µm,21.2s,baz=93,slow=34						
GENI	**Genyem**	**45.92**	**281**	P	P	01 37 39.8	+4.5
	comp=Z,4µmcomp=Z,8µmcomp=Z,310nm,1.4s						
SMPI	**Sarmi**	**47.50**	**282**	P	P	01 37 51.5	+3.9
BBOO	**Buckleboo**	**47.52**	**239**	P	**P**	**01 37 48.2**	**+0.6**
	baz=48,SNR=7.7						
BBOO	**Buckleboo**	**47.52**	**239**	P	**P**	**01 37 45.3**	**-2.3**
WR0	**Warramunga Arr**	**48.16**	**257**	IAMs_20	IAMs_20	01 55 17.1	
	comp=Z,18µm,22.0s						
WR9	**Warramunga Arr**	**48.19**	**257**	IAMs_20	IAMs_20	01 55 06.7	
	comp=Z,25µm,22.0s						
WR8	**Warramunga Arr**	**48.20**	**257**	IAMs_20	IAMs_20	01 55 18.1	
	comp=Z,19µm,22.0s						
WR7	**Warramunga Arr**	**48.22**	**257**	IAMs_20	IAMs_20	01 55 54.7	
	comp=Z,17µm,21.0s						
WR6	**Warramunga Arr**	**48.24**	**257**	IAMs_20	IAMs_20	01 55 07.3	
	comp=Z,27µm,22.0s						
WR5	**Warramunga Arr**	**48.27**	**257**	IAMs_20	IAMs_20	01 55 55.8	
	comp=Z,17µm,21.0s						
WR4	**Warramunga Arr**	**48.29**	**257**	IAMs_20	IAMs_20	01 55 20.4	
	comp=Z,17µm,22.0s						
WC3	**Warramunga Arr**	**48.32**	**257**	IAMs_20	IAMs_20	01 55 57.3	
	comp=Z,17µm,21.0s						
WB5	**Warramunga Arr**	**48.33**	**257**	IAMs_20	IAMs_20	01 55 57.5	
	comp=Z,17µm,21.0s						
WB3	**Warramunga Arr**	**48.34**	**257**	IAMs_20	IAMs_20	01 55 57.7	
	comp=Z,17µm,21.0s						
WRAB	**Tennant Creek**	**48.34**	**257**	*e*P	**P**	**01 37 54.6**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,84nm,1.2s						
WRAB	**Tennant Creek**	**48.34**	**257**	IAMs_20	IAMs_20	01 55 57.6	
	comp=Z,17µm,21.0s						
WB1	**Warramunga Ar.**	**48.35**	**257**	IAMs_20	IAMs_20	01 55 57.9	
	comp=Z,17µm,21.0s						
WC4	**Warramunga Arr**	**48.35**	**257**	IAMs_20	IAMs_20	01 55 58.1	
	comp=Z,18µm,21.0s						
WRA	**Warramunga Arr**	**48.35**	**257**	P	**P**	**01 37 53.7**	**-0.6**
	comp=Z,61nm,1.1s,baz=91,slow=7.9,SNR=40						
WRA				LR	LR	01 56 10.4	
	comp=Z,15µm,21.8s,baz=95,slow=34						
WC1	**Warramunga Arr**	**48.35**	**257**	IAMs_20	IAMs_20	01 55 59.1	
	comp=Z,17µm,21.0s						
AS31	**Alice Springs**	**48.66**	**252**	IAmb	IAmb	01 38 05.4	
	comp=Z,55nm,0.9s						
ASAR	**Alice Springs**	**48.66**	**252**	P	**P**	**01 37 55.8**	**-0.9**
	comp=Z,64nm,0.9s,baz=88,slow=7.9,SNR=98						
ASAR				LR	LR	01 56 40.0	
	comp=Z,43µm,21.4s,baz=85,slow=34						
GUMO	**Guam**	**48.98**	**304**	LR	LR	01 55 35.9	
	comp=Z,12µm,20.1s,baz=123,slow=32						
BAKI	**Biak**	**50.22**	**281**	P	**P**	**01 38 11.0**	**+2.5**
	comp=Z,4µmcomp=Z,146nm,1.2s						
KDU	**Kakadu**	**50.93**	**266**	P	**P**	**01 38 16.6**	**+2.7**
	baz=51,SNR=5.0						
RKPI	**Ransiki, Papua**	**51.94**	**280**	P	P	01 38 24.9	+3.4
	comp=Z,43µmcomp=Z,166nm,1.9s						
MTN	**Manton Dam**	**52.19**	**265**	P	**P**	**01 38 23.9**	**+0.6**
	baz=52,SNR=5.7						
SAUI	**Saumlaki**	**52.97**	**271**	P	**P**	**01 38 31.6**	**+2.4**
	comp=Z,417nm,1.8s						
FAKI	**Fak Fak**	**53.36**	**278**	P	P	01 38 35.5	+3.5
	comp=Z,4µmcomp=Z,3µmcomp=Z,69nm,1.5s						
WRKA	**Warakurna**	**53.77**	**250**	P	**P**	**01 38 35.1**	**+0.1**
	baz=54,SNR=64						
KNRA	**Kununurra**	**54.04**	**262**	P	**P**	**01 38 38.7**	**+1.7**
	baz=54,SNR=6.8						
KNRA	**Kununurra**	**54.04**	**262**	P	**P**	**01 38 35.4**	**-1.6**
KNRA				IAMs_20	IAMs_20	01 59 44.9	
	comp=Z,17µm,19.0s						
FORT	**Forrest**	**54.08**	**243**	P	**P**	**01 38 34.0**	**-3.1**
FORT				IAMs_20	IAMs_20	02 00 31.1	
	comp=Z,17µm,19.0s						
SIJI	**Sorong**	**54.91**	**280**	LR	LR	02 03 00.6	
	comp=Z,7µm,18.6s,baz=113,slow=37						
SWI	**Sorong**	**54.91**	**280**	P	**P**	**01 38 46.0**	**+2.6**
	comp=Z,4µmcomp=Z,269nm,1.2s						
FITZ	**Fitzroy Crossi**	**56.71**	**258**	P	**P**	**01 38 58.5**	**+2.3**
	baz=57,SNR=5.6						
FITZ	**Fitzroy Crossi**	**56.71**	**258**	P	**P**	**01 38 54.0**	**-2.2**
FITZ				IAmb	IAmb	01 39 11.0	
	comp=Z,38nm,1.1s						
NLAI	**Namlea**	**58.20**	**276**	P	P	01 39 11.1	+4.3
	comp=Z,3µmcomp=Z,174nm,1.6s						
JCJ	**Chichijima**	**59.17**	**315**	LR	LR	02 00 35.9	
	comp=Z,22µm,20.3s,baz=133,slow=32						
SOEI	**Soe**	**59.38**	**268**	P	**P**	**01 39 16.6**	**+1.4**
	comp=Z,13µmcomp=Z,549nm,1.5s						
SOEI	**Soe**	**59.38**	**268**	P	**P**	**01 39 12.4**	**-2.8**
SOEI				IAMs_20	IAMs_20	02 02 56.2	
	comp=Z,14µm,21.0s						
KMBL	**Kambalda**	**59.39**	**242**	P	**P**	**01 39 15.3**	**+0.4**
	baz=60,SNR=4.7						
SANI	**Sanana**	**59.60**	**277**	P	**P**	**01 39 18.9**	**+2.4**
	comp=Z,4µmcomp=Z,195nm,1.6s						
PSA00	**Pilbara Seismi**	**61.74**	**253**	P	**P**	**01 39 30.0**	**-1.1**
BBSI	**Bau Bau**	**61.98**	**272**	P	**P**	**01 39 35.6**	**+2.8**
	comp=Z,1µmcomp=Z,48nm,1.6s						
KMSI	**Cibinong**	**62.28**	**279**	P	P	01 39 39.4	+4.6
	comp=Z,104nm,0.9s						
KDI	**Kendari**	**62.32**	**274**	P	P	01 39 40.6	+5.5
	comp=Z,3µmcomp=Z,102nm,1.3s						
MEEK	**Meekatharra**	**62.41**	**248**	P	**P**	**01 39 35.7**	**+0.1**
	baz=63,SNR=4.8						
DAV	**Davao City (W)**	**62.91**	**286**	LR	LR	02 05 49.7	
	comp=Z,7µm,18.4s,baz=103,slow=35						
KLBR	**Kellerberrin**	**62.91**	**242**	P	**P**	**01 39 39.0**	**+0.2**
	baz=63,SNR=8.9						
LUWI	**Luwuk**	**62.97**	**277**	P	**P**	**01 39 42.2**	**+2.8**
	comp=Z,8µmcomp=Z,354nm,1.7s						
LUWI	**Luwuk**	**62.97**	**277**	P	**P**	**01 39 37.3**	**-2.1**
SBA	**Scott Base**	**63.23**	**184**	P	**P**	**01 39 40.9**	**+0.9**
SBA				pmax	pmax		
	comp=Z,76nm,1.0s						
SBA	**Scott Base**	**63.23**	**184**	P	**P**	**01 39 40.9**	**+0.9**
VNDA	**Vanda**	**63.33**	**185**	P	**P**	**01 39 38.3**	**-2.4**
VNDA				pmax	pmax		
	comp=Z,64nm,1.1s						
VNDA	**Vanda**	**63.33**	**185**	P	**P**	**01 39 42.0**	**+1.3**
	comp=Z,24nm,1.0s,baz=22,slow=5.5,SNR=16						
VNDA				LR	LR	02 01 03.9	
	comp=Z,5µm,21.6s,baz=27,slow=30						
VNDA	**Vanda**	**63.33**	**185**	P	**P**	**01 39 38.3**	**-2.4**
KCP	**Kidapawan**	**63.34**	**286**	*e*P	P	01 39 45.9	+4.0
APSI	**Ampana**	**64.08**	**277**	P	**P**	**01 39 48.9**	**+2.2**
	comp=Z,4µmcomp=Z,209nm,1.4s						
MRSI	**Marisa**	**64.20**	**278**	P	**P**	**01 39 50.6**	**+3.1**
	comp=Z,3µmcomp=Z,101nm,1.4s						
BKSI	**Bulukumba**	**64.39**	**271**	P	**P**	**01 39 51.7**	**+3.0**
	comp=Z,3µmcomp=Z,2µmcomp=Z,56nm,1.4s						
MORW	**Morawa**	**64.52**	**245**	P	**P**	**01 39 47.2**	**-2.2**
MORW				IAmb	IAmb	01 40 02.8	
	comp=Z,27nm,1.1s						
BNSI	**Bone**	**64.63**	**272**	P	**P**	**01 39 51.7**	**+1.4**
	comp=Z,2µmcomp=Z,129nm,1.4s						
PLAI	**Plampang**	**65.83**	**267**	P	**P**	**01 40 00.6**	**+2.4**
ADK	**Adak**	**66.91**	**359**	IAMs_20	IAMs_20	02 02 14.7	
	comp=Z,16µm,22.0s						
ATKA	**Atka Island**	**67.22**	**1**	IAMs_20	IAMs_20	02 01 23.6	
	comp=Z,11µm,22.0s						
MJAR	**Matsushiro Arr**	**67.86**	**321**	P	**P**	**01 40 09.6**	**-1.0**
	comp=Z,2.7nm,0.8s,baz=153,slow=6.8,SNR=4.0						
MJAR				LR	LR	02 04 32.5	
	comp=Z,12µm,21.8s,baz=125,slow=31						
MAT	**Matsushiro**	**67.87**	**321**	P	**P**	**01 40 10.6**	**0.0**
MAT				S	**S**	**01 49 14.6**	**+5.4**
MJB9	**Matsu-Tunnel**	**67.87**	**321**	IAMs_20	IAMs_20	02 04 00.3	
	comp=Z,17µm,22.0s						
NIKH	**Nikolski High**	**68.19**	**4**	IAMs_20	IAMs_20	02 03 30.9	
	comp=Z,9µm,20.0s						
SMY	**Shemya**	**68.39**	**353**	IAMs_20	IAMs_20	02 04 09.6	
	comp=Z,14µm,20.0s						
YUK	**Yuzh-Kuril'sk**	**69.00**	**331**	*e*P	**P**	**01 40 13.2**	**-4.3**
YUK				*e*		01 40 42.1	
YUK				*e*S	**S**	**01 49 24.0**	**+1.7**
YUK				*e*		01 49 48.0	
KUR	**Kuril'sk**	**69.01**	**333**	*e*P	**P**	**01 40 17.5**	**0.0**
KUR				*e*		01 40 34.1	
KUR				*e*		01 42 58.9	
KUR				*e*S	S	01 49 29.7	+7.3
KUR				pmax	pmax		
	comp=Z,271nm,1.7s						
KUR				pmax	pmax		
	comp=E,184nm,1.6s						
TGY	**Tagaytay City**

HOPS Hopland Field 72.58 40 IAMs_20 IAMs_20 02 07 10.4
comp=Z,9μm,18.0s
YSS Yuzh-Sakhalins 72.63 331 ⇓*i*P **P** **01 40 41.3 +1.7**
YSS *e* 01 40 59.1
YSS *e* 01 43 22.6
YSS *e*S **S** **01 50 07.6 +3.1**
YSS *e*PS **PnS** **01 50 29.1 -6.3**
YSS *e*SS **SS** **01 54 52.0 +7.7**
YSS pmax pmax
comp=Z,1μm,8.2s
YSS pmax pmax
comp=Z,70nm,1.1s
YSS Yuzh-Sakhalins 72.63 331 P **P** **01 40 35.5 -4.1**
KCPM Cahto Peak 72.69 39 P P 01 40 33.5 -6.8
KCPM IAmb IAmb 01 40 50.3
comp=Z,39nm,1.2s
FMP Fort Macarthur 72.75 47 P **P** **01 40 41.7 +1.1**
baz=238
OSI Osito Audit: C 72.93 46 IAMs_20 IAMs_20 02 07 42.4
comp=Z,9μm,18.0s
OSI Osito Audit: C 72.93 46 P **P** **01 40 42.8 +1.1**
baz=237
KMRM Mail Ridge 72.94 39 P P 01 40 36.8 -4.9
DECC Green Verdugo 73.01 46 P **P** **01 40 42.8 +0.7**
baz=237
PASC Pasadena Art C 73.07 47 IAMs_20 IAMs_20 02 04 34.3
comp=Z,10μm,22.0s
ARVC Arvin 73.14 45 P **P** **01 40 43.5 +0.6**
baz=237,SNR=6.7
109C Camp Elliot, M 73.16 48 IAMs_20 IAMs_20 02 07 18.6
comp=Z,10μm,18.0s
109C Camp Elliot, M 73.16 48 P **P** **01 40 43.8 +0.7**
baz=239
MWC Mount Wilson 73.19 47 IAMs_20 IAMs_20 02 04 38.1
comp=Z,10μm,21.0s
NACB Ninganchiao 73.26 301 IAMs_20 IAMs_20 02 12 19.2
comp=Z,10μm,19.0s
KHMM Horse Mountain 73.33 38 P P 01 40 38.1 -6.0
KHMM IAmb IAmb 01 40 55.3
comp=Z,48nm,1.2s
VES Vestal, Richgr 73.35 45 P **P** **01 40 44.9 +0.8**
baz=236
BAR Barrett 73.36 49 P P 01 40 37.4 -6.9
BAR IAMs_20 IAMs_20 02 04 29.7
comp=Z,10μm,21.0s
VOG Valley Oaks Go 73.42 44 P **P** **01 40 45.2 +0.7**
baz=236
MURC Murrieta 73.47 47 P **P** **01 40 45.5 +0.6**
baz=238,SNR=7.9
O02D Mt. Diablo Mer 73.47 39 P **P** **01 40 46.1 +1.3**
baz=233,SNR=31
BFSC Mount Baldy Ra 73.47 47 P **P** **01 40 45.3 +0.2**
baz=238,SNR=11
EDW2 Edwards Air Fo 73.58 46 P **P** **01 40 46.2 +0.6**
baz=238,SNR=42
MONP2 Monument Peak 73.65 48 P **P** **01 40 46.8 +0.6**
baz=239,SNR=15
YHNB Yeheng 73.66 302 IAMs_20 IAMs_20 02 09 29.6
comp=Z,8μm,19.0s
ISA Isabella, Lake 73.67 45 IAMs_20 IAMs_20 02 06 34.3
comp=Z,11μm,20.0s
ISA Isabella, Lake 73.67 45 P **P** **01 40 47.1 +1.0**
baz=237,SNR=28
SII Sitkinak Islan 73.68 12 IAMs_20 IAMs_20 02 08 06.9
comp=Z,10μm,19.0s
TATO Taipei 73.70 302 IAMs_20 IAMs_20 02 12 07.4
comp=Z,8μm,19.0s
IKP In-Ko-Pah, Jac 73.76 49 P **P** **01 40 47.5 +0.8**
baz=239,SNR=12
PFO Pinyon Flats O 74.00 48 ⇓*e*P **P** **01 40 49.2 +1.1**
PFO pmax pmax
comp=Z,29nm,1.2s
PFO Pinyon Flats O 74.00 48 P **P** **01 40 49.1 +1.1**
comp=Z,14nm,1.1s,baz=249,slow=3.8,SNR=18
PFO Pinyon Flats O 74.00 48 IAMs_20 IAMs_20 02 07 25.5
comp=Z,11μm,18.0s
PFO Pinyon Flats O 74.00 48 P **P** **01 40 48.8 +0.7**
baz=239,SNR=13
XPFO Pion Flat 74.00 48 P P 01 40 41.8 -6.4
XPFO Pion Flat 74.00 48 IAMs_20 IAMs_20 02 08 54.5
comp=Z,12μm,18.0s
BBRC Big Bear Solar 74.00 47 P **P** **01 40 48.8 +0.6**
baz=238
N02D Trinity Center 74.01 39 P **P** **01 40 49.1 +1.2**
baz=233,SNR=8.5
SBUM Sibu 74.07 277 P **P** **01 40 47.8 -1.0**
SBUM Sibu 74.07 277 P P 01 40 54.0 +5.2
LRMC Laurel Mtn Rad 74.12 46 P **P** **01 40 49.3 +0.5**
baz=238,SNR=22
SWSC Sam W. Stewart 74.13 49 P **P** **01 40 49.7 +1.0**
baz=240,SNR=12
O03E Paynes Creek 74.15 40 P **P** **01 40 49.5 +0.7**
baz=233,SNR=32
SRIG Santa Rosalia 74.15 55 IAMs_20 IAMs_20 02 05 12.3
comp=Z,8μm,20.0s
M02C Callahan 74.17 38 P **P** **01 40 50.5 +1.5**
baz=232,SNR=13
L02E Cave Junction 74.20 37 P **P** **01 40 50.4 +1.4**
baz=232
KEBM Edson Butte 74.23 36 P P 01 40 43.5 -5.6
KEBM IAmb IAmb 01 40 59.7
comp=Z,29nm,1.1s
RRX Edison Barstow 74.27 46 P **P** **01 40 50.3 +0.7**
baz=238
MDPB Devils Postpil 74.35 43 IAMs_20 IAMs_20 02 07 45.0
comp=Z,8μm,19.0s
CWC Cottonwood Cre 74.36 45 P **P** **01 40 51.1 +0.9**
baz=237
TEY Ternei 74.36 327 *de*P **P** **01 40 52.3 +2.5**
TEY *e* 01 50 24.3
TEY pmax pmax
comp=Z,200nm,6.7s
TEY MLR MLR
comp=E,400nm,17.0s
TEY MLR MLR
comp=N,200nm,19.0s
TEY MLR MLR
comp=Z,500nm,18.0s
OMMB Old Mammoth Mi 74.39 43 IAMs_20 IAMs_20 02 06 40.1
comp=Z,9μm,20.0s
OHAK Old Harbor 74.47 12 IAMs_20 IAMs_20 02 05 23.0
comp=Z,13μm,22.0s
K02D Willamette Mer 74.50 37 P **P** **01 40 51.9 +1.1**
baz=231,SNR=9.5
MLAC Mammoth, Mammo 74.51 43 P **P** **01 40 52.2 +1.1**
baz=236,SNR=8.4
BELC Belle Mtn. Jos 74.53 48 P **P** **01 40 52.0 +0.8**
baz=239,SNR=27
MPMC Manual Prospec 74.56 45 P **P** **01 40 52.1 +0.7**
baz=238,SNR=47
TIN Tinemaha, Big 74.59 44 P **P** **01 40 52.5 +1.0**
baz=237,SNR=12
DAC Darwin (Calif) 74.61 45 IAMs_20 IAMs_20 02 07 28.0
comp=Z,12μm,20.0s
GSC Goldstone, Bar 74.63 46 IAMs_20 IAMs_20 02 09 03.3
comp=Z,10μm,19.0s
GSC Goldstone, Bar 74.63 46 P **P** **01 40 52.2 +0.5**
baz=238,SNR=34
J01E Myrtle Point 74.64 36 P **P** **01 40 52.5 +1.0**
baz=231
HEC Hector,Ludlow 74.71 47 P **P** **01 40 52.9 +0.7**
baz=239,SNR=24
BC3 Big Chuckawall 74.74 48 P **P** **01 40 53.0 +0.6**
baz=240,SNR=22
QSPA South Pole Qui 74.75 180 P **P** **01 40 49.4 -2.6**
QSPA South Pole Qui 74.75 180 IAMs_20 IAMs_20 02 07 24.9
comp=Z,9μm,20.0s
GLA Glamis 74.89 49 IAMs_20 IAMs_20 02 06 58.1
comp=Z,10μm,20.0s
GLA Glamis 74.89 49 P **P** **01 40 53.5 +0.3**
baz=240,SNR=7.5
L04D Klamath Falls 75.00 38 P **P** **01 40 54.6 +0.8**
baz=233,SNR=18
KSRS Korea Array 75.00 316 P P 01 40 57.9 +4.2
comp=Z,1.4nm,0.8s,baz=106,slow=7.9,SNR=3.0
KSRS LR LR 02 11 00.6
comp=Z,8μm,19.4s,baz=130,slow=34
M04C Macdoel 75.01 38 P **P** **01 40 54.9 +1.0**
baz=233,SNR=13
KDAK Kodiak Island 75.14 12 LR LR 02 07 01.8
comp=Z,8μm,21.0s,baz=224,slow=30
KDAK Kodiak Island 75.14 12 IAMs_20 IAMs_20 02 06 05.5
comp=Z,10μm,22.0s
GRAC Grapevine Rang 75.14 44 P **P** **01 40 55.5 +0.9**
baz=237,SNR=15
GMRC Granite Mounta 75.17 47 P **P** **01 40 55.0 +0.1**
baz=239,SNR=29

FURC Furnace Creek, 75.20 45 P **P** **01 40 55.4 +0.5**
baz=238,SNR=21
IRM Iron Mountain 75.21 48 P **P** **01 40 55.8 +0.7**
baz=240,SNR=42
I02D Swisshome 75.28 35 P **P** **01 40 56.3 +1.2**
baz=231
NVAR Mina Array Bea 75.30 43 P **P** **01 40 56.1 +0.4**
comp=Z,21nm,0.9s,baz=227,slow=8.3,SNR=70
NVAR LR LR 02 07 54.2
comp=Z,8μm,19.6s,baz=236,slow=31
NVAR PKPPKP P'P'df 02 08 28.6 +12
comp=Z,0.3nm,0.9s,baz=91,slow=2.3,SNR=4.2
I03D Drain, OR 75.30 36 P **P** **01 40 56.2 +0.9**
baz=232,SNR=6.5
SHOC Shoshone, Teco 75.31 46 P **P** **01 40 56.1 +0.6**
baz=238,SNR=9.9
TUQ Turquoise Moun 75.31 46 P **P** **01 40 56.0 +0.3**
baz=239,SNR=27
NV11 Mina Array Sit 75.40 43 IAMs_20 IAMs_20 02 07 32.8
comp=Z,8μm,20.0s
Y12C Blythe 75.46 49 IAMs_20 IAMs_20 02 07 06.1
comp=Z,10μm,20.0s
Y12C Blythe 75.46 49 P **P** **01 40 57.1 +0.7**
baz=240,SNR=13
113A Mohawk Valley, 75.53 50 IAMs_20 IAMs_20 02 06 28.0
comp=Z,10μm,20.0s
TYV Tymovskoe 75.56 334 *e*P **P** **01 40 57.3 +0.7**
TYV *e*S **S** **01 50 39.8 +2.5**
TYV pmax pmax
comp=Z,23nm,1.0s
TYV pmax pmax
comp=Z,1μm,5.5s
TYV smax smax
comp=E,2μm,6.3s
K04D Chiloquin, OR 75.57 38 P **P** **01 40 57.9 +0.9**
baz=233
KSM Kuching 75.63 276 P P 01 41 04.0 +6.1
CISI Cisompet, Garu 75.72 266 IAMs_20 IAMs_20 02 12 54.3
comp=Z,8μm,22.0s
J04D Umpqua Nationa 75.73 37 P **P** **01 40 58.8 +0.7**
baz=232,SNR=17
214A Organ Pipe Nat 75.85 51 P P 01 40 53.0 -5.8
214A IAMs_20 IAMs_20 02 06 48.4
comp=Z,10μm,20.0s
214A Organ Pipe Nat 75.85 51 P **P** **01 40 59.6 +0.8**
baz=242,SNR=14
TPNV Topopah Spring 75.88 45 IAMs_20 IAMs_20 02 08 25.4
comp=Z,10μm,20.0s
TPNV Topopah Spring 75.88 45 P **P** **01 40 59.6 +0.6**
baz=238,SNR=38
INCN Inchon 75.88 316 IAMs_20 IAMs_20 02 11 34.9
comp=Z,9μm,20.0s
NEE2 Needles Airpor 75.90 48 P **P** **01 40 59.7 +0.7**
baz=240
I04A Tendick Farm, 75.90 36 P **P** **01 40 59.5 +0.7**
baz=232,SNR=9.2
HSIG 75.93 54 IAMs_20 IAMs_20 02 06 07.5
comp=Z,8μm,20.0s
H04D Lebanon 76.16 36 P **P** **01 41 01.1 +0.9**
baz=232,SNR=5.9
J05D Fort Rock, OR 76.27 37 P **P** **01 41 01.7 +0.7**
baz=233,SNR=35
G03D McMinnville, O 76.30 35 P **P** **01 41 02.1 +1.2**
baz=231
USRK Ussuriysk Ar. 76.37 324 P **P** **01 41 02.0 +0.6**
comp=Z,2.1nm,0.9s,baz=123,slow=10,SNR=3.7
USRK LR LR 02 08 25.3
comp=Z,27μm,22.0s,baz=119,slow=31
SHPR Sheep Range 76.39 46 IAMs_20 IAMs_20 02 09 25.1
comp=Z,8μm,19.0s
W13A Hualapai Mount 76.58 48 IAMs_20 IAMs_20 02 06 42.0
comp=Z,10μm,21.0s
Y14A Wickenburg 76.65 49 IAMs_20 IAMs_20 02 08 11.7
comp=Z,11μm,19.0s
SSE Sheshan 76.66 308 P P 01 41 06.8 +3.5
SSE S **S** **01 50 50.8 +0.6**
SSE pmax pmax
comp=Z,12nm,0.9s
SSE pmax pmax
comp=Z,420nm,8.3s
SSE LR LR
comp=Z,2μm,19.5s
SSE LR LR
comp=Z,3μm,25.2s
I05D Terrebonne, OR 76.84 36 P **P** **01 41 05.1 +0.9**
baz=233,SNR=9.0
F04D Rainier, OR 76.98 34 P **P** **01 41 05.9 +1.1**
baz=231
CNPM China Poot 77.02 12 IAMs_20 IAMs_20 02 09 04.3
comp=Z,9μm,19.0s
R11A Troy Canyon, C 77.06 44 IAMs_20 IAMs_20 02 08 46.7
comp=Z,8μm,20.0s
R11A Troy Canyon, C 77.06 44 P **P** **01 41 06.4 +0.7**
baz=238,SNR=31
HOM Homer 77.06 12 IAMs_20 IAMs_20 02 08 46.3
comp=Z,8μm,21.0s
BRLK Bradley Lake 77.31 12 IAMs_20 IAMs_20 02 08 40.6
comp=Z,10μm,20.0s
WVOR Wild Horse Val 77.33 39 IAMs_20 IAMs_20 02 10 36.0
comp=Z,8μm,19.0s
G05D Wamic, OR 77.40 36 P **P** **01 41 08.0 +0.7**
baz=233,SNR=8.9
E04D Onebar 77.52 34 P **P** **01 41 08.9 +1.1**
baz=232,SNR=14
TUC Tucson 77.53 51 P P 01 41 03.5 -4.9
TUC pmax pmax
comp=Z,30nm,1.1s
TUC Tucson 77.53 51 P P 01 41 03.5 -4.9
TUC IAmb IAmb 01 41 21.4
comp=Z,30nm,1.1s
TUC Tucson 77.53 51 IAMs_20 IAMs_20 02 07 50.1
comp=Z,13μm,20.0s
TUC Tucson 77.53 51 P **P** **01 41 09.3 +1.0**
baz=243
F05D White Salmon 77.71 35 P **P** **01 41 09.9 +1.0**
baz=233
G06A Carlson Farm, 77.78 36 P P 01 41 02.6 -6.8
G06A IAmb IAmb 01 41 21.5
comp=Z,28nm,1.2s
D04E Lakebay 77.79 33 P **P** **01 41 10.9 +1.6**
baz=231
D03D Eldn 77.85 33 P **P** **01 41 10.7 +1.1**
baz=231,SNR=10
LCMT Little Creek M 77.98 46 P P 01 41 03.4 -7.4
X16A Lo Mia Camp, P 78.02 49 IAMs_20 IAMs_20 02 08 06.0
comp=Z,11μm,20.0s
NKL Nikolayevsk 78.07 335 *e*P **P** **01 41 09.7 -1.0**
NKL pmax pmax
comp=Z,11nm,0.9s
NKL pmax pmax
comp=N,4.0nm,0.5s
NKL pmax pmax
comp=E,2.0nm,0.9s
NKL pmax pmax
comp=Z,156nm,5.4s
GRNR Gornyy 78.29 331 ⇓*i*P **P** **01 41 12.2 +0.2**
GRNR *e* 01 44 06.3
GRNR *e*S **S** **01 51 10.0 +2.9**
GRNR pmax pmax
comp=Z,10.0nm,1.3s
GRNR smax smax
comp=N,3.0nm,0.9s
GRNR MLR MLR
comp=Z,3μm,18.0s
U15A North Rim 78.36 47 IAMs_20 IAMs_20 02 08 11.1
comp=Z,7μm,20.0s
PGC Sidney 78.37 32 P P 01 41 07.5 -4.9
PGC IAmb IAmb 01 41 14.4
comp=Z,50nm,1.1s
SZCU Shurtz Canyon 78.38 46 P P 01 41 07.4 -5.7
ELK Elko 78.54 42 P P 01 41 07.2 -6.8
ELK pmax pmax
comp=Z,31nm,1.2s
ELK Elko 78.54 42 P P 01 41 07.2 -6.8
ELK IAmb IAmb 01 41 20.9
comp=Z,31nm,1.1s
WUAZ Wupatki 78.58 48 P P 01 41 08.1 -6.1
WUAZ IAmb IAmb 01 41 27.3
comp=Z,31nm,1.0s
WUAZ IAMs_20 IAMs_20 02 11 04.9
comp=Z,9μm,18.0s
WUAZ Wupatki 78.58 48 P **P** **01 41 15.2 +1.0**
baz=242
G08A Pilot Rock 78.77 37 P P 01 41 09.5 -5.4
G08A IAmb IAmb 01 41 27.7
comp=Z,31nm,1.2s
A04D Lummi Island 78.79 32 P **P** **01 41 15.5 +0.7**
baz=231,SNR=7.1
B05A Bryant 78.83 33 P **P** **01 41 15.8 +0.8**
baz=232,SNR=16
PKCU Pink Cliffs 78.84 46 P P 01 41 09.5 -6.3
NJ2 Nanjing 78.86 308 *e*P P 01 41 21.6 +6.0
NJ2 pP **PcP** **01 41 26.3 +2.0**
NJ2 sP pwP 01 41 28.8 +7.8
NJ2 PP **PP** **01 44 17.6 +3.2**
NJ2 S S 01 51 21.9 +7.8
NJ2 sS **SKSac** **01 51 24.8 -6.6**
NJ2 pmax pmax
comp=Z,19nm,0.5s
NJ2 pmax pmax
comp=Z,1μm,5.7s
NJ2 LR LR
comp=Z,1μm,13.3s
NJ2 LR LR
comp=Z,3μm,14.2s
NJ2 LR LR
comp=Z,4μm,21.8s
SUA Susitna One 78.90 12 IAMs_20 IAMs_20 02 10 09.0
comp=Z,9μm,20.0s
HAWA Hanford 79.09 36 P P 01 41 10.9 -5.6
HAWA IAmb IAmb 01 41 29.4
comp=Z,38nm,1.1s
GLI Glacier Island 79.14 13 P P 01 41 10.8 -5.7
GLI IAmb IAmb 01 41 24.7
comp=Z,54nm,0.9s
GLI IAMs_20 IAMs_20 02 10 39.7
comp=Z,7μm,20.0s
EYAK Cordova Ski Ar 79.16 14 IAMs_20 IAMs_20 02 09 05.5
comp=Z,9μm,20.0s
FID Port Fidalgo 79.16 14 IAMs_20 IAMs_20 02 09 06.5
comp=Z,9μm,20.0s
X18A Snowflake 79.16 50 P P 01 41 11.1 -6.4
X18A IAmb IAmb 01 41 30.5
comp=Z,46nm,1.1s
X18A IAMs_20 IAMs_20 02 08 41.2
comp=Z,8μm,20.0s
MTPU Mount Pierson 79.22 46 P P 01 41 11.5 -6.4
SUCK Suckling Hills 79.23 15 IAMs_20 IAMs_20 02 10 23.2
comp=Z,9μm,20.0s
C06D Leavenworth 79.25 34 P **P** **01 41 17.9 +0.5**
baz=233
RAGM Ragged Mountai 79.27 15 IAMs_20 IAMs_20 02 09 57.5
comp=Z,10μm,19.0s
HPIG 79.30 58 P P 01 41 11.6 -6.8
HPIG IAMs_20 IAMs_20 02 07 48.6
comp=Z,7μm,20.0s
B06A Marblemount 79.31 33 P P 01 41 12.1 -5.5
KNK Knik Glacier 79.32 13 P P 01 41 11.7 -5.8
KNK IAmb IAmb 01 41 26.1
comp=Z,50nm,1.1s
HMT Hamilton 79.33 15 IAMs_20 IAMs_20 02 10 38.0
comp=Z,10μm,19.0s
PMR Palmer 79.34 12 P P 01 41 12.3 -5.2
PMR pmax pmax
comp=Z,57nm,1.2s
PMR MLR MLR
comp=Z,6μm,19.0s
PMR Palmer 79.34 12 P P 01 41 12.3 -5.2
PMR IAmb IAmb 01 41 24.6
comp=Z,57nm,1.2s
E08A Dider Farm, El 79.41 36 P P 01 41 12.9 -5.3
MSU Marysvale 79.45 45 P P 01 41 13.0 -6.0
MSU Marysvale 79.45 45 P P 01 41 13.0 -6.0
BMO Blue Mountains 79.49 38 P P 01 41 13.7 -5.1
BMO pmax pmax
comp=Z,22nm,1.1s
BMO Blue Mountains 79.49 38 P P 01 41 13.7 -5.1
W18A Petrified Fore 79.59 49 P P 01 41 13.4 -6.4
W18A IAmb IAmb 01 41 32.7
comp=Z,29nm,1.1s
W18A IAMs_20 IAMs_20 02 09 05.5
comp=Z,9μm,21.0s
W18A Petrified Fore 79.59 49 P **P** **01 41 20.7 +0.9**
baz=243
KLR Kul'dur 79.59 328 *ce*P **P** **01 41 20.1 +0.9**
KLR pmax pmax
comp=Z,33nm,1.5s
KLR Kul'dur 79.59 328 P **P** **01 41 19.5 +0.3**
comp=Z,1.2nm,0.7s,baz=119,slow=5.9,SNR=5.2
MA2 Magadan 79.60 343 *e*P **P** **01 41 19.2 +0.2**
MA2 pmax pmax
comp=Z,83nm,2.2s
MA2 Magadan 79.60 343 P **P** **01 41 19.1 +0.1**
comp=Z,10.0nm,0.8s,baz=131,slow=5.8,SNR=6.2
MA2 Magadan 79.60 343 P **P** **01 41 14.4 -4.6**
MA2 IAmb IAmb 01 41 26.0
comp=Z,39nm,1.1s
MA2 Magadan 79.60 343 IAMs_20 IAMs_20 02 10 47.6
comp=Z,12μm,21.0s
MESA MESA 79.80 16 IAMs_20 IAMs_20 02 08 19.2
comp=Z,9μm,20.0s
DUG Dugway, Tooele 79.85 43 P P 01 41 15.5 -5.5
DUG pmax pmax
comp=Z,27nm,1.2s
DUG Dugway, Tooele 79.85 43 P P 01 41 15.4 -5.5
DUG IAMs_20 IAMs_20 02 10 54.6
comp=Z,7μm,19.0s
DUG Dugway, Tooele 79.85 43 P **P** **01 41 21.6 +0.6**
baz=240
YKU2 Yakutat 79.87 17 IAMs_20 IAMs_20 02 07 59.1
comp=Z,10μm,20.0s
121A Cookes Peak, D 79.91 52 P P 01 41 15.4 -6.1
121A IAmb IAmb 01 41 34.7
comp=Z,33nm,1.0s
121A Cookes Peak, D 79.91 52 P **P** **01 41 21.5 0.0**
baz=245,SNR=12
SCM Sheep Creek Mo 79.94 13 P P 01 41 15.1 -5.8
SCM pmax pmax
comp=Z,48nm,1.0s
SCM Sheep Creek Mo 79.94 13 P P 01 41 15.1 -5.8
SCM IAmb IAmb 01 41 31.9
comp=Z,48nm,1.0s
E09A Wood Farm, Sta 79.94 36 P P 01 41 14.8 -6.4
ANM Nome 79.95 4 P P 01 41 13.1 -7.7
ANM pmax pmax
comp=Z,9.0nm,0.9s
ANM Nome 79.95 4 P P 01 41 13.1 -7.8
DHAK Deception Hill 79.96 18 IAMs_20 IAMs_20 02 11 16.2
comp=Z,10μm,20.0s
PPLA Purkeypile 79.96 10 IAMs_20 IAMs_20 02 11 52.7
comp=Z,8μm,20.0s
DL2 Dalian 80.00 315 P P 01 41 25.8 +4.2
DL2 PP **PP** **01 44 25.0 +1.3**
DL2 S S 01 51 34.6 +8.8
DL2 pmax pmax
comp=Z,36nm,1.4s
DL2 pmax pmax
comp=Z,760nm,8.1s
DL2 LR LR
comp=Z,4μm,18.0s
DL2 LR LR
comp=Z,4μm,24.1s
DL2 LR LR
comp=Z,7μm,24.5s
CN2 Changchun 80.01 321 *e*P **P** **01 41 22.3 +0.7**
CN2 *e*S S 01 51 33.4 +7.6
CN2 pmax pmax
comp=Z,10.0nm,0.5s
CN2 pmax pmax
comp=Z,1μm,6.0s
CN2 LR LR
comp=Z,4μm,24.0s
CN2 LR LR
comp=Z,7μm,24.0s
CN2 LR LR
comp=Z,11μm,25.0s
TGL Tana Glacier 80.06 15 P P 01 41 15.5 -6.1
TGL IAmb IAmb 01 41 23.2
comp=Z,83nm,1.2s
TGL IAMs_20 IAMs_20 02 12 55.1
comp=Z,8μm,19.0s
BGU Big Grassy Mou 80.07 43 P P 01 41 15.6 -6.7
SNY Shenyang 80.16 318 ⇓P P 01 41 26.6 +4.2
SNY S **S** **01 51 33.9 +6.6**
SNY pmax pmax
comp=Z,1μm,7.5s
SNY LR LR
comp=Z,4μm,17.8s
SNY LR LR
comp=Z,3μm,21.4s
SNY LR LR
comp=Z,7μm,20.6s
F10A Beach Ranch, E 80.16 37 P P 01 41 16.4 -6.1

NLU	**North Lily Min**	**80.22**	**44**	P	P	01 41 14.6	-8.6	
ZAIG	**Zacatecas**	**80.34**	**63**	IAMs_20	IAMs_20	02 08 09.3		
	comp=Z,11µm,21.0s							
B08A	**Colville Reser**	**80.35**	**34**	P	P	01 41 18.1	-5.3	
LLLB	**Lillooet**	**80.39**	**31**	P	P	01 41 16.9	-6.7	
BALM	**Baldy**	**80.42**	**15**	IAMs_20	IAMs_20	02 09 01.8		
	comp=Z,7µm,20.0s							
TMUT	**Trail Mountain**	**80.49**	**45**	P	P	01 41 16.9	-7.8	
JIS	**Juneau Island**	**80.54**	**20**	IAMs_20	IAMs_20	02 10 16.4		
	comp=Z,10µm,19.0s							
MPU	**Maple Canyon**	**80.55**	**44**	P	P	01 41 19.0	-5.8	
EPT	**El Paso**	**80.57**	**53**	IAMs_20	IAMs_20	02 09 46.5		
	comp=Z,10µm,20.0s							
C09A	**Chrisman Ranch**	**80.61**	**35**	P	P	01 41 19.3	-5.4	
BESE	**Bessie Mountai**	**80.61**	**20**	P	P	01 41 18.9	-5.7	
BESE				IAmb	IAmb	01 41 26.7		
	comp=Z,51nm,1.2s							
BESE				IAMs_20	IAMs_20	02 10 19.5		
	comp=Z,9µm,20.0s							
CTGM	**Chitina Glacie**	**80.62**	**16**	IAMs_20	IAMs_20	02 09 07.1		
	comp=Z,7µm,21.0s							
SPUT	**South Promonto**	**80.64**	**43**	P	P	01 41 19.2	-6.0	
HVU	**Hansel Valley**	**80.67**	**42**	P	P	01 41 18.6	-6.8	
HVU				pmax	pmax			
	comp=Z,18nm,1.0s							
HVU	**Hansel Valley**	**80.67**	**42**	P	P	01 41 18.6	-6.8	
KTH	**Kantishna Hill**	**80.79**	**11**	IAMs_20	IAMs_20	02 12 29.1		
	comp=Z,8µm,20.0s							
CTU	**Camp Tracy**	**80.80**	**43**	P	P	01 41 18.8	-7.3	
TRF	**Thorofare Moun**	**80.81**	**11**	IAMs_20	IAMs_20	02 11 22.6		
	comp=Z,12µm,20.0s							
SRU	**San Rafael Swe**	**80.87**	**45**	P	P	01 41 20.3	-6.3	
SRU				pmax	pmax			
	comp=Z,32nm,1.0s							
SRU	**San Rafael Swe**	**80.87**	**45**	P	P	01 41 20.3	-6.3	
P17A	**Butcher Ranch,**	**80.89**	**45**	P	P	01 41 18.9	-7.8	
JLU	**Jordanelle**	**80.96**	**44**	P	P	01 41 21.7	-5.4	
RND	**Reindeer**	**81.04**	**12**	P	P	01 41 20.6	-6.2	
RND				pmax	pmax			
	comp=Z,57nm,1.2s							
RND	**Reindeer**	**81.04**	**12**	P	P	01 41 20.6	-6.2	
RND				IAmb	IAmb	01 41 34.0		
	comp=Z,57nm,1.2s							
RND				IAMs_20	IAMs_20	02 12 04.6		
	comp=Z,9µm,20.0s							
Y22D	**IRIS PASSCAL I**	**81.22**	**51**	IAMs_20	IAMs_20	02 09 37.9		
	comp=Z,9µm,21.0s							
Y22D	**IRIS PASSCAL I**	**81.22**	**51**	P	**P**	**01 41 29.6**	**+1.1**	
	baz=245							
TCUT	**Toone Canyon**	**81.23**	**43**	P	P	01 41 22.5	-6.1	
MCK	**McKinley**	**81.32**	**11**	P	**P**	**01 41 23.6**	**-4.6**	
MCK				pmax	pmax			
	comp=Z,74nm,1.0s							
MCK	**McKinley**	**81.32**	**11**	P	**P**	**01 41 23.6**	**-4.6**	
MCK				IAMs_20	IAMs_20	02 10 52.0		
	comp=Z,10µm,21.0s							
PAX	**Paxson**	**81.35**	**13**	P	P	01 41 20.6	-7.9	
PAX				pmax	pmax			
	comp=Z,16nm,1.1s							
PAX	**Paxson**	**81.35**	**13**	P	P	01 41 20.6	-7.9	
PAX				IAMs_20	IAMs_20	02 10 30.6		
	comp=Z,7µm,20.0s							
HWUT	**Hardware Ranch**	**81.37**	**43**	P	P	01 41 21.0	-8.2	
MNTX	**Cornudas Mount**	**81.42**	**54**	P	P	01 41 22.6	-6.8	
MNTX				IAmb	IAmb	01 41 41.7		
	comp=Z,24nm,1.1s							
MNTX				IAMs_20	IAMs_20	02 10 12.8		
	comp=Z,7µm,20.0s							
MNTX	**Cornudas Mount**	**81.42**	**54**	P	**P**	**01 41 29.8**	**+0.3**	
	baz=246,SNR=22							
MVCO	**Mesa Verde**	**81.42**	**48**	P	P	01 41 21.4	-8.2	
MVCO				IAMs_20	IAMs_20	02 11 26.0		
	comp=Z,9µm,19.0s							
MVCO	**Mesa Verde**	**81.42**	**48**	P	**P**	**01 41 30.1**	**+0.5**	
	baz=244							
QIZ	**Qiongzhong**	**81.42**	**292**	P	**P**	**01 41 30.1**	**+0.4**	
QIZ				S	**S**	**01 51 42.6**	**+1.1**	
QIZ				SS	**SS**	**01 56 59.1**	**+0.9**	
QIZ				LR	LR			
	comp=Z,4µm,30.9s							
QIZ				LR	LR			
	comp=Z,2µm,27.0s							
QIZ				LR	LR			
	comp=Z,8µm,21.4s							
QIZ	**Qiongzhong**	**81.42**	**292**	IAMs_20	IAMs_20	02 11 15.6		
	comp=Z,10µm,22.0s							
NEW	**Newport**	**81.51**	**35**	P	P	01 41 22.5	-7.1	
NEW				pmax	pmax			
	comp=Z,7.0nm,1.2s							
NEW	**Newport**	**81.51**	**35**	P	P	01 41 22.5	-7.1	
NEW	**Newport**	**81.51**	**35**	P	**P**	**01 41 29.3**	**-0.3**	
	baz=236,SNR=6.9							
HYT	**Haines Junctio**	**81.57**	**18**	P	P	01 41 23.9	-5.8	
HYT				IAmb	IAmb	01 41 37.7		
	comp=Z,39nm,1.2s							
HYT				IAMs_20	IAMs_20	02 09 17.0		
	comp=Z,9µm,22.0s							
BWN	**Browne**	**81.62**	**11**	P	P	01 41 24.7	-5.0	
BWN				IAMs_20	IAMs_20	02 12 45.8		
	comp=Z,12µm,20.0s							
MENT	**Mentasta**	**81.72**	**14**	P	P	01 41 24.1	-6.2	
MENT				IAmb	IAmb	01 41 37.3		
	comp=Z,37nm,1.1s							
WHN	**Wuhan**	**81.75**	**305**	⇑P	P	01 41 38.1	+6.9	
WHN				S	S	01 51 51.9	+7.5	
WHN				LR	LR			
	comp=Z,9µm,18.2s							
WHN				LR	LR			
	comp=Z,7µm,15.6s							
WHN				LR	LR			
	comp=Z,16µm,20.9s							
TXAR	**Lajitas Array**	**81.85**	**57**	P	**P**	**01 41 32.3**	**+0.4**	
	comp=Z,8.5nm,1.1s,baz=224,slow=5.2,SNR=46							
TXAR				LR	LR	02 09 56.3		
	comp=Z,5µm,21.7s,baz=0.0,slow=30							
MYKOM	**Kota Tinggi**	**81.92**	**274**	P	P	01 41 37.0	+4.5	
ANMO	**Albuquerque**	**81.93**	**51**	P	P	01 41 27.5	-4.8	
ANMO				pmax	pmax			
	comp=Z,45nm,1.1s							
ANMO	**Albuquerque**	**81.93**	**51**	P	P	01 41 27.5	-4.8	
ANMO				IAmb	IAmb	01 41 45.2		
	comp=Z,45nm,1.1s							
ANMO	**Albuquerque**	**81.93**	**51**	IAMs_20	IAMs_20	02 10 22.5		
	comp=Z,10µm,20.0s							
ANMO	**Albuquerque**	**81.93**	**51**	P	**P**	**01 41 33.1**	**+0.8**	
	baz=245							
TIA	**Tai'an**	**81.96**	**311**	P	**P**	**01 41 33.3**	**+1.1**	
TIA				S	S	01 51 55.0	+8.6	
TIA				pmax	pmax			
	comp=Z,22nm,2.2s							
TIA				pmax	pmax			
	comp=Z,1µm,5.5s							
TIA				LR	LR			
	comp=Z,4µm,22.6s							
TIA				LR	LR			
	comp=Z,5µm,21.4s							
TIA				LR	LR			
	comp=Z,9µm,27.5s							
SEY	**Seymchan**	**82.02**	**346**	*e*P	**P**	**01 41 32.1**	**+0.2**	
SEY	**Seymchan**	**82.02**	**346**	P	**P**	**01 41 31.8**	**-0.1**	
	comp=Z,14nm,0.9s,baz=142,slow=5.0,SNR=31							
SEY				LR	LR	02 13 32.2		
	comp=Z,7µm,20.4s,baz=158,slow=32							
NEA	**Nenana**	**82.06**	**11**	IAMs_20	IAMs_20	02 13 09.0		
	comp=Z,12µm,20.0s							
WRH	**Wood River Hil**	**82.15**	**11**	P	P	01 41 26.9	-5.6	
WRH				IAMs_20	IAMs_20	02 10 22.9		
	comp=Z,10µm,22.0s							
MCMT	**McKenzie Canyo**	**82.16**	**39**	P	P	01 41 26.9	-6.4	
RIDG	**Independent Ri**	**82.16**	**13**	P	P	01 41 25.5	-7.2	
RIDG				IAmb	IAmb	01 41 39.9		
	comp=Z,38nm,1.1s							
RIDG				IAMs_20	IAMs_20	02 10 34.1		
	comp=Z,8µm,22.0s							
MLY	**Manley**	**82.18**	**10**	P	**P**	**01 41 28.2**	**-4.5**	
MLY				IAmb	IAmb	01 41 43.6		
	comp=Z,25nm,1.0s							
RDMU	**Red Mountain**	**82.20**	**44**	P	P	01 41 26.7	-6.9	
WHY	**Whitehorse**	**82.23**	**19**	P	P	01 41 25.6	-7.6	
AHID	**Auburn Hatcher**	**82.23**	**42**	P	P	01 41 26.4	-7.3	
DOT	**Dot Lake**	**82.26**	**13**	P	P	01 41 25.6	-7.6	
DOT				IAmb	IAmb	01 41 44.8		
	comp=Z,50nm,1.2s							
DOT				IAMs_20	IAMs_20	02 10 15.5		
	comp=Z,8µm,22.0s							
HDA	**Harding Lake**	**82.32**	**12**	P	P	01 41 26.0	-7.4	
HDA				IAmb	IAmb	01 41 41.2		
	comp=Z,37nm,1.0s							
HDA	**Harding Lake**	**82.32**	**12**	P	**P**	**01 41 33.4**	**0.0**	
	baz=207							
CCB	**Clear Creek Bu**	**82.36**	**11**	P	P	01 41 28.9	-4.8	
CCB				IAmb	IAmb	01 41 46.8		
	comp=Z,24nm,0.9s							
CCB				IAMs_20	IAMs_20	02 12 17.5		
	comp=Z,8µm,19.0s							
MSO	**Missoula**	**82.53**	**37**	P	**P**	**01 41 35.0**	**-0.1**	
	baz=238,SNR=8.3							
TCOL	**CIGO, UAF Yank**	**82.56**	**11**	P	**P**	**01 41 34.5**	**-0.1**	
	baz=206							
COLA	**College**	**82.56**	**11**	P	P	01 41 29.4	-5.2	
COLA				pmax	pmax			
	comp=Z,38nm,0.9s							
COLA	**College**	**82.56**	**11**	P	P	01 41 29.4	-5.2	
COLA				IAmb	IAmb	01 41 43.0		
	comp=Z,38nm,0.9s							
COLA	**College**	**82.56**	**11**	IAMs_20	IAMs_20	02 10 34.7		
	comp=Z,11µm,22.0s							
SCRK	**Sand Creek**	**82.56**	**13**	IAMs_20	IAMs_20	02 10 57.5		
	comp=Z,8µm,22.0s							
DLMT	**Dillon**	**82.58**	**39**	P	P	01 41 26.1	-9.3	
DLMT				IAmb	IAmb	01 41 42.6		
	comp=Z,36nm,1.1s							
IL31		**82.65**	**12**	P	P	01 41 28.6	-6.5	
ILAR	**Eielson Array**	**82.65**	**12**	P	**P**	**01 41 34.7**	**-0.4**	
	comp=Z,5.6nm,1.0s,baz=212,slow=5.7,SNR=28							
ILAR				LR	LR	02 10 59.8		
	comp=Z,5µm,21.5s,baz=218,slow=30							
REDW	**Red Top Meadow**	**82.68**	**41**	P	P	01 41 29.5	-6.6	
REDW				IAmb	IAmb	01 41 48.8		
	comp=Z,44nm,1.1s							
S22A	**4UR Ranch, Cre**	**82.85**	**48**	P	P	01 41 31.2	-6.0	
S22A				IAMs_20	IAMs_20	02 10 33.8		
	comp=Z,10µm,21.0s							
S22A	**4UR Ranch, Cre**	**82.85**	**48**	P	**P**	**01 41 37.9**	**+0.7**	
	baz=244,SNR=56							
POKR	**Poker Flat Res**	**82.86**	**11**	P	**P**	**01 41 36.2**	**-0.1**	
	baz=207							
O20A	**White River Ci**	**82.91**	**45**	P	P	01 41 29.5	-7.8	
O20A				IAmb	IAmb	01 41 43.7		
	comp=Z,30nm,1.1s							
O20A				IAMs_20	IAMs_20	02 11 14.4		
	comp=Z,8µm,20.0s							
O20A	**White River Ci**	**82.91**	**45**	P	**P**	**01 41 37.6**	**+0.3**	
	baz=243,SNR=21							
MOOW	**Moose Ponds**	**82.94**	**41**	P	P	01 41 31.5	-5.9	
MOOW				IAmb	IAmb	01 41 50.0		
	comp=Z,22nm,1.1s							
YHB	**Horse Butte**	**83.14**	**40**	P	P	01 41 31.4	-7.0	
YPP	**Pitchstone Pla**	**83.15**	**41**	P	P	01 41 32.6	-6.0	
YHL	**Hebgen Lake**	**83.19**	**40**	P	P	01 41 31.5	-7.3	
PD31	**Pinedale Array**	**83.23**	**42**	P	P	01 41 32.3	-6.6	
PDAR	**Pinedale Array**	**83.23**	**42**	P	**P**	**01 41 38.5**	**-0.4**	
	comp=Z,9.9nm,0.9s,baz=222,slow=3.6,SNR=46							
PDAR				PKKPbc	**PKKPbc**	**02 00 06.5**	**+5.1**	
	comp=Z,0.2nm,0.7s,baz=252,slow=3.0,SNR=3.7							
PDAR				PKKPKP		02 08 12.0		
	comp=Z,1.0nm,1.1s,baz=357,slow=3.7,SNR=2.8							
PDAR				LR	LR	02 14 11.6		
	comp=Z,5µm,18.6s,baz=246,slow=32							
YMR	**Madison River**	**83.24**	**40**	P	P	01 41 32.0	-7.0	
H17A	**Grant Village**	**83.35**	**41**	P	P	01 41 33.6	-6.0	
H17A				IAmb	IAmb	01 41 51.5		
	comp=Z,17nm,0.9s							
H17A	**Grant Village**	**83.35**	**41**	P	**P**	**01 41 41.1**	**+1.5**	
	baz=241,SNR=22							
SMCO	**Snowmass**	**83.36**	**47**	IAMs_20	IAMs_20	02 14 12.5		
	comp=Z,7µm,18.0s							
RDOG	**Red Dog Mine**	**83.58**	**5**	P	**P**	**01 41 35.9**	**-4.0**	
RDOG				IAmb	IAmb	01 41 48.1		
	comp=Z,37nm,1.2s							
RDOG				IAMs_20	IAMs_20	02 11 57.4		
	comp=Z,8µm,22.0s							
PRP	**Porcupine Dome**	**83.58**	**12**	P	**P**	**01 41 36.0**	**-4.1**	
PRP				IAmb	IAmb	01 41 44.5		
	comp=Z,25nm,1.2s							
DAWY	**Dawson**	**83.71**	**15**	P	**P**	**01 41 36.3**	**-4.4**	
DAWY				IAmb	IAmb	01 41 42.6		
	comp=Z,34nm,1.1s							
SDCO	**Great Sand Dun**	**83.80**	**48**	IAMs_20	IAMs_20	02 11 45.4		
	comp=Z,7µm,20.0s							
SDCO	**Great Sand Dun**	**83.80**	**48**	P	**P**	**01 41 42.3**	**+0.2**	
	baz=245,SNR=28							
EGAK	**Eagle**	**83.89**	**14**	P	P	01 41 36.2	-5.3	
EGAK				IAMs_20	IAMs_20	02 11 04.5		
	comp=Z,8µm,22.0s							
BILL	**Bilibino**	**84.21**	**353**	*c* i P	**P**	**01 41 43.1**	**0.0**	
BILL				*i*		01 41 47.4		
BILL				*i* S	**S**	**01 52 11.6**	**+3.6**	
BILL				pmax	pmax			
	comp=Z,14nm,1.0s							
BILL				MLR	MLR			
	comp=Z,6µm,19.0s							
BJT	**Baijiatuau**	**84.27**	**314**	P	**P**	**01 41 40.8**	**-3.2**	
BJT	**Baijiatuau**	**84.27**	**314**	P	**P**	**01 41 40.8**	**-3.2**	
BJI	**Beijing**	**84.27**	**314**	P	**P**	**01 41 45.6**	**+1.6**	
BJI				S	S	01 52 17.8	+8.1	
BJI				SS	**SS**	**01 57 41.1**	**+1.4**	
BJI				pmax	pmax			
	comp=Z,6.0nm,1.2s							
BJI				LR	LR			
	comp=Z,4µm,17.5s							
BJI				LR	LR			
	comp=Z,4µm,19.5s							
COLD	**Coldfoot**	**84.29**	**9**	P	**P**	**01 41 39.4**	**-4.2**	
COLD				IAmb	IAmb	01 41 57.7		
	comp=Z,33nm,1.2s							
MSTX	**Muleshoe**	**84.33**	**53**	P	**P**	**01 41 44.9**	**+0.2**	
	baz=247							
T25A	**Trinidad**	**84.34**	**49**	P	**P**	**01 41 44.8**	**+0.1**	
	baz=246							
RLMT	**Red Lodge**	**84.52**	**40**	P	**P**	**01 41 46.1**	**+0.6**	
	baz=242,SNR=25							
ZEA	**Zeya**	**84.54**	**330**	*e*P	**P**	**01 41 45.1**	**0.0**	
ZEA				*e*		01 45 04.0		
ZEA				*e*PPP	PPP	01 47 04.0		
ZEA				*e*S	**S**	**01 52 14.0**	**+2.2**	
ZEA				*e*PS		01 53 10.0		
ZEA				pmax	pmax			
	comp=Z,50nm,1.2s							
ZEA				pmax	pmax			
	comp=Z,1µm,7.0s							
ZEA				pmax	pmax			
	comp=N,400nm,6.0s							
ZEA				pmax	pmax			
	comp=E,400nm,8.0s							
ZEA				pmax	pmax			
	comp=Z,900nm,8.0s							
ZEA				smax	smax			
	comp=Z,1µm,14.0s							
ZEA				smax	smax			
	comp=E,2µm,18.0s							
ZEA				smax	smax			
	comp=N,1µm,16.0s							
Q24A	**Divide**	**84.56**	**47**	IAMs_20	IAMs_20	02 11 43.1		
	comp=Z,10µm,21.0s							
Q24A	**Divide**	**84.56**	**47**	P	**P**	**01 41 46.2**	**+0.3**	
	baz=246							
ISCO	**Idaho Springs**	**84.58**	**46**	IAMs_20	IAMs_20	02 15 11.7		
	comp=Z,6µm,18.0s							
ISCO	**Idaho Springs**	**84.58**	**46**	P	**P**	**01 41 46.0**	**0.0**	
	baz=245,SNR=11							
N23A	**Red Feather La**	**84.81**	**45**	IAMs_20	IAMs_20	02 14 04.9		
	comp=Z,6µm,20.0s							
N23A	**Red Feather La**	**84.81**	**45**	P	**P**	**01 41 47.5**	**+0.4**	
	baz=245,SNR=18							
PMSA	**Palmer Station**	**84.90**	**156**	IAMs_20	IAMs_20	02 10 59.5		
	comp=Z,10µm,21.0s							
833A	**Chaparral WMA,**	**84.98**	**59**	P	P	01 41 39.2	-8.6	
833A				IAMs_20	IAMs_20	02 11 07.1		
	comp=Z,9µm,22.0s							
833A	**Chaparral WMA,**	**84.98**	**59**	P	**P**	**01 41 48.0**	**+0.1**	
	baz=250							
COCO	**West Island**	**85.10**	**259**	IAMs_20	IAMs_20	02 18 33.8		
	comp=Z,9µm,20.0s							
K22A	**Casper**	**85.18**	**44**	P	**P**	**01 41 44.3**	**-4.5**	
K22A	**Casper**	**85.18**	**44**	P	**P**	**01 41 49.1**	**+0.4**	
	baz=244,SNR=8.9							
IPM	**Ipoh**	**85.36**	**276**	P	**P**	**01 41 47.0**	**-3.1**	
IPM	**Ipoh**	**85.36**	**276**	P	P	01 41 56.0	+5.8	
JCT	**Junction City**	**85.39**	**57**	P	**P**	**01 41 49.8**	**-0.1**	
	baz=249							
AMTX	**Amarillo**	**85.51**	**52**	P	**P**	**01 41 50.5**	**-0.1**	
	baz=248							
ENH	**Enshi**	**85.55**	**303**	P	**P**	**01 41 47.9**	**-2.9**	
ENH				IAmb	IAmb	01 41 54.5		
	comp=Z,9.1nm,0.4s							
EGMT	**Eagleton**	**85.59**	**38**	P	**P**	**01 41 51.0**	**+0.4**	
	baz=242							
GO09	**Cerro Castillo**	**85.93**	**142**	IAMs_20	IAMs_20	02 10 53.3		
	comp=Z,7µm,21.0s							
KULM	**Kulim**	**85.94**	**277**	P	P	01 41 59.0	+6.0	
TIY	**Taiyuan**	**86.00**	**311**	*e*P	P	01 41 59.6	+6.7	
TIY				PP	**PP**	**01 45 17.1**	**+4.0**	
TIY				S	**S**	**01 52 26.8**	**-0.3**	
TIY				pmax	pmax			
	comp=Z,1µm,6.8s							
TIY				LR	LR			
	comp=Z,3µm,15.3s							
TIY				LR	LR			
	comp=Z,6µm,19.7s							
TIY				LR	LR			
	comp=Z,7µm,19.1s							
GO10	**Punta Arenas**	**86.04**	**144**	IAMs_20	IAMs_20	02 10 22.3		
	comp=Z,10µm,21.0s							
EPYK	**Eagle Plains**	**86.25**	**14**	P	**P**	**01 41 49.3**	**-4.1**	
EPYK				IAmb	IAmb	01 41 59.5		
	comp=Z,20nm,1.1s							
EPYK				IAMs_20	IAMs_20	02 11 55.0		
	comp=Z,7µm,22.0s							
EPYK	**Eagle Plains**	**86.25**	**14**	P	**P**	**01 41 54.0**	**+0.6**	
	baz=217							
ABTX	**Abilene, Hawle**	**86.27**	**55**	P	P	01 41 49.3	-5.0	
ABTX				IAMs_20	IAMs_20	02 12 38.4		
	comp=Z,12µm,21.0s							
ABTX	**Abilene, Hawle**	**86.27**	**55**	P	**P**	**01 41 54.2**	**-0.1**	
	baz=249							
KSCO	**Kaye Shedlock'**	**86.38**	**48**	P	**P**	**01 41 54.9**	**+0.1**	
	baz=247							
GYA	**Guiyang**	**86.62**	**298**	P	**P**	**01 41 57.0**	**+0.7**	
GYA				pP	pwP	01 42 08.3	+6.6	
GYA				SKS	**SKSac**	**01 52 19.5**	**-4.1**	
GYA				S	**S**	**01 52 34.5**	**+0.7**	
GYA				SS	**SS**	**01 58 23.3**	**+8.1**	
GYA				pmax	pmax			
	comp=Z,40nm,1.0s							
GYA				pmax	pmax			
	comp=Z,190nm,5.9s							
GYA				LR	LR			
	comp=Z,9µm,20.6s							
GYA				LR	LR			
	comp=Z,8µm,21.0s							
GYA				LR	LR			
	comp=Z,9µm,21.3s							
RPSI	**Rantau Prapat**	**86.91**	**274**	P	**P**	**01 41 54.7**	**-3.0**	
PSI	**Prapat**	**86.94**	**274**	P	**P**	**01 41 54.7**	**-3.4**	
PSI				pmax	pmax			
	comp=Z,5.0nm,0.4s							
LAO	**LASA Array**	**87.12**	**40**	P	**P**	**01 41 59.1**	**+1.0**	
	baz=244							
435B	**Jarrell**	**87.29**	**57**	IAMs_20	IAMs_20	02 15 02.3		
	comp=Z,7µm,19.0s							
435B	**Jarrell**	**87.29**	**57**	P	**P**	**01 41 59.7**	**+0.5**	
	baz=250							
XAN	**Xi'an**	**87.31**	**306**	P	**P**	**01 42 00.3**	**+0.9**	
XAN				pP	pwP	01 42 05.5	+0.7	
XAN				sP	sP	01 42 08.1	+5.2	
XAN				PP	**PP**	**01 45 24.4**	**+0.6**	
XAN				SKS	**SKSac**	**01 52 31.6**	**+4.3**	
XAN				S	**ScS**	**01 52 47.3**	**+0.1**	
XAN				sS	sS	01 52 54.8	+10	
XAN				SS	**SS**	**01 58 27.5**	**+2.7**	
XAN				pmax	pmax			
	comp=Z,95nm,1.5s							
XAN				pmax	pmax			
	comp=Z,960nm,4.9s							
XAN				LR	LR			
	comp=Z,2µm,23.9s							
XAN				LR	LR			
	comp=Z,5µm,22.0s							
XAN				LR	LR			
	comp=Z,5µm,20.1s							
XAN	**Xi'an**	**87.31**	**306**	P	**P**	**01 41 55.2**	**-4.2**	
XAN				pmax	pmax			
	comp=Z,83nm,1.2s							
XAN	**Xi'an**	**87.31**	**306**	P	**P**	**01 41 55.2**	**-4.2**	
MAW	**Mawson**	**87.39**	**199**	P	**P**	**01 41 59.2**	**+0.2**	
	comp=Z,19nm,1.0s,baz=104,slow=8.8,SNR=11							
MAW				LR	LR	02 18 56.9		
	comp=Z,7µm,18.4s,baz=116,slow=34							
RSSD	**Black Hills**	**87.44**	**43**	P	P	01 41 55.0	-4.9	
RSSD				pmax	pmax			
	comp=Z,12nm,1.1s							
RSSD	**Black Hills**	**87.44**	**43**	P	P	01 41 55.0	-4.9	
RSSD	**Black Hills**	**87.44**	**43**	P	**P**	**01 41 59.8**	**-0.1**	
	baz=246							
SLVN	**Son La**	**87.44**	**293**	P	**P**	**01 41 58.0**	**-2.3**	
SLVN				IAmb	IAmb	01 42 10.9		
	comp=Z,19nm,1.1s							
SLVN				IAMs_20	IAMs_20	02 14 53.2		
	comp=Z,8µm,22.0s							
OGNE	**Ogallala**	**87.55**	**46**	P	**P**	**01 42 00.9**	**+0.6**	
	baz=247							
CCIG	**Comitan**	**87.60**	**73**	IAMs_20	IAMs_20	02 11 25.7		
	comp=Z,11µm,21.0s							
WMOK	**Wichita Mounta**	**87.68**	**53**	IAMs_20	IAMs_20	02 15 01.7		
	comp=Z,9µm,19.0s							
WMOK	**Wichita Mounta**	**87.68**	**53**	P	**P**	**01 42 01.7**	**+0.6**	
	baz=250							
WHTX	**Lake Whitney,**	**87.80**	**56**	IAMs_20	IAMs_20	02 14 24.7		
	comp=Z,9µm,20.0s							
WHTX	**Lake Whitney,**	**87.80**	**56**	P	**P**	**01 42 01.8**	**+0.2**	
	baz=250							
HHC	**Hu-ho-hao-te**	**87.82**	**313**	*e*P	**P**	**01 42 02.8**	**+1.1**	
HHC				sP	pwP	01 42 10.3	+3.1	
HHC				sS	sS	01 52 55.1	+6.0	
HHC				pmax	pmax			
	comp=Z,17nm,2.0s							
HHC				pmax	pmax			
	comp=Z,700nm,6.6s							
HHC				LR	LR			
	comp=Z,2µm,18.0s							
HHC				LR	LR			
	comp=Z,3µm,22.7s							
HHC				LR	LR			
	comp=Z,5µm,23.7s							
GSI	**Gunungsitoli**	**87.84**	**272**	P	**P**	**01 42 00.4**	**-1.9**	
GSI				IAMs_20	IAMs_20	02 21 47.4		
	comp=Z,7µm,21.0s							
U32A	**Winter Ranch,**	**88.08**	**52**	IAMs_20	IAMs_20	02 14 40.4		
	comp=Z,10µm,20.0s							
X34A	**Smith Ranch, M**	**88.37

HKT	Hockley	88.45	59	P	P	01 41 59.7	-5.0	
HKT	Hockley	88.45	59	IAMs_20	IAMs_20	02 15 50.1		
	comp=Z,8µm,19.0s							
INK	Inuvik	88.54	14	P	P	01 42 04.3	-0.1	
	comp=Z,6.0nm,0.9s,baz=214,slow=5.3,SNR=16							
INK				LR	LR	02 14 43.1		
	comp=Z,3µm,21.4s,baz=212,slow=31							
INK	Inuvik	88.54	14	IAmb	IAmb	01 42 24.1		
	comp=Z,24nm,1.1s							
BTO	Baotou	88.82	313	*e*P	P	01 42 10.8	+4.4	
OKCFA	Oklahoma City	88.94	53	IAMs_20	IAMs_20	02 15 24.0		
	comp=Z,8µm,20.0s							
DGMT	Dagmar	89.12	39	P	P	01 42 08.3	+0.7	
	baz=246							
SNET	Serv Nac Est T	89.58	76	IAMs_20	IAMs_20	02 12 33.2		
	comp=Z,10µm,20.0s							
KMI	Kunming	89.58	296	P	P	01 42 13.1	+2.6	
KMI				SKS	SKSac	01 52 45.8	+4.1	
KMI				S	ScS	01 53 04.3	-2.5	
KMI				sS	sS	01 53 10.8	+4.2	
KMI				SS	SS	01 59 00.5	+1.9	
KMI				pmax	pmax			
	comp=Z,11nm,1.0s							
KMI				pmax	pmax			
	comp=Z,170nm,3.1s							
KMI				LR	LR			
	comp=Z,2µm,22.0s							
KMI				LR	LR			
	comp=Z,5µm,23.4s							
KMI				LR	LR			
	comp=Z,9µm,24.0s							
KMI	Kunming	89.58	296	IAMs_20	IAMs_20	02 15 58.3		
	comp=Z,6µm,22.0s							
NATX	Nacogdoches	89.97	57	IAMs_20	IAMs_20	02 17 15.4		
	comp=Z,6µm,19.0s							
NATX	Nacogdoches	89.97	57	P	P	01 42 12.6	+0.7	
	baz=252							
TUL1	Leonard	90.38	53	IAMs_20	IAMs_20	02 15 50.0		
	comp=Z,8µm,20.0s							
TUL1	Leonard	90.38	53	P	P	01 42 14.3	+0.6	
	baz=251							
CD2	Chengdu	90.43	302	P	P	01 42 17.3	+3.1	
CD2				PP	PP	01 45 51.6	+2.7	
CD2				S	S	01 53 17.8	+8.3	
CD2				SS	SS	01 59 20.3	+10	
CD2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
CD2				pmax	pmax			
	comp=Z,2µm,4.7s							
CD2				LR	LR			
	comp=Z,10µm,22.2s							
CD2				LR	LR			
	comp=Z,17µm,20.4s							
CD2				LR	LR			
	comp=Z,20µm,20.2s							
GO06	Curarrehue	90.47	131	IAMs_20	IAMs_20	02 12 30.9		
	comp=Z,10µm,22.0s							
YKA	Yellowknife Ar	90.63	24	P	P	01 42 14.0	-0.2	
	comp=Z,8.2nm,1.1s,baz=240,slow=4.7,SNR=54							
YKA				LR	LR	02 19 09.1		
	comp=Z,3µm,18.9s,baz=0.0,slow=33							
PLCA	Paso Flores	90.73	133	P	P	01 42 11.5	-4.0	
PLCA				pmax	pmax			
	comp=Z,7.0nm,1.1s							
PLCA	Paso Flores	90.73	133	P	P	01 42 19.5	+4.0	
	comp=Z,12nm,1.2s,baz=262,slow=8.8,SNR=4.7							
PLCA				LR	LR	02 14 36.6		
	comp=Z,8µm,20.6s,baz=264,slow=30							
PLCA	Paso Flores	90.73	133	P	P	01 42 11.5	-4.0	
KSU1	Kansas State U	90.79	50	IAMs_20	IAMs_20	02 16 04.9		
	comp=Z,8µm,20.0s							
CIT	Chita	90.93	324	*e*P	P	01 42 25.0	+9.0	
CIT				pmax	pmax			
	comp=Z,120nm,1.9s							
SUSD	Miller	90.94	44	IAMs_20	IAMs_20	02 17 43.0		
	comp=Z,10µm,20.0s							
CMAR	Chiang Mai Arr	91.11	289	P	P	01 42 19.1	+1.6	
	comp=Z,3.6nm,0.7s,baz=95,slow=2.9,SNR=11							
CMAR				LR	LR	02 18 40.4		
	comp=Z,4µm,21.7s,baz=106,slow=33							
CHTO	Chiang Mai	91.20	289	P	P	01 42 14.9	-3.0	
CHTO				pmax	pmax			
	comp=Z,9.0nm,0.8s							
CHTO	Chiang Mai	91.20	289	P	P	01 42 14.9	-3.0	
CHTO				IAmb	IAmb	01 42 26.5		
	comp=Z,8.9nm,0.8s							
CHTO	Chiang Mai	91.20	289	IAMs_20	IAMs_20	02 18 21.1		
	comp=Z,7µm,21.0s							
TGUH	Tegucigalpa,Un	91.51	76	IAMs_20	IAMs_20	02 13 54.4		
	comp=Z,8µm,20.0s							
MIAR	Mount Ida	91.68	55	IAMs_20	IAMs_20	02 15 03.6		
	comp=Z,7µm,22.0s							
MIAR	Mount Ida	91.68	55	P	P	01 42 20.5	+0.7	
	baz=253							
C36M	Paulatuk	91.68	16	P	P	01 42 13.4	-5.5	
C36M				IAMs_20	IAMs_20	02 23 58.4		
	comp=Z,6µm,18.0s							
C36M	Paulatuk	91.68	16	P	P	01 42 19.8	+0.8	
	baz=229							
GO05	Huala	91.69	127	P	P	01 42 14.2	-5.8	
GO05				IAMs_20	IAMs_20	02 13 23.1		
	comp=Z,8µm,21.0s							
W39A	Magazine	91.71	54	P	P	01 42 21.0	+1.1	
	baz=253							
MDND	Maddock	91.72	41	IAMs_20	IAMs_20	02 21 10.8		
	comp=Z,6µm,19.0s							
MDND	Maddock	91.72	41	P	P	01 42 21.1	+1.4	
	baz=249							
LZH	Lanzhou	91.91	307	⇑P	P	01 42 23.3	+2.2	
LZH				sP	pwP	01 42 30.9	+4.4	
LZH				SKS	SKSac	01 53 00.4	+5.9	
LZH				S	ScS	01 53 28.0	+2.4	
LZH				SS	SS	01 59 40.1	+8.3	
LZH				pmax	pmax			
	comp=Z,78nm,1.3s							
LZH				pmax	pmax			
	comp=Z,710nm,5.4s							
LZH				LR	LR			
	comp=Z,2µm,19.5s							
LZH				LR	LR			
	comp=Z,4µm,18.1s							
LZH				LR	LR			
	comp=Z,4µm,18.4s							
HHAR	Hobbs	91.92	53	IAMs_20	IAMs_20	02 16 27.8		
	comp=Z,6µm,20.0s							
Z41A	Richland Creek	91.92	56	IAMs_20	IAMs_20	02 16 55.9		
	comp=Z,9µm,20.0s							
Z41A	Richland Creek	91.92	56	P	P	01 42 21.6	+0.7	
	baz=253							
ESTN	Estel	92.11	77	IAMs_20	IAMs_20	02 13 15.3		
	comp=Z,7µm,22.0s							
X40A	Basin Creek Fa	92.25	55	P	P	01 42 23.0	+0.5	
	baz=253							
ECSD	EROS Data Cent	92.29	45	IAMs_20	IAMs_20	02 16 45.7		
	comp=Z,10µm,21.0s							
ECSD	EROS Data Cent	92.29	45	P	P	01 42 22.5	+0.1	
	baz=251							
SYO	Syowa Base	92.39	192	⇓eP	P	01 42 20.4	-2.0	
SYO	Syowa Base	92.39	192	epP	pP	01 42 23.6	-1.5	
SYO	Syowa Base	92.39	192	⇑eX	P	01 42 26.0	+3.6	
UALR	University of	92.72	55	IAMs_20	IAMs_20	02 16 23.2		
	comp=Z,6µm,22.0s							
JTS	Las Juntas de	92.72	80	P	P	01 42 20.0	-5.1	
JTS				pmax	pmax			
	comp=Z,22nm,1.1s							
JTS	Las Juntas de	92.72	80	P	P	01 42 25.8	+0.7	
	comp=Z,5.7nm,0.9s,baz=323,slow=8.3,SNR=3.0							
JTS	Las Juntas de	92.72	80	P	P	01 42 20.0	-5.1	
JTS				IAmb	IAmb	01 42 37.4		
	comp=Z,22nm,1.1s							
JTS	Las Juntas de	92.72	80	IAMs_20	IAMs_20	02 14 28.7		
	comp=Z,10µm,20.0s							
U40A	Yellville	92.78	53	P	P	01 42 20.1	-4.8	
U40A				IAmb	IAmb	01 42 36.7		
	comp=Z,14nm,1.1s							
U40A				IAMs_20	IAMs_20	02 16 53.6		
	comp=Z,6µm,20.0s							
U40A	Yellville	92.78	53	P	P	01 42 25.1	+0.2	
	baz=253							
FFC	Flin Flon	92.88	34	P	P	01 42 18.7	-6.1	
FFC				pmax	pmax			
	comp=Z,9.0nm,1.1s							
FFC	Flin Flon	92.88	34	P	P	01 42 18.7	-6.1	
W41B	Gary Mavity, V	92.91	54	P	P	01 42 26.0	+0.5	
	baz=253							
BOD	Bodaibo	93.05	330	*e*P	P	01 42 26.0	+0.5	
BOD				pmax	pmax			
	comp=Z,12nm,1.3s							
SNAA	Sanae	93.08	178	P	P	01 42 25.8	+0.1	
SNAA	Sanae	93.08	178	P	P	01 42 23.7	-2.0	
SNAA				pmax	pmax			
	comp=Z,9.0nm,1.1s							
SNAA	Sanae	93.08	178	P	P	01 42 23.7	-2.0	
VNA3	Neumayer Olymp	93.09	175	P	P	01 42 25.8	+0.1	
PEL	Peldehue	93.31	125	IAMs_20	IAMs_20	02 14 12.0		
	comp=Z,9µm,22.0s							
ULN	Ulaanbaatar	93.32	319	⇓eP	P	01 42 27.4	+0.1	
ULN				pmax	pmax			
	comp=Z,7.0nm,1.4s							
ULN	Ulaanbaatar	93.32	319	IAMs_20	IAMs_20	02 18 26.8		
	comp=Z,6µm,21.0s							
HDC	Heredia	93.45	81	IAMs_20	IAMs_20	02 13 17.0		
	comp=Z,7µm,22.0s							
MGMO	Mountain Grove	93.45	53	IAMs_20	IAMs_20	02 17 26.6		
	comp=Z,10µm,21.0s							
SONM	Songino Array	93.73	319	P	P	01 42 29.5	+0.3	
	comp=Z,0.6nm,0.8s,baz=96,slow=1.5,SNR=3.9							
SONM				LR	LR	02 20 07.3		
	comp=Z,6µm,21.6s,baz=110,slow=33							
VNA1	Neumayer--Stat	93.78	176	P	P	01 42 30.1	+1.2	
X43A	Marvell	93.81	55	IAMs_20	IAMs_20	02 20 57.9		
	comp=Z,6µm,19.0s							
EFI	East Falkland	93.85	146	IAMs_20	IAMs_20	02 15 42.1		
	comp=Z,7µm,21.0s							
LCAR	Lake Charles	94.02	54	IAMs_20	IAMs_20	02 18 14.4		
	comp=Z,10µm,20.0s							
NVL	N'lazarevskaya	94.03	182	⇑*e*P	P	01 42 30.3	+0.3	
NVL				*e*S	SKSac	01 53 05.8	+1.1	
NVL				*e*		01 53 37.2		
NVL				*e*SS	SS	02 00 04.7	+6.0	
NVL				pmax	pmax			
	comp=Z,13nm,1.0s							
NVL				MLR	MLR			
	comp=Z,5µm,18.0s							
SCIA	State Center	94.11	48	IAMs_20	IAMs_20	02 20 45.9		
	comp=Z,8µm,19.0s							
GO04	Tololo Observa	94.25	123	IAMs_20	IAMs_20	02 14 35.6		
	comp=Z,7µm,21.0s							
CCM	Cathedral Cave	94.49	52	P	P	01 42 27.7	-5.0	
CCM				pmax	pmax			
	comp=Z,16nm,1.0s							
CCM	Cathedral Cave	94.49	52	P	P	01 42 27.7	-5.0	
CCM				IAmb	IAmb	01 42 43.9		
	comp=Z,16nm,0.9s							
CCM	Cathedral Cave	94.49	52	P	P	01 42 32.5	-0.1	
	baz=254							
TIXI	Tiksi	94.49	345	*e*P	P	01 42 31.5	-0.4	
TIXI				pmax	pmax			
	comp=Z,18nm,1.1s							
TIXI	Tiksi	94.49	345	P	P	01 42 31.3	-0.5	
	comp=Z,5.0nm,0.9s,baz=128,slow=3.9,SNR=9.9							
TIXI	Tiksi	94.49	345	P	P	01 42 29.0	-2.8	
TIXI				IAmb	IAmb	01 42 42.7		
	comp=Z,17nm,1.1s							
TIXI				IAMs_20	IAMs_20	02 18 10.9		
	comp=Z,8µm,22.0s							
LPAR	Lepanto	94.56	54	IAMs_20	IAMs_20	02 18 29.9		
	comp=Z,9µm,20.0s							
NNA	Nana	94.59	104	LR	LR	02 16 58.1		
	comp=Z,3µm,20.0s,baz=250,slow=30							
MET	Memphis--Engin	94.72	55	IAMs_20	IAMs_20	02 18 36.1		
	comp=Z,6µm,20.0s							
PBMO	Poplar Bluff	94.77	53	IAMs_20	IAMs_20	02 17 37.3		
	comp=Z,7µm,21.0s							
ULM	Lac du Bonnet	94.83	39	P	P	01 42 29.0	-4.9	
ULM				pmax	pmax			
	comp=Z,16nm,1.2s							
ULM	Lac du Bonnet	94.83	39	P	P	01 42 33.5	-0.4	
	comp=Z,15nm,1.3s,baz=255,slow=4.8,SNR=6.9							
ULM				LR	LR	02 20 59.5		
	comp=Z,4µm,18.9s,baz=257,slow=33							
ULM	Lac du Bonnet	94.83	39	P	P	01 42 29.0	-4.9	
ULM				IAmb	IAmb	01 42 45.4		
	comp=Z,16nm,1.1s							
ULM				IAMs_20	IAMs_20	02 22 11.2		
	comp=Z,5µm,19.0s							
OXF	Oxford	94.98	56	P	P	01 42 35.9	+1.0	
	baz=255							
PBA	Port Blair	95.14	281	IAMs_20	IAMs_20	02 29 34.2		
	comp=Z,6µm,22.0s							
PVMO	Portageville	95.24	54	IAMs_20	IAMs_20	02 19 10.8		
	comp=Z,9µm,20.0s							
PARMO	Parma	95.26	54	IAMs_20	IAMs_20	02 18 32.6		
	comp=Z,8µm,20.0s							
PENMO	Penman	95.31	54	IAMs_20	IAMs_20	02 19 22.6		
	comp=Z,9µm,20.0s							
LNXT	Lenox	95.32	54	IAMs_20	IAMs_20	02 19 03.0		
	comp=Z,10µm,21.0s							
SPMN	Marine on St.	95.34	45	IAMs_20	IAMs_20	02 20 00.4		
	comp=Z,9µm,20.0s							
SPMN	Marine on St.	95.34	45	P	P	01 42 37.1	+0.7	
	baz=254							
HALT	Halls	95.39	54	IAMs_20	IAMs_20	02 18 35.2		
	comp=Z,9µm,20.0s							
SLM	Saint Louis	95.41	52	IAMs_20	IAMs_20	02 19 16.5		
	comp=Z,9µm,20.0s							
N41A	Harden Midland	95.49	49	IAMs_20	IAMs_20	02 20 44.4		
	comp=Z,7µm,19.0s							
HENM	Henderson Moun	95.50	54	IAMs_20	IAMs_20	02 19 19.9		
	comp=Z,7µm,20.0s							
L40A	Anamosa	95.58	48	IAMs_20	IAMs_20	02 18 30.1		
	comp=Z,7µm,20.0s							
GO03	Copiap	95.61	120	IAMs_20	IAMs_20	02 15 19.5		
	comp=Z,6µm,21.0s							
HICK	Hickman	95.64	54	IAMs_20	IAMs_20	02 19 52.4		
	comp=Z,8µm,20.0s							
CFA	Coronel Fontan	95.79	125	P	P	01 42 39.7	+0.7	
	comp=Z,2.7nm,0.8s,baz=260,slow=2.4,SNR=6.0							
CFA				LR	LR	02 15 34.3		
	comp=Z,10µm,21.8s,baz=268,slow=29							
GTA	Gaotai	95.90	309	⇓P	P	01 42 45.0	+5.7	
GTA				pP	pwP	01 42 49.8	+5.0	
GTA				sP	sP	01 42 52.3	+9.4	
GTA				SKS	SKSac	01 53 22.8	+6.7	
GTA				S	ScS	01 53 59.3	+0.7	
GTA				sS	sS	01 54 07.6	+5.3	
GTA				SS	SS	02 00 36.1	+7.5	
GTA				pmax	pmax			
	comp=Z,9.0nm,1.5s							
GTA				pmax	pmax			
	comp=Z,410nm,9.7s							
GTA				LR	LR			
	comp=Z,4µm,22.2s							
GTA				LR	LR			
	comp=Z,8µm,24.1s							
GTA				LR	LR			
	comp=Z,13µm,23.2s							
S44A	Carbondale	95.91	53	IAMs_20	IAMs_20	02 19 01.6		
	comp=Z,6µm,20.0s							
BRAL	Brewton	96.06	59	P	P	01 42 40.1	+0.1	
	baz=256							
ZAK	Zakamensk	96.45	320	*e*P	P	01 42 48.7	+7.2	
ZAK				*e*		01 46 42.9		
ZAK				pmax	pmax			
	comp=Z,6.0nm,1.3s							
ZAK				pmax	pmax			
	comp=Z,6.0nm,1.8s							
I40A	Norwalk	96.49	46	IAMs_20	IAMs_20	02 21 33.8		
	comp=Z,6µm,19.0s							
JFWS	Jewell Farm	96.50	47	IAMs_20	IAMs_20	02 19 50.1		
	comp=Z,8µm,20.0s							
JFWS	Jewell Farm	96.50	47	P	P	01 42 42.5	+0.8	
	baz=255							
E38A	The Farm, Brul	96.55	44	IAMs_20	IAMs_20	02 21 11.5		
	comp=Z,9µm,19.0s							
TLY	Talaya	96.59	322	*e*P	P	01 42 55.8	+14	
TLY				*e*		01 46 40.9		
TLY				*e*		01 54 02.2		
TLY				*e*SS	SS	02 00 33.0	-4.4	
TLY				pmax	pmax			
	comp=Z,27nm,1.0s							
TLY				MLR	MLR			
	comp=Z,9µm,19.0s							
TLY	Talaya	96.59	322	LR	LR	02 22 01.2		
	comp=Z,11µm,21.1s,baz=100,slow=33							
HDIL	Hopedale	96.60	50	IAMs_20	IAMs_20	02 19 46.7		
	comp=Z,6µm,20.0s							
HDIL	Hopedale	96.60	50	P	P	01 42 42.6	+0.4	
	baz=256							
WVT	Waverly	96.63	54	P	P	01 42 42.0	-0.5	
	baz=256							
L42A	Oliver, Polo	96.69	48	IAMs_20	IAMs_20	02 19 44.1		
	comp=Z,5µm,20.0s							
X48A	Hartselle	96.85	56	IAMs_20	IAMs_20	02 20 06.6		
	comp=Z,8µm,20.0s							
EYMN	Ely	96.94	42	IAMs_20	IAMs_20	02 19 54.8		
	comp=Z,6µm,21.0s							
EYMN	Ely	96.94	42	P	P	01 42 44.0	+0.3	
	baz=255							
USIN	University of	97.20	53	IAMs_20	IAMs_20	02 19 43.6		
	comp=Z,8µm,20.0s							
Y49A	Blount Mountai	97.22	57	IAMs_20	IAMs_20	02 20 02.4		
	comp=Z,8µm,20.0s							
V48A	Smith Brothers	97.33	55	IAMs_20	IAMs_20	02 19 54.3		
	comp=Z,9µm,20.0s							
T47A	Sharon Grove	97.40	54	IAMs_20	IAMs_20	02 19 16.1		
	comp=Z,9µm,22.0s							
Z50A	Ashland	97.48	58	IAMs_20	IAMs_20	02 22 52.3		
	comp=Z,5µm,18.0s							
W49A	Belvidere	97.63	56	P	Pdif	01 42 48.2	+1.1	
	baz=257							
I42A	Draeger Farm,	97.68	47	IAMs_20	IAMs_20	02 21 53.4		
	comp=Z,6µm,19.0s							
M44A	Midewin, Midew	97.72	49	IAMs_20	IAMs_20	02 22 56.7		
	comp=Z,7µm,19.0s							
K43A	Burlington	97.81	48	IAMs_20	IAMs_20	02 19 47.9		
	comp=Z,8µm,21.0s							
Z51A	Franklin	98.11	58	IAMs_20	IAMs_20	02 21 47.8		
	comp=Z,5µm,20.0s							
WCI	Wyandotte Cave	98.31	53	IAMs_20	IAMs_20	02 20 37.1		
	comp=Z,8µm,20.0s							
U49A	Red Boiling Sp	98.33	55	Pdiff	Pdif	01 42 50.3	+0.1	
	baz=257							
152A	Waverly Hall	98.34	58	IAMs_20	IAMs_20	02 22 32.9		
	comp=Z,5µm,19.0s							
152A	Waverly Hall	98.34	58	Pdiff	Pdif	01 42 51.0	+0.7	
	baz=257							
W50A	Signal Mountai	98.41	56	IAMs_20	IAMs_20	02 22 40.9		
	comp=Z,5µm,20.0s							
H43A	Windswept, Lux	98.61	46	IAMs_20	IAMs_20	02 24 53.4		
	comp=Z,5µm,18.0s							
X51A	Calhoun	98.64	57	IAMs_20	IAMs_20	02 24 48.9		
	comp=Z,6µm,18.0s							
F42A	Maple Grove Fa	98.65	45	IAMs_20	IAMs_20	02 19 58.1		
	comp=Z,9µm,21.0s							
T49A	Edmonton	98.65	54	IAMs_20	IAMs_20	02 20 27.2		
	comp=Z,8µm,20.0s							
V50A	Pikeville	98.68	55	Pdiff	Pdif	01 42 52.7	+0.9	
	baz=258							
MNMC	Minye Minye	99.04	113	IAMs_20	IAMs_20	02 16 17.4		
	comp=Z,6µm,22.0s							
CPCT	Cooper Cave	99.10	56	IAMs_20	IAMs_20	02 20 06.0		
	comp=Z,6µm,21.0s							
L46A	Eue Claire	99.13	49	IAMs_20	IAMs_20	02 23 47.8		
	comp=Z,5µm,19.0s							
Y52A	Lilburn	99.13	57	IAMs_20	IAMs_20	02 21 22.9		
	comp=Z,7µm,21.0s							
R49A	Shelbyville	99.19	53	IAMs_20	IAMs_20	02 22 40.3		
	comp=Z,8µm,20.0s							
V51A	Loudon	99.31	55	IAMs_20	IAMs_20	02 21 45.5		
	comp=Z,7µm,20.0s							
W52A	Murphy	99.50	56	IAMs_20	IAMs_20	02 21 57.6		
	comp=Z,5µm,20.0s							
W52A	Murphy	99.50	56	Pdiff	Pdif	01 42 56.8	+1.4	
	baz=258							
154A	Montrose	99.65	59	IAMs_20	IAMs_20	02 22 35.2		
	comp=Z,6µm,20.0s							
TKL	Tuckaleechee C	99.74	56	IAMs_20	IAMs_20	02 20 14.9		
	comp=Z,8µm,20.0s							
R50A	Paris	99.83	53	IAMs_20	IAMs_20	02 21 14.5		
	comp=Z,9µm,20.0s							
V52A	Sevierville	99.92	56	IAMs_20	IAMs_20	02 20 52.6		
	comp=Z,6µm,21.0s							
TZTN	Tazewell	100.09	55	IAMs_20	IAMs_20	02 22 10.7		
	comp=Z,7µm,21.0s							
061Z	Ochoppi	100.14	66	IAMs_20	IAMs_20	02 20 46.7		
	comp=Z,5µm,21.0s							
G45A	Suttons Bay	100.21	46	IAMs_20	IAMs_20	02 21 07.2		
	comp=Z,6µm,21.0s							
K47A	Vermontville	100.21	49	Pdiff	Pdif	01 43 00.0	+1.6	
	baz=259							
E44A	Grand Marais A	100.33	44	IAMs_20	IAMs_20	02 23 21.9		
	comp=Z,8µm,20.0s							
J47A	Sunmer	100.44	48	IAMs_20	IAMs_20	02 21 58.6		
	comp=Z,5µm,20.0s							
V53A	Saluda	100.51	56	IAMs_20	IAMs_20	02 24 13.3		
	comp=Z,5µm,20.0s							
T52A	Hallie	100.65	54	IAMs_20	IAMs_20	02 23 34.0		
	comp=Z,8µm,20.0s							
HODGE	Hodges	100.67	57	IAMs_20	IAMs_20	02 22 28.1		
	comp=Z,6µm,20.0s							
Q51A	Peebles	100.73	52	IAMs_20	IAMs_20	02 21 11.6		
	comp=Z,9µm,22.0s							
I47A	Gladwin	100.81	47	IAMs_20	IAMs_20	02 23 19.4		
	comp=Z,8µm,20.0s							
060A	Indiantown	100.86	65	IAMs_20	IAMs_20	02 21 44.7		
	comp=Z,5µm,22.0s							
GLMI	Grayling	100.89	46	IAMs_20	IAMs_20	02 24 36.3		
	comp=Z,6µm,19.0s							
P51A	Williamsport	101.04	52	IAMs_20	IAMs_20	02 21 51.3		
	comp=Z,9µm,21.0s							
PAULI	Pauline	101.15	57	IAMs_20	IAMs_20	02 23 30.2		
	comp=Z,5µm,20.0s							
J48A	Bridge Port	101.20	48	IAMs_20	IAMs_20	02 21 17.9		
	comp=Z,6µm,22.0s							
J48A	Bridge Port	101.20	48	Pdiff	Pdif	01 43 03.9	+1.1	
	baz=260							
Z56A	Williston	101.23	58	IAMs_20	IAMs_20	02 25 23.8		
	comp=Z,5µm,20.0s							
257A	Skidaway Islan	101.25	60	IAMs_20	IAMs_20	02 24 48.2		
	comp=Z,5µm,19.0s							
E46A	Sault Ste Mari	101.38	45	IAMs_20	IAMs_20	02 22 25.4		
	comp=Z,8µm,20.0s							
U54A	Nelsons Funny	101.46	55	IAMs_20	IAMs_20	02 22 52.8		
	comp=Z,5µm,18.0s							
ROSC	El Rosal	101.56	88	IAMs_20	IAMs_20	02 18 04.2		
	comp=Z,5µm,22.0s							
KMSC	Kings Mountain	101.59	57	IAMs_20	IAMs_20	02 24 04.1		
	comp=Z,5µm,19.0s							
H48A	Harrisville	101.77	47	IAMs_20	IAMs_20	02 25 12.0		
	comp=Z,8µm,19.0s							
V55A	Taylorsville	101.82	56	IAMs_20	IAMs_20	02 22 35.0		
	comp=Z,6µm,22.0s							
K50A	Casco	101.95	49	IAMs_20	IAMs_20	02 23 06.3		
	comp=Z,5µm,20.0s							
I49A	Point Hope	102.00	48	IAMs_20	IAMs_20	02 23 25.7		
	comp=Z,7µm,20.0s							
RES	Resolute Bay	102.05	16	IAMs_20	IAMs_20	02 29 18.3		
	comp=Z,5µm,18.0s							

S57A	**Dark Hollow, R**	**103.92**	**54**	IAMs_20	IAMs_20	02 24 31.6		
	comp=Z,8µm,20.0s							
Y60A	**Bolivia**	**103.93**	**58**	IAMs_20	IAMs_20	02 23 48.1		
	comp=Z,6µm,21.0s							
CNNC	**Cliffs of the**	**104.39**	**57**	IAMs_20	IAMs_20	02 25 00.1		
	comp=Z,5µm,21.0s							
O56A	**Blue Knob Stat**	**104.58**	**52**	IAMs_20	IAMs_20	02 24 34.0		
	comp=Z,7µm,20.0s							
S58A	**Poland Farm, P**	**104.61**	**55**	IAMs_20	IAMs_20	02 23 50.8		
	comp=Z,8µm,22.0s							
U59A	**Littleton**	**104.63**	**56**	IAMs_20	IAMs_20	02 25 47.5		
	comp=Z,7µm,20.0s							
SADO	**Sadowa**	**104.73**	**47**	IAMs_20	IAMs_20	02 26 06.0		
	comp=Z,8µm,19.0s							
WVNY	**West Valley, N**	**104.83**	**50**	IAMs_20	IAMs_20	02 26 01.6		
	comp=Z,6µm,20.0s							
J54A	**Appleton**	**104.91**	**49**	IAMs_20	IAMs_20	02 24 16.7		
	comp=Z,5µm,20.0s							
T59A	**Double "B" Far**	**104.91**	**55**	IAMs_20	IAMs_20	02 26 58.9		
	comp=Z,7µm,19.0s							
V60A	**Jim Taylor Roa**	**104.97**	**57**	IAMs_20	IAMs_20	02 25 00.6		
	comp=Z,5µm,22.0s							
MEDO	**Medina**	**105.03**	**49**	IAMs_20	IAMs_20	02 23 48.9		
	comp=Z,5µm,22.0s							
Q58A	**Fox Den Farm,**	**105.08**	**53**	PKiKP	**PKiKP**	**01 47 35.0 +0.2**		
	baz=262							
H53A	**Bobcaygeon**	**105.11**	**47**	PKiKP	**PKiKP**	**01 47 35.6 +0.9**		
	baz=263							
MMNY	**Mt. Morris Dam**	**105.38**	**49**	IAMs_20	IAMs_20	02 23 57.5		
	comp=Z,6µm,21.0s							
P58A	**Pank, Wackersv**	**105.44**	**53**	PKiKP	**PKiKP**	**01 47 35.9 +0.4**		
	baz=263							
J55A	**Hilton**	**105.51**	**49**	IAMs_20	IAMs_20	02 24 45.5		
	comp=Z,6µm,20.0s							
T60A	**Surry**	**105.58**	**55**	IAMs_20	IAMs_20	02 25 38.6		
	comp=Z,7µm,20.0s							
PALK	**Pallekele**	**105.62**	**273**	IAMs_20	IAMs_20	02 32 43.4		
	comp=Z,5µm,21.0s							
U61A	**Possum Corner**	**105.71**	**56**	IAMs_20	IAMs_20	02 25 12.9		
	comp=Z,7µm,21.0s							
DELO	**Deloro Mine**	**105.78**	**47**	IAMs_20	IAMs_20	02 26 20.9		
	comp=Z,5µm,20.0s							
SDMD	**Soldier's Deli**	**105.78**	**53**	IAMs_20	IAMs_20	02 25 12.0		
	comp=Z,6µm,20.0s							
O58A	**Lewisberry**	**105.81**	**52**	PKiKP	**PKiKP**	**01 47 37.6 +1.4**		
	baz=263							
Q59A	**Harwood**	**105.86**	**53**	PKiKP	**PKiKP**	**01 47 38.2 +2.0**		
	baz=263							
E53A	**Dumoine, Ponti**	**105.94**	**46**	PKiKP	**PKiKP**	**01 47 37.8 +1.6**		
	baz=264							
PAGS	**Pennsylvania G**	**105.97**	**52**	IAMs_20	IAMs_20	02 25 07.9		
	comp=Z,8µm,21.0s							
V62A	**Hyde County Ai**	**106.00**	**57**	IAMs_20	IAMs_20	02 24 18.7		
	comp=Z,6µm,22.0s							
J56A	**Wolcott**	**106.20**	**49**	IAMs_20	IAMs_20	02 25 27.9		
	comp=Z,6µm,20.0s							
PLVO	**Plevna**	**106.22**	**47**	IAMs_20	IAMs_20	02 26 59.4		
	comp=Z,6µm,19.0s							
S61A	**Accomac**	**106.49**	**55**	IAMs_20	IAMs_20	02 26 28.0		
	comp=Z,6µm,20.0s							
J57A	**Williamstown**	**106.84**	**49**	IAMs_20	IAMs_20	02 26 07.2		
	comp=Z,7µm,20.0s							
K58A	**Earlville**	**107.04**	**49**	IAMs_20	IAMs_20	02 27 36.0		
	comp=Z,6µm,19.0s							
SIV	**San Ignacio**	**107.75**	**113**	PKKPbc	PKKPbc	01 58 55.5 +1.8		
	comp=Z,0.8nm,1.0s,baz=27,slow=2.3,SNR=2.4							
LONY	**Lake Ozonia**	**107.95**	**48**	IAMs_20	IAMs_20	02 28 23.3		
	comp=Z,5µm,19.0s							
TRY	**Troy**	**108.49**	**50**	IAMs_20	IAMs_20	02 25 42.5		
	comp=Z,7µm,21.0s							
ACCN	**Adirondack Com**	**108.53**	**49**	IAMs_20	IAMs_20	02 26 55.6		
	comp=Z,7µm,20.0s							
TULEG	**Thule**	**108.54**	**14**	IAMs_20	IAMs_20	02 31 49.9		
	comp=Z,4µm,19.0s							
HNH	**Hanover**	**109.55**	**49**	IAMs_20	IAMs_20	02 27 47.9		
	comp=Z,7µm,19.0s							
MKAR	**Makanchi Array**	**109.65**	**315**	Pdiff	**Pdif**	**01 43 46.3 +6.0**		
	comp=Z,0.2nm,0.5s,baz=94,slow=5.8,SNR=3.3							
MKAR				PKiKP	**PKiKP**	**01 47 47.9 +4.8**		
	comp=Z,2.4nm,0.9s,baz=64,slow=2.8,SNR=8.6							
MKAR				PKKPbc	**PKKPbc**	**01 58 51.1 +2.6**		
	comp=Z,0.5nm,0.8s,baz=48,slow=3.6,SNR=4.4							
LBNH	**Lisbon**	**109.83**	**48**	IAMs_20	IAMs_20	02 28 17.1		
	comp=Z,6µm,20.0s							
MAKZ	**Makanchi**	**109.86**	**315**	IAMs_20	IAMs_20	02 32 55.2		
	comp=Z,5µm,20.0s							
I62A	**Tamworth**	**110.25**	**48**	IAMs_20	IAMs_20	02 27 48.3		
	comp=Z,6µm,20.0s							
H62A	**Milan**	**110.40**	**48**	IAMs_20	IAMs_20	02 33 04.9		
	comp=Z,5µm,20.0s							
I63A	**Otisfield**	**110.80**	**48**	IAMs_20	IAMs_20	02 28 35.5		
	comp=Z,7µm,20.0s							
KAAM	**Kaadhehdhoo**	**111.32**	**264**	IAMs_20	IAMs_20	02 37 21.9		
	comp=Z,6µm,19.0s							
WVL	**Waterville**	**111.47**	**48**	IAMs_20	IAMs_20	02 31 17.2		
	comp=Z,5µm,18.0s							
PKME	**Peaks-Kenny Pk**	**111.73**	**47**	IAMs_20	IAMs_20	02 30 36.2		
	comp=Z,6µm,19.0s							
F63A	**Nahmakanta, Br**	**111.86**	**47**	IAMs_20	IAMs_20	02 30 22.7		
	comp=Z,5µm,20.0s							
KURK	**Kurchatov**	**112.04**	**319**	*i* PKiKP	**PKiKP**	**01 47 47.3 -0.1**		
KURBB	**Kurchatov Arra**	**112.10**	**319**	PKiKP	**PKiKP**	**01 47 52.6 +5.0**		
	comp=Z,3.4nm,1.1s,baz=95,slow=1.8,SNR=9.9							
PRZ	**Przheval'sk**	**112.35**	**310**	IAMs_20	IAMs_20	02 32 60.0		
	comp=Z,5µm,20.0s							
F64A	**Sherman**	**112.39**	**46**	IAMs_20	IAMs_20	02 28 59.6		
	comp=Z,6µm,20.0s							
D63A	**Stockholm**	**112.53**	**45**	PKiKP	**PKiKP**	**01 47 49.5 +0.9**		
	baz=272							
E64A	**Bridgewater**	**112.74**	**46**	PKiKP	**PKiKP**	**01 47 49.9 +0.9**		
	baz=272							
EMMW	**East Machias**	**113.04**	**48**	IAMs_20	IAMs_20	02 32 14.8		
	comp=Z,4µm,18.0s							
KDJ	**Kajisay**	**113.25**	**310**	IAMs_20	IAMs_20	02 33 32.0		
	comp=Z,6µm,20.0s							
GGN	**Saint George**	**113.47**	**47**	IAMs_20	IAMs_20	02 32 13.5		
	comp=Z,5µm,19.0s							
KSH	**Kashi**	**114.16**	**307**	PKP	PKiKP	01 48 00.4 +8.3		
KSH				PP	PP	01 49 00.6 +13		
KSH				PKS		01 51 30.3		
KSH				SKS	**SKSdf**	**01 55 07.4 +2.8**		
KSH				SKKS	**SKKSac**	**01 55 52.3 +3.1**		
KSH	**Kashi**	**114.16**	**307**	SS	SS	02 04 45.3 +6.8		
KSH				AMB	AMB			
	comp=Z,1µm,6.4s							
KSH				LR	LR			
	comp=N,1µm,14.1s							
KSH				LR	LR			
	comp=E,3µm,13.9s							
KSH				LR	LR			
	comp=Z,5µm,16.8s							
SABA	**Saba**	**114.85**	**77**	IAMs_20	IAMs_20	02 27 30.3		
	comp=Z,4µm,22.0s							
LMN	**Caledonia Moun**	**114.86**	**46**	IAMs_20	IAMs_20	02 30 35.1		
	comp=Z,7µm,20.0s							
AAK	**Ala-Archa**	**115.23**	**310**	*i* PKIKP	**PKPdf**	**01 47 56.0 +1.9**		
AAK	**Ala-Archa**	**115.23**	**310**	PKP	**PKPdf**	**01 47 58.6 +4.6**		
	comp=Z,1.2nm,0.7s,baz=66,slow=1.9,SNR=4.0							
AAK	**Ala-Archa**	**115.23**	**310**	IAMs_20	IAMs_20	02 33 10.2		
	comp=Z,7µm,21.0s							
HAL	**Halifax**	**115.80**	**48**	IAMs_20	IAMs_20	02 34 35.8		
	comp=Z,6µm,19.0s							
SPB	**Sao Paulo**	**115.82**	**126**	IAMs_20	IAMs_20	02 28 01.3		
	comp=Z,7µm,22.0s							
ILULI	**Ilulissat**	**115.92**	**19**	IAMs_20	IAMs_20	02 34 10.5		
	comp=Z,6µm,20.0s							
ARSB	**Arslanbob**	**116.41**	**309**	IAMs_20	IAMs_20	02 33 31.8		
	comp=Z,4µm,21.0s							
GBN	**Guysborough**	**117.20**	**47**	IAMs_20	IAMs_20	02 32 19.0		
	comp=Z,6µm,20.0s							
SUMG	**Summit**	**117.46**	**14**	IAMs_20	IAMs_20	02 35 47.6		
	comp=Z,5µm,20.0s							
BTK	**Batken**	**118.12**	**307**	IAMs_20	IAMs_20	02 35 51.3		
	comp=Z,7µm,22.0s							
RER	**Riviere de l'E**	**118.41**	**235**	IAMs_20	IAMs_20	02 34 30.8		
	comp=Z,5µm,20.0s							
BDFB	**Brasilia**	**119.29**	**118**	IAMs_20	IAMs_20	02 29 50.0		
	comp=Z,4µm,21.0s							
DRLN	**Deer Lake**	**119.35**	**42**	IAMs_20	IAMs_20	02 36 25.6		
	comp=Z,6µm,19.0s							
SVE	**Sverdlovsk**	**121.22**	**328**	*i* PKIKP	**PKiKP**	**01 48 04.7 -0.3**		
SVE				pmax	pmax			
	comp=Z,21nm,1.1s							
SVE				MLR	MLR			
	comp=Z,11µm,22.0s							
ANGG	**Ammassalik, Gr**	**122.23**	**19**	IAMs_20	IAMs_20	02 33 40.3		
	comp=Z,5µm,19.0s							
SCO	**Scoresbysund**	**122.42**	**10**	IAMs_20	IAMs_20	02 36 24.0		
	comp=Z,5µm,20.0s							
ARU	**Arti**	**122.43**	**328**	*i* PKIKP	**PKiKP**	**01 48 12.6 +5.2**		
ARU				SS	SS	02 06 27.5 +3.5		
ARU				MLR	MLR			
	comp=Z,12µm,21.0s							
ARCES	**ARCESS Array B**	**124.28**	**351**	PKP	**PKiKP**	**01 48 12.6 +1.8**		
	comp=Z,8.2nm,0.9s,baz=66,slow=2.9,SNR=6.0							
HRA	**Herat**	**125.38**	**301**	IAMs_20	IAMs_20	02 41 12.4		
	comp=Z,4µm,21.0s							
PRGR	**Permogore**	**125.45**	**338**	*e*PKIKP	**PKiKP**	**01 48 19.3 +6.1**		
PRGR				*e*		01 50 10.8		
PRGR				pmax	pmax			
	comp=Z,19nm,0.9s							
TMCR	**Tamitsa**	**126.16**	**343**	*e*PKIKP	PKiKP	01 48 22.4 +7.8		
TMCR				pmax	pmax			
	comp=Z,26nm,1.4s							
KLMR	**Klimovskoe**	**128.15**	**339**	*e*PKIKP	**PKiKP**	**01 48 17.2 -1.4**		
KLMR				*e*		01 50 22.7		
KLMR				*e*SS	SS	02 07 37.6 +2.5		
KLMR				pmax	pmax			
	comp=Z,36nm,1.3s							
KLMR	**Klimovskoe**	**128.15**	**339**	*e*PKPdf	**PKiKP**	**01 48 17.3 -1.4**		
KLMR				AMP		01 48 28.1		
	comp=Z,36nm,1.3s							
KLMR				*e*PP	**PP**	**01 50 22.7 +1.4**		
KLMR				*e*SS	**SS**	**02 07 37.7 +2.6**		
KLMR				*e*SS	**SS**	**02 07 37.7 +2.6**		
KLMR				LQ	LQ	02 31 24.7		
KLMR				LQ	LQ	02 31 24.7		
KLMR				LR	LR	02 35 08.1		
GEYT	**Alibeck**	**128.19**	**306**	PKP	**PKPdf**	**01 48 17.9 -1.1**		
	comp=Z,2.7nm,0.9s,baz=90,slow=1.5,SNR=5.6							
GYA0B	**ALIBECK ARRAY**	**128.19**	**306**	IAMs_20	IAMs_20	02 54 37.0		
	comp=Z,3µm,19.0s							
FINES	**FINESS Array B**	**131.49**	**347**	PKP	**PKPdf**	**01 48 23.0 -1.4**		
	comp=Z,1.7nm,0.8s,baz=91,slow=5.6,SNR=3.3							
OBN	**Obninsk**	**133.38**	**336**	*i* PKIKP	**PKiKP**	**01 48 30.4 +1.1**		
OBN				*i*		01 51 04.7		
OBN				pmax	pmax			
	comp=Z,6.0nm,1.0s							
OBN	**Obninsk**	**133.38**	**336**	IAMs_20	IAMs_20	02 54 54.0		
	comp=Z,3µm,19.0s							
VRH	**Novokhopyorsk**	**133.66**	**329**	*e*PKIKP	**PKPdf**	**01 48 27.4 -1.4**		
VRH				pmax	pmax			
	comp=Z,20nm,1.5s							
NB2	**NORSAR Subarra**	**134.10**	**356**	PKP	PKiKP	01 48 40.0 +9.3		
	comp=Z,2.4nm,1.0s,baz=17,slow=2.6							
NOA	**NORSAR Array B**	**134.10**	**356**	PKP	**PKiKP**	**01 48 29.0 -1.7**		
	comp=Z,1.5nm,1.0s,baz=13,slow=4.1,SNR=3.4							
LPSR	**Galich'ya Gora**	**134.11**	**332**	*e*PKIKP	**PKiKP**	**01 48 29.3 -1.6**		
LPSR				pmax	pmax			
	comp=Z,10.0nm,1.2s							
MAK	**Makhachkala**	**134.44**	**316**	*e*P	**Pdif**	**01 45 26.0 -4.6**		
MAK				*i*		01 48 27.0		
MAK				*e*		01 51 02.5		
MAK				*e*		01 55 35.8		
MAK				*e*SS	SS	02 08 47.7 -5.7		
MAK				pmax	pmax			
	comp=Z,469nm,1.1s							
AKT	**Akhty**	**134.87**	**314**	*e*PKIKP	**PKiKP**	**01 48 35.9 +2.9**		
AKT				*e*		01 51 11.2		
AKT				pmax	pmax			
	comp=Z,40nm,1.2s							
VSR	**Storozhevoye**	**134.91**	**330**	PKIKP	**PKiKP**	**01 48 30.8 -1.8**		
VSR				pmax	pmax			
	comp=Z,20nm,1.2s							
VORD	**Divnogorie**	**135.00**	**330**	*e*PKIKP	**PKPdf**	**01 48 30.1 -1.2**		
VORD				pmax	pmax			
	comp=Z,20nm,1.1s							
KONO	**Kongsberg**	**135.59**	**357**	IAMs_20	IAMs_20	02 51 52.9		
	comp=Z,5µm,22.0s							
GOF	**Gofitskoye**	**136.34**	**321⇑**	*e*PKIKP	**PKiKP**	**01 48 39.4 +3.7**		
GOF				pmax	pmax			
	comp=Z,27nm,1.0s							
ZEI	**Tsey**	**136.90**	**317**	*i* PKIKP	PKiKP	01 48 45.2 +8.0		
ZEI				pmax	pmax			
	comp=Z,7.0nm,1.0s							
MICGM	**Minsk**	**137.01**	**341**	*e*	**PKiKP**	**01 48 40.0 +3.2**		
MICGM				*e*		01 51 34.0		
MICGM				*e*LR	LR	02 35 30.0		
MICGM				LRM	MLR	02 46 00.0		
	comp=Z,13nm,20.0s							
MICGM				LRM	MLR	02 46 04.0		
	comp=Z,15nm,24.0s							
MNK	**Minsk**	**137.01**	**341**	*e*PKIKP	**PKiKP**	**01 48 40.0 +3.2**		
MNK				MLR	MLR			
	comp=Z,15µm,24.0s							
KIV	**Kislovodsk**	**137.12**	**320**	*i* PKIKP	**PKiKP**	**01 48 39.3 +1.8**		
KIV				*e*		01 51 20.9		
KIV				*e*PS	PS	02 01 46.1 -0.5		
KIV				*e*SS	SS	02 09 27.1 +1.6		
KIV				*e*SSS	SSS	02 14 32.4		
KIV				pmax	pmax			
	comp=Z,20nm,1.1s							
KIV				MLR	MLR			
	comp=Z,19µm,24.0s							
KIV	**Kislovodsk**	**137.12**	**320**	⇑P	PKiKP	01 48 51.9 +14		
GNI	**Garni**	**137.48**	**314**	IAMs_20	IAMs_20	02 49 21.3		
	comp=Z,4µm,21.0s							
AKH	**Akhalkalaki**	**137.80**	**316**	IAMs_20	IAMs_20	02 51 45.1		
	comp=Z,4µm,20.0s							
SUW	**Suwalki**	**138.82**	**344**	*e*PKIKP	PKiKP	01 48 48.2 +7.7		
SUW	**Suwalki**	**138.82**	**344**	*e*PKP	PKiKP	01 48 48.2 +7.7		
SUW				*e*L	L	02 41 41.1		
	comp=Z,11µm,28.3s							
SOC	**Sochi**	**139.15**	**321**	*i* PKIKP	**PKiKP**	**01 48 45.2 +3.7**		
SOC				*e*		01 51 35.5		
SOC				*e*SS	SS	02 09 43.8 -5.4		
SOC				*e*SSS	SSS	02 15 03.9		
SOC				pmax	pmax			
	comp=Z,17nm,1.1s							
SOC				MLR	MLR			
	comp=Z,6µm,20.0s							
AKASG	**Malin Array Be**	**139.63**	**336**	PKhKP	PKPpre	01 48 35.9		
	comp=Z,0.5nm,0.5s,baz=40,slow=2.9,SNR=3.6							
ANN	**Anapa**	**139.81**	**324**	*i* PKIKP	**PKiKP**	**01 48 40.4 -2.4**		
ANN				*e*		01 48 44.3		
ANN				*e*		01 51 31.8		
ANN				pmax	pmax			
	comp=Z,81nm,1.1s							
RGN	**Rugen**	**140.30**	**352**	IAMs_20	IAMs_20	02 48 34.8		
	comp=Z,5µm,21.0s							
GKP	**Gorka Klasztor**	**140.90**	**348**	*e*PKP	PKiKP	01 49 01.7 +17		
GKP				*e*L	L	02 44 30.0		
	comp=Z,9µm,24.1s							
RAYN	**Ar Rayn**	**141.03**	**289**	PKIKP	**PKPdf**	**01 48 38.4 -4.9**		
RAYN	**Ar Rayn**	**141.03**	**289**		**PKPdf**	**01 48 38.4 -4.9**		
RAYN				IAMs_20	IAMs_20	02 57 12.1		
	comp=Z,4µm,19.0s							
BSEG	**Bad Segeberg**	**141.22**	**355**	*e*L	L	02 50 06.4		
	comp=Z,4µm,22.0s							
BEL	**Belsk**	**141.42**	**344**	*e*PKIKP	PKiKP	01 48 53.3 +7.4		
BEL	**Belsk**	**141.42**	**344**	*e*PKP	PKiKP	01 48 53.3 +7.5		
BEL				*e*L	L	02 45 28.2		
	comp=Z,11µm,25.2s							
SIM	**Simferopol'**	**141.55**	**326**	*e*PKIKP	**PKiKP**	**01 48 47.0 +0.6**		
SIM				*e*		01 51 51.0		
SIM				pmax	pmax			
	comp=Z,401nm,6.4s							
SORM	**Soroca**	**142.01**	**334**	⇑PKIKP	**PKiKP**	**01 48 48.7 +1.5**		
SORM	**Soroca**	**142.01**	**334**	⇑P	**PKiKP**	**01 48 48.7 +1.5**		
LVV	**L'vov**	**142.24**	**340**	*e*PKIKP	**PKPdf**	**01 48 40.5 -4.1**		
LVV				*i*		01 48 47.6		
LVV				*e*		01 51 51.3		
LVV				MLR	MLR			
	comp=N,6µm,23.0s							
LVV				MLR	MLR			
	comp=E,4µm,23.0s							
LVV				MLR	MLR			
	comp=Z,8µm,23.0s							
RETH	**Rethem/Aller,**	**142.48**	**356**	*e*L	L	02 51 10.4		
	comp=Z,7µm,21.7s							
KIS	**Kishinev**	**142.69**	**333**	*e*PKP	PKiKP	01 48 57.0 +8.4		
KIS	**Kishinev**	**142.69**	**333**	*e*PS	PS	02 04 36.0		
KIS	**Kishinev**	**142.69**	**333**	*e*PKIKP	PKiKP	01 48 57.0 +8.4		
KWP	**Kalwaria Pacla**	**142.83**	**341**	*e*PKIKP	**PKPdf**	**01 48 44.2 -1.5**		
KWP				*e*		01 51 55.2		
KWP	**Kalwaria Pacla**	**142.83**	**341**	*e*PKP	**PKPdf**	**01 48 44.2 -1.5**		
KWP				*e*PP	**PP**	**01 51 55.2 +1.4**		
KWP				*e*L	L	02 46 36.3		
	comp=Z,11µm,24.4s							
ATD	**Arta Tunnel**	**143.01**	**269**	IAMs_20	IAMs_20	02 54 45.8		
	comp=Z,4µm,18.0s							
OJC	**Ojcow**	**143.15**	**344**	*e*PKIKP	**PKPdf**	**01 48 46.3 +0.1**		
OJC				*e*SKPdf	**SKPbc**	**01 52 22.3 -2.4**		
OJC				*e*L	L	02 45 40.1		
	comp=Z,9µm,27.1s							
KSP	**Ksiaz**	**143.39**	**348**	*e*PKIKP	**PKPdf**	**01 48 44.8 -1.8**		
KSP	**Ksiaz**	**143.39**	**348**	*e*PKP	**PKPdf**	**01 48 44.8 -1.8**		
KSP				*e*PP	PP	01 52 10.8 +14		
KSP				*e*L	L	02 45 30.3		
	comp=Z,7µm,25.3s							
CLL	**Collm**	**143.50**	**352**	*e*PKIKP	PKPbc	01 48 44.0 0.0		
CLL				*i*		01 48 51.0		
CLL				*e*		01 52 02.0		
CLL	**Collm**	**143.50**	**352**	*e*PKPdf	PKPbc	01 48 44.0 0.0		
CLL				*i*		01 48 51.0		
	comp=Z,14nm,1.0s							
CLL				*i*		01 49 09.8		
	comp=Z,31nm,1.3s							
CLL				*e*		01 51 06.0		
CLL				*e*PP	**PP**	**01 52 02.0 +4.4**		
CLL				*e*SKPbc	**SKiKP**	**01 52 25.0 -1.6**		
CLL				*e*		01 52 53.0		
CLL				*e*PPP	PPP	01 55 06.0		
CLL				*e*SKKSac	**SKKSac**	**01 58 53.0 +1.7**		
CLL				*e*PSKS		02 02 12.0		
CLL				*e*PPS	PPS	02 04 34.0		
CLL				*e*		02 05 54.0		
CLL				*e*		02 10 05.0		
CLL				*e*SS	**SS**	**02 10 39.0 +0.7**		
CLL				*e*SKSSKSac		02 12 05.0		
CLL				*e*		02 12 58.0		
CLL				*e*SSS	SSS	02 15 54.0		
CLL				*e*SSSS		02 19 48.0		
CLL				Lm	MLR	02 49 00.0		
	comp=N,4µm,21.6s							
CLL				Lm	MLR	02 49 00.0		
	comp=E,2µm,21.6s							
CLL	**Collm**	**143.50**	**352**	*e*L	L	02 51 02.4		
	comp=E,5µm,21.4s							
KOLS	**Kolonicke sedl**	**143.58**	**341**	*e*PKIKP	**PKiKP**	**01 48 48.4 -2.0**		
KOLS	**Kolonicke sedl**	**143.58**	**341**	*e*PKP	**PKiKP**	**01 48 48.4 -2.0**		
OSTC	**Ostas**	**143.68**	**348**	*e*PKP	**PKPdf**	**01 48 44.6 -2.6**		
OSTC				*ex*	x	01 48 54.3		
OSTC				*e*SS	SS	02 10 34.6 -5.8		
OSTC				AMS	AMS	02 50 00.0		
	comp=E,8µm,23.3s							
BURAR	**Bucovina Array**	**143.68**	**337**	⇑PKIKP	PKPbc	01 48 44.1 -0.7		
BURAR	**Bucovina Array**	**143.68**	**337**	⇑P	PKPbc	01 48 44.1 -0.8		
CHVC	**Chvalec**	**143.68**	**348**	*e*PKP	PKPbc	01 48 43.9 -0.7		
CHVC				*ex*	x	01 48 53.6		
CHVC				AMS	AMS	02 42 50.0		
	comp=E,6µm,26.3s							
NIE	**Niedzica**	**143.74**	**343**	*e*PKIKP	**PKiKP**	**01 48 48.3 -2.5**		
NIE	**Niedzica**	**143.74**	**343**	*e*PKP	**PKiKP**	**01 48 48.3 -2.5**		
NIE				*e*L	L	02 47 42.3		
	comp=E,6µm,24.8s							
UPC	**Upice**	**143.76**	**348**	*e*PKIKP	**PKPdf**	**01 48 45.9 -1.4**		
UPC				*e*SS	SS	02 10 35.7 -5.7		
UPC				MLR	MLR			
	comp=Z,7µm,25.5s							
UPC	**Upice**	**143.76**	**348**	*e*PKP	**PKPdf**	**01 48 45.9 -1.4**		
UPC				*ex*	x	01 49 10.9		
UPC				*e*SS	SS	02 10 35.7 -5.7		
UPC				AMS	AMS	02 45 20.0		
	comp=Z,7µm,25.5s							
BRG	**Berggiesshubel**	**143.78**	**350**	*e*PKP	**PKPdf**	**01 48 45.4 -1.9**		
	comp=Z,28nm,1.9s							
BRG				*e*		01 48 51.2		
	comp=Z,10nm,1.1s							
BRG				*e*		02 04 30.0		
BRG				SS	SS	02 10 41.0 -0.6		
	comp=N,8µm,25.2s							
	comp=E,3µm,28.2s							
	comp=Z,8µm,27.0s							
BRG	**Berggiesshubel**	**143.78**	**350**	*e*PKIKP	**PKPdf**	**01 48 45.4 -1.9**		
BRG				*e*		01 48 51.2		
BRG				*e*		02 04 30.0		
BRG				SS	SS	02 10 41.0 -0.6		
BRG				pmax	pmax			
	comp=Z,28nm,1.9s							
BRG				MLR	MLR			
	comp=N,8µm,25.2s							
BRG				MLR	MLR			
	comp=E,3µm,28.2s							
BRG				MLR	MLR			
	comp=Z,8µm,27.0s							
UZH	**Uzhgorod**	**143.84**	**340**	*e*PKIKP	**PKPdf**	**01 48 45.0 -2.5**		
UZH				*e*		01 48 48.0		
UZH				*i*		01 48 51.5		
UZH				*e*PPP	PPP	01 55 16.4		
DPC	**Dobruska-Polom**	**143.85**	**348**	*e*PKIKP	**PKPdf**	**01 48 46.4 -1.1**		
DPC				*e*		01 48 51.5		
DPC				MLR	MLR			
	comp=Z,8µm,22.4s							
DPC	**Dobruska-Polom**	**143.85**	**348**	*e*PKP	**PKPdf**	**01 48 46.4 -1.1**		
DPC				*ep*PKP	**sPKPdf**	**01 48 51.5 +0.3**		
DPC				*ex*	x	01 48 59.9		
DPC				*ex*	x	01 49 11.1		
DPC				*e*SS	SS	02 10 32.3 -10		
DPC				AMS	AMS	02 50 10.0		
	comp=Z,8µm,22.4s							
BIZ	**Bicaz**	**143.88**	**335**	⇑P	**PKPdf**	**01 48 46.5 -1.2**		
OKC	**Ostrava-Krasne**	**143.92**	**346**	*e

PRU				MLR	MLR			
	comp=Z,7μm,23.3s							
PRU	**Pruhonice**	**144.54**	**349**	*e*PKP	**PKPdf**	**01**	**48**	**47.8 -0.9**
PRU				*ep*PKP	**sPKPdf**	**01**	**48**	**53.0 +0.7**
PRU				*ex*	x	01	49	13.2
PRU				*e*SS	SS	02	10	45.2 -5.0
PRU				AMS	AMS	02	48	20.0
	comp=Z,7μm,23.3s							
NKC	**Novy Kostel**	**144.63**	**352**	*e*PKIKP	**PKiKP**	**01**	**48**	**55.0 +2.4**
NKC				*e*		01	49	02.2
NKC				MLR	MLR			
	comp=Z,6μm,21.9s							
NKC	**Novy Kostel**	**144.63**	**352**	*e*PKP	**PKiKP**	**01**	**48**	**55.0 +2.4**
NKC				*ex*	x	01	49	02.2
NKC				*ex*	x	01	49	09.9
NKC				AMS	AMS	02	51	10.0
	comp=Z,6μm,21.9s							
OZUR		**144.69**	**335**	⇓P	**PKPdf**	**01**	**48**	**49.1 0.0**
VRAC	**Vranov**	**144.78**	**347**	⇑PKIKP	**PKPdf**	**01**	**48**	**48.8 -0.4**
VRAC	**Vranov**	**144.78**	**347**	⇑P	**PKPdf**	**01**	**48**	**48.8 -0.4**
VRAC	**Vranov**	**144.78**	**347**	*e*PKP	**PKPdf**	**01**	**48**	**48.1 -1.0**
MONG	**Mongu**	**144.85**	**211**	*i* P	**PKPdf**	**01**	**48**	**49.9 -0.5**
PBCC	**Pribram**	**144.92**	**350**	*e*PKP	**PKPdf**	**01**	**48**	**49.3 -0.1**
PBCC				*ex*	x	01	48	54.1
PBCC				*ex*	x	01	49	14.5
PBCC				AMS	AMS	02	48	50.0
	comp=Z,2μm,25.3s							
JAVC	**Velka Javorina**	**144.95**	**345**	*e*PKP	**PKPdf**	**01**	**48**	**49.6 +0.1**
DOPR	**Dopca**	**144.96**	**335**	⇑P	**PKPdf**	**01**	**48**	**49.5 -0.1**
VYHS	**Vyhne**	**144.99**	**344**	*e*PKIKP	**PKPdf**	**01**	**48**	**49.4 -0.1**
VYHS	**Vyhne**	**144.99**	**344**	*e*PKP	**PKPdf**	**01**	**48**	**49.4 -0.1**
TREC	**Trest**	**145.02**	**348**	*e*PKIKP	**PKPdf**	**01**	**48**	**49.1 -0.5**
TREC				MLR	MLR			
	comp=Z,7μm,20.2s							
TREC	**Trest**	**145.02**	**348**	*e*PKP	**PKPdf**	**01**	**48**	**49.1 -0.5**
TREC				AMS	AMS	02	51	40.0
	comp=Z,7μm,20.2s							
CJR	**Cluj-Napoca**	**145.04**	**337**	⇑PKIKP	**PKiKP**	**01**	**48**	**55.8 +2.2**
CJR	**Cluj-Napoca**	**145.04**	**337**	⇑P	**PKiKP**	**01**	**48**	**55.8 +2.2**
KRUC	**Moravsky**	**145.05**	**347**	*e*PKP	**PKPdf**	**01**	**48**	**48.8 -0.8**
TNS	**Taunus Mts**	**145.05**	**356**	*e*L	L	02	56	44.3
	comp=Z,6μm,21.3s							
LTVH	**Ltavrtes, Hu**	**145.06**	**340**	*e*PKiKP	**PKPdf**	**01**	**48**	**49.3 -0.3**
BR131	**Keskin Array S**	**145.08**	**320**	PKP2	**PKPab**	**01**	**48**	**45.7 -3.9**
BR131	**Keskin Array S**	**145.08**	**320**	PKPbc	**PKPab**	**01**	**48**	**45.7 -3.9**
BRTR	**Keskin Array B**	**145.09**	**320**	PKP	**PKPdf**	**01**	**48**	**49.8 -0.4**
	comp=Z,22nm,0.9s,baz=96,slow=2.8,SNR=119							
MLR	**Muntele Rosu**	**145.11**	**334**	PKP2	**PKPbc**	**01**	**48**	**45.4 -4.0**
MLR				MLR	MLR			
	comp=Z,8μm,22.0s							
MLR	**Muntele Rosu**	**145.11**	**334**	⇑P	**PKPdf**	**01**	**48**	**50.2 +0.2**
MLR	**Muntele Rosu**	**145.11**	**334**	PKPbc	**PKPbc**	**01**	**48**	**45.4 -4.0**
PSZ	**Piszkesteto**	**145.21**	**342**	⇓PKIKP	**PKPdf**	**01**	**48**	**50.1 +0.1**
PSZ	**Piszkesteto**	**145.21**	**342**	⇓P	**PKPdf**	**01**	**48**	**50.1 +0.1**
DRGR		**145.29**	**338**	⇓PKIKP	**PKPdf**	**01**	**48**	**49.9 -0.3**
DRGR		**145.29**	**338**	⇓P	**PKPdf**	**01**	**48**	**49.9 -0.3**
GRA1	**Grafenberg Arr**	**145.32**	**353**		**PKPbc**	**01**	**48**	**45.7 -4.1**
GRA1				IAMs_20	IAMs_20	02	52	19.6
	comp=Z,4μm,20.0s							
GRF	**Grafenberg Arr**	**145.32**	**353**	PKP2	**PKPbc**	**01**	**48**	**45.7 -4.1**
GRF				MLR	MLR			
	comp=Z,4μm,20.0s							
GRF	**Grafenberg Arr** baz=11,slow=2.9	**145.32**	**353**	*e*PKPbc	**PKPdf**	**01**	**48**	**50.0 -0.1**
GRF				*e*L	L	02	56	56.4
	comp=Z,4μm,21.3s							
SMOL	**Smolenice**	**145.33**	**345**	*e*PKIKP	**PKiKP**	**01**	**48**	**51.1 -2.9**
SMOL	**Smolenice**	**145.33**	**345**	*e*PKP	**PKiKP**	**01**	**48**	**51.1 -2.9**
PSN	**Preselentsi**	**145.48**	**330**	*e*P	PKiKP	01	49	04.2 +10
MODS	**Modra-Piesok**	**145.49**	**345**	*e*PKIKP	**PKPab**	**01**	**48**	**50.7 +0.1**
MODS	**Modra-Piesok**	**145.49**	**345**	*e*PKP	**PKPab**	**01**	**48**	**50.7 +0.1**
ANTO	**Ankara**	**145.52**	**321**	⇑PKP2	**PKiKP**	**01**	**48**	**57.4 +2.6**
ANTO	**Ankara**	**145.52**	**321**	⇑P	**PKiKP**	**01**	**48**	**57.4 +2.6**
ANTO	**Ankara**	**145.52**	**321**	IAMs_20	IAMs_20	02	56	56.9
	comp=Z,3μm,20.0s							
VOIR		**145.53**	**335**	⇓PKIKP	**PKPab**	**01**	**48**	**51.3 +0.4**
VOIR		**145.53**	**335**	⇓P	**PKPab**	**01**	**48**	**51.3 +0.4**
KHC	**Kasperske Hory**	**145.53**	**350**	*e*PKIKP	**PKPab**	**01**	**48**	**50.9 +0.1**
KHC				*e*		01	48	54.9
KHC				MLR	MLR			
	comp=Z,9μm,25.0s							
KHC	**Kasperske Hory**	**145.53**	**350**	*e*PKP	**PKPab**	**01**	**48**	**50.9 +0.1**
KHC				*ep*PKP	**PKiKP**	**01**	**48**	**54.9 +0.4**
KHC				*ex*	x	01	49	06.0
KHC				*ex*	x	01	49	14.8
KHC				*e*SS	SS	02	10	51.6 -10
KHC				AMS	AMS	02	49	40.0
	comp=Z,9μm,25.0s							
KHC	**Kasperske Hory**	**145.53**	**350**		**PKPbc**	**01**	**48**	**46.8 -3.7**
KHC				IAMs_20	IAMs_20	02	50	51.7
	comp=Z,3μm,22.0s							
WET	**Wettzell**	**145.63**	**351**	*e*L	L	02	53	27.3
	comp=Z,7μm,21.4s							
ZST	**Bratislava**	**145.70**	**346**	*e*PKP2	**PKPab**	**01**	**48**	**51.4 0.0**
ZST	**Bratislava**	**145.70**	**346**	*e*PKP	**PKPab**	**01**	**48**	**51.4 0.0**
WLF	**Walferdange**	**145.71**	**359**	PKIKP	**PKPdf**	**01**	**48**	**46.9 -3.8**
WLF				MLR	MLR			
	comp=Z,11μm,22.0s							
WLF	**Walferdange**	**145.71**	**359**		**PKPdf**	**01**	**48**	**46.9 -3.8**
GEC2	**GERESS Array S**	**145.79**	**350**	*e*L	L	02	53	49.0
	comp=Z,6μm,21.8s							
GERES	**GERESS Array B**	**145.79**	**350**	PKPbc	**PKPab**	**01**	**48**	**51.4 -0.4**
	comp=Z,8.4nm,1.0s,baz=31,slow=3,1,SNR=48							
LOT	**Lotru**	**146.03**	**336**	⇑P	**PKPab**	**01**	**48**	**52.5 -0.4**
PRD	**Provadia**	**146.22**	**330**	*e*P	**PKiKP**	**01**	**48**	**55.7 -0.3**
NEF	**NEVSHA**	**146.23**	**330**	*e*P	**PKiKP**	**01**	**48**	**59.2 +3.1**
CONA	**Conrad Observa**	**146.24**	**347**	*i* sPKiKP	**PKiKP**	**01**	**48**	**53.7 -2.4**
	comp=Z,120nm,1.6s,SNR=14							
HWQ	**Hawqa**	**146.33**	**310**	*e*P	**PKPdf**	**01**	**48**	**51.2 -1.2**
STU	**Stuttgart**	**146.44**	**355**	IAMs_20	IAMs_20	02	59	11.2
	comp=Z,4μm,20.0s							
GZR	**Gura Zlata**	**146.46**	**337**	⇑PKP2	**PKPab**	**01**	**48**	**53.5 -0.9**
GZR	**Gura Zlata**	**146.46**	**337**	⇑P	**PKPab**	**01**	**48**	**53.5 -0.9**
ORH	**Orhaniye**	**146.49**	**324**	P	**PKiKP**	**01**	**49**	**03.1 +6.4**
MOA	**Molln**	**146.64**	**349**	*i* pPKiKP	**PKPab**	**01**	**48**	**53.9 -1.1**
	comp=Z,68nm,1.2s,SNR=14							
TIH	**Tihany**	**146.70**	**344**	*e*PKiKP	**PKPab**	**01**	**48**	**53.6 -1.6**
BHL	**Bhannes**	**146.71**	**309**	*e*P	**PKPbc**	**01**	**48**	**53.6 -1.0**
FUR	**Furstenfeldbru**	**146.81**	**352**	*e*L	L	02	53	12.8
	comp=Z,5μm,21.9s							
SZH	**Strazhica**	**146.86**	**331**	*e*P	PKiKP	01	49	04.3 +7.0
ISK	**Istanbul-Kandi**	**146.91**	**326**	P	PKiKP	01	49	05.4 +7.9
BFO	**Black Forest**	**146.94**	**356**	*e*L	L	02	57	33.2
	comp=Z,3μm,20.7s							
BFO	**Black Forest**	**146.94**	**356**	IAMs_20	IAMs_20	02	57	33.4
	comp=Z,4μm,20.0s							
ARSA	**Arzberg**	**146.96**	**347**	*i* pPKiKP	**PKPab**	**01**	**48**	**54.6 -1.6**
	comp=Z,88nm,1.3s							
HERR	**Herculane**	**147.03**	**337**	⇓P	**PKPab**	**01**	**48**	**55.2 -1.4**
MORH	**Mrgy, Hungar**	**147.12**	**342**	*e*P	**PKPbc**	**01**	**48**	**54.2 -1.1**
ECH	**Echery**	**147.12**	**357**	PKIKP	**PKPdf**	**01**	**48**	**49.7 -3.5**
ECH				MLR	MLR			
	comp=Z,5μm,21.0s							
ECH	**Echery**	**147.12**	**357**		**PKPdf**	**01**	**48**	**49.7 -3.5**
ECH				IAMs_20	IAMs_20	02	52	58.9
	comp=Z,5μm,21.0s							
JMB	**Yambol**	**147.17**	**330**	*e*P	PKiKP	01	49	08.2 +10
PVL	**Pavlikeni**	**147.18**	**332**	*e*P	PKiKP	01	49	05.4 +7.4
SHEL	**Horse Pasture**	**147.19**	**161**	IAMs_20	IAMs_20	02	53	43.2
	comp=Z,3μm,21.0s							
PLVB	**Pleven**	**147.36**	**333**	⇑P	**PKPab**	**01**	**48**	**56.4 -1.4**
MDVR	**Moldovita**	**147.38**	**338**	⇓P	**PKiKP**	**01**	**48**	**57.7 -0.7**
BEHE	**Becsehely**	**147.39**	**345**	*e*P	**PKiKP**	**01**	**49**	**02.7 +4.4**
RETA	**Reutte**	**147.55**	**353**	*i* sPKiKP	**PKPab**	**01**	**48**	**56.3 -2.3**
	comp=Z,29nm,1.1s							
EDRB	**Edirne**	**147.55**	**329**	P	PKiKP	01	49	07.4 +8.6
KBA	**Koelnbreinsper**	**147.56**	**349**	*i* sPKiKP	**PKiKP**	**01**	**48**	**59.7 +0.8**
	comp=Z,41nm,1.2s							
WATA	**Walderalm**	**147.59**	**352**	*i* sPKiKP	**PKPab**	**01**	**48**	**57.0 -1.9**
	comp=Z,47nm,1.2s							
SOKA	**Soboth**	**147.61**	**347**	*i* sPKiKP	**PKPab**	**01**	**48**	**56.7 -2.2**
	comp=Z,62nm,1.2s,SNR=6.8							
PERS	**Pernice**	**147.63**	**347**	*e*PKPdf	**PKPab**	**01**	**48**	**56.9 -2.1**
PERS				*i* PKPbc	**sPKPbc**	**01**	**48**	**59.5 -0.9**
PERS				*e*		02	12	18.5
MOTA	**Moosalm**	**147.64**	**352**	*i* sPKiKP	**PKPab**	**01**	**48**	**57.3 -1.8**
	comp=Z,51nm,1.2s							
WTTA	**Wattenberg**	**147.65**	**352**	*es*PKiKP	**PKPab**	**01**	**48**	**56.7 -2.5**
	comp=Z,41nm,1.1s							
FRGS	**Fruska Gora**	**147.71**	**340**	*e*P	**PKPab**	**01**	**49**	**00.1 +0.9**
SQTA	**Sankt Quirin**	**147.75**	**352**	*i* sPKiKP	**PKPab**	**01**	**48**	**58.1 -1.4**
	comp=Z,35nm,1.1s							
DAVA	**Damuels**	**147.84**	**354**	*i* sPKPab	**PKPbc**	**01**	**48**	**57.0 -0.5**
	comp=Z,57nm,1.1s,SNR=6.3							
OBKA	**Obir**	**147.87**	**348**	*i* sPKiKP	**PKPab**	**01**	**48**	**59.9 0.0**
	comp=Z,30nm,1.2s							
CSS	**Mathiatis**	**147.90**	**313**	IAMs_20	IAMs_20	03	06	14.1
	comp=Z,4μm,20.0s							
MYKA	**Terra Mystica**	**147.93**	**349**	*i* sPKiKP	**PKiKP**	**01**	**48**	**57.7 -1.9**
	comp=Z,34nm,1.0s							
FETA	**Feichten**	**148.01**	**353**	*i* sPKiKP	**PKPab**	**01**	**48**	**59.1 -1.4**
	comp=Z,42nm,1.1s							
ABTA	**Abfaltersbach**	**148.02**	**350**	*i* sPKiKP	**PKiKP**	**01**	**48**	**58.2 -1.6**
	comp=Z,46nm,1.2s							
LEF	**Lefka**	**148.13**	**313**	⇑P	**PKPab**	**01**	**49**	**02.1 +0.8**
ISP	**Isparta**	**148.17**	**320**	IAMs_20	IAMs_20	03	10	40.4
	comp=Z,4μm,22.0s							
PGB	**Panagyurishte**	**148.23**	**333**	*e*P	**PKPab**	**01**	**49**	**04.2 +2.7**
CRES	**Cresnjev**	**148.32**	**346**	*e*P	**PKPab**	**01**	**49**	**00.4 -1.2**
LJU	**Ljubljana**	**148.32**	**347**	*e*P	**PKPab**	**01**	**49**	**05.0 +3.4**
PLD	**Plovdiv**	**148.34**	**331**	*e*P	**PKPab**	**01**	**49**	**03.8 +2.0**
VTS	**Vitosha**	**148.58**	**334**	⇑PKP2	**PKiKP**	**01**	**49**	**00.5 -0.6**
VTS	**Vitosha**	**148.58**	**334**	⇑P	**PKiKP**	**01**	**49**	**00.5 -0.6**
VTS	**Vitosha**	**148.58**	**334**	*e*P	**PKPab**	**01**	**49**	**02.9 -0.1**
DIVS	**Divibare**	**148.58**	**339**	*e*P	**PKPbc**	**01**	**48**	**58.5 -0.9**
ALN	**Alexandroupoli**	**148.61**	**328**	P	PKPab	01	49	10.6 +7.6
ALN	**Alexandroupoli**	**148.61**	**328**	IAMs_20	IAMs_20	02	53	48.8
	comp=Z,3μm,22.0s							
CEY	**Cerknica**	**148.63**	**347**	*e*P	**PKPab**	**01**	**49**	**03.5 +0.6**
BLY	**Banja Luka**	**148.88**	**343**	*e*P	**PKiKP**	**01**	**49**	**00.2 -1.2**
HAPS	**Han Pijesak,BI**	**148.94**	**340**	*e*P	**PKiKP**	**01**	**49**	**00.2 -1.6**
BBLS	**Lazići**	**148.99**	**340**	*e*P	**PKPab**	**01**	**49**	**02.5 -2.0**
MGRS	**Mrkonjic Grad**	**149.21**	**343**	*e*P	**PKPab**	**01**	**49**	**05.5 +0.2**
RUDO	**Rudo**	**149.22**	**339**	*e*P	**PKPbc**	**01**	**48**	**58.6 -2.4**
EZN	**Ezine**	**149.26**	**327**	P	**PKPab**	**01**	**49**	**07.0 +1.4**
KKB	**Krupnik**	**149.26**	**333**	*e*P	**PKPbc**	**01**	**49**	**00.3 -0.8**
KAVA	**Kavala**	**149.29**	**330**	P	**PKPdf**	**01**	**48**	**54.4 -2.5**
THAS	**Thassos island**	**149.49**	**330**	P	**PKPab**	**01**	**49**	**05.4 -1.1**
SRS	**Serrai**	**149.63**	**332**	P	**PKPab**	**01**	**49**	**11.8 +4.7**
PRK	**Paraskevi**	**149.70**	**326**	P	**PKPab**	**01**	**49**	**09.5 +2.1**
SKO	**Skopje**	**149.86**	**335**	*e*P	**PKiKP**	**01**	**49**	**01.8 -1.8**
KNT	**Kendrikon**	**149.91**	**332**	P	**PKiKP**	**01**	**49**	**03.0 -0.7**
VAY	**Valandovo**	**149.92**	**333**	*e*P	**PKPab**	**01**	**49**	**08.5 +0.3**
SOH	**Sokhos**	**149.97**	**331**	P	**PKPab**	**01**	**49**	**07.0 -1.6**
YER	**Yerkesik**	**149.99**	**321**	P	**PKPab**	**01**	**49**	**08.5 -0.3**
ASCN	**Ascension**	**150.00**	**139**	IAMs_20	IAMs_20	02	51	58.5
	comp=Z,3μm,21.0s							
CHOS	**Chios island**	**150.44**	**325**	P	**PKPab**	**01**	**49**	**14.0 +3.4**
PAIG	**Paliouri**	**150.52**	**330**	P	**PKPab**	**01**	**49**	**07.0 -3.8**
OHR	**Ohrid**	**150.85**	**335**	*e*P	**PKPab**	**01**	**49**	**11.2 -0.9**
FNA	**Florina**	**150.88**	**334**	P	**PKiKP**	**01**	**49**	**06.6 +0.8**
FNA	**Florina**	**150.88**	**334**	IAMs_20	IAMs_20	02	53	14.2
	comp=Z,4μm,19.0s							
LIT	**Litokhoron**	**150.94**	**332**	P	**PKPbc**	**01**	**49**	**01.9 -3.4**
AOS	**Alonnisos**	**151.00**	**329**	P	**PKPab**	**01**	**49**	**10.1 -2.7**
KZN	**Kozani**	**151.10**	**333**	P	**PKPbc**	**01**	**49**	**03.5 -2.2**
XOR	**Xorichti**	**151.19**	**330**	P	**PKPab**	**01**	**49**	**15.2 +1.6**
SKIA	**Skiathos**	**151.21**	**329**	P	**PKPab**	**01**	**49**	**12.1 -1.6**
NEST	**Nestorio**	**151.32**	**334**	P	**PKiKP**	**01**	**49**	**08.2 +1.4**
EREA	**Eretria**	**151.55**	**328**	P	**PKiKP**	**01**	**49**	**08.9 +1.7**
KPRO	**Kipourio**	**151.57**	**333**	P	**PKPab**	**01**	**49**	**10.3 -4.9**
AMGA	**Amorgos Island**	**151.61**	**323**	P	**PKPab**	**01**	**49**	**14.4 -1.1**
APE	**Apeiranthos**	**151.66**	**324**	P	**PKiKP**	**01**	**49**	**09.3 +1.8**
KARP	**Karpathos**	**151.70**	**320**	P	**PKPab**	**01**	**49**	**12.8 -3.1**
KARP	**Karpathos**	**151.70**	**320**	IAMs_20	IAMs_20	02	59	41.0
	comp=Z,4μm,22.0s							
PBRG	**Braganca**	**151.71**	**19**	*e*PKPab	**PKPab**	**01**	**49**	**14.7 -1.0**
PBRG	**Braganca**	**151.71**	**19**	*e*SS	SS	02	12	22.5 +11
POLO	**Lamas de Olo**	**151.75**	**21**	*e*PKPbc	**PKiKP**	**01**	**49**	**08.2 +0.6**
POLO	**Lamas de Olo**	**151.75**	**21**	*e*PKPab	**PKPab**	**01**	**49**	**15.8 -0.2**
POLO	**Lamas de Olo**	**151.75**	**21**	*e*SS	SS	02	12	21.6 +10
PVRL	**Vila Real**	**151.87**	**21**	*e*PKPbc	**PKiKP**	**01**	**49**	**10.4 +2.6**
PVRL	**Vila Real**	**151.87**	**21**	*e*PKPab	**PKPab**	**01**	**49**	**14.8 -1.6**
AGG	**Agios Georgios**	**151.88**	**330**	P	**PKPdf**	**01**	**49**	**00.3 -0.8**
ATHU	**Athens Univers**	**151.96**	**327**	P	**PKiKP**	**01**	**49**	**10.9 +2.9**
JAN	**Janina**	**152.04**	**333**	P	**PKPab**	**01**	**49**	**15.6 -1.5**
VILL	**Villia**	**152.06**	**328**	P	**PKPab**	**01**	**49**	**11.7 -5.6**
AQU	**L'Aquila**	**152.08**	**347**	*e*P	**PKPab**	**01**	**49**	**17.0 -0.2**
SERI	**Serifos**	**152.18**	**325**	P	**PKPab**	**01**	**49**	**11.8 -6.0**
SANT	**Santorini**	**152.19**	**323**	IAMs_20	IAMs_20	03	13	24.9
	comp=Z,3μm,21.0s							
MVO	**Moncorvo**	**152.19**	**20**	*e*PKPbc	**PKiKP**	**01**	**49**	**08.6 +0.1**
MVO	**Moncorvo**	**152.19**	**20**	*e*PKPab	**PKPab**	**01**	**49**	**16.7 -1.1**
MVO	**Moncorvo**	**152.19**	**20**	*e*SS	SS	02	12	30.2 +13
MVO	**Moncorvo**	**152.19**	**20**	*e*LQ	LQ	02	32	18.6
MVO	**Moncorvo**	**152.19**	**20**	*e*LR	LR	02	44	46.5
	comp=Z,4μm,20.0s							
PVIS	**Viseu**	**152.30**	**21**	*e*PKPab	**PKPab**	**01**	**49**	**15.4 -2.8**
LTK	**Loutraki**	**152.34**	**328**	P	**PKPdf**	**01**	**49**	**00.9 -0.9**
LOUT	**Loutraki**	**152.37**	**328**	P	**PKPdf**	**01**	**49**	**03.8 +2.0**
ANX	**Ano Chora**	**152.41**	**330**	P	**PKPab**	**01**	**49**	**14.4 -4.4**
TRIZ	**Trizonia**	**152.52**	**330**	P	**PKPab**	**01**	**49**	**17.1 -2.0**
COI	**Coimbra**	**152.56**	**23**	*e*PKPab	**PKPab**	**01**	**49**	**22.1 +2.9**
COI	**Coimbra**	**152.56**	**23**	*e*SS	SS	02	12	27.2 +6.4
PVO	**Paravola**	**152.58**	**331**	P	**PKiKP**	**01**	**49**	**11.7 +2.4**
DID	**Didima**	**152.59**	**327**	P	**PKPdf**	**01**	**48**	**56.4 -5.8**
LAKA	**Lakka**	**152.66**	**330**	P	**PKiKP**	**01**	**49**	**08.2 -1.3**
PCAS	**Casmilo, Conde**	**152.66**	**23**	*e*PKPbc	**PKPab**	**01**	**49**	**13.5 -6.2**
PCAS	**Casmilo, Conde**	**152.66**	**23**	*e*SS	SS	02	12	31.3 +9.3
MTE	**Manteigas**	**152.71**	**21**	*e*PKPbc	**PKiKP**	**01**	**49**	**10.3 +0.7**
MTE	**Manteigas**	**152.71**	**21**	*e*SS	SS	02	12	35.4 +13
MTE	**Manteigas**	**152.71**	**21**	*e*LQ	LQ	02	32	12.3
MTE				*e*LR	LR	02	42	06.0
	comp=Z,3μm,18.0s							
MTE	**Manteigas**	**152.71**	**21**	PKPdf	**PKPdf**	**01**	**48**	**55.1 -7.2**
MTE					**sPKPbc**	**01**	**49**	**14.4 +1.4**
MTE				IAMs_20	IAMs_20	03	05	37.3
	comp=Z,3μm,20.0s							
PDO	**Prodromos**	**152.75**	**331**	P	**PKPbc**	**01**	**49**	**04.6 -4.8**
LAST	**Lasithi**	**152.99**	**321**	P	**PKPab**	**01**	**49**	**19.5 -1.9**
PTOM	**Tomar**	**153.08**	**23**	*e*PKPbc	**PKiKP**	**01**	**49**	**13.6 +3.3**
PTOM	**Tomar**	**153.08**	**23**	*e*PKPab	**PKPab**	**01**	**49**	**25.1 +3.7**
PCBR	**Castelo Branco**	**153.22**	**22**	*e*PKPbc	**PKiKP**	**01**	**49**	**10.8 +0.2**
PMAFR	**Mafra**	**153.30**	**25**	*e*SS	SS	02	12	36.3 +7.3
PMOZ	**Porto Moniz, M**	**153.36**	**45**	*e*LR	LR	02	41	16.3
	comp=Z,2μm,18.0s							
ITM	**Ithomi**	**153.52**	**329**	IAMs_20	IAMs_20	02	54	51.6
	comp=Z,4μm,22.0s							
CHAN	**Chania**	**153.60**	**323**	P	**PKPab**	**01**	**49**	**19.1 -4.7**
PMRV	**Marv??o**	**153.62**	**22**	*e*PKPbc	**PKiKP**	**01**	**49**	**11.7 +0.3**
PMRV	**Marv??o**	**153.62**	**22**	*e*PKPab	**PKPab**	**01**	**49**	**19.8 -4.0**
PMRV	**Marv??o**	**153.62**	**22**	*e*SS	SS	02	12	42.8 +10
PMRV	**Marv??o**	**153.62**	**22**	*e*LQ	LQ	02	32	49.9
PMRV	**Marv??o**	**153.62**	**22**	*e*LR	LR	02	46	04.0
	comp=Z,4μm,20.0s							
PMTG	**Montargil**	**153.62**	**24**	*e*PKPab	**PKPab**	**01**	**49**	**18.7 -5.1**
PMTG	**Montargil**	**153.62**	**24**	*e*SS	SS	02	12	44.4 +12
PESTR	**Estremoz**	**154.04**	**23**	*e*SS	SS	02	12	48.1 +11
PESTR	**Estremoz**	**154.04**	**23**	IAMs_20	IAMs_20	02	54	14.6
	comp=Z,3μm,20.0s							
GVDS	**Gavdos**	**154.04**	**322**	P	**PKiKP**	**01**	**49**	**16.0 +3.6**
UCM	**Universidad Co**	**154.06**	**14**	*e*PKP	**PKPab**	**01**	**49**	**20.4 -5.2**
UCM				*i* SS	SS	02	12	38.9 +1.9
PNCL	**Nicolau / Gran**	**154.33**	**25**	*e*SS	SS	02	12	47.3 +7.1
ESDC	**Sonseca Array**	**154.48**	**16**	PKPbc	**PKiKP**	**01**	**49**	**13.9 +0.7**
	comp=Z,1.3nm,0.9s,baz=3.6,slow=1.8,SNR=6.2							
PBEJ	**Beja**	**154.67**	**24**	*e*PKPab	PKPab	01	49	34.9 +6.7
PCVE	**Castro Verde**	**154.94**	**25**	*e*SS	SS	02	13	05.4 +19
MORF	**Marmelete**	**154.96**	**26**	*e*PKPab	**PKPab**	**01**	**49**	**25.6 -4.0**
MORF	**Marmelete**	**154.96**	**26**	*e*SS	SS	02	13	00.7 +13
PFVI	**Vila Bisbo**	**155.03**	**27**	*e*SS	SS	02	12	54.1 +6.2
PVAQ	**Vaqueiros**	**155.26**	**25**	*e*PKPab	**PKPab**	**01**	**49**	**31.8 +1.0**
PVAQ	**Vaqueiros**	**155.26**	**25**	*e*SS	SS	02	13	04.2 +14
PVAQ	**Vaqueiros**	**155.26**	**25**	*e*LQ	LQ	02	32	44.9
PVAQ	**Vaqueiros**	**155.26**	**25**	*e*LR	LR	02	43	40.0
	comp=Z,4μm,20.0s							
PBDV	**Barranco-do-Ve**	**155.31**	**25**	*e*PKPbc	PKPdf	01	49	16.2 +10
PBDV	**Barranco-do-Ve**	**155.31**	**25**	*e*SS	SS	02	13	01.7 +11
MAHO	**Mahon**	**155.48**	**1**	*e*PKP	PKPab	01	49	20.6 -11
MAHO				*i* SS	SS	02	12	49.2 -2.7
SFS	**San Fernando**	**156.67**	**23**	IAMs_20	IAMs_20	03	10	44.3
	comp=Z,3μm,20.0s							
EMAL	**Malaga-Limoner**	**157.03**	**20**	*e*PKP	**PKPdf**	**01**	**49**	**09.0 +0.8**
CART	**Cartagena**	**157.17**	**12**	*e*PKP	PKPab	01	49	23.0 -16
CART				*e*SS	SS	02	13	09.2 -1.1
CART	**Cartagena**	**157.17**	**12**	IAMs_20	IAMs_20	02	56	50.0
	comp=Z,4μm,21.0s							
CEU	**Ceuta**	**157.49**	**22**	*e*PKP	PKPdf	01	49	23.1 +14
CEU				*e*SS	SS	02	13	30.1 +16
MELI	**Melilla**	**158.85**	**18**	*e*PKP	**PKPab**	**01**	**49**	**44.3 -1.9**
IFR	**Ifrane**	**159.68**	**25**	*e*PKP	PKPdf	01	49	26.3 +14
IFR				*e*SS	SS	02	13	46.2 +8.2
LIC	**Lamto**	**166.66**	**131**	*e*PKIKP	PKPdf	01	49	25.9 +7.1
	comp=Z,40nm,1.0s							
TIC	**Toumodi**	**166.95**	**130**	*e*PKIKP	PKPdf	01	49	26.2 +7.2
	comp=Z,40nm,1.0s							
KIC	**Kosan Boka**	**166.96**	**132**	*e*PKIKP	PKPdf	01	49	26.2 +7.2
	comp=Z,38nm,1.2s							
DBIC	**Dimbokro

ATTE					AML	AML		
	comp=N,143μm,1.3s							
NARO	**Abbazia di Nar**	**0.22**	**18**	P	Pg	01 46 42.5	+0.5	
NARO				S	Sg	01 46 46.2	+1.1	
NARO				AML	AML			
	comp=N,103μm,1.5s							
NARO				AML	AML			
	comp=E,120μm,1.2s							
FOSV	**Fossato di Vic**	**0.23**	**117**	P	Pg	01 46 42.6	+0.6	
FOSV				S	Sg	01 46 46.7	+1.5	
FOSV				AML	AML			
	comp=E,99μm,1.1s							
FOSV				AML	AML			
	comp=N,83μm,1.0s							
ATCC	**AVT- Casa Cast**	**0.24**	**152**	P	Pg	01 46 43.2	+0.9	
ATCC				S	Sg	01 46 47.8	+2.2	
ATCC				AML	AML			
	comp=E,332μm,1.1s							
ATCC				AML	AML			
	comp=N,314μm,1.3s							
PE3	**Peglio**	**0.30**	**1**	P	Pb	01 46 44.4	-0.7	
PE3				S	Sb	01 46 50.0	-0.2	
PARC	**Parchiule**	**0.31**	**324**	P	Pg	01 46 44.4	+0.8	
PARC				S	Sb	01 46 50.1	-0.4	
SSP9	**Sansepolcro**	**0.31**	**304**	P	Pb	01 46 44.7	-0.6	
SSP9				S	Sb	01 46 49.9	-0.7	
ARVD	**Arcevia**	**0.35**	**73**	P	Pg	01 46 44.9	+0.6	
ARVD				S	Sb	01 46 50.9	-0.7	
SNTG	**Esanatoglia**	**0.36**	**113**	P	Pg	01 46 45.0	+0.5	
SNTG				S	Sb	01 46 51.5	-0.5	
ASSB	**Assisi San Ben**	**0.38**	**161**	P	Pg	01 46 45.4	+0.5	
ASSB				S	Sb	01 46 51.7	-0.7	
CAFI	**Castiglion Fio**	**0.39**	**260**	P	Pb	01 46 45.9	-0.7	
CAFI				S	Sb	01 46 51.9	-0.8	
CAFI				AML	AML			
	comp=N,61μm,1.6s							
CAFI				AML	AML			
	comp=E,75μm,1.1s							
EL6	**Elcito**	**0.45**	**99**	P	Pg	01 46 46.8	+0.4	
EL6				S	Sb	01 46 54.4	-0.3	
MGAB	**Montegabbione**	**0.56**	**210**	P	Pg	01 46 48.8	+0.5	
MGAB				AML	AML			
	comp=E,128μm,0.6s							
MGAB				AML	AML			
	comp=N,120μm,0.9s							
FDMO	**Fiordimonte**	**0.57**	**129**	P	Pg	01 46 48.9	+0.4	

*IDC **21** 01:51:26.7±10.0, 29°.77N×138°.57E, h411$^{km}_{\pm 57}$, mb3.1/7, mb1 3.2/9, mb1mx2.9/53, mbtmp3.9/9, Error ellipse: s-maj=132.0km s-min=58.0km az=158.0*
*JMA **21** 01:51:32.1±0.4, 30°.39N×138°.90E, h440^{km}, M3.8*
ISC 21 01:51:31.6±1.0, **30°.36N**±0°.09×**138°.9E**±0°.1, **h450^{km}, n18,** σ1§**61**/20, **mb3.5/6, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**4.33**	**138**	*eS*		**S**		**01 53 51.4**	**-2.0**
JTNC	**Tanabenakahech**	**4.45**	**322**	P		**P**		**01 52 50.7**	**0.0**
BSO1	**Boso 1**	**4.62**	**22**	P		**P**		**01 52 53.5**	**+1.9**
BSO1				*eS*		**S**		**01 53 56.8**	**-0.2**
JHH2	**Haha-jima-NKT2**	**4.69**	**142**	*eS*		**S**		**01 53 59.3**	**-0.1**
JNY	**Yasuok**	**5.06**	**350**	P		**P**		**01 52 58.1**	**+1.6**
JHU	**Hanno**	**5.48**	**3**	P		**P**		**01 53 00.7**	**+0.1**
JRY	**Ryogami san**	**5.64**	**360**	P		**P**		**01 53 02.9**	**+0.7**
JAG	**Ashikaga**	**6.06**	**4**	P		**P**		**01 53 05.9**	**-0.5**
JAG				*eS*		**S**		**01 54 19.4**	**-4.6**
MJAR	**Matsushiro Arr**	**6.19**	**355**	P		**P**		**01 53 07.8**	**+0.1**
	0.4nm,0.3s,baz=170,slow=11,SNR=13								
MAT	**Matsushiro**	**6.19**	**355**	P		**P**		**01 53 06.8**	**-1.0**
USRK	**Ussuriysk Ar.**	**14.87**	**340**	P		**P**		**01 54 41.7**	**+0.6**
	baz=141,slow=6.9,SNR=4.7								
KLR	**Kul'dur**	**19.62**	**346**	P		**P**		**01 55 31.3**	**+2.1**
	0.9nm,0.6s,baz=156,slow=10.0,SNR=3.8								
MKAR	**Makanchi Array**	**46.21**	**307**	P		**P**		**01 59 13.8**	**-0.8**
	0.4nm,0.6s,baz=85,slow=7.0,SNR=4.2								
AKTO	**Aktyubinsk**	**61.71**	**314**	P		**P**		**02 01 04.1**	**-0.6**
	0.8nm,0.6s,baz=84,slow=13,SNR=4.5								
ARCES	**ARCESS Array B**	**69.51**	**340**	P		**P**		**02 01 55.2**	**+1.8**
	2.3nm,0.8s,baz=72,slow=8.8,SNR=9.2								
FINES	**FINESS Array B**	**73.75**	**333**	P		**P**		**02 02 19.1**	**+0.7**
	0.8nm,0.5s,baz=65,slow=5.9,SNR=8.9								
HFS	**Hagfors**	**79.29**	**335**	P		**P**		**02 02 49.6**	**+0.6**
	0.9nm,0.4s,baz=83,slow=6.1,SNR=9.7								
NOA	**NORSAR Array B**	**79.51**	**337**	P		**P**		**02 02 51.3**	**+1.1**
	0.5nm,0.6s,baz=50,slow=4.8,SNR=2.9								

*IDC **21** 01:58:50.6±2.3, 41°.34N×143°.87E, h0^{km}, mb3.7/7, mb1 3.7/8, mb1mx3.5/57, mbtmp3.7/8, ML3.4/1, Error ellipse: s-maj=48.7km s-min=27.4km az=172.0*
*JMA **21** 01:58:57.6±0.1, 41°.72N×143°.64E, h21$^{km}_{\pm 3}$, M3.6*
ISC 21 01:58:57.4±1.3, **41°.68N**±0°.10×**143°.7E**±0°.1, **h31^{km}, n21,** σ1§**05**/19, **mb3.9/7, 3C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.51**	**312**	⇑P		**Pb**		**01 59 06.7**	**-1.4**
JTHR	**Tokachihiroo**	**0.68**	**336**	⇑P		**Pn**		**01 59 10.0**	**-0.8**
JTHR				*eS*		**Sb**		**01 59 18.5**	**-1.3**
JNBK	**Urakawa-nobuka**	**0.91**	**312**	⇑P		**Pn**		**01 59 13.9**	**-0.2**
JCH	**Churui**	**0.97**	**346**	P		**Pn**		**01 59 14.3**	**-0.5**
JCH				*eS*		**Sn**		**01 59 26.1**	**-1.4**
JSHD	**Hidakashinhida**	**1.16**	**310**	P		**Pb**		**01 59 18.9**	**+0.1**
JOB	**Onbets**	**1.23**	**6**	⇓P		**Pn**		**01 59 18.6**	**+0.1**
JOB				*eS*		**Sn**		**01 59 34.3**	**+0.3**
JBT2	**Biratori 2**	**1.47**	**319**	P		**Pn**		**01 59 22.7**	**+1.0**
ASAJ	**Asahikawa**	**2.56**	**342**	Pn		**Pn**		**01 59 38.4**	**+1.6**
	3.4nm,0.3s,baz=181,slow=8.8,SNR=11								
ASAJ				Sn		**Sb**		**02 00 16.2**	**+2.4**
	6.0nm,0.3s,baz=224,slow=16,SNR=4.2								
SONM	**Songino Array**	**26.99**	**296**	P		**P**		**02 04 37.3**	**+0.9**
	0.4nm,0.5s,baz=86,slow=9.0,SNR=3.9								
H11N2	**WAKE ISLAND Hy 29.45**	**131**		T		T		02 35 59.0	
	baz=323,slow=75,SNR=216								
H11N1	**WAKE ISLAND Hy 29.46**	**131**		T		T		02 35 53.1	
	baz=323,slow=75,SNR=184								
H11N3	**WAKE ISLAND Hy 29.46**	**131**		T		T		02 35 57.9	
	baz=323,slow=75,SNR=157								
H11S1	**WAKE ISLAND Hy 30.32**	**133**		T		T		02 37 00.4	
	baz=325,slow=76,SNR=245								
H11S3	**WAKE ISLAND Hy 30.32**	**133**		T		T		02 36 57.8	
	baz=325,slow=76,SNR=193								
H11S2	**WAKE ISLAND Hy 30.34**	**133**		T		T		02 37 02.5	
	baz=325,slow=76,SNR=150								
ILAR	**Eielson Array**	**44.66**	**35**	P		**P**		**02 07 06.5**	**-0.3**
	0.3nm,0.7s,baz=287,slow=9.3,SNR=4.8								
KURBB	**Kurchatov Arra**	**44.66**	**305**	P		**P**		**02 07 07.0**	**0.0**
	0.8nm,0.4s,baz=76,slow=9.0,SNR=3.2								
BVAR	**Borovoye Array**	**48.85**	**310**	P		**P**		**02 07 40.4**	**+0.7**
	0.6nm,0.3s,baz=79,slow=8.9,SNR=5.2								
INK	**Inuvik**	**49.47**	**29**	P		**P**		**02 07 43.7**	**-0.5**
	0.5nm,0.8s,baz=293,slow=6.4,SNR=3.3								
RES	**Resolute Bay**	**57.67**	**16**	P		**P**		**02 08 44.0**	**-0.1**
	0.5nm,0.5s,baz=311,slow=6.6,SNR=4.5								
FINES	**FINESS Array B**	**65.53**	**332**	P		**P**		**02 09 37.4**	**0.0**
	1.1nm,0.4s,baz=47,slow=6.3,SNR=13								

*BJI **21** 02:01:49.1±0.0, 37°.39N×96°.69E, h8^{km}, ML3.8/13*
*MOS **21** 02:01:50.7±1.4, 37°.57N×96°.57E, h26^{km}, mb4.4/12, Error ellipse: s-maj=11.9km s-min=7.0km az=126.1*
*NEIC **21** 02:01:52.8±1.7, 37°.47N±0°.08×96°.5E±0°.1, h35$^{km}_{\pm 1}$, mb4.1/8, Error ellipse: s-maj=18.9km s-min=13.9km az=271.0*
*IDC **21** 02:01:53.5±3.9, 37°.49N×96°.66E, h37$^{km}_{\pm 34}$, mb3.7/17, mb1 3.9/22, mb1mx3.7/59, mbtmp3.9/22, ML3.8/5, Error ellipse: s-maj=20.5km s-min=13.6km az=36.0*
ISC 21 02:01:50.3±0.4, **37°.60N**±0°.05×**96°.67E**±0°.04, **h11^{km}, n69,** σ1§**62**/78, **mb4.1/22, 5C, Qinghai**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**3.06**	**53**	⇑Pn		**Pb**		**02 02 42.3**	**-2.6**
GTA				Pg		**Pg**		**02 02 47.3**	**-1.7**
GTA				Sn		**Sb**		**02 03 21.0**	**-1.3**
GTA				Sg		**Sg**		**02 03 28.9**	**+0.2**
GTA				smax	smax				
	comp=N,150nm,1.0s								
GTA				smax	smax				
	comp=E,170nm,0.9s								
LZH	**Lanzhou**	**5.95**	**103**	*e*Pn		**Pn**		**02 03 17.4**	**-1.1**
LZH				Pg		**Pb**		**02 03 34.4**	**+0.2**
LZH				Sn		**Sn**		**02 04 24.8**	**-2.0**
LZH				Sg		**Sb**		**02 04 51.0**	**+5.5**
LZH				smax	smax				
	comp=N,130nm,0.8s								
LZH				smax	smax				
	comp=E,160nm,0.8s								
LSA	**Lhasa**	**9.12**	**212**	P		**Pn**		**02 04 01.9**	**-0.4**
LSA				smax	smax				
	comp=N,20nm,0.5s								
LSA				smax	smax				
	comp=E,5.0nm,0.4s								
WMQ	**Urumqi**	**9.22**	**315**	P		**Pn**		**02 04 04.1**	**+0.8**
WMQ				S		**Sn**		**02 05 51.4**	**+4.4**
WMQ				smax	smax				
	comp=N,33nm,0.6s								
WMQ				smax	smax				
	comp=E,21nm,1.1s								
SONM	**Songino Array**	**12.47**	**32**	Pn		**Pn**		**02 04 50.5**	**+2.7**
	0.9nm,0.3s,baz=218,slow=15,SNR=11								
ULN	**Ulaanbaatar**	**12.78**	**33**	*e*P		**Pn**		**02 04 54.2**	**+2.2**
ULN				pmax	pmax				
	comp=Z,2.0nm,0.7s								
MK31	**Makanchi Array**	**14.05**	**315**	P		**Pn**		**02 05 07.5**	**-1.8**
MK31	**Makanchi Array**	**14.05**	**315**			**Pn**		**02 05 07.5**	**-1.8**
MKAR	**Makanchi Array**	**14.05**	**315**	Pn		**Pn**		**02 05 07.3**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=128,slow=13,SNR=19								
MAKZ	**Makanchi**	**14.23**	**315**	P		**Pn**		**02 05 09.8**	**-2.0**
MAKZ	**Makanchi**	**14.23**	**315**			**Pn**		**02 05 09.8**	**-2.0**
MOY	**Mondy**	**14.40**	**11**	*e*P		**P**		**02 05 24.6**	**+3.5**
WHN	**Wuhan**	**16.24**	**110**	P		**P**		**02 05 41.3**	**-0.2**
BOOM	**Boomskoye usch**	**16.60**	**294**	P		**Pn**		**02 05 43.3**	**+0.2**
BOOM	**Boomskoye usch**	**16.60**	**294**	P		**Pn**		**02 05 43.3**	**+0.2**
AAK	**Ala-Archa**	**17.67**	**293**	⇓*e*P		**P**		**02 05 56.8**	**-0.8**
AAK				pmax	pmax				
	comp=Z,4.0nm,1.3s								
AAK	**Ala-Archa**	**17.67**	**293**	P		**P**		**02 05 56.7**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=96,slow=14,SNR=4.7								
ZALV	**Zalesovo Beam**	**18.28**	**337**	P		**P**		**02 06 07.0**	**+3.2**
	comp=Z,0.7nm,0.3s,baz=132,slow=11,SNR=3.2								
KURBB	**Kurchatov Arra**	**18.35**	**321**	P		**Pn**		**02 06 03.7**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=132,slow=11,SNR=17								
KURK	**Kurchatov**	**18.36**	**321**	⇑*e*P		**Pn**		**02 06 04.2**	**-0.6**
KURK				pmax	pmax				
	comp=Z,9.0nm,1.7s								
KURK	**Kurchatov**	**18.36**	**321**	P		**Pn**		**02 06 03.5**	**-1.3**
ARSB	**Arslanbob**	**18.65**	**289**			**P**		**02 06 06.8**	**-1.4**
CMAR	**Chiang Mai Arr**	**19.17**	**173**	*e*P		**Pn**		**02 06 17.2**	**+2.3**
CMAR				pmax	pmax				
	comp=Z,1.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**19.17**	**173**	P		**P**		**02 06 13.3**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=351,slow=10,SNR=6.2								
NIL	**Nilore**	**19.43**	**265**	P		**P**		**02 06 14.5**	**-2.2**
NIL				pmax	pmax				
	comp=Z,9.0nm,1.1s								
KKAR	**Karatay Array**	**20.64**	**294**	P		**P**		**02 06 29.5**	**-0.3**
GAR	**Garm**	**20.71**	**282**	P		**P**		**02 06 29.6**	**-1.1**
GAR				IAmb	IAmb	02 06 30.9			
	comp=Z,11nm,1.1s								
KBL	**Kabul**	**22.50**	**271**	P		**P**		**02 06 48.4**	**-1.8**
KBL				pmax	pmax				
	comp=Z,6.0nm,1.1s								
KBL	**Kabul**	**22.50**	**271**	P		**P**		**02 06 48.4**	**-1.8**
KBL				IAmb	IAmb	02 06 53.9			
	comp=Z,5.6nm,1.1s								
BVAR	**Borovoye Array**	**23.88**	**319**	P		**P**		**02 07 04.3**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=106,slow=11,SNR=15								
BRVK	**Borovoye**	**23.95**	**319**	P		**P**		**02 07 03.4**	**-1.0**
BRVK				pmax	pmax				
	comp=Z,5.0nm,0.8s								
BRVK	**Borovoye**	**23.95**	**319**	P		**P**		**02 07 03.4**	**-1.0**
BRVK				IAmb	IAmb	02 07 14.9			
	comp=Z,5.3nm,0.8s								
KSRS	**Korea Array**	**24.74**	**81**	P		**P**		**02 07 11.2**	**-0.5**
	comp=Z,3.3nm,0.6s,baz=280,slow=9.0,SNR=9.8								
AKTO	**Aktyubinsk**	**30.26**	**308**	P		**P**		**02 08 01.6**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=90,slow=11,SNR=5.8								
GEYT	**Alibeck**	**30.33**	**283**	P		**P**		**02 08 01.7**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=76,slow=12,SNR=3.2								
ARU	**Arti**	**31.53**	**319**	*c*	*i*P	**P**		**02 08 12.5**	**+0.3**
ARU						02 09 10.4			
ARU				S		**S**		**02 13 19.8**	**-0.5**
ARU				pmax	pmax				
	comp=Z,6.0nm,1.4s								
ARU	**Arti**	**31.53**	**319**	P		**P**		**02 08 12.2**	**0.0**
	comp=Z,0.6nm,0.3s,baz=101,slow=7.0,SNR=3.6								
ARU	**Arti**	**31.53**	**319**	P		**P**		**02 08 11.6**	**-0.6**
KIV	**Kislovodsk**	**40.75**	**297**	*e*P		**P**		**02 09 31.0**	**-0.3**
KIV				pmax	pmax				
	comp=Z,12nm,1.0s								
KLMR	**Klimovskoe**	**42.21**	**322**	*e*P		**P**		**02 09 41.7**	**-1.2**
KLMR				pmax	pmax				
	comp=Z,16nm,1.6s								
KLMR	**Klimovskoe**	**42.21**	**322**	*e*P		**P**		**02 09 41.7**	**-1.2**
KLMR				AMP		02 09 44.6			
	comp=Z,16nm,1.6s								
PET	**Petropavlovsk**	**44.80**	**49**	*e*P		**P**		**02 10 03.4**	**-0.5**
PET				pmax	pmax				
	comp=Z,33nm,1.1s								
BR131	**Keskin Array S**	**48.35**	**293**	P		**P**		**02 10 31.1**	**-1.1**
BR131				pmax	pmax				
	comp=Z,2.0nm,0.9s								
BR131	**Keskin Array S**	**48.35**	**293**	P		**P**		**02 10 31.1**	**-1.1**
BR131				IAmb	IAmb	02 10 35.1			
	comp=Z,1.9nm,0.9s								
BRTR	**Keskin Array B**	**48.35**	**293**	P		**P**		**02 10 31.2**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=106,slow=7.0,SNR=8.2								
AKASG	**Malin Array Be**	**48.50**	**308**	*e*P		**P**		**02 10 35.3**	**+2.4**
AKASG				pmax	pmax				
	comp=Z,1.0nm,0.5s								
AKASG	**Malin Array Be**	**48.50**	**308**	P		**P**		**02 10 32.1**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=68,slow=7.2,SNR=4.1								
FINES	**FINESS Array B**	**48.73**	**323**	P		**P**		**02 10 34.8**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=81,slow=8.5,SNR=7.2								
ARCES	**ARCESS Array B**	**48.78**	**334**	*e*P		**P**		**02 10 34.5**	**-0.4**
ARCES				pmax	pmax				
	comp=Z,3.0nm,0.8s								
ARCES	**ARCESS Array B**	**48.78**	**334**	P		**P**		**02 10 35.6**	**+0.8**
	comp=Z,3.2nm,0.8s,baz=74,slow=8.9,SNR=5.1								
ARCES				PcP		**PcP**		**02 11 59.1**	**-0.5**
	comp=Z,3.4nm,1.0s,baz=46,slow=3.5,SNR=4.6								
VYHS	**Vyhne**	**55.60**	**308**	*e*P		**P**		**02 11 25.2**	**-0.7**
VYHS	**Vyhne**	**55.60**	**308**	*e*P		**P**		**02 11 25.2**	**-0.7**
NB2	**NORSAR Subarra**	**55.85**	**324**	P		**P**		**02 11 26.1**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=70,slow=7.4								
NOA	**NORSAR Array B**	**55.85**	**324**	*e*P		**P**		**02 11 30.5**	**+3.0**
NOA				pmax	pmax				
	comp=Z,1.0nm,0.7s								
NOA	**NORSAR Array B**	**55.85**	**324**	P		**P**		**02 11 27.2**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=72,slow=7.1,SNR=3.5								
CLL	**Collm**	**58.13**	**313**	*e*P		**P**		**02 11 46.0**	**+2.2**
CLL	**Collm**	**58.13**	**313**	*e*(P)		**P**		**02 11 46.0**	**+2.2**
GERES	**GERESS Array B**	**58.64**	**310**	*e*P		**P**		**02 11 50.0**	**+2.5**
GERES	**GERESS Array B**	**58.64**	**310**	P		**P**		**02 11 47.9**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=70,slow=8.8,SNR=4.2								
ILAR	**Eielson Array**	**66.59**	**25**	P		**P**		**02 12 39.5**	**-0.7**
	comp=Z,0.7nm,0.8s,baz=280,slow=5.2,SNR=7.6								
WRA	**Warramunga Arr**	**67.33**	**141**	*e*P		**P**		**02 12 45.6**	**+0.2**
WRA				pmax	pmax				
	comp=Z,1.0nm,0.8s								
WRA	**Warramunga Arr**	**67.33**	**141**	P		**P**		**02 12 43.5**	**-1.9**
	comp=Z,1.3nm,0.8s,baz=341,slow=6.6,SNR=5.2								
INK	**Inuvik**	**67.98**	**18**	P		**P**		**02 12 49.4**	**+0.5**
INK				pmax	pmax				
	comp=Z,3.0nm,0.8s								
INK	**Inuvik**	**67.98**	**18**	P		**P**		**02 12 49.3**	**+0.5**
	comp=Z,3.0nm,0.7s,baz=337,slow=8.0,SNR=14								
INK	**Inuvik**	**67.98**	**18**	P		**P**		**02 12 49.4**	**+0.5**
ASAR	**Alice Springs**	**70.29**	**144**	P		**P**		**02 13 02.8**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=330,slow=5.7,SNR=8.8								
ESDC	**Sonseca Array**	**74.14**	**308**	P		**P**		**02 13 26.9**	**0.0**
	comp=Z,0.1nm,0.4s,baz=44,slow=5.5,SNR=5.0								
YKA	**Yellowknife Ar**	**77.12**	**14**	P		**P**		**02 13 42.9**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=340,slow=5.8,SNR=10.0								
STKA	**Stephens Creek**	**80.84**	**143**	*e*P		**P**		**02 14 04.1**	**0.0**
STKA				pmax	pmax				
	comp=Z,2.0nm,0.7s								

*IDC **21** 02:15:25.2±1.6, 10°.28N×126°.11E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.5/42, mbtmp3.7/5, Error ellipse: s-maj=178.8km s-min=22.8km az=69.0*
*MAN **21** 02:15:33.6, 9°.86N×125°.85E, h1^{km}, mb4.4, ML3.2, MS3.0*
ISC 21 02:15:32.5±1.2, **10°.10N**±0°.07×**126°.1E**±0°.1, **h54^{km}, n10,** σ1§**34**/14, **mb3.7/5, 2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.22**	**203**	*e*P		**Pn**		**02 15 51.2**	**-2.1**
BUTP				*e*S		**Sn**		**02 16 07.8**	**-0.9**
MSLP	**Maasin**	**1.22**	**272**	*e*P		**Pn**		**02 15 53.5**	**+0.2**
MSLP				*e*S		**Sn**		**02 16 10.1**	**+1.4**
CGP	**Cagayan de Oro**	**2.14**	**220**	⇓*e*P		**Pn**		**02 16 05.3**	**-0.5**
CGP				*e*S		**Sn**		**02 16 29.8**	**-1.5**
BUKP	**Musuan**	**2.43**	**205**	*e*P		**Pn**		**02 16 10.1**	**+0.2**
BUKP				*e*S		**Sn**		**02 16 39.8**	**+1.3**
KCP	**Kidapawan**	**3.23**	**198**	⇓*e*P		**Pn**		**02 16 22.9**	**+2.1**
WRA	**Warramunga Arr**	**30.94**	**165**	P		**P**		**02 21 45.9**	**+1.4**
	0.3nm,0.5s,baz=345,slow=9.5,SNR=4.6								
ASAR	**Alice Springs**	**34.42**	**167**	P		**P**		**02 22 15.7**	**+0.7**
	0.2nm,0.3s,baz=342,slow=7.3,SNR=6.4								
MKAR	**Makanchi Array**	**52.06**	**323**	P		**P**		**02 24 36.4**	**-0.6**
	0.5nm,0.6s,baz=118,slow=8.9,SNR=7.0								
ARCES	**ARCESS Array B**	**84.29**	**340**	P		**P**		**02 27 57.7**	**-0.6**
	1.4nm,0.8s,baz=74,slow=6.7,SNR=4.1								
FINES	**FINESS Array B**	**85.96**	**332**	P		**P**		**02 28 05.9**	**-0.8**
	0.5nm,0.4s,baz=78,slow=3.3,SNR=7.0								

MAN 21 02:16:52.5, 6°.94N×127°.12E, h3^{km}, mb4.1, ML2.9, MS2.5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.85**	**270**	*e*P		**Pb**		02 17 09.6	-0.5
MATI				*e*S		Sn		02 17 23.7	-0.8
DDMP	**Don Marcelino,**	**1.63**	**239**	*e*P		**Pn**		02 17 22.1	0.0
DDMP				*e*S		Sb		02 17 44.1	-0.1
BUTP	**Butuan**	**2.50**	**324**	*e*P		Pn		02 17 34.5	+0.3
BUTP				*e*S		Sn		02 18 06.4	+1.2
SKMP	**Bagumbayan, Su**	**2.59**	**261**	*e*P		Pn		02 17 35.3	-0.1
SKMP				*e*S		Sn		02 18 09.3	+1.8
CGP	**Cagayan de Oro**	**2.83**	**302**	⇓*e*P		Pn		02 17 40.0	+1.3
CGP				*e*S		Sn		02 18 12.9	-0.5

AEIC 21 03:45:18.8±1.7, **55°.74N**±0°.08×**157°.95W**±0°.06, **h40^{km}**±9^{km}, **ML3.5/28, Error ellipse: s-maj=11.7km s-min=4.8km az=189.0, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNSG	**Veniaminof 6**	**0.75**	**302**				Pn	03 45 31.8	-1.1
VNSG							Sn	03 45 42.6	-0.5
VNHG	**Veniaminof 1**	**0.84**	**306**				Pn	03 45 33.3	-0.9
VNNF	**Veniaminof 3**	**0.94**	**306**				Pn	03 45 35.1	-0.6
VNSS	**Veniaminof 8**	**0.98**	**301**				Pn	03 45 35.2	-0.9
VNWF	**Veniaminof 8**	**1.00**	**295**				Pn	03 45 35.5	-0.9
VNFG	**Fog Glacier, M**	**1.05**	**302**				Pn	03 45 36.8	-0.4
VNFG							Sn	03 45 50.6	0.0
CHIR	**Chirikof Islan**	**1.32**	**85**				Pn	03 45 40.0	-0.7
CHIR							Sn	03 45 57.5	+0.5
SDPT	**Sand Point**	**1.48**	**256**				Sn	03 46 00.9	-0.2
SII	**Sitkinak Islan**	**2.27**	**67**				Sn	03 46 20.0	-0.4
OHAK	**Old Harbor**	**2.99**	**58**				Pn	03 46 02.2	-1.4
FALS	**False Pass**	**3.25**	**256**				Sn	03 46 43.3	-1.2
CNPM	**China Poot**	**5.24**	**41**				Sn	03 46 33.3	-1.2
SLKM	**Skilak Lake**	**6.29**	**37**				Pn	03 46 47.4	-1.6
SUA	**Susitna One**	**6.86**	**30**				Pn	03 46 55.5	-1.3
RC01	**Rabbit Creek A**	**6.88**	**35**				Pn	03 46 55.3	-1.7
PWL	**Port Wells**	**7.21**	**41**				Pn	03 46 59.0	-2.5
TT01	**Tatalina**	**7.26**	**7**				Pn	03 47 00.5	-1.7
KNK	**Knik Glacier**	**7.55**	**37**				Pn	03 47 04.1	-2.0
GLI	**Glacier Island**	**7.69**	**43**				Pn	03 47 05.6	-2.5
FID

PAMC				*i*			04 23 49.2		
	comp=Z,2μm,0.4s								
RUSC	**La Rusia**	**0.93**	**180**	⇑ *i*	P	**Pn**	**04 23 31.2**	**+0.1**	
RUSC				*e*	S	**Sn**	**04 23 49.5**	**-1.0**	
RUSC				*i*			04 23 51.3		
	comp=Z,586nm,0.3s								
RUSC	**La Rusia**	**0.93**	**180**	*e*	P	**Pn**	**04 23 31.0**	**-0.1**	
RUSC				*e*	S	**Sn**	**04 23 49.8**	**-0.7**	
RUSC	**La Rusia**	**0.93**	**180**		P	**Pn**	**04 23 30.7**	**-0.4**	
RUSC					Sn	**Sn**	**04 23 48.9**	**-1.6**	
TAMC	**Tame, Arauca**	**1.34**	**107**	⇑ *i*	P	**Pn**	**04 23 35.6**	**+1.5**	
TAMC				*e*	S	**Sn**	**04 23 56.6**	**+0.7**	
TAMC				*i*			04 23 58.6		
	comp=Z,405nm,0.5s								
PTBC	**PUERTO BERRIO,**	**1.40**	**258**	⇑ *i*	P	**Pn**	**04 23 33.7**	**-1.0**	
PTBC				*e*	S	**Sn**	**04 23 55.6**	**-1.4**	
PTBC				*i*			04 24 02.4		
	comp=Z,1μm,0.2s								
OCAC	**Ocana**	**1.42**	**350**	⇓ *i*	P	**Pn**	**04 23 35.2**	**+0.1**	
OCAC				*e*	S	**Sn**	**04 23 56.9**	**-0.8**	
OCAC				*i*			04 24 02.7		
	comp=Z,1μm,0.3s								
SPBC	**San Pablo de B**	**1.53**	**220**	⇑ *i*	P	**Pn**	**04 23 36.1**	**0.0**	
SPBC				*e*	S	**Sn**	**04 23 59.1**	**-0.4**	
SPBC				*i*			04 24 04.5		
	comp=Z,1μm,0.2s								
ZARC	**Zaragoza, Cauc**	**1.89**	**291**	*e*	P	**Pn**	**04 23 39.9**	**0.0**	
ZARC				*e*	S	**Sn**	**04 24 05.1**	**-1.1**	
ZARC				*i*			04 24 11.7		
	comp=Z,1μm,0.4s								
NORC	**Norcasia**	**2.18**	**235**	⇓ *i*	P	**Pn**	**04 23 43.2**	**-0.2**	
NORC				*e*	S	**Sn**	**04 24 11.4**	**-1.0**	
NORC				*i*			04 24 16.4		
	comp=Z,781nm,0.2s								
SMLC	**San Martn de**	**2.19**	**333**	⇓ *e*	P	**Pn**	**04 23 42.9**	**-0.6**	
SMLC				*e*	S	**Sn**	**04 24 11.8**	**-0.8**	
SMLC				*i*			04 24 21.2		
	comp=Z,1μm,0.2s								
CHIC	**Chingaza**	**2.28**	**197**	*e*	P	**Pn**	**04 23 45.2**	**+0.3**	
CHIC				*e*	S	**Sn**	**04 24 14.4**	**-0.7**	
CHIC				*i*			04 24 22.3		
	comp=Z,527nm,0.4s								
ROSC	**El Rosal**	**2.33**	**212**	P		**Pn**	**04 23 47.2**	**+1.7**	
	comp=Z,121nm,0.3s,baz=50,slow=21,SNR=251								
ROSC				S		**Sn**	**04 24 16.6**	**+0.5**	
	comp=Z,84nm,0.3s,baz=46,slow=14,SNR=11								
ROSC	**El Rosal**	**2.33**	**212**	⇑ *i*	P	**Pn**	**04 23 47.2**	**+1.7**	
ROSC				*e*	S	**Sn**	**04 24 16.2**	**0.0**	
ROSC	**El Rosal**	**2.33**	**212**			**Pn**	**04 23 45.2**	**-0.3**	
ROSC						**Sn**	**04 24 14.6**	**-1.5**	
HELC	**Santa Helena**	**2.52**	**256**	*e*	P	**Pn**	**04 23 48.2**	**+0.5**	
HELC				*e*	S	**Sn**	**04 24 19.7**	**-0.4**	
HELC				*i*			04 24 25.8		
	comp=Z,500nm,0.4s								
HELC	**Santa Helena**	**2.52**	**256**	*e*	P	**Pn**	**04 23 48.1**	**+0.4**	
HELC				*e*	S	**Sn**	**04 24 19.8**	**-0.3**	
UREC	**San Jos de Ur**	**2.60**	**291**	*e*	P	**Pn**	**04 23 47.6**	**-0.8**	
UREC				*e*	S	**Sn**	**04 24 18.8**	**-2.6**	
UREC				*i*			04 24 29.8		
	comp=Z,632nm,0.2s								
VIGV	**El Vigia**	**2.62**	**40**	⇓ *i*	P	**Pn**	**04 23 49.7**	**+1.0**	
SOCV	**Socops**	**2.63**	**57**	⇓ *i*	P	**Pn**	**04 23 49.6**	**+0.8**	
VILC	**Villavicencio,**	**2.77**	**193**	*e*	P	**Pn**	**04 23 50.6**	**0.0**	
VILC				*e*	S	**Sn**	**04 24 23.7**	**-1.6**	
VILC				*i*			04 24 36.1		
	comp=Z,686nm,0.5s								
PTGC	**Puerto Gaitan,**	**2.78**	**160**	⇑ *i*	P	**Pn**	**04 23 50.5**	**-0.1**	
PTGC				*e*	S	**Sn**	**04 24 23.6**	**-1.7**	
PTGC				*i*			04 24 26.6		
	comp=Z,410nm,0.4s								
GUY2C	**Guyana, Caldas**	**2.78**	**235**	*e*	P	**Pn**	**04 23 51.7**	**+0.7**	
GUY2C				*e*	S	**Sn**	**04 24 27.0**	**+1.0**	
GUY2C				*i*			04 24 35.2		
	comp=Z,594nm,0.7s								
CBOC	**Ciudad Bolivar**	**3.07**	**252**	*e*	P	**Pn**	**04 23 55.2**	**+0.8**	
CBOC				*e*	S	**Sn**	**04 24 31.0**	**-1.1**	
CBOC				*i*			04 24 43.0		
	comp=Z,178nm,0.6s								
CODC	**Agustn Codazz**	**3.11**	**353**	⇓ *i*	P	**Pn**	**04 23 54.4**	**-0.3**	
CODC				*e*	S	**Sn**	**04 24 31.8**	**-1.0**	
CODC				*i*			04 24 44.5		
	comp=Z,118nm,0.4s								
DBBC	**Dabeiba**	**3.12**	**274**	⇑ *e*	P	**Pn**	**04 23 55.0**	**+0.2**	
DBBC				*i*			04 24 37.0		
	comp=Z,371nm,0.4s								
SDV	**Santo Domingo**	**3.17**	**50**	P		**Pn**	**04 23 56.7**	**+1.0**	
	comp=Z,66nm,0.3s,baz=156,slow=2.5,SNR=436								
SDV				S		**Sn**	**04 24 33.7**	**-0.7**	
	comp=Z,41nm,0.3s,baz=252,slow=18,SNR=15								
SDV	**Santo Domingo**	**3.17**	**50**	*e*	P	**Pn**	**04 23 56.5**	**+0.8**	
SDV	**Santo Domingo**	**3.17**	**50**		P	**Pn**	**04 23 56.8**	**+1.1**	
SDV					Sn	**Sn**	**04 24 34.6**	**+0.3**	
ARGC	**Ariguani, Magd**	**3.23**	**339**	*e*	P	**Pn**	**04 23 57.3**	**+1.1**	
ARGC				*e*	S	**Sn**	**04 24 35.2**	**-0.2**	
ARGC				*i*			04 24 46.6		
	comp=Z,215nm,0.3s								
ORTC	**Ortega, Tolima**	**3.62**	**217**	⇓ *e*	P	**Pn**	**04 24 01.7**	**+0.5**	
ORTC				*e*	S	**Sn**	**04 24 44.1**	**-0.3**	
ORTC				*i*			04 24 49.8		
	comp=Z,384nm,0.4s								
SJCC	**San Jacinto, C**	**3.69**	**326**	*e*	P	**Pn**	**04 24 01.1**	**-1.2**	
SJCC				*e*	S	**Sn**	**04 24 42.5**	**-3.6**	
SJCC				*i*			04 24 47.0		
	comp=Z,291nm,0.5s								
PLMC	**San Jos del P**	**3.72**	**239**	*e*	P	**Pn**	**04 24 02.9**	**+0.3**	
PLMC				*e*	S	**Sn**	**04 24 46.1**	**-0.6**	
PLMC				*i*			04 24 52.4		
	comp=Z,231nm,0.2s								
LCBC	**Los crdobas,**	**3.83**	**302**	*e*	P	**Pn**	**04 24 03.0**	**-0.9**	
LCBC				*e*	S	**Sn**	**04 24 46.5**	**-2.8**	
QARV	**Quebrada Arrib**	**4.20**	**37**	⇓ *i*	P	**Pn**	**04 24 09.7**	**+0.8**	
GUVC	**San Jose del G**	**4.28**	**174**	*e*	P	**Pn**	**04 24 09.4**	**-0.5**	
GUVC				*e*	S	**Sn**	**04 24 58.0**	**-1.8**	
GUVC				*i*			04 25 03.6		
	comp=Z,256nm,0.3s								
YOTC	**Yotoco, Valle**	**4.31**	**229**	⇑ *e*	P	**Pn**	**04 24 10.1**	**-0.3**	
YOTC				*e*	S	**Sn**	**04 25 00.3**	**-0.3**	
YOTC				*i*			04 25 13.2		
	comp=Z,32nm,0.4s								
SOLC	**Bahia Solano**	**4.34**	**262**	*e*	P	**Pn**	**04 24 10.0**	**-0.7**	
SOLC				*e*	S	**Sn**	**04 25 00.3**	**-0.9**	
SOLC				*i*			04 25 00.4		
	comp=Z,31nm,0.5s								
CURV	**Curarigua**	**4.42**	**44**	⇓ *e*	P	**Pn**	**04 24 12.0**	**+0.3**	
SMRC	**Santa Marta, M**	**4.45**	**345**	*e*	P	**Pn**	**04 24 11.7**	**-0.5**	
SMRC				*e*	S	**Sn**	**04 25 00.3**	**-3.6**	
SMRC				*i*			04 25 01.3		
	comp=Z,80nm,0.2s								
PTAC	**Punta Ardita,**	**4.71**	**274**	*e*	P	**Pn**	**04 24 14.8**	**-0.6**	
PTAC				*e*	S	**Sn**	**04 25 09.8**	**0.0**	
PTAC				*i*			04 25 19.9		
	comp=Z,168nm,0.3s								
MACC	**Macarena, Meta**	**4.71**	**189**	*e*	P	**Pn**	**04 24 14.4**	**-1.2**	
	comp=Z,97nm,0.6s								
MACC				*e*	S	**Sn**	**04 25 05.3**	**-4.7**	
MACC				*i*			04 25 32.1		
	comp=Z,97nm,0.6s								
DABV	**Dabajuro**	**4.73**	**30**	*e*	P	**Pn**	**04 24 16.1**	**+0.4**	
BETC	**Betania**	**4.75**	**210**	*e*	P	**Pn**	**04 24 15.2**	**-0.9**	
BETC				*e*	S	Sn	04 25 00.7	-10	
TEPV	**Terepaima**	**4.95**	**51**	*e*	P	**Pn**	**04 24 18.8**	**+0.2**	
URIC	**Uribia, Colomb**	**4.96**	**12**	*e*	P	**Pn**	**04 24 17.6**	**-1.1**	
URIC				*i*			04 25 19.2		
	comp=Z,34nm,0.5s								
SIQV	**Siquisique**	**4.99**	**40**	⇓ *e*	P	**Pn**	**04 24 19.1**	**-0.1**	
MALC	**Bahia Malaga**	**5.08**	**237**	*e*	P	**Pn**	**04 24 21.9**	**+1.5**	
MALC				*e*	S	**Sn**	**04 25 18.6**	**+0.1**	
MALC				*i*			04 25 39.7		
	comp=Z,38nm,0.5s								
MAPV	**Macapo**	**5.46**	**57**	⇓ *e*	P	**Pn**	**04 24 25.3**	**-0.1**	
PCON	**Cinco Dias**	**5.56**	**217**	*e*	P	**Pn**	**04 24 28.6**	**+1.4**	
PCON				*e*	S	**Sn**	**04 25 26.4**	**-4.5**	
PCON				*i*			04 25 42.1		
	comp=Z,47nm,0.4s								
PAYV	**Puerto Ayacuch**	**5.57**	**104**	*e*	P	**Pn**	**04 24 26.3**	**-0.5**	
FLOC	**Florencia**	**5.81**	**206**	*e*	P	**Pn**	**04 24 30.2**	**+0.1**	
FLOC				*e*	S	**Sn**	**04 25 28.9**	**-7.1**	
FLOC				*i*			04 25 41.7		
	comp=Z,34nm,0.4s								
FLOC	**Florencia**	**5.81**	**206**			**Pn**	**04 24 29.6**	**-0.5**	
FLOC					Sn	**Sn**	**04 25 36.0**	**-0.1**	
SOTA	**Rioblanco**	**5.84**	**217**	*e*	P	**Pn**	**04 24 32.3**	**+1.4**	
SOTA				*e*	S	**Sn**	**04 25 32.7**	**-4.8**	
SOTA				*i*			04 25 48.5		
	comp=Z,39nm,0.6s								
MONV	**Montecano**	**5.95**	**31**	*e*	P	**Pn**	**04 24 31.2**	**-0.6**	
TURV	**Turiamo**	**6.31**	**55**	*e*	P	**Pn**	**04 24 36.5**	**-0.1**	
BBAC	**Balboa, Cauca**	**6.33**	**221**	*e*	P	**Pn**	**04 24 38.9**	**+1.7**	
BBAC				*e*	S	**Sn**	**04 25 46.4**	**-2.4**	
BBAC				*i*			04 25 52.4		
	comp=Z,24nm,0.4s								
CRUC	**La Cruz**	**6.50**	**217**	*e*	P	**Pn**	**04 24 40.9**	**+1.4**	
CRUC				*e*	S	**Sn**	**04 25 53.5**	**+0.6**	
CRUC				*i*			04 26 03.7		
	comp=Z,21nm,0.6s								
BIRV	**Birongo**	**7.64**	**61**	*e*	P	**Pn**	**04 24 53.3**	**-1.2**	
CUPV	**Cpira**	**7.89**	**66**	*e*	P	**Pn**	**04 24 56.8**	**-1.0**	
OTAV	**Otavalo**	**8.46**	**220**			**Pn**	**04 25 05.6**	**-0.2**	
OTAV					Sn	**Sn**	**04 26 39.6**	**-0.6**	
PCRV	**Puerto La Cruz**	**8.99**	**68**	P		**Pn**	**04 25 14.3**	**+2.0**	
	comp=Z,1.3nm,0.3s,baz=206,slow=4.9,SNR=5.9								
PLCV	**Puerto La Cruz**	**9.03**	**68**			**Pn**	**04 25 14.3**	**+1.5**	
SAML	**Samuel**	**18.52**	**148**	P		**P**	**04 27 08.2**	**-2.2**	
LPAZ	**La Paz**	**23.48**	**168**	P		**P**	**04 28 01.8**	**-0.5**	
	comp=Z,0.6nm,0.4s,baz=332,slow=13,SNR=4.1								
LPAZ	**La Paz**	**23.48**	**168**	P		**P**	**04 28 00.1**	**-2.1**	
U40A	**Yellville**	**34.51**	**331**	P		**P**	**04 29 40.1**	**+1.0**	
U40A				IAmb		IAmb	04 29 41.1		
	comp=Z,7.1nm,0.7s								
CCM	**Cathedral Cave**	**35.18**	**335**	P		**P**	**04 29 45.8**	**+1.0**	
CCM				IAmb		IAmb	04 29 46.7		
	comp=Z,8.1nm,0.8s								
TXAR	**Lajitas Array**	**36.49**	**312**	P		**P**	**04 29 56.8**	**+0.6**	
	comp=Z,0.6nm,0.5s,baz=128,slow=9.2,SNR=7.7								
SUSD	**Miller**	**43.75**	**333**	P		**P**	**04 30 56.1**	**+0.4**	
SUSD				IAmb		IAmb	04 30 57.1		
	comp=Z,19nm,0.9s								
ULM	**Lac du Bonnet**	**47.29**	**340**	P		**P**	**04 31 23.7**	**+0.3**	
	comp=Z,3.2nm,0.4s,baz=141,slow=6.2,SNR=17								
ULM	**Lac du Bonnet**	**47.29**	**340**	IAmb		IAmb	04 31 24.4		
	comp=Z,4.6nm,0.5s								
PDAR	**Pinedale Array**	**48.10**	**324**	P		**P**	**04 31 31.1**	**+1.0**	
	comp=Z,0.6nm,0.5s,baz=127,slow=10,SNR=6.7								
SCHQ	**Schefferville**	**48.13**	**5**	P		**P**	**04 31 31.0**	**+1.2**	
	comp=Z,4.1nm,0.7s,baz=198,slow=7.9,SNR=8.2								
SCHQ	**Schefferville**	**48.13**	**5**	P		**P**	**04 31 30.3**	**+0.5**	
TCUT	**Toone Canyon**	**48.25**	**321**	P		**P**	**04 31 30.0**	**-1.3**	
DGMT	**Dagmar**	**49.16**	**333**	P		**P**	**04 31 38.8**	**+0.9**	
NVAR	**Mina Array Bea**	**51.51**	**315**	P		**P**	**04 31 57.2**	**+1.3**	
	comp=Z,0.4nm,0.6s,baz=125,slow=7.1,SNR=4.3								
PINE	**Pine Mountain**	**55.67**	**319**	P		**P**	**04 32 26.7**	**+0.6**	
PINE				IAmb		IAmb	04 32 28.7		
	comp=Z,5.7nm,0.9s								
KEBM	**Edson Butte**	**57.52**	**317**	P		**P**	**04 32 41.3**	**+2.3**	
YKA	**Yellowknife Ar**	**63.27**	**340**	P		**P**	**04 33 18.0**	**+0.5**	
	comp=Z,2.9nm,0.6s,baz=134,slow=6.6,SNR=91								
DBIC	**Dimbokro**	**67.69**	**86**	P		**P**	**04 33 46.0**	**-0.8**	
	comp=Z,4.9nm,1.1s,baz=286,slow=9.0,SNR=3.7								
DBIC	**Dimbokro**	**67.69**	**86**	P		**P**	**04 33 44.9**	**-1.9**	
DBIC				IAmb		IAmb	04 33 48.7		
	comp=Z,8.0nm,1.1s								
SUMG	**Summit**	**68.97**	**11**	P		**P**	**04 33 54.5**	**+0.3**	
SUMG				IAmb		IAmb	04 33 55.7		
	comp=Z,8.3nm,0.6s								
TORD	**Torodi Ar. Bea**	**73.69**	**78**	P		**P**	**04 34 21.9**	**-1.3**	
	comp=Z,0.3nm,0.4s,baz=290,slow=6.8,SNR=10.0								
ILAR	**Eielson Array**	**76.97**	**335**	P		**P**	**04 34 41.6**	**+0.7**	
	comp=Z,0.4nm,0.7s,baz=127,slow=6.8,SNR=5.2								
ARCES	**ARCESS Array B**	**86.65**	**20**	P		**P**	**04 35 31.8**	**+0.3**	
	comp=Z,3.9nm,1.1s,baz=349,slow=3.9,SNR=5.5								
MKAR	**Makanchi Array**	**122.30**	**20**	PKP		**PKPdf**	**04 41 42.3**	**-0.2**	
	comp=Z,0.3nm,0.4s,baz=287,slow=3.0,SNR=9.6								
ASAR	**Alice Springs**	**149.15**	**234**	PKPbc		**PKPbc**	**04 42 36.1**	**-0.5**	
	comp=Z,0.9nm,0.5s,baz=119,slow=3.9,SNR=13								
WRA	**Warramunga Arr**	**150.38**	**241**	PKPbc		**PKPbc**	**04 42 39.5**	**-0.1**	
	comp=Z,1.0nm,0.4s,baz=110,slow=2.7,SNR=10.0								

*IDC **21** 04:29:06.5±0.9,26.67N×144.19E,h0km,mb4.1/10,*
mb1 4.3/11,mb1mx3.9/42,mbtmp4.1/11,ML3.3/1,Error
ellipse: s-maj=26.3km s-min=20.8km az=36.0
*NEIC **21** 04:29:09.3±1.1,26.69N±0.05×144.1E±0.1,h18km±4km,*
mb4.3/8,Error ellipse: s-maj=13.3km s-min=7.2km
az=90.0

ISC 21 04:29:11.2±0.8,26.7N±0.1×144.1E±0.1,h31km,n29,
σ0s77/25,mb4.2/14,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**1.77**	**283**	Pn		**Pn**	**04 29 39.2**	**-0.5**
	36nm,0.3s,baz=272,slow=22,SNR=18							
JCJ				Sn		**Sn**	**04 30 01.3**	**+0.1**
	192nm,0.3s,baz=288,slow=23,SNR=16							
MJAR	**Matsushiro Arr**	**11.01**	**334**	Pn		**Pn**	**04 31 44.7**	**-1.9**
	0.2nm,0.3s,baz=164,slow=11,SNR=5.5							
MJB9	**Matsu-Tunnel**	**11.02**	**334**	Pn		**Pn**	**04 31 46.4**	**-0.3**
H11N2	**WAKE ISLAND Hy**	**22.03**	**104**	T		T	04 56 59.5	
	baz=292							
H11N1	**WAKE ISLAND Hy**	**22.04**	**104**	T		T	04 56 47.7	
	baz=292							
H11N3	**WAKE ISLAND Hy**	**22.05**	**104**	T		T	04 57 04.8	
	baz=292							
H11S3	**WAKE ISLAND Hy**	**22.36**	**107**	T		T	04 57 35.3	
	baz=288							
H11S1	**WAKE ISLAND Hy**	**22.36**	**107**	T		T	04 57 32.3	
	baz=288							
H11S2	**WAKE ISLAND Hy**	**22.37**	**107**	T		T	04 57 19.8	
	baz=288							
KLR	**Kul'dur**	**24.44**	**340**	P		**P**	**04 34 27.4**	**+0.4**
	1.5nm,0.7s,baz=166,slow=7.8,SNR=5.9							
ULN	**Ulaanbaatar**	**35.79**	**316**	P		**P**	**04 36 08.7**	**+1.0**
SONM	**Songino Array**	**36.19**	**316**	P		**P**	**04 36 12.6**	**+1.5**
	4.9nm,0.8s,baz=113,slow=7.3,SNR=38							
WRA	**Warramunga Arr**	**47.34**	**193**	P		**P**	**04 37 41.6**	**-0.7**
	3.5nm,0.8s,baz=13,slow=8.2,SNR=9.6							
FITZ	**Fitzroy Crossi**	**48.03**	**204**	P		**P**	**04 37 47.5**	**-0.1**
ZALV	**Zalesovo Beam**	**50.91**	**319**	P		**P**	**04 38 09.6**	**+0.4**
	0.6nm,0.3s,baz=101,slow=7.7,SNR=3.7							
MK31	**Makanchi Array**	**52.05**	**310**	P		**P**	**04 38 18.1**	**+0.1**
MKAR	**Makanchi Array**	**52.05**	**310**	P		**P**	**04 38 18.6**	**+0.6**
	2.0nm,0.7s,baz=88,slow=9.4,SNR=25							
MKAR				PcP		**PcP**	**04 39 30.1**	**+0.2**
	0.7nm,0.8s,baz=116,slow=2.8,SNR=4.4							
MAKZ	**Makanchi**	**52.26**	**310**	P		**P**	**04 38 19.6**	**0.0**
KURK	**Kurchatov**	**54.48**	**315**	P		**P**	**04 38 36.1**	**+0.3**
KURK				IAmb		IAmb	04 38 49.4	
	comp=Z,2.7nm,1.0s							
KURBB	**Kurchatov Arra**	**54.54**	**315**	P		**P**	**04 38 36.5**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=90,slow=8.0,SNR=21							
KKAR	**Karatay Array**	**60.71**	**306**	P		**P**	**04 39 19.9**	**+0.1**
KKAR				IAmb		IAmb	04 39 22.4	
	comp=Z,2.8nm,1.0s							
BTK	**Batken**	**61.06**	**303**	P		**P**	**04 39 21.3**	**-1.0**
ABKAR	**Akbulak array**	**66.59**	**315**	P		**P**	**04 39 58.6**	**+0.2**
ABKAR				IAmb		IAmb	04 39 59.5	
	comp=Z,2.2nm,0.8s							
YKA	**Yellowknife Ar**	**71.65**	**29**	P		**P**	**04 40 28.9**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=292,slow=6.5,SNR=7.6							
CMB	**Columbia Colle**	**78.07**	**53**	P		**P**	**04 41 06.5**	**-0.6**
CMB				IAmb		IAmb	04 41 10.8	
	comp=Z,2.2nm,0.9s							
NVAR	**Mina Array Bea**	**79.39**	**52**	P		**P**	**04 41 15.1**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=289,slow=5.4,SNR=6.8							
KBZ	**Khabaz**	**79.53**	**314**	P		**P**	**04 41 16.2**	**+1.3**
	comp=Z,2.7nm,0.8s,baz=97,slow=2.6,SNR=6.9							
BRTR	**Keskin Array B**	**87.52**	**314**	P		**P**	**04 41 56.0**	**-0.4**
	comp=Z,0.6nm,0.8s,baz=35,slow=5.3,SNR=3.9							
LPAZ	**La Paz**	**148.33**	**77**	PKPbc		**PKPbc**	**04 48 56.5**	**+0.6**
	comp=Z,1.9nm,0.8s,baz=304,slow=2.4,SNR=8.1							

*JMA **21** 04:43:11.4±0.1,23.98N×121.96E,h35km±3km,M2.9*
*TAP **21** 04:43:12.1,24.04N×121.95E,h42km,ML3.5,C*

ISC 21 04:43:12.5±1.1,24.02N±0.02×121.97E±0.02,h34km±2km,
n98,σ0s79/184,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.34**	**263**	*i* P		**Pb**	**04 43 20.9**	**+0.1**
	baz=266							
HWA				*i* S		**Sb**	**04 43 28.3**	**+1.9**
	baz=266							
TWD	**Chiawan**	**0.35**	**280**	*i* P		**Pb**	**04 43 20.6**	**-0.4**
	baz=278							
TWD				S		**Sn**	**04 43 26.9**	**+0.2**
	baz=278							
ENLB	**Shoufeng**	**0.35**	**252**	P		**Pb**	**04 43 20.3**	**-0.7**
	baz=240							
ENLB				*e* S		**Sb**	**04 43 27.8**	**+1.0**
	baz=240							
NACB	**Ninganchiao**	**0.38**	**295**	P		**Pb**	**04 43 20.9**	**-0.5**
	baz=293							
NACB				*e* S		**Sb**	**04 43 27.2**	**-0.2**
	baz=293							
NANB	**Nanao**	**0.46**	**334**	P		**Pb**	**04 43 22.1**	**-0.4**
	baz=329							
NANB				S		**Sb**	**04 43 29.5**	**+0.2**
	baz=329							
ENA	**Nanau**	**0.46**	**333**	*i* P		**Pb**	**04 43 22.2**	**-0.4**
	baz=329							
ENA				S		**Sb**	**04 43 29.6**	**+0.2**
	baz=329							
ETLH	**Xiulin Townshi**	**0.48**	**293**	*i* P		**Pb**	**04 43 22.2**	**-0.8**
	baz=292							
ETLH				S		**Sb**	**04 43 29.9**	**-0.2**
	baz=292							
ESL	**Shilin**	**0.53**	**248**	*i* P		**Pn**	**04 43 23.2**	**-0.5**
	baz=252							
ESL				*i* S		**Sb**	**04 43 31.2**	**-0.1**
	baz=252							
EOS1	**EOS1**	**0.55**	**15**	*e* P		**Pb**	**04 43 24.2**	**+0.3**
	baz=28							
EOS1				*e* S		**Sb**	**04 43 33.0**	**+1.3**
	baz=28							
TWC	**Suao**	**0.60**	**349**	*i* P		**Pn**	**04 43 24.4**	**-0.2**
	baz=359							
TWC				*i* S		**Sn**	**04 43 33.0**	**-0.2**
	baz=359							
EGFH	**Guangfu**	**0.61**	**235**	P		**Pn**	**04 43 24.1**	**-0.5**
	baz=228							
EGFH				S		**Sn**	**04 43 33.0**	**-0.3**
	baz=228							
WHF	**Hehuan Shan**	**0.66**	**281**	P		**Pn**	**04 43 24.7**	**-1.1**
	baz=280							
WHF				S		**Sn**	**04 43 34.3**	**-0.9**
	baz=280							
NNSB	**Datong**	**0.67**	**308**	*i* P		**Pn**	**04 43 25.1**	**-0.7**
	baz=299							
NNSB				S		**Sn**	**04 43 34.6**	**-0.7**
	baz=299							
NNSH	**Datong**	**0.67**	**308**	P		**Pn**	**04 43 25.1**	**-0.6**
	baz=298							
NNSH				S		**Sn**	**04 43 34.3**	**-0.9**
	baz=298							
NNS	**Nan Shan**	**0.69**	**308**	P		**Pn**	**04 43 25.3**	**-0.7**
	baz=299							
NNS				S		**Sn**	**04 43 34.5**	**-1.1**
	baz=299							
NDT	**Datong Townshi**	**0.72**	**325**	*i* P		**Pn**	**04 43 26.0**	**-0.3**
	baz=325							
NDT				S		**Sn**	**04 43 35.9**	**-0.3**
	baz=325							
ENTT	**Nioudou**	**0.72**	**329**	P		**Pn**	**04 43 25.9**	**-0.5**
	baz=330							
ENTT				S		**Sn**	**04 43 36.0**	**-0.3**
	baz=330							
HGSD	**Ruisui**	**0.72**	**224**	P		**Pn**	**04 43 25.7**	**-0.6**
	baz=218							
HGSD				*e* S		**Sb**	**04 43 37.1**	**+0.7**
	baz=218							
CHGB	**Renai**	**0.73**	**274**	*i* P		**Pn**	**04 43 26.1**	**-0.5**
	baz=272							
CHGB				S		**Sn**	**04 43 36.0**	**-0.7**
	baz=272							
OWD	**Renai**	**0.73**	**265**	*e* P		**Pn**	**04 43 25.8**	**-0.8**
	baz=271							
OWD				S		**Sn**	**04 43 35.3**	**-1.3**
	baz=271							
TWE	**Neicheng**	**0.75**	**339**	*i* P		**Pn**	**04 43 26.4**	**-0.4**
	baz=340							
TWE				*i* S		**Sn**	**04 43 36.8**	**-0.3**
	baz=340							
ILA	**Ilan**	**0.77**	**345**	P		**Pn**	**04 43 27.1**	**+0.1**
	baz=340							
ILA				S		**Sb**	**04 43 38.1**	**+0.3**
	baz=340							
TDCB	**Techi

WFSB	**Wu-fen Shan**	**1.06 351**	*e*P	**Pn**	**04 43 31.7**	**+0.6**
	baz=351						
WFSB			*e*S	**Sn**	**04 43 44.8**	**+0.1**
	baz=351						
CHKT	**Chengkung**	**1.07 211**	S	**Sn**	**04 43 41.9**	**-2.9**
	baz=200						
YUS	**Yu-Shan**	**1.07 241**	P	**Pn**	**04 43 31.4**	**-0.2**
	baz=239						
YUS			*e*S	**Sn**	**04 43 44.7**	**-0.8**
	baz=239						
WHYT	**Xinyi Township**	**1.07 253**	*e*P	**Pn**	**04 43 31.0**	**-0.2**
	baz=245						
WHYT			*e*S	**Sn**	**04 43 44.3**	**-0.6**
	baz=245						
LIOB	**Emei**	**1.07 306**	*e*P	**Pn**	**04 43 31.6**	**+0.4**
	baz=299						
LIOB			S	**Sn**	**04 43 45.3**	**+0.3**
	baz=299						
NSTT	**Nanjuang**	**1.07 305**	*e*P	**Pn**	**04 43 31.9**	**+0.7**
	baz=298						
NSTT			*e*S	**Sn**	**04 43 45.4**	**+0.5**
	baz=298						
WJS	**Zhushan**	**1.15 261**	*e*P	**Pn**	**04 43 33.4**	**+1.1**
	baz=260						
WJS			*e*S	**Sb**	**04 43 49.2**	**+0.6**
	baz=260						
NSY	**Sanyi**	**1.17 290**	*e*P	**Pn**	**04 43 33.5**	**+1.0**
	baz=290						
NSY			*e*S	**Sn**	**04 43 48.5**	**+1.1**
	baz=290						
ALS	**Alishan**	**1.18 245**	P	**Pn**	**04 43 33.4**	**+0.5**
	baz=236						
ALS			*e*S	**Sn**	**04 43 48.5**	**+0.5**
	baz=236						
YM01	**YM01**	**1.18 342**	*e*P	**Pn**	**04 43 32.6**	**-0.2**
	baz=328						
YM01			*e*S	**Sn**	**04 43 47.8**	**+0.1**
	baz=328						
SBCB	**Hsinchu**	**1.18 311**	*e*P	**Pn**	**04 43 33.1**	**+0.4**
	baz=310						
SBCB			*e*S	**Sb**	**04 43 49.2**	**-0.3**
	baz=310						
WNT	**Mingjian**	**1.18 264**	P	**Pn**	**04 43 34.0**	**+1.2**
	baz=263						
WNT			S	**Sb**	**04 43 49.3**	**-0.2**
	baz=263						
NCUH	**Zhongli**	**1.19 323**	*e*P	**Pn**	**04 43 33.0**	**+0.2**
	baz=322						
NCUH			S	**Sn**	**04 43 48.8**	**+1.0**
	baz=322						
NCU	**National Centr**	**1.19 323**	S	**Sn**	**04 43 48.6**	**+0.9**
	baz=323						
TCU	**Taichung**	**1.19 277**	*e*P	**Pn**	**04 43 33.5**	**+0.8**
	baz=276						
TCU			*e*S	**Sb**	**04 43 49.8**	**+0.1**
	baz=276						
TWS1	**Kuangyinshan**	**1.19 335**	*e*S	**Sn**	**04 43 48.5**	**+0.7**
	baz=335						
YM10	**YM10**	**1.19 342**	*e*S	**Sn**	**04 43 47.5**	**-0.5**
	baz=327						
NMLH	**Miaoli**	**1.19 296**	*e*P	**Pn**	**04 43 33.0**	**+0.1**
	baz=296						
NMLH			*e*S	**Sb**	**04 43 49.5**	**-0.3**
	baz=296						
YM04	**YM04**	**1.20 341**	*e*P	**Pn**	**04 43 32.6**	**-0.4**
	baz=327						
YM04			S	**Sn**	**04 43 48.1**	**0.0**
	baz=327						
YM11	**YM11**	**1.20 343**	*e*P	**Pn**	**04 43 32.4**	**-0.6**
	baz=328						
YM11			*e*S	**Sn**	**04 43 48.6**	**+0.5**
	baz=328						
YM05	**YM05**	**1.20 342**	*e*P	**Pn**	**04 43 32.7**	**-0.3**
	baz=328						
YM05			*e*S	**Sn**	**04 43 48.2**	**0.0**
	baz=328						
ELDTW	**Lidau**	**1.20 227**	P	**Pn**	**04 43 32.7**	**-0.4**
	baz=220						
ELDTW			S	**Sn**	**04 43 47.1**	**-1.2**
	baz=220						
HSN	**Hsinchu**	**1.20 311**	S	**Sb**	**04 43 49.6**	**-0.4**
	baz=312						
YM03	**YM03**	**1.22 341**	*e*P	**Pn**	**04 43 32.8**	**-0.5**
	baz=328						
YM03			*e*S	**Sn**	**04 43 49.2**	**+0.5**
	baz=328						
CHN5	**Tsauling**	**1.25 251**	*e*P	**Pn**	**04 43 33.7**	**-0.1**
	baz=250						
CHN5			*e*S	**Sn**	**04 43 50.5**	**+0.9**
	baz=250						
WDJ	**Dajia District**	**1.26 285**	*e*P	**Pn**	**04 43 33.1**	**-0.6**
	baz=285						
WDJ			*e*S	**Sn**	**04 43 50.3**	**+0.8**
	baz=285						
WCHH	**Zhanghua**	**1.29 273**	P	**Pn**	**04 43 34.9**	**+0.8**
	baz=273						
WCHH			S	**Sb**	**04 43 52.4**	**-0.2**
	baz=273						
TWY	**Chenhua**	**1.30 345**	*e*S	**Sn**	**04 43 51.4**	**+1.0**
	baz=345						
WGK	**Gukeng**	**1.33 256**	*e*P	**Pb**	**04 43 37.0**	**+0.1**
	baz=255						
WGK			*e*S	**Sb**	**04 43 54.6**	**+1.0**
	baz=255						
WDLH	**Douliu**	**1.35 256**	*e*P	**Pn**	**04 43 35.6**	**+0.6**
	baz=245						
WDLH			S	**Sb**	**04 43 55.5**	**+1.2**
	baz=245						
STYT	**Tauyuan**	**1.40 233**	P	**Pn**	**04 43 35.9**	**+0.2**
	baz=226						
STYT			S	**Sn**	**04 43 53.5**	**+0.4**
	baz=226						
TPUB	**Ta-pu**	**1.42 240**	*e*P	**Pn**	**04 43 36.7**	**+0.7**
	baz=238						
TWGBT	**Beinan**	**1.45 215**	*e*P	**Pn**	**04 43 34.8**	**-1.5**
	baz=214						
TWGBT			*e*S	**Sn**	**04 43 52.8**	**-1.3**
	baz=214						
TWG	**Pinlang**	**1.45 215**	*e*P	**Pn**	**04 43 37.0**	**+0.6**
	baz=214						
TWG			*e*S	**Sn**	**04 43 54.9**	**+0.7**
	baz=214						
WTP	**Ta-pu**	**1.46 239**	*e*P	**Pn**	**04 43 37.0**	**+0.5**
	baz=238						
WTP			*e*S	**Sn**	**04 43 54.5**	**-0.1**
	baz=238						
RLNB	**Erlin**	**1.48 265**	*e*P	**Pn**	**04 43 37.8**	**+1.0**
	baz=277						
RLNB			*e*S	**Sb**	**04 43 57.2**	**-0.6**
	baz=277						
CHY	**Chiayi**	**1.51 250**	*e*P	**Pn**	**04 43 37.0**	**-0.1**
	baz=250						
CHY			*e*S	**Sb**	**04 43 57.9**	**-0.8**
	baz=250						
TWK	**Hsinying**	**1.55 242**	P	**Pn**	**04 43 39.0**	**+1.2**
	baz=241						
TWK			S	**Sn**	**04 43 58.7**	**+1.9**
	baz=241						
CHN1	**Nanshi**	**1.56 238**	*e*P	**Pn**	**04 43 38.6**	**+0.7**
	baz=238						
CHN1			*e*S	**Sn**	**04 43 58.8**	**+1.8**
	baz=238						
SNST	**Tainan City**	**1.57 240**	*e*P	**Pn**	**04 43 39.4**	**+1.4**
	baz=240						
SNST			*e*S	**Sn**	**04 43 59.1**	**+2.0**
	baz=240						
SGST	**Jiashian**	**1.58 234**	P	**Pn**	**04 43 38.4**	**+0.3**
	baz=234						
SGST			S	**Sn**	**04 43 59.0**	**+1.6**
	baz=234						
SLGT	**Liugui**	**1.59 230**	P	**Pn**	**04 43 39.5**	**+1.3**
	baz=239						
SLGT			*e*S	**Sn**	**04 43 59.4**	**+1.8**
	baz=239						
IRIF	**Iriomote-Funau**	**1.64 79**	P	**Pn**	**04 43 39.0**	**+0.1**
HATJ	**Hateruma jima**	**1.68 88**	P	**Pn**	**04 43 39.8**	**+0.3**
HATJ			*e*S	**Sn**	**04 44 00.1**	**+0.2**
ECL	**Taimali**	**1.69 214**	*e*P	**Pn**	**04 43 39.0**	**-0.7**
	baz=213						
ECL			S	**Sn**	**04 43 58.3**	**-2.0**
	baz=213						
MASBT	**Mashibuluo**	**1.86 222**	*e*P	**Pn**	**04 43 43.9**	**+1.8**
	baz=222						
MASBT			*e*S	**Sn**	**04 44 06.5**	**+2.1**
	baz=222						
JKRS	**Kuro-shima**	**1.88 83**	P	**Pn**	**04 43 42.7**	**+0.5**
JKRS			S	**Sn**	**04 44 05.2**	**+0.5**
JIJ	**Ishigaki jima**	**2.01 80**	P	**Pn**	**04 43 43.9**	**-0.2**
JIJ			S	**Sn**	**04 44 07.1**	**-1.1**
JISG	**Ishigakijimahi**	**2.21 75**	P	**Pn**	**04 43 46.4**	**-0.4**
JISG			S	**Sn**	**04 44 12.0**	**-1.0**
JTJ	**Tarama**	**2.57 75**	P	**Pn**	**04 43 50.8**	**-0.9**
JTJ			S	**Sn**	**04 44 22.3**	**+0.5**
JIRB	**Irabujima**	**3.03 74**	S	**Sn**	**04 44 33.0**	**-0.2**

ATH ***21*** *04:51:48.9, 41.37N×19.42E, h17km, ML3.4/7, Error ellipse: s-maj=2.1km s-min=0.8km az=351.0*
IDC ***21*** *04:51:48.4±1.0, 41.39N×19.40E, h0km, mb4.0/7, mb1 4.0/10, mb1mx3.7/35, mbtmp3.9/10, ML3.5/3, MS3.2/2, Ms1 3.2/2, ms1mx2.5/63, Error ellipse: s-maj=14.8km s-min=13.7km az=12.0*
BEO ***21*** *04:51:49.0±0.5, 41.22N×19.42E, h7km±2km, ML3.4/20*
LDG ***21*** *04:51:49.8±0.1, 41.30N×19.48E, h5km, Ml3.7/15, Error ellipse: s-maj=3.4km s-min=2.1km az=33.0*
PDG ***21*** *04:51:50.7±0.5, 41.36N×19.53E, h14km, MD3.5/7, ML3.6/12, Error ellipse: s-maj=0.4km s-min=0.8km az=0.0*
TIR ***21*** *04:51:50.7, 41.40N×19.57E, h19km, Md3.5/7*
PRU ***21*** *04:51:51.7±0.0, 41.45N×19.39E, h0km*
SKO ***21*** *04:51:51.4, 41.37N×19.50E, h14km*
THE ***21*** *04:51:51.1, 41.46N×19.53E, h10km±1km, ML3.5/5, Error ellipse: s-maj=2.2km s-min=1.0km az=127.0*

ISC 21 04:51:50.6±0.8, 41.40N±0.02×19.50E±0.02, h17km±6km, n219, σ2§10/297, mb4.0/6, 13C-18D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
TIR	**Tirane**	**0.28**	**101**	P	**Pg**	**04 51 56.2**	**-0.5**
TIR				S	**Sg**	**04 52 00.8**	**-0.1**
	5µm,0.5s						
TIR	**Tirane**	**0.28**	**101**	*e*Pg	**Pg**	**04 51 56.0**	**-0.7**
TIR				*e*Sg	**Sg**	**04 52 00.9**	**+0.1**
TIR	**Tirane**	**0.28**	**101**	*i* PG	**Pg**	**04 51 56.2**	**-0.5**
TIR				*i* PG	**Sg**	**04 52 00.6**	**-0.2**
TIR	**Tirane**	**0.28**	**101**	P	**Pg**	**04 51 56.2**	**-0.5**
TIR				S	**Sg**	**04 52 00.7**	**-0.1**
TIR				AML	AML	04 52 01.3	
	comp=N,23096µm,0.6s						
TIR				AML	AML	04 52 03.2	
	comp=E,24108µm,0.5s						
TIR	**Tirane**	**0.28**	**101**	||P	**Pg**	**04 51 56.2**	**-0.5**
TIR				||S	**Sg**	**04 52 01.0**	**+0.1**
ULC	**Ulcinj**	**0.60**	**341**	*e*Pg	**Pb**	**04 52 03.1**	**+0.5**
ULC				*e*Sg	**Sn**	**04 52 13.2**	**-0.5**
PUK	**Puka**	**0.71**	**24**	*i* PG	**Pb**	**04 52 04.4**	**-0.2**
PUK				*i* PG	**Sg**	**04 52 14.8**	**+0.9**
PHP	**Peshkopia**	**0.76**	**68**	P	**Pg**	**04 52 04.3**	**-1.2**
PHP	**Peshkopia**	**0.76**	**68**	*i* PG	**Pg**	**04 52 04.4**	**-1.1**
PHP				*i* PG	**Sg**	**04 52 15.6**	**0.0**
DRME	**Dracevica, Mon**	**0.82**	**343**	*e*Pn	**Pb**	**04 52 07.2**	**+0.8**
DRME	**Dracevica, Mon**	**0.82**	**343**	*e*Pg	**Pb**	**04 52 07.3**	**+0.8**
DRME				*e*Sg	**Sn**	**04 52 20.8**	**+1.6**
VLO	**Vlora**	**0.93**	**180**	P	**Pg**	**04 52 09.6**	**+0.9**
VLO				S	**Sn**	**04 52 24.9**	**+3.1**
	comp=E,6µm,0.2s						
VLO	**Vlora**	**0.93**	**180**	*i* PG	**Pg**	**04 52 09.1**	**+0.4**
VLO				*i* PG	**Sn**	**04 52 22.7**	**+0.9**
BUM	**Brajici-Budva**	**1.01**	**333**	*e*Pg	**Pn**	**04 52 10.7**	**+0.6**
BUM				*e*Sg	**Sn**	**04 52 27.1**	**+3.2**
OHR	**Ohrid**	**1.02**	**106**	*i* Pg	**Pg**	**04 52 10.4**	**0.0**
OHR				*e*Sg	**Sn**	**04 52 25.3**	**+1.1**
OHR				*e*Lg	Lg	04 52 26.4	
	comp=N,1µm,0.8s						
OHR				*e*Lg	Lg	04 52 27.8	
	comp=E,1µm,0.5s						
PDG	**Podgorica**	**1.05**	**350**	*e*Pg	**Pn**	**04 52 11.3**	**+0.8**
PDG				*e*Sg	**Sn**	**04 52 28.1**	**+3.4**
PDG	**Podgorica**	**1.05**	**350**	||P	**Pn**	**04 52 12.6**	**+2.1**
PDG	**Podgorica**	**1.05**	**350**	||S	**Sn**	**04 52 28.6**	**+3.9**
PDG	**Podgorica**	**1.05**	**350**	*e*Pn	**Pn**	**04 52 11.4**	**+0.9**
TTG	**Podgorica**	**1.05**	**350**	*e*Pg	**Pn**	**04 52 11.0**	**+0.5**
TTG				*e*Sg	**Sn**	**04 52 28.3**	**+3.6**
BCI	**Bajram Curri**	**1.05**	**23**	*i* PG	**Pb**	**04 52 10.3**	**-0.2**
BCI				*i* PG	**Sg**	**04 52 26.0**	**+1.1**
TPE	**Tepelena**	**1.17**	**161**	P	**Pn**	**04 52 12.4**	**+0.2**
TPE				S	**Sg**	**04 52 30.4**	**+1.9**
	comp=E,2µm,0.6s						
TPE	**Tepelena**	**1.17**	**161**	*i* PG	**Pn**	**04 52 12.6**	**+0.4**
TPE				*i* PG	**Sg**	**04 52 29.1**	**+0.6**
CEME	**Cevo**	**1.23**	**339**	*e*Pg	**Pg**	**04 52 14.6**	**+0.3**
CEME				*e*Sg	**Sn**	**04 52 34.4**	**+5.1**
PVY	**Plav**	**1.24**	**16**	*e*Pg	**Pg**	**04 52 13.7**	**-0.9**
PVY				*e*Sg	**Sn**	**04 52 34.6**	**+4.8**
HCY	**Herceg Novi**	**1.29**	**325**	||*i*Pn	**Pg**	**04 52 15.1**	**-0.4**
HCY	**Herceg Novi**	**1.29**	**325**	*e*Pg	**Pg**	**04 52 15.3**	**-0.2**
HCY				*e*Sg	**Sn**	**04 52 36.0**	**+5.2**
NKME	**Niksic**	**1.43**	**344**	*e*Pg	**Pg**	**04 52 18.0**	**-0.1**
NKME				*e*Sg	**Sg**	**04 52 39.4**	**+2.7**
NKY	**Niksic**	**1.46**	**345**	*e*Pg	**Pg**	**04 52 18.3**	**-0.5**
NKY				*e*Sg	**Sg**	**04 52 40.3**	**+2.4**
IVA	**Berane**	**1.50**	**11**	*e*Pg	**Pg**	**04 52 18.7**	**-0.8**
IVA				*e*Sg	**Sg**	**04 52 41.1**	**+2.0**
NEST	**Nestorio**	**1.53**	**129**	P	**Pg**	**04 52 18.4**	**+1.1**
NEST	**Nestorio**	**1.53**	**129**	P	**Pn**	**04 52 18.3**	**+1.0**
NEST				S	**Sn**	**04 52 39.0**	**+2.1**
NEST				AML	AML	04 52 44.1	
	comp=N,1025µm,0.5s						
NEST				AML	AML	04 52 45.5	
	comp=E,1491µm,0.7s						
SCTE	**Santa Cesarea**	**1.54**	**211**	P	**Pn**	**04 52 16.7**	**-0.6**
FNA	**Florina**	**1.54**	**113**	P	**Pn**	**04 52 18.6**	**+1.2**
FNA				S	**Sn**	**04 52 39.2**	**+2.1**
	comp=E,2µm,0.6s						
FNA	**Florina**	**1.54**	**113**	*i* PN	**Pn**	**04 52 15.8**	**-1.6**
FNA				*i* PN	**Sg**	**04 52 40.0**	**-0.5**
FNA	**Florina**	**1.54**	**113**	P	**Pn**	**04 52 18.2**	**+0.8**
FNA				S	**Sb**	**04 52 40.1**	**+2.0**
FNA				AML	AML	04 52 42.7	
	comp=N,5667µm,0.5s						
FNA				AML	AML	04 52 43.9	
	comp=E,2976µm,0.8s						
SKO	**Skopje**	**1.56**	**68**	*e*Pg	**Pg**	**04 52 19.8**	**-0.8**
SKO	**Skopje**	**1.56**	**68**	*i* Pg	**Pb**	**04 52 19.7**	**+0.6**
SKO				*e*Sg	**Sg**	**04 52 41.2**	**+0.2**
SRN	**Sarande**	**1.56**	**166**	P	**Pn**	**04 52 17.9**	**+0.3**
SRN				S	**Sn**	**04 52 39.8**	**+2.3**
	comp=E,602nm,0.5s						
TREB	**Trebinje**	**1.57**	**327**	*e*Pg	**Pb**	**04 52 19.3**	**+0.1**
TREB				*e*Sg	**Sg**	**04 52 42.6**	**+1.3**
TREB	**Trebinje**	**1.57**	**327**	||*i*Pn	**Pb**	**04 52 19.1**	**-0.1**
DBRK	**Dubrovnik**	**1.62**	**322**	*i* Pn	**Pb**	**04 52 20.0**	**-0.1**
DBRK				Sn	**Sg**	**04 52 41.9**	**-1.0**
BRY	**Bratogost**	**1.66**	**335**	||*i*Pn	**Pg**	**04 52 22.2**	**-0.4**
BRY	**Bratogost**	**1.66**	**335**	*e*Pn	**Pb**	**04 52 21.5**	**+0.6**
BRY				*e*Sn	**Sg**	**04 52 45.5**	**+1.2**
KASA	**Kassiopi**	**1.68**	**169**	P	**Pn**	**04 52 19.8**	**+0.5**
KASA				S	**Sn**	**04 52 42.0**	**+1.6**
KASA				AML	AML	04 52 45.7	
	comp=E,3238µm,0.3s						
KASA				AML	AML	04 52 49.6	
	comp=N,2072µm,0.4s						
UPM	**Unac-Piva**	**1.86**	**346**	*e*Pn	**Pg**	**04 52 25.3**	**-1.0**
UPM	**Unac-Piva**	**1.86**	**346**	*e*Pn	**Pb**	**04 52 24.2**	**0.0**
UPM				*e*Sn	**Sg**	**04 52 50.0**	**-0.5**
TAR1	**Taranto**	**1.89**	**243**	*e*Pn	**Pn**	**04 52 21.9**	**-0.2**
SJES	**Sjenica**	**1.89**	**10**	*e*Pn	**Pg**	**04 52 25.6**	**-1.4**
SJES				*e*Sn	**Sg**	**04 52 51.4**	**-0.2**
PLE	**Pljevlja**	**1.93**	**358**	*e*Pn	**Pb**	**04 52 25.2**	**-0.3**
PLE				*e*Sn	**Sg**	**04 52 51.8**	**-1.0**
NOCI	**Noci**	**1.94**	**252**	P	**Pn**	**04 52 22.6**	**-0.3**
MASS	**Massafra**	**1.94**	**248**	*e*Pn	**Pn**	**04 52 22.5**	**-0.3**
IGT	**Igoumenitsa**	**1.97**	**161**	P	**Pn**	**04 52 23.8**	**+0.5**
IGT	**Igoumenitsa**	**1.97**	**161**	P	**Pn**	**04 52 23.7**	**+0.5**
IGT				AML	AML	04 52 53.1	
	comp=N,1049µm,0.6s						
IGT				AML	AML	04 52 59.3	
	comp=E,1002µm,0.9s						
STON	**Ston**	**1.99**	**318**	*e*Pn	**Pn**	**04 52 24.6**	**+1.2**
STON				Sn	**Sn**	**04 52 49.6**	**+1.7**
STON	**Ston**	**1.99**	**318**	*e*Pn	**Pn**	**04 52 24.7**	**+1.2**
STON				*e*Sn	**Sb**	**04 52 50.5**	**-0.3**
STON	**Ston**	**1.99**	**318**	*e*Pn	**Pn**	**04 52 24.0**	**+0.5**
BAI	**Bari**	**2.00**	**262**	*e*Pn	**Pn**	**04 52 23.9**	**+0.3**
BAI				Sn	**Sn**	**04 52 47.8**	**-0.4**
KPRO	**Kipourio**	**2.02**	**135**	P	**Pn**	**04 52 26.0**	**+2.0**
KPRO	**Kipourio**	**2.02**	**135**	P	**Pn**	**04 52 25.6**	**+1.6**
JAN	**Janina**	**2.02**	**149**	P	**Pn**	**04 52 24.6**	**+0.6**
JAN				AML	AML	04 53 04.3	
	comp=E,902µm,0.5s						
JAN				AML	AML	04 53 07.5	
	comp=N,857µm,0.5s						
KZN	**Kozani**	**2.04**	**122**	P	**Pn**	**04 52 26.3**	**+2.1**
KZN	**Kozani**	**2.04**	**122**	P	**Pn**	**04 52 25.9**	**+1.6**
KZN				S	**Sn**	**04 52 52.5**	**+3.2**
KZN				AML	AML	04 52 57.5	
	comp=E,1299µm,0.6s						
KZN				AML	AML	04 53 01.9	
	comp=N,765µm,0.5s						
SELS	**Selova**	**2.18**	**33**	*e*Pn	**Pn**	**04 52 27.6**	**+1.5**
SELS				*e*Sn	**Sg**	**04 52 57.5**	**-3.2**
SG1	**Sgolgore (BA)**	**2.21**	**256**	*e*Pn	**Pn**	**04 52 26.5**	**0.0**
SG1				Sn	**Sb**	**04 52 59.9**	**+2.8**
RUDO	**Rudo**	**2.22**	**358**	*e*Pn	**Pn**	**04 52 28.6**	**+1.9**
IVAS	**Ivanjica**	**2.23**	**12**	*e*Pn	**Pb**	**04 52 28.8**	**-1.7**
IVAS				*e*Sn	**Sg**	**04 53 00.1**	**-2.2**
BARS	**Barje**	**2.23**	**50**	*e*Pn	**Pn**	**04 52 28.5**	**+1.7**
BARS	**Barje**	**2.23**	**50**	*e*Pn	Pg	04 52 41.7	+8.3
BARS				*e*Sn	**Sb**	**04 52 58.3**	**+0.5**
GRG	**Griva**	**2.23**	**100**	P	**Pn**	**04 52 28.1**	**+1.2**
GRG	**Griva**	**2.23**	**100**	P	**Pn**	**04 52 28.2**	**+1.3**
MATE	**Matera**	**2.25**	**251**	||P	**Pn**	**04 52 26.2**	**-0.8**
MATE	**Matera**	**2.25**	**251**	||S	**Sn**	**04 52 55.7**	**+1.4**
VAY	**Valandovo**	**2.31**	**91**	*e*Pn	**Pn**	**04 52 29.1**	**+1.2**
VAY				*e*Sn	**Sn**	**04 52 57.2**	**+1.3**
VAY	**Valandovo**	**2.31**	**91**	*i* Pn	**Pn**	**04 52 28.9**	**+1.0**
VAY				*e*Lg	Lg	04 52 59.3	
	comp=E,170nm,0.7s						
VAY				*e*Lg	Lg	04 52 59.4	
	comp=N,204nm,0.7s						
BBLS	**Lazići**	**2.47**	**358**	*e*Pn	**Pb**	**04 52 32.7**	**-1.8**
BBLS				*e*Sn	**Sb**	**04 53 04.2**	**-0.5**
BBLS	**Lazići**	**2.47**	**358**	*e*Pn	**Pb**	**04 52 32.7**	**-1.8**
BOSS	**Bosilegrad**	**2.48**	**63**	*e*Pn	**Pn**	**04 52 31.9**	**+1.7**
BOSS				*e*Sn	**Sb**	**04 53 03.0**	**-1.9**
KNT	**Kendrikon**	**2.57**	**94**	P	**Pn**	**04 52 32.8**	**+1.3**
KNT	**Kendrikon**	**2.57**	**94**	P	**Pn**	**04 52 32.7**	**+1.3**
LIT	**Litokhoron**	**2.61**	**119**	P	**Pn**	**04 52 33.0**	**+0.9**
MAKA	**Makarska**	**2.64**	**317**	*e*Pn	**Pn**	**04 52 33.7**	**+1.3**
MAKA				Sn	**Sn**	**04 53 04.8**	**+0.9**
GRUS	**Gruza**	**2.64**	**19**	*e*Pn	**Pn**	**04 52 34.8**	**+2.3**
THL	**Klokotos Trika**	**2.65**	**133**	P	**Pn**	**04 52 33.5**	**+0.9**
HAPS	**Han Pijesak,Bl**	**2.72**	**352**	*e*Pn	**Pn**	**04 52 35.1**	**+1.5**
HAPS	**Han Pijesak,Bl**	**2.72**	**352**	||*i*Pn	**Pn**	**04 52 35.1**	**+1.5**
TSLK	**Tsoukalades, L**	**2.72**	**161**	P	**Pn**	**04 52 33.3**	**-0.2**
DIVS	**Divibare**	**2.72**	**7**	*e*Pn	**Pn**	**04 52 35.6**	**+1.9**
DIVS	**Divibare**	**2.72**	**7**	*e*Pn	**Pn**	**04 52 35.5**	**+1.9**
KKB	**Krupnik**	**2.73**	**79**	*i* P	**Pn**	**04 52 35.5**	**+1.9**
THE	**Thessaloniki**	**2.73**	**105**	P	**Pn**	**04 52 34.3**	**+0.7**
LKD2	**Lefkada island**	**2.75**	**161**	P	**Pn**	**04 52 34.1**	**0.0**
BOVS	**Bovan**	**2.77**	**35**	*e*Pn	**Pn**	**04 52 36.4**	**+2.2**
HORT	**Hortiatis**	**2.84**	**105**	P	**Pn**	**04 52 36.4**	**+1.1**
HVAR	**Hvar**	**2.88**	**309**	*e*Pn	**Pn**	**04 52 36.4**	**+0.7**
TRUS	**Trudelj**	**2.90**	**13**	*e*Pn	**Pn**	**04 52 37.8**	**+1.8**
EVGI	**Lefkada island**	**2.91**	**162**	P	**Pn**	**04 52 35.9**	**-0.2**
SOH	**Sokhos**	**2.97**	**100**	P	**Pn**	**04 52 38.0**	**+1.0**
ZAPS	**Zavoj**	**2.98**	**50**	*e*Pn	**Pn**	**04 52 39.8**	**+2.6**
VTS	**Vitosha**	**3.04**	**65**	*e*Pn	**Pn**	**04 52 39.9**	**+1.8**
VTS	**Vitosha**	**3.04**	**65**	||P	**Pn**	**04 52 39.8**	**+1.8**
VTS	**Vitosha**	**3.04**	**65**	*i* P	**Pn**	**04 52 40.2**	**+2.2**
EVR	**Evrytania**	**3.04**	**144**	P	**Pn**	**04 52 39.9**	**+1.8**
TIP	**Timpagrande**	**3.05**	**224**	P	**Pn**	**04 52 37.9**	**-0.3**
TIP	**Timpagrande**	**3.05**	**224**	||P	**Pn**	**04 52 37.9**	**-0.3**
PDO	**Prodromos**	**3.08**	**155**	P	**Pn**	**04 52 38.7**	**+0.2**
SRS	**Serrai**	**3.10**	**94**	P	**Pn**	**04 52 39.5**	**+0.8**
SRS	**Serrai**	**3.10**	**94**	P	**Pn**	**04 52 39.6**	**+0.8**
CUC	**Castrocucco**	**3.13**	**245**	P	**Pn**	**04 52 39.8**	**+0.5**
ZAGS	**Zajecar**	**3.14**	**39**	*e*Pn	**Pn**	**04 52 40.9**	**+1.6**
TEKS	**Tekeris**	**3.15**	**0**	*e*Pn	**Pn**	**04 52 39.5**	**0.0**
PLG	**Polygyros**	**3.16**	**108**	P	**Pn**	**04 52 40.6**	**+0.9**
MMB	**Musomiste**	**3.18**	**85**	*i* P	**Pn**	**04 52 41.7**	**+1.8**
PVO	**Paravola**	**3.18**	**150**	P	**Pn**	**04 52 40.9**	**+1.0**
AGG	**Agios Georgios**	**3.21**	**137**	P	**Pn**	**04 52 41.3**	**+0.9**
AGG	**Agios Georgios**	**3.21**	**137**	P	**Pn**	**04 52 41.6**	**+1.2**
VLS	**Valsamata**	**3.33**	**165**	P	**Pn**	**04 52 41.1**	**-0.8**
ANX	**Ano Chora**	**3.36**	**146**	P	**Pn**	**04 52 44.1**	**+1.6**
ANX	**Ano Chora**	**3.36**	**146**	P	**Pn**	**04 52 44.1**	**+1.6**
KUBS	**Kucevo**	**3.41**	**27**	*e*Pn	**Pn**	**04 52 44.0**	**+1.0**
KIJV	**Kijevo**	**3.46**	**320**	*e*Pn	**Pn**	**04 52 45.4**	**+1.6**
KIJV				Sn	**Sn**	**04 53 26.0**	**+1.7**
XOR	**Xorichti**	**3.47**	**125**	P	**Pn**	**04 52 44.3**	**+0.3**
EFP	**Efpalio**	**3.50**	**147**	P	**Pn**	**04 52 45.7**	**+1.5**
MGRS	**Mrkonjic Grad**	**3.50**	**330**	*e*Pn	**Pn**	**04 52 46.5**	**+2.2**
PAIG	**Paliouri**	**3.50**	**113**	P	**Pn**	**04 52 45.3**	**+1.0**
SERG	**Sergoula**	**3.57**	**146**	P	**Pn**	**04 52 47.0**	**+1.7**
TRIZ	**Trizonia**	**3.62**	**146**	P	**Pn**	**04 52 47.6**	**+1.7**
KALE	**Kalithea**	**3.62

BURAR	**Bucovina Array**	7.43	31	⇑P		Pn	04 53 42.5	+4.1	
MOA	**Molln**	7.45	332	*e*Pn		Pn	04 53 41.6	+3.0	
	comp=N,1.0nm,0.2s								
MOA				*e*Sn		Sn	04 55 04.6	+2.0	
	comp=N,3.1nm,0.3s								
TLCR		7.78	58	⇑P		Pn	04 53 46.3	+3.3	
KOLS	**Kolonicke sedl**	7.78	14	*e*PN		Pn	04 53 46.5	+3.4	
KOLS				*e*SN		Sn	04 55 11.5	+0.7	
PGF	**Pioggiola**	7.91	282	*e*P		Pn	04 53 46.9	+2.0	
WTTA	**Wattenberg**	8.13	319	*e*Pn		Pn	04 53 49.1	+1.1	
	comp=N,2.0nm,0.2s								
WTTA				*e*Sn		Sn	04 55 19.2	-0.4	
	comp=N,12nm,0.6s								
WATA	**Walderalm**	8.21	319	*e*Pn		Pn	04 53 51.7	+2.6	
	comp=N,3.9nm,0.4s								
WATA				*e*Sn		Sn	04 55 21.2	-0.2	
	comp=N,9.1nm,0.6s								
SQTA	**Sankt Quirin**	8.32	317	*e*Pn		Pn	04 53 53.9	+3.4	
	comp=N,1.0nm,0.2s								
SQTA				*i* Sn		Sn	04 55 23.4	-0.7	
	comp=N,5.4nm,0.5s								
FETA	**Feichten**	8.44	315	*e*Pn		Pn	04 53 54.5	+2.2	
	comp=N,0.7nm,0.4s								
FETA				*e*Sn		Sn	04 55 25.9	-1.2	
	comp=N,1.9nm,0.5s								
MOTA	**Moosalm**	8.45	317	*e*Pn		Pn	04 53 54.8	+2.4	
	comp=N,1.4nm,0.4s								
MOTA				*e*Sn		Sn	04 55 27.1	-0.4	
	comp=N,19nm,0.9s								
GERES	**GERESS Array B**	8.50	333	Pn		Pn	04 53 54.8	+1.9	
	comp=N,0.1nm,0.3s,baz=150,slow=14,SNR=4.2								
GERES				Sn		Sn	04 55 27.4	-1.0	
	comp=N,0.5nm,0.3s,baz=159,slow=23,SNR=5.9								
RETA	**Reutte**	8.72	317	*i* Pn		Pn	04 53 59.0	+3.0	
	comp=N,0.3nm,0.2s								
RETA				*e*Sn		Sn	04 55 33.4	-0.5	
	comp=N,3.8nm,0.4s								
DAVOX	**Davos/Dischmat**	8.77	311	Pn		Pn	04 53 59.3	+2.6	
	comp=N,0.5nm,0.3s,baz=331,slow=10,SNR=5.6								
DAVOX				Sn		Sn	04 55 32.1	-3.1	
	comp=N,0.4nm,0.3s,baz=337,slow=23,SNR=2.6								
KHC	**Kasperske Hory**	8.79	334	*e*SN		Sn	04 55 37.0	+1.6	
DAVA	**Damuels**	9.06	314	*e*Pn		Pn	04 54 02.2	+1.5	
	comp=N,1.0nm,0.2s								
DAVA				*e*Sn		Sn	04 55 41.7	-0.7	
	comp=N,5.3nm,0.5s								
SBF	**Sospel**	9.23	289	*e*Pn		Pn	04 54 01.5	-1.5	
SBF				*e*Sn		Sn	04 55 40.2	-6.2	
	comp=N,2.5nm,0.3s								
FRF	**La Foret Royal**	9.74	287	*e*P		Pn	04 54 13.0	+3.1	
FRF				*e*Sn		Sn	04 55 52.1	-6.8	
	comp=N,0.7nm,0.3s								
MBDF	**Montbardon**	9.89	294	*e*Pn		Pn	04 54 10.5	-1.6	
MBDF				*e*Sn		Sn	04 55 56.3	-6.5	
	comp=N,9.5nm,0.8s								
LPG	**La Plagne**	10.13	298	*e*Pn		Pn	04 54 13.7	-1.9	
LPG				*e*Sn		Sn	04 56 02.8	-6.1	
	comp=N,4.3nm,0.3s								
LPL	**La Plagne**	10.15	298	*e*Pn		Pn	04 54 13.8	-2.0	
LPL				*e*Sn		Sn	04 56 03.1	-6.2	
	comp=N,3.2nm,0.3s								
ORIF	**Oris-en-Rattie**	10.55	294	*e*Pn		Pn	04 54 18.4	-2.7	
ORIF				*e*Sn		Sn	04 56 12.5	-6.5	
SMRF	**Simiane la Rot**	10.57	289	*e*P		Pn	04 54 25.7	+4.4	
SMRF				*e*Sn		Sn	04 56 12.6	-6.7	
	comp=N,1.1nm,0.2s								
CABF	**La Chapelle**	10.97	303	*e*Pn		Pn	04 54 25.8	-1.1	
CABF				*e*Sn		Sn	04 56 22.6	-6.6	
	comp=N,0.7nm,0.3s								
HINF	**Hinteralfeld**	11.06	310	*e*Pn		Pn	04 54 27.2	-0.8	
HINF				*e*Sn		Sn	04 56 23.8	-7.4	
	comp=N,4.8nm,0.5s								
CDF	**Champ du Feu**	11.14	313	*e*Pn		Pn	04 54 27.7	-1.5	
HAU	**Haudompre**	11.45	310	*e*Pn		Pn	04 54 31.6	-1.7	
HAU				*e*Sn		Sn	04 56 34.4	-6.3	
	comp=N,4.8nm,0.4s								
PAGF	**Fort de Pagny**	12.09	311	*e*Sn		Sn	04 56 48.7	-7.6	
SMF	**Signal de Mont**	12.43	300	*e*Pn		Pn	04 54 44.7	-2.0	
SMF				*e*Sn		Sn	04 56 56.8	-7.9	
	comp=N,1.6nm,0.3s								
LOR	**Lormes**	12.63	303	*e*Pn		Pn	04 54 48.0	-1.5	
	baz=124								
LOR				*e*Sn		Sn	04 57 02.0	-7.8	
	comp=N,6.1nm,0.6s								
SSF	**Saint Saulge**	12.79	302	*e*Pn		Pn	04 54 49.5	-2.0	
SSF				*e*Sn		Sn	04 57 03.7	-10	
	comp=N,1.7nm,0.5s								
AVF	**Avril sur Loir**	12.79	300	*e*Pn		Pn	04 54 50.2	-1.4	
BGF	**Bois d'Agland**	13.05	299	*e*Pn		Pn	04 54 53.1	-2.1	
BGF				*e*Sn		Sn	04 57 11.4	-8.5	
	comp=N,6.7nm,0.5s								
BAIF	**Baives**	13.73	314	*e*Pn		Pn	04 55 02.0	-2.4	
KVAR	**Kislovodsk Arr**	17.24	74	LR		LR	05 05 08.6		
	comp=N,60nm,18.6s,baz=106,slow=46								
FINES	**FINESS Array B**	20.47	9	P		P	04 56 26.7	-0.4	
	comp=N,1.8nm,0.5s,baz=185,slow=9.8,SNR=14								
KIRV	**Kirov**	25.48	37	LR		LR	05 07 11.5		
	comp=N,75nm,19.1s,baz=83,slow=36								
ARU	**Arti**	29.27	46	P		P	04 57 51.4	-0.2	
	comp=N,2.7nm,0.2s,baz=274,slow=13,SNR=4.0								
TORD	**Torodi Ar. Bea**	32.15	214	P		P	04 58 18.1	+0.7	
	comp=N,0.4nm,0.9s,baz=22,slow=10.0,SNR=2.9								
ZALV	**Zalesovo Beam**	44.19	50	P		P	04 59 58.2	-0.1	
	comp=N,4.0nm,0.4s,baz=286,slow=10,SNR=11								
MKAR	**Makanchi Array**	44.35	61	P		P	04 59 59.6	-0.2	
	comp=N,2.4nm,0.6s,baz=282,slow=7.2,SNR=33								
SONM	**Songino Array**	59.05	52	P		P	05 01 50.4	+0.7	
	comp=N,0.5nm,0.6s,baz=289,slow=9.1,SNR=3.9								
YKA	**Yellowknife Ar**	70.10	339	P		P	05 03 01.6	+0.2	
	comp=N,0.5nm,0.6s,baz=36,slow=5.3,SNR=10								

*ISN **21** 04:56:15.1±0.8,34˚.25N×45˚.52E,h7km±4km,ML3.3*
*TEH **21** 04:56:18.3,34˚.27N×45˚.67E,h16km,ML3.3*
ISC 21 04:56:16.6±0.9**,34˚.23N**±0˚.03×**45˚.51E**±0˚.04**,h10**km**,n33,**
σ1§**24**/38**,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
IDHR	**Dehrash**	**0.86**	**57**	*e*Pg	**Pg**	**04**	**56**	**32.0**	**-1.3**
IDHR				*e*		04	56	46.5	
IGHG	**Ghaleghazi**	**0.88**	**83**	*e*Pg	**Pb**	**04**	**56**	**33.3**	**-0.9**
IGHG				*e*		04	56	34.4	
IVIS	**Veis**	**1.15**	**75**	*e*Pg	**Pb**	**04**	**56**	**37.8**	**-0.8**
IVIS				*e*		04	56	59.6	
IBDR	**Badra**	**1.17**	**162**	*e*Pg	**Pb**	**04**	**56**	**38.0**	**-0.9**
IBDR				AML	AML	04	56	42.0	
	comp=Z,306nm,0.5s								
IBDR				*e*Sg	**Sb**	**04**	**56**	**54.5**	**+0.4**
KCHF	**Cheshme Sefid,**	**1.27**	**88**	*e*Pg	**Pb**	**04**	**56**	**40.2**	**-0.5**
KCHF				*e*		04	57	02.1	
BHD	**Baghdad**	**1.34**	**225**	*e*Pg	**Pn**	**04**	**56**	**41.0**	**-0.4**
BHD				*e*Sg	**Sn**	**04**	**57**	**00.0**	**+0.7**
KER	**Kermanshah**	**1.35**	**83**	*e*Pg	**Pg**	**04**	**56**	**41.9**	**-0.7**
ILIN	**Lien**	**1.38**	**60**	*e*Pg	**Pg**	**04**	**56**	**42.3**	**-0.9**
ILIN				*e*		04	56	46.8	
IKRK	**Kirkuk**	**1.51**	**321**	*e*Pn	**Pn**	**04**	**56**	**44.3**	**+0.5**
IKRK				AML	AML	04	56	46.1	
	comp=Z,2μm,0.4s								
IKRK				*e*Sn	**Sn**	**04**	**57**	**05.0**	**+1.4**
IKOM	**Komasi**	**1.66**	**91**	*e*Pn	**Pg**	**04**	**56**	**47.8**	**-0.6**
IKOM				*e*		04	57	16.9	
SNGE	**Sanandaj**	**1.74**	**60**	*e*Pg	**Pg**	**04**	**56**	**49.3**	**-0.7**
IBZA	**Bozab**	**1.96**	**82**	*e*Pn	**Pb**	**04**	**56**	**52.0**	**-0.5**
IBZA				*e*		04	57	22.2	
IKFM	**Kafar-mosalman**	**2.07**	**109**	*e*Pn	**Pb**	**04**	**56**	**52.8**	**-1.4**
IKFM				*e*		04	57	30.7	
IDOB	**Doab**	**2.26**	**101**	*e*Pn	**Pn**	**04**	**56**	**55.3**	**+1.1**
IDOB				*e*		04	57	01.0	
IKMR	**Kamar-syah**	**2.49**	**106**	*e*Pn	**Pn**	**04**	**56**	**58.6**	**+1.4**
IKMR				*e*		04	57	42.5	
HSRG	**Sareghieh**	**2.49**	**65**	*e*Pn	**Pb**	**04**	**56**	**59.7**	**-2.0**
HSRG				*e*		04	57	38.0	
MAHB	**Mahabad**	**2.54**	**4**	*e*Pn	**Pn**	**04**	**57**	**00.2**	**+2.2**
MAHB				*e*		04	57	44.7	
HSAM	**Samen**	**2.56**	**90**	*e*Pn	**Pn**	**04**	**56**	**59.7**	**+1.3**
HSAM				*e*		04	57	05.5	
BDRS	**Dareh Seyedi**	**2.81**	**95**	*e*Pn	**Pn**	**04**	**57**	**02.7**	**+0.8**
BMDN	**Meydan**	**2.81**	**100**	*e*Pn	**Pn**	**04**	**57**	**02.8**	**+1.0**
MSL	**Mosul**	**2.92**	**319**	*e*Pn	**Pn**	**04**	**57**	**04.0**	**+0.9**
MSL				AML	AML	04	57	17.8	
	comp=Z,324nm,0.2s								
MSL				*e*Sn	**Sn**	**04**	**57**	**40.0**	**+1.7**
HAGD	**Aghdareh**	**3.06**	**78**	*e*		04	57	17.7	
HAGD				*e*Pn	**Pn**	**04**	**57**	**05.9**	**+0.7**
NSR	**Nassriya**	**3.25**	**170**	*e*Pn	**Pn**	**04**	**57**	**08.5**	**+0.8**
NSR				*e*Sn	**Sn**	**04**	**57**	**48.0**	**+1.5**
SHGR	**Shooshtar-Gavs**	**3.48**	**127**	*e*Pn	**Pn**	**04**	**57**	**12.1**	**+1.3**
ZNJK	**Zanjan**	**3.56**	**46**	*e*Pn	**Pb**	**04**	**57**	**17.1**	**-2.7**
KHMZ	**Khomeyn**	**3.73**	**96**	*e*Pn	**Pn**	**04**	**57**	**15.0**	**+0.6**
ASAO	**Ashtian**	**3.75**	**84**	*e*Pn	**Pn**	**04**	**57**	**15.9**	**+1.2**
IRAZ	**Razeghan**	**3.82**	**71**	*e*Pn	**Pn**	**04**	**57**	**17.6**	**+1.9**
JHBN	**Jahan bin**	**4.76**	**113**	*e*Pn	**Pn**	**04**	**57**	**28.7**	**0.0**
GHVR	**GHOM**	**4.79**	**85**	*e*Pn	**Pn**	**04**	**57**	**30.3**	**+1.4**
IKLH	**Kolahrood**	**5.13**	**98**	*e*Pn	**Pn**	**04**	**57**	**34.5**	**+0.7**
KRSH	**Karshahi**	**5.50**	**91**	*e*Pn	**Pn**	**04**	**57**	**38.3**	**-0.5**
IZEF	**Zefreh**	**5.85**	**101**	*e*Pn	**Pn**	**04**	**57**	**45.2**	**+1.6**

*MDD **21** 04:59:39.3±1.4,36˚.57N×9˚.76W,h45km,mb3.7/6,Error ellipse: s-maj=12.3km s-min=10.4km az=41.0,PRXIMO*
*INMG **21** 04:59:40.1±1.2,36˚.63N×9˚.67W,h19km±4km,ML1.8,Error ellipse: s-maj=4.8km s-min=3.9km az=53.0*
*IGIL **21** 04:59:40.1,36˚.62N×9˚.67W,h19km,ML1.8*
ISC 21 04:59:36.7±2.5**,36˚.65N**±0˚.10×**9˚.73W**±0˚.08**,h10**km**,n45,**
σ1§**85**/79**,2C,West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
PFVI	**Vila Bisbo**	**0.87**	**56**	⇑*i*P	**Pg**	**04**	**59**	**55.4**	**+1.9**
PFVI				*e*S	**Sg**	**05**	**00**	**06.8**	**+1.9**
PFVI				A	A	05	00	07.5	
	14nm,0.3s								
PFVI	**Vila Bisbo**	**0.87**	**56**	⇑P	**Pg**	**04**	**59**	**55.4**	**+1.9**
	6.2nm,0.1s,SNR=18								
PFVI				S	**Sg**	**05**	**00**	**07.1**	**+2.2**
	22nm,0.1s,SNR=7.9								
MORF	**Marmelete**	**1.09**	**52**	*e*P	**Pg**	**04**	**59**	**58.4**	**+0.8**
MORF				*e*S	**Sg**	**05**	**00**	**11.9**	**+0.2**
MORF				AML	AML	05	00	12.7	
	comp=N,16nm,0.1s								
MORF	**Marmelete**	**1.09**	**52**	*e*P	**Pg**	**04**	**59**	**58.4**	**+0.8**
MORF				*e*S	**Sg**	**05**	**00**	**12.3**	**+0.5**
MORF				A	A	05	00	15.2	
	comp=N,7.6nm,0.2s								
MORF	**Marmelete**	**1.09**	**52**	P	**Pg**	**04**	**59**	**58.4**	**+0.8**
MORF				S	**Sg**	**05**	**00**	**12.3**	**+0.5**
	comp=N,7.6nm,0.2s								
PTEO	**Sao Teotonio**	**1.21**	**42**	*e*P	**Pb**	**05**	**00**	**00.2**	**+0.6**
PTEO				*e*S	**Sb**	**05**	**00**	**15.3**	**0.0**
PTEO				A	A	05	00	16.7	
	comp=N,7.6nm,0.4s								
PTEO	**Sao Teotonio**	**1.21**	**42**	P	**Pb**	**05**	**00**	**00.2**	**+0.6**
PTEO				S	**Sb**	**05**	**00**	**15.3**	**0.0**
	comp=N,3.8nm,0.4s								
PBDV	**Barranco-do-Ve**	**1.56**	**67**	*e*P	**Pn**	**05**	**00**	**05.0**	**+0.5**
PBDV				*e*S	**Sn**	**05**	**00**	**23.3**	**-1.5**
PBDV				A	A	05	00	34.8	
	comp=N,2.3nm,0.2s								
PBDV	**Barranco-do-Ve**	**1.56**	**67**	P	**Pn**	**05**	**00**	**05.0**	**+0.5**
PBDV				S	**Sn**	**05**	**00**	**23.3**	**-1.5**
	comp=N,2.3nm,0.2s								
PCVE	**Castro Verde**	**1.67**	**53**	*e*Pn	**Pn**	**05**	**00**	**06.8**	**+0.7**
PCVE				*e*Sn	**Sn**	**05**	**00**	**26.6**	**-1.0**
PCVE				A	A	05	00	28.4	
	comp=N,4.5nm,0.4s								
PCVE	**Castro Verde**	**1.67**	**53**	P	**Pn**	**05**	**00**	**06.8**	**+0.7**
PCVE				S	**Sn**	**05**	**00**	**26.6**	**-1.0**
	comp=N,4.5nm,0.4s								
PNCL	**Nicolau / Gran**	**1.75**	**33**	*e*Pn	**Pn**	**05**	**00**	**07.5**	**+0.4**
PNCL				*e*Sn	**Sn**	**05**	**00**	**28.1**	**-1.3**
PNCL				A	A	05	00	30.6	
	comp=N,3.6nm,0.1s								
PNCL	**Nicolau / Gran**	**1.75**	**33**	P	**Pn**	**05**	**00**	**07.5**	**+0.4**
PNCL				S	**Sn**	**05**	**00**	**28.1**	**-1.3**
	comp=N,3.6nm,0.1s								
PVAQ	**Vaqueiros**	**1.78**	**64**	*e*Pn	**Pn**	**05**	**00**	**07.9**	**+0.4**
PVAQ				*e*Sn	**Sn**	**05**	**00**	**28.5**	**-1.7**
PVAQ				A	A	05	00	30.4	
	comp=N,4.4nm,0.2s								
PVAQ	**Vaqueiros**	**1.78**	**64**	P	**Pn**	**05**	**00**	**07.9**	**+0.4**
PVAQ				S	**Sn**	**05**	**00**	**28.5**	**-1.7**
	comp=N,4.4nm,0.2s								
EGRO	**El Granado**	**2.00**	**63**	P	**Pn**	**05**	**00**	**10.9**	**+0.3**
	comp=N,4.7nm,0.7s,SNR=7.9								
EGRO				S	**Sn**	**05**	**00**	**33.5**	**-2.2**
	comp=N,1.9nm,0.1s,SNR=7.9								
PBEJ	**Beja**	**2.03**	**47**	*e*Sn	**Sn**	**05**	**00**	**34.7**	**-1.6**
PBEJ				A	A	05	00	37.6	
	comp=N,2.6nm,0.5s								
PBEJ	**Beja**	**2.03**	**47**	S	**Sn**	**05**	**00**	**34.7**	**-1.6**
	comp=N,1.3nm,0.5s								
PMAFR	**Mafra**	**2.33**	**9**	*e*Pn	**Pn**	**05**	**00**	**15.6**	**+0.5**
PMAFR				*e*Sn	**Sn**	**05**	**00**	**42.7**	**-1.1**
PMAFR				A	A	05	00	44.0	
	comp=N,18nm,0.2s								
PMAFR	**Mafra**	**2.33**	**9**	P	**Pn**	**05**	**00**	**15.3**	**+0.2**
	comp=N,8.8nm,0.4s,SNR=7.9								
PMAFR				S	**Sn**	**05**	**00**	**42.7**	**-1.1**
	comp=N,11nm,0.1s,SNR=15								
EMIN	**Mina Concepcio**	**2.69**	**64**	P	**Pn**	**05**	**00**	**20.1**	**+0.1**
	comp=N,3.3nm,0.5s,SNR=7.9								
EMIN				S	**Sn**	**05**	**00**	**50.1**	**-2.5**
	comp=N,1.0nm,0.3s,SNR=7.9								
PMTG	**Montargil**	**2.69**	**26**	*e*Pn	**Pn**	**05**	**00**	**20.8**	**+0.7**
PMTG				*e*Sn	**Sn**	**05**	**00**	**51.0**	**-1.8**
PMTG				A	A	05	00	53.2	
	comp=N,2.9nm,0.2s								
PMTG	**Montargil**	**2.69**	**26**	P	**Pn**	**05**	**00**	**20.8**	**+0.7**
PMTG				S	**Sn**	**05**	**00**	**51.0**	**-1.8**
	comp=N,2.9nm,0.2s								
PESTR	**Estremoz**	**2.79**	**37**	*e*Pn	**Pn**	**05**	**00**	**22.3**	**+0.8**
PESTR				*e*Sn	**Sn**	**05**	**00**	**53.7**	**-1.5**
PESTR				A	A	05	00	55.6	
	comp=N,1.2nm,0.3s								
EBAD	**Badajoz**	**3.01**	**45**	P	**Pn**	**05**	**00**	**24.5**	**0.0**
	comp=N,3.5nm,0.4s,SNR=7.9								
EBAD				S	**Sn**	**05**	**00**	**57.9**	**-2.7**
	comp=N,1.8nm,0.1s,SNR=7.9								
PTOM	**Tomar**	**3.14**	**19**	*e*Sn	**Sn**	**05**	**01**	**02.6**	**-1.3**
PTOM				A	A	05	01	08.6	
	comp=N,3.6nm,0.5s								
PTOM	**Tomar**	**3.14**	**19**	S	**Sn**	**05**	**01**	**02.6**	**-1.3**
	comp=N,1.8nm,0.5s								
PMRV	**Marv??o**	**3.33**	**33**	*e*Pn	**Pn**	**05**	**00**	**29.1**	**+0.2**
PMRV				*e*Sn	**Sn**	**05**	**01**	**05.7**	**-2.9**
PMRV				A	A	05	01	07.8	
	comp=N,2.1nm,0.6s								
PMRV	**Marv??o**	**3.33**	**33**	P	**Pn**	**05**	**00**	**29.1**	**+0.2**
PMRV				S	**Sn**	**05**	**01**	**05.7**	**-2.9**
	comp=N,2.1nm,0.6s								
PCAS	**Casmilo, Conde**	**3.54**	**16**	*e*Pn	**Pn**	**05**	**00**	**32.2**	**+0.5**
PCAS				*e*Sn	**Sn**	**05**	**01**	**11.1**	**-2.5**
PCAS				A	A	05	01	13.4	
	comp=N,3.2nm,0.8s								
PCAS	**Casmilo, Conde**	**3.54**	**16**	P	**Pn**	**05**	**00**	**32.2**	**+0.5**
PCAS				S	**Sn**	**05**	**01**	**11.1**	**-2.5**
	comp=N,3.2nm,0.8s								
PCBR	**Castelo Branco**	**3.65**	**28**	*e*Sn	**Sn**	**05**	**01**	**14.8**	**-1.5**
PCBR	**Castelo Branco**	**3.65**	**28**	S	**Sn**	**05**	**01**	**14.8**	**-1.5**
ECAB	**El Cabril**	**3.72**	**66**	P	**Pn**	**05**	**00**	**34.2**	**-0.1**
	comp=N,3.2nm,0.5s,SNR=7.9								
ECAB				S	**Sn**	**05**	**01**	**14.8**	**-3.4**
	comp=N,0.3nm,0.2s,SNR=7.9								
MTE	**Manteigas**	**4.12**	**24**	*e*Pn	**Pn**	**05**	**00**	**40.2**	**+0.4**
MTE				*e*Sn	**Sn**	**05**	**01**	**26.1**	**-2.0**
MTE	**Manteigas**	**4.12**	**24**	P	**Pn**	**05**	**00**	**40.2**	**+0.4**
MTE				S	**Sn**	**05**	**01**	**26.1**	**-2.0**
PVIS	**Viseu**	**4.31**	**19**	*e*Pn	**Pn**	**05**	**00**	**43.1**	**+0.7**
PVIS				*e*Sn	**Sn**	**05**	**01**	**30.2**	**-2.5**
PVIS				A	A	05	01	32.6	
	comp=N,1.8nm,0.2s								
PVIS	**Viseu**	**4.31**	**19**	P	**Pn**	**05**	**00**	**43.1**	**+0.7**
PVIS				S	**Sn**	**05**	**01**	**30.2**	**-2.5**
	comp=N,0.9nm,0.2s								
EADA	**Adamuz**	**4.37**	**68**	S	**Sn**	**05**	**01**	**30.5**	**-3.8**
	comp=N,0.3nm,0.1s,SNR=7.9								
EPLA	**Plasencia**	**4.46**	**39**	S	**Sn**	**05**	**01**	**32.8**	**-3.5**
	comp=N,1.8nm,0.2s,SNR=7.9								
POLO	**Lamas de Olo**	**4.96**	**17**	*e*Pn	**Pn**	**05**	**00**	**51.2**	**-0.1**
POLO				*e*Sn	**Sn**	**05**	**01**	**44.8**	**-3.9**
POLO	**Lamas de Olo**	**4.96**	**17**	P	**Pn**	**05**	**00**	**51.2**	**-0.1**
POLO				S	**Sn**	**05**	**01**	**44.8**	**-3.9**
MVO	**Moncorvo**	**4.98**	**24**	S	**Sn**	**05**	**01**	**45.3**	**-3.9**
	comp=N,3.1nm,3.1s,SNR=7.9								
ELOB	**Lobios**	**5.37**	**13**	S	**Sn**	**05**	**01**	**54.3**	**-4.6**
	comp=N,1.0nm,0.3s,SNR=7.9								
EQES	**Quesada**	**5.44**	**76**	S	**Sn**	**05**	**01**	**55.9**	**-4.7**
	comp=N,0.2nm,0.2s,SNR=7.9								

*SFS **21** 05:04:01.0,36˚.70N×9˚.70W,ML3.0,CABO DE SAN VICENTE*
*LDG **21** 05:04:02.3±0.2,36˚.68N×9˚.73W,h10km,Md2.0/2,Ml3.0/3,Error ellipse: s-maj=4.6km s-min=3.4km az=38.0*
*MDD **21** 05:04:02.8±0.8,36˚.79N×9˚.71W,h10km,mbLg2.7/24,Error ellipse: s-maj=7.3km s-min=4.7km az=44.0,PRXIMO*
*IGIL **21** 05:04:02.9,36˚.67N×9˚.65W,h14km,ML3.2*
*INMG **21** 05:04:03.1±1.9,36˚.68N×9˚.67W,h13km±3km,MD2.6,ML3.0,Error ellipse: s-maj=4.5km s-min=2.5km az=76.0*
*CNRM **21** 05:04:04.8,36˚.46N×9˚.25W,h12km*
ISC 21 05:04:02.1±1.6**,36˚.72N**±0˚.04×**9˚.62W**±0˚.05**,h20**km±5km**,**
n115,σ1§**87**/216**,2C,West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
PFVI	**Vila Bisbo**	**0.76**	**57**	⇑*e*P	**Pg**	**05**	**04**	**17.6**	**+0.7**
PFVI				*e*S	**Sn**	**05**	**04**	**29.1**	**+0.6**
PFVI				A	A	05	04	30.6	
	253nm,0.1s								
PFVI	**Vila Bisbo**	**0.76**	**57**	⇑Pg	**Pg**	**05**	**04**	**17.6**	**+0.7**
	76nm,0.2s,SNR=18								
PFVI				Lg	Lg	05	04	28.6	
	316nm,0.1s,SNR=18								
PFVI	**Vila Bisbo**	**0.76**	**57**	P	**Pb**	**05**	**04**	**17.4**	**+0.8**
	SNR=7.4								
PFVI				S	**Sn**	**05**	**04**	**28.7**	**+0.2**
MORF	**Marmelete**	**0.97**	**53**	*e*P	**Pb**	**05**	**04**	**20.8**	**+0.6**
MORF				*e*S	**Sg**	**05**	**04**	**33.8**	**0.0**
MORF				AML	AML	05	04	36.4	
	comp=E,491nm,0.2s								
MORF	**Marmelete**	**0.97**	**53**	*e*P	**Pb**	**05**	**04**	**21.1**	**+0.9**
MORF				*e*S	**Sn**	**05**	**04**	**35.1**	**+1.2**
MORF				A	A	05	04	37.5	
	comp=E,331nm,0.1s								
MORF	**Marmelete**	**0.97**	**53**	Pg	**Pb**	**05**	**04**	**21.1**	**+0.9**
MORF				Lg	Lg	05	04	35.1	
	comp=E,331nm,0.1s								
PTEO	**Sao Teotonio**	**1.09**	**41**	*e*P	**Pb**	**05**	**04**	**22.7**	**+0.4**
PTEO				*e*S	**Sg**	**05**	**04**	**38.5**	**+0.9**
PTEO				A	A	05	04	42.0	
	comp=E,222nm,0.5s								
PTEO	**Sao Teotonio**	**1.09**	**41**	Pg	**Pb**	**05**	**04**	**22.7**	**+0.4**
PTEO				Lg	Lg	05	04	38.5	
	comp=E,111nm,0.5s								
PBDV	**Barranco-do-Ve**	**1.45**	**68**	*e*Pn	**Pn**	**05**	**04**	**27.7**	**+0.5**
PBDV	**Barranco-do-Ve**	**1.45**	**68**	*e*Pg	**Pb**	**05**	**04**	**30.0**	**+1.6**
PBDV				*e*Sn	**Sn**	**05**	**04**	**46.6**	**+1.0**
PBDV				*e*Sg	**Sg**	**05**	**04**	**50.1**	**+1.2**
PBDV				A	A	05	04	51.1	
	comp=E,164nm,0.3s								
PBDV	**Barranco-do-Ve**	**1.45**	**68**

PTOM					*e*Sn	**Sn**	**05 05 23.6**	**-1.4**
PTOM					*e*Sg	**Sg**	**05 05 38.1**	**-1.8**
PTOM					A	A	05 05 51.0	
	comp=E,35nm,0.3s							
PTOM	**Tomar**	**3.04**	**18**	Pn	**Pn**	**05 04 50.1**	**+1.0**
PTOM				Sn	**Sn**	**05 05 23.6**	**-1.4**
PTOM				Lg	Lg	05 05 38.1	
	comp=E,18nm,0.3s							
PMRV	**Marv??o**	**3.22**	**32**	*e*Pn	**Pn**	**05 04 51.8**	**+0.2**
PMRV				*e*Sn	**Sn**	**05 05 28.7**	**-0.7**
PMRV				*e*Sg	**Sg**	**05 05 44.1**	**-1.5**
PMRV				A	A	05 05 49.9	
	comp=E,28nm,0.4s							
PMRV	**Marv??o**	**3.22**	**32**	Pn	**Pn**	**05 04 51.8**	**+0.2**
PMRV				Sn	**Sn**	**05 05 28.7**	**-0.7**
PMRV				Lg	Lg	05 05 44.1	
	comp=E,28nm,0.4s							
PCAS	**Casmilo, Conde**	**3.44**	**14**	*e*Pn	**Pn**	**05 04 55.5**	**+0.9**
PCAS				*e*Sn	**Sn**	**05 05 34.0**	**-0.8**
PCAS				*e*Sg	**Sg**	**05 05 51.8**	**-0.8**
PCAS				A	A	05 06 02.6	
	comp=E,23nm,0.4s							
PCAS	**Casmilo, Conde**	**3.44**	**14**	Pn	**Pn**	**05 04 55.5**	**+0.9**
PCAS				Sn	**Sn**	**05 05 34.0**	**-0.8**
PCAS				Lg	Lg	05 05 51.8	
	comp=E,23nm,0.4s							
PCBR	**Castelo Branco**	**3.54**	**28**	*e*Pn	**Pn**	**05 04 57.0**	**+1.1**
PCBR				*e*Sn	**Sn**	**05 05 36.4**	**-0.8**
PCBR				*e*Sg	**Sg**	**05 05 52.9**	**-2.9**
PCBR				A	A	05 05 57.5	
	comp=E,21nm,0.6s							
PCBR	**Castelo Branco**	**3.54**	**28**	Pn	**Pn**	**05 04 57.0**	**+1.1**
PCBR				Sn	**Sn**	**05 05 36.4**	**-0.8**
COI	**Coimbra**	**3.61**	**15**	*e*Pn	**Pn**	**05 04 57.7**	**+0.9**
COI				*e*Sg	**Sg**	**05 05 56.2**	**-1.7**
COI				A	A	05 06 05.2	
	comp=E,20nm,0.5s							
COI	**Coimbra**	**3.61**	**15**	Pn	**Pn**	**05 04 57.7**	**+0.9**
COI				Lg	Lg	05 05 56.2	
	comp=E,10nm,0.5s							
ECAB	**El Cabril**	**3.61**	**67**	Pn	**Pn**	**05 04 57.5**	**+0.6**
	comp=E,7.0nm,0.1s,SNR=139							
ECAB				Pg	**Pg**	**05 05 09.3**	**-1.9**
	comp=E,1.3nm,1.1s,SNR=7.9							
ECAB				Sn	**Sn**	**05 05 38.2**	**-0.7**
	comp=E,34nm,0.3s,SNR=7.3							
ECAB				Lg	Lg	05 05 59.3	
	comp=E,34nm,1.3s,SNR=7.9							
HORN	**Hornachuelos**	**3.65**	**71**	P	**Pn**	**05 04 58.2**	**+0.7**
	SNR=64							
HORN				S	**Sn**	**05 05 39.5**	**-0.5**
AVE	**Averroes**	**3.87**	**151**	*e*P	**Pn**	**05 05 01.4**	**+1.0**
AVE				*e*S	**Sn**	**05 05 42.4**	**-2.8**
AVE	**Averroes**	**3.87**	**151**	P	**Pn**	**05 05 01.3**	**+0.9**
AVE				S	**Sn**	**05 05 40.5**	**-4.7**
EMIJ	**Mijas**	**3.90**	**91**	Pn	**Pn**	**05 05 03.0**	**+2.1**
	comp=E,0.6nm,0.1s,SNR=6.6							
EMIJ				Sn	**Sn**	**05 05 46.4**	**+0.3**
	comp=E,5.5nm,0.4s,SNR=7.9							
EMIJ				Lg	Lg	05 06 09.3	
	comp=E,18nm,1.6s,SNR=7.9							
MTE	**Manteigas**	**4.02**	**23**	*e*Pn	**Pn**	**05 05 02.9**	**+0.4**
MTE				*e*Sn	**Sn**	**05 05 49.5**	**+0.4**
MTE				*e*Sg	**Sg**	**05 06 08.3**	**-2.7**
MTE				A	A	05 06 13.1	
	comp=E,18nm,0.5s							
MTE	**Manteigas**	**4.02**	**23**	Pn	**Pn**	**05 05 02.9**	**+0.4**
PVIS	**Viseu**	**4.21**	**18**	*e*Pn	**Pn**	**05 05 06.1**	**+0.9**
PVIS				*e*Sn	**Sn**	**05 05 52.5**	**-1.3**
PVIS				A	A	05 06 25.5	
	comp=E,8.8nm,0.7s							
PVIS	**Viseu**	**4.21**	**18**	Pn	**Pn**	**05 05 06.1**	**+0.9**
PVIS				Sn	**Sn**	**05 05 52.5**	**-1.3**
	comp=E,4.4nm,0.7s							
EADA	**Adamuz**	**4.26**	**69**	Pn	**Pn**	**05 05 06.8**	**+0.8**
	comp=E,2.6nm,0.1s,SNR=44							
EADA				Sn	**Sn**	**05 05 54.1**	**-1.0**
	comp=E,19nm,0.3s,SNR=7.9							
EADA				Lg	Lg	05 06 20.2	
	comp=E,47nm,1.0s,SNR=7.9							
EPLA	**Plasencia**	**4.34**	**39**	Pn	**Pn**	**05 05 08.0**	**+1.0**
	comp=E,3.8nm,0.1s,SNR=58							
EPLA				Sn	**Sn**	**05 05 56.0**	**-1.1**
	comp=E,6.8nm,0.2s,SNR=7.6							
EPLA				Lg	Lg	05 06 20.9	
	comp=E,25nm,1.6s,SNR=7.9							
EGOR	**Sierra Gorda,**	**4.43**	**83**	Pn	**Pn**	**05 05 09.7**	**+1.4**
	comp=E,2.6nm,0.9s,SNR=7.9							
EGOR				Sn	**Sn**	**05 05 59.9**	**+0.4**
	comp=E,7.8nm,0.3s,SNR=7.9							
EGOR				Lg	Lg	05 06 26.1	
	comp=E,1.8nm,6.2s,SNR=7.9							
PVRL	**Vila Real**	**4.78**	**17**	*e*Pn	**Pn**	**05 05 14.3**	**+1.2**
PVRL				*e*Sn	**Sn**	**05 06 06.0**	**-1.9**
PVRL				A	A	05 06 47.6	
	comp=E,9.4nm,0.5s							
PVRL	**Vila Real**	**4.78**	**17**	Pn	**Pn**	**05 05 14.3**	**+1.2**
PVRL				Sn	**Sn**	**05 06 06.0**	**-1.9**
	comp=E,4.7nm,0.5s							
ELGU	**Los Guajares,**	**4.81**	**86**	Pn	**Pn**	**05 05 15.2**	**+1.7**
	comp=E,3.0nm,0.3s,SNR=7.9							
ELGU				Sn	**Sn**	**05 06 08.3**	**-0.4**
	comp=E,13nm,0.3s,SNR=7.9							
ELGU				Lg	Lg	05 06 38.2	
	comp=E,1.6nm,5.6s,SNR=7.9							
POLO	**Lamas de Olo**	**4.86**	**16**	*e*Pn	**Pn**	**05 05 14.7**	**+0.6**
POLO	**Lamas de Olo**	**4.86**	**16**	Pn	**Pn**	**05 05 14.7**	**+0.6**
MVO	**Moncorvo**	**4.87**	**24**	*e*Pn	**Pn**	**05 05 15.3**	**+0.9**
MVO				*e*Sn	**Sn**	**05 06 09.7**	**-0.5**
MVO				A	A	05 06 46.7	
	comp=E,10nm,0.5s							
MVO	**Moncorvo**	**4.87**	**24**	Pn	**Pn**	**05 05 15.2**	**+0.9**
	comp=E,3.2nm,0.1s,SNR=15							
MVO				Sn	**Sn**	**05 06 08.2**	**-2.0**
	comp=E,7.1nm,0.4s,SNR=7.9							
MVO				Lg	Lg	05 06 38.3	
	SNR=7.9							
EQUE	**Quentar**	**4.97**	**83**	Pn	**Pn**	**05 05 17.1**	**+1.4**
	comp=E,3.8nm,0.3s,SNR=7.9							
EQUE				Sn	**Sn**	**05 06 12.7**	**0.0**
	comp=E,4.5nm,0.4s,SNR=7.9							
EQUE				Lg	Lg	05 06 43.9	
	SNR=7.9							
PCAB	**Cabril**	**5.13**	**13**	*e*Pn	**Pn**	**05 05 18.3**	**+0.4**
PCAB				*e*Sn	**Sn**	**05 06 16.2**	**-0.3**
PCAB	**Cabril**	**5.13**	**13**	Pn	**Pn**	**05 05 18.3**	**+0.4**
ELOB	**Lobios**	**5.28**	**13**	Pn	**Pn**	**05 05 20.0**	**+0.1**
	comp=E,2.0nm,0.2s,SNR=7.9							
ELOB				Sn	**Sn**	**05 06 17.6**	**-2.6**
	comp=E,8.0nm,0.5s,SNR=7.9							
ELOB				Lg	Lg	05 06 50.5	
	SNR=7.9							
GORA	**Gorafe**	**5.31**	**80**	Pn	**Pn**	**05 05 21.6**	**+1.3**
	comp=E,0.8nm,0.1s,SNR=7.9							
GORA				Sn	**Sn**	**05 06 20.6**	**-0.4**
	comp=E,7.5nm,0.4s,SNR=7.9							
GORA				Lg	Lg	05 06 54.3	
	SNR=7.9							
EQES	**Quesada**	**5.33**	**76**	Pn	**Pn**	**05 05 20.8**	**+0.1**
	comp=E,4.2nm,0.2s,SNR=18							
EQES				Sn	**Sn**	**05 06 20.0**	**-1.6**
	comp=E,8.4nm,0.5s,SNR=7.9							
EQES				Lg	Lg	05 06 54.7	
	SNR=7.9							
ESDC	**Sonseca Array**	**5.34**	**55**	Pn	**Pn**	**05 05 21.1**	**+0.4**
	comp=E,3.7nm,0.1s,baz=243,slow=13,SNR=70							
ESDC				Sn	**Sn**	**05 06 20.3**	**-1.4**
	comp=E,0.8nm,0.1s,baz=239,slow=24,SNR=8.1							
ESDC				Lg	Lg	05 06 54.1	
	SNR=7.9							
EBER	**Berja**	**5.40**	**86**	Pn	**Pn**	**05 05 23.7**	**+2.0**
	comp=E,2.1nm,0.2s,SNR=7.9							
EBER				Sn	**Sn**	**05 06 22.7**	**-0.7**
	comp=E,0.9nm,0.2s,SNR=7.9							
EBER				Lg	Lg	05 06 57.3	
	SNR=7.9							
PBRG	**Braganca**	**5.54**	**23**	*e*Pn	**Pn**	**05 05 24.2**	**+0.7**
PBRG				*e*Sn	**Sn**	**05 06 23.3**	**-3.4**
PBRG				A	A	05 07 17.2	
	comp=E,6.8nm,0.7s							
PBRG	**Braganca**	**5.54**	**23**	Pn	**Pn**	**05 05 24.2**	**+0.7**
PBRG				Sn	**Sn**	**05 06 23.3**	**-3.4**
	comp=E,3.4nm,0.7s							
MD31	**MD31**	**5.55**	**132**	P	**Pn**	**05 05 23.1**	**-0.5**
MD31				S	**Sn**	**05 06 21.1**	**-5.8**
MDT	**Midelt**	**5.67**	**132**	P	**Pn**	**05 05 25.0**	**-0.4**
	SNR=139							
MDT				S	**Sn**	**05 06 24.9**	**-5.1**
OUK	**Oukaimeden**	**5.69**	**165**	P	**Pn**	**05 05 24.1**	**-1.7**
GUD	**Guadarrama**	**5.80**	**46**	Pn	**Pn**	**05 05 27.2**	**+0.2**
	comp=E,3.8nm,0.2s,SNR=22							
GUD				Sn	**Sn**	**05 06 31.0**	**-2.0**
	comp=E,2.4nm,0.3s,SNR=7.9							
ENIJ	**Nijar**	**5.95**	**85**	Pn	**Pn**	**05 05 30.6**	**+1.5**
	comp=E,8.1nm,0.4s,SNR=7.9							
UCM	**Universidad Co**	**6.15**	**52**	*e*P	**Pn**	**05 05 32.6**	**+0.8**
UCM				*e*S	**Sn**	**05 06 41.8**	**+0.3**
UCM				*e*L	L	05 07 18.2	
UCM	**Universidad Co**	**6.15**	**52**	Pn	**Pn**	**05 05 32.6**	**+0.8**
UCM				Lg	Lg	05 07 18.2	
EAGO	**Agolada(Pontev**	**6.19**	**10**	Pn	**Pn**	**05 05 32.5**	**+0.2**
	comp=E,0.5nm,0.1s,SNR=7.9							
EAGO				Sn	**Sn**	**05 06 38.6**	**-3.8**
	comp=E,1.3nm,0.1s,SNR=7.9							
JBK	**JBK**	**6.22**	**110**	P	**Pn**	**05 05 32.1**	**-0.9**
JBK				S	**Sn**	**05 06 38.7**	**-4.9**
ETOB	**Tobarra**	**6.68**	**71**	Pn	**Pn**	**05 05 39.4**	**+0.2**
	comp=E,0.5nm,0.1s,SNR=8.2							
ETOB				Sn	**Sn**	**05 06 52.2**	**-2.6**
	comp=E,1.0nm,0.2s,SNR=7.9							
ETOB				Lg	Lg	05 07 38.6	
	SNR=7.9							
EMUR	**La Murta**	**6.77**	**78**	Pn	**Pn**	**05 05 41.4**	**+1.0**
	comp=E,0.8nm,0.3s,SNR=7.9							
TZRR	**Tazzarine**	**6.81**	**149**	P	**Pn**	**05 05 40.1**	**-0.9**
TZRR				S	**Sn**	**05 06 52.3**	**-5.8**
EPON	**Pontenova**	**6.86**	**15**	Pn	**Pn**	**05 05 42.2**	**+0.6**
	comp=E,1.2nm,4.2s,SNR=7.9							
EPON				Sn	**Sn**	**05 06 55.0**	**-4.2**
	comp=E,0.7nm,5.2s,SNR=7.9							
ARF	**Arif**	**6.92**	**138**	P	**Pn**	**05 05 40.9**	**-1.6**
ARF				S	**Sn**	**05 06 54.2**	**-6.5**
ETOR	**Torete**	**7.18**	**53**	Pn	**Pn**	**05 05 46.9**	**+0.9**
	comp=E,9.3nm,0.2s,SNR=36							
ETOR				Sn	**Sn**	**05 07 03.9**	**-3.3**
	comp=E,3.9nm,0.2s,SNR=7.9							
ETOR				Lg	Lg	05 07 53.7	
	SNR=7.9							
TDRA	**Tendrara**	**7.24**	**118**	P	**Pn**	**05 05 46.9**	**0.0**
TDRA				S	**Sn**	**05 07 02.6**	**-6.0**
ZGR	**Zagora**	**7.38**	**152**	P	**Pn**	**05 05 48.6**	**-0.2**
EARI	**Arriondas**	**7.39**	**26**	Pn	**Pn**	**05 05 49.7**	**+0.8**
	comp=E,1.3nm,0.4s,SNR=7.9							
EARI				Sn	**Sn**	**05 07 07.7**	**-4.4**
	comp=E,5.5nm,13.2s,SNR=7.9							
EMOS	**Mosqueruela**	**8.04**	**60**	Pn	**Pn**	**05 05 59.7**	**+1.8**
	comp=E,0.7nm,0.1s,SNR=7.2							
EMOS				Sn	**Sn**	**05 07 24.7**	**-3.5**
	comp=E,2.7nm,0.4s,SNR=7.9							
EORO	**Oroz-Betelu**	**8.88**	**43**	Pn	**Pn**	**05 06 10.6**	**+1.3**
	comp=E,0.7nm,0.1s,SNR=7.9							
EALK	**Alkurruntz**	**8.99**	**41**	Pn	**Pn**	**05 06 11.8**	**+0.9**
	comp=E,1.7nm,0.2s,SNR=5.6							
EALK				Sn	**Sn**	**05 07 46.6**	**-4.9**
	comp=E,0.4nm,0.2s,SNR=7.9							
SJPF	**Ste Jean**	**9.07**	**43**	*e*Pn	**Pn**	**05 06 12.1**	**+0.2**
SJPF				*e*Sn	**Sn**	**05 07 49.3**	**-4.1**
	comp=E,1.1nm,0.3s							
SJPF	**Ste Jean**	**9.07**	**43**	Pn	**Pn**	**05 06 12.1**	**+0.2**
SJPF				Sn	**Sn**	**05 07 49.3**	**-4.1**
	comp=E,0.6nm,0.3s							
ETSF	**Etsaut**	**9.30**	**46**	*e*Pn	**Pn**	**05 06 15.7**	**+0.6**
ETSF				*e*Sn	**Sn**	**05 07 55.1**	**-4.1**
	comp=E,0.6nm,0.3s							
ETSF	**Etsaut**	**9.30**	**46**	Pn	**Pn**	**05 06 15.7**	**+0.6**
ETSF				Sn	**Sn**	**05 07 55.1**	**-4.1**
	comp=E,0.3nm,0.3s							
ATE	**Arette**	**9.34**	**44**	Pn	**Pn**	**05 06 16.9**	**+1.3**
	comp=E,0.4nm,0.1s,SNR=7.9							
ATE				Sn	**Sn**	**05 07 55.5**	**-4.6**
	comp=E,0.2nm,0.2s,SNR=4.0							
ECHI	**Chisagues Biel**	**9.61**	**49**	Pn	**Pn**	**05 06 20.2**	**+0.8**
	comp=E,0.9nm,0.2s,SNR=7.9							
ECHI				Sn	**Sn**	**05 08 02.0**	**-4.9**
	comp=E,0.3nm,0.1s,SNR=7.9							
EPF	**Esparros**	**9.91**	**47**	*e*Pn	**Pn**	**05 06 23.6**	**+0.2**
EPF				*e*Sn	**Sn**	**05 08 09.3**	**-4.7**
	comp=E,0.6nm,0.3s							
EPF	**Esparros**	**9.91**	**47**	Pn	**Pn**	**05 06 23.6**	**+0.2**
EPF				Sn	**Sn**	**05 08 09.3**	**-4.7**
	comp=E,0.3nm,0.3s							
CSOR	**Sort**	**10.04**	**52**	Pn	**Pn**	**05 06 25.8**	**+0.6**
	comp=E,0.1nm,0.1s,SNR=7.9							
CLLI	**Llivia**	**10.63**	**54**	Pn	**Pn**	**05 06 34.7**	**+1.3**
	comp=E,1.9nm,2.7s,SNR=7.9							
RJF	**Les Rejaudoux**	**12.00**	**41**	*e*Pn	**Pn**	**05 06 51.6**	**-0.4**
RJF	**Les Rejaudoux**	**12.00**	**41**	Pn	**Pn**	**05 06 51.6**	**-0.4**
CAF	**Calviac**	**12.05**	**44**	*e*Pn	**Pn**	**05 06 52.8**	**+0.1**
CAF	**Calviac**	**12.05**	**44**	Pn	**Pn**	**05 06 52.8**	**+0.1**
TCF	**Toulx Ste Croi**	**13.02**	**39**	*e*Pn	**Pn**	**05 07 05.5**	**-0.4**
TCF	**Toulx Ste Croi**	**13.02**	**39**	Pn	**Pn**	**05 07 05.5**	**-0.4**
SMRF	**Simiane la Rot**	**13.65**	**53**	*e*P	Pn	05 07 19.8	+5.2
LDF	**La Druitiere**	**13.75**	**27**	*e*P	**Pn**	**05 07 20.6**	**+4.7**

MAN 21 05:07:29.8,12°.90N×122°.75E,h24km,mb3.8,ML2.6, MS2.1,1C-2D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTRP	**Odiongan**	**0.89**	**233**	*e*P	Pb	05 07 46.2	-0.4
OTRP				*e*S	Sn	05 07 59.2	+0.3
BOAC	**Boac**	**1.04**	**302**	*e*P	Pn	05 07 48.4	-0.4
BOAC				*e*S	Sn	05 08 02.9	+0.3
GQP	**Guinayangan**	**1.04**	**344**	⇓*e*P	Pn	05 07 47.2	-1.7
GQP				*e*S	Sn	05 08 02.8	+0.2
RCP	**Roxas**	**1.33**	**180**	⇓*e*P	Pn	05 07 52.4	-0.5
RCP				*e*S	Sn	05 08 10.0	+0.1
LQP	**Lukban**	**1.68**	**316**	⇑*e*P	Pb	05 07 59.3	-0.9
LQP				*i* S	Sb	05 08 24.0	+3.0
POLP	**Polilio Island**	**1.98**	**337**	*e*P	Pn	05 08 03.1	+1.4
POLP				*e*S	Sb	05 08 29.8	+0.5

NNC 21 05:09:46.2±4.7,37°.06N×70°.84E,h1km±26km,mb3.7, mpv3.5,4C-4D,Error ellipse: s-maj=34.1km s-min=24.7km az=162.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.04**	**358**	⇑Pn	Pn	05 11 17.1	+0.4
	2.0nm,0.3s,baz=179,slow=12,SNR=73						
KK31				⇓Sn	Sn	05 12 29.3	+2.9
	2.1nm,0.4s,baz=33,slow=78,SNR=4.4						
KK31				⇑Lg	Lg	05 12 59.0	
	7.3nm,0.7s,baz=182,slow=29,SNR=6.5						
AAK	**Ala-Archa**	**6.24**	**26**	⇑Pn	Pn	05 11 20.0	+0.5
	1.8nm,0.5s						
AAK				Sn	Sn	05 12 31.6	0.0
	3.7nm,0.9s						
AAK				Lg	Lg	05 13 01.3	
	3.5nm,0.8s						
AB31	**Akbulak array**	**14.53**	**330**	⇓Pn	Pn	05 13 10.6	-2.3
	0.3nm,0.4s,baz=219,slow=66,SNR=21						
AB31				⇓Sn	Sn	05 15 52.0	-2.5
	0.3nm,0.5s,baz=163,slow=21,SNR=4.2						
AKTO	**Aktyubinsk**	**16.23**	**329**	⇑Pn	Pn	05 13 36.6	+1.3
	1.9nm,0.9s						
AKTO				⇓Sn	Sn	05 16 35.6	-0.3
	2.7nm,1.4s						

*UCR **21** 05:13:16.3±1.7, 12°.68N×88°.80W,h19km±5km, ML4.2, mb4.4(NEIC)*
*INET **21** 05:13:16.4, 12°.63N×88°.77W,h20km, ML4.2*
*SNET **21** 05:13:16.1±1.7, 12°.68N×88°.80W,h19km±5km, ML4.2*
*GCG **21** 05:13:16.1±0.8, 12°.48N×88°.75W, h47km±409km, MD4.4*
*NEIC **21** 05:13:19.7±1.6, 12°.81N±0°.07×88°.60W±0°.07, h64km±8km, mb4.4/75, Md4.2(SNET), Error ellipse: s-maj=13.6km s-min=6.4km az=222.0*
*IDC **21** 05:13:19.5±1.7, 12°.91N×88°.42W, h60km±16km, mb3.9/11, mb1 4.1/15, mb1mx3.8/35, mbtmp4.1/15, MS3.2/5, Ms1 3.3/5, ms1mx3.0/40, Error ellipse: s-maj=33.2km s-min=10.7km az=43.0*
ISC 21 05:13:17.8±1.1,12°.73N±0°.06×88°.70W±0°.04,h53km±9km, n283,σ0s97/316,mb4.4/43,4D,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.61**	**12**	*e*P	**Pn**	**05 13 29.9**	**-0.6**
ALJI				*e*S	**Sn**	**05 13 40.3**	**+0.5**
ALJI				IAML		05 13 41.3	
	comp=Z,8μm,0.5s						
JUCU	**Jucuarįn**	**0.69**	**40**	*e*P	**Pn**	**05 13 30.8**	**-0.7**
JUCU				*e*S	**Sn**	**05 13 41.9**	**+0.3**
COEB	**Comit de Eme**	**0.78**	**12**	*e*P	**Pn**	**05 13 32.2**	**-0.7**
COEB				*e*S	**Sn**	**05 13 45.9**	**+2.0**
COEB				IAML		05 13 48.4	
	comp=Z,6μm,0.3s						
TECA	**Tecapa**	**0.79**	**14**	⇓*i*P	**Pn**	**05 13 32.5**	**-0.5**
TECA	**Tecapa**	**0.79**	**14**	⇓*i*P	**Pn**	**05 13 32.5**	**-0.5**
LCY	**Lacayo**	**0.80**	**30**	*e*P	**Pn**	**05 13 32.7**	**-0.4**
LCY	**Lacayo**	**0.80**	**30**	*e*P	**Pn**	**05 13 32.7**	**-0.4**
VSM	**San Miguel**	**0.81**	**31**	*e*P	**Pn**	**05 13 33.2**	**-0.2**
VSM	**San Miguel**	**0.81**	**31**	*e*P	**Pn**	**05 13 33.2**	**-0.2**
PACA	**Pacayal**	**0.82**	**27**	*e*P	**Pn**	**05 13 33.0**	**-0.4**
PACA				*e*S	**Sn**	**05 13 45.7**	**+0.9**
PACA	**Pacayal**	**0.82**	**27**	*e*P	**Pn**	**05 13 33.0**	**-0.4**
PACA				*e*S	**Sn**	**05 13 45.7**	**+0.9**
COEG	**Centro de Oper**	**0.90**	**349**	*e*P	**Pn**	**05 13 33.5**	**-0.9**
COEG				*e*S	**Sn**	**05 13 47.3**	**+0.7**
COEG				IAML		05 13 55.6	
	comp=Z,11μm,0.4s						
UESV	**Universidad de**	**0.91**	**355**	*e*P	**Pn**	**05 13 34.0**	**-0.5**
UESV				*e*S	**Sn**	**05 13 47.1**	**+0.5**
UESV	**Universidad de**	**0.91**	**355**	*e*P	**Pn**	**05 13 34.0**	**-0.5**
UESV				*e*S	**Sn**	**05 13 47.1**	**+0.5**
LFRS	**El Faro**	**0.96**	**339**	⇓*i*P	**Pn**	**05 13 34.1**	**-1.0**
LCND	**La Caada**	**0.98**	**54**	*e*P	**Pn**	**05 13 34.7**	**-0.6**
LCND				*e*S	**Sn**	**05 13 49.5**	**+1.2**
LCND				IAML		05 13 54.0	
	comp=Z,6μm,0.3s						
LCND	**La Caada**	**0.98**	**54**	*e*P	**Pn**	**05 13 34.7**	**-0.6**
LCND				*e*S	**Sn**	**05 13 49.5**	**+1.2**
LCND				IAML		05 13 54.0	
	comp=Z,6μm,0.3s						
PAVA	**Las Pavas**	**1.01**	**347**	*i* P	**Pn**	**05 13 35.5**	**-0.3**
PAVA				*e*S	**Sn**	**05 13 49.5**	**+0.4**
PAVA	**Las Pavas**	**1.01**	**347**	*i* P	**Pn**	**05 13 35.5**	**-0.3**
PAVA				*e*S	**Sn**	**05 13 49.5**	**+0.4**
AEIL	**Aeropuerto Ilo**	**1.04**	**337**	*e*P	**Pn**	**05 13 35.9**	**-0.4**
AEIL				*e*S	**Sn**	**05 13 50.5**	**+0.6**
AEIL				IAML		05 14 01.3	
	comp=Z,9μm,0.3s						
LBRS	**Las Brisas**	**1.06**	**342**	⇓*i*P	**Pn**	**05 13 36.0**	**-0.5**
UTEC	**Universidad Te**	**1.08**	**333**	*e*P	**Pn**	**05 13 36.4**	**-0.5**
UTEC				*e*S	**Sn**	**05 13 50.4**	**-0.5**
UTEC				IAML		05 13 55.8	
	comp=Z,5μm,0.2s						
UTEC	**Universidad Te**	**1.08**	**333**	*e*P	**Pn**	**05 13 36.4**	**-0.5**
UTEC				*e*S	**Sn**	**05 13 50.4**	**-0.5**
UTEC				IAML		05 13 55.8	
	comp=Z,5μm,0.2s						
SNET	**Serv Nac Est T**	**1.08**	**332**	*e*P	**Pn**	**05 13 36.0**	**-0.8**
SNET				*e*S	**Sn**	**05 13 50.0**	**-0.9**
SNET				IAML		05 13 53.3	
	comp=Z,9μm,0.3s						
SNET	**Serv Nac Est T**	**1.08**	**332**	*e*P	**Pn**	**05 13 36.0**	**-0.8**
SNET				*e*S	**Sn**	**05 13 50.0**	**-0.9**
SNET				IAML		05 13 53.3	
	comp=Z,9μm,0.3s						
SNET	**Serv Nac Est T**	**1.08**	**332**	Pn	**Pn**	**05 13 36.1**	**-0.7**
SNET				Sn	**Sn**	**05 13 49.6**	**-1.3**
LFU	**La Fuente**	**1.09**	**338**	*e*P	**Pn**	**05 13 36.3**	**-0.6**
LFU	**La Fuente**	**1.09**	**338**	*e*P	**Pn**	**05 13 36.3**	**-0.6**
OPAM	**Oficina de Pla**	**1.09**	**334**	*e*P	**Pn**	**05 13 36.3**	**-0.6**
OPAM				*e*S	**Sn**	**05 13 50.8**	**-0.3**
OPAM				IAML		05 13 54.6	
	comp=Z,6μm,0.2s						
OPAM	**Oficina de Pla**	**1.09**	**334**	*e*P	**Pn**	**05 13 36.3**	**-0.6**
OPAM				*e*S	**Sn**	**05 13 50.8**	**-0.3**
OPAM				IAML		05 13 54.6	
	comp=Z,6μm,0.2s						
UESS	**Universidad de**	**1.10**	**334**	*e*P	**Pn**	**05 13 36.5**	**-0.6**
UESS				IAML		05 13 53.3	
	comp=Z,6μm,0.2s						
UESS	**Universidad de**	**1.10**	**334**	*e*P	**Pn**	**05 13 36.5**	**-0.6**
UESS				IAML		05 13 53.3	
	comp=Z,6μm,0.2s						
UEES	**Universidad Ev**	**1.11**	**332**	*e*P	**Pn**	**05 13 36.6**	**-0.7**
UEES				*e*S	**Sn**	**05 13 51.2**	**-0.4**
UEES	**Universidad Ev**	**1.11**	**332**	*e*P	**Pn**	**05 13 36.6**	**-0.7**
UEES				*e*S	**Sn**	**05 13 51.2**	**-0.4**
FAGO	**Alcalda de S**	**1.12**	**31**	*e*P	**Pn**	**05 13 37.4**	**+0.1**
FAGO				*e*S	**Sn**	**05 13 53.5**	**+1.7**
BOQS	**Boqueron**	**1.15**	**331**	*e*P	**Pn**	**05 13 37.2**	**-0.6**
CEVE	**Cerro Verde**	**1.42**	**321**	*e*P	**Pn**	**05

352A	Blakely	18.98	10	P		Pn	05 17 35.6	-0.5
	baz=191,SNR=9.5							
353A	Camilla	18.99	12	P		P	05 17 34.9	-0.1
	baz=193							
252A	Lumpkin	19.52	10	P		Pn	05 17 42.2	-0.4
	baz=191,SNR=10							
253A	Americus	19.70	12	P		P	05 17 42.7	-0.1
	baz=193							
435B	Jarrell	19.75	337	P		Pn	05 17 44.8	-0.5
	baz=153							
254A	Abbeville	19.77	14	P		P	05 17 43.4	-0.1
	baz=196							
256A	Glennville	20.16	17	P		P	05 17 47.6	-0.2
	baz=199							
152A	Waverly Hall	20.18	10	P		P	05 17 47.9	-0.2
	baz=191							
153A	Fort Valley	20.33	12	P		P	05 17 49.3	-0.3
	baz=194							
257A	Skidaway Islan	20.41	19	P		P	05 17 50.5	0.0
	baz=202							
JCT	Junction City	20.43	332	P		P	05 17 51.5	+0.6
JCT	Junction City	20.43	332	P		P	05 17 51.3	+0.4
	baz=147							
154A	Montrose	20.45	14	P		P	05 17 49.4	-1.5
	baz=196							
Z50A	Ashland	20.59	7	P		P	05 17 52.6	+0.1
Z50A	Ashland	20.59	7	P		P	05 17 53.0	+0.5
	baz=187							
155A	Kite	20.61	15	P		P	05 17 52.5	-0.2
	baz=197							
Z52A	Williamson	20.74	10	P		P	05 17 53.8	-0.3
	baz=192							
156A	Sylvania	20.91	17	P		P	05 17 54.8	-1.0
	baz=200							
Z53A	Monticello	20.99	12	P		P	05 17 56.3	-0.4
	baz=194							
157A	Early Branch	21.08	18	P		P	05 17 57.2	-0.4
	baz=201							
GOGA	Godfrey	21.14	12	P		P	05 17 57.9	-0.4
GOGA				IAmb		IAmb	05 18 03.3	
	comp=Z,7.8nm,0.8s							
GOGA	Godfrey	21.14	12	P		P	05 17 58.9	+0.5
	baz=194,SNR=5.6							
Y49A	Blount Mountai	21.14	5	P		P	05 17 59.0	+0.6
HPIG		21.28	314	P		P	05 18 01.0	+0.8
Y51A	Rockmart	21.34	8	P		P	05 18 00.3	-0.2
	baz=190							
Y52A	Lilburn	21.46	11	P		P	05 18 01.7	-0.1
Y52A				IAmb		IAmb	05 18 07.5	
	comp=Z,9.0nm,0.7s							
Y52A	Lilburn	21.46	11	P		P	05 18 01.3	-0.5
	baz=192							
Y53A	Monroe	21.54	12	P		P	05 18 02.2	-0.5
	baz=193,SNR=7.2							
Z56A	Williston	21.57	17	P		P	05 18 03.2	+0.3
	baz=200,SNR=5.4							
TX32	Lajitas Array	21.60	322	P		P	05 18 05.0	+1.5
TXAR	Lajitas Array	21.60	322	P		P	05 18 05.5	+2.0
	comp=Z,4.2nm,0.7s,baz=145,slow=11,SNR=28							
TX31	Lajitas Ar. Si	21.60	322	P		P	05 18 04.5	+1.0
OXF	Oxford	21.70	358	P		P	05 18 04.1	-0.2
	baz=178							
Y54A	Tignall	21.74	14	P		P	05 18 04.1	-0.6
	baz=196							
Y55A	Saluda	22.02	15	P		P	05 18 07.4	-0.4
	baz=198							
MIAR	Mount Ida	22.17	349	P		P	05 18 09.9	+0.5
MIAR				IAmb		IAmb	05 18 15.0	
	comp=Z,8.0nm,0.7s							
MIAR	Mount Ida	22.17	349	P		P	05 18 10.3	+0.9
	baz=167,SNR=5.4							
HODGE	Hodges	22.20	14	P		P	05 18 09.2	-0.5
ABTX	Abilene, Hawle	22.20	335	P		P	05 18 11.0	+1.2
ABTX				IAmb		IAmb	05 18 13.6	
	comp=Z,10nm,0.6s							
ABTX	Abilene, Hawle	22.20	335	P		P	05 18 10.8	+1.1
	baz=150,SNR=6.9							
UALR	University of	22.20	352	P		P	05 18 10.7	+1.0
UALR				IAmb		IAmb	05 18 13.3	
	comp=Z,10nm,0.7s							
X53A	Estanollee	22.23	12	P		P	05 18 09.7	-0.3
	baz=194							
W49A	Belvidere	22.40	5	P		P	05 18 11.5	-0.4
	baz=186							
X54A	Belton	22.47	14	P		P	05 18 12.1	-0.5
	baz=196							
Y57A	Sumter	22.50	18	P		P	05 18 12.4	-0.6
	baz=201							
W41B	Gary Mavity, V	22.58	352	P		P	05 18 14.4	+0.6
W41B				IAmb		IAmb	05 18 16.9	
	comp=Z,6.1nm,0.7s							
W41B	Gary Mavity, V	22.58	352	P		P	05 18 14.8	+1.1
	baz=171,SNR=5.7							
X55A	Gracelyn & Ava	22.58	15	P		P	05 18 13.4	-0.4
	baz=198							
W50A	Signal Mountai	22.58	7	P		P	05 18 13.0	-0.8
	baz=188							
W51A	Cleveland	22.62	8	P		P	05 18 14.3	+0.1
	baz=190							
Y58A	Scranton	22.63	20	P		P	05 18 13.5	-0.9
	baz=203							
WHAR	Wooly Hollow	22.70	352	P		P	05 18 16.4	+1.3
WHAR				IAmb		IAmb	05 18 30.9	
	comp=Z,9.8nm,1.1s							
X56A	White Oak	22.76	17	P		P	05 18 15.5	-0.2
	baz=199							
BG3	Lake Jocassee	22.78	12	P		P	05 18 16.2	+0.3
W39A	Magazine	22.84	349	P		P	05 18 16.8	+0.3
	baz=167							
MTP	Monte Pirata	22.94	74	P		P	05 18 16.4	-1.3
X57A	Johnson Farm,	23.01	18	P		P	05 18 17.9	-0.3
	baz=202							
W54A	Cherokee Point	23.03	14	P		P	05 18 19.5	+1.1
	baz=196,SNR=5.9							
BIRD	Birdtown, Kers	23.07	18	P		P	05 18 18.8	-0.1
BIRD				IAmb		IAmb	05 18 21.2	
	comp=Z,12nm,0.7s							
V50A	Pikeville	23.07	7	P		P	05 18 18.7	-0.2
	baz=189							
V49A	McMinnville	23.08	6	P		P	05 18 18.4	-0.5
	baz=187							
TKL	Tuckaleechee C	23.26	10	P		P	05 18 21.5	+0.8
	comp=Z,8.4nm,0.7s,baz=182,slow=12,SNR=13							
TKL	Tuckaleechee C	23.26	10	P		P	05 18 21.2	+0.5
TKL				IAmb		IAmb	05 18 22.4	
	comp=Z,9.0nm,0.8s							
KMSC	Kings Mountain	23.29	15	P		P	05 18 20.7	-0.4
	baz=198							
X34A	Smith Ranch, M	23.30	341	P		P	05 18 23.0	+1.9
V51A	Loudon	23.31	9	P		P	05 18 21.2	0.0
	baz=190							
WVT	Waverly	23.32	2	P		P	05 18 21.3	+0.1
	baz=182							
X58A	Rowland	23.34	20	P		P	05 18 21.3	-0.1
X58A				IAmb		IAmb	05 18 23.3	
	comp=Z,11nm,0.6s							
X58A	Rowland	23.34	20	P		P	05 18 21.1	-0.3
	baz=203							
V53A	Saluda	23.45	12	P		P	05 18 23.0	+0.4
V53A				IAmb		IAmb	05 18 25.6	
	comp=Z,5.9nm,0.7s							
V53A	Saluda	23.45	12	P		P	05 18 22.6	-0.1
	baz=194							
V52A	Sevierville	23.47	10	P		P	05 18 22.8	0.0
	baz=192							
W56A	Indian Trail	23.49	17	P		P	05 18 23.9	+1.0
	baz=200							
W57A	Gilead	23.68	18	P		P	05 18 25.1	+0.5
W57A				IAmb		IAmb	05 18 32.3	
	comp=Z,9.7nm,1.1s							
W57A	Gilead	23.68	18	P		P	05 18 23.8	-0.8
	baz=201							
WMOK	Wichita Mounta	23.75	339	P		P	05 18 25.6	+0.3
WMOK	Wichita Mounta	23.75	339	P		P	05 18 25.8	+0.4
	baz=154,SNR=8.8							
V54A	Nebo	23.75	14	P		P	05 18 24.7	-0.6
	baz=196							
FNO	Franklin	23.77	342	P		P	05 18 27.4	+1.8
W58A	Raeford	23.80	20	P		P	05 18 25.1	-0.6
	baz=203							
U40A	Yellville	23.82	352	P		P	05 18 27.0	+1.0
U40A	Yellville	23.82	352	P		P	05 18 26.7	+0.7
	baz=170,SNR=15							
U49A	Red Boiling Sp	23.83	6	P		P	05 18 25.7	-0.3
	baz=187							
X60A	Albert Glenn T	23.83	22	P		P	05 18 25.6	-0.5
	baz=206							
U50A	Jamestown	23.84	8	P		P	05 18 25.8	-0.4
	baz=189							
HHAR	Hobbs	23.92	350	P		P	05 18 27.8	+0.9
HHAR				IAmb		IAmb	05 18 30.9	
	comp=Z,10nm,0.6s							
U51A	La Follette	23.93	9	P		P	05 18 27.1	+0.1
	baz=191							
TUL1	Leonard	23.95	346	P		P	05 18 27.5	+0.3
	baz=162							
V55A	Taylorsville	24.00	15	P		P	05 18 27.0	-0.5
V55A				IAmb		IAmb	05 18 33.9	
	comp=Z,20nm,1.4s							
V55A	Taylorsville	24.00	15	P		P	05 18 27.2	-0.3
	baz=198							
U52A	Thorn Hill	24.05	11	P		P	05 18 27.8	-0.3
	baz=193							
V56A	Mocksville	24.15	16	P		P	05 18 28.5	-0.5
	baz=200							
U53A	Fall Branch	24.17	12	P		P	05 18 28.5	-0.8
	baz=194							
T47A	Sharon Grove	24.20	3	P		P	05 18 29.0	-0.4
T47A				IAmb		IAmb	05 18 30.2	
	comp=Z,14nm,0.7s							
MNTX	Cornudas Mount	24.33	324	P		P	05 18 31.1	+0.4
	baz=137,SNR=9.1							
W60A	Pink Hill	24.35	22	P		P	05 18 29.3	-1.5
	baz=207							
T49A	Edmonton	24.44	6	P		P	05 18 31.2	-0.5
	baz=187							
U54A	Nelsons Funny	24.49	13	P		P	05 18 31.9	-0.2
U54A				IAmb		IAmb	05 18 49.5	
	comp=Z,11nm,0.8s							
T51A	Gray	24.51	9	P		P	05 18 32.4	+0.1
	baz=191							
MGMO	Mountain Grove	24.53	353	IAmb		IAmb	05 18 46.7	
	comp=Z,14nm,1.4s							
V58A	Windy Hill, Pi	24.54	19	P		P	05 18 32.5	0.0
V58A	Windy Hill, Pi	24.54	19	P		P	05 18 32.5	0.0
	baz=203							
U55A	TA2, Sparta	24.65	15	P		P	05 18 33.2	-0.4
	baz=198							
MSTX	Muleshoe	24.73	331	P		P	05 18 34.4	0.0
	baz=145,SNR=18							
S44A	Carbondale	24.87	359	P		P	05 18 35.6	+0.1
S44A				IAmb		IAmb	05 18 36.6	
	comp=Z,7.6nm,0.8s							
AMTX	Amarillo	25.00	334	P		P	05 18 36.9	+0.1
AMTX				IAmb		IAmb	05 18 39.9	
	comp=Z,14nm,0.9s							
AMTX	Amarillo	25.00	334	P		P	05 18 37.7	+0.9
	baz=148							
U57A	Blanch	25.06	18	P		P	05 18 37.5	+0.2
	baz=202							
V60A	Jim Taylor Roa	25.15	22	P		P	05 18 38.2	+0.1
	baz=207							
CCM	Cathedral Cave	25.33	355	P		P	05 18 39.8	+0.1
CCM				IAmb		IAmb	05 18 41.1	
	comp=Z,12nm,0.7s							
CCM	Cathedral Cave	25.33	355	P		P	05 18 40.0	+0.4
	baz=174							
BLA	Blacksburg	25.48	16	P		P	05 18 40.8	-0.4
	baz=199							
WCI	Wyandotte Cave	25.49	4	P		P	05 18 41.1	0.0
WCI				IAmb		IAmb	05 18 41.7	
	comp=Z,8.2nm,0.7s							
WCI	Wyandotte Cave	25.49	4	P		P	05 18 41.1	0.0
	baz=185							
T57A	Hurt	25.61	18	P		P	05 18 42.6	+0.3
T57A	Hurt	25.61	18	P		P	05 18 42.3	+0.1
	baz=202							
R49A	Shelbyville	25.65	6	P		P	05 18 42.1	-0.5
	baz=188							
121A	Cookes Peak, D	26.35	322	P		P	05 18 49.9	+0.6
	baz=134							
S58A	Poland Farm, P	26.55	19	P		P	05 18 50.4	-0.2
	baz=204							
R55A	Marlinton	26.57	15	P		P	05 18 50.7	-0.3
R55A				IAmb		IAmb	05 19 04.8	
	comp=Z,23nm,1.4s							
Q51A	Peebles	26.62	9	P		P	05 18 51.1	-0.3
	baz=192							
Q52A	Bidwell	26.75	11	P		P	05 18 52.2	-0.3
	baz=194							
P48A	Milroy	26.78	6	P		P	05 18 51.7	-1.1
	baz=187							
R57A	Stanardsville	27.03	18	P		P	05 18 55.2	+0.1
	baz=202							
Q54A	Cox Mills	27.07	14	P		P	05 18 55.4	0.0
	baz=197							
KSU1	Kansas State U	27.19	346	P		P	05 18 57.4	+0.9
	baz=163							
ANMO	Albuquerque	27.35	327	P		P	05 19 00.6	+2.4
	comp=Z,1.5nm,0.7s,baz=123,slow=6.6,SNR=5.9							
Q56A	Snyder Ridge,	27.53	16	P		P	05 18 59.8	+0.2
O50A	Cable	27.68	8	P		P	05 19 00.6	-0.2
	baz=190							
P54A	Burton	27.74	14	P		P	05 19 01.5	+0.1
	baz=197							
CBKS	Cedar Bluff	27.77	341	P		P	05 19 02.1	+0.4
	baz=156							
O51A	Pataskala	27.84	10	P		P	05 19 02.1	-0.2
	baz=193							
ACSO	Alum Creek Sta	27.86	9	P		P	05 19 02.1	-0.4
	baz=192							
P56A	Dayton Farm, R	28.06	16	P		P	05 19 04.7	+0.4
	baz=201							
T25A	Trinidad	28.09	333	P		P	05 19 05.8	+1.0
T25A				IAmb		IAmb	05 19 08.1	
	comp=Z,8.6nm,0.8s							
T25A	Trinidad	28.09	333	P		P	05 19 06.1	+1.3
	baz=146,SNR=9.7							
P57A	Homestead Farm	28.28	18	P		P	05 19 06.4	+0.3
	baz=202							
N50A	Nevada	28.36	9	P		P	05 19 07.0	+0.1
	baz=191							
N52A	McGinn's Farm,	28.65	11	P		P	05 19 09.3	-0.2
	baz=194							
KSCO	Kaye Shedlock'	28.95	337	P		P	05 19 13.2	+0.9
	baz=151,SNR=5.2							
M50A	Fremont	28.99	9	P		P	05 19 12.5	0.0
	baz=191							
SDCO	Great Sand Dun	29.08	332	P		P	05 19 14.7	+0.9
SDCO	Great Sand Dun	29.08	332	P		P	05 19 14.9	+1.2
	baz=144							
W18A	Petrified Fore	29.31	323	P		P	05 19 17.5	+1.9
	baz=134							
N56A	West Decatur	29.53	16	P		P	05 19 18.0	+0.7
	baz=201							
L49A	Milan	29.59	7	P		P	05 19 17.7	0.0
	baz=190							
L50A	Kingsville	29.66	9	P		P	05 19 18.4	0.0
	baz=191							
S22A	4UR Ranch, Cre	29.71	330	P		P	05 19 20.1	+0.8
	baz=142							
MVCO	Mesa Verde	30.14	327	P		P	05 19 24.6	+1.5
	baz=138							
J46A	Howard City	30.62	4	P		P	05 19 27.5	+0.6
	baz=186							
ISCO	Idaho Springs	30.82	334	P		P	05 19 29.6	+0.5
	baz=146							
ECSD	EROS Data Cent	31.64	349	P		P	05 19 35.7	-0.2
N23A	Red Feather La	31.87	335	P		P	05 19 39.3	+1.0
	baz=146							
J56A	Wcott	32.11	16	P		P	05 19 39.8	-0.2
	baz=202							
O20A	White River Ci	32.27	331	P		P	05 19 42.4	+0.7
	baz=142							
MONP2	Monument Peak	32.32	313	P		P	05 19 44.3	+2.0
	baz=122							
SPMN	Marine on St.	32.58	355	P		P	05 19 43.3	-0.8
	baz=172,SNR=9.2							
SRU	San Rafael Swe	32.62	328	P		P	05 19 46.5	+1.8
BELC	Belle Mtn. Jos	32.63	315	P		P	05 19 46.2	+1.4
	baz=124							
PFO	Pinyon Flats O	32.73	314	P		P	05 19 47.1	+1.3
	baz=122							
I55A	Frankford	32.77	15	P		P	05 19 45.5	-0.3
	baz=200							
H53A	Bobcaygeon	32.90	13	P		P	05 19 46.9	0.0
	baz=198							
HRV	Adam Dziewonsk	33.19	23	P		P	05 19 49.8	+0.3
	baz=212							
SAML	Samuel	33.26	129	P		P	05 19 50.3	-0.1
SAML				IAmb		IAmb	05 19 50.9	
	comp=Z,3.6nm,0.8s							
COWI	Conover	33.27	359	P		P	05 19 49.7	-0.4
E43A	Lone Tree Farm	33.57	2	P		P	05 19 51.5	-1.2
K22A	Casper	33.58	336	P		P	05 19 53.8	+0.7
	baz=147							
RSSD	Black Hills	33.94	340	P		P	05 19 57.2	+0.9
RSSD	Black Hills	33.94	340	P		P	05 19 57.2	+0.9
	baz=152							
E48A	Lockeyer	34.09	8	P		P	05 19 57.5	+0.2
	baz=191							
G57A	Newington	34.32	17	P		P	05 19 58.8	-0.4
	baz=204							
D48A	Paudash Townsh	34.82	8	P		P	05 20 03.1	-0.5
	baz=192							
PDAR	Pinedale Array	34.96	333	P		P	05 20 05.7	+0.6
	comp=Z,0.7nm,0.6s,baz=133,slow=9.8,SNR=8.2							
PDAR				PcP		PcP	05 22 37.0	+0.3
	comp=Z,0.8nm,0.6s,baz=135,slow=4.8,SNR=8.9							
D49A	Beulah Townshi	34.98	9	P		P	05 20 04.2	-0.8
	baz=192							
HWUT	Hardware Ranch	35.01	329	P		P	05 20 06.9	+1.4
HWUT				IAmb		IAmb	05 20 08.4	
	comp=Z,2.3nm,0.8s							
EYMN	Ely	35.19	357	P		P	05 20 06.1	-0.6
EYMN				IAmb		IAmb	05 20 06.5	
	comp=Z,3.5nm,0.6s							
EYMN	Ely	35.19	357	P		P	05 20 05.8	-0.9
	baz=175							
TPAW	Teton Pass	36.16	332	IAmb		IAmb	05 20 17.7	
	comp=Z,3.0nm,0.6s							
MOOW	Moose Ponds	36.27	333	IAmb		IAmb	05 20 18.1	
	comp=Z,2.1nm,0.8s							
NVAR	Mina Array Bea	36.70	320	P		P	05 20 22.4	+2.4
	comp=Z,1.2nm,0.7s,baz=130,slow=7.2,SNR=12							
NVAR				PcP		PcP	05 22 43.9	+2.0
	comp=Z,1.4nm,0.6s,baz=133,slow=3.8,SNR=9.3							
RLMT	Red Lodge	36.74	335	IAmb		IAmb	05 20 21.8	
	comp=Z,5.9nm,0.8s							
RLMT	Red Lodge	36.74	335	P		P	05 20 20.6	+0.3
	baz=145,SNR=7.1							
LAO	LASA Array	36.94	340	P		P	05 20 22.8	+1.0
LAO				IAmb		IAmb	05 20 23.3	
	comp=Z,7.2nm,1.2s							
LAO	LASA Array	36.94	340	P		P	05 20 22.3	+0.5
	baz=150							
YNE	Yellowstone No	36.95	335	P		P	05 20 22.7	+0.5
YHL	Hebgen Lake	37.33	333	P		P	05 20 27.0	+1.6
ULM	Lac du Bonnet	37.88	352	P		P	05 20 28.5	-1.1
	comp=Z,4.8nm,0.6s,baz=164,slow=9.8,SNR=16							
ULM	Lac du Bonnet	37.88	352	P		P	05 20 28.4	-1.1
DGMT	Dagmar	37.89	343	P		P	05 20 30.3	+0.5
	baz=155,SNR=14							
MATQ	Matagami	38.03	12	P		P	05 20 30.0	-0.9
	baz=198							
MCMT	McKenzie Canyo	38.06	332	P		P	05 20 33.4	+1.9
EGMT	Eagleton	39.33	338	P		P	05 20 42.6	+0.7
	baz=146,SNR=17							
WVOR	Wild Horse Val	39.36	324	P		P	05 20 41.3	-1.0
WVOR				IAmb		IAmb	05 20 45.0	
	comp=Z,2.6nm,0.8s							
L04D	Klamath Falls	41.39	322	P		P	05 20 59.2	+0.1
	baz=125							
FFC	Flin Flon	43.18	349	P		P	05 21 13.6	+0.3
B05A	Bryant	44.99	329	P		P	05 21 28.5	+0.6
	baz=130							
SCHQ	Schefferville	45.38	18	P		P	05 21 29.6	-1.3
	comp=Z,3.3nm,0.7s,baz=220,slow=8.7,SNR=6.9							
BDFB	Brasilia	49.14	124	P		P	05 22 00.2	-0.6
	comp=Z,2.0nm,0.6s,baz=301,slow=8.9,SNR=6.0							
BDFB	Brasilia	49.14	124	IAmb		IAmb	05 22 13.9	
	comp=Z,7.6nm,1.4s							
YKA	Yellowknife Ar	53.03	345	P		P	05 22 28.6	-0.6
	comp=Z,6.6nm,0.6s,baz=140,slow=7.8,SNR=148							
YKA				PcP		PcP	05 23 36.5	-0.7
	comp=Z,0.7nm,0.6s,baz=151,slow=3.7,SNR=7.0							
RES	Resolute Bay	62.04	358	P		P	05 23 31.4	-0.9
RES				IAmb		IAmb	05 23 31.9	
	comp=Z,2.6nm,0.7s							
EPYK	Eagle Plains	62.39	340	P		P	05 23 35.1	+0.1
	baz=125							
INK	Inuvik	62.58	343	P		P	05 23 36.0	0.0
HDA	Harding Lake	65.15	336	P		P	05 23 52.8	-0.3
	baz=114							
ILAR	Eielson Array	65.28	336	P		P	05 23 53.1	-0.8
	comp=Z,1.3nm,0.9s,baz=104,slow=5.9,SNR=12							
MLY	Manley	66.90	336	P		P	05 24 04.4	+0.1
MLY				IAmb		IAmb	05 24 07.0	
	comp=Z,8.2nm,1.3s							
NOA	NORSAR Array B	83.72	29	LR		LR	06 01 14.0	
	comp=Z,16nm,19.5s,baz=355,slow=34							
ARCES	ARCESS Array B	86.32	19	P		P	05 25 52.7	-1.1
	comp=Z,3.4nm,1.0s,baz=282,slow=4.5,SNR=2.6							
SONM	Songino Array	118.23	349	PKP		PKiKP	05 32 00.1	+0.6
	comp=Z,0.4nm,0.6s,baz=20,slow=4.9,SNR=3.8							
LZH	Lanzhou	130.03	347	*e*PKP		PKPdf	05 32 18.6	-3.9
LZH				pPKP		sPKPdf	05 32 40.0	-4.0
LZH				sPKP			05 32 55.5	
WRA	Warramunga Arr	138.17	254	PKP		PKiKP	05 32 39.8	-0.1
	comp=Z,0.9nm,0.6s,baz=98,slow=2.3,SNR=5.3							

IDC ***21*** *05:20:39.4±0.9,2˚.08N×126˚.27E,h0km,mb4.0/7, mb1 4.1/7,mb1mx3.9/42,mbtmp4.0/7,MS3.1/5,Ms1 3.1/5, ms1mx2.8/41,Error ellipse: s-maj=73.7km s-min=16.3km az=75.0*

DJA ***21*** *05:20:45.8±1.1,2˚N±3˚×12˚7E±˚,h24km±10km,M4.4/7, mB4.9/2,mb4.8/2,MLv4.2/7,Mw(mB)4.2/2*

NEIC ***21*** *05:20:49.2±2.8,2˚.17N±0˚.10×126˚.92E±0˚.07,h83km±9km, mb4.1/9,Error ellipse: s-maj=15.0km s-min=9.3km az=201.0*

ISC 21 05:20:46.3±0.7,2˚.35N±0˚.05×126˚.91E±0˚.07,h53km,n30, σ2s01/28,mb4.1/11,MS2.9/4,1C,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	1.63	164	P	Pn	05 21 11.5	-1.1
TNTI				S	Sn	05 21 34.4	+1.9
TNTI	Ternate	1.63	164		Pn	05 21 12.9	+0.2
TNTI				Sn	Sn	05 21 33.9	+1.4
KMSI	Cibinong	3.42	239	P	Pn	05 21 37.2	+0.1
KMSI				S	Sn	05 22 13.4	-2.9
SKMP	Bagumbayan, Su	4.77	330	*e*P	Pn	05 21 55.0	-0.6
SKMP				*e*S	Sn	05 22 47.7	-1.9
KCP	Kidapawan	4.97	339	*e*P	Pn	05 22 04.8	+6.3
KCP				*i* S	Sn	05 23 09.4	+15
MRSI	Marisa	5.30	250	P	Pn	05 22 03.7	+0.8
	0.4nm1μm98nm,0.6s						
LUWI	Luwuk	5.33	231		Pn	05 22 05.3	+2.0
SIJI	Sorong	5.40	126	LR	LR	05 24 43.5	
	comp=Z,307nm,20.0s,baz=296,slow=42						
APSI	Ampana	6.17	238	P	Pn	05 22 14.9	0.0
MPSI	Mapaga	7.29	254	P	Pn	05 22 33.3	+3.1
MTN	Manton Dam	15.66	165	Pn	Pn	05 24 22.6	-1.0
KNRA	Kununurra	18.00	174		P	05 24 49.4	-3.4
FITZ	Fitzroy Crossi	20.36	183	P	P	05 25 17.2	-1.3
FITZ				IAmb	IAmb	05 25 32.8	
	comp=Z,13nm,1.4s						
WRAB	Tennant Creek	23.32	162	P	P	05 25 49.8	-0.1
WRAB				IAmb	IAmb	05 25 54.7	
	comp=Z,5.6nm,0.7s						
WRA	Warramunga Arr	23.32	162

KURK	**Kurchatov**	**63.00**	**328**	P	**P**	**05 31 07.4**	**-0.1**
KURK				IAmb	IAmb	05 31 11.3	
	comp=Z,2.5nm,0.8s						
GNI	**Garni**	**82.50**	**310**	LR	LR	06 17 06.9	
	comp=Z,14nm,18.1s,baz=20,slow=41						

NIED ***21*** *05:28:00,35˚.10N×138˚.20E,h32km,Mw3.8 Best double couple: M₀6.16000×10¹⁴ NP1:φs198.00000°,δ81.00000°, λ-56.00000°. NP2:φs302.00000°,δ35.00000°, λ-163.00000°.*

IDC ***21*** *05:28:12.4±1.2,34˚.91N×138˚.43E,h0km,mb3.5/5, mb1 3.9/5,mb1mx3.5/42,mbtmp3.5/5,MS2.9/1,Ms1 2.9/1, ms1mx2.5/46,Error ellipse: s-maj=63.8km s-min=17.9km az=95.0*

JMA ***21*** *05:28:17.0,35˚.05N×138˚.19E,h30km±1km,M3.8 Broadband fault plane solution: P waves. NP1: φs306.00000°,δ29.00000°,λ-171.00000°. NP2: φs208.00000°,δ86.00000°,λ-61.00000°. Principal axes: T Plg34.0000°, Azm274.0000°; N Plg29.0000°, Azm26.0000°; P Plg42.0000°, Azm146.0000°;*

JMA Felt II J1.

ISC 21 05:28:16.8±0.9,34˚.98N±0˚.04×138˚.28E±0˚.06,h29km±6km, n20,σ0s73/23,mb3.6/5,4C-1D,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SHZ3	**Shizuoka 3**	**0.10**	**328**	P		**Pb**	**05 28 21.9**	**-0.1**
SHZ3				S		**Sb**	**05 28 25.7**	**+0.1**
JFNN	**Fujinakano**	**0.40**	**57**	⇑P		**Pn**	**05 28 26.0**	**-0.6**
JFNN				S		**Sn**	**05 28 33.3**	**+0.1**
JIZS	**Izushimoda**	**0.56**	**118**	⇑P		**Pn**	**05 28 28.8**	**-0.1**
JIZS				S		**Sn**	**05 28 37.9**	**+0.7**
JYN	**Shimob**	**0.56**	**23**	⇑P		**Pb**	**05 28 27.8**	**-0.4**
JYN				S		**Sb**	**05 28 36.3**	**+0.3**
TK04	**Tokai 4**	**0.68**	**209**	⇓P		**Pb**	**05 28 30.5**	**+0.4**
TK04				X			05 28 41.9	
JOD2	**Odawara 2**	**0.72**	**67**	⇑P		**Pn**	**05 28 30.9**	**-0.2**
JOD2				S		**Sn**	**05 28 41.5**	**+0.2**
JIM2	**Oshima 3**	**0.99**	**105**	P		**Pn**	**05 28 35.9**	**+1.2**
TK02	**Tokai 2**	**1.12**	**203**	P		**Pn**	**05 28 35.7**	**-0.6**
JRY	**Ryogami san**	**1.15**	**26**	P		**Pn**	**05 28 37.2**	**+0.1**
MJAR	**Matsushiro Arr**	**1.56**	**358**	Pn		**Pn**	**05 28 42.8**	**+0.2**
	6.8nm,0.3s,baz=189,slow=15,SNR=110							
MJAR				Sn		**Sb**	**05 29 04.8**	**+0.5**
	9.8nm,0.3s,baz=194,slow=24,SNR=18							
MJAR				LR		LR	05 29 33.2	
	comp=Z,137nm,19.4s,baz=175,slow=50							
MAT	**Matsushiro**	**1.56**	**358**	P		**Pn**	**05 28 43.2**	**+0.5**
MAT				S		**Sn**	**05 29 03.2**	**+1.3**
KSRS	**Korea Array**	**8.72**	**289**	LR		LR	05 33 59.8	
	comp=Z,79nm,19.0s,baz=66,slow=39							
H11N2	**WAKE ISLAND Hy**	**29.48**	**114**	T		T	06 04 35.4	
	baz=310,slow=75,SNR=3.6							
H11N1	**WAKE ISLAND Hy**	**29.48**	**114**	T		T	06 04 37.3	
	baz=310							
H11N3	**WAKE ISLAND Hy**	**29.50**	**114**	T		T	06 04 38.2	
	baz=310,slow=75,SNR=3.8							
ILAR	**Eielson Array**	**52.58**	**31**	P		**P**	**05 37 26.3**	**-1.1**
	2.1nm,1.3s,baz=252,slow=5.1,SNR=4.2							
WRA	**Warramunga Arr**	**54.75**	**185**	P		**P**	**05 37 42.5**	**-1.3**
	1.2nm,0.6s,baz=359,slow=7.6,SNR=8.4							
ASAR	**Alice Springs**	**58.47**	**185**	P		**P**	**05 38 10.6**	**+0.3**
	0.3nm,0.7s,baz=9.6,slow=12,SNR=4.6							
YKA	**Yellowknife Ar**	**66.84**	**29**	P		**P**	**05 39 05.1**	**-0.5**
	0.2nm,0.7s,baz=292,slow=6.4,SNR=4.9							
NVAR	**Mina Array Bea**	**78.25**	**51**	P		**P**	**05 40 15.6**	**+1.3**
	0.4nm,0.7s,baz=265,slow=5.4,SNR=3.8							

TEH ***21*** *05:33:00.1,38˚.45N×44˚.78E,h7km,ML2.6*

DDA ***21*** *05:33:01.8,38˚.60N×44˚.88E,h7km±1km,ML2.0*

ISK ***21*** *05:33:01.5,38˚.49N×44˚.80E,h5km,ML2.3/5*

ISC 21 05:33:01.6±1.2,38˚.49N±0˚.06×44˚.85E±0˚.03,h10km±12km, n11,σ0s87/18,Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IMRD	**Marand**	**0.71**	**71**	*e*Pg		**Pg**	**05 33 15.0**	**-0.4**
IMRD				*e*Sg		**Sg**	**05 33 25.5**	**+0.8**
IMRD				*e*			05 33 27.4	
CLDR	**Caldiran**	**0.98**	**312**	PG		**Pb**	**05 33 20.9**	**+0.1**
CLDR				SG		**Sn**	**05 33 35.0**	**-0.7**
CLDR	**Caldiran**	**0.98**	**312**	*i* P		**Pg**	**05 33 19.6**	**-0.8**
CLDR				*i* S		**Sb**	**05 33 33.0**	**-0.8**
CLDR				IAML			05 33 36.0	
	comp=N,33nm,0.4s							
CLDR				IAML			05 33 39.0	
	comp=E,48nm,0.4s							
ITBZ	**Tabriz**	**1.05**	**104**	*e*Pg		**Pg**	**05 33 20.5**	**-1.4**
ITBZ				*e*			05 33 40.8	
VMUR	**Van-Muradiye**	**1.11**	**297**	*i* P		**Pb**	**05 33 22.7**	**-0.5**
VMUR				*i* S		**Sn**	**05 33 38.3**	**-0.7**
VMUR				IAML			05 33 42.0	
	comp=E,34nm,0.8s							
VMUR				IAML			05 33 54.0	
	comp=N,197nm,0.9s							
TVAN	**Van**	**1.13**	**272**	*i* P		**Pb**	**05 33 23.0**	**-0.4**
TVAN				*i* S		**Sn**	**05 33 40.7**	**+1.2**
TVAN				IAML			05 33 47.0	
	comp=N,29nm,0.6s							
TVAN				IAML			05 33 51.0	
	comp=E,33nm,0.9s							
AKDM	**Akdamar-Van**	**1.48**	**264**	PN		**Pg**	**05 33 29.7**	**-0.3**
AKDM				SN		**Sg**	**05 33 50.5**	**+1.4**
TASB	**TASBURUN-IGDIR**	**1.57**	**343**	PN		**Pg**	**05 33 31.4**	**-0.3**
GNI	**Garni**	**1.66**	**357**	PN		**Pb**	**05 33 32.8**	**+0.3**
IHRS	**Heris**	**1.73**	**95**	*e*Pn		**Pn**	**05 33 32.8**	**+0.7**
IHRS				*e*			05 33 34.5	
IHRS				*e*Sg		**Sg**	**05 33 58.2**	**+0.8**
AGRB	**Hanur-Agry**	**1.81**	**308**	PN		**Pb**	**05 33 34.6**	**-0.4**

IDC 21 05:40:57.6±11.0,0˚.64N×133˚.55E,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.6/41,mbtmp3.9/4,Error ellipse: s-maj=183.2km s-min=81.2km az=169.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.18**	**202**	P		P	05 45 33.1	-0.9
	1.1nm,0.3s,baz=37,slow=13,SNR=6.9							
WRA	**Warramunga Arr**	**20.47**	**178**	P		P	05 45 35.9	-1.2
	4.0nm,0.8s,baz=358,slow=12,SNR=17							
ASAR	**Alice Springs**	**24.16**	**179**	P		P	05 46 17.3	+1.5
	2.4nm,0.7s,baz=3.8,slow=9.1,SNR=24							
STKA	**Stephens Creek**	**33.23**	**167**	P		P	05 47 36.2	-0.3
	0.6nm,0.3s,baz=350,slow=6.1,SNR=2.9							

TAP ***21*** *05:53:07.5,24˚.83N×122˚.04E,h9km,ML4.0,B*

JMA ***21*** *05:53:07.9±0.1,24˚.81N×121˚.98E,h46km±3km,M3.2*

IDC ***21*** *05:53:26.2±6.5,24˚.69N×121˚.80E,h170km±67km,mb3.4/6, mb1 3.5/7,mb1mx3.2/40,mbtmp3.9/7,MS3.3/7,Ms1 3.3/7, ms1mx3.0/32,Error ellipse: s-maj=43.6km s-min=15.3km az=67.0*

ISC 21 05:53:07.7±0.9,24˚.82N±0˚.02×122˚.06E±0˚.02,h8km±6km, n127,σ0s85/182,mb3.7/6,MS3.3/5,16C-8D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EGS		**0.12**	**282**	⇑*i*P		**Pg**	**05 53 10.5**	**+0.1**
	baz=277							
EGS				S		**Sg**	**05 53 12.6**	**+0.4**
	baz=277							
TWB1	**Santiao Chiao**	**0.20**	**341**	⇑*i*P		**Pg**	**05 53 11.8**	**0.0**
	baz=345							
TWB1				*i* S		**Sg**	**05 53 14.8**	**+0.3**
	baz=345							
NTC	**Toucheng**	**0.21**	**280**	⇑P		**Pg**	**05 53 12.4**	**+0.4**
	baz=277							
NTC				*e*S		**Sg**	**05 53 15.7**	**+0.8**
	baz=277							
TIPB	**Shuangxi**	**0.26**	**306**	⇑*i*P		**Pg**	**05 53 13.2**	**+0.3**
	baz=295							
TIPB				*i* S		**Sg**	**05 53 17.2**	**+0.7**
	baz=295							
EOS1	**EOS1**	**0.28**	**167**	⇓P		**Pb**	**05 53 14.2**	**-0.7**
	baz=163							
EOS1				*e*S		**Sg**	**05 53 18.1**	**+1.3**
	baz=163							
TWC	**Suao**	**0.28**	**223**	⇓*i*P		**Pg**	**05 53 13.5**	**+0.1**
	baz=228							
TWC				*e*S		**Sg**	**05 53 17.1**	**0.0**
	baz=228							
ILA	**Ilan**	**0.29**	**259**	P		**Pg**	**05 53 13.8**	**+0.4**
	baz=257							
ILA				S		**Sb**	**05 53 18.3**	**-1.8**
	baz=257							
NWF	**Wu-fen Shan**	**0.36**	**315**	⇑*i*P		**Pb**	**05 53 15.2**	**-1.2**
	baz=306							
NWF				*e*S		**Sb**	**05 53 20.3**	**-1.9**
	baz=306							
WFSB	**Wu-fen Shan**	**0.36**	**315**	⇑P		**Pb**	**05 53 15.2**	**-1.1**
	baz=306							
WFSB				S		**Sb**	**05 53 20.2**	**-1.9**
	baz=306							
TWE	**Neicheng**	**0.37**	**255**	⇓*i*P		**Pg**	**05 53 15.1**	**+0.1**
	baz=252							
TWE				S		**Sg**	**05 53 20.0**	**+0.1**
	baz=252							
SLBB	**Yuanshan**	**0.39**	**260**	⇓P		**Pg**	**05 53 14.7**	**-0.7**
	baz=259							
SLBB				*e*S		**Sg**	**05 53 20.7**	**+0.2**
	baz=259							
TWA	**Mucha**	**0.46**	**290**	⇑P		**Pb**	**05 53 17.1**	**-1.0**
	baz=280							
TWA				S		**Sb**	**05 53 23.5**	**-1.7**
	baz=280							
NANB	**Nanao**	**0.48**	**216**	⇓*e*P		**Pg**	**05 53 17.0**	**-0.1**
	baz=222							
NANB				*e*S		**Sg**	**05 53 23.2**	**-0.2**
	baz=222							
ENTT	**Nioudou**	**0.48**	**248**	*e*P		**Pb**	**05 53 17.4**	**-1.1**
	baz=247							
ENA	**Nanau**	**0.49**	**217**	*e*P		**Pg**	**05 53 17.1**	**0.0**
	baz=222							
ENA				*e*S		**Sg**	**05 53 24.0**	**+0.5**
	baz=222							
NHDH	**Xindian Distri**	**0.51**	**287**	*e*P		**Pb**	**05 53 18.5**	**-0.4**
	baz=277							
NHDH				*e*S		**Sb**	**05 53 25.5**	**-0.9**
	baz=277							
NWLT	**Wulai**	**0.51**	**265**	⇓*e*P		**Pg**	**05 53 17.6**	**+0.1**
	baz=264							
NWLT				*e*S		**Sg**	**05 53 24.4**	**+0.2**
	baz=264							
TAP1	**Taipei**	**0.53**	**294**	⇑P		**Pb**	**05 53 19.2**	**-0.2**
	baz=284							
TAP1				S		**Sb**	**05 53 26.3**	**-0.9**
	baz=284							
NDT	**Datong Townshi**	**0.54**	**247**	*e*P		**Pg**	**05 53 18.3**	**+0.1**
	baz=246							
NDT				*e*S		**Sb**	**05 53 25.9**	**-1.6**
	baz=246							
TATO	**Taipei**	**0.54**	**287**	⇑P		**Pb**	**05 53 18.7**	**-0.8**
	baz=277							
TATO				S		**Sb**	**05 53 26.0**	**-1.5**
	baz=277							
TAP	**Taipei**	**0.55**	**294**	P		**Pb**	**05 53 19.0**	**-0.6**
	baz=284							
TAP				S		**Sb**	**05 53 26.7**	**-1.0**
	baz=284							
YM01	**YM01**	**0.55**	**306**	⇑*i*P		**Pb**	**05 53 19.2**	**-0.4**
	baz=296							
YM01				*e*S		**Sb**	**05 53 26.1**	**-1.7**
	baz=296							
YM11	**YM11**	**0.56**	**308**	⇑*i*P		**Pb**	**05 53 19.4**	**-0.4**
	baz=298							
YM11				*e*S		**Sb**	**05 53 28.0**	**0.0**
	baz=298							
YM08	**YM08**	**0.56**	**311**	⇑*i*P		**Pb**	**05 53 19.2**	**-0.7**
	baz=298							
YM08				*e*S		**Sg**	**05 53 25.8**	**-0.2**
	baz=298							
YM10	**YM10**	**0.56**	**307**	⇑*i*P		**Pb**	**05 53 19.4**	**-0.5**
	baz=304							
YM10				*e*S		**Sb**	**05 53 27.9**	**-0.2**
	baz=304							
YM03	**YM03**	**0.59**	**307**	⇑P		**Pb**	**05 53 19.8**	**-0.6**
	baz=296							
YM03				S		**Sb**	**05 53 28.1**	**-0.9**
	baz=296							
ANP	**Anpu**	**0.61**	**307**	*e*P		**Pb**	**05 53 20.1**	**-0.6**
	baz=306							
TWY	**Chenhua**	**0.62**	**318**	⇑P		**Pb**	**05 53 20.4**	**-0.3**
	baz=316							
TWY				*e*S		**Sb**	**05 53 29.4**	**-0.3**
	baz=316							
YHNB	**Yeheng**	**0.64**	**257**	⇓*i*P		**Pg**	**05 53 19.9**	**-0.2**
	baz=249							
YHNB				S		**Sg**	**05 53 28.3**	**-0.2**
	baz=249							
TWS1	**Kuangyinshan**	**0.65**	**296**	P		**Pb**	**05 53 21.4**	**+0.1**
	baz=295							
TWS1				*e*S		**Sb**	**05 53 30.4**	**-0.1**
	baz=295							
NSK	**Sanguang**	**0.65**	**258**	⇓P		**Pg**	**05 53 20.1**	**-0.3**
	baz=256							
NSK				*e*S		**Sg**	**05 53 28.2**	**-0.7**
	baz=256							
NNSB	**Datong**	**0.73**	**238**	⇑*e*P		**Pg**	**05 53 21.5**	**-0.3**
	baz=244							
NNSB				*e*S		**Sb**	**05 53 31.9**	**-1.0**
	baz=244							
NNSH	**Datong**	**0.73**	**238**	*e*P		**Pb**	**05 53 22.0**	**-0.8**
	baz=238							
NNSH				*e*S		**Sg**	**05 53 31.3**	**0.0**
	baz=238							
NNS	**Nan Shan**	**0.73**	**239**	*e*P		**Pg**	**05 53 21.8**	**0.0**
	baz=244							
NNS				*e*S		**Sg**	**05 53 31.6**	**+0.2**
	baz=244							
WLTB	**Daxi**	**0.73**	**273**	*e*P		**Pb**	**05 53 22.8**	**0.0**
	baz=272							
WLTB				*e*S		**Sb**	**05 53 32.7**	**-0.2**
	baz=272							
NACB	**Ninganchiao**	**0.77**	**214**	P		**Pg**	**05 53 22.2**	**-0.4**
	baz=203							
NACB				S		**Sb**	**05 53 33.1**	**-0.9**
	baz=203							
ETLH	**Xiulin Townshi**	**0.81**	**221**	*e*P		**Pb**	**05 53 23.5**	**-0.5**
	baz=231							
ETLH				*e*S		**Sb**	**05 53 35.0**	**-0.1**
	baz=231							
NCU	**National Centr**	**0.81**	**281**	*e*P		**Pn**	**05 53 24.3**	**-1.1**
	baz=279							
NCU				*e*S		**Sn**	**05 53 36.4**	**-1.2**
	baz=279							
PCYT	**Pengchaiyu**	**0.81**	**1**	*e*P		**Pb**	**05 53 23.8**	**-0.2**
	baz=354							
NCUH	**Zhongli**	**0.81**	**281**	*e*P		**Pn**	**05 53 24.8**	**-0.6**
	baz=279							
TWD	**Chiawan**	**0.85**	**210**	*e*P		**Pg**	**05 53 23.8**	**-0.2**
	baz=198							
TWD				*e*S		**Sg**	**05 53 35.2**	**+0.1**
	baz=198							
JYNG	**Yonagunijimaku**	**0.89**	**114**	P		**Pg**	**05 53 25.0**	**+0.3**
JYNG				S		**Sb**	**05 53 37.4**	**+0.1**
HWA	**Hwalien**	**0.94**	**206**	*e*P		**Pn**	**05 53 26.7**	**-0.4**
	baz=215							
HWA				*e*S		**Sn**	**05 53 40.0**	**-0.8**
	baz=215							
YOJ	**Yonaguni jima**	**0.94**	**112**	*e*P		**Pg**	**05 53 25.8**	**+0.1**
	baz=113							
YOJ				*e*S		**Sg**	**05 53 38.5**	**+0.6**
	baz=113							
YOJ	**Yonaguni jima**	**0.94**	**112**	P		**Pg**	**05 53 25.8**	**+0.1**
YOJ				*e*S		**Sg**	**05 53 38.5**	**+0.6**
LIOB	**Emei**	**0.96**	**260**	*e*P		**Pn**	**05 53 27.1**	**-0.6**
	baz=259							
LIOB				*e*S		**Sn**	**05 53 41.3**	**-0.3**
	baz=259							
SBCB	**Hsinchu**	**0.98**	**269**	*e*P		**Pn**	**05 53 27.7**	**-0.1**
	baz=284							
SBCB				*e*S		**Sn**	**05 53 41.4**	**-0.4**
	baz=284							
NSTT	**Nanjuang**	**0.98**	**259**	*e*P		**Pn**	**05 53 27.2**	**-0.6**
	baz=251							
TWT	**Tachien**	**0.98**	**235**	*e*P		**Pb**	**05 53 27.1**	**0.0**
	baz=228							
TWT				*e*S		**Sn**	**05 53 40.8**	**-1.4**
	baz=228							
WHF	**Hehuan Shan**	**0.99**	**227**	*e*P		**Pg**	**05 53 26.7**	**-0.1**
	baz=228							
WHF				*e*S		**Sb**	**05 53 40.3**	**-0.4**
	baz=228							
HSN	**Hsinchu**	**0.99**	**269**	*e*P		**Pn**	**05 53 27.4**	**-0.6**
	baz=285							
HSN				*e*S		**Sn**	**05 53 40.9**	**-1.2**
	baz=285							
TDCB	**Techi**	**1.00**	**236**	*e*P		**Pb**	**05 53 26.8**	**-0.5**
	baz=231							
TDCB				*e*S		**Sb**	**05 53 40.4**	**-0.2**
	baz=231							
ENLB	**Shoufeng**	**1.00**	**205**	*e*P		**Pn**	**05 53 27.4**	**-0.7**
	baz=216							
ENLB				*e*S		**Sn**	**05 53 42.8**	**+0.4**
	baz=216							
CHGB	**Renai**	**1.11**	**227**	*e*P		**Pg**	**05 53 28.7**	**-0.3**
	baz=229							
CHGB				*e*S		**Sb**	**05 53 44.0**	**+0.1**
	baz=229							
WHP	**Taichung City**	**1.15**	**242**	*e*P		**Pn**	**05 53 30.0**	**-0.2**
	baz=243							
ESL	**Shilin**	**1.15**	**210**	*e*P		**Pb**	**05 53 29.4**	**-0.5**
	baz=211							
ESL				*e*S		**Sg**	**05 53 44.7**	**-0.1**
	baz=211							
OWD	**Renai**	**1.18**	**223**	*e*P		**Pb**	**05 53 29.9**	**-0.5**
	baz=230							
OWD				*e*S		**Sn**	**05 53 46.5**	**-0.5**
	baz=230							
NMLH	**Miaoli**	**1.19**	**257**	*e*P		**Pn**	**05 53 31.4**	**+0.7**
	baz=257							
NMLH				*e*S		**Sn**	**05 53 48.9**	**+1.9**
	baz=257							
NSY	**Sanyi**	**1.25**	**252**	*e*P		**Pg**	**05 53 32.8**	**+1.1**
	baz=269							
TWQ1	**Liyutan**	**1.26**	**248**	*e*P		**Pg**	**05 53 32.8**	**+0.9**
	baz=249							
TWQ1				*e*S		**Sn**	**05 53 50.1**	**+1.3**
	baz=249							
EGFH	**Guangfu**	**1.28**	**207**	*e*P		**Pb**	**05 53 32.0**	**-0.1**
	baz=224							
PTSB	**Yuanli**	**1.29**	**254**	*e*P		**Pg**	**05 53 32.6**	**+0.2**
	baz=271							
DPDB	**Guoxing**	**1.30**	**233**	*e*P		**Pg**	**05 53 32.4**	**-0.2**
	baz=224							
VWDT	**VWDT**	**1.35**	**219**	P		**Pg**	**05 53 33.3**	**-0.4**
	baz=230							
VWDT				*e*S		**Sb**	**05 53 50.1**	**-0.6**
	baz=230							
WDJ	**Dajia District**	**1.38**	**250**	*e*P		**Pg**	**05 53 34.8**	**+0.6**
	baz=267							
TYC	**Yuchr**	**1.43**	**231**	*e*P		**Pg**	**05 53 34.5**	**-0.5**
	baz=222							
TCU	**Taichung**	**1.43**	**242**	*e*P		**Pg**	**05 53 36.4**	**+1.2**
	baz=262							
SSLB	**Suanglung**	**1.44**	**225**	*e*P		**Pb**	**05 53 34.4**	**-0.5**
	baz=227							
SSLB				*e*S		**Sg**	**05 53 53.6**	**-0.5**
	baz=227							
HGSD	**Ruisui**	**1.44**	**204**	*e*P		**Pg**	**05 53 35.3**	**-0.1**
	baz=222							
EHY	**Hungye**	**1.47**	**207**	*e*P		**Pb**	**05 53 34.7**	**-0.7**
	baz=220							
WCHH	**Zhanghua**	**1.55**	**242**	*e*P		**Pb**	**05 53 36.5**	**-0.3**
	baz=261							
WNT	**Mingjian**	**1.57**	**234**	*e*P		**Pg**	**05 53 38.4**	**+0.6**
	baz=226							
WJS	**Zhushan**	**1.57**	**231**	*e*P		**Pg**	**05 53 37.5**	**-0.3**
	baz=224							
WJS				*e*S		**Sg**	**05 54 00.2**	**+2.0**
	baz=224							
WHYT	**Xinyi Township**	**1.57**	**225**	*e*P		**Pg**	**05 53 38.0**	**+0.1**
	baz=227							
YULB	**Yu-li**	**1.58**	**206**	*e*P		**Pb**	**05 53 36.8**	**-0.4**
	baz=220							
YULB				*e*S		**Sb**	**05 53 57.6**	**+0.2**
	baz=220							
IRIF	**Iriomote-Funau**	**1.59**	**107**	P		**Pn**	**05 53 34.5**	**-1.7**
TWF1	**Yuli**	**1.62**	**206**	*e*P		**Pb**	**05 53 37.0**	**-0.9**
	baz=219							
YUS	**Yu-Shan**	**1.67**	**218**	*e*P		**Pb**	**05 53 38.6**	**-0.3**
	baz=229							
ALS	**Alishan**	**1.73**	**222**	*e*P		**Pb**	**05 53 40.2**	**+0.2**
	baz=211							
CHN5	**Tsauling**	**1.75**	**226**	*e*P		**Pg**	**05 53 41.2**	**-0.1**
	baz=229							
FULB	**Fuli**	**1.76**	**204**	*e*P		**Pn**	**05 53 39.1**	**+0.5**
	baz=220							
HATJ	**Hateruma jima**	**1.76**	**115**	P		**Pn**	**05 53 37.9**	**-0.7**
WDLH	**Douliu**	**1.79**	**231**	*e*P		**Pg**	**05 53 41.2**	**-0.8**
	baz=234							
JKRS	**Kuro-shima**	**1.87**	**108**	P		**Pn**	**05 53 39.0**	**-1.0**
ELDTW	**Lidau**	**1.88**	**211**	*e*P		**Pb**	**05 53 41.5**	**-0.9**
	baz=190							
JIJ	**Ishigaki jima**	**1.95**	**103**	P		**Pn**	**05 53 40.5**	**-0.6**
CHN4	**Tsaushan**	**1.98**	**223**	*e*P		**Pg**	**05 53 44.9**	**-0.9**
	baz=230							
CHN4				*e*S		**Sg**	**05 54 12.3**	**+0.8**
	baz=230							
CHY	**Chiayi**	**1.99**	**229**	*e*P		**Pb**	**05 53 44.7**	**+0.5**
	baz=232							
TPUB	**Ta-pu**	**2.00**	**221**	*e*P		**Pb**	**05 53 44.8**	**+0.5**
	baz=214							
TPUB				*e*S		**Sg**	**05 54 10.6**	**-1.4**
	baz=214							
STYT	**Tauyuan**	**2.03**	**216**	*e*P		**Pb**	**05 53 45.5**	**+0.5**
	baz=220							
WTP	**Ta-pu**	**2.05**	**220**	*e*P		**Pb**	**05 53 45.4**	**+0.1**
	baz=213							
WTP				*e*S		**Sg**	**05 54 14.7**	**+1.1**
	baz=213							
JISG	**Ishigakijimahi**	**2.06**	**96**	P		**Pn**	**05 53 41.7**	**-0.9**
TWK	**Hsinying**	**2.11**	**223**	*e*P		**Pb**	**05 53 46.0**	**-0.2**
	baz=230							
TWK				*e*S		**Sg**	**05 54 15.8**	**+0.2**
	baz=230							
SNST	**Tainan City**	**2.14**	**222**	*e*P		**Pb**	**05 53 46.6**	**-0.1**
	baz=226							
CHN1	**Nanshi**	**2.15**	**221**	*e*P		**Pb**	**05 53 46.6**	**-0.3**
	baz=225							
PTTC	**Pingtan**	**2.18**	**289**	*e*P		**Pn**	**05 53 43.5**	**-0.8**
	baz=285							
TWG	**Pinlang**	**2.19**	**205**	*e*P		**Pb**	**05 53 46.8**	**-0.7**
	baz=184							
SGST	**Jiashian**	**2.19**	**218**	*e*P		**Pb**	**05 53 46.1**	**-1.6**
	baz=209							
SLGT	**Liugui**	**2.23**	**216**	*e*P		**Pb**	**05 53 48.2**	**-0.1**
	baz=220							
MATB	**Ma-tsu**	**2.33**	**305**	*e*P		**Pn**	**05 53 47.0**	**+0.7**
	baz=299							
SCLT	**Jiali**	**2.37**	**227**	*e*P		**Pb**	**05 53 48.5**	**-2.0**
	baz=230							
VWUC	**VWUC**	**2.38**	**275**	*e*P		**Pn**	**05 53 46.9**	**-0.1**
	baz=273							
ECL	**Taimali**	**2.43**	**205**	*e*P		**Pb**	**05 53 49.8**	**-1.9**
	baz=186							
SSD	**Sandimen**	**2.44**	**213**	*e*P		**Pb**	**05 53 49.9**	**-2.1**
	baz=217							
TWM1	**Shoushan**	**2.49**	**217**	*e*P		**Pb**	**05 53 53.0**	**+0.2**
	baz=221							
MASBT	**Mashibuluo**	**2.56**	**211**	*e*P		**Pb**	**05 53 53.0**	**-0.9**
	baz=216							
PHUB	**P'eng-hu**	**2.62**	**241**

MKAR	**Makanchi Array**	**38.45**	**315**	P		**P**	**06 00 31.2**	**+1.2**
	0.6nm,0.7s,baz=90,slow=11,SNR=6.6							
ZALV	**Zalesovo Beam**	**40.15**	**326**	P		**P**	**06 00 45.1**	**+1.0**
	2.9nm,0.3s,baz=119,slow=8.4,SNR=9.2							
ZALV				LR		LR	06 17 07.6	
	comp=Z,23nm,20.1s,baz=50,slow=35							
WRA	**Warramunga Arr**	**46.07**	**164**	P		**P**	**06 01 31.8**	**-0.6**
	2.2nm,0.7s,baz=345,slow=8.4,SNR=8.1							
ASAR	**Alice Springs**	**49.55**	**166**	P		**P**	**06 02 00.2**	**+0.9**
	0.4nm,0.8s,baz=342,slow=5.8,SNR=3.5							
DZM	**Mont Dzumac**	**63.48**	**134**	LR		LR	06 30 13.2	
	comp=Z,206nm,18.5s,baz=2.0,slow=35							
NOA	**NORSAR Array B**	**78.04**	**332**	LR		LR	06 43 47.1	
	comp=Z,17nm,19.7s,baz=340,slow=39							
YKA	**Yellowknife Ar**	**82.08**	**23**	P		**P**	**06 05 28.5**	**+0.1**
	0.2nm,0.6s,baz=311,slow=5.1,SNR=4.5							

MAN 21 05:57:47.8, 17°.89N×121°.65E, h9km, mb4.6, ML3.4, MS3.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CVP	**Callao Caves**	**0.25**	**137**	*i* P	Pg	05 57 53.9	+1.0
CVP				*i* S	Sg	05 57 57.9	+1.7
APYP	**Conner**	**0.39**	**267**	*e*P	Pb	05 57 56.2	-0.6
APYP				*e*S	Sb	05 58 05.4	+2.5
SGCP	**Mt. Cagua**	**0.52**	**47**	*e*P	Pg	05 57 54.3	-3.7
SGCP				*e*S	Sg	05 58 00.3	-4.5
ABRA	**Dolores**	**0.92**	**255**	*e*P	Pg	05 58 04.9	-0.6
ABRA				*e*S	Sb	05 58 18.4	+0.1
CAUP	**Cauayan**	**0.95**	**170**	*e*P	Pn	05 58 07.6	+0.2
SIPP	**Brgy, Tapao**	**1.13**	**272**⇑	*e*P	Pb	05 58 08.6	-1.0
SIPP				*e*S	Sg	05 58 21.9	-2.4
SMPP	**San Manuel, Pa**	**1.96**	**208**	*e*P	Pn	05 58 21.7	+0.5
SMPP				*e*S	Sg	05 58 50.3	-0.5
BALP	**Baler**	**2.13**	**182**	*e*P	Pn	05 58 22.6	-1.1
BALP				*e*S	Sn	05 58 51.0	+0.7
BOLP	**Bolinao**	**2.23**	**228**	*e*P	Pn	05 58 25.9	+0.8
BOLP				*e*S	Sb	05 58 55.9	-0.3

*IDC **21** 06:11:57.6±2.6, 24°.43N×141°.92E, h52km±22km, mb3.7/13, mb1 3.9/14, mb1mx3.6/52, mbtmp3.9/14, ML3.6/1, MS2.7/5, Ms1 2.7/5, ms1mx2.5/46, Error ellipse: s-maj=28.0km s-min=14.9km az=98.0*
*NEIC **21** 06:11:57.8±0.9, 24°.41N±0°.10×141°.9E±0°.2, h54km±7km, mb4.2/3, Error ellipse: s-maj=22.6km s-min=14.4km az=94.0*
ISC 21 06:11:55.5±0.8, 24°.33N±0°.10×141°.9E±0°.2, h35km, n28, σ0°82/19, mb4.0/16, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.76**	**5**	P	**Pn**	**06 12 38.9**	**+1.6**
	12nm,0.3s,baz=131,slow=20,SNR=10						
JCJ				S	**Sn**	**06 13 09.7**	**+0.3**
	40nm,0.3s,baz=252,slow=20,SNR=6.0						
GUMO	**Guam**	**11.04**	**165**	LR	LR	06 18 18.4	
	comp=Z,26nm,20.5s,baz=150,slow=34						
JNU	**Nakatsue**	**13.06**	**315**	LR	LR	06 18 33.4	
	comp=Z,31nm,21.1s,baz=322,slow=30						
KSRS	**Korea Array**	**17.74**	**321**	LR	LR	06 22 25.2	
	comp=Z,19nm,18.4s,baz=60,slow=36						
ASAJ	**Asahikawa**	**19.74**	**1**	LR	LR	06 25 55.1	
	comp=Z,16nm,20.6s,baz=174,slow=43						
H11N1	**WAKE ISLAND Hy**	**23.58**	**96**	T	T	06 42 05.7	
	baz=287						
H11N2	**WAKE ISLAND Hy**	**23.58**	**96**	T	T	06 42 02.6	
	baz=287,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**23.59**	**96**	T	T	06 42 22.6	
	baz=287						
H11S3	**WAKE ISLAND Hy**	**23.75**	**99**	T	T	06 42 40.9	
	baz=289,slow=74,SNR=17						
H11S1	**WAKE ISLAND Hy**	**23.76**	**99**	T	T	06 42 41.2	
	baz=289,slow=74,SNR=14						
H11S2	**WAKE ISLAND Hy**	**23.77**	**99**	T	T	06 42 40.6	
	baz=289,slow=74,SNR=10						
KLR	**Kul'dur**	**26.11**	**345**	P	**P**	**06 17 24.8**	**-1.2**
	1.5nm,0.6s,baz=168,slow=7.3,SNR=6.8						
KLR				LR	LR	06 26 22.4	
	comp=Z,35nm,20.9s,baz=295,slow=33						
SEY	**Seymchan**	**39.22**	**8**	P	**P**	**06 19 19.3**	**-0.7**
	1.0nm,0.5s,baz=215,slow=2.2,SNR=3.7						
WR0	**Warramunga Arr**	**44.61**	**190**	P	**P**	**06 20 05.2**	**+0.7**
WR0				IAmb	IAmb	06 20 06.1	
	comp=Z,3.8nm,1.1s						
WRAB	**Tennant Creek**	**44.61**	**190**	P	**P**	**06 20 05.5**	**+0.9**
WRAB				IAmb	IAmb	06 20 08.1	
	comp=Z,6.0nm,0.5s						
WRA	**Warramunga Arr**	**44.62**	**190**	P	**P**	**06 20 05.6**	**+0.9**
	comp=Z,2.6nm,0.4s,baz=10.0,slow=8.5,SNR=20						
ASAR	**Alice Springs**	**48.34**	**190**	P	**P**	**06 20 34.5**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=15,slow=9.4,SNR=10						
MK31	**Makanchi Array**	**52.09**	**311**	P	**P**	**06 21 02.5**	**+0.5**
MK31				IAmb	IAmb	06 21 03.0	
	comp=Z,1.3nm,1.1s						
MKAR	**Makanchi Array**	**52.09**	**311**	P	**P**	**06 21 02.4**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=90,slow=9.8,SNR=8.3						
ILAR	**Eielson Array**	**60.24**	**28**	P	**P**	**06 21 59.8**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=261,slow=6.0,SNR=12						
INK	**Inuvik**	**65.63**	**24**	P	**P**	**06 22 35.5**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=300,slow=5.3,SNR=5.2						
YKA	**Yellowknife Ar**	**74.68**	**28**	P	**P**	**06 23 31.2**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=292,slow=5.9,SNR=18						
ARCES	**ARCESS Array B**	**76.07**	**341**	P	**P**	**06 23 39.1**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=74,slow=8.9,SNR=9.7						
KBZ	**Khabaz**	**79.72**	**313**	P	**P**	**06 24 00.2**	**+0.4**
	comp=Z,1.5nm,0.7s,baz=93,slow=6.5,SNR=4.1						
FINES	**FINESS Array B**	**80.32**	**334**	P	**P**	**06 24 02.0**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=64,slow=6.3,SNR=10						
NVAR	**Mina Array Bea**	**82.41**	**51**	P	**P**	**06 24 14.7**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=312,slow=6.5,SNR=4.3						
AKASG	**Malin Array Be**	**84.70**	**324**	P	**P**	**06 24 24.6**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=50,slow=5.3,SNR=2.8						
LPAZ	**La Paz**	**150.74**	**80**	PKPbc	**PKPbc**	**06 31 44.5**	**-1.1**
	comp=Z,0.4nm,0.5s,baz=34,slow=3.6,SNR=3.1						

*IDC **21** 06:21:29.3±4.0, 6°.10S×103°.23E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/40, mbtmp3.7/5, Error ellipse: s-maj=180.5km s-min=23.8km az=52.0*
*DJA **21** 06:21:32.8±0.8, 6°.5×6°×10°.4E±°, h10km, M4.0/5, MLv4.0/5*
ISC 21 06:21:35.4±1.2, 6°.0S±0°.1×103°.5E±0°.1, h38km, n13, σ1°12/15, mb3.6/5, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KASI	**Kota Agung**	**1.10**	**63**	P	**Pn**	**06 21 52.4**	**-1.8**
KASI				S	**Sn**	**06 22 07.3**	**-0.8**
LWLI	**Liwa**	**1.14**	**28**	P	**Pn**	**06 21 53.8**	**-1.2**
LWLI				S	**Sn**	**06 22 08.8**	**-0.6**
MDSI	**Maura Dua**	**1.67**	**23**	P	**Pn**	**06 22 01.6**	**-0.5**
MDSI				S	**Sn**	**06 22 23.2**	**+0.9**
KLSI		**1.80**	**42**	P	**Pn**	**06 22 04.5**	**+0.6**
KLSI				S	**Sn**	**06 22 27.6**	**+2.1**
H08S2	**Diego Garcia H**	**30.84**	**265**	T	T	06 59 26.6	
	baz=92						
H08S3	**Diego Garcia H**	**30.85**	**265**	T	T	06 59 28.5	
	baz=92,SNR=2.1						
H08S1	**Diego Carcia H**	**30.86**	**265**	T	T	06 59 49.8	
	baz=92						
WRA	**Warramunga Arr**	**32.98**	**118**	P	**P**	**06 28 07.5**	**+0.6**
	0.4nm,0.7s,baz=287,slow=9.7,SNR=3.2						
ASAR	**Alice Springs**	**34.08**	**124**	P	**P**	**06 28 17.6**	**+1.1**
	0.3nm,0.7s,baz=305,slow=8.2,SNR=3.8						
SONM	**Songino Array**	**53.70**	**2**	P	**P**	**06 30 53.6**	**+0.1**
	0.3nm,0.5s,baz=169,slow=8.2,SNR=4.2						
SONM				PcP	**PcP**	**06 31 59.3**	**-0.1**
	0.3nm,0.4s,baz=202,slow=2.0,SNR=3.0						
MKAR	**Makanchi Array**	**55.87**	**343**	P	**P**	**06 31 08.5**	**-0.7**
	1.2nm,0.5s,baz=146,slow=7.8,SNR=18						
ZALV	**Zalesovo Beam**	**61.80**	**348**	P	**P**	**06 31 49.4**	**-0.8**
	1.3nm,0.3s,baz=168,slow=5.5,SNR=4.9						
TXAR	**Lajitas Array**	**145.42**	**45**	PKPbc	**PKPab**	**06 41 11.1**	**+0.8**
	0.6nm,0.6s,baz=292,slow=0.5,SNR=6.5						

*CNRM **21** 06:48:44.9±1.0, 36°.46N×7°.40W, h30km, Error ellipse: s-maj=14.1km s-min=5.7km az=74.0*
*MDD **21** 06:48:50.2±0.7, 36°.68N×7°.27W, h40km±20km, mb3.6/10, Error ellipse: s-maj=7.5km s-min=4.4km az=22.0, PRXIMO*
*INMG **21** 06:48:50.7±1.3, 36°.68N×7°.27W, h32km±4km, ML1.9, Error ellipse: s-maj=2.8km s-min=2.7km az=12.0*

*IGIL **21** 06:48:50.8, 36°.68N×7°.35W, h27km, ML1.7*
ISC 21 06:48:47.9±1.2, 36°.63N±0°.04×7°.25W±0°.03, h35km, n47, σ1°57/86, 3C-1D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBDV	**Barranco-do-Ve**	**0.82**	**318**	*i* P	**Pn**	**06 49 04.0**	**+0.9**
PBDV				*e*S	**Sn**	**06 49 13.9**	**-0.2**
PBDV				A	A	06 49 14.9	
	27nm,0.2s						
PBDV	**Barranco-do-Ve**	**0.82**	**318**	P	**Pn**	**06 49 04.0**	**+0.9**
PBDV				S	**Sn**	**06 49 13.9**	**-0.2**
	27nm,0.2s						
PVAQ	**Vaqueiros**	**0.86**	**334**⇑	*i* P	**Pn**	**06 49 04.7**	**+1.1**
PVAQ				*e*S	**Sn**	**06 49 15.1**	**+0.1**
PVAQ				A	A	06 49 15.8	
	38nm,0.2s						
PVAQ	**Vaqueiros**	**0.86**	**334**	P	**Pn**	**06 49 04.7**	**+1.1**
PVAQ				S	**Sn**	**06 49 15.1**	**+0.1**
	38nm,0.2s						
PVAQ	**Vaqueiros**	**0.86**	**334**	P	**Pn**	**06 49 02.2**	**-1.3**
PVAQ				S	**Sn**	**06 49 15.9**	**+0.9**
EGRO	**El Granado**	**0.93**	**348**	⇓P	**Pn**	**06 49 05.7**	**+1.2**
	1.5nm,0.1s,SNR=18						
EGRO				S	**Sn**	**06 49 16.5**	**0.0**
	33nm,0.1s,SNR=42						
PCVE	**Castro Verde**	**1.19**	**328**	*e*P	**Pn**	**06 49 09.3**	**+1.2**
PCVE				*e*S	**Sn**	**06 49 23.2**	**+0.2**
PCVE				A	A	06 49 23.6	
	28nm,0.3s						
PCVE	**Castro Verde**	**1.19**	**328**	P	**Pn**	**06 49 09.3**	**+1.2**
PCVE				S	**Sn**	**06 49 23.2**	**+0.2**
	28nm,0.3s						
EMIN	**Mina Concepcio**	**1.23**	**22**	P	**Pn**	**06 49 09.7**	**+1.1**
	1.8nm,0.1s,SNR=29						
EMIN				S	**Sn**	**06 49 23.6**	**-0.4**
	5.3nm,0.1s,SNR=11						
MORF	**Marmelete**	**1.31**	**302**	*e*P	**Pn**	**06 49 10.5**	**+0.7**
MORF				*e*S	**Sn**	**06 49 25.2**	**-0.9**
MORF				AML	AML	06 49 27.1	
	comp=N,11nm,0.2s						
MORF	**Marmelete**	**1.31**	**302**	*e*P	**Pn**	**06 49 10.6**	**+0.7**
MORF				*e*S	**Sn**	**06 49 25.8**	**-0.4**
MORF				A	A	06 49 26.4	
	comp=N,11nm,0.4s						
MORF	**Marmelete**	**1.31**	**302**	P	**Pn**	**06 49 10.6**	**+0.7**
MORF				S	**Sn**	**06 49 25.8**	**-0.4**
	comp=N,11nm,0.4s						
PFVI	**Vila Bisbo**	**1.36**	**292**	*e*P	**Pn**	**06 49 11.3**	**+0.8**
PFVI				*e*S	**Sn**	**06 49 27.0**	**-0.4**
PFVI				A	A	06 49 34.2	
	comp=N,6.4nm,0.3s						
PFVI	**Vila Bisbo**	**1.36**	**292**	P	**Pn**	**06 49 11.3**	**+0.8**
	comp=N,2.7nm,0.1s,SNR=16						
PFVI				S	**Sn**	**06 49 27.0**	**-0.4**
	comp=N,6.3nm,0.1s,SNR=6.9						
PBEJ	**Beja**	**1.48**	**341**	*e*S	**Sn**	**06 49 29.5**	**-0.8**
PBEJ				A	A	06 49 37.3	
	comp=N,7.3nm,0.3s						
PBEJ	**Beja**	**1.48**	**341**	S	**Sn**	**06 49 29.5**	**-0.8**
	comp=N,3.7nm,0.3s						
PTEO	**Sao Teotonio**	**1.50**	**308**⇑	*i* eP	**Pn**	**06 49 13.5**	**+1.2**
PTEO				*e*S	**Sn**	**06 49 30.6**	**0.0**
PTEO	**Sao Teotonio**	**1.50**	**308**	P	**Pn**	**06 49 13.5**	**+1.2**
PTEO				S	**Sn**	**06 49 30.6**	**0.0**
PBAR	**Barrancos**	**1.56**	**6**	*e*P	**Pn**	**06 49 14.6**	**+1.5**
PBAR				*e*S	**Sn**	**06 49 32.5**	**+0.5**
PBAR	**Barrancos**	**1.56**	**6**	P	**Pn**	**06 49 14.6**	**+1.5**
PBAR				S	**Sn**	**06 49 32.5**	**+0.5**
ECEU	**Ceuta**	**1.68**	**115**	P	**Pn**	**06 49 17.4**	**+2.6**
	comp=N,3.6nm,0.1s,SNR=7.9						
PNCL	**Nicolau / Gran**	**1.80**	**326**	*e*P	**Pn**	**06 49 17.6**	**+1.1**
PNCL				*e*S	**Sn**	**06 49 36.8**	**-1.3**
PNCL				A	A	06 49 48.2	
	comp=N,8.6nm,0.3s						
PNCL	**Nicolau / Gran**	**1.80**	**326**	P	**Pn**	**06 49 17.6**	**+1.1**
PNCL				S	**Sn**	**06 49 36.8**	**-1.3**
	comp=N,8.6nm,0.3s						
EMIJ	**Mijas**	**1.99**	**91**	S	**Sn**	**06 49 44.0**	**+1.2**
	comp=N,20nm,8.4s,SNR=7.9						
HORN	**Hornachuelos**	**2.00**	**52**	P	**Pn**	**06 49 18.0**	**-1.2**
HORN				S	**Sn**	**06 49 47.1**	**+4.1**
ECAB	**El Cabril**	**2.05**	**45**	P	**Pn**	**06 49 21.1**	**+1.1**
	comp=N,0.1nm,0.0s,SNR=7.9						
ECAB				S	**Sn**	**06 49 43.5**	**-0.9**
	comp=N,1.0nm,0.0s,SNR=12						
EBAD	**Badajoz**	**2.13**	**5**	P	**Pn**	**06 49 22.1**	**+1.1**
	comp=N,0.4nm,0.1s,SNR=6.4						
EBAD				S	**Sn**	**06 49 45.5**	**-0.9**
	comp=N,3.8nm,0.1s,SNR=10						
PESTR	**Estremoz**	**2.25**	**353**	*e*P	**Pn**	**06 49 23.8**	**+1.1**
PESTR				*e*S	**Sn**	**06 49 48.6**	**-0.7**
PESTR				A	A	06 50 00.7	
	comp=N,3.0nm,0.4s						
PMTG	**Montargil**	**2.56**	**343**	*e*P	**Pn**	**06 49 28.3**	**+1.4**
PMTG				*e*S	**Sn**	**06 49 56.5**	**-0.3**
PMTG				A	A	06 49 57.8	
	comp=N,4.7nm,0.6s						
PMTG	**Montargil**	**2.56**	**343**	P	**Pn**	**06 49 28.3**	**+1.4**
PMTG				S	**Sn**	**06 49 56.5**	**-0.3**
	comp=N,4.7nm,0.6s						
EGOR	**Sierra Gorda,**	**2.56**	**78**	P	**Pn**	**06 49 28.6**	**+1.5**
	comp=N,0.1nm,0.0s,SNR=4.0						
EGOR				S	**Sn**	**06 49 56.8**	**-0.3**
	comp=N,6.8nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**2.62**	**53**	P	**Pn**	**06 49 29.2**	**+1.4**
	comp=N,0.2nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**06 49 57.7**	**-0.8**
	comp=N,2.8nm,0.1s,SNR=7.9						
PMRV	**Marv??o**	**2.80**	**358**	*e*P	**Pn**	**06 49 31.4**	**+1.2**
PMRV				*e*S	**Sn**	**06 50 01.3**	**-1.5**
PMRV				A	A	06 50 04.2	
	comp=N,2.7nm,0.3s						
PMRV	**Marv??o**	**2.80**	**358**	P	**Pn**	**06 49 31.4**	**+1.2**
PMRV				S	**Sn**	**06 50 01.3**	**-1.5**
	comp=N,2.7nm,0.3s						
PMAFR	**Mafra**	**2.83**	**326**	*e*P	**Pn**	**06 49 32.2**	**+1.6**
PMAFR				*e*S	**Sn**	**06 50 03.1**	**-0.4**
PMAFR	**Mafra**	**2.83**	**326**	P	**Pn**	**06 49 32.1**	**+1.4**
	comp=N,1.6nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**06 50 02.9**	**-0.6**
	comp=N,24nm,0.4s,SNR=7.9						
ELGU	**Los Guajares,**	**2.92**	**84**	P	**Pn**	**06 49 33.7**	**+1.8**
	comp=N,3.6nm,2.1s,SNR=7.9						
ELGU				S	**Sn**	**06 50 05.9**	**+0.2**
	comp=N,18nm,7.9s,SNR=7.9						
EBER	**Berja**	**3.51**	**84**	P	**Pn**	**06 49 42.3**	**+2.2**
	comp=N,3.4nm,4.2s,SNR=7.9						
EQES	**Quesada**	**3.53**	**69**	P	**Pn**	**06 49 42.4**	**+2.0**
	comp=N,1.0nm,2.6s,SNR=7.9						
EQES				S	**Sn**	**06 50 19.6**	**-1.4**
	comp=N,5.4nm,3.7s,SNR=7.9						
EPLA	**Plasencia**	**3.55**	**15**	P	**Pn**	**06 49 41.7**	**+1.1**
	comp=N,0.7nm,0.1s,SNR=7.9						
EPLA				S	**Sn**	**06 50 19.4**	**-2.0**
	comp=N,1.9nm,0.2s,SNR=7.9						
MD31	**MD31**	**4.27**	**151**	P	**Pn**	**06 49 50.0**	**-0.6**
MD31				S	**Sn**	**06 50 34.9**	**-4.4**
MDT	**Midelt**	**4.38**	**149**	P	Pn	06 49 48.2	-3.8
MDT				S	**Sn**	**06 50 37.4**	**-4.5**
MVO	**Moncorvo**	**4.54**	**2**	P	**Pn**	**06 49 54.4**	**+0.3**
	comp=N,7.8nm,3.7s,SNR=7.9						
MVO				S	**Sn**	**06 50 42.6**	**-3.1**
	comp=N,2.4nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.95**	**64**	P	**Pn**	**06 50 00.9**	**+1.1**
	comp=N,0.7nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**06 50 53.0**	**-2.9**
	comp=N,1.3nm,0.1s,SNR=6.4						
ELOB	**Lobios**	**5.27**	**353**	S	**Sn**	**06 51 00.5**	**-3.4**
	comp=N,1.3nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**5.32**	**4**	S	**Sn**	**06 51 01.6**	**-3.5**
	comp=N,14nm,7.3s,SNR=7.9						
ETOR	**Torete**	**5.83**	**43**	P	**Pn**	**06 50 13.6**	**+1.6**
	comp=N,2.6nm,0.1s,SNR=7.9						
ETOR				S	**Sn**	**06 51 13.7**	**-3.9**
	comp=N,1.7nm,0.3s,SNR=7.9						

IDC 21 07:25:29.0±1.9, 9°.05N×94°.66E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.5/30, mbtmp3.7/5, Error ellipse: s-maj=103.0km s-min=23.3km az=54.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**39.07**	**346**	P	P	07 32 57.3	-0.4
	0.3nm,0.7s,baz=162,slow=7.2,SNR=3.6						
GEYT	**Alibeck**	**43.69**	**317**	P	P	07 33 36.1	+0.2
	1.5nm,0.5s,baz=122,slow=11,SNR=3.2						
ZALV	**Zalesovo Beam**	**45.47**	**352**	P	P	07 33 49.6	-0.1
	1.4nm,0.4s,baz=188,slow=8.7,SNR=5.0						
WRA	**Warramunga Arr**	**48.53**	**127**	P	P	07 34 15.0	+0.7
	0.3nm,0.6s,baz=305,slow=8.5,SNR=4.6						
ASAR	**Alice Springs**	**50.28**	**131**	P	P	07 34 26.6	-1.0
	0.3nm,0.8s,baz=303,slow=7.4,SNR=3.1						

*UPA **21** 07:33:58.5±1.4, 8°.43N×77°.53W, h28km±9km, MW3.8*
*RSNC **21** 07:34:00.1±0.6, 8°.36N×77°.49W, h32km±14km, ML2.1*
ISC 21 07:33:56.5±1.6, 8°.37N±0°.04×77°.51W±0°.03, h15km±13km, n21, σ0°98/32, 1D, Panama-Colombia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UPD2	**Meteti**	**0.53**	**289**⇓	*i* P	**Pb**	**07 34 08.1**	**+0.6**
UPD2				*i* S	**Sb**	**07 34 16.2**	**+1.2**
LCBC	**Los crdobas,**	**1.23**	**67**	*e*P	**Pg**	**07 34 19.8**	**-0.3**
LCBC				*e*S	**Sn**	**07 34 35.4**	**0.0**
LCBC	**Los crdobas,**	**1.23**	**67**	*e*P	**Pg**	**07 34 19.8**	**-0.3**
LCBC				*e*S	**Sn**	**07 34 35.4**	**0.0**
PTAC	**Punta Ardita,**	**1.25**	**194**	*e*P	**Pn**	**07 34 19.8**	**+0.4**
PTAC				*e*S	**Sb**	**07 34 36.2**	**+0.4**
PTAC	**Punta Ardita,**	**1.25**	**194**	*e*P	**Pn**	**07 34 19.8**	**+0.4**
PTAC				*e*S	**Sb**	**07 34 36.2**	**+0.4**
CHPO	**Chepo, Panama**	**1.78**	**297**	*e*P	**Pn**	**07 34 25.9**	**-0.8**
CHPO				*i* S	**Sn**	**07 34 46.9**	**-2.1**
DBBC	**Dabeiba**	**1.86**	**136**	*e*P	**Pn**	**07 34 28.9**	**+1.0**
DBBC				*i*		07 35 04.0	
	comp=Z,32nm,0.5s						
DBBC	**Dabeiba**	**1.86**	**136**	*e*P	**Pn**	**07 34 28.9**	**+1.0**
UREC	**San Jos de Ur**	**2.05**	**107**	*e*P	**Pn**	**07 34 31.3**	**+0.9**
UREC				*e*S	**Sn**	**07 34 55.0**	**-0.8**
UREC				*i*		07 34 57.8	
	comp=Z,16nm,0.2s						
TABO3	**Taboga, Panama**	**2.07**	**282**	*e*P	**Pn**	**07 34 30.6**	**-0.1**
UPA	**Univ. de Panam**	**2.09**	**287**	*i* P	**Pn**	**07 34 30.6**	**-0.4**
CHOR3	**La Chorrera**	**2.29**	**283**	*e*P	**Pn**	**07 34 33.8**	**0.0**
FRIJ	**El Hiral**	**2.35**	**291**	*i* P	**Pn**	**07 34 34.8**	**+0.2**
ZANG	**Zanguenga, Cho**	**2.41**	**284**	*i* P	**Pn**	**07 34 35.7**	**+0.4**
ZANG				*e*S	**Sn**	**07 35 04.2**	**-0.4**
BCIP	**Isla Barro Col**	**2.44**	**289**	*e*P	**Pn**	**07 34 36.3**	**+0.6**
SJCC	**San Jacinto, C**	**2.75**	**56**	*e*P	**Pn**	**07 34 41.3**	**+1.1**
SJCC				*e*S	**Sn**	**07 35 12.1**	**-1.2**
SJCC				*i*		07 35 18.8	
	comp=Z,1.5nm,0.6s						
SJCC	**San Jacinto, C**	**2.75**	**56**	*e*P	**Pn**	**07 34 41.3**	**+1.1**
SJCC				*e*S	**Sn**	**07 35 12.1**	**-1.2**
ZARC	**Zaragoza, Cauc**	**2.77**	**108**	*e*P	**Pn**	**07 34 41.5**	**+1.3**
ZARC				*e*S	**Sn**	**07 35 12.9**	**-0.6**
ZARC				*i*		07 35 16.4	
	comp=Z,13nm,0.3s						
PNME	**Penonome**	**2.79**	**273**	*e*P	**Pn**	**07 34 42.2**	**+1.5**
AZU	**Azuero**	**2.80**	**258**	*e*P	**Pn**	**07 34 42.6**	**+1.9**
HELC	**Santa Helena**	**2.92**	**138**	*e*P	**Pb**	**07 34 47.0**	**-1.5**

*NEIC **21** 07:58:55.6±1.8, 6°.88N±0°.06×73°.11W±0°.05, h150km±7km, Error ellipse: s-maj=10.1km s-min=5.8km az=148.0*
*IDC **21** 07:58:55.3±0.7, 6°.77N×72°.93W, h163km±7km, mb3.6/10, mb1 3.8/15, mb1mx3.6/38, mbtmp4.2/15, Error ellipse: s-maj=15.6km s-min=7.7km az=136.0*
*RSNC **21** 07:58:56.7±1.0, 6°.83N×73°.16W, h145km±4km, ML3.9, Mw3.9, Fault plane solution: NP1:φs108.00000°, δ39.00000°, λ155.00000°.*
*FUNV **21** 07:58:56.2, 6°.80N×73°.12W, h152km, MW3.6*
ISC 21 07:58:55.0±0.6, 6°.85N±0°.03×73°.10W±0°.03, h153km±5km, n117, σ1°95/187, mb4.3/19, 25C-10D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.27**	**198**⇑	*i* P	**Pn**	**07 59 16.6**	**+0.5**
BARC				*e*S	**Sn**	**07 59 31.3**	**-0.9**
BARC				*i*		07 59 32.7	
	comp=Z,4μm,0.3s						
PAMC	**Pamplona, Colo**	**0.63**	**39**⇑	*i* P	**Pn**	**07 59 19.4**	**+1.5**
PAMC				*e*S	**Sn**	**07 59 36.1**	**+0.6**
PAMC				*i*		07 59 39.0	
	comp=Z,1μm,0.3s						
RUSC	**La Rusia**	**0.95**	**179**⇓	*i* P	**Pn**	**07 59 20.5**	**+0.2**
RUSC				*e*S	**Sn**	**07 59 38.5**	**-1.0**
RUSC				*i*		07 59 40.4	
	comp=Z,1μm,0.7s						

SOCV Socops 2.64 57⇑ eP Pn 07 59 39.0 +1.0
SOCV eS Sn 08 00 09.8 -1.6
GUY2C Guyana, Caldas 2.77 234 eP Pn 07 59 40.3 +0.2
comp=Z,866nm,0.6s
GUY2C eS Sn 08 00 16.9 +2.1
GUY2C i 08 00 22.7
comp=Z,930nm,0.4s
GUY2C i 08 00 23.1
comp=Z,866nm,0.6s
VILC Villavicencio, 2.78 192⇑ iP Pn 07 59 39.8 -0.1
VILC eS Sn 08 00 14.1 -0.6
VILC i 08 00 24.2
comp=Z,1μm,0.5s
PTGC Puerto Gaitan, 2.81 160⇓ iP Pn 07 59 39.8 -0.3
PTGC eS Sn 08 00 12.7 -2.2
PTGC i 08 00 15.9
comp=Z,400nm,0.3s
PTGC i 08 00 15.9
comp=Z,441nm,0.4s
CBOC Ciudad Bolivar 3.06 251⇑ eP Pn 07 59 43.8 +0.4
CBOC eS Sn 08 00 21.2 +0.5
CBOC i 08 00 26.5
comp=Z,209nm,0.3s
CBOC i 08 00 32.1
comp=Z,252nm,0.6s
CODC Agustn Codazz 3.08 354⇑ eP Pn 07 59 43.8 +0.2
CODC eS Sn 08 00 20.3 -0.9
CODC i 08 00 32.8
comp=Z,321nm,0.6s
CODC i 08 00 33.2
comp=Z,251nm,0.5s
DBBC Dabeiba 3.09 273⇑ iP Pn 07 59 44.0 +0.3
DBBC eS Sn 08 00 20.6 -0.8
DBBC i 08 00 21.9
comp=Z,694nm,0.5s
SDV Santo Domingo 3.17 50 P Pn 07 59 46.0 +1.2
comp=Z,162nm,0.3s,baz=177,slow=3.4,SNR=963
SDV S Sn 08 00 23.2 -0.3
comp=Z,64nm,0.3s,baz=300,slow=14,SNR=8.4
SDV Santo Domingo 3.17 50⇑ iP Pn 07 59 46.1 +1.2
SDV eS Sn 08 00 22.8 -0.6
SDV i 08 00 25.3
comp=Z,135nm,0.3s
SDV Santo Domingo 3.17 50 eP Pn 07 59 45.9 +1.0
SDV eS Sn 08 00 23.0 -0.4
SDV Santo Domingo 3.17 50 Pn Pn 07 59 45.8 +1.0
SDV Sn Sn 08 00 23.1 -0.4
ARGC Ariguani, Magd 3.20 339 eP Pn 07 59 46.2 +1.3
ARGC eS Sn 08 00 25.0 +1.2
ARGC i 08 00 32.4
comp=Z,264nm,0.3s
ARGC i 08 00 34.5
comp=Z,241nm,0.4s
ELOV Elorza 3.59 87⇑ eP Pn 07 59 50.9 +0.8
ELOV eS Sn 08 00 28.9 -4.0
ORTC Ortega, Tolima 3.62 216 eP Pn 07 59 50.5 0.0
ORTC eS Sn 08 00 34.1 +0.5
ORTC i 08 00 38.1
comp=Z,399nm,0.2s
ORTC i 08 00 45.6
comp=Z,354nm,0.5s
SJCC San Jacinto, C 3.66 326⇓ iP Pn 07 59 50.2 -0.8
SJCC eS Sn 08 00 31.2 -3.3
SJCC i 08 00 45.7
comp=Z,215nm,0.6s
SJCC i 08 00 46.6
comp=Z,204nm,0.5s
PLMC San Jos del P 3.71 239 eP Pn 07 59 52.0 +0.4
PLMC eS Sn 08 00 34.7 -0.9
PLMC i 08 00 40.5
comp=Z,235nm,0.2s
PLMC i 08 00 40.5
comp=Z,225nm,0.2s
LCBC Los crdobas, 3.80 302 eP Pn 07 59 52.7 0.0
LCBC eS Sn 08 00 35.6 -2.1
QARV Quebrada Arrib 4.20 37⇑ iP Pn 07 59 59.0 +1.0
QARV eS Sn 08 00 44.5 -2.5
GUVC San Jose del G 4.30 174 eP Pn 07 59 58.4 -1.0
GUVC eS Sn 08 00 47.1 -2.4
GUVC i 08 00 51.1
comp=Z,233nm,0.4s
YOTC Yotoco, Valle 4.31 229⇑ iP Pn 07 59 58.6 -0.9
YOTC eS Sn 08 00 49.2 -0.5
YOTC i 08 00 58.1
comp=Z,34nm,0.5s
YOTC i 08 01 01.4
comp=Z,53nm,0.9s
SOLC Bahia Solano 4.33 262 eP Pn 07 59 59.3 -0.3
SOLC eS Sn 08 00 49.1 -0.7
SOLC i 08 00 51.6
comp=Z,46nm,0.5s
CURV Curarigua 4.42 44⇑ eP Pn 08 00 01.4 +0.4
CURV eS Sn 08 00 49.0 -3.2
SMRC Santa Marta, M 4.43 346 eP Pn 08 00 01.2 +0.3
SMRC eS Sn 08 00 49.5 -2.9
SMRC i 08 00 53.6
comp=Z,125nm,0.3s
SMRC i 08 00 53.7
comp=Z,145nm,0.5s
SMRC i 08 00 53.7
comp=Z,145nm,0.5s
PIZC Pizarro, Choco 4.63 246⇑ iP Pn 08 00 04.3 +0.6
PIZC ⇑ iP Pn 08 00 04.3 +0.6
PIZC eS Sn 08 00 52.6 -4.6
PIZC eS Sn 08 00 52.6 -4.6
PIZC i 08 01 11.0
comp=Z,81nm,0.9s
PIZC i 08 01 11.0
comp=Z,81nm,0.9s
PIZC i 08 01 11.9
comp=Z,59nm,0.5s
PIZC i 08 01 11.9
comp=Z,59nm,0.5s
PTAC Punta Ardita, 4.68 274 eP Pn 08 00 03.6 -0.7
PTAC eP Pn 08 00 03.6 -0.7
PTAC eS Sn 08 00 53.7 -4.6
PTAC eS Sn 08 00 53.7 -4.6
PTAC i 08 00 57.5
comp=Z,194nm,0.3s
PTAC i 08 00 57.5
comp=Z,194nm,0.3s
PTAC i 08 00 57.7
comp=Z,202nm,0.3s
PTAC i 08 00 57.7
comp=Z,202nm,0.3s
DABV Dabajuro 4.72 31⇑ eP Pn 08 00 05.4 +0.6
DABV eS Sn 08 00 56.1 -3.2
MACC Macarena, Meta 4.73 189⇓ eP Pn 08 00 03.5 -1.6
MACC ⇓ eP Pn 08 00 03.5 -1.6
MACC eS Sn 08 00 53.7 -5.9
MACC eS Sn 08 00 53.7 -5.9
MACC i 08 00 58.9
comp=Z,189nm,0.9s
MACC i 08 00 58.9
comp=Z,189nm,0.9s
MACC i 08 01 01.1
comp=Z,151nm,0.7s
MACC i 08 01 01.1
comp=Z,151nm,0.7s
BETC Betania 4.75 209 eP Pn 08 00 04.8 -0.5
BETC eP Pn 08 00 04.8 -0.5
BETC eS Sn 08 00 50.6 -10
BETC eS Sn 08 00 50.6 -10
BETC i 08 01 01.8
comp=Z,22nm,0.6s
BETC i 08 01 01.8
comp=Z,22nm,0.6s
URIC Uribia, Colomb 4.94 13 Pn Pn 08 00 06.9 -0.8
TEPV Terepaima 4.95 51⇑ eP Pn 08 00 08.2 +0.3
SIQV Siquisique 4.98 41⇑ iP Pn 08 00 08.4 +0.1
SIQV eS Sn 08 01 01.5 -4.1
MALC Bahia Malaga 5.07 236 eP Pn 08 00 10.5 +1.1
MALC eP Pn 08 00 10.5 +1.1
MALC eS Sn 08 01 14.2 +6.6
MALC eS Sn 08 01 14.2 +6.6
MALC i 08 01 34.7
comp=Z,47nm,0.6s
MALC i 08 01 34.7
comp=Z,47nm,0.6s
MAPV Macapo 5.47 57⇑ eP Pn 08 00 14.6 -0.1
PCON Cinco Dias 5.57 216 eP Pn 08 00 17.2 +0.7
PCON eP Pn 08 00 17.2 +0.7
PCON eS Sn 08 01 14.4 -5.8
PCON eS Sn 08 01 14.4 -5.8

PCON i 08 01 45.7
comp=Z,43nm,0.4s
PCON i 08 01 45.7
comp=Z,43nm,0.4s
PCON i 08 01 56.3
comp=Z,59nm,0.7s
PCON i 08 01 56.3
comp=Z,59nm,0.7s
PAYV Puerto Ayacuch 5.60 104⇑ eP Pn 08 00 15.4 -1.0
FLOC Florencia 5.82 206 eP Pn 08 00 19.1 -0.3
FLOC eP Pn 08 00 19.1 -0.3
FLOC eS Sn 08 01 21.1 -4.4
FLOC eS Sn 08 01 21.1 -4.4
FLOC i 08 01 29.7
comp=Z,46nm,0.5s
FLOC i 08 01 29.7
comp=Z,46nm,0.5s
FLOC i 08 01 31.1
comp=Z,78nm,1.3s
FLOC i 08 01 31.1
comp=Z,78nm,1.3s
FLOC Florencia 5.82 206 Pn 08 00 19.5 +0.1
SOTA Rioblanco 5.84 217⇑ iP Pn 08 00 21.0 +0.8
SOTA ⇑ iP Pn 08 00 21.0 +0.8
SOTA eS Sn 08 01 24.0 -2.8
SOTA eS Sn 08 01 24.0 -2.8
SOTA i 08 01 37.8
comp=Z,49nm,0.6s
SOTA i 08 01 37.8
comp=Z,49nm,0.6s
SOTA i 08 01 38.3
comp=Z,36nm,0.5s
SOTA i 08 01 38.3
comp=Z,36nm,0.5s
MONV Montecano 5.94 31 eP Pn 08 00 20.6 -0.3
MONV eS Sn 08 01 23.6 -4.6
BBAC Balboa, Cauca 6.33 221 eP Pn 08 00 27.3 +0.9
BBAC eP Pn 08 00 27.3 +0.9
BBAC eS Sn 08 01 33.4 -4.6
BBAC eS Sn 08 01 33.4 -4.6
BBAC i 08 01 41.8
comp=Z,23nm,0.4s
BBAC i 08 01 41.8
comp=Z,23nm,0.4s
BBAC i 08 01 48.8
comp=Z,24nm,1.1s
BBAC i 08 01 48.8
comp=Z,24nm,1.1s
PTLC Puerto Leguiza 6.85 194 eP Pn 08 00 37.2 +4.1
PTLC eP Pn 08 00 37.2 +4.1
PTLC eS Sn 08 02 13.5 +23
PTLC eS Sn 08 02 13.5 +23
PTLC i 08 02 36.0
comp=Z,44nm,0.5s
PTLC i 08 02 36.0
comp=Z,44nm,0.5s
PTLC i 08 02 36.4
comp=Z,43nm,0.5s
PTLC i 08 02 36.4
comp=Z,43nm,0.5s
GCUF Volcan Galeras 7.01 217 eP Pn 08 00 36.3 +0.6
GCUF eP Pn 08 00 36.3 +0.6
GCUF eS Sn 08 01 44.8 -10
GCUF eS Sn 08 01 44.8 -10
GCUF i 08 02 01.0
comp=Z,8.9nm,0.4s
GCUF i 08 02 01.0
comp=Z,8.9nm,0.4s
GCUF i 08 02 18.4
comp=Z,15nm,1.7s
GCUF i 08 02 18.4
comp=Z,15nm,1.7s
BCIP Isla Barro Col 7.06 289 Pn Pn 08 00 34.6 -1.3
BCIP Sn Sn 08 01 51.6 -3.4
MERV Las Mercedes 7.15 70 eP Pn 08 00 35.5 -1.6
OTAV Otavalo 8.46 219 Pn 08 00 53.2 -1.8
PRGV PARIAGUAN 8.59 77 eP Pn 08 00 54.9 -1.4
PCRV Puerto La Cruz 9.00 68 P Pn 08 01 00.7 -1.1
comp=Z,2.6nm,0.3s,baz=238,slow=2.2,SNR=12
PCRV Puerto La Cruz 9.00 68 eP Pn 08 01 01.8 -0.1
PLCV Puerto La Cruz 9.04 68 Pn 08 01 00.7 -1.6
MTDJ Mount Denham 12.10 339 Pn Pn 08 01 44.6 +1.9
SDDR Presa de Saban 12.19 8 Pn Pn 08 01 44.8 +1.1
JTS Las Juntas de 12.21 287 P P 08 01 48.4 -1.7
comp=Z,0.2nm,0.3s,baz=108,slow=19,SNR=2.1
DR12 Loma Pena Alta 12.41 17 Pn Pn 08 01 46.5 -0.1
GRGR Grenville 12.45 64 Pn Pn 08 01 49.1 +2.0
CRPR Cabo Rojo, PR 12.53 27 Pn Pn 08 01 47.7 -0.5
SJG San Juan 13.08 31 P Pn 08 01 54.1 -1.1
comp=Z,1.3nm,0.3s,baz=191,slow=19,SNR=2.9
GTBY Guantanamo Bay 13.14 352 Pn P 08 01 59.3 -1.1
EMPR Esperanza - Ma 13.21 28 Pn Pn 08 01 58.9 +2.0
HUMP Col San Antoni 13.26 32 Pn Pn 08 01 56.5 -1.0
CBYP Canovanas 13.37 31 Pn 08 01 58.4 -0.5
MTP Monte Pirata 13.38 33 Pn Pn 08 01 59.1 0.0
FDF Fort de France 14.11 55 Pn Pn 08 02 09.2 +0.9
SAML Samuel 18.55 148 P Pn 08 03 00.4 -1.8
PAYG Puerto Ayora 18.71 247 P P 08 03 03.1 +1.1
PAYG IAmb IAmb 08 03 05.8
comp=Z,17nm,1.1s
TEIG Tepich 19.84 314 P P 08 03 15.7 +1.6
TEIG IAmb IAmb 08 03 19.9
comp=Z,22nm,1.1s
656A Willston 24.10 339 P P 08 03 57.6 +1.1
656A IAmb IAmb 08 03 58.2
comp=Z,26nm,1.1s
V48A Smith Brothers 31.39 338 P P 08 05 03.0 +1.5
V48A IAmb IAmb 08 05 04.0
comp=Z,7.9nm,0.6s
PBMO Poplar Bluff 33.73 334 P P 08 05 23.2 +1.4
PBMO IAmb IAmb 08 05 23.9
comp=Z,7.0nm,0.6s
U40A Yellville 34.48 331 P P 08 05 29.6 +1.2
CCM Cathedral Cave 35.15 335 P P 08 05 35.0 +0.9
TXAR Lajitas Array 36.46 312 P P 08 05 46.5 +1.1
comp=Z,0.9nm,0.5s,baz=131,slow=9.9,SNR=5.9
TX31 Lajitas Ar. Si 36.46 312 P P 08 05 46.1 +0.6
MNTX Cornudas Mount 38.97 314 P P 08 06 07.0 +0.5
LMN Caledonia Moun 39.51 9 P P 08 06 11.7 +1.0
LMN IAmb IAmb 08 06 15.0
comp=Z,8.1nm,1.1s
ROC1 El Roble 39.66 177 P P 08 06 14.1 +1.7
D62A Allapoint, All 40.23 4 P P 08 06 17.8 +1.2
SDCO Great Sand Dun 42.54 321 P P 08 06 37.2 +1.3
SUSD Miller 43.72 333 P P 08 06 45.0 0.0
EYMN Ely 43.85 342 P P 08 06 46.4 +0.5
EYMN IAmb IAmb 08 06 46.9
comp=Z,7.8nm,0.6s
KNB Kanab 46.97 316 P P 08 07 12.4 +1.5
ULM Lac du Bonnet 47.27 340 P P 08 07 12.5 -0.2
comp=Z,5.0nm,0.5s,baz=149,slow=7.2,SNR=18
ULM Lac du Bonnet 47.27 340 P P 08 07 12.6 -0.1
ULM IAmb IAmb 08 07 13.5
comp=Z,5.5nm,0.5s
PDAR Pinedale Array 48.07 324 P P 08 07 19.1 -0.2
comp=Z,0.7nm,0.5s,baz=125,slow=9.6,SNR=10
SCHQ Schefferville 48.11 5 P P 08 07 18.6 -0.6
comp=Z,2.6nm,0.6s,baz=192,slow=6.6,SNR=8.9
SCHQ Schefferville 48.11 5 P P 08 07 19.9 +0.7
SCHQ IAmb IAmb 08 07 25.1
comp=Z,24nm,1.5s
REDW Red Top Meadow 49.18 324 IAmb IAmb 08 07 29.1
comp=Z,5.1nm,1.1s
NVAR Mina Array Bea 51.48 315 P P 08 07 46.2 +1.1
comp=Z,0.3nm,0.5s,baz=134,slow=8.5,SNR=5.7
NVAR PcP PcP 08 08 58.4 +1.0
comp=Z,0.3nm,0.5s,baz=145,slow=3.3,SNR=2.7
PINE Pine Mountain 55.64 319 P P 08 08 16.7 +1.3
PINE IAmb IAmb 08 08 17.7
comp=Z,5.1nm,0.8s
YKA Yellowknife Ar 63.24 340 P P 08 09 07.0 +0.1
comp=Z,3.0nm,0.5s,baz=134,slow=6.5,SNR=111
DBIC Dimbokro 67.71 86 P P 08 09 34.8 -1.7
comp=Z,2.5nm,0.9s,baz=270,slow=5.1,SNR=2.7
SUMG Summit 68.96 11 P P 08 09 44.0 +0.4
SUMG IAmb IAmb 08 09 47.0
comp=Z,5.9nm,1.2s
TORD Tondi Ar. Bea 73.71 78 P P 08 10 11.4 -1.4
comp=Z,0.1nm,0.3s,baz=289,slow=4.4,SNR=3.2
ILAR Eielson Array 76.94 335 P P 08 10 30.3 0.0
comp=Z,0.5nm,0.7s,baz=99,slow=4.2,SNR=5.4
BFO Black Forest 79.22 42 P P 08 10 43.6 +0.4
BFO IAmb IAmb 08 10 47.7
comp=Z,6.4nm,1.4s
ARCES ARCESS Array B 86.64 20 P P 08 11 19.9 -1.0
comp=Z,1.9nm,1.0s,baz=258,slow=4.4,SNR=4.4
LZH Lanzhou 137.19 4 ePKP PKPdf 08 17 59.8 -1.0
LZH pPKP pPKPdf 08 18 38.0 -3.7
LZH sPKP 08 18 58.6
ASAR Alice Springs 149.14 234 PKPbc PKPbc 08 18 25.2 -1.0
comp=Z,0.7nm,0.6s,baz=117,slow=3.5,SNR=10
WRA Warramunga Arr 150.37 241 PKPbc PKPbc 08 18 27.9 -1.4
comp=Z,0.6nm,0.4s,baz=107,slow=2.9,SNR=7.5

GUC ***21*** *08:00:00.3±0.7, 19°.82S×69°.23W, h102km±2km, ML4.5*
NEIC ***21*** *08:00:00.0±1.9, 19°.89S±0°.05×69°.16W±0°.08, h102km±3km, Error ellipse: s-maj=11.1km s-min=6.5km az=80.0*
IDC ***21*** *08:00:01.1±0.5, 19°.81S×69°.06W, h109km±4km, mb3.9/12, mb1 4.0/17, mb1mx3.9/34, mbtmp4.3/17, MS2.9/4, Ms1 2.9/4, ms1mx2.8/26, Error ellipse: s-maj=15.3km s-min=7.2km az=88.0*
ISC 21 07:59:60.0±0.4, 19°.86S±0°.03×69°.17W±0°.05, h101km±3km, h102km:pP-P, n99, σ1$58/120, mb4.6/24, 8C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GO01	**Chusmiza**	**0.19**	**352**	⇑	*iP*		**Pn**	**08 00 15.7**	**+0.7**
GO01					*i*	S	**Sn**	**08 00 27.3**	**+1.2**
GO01	**Chusmiza**	**0.19**	**352**				**Pn**	**08 00 15.7**	**+0.7**
GO01						Sn	**Sn**	**08 00 26.9**	**+0.9**
PB08	**IPOC Station P**	**0.28**	**178**	⇓	*iP*		**Pn**	**08 00 16.7**	**+1.5**
PB08					*i*	S	**Sn**	**08 00 28.5**	**+2.0**
PB08						IAML		08 00 29.1	
comp=N,37μm,0.3s									
PB11	**IPOC Station P**	**0.47**	**282**	⇓	*iP*		**Pn**	**08 00 16.5**	**+0.6**
PB11					*i*	S	**Sn**	**08 00 28.3**	**+0.5**
PB11	**IPOC Station P**	**0.47**	**282**				**Pn**	**08 00 16.2**	**+0.3**
PB11						Sn	**Sn**	**08 00 28.2**	**+0.4**
MNMC	**Minye Minye**	**0.83**	**331**	⇓	*iP*		**Pn**	**08 00 19.9**	**+0.8**
MNMC					*i*	S	**Sn**	**08 00 34.2**	**+0.9**
MNMC	**Minye Minye**	**0.83**	**331**				**Pn**	**08 00 19.5**	**+0.4**
MNMC						Sn	**Sn**	**08 00 34.1**	**+0.7**
PSGC	**Pisagua**	**0.94**	**286**	⇓	*iP*		**Pn**	**08 00 20.2**	**+0.2**
PSGC					*i*	S	**Sn**	**08 00 34.8**	**-0.2**
TA01	**Diego Aracena**	**1.19**	**233**	⇑	*iP*		**Pn**	**08 00 23.2**	**+0.6**
TA01					*i*	S	**Sn**	**08 00 40.3**	**+0.7**
PATCX	**Punta Patache**	**1.33**	**224**	⇑	*iP*		**Pn**	**08 00 25.1**	**+0.7**
PATCX					*i*	S	**Sn**	**08 00 44.2**	**+1.3**
PATCX						IAML		08 00 44.9	
comp=E,9μm,0.2s									
PB16	**IPOC Station P**	**1.55**	**348**	⇓	*iP*		**Pn**	**08 00 28.6**	**+1.1**
PB16					*i*	S	**Sn**	**08 00 49.4**	**+1.2**
AP01	**Chacalluta**	**1.85**	**323**	⇑	*iP*		**Pn**	**08 00 30.9**	**+0.2**
AP01					*i*	S	**Sn**	**08 00 53.9**	**-0.2**
PB09	**IPOC Station P**	**1.93**	**182**	⇑	*iP*		**Pn**	**08 00 34.0**	**+2.1**
PB09					*i*	S	**Sn**	**08 00 59.0**	**+2.7**
PB09						IAML		08 01 02.7	
comp=E,3μm,0.4s									
PB03	**IPOC Station P**	**2.25**	**194**	⇑	*iP*		**Pn**	**08 00 37.1**	**+1.1**
PB03						IAML		08 01 14.1	
comp=E,3μm,0.2s									
PB04	**IPOC Station P**	**2.63**	**200**	⇓	*iP*		**Pn**	**08 00 42.3**	**+1.3**
PB04						IAML		08 01 30.3	
comp=E,2μm,0.6s									
PB04	**IPOC Station P**	**2.63**	**200**				**Pn**	**08 00 41.6**	**+0.5**
PB04						Sn	**Sn**	**08 01 09.2**	**-3.4**
LVC	**Limon Verde**	**2.75**	**175**	*eP*			**Pn**	**08 00 44.8**	**+2.0**
LVC	**Limon Verde**	**2.75**	**175**	P			**Pn**	**08 00 45.1**	**+2.3**
comp=E,48nm,0.3s,baz=16,slow=7.5,SNR=313									
LVC						S	**Sn**	**08 01 18.6**	**+2.9**
comp=E,260nm,0.3s,baz=341,slow=10,SNR=28									
LVC						LR	LR	08 02 06.4	
comp=E,97nm,19.7s,baz=29,slow=45									
LVC	**Limon Verde**	**2.75**	**175**				**Pn**	**08 00 45.1**	**+2.3**
LVC						Sn	**Sn**	**08 01 12.6**	**-3.0**
PB06	**IPOC Station P**	**2.86**	**188**	⇑	*iP*		**Pn**	**08 00 44.9**	**+0.8**
PB06						IAML		08 01 29.3	
comp=N,2μm,0.8s									
LPAZ	**La Paz**	**3.68**	**16**	P			**Pn**	**08 00 57.8**	**+2.2**
comp=N,14nm,0.3s,baz=203,slow=6.3,SNR=336									
LPAZ						S	**Sn**	**08 01 40.5**	**+2.1**
baz=184,slow=19,SNR=2.1									
LPAZ	**La Paz**	**3.68**	**16**				**Pn**	**08 00 58.0**	**+2.4**
PB10	**IPOC Station P**	**3.86**	**199**				**Pn**	**08 00 57.3**	**0.0**
GO02	**Mina Guanaco**	**5.29**	**184**				**Pn**	**08 01 17.1**	**+0.1**
GO03	**Copiap**	**7.76**	**187**	Pn			**Pn**	**08 01 48.3**	**-2.0**
SIV	**San Ignacio**	**8.61**	**65**	P			**Pn**	**08 02 00.3**	**-1.6**
comp=N,6.9nm,0.3s,baz=263,slow=11,SNR=169									
SIV						S	**Sn**	**08 03 31.7**	**-5.6**
baz=234,slow=19,SNR=2.9									
GO04	**Tololo Observa**	**10.38**	**188**	Pn			**Pn**	**08 02 22.5**	**-3.5**
NNA	**Nana**	**10.76**	**316**	P			**Pn**	**08 02 32.3**	**+1.3**
comp=N,0.6nm,0.3s,baz=195,slow=20,SNR=2.3									
NNA						LR	LR	08 06 05.4	
comp=N,38nm,21.3s,baz=262,slow=34									
NNA	**Nana**	**10.76**	**316**				**Pn**	**08 02 28.2**	**-2.9**
CFA	**Coronel Fontan**	**11.73**	**176**	P			**Pn**	**08 02 40.8**	**-3.3**
comp=N,0.6nm,0.3s,baz=343,slow=14,SNR=13									
CFA						S	**Sn**	**08 04 45.8**	**-7.3**
comp=N,0.6nm,0.3s,baz=257,slow=19,SNR=5.1									
SAML	**Samuel**	**12.29**	**29**				**Pn**	**08 02 49.0**	**-2.5**
CPUP	**Villa Florida**	**12.65**	**123**	P			**Pn**	**08 02 55.5**	**-0.7**
comp=N,0.5nm,0.3s,baz=298,slow=12,SNR=16									
CPUP						LR	LR	08 08 58.6	
comp=N,52nm,18.2s,baz=304,slow=43									
CPUP	**Villa Florida**	**12.65**	**123**				**Pn**	**08 02 56.3**	**+0.1**
ROC1	**El Roble**	**13.17**	**187**	Pn			**Pn**	**08 03 01.1**	**-2.1**
GO06	**Curarrehue**	**19.76**	**185**	P			**P**	**08 04 21.3**	**-0.8**
BDFB	**Brasilia**	**20.57**	**82**	P			**P**	**08 04 29.4**	**-1.6**
comp=N,2.1nm,0.4s,baz=239,slow=11,SNR=4.5									
BDFB						LR	LR	08 14 22.9	
comp=N,80nm,19.0s,baz=32,slow=42									
BDFB	**Brasilia**	**20.57**	**82**	P			**P**	**08 04 30.7**	**-0.3**
PLCA	**Paso Flores**	**20.84**	**183**	P			**P**	**08 04 34.3**	**+0.7**
comp=N,4.0nm,0.7s,baz=19,slow=11,SNR=10									
PLCA	**Paso Flores**	**20.84**	**183**	P			**P**	**08 04 34.1**	**+0.5**
RUSC	**La Rusia**	**25.88**	**351**	P			**P**	**08 05 22.7**	**-0.3**
HOPE	**Hope Point**	**42.43**	**152**	P			**P**	**08 07 45.7**	**+1.2**
HOPE						IAmb	IAmb	08 07 55.4	
comp=Z,15nm,1.4s									
BIRD	**Birdtown, Kers**	**55.26**	**349**	P			**P**	**08 09 22.9**	**+0.2**
WVT	**Waverly**	**58.42**	**342**	P			**P**	**08 09 44.1**	**-0.9**
WVT						IAmb	IAmb	08 09 44.5	
comp=Z,6.9nm,0.7s									
WVT							**pP**	**08 10 10.2**	**-0.8**
S54A	**Dingess, Beckl**	**58.48**	**349**	P			**P**	**08 09 45.5**	**0.0**
S54A						IAmb	IAmb	08 09 46.5	
comp=Z,9.4nm,1.0s									
T49A	**Edmonton**	**58.72**	**345**	P			**P**	**08 09 46.3**	**-0.8**
T49A						IAmb	IAmb	08 09 46.8	
comp=Z,5.7nm,0.7s									
T49A							**pP**	**08 10 12.6**	**-0.6**
T47A	**Sharon Grove**	**59.02**	**343**	P			**P**	**08 09 49.2**	**0.0**
PBMO	**Poplar Bluff**	**59.80**	**340**	P			**P**	**08 09 54.0**	**-0.5**
P53A	**Whipple**	**60.13**	**349**	P			**P**	**08 09 57.0**	**+0.3**
SSPA	**Standing Stone**	**60.73**	**352**	P			**P**	**08 10 00.8**	**0.0**
SSPA						IAmb	IAmb	08 10 12.2	
comp=Z,11nm,1.3s									
FVM	**French Village**	**60.91**	**341**	P			**P**	**08 10 02.1**	**0.0**
VNA3	**Neumayer Olymp**	**61.70**	**162**	P			**P**	**08 10 08.9**	**+1.8**
VNA1	**Neumayer--Stat**	**61.91**	**161**	P			**P**	**08 10 10.6**	**+2.3**
SNAA	**Sanae**	**63.90**	**161**	P			**P**	**08 10 23.3**	**+1.6**
SNAA	**Sanae**	**63.90**	**161**	P			**P**	**08 10 23.0**	**+1.2**
comp=Z,4.4nm,0.8s,baz=277,slow=5.5,SNR=15									
SNAA	**Sanae**	**63.90**	**161**	P			**P**	**08 10 22.9**	**+1.2**
SNAA						IAmb	IAmb	08 10 24.2	
comp=Z,6.1nm,0.9s									
SADO	**Sadowa**	**64.95**	**352**	P			**P**	**08 10 28.2**	**-0.5**
comp=Z,3.8nm,0.5s,baz=156,slow=2.7,SNR=4.9									
SADO	**Sadowa**	**64.95**	**352**	P			**P**	**08 10 28.1**	**-0.6**
SADO						IAmb	IAmb	08 10 29.0	
comp=Z,13nm,1.1s									
BGNE	**Belgrade**	**66.62**	**337**	P			**P**	**08 10 39.4**	**-0.1**
SDCO	**Great Sand Dun**	**66.72**	**329**	P			**P**	**08 10 40.9**	**+0.3**
SDCO						IAmb	IAmb	08 10 42.6	
comp=Z,6.1nm,1.4s									
LIC	**Lamto**	**68.17**	**75**	*eP*			**P**	**08 10 48.6**	**-1.3**
comp=Z,12nm,0.6s									
TIC	**Toumodi**	**68.35**	**74**	*eP*			**P**	**08 10 51.8**	**+0.8**
comp=Z,2.3nm,0.3s									
KIC	**Kosan Boka**	**68.49**	**75**	*eP*			**P**	**08 10 51.0**	**-0.9**
comp=Z,6.3nm,0.6s									
DBIC	**Dimbokro**	**68.51**	**74**	P			**P**	**08 10 51.3**	**-0.7**
comp=Z,8.4nm,0.7s,baz=226,slow=7.4,SNR=10									
DBIC						pP	**pP**	**08 11 19.9**	**+0.9**
comp=Z,3.8nm,0.6s,baz=206,slow=8.8,SNR=3.2									

DBIC	**Dimbokro**	**68.51**	**74**	P	**P**	**08 10 51.4**	**-0.6**
DBIC				IAmb	IAmb	08 10 52.1	
	comp=Z,11nm,0.9s						
KNB	**Kanab**	**69.96**	**324**	P	**P**	**08 11 01.4**	**+0.7**
QSPA	**South Pole Qui**	**70.33**	**180**	P	**P**	**08 11 04.2**	**+1.7**
QSPA				IAmb	IAmb	08 11 05.5	
	comp=Z,7.9nm,1.1s						
PDAR	**Pinedale Array**	**72.57**	**330**	P	**P**	**08 11 16.5**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=118,slow=7.9,SNR=3.8						
ULM	**Lac du Bonnet**	**73.69**	**343**	P	**P**	**08 11 21.8**	**-0.6**
	comp=Z,4.1nm,0.6s,baz=159,slow=5.7,SNR=15						
ULM				pP	**pP**	**08 11 48.9**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=150,slow=4.7,SNR=2.5						
ULM	**Lac du Bonnet**	**73.69**	**343**	P	**P**	**08 11 22.1**	**-0.3**
ULM				IAmb	IAmb	08 11 22.7	
	comp=Z,4.7nm,0.6s						
NVAR	**Mina Array Bea**	**74.06**	**322**	P	**P**	**08 11 26.2**	**+1.0**
	comp=Z,0.5nm,0.5s,baz=160,slow=7.7,SNR=6.6						
NVAR				pP	**pP**	**08 11 52.1**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=140,slow=5.7,SNR=2.6						
NVAR				LR	LR	08 43 29.7	
	comp=Z,135nm,19.0s,baz=301,slow=35						
SCHQ	**Schefferville**	**74.41**	**1**	P	**P**	**08 11 26.1**	**-0.5**
	comp=Z,3.7nm,0.9s,baz=216,slow=8.7,SNR=3.5						
SCHQ	**Schefferville**	**74.41**	**1**	P	**P**	**08 11 26.1**	**-0.5**
TOA0	**Torodi Ar. Sit**	**77.04**	**71**	P	**P**	**08 11 41.5**	**-0.9**
TOA0				IAmb	IAmb	08 11 42.1	
	comp=Z,7.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**77.04**	**71**	P	**P**	**08 11 41.5**	**-1.0**
	comp=Z,6.8nm,0.5s,baz=252,slow=5.3,SNR=75						
TORD				pP	**pP**	**08 12 09.6**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=247,slow=5.2,SNR=3.3						
BMO	**Blue Mountains**	**77.91**	**327**	P	**P**	**08 11 47.8**	**+1.0**
SYO	**Syowa Base**	**78.12**	**160**⇑	*eP*	**P**	**08 11 47.6**	**+0.1**
SUR	**Sutherland**	**79.61**	**121**	P	**P**	**08 11 56.5**	**-0.2**
TSUM	**Tsumeb**	**80.75**	**107**	P	**P**	**08 12 02.9**	**0.0**
TSUM				IAmb	IAmb	08 12 04.4	
	comp=Z,5.2nm,0.9s						
BOSA	**Boshof**	**84.43**	**118**	P	**P**	**08 12 22.0**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=269,slow=2.2,SNR=3.9						
BOSA	**Boshof**	**84.43**	**118**	P	**P**	**08 12 21.9**	**0.0**
PAB	**San Pablo**	**84.52**	**45**	P	**P**	**08 12 21.6**	**-0.2**
PAB				IAmb	IAmb	08 12 22.8	
	comp=Z,6.5nm,0.9s						
ESDC	**Sonseca Array**	**84.84**	**45**	P	**P**	**08 12 23.5**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=243,slow=6.5,SNR=4.1						
YKA	**Yellowknife Ar**	**89.57**	**341**	P	**P**	**08 12 45.9**	**+0.4**
	comp=Z,8.5nm,0.7s,baz=135,slow=4.6,SNR=131						
YKA				pP	**pP**	**08 13 13.8**	**+0.7**
	comp=Z,5.9nm,0.8s,baz=137,slow=4.7,SNR=11						
YKA				sP	**sP**	**08 13 26.1**	**+1.9**
	comp=Z,0.9nm,0.7s,baz=135,slow=4.8,SNR=1.7						
H11S2	**WAKE ISLAND Hyl**	**27.42**	**278**	T	T	10 38 51.8	
	baz=102,slow=75,SNR=77						
H11S1	**WAKE ISLAND Hyl**	**27.43**	**278**	T	T	10 38 51.3	
	baz=102,slow=75,SNR=35						
H11S3	**WAKE ISLAND Hyl**	**27.44**	**278**	T	T	10 38 51.3	
	baz=102,slow=75,SNR=49						
H11N3	**WAKE ISLAND Hyl**	**27.45**	**280**	T	T	10 38 58.1	
	baz=102,slow=75,SNR=15						
H11N2	**WAKE ISLAND Hyl**	**27.47**	**280**	T	T	10 38 55.8	
	baz=102,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hyl**	**27.47**	**280**	T	T	10 38 55.3	
	baz=102,slow=75,SNR=18						
ASAR	**Alice Springs**	**131.24**	**209**	PKP	**PKPdf**	**08 19 01.4**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=135,slow=1.9,SNR=20						
WRA	**Warramunga Arr**	**134.23**	**212**	PKP	**PKPdf**	**08 19 07.1**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=153,slow=1.7,SNR=14						
ZALV	**Zalesovo Beam**	**140.37**	**24**	PKP	**PKPdf**	**08 19 18.5**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=311,slow=3.3,SNR=2.9						
KSH	**Kashi**	**144.24**	**49**	PKP	**PKPdf**	**08 19 25.1**	**+0.7**
KSH				pPKP	pPKPdf	08 19 50.4	-3.3
KSH				PP	**PP**	**08 22 44.4**	**+4.1**
KSH				AMB	AMB		
	comp=Z,340nm,5.7s						
MK31	**Makanchi Array**	**144.44**	**34**		PKPbc	08 19 23.6	+0.5
MKAR	**Makanchi Array**	**144.44**	**34**	PKP	PKPbc	08 19 23.2	+0.1
	comp=Z,1.1nm,0.6s,baz=314,slow=2.9,SNR=15						
USRK	**Ussuriysk Ar.**	**149.99**	**329**	PKPbc	**PKiKP**	**08 19 39.4**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=6.4,slow=1.9,SNR=7.5						
MJAR	**Matsushiro Arr**	**150.85**	**311**	PKPbc	**PKPbc**	**08 19 41.2**	**+0.2**
	comp=Z,3.1nm,0.7s,baz=77,slow=2.2,SNR=7.3						
SONM	**Songino Array**	**151.86**	**6**	PKPbc	**PKiKP**	**08 19 43.8**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=330,slow=1.6,SNR=19						
SONM				pPKPbc	**pPKPbc**	**08 20 13.0**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=302,slow=1.1,SNR=5.6						
LZH	**Lanzhou**	**162.70**	**19**	*e*PKP	**PKPdf**	**08 19 51.8**	**+1.2**
LZH				pPKP	pPKPdf	08 20 15.6	-4.3
LZH				sPKP		08 20 27.3	

*JMA **21** 08:05:51.7±0.4,33°.59N×138°.60E,h299km±4km,M3.5*
*IDC **21** 08:05:52.7±2.0,33°.44N×138°.43E,h279km±18km,mb3.0/7, mb1 3.2/9,mb1mx3.0/55,mbtmp3.7/9,Error ellipse: s-maj=22.2km s-min=21.0km az=119.0*
ISC 21 08:05:53.8±0.8,33°.62N±0°.08×138°.51E±0°.07,h287km±6km, n29,σ1s06/36,mb3.3/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**0.70**	**298**	P	**Pn**	**08 06 31.6**	**+0.4**
TK02				*e*S	**S**	**08 07 02.8**	**+2.0**
TK01	**Tokai 1**	**0.78**	**281**	P	**Pn**	**08 06 31.2**	**-0.1**
TK01				*e*S	**S**	**08 07 01.5**	**+0.3**
TTO4	**TONANKAI O.B.S**	**0.89**	**296**	P	**Pn**	**08 06 32.0**	**+0.1**
TK04	**Tokai 4**	**0.92**	**326**	P	**Pn**	**08 06 32.7**	**+0.5**
TTO3	**TONANKAI O.B.S**	**0.95**	**283**	P	**Pn**	**08 06 32.6**	**+0.3**
JHJ2	**Mitsune**	**1.21**	**115**	P	**Pn**	**08 06 33.4**	**-0.4**
TTO1	**TONANKAI O.B.S**	**1.44**	**270**	P	**Pn**	**08 06 34.8**	**0.0**
JOD2	**Odawara 2**	**1.71**	**16**	P	**Pn**	**08 06 36.8**	**-0.3**
JOD2				*e*S	**S**	**08 07 12.0**	**+0.5**
JYN	**Shimob**	**1.87**	**1**	P	**Pn**	**08 06 38.6**	**+0.2**
BSO1	**Boso 1**	**2.29**	**63**	P	**Pn**	**08 06 40.1**	**-1.1**
BSO1				*e*S	**S**	**08 07 17.1**	**-1.9**
JRY	**Ryogami san**	**2.41**	**8**	P	**Pn**	**08 06 43.1**	**+0.2**
JTNC	**Tanabenakahech**	**2.42**	**275**	P	**Pn**	**08 06 42.2**	**-0.8**
JTNC				*e*S	**S**	**08 07 21.1**	**-1.1**
JYTA	**Yamagatataniai**	**2.45**	**324**	P	**Pn**	**08 06 43.1**	**-0.1**
JWY	**Kouya**	**2.49**	**285**	P	**Pn**	**08 06 43.4**	**-0.4**
JAG	**Ashikaga**	**2.90**	**15**	P	**Pn**	**08 06 46.2**	**-1.4**
JAG				*e*S	**S**	**08 07 27.2**	**-3.3**
MJAR	**Matsushiro Arr**	**2.92**	**355**	P	**Pn**	**08 06 47.6**	**-0.2**
	0.5nm,0.3s,baz=169,slow=81,SNR=18						
MAT	**Matsushiro**	**2.92**	**355**	P	**Pn**	**08 06 47.7**	**-0.1**
MAT	**Matsushiro**	**2.92**	**355**	P	**Pn**	**08 06 47.7**	**-0.1**
MAT				S	**S**	**08 07 30.4**	**-0.5**
JWT	**Wachi**	**3.05**	**304**	P	**Pn**	**08 06 48.7**	**-0.4**
JAI	**Aioi**	**3.38**	**274**	P	**Pn**	**08 06 51.6**	**-1.0**
JMN	**Monobe**	**3.86**	**273**	P	**Pn**	**08 06 57.1**	**-0.7**
KSRS	**Korea Array**	**9.43**	**297**	P	**Pn**	**08 08 05.0**	**+0.1**
	0.3nm,0.3s,baz=109,slow=13,SNR=6.2						
SONM	**Songino Array**	**27.94**	**310**	P	**P**	**08 11 19.3**	**+1.2**
	0.6nm,0.4s,baz=119,slow=12,SNR=3.5						
MKAR	**Makanchi Array**	**44.01**	**305**	P	**P**	**08 13 33.0**	**-0.3**
	0.8nm,0.4s,baz=85,slow=11,SNR=11						
WRA	**Warramunga Arr**	**53.41**	**185**	P	**P**	**08 14 42.8**	**-1.9**
	0.6nm,0.6s,baz=359,slow=7.7,SNR=5.9						
INK	**Inuvik**	**58.49**	**26**	P	**P**	**08 15 20.5**	**+0.7**
	0.4nm,0.5s,baz=290,slow=4.8						
YKA	**Yellowknife Ar**	**67.94**	**29**	P	**P**	**08 16 22.3**	**+0.7**
	0.2nm,0.5s,baz=301,slow=6.6,SNR=3.7						
AKASG	**Malin Array Be**	**75.52**	**322**	P	**P**	**08 17 06.2**	**-0.5**
	0.3nm,0.3s,baz=50,slow=5.7,SNR=2.8						
NVAR	**Mina Array Bea**	**78.95**	**51**	P	**P**	**08 17 27.9**	**+1.7**
	0.3nm,0.6s,baz=298,slow=4.8,SNR=3.7						

*SOME **21** 08:15:53.1,41°.02N×79°.95E,h0km*
*KRNET **21** 08:15:55.4±0.1,40°.93N×79°.88E,mb2.8*
ISC 21 08:15:54.1±1.7,40°.95N±0°.09×80°.18E±0°.06,h10km,n13, σ1s33/25,8C-4D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**2.03**	**320**⇑	*i*P	**Pb**	**08 16 30.3**	**-0.9**
	baz=25						
PRZ				⇑*i*S	**Sb**	**08 16 55.9**	**-0.7**
	baz=25						
SHLS	**Shalkode**	**2.27**	**347**	*e*P	**Pb**	**08 16 34.7**	**-0.6**
	12nm,0.2s						
SHLS				*e*S	**Sg**	**08 17 04.9**	**-2.2**
	14nm,0.2s						
UZB	**Uzynbulak**	**2.36**	**339**	*e*P	**Pb**	**08 16 36.0**	**-0.8**
	5.5nm,0.2s						
UZB				*e*S	**Sb**	**08 17 06.9**	**+0.9**
	5.2nm,0.2s						
ANVS	**Anan'yevo**	**2.62**	**315**⇓	*i*P	**Pb**	**08 16 38.3**	**-3.0**
	baz=19						
ANVS				⇓*i*S	**Sn**	**08 17 09.4**	**+0.7**
	baz=19						
KPKS	**Kokpek**	**2.75**	**337**	*e*P	**Pb**	**08 16 42.8**	**-0.6**
	14nm,0.2s						
KPKS				*e*S	**Sb**	**08 17 18.8**	**+1.6**
	12nm,0.3s						
KURS	**Kuram**	**2.94**	**330**	*e*P	**Pb**	**08 16 46.5**	**-0.2**
	1.9nm,0.2s						
KURS				*e*S	**Sb**	**08 17 24.8**	**+2.1**
	5.9nm,0.3s						
NRN	**Naryn**	**3.19**	**280**⇓	*e*P	**Pn**	**08 16 45.6**	**+1.0**
	baz=81						
NRN				⇓*e*S	**Sn**	**08 17 22.1**	**-0.7**
	baz=81						
ULHL	**Ulahol**	**3.22**	**295**⇑	*i*P	**Pn**	**08 16 46.2**	**+1.3**
	baz=97						
ULHL				⇑*i*S	**Sn**	**08 17 23.1**	**-0.4**
	baz=97						
BOOM	**Boomskoye usch**	**3.53**	**297**⇑	*i*P	**Pn**	**08 16 50.4**	**+1.3**
	baz=99						
BOOM				⇑*i*S	**Sn**	**08 17 30.4**	**-0.5**
	baz=99						
KST	**Kastek**	**3.77**	**305**	*e*P	**Pb**	**08 17 00.1**	**-0.7**
	1.2nm,0.1s						
KST				*e*S	**Sb**	**08 17 48.1**	**+1.5**
	6.9nm,0.3s						
KZA	**Kyzart**	**3.87**	**289**⇑	*e*P	**Pn**	**08 16 55.1**	**+1.1**
	baz=90						
KZA				⇑*i*S	**Sn**	**08 17 38.5**	**-1.2**
	baz=90						
DGS	**Degeres**	**4.00**	**306**	*e*P	**Pb**	**08 17 04.0**	**-0.7**
	1.7nm,0.4s						
DGS				*e*S	**Sb**	**08 17 54.7**	**+1.5**
	2.5nm,0.2s						
WMQ	**Urumqi**	**6.26**	**60**	*e*P	**Pb**	**08 17 42.3**	**-0.9**
WMQ				pmax	pmax		
	comp=Z,44nm,4.1s						
WMQ				LR	LR		
	comp=N,310nm,29.2s						
WMQ				LR	LR		
	comp=E,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,280nm,28.9s						

*IPEC **21** 08:20:19.4±0.5,51°.57N×16°.19E,h2km±2km,ML3.0/3, Error ellipse: s-maj=2.8km s-min=1.6km az=22.0*
*BGR **21** 08:20:20.5±0.3,51°.53N×16°.10E,h1km,ML3.2/10,Error ellipse: s-maj=3.3km s-min=2.2km az=35.0*
*IDC **21** 08:20:20.0±0.6,51°.55N×16°.01E,h0km,mb3.3/3, mb1 3.5/12,mb1mx3.4/49,mbtmp3.4/12,ML3.1/9,Error ellipse: s-maj=10.1km s-min=5.7km az=107.0*
*PRU **21** 08:20:20.4±0.0,51°.53N×16°.02E,h0km*
*VIE **21** 08:20:21.6±0.7,51°.37N×16°.04E,h0km,mb2.9/7,ml3.3/7, Error ellipse: s-maj=6.8km s-min=4.4km az=9.0 74 km WNW of Wroclaw Suspected Mining induced.*
ISC 21 08:20:18.5±0.6,51°.61N±0°.03×16°.11E±0°.02,h0km,n74, σ1s29/145,mb3.1/3,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.78**	**172**	*e*Pg	**Pg**	**08 20 33.7**	**+0.2**
	SNR=30						
KSP				*e*Sg	**Sg**	**08 20 43.1**	**-0.4**
	SNR=4.3						
KSP	**Ksiaz**	**0.78**	**172**	*i* Pg	**Pg**	**08 20 33.6**	**+0.2**
KSP				*e*Sg	**Sg**	**08 20 43.0**	**-0.5**
CHVC	**Chvalec**	**1.03**	**182**	*e*PG	**Pg**	**08 20 38.3**	**+0.2**
CHVC				*e*SG	**Sg**	**08 20 50.0**	**-1.4**
	comp=Z,161nm,0.6s						
OSTC	**Ostas**	**1.06**	**176**	*e*PG	**Pg**	**08 20 38.9**	**+0.1**
OSTC				*e*SG	**Sg**	**08 20 51.7**	**-0.8**
	comp=Z,123nm,0.4s						
UPC	**Upice**	**1.11**	**183**	*e*PG	**Pg**	**08 20 39.7**	**0.0**
UPC				*e*SG	**Sg**	**08 20 52.2**	**-1.9**
	comp=Z,250nm,0.6s						
PVCC	**Panska Ves**	**1.46**	**223**	*e*Pn	**Pn**	**08 20 46.0**	**-0.1**
	SNR=4.5						
PVCC				*e*Pg	**Pb**	**08 20 46.6**	**+0.1**
	SNR=41						
PVCC				*e*Sg	**Sg**	**08 21 05.9**	**+0.6**
	SNR=5.5						
PVCC	**Panska Ves**	**1.46**	**223**	*e*PG	**Pn**	**08 20 46.1**	**0.0**
PVCC				*e*SG	**Sg**	**08 21 04.4**	**-0.9**
	comp=Z,401nm,0.6s						
BRG	**Berggiesshubel**	**1.55**	**242**	PN	**Pn**	**08 20 46.8**	**-0.5**
BRG				PG	**Pg**	**08 20 48.5**	**+0.3**
BRG				SG	**Sn**	**08 21 08.1**	**-0.1**
	186nm,0.5s						
BRG	**Berggiesshubel**	**1.55**	**242**	*e*Pn	**Pn**	**08 20 47.0**	**-0.4**
	SNR=2.1						
BRG				*e*Pg	**Pg**	**08 20 48.4**	**+0.2**
	SNR=65						
BRG				*e*Sg	**Sn**	**08 21 08.4**	**+0.2**
	SNR=3.7						
KRLC	**Kraliky**	**1.60**	**164**	*e*PG	**Pn**	**08 20 47.9**	**-0.1**
KRLC				*e*SG	**Sn**	**08 21 08.4**	**-1.0**
	comp=Z,197nm,0.8s						
RUE	**Ruedersdorf**	**1.68**	**302**	*e*Pn	**Pb**	**08 20 49.7**	**-0.7**
	SNR=3.2						
RUE				*e*Sg	**Sg**	**08 21 15.4**	**+2.9**
	SNR=3.7						
FBE	**Freiberg**	**1.87**	**249**	*e*Pn	**Pn**	**08 20 51.4**	**-0.3**
	SNR=1.1						
FBE				*e*Pg	**Pg**	**08 20 54.0**	**-0.3**
	SNR=21						
FBE				*e*Sg	**Sg**	**08 21 18.9**	**+0.4**
	SNR=5.2						
PRA	**Prague**	**1.88**	**215**	*e*PN	**Pn**	**08 20 51.7**	**-0.1**
PRA				*e*PG	**Pb**	**08 20 53.3**	**-0.3**
PRA				*e*SG	**Sn**	**08 21 16.8**	**+0.6**
	comp=Z,186nm,1.0s						
PRU	**Pruhonice**	**1.91**	**212**	*e*Pn	**Pn**	**08 20 51.7**	**-0.6**
	SNR=4.7						
PRU	**Pruhonice**	**1.91**	**212**	*e*PN	**Pn**	**08 20 52.1**	**-0.2**
PRU				*e*SG	**Sn**	**08 21 17.4**	**+0.4**
	comp=Z,76nm,0.6s						
CLL	**Collm**	**1.97**	**262**	*i* Pn	**Pn**	**08 20 52.8**	**-0.3**
CLL				*e*Pg	**Pb**	**08 20 55.0**	**-0.2**
CLL				*i*		08 20 56.5	
CLL				*e*		08 20 59.0	
CLL				*i*		08 21 02.6	
CLL				*i* Sg	**Sg**	**08 21 21.7**	**0.0**
	comp=Z,131nm,0.6s						
CLL	**Collm**	**1.97**	**262**	*e*Pn	**Pn**	**08 20 52.9**	**-0.3**
	SNR=2.6						
CLL				*e*Pg	**Pg**	**08 20 56.5**	**+0.3**
	SNR=2.0						
CLL				*e*Sg	**Sg**	**08 21 22.3**	**+0.6**
	SNR=3.1						
MORC	**Moravsky Berou**	**2.05**	**153**	*e*Pn	**Pn**	**08 20 54.1**	**-0.2**
	SNR=28						
MORC	**Moravsky Berou**	**2.05**	**153**	*e*PN	**Pn**	**08 20 53.9**	**-0.4**
MORC				*e*SG	**Sn**	**08 21 21.7**	**+1.1**
MORC	**Moravsky Berou**	**2.05**	**153**	*e*Pn	**Pn**	**08 20 53.8**	**-0.5**
	baz=335						
MORC				*e*Sg	**Sn**	**08 21 21.7**	**+1.1**
	comp=Z,92nm,0.5s,baz=335						
OKC	**Ostrava-Krasne**	**2.20**	**143**	*e*Pn	**Pn**	**08 20 56.5**	**+0.3**
	SNR=1.5						
OKC				*e*Pg	**Pg**	**08 21 00.5**	**-0.1**
	SNR=5.9						
OKC	**Ostrava-Krasne**	**2.20**	**143**	*e*PG	**Pb**	**08 20 59.2**	**+0.1**
OKC				*e*SG	**Sb**	**08 21 28.4**	**+1.6**
	comp=Z,193nm,0.8s						
VRAC	**Vranov**	**2.33**	**172**	*e*Pn	**Pn**	**08 20 58.5**	**+0.4**
	SNR=5.3						
VRAC				*e*Sg	**Sb**	**08 21 32.5**	**+1.9**
	SNR=2.5						
VRAC	**Vranov**	**2.33**	**172**	Pn	**Pn**	**08 20 57.8**	**-0.2**
	comp=Z,2.8nm,0.3s,baz=355,slow=12,SNR=11						
VRAC				Pg	**Pb**	**08 21 02.2**	**+0.9**
	comp=Z,6.5nm,0.3s,baz=360,slow=16,SNR=13						
VRAC				Sn	**Sn**	**08 21 28.1**	**+0.8**
	comp=Z,7.1nm,0.3s,baz=54,slow=19,SNR=12						
VRAC				Lg	Lg	08 21 32.9	
	comp=Z,7.1nm,0.3s,baz=266,slow=13,SNR=12						
VRAC	**Vranov**	**2.33**	**172**	*e*PN	**Pn**	**08 20 58.2**	**+0.2**
VRAC				*e*SG	**Sb**	**08 21 30.7**	**+0.1**
VRAC	**Vranov**	**2.33**	**172**	*e*Pn	**Pn**	**08 20 58.2**	**+0.2**
	baz=354						
VRAC				*e*Sg	**Sb**	**08 21 30.6**	**0.0**
	comp=Z,77nm,0.6s,baz=354						
PBCC	**Pribram**	**2.35**	**216**	*e*PG	**Pb**	**08 21 01.7**	**-0.1**
PBCC				*e*SG	**Sb**	**08 21 32.1**	**+0.8**
	comp=Z,18nm,0.4s						
TREC	**Trest**	**2.35**	**190**	*e*Pn	**Pn**	**08 20 58.7**	**+0.2**
	SNR=5.4						
TREC				*e*Pg	**Pb**	**08 21 02.4**	**+0.6**
	SNR=6.7						
TREC				*e*Sg	**Sb**	**08 21 31.9**	**+0.5**
	SNR=3.1						
TREC	**Trest**	**2.35**	**190**	*e*PN	**Pn**	**08 20 59.3**	**+0.9**
TREC				*e*PG	**Pb**	**08 21 01.4**	**-0.4**
TREC				*e*SG	**Sb**	**08 21 31.5**	**+0.1**
	comp=Z,89nm,0.8s						
KRUC	**Moravsky**	**2.56**	**176**	*e*Pn	**Pn**	**08 21 01.6**	**+0.3**
	SNR=4.5						
KRUC				*e*Pg	**Pb**	**08 21 05.7**	**+0.4**
	SNR=3.7						
KRUC				*e*Sg	**Sb**	**08 21 39.1**	**+1.8**
	SNR=5.2						
KRUC	**Moravsky**	**2.56**	**176**	*e*PN	**Pn**	**08 21 01.5**	**+0.3**
KRUC				*e*SG	**Sb**	**08 21 38.2**	**+0.9**
KRUC	**Moravsky**	**2.56**	**176**	*e*Pn	**Pn**	**08 21 01.4**	**+0.2**
	baz=357						
KRUC				*e*Sg	**Sb**	**08 21 38.2**	**+0.9**
	comp=Z,75nm,0.9s,baz=357						
TANN	**Tannenbergstha**	**2.60**	**244**	*e*Pn	**Pn**	**08 21 02.0**	**+0.2**
	SNR=3.3						
TANN				*e*Pg	**Pg**	**08 21 09.3**	**+1.0**
	SNR=4.2						
GUNZ	**Gunzen**	**2.70**	**244**	*e*Pn	**Pn**	**08 21 03.5**	**+0.3**
	SNR=1.9						
GUNZ				*e*Pg	**Pg**	**08 21 10.8**	**+0.6**
	SNR=6.6						
NKC	**Novy Kostel**	**2.70**	**241**	*e*Pn	**Pn**	**08 21 03.9**	**+0.8**
	SNR=7.8						
NKC				*e*Pg	**Pg**	**08 21 10.7**	**+0.5**
	SNR=2.3						
NKC	**Novy Kostel**	**2.70**	**241**	*e*PN	**Pn**	**08 21 04.0**	**+0.8**
NKC				*e*PG	**Pb**	**08 21 08.8**	**+1.1**
NKC				*e*SG	**Sg**	**08 21 44.4**	**-0.8**
	comp=Z,142nm,0.5s						
WERN	**Wernitzgruen**	**2.71**	**242**	*e*Pn	**Pn**	**08 21 04.2**	**+0.9**
	SNR=7.2						
WERN				*e*Pg	**Pg**	**08 21 10.9**	**+0.5**
	SNR=2.8						
OJC	**Ojcow**	**2.72**	**119**	*e*Pg	**Pg**	**08 21 11.3**	**+0.8**
	SNR=16						
OJC	**Ojcow**	**2.72**	**119**	*e*Pg	**Pg**	**08 21 11.4**	**+0.8**
OJC				*e*Sg	**Sg**	**08 21 46.6**	**+0.8**
PLN	**Plauen**	**2.74**	**247**	*e*Pn	**Pn**	**08 21 03.8**	**+0.1**
	SNR=4.0						
KHC	**Kasperske Hory**	**2.97**	**214**	*e*Pn	**Pn**	**08 21 06.8**	**-0.1**
	SNR=7.0						
KHC	**Kasperske Hory**	**2.97**	**214**	*e*PN	**Pn**	**08 21 07.1**	**+0.2**
KHC				*e*PG	**Pb**	**08 21 12.5**	**+0.3**
KHC				*e*SN	**Sn**	**08 21 42.0**	**-1.2**
KHC				*e*SG	**Sb**	**08 21 51.9**	**+2.9**
	comp=Z,44nm,0.5s						
MOX	**Moxa**	**2.99**	**253**	*e*Pn	**Pn**	**08 21 08.4**	**+1.2**
	SNR=2.5						
MOX				*e*Pg	**Pg**	**08 21 16.1**	**+0.2**
	SNR=6.9						
MANZ	**Manzenberg**	**3.02**	**239**	*e*Pn	**Pn**	**08 21 08.4**	**+0.8**
	SNR=6.3						
MANZ				*e*Sg	**Sg**	**08 21 55.0**	**-0.4**
	SNR=2.8						
ROTZ	**Rotzenmuhle**	**3.10**	**235**	*e*Pn	**Pn**	**08 21 08.7**	**+0.1**
	SNR=8.8						
GEC2	**GERESS Array S**	**3.17**	**210**	*e*Pn	**Pn**	**08 21 10.6**	**+0.8**
	SNR=11						
GERES	**GERESS Array B**	**3.17**	**210**	Pn	**Pn**	**08 21 10.2**	**+0.4**
	comp=Z,3.6nm,0.3s,baz=33,slow=13,SNR=79						
GERES				Pg	**Pb**	**08 21 16.6**	**+0.9**
	comp=Z,6.8nm,0.3s,baz=27,slow=13,SNR=36						
GERES				Sn	**Sn**	**08 21 47.2**	**-1.1**
	comp=Z,3.6nm,0.3s,baz=22,slow=29,SNR=6.6						
GERES				Lg	Lg	08 21 56.7	
	comp=Z,7.0nm,0.3s,baz=30,slow=30,SNR=11						
SMOL	**Smolenice**	**3.21**	**164**	*e*PN	**Pn**	**08 21 09.2**	**-1.1**
SMOL				*e*PG	**Pg**	**08 21 21.1**	**+1.0**
SMOL				*e*SG	**Sg**	**08 22 02.5**	**+0.8**
SMOL				*e*LG	Lg	08 22 06.6	
WET	**Wettzell**	**3.22**	**221**	*e*Pn	**Pn**	**08 21 10.6**	**+0.2**
	SNR=10						
LANS	**Liptovska Anna**	**3.27**	**138**	*e*PN	**Pn**	**08 21 12.1**	**+1.1**
LANS				*e*PG	**Pg**	**08 21 22.9**	**+1.8**
LANS				*e*SG	**Sg**	**08 22 03.6**	**+0.1**
LANS				*e*LG	Lg	08 22 16.8	
MODS	**Modra-Piesok**	**3.33**	**167**	*e*PN	**Pn**	**08 21 11.5**	**-0.3**
MODS				*e*SG	**Sg**	**08 22 04.2**	**-1.2**
MODS				*e*LG	Lg	08 22 08.8	
NIE	**Niedzica**	**3.46**	**128**	*e*P	**Pg**	**08 21 24.6**	**-0.1**
NIE

GO05	**Huala**	**0.41**	**149**	*e*P		Pb	08 35 35.1	-1.1
GO05				*e*S		Sb	08 35 40.9	-1.4
BO02	**Sierra Bellavi**	**1.17**	**97**	⇓*i*P		Pn	08 35 46.8	-0.8
BO02				*i* S		Sn	08 36 02.1	-0.5
COCH	**Cobquecura**	**1.55**	**198**	*e*P		Pn	08 35 52.8	+0.1
COCH				*e*S		Sb	08 36 16.3	+2.0
MT05	**Renca**	**1.75**	**44**	⇑*i*P		Pn	08 35 56.3	+0.7
MT05				*e*S		Sn	08 36 17.2	+0.3
MT05				IAML			08 36 22.7	
	comp=E,649nm,0.5s							
MT03	**Universidad Ad**	**1.81**	**51**	⇑*i*P		Pn	08 35 56.9	+0.4
MT03				*i* S		Sn	08 36 19.8	+1.2
MT03				IAML			08 36 24.0	
	comp=N,929nm,0.3s							
LMEL	**Las Melosas**	**1.83**	**64**	⇓*i*P		Pn	08 35 58.0	+1.2
LMEL				*i* S		Sb	08 36 21.2	-1.5
LMEL				IAML			08 36 23.9	
	comp=N,817nm,0.2s							
CLCH	**Cerro Calan**	**1.86**	**48**	*e*P		Pn	08 35 58.0	+0.9
CLCH				*i* S		Sn	08 36 21.2	+1.4
CLCH				IAML			08 36 27.5	
	comp=N,456nm,0.6s							
ROC1	**El Roble**	**1.94**	**31**	*i* P		Pn	08 35 58.6	+0.2
ROC1				*e*S		Sb	08 36 26.0	+0.1
CCHI	**Chillan**	**1.94**	**177**	*e*P		Pb	08 36 00.5	-1.4
CCHI				*e*S		Sb	08 36 27.1	+1.4
FCH	**Farellones**	**2.06**	**51**	*e*P		Pn	08 36 01.1	+1.0
FCH				*i* S		Sn	08 36 27.1	+2.1
FCH				IAML			08 36 33.4	
	comp=E,231nm,0.4s							
COIS	**El Sosneado**	**2.18**	**103**	*e*P		Pn	08 36 03.1	+1.6
COIS				*e*S		Sb	08 36 33.0	+0.4
PUMA	**Malargue**	**2.40**	**111**	*e*P		Pb	08 36 09.3	-0.4
AAGR	**Agrelo**	**3.21**	**62**	*e*P		Pb	08 36 23.4	-0.1
AAGR				*e*S		Sn	08 36 54.1	+1.1
ASAL	**Salagasta**	**3.48**	**55**	*i* P		Pb	08 36 24.5	-3.5
ASAL				*e*S		Sb	08 37 13.7	+3.9
RTLS	**Leoncito**	**3.74**	**41**	*i* P		Pn	08 36 26.6	+3.4
RTLS				IAML			08 36 38.0	
	comp=Z,10nm,0.4s							
RTLS				*e*S		Sb	08 37 17.9	+0.2
RTCV	**Cerro Valdivia**	**4.14**	**49**	*i* P		Pn	08 36 32.4	+4.0
RTCV				*e*S		Sb	08 37 36.6	+7.8
GO04	**Tololo Observa**	**4.62**	**15**	*i* P		Pn	08 36 34.8	-0.5
ACCO	**Cerro Coronel**	**4.84**	**34**	*i* P		Pn	08 36 40.2	+1.9
ACCO				*e*S		Sb	08 37 47.9	-1.4
AMOG	**MOGNA**	**4.84**	**41**	*i* P		Pn	08 36 39.6	+1.4
AROD	**Rodeo**	**5.03**	**28**	*i* P		Pn	08 36 44.2	+3.3
AROD				*e*S		Sn	08 37 21.1	-17

*BJI **21** 08:40:33.3±0.0, 49°.25N×156°.84E, h45km, mB4.9/15, mb4.5/26, Ms4.3/9, Ms7 4.0/9*
*KRSC **21** 08:40:35.9±1.9, 49°.17N×156°.39E, h99km±26km, ML4.6*
*SKHL **21** 08:40:36.3±0.5, 49°.00N×156°.40E, h53km±4km, mb4.9/10, mbv5.3/2, msh5.0/2*
*MOS **21** 08:40:36.9±1.2, 49°.15N×156°.33E, h51km, mb4.7/30, Error ellipse: s-maj=8.3km s-min=3.3km az=79.0*
*NEIC **21** 08:40:38.6±1.5, 49°.13N±0°.09×156°.2E±0°.1, h44km±7km, mb4.6/39, Error ellipse: s-maj=14.9km s-min=9.8km az=136.0*
*IDC **21** 08:40:39.8±2.1, 49°.15N×156°.11E, h55km±18km, mb3.8/25, mb1 4.0/32, mb1mx3.9/55, mbtmp4.1/32, ML4.7/2, MS3.5/8, Ms1 3.5/8, ms1mx3.1/37, Error ellipse: s-maj=17.8km s-min=11.6km az=148.0*
ISC 21 08:40:37.9±0.8, 49°.07N±0°.05×156°.32E±0°.05, h44km±7km, n281, σ1$37/307, mb4.5/73, MS3.6/8, 28C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.62**	**355**	⇑*i*PN	**Pn**	**08 41 03.1**	**-0.8**
SKR				*e*S	**Sn**	**08 41 23.8**	**+0.3**
SKR				pmax	pmax		
	comp=Z,700nm,2.7s						
SKR				pmax	pmax		
	comp=Z,957nm,0.6s						
SKR				smax	smax		
	comp=N,2μm,0.6s						
SKR				smax	smax		
	comp=E,1μm,0.5s						
SKR	**Severo-Kuril's**	**1.62**	**355**	*e*P	**Pn**	**08 41 03.5**	**-0.4**
SKR				*e*S	**Sn**	**08 41 22.8**	**-0.7**
SKR	**Severo-Kuril's**	**1.62**	**355**	⇑*i*P	**Pn**	**08 41 03.4**	**-0.4**
SKR				AMB	AMB	08 41 05.0	
	comp=E,700nm,2.7s						
SKR				AMB	AMB	08 41 08.0	
	comp=E,180nm,0.6s						
SKR				*e*S	**Sn**	**08 41 24.1**	**+0.6**
SKR				A	A	08 41 27.0	
	comp=E,2μm,0.6s						
SKR				A	A	08 41 27.0	
	comp=E,1μm,0.6s						
PAU	**Pauzhetka**	**2.42**	**7**	PN	**Pn**	**08 41 14.9**	**+0.1**
PAU				S	**Sn**	**08 41 41.0**	**-2.2**
PAU	**Pauzhetka**	**2.42**	**7**	*e*P	**Pn**	**08 41 14.9**	**+0.1**
PAU				*e*S	**Sn**	**08 41 41.0**	**-2.2**
PAU	**Pauzhetka**	**2.42**	**7**	*e*P	**Pn**	**08 41 14.9**	**+0.1**
KDTR	**Khodutka, Kamc**	**2.96**	**22**	PN	**Pn**	**08 41 20.9**	**-1.4**
KDTR				S	**Sn**	**08 41 54.5**	**-2.0**
KDTR	**Khodutka, Kamc**	**2.96**	**22**	*e*P	**Pn**	**08 41 20.9**	**-1.4**
KDTR				*e*S	**Sn**	**08 41 54.5**	**-2.0**
ASAK	**Asacha**	**3.46**	**16**	PN	**Pn**	**08 41 28.9**	**-0.4**
ASAK				S	**Sn**	**08 42 07.8**	**-1.3**
ASAK	**Asacha**	**3.46**	**16**	*e*P	**Pn**	**08 41 28.9**	**-0.4**
ASAK				*e*S	**Sn**	**08 42 07.8**	**-1.3**
MTVR	**Mutnovka**	**3.61**	**18**	PN	**Pn**	**08 41 31.0**	**-0.4**
MTVR	**Mutnovka**	**3.61**	**18**	*e*P	**Pn**	**08 41 31.0**	**-0.4**
RUS	**Russkaya**	**3.64**	**22**	PN	**Pn**	**08 41 30.7**	**-0.9**
RUS				S	**Sn**	**08 42 10.3**	**-3.0**
RUS	**Russkaya**	**3.64**	**22**	*e*P	**Pn**	**08 41 30.7**	**-0.9**
RUS				*e*S	**Sn**	**08 42 10.3**	**-3.0**
RUS	**Russkaya**	**3.64**	**22**	*e*P	**Pn**	**08 41 30.7**	**-0.9**
GRL	**Gorelyy**	**3.66**	**17**	PN	**Pn**	**08 42 32.3**	**+0.3**
GRL				S	**Sn**	**08 42 13.3**	**-0.6**
GRL	**Gorelyy**	**3.66**	**17**	*e*P	**Pn**	**08 41 32.3**	**+0.3**
GRL				*e*S	**Sn**	**08 42 13.3**	**-0.6**
APC	**Apacha**	**3.89**	**8**	PN	**Pn**	**08 41 35.5**	**+0.4**
APC	**Apacha**	**3.89**	**8**	*e*P	**Pn**	**08 41 35.5**	**+0.4**
KRMR	**Karymshinskiy**	**3.93**	**16**	PN	**Pn**	**08 41 35.8**	**+0.2**
KRMR				S	**Sn**	**08 42 18.5**	**-2.0**
KRMR	**Karymshinskiy**	**3.93**	**16**	*e*P	**Pn**	**08 41 35.8**	**+0.2**
KRMR				*e*S	**Sn**	**08 42 18.5**	**-2.0**
PEA0B	**Petropavlovsk-**	**4.13**	**12**	*i* PN	**Pn**	**08 41 38.9**	**+0.5**
PEA0B	**Petropavlovsk-**	**4.13**	**12**		**Pn**	**08 41 39.2**	**+0.8**
PETK	**Petropavlovsk-**	**4.13**	**12**	P	**Pn**	**08 41 38.6**	**+0.2**
	comp=E,5.3nm,0.3s,baz=176,slow=14,SNR=34						
PET	**Petropavlovsk**	**4.22**	**20**	PN	**Pn**	**08 41 39.5**	**-0.1**
PET				S	**Sn**	**08 42 25.2**	**-2.4**
PET	**Petropavlovsk**	**4.22**	**20**	*e*P	**Pn**	**08 41 39.4**	**-0.1**
PET				AMB	AMB	08 41 43.0	
	comp=E,50nm,0.6s						
PET				*e*S	**Sn**	**08 42 26.3**	**-1.3**
PET				A	A	08 42 32.6	
	comp=E,250nm,0.5s						
PET				A	A	08 42 32.6	
	comp=E,260nm,0.5s						
PET	**Petropavlovsk**	**4.22**	**20**		**Pn**	**08 41 39.2**	**-0.4**
PET				Sn	**Sn**	**08 42 28.0**	**+0.4**
UGLR	**Uglovaya**	**4.43**	**20**	PN	**Pn**	**08 41 42.7**	**+0.1**
UGLR	**Uglovaya**	**4.43**	**20**	*e*P	**Pn**	**08 41 42.7**	**+0.1**
AVH	**Avacha**	**4.47**	**19**	PN	**Pn**	**08 41 43.2**	**+0.2**
AVH				S	**Sn**	**08 42 31.7**	**-2.0**
AVH	**Avacha**	**4.47**	**19**	*e*P	**Pn**	**08 41 43.2**	**+0.2**
AVH				*e*S	**Sn**	**08 42 31.7**	**-2.0**
KOK	**Koryaka**	**4.47**	**18**	PN	**Pn**	**08 41 43.2**	**+0.1**
KOK				S	**Sn**	**08 42 31.9**	**-1.9**
KOK	**Koryaka**	**4.47**	**18**	*e*P	**Pn**	**08 41 43.2**	**+0.1**
KOK				*e*S	**Sn**	**08 42 31.9**	**-1.9**
KOK	**Koryaka**	**4.47**	**18**	*e*P	**Pn**	**08 41 43.2**	**+0.1**
SMAR	**Somma**	**4.48**	**19**	PN	**Pn**	**08 41 43.9**	**+0.6**
SMAR	**Somma**	**4.48**	**19**	*e*P	**Pn**	**08 41 43.9**	**+0.6**
KRER	**Koryakskii**	**4.50**	**19**	PN	**Pn**	**08 41 43.2**	**-0.5**
KRER				S	**Sn**	**08 42 32.3**	**-2.5**
KRER	**Koryakskii**	**4.50**	**19**	*e*P	**Pn**	**08 41 43.2**	**-0.5**
KRER				*e*S	**Sn**	**08 42 32.3**	**-2.5**
NLC	**Nalytchevo**	**4.53**	**24**	PN	**Pn**	**08 41 42.2**	**-1.5**
NLC	**Nalytchevo**	**4.53**	**24**	*e*P	**Pn**	**08 41 42.2**	**-1.5**
NLC				*e*S	**Sn**	**08 42 31.1**	**-3.9**
NLC	**Nalytchevo**	**4.53**	**24**	*e*P	**Pn**	**08 41 42.2**	**-1.5**
KRX	**Arik**	**4.54**	**18**	PN	**Pn**	**08 41 44.8**	**+0.8**
KRX	**Arik**	**4.54**	**18**	*e*P	**Pn**	**08 41 44.8**	**+0.8**
SPN	**Mys Shipunski**	**4.66**	**29**	PN	**Pn**	**08 41 44.6**	**-1.0**
SPN	**Mys Shipunski**	**4.66**	**29**	*e*P	**Pn**	**08 41 44.6**	**-1.0**
SPN				*e*S	**Sn**	**08 42 34.6**	**-3.7**
SPN	**Mys Shipunski**	**4.66**	**29**	*e*P	**Pn**	**08 41 44.6**	**-1.0**
MKZ	**Mys Kozlova**	**6.43**	**29**	PN	**Pn**	**08 42 07.8**	**-2.1**
MKZ	**Mys Kozlova**	**6.43**	**29**	*e*P	**Pn**	**08 42 07.8**	**-2.1**
MKZ				*e*S	**Sn**	**08 43 16.4**	**-5.5**
KZV	**Kizimen**	**6.53**	**21**	PN	**Pn**	**08 42 11.6**	**+0.2**
KZV	**Kizimen**	**6.53**	**21**	*e*P	**Pn**	**08 42 11.6**	**+0.2**
KZV				*e*S	**Sn**	**08 43 21.5**	**-3.0**
TUMD	**Tumrok D**	**6.63**	**21**	*e*P	**Pn**	**08 42 12.4**	**-0.3**
TUMR	**Tumrok**	**6.65**	**19**	PN	**Pn**	**08 42 12.4**	**-0.6**
TUMR	**Tumrok**	**6.65**	**19**	*e*P	**Pn**	**08 42 13.5**	**+0.5**
KUR	**Kuril'sk**	**6.92**	**239**	⇑*i*PN	**Pn**	**08 42 18.9**	**+2.2**
KUR				pmax	pmax		
	comp=Z,82nm,0.4s						
KUR				pmax	pmax		
	comp=N,25nm,0.3s						
KUR				pmax	pmax		
	comp=E,20nm,0.5s						
KUR	**Kuril'sk**	**6.92**	**239**	*e*P	**Pn**	**08 42 17.4**	**+0.7**
KUR				AMB	AMB	08 42 21.9	
	comp=E,500nm,4.5s						
KUR				AMB	AMB	08 42 30.0	
	comp=E,30nm,0.5s						
KUR				AMB	AMB	08 42 30.0	
	comp=E,20nm,0.5s						
KUR				AMB	AMB	08 42 30.0	
	comp=E,80nm,0.5s						
KUR				*e*S	**Sn**	**08 43 32.9**	**-1.1**
KUR				A	A	08 43 34.5	
	comp=E,400nm,3.5s						
KUR				A	A	08 43 34.5	
	comp=E,500nm,3.5s						
ESO	**Esso**	**7.02**	**11**	PN	**Pn**	**08 42 18.6**	**+0.7**
ESO	**Esso**	**7.02**	**11**	*e*P	**Pn**	**08 42 18.6**	**+0.7**
ESO	**Esso**	**7.02**	**11**	*e*P	**Pn**	**08 42 18.6**	**+0.7**
KMNR	**Kamenistaya**	**7.11**	**18**	PN	**Pn**	**08 42 18.3**	**-1.0**
KMNR	**Kamenistaya**	**7.11**	**18**	*e*P	**Pn**	**08 42 18.3**	**-1.0**
KPT	**Kopyto**	**7.30**	**18**	PN	**Pn**	**08 42 20.4**	**-1.5**
KPT	**Kopyto**	**7.30**	**18**	*e*P	**Pn**	**08 42 20.4**	**-1.5**
KIRR	**Kirishev**	**7.32**	**18**	PN	**Pn**	**08 42 22.3**	**+0.1**
KIRR	**Kirishev**	**7.32**	**18**	*e*P	**Pn**	**08 42 22.3**	**+0.1**
KOZ	**Kozyrevsk**	**7.32**	**16**	PN	**Pn**	**08 42 21.4**	**-0.8**
KOZ	**Kozyrevsk**	**7.32**	**16**	*e*P	**Pn**	**08 42 21.4**	**-0.8**
KOZ	**Kozyrevsk**	**7.32**	**16**	*e*P	**Pn**	**08 42 21.4**	**-0.8**
SRDR	**Sredinnyy**	**7.54**	**15**	PN	**Pn**	**08 42 24.2**	**-1.0**
SRDR	**Sredinnyy**	**7.54**	**15**	*e*P	**Pn**	**08 42 24.2**	**-1.0**
KLY	**Klyuchi**	**7.71**	**18**	PN	**Pn**	**08 42 28.5**	**+1.0**
KLY	**Klyuchi**	**7.71**	**18**	*e*P	**Pn**	**08 42 28.5**	**+1.0**
KLY	**Klyuchi**	**7.71**	**18**	*e*P	**Pn**	**08 42 28.5**	**+1.0**
KBTR	**Krutoberegovo**	**8.16**	**26**	PN	**Pn**	**08 42 32.2**	**-1.4**
KBTR	**Krutoberegovo**	**8.16**	**26**	*e*P	**Pn**	**08 42 32.2**	**-1.4**
KBG	**Krutoberegovo**	**8.17**	**26**	PN	**Pn**	**08 42 33.1**	**-0.6**
KBG	**Krutoberegovo**	**8.17**	**26**	*e*P	**Pn**	**08 42 33.1**	**-0.6**
KBG	**Krutoberegovo**	**8.17**	**26**	*e*P	**Pn**	**08 42 33.1**	**-0.6**
SHO	**Shikotan**	**8.36**	**235**	*e*PN	**Pn**	**08 42 33.8**	**-2.6**
SHO				pmax	pmax		
	comp=N,14nm,0.4s						
SHO				pmax	pmax		
	comp=Z,20nm,0.4s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.2s						
SHO				MLR	MLR		
	comp=Z,120nm,10.0s						
SHO				MLR	MLR		
	comp=N,60nm,7.0s						
SHO	**Shikotan**	**8.36**	**235**	⇑*e*P	**Pn**	**08 42 34.3**	**-2.1**
SHO				AMB	AMB	08 42 37.6	
	comp=N,200nm,3.0s						
SHO				AMB	AMB	08 42 39.0	
	comp=N,10.0nm,0.4s						
SHO				AMB	AMB	08 42 39.0	
	comp=N,10.0nm,0.4s						
SHO				AMB	AMB	08 42 39.0	
	comp=N,20nm,0.4s						
SHO				*e*S	**Sn**	**08 44 03.7**	**-5.7**
SHO				A	A	08 44 05.2	
	comp=N,600nm,4.0s						
SHO				A	A	08 44 05.2	
	comp=N,200nm,4.0s						
BKI	**Bering**	**8.54**	**40**	PN	**Pn**	**08 42 37.4**	**-1.3**
BKI	**Bering**	**8.54**	**40**	*e*P	**Pn**	**08 42 37.4**	**-1.3**
BKI				*e*S	Sn	08 44 03.2	-10
YUK	**Yuzh-Kuril'sk**	**8.79**	**239**	*e*PN	**Pn**	**08 42 43.1**	**+0.9**
YUK				pmax	pmax		
	comp=Z,123nm,0.3s						
YUK				MLR	MLR		
	comp=Z,186nm,14.0s						
YUK	**Yuzh-Kuril'sk**	**8.79**	**239**	*e*P	**Pn**	**08 42 43.1**	**+0.9**
YUK				AMB	AMB	08 42 47.0	
	comp=Z,120nm,0.3s						
YUK				*e*S	**Sn**	**08 44 18.0**	**-1.9**
GRPR	**Tuman**	**8.87**	**239**	*e*PN	**Pn**	**08 42 42.9**	**-0.4**
GRPR				pmax	pmax		
	comp=N,37nm,0.4s						
GRPR				pmax	pmax		
	comp=E,59nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,84nm,0.4s						
GRPR	**Tuman**	**8.87**	**239**	*e*P	**Pn**	**08 42 44.1**	**+0.8**
GRPR				AMB	AMB	08 42 51.8	
	comp=Z,40nm,0.6s						
GRPR				AMB	AMB	08 42 51.8	
	comp=Z,60nm,0.6s						
GRPR				AMB	AMB	08 42 51.8	
	comp=Z,80nm,0.6s						
TYV	**Tymovskoe**	**8.99**	**287**	*e*PN	**Pn**	**08 42 48.5**	**+3.6**
TYV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TYV	**Tymovskoe**	**8.99**	**287**	*e*P	**Pn**	**08 42 47.6**	**+2.7**
TYV				AMB	AMB	08 42 50.7	
	comp=Z,100nm,0.8s						
TYV				*e*S	**Sn**	**08 44 23.6**	**-1.1**
TYV				A	A	08 44 26.2	
	comp=Z,30nm,0.7s						
TYV				A	A	08 44 26.2	
	comp=Z,50nm,0.7s						
GLVR	**Golovnino**	**9.17**	**238**	*e*PN	**Pn**	**08 42 47.5**	**+0.1**
GLVR	**Golovnino**	**9.17**	**238**	*e*P	**Pn**	**08 42 48.0**	**+0.6**
NMR	**Nemuro--Hokkai**	**9.29**	**236**	⇓*i*PN	**Pn**	**08 42 46.7**	**-2.4**
NMR	**Nemuro--Hokkai**	**9.29**	**236**	⇓*i*P	**Pn**	**08 42 46.7**	**-2.4**
YSS	**Yuzh-Sakhalins**	**9.34**	**262**	*e*PN	**Pn**	**08 42 53.0**	**+3.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
YSS				MLR	MLR		
	comp=N,100nm,16.0s						
YSS	**Yuzh-Sakhalins**	**9.34**	**262**	*e*P	**Pn**	**08 42 51.8**	**+2.1**
YSS				AMB	AMB	08 42 53.0	
	comp=N,20nm,0.5s						
YSS	**Yuzh-Sakhalins**	**9.34**	**262**	Pn	**Pn**	**08 42 51.6**	**+1.9**
UGL	**Uglegorsk**	**9.36**	**275**	*e*P	**Pn**	**08 42 49.8**	**-0.2**
UGL				AMB	AMB	08 42 50.3	
	comp=N,60nm,1.0s						
JKA	**Kamikawa-asahi**	**10.66**	**247**	*e*P	**Pn**	**08 43 09.5**	**+1.7**
JKA	**Kamikawa-asahi**	**10.66**	**247**		**Pn**	**08 43 09.5**	**+1.7**
ASAJ	**Asahikawa**	**10.66**	**247**	P	**Pn**	**08 43 09.5**	**+1.7**
	comp=N,4.5nm,0.3s,baz=66,slow=14,SNR=17						
MA2	**Magadan**	**11.01**	**345**	PN	**Pn**	**08 43 11.6**	**-0.9**
MA2	**Magadan**	**11.01**	**345**	P	**Pn**	**08 43 12.8**	**+0.3**
	comp=N,1.9nm,0.3s,baz=157,slow=11,SNR=14						
MA2				LR	LR	08 48 23.3	
	comp=N,161nm,18.2s,baz=152,slow=43						
MA2	**Magadan**	**11.01**	**345**	*e*P	**Pn**	**08 43 11.6**	**-0.9**
ERM	**Erimo**	**11.61**	**237**	PN	**Pn**	**08 43 20.5**	**-0.3**
ERM	**Erimo**	**11.61**	**237**	Pn	**Pn**	**08 43 20.4**	**-0.3**
SMY	**Shemya**	**11.80**	**65**	PN	**Pn**	**08 43 21.5**	**-1.9**
SMY	**Shemya**	**11.80**	**65**	Pn	**Pn**	**08 43 21.5**	**-1.9**
SEY	**Seymchan**	**14.06**	**353**	P	**Pn**	**08 43 56.0**	**+1.8**
SEY	**Seymchan**	**14.06**	**353**	P	**Pn**	**08 43 56.0**	**+1.8**
	comp=N,0.1nm,0.3s,baz=180,slow=20,SNR=2.9						
EKMR	**Ekimchan**	**15.20**	**294**	*e*P	**Pn**	**08 44 07.3**	**-2.1**
EKMR				AMB	AMB	08 44 16.3	
	comp=N,10.0nm,0.5s						
KLR	**Kul'dur**	**16.06**	**280**	*i* P	**Pn**	**08 44 21.5**	**+1.1**
KLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KLR	**Kul'dur**	**16.06**	**280**	P	**P**	**08 44 23.3**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=79,slow=8.7,SNR=12						
KLR				LR	LR	08 50 59.4	
	comp=Z,200nm,18.4s,baz=70,slow=39						
USA0B	**Ussuriysk Arra**	**17.37**	**263**	P	**Pn**	**08 44 36.9**	**0.0**
USA0B				pmax	pmax		
	comp=Z,15nm,1.5s						
USA0B	**Ussuriysk Arra**	**17.37**	**263**		**Pn**	**08 44 36.9**	**0.0**
USRK	**Ussuriysk Ar.**	**17.37**	**263**	P	**Pn**	**08 44 36.6**	**-0.3**
	baz=72,slow=9.7,SNR=7.9						
BMKR	**Bomnak**	**17.80**	**299**	*e*P	**Pn**	**08 44 41.4**	**-0.7**
BMKR				AMB	AMB	08 44 43.9	
	comp=Z,10.0nm,0.6s						
MJAR	**Matsushiro Arr**	**18.20**	**233**	P	**P**	**08 44 46.2**	**-0.8**
	comp=Z,0.0nm,0.3s,baz=42,slow=20,SNR=3.3						
MAT	**Matsushiro**	**18.20**	**233**	P	**P**	**08 44 46.2**	**-0.8**
KROS	**Kirovskiy**	**18.86**	**298**	*e*P	**Pn**	**08 44 55.0**	**0.0**
KROS				AMB	AMB	08 44 55.2	
	comp=Z,4.0nm,0.6s						
BILL	**Bilibino**	**19.67**	**11**	*i* P	**P**	**08 45 02.3**	**-0.5**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BILL	**Bilibino**	**19.67**	**11**	P	**P**	**08 45 03.0**	**+0.3**
YAK	**Yakutsk**	**19.69**	**321**	*e*P	**P**	**08 45 02.0**	**-1.1**
YAK				*e*S	**S**	**08 48 42.4**	**-0.1**
YAK				pmax	pmax		
	comp=Z,23nm,1.2s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.3s						
YAK				smax	smax		
	comp=N,31nm,2.7s						
YAK				smax	smax		
	comp=E,84nm,2.7s						
YAK	**Yakutsk**	**19.69**	**321**	P	**P**	**08 45 01.7**	**-1.4**
	comp=E,0.1nm,0.3s,baz=156,slow=1.5,SNR=5.5						
YAK	**Yakutsk**	**19.69**	**321**	P	**P**	**08 45 02.4**	**-0.7**
YAK				IAmb	IAmb	08 45 04.3	
	comp=Z,15nm,0.7s						
KSRS	**Korea Array**	**23.57**	**251**	P	**P**	**08 45 44.1**	**-0.1**
	comp=Z,3.0nm,0.7s,baz=46,slow=9.9,SNR=4.9						
KSRS				ScP	**ScP**	**08 52 60.0**	**-2.7**
	comp=Z,2.2nm,0.9s,baz=50,slow=1.1,SNR=4.4						
ANM	**Nome**	**25.54**	**38**	P	**P**	**08 46 02.4**	**+0.4**
ANM				pmax	pmax		
	comp=Z,14nm,1.3s						
ANM	**Nome**	**25.54**	**38**	P	**P**	**08 46 02.4**	**+0.4**
ANM				IAmb	IAmb	08 46 15.3	
	comp=Z,14nm,1.3s						
TIXI	**Tiksi**	**25.92**	**340**	*ce*P	**P**	**08 46 04.7**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIXI	**Tiksi**	**25.92**	**340**	LR	LR	08 57 03.3	
	comp=Z,56nm,18.2s,baz=139,slow=38						
TIXI	**Tiksi**	**25.92**	**340**	⇑*e*P	**P**	**08 46 04.7**	**-0.7**
H11N2	**WAKE ISLAND Hy**	**30.48**	**160**	T	T	09 19 18.2	
	baz=357,slow=74,SNR=6.0						
H11N1	**WAKE ISLAND Hy**	**30.50**	**160**	T	T	09 19 43.9	
	baz=357,slow=74,SNR=9.6						
H11N3	**WAKE ISLAND Hy**	**30.50**	**160**	T	T	09 20 04.5	
	baz=357,slow=74,SNR=7.2						
PPLA	**Purkeypile**	**30.99**	**44**	P	**P**	**08 46 49.5**	**-1.4**
PPLA				IAmb	IAmb	08 46 54.7	
	comp=Z,15nm,1.3s						
H11S1	**WAKE ISLAND Hy**	**31.62**	**161**	T	T	09 21 11.3	
	baz=346,slow=76,SNR=122						
H11S3	**WAKE ISLAND Hy**	**31.64**	**161**	T	T	09 21 12.2	
	baz=346,slow=76,SNR=170						
H11S2	**WAKE ISLAND Hy**	**31.64**	**161**	T	T	09 20 42.6	
	baz=346,slow=76,SNR=125						
HHC	**Hu-ho-hao-te**	**32.31**	**272**	*e*P	**P**	**08 47 03.8**	**+1.1**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,43nm,5.7s						
SONM	**Songino Array**	**32.65**	**287**	LR	LR	09 01 45.9	
	comp=Z,119nm,18.1s,baz=196,slow=39						
NJ2	**Nanjing**	**32.74**	**253**	*e*P	**P**	**08 47 06.9**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
SML	**Sawmill**	**32.80**	**46**	P	**P**	**08 47 05.8**	**-0.9**
SML				IAmb	IAmb	08 47 18.2	
	comp=Z,7.7nm,0.9s						
TLY	**Talaya**	**33.09**	**295**	*i* P	**P**	**08 47 09.1**	**-0.2**
TLY				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY	**Talaya**	**33.09**	**295**	*i* P	**P**	**08 47 09.1**	**-0.2**
IL31		**33.38**	**41**	P	**P**	**08 47 12.9**	**+1.3**
ILAR	**Eielson Array**	**33.38**	**41**	P	**P**	**08 47 12.2**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=246,slow=6.8,SNR=6.0						
FYU	**Fort Yukon**	**34.10**	**37**	P	**P**	**08 47 19.3**	**+1.6**
FYU				IAmb	IAmb	08 47 29.6	
	comp=Z,8.2nm,1.2s						
EGAK	**Eagle**	**35.84**	**40**

BRVK Borovoye 51.09 309 P P 08 49 35.2 -0.3
BRVK IAmb IAmb 08 49 35.8
comp=Z,3.6nm,0.7s
SHL Shillong 54.57 269 P P 08 50 01.6 -0.3
SHL pmax pmax
comp=Z,7.0nm,0.6s
SHL Shillong 54.57 269 P P 08 50 01.6 -0.3
AAK Ala-Archa 54.73 297 *ceP* **P 08 50 03.4 +0.6**
AAK pmax pmax
comp=Z,3.0nm,1.1s
AAK Ala-Archa 54.73 297 P P 08 50 02.7 -0.1
comp=Z,0.8nm,0.5s,baz=67,slow=7.7,SNR=2.8
AAK Ala-Archa 54.73 297⇑ *eP* **P 08 50 03.4 +0.6**
AAK Ala-Archa 54.73 297 P P 08 50 02.9 +0.1
ARU Arti 54.75 318 *c iP* **P 08 50 01.7 -0.8**
ARU *PP **pP** 08 50 16.9 +2.7
ARU S **S** 08 57 38.4 -1.2
ARU SS **SS** 09 01 15.4 -7.0
ARU pmax pmax
comp=Z,13nm,0.7s
ARU Arti 54.75 318 P P 08 50 01.6 -1.0
comp=Z,7.0nm,0.7s,baz=37,slow=2.5,SNR=18
ARU Arti 54.75 318⇑ *iP* **P 08 50 01.7 -0.8**
ARU Arti 54.75 318 P P 08 50 02.1 -0.4
CMAR Chiang Mai Arr 55.00 257 *ceP* **P 08 50 07.1 +2.3**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 55.00 257 P P 08 50 04.0 -0.8
comp=Z,1.2nm,0.3s,baz=30,slow=7.7,SNR=7.5
CMAR Chiang Mai Arr 55.00 257 P P 08 50 04.0 -0.8
K05A Summer Lake 55.24 63 P P 08 50 08.3 +1.7
K05A IAmb IAmb 08 50 16.7
comp=Z,7.7nm,1.3s
ARCES ARCESS Array B 56.35 341 P P 08 50 13.4 -0.5
comp=Z,3.1nm,1.1s,baz=54,slow=7.9,SNR=4.3
ARCES LR LR 09 19 40.5
comp=Z,38nm,18.1s,baz=1.0,slow=42
SUMG Summit 58.21 5 P P 08 50 27.7 +0.3
SUMG pmax pmax
comp=Z,8.0nm,1.2s
SUMG Summit 58.21 5 P P 08 50 27.7 +0.3
SUMG IAmb IAmb 08 50 33.2
comp=Z,7.9nm,1.2s
ABKAR Akbulak array 58.58 310 P P 08 50 30.0 +0.1
ABKAR IAmb IAmb 08 50 30.2
comp=Z,3.5nm,0.6s
AKTO Aktyubinsk 58.77 312 P P 08 50 29.8 -1.3
comp=Z,1.7nm,0.5s,baz=67,slow=7.1,SNR=9.6
KLMR Klimovskoe 59.22 329 *eP* **P 08 50 31.8 -2.2**
KLMR pmax pmax
comp=Z,9.0nm,1.2s
KLMR Klimovskoe 59.22 329 *eP* **P 08 50 31.9 -2.1**
KLMR AMP 08 50 35.3
comp=Z,9.0nm,1.2s
GAR Garm 59.47 296 P P 08 50 36.7 +0.3
GAR IAmb IAmb 08 50 37.0
comp=Z,4.0nm,0.7s
NVAR Mina Array Bea 59.47 65 P P 08 50 36.8 +0.3
comp=Z,0.4nm,0.6s,baz=290,slow=8.0,SNR=4.4
CHGR Chuyangaron 60.38 296 P P 08 50 42.7 +0.1
NIL Nilore 61.20 289 P P 08 50 48.3 +0.2
NIL pmax pmax
comp=Z,6.0nm,0.6s
NIL Nilore 61.20 289 P P 08 50 48.3 +0.2
PDAR Pinedale Array 61.65 57 P P 08 50 52.5 +1.2
comp=Z,1.0nm,1.1s,baz=306,slow=3.5,SNR=3.6
FIA1 FINESS Array S 62.83 336 P P 08 50 58.4 -0.2
FINES FINESS Array B 62.83 336 *ceP* **P 08 50 58.7 +0.2**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 62.83 336 P P 08 50 57.1 -1.4
comp=Z,1.4nm,0.5s,baz=30,slow=7.6,SNR=9.5
OBN Obninsk 64.59 326 *i P* **P 08 51 09.2 -1.0**
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN Obninsk 64.59 326 *i P* **P 08 51 09.2 -1.0**
NOA NORSAR Array B 66.70 342 P P 08 51 24.0 +0.2
comp=Z,0.8nm,0.8s,baz=23,slow=5.9,SNR=2.7
NOA LR LR 09 24 56.2
comp=Z,34nm,18.4s,baz=5.0,slow=40
IVI Ivigtut 68.32 12 P P 08 51 35.0 +1.1
ANMO Albuquerque 68.80 61 P P 08 51 38.6 +0.9
ANMO pmax pmax
comp=Z,1.0nm,1.4s
ANMO Albuquerque 68.80 61 P P 08 51 38.6 +0.9
SCHQ Schefferville 70.31 25 P P 08 51 48.4 +2.0
comp=Z,3.2nm,0.8s,baz=326,slow=7.3,SNR=4.1
SCHQ Schefferville 70.31 25 P P 08 51 48.4 +2.0
SCHQ IAmb IAmb 08 51 55.1
comp=Z,10nm,1.3s
KIV Kislovodsk 70.69 315 *eP* **P 08 51 49.1 +0.1**
KBZ Khabaz 70.77 315 P P 08 51 50.0 +0.7
KBZ Khabaz 70.77 315 P P 08 51 50.0 +0.7
comp=Z,1.2nm,0.5s,baz=84,slow=4.8,SNR=6.7
KBZ Khabaz 70.77 315 *eP* **P 08 51 50.0 +0.7**
AKASG Malin Array Be 70.78 328 *i P* **P 08 51 48.7 -0.6**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 70.78 328 P P 08 51 48.9 -0.4
comp=Z,1.6nm,0.4s,baz=33,slow=6.5,SNR=7.6
AKBB Malin Array Si 70.78 328 P P 08 51 48.5 -0.8
AKBB pmax pmax
comp=Z,10.0nm,1.5s
AKBB Malin Array Si 70.78 328 P P 08 51 48.5 -0.8
AKBB IAmb IAmb 08 51 48.8
comp=Z,10nm,1.4s
WR0 Warramunga Arr 71.41 202 P P 08 51 54.6 +1.3
WR0 IAmb IAmb 08 51 55.8
comp=Z,9.0nm,1.3s
WRA Warramunga Arr 71.44 202 P P 08 51 54.1 +0.5
comp=Z,1.0nm,0.9s,baz=20,slow=6.6,SNR=4.2
TXAR Lajitas Array 74.50 63 P P 08 52 12.4 +0.6
comp=Z,0.5nm,0.6s,baz=183,slow=19,SNR=2.6
KOLS Kolonicke sedl 74.64 331 *eP* **P 08 52 11.9 -0.4**
KOLS Kolonicke sedl 74.64 331 eP P 08 52 11.9 -0.4
BUR08 Bucovina Ar. S 74.78 328 P P 08 52 14.1 +0.9
BUR08 IAmb IAmb 08 52 14.9
comp=Z,4.0nm,0.8s
BURAR Bucovina Array 74.80 328⇑P P 08 52 14.3 +1.0
ASAR Alice Springs 75.13 201 P P 08 52 17.1 +1.9
comp=Z,0.4nm,0.7s,baz=13,slow=5.2,SNR=3.8
CLL Collm 75.20 337 *i P* **P 08 52 15.8 +0.4**
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL Collm 75.20 337 *i P* **P 08 52 15.8 +0.4**
comp=Z,7.0nm,0.8s
TESR Tescani 75.23 327⇑P P 08 52 15.9 +0.2
TRPA Tarpa 75.25 330⇑P P 08 52 16.8 +1.0
KRLC Kraliky 75.30 334 *eP* **P 08 52 17.0 +0.9**
KRLC Kraliky 75.30 334 eP P 08 52 17.0 +0.9
LANS Liptovska Anna 75.33 332 *eP* **P 08 52 18.3 +2.0**
LANS pmax pmax
comp=Z,6.0nm,0.8s
LANS Liptovska Anna 75.33 332 *eP* **P 08 52 18.3 +2.0**
MORC Moravsky Berou 75.35 334 P P 08 52 17.4 +1.0
MORC pmax pmax
comp=Z,7.0nm,0.8s
MORC Moravsky Berou 75.35 334⇑P P 08 52 17.6 +1.3
MORC Moravsky Berou 75.35 334 P P 08 52 17.4 +1.0
MORC IAmb IAmb 08 52 18.4
comp=Z,7.2nm,0.8s
BRG Berggiesshubel 75.35 336 *e*(P) **P 08 52 17.6 +1.3**
comp=Z,3.6nm,0.8s
BRG Berggiesshubel 75.35 336 *eP* **P 08 52 17.6 +1.3**
BRG pmax pmax
comp=Z,4.0nm,0.8s
GIUM Giurgiulesti 75.53 325⇑P P 08 52 32.1 +15
PRU Pruhonice 76.00 336 *eP* **P 08 52 21.2 +1.2**
PRU Pruhonice 76.00 336 eP P 08 52 21.2 +1.2
VYHS Vyhne 76.11 332 *eP* **P 08 52 22.1 +1.4**
VYHS pmax pmax
comp=Z,5.0nm,0.8s
VYHS Vyhne 76.11 332 *eP* **P 08 52 22.1 +1.4**
MOX Moxa 76.16 338 P P 08 52 21.9 +1.0
MOX pmax pmax
comp=Z,7.0nm,2.4s
MLR Muntele Rosu 76.36 327 P P 08 52 23.0 +0.7
MLR pmax pmax
comp=Z,7.0nm,0.7s
MLR Muntele Rosu 76.36 327⇑P P 08 52 23.8 +1.4
MLR Muntele Rosu 76.36 327 P P 08 52 23.0 +0.7
MLR IAmb IAmb 08 52 24.3
comp=Z,7.2nm,0.7s
VOIR 76.73 327⇑P P 08 52 25.6 +1.3
ARR Arges 76.94 327⇑P P 08 52 27.7 +2.2

KHC Kasperske Hory 77.04 336 P P 08 52 26.5 +0.5
KHC pmax pmax
comp=Z,3.0nm,0.8s
KHC Kasperske Hory 77.04 336 *eP* **P 08 52 27.2 +1.2**
KHC Kasperske Hory 77.04 336 P P 08 52 26.5 +0.5
KHC IAmb IAmb 08 52 28.2
comp=Z,2.9nm,0.8s
GEC2 GERESS Array S 77.27 336 P P 08 52 27.9 +0.6
GEC2 IAmb IAmb 08 52 28.5
comp=Z,3.0nm,0.7s
GERES GERESS Array B 77.27 336 P P 08 52 27.8 +0.4
comp=Z,2.4nm,0.6s,baz=29,slow=5.4,SNR=16
MEM Membach 77.49 341 P P 08 52 29.4 +1.0
CONA Conrad Observa 77.50 334 *i P* **P 08 52 30.5 +1.8**
comp=Z,6.4nm,0.7s
GZR Gura Zlata 77.56 328⇑P P 08 52 29.6 +0.6
BZS Buzias 77.76 329⇑P P 08 52 30.4 +0.4
MOA Molln 78.02 335 *eP* **P 08 52 32.8 +1.4**
comp=Z,5.3nm,1.1s
BR131 Keskin Array S 78.13 318 P P 08 52 32.8 +0.4
BR131 pmax pmax
comp=Z,6.0nm,1.0s
BR131 Keskin Array S 78.13 318 P P 08 52 32.8 +0.4
BR131 IAmb IAmb 08 52 34.2
comp=Z,5.5nm,1.0s
BRTR Keskin Array B 78.13 318 *i P* **P 08 52 33.2 +0.8**
BRTR pmax pmax
comp=Z,4.0nm,0.8s
BRTR Keskin Array B 78.13 318 P P 08 52 33.0 +0.7
comp=Z,3.7nm,0.8s,baz=60,slow=3.2,SNR=16
HERR Herculane 78.13 328⇑P P 08 52 32.1 0.0
SOKA Soboth 78.87 334 *eP* **P 08 52 37.7 +1.5**
comp=Z,9.1nm,0.9s
KBA Koelnbreinsper 78.98 335 *i P* **P 08 52 39.2 +2.2**
comp=Z,28nm,0.9s
WATA Walderalm 79.22 336 *i P* **P 08 52 40.0 +1.8**
comp=Z,4.5nm,0.7s
RETA Reutte 79.29 337 *i P* **P 08 52 40.1 +1.5**
comp=Z,6.2nm,0.8s
MOTA Moosalm 79.33 337 *eP* **P 08 52 40.5 +1.7**
comp=Z,12nm,1.0s
SQTA Sankt Quirin 79.42 337 *eP* **P 08 52 41.2 +1.9**
comp=Z,6.1nm,0.9s
ABTA Abfaltersbach 79.51 336 *eP* **P 08 52 40.5 +0.8**
comp=Z,8.7nm,0.9s
DAVA Damuels 79.70 338 *eP* **P 08 52 42.2 +1.4**
comp=Z,9.0nm,0.9s
FETA Feichten 79.73 337 *eP* **P 08 52 41.8 +0.8**
comp=Z,5.5nm,1.0s
VTS Vitosha 79.82 327 P P 08 52 42.4 +0.8
VTS pmax pmax
comp=Z,8.0nm,0.7s
VTS Vitosha 79.82 327⇑P P 08 52 42.3 +0.8
VTS Vitosha 79.82 327 P P 08 52 42.4 +0.8
PPT Papeete 81.85 129 LR LR 09 29 19.5
comp=Z,41nm,18.6s,baz=152,slow=36
RAYN Ar Rayn 85.15 301 P P 08 53 09.6 +0.1
RAYN pmax pmax
comp=Z,4.0nm,0.9s

*IDC **21** 08:41:46.1±29.0, 18.˚19S×178.˚50W, h504km±253km, mb3.3/4, mb1 3.4/4, mb1mx3.0/32, mbtmp4.2/4, Error ellipse: s-maj=251.7km s-min=38.1km az=37.0*
*NEIC **21** 08:41:53.9±1.1, 18.˚4S±0.˚1×179.˚05W±0.˚09, h554km±15km, mb4.3/14, Error ellipse: s-maj=21.2km s-min=13.0km az=178.0*
ISC 21 08:41:53.2±1.3,**18.˚5S**±0.˚1×**179.˚0W**±0.˚2,**h548**km,**n21,**
σ0**s88**/22,**mb4.1**/10,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MSVF	**Nonsavu**	**2.91**	**284**	P		**P**	**08 43 09.9**	**+2.2**
FUNA	**Funafuti**	**10.03**	**350**	P		**P**	**08 44 11.1**	**-0.4**
SANVU	**Saraoutou**	**13.55**	**281**	P		**P**	**08 44 47.3**	**-0.5**
OUZ	**Omahuta**	**17.95**	**200**	P		**P**	**08 45 30.7**	**+0.1**
OUZ				IAmb	IAmb		08 45 37.4	
	comp=Z,17nm,1.1s							
URZ	**Urewera**	**20.02**	**189**	P		**P**	**08 45 47.6**	**-1.8**
	comp=Z,11nm,1.0s,baz=75,slow=19,SNR=5.6							
URZ	**Urewera**	**20.02**	**189**	P		**P**	**08 45 48.2**	**-1.2**
THZ	**Tophouse**	**24.24**	**195**	P		**P**	**08 46 27.4**	**+0.1**
ARMA	**Armidale**	**29.19**	**240**	P		**P**	**08 47 11.4**	**+0.4**
ARMA				IAmb	IAmb		08 47 12.7	
	comp=Z,9.8nm,1.1s							
TOO	**Toolangi**	**36.40**	**231**	P		**P**	**08 48 12.8**	**+1.1**
TOO				IAmb	IAmb		08 48 14.0	
	comp=Z,9.3nm,0.7s							
COEN	**Coen**	**36.56**	**271**	P		**P**	**08 48 13.0**	**-0.3**
COEN				IAmb	IAmb		08 48 18.6	
	comp=Z,5.7nm,1.1s							
STKA	**Stephens Creek**	**37.89**	**242**	P		**P**	**08 48 24.2**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=93,slow=9.2,SNR=6.0							
STKA	**Stephens Creek**	**37.89**	**242**	P		**P**	**08 48 24.1**	**+0.1**
BBOO	**Buckleboo**	**42.66**	**241**	P		**P**	**08 49 02.4**	**+0.4**
BBOO				IAmb	IAmb		08 49 05.0	
	comp=Z,16nm,1.3s							
WR0	**Warramunga Arr**	**43.80**	**260**	P		**P**	**08 49 11.0**	**-0.1**
WR0				IAmb	IAmb		08 49 21.5	
	comp=Z,4.8nm,1.2s							
WRA	**Warramunga Arr**	**43.99**	**260**	P		**P**	**08 49 12.2**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=97,slow=7.5,SNR=5.0							
AS31	**Alice Springs**	**44.11**	**255**	P		**P**	**08 49 13.4**	**-0.2**
ASAR	**Alice Springs**	**44.12**	**255**	P		**P**	**08 49 13.3**	**-0.2**
	comp=Z,3.6nm,0.5s,baz=89,slow=8.3,SNR=84							
ASAR				PcP		**PcP**	**08 50 45.4**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=98,slow=3.9,SNR=4.9							
GUMO	**Guam**	**47.79**	**309**	P		**P**	**08 49 41.5**	**0.0**
PSAA2	**Pilbara Seismi**	**57.24**	**256**	P		**P**	**08 50 48.4**	**-0.6**
PSAA2				IAmb	IAmb		08 50 51.3	
	comp=Z,45nm,1.4s							
QSPA	**South Pole Qui**	**71.60**	**180**	P		**P**	**08 52 19.9**	**+0.7**
QSPA				IAmb	IAmb		08 52 20.7	
	comp=Z,2.8nm,0.8s							
MAW	**Mawson**	**83.16**	**200**	P		**P**	**08 53 21.8**	**+0.2**

*IDC **21** 08:49:59.2±8.9, 20.˚93S×66.˚00W, h220km±61km, mb3.2/2, mb1 3.4/3, mb1mx3.1/25, mbtmp3.7/3, Error ellipse: s-maj=113.7km s-min=37.6km az=18.0*
*GUC **21** 08:49:59.0±0.7, 21.˚25S×67.˚24W, h280km±9km, ML4.2*
ISC 21 08:49:58.3±1.3,**21.˚24S**±0.˚06×**67.˚0W**±0.˚1,**h250**km,**n14,**
σ1**s18**/24,**8C-1D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PB09	**IPOC Station P**	**2.13**	**255⇑**	*iP*		**Pn**	**08 50 44.0**	**+1.7**
PB09				*eS*		**S**	**08 51 17.8**	**+0.9**
PB08	**IPOC Station P**	**2.27**	**298⇑**	*iP*		**Pn**	**08 50 44.8**	**+1.0**
PB08				*eS*		**S**	**08 51 20.7**	**+1.1**
GO01	**Chusmiza**	**2.56**	**307⇓**	*eP*		**Pn**	**08 50 48.0**	**+1.2**
GO01				*eS*		**S**	**08 51 25.7**	**+0.7**
GO01				IAML			08 51 31.6	
	comp=N,364nm,0.1s							
PB03	**IPOC Station P**	**2.66**	**252⇑**	*iP*		**Pn**	**08 50 47.7**	**+0.3**
PB03				*eS*		**S**	**08 51 25.0**	**-1.2**
PB03				IAML			08 51 25.6	
	comp=N,177nm,0.2s							
PB11	**IPOC Station P**	**2.87**	**300⇑**	*iP*		**Pn**	**08 50 50.1**	**+0.5**
PB11				*eS*		**S**	**08 51 29.0**	**-1.2**
PB11				IAML			08 51 32.7	
	comp=N,349nm,0.1s							
PATCX	**Punta Patache**	**2.95**	**278⇑**	*iP*		**Pn**	**08 50 50.9**	**+0.5**
PATCX				*eS*		**S**	**08 51 30.0**	**-1.5**
PATCX				IAML			08 51 32.1	
	comp=N,194nm,0.2s							
PB15	**IPOC Station P**	**2.99**	**229⇑**	*iP*		**Pn**	**08 50 52.0**	**+1.0**
PB15				*eS*		**S**	**08 51 31.8**	**-0.8**
MNMC	**Minye Minye**	**3.20**	**311⇑**	*iP*		**Pn**	**08 50 54.6**	**+1.3**
MNMC				*eS*		**S**	**08 51 36.5**	**-0.3**
MNMC				IAML			08 51 40.9	
	comp=N,387nm,0.3s							
PSGC	**Pisagua**	**3.33**	**299⇑**	*iP*		**Pn**	**08 50 54.5**	**-0.2**
PSGC				*eS*		**S**	**08 51 36.9**	**-2.3**
PSGC				IAML			08 51 39.4	
	comp=N,104nm,0.4s							
PB16	**IPOC Station P**	**3.71**	**321**	*eP*		**Pn**	**08 51 01.1**	**+1.7**
PB16				*eS*		**S**	**08 51 48.3**	**+0.5**
LPAZ	**La Paz**	**5.03**	**348**	P		**Pn**	**08 51 15.6**	**+0.4**
	comp=N,0.8nm,0.3s,baz=162,slow=11,SNR=30							
LPAZ				S		**S**	**08 52 15.5**	**-0.9**
	baz=162,slow=20,SNR=2.7							
TORD	**Torodi Ar. Bea**	**75.62**	**70**	P		**P**	**09 01 15.0**	**-1.4**
	comp=N,0.9nm,0.4s,baz=242,slow=6.4,SNR=12							

NVAR Mina Array Bea 76.38 321 P P 09 01 27.4 +6.9
comp=N,0.1nm,0.3s,baz=152,slow=4.1,SNR=2.4
MKAR Makanchi Array 144.38 37 PKP PKPdf 09 09 05.7 +1.0
comp=N,0.4nm,0.8s,baz=320,slow=4.1,SNR=3.6

*BER **21** 09:18:22.2±2.2, 81.˚55N×3.˚40W, h9km±25km, ML2.2, ML2.8(DNK), Confirmed Earthquake*
*IEPN **21** 09:18:23.0, 81.˚56N×1.˚88W, h15km*
ISC 21 09:18:18.5±1.0,**81.˚49N**±0.˚08×**3.˚72W**±0.˚05,**h10**km,**n16,**
σ2**s25**/27,**3C,North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
NOR	**Nord**	**1.92**	**280**	*i P*		**Pb**	**09 18 53.4**	**0.0**
NOR	**Nord**	**1.92**	**280**	*i P*		**Pb**	**09 18 53.4**	**0.0**
NOR				IAML			09 19 18.0	
	comp=Z,16nm,0.4s							
KBS	**Kingsbay**	**3.70**	**126**	*eP*		**Pn**	**09 19 17.5**	**+2.0**
KBS				*eS*		**Sn**	**09 19 57.4**	**-1.6**
KBS				IAML			09 19 59.9	
	comp=Z,8.5nm,0.5s							
KBS	**Kingsbay**	**3.70**	**126⇑**	*iP*		**Pn**	**09 19 17.5**	**+2.0**
KBS				*eS*		**Sn**	**09 19 57.2**	**-1.9**
SPA0	**Spitsbergen Ar**	**4.84**	**123**	*eP*		**Pn**	**09 19 33.7**	**+2.5**
SPA0				*eS*		**Sn**	**09 20 25.8**	**-1.4**
SPA0				IAML			09 20 26.7	
	comp=Z,7.9nm,0.8s							
SPA0	**Spitsbergen Ar**	**4.84**	**123⇑**	*iP*		**Pn**	**09 19 33.5**	**+2.4**
SPA0				*i S*		**Sn**	**09 20 25.8**	**-1.4**
DAG	**Danmarks Havn**	**5.49**	**218**	*i P*		**Pn**	**09 19 41.5**	**+1.4**
DAG				*i S*		**Sn**	**09 20 42.9**	**-0.3**
DAG	**Danmarks Havn**	**5.49**	**218**	*i P*		**Pn**	**09 19 41.5**	**+1.4**
DAG				*e*			09 19 47.6	
DAG				*i S*		**Sn**	**09 20 43.0**	**-0.3**
DAG				IAML			09 20 55.0	
	comp=Z,3.8nm,0.4s							
HSPB	**Hornsund (broa**	**5.73**	**132**	*eP*		**Pn**	**09 19 46.3**	**+3.0**
HSPB				*eS*		**Sn**	**09 20 46.6**	**-2.4**
HSPB				IAML			09 20 57.7	
	comp=Z,6.7nm,0.9s							
HSPB	**Hornsund (broa**	**5.73**	**132⇑**	*iP*		**Pn**	**09 19 46.4**	**+3.1**
HSPB				*eS*		**Sn**	**09 20 48.8**	**-0.2**
HOPEN	**Hopen**	**7.31**	**118**	*eP*		**Pn**	**09 20 07.5**	**+2.5**
HOPEN	**Hopen**	**7.31**	**118**	*eP*		**Pn**	**09 20 07.2**	**+2.2**
HOPEN				*eS*		**Sn**	**09 21 24.8**	**-3.0**
ZFI2	**Zemlya Franca-**	**7.72**	**69**	*eP*		**Pn**	**09 20 13.5**	**+2.9**
ZFI2				*eS*		**Sn**	**09 21 33.4**	**-4.6**
	comp=Z,12nm,0.4s							
DBG	**Daneborg**	**7.95**	**214**	*i P*		**Pn**	**09 20 14.7**	**+0.8**
DBG				*i S*		**Sn**	**09 21 40.1**	**-3.6**
DBG				IAML			09 21 42.6	
	comp=Z,2.2nm,0.3s							
SUMG	**Summit**	**11.54**	**239**	*i P*		**Pn**	**09 21 03.4**	**+0.1**
SUMG				*eS*		Sn	09 23 00.6	-12
SUMG	**Summit**	**11.54**	**239**	*i P*		**Pn**	**09 21 03.4**	**+0.1**
SUMG				*eS*		Sn	09 23 00.7	-12
SUMG				IAML			09 23 08.5	
	comp=Z,2.8nm,0.4s							

*FUNV **21** 09:43:52.8, 10.˚43N×61.˚75W, h46km, MW3.0*
*TRN **21** 09:43:52.8, 10.˚51N×61.˚80W, h49km, MD3.1*
ISC 21 09:43:50.7±1.2,**10.˚43N**±0.˚03×**61.˚77W**±0.˚04,**h71**km±8km,
n30,σ1**s44/55,1D,Trinidad**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BUAY	**Buenos Aires**	**0.33**	**166**	*eP*		**Pn**	**09 44 03.6**	**+1.5**
BUAY				*eS*		**Sn**	**09 44 10.5**	**0.0**
TPP	**Pointe-a-Pierr**	**0.33**	**109**	*eP*		**Pn**	**09 44 03.3**	**+1.2**
TPP				*eS*		**Sn**	**09 44 10.2**	**-0.3**
TRN	**Trinidad (W)**	**0.42**	**58⇓**	*iP*		**Pn**	**09 44 02.8**	**0.0**
TRN				*eS*		**Sn**	**09 44 09.9**	**-1.9**
TRN	**Trinidad (W)**	**0.42**	**58**	*eP*		**Pn**	**09 44 02.4**	**-0.5**
TRN				*eS*		**Sn**	**09 44 09.6**	**-2.1**
TBH	**Brigand Hill**	**0.69**	**85**	*eP*		**Pn**	**09 44 06.2**	**+0.7**
GUNV	**Guanoco**	**1.19**	**257**	*eP*		**Pn**	**09 44 12.9**	**+1.4**
GUNV				*eS*		**Sn**	**09 44 28.6**	**+1.4**
CRUV	**Carupano**	**1.47**	**280**	*eP*		**Pn**	**09 44 16.6**	**+1.4**
CRUV				*eS*		**Sn**	**09 44 32.3**	**-1.4**
TOSP	**Speyside**	**1.49**	**54**	*eP*		**Pn**	**09 44 17.4**	**+1.9**
TOSP				*eS*		**Sn**	**09 44 34.8**	**+0.6**
TOSP	**Speyside**	**1.49**	**54**	*eP*		**Pn**	**09 44 16.8**	**+1.3**
TOSP				*eS*		**Sn**	**09 44 34.5**	**+0.2**
GRGR	**Grenville**	**1.70**	**4**	*eP*		**Pn**	**09 44 19.2**	**+0.8**
GRGR				*eS*		**Sn**	**09 44 38.7**	**-0.6**
GRGR	**Grenville**	**1.70**	**4**	*eP*		**Pn**	**09 44 19.2**	**+0.8**
GRGR				*eS*		**Sn**	**09 44 38.8**	**-0.6**
GRHS	**Sauteurs**	**1.79**	**4**	*eP*		**Pn**	**09 44 20.6**	**+1.0**
GRHS				*eS*		**Sn**	**09 44 40.3**	**-1.1**
GRSS	**Sisters**	**1.87**	**5**	*eP*		**Pn**	**09 44 22.6**	**+2.0**
GRSS				*eS*		**Sn**	**09 44 42.7**	**-0.6**
ORIV	**Oritupano**	**2.11**	**230**	*eP*		**Pn**	**09 44 26.0**	**+2.2**
ORIV				*eS*		**Sn**	**09 44 50.4**	**+1.4**
ORIV	**Oritupano**	**2.11**	**230**	*eP*		**Pn**	**09 44 25.1**	**+1.3**
ORIV				*eS*		**Sn**	**09 44 49.4**	**+0.3**
RIOV	**Rio Grande**	**2.34**	**181**	*eP*		**Pn**	**09 44 28.7**	**+1.7**
RIOV				*eS*		**Sn**	**09 44 54.7**	**-0.1**
PCRV	**Puerto La Cruz**	**2.83**	**265**	*eP*		**Pn**	**09 44 34.3**	**+0.6**
SVB	**Belmont**	**2.87**	**10**	*eP*		**Pn**	**09 44 36.0**	**+1.8**
SVB				*eS*		**Sn**	**09 45 07.5**	**-0.2**
SVCV	**St. Vincent, C**	**2.89**	**12**	*eP*		**Pn**	**09 44 36.1**	**+1.7**
SVCV				*eS*		**Sn**	**09 45 07.5**	**-0.7**
SVV	**Soufriere Volc**	**2.92**	**11**	*eP*		**Pn**	**09 44 37.3**	**+2.4**
SVV				*eS*		**Sn**	**09 45 08.4**	**-0.5**
PRGV	**PARIAGUAN**	**3.29**	**240**	*eP*		**Pn**	**09 44 40.7**	**+0.9**
PRGV				*eS*		**Sn**	**09 45 16.7**	**-1.1**
SLB	**Belfond**	**3.45**	**12**	*eP*		**Pn**	**09 44 44.4**	**+2.2**
SLB				*eS*		**Sn**	**09 45 20.8**	**-1.2**
SLBI	**Saint Lucia, B**	**3.66**	**12**	*eP*		**Pn**	**09 44 46.6**	**+1.7**
SLBI				*eS*		**Sn**	**09 45 25.4**	**-1.4**
CUPV	**Cpira**	**3.97**	**265**	*eP*		**Pn**	**09 44 50.2**	**+0.9**
CUPV				*eS*		**Sn**	**09 45 32.4**	**-2.3**
BIRV	**Birongo**	**4.43**	**271**	*eP*		**Pn**	**09 44 57.1**	**+1.7**
BIRV				*eS*		**Sn**	**09 45 44.2**	**-1.6**
LUEV	**Luepa**	**4.56**	**176**	*eP*		**Pn**	**09 44 57.6**	**+0.1**
LUEV				*eS*		**Sn**	**09 45 45.8**	**-3.5**
MERV	**Las Mercedes**	**4.61**	**256**	*eP*		**Pn**	**09 44 58.3**	**+0.3**
MERV				*eS*		**Sn**	**09 45 47.4**	**-2.9**
TURV	**Turiamo**	**5.97**	**271**	*eP*		**Pn**	**09 45 17.1**	**+0.6**
MAPV	**Macapo**	**6.61**	**265**	*eP*		**Pn**	**09 45 24.8**	**-0.5**
PAYV	**Puerto Ayacuch**	**7.67**	**230**	*eP*		**Pn**	**09 45 38.4**	**-1.3**

*JMA **21** 09:52:20.1±0.1, 24.˚21N×122.˚17E, h56km±2km, M2.4*
*TAP **21** 09:52:20.8, 24.˚28N×122.˚16E, h52km, ML3.1, B*
ISC 21 09:52:21.3±1.2,**24.˚27N**±0.˚03×**122.˚20E**±0.˚02,**h42**km±10km,
n80,σ0**s69**/129,**2C-3D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
EOS1	**EOS1**	**0.29**	**347**	*i P*		**Pn**	**09 52 29.8**	**+0.2**
	baz=348							
EOS1				*eS*		**Sn**	**09 52 36.8**	**+1.3**
	baz=348							
NANB	**Nanao**	**0.44**	**291**	P		**Pn**	**09 52 31.2**	**-0.1**
	baz=295							
NANB				S		**Sn**	**09 52 38.8**	**+0.3**
	baz=295							
ENA	**Nanau**	**0.45**	**291**	*i P*		**Pn**	**09 52 31.3**	**-0.2**
	baz=294							
ENA

baz=310
TWE *i* S **Sn** 09 52 43.8 +0.2
baz=310
NTC Toucheng 0.67 330 *i* P **Pn** 09 52 34.5 0.0
baz=339
NTC *e*S **Sn** 09 52 44.0 +0.2
baz=339
ENTT Nioudou 0.68 303 *i* P **Pn** 09 52 34.5 -0.1
baz=303
ENTT *i* S **Sn** 09 52 44.4 +0.2
baz=303
SLBB Yuanshan 0.70 314 *e*P **Pn** 09 52 34.1 -0.8
baz=310
JYNG Yonagunijimaku 0.71 75 P **Pn** 09 52 34.8 -0.1
JYNG S **Sn** 09 52 44.6 -0.1
NDT Datong Townshi 0.71 298 P **Pn** 09 52 34.8 -0.1
baz=293
NDT *i* S **Sn** 09 52 45.1 +0.3
baz=293
NNSB Datong 0.76 282 P **Pn** 09 52 35.2 -0.5
baz=281
NNSB *e*S **Sn** 09 52 46.0 -0.2
baz=281
NNSH Datong 0.76 282 P **Pn** 09 52 35.2 -0.6
baz=281
NNSH S **Sn** 09 52 45.8 -0.4
baz=281
TWB1 Santiao Chiao 0.76 346 *e*P **Pn** 09 52 36.1 +0.4
baz=348
TWB1 *e*S **Sn** 09 52 44.6 -1.4
baz=348
YOJ Yonaguni jima 0.77 75 *e*P **Pn** 09 52 35.8 +0.1
baz=76
YOJ *e*S **Sn** 09 52 47.0 +0.9
baz=76
YOJ Yonaguni jima 0.77 75 P **Pn** 09 52 35.7 0.0
YOJ *e*S **Sn** 09 52 46.9 +0.8
NNS Nan Shan 0.77 283⇑ *i*P **Pn** 09 52 35.4 -0.5
baz=282
NNS *e*S **Sn** 09 52 46.3 -0.1
baz=282
TIPB Shuangxi 0.78 334 P **Pn** 09 52 35.6 -0.3
baz=342
TIPB S **Sn** 09 52 46.0 -0.4
baz=342
NWLT Wulai 0.81 309⇓ *i*P **Pn** 09 52 36.3 -0.1
baz=300
NWLT S **Sn** 09 52 47.5 +0.3
baz=300
ESL Shilin 0.83 237 P **Pn** 09 52 35.7 -0.9
baz=235
ESL *e*S **Sn** 09 52 47.5 -0.3
baz=235
YHNB Yeheng 0.85 298⇓ *e*P **Pn** 09 52 36.7 -0.2
baz=298
YHNB *e*S **Sn** 09 52 48.1 -0.2
baz=298
WHF Hehuan Shan 0.86 262 P **Pn** 09 52 37.0 -0.4
baz=251
WHF S **Sn** 09 52 48.5 -0.5
baz=251
NSK Sanguang 0.87 298 ⇓P **Pn** 09 52 36.9 -0.3
baz=298
NSK *e*S **Sn** 09 52 48.9 +0.2
baz=298
TWA Mucha 0.90 322 *e*P **Pn** 09 52 38.2 +0.6
baz=322
TWA S **Sn** 09 52 49.9 +0.4
baz=322
EGFH Guangfu 0.92 230 *e*P **Pn** 09 52 37.4 -0.5
baz=220
EGFH *e*S **Sn** 09 52 49.9 -0.1
baz=220
NHDH Xindian Distri 0.92 319 *e*P **Pn** 09 52 38.4 +0.5
baz=329
NHDH S **Sn** 09 52 50.5 +0.6
baz=329
TWT Tachien 0.93 269 P **Pn** 09 52 38.5 +0.3
baz=268
TWT S **Sn** 09 52 50.5 +0.1
baz=268
TDCB Techi 0.95 269 *e*P **Pn** 09 52 38.4 0.0
baz=268
TDCB *e*S **Sn** 09 52 50.6 -0.2
baz=268
TATO Taipei 0.95 318 *e*P **Pn** 09 52 38.8 +0.5
baz=318
TATO *i* S **Sn** 09 52 51.1 +0.4
baz=318
CHGB Renai 0.96 258 *e*P **Pn** 09 52 38.3 -0.2
baz=248
CHGB *e*S **Sn** 09 52 51.0 -0.1
baz=248
OWD Renai 0.98 252 *e*P **Pn** 09 52 38.4 -0.4
baz=250
OWD S **Sn** 09 52 50.5 -1.2
baz=250
WLTB Daxi 1.04 304 *e*P **Pn** 09 52 39.9 +0.4
baz=304
YM01 YM01 1.04 327 *e*P **Pn** 09 52 39.9 +0.3
baz=339
HGSD Ruisui 1.05 223 *e*P **Pn** 09 52 38.7 -0.9
baz=217
HGSD *e*S **Sn** 09 52 53.3 +0.3
baz=217
YM10 YM10 1.06 327 *e*P **Pn** 09 52 39.9 +0.1
baz=339
YM11 YM11 1.06 328 *e*P **Pn** 09 52 40.0 +0.1
baz=340
YM05 YM05 1.06 327 P **Pn** 09 52 39.6 -0.2
baz=339
YM05 *e*S **Sn** 09 52 52.2 -1.2
baz=339
YM04 YM04 1.07 326 *e*P **Pn** 09 52 39.9 +0.1
baz=337
YM04 *e*S **Sn** 09 52 52.6 -0.9
baz=337
YM08 YM08 1.07 329 *e*P **Pn** 09 52 40.0 +0.1
baz=340
TWS1 Kuangyinshan 1.09 320 P **Pn** 09 52 40.4 +0.2
baz=330
TWS1 S **Sn** 09 52 54.8 +0.7
baz=330
VWDT VWDT 1.09 242 *e*P **Pn** 09 52 40.0 -0.2
baz=232
VWDT *e*S **Sn** 09 52 54.1 0.0
baz=232
EHY Hungye 1.10 227 P **Pn** 09 52 39.2 -1.1
baz=235
LIOB Emei 1.14 289 *e*P **Pn** 09 52 41.3 +0.5
baz=289
WHP Taichung City 1.14 271 *e*P **Pn** 09 52 41.7 +0.8
baz=263
WHP *e*S **Sn** 09 52 55.8 +0.3
baz=263
NSTT Nanjuang 1.15 289 P **Pn** 09 52 41.4 +0.4
baz=288
YULB Yu-li 1.20 224 *e*P **Pn** 09 52 40.5 -1.1
baz=233
TWF1 Yuli 1.23 222 *e*P **Pn** 09 52 41.0 -1.1
baz=231
SSLB Suanglung 1.23 247 *e*P **Pn** 09 52 42.4 +0.2
baz=246
SSLB *e*S **Sn** 09 52 57.7 +0.1
baz=246
SMLT Sun Moon Lake 1.25 252 *e*P **Pn** 09 52 43.5 +1.1
baz=244
SMLT *e*S **Sn** 09 52 58.2 +0.1
baz=244
TYC Yuchr 1.28 254 *e*P **Pn** 09 52 43.9 +1.2
baz=245
TYC *e*S **Sn** 09 52 58.8 +0.1
baz=245
TWQ1 Liyutan 1.30 274 *e*P **Pn** 09 52 44.0 +0.9
baz=273
FULB Fuli 1.35 218 *e*P **Pn** 09 52 42.8 -0.9
baz=208
FULB S **Sn** 09 53 00.6 +0.2
baz=208
WHYT Xinyi Township 1.35 245 *e*P **Pn** 09 52 45.0 +1.1
baz=244
WHYT *e*S **Sn** 09 53 00.8 +0.2
baz=244
IRIF Iriomote-Funau 1.40 87 P **Pn** 09 52 44.1 -0.3
IRIF *e*S **Sn** 09 53 01.9 +0.2
WJS Zhushan 1.42 252 *e*P **Pn** 09 52 46.0 +1.4
baz=242
WNT Mingjian 1.44 255 *e*P **Pn** 09 52 46.1 +1.2
baz=253
ALS Alishan 1.48 240 *e*P **Pn** 09 52 46.8 +1.0
baz=230
ELDTW Lidau 1.52 225 *e*P **Pn** 09 52 46.0 -0.2
baz=219
ELDTW *e*S **Sn** 09 53 04.4 -0.5
baz=219
CHN5 Tsauling 1.54 245 *e*P **Pn** 09 52 47.8 +1.4
baz=234
CHN5 *e*S **Sn** 09 53 07.4 +2.1
baz=234
WDLH Douliu 1.62 250 *e*P **Pn** 09 52 48.9 +1.5
baz=248
JKRS Kuro-shima 1.65 91 P **Pn** 09 52 48.1 +0.2
JKRS S **Sn** 09 53 08.2 +0.3
TPUB Ta-pu 1.73 236 *e*P **Pn** 09 52 50.3 +1.3
baz=227
CHN4 Tsaushan 1.73 238 *e*P **Pn** 09 52 50.6 +1.7
baz=228
TWGBT Beinan 1.77 216 *e*P **Pn** 09 52 48.9 -0.6
baz=215
TWG Pinlang 1.77 216 *e*P **Pn** 09 52 49.0 -0.5
baz=215
WTP Ta-pu 1.77 235 *e*P **Pn** 09 52 49.5 -0.1
baz=234
JIJ Ishigaki jima 1.78 87 P **Pn** 09 52 49.1 -0.5
JIJ S **Sn** 09 53 10.2 -0.8
TWK Hsinying 1.86 238 *e*P **Pn** 09 52 51.8 +1.1
baz=237
CHN1 Nanshi 1.87 235 *e*P **Pn** 09 52 52.6 +1.7
baz=234
SLGT Liugui 1.91 229 *e*P **Pn** 09 52 52.9 +1.6
baz=228
JISG Ishigakijimahi 1.95 80 P **Pn** 09 52 52.0 0.0
JISG *e*S **Sn** 09 53 14.7 -0.6
EAST Anshuo 2.25 214 *e*P **Pn** 09 52 56.9 +0.8
baz=206
JTJ Tarama 2.31 80 *e*S **Sn** 09 53 24.2 +0.1
VWUC VWUC 2.60 287 *e*P **Pn** 09 52 59.8 -1.1
baz=285
PTMZ Houxiangcun 2.90 286 *e*P **Pn** 09 53 04.0 -1.1
baz=284
XPSS Dashiqiu 3.21 326 *e*P **Pn** 09 53 08.4 -0.8
baz=336
AXDP Jialang 3.90 280 *e*P **Pn** 09 53 18.9 +0.1
baz=277

MAN 21 09:53:42.4, 5.85N×126.30E, h36km, mb4.3, ML3.1, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.64**	**293**	*e*P	Pn	09 53 56.1	+1.1
DDMP				*e*S	Sn	09 54 05.6	+1.7
MATI	**Mati**	**1.09**	**358**	*e*P	Pn	09 54 01.1	+0.1
MATI				*e*S	Sn	09 54 15.7	+0.9
GSPH	**General Santos**	**1.37**	**280**	*e*P	Pn	09 54 05.7	+0.7
KCP	**Kidapawan**	**1.67**	**314** ⇓ *i*P		Pn	09 54 09.7	+0.6
KCP				*i* S	Sn	09 54 46.2	+17

*IDC **21** 10:00:39.6±0.9, 4.°15S×153.°86E, h257km±8km, mb3.7/16, mb1 3.9/18, mb1mx3.7/33, mbtmp4.4/18, Error ellipse: s-maj=16.1km s-min=9.9km az=76.0*
*NEIC **21** 10:00:43.3±0.9, 4.°2S±0.°1×153.°7E±0.°1, h292km±6km, mb4.4/29, Error ellipse: s-maj=15.9km s-min=14.7km az=100.0*
*DJA **21** 10:00:44.8±3.2, 4.°S±16.°×15.°4E±2.°4, h340km±22km, M4.5/10, mB4.2/2, mb4.5/10, Mw(mB)3.3/2*
ISC 21 10:00:38.9±0.5, 4.°14S±0.°07×153.°90E±0.°07, h250km, n65, σ1°47/71, mb4.4/28, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.87**	**265**	P	**Pn**	**10 01 21.9**	**+1.7**
	132nm,0.3s,baz=270,slow=2.7,SNR=82						
KRVT				S	**S**	**10 01 54.0**	**+1.2**
	69nm,0.3s,baz=164,slow=23,SNR=9.6						
PMG	**Port Moresby**	**8.49**	**232**	P	Pn	10 02 45.8	+7.3
	4.0nm,0.3s,baz=49,slow=9.0,SNR=17						
PMG				S	**S**	**10 04 20.2**	**+5.1**
	2.8nm,0.3s,baz=201,slow=14,SNR=9.7						
PMG	**Port Moresby**	**8.49**	**232**		**Pn**	**10 02 40.7**	**+2.2**
PMG					**S**	**10 04 16.5**	**+1.4**
JAY	**Jayapura**	**13.27**	**277**	P	**Pn**	**10 03 38.8**	**+0.5**
	3.3nm,0.3s,baz=170,slow=7.5,SNR=11						
COEN	**Coen**	**14.39**	**227**	P	**P**	**10 03 54.1**	**+2.0**
SMPI	**Sarmi**	**15.31**	**278**	P	**P**	**10 04 02.5**	**+0.2**
	61nm,0.8s						
SANVU	**Saraoutou**	**17.26**	**132**	P	**Pn**	**10 04 26.6**	**+0.7**
SANVU				IAmb	IAmb	10 04 31.4	
	comp=Z,16nm,1.2s						
CTA	**Charters Tower**	**17.52**	**205**	P	**Pn**	**10 04 28.3**	**-0.6**
	comp=Z,1.5nm,0.3s,baz=29,slow=13,SNR=27						
EIDS	**Eidsvold**	**21.29**	**187**	P	**P**	**10 05 06.8**	**+0.4**
EIDS				IAmb	IAmb	10 05 07.4	
	comp=Z,13nm,0.7s						
DZM	**Mont Dzumac**	**21.59**	**147**	P	**P**	**10 05 10.3**	**+1.0**
	comp=Z,3.2nm,0.5s,baz=314,slow=8.4,SNR=7.0						
DZM	**Mont Dzumac**	**21.59**	**147**	P	**P**	**10 05 10.5**	**+1.2**
DZM				IAmb	IAmb	10 05 16.0	
	comp=Z,20nm,1.2s						
FAKI	**Fak Fak**	**21.64**	**272**	P	**P**	**10 05 08.7**	**-1.2**
SIJI	**Sorong**	**22.84**	**278**	P	**P**	**10 05 21.6**	**+0.9**
	comp=Z,15nm,0.6s,baz=39,slow=21,SNR=4.8						
MTN	**Manton Dam**	**24.10**	**248**	P	**P**	**10 05 31.6**	**-0.6**
MTN				IAmb	IAmb	10 05 41.9	
	comp=Z,20nm,1.2s						
WR0	**Warramunga Arr**	**24.56**	**229**	P	**P**	**10 05 36.1**	**-0.3**
WR0				IAmb	IAmb	10 05 37.0	
	comp=Z,16nm,1.3s						
WRAB	**Tennant Creek**	**24.69**	**229**	P	**P**	**10 05 37.0**	**-0.5**
WRAB				IAmb	IAmb	10 05 37.8	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**24.70**	**229**	P	**P**	**10 05 37.1**	**-0.5**
	comp=Z,3.1nm,0.5s,baz=54,slow=9.6,SNR=18						
WRA				PcP	**PcP**	**10 09 07.1**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=45,slow=2.3,SNR=5.9						
WRA				S	**S**	**10 09 37.1**	**-3.7**
	comp=Z,2.5nm,0.9s,baz=50,slow=15,SNR=8.1						
ARMA	**Armidale**	**26.23**	**184**	P	**P**	**10 05 50.0**	**-1.3**
ARMA				IAmb	IAmb	10 05 52.6	
	comp=Z,10nm,0.9s						
KNRA	**Kununurra**	**27.24**	**243**	P	**P**	**10 05 59.1**	**-1.3**
KNRA				IAmb	IAmb	10 06 15.3	
	comp=Z,13nm,0.9s						
AS31	**Alice Springs**	**27.37**	**223**	P	**P**	**10 06 00.9**	**-0.7**
AS31					**S**	**10 10 18.0**	**-4.9**
ASAR	**Alice Springs**	**27.38**	**223**	P	**P**	**10 06 01.1**	**-0.5**
	comp=Z,5.4nm,0.4s,baz=55,slow=8.9,SNR=249						
ASAR				PcP	**PcP**	**10 09 13.5**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=60,slow=2.5,SNR=5.0						
ASAR				S	**S**	**10 10 18.2**	**-4.7**
	comp=Z,3.2nm,0.8s,baz=50,slow=14,SNR=18						
STKA	**Stephens Creek**	**29.92**	**201**	P	**P**	**10 06 23.6**	**-0.3**
	comp=Z,4.5nm,0.5s,baz=9.0,slow=9.6,SNR=19						
STKA	**Stephens Creek**	**29.92**	**201**	P	**P**	**10 06 23.7**	**-0.1**
FITZ	**Fitzroy Crossi**	**30.93**	**241**	P	**P**	**10 06 31.6**	**-1.3**
FITZ				IAmb	IAmb	10 06 50.4	
	comp=Z,17nm,1.5s						
CAN	**Canberra**	**31.36**	**188**	P	**P**	**10 06 37.5**	**+0.9**
CAN				IAmb	IAmb	10 06 40.8	
	comp=Z,12nm,1.1s						
BBOO	**Buckleboo**	**33.05**	**208**	P	**P**	**10 06 50.6**	**-0.5**
BBOO				IAmb	IAmb	10 06 51.3	
	comp=Z,11nm,0.9s						
FORT	**Forrest**	**35.99**	**220**	P	**P**	**10 07 15.9**	**-0.5**
PSA00	**Pilbara Seismi**	**37.31**	**239**	P	**P**	**10 07 25.0**	**-2.6**
URZ	**Urewera**	**40.02**	**151**	P	**P**	**10 07 48.2**	**-1.6**
	comp=Z,33nm,1.2s,baz=162,slow=6.4,SNR=4.5						
URZ	**Urewera**	**40.02**	**151**	P	**P**	**10 07 48.5**	**-1.3**
BKZ	**Black Stump Fm**	**40.45**	**153**	P	**P**	**10 07 54.0**	**+0.6**
BKZ				IAmb	IAmb	10 08 08.0	
	comp=Z,24nm,1.2s						
THZ	**Tophouse**	**41.15**	**158**	P	**P**	**10 07 59.1**	**+0.1**
TUWZ	**Tuamarina**	**41.25**	**157**	P	**P**	**10 08 00.2**	**+0.4**
BSWZ	**Blackbirch Sta**	**41.47**	**157**	P	**P**	**10 08 03.6**	**+2.0**
LTZ	**Lake Taylor**	**41.81**	**160**	P	**P**	**10 08 04.5**	**+0.2**
KHZ	**Kahutara**	**41.95**	**158**	P	**P**	**10 08 04.9**	**-0.5**
KHZ				IAmb	IAmb	10 08 09.8	
	comp=Z,30nm,1.5s						
NACB	**Ninganchiao**	**42.20**	**313**	P	**P**	**10 08 07.8**	**+0.2**
RPZ	**Rata Peaks**	**42.24**	**161**	P	**P**	**10 08 08.1**	**+0.3**
	comp=Z,5.6nm,0.6s,baz=356,slow=15,SNR=4.8						
RPZ	**Rata Peaks**	**42.24**	**161**	P	**P**	**10 08 08.2**	**+0.4**
MQZ	**McQueen's Vall**	**42.76**	**160**	P	**P**	**10 08 11.5**	**-0.3**
MQZ				IAmb	IAmb	10 08 20.6	
	comp=Z,37nm,1.3s						
MLZ	**Mavora Lakes**	**42.91**	**165**	P	**P**	**10 08 13.3**	**+0.1**
JNU	**Nakatsue**	**42.99**	**331**	P	**P**	**10 08 13.6**	**-0.4**
	comp=Z,4.8nm,0.4s,baz=72,slow=1.1,SNR=11						
WHZ	**Wether Hill Ro**	**43.36**	**166**	P	**P**	**10 08 16.9**	**+0.2**
MORW	**Morawa**	**43.61**	**231**	P	**P**	**10 08 17.6**	**-1.4**
KSRS	**Korea Array**	**47.91**	**332**	P	**P**	**10 08 52.2**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=149,slow=8.3,SNR=3.2						
SONM	**Songino Array**	**66.35**	**327**	P	**P**	**10 11 01.2**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=141,slow=6.6,SNR=4.6						
TTA	**Tatalina**	**76.76**	**21**	P	**P**	**10 12 04.4**	**+1.7**
MKAR	**Makanchi Array**	**80.55**	**319**	P	**P**	**10 12 23.6**	**0.0**
	comp=Z,0.2nm,0.4s,baz=93,slow=5.1,SNR=3.1						
ILAR	**Eielson Array**	**81.14**	**22**	P	**P**	**10 12 25.9**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=243,slow=5.9,SNR=11						
QSPA	**South Pole Qui**	**85.82**	**180**	P	**P**	**10 12 49.7**	**-0.5**
	comp=Z,4.1nm,0.7s,baz=318,slow=0.6,SNR=36						
QSPA	**South Pole Qui**	**85.82**	**180**	P	**P**	**10 12 49.9**	**-0.2**
QSPA				IAmb	IAmb	10 12 50.6	
	comp=Z,5.1nm,0.8s						
MAW	**Mawson**	**86.60**	**203**	P	**P**	**10 12 52.9**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=114,slow=5.6,SNR=7.5						
MAW	**Mawson**	**86.60**	**203**	P	**P**	**10 12 53.0**	**-0.8**
NVAR	**Mina Array Bea**	**90.82**	**52**	P	**P**	**10 13 15.7**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=259,slow=7.3,SNR=3.7						
YKA	**Yellowknife Ar**	**94.33**	**28**	P	**P**	**10 13 30.4**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=268,slow=4.9,SNR=11						
AKASG	**Malin Array Be**	**114.59**	**325**	PKP	PKPdf	10 18 48.6	-0.7
	comp=Z,0.8nm,0.4s,baz=50,slow=2.7,SNR=4.1						
PLCA	**Paso Flores**	**119.64**	**142**	PKP	**PKPdf**	**10 18 59.4**	**-0.2**
	comp=Z,0.9nm,0.5s,baz=271,slow=3.7,SNR=7.5						
PLCA	**Paso Flores**	**119.64**	**142**		**PKPdf**	**10 18 59.0**	**-0.6**
GERES	**GERESS Array B**	**124.05**	**329**	PKP	**PKPdf**	**10 19 07.5**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=45,slow=2.1,SNR=4.6						
CFA	**Coronel Fontan**	**126.43**	**135**	PKP	**PKPdf**	**10 19 11.9**	**-0.9**
	comp=Z,2.2nm,0.3s,baz=133,slow=4.3,SNR=6.8						
LPAZ	**La Paz**	**133.76**	**117**	PKP	**PKPdf**	**10 19 28.0**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=25,slow=5.3,SNR=7.2						
SDV	**Santo Domingo**	**135.53**	**82**	PKP	**PKPdf**	**10 19 30.9**	**+0.3**
	comp=Z,3.2nm,0.8s,baz=62,slow=0.5,SNR=5.1						
BDFB	**Brasilia**	**150.74**	**133**	PKPbc	**PKPbc**	**10 20 02.6**	**-0.1**
	comp=Z,5.7nm,0.4s,baz=138,slow=1.8,SNR=7.3						
BDFB	**Brasilia**	**150.74**	**133**	PKPbc	**PKPbc**	**10 20 01.4**	**-1.3**
TORD	**Torodi Ar. Bea**	**151.12**	**290**	PKPbc	**PKPbc**	**10 20 02.3**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=89,slow=1.4,SNR=14						

*GCG **21** 10:02:07.4±0.5, 13.°17N×91.°17W, h35km±999km, MD3.4*
*SNET **21** 10:02:13.3±0.5, 13.°50N×90.°74W, h15km±6km, ML2.7*
ISC 21 10:02:06.0±4.6, 13.°1N±0.°2×91.°0W±0.°2, h29km, n9, σ0°64/11, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**1.18**	**281**⇑ *e*P		**Pb**	**10 02 28.5**	**+0.6**
FAME	**Alcalda de S**	**1.21**	**53**	*e*P	**Pb**	**10 02 27.7**	**-0.5**
FUG	**Fuego 3**	**1.33**	**7**	*e*P	**Pb**	**10 02 30.1**	**-0.3**
FUG				*e*S	**Sb**	**10 02 47.4**	**+0.3**
CEVE	**Cerro Verde**	**1.52**	**62**	*e*P	**Pb**	**10 02 34.3**	**+0.6**
CEVE				*e*S	**Sn**	**10 02 50.5**	**+0.1**
CEVE				IAML		10 02 59.9	
	comp=Z,184nm,0.2s						
SBLS	**San Blas**	**1.53**	**62**	*e*P	**Pb**	**10 02 34.0**	**+0.2**
SNJE	**San Jose**	**1.56**	**61**	*e*P	**Pb**	**10 02 34.6**	**+0.3**
STG3	**Santiaguito 3,**	**1.67**	**341**	*e*S	**Sn**	**10 02 54.2**	**+0.1**
MTO3	**Montecristo**	**2.04**	**51**	*e*P	**Pb**	**10 02 41.2**	**-1.4**
COEG	**Centro de Oper**	**2.13**	**76**	*e*P	**Pb**	**10 02 43.9**	**-0.1**

*DDA **21** 10:10:58.2, 37.°57N×41.°84E, h13km±3km, ML2.5*
*ISK **21** 10:10:59.1, 37.°66N×41.°77E, h12km, ML2.5/7*
ISC 21 10:10:59.0±1.3, 37.°63N±0.°04×41.°81E±0.°03, h11km±11km, n17, σ1°02/27, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SRTM	**Siirt_Merkez**	**0.38**	**14**	*i* P	**Pg**	**10 11 06.4**	**-0.1**
SRTM				*i* S	**Sb**	**10 11 13.2**	**-0.5**
SRTM				IAML		10 11 26.0	
	comp=E,274nm,1.1s						
SRTM				IAML		10 11 28.0	
	comp=N,296nm,0.7s						
SIRN	**Sirnak**	**0.50**	**105**	*i* P	**Pn**	**10 11 13.8**	**+1.6**
BTMN	**Batman**	**0.50**	**302**	*i* P	**Pb**	**10 11 08.9**	**-1.1**
BTMN				*i* S	**Sb**	**10 11 19.6**	**+2.2**
SIRT	**Sirnak**	**0.52**	**104**	PG	**Pb**	**10 11 10.5**	**+0.3**
BLIS	**Bitlis-Merkez**	**0.82**	**17**	*i* P	**Pg**	**10 11 14.6**	**-0.4**
BLIS				*i* S	**Sn**	**10 11 28.6**	**-0.5**
MARD	**Mardin**	**0.88**	**250**	*i* P	**Pg**	**10 11 15.4**	**-0.5**
MARD				*i* S	**Sn**	**10 11 28.9**	**-1.4**
MARD				IAML		10 11 40.0	
	comp=E,201nm,0.4s						
MARD				IAML		10 11 43.0	
	comp=N,300nm,0.5s						
GURO	**Guroymak-BITLI**	**0.94**	**11**	PG	**Pb**	**10 11 17.2**	**-0.3**
GURO				SG	**Sb**	**10 11 30.3**	**+0.3**
MAZI	**Mazidag**	**1.10**	**262**	PG	**Pb**	**10 11 19.9**	**-0.2**
MAZI				SG	**Sn**	**10 11 35.3**	**-0.4**
MUSM	**Mu-Merkez**	**1.12**	**348**	*i* P	Pg	10 11 15.0	-5.6
MUSM				*i* S	**Sn**	**10 11 36.2**	**-0.2**
AKDM	**Akdamar-Van**	**1.16**	**52**	PN	**Pb**	**10 11 20.0**	**-1.2**
AKDM				SN	**Sn**	**10 11 38.6**	**+1.2**
GEVA	**Gevas**	**1.20**	**55**	*i* P	**Pb**	**10 11 20.6**	**-1.3**
GEVA				*i* S	**Sn**	**10 11 38.7**	**+0.3**
GEVA				IAML		10 11 45.0	
	comp=E,56nm,0.5s						
DYBB	**Diyarbakir**	**1.36**	**284**	PN	**Pb**	**10 11 24.1**	**-0.5**
HANI	**Diyarbakir_Han**	**1.36**	**306**	*i* P	**Pn**	**10 11 23.7**	**-0.4**
HANI				*i* S	**Sg**	**10 11 44.3**	**+1.4**
HANI				IAML		10 11 51.0	
	comp=N,44nm,0.6s						
CUKT	**Cukurca**	**1.48**	**104**	*i* P	**Pn**	**10 11 23.8**	**-1.9**
CUKT				*i* S	**Sn**	**10 11 45.7**	**+0.5**
CUKT				IAML		10 11 50.0	
	comp=N,115nm,0.5s						
CUKT				IAML		10 11 52.0	
	comp=E,148nm,0.5s						
AGRB	**Hanur-Agry**	**2.16**	**25**	PN	**Pn**	**10 11 35.7**	**+0.6**
URFA	**Urfa**	**2.38**	**266**	PN	**Pn**	**10 11 38.8**	**+0.7**
MALT	**Malatya**	**2.76**	**285**	PN	**Pn**	**10 11 43.7**	**+0.3**

*MAN **21** 10:35:10.5, 13.°72N×119.°89E, h4km, mb5.6, ML4.6, MS4.9*
MAN Intensity V - Lubang Occidental Mindoro.
*NEIC **21** 10:35:15.0±1.7, 13.°72N±0.°06×120.°28E±0.°07, h36km±3km, mb4.7/30, Error ellipse: s-maj=11.0km s-min=7.9km az=116.0*
*IDC **21** 10:35:15.1±2.1, 13.°76N×120.°16E, h35km±17km, mb4.0/19, mb1 4.2/19, mb1mx4.0/41, mbtmp4.2/19, MS3.5/3, Ms1 3.5/3, ms1mx3.3/44, Error ellipse: s-maj=20.4km s-min=13.8km az=70.0*
ISC 21 10:35:16.4±0.9, 13.°71N±0.°04×120.°08E±0.°05, h46km±10km, n94, σ1°53/110, mb4.6/40, 1C-3D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.92**	**65**	Pg	**Pn**	**10 35 30.8**	**-2.2**
	1µm,0.3s,baz=229,slow=1.8,SNR=84						
TGY				Lg	Lg	10 35 44.3	
	3µm,0.3s,baz=316,slow=19,SNR=18						
TGY	**Tagaytay City**	**0.92**	**65**	*e*P	**Pn**	**10 35 31.0**	**-2.0**
TGY				*i* S	**Sn**	**10 35 41.0**	**-4.2**
LQP	**Lukban**	**1.47**	**74**⇓ *e*P		**Pn**	**10 35 39.5**	**-1.2**
LQP				*e*S	**Sn**	**10 35 58.4**	**-0.5**
BOAC	**Boac**	**1.73**	**98**	*e*P	**Pn**	**10 35 43.3**	**-0.8**
BOAC				*e*S	**Sn**	**10 36 09.1**	**+4.1**
SCZP	**Santa Cruz**	**2.06**	**355**	*e*P	**Pn**	**10 35 47.5**	**-1.2**
SCZP				*e*S	**Sn**	**10 36 10.1**	**-3.1**
POLP	**Polilio Island**	**2.07**	**60**	*e*P	**Pn**	**10 35 48.9**	**+0.2**
POLP				*e*S	**Sn**	**10 36 09.4**	**-3.8**
GQP	**Guinayangan**	**2.31**	**85**⇑ *e*P		**Pn**	**10 35 52.2**	**+0.2**
GQP				*e*S	**Sn**	**10 36 16.7**	**-2.4**
OTRP	**Odiongan**	**2.32**	**125**	*e*P	**Pn**	**10 35 52.6**	**+0.5**
OTRP				*e*S	**Sn**	**10 36 24.3**	**+4.9**
BALP	**Baler**	**2.48**	**35**	*e*P	**Pn**	**10 35 53.9**	**-0.6**
BALP				*e*S	**Sn**	**10 36 25.0**	**+1.4**
SMPP	**San Manuel, Pa**	**2.50**	**13**	*e*P	**Pn**	**10 35 52.6**	**-2.0**
SMPP				*e*S	**Sn**	**10 36 22.9**	**-1.0**
ENPP	**El Nido**	**2.57**	**195**	*e*P	**Pn**	**10 35 53.8**	**-1.8**
ENPP				*e*S	**Sn**	**10 36 24.2**	**-1.4**

BOLP	**Bolinao**	**2.66**	**357**	*e*P		**Pn**	**10 35 54.1**	**-2.8**
BOLP				*e*S		**Sn**	**10 36 31.3**	**+3.4**
CUYO	**Cuyo Island**	**2.98**	**162**	*e*P		**Pn**	**10 36 00.1**	**-1.2**
CUYO				*e*S		**Sn**	**10 36 34.2**	**-1.7**
RCP	**Roxas**	**3.37**	**129**‖	*e*P		Pn	10 36 12.0	+5.5
CAUP	**Cauayan**	**3.63**	**27**	*e*P		**Pn**	**10 36 10.3**	**+0.1**
CAUP				*e*S		**Sn**	**10 36 56.6**	**+4.8**
SZP	**Santa**	**3.84**	**5**	Pn		**Pn**	**10 36 14.7**	**+1.7**
SZP				Sn		**Sn**	**10 36 58.6**	**+1.7**
ABRA	**Dolores**	**3.96**	**9**	*e*P		**Pn**	**10 36 13.6**	**-1.1**
ABRA				*e*S		**Sn**	**10 37 02.5**	**+2.5**
SIPP	**Brgy, Tapao**	**4.21**	**5**‖	*e*P		**Pn**	**10 36 19.8**	**+1.7**
APYP	**Conner**	**4.28**	**15**	*e*P		**Pn**	**10 36 18.8**	**-0.3**
APYP				*e*S		**Sn**	**10 37 05.6**	**-2.1**
KKM	**Kota Kinabalu**	**8.51**	**207**	Pn		**Pn**	**10 37 20.4**	**+3.0**
KKM				Sn		**Sn**	**10 38 51.3**	**-0.9**
DAV	**Davao City (W)**	**8.53**	**140**	LR		LR	10 41 24.0	
	comp=Z,1μm,18.3s,baz=332,slow=43							
TWG	**Pinlang**	**9.11**	**6**	Pn		**Pn**	**10 37 27.4**	**+1.9**
TPUB	**Ta-pu**	**9.55**	**3**	Pn		**Pn**	**10 37 31.8**	**+0.3**
YULB	**Yu-li**	**9.70**	**7**	Pn		**Pn**	**10 37 33.3**	**-0.2**
SSLB	**Suanglung**	**10.06**	**5**	Pn		**Pn**	**10 37 39.8**	**+1.4**
YHNB	**Yeheng**	**10.97**	**6**	Pn		**Pn**	**10 37 50.8**	**-0.1**
SBUM	**Sibu**	**13.62**	**215**	Pn		**Pn**	**10 38 28.2**	**+1.0**
KSM	**Kuching**	**15.53**	**219**	Pn		**Pn**	**10 38 54.1**	**+1.6**
CMAR	**Chiang Mai Arr**	**20.85**	**286**	P		Pn	10 39 56.4	-1.1
	16nm,0.9s,baz=95,slow=9.1,SNR=75							
CMAR				PcP		**PcP**	**10 44 03.8**	**+1.8**
	1.4nm,0.6s,baz=76,slow=0.8,SNR=7.3							
CMAR				LR		LR	10 48 32.7	
	comp=Z,38nm,18.6s,baz=90,slow=38							
CHTO	**Chiang Mai**	**20.91**	**287**	P		**P**	**10 39 55.7**	**+0.4**
XAN	**Xi'an**	**22.63**	**335**	P		**P**	**10 40 13.1**	**-0.5**
PSI	**Prapat**	**23.55**	**244**	P		**P**	**10 40 23.3**	**+0.3**
	9.1nm,0.8s,baz=58,slow=17,SNR=4.1							
RPSI	**Rantau Prapat**	**23.60**	**244**	P		**P**	**10 40 23.3**	**-0.1**
RPSI	**Rantau Prapat**	**23.60**	**244**	P		**P**	**10 40 24.5**	**+1.1**
RPSI				IAmb		IAmb	10 40 38.8	
	comp=Z,20nm,1.0s							
KSRS	**Korea Array**	**24.66**	**15**	P		**P**	**10 40 32.9**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=198,slow=9.7,SNR=5.3							
MTN	**Manton Dam**	**28.56**	**157**	P		**P**	**10 41 07.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**32.08**	**170**	P		**P**	**10 41 39.3**	**0.0**
FITZ				IAmb		IAmb	10 41 51.7	
	comp=Z,12nm,1.2s							
ODAN	**Odare**	**33.23**	**298**	*e*P		**P**	**10 41 49.4**	**-0.2**
	comp=Z,11nm,0.6s							
RAMN	**Ramite**	**33.93**	**298**	*e*P		**P**	**10 41 56.1**	**+0.3**
	comp=Z,12nm,0.7s							
JIRN	**Jiri**	**34.48**	**299**	*e*P		**P**	**10 42 00.5**	**-0.2**
	comp=Z,25nm,0.6s							
GUN	**Gumba**	**34.81**	**299**	*e*P		**P**	**10 42 03.3**	**-0.3**
	comp=Z,25nm,0.6s							
PSA00	**Pilbara Seismi**	**35.06**	**180**	P		**P**	**10 42 06.3**	**+1.1**
SONM	**Songino Array**	**35.88**	**344**	P		**P**	**10 42 11.5**	**-0.7**
	comp=Z,2.1nm,0.6s,baz=163,slow=8.6,SNR=8.9							
WB0	**Warramunga Arr**	**36.12**	**157**	P		**P**	**10 42 13.4**	**-1.0**
WB0				IAmb		IAmb	10 42 20.2	
	comp=Z,11nm,0.8s							
WRAB	**Tennant Creek**	**36.26**	**157**	P		**P**	**10 42 14.9**	**-0.7**
WRAB				IAmb		IAmb	10 42 15.8	
	comp=Z,11nm,0.8s							
WRA	**Warramunga Arr**	**36.26**	**157**	P		**P**	**10 42 14.7**	**-0.9**
	comp=Z,7.1nm,0.6s,baz=335,slow=9.5,SNR=31							
WR0	**Warramunga Arr**	**36.36**	**157**	P		**P**	**10 42 15.5**	**-0.9**
WR0				IAmb		IAmb	10 42 16.6	
	comp=Z,6.2nm,0.7s							
KRVT	**Keravat (AS076**	**36.41**	**117**	LR		LR	10 57 42.3	
	comp=Z,49nm,18.6s,baz=288,slow=37							
KOLN	**Koldanda**	**36.72**	**298**	*e*P		**P**	**10 42 19.7**	**0.0**
	comp=Z,17nm,1.0s							
DANN	**Dangsing**	**36.73**	**299**	*e*P		**P**	**10 42 19.4**	**-0.5**
	comp=Z,17nm,0.6s							
AS31	**Alice Springs**	**39.53**	**160**	P		**P**	**10 42 42.6**	**-0.5**
ASAR	**Alice Springs**	**39.53**	**160**	P		**P**	**10 42 42.9**	**-0.3**
	comp=Z,5.8nm,0.7s,baz=337,slow=6.8,SNR=84							
FORT	**Forrest**	**44.89**	**170**	P		**P**	**10 43 26.4**	**-0.2**
MK31	**Makanchi Array**	**45.67**	**324**	P		**P**	**10 43 33.2**	**+0.4**
MKAR	**Makanchi Array**	**45.67**	**324**	P		**P**	**10 43 33.4**	**+0.6**
	comp=Z,4.6nm,0.8s,baz=132,slow=9.0,SNR=34							
MKAR				PcP		**PcP**	**10 45 10.3**	**0.0**
	comp=Z,2.6nm,0.7s,baz=113,slow=3.6,SNR=7.0							
KDJ	**Kajisay**	**46.61**	**316**	P		**P**	**10 43 40.6**	**+0.2**
KDJ				IAmb		IAmb	10 43 42.4	
	comp=Z,6.3nm,0.8s							
NIL	**Nilore**	**46.80**	**303**	P		**P**	**10 43 42.2**	**+0.4**
NRN	**Naryn**	**47.14**	**314**	P		**P**	**10 43 45.8**	**+1.1**
NRN				IAmb		IAmb	10 43 46.5	
	comp=Z,8.1nm,0.8s							
ULHL	**Ulahol**	**47.29**	**316**	P		**P**	**10 43 46.7**	**+0.9**
	SNR=16							
KZA	**Kyzart**	**47.91**	**315**	P		**P**	**10 43 52.3**	**+1.5**
	SNR=8.4							
KBK	**Karagaybulak**	**48.34**	**316**	P		**P**	**10 43 55.2**	**+1.4**
	SNR=8.1							
UCH	**Uchtor**	**48.47**	**315**	P		**P**	**10 43 56.7**	**+1.5**
	SNR=8.6							
AAK	**Ala-Archa**	**48.64**	**315**	P		**P**	**10 43 56.9**	**+0.8**
BBOO	**Buckleboo**	**48.71**	**162**	P		**P**	**10 43 56.0**	**-0.5**
BBOO				IAmb		IAmb	10 44 01.2	
	comp=Z,9.3nm,0.9s							
ZAA0	**Zalesovo Array**	**48.77**	**333**	P		**P**	**10 43 55.6**	**-1.1**
ZAA0				IAmb		IAmb	10 44 00.4	
	comp=Z,6.6nm,1.1s							
ZALV	**Zalesovo Beam**	**48.77**	**333**	P		**P**	**10 43 55.6**	**-1.1**
	comp=Z,2.6nm,0.5s,baz=124,slow=7.4,SNR=11							
ZALV				PcP		**PcP**	**10 45 20.1**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=149,slow=3.4,SNR=2.2							
AML	**Almayashu**	**49.00**	**314**	P		**P**	**10 43 59.7**	**+0.5**
	SNR=12							
EKS2	**Erkin-Say**	**49.14**	**315**	P		**P**	**10 44 01.0**	**+1.1**
	SNR=7.2							
STKA	**Stephens Creek**	**49.80**	**156**	P		**P**	**10 44 05.7**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=319,slow=11,SNR=3.3							
KURK	**Kurchatov**	**49.85**	**327**	P		**P**	**10 44 05.3**	**+0.3**
GAR	**Garm**	**50.45**	**310**	P		**P**	**10 44 10.3**	**+0.3**
GAR				IAmb		IAmb	10 44 22.1	
	comp=Z,14nm,1.0s							
CHGR	**Chuyangaron**	**51.23**	**309**	P		**P**	**10 44 16.7**	**+0.9**
KK31	**Karatay Array**	**51.54**	**315**	P		**P**	**10 44 18.2**	**+0.2**
KK31				IAmb		IAmb	10 44 19.1	
	comp=Z,7.2nm,0.8s							
KKAR	**Karatay Array**	**51.54**	**315**	P		**P**	**10 44 18.1**	**+0.2**
KKAR				IAmb		IAmb	10 44 19.1	
	comp=Z,7.2nm,0.8s							
GEYT	**Alibeck**	**59.64**	**306**	P		**P**	**10 45 17.0**	**+0.7**
	comp=Z,2.5nm,0.7s,baz=178,slow=4.3,SNR=5.7							
ABKAR	**Akbulak array**	**60.33**	**319**	P		**P**	**10 45 21.2**	**+0.5**
ABKAR				IAmb		IAmb	10 45 21.7	
	comp=Z,5.4nm,0.7s							
ARU	**Arti**	**63.05**	**327**	P		**P**	**10 45 38.4**	**-0.4**
RAYN	**Ar Rayn**	**70.69**	**290**	P		**P**	**10 46 28.6**	**+0.4**
RAYN				IAmb		IAmb	10 46 29.5	
	comp=Z,7.2nm,0.9s							
KBZ	**Khabaz**	**71.43**	**312**	P		**P**	**10 46 31.8**	**-0.3**
	comp=Z,2.4nm,1.0s,baz=196,slow=15,SNR=3.4							
KLMR	**Klimovskoe**	**73.54**	**330**	*e*		**P**	**10 46 45.8**	**+1.4**
KLMR				AMP			10 46 48.2	
	comp=Z,12nm,1.1s							
BRTR	**Keskin Array B**	**78.67**	**308**	P		**P**	**10 47 14.1**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=111,slow=6.8,SNR=5.7							
ARCES	**ARCESS Array B**	**78.86**	**339**	P		**P**	**10 47 14.5**	**0.0**
	comp=Z,2.1nm,0.6s,baz=82,slow=6.6,SNR=14							
ARE0	**ARCESS Array S**	**78.86**	**339**	P		**P**	**10 47 14.9**	**+0.4**
ILAR	**Eielson Array**	**79.00**	**26**	P		**P**	**10 47 13.3**	**-2.1**
	comp=Z,0.3nm,0.7s,baz=306,slow=6.3,SNR=4.7							
DHY	**Denali Highway**	**79.05**	**28**	P		**P**	**10 47 14.8**	**-1.0**
DHY				IAmb		IAmb	10 47 24.8	
	comp=Z,10nm,1.3s							
FINES	**FINESS Array B**	**79.98**	**331**	P		**P**	**10 47 20.0**	**-0.7**
	comp=Z,1.6nm,0.6s,baz=46,slow=8.2,SNR=4.9							
AKASG	**Malin Array Be**	**80.07**	**320**	P		**P**	**10 47 21.4**	**0.0**
	comp=Z,0.4nm,0.5s,baz=65,slow=4.1,SNR=3.0							
BUR08	**Bucovina Ar. S**	**83.25**	**317**	P		**P**	**10 47 38.6**	**+0.2**
BUR08				IAmb		IAmb	10 47 50.7	
	comp=Z,6.8nm,1.1s							
KMBO	**Kilima Mbogo**	**83.30**	**267**	P		**P**	**10 47 40.8**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=106,slow=15,SNR=3.2							
NB2	**NORSAR Subarra**	**86.98**	**333**	P		**P**	**10 47 55.2**	**-1.5**
	comp=Z,5.4nm,1.0s,baz=66,slow=4.6							
NB2	**NORSAR Subarra**	**86.98**	**333**	P		**P**	**10 47 55.2**	**-1.5**
	baz=66,slow=4.6							
NOA	**NORSAR Array B**	**86.98**	**333**	P		**P**	**10 47 55.4**	**-1.4**
	comp=Z,3.1nm,0.8s,baz=67,slow=4.6,SNR=8.2							
YKA	**Yellowknife Ar**	**93.00**	**22**	P		**P**	**10 48 23.3**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=310,slow=4.1,SNR=10							
TORD	**Torodi Ar. Bea**	**113.38**	**291**	PKiKP		**PKiKP**	**10 53 49.4**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=40,slow=2.2,SNR=4.1							

*KRSC **21** 10:49:56.5±2.0, 48.°97N×156.°61E, h75km±27km, ML5.4, FELT [II-III] at Severo-Kurilsk.*
*BJI **21** 10:49:57.8±0.0, 49.°40N×156.°10E, h30km, mB5.2/58, mb4.8/69, Ms5.5/76, Ms7 5.4/71*
*SKHL **21** 10:49:58.5±0.3, 48.°90N×156.°60E, h48km±7km, mb5.3/16, mbv5.4/5, ms5.3/14*
*MOS **21** 10:50:00.1±1.1, 49.°24N×156.°12E, h43km, mb5.4/98, MS5.4/56, Error ellipse: s-maj=5.4km s-min=2.6km az=79.8*
MOS Felt (II) at Severo-Kuril'sk.
*NEIC **21** 10:50:01.7±1.4, 49.°16N±0.°08×156.°06E±0.°07, h44km±5km, mb5.2/291, Ms_20 5.3/293, Error ellipse: s-maj=11.6km s-min=6.3km az=159.0*
*IDC **21** 10:50:02.6±2.0, 49.°24N×156.°07E, h50km±18km, mb4.4/29, mb1 4.5/36, mb1mx4.5/40, mbtmp4.7/36, ML5.1/3, MS5.1/46, Ms1 5.1/46, ms1mx5.0/54, Error ellipse: s-maj=13.8km s-min=9.6km az=145.0*
*GCMT **21** 10:50:03.7±0.1, 49.°12N±0.°01×156.°59E±0.°01, h22km, MW5.5/151, Moment Tensor Solution. s128,c243; s151,c313; Duration: 1s3 Moment tensor: Scale 10^{17} Nm; M_{rr}1.70±.03; $M_{\theta\theta}$-0.45±.02; $M_{\phi\phi}$-1.24±.02; $M_{r\theta}$0.49±.03; $M_{\theta\phi}$-0.82±.01; $M_{\phi r}$0.82±.03; Best double couple: $M_0$1.97600×10^{17} NP1:ϕ_s213.00000°, δ30.00000°, λ91.00000°. NP2:ϕ_s32.00000°, δ60.00000°, λ89.00000°. Principal axes: T 1.9500, Plg75.0000°, Azm300.0000°; N 0.0590, Plg1.0000°, Azm32.0000°; P -2.0030, Plg15.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BGR **21** 10:50:13.3±0.0, 50.°94N×155.°01E, h33km, mb5.2, Ms5.5*

ISC 21 10:50:00.1±0.3, **49.°06N**±0.°04×**156.°27E**±0.°03, **h34**km, **n1231**, **s1**♀**42**/1186, **mb5.2**/281, **MS5.3**/238, **61C-12D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SKR	**Severo-Kuril's**	**1.63**	**357**	*c* iPN	**Pn**	**10**	**50**	**26.3**	**0.0**
SKR				*e*S	**Sn**	**10**	**50**	**47.3**	**+1.3**
SKR				pmax	pmax				
	comp=Z,3μm,2.5s								
SKR				pmax	pmax				
	comp=Z,3μm,1.1s								
SKR				smax	smax				
	comp=E,8μm,0.7s								
SKR				smax	smax				
	comp=N,13μm,0.8s								
SKR	**Severo-Kuril's**	**1.63**	**357**	*e*P	**Pn**	**10**	**50**	**25.9**	**-0.3**
SKR				*e*S	**Sn**	**10**	**50**	**46.6**	**+0.6**
SKR	**Severo-Kuril's**	**1.63**	**357**⇑	*i*P	**Pn**	**10**	**50**	**26.0**	**-0.3**
SKR				AMB	AMB	10	50	27.8	
	comp=N,3μm,3.0s								
SKR				AMB	AMB	10	50	30.6	
	comp=N,3μm,1.0s								
SKR				*e*S	**Sn**	**10**	**50**	**46.6**	**+0.6**
SKR				A	A	10	50	58.4	
	comp=N,13μm,0.7s								
SKR				A	A	10	50	58.4	
	comp=N,8μm,0.7s								
SKR				AMS	AMS	10	51	16.8	
	comp=N,51μm,15.0s								
SKR				AMS	AMS	10	51	16.8	
	comp=N,56μm,15.0s								
SKR				AMS	AMS	10	51	16.8	
	comp=N,59μm,15.0s								
PAU	**Pauzhetka**	**2.43**	**8**	PN	**Pn**	**10**	**50**	**37.3**	**-0.1**
PAU				S	**Sn**	**10**	**51**	**06.7**	**+0.8**
PAU	**Pauzhetka**	**2.43**	**8**	*e*P	**Pn**	**10**	**50**	**37.3**	**-0.1**
PAU				*e*S	**Sn**	**10**	**51**	**06.7**	**+0.8**
PAU	**Pauzhetka**	**2.43**	**8**	*e*P	**Pn**	**10**	**50**	**37.3**	**-0.1**
PAU				*e*S	**Sn**	**10**	**51**	**06.7**	**+0.8**
KDTR	**Khodutka, Kamc**	**2.98**	**22**	PN	**Pn**	**10**	**50**	**43.5**	**-1.4**
KDTR				S	**Sn**	**10**	**51**	**17.9**	**-1.5**
KDTR	**Khodutka, Kamc**	**2.98**	**22**	*e*P	**Pn**	**10**	**50**	**43.5**	**-1.4**
KDTR				*e*S	**Sn**	**10**	**51**	**17.9**	**-1.5**
ASAK	**Asacha**	**3.48**	**17**	PN	**Pn**	**10**	**50**	**52.0**	**+0.1**
ASAK	**Asacha**	**3.48**	**17**	*e*P	**Pn**	**10**	**50**	**52.0**	**+0.1**
MTVR	**Mutnovka**	**3.63**	**19**	PN	**Pn**	**10**	**50**	**53.8**	**-0.2**
MTVR	**Mutnovka**	**3.63**	**19**	*e*P	**Pn**	**10**	**50**	**53.8**	**-0.2**
RUS	**Russkaya**	**3.66**	**22**	PN	**Pn**	**10**	**50**	**52.9**	**-1.4**
RUS				S	**Sn**	**10**	**51**	**34.3**	**-1.9**
RUS	**Russkaya**	**3.66**	**22**	*e*P	**Pn**	**10**	**50**	**52.9**	**-1.4**
RUS				*e*S	**Sn**	**10**	**51**	**34.3**	**-1.9**
RUS	**Russkaya**	**3.66**	**22**	*e*P	**Pn**	**10**	**50**	**52.9**	**-1.4**
GRL	**Gorelyy**	**3.68**	**17**	PN	**Pn**	**10**	**50**	**54.6**	**0.0**
GRL				S	**Sn**	**10**	**51**	**38.2**	**+1.4**
GRL	**Gorelyy**	**3.68**	**17**	*e*P	**Pn**	**10**	**50**	**54.6**	**0.0**
GRL				*e*S	**Sn**	**10**	**51**	**38.2**	**+1.4**
APC	**Apacha**	**3.91**	**8**	PN	**Pn**	**10**	**50**	**58.6**	**+1.0**
APC	**Apacha**	**3.91**	**8**	*e*P	**Pn**	**10**	**50**	**58.6**	**+1.0**
KRMR	**Karymshinskiy**	**3.95**	**17**	PN	**Pn**	**10**	**50**	**58.4**	**+0.2**
KRMR				S	**Sn**	**10**	**51**	**43.4**	**+0.1**
KRMR	**Karymshinskiy**	**3.95**	**17**	*e*P	**Pn**	**10**	**50**	**58.4**	**+0.2**
KRMR				*e*S	**Sn**	**10**	**51**	**43.4**	**+0.1**
PEA0B	**Petropavlovsk-**	**4.15**	**12**	*i* PN	**Pn**	**10**	**51**	**01.0**	**0.0**
PEA0B	**Petropavlovsk-**	**4.15**	**12**		**Pn**	**10**	**51**	**01.9**	**+1.0**
PEA0B				Sn	**Sn**	**10**	**51**	**49.0**	**+0.7**
PETK	**Petropavlovsk-**	**4.15**	**12**	P	**Pn**	**10**	**51**	**01.6**	**+0.7**
	comp=N,11nm,0.3s,baz=197,slow=11,SNR=351								
PETK				LR	LR	10	52	49.9	
	comp=N,20μm,21.8s,baz=191,slow=42								
PET	**Petropavlovsk**	**4.24**	**20**⇑	*i*PN	**Pn**	**10**	**51**	**01.8**	**-0.4**
PET				*e*S	**Sn**	**10**	**51**	**52.3**	**+1.8**
PET				pmax	pmax				
	comp=Z,2μm,8.5s								
PET				pmax	pmax				
	comp=Z,238nm,0.4s								
PET				smax	smax				
	comp=N,1μm,0.5s								
PET				smax	smax				
	comp=E,2μm,0.6s								
PET				MLR	MLR				
	comp=Z,14μm,12.0s								
PET	**Petropavlovsk**	**4.24**	**20**⇑	*i*P	**Pn**	**10**	**51**	**01.8**	**-0.4**
PET				AMB	AMB	10	51	04.7	
	comp=Z,2μm,8.0s								
PET				AMB	AMB	10	51	05.2	
	comp=Z,250nm,0.4s								
PET				*e*S	**Sn**	**10**	**51**	**49.1**	**-1.4**
PET				A	A	10	52	06.9	
	comp=Z,1μm,0.6s								
PET				A	A	10	52	06.9	
	comp=Z,2μm,0.6s								
PET				AMS	AMS	10	52	59.4	
	comp=Z,11μm,12.0s								
PET				AMS	AMS	10	52	59.4	
	comp=Z,14μm,12.0s								
PET	**Petropavlovsk**	**4.24**	**20**		**Pn**	**10**	**51**	**02.3**	**+0.1**
PET				Sn	**Sn**	**10**	**51**	**50.7**	**+0.2**
UGLR	**Uglovaya**	**4.45**	**20**	PN	**Pn**	**10**	**51**	**05.2**	**0.0**
UGLR	**Uglovaya**	**4.45**	**20**	*e*P	**Pn**	**10**	**51**	**05.2**	**0.0**
AVH	**Avacha**	**4.49**	**19**	PN	**Pn**	**10**	**51**	**06.4**	**+0.8**
AVH				S	**Sn**	**10**	**51**	**56.9**	**+0.3**
AVH	**Avacha**	**4.49**	**19**	*e*P	**Pn**	**10**	**51**	**06.4**	**+0.8**
AVH				*e*S	**Sn**	**10**	**51**	**56.9**	**+0.3**
KOK	**Koryaka**	**4.49**	**18**	PN	**Pn**	**10**	**51**	**06.6**	**+0.9**
KOK	**Koryaka**	**4.49**	**18**	*e*P	**Pn**	**10**	**51**	**06.6**	**+0.9**
KOK	**Koryaka**	**4.49**	**18**	*e*P	**Pn**	**10**	**51**	**06.6**	**+0.9**
SMAR	**Somma**	**4.50**	**20**	PN	**Pn**	**10**	**51**	**06.1**	**+0.2**
SMAR	**Somma**	**4.50**	**20**	*e*P	**Pn**	**10**	**51**	**06.1**	**+0.2**
KRER	**Koryakskii**	**4.52**	**19**	PN	**Pn**	**10**	**51**	**07.1**	**+0.8**
KRER	**Koryakskii**	**4.52**	**19**	*e*P	**Pn**	**10**	**51**	**07.1**	**+0.8**
SDLR	**Sedlovina**	**4.53**	**20**	PN	**Pn**	**10**	**51**	**05.6**	**-0.7**
SDLR	**Sedlovina**	**4.53**	**20**	*e*P	**Pn**	**10**	**51**	**05.6**	**-0.7**
NLC	**Nalytchevo**	**4.55**	**24**	PN	**Pn**	**10**	**51**	**04.9**	**-1.5**
NLC	**Nalytchevo**	**4.55**	**24**	*e*P	**Pn**	**10**	**51**	**04.9**	**-1.5**
NLC				*e*S	**Sn**	**10**	**51**	**55.2**	**-2.8**
NLC	**Nalytchevo**	**4.55**	**24**	*e*P	**Pn**	**10**	**51**	**04.9**	**-1.5**
KRX	**Arik**	**4.55**	**18**	PN	**Pn**	**10**	**51**	**07.7**	**+1.0**
KRX	**Arik**	**4.55**	**18**	*e*P	**Pn**	**10**	**51**	**07.7**	**+1.0**
SPN	**Mys Shipunski**	**4.68**	**29**	PN	**Pn**	**10**	**51**	**07.0**	**-1.2**
SPN	**Mys Shipunski**	**4.68**	**29**	*e*P	**Pn**	**10**	**51**	**07.0**	**-1.2**
SPN				*e*S	**Sn**	**10**	**51**	**58.4**	**-2.9**
SPN	**Mys Shipunski**	**4.68**	**29**	*e*P	**Pn**	**10**	**51**	**07.0**	**-1.2**
MKZ	**Mys Kozlova**	**6.46**	**30**	PN	**Pn**	**10**	**51**	**30.7**	**-1.9**
MKZ	**Mys Kozlova**	**6.46**	**30**	*e*P	**Pn**	**10**	**51**	**30.7**	**-1.9**
MKZ				*e*S	**Sn**	**10**	**52**	**41.3**	**-3.7**
KZV	**Kizimen**	**6.55**	**21**	PN	**Pn**	**10**	**51**	**33.8**	**-0.2**
KZV	**Kizimen**	**6.55**	**21**	*e*P	**Pn**	**10**	**51**	**33.8**	**-0.2**
TUMD	**Tumrok D**	**6.65**	**21**	*e*P	**Pn**	**10**	**51**	**35.1**	**-0.2**
TUMR	**Tumrok**	**6.67**	**19**	PN	**Pn**	**10**	**51**	**35.1**	**-0.5**
TUMR	**Tumrok**	**6.67**	**19**	*e*P	**Pn**	**10**	**51**	**36.1**	**+0.5**
KUR	**Kuril'sk**	**6.89**	**239**	*d* iPN	**Pn**	**10**	**51**	**41.1**	**+2.5**
KUR				pmax	pmax				
	comp=N,115nm,0.5s								
KUR				pmax	pmax				
	comp=Z,415nm,0.5s								
KUR				pmax	pmax				
	comp=E,187nm,0.3s								
KUR				MLR	MLR				
	comp=N,9μm,12.0s								
KUR				MLR	MLR				
	comp=E,22μm,12.0s								
KUR				MLR	MLR				
	comp=Z,16μm,12.0s								
KUR	**Kuril'sk**	**6.89**	**239**	*i* P	**Pn**	**10**	**51**	**40.9**	**+2.3**
KUR				AMB	AMB	10	51	54.2	
	comp=Z,120nm,0.6s								
KUR				AMB	AMB	10	51	54.2	
	comp=Z,190nm,0.6s								
KUR				AMB	AMB	10	51	54.2	
	comp=Z,420nm,0.6s								
KUR				*e*S	**Sn**	**10**	**52**	**56.5**	**+0.7**
KUR				A	A	10	53	08.5	
	comp=Z,450nm,0.7s								
KUR				A	A	10	53	08.5	
	comp=Z,470nm,0.7s								
KUR				AMS	AMS	10	55	29.0	
	comp=Z,9μm,12.0s								
KUR				AMS	AMS	10	55	29.0	
	comp=Z,22μm,12.0s								
KUR				AMS	AMS	10	55	29.0	
	comp=Z,16μm,12.0s								
ESO	**Esso**	**7.03**	**11**	PN	**Pn**	**10**	**51**	**41.8**	**+1.3**
ESO	**Esso**	**7.03**	**11**	*e*P	**Pn**	**10**	**51**	**41.8**	**+1.3**
ESO	**Esso**	**7.03**	**11**	*e*P	**Pn**	**10**	**51**	**41.8**	**+1.3**
KMNR	**Kamenistaya**	**7.13**	**18**	PN	**Pn**	**10**	**51**	**42.3**	**+0.4**
KMNR	**Kamenistaya**	**7.13**	**18**	*e*P	**Pn**	**10**	**51**	**42.3**	**+0.4**
KPT	**Kopyto**	**7.32**	**18**	PN	**Pn**	**10**	**51**	**45.4**	**+0.8**
KPT	**Kopyto**	**7.32**	**18**	*e*P	**Pn**	**10**	**51**	**45.4**	**+0.8**
KIRR	**Kirishev**	**7.33**	**18**	PN	**Pn**	**10**	**51**	**44.7**	**-0.1**
KIRR	**Kirishev**	**7.33**	**18**	*e*P	**Pn**	**10**	**51**	**44.7**	**-0.1**
KOZ	**Kozyrevsk**	**7.34**	**16**	PN	**Pn**	**10**	**51**	**46.6**	**+1.8**
KOZ	**Kozyrevsk**	**7.34**	**16**	*e*P	**Pn**	**10**	**51**	**46.6**	**+1.8**
KOZ	**Kozyrevsk**	**7.34**	**16**	*e*P	**Pn**	**10**	**51**	**46.6**	**+1.8**
BZGR	**Bezymyannyi-Gr**	**7.40**	**20**	PN	**Pn**	**10**	**51**	**46.7**	**+1.1**
BZGR	**Bezymyannyi-Gr**	**7.40**	**20**	*e*P	**Pn**	**10**	**51**	**46.7**	**+1.1**
ZLN	**Zelenaya**	**7.49**	**20**	PN	**Pn**	**10**	**51**	**47.3**	**+0.4**
ZLN	**Zelenaya**	**7.49**	**20**	*e*P	**Pn**	**10**	**51**	**47.3**	**+0.4**
LGNR	**Loginova**	**7.53**	**19**	PN	**Pn**	**10**	**51**	**47.1**	**-0.5**
LGNR	**Loginova**	**7.53**	**19**	P	**Pn**	**10**	**51**	**47.1**	**-0.5**
SRDR	**Sredinnyy**	**7.56**	**15**

TYV Tymovskoe 8.96 287 *e*P **Pn 10 52 10.5 +3.5**
TYV AMB AMB 10 52 12.8
comp=Z,30nm,1.0s
TYV AMB AMB 10 52 13.5
comp=Z,700nm,5.0s
TYV AMS AMS 10 56 13.2
comp=Z,20μm,15.0s
TYV AMS AMS 10 56 13.2
comp=Z,31μm,15.0s
GLVR Golovnino 9.14 238 *e*PN **Pn 10 52 09.1 -0.3**
GLVR pmax pmax
comp=Z,338nm,0.6s
GLVR pmax pmax
comp=E,179nm,0.4s
GLVR pmax pmax
comp=N,173nm,0.3s
GLVR MLR MLR
comp=Z,11μm,12.0s
GLVR MLR MLR
comp=N,5μm,9.0s
GLVR Golovnino 9.14 238 *e*P **Pn 10 52 09.0 -0.3**
GLVR AMB AMB 10 52 19.5
comp=N,200nm,0.6s
GLVR AMB AMB 10 52 19.5
comp=N,190nm,0.6s
GLVR AMB AMB 10 52 19.5
comp=N,340nm,0.6s
GLVR *e*S **Sn 10 53 47.3 -3.6**
GLVR AMS AMS 10 56 26.9
comp=N,5μm,11.0s
GLVR AMS AMS 10 56 26.9
comp=N,11μm,11.0s
NMR Nemuro--Hokkai 9.26 236⇓ *i*PN **Pn 10 52 08.7 -2.4**
NMR Nemuro--Hokkai 9.26 236 *e*rx rx 10 52 09.0
YSS Yuzh-Sakhalins 9.30 262⇑ *e*PN **Pn 10 52 15.5 +3.8**
YSS pmax pmax
comp=E,40nm,0.5s
YSS pmax pmax
comp=Z,90nm,0.5s
YSS pmax pmax
comp=Z,1μm,4.1s
YSS MLR MLR
comp=Z,11μm,17.0s
YSS MLR MLR
comp=N,7μm,16.0s
YSS Yuzh-Sakhalins 9.30 262 *i*P **Pn 10 52 15.4 +3.8**
YSS AMB AMB 10 52 17.2
comp=N,40nm,0.5s
YSS AMB AMB 10 52 17.2
comp=N,90nm,0.5s
YSS AMB AMB 10 52 18.0
comp=N,1μm,4.0s
YSS AMS AMS 10 55 49.0
comp=N,7μm,17.0s
YSS AMS AMS 10 55 49.0
comp=N,11μm,17.0s
YSS Yuzh-Sakhalins 9.30 262 Pn 10 52 11.4 -0.3
UGL Uglegorsk 9.33 275 *e*PN **Pn 10 52 14.7 +2.7**
UGL pmax pmax
comp=Z,103nm,1.1s
UGL MLR MLR
comp=N,6μm,12.0s
UGL MLR MLR
comp=Z,6μm,14.0s
UGL MLR MLR
comp=E,9μm,13.0s
UGL Uglegorsk 9.33 275 *e*P **Pn 10 52 14.7 +2.7**
UGL AMB AMB 10 52 18.1
comp=E,100nm,1.1s
UGL AMS AMS 10 57 48.0
comp=E,6μm,13.0s
UGL AMS AMS 10 57 48.0
comp=E,9μm,13.0s
UGL AMS AMS 10 57 48.0
comp=E,6μm,13.0s
OKH Okha 9.48 303 *d i*PN **Pn 10 52 12.1 -2.0**
OKH pmax pmax
comp=Z,800nm,10.7s
OKH MLR MLR
comp=Z,12μm,16.0s
OKH MLR MLR
comp=E,18μm,16.0s
OKH MLR MLR
comp=N,9μm,15.0s
OKH Okha 9.48 303⇑ *e*P Pn 10 52 18.8 +4.7
OKH AMB AMB 10 52 23.5
comp=N,60nm,0.5s
OKH AMB AMB 10 52 23.5
comp=N,70nm,0.5s
OKH AMB AMB 10 52 26.4
comp=N,600nm,11.0s
OKH AMS AMS 10 56 45.3
comp=N,9μm,16.0s
OKH AMS AMS 10 56 45.3
comp=N,18μm,16.0s
OKH AMS AMS 10 56 45.3
comp=N,12μm,16.0s
PALN Palana 10.28 11 PN **Pn 10 52 25.3 +0.4**
PALN Palana 10.28 11 *e*P **Pn 10 52 25.3 +0.4**
NKL Nikolayevsk 10.62 299 *e*PN **Pn 10 52 32.0 +2.4**
NKL pmax pmax
comp=Z,33nm,1.0s
NKL pmax pmax
comp=N,5.0nm,0.4s
NKL pmax pmax
comp=E,12nm,1.1s
NKL Nikolayevsk 10.62 299 *e*P **Pn 10 52 32.0 +2.4**
NKL AMB AMB 10 52 36.3
comp=E,10.0nm,1.0s
NKL AMB AMB 10 52 36.3
comp=E,10.0nm,1.0s
NKL AMB AMB 10 52 36.3
comp=E,30nm,1.0s
NKL AMS AMS 10 57 35.7
comp=E,11μm,15.0s
NKL AMS AMS 10 57 35.7
comp=E,9μm,15.0s
JKA Kamikawa-asahi 10.63 247 *e*P **Pn 10 52 32.6 +2.8**
JKA Kamikawa-asahi 10.63 247 Pn 10 52 32.6 +2.8
ASAJ Asahikawa 10.63 247 P **Pn 10 52 32.6 +2.8**
comp=E,15nm,0.3s,baz=77,slow=15,SNR=62
ASAJ LR LR 10 56 30.6
comp=E,15μm,18.8s,baz=68,slow=37
OSSR Ossora 10.95 19 PN **Pn 10 52 33.7 -0.4**
OSSR Ossora 10.95 19 *e*P **Pn 10 52 33.7 -0.4**
MA2 Magadan 11.01 345 *i*PN **Pn 10 52 34.7 -0.2**
MA2 MLR MLR
comp=Z,12μm,16.0s
MA2 Magadan 11.01 345 P **Pn 10 52 35.7 +0.8**
comp=Z,2.2nm,0.3s,baz=154,slow=11,SNR=19
MA2 Magadan 11.01 345 *i*P **Pn 10 52 34.7 -0.2**
ERM Erimo 11.58 237 *ce*PN **Pn 10 52 42.7 -0.1**
ERM pmax pmax
comp=Z,145nm,1.3s
ERM Erimo 11.58 237 Pn 10 52 42.5 -0.3
ERM Sn **Sn 10 54 48.9 -1.9**
SMY Shemya 11.84 65 PN **Pn 10 52 44.7 -1.6**
SMY Shemya 11.84 65 Pn **Pn 10 52 44.7 -1.6**
TILK Tilichiki 12.73 23 PN **Pn 10 52 57.5 -0.9**
TILK Tilichiki 12.73 23 *e*P **Pn 10 52 57.5 -0.9**
GRNR Gornyy 12.90 285 ⇓ *i*PN Pn 10 53 05.9 +5.0
GRNR *e*S Sn 10 55 33.2 +10
GRNR pmax pmax
comp=Z,10.0nm,0.6s
GRNR smax smax
comp=N,4.0nm,0.7s
GRNR MLR MLR
comp=Z,13μm,16.0s
GRNR Gornyy 12.90 285⇓ *i*P Pn 10 53 05.9 +5.0
GRNR AMB AMB 10 53 07.4
comp=Z,10.0nm,0.6s
GRNR AMS AMS 10 58 41.0
comp=Z,6μm,16.0s
GRNR AMS AMS 10 58 41.0
comp=Z,10μm,16.0s
GRNR AMS AMS 10 58 41.0
comp=Z,13μm,16.0s
TEY Ternei 13.99 261⇓ *e*P **Pn 10 53 18.7 +2.9**
TEY *e*S **Sn 10 55 54.1 +4.4**
TEY pmax pmax
comp=Z,20nm,1.2s
TEY MLR MLR
comp=E,6μm,16.0s
TEY MLR MLR
comp=Z,8μm,16.0s
TEY Ternei 13.99 261⇓ *e*P **Pn 10 53 16.6 +0.8**
TEY AMB AMB 10 53 19.8
comp=Z,20nm,1.0s
TEY AMS AMS 10 58 42.0
comp=Z,6μm,16.0s
TEY AMS AMS 10 58 42.0
comp=Z,8μm,16.0s
SEY Seymchan 14.07 353 *i*P **Pn 10 53 15.9 -0.8**
SEY Seymchan 14.07 353 P **Pn 10 53 16.3 -0.4**
comp=Z,0.1nm,0.3s,baz=153,slow=9.8,SNR=5.7
SEY Seymchan 14.07 353 *i*P **Pn 10 53 15.9 -0.8**
KMSK Kamenskaya 14.52 19 P **Pn 10 53 22.3 -0.6**
KMSK Kamenskaya 14.52 19 *e*P **Pn 10 53 22.3 -0.6**
EKMR Ekimchan 15.18 294 *e*P **Pn 10 53 32.4 +0.7**
EKMR AMB AMB 10 53 42.4
comp=Z,60nm,0.9s
KLR Kul'dur 16.03 280 *i*P **P 10 53 44.4 -1.5**
KLR pmax pmax
comp=Z,67nm,1.0s
KLR MLR MLR
comp=Z,17μm,17.0s
KLR Kul'dur 16.03 280 P **P 10 53 45.2 -0.7**
comp=Z,1.4nm,0.3s,baz=73,slow=10,SNR=18
KLR LR LR 11 00 34.1
comp=Z,18μm,18.2s,baz=84,slow=40
KLR Kul'dur 16.03 280 *i*P **Pn 10 53 43.4 +0.6**
KLR AMB AMB 10 53 53.2
comp=Z,70nm,1.0s
KLR AMS AMS 11 00 39.2
comp=Z,17μm,17.0s
USA0B Ussuriysk Arra 17.34 263 *i*P **Pn 10 53 59.7 +0.4**
USA0B Ussuriysk Arra 17.34 263 P **Pn 10 53 59.7 +0.4**
USRK Ussuriysk Ar. 17.34 263 P **P 10 53 59.9 -0.5**
baz=71,slow=9.7,SNR=22
USRK LR LR 11 00 41.0
comp=Z,3μm,18.2s,baz=62,slow=37
ADK Adak 17.41 70 P **P 10 54 03.4 +2.4**
ADK pmax pmax
comp=Z,145nm,1.4s
ADK Adak 17.41 70 P **P 10 54 03.4 +2.4**
BMKR Bomnak 17.78 299⇑ *i*P **P 10 54 05.2 0.0**
BMKR AMB AMB 10 54 10.2
comp=Z,30nm,0.4s
MJAR Matsushiro Arr 18.17 233 P **P 10 54 10.3 +0.7**
comp=Z,0.3nm,0.3s,baz=26,slow=12,SNR=20
MJAR LR LR 11 02 06.4
comp=Z,6μm,19.7s,baz=55,slow=40
MJB9 Matsu-Tunnel 18.17 233 P **P 10 54 10.5 +0.9**
MAJO Matsushiro 18.17 233 *i*P **P 10 54 10.0 +0.4**
MAJO pmax pmax
comp=Z,22nm,0.6s
MAJO Matsushiro 18.17 233 P **P 10 54 10.7 +1.1**
MAT Matsushiro 18.17 233 P **Pn 10 54 08.7 -0.9**
MAT S **S 10 57 35.6 -0.2**
ZEA Zeya 18.63 296 *e*P **P 10 54 14.0 -0.5**
ZEA pmax pmax
comp=E,24nm,1.0s
ZEA pmax pmax
comp=Z,25nm,1.2s
ZEA pmax pmax
comp=E,1μm,11.0s
ZEA pmax pmax
comp=Z,2μm,11.0s
ZEA MLR MLR
comp=N,6μm,15.0s
ZEA MLR MLR
comp=E,8μm,15.0s
ZEA MLR MLR
comp=Z,11μm,15.0s
ZEA Zeya 18.63 296 *e*P **Pn 10 54 17.9 +2.9**
ZEA AMB AMB 10 54 18.8
comp=Z,20nm,1.0s
ZEA AMB AMB 10 54 18.8
comp=Z,30nm,1.0s
ZEA AMB AMB 10 54 25.0
comp=Z,2μm,11.0s
ZEA AMS AMS 11 02 31.0
comp=Z,6μm,15.0s
ZEA AMS AMS 11 02 31.0
comp=Z,8μm,15.0s
ZEA AMS AMS 11 02 31.0
comp=Z,11μm,15.0s
MDJ Mudanjiang 18.74 266 P **P 10 54 13.9 -1.9**
MDJ pmax pmax
comp=Z,17nm,1.1s
MDJ pmax pmax
comp=Z,630nm,10.1s
MDJ LR LR
comp=Z,5μm,15.7s
MDJ LR LR
comp=Z,6μm,15.7s
MDJ LR LR
comp=Z,6μm,16.7s
MDJ Mudanjiang 18.74 266 P **P 10 54 14.9 -0.9**
KROS Kirovskiy 18.84 298⇑ *e*P **Pn 10 54 17.4 -0.1**
KROS AMB AMB 10 54 21.0
comp=Z,10.0nm,0.7s
BILL Bilibino 19.68 11 *c i*P **P 10 54 24.6 -1.3**
BILL pmax pmax
comp=Z,21nm,0.8s
BILL MLR MLR
comp=Z,10μm,16.0s
BILL Bilibino 19.68 11 P **P 10 54 24.8 -1.1**
YAK Yakutsk 19.68 321 *c i*P **P 10 54 24.4 -1.6**
YAK *e*S **S 10 57 59.9 -5.9**
YAK pmax pmax
comp=Z,68nm,0.9s
YAK pmax pmax
comp=N,17nm,1.0s
YAK pmax pmax
comp=E,34nm,1.0s
YAK smax smax
comp=N,187nm,3.9s
YAK smax smax
comp=E,107nm,3.5s
YAK MLR MLR
comp=Z,6μm,17.0s
YAK MLR MLR
comp=N,4μm,16.0s
YAK MLR MLR
comp=E,4μm,16.0s
YAK Yakutsk 19.68 321 P **P 10 54 24.8 -1.2**
comp=E,0.2nm,0.3s,baz=328,slow=1.0,SNR=32
YAK LR LR 11 02 28.4
comp=E,5μm,18.2s,baz=120,slow=38
YAK Yakutsk 19.68 321 P **P 10 54 24.4 -1.6**
YAK IAmb IAmb 10 54 27.1
comp=Z,96nm,0.9s
INU Inuyama 19.70 233 P **P 10 54 27.1 +0.7**
CN2 Changchun 21.80 268 *e*P **P 10 54 44.8 -4.1**
CN2 *e*S **S 10 58 49.4 +1.4**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,440nm,5.0s
CN2 LR LR
comp=Z,5μm,16.0s
CN2 LR LR
comp=Z,4μm,16.0s
CN2 LR LR
comp=Z,6μm,17.0s
GAMB Gambell 22.70 38 P **P 10 54 59.0 +0.6**
GAMB IAmb IAmb 10 55 44.0
comp=Z,90nm,1.4s
KSRS Korea Array 23.54 251 P **P 10 55 07.5 +0.4**
comp=Z,14nm,0.7s,baz=50,slow=9.9,SNR=18
KSRS LR LR 11 03 53.1
comp=Z,5μm,19.0s,baz=61,slow=35
KS19 Wonju Array Si 23.54 251 P **P 10 55 08.4 +1.3**
KS19 IAmb IAmb 10 55 42.1
comp=Z,163nm,1.6s
HIA Hailar 23.74 284 P **P 10 55 07.2 -1.8**
HIA pmax pmax
comp=Z,12nm,0.7s
HIA MLR MLR
comp=Z,14μm,18.0s
HIA Hailar 23.74 284 P **P 10 55 07.2 -1.8**
SNY Shenyang 23.91 265⇓ P **P 10 55 08.3 -2.3**
SNY pmax pmax
comp=Z,12nm,0.7s
SNY LR LR
comp=Z,4μm,13.9s
SNY LR LR
comp=Z,4μm,17.8s
SNY LR LR
comp=Z,6μm,14.2s
JCJ Chichijima 24.50 212 LR LR 11 06 19.3
comp=Z,946nm,18.5s,baz=6.5,slow=40
JNU Nakatsue 24.73 239 P **P 10 55 18.7 +0.5**
comp=Z,24nm,0.8s,baz=0.4,slow=1.4,SNR=10
JNU LR LR 11 06 14.5
comp=Z,3μm,18.5s,baz=44,slow=39
JNU Nakatsue 24.73 239 P **P 10 55 17.9 -0.3**
ANM Nome 25.56 38 P **P 10 55 25.5 +0.1**
ANM pmax pmax
comp=Z,77nm,1.1s
ANM Nome 25.56 38 P **P 10 55 25.5 +0.1**
ANM IAmb IAmb 10 55 40.8
comp=Z,77nm,1.1s
TIXI Tiksi 25.92 341 *ce*P **P 10 55 25.8 -2.7**
TIXI pmax pmax
comp=Z,24nm,0.8s
TIXI MLR MLR
comp=Z,6μm,16.0s
TIXI Tiksi 25.92 341 P **P 10 55 26.2 -2.3**
comp=Z,28nm,0.7s,baz=360,slow=24,SNR=44
TIXI LR LR 11 06 28.9
comp=Z,4μm,19.6s,baz=160,slow=38
TIXI Tiksi 25.92 341 P **P 10 55 25.4 -3.2**
BOD Bodaibo 26.26 306 *e*P **P 10 55 32.7 +0.9**
BOD pmax pmax
comp=Z,10.0nm,1.2s
DL2 Dalian 26.70 261 P **P 10 55 37.8 +1.9**
DL2 PP **PnPn 10 56 25.8 +8.2**
DL2 S **S 11 00 14.1 +5.1**
DL2 pmax pmax
comp=Z,22nm,1.1s
DL2 pmax pmax
comp=Z,590nm,7.1s
DL2 LR LR
comp=Z,2μm,14.8s
DL2 LR LR
comp=Z,3μm,17.5s
DL2 LR LR
comp=Z,4μm,17.2s
RDOG Red Dog Mine 27.74 32 P **P 10 55 46.2 +1.3**
TTA Tatalina 29.28 44 P **P 10 56 00.1 +1.3**
TTA pmax pmax
comp=Z,15nm,1.0s
TTA Tatalina 29.28 44 P **P 10 56 00.1 +1.3**
H11N2 WAKE ISLAND Hy 30.48 160 T T 11 29 10.4
baz=347,slow=76,SNR=40
H11N1 WAKE ISLAND Hy 30.50 160 T T 11 29 13.1
baz=347,slow=76,SNR=53
H11N3 WAKE ISLAND Hy 30.50 160 T T 11 29 27.4
baz=347,slow=76,SNR=28
OHAK Old Harbor 30.69 55 P **P 10 56 11.9 +0.7**
WAKE Wake Island 30.86 161 IAMs_20 IAMs_20 11 10 31.0
comp=Z,6μm,20.0s
KDAK Kodiak Island 31.01 54 IAMs_20 IAMs_20 11 10 51.2
comp=Z,5μm,20.0s
PPLA Purkeypile 31.02 44 P **P 10 56 15.9 +1.6**
SKT Skwentna 31.31 46 P **P 10 56 18.6 +1.8**
SKT IAmb IAmb 10 56 48.7
comp=Z,67nm,1.8s
BPAW Bear Paw Mtn. 31.61 42 P **P 10 56 18.7 -0.6**
KTH Kantishna Hill 31.62 43 P **P 10 56 20.9 +1.4**
H11S1 WAKE ISLAND Hy 31.62 161 T T 11 30 37.5
baz=346,slow=76,SNR=161
H11S3 WAKE ISLAND Hy 31.63 161 T T 11 30 45.6
baz=346,slow=76,SNR=112
H11S2 WAKE ISLAND Hy 31.64 161 T T 11 30 35.0
baz=346,slow=76,SNR=120
SUA Susitna One 31.69 47 P **P 10 56 20.9 +0.7**
SUA IAmb IAmb 10 57 08.3
comp=Z,37nm,1.4s
BRLK Bradley Lake 31.71 50 P **P 10 56 21.1 +0.8**
MLY Manley 31.78 40 P **P 10 56 21.8 +0.9**
TRF Thorofare Moun 31.90 43 P **P 10 56 23.3 +1.2**
TRF IAmb IAmb 10 56 41.8
comp=Z,61nm,1.6s
TRF IAMs_20 IAMs_20 11 11 11.8
comp=Z,5μm,18.0s
SSE Sheshan 31.92 249 P **P 10 56 23.1 +0.8**
SSE S **S 11 01 33.1 +2.1**
SSE pmax pmax
comp=Z,11nm,1.4s
SSE pmax pmax
comp=Z,300nm,3.3s
SSE LR LR
comp=Z,2μm,17.4s
SSE LR LR
comp=Z,1μm,15.8s
ULN Ulaanbaatar 32.20 287 *i*P **P 10 56 24.7 -0.2**
COLD Coldfoot 32.22 36 P **P 10 56 26.5 +1.9**
BWN Browne 32.28 42 P **P 10 56 27.1 +1.9**
HHC Hu-ho-hao-te 32.29 272 *e*P **P 10 56 25.3 -0.3**
HHC PP **PnPn 10 57 31.6 -0.8**
HHC S **S 11 01 34.6 -2.3**
HHC sS sS 11 01 51.8 -1.1
HHC pmax pmax
comp=Z,6.0nm,0.9s
HHC pmax pmax
comp=Z,170nm,6.6s
HHC LR LR
comp=Z,3μm,20.6s
HHC LR LR
comp=Z,2μm,18.1s
HHC LR LR
comp=Z,3μm,19.0s
PMR Palmer 32.46 47 P **P 10 56 27.7 +1.0**
PMR pmax pmax
comp=Z,38nm,1.4s
PMR Palmer 32.46 47 P **P 10 56 27.7 +1.0**
PMR IAmb IAmb 10 56 57.7
comp=Z,38nm,1.4s
MCK McKinley 32.51 43 P **P 10 56 28.9 +1.7**
MCK pmax pmax
comp=Z,66nm,1.4s
MCK MLR MLR
comp=Z,4μm,18.0s
MCK McKinley 32.51 43 P **P 10 56 28.9 +1.7**
MCK IAmb IAmb 10 57 01.0
comp=Z,66nm,1.4s
MCK IAMs_20 IAMs_20 11 11 37.8
comp=Z,4μm,18.0s
IRK Irkutsk 32.54 296 *e*P **P 10 56 26.0 -1.6**
IRK pmax pmax
comp=Z,32nm,1.0s
RND Reindeer 32.55 43 P **P 10 56 28.8 +1.2**
RND pmax pmax
comp=Z,37nm,1.3s
RND MLR MLR
comp=Z,5μm,19.0s
RND Reindeer 32.55 43 P **P 10 56 28.8 +1.2**
RND IAmb IAmb 10 56 35.5
comp=Z,37nm,1.3s
RND IAMs_20 IAMs_20 11 10 50.7
comp=Z,5μm,19.0s
GHO Glory Hole Cre 32.55 46 P **P 10 56 28.9 +1.2**
SONM Songino Array 32.63 287 P **P 10 56 28.3 -0.2**
comp=Z,0.8nm,0.4s,baz=86,slow=9.2,SNR=6.3
SONM LR LR 11 11 02.7
comp=Z,9μm,18.6s,baz=76,slow=39
NJ2 Nanjing 32.71 253 *e*P **P 10 56 30.4 +1.2**
NJ2 S **S 11 01 46.4 +3.1**
NJ2 pmax pmax
comp=Z,15nm,0.7s
NJ2 pmax pmax
comp=Z,370nm,4.7s
NJ2 LR LR
comp=Z,7μm,18.0s
NJ2 LR LR
comp=Z,4μm,18.9s
NJ2 LR LR
comp=Z,6μm,19.1s
KNK Knik Glacier 32.79 47 P **P 10 56 29.8 +0.1**
SML Sawmill 32.83 46 P **P 10 56 30.3 +0.2**
MDM Murphy Dome 32.84 40 P **P 10 56 30.8 +0.6**
WRH Wood River Hil 32.89 41 P **P 10 56 32.6 +2.1**
WRH IAmb IAmb 10 57 29.4
comp=Z,27nm,1.1s
TCOL CIGO, UAF Yank 33.00 40 P **P 10 56 31.5 +0.1**
baz=269,SNR=6.4
COLA College 33.00 40 *i*P **P 10 56 31.1 -0.3**
COLA pmax pmax
comp=Z,19nm,0.8s
COLA College 33.00 40 P **P 10 56 33.6 +2.2**
COLA IAmb IAmb 10 56 51.0
comp=Z,30nm,0.8s
CCB Clear Creek Bu 33.02 41 P **P 10 56 33.2 +1.6**
CCB IAmb IAmb 10 57 35.4
comp=Z,34nm,1.4s

TLY Talaya 33.07 295 *e*P **P** **10 56 31.1 -1.1**
TLY *e* 10 57 41.9
TLY *e*PPP PPP 10 57 55.5
TLY *e*S **S** **11 01 55.1 +6.4**
TLY pmax pmax
comp=Z,59nm,1.0s
TLY MLR MLR
comp=Z,16µm,15.0s
TLY Talaya 33.07 295 P **P** **10 56 30.1 -2.1**
TLY IAMs_20 IAMs_20 11 11 26.7
comp=Z,5µm,18.0s
POKR Poker Plat Res 33.18 40 P **P** **10 56 33.3 +0.2**
baz=269,SNR=12
DHY Denali Highway 33.22 44 P **P** **10 56 34.9 +1.3**
DHY IAmb IAmb 10 57 06.3
comp=Z,69nm,1.6s
SCM Sheep Creek Mo 33.31 46 P **P** **10 56 35.2 +0.9**
SCM pmax pmax
comp=Z,39nm,0.9s
SCM MLR MLR
comp=Z,4µm,18.0s
SCM Sheep Creek Mo 33.31 46 P **P** **10 56 35.2 +0.9**
SCM IAmb IAmb 10 57 01.1
comp=Z,39nm,0.9s
SCM IAMs_20 IAMs_20 11 10 21.1
comp=Z,4µm,18.0s
TIY Taiyuan 33.38 267 *e*P **P** **10 56 36.8 +1.7**
TIY S **S** **11 01 49.3 -4.5**
TIY sS **pS** **11 02 05.4 +0.8**
TIY SS **SnSn** **11 03 52.8 -3.5**
TIY pmax pmax
comp=Z,170nm,6.8s
TIY LR LR
comp=Z,2µm,14.4s
TIY LR LR
comp=Z,3µm,17.5s
TIY LR LR
comp=Z,2µm,16.2s
HDA Harding Lake 33.38 41 P **P** **10 56 34.5 -0.3**
HDA Harding Lake 33.38 41 P **P** **10 56 35.2 +0.4**
baz=271
IL31 33.41 41 P **P** **10 56 35.4 +0.5**
ILAR Eielson Array 33.41 41 P **P** **10 56 35.6 +0.5**
comp=Z,4.9nm,0.8s,baz=249,slow=7.7,SNR=42
ILAR LR LR 11 13 18.6
comp=Z,3µm,18.0s,baz=281,slow=42
ZAK Zakamensk 33.68 293 *e*P **P** **10 56 36.2 -1.5**
ZAK pmax pmax
comp=Z,13nm,0.9s
PRP Porcupine Dome 33.99 39 P **P** **10 56 41.2 +1.0**
PRP IAmb IAmb 10 57 01.8
comp=Z,23nm,0.8s
PAX Paxson 34.09 44 P **P** **10 56 42.0 +0.9**
PAX pmax pmax
comp=Z,82nm,2.0s
PAX MLR MLR
comp=Z,3µm,20.0s
PAX Paxson 34.09 44 P **P** **10 56 42.0 +0.9**
PAX IAmb IAmb 10 57 36.7
comp=Z,82nm,2.0s
FYU Fort Yukon 34.12 37 P **P** **10 56 42.7 +1.6**
RIDG Independent Ri 34.33 42 P **P** **10 56 44.1 +1.0**
RIDG IAmb IAmb 10 57 40.9
comp=Z,23nm,0.9s
MOY Mondy 34.65 296 *e*P **P** **10 56 45.2 -0.9**
DOT Dot Lake 34.68 43 P **P** **10 56 46.9 +0.8**
SCRK Sand Creek 34.70 42 P **P** **10 56 44.4 -1.9**
GLB Gilahina Butte 35.02 46 P **P** **10 56 50.3 +1.3**
GLB IAmb IAmb 10 57 53.0
comp=Z,46nm,1.5s
VRDI Verde Repeater 35.22 47 P **P** **10 56 51.6 +0.7**
VRDI IAmb IAmb 10 57 22.7
comp=Z,62nm,1.5s
MCARA McCarthy VSAT 35.40 46 P **P** **10 56 54.3 +2.1**
MCARA IAmb IAmb 10 57 54.9
comp=Z,24nm,1.0s
CRQM Cirque 35.43 48 P **P** **10 56 54.9 +2.0**
CRQM IAMs_20 IAMs_20 11 12 12.2
comp=Z,4µm,21.0s
TGL Tana Glacier 35.59 48 P **P** **10 56 54.7 +0.7**
TGL IAmb IAmb 10 57 17.3
comp=Z,33nm,1.0s
TGL IAMs_20 IAMs_20 11 12 05.6
comp=Z,4µm,22.0s
BALM Baldy 35.77 47 P **P** **10 56 57.7 +2.0**
EGAK Eagle 35.86 40 P **P** **10 56 56.0 -0.1**
EGAK IAmb IAmb 10 57 11.8
comp=Z,29nm,0.8s
BARN Barnard Glacie 36.10 47 P **P** **10 56 58.9 +0.4**
BARN IAmb IAmb 10 57 20.1
comp=Z,24nm,0.9s
CTGM Chitina Glacie 36.27 47 P **P** **10 57 00.8 +0.8**
WHN Wuhan 36.57 255 P **P** **10 57 02.8 +0.2**
WHN S **S** **11 02 46.5 +3.7**
WHN LR LR
comp=Z,6µm,15.1s
WHN LR LR
comp=Z,6µm,14.4s
WHN LR LR
comp=Z,7µm,21.3s
DAWY Dawson 36.70 42 P **P** **10 57 06.0 +2.5**
DAWY IAmb IAmb 10 57 24.4
comp=Z,50nm,1.7s
NACB Ninganchiao 36.80 240 IAMs_20 IAMs_20 11 14 36.4
comp=Z,5µm,18.0s
PCA Pinnacle 36.96 48 IAMs_20 IAMs_20 11 12 51.0
comp=Z,4µm,18.0s
SSLB Suanglung 37.46 241 IAMs_20 IAMs_20 11 14 50.0
comp=Z,3µm,18.0s
EPYK Eagle Plains 37.54 38 P **P** **10 57 11.7 +1.1**
EPYK IAmb IAmb 10 57 59.6
comp=Z,44nm,1.1s
XAN Xi'an 37.84 265 P **P** **10 57 17.3 +3.9**
XAN S **S** **11 03 08.6 +6.4**
XAN PcS **PcS** **11 03 16.3 -1.9**
XAN ScS **ScS** **11 07 19.0 -4.1**
XAN pmax pmax
comp=Z,8.0nm,1.4s
XAN pmax pmax
comp=Z,320nm,4.9s
XAN LR LR
comp=Z,2µm,17.2s
XAN LR LR
comp=Z,3µm,17.2s
XAN LR LR
comp=Z,4µm,17.2s
XAN Xi'an 37.84 265 IAMs_20 IAMs_20 11 14 13.9
comp=Z,4µm,18.0s
QZH Quanzhou 37.96 244 P P 10 57 19.5 +5.1
QZH LR LR
comp=Z,2µm,16.7s
QZH LR LR
comp=Z,1µm,17.2s
QZH LR LR
comp=Z,2µm,14.8s
TPUB Ta-pu 38.03 240 P **P** **10 57 16.6 +1.5**
TPUB IAMs_20 IAMs_20 11 12 02.0
comp=Z,3µm,21.0s
HYT Haines Junctio 38.13 47 P **P** **10 57 16.8 +1.1**
HYT IAmb IAmb 10 57 33.9
comp=Z,29nm,0.9s
INK Inuvik 38.55 34 P **P** **10 57 19.8 +0.9**
INK pmax pmax
comp=Z,17nm,0.8s
INK MLR MLR
comp=Z,2µm,21.0s
INK Inuvik 38.55 34 P **P** **10 57 19.7 +0.8**
comp=Z,16nm,0.8s,baz=290,slow=7.0,SNR=40
INK Inuvik 38.55 34 P **P** **10 57 19.8 +0.9**
WHY Whitehorse 39.43 46 P **P** **10 57 29.4 +2.9**
SKAG Skagway 39.53 48 P **P** **10 57 28.5 +1.3**
SKAG IAmb IAmb 10 58 01.1
comp=Z,34nm,1.0s
LZH Lanzhou 39.95 271 ⇑P **P** **10 57 30.6 -0.6**
LZH pP pP 10 57 38.4 -2.0
LZH sS sS 11 03 48.1 -2.4
LZH SS **SS** **11 06 19.9 -12**
LZH pmax pmax
comp=Z,37nm,1.0s
LZH pmax pmax
comp=Z,340nm,6.0s
LZH LR LR
comp=Z,4µm,17.4s
LZH LR LR
comp=Z,3µm,16.3s
LZH LR LR
comp=Z,3µm,18.4s
GTA Gaotai 40.73 278 ⇑P **P** **10 57 37.3 -0.2**
GTA pP pP 10 57 43.3 -3.4
GTA sP pwP 10 57 46.3 -3.8
GTA S **S** **11 03 44.3 -1.3**
GTA sS pS 11 03 55.8 -1.1
GTA SS **SS** **11 06 40.8 -5.9**
GTA pmax pmax
comp=Z,8.0nm,1.3s
GTA pmax pmax
comp=Z,150nm,8.1s
GTA LR LR
comp=Z,3µm,16.5s
GTA LR LR
comp=Z,7µm,15.9s
GTA LR LR
comp=Z,9µm,16.2s
HKPS Hong Kong Po S 42.63 247 IAMs_20 IAMs_20 11 16 15.4
comp=Z,2µm,18.0s
ZAA0 Zalesovo Array 43.01 305 IAMs_20 IAMs_20 11 16 57.2
comp=Z,3µm,18.0s
ZALV Zalesovo Beam 43.01 305 P **P** **10 57 54.2 -1.6**
comp=Z,1.7nm,0.3s,baz=63,slow=5.7,SNR=11
ZALV PcP **PcP** **10 59 45.8 +0.2**
comp=Z,1.5nm,0.5s,baz=102,slow=6.5,SNR=2.8
ZALV LR LR 11 17 08.5
comp=Z,3µm,18.1s,baz=56,slow=38
CD2 Chengdu 43.19 265 P **P** **10 57 57.8 +0.1**
CD2 pP pP 10 58 06.1 -0.9
CD2 sP sP 10 58 09.8 +0.3
CD2 S **S** **11 04 21.4 -0.7**
CD2 sS sS 11 04 37.3 -1.1
CD2 SS **SS** **11 07 30.5 -4.9**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,350nm,6.5s
CD2 LR LR
comp=Z,3µm,18.4s
CD2 LR LR
comp=Z,3µm,18.2s
CD2 LR LR
comp=Z,4µm,17.5s
GYA Guiyang 44.28 258 *e*P **P** **10 58 07.3 +0.7**
GYA pmax pmax
comp=Z,10.0nm,1.0s
TGY Tagaytay City 45.33 232 LR LR 11 19 23.3
comp=Z,806nm,18.7s,baz=12,slow=39
BBB Bella Bella 46.04 56 LR LR 11 18 13.9
comp=Z,843nm,20.2s,baz=296,slow=37
BBB Bella Bella 46.04 56 IAMs_20 IAMs_20 11 18 27.9
comp=Z,2µm,18.0s
WMQ Urumqi 46.08 291 *e*P **P** **10 58 19.6 -1.0**
WMQ pP pP 10 58 23.8 -6.1
WMQ PcP **PcP** **10 59 58.5 +2.1**
WMQ pmax pmax
comp=Z,13nm,1.3s
WMQ pmax pmax
comp=Z,220nm,6.9s
WMQ LR LR
comp=Z,2µm,22.3s
WMQ LR LR
comp=Z,620nm,21.3s
WMQ LR LR
comp=Z,950nm,25.1s
WMQ Urumqi 46.08 291 IAMs_20 IAMs_20 11 19 59.1
comp=Z,3µm,19.0s
QIZ Qiongzhong 47.70 248 P **P** **10 58 32.6 -0.8**
QIZ S **S** **11 05 26.3 -0.9**
QIZ LR LR
comp=Z,1µm,18.8s
QIZ LR LR
comp=Z,2µm,17.1s
QIZ LR LR
comp=Z,2µm,15.4s
QIZ Qiongzhong 47.70 248 IAMs_20 IAMs_20 11 18 53.5
comp=Z,2µm,20.0s
KMI Kunming 47.74 260 P **P** **10 58 34.5 +0.5**
KMI pP pP 10 58 41.8 -1.6
KMI sP sP 10 58 45.3 -1.2
KMI PP **PP** **11 00 23.3 -2.5**
KMI S **S** **11 05 27.3 -0.9**
KMI sS sS 11 05 44.1 -0.7
KMI SS **SS** **11 08 49.3 -7.2**
KMI pmax pmax
comp=Z,23nm,1.0s
KMI pmax pmax
comp=Z,190nm,4.4s
KMI LR LR
comp=Z,2µm,20.0s
KMI LR LR
comp=Z,2µm,21.9s
KMI LR LR
comp=Z,2µm,17.8s
KMI Kunming 47.74 260 P **P** **10 58 33.2 -0.8**
KMI pmax pmax
comp=Z,74nm,1.4s
KMI MLR MLR
comp=Z,2µm,19.0s
KMI Kunming 47.74 260 P **P** **10 58 33.2 -0.8**
MK31 Makanchi Array 47.78 297 P **P** **10 58 32.5 -1.2**
MK31 pmax pmax
comp=Z,16nm,0.9s
MK31 Makanchi Array 47.78 297 P **P** **10 58 32.5 -1.2**
MK31 IAmb IAmb 10 58 37.1
comp=Z,16nm,0.9s
MKAR Makanchi Array 47.78 297 P **P** **10 58 32.7 -1.1**
comp=Z,18nm,0.8s,baz=64,slow=8.2,SNR=65
MKAR LR LR 11 20 09.9
comp=Z,9µm,18.2s,baz=36,slow=38
YKA Yellowknife Ar 47.79 39 P **P** **10 58 33.9 +0.3**
comp=Z,7.5nm,0.8s,baz=296,slow=7.5,SNR=37
KURK Kurchatov 47.87 303 P **P** **10 58 33.0 -1.3**
KURK pmax pmax
comp=Z,36nm,1.1s
KURK MLR MLR
comp=Z,3µm,18.0s
KURK Kurchatov 47.87 303 P **P** **10 58 33.0 -1.3**
KURK IAmb IAmb 10 58 37.6
comp=Z,36nm,1.1s
KURK Kurchatov 47.87 303 IAMs_20 IAMs_20 11 20 18.7
comp=Z,3µm,18.0s
RES Resolute Bay 47.95 20 P **P** **10 58 35.0 +0.3**
RES pmax pmax
comp=Z,20nm,1.2s
RES Resolute Bay 47.95 20 P **P** **10 58 35.0 +0.3**
RES IAmb IAmb 10 58 39.9
comp=Z,20nm,1.2s
MAKZ Makanchi 47.95 297 P **P** **10 58 33.6 -1.5**
MAKZ pmax pmax
comp=Z,7.0nm,0.8s
MAKZ MLR MLR
comp=Z,10µm,18.0s
MAKZ Makanchi 47.95 297 P **P** **10 58 33.6 -1.5**
DAV Davao City (W) 49.20 222 LR LR 11 19 05.6
comp=Z,551nm,20.8s,baz=33,slow=35
TARA Tarawa 49.63 158 IAMs_20 IAMs_20 11 14 54.5
comp=Z,4µm,22.0s
SLVN Son La 49.69 256 P **P** **10 58 49.8 +1.1**
SLVN IAMs_20 IAMs_20 11 20 15.8
comp=Z,3µm,21.0s
LLLB Lillooet 50.21 55 P **P** **10 58 53.0 +0.7**
LLLB IAmb IAmb 10 59 09.4
comp=Z,34nm,1.2s
SPA0 Spitsbergen Ar 50.71 350 P **P** **10 58 55.4 -0.3**
SPA0 IAmb IAmb 10 59 52.7
comp=Z,32nm,1.1s
BRVK Borovoye 51.07 309 P **P** **10 58 57.1 -1.6**
BRVK pmax pmax
comp=Z,21nm,1.1s
BRVK MLR MLR
comp=Z,3µm,18.0s
BRVK Borovoye 51.07 309 P **P** **10 58 57.1 -1.6**
BRVK IAmb IAmb 10 59 19.9
comp=Z,21nm,1.1s
BRVK Borovoye 51.07 309 IAMs_20 IAMs_20 11 22 17.3
comp=Z,3µm,18.0s
BRVK Borovoye 51.07 309 P **P** **10 58 57.8 -1.0**
BRVK P **P** **10 58 57.8 -1.0**
D03D Eldon 51.21 59 P **P** **10 59 00.2 +0.3**
baz=304
B05A Bryant 51.37 58 P **P** **10 59 01.6 +0.6**
baz=304,SNR=6.0
TULEG Thule 51.43 12 P **P** **10 59 00.4 -0.7**
TULEG IAmb IAmb 11 00 05.3
comp=Z,46nm,1.4s
TULEG IAMs_20 IAMs_20 11 20 25.0
comp=Z,2µm,22.0s
B06A Marblemount 51.56 57 P **P** **10 59 03.7 +1.3**
B06A IAmb IAmb 10 59 11.2
comp=Z,37nm,1.3s
D04E Lakebay 51.59 59 P **P** **10 59 03.1 +0.5**
baz=304
D05A Enumclaw 52.03 59 P **P** **10 59 07.2 +1.3**
D05A IAmb IAmb 10 59 15.5
comp=Z,35nm,1.1s
E04D Cinebar 52.06 60 P **P** **10 59 07.4 +1.3**
baz=305,SNR=6.8
LSA Lhasa 52.26 274 P **P** **10 59 09.1 +0.6**
LSA pmax pmax
comp=Z,24nm,1.2s
LSA MLR MLR
comp=Z,2µm,19.0s
LSA Lhasa 52.26 274 P **P** **10 59 09.1 +0.6**
LSA Lhasa 52.26 274 *e*P **P** **10 59 09.1 +0.6**
LSA Lhasa 52.26 274 P **P** **10 59 09.1 +0.6**
LSA IAmb IAmb 10 59 43.7
comp=Z,24nm,1.2s
LSA IAMs_20 IAMs_20 11 23 21.4
comp=Z,2µm,19.0s
LSA Lhasa 52.26 274 P **P** **10 59 10.5 +2.0**
LSA P **P** **10 59 10.5 +2.0**
LON Longmire 52.38 59 P **P** **10 59 10.5 +1.9**
LON pmax pmax
comp=Z,15nm,1.1s
LON Longmire 52.38 59 P **P** **10 59 10.5 +1.9**
G03D McMinnville, O 52.42 62 P **P** **10 59 10.3 +1.4**
baz=306
LTY Liberty 52.73 58 P **P** **10 59 12.1 +0.9**
LTY IAmb IAmb 10 59 27.7
comp=Z,59nm,1.8s
F05D White Salmon 53.07 60 P **P** **10 59 14.6 +0.9**
baz=306
H04D Lebanon 53.13 62 P **P** **10 59 14.0 -0.1**
baz=306
I03D Drain, OR 53.25 63 P **P** **10 59 16.0 +1.0**
baz=306
H04A Detroit Lake 53.35 62 P **P** **10 59 16.9 +1.0**
H04A IAmb IAmb 10 59 25.0
comp=Z,24nm,1.1s
KDJ Kajisay 53.42 295 P **P** **10 59 16.3 -0.2**
KDJ pmax pmax
comp=Z,8.0nm,0.9s
KDJ MLR MLR
comp=Z,4µm,18.0s
KDJ Kajisay 53.42 295 P **P** **10 59 16.3 -0.2**
G05D Wamic, OR 53.53 61 P **P** **10 59 17.9 +0.8**
baz=306,SNR=5.8
SVE Sverdlovsk 53.58 317 *e*P **P** **10 59 16.3 -1.0**
SVE pmax pmax
comp=Z,40nm,0.9s
SVE MLR MLR
comp=Z,3µm,16.0s
K02D Willamette Mer 53.66 64 P **P** **10 59 19.1 +0.9**
baz=307
C09A Chrisman Ranch 53.74 56 P **P** **10 59 18.7 +0.1**
C09A IAmb IAmb 10 59 27.3
comp=Z,28nm,1.2s
I04A Tendick Farm, 53.75 63 P **P** **10 59 19.7 +1.0**
baz=307,SNR=6.6
HAWA Hanford 53.86 58 P **P** **10 59 20.4 +0.8**
BOOM Boomskoye usch 53.94 296 P **P** **10 59 19.7 -0.7**
BOOM Boomskoye usch 53.94 296 P **P** **10 59 19.7 -0.7**
L02E Cave Junction 54.02 65 P **P** **10 59 21.7 +1.0**
baz=307
I05D Terrebonne, OR 54.05 61 P **P** **10 59 21.6 +0.7**
baz=307
NEW Newport 54.10 55 P **P** **10 59 23.5 +2.2**
NEW pmax pmax
comp=Z,29nm,1.4s
NEW Newport 54.10 55 LR LR 11 20 25.5
comp=Z,436nm,21.9s,baz=292,slow=34
NEW Newport 54.10 55 P **P** **10 59 23.5 +2.2**
NEW IAmb IAmb 10 59 37.8
comp=Z,30nm,1.4s
NEW Newport 54.10 55 P **P** **10 59 22.0 +0.8**
baz=306,SNR=7.4
HUMO Hull Mountain 54.13 64 P **P** **10 59 23.2 +1.6**
HUMO IAmb IAmb 10 59 31.4
comp=Z,22nm,1.2s
J04D Umpqua Nationa 54.25 63 P **P** **10 59 23.1 +0.5**
baz=307
DAG Danmarks Havn 54.40 359 *i* P **P** **10 59 21.9 -1.1**
DAG Danmarks Havn 54.40 359 *i* P **P** **10 59 21.9 -1.1**
NRN Naryn 54.54 295 P **P** **10 59 22.8 -2.1**
NRN pmax pmax
comp=Z,6.0nm,1.0s
NRN MLR MLR
comp=Z,5µm,19.0s
NRN Naryn 54.54 295 P **P** **10 59 22.8 -2.1**
SHL Shillong 54.54 269 P **P** **10 59 24.0 -1.0**
SHL pmax pmax
comp=Z,23nm,0.7s
SHL MLR MLR
comp=Z,4µm,18.0s
SHL Shillong 54.54 269 P **P** **10 59 24.0 -1.0**
SHL IAmb IAmb 10 59 39.9
comp=Z,23nm,0.7s
SHL Shillong 54.54 269 P **P** **10 59 25.5 +0.5**
SNR=8.1
E09A Wood Farm, Sta 54.57 58 P **P** **10 59 25.6 +0.9**
E09A IAmb IAmb 10 59 33.5
comp=Z,36nm,1.2s
PINE Pine Mountain 54.60 62 P **P** **10 59 27.0 +1.8**
PINE IAmb IAmb 10 59 35.2
comp=Z,34nm,1.1s
KULLO Kullorsuaq 54.62 10 *e*P **P** **10 59 24.0 -0.6**
KULLO Kullorsuaq 54.62 10 *i* P **P** **10 59 24.0 -0.6**
CHTO Chiang Mai 54.70 258 P **P** **10 59 27.0 +1.0**
CHTO pmax pmax
comp=Z,26nm,1.0s
CHTO MLR MLR
comp=Z,2µm,18.0s
CHTO Chiang Mai 54.70 258 P **P** **10 59 27.0 +1.0**
CHTO IAmb IAmb 10 59 57.3
comp=Z,26nm,1.0s
CHTO Chiang Mai 54.70 258 IAMs_20 IAMs_20 11 26 32.2
comp=Z,2µm,18.0s
CHTO Chiang Mai 54.70 258 P **P** **10 59 27.4 +1.4**
CHTO P **P** **10 59 27.4 +1.4**
AAK Ala-Archa 54.71 297 P **P** **10 59 24.6 -1.3**
AAK pmax pmax
comp=Z,9.0nm,1.1s
AAK MLR MLR
comp=Z,6µm,18.0s
AAK Ala-Archa 54.71 297 *i* P **P** **10 59 25.2 -0.7**
SNR=9.1
AAK Ala-Archa 54.71 297 P **P** **10 59 24.6 -1.3**
J05D Fort Rock, OR 54.74 62 P **P** **10 59 26.8 +0.7**
baz=307,SNR=10
ARU Arti 54.74 318 *c i*P **P** **10 59 24.1 -1.6**
ARU *PP **pwP** **10 59 40.5 +2.0**
ARU 11 00 24.9
ARU 11 01 23.5
ARU S **S** **11 07 02.3 -1.2**
ARU pmax pmax
comp=Z,53nm,0.8s
ARU MLR MLR
comp=Z,3µm,15.0s
ARU Arti 54.74 318 LR LR 11 25 20.0
comp=Z,2µm,19.5s,baz=36,slow=39
ARU Arti 54.74 318 P **P** **10 59 24.4 -1.3**
ARU IAMs_20 IAMs_20 11 25 16.0
comp=Z,2µm,19.0s
L04D Klamath Falls 54.75 64 P **P** **10 59 27.2 +1.0**
baz=308,SNR=6.1
YBH Yreka Blue Hor 54.80 65 P **P** **10 59 26.9 +0.3**
YBH pmax pmax
comp=Z,38nm,1.3s
YBH Yreka Blue Hor 54.80 65 P **P** **10 59 28.1 +1.5**
comp=Z,3.4nm,0.8s,baz=20,slow=9.6,SNR=11
YBH Yreka Blue Hor 54.80 65 P **P** **10 59 26.9 +0.3**
YBH IAmb IAmb 10 59 36.6
comp=Z,38nm,1.2s
K04D Chiloquin, OR 54.83 63 P **P** **10 59 27.3 +0.6**
baz=308
G08A Pilot Rock 54.84 59 P **P** **10 59 28.3 +1.6**
M02C Callahan 54.92 65 P **P** **10 59 28.8 +1.4**
baz=308,SNR=7.5
CMAR Chiang Mai Arr 54.97 257 P **P** **10 59 29.3 +1.4**
comp=Z,12nm,0.9s,baz=30,slow=7.4,SNR=21

CMAR LR LR 11 23 52.9
comp=Z,2µm,20.9s,baz=45,slow=37
I07A Izee 55.26 61 P **P** **10 59 31.2 +1.4**
I07A IAmb IAmb 10 59 39.4
comp=Z,23nm,1.2s
N02D Trinity Center 55.27 66 P **P** **10 59 30.5 +0.6**
baz=308,SNR=5.2
K05A Summer Lake 55.27 63 P **P** **10 59 31.1 +1.1**
M04C Macdoel 55.29 64 P **P** **10 59 31.2 +1.1**
baz=308,SNR=6.0
WALA Waterton Lakes 55.34 53 P **P** **10 59 30.1 -0.3**
WALA IAmb IAmb 10 59 39.5
comp=Z,28nm,1.1s
F10A Beach Ranch, E 55.40 58 P **P** **10 59 31.8 +1.0**
KCPM Cahto Peak 55.53 67 P **P** **10 59 32.8 +1.0**
KCPM IAmb IAmb 10 59 49.4
comp=Z,49nm,1.4s
WDC Whiskeytown Da 55.61 66 P **P** **10 59 31.3 -0.9**
WDC pmax pmax
comp=Z,20nm,1.1s
WDC Whiskeytown Da 55.61 66 P **P** **10 59 31.3 -0.9**
WDC IAmb IAmb 10 59 41.8
comp=Z,20nm,1.1s
KSH Kashi 55.73 293 P **P** **10 59 36.9 +3.6**
KSH PP **PP** **11 01 43.4 +5.9**
KSH S **S** **11 07 20.3 +2.8**
KSH SS **SS** **11 11 05.4 +2.8**
KSH pmax pmax
comp=Z,26nm,0.9s
KSH pmax pmax
comp=Z,630nm,7.8s
KSH LR LR
comp=Z,1µm,12.3s
KSH LR LR
comp=Z,2µm,8.8s
KSH LR LR
comp=Z,4µm,18.6s
JTMT Jette 55.94 55 P **P** **10 59 34.7 0.0**
BMO Blue Mountains 56.04 59 P **P** **10 59 36.2 +0.8**
BMO pmax pmax
comp=Z,39nm,1.5s
BMO Blue Mountains 56.04 59 P **P** **10 59 36.2 +0.8**
BMO IAmb IAmb 10 59 52.6
comp=Z,39nm,1.5s
TAPN Taplejung 56.08 274 *e*P **P** **10 59 38.4 +2.3**
MOD Modoc Plateau 56.12 63 P **P** **10 59 37.2 +1.1**
O03E Paynes Creek 56.23 66 P **P** **10 59 37.4 +0.6**
baz=309,SNR=9.1
J08A Circle Bar Ran 56.29 61 P **P** **10 59 38.5 +1.2**
J08A IAmb IAmb 10 59 47.0
comp=Z,32nm,1.1s
ARCES ARCESS Array B 56.35 341 P **P** **10 59 35.4 -1.7**
comp=Z,2.0nm,0.6s,baz=45,slow=7.7,SNR=13
ARCES LR LR 11 28 39.8
comp=Z,3µm,18.3s,baz=33,slow=41
ARSB Arslanbob 56.40 296 P **P** **10 59 35.0 -3.0**
ARSB IAmb IAmb 11 00 53.5
comp=Z,23nm,1.4s
GDXM Geysers 56.56 68 P **P** **10 59 40.1 +1.0**
PRGR Permogore 56.56 328 *e*P **P** **10 59 35.7 -3.0**
PRGR pmax pmax
comp=Z,17nm,0.8s
ODAN Odare 56.62 274 *e*P **P** **10 59 42.6 +2.7**
MSO Missoula 56.68 55 P **P** **10 59 39.6 -0.3**
MSO IAmb IAmb 10 59 49.8
comp=Z,37nm,1.2s
MSO Missoula 56.68 55 P **P** **10 59 40.5 +0.5**
baz=308,SNR=11
KK31 Karatay Array 56.74 299 P **P** **10 59 38.8 -1.5**
KK31 pmax pmax
comp=Z,14nm,1.3s
KK31 Karatay Array 56.74 299 P **P** **10 59 38.8 -1.5**
KKAR Karatay Array 56.74 299 P **P** **10 59 38.8 -1.5**
KKAR pmax pmax
comp=Z,14nm,1.3s
KKAR Karatay Array 56.74 299 P **P** **10 59 38.8 -1.5**
WVOR Wild Horse Val 56.77 62 P **P** **10 59 41.7 +1.0**
WVOR pmax pmax
comp=Z,30nm,1.1s
WVOR Wild Horse Val 56.77 62 P **P** **10 59 41.6 +1.0**
WVOR IAmb IAmb 10 59 50.3
comp=Z,30nm,1.1s
JIRN Jiri 56.87 275 *e*P **P** **10 59 42.3 +0.5**
ORV Oroville 56.87 66 P **P** **10 59 41.0 -0.3**
ORV pmax pmax
comp=Z,22nm,1.3s
ORV Oroville 56.87 66 P **P** **10 59 41.0 -0.3**
ORV IAmb IAmb 10 59 49.9
comp=Z,22nm,1.3s
GUN Gumba 56.90 276 *e*P **P** **10 59 42.7 +0.7**
comp=Z,26nm,0.5s
RAMN Ramite 57.08 274 *e*P **P** **10 59 43.2 0.0**
comp=Z,37nm,0.5s
KIRV Kirov 57.20 323 LR LR 11 27 14.5
comp=Z,2µm,18.5s,baz=40,slow=39
TMCR Tamitsa 57.27 333 *e*P **P** **10 59 42.3 -1.3**
TMCR pmax pmax
comp=Z,29nm,0.9s
BEKR Beckworth 57.36 65 P **P** **10 59 45.4 +0.4**
BEKR IAmb IAmb 10 59 54.0
comp=Z,24nm,1.2s
KKN Kakani 57.38 276 *e*P **P** **10 59 47.1 +1.9**
PKIN Phulchoki 57.44 276 *e*P **P** **10 59 47.0 +1.2**
comp=Z,12nm,0.4s
AFDM Forest Hills D 57.57 66 P **P** **10 59 47.1 +0.8**
FFC Flin Flon 57.60 42 P **P** **10 59 46.7 +0.6**
FFC pmax pmax
comp=Z,46nm,1.7s
FFC Flin Flon 57.60 42 P **P** **10 59 46.7 +0.6**
FFC IAmb IAmb 11 00 08.3
comp=Z,46nm,1.7s
DMN Daman 57.61 276 *e*P **P** **10 59 47.8 +0.9**
MFID Camas Ranch 57.76 59 P **P** **10 59 49.3 +1.6**
MFID IAmb IAmb 10 59 56.5
comp=Z,18nm,1.1s
MFID IAMs_20 IAMs_20 11 19 07.5
comp=Z,2µm,20.0s
DANN Dangsing 57.99 278 *e*P **P** **10 59 50.5 +0.8**
comp=Z,38nm,0.5s
PAHR Pah Rah Range 58.04 65 P **P** **10 59 50.5 +0.8**
PAHR IAmb IAmb 10 59 58.9
comp=Z,21nm,1.2s
VCNR Virginia City 58.14 65 P **P** **10 59 51.7 +1.2**
FCC Fort Churchill 58.15 35 P **P** **10 59 50.0 +0.1**
FCC pmax pmax
comp=Z,9.0nm,0.8s
FCC Fort Churchill 58.15 35 P **P** **10 59 50.0 +0.1**
SUMG Summit 58.23 5 P **P** **10 59 50.7 -0.1**
SUMG pmax pmax
comp=Z,41nm,1.1s
SUMG Summit 58.23 5 *i* P **P** **10 59 50.0 -0.8**
SUMG Summit 58.23 5 P **P** **10 59 50.7 -0.1**
PNTR Pine Nut 58.31 65 P **P** **10 59 53.0 +1.3**
PNTR IAmb IAmb 11 00 13.9
comp=Z,17nm,0.7s
DLMT Dillon 58.33 56 P **P** **10 59 52.1 +0.4**
DLMT IAmb IAmb 11 00 08.6
comp=Z,26nm,1.2s
HNR Honiara 58.33 176 IAMs_20 IAMs_20 11 21 09.5
comp=Z,1µm,19.0s
BTK Batken 58.48 296 P **P** **10 59 51.9 -0.7**
BTK pmax pmax
comp=Z,14nm,1.0s
BTK Batken 58.48 296 P **P** **10 59 51.9 -0.7**
BTK IAmb IAmb 11 00 53.1
comp=Z,14nm,1.0s
KOLN Koldanda 58.49 277 *e*P **P** **10 59 53.6 +0.6**
comp=Z,48nm,0.9s
CMB Columbia Colle 58.51 67 P **P** **10 59 53.6 +0.8**
CMB pmax pmax
comp=Z,19nm,1.3s
CMB Columbia Colle 58.51 67 P **P** **10 59 53.6 +0.8**
CMB IAmb IAmb 11 00 02.1
comp=Z,19nm,1.3s
MCMT McKenzie Canyo 58.53 57 P **P** **10 59 53.4 +0.2**
AB31 Akbulak array 58.56 310 *i* P **P** **10 59 51.7 -1.3**
ABKAR Akbulak array 58.56 310 P **P** **10 59 51.4 -1.6**
ABKAR IAmb IAmb 10 59 56.1
comp=Z,24nm,1.1s
YERR Yerington 58.59 65 P **P** **10 59 54.1 +0.5**
AKTO Aktyubinsk 58.76 312 P **P** **10 59 52.5 -1.8**
AKTO Aktyubinsk 58.76 312 LR LR 11 26 41.3
comp=Z,1µm,20.1s,baz=42,slow=38
WAKR Walker 58.78 66 P **P** **10 59 55.6 +0.7**
KLMR Klimovskoe 59.21 329 *e*P **P** **10 59 54.8 -2.5**
KLMR *e* 11 02 04.8
KLMR *e*SS SS 11 11 58.9 +2.8
KLMR pmax pmax
comp=Z,14nm,0.8s
KLMR MLR MLR
comp=Z,2µm,15.0s
KLMR Klimovskoe 59.21 329 *e*P **P** **10 59 54.9 -2.4**
KLMR AMP 11 00 00.4
comp=Z,14nm,0.8s
KLMR *e*PP **PP** **11 02 04.9 -2.8**
KLMR *e*SS **SS** **11 11 58.9 +2.8**
KLMR *e*SS **SS** **11 11 58.9 +2.8**
KLMR LQ LQ 11 20 59.5
KLMR LQ LQ 11 20 59.5
KLMR LR LR 11 27 26.8
KLMR AMP 11 30 29.3
comp=Z,2µm,14.9s
KVN Kaiserville 59.23 65 P **P** **10 59 59.2 +1.2**
KVN pmax pmax
comp=Z,24nm,1.1s
KVN Kaiserville 59.23 65 P **P** **10 59 59.2 +1.2**
KVN IAmb IAmb 11 00 07.3
comp=Z,24nm,1.1s
RYN Ryan 59.25 65 P **P** **10 59 59.1 +1.0**
RYN IAmb IAmb 11 00 07.3
comp=Z,14nm,1.1s
QLMT Earthquake Lak 59.30 56 P **P** **10 59 59.5 +1.0**
YHL Hebgen Lake 59.43 56 P **P** **11 00 01.3 +1.9**
GAR Garm 59.45 296 P **P** **10 59 58.6 -0.9**
YHB Horse Butte 59.48 56 P **P** **11 00 00.2 +0.5**
NVAR Mina Array Bea 59.51 65 P **P** **11 00 01.0 +1.0**
comp=Z,3.1nm,0.8s,baz=301,slow=7.0,SNR=16
NVAR LR LR 11 23 56.2
comp=Z,656nm,20.1s,baz=310,slow=34
MDPB Devils Postpil 59.56 66 P **P** **11 00 01.1 +0.7**
MDPB IAmb IAmb 11 00 09.8
comp=Z,15nm,1.1s
NV11 Mina Array Sit 59.59 65 P **P** **11 00 01.5 +1.0**
NV11 IAmb IAmb 11 00 17.8
comp=Z,22nm,1.4s
OMMB Old Mammoth Mi 59.62 66 P **P** **11 00 01.8 +1.0**
OMMB IAmb IAmb 11 01 02.1
comp=Z,24nm,1.7s
YMR Madison River 59.66 56 P **P** **11 00 01.7 +0.8**
ELK Elko 59.81 61 P **P** **11 00 02.6 +0.6**
ELK pmax pmax
comp=Z,10.0nm,1.1s
ELK Elko 59.81 61 P **P** **11 00 02.6 +0.6**
YUF Upper Falls 59.88 55 P **P** **11 00 02.1 -0.4**
YNE Yellowstone No 59.96 55 P **P** **11 00 03.0 0.0**
H17A Grant Village 60.05 56 P **P** **11 00 04.1 +0.4**
H17A Grant Village 60.05 56 P **P** **11 00 04.7 +1.1**
baz=311,SNR=11
YMP Mirror Lake Pl 60.05 55 P **P** **11 00 03.3 -0.5**
FLWY Flagg Ranch 60.19 56 P **P** **11 00 07.5 +2.9**
RLMT Red Lodge 60.28 54 P **P** **11 00 06.5 +1.3**
RLMT Red Lodge 60.28 54 P **P** **11 00 05.9 +0.7**
baz=311,SNR=7.7
ILULI Ilulissat 60.33 11 *i* P **P** **11 00 04.8 0.0**
ILULI pmax pmax
comp=Z,23nm,0.8s
ILULI Ilulissat 60.33 11 *i* P **P** **11 00 04.8 0.0**
comp=Z,23nm,0.8s
ILULI Ilulissat 60.33 11 P **P** **11 00 04.7 -0.1**
CHGR Chuyangaron 60.36 296 P **P** **11 00 04.7 -1.0**
MOOW Moose Ponds 60.38 56 P **P** **11 00 06.5 +0.6**
MOOW IAmb IAmb 11 00 16.1
comp=Z,26nm,1.4s
TPAW Teton Pass 60.44 57 P **P** **11 00 08.7 +2.3**
TIN Timemaha, Big 60.45 66 P **P** **11 00 07.3 +1.0**
baz=312
SNOW Snow King Moun 60.56 57 P **P** **11 00 09.5 +2.3**
REDW Red Top Meadow 60.58 57 P **P** **11 00 08.1 +0.9**
DGMT Dagmar 60.68 49 P **P** **11 00 07.9 +0.3**
DGMT Dagmar 60.68 49 P **P** **11 00 08.1 +0.5**
baz=312
VES Vestal, Richgr 60.73 68 P **P** **11 00 09.0 +1.0**
baz=312
AHID Auburn Hatcher 60.83 57 P **P** **11 00 10.1 +1.2**
AHID IAmb IAmb 11 00 18.7
comp=Z,37nm,1.4s
LAO LASA Array 60.84 51 P **P** **11 00 10.1 +1.2**
LAO LASA Array 60.84 51 P **P** **11 00 10.0 +1.2**
baz=312
PKM Mcpherson Peak 60.91 69 P **P** **11 00 10.5 +0.9**
baz=312
BGU Big Grassy Mou 60.96 60 P **P** **11 00 10.8 +1.0**
SPUT South Promonto 61.03 59 P **P** **11 00 11.3 +1.0**
R11A Troy Canyon, C 61.17 64 P **P** **11 00 12.2 +0.9**
R11A IAmb IAmb 11 00 20.4
comp=Z,17nm,1.2s
R11A Troy Canyon, C 61.17 64 P **P** **11 00 11.8 +0.5**
baz=312,SNR=11
NIL Nilore 61.18 289 P **P** **11 00 11.4 +0.2**
NIL pmax pmax
comp=Z,66nm,0.5s
NIL MLR MLR
comp=Z,4µm,18.0s
NIL Nilore 61.18 289 P **P** **11 00 11.4 +0.2**
ISA Isabella, Lake 61.22 68 P **P** **11 00 11.6 +0.1**
ISA pmax pmax
comp=Z,16nm,1.4s
ISA Isabella, Lake 61.22 68 P **P** **11 00 11.6 +0.1**
ISA Isabella, Lake 61.22 68 P **P** **11 00 11.2 -0.3**
baz=312
HWUT Hardware Ranch 61.34 59 P **P** **11 00 13.7 +1.3**
HWUT IAmb IAmb 11 00 22.2
comp=Z,17nm,1.1s
DAC Darwin (Calif) 61.34 67 P **P** **11 00 14.4 +1.9**
DAC pmax pmax
comp=Z,27nm,2.0s
DAC Darwin (Calif) 61.34 67 P **P** **11 00 14.4 +1.9**
DAC IAmb IAmb 11 00 31.9
comp=Z,27nm,1.9s
MPMC Manual Prospec 61.55 67 P **P** **11 00 14.2 +0.3**
baz=312
DUG Dugway, Tooele 61.56 61 P **P** **11 00 15.2 +1.3**
DUG pmax pmax
comp=Z,45nm,1.4s
DUG Dugway, Tooele 61.56 61 P **P** **11 00 15.2 +1.3**
DUG Dugway, Tooele 61.56 61 P **P** **11 00 14.9 +1.0**
baz=312,SNR=7.0
FURC Furnace Creek, 61.66 66 P **P** **11 00 15.4 +1.0**
baz=312,SNR=12
PD31 Pinedale Array 61.68 57 P **P** **11 00 15.3 +0.6**
PD31 IAmb IAmb 11 00 24.1
comp=Z,32nm,1.2s
PDAR Pinedale Array 61.68 57 P **P** **11 00 15.8 +1.1**
comp=Z,4.0nm,0.8s,baz=323,slow=2.6,SNR=28
TPNV Topopah Spring 61.70 65 P **P** **11 00 15.4 +0.5**
TPNV pmax pmax
comp=Z,36nm,1.4s
TPNV Topopah Spring 61.70 65 P **P** **11 00 15.4 +0.5**
TPNV IAmb IAmb 11 00 24.1
comp=Z,36nm,1.4s
TPNV Topopah Spring 61.70 65 P **P** **11 00 15.5 +0.6**
baz=312,SNR=6.4
TCUT Toone Canyon 61.75 59 P **P** **11 00 15.0 -0.2**
LRMC Laurel Mtn Rad 61.82 67 P **P** **11 00 16.3 +0.6**
baz=312
CTU Camp Tracy 61.84 60 P **P** **11 00 15.6 -0.1**
EDW2 Edwards Air Fo 62.03 68 P **P** **11 00 17.5 +0.5**
baz=312
PSUT Pine Spring 62.07 63 P **P** **11 00 17.6 +0.3**
NLU North Lily Min 62.15 60 P **P** **11 00 19.1 +1.2**
DECC Green Verdugo 62.24 69 P **P** **11 00 19.2 +0.9**
baz=313
MPU Maple Canyon 62.36 60 P **P** **11 00 20.4 +1.1**
SHOC Shoshone, Teco 62.39 66 P **P** **11 00 20.0 +0.6**
baz=313
MWC Mount Wilson 62.43 69 P **P** **11 00 21.9 +2.0**
MWC pmax pmax
comp=Z,40nm,1.5s
MWC Mount Wilson 62.43 69 P **P** **11 00 21.9 +2.0**
MWC IAmb IAmb 11 00 28.6
comp=Z,40nm,1.5s
GSC Goldstone, Bar 62.47 67 P **P** **11 00 20.3 +0.3**
GSC pmax pmax
comp=Z,11nm,1.1s
GSC Goldstone, Bar 62.47 67 P **P** **11 00 20.3 +0.3**
GSC Goldstone, Bar 62.47 67 P **P** **11 00 20.2 +0.2**
baz=313
SFJD Kangerlussuaq 62.48 12 P **P** **11 00 18.1 -1.3**
SFJD pmax pmax
comp=Z,48nm,1.4s
SFJD Kangerlussuaq 62.48 12 *i* P **P** **11 00 17.7 -1.7**
SFJD Kangerlussuaq 62.48 12 P **P** **11 00 18.1 -1.3**
SHPR Sheep Range 62.65 65 P **P** **11 00 22.3 +1.1**
BFSC Mount Baldy Ra 62.66 68 P **P** **11 00 21.8 +0.5**
baz=313
FIA1 FINESS Array S 62.83 336 P **P** **11 00 20.8 -1.0**
FINES FINESS Array B 62.83 336 P **P** **11 00 20.6 -1.2**
comp=Z,7.4nm,0.6s,baz=34,slow=8.5,SNR=34
FINES LR LR 11 30 56.7
comp=Z,3µm,18.2s,baz=23,slow=39
CCUT Cedar City 63.01 63 P **P** **11 00 25.1 +1.3**
MSU Marysvale 63.05 62 P **P** **11 00 25.4 +1.4**
MSU Marysvale 63.05 62 P **P** **11 00 25.4 +1.4**
HEC Hector,Ludlow 63.07 67 P **P** **11 00 24.6 +0.6**
baz=313
TMUT Trail Mountain 63.08 60 P **P** **11 00 25.2 +0.9**
BBRC Big Bear Solar 63.10 68 P **P** **11 00 24.6 +0.2**
baz=313
SZCU Shurtz Canyon 63.14 63 P **P** **11 00 24.6 0.0**
KBL Kabul 63.17 292 P **P** **11 00 23.5 -1.3**
KBL pmax pmax
comp=Z,15nm,1.0s
KBL MLR MLR
comp=Z,3µm,21.0s
KBL Kabul 63.17 292 P **P** **11 00 23.4 -1.3**
KBL IAmb IAmb 11 00 58.2
comp=Z,15nm,1.0s
P17A Butcher Ranch, 63.23 60 P **P** **11 00 26.4 +1.3**
MDND Maddock 63.34 47 P **P** **11 00 25.9 +0.4**
Q16A Castle Valley 63.36 61 P **P** **11 00 27.9 +1.9**
MTPU Mount Pierson 63.37 62 P **P** **11 00 28.6 +2.4**
MURC Murrieta 63.38 69 P **P** **11 00 26.5 +0.5**
baz=313
ULM Lac du Bonnet 63.38 43 P **P** **11 00 25.2 -0.4**
ULM pmax pmax
comp=Z,9.0nm,1.1s
ULM Lac du Bonnet 63.38 43 P **P** **11 00 25.4 -0.3**
comp=Z,1.3nm,0.5s,baz=341,slow=7.2,SNR=3.6
ULM LR LR 11 29 29.5
comp=Z,1µm,20.3s,baz=320,slow=37
ULM Lac du Bonnet 63.38 43 P **P** **11 00 25.2 -0.4**
K22A Casper 63.41 55 P **P** **11 00 28.2 +2.0**
K22A Casper 63.41 55 P **P** **11 00 26.8 +0.6**
baz=314,SNR=6.1
LCMT Little Creek M 63.45 63 P **P** **11 00 27.2 +0.8**
GMRC Granite Mounta 63.51 67 P **P** **11 00 27.2 +0.3**
baz=313
SRU San Rafael Swe 63.60 60 P **P** **11 00 28.7 +1.2**
SRU pmax pmax
comp=Z,34nm,0.9s
SRU San Rafael Swe 63.60 60 P **P** **11 00 28.7 +1.2**
KNB Kanab 63.69 63 P **P** **11 00 28.5 +0.3**
KNB pmax pmax
comp=Z,68nm,1.5s
KNB Kanab 63.69 63 P **P** **11 00 28.4 +0.3**
PKCU Pink Cliffs 63.70 63 P **P** **11 00 29.4 +1.1**
RSSD Black Hills 63.72 52 P **P** **11 00 28.2 -0.1**
RSSD pmax pmax
comp=Z,48nm,1.2s
RSSD Black Hills 63.72 52 P **P** **11 00 28.2 -0.1**
RSSD Black Hills 63.72 52 P **P** **11 00 28.4 +0.2**
baz=314
PFO Pinyon Flats O 63.82 68 P **P** **11 00 31.8 +2.8**
PFO pmax pmax
comp=Z,21nm,1.6s
PFO Pinyon Flats O 63.82 68 P **P** **11 00 31.8 +2.8**
PFO Pinyon Flats O 63.82 68 P **P** **11 00 29.7 +0.7**
baz=313
BELC Belle Mtn. Jos 63.84 68 P **P** **11 00 29.8 +0.7**
baz=313
109C Camp Elliot, M 63.92 69 P **P** **11 00 31.0 +1.6**
PBA Port Blair 64.00 257 IAMs_20 IAMs_20 11 33 36.4
comp=Z,2µm,19.0s
NEE2 Needles Airpor 64.15 66 P **P** **11 00 32.1 +1.1**
baz=314
O20A White River Ci 64.19 58 P **P** **11 00 33.2 +1.8**
O20A IAmb IAmb 11 00 40.6
comp=Z,23nm,1.2s
O20A White River Ci 64.19 58 P **P** **11 00 31.8 +0.3**
baz=314,SNR=5.2
IRM Iron Mountain 64.25 67 P **P** **11 00 32.6 +0.9**
baz=314,SNR=5.5
MONP2 Monument Peak 64.33 69 P **P** **11 00 34.1 +1.7**
baz=314
W13A Hualapai Mount 64.36 65 P **P** **11 00 33.3 +0.7**
U15A North Rim 64.40 63 P **P** **11 00 34.2 +1.2**
U15A IAmb IAmb 11 00 42.7
comp=Z,27nm,1.3s
BC3 Big Chuckawall 64.41 68 P **P** **11 00 33.6 +0.8**
baz=314
OBN Obninsk 64.58 326 *i* P **P** **11 00 30.0 -3.4**
OBN *i* 11 01 05.1
OBN pmax pmax
comp=Z,24nm,0.8s
OBN MLR MLR
comp=Z,2µm,19.0s
OBN Obninsk 64.58 326 IAMs_20 IAMs_20 11 33 55.0
comp=Z,2µm,18.0s
CHLP Challavanipeta 64.64 269 *e*P **P** **11 00 34.2 -0.2**
CHLP IVMs_BB IVMs_BB 11 31 49.3
comp=Z,205nm,16.9s
IKP In-Ko-Pah, Jac 64.69 69 P **P** **11 00 35.9 +1.3**
baz=314
AGMN Agassiz Nation 64.79 45 P **P** **11 00 34.6 -0.3**
AGMN IAmb IAmb 11 00 58.6
comp=Z,19nm,1.2s
Y12C Blythe 64.90 67 P **P** **11 00 36.8 +0.9**
baz=314
N23A Red Feather La 64.93 56 P **P** **11 00 37.4 +1.0**
N23A IAmb IAmb 11 00 46.1
comp=Z,24nm,1.1s
N23A Red Feather La 64.93 56 P **P** **11 00 37.1 +0.7**
baz=314
SANVU Saraoutou 64.95 168 IAMs_20 IAMs_20 11 23 39.6
comp=Z,1µm,19.0s
D32A Dogwood Acres, 65.09 46 P **P** **11 00 37.2 +0.3**
D32A IAmb IAmb 11 00 51.7
comp=Z,26nm,0.9s
D32A IAMs_20 IAMs_20 11 31 09.6
comp=Z,2µm,20.0s
VSU Vasula 65.12 333 *ce*P **P** **11 00 37.0 +0.1**
VSU pmax pmax
comp=Z,24nm,0.8s
SMCO Snowmass 65.56 58 P **P** **11 00 41.2 +0.6**
SMCO IAmb IAmb 11 01 01.9
comp=Z,18nm,0.9s
WUAZ Wupatki 65.57 64 P **P** **11 00 41.4 +1.0**
WUAZ IAmb IAmb 11 00 50.1
comp=Z,34nm,1.4s
WUAZ Wupatki 65.57 64 P **P** **11 00 41.6 +1.2**
baz=314,SNR=6.7
LPSR Galich'ya Gora 65.63 324 *e*P **P** **11 00 38.7 -1.6**
LPSR pmax pmax
comp=Z,40nm,0.8s
LPSR MLR MLR
comp=Z,2µm,14.0s
Y14A Wickenburg 65.69 66 P **P** **11 00 40.7 -0.4**
ISCO Idaho Springs 65.88 57 P **P** **11 00 43.7 +1.2**
ISCO pmax pmax
comp=Z,37nm,1.2s
ISCO Idaho Springs 65.88 57 P **P** **11 00 43.7 +1.2**
ISCO IAmb IAmb 11 00 52.4
comp=Z,37nm,1.2s
ISCO Idaho Springs 65.88 57 P **P** **11 00 43.1 +0.6**
baz=315,SNR=19
MVCO Mesa Verde 66.06 60 P **P** **11 00 44.5 +0.8**
MVCO IAmb IAmb 11 00 53.0
comp=Z,28nm,1.3s
MVCO Mesa Verde 66.06 60 P **P** **11 00 44.8 +1.1**
baz=315
X16A Lo Mia Camp, P 66.29 64 P **P** **11 00 45.6 +0.5**
BORG Borgarnes 66.51 359 LR LR 11 29 06.9
comp=Z,718nm,18.8s,baz=355,slow=35
NC204 NORSAR Array S 66.57 343 P **P** **11 00 45.4 -0.9**
VSR Storozhevoye 66.60 322 *e*P **P** **11 00 44.2 -2.3**
VSR pmax pmax
comp=Z,20nm,0.7s
VSR MLR MLR
comp=Z,3µm,17.0s
S22A 4UR Ranch, Cre 66.64 59 P **P** **11 00 48.9 +1.5**
S22A IAmb IAmb 11 00 57.3
comp=Z,39nm,1.3s
S22A 4UR Ranch, Cre 66.64 59 P **P** **11 00 48.9 +1.5**
baz=315,SNR=24
NB2 NORSAR Subarra 66.70 342 P **P** **11 00 46.7 -0.4**
comp=Z,3.0nm,0.8s,baz=25,slow=6.5

NOA	**NORSAR Array B**	**66.70**	**342**	P		**P**		**11 00 46.5**	**-0.5**	
	comp=Z,5.7nm,0.9s,baz=24,slow=6.5,SNR=10									
NOA				LR		LR		11 35 39.1		
	comp=Z,2μm,18.1s,baz=25,slow=41									
Q24A	**Divide**	**66.72**	**57**	IAMs_20		IAMs_20		11 33 12.2		
	comp=Z,1μm,19.0s									
Q24A	**Divide**	**66.72**	**57**	P		**P**		**11 00 48.8**	**+0.9**	
	baz=315									
VORD	**Divnogorie**	**66.74**	**322**	*e*P		**P**		**11 00 45.6**	**-1.8**	
VORD				pmax		pmax				
	comp=Z,20nm,0.8s									
EYMN	**Ely**	**67.03**	**43**	P		**P**		**11 00 48.2**	**-1.2**	
EYMN	**Ely**	**67.03**	**43**	P		**P**		**11 00 48.9**	**-0.4**	
	baz=319									
ASHT	**Ashkhabad**	**67.06**	**302**	IAMs_20		IAMs_20		11 31 54.6		
	comp=Z,2μm,20.0s									
X18A	**Snowflake**	**67.09**	**63**	IAMs_20		IAMs_20		11 25 46.9		
	comp=Z,1μm,18.0s									
PVM	**Polavaram**	**67.14**	**270**	*e*P		**P**		**11 00 47.7**	**-2.8**	
PVM				IVMs_BB		IVMs_BB		11 32 49.7		
	comp=Z,214nm,11.4s									
214A	**Organ Pipe Nat**	**67.18**	**67**	P		**P**		**11 00 51.9**	**+1.2**	
	baz=315									
GEYT	**Alibeck**	**67.21**	**302**	P		**P**		**11 00 51.2**	**+0.5**	
	comp=Z,2.6nm,0.5s,baz=325,slow=1.8,SNR=6.0									
GEYT				LR		LR		11 32 20.9		
	comp=Z,2μm,19.9s,baz=40,slow=38									
GYA0B	**ALIBECK ARRAY**	**67.21**	**302**	P		**P**		**11 00 48.7**	**-2.0**	
GYA0B				IAmb		IAmb		11 02 11.3		
	comp=Z,23nm,0.8s									
GYA0B				IAMs_20		IAMs_20		11 31 59.7		
	comp=Z,2μm,20.0s									
HRA	**Herat**	**67.34**	**297**	P		**P**		**11 00 48.7**	**-3.1**	
HRA				IAmb		IAmb		11 01 26.5		
	comp=Z,58nm,1.9s									
HRA				IAMs_20		IAMs_20		11 33 47.5		
	comp=Z,2μm,18.0s									
SDCO	**Great Sand Dun**	**67.38**	**58**	P		**P**		**11 00 53.0**	**+0.8**	
SDCO				IAmb		IAmb		11 01 02.6		
	comp=Z,38nm,1.6s									
SDCO	**Great Sand Dun**	**67.38**	**58**	P		**P**		**11 00 53.8**	**+1.6**	
	baz=316,SNR=7.8									
RPR	**Rampur**	**67.52**	**273**	*e*P		**P**		**11 00 52.8**	**-0.1**	
RPR				IVMs_BB		IVMs_BB		11 33 21.3		
	comp=Z,340nm,14.7s									
GGR	**Gangavaram**	**67.67**	**272**	*e*P		**P**		**11 00 54.1**	**+0.2**	
GGR				IVMs_BB		IVMs_BB		11 33 21.2		
	comp=Z,304nm,14.9s									
ECSD	**EROS Data Cent**	**67.75**	**48**	P		**P**		**11 00 53.6**	**-0.5**	
ECSD				IAmb		IAmb		11 01 02.7		
	comp=Z,22nm,1.1s									
ECSD	**EROS Data Cent**	**67.75**	**48**	IAMs_20		IAMs_20		11 31 00.4		
	comp=Z,2μm,20.0s									
ECSD	**EROS Data Cent**	**67.75**	**48**	P		**P**		**11 00 54.0**	**-0.1**	
	baz=318									
E38A	**The Farm, Brul**	**68.01**	**44**	P		**P**		**11 00 54.1**	**-1.5**	
E38A				IAmb		IAmb		11 01 07.4		
	comp=Z,24nm,1.3s									
MICGM	**Minsk**	**68.06**	**330**	*e*		P		11 01 12.0	+16	
MICGM				*e*LQ		LQ		11 27 04.0		
MICGM				*e*LR		LR		11 30 36.0		
MICGM				LRM		MLR		11 34 46.0		
	comp=E,1.6nm,14.0s									
MICGM				LRM		MLR		11 35 00.0		
	comp=Z,2.8nm,16.0s									
KSCO	**Kaye Shedlock'**	**68.06**	**56**	P		**P**		**11 00 56.8**	**+0.6**	
	baz=316									
SRSP	**Sriramsagar**	**68.09**	**274**	*e*P		**P**		**11 00 56.7**	**+0.2**	
SRSP				IVMs_BB		IVMs_BB		11 33 40.9		
	comp=Z,454nm,16.4s									
MYLAV	**Mylavaram**	**68.16**	**271**	*e*P		**P**		**11 00 57.7**	**+0.9**	
MYLAV				IVMs_BB		IVMs_BB		11 33 37.7		
	comp=Z,274nm,17.4s									
TUC	**Tucson**	**68.16**	**66**	P		**P**		**11 00 59.6**	**+2.8**	
TUC				pmax		pmax				
	comp=Z,7.0nm,1.1s									
TUC	**Tucson**	**68.16**	**66**	P		**P**		**11 00 59.6**	**+2.8**	
TUC	**Tucson**	**68.16**	**66**	P		**P**		**11 00 58.3**	**+1.5**	
	baz=315									
KONO	**Kongsberg**	**68.30**	**343**	*i* P		**P**		**11 00 56.8**	**-0.3**	
KONO				pmax		pmax				
	comp=Z,17nm,1.1s									
IVI	**Ivigtut**	**68.34**	**12**	P		**P**		**11 00 56.7**	**-0.6**	
T25A	**Trinidad**	**68.42**	**58**	P		**P**		**11 00 59.8**	**+1.2**	
T25A				IAmb		IAmb		11 01 08.7		
	comp=Z,41nm,1.3s									
T25A	**Trinidad**	**68.42**	**58**	P		**P**		**11 00 59.9**	**+1.2**	
	baz=316,SNR=7.0									
SPMN	**Marine on St.**	**68.47**	**45**	P		**P**		**11 00 58.7**	**+0.2**	
SPMN				IAMs_20		IAMs_20		11 33 51.1		
	comp=Z,2μm,19.0s									
SPMN	**Marine on St.**	**68.47**	**45**	P		**P**		**11 00 57.9**	**-0.6**	
	baz=319									
BGNE	**Belgrade**	**68.69**	**51**	P		**P**		**11 01 00.3**	**+0.4**	
	baz=318									
ANMO	**Albuquerque**	**68.83**	**61**	P		**P**		**11 01 01.6**	**+0.4**	
ANMO				pmax		pmax				
	comp=Z,10.0nm,1.0s									
ANMO	**Albuquerque**	**68.83**	**61**	P		**P**		**11 01 01.6**	**+0.4**	
ANMO	**Albuquerque**	**68.83**	**61**	P		**P**		**11 01 01.8**	**+0.6**	
	baz=316									
D41A	**Chassel**	**68.99**	**42**	IAMs_20		IAMs_20		11 35 24.3		
	comp=Z,2μm,19.0s									
HYB	**Hyderabad**	**69.04**	**273**	*i* P		**P**		**11 01 03.0**	**+0.5**	
HYBB	**Hyderabad (bro**	**69.04**	**273**	*e*P		**P**		**11 01 02.5**	**0.0**	
HYBB				IVMs_BB		IVMs_BB		11 33 30.9		
	comp=Z,351nm,16.3s									
MAK	**Makhachkala**	**69.14**	**312**	*e*P		**P**		**11 01 02.9**	**+0.3**	
MAK				*e*				11 03 33.9		
MAK				*e*S		**S**		**11 10 06.0**	**+0.4**	
MAK				*e*SS		**SS**		**11 14 28.6**	**-2.6**	
MAK				MLR		MLR				
	comp=Z,1μm,16.0s									
NJS	**Nagarjunasagar**	**69.17**	**271**	*e*P		**P**		**11 01 03.0**	**-0.2**	
NJS				IVMs_BB		IVMs_BB		11 34 16.5		
	comp=Z,219nm,14.5s									
Y22D	**IRIS PASSCAL I**	**69.19**	**62**	IAMs_20		IAMs_20		11 27 47.1		
	comp=Z,1μm,20.0s									
ADKI	**Addanki**	**69.25**	**270**	*e*P		**P**		**11 01 04.1**	**+0.4**	
ADKI				IVMsBB				11 34 13.2		
	comp=Z,216nm,15.5s									
COWI	**Conover**	**69.48**	**42**	IAMs_20		IAMs_20		11 33 13.4		
	comp=Z,2μm,21.0s									
GOF	**Gofitskoye**	**69.67**	**316**⇑	*e*P		**P**		**11 01 05.7**	**-0.2**	
GOF				pmax		pmax				
	comp=Z,27nm,0.8s									
CBKS	**Cedar Bluff**	**69.76**	**54**	P		**P**		**11 01 07.6**	**+0.9**	
	baz=318									
SRLM	**Srisailam**	**69.77**	**271**	*e*P		**P**		**11 01 06.7**	**-0.3**	
SRLM				IVMs_BB		IVMs_BB		11 34 11.0		
	comp=Z,282nm,16.9s									
121A	**Cookes Peak, D**	**69.78**	**64**	P		**P**		**11 01 07.7**	**+0.7**	
	baz=316									
GROC	**Groznyy**	**69.78**	**313**	*e*P		P		11 01 17.3	+11	
GROC				*e*				11 01 36.7		
GROC				pmax		pmax				
	comp=Z,38nm,0.6s									
KLRI	**Killari**	**69.86**	**275**	*e*P		**P**		**11 01 07.9**	**+0.4**	
KLRI				IVMs_BB		IVMs_BB		11 34 54.8		
	comp=Z,586nm,17.4s									
AKT	**Akhty**	**70.13**	**311**	*e*P		**P**		**11 01 08.6**	**-0.4**	
AKT				*e*				11 01 27.4		
AKT				*e*				11 03 42.8		
AKT				pmax		pmax				
	comp=Z,28nm,0.9s									
SCHQ	**Schefferville**	**70.33**	**25**	P		**P**		**11 01 09.4**	**-0.5**	
	comp=Z,11nm,0.9s,baz=338,slow=4.4,SNR=9.6									
SCHQ				LR		LR		11 37 09.5		
	comp=Z,899nm,18.5s,baz=338,slow=40									
SCHQ	**Schefferville**	**70.33**	**25**	P		**P**		**11 01 10.1**	**+0.2**	
KIV	**Kislovodsk**	**70.67**	**315**	*e*P		**P**		**11 01 12.6**	**+0.4**	
KIV				*e*				11 01 31.5		
KIV				*e*S		**S**		**11 10 23.0**	**-0.9**	
KIV				pmax		pmax				
	comp=Z,160nm,3.7s									
KIV				pmax		pmax				
	comp=Z,66nm,1.1s									
KIV				MLR		MLR				
	comp=Z,2μm,18.0s									
KIV	**Kislovodsk**	**70.67**	**315**	⇑P		**P**		**11 01 13.7**	**+1.5**	
KIV	**Kislovodsk**	**70.67**	**315**	*e*P		**P**		**11 01 12.6**	**+0.4**	
KIV	**Kislovodsk**	**70.67**	**315**	IAMs_20		IAMs_20		11 36 31.6		
	comp=Z,1μm,18.0s									
KBZ	**Khabaz**	**70.75**	**315**	*c i* P		**P**		**11 01 12.3**	**-0.2**	
KBZ	**Khabaz**	**70.75**	**315**	P		**P**		**11 01 12.7**	**+0.2**	
	comp=Z,21nm,0.9s,baz=88,slow=4.5,SNR=13									
KBZ				LR		LR		11 37 35.0		
	comp=Z,2μm,18.1s,baz=29,slow=40									
KBZ	**Khabaz**	**70.75**	**315**	*i* P		**P**		**11 01 12.3**	**-0.2**	
AKASG	**Malin Array Be**	**70.77**	**327**	P		**P**		**11 01 11.3**	**-1.3**	
	comp=Z,3.6nm,0.3s,baz=33,slow=6.6,SNR=23									
AKASG				LR		LR		11 34 32.3		
	comp=Z,2μm,21.0s,baz=30,slow=38									
AKBB	**Malin Array Si**	**70.77**	**327**	P		**P**		**11 01 11.8**	**-0.7**	
AKBB				pmax		pmax				
	comp=Z,14nm,1.0s									
AKBB	**Malin Array Si**	**70.77**	**327**	P		**P**		**11 01 11.8**	**-0.7**	
SCIA	**State Center**	**70.78**	**48**	IAMs_20		IAMs_20		11 36 09.5		
	comp=Z,2μm,18.0s									
SHA1	**Shidzhatmaz**	**70.86**	**315**	*c i* P		**P**		**11 01 12.8**	**-0.7**	
SKHT	**Srikalahasti**	**70.95**	**269**	*e*P		**P**		**11 01 15.7**	**+1.6**	
ZEI	**Tsey**	**71.00**	**314**	*e*P		**P**		**11 01 13.5**	**-0.9**	
ZEI				pmax		pmax				
	comp=Z,10.0nm,0.9s									
D46A	**Sault St. Mari**	**71.05**	**39**	P		**P**		**11 01 13.7**	**-0.6**	
	baz=323									
KSU1	**Kansas State U**	**71.19**	**52**	IAMs_20		IAMs_20		11 35 51.7		
	comp=Z,2μm,20.0s									
KSU1	**Kansas State U**	**71.19**	**52**	P		**P**		**11 01 15.3**	**0.0**	
	baz=319									
NEY	**Neytrino**	**71.20**	**315**	*i* P		**P**		**11 01 13.8**	**-1.7**	
MATQ	**Matagami**	**71.21**	**34**	P		**P**		**11 01 13.8**	**-1.4**	
	baz=326									
WB0	**Warramunga Arr**	**71.24**	**202**	P		**P**		**11 01 16.0**	**+0.4**	
D47A	**Chapleau**	**71.30**	**38**	P		**P**		**11 01 16.2**	**+0.3**	
	baz=324									
POO	**Poona**	**71.32**	**277**	*e*P		**P**		**11 01 15.5**	**-0.9**	
F45A	**CMU Biological**	**71.39**	**41**	P		**P**		**11 01 16.6**	**+0.3**	
	baz=323									
WR0	**Warramunga Arr**	**71.39**	**202**	P		**P**		**11 01 16.6**	**+0.1**	
DZM	**Mont Dzumac**	**71.39**	**170**	*e*P		**P**		**11 01 17.4**	**+0.8**	
	comp=Z,40nm,1.4s									
DZM				*e*S		**S**		**11 10 32.4**	**+0.1**	
	comp=Z,1μm,26.4s									
DZM				*e*LQ		LQ		11 19 59.4		
	comp=Z,1μm,29.1s									
DZM				*e*LR		LR		11 23 04.4		
	comp=Z,1μm,25.8s									
WRAB	**Tennant Creek**	**71.41**	**202**	P		**P**		**11 01 17.2**	**+0.5**	
WRAB				pmax		pmax				
	comp=Z,20nm,1.2s									
WRAB	**Tennant Creek**	**71.41**	**202**	P		**P**		**11 01 17.2**	**+0.5**	
TBLG	**Delisi**	**71.41**	**313**	P		**P**		**11 01 17.0**	**+0.4**	
TBLG				pmax		pmax				
	comp=Z,54nm,1.2s									
TBLG	**Delisi**	**71.41**	**313**	P		**P**		**11 01 17.0**	**+0.4**	
WRA	**Warramunga Arr**	**71.42**	**202**	P		**P**		**11 01 16.9**	**+0.1**	
	comp=Z,4.3nm,0.8s,baz=18,slow=6.3,SNR=11									
WRA				LR		LR		11 30 06.4		
	comp=Z,467nm,21.4s,baz=30,slow=34									
AMTX	**Amarillo**	**71.58**	**58**	P		**P**		**11 01 18.4**	**+0.5**	
	baz=318									
MSTX	**Muleshoe**	**71.64**	**59**	P		**P**		**11 01 20.6**	**+2.4**	
MSTX				IAmb		IAmb		11 01 27.2		
	comp=Z,36nm,1.1s									
MSTX	**Muleshoe**	**71.64**	**59**	P		**P**		**11 01 19.0**	**+0.8**	
	baz=318									
URV	**Uravakonda**	**71.69**	**272**	*e*P		**P**		**11 01 18.4**	**-0.2**	
URV				IVMs_BB		IVMs_BB		11 35 25.5		
	comp=Z,565nm,14.3s									
MNTX	**Cornudas Mount**	**71.79**	**63**	P		**P**		**11 01 20.1**	**+1.0**	
MNTX	**Cornudas Mount**	**71.79**	**63**	P		**P**		**11 01 20.4**	**+1.3**	
	baz=317,SNR=9.5									
D49A	**Beulah Townshi**	**71.83**	**37**	P		**P**		**11 01 19.0**	**0.0**	
	baz=325									
G45A	**Suttons Bay**	**71.83**	**41**	P		**P**		**11 01 18.4**	**-0.7**	
	baz=323									
U32A	**Winter Ranch,**	**71.95**	**55**	P		**P**		**11 01 21.3**	**+1.3**	
U32A				IAmb		IAmb		11 01 27.9		
	comp=Z,32nm,1.1s									
U32A				IAMs_20		IAMs_20		11 37 39.3		
	comp=Z,1μm,18.0s									
LSQQ	**Lebel-sur-Quev**	**72.03**	**34**	P		**P**		**11 01 20.1**	**-0.1**	
	baz=327									
AKH	**Akhalkalaki**	**72.25**	**313**	P		**P**		**11 01 22.4**	**+0.5**	
AKH				pmax		pmax				
	comp=Z,25nm,1.1s									
AKH	**Akhalkalaki**	**72.25**	**313**	⇑P		**P**		**11 01 22.8**	**+0.9**	
AKH	**Akhalkalaki**	**72.25**	**313**	P		**P**		**11 01 22.4**	**+0.5**	
AKH				IAmb		IAmb		11 01 58.5		
	comp=Z,24nm,1.1s									
AKH				IAMs_20		IAMs_20		11 39 13.5		
	comp=Z,1μm,19.0s									
SOC	**Sochi**	**72.32**	**317**	*e*P		**P**		**11 01 20.5**	**-1.5**	
SOC				*e**SP		**PcP**		**11 01 39.4**	**-0.5**	
SOC				*e*				11 03 59.5		
SOC				*e*PPP		PPP		11 05 46.5		
SOC				*e*S		**S**		**11 10 38.0**	**-4.6**	
SOC				*e*SS		**SS**		**11 15 23.2**	**+3.3**	
SOC				pmax		pmax				
	comp=Z,18nm,0.7s									
SOC				MLR		MLR				
	comp=Z,2μm,16.0s									
I45A	**Fountain**	**72.38**	**42**	IAMs_20		IAMs_20		11 37 20.0		
	comp=Z,2μm,18.0s									
H46A	**Fife Lake**	**72.43**	**41**	P		**P**		**11 01 22.4**	**-0.3**	
	baz=323									
GNI	**Garni**	**72.62**	**312**	*ce*P		**P**		**11 01 25.3**	**+1.2**	
GNI				pmax		pmax				
	comp=Z,182nm,2.1s									
GNI	**Garni**	**72.62**	**312**	LR		LR		11 36 19.8		
	comp=Z,1μm,21.5s,baz=48,slow=38									
GNI	**Garni**	**72.62**	**312**	P		**P**		**11 01 24.0**	**-0.1**	
GNI	**Garni**	**72.62**	**312**	P		**P**		**11 01 25.5**	**+1.4**	
GNI	**Garni**	**72.62**	**312**	IAMs_20		IAMs_20		11 37 32.2		
	comp=Z,1μm,18.0s									
I46A	**Reed City**	**72.80**	**42**	P		**P**		**11 01 25.4**	**+0.5**	
	baz=323									
N41A	**Harden Midland**	**72.84**	**47**	P		**P**		**11 01 26.8**	**+1.7**	
N41A				IAMs_20		IAMs_20		11 35 39.9		
	comp=Z,1μm,21.0s									
SORM	**Soroca**	**73.23**	**327**	⇑P		**P**		**11 01 28.0**	**+0.7**	
WMOK	**Wichita Mounta**	**73.29**	**56**	P		**P**		**11 01 29.5**	**+1.6**	
WMOK				pmax		pmax				
	comp=Z,15nm,1.0s									
WMOK	**Wichita Mounta**	**73.29**	**56**	P		**P**		**11 01 29.5**	**+1.6**	
WMOK	**Wichita Mounta**	**73.29**	**56**	P		**P**		**11 01 29.2**	**+1.2**	
	baz=319									
LVV	**L'vov**	**73.29**	**330**	*e*P		**P**		**11 01 31.0**	**+3.3**	
LVV				*e*S		**SKiKP**		**11 10 55.0**	**-0.9**	
BSEG	**Bad Segeberg**	**73.43**	**340**	*e*L		L		11 37 37.0		
	comp=Z,2μm,18.0s									
J47A	**Sunner**	**73.63**	**42**	P		**P**		**11 01 30.0**	**+0.2**	
	baz=324									
SIM	**Simferopol'**	**73.63**	**321**	P		P		11 01 35.5	+5.7	
SIM				pmax		pmax				
	comp=Z,112nm,9.6s									
SIM				MLR		MLR				
	comp=Z,2μm,14.4s									
FNO	**Franklin**	**73.65**	**55**	P		**P**		**11 01 31.1**	**+1.0**	
E52A	**Mattawa**	**73.70**	**36**	P		**P**		**11 01 30.1**	**0.0**	
	baz=326									
KWP	**Kalwaria Pacla**	**73.89**	**331**	P		**P**		**11 01 31.3**	**+0.1**	
KWP				pmax		pmax				
	comp=Z,86nm,1.0s									
KWP				MLR		MLR				
	comp=Z,2μm,18.0s									
KWP	**Kalwaria Pacla**	**73.89**	**331**	*e*P		**P**		**11 01 31.0**	**-0.2**	
KWP	**Kalwaria Pacla**	**73.89**	**331**	P		**P**		**11 01 31.3**	**+0.1**	
L46A	**Eue Claire**	**73.95**	**43**	IAMs_20		IAMs_20		11 39 56.8		
	comp=Z,2μm,19.0s									
W35A	**Tecumseh**	**74.01**	**55**	P		**P**		**11 01 32.5**	**+0.3**	
TUL1	**Leonard**	**74.01**	**53**	P		**P**		**11 01 32.6**	**+0.5**	
TUL1				IAmb		IAmb		11 01 40.9		
	comp=Z,46nm,1.4s									
TUL1	**Leonard**	**74.01**	**53**	P		**P**		**11 01 32.9**	**+0.7**	
	baz=320									
KIS	**Kishinev**	**74.02**	**326**	*e*P		**P**		**11 01 30.0**	**-1.9**	
KIS				*e*LQ		LQ		11 30 08.0		
	comp=Z,1μm,20.0s									
KIS				LRM		MLR		11 37 48.0		
	comp=Z,2μm,16.0s									
KIS	**Kishinev**	**74.02**	**326**	*e*P		**P**		**11 01 30.0**	**-1.9**	
KIS				*e*				11 01 48.0		
KIS				MLR		MLR				
	comp=Z,2μm,16.0s									
ALGO	**Algonquin Park**	**74.22**	**36**	P		**P**		**11 01 33.1**	**0.0**	
	baz=327									
OJC	**Ojcow**	**74.28**	**333**	P		**P**		**11 01 32.8**	**-0.7**	
OJC				pmax		pmax				
	comp=Z,37nm,1.1s									
OJC	**Ojcow**	**74.28**	**333**	*e*P		**P**		**11 01 33.4**	**-0.1**	
OJC	**Ojcow**	**74.28**	**333**	P		**P**		**11 01 32.8**	**-0.7**	
OJC				IAmb		IAmb		11 01 55.6		
	comp=Z,37nm,1.1s									
K48A	**Perry**	**74.29**	**42**	P		**P**		**11 01 33.4**	**-0.2**	
	baz=324									
D55A	**Sainte-Anne-du**	**74.30**	**34**	P		**P**		**11 01 34.4**	**+0.8**	
	baz=328									
LPIG	**La Paz**	**74.33**	**71**	LR		LR		11 26 43.3		
	comp=Z,403nm,21.7s,baz=306,slow=30									
ABTX	**Abilene, Hawle**	**74.39**	**58**	P		**P**		**11 01 37.4**	**+2.9**	
ABTX				IAmb		IAmb		11 01 43.5		
	comp=Z,38nm,1.2s									
ABTX	**Abilene, Hawle**	**74.39**	**58**	P		**P**		**11 01 36.2**	**+1.8**	
	baz=319									
TX31	**Lajitas Ar. Si**	**74.53**	**63**	P		**P**		**11 01 36.2**	**+0.9**	
TX31				IAmb		IAmb		11 01 44.5		
	comp=Z,37nm,1.2s									
TX32	**Lajitas Array**	**74.53**	**63**	P		**P**		**11 01 36.0**	**+0.6**	
TX32				IAmb		IAmb		11 01 44.5		
	comp=Z,38nm,1.2s									
TXAR	**Lajitas Array**	**74.53**	**63**	P		**P**		**11 01 36.2**	**+0.9**	
	comp=Z,4.2nm,0.7s,baz=299,slow=4.1,SNR=19									
D56A	**ZEC Mazanza, M**	**74.53**	**33**	P		**P**		**11 01 34.9**	**-0.1**	
	baz=328									
STHS	**Stebnicka Huta**	**74.54**	**331**	*e*P		**P**		**11 01 35.0**	**0.0**	
STHS				pmax		pmax				
	comp=Z,33nm,0.9s									
STHS	**Stebnicka Huta**	**74.54**	**331**	*e*P		**P**		**11 01 35.0**	**0.0**	
EKA	**Eskdalemuir Ar**	**74.56**	**348**	LR		LR		11 36 14.1		
	comp=Z,593nm,18.4s,baz=15,slow=37									
K49A	**Clarkson**	**74.59**	**41**	P		**P**		**11 01 35.8**	**+0.4**	
	baz=324									
KOLS	**Kolonicke sedl**	**74.64**	**331**	*e*P		**P**		**11 01 35.7**	**+0.1**	
KOLS				pmax		pmax				
	comp=Z,25nm,1.0s									
KOLS	**Kolonicke sedl**	**74.64**	**331**	*e*P		**P**		**11 01 35.6**	**0.0**	
HHAR	**Hobbs**	**74.70**	**52**	P		**P**		**11 01 37.0**	**+0.9**	
HHAR				IAmb		IAmb		11 03 13.3		
	comp=Z,29nm,1.3s									
CCM	**Cathedral Cave**	**74.70**	**49**	P		**P**		**11 01 34.9**	**-1.2**	
CCM				pmax		pmax				
	comp=Z,23nm,1.1s									
CCM	**Cathedral Cave**	**74.70**	**49**	P		**P**		**11 01 34.9**	**-1.2**	
CCM				IAmb		IAmb		11 01 44.6		
	comp=Z,23nm,1.1s									
CCM	**Cathedral Cave**	**74.70**	**49**	P		**P**		**11 01 36.3**	**+0.2**	
	baz=321									
KSP	**Ksiaz**	**74.74**	**335**	*e*P		**P**		**11 01 35.9**	**-0.2**	
KSP	**Ksiaz**	**74.74**	**335**	*e*P		**P**		**11 01 35.9**	**-0.2**	
RETH	**Rethem/Aller,**	**74.76**	**340**	*e*P		**P**		**11 01 36.4**	**+0.3**	
	comp=Z,35nm,1.2s,baz=23,slow=5.8									
BUR08	**Bucovina Ar. S**	**74.77**	**328**	P		**P**		**11 01 36.3**	**-0.2**	
BUR08				IAmb		IAmb		11 01 40.3		
	comp=Z,27nm,1.1s									
BURAR	**Bucovina Array**	**74.79**	**328**	⇓P		**P**		**11 01 36.4**	**-0.1**	
NRDL	**Niedersach Rie**	**74.81**	**339**	*e*P		**P**		**11 01 36.6**	**+0.3**	
	comp=Z,16nm,1.1s,baz=23,slow=5.8									
NIE	**Niedzica**	**74.83**	**332**	*e*P		**P**		**11 01 37.1**	**+0.4**	
NIE	**Niedzica**	**74.83**	**332**	*e*P		**P**		**11 01 37.1**	**+0.4**	
D57A	**Chemin Vers le**	**74.87**	**33**	P		**P**		**11 01 36.4**	**-0.5**	
	baz=329									
SFIN	**Lafayette**	**74.88**	**45**	IAMs_20		IAMs_20		11 37 38.6		
	comp=Z,2μm,21.0s									
SFIN	**Lafayette**	**74.88**	**45**	P		**P**		**11 01 37.5**	**+0.5**	
	baz=323									
UZH	**Uzhgorod**	**74.89**	**330**	*e*P		**P**		**11 01 38.8**	**+1.8**	
UZH				*i*				11 01 44.5		
L49A	**Milan**	**75.00**	**42**	P		**P**		**11 01 38.4**	**+0.7**	
	baz=324									
ASSE	**Asse, Remlinge**	**75.02**	**339**	*e*P		**P**		**11 01 37.9**	**+0.3**	
	comp=Z,34nm,1.4s,baz=23,slow=5.8									
OSTC	**Ostas**	**75.02**	**335**	*e*P		**P**		**11 01 38.0**	**+0.2**	
OSTC				AMS		AMS		11 38 20.0		
	comp=Z,4μm,18.1s									
CHVC	**Chvalec**	**75.04**	**335**	*e*P		**

MORC Moravsky Berou 75.34 334 P P 11 01 39.7 +0.1
MORC pmax pmax
comp=Z,27nm,0.9s
MORC MLR MLR
comp=Z,4µm,19.0s
MORC Moravsky Berou 75.34 334 ⇑P P 11 01 40.0 +0.3
MORC Moravsky Berou 75.34 334 *eP* **P 11 01 39.8 +0.1**
MORC Moravsky Berou 75.34 334 P P 11 01 39.7 +0.1
MORC IAmb IAmb 11 01 41.1
comp=Z,26nm,0.9s
BRG Berggiesshubel 75.35 336 *i* P **P 11 01 39.4 -0.2**
comp=Z,9.9nm,1.0s
BRG *i* 11 01 50.1
comp=Z,20nm,1.3s
BRG S **S 11 11 18.0 +1.5**
BRG SS **SS 11 16 12.0 +6.4**
BRG *e*PKKP **PKKPbc 11 21 03.4 +5.1**
comp=Z,2.5nm,0.4s
comp=N,3µm,18.4s
comp=E,1µm,16.4s
comp=Z,4µm,19.9s
BRG Berggiesshubel 75.35 336 *i* P **P 11 01 39.4 -0.2**
BRG *i* 11 01 50.1
BRG S **S 11 11 18.0 +1.5**
BRG SS **SS 11 16 12.0 +6.4**
BRG pmax pmax
comp=Z,10.0nm,1.0s
BRG MLR MLR
comp=N,3µm,18.4s
BRG MLR MLR
comp=E,1µm,16.4s
BRG MLR MLR
comp=Z,4µm,19.9s
BRG Berggiesshubel 75.35 336 *eP* **P 11 01 39.5 -0.2**
comp=Z,9.9nm,1.0s,baz=23,slow=5.8
BRG *eL* L 11 38 47.0
comp=Z,4µm,19.3s
CLZ Clausthal 75.35 339 *eP* **P 11 01 40.2 +0.5**
comp=Z,30nm,1.0s,baz=23,slow=5.8
M49A Liberty Center 75.42 42 P **P 11 01 40.0 -0.2**
baz=324
N48A Decatur 75.45 43 P **P 11 01 41.1 +0.7**
baz=324
FBE Freiberg 75.46 337 *eP* **P 11 01 40.7 +0.4**
comp=Z,40nm,1.3s,baz=23,slow=5.8
PVCC Panska Ves 75.50 336 AMS AMS 11 38 40.0
comp=Z,4µm,17.3s
IBBN Ibbenburen 75.51 341 *eP* **P 11 01 41.0 +0.5**
comp=Z,35nm,1.2s,baz=23,slow=5.8
TLCR 75.54 325 ⇑P **P 11 01 41.1 +0.3**
ARCR ARCALIA 75.54 328 ⇑P **P 11 01 41.3 +0.5**
KECS Kecovo 75.60 331 *eP* **P 11 01 41.7 +0.6**
KECS pmax pmax
comp=Z,9.0nm,0.8s
KECS Kecovo 75.60 331 *eP* **P 11 01 41.7 +0.6**
W39A Magazine 75.61 53 P **P 11 01 42.7 +1.3**
W39A IAmb IAmb 11 01 56.7
comp=Z,52nm,1.6s
W39A Magazine 75.61 53 P **P 11 01 41.7 +0.3**
baz=321
E58A La Victoria 75.64 33 P **P 11 01 40.8 -0.6**
baz=329
H55A Tweed 75.72 36 P **P 11 01 41.5 -0.4**
baz=327
VRI Vrincioaia 75.75 326 ⇑P **P 11 01 42.5 +0.5**
PLOR Plostina 75.79 326 ⇑P **P 11 01 42.3 0.0**
CFR Carcaliu 75.81 325 ⇑P **P 11 01 41.9 -0.3**
DIKM Dikmen 75.83 319 ⇑P **P 11 01 43.5 +0.9**
O48A Farmland 75.87 44 P **P 11 01 42.9 +0.1**
baz=324
JURR Jurilovca 75.87 324 ⇑P **P 11 01 43.1 +0.4**
M50A Fremont 75.89 42 IAMs_20 IAMs_20 11 36 20.9
comp=Z,2µm,19.0s
JCT Junction City 75.91 60 P **P 11 01 44.6 +1.4**
JCT pmax pmax
comp=Z,49nm,1.4s
JCT Junction City 75.91 60 P **P 11 01 44.6 +1.4**
JCT IAmb IAmb 11 01 52.7
comp=Z,48nm,1.4s
JCT Junction City 75.91 60 P **P 11 01 44.5 +1.3**
baz=319,SNR=7.5
PRA Prague 75.95 336 *eP* **P 11 01 43.8 +0.7**
PRA MLR MLR
comp=Z,4µm,18.6s
PRA Prague 75.95 336 *eP* **P 11 01 43.8 +0.7**
PRA AMS AMS 11 38 40.0
comp=Z,4µm,18.6s
S44A Carbondale 75.97 48 IAMs_20 IAMs_20 11 36 53.8
comp=Z,2µm,20.0s
D61A St Aubert, Com 76.00 31 P **P 11 01 43.6 +0.3**
baz=331
D60A Saint Jean D'O 76.00 31 P **P 11 01 43.2 -0.1**
baz=331
PRU Pruhonice 76.00 336 *eP* **P 11 01 43.6 +0.3**
PRU MLR MLR
comp=Z,4µm,17.7s
PRU Pruhonice 76.00 336 *eP* **P 11 01 43.6 +0.3**
PRU AMS AMS 11 38 40.0
comp=Z,4µm,17.7s
VRAC Vranov 76.04 334 ⇑P **P 11 01 44.2 +0.6**
VRAC Vranov 76.04 334 *eP* **P 11 01 43.9 +0.3**
WHTX Lake Whitney, 76.08 57 IAMs_20 IAMs_20 11 39 18.1
comp=Z,1µm,19.0s
WHTX Lake Whitney, 76.08 57 P **P 11 01 45.8 +1.7**
baz=320
G57A Newington 76.10 35 P **P 11 01 44.0 0.0**
baz=328
VYHS Vyhne 76.10 332 *eP* **P 11 01 44.7 +0.7**
VYHS pmax pmax
comp=Z,34nm,1.3s
VYHS Vyhne 76.10 332 *eP* **P 11 01 44.7 +0.7**
CJR Cluj-Napoca 76.12 329 ⇑P **P 11 01 44.6 +0.4**
JAVC Velka Javorina 76.13 333 *eP* **P 11 01 45.5 +1.3**
DOPR Dopca 76.14 327 ⇑P **P 11 01 44.9 +0.6**
TANN Tannenbergstha 76.16 337 *eP* **P 11 01 44.5 +0.2**
comp=Z,19nm,0.9s,baz=23,slow=5.8
MOX Moxa 76.16 338 *eP* **P 11 01 44.6 +0.3**
comp=Z,18nm,0.9s,baz=23,slow=5.8
MOX *eL* L 11 39 36.1
comp=Z,2µm,18.5s
PLN Plauen 76.17 337 *eP* **P 11 01 44.7 +0.3**
comp=Z,21nm,1.0s,baz=23,slow=5.8
J54A Appleton 76.21 38 P **P 11 01 45.2 +0.6**
baz=327
MIAR Mount Ida 76.22 53 P **P 11 01 45.7 +0.8**
MIAR pmax pmax
comp=Z,46nm,1.4s
MIAR MLR MLR
comp=Z,2µm,19.0s
MIAR Mount Ida 76.22 53 P **P 11 01 45.7 +0.8**
MIAR IAmb IAmb 11 01 53.7
comp=Z,46nm,1.4s
MIAR IAMs_20 IAMs_20 11 40 28.2
comp=Z,2µm,19.0s
MIAR Mount Ida 76.22 53 P **P 11 01 46.0 +1.2**
baz=321
GUNZ Gunzen 76.23 337 *eP* **P 11 01 45.2 +0.5**
comp=Z,14nm,0.9s,baz=23,slow=5.8
F59A Saint Guilaume 76.27 33 P **P 11 01 45.1 +0.2**
baz=330
PSZ Piszkesteto 76.29 331 P **P 11 01 45.5 +0.4**
PSZ pmax pmax
comp=Z,23nm,1.0s
PSZ Piszkesteto 76.29 331 ⇓P **P 11 01 45.5 +0.4**
PSZ Piszkesteto 76.29 331 P **P 11 01 45.5 +0.4**
PSZ IAmb IAmb 11 02 07.8
comp=Z,23nm,1.0s
PSZ IAMs_20 IAMs_20 11 41 19.6
comp=Z,2µm,19.0s
E60A Ste Agathe de 76.29 32 P **P 11 01 45.4 +0.3**
baz=330
LCAR Lake Charles 76.29 50 IAMs_20 IAMs_20 11 38 27.7
comp=Z,1µm,18.0s
WERN Wernitzgruen 76.29 337 *eP* **P 11 01 45.6 +0.5**
comp=Z,19nm,0.8s,baz=23,slow=5.8
HARR Harsova 76.30 325 ⇑P **P 11 01 45.1 0.0**
TIRR Tirgusor 76.31 324 P **P 11 01 45.2 0.0**
TIRR pmax pmax
comp=Z,130nm,1.0s
TIRR MLR MLR
comp=Z,5µm,20.0s
TIRR Tirgusor 76.31 324 ⇑P **P 11 01 45.2 0.0**
TIRR Tirgusor 76.31 324 P **P 11 01 45.2 0.0**
KRUC Moravsky 76.32 334 *eP* **P 11 01 45.4 +0.2**
WHAR Wooly Hollow 76.32 52 P **P 11 01 46.1 +0.7**
WHAR IAMs_20 IAMs_20 11 36 18.6
comp=Z,2µm,21.0s
NKC Novy Kostel 76.33 337 *eP* **P 11 01 45.3 +0.1**
NKC MLR MLR
comp=Z,3µm,18.9s
NKC Novy Kostel 76.33 337 *eP* **P 11 01 45.3 +0.1**
NKC AMS AMS 11 39 10.0
comp=Z,3µm,18.9s
MLR Muntele Rosu 76.35 327 P **P 11 01 46.1 +0.5**
MLR pmax pmax
comp=Z,41nm,1.0s
MLR MLR MLR
comp=Z,2µm,21.0s
MLR Muntele Rosu 76.35 327 ⇑P **P 11 01 46.3 +0.7**
MLR Muntele Rosu 76.35 327 P **P 11 01 46.1 +0.5**
MLR IAMs_20 IAMs_20 11 37 24.4
comp=Z,2µm,21.0s
N50A Nevada 76.36 42 P **P 11 01 45.6 0.0**
baz=325
DRGR 76.36 329 P **P 11 01 47.5 +1.9**
DRGR pmax pmax
comp=Z,49nm,1.0s
DRGR 76.36 329 ⇑P **P 11 01 45.6 +0.1**
TREC Trest 76.36 335 *eP* **P 11 01 46.2 +0.7**
TREC MLR MLR
comp=Z,4µm,17.1s
TREC Trest 76.36 335 *eP* **P 11 01 46.2 +0.7**
TREC AMS AMS 11 39 20.0
comp=Z,4µm,17.1s
P48A Milroy 76.39 45 IAMs_20 IAMs_20 11 37 52.4
comp=Z,2µm,21.0s
P48A Milroy 76.39 45 P **P 11 01 45.6 -0.1**
baz=324
UBBA Unterbreizbach 76.39 339 *eP* **P 11 01 45.8 +0.4**
comp=Z,12nm,1.0s,baz=23,slow=5.8
G58A Ormstown 76.41 34 P **P 11 01 45.9 +0.2**
baz=329
PBCC Pribram 76.42 336 *eP* **P 11 01 46.2 +0.4**
PBCC AMS AMS 11 39 10.0
comp=Z,1µm,18.5s
W41B Gary Mavity, V 76.43 52 P **P 11 01 46.5 +0.4**
W41B IAmb IAmb 11 01 55.1
comp=Z,36nm,1.1s
W41B IAMs_20 IAMs_20 11 36 33.5
comp=Z,2µm,22.0s
W41B Gary Mavity, V 76.43 52 P **P 11 01 47.1 +1.1**
baz=321
BUG Bochum--Univer 76.43 341 *eP* **P 11 01 46.0 +0.2**
comp=Z,32nm,1.2s,baz=23,slow=5.8
D62A Allapoint, All 76.48 30 P **P 11 01 46.0 -0.1**
baz=332
SMOL Smolenice 76.51 333 *eP* **P 11 01 47.4 +1.1**
SMOL pmax pmax
comp=Z,15nm,1.0s
SMOL Smolenice 76.51 333 *eP* **P 11 01 47.4 +1.1**
M52A Chesterland 76.51 41 P **P 11 01 46.2 -0.2**
baz=326
USIN University of 76.52 47 P **P 11 01 45.7 -0.8**
N51A Ashland 76.58 42 IAMs_20 IAMs_20 11 37 34.1
comp=Z,2µm,19.0s
N51A Ashland 76.58 42 P **P 11 01 47.5 +0.7**
baz=325
ERPA Erie 76.61 39 P **P 11 01 46.9 -0.1**
baz=326
L53A Girard 76.64 40 P **P 11 01 47.0 -0.1**
baz=326
MANZ Manzenberg 76.64 337 *eP* **P 11 01 47.3 +0.3**
comp=Z,13nm,0.9s,baz=23,slow=5.8
P49A Miami Univ. Ec 76.65 44 P **P 11 01 47.8 +0.5**
baz=324
O50A Cable 76.65 43 P **P 11 01 47.5 +0.3**
baz=325
X40A Basin Creek Fa 76.66 52 P **P 11 01 47.2 -0.1**
X40A IAmb IAmb 11 01 56.8
comp=Z,31nm,1.4s
X40A Basin Creek Fa 76.66 52 P **P 11 01 48.0 +0.7**
baz=321
MODS Modra-Piesok 76.68 333 *eP* **P 11 01 47.4 +0.1**
MODS pmax pmax
comp=Z,38nm,1.1s
MODS Modra-Piesok 76.68 333 *eP* **P 11 01 47.4 +0.1**
VOIR 76.72 327 ⇑P **P 11 01 48.1 +0.5**
F61A St Evariste 76.79 32 P **P 11 01 48.1 +0.2**
baz=331
ROTZ Rotzenmuhle 76.81 337 *eP* **P 11 01 48.4 +0.4**
comp=Z,20nm,1.1s,baz=23,slow=5.8
I57A Carthage 76.83 36 P **P 11 01 48.8 +0.7**
baz=328
ICOR Ion Corvin 76.83 325 ⇑P **P 11 01 48.7 +0.6**
SRO Srobarova 76.87 332 *eP* **P 11 01 49.2 +0.9**
SRO pmax pmax
comp=Z,36nm,0.8s
SRO Srobarova 76.87 332 *eP* **P 11 01 49.2 +0.9**
ZST Bratislava 76.89 333 *eP* **P 11 01 48.9 +0.5**
ZST pmax pmax
comp=Z,41nm,1.1s
ZST Bratislava 76.89 333 *eP* **P 11 01 48.9 +0.5**
MTUR Matau 76.90 327 ⇑P **P 11 01 49.1 +0.4**
ARR Arges 76.93 327 ⇑P **P 11 01 49.2 +0.4**
BUD Budapest 76.94 332 *eP* **P 11 01 49.8 +1.1**
WCI Wyandotte Cave 76.97 46 P **P 11 01 49.7 +0.7**
WCI pmax pmax
comp=Z,33nm,1.0s
WCI Wyandotte Cave 76.97 46 P **P 11 01 49.7 +0.7**
WCI IAmb IAmb 11 01 58.0
comp=Z,33nm,0.9s
WCI Wyandotte Cave 76.97 46 P **P 11 01 49.4 +0.4**
baz=324
Q49A Aurora 77.00 44 P **P 11 01 50.1 +0.9**
baz=324
BANOM Banah 77.00 294 *i* P **P 11 01 49.7 +0.2**
SNR=6.7
BANOM Banah 77.00 294 P **P 11 01 49.9 +0.4**
BANOM P **P 11 01 49.9 +0.4**
KHC Kasperske Hory 77.04 336 P **P 11 01 49.1 -0.2**
KHC pmax pmax
comp=Z,21nm,1.3s
KHC MLR MLR
comp=Z,2µm,18.0s
KHC Kasperske Hory 77.04 336 *eP* **P 11 01 49.9 +0.6**
KHC *ex* x 11 02 11.0
KHC AMS AMS 11 39 40.0
comp=Z,4µm,18.6s
KHC Kasperske Hory 77.04 336 P **P 11 01 49.1 -0.2**
O51A Pataskala 77.11 42 P **P 11 01 49.7 -0.1**
baz=325
WLAR White Oak Lake 77.13 53 IAMs_20 IAMs_20 11 39 39.3
comp=Z,2µm,20.0s
GRA1 Grafenberg Arr 77.14 338 P **P 11 01 49.5 -0.3**
GRF Grafenberg Arr 77.14 338 P **P 11 01 49.5 -0.3**
GRF pmax pmax
comp=Z,74nm,1.2s
GRF Grafenberg Arr 77.14 338 *eP* **P 11 01 50.3 +0.5**
comp=Z,37nm,0.9s,baz=23,slow=5.8
GRF *eL* L 11 41 16.7
comp=Z,2µm,18.9s
WET Wettzell 77.21 336 *eP* **P 11 01 51.0 +0.7**
comp=Z,26nm,0.9s,baz=23,slow=5.8
WET *eL* L 11 40 03.6
comp=Z,3µm,19.4s
GEC2 GERESS Array S 77.27 336 *eP* **P 11 01 50.7 0.0**
comp=Z,13nm,0.9s,baz=23,slow=5.8
GEC2 *eL* L 11 39 57.4
comp=Z,5µm,19.0s
GEC2 GERESS Array S 77.27 336 P **P 11 01 50.4 -0.3**
GEC2 IAmb IAmb 11 01 55.4
comp=Z,25nm,1.2s
GERES GERESS Array B 77.27 336 P **P 11 01 50.9 +0.2**
comp=Z,11nm,0.9s,baz=30,slow=5.4,SNR=44
GERES LR LR 11 40 16.9
comp=Z,5µm,18.3s,baz=18,slow=39
CSKK Cskako 77.29 332 *eP* **P 11 01 49.5 -1.2**
TNS Taunus Mts 77.31 339 *eP* **P 11 01 51.2 +0.4**
comp=Z,27nm,0.8s,baz=23,slow=5.8
TNS *eL* L 11 38 51.2
comp=Z,2µm,21.2s
AHRW Bad Neuenahr-A 77.32 340 *eP* **P 11 01 51.4 +0.6**
comp=Z,26nm,0.9s,baz=23,slow=5.8
E64A Bridgewater 77.46 30 P **P 11 01 51.9 +0.2**
baz=332
J58A Remsen 77.46 36 P **P 11 01 52.2 +0.4**
baz=329
MEM Membach 77.49 341 ⇑P **P 11 01 51.9 +0.2**
comp=Z,42nm,1.0s
CONA Conrad Observa 77.49 334 *i* P **P 11 01 52.9 +1.0**
comp=Z,23nm,0.8s,SNR=7.0
MSFE Esma-Masafi 77.50 294 P **P 11 01 52.6 +0.3**
SOP Sopron 77.51 333 *eP* **P 11 01 51.8 -0.1**
Q50A Georgetown 77.55 44 P **P 11 01 53.5 +1.2**
baz=325
GZR Gura Zlata 77.56 328 ⇑P **P 11 01 52.2 -0.1**
T47A Sharon Grove 77.57 47 P **P 11 01 52.9 +0.5**
T47A IAmb IAmb 11 02 01.7
comp=Z,31nm,1.0s
T47A IAMs_20 IAMs_20 11 38 33.1
comp=Z,1µm,20.0s
WSAR Wadi Sarin 77.58 291 P **P 11 01 53.7 +1.0**
BSTI Sart Tilman 77.61 341 P **P 11 01 53.3 +0.9**
G62A West of Eustis 77.61 32 P **P 11 01 52.8 +0.3**
baz=331
O53A New Philadelph 77.63 41 P **P 11 01 53.3 +0.5**
baz=326
M55A Ridgway 77.66 39 P **P 11 01 52.8 -0.2**
baz=327
F63A Nahmakanta, Br 77.67 31 P **P 11 01 53.1 +0.2**
baz=332
J59A Piesco 77.67 35 IAMs_20 IAMs_20 11 40 47.3
comp=Z,963nm,20.0s
MPLH Magyarpolny 77.68 333 ⇑*eP* **P 11 01 53.3 +0.4**
Q51A Peebles 77.69 43 IAMs_20 IAMs_20 11 39 32.7
comp=Z,1µm,20.0s
Q51A Peebles 77.69 43 P **P 11 01 53.2 +0.2**
baz=325
H61A Lyndonville 77.71 33 P **P 11 01 53.1 0.0**
baz=330
BZS Buzias 77.75 329 ⇑P **P 11 01 53.1 -0.2**
NEF NEVSHA 77.76 324 *eP* **P 11 01 53.1 -0.3**
833A Chaparral WMA, 77.76 61 IAMs_20 IAMs_20 11 39 34.1
comp=Z,942nm,20.0s
F64A Sherman 77.78 30 P **P 11 01 53.3 -0.2**
baz=332
COPA Copaceanca 77.78 326 ⇑P **P 11 01 52.9 -0.6**
UOSS Minazif 77.79 294 *i* P **P 11 01 53.7 -0.1**
SNR=8.8
UOSS Minazif 77.79 294 P **P 11 01 53.6 -0.3**
UOSS IAmb IAmb 11 01 54.8
comp=Z,32nm,1.0s
UOSS Minazif 77.79 294 IAMs_20 IAMs_20 11 39 57.3
comp=Z,945nm,19.0s
UOSS Minazif 77.79 294 P **P 11 01 54.0 +0.2**
UOSS P **P 11 01 54.0 +0.2**
RAZG Razgrad 77.79 325 ⇑P **P 11 01 53.6 0.0**
S49A Springfield 77.80 45 P **P 11 01 54.5 +0.8**
baz=324
BCLA Clavier 77.82 341 P **P 11 01 53.7 +0.1**
comp=Z,17nm,0.9s
R50A Paris 77.84 45 IAMs_20 IAMs_20 11 38 46.0
comp=Z,2µm,20.0s
R50A Paris 77.84 45 P **P 11 01 54.3 +0.4**
baz=324
BGES Gesves 77.89 342 ⇑P **P 11 01 53.7 -0.3**
WVT Waverly 77.90 48 P **P 11 01 56.6 +2.3**
WVT pmax pmax
comp=Z,18nm,1.1s
WVT MLR MLR
comp=Z,2µm,19.0s
WVT Waverly 77.90 48 P **P 11 01 56.6 +2.3**
WVT IAmb IAmb 11 02 03.2
comp=Z,18nm,1.1s
WVT Waverly 77.90 48 IAMs_20 IAMs_20 11 38 14.0
comp=Z,2µm,19.0s
WVT Waverly 77.90 48 P **P 11 01 54.8 +0.5**
baz=323
HATD Hatta, Dubai 77.92 294 *i* P **P 11 01 55.1 +0.5**
SNR=11
HATD Hatta, Dubai 77.92 294 P **P 11 01 55.3 +0.7**
SNR=7.8
HATD P **P 11 01 55.3 +0.7**
SNR=7.8
MOA Molln 78.02 335 *i* P **P 11 01 55.3 +0.5**
comp=Z,24nm,1.1s
BMRD Maredsous 78.04 342 ⇑P **P 11 01 55.2 +0.4**
comp=Z,30nm,1.0s
O54A Avella 78.05 41 IAMs_20 IAMs_20 11 36 51.9
comp=Z,2µm,18.0s
ACCN Adirondack Com 78.06 35 IAMs_20 IAMs_20 11 38 42.3
comp=Z,1µm,22.0s
ASHO Ashiyiah 78.07 294 *i* P **P 11 01 55.8 +0.4**
SNR=11
ASHO Ashiyiah 78.07 294 P **P 11 01 55.9 +0.4**
ASHO P **P 11 01 55.9 +0.4**
ASHO P **PcP 11 02 00.0 -5.0**
SNR=6.3
ASHO P **PcP 11 02 00.0 -5.0**
SNR=6.3
NAZ Nazwa, Dubai 78.08 294 *i* P **P 11 01 55.8 +0.4**
SNR=8.3
NAZ Nazwa, Dubai 78.08 294 P **P 11 01 60.0 +4.5**
SNR=5.3
NAZ P **P 11 01 60.0 +4.5**
SNR=5.3
BR131 Keskin Array S 78.11 318 P **P 11 01 55.2 -0.4**
BR131 pmax pmax
comp=Z,30nm,1.0s
BR131 Keskin Array S 78.11 318 P **P 11 01 55.2 -0.4**
BR131 IAmb IAmb 11 02 00.6
comp=Z,30nm,1.0s
BR131 Keskin Array S 78.11 318 P **P 11 01 55.8 +0.1**
SNR=22
BR131 P **P 11 01 55.8 +0.1**
SNR=22
BRTR Keskin Array B 78.12 318 P **P 11 01 55.7 +0.1**
comp=Z,17nm,0.9s,baz=55,slow=2.9,SNR=63
BRTR LR LR 11 42 57.7
comp=Z,555nm,18.1s,baz=356,slow=41
HERR Herculane 78.13 328 ⇑P **P 11 01 54.9 -0.5**
HOQ Hoqain 78.13 292 P **P 11 01 56.2 +0.4**
HOQ P **P 11 01 56.2 +0.4**
N55A Marion Center 78.14 40 P **P 11 01 57.0 +1.3**
baz=327
R51A Hillsboro 78.17 44 P **P 11 01 56.5 +0.8**
baz=325
G64A Maxfield 78.18 31 P **P 11 01 56.4 +0.7**
baz=332
MORH Mrgy, Hungar 78.19 331 *eP* **P 11 01 55.4 -0.3**
MORH Mrgy, Hungar 78.19 331 *eP* **P 11 01 55.0 -0.7**
SOHO SOHO 78.19 293 P **P 11 01 56.8 +0.7**
SNR=6.0
SOHO P **P 11 01 56.8 +0.7**
SNR=6.0
ARSA Arzberg 78.20 334 *i* P **P 11 01 56.6 +0.8**
comp=Z,19nm,1.0s,SNR=9.0
Q52A Bidwell 78.22 43 P **P 11 01 56.6 +0.6**
baz=325
T49A Edmonton 78.23 46 IAMs_20 IAMs_20 11 39 46.4
comp=Z,1µm,20.0s
T49A Edmonton 78.23 46 P **P 11 01 57.1 +1.0**
baz=324
DOU Dourbes 78.27 342 P **P 11 01 56.1 0.0**
S50A Richmond 78.30 45 P **P 11 01 57.3 +0.8**
baz=325
N56A West Decatur 78.32 39 P **P 11 01 57.4 +0.9**
baz=327
WLF Walferdange 78.35 341 *eP* **P 11 01 57.0 +0.4**
comp=Z,24nm,1.2s,baz=23,slow=5.8
ANTO Ankara 78.36 319 P **P 11 01 57.3 +0.4**
ANTO pmax pmax
comp=Z,19nm,0.8s
ANTO Ankara 78.36 319 P **P 11 01 57.3 +0.4**
ANTO IAmb IAmb 11 02 21.0
comp=Z,19nm,0.8s
OXF Oxford 78.40 50 P **P 11 01 57.6 +0.5**
OXF pmax pmax
comp=Z,40nm,1.1s
OXF Oxford 78.40 50 P **P 11 01 57.6 +0.5**
OXF IAmb IAmb 11 02 06.1
comp=Z,40nm,1.1s
OXF Oxford 78.40 50 P **P 11 01 58.1 +1.1**
baz=323
M57A Sunshine Farm, 78.44 38 P **P 11 01 57.2 0.0**
baz=328
PUNG Punghina 78.47 328 ⇑P **P 11 01 56.6 -0.7**
P54A Burton 78.48 41 P **P 11 01 58.0 +0.5**
baz=326
O55A Ligonier 78.49 40 P **P 11 01 58.5 +1.0**
baz=327
STU Stuttgart 78.49 338 IAMs_20 IAMs_20 11 37 48.7
comp=Z,2µm,22.0s
RJOB Jochberg 78.52 336 *eP* **P 11 01 58.4 +0.8**
comp=Z,9.7nm,0.9s,baz=23,slow=5.8
FUR Furstenfeldbru 78.53 337 *eP* **P 11 01 58.2 +0.6**
comp=Z,37nm,0.9s,baz=23,slow=5.8
FUR *eL* L 11 43 01.7
comp=Z,2µm,18.1s

BEHE	Becsehely	78.54	333	eP		P		11 01 45.1	-13
BEHE	Becsehely	78.54	333	eP		P		11 02 01.2	+3.6
MDUB	Mudurnu	78.54	320		P	P		11 01 58.2	+0.3
JMDO	Jabal Madar	78.55	291		P	P		11 01 58.8	+0.7
JMDO					P	P		11 01 58.8	+0.7
ASUD	Al Ashush, Dub	78.55	294	i	P	P		11 01 59.0	+0.9
	SNR=15								
ASUD	Al Ashush, Dub	78.55	294		P	P		11 01 58.7	+0.7
ASUD					P	PcP		11 02 03.0	-4.0
	SNR=6.1								
R52A	Catlettsburg	78.57	43		P	P		11 01 58.7	+0.8
	baz=325								
GAZ	Gaziantep	78.58	315		P	P		11 01 58.2	0.0
GAZ					IAMs_20	IAMs_20		11 42 16.9	
	comp=Z,889nm,18.0s								
U49A	Red Boiling Sp	78.59	47		P	P		11 01 58.5	+0.5
	baz=324								
T50A	Nancy	78.62	46		P	P		11 01 59.0	+0.7
	baz=324								
Q53A	Leroy	78.64	42		P	P		11 01 58.2	-0.2
	baz=326								
PLVB	Pleven	78.64	326	⇑	P	P		11 01 58.2	0.0
CLTN	Cedars of Leba	78.66	47		P	P		11 01 58.6	+0.1
PLAL	Pickwick Lake	78.69	49		P	P		11 01 59.7	+1.0
PLAL					IAmb	IAmb		11 02 07.2	
	comp=Z,30nm,1.2s								
PLAL					IAMs_20	IAMs_20		11 38 16.0	
	comp=Z,1µm,20.0s								
S51A	Beattyville	78.70	44		P	P		11 01 59.7	+1.0
	baz=325								
V48A	Smith Brothers	78.70	48		P	P		11 01 59.4	+0.6
V48A					IAmb	IAmb		11 02 07.5	
	comp=Z,20nm,1.1s								
V48A					IAMs_20	IAMs_20		11 38 48.2	
	comp=Z,1µm,20.0s								
MCWV	Mont Chateau	78.71	41		P	P		11 01 59.7	+1.0
	baz=327								
O56A	Blue Knob Stat	78.75	40		IAMs_20	IAMs_20		11 41 59.3	
	comp=Z,1µm,20.0s								
O56A	Blue Knob Stat	78.75	40		P	P		11 01 59.7	+0.8
	baz=327								
FRGS	Fruska Gora	78.76	330	eP		P		11 01 56.9	-2.0
N57A	Milroy	78.76	39		P	P		11 01 59.3	+0.3
	baz=328								
ARQ	Araqi	78.80	293		P	P		11 02 00.0	+0.6
ARQ					P	P		11 02 00.0	+0.6
AJN	Ajban	78.80	294		P	P		11 02 00.5	+1.1
	SNR=5.1								
BSY	Bisya	78.82	292		P	P		11 02 00.6	+0.9
BSY					P	P		11 02 00.6	+0.9
Q54A	Coxs Mills	78.84	42		P	P		11 02 00.1	+0.7
	baz=326								
P55A	Reedsville	78.85	41		P	P		11 01 59.5	0.0
	baz=327								
SOKA	Soboth	78.87	334	i	P	P		11 02 00.0	+0.5
	comp=Z,30nm,0.9s,SNR=7.3								
LMN	Caledonia Moun	78.92	28		IAMs_20	IAMs_20		11 43 38.3	
	comp=Z,1µm,20.0s								
KBA	Koelnbreinsper	78.98	335	i	P	P		11 02 01.3	+1.0
	comp=Z,76nm,0.7s,SNR=18								
T51A	Gray	79.09	45		P	P		11 02 00.8	0.0
	baz=325								
EMMW	East Machias	79.09	30		IAMs_20	IAMs_20		11 40 08.3	
	comp=Z,2µm,20.0s								
BFO	Black Forest	79.11	339		P	P		11 02 00.0	-0.8
BFO					pmax	pmax			
	comp=Z,23nm,1.1s								
BFO					MLR	MLR			
	comp=Z,2µm,20.0s								
BFO	Black Forest	79.11	339	eP		P		11 02 01.0	+0.3
	comp=Z,16nm,1.0s,baz=23,slow=5.8								
BFO				eL		L		11 40 05.6	
	comp=Z,2µm,20.3s								
BFO	Black Forest	79.11	339		P	P		11 01 60.0	-0.8
BFO					IAmb	IAmb		11 02 23.6	
	comp=Z,23nm,1.1s								
BFO					IAMs_20	IAMs_20		11 40 05.1	
	comp=Z,2µm,20.0s								
U50A	Jamestown	79.11	46		P	P		11 02 01.4	+0.4
	baz=324								
L61A	Hillsdale 1, H	79.12	35		P	P		11 02 01.4	+0.5
	baz=330								
V49A	McMinnville	79.13	47		P	P		11 02 01.5	+0.5
	baz=324								
OBKA	Obir	79.16	334	i	P	P		11 02 00.9	-0.3
	comp=Z,14nm,0.8s								
Q55A	Buckhannon	79.16	41		P	P		11 02 00.9	-0.3
	baz=326								
WATA	Walderalm	79.22	336	i	P	P		11 02 02.3	+0.8
	comp=Z,35nm,1.1s,SNR=8.2								
P56A	Dayton Farm, R	79.27	40		P	P		11 02 02.1	+0.3
	baz=327								
UBR	Ueberruh	79.28	337	eL		L		11 41 21.8	
	comp=Z,2µm,18.4s								
RETA	Reutte	79.29	337	i	P	P		11 02 02.4	+0.6
	comp=Z,14nm,0.8s								
MYKA	Terra Mystica	79.31	335	i	P	P		11 02 02.0	+0.1
	comp=Z,26nm,1.2s								
MOTA	Moosalm	79.33	337	i	P	P		11 02 02.8	+0.6
	comp=Z,42nm,1.0s,SNR=14								
T52A	Hallie	79.42	44		P	P		11 02 01.2	-1.4
	baz=325								
SQTA	Sankt Quirin	79.42	337	i	P	P		11 02 03.5	+0.9
	comp=Z,31nm,1.0s,SNR=12								
R54A	Victor	79.44	42		P	P		11 02 02.1	-0.7
	baz=326								
W49A	Belvidere	79.47	48		P	P		11 02 03.4	+0.5
	baz=324								
ECH	Echery	79.49	340		P	P		11 02 03.0	+0.1
ECH					pmax	pmax			
	comp=Z,33nm,1.1s								
ECH	Echery	79.49	340		P	P		11 02 03.0	+0.1
ECH					IAmb	IAmb		11 02 07.7	
	comp=Z,33nm,1.1s								
ABTA	Abfaltersbach	79.51	336	i	P	P		11 02 03.3	+0.2
	comp=Z,25nm,1.0s,SNR=7.6								
CRES	Cresnjev	79.52	333	eP		P		11 02 02.8	-0.2
U51A	La Follette	79.53	45		P	P		11 02 04.8	+1.5
	baz=325								
SWET	Sewanee	79.56	47		P	P		11 02 03.2	-0.3
LJU	Ljubljana	79.59	334	eP		P		11 02 03.0	-0.4
V50A	Pikevile	79.59	47		P	P		11 02 05.4	+1.8
	baz=324								
S54A	Dingess, Beckl	79.61	43		P	P		11 02 05.3	+1.6
	baz=326								
TZTN	Tazewell	79.61	45		P	P		11 02 05.0	+1.3
	baz=325								
X48A	Hartselle	79.62	49		IAMs_20	IAMs_20		11 38 54.7	
	comp=Z,1µm,20.0s								
VBMS	Vicksburg	79.63	52		IAMs_20	IAMs_20		11 41 41.5	
	comp=Z,1µm,21.0s								
P57A	Homestead Farm	79.64	40		IAMs_20	IAMs_20		11 42 43.8	
	comp=Z,1µm,19.0s								
DIVS	Divibare	79.64	330	eP		P		11 02 03.3	-0.5
MHTO	MHTO	79.66	290		P	P		11 02 05.1	+0.9
	SNR=8.8								
MHTO					P	P		11 02 05.1	+0.9
	SNR=8.8								
O59A	Robesonia	79.69	38		P	P		11 02 05.1	+1.0
	baz=328								
DAVA	Damuels	79.70	337	i	P	P		11 02 05.0	+0.8
	comp=Z,39nm,0.9s,SNR=13								
T53A	Wise	79.72	44		P	P		11 02 05.6	+1.3
	baz=326								
FETA	Feichten	79.73	337	i	P	P		11 02 05.1	+0.7
	comp=Z,28nm,1.0s,SNR=9.3								
R55A	Marlinton	79.73	42		P	P		11 02 05.5	+1.0
	baz=327								
VTS	Vitosha	79.82	327		P	P		11 02 04.8	-0.1
VTS					pmax	pmax			
	comp=Z,45nm,1.0s								
VTS					MLR	MLR			
	comp=Z,2µm,18.0s								
VTS	Vitosha	79.82	327	⇑	P	P		11 02 04.8	-0.1
VTS	Vitosha	79.82	327		P	P		11 02 04.8	-0.1
U52A	Thorn Hill	79.82	45		P	P		11 02 06.1	+1.2
	baz=325								
V51A	Loudon	79.84	46		IAMs_20	IAMs_20		11 40 55.0	
	comp=Z,2µm,20.0s								
V51A	Loudon	79.84	46		P	P		11 02 06.6	+1.7
	baz=325								
W50A	Signal Mountai	79.87	47		P	P		11 02 05.8	+0.7
W50A					IAMs_20	IAMs_20		11 39 54.9	
	comp=Z,1µm,20.0s								
W50A	Signal Mountai	79.87	47		P	P		11 02 07.0	+1.9
	baz=324								
CEY	Cerknica	79.89	334	eP		P		11 02 03.4	-1.7
STAL	STALIGIAL	79.90	335		P	P		11 02 04.5	-0.6
R56A	Bull Pasture M	79.94	41		P	P		11 02 06.7	+1.1
	baz=327								
BLY	Banja Luka	79.96	332	eP		P		11 02 02.9	-2.5
TAOE	Nuku Hiva Isla	79.98	116	eLR		LR		11 27 02.4	
	comp=Z,3µm,22.5s,baz=327								
S55A	Lewisburg	79.99	42		P	P		11 02 06.7	+0.9
	baz=326								
BBLS	Lazići	80.04	330	eP		P		11 02 06.2	+0.2
CPCT	Cooper Cave	80.05	46		IAMs_20	IAMs_20		11 40 41.5	
	comp=Z,1µm,19.0s								
T54A	Tazewell	80.10	43		P	P		11 02 07.3	+0.9
	baz=326								
L63A	North Scituate	80.14	34		P	P		11 02 07.3	+0.9
	baz=331								
V52A	Sevierville	80.16	45		IAMs_20	IAMs_20		11 41 24.5	
	comp=Z,1µm,19.0s								
V52A	Sevierville	80.16	45		P	P		11 02 08.4	+1.7
	baz=325								
W51A	Cleveland	80.17	47		P	P		11 02 08.1	+1.3
	baz=325								
P59A	Jarrettsville	80.19	39		P	P		11 02 08.3	+1.6
	baz=328								
U53A	Fall Branch	80.21	45		P	P		11 02 08.0	+1.0
	baz=326								
FUORN	Ofenpass-Fuorn	80.22	337		P	P		11 02 07.2	+0.1
FUORN					IAmb	IAmb		11 02 12.9	
	comp=Z,38nm,1.1s								
Q58A	Fox Den Farm,	80.23	40		P	P		11 02 07.8	+0.9
	baz=328								
FPAL	Fort Paine	80.26	48		IAMs_20	IAMs_20		11 39 37.3	
	comp=Z,895nm,19.0s								
MGRS	Mrkonjic Grad	80.29	332	eP		P		11 02 08.2	+0.9
CTI	Castel Tesino	80.39	336		P	P		11 02 07.2	-0.7
CTI					pmax	pmax			
	comp=Z,32nm,1.1s								
CTI					MLR	MLR			
	comp=Z,4µm,18.0s								
CTI	Castel Tesino	80.39	336		P	P		11 02 07.2	-0.7
CTI					IAmb	IAmb		11 02 26.1	
	comp=Z,32nm,1.1s								
Y49A	Blount Mountai	80.41	49		P	P		11 02 09.6	+1.5
R57A	Stanardsville	80.42	41		P	P		11 02 09.1	+1.1
	baz=327								
U54A	Nelsons Funny	80.43	44		IAMs_20	IAMs_20		11 40 47.3	
	comp=Z,2µm,22.0s								
BLA	Blacksburg	80.49	43		P	P		11 02 09.6	+1.1
	baz=327								
TUE	Stuetta	80.59	338		P	P		11 02 08.1	-0.9
W52A	Murphy	80.62	46		IAMs_20	IAMs_20		11 41 09.6	
	comp=Z,2µm,20.0s								
S57A	Dark Hollow, R	80.68	41		P	P		11 02 10.5	+1.1
	baz=327								
Q59A	Harwood	80.73	39		P	P		11 02 10.7	+1.1
	baz=328								
M65A	Busby, Falmout	80.75	34		P	P		11 02 10.2	+0.4
	baz=331								
LRAL	Lakeview Retre	80.78	49		IAMs_20	IAMs_20		11 38 08.5	
	comp=Z,1µm,20.0s								
LRAL	Lakeview Retre	80.78	49		P	P		11 02 11.0	+0.9
	baz=324								
UPM	Unac-Piva	80.80	330	eP		P		11 02 09.9	-0.3
U55A	TA2, Sparta	80.80	43		P	P		11 02 10.8	+0.7
	baz=326								
TEOL	Teolo	81.02	336		P	P		11 02 10.8	-0.3
X52A	Dahlonega	81.03	46		P	P		11 02 12.1	+0.7
	baz=325								
Y51A	Rockmart	81.04	48		P	P		11 02 11.7	+0.2
	baz=325,SNR=5.4								
ISP	Isparta	81.05	319		IAMs_20	IAMs_20		11 44 04.6	
	comp=Z,822nm,19.0s								
Z50A	Ashland	81.14	49		P	P		11 02 13.5	+1.5
Z50A					IAmb	IAmb		11 02 20.6	
	comp=Z,42nm,1.1s								
Z50A					IAMs_20	IAMs_20		11 39 13.8	
	comp=Z,1µm,18.0s								
Z50A	Ashland	81.14	49		P	P		11 02 12.5	+0.5
	baz=324,SNR=5.1								
BG3	Lake Jocassee	81.17	46		IAMs_20	IAMs_20		11 42 06.1	
	comp=Z,1µm,20.0s								
T57A	Hurt	81.18	42		IAMs_20	IAMs_20		11 40 14.9	
	comp=Z,1µm,20.0s								
T57A	Hurt	81.18	42		P	P		11 02 13.1	+0.9
	baz=327								
BRY	Bratogost	81.19	330	eP		P		11 02 10.2	-2.0
SENIN	Lac Senin/Sane	81.19	339		P	P		11 02 12.9	+0.6
V55A	Taylorsville	81.26	44		IAMs_20	IAMs_20		11 41 31.2	
	comp=Z,2µm,22.0s								
Q61A	Milford	81.26	38		P	P		11 02 11.7	-0.7
	baz=329								
RAO	Raoul Island	81.30	157		LR	LR		11 33 34.5	
	comp=Z,1µm,19.2s,baz=348,slow=32								
PDG	Podgorica	81.37	329	eP		P		11 02 12.8	-0.2
X53A	Estanollee	81.39	46		P	P		11 02 13.7	+0.4
	baz=325								
W54A	Cherokee Point	81.44	45		P	P		11 02 12.6	-0.9
	baz=326								
Z51A	Franklin	81.46	48		P	P		11 02 14.8	+1.1
Z51A					IAmb	IAmb		11 02 22.2	
	comp=Z,27nm,1.1s								
Z51A					IAMs_20	IAMs_20		11 40 13.1	
	comp=Z,2µm,20.0s								
Y52A	Lilburn	81.55	47		IAMs_20	IAMs_20		11 40 56.5	
	comp=Z,2µm,20.0s								
Y52A	Lilburn	81.55	47		P	P		11 02 14.2	0.0
	baz=325								
STKA	Stephens Creek	81.64	193		P	P		11 02 16.4	+2.2
STKA					pmax	pmax			
	comp=Z,6.0nm,1.7s								
STKA					MLR	MLR			
	comp=Z,200nm,19.0s								
STKA	Stephens Creek	81.64	193		P	P		11 02 16.3	+2.0
	comp=Z,1.5nm,0.4s,baz=355,slow=11,SNR=4.3								
STKA					LR	LR		11 38 39.6	
	comp=Z,526nm,19.8s,baz=8.2,slow=36								
STKA	Stephens Creek	81.64	193		P	P		11 02 16.4	+2.2
PAULI	Pauline	81.83	45		IAMs_20	IAMs_20		11 41 22.5	
	comp=Z,2µm,20.0s								
PPT	Papeete	81.87	129		LR	LR		11 36 54.7	
	comp=Z,524nm,18.7s,baz=312,slow=34								
PPT2	Papeete2	81.88	129	eS		S		11 12 27.2	0.0
	comp=Z,206nm,22.2s								
PPT2	Papeete2	81.88	129	eLR		LR		11 27 45.4	
	comp=Z,614nm,22.0s								
U58A	Oxford	82.00	42		P	P		11 02 17.4	+0.9
	baz=328								
250A	Grady	82.00	50		P	P		11 02 18.9	+2.4
250A					IAMs_20	IAMs_20		11 43 09.7	
	comp=Z,904nm,19.0s								
CSS	Mathiatis	82.19	316		P	P		11 02 17.1	-0.4
CSS					IAmb	IAmb		11 02 32.8	
	comp=Z,20nm,0.7s								
152A	Waverly Hall	82.21	48		IAMs_20	IAMs_20		11 40 47.0	
	comp=Z,2µm,20.0s								
GOGA	Godfrey	82.21	47		IAMs_20	IAMs_20		11 41 36.8	
	comp=Z,1µm,20.0s								
GOGA	Godfrey	82.21	47		P	P		11 02 18.7	+1.2
	baz=325								
Y54A	Tignall	82.21	46		P	P		11 02 18.9	+1.3
	baz=326								
ELL	Elmali	82.21	319		P	P		11 02 19.5	+1.8
ELL					pmax	pmax			
	comp=Z,115nm,1.1s								
ELL	Elmali	82.21	319		P	P		11 02 19.5	+1.8
V58A	Windy Hill, Pi	82.25	42		IAMs_20	IAMs_20		11 39 36.3	
	comp=Z,1µm,21.0s								
V58A	Windy Hill, Pi	82.25	42		P	P		11 02 18.5	+0.8
	baz=327								
BRAL	Brewton	82.25	51		IAMs_20	IAMs_20		11 44 36.4	
	comp=Z,1µm,19.0s								
BRAL	Brewton	82.25	51		P	P		11 02 18.8	+1.0
	baz=324								
Z53A	Monticello	82.27	47		P	P		11 02 18.2	+0.4
	baz=325								
VLC	Villacollemand	82.47	336		P	P		11 02 19.0	+0.2
JSC	Jenkinsville	82.53	45		IAMs_20	IAMs_20		11 41 42.2	
	comp=Z,868nm,20.0s								
Y55A	Saluda	82.54	45		P	P		11 02 18.4	-0.9
	baz=326								
BNI	Bardonecchia	82.58	339		P	P		11 02 20.0	+0.5
BNI					pmax	pmax			
	comp=Z,27nm,1.0s								
BNI	Bardonecchia	82.58	339		P	P		11 02 20.0	+0.5
BNI					IAmb	IAmb		11 02 40.5	
	comp=Z,27nm,1.0s								
Z54A	Sparta	82.65	46		P	P		11 02 21.1	+1.3
	baz=326								
V59A	Middlesex	82.66	42		P	P		11 02 19.4	-0.5
	baz=328								
MURB	Monte Urbino	82.71	334		P	P		11 02 21.8	+1.6
252A	Lumpkin	82.74	49		P	P		11 02 21.2	+0.8
	baz=325								
W58A	Raeford	82.84	43		P	P		11 02 20.4	-0.5
	baz=327								
NRCA	Norcia	82.93	334		P	P		11 02 21.8	+0.5
253A	Americus	82.99	48		IAMs_20	IAMs_20		11 41 09.7	
	comp=Z,2µm,20.0s								
352A	Blakely	83.07	49		IAMs_20	IAMs_20		11 40 21.9	
	comp=Z,1µm,20.0s								
352A	Blakely	83.07	49		P	P		11 02 23.2	+1.1
	baz=325								
X58A	Rowland	83.19	43		IAMs_20	IAMs_20		11 39 51.2	
	comp=Z,1µm,21.0s								
CNNC	Cliffs of the	83.26	42		IAMs_20	IAMs_20		11 41 38.9	
	comp=Z,1µm,20.0s								
155A	Kite	83.33	47		P	P		11 02 24.8	+1.4
	baz=326								
254A	Abbeville	83.49	48		P	P		11 02 24.9	+0.6
	baz=326								
TIGA	Tifton	83.76	48		IAMs_20	IAMs_20		11 41 44.1	
	comp=Z,2µm,21.0s								
TIGA	Tifton	83.76	48		P	P		11 02 26.9	+1.2
	baz=326								
Y59A	Loris	83.87	43		IAMs_20	IAMs_20		11 43 04.3	
	comp=Z,1µm,18.0s								
LFF	La Frestale	83.97	343	eP		P		11 02 28.6	+2.1
LFF					pmax	pmax			
	comp=Z,3.0nm,0.2s								
NHSC	New Hope	84.01	45		IAMs_20	IAMs_20		11 40 06.2	
	comp=Z,1µm,20.0s								
CAN	Canberra	84.26	186		IAMs_20	IAMs_20		11 45 16.6	
	comp=Z,972nm,20.0s								
SANT	Santorini	84.39	322		IAMs_20	IAMs_20		11 47 20.3	
	comp=Z,1µm,18.0s								
UNM	Universidad Na	84.73	67		IAMs_20	IAMs_20		11 46 46.5	
	comp=Z,782nm,19.0s								
ITM	Ithomi	85.06	325		IAMs_20	IAMs_20		11 47 17.1	
	comp=Z,1µm,20.0s								
456A	Hilliard	85.11	47		IAMs_20	IAMs_20		11 42 55.7	
	comp=Z,1µm,20.0s								
RAYN	Ar Rayn	85.13	301		P	P		11 02 32.6	-0.2
RAYN	Ar Rayn	85.13	301	i	P	P		11 02 33.1	+0.3
	SNR=12								
RAYN	Ar Rayn	85.13	301		P	P		11 02 32.6	-0.2
656A	Willston	85.98	48		IAMs_20	IAMs_20		11 42 42.9	
	comp=Z,1µm,20.0s								
TBI	Tubuai	86.78	132	eS		S		11 13 14.7	-1.0
	comp=Z,406nm,24.8s								
TBI	Tubuai	86.78	132	eLR		LR		11 30 04.6	
	comp=Z,2µm,22.8s,baz=327								
DWPF	Disney Wildern	87.56	48		IAMs_20	IAMs_20		11 44 22.7	
	comp=Z,1µm,20.0s								
SOCY	Socotra	88.79	287		IAMs_20	IAMs_20		11 44 40.7	
	comp=Z,1µm,20.0s								
URZ	Urewera	88.89	164		LR	LR		11 35 22.1	
	comp=Z,848nm,21.8s,baz=21,slow=30								
060A	Indiantown	88.97	48		IAMs_20	IAMs_20		11 45 15.2	
	comp=Z,1µm,19.0s								
061Z	Ochoppi	89.68	49		IAMs_20	IAMs_20		11 44 47.0	
	comp=Z,957nm,20.0s								
MTE	Manteigas	89.78	348		IAMs_20	IAMs_20		11 47 58.6	
	comp=Z,956nm,20.0s								
ESDC	Sonseca Array	89.93	345		P	P		11 02 55.2	-0.5
	comp=Z,0.8nm,0.4s,baz=16,slow=3.7,SNR=7.3								
ESDC					LR	LR		11 48 49.3	
	comp=Z,868nm,20.2s,baz=15,slow=39								
KEST	Kesra	90.60	334		P	P		11 03 00.1	+1.2
	comp=Z,4.0nm,0.6s,baz=193,slow=11,SNR=2.5								
KEST					LR	LR		11 49 35.6	
	comp=Z,2µm,18.4s,baz=332,slow=40								
CART	Cartagena	91.40	342		IAMs_20	IAMs_20		11 50 07.5	
	comp=Z,986nm,20.0s								
RPZ	Rata Peaks	93.30	169		LR	LR		11 38 10.6	
	comp=Z,743nm,21.8s,baz=356,slow=31								
TGUH	Tegucigalpa,Un	95.89	61		IAMs_20	IAMs_20		11 50 08.2	
	comp=Z,677nm,21.0s								
SC01	Santiago de lo	100.04	45		IAMs_20	IAMs_20		11 55 08.8	
	comp=Z,1µm,20.0s								
SDDR	Presa de Saban	100.17	45		IAMs_20	IAMs_20		11 55 17.2	
	comp=Z,737nm,19.0s								
FURI	Furi	100.68	297		IAMs_20	IAMs_20		11 55 28.7	
	comp=Z,907nm,18.0s								
TAM	Tamanrasset	103.86	332		IAMs_20	IAMs_20		11 57 11.4	
	comp=Z,1µm,20.0s								
SMRT	St. Maarten	104.59	39		IAMs_20	IAMs_20		11 51 28.6	
	comp=Z,888nm,20.0s								
SABA	Saba	104.91	39		IAMs_20	IAMs_20		11 59 55.0	
	comp=Z,890nm,20.0s								
SEUS	St. Eustatius	105.13	39		IAMs_20	IAMs_20		11 56 02.9	
	comp=Z,890nm,20.0s								
SDV	Santo Domingo	109.18	50		IAMs_20	IAMs_20		11 57 52.7	
	comp=Z,643nm,21.0s								
KMBO	Kilima Mbogo	109.50	292		IAMs_20	IAMs_20		11 57 57.8	
	comp=Z,782nm,21.0s								
TORD	Torodi Ar. Bea	114.11	333		PP	PP		11 09 25.4	-4.3
	comp=Z,1.8nm,0.9s,baz=2.9,slow=8.1,SNR=5.4								
ABPO	Ambohimpanom	116.55	271		IAMs_20	IAMs_20		11 58 13.9	
	comp=Z,653nm,20.0s								
SAML	Samuel	128.18	53		IAMs_20	IAMs_20		12 14 06.0	
	comp=Z,466nm,19.0s								
LPAZ	La Paz	131.40	64		PKP	PKiKP		11 09 11.8	+1.2
	comp=Z,1.2nm,0.7s,baz=342,slow=3.3,SNR=5.5								
PB10	IPOC Station P	135.39	72		IAMs_20	IAMs_20		11 56 27.8	
	comp=Z,656nm,18.0s								
TSUM	Tsumeb	135.49	297		IAMs_20	IAMs_20		12 13 57.3	
	comp=Z,676nm,20.0s								
GO02	Mina Guanaco	137.19	73		IAMs_20	IAMs_20		11 58 07.5	
	comp=Z,642nm,21.0s								
QSPA	South Pole Qui	138.80	180		IAMs_20	IAMs

CO02				*i* S		Sn	11 05 06.9	-1.2
VA03	**San Esteban**	**1.09**	**169**	*i* P		Pn	11 04 59.6	+0.1
VA03				*i* S		Sn	11 05 16.3	-0.6
VA03				IAML			11 05 17.6	
	comp=E,3μm,0.1s							
RTLS	**Leoncito**	**1.28**	**95**	*i* P		Pn	11 05 01.9	+0.1
RTLS				*eS*		Sn	11 05 19.8	-1.0
RTLS				IAML			11 05 20.5	
	comp=Z,210nm,0.2s							
GO04	**Tololo Observa**	**1.51**	**360⇑**	*i* P		Pn	11 05 04.5	+0.3
GO04				*i* S		Sn	11 05 24.9	-0.3
VA01	**Torpederas**	**1.52**	**208⇑**	*i* P		Pn	11 05 04.2	+0.1
VA01				*i* S		Sn	11 05 23.9	-1.0
FCH	**Farellones**	**1.69**	**165⇑**	*i* P		Pn	11 05 07.3	+0.8
FCH				*i* S		Sn	11 05 29.7	+0.4
FCH				IAML			11 05 32.5	
	comp=E,523nm,0.2s							
MT05	**Renca**	**1.70**	**178**	*eP*		Pn	11 05 06.8	+0.4
MT05				*i* S		Sn	11 05 28.7	-0.4
MT05				IAML			11 05 31.9	
	comp=E,1μm,0.3s							
CLCH	**Cerro Calan**	**1.72**	**173**	*eP*		Pn	11 05 06.5	-0.1
CLCH				*i* S		Sn	11 05 29.3	-0.2
CLCH				IAML			11 05 33.5	
	comp=E,343nm,0.4s							
LSCH	**La Serena**	**1.81**	**348⇑**	*i* P		Pn	11 05 08.3	+0.7
LSCH				*i* S		Sn	11 05 31.3	-0.1
MT03	**Universidad Ad**	**1.82**	**172**	*eP*		Pn	11 05 08.6	+0.7
MT03				*i* S		Sn	11 05 31.9	+0.2
MT03				IAML			11 05 35.9	
	comp=N,872nm,0.1s							
ACCO	**Cerro Coronel**	**1.84**	**54**	*i* P		Pn	11 05 08.9	+0.5
ACCO				*eS*		Sn	11 05 33.7	+1.1
ANTU	**Antumapu**	**1.88**	**176**	*i* S		Sn	11 05 33.1	+0.1
ANTU				IAML			11 05 35.1	
	comp=E,359nm,0.2s							
AROD	**Rodeo**	**1.89**	**37**	*i* P		Pn	11 05 10.5	+1.5
AROD				⇓*eS*		Sn	11 05 34.9	+1.2
RTCV	**Cerro Valdivia**	**1.93**	**96**	*i* P		Pn	11 05 09.3	+0.2
RTCV				*eS*		Sn	11 05 32.6	-1.4
ARCO	**CERRO ARCO**	**1.96**	**127**	*i* P		Pn	11 05 11.1	+1.5
ARCO				IAML			11 05 11.9	
	comp=Z,167nm,0.3s							
ARCO				⇓*eS*		Sn	11 05 36.1	+1.3
RTLL	**Cerro Villicun**	**2.02**	**80**	*i* P		Pn	11 05 10.1	-0.1
RTLL				*eS*		Sn	11 05 34.2	-1.7
ACDV	**Cuesta del Vie**	**2.09**	**44**	*i* P		Pn	11 05 12.6	+1.3
AAGR	**Agrelo**	**2.17**	**130**	*i* P		Pn	11 05 13.9	+1.6
AAGR				*eS*		Sn	11 05 42.0	+2.5
CFA	**Coronel Fontan**	**2.19**	**89**	*i* P		Pn	11 05 12.2	-0.2
CFA				⇓*eS*		Sn	11 05 38.8	-0.9
LMEL	**Las Melosas**	**2.21**	**167⇑**	*i* P		Pn	11 05 14.0	+1.2
LMEL				*i* S		Sn	11 05 41.4	+0.9
LMEL				IAML			11 05 42.9	
	comp=N,411nm,0.2s							
ACAN	**Cantantal**	**3.12**	**102**	*i* P		Pn	11 05 24.5	0.0
GO05	**Huala**	**3.45**	**196**	*i* P		Pn	11 05 27.9	-0.8
COIS	**El Sosneado**	**3.56**	**164**	*i* P		Pn	11 05 30.3	0.0
VCA	**Vinchina**	**3.70**	**38**	*i* P		Pn	11 05 33.5	+1.3
VCA				IAML			11 06 20.4	
	comp=Z,47nm,0.3s							
GO03	**Copiap**	**4.11**	**7**	*i* P		Pn	11 05 38.5	+0.9
MRA	**San Martin**	**4.38**	**101**	*i* P		Pn	11 05 40.1	-1.1
MRA				IAML			11 06 28.2	
	comp=Z,21nm,0.5s							
TCA	**Tanti**	**5.31**	**88**	*i* P		Pn	11 05 52.4	-1.4
CYA	**Choya**	**5.40**	**55**	*i* P		Pn	11 05 53.1	-2.0

*ANF **21** 11:11:08.1±0.6,38˚76N×123˚56W,h15km,ML3.6/15, Error ellipse: s-maj=8.2km s-min=3.7km az=87.0*
*IDC **21** 11:11:09.8±1.8,38˚68N×123˚06W,h0km,mb3.2/2, mb1 3.8/7,mb1mx3.6/50,mbtmp3.5/7,ML3.4/5,MS3.3/1, Ms1 3.3/1,ms1mx2.8/14,Error ellipse: s-maj=22.4km s-min=10.7km az=61.0*
*NEIC **21** 11:11:11.9±2.1,38˚84N±0˚01×122˚84W±0˚02,h6km±3km, Error ellipse: s-maj=2.1km s-min=1.6km az=69.0*
*NCEDC **21** 11:11:11.6±2.4,38˚84N±0˚01×122˚84W±0˚02,h3km±4km, Mwr3.7/5,Error ellipse: s-maj=2.3km s-min=1.6km az=67.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁴Nm; Mrr=2.12; Mθθ=1.49; Mϕϕ3.61; Mrθ=2.02; Mθϕ3.45; Mϕr0.91;*
ISC 21 11:11:11.4±0.8,38˚82N±0˚01×122˚85W±0˚02,h5km±5km, n268,σ1ŝ15/273,Northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GDXM	**Geysers**	**0.05**	**109**		**Pg**	**11 11 12.8**	**0.0**
GDXM				Sg	**Sg**	11 11 13.6	-0.2
GACM	**Adobe Creek**	**0.05**	**353**		**Pg**	11 11 12.6	-0.2
GPMM	**Pine Mountain**	**0.08**	**288**		**Pg**	11 11 13.7	+0.5
GCRM	**Castle Rock Sp**	**0.12**	**115**		**Pg**	11 11 14.1	+0.2
GSGM	**Seigler Mounta**	**0.12**	**69**		**Pg**	11 11 14.3	+0.4
GCVM	**Cloverdale**	**0.14**	**247**		**Pg**	11 11 15.2	+1.0
GAXM	**Alexander Vall**	**0.14**	**145**		**Pg**	11 11 14.6	+0.4
GAXM					**Sg**	11 11 16.9	+0.8
GBGM	**Boggs Mountain**	**0.14**	**94**		**Pg**	11 11 14.6	+0.3
GMKM	**Mount Konoctai**	**0.15**	**20**		**Pg**	11 11 15.1	+0.6
NMCNC	**Mill Creek, So**	**0.24**	**191**		**Pg**	11 11 17.1	+1.0
HOPS	**Hopland Field**	**0.24**	**315**	Pg	**Pg**	11 11 16.8	+0.7
HOPS				Sg	**Sg**	11 11 18.9	-0.5
NHSM	**Mount Saint He**	**0.25**	**132**		**Pg**	11 11 16.8	+0.4
GHLM	**Highland Sprin**	**0.25**	**329**		**Pg**	11 11 16.8	+0.4
GSNM	**Snow Mountain**	**0.29**	**294**		**Pg**	11 11 17.9	+0.9
MAC	**Mark West Spri**	**0.29**	**159**		**Pb**	11 11 18.1	-1.0
GDCM	**Dry Creek**	**0.31**	**260**		**Pb**	11 11 18.6	-0.9
NMTM	**Middletown**	**0.32**	**93**		**Pg**	11 11 18.1	+0.5
MNRC	**McLaughlin Min**	**0.33**	**80**		**Pg**	11 11 18.5	+0.7
GHCM	**House Creek**	**0.34**	**231**		**Pb**	11 11 19.4	-0.7
NSHM	**Saint Helena R**	**0.36**	**147**		**Pg**	11 11 19.1	+0.8
GWKM	**Walker Ridge**	**0.36**	**51**		**Pg**	11 11 18.9	+0.4
FTR	**Fort Ross**	**0.38**	**219**		**Pb**	11 11 20.3	-0.5
GBMM	**Baldy Mountain**	**0.42**	**41**		**Pg**	11 11 20.1	+0.5
NTYM	**Taylor**	**0.46**	**161**		**Pb**	11 11 21.3	-0.7
GGUM	**Gualala**	**0.50**	**274**		**Pb**	11 11 22.2	-0.6
GTSM	**Trough Springs**	**0.53**	**22**		**Pb**	11 11 22.3	-0.9
NBPM	**Berryessa Peak**	**0.54**	**107**		**Pb**	11 11 23.0	-0.3
CVS	**Carmenet Viney**	**0.57**	**147**		**Pg**	11 11 23.0	+0.7
GHOM	**Hamilton Openi**	**0.58**	**293**		**Pb**	11 11 23.6	-0.5
NAPC	**Atlas Peak**	**0.61**	**129**		**Pg**	11 11 23.6	+0.5
GFC	**Funks Creek**	**0.67**	**41**		**Pb**	11 11 26.4	+0.8
GHMM	**Hull Mountain**	**0.67**	**355**		**Pb**	11 11 25.6	-0.2
MCCM	**Marconi Confer**	**0.68**	**182**	Pg	**Pb**	11 11 25.8	0.0
MCCM				Sg	**Sb**	11 11 34.5	-0.8
GNAM	**Navarro Ridge**	**0.71**	**302**		**Pb**	11 11 26.2	-0.1
SNT	**Sears Point**	**0.71**	**154**		**Pg**	11 11 25.4	+0.3
NGVM		**0.74**	**137**		**Pb**	11 11 26.2	-0.6
NDHM	**Dunnigan Hills**	**0.74**	**94**		**Pn**	11 11 27.7	-0.9
NADM	**Allendale**	**0.78**	**117**		**Pn**	11 11 28.4	-0.7
NOLM	**Olema**	**0.78**	**176**		**Pb**	11 11 27.4	-0.2
GCK	**Clark Valley**	**0.79**	**124**		**Pb**	11 11 28.8	-0.4
GTC	**Three Chop Rid**	**0.79**	**317**		**Pb**	11 11 27.4	-0.3
NPRM	**Point Reyes**	**0.83**	**189**		**Pb**	11 11 28.7	+0.3
GASB	**Alder Springs**	**0.84**	**7**		**Pb**	11 11 28.8	+0.3
NLHM	**Lake Herman**	**0.90**	**142**		**Pb**	11 11 29.0	-0.4
SUTB	**Sutter Butte**	**0.93**	**64**		**Pg**	11 11 28.6	-0.6
KFPM	**Farley Peak**	**0.93**	**332**		**Pb**	11 11 29.9	-0.2
HERB	**Hercules**	**0.93**	**150**		**Pb**	11 11 30.1	0.0
CPMM	**Point Molate**	**0.94**	**158**		**Pg**	11 11 29.8	+0.3
GVV	**Valley View**	**0.96**	**8**		**Pn**	11 11 31.1	-0.6
CSPM	**San Pablo Ridg**	**0.96**	**154**		**Pb**	11 11 30.7	+0.1
CPIM	**Pinole Ridge**	**0.97**	**149**		**Pb**	11 11 30.4	-0.4
KCPM	**Cahto Peak**	**1.03**	**327**		**Pb**	11 11 31.8	0.0
KCPM				Sg	**Sg**	11 11 44.3	-0.3
BRK	**Berkeley--Havi**	**1.06**	**154**		**Pg**	11 11 31.7	0.0
BL67	**Building 67, L**	**1.06**	**153**		**Pb**	11 11 32.2	0.0
VAK	**Adit at Lawren**	**1.06**	**153**		**Pg**	11 11 31.8	+0.1
BRIB	**Briones**	**1.06**	**148**		**Pg**	11 11 31.4	-0.3
CVPM	**Vollmer Peak**	**1.06**	**152**		**Pg**	11 11 31.9	+0.2
HMR	**Hamilton Ranch**	**1.06**	**129**		**Pb**	11 11 32.5	+0.2
BKS	**Berkeley--Byer**	**1.06**	**153**		**Pg**	11 11 31.6	-0.2
CYBM	**Yerba Buena Is**	**1.08**	**159**		**Pb**	11 11 32.4	-0.2
KIPM	**Iron Peak**	**1.10**	**334**		**Pg**	11 11 32.5	0.0
KBNM	**Bluenose Ridge**	**1.10**	**346**		**Pb**	11 11 33.0	0.0
GROM	**Round Mountain**	**1.10**	**7**		**Pn**	11 11 33.9	+0.3
FARB	**Farallon Islan**	**1.13**	**186**		**Pg**	11 11 32.9	-0.1
SMCB	**Saint Mary's C**	**1.14**	**149**		**Pb**	11 11 33.6	-0.1
BDM	**Black Diamond**	**1.17**	**138**		**Pg**	11 11 32.8	-1.0
CMCM	**Mills College**	**1.17**	**153**		**Pg**	11 11 33.4	-0.5
CRPB	**Russellman Par**	**1.18**	**140**		**Pg**	11 11 33.4	-0.6
CRHM	**Round Hill Res**	**1.18**	**145**		**Pg**	11 11 33.6	-0.4
BGC	**Bolinger Road**	**1.18**	**148**		**Pg**	11 11 33.7	-0.4
OHCM	**Honcut**	**1.18**	**64**		**Pg**	11 11 33.0	-1.2
PAM	**Palermo**	**1.21**	**59**		**Pg**	11 11 33.4	-1.2
KBSM	**Bell Springs**	**1.23**	**333**		**Pg**	11 11 34.7	-0.4
CLCB	**Lake Chabot**	**1.25**	**150**		**Pg**	11 11 34.1	-1.2
ORV	**Oroville**	**1.28**	**55**	Pg	**Pg**	11 11 34.4	-1.6
ORV					**Sn**	11 11 54.1	+0.5
ORV	**Oroville**	**1.28**	**55**		**Pg**	11 11 34.5	-1.5
SAC	**San Andreas**	**1.29**	**164**		**Pg**	11 11 35.1	-1.0
JCPM	**Coyote Point**	**1.30**	**161**		**Pn**	11 11 35.8	-0.4
CMOB	**Morgan Territo**	**1.31**	**140**		**Pg**	11 11 36.2	-0.2
O02D	**Mt. Diablo Mer** baz=182	**1.35**	**2**	P	**Pb**	11 11 37.4	+0.1
OXMT	**Ox Mountain**	**1.36**	**165**		**Pn**	11 11 36.2	-0.9
CBSNC	**Byron Hot Spri**	**1.39**	**136**		**Pn**	11 11 36.6	-0.8
CNIC	**Niles Canyon**	**1.40**	**150**		**Pn**	11 11 36.4	-1.3
MGL	**Magalia**	**1.41**	**45**		**Pn**	11 11 36.4	-1.4
AASM	**Arroyo Seco**	**1.42**	**105**		**Pn**	11 11 35.9	-2.0
JHPM	**Huddart Park**	**1.44**	**162**		**Pn**	11 11 37.3	-1.0
AFDM	**Forest Hills D**	**1.47**	**85**		**Pn**	11 11 37.0	-1.6
WENL	**Wente Vineyard**	**1.48**	**144**		**Pn**	11 11 38.1	-0.6
LBPM	**Beegum Peak**	**1.49**	**359**		**Pb**	11 11 39.4	-0.4
LTCM	**Tuscan Springs**	**1.49**	**22**		**Pn**	11 11 37.8	-1.2
JRSC	**Jasper Ridge**	**1.50**	**161**		**Pn**	11 11 38.0	-0.9
CMJM	**Mission San Jo**	**1.51**	**149**		**Pn**	11 11 38.1	-1.1
JSFB	**Stanford Teles**	**1.52**	**159**		**Pn**	11 11 38.9	-0.3
BGH	**Bear Gulch**	**1.53**	**164**		**Pg**	11 11 41.2	+0.3
KMRM	**Mail Ridge**	**1.54**	**335**		**Pn**	11 11 39.2	-0.6
KMRM					**Sn**	11 11 59.2	-1.0
JFP	**Foothills Park**	**1.55**	**160**		**Pn**	11 11 38.5	-1.2
JJRM	**Joaquin Road**	**1.56**	**161**		**Pn**	11 11 38.9	-1.0
KPPM	**Pickett Peak**	**1.57**	**346**		**Pb**	11 11 40.9	-0.2
JBMM	**Black Mountain**	**1.60**	**160**		**Pn**	11 11 39.5	-1.0
CALM	**Calaveras Res.**	**1.60**	**148**		**Pn**	11 11 39.3	-1.1
JPC	**Peters Creek,**	**1.63**	**162**		**Pn**	11 11 39.8	-1.0
CMLM	**Mount Lewis**	**1.65**	**144**		**Pn**	11 11 39.9	-1.2
JSGM	**Saratoga Golf**	**1.66**	**157**		**Pn**	11 11 40.5	-0.7
LCMM	**Colby Mountain**	**1.68**	**38**		**Pn**	11 11 40.9	-0.7
O03E	**Paynes Creek**	**1.68**	**29**		**Pn**	11 11 40.7	-0.9
O03E	**Paynes Creek** baz=209,SNR=44	**1.68**	**29**	P	**Pn**	11 11 40.8	-0.8
ASMM	**Slate Mountain**	**1.70**	**89**		**Pn**	11 11 40.8	-1.0
CMMM	**Mount Mocho**	**1.74**	**141**		**Pn**	11 11 41.5	-0.9
MNHB	**New Hogan Dam**	**1.74**	**112**		**Pn**	11 11 40.9	-1.4
MHC	**Mount Hamilton**	**1.76**	**147**		**Pn**	11 11 41.6	-1.1
KCRM	**Chalk Rock**	**1.77**	**335**		**Pn**	11 11 42.6	-0.2
WDC	**Whiskeytown Da**	**1.77**	**8**		**Pn**	11 11 41.8	-0.9
WDC	**Whiskeytown Da**	**1.77**	**8**		**Pb**	11 11 43.6	-0.8
WDC					**Sn**	11 12 06.2	+0.5
JBNB	**Ben Lomond Mou**	**1.79**	**162**		**Pn**	11 11 41.8	-1.2
KCSM	**Cold Springs**	**1.79**	**344**		**Pn**	11 11 43.6	+0.5
ARN	**Arnold Ranch**	**1.80**	**144**		**Pn**	11 11 42.6	-0.6
LDBM	**Digger Butte**	**1.81**	**27**		**Pn**	11 11 42.9	-0.4
JSTM	**Santa Teresa H**	**1.82**	**152**		**Pn**	11 11 42.7	-0.6
CCOB	**Coe Ranch Numb**	**1.82**	**149**		**Pn**	11 11 42.8	-0.6
JUMM	**Mount Umunhum**	**1.82**	**155**		**Pn**	11 11 42.4	-1.1
AMC	**Almaden**	**1.84**	**154**		**Pn**	11 11 42.9	-0.8
KHBM	**Hayfork Bally**	**1.86**	**351**		**Pn**	11 11 44.3	+0.2
KMPM	**Mount Pierce**	**1.87**	**329**		**Pg**	11 11 50.6	+3.4
JLAB	**Laurel Hill**	**1.89**	**152**		**Pn**	11 11 43.4	-1.0
JHLM	**Holstrom Ranch**	**1.89**	**154**		**Pn**	11 11 43.4	-1.1
CADM	**Anderson Res.**	**1.92**	**149**		**Pn**	11 11 44.4	-0.4
MCLB	**Copperopolis B**	**1.95**	**115**		**Pn**	11 11 44.0	-1.1
LRDM	**Redding Peak**	**1.96**	**33**		**Pn**	11 11 45.4	-0.5
LMEM	**Manzanita Entr**	**1.98**	**30**		**Pn**	11 11 46.2	+0.5
HSPM	**Sheep**	**2.01**	**148**		**Pn**	11 11 45.6	-0.5
KCTM	**Capetown**	**2.01**	**326**		**Pb**	11 11 48.1	-0.3
HLPM	**Lions Peak**	**2.02**	**151**		**Pn**	11 11 45.4	-0.8
DONR	**Donner Summit**	**2.04**	**74**		**Pn**	11 11 47.0	+0.3
LSHM	**Sage Hen Hill**	**2.06**	**17**		**Pn**	11 11 47.8	+1.0
IND	**Independence**	**2.08**	**72**		**Pn**	11 11 48.3	+1.0
LGPM	**Granite Peak**	**2.09**	**1**		**Pn**	11 11 48.2	+1.0
CMB	**Columbia Colle**	**2.09**	**111**	Pn	**Pn**	11 11 46.8	-0.4
CMB					**Sn**	11 12 14.3	+0.6
CDC	**Canada Road**	**2.10**	**148**		**Pn**	11 11 46.4	-0.8
CBC	**Chamberlain**	**2.11**	**153**		**Pn**	11 11 47.1	-0.3
RUBR	**Rubicon Trail**	**2.12**	**83**		**Pn**	11 11 48.4	+0.7
TAHR	**Tahoe**	**2.12**	**80**		**Pn**	11 11 49.1	+1.3
N02D	**Trinity Center**	**2.15**	**3**		**Pb**	11 11 49.7	-1.2
N02D	**Trinity Center** baz=183,SNR=14	**2.15**	**3**	Pb	**Pb**	11 11 49.7	-1.2
EMB	**Emerald Bay**	**2.15**	**85**		**Pn**	11 11 48.7	+0.5
KHMM	**Horse Mountain**	**2.16**	**342**		**Pn**	11 11 49.7	-1.4
HPCM	**Pacheco Lake**	**2.16**	**144**		**Pn**	11 11 47.2	-0.9
KBF	**Kyburz Flat**	**2.16**	**71**		**Pn**	11 11 49.0	+0.6
HFEM	**San Felipe**	**2.17**	**148**		**Pn**	11 11 47.5	-0.7
SLD	**San Luis Dam**	**2.17**	**143**		**Pn**	11 11 47.6	-0.7
ANZ	**Anzar Road**	**2.18**	**152**		**Pn**	11 11 47.7	-0.6
OCR	**O'Connell Ranc**	**2.18**	**150**		**Pn**	11 11 47.5	-0.9
JCC	**Jacoby Creek,**	**2.19**	**336**		**Pg**	11 11 56.0	+2.6
JCC	**Jacoby Creek,**	**2.19**	**336**	Pn	**Pn**	11 11 48.1	-0.3
BEKR	**Beckworth**	**2.20**	**61**		**Pn**	11 11 49.5	+0.7
LOY	**Loyalton**	**2.20**	**67**		**Pn**	11 11 49.5	+0.7
HTUM	**Tustin Road**	**2.21**	**154**		**Pn**	11 11 47.4	-1.4
SFJWR	**San Luis Fatjo**	**2.21**	**143**		**Pn**	11 11 48.2	-0.7
MPK	**Martis Peak**	**2.25**	**77**		**Pn**	11 11 50.4	+0.8
HATC	**Hat Creek Radi**	**2.26**	**28**		**Pb**	11 11 51.7	-1.1
LBKM	**Bonanza King**	**2.26**	**4**		**Pn**	11 11 50.7	+1.1
BABB	**Babbit Peak**	**2.27**	**69**		**Pn**	11 11 46.1	-3.8
VPK	**Verdi Peak**	**2.29**	**73**		**Pn**	11 11 51.5	+1.5
HLTM	**Lone Tree Road**	**2.29**	**147**		**Pn**	11 11 49.1	-0.7
LBCM	**Butte Creek Ri**	**2.32**	**29**		**Pn**	11 11 51.7	+1.3
FRP	**Fremont Peak**	**2.33**	**152**		**Pn**	11 11 49.2	-1.3
SAO	**San Andreas Ge**	**2.34**	**151**		**Pn**	11 11 50.0	-0.6
SAO	**San Andreas Ge**	**2.34**	**151**	Pn	**Pn**	11 11 49.7	-0.8
GNO	**Genoa**	**2.34**	**86**		**Pn**	11 11 51.7	+0.9
BMRR	**Black Mountain**	**2.36**	**56**		**Pn**	11 11 49.1	-2.0
BVYM	**Vineyard**	**2.37**	**151**		**Pn**	11 11 49.6	-1.3
BSLM	**Silva Ranch**	**2.37**	**149**		**Pn**	11 11 50.6	-0.3
PEAR	**Peavine Mounta**	**2.38**	**70**		**Pn**	11 11 52.2	+0.9
BSRM	**Salinas Radio**	**2.40**	**153**		**Pn**	11 11 50.5	-0.9
MYLM	**Yosemite Lake**	**2.40**	**126**		**Pn**	11 11 51.0	-0.4
BCQM	**Cienega Road**	**2.43**	**150**		**Pn**	11 11 51.1	-0.6
BHRM	**Hodges Ranch**	**2.44**	**148**		**Pn**	11 11 51.1	-0.8
BPCNC	**Pine Canyon**	**2.45**	**156**		**Pn**	11 11 51.1	-0.9
BLRM	**Lewis Ranch**	**2.49**	**149**		**Pn**	11 11 52.5	-0.2
SCZ	**Santa Cruz**	**2.50**	**152**		**Pn**	11 11 52.0	-0.8
BEHM	**Elkhorn Ranch**	**2.53**	**148**		**Pn**	11 11 52.9	-0.3
BFC	**Buffalo Canyon**	**2.54**	**87**		**Pn**	11 11 55.0	+1.5
VCNR	**Virginia City**	**2.54**	**78**		**Pn**	11 11 54.5	+1.0
PNTR	**Pine Nut**	**2.55**	**83**	Pn	**Pn**	11 11 55.0	+1.3
BRMM	**Rolling Bench**	**2.56**	**140**		**Pn**	11 11 53.3	-0.2
M02C	**Callahan**	**2.56**	**0**		**Pb**	11 11 56.6	-1.4
M02C	**Callahan** baz=180,SNR=20	**2.56**	**0**	Pb	**Pb**	11 11 56.5	-1.5
BEMM	**Emmet**	**2.57**	**147**		**Pn**	11 11 53.5	-0.2
LGBM	**Gray Butte**	**2.57**	**11**		**Pn**	11 11 55.3	+1.4
LTIM	**Timbered Crate**	**2.57**	**24**		**Pb**	11 11 56.5	-1.7
BAVM	**Antelope Valle**	**2.61**	**146**		**Pn**	11 11 53.5	-0.9
LBFM	**Black Fox Moun**	**2.63**	**16**		**Pn**	11 11 56.8	+2.1
HAST	**Hastings Reser**	**2.64**	**157**		**Pn**	11 11 53.5	-1.3
BBGB	**Big Mountain B**	**2.66**	**147**		**Pn**	11 11 55.5	+0.4
BSMM	**Soledad Missio**	**2.69**	**155**		**Pn**	11 11 54.5	-0.9
WAKR	**Walker**	**2.69**	**96**		**Pn**	11 11 57.6	+2.0
KRMB	**Red Mountain**	**2.81**	**344**		**Pn**	11 11 58.0	+0.8
YERR	**Yerington**	**2.82**	**86**		**Pn**	11 11 58.3	+0.9
MMIM	**Miami Mountain**	**2.83**	**119**		**Pn**	11 11 58.2	+0.8
PAHR	**Pah Rah Range**	**2.83**	**71**		**Pn**	11 11 58.4	+0.9
YBH	**Yreka Blue Hor** 0.3nm,0.3s,baz=184,slow=9.3,SNR=18	**2.91**	**2**	Pn	**Pn**	11 11 59.7	+1.3
YBH					**Pg**	11 12 07.1	0.0
	1.6nm,0.3s,baz=188,slow=13,SNR=42						
YBH					Lg	11 12 49.1	
	0.5nm,0.3s,baz=182,slow=11,SNR=3.1						
YBH	**Yreka Blue Hor**	**2.91**	**2**		**Pn**	11 12 00.4	+2.0
M04C	**Macdoel** baz=195,SNR=22	**3.06**	**14**	Pb	**Pb**	11 12 05.4	-0.9
PMPB	**Monarch Peak**	**3.07**	**147**		**Pn**	11 12 01.2	+0.5
MDPB	**Devils Postpil**	**3.20**	**111**		**Pn**	11 12 04.1	+1.4
MINS	**Minaret Summit**	**3.21**	**110**		**Pn**	11 12 04.8	+2.0
MDYM	**Dry Creek**	**3.24**	**110**		**Pn**	11 12 05.6	+2.3
OMMB	**Old Mammoth Mi**	**3.27**	**111**		**Pn**	11 12 05.0	+1.4
L02E	**Cave Junction** baz=170	**3.38**	**351**	Pb	**Pb**	11 12 08.7	-3.1
L02E				S	**Sn**	11 12 40.6	-4.7
	baz=170						
MLAC	**Mammoth, Mammo** baz=292	**3.38**	**109**	P	**Pn**	11 12 07.5	+2.4
MLAC				S	**Sb**	11 12 53.3	-0.2
	baz=292						

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RYN	**Ryan**	**3.39**	**92**		**Pn**	11 12 05.9	+0.7
L04D	**Klamath Falls** baz=187	**3.42**	**7**	Pb	**Pb**	11 12 11.8	-0.7
KBO	**Bosley Butte**	**3.54**	**343**	Pn	**Pn**	11 12 07.4	+0.2
NVAR	**Mina Array Bea** 1.0nm,0.3s,baz=268,slow=15,SNR=63	**3.59**	**95**	Pn	**Pn**	11 12 08.8	+0.9
NVAR					**Pg**	**11 12 16.3**	**+0.9**
	6.5nm,0.3s,baz=264,slow=16,SNR=76						
NVAR					Lg	11 13 06.4	
	1.3nm,0.3s,baz=275,slow=34,SNR=3.1						
NVAR					LR	LR 11 13 55.1	
	comp=Z,378nm,19.6s,baz=204,slow=43						
MOD	**Modoc Plateau**	**3.64**	**32**		**Pn**	**11 12 10.1**	**+1.5**
NV11	**Mina Array Sit**	**3.70**	**95**		**Pn**	11 12 10.4	+0.9
KVN	**Kaiserville**	**3.71**	**85**		**Pn**	11 12 10.0	+0.4
PAGB	**Antelope Grade**	**3.72**	**145**		**Pn**	11 12 10.2	+0.6
TRAM	**Private Proper**	**3.76**	**146**		**Pb**	11 12 14.8	-3.4
HUMO	**Hull Mountain**	**3.78**	**359**	Pn	**Pn**	11 12 10.6	+0.2
K02D	**Willamette Mer** baz=170	**3.92**	**351**	P	**Pn**	11 12 07.3	-5.1
K05A	**Summer Lake**	**4.17**	**20**	Pn	**Pn**	**11 12 19.6**	**+3.7**
SMMC	**Simmler** baz=328	**4.18**	**146**	P	**Pn**	**11 12 15.4**	**-0.5**
J01E	**Myrtle Point** baz=169	**4.41**	**350**	Pg	**Pg**	**11 12 33.6**	**-2.3**
J05D	**Fort Rock, OR** baz=196,SNR=7.5	**4.62**	**15**	P	**Pn**	**11 12 21.6**	**-0.4**
PKM	**Mcpherson Peak** baz=329	**4.62**	**147**	P	**Pn**	**11 12 21.3**	**-0.8**
ISA	**Isabella, Lake**	**4.71**	**131**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**22.82**	**325**	P	P	11 37 27.0	-0.2
	1.8nm,0.7s,baz=179,slow=12,SNR=4.1						
QSPA	**South Pole Qui**	**29.20**	**180**	P	P	11 38 25.8	0.0
	1.3nm,0.6s,baz=180,slow=10,SNR=16						
H10N3	**ASCENSION HYDR**	**60.49**	**46**	T	T	12 48 51.8	
	baz=196,slow=75						
H10N1	**ASCENSION HYDR**	**60.49**	**46**	T	T	12 48 52.4	
	baz=196,slow=75						
H10N2	**ASCENSION HYDR**	**60.51**	**46**	T	T	12 48 53.0	
	baz=196,slow=75						
YKA	**Yellowknife Ar**	**131.60**	**327**	PKP	PKPdf	11 51 35.7	-0.1
	0.1nm,0.5s,baz=150,slow=2.0,SNR=5.0						
ILAR	**Eielson Array**	**143.23**	**314**	PKP	PKPdf	11 51 57.5	+0.4
	0.7nm,0.9s,baz=128,slow=1.5,SNR=4.9						
MKAR	**Makanchi Array**	**151.04**	**99**	PKPbc	PKPbc	11 52 16.1	-0.4
	1.0nm,0.8s,baz=235,slow=2.4,SNR=8.6						

*IDC **21** 11:42:11.3±3.2, 19°.75S×178°.52W, h393km±73km, mb3.5/4, mb1 3.6/6, mb1mx3.1/47, mbtmp4.3/6, Error ellipse: s-maj=55.3km s-min=19.6km az=60.0*
*NEIC **21** 11:42:13.7±1.1, 20°.1S±0°.3×177°.59W±0°.06, h519km±21km, mb4.1/11, Error ellipse: s-maj=43.2km s-min=7.0km az=185.0*

ISC 21 11:42:13.0±0.9, 19°.1S±0°.2×177°.42W±0°.09, h569km, n19, σ2s33/21, mb4.1/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**4.50**	**287**	P	**P**	**11 43 40.0**	**-0.1**
MSVF				S	**S**	**11 44 49.5**	**-1.6**
NIUE	**Niue**	**7.09**	**91**	P	**P**	**11 44 02.3**	**-0.3**
NIUE				S	**S**	**11 45 33.4**	**+1.1**
AFI	**Afiamalu**	**7.46**	**47**	P	P	11 44 14.5	+8.2
	1.4nm,0.3s,baz=218,slow=12,SNR=2.7						
AFI				S	S	11 45 48.3	+9.3
	7.7nm,0.3s,baz=150,slow=21,SNR=7.6						
URZ	**Urewera**	**19.70**	**193**	P	**P**	**11 46 04.4**	**-0.8**
	2.4nm,0.3s,baz=45,slow=13,SNR=13						
URZ				S	**S**	**11 49 18.5**	**+5.0**
	0.5nm,0.3s,baz=0.0,slow=9.1,SNR=3.3						
BKZ	**Black Stump Fm**	**20.70**	**193**	P	**P**	**11 46 08.5**	**-5.9**
CTA	**Charters Tower**	**34.20**	**262**	P	**P**	**11 48 14.2**	**+2.1**
	4.6nm,0.4s,baz=88,slow=9.1,SNR=16						
TOO	**Toolangi**	**37.18**	**232**	P	**P**	**11 48 34.7**	**-1.9**
TOO				IAmb	IAmb	11 48 45.8	
	comp=Z,28nm,1.5s						
STKA	**Stephens Creek**	**38.91**	**243**	P	**P**	**11 48 49.0**	**-1.7**
	comp=Z,1.6nm,0.8s,baz=106,slow=15,SNR=4.1						
STKA	**Stephens Creek**	**38.91**	**243**	P	**P**	**11 48 49.5**	**-1.2**
BBOO	**Buckleboo**	**43.68**	**242**	P	**P**	**11 49 27.2**	**-1.2**
BBOO				IAmb	IAmb	11 49 27.9	
	comp=Z,15nm,1.1s						
WR0	**Warramunga Arr**	**45.16**	**261**	P	**P**	**11 49 41.4**	**+1.4**
WR0				IAmb	IAmb	11 49 57.1	
	comp=Z,3.8nm,1.1s						
WB0	**Warramunga Arr**	**45.33**	**261**	P	**P**	**11 49 43.1**	**+1.9**
WB0				IAmb	IAmb	11 49 43.1	
	comp=Z,2.2nm,0.6s						
WB2	**Warramunga Arr**	**45.34**	**261**	P	**P**	**11 49 43.3**	**+2.0**
WB2				IAmb	IAmb	11 49 43.7	
	comp=Z,7.0nm,1.2s						
WRAB	**Tennant Creek**	**45.34**	**261**	P	**P**	**11 49 42.4**	**+1.0**
WRAB				IAmb	IAmb	11 49 42.9	
	comp=Z,18nm,1.4s						
WRA	**Warramunga Arr**	**45.35**	**261**	P	**P**	**11 49 43.0**	**+1.6**
	comp=Z,1.3nm,0.6s,baz=97,slow=8.5,SNR=9.4						
AS31	**Alice Springs**	**45.39**	**255**	P	**P**	**11 49 43.0**	**+1.3**
ASAR	**Alice Springs**	**45.39**	**255**	P	**P**	**11 49 43.0**	**+1.3**
	comp=Z,4.1nm,0.7s,baz=91,slow=8.1,SNR=80						
KNRA	**Kununurra**	**51.31**	**265**	P	**P**	**11 50 27.4**	**+1.7**
QSPA	**South Pole Qui**	**70.99**	**180**	P	**P**	**11 52 33.3**	**-0.3**
QSPA				IAmb	IAmb	11 52 34.9	
	comp=Z,5.1nm,1.4s						

ISC 21 11:46:22.7±2.5, 10°.80S×119°.07E, h0km, mb3.8/2, mb1 3.9/5, mb1mx3.6/39, mbtmp3.7/5, ML3.4/3, Error ellipse: s-maj=151.8km s-min=22.6km az=53.0, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.65**	**140**	Pn	Pn	11 48 42.5	-0.4
	0.2nm,0.3s,baz=319,slow=11,SNR=3.6						
FITZ				Sn	Sn	11 50 23.4	-8.7
	0.8nm,0.3s,baz=200,slow=19,SNR=5.9						
WRA	**Warramunga Arr**	**17.29**	**124**	P	Pn	11 50 24.9	-0.8
	0.2nm,0.3s,baz=292,slow=13,SNR=4.4						
WRA				S	Sn	11 53 20.5	-18
	0.1nm,0.3s,baz=289,slow=23,SNR=3.6						
ASAR	**Alice Springs**	**19.07**	**134**	P	Pn	11 50 47.7	+0.1
	0.1nm,0.3s,baz=311,slow=9.9,SNR=9.6						
ASAR				S	Sn	11 54 04.7	-17
	0.0nm,0.3s,baz=315,slow=26,SNR=3.0						
SONM	**Songino Array**	**59.45**	**350**	P	P	11 56 27.1	-0.3
	0.5nm,0.6s,baz=171,slow=8.4,SNR=4.5						
MKAR	**Makanchi Array**	**66.08**	**333**	P	P	11 57 11.8	+0.2
	0.9nm,0.7s,baz=156,slow=6.5,SNR=9.6						

*ISK **21** 11:55:00.8, 39°.64N×28°.90E, h5km, ML2.6/12*
*DDA **21** 11:55:01.1, 39°.63N×28°.86E, h7km±2km, ML1.7*

ISC 21 11:55:01.1±1.1, 39°.62N±0°.02×28°.89E±0°.03, h8km±10km, n20, σ0s40/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**0.32**	**266**	*i* P	**Pg**	**11 55 07.3**	**-0.1**
DURS				IAML		11 55 12.0	
	comp=N,112nm,0.2s						
DURS				*i* S	**Sg**	**11 55 12.1**	**+0.3**
DURS				IAML		11 55 14.0	
	comp=E,120nm,0.2s						
TVSB	**Tavsanli**	**0.47**	**111**	PG	**Pb**	**11 55 11.2**	**-0.6**
TVSB				SG	**Sb**	**11 55 18.7**	**-0.2**
SIMA	**Simav-Kutahya**	**0.54**	**172**	PG	**Pb**	**11 55 12.6**	**-0.3**
SIMA				SG	**Sb**	**11 55 21.5**	**+0.6**
ULDT	**Uludag**	**0.55**	**20**	*i* P	**Pg**	**11 55 12.0**	**+0.2**
ULDT				*i* S	**Sg**	**11 55 19.6**	**+0.5**
ULDT				IAML		11 55 20.0	
	comp=N,57nm,0.2s						
ULDT				IAML		11 55 20.0	
	comp=E,37nm,0.3s						
SHAP	**Saphane-Kutahy**	**0.65**	**157**	PG	**Pb**	**11 55 14.7**	**-0.1**
IGD	**Bursa**	**0.69**	**20**	*i* P	**Pg**	**11 55 14.4**	**+0.1**
IGD				*i* S	**Sg**	**11 55 22.3**	**-1.0**
IGD				IAML		11 55 23.0	
	comp=N,49nm,1.1s						
GDZ	**Gediz**	**0.70**	**139**	*i* P	**Pg**	**11 55 15.1**	**+0.5**
GDZ				*i* S	**Sn**	**11 55 28.1**	**-0.5**
USAK	**Uak-Merkez**	**0.91**	**174**	*i* P	**Pb**	**11 55 19.1**	**-0.1**
USAK				*i* S	**Sg**	**11 55 30.2**	**-0.2**
USAK				IAML		11 55 32.0	
	comp=N,25nm,0.4s						
USAK				IAML		11 55 37.0	
	comp=E,21nm,0.2s						
CAVI	**Cavuskoy**	**0.93**	**51**	PG	**Pb**	**11 55 19.5**	**-0.1**
STEP	**BALIKESIR_Sava**	**0.94**	**255**	*i* P	**Pb**	**11 55 19.2**	**-0.4**
STEP				IAML		11 55 34.0	
	comp=E,28nm,0.7s						
STEP				*i* S	**Sn**	**11 55 34.5**	**+0.1**
STEP				IAML		11 55 36.0	
	comp=N,26nm,0.7s						
ARMT	**Armutlu**	**0.94**	**359**	PG	**Pb**	**11 55 19.8**	**+0.1**
YLV	**Yalova**	**1.01**	**21**	PG	**Pb**	**11 55 20.9**	**-0.1**
GONE	**Gonen-Balikesi**	**1.02**	**295**	PG	**Pn**	**11 55 21.6**	**-0.1**
EDC	**Edincik**	**1.07**	**313**	PG	**Pn**	**11 55 22.5**	**+0.1**
MANT	**Manisa**	**1.16**	**193**	*i* P	**Pb**	**11 55 23.8**	**+0.3**
MANT				*i* S	**Sg**	**11 55 37.7**	**-0.7**
MANT				IAML		11 55 40.0	
	comp=E,16nm,0.8s						
MANT				IAML		11 55 41.0	
	comp=N,18nm,0.7s						
BORA	**Eskisehir**	**1.23**	**77**	PN	**Pn**	**11 55 25.2**	**+0.5**
MRMT	**Marmara Adasi**	**1.40**	**315**	PN	**Pg**	**11 55 28.3**	**+0.4**
SRCK	**Saricakaya, Es**	**1.40**	**72**	PN	**Pg**	**11 55 28.3**	**+0.3**
ISK	**Istanbul-Kandi**	**1.45**	**5**	PN	**Pg**	**11 55 28.9**	**0.0**
GULT	**Gulveren**	**1.49**	**56**	PN	**Pg**	**11 55 29.5**	**-0.1**

*IDC **21** 11:56:59.7±28.0, 24°.00S×174°.30W, h0km, mb4.3/4, mb1 4.4/4, mb1mx3.8/46, mbtmp4.3/4, Error ellipse: s-maj=512.0km s-min=155.3km az=79.0*
*NEIC **21** 11:57:32.8±0.4, 24°.1S±0°.1×178°.7W±0°.2, h10km±2km, mb4.3/9, Error ellipse: s-maj=35.8km s-min=13.4km az=60.0*

ISC 21 11:57:35.5±2.3, 24°.0S±0°.2×178°.5W±0°.3, h35km, n17, σ1s54/17, mb4.3/9, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.06**	**332**	Pn	**Pn**	**11 59 10.0**	**-0.4**
CTA	**Charters Tower**	**32.88**	**270**	P	**P**	**12 04 09.4**	**+3.0**
	3.9nm,0.4s,baz=98,slow=10,SNR=5.6						
CTA	**Charters Tower**	**32.88**	**270**	P	**P**	**12 04 09.4**	**+3.0**
STKA	**Stephens Creek**	**35.97**	**248**	P	**P**	**12 04 31.8**	**-1.3**
	1.0nm,0.5s,baz=90,slow=10,SNR=1.9						
STKA	**Stephens Creek**	**35.97**	**248**	P	**P**	**12 04 32.3**	**-0.8**
BBOO	**Buckleboo**	**40.68**	**247**	P	**P**	**12 05 10.2**	**-2.4**
AS31	**Alice Springs**	**43.39**	**260**	P	**P**	**12 05 33.9**	**-1.1**
ASAR	**Alice Springs**	**43.39**	**260**	P	**P**	**12 05 33.9**	**-1.1**
	0.9nm,0.4s,baz=94,slow=7.8,SNR=12						
ASAR	**Alice Springs**	**43.39**	**260**	P	**P**	**12 05 33.9**	**-1.1**
WR0	**Warramunga Arr**	**43.60**	**266**	P	**P**	**12 05 35.9**	**-0.8**
WR0				IAmb	IAmb	12 05 45.8	
	comp=Z,3.7nm,1.1s						
WB2	**Warramunga Arr**	**43.78**	**266**	P	**P**	**12 05 37.5**	**-0.6**
WB2				IAmb	IAmb	12 05 37.7	
	comp=Z,9.3nm,1.4s						
WRAB	**Tennant Creek**	**43.78**	**266**	P	**P**	**12 05 37.4**	**-0.7**
WRAB				IAmb	IAmb	12 05 38.7	
	comp=Z,4.2nm,1.2s						
WB0	**Warramunga Arr**	**43.79**	**266**	P	**P**	**12 05 37.5**	**-0.6**
WB0				IAmb	IAmb	12 05 40.3	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**43.79**	**266**	P	**P**	**12 05 37.5**	**-0.6**
	comp=Z,2.5nm,0.4s,baz=103,slow=7.9,SNR=16						
WRA	**Warramunga Arr**	**43.79**	**266**	P	**P**	**12 05 37.5**	**-0.6**
KNRA	**Kununurra**	**50.09**	**269**	P	**P**	**12 06 26.8**	**-0.6**
QSPA	**South Pole Qui**	**66.05**	**180**	P	**P**	**12 08 19.2**	**+0.5**
QSPA				IAmb	IAmb	12 08 21.8	
	comp=Z,3.7nm,1.0s						

*IDC **21** 12:02:29.8±1.6, 60°.37N×147°.32W, h0km, mb3.6/1, mb1 3.7/5, mb1mx3.3/53, mbtmp3.5/5, ML3.1/4, Error ellipse: s-maj=31.8km s-min=16.2km az=130.0*
*NEIC **21** 12:02:30.3±1.8, 60°.43N±0°.03×147°.39W±0°.04, h13km±5km, Error ellipse: s-maj=3.8km s-min=3.1km az=184.0*
*AEIC **21** 12:02:31.3±2.0, 60°.45N±0°.02×147°.34W±0°.03, h9km±4km, ML3.3/91, Error ellipse: s-maj=2.7km s-min=2.4km az=195.0*

ISC 21 12:02:29.7±1.1, 60°.40N±0°.03×147°.34W±0°.02, h10km±8km, n105, σ1s04/151, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLI	**Glacier Island**	**0.49**	**14**		**Pg**	**12 02 39.8**	**+0.5**
GLI					**Sg**	**12 02 46.1**	**+0.4**
FID	**Port Fidalgo**	**0.55**	**50**		**Pg**	**12 02 40.6**	**+0.2**
FID					**Sg**	**12 02 47.1**	**-0.5**
PWL	**Port Wells**	**0.67**	**313**		**Pg**	**12 02 42.9**	**+0.2**
PWL					**Sg**	**12 02 51.7**	**+0.2**
JPK	**Jack Peak**	**0.75**	**29**		**Pg**	**12 02 44.0**	**-0.2**
EYAK	**Cordova Ski Ar**	**0.80**	**79**		**Pb**	**12 02 45.7**	**+0.1**
EYAK				Sg	**Sb**	**12 02 56.9**	**+0.4**
VMT	**TAPS Tl Valdez**	**0.83**	**35**		**Pg**	**12 02 45.5**	**-0.1**
VMT					**Sg**	**12 02 55.9**	**-0.6**
SEW	**Seward**	**1.10**	**255**	Pg	**Pb**	**12 02 50.7**	**0.0**
SEW				Sg	**Sb**	**12 03 05.3**	**+0.3**
MID	**Middleton Isla**	**1.10**	**152**		**Pn**	**12 02 52.0**	**+0.9**
MID				Sg	**Sn**	**12 03 07.7**	**+1.4**
KNK	**Knik Glacier**	**1.15**	**332**		**Pb**	**12 02 50.6**	**-1.1**
KNK					**Sb**	**12 03 05.4**	**-1.3**
GOAT	**Goat Mountain**	**1.30**	**81**		**Pn**	**12 02 53.9**	**-0.1**
GOAT					**Sb**	**12 03 10.8**	**-0.3**
RAGM	**Ragged Mountai**	**1.32**	**90**		**Pn**	**12 02 54.0**	**-0.2**
RAGM				Sn	**Sg**	**12 03 13.3**	**+1.1**
RC01	**Rabbit Creek A**	**1.36**	**301**		**Pn**	**12 02 55.0**	**+0.3**
RC01					**Sb**	**12 03 12.4**	**-0.3**
SLKM	**Skilak Lake**	**1.43**	**275**		**Pn**	**12 02 55.5**	**-0.2**
SCM	**Sheep Creek Mo**	**1.44**	**0**		**Pn**	**12 02 55.3**	**-0.5**
SCM				Sn	**Sn**	**12 03 13.9**	**-0.8**
PMR	**Palmer**	**1.48**	**325**		**Pn**	**12 02 56.1**	**-0.2**
PMR				Sn	**Sn**	**12 03 15.4**	**-0.3**
SML	**Sawmill**	**1.49**	**342**		**Pn**	**12 02 56.6**	**+0.1**
SML				Sn	**Sn**	**12 03 16.1**	**+0.1**
PS12	**TAPS Pump St12**	**1.52**	**44**		**Pn**	**12 02 56.6**	**-0.3**
HMT	**Hamilton**	**1.53**	**91**		**Pn**	**12 02 57.3**	**+0.5**
HMT				Sn	**Sg**	**12 03 18.2**	**-0.6**
GHO	**Glory Hole Cre**	**1.57**	**331**		**Pn**	**12 02 58.1**	**+0.4**
GHO				Sn	**Sn**	**12 03 17.5**	**-0.7**
FIS	**Fire Island**	**1.60**	**299**		**Pn**	**12 02 57.1**	**-0.8**
NICHA	**Nichawak Mount**	**1.69**	**94**		**Pn**	**12 02 59.7**	**+0.5**
BRSE	**Bradley Lake S**	**1.83**	**250**		**Pn**	**12 03 01.2**	**0.0**
BRLK	**Bradley Lake**	**1.89**	**252**		**Pn**	**12 03 02.2**	**+0.2**
BRLK				Sn	**Sn**	**12 03 25.8**	**-0.1**
PS11	**TAPS Pump St11**	**1.91**	**27**		**Pn**	**12 03 03.4**	**+1.1**
CAPN	**Captain Cook N**	**1.92**	**283**		**Pn**	**12 03 03.0**	**+0.6**
SUA	**Susitna One**	**1.98**	**304**		**Pn**	**12 03 03.0**	**-0.2**
SUA				Sn	**Sn**	**12 03 28.0**	**-0.1**
GRIN	**Grindle Hills**	**2.00**	**92**		**Pn**	**12 03 03.0**	**-0.5**
GLB	**Gilahina Butte**	**2.01**	**57**		**Pn**	**12 03 03.7**	**0.0**
GLB				Sn	**Sn**	**12 03 28.4**	**-0.5**
VRDI	**Verde Repeater**	**2.08**	**65**		**Pn**	**12 03 04.5**	**-0.2**
VRDI				Sn	**Sn**	**12 03 29.8**	**-0.9**
CRQM	**Cirque**	**2.10**	**78**		**Pn**	**12 03 04.9**	**-0.2**
CRQM				Sn	**Sn**	**12 03 31.2**	**-0.1**
CNPM	**China Poot**	**2.15**	**248**		**Pn**	**12 03 05.8**	**+0.2**
TGL	**Tana Glacier**	**2.25**	**79**		**Pn**	**12 03 06.8**	**-0.3**
TGL				Sn	**Sn**	**12 03 34.2**	**-0.8**
HOM	**Homer**	**2.29**	**253**	Pn	**Pn**	**12 03 08.0**	**+0.6**
HOM				Sn	**Sn**	**12 03 37.1**	**+1.5**
MCARA	**McCarthy VSAT**	**2.33**	**63**		**Pn**	**12 03 08.1**	**+0.2**
MCARA				Sn	**Sn**	**12 03 37.5**	**+0.9**
SPCG	**Spurr Capps Gl**	**2.46**	**293**		**Pn**	**12 03 09.3**	**-0.6**
WAT1	**Susitna Watana**	**2.50**	**347**		**Pn**	**12 03 10.8**	**+0.3**
KIAG	**Kiagna River**	**2.51**	**76**		**Pn**	**12 03 10.5**	**-0.1**
RDT	**Redoubt**	**2.52**	**276**		**Pn**	**12 03 09.7**	**-0.9**
SPCR	**Spurr Chakacha**	**2.52**	**291**		**Pn**	**12 03 10.4**	**-0.3**
BALM	**Baldy**	**2.53**	**73**		**Pn**	**12 03 10.8**	**-0.2**
BALM				Sn	**Sn**	**12 03 41.0**	**-0.9**
SKT	**Skwentna**	**2.57**	**310**		**Pn**	**12 03 10.8**	**-0.6**
SKT				Sn	**Sn**	**12 03 43.0**	**+0.3**
SPBG	**Spurr Blockage**	**2.61**	**291**		**Pn**	**12 03 11.5**	**-0.4**
WAT2	**Susitna Watana**	**2.64**	**348**		**Pn**	**12 03 12.7**	**+0.4**
DFR	**Drift River**	**2.65**	**276**		**Pn**	**12 03 11.8**	**-0.8**
DHY	**Denali Highway**	**2.68**	**360**		**Pn**	**12 03 13.9**	**+0.9**
DHY				Sn	**Sn**	**12 03 46.0**	**+0.4**
RSO	**Redoubt South**	**2.69**	**274**		**Pn**	**12 03 11.9**	**-1.1**
MESA	**MESA**	**2.69**	**92**		**Pn**	**12 03 13.0**	**-0.1**
RED	**Redoubt Volcan**	**2.70**	**273**		**Pn**	**12 03 12.5**	**-0.6**
RDJH	**Redoubt Jeurge**	**2.71**	**276**		**Pn**	**12 03 13.0**	**-0.4**
PAX	**Paxson**	**2.73**	**18**		**Pn**	**12 03 14.5**	**+1.0**
PAX				Sn	**Sn**	**12 03 47.3**	**+0.8**
RDWB	**Redoubt West**	**2.73**	**274**		**Pn**	**12 03 13.3**	**-0.3**
HUR	**Hurricane**	**2.81**	**338**		**Pn**	**12 03 13.9**	**-0.7**
BARN	**Barnard Glacie**	**2.87**	**74**		**Pn**	**12 03 16.0**	**+0.4**
ILW	**Iliamna West**	**2.91**	**266**		**Pn**	**12 03 16.1**	**0.0**
RKAV	**Rock Avalanche**	**2.98**	**89**		**Pn**	**12 03 17.1**	**0.0**
CTGM	**Chitina Glacie**	**3.01**	**77**	Pn	**Pn**	**12 03 17.8**	**+0.4**
CTGM				Sn	**Sn**	**12 03 52.9**	**-0.7**
MENT	**Mentasta**	**3.07**	**33**		**Pn**	**12 03 18.9**	**+0.7**
MENT				Sn	**Sn**	**12 03 56.8**	**+1.8**
RND	**Reindeer**	**3.10**	**347**		**Pn**	**12 03 19.6**	**+1.0**
RND				Sn	**Sn**	**12 03 54.6**	**-1.1**
PS10	**TAPS Pump St10**	**3.12**	**13**		**Pn**	**12 03 18.2**	**-0.7**
AUP	**Augustine Pinn**	**3.24**	**254**		**Pn**	**12 03 20.7**	**+0.1**
TRF	**Thorofare Moun**	**3.36**	**337**		**Pn**	**12 03 23.7**	**+1.3**
PPLA	**Purkeypile**	**3.41**	**319**		**Pn**	**12 03 22.3**	**-0.6**
PPLA				Sn	**Sn**	**12 04 02.3**	**-1.2**
MCK	**McKinley**	**3.42**	**348**		**Pn**	**12 03 25.0**	**+1.9**
MCK				Sn	**Sn**	**12 04 05.8**	**+2.1**
PCA	**Pinnacle**	**3.54**	**92**		**Pn**	**12 03 24.7**	**0.0**
RIDG	**Independent Ri**	**3.55**	**18**		**Pn**	**12 03 25.5**	**+0.7**
KTH	**Kantishna Hill**	**3.58**	**333**		**Pn**	**12 03 26.3**	**+1.0**
KTH				Sn	**Sn**	**12 04 08.3**	**+0.6**
DOT	**Dot Lake**	**3.60**	**24**		**Pn**	**12 03 26.9**	**+1.4**
YUK3	**Moose Creek**	**3.61**	**65**		**Pn**	**12 03 26.7**	**+0.9**
BVCY	**Beaver Creek**	**3.71**	**54**		**Pn**	**12 03 27.7**	**+0.7**
YUK1	**Sand Pete Hill**	**3.73**	**59**		**Pn**	**12 03 28.4**	**+1.0**
BC03		**3.76**	**42**		**Pn**	**12 03 28.4**	**+0.8**
KDAK	**Kodiak Island**	**3.77**	**228**	Pn	**Pn**	**12 03 27.9**	**+0.1**
	3.0nm,0.3s,baz=57,slow=8.0,SNR=34						
KDAK				Sn	**Sn**	**12 04 08.2**	**-4.0**
	6.9nm,0.3s,baz=226,slow=19,SNR=17						
KDAK	**Kodiak Island**	**3.77**	**228**		**Pn**	**12 03 28.2**	**+0.4**
BWN	**Browne**	**3.91**	**346**		**Pn**	**12 03 30.7**	**+1.0**
BWN				Sn	**Sn**	**12 04 15.9**	**+0.3**
HDA	**Harding Lake**	**4.03**	**2**		**Pn**	**12 03 32.7**	**+1.4**
HDA				Sn	**Sn**	**12 04 18.0**	**-0.4**
PNL	**Peninsula**	**4.05**	**97**		**Pn**	**12 03 31.8**	**+0.1**
BPAW	**Bear Paw Mtn.**	**4.08**	**337**		**Pn**	**12 03 32.4**	**+0.2**
WRH	**Wood River Hil**	**4.10**	**355**		**Pn**	**12 03 33.0**	**+0.8**
WRH				Sn	**Sn**	**12 04 20.6**	**+0.4**
CHUM	**Lake Minchumin**	**4.20**	**328**		**Pn**	**12 03 33.6**	**0.0**
CCB	**Clear Creek Bu**	**4.26**	**357**		**Pn**	**12 03 34.9**	**+0.3**
CCB				Sn	**Sn**	**12 04 23.1**	**-1.2**
IL31		**4.39**	**3**		**Pn**	**12 03 36.3**	**0.0**
ILAR	**Eielson Array**	**4.39**	**3**	Pn	**Pn**	**12 03 36.3**	**0.0**
	6.1nm,0.3s,baz=184,slow=13,SNR=111						
ILAR				Sn	**Sn**	**12 04 27.8**	**+0.4**
	1.6nm,0.3s,baz=191,slow=19,SNR=5.2						
OHAK	**Old Harbor**	**4.44**	**227**		**Pn**	**12 03 36.5**	**-0.5**
OHAK				Sn	**Sn**	**12 04 30.7**	**+2.0**
COLA	**College**	**4.49**	**357**		**Pn**	**12 03 37.7**	**0.0**
MDM	**Murphy Dome**	**4.59**	**355**		**Pn**	**12 03 39.6**	**+0.5**
POKR	**Poker Plat Res**	**4.73**	**360**		**Pn**	**12 03 40.0**	**-1.0**
DHAK	**Deception Hill**	**4.80**	**102**	Pn	**Pn**	**12 03 41.8**	**-0.1**
TT01	**Tatalina**	**4.84**	**305**		**Pn**	**12 03 41.0**	**-1.4**
HYT	**Haines Junctio**	**4.86**	**81**	Pn	**Pn**	**12 03 43.5**	**+0.6**
HYT				Sn	**Sn**	**12 04 38.3**	**-1.0**
MLY	**Manley**	**4.90**	**343**		**Pn**	**12 03 44.1**	**+0.7**
PRP	**Porcupine Dome**	**5.20**	**8**		**Pn**	**12 03 49.3**	**+1.8**
PRP				Sn	**Sn**	**12 04 48.4**	**+0.8**
DAWY	**Dawson**	**5.22**	**42**		**Pn**	**12 03 48.5**	**+0.8**
EGAK	**Eagle**	**5.24**	**30**		**Pn**	**12 03 50.0**	**+2.1**
SII	**Sitkinak Islan**	**5.27**	**226**	Pn	**Pn**	**12 03 48.1**	**-0.3**
SII				Sn	**Sn**	**12 04 47.1**	**-2.0**
SKAG	**Skagway**	**6.11**	**94**	Pn	**Pn**	**12 04 00.7**	**+0.8**
WHY	**Whitehorse**	**6.16**	**82**	Pn	**Pn**	**12 04 00.8**	**+0.2**
WHY				Sn	**Sn**	**12 05 08.7**	**-2.3**
FYU	**Fort Yukon**	**6.26**	**8**		**Pn**	**12 04 02.4**	**+0.5**
IM03		**6.30**	**335**		**Pn**	**12 04 02.3**	**-0.2**
JIS	**Juneau Island**	**6.96**	**102**	Pn	**Pn**	**12 04 12.2**	**+0.6**
COLD	**Coldfoot**	**6.97**	**351**	Pn	**Pn**	**12 04 13.5**	**+1.8**
COLD				Sn	**Sn**	**12 05 36.4**	**+5.6**
BM03	**Burnt Mountain**	**7.14**	**9**		**Pn**	**12 04 12.9**	**-1.2**
INK	**Inuvik**	**9.91**	**31**		**Pn**	**12 04 55.7**	**+3.9**
	0.1nm,0.3s,baz=233,slow=8.5,SNR=6.2						
INK	**Inuvik**	**9.91**	**31**		**Pn**	**12 04 50.3**	**-1.5**
YKA	**Yellowknife Ar**	**15.69**	**68**	Pn	**Pn**	**12 06 09.4**	**-1.0**
	0.0nm,0.3s,baz=279,slow=13,SNR=3.9						
SONM	**Songino Array**	**56.78**	**309**	P	**P**	**12 12 14.2**	**+0.5**
	0.7nm,0.9s,baz=38,slow=7.3,SNR=4.2						

*UPA **21** 12:07:30.2±3.2, 3°.32N×83°.22W, h0km±44km, MW4.6*
*IDC **21** 12:07:34.8±0.8, 3°.64N×82°.88W, h0km, mb3.8/11, mb1 4.1/19, mb1mx4.0/45, mbtmp4.0/19, ML3.7/7, MS3.9/13, Ms1 3.9/13, ms1mx3.7/30, Error ellipse: s-maj=30.1km s-min=13.5km az=50.0*
*NEIC **21** 12:07:37.9±2.7, 3°.64N±0°.07×82°.77W±0°.08, h24km±4km, mb4.4/15, Error ellipse: s-maj=13.6km s-min=8.2km az=53.0*

ISC 21 12:07:37.6±0.5, 3°.59N±0°.05×82°.85W±0°.07, h24km, n93, σ1s74/93, mb4.2/18, MS3.7/8, 1C, South of Panama

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CACAO	**El Cacao, Vera**	**4.23**	**28**	*eP*	**Pn**	**12 08 39.1**	**-1.4**
GMAL	**Guarumal, Vera**	**4.45**	**21**	*eP*	**Pn**	**12 08 44.5**	**+0.9**
AZU	**Azuero**	**4.90**	**31**	*eP*	**Pn**	**12 08 50.

LPAZ	La Paz	24.53	144	P	P	12 12 57.3	+1.1	
	comp=Z,4.2nm,0.9s,baz=333,slow=11,SNR=14							
LPAZ	La Paz	24.53	144	P	P	12 12 56.5	+0.3	
LPAZ				IAmb	IAmb	12 13 08.6		
	comp=Z,10nm,0.9s							
MNMC	Minye Minye	26.07	150	P	P	12 13 07.3	-2.4	
MNMC				IAmb	IAmb	12 13 22.1		
	comp=Z,23nm,1.5s							
PB11	IPOC Station P	26.58	151	P	P	12 13 13.4	-0.8	
PB11				IAmb	IAmb	12 13 25.9		
	comp=Z,10.0nm,0.9s							
GO01	Chusmiza	26.72	150	P	P	12 13 16.9	+0.9	
GO01				IAmb	IAmb	12 13 36.2		
	comp=Z,10nm,1.3s							
SIV	San Ignacio	29.02	133	P	P	12 13 36.2	+0.2	
	comp=Z,1.0nm,0.9s,baz=284,slow=12,SNR=4.3							
SIV				LR	LR	12 26 14.6		
	comp=Z,685nm,18.4s,baz=283,slow=38							
TXAR	Lajitas Array	32.34	325	LR		12 27 50.3		
	comp=Z,124nm,18.7s,baz=0.0,slow=38							
AMTX	Amarillo	35.71	333	P	P	12 14 34.8	+0.4	
ANMO	Albuquerque	38.12	328	P	P	12 14 55.3	+0.2	
T25A	Trinidad	38.82	332	P	P	12 15 01.5	+0.6	
T25A				IAmb	IAmb	12 15 10.6		
	comp=Z,6.5nm,1.0s							
SDCO	Great Sand Dun	39.82	332	P	P	12 15 10.8	+1.3	
SDCO				IAmb	IAmb	12 15 14.9		
	comp=Z,4.5nm,0.9s							
214A	Organ Pipe Nat	39.85	319	P	P	12 15 10.7	+1.3	
SMCO	Snowmass	41.66	331	P	P	12 15 25.3	+0.6	
PDAR	Pinedale Array	45.69	332	P	P	12 15 56.9	0.0	
	comp=Z,0.6nm,0.9s,baz=140,slow=10,SNR=3.0							
PDAR				LR	LR	12 36 05.4		
	comp=Z,79nm,19.2s,baz=45,slow=38							
ELK	Elko	47.10	326	P	P	12 16 08.7	+0.7	
	comp=Z,0.6nm,0.8s,baz=166,slow=5.1,SNR=4.3							
OMMB	Old Mammoth Mi	47.33	320		pP	12 16 16.6	+0.2	
NVAR	Mina Array Bea	47.39	322	P	P	12 16 11.9	+1.6	
	comp=Z,1.1nm,0.8s,baz=139,slow=7.5,SNR=8.2							
NVAR				PcP	PcP	12 17 41.7	+0.9	
	comp=Z,0.5nm,0.8s,baz=148,slow=5.3,SNR=2.5							
NVAR				LR	LR	12 35 34.5		
	comp=Z,149nm,19.3s,baz=106,slow=36							
ULM	Lac du Bonnet	47.79	349	P	P	12 16 12.5	-0.4	
	comp=Z,3.0nm,0.9s,baz=197,slow=6.1,SNR=5.9							
ULM	Lac du Bonnet	47.79	349	P	P	12 16 12.4	-0.4	
YHB	Horse Butte	47.97	333	P	P	12 16 14.2	-0.5	
HOPS	Hopland Field	50.74	319		pP	12 16 43.0	+0.8	
YKA	Yellowknife Ar	63.32	344	P	P	12 18 04.3	0.0	
	comp=Z,2.1nm,1.0s,baz=141,slow=6.4,SNR=20							
PPT	Papeete	69.05	250	LR	LR	12 40 39.3		
	comp=Z,149nm,19.8s,baz=64,slow=29							
INK	Inuvik	72.97	342	P	P	12 19 05.7	+0.9	
	comp=Z,1.7nm,1.0s,baz=150,slow=6.1,SNR=4.8							
SUMG	Summit	74.09	13	*i* P	P	12 19 14.0	+2.2	
	comp=Z,32nm,1.1s							
ILAR	Eielson Array	75.91	337	P	P	12 19 22.6	+0.6	
	comp=Z,0.8nm,0.9s,baz=123,slow=3.3,SNR=5.0							
ESDC	Sonseca Array	79.16	50	P	P	12 19 41.6	+0.8	
	comp=Z,0.1nm,0.3s,baz=249,slow=5.1,SNR=2.5							
TORD	Torodi Ar. Bea	83.89	77	P	P	12 20 09.0	+2.8	
	comp=Z,0.5nm,0.9s,baz=308,slow=7.0,SNR=2.6							
VNA3	Neumayer Olymp	88.02	162	P	P	12 20 25.3	-0.1	
VNA1	Neumayer--Stat	88.29	161	P	P	12 20 27.7	+1.0	
NOA	NORSAR Array B	88.86	29	LR	LR	12 57 54.1		
	comp=Z,22nm,19.6s,baz=235,slow=34							
FINES	FINESS Array B	95.80	27	LR	LR	13 00 23.0		
	comp=Z,32nm,21.3s,baz=236,slow=33							
ASAR	Alice Springs	139.29	237	PKhKP	PKPpre	12 26 57.1		
	comp=Z,0.4nm,0.9s,baz=110,slow=2.0,SNR=3.3							
LZH	Lanzhou	140.04	352	*e*PKP	PKPdf	12 26 59.0	-5.8	
LZH				pPKP	pPKPdf	12 27 12.1	+0.3	
LZH				sPKP		12 27 15.3		
WRA	Warramunga Arr	140.27	243	PKP	PKPdf	12 27 06.2	+0.7	
	comp=Z,0.9nm,0.9s,baz=115,slow=2.6,SNR=4.8							

NNC 21 12:25:41.0±1.9, 51°38N×74°20E, h0km, mb 3.5, mpv 3.2, 9C-4D, Error ellipse: s-maj=36.6km s-min=11.7km az=27.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	Kurchatov Arra	2.84	104	↑Pg	Pb	12 26 32.7	+0.2
	12nm,0.8s						
KURBB				↑Lg	Lg	12 27 12.6	
	179nm,0.8s						
KURK	Kurchatov	2.87	102	↓Pg	Pb	12 26 33.3	+0.3
	8.1nm,1.0s						
KURK				↓Lg	Lg	12 27 13.6	
	64nm,0.9s						
BRVK	Borovoye	2.94	307	↑Pg	Pb	12 26 34.8	+0.6
	8.8nm,1.2s						
BRVK				↓Lg	Lg	12 27 14.3	
	54nm,0.8s						
MAKZ	Makanchi	6.85	129	↓Pg	Pb	12 27 43.5	+2.6
	2.8nm,1.2s						
MAKZ				↑Lg	Lg	12 29 16.4	
	22nm,1.1s						
MK31	Makanchi Array	7.02	128	↑Pg	Pb	12 27 48.6	+4.9
	1.2nm,0.7s,baz=326,slow=18,SNR=5.0						
MK31				↑Lg	Lg	12 29 25.4	
	9.4nm,0.7s,baz=321,slow=25,SNR=4.0						
TKM2	Tokmak 2	8.51	173	↑Lg	Lg	12 30 09.3	
	33nm,1.0s						
KK31	Karatay Array	8.65	198	↑Lg	Lg	12 30 12.9	
	6.3nm,0.8s,baz=20,slow=27,SNR=4.0						
AAK	Ala-Archa	8.74	179	Lg	Lg	12 30 17.8	
	23nm,1.0s						
PDGK	Podgornoye	8.81	154	↑Lg	Lg	12 30 16.9	
	18nm,1.1s						

*ISK **21** 13:06:16.9, 40°.31N×25°.76E, h6km, ML 2.5/14*
*ATH **21** 13:06:17.2, 40°.32N×25°.75E, h25km±4km, ML 2.1/2, Error ellipse: s-maj=5.0km s-min=1.7km az=291.0*
*DDA **21** 13:06:18.0, 40°.23N×25°.93E, h21km±12km, ML 2.3*
*THE **21** 13:06:18.1, 40°.33N×25°.80E, h13km±1km, ML 2.1/5, Error ellipse: s-maj=1.8km s-min=0.5km az=332.0*

ISC 21 13:06:17.6±0.8, 40°29N±0°.02×25°.76E±0°.02, h14km±6km, n36, σ0s76/52, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GADA	Gvkgeada	0.15	134	PG	Pg	13 06 21.1	-0.3
GADA				SG	Sg	13 06 23.5	-0.5
SMTH	Samothraki Isl	0.25	315	P	Pg	13 06 23.3	+0.3
SMTH				S	Sg	13 06 27.3	+0.6
	860nm,0.3s						
SMTH	Samothraki Isl	0.25	315	P	Pg	13 06 23.4	+0.3
SMTH				S	Sg	13 06 27.3	+0.6
SMTH				AML	AML	13 06 27.5	
	comp=N,2310μm,0.2s						
SMTH				AML	AML	13 06 28.2	
	comp=E,971μm,0.3s						
BOZC	Bozcaada	0.50	153	PG	Pg	13 06 27.6	0.0
BOZC	Bozcaada	0.50	153	*i* P	Pg	13 06 27.1	-0.4
BOZC				*i* S	Sg	13 06 32.6	-1.7
ENEZ	Enez	0.53	34	PG	Pg	13 06 27.5	-0.7
ENEZ				SG	Sg	13 06 35.2	-0.1
GELI	Tayfur-Gelibol	0.56	79	PG	Pg	13 06 28.0	-0.6
EZN	Ezine	0.64	137	PG	Pg	13 06 29.6	-0.5
ALN	Alexandroupoli	0.64	20	P	Pg	13 06 29.2	-1.0
ALN				S	Sg	13 06 38.2	-0.5
	comp=E,132nm,0.3s						
ALN	Alexandroupoli	0.64	20	P	Pg	13 06 29.4	-0.8
ALN				S	Sg	13 06 38.2	-0.5
ALN				AML	AML	13 06 38.6	
	comp=N,320μm,0.3s						
ALN				AML	AML	13 06 41.3	
	comp=E,196μm,0.3s						
ALN	Alexandroupoli	0.64	20	PG	Pg	13 06 29.5	-0.7
ERIK	Erikli-Kesan	0.69	57	PG	Pg	13 06 30.5	-0.5
LPK	Lapseki	0.77	84	PG	Pg	13 06 32.1	-0.5
BAYC	CANAKKALE_Bayr	0.82	132	*i* P	Pg	13 06 32.8	-0.7
BAYC				*i* S	Sb	13 06 44.5	0.0
BAYC				IAML		13 06 48.0	
	comp=N,97nm,0.2s						
THAS	Thassos island	0.85	292	P	Pb	13 06 34.7	+0.5
THAS				S	Sn	13 06 47.2	-0.2
	comp=N,120nm,0.3s						
THAS	Thassos island	0.85	292	P	Pg	13 06 32.8	-1.3
RDO	Rodhopi	0.87	349	P	Pg	13 06 33.9	-0.5
RDO				S	Sg	13 06 46.0	+0.1
	comp=N,252nm,0.3s						
RDO	Rodhopi	0.87	349	P	Pg	13 06 33.9	-0.5
RDO				S	Sg	13 06 45.5	-0.3
RDO	Rodhopi	0.87	349	PG	Pg	13 06 33.7	-0.8
KESN	Edirne-Kesan	0.88	53	*i* P	Pn	13 06 39.5	+3.6
KESN				*i* S	Sg	13 06 46.4	0.0
UKOP	Uzunkopru-Edir	1.07	38	PG	Pb	13 06 37.4	-0.4
SIGR	SIGRI	1.08	176	P	Pg	13 06 38.7	+0.2
SIGR				S	Sn	13 06 53.9	+0.8
	comp=N,290nm,0.4s						
SIGR	SIGRI	1.08	176	P	Pg	13 06 38.5	0.0
SIGR	SIGRI	1.08	176	PN	Pg	13 06 38.5	0.0
KAVA	Kavala	1.18	307	P	Pn	13 06 39.7	0.0
KAVA	Kavala	1.18	307	P	Pn	13 06 39.2	-0.5
AYVA	Ayvalik	1.22	144	*i* P	Pn	13 06 40.3	+0.2
AYVA				*i* S	Sb	13 06 55.6	-0.3
AYVA				IAML		13 06 58.0	
	comp=E,93nm,0.5s						
AYVA				IAML		13 06 59.0	
	comp=N,183nm,0.5s						
KDZ	Kurdzhali	1.38	349	PN	Pn	13 06 42.7	+0.3
MRMT	Marmara Adasi	1.44	77	PN	Pb	13 06 43.9	-0.2
GONE	Gonen-Balikesi	1.50	99	PN	Pb	13 06 44.9	-0.2
DKL	Dikili	1.51	144	PN	Pb	13 06 45.3	0.0
EDC	Edincik	1.61	87	PN	Pb	13 06 46.5	-0.6
ZEDA	zmir-Bergama	1.67	142	*i* P	Pb	13 06 47.9	-0.2
ZEDA				*i* S	Sb	13 07 09.5	+0.5
ZEDA				IAML		13 07 12.0	
	comp=N,36nm,0.4s						
EDRB	Edirne	1.72	25	PN	Pn	13 06 47.8	+0.7
STEP	BALIKESIR_Sava	1.77	121	*i* P	Pg	13 06 51.5	-0.1
STEP				*i* S	Sb	13 07 11.2	-0.5
PLG	Polygyros	1.77	273	P	Pn	13 06 48.0	+0.2

*EAF **21** 13:11:13.2±1.8, 27°.01S×27°.34E, h10km, MD 3.0*
PRE 21 13:11:17.1±1.0, 26°.93S×26°.79E, h2km, ML 2.3, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRYS	Parys	0.51	89	*e*P	Pg	13 11 26.8	-0.1
PRYS				*e*S	Sg	13 11 34.5	+0.9
PRYS				AML	AML	13 11 43.1	
	comp=Z,76nm,0.3s						
WDLM	Western Deep L	0.76	49	*e*P	Pg	13 11 32.4	+0.7
WDLM				*e*S	Sg	13 11 41.9	+0.3
WDLM				AML	AML	13 11 50.6	
	comp=Z,138nm,0.3s						
KLOF	Kloof	0.94	52	*e*P	Pg	13 11 35.6	+0.5
KLOF				*e*S	Sg	13 11 47.3	+0.1
KLOF				AML	AML	13 11 54.9	
	comp=Z,321nm,0.2s						
KSR	Koster	1.08	5	*e*P	Pb	13 11 38.5	-0.1
KSR				*e*S	Sb	13 11 52.9	-0.3
KSR				AML	AML	13 11 58.0	
	comp=Z,41nm,1.2s						
SWZ	Schweizer	1.32	259	*e*P	Pg	13 11 42.2	-0.2
SWZ				*e*S	Sb	13 12 00.5	+0.3
SWZ				AML	AML	13 12 03.6	
	comp=Z,91nm,0.4s						
ERPM	east rand prop	1.43	66	*e*P	Pb	13 11 45.3	+0.8
ERPM				*e*S	Sn	13 12 05.6	+1.9
ERPM				AML	AML	13 12 07.2	
	comp=Z,47nm,0.4s						
BOSA	Boshof	2.16	219	*i* P	Pb	13 11 55.8	-1.2
BOSA	Boshof	2.16	219	*e*P	Pn	13 11 55.1	+0.9
BOSA				*e*S	Sn	13 12 21.9	+0.3
BOSA				AML	AML	13 12 28.5	
	comp=Z,13nm,0.6s						
BOSA	Boshof	2.16	219	*i* P	Pn	13 11 54.0	-0.2
BOSA				*i* S	Sn	13 12 20.8	-0.8
LBTB	Lobatse	2.19	330	*e*P	Pn	13 11 55.2	+0.6
LBTB				*e*S	Sn	13 12 22.9	+0.5
LBTB				AML	AML	13 12 27.2	
	comp=Z,50nm,0.2s						
LBTB	Lobatse	2.19	330	*i* P	Pn	13 11 54.9	+0.3
LBTB				*i* S	Sb	13 12 24.0	-1.1

*IDC **21** 13:49:53.1±0.9, 36°.35S×97°.51W, h0km, mb 4.4/12, mb1 4.6/12, mb1mx4.4/35, mbtmp4.4/12, MS 4.1/10, Ms1 4.1/10, ms1mx3.9/24, Error ellipse: s-maj=25.2km s-min=19.1km az=25.0*
*NEIC **21** 13:49:54.2±2.0, 36°.14S±0°.04×97°.5W±0°.2, h10km±1km, mb 4.8/42, Error ellipse: s-maj=21.2km s-min=5.7km az=263.0*
*GCMT **21** 13:49:55.2±0.2, 36°.41S±0°.01×97°.52W±0°.02, h16km±1km, MW 4.9/108, Moment Tensor Solution. s34,c42; s108,c143; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=0.21±.11; Mθθ 0.24±.09; Mϕϕ=0.03±.10; Mrθ 0.40±.26; Mϕθ=3.21±.08; Mϕr=0.29±.27; Best double couple: Mo 3.24700×10^16 NP1:ϕs 179.00000°, δ 84.00000°, λ 5.00000°. NP2:ϕs 89.00000°, δ 85.00000°, λ 174.00000°. Principal axes: T 3.3840, Plg 8.0000°, Azm 44.0000°; N -0.2740, Plg 82.0000°, Azm 234.0000°; P -3.1100, Plg 1.0000°, Azm 134.0000°; nsta 1 refers to body waves, cutoff=40s. nsta 2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 13:49:53.8±0.5, 36°.27S±0°.09×97°.69W±0°.08, h12km, n107, σ1s35/96, mb 4.8/27, MS 4.1/12, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	13.45	309	LR	LR	13 56 47.8	
	comp=Z,1μm,20.6s,baz=108,slow=30						
GO06	Curarrehue	20.92	107	P	Pn	13 54 36.8	-2.1
GO05	Huala	20.96	94	P	Pn	13 54 36.0	-0.7
PLCA	Paso Flores	21.67	110	P	P	13 54 43.1	-1.2
	3.8nm,0.8s,baz=316,slow=8.9,SNR=5.7						
PLCA	Paso Flores	21.67	110	*e*P	P	13 54 44.6	+0.2
PLCA	Paso Flores	21.67	110	P	P	13 54 43.0	-1.3
ROC1	El Roble	22.17	89	P	P	13 54 47.2	-2.8
PEL	Peldehue	22.39	90	P	P	13 54 52.1	0.0
PEL				IAmb	IAmb	13 55 04.9	
	comp=Z,47nm,1.5s						
GO04	Tololo Observa	23.26	83	P	P	13 55 01.5	0.0
GO04				IAmb	IAmb	13 55 37.2	
	comp=Z,46nm,1.4s						
GO09	Cerro Castillo	23.51	138	P	P	13 55 04.9	+1.4
GO03	Copiap	24.79	77	P	P	13 55 13.6	-2.1
GO03				IAmb	IAmb	13 55 24.0	
	comp=Z,12nm,0.8s						
CFA	Coronel Fontan	24.83	88	P	P	13 55 15.6	-0.4
	comp=Z,11nm,1.0s,baz=252,slow=9.9,SNR=10						
CFA				LR	LR	14 02 36.1	
	comp=Z,413nm,19.1s,baz=256,slow=31						
GO10	Punta Arenas	25.15	141	P	P	13 55 18.5	-0.3
GO02	Mina Guanaco	26.48	73	P	P	13 55 29.0	-2.4
GO02				IAmb	IAmb	13 55 34.5	
	comp=Z,26nm,1.1s						
PB10	IPOC Station P	26.64	69	P	P	13 55 30.7	-1.7
PB10				IAmb	IAmb	13 55 47.8	
	comp=Z,33nm,1.3s						
PB04	IPOC Station P	27.63	67	P	P	13 55 39.8	-1.8
PB04				IAmb	IAmb	13 55 49.1	
	comp=Z,33nm,1.2s						
LVC	Limon Verde	28.40	69	P	P	13 55 49.3	+0.7
	comp=Z,21nm,1.1s,baz=236,slow=7.2,SNR=9.4						
LVC				LR	LR	14 04 11.3	
	comp=Z,760nm,18.8s,baz=238,slow=30						
LVC	Limon Verde	28.40	69	*e*P	P	13 55 49.4	+0.7
LVC	Limon Verde	28.40	69	P	P	13 55 47.4	-1.2
LVC				IAmb	IAmb	13 55 50.5	
	comp=Z,27nm,1.1s						
PB11	IPOC Station P	29.57	64	P	P	13 55 57.2	-1.6
PB11				IAmb	IAmb	13 56 45.3	
	comp=Z,14nm,1.0s						
PTCN	Pitcairn Islan	29.89	283	P	P	13 56 03.0	+1.5
GO01	Chusmiza	29.96	64	P	P	13 56 00.7	-2.0
MNMC	Minye Minye	30.01	63	P	P	13 56 01.9	-0.9
MNMC				IAmb	IAmb	13 56 04.2	
	comp=Z,23nm,1.1s						
NNA	Nana	30.62	43	P	P	13 56 06.2	-1.8
NNA				IAmb	IAmb	13 56 18.1	
	comp=Z,15nm,1.1s						
EFI	East Falkland	31.96	131	P	P	13 56 19.2	-0.2
LPAZ	La Paz	32.94	61	P	P	13 56 29.9	+0.8
	comp=Z,14nm,0.9s,baz=197,slow=3.5,SNR=29						
LPAZ	La Paz	32.94	61	*e*P	P	13 56 30.4	+1.4
LPAZ	La Paz	32.94	61	P	P	13 56 29.4	+0.4
SIV	San Ignacio	38.27	68	P	P	13 57 13.5	-0.7
	comp=Z,5.0nm,1.0s,baz=263,slow=12,SNR=8.0						
OTAV	Otavalo	40.48	31	*e*P	P	13 57 34.9	+1.8
OTAV	Otavalo	40.48	31	P	P	13 57 32.9	-0.2
SAML	Samuel	41.50	58	*e*P	P	13 57 41.8	+0.8
SAML	Samuel	41.50	58	P	P	13 57 40.9	-0.1
PP1B	Ponte de Pedra	42.06	75	*e*P	P	13 57 45.9	+0.3
SALV	Santo Antonio	42.42	73	*e*P	P	13 57 48.6	+0.1
PCMB	Pacaembu	42.78	83	*e*P	P	13 57 51.8	+0.4
C2SB	Chapadao do Su	43.02	78	*e*P	P	13 57 54.3	+0.9
FRTB	Fartura	43.30	86	*e*P	P	13 57 55.8	+0.1
ITRB	Iturama	44.48	81	*e*P	P	13 58 05.5	+0.3
SPB	Sao Paulo	44.90	88	P	P	13 58 07.9	-0.5
HOPE	Hope Point	45.14	134	P	P	13 58 11.4	+1.4
CLDB	Colider	45.47	67	*e*P	P	13 58 10.7	-2.4
ARAG	Araguaiana, MT	45.55	76	*e*P	P	13 58 13.6	-0.1
ROSC	El Rosal	46.38	33	LR	LR	14 16 00.4	
	comp=Z,351nm,18.0s,baz=346,slow=34						
IPMB	Ipameri, GO	47.12	81	*e*P	P	13 58 25.2	-0.9
TAOE	Nuku Hiva Isla	47.21	295	*e*S	S	14 05 17.3	-2.5
	comp=Z,94nm,23.6s						
TAOE				*e*LR	LR	14 12 00.3	
	comp=Z,185nm,30.5s						
RUSC	La Rusia	47.87	34	P	P	13 58 32.5	+0.2
PMNB	Patos De Minas	48.24	83	*e*P	P	13 58 35.0	+0.1
BSCB	Bom Sucesso	48.31	87	*e*P	P	13 58 35.2	-0.1
BDFB	Brasilia	48.58	78	P	P	13 58 37.0	-0.4
	comp=Z,2.8nm,0.5s,baz=216,slow=8.7,SNR=4.2						
BDFB				LR	LR	14 17 46.2	
	comp=Z,185nm,18.6s,baz=281,slow=34						
BDFB	Brasilia	48.58	78	P	P	13 58 36.7	-0.7
BDFB				IAmb	IAmb	13 58 38.0	
	comp=Z,6.7nm,0.9s						
VAS01	Vassouras-RJ	48.75	89	*e*P	P	13 58 38.6	-0.1
PPT2	Papeete2	49.25	278	*e*S	S	14 05 47.7	-0.9
	comp=Z,64nm,25.0s						
PPT2				*e*LR	LR	14 12 46.3	
	comp=Z,213nm,24.0s,baz=103						
PPT	Papeete	49.27	278	LR	LR	14 15 05.6	
	comp=Z,92nm,19.5s,baz=105,slow=31						
ACON	Acoyapa	49.41	16	P	P	13 58 44.5	+1.0
SDV	Santo Domingo	51.62	35	*e*P	P	13 59 01.7	+1.1
JANB	Januaria	51.85	80	*e*P	P	13 59 02.1	-0.1
SJMB	Sao Joao De Ma	52.38	86	*e*P	P	13 59 06.6	+0.6
BSFB	Barra de Sao F	52.59	87	*e*P	P	13 59 07.7	+0.1
SMTB	Santa Maria do	52.96	72	*e*P	P	13 59 11.0	+0.6
QSPA	South Pole Qui	53.95	180	P	P	13 59 17.9	+0.7
	comp=Z,4.4nm,1.1s,baz=140,slow=5.2,SNR=14						
QSPA	South Pole Qui	53.95	180	P	P	13 59 17.8	+0.7
QSPA				IAmb	IAmb	13 59 29.9	
	comp=Z,9.2nm,1.2s						
VNA3	Neumayer Olymp	55.51	157	P	P	13 59 27.9	-0.4
NBIT	Itapeh - BA	55.82	84	*e*P	P	13 59 31.8	+0.6
VNA1	Neumayer--Stat	56.09	156	P	P	13 59 32.5	+0.2
SNAA	Sanae	57.52	158	P	P	13 59 41.7	-0.9
SNAA	Sanae	57.52	158	P	P	13 59 44.2	+1.6
SNAA				IAmb	IAmb	13 59 48.6	
	comp=Z,12nm,1.6s						
NBPN	Ponto Novo - B	57.54	79	*e*P	P	13 59 43.4	-0.1
NBLA	Lagarto - SE	59.37	81	*e*P	P	13 59 55.9	-0.3
NBTA	Tacaratu-PE	60.25	79	*e*P	P	14 00 02.9	+0.6
NBMA	Muriti-CE	60.74	77	*e*P	P	14 00 06.4	+0.6
NBPB	Pedra_Branca-C	61.22	75	*e*P	P	14 00 09.4	+0.5
NBAN	Anadia - AL	61.35	81	*e*P	P	14 00 10.3	+0.5
NBPA	Parau_RN	63.02	77	*e*P	P	14 00 21.5	+0.4
RCBR	Riachuelo	63.93	77	P	P	14 00 28.2	+1.1
	comp=Z,8.3nm,0.8s,baz=320,slow=3.8,SNR=3.5						
RCBR	Riachuelo	63.93	77	IAmb	IAmb	14 00 31.7	
	comp=Z,29nm,1.2s						
TXAR	Lajitas Array	65.49	354	P	P	14 00 38.5	+1.6
	comp=Z,0.9nm,0.8s,baz=164,slow=7.7,SNR=6.1						
MNTX	Cornudas Mount	67.99	353	P	P	14 00 52.0	-0.7
MNTX				IAmb	IAmb	14 01 08.7	
	comp=Z,11nm,1.6s						
AMTX	Amarillo	70.88	357	P	P	14 01 09.8	-0.8
AMTX				IAmb	IAmb	14 01 25.9	
	comp=Z,9.8nm,1.0s						
CCM	Cathedral Cave	74.19	5	P	P	14 01 30.6	+0.5
CCM				IAmb	IAmb	14 01 47.2	
	comp=Z,24nm,1.6s						
SHPR	Sheep Range	74.20	345	P	P	14 01 30.7	+0.3
CCUT	Cedar City	74.87	347	P	P	14 01 33.9	-0.5
MAW	Mawson	75.41	172	LR	LR	14 33 21.3	
	comp=Z,88nm,18.8s,baz=234,slow=35						
Q16A	Castle Valley	75.84	349	P	P	14 01 38.6	-1.3
TMUT	Trail Mountain	76.22	349	P	P	14 01 41.6	-0.5
NV11	Mina Array Sit	76.70	344	P	P	14 01 44.3	-0.4
NV11				IAmb	IAmb	14 02 08.6	
	comp=Z,8.0nm,1.4s						
NVAR	Mina Array Bea	76.73	343	P	P	14 01 47.6	+2.6
	comp=Z,4.1nm,1.1s,baz=178,slow=6.4,SNR=15						
KVN	Kaiserville	77.28	344	P	P	14 01 48.8	+0.8
ELK	Elko	78.31	346	P	P	14 01 53.7	-0.1
PD31	Pinedale Array	79.40	351	P	P	14 02 00.2	+0.5
PD31				IAmb	IAmb	14 02 03.6	
	comp=Z,16nm,1.8s						
PDAR	Pinedale Array	79.40	351	P	P	14 02 01.2	+1.5
	comp=Z,1.6nm,0.5s,baz=159,slow=6.9,SNR=20						
SPMN	Marine on St.	81.23	3	P	P	14 02 08.0	-1.3
SPMN				IAmb	IAmb	14 02 14.6	
	comp=Z,8.5nm,0.6s						
DZM	Mont Dzumac	81.75	249	*e*LQ	LQ	14 24 31.5	
	comp=Z,434nm,29.8s						
DZM				*e*LR	LR	14 27 50.7	
	comp=Z,154nm,30.7s						
I07A	Izee	82.39	344	P	P	14 02 15.6	+0.1
I07A

H10N3	**ASCENSION HYDR**	**40.26**	**126**	T	T	14 43 36.2			
	baz=308,slow=75,SNR=436								
H10N2	**ASCENSION HYDR**	**40.27**	**126**	T	T	14 43 36.5			
	baz=308,slow=75,SNR=432								
H10N1	**ASCENSION HYDR**	**40.28**	**126**	T	T	14 43 37.7			
	baz=308,slow=75,SNR=413								
SCHQ	**Schefferville**	**40.66**	**342**	P	**P**	**14 00 45.5**	**-1.4**		
	3.5nm,0.9s,baz=186,slow=10,SNR=2.4								
SCHQ	**Schefferville**	**40.66**	**342**	P	**P**	**14 00 46.3**	**-0.6**		
SCHQ				IAmb	IAmb	14 00 57.1			
	comp=Z,41nm,1.7s								
H10S3	**ASCENSION HYDR**	**40.83**	**127**	T	T	14 44 22.8			
	baz=307,slow=74,SNR=140								
H10S2	**ASCENSION HYDR**	**40.85**	**127**	T	T	14 44 24.1			
	baz=273,slow=74,SNR=166								
DBIC	**Dimbokro**	**41.98**	**99**	LR	LR	14 15 17.6			
	comp=Z,121nm,20.4s,baz=221,slow=32								
PB11	**IPOC Station P**	**43.23**	**213**	P	**P**	**14 01 09.1**	**+0.6**		
PB11				IAmb	IAmb	14 01 10.5			
	comp=Z,16nm,1.0s								
CPUP	**Villa Florida**	**44.57**	**194**	P	**P**	**14 01 18.9**	**0.0**		
CPUP				IAmb	IAmb	14 02 21.1			
	comp=Z,18nm,1.6s								
TORD	**Torodi Ar. Bea**	**46.59**	**88**	P	**P**	**14 01 33.7**	**-1.6**		
	comp=Z,2.9nm,1.0s,baz=285,slow=5.9,SNR=8.1								
TORD				LR	LR	14 19 09.7			
	comp=Z,160nm,18.9s,baz=290,slow=34								
BGNE	**Belgrade**	**50.20**	**310**	P	**P**	**14 02 03.8**	**+1.0**		
ULM	**Lac du Bonnet**	**51.30**	**321**	P	**P**	**14 02 09.5**	**-1.3**		
	comp=Z,2.0nm,0.7s,baz=130,slow=8.1,SNR=4.1								
ULM	**Lac du Bonnet**	**51.30**	**321**	IAmb	IAmb	14 03 31.9			
	comp=Z,36nm,2.0s								
KEST	**Kesra**	**52.57**	**58**	LR	LR	14 24 36.2			
	comp=Z,58nm,18.0s,baz=292,slow=36								
TXAR	**Lajitas Array**	**53.42**	**294**	P	**P**	**14 02 25.1**	**-2.0**		
	comp=Z,0.4nm,0.8s,baz=103,slow=7.5,SNR=3.0								
FCC	**Fort Churchill**	**54.04**	**332**	P	**P**	**14 02 31.3**	**+0.4**		
FCC				IAmb	IAmb	14 03 58.9			
	comp=Z,31nm,1.8s								
MNTX	**Cornudas Mount**	**54.91**	**297**	P	**P**	**14 02 38.4**	**+0.6**		
PDAR	**Pinedale Array**	**58.80**	**310**	LR	LR	14 25 42.6			
	comp=Z,68nm,21.8s,baz=122,slow=33								
NOA	**NORSAR Array B**	**59.62**	**28**	LR	LR	14 24 30.8			
	comp=Z,26nm,18.8s,baz=235,slow=32								
NC602	**NORSAR Array S**	**59.66**	**29**	P	**P**	**14 03 11.0**	**+0.1**		
YHL	**Hebgen Lake**	**60.16**	**312**	P	**P**	**14 03 16.3**	**+1.3**		
HWUT	**Hardware Ranch**	**60.20**	**308**	P	**P**	**14 03 15.5**	**+0.3**		
HWUT				IAmb	IAmb	14 03 24.2			
	comp=Z,7.5nm,1.2s								
U15A	**North Rim**	**60.65**	**302**	P	**P**	**14 03 19.5**	**+1.1**		
BGU	**Big Grassy Mou**	**61.28**	**308**	P	**P**	**14 03 23.3**	**+0.8**		
ELK	**Elko**	**62.95**	**307**	P	**P**	**14 03 34.3**	**+0.5**		
MFID	**Camas Ranch**	**63.42**	**310**	P	**P**	**14 03 37.4**	**+0.7**		
MFID				IAmb	IAmb	14 03 39.5			
	comp=Z,6.2nm,1.4s								
YKA	**Yellowknife Ar**	**64.77**	**332**	P	**P**	**14 03 44.9**	**-0.1**		
	comp=Z,0.3nm,0.7s,baz=103,slow=6.4,SNR=5.4								
ISA	**Isabella, Lake**	**65.69**	**302**	P	**P**	**14 03 52.5**	**+0.8**		
ISA				IAmb	IAmb	14 03 56.3			
	comp=Z,6.9nm,1.4s								
OMMB	**Old Mammoth Mi**	**65.97**	**304**	P	**P**	**14 03 55.3**	**+1.5**		
OMMB				IAmb	IAmb	14 03 57.4			
	comp=Z,12nm,1.7s								
FINES	**FINESS Array B**	**66.69**	**30**	LR	LR	14 28 25.4			
	comp=Z,40nm,18.7s,baz=318,slow=32								
AKASG	**Malin Array Be**	**67.84**	**42**	P	**P**	**14 04 06.0**	**+1.0**		
	comp=Z,0.4nm,0.5s,baz=273,slow=5.1,SNR=3.0								
BRTR	**Keskin Array B**	**71.72**	**53**	P	**P**	**14 04 30.3**	**+1.0**		
	comp=Z,0.8nm,0.8s,baz=264,slow=8.0,SNR=4.6								
ILAR	**Eielson Array**	**78.92**	**335**	P	**P**	**14 05 10.8**	**+0.8**		
	comp=Z,1.5nm,0.9s,baz=72,slow=5.2,SNR=8.6								

*IDC **21** 14:07:25.3±1.2, 35°.53N×21°.65E, h0km, mb3.7/6, mb1 3.7/10, mb1mx3.5/52, mbtmp3.6/10, ML3.5/4, Error ellipse: s-maj=23.7km s-min=18.3km az=167.0*
*ATH **21** 14:07:28.7, 35°.42N×21°.67E, h36km±12km, ML3.0/5, Error ellipse: s-maj=13.1km s-min=1.8km az=217.0*
*THE **21** 14:07:34.4, 35°.64N×21°.82E, h35km±31km, ML2.9/3, Error ellipse: s-maj=31.6km s-min=1.2km az=0.0*

ISC 21 14:07:29.3±1.8, 35°.49N±0°.07×21°.64E±0°.06, h31km±12km, n55, σ1s81/62, mb3.7/5, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTHR	**Kythira**	**1.35**	**55**	P	**Pb**	**14 07 53.5**	**-0.5**
KTHR				S	**Sn**	**14 08 07.7**	**-1.2**
	545nm,0.4s						
KTHA	**Kythira Island**	**1.39**	**56**	P	**Pb**	**14 07 54.3**	**-0.3**
KTHA	**Kythira Island**	**1.39**	**56**	P	**Pb**	**14 07 54.0**	**-0.6**
KTHA				S	**Sb**	**14 08 12.2**	**+0.3**
KTHA				AML	AML	14 08 25.9	
	comp=N,641μm,0.6s						
KTHA				AML	AML	14 08 28.9	
	comp=E,1065μm,0.8s						
DYR	**Agios Nikonas**	**1.39**	**24**	P	**Pb**	**14 07 54.7**	**+0.1**
DYR	**Agios Nikonas**	**1.39**	**24**	P	**Pb**	**14 07 54.1**	**-0.5**
DYR				S	**Sb**	**14 08 12.3**	**+0.2**
DYR				AML	AML	14 08 19.3	
	comp=E,263μm,0.5s						
DYR				AML	AML	14 08 22.9	
	comp=N,293μm,0.4s						
PYL	**PYLOS**	**1.41**	**3**	P	**Pb**	**14 07 54.4**	**-0.5**
PYL	**PYLOS**	**1.41**	**3**	P	**Pb**	**14 07 54.5**	**-0.5**
PYL				S	**Sb**	**14 08 14.9**	**+2.5**
PYL				AML	AML	14 08 21.7	
	comp=N,672μm,0.5s						
PYL				AML	AML	14 08 27.8	
	comp=E,966μm,0.6s						
VLI	**Veliai**	**1.62**	**40**	P	**Pb**	**14 07 57.6**	**-0.9**
VLI				S	**Sn**	**14 08 15.1**	**-0.3**
	comp=E,372nm,0.5s						
VLI	**Veliai**	**1.62**	**40**	P	**Pb**	**14 07 57.5**	**-0.9**
VLI				S	**Sb**	**14 08 17.7**	**-0.7**
VLI				AML	AML	14 08 29.2	
	comp=N,678μm,0.9s						
VLI				AML	AML	14 08 31.2	
	comp=E,891μm,1.0s						
ITM	**Ithomi**	**1.70**	**8**	P	**Pb**	**14 07 59.1**	**-0.9**
ITM				S	**Sn**	**14 08 18.8**	**+1.2**
	comp=E,170nm,0.5s						
ITM	**Ithomi**	**1.70**	**8**	P	**Pb**	**14 07 58.7**	**-1.2**
RODP	**Rodopos**	**1.73**	**87**	P	**Pb**	**14 07 59.8**	**-0.6**
IMMV	**Iera Moni Meta**	**1.91**	**90**	P	**Pn**	**14 08 00.3**	**+0.6**
VLX	**Vlachokerasia**	**1.97**	**17**	P	**Pb**	**14 08 02.7**	**-1.9**
AMT	**Artemida-Makis**	**2.04**	**2**	P	**Pb**	**14 08 03.8**	**-1.9**
GVD	**Gavdhos**	**2.11**	**107**	P	**Pn**	**14 08 02.9**	**+0.5**
GVD				AML	AML	14 08 31.1	
	comp=E,487μm,0.4s						
GVD				AML	AML	14 08 31.2	
	comp=N,630μm,0.4s						
DID	**Didima**	**2.39**	**32**	P	**Pn**	**14 08 08.0**	**+1.7**
DRO	**Drossia**	**2.46**	**1**	P	**Pn**	**14 08 09.6**	**+2.3**
DRO	**Drossia**	**2.46**	**1**	P	**Pn**	**14 08 09.1**	**+1.8**
VLMS	**Volimes, Zakyn**	**2.51**	**342**	P	**Pn**	**14 08 10.4**	**+2.4**
KLV	**Kalavryta, Ach**	**2.58**	**9**	P	**Pn**	**14 08 11.5**	**+2.5**
KLV	**Kalavryta, Ach**	**2.58**	**9**	P	**Pn**	**14 08 11.2**	**+2.2**
IDI	**Anoyia**	**2.67**	**93**	Pn	**Pn**	**14 08 11.4**	**+1.3**
	comp=N,2.3nm,0.3s,baz=277,slow=17,SNR=12						
IDI				Sn	**Sn**	**14 08 42.3**	**+0.9**
	comp=N,9.2nm,0.3s,baz=252,slow=20,SNR=11						
IDI	**Anoyia**	**2.67**	**93**	P	**Pn**	**14 08 10.7**	**+0.6**
LTK	**Loutraki**	**2.75**	**22**	P	**Pn**	**14 08 13.1**	**+1.9**
LAKA	**Lakka**	**2.76**	**6**	P	**Pn**	**14 08 14.1**	**+2.7**
LAKA	**Lakka**	**2.76**	**6**	P	**Pn**	**14 08 14.0**	**+2.6**
KALE	**Kalithea**	**2.92**	**8**	P	**Pn**	**14 08 16.3**	**+2.6**
KALE	**Kalithea**	**2.92**	**8**	P	**Pn**	**14 08 15.7**	**+2.0**
EFP	**Efpalio**	**2.94**	**4**	P	**Pn**	**14 08 17.1**	**+3.2**
EFP	**Efpalio**	**2.94**	**4**	P	**Pn**	**14 08 16.3**	**+2.4**
PROD	**Prodromos**	**2.94**	**20**	P	**Pn**	**14 08 15.9**	**+2.0**
ANX	**Ano Chora**	**3.11**	**4**	P	**Pn**	**14 08 19.4**	**+3.2**
ANX	**Ano Chora**	**3.11**	**4**	P	**Pn**	**14 08 18.8**	**+2.5**
PVO	**Paravola**	**3.12**	**358**	P	**Pn**	**14 08 19.5**	**+3.1**
PVO	**Paravola**	**3.12**	**358**	P	**Pn**	**14 08 19.1**	**+2.7**
PDO	**Prodromos**	**3.12**	**353**	P	**Pn**	**14 08 18.7**	**+2.3**
LKR	**Lokris**	**3.34**	**19**	P	**Pn**	**14 08 20.9**	**+1.6**
AXAR	**Agios Charalam**	**3.37**	**14**	P	**Pn**	**14 08 22.4**	**+2.6**
MAKR	**Makrakomi, Fth**	**3.54**	**6**	P	**Pn**	**14 08 24.9**	**+2.8**
AGG	**Agios Georgios**	**3.57**	**9**	P	**Pn**	**14 08 24.9**	**+2.4**
AGG	**Agios Georgios**	**3.57**	**9**	P	**Pn**	**14 08 25.0**	**+2.4**
STON	**Ston**	**7.98**	**339**	*e*Pn	Pn	14 09 20.4	-2.6
STON				Sn	Sn	14 10 42.6	-10
ZIRJ	**Zirje**	**9.37**	**332**	*e*Pn	**Pn**	**14 09 40.6**	**-1.6**
ZIRJ				Sn	Sn	14 11 17.6	-8.8
KIJV	**Kijevo**	**9.41**	**336**	*e*Pn	**Pn**	**14 09 41.5**	**-1.1**
KIJV				Sn	Sn	14 11 18.9	-8.5
MORI	**Morici**	**9.53**	**333**	*e*Pn	**Pn**	**14 09 42.5**	**-1.8**
MORI				Sn	Sn	14 11 22.0	-8.3
BRTR	**Keskin Array B**	**10.42**	**62**	Pn	**Pn**	**14 09 58.2**	**+1.6**
	comp=N,0.1nm,0.3s,baz=251,slow=13,SNR=2.9						
MLR	**Muntele Rosu**	**10.51**	**17**	Pn	**Pn**	**14 09 57.7**	**-0.1**
	comp=N,0.2nm,0.3s,baz=178,slow=14,SNR=3.4						
AKASG	**Malin Array Be**	**16.17**	**18**	Pn	**Pn**	**14 11 12.1**	**-1.9**
	comp=N,0.6nm,0.3s,baz=214,slow=11,SNR=3.5						
ESDC	**Sonseca Array**	**20.69**	**289**	P	**P**	**14 12 07.2**	**+0.3**
	comp=N,0.2nm,0.3s,baz=74,slow=11,SNR=4.4						
HFS	**Hagfors**	**25.19**	**351**	P	**P**	**14 12 51.7**	**0.0**
	comp=N,1.1nm,0.5s,baz=188,slow=8.7,SNR=3.2						
EKA	**Eskdalemuir Ar**	**26.15**	**327**	P	**P**	**14 13 02.4**	**+1.8**
	comp=N,1.5nm,0.7s,baz=123,slow=10,SNR=3.0						
TORD	**Torodi Ar. Bea**	**28.61**	**224**	P	**P**	**14 13 23.5**	**+0.6**
	comp=N,0.2nm,0.5s,baz=29,slow=9.1,SNR=2.4						
ARCES	**ARCESS Array B**	**34.17**	**2**	P	**P**	**14 14 09.9**	**-1.4**
	comp=N,5.3nm,1.2s,baz=191,slow=9.2,SNR=4.4						
MKAR	**Makanchi Array**	**45.99**	**56**	P	**P**	**14 15 49.2**	**-0.4**
	comp=N,1.8nm,0.5s,baz=271,slow=7.5,SNR=16						

MAN 21 14:08:17.6, 9°.71N×123°.63E, h11km, mb3.9, ML2.7, MS2.3, 2C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.54**	**227**	*e*P	Pb	14 08 29.3	+0.3
SNPH				*i* S	Sn	14 08 38.7	-1.6
LLP	**Lapu-Lapu**	**0.69**	**29**	*i* P	Pg	14 08 29.9	-1.0
LLP				*i* S	Sg	14 08 39.3	-0.6
DCPH	**Dipolog City**	**1.16**	**194**	*e*P	Pb	14 08 38.4	-1.2
DCPH				*i* S	Sg	14 08 55.0	+0.2
MSLP	**Maasin**	**1.28**	**71**	*e*P	Pn	14 08 40.9	-0.6
MSLP				*e*S	Sg	14 08 58.9	0.0
GUIM	**Jordan**	**1.37**	**312**	*e*P	Pn	14 08 41.4	-1.3
GUIM				*e*S	Sg	14 09 01.5	-0.3
OCLP	**Ormoc**	**1.64**	**36**	*e*P	Pn	14 08 46.3	-0.1
OCLP				*e*S	Sb	14 09 08.4	-0.3

*IDC **21** 14:08:21.3±0.7, 25°.86N×100°.73E, h0km, mb4.0/15, mb1 4.1/16, mb1mx3.8/62, mbtmp4.0/16, ML3.6/1, MS3.5/7, Ms1 3.5/7, ms1mx3.0/46, Error ellipse: s-maj=21.7km s-min=13.6km az=61.0*
*BJI **21** 14:08:22.8±0.0, 25°.83N×100°.60E, h10km, mB4.2/2, mb4.0/21, ML3.9/12, Ms3.9/13, Ms7 3.8/12*
*MOS **21** 14:08:24.5±1.4, 25°.88N×100°.70E, h38km, mb4.3/14, Error ellipse: s-maj=9.6km s-min=7.0km az=114.9*
*NEIC **21** 14:08:27.3±1.6, 25°.86N±0°.07×100°.66E±0°.07, h47km±6km, mb4.5/22, Error ellipse: s-maj=10.9km s-min=8.3km az=195.0*

ISC 21 14:08:22.4±0.4, 25°.80N±0°.04×100°.56E±0°.04, h10km, n99, σ2s29/111, mb4.2/33, MS3.3/8, 1C, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**2.08**	**108**	Pn	**Pb**	**14 09 00.3**	**-0.1**
KMI				Pg	**Pg**	**14 09 01.8**	**-0.6**
KMI				Sg	**Sg**	**14 09 27.9**	**-1.5**
KMI				smax	smax		
	comp=N,1μm,0.9s						
KMI				smax	smax		
	comp=E,2μm,0.9s						
KMI	**Kunming**	**2.08**	**108**	P	**Pb**	**14 09 00.3**	**-0.1**
KMI	**Kunming**	**2.08**	**108**		**Pb**	**14 09 00.3**	**-0.1**
SLVN	**Son La**	**5.40**	**145**	Pn	**Pn**	**14 09 43.5**	**+0.4**
GYA	**Guiyang**	**5.53**	**82**	Pn	**Pn**	**14 09 47.3**	**+2.4**
GYA				Sn	**Sn**	**14 10 53.5**	**+5.0**
GYA				Sg	**Sg**	**14 11 24.4**	**+4.5**
GYA				smax	smax		
	comp=N,90nm,1.0s						
GYA				smax	smax		
	comp=E,80nm,1.0s						
CD2	**Chengdu**	**5.82**	**28**	Pn	**Pn**	**14 09 51.8**	**+3.0**
CD2				Pg	**Pg**	**14 10 09.3**	**-4.6**
CD2				Sn	**Sn**	**14 10 57.9**	**+2.2**
CD2				Sg	**Sg**	**14 11 24.8**	**-4.4**
CD2				smax	smax		
	comp=N,170nm,1.0s						
CD2				smax	smax		
	comp=E,190nm,0.8s						
CHTO	**Chiang Mai**	**7.11**	**192**	P	**Pn**	**14 10 09.2**	**+2.6**
CHTO	**Chiang Mai**	**7.11**	**192**	Pn	**Pn**	**14 10 09.2**	**+2.6**
CMMT	**Chiang Mai**	**7.11**	**192**	P	**Pn**	**14 10 09.1**	**+2.5**
PHRA	**Phrae**	**7.27**	**182**	P	**Pn**	**14 10 08.4**	**-0.4**
PHRA				S	**Sg**	**14 12 12.2**	**-3.7**
LAMP	**Lampang**	**7.29**	**187**	P	**Pn**	**14 10 09.3**	**+0.3**
LAMP				S	**Sg**	**14 12 13.6**	**-3.0**
CMAR	**Chiang Mai Arr**	**7.46**	**192**	*i* P	**Pn**	**14 10 14.1**	**+2.7**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**7.46**	**192**	Pn	**Pn**	**14 10 13.4**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=3.9,slow=12,SNR=8.7						
CMAR				Pg	**Pg**	**14 10 42.3**	**-2.9**
	comp=Z,1.7nm,0.3s,baz=6.8,slow=16,SNR=45						
CMAR				Lg	Lg	14 12 18.6	
	comp=Z,1.4nm,0.3s,baz=3.4,slow=32,SNR=10						
SHL	**Shillong**	**7.83**	**270**	P	**Pn**	**14 10 19.1**	**+2.5**
SHL	**Shillong**	**7.83**	**270**	Pn	**Pn**	**14 10 19.1**	**+2.5**
MHMT	**Maesarieng**	**7.97**	**198**	P	**Pn**	**14 10 20.8**	**+2.4**
MHMT				S	**Sg**	**14 12 31.9**	**-6.4**
ENH	**Enshi**	**9.06**	**59**		**Pn**	**14 10 32.9**	**-0.4**
LSA	**Lhasa**	**9.20**	**297**	P	**Pn**	**14 10 35.6**	**0.0**
LSA				pmax	pmax		
	comp=Z,11nm,1.1s						
LSA				LR	LR		
	comp=Z,420nm,6.1s						
LSA				LR	LR		
	comp=Z,300nm,5.0s						
LSA				LR	LR		
	comp=Z,210nm,5.3s						
LSA	**Lhasa**	**9.20**	**297**	P	**Pn**	**14 10 37.6**	**+2.0**
LSA	**Lhasa**	**9.20**	**297**		**Pn**	**14 10 37.6**	**+2.0**
LZH	**Lanzhou**	**10.63**	**15**	*e*P	Pn	14 10 59.8	+4.8
LZH				PP	**PnPn**	**14 11 08.6**	**+5.7**
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				LR	LR		
	comp=Z,480nm,7.1s						
LZH				LR	LR		
	comp=Z,560nm,9.8s						
XAN	**Xi'an**	**10.95**	**39**	P	**Pn**	**14 10 59.1**	**-0.1**
XAN				S	**Sn**	**14 12 59.6**	**-2.2**
XAN				LR	LR		
	comp=Z,430nm,11.9s						
XAN				LR	LR		
	comp=Z,200nm,10.8s						
XAN				LR	LR		
	comp=Z,350nm,11.8s						
XAN	**Xi'an**	**10.95**	**39**	P	**Pn**	**14 10 58.2**	**-1.0**
XAN	**Xi'an**	**10.95**	**39**		**Pn**	**14 10 58.2**	**-1.0**
TAPN	**Taplejung**	**11.61**	**280**	*e*P	**Pn**	**14 11 10.8**	**+2.3**
ODAN	**Odare**	**11.86**	**278**	*e*P	**Pn**	**14 11 13.3**	**+1.4**
	comp=Z,9.3nm,0.5s						
RAMN	**Ramite**	**12.57**	**278**	*e*P	**Pn**	**14 11 22.8**	**+1.2**
	comp=Z,15nm,0.6s						
JIRN	**Jiri**	**12.98**	**281**	*e*P	**Pn**	**14 11 28.2**	**+0.9**
	comp=Z,51nm,0.9s						
WHN	**Wuhan**	**13.05**	**66**	P	**Pn**	**14 11 27.3**	**-0.5**
GUN	**Gumba**	**13.28**	**282**	*e*P	**Pn**	**14 11 31.8**	**+0.5**
	comp=Z,29nm,1.0s						
PKIN	**Phulchoki**	**13.67**	**281**	*e*P	**Pn**	**14 11 36.5**	**-0.2**
	comp=Z,11nm,0.6s						
KKN	**Kakani**	**13.79**	**282**	*e*P	**Pn**	**14 11 38.2**	**-0.1**
	comp=Z,72nm,1.1s						
DMN	**Daman**	**13.93**	**281**	*e*P	**Pn**	**14 11 40.0**	**-0.2**
	comp=Z,19nm,1.1s						
GKN	**Gorkha**	**14.38**	**282**	*e*P	**Pn**	**14 11 45.3**	**-0.9**
KOLN	**Koldanda**	**15.28**	**281**	*e*P	**Pn**	**14 11 56.6**	**-1.8**
NJ2	**Nanjing**	**17.17**	**65**	*e*P	**P**	**14 12 23.5**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**17.58**	**29**	*e*P	**P**	**14 12 29.3**	**+0.6**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YHNB	**Yeheng**	**18.86**	**89**	P	**P**	**14 12 43.1**	**+0.2**
SSE	**Sheshan**	**18.88**	**69**	P	**P**	**14 12 43.0**	**0.0**
SSE				IAmb	IAmb	14 13 28.8	
	comp=Z,84nm,1.8s						
TATO	**Taipei**	**18.93**	**88**	P	**P**	**14 12 43.8**	**+0.2**
WMQ	**Urumqi**	**20.81**	**333**	*e*P	Pn	14 13 06.6	+0.2
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,49nm,6.3s						
WMQ				LR	LR		
	comp=Z,200nm,19.9s						
WMQ				LR	LR		
	comp=Z,62nm,22.9s						
SONM	**Songino Array**	**22.47**	**10**	P	**P**	**14 13 21.9**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=190,slow=10,SNR=6.5						
SONM				LR	LR	14 22 51.5	
	comp=Z,109nm,18.6s,baz=193,slow=39						
ULN	**Ulaanbaatar**	**22.61**	**11**	P	**P**	**14 13 22.8**	**-0.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
ULN	**Ulaanbaatar**	**22.61**	**11**	P	**P**	**14 13 22.8**	**-0.6**
PSI	**Prapat**	**22.92**	**184**	P	**P**	**14 13 29.3**	**+2.4**
	comp=Z,7.0nm,0.6s,baz=356,slow=3.1,SNR=5.1						
PSI				LR	LR	14 23 32.7	
	comp=Z,72nm,18.4s,baz=5.0,slow=40						
RPSI	**Rantau Prapat**	**23.03**	**184**	P	**P**	**14 13 29.3**	**+1.5**
KSH	**Kashi**	**24.71**	**310**	*e*P	**P**	**14 13 46.1**	**+2.1**
KSH				*es*P	sP	14 13 58.6	+10
KSH				*e*PP	**PnPn**	**14 14 22.4**	**+6.7**
KSH				*e*S	**S**	**14 18 01.8**	**-4.2**
KSH				*es*S	sS	14 18 17.8	+5.9
KSH				*e*SS	**SnSn**	**14 19 01.8**	**+10**
NIL	**Nilore**	**24.92**	**295**	P	**P**	**14 13 45.8**	**0.0**
NIL				pmax	pmax		
	comp=Z,17nm,0.9s						
NIL	**Nilore**	**24.92**	**295**	P	**P**	**14 13 45.8**	**0.0**
NIL				IAmb	IAmb	14 13 47.9	
	comp=Z,17nm,0.9s						
KDJ	**Kajisay**	**25.20**	**316**	P	**P**	**14 13 51.1**	**+2.6**
KDJ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KDJ	**Kajisay**	**25.20**	**316**	P	**P**	**14 13 51.1**	**+2.6**
KDJ				IAmb	IAmb	14 13 52.2	
	comp=Z,5.5nm,0.8s						
MK31	**Makanchi Array**	**25.49**	**330**	P	**P**	**14 13 52.3**	**+1.5**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK31	**Makanchi Array**	**25.49**	**330**	P	**P**	**14 13 52.3**	**+1.5**
MKAR	**Makanchi Array**	**25.49**	**330**	P	**P**	**14 13 52.6**	**+1.8**
	comp=Z,2.7nm,0.5s,baz=134,slow=11,SNR=35						
NRN	**Naryn**	**25.60**	**314**	P	**P**	**14 13 52.6**	**+0.4**
NRN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NRN	**Naryn**	**25.60**	**314**	P	**P**	**14 13 52.6**	**+0.4**
KSRS	**Korea Array**	**25.94**	**57**	P	**P**	**14 13 54.4**	**-0.5**
	comp=Z,0.8nm,0.8s,baz=233,slow=8.0,SNR=3.5						
KSRS				LR	LR	14 24 02.0	
	comp=Z,29nm,18.2s,baz=125,slow=36						
TLY	**Talaya**	**25.95**	**4**	LR	LR	14 25 10.9	
	comp=Z,107nm,21.6s,baz=170,slow=39						
AAK	**Ala-Archa**	**27.17**	**315**	P	**P**	**14 14 08.1**	**+1.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AAK	**Ala-Archa**	**27.17**	**315**	P	**P**	**14 14 07.8**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=136,slow=7.9,SNR=5.0						
AAK	**Ala-Archa**	**27.17**	**315**	P	**P**	**14 14 08.1**	**+1.9**
KBL	**Kabul**	**28.52**	**295**	P	**P**	**14 14 18.9**	**+0.5**
KBL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBL	**Kabul**	**28.52**	**295**	P	**P**	**14 14 18.9**	**+0.5**
KBL				IAmb	IAmb	14 14 47.9	
	comp=Z,3.3nm,0.7s						
BTK	**Batken**	**28.57**	**307**	P	**P**	**14 14 19.7**	**+1.0**
BTK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BTK	**Batken**	**28.57**	**307**	P	**P**	**14 14 19.7**	**+1.0**
GAR	**Garm**	**28.58**	**305**	P	**P**	**14 14 19.8**	**+0.9**
GAR				IAmb	IAmb	14 14 24.7	
	comp=Z,15nm,1.5s						
CHGR	**Chuyangaron**	**29.34**	**304**	P	**P**	**14 14 26.1**	**+0.5**
CHGR				IAmb	IAmb	14 14 27.6	
	comp=Z,9.7nm,1.0s						
KURBB	**Kurchatov Arra**	**30.01**	**331**	P	**P**	**14 14 31.8**	**+0.7**
	comp=Z,2.1nm,0.2s,baz=135,slow=9.2,SNR=7.6						
KURK	**Kurchatov**	**30.04**	**332**	*i* P	**P**	**14 14 31.9**	**+0.5**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	**Kurchatov**	**30.04**	**332**	P	**P**	**14 14 32.1**	**+0.7**
KURK				IAmb	IAmb	14 14 36.6	
	comp=Z,2.4nm,0.7s						
ZALV	**Zalesovo Beam**	**30.46**	**342**	P	**P**	**14 14 34.9**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=

WMGZ			S	Sn	14 18 55.6	+1.9
PKGZ	**Pakihiroa**	**3.62 210**	P	Pn	14 18 14.3	-0.7
PKGZ			S	Sn	14 18 58.8	+0.6
HAZ	**Te Kaha**	**3.64 214**	P	Pn	14 18 15.4	+0.3
PUZ	**Puketiti**	**3.71 207**	P	Pn	14 18 15.8	-0.3
RUGZ	**Raukumara Rang**	**3.86 214**	P	Pn	14 18 18.3	+0.2
TWGZ	**Tauwhareparae**	**3.91 209**	P	Pn	14 18 19.0	+0.4
TWGZ			S	Sn	14 19 07.0	+2.2
CNGZ	**Carnagh Statio**	**4.09 205**	P	Pn	14 18 20.8	-0.2
MWZ	**Matawai**	**4.23 212**	P	Pn	14 18 22.8	0.0
MWZ			S	Sn	14 19 11.7	-0.6
KUZ	**Kuaotunu**	**4.27 241**	P	Pn	14 18 22.8	-0.5
OPRZ	**Ohinepanea**	**4.35 224**	P	Pn	14 18 24.8	+0.5
URZ	**Urewera**	**4.36 216**	P	Pn	14 18 24.6	+0.1
URZ			S	Sn	14 19 15.2	-0.1
RAGZ	**Rawiri**	**4.41 212**	P	Pn	14 18 24.9	-0.3
RIGZ	**Rimuhau**	**4.45 207**	P	Pn	14 18 23.8	-1.9
SNGZ	**Shannon Statio**	**4.68 211**	P	Pn	14 18 29.3	+0.6
MUGZ	**Murupara**	**4.70 217**	P	Pn	14 18 29.0	+0.1
MUGZ			S	Sn	14 19 23.1	-0.1
RTZ	**Ruatahuna**	**4.71 214**	P	Pn	14 18 29.0	-0.1
MKAZ	**Moumakai**	**4.83 240**	P	Pn	14 18 31.9	+1.3
RAHZ	**Arahi**	**4.91 212**	P	Pn	14 18 32.2	+0.5
TOZ	**Tahuroa Road**	**4.92 232**	P	Pn	14 18 33.4	+1.5
MTHZ	**Maungataniwha**	**4.96 214**	P	Pn	14 18 32.8	+0.4
MRHZ	**Matea Rd**	**5.15 217**	P	Pn	14 18 35.3	+0.4
NMHZ	**Naumai**	**5.18 213**	P	Pn	14 18 35.5	+0.3
ARHZ	**Aropaoanui**	**5.23 210**	P	Pn	14 18 36.5	+0.5
BKZ	**Black Stump Fm**	**5.38 214**	P	Pn	14 18 37.6	-0.3
OUZ	**Omahuta**	**5.59 264**	P	Pn	14 18 40.3	-0.4
HIZ	**Hauiti**	**5.80 228**	P	Pn	14 18 45.1	+1.7
NGZ	**Ngauruhoe**	**5.82 220**	P	Pn	14 18 41.2	-2.7

*IDC **21** 14:26:56.4±1.3,5°.37S×151°.53E, h68km±9km, mb3.9/8, mb1 4.1/9, mb1mx3.8/30, mbtmp4.2/9, MS3.4/1, Ms1 3.4/1, ms1mx2.6/26, Error ellipse: s-maj=38.7km s-min=9.7km az=126.0*
*NEIC **21** 14:27:01.1±1.7,5°.55S±0°.1×151°.4E±0°.1, h107km±6km, mb4.4/9, Error ellipse: s-maj=17.3km s-min=13.9km az=127.0*

ISC 21 14:26:55.9±0.7, 5°.3S±0°.1×151°.4E±0°.1, h57km, n25, σ1§10/26, mb4.3/12, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.11**	**31**	P	**Pn**	**14 27 15.3**	**-0.1**
	587nm,0.3s,baz=166,slow=1.4,SNR=474						
KRVT				LR	LR	14 27 19.9	
	comp=Z,47nm,20.4s,baz=179,slow=20						
KRVT				S	**Sn**	**14 27 32.6**	**+2.8**
	1µm,0.3s,baz=319,slow=19,SNR=40						
MANU	**Manus Island**	**5.18**	**308**	Pn	Pn	14 28 17.6	+6.7
PMG	**Port Moresby**	**5.92**	**226**	P	**Pn**	**14 28 21.7**	**+0.7**
	2.0nm,0.3s,baz=327,slow=6.6,SNR=6.4						
PMG				S	**Sn**	**14 29 28.1**	**+0.6**
	2.8nm,0.3s,baz=270,slow=18,SNR=4.3						
PMG	**Port Moresby**	**5.92**	**226**	Pn	**Pn**	**14 28 22.1**	**+1.1**
SANVU	**Saraoutou**	**18.50**	**124**		**Pn**	**14 31 08.3**	**0.0**
SANVU				IAmb	IAmb	14 31 26.8	
	comp=Z,17nm,0.9s						
WB0	**Warramunga Arr**	**21.98**	**228**	P	**P**	**14 31 45.6**	**+0.2**
WR0	**Warramunga Arr**	**22.00**	**227**	P	**P**	**14 31 46.1**	**+0.6**
WR0				IAmb	IAmb	14 31 47.0	
	comp=Z,7.7nm,0.6s						
WRAB	**Tennant Creek**	**22.12**	**227**	P	**P**	**14 31 47.4**	**+0.6**
WRAB				IAmb	IAmb	14 31 48.1	
	comp=Z,12nm,0.6s						
WB2	**Warramunga Arr**	**22.12**	**227**	P	**P**	**14 31 47.5**	**+0.6**
WB2				IAmb	IAmb	14 31 48.2	
	comp=Z,13nm,0.6s						
WRA	**Warramunga Arr**	**22.13**	**227**	P	**P**	**14 31 47.7**	**+0.7**
	comp=Z,8.5nm,0.6s,baz=52,slow=9.8,SNR=60						
DZM	**Mont Dzumac**	**22.13**	**140**	LR	LR	14 38 23.6	
	comp=Z,96nm,18.9s,baz=309,slow=31						
KNRA	**Kununurra**	**24.56**	**243**	P	**P**	**14 32 10.2**	**-0.4**
KNRA				IAmb	IAmb	14 32 26.3	
	comp=Z,69nm,1.6s						
AS31	**Alice Springs**	**24.91**	**221**	P	**P**	**14 32 13.3**	**-0.5**
ASAR	**Alice Springs**	**24.91**	**221**	P	**P**	**14 32 12.5**	**-1.3**
	comp=Z,3.7nm,0.6s,baz=60,slow=8.6,SNR=54						
ASAR				PcP	**PcP**	**14 35 48.8**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=31,slow=2.6,SNR=3.5						
FITZ	**Fitzroy Crossi**	**28.25**	**241**	P	**P**	**14 32 42.9**	**-1.0**
	comp=Z,6.4nm,0.6s,baz=77,slow=6.8,SNR=20						
FITZ	**Fitzroy Crossi**	**28.25**	**241**	P	**P**	**14 32 43.0**	**-0.9**
WRMHI	**West Rim**	**57.84**	**63**	P	**P**	**14 36 43.1**	**+0.8**
SONM	**Songino Array**	**66.00**	**329**	P	**P**	**14 37 37.9**	**+1.3**
	comp=Z,1.3nm,0.6s,baz=144,slow=3.9,SNR=10						
MKAR	**Makanchi Array**	**79.79**	**319**	P	**P**	**14 38 57.9**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=100,slow=7.8,SNR=7.0						
ZALV	**Zalesovo Beam**	**80.72**	**327**	P	**P**	**14 39 02.3**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=131,slow=6.8,SNR=4.5						
ILAR	**Eielson Array**	**83.10**	**22**	P	**P**	**14 39 12.9**	**-2.2**
	comp=Z,0.6nm,0.6s,baz=244,slow=5.7,SNR=9.2						
NVAR	**Mina Array Bea**	**93.43**	**52**	P	**P**	**14 40 06.0**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=253,slow=6.8,SNR=13						
PDAR	**Pinedale Array**	**100.16**	**48**	P	**Pdif**	**14 40 34.9**	**-1.2**
	comp=Z,0.3nm,0.6s,baz=202,slow=1.6,SNR=4.8						
GERES	**GERESS Array B**	**123.73**	**328**	PKP	**PKPdf**	**14 45 46.9**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=31,slow=0.6,SNR=5.3						
TORD	**Torodi Ar. Bea**	**149.16**	**287**	PKPbc	**PKPbc**	**14 46 37.6**	**-1.4**
	comp=Z,3.6nm,0.6s,baz=82,slow=3.1,SNR=21						

*IDC **21** 14:32:36.7±5.6,4°.44S×82°.21W, h43km±51km, mb3.4/5, mb1 3.7/7, mb1mx3.5/25, mbtmp3.6/7, ML3.7/2, MS3.2/8, Ms1 3.2/8, ms1mx3.0/22, Error ellipse: s-maj=84.3km s-min=25.2km az=54.0*

ISC 21 14:32:35.1±1.0, 4°.6S±0°.3×82°.5W±0°.3, h35km, n16, σ1§12/12, mb3.5/5, Off coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**4.76**	**122**	P	**Pn**	**14 33 46.6**	**+1.9**
	7.5nm,0.3s,baz=290,slow=15,SNR=65						
ATAH				S	**Sn**	**14 34 37.7**	**-1.2**
	7.8nm,0.3s,baz=82,slow=12,SNR=4.8						
ATAH				LR	LR	14 35 39.1	
	comp=Z,209nm,20.5s,baz=285,slow=39						
NNA	**Nana**	**9.18**	**143**	LR	LR	14 37 42.9	
	comp=Z,78nm,21.5s,baz=344,slow=33						
ROSC	**El Rosal**	**12.46**	**41**	LR	LR	14 41 14.0	
	comp=Z,136nm,19.6s,baz=246,slow=43						
JTS	**Las Juntas de**	**15.04**	**351**	LR	LR	14 40 32.0	
	comp=Z,80nm,18.5s,baz=174,slow=32						
SDV	**Santo Domingo**	**17.89**	**41**	LR	LR	14 43 50.0	
	comp=Z,62nm,18.2s,baz=215,slow=38						
LPAZ	**La Paz**	**18.23**	**130**	P	**Pn**	**14 36 44.8**	**-1.3**
	0.1nm,0.3s,baz=315,slow=10.0,SNR=3.0						
LVC	**Limon Verde**	**22.17**	**145**	LR	LR	14 45 18.1	
	comp=Z,32nm,19.8s,baz=293,slow=34						
SIV	**San Ignacio**	**23.86**	**120**	P	**P**	**14 37 45.0**	**-0.4**
	0.7nm,0.4s,baz=309,slow=13,SNR=4.9						
SIV				LR	LR	14 47 43.4	
	comp=Z,96nm,21.5s,baz=105,slow=38						
PDAR	**Pinedale Array**	**53.19**	**335**	P	**P**	**14 41 50.6**	**+0.5**
	0.3nm,0.8s,baz=129,slow=8.2,SNR=2.9						
NVAR	**Mina Array Bea**	**54.20**	**325**	P	**P**	**14 41 56.2**	**-1.4**
	0.5nm,0.7s,baz=133,slow=6.4,SNR=3.1						
NVAR				PcP	**PcP**	**14 43 03.1**	**+1.3**
	0.3nm,0.6s,baz=164,slow=3.7,SNR=2.7						
ELK	**Elko**	**54.23**	**330**	LR	LR	15 05 51.0	
	comp=Z,66nm,20.2s,baz=268,slow=37						
ULM	**Lac du Bonnet**	**55.89**	**350**	P	**P**	**14 42 09.2**	**0.0**
	2.9nm,0.6s,baz=164,slow=8.1,SNR=6.1						
YKA	**Yellowknife Ar**	**71.29**	**345**	P	**P**	**14 43 50.5**	**-0.3**
	0.1nm,0.6s,baz=145,slow=6.5,SNR=3.6						
ASAR	**Alice Springs**	**134.72**	**230**	PKP	**PKPdf**	**14 51 51.4**	**+0.4**
	0.3nm,0.7s,baz=121,slow=1.6,SNR=3.4						
MKAR	**Makanchi Array**	**135.99**	**15**	PKP	**PKPdf**	**14 51 52.1**	**-0.6**
	0.4nm,1.0s,baz=331,slow=0.6,SNR=2.6						
WRA	**Warramunga Arr**	**136.34**	**235**	PKP	**PKiKP**	**14 51 56.0**	**+0.3**
	0.8nm,1.0s,baz=114,slow=2.0,SNR=4.2						

*IDC **21** 14:46:45.7±9.5, 1°.53N×67°.65E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/38, mbtmp3.7/4, MS3.5/1, Ms1 3.4/1, ms1mx2.7/34, Error ellipse: s-maj=298.3km s-min=35.0km az=71.0*
*NEIC **21** 14:46:49.0±0.9, 1°.40N±0°.08×68°.0E±0°.1, h115km±7km, mb4.3/2, Error ellipse: s-maj=18.4km s-min=10.3km az=63.0*

ISC 21 14:46:47.6±1.8, 1°.5N±0°.1×67°.9E±0°.3, h10km, n16, σ1§42/12, mb3.9/6, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAAM	**Kaadhehdhoo**	**5.16**	**101**	Pn	**Pn**	**14 48 02.6**	**-2.4**
H08N2	**Diego Garcia H**	**8.32**	**158**	Pn	**Pn**	**14 48 47.6**	**-0.4**
	SNR=6.6						
H08N2				T	T	14 57 28.1	
	baz=338,slow=75,SNR=91						
H08N3	**Diego Garcia H**	**8.33**	**158**	Pn	**Pn**	**14 48 47.3**	**-1.0**
	SNR=8.5						
H08N3				T	T	14 57 11.6	
	baz=338,slow=75,SNR=139						
H08N1	**Diego Garcia H**	**8.34**	**158**	Pn	**Pn**	**14 48 47.9**	**-0.4**
	SNR=6.2						
H08N1				T	T	14 57 14.5	
	baz=338,slow=75,SNR=81						
MNCI	**Minicoy**	**8.49**	**37**	Pn	**Pn**	**14 48 51.5**	**+0.7**
PALK	**Pallekele**	**13.99**	**65**	Pn	**Pn**	**14 50 05.9**	**-0.2**
CM31	**Chiang Mai Arr**	**34.80**	**59**	P	**P**	**14 53 39.4**	**+0.5**
CM31				IAmb	IAmb	14 54 41.1	
	comp=Z,1.9nm,0.9s						
XAN	**Xi'an**	**50.17**	**45**	P	**P**	**14 55 42.8**	**-0.9**
XAN				IAmb	IAmb	14 55 44.2	
	comp=Z,7.5nm,1.0s						
BOSA	**Boshof**	**50.63**	**230**	LR	LR	15 14 41.3	
	comp=Z,51nm,19.1s,baz=95,slow=33						
ZALV	**Zalesovo Beam**	**54.14**	**12**	P	**P**	**14 56 12.1**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=210,slow=5.7,SNR=3.9						
H01W3	**Cape Leeuwin H**	**56.34**	**135**	T	T	15 57 02.5	
	baz=300,slow=75,SNR=3.8						
H01W2	**Cape Leeuwin H**	**56.34**	**135**	T	T	15 57 04.9	
	baz=300,slow=75,SNR=4.2						
H01W1	**Cape Leeuwin H**	**56.35**	**135**	T	T	15 57 03.7	
	baz=300,slow=75,SNR=4.2						
SONM	**Songino Array**	**56.91**	**30**	P	**P**	**14 56 33.6**	**+0.5**
	comp=Z,0.8nm,0.9s,baz=236,slow=6.4,SNR=4.7						
WRA	**Warramunga Arr**	**68.43**	**112**	P	**P**	**14 57 50.2**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=288,slow=6.0,SNR=4.7						
ASAR	**Alice Springs**	**68.72**	**116**	P	**P**	**14 57 55.0**	**+2.9**
	comp=Z,0.3nm,0.8s,baz=290,slow=5.8,SNR=5.9						

*TRN **21** 14:53:13.0, 11°.01N×62°.29W, h125km, MD3.4*
*FUNV **21** 14:53:14.3, 11°.02N×62°.24W, h121km, MW3.4*

ISC 21 14:53:11.4±1.3, 11°.00N±0°.04×62°.27W±0°.04, h137km±8km, n28, σ1§30/54, 1C-1D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.35**	**172**	eP	**Pn**	**14 53 31.2**	**+0.6**
GUIV				eS	**Sn**	**14 53 43.8**	**-1.3**
GUIV	**Guiria**	**0.35**	**172**	iP	**Pn**	**14 53 31.2**	**+0.6**
GUIV				eS	**Sn**	**14 53 43.9**	**-1.3**
TRN	**Trinidad (W)**	**0.92**	**112**	iP	**Pn**	**14 53 35.7**	**+1.5**
TRN				eS	**Sn**	**14 53 50.8**	**-0.8**
TRN	**Trinidad (W)**	**0.92**	**112**	eP	**Pn**	**14 53 35.2**	**+1.0**
TRN				eS	**Sn**	**14 53 50.6**	**-1.0**
CRUV	**Carupano**	**1.00**	**251**	eP	**Pn**	**14 53 35.5**	**+0.6**
CRUV				eS	**Sn**	**14 53 51.6**	**-1.2**
TPP	**Pointe-a-Pierr**	**1.05**	**130**	eP	**Pn**	**14 53 36.6**	**+1.2**
TPP				eS	**Sn**	**14 53 53.5**	**-0.2**
GUNV	**Guanoco**	**1.06**	**218**	eP	**Pn**	**14 53 37.2**	**+1.7**
GUNV				eS	**Sn**	**14 53 53.9**	**0.0**
GRGR	**Grenville**	**1.28**	**28**	eP	**Pn**	**14 53 37.9**	**+0.3**
GRGR				eS	**Sn**	**14 53 56.7**	**-1.0**
GRGR	**Grenville**	**1.28**	**28**	eP	**Pn**	**14 53 37.9**	**+0.3**
GRGR				eS	**Sn**	**14 53 56.3**	**-1.4**
TBH	**Brigand Hill**	**1.29**	**113**	eP	**Pn**	**14 53 38.7**	**+1.0**
TBH				eS	**Sn**	**14 53 57.3**	**-0.5**
TOSP	**Speyside**	**1.73**	**80**	iP	**Pn**	**14 53 43.3**	**+0.7**
TOSP				eS	**Sn**	**14 54 06.0**	**-0.3**
TOSP	**Speyside**	**1.73**	**80**	eP	**Pn**	**14 53 43.2**	**+0.7**
TOSP				eS	**Sn**	**14 54 05.6**	**-0.8**
ORIV	**Oritupano**	**2.22**	**210**	eP	**Pn**	**14 53 50.0**	**+1.6**
ORIV				eS	**Sn**	**14 54 15.6**	**-1.3**
ORIV	**Oritupano**	**2.22**	**210**	eP	**Pn**	**14 53 50.3**	**+1.8**
ORIV				eS	**Sn**	**14 54 16.7**	**-0.2**
PCRV	**Puerto La Cruz**	**2.46**	**251**	eP	**Pn**	**14 53 53.0**	**+1.5**
PCRV				eS	**Sn**	**14 54 21.0**	**-1.3**
SVB	**Belmont**	**2.47**	**24**	eP	**Pn**	**14 53 53.4**	**+1.8**
SVB				eS	**Sn**	**14 54 21.9**	**-0.5**
SVCV	**St. Vincent, C**	**2.51**	**26**	eP	**Pn**	**14 53 52.5**	**+0.4**
SVCV				eS	**Sn**	**14 54 22.5**	**-1.0**
SVV	**Soufriere Volc**	**2.53**	**24**	eP	**Pn**	**14 53 53.3**	**+1.1**
SVV				eS	**Sn**	**14 54 23.1**	**-0.6**
RIOV	**Rio Grande**	**2.95**	**171**	eP	**Pn**	**14 53 59.1**	**+1.5**
RIOV				eS	**Sn**	**14 54 32.5**	**-0.8**
SLB	**Belfond**	**3.06**	**23**	eP	**Pn**	**14 54 00.7**	**+1.6**
SLB				eS	**Sn**	**14 54 34.9**	**-1.0**
PRGV	**PARIAGUAN**	**3.23**	**227**	eP	**Pn**	**14 54 03.2**	**+2.0**
PRGV				eS	**Sn**	**14 54 39.3**	**-0.4**
CUPV	**Cpira**	**3.58**	**255**	eP	**Pn**	**14 54 07.2**	**+1.3**
CUPV				eS	**Sn**	**14 54 47.7**	**-0.4**
BIRV	**Birongo**	**3.96**	**263**	eP	**Pn**	**14 54 13.5**	**+2.7**
BIRV				eS	**Sn**	**14 54 56.2**	**-0.7**
MERV	**Las Mercedes**	**4.33**	**247**	eP	**Pn**	**14 54 16.6**	**+0.9**
MERV				eS	**Sn**	**14 55 03.8**	**-1.8**
LUEV	**Luepa**	**5.18**	**171**	eP	**Pn**	**14 54 27.9**	**+0.7**
LUEV				eS	**Sn**	**14 55 23.1**	**-3.3**
BAUV	**El Baul**	**6.04**	**251**	eP	**Pn**	**14 54 39.3**	**+0.8**
BAUV	**El Baul**	**6.04**	**251**	eP	**Pn**	**14 54 38.5**	**0.0**
BAUV				eS	**Sn**	**14 55 43.3**	**-3.3**
PAYV	**Puerto Ayacuch**	**7.69**	**224**	eP	**Pn**	**14 55 00.7**	**0.0**

*NEIC **21** 14:57:03.3±1.3, 61°.76N±0°.03×149°.93W±0°.05, h52km±3km, Error ellipse: s-maj=4.2km s-min=3.2km az=171.0*
*IDC **21** 14:57:03.0±1.4, 61°.74N×149°.94W, h61km±14km, mb3.7/10, mb1 3.7/14, mb1mx3.5/42, mbtmp3.9/14, MS3.5/1, Ms1 3.5/1, ms1mx2.6/31, Error ellipse: s-maj=21.0km s-min=9.6km az=117.0*
*AEIC **21** 14:57:04.1±1.3, 61°.77N±0°.02×149°.91W±0°.05, h42km±5km, ML3.9/117, mb4.5/6(NEIC), Error ellipse: s-maj=3.6km s-min=3.2km az=136.0*

ISC 21 14:57:02.6±0.7, 61°.75N±0°.04×149°.91W±0°.03, h52km±7km, n138, σ1§16/145, mb4.1/12, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMR	**Palmer**	**0.40**	**113**		**Pn**	**14 57 12.5**	**-0.4**
PMR					**Sn**	**14 57 20.4**	**+0.1**
GHO	**Glory Hole Cre**	**0.47**	**87**		**Sn**	**14 57 22.3**	**+0.6**
GHO	**Glory Hole Cre**	**0.47**	**87**	Pn	**Pn**	**14 57 13.7**	**0.0**
SUA	**Susitna One**	**0.50**	**235**		**Pn**	**14 57 14.1**	**0.0**
SUA					**Sn**	**14 57 22.6**	**+0.3**
FIS	**Fire Island**	**0.63**	**194**		**Pn**	**14 57 16.5**	**+0.9**
RC01	**Rabbit Creek A**	**0.67**	**173**		**Pn**	**14 57 16.6**	**+0.5**
RC01					**Sn**	**14 57 27.1**	**+1.2**
SML	**Sawmill**	**0.75**	**85**		**Pn**	**14 57 16.9**	**-0.3**
KNK	**Knik Glacier**	**0.77**	**116**		**Pn**	**14 57 17.7**	**+0.3**
KNK					**Sn**	**14 57 29.6**	**+1.4**
SKT	**Skwentna**	**0.80**	**287**		**Pn**	**14 57 17.5**	**-0.3**
SKT					**Sn**	**14 57 28.7**	**-0.3**
SPCG	**Spurr Capps Gl**	**1.11**	**246**		**Pn**	**14 57 22.6**	**+0.6**
SPCG					**Sn**	**14 57 37.3**	**+0.9**
CAPN	**Captain Cook N**	**1.16**	**212**		**Pn**	**14 57 24.7**	**+2.3**
PWL	**Port Wells**	**1.17**	**139**		**Pn**	**14 57 23.2**	**+0.4**
SCM	**Sheep Creek Mo**	**1.23**	**85**		**Pn**	**14 57 24.1**	**+0.6**
HUR	**Hurricane**	**1.24**	**6**		**Pn**	**14 57 24.1**	**+0.5**
SPCR	**Spurr Chakacha**	**1.24**	**244**		**Pn**	**14 57 24.2**	**+0.5**
WAT1	**Susitna Watana**	**1.25**	**30**		**Pn**	**14 57 24.1**	**+0.3**
SLKM	**Skilak Lake**	**1.26**	**187**		**Pn**	**14 57 24.3**	**+0.4**
SPBG	**Spurr Blockage**	**1.28**	**248**		**Pn**	**14 57 25.1**	**+0.8**
WAT6	**Susitna Watana**	**1.31**	**50**		**Pn**	**14 57 25.1**	**+0.4**
WAT2	**Susitna Watana**	**1.36**	**26**		**Pn**	**14 57 25.9**	**+0.5**
PPLA	**Purkeypile**	**1.57**	**318**		**Pn**	**14 57 28.5**	**+0.3**
GLI	**Glacier Island**	**1.61**	**122**		**Pn**	**14 57 29.2**	**+0.5**
SEW	**Seward**	**1.67**	**172**		**Pn**	**14 57 30.6**	**+1.2**
TRF	**Thorofare Moun**	**1.71**	**354**		**Pn**	**14 57 30.9**	**+0.7**
RND	**Reindeer**	**1.73**	**16**		**Pn**	**14 57 31.1**	**+0.7**
JPK	**Jack Peak**	**1.74**	**112**		**Pn**	**14 57 31.1**	**+0.7**
DFR	**Drift River**	**1.78**	**230**		**Pn**	**14 57 32.1**	**+1.1**
RDJH	**Redoubt Jeurge**	**1.82**	**232**		**Pn**	**14 57 33.0**	**+1.3**
VMT	**TAPS TI Valdez**	**1.83**	**110**		**Pn**	**14 57 33.1**	**+1.5**
KTH	**Kantishna Hill**	**1.87**	**346**		**Pn**	**14 57 33.1**	**+0.9**
RSO	**Redoubt South**	**1.90**	**228**		**Pn**	**14 57 33.3**	**+0.6**
RDWB	**Redoubt West**	**1.91**	**230**		**Pn**	**14 57 34.0**	**+1.1**
RED	**Redoubt Volcan**	**1.93**	**227**		**Pn**	**14 57 34.4**	**+1.3**
FID	**Port Fidalgo**	**1.94**	**120**		**Pn**	**14 57 33.2**	**+0.1**
CAST	**Castle Rocks**	**1.95**	**330**		**Pn**	**14 57 33.9**	**+0.6**
MCK	**McKinley**	**2.04**	**12**		**Pn**	**14 57 35.6**	**+1.1**
BRLK	**Bradley Lake**	**2.05**	**194**		**Pn**	**14 57 36.6**	**+1.9**
BRSE	**Bradley Lake S**	**2.06**	**192**		**Pn**	**14 57 37.0**	**+2.2**
PS11	**TAPS Pump St11**	**2.12**	**79**		**Pn**	**14 57 37.6**	**+2.0**
HOM	**Homer**	**2.27**	**203**		**Pn**	**14 57 40.4**	**+2.8**
PS12	**TAPS Pump St12**	**2.29**	**95**		**Pn**	**14 57 38.5**	**+0.6**
ILW	**Iliamna West**	**2.32**	**224**		**Pn**	**14 57 39.9**	**+1.5**
CNPM	**China Poot**	**2.33**	**197**		**Pn**	**14 57 39.9**	**+1.4**
EYAK	**Cordova Ski Ar**	**2.35**	**119**		**Pn**	**14 57 39.1**	**+0.4**
ILS	**Iliamna Low So**	**2.38**	**222**		**Pn**	**14 57 41.3**	**+2.1**
PAX	**Paxson**	**2.40**	**57**		**Pn**	**14 57 41.5**	**+2.0**
BPAW	**Bear Paw Mtn.**	**2.41**	**349**		**Pn**	**14 57 39.9**	**+0.4**
CHUM	**Lake Minchumin**	**2.41**	**334**		**Pn**	**14 57 40.2**	**+0.7**
BWN	**Browne**	**2.44**	**5**		**Pn**	**14 57 41.5**	**+1.6**
PS10	**TAPS Pump St10**	**2.54**	**47**		**Pn**	**14 57 44.2**	**+2.7**
GOAT	**Goat Mountain**	**2.77**	**113**		**Pn**	**14 57 45.2**	**+0.7**
SVW2	**Sparrevohn**	**2.81**	**259**		**Pn**	**14 57 45.6**	**+0.6**
WRH	**Wood River Hil**	**2.85**	**16**		**Pn**	**14 57 46.5**	**+0.9**
NEA	**Nenana**	**2.86**	**7**		**Pn**	**14 57 46.5**	**+0.8**
GLB	**Gilahina Butte**	**2.93**	**93**		**Pn**	**14 57 47.5**	**+0.8**
AUW	**Augustine West**	**2.97**	**218**		**Pn**	**14 57 48.0**	**+0.8**
HDA	**Harding Lake**	**2.99**	**25**		**Pn**	**14 57 48.5**	**+1.1**
CCB	**Clear Creek Bu**	**3.06**	**17**		**Pn**	**14 57 48.9**	**+0.5**
RIDG	**Independent Ri**	**3.06**	**47**		**Pn**	**14 57 50.4**	**+1.8**
TT01	**Tatalina**	**3.08**	**295**		**Pn**	**14 57 48.9**	**+0.1**
TTA	**Tatalina**	**3.08**	**295**		**Pn**	**14 57 48.8**	**0.0**
HMT	**Hamilton**	**3.09**	**115**		**Pn**	**14 57 51.9**	**+3.0**
MENT	**Mentasta**	**3.12**	**65**		**Pn**	**14 57 50.6**	**+1.3**
VRDI	**Verde Repeater**	**3.14**	**97**		**Pn**	**14 57 50.0**	**+0.3**
TCOL	**CIGO, UAF Yank**	**3.27**	**15**		**Pn**	**14 57 52.0**	**+0.8**
COLA	**College**	**3.27**	**16**		**Pn**	**14 57 52.0**	**+0.8**
DOT	**Dot Lake**	**3.30**	**52**		**Pn**	**14 57 52.8**	**+1.1**
MDM	**Murphy Dome**	**3.31**	**12**		**Pn**	**14 57 52.9**	**+1.1**
MCARA	**McCarthy VSAT**	**3.31**	**93**		**Pn**	**14 57 53.5**	**+1.6**
MLY	**Manley**	**3.31**	**354**		**Pn**	**14 57 52.5**	**+0.5**
IL31		**3.32**	**23**		**Pn**	**14 57 52.7**	**+0.7**
ILAR	**Eielson Array**	**3.32**	**23**	P	**Pn**	**14 57 52.5**	**+0.5**
	6.3nm,0.3s,baz=208,slow=14,SNR=174						
ILAR				S	**Sn**	**14 58 32.1**	**+1.9**
	23nm,0.3s,baz=204,slow=22,SNR=7.3						
CRQM	**Cirque**	**3.42**	**104**		**Pn**	**14 57 54.4**	**+0.9**
SCRK	**Sand Creek**	**3.51**	**48**		**Pn**	**14 57 55.9**	**+1.2**
POKR	**Poker Plat Res**	**3.56**	**17**		**Pn**	**14 57 56.1**	**+0.8**
TGL	**Tana Glacier**	**3.56**	**103**		**Pn**	**14 57 55.7**	**+0.3**
PS07	**TAPS Pump Stn7**	**3.65**	**11**		**Pn**	**14 57 57.7**	**+1.3**
BALM	**Baldy**	**3.71**	**98**		**Pn**	**14 57 57.6**	**+0.2**
KIAG	**Kiagna River**	**3.73**	**100**		**Pn**	**14 57 58.5**	**+0.7**
BC03		**4.00**	**67**		**Pn**	**14 58 02.5**	**+1.3**
BARN	**Barnard Glacie**	**4.02**	**96**		**Pn**	**14 58 03.5**	**+1.7**
PS06	**TAPS Pump Stn6**	**4.12**	**1**		**Pn**	**14 58 04.2**	**+1.3**
MESA	**MESA**	**4.19**	**109**	Pn	**Pn**	**14 58 03.8**	**-0.2**
CTGM	**Chitina Glacie**	**4.20**	**97**		**Pn**	**14 58 04.7**	**+0.5**
KDAK	**Kodiak Island**	**

MKAR Makanchi Array 59.09 325 P P 15 17 15.3 +0.3
0.1nm,0.4s,baz=108,slow=8.7,SNR=3.8

*NEIC **21** 15:07:23.4±2.3,25.°9S±0.°1×179.°2E±0.°1,h522km±5km, mb4.7/29, Error ellipse: s-maj=17.5km s-min=13.8km az=118.0*
*IDC **21** 15:07:25.6±1.5,25.°86S×179.°15E,h540km±18km,mb3.2/9, mb1 3.4/11,mb1mx3.3/20,mbtmp4.1/11, Error ellipse: s-maj=25.0km s-min=13.9km az=158.0*
ISC 21 15:07:24.7±0.5,25°94S±0.°06×179°32E±0.°08, h550km, n97, σ1°59/103, mb4.2/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.11**	**144**	P	**P**		**15 08 49.0**	**+1.7**
	249nm,0.3s,baz=87,slow=8.1,SNR=14							
RAO	**Raoul Island**	**4.11**	**144**	P	**P**		**15 08 49.0**	**+1.7**
GLKZ	**Green Lake**	**4.12**	**144**	P	**P**		**15 08 46.0**	**-1.3**
MSVF	**Nonsavu**	**8.25**	**352**	P	**P**		**15 09 20.5**	**-4.7**
OUZ	**Omahuta**	**10.48**	**207**	P	**P**		**15 09 49.4**	**+2.0**
OUZ	**Omahuta**	**10.48**	**207**	P	**P**		**15 09 49.1**	**+1.7**
KUZ	**Kuaotunu**	**11.20**	**195**	P	**P**		**15 09 57.7**	**+2.9**
MKAZ	**Moumakai**	**11.68**	**197**	P	**P**		**15 10 00.3**	**+0.6**
HAZ	**Te Kaha**	**11.86**	**186**	P	**P**		**15 10 04.3**	**+2.8**
WMGZ	**Waiomatatini S**	**11.87**	**183**	P	**P**		**15 10 01.9**	**+0.2**
WMGZ				S	**S**		**15 12 10.9**	**0.0**
NIUE	**Niue**	**12.05**	**58**	P	**P**		**15 10 01.5**	**-2.4**
PUZ	**Puketiti**	**12.13**	**184**	P	**P**		**15 10 04.7**	**+0.3**
PUZ				S	**S**		**15 12 15.6**	**-0.3**
DZM	**Mont Dzumac**	**12.38**	**285**	P	**P**		**15 10 06.1**	**-1.3**
	0.4nm,0.3s,baz=105,slow=19,SNR=5.0							
DZM	**Mont Dzumac**	**12.38**	**285**	P	**P**		**15 10 03.8**	**-3.6**
URZ	**Urewera**	**12.43**	**188**	P	**P**		**15 10 05.9**	**-1.5**
	4.8nm,0.3s,baz=247,slow=3.0,SNR=33							
URZ				S	**S**		**15 12 16.2**	**-5.2**
	0.6nm,0.3s,baz=214,slow=21,SNR=6.8							
URZ	**Urewera**	**12.43**	**188**	P	**P**		**15 10 06.0**	**-1.4**
URZ				S	**S**		**15 12 19.6**	**-1.8**
MWZ	**Matawai**	**12.45**	**187**	P	**P**		**15 10 06.6**	**-1.1**
MWZ				S	**S**		**15 12 20.2**	**-1.8**
NOUC	**Port Laguerre**	**12.49**	**285**	P	**P**		**15 10 05.7**	**-3.0**
TKGZ	**Te Karaka**	**12.53**	**185**	P	**P**		**15 10 08.7**	**+0.3**
RAGZ	**Rawiri**	**12.62**	**187**	P	**P**		**15 10 08.7**	**-0.9**
MUGZ	**Murupara**	**12.69**	**189**	P	**P**		**15 10 09.5**	**-0.6**
TLZ	**Tolley Road**	**12.76**	**194**	P	**P**		**15 10 13.7**	**+2.7**
RIGZ	**Rimuhau**	**12.80**	**186**	P	**P**		**15 10 10.9**	**-0.5**
HIZ	**Hauiti**	**13.09**	**196**	P	**P**		**15 10 15.7**	**+1.3**
BKZ	**Black Stump Fm**	**13.40**	**190**	P	**P**		**15 10 15.8**	**-1.8**
BKZ	**Black Stump Fm**	**13.40**	**190**	P	**P**		**15 10 15.3**	**-2.3**
KWHZ	**Kaweka Forest**	**13.67**	**190**	P	**P**		**15 10 18.6**	**-1.7**
BHHZ	**Black Hill Sta**	**13.79**	**191**	P	**P**		**15 10 19.4**	**-2.1**
KRHZ	**Kereru**	**13.89**	**190**	P	**P**		**15 10 21.3**	**-1.3**
PNHZ	**Pukenui**	**14.18**	**190**	P	**P**		**15 10 24.1**	**-1.4**
PXZ	**Pawanui**	**14.20**	**188**	P	**P**		**15 10 23.1**	**-2.6**
DVHZ	**Dannevirke**	**14.56**	**190**	P	**P**		**15 10 28.2**	**-1.2**
AFI	**Afiamalu**	**14.60**	**37**	P	**P**		**15 10 30.4**	**+0.1**
BFZ	**Birch Farm**	**14.93**	**189**	P	**P**		**15 10 32.3**	**-0.9**
MRZ	**Mangatainoka R**	**15.01**	**191**	P	**P**		**15 10 31.9**	**-2.2**
OGWZ	**Otaki Gorge**	**15.23**	**192**	P	**P**		**15 10 33.8**	**-2.5**
SANVU	**Saraoutou**	**15.40**	**310**	P	**P**		**15 10 36.0**	**-2.4**
SANVU				IAmb	IAmb		15 11 20.4	
	comp=Z,16nm,1.1s							
DUWZ	**D'Urville Isla**	**15.49**	**196**	P	**P**		**15 10 37.7**	**-1.3**
CAW	**Cannon Point**	**15.54**	**192**	P	**P**		**15 10 38.7**	**-0.7**
MSWZ	**Moikau Station**	**15.80**	**191**	P	**P**		**15 10 40.1**	**-2.0**
MSWZ	**Moikau Station**	**15.80**	**191**	P	**P**		**15 10 40.2**	**-2.0**
SNZO	**South Karori**	**15.80**	**193**	P	**P**		**15 10 40.2**	**-1.9**
BHW	**Baring Head**	**15.86**	**192**	P	**P**		**15 10 42.6**	**-0.1**
BHW	**Baring Head**	**15.86**	**192**	P	**P**		**15 10 40.5**	**-2.2**
QRZ	**Quartz Range**	**15.88**	**199**	P	**P**		**15 10 43.6**	**+0.7**
QRZ	**Quartz Range**	**15.88**	**199**	P	**P**		**15 10 43.6**	**+0.7**
PLWZ	**Palliser**	**15.95**	**191**	P	**P**		**15 10 42.1**	**-1.5**
PLWZ	**Palliser**	**15.95**	**191**	P	**P**		**15 10 42.0**	**-1.6**
NNZ	**Nelson**	**16.02**	**196**	P	**P**		**15 10 43.8**	**-0.4**
TUWZ	**Tuamarina**	**16.08**	**195**	P	**P**		**15 10 43.9**	**-0.9**
TUWZ	**Tuamarina**	**16.08**	**195**	P	**P**		**15 10 43.8**	**-1.0**
BSWZ	**Blackbirch Sta**	**16.37**	**195**	P	**P**		**15 10 47.1**	**-0.3**
THZ	**Tophouse**	**16.65**	**197**	P	**P**		**15 10 49.6**	**-0.5**
KHZ	**Kahutara**	**17.11**	**195**	P	**P**		**15 10 53.9**	**-0.3**
LTZ	**Lake Taylor**	**17.77**	**197**	P	**P**		**15 10 60.0**	**-0.3**
OXZ	**Oxford**	**18.34**	**197**	P	**P**		**15 11 05.5**	**+0.1**
MQZ	**McQueen's Vall**	**18.54**	**195**	P	**P**		**15 11 06.4**	**-0.8**
RPZ	**Rata Peaks**	**18.97**	**199**	P	**P**		**15 11 12.0**	**+0.8**
	comp=Z,2.6nm,0.3s,baz=54,slow=4.0,SNR=17							
RPZ	**Rata Peaks**	**18.97**	**199**	P	**P**		**15 11 11.2**	**0.0**
FOZ	**Fox Glacier**	**19.19**	**201**	P	**P**		**15 11 14.0**	**+0.8**
LBZ	**Lake Benmore**	**19.84**	**200**	P	**P**		**15 11 19.8**	**+0.7**
LBZ				IAmb	IAmb		15 12 11.2	
	comp=Z,38nm,1.4s							
ODZ	**Otahua Downs**	**20.31**	**198**	P	**P**		**15 11 24.6**	**+1.3**
WKZ	**Wanaka**	**20.60**	**201**	P	**P**		**15 11 26.2**	**+0.2**
MLZ	**Mavora Lakes**	**21.38**	**202**	P	**P**		**15 11 31.1**	**-1.9**
MLZ				IAmb	IAmb		15 11 48.0	
	comp=Z,60nm,1.6s							
WHZ	**Wether Hill Ro**	**21.90**	**202**	P	**P**		**15 11 38.1**	**+0.5**
CAN	**Canberra**	**27.63**	**243**	P	**P**		**15 12 27.1**	**-1.4**
CAN				IAmb	IAmb		15 12 33.7	
	comp=Z,57nm,1.7s							
TARA	**Tarawa**	**27.83**	**346**	P	**P**		**15 12 28.6**	**-1.9**
STKA	**Stephens Creek**	**33.43**	**251**	P	**P**		**15 13 19.4**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=96,slow=14,SNR=5.2							
COEN	**Coen**	**35.88**	**282**	P	**P**		**15 13 39.5**	**+0.4**
BBOO	**Buckleboo**	**38.11**	**249**	P	**P**		**15 13 57.3**	**+0.2**
BBOO				IAmb	IAmb		15 13 57.8	
	comp=Z,10nm,0.8s							
AS31	**Alice Springs**	**41.13**	**263**	P	**P**		**15 14 21.9**	**+0.4**
ASAR	**Alice Springs**	**41.13**	**263**	P	**P**		**15 14 21.7**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=91,slow=7.5,SNR=31							
ASAR				S	**S**		**15 19 56.8**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=102,slow=17,SNR=5.5							
WR0	**Warramunga Arr**	**41.51**	**269**	P	**P**		**15 14 24.2**	**-0.3**
WB2	**Warramunga Arr**	**41.69**	**269**	P	**P**		**15 14 25.8**	**-0.1**
WB2				IAmb	IAmb		15 15 19.7	
	comp=Z,17nm,1.4s							
WRAB	**Tennant Creek**	**41.69**	**269**	P	**P**		**15 14 25.8**	**-0.1**
WRAB				IAmb	IAmb		15 14 54.6	
	comp=Z,16nm,1.6s							
WRA	**Warramunga Arr**	**41.70**	**269**	P	**P**		**15 14 26.0**	**0.0**
	comp=Z,1.3nm,0.5s,baz=105,slow=7.7,SNR=6.8							
WRA				S	**S**		**15 20 02.4**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=98,slow=14,SNR=4.5							
WB0	**Warramunga Arr**	**41.70**	**269**	P	**P**		**15 14 25.9**	**-0.1**
WB0				IAmb	IAmb		15 16 04.4	
	comp=Z,28nm,1.8s							
KNRA	**Kununurra**	**48.10**	**272**	P	**P**		**15 15 15.9**	**+0.9**
KNRA				IAmb	IAmb		15 16 41.8	
	comp=Z,99nm,1.9s							
FITZ	**Fitzroy Crossi**	**50.09**	**268**	P	**P**		**15 15 30.0**	**+0.2**
FITZ				IAmb	IAmb		15 16 32.6	
	comp=Z,32nm,1.5s							
PSA00	**Pilbara Seismi**	**54.22**	**261**	P	**P**		**15 15 59.6**	**+0.3**
PSA00				IAmb	IAmb		15 17 42.9	
	comp=Z,74nm,1.4s							
KSRS	**Korea Array**	**79.42**	**321**	P	**P**		**15 18 33.8**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=134,slow=5.1,SNR=3.7							
PETK	**Petropavlovsk-**	**80.93**	**347**	P	**P**		**15 18 42.6**	**+1.0**
	comp=Z,1.9nm,0.7s,baz=168,slow=7.4,SNR=4.7							
USRK	**Ussuriysk Ar.**	**82.14**	**328**	P	**P**		**15 18 49.6**	**+1.7**
	comp=Z,3.8nm,0.7s,baz=202,slow=3.0,SNR=6.6							
NVAR	**Mina Array Bea**	**86.64**	**44**	P	**P**		**15 19 13.0**	**+2.6**
	comp=Z,0.4nm,0.6s,baz=225,slow=7.3,SNR=4.4							
CMAR	**Chiang Mai Arr**	**89.66**	**291**	P	**P**		**15 19 27.4**	**+2.7**
	comp=Z,1.0nm,0.9s,baz=126,slow=4.6,SNR=5.0							
ROC1	**El Roble**	**91.09**	**128**	P	**P**		**15 19 31.2**	**-0.3**
ILAR	**Eielson Array**	**94.15**	**14**	P	**P**		**15 19 44.6**	**+0.3**
	comp=Z,0.4nm,0.8s,baz=225,slow=4.7,SNR=3.9							
MKAR	**Makanchi Array**	**113.07**	**312**	PKiKP		**PKiKP**	**15 25 00.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=150,slow=0.9,SNR=5.6							
ARCES	**ARCESS Array B**	**133.74**	**348**	PKhKP		PKPpre	15 25 33.3	
	comp=Z,1.5nm,1.0s,baz=22,slow=0.5,SNR=7.7							
ARCES				PKP		**PKPdf**	**15 25 39.1**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=48,slow=4.0,SNR=5.3							
FINES	**FINESS Array B**	**140.16**	**340**	PKiKP		PKPpre	15 25 44.5	
	comp=Z,0.9nm,0.5s,baz=82,slow=2.7,SNR=6.9							
NC303	**NORSAR Array S**	**143.78**	**350**			**PKPdf**	**15 25 57.2**	**+0.3**
NB2	**NORSAR Subarra**	**143.98**	**350**	PKP		**PKPdf**	**15 25 57.9**	**+0.7**
	comp=Z,5.2nm,0.8s,baz=18,slow=3.2							
NOA	**NORSAR Array B**	**143.98**	**350**	PKP		PKPbc	15 25 57.1	+0.5
	comp=Z,4.3nm,0.6s,baz=22,slow=3.8,SNR=20							
AKASG	**Malin Array Be**	**146.31**	**325**	PKPbc		**PKPbc**	**15 26 04.8**	**+1.0**
	comp=Z,1.3nm,0.4s,baz=44,slow=4.3,SNR=12							
BRTR	**Keskin Array B**	**148.26**	**304**	PKPbc		**PKiKP**	**15 26 10.9**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=142,slow=4.4,SNR=7.0							
BRTR				PKPab		**PKPab**	**15 26 15.4**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=105,slow=2.6,SNR=6.9							
BUR08	**Bucovina Ar. S**	**150.26**	**323**			**PKiKP**	**15 26 16.4**	**+2.0**
TORD	**Torodi Ar. Bea**	**167.08**	**190**	PKPab		**PKPab**	**15 27 38.1**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=172,slow=5.3,SNR=3.1							

*NNC **21** 15:10:21.6±0.7,42.°80N×78.°18E,h0km, mb2.3,mpv2.7, Error ellipse: s-maj=5.9km s-min=2.2km az=174.0*
*KRNET **21** 15:10:22.8±0.1,42.°84N×78.°14E,h21km,mb2.5*
*SOME **21** 15:10:23.1,42.°83N×78.°15E,h15km*
ISC 21 15:10:21.3±1.1,42°80N±0.°03×78°14E±0.°02, h4km±10km, n48, σ1°21/91, 8C-8D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SATY	**Saty**	**0.33**	**37**	*eP*		**Pb**	**15 10 28.8**	**-1.0**
	35nm,0.1s							
SATY				*eS*		**Sg**	**15 10 33.1**	**+1.1**
	83nm,0.2s							
SATY	**Saty**	**0.33**	**37**	P		**Pb**	**15 10 28.8**	**-1.0**
	35nm,0.1s							
SATY				S		**Sg**	**15 10 33.0**	**+1.1**
	89nm,0.1s							
ANVS	**Anan'yevo**	**0.35**	**268**	⇓*iP*		**Pb**	**15 10 30.5**	**+0.3**
	baz=61							
ANVS				⇓*iS*		**Sb**	**15 10 35.7**	**-0.4**
	baz=61							
PRZ	**Przheval'sk**	**0.37**	**148**	⇑*iP*		**Pn**	**15 10 31.5**	**-2.1**
	baz=50							
PRZ				⇑*iS*		**Sb**	**15 10 37.6**	**+1.0**
	baz=50							
ZHN	**Zhinishke**	**0.43**	**30**	*eP*		**Pb**	**15 10 30.5**	**-1.1**
	baz=33							
ZHN				*eS*		**Sg**	**15 10 36.0**	**+0.7**
	baz=33							
ZHN	**Zhinishke**	**0.43**	**30**	*eP*		**Pb**	**15 10 30.5**	**-1.1**
	6.2nm,0.1s							
ZHN				*eS*		**Sg**	**15 10 36.0**	**+0.7**
	25nm,0.2s							
KURS	**Kuram**	**0.69**	**2**	*eP*		**Pb**	**15 10 35.5**	**-0.5**
	baz=2.0							
KURS				*eS*		**Sg**	**15 10 44.5**	**+0.9**
	baz=2.0							
KURS	**Kuram**	**0.69**	**2**	*eP*		**Pb**	**15 10 35.5**	**-0.5**
	1.4nm,0.1s							
KURS				*eS*		**Sg**	**15 10 44.5**	**+0.9**
	7.8nm,0.1s							
KURS	**Kuram**	**0.69**	**2**	P		**Pb**	**15 10 35.3**	**-0.6**
	1.4nm,0.1s							
KURS				S		**Sg**	**15 10 44.3**	**+0.7**
	9.2nm,0.3s							
UZB	**Uzynbulak**	**0.74**	**61**	*eP*		**Pb**	**15 10 35.7**	**-1.0**
	2.5nm,0.1s							
UZB				*eS*		**Sg**	**15 10 44.9**	**-0.2**
	13nm,0.1s							
UZB	**Uzynbulak**	**0.74**	**61**	P		**Pb**	**15 10 35.7**	**-1.0**
	3.4nm,0.1s							
UZB				S		**Sg**	**15 10 44.8**	**-0.2**
	13nm,0.1s							
KPKS	**Kokpek**	**0.78**	**31**	*eP*		**Pb**	**15 10 36.8**	**-0.7**
	baz=33							
KPKS				*eS*		**Sg**	**15 10 46.7**	**+0.3**
	baz=33							
KPKS	**Kokpek**	**0.78**	**31**	*eP*		**Pb**	**15 10 36.8**	**-0.7**
	3.8nm,0.1s							
KPKS				*eS*		**Sg**	**15 10 46.7**	**+0.3**
	22nm,0.1s							
KOTS	**Kotyrbulak**	**0.87**	**300**	*eP*		**Pb**	**15 10 39.1**	**0.0**
	baz=98							
KOTS				*eS*		**Sb**	**15 10 50.6**	**-0.5**
	baz=98							
KOTS	**Kotyrbulak**	**0.87**	**300**	*eP*		**Pb**	**15 10 39.1**	**0.0**
	12nm,0.1s							
KOTS				*eS*		**Sb**	**15 10 50.6**	**-0.5**
	12nm,0.2s							
KOTS	**Kotyrbulak**	**0.87**	**300**	P		**Pb**	**15 10 39.1**	**0.0**
	12nm,0.1s							
KOTS				S		**Sb**	**15 10 50.9**	**-0.3**
	9.0nm,0.3s							
MDOK	**Medeo**	**0.88**	**295**	*eP*		**Pb**	**15 10 39.0**	**-0.2**
	baz=92							
MDOK				*eS*		**Sg**	**15 10 50.4**	**+0.7**
	baz=92							
MDOK	**Medeo**	**0.88**	**295**	*eP*		**Pb**	**15 10 39.0**	**-0.2**
	1.4nm,0.1s							
MDOK				*eS*		**Sg**	**15 10 50.4**	**+0.7**
	7.6nm,0.3s							
MDOK	**Medeo**	**0.88**	**295**	Pg		**Pb**	**15 10 39.3**	**0.0**
	2.2nm,0.3s							
MDOK				Lg	Lg		15 10 50.8	
	7.9nm,0.3s							
TNSS	**Tian-Shan**	**0.91**	**286**	*eP*		**Pb**	**15 10 40.1**	**+0.3**
	baz=83							
TNSS				*eS*		**Sb**	**15 10 52.3**	**-0.2**
	baz=83							
TNSS	**Tian-Shan**	**0.91**	**286**	*eP*		**Pb**	**15 10 40.1**	**+0.3**
	0.8nm,0.0s							
TNSS				*eS*		**Sb**	**15 10 52.3**	**-0.2**
	6.0nm,0.1s							
TNSS	**Tian-Shan**	**0.91**	**286**	P		**Pb**	**15 10 39.9**	**0.0**
	1.5nm,0.1s							
TNSS				S		**Sb**	**15 10 51.9**	**-0.6**
	6.0nm,0.1s							
KDJ	**Kajisay**	**0.97**	**227**	⇑*iP*		**Pn**	**15 10 41.6**	**-0.3**
	baz=25							
KDJ				⇑*iS*		**Sn**	**15 10 54.8**	**-1.4**
	baz=25							
SHLS	**Shalkode**	**1.03**	**69**	*eP*		**Pn**	15 10 46.9	+4.2
	2.6nm,0.2s							
SHLS				*eS*		**Sn**	**15 11 04.1**	**+6.5**
	4.9nm,0.3s							
SHLS	**Shalkode**	**1.03**	**69**	P		**Pn**	15 10 47.1	+4.4
	2.6nm,0.2s							
SHLS				S		**Sn**	**15 11 04.2**	**+6.5**
	5.5nm,0.3s							
PDGK	**Podgornoye**	**1.12**	**61**	P		**Pb**	**15 10 42.8**	**-0.5**
	0.4nm,0.1s							
PDGK				S		**Sg**	**15 10 57.1**	**-0.3**
	2.3nm,0.2s							
PDGK	**Podgornoye**	**1.12**	**61**	⇓P		**Pb**	**15 10 42.7**	**-0.6**
	0.3nm,0.4s							
PDGK				⇓S		**Sg**	**15 10 57.0**	**-0.4**
	1.5nm,0.4s							
IZV	**Izvestkoviy**	**1.15**	**283**	*eP*		**Pn**	**15 10 44.4**	**+0.1**
	baz=80							
IZV				*eS*		**Sn**	**15 10 59.7**	**-0.8**
	baz=80							
IZV	**Izvestkoviy**	**1.15**	**283**	*eP*		**Pn**	**15 10 44.4**	**+0.1**
	2.2nm,0.1s							
IZV				*eS*		**Sn**	**15 10 59.7**	**-0.8**
	16nm,0.2s							
IZV	**Izvestkoviy**	**1.15**	**283**	P		**Pn**	**15 10 44.2**	**-0.1**
	3.0nm,0.2s							
IZV				S		**Sn**	**15 10 59.6**	**-0.8**
	17nm,0.3s							
MNBS	**Baschi**	**1.30**	**8**	P		**Pg**	**15 10 46.4**	**+0.3**
	4.1nm,0.1s							
MNBS				S		**Sn**	**15 11 03.4**	**-0.7**
	9.4nm,0.2s							
CHKK	**Chushkaly**	**1.35**	**322**	*eP*		**Pg**	**15 10 47.2**	**0.0**
	baz=21							
CHKK				*eS*		**Sb**	**15 11 04.5**	**-0.3**
	baz=21							
CHKK	**Chushkaly**	**1.35**	**322**	*eP*		**Pg**	**15 10 47.2**	**0.0**
	2.3nm,0.1s							
CHKK				*eS*		**Sb**	**15 11 04.5**	**-0.3**
	13nm,0.2s							
CHKK	**Chushkaly**	**1.35**	**322**	P		**Pg**	**15 10 47.2**	**0.0**
	1.9nm,0.1s							
CHKK				S		**Sn**	**15 11 04.9**	**-0.4**
	13nm,0.3s							
KTBS	**Karatobe**	**1.40**	**311**	*eP*		**Pg**	**15 10 48.8**	**+0.5**
	1.6nm,0.1s							
KTBS				*eS*		**Sg**	**15 11 07.1**	**+0.7**
	5.2nm,0.2s							
KTBS	**Karatobe**	**1.40**	**311**	P		**Pg**	**15 10 48.7**	**+0.5**
	1.6nm,0.1s							
KTBS				S		**Sg**	**15 11 07.2**	**+0.7**
	8.4nm,0.3s							
ARXS	**Arharly**	**1.43**	**351**	*eP*		**Pg**	**15 10 48.8**	**0.0**
	0.3nm,0.1s							
ARXS				*eS*		**Sg**	**15 11 07.2**	**-0.2**
	4.5nm,0.1s							
ARXS	**Arharly**	**1.43**	**351**	P		**Pg**	**15 10 48.6**	**-0.2**
	0.8nm,0.2s							
ARXS				S		**Sb**	**15 11 07.0**	**-0.3**
	4.8nm,0.1s							
ULHL	**Ulahol**	**1.51**	**249**	⇑*iP*		**Pg**	**15 10 50.5**	**+0.3**
	baz=48							
ULHL				⇑*iS*		**Sg**	**15 11 10.7**	**+0.9**
	baz=48							
KUU	**Kurty**	**1.71**	**310**	*eP*		**Pg**	**15 10 54.5**	**+0.4**
	0.5nm,0.1s							
KUU				*eS*		**Sg**	**15 11 16.9**	**+0.6**
	12nm,0.2s							
KUU	**Kurty**	**1.71**	**310**	P		**Pg**	**15 10 54.5**	**+0.4**
	0.6nm,0.2s							
KUU				S		**Sg**	**15 11 17.0**	**+0.8**
	12nm,0.3s							
DGS	**Degeres**	**1.79**	**285**	P		**Pg**	**15 10 56.1**	**+0.4**
	1.2nm,0.5s							
DGS				S		**Sg**	**15 11 19.8**	**+0.9**
	5.4nm,0.3s							
DJR	**Jarkent**	**1.95**	**37**	*eP*		**Pb**	**15 10 57.1**	**-0.3**
	0.4nm,0.2s							
DJR				*eS*		**Sb**	**15 11 21.4**	**-0.6**
	4.6nm,0.4s							
DJR	**Jarkent**	**1.95**	**37**	P		**Pg**	**15 10 58.1**	**-0.6**
	0.5nm,0.2s							
DJR				S		**Sg**	**15 11 22.7**	**-1.1**
	4.3nm,0.3s							
NRN	**Naryn**	**2.10**	**230**	⇓*iP*		**Pb**	**15 10 59.6**	**-0.4**
	baz=29							
NRN				⇓*iS*		**Sb**	**15 11 26.2**	**-0.3**
	baz=29							
CHMS	**Chumysh**	**2.50**	**276**	⇓*eP*		**Pb**	**15 11 04.8**	**-1.9**
	baz=75							
CHMS				⇓*iS*		**Sn**	**15 11 35.1**	**+1.4**
	baz=75							
KAPS	**Kapalarasan**	**2.64**	**19**	Pg		**Pg**	**15 11 11.0**	**-0.8**
	0.5nm,0.4s							
KAPS				Lg	Lg		15 11 45.2	
	1.0nm,0.3s							
AAK	**Ala-Archa**	**2.69**	**268**	⇑Pg		**Pb**	**15 11 09.2**	**-0.9**
	1.5nm,0.9s							
AAK				⇑Lg	Lg		15 11 46.1	
	1.1nm,0.5s							

*IDC **21** 15:15:02.2±2.0,33.°00S×179.°03W,h0km,mb3.7/2, mb1 4.0/3,mb1mx3.7/30,mbtmp3.8/3,ML3.7/1,MS2.9/1, Ms1 2.9/1,ms1mx2.4/31,Error ellipse: s-maj=46.8km s-min=43.8km az=84.0*
*NEIC **21** 15:15:24.4±3.2,40.°83S±0.°04×176.°50E±0.°08,h35km±1km, mb4.6/10, Error ellipse: s-maj=11.0km s-min=6.2km az=288.0*
*WEL **21** 15:15:28.5,41.°5S±1.°×17.°6E±.°, h22km±3km, M2.8/34, ML3.0/32,MLv2.8/34,Error ellipse: s-maj=0.0km s-min=0.0km az=97.3*
ISC 21 15:15:26.2±1.0, 40°60S±0.°02×175°93E±0.°03, h34km±2km, n89, σ1°51/78, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PRWZ	**Pori Road**	**0.05**	**39**	P		**Pb**	**15 15 32.9**	**+1.0**
TIWZ	**Tintock**	**0.18**	**190**	P		**Pb**	**15 15 34.2**	**+1.4**
POWZ	**Post Office Ro**	**0.24**	**329**	P		**Pb**	**15 15 34.5**	**+1.2**
BFZ	**Birch Farm**	**0.26**	**109**	P		**Pb**	**15 15 34.9**	**+1.3**
BFZ	**Birch Farm**	**0.26**	**109**			**Pb**	**15 15 34.7**	**+1.2**
BFZ						**Sb**	**15 15 39.8**	**+1.3**
MRZ	**Mangatainoka R**	**0.27**	**256**	P		**Pn**	**15 15 35.0**	**+1.5**
DVHZ	**Dannevirke**	**0.35**	**32**	P		**Pn**	**15 15 35.9**	**+0.9**
CPWZ	**Castlepoint**	**0.38**	**146**	P		**Pn**	**15 15 37.8**	**+2.4**
HOWZ	**Holdsworth Sta**	**0.43**	**226**	P		**Pn**	**15 15 37.8**	**+1.7**
ANWZ	**Angora Road**	**0.44**	**72**	P		**Pn**	**15 15 37.7**	**+1.5**
TMWZ	**Te Maipa**	**0.51**	**183**	P		**Pn**	**15 15 39.3**	**+2.2**
TSZ	**Takapari Road**	**0.54**	**3**	P		**Pn**	**15 15 36.2**	**-1.2**
OHWZ	**Ohakea**	**0.61**	**310**	P		**Pb**	**15 15 41.1**	**+2.6**
OGWZ	**Otaki Gorge**	**0.61**	**249**	P		**Pb**	**15 15 40.7**	**+2.0**
PRHZ	**Porangahau**	**0.63**	**59**	P		**Pb**	**15 15 40.7**	**+1.7**
MTW	**Mount Morrison**	**0.65**	**210**	P		**Pb**	**15 15 41.7**	**+2.5**
WPHZ	**Waipukurau**	**0.66**	**37**	P		**Pb**	**15 15 41.4**	**+1.9**
PNHZ	**Pukenui**	**0.71**	**17**	P		**Pn**	**15 15 39.3**	**-0.6**
KIW	**Kapiti Island**	**0.82**	**251**	P		**Pb**	**15 15 44.1**	**+2.1**
TRWZ	**Traveller**	**0.82**	**193**	P		**Pb**	**15 15 43.4**	**+1.3**
CAW	**Cannon Point**	**0.83**	**232**	P		**Pb**	**15 15 44.1**	**+1.9**
PAWZ	**Paruwai Farm**	**0.87**	**206**	P		**Pb**	**15 15 45.7**	**+2.8**
PXZ	**Pawanui**	**0.91**	**52**	P		**Pb**	**15 15 44.5**	**+0.9**
MSWZ	**Moikau Station**	**0.96**	**212**	P		**Pb**	**15 15 44.9**	**+0.4**
MSWZ	**Moikau Station**	**0.96**	**212**	Pn		**Pb**	**15 15 44.2**	**-0.2**
KRHZ	**Kereru**	**1.01**	**20**	P		**Pb**	**15 15 46.4**	**+1.1**
KAHZ	**Kahuranaki**

*ISK **21** 15:46:08.8, 40˝.31N×25˝.80E, h11km, ML2.3/13*
*THE **21** 15:46:09.4, 40˝.30N×25˝.79E, h10km±1km, ML2.1/4, Error ellipse: s-maj=1.2km s-min=0.4km az=58.0*
*ATH **21** 15:46:09.1, 40˝.33N×25˝.77E, h24km±1km, ML2.0/4, Error ellipse: s-maj=1.6km s-min=0.8km az=35.0*
*DDA **21** 15:46:10.1, 40˝.24N×25˝.77E, h7km±1km, ML2.5*

ISC 21 15:46:09.3±0.8, **40˝.32N**±0˝.02×**25˝.81E**±0˝.02, **h13**km±6km, **n45**, σ0**942**/69, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.14**	**153**	P	**Pg**	**15 46 12.8**	**0.0**
GADA				S	**Sg**	**15 46 15.1**	**-0.1**
GADA	**Gvkgeada**	**0.14**	**153**	PG	**Pg**	**15 46 12.7**	**0.0**
GADA				SG	**Sg**	**15 46 15.1**	**-0.1**
SMTH	**Samothraki Isl**	**0.27**	**306**	P	**Pg**	**15 46 15.0**	**+0.1**
SMTH				S	**Sg**	**15 46 18.8**	**+0.1**
	668nm,0.1s						
SMTH	**Samothraki Isl**	**0.27**	**306**	P	**Pg**	**15 46 15.0**	**+0.1**
SMTH				S	**Sg**	**15 46 19.0**	**+0.3**
SMTH				AML	AML	15 46 19.2	
	comp=E,981μm,0.1s						
SMTH				AML	AML	15 46 19.4	
	comp=N,1596μm,0.2s						
ENEZ	**Enez**	**0.49**	**31**	PG	**Pg**	**15 46 19.3**	**+0.2**
ENEZ				SG	**Sb**	**15 46 26.8**	**-0.3**
BOZC	**Bozcaada**	**0.51**	**159**	PG	**Pg**	**15 46 19.3**	**0.0**
BOZC	**Bozcaada**	**0.51**	**159**	*i* P	**Pg**	**15 46 19.2**	**-0.1**
BOZC				*i* S	**Sg**	**15 46 26.1**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.51**	**80**	PG	**Pb**	**15 46 20.0**	**-0.2**
GELI				SG	**Sb**	**15 46 27.2**	**-0.4**
ALN	**Alexandroupoli**	**0.61**	**17**	P	**Pg**	**15 46 21.2**	**0.0**
ALN				S	**Sb**	**15 46 30.3**	**-0.1**
	comp=N,162nm,0.3s						
ALN	**Alexandroupoli**	**0.61**	**17**	P	**Pg**	**15 46 21.2**	**0.0**
ALN				S	**Sg**	**15 46 29.8**	**+0.5**
ALN				AML	AML	15 46 30.4	
	comp=N,398μm,0.4s						
ALN				AML	AML	15 46 30.6	
	comp=E,180μm,0.2s						
ALN	**Alexandroupoli**	**0.61**	**17**	PG	**Pg**	**15 46 21.2**	**0.0**
ALN				SG	**Sg**	**15 46 29.5**	**+0.2**
EZN	**Ezine**	**0.63**	**141**	P	**Pg**	**15 46 20.9**	**-0.6**
EZN	**Ezine**	**0.63**	**141**	PG	**Pg**	**15 46 21.2**	**-0.3**
ERIK	**Erikli-Kesan**	**0.64**	**56**	PG	**Pb**	**15 46 22.2**	**-0.2**
ERIK				SG	**Sb**	**15 46 31.6**	**+0.3**
LPK	**Lapseki**	**0.72**	**85**	PG	**Pg**	**15 46 23.4**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.80**	**135**	*i* P	**Pb**	**15 46 25.1**	**0.0**
BAYC				*i* S	**Sb**	**15 46 36.3**	**+0.3**
KESN	**Edirne-Kesan**	**0.83**	**52**	*i* P	**Sn**	**15 46 38.1**	**-1.5**
RDO	**Rodhopi**	**0.86**	**346**	P	**Pg**	**15 46 25.8**	**-0.1**
RDO	**Rodhopi**	**0.86**	**346**	P	**Pg**	**15 46 25.7**	**-0.2**
RDO				S	**Sb**	**15 46 37.3**	**-0.2**
RDO				AML	AML	15 46 37.7	
	comp=E,236μm,0.3s						
RDO				AML	AML	15 46 37.9	
	comp=N,271μm,0.4s						
RDO	**Rodhopi**	**0.86**	**346**	PG	**Pg**	**15 46 25.8**	**-0.1**
THAS	**Thassos island**	**0.89**	**290**	P	**Pg**	**15 46 26.1**	**-0.3**
THAS				S	**Sb**	**15 46 38.2**	**-0.1**
	comp=N,90nm,0.2s						
THAS	**Thassos island**	**0.89**	**290**	P	**Pg**	**15 46 25.4**	**-1.0**
THAS				S	**Sg**	**15 46 37.6**	**-0.4**
THAS				AML	AML	15 46 39.7	
	comp=N,207μm,0.2s						
THAS				AML	AML	15 46 41.0	
	comp=E,147μm,0.2s						
EFSA	**Agios Efstrati**	**1.00**	**220**	P	**Pb**	**15 46 28.5**	**-0.1**
EFSA				S	**Sg**	**15 46 41.8**	**+0.2**
SIGR	**SIGRI**	**1.10**	**178**	P	**Pb**	**15 46 29.8**	**-0.5**
SIGR				S	**Sg**	**15 46 44.9**	**0.0**
	comp=E,140nm,0.4s						
SIGR	**SIGRI**	**1.10**	**178**	P	**Pb**	**15 46 30.3**	**0.0**
SIGR				S	**Sn**	**15 46 46.2**	**+0.6**
SIGR	**SIGRI**	**1.10**	**178**	PN	**Pb**	**15 46 30.4**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.10**	**70**	PN	**Pb**	**15 46 30.4**	**0.0**
PRK	**Paraskevi**	**1.12**	**162**	P	**Pb**	**15 46 30.6**	**0.0**
PRK				S	**Sn**	**15 46 46.8**	**+0.6**
KRBG	**Karabiga-Canak**	**1.14**	**86**	PN	**Pb**	**15 46 30.8**	**-0.1**
KAVA	**Kavala**	**1.20**	**305**	P	**Pn**	**15 46 31.5**	**-0.4**
KAVA	**Kavala**	**1.20**	**305**	P	**Pn**	**15 46 31.7**	**-0.2**
KAVA				S	**Sb**	**15 46 47.1**	**-0.3**
AYVA	**Ayvalik**	**1.21**	**146**	*i* P	**Pb**	**15 46 32.3**	**+0.2**
AYVA				*i* S	**Sg**	**15 46 48.8**	**+0.4**
AYVA				IAML		15 46 50.0	
	comp=N,138nm,0.4s						
KDZ	**Kurdzhali**	**1.37**	**347**	*e*P	**Pn**	**15 46 33.9**	**-0.3**
KDZ				*e*S	**Pg**	**15 46 37.5**	**+1.9**
KDZ	**Kurdzhali**	**1.37**	**347**	PN	**Pn**	**15 46 34.2**	**0.0**
MRMT	**Marmara Adasi**	**1.39**	**77**	PN	**Pn**	**15 46 34.4**	**-0.2**
ZEDA	**zmir-Bergama**	**1.66**	**144**	*i* P	**Pb**	**15 46 40.1**	**+0.3**
PAIG	**Paliouri**	**1.68**	**257**	P	**Pn**	**15 46 38.6**	**+0.1**
EDRB	**Edirne**	**1.68**	**24**	PN	**Pn**	**15 46 38.9**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.74**	**122**	*i* P	**Pb**	**15 46 40.8**	**-0.4**
STEP				*i* S	**Sn**	**15 47 01.4**	**0.0**
STEP				IAML		15 47 12.0	
	comp=E,36nm,1.0s						
KIRK	**Kırklareli**	**1.76**	**33**	*i* P	**Pb**	**15 46 41.6**	**+0.1**
KIRK				*i* S	**Sn**	**15 47 01.5**	**-0.4**
NVR	**Nevrokopi**	**1.81**	**306**	P	**Pn**	**15 46 40.2**	**-0.1**
PLG	**Polygyros**	**1.81**	**273**	P	**Pn**	**15 46 40.9**	**+0.6**
SRS	**Serrai**	**1.87**	**296**	P	**Pn**	**15 46 41.3**	**+0.2**
AOS	**Alonnisos**	**1.88**	**233**	P	**Pn**	**15 46 41.8**	**+0.6**
CHOS	**Chios island**	**1.94**	**174**	P	**Pn**	**15 46 42.3**	**+0.2**

*IDC **21** 15:47:49.3±0.7, 14˝.70N×145˝.10E, h206km±14km, mb3.3/9, mb1 3.4/9, mb1mx3.1/57, mbtmp3.8/9, MS3.0/1, Ms1 3.0/1, ms1mx2.4/22, Error ellipse: s-maj=36.3km s-min=20.8km az=33.0*
*NEIC **21** 15:47:49.3±1.7, 14˝.72N±0˝.08×145˝.1E±0˝.2, h212km±4km, mb4.5/12, Error ellipse: s-maj=26.0km s-min=10.3km az=99.0*

ISC 21 15:47:48.6±0.7, **14˝.75N**±0˝.09×**145˝.1E**±0˝.2, **h200**km, **n26**, σ1**811**/26, **mb3.9**/15, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.17**	**189**	P	**Pn**	**15 48 21.8**	**+2.1**
	54nm,0.3s,baz=264,slow=2.8,SNR=28						
GUMO				S	**Sn**	**15 48 45.1**	**+1.4**
	131nm,0.3s,baz=138,slow=19,SNR=20						
SARN	**Sarigan**	**2.06**	**20**	Pn	**Pn**	**15 48 29.6**	**+1.9**
JNU	**Nakatsue**	**22.37**	**327**	P	**P**	**15 52 30.6**	**+0.3**
MJAR	**Matsushiro Arr**	**22.55**	**345**	P	**P**	**15 52 33.6**	**+1.8**
	2.2nm,0.6s,baz=148,slow=8.9,SNR=4.7						
MAJO	**Matsushiro**	**22.55**	**345**	P	**P**	**15 52 31.1**	**-0.7**
MAJO				IAmb	IAmb	15 52 37.9	
	comp=Z,38nm,1.6s						
MJB9	**Matsu-Tunnel**	**22.55**	**345**	P	**P**	**15 52 31.0**	**-0.9**
MJB9				IAmb	IAmb	15 52 37.9	
	comp=Z,40nm,1.7s						
SSLB	**Suanglung**	**24.43**	**295**	P	**P**	**15 52 48.7**	**-0.4**
KSRS	**Korea Array**	**27.26**	**329**	P	**P**	**15 53 15.4**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=155,slow=9.5,SNR=2.9						
SSE	**Sheshan**	**27.26**	**311**	P	**P**	**15 53 13.1**	**-1.2**
KLR	**Kul'dur**	**36.07**	**345**	LR	LR	16 08 19.8	
	comp=Z,22nm,18.1s,baz=65,slow=34						
SONM	**Songino Array**	**45.90**	**324**	P	**P**	**15 55 52.7**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=129,slow=6.8,SNR=2.9						
STKA	**Stephens Creek**	**46.48**	**184**	P	**P**	**15 55 53.8**	**-2.0**
TIXI	**Tiksi**	**57.70**	**354**	P	**P**	**15 57 17.4**	**-0.5**
TIXI				IAmb	IAmb	15 58 25.5	
	comp=Z,12nm,2.0s						
MK31	**Makanchi Array**	**60.79**	**316**	P	**P**	**15 57 39.8**	**+0.3**
MKAR	**Makanchi Array**	**60.79**	**316**	P	**P**	**15 57 40.1**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=92,slow=8.6,SNR=18						
MAKZ	**Makanchi**	**61.00**	**316**	P	**P**	**15 57 40.8**	**-0.2**
KURK	**Kurchatov**	**63.82**	**320**	P	**P**	**15 57 59.3**	**-0.2**
KURK				IAmb	IAmb	15 59 27.6	
	comp=Z,15nm,2.0s						
KURBB	**Kurchatov Arra**	**63.86**	**319**	P	**P**	**15 57 59.8**	**0.0**
	comp=Z,0.8nm,0.4s,baz=101,slow=6.9,SNR=7.9						
KDJ	**Kajisay**	**63.89**	**310**	P	**P**	**15 57 60.0**	**-0.4**
KDJ				IAmb	IAmb	15 59 56.0	
	comp=Z,12nm,1.8s						
IL31		**67.44**	**25**	P	**P**	**15 58 21.7**	**-0.6**
IL31				IAmb	IAmb	15 59 26.6	
	comp=Z,20nm,1.7s						
ILAR	**Eielson Array**	**67.44**	**25**	P	**P**	**15 58 22.0**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=247,slow=5.9,SNR=12						
BVAR	**Borovoye Array**	**69.14**	**321**	P	**P**	**15 58 33.2**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=113,slow=8.0,SNR=8.0						
YKA	**Yellowknife Ar**	**81.75**	**27**	P	**P**	**15 59 44.8**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=285,slow=5.2,SNR=4.0						
FINES	**FINESS Array B**	**90.19**	**335**	P	**P**	**16 00 24.4**	**-1.7**
	comp=Z,2.8nm,1.0s,baz=46,slow=6.0,SNR=4.9						
LPAZ	**La Paz**	**148.00**	**97**	PKPbc	**PKPbc**	**16 07 12.4**	**+0.4**
	comp=Z,2.6nm,0.6s,baz=301,slow=3.1,SNR=9.1						
LPAZ	**La Paz**	**148.00**	**97**		**PKPbc**	**16 07 12.1**	**0.0**

*SJA **21** 15:54:57.6±0.6, 38˝.04S×75˝.31W, h37km±33km, ML4.7*
*GUC **21** 15:55:00.0±0.7, 38˝.00S×75˝.14W, h20km, ML3.9*

ISC 21 15:55:01.5±3.2, **38˝.07S**±0˝.08×**75˝.2W**±0˝.2, **h35**km, **n29**, σ0**82**/35, **1C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BI04	**Isla Mocha**	**1.06**	**109**	*e*P	**Pn**	**15 55 18.8**	**-1.1**
BI04				*i* S	**Sn**	**15 55 31.9**	**-1.5**
CCSP	**San Pedro de C**	**2.04**	**54**	*e*P	**Pn**	**15 55 33.0**	**-0.4**
CCSP				IAML		15 55 59.7	
	comp=N,838nm,0.3s						
BI03	**Tigo**	**2.10**	**55**	*e*P	**Pn**	**15 55 33.4**	**-0.8**
BI03				*e*S	**Sn**	**15 55 58.8**	**-0.2**
BI03				IAML		15 56 00.2	
	comp=N,3μm,0.5s						
LC01	**Cunco**	**2.71**	**109**	⇑*i* P	**Pn**	**15 55 42.6**	**+0.1**
COCH	**Cobquecura**	**2.71**	**45**	*e*P	**Pn**	**15 55 41.8**	**-0.8**
COCH				*e*S	**Sn**	**15 56 13.9**	**-0.2**
COCH	**Cobquecura**	**2.71**	**45**	*i* S	**Sn**	**15 56 14.7**	**+0.5**
CCHI	**Chillan**	**2.86**	**60**	*e*P	**Pn**	**15 55 44.7**	**0.0**
CCHI				*e*S	**Sn**	**15 56 18.2**	**+0.3**
CCHI				IAML		15 56 23.9	
	comp=E,450nm,0.5s						
CCHI	**Chillan**	**2.86**	**60**	*i* S	**Sn**	**15 56 19.0**	**+1.1**
GO06	**Curarrehue**	**3.25**	**119**	*e*P	**Pn**	**15 55 50.6**	**+0.4**
GO06	**Curarrehue**	**3.25**	**119**	*i* P	**Pn**	**15 55 50.8**	**+0.7**
GO05	**Huala**	**4.01**	**41**	*i* P	**Pn**	**15 56 00.1**	**-0.5**
GO05				*i* S	**Sn**	**15 56 46.5**	**+0.1**
PLCA	**Paso Flores**	**4.45**	**128**	*i* P	**Pn**	**15 56 07.1**	**+0.5**
COIS	**El Sosneado**	**5.37**	**58**	*i* P	**Pn**	**15 56 19.3**	**+0.1**
PEL	**Peldehue**	**6.12**	**38**	*i* P	**Pn**	**15 56 29.8**	**+0.2**
FCH	**Farellones**	**6.17**	**41**	*e*P	**Pn**	**15 56 30.1**	**-0.4**
FCH				*e*S	**Sn**	**15 57 38.8**	**-1.3**
ASAL	**Salagasta**	**7.52**	**45**	*e*P	**Pn**	**15 56 50.9**	**+2.1**
RTLS	**Leoncito**	**7.89**	**39**	*e*P	**Pn**	**15 56 55.2**	**+1.0**
RTCV	**Cerro Valdivia**	**8.24**	**43**	*e*P	**Pn**	**15 56 58.6**	**0.0**
CFA	**Coronel Fontan**	**8.60**	**43**	*i* P	**Pn**	**15 57 03.1**	**-0.5**
CFA	**Coronel Fontan**	**8.60**	**43**	*e*P	**Pn**	**15 57 03.0**	**-0.5**
GO04	**Tololo Observa**	**8.67**	**26**	*e*P	**Pn**	**15 57 03.1**	**-1.6**
RTLL	**Cerro Villicun**	**8.69**	**41**	*e*P	**Pn**	**15 57 04.0**	**-0.8**
AMOG	**MOGNA**	**8.99**	**40**	*i* P	**Pn**	**15 57 08.7**	**-0.3**
AMOG	**MOGNA**	**8.99**	**40**	*e*P	**Pn**	**15 57 08.6**	**-0.3**
AMOG				*i* S		15 57 45.5	
ACCO	**Cerro Coronel**	**9.01**	**36**	*i* P	**Pn**	**15 57 09.5**	**+0.1**
ACCO	**Cerro Coronel**	**9.01**	**36**	*e*P	**Pn**	**15 57 09.3**	**-0.1**
AROD	**Rodeo**	**9.19**	**33**	*e*P	**Pn**	**15 57 13.2**	**+1.4**
VCA	**Vinchina**	**10.97**	**34**	*e*P	**Pn**	**15 57 36.4**	**+0.2**
VCA				IAML		15 57 38.5	
	comp=Z,11nm,0.2s						
VCA	**Vinchina**	**10.97**	**34**	*e*P	**Pn**	**15 57 36.8**	**+0.6**
VCA				IAML		15 57 38.4	
	comp=Z,11nm,0.2s						

*TAP **21** 16:01:17.5, 24˝.80N×122˝.42E, h12km±1km, ML3.0, C*
*JMA **21** 16:01:18.6±0.1, 24˝.71N×122˝.41E, h15km±3km, M2.3*

ISC 21 16:01:18.0±1.0, **24˝.75N**±0˝.02×**122˝.42E**±0˝.02, **h14**km±8km, **n68**, σ0**959**/119, **1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.33**	**233**	P	**Pb**	**16 01 25.7**	**0.0**
	baz=227						
EOS1				S	**Sb**	**16 01 31.8**	**+1.0**
	baz=227						
TWB1	**Santiao Chiao**	**0.47**	**304**	⇑*i* P	**Pg**	**16 01 26.9**	**-0.4**
	baz=298						
TWB1				S	**Sg**	**16 01 34.0**	**+0.5**
	baz=298						
TWC	**Suao**	**0.53**	**255**	P	**Pg**	**16 01 28.6**	**+0.1**
	baz=249						
TWC				*e*S	**Sb**	**16 01 37.2**	**+0.4**
	baz=249						
NTC	**Toucheng**	**0.54**	**281**	*e*P	**Pb**	**16 01 29.1**	**-0.2**
	baz=276						
NTC				*e*S	**Sb**	**16 01 38.1**	**+1.1**
	baz=276						
JYNG	**Yonagunijimaku**	**0.57**	**122**	P	**Pg**	**16 01 29.4**	**+0.2**
JYNG				*e*S	**Sg**	**16 01 37.1**	**+0.4**
TIPB	**Shuangxi**	**0.58**	**292**	P	**Pg**	**16 01 29.4**	**0.0**
	baz=287						
TIPB				*i* S	**Sb**	**16 01 38.0**	**-0.1**
	baz=287						
ILA	**Ilan**	**0.61**	**272**	*e*S	**Sn**	**16 01 40.9**	**-1.0**
	baz=266						
YOJ	**Yonaguni jima**	**0.61**	**118**	P	**Pg**	**16 01 30.1**	**+0.1**
	baz=121						
YOJ				*e*S	**Sg**	**16 01 38.0**	**-0.2**
	baz=121						
YOJ	**Yonaguni jima**	**0.61**	**118**	P	**Pg**	**16 01 30.2**	**+0.1**
YOJ				*e*S	**Sg**	**16 01 37.8**	**-0.4**
NWF	**Wu-fen Shan**	**0.66**	**299**	*e*P	**Pg**	**16 01 30.4**	**-0.5**
	baz=295						
NWF				S	**Sb**	**16 01 40.6**	**+0.1**
	baz=295						
WFSB	**Wu-fen Shan**	**0.66**	**299**	*i* P	**Pg**	**16 01 30.3**	**-0.6**
	baz=295						
WFSB				*e*S	**Sb**	**16 01 40.3**	**0.0**
	baz=295						
TWE	**Neicheng**	**0.68**	**268**	P	**Pg**	**16 01 31.2**	**-0.2**
	baz=263						
TWE				*e*S	**Sb**	**16 01 41.7**	**+0.7**
	baz=263						
NANB	**Nanao**	**0.69**	**242**	P	**Pg**	**16 01 31.3**	**-0.1**
	baz=238						
NANB				*e*S	**Sg**	**16 01 40.5**	**0.0**
	baz=238						
ENA	**Nanau**	**0.69**	**242**	P	**Pb**	**16 01 31.9**	**-0.1**
	baz=238						
ENA				*e*S	**Sb**	**16 01 41.1**	**-0.2**
	baz=238						
SLBB	**Yuanshan**	**0.71**	**270**	*e*P	**Pg**	**16 01 31.3**	**-0.6**
	baz=266						
SLBB				*e*S	**Sn**	**16 01 43.9**	**-0.6**
	baz=266						
ENTT	**Nioudou**	**0.78**	**262**	*e*P	**Pb**	**16 01 33.7**	**+0.3**
	baz=258						
ENTT				*e*S	**Sb**	**16 01 44.6**	**+0.7**
	baz=258						
TWA	**Mucha**	**0.79**	**287**	*e*P	**Pg**	**16 01 33.2**	**-0.2**
	baz=283						
NWLT	**Wulai**	**0.83**	**272**	*e*P	**Pg**	**16 01 34.1**	**-0.1**
	baz=268						
NWLT				*e*S	**Sb**	**16 01 45.4**	**0.0**
	baz=268						
NDT	**Datong Townshi**	**0.83**	**260**	P	**Pb**	**16 01 34.6**	**+0.2**
	baz=256						
NDT				*e*S	**Sn**	**16 01 46.8**	**-0.8**
	baz=256						
NHDH	**Xindian Distri**	**0.84**	**285**	*e*P	**Pg**	**16 01 34.2**	**-0.1**
	baz=281						
NHDH				*e*S	**Sb**	**16 01 45.9**	**+0.4**
	baz=281						
YM01	**YM01**	**0.86**	**297**	*e*P	**Pg**	**16 01 34.6**	**-0.2**
	baz=294						
YM01				S	**Sg**	**16 01 45.8**	**-0.3**
	baz=294						
YM08	**YM08**	**0.87**	**300**	P	**Pg**	**16 01 34.3**	**-0.6**
	baz=297						
YM08				S	**Sg**	**16 01 45.6**	**-0.6**
	baz=297						
YM11	**YM11**	**0.87**	**299**	*e*P	**Pb**	**16 01 35.3**	**+0.4**
	baz=295						
YM11				*e*S	**Sg**	**16 01 46.3**	**0.0**
	baz=295						
TATO	**Taipei**	**0.87**	**285**	*e*P	**Pb**	**16 01 35.1**	**+0.2**
	baz=281						
TATO				*e*S	**Sb**	**16 01 46.4**	**-0.1**
	baz=281						
YM05	**YM05**	**0.87**	**298**	*e*P	**Pg**	**16 01 34.4**	**-0.6**
	baz=295						
YM05				S	**Sg**	**16 01 46.1**	**-0.4**
	baz=295						
YM10	**YM10**	**0.87**	**298**	*e*P	**Pg**	**16 01 34.9**	**-0.1**
	baz=294						
YM04	**YM04**	**0.89**	**297**	*e*P	**Pb**	**16 01 35.5**	**+0.1**
	baz=293						
YM04				*e*S	**Sg**	**16 01 46.6**	**-0.5**
	baz=293						
YM03	**YM03**	**0.90**	**298**	*e*P	**Pb**	**16 01 35.7**	**+0.2**
	baz=295						
TWY	**Chenhua**	**0.91**	**305**	*e*P	**Pb**	**16 01 35.8**	**+0.2**
	baz=302						
TWY				*e*S	**Sb**	**16 01 47.9**	**+0.4**
	baz=302						
ANP	**Anpu**	**0.92**	**298**	*e*P	**Pg**	**16 01 35.6**	**-0.3**
	baz=295						
NACB	**Ninganchiao**	**0.94**	**233**	P	**Pb**	**16 01 36.1**	**-0.1**
	baz=230						
NACB				*e*S	**Sg**	**16 01 49.0**	**+0.4**
	baz=230						
YHNB	**Yeheng**	**0.95**	**265**	P	**Pb**	**16 01 36.1**	**-0.2**
	baz=262						
YHNB				*e*S	**Sn**	**16 01 49.8**	**-0.6**
	baz=262						
NSK	**Sanguang**	**0.96**	**266**	P	**Pb**	**16 01 36.6**	**0.0**
	baz=262						
NSK				*e*S	**Sg**	**16 01 49.7**	**+0.4**
	baz=262						
NNSB	**Datong**	**0.99**	**251**	P	**Pb**	**16 01 37.2**	**0.0**
	baz=248						
NNSB				*e*S	**Sn**	**16 01 51.2**	**-0.4**
	baz=248						
NNSH	**Datong**	**0.99**	**251**	*e*P	**Pg**	**16 01 37.4**	**+0.1**
	baz=248						
NNSH				*e*S	**Sn**	**16 01 51.3**	**-0.3**
	baz=248						
NNS	**Nan Shan**	**1.00**	**252**	P	**Pb**	**16 01 37.2**	**0.0**
	baz=249						
NNS				*e*S	**Sn**	**16 01 51.2**	**-0.5**
	baz=249						
ETLH	**Xiulin Townshi**	**1.01**	**238**	P	**Pb**	**16 01 37.2**	**-0.1**
	baz=235						
ETLH				*e*S	**Sg**	**16 01 51.2**	**+0.5**
	baz=235						
WHF	**Hehuan Shan**	**1.21**	**240**	P	**Pn**	**16 01 40.9**	**0.0**
	baz=238						
WHF				*e*S	**Sb**	**16 01 57.0**	**+0.3**
	baz=238						
TWT	**Tachien**	**1.23**	**247**	*e*P	**Pg**	**16 01 42.1**	**+0.3**
	baz=244						
TWT				*e*S	**Sg**	**16 01 58.7**	**+0.8**
	baz=244						
TDCB	**Techi**	**1.25**	**247**	P	**Pb**	**16 01 41.8**	**+0.3**
	baz=244						
TDCB				*e*S	**Sg**	**16 01 58.3**	**-0.1**
	baz=244						
IRIF	**Iriomote-Funau**	**1.27**	**109**	P	**Pg**	**16 01 42.4**	**0.0**
IRIF				*e*S	**Sb**	**16 01 58.0**	**+0.1**
LIOB	**Emei**	**1.28**	**266**	*e*P	**Pn**	**16 01 41.5**	**0.0**
	baz=263						
NSTT	**Nanjuang**	**1.29**	**265**	*e*P	**Pn**	**16 01 41.9**	**+0.2**
	baz=262						
NSTT				*e*S	**Sg**	**16 02 01.6**	**+1.9**
	baz=262						
ESL	**Shilin**	**1.29**	**224**	*e*P	**Pb**	**16 01 42.3**	**+0.1**
	baz=222						
CHGB	**Renai**	**1.32**	**239**	*e*P	**Pg**	**16 01 43.5**	**-0.1**
	baz=237						
CHGB				*e*S	**Sg**	**16 02 01.2**	**+0.3**
	baz=237						
OWD	**Renai**	**1.38**	**235**	P	**Pg**	**16 01 44.5**	**-0.2**
	baz=233						
OWD				*e*S	**Sg**	**16 02 03.0**	**+0.3**
	baz=233						
WHP	**Taichung City**	**1.42**	**251**	*e*P	**Pg**	**16 01 45.5**	**+0.1**
	baz=248						
WHP				*e*S	**Sg**	**16 02 03.6**	**-0.3**
	baz=248						
VWDT	**VWDT**	**1.53**	**230**	*e*P	**Pb**	**16 01 46.1**	**-0.1**
	baz=228						
VWDT				*e*S	**Sg**	**16 02 07.3**	**0.0**
	baz=228						
DPDB	**Guoxing**	**1.53**	**243**	*e*P	**Pb**	**16 01 46.8**	**+0.5**
	baz=240						
DPDB				*e*S	**Sg**	**16 02 08.1**	**+0.6**
	baz=240						
JKRS	**Kuro-shima**	**1.54**	**109**	P	**Pb**	**16 01 45.9**	**-0.5**
HGSD	**Ruisui**	**1.55**	**216**	*e*P	**Pb**	**16 01 46.5**	**0.0**
	baz=214						
TWQ1	**Liyutan**	**1.55**	**255**	*e*P	**Pg**	**16 01 47.8**	**0.0**
	baz=253						
TWQ1				*e*S	**Sg**	**16 02 08.1**	**+0.2**
	baz=253						
JIJ	**Ishigaki jima**	**1.62**	**103**	P	**Pn**	**16 01 46.2**	**0.0**
JIJ				*e*S	**Sn**	**16 02 07.5**	**+0.6**
SMLT	**Sun Moon Lake**	**1.63**	**238**	*e*P	**Pb**	**16 01 48.2**	**+0.2**
	baz=236						
SSLB	**Suanglung**	**1.64**	**235**	*e*P	**Pb**	**16 01 47.9**	**-0.2**
	baz=233						
SSLB				*e*S	**Sg**	**16 02 10.5**	**-0.5**
	baz=233						
TYC	**Yuchr**	**1.65**	**240**	*e*P	**Pb**	**16 01 48.7**	**+0.4**
	baz=237						
YULB	**Yu-li**	**1.69**	**217**	*e*P	**Pn**	**16 01 46.6**	**-0.7**
	baz=216						
YULB				*e*S	**Sb**	**16 02 11.0**	**+0.7**
	baz=216						
TWF1	**Yuli**	**1.73**	**217**	*e*P	**Pn**	**16 01 48.4**	**+0.7**
	baz=215						
JISG	**Ishigakijimahi**	**1.73**	**95**	*e*S	**Sn**	**16 02 09.8**	**+0.1**
WHYT	**Xinyi Township**	**1.77**	**234**	*e*P	**Pb**	**16 01 50.5**	**+0.1**
	baz=232						
WJS	**Zhushan**	**1.80**	**239**	*e*S	**Sg**	**16 02 15.0**	**-0.8**
	baz=237						
FULB	**Fuli**	**1.85**	**214**	*e*P	**Pb**	**16 01 50.8**	**-1

BOOM	**Boomskoye usch**	**2.12**	**332**	⇓*iP*	**Pn**	**16 09 44.2**	**-0.9**
	baz=32							
BOOM				⇓*iS*	**Sn**	**16 10 11.9**	**0.0**
	baz=32							
ANVS	**Anan'yevo**	**2.19**	**8**	⇑*iP*	**Pn**	**16 09 45.0**	**-1.0**
	baz=7.0							
ANVS				⇑*iS*	**Sn**	**16 10 13.3**	**-0.2**
	baz=7.0							
TNSS	**Tian-Shan**	**2.43**	**354**	*eP*	**Pb**	**16 09 51.3**	**-1.9**
	20nm,0.2s							
TNSS				*eS*	**Sb**	**16 10 25.4**	**+1.7**
	65nm,0.3s							
TNSS	**Tian-Shan**	**2.43**	**354**	Pg	**Pb**	**16 09 51.3**	**-1.9**
	20nm,0.2s							
TNSS				Lg	Lg	16 10 25.4		
	65nm,0.3s							
IZV	**Izvestkoviy**	**2.47**	**349**	*eP*	**Pb**	**16 09 51.8**	**-1.9**
	5.2nm,0.2s							
IZV				*eS*	**Sb**	**16 10 26.3**	**+1.8**
	59nm,0.2s							
IZV	**Izvestkoviy**	**2.47**	**349**	Pg	**Pb**	**16 09 51.8**	**-1.9**
	5.2nm,0.2s							
IZV				Lg	Lg	16 10 26.3		
	59nm,0.2s							
ARLS	**Aral**	**2.55**	**300**	⇑*iP*	**Pn**	**16 09 50.0**	**-0.9**
	baz=99							
ARLS				⇑*iS*	**Sn**	**16 10 22.1**	**-0.3**
	baz=99							
MDOK	**Medeo**	**2.55**	**356**	*eP*	**Pb**	**16 09 53.0**	**-2.1**
	7.3nm,0.2s							
MDOK				*eS*	**Sb**	**16 10 28.3**	**+1.4**
	49nm,0.4s							
MDOK	**Medeo**	**2.55**	**356**	Pg	**Pn**	**16 09 52.3**	**+1.3**
	14nm,0.6s							
MDOK				Sn	**Sb**	**16 10 27.1**	**+0.2**
	38nm,0.6s							
MDOK	**Medeo**	**2.55**	**356**	Pg	**Pb**	**16 09 53.0**	**-2.1**
	7.3nm,0.2s							
MDOK				Lg	Lg	16 10 28.3		
	49nm,0.4s							
SATY	**Saty**	**2.58**	**19**	*eP*	**Pb**	**16 09 53.6**	**-2.1**
	4.2nm,0.1s							
SATY				*eS*	**Sb**	**16 10 28.8**	**+1.0**
	60nm,0.1s							
SATY	**Saty**	**2.58**	**19**	Pg	**Pb**	**16 09 53.6**	**-2.1**
	4.2nm,0.1s							
SATY				Lg	Lg	16 10 28.8		
	60nm,0.1s							
MTBS	**Maitube**	**2.59**	**346**	*eP*	**Pb**	**16 09 54.3**	**-1.5**
	3.4nm,0.1s							
MTBS				*eS*	**Sb**	**16 10 30.1**	**+2.2**
	39nm,0.3s							
MTBS	**Maitube**	**2.59**	**346**	Pg	**Pb**	**16 09 54.3**	**-1.5**
	3.4nm,0.1s							
MTBS				Lg	Lg	16 10 30.1		
	39nm,0.3s							
AAA	**Alma-Ata**	**2.60**	**354**	*eP*	**Pb**	**16 09 55.3**	**-0.7**
	9.4nm,0.1s							
AAA				*eS*	**Sg**	**16 10 31.6**	**-0.9**
	70nm,0.2s							
KNDC	**Almaty**	**2.61**	**355**	⇑Pg	**Pn**	**16 09 52.3**	**+0.6**
	11nm,0.4s							
KNDC				⇓Sn	**Sb**	**16 10 27.6**	**-0.8**
	74nm,0.5s							
KST	**Kastek**	**2.61**	**338**	*eP*	**Pb**	**16 09 55.1**	**-1.1**
	5.9nm,0.1s							
KST				*eS*	**Sb**	**16 10 31.3**	**+2.6**
	36nm,0.2s							
KST	**Kastek**	**2.61**	**338**	Pg	**Pb**	**16 09 55.1**	**-1.1**
	5.9nm,0.1s							
KST				Lg	Lg	16 10 31.3		
	36nm,0.2s							
KOTS	**Kotyrbulak**	**2.62**	**357**	*eP*	**Pb**	**16 09 54.5**	**-1.8**
	25nm,0.2s							
KOTS				*eS*	**Sb**	**16 10 30.8**	**+2.0**
	187nm,0.5s							
KOTS	**Kotyrbulak**	**2.62**	**357**	Pg	**Pb**	**16 09 54.5**	**-1.8**
	25nm,0.2s							
KOTS				Lg	Lg	16 10 30.8		
	187nm,0.5s							
UCH	**Uchtor**	**2.62**	**309**	⇓*eP*	**Pn**	**16 09 51.2**	**-1.1**
	baz=8.0							
UCH				⇓*iS*	**Sn**	**16 10 24.8**	**+0.1**
	baz=8.0							
UCH	**Uchtor**	**2.62**	**309**	P	**Pn**	**16 09 51.6**	**-0.7**
	SNR=11							
KBK	**Karagaybulak**	**2.68**	**320**	⇑*eP*	**Pn**	**16 09 51.9**	**-0.9**
	baz=19							
KBK				⇑*iS*	**Sn**	**16 10 25.8**	**+0.1**
	baz=19							
KBK	**Karagaybulak**	**2.68**	**320**	P	**Pb**	**16 09 55.7**	**-1.7**
	SNR=18							
ZHN	**Zhinishke**	**2.69**	**18**	*eP*	**Pb**	**16 09 55.5**	**-2.0**
	2.8nm,0.1s							
ZHN				*eS*	**Sb**	**16 10 32.1**	**+1.2**
	25nm,0.2s							
ZHN	**Zhinishke**	**2.69**	**18**	Pg	**Pb**	**16 09 55.5**	**-2.0**
	2.8nm,0.1s							
ZHN				Lg	Lg	16 10 32.1		
	25nm,0.2s							
UZB	**Uzynbulak**	**2.85**	**27**	*eP*	**Pb**	**16 09 58.0**	**-2.3**
	3.1nm,0.2s							
UZB				*eS*	**Sb**	**16 10 36.5**	**+1.1**
	9.4nm,0.4s							
UZB	**Uzynbulak**	**2.85**	**27**	Pg	**Pb**	**16 09 57.9**	**-2.3**
	3.1nm,0.2s							
UZB				Lg	Lg	16 10 36.5		
	9.4nm,0.4s							
DGS	**Degeres**	**2.85**	**337**	*eP*	**Pb**	**16 09 58.9**	**-1.3**
	7.3nm,0.3s							
DGS				*eS*	**Sb**	**16 10 38.3**	**+2.8**
	30nm,0.5s							
DGS	**Degeres**	**2.85**	**337**	Pg	**Pb**	**16 09 58.9**	**-1.3**
	7.3nm,0.3s							
DGS				Lg	Lg	16 10 38.3		
	30nm,0.5s							
AAK	**Ala-Archa**	**2.90**	**315**	⇑*eP*	**Pn**	**16 09 55.4**	**-0.4**
	baz=14							
AAK				⇑*iS*	**Sn**	**16 10 31.1**	**0.0**
	baz=14							
AAK	**Ala-Archa**	**2.90**	**315**	P	**Pb**	**16 09 59.6**	**-1.5**
	SNR=6.3							
AAK	**Ala-Archa**	**2.90**	**315**	Pn	Pn	16 09 46.7	-9.1
	8.0nm,0.5s							
AAK				Lg	Lg	16 10 39.7		
	54nm,0.9s							
KURS	**Kuram**	**2.95**	**13**	*eP*	**Pb**	**16 10 00.1**	**-1.7**
	11nm,0.4s							
KURS				*eS*	**Sb**	**16 10 39.9**	**+1.7**
	13nm,0.3s							
KURS	**Kuram**	**2.95**	**13**	Pg	**Pb**	**16 10 00.1**	**-1.7**
	11nm,0.4s							
KURS				Lg	Lg	16 10 39.8		
	13nm,0.3s							
SHLS	**Shalkode**	**3.02**	**32**	*eP*	**Pb**	**16 10 04.0**	**+0.9**
	3.7nm,0.2s							
SHLS				*eS*	**Sg**	**16 10 46.4**	**+0.6**
	14nm,0.3s							
SHLS	**Shalkode**	**3.02**	**32**	Pg	**Pb**	**16 10 04.0**	**+0.9**
	3.7nm,0.2s							
SHLS				Lg	Lg	16 10 46.4		
	14nm,0.3s							
CHMS	**Chumysh**	**3.03**	**322**	⇑*eP*	**Pn**	**16 09 56.6**	**-0.9**
	baz=22							
CHMS				⇑*iS*	**Sn**	**16 10 33.8**	**-0.4**
	baz=22							
CHMS	**Chumysh**	**3.03**	**322**	P	**Pg**	**16 10 09.5**	**+2.5**
	SNR=6.1							
KPKS	**Kokpek**	**3.04**	**20**	*eP*	**Pb**	**16 10 01.6**	**-1.8**
	5.4nm,0.2s							
KPKS				*eS*	**Sb**	**16 10 42.5**	**+1.7**
	54nm,0.3s							
AML	**Almayashu**	**3.09**	**301**	⇓*iP*	**Pn**	**16 09 58.2**	**-0.4**
	baz=0.0							
AML				⇓*iS*	**Sn**	**16 10 35.8**	**-0.3**
	baz=0.0							
AML	**Almayashu**	**3.09**	**301**	P	**Pb**	**16 10 04.2**	**-0.2**
	SNR=5.7							
KTBS	**Karatobe**	**3.12**	**352**	*eP*	**Pb**	**16 10 03.5**	**-1.4**
	3.2nm,0.2s							
KTBS				*eS*	**Sb**	**16 10 45.7**	**+2.4**
	45nm,0.3s							
KTBS	**Karatobe**	**3.12**	**352**	Pg	**Pb**	**16 10 03.5**	**-1.4**
	3.2nm,0.2s							
KTBS				Lg	Lg	16 10 45.7		
	45nm,0.3s							
PDGK	**Podgornoye**	**3.17**	**31**	Pg	**Pb**	**16 10 03.4**	**-2.4**
	1.7nm,0.3s							
PDGK				Lg	Lg	16 10 45.6		
	5.6nm,0.5s							
PDGK	**Podgornoye**	**3.17**	**31**	⇑Pg	**Pn**	**16 10 01.3**	**+1.8**
	7.6nm,1.1s							
PDGK				⇑Sn	**Sb**	**16 10 42.3**	**-2.6**
	23nm,1.0s							
CHKK	**Chushkaly**	**3.24**	**356**	*eP*	**Pb**	**16 10 05.9**	**-0.9**
	6.0nm,0.2s							
CHKK				*eS*	**Sb**	**16 10 49.7**	**+3.1**
	24nm,0.3s							
CHKK	**Chushkaly**	**3.24**	**356**	Pg	**Pb**	**16 10 05.9**	**-0.9**
	6.0nm,0.2s							
CHKK				Lg	Lg	16 10 49.7		
	24nm,0.3s							
KRBS	**Karabastau**	**3.30**	**339**	*eP*	**Pb**	**16 10 06.6**	**-1.3**
	3.6nm,0.2s							
KRBS				*eS*	**Sb**	**16 10 51.6**	**+3.3**
	8.1nm,0.4s							
KRBS	**Karabastau**	**3.30**	**339**	Pg	**Pb**	**16 10 06.6**	**-1.3**
	3.6nm,0.2s							
KRBS				Lg	Lg	16 10 51.6		
	8.1nm,0.4s							
ARSB	**Arslanbob**	**3.32**	**284**	⇑*iP*	**Pn**	**16 10 01.5**	**-0.1**
	baz=83							
ARSB				⇑*iS*	**Sn**	**16 10 41.8**	**+0.3**
	baz=83							
KUU	**Kurty**	**3.35**	**348**	*eP*	**Pb**	**16 10 07.2**	**-1.5**
	2.0nm,0.2s							
KUU				*eS*	**Sb**	**16 10 52.2**	**+2.6**
	15nm,0.3s							
KUU	**Kurty**	**3.35**	**348**	Pg	**Pb**	**16 10 07.2**	**-1.5**
	2.0nm,0.2s							
KUU				Lg	Lg	16 10 52.2		
	15nm,0.3s							
USP	**Ospenovka**	**3.36**	**323**	P	**Pb**	**16 10 07.5**	**-1.4**
	SNR=8.0							
SGDS	**Sogindy**	**3.45**	**326**	Pg	**Pb**	**16 10 09.2**	**-1.2**
	3.4nm,0.3s							
SGDS				Lg	Lg	16 10 55.6		
	5.6nm,0.3s							
MRKS	**Merke**	**3.70**	**306**	*eP*	**Pb**	**16 10 13.8**	**-0.9**
	2.8nm,0.2s							
MRKS				*eS*	**Sb**	**16 11 03.6**	**+3.7**
	9.5nm,0.3s							
MRKS	**Merke**	**3.70**	**306**	Pg	**Pb**	**16 10 13.8**	**-0.9**
	2.8nm,0.2s							
MRKS				Lg	Lg	16 11 03.6		
	9.5nm,0.3s							
DJR	**Jarkent**	**4.15**	**26**	*eP*	**Pb**	**16 10 21.3**	**-1.1**
	0.3nm,0.0s							
DJR				*eS*	**Sb**	**16 11 16.1**	**+3.2**
	5.5nm,0.4s							
DJR	**Jarkent**	**4.15**	**26**	Pg	**Pb**	**16 10 21.3**	**-1.1**
	0.3nm,0.0s							
DJR				Lg	Lg	16 11 16.1		
	5.5nm,0.4s							
KAPS	**Kapalarasan**	**4.91**	**17**	*eP*	**Pb**	**16 10 35.9**	**+0.6**
	0.5nm,0.2s							
KAPS				*eS*	**Sg**	**16 11 41.1**	**-5.3**
	4.6nm,0.3s							
KAPS	**Kapalarasan**	**4.91**	**17**	Pg	**Pb**	**16 10 35.9**	**+0.6**
	0.5nm,0.2s							
KAPS				Lg	Lg	16 11 41.1		
	4.6nm,0.3s							
KK31	**Karatay Array**	**5.62**	**298**	⇓Pn	Pn	16 10 24.4	-8.6
	0.2nm,0.3s,baz=141,slow=17,SNR=4.5							
KK31				⇑Lg	Lg	16 12 01.3		
	0.7nm,0.4s,baz=141,slow=33,SNR=4.1							

MAN 21 16:14:30.6,5.93N×126.07E,h80km,mb3.8,ML2.5,MS2.1, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.40**	**296**	*eP*	Pn	16 14 45.4	+1.9
DDMP				*eS*	Sn	16 14 56.3	+3.2
GSPH	**General Santos**	**1.13**	**278**	*eP*	Pn	16 14 49.7	-1.6
SKMP	**Bagumbayan, Su**	**1.63**	**291**	*eP*	Pn	16 14 58.1	+0.5
SKMP				*eS*	Sn	16 15 19.4	+1.4

IDC 21 16:16:32.5±3.3,16.77S×173.79W,h0km,mb3.4/3, mb1 3.8/4,mb1mx3.6/34,mbtmp3.5/4,ML3.7/1,MS3.6/10, Ms1 3.6/10,ms1mx3.5/19,Error ellipse: s-maj=174.1km s-min=25.6km az=144.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.44**	**35**	Pn	Pn	16 17 27.4	-0.1
	7.1nm,0.3s,baz=357,slow=16,SNR=14						
AFI				Sn	Sn	16 18 00.8	-8.3
	4.2nm,0.3s,baz=90,slow=20,SNR=2.9						
AFI				LR	LR	16 18 37.3	
	comp=Z,1μm,19.7s,baz=206,slow=36						
DZM	**Mont Dzumac**	**19.37**	**251**	LR	LR	16 26 56.5	
	comp=Z,383nm,20.9s,baz=54,slow=32						
PPT	**Papeete**	**23.14**	**96**	LR	LR	16 28 54.7	
	comp=Z,114nm,18.9s,baz=266,slow=32						
HNR	**Honiara**	**26.58**	**283**	LR	LR	16 30 29.5	
	comp=Z,169nm,21.0s,baz=95,slow=32						
STKA	**Stephens Creek**	**43.04**	**241**	LR	LR	16 40 29.3	
	comp=Z,95nm,19.7s,baz=40,slow=33						
WRA	**Warramunga Arr**	**49.18**	**258**	P	P	16 25 22.5	-0.2
	0.6nm,0.8s,baz=92,slow=6.6,SNR=5.1						
ASAR	**Alice Springs**	**49.34**	**253**	P	P	16 25 23.5	-0.5
	0.5nm,0.7s,baz=86,slow=7.8,SNR=6.5						
ASAR				LR	LR	16 43 58.1	
	comp=Z,124nm,21.6s,baz=96,slow=33						
VNDA	**Vanda**	**61.98**	**186**	LR	LR	16 52 58.3	
	comp=Z,14nm,18.5s,baz=86,slow=35						
MJAR	**Matsushiro Arr**	**69.75**	**320**	LR	LR	16 52 19.1	
	comp=Z,33nm,21.7s,baz=120,slow=31						
NVAR	**Mina Array Bea**	**75.59**	**42**	P	P	16 28 19.2	-0.4
	0.2nm,0.7s,baz=224,slow=7.6,SNR=3.4						
KSRS	**Korea Array**	**76.88**	**316**	LR	LR	16 59 02.7	
	comp=Z,24nm,19.1s,baz=120,slow=33						
TXAR	**Lajitas Array**	**81.68**	**56**	LR	LR	16 56 56.5	
	comp=Z,20nm,21.9s,baz=0.0,slow=30						
BRTR	**Keskin Array B**	**146.97**	**319**	PKPbc	PKPbc	16 36 17.8	+0.2
	0.6nm,0.9s,baz=85,slow=3.0,SNR=2.7						

BEO 21 16:35:06.4±1.4,42.30N×24.47E,h9km,ML1.4/3, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VTS	**Vitosha**	**0.97**	**290**	*ePg*	Pg	16 35 24.5	-0.6
VTS				*eSg*	Sb	16 35 38.1	-0.3
BOSS	**Bosilegrad**	**1.49**	**278**	*ePg*	Pn	16 35 32.0	-1.3
BOSS				*eSg*	Sg	16 35 54.1	-0.2
ZAPS	**Zavoj**	**1.67**	**306**	*ePg*	Pb	16 35 36.8	-0.5
ZAPS				*eSg*	Sb	16 35 59.0	+0.5
BARS	**Barje**	**2.03**	**286**	*eSg*	Pn	16 35 40.7	-0.1
BARS	**Barje**	**2.03**	**286**	*ePn*	Sg	16 36 10.6	-1.0

ATH 21 16:36:04.8,41.88N×24.56E,h20km±1km,ML1.4/1,Error ellipse: s-maj=3.0km s-min=1.1km az=182.0, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVR	**Nevrokopi**	**0.75**	**225**	P	Pb	16 36 19.2	+0.1
NVR				S	Sg	16 36 29.7	+0.2
NVR				AML	AML	16 36 31.1	
	comp=N,65μm,0.2s						
NVR				AML	AML	16 36 34.0	
	comp=E,57μm,0.2s						
KAVA	**Kavala**	**0.89**	**182**	P	Pg	16 36 21.9	-0.2
KAVA				S	Sn	16 36 34.4	0.0
RDO	**Rodhopi**	**1.04**	**135**	P	Pg	16 36 24.7	-0.4
RDO				S	Sg	16 36 38.9	+0.2
SRS	**Serrai**	**1.06**	**224**	P	Pg	16 36 25.1	-0.3
SRS				S	Sg	16 36 40.1	+0.9
SOH	**Sokhos**	**1.40**	**221**	P	Pg	16 36 31.0	-0.8
KNT	**Kendrikon**	**1.44**	**241**	P	Pg	16 36 31.9	-0.7
KNT				S	Sg	16 36 51.7	+0.2
ALN	**Alexandroupoli**	**1.49**	**131**	P	Pg	16 36 32.9	-0.7
ALN				S	Sg	16 36 52.8	-0.2

*KLM **21** 16:48:45.0, 1.46N×128.55E, h82km, mb4.8*
*IDC **21** 16:48:47.7±0.8, 1.36N×128.21E, h105km±7km, mb4.0/18, mb1 4.1/20, mb1mx4.0/34, mbtmp4.3/20, MS3.0/4,*
Ms1 2.9/4, ms1mx2.6/42, Error ellipse: s-maj=16.0km s-min=8.5km az=68.0
*NEIC **21** 16:48:47.4±1.3, 1.37N±0.06×128.17E±0.06, h102km±4km, mb4.9/69, Error ellipse: s-maj=8.9km s-min=8.3km az=210.0*
*DJA **21** 16:48:49.0±0.5, 1°N±5°×12°8E±°, h84km±12km, M4.5/13, mB4.9/2, mb4.7/4, MLv4.4/13, Mw(mB)4.2/2*

ISC 21 16:48:47.9±0.6,1.35N±0.04×128.23E±0.05,h106km±5km, h106km:pP-P,n168,σ1933/185,mb4.7/72,1C-1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.03**	**236**	P	**Pn**	**16 49 08.7**	**-0.4**
TNTI	**Ternate**	**1.03**	**236**		**Pn**	**16 49 08.2**	**-0.8**
SWI	**Sorong**	**3.75**	**126**	P	**Pn**	**16 49 44.4**	**+0.7**
SIJI	**Sorong**	**3.75**	**126**	P	**Pn**	**16 49 44.6**	**+0.7**
	27nm,0.3s,baz=315,slow=13,SNR=84						
SIJI				S	**Sn**	**16 50 27.5**	**+0.2**
	baz=127,slow=20,SNR=3.4						
SANI	**Sanana**	**4.05**	**214**	P	**Pn**	**16 49 47.1**	**-0.8**
KMSI	**Cibinong**	**4.32**	**260**	P	**Pn**	**16 49 52.0**	**+0.6**
NLAI	**Namlea**	**4.69**	**194**	P	**Pn**	**16 49 57.2**	**+0.6**
MSAI	**Masohi**	**4.72**	**171**	P	**Pn**	**16 49 56.5**	**-0.4**
AAI	**Ambon**	**5.00**	**180**	P	**Pn**	**16 50 01.2**	**+0.5**
FAKI	**Fak Fak**	**5.84**	**137**	P	**Pn**	**16 50 12.9**	**+0.8**
	0.3nm66nm,1.0s						
FAKI	**Fak Fak**	**5.84**	**137**		**Pn**	**16 50 13.1**	**+1.0**
LUWI	**Luwuk**	**5.95**	**247**		**Pn**	**16 50 12.5**	**-1.0**
DAV	**Davao City (W)**	**6.27**	**335**	Pn	**Pn**	**16 50 16.3**	**-1.6**
SKMP	**Bagumbayan, Su**	**6.32**	**325**	*eP*	**Pn**	**16 50 17.2**	**-1.3**
SKMP				*eS*	**Sn**	**16 51 26.7**	**-2.6**
MRSI	**Marisa**	**6.34**	**262**	P	**Pn**	**16 50 19.5**	**+0.6**
	0.4nm2μm105nm,0.6s						
KCP	**Kidapawan**	**6.43**	**331**	⇑*eP*	**Pn**	**16 50 21.3**	**+1.1**
KCP				*eS*	**Sn**	**16 51 30.4**	**-1.9**
APSI	**Ampana**	**6.95**	**251**	P	**Pn**	**16 50 26.0**	**-1.1**
	0.5nm863nm88nm,0.7s						
BUKP	**Musuan**	**7.21**	**334**	*eP*	**Pn**	**16 50 31.6**	**+0.8**
BUKP				*eS*	**Sn**	**16 51 50.5**	**-0.7**
BUTP	**Butuan**	**8.00**	**341**	*eP*	**Pn**	**16 50 44.3**	**+2.9**
BUTP				*eS*	**Sn**	**16 52 15.2**	**+4.8**
MPSI	**Mapaga**	**8.39**	**263**	P	**Pn**	**16 50 47.3**	**+0.6**
JAY	**Jayapura**	**13.05**	**107**	LR	LR	16 57 13.2	
	comp=Z,77nm,21.0s,baz=218,slow=39						
MTN	**Manton Dam**	**14.39**	**169**	Pn	**Pn**	**16 52 06.9**	**+0.2**
SBUM	**Sibu**	**16.04**	**274**		**P**	**16 52 29.9**	**+1.1**
KNRA	**Kununurra**	**16.93**	**178**		**Pn**	**16 52 38.5**	**+0.1**
KNRA				IAmb	IAmb	16 53 19.4	
	comp=Z,94nm,1.8s						
JAGI	**Jajag, Banyuwa**	**17.09**	**235**	Pn	**P**	**16 52 42.0**	**+1.5**
JAGI				IAmb	IAmb	16 52 43.3	
	comp=Z,136nm,1.5s						
KSM	**Kuching**	**17.91**	**271**		**Pn**	**16 52 50.8**	**+0.3**
KSM				IAmb	IAmb	16 52 52.1	
	comp=Z,64nm,0.6s						
KSM	**Kuching**	**17.91**	**271**	P	**Pn**	**16 52 51.0**	**+0.6**
FITZ	**Fitzroy Crossi**	**19.49**	**187**	P	**P**	**16 53 06.6**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=29,slow=6.9,SNR=10						
FITZ	**Fitzroy Crossi**	**19.49**	**187**	P	**P**	**16 53 06.5**	**-0.2**
SMRI	**Semarang**	**19.61**	**245**		**P**	**16 53 08.8**	**+0.7**
UGM	**Wanagama**	**19.91**	**242**	Pn	**P**	**16 53 12.3**	**+0.9**
COEN	**Coen**	**21.23**	**136**	P	**P**	**16 53 27.6**	**+2.0**
PMG	**Port Moresby**	**21.67**	**120**	P	**P**	**16 53 31.6**	**+1.3**
WB0	**Warramunga Arr**	**21.84**	**164**	P	**P**	**16 53 31.9**	**-0.1**
WRAB	**Tennant Creek**	**21.99**	**164**	P	**P**	**16 53 33.3**	**-0.2**
WRA	**Warramunga Arr**	**21.99**	**164**	P	**P**	**16 53 33.6**	**0.0**
	comp=Z,6.3nm,0.5s,baz=338,slow=10,SNR=30						
WRA				pP	**pP**	**16 53 54.5**	**+0.9**
	comp=Z,9.2nm,1.0s,baz=342,slow=11,SNR=4.3						
WRA				PcP	**PcP**	**16 57 28.1**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=324,slow=2.0,SNR=3.7						
WB2	**Warramunga Arr**	**22.00**	**164**	P	**P**	**16 53 33.6**	**-0.1**
WR0	**Warramunga Arr**	**22.06**	**164**	P	**P**	**16 53 34.0**	**-0.3**
CISI	**Cisompet, Garu**	**22.20**	**246**	P	**P**	**16 53 35.0**	**-1.0**
CISI				IAmb	IAmb	16 53 43.4	
	comp=Z,52nm,0.8s						
DLV	**T Lat**	**22.23**	**299**	P	**P**	**16 53 36.9**	**+0.6**
DLV				IAmb	IAmb	16 53 38.1	
	comp=Z,27nm,0.7s						
TWG	**Pinlang**	**22.45**	**342**	P	**P**	**16 53 36.2**	**-2.1**
YULB	**Yu-li**	**22.92**	**343**	P	**P**	**16 53 41.1**	**-2.0**
YULB				IAmb	IAmb	16 54 40.0	
	comp=Z,64nm,1.5s						
TPUB	**Ta-pu**	**23.03**	**342**	P	**P**	**16 53 43.2**	**-0.9**
SARN	**Sarigan**	**23.05**	**48**	P	**P**	**16 53 44.6**	**+0.2**
SSLB	**Suanglung**	**23.39**	**343**	P	**P**	**16 53 48.0**	**+0.5**
SSLB				IAmb	IAmb	16 53 55.5	
	comp=Z,137nm,1.9s						
YHNB	**Yeheng**	**24.11**	**345**	P	**P**	**16 53 54.8**	**+0.7**
YHNB				IAmb	IAmb	16 54 53.4	
	comp=Z,85nm,1.4s						
PSA00	**Pilbara Seismi**	**24.21**	**199**	P	**P**	**16 53 54.4**	**-0.5**
PSA00				IAmb	IAmb	16 53 55.5	
	comp=Z,33nm,1.1s						
MYKOM	**Kota Tinggi**	**24.37**	**271**	P	**P**	**16 53 56.8**	**+0.4**
MYKOM				IAmb	IAmb	16 53 58.5	
	comp=Z,41nm,0.8s						
MYKOM	**Kota Tinggi**	**24.37**	**271**	P	**P**	**16 53 57.0**	**+0.6**
KNMB	**Chin-men Tao**	**24.87**	**338**	P	**P**	**16 54 02.1**	**+1.3**
HKPS	**Hong Kong Po S**	**24.91**	**328**	P	**P**	**16 54 02.4**	**+1.1**
QIZ	**Qiongzhong**	**25.17**	**315**	P	**P**	**16 54 04.4**	**+0.8**
QIZ				IAmb	IAmb	16 54 14.8	
	comp=Z,132nm,1.7s						
AS31	**Alice Springs**	**25.47**	**168**	P	**P**	**16 54 06.4**	**0.0**
ASAR	**Alice Springs**	**25.47**	**168**	P	**P**	**16 54 06.3**	**0.0**
	comp=Z,2.1nm,0.6s,baz=351,slow=8.0,SNR=66						
ASAR				PcP	**PcP**	**16 57 35.1**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=343,slow=1.9,SNR=4.6						
JRMM	**Jerantut**	**25.84**	**276**	P	**P**	**16 54 11.0**	**+1.2**
MNAI	**Manna**	**25.88**	**257**	P	**P**	**16 54 09.9**	**-0.3**
BKNI	**Bangkinang**	**27.20**	**268**	P	**P**	**16 54 21.6**	**-0.5**
BKNI				IAmb	IAmb	16 54 24.2	
	comp=Z,72nm,1.1s						
IPM	**Ipoh**	**27.34**	**277**	P	**P**	**16 54 22.7**	**-0.6**
IPM				IAmb	IAmb	16 54 33.8	
	comp=Z,44nm,1.7s						
GIRL	**Giralia**	**27.47**	**209**	P	**P

STKA	**Stephens Creek**	**35.39**	**160**	P	**P**	**16 55 33.9**	**+0.2**
NWAO	**Narrogin (SRO)**	**35.64**	**196**	P	**P**	**16 55 35.1**	**-0.7**
KSRS	**Korea Array**	**35.93**	**360**	P	**P**	**16 55 38.3**	**+0.2**
	comp=Z,2.7nm,0.5s,baz=175,slow=9.7,SNR=18						
KSRS				LR	LR	17 10 15.8	
	comp=Z,10nm,21.0s,baz=105,slow=36						
KS19	**Wonju Array Si**	**35.98**	**360**	P	**P**	**16 55 38.2**	**-0.4**
MJAR	**Matsushiro Arr**	**36.22**	**14**	P	**P**	**16 55 40.6**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=185,slow=8.6,SNR=10						
MJAR				pP	**pP**	**16 56 04.3**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=187,slow=9.2,SNR=5.8						
MJAR				LR	LR	17 09 33.5	
	comp=Z,24nm,20.1s,baz=105,slow=34						
MAJO	**Matsushiro**	**36.22**	**14**	P	**P**	**16 55 39.5**	**-1.1**
MAJO				IAmb	IAmb	16 55 44.0	
	comp=Z,44nm,1.8s						
MAJO				pP	**pP**	**16 56 03.6**	**-0.9**
MAT	**Matsushiro**	**36.22**	**14**	P	**P**	**16 55 39.0**	**-1.6**
MJB9	**Matsu-Tunnel**	**36.22**	**14**	P	**P**	**16 55 39.4**	**-1.3**
MJB9				IAmb	IAmb	16 55 44.0	
	comp=Z,47nm,1.8s						
MJB9				pP	**pP**	**16 56 03.8**	**-0.8**
XAN	**Xi'an**	**37.20**	**333**	P	**P**	**16 55 49.8**	**+0.7**
XAN				pP	pP	16 56 19.1	+6.1
XAN				PcP	**PcP**	**16 58 07.0**	**0.0**
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
XAN				pmax	pmax		
	comp=Z,140nm,5.5s						
XAN	**Xi'an**	**37.20**	**333**	P	**P**	**16 55 48.1**	**-1.0**
XAN				IAmb	IAmb	16 55 50.3	
	comp=Z,16nm,1.0s						
CD2	**Chengdu**	**37.44**	**324**	*e*P	**P**	**16 55 52.0**	**+0.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BJT	**Baijiatuau**	**40.02**	**346**	P	**P**	**16 56 12.7**	**+0.2**
BJT				IAmb	IAmb	16 56 13.6	
	comp=Z,9.3nm,0.6s						
BJI	**Beijing**	**40.04**	**346**	P	**P**	**16 56 12.9**	**+0.3**
BJI				pmax	pmax		
	comp=Z,12nm,0.6s						
LZH	**Lanzhou**	**41.30**	**330**	⇓P	**P**	**16 56 25.1**	**+1.8**
LZH				pP	pP	16 56 49.4	+1.8
LZH				sP	sP	16 57 00.3	+0.6
LZH				PP	**PP**	**16 58 02.8**	**+2.0**
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,69nm,4.9s						
LZH				LR	LR		
	comp=Z,370nm,14.2s						
LZH				LR	LR		
	comp=Z,380nm,14.1s						
LZH				LR	LR		
	comp=Z,560nm,17.3s						
SANVU	**Saraoutou**	**41.99**	**115**	P	**P**	**16 56 29.2**	**+0.2**
SANVU				IAmb	IAmb	16 57 18.0	
	comp=Z,37nm,1.5s						
H11N1	**WAKE ISLAND Hy**	**41.99**	**62**	T	T	17 41 11.4	
	baz=248,slow=75,SNR=10						
H11N2	**WAKE ISLAND Hy**	**42.00**	**62**	T	T	17 41 13.9	
	baz=248,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	**42.01**	**62**	T	T	17 41 13.3	
	baz=248,slow=75,SNR=7.1						
HHC	**Hu-ho-hao-te**	**42.12**	**341**	*e*P	**P**	**16 56 31.8**	**+2.0**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,67nm,6.6s						
SHL	**Shillong**	**42.49**	**308**	P	**P**	**16 56 33.2**	**0.0**
SHL				IAmb	IAmb	16 56 34.3	
	comp=Z,22nm,0.7s						
USRK	**Ussuriysk Ar.**	**42.80**	**4**	P	**P**	**16 56 35.4**	**+0.2**
	comp=Z,2.0nm,0.6s,baz=183,slow=7.6,SNR=5.8						
LSA	**Lhasa**	**45.13**	**312**	P	**P**	**16 56 56.3**	**+1.7**
LSA				pmax	pmax		
	comp=Z,63nm,0.7s						
LSA	**Lhasa**	**45.13**	**312**	P	**P**	**16 56 55.8**	**+1.2**
LSA				IAmb	IAmb	16 56 57.1	
	comp=Z,12nm,0.8s						
GTA	**Gaotai**	**45.89**	**329**	*e*P	**P**	**16 57 00.8**	**+0.7**
GTA				pP	pP	16 57 28.8	+4.0
GTA				PcP	**PcP**	**16 58 35.8**	**+0.3**
GTA				S	**S**	**17 03 39.3**	**+2.6**
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,120nm,7.8s						
GTA				LR	LR		
	comp=Z,140nm,18.4s						
GTA				LR	LR		
	comp=Z,150nm,19.0s						
GTA				LR	LR		
	comp=Z,160nm,17.1s						
CHLP	**Challavanipeta**	**46.54**	**294**	*e*P	**P**	**16 57 05.9**	**+0.6**
CHLP				IAmb	IAmb	16 57 07.0	
	comp=Z,12nm,1.0s						
TAPN	**Taplejung**	**46.63**	**307**	*e*P	**P**	**16 57 06.8**	**+0.6**
	comp=Z,17nm,0.4s						
ODAN	**Odare**	**46.67**	**307**	*e*P	**P**	**16 57 06.9**	**+0.4**
	comp=Z,46nm,0.6s						
RAMN	**Ramite**	**47.34**	**306**	*e*P	**P**	**16 57 12.5**	**+0.8**
	comp=Z,67nm,0.7s						
JIRN	**Jiri**	**47.98**	**307**	*e*P	**P**	**16 57 17.3**	**+0.5**
	comp=Z,44nm,0.5s						
GUN	**Gumba**	**48.34**	**307**	*e*P	**P**	**16 57 19.9**	**+0.4**
	comp=Z,37nm,0.5s						
PVM	**Polavaram**	**48.45**	**292**	*e*P	**P**	**16 57 20.4**	**+0.3**
PVM				IAmb	IAmb	16 57 21.3	
	comp=Z,4.8nm,0.8s						
PKIN	**Phulchoki**	**48.58**	**306**	*e*P	**P**	**16 57 21.2**	**-0.1**
KKN	**Kakani**	**48.76**	**307**	*e*P	**P**	**16 57 22.7**	**+0.1**
	comp=Z,21nm,0.6s						
DMN	**Daman**	**48.83**	**306**	*e*P	**P**	**16 57 23.4**	**+0.2**
	comp=Z,33nm,0.9s						
MYLAV	**Mylavaram**	**49.26**	**291**	*e*P	**P**	**16 57 26.5**	**+0.3**
MYLAV				IAmb	IAmb	16 57 27.4	
	comp=Z,6.1nm,1.2s						
GKN	**Gorkha**	**49.37**	**307**	*e*P	**P**	**16 57 27.2**	**0.0**
	comp=Z,18nm,0.7s						
SKHT	**Srikalahasti**	**49.53**	**287**	*e*P	**P**	**16 57 28.2**	**-0.1**
SKHT				IAmb	IAmb	16 57 28.7	
	comp=Z,5.2nm,0.6s						
ADKI	**Addanki**	**49.69**	**290**	*e*P	**P**	**16 57 28.1**	**-1.4**
ADKI				IAmb	IAmb	16 57 30.1	
	comp=Z,2.2nm,0.8s						
ULN	**Ulaanbaatar**	**49.83**	**341**	P	**P**	**16 57 29.9**	**-0.4**
ULN				IAmb	IAmb	16 57 31.8	
	comp=Z,6.1nm,1.0s						
GGR	**Gangavaram**	**49.91**	**292**	*e*P	**P**	**16 57 31.1**	**-0.1**
GGR				IAmb	IAmb	16 57 31.9	
	comp=Z,8.8nm,1.3s						
SONM	**Songino Array**	**50.02**	**341**	P	**P**	**16 57 32.0**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=155,slow=8.0,SNR=13						
SONM				PcP	**PcP**	**16 58 50.0**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=165,slow=3.7,SNR=4.7						
KOLN	**Koldanda**	**50.11**	**306**	*e*P	**P**	**16 57 33.5**	**+0.6**
DANN	**Dangsing**	**50.22**	**307**	*e*P	**P**	**16 57 34.1**	**+0.3**
	comp=Z,74nm,0.6s						
NJS	**Nagarjunasagar**	**50.46**	**290**	*e*P	**P**	**16 57 35.1**	**-0.2**
NJS				IAmb	IAmb	16 57 35.4	
	comp=Z,5.2nm,0.6s						
SRLM	**Srisailam**	**50.75**	**290**	*e*P	**P**	**16 57 37.2**	**-0.5**
SRLM				IAmb	IAmb	16 57 37.8	
	comp=Z,7.9nm,1.1s						
RPR	**Rampur**	**50.99**	**293**	*e*P	**P**	**16 57 39.1**	**-0.2**
RPR				IAmb	IAmb	16 57 40.6	
	comp=Z,3.3nm,0.5s						
HYB	**Hyderabad**	**51.34**	**291**	*i* P	**P**	**16 57 41.5**	**-0.6**
HYBB	**Hyderabad (bro**	**51.35**	**291**	*e*P	**P**	**16 57 41.7**	**-0.4**
HYBB				IAmb	IAmb	16 57 42.3	
	comp=Z,8.0nm,0.9s						
SRSP	**Sriramsagar**	**51.88**	**293**	*e*P	**P**	**16 57 45.6**	**-0.4**
SRSP				IAmb	IAmb	16 57 46.1	
	comp=Z,4.5nm,1.0s						
URV	**Uravakonda**	**52.08**	**288**	*e*P	**P**	**16 57 46.5**	**-1.0**
URV				IAmb	IAmb	16 57 47.6	
	comp=Z,8.0nm,1.1s						
WMQ	**Urumqi**	**55.52**	**325**	*e*P	**P**	**16 58 13.1**	**+0.9**
WMQ				pP	pP	16 58 42.4	+4.7
WMQ				pmax	pmax		
	comp=Z,11nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.5s						
WMQ				LR	LR		
	comp=Z,410nm,28.9s						
WMQ				LR	LR		
	comp=Z,1μm,29.2s						
WMQ				LR	LR		
	comp=Z,2μm,29.1s						
WMQ	**Urumqi**	**55.52**	**325**	P	**P**	**16 58 12.8**	**+0.6**
PETK	**Petropavlovsk-**	**57.09**	**21**	P	**P**	**16 58 23.1**	**0.0**
	comp=Z,1.0nm,0.6s,baz=210,slow=7.3,SNR=5.2						
LBZ	**Lake Benmore**	**58.89**	**146**	P	**P**	**16 58 36.0**	**+0.2**
MK31	**Makanchi Array**	**60.35**	**325**	P	**P**	**16 58 45.5**	**-0.3**
MK31				IAmb	IAmb	16 58 46.6	
	comp=Z,7.7nm,0.7s						
MKAR	**Makanchi Array**	**60.35**	**325**	P	**P**	**16 58 46.0**	**+0.1**
	comp=Z,11nm,0.6s,baz=117,slow=8.4,SNR=169						
PRZ	**Przheval'sk**	**60.48**	**319**	P	**P**	**16 58 46.9**	**-0.1**
PRZ				IAmb	IAmb	16 58 48.5	
	comp=Z,9.1nm,0.6s						
MAKZ	**Makanchi**	**60.54**	**325**	P	**P**	**16 58 46.8**	**-0.3**
MAKZ				IAmb	IAmb	16 58 47.8	
	comp=Z,9.4nm,0.7s						
YAK	**Yakutsk**	**60.54**	**1**	P	**P**	**16 58 46.6**	**-0.2**
YAK				IAmb	IAmb	16 58 47.8	
	comp=Z,12nm,0.6s						
NIL	**Nilore**	**60.56**	**308**	P	**P**	**16 58 46.8**	**-0.7**
NIL				IAmb	IAmb	16 58 47.6	
	comp=Z,10.0nm,1.4s						
KSH	**Kashi**	**60.78**	**316**	P	**P**	**16 58 51.9**	**+2.9**
KSH				pP	pP	16 59 17.0	+1.9
KSH				PP	**PP**	**17 01 11.3**	**+7.1**
KSH				S	**S**	**17 06 58.1**	**-0.2**
KSH				sS	sS	17 07 43.1	+1.4
KSH				SS	**SS**	**17 11 04.8**	**+5.8**
KSH				pmax	pmax		
	comp=Z,290nm,6.2s						
KSH				LR	LR		
	comp=Z,160nm,5.4s						
KSH				LR	LR		
	comp=Z,110nm,4.5s						
KSH				LR	LR		
	comp=Z,290nm,7.6s						
KDJ	**Kajisay**	**61.11**	**319**	P	**P**	**16 58 51.3**	**0.0**
KDJ				IAmb	IAmb	16 58 52.4	
	comp=Z,8.4nm,0.8s						
NRN	**Naryn**	**61.58**	**317**	P	**P**	**16 58 54.0**	**-0.7**
KZA	**Kyzart**	**62.37**	**318**	P	**P**	**16 59 00.8**	**+0.8**
	SNR=8.2						
UCH	**Uchtor**	**62.93**	**318**	P	**P**	**16 59 04.7**	**+0.9**
	SNR=6.8						
AAK	**Ala-Archa**	**63.12**	**318**	P	**P**	**16 59 04.6**	**0.0**
ZALV	**Zalesovo Beam**	**63.37**	**333**	P	**P**	**16 59 04.3**	**-1.6**
	comp=Z,1.5nm,0.6s,baz=130,slow=7.3,SNR=6.8						
USP	**Ospenovka**	**63.38**	**319**	P	**P**	**16 59 06.3**	**0.0**
	SNR=10.0						
AML	**Almayashu**	**63.44**	**317**	P	**P**	**16 59 07.5**	**+0.4**
	SNR=9.5						
EKS2	**Erkin-Say**	**63.61**	**318**	P	**P**	**16 59 08.1**	**+0.2**
	SNR=13						
KURK	**Kurchatov**	**64.54**	**328**	P	**P**	**16 59 13.2**	**-0.4**
GAR	**Garm**	**64.63**	**313**	P	**P**	**16 59 13.9**	**-0.7**
GAR				IAmb	IAmb	16 59 14.6	
	comp=Z,13nm,0.5s						
CHGR	**Chuyangaron**	**65.36**	**312**	P	**P**	**16 59 18.6**	**-0.8**
CHGR				IAmb	IAmb	16 59 19.1	
	comp=Z,17nm,1.4s						
KK31	**Karatay Array**	**65.98**	**317**	P	**P**	**16 59 22.5**	**-0.7**
KK31				IAmb	IAmb	16 59 23.5	
	comp=Z,8.3nm,1.1s						
KKAR	**Karatay Array**	**65.98**	**317**	P	**P**	**16 59 22.6**	**-0.6**
KKAR				IAmb	IAmb	16 59 23.5	
	comp=Z,8.3nm,1.1s						
BVAR	**Borovoye Array**	**70.12**	**327**	P	**P**	**16 59 48.3**	**-0.5**
	comp=Z,3.4nm,0.6s,baz=125,slow=7.8,SNR=24						
BRVK	**Borovoye**	**70.19**	**327**	P	**P**	**16 59 48.4**	**-0.9**
GEYT	**Alibeck**	**73.55**	**309**	P	**P**	**17 00 09.2**	**-0.4**
	comp=Z,19nm,0.7s,baz=128,slow=2.4,SNR=6.4						
ABKAR	**Akbulak array**	**74.93**	**321**	P	**P**	**17 00 16.0**	**-1.4**
VNDA	**Vanda**	**80.89**	**173**	P	**P**	**17 00 49.5**	**-0.3**
	comp=Z,7.8nm,1.1s,baz=309,slow=6.7,SNR=4.0						
MAW	**Mawson**	**82.06**	**201**	P	**P**	**17 00 55.9**	**-0.2**
	comp=Z,3.6nm,0.3s,baz=170,slow=19,SNR=17						
RAYN	**Ar Rayn**	**82.79**	**293**	P	**P**	**17 00 59.6**	**-1.4**
AKH	**Akhalkalaki**	**85.16**	**311**	P	**P**	**17 01 12.5**	**-0.4**
AKH				IAmb	IAmb	17 01 14.3	
	comp=Z,9.5nm,1.0s						
ILAR	**Eielson Array**	**86.60**	**25**	P	**P**	**17 01 18.4**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=240,slow=5.0,SNR=5.8						
BRTR	**Keskin Array B**	**92.68**	**310**	P	**P**	**17 01 46.8**	**-1.7**
	comp=Z,1.0nm,0.9s,baz=101,slow=6.4,SNR=5.1						
ARCES	**ARCESS Array B**	**93.18**	**340**	P	**P**	**17 01 48.5**	**-1.5**
	comp=Z,3.1nm,0.8s,baz=61,slow=6.4,SNR=7.3						
TXAR	**Lajitas Array**	**121.82**	**54**	PKP	**PKPdf**	**17 07 28.9**	**-1.7**
	comp=Z,0.4nm,0.9s,baz=199,slow=1.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**125.06**	**287**	PKP	**PKPdf**	**17 07 36.1**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=50,slow=2.0,SNR=10.0						
DBIC	**Dimbokro**	**132.50**	**280**	PKP	**PKPdf**	**17 07 51.4**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=198,slow=3.2,SNR=3.6						
CFA	**Coronel Fontan**	**146.12**	**154**	PKPbc	**PKPdf**	**17 08 15.8**	**+0.3**
	comp=Z,1.5nm,0.4s,baz=255,slow=2.9,SNR=5.2						
CFA				pPKPbc	**pPKPdf**	**17 08 43.4**	**-1.1**
	comp=Z,1.4nm,0.4s,baz=211,slow=4.9,SNR=2.8						
GO02	**Mina Guanaco**	**150.74**	**145**	PKPbc	**PKPbc**	**17 08 29.1**	**0.0**
GO02					**PKPab**	**17 08 36.5**	**+0.2**
LPAZ	**La Paz**	**158.09**	**134**	PKPab	**PKPab**	**17 09 09.3**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=208,slow=3.6,SNR=7.0						
PET				smax	smax		
	comp=E,153nm,0.5s						
PET	**Petropavlovsk**	**3.08**	**19**	Pn	**Pn**	**17 09 57.1**	**+1.0**
PET					**Sn**	**17 10 31.6**	**-0.2**
UGLR	**Uglovaya**	**3.29**	**20**	PN	**Pn**	**17 10 00.8**	**+1.6**
UGLR	**Uglovaya**	**3.29**	**20**	*e*P	**Pn**	**17 10 00.8**	**+1.6**
AVH	**Avacha**	**3.33**	**18**	PN	**Pn**	**17 10 01.9**	**+2.2**
AVH				S	**Sn**	**17 10 39.2**	**+1.3**
AVH	**Avacha**	**3.33**	**18**	*e*P	**Pn**	**17 10 01.9**	**+2.2**
AVH				*e*S	**Sn**	**17 10 39.2**	**+1.3**
KOK	**Koryaka**	**3.33**	**17**	PN	**Pn**	**17 10 02.1**	**+2.3**
KOK				S	**Sn**	**17 10 39.6**	**+1.5**
KOK	**Koryaka**	**3.33**	**17**	*e*P	**Pn**	**17 10 02.1**	**+2.3**
KOK				*e*S	**Sn**	**17 10 39.6**	**+1.5**
SMAR	**Somma**	**3.34**	**19**	PN	**Pn**	**17 10 01.8**	**+1.9**
SMAR				S	**Sn**	**17 10 39.1**	**+0.7**
SMAR	**Somma**	**3.34**	**19**	*e*P	**Pn**	**17 10 01.8**	**+1.9**
SMAR				*e*S	**Sn**	**17 10 39.1**	**+0.7**
KRER	**Koryakskii**	**3.37**	**18**	PN	**Pn**	**17 10 02.2**	**+1.9**
KRER				S	**Sn**	**17 10 40.7**	**+1.6**
KRER	**Koryakskii**	**3.37**	**18**	*e*P	**Pn**	**17 10 02.2**	**+1.9**
KRER				*e*S	**Sn**	**17 10 40.7**	**+1.6**
SDLR	**Sedlovina**	**3.37**	**20**	PN	**Pn**	**17 10 00.9**	**+0.6**
SDLR	**Sedlovina**	**3.37**	**20**	*e*P	**Pn**	**17 10 00.9**	**+0.6**
NLC	**Nalytchevo**	**3.38**	**25**	PN	**Pn**	**17 09 59.9**	**-0.5**
NLC				S	**Sn**	**17 10 37.5**	**-1.7**
NLC	**Nalytchevo**	**3.38**	**25**	*e*P	**Pn**	**17 09 59.9**	**-0.5**
NLC				*e*S	**Sn**	**17 10 37.5**	**-1.7**
KRX	**Arik**	**3.40**	**17**	PN	**Pn**	**17 10 02.5**	**+1.8**
KRX	**Arik**	**3.40**	**17**	*e*P	**Pn**	**17 10 02.5**	**+1.8**
SPN	**Mys Shipunski**	**3.53**	**31**	PN	**Pn**	**17 10 02.7**	**+0.4**
SPN				S	**Sn**	**17 10 42.4**	**-0.3**
SPN	**Mys Shipunski**	**3.53**	**31**	*e*P	**Pn**	**17 10 02.7**	**+0.4**
SPN				*e*S	**Sn**	**17 10 42.4**	**-0.3**
MKZ	**Mys Kozlova**	**5.30**	**31**	PN	**Pn**	**17 10 26.3**	**-0.4**
MKZ	**Mys Kozlova**	**5.30**	**31**	*e*P	**Pn**	**17 10 26.3**	**-0.4**
KZV	**Kizimen**	**5.38**	**21**	PN	**Pn**	**17 10 30.6**	**+2.6**
KZV	**Kizimen**	**5.38**	**21**	*e*P	**Pn**	**17 10 30.6**	**+2.6**
TUMD	**Tumrok D**	**5.49**	**21**	*e*P	**Pn**	**17 10 29.8**	**+0.5**
TUMD				*e*S	**Sn**	**17 11 29.8**	**-1.4**
TUMR	**Tumrok**	**5.51**	**19**	PN	**Pn**	**17 10 29.8**	**+0.1**
TUMR	**Tumrok**	**5.51**	**19**	*e*P	**Pn**	**17 10 31.1**	**+1.4**
KMNR	**Kamenistaya**	**5.97**	**18**	PN	**Pn**	**17 10 38.1**	**+2.1**
KMNR	**Kamenistaya**	**5.97**	**18**	*e*P	**Pn**	**17 10 38.1**	**+2.1**
KBTR	**Krutoberegovo**	**7.03**	**28**	PN	**Pn**	**17 10 50.4**	**+0.1**
KBTR	**Krutoberegovo**	**7.03**	**28**	*e*P	**Pn**	**17 10 50.4**	**+0.1**
BKI	**Bering**	**7.46**	**44**	PN	**Pn**	**17 10 55.7**	**-0.6**
BKI	**Bering**	**7.46**	**44**	*e*P	**Pn**	**17 10 55.7**	**-0.6**
BKI				*e*S	Sn	17 12 12.3	-7.2
SHO	**Shikotan**	**9.34**	**232**	*e*PN	**Pn**	**17 11 20.1**	**-2.0**
SHO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**9.73**	**235**	*i* PN	**Pn**	**17 11 28.3**	**+0.9**
YSS	**Yuzh-Sakhalins**	**9.96**	**257**	*e*PN	**Pn**	**17 11 28.1**	**-2.4**
MA2	**Magadan**	**10.12**	**342**	PN	**Pn**	**17 11 32.6**	**-0.1**
MA2	**Magadan**	**10.12**	**342**	P	**Pn**	**17 11 30.8**	**-1.8**
	comp=Z,1.4nm,0.3s,baz=170,slow=6.1,SNR=6.6						
MA2	**Magadan**	**10.12**	**342**		**Pn**	**17 11 32.6**	**-0.1**
NMR	**Nemuro--Hokkai**	**10.26**	**233**	*e*PN	**Pn**	**17 11 33.0**	**-1.6**
ERM	**Erimo**	**12.55**	**235**	PN	**Pn**	**17 12 07.6**	**+1.6**
ERM	**Erimo**	**12.55**	**235**	Pn	**Pn**	**17 12 07.6**	**+1.6**
USA0B	**Ussuriysk Arra**	**17.96**	**260**	*i* P	**Pn**	**17 13 16.8**	**+0.2**
BILL	**Bilibino**	**18.55**	**11**	*i* P	**Pn**	**17 13 24.3**	**+0.7**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s						
YAK	**Yakutsk**	**19.16**	**319**	*i* P	**Pn**	**17 13 29.6**	**-1.4**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SVW2	**Sparrevohn**	**28.30**	**49**	P	**P**	**17 15 00.1**	**+0.5**
SVW2				IAmb	IAmb	17 15 08.1	
	comp=Z,24nm,0.5s						
MIDW	**Midway**	**29.31**	**129**		**P**	**17 15 11.5**	**+2.7**
H11N2	**WAKE ISLAND Hy**	**31.34**	**162**	T	T	17 49 06.3	
	baz=348,slow=76,SNR=14						
H11N3	**WAKE ISLAND Hy**	**31.36**	**162**	T	T	17 49 07.3	
	baz=348,slow=76,SNR=23						
H11N1	**WAKE ISLAND Hy**	**31.36**	**162**	T	T	17 49 07.5	
	baz=348,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	**32.49**	**163**	T	T	17 50 32.9	
	baz=348,slow=76,SNR=38						
H11S3	**WAKE ISLAND Hy**	**32.50**	**163**	T	T	17 50 30.0	
	baz=348,slow=76,SNR=127						
H11S2	**WAKE ISLAND Hy**	**32.51**	**163**	T	T	17 50 34.3	
	baz=348,slow=76,SNR=35						
INK	**Inuvik**	**37.41**	**35**	P	**P**	**17 16 18.2**	**-0.6**
INK	**Inuvik**	**37.41**	**35**	P	**P**	**17 16 17.4**	**-1.4**
	comp=Z,0.3nm,0.4s,baz=280,slow=2.1,SNR=4.3						
INK	**Inuvik**	**37.41**	**35**	P	**P**	**17 16 18.2**	**-0.6**
INK				IAmb	IAmb	17 16 45.7	
	comp=Z,4.0nm,1.5s						
YKA	**Yellowknife Ar**	**46.67**	**40**	P	**P**	**17 17 33.9**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=298,slow=7.2,SNR=3.8						
CMAR	**Chiang Mai Arr**	**55.65**	**257**	*i* P	**P**	**17 18 43.5**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR	**Chiang Mai Arr**	**55.65**	**257**	P	**P**	**17 18 39.8**	**-2.4**
	comp=Z,1.0nm,0.4s,baz=42,slow=8.6,SNR=5.5						
PDAR	**Pinedale Array**	**60.71**	**57**	P	**P**	**17 19 17.6**	**-0.1**
	comp=Z,0.6nm,0.9s,baz=323,slow=2.2,SNR=3.6						
TXAR	**Lajitas Array**	**73.64**	**64**	P	**P**	**17 20 39.4**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=297,slow=4.0,SNR=6.5						

*KRSC **21** 17:09:08.8±2.4, 50°.19N×157°.20E, h52km±25km, ML4.3*
*MOS **21** 17:09:08.3±1.3, 50°.04N×156°.95E, h52km, mb4.2/1, Error ellipse: s-maj=14.9km s-min=4.0km az=76.5*
*IDC **21** 17:09:12.2±8.7, 50°.26N×156°.63E, h68km±70km, mb3.4/5, mb1 3.8/7, mb1mx3.3/51, mbtmp3.8/7, ML5.0/1, Error ellipse: s-maj=101.5km s-min=25.0km az=154.0*
*NEIC **21** 17:09:13.2±0.9, 50°.3N±0°.1×156°.6E±0°.2, h74km±11km, mb4.6/3, Error ellipse: s-maj=22.2km s-min=12.6km az=126.0*

ISC 21 17:09:10.2±0.8, 50°.13N±0°.08×156°.98E±0°.05, h39km±4km, n82, σ1°33/106, mb3.8/6, 1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.79**	**315**	*d*	*i*	PN	**Pn**	**17 09 24.6**	**-0.1**
SKR					*i*	S	**Sn**	**17 09 35.1**	**-0.1**
SKR	**Severo-Kuril's**	**0.79**	**315**		*i*	P	**Pn**	**17 09 24.7**	**0.0**
SKR					*e*	S	**Sn**	**17 09 35.3**	**+0.1**
PAU	**Pauzhetka**	**1.35**	**355**			PN	**Pn**	**17 09 32.7**	**+0.3**
PAU						S	**Sn**	**17 09 48.7**	**-0.3**
PAU	**Pauzhetka**	**1.35**	**355**		*e*	P	**Pn**	**17 09 32.7**	**+0.3**
PAU					*e*	S	**Sn**	**17 09 48.7**	**-0.3**
KDTR	**Khodutka, Kamc**	**1.82**	**22**			PN	**Pn**	**17 09 39.2**	**+0.3**
KDTR						S	**Sn**	**17 10 00.2**	**-0.5**
KDTR	**Khodutka, Kamc**	**1.82**	**22**		*e*	P	**Pn**	**17 09 39.2**	**+0.3**
KDTR					*e*	S	**Sn**	**17 10 00.2**	**-0.5**
ASAK	**Asacha**	**2.33**	**14**			PN	**Pn**	**17 09 46.6**	**+0.6**
ASAK						S	**Sn**	**17 10 13.4**	**0.0**
ASAK	**Asacha**	**2.33**	**14**		*e*	P	**Pn**	**17 09 46.6**	**+0.6**
ASAK					*e*	S	**Sn**	**17 10 13.4**	**0.0**
MTVR	**Mutnovka**	**2.48**	**17**			PN	**Pn**	**17 09 48.9**	**+0.8**
MTVR	**Mutnovka**	**2.48**	**17**		*e*	P	**Pn**	**17 09 48.9**	**+0.8**
RUS	**Russkaya**	**2.50**	**22**			PN	**Pn**	**17 09 48.5**	**+0.3**
RUS						S	**Sn**	**17 10 16.7**	**-0.7**
RUS	**Russkaya**	**2.50**	**22**		*e*	P	**Pn**	**17 09 48.5**	**+0.3**
RUS					*e*	S	**Sn**	**17 10 16.7**	**-0.7**
GRL	**Gorelyy**	**2.52**	**15**			PN	**Pn**	**17 09 49.7**	**

WRA	**Warramunga Arr**	**43.83**	**271**	P	**P**	**17 19 46.3**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=111,slow=7.3,SNR=7.1						
WRA				pP	**pP**	**17 20 32.7**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=109,slow=7.1,SNR=1.5						
WB0	**Warramunga Arr**	**43.85**	**271**	P	**P**	**17 19 46.2**	**0.0**
WB0				IAmb	IAmb	17 19 48.9	
	comp=Z,7.0nm,1.2s						
KNRA	**Kununurra**	**50.39**	**273**	P	**P**	**17 20 37.8**	**+1.2**
QSPA	**South Pole Qui**	**61.03**	**180**	P	**P**	**17 21 53.7**	**+2.3**
	comp=Z,3.3nm,0.7s,baz=17,slow=5.3,SNR=20						
QSPA	**South Pole Qui**	**61.03**	**180**	P	**P**	**17 21 53.8**	**+2.3**
QSPA				IAmb	IAmb	17 21 54.7	
	comp=Z,4.3nm,0.8s						
QSPA				PcP	**PcP**	**17 22 33.6**	**+1.3**
PMSA	**Palmer Station**	**73.56**	**156**	P	**P**	**17 23 10.6**	**+0.8**
	comp=Z,6.3nm,0.5s,baz=259,slow=5.9,SNR=5.0						
PMSA	**Palmer Station**	**73.56**	**156**	P	**P**	**17 23 10.6**	**+0.8**
MJAR	**Matsushiro Arr**	**77.03**	**325**	P	**P**	**17 23 29.9**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=144,slow=5.4,SNR=3.4						
SNAA	**Sanae**	**79.48**	**179**	P	**P**	**17 23 44.2**	**+1.3**
ADK	**Adak**	**80.62**	**1**	P	**P**	**17 23 51.7**	**+2.7**
NVAR	**Mina Array Bea**	**87.43**	**43**	P	**P**	**17 24 25.9**	**+2.0**
	comp=Z,0.3nm,0.5s,baz=225,slow=8.9,SNR=2.8						
ARCES	**ARCESS Array B**	**137.25**	**348**	PKP	**PKiKP**	**17 31 00.3**	**+1.1**
	comp=Z,2.3nm,0.9s,baz=38,slow=4.6,SNR=2.7						
FINES	**FINESS Array B**	**143.83**	**340**	PKP	**PKPdf**	**17 31 08.9**	**-0.3**
	comp=Z,4.4nm,0.8s,baz=60,slow=3.4,SNR=16						
AKASG	**Malin Array Be**	**150.11**	**324**	PKPbc	**PKiKP**	**17 31 26.7**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=46,slow=2.5,SNR=3.3						
BRTR	**Keskin Array B**	**151.75**	**301**	PKPbc	**PKPbc**	**17 31 29.8**	**+0.1**
	comp=Z,0.3nm,0.8s,baz=343,slow=4.5,SNR=2.3						
TORD	**Torodi Ar. Bea**	**164.15**	**180**	PKPab	**PKPab**	**17 32 34.7**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=173,slow=3.8,SNR=5.8						

IDC 21 17:13:51.5±1.2, 20.90N×146.50E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.5/52, mbtmp3.7/7, MS4.2/1, Ms1 4.4/1, ms1mx2.6/39, Error ellipse: s-maj=38.8km s-min=29.5km az=98.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SEY	**Seymchan**	**42.20**	**4**	P	P	17 21 46.8	+1.0
	1.1nm,0.7s,baz=171,slow=16,SNR=3.7						
CMAR	**Chiang Mai Arr**	**44.72**	**275**	LR	LR	17 41 01.6	
	comp=Z,312nm,20.1s,baz=110,slow=36						
ASAR	**Alice Springs**	**45.96**	**196**	P	P	17 22 16.8	+0.2
	0.4nm,0.9s,baz=11,slow=7.2,SNR=4.1						
ZALV	**Zalesovo Beam**	**56.76**	**322**	P	P	17 23 37.8	+0.6
	0.5nm,0.4s,baz=116,slow=6.6,SNR=3.2						
KURBB	**Kurchatov Arra**	**60.21**	**317**	P	P	17 24 00.8	-0.5
	0.9nm,0.6s,baz=92,slow=7.7,SNR=7.8						
YKA	**Yellowknife Ar**	**75.70**	**28**	P	P	17 25 37.8	-0.8
	0.2nm,0.4s,baz=287,slow=5.9,SNR=4.0						
NVAR	**Mina Array Bea**	**81.20**	**52**	P	P	17 26 09.9	+0.1
	0.3nm,0.6s,baz=264,slow=6.0,SNR=3.3						
FINES	**FINESS Array B**	**85.21**	**335**	P	P	17 26 29.2	-0.5
	1.1nm,0.5s,baz=65,slow=4.6,SNR=11						

*SJA **21** 17:18:07.8±1.4, 19.75S×70.98W, h21km±10km, ML3.9, MW4.2*
*GUC **21** 17:18:10.7±0.7, 19.67S×70.97W, h40km±4km, ML4.1*
*IDC **21** 17:18:14.8±3.5, 19.67S×70.68W, h59km±29km, mb3.8/2, mb1 3.7/6, mb1mx3.5/30, mbtmp3.7/6, ML3.4/4, MS3.1/5, Ms1 3.1/5, ms1mx2.9/27, Error ellipse: s-maj=45.7km s-min=18.8km az=87.0*

ISC 21 17:18:07.5±1.5, 19.63S±0.03×70.96W±0.06, h10km±9km, n39, σ1ᵗ18/43, 5C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.79**	**88**	⇓*i*P	**Pn**	**17 18 24.0**	**-0.9**
PSGC				*e*S	**Sn**	**17 18 35.8**	**-1.0**
PSGCX	**Pisagua**	**0.79**	**88**	*i* P	**Pn**	**17 18 24.1**	**-0.7**
PSGCX				*e*S	**Sn**	**17 18 35.7**	**-1.0**
TA01	**Diego Aracena**	**1.18**	**142**	⇑*i*P	**Pb**	**17 18 29.8**	**-0.4**
TA01				*i* S	**Sg**	**17 18 45.2**	**-0.5**
TA01				IAML		17 18 49.9	
	comp=E,5μm,0.6s						
PB11	**IPOC Station P**	**1.23**	**96**	⇓*i*P	**Pg**	**17 18 31.3**	**+0.1**
PB11				*e*S	**Sn**	**17 18 47.6**	**-0.2**
PB11				IAML		17 18 50.5	
	comp=E,6μm,0.5s						
PB11	**IPOC Station P**	**1.23**	**96**	*i* P	**Pg**	**17 18 31.7**	**+0.4**
PB11				*e*S	**Sn**	**17 18 49.0**	**+1.2**
MNMC	**Minye Minye**	**1.38**	**69**	⇓*i*P	**Pg**	**17 18 34.4**	**+0.4**
MNMC				*e*S	**Sg**	**17 18 52.7**	**+0.8**
MNMC				IAML		17 18 55.7	
	comp=N,8μm,0.4s						
MNMCX	**Minye Minye**	**1.38**	**69**	*i* P	**Pg**	**17 18 34.5**	**+0.5**
AP01	**Chacalluta**	**1.38**	**25**	*e*P	**Pg**	**17 18 34.0**	**0.0**
AP01				*e*S	**Sg**	**17 18 52.4**	**+0.4**
AP01				IAML		17 18 59.7	
	comp=N,6μm,0.4s						
PATCX	**Punta Patache**	**1.41**	**148**	⇑*i*P	**Pn**	**17 18 32.9**	**-0.5**
PATCX				*i* S	**Sb**	**17 18 51.4**	**-0.7**
PATCX	**Punta Patache**	**1.41**	**148**	*i* P	**Pn**	**17 18 32.9**	**-0.5**
GO01	**Chusmiza**	**1.66**	**92**	⇑*i*P	**Pb**	**17 18 38.5**	**0.0**
GO01				*e*S	**Sg**	**17 18 59.7**	**-1.4**
GO01				IAML		17 19 03.3	
	comp=N,6μm,0.2s						
PB08	**IPOC Station P**	**1.77**	**107**	⇑*i*P	**Pb**	**17 18 39.6**	**-0.8**
PB08				*e*S	**Sb**	**17 19 02.0**	**-0.9**
PB08				IAML		17 19 11.3	
	comp=E,1μm,0.3s						
PB08	**IPOC Station P**	**1.77**	**107**	*i* P	**Pb**	**17 18 39.8**	**-0.6**
PB16	**IPOC Station P**	**1.88**	**47**	⇑*i*P	**Pb**	**17 18 42.1**	**-0.2**
PB16				*e*S	**Sg**	**17 19 06.9**	**-1.2**
PB16				IAML		17 19 14.9	
	comp=N,1μm,0.3s						
PB16	**IPOC Station P**	**1.88**	**47**	*i* P	**Pg**	**17 18 43.2**	**-0.4**
PB03	**IPOC Station P**	**2.66**	**155**	*i* P	**Pb**	**17 18 56.0**	**+0.6**
PB09	**IPOC Station P**	**2.69**	**144**	*i* P	**Pn**	**17 18 52.3**	**+1.2**
PB09				IAML		17 19 41.2	
	comp=Z,633nm,0.5s						
PB04	**IPOC Station P**	**2.80**	**164**	*i* P	**Pn**	**17 18 51.5**	**-1.1**
PB04				IAML		17 19 44.3	
	comp=Z,332nm,0.6s						
PB05	**IPOC Station P**	**3.29**	**168**	*i* P	**Pn**	**17 18 57.7**	**-1.6**
PB06	**IPOC Station P**	**3.33**	**157**	*i* P	**Pn**	**17 18 58.9**	**-0.9**
LVC	**Limon Verde**	**3.53**	**148**	P	**Pn**	**17 19 04.4**	**+1.5**
	comp=Z,3.7nm,0.3s,baz=330,slow=10.0,SNR=20						
LVC				S	**Sn**	**17 19 44.8**	**0.0**
	comp=Z,8.6nm,0.3s,baz=221,slow=12,SNR=3.8						
LVC				LR	LR	17 20 43.6	
	comp=Z,224nm,19.0s,baz=308,slow=44						
LVC	**Limon Verde**	**3.53**	**148**	*i* P	**Pn**	**17 19 04.3**	**+1.5**
PB15	**IPOC Station P**	**3.82**	**159**	*i* P	**Pn**	**17 19 05.9**	**-0.8**
PB10	**IPOC Station P**	**3.88**	**175**	*i* P	**Pn**	**17 19 05.5**	**-1.9**
LPAZ	**La Paz**	**4.27**	**39**	P	**Pn**	**17 19 16.8**	**+3.5**
	comp=Z,0.8nm,0.3s,baz=214,slow=8.7,SNR=7.0						
LPAZ				LR	LR	17 21 05.2	
	comp=Z,172nm,18.9s,baz=310,slow=41						
LPAZ	**La Paz**	**4.27**	**39**	*i* P	**Pb**	**17 19 22.3**	**-1.0**
YJA	**Yavi**	**5.68**	**117**	*i* P	Pb	17 19 39.6	-7.5
SIV	**San Ignacio**	**10.08**	**71**	P	**Pn**	**17 20 33.5**	**+0.9**
	comp=Z,0.9nm,0.3s,baz=268,slow=12,SNR=12						
SIV				LR	LR	17 25 02.1	
	comp=Z,186nm,19.4s,baz=286,slow=41						
CFA	**Coronel Fontan**	**12.18**	**169**	P	**Pn**	**17 21 04.5**	**+3.3**
	comp=Z,0.2nm,0.3s,baz=353,slow=18,SNR=2.4						
CFA				LR	LR	17 26 00.7	
	comp=Z,62nm,18.7s,baz=260,slow=38						
BDFB	**Brasilia**	**22.21**	**83**	LR	LR	17 32 36.8	
	comp=Z,50nm,20.0s,baz=294,slow=39						
TORD	**Torodi Ar. Bea**	**78.56**	**72**	P	**P**	**17 30 08.8**	**-1.1**
	comp=Z,1.5nm,0.7s,baz=248,slow=4.6,SNR=7.4						
YKA	**Yellowknife Ar**	**88.80**	**341**	P	**P**	**17 31 01.9**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=141,slow=4.1,SNR=11						
H11S2	**WAKE ISLAND Hyl**	**25.72**	**279**	T	T	19 56 27.9	
	baz=101,slow=74,SNR=21						
H11S1	**WAKE ISLAND Hyl**	**25.72**	**279**	T	T	19 56 28.5	
	baz=101,slow=74,SNR=5.2						
H11S3	**WAKE ISLAND Hyl**	**25.73**	**279**	T	T	19 56 29.3	
	baz=101,slow=74,SNR=7.0						
H11N3	**WAKE ISLAND Hyl**	**25.75**	**281**	T	T	19 56 31.6	
	baz=103,slow=74						
H11N2	**WAKE ISLAND Hyl**	**25.77**	**281**	T	T	19 56 34.7	
	baz=103,slow=74						
H11N1	**WAKE ISLAND Hyl**	**25.77**	**281**	T	T	19 56 30.2	
	baz=103						
MKAR	**Makanchi Array**	**145.18**	**33**	PKPbc	**PKPdf**	**17 37 45.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=331,slow=4.1,SNR=5.6						

*NIED **21** 17:25:00, 33.50N×141.10E, h53km, Mw3.9 Best double couple: M0 7.73000×10^14 NP1:ϕ=322.00000°, δ=81.00000°, λ=48.00000°. NP2:ϕ=222.00000°, δ=43.00000°, λ=166.00000°.*
*NEIC **21** 17:25:35.3±2.6, 33.53N±0.06×141.46E±0.09, h31km±5km, mb4.8/21, Error ellipse: s-maj=10.8km s-min=8.0km az=89.0*
*JMA **21** 17:25:37.8±0.1, 33.54N×141.08E, h49km, M3.8*
*IDC **21** 17:25:39.0±3.1, 33.43N×140.97E, h49km±22km, mb3.6/5, mb1 3.9/8, mb1mx3.4/48, mbtmp4.0/8, ML3.1/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/30, Error ellipse: s-maj=63.0km s-min=14.1km az=68.0*

ISC 21 17:25:36.5±0.6, 33.52N±0.04×141.28E±0.06, h48km, n61, σ1ᵗ59/66, mb4.7/14, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.16**	**348**	P	**Pn**	**17 25 57.4**	**+1.6**
JHJ2	**Mitsune**	**1.29**	**252**	P	**Pn**	**17 25 57.9**	**-0.2**
JHJ2				S	**Sn**	**17 26 12.5**	**-1.7**
JHJ2	**Mitsune**	**1.29**	**252**		**Pn**	**17 25 58.0**	**-0.2**
JHCJ	**Hachijojimakas**	**1.32**	**250**	P	**Pn**	**17 25 58.2**	**-0.3**
JHCJ				S	**Sn**	**17 26 12.5**	**-2.4**
BSO3	**Boso 3**	**1.43**	**334**	P	**Pn**	**17 26 01.0**	**+1.3**
JMKN	**Mikurajimanish**	**1.45**	**285**	P	**Pn**	**17 25 59.9**	**-0.5**
JAOM	**Aogashimamukai**	**1.65**	**231**	P	**Pn**	**17 26 03.3**	**+0.2**
BSO4	**Boso 4**	**1.66**	**332**	P	**Pn**	**17 26 04.6**	**+1.5**
JKO	**Kozu shima**	**1.90**	**291**	P	**Pn**	**17 26 06.5**	**0.0**
JTHY	**Toshimahigashi**	**1.93**	**302**	P	**Pn**	**17 26 07.4**	**+0.5**
JIM2	**Oshima 3**	**1.94**	**308**	P	**Pn**	**17 26 06.8**	**-0.3**
JIZS	**Izushimoda**	**2.32**	**302**	P	**Pn**	**17 26 12.7**	**+0.5**
JIZS				*e*S	**Sn**	**17 26 38.3**	**-1.2**
JOD2	**Odawara 2**	**2.51**	**314**	P	**Pn**	**17 26 15.1**	**+0.3**
JOD2				*e*S	**Sn**	**17 26 42.7**	**-1.5**
JFNN	**Fujinakano**	**2.71**	**309**	P	**Pn**	**17 26 18.9**	**+1.2**
TK02	**Tokai 2**	**2.96**	**279**	P	**Pn**	**17 26 21.4**	**+0.6**
SHZ3	**Shizuoka 3**	**2.97**	**302**	P	**Pn**	**17 26 22.7**	**+1.5**
JYN	**Shimob**	**2.99**	**312**	P	**Pn**	**17 26 23.0**	**+1.4**
JRY	**Ryogami san**	**3.16**	**323**	P	**Pn**	**17 26 24.8**	**+1.0**
MJAR	**Matsushiro Arr**	**3.92**	**321**	P	**Pn**	**17 26 36.2**	**+1.9**
	1.8nm,0.3s,baz=154,slow=13,SNR=60						
MJAR				S	**Sn**	**17 27 19.1**	**0.0**
	0.8nm,0.3s,baz=158,slow=42,SNR=5.7						
MAJO	**Matsushiro**	**3.93**	**321**		**Pn**	**17 26 36.5**	**+2.2**
MAT	**Matsushiro**	**3.93**	**321**	P	**Pn**	**17 26 36.5**	**+2.2**
MAT				S	**Sn**	**17 27 19.1**	**0.0**
MJB9	**Matsu-Tunnel**	**3.93**	**321**		**Pn**	**17 26 36.4**	**+2.1**
INU	**Inuyama**	**3.96**	**299**		**Pn**	**17 26 37.0**	**+2.3**
JCJ	**Chichijima**	**6.45**	**173**	P	**Pn**	**17 27 09.6**	**+0.6**
	12nm,0.3s,baz=336,slow=20,SNR=11						
JCJ				S	**Sn**	**17 28 17.9**	**-3.4**
	5.7nm,0.3s,baz=322,slow=12,SNR=2.4						
ERM	**Erimo**	**8.61**	**9**	Pn	**Pn**	**17 27 37.9**	**-0.5**
JNU	**Nakatsue**	**8.71**	**270**	P	**Pn**	**17 27 39.7**	**-0.2**
	0.2nm,0.3s,baz=106,slow=7.4,SNR=4.1						
JNU	**Nakatsue**	**8.71**	**270**		**Pn**	**17 27 39.9**	**-0.1**
ASAJ	**Asahikawa**	**10.63**	**5**	P	**Pn**	**17 28 05.0**	**-1.0**
	0.7nm,0.3s,baz=201,slow=14,SNR=15						
ASAJ				S	**Sn**	**17 29 59.8**	**-3.8**
	0.3nm,0.3s,baz=342,slow=19,SNR=2.4						
JKA	**Kamikawa-asahi**	**10.63**	**5**		**Pn**	**17 28 05.0**	**-1.0**
JKA					**Sn**	**17 29 59.8**	**-3.8**
KSRS	**Korea Array**	**11.57**	**294**	LR	LR	17 32 54.2	
	comp=Z,37nm,18.7s,baz=66,slow=38						
KLR	**Kul'dur**	**17.22**	**339**	P	**Pn**	**17 29 31.9**	**-1.6**
	0.1nm,0.3s,baz=135,slow=19,SNR=2.4						
H11N2	**WAKE ISLAND Hy**	**26.42**	**115**	T	T	18 00 11.0	
	baz=306,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**26.62**	**115**	T	T	18 00 11.3	
	baz=306,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**26.64**	**115**	T	T	18 00 08.1	
	baz=306,slow=75,SNR=16						
MK31	**Makanchi Array**	**45.96**	**305**	P	**P**	**17 33 55.8**	**+1.1**
MKAR	**Makanchi Array**	**45.96**	**305**	P	**P**	**17 33 56.2**	**+1.4**
	0.3nm,0.4s,baz=89,slow=7.9,SNR=6.9						
MAKZ	**Makanchi**	**46.17**	**305**	P	**P**	**17 33 55.5**	**-1.0**
MTN	**Manton Dam**	**47.11**	**194**	P	**P**	**17 34 05.0**	**+1.1**
KURK	**Kurchatov**	**48.07**	**311**	P	**P**	**17 34 11.2**	**+0.2**
KURBB	**Kurchatov Arra**	**48.13**	**310**	P	**P**	**17 34 12.4**	**+0.9**
	0.3nm,0.4s,baz=86,slow=7.5,SNR=5.2						
RSO	**Redoubt South**	**49.76**	**36**	P	**P**	**17 34 20.9**	**-3.3**
HOM	**Homer**	**50.30**	**37**	P	**P**	**17 34 26.8**	**-1.2**
KNRA	**Kununurra**	**50.36**	**196**	P	**P**	**17 34 30.4**	**+1.6**
SUA	**Susitna One**	**50.76**	**35**	P	**P**	**17 34 31.6**	**0.0**
SUA				IAmb	IAmb	17 34 38.1	
	comp=Z,51nm,1.6s						
WB0	**Warramunga Arr**	**53.40**	**188**	P	**P**	**17 34 52.9**	**+1.5**
WB0				IAmb	IAmb	17 34 53.2	
	comp=Z,6.6nm,0.5s						
ARSB	**Arslanbob**	**53.54**	**300**	P	**P**	**17 34 57.1**	**+4.5**
ARSB				IAmb	IAmb	17 35 22.7	
	comp=Z,2.9nm,0.9s						
WRAB	**Tennant Creek**	**53.57**	**188**	P	**P**	**17 34 53.9**	**+1.3**
WRAB				IAmb	IAmb	17 34 58.0	
	comp=Z,6.6nm,1.1s						
WR0	**Warramunga Arr**	**53.57**	**188**	P	**P**	**17 34 54.1**	**+1.4**
WR0				IAmb	IAmb	17 34 59.9	
	comp=Z,16nm,1.5s						
WB2	**Warramunga Arr**	**53.58**	**188**	P	**P**	**17 34 54.1**	**+1.4**
WB2				IAmb	IAmb	17 34 56.1	
	comp=Z,6.6nm,1.1s						
WRA	**Warramunga Arr**	**53.58**	**188**	P	**P**	**17 34 54.2**	**+1.4**
	comp=Z,3.3nm,0.3s,baz=5.9,slow=7.7,SNR=40						
CHGR	**Chuyangaron**	**57.13**	**297**	P	**P**	**17 35 18.0**	**-0.3**
CHGR				IAmb	IAmb	17 35 35.8	
	comp=Z,12nm,1.6s						
AS31	**Alice Springs**	**57.30**	**188**	P	**P**	**17 35 21.4**	**+1.8**
ASAR	**Alice Springs**	**57.30**	**188**	P	**P**	**17 35 21.1**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=1.4,slow=6.6,SNR=46						
PSAD1	**Pilbara Seismi**	**58.37**	**204**	P	**P**	**17 35 28.2**	**+1.2**
PSAC2	**Pilbara Seismi**	**58.45**	**203**	P	**P**	**17 35 27.9**	**+0.3**
BESE	**Bessie Mountai**	**59.01**	**37**	P	**P**	**17 35 30.9**	**-0.3**
MORW	**Morawa**	**66.68**	**204**	P	**P**	**17 36 23.2**	**+0.8**
LHI	**Lord Howe Isla**	**66.84**	**164**	P	**P**	**17 36 23.5**	**+0.3**
NLWA	**Neilton Lookou**	**69.19**	**46**	P	**P**	**17 36 39.6**	**+1.5**
NLWA				IAmb	IAmb	17 36 40.9	
	comp=Z,20nm,1.2s						
E03A	**Lebam**	**69.76**	**47**	P	**P**	**17 36 41.5**	**0.0**
E03A				IAmb	IAmb	17 37 10.5	
	comp=Z,22nm,1.0s						
AKASG	**Malin Array Be**	**77.01**	**323**	P	**P**	**17 37 25.5**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=50,slow=6.1,SNR=3.8						

*IDC **21** 17:25:50.2±1.9, 1.53N×127.23E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.5/43, mbtmp3.9/5, ML3.7/1, Error ellipse: s-maj=105.6km s-min=25.5km az=68.0*
*NEIC **21** 17:26:04.2±1.9, 1.45N±0.06×127.15E±0.05, h129km±8km, mb4.2/16, Error ellipse: s-maj=9.3km s-min=6.7km az=147.0*

ISC 21 17:26:05.3±0.6, 1.48N±0.05×127.03E±0.09, h150km, n28, σ2ᵗ12/30, mb4.0/10, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.78**	**155**		**Pn**	**17 26 24.6**	**-3.8**
LUWI	**Luwuk**	**4.94**	**240**		**Pn**	**17 27 17.7**	**-0.3**
GSPH	**General Santos**	**5.03**	**336**	*e*P	**Pn**	**17 27 16.9**	**-2.4**
SKMP	**Bagumbayan, Su**	**5.59**	**334**	*e*P	**Pn**	**17 27 25.1**	**-1.5**
SKMP				*e*S	**Sn**	**17 28 23.9**	**-6.3**
DAV	**Davao City (W)**	**5.74**	**345**	Pn	**Pn**	**17 27 28.5**	**-0.2**
DAV					**Sn**	**17 28 35.1**	**+1.3**
FAKI	**Fak Fak**	**6.80**	**130**		**Sn**	**17 29 03.3**	**+4.1**
MTN	**Manton Dam**	**14.80**	**164**	Pn	**Pn**	**17 29 24.8**	**-2.6**
KNRA	**Kununurra**	**17.13**	**174**	P	**Pn**	**17 29 54.6**	**-1.2**
KNRA				IAmb	IAmb	17 29 55.4	
	comp=Z,13nm,0.8s						
SZP	**Santa**	**17.23**	**338**	P	**Pn**	**17 29 59.2**	**+2.2**
UGM	**Wanagama**	**18.93**	**240**	P	**Pn**	**17 30 16.7**	**-0.5**
FITZ	**Fitzroy Crossi**	**19.50**	**184**	P	**P**	**17 30 20.0**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=34,slow=11,SNR=3.9						
FITZ	**Fitzroy Crossi**	**19.50**	**184**	P	**P**	**17 30 20.6**	**-0.5**
FITZ				IAmb	IAmb	17 30 22.9	
	comp=Z,22nm,1.6s						
COEN	**Coen**	**22.16**	**134**	P	**P**	**17 30 48.1**	**-1.2**
COEN				IAmb	IAmb	17 31 12.4	
	comp=Z,7.3nm,1.2s						
WB0	**Warramunga Arr**	**22.32**	**161**	P	**P**	**17 30 50.3**	**-0.5**
WB0				IAmb	IAmb	17 30 57.2	
	comp=Z,6.3nm,0.8s						
WRAB	**Tennant Creek**	**22.46**	**162**	P	**P**	**17 30 51.8**	**-0.4**
WRA	**Warramunga Arr**	**22.46**	**162**	P	**P**	**17 30 51.6**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=341,slow=11,SNR=22						
WB2	**Warramunga Arr**	**22.47**	**162**	P	**P**	**17 30 51.7**	**-0.6**
WB2				IAmb	IAmb	17 30 58.9	
	comp=Z,7.3nm,1.1s						
WR0	**Warramunga Arr**	**22.54**	**161**	P	**P**	**17 30 52.5**	**-0.5**
WR0				IAmb	IAmb	17 31 05.4	
	comp=Z,10nm,1.4s						
TPUB	**Ta-pu**	**22.57**	**344**	P	**P**	**17 30 51.3**	**-1.9**
AS31	**Alice Springs**	**25.87**	**165**	P	**P**	**17 31 23.0**	**-0.3**
ASAR	**Alice Springs**	**25.87**	**165**	P	**P**	**17 31 23.6**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=346,slow=12,SNR=24						
MORW	**Morawa**	**32.15**	**198**	P	**P**	**17 32 19.7**	**+0.9**
BBOO	**Buckleboo**	**35.16**	**167**	P	**P**	**17 32 44.1**	**-0.7**
BBOO				IAmb	IAmb	17 33 06.8	
	comp=Z,25nm,1.4s						
STKA	**Stephens Creek**	**35.93**	**159**	P	**P**	**17 32 52.1**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=336,slow=11,SNR=3.8						
STKA	**Stephens Creek**	**35.93**	**159**	P	**P**	**17 32 51.9**	**+0.5**
ARMA	**Armidale**	**39.44**	**146**	P	**P**	**17 33 22.9**	**+1.8**
ARMA				IAmb	IAmb	17 33 23.4	
	comp=Z,20nm,1.4s						
KAAM	**Kaadhehdhoo**	**54.04**	**270**	P	**P**	**17 35 16.9**	**+2.2**
MKAR	**Makanchi Array**	**59.57**	**326**	P	**P**	**17 35 56.2**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=124,slow=7.8,SNR=3.5						

MAN 21 17:26:07.5, 9.80N×123.87E, h1km, mb3.6, ML2.3, MS1.8, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.52**	**10**	*e*P	Pg	17 26 17.4	-0.1
LLP				*i* S	Sg	17 26 25.3	+1.0
MSLP	**Maasin**	**1.03**	**71**	*e*P	Pb	17 26 28.1	0.0
MSLP				*e*S	Sn	17 26 44.1	+0.1

*TEH **21** 17:28:58.0, 34.49N×45.39E, h16km, ML2.5*
*ISN **21** 17:28:58.2±0.5, 34.45N±45.42E, h14km±13km, ML2.2*

ISC 21 17:28:58.2±1.2, 34.47N±0.04×45.41E±0.04, h17km±12km, n9, σ0ᵗ53/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDHR	**Dehrash**	**0.84**	**74**	*e*Pg	**Pg**	**17 29 14.0**	**-0.6**
IDHR				*e*Sg	**Sn**	**17 29 26.9**	**-0.6**
IDHR				*e*		17 29 28.6	
IGHG	**Ghaleghazi**	**0.97**	**98**	*e*Pg	**Pb**	**17 29 16.5**	**-0.2**
IGHG				*e*Sg	**Sn**	**17 29 31.0**	**+0.2**
IGHG				*e*		17 29 34.9	
IVIS	**Veis**	**1.19**	**87**	*e*Pg	**Pg**	**17 29 20.8**	**-0.4**
IVIS				*e*		17 29 40.5	
IKRK	**Kirkuk**	**1.28**	**317**	*e*Pg	**Pb**	**17 29 22.0**	**+0.2**
IKRK				AML	AML	17 29 27.9	
	comp=Z,28nm,0.4s						
IKRK				*e*Sg	**Sg**	**17 29 40.0**	**+0.4**
KCHF	**Cheshme Sefid,**	**1.36**	**98**	*e*Pg	**Pg**	**17 29 24.8**	**+0.3**
KCHF				*e*		17 29 25.2	
IBDR	**Badra**	**1.42**	**162**	*e*Pn	**Pg**	**17 29 25.0**	**-0.6**
IBDR				AML	AML	17 29 34.0	
	comp=Z,98nm,0.5s						
IBDR				*e*Sn	**Sg**	**17 29 45.0**	**+0.8**
BHD	**Baghdad**	**1.47**	**216**	*e*Pn	**Pg**	**17 29 26.0**	**-0.5**
BHD				*e*Sn	**Sg**	**17 29 46.0**	**+0.3**
IKOM	**Komasi**	**1.76**	**99**	*e*Pn	**Pb**	**17 29 30.2**	**0.0**
IKOM				*e*		17 29 57.2	
IKFM	**Kafar-mosalman**	**2.23**	**114**	*e*Pn	**Pn**	**17 29 34.7**	**+0.3**

*GUC **21** 17:35:33.7±0.7, 19.68

PB08				IAML			18 05 37.7	
	comp=N,1μm,0.4s							
PB16	**IPOC Station P**	**1.93**	**46**	*i* P	**Pn**	**18 05 09.1**	**+0.9**
PB16				*i* S	**Sb**	**18 05 35.5**	**+0.7**
PB16				IAML		18 05 41.9	
	comp=N,971nm,0.4s						
LVC	**Limon Verde**	**3.49**	**147**	P	**Pn**	**18 05 31.0**	**+1.4**
	comp=N,3.1nm,0.3s,baz=328,slow=11,SNR=9.1						
LVC				S	**Sn**	**18 06 12.7**	**+1.7**
	comp=N,6.1nm,0.3s,baz=230,slow=12,SNR=3.8						
LVC				LR	LR	18 07 10.8	
	comp=N,191nm,20.5s,baz=292,slow=44						
LPAZ	**La Paz**	**4.33**	**39**	P	**Pn**	**18 05 45.0**	**+3.7**
	comp=N,0.3nm,0.3s,baz=216,slow=6.6,SNR=6.5						
LPAZ				LR	LR	18 06 55.0	
	comp=N,34nm,19.9s,baz=248,slow=32						
SIV	**San Ignacio**	**10.12**	**70**	P	**Pn**	**18 06 59.6**	**-0.8**
	comp=N,0.7nm,0.3s,baz=236,slow=15,SNR=9.7						
BDFB	**Brasilia**	**22.24**	**83**	LR	LR	18 19 57.8	
	comp=N,94nm,18.2s,baz=145,slow=42						
TORD	**Torodi Ar. Bea**	**78.59**	**72**	P	**P**	**18 16 35.8**	**-1.5**
	comp=N,1.5nm,0.7s,baz=251,slow=4.9,SNR=8.0						
YKA	**Yellowknife Ar**	**88.85**	**341**	P	**P**	**18 17 29.0**	**+0.3**
	comp=N,0.6nm,0.8s,baz=135,slow=4.7,SNR=11						
H11S2	**WAKE ISLAND Hyl**	**25.71**	**279**	T	T	20 42 54.9	
	baz=101,slow=74,SNR=21						
H11S1	**WAKE ISLAND Hyl**	**25.72**	**279**	T	T	20 42 56.6	
	baz=101,slow=74,SNR=10						
H11S3	**WAKE ISLAND Hyl**	**25.73**	**279**	T	T	20 42 57.0	
	baz=101,slow=74,SNR=11						
MKAR	**Makanchi Array**	**145.23**	**33**	PKPbc	**PKPdf**	**18 24 12.4**	**-0.4**
	comp=N,0.7nm,0.8s,baz=320,slow=3.8,SNR=7.4						

MAN 21 18:13:10.8, 10.0′09N×124.06E, h35km, mb4.0, ML2.7, MS2.3, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.25**	**338**	*e*P	Pn	18 13 20.0	+1.8
LLP				*i* S	Sn	18 13 25.2	+2.1
MSLP	**Maasin**	**0.79**	**87**	*e*P	Pn	18 13 26.7	+1.2
MSLP				*e*S	Sn	18 13 37.1	+1.1

*IDC **21** 18:21:05.8±2.4, 19°.14N×108°.68W, h0km, mb3.3/6, mb1 3.8/8, mb1mx3.6/46, mbtmp3.5/8, ML3.7/2, MS3.4/12, Ms1 3.4/12, ms1mx3.3/20, Error ellipse: s-maj=43.9km s-min=22.4km az=146.0*

*NEIC **21** 18:21:06.1±2.8, 19°.2N±0°.1×108°.67W±0°.06, h6km±7km, mb4.0/61, Error ellipse: s-maj=17.2km s-min=6.0km az=162.0*

ISC 21 18:21:09.9±1.1, 19°.2N±0°.1×108°.75W±0°.08, h35km, n94, σ1$33/84, mb4.0/16, MS3.3/7, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
H06E1	**SOCORRO T-PHAS**	**2.10**	**260**	Pn	**Pn**	**18 21 42.6**	**0.0**
	SNR=14						
H06E1				T	T	18 23 51.9	
	SNR=281						
H06S1	**SOCORRO T**	**2.14**	**258**	Pn	**Pn**	**18 21 43.8**	**+0.7**
LPIG	**La Paz**	**5.11**	**344**	LR	LR	18 23 51.5	
	comp=Z,506nm,19.4s,baz=194,slow=32						
ZAIG	**Zacatecas**	**6.79**	**57**		**Pn**	**18 22 46.2**	**-1.2**
TLIG	**Tlapa**	**9.80**	**98**	Pn	**Pn**	**18 23 29.7**	**+1.1**
HSIG		**10.00**	**349**	Pn	**Pn**	**18 23 33.4**	**+2.2**
TX31	**Lajitas Ar. Si**	**11.12**	**24**		**Pn**	**18 23 46.9**	**+0.3**
TX32	**Lajitas Array**	**11.12**	**24**		**Pn**	**18 23 47.2**	**+0.7**
TXAR	**Lajitas Array**	**11.12**	**24**	Pn	**Pn**	**18 23 46.6**	**0.0**
	0.2nm,0.3s,baz=199,slow=14,SNR=22						
319A	**Douglas**	**12.16**	**358**		**Pn**	**18 24 01.8**	**+1.0**
833A	**Chaparral WMA,**	**12.49**	**41**	Pn	**Pn**	**18 24 07.4**	**+2.1**
TUC	**Tucson**	**13.21**	**352**	Pn	**Pn**	**18 24 13.2**	**-1.9**
214A	**Organ Pipe Nat**	**13.24**	**345**	Pn	**Pn**	**18 24 15.0**	**-0.5**
121A	**Cookes Peak, D**	**13.33**	**4**	Pn	**Pn**	**18 24 15.6**	**-1.3**
CMIG	**Matias Romero**	**13.34**	**97**	Pn	**Pn**	**18 24 16.4**	**-0.5**
	0.2nm,0.3s,baz=312,slow=15,SNR=2.3						
JCT	**Junction City**	**13.87**	**34**	Pn	**Pn**	**18 24 25.1**	**+1.0**
113A	**Mohawk Valley,**	**14.26**	**343**	Pn	**Pn**	**18 24 26.5**	**-2.9**
GLA	**Glamis**	**14.85**	**340**	P	**Pn**	**18 24 37.8**	**+0.4**
Y14A	**Wickenburg**	**15.18**	**346**	Pn	**Pn**	**18 24 42.3**	**+0.5**
Y14A				IAmb	IAmb	18 25 16.2	
	comp=Z,8.8nm,1.2s						
X16A	**Lo Mia Camp, P**	**15.37**	**352**	P	**Pn**	**18 24 44.2**	**-0.2**
Y12C	**Blythe**	**15.40**	**342**	Pn	**Pn**	**18 24 44.5**	**-0.1**
Y12C				IAmb	IAmb	18 25 14.1	
	comp=Z,19nm,1.7s						
MSTX	**Muleshoe**	**15.67**	**19**	P	**P**	**18 24 50.6**	**-1.3**
MSTX				IAmb	IAmb	18 25 05.4	
	comp=Z,18nm,1.4s						
ABTX	**Abilene, Hawle**	**15.69**	**30**		**P**	**18 24 50.7**	**-1.3**
ABTX				IAmb	IAmb	18 25 05.6	
	comp=Z,9.6nm,1.1s						
ANMO	**Albuquerque**	**15.84**	**7**	LR	LR	18 30 50.2	
	comp=Z,136nm,18.4s,baz=190,slow=37						
ANMO	**Albuquerque**	**15.84**	**7**	P	**P**	**18 24 53.4**	**-0.6**
W18A	**Petrified Fore**	**15.90**	**357**	Pn	**Pn**	**18 24 51.0**	**-0.3**
W18A				IAmb	IAmb	18 25 02.9	
	comp=Z,12nm,1.3s						
PFO	**Pinyon Flats O**	**15.94**	**336**	LR	LR	18 29 33.1	
	comp=Z,197nm,21.4s,baz=162,slow=32						
CCIG	**Comitan**	**16.08**	**98**	P	**Pn**	**18 24 53.3**	**-0.4**
CCIG				IAmb	IAmb	18 25 24.3	
	comp=Z,13nm,1.1s						
WUAZ	**Wupatki**	**16.44**	**352**	P	**Pn**	**18 24 57.6**	**-0.6**
W13A	**Hualapai Mount**	**16.50**	**345**	P	**Pn**	**18 24 59.2**	**+0.3**
U15A	**North Rim**	**17.47**	**350**	P	**P**	**18 25 16.4**	**+4.4**
U15A				IAmb	IAmb	18 25 26.8	
	comp=Z,16nm,1.6s						
GSC	**Goldstone, Bar**	**17.57**	**338**	P	**Pn**	**18 25 11.7**	**-0.5**
WMOK	**Wichita Mounta**	**17.84**	**28**	P	**Pn**	**18 25 14.3**	**-1.2**
WMOK				IAmb	IAmb	18 25 36.4	
	comp=Z,16nm,1.8s						
APG	**El Apazote**	**17.96**	**101**	LR	LR	18 32 26.9	
	comp=Z,43nm,18.2s,baz=42,slow=38						
KNB	**Kanab**	**18.13**	**349**	P	**Pn**	**18 25 19.0**	**-0.2**
SHPR	**Sheep Range**	**18.16**	**343**	P	**Pn**	**18 25 18.7**	**-0.8**
LCMT	**Little Creek M**	**18.20**	**348**	P	**P**	**18 25 20.9**	**+0.9**
PKCU	**Pink Cliffs**	**18.47**	**351**	P	**Pn**	**18 25 23.6**	**+0.2**
ISA	**Isabella, Lake**	**18.53**	**334**	P	**Pn**	**18 25 24.6**	**+0.6**
SDCO	**Great Sand Dun**	**18.72**	**8**	P	**P**	**18 25 24.9**	**-0.9**
DAC	**Darwin (Calif)**	**18.73**	**337**		**Pn**	**18 25 26.4**	**-0.1**
DAC				IAmb	IAmb	18 26 21.1	
	comp=Z,12nm,1.8s						
CCUT	**Cedar City**	**18.75**	**349**	P	**P**	**18 25 21.9**	**-4.1**
TEIG	**Tepich**	**19.30**	**83**	LR	LR	18 33 15.7	
	comp=Z,170nm,20.9s,baz=226,slow=38						
PSUT	**Pine Spring**	**19.79**	**348**	P	**Pn**	**18 25 38.8**	**-0.4**
SRU	**San Rafael Swe**	**19.92**	**356**	P	**Pn**	**18 25 40.1**	**-0.6**
R11A	**Troy Canyon, C**	**20.01**	**344**	P	**P**	**18 25 39.6**	**-0.2**
OMMB	**Old Mammoth Mi**	**20.44**	**336**	P	**P**	**18 25 45.4**	**+0.8**
OMMB				IAmb	IAmb	18 26 09.6	
	comp=Z,5.5nm,1.3s						
MDPB	**Devils Postpil**	**20.48**	**336**	P	**P**	**18 25 46.0**	**+1.0**
MDPB				IAmb	IAmb	18 25 58.0	
	comp=Z,6.4nm,1.1s						
NV11	**Mina Array Sit**	**20.86**	**339**	P	**P**	**18 25 49.2**	**+0.2**
NV11				IAmb	IAmb	18 25 59.6	
	comp=Z,12nm,1.7s						
O20A	**White River Ci**	**20.89**	**1**	P	**P**	**18 25 47.0**	**-2.4**
O20A				IAmb	IAmb	18 25 53.2	
	comp=Z,6.3nm,0.9s						
VBMS	**Vicksburg**	**20.90**	**48**	P	**P**	**18 25 48.2**	**-1.0**
NVAR	**Mina Array Bea**	**20.91**	**339**	P	**P**	**18 25 50.5**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=159,slow=13,SNR=3.3						
NVAR				LR	LR	18 32 45.5	
	comp=Z,134nm,22.0s,baz=172,slow=33						
RYN	**Ryan**	**21.16**	**338**	P	**P**	**18 25 50.9**	**-1.4**
RYN				IAmb	IAmb	18 26 03.5	
	comp=Z,15nm,1.6s						
DUG	**Dugway, Tooele**	**21.24**	**351**	P	**P**	**18 25 51.2**	**-1.9**
DUG				IAmb	IAmb	18 26 40.1	
	comp=Z,5.9nm,1.2s						
RDMU	**Red Mountain**	**21.34**	**358**	P	**P**	**18 25 53.2**	**-0.9**
WAKR	**Walker**	**21.38**	**336**	P	**P**	**18 25 53.7**	**-1.0**
WAKR				IAmb	IAmb	18 26 21.9	
	comp=Z,12nm,1.6s						
KVN	**Kaiserville**	**21.40**	**340**	P	**P**	**18 25 55.1**	**+0.3**
HHAR	**Hobbs**	**21.45**	**34**	P	**P**	**18 25 54.1**	**-1.1**
JLU	**Jordanelle**	**21.48**	**354**	P	**P**	**18 25 54.7**	**-1.1**
CTU	**Camp Tracy**	**21.60**	**354**	P	**P**	**18 25 56.9**	**0.0**
W41B	**Gary Mavity, V**	**21.61**	**39**	P	**P**	**18 25 56.0**	**-0.9**
WHAR	**Wooly Hollow**	**21.67**	**39**	P	**P**	**18 25 57.1**	**-0.4**
YERR	**Yerington**	**21.73**	**337**	P	**P**	**18 25 58.9**	**+0.4**
YERR				IAmb	IAmb	18 26 18.1	
	comp=Z,7.1nm,1.1s						
N23A	**Red Feather La**	**21.78**	**6**	P	**P**	**18 25 59.1**	**+0.2**
N23A				IAmb	IAmb	18 26 16.9	
	comp=Z,12nm,1.6s						
PNTR	**Pine Nut**	**21.96**	**337**	P	**P**	**18 25 59.2**	**-1.7**
PNTR				IAmb	IAmb	18 26 25.5	
	comp=Z,16nm,1.7s						
BGU	**Big Grassy Mou**	**21.98**	**351**	P	**P**	**18 26 00.6**	**-0.5**
TCUT	**Toone Canyon**	**21.99**	**355**	P	**P**	**18 26 01.0**	**-0.2**
U40A	**Yellville**	**22.10**	**36**	P	**P**	**18 26 01.6**	**-0.5**
RUBR	**Rubicon Trail**	**22.13**	**336**	P	**P**	**18 25 60.0**	**-2.8**
RUBR				IAmb	IAmb	18 26 58.0	
	comp=Z,7.4nm,1.0s						
ELK	**Elko**	**22.21**	**347**	P	**P**	**18 26 06.3**	**+2.7**
	comp=Z,0.6nm,0.6s,baz=187,slow=9.3,SNR=5.1						
ELK				LR	LR	18 34 01.4	
	comp=Z,50nm,20.0s,baz=176,slow=35						
ELK	**Elko**	**22.21**	**347**	P	**P**	**18 26 04.5**	**+0.9**
SPUT	**South Promonto**	**22.29**	**353**	P	**P**	18 25 55.9	-8.4
K22A	**Casper**	**23.48**	**4**	P	**P**	**18 26 15.7**	**-0.9**
PDAR	**Pinedale Array**	**23.53**	**359**	P	**P**	**18 26 18.2**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=171,slow=10,SNR=4.7						
PDAR				LR	LR	18 34 44.9	
	comp=Z,44nm,19.3s,baz=140,slow=35						
MOOW	**Moose Ponds**	**24.56**	**357**	P	**P**	**18 26 27.8**	**+1.1**
MOOW				IAmb	IAmb	18 26 34.4	
	comp=Z,6.7nm,1.6s						
KMRM	**Mail Ridge**	**24.61**	**332**	P	**P**	**18 26 26.3**	**-0.7**
JTS	**Las Juntas de**	**24.62**	**108**	LR	LR	18 34 00.2	
	comp=Z,56nm,18.7s,baz=334,slow=32						
WVOR	**Wild Horse Val**	**24.65**	**342**	P	**P**	**18 26 28.9**	**+1.4**
MOD	**Modoc Plateau**	**24.70**	**339**	P	**P**	**18 26 27.8**	**-0.1**
MOD				IAmb	IAmb	18 26 42.2	
	comp=Z,6.3nm,1.2s						
Z50A	**Ashland**	**24.74**	**51**	P	**P**	**18 26 29.1**	**+0.9**
MFID	**Camas Ranch**	**24.89**	**348**	P	**P**	**18 26 28.3**	**-1.3**
MFID				IAmb	IAmb	18 26 37.4	
	comp=Z,5.3nm,1.4s						
WVT	**Waverly**	**24.98**	**43**	P	**P**	**18 26 29.1**	**-1.3**
YHB	**Horse Butte**	**25.58**	**356**	P	**P**	**18 26 36.7**	**+0.7**
YHH	**Holmes Hill**	**25.60**	**357**	P	**P**	**18 26 37.4**	**+1.2**
YNE	**Yellowstone No**	**25.78**	**358**	P	**P**	**18 26 40.8**	**+3.0**
MCMT	**McKenzie Canyo**	**25.80**	**353**	P	**P**	**18 26 37.9**	**-0.1**
CLTN	**Cedars of Leba**	**25.94**	**45**	P	**P**	**18 26 37.9**	**-1.2**
CLTN				IAmb	IAmb	18 27 01.8	
	comp=Z,3.1nm,0.8s						
W50A	**Signal Mountai**	**26.16**	**48**	P	**P**	**18 26 39.6**	**-1.4**
NEW	**Newport**	**29.80**	**349**	LR	LR	18 38 10.9	
	comp=Z,73nm,19.4s,baz=236,slow=34						
YKA	**Yellowknife Ar**	**43.47**	**356**	P	**P**	**18 29 10.6**	**+1.2**
	comp=Z,0.3nm,0.7s,baz=173,slow=7.7,SNR=7.8						
INK	**Inuvik**	**51.52**	**349**	P	**P**	**18 30 12.9**	**+1.0**
	comp=Z,1.5nm,0.8s,baz=123,slow=6.7,SNR=5.7						
ILAR	**Eielson Array**	**52.15**	**340**	P	**P**	**18 30 18.1**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=146,slow=6.6,SNR=10						
LPAZ	**La Paz**	**53.27**	**129**	LR	LR	18 50 15.6	
	comp=Z,48nm,21.2s,baz=328,slow=33						
PPT	**Papeete**	**54.25**	**230**	LR	LR	18 48 06.8	
	comp=Z,96nm,18.5s,baz=14,slow=30						

MAN 21 18:58:01.1, 11°.33N×122°.19E, h3km, mb4.1, ML2.9, MS2.5, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RCP	**Roxas**	**0.59**	**67**	*e*P	Pg	18 58 12.8	+0.4
GUIM	**Jordan**	**0.80**	**151**	*e*P	Pg	18 58 16.8	+0.4
GUIM				*e*S	Sn	18 58 31.6	0.0
OTRP	**Odiongan**	**1.04**	**351**	*e*P	Pg	18 58 21.2	0.0
OTRP				*e*S	Sn	18 58 37.8	0.0

*PAS **21** 19:03:10.8±1.4, 33°.965N±0°.009×118°.42W±0°.03, h12km, ML2.0/71, Error ellipse: s-maj=3.1km s-min=1.3km az=87.0*

NEIC 21 19:03:10.2±1.4, 33°.97N±0°.04×118°.4W±0°.1, h16km±7km, Error ellipse: s-maj=12.8km s-min=5.4km az=87.0, Southern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCGC	**La Cienega, Cu**	**0.06**	**61**		Pg	19 03 15.1	+1.8
BHPC	**Baldwin Hills**	**0.07**	**74**		Pg	19 03 13.2	-0.2
DJJ	**Donna J Jenkin**	**0.14**	**356**		Pg	19 03 13.9	-0.3
DJJ	**Donna J Jenkin**	**0.14**	**356**		Pg	19 03 13.8	-0.3
DJJ					Sg	19 03 16.3	-0.5
USC	**University of**	**0.14**	**70**		Pb	19 03 14.3	-0.1
WTT2	**Watts, South G**	**0.16**	**98**		Pb	19 03 14.9	+0.1
GR2C	**Griffith Obs.**	**0.19**	**39**		Pg	19 03 14.6	-0.3
RPV	**Rancho Palos V**	**0.23**	**172**		Pg	19 03 15.5	+0.1
GVRC	**Garvey Reservo**	**0.28**	**74**		Pg	19 03 16.6	+0.2
PASC	**Pasadena Art C**	**0.29**	**47**	Pg	Pg	19 03 16.3	-0.3
PASC					Sg	19 03 20.0	-0.9
DECC	**Green Verdugo**	**0.30**	**18**		Sg	19 03 21.1	+0.1
BLCC	**Black Canyon**	**0.33**	**325**		Pb	19 03 17.9	+0.1
MWC	**Mount Wilson**	**0.41**	**52**		Pg	19 03 18.2	-0.5
MWC	**Mount Wilson**	**0.41**	**52**		Pg	19 03 18.3	-0.3
MWC				Sg	Sg	19 03 24.0	-0.4
IR2C	**Iron Canyon**	**0.42**	**5**		Pg	19 03 18.8	0.0
CHFC	**Chilao Flat St**	**0.50**	**44**		Sg	19 03 26.5	-0.6
CIAC	**Catalina I. Ai**	**0.57**	**177**		Pg	19 03 21.5	0.0
CIAC					Sg	19 03 28.9	-0.2
XTL	**Crystal Lake,**	**0.58**	**56**		Pg	19 03 21.4	-0.5
LRRC	**Littlerock Res**	**0.65**	**32**		Pg	19 03 22.7	-0.4
SSK	**Sunset Peak**	**0.67**	**69**		Pg	19 03 23.1	-0.3
LEOC	**Leona Valley**	**0.67**	**10**		Pg	19 03 22.9	-0.5
HOLC	**Holcomb Ridge**	**0.69**	**45**		Pg	19 03 23.3	-0.6
SBB	**Saddle Back Bu**	**0.88**	**35**		Pb	19 03 26.5	-0.7
SME	**Santa Rosa Min**	**0.92**	**99**		Pb	19 03 27.1	-0.6
EDW2	**Edwards Air Fo**	**0.98**	**22**		Pb	19 03 28.5	-0.4
PEC	**Perris**	**1.07**	**94**		Pb	19 03 29.8	-0.6
SNCC	**San Nicolas Is**	**1.16**	**232**	Pn	Pb	19 03 32.1	+0.3
PFO	**Pinyon Flats O**	**1.69**	**102**	Pn	Pb	19 03 40.3	-0.7
XPFO	**Pion Flat**	**1.69**	**102**	Pn	Pb	19 03 40.2	-0.9
GSC	**Goldstone, Bar**	**1.89**	**45**	Pn	Pn	19 03 42.0	0.0
BAR	**Barrett**	**1.96**	**130**	Pn	Pn	19 03 42.6	-0.3

MAN 21 19:38:41.1, 7°.15N×126°.92E, h3km, mb4.1, ML2.9, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.69**	**253**	*e*P	Pg	19 38 54.9	+0.6
MATI				*e*S	Sn	19 39 08.3	-0.7
DDMP	**Don Marcelino,**	**1.59**	**229**	*e*P	Pn	19 39 09.8	-0.3
DDMP				*e*S	Sb	19 39 31.8	+0.2
KCP	**Kidapawan**	**1.82**	**266**	*e*P	Pn	19 39 13.6	+0.2
BUKP	**Musuan**	**1.98**	**292**	*e*P	Pn	19 39 15.3	-0.3
BUKP				*e*S	Sn	19 39 41.6	+0.7
BUTP	**Butuan**	**2.21**	**325**	*e*P	Pn	19 39 18.8	0.0
BUTP				*e*S	Sn	19 39 47.8	+1.1

IDC 21 19:51:52.6±2.4, 2°.36N×127°.24E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/52, mbtmp3.2/3, Error ellipse: s-maj=196.9km s-min=27.2km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.23**	**163**	P	P	19 57 00.7	-1.0
	0.4nm,0.4s,baz=342,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**26.67**	**166**	P	P	19 57 34.8	+1.2
	0.2nm,0.5s,baz=343,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**58.96**	**325**	P	P	20 01 53.7	-0.3
	0.1nm,0.4s,baz=108,slow=7.1,SNR=4.6						

*DDA **21** 19:58:33.4, 39°.23N×26°.91E, h7km±2km, ML1.7*
*ISK **21** 19:58:33.0, 39°.28N×26°.90E, h5km, ML2.6/7*

ISC 21 19:58:33.7±0.9, 39°.27N±0°.03×26°.92E±0°.04, h13km±9km, n12, σ0$47/19, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.18**	**283**	*i* P	**Pg**	**19 58 38.2**	**+0.4**
AYVA				*i* S	**Sg**	**19 58 40.7**	**-0.1**
DKL	**Dikili**	**0.20**	**183**	PG	**Pg**	**19 58 37.8**	**-0.3**
DKL				SG	**Sg**	**19 58 41.2**	**+0.2**
ZEDA	**zmir-Bergama**	**0.32**	**158**	*i* P	**Pg**	**19 58 39.8**	**-0.5**
ZEDA				IAML		19 58 44.0	
	comp=E,158nm,0.2s						
ZEDA				*i* S	**Sg**	**19 58 44.6**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.56**	**329**	*i* P	**Pb**	**19 58 44.8**	**-0.5**
BAYC				*i* S	**Sb**	**19 58 52.4**	**-0.7**
STEP	**BALIKESIR_Sava**	**0.63**	**80**	*i* P	**Pg**	**19 58 46.2**	**+0.2**
STEP				IAML		19 58 52.0	
	comp=N,36nm,2.0s						
STEP				*i* S	**Sb**	**19 58 55.1**	**-0.3**
BALY	**Balya**	**0.72**	**49**	*i* P	**Pb**	**19 58 48.2**	**+0.1**
BALB	**Balıkesir**	**0.83**	**63**	PG	**Pg**	**19 58 49.0**	**-0.8**
BALB				SG	**Sb**	**19 59 01.5**	**+0.4**
BLCB	**Balcova**	**0.89**	**174**	PG	**Pb**	**19 58 50.8**	**-0.1**
GONE	**Gonen-Balikesi**	**0.98**	**37**	PG	**Pg**	**19 58 52.2**	**-0.4**
GONE				SG	**Sb**	**19 59 06.1**	**+0.8**
CHOS	**Chios island**	**1.11**	**218**	PN	**Pb**	**19 58 54.8**	**0.0**
KCTX	**Karacabey (Bur**	**1.49**	**48**	PN	**Pn**	**19 59 00.8**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**1.52**	**150**	PN	**Pb**	**19 59 01.7**	**-0.2**

*IDC **21** 19:58:59.4±3.0, 15°.32S×173°.35W, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.7/42, mbtmp4.0/4, ML3.7/1, Error ellipse: s-maj=175.2km s-min=24.8km az=144.0*

*NEIC **21** 19:59:01.5±0.6, 15°.18S±0°.06×173°.4W±0°.1, h20km±6km, mb4.6/10, Error ellipse: s-maj=21.4km s-min=4.4km az=110.0*

ISC 21 19:59:02.0±0.8, 15°.24S±0°.07×173°.16W±0°.09, h30km, n18, σ1$42/21, mb4.5/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.88**	**46**	Pn	**Pn**	**19 59 34.5**	**+2.4**
	24nm,0.3s,baz=33,slow=4.1,SNR=14						
AFI				Sn	**Sn**	**19 59 53.3**	**-1.5**
	167nm,0.3s,baz=287,slow=22,SNR=13						
AFI	**Afiamalu**	**1.88**	**46**		**Pn**	**19 59 34.0**	**+1.9**
AFI					**Sn**	**19 59 53.2**	**-1.7**
NIUE	**Niue**	**4.91**	**141**	Pn	**Pn**	**20 00 16.4**	**+2.6**
NIUE					**Sn**	**20 01 06.5**	**-3.2**
MSWZ	**Moikau Station**	**27.95**	**199**	P	**P**	**20 04 50.8**	**+0.9**
ARMA	**Armidale**	**35.62**	**239**	P	**P**	**20 05 57.5**	**0.0**
STKA	**Stephens Creek**	**44.32**	**240**	P	**P**	**20 07 09.9**	**+0.4**
	2.2nm,0.7s,baz=75,slow=10,SNR=4.7						
STKA	**Stephens Creek**	**44.32**	**240**	P	**P**	**20 07 10.0**	**+0.5**
WR0	**Warramunga Arr**	**49.92**	**257**	P	**P**	**20 07 53.6**	**+0.2**
WR0				IAmb	IAmb	20 08 21.2	
	comp=Z,8.6nm,1.4s						
WB0	**Warramunga Arr**	**50.07**	**257**	P	**P**	**20 07 54.3**	**-0.2**
WB0				IAmb	IAmb	20 07 58.5	
	comp=Z,8.6nm,1.3s						
WB2	**Warramunga Arr**	**50.10**	**257**	P	**P**	**20 07 54.2**	**-0.5**
WB2				IAmb	IAmb	20 07 58.6	
	comp=Z,12nm,1.4s						
WRAB	**Tennant Creek**	**50.10**	**257**	P	**P**	**20 07 54.1**	**-0.6**
WRAB				IAmb	IAmb	20 08 27.5	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**50.11**	**257**	P	**P**	**20 07 54.8**	**0.0**
	comp=Z,0.6nm,0.5s,baz=91,slow=7.0,SNR=11						
AS31	**Alice Springs**	**50.38**	**252**	P	**P**	**20 07 56.5**	**-0.3**
AS31				IAmb	IAmb	20 08 18.9	
	comp=Z,2.1nm,1.4s						
ASAR	**Alice Springs**	**50.38**	**252**	P	**P**	**20 07 56.8**	**-0.1**
	comp=Z,1.6nm,0.4s,baz=87,slow=8.1,SNR=36						
FORT	**Forrest**	**55.70**	**243**	P	**P**	**20 08 35.2**	**-0.7**
MAJO	**Matsushiro**	**68.97**	**320**	P	**P**	**20 10 03.5**	**-1.1**
MJB9	**Matsu-Tunnel**	**68.97**	**320**	P	**P**	**20 10 03.5**	**-1.1**
BRTR	**Keskin Array B**	**146.18**	**321**	PKPbc	**PKiKP**	**20 18 42.7**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=112,slow=3.8,SNR=6.0						

KRSC 21 20:06:47.1±1.8, 49°.22N×157°.27E, h47km±36km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.64**	**333**	*e*P	Pn	20 07 13.9	+0.5
SKR				*e*S	Sn	20 07 34.5	+1.2
PAU	**Pauzhetka**	**2.27**	**353**	*e*P	Pn	20 07 24.6	+2.6
PAU				*e*S	Sn	20 07 52.9	+4.2
KDTR	**Khodutka, Kamc**	**2.64**	**11**	*e*P	Pn	20 07 30.4	+3.3
KDTR				*e*S	Sn	20 08 03.3	+5.4
ASAK	**Asacha**	**3.19**	**7

WKZ					IAmb	IAmb	20 24 47.4			
	comp=Z,56nm,1.4s									
KWAJ	**Kwajalein Atol**	**29.45**	**331**		P	**P**	**20 24 40.1**	**-3.4**		
EIDS	**Eidsvold**	**29.48**	**249**		P	**P**	**20 24 43.5**	**-0.3**		
MLZ	**Mavora Lakes**	**30.12**	**199**		P	**P**	**20 24 48.4**	**-0.7**		
ARMA	**Armidale**	**30.24**	**239**		P	**P**	**20 24 51.5**	**+1.0**		
ARMA					IAmb	IAmb	20 24 52.1			
	comp=Z,16nm,0.6s									
WHZ	**Wether Hill Ro**	**30.64**	**199**		P	**P**	**20 24 53.2**	**-0.3**		
CAN	**Canberra**	**34.06**	**232**		P	**P**	**20 25 23.0**	**+0.2**		
CAN					IAmb	IAmb	20 25 24.5			
	comp=Z,69nm,1.7s									
PMG	**Port Moresby**	**34.39**	**279**		P	**P**	**20 25 27.4**	**+1.6**		
PMG					IAmb	IAmb	20 25 28.9			
	comp=Z,31nm,0.9s									
COEN	**Coen**	**37.13**	**270**		P	**P**	**20 25 49.6**	**+1.3**		
COEN					IAmb	IAmb	20 25 50.7			
	comp=Z,16nm,0.7s									
TOO	**Toolangi**	**37.53**	**230**		P	**P**	**20 25 52.1**	**+0.7**		
TOO					IAmb	IAmb	20 25 53.4			
	comp=Z,39nm,1.1s									
TAU	**Tasmania Unive**	**38.66**	**222**		P	**P**	**20 25 59.6**	**-0.8**		
STKA	**Stephens Creek**	**38.91**	**241**		P	**P**	**20 26 03.7**	**+1.0**		
	comp=Z,15nm,0.5s,baz=90,slow=10,SNR=43									
STKA	**Stephens Creek**	**38.91**	**241**		P	**P**	**20 26 03.2**	**+0.4**		
BBOO	**Buckleboo**	**43.69**	**240**		P	**P**	**20 26 40.6**	**+0.1**		
BBOO					IAmb	IAmb	20 26 41.7			
	comp=Z,38nm,0.8s									
WR0	**Warramunga Arr**	**44.57**	**259**		P	**P**	**20 26 46.9**	**-0.5**		
WB0	**Warramunga Arr**	**44.72**	**259**		P	**P**	**20 26 48.5**	**-0.1**		
WB2	**Warramunga Arr**	**44.74**	**259**		P	**P**	**20 26 48.8**	**0.0**		
WB2					IAmb	IAmb	20 26 49.6			
	comp=Z,12nm,0.6s									
WRAB	**Tennant Creek**	**44.75**	**259**		P	**P**	**20 26 48.5**	**-0.4**		
WRA	**Warramunga Arr**	**44.76**	**259**		P	**P**	**20 26 49.0**	**0.0**		
	comp=Z,7.6nm,0.5s,baz=93,slow=6.9,SNR=81									
AS31	**Alice Springs**	**44.96**	**254**		P	**P**	**20 26 50.8**	**+0.3**		
AS31					IAmb	IAmb	20 26 51.6			
	comp=Z,20nm,0.7s									
ASAR	**Alice Springs**	**44.96**	**254**		P	**P**	**20 26 51.0**	**+0.5**		
	comp=Z,71nm,0.6s,baz=88,slow=8.1,SNR=1170									
ASAR					PcP	**PcP**	**20 28 20.7**	**+0.7**		
	comp=Z,0.7nm,0.8s,baz=100,slow=4.8,SNR=3.3									
MTN	**Manton Dam**	**48.84**	**268**		P	**P**	**20 27 19.8**	**+0.1**		
FORT	**Forrest**	**50.26**	**244**		P	**P**	**20 27 29.9**	**-0.1**		
FORT					IAmb	IAmb	20 27 30.5			
	comp=Z,31nm,0.7s									
KNRA	**Kununurra**	**50.57**	**264**		P	**P**	**20 27 32.8**	**+0.3**		
FITZ	**Fitzroy Crossi**	**53.14**	**260**		P	**P**	**20 27 51.8**	**+0.9**		
PSA00	**Pilbara Seismi**	**58.07**	**255**		P	**P**	**20 28 25.2**	**+0.1**		
PSA00					IAmb	IAmb	20 28 50.1			
	comp=Z,92nm,1.8s									
NWAO	**Narrogin (SRO)**	**59.49**	**242**		P	**P**	**20 28 35.1**	**+0.7**		
MORW	**Morawa**	**60.72**	**246**		P	**P**	**20 28 43.0**	**+0.3**		
MORW					IAmb	IAmb	20 28 56.6			
	comp=Z,56nm,1.6s									
JAGI	**Jajag, Banyuwa**	**66.08**	**268**		P	**P**	**20 29 15.9**	**-1.3**		
JAGI					IAmb	IAmb	20 29 36.5			
	comp=Z,80nm,1.5s									
MJAR	**Matsushiro Arr**	**67.48**	**323**		P	**P**	**20 29 26.2**	**+0.8**		
	comp=Z,1.3nm,0.5s,baz=138,slow=6.0,SNR=5.3									
NJ2	**Nanjing**	**77.61**	**309**		*e*P	**P**	**20 30 22.0**	**-1.8**		
NJ2					pmax	pmax				
	comp=Z,9.0nm,0.6s									
NVAR	**Mina Array Bea**	**79.02**	**44**		P	**P**	**20 30 33.8**	**+2.4**		
	comp=Z,0.4nm,0.5s,baz=224,slow=9.9,SNR=5.6									
ILAR	**Eielson Array**	**85.35**	**13**		P	**P**	**20 31 03.8**	**+1.1**		
	comp=Z,0.3nm,0.7s,baz=211,slow=3.2,SNR=3.2									
TXAR	**Lajitas Array**	**85.68**	**58**		P	**P**	**20 31 07.8**	**+2.6**		
	comp=Z,0.7nm,0.7s,baz=220,slow=6.1,SNR=9.4									
HHC	**Hu-ho-hao-te**	**86.91**	**314**		*e*P	**P**	**20 31 09.8**	**-1.0**		
HHC					pmax	pmax				
	comp=Z,2.0nm,0.8s									
HHC					pmax	pmax				
	comp=Z,58nm,5.7s									
PDAR	**Pinedale Array**	**86.94**	**43**		P	**P**	**20 31 12.2**	**+1.2**		
	comp=Z,0.2nm,0.6s,baz=233,slow=4.1,SNR=2.9									
KMI	**Kunming**	**87.60**	**297**		P	**P**	**20 31 11.0**	**-3.5**		
KMI					pmax	pmax				
	comp=Z,6.0nm,1.6s									
LZH	**Lanzhou**	**90.58**	**308**		⇑P	**P**	**20 31 28.5**	**+0.5**		
LZH					sP	sP	20 34 29.1	+6.5		
LZH					PP	**PP**	**20 35 12.8**	**-0.4**		
LZH					pmax	pmax				
	comp=Z,16nm,1.1s									
LZH					pmax	pmax				
	comp=Z,63nm,5.4s									
SONM	**Songino Array**	**93.15**	**319**		P	**P**	**20 31 41.4**	**+1.8**		
	comp=Z,0.2nm,0.6s,baz=111,slow=3.2,SNR=2.4									
MKAR	**Makanchi Array**	**108.77**	**314**		PKiKP	**PKiKP**	**20 36 51.0**	**+0.3**		
	comp=Z,0.2nm,0.6s,baz=113,slow=1.9,SNR=2.3									
KSH	**Kashi**	**112.78**	**306**		PKP	**PKiKP**	**20 36 57.1**	**-1.6**		
KSH					PP	**PP**	**20 38 02.5**	**+5.2**		
BRTR	**Keskin Array B**	**144.41**	**315**		PKP	**PKPab**	**20 37 59.5**	**+0.9**		
	comp=Z,1.4nm,0.8s,baz=108,slow=2.9,SNR=8.5									
VYHS	**Vyhne**	**145.91**	**339**		*e*PKP	**PKPab**	**20 38 04.1**	**+0.2**		
GERES	**GERESS Array B**	**147.09**	**345**		PKPbc	**PKiKP**	**20 38 06.3**	**-0.9**		
	comp=Z,0.9nm,0.6s,baz=29,slow=3.0,SNR=5.5									

IDC ***21*** *20:46:35.5±0.7, 42.07N×75.09E, h0km, mb3.8/20, mb1 4.0/27, mb1mx3.9/63, mbtmp4.0/27, ML3.7/7, MS3.2/13, Ms1 3.2/13, ms1mx3.0/54, Error ellipse: s-maj=9.3km s-min=7.8km az=12.0*

KNET ***21*** *20:46:35.3±0.4, 42.11N×75.14E, h13km±2km, ml4.1, Error ellipse: s-maj=3.6km s-min=2.3km az=13.0*

BJI ***21*** *20:46:36.5±0.0, 42.36N×75.26E, h6km, mB4.6/19, mb4.1/25, ML4.3/6, Ms3.9/11, Ms7 3.7/9*

KRNET ***21*** *20:46:36.5±0.1, 42.10N×75.14E, h15km, mb5.0*

MOS ***21*** *20:46:36.9±1.9, 42.10N×75.05E, h13km, mb4.5/14, Error ellipse: s-maj=5.7km s-min=4.7km az=68.4*

MOS Felt (IV) at Uzunbulak, Zhumgal; (III-IV) at Kyzart.

NEIC ***21*** *20:46:36.5±2.9, 42.09N±0.06×75.10E±0.06, h7km±3km, mb4.5/16, Mwr4.0/14, Error ellipse: s-maj=8.9km s-min=6.3km az=162.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr0.37; Mθθ-0.61; Mφφ0.24; Mrθ0.58; Mθφ-0.95; Mφr-0.49; Fault plane solution: Mo1.33000×10¹⁵ NP1:φs198.15000°, δ58.15000°, λ20.86000°. NP2:φs96.78000°, δ72.40000°, λ146.38000°. Principal axes: T 1.3834, Plg36.0000°, Azm53.0000°; N -0.1226, Plg53.0000°, Azm252.0000°; P -1.2608, Plg9.0000°, Azm150.0000°;*

SOME ***21*** *20:46:37.4, 42.12N×75.15E, h15km, MS3.8*

NNC ***21*** *20:46:37.5±1.0, 42.16N×75.09E, h0km, mb5.1, mpv4.9, Error ellipse: s-maj=7.9km s-min=2.9km az=6.0*

ISC 21 20:46:36.6±1.0, 42.18N±0.02×75.04E±0.01, h4km±6km, n268, σ1s84/378, mb4.2/40, MS3.2/9, 47C-33D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KZA	**Kyzart**	**0.19**	**122**	⇓*i*P		**Pg**	**20 46 39.3**	**-1.1**
	baz=3.0							
KZA				⇓*i*S		**Sg**	**20 46 41.4**	**-1.4**
	baz=3.0							
KZA	**Kyzart**	**0.19**	**122**	P		**Pg**	**20 46 39.0**	**-1.3**
	47μm,0.1s							
KZA				⇑S		**Sg**	**20 46 41.3**	**-1.5**
	363μm,0.3s							
UCH	**Uchtor**	**0.39**	**278**	⇓*i*P		**Pb**	**20 46 45.8**	**-0.7**
	baz=86							
UCH				⇓*i*S		**Sb**	**20 46 52.6**	**-0.4**
	baz=86							
UCH	**Uchtor**	**0.39**	**278**	P		**Pb**	**20 46 45.7**	**-0.7**
	2μm,0.3s,SNR=3586							
UCH				⇑S		**Sb**	**20 46 52.5**	**-0.5**
	20μm,0.4s							
KBK	**Karagaybulak**	**0.48**	**352**	⇓*i*P		**Pb**	**20 46 47.8**	**0.0**
	baz=46							
KBK				⇓*i*S		**Sb**	**20 46 55.8**	**+0.4**
	baz=46							
KBK	**Karagaybulak**	**0.48**	**352**	⇑P		**Pb**	**20 46 47.6**	**-0.2**
	3μm,0.2s,SNR=7228							
KBK				⇑S		**Sb**	**20 46 55.8**	**+0.4**
	17μm,0.2s							
AAK	**Ala-Archa**	**0.61**	**319**	PG		**Pb**	**20 46 50.0**	**0.0**
AAK	**Ala-Archa**	**0.61**	**319**	Pg		**Pb**	**20 46 49.8**	**-0.2**
	1μm,0.3s,baz=122,slow=10							
AAK				Lg		Lg	20 46 59.3	
	684nm,0.3s,baz=324,slow=18,SNR=20							
AAK	**Ala-Archa**	**0.61**	**319**	⇓*i*P		**Pb**	**20 46 50.1**	**0.0**
	baz=19							
AAK				⇓*i*S		**Sn**	**20 46 59.7**	**-2.9**
	baz=19							
AAK	**Ala-Archa**	**0.61**	**319**	⇑P		**Pb**	**20 46 50.0**	**0.0**
	3μm,0.3s,SNR=5231							
AAK				⇓S		**Sn**	**20 46 59.7**	**-2.9**
	3μm,0.3s							
AAK	**Ala-Archa**	**0.61**	**319**	⇓P		**Pb**	**20 46 50.0**	**0.0**
	2μm,0.3s							
AAK				⇓S		**Sn**	**20 46 59.6**	**-3.1**
	2μm,0.8s							
AAK	**Ala-Archa**	**0.61**	**319**			**Pb**	**20 46 50.0**	**0.0**
ARLS	**Aral**	**0.62**	**240**	⇑*i*P		**Pg**	**20 46 48.7**	**+0.2**
	baz=50							
ARLS				⇑*i*S		**Sg**	**20 46 57.4**	**+0.9**
	baz=50							
FRU1	**Bishkek**	**0.70**	**335**	PG		**Pn**	**20 46 52.3**	**-1.1**
FRU1	**Bishkek**	**0.70**	**335**	⇓*i*P		**Pn**	**20 46 52.3**	**-1.1**
	baz=32							
FRU1				⇓*i*S		**Sn**	**20 47 02.7**	**-2.0**
	baz=32							
FRU1	**Bishkek**	**0.70**	**335**			**Pn**	**20 46 52.3**	**-1.1**
BOOM	**Boomskoye usch**	**0.74**	**65**	⇑*i*P		**Pg**	**20 46 49.8**	**-1.0**
	baz=56							
BOOM				⇑*i*S		**Sg**	**20 46 59.8**	**-0.6**
	baz=56							
CHMS	**Chumysh**	**0.85**	**346**	⇓*i*P		**Pn**	**20 46 54.2**	**-1.2**
	baz=43							
CHMS				⇓*i*S		**Sn**	**20 47 06.8**	**-1.5**
	baz=43							
CHMS	**Chumysh**	**0.85**	**346**	P		**Pn**	**20 46 54.1**	**-1.3**
	1μm,0.2s,SNR=1392							
CHMS				⇑S		**Sn**	**20 47 06.7**	**-1.6**
	4μm,0.2s							
ULHL	**Ulahol**	**0.90**	**85**	⇑*i*P		**Pg**	**20 46 51.9**	**-2.0**
	baz=79							
ULHL				⇑*i*S		**Sg**	**20 47 03.2**	**-2.3**
	baz=79							
ULHL	**Ulahol**	**0.90**	**85**	⇑P		**Pg**	**20 46 51.8**	**-2.0**
	780nm,0.1s,SNR=1237							
ULHL				⇑S		**Sg**	**20 47 03.2**	**-2.3**
	4μm,0.3s							
AML	**Almayashu**	**1.00**	**268**	⇓*i*P		**Pb**	**20 46 56.6**	**-0.1**
	baz=72							
AML				⇓*i*S		**Sn**	**20 47 11.1**	**-1.4**
	baz=72							
AML	**Almayashu**	**1.00**	**268**	P		**Pb**	**20 46 56.6**	**-0.1**
	805nm,0.3s,SNR=1546							
AML				⇓S		**Sn**	**20 47 11.1**	**-1.4**
	7μm,0.4s							
NRN	**Naryn**	**1.03**	**136**	PG		**Pg**	**20 46 53.8**	**-2.6**
NRN	**Naryn**	**1.03**	**136**	⇓*i*P		**Pg**	**20 46 54.0**	**-2.4**
	baz=37							
NRN				⇓*i*S		**Sg**	**20 47 06.2**	**-3.6**
	baz=37							
NRN	**Naryn**	**1.03**	**136**			**Pg**	**20 46 53.8**	**-2.6**
EKS2	**Erkin-Say**	**1.05**	**298**	⇓*e*P		**Pn**	**20 46 58.0**	**-0.3**
	baz=0.0							
EKS2				⇓*i*S		**Sn**	**20 47 13.3**	**-0.1**
	baz=0.0							
EKS2	**Erkin-Say**	**1.05**	**298**	P		**Pn**	**20 46 58.0**	**-0.3**
	558nm,0.3s,SNR=1548							
EKS2				⇑S		**Sn**	**20 47 14.2**	**+0.8**
	4μm,0.6s							
KST	**Kastek**	**1.10**	**38**	*e*P		**Pg**	**20 46 57.4**	**-0.4**
	baz=33							
KST				*e*S		**Sb**	**20 47 12.3**	**-0.9**
	baz=33							
KST	**Kastek**	**1.10**	**38**	*e*P		**Pg**	**20 46 57.4**	**-0.4**
	294nm,0.1s							
KST				*e*S		**Sb**	**20 47 12.3**	**-0.9**
	3μm,0.2s							
KST	**Kastek**	**1.10**	**38**	P		**Pg**	**20 46 57.4**	**-0.4**
	290nm,0.3s							
KST				S		**Sb**	**20 47 12.4**	**-0.9**
	3μm,0.6s							
USP	**Ospenovka**	**1.16**	**340**	⇓*i*P		**Pn**	**20 46 59.8**	**+0.1**
	baz=38							
USP				⇓*i*S		**Sn**	**20 47 16.4**	**+0.4**
	baz=38							
USP	**Ospenovka**	**1.16**	**340**	P		**Pn**	**20 46 59.8**	**+0.1**
	932nm,0.2s,SNR=1077							
USP				⇑S		**Sn**	**20 47 16.4**	**+0.4**
	2μm,0.2s							
DGS	**Degeres**	**1.20**	**27**	*e*P		**Pb**	**20 46 59.7**	**-0.2**
	baz=22							
DGS				*e*S		**Sn**	**20 47 16.0**	**-1.0**
	baz=22							
DGS	**Degeres**	**1.20**	**27**	*e*P		**Pb**	**20 46 59.7**	**-0.2**
	147nm,0.1s							
DGS				*e*S		**Sn**	**20 47 16.0**	**-1.0**
	4μm,0.2s							
DGS	**Degeres**	**1.20**	**27**	P		**Pb**	**20 46 59.5**	**-0.4**
	222nm,0.2s							
DGS				S		**Sb**	**20 47 15.3**	**-0.5**
	2μm,0.3s							
SGDS	**Sogindy**	**1.31**	**347**	P		**Pn**	**20 47 02.3**	**+0.6**
	875nm,0.6s							
SGDS				S		**Sn**	**20 47 20.2**	**+0.4**
	1μm,0.6s							
MTBS	**Maitube**	**1.40**	**47**	*e*PG		**Pn**	**20 47 02.4**	**-0.6**
MTBS				*e*S		**Sg**	**20 47 20.6**	**-1.1**
MTBS	**Maitube**	**1.40**	**47**	*e*P		**Pn**	**20 47 02.4**	**-0.6**
	baz=42							
MTBS				*e*S		**Sg**	**20 47 20.6**	**-1.1**
	baz=42							
MTBS	**Maitube**	**1.40**	**47**	*e*P		**Pn**	**20 47 02.4**	**-0.6**
	306nm,0.1s							
MTBS				*e*S		**Sg**	**20 47 20.6**	**-1.1**
	3μm,0.2s							
MTBS	**Maitube**	**1.40**	**47**	P		**Pn**	**20 47 02.5**	**-0.6**
MTBS				S		**Sg**	**20 47 21.0**	**-0.7**
	1μm,0.4s							
IZV	**Izvestkoviy**	**1.45**	**53**	*e*P		**Pn**	**20 47 03.2**	**-0.6**
	baz=49							
IZV				*e*S		**Sg**	**20 47 21.6**	**-1.5**
	baz=49							
IZV	**Izvestkoviy**	**1.45**	**53**	*e*P		**Pn**	**20 47 03.2**	**-0.6**
	449nm,0.1s							
IZV				*e*S		**Sg**	**20 47 21.6**	**-1.5**
	1μm,0.3s							
IZV	**Izvestkoviy**	**1.45**	**53**	P		**Pn**	**20 47 03.1**	**-0.6**
	729nm,0.5s							
IZV				S		**Sg**	**20 47 21.5**	**-1.5**
	1μm,0.6s							
MRKS	**Merke**	**1.46**	**294**	*e*P		**Pb**	**20 47 06.0**	**+1.6**
	baz=95							
MRKS				*e*S		**Sn**	**20 47 26.8**	**+3.4**
	baz=95							
MRKS	**Merke**	**1.46**	**294**	*e*P		**Pb**	**20 47 06.0**	**+1.6**
	849nm,0.2s							
MRKS				*e*S		**Sn**	**20 47 26.8**	**+3.4**
	1μm,0.3s							
MRKS	**Merke**	**1.46**	**294**	P		**Pb**	**20 47 05.2**	**+0.9**
	707nm,0.4s							
MRKS				S		**Sn**	**20 47 25.7**	**+2.4**
	1μm,0.4s							
KRBS	**Karabastau**	**1.59**	**17**	*e*P		**Pg**	**20 47 06.8**	**-0.2**
	685nm,0.2s							
KRBS				*e*S		**Sg**	**20 47 27.9**	**+0.2**
	6μm,0.3s							
KRBS	**Karabastau**	**1.59**	**17**	P		**Pg**	**20 47 07.4**	**+0.3**
	471nm,0.5s							
KRBS				S		**Sg**	**20 47 28.8**	**+1.1**
	4μm,0.7s							
KDJ	**Kajisay**	**1.59**	**91**	PN		**Pn**	**20 47 04.5**	**-1.3**
KDJ	**Kajisay**	**1.59**	**91**	⇑*i*P		**Pn**	**20 47 04.5**	**-1.3**
	baz=88							
KDJ				⇑*i*S		**Sn**	**20 47 24.8**	**-2.1**
	baz=88							
KDJ	**Kajisay**	**1.59**	**91**			**Pn**	**20 47 04.5**	**-1.3**
TNSS	**Tian-Shan**	**1.65**	**58**	*e*PN		**Pn**	**20 47 06.6**	**-0.2**
TNSS				*e*S		**Sn**	**20 47 27.4**	**-1.3**
TNSS	**Tian-Shan**	**1.65**	**58**	*e*P		**Pn**	**20 47 06.6**	**-0.2**
	722nm,0.3s							
TNSS				*e*S		**Sn**	**20 47 27.4**	**-1.3**
	2μm,0.3s							
TNSS	**Tian-Shan**	**1.65**	**58**	P		**Pn**	**20 47 06.7**	**-0.1**
	647nm,0.7s							
TNSS				S		**Sn**	**20 47 27.6**	**-1.0**
	872nm,0.5s							
AAA	**Alma-Ata**	**1.73**	**53**	*e*PN		**Pb**	**20 47 09.4**	**+0.5**
AAA				*e*S		**Sg**	**20 47 32.1**	**0.0**
AAA	**Alma-Ata**	**1.73**	**53**	*e*P		**Pb**	**20 47 09.4**	**+0.5**
	964nm,0.1s							
AAA				*e*S		**Sg**	**20 47 32.1**	**0.0**
	3μm,0.4s							
AAA	**Alma-Ata**	**1.73**	**53**	P		**Pb**	**20 47 08.6**	**-0.3**
	1μm,0.7s							
AAA				S		**Sb**	**20 47 31.6**	**+0.5**
	2μm,0.8s							
ARSB	**Arslanbob**	**1.76**	**242**	⇑*i*P		**Pb**	**20 47 09.4**	**-0.1**
	baz=45							
ARSB				⇑*i*S		**Sg**	**20 47 33.0**	**-0.1**
	baz=45							
ARSB	**Arslanbob**	**1.76**	**242**			**Pb**	**20 47 09.5**	**-0.1**
KNDC	**Almaty**	**1.76**	**53**	⇑P		**Pb**	**20 47 09.1**	**-0.4**
	673nm,0.5s							
KNDC				⇑S		**Sg**	**20 47 32.9**	**-0.3**
	4μm,0.7s							
MDOK	**Medeo**	**1.78**	**56**	*e*PN		**Pb**	**20 47 09.9**	**0.0**
MDOK				*e*S		**Sb**	**20 47 33.1**	**+0.4**
MDOK	**Medeo**	**1.78**	**56**	*e*P		**Pb**	**20 47 09.9**	**0.0**
	baz=52							
MDOK				*e*S		**Sb**	**20 47 33.1**	**+0.4**
	baz=52							
MDOK	**Medeo**	**1.78**	**56**	*e*P		**Pb**	**20 47 09.9**	**0.0**
	780nm,0.3s							
MDOK				*e*S		**Sb**	**20 47 33.1**	**+0.4**
	4μm,0.3s							
MDOK	**Medeo**	**1.78**	**56**	Pn		**Pn**	**20 47 08.1**	**-0.2**
	414nm,0.4s							
MDOK				Sn		**Sg**	**20 47 39.2**	**+5.3**
	2μm,0.5s							
MDOK	**Medeo**	**1.78**	**56**	Pg		**Pn**	**20 47 09.1**	**+0.8**
	498nm,0.8s							
MDOK				Lg		Lg	20 47 31.9	
	1μm,0.9s							
KOTS	**Kotyrbulak**	**1.86**	**55**	*e*P		**Pb**	**20 47 10.7**	**-0.6**
	baz=51							
KOTS				*e*S		**Sn**	**20 47 34.3**	**+0.8**
	baz=51							
KOTS	**Kotyrbulak**	**1.86**	**55**	*e*P		**Pb**	**20 47 10.7**	**-0.6**
	3μm,0.2s							
KOTS				*e*S		**Sn**	**20 47 34.2**	**+0.8**
	14μm,0.5s							
KOTS	**Kotyrbulak**	**1.86**	**55**	P		**Pb**	**20 47 10.8**	**-0.4**
	4μm,0.7s							
KOTS				S		**Sb**	**20 47 34.7**	**-0.2**
	11μm,0.7s							
KTBS	**Karatobe**	**1.95**	**38**	*e*P		**Pb**	**20 47 12.7**	**-0.1**
	827nm,0.2s							
KTBS				*e*S		**Sb**	**20 47 37.9**	**+0.4**
	8μm,0.7s							
KTBS	**Karatobe**	**1.95**	**38**	Pg		**Pb**	**20 47 12.8**	**0.0**
	817nm,0.4s							
KTBS				Lg		Lg	20 47 38.1	
	7μm,0.6s							
KUU	**Kurty**	**1.96**	**29**	*e*PN		**Pg**	**20 47 14.0**	**-0.3**
KUU				*e*S		**Sg**	**20 47 40.0**	**+0.3**
KUU	**Kurty**	**1.96**	**29**	*e*P		**Pg**	**20 47 13.9**	**-0.3**
	477nm,0.2s							
KUU				*e*S		**Sg**	**20 47 40.0**	**+0.3**
	5μm,0.4s							
KUU	**Kurty**	**1.96**	**29**	Pg		**Pg**	**20 47 13.2**	**-1.0**
	763nm,0.7s							
KUU				Lg		Lg	20 47 39.9	
	5μm,0.8s							
ANVS	**Anan'yevo**	**2.04**	**72**	⇑*i*P		**Pn**	**20 47 12.8**	**+0.9**
	baz=69							
ANVS				⇑*i*S		**Sn**	**20 47 38.0**	**+0.1**
	baz=69							
CHKK	**Chushkaly**	**2.21**	**40**	*e*PN		**Pb**	**20 47 17.5**	**+0.4**
CHKK				*e*S		**Sg**	**20 47 46.3**	**-1.2**
CHKK	**Chushkaly**	**2.21**	**40**	*e*P		**Pb**	**20 47 17.4**	**+0.4**
	1μm,0.4s							
CHKK				*e*S		**Sg**	**20 47 46.3**	**-1.2**
	7μm,0.2s							
CHKK	**Chushkaly**	**2.21**	**40**	Pg		**Pb**	**20 47 17.1**	**0.0**
	1μm,0.6s							
CHKK				Lg		Lg	20 47 45.9	
	5μm,0.4s							
ARK	**Arkit**	**2.32**	**262**	⇑*i*P		**Pb**	**20 47 17.4**	**-1.7**
	baz=63							
ARK				⇑*i*S		**Sb**	**20 47 46.7**	**-1.5**
	baz=63							
ANR	**Andizhan**	**2.46**	**236**	P		**Pb**	**20 47 22.4**	**+1.0**
ANR				S		**Sg**	**20 47 56.0**	**+0.3**
PRZ	**Przheval'sk**	**2.51**	**82**	PN		**Pn**	**20 47 20.7**	**+2.3**
PRZ	**Przheval'sk**	**2.51**	**82**	⇑*i*P		**Pn**	**20 47 18.2**	**-0.2**
	baz=80							
PRZ				⇑*i*S		**Sn**	**20 47 49.5**	**-0.1**
	baz=80							
PRZ	**Przheval'sk**	**2.51**	**82**			**Pn**	**20 47 20.6**	**+2.3**
SATY	**Saty**	**2.64**	**69**	*e*PN		**Pb**	**20 47 25.2**	**+0.7**
SATY				*e*S		**Sb**	**20 47 59.3**	**+2.0**
SATY	**Saty**	**2.64**	**69**	*e*P		**Pb**	**20 47 25.2**	**+0.7**
	1μm,0.4s							
SATY				*e*S		**Sb**	**20 47 59.3**	**+2.0**
	5μm,0.2s							
SATY	**Saty**	**2.64**	**69**	Pg		**Pb**	**20 47 24.2**	**-0.3**
	802nm,0.5s							
SATY				Lg		Lg	20 47 57.7	
	3μm,0.6s							
KURS	**Kuram**	**2.65**	**59**	*e*P		**Pb**	**20 47 25.7**	**+1.0**
	681nm,0.3s							
KURS				*e*S		**Sb**	**20 48 00.0**	**+2.4**
	1μm,0.5s							
ZHN	**Zhinishke**	**2.69**	**67**	*e*PN		**Pb**	**20 47 25.5**	**0.0**
ZHN				*e*S		**Sb**	**20 47 59.7**	**+0.8**

MAN 21 20:25:55.5, 9.95N×124.29E, h4km, mb4.0, ML2.8, MS2.5, 2D, Mindanao

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

ZHN Zhinishke 2.69 67 *e*P Pb 20 47 25.5 0.0
335nm,0.2s
ZHN *e*S Sb 20 47 59.7 +0.8
2µm,0.2s
KSH Kashi 2.75 165 Pn Pb 20 47 27.9 +1.5
KSH Sn Sg 20 48 06.6 +1.7
KSH smax smax
comp=N,750nm,0.6s
KSH smax smax
comp=E,770nm,0.5s
DZA Taraz 2.83 286 *e*PN Pg 20 47 29.6 -1.2
DZA *e*S Sg 20 48 07.2 -0.3
DZA Taraz 2.83 286 *e*P Pg 20 47 29.6 -1.2
826nm,0.2s
DZA *e*S Sg 20 48 07.2 -0.3
2µm,0.5s
DZA Taraz 2.83 286 Pg Pg 20 47 29.7 -1.2
889nm,0.4s
DZA Lg Lg 20 48 07.3
2µm,0.6s
FRG Fergana 2.84 241 P Pg 20 47 31.0 0.0
FRG S Sg 20 48 14.8 +7.1
ARXS Arharly 2.88 44 *e*P Pb 20 47 29.3 +0.7
415nm,0.3s
ARXS *e*S Sb 20 48 06.2 +1.9
4µm,0.5s
ARXS Arharly 2.88 44 Pg Pb 20 47 28.1 -0.6
377nm,0.3s
ARXS Lg Lg 20 48 04.3
2µm,0.6s
BTLS Baital 2.95 346 *e*PN Pg 20 47 31.9 -1.3
BTLS *e*S Sg 20 48 10.6 -0.8
BTLS Baital 2.95 346 *e*P Pg 20 47 31.9 -1.3
57nm,0.2s
BTLS *e*S Sg 20 48 10.6 -0.8
2µm,0.3s
BTLS Baital 2.95 346 Pg Pg 20 47 34.0 +0.8
90nm,0.5s
BTLS Lg Lg 20 48 14.4
851nm,0.6s
KPKS Kokpek 2.98 63 *e*PN Pb 20 47 31.3 +1.0
KPKS *e*S Sb 20 48 09.7 +2.7
KPKS Kokpek 2.98 63 *e*P Pb 20 47 31.3 +1.0
585nm,0.3s
KPKS *e*S Sb 20 48 09.7 +2.7
4µm,0.3s
UZB Uzynbulak 3.10 70 *e*PN Pb 20 47 33.1 +0.8
UZB *e*S Sb 20 48 12.7 +2.2
UZB Uzynbulak 3.10 70 *e*P Pb 20 47 33.1 +0.8
505nm,0.3s
UZB *e*S Sb 20 48 12.7 +2.2
2µm,0.3s
UZB Uzynbulak 3.10 70 Pg Pb 20 47 31.1 -1.2
260nm,0.5s
UZB Lg Lg 20 48 09.5
2µm,0.6s
MNBS Baschi 3.11 51 Pg Pb 20 47 32.6 0.0
MNBS Lg Lg 20 48 12.1
782nm,0.7s
JBG Jabagly 3.34 276 *e*PN Pg 20 47 40.1 -0.5
JBG *e*S Sg 20 48 25.2 +1.3
JBG Jabagly 3.34 276 Pg Pg 20 47 39.9 -0.8
385nm,0.8s
JBG Lg Lg 20 48 24.6
1µm,0.7s
SHLS Shalkode 3.41 72 *e*PN Pg 20 47 44.2 +2.3
SHLS *e*S Sg 20 48 31.8 +5.7
SHLS Shalkode 3.41 72 *e*P Pg 20 47 44.2 +2.3
375nm,0.3s
SHLS *e*S Sg 20 48 31.8 +5.7
1µm,0.5s
SHLS Shalkode 3.41 72 Pg Pb 20 47 37.6 0.0
607nm,0.9s
SHLS Lg Lg 20 48 20.6
2µm,0.6s
KK31 Karatay Array 3.46 287 PN Pb 20 47 34.8 -3.7
KK31 Karatay Array 3.46 287 ⇓Pn Pb 20 47 34.9 -3.7
8.3nm,0.7s,baz=101,slow=14,SNR=1378
KK31 ⇓Pg Pg 20 47 42.9 -0.1
58nm,0.3s,baz=92,slow=15,SNR=19
KK31 ⇓Lg Lg 20 48 28.7
231nm,0.5s,baz=111,slow=28,SNR=7.4
KK31 Karatay Array 3.46 287 Pb 20 47 34.8 -3.7
KKAR Karatay Array 3.46 287 PN Pb 20 47 34.7 -3.8
KKAR Karatay Array 3.46 287 Pb 20 47 34.7 -3.8
PDGK Podgornoye 3.48 69 PN Pn 20 47 33.3 +1.7
PDGK LG Lg 20 48 25.3
PDGK Podgornoye 3.48 69 Pg Pb 20 47 36.1 -2.7
194nm,0.7s
PDGK Lg Lg 20 48 18.0
567nm,0.9s
PDGK Podgornoye 3.48 69 ⇑Pn Pn 20 47 33.3 +1.7
274nm,0.4s
PDGK ⇓Lg Lg 20 48 25.0
1µm,1.0s
IUG luzhnay 3.72 271 *e*PN Pg 20 47 46.8 -1.1
IUG luzhnay 3.72 271 *e*P Pg 20 47 46.8 -1.1
28nm,0.4s
IUG *e*S Sg 20 48 36.6 +0.5
1µm,0.5s
IUG luzhnay 3.72 271 Pg Pg 20 47 47.1 -0.8
45nm,0.5s
IUG Lg Lg 20 48 37.0
886nm,0.6s
TDK Taldyqorghan 3.74 40 *e*PN Pb 20 47 44.6 +1.4
TDK *e*S Sg 20 48 32.6 -4.1
TDK Taldyqorghan 3.74 40 *e*P Pb 20 47 44.6 +1.4
600nm,0.4s
TDK *e*S Sg 20 48 32.5 -4.1
2µm,0.1s
TDK Taldyqorghan 3.74 40 Pg Pb 20 47 44.8 +1.7
583nm,0.5s
TDK Lg Lg 20 48 33.0
1µm,0.4s
BTK Batken 3.83 238 PN Pn 20 47 38.5 +2.2
BTK Batken 3.83 238 ⇑*i*P Pn 20 47 37.5 +1.2
baz=39
BTK ⇑*i*S Sn 20 48 22.1 +0.3
baz=39
BTK Batken 3.83 238 Pn 20 47 38.5 +2.2
CHRV Charvak 3.83 264 *e*P Pg 20 47 49.6 -0.4
CHRV *e*S Sg 20 48 39.2 -0.5
CHM Chimkent 4.04 274 *e*PN Pg 20 47 53.4 -0.5
CHM Chimkent 4.04 274 *e*P Pg 20 47 53.4 -0.5
237nm,0.4s
CHM *e*S Sg 20 48 47.9 +1.7
2µm,0.5s
DJR Jarkent 4.09 57 *e*P Pg 20 47 52.7 -2.2
228nm,0.3s
DJR *e*S Sg 20 48 46.5 -1.3
1µm,0.4s
DJR Jarkent 4.09 57 Pg Pb 20 47 50.1 +0.9
235nm,0.7s
DJR Lg Lg 20 48 42.3
510nm,0.6s
TAS Tashkent 4.38 261 PN Pn 20 47 44.9 +1.0
TAS Tashkent 4.38 261 Pn Pn 20 47 44.9 +1.0
TAS Tashkent 4.38 261 *e*P Pg 20 47 59.1 -1.4
TAS *e*S Sg 20 48 57.5 +0.3
KAPS Kapalarasan 4.41 44 *e*P Pb 20 47 57.5 +2.8
224nm,0.4s
KAPS *e*S Sg 20 48 54.8 -3.5
322nm,0.4s
KAPS Kapalarasan 4.41 44 Pg Pb 20 47 53.3 -1.4
154nm,0.7s
KAPS Lg Lg 20 48 47.7
242nm,0.5s
GAR Garm 4.79 230 Pn 20 47 50.3 +0.6
CHGR Chuyangaron 5.70 234 Pn 20 48 03.2 +1.1
MAKZ Makanchi 6.79 45 PN Pn 20 48 17.5 +0.5
MAKZ Makanchi 6.79 45 ⇑Pn Pn 20 48 18.4 +1.5
7.8nm,0.5s
MAKZ ⇓Lg Lg 20 50 18.0
171nm,1.1s
MAKZ Makanchi 6.79 45 Pn 20 48 17.4 +0.5
MK31 Makanchi Array 6.94 46 PN Pn 20 48 20.9 +1.8
MK31 SN Sn 20 49 40.9 +2.4
MK31 Makanchi Array 6.94 46 ⇑Pn Pn 20 48 21.0 +1.8
13nm,0.5s,baz=220,slow=14,SNR=773
MK31 ⇓Sn Sn 20 49 40.9 +2.4
20nm,0.6s
MK31 ⇑Lg Lg 20 50 22.0
52nm,0.6s,baz=223,slow=26,SNR=4.4
MK31 Makanchi Array 6.94 46 Pn 20 48 20.6 +1.4
MKAR Makanchi Array 6.94 46 Pn Pn 20 48 21.1 +2.0
5.7nm,0.3s,baz=226,slow=15,SNR=368

MKAR Sn Sn 20 49 41.1 +2.6
8.2nm,0.3s,baz=226,slow=25,SNR=5.2
MKAR Lg Lg 20 50 12.4
11nm,0.3s,baz=227,slow=28,SNR=5.6
MKAR LR LR 20 51 17.8
comp=Z,205nm,18.6s,baz=244,slow=40
NIL Nilore 8.63 190 P Pn 20 48 42.1 -0.1
NIL Nilore 8.63 190 Pn 20 48 42.1 -0.1
CEP Cherat 8.70 197 P Pn 20 48 40.6 -2.7
KURBB Kurchatov Arra 8.79 15 Pn Pn 20 48 44.2 -0.1
0.5nm,0.3s,baz=195,slow=13,SNR=26
KURBB Sn Sn 20 50 23.7 0.0
1.3nm,0.3s,baz=140,slow=28,SNR=5.8
KURBB Lg Lg 20 51 12.2
3.3nm,0.3s,baz=204,slow=28,SNR=12
KURBB Kurchatov Arra 8.79 15 ⇑Pn Pn 20 48 45.3 +1.0
8.9nm,0.5s
KURBB ⇑Lg Lg 20 51 17.8
480nm,0.7s
KURK Kurchatov 8.89 15 P Pn 20 48 44.2 -1.6
KURK 20 50 23.7
KURK Kurchatov 8.89 15 ⇑Pn Pn 20 48 47.4 +1.6
8.8nm,0.8s
KURK ⇑Lg Lg 20 51 22.4
345nm,0.8s
KURK Kurchatov 8.89 15 Pn 20 48 46.0 +0.2
KBL Kabul 8.96 214 P Pn 20 48 46.0 -0.9
KBL Kabul 8.96 214 Pn 20 48 46.0 -0.9
WMQ Urumqi 9.42 76 *e*P Pn 20 48 52.4 -0.7
WMQ S Sn 20 50 43.6 +4.1
WMQ smax smax
comp=N,31nm,0.9s
WMQ smax smax
comp=E,40nm,0.9s
WMQ Urumqi 9.42 76 P Pn 20 48 52.6 -0.5
WMQ Urumqi 9.42 76 Pn 20 48 52.6 -0.5
BVAR Borovoye Array 11.30 346 Pn Pn 20 49 18.5 -0.2
1.3nm,0.3s,baz=160,slow=13,SNR=32
BVAR Sn Sn 20 51 17.3 -8.0
1.8nm,0.3s,baz=161,slow=20,SNR=3.6
BVAR Lg Lg 20 52 32.8
4.0nm,0.3s,baz=159,slow=17,SNR=13
BRVK Borovoye 11.35 345 P Pn 20 49 19.5 +0.1
BRVK Borovoye 11.35 345 ⇓Pn Pn 20 49 19.8 +0.4
5.9nm,0.5s
BRVK ⇑Lg Lg 20 52 42.4
58nm,0.7s
BRVK Borovoye 11.35 345 Pn 20 49 19.5 +0.1
AB31 Akbulak array 12.69 309 P Pn 20 49 37.6 -0.1
AB31 SN Sn 20 52 02.1 +2.6
AB31 Akbulak array 12.69 309 ⇑Pn Pn 20 49 37.6 -0.1
22nm,0.6s,baz=115,slow=13,SNR=289
AB31 ⇓Sn Sn 20 52 02.0 +2.6
7.3nm,0.6s,baz=114,slow=24,SNR=4.3
ABKAR Akbulak array 12.69 309 Pn 20 49 37.5 -0.2
HRA Herat 12.70 236 Pn 20 49 36.5 -1.7
ZAA0 Zalesovo Array 13.46 26 ⇑Pn Pn 20 49 49.4 +1.3
2.6nm,0.9s
ZAA0 Zalesovo Array 13.46 26 Pn 20 49 47.6 -0.6
ZALV Zalesovo Beam 13.46 26 *i* P Pn 20 49 49.0 +0.8
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV Zalesovo Beam 13.46 26 Pn Pn 20 49 48.4 +0.2
comp=Z,1.0nm,0.3s,baz=221,slow=16,SNR=13
ZALV Sn Sn 20 52 13.6 -4.4
comp=Z,1.3nm,0.3s,baz=215,slow=19,SNR=4.5
ZALV Lg Lg 20 53 41.1
baz=204,slow=28,SNR=2.9
ZALV LR LR 20 55 27.4
comp=Z,46nm,19.2s,baz=130,slow=39
GEYT Alibeck 13.63 257 Pn Pn 20 49 49.3 -1.4
comp=Z,0.5nm,0.3s,baz=72,slow=9.5,SNR=8.2
GEYT Sn Sn 20 52 15.4 -7.2
comp=Z,0.4nm,0.3s,baz=125,slow=17,SNR=3.9
GEYT LR LR 20 55 05.1
comp=Z,31nm,21.4s,baz=30,slow=37
GYA0B ALIBECK ARRAY 13.63 257 ⇑Pn Pn 20 49 49.2 -1.6
GYA0B ALIBECK ARRAY 13.63 257 Pn Pn 20 49 49.6 -1.1
AKTO Aktyubinsk 14.35 311 P Pn 20 50 00.9 +0.5
AKTO SN Sn 20 52 44.9 +5.0
AKTO Aktyubinsk 14.35 311 Pn Pn 20 50 00.2 -0.2
comp=Z,1.4nm,0.3s,baz=118,slow=11,SNR=51
AKTO Sn Sn 20 52 32.2 -7.7
comp=Z,0.7nm,0.3s,baz=356,slow=20,SNR=4.1
AKTO Lg Lg 20 54 10.8
comp=Z,0.6nm,0.3s,baz=16,slow=16,SNR=2.1
AKTO Aktyubinsk 14.35 311 ⇓Pn Pn 20 50 00.9 +0.5
comp=Z,23nm,0.7s
AKTO ⇑Sn Sn 20 52 44.9 +5.0
comp=Z,16nm,0.9s
DANN Dangsing 15.51 150 *e*P Pn 20 50 16.3 -0.1
comp=Z,30nm,0.9s
KOLN Koldanda 15.98 151 *e*P Pn 20 50 17.8 -4.6
comp=Z,11nm,0.6s
GKN Gorkha 16.16 148 *e*P Pn 20 50 23.9 -0.8
comp=Z,9.1nm,0.4s
KKN Kakani 16.61 147 *e*P Pn 20 50 29.7 -0.8
comp=Z,12nm,0.6s
GUN Gumba 16.75 145 *e*P Pn 20 50 34.2 +1.7
comp=Z,12nm,0.5s
PKIN Phulchoki 16.84 147 *e*P Pn 20 50 32.6 -0.9
comp=Z,11nm,0.7s
JIRN Jiri 17.10 144 *e*P Pn 20 50 37.6 +0.7
comp=Z,21nm,0.6s
SVE Sverdlovsk 17.34 333 *e*P Pn 20 50 38.6 -0.6
SVE *e*S S 20 53 57.5 -3.8
SVE pmax pmax
comp=Z,22nm,1.1s
ARU Arti 17.79 329 *c i*P Pn 20 50 44.1 -0.8
ARU S Sn 20 54 02.2 -1.1
ARU pmax pmax
comp=Z,12nm,0.7s
ARU Arti 17.79 329 P Pn 20 50 44.3 -0.6
comp=Z,0.0nm,0.3s,baz=135,slow=9.0,SNR=21
ARU S Sn 20 54 01.2 -2.1
comp=Z,0.0nm,0.3s,baz=154,slow=22,SNR=3.0
ARU Lg Lg 20 55 58.7
comp=Z,0.0nm,0.3s,baz=162,slow=20,SNR=2.3
ARU LR LR 20 57 39.4
comp=Z,80nm,21.7s,baz=124,slow=37
ARU Arti 17.79 329 P Pn 20 50 44.0 -0.8
ARU IAmb IAmb 20 50 49.4
comp=Z,28nm,1.2s
RAMN Ramite 17.90 144 *e*P Pn 20 50 42.7 -4.0
comp=Z,23nm,0.6s
TAPN Taplejung 18.06 141 *e*P Pn 20 50 49.0 +0.3
ODAN Odare 18.33 143 *e*P Pn 20 50 50.1 -1.8
comp=Z,18nm,0.7s
GTA Gaotai 18.95 90 ⇑P Pn 20 51 00.5 +1.2
GTA pP sP 20 51 04.6 +2.9
GTA sP pP 20 51 07.6 +6.8
GTA S Sn 20 54 29.4 -2.4
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA pmax pmax
comp=Z,120nm,7.6s
GTA LR LR
comp=Z,170nm,14.9s
GTA LR LR
comp=Z,120nm,16.5s
GTA LR LR
comp=Z,110nm,15.6s
MOY Mondy 20.02 53 *e*P Pn 20 51 12.2 +0.2
MOY pmax pmax
comp=Z,16nm,1.6s
ZAK Zakamensk 21.08 57 *e*P P 20 51 23.3 +1.5
ZAK pmax pmax
comp=Z,48nm,0.8s
TLY Talaya 21.60 54 *e*P P 20 51 31.3 +3.9
TLY pmax pmax
comp=Z,25nm,1.0s
TLY MLR MLR
comp=Z,103nm,5.0s
TLY Talaya 21.60 54 P P 20 51 26.0 -1.4
comp=Z,3.0nm,0.5s,baz=236,slow=7.3,SNR=3.9
TLY LR LR 21 00 22.2
comp=Z,34nm,21.1s,baz=257,slow=38
TLY Talaya 21.60 54 P P 20 51 28.8 +1.4
SONM Songino Array 22.78 65 *e*P P 20 51 41.3 +1.1
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 22.78 65 P P 20 51 39.4 -0.7
comp=Z,2.3nm,0.9s,baz=275,slow=8.2,SNR=16
GNI Garni 22.84 275 *ce*P P 20 51 43.7 +2.8
GNI pmax pmax
comp=Z,48nm,1.7s

GNI Garni 22.84 275 P P 20 51 42.3 +1.4
comp=Z,3.1nm,0.9s,baz=275,slow=20,SNR=3.0
GNI Garni 22.84 275 P P 20 51 43.5 +2.6
GNI IAmb IAmb 20 51 55.6
comp=Z,27nm,1.6s
LZH Lanzhou 23.09 96 *e*P P 20 51 40.8 -2.7
LZH pP pP 20 51 45.4 -0.2
LZH sP sP 20 51 48.9 +2.4
LZH pmax pmax
comp=Z,15nm,1.0s
LZH pmax pmax
comp=Z,73nm,5.4s
ULN Ulaanbaatar 23.23 65 *ce*P P 20 51 45.9 +1.1
ULN pmax pmax
comp=Z,23nm,1.7s
ULN Ulaanbaatar 23.23 65 P P 20 51 45.9 +1.1
ULN IAmb IAmb 20 51 47.2
comp=Z,13nm,1.1s
WSAR Wadi Sarin 23.32 221 P P 20 51 44.8 -0.9
comp=Z,1.5nm,0.5s,baz=106,slow=3.0,SNR=2.8
WSAR LR LR 21 03 06.1
comp=Z,39nm,19.4s,baz=53,slow=43
KBZ Khabaz 23.50 285 *e*P P 20 51 50.2 +2.8
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KBZ Khabaz 23.50 285 P P 20 51 47.7 +0.4
comp=Z,1.9nm,0.9s,baz=57,slow=7.8,SNR=2.9
KIV Kislovodsk 23.62 285 *e*P P 20 51 51.2 +2.5
KIV pmax pmax
comp=Z,11nm,1.0s
KIV Kislovodsk 23.62 285 P P 20 51 51.5 +2.8
KIV IAmb IAmb 20 52 19.6
comp=Z,6.0nm,0.6s
VRH Novokhopyorsk 24.39 303 *e*P P 20 51 59.1 +3.4
VRH pmax pmax
comp=Z,10.0nm,0.6s
VSR Storozhevoye 25.99 303 *e*P P 20 52 11.1 +0.9
VSR pmax pmax
comp=Z,6.0nm,1.3s
PRGR Permogore 26.24 328 *e*P P 20 52 12.4 0.0
PRGR pmax pmax
comp=Z,6.0nm,0.6s
HHC Hu-ho-hao-te 27.26 80 *e*P P 20 52 23.3 +1.4
HHC pmax pmax
comp=Z,4.0nm,0.7s
HHC pmax pmax
comp=Z,87nm,6.6s
XAN Xi'an 27.73 96 P P 20 52 20.3 -5.9
XAN pmax pmax
comp=Z,4.0nm,1.0s
OBN Obninsk 28.13 311 *i* P P 20 52 30.4 +1.0
OBN pmax pmax
comp=Z,20nm,1.8s
OBN Obninsk 28.13 311 LR LR 21 05 12.2
comp=Z,15nm,19.7s,baz=358,slow=40
KLMR Klimovskoe 28.42 323 *e*P P 20 52 34.6 +2.6
KLMR pmax pmax
comp=Z,8.0nm,1.4s
KLMR Klimovskoe 28.42 323 *e*P P 20 52 34.7 +2.7
KLMR AMP 20 52 36.4
comp=Z,8.0nm,1.4s
KMI Kunming 28.48 118 P P 20 52 34.5 +1.4
KMI pmax pmax
comp=Z,5.0nm,1.7s
BR131 Keskin Array S 31.15 280 P P 20 52 57.6 +1.0
BR131 pmax pmax
comp=Z,3.0nm,0.8s
BR131 Keskin Array S 31.15 280 P P 20 52 57.5 +1.0
BRTR Keskin Array B 31.15 280 P P 20 52 58.2 +1.7
comp=Z,1.2nm,0.6s,baz=97,slow=8.5,SNR=12
CMAR Chiang Mai Arr 31.18 132 PcP PcP 20 55 51.2 -0.6
comp=Z,0.4nm,0.4s,baz=308,slow=4.4,SNR=3.5
AKASG Malin Array Be 32.25 301 P P 20 53 06.0 +0.1
AKASG Malin Array Be 32.25 301 P P 20 53 06.0 +0.1
comp=Z,1.3nm,0.5s,baz=74,slow=8.6,SNR=5.6
MMAI Mount Meron Ar 32.46 267 P P 20 53 07.3 -0.8
comp=Z,0.2nm,0.3s,baz=83,slow=12,SNR=2.5
FINES FINESS Array B 34.80 321 *e*P P 20 53 31.5 +3.5
FINES pmax pmax
comp=Z,1.0nm,0.6s
FINES FINESS Array B 34.80 321 P P 20 53 28.5 +0.5
comp=Z,1.1nm,0.6s,baz=84,slow=13,SNR=4.1
MLR Muntele Rosu 35.13 293 P P 20 53 33.1 +1.9
MLR pmax pmax
comp=Z,28nm,1.6s
MLR Muntele Rosu 35.13 293 P P 20 53 33.1 +1.9
NJ2 Nanjing 36.03 92 *e*P P 20 53 38.6 -0.3
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
ARCES ARCESS Array B 37.26 334 *e*P P 20 53 53.1 +4.1
ARCES pmax pmax
comp=Z,2.0nm,0.8s
ARCES ARCESS Array B 37.26 334 P P 20 53 49.6 +0.5
comp=Z,1.3nm,0.7s,baz=89,slow=6.6,SNR=14
ARCES PcP PcP 20 56 08.0 -0.3
comp=Z,5.2nm,1.0s,baz=108,slow=4.0,SNR=3.8
YAK Yakutsk 37.56 39 *i* P P 20 53 51.4 -0.2
YAK pmax pmax
comp=Z,4.0nm,0.8s
TIXI Tiksi 39.34 24 *e*P P 20 54 06.5 +0.1
TIXI pmax pmax
comp=Z,9.0nm,1.5s
TIXI Tiksi 39.34 24 P P 20 54 06.3 -0.1
comp=Z,3.6nm,0.6s,baz=277,slow=6.3,SNR=12
TIXI Tiksi 39.34 24 P P 20 54 06.1 -0.3
KLR Kul'dur 39.41 60 *i* P P 20 54 08.0 +0.6
KLR pmax pmax
comp=Z,2.0nm,1.0s
KLR Kul'dur 39.41 60 P P 20 54 07.5 +0.1
comp=Z,1.4nm,0.7s,baz=282,slow=11,SNR=5.6
KLR LR LR 21 11 49.4
comp=Z,38nm,18.6s,baz=61,slow=38
KSRS Korea Array 40.36 79 LR LR 21 12 12.4
comp=Z,31nm,19.6s,baz=180,slow=38
NC405 NORSAR Array S 41.68 319 P P 20 54 27.8 +1.8
NC303 NORSAR Array S 41.84 319 P P 20 54 29.2 +2.0
NB2 NORSAR Subarra 41.93 319 P P 20 54 28.7 +0.7
comp=Z,0.9nm,0.6s,baz=87,slow=8.6
NOA NORSAR Array B 41.93 319 *e*P P 20 54 28.7 +0.7
NOA pmax pmax
comp=Z,1.0nm,0.6s
NOA NORSAR Array B 41.93 319 P P 20 54 29.0 +1.0
comp=Z,1.3nm,0.6s,baz=88,slow=8.1,SNR=4.3
NOA LR LR 21 12 21.3
comp=Z,30nm,21.2s,baz=250,slow=37
CLL Collm 42.31 305 *e*P P 20 54 32.0 +0.8
CLL Collm 42.31 305 *e*P P 20 54 32.0 +0.8
GERES GERESS Array B 42.46 301 *e*P P 20 54 36.7 +4.1
GERES pmax pmax
comp=Z,1.0nm,0.5s
GERES GERESS Array B 42.46 301 P P 20 54 34.0 +1.4
comp=Z,0.5nm,0.5s,baz=69,slow=7.4,SNR=4.8
FUORN Ofenpass-Fuorn 45.33 299 P P 20 54 55.8 0.0
FUORN IAmb IAmb 20 55 21.8
comp=Z,6.9nm,1.2s
BKNI Bangkinang 47.79 144 P P 20 55 16.0 +0.9
ASAJ Asahikawa 48.06 64 LR LR 21 18 05.6
comp=Z,56nm,21.6s,baz=25,slow=39
BNI Bardonecchia 48.23 298 P P 20 55 18.9 +0.5
BNI pmax pmax
comp=Z,5.0nm,0.9s
BNI Bardonecchia 48.23 298 P P 20 55 18.9 +0.5
BNI IAmb IAmb 20 55 21.7
comp=Z,4.8nm,0.9s
BILL Bilibino 52.14 28 *i* P P 20 55 50.4 +2.8
BILL *i* 20 57 05.7
BILL pmax pmax
comp=Z,2.0nm,1.3s
ESDC Sonseca Array 57.67 296 P P 20 56 28.1 0.0
comp=Z,0.6nm,0.6s,baz=55,slow=6.4,SNR=4.0
ESDC LR LR 21 26 31.1
comp=Z,38nm,19.1s,baz=340,slow=42
INK Inuvik 67.78 11 P P 20 57 34.5 -0.4
comp=Z,1.6nm,0.8s,baz=20,slow=11,SNR=4.6
ILAR Eielson Array 68.45 18 *e*P P 20 57 38.6 -0.7
ILAR pmax pmax
comp=Z,1.0nm,0.8s
ILAR Eielson Array 68.45 18 P P 20 57 37.7 -1.6
comp=Z,0.6nm,0.8s,baz=323,slow=5.6,SNR=6.4
TOA0 Torodi Ar. Sit 68.98 269 P P 20 57 42.6 -0.7
TOA0 IAmb IAmb 20 57 47.9
comp=Z,2.2nm,0.8s
TORD Torodi Ar. Bea 68.98 269 P P 20 57 42.9 -0.4
comp=Z,0.9nm,0.4s,baz=45,slow=7.0,SNR=8.7
YKA Yellowknife Ar 75.39 5 P P 20 58 20.5 -0.5
comp=Z,0.9nm,0.7s,baz=348,slow=5.7,SNR=14

WRA	**Warramunga Arr**	**82.52**	**125**	P		**P**	**20 58 58.8**	**-1.8**
	comp=Z,0.7nm,0.6s,baz=320,slow=4.9,SNR=5.4							
WRA				LR		LR	21 43 28.5	
	comp=Z,51nm,18.1s,baz=250,slow=41							
WRAB	**Tennant Creek**	**82.52**	**125**	P		**P**	**20 58 58.6**	**-2.0**
WRAB				pmax		pmax		
	comp=Z,7.0nm,1.3s							
WRAB	**Tennant Creek**	**82.52**	**125**	P		**P**	**20 58 58.6**	**-2.0**
WRAB				IAmb		IAmb	20 59 08.3	
	comp=Z,7.3nm,1.2s							
WB2	**Warramunga Arr**	**82.53**	**125**	P		**P**	**20 58 59.0**	**-1.6**
ASAR	**Alice Springs**	**85.10**	**128**	P		**P**	**20 59 10.1**	**-3.6**
	comp=Z,0.7nm,1.0s,baz=327,slow=6.7,SNR=3.2							

*NEIC **21** 20:47:11.7±2.4,20.0S±0.1×173.36W±0.10,h10km±1km, mb5.1/52, Error ellipse: s-maj=18.2km s-min=15.8km az=172.0*

*IDC **21** 20:47:12.3±0.7,20.08S×173.60W,h0km, mb4.4/17, mb1 4.5/19,mb1mx4.4/45,mbtmp4.4/19,ML4.2/2,MS3.5/5, Ms1 3.5/5,ms1mx3.1/41, Error ellipse: s-maj=27.4km s-min=15.5km az=145.0*

*BGR **21** 20:47:18.5±0.0,20.22S×171.51W,h33km,Ms4.6*

ISC 21 20:47:17.7±3.9,20.0S±0.1×173.6W±0.1,h40km±33km, n162,σ1§16/161,mb4.8/37,MS3.4/3,15C-12D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NIUE	**Niue**	**3.61**	**75**	Op		Pn	20 48 01.2	-10
AFI	**Afiamalu**	**6.33**	**16**	Pn		Pn	20 48 41.9	-6.8
	13nm,0.3s,baz=157,slow=5.6,SNR=10							
AFI				Sn		Sn	20 49 46.0	-14
	12nm,0.3s,baz=15,slow=8.4,SNR=2.3							
AFI				LR		LR	20 51 24.5	
	comp=Z,198nm,18.9s,baz=230,slow=40							
AFI	**Afiamalu**	**6.33**	**16**			Pn	20 48 41.3	-7.4
MSVF	**Nonsavu**	**8.21**	**285**			Pn	20 49 20.7	+6.2
RAR	**Rarotonga**	**13.02**	**98**	Pn		Pn	20 50 09.0	-11
	2.2nm,0.3s,baz=264,slow=7.7,SNR=4.3							
RAR				LR		LR	20 55 02.4	
	comp=Z,252nm,18.2s,baz=284,slow=36							
RAR	**Rarotonga**	**13.02**	**98**	Pn		Pn	20 50 11.2	-9.0
DZM	**Mont Dzumac**	**18.72**	**260**	*e*P		**Pn**	**20 51 34.9**	**+1.1**
	55nm,1.4s							
DZM				*e*LR		LR	20 56 11.3	
	comp=Z,166nm,21.4s							
DZM	**Mont Dzumac**	**18.72**	**260**	P		**Pn**	**20 51 33.9**	**0.0**
	0.6nm,0.3s,baz=253,slow=21,SNR=7.7							
DZM	**Mont Dzumac**	**18.72**	**260**	P		**Pn**	**20 51 34.1**	**+0.3**
NOUC	**Port Laguerre**	**18.85**	**260**			**Pn**	**20 51 35.2**	**-0.1**
OUZ	**Omahuta**	**18.88**	**214**	P		**Pn**	**20 51 36.1**	**+0.6**
OUZ				IAmb		IAmb	20 52 04.4	
	comp=Z,111nm,1.8s							
URZ	**Urewera**	**19.87**	**202**	P		**P**	**20 51 45.5**	**0.0**
	comp=Z,0.7nm,0.3s,baz=9.5,slow=6.9,SNR=3.1							
URZ	**Urewera**	**19.87**	**202**	P		**P**	**20 51 45.9**	**+0.4**
URZ				IAmb		IAmb	20 51 56.9	
	comp=Z,171nm,1.9s							
BKZ	**Black Stump Fm**	**20.90**	**202**	P		**P**	**20 51 56.9**	**+0.2**
HIZ	**Hauiti**	**20.95**	**206**	P		**P**	**20 51 58.0**	**+0.8**
HIZ				IAmb		IAmb	20 52 25.0	
	comp=Z,129nm,1.5s							
PPT	**Papeete**	**22.89**	**88**	LR		LR	20 59 26.9	
	comp=Z,136nm,18.7s,baz=304,slow=32							
QRZ	**Quartz Range**	**23.87**	**207**	P		**P**	**20 52 28.7**	**+1.3**
QRZ				IAmb		IAmb	20 52 40.9	
	comp=Z,112nm,1.7s							
KHZ	**Kahutara**	**24.82**	**203**	P		**P**	**20 52 36.5**	**+0.4**
KHZ				IAmb		IAmb	20 52 54.5	
	comp=Z,24nm,1.1s							
OXZ	**Oxford**	**26.16**	**204**	P		**P**	**20 52 49.3**	**+1.0**
OXZ				IAmb		IAmb	20 52 58.6	
	comp=Z,14nm,0.6s							
RPZ	**Rata Peaks**	**26.88**	**205**	P		**P**	**20 52 54.8**	**+0.1**
	comp=Z,4.3nm,0.7s,baz=3.5,slow=15,SNR=1.9							
RPZ	**Rata Peaks**	**26.88**	**205**	P		**P**	**20 52 54.2**	**-0.6**
RPZ				IAmb		IAmb	20 53 04.7	
	comp=Z,128nm,1.9s							
FOZ	**Fox Glacier**	**27.24**	**207**	P		**P**	**20 52 59.9**	**+1.9**
FOZ				IAmb		IAmb	20 53 05.2	
	comp=Z,55nm,1.4s							
LBZ	**Lake Benmore**	**27.79**	**205**	P		**P**	**20 53 05.6**	**+2.8**
LBZ				IAmb		IAmb	20 53 29.3	
	comp=Z,62nm,1.8s							
WKZ	**Wanaka**	**28.62**	**206**	P		**P**	**20 53 11.4**	**+1.1**
EIDS	**Eidsvold**	**32.93**	**254**	P		**P**	**20 53 48.2**	**-0.4**
EIDS				IAmb		IAmb	20 54 06.9	
	comp=Z,16nm,1.3s							
ARMA	**Armidale**	**32.98**	**245**	P		**P**	**20 53 48.5**	**-0.6**
ARMA				IAmb		IAmb	20 53 50.2	
	comp=Z,82nm,1.8s							
CAN	**Canberra**	**36.20**	**237**	P		**P**	**20 54 17.5**	**+0.6**
CAN				IAmb		IAmb	20 54 42.3	
	comp=Z,40nm,1.5s							
PMG	**Port Moresby**	**39.28**	**280**	P		**P**	**20 54 42.8**	**-0.1**
	comp=Z,8.1nm,0.7s,baz=15,slow=6.3,SNR=3.3							
PMG	**Port Moresby**	**39.28**	**280**	P		**P**	**20 54 42.2**	**-0.8**
PMG				IAmb		IAmb	20 54 52.4	
	comp=Z,44nm,1.5s							
TOO	**Toolangi**	**39.51**	**235**	P		**P**	**20 54 43.7**	**-1.0**
TAU	**Tasmania Unive**	**39.88**	**226**	P		**P**	**20 54 48.7**	**+1.0**
TAU				IAmb		IAmb	20 55 14.2	
	comp=Z,150nm,1.8s							
COEN	**Coen**	**41.67**	**271**	P		**P**	**20 55 01.0**	**-1.7**
STKA	**Stephens Creek**	**41.70**	**244**	P		**P**	**20 55 02.1**	**-0.7**
	comp=Z,3.8nm,0.8s,baz=93,slow=9.3,SNR=4.8							
STKA	**Stephens Creek**	**41.70**	**244**	P		**P**	**20 55 02.3**	**-0.5**
JAY	**Jayapura**	**47.84**	**285**	P		**P**	**20 55 52.3**	**+0.4**
	comp=Z,12nm,0.8s,baz=176,slow=11,SNR=2.3							
WR0	**Warramunga Arr**	**48.55**	**261**	P		**P**	**20 55 56.8**	**-0.5**
WR0				PcP		**PcP**	**20 57 22.8**	**0.0**
AS31	**Alice Springs**	**48.62**	**256**	P		**P**	**20 55 57.9**	**0.0**
ASAR	**Alice Springs**	**48.62**	**256**	P		P	**20 55 57.5**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=92,slow=8.1,SNR=44							
ASAR				PcP		**PcP**	**20 57 24.8**	**+1.6**
	comp=Z,2.2nm,0.6s,baz=103,slow=4.3,SNR=7.4							
WB0	**Warramunga Arr**	**48.72**	**261**	P		**P**	**20 55 58.1**	**-0.5**
WB0				IAmb		IAmb	20 55 59.3	
	comp=Z,51nm,1.8s							
WB0				PcP		**PcP**	**20 57 25.0**	**+1.6**
WB2	**Warramunga Arr**	**48.73**	**261**	P		**P**	**20 55 57.9**	**-0.9**
WB2				IAmb		IAmb	20 55 59.5	
	comp=Z,14nm,1.1s							
WB2				PcP		**PcP**	**20 57 22.4**	**-1.1**
WRAB	**Tennant Creek**	**48.73**	**261**	P		**P**	**20 55 57.8**	**-0.9**
WRAB				PcP		**PcP**	**20 57 22.6**	**-0.9**
WRA	**Warramunga Arr**	**48.74**	**261**	P		**P**	**20 55 58.0**	**-0.9**
	comp=Z,4.1nm,0.5s,baz=98,slow=8.5,SNR=22							
WRA				PcP		**PcP**	**20 57 25.4**	**+1.8**
	comp=Z,2.8nm,0.9s,baz=93,slow=3.9,SNR=5.0							
FORT	**Forrest**	**53.25**	**246**	P		**P**	**20 56 32.2**	**-0.4**
FORT				IAmb		IAmb	20 56 35.0	
	comp=Z,36nm,1.1s							
MTN	**Manton Dam**	**53.28**	**269**	P		**P**	**20 56 32.1**	**-0.8**
KNRA	**Kununurra**	**54.80**	**265**	P		**P**	**20 56 42.8**	**-1.3**
SIJI	**Sorong**	**57.12**	**282**	P		**P**	**20 57 01.3**	**+0.6**
	comp=Z,19nm,0.6s,baz=90,slow=11,SNR=6.1							
FITZ	**Fitzroy Crossi**	**57.16**	**261**	P		**P**	**20 56 59.2**	**-1.7**
FITZ				IAmb		IAmb	20 57 13.5	
	comp=Z,19nm,1.3s							
SOEI	**Soe**	**60.60**	**270**	P		**P**	**20 57 24.9**	**-0.1**
PSAB3	**Pilbara Seismi**	**61.76**	**256**	P		**P**	**20 57 32.0**	**-0.7**
PSAA3	**Pilbara Seismi**	**61.77**	**256**	P		**P**	**20 57 32.0**	**-0.7**
PSA00	**Pilbara Seismi**	**61.77**	**256**	P		**P**	**20 57 32.0**	**-0.8**
PSAC3	**Pilbara Seismi**	**61.78**	**256**	P		**P**	**20 57 32.2**	**-0.6**
NWAO	**Narrogin (SRO)**	**62.25**	**243**	P		**P**	**20 57 35.7**	**-0.1**
NWAO				IAmb		IAmb	20 57 38.1	
	comp=Z,32nm,1.2s							
QSPA	**South Pole Qui**	**70.05**	**180**	P		**P**	**20 58 25.9**	**+0.5**
MJAR	**Matsushiro Arr**	**72.35**	**321**	P		**P**	**20 58 40.4**	**+0.9**
	comp=Z,2.5nm,0.7s,baz=148,slow=5.5,SNR=5.3							
MJAR				LR		LR	21 28 13.3	
	comp=Z,18nm,19.4s,baz=125,slow=34							
KKM	**Kota Kinabalu**	**73.64**	**283**	P		**P**	**20 58 46.6**	**-1.1**
UGM	**Wanagama**	**74.09**	**267**	P		**P**	**20 58 49.1**	**-1.3**
PEA0B	**Petropavlovsk-**	**76.95**	**343**	P		**P**	**20 59 04.3**	**-1.5**
PETK	**Petropavlovsk-**	**76.95**	**343**	P		**P**	**20 59 07.5**	**+1.7**
	comp=Z,5.1nm,0.8s,baz=132,slow=8.5,SNR=5.4							
SSLB	**Suanglung**	**77.19**	**301**	P		**P**	**20 59 06.3**	**-1.5**
SSLB				IAmb		IAmb	20 59 13.4	
	comp=Z,48nm,1.4s							
TPUB	**Ta-pu**	**77.22**	**301**	P		**P**	**20 59 08.0**	**0.0**
NVAR	**Mina Array Bea**	**77.91**	**41**	P		**P**	**20 59 12.7**	**+0.9**
	comp=Z,1.8nm,0.9s,baz=224,slow=9.1,SNR=10							
NV11	**Mina Array Sit**	**78.00**	**41**	P		**P**	**20 59 08.8**	**-3.4**
KVN	**Kaiserville**	**78.41**	**41**	P		**P**	**20 59 12.1**	**-2.5**
KSRS	**Korea Array**	**79.32**	**316**	P		**P**	**20 59 21.4**	**+2.2**
	comp=Z,2.8nm,1.0s,baz=108,slow=8.0,SNR=4.6							
U15A	**North Rim**	**80.64**	**46**	P		**P**	**20 59 23.7**	**-3.2**
MTPU	**Mount Pierson**	**81.60**	**45**	P		**P**	**20 59 31.4**	**-0.6**
TMUT	**Trail Mountain**	**82.92**	**44**	P		**P**	**20 59 38.8**	**0.0**
MNTX	**Cornudas Mount**	**83.16**	**53**	P		**P**	**20 59 39.4**	**-0.5**
SRU	**San Rafael Swe**	**83.27**	**44**	P		**P**	**20 59 37.7**	**-2.8**
TXAR	**Lajitas Array**	**83.37**	**56**	P		**P**	**20 59 41.9**	**+0.8**
	comp=Z,1.1nm,1.0s,baz=224,slow=3.8,SNR=6.7							
TCUT	**Toone Canyon**	**83.79**	**42**	P		**P**	**20 59 41.0**	**-2.2**
NEW	**Newport**	**84.63**	**34**	LR		LR	21 31 05.3	
	comp=Z,89nm,20.6s,baz=214,slow=31							
S22A	**4UR Ranch, Cre**	**85.05**	**47**	P		**P**	**20 59 47.6**	**-2.1**
S22A				IAmb		IAmb	20 59 52.2	
	comp=Z,5.2nm,0.9s							
WHN	**Wuhan**	**85.52**	**305**	P		**P**	**20 59 54.8**	**+3.0**
PDAR	**Pinedale Array**	**85.84**	**42**	P		**P**	**20 59 53.6**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=212,slow=4.5,SNR=5.9							
WRH	**Wood River Hil**	**86.51**	**11**	P		**P**	**20 59 54.8**	**-1.1**
WRH				IAmb		IAmb	20 59 56.9	
	comp=Z,24nm,1.5s							
SEY	**Seymchan**	**86.91**	**345**	P		**P**	**20 59 58.9**	**+1.0**
	comp=Z,4.6nm,0.9s,baz=136,slow=5.6,SNR=10							
ILAR	**Eielson Array**	**87.00**	**11**	P		**P**	**20 59 58.5**	**+0.2**
	comp=Z,1.1nm,1.0s,baz=233,slow=5.0,SNR=5.5							
ENH	**Enshi**	**89.21**	**303**	P		**P**	**21 00 08.9**	**-0.7**
ENH				IAmb		IAmb	21 00 14.0	
	comp=Z,12nm,1.0s							
XAN	**Xi'an**	**91.15**	**306**	P		**P**	**21 00 21.4**	**+2.7**
XAN				pmax		pmax		
	comp=Z,7.0nm,1.4s							
CMAR	**Chiang Mai Arr**	**93.85**	**288**	P		**P**	**21 00 32.6**	**+1.1**
	comp=Z,2.6nm,0.9s,baz=126,slow=3.2,SNR=11							
YKA	**Yellowknife Ar**	**94.40**	**24**	P		**P**	**21 00 33.5**	**+0.6**
	comp=Z,0.2nm,0.7s,baz=242,slow=4.5,SNR=4.0							
ECSD	**EROS Data Cent**	**94.66**	**45**	P		**P**	**21 00 32.3**	**-2.3**
ECSD				IAmb		IAmb	21 00 35.8	
	comp=Z,5.3nm,1.0s							
KURBB	**Kurchatov Arra**	**116.49**	**317**	PKP		**PKPdf**	**21 05 56.3**	**-0.8**
	comp=Z,0.6nm,0.7s,baz=70,slow=1.6,SNR=3.6							
BVAR	**Borovoye Array**	**121.34**	**321**	PKP		**PKiKP**	**21 06 07.1**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=166,slow=1.2,SNR=8.4							
SPITS	**Spitsbergen Ar**	**121.60**	**358**	PKP		**PKiKP**	**21 06 07.3**	**+0.9**
	comp=Z,3.2nm,0.7s,baz=116,slow=3.4,SNR=2.9							
ARCES	**ARCESS Array B**	**129.13**	**351**	PKP		**PKiKP**	**21 06 22.2**	**+0.7**
	comp=Z,5.1nm,1.1s,baz=0.0,slow=0.9,SNR=3.0							
AKASG	**Malin Array Be**	**144.46**	**335**	PKP		PKPbc	21 06 48.9	+0.8
	comp=Z,0.9nm,0.7s,baz=38,slow=4.6,SNR=14							
BSEG	**Bad Segeberg**	**146.01**	**356**	*e*PKPbc		**PKPab**	**21 06 54.9**	**+1.4**
	baz=5.2,slow=2.5							
SORM	**Soroca**	**146.81**	**333**	⇓P		**PKPab**	**21 06 56.9**	**+0.1**
RUE	**Ruedersdorf**	**147.10**	**352**	*e*PKPbc		**PKiKP**	**21 06 58.3**	**-0.2**
	baz=5.2,slow=2.5							
NRDL	**Niedersach Rie**	**147.46**	**356**	*e*PKPbc		**PKPab**	**21 06 58.8**	**-0.2**
	baz=5.2,slow=2.5							
CLZ	**Clausthal**	**148.09**	**355**	*e*PKPbc		**PKPbc**	**21 06 59.9**	**+0.9**
	baz=5.2,slow=2.5							
GAZ	**Gaziantep**	**148.18**	**309**			**PKPdf**	**21 06 55.0**	**-1.4**
VASR	**Vaslui**	**148.19**	**331**	⇑P		**PKiKP**	**21 07 01.5**	**+0.5**
CLL	**Collm**	**148.35**	**352**	⇑*i*PKPbc		**PKiKP**	**21 07 01.1**	**-0.1**
	comp=Z,11nm,1.0s							
CLL				*i*			21 07 07.2	
CLL	**Collm**	**148.35**	**352**	*e*PKPbc		**PKiKP**	**21 07 01.5**	**+0.3**
	baz=5.2,slow=2.5							
CLL	**Collm**	**148.35**	**352**			**PKPbc**	**21 06 58.4**	**-1.2**
GTTG	**Gvttingen**	**148.42**	**356**	*e*PKPbc		**PKiKP**	**21 07 01.5**	**+0.1**
	baz=5.2,slow=2.5							
BUR08	**Bucovina Ar. S**	**148.50**	**335**			**PKiKP**	**21 07 01.7**	**-0.1**
BURAR	**Bucovina Array**	**148.51**	**335**	⇓P		**PKPab**	**21 07 03.6**	**-0.1**
MBAR	**Mbarara**	**148.54**	**232**	PKPbc		**PKPbc**	**21 07 01.4**	**0.0**
	comp=Z,1.4nm,0.2s,baz=243,slow=2.3,SNR=3.5							
MBAR	**Mbarara**	**148.54**	**232**	PKPdf		**PKPdf**	**21 06 55.1**	**-2.8**
MBAR						**PKPbc**	**21 07 00.8**	**-0.7**
OSTC	**Ostas**	**148.55**	**348**	*e*PKP		**PKiKP**	**21 07 02.2**	**+0.5**
NEUB	**Neuenburg**	**148.59**	**353**	*e*PKPbc		**PKiKP**	**21 07 01.9**	**+0.2**
	baz=5.2,slow=2.5							
BUG	**Bochum--Univer**	**148.64**	**359**	*e*PKPbc		**PKiKP**	**21 07 01.3**	**-0.5**
	baz=5.2,slow=2.5							
BRG	**Berggiesshubel**	**148.64**	**351**	*e*PKP		**PKiKP**	**21 07 02.1**	**+0.2**
	comp=Z,5.9nm,0.9s							
BRG	**Berggiesshubel**	**148.64**	**351**	*e*PKPbc		**PKiKP**	**21 07 02.1**	**+0.2**
	baz=5.2,slow=2.5							
FBE	**Freiberg**	**148.68**	**351**	*e*PKPbc		**PKiKP**	**21 07 01.7**	**-0.2**
	baz=5.2,slow=2.5							
BIZ	**Bicaz**	**148.69**	**334**	⇑P		**PKiKP**	**21 07 02.9**	**+0.8**
DPC	**Dobruska-Polom**	**148.73**	**348**	*e*PKP		**PKiKP**	**21 07 02.8**	**+0.7**
GHRR		**148.81**	**331**	⇑P		**PKiKP**	**21 07 02.0**	**-0.3**
PVCC	**Panska Ves**	**148.88**	**350**	*e*PKP		**PKiKP**	**21 07 03.4**	**+1.1**
KRLC	**Kraliky**	**148.89**	**347**	*e*PKP		**PKiKP**	**21 07 02.0**	**-0.5**
MORC	**Moravsky Berou**	**149.01**	**346**	⇑P		**PKiKP**	**21 07 03.3**	**+0.6**
TRPA	**Tarpa**	**149.06**	**339**	⇓P		**PKiKP**	**21 07 02.6**	**-0.1**
CFR	**Carcaliu**	**149.13**	**329**	⇓P		**PKPab**	**21 07 06.5**	**+0.4**
MOX	**Moxa**	**149.16**	**353**	*e*PKPbc		**PKiKP**	**21 07 03.1**	**+0.1**
	baz=5.2,slow=2.5							
MOX				*e*L		L	22 21 07.1	
	comp=Z,96nm,18.9s							
TOPG	**Topolog**	**149.23**	**329**	⇑P		**PKiKP**	**21 07 03.8**	**+0.6**
VRI	**Vrincioaia**	**149.26**	**332**	⇓P		**PKiKP**	**21 07 03.0**	**-0.3**
TANN	**Tannenbergstna**	**149.29**	**352**	*e*PKPbc		**PKiKP**	**21 07 03.6**	**+0.4**
	baz=5.2,slow=2.5							
GUNZ	**Gunzen**	**149.36**	**353**	*e*PKPbc		**PKiKP**	**21 07 04.0**	**+0.6**
	baz=5.2,slow=2.5							
PRU	**Pruhonice**	**149.40**	**350**	*e*PKP		**PKiKP**	**21 07 03.1**	**-0.3**
WERN	**Werrnitzgruen**	**149.43**	**352**	*e*PKPbc		**PKiKP**	**21 07 04.6**	**+1.1**
	baz=5.2,slow=2.5							
BR131	**Keskin Array S**	**149.46**	**316**	PKPdf		**PKPdf**	**21 06 56.6**	**-1.9**
BR131						**PKPbc**	**21 07 03.1**	**+0.1**
BRTR	**Keskin Array B**	**149.47**	**316**	PKPbc		**PKiKP**	**21 07 04.2**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=80,slow=1.8,SNR=12							
HARR	**Harsova**	**149.58**	**329**	⇑P		**PKiKP**	**21 07 04.5**	**+0.5**
VRAC	**Vranov**	**149.66**	**347**	⇑P		**PKiKP**	**21 07 04.9**	**+0.9**
MFTR	**Murfatlar**	**149.71**	**328**	⇑P		**PKiKP**	**21 07 06.2**	**+2.0**
MANZ	**Manzenberg**	**149.76**	**353**	*e*PKPbc		**PKiKP**	**21 07 05.4**	**+1.2**
	baz=5.2,slow=2.5							
DOPR	**Dopca**	**149.77**	**333**	⇓P		**PKiKP**	**21 07 05.8**	**+1.5**
TNS	**Taunus Mts**	**149.82**	**357**	*e*PKPbc		**PKiKP**	**21 07 05.2**	**+0.8**
	baz=5.2,slow=2.5							
VYHS	**Vyhne**	**149.87**	**343**	*e*PKP		**PKPdf**	**21 07 00.5**	**+1.8**
VYHS				*e*			21 07 05.3	
MLR	**Muntele Rosu**	**149.90**	**332**	⇓P		**PKiKP**	**21 07 05.7**	**+0.9**
MLR	**Muntele Rosu**	**149.90**	**332**			**PKPbc**	**21 07 02.8**	**-1.0**
ISR	**Istrita**	**149.92**	**331**	⇓P		**PKiKP**	**21 07 05.2**	**+0.5**
ROTZ	**Rotzenmuhle**	**149.96**	**352**	*e*PKPbc		**PKiKP**	**21 07 05.6**	**+1.0**
	baz=5.2,slow=2.5							
SHAB	**Shabla**	**150.07**	**327**	⇓P		**PKPab**	**21 07 09.4**	**-0.6**
GRF	**Grafenberg Arr**	**150.15**	**354**	*e*PKPbc		**PKiKP**	**21 07 06.6**	**+1.6**
	baz=5.2,slow=2.5							
LEHL	**Lehliu**	**150.28**	**330**	⇑P		**PKPab**	**21 07 09.9**	**-0.9**
VOIR		**150.33**	**333**	⇑P		**PKiKP**	**21 07 07.0**	**+1.4**
MODS	**Modra-Piesok**	**150.38**	**345**	*e*PKP		**PKiKP**	**21 07 06.6**	**+1.1**
KHC	**Kasperske Hory**	**150.39**	**350**	*e*PKP		**PKiKP**	**21 07 06.5**	**+0.9**
KHC	**Kasperske Hory**	**150.39**	**350**			**PKPbc**	**21 07 02.7**	**-2.1**
WLF	**Walferdange**	**150.43**	**0**	*e*PKPbc		**PKiKP**	**21 07 06.4**	**+0.8**
	baz=5.2,slow=2.5							
WET	**Wettzell**	**150.48**	**351**	*e*PKPbc		**PKiKP**	**21 07 06.6**	**+0.9**
	baz=5.2,slow=2.5							
ARR	**Arges**	**150.57**	**333**	⇓P		**PKiKP**	**21 07 08.0**	**+1.9**
GEC2	**GERESS Array S**	**150.65**	**350**	*e*PKPbc		**PKiKP**	**21 07 08.2**	**+2.0**
	baz=5.2,slow=2.5							
GERES	**GERESS Array B**	**150.65**	**350**	PKPbc		**PKiKP**	**21 07 07.0**	**+0.8**
	comp=Z,2.3nm,0.9s,baz=29,slow=3.0,SNR=11							
KUBB	**Kubrat**	**150.94**	**329**	⇑P		**PKiKP**	**21 07 07.2**	**+0.5**
SIRR	**Siria**	**150.97**	**338**	⇑P		**PKiKP**	**21 07 08.0**	**+1.2**
GZR	**Gura Zlata**	**151.30**	**336**	⇑P		**PKiKP**	**21 07 08.2**	**+0.6**
BZS	**Buzias**	**151.55**	**337**	⇓P		**PKiKP**	**21 07 09.3**	**+1.3**
TIM	**Timisoara**	**151.59**	**338**	⇑P		**PKPab**	**21 07 17.3**	**+1.1**
FUR	**Furstenfeldbru**	**151.65**	**353**	*e*PKPbc		**PKiKP**	**21 07 09.0**	**+0.8**
	baz=5.2,slow=2.5							
BFO	**Black Forest**	**151.72**	**357**	*e*PKPbc		**PKiKP**	**21 07 09.7**	**+1.4**
	baz=5.2,slow=2.5							
HERR	**Herculane**	**151.87**	**335**	⇓P		**PKiKP**	**21 07 09.7**	**+1.0**
RJOB	**Jochberg**	**151.87**	**351**	*e*PKPbc		**PKiKP**	**21 07 09.2**	**+0.5**
	baz=5.2,slow=2.5							
CSS	**Mathiatis**	**151.96**	**308**			**PKPdf**	**21 07 03.5**	**+1.1**
UBR	**Ueberruh**	**152.25**	**355**	*e*PKPbc		**PKiKP**	**21 07 10.5**	**+1.1**
	baz=5.2,slow=2.5							
TORD	**Torodi Ar. Bea**	**171.82**	**146**	PKP		**PKPdf**	**21 07 22.7**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=283,slow=2.5,SNR=3.4							

*NEIC **21** 20:49:57.8±1.5,20.82S±0.05×69.31W±0.09,h77km±5km, Error ellipse: s-maj=11.6km s-min=6.7km az=86.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.54; Mθθ=0.16; Mφφ=0.69; Mrθ=0.99; Mrφ=0.35; Mθφ=0.39; Fault plane solution: Mw1.28000×10¹⁵ NP1: φs171.08000°,δ29.04000°,λ-152.42000°. NP2: φs56.53000°,δ77.01000°,λ-63.79000°. Principal axes: T 1.1903, Plg27.0000°, Azm126.0000°; N 0.1638, Plg25.0000°, Azm230.0000°; P -1.3541, Plg51.0000°, Azm356.0000°;*

*IDC **21** 20:49:58.4±0.8,20.70S×69.20W,h81km±7km, mb3.8/9, mb1 4.0/11,mb1mx3.8/34,mbtmp4.1/11,MS3.0/2, Ms1 3.0/2,ms1mx2.8/20 Error ellipse: s-maj=19.6km s-min=8.4km az=87.0*

*GUC **21** 20:49:58.9±0.6,20.79S×69.33W,h78km±3km,ML4.2*

ISC 21 20:49:57.8±0.6,20.79S±0.03×69.37W±0.05,h80km±5km, n62,σ1§10/73,mb4.2/9,9C-5D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.68**	**18**	⇑*i*P		**Pn**	**20 50 14.3**	**+0.6**
PB08				*e*S		**Sn**	**20 50 26.1**	**+0.7**
PATCX	**Punta Patache**	**0.73**	**267**	⇑*i*P		**Pn**	**20 50 14.4**	**+0.5**
PATCX				*e*S		**Sn**	**20 50 27.0**	**+1.1**
PATCX				IAML			20 50 27.9	
	comp=N,19μm,0.5s							
TA01	**Diego Aracena**	**0.79**	**286**	⇑*i*P		**Pn**	**20 50 14.7**	**+0.3**
TA01				*e*S		**Sn**	**20 50 27.3**	**+0.5**
TA01				IAML			20 50 29.6	
	comp=E,10μm,0.3s							
PB09	**IPOC Station P**	**1.01**	**173**	⇓*i*P		**Pn**	**20 50 18.0**	**+0.8**
PB09				*e*S		**Sn**	**20 50 32.9**	**+1.3**
PB11	**IPOC Station P**	**1.06**	**345**	⇑*i*P		**Pn**	**20 50 18.1**	**+0.4**
PB11				*e*S		**Sn**	**20 50 33.6**	**+1.0**
PB11				IAML			20 50 35.5	
	comp=E,9μm,0.5s							
PB11	**IPOC Station P**	**1.06**	**345**			**Pn**	**20 50 17.9**	**+0.2**
GO01	**Chusmiza**	**1.13**	**9**	⇑*i*P		**Pn**	**20 50 19.6**	**+0.7**
GO01				*e*S		**Sn**	**20 50 35.3**	**+0.6**
GO01				IAML			20 50 39.0	
	comp=N,9μm,0.2s							
GO01	**Chusmiza**	**1.13**	**9**

mb1 4.0/7, mb1mx3.6/42, mbtmp4.1/7, ML4.3/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/33, Error ellipse: s-maj=38.4km s-min=31.1km az=86.0

NEIC ***21*** *20:57:18.4±2.6, 13.6S±0.1×166.5E±0.1, h68km±11km, mb4.1/4, Error ellipse: s-maj=22.6km s-min=12.1km az=54.0*

ISC 21 20:57:15.7±0.8, **13.52S**±0.08×**166.7E**±0.1, **h39**km, **n18**, σ1§**46**/20, **mb4.0**/6, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**1.98**	**165**		**Pn**	**20 57 48.4**	**+1.6**
HNR	**Honiara**	**7.74**	**301**	P	**Pn**	**20 59 08.0**	**+2.1**
	18nm,0.3s,baz=106,slow=12,SNR=6.9						
HNR				S	**Sn**	**21 00 31.2**	**-1.2**
	34nm,0.3s,baz=176,slow=22,SNR=8.0						
HNR	**Honiara**	**7.74**	**301**		**Pn**	**20 59 08.1**	**+2.1**
HNR					**Sn**	**21 00 33.3**	**+0.9**
DZM	**Mont Dzumac**	**8.51**	**181**	P	**Pn**	**20 59 19.2**	**+2.6**
	1.0nm,0.3s,baz=115,slow=22,SNR=9.0						
DZM				S	**Sn**	**21 00 51.1**	**-0.3**
	baz=187,slow=10,SNR=2.2						
DZM	**Mont Dzumac**	**8.51**	**181**	Pn	**Pn**	**20 59 16.5**	**0.0**
NOUC	**Port Laguerre**	**8.54**	**182**	Pn	**Pn**	**20 59 15.7**	**-1.2**
KRVT	**Keravat (AS076**	**17.11**	**301**	LR	LR	21 08 40.2	
	comp=Z,75nm,18.2s,baz=96,slow=40						
STKA	**Stephens Creek**	**29.36**	**227**	P	**P**	**21 03 15.9**	**+0.8**
	2.0nm,1.0s,baz=67,slow=13,SNR=3.1						
STKA	**Stephens Creek**	**29.36**	**227**	P	**P**	**21 03 15.3**	**+0.2**
STKA				IAmb	IAmb	21 03 16.9	
	comp=Z,1.8nm,1.4s						
WRAB	**Tennant Creek**	**31.57**	**254**	P	**P**	**21 03 32.9**	**-1.9**
WRAB				IAmb	IAmb	21 03 54.0	
	comp=Z,19nm,1.6s						
ASAR	**Alice Springs**	**32.58**	**247**	PcP	**PcP**	**21 06 28.4**	**-1.2**
	comp=Z,0.4nm,0.5s,baz=91,slow=1.7,SNR=3.0						
ASAR				LR	LR	21 15 21.5	
	comp=Z,80nm,19.0s,baz=98,slow=33						
WAKE	**Wake Island**	**32.60**	**360**	P	**P**	**21 03 44.9**	**+1.2**
SARN	**Sarigan**	**36.44**	**325**	P	**P**	**21 04 15.0**	**-2.0**
CMAR	**Chiang Mai Arr**	**73.93**	**294**	P	**P**	**21 08 48.0**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=120,slow=5.6,SNR=4.9						
ILAR	**Eielson Array**	**85.56**	**18**	P	**P**	**21 09 49.3**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=233,slow=5.3,SNR=15						
MKAR	**Makanchi Array**	**95.93**	**317**	P	**P**	**21 10 38.7**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=103,slow=3.3,SNR=3.1						
YKA	**Yellowknife Ar**	**96.74**	**27**	P	**P**	**21 10 41.4**	**-0.4**
	comp=Z,0.1nm,0.4s,baz=257,slow=4.4,SNR=2.9						
ARCES	**ARCESS Array B**	**118.94**	**345**	PKP	**PKPdf**	**21 15 58.0**	**-1.5**
	comp=Z,3.3nm,1.1s,baz=21,slow=3.9,SNR=8.1						

IDC ***21*** *20:57:58.3±0.5, 5.27S×151.17E, h116km±5km, mb4.1/9, mb1 4.3/11, mb1mx3.8/41, mbtmp4.6/11, MS3.2/1, Ms1 3.2/1, ms1mx2.5/27, Error ellipse: s-maj=17.6km s-min=7.5km az=131.0*

NEIC ***21*** *20:57:58.7±1.5, 5.24S±0.10×151.2E±0.1, h122km±7km, mb4.9/34, Error ellipse: s-maj=16.5km s-min=13.0km az=117.0*

ISC 21 20:57:57.1±0.5, **5.28S**±0.06×**151.16E**±0.08, **h100**km, **n58**, σ1§**60**/66, **mb4.9**/23, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.29**	**42**	P	**Pn**	**20 58 23.3**	**+2.4**
	110nm,0.3s,baz=270,slow=1.2,SNR=51						
KRVT				S	**Sn**	**20 58 41.5**	**+2.7**
	178nm,0.3s,baz=276,slow=22,SNR=36						
KRVT				LR	LR	20 59 08.6	
	comp=Z,490nm,21.6s,baz=178,slow=55						
PMG	**Port Moresby**	**5.71**	**224**	P	**Pn**	**20 59 22.5**	**+3.1**
	4.2nm,0.3s,baz=33,slow=8.6,SNR=21						
PMG				S	**Sn**	**21 00 25.6**	**+1.9**
	7.7nm,0.3s,baz=279,slow=22,SNR=10						
COEN	**Coen**	**11.67**	**222**	Pn	**Pn**	**21 00 40.7**	**+0.2**
CTA	**Charters Tower**	**15.48**	**198**	P	**P**	**21 01 33.5**	**+1.3**
	0.3nm,0.3s,baz=28,slow=14,SNR=9.3						
SANVU	**Saraoutou**	**18.72**	**124**	P	**P**	**21 02 06.9**	**-1.1**
SANVU				IAmb	IAmb	21 02 11.1	
	comp=Z,104nm,1.4s						
GUMO	**Guam**	**19.76**	**342**	P	**P**	**21 02 21.0**	**+1.8**
	comp=Z,4.9nm,0.3s,baz=6,7,slow=23,SNR=2.3						
EIDS	**Eidsvold**	**19.98**	**180**	P	**P**	**21 02 22.4**	**+0.8**
SIJI	**Sorong**	**20.34**	**282**	P	**P**	**21 02 27.2**	**+1.6**
	comp=Z,6.4nm,0.9s,baz=343,slow=8.4,SNR=2.8						
MTN	**Manton Dam**	**21.15**	**248**	P	**P**	**21 02 35.8**	**+1.6**
MTN				IAmb	IAmb	21 02 36.9	
	comp=Z,24nm,1.0s						
WB0	**Warramunga Arr**	**21.77**	**227**	P	**P**	**21 02 41.0**	**+0.1**
WR0	**Warramunga Arr**	**21.78**	**226**	P	**P**	**21 02 40.2**	**-0.9**
WR0					**S**	**21 06 34.2**	**-2.0**
WRAB	**Tennant Creek**	**21.90**	**227**	P	**P**	**21 02 41.2**	**-1.1**
WB2	**Warramunga Arr**	**21.91**	**227**	P	**P**	**21 02 42.3**	**-0.1**
WB2				IAmb	IAmb	21 02 44.5	
	comp=Z,17nm,0.8s						
WRA	**Warramunga Arr**	**21.92**	**227**	P	**P**	**21 02 42.2**	**-0.2**
	comp=Z,12nm,0.6s,baz=51,slow=9.8,SNR=48						
WRA				pP	**pP**	**21 03 03.3**	**+1.2**
	comp=Z,6.7nm,0.9s,baz=51,slow=11,SNR=5.9						
WRA				S	**S**	**21 06 35.8**	**-3.0**
	comp=Z,2.2nm,1.0s,baz=58,slow=18,SNR=7.2						
WRA				ScP	**ScP**	**21 10 02.9**	**-3.6**
	comp=Z,1.8nm,1.0s,baz=39,slow=2.6,SNR=4.2						
NOUC	**Port Laguerre**	**22.24**	**140**	P	**P**	**21 02 44.8**	**-1.0**
DZM	**Mont Dzumac**	**22.30**	**140**	P	**P**	**21 02 47.2**	**+0.6**
	comp=Z,6.8nm,0.6s,baz=252,slow=22,SNR=5.4						
DZM	**Mont Dzumac**	**22.30**	**140**	P	**P**	**21 02 46.5**	**-0.1**
KNRA	**Kununurra**	**24.30**	**243**	P	**P**	**21 03 04.8**	**-0.7**
KNRA				IAmb	IAmb	21 03 31.3	
	comp=Z,77nm,1.5s						
AS31	**Alice Springs**	**24.71**	**221**	P	**P**	**21 03 08.7**	**-0.5**
ASAR	**Alice Springs**	**24.71**	**221**	P	**P**	**21 03 09.2**	**0.0**
	comp=Z,14nm,0.7s,baz=56,slow=8.6,SNR=76						
ASAR				pP	**pP**	**21 03 33.2**	**+1.9**
	comp=Z,2.7nm,0.8s,baz=58,slow=8.7,SNR=3.1						
ASAR				S	**S**	**21 07 20.2**	**-3.8**
	comp=Z,0.6nm,0.9s,baz=53,slow=18,SNR=3.5						
ASAR				ScP	**ScP**	**21 10 09.7**	**-4.2**
	comp=Z,0.9nm,0.8s,baz=43,slow=2.2,SNR=5.9						
ARMA	**Armidale**	**25.01**	**179**	P	**P**	**21 03 11.4**	**-0.5**
ARMA				IAmb	IAmb	21 03 15.4	
	comp=Z,34nm,1.2s						
STKA	**Stephens Creek**	**27.94**	**198**	P	**P**	**21 03 39.1**	**+1.0**
FITZ	**Fitzroy Crossi**	**28.00**	**241**	P	**P**	**21 03 38.0**	**-0.8**
	comp=Z,6.0nm,0.3s,baz=61,slow=6.4,SNR=31						
FITZ	**Fitzroy Crossi**	**28.00**	**241**	P	**P**	**21 03 37.7**	**-1.1**
FITZ				IAmb	IAmb	21 03 40.8	
	comp=Z,17nm,1.2s						
CAN	**Canberra**	**29.96**	**184**	P	**P**	**21 03 56.4**	**+0.4**
CAN				IAmb	IAmb	21 04 12.7	
	comp=Z,63nm,1.7s						
BBOO	**Buckleboo**	**30.81**	**205**	P	**P**	**21 04 04.2**	**+0.8**
BBOO				IAmb	IAmb	21 04 59.1	
	comp=Z,91nm,1.9s						
FORT	**Forrest**	**33.40**	**218**	P	**P**	**21 04 25.6**	**-0.6**
FORT				IAmb	IAmb	21 04 50.0	
	comp=Z,23nm,0.9s						
PSA00	**Pilbara Seismi**	**34.38**	**239**	P	**P**	**21 04 34.3**	**-0.6**
PSA00				IAmb	IAmb	21 05 04.0	
	comp=Z,79nm,1.6s						
OUZ	**Omahuta**	**36.28**	**148**	P	**P**	**21 04 52.0**	**+1.0**
TAU	**Tasmania Unive**	**37.63**	**185**	P	**P**	**21 05 00.7**	**-1.6**
QRZ	**Quartz Range**	**40.25**	**155**	P	**P**	**21 05 24.2**	**+0.1**
YOJ	**Yonaguni jima**	**40.31**	**318**	P	**P**	**21 05 22.0**	**-2.8**
URZ	**Urewera**	**40.43**	**148**	P	**P**	**21 05 25.6**	**0.0**
NNZ	**Nelson**	**40.94**	**154**	P	**P**	**21 05 29.9**	**+0.2**
THZ	**Tophouse**	**41.18**	**155**	P	**P**	**21 05 31.6**	**-0.2**
THZ				IAmb	IAmb	21 05 33.0	
	comp=Z,25nm,1.0s						
TUWZ	**Tuamarina**	**41.35**	**154**	P	**P**	**21 05 33.8**	**+0.6**
FOZ	**Fox Glacier**	**41.50**	**159**	P	**P**	**21 05 37.5**	**+3.2**
FOZ				IAmb	IAmb	21 06 21.0	
	comp=Z,63nm,1.4s						
BSWZ	**Blackbirch Sta**	**41.56**	**154**	P	**P**	**21 05 35.4**	**+0.5**
LTZ	**Lake Taylor**	**41.77**	**157**	P	**P**	**21 05 39.1**	**+2.4**
LTZ				IAmb	IAmb	21 06 18.5	
	comp=Z,99nm,2.0s						
MSWZ	**Moikau Station**	**41.93**	**153**	P	**P**	**21 05 37.7**	**-0.2**
KHZ	**Kahutara**	**41.99**	**155**	P	**P**	**21 05 38.6**	**+0.3**
PLWZ	**Palliser**	**42.05**	**153**	P	**P**	**21 05 38.7**	**-0.2**
RPZ	**Rata Peaks**	**42.11**	**158**	P	**P**	**21 05 39.9**	**+0.6**
	comp=Z,18nm,0.8s,baz=223,slow=22,SNR=5.3						
RPZ	**Rata Peaks**	**42.11**	**158**	P	**P**	**21 05 39.6**	**+0.3**
RPZ				IAmb	IAmb	21 05 40.9	
	comp=Z,19nm,0.8s						
OXZ	**Oxford**	**42.14**	**157**	P	**P**	**21 05 39.1**	**-0.5**
OXZ				IAmb	IAmb	21 05 43.9	
	comp=Z,23nm,1.0s						
LBZ	**Lake Benmore**	**42.38**	**160**	P	**P**	**21 05 41.5**	**0.0**
MLZ	**Mavora Lakes**	**42.58**	**162**	P	**P**	**21 05 44.1**	**+0.9**
MLZ				IAmb	IAmb	21 05 44.8	
	comp=Z,42nm,1.3s						
MQZ	**McQueen's Vall**	**42.70**	**157**	P	**P**	**21 05 44.3**	**+0.2**
MQZ				IAmb	IAmb	21 06 59.3	
	comp=Z,60nm,1.3s						
KLR	**Kul'dur**	**56.86**	**345**	LR	LR	21 29 06.8	
	comp=Z,20nm,18.6s,baz=146,slow=33						
PETK	**Petropavlovsk-**	**58.43**	**5**	P	**P**	**21 07 41.7**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=163,slow=5.6,SNR=2.8						
SONM	**Songino Array**	**65.87**	**329**	P	**P**	**21 08 31.7**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=144,slow=5.3,SNR=3.4						
SONM				PcP	**PcP**	**21 09 01.6**	**-0.8**
	comp=Z,0.7nm,1.0s,baz=116,slow=5.0,SNR=3.3						
BWN	**Browne**	**81.95**	**22**		pP	21 10 35.0	+3.6
ILAR	**Eielson Array**	**83.22**	**22**	P	**P**	**21 10 10.5**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=257,slow=5.3,SNR=3.3						
QSPA	**South Pole Qui**	**84.69**	**180**	P	**P**	**21 10 19.1**	**-0.6**
	comp=Z,5.1nm,0.7s,baz=334,slow=1.2,SNR=17						
QSPA	**South Pole Qui**	**84.69**	**180**	P	**P**	**21 10 18.8**	**-0.9**
QSPA				IAmb	IAmb	21 12 42.6	
	comp=Z,9.2nm,0.9s						
KCPM	**Cahto Peak**	**89.69**	**50**		pP	21 11 12.5	+1.7
TORD	**Torodi Ar. Bea**	**148.89**	**287**	PKPbc	**PKPdf**	**21 17 32.5**	**+2.2**
	comp=Z,0.5nm,0.6s,baz=78,slow=2.0,SNR=5.5						
TORD				pPKPbc	**pPKPbc**	**21 18 04.9**	**+3.2**
	comp=Z,1.2nm,0.8s,baz=66,slow=3.4,SNR=4.7						
BDFB	**Brasilia**	**151.85**	**138**	PKPbc	**PKPbc**	**21 17 40.3**	**-1.2**
	comp=Z,2.2nm,0.6s,baz=211,slow=8.4,SNR=3.2						

IDC ***21*** *21:02:52.9±0.5, 36.02S×53.50E, h0km, mb4.2/25, mb1 4.3/26, mb1mx4.2/47, mbtmp4.2/26, ML4.5/1, MS4.0/28, Ms1 4.0/28, ms1mx4.0/41, Error ellipse: s-maj=16.1km s-min=10.2km az=58.0*

NEIC ***21*** *21:02:54.8±1.3, 36.03S±0.08×53.5E±0.2, h10km±4km, mb4.5/17, Error ellipse: s-maj=18.0km s-min=11.0km az=81.0*

GCMT ***21*** *21:02:56.8±0.2, 36.06S±0.01×53.46E±0.01, h17km±1km, MW5.0/109, Moment Tensor Solution. s49,c60; s109,c158; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.78±.13; Mθθ=0.86±.12; Mφφ=-0.07±.12; Mrθ=0.86±.30; Mrφ=4.22±.10; Mθφ=-0.98±.32; Best double couple: M=4.48700×10^16 NP1=φs=271.00000°, δ=76.00000°, λ=-14.00000°. NP2=φs=5.00000°, δ=76.00000°, λ=-165.00000°. Principal axes: T 4.6370, Plg=0.0000°, Azm=138.0000°; N -0.3020, Plg=70.0000°, Azm=48.0000°; P -4.3360, Plg=20.0000°, Azm=228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 21 21:02:55.3±0.4, **36.02S**±0.07×**53.5E**±0.1, **h14**km, **n72**, σ0§**93**/46, **mb4.3**/27, **MS4.2**/27, **South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CRZF	**Crozet Islands**	**10.47**	**186**	Pn	**Pn**	**21 05 25.7**	**+0.7**
RER	**Riviere de l'E**	**14.93**	**8**	Pn	**Pn**	**21 06 24.1**	**-2.0**
ABPO	**Ambohimpanom**	**17.83**	**340**	P	**P**	**21 07 04.2**	**+0.3**
ABPO				IAmb	IAmb	21 07 08.2	
	comp=Z,35nm,1.0s						
ABPO					Sn	21 10 08.9	-13
OPO	**Ambohidratompo**	**18.27**	**340**	P	**P**	**21 07 08.4**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=169,slow=12,SNR=14						
OPO				S	**Sn**	**21 10 33.3**	**+0.8**
	comp=Z,1.4nm,0.3s,baz=60,slow=21,SNR=4.9						
OPO				LR	LR	21 13 07.2	
	comp=Z,253nm,18.3s,baz=8.5,slow=34						
BOSA	**Boshof**	**24.96**	**279**	P	**P**	**21 08 16.8**	**-1.8**
	comp=Z,4.0nm,0.7s,baz=113,slow=12,SNR=7.6						
BOSA				LR	LR	21 15 34.9	
	comp=Z,392nm,20.8s,baz=118,slow=31						
BOSA	**Boshof**	**24.96**	**279**	IAmb	IAmb	21 08 28.0	
	comp=Z,18nm,1.1s						
LBTB	**Lobatse**	**26.37**	**287**	P	**P**	**21 08 29.1**	**-2.2**
	comp=Z,4.9nm,0.9s,baz=129,slow=7.7,SNR=6.8						
LBTB				LR	LR	21 17 05.1	
	comp=Z,526nm,18.8s,baz=120,slow=32						
LBTB	**Lobatse**	**26.37**	**287**	IAmb	IAmb	21 08 35.4	
	comp=Z,14nm,1.2s						
MATP	**Matopo**	**26.88**	**299**	P	**P**	**21 08 36.3**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=109,slow=7.5,SNR=6.1						
MATP				LR	LR	21 17 38.7	
	comp=Z,414nm,20.4s,baz=130,slow=33						
SUR	**Sutherland**	**27.24**	**268**	LR	LR	21 17 17.2	
	comp=Z,331nm,19.3s,baz=114,slow=32						
MAW	**Mawson**	**32.08**	**173**	P	**P**	**21 09 21.4**	**0.0**
	comp=Z,3.5nm,0.8s,baz=345,slow=9.1,SNR=4.8						
MAW				LR	LR	21 19 06.9	
	comp=Z,478nm,19.9s,baz=353,slow=30						
H08S1	**Diego Carcia H**	**33.13**	**36**	T	T	21 44 23.0	
	baz=209,slow=76,SNR=102						
H08S2	**Diego Garcia H**	**33.13**	**36**	T	T	21 44 19.8	
	baz=209,slow=76,SNR=133						
H08S3	**Diego Garcia H**	**33.15**	**36**	T	T	21 44 22.8	
	baz=209,slow=76,SNR=184						
H08N3	**Diego Garcia H**	**33.59**	**33**	T	T	21 44 45.1	
	baz=206,slow=76,SNR=53						
H08N1	**Diego Carcia H**	**33.61**	**33**	T	T	21 44 47.6	
	baz=206,slow=76,SNR=72						
H08N2	**Diego Garcia H**	**33.62**	**33**	T	T	21 44 48.4	
	baz=206,slow=76,SNR=61						
TSUM	**Tsumeb**	**35.75**	**288**	P	**P**	**21 09 54.5**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=120,slow=9.5,SNR=2.4						
TSUM	**Tsumeb**	**35.75**	**288**	IAmb	IAmb	21 10 07.8	
	comp=Z,5.8nm,1.1s						
KMBO	**Kilima Mbogo**	**37.87**	**333**	P	**P**	**21 10 12.8**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=176,slow=14,SNR=2.0						
KMBO	**Kilima Mbogo**	**37.87**	**333**	P	**P**	**21 10 12.2**	**0.0**
SNAA	**Sanae**	**45.78**	**202**	P	**P**	**21 11 15.6**	**-0.5**
	comp=Z,1.3nm,0.7s,baz=66,slow=10.0,SNR=4.9						
SNAA	**Sanae**	**45.78**	**202**	IAmb	IAmb	21 11 30.2	
	comp=Z,4.8nm,0.9s						
H01W2	**Cape Leeuwin H**	**48.65**	**107**	T	T	22 03 38.8	
	baz=249,slow=75,SNR=520						
H01W3	**Cape Leeuwin H**	**48.66**	**107**	T	T	22 03 39.3	
	baz=249,slow=75,SNR=511						
H01W1	**Cape Leeuwin H**	**48.67**	**107**	T	T	22 03 40.1	
	baz=249,slow=75,SNR=500						
NWAO	**Narrogin (SRO)**	**51.76**	**106**	P	**P**	**21 12 03.3**	**+0.8**
	comp=Z,5.2nm,0.7s,baz=150,slow=2.2,SNR=3.4						
NWAO	**Narrogin (SRO)**	**51.76**	**106**	P	**P**	**21 12 02.0**	**-0.5**
QSPA	**South Pole Qui**	**54.16**	**180**	P	**P**	**21 12 19.0**	**-0.9**
	comp=Z,2.1nm,0.7s,baz=260,slow=3.5,SNR=5.8						
QSPA				LR	LR	21 32 33.1	
	comp=Z,265nm,20.2s,baz=273,slow=33						
QSPA	**South Pole Qui**	**54.16**	**180**	P	**P**	**21 12 18.5**	**-1.5**
VNDA	**Vanda**	**58.93**	**166**	P	**P**	**21 12 53.8**	**+0.3**
	comp=Z,3.0nm,0.9s,baz=68,slow=5.4,SNR=2.1						
VNDA				LR	LR	21 35 20.1	
	comp=Z,205nm,20.2s,baz=247,slow=33						
RAYN	**Ar Rayn**	**59.71**	**351**	P	**P**	**21 13 00.3**	**+0.8**
RAYN				IAmb	IAmb	21 13 01.4	
	comp=Z,5.6nm,1.0s						
FITZ	**Fitzroy Crossi**	**65.30**	**95**	P	**P**	**21 13 37.2**	**+0.1**
	comp=Z,3.8nm,0.9s,baz=209,slow=14,SNR=2.8						
FITZ				LR	LR	21 38 13.4	
	comp=Z,65nm,19.4s,baz=260,slow=32						
ASAR	**Alice Springs**	**69.01**	**104**	P	**P**	**21 14 00.8**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=234,slow=5.8,SNR=22						
CMAR	**Chiang Mai Arr**	**69.14**	**46**	P	**P**	**21 14 01.6**	**+0.3**
	comp=Z,3.6nm,1.0s,baz=236,slow=6.6,SNR=8.9						
TORD	**Torodi Ar. Bea**	**69.18**	**305**	P	**P**	**21 14 02.2**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=126,slow=4.8,SNR=8.3						
TORD				LR	LR	21 42 51.2	
	comp=Z,198nm,21.7s,baz=60,slow=35						
DBIC	**Dimbokro**	**69.25**	**295**	LR	LR	21 41 05.3	
	comp=Z,132nm,20.6s,baz=114,slow=33						
STKA	**Stephens Creek**	**70.66**	**116**	P	**P**	**21 14 10.0**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=291,slow=14,SNR=2.7						
STKA				LR	LR	21 38 23.7	
	comp=Z,217nm,21.2s,baz=211,slow=30						
STKA	**Stephens Creek**	**70.66**	**116**	IAmb	IAmb	21 14 12.9	
	comp=Z,3.4nm,1.5s						
WRA	**Warramunga Arr**	**71.31**	**101**	P	**P**	**21 14 14.9**	**+0.1**
	comp=Z,3.8nm,0.8s,baz=233,slow=5.5,SNR=20						
BRTR	**Keskin Array B**	**77.58**	**344**	P	**P**	**21 14 50.5**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=171,slow=7.2,SNR=7.5						
BRTR				LR	LR	21 47 22.6	
	comp=Z,42nm,19.3s,baz=206,slow=34						
BR131	**Keskin Array S**	**77.58**	**344**	P	**P**	**21 14 49.7**	**-1.1**
BR131				IAmb	IAmb	21 15 01.5	
	comp=Z,2.6nm,0.8s						
AKH	**Akhalkalaki**	**77.61**	**352**		**PcP**	**21 15 03.2**	**+2.1**
KSH	**Kashi**	**77.96**	**18**	P	**P**	**21 14 54.8**	**+1.9**
KBZ	**Khabaz**	**79.97**	**352**	P	**P**	**21 15 03.9**	**+0.3**
	comp=Z,2.2nm,1.0s,baz=205,slow=5.2,SNR=3.4						
KBZ				LR	LR	21 47 38.9	
	comp=Z,70nm,21.4s,baz=216,slow=34						
AAK	**Ala-Archa**	**80.59**	**16**	P	**P**	**21 15 07.7**	**+0.5**
	comp=Z,2.3nm,0.9s,baz=190,slow=5.0,SNR=9.8						
AAK	**Ala-Archa**	**80.59**	**16**	P	**P**	**21 15 08.4**	**+1.1**
AAK				IAmb	IAmb	21 15 20.8	
	comp=Z,10.0nm,1.1s						
KEST	**Kesra**	**82.39**	**325**	LR	LR	21 51 14.0	
	comp=Z,174nm,20.1s,baz=328,slow=35						
ABKAR	**Akbulak array**	**85.09**	**4**	P	**P**	**21 15 30.5**	**+0.3**
AKTO	**Aktyubinsk**	**86.18**	**3**	P	**P**	**21 15 35.4**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=179,slow=5.8,SNR=5.8						
MAKZ	**Makanchi**	**86.32**	**19**	P	**P**	**21 15 36.6**	**+0.2**
MAKZ				IAmb	IAmb	21 15 48.9	
	comp=Z,3.2nm,0.8s						
MK31	**Makanchi Array**	**86.39**	**19**	P	**P**	**21 15 37.0**	**+0.2**
MKAR	**Makanchi Array**	**86.39**	**19**	P	**P**	**21 15 36.5**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=206,slow=6.4,SNR=8.2						
MKAR				LR	LR	21 49 21.0	
	comp=Z,56nm,20.7s,baz=167,slow=32						
PMG	**Port Moresby**	**87.44**	**100**	LR	LR	21 49 46.5	
	comp=Z,91nm,21.3s,baz=190,slow=32						
PLCA	**Paso Flores**	**87.98**	**219**	LR	LR	21 48 19.1	
	comp=Z,75nm,20.1s,baz=154,slow=31						
AKASG	**Malin Array Be**	**88.97**	**345**	P	**P**	**21 15 48.6**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=165,slow=3.8,SNR=5.3						
AKASG				LR	LR	21 55 20.6	
	comp=Z,20nm,18.0s,baz=275,slow=35						
URZ	**Urewera**	**89.53**	**139**	LR	LR	21 50 12.8	
	comp=Z,120nm,19.3s,baz=190,slow=32						
BVAR	**Borovoye Array**	**89.88**	**10**	P	**P**	**21 15 52.5**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=172,slow=5.1,SNR=3.4						
CPUP	**Villa Florida**	**90.05**	**237**	P	**P**	**21 15 55.5**	**+0.5**
	comp=Z,1.8nm,0.8s,baz=106,slow=15,SNR=2.0						
CPUP				LR	LR	21 49 34.3	
	comp=Z,73nm,20.2s,baz=172,slow=31						
GERES	**GERESS Array B**	**91.63**	**335**	LR	LR	22 00 46.7	
	comp=Z,77nm,18.1s,baz=252,slow=38						
ESDC	**Sonseca Array**	**92.08**	**319**	LR	LR	21 58 21.8	
	comp=Z,82nm,19.2s,baz=305,slow=36						
CFA	**Coronel Fontan**	**93.39**	**227**	LR	LR	21 51 09.1	
	comp=Z,73nm,19.3s,baz=194,slow=31						
ZALV	**Zalesovo Beam**	**93.60**	**18**	P	**P**	**21 16 08.4**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=207,slow=2.9,SNR=2.8						
DZM	**Mont Dzumac**	**94.24**	**121**	LR	LR	21 49 27.0	
	comp=Z,80nm,22.0s,baz=213,slow=30						
KRVT	**Keravat (AS076**	**94.33**	**98**	LR	LR	21 57 07.9	
	comp=Z,28nm,18.1s,baz=218,slow=34						
SONM	**Songino Array**	**95.90**	**33**	LR	LR	21 57 48.4	
	comp=Z,146nm,18.3s,baz=201,slow=34						
HNR	**Honiara**	**97.50**	**107**	LR	LR	21 56 18.5	
	comp=Z,88nm,18.6s,baz=290,slow=33						
INK	**Inuvik**	**147.42**	**5**	PKPbc	**PKPdf**	**21 22 36.1**	**+1.0**
	comp=Z,2.9nm,0.9s,baz=20,slow=5.2,SNR=9.3						
INK	**Inuvik**	**147.42**	**5**		**PKPbc**	**21 22 37.9**	**+0.3**
ILAR	**Eielson Array**	**148.72**	**17**	PKPbc	**PKPbc**	**21 22 41.0**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=319,slow=3.3,SNR=16						
YKA	**Yellowknife Ar**	**152.49**	**348**	PKPbc	**PKiKP**	**21 22 50.5**	**0.0**
	comp=Z,0.6nm,0.7s,baz=32,slow=1.5,SNR=3.7						
ULM	**Lac du Bonnet**	**153.76**	**312**	PKPbc	**PKiKP**	**21 22 53.7**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=72,slow=6.4,

PB05	**IPOC Station P**	**3.25**	**165**	*i* P		**Pn**	**21 42 09.9**	**+0.9**
PB06	**IPOC Station P**	**3.31**	**155**	*i* P		**Pn**	**21 42 11.1**	**+1.2**
LVC	**Limon Verde**	**3.54**	**145**	P		**Pn**	**21 42 15.1**	**+1.9**
	comp=Z,4.9nm,0.3s,baz=324,slow=11,SNR=39							
LVC				S		**Sn**	**21 42 56.3**	**+0.4**
	comp=Z,15nm,0.3s,baz=216,slow=22,SNR=4.0							
LVC	**Limon Verde**	**3.54**	**145**			**Pn**	**21 42 16.4**	**+3.2**
LVC						**Sn**	**21 42 49.9**	**-6.0**
LVC	**Limon Verde**	**3.54**	**145**	*i* P		**Pn**	**21 42 16.3**	**+3.0**
PB15	**IPOC Station P**	**3.81**	**157**	*i* P		**Pn**	**21 42 18.9**	**+2.1**
PB10	**IPOC Station P**	**3.83**	**172**			**Pn**	**21 42 17.6**	**+0.7**
PB10						Sn	21 42 54.5	-7.9
PB10	**IPOC Station P**	**3.83**	**172**	*i* P		**Pn**	**21 42 17.6**	**+0.7**
LPAZ	**La Paz**	**4.42**	**40**	P		**Pn**	**21 42 29.6**	**+4.1**
	comp=Z,0.3nm,0.3s,baz=130,slow=5.5,SNR=7.0							
LPAZ				S		**Sn**	**21 43 18.6**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=218,slow=18,SNR=1.9							
LPAZ	**La Paz**	**4.42**	**40**			**Pn**	**21 42 28.4**	**+2.9**
GO02	**Mina Guanaco**	**5.61**	**166**			**Pn**	**21 42 43.0**	**+1.3**
GO03	**Copiap**	**7.90**	**174**	Pn		**Pn**	**21 43 11.7**	**-1.2**
GO03						**Sn**	**21 44 39.5**	**-3.2**
NNA	**Nana**	**9.45**	**323**	LR		LR	21 47 09.9	
	comp=Z,64nm,18.4s,baz=152,slow=36							
SIV	**San Ignacio**	**10.24**	**70**	P		**Pn**	**21 43 46.7**	**+1.7**
	comp=Z,0.8nm,0.3s,baz=254,slow=14,SNR=10.0							
GO04	**Tololo Observa**	**10.43**	**179**	Pn		**Pn**	**21 43 47.3**	**-0.5**
SAML	**Samuel**	**13.15**	**37**	Pn		**Pn**	**21 44 22.7**	**-2.1**
BDFB	**Brasilia**	**22.36**	**83**	P		**P**	**21 46 17.6**	**+1.1**
	comp=Z,1.6nm,0.5s,baz=228,slow=22,SNR=3.5							
BDFB				LR		LR	21 56 34.7	
	comp=Z,122nm,18.9s,baz=246,slow=41							
RUSC	**La Rusia**	**25.51**	**355**	P		**P**	**21 46 44.7**	**-2.6**
ULM	**Lac du Bonnet**	**73.01**	**344**	LR		LR	22 27 31.1	
	comp=Z,80nm,21.3s,baz=98,slow=38							
TORD	**Torodi Ar. Bea**	**78.71**	**72**	P		**P**	**21 53 21.0**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=255,slow=4.9,SNR=9.2							
YKA	**Yellowknife Ar**	**88.83**	**341**	P		**P**	**21 54 13.8**	**+1.9**
	comp=Z,0.5nm,0.7s,baz=135,slow=4.8,SNR=10							
MKAR	**Makanchi Array**	**145.31**	**33**	PKPbc		**PKPdf**	**22 00 57.6**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=329,slow=3.1,SNR=7.0							

KRNET 21 21:41:50.8±0.1, 42.08N×75.14E, h23km, mb1.2, 5C-2D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
KZA	**Kyzart**	**0.08**	**88**	⇑*i*	P		Pb	21 41 53.8	-1.8
	baz=88								
KZA				⇑*i*	S		Sb	21 41 55.9	-2.9
	baz=88								
UCH	**Uchtor**	**0.49**	**288**	⇑*i*	P		Pb	21 42 00.7	-0.3
	baz=88								
KBK	**Karagaybulak**	**0.60**	**346**	⇑*i*	P		Pb	21 42 02.3	-0.4
	baz=46								
KBK				⇑*i*	S		Sb	21 42 11.0	+0.1
	baz=46								
AAK	**Ala-Archa**	**0.74**	**320**	⇓*i*	P		Pb	21 42 04.5	-0.6
	baz=20								
AAK				⇓*i*	S		Sb	21 42 14.8	0.0
	baz=20								

KRNET 21 21:41:58.0±0.1, 42.10N×75.12E, h8km, mb1.2, 1C-6D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
KZA	**Kyzart**	**0.10**	**104**	⇓*i*	P		Pg	21 41 59.7	-1.1
	baz=4.0								
KZA				⇓*i*	S		Sg	21 42 01.8	-0.9
	baz=4.0								
UCH	**Uchtor**	**0.46**	**286**	⇓*i*	P		Pg	21 42 07.2	+0.1
	baz=86								
UCH				⇓*i*	S		Sg	21 42 14.2	+0.9
	baz=86								
UCH	**Uchtor**	**0.46**	**286**	⇑*i*	S		Pg	21 42 07.4	+0.3
	baz=88								
KBK	**Karagaybulak**	**0.57**	**347**	⇓*i*	P		Pg	21 42 09.4	+0.4
	baz=47								
KBK				⇓*i*	S		Sg	21 42 17.4	+0.9
	baz=47								
AAK	**Ala-Archa**	**0.71**	**320**	*i* P			Pg	21 42 11.8	+0.2
	baz=20								
AAK				*i* S			Sg	21 42 21.5	+0.6
	baz=20								

*OSPL **21** 21:44:55.7±1.0, 18.94N×66.50W, h14km±17km, ML2.3*
*NEIC **21** 21:44:57.5±1.4, 18.99N±0.02×66.73W±0.03, h34km±8km, Error ellipse: s-maj=4.7km s-min=3.3km az=81.0*
*RSPR **21** 21:44:58.0, 19.02N×66.84W, h46km±3km, MD3.1/9*
ISC 21 21:44:57.6±1.8, 18.96N±0.09×66.77W±0.03, h28km, n41, σ0.65/53, 9C-4D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
EMPR	**Esperanza - Ma**	**0.53**	**155**	*e*S			**Sn**	**21 45 19.1**	**+1.8**
EMPR	**Esperanza - Ma**	**0.53**	**155**	⇓*e*P			**Pn**	**21 45 09.7**	**+0.4**
EMPR	**Esperanza - Ma**	**0.53**	**155**				**Pn**	**21 45 09.7**	**+0.4**
EMPR							**Sn**	**21 45 19.1**	**+1.8**
AGPR	**Aguadilla, PR**	**0.59**	**214**	⇓*e*P			**Pn**	**21 45 09.2**	**-0.2**
AGPR	**Aguadilla, PR**	**0.59**	**214**	*i* P			**Pb**	**21 45 09.1**	**-0.2**
AGPR				*e*S			**Sn**	**21 45 18.5**	**-0.2**
AGPR				IAML				21 45 22.0	
	comp=Z,84nm,0.1s								
AGPR	**Aguadilla, PR**	**0.59**	**214**				**Pb**	**21 45 09.2**	**-0.2**
AGPR							**Sn**	**21 45 18.6**	**-0.2**
AOPR	**Arecibo Observ**	**0.61**	**179**	⇓*e*P			**Pn**	**21 45 10.2**	**-0.2**
AOPR	**Arecibo Observ**	**0.61**	**179**	*e*S			**Sn**	**21 45 20.0**	**+0.7**
AOPR	**Arecibo Observ**	**0.61**	**179**				**Pn**	**21 45 10.2**	**-0.2**
AOPR							**Sn**	**21 45 20.0**	**+0.7**
MPR	**Mayaguez**	**0.82**	**205**	*i* P			**Pn**	**21 45 12.6**	**-0.7**
MPR				*e*S			**Sb**	**21 45 24.2**	**+0.1**
MPR				IAML				21 45 34.8	
	comp=Z,84nm,0.1s								
MPR	**Mayaguez**	**0.82**	**205**	Pn			**Pn**	**21 45 12.8**	**-0.6**
LSP	**Las Mesas**	**0.84**	**201**	⇑*e*P			**Pn**	**21 45 13.3**	**-0.3**
LSP	**Las Mesas**	**0.84**	**201**				**Pn**	**21 45 13.3**	**-0.3**
CELP	**Cerrillos**	**0.90**	**168**	⇑*e*P			**Pn**	**21 45 14.1**	**-0.3**
CELP	**Cerrillos**	**0.90**	**168**				**Pn**	**21 45 14.1**	**-0.3**
GCPR	**Guaynabo City**	**0.92**	**135**	Pn			**Pb**	**21 45 15.1**	**+0.2**
OBIP	**Obispado Ponce**	**0.92**	**170**	⇑*e*P			**Pb**	**21 45 15.2**	**+0.2**
OBIP	**Obispado Ponce**	**0.92**	**170**	*e*S			**Sn**	**21 45 27.8**	**+0.7**
OBIP	**Obispado Ponce**	**0.92**	**170**				**Pb**	**21 45 15.2**	**+0.2**
OBIP							**Sn**	**21 45 27.8**	**+0.7**
GBPR	**Guanica, Bosqu**	**0.98**	**186**	⇑*e*P			**Pn**	**21 45 15.1**	**-0.5**
GBPR	**Guanica, Bosqu**	**0.98**	**186**	*e*S			**Sn**	**21 45 28.8**	**+0.2**
GBPR	**Guanica, Bosqu**	**0.98**	**186**				**Pn**	**21 45 15.1**	**-0.5**
GBPR							**Sn**	**21 45 28.8**	**+0.2**
CRPR	**Cabo Rojo, PR**	**1.00**	**199**	⇓*e*P			**Pn**	**21 45 15.7**	**-0.1**
CRPR	**Cabo Rojo, PR**	**1.00**	**199**	*e*S			**Sn**	**21 45 28.8**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.00**	**199**				**Pn**	**21 45 15.7**	**-0.1**
CRPR							**Sn**	**21 45 28.8**	**-0.2**
MLPR	**Magueyes Islan**	**1.02**	**195**	⇑*e*P			**Pn**	**21 45 15.2**	**-0.8**
MLPR	**Magueyes Islan**	**1.02**	**195**	*e*S			**Sn**	**21 45 29.0**	**-0.4**
MLPR	**Magueyes Islan**	**1.02**	**195**				**Pn**	**21 45 15.2**	**-0.8**
MLPR							**Sn**	**21 45 29.0**	**-0.4**
SJG	**San Juan**	**1.03**	**145**	Pn			**Pb**	**21 45 17.6**	**+0.8**
CBYP	**Canovanas**	**1.10**	**128**	⇑*e*P			**Pb**	**21 45 17.3**	**-0.8**
CBYP	**Canovanas**	**1.10**	**128**	*e*S			**Sb**	**21 45 32.2**	**+0.1**
CBYP	**Canovanas**	**1.10**	**128**				**Sb**	**21 45 32.2**	**+0.1**
CBYP	**Canovanas**	**1.10**	**128**				**Pb**	**21 45 17.1**	**-1.0**
IGPR	**InterUniversit**	**1.17**	**148**	⇑*e*P			**Pb**	**21 45 18.5**	**-0.7**
IGPR	**InterUniversit**	**1.17**	**148**	Pn			**Pn**	**21 45 17.8**	**-0.4**
HUMP	**Col San Antoni**	**1.19**	**133**	⇑*e*P			**Pb**	**21 45 18.3**	**-1.3**
HUMP	**Col San Antoni**	**1.19**	**133**	⇑*e*P			**Pb**	**21 45 18.9**	**-0.7**
HUMP				*e*S			**Sb**	**21 45 34.4**	**-0.2**
HUMP	**Col San Antoni**	**1.19**	**133**				**Pb**	**21 45 18.9**	**-0.7**
HUMP							**Sb**	**21 45 34.4**	**-0.2**
HUMP	**Col San Antoni**	**1.19**	**133**	Pn			**Pb**	**21 45 18.3**	**-1.3**
MTP	**Monte Pirata**	**1.44**	**126**	Pn			**Pn**	**21 45 21.8**	**+0.1**
PCDR	**Punta Cana, DR**	**1.59**	**254**	*i* P			**Pn**	**21 45 24.4**	**+0.5**
PCDR				*e*S			**Sb**	**21 45 47.1**	**+1.0**
PCDR				IAML				21 45 59.5	
	comp=Z,38nm,0.5s								

ANF 21 22:05:13.5±0.4, 36.98N×83.39W, h0km, ML2.1/16, ML1.9/10, Error ellipse: s-maj=3.1km s-min=2.6km az=18.0, Tennessee

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

T52A	**Hallie**	**0.35**	**69**	P			Pg	22 05 20.3	+0.2
	baz=249								
T52A				S			Sg	22 05 24.2	-0.4
	baz=249								
T51A	**Gray**	**0.45**	**268**	P			Pg	22 05 21.6	-0.5
	baz=88								
T51A				S			Sg	22 05 27.9	+0.1
	baz=88								
TZTN	**Tazewell**	**0.46**	**197**	P			Pg	22 05 21.9	-0.4
	baz=16								
TZTN				S			Sg	22 05 28.5	+0.4
	baz=16								
U51A	**La Follette**	**0.79**	**220**	S			Sg	22 05 38.5	-0.3
	baz=40								
S50A	**Richmond**	**1.06**	**311**	P			Pg	22 05 34.2	+0.3
	baz=131								
V52A	**Sevierville**	**1.15**	**188**	P			Pb	22 05 36.4	+0.1
	baz=8.3,SNR=5.3								
V52A				S			Sb	22 05 51.7	-0.1
	baz=8.3								
T50A	**Nancy**	**1.16**	**272**	P			Pb	22 05 36.5	0.0
	baz=92								
T50A				S			Sb	22 05 52.7	+0.6
	baz=92								
S53A	**Williamson**	**1.22**	**55**	P			Pg	22 05 36.6	-0.3
	baz=236								
U54A	**Nelsons Funny**	**1.34**	**110**	P			Pn	22 05 39.4	-0.2
	baz=291,SNR=7.3								
V53A	**Saluda**	**1.39**	**160**	P			Pg	22 05 40.2	0.0
	baz=341,SNR=7.8								
V53A				S			Sn	22 06 00.2	+0.9
	baz=341								
V51A	**Loudon**	**1.41**	**214**	P			Pg	22 05 40.6	+0.1
	baz=33,SNR=6.7								
S49A	**Springfield**	**1.71**	**298**	P			Pn	22 05 44.7	+0.1
	baz=117								
W53A	**Cullowhee**	**1.82**	**174**	P			Pn	22 05 46.9	+0.7
	baz=354,SNR=5.5								
W54A	**Cherokee Point**	**2.13**	**152**	P			Pn	22 05 51.1	+0.8
	baz=333,SNR=6.0								

ANF 21 22:05:48.4±0.2, 37.77N×82.05W, h0km, Error ellipse: s-maj=1.8km s-min=1.2km az=134.0, West Virginia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
S53A	**Williamson**	**0.10**	**216**	P			Pg	22 05 50.2	-0.1
	baz=36								
S53A				S			Sg	22 05 52.4	+0.7
	baz=36								
S54A	**Dingess, Beckl**	**0.59**	**86**	P			Pg	22 05 59.8	+0.2
	baz=267								
S54A				S			Sg	22 06 07.7	+0.4
	baz=267								
R52A	**Catlettsburg**	**0.74**	**321**	S			Sg	22 06 12.8	+0.7
	baz=141								
T54A	**Tazewell**	**0.80**	**152**	S			Sg	22 06 13.9	-0.1
	baz=332								
R54A	**Victor**	**0.94**	**63**	P			Pg	22 06 06.4	0.0
	baz=243								
R54A				S			Sb	22 06 19.6	-0.9
	baz=243								
Q53A	**Leroy**	**1.17**	**21**	S			Sg	22 06 26.5	+0.5
	baz=201								
Q52A	**Bidwell**	**1.21**	**352**	S			Sb	22 06 28.3	0.0
	baz=172								
S55A	**Lewisburg**	**1.23**	**89**	P			Pg	22 06 12.2	+0.3
	baz=270,SNR=9.8								
S55A				S			Sb	22 06 29.5	+0.5
	baz=270								
S51A	**Beattyville**	**1.23**	**265**	S			Sb	22 06 28.9	0.0
	baz=84								
U54A	**Nelsons Funny**	**1.25**	**171**	S			Sn	22 06 30.4	-0.5
	baz=352								
R51A	**Hillsboro**	**1.32**	**294**	S			Sb	22 06 31.8	+0.2
	baz=114								
BLA	**Blacksburg**	**1.41**	**113**	P			Pn	22 06 15.2	-0.2
	baz=294,SNR=12								
U55A	**TA2, Sparta**	**1.49**	**147**	P			Pn	22 06 16.6	+0.1
	baz=326								
Q54A	**Coxs Mills**	**1.55**	**38**	P			Pn	22 06 17.5	+0.3
	baz=218								
R55A	**Marlinton**	**1.61**	**71**	P			Pn	22 06 18.2	0.0
	baz=252,SNR=7.8								
T51A	**Gray**	**1.71**	**243**	P			Pn	22 06 19.1	-0.3
	baz=62								
TZTN	**Tazewell**	**1.71**	**225**	P			Pn	22 06 19.1	-0.3
	baz=44,SNR=7.6								
T56A	**Rocky Mt**	**1.77**	**114**	P			Pn	22 06 20.7	+0.4
	baz=295,SNR=7.4								
P53A	**Whipple**	**1.80**	**17**	P			Pn	22 06 20.9	+0.2
	baz=197,SNR=8.4								
P52A	**Corning**	**1.87**	**358**	P			Pn	22 06 21.7	0.0
	baz=178,SNR=9.5								

*VAO **21** 22:06:27.1±1.9, 20.86S×69.14W, h10km, mb4.4*
*NEIC **21** 22:06:32.9±3.8, 20.30S±0.05×69.2W±0.1, h93km±5km, Error ellipse: s-maj=15.6km s-min=7.5km az=90.0*
*GUC **21** 22:06:33.9±0.6, 20.25S×69.27W, h95km±2km, ML4.4*
*SJA **21** 22:06:33.1±0.9, 20.25S×69.35W, h125km±13km, ML4.6, MW4.5*
*IDC **21** 22:06:35.0±0.5, 20.21S×69.01W, h100km±4km, mb4.2/12, mb1 4.2/15, mb1mx3.9/40, mbtmp4.5/15, MS3.2/3, Ms1 3.2/3, ms1mx2.8/24, Error ellipse: s-maj=16.3km s-min=7.6km az=92.0*
ISC 21 22:06:33.6±0.4, 20.29S±0.03×69.24W±0.05, h97km±3km, n87, σ2.911/110, mb4.4/14, 4C-5D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
PB08	**IPOC Station P**	**0.17**	**29**	⇓*i*	P		**Pn**	**22 06 48.7**	**+0.8**
PB08				*e*S			**Sn**	**22 06 59.0**	**+0.6**
PB08				IAML				22 07 00.1	
	comp=E,42μm,0.2s								
GO01	**Chusmiza**	**0.62**	**4**	⇓*i*	P		**Pn**	**22 06 51.0**	**+0.4**
GO01				*i*	S		**Sn**	**22 07 03.7**	**+0.4**
GO01				IAML				22 07 04.3	
	comp=N,29μm,0.1s								
GO01	**Chusmiza**	**0.62**	**4**				**Pn**	**22 06 51.1**	**+0.5**
PB11	**IPOC Station P**	**0.65**	**323**	⇓*i*	P		**Pn**	**22 06 50.8**	**+0.3**
PB11				*i*	S		**Sn**	**22 07 03.1**	**-0.1**
PB11	**IPOC Station P**	**0.65**	**323**				**Pn**	**22 06 50.4**	**-0.2**
TA01	**Diego Aracena**	**0.93**	**252**	⇑*i*	P		**Pn**	**22 06 53.3**	**+0.4**
TA01				*e*S			**Sn**	**22 07 07.6**	**+0.1**
PATCX	**Punta Patache**	**1.01**	**238**	⇑*i*	P		**Pn**	**22 06 54.7**	**+0.7**
PATCX				*i*	S		**Sn**	**22 07 10.2**	**+0.9**
PSGC	**Pisagua**	**1.08**	**309**	⇓*i*	P		**Pn**	**22 06 54.6**	**-0.2**
PSGC				*e*S			**Sn**	**22 07 09.6**	**-1.1**
PSGC				IAML				22 07 13.1	
	comp=E,4μm,0.5s								
MNMC	**Minye Minye**	**1.20**	**344**	⇓*i*	P		**Pn**	**22 06 56.9**	**+0.5**
MNMC				*e*S			**Sn**	**22 07 14.2**	**+0.8**
MNMC	**Minye Minye**	**1.20**	**344**				**Pn**	**22 06 56.9**	**+0.5**
PB09	**IPOC Station P**	**1.50**	**180**	*e*P			**Pn**	**22 07 02.1**	**+2.2**
PB09				*e*S			**Sn**	**22 07 23.0**	**+3.2**
PB09	**IPOC Station P**	**1.50**	**180**	*i* P			**Pn**	**22 07 02.8**	**+2.9**
PB09				*e*S			**Sn**	**22 07 24.0**	**+4.2**
PB09				IAML				22 07 25.1	
	comp=Z,11μm,0.8s								
PB03	**IPOC Station P**	**1.82**	**195**	⇑*i*	P		**Pn**	**22 07 05.1**	**+1.3**
PB03				*i*	S		**Sn**	**22 07 28.6**	**+1.7**
PB03				IAML				22 07 29.1	
	comp=E,3μm,0.4s								
PB03	**IPOC Station P**	**1.82**	**195**	*i* P			**Pn**	**22 07 05.2**	**+1.3**
PB16	**IPOC Station P**	**1.96**	**353**	⇑*i*	P		**Pn**	**22 07 07.4**	**+1.3**
PB16				*i*	S		**Sn**	**22 07 32.1**	**+1.4**
PB16				IAML				22 07 37.0	
	comp=E,1μm,0.3s								
PB16	**IPOC Station P**	**1.96**	**353**	*i* P			**Pn**	**22 07 07.4**	**+1.3**
AP01	**Chacaluta**	**2.17**	**331**	*e*P			**Pn**	**22 07 08.4**	**0.0**
AP01				*e*S			**Sn**	**22 07 34.9**	**0.0**
AP01				IAML				22 07 42.1	
	comp=N,5μm,0.3s								
PB04	**IPOC Station P**	**2.21**	**202**	*e*P			**Pn**	**22 07 10.3**	**+1.3**
PB04	**IPOC Station P**	**2.21**	**202**				**Pn**	**22 07 09.2**	**+0.2**
PB04							**Sn**	**22 07 32.0**	**-4.0**
PB04	**IPOC Station P**	**2.21**	**202**	*i* P			**Pn**	**22 07 10.4**	**+1.5**
PB04				IAML				22 07 55.3	
	comp=Z,1μm,0.4s								
LVC	**Limon Verde**	**2.33**	**172**	P			**Pn**	**22 07 13.7**	**+2.9**
	comp=Z,148nm,0.3s,baz=342,slow=8.1,SNR=883								
LVC				S			**Sn**	**22 07 41.9**	**+2.7**
	comp=Z,241nm,0.3s,baz=215,slow=23,SNR=39								

PB06	**IPOC Station P**	**2.43**	**187**	*e*P			**Pn**	**22 07 12.9**	**+1.1**
PB06				*i* S			**Sn**	**22 07 39.2**	**-1.8**
PB06				IAML				22 07 42.6	
	comp=N,3μm,0.3s								
PB06	**IPOC Station P**	**2.43**	**187**	*i* P			**Pn**	**22 07 14.2**	**+2.3**
PB05	**IPOC Station P**	**2.71**	**199**	*e*P			**Pn**	**22 07 16.2**	**+0.7**
PB05				*i* S			**Sn**	**22 07 46.0**	**-1.7**
PB05				IAML				22 07 57.9	
	comp=E,1μm,0.4s								
PB05	**IPOC Station P**	**2.71**	**199**	*i* P			**Pn**	**22 07 17.2**	**+1.7**
PB10	**IPOC Station P**	**3.43**	**201**				**Pn**	**22 07 25.4**	**+0.2**
PB10							Sn	22 07 55.9	-9.1
YJA	**Yavi**	**3.95**	**119**	*i* P			Pn	22 07 36.9	+4.4
LPAZ	**La Paz**	**4.12**	**15**	P			**Pn**	**22 07 37.5**	**+2.6**
	comp=E,7.2nm,0.3s,baz=191,slow=7.3,SNR=262								
LPAZ				S			**Sn**	**22 08 22.0**	**-0.3**
	comp=E,4.6nm,0.3s,baz=187,slow=15,SNR=2.1								
LPAZ				LR			LR	22 09 10.3	
	comp=E,68nm,20.6s,baz=236,slow=39								
LPAZ	**La Paz**	**4.12**	**15**	*e*P			**Pn**	**22 07 37.6**	**+2.6**
LPAZ	**La Paz**	**4.12**	**15**				**Pn**	**22 07 37.5**	**+2.6**
LPAZ							**Sn**	**22 08 16.2**	**-6.1**
LPAZ	**La Paz**	**4.12**	**15**	*i* P			**Pn**	**22 07 37.6**	**+2.6**
GO02	**Mina Guanaco**	**4.86**	**184**				**Pn**	**22 07 45.3**	**+0.6**
AZAP	**Zapla**	**5.50**	**136**	*i* P			**Pn**	**22 07 55.5**	**+2.2**
GO03	**Copiap**	**7.33**	**187**				**Pn**	**22 08 17.1**	**-1.0**
GO03							**Sn**	**22 09 33.0**	**-6.8**
SIV	**San Ignacio**	**8.86**	**62**	P			**Pn**	**22 08 37.3**	**-1.6**
	comp=E,11nm,0.3s,baz=260,slow=12,SNR=178								
GO04	**Tololo Observa**	**9.94**	**188**	Pn			**Pn**	**22 08 50.5**	**-3.3**
GO04							**Sn**	**22 10 37.6**	**-6.0**
CFA	**Coronel Fontan**	**11.31**	**176**	P			**Pn**	**22 09 08.8**	**-3.3**
	comp=E,0.7nm,0.3s,baz=341,slow=11,SNR=5.1								
CFA				S			Sn	22 11 03.9	-13
	comp=E,0.6nm,0.3s,baz=354,slow=19,SNR=3.0								
CPUP	**Villa Florida**	**12.48**	**121**	P			**Pn**	**22 09 26.8**	**-1.0**
	comp=E,0.2nm,0.3s,baz=318,slow=11,SNR=5.6								
SALV	**Santo Antonio**	**13.60**	**73**	*e*P			**Pn**	**22 09 41.8**	**-0.7**
PP1B	**Ponte de Pedra**	**13.85**	**81**	*e*P			**Pn**	**22 09 43.6**	**-2.2**
ARAG	**Araguaiana, MT**	**17.19**	**77**	*e*P			**P**	**22 10 28.1**	**+0.2**
FRTB	**Fartura**	**18.52**	**103**	*e*P			**P**	**22 10 41.5**	**-1.0**
GO06	**Curarrehue**	**19.33**	**185**	P			**P**	**22 10 50.7**	**-0.6**
GO06				IAmb			IAmb	22 10 54.6	
	comp=Z,26nm,0.8s								
IPMB	**Ipameri, GO**	**20.00**	**87**	*e*P			**P**	**22 10 57.7**	**-1.0**
RCLB	**Rio Claro- Sao**	**20.33**	**100**	*e*P			**P**	**22 11 02.2**	**-0.1**
PLCA	**Paso Flores**	**20.41**	**183**	P			Pn	22 11 05.0	-0.9
	comp=Z,16nm,0.8s,baz=30,slow=12,SNR=16								
PLCA	**Paso Flores**	**20.41**	**183**	P			**P**	**22 11 01.8**	**-1.2**
PLCA				IAmb			IAmb	22 11 06.1	
	comp=Z,23nm,1.0s								
BDFB	**Brasilia**	**20.71**	**81**	P			**P**	**22 11 06.0**	**-0.4**
	comp=Z,13nm,0.4s,baz=222,slow=6.9,SNR=17								
BDFB	**Brasilia**	**20.71**	**81**	P			**P**	**22 11 05.6**	**-0.8**
VAO	**Valinhos**	**20.88**	**101**	*e*P			**P**	**22 11 07.8**	**-0.4**
BSCB	**Bom Sucesso**	**22.90**	**96**	*e*P			**P**	**22 11 29.5**	**0.0**
RUSC	**La Rusia**	**26.29**	**351**	P			**P**	**22 12 00.4**	**-0.4**
SDV	**Santo Domingo**	**29.02**	**357**	P			**P**	**22 12 24.0**	**-0.8**
	comp=Z,3.2nm,0.5s,baz=239,slow=21,SNR=4.3								
USHA	**Ushuaia**	**34.49**	**179**	P			**P**	**22 13 14.2**	**+2.1**
	comp=E,6.8nm,0.8s,baz=339,slow=8.3,SNR=4.1								
RCBR	**Riachuelo**	**35.41**	**71**	P			**P**	**22 13 19.4**	**-1.2**
	comp=Z,7.1nm,0.6s,baz=221,slow=6.8,SNR=7.2								
RCBR	**Riachuelo**	**35.41**	**71**	P			**P**	**22 13 20.9**	**+0.3**
RCBR				IAmb			IAmb	22 13 29.8	
	comp=Z,22nm,1.4s								
MLPR	**Magueyes Islan**	**38.08**	**3**	P			**P**	**22 13 39.9**	**-3.1**
MLPR				IAmb			IAmb	22 13 48.0	
	comp=Z,16nm,0.8s								
CRPR	**Cabo Rojo, PR**	**38.11**	**3**	P			**P**	**22 13 42.0**	**-1.3**
SJG	**San Juan**	**38.28**	**5**	P			**P**	**22 13 43.1**	**-1.6**
	comp=Z,16nm,0.6s,baz=167,slow=3

OCLP	**Ormoc**	**1.08**	**24**	*e*P		Pg	22 24 14.0	+0.1
OCLP				*e*S		Sn	22 24 29.6	-0.5
SNPH	**Sibulan**	**1.16**	**232**	*i*P		Pg	22 24 15.0	-0.5
SNPH				*i* S		Sn	22 24 31.8	-0.6
GUIM	**Jordan**	**1.65**	**290**	*e*P		Pn	22 24 22.9	+0.1
GUIM				*e*S		Sb	22 24 45.2	+0.1

*IDC **21** 22:25:09.6±5.2, 36°.77N×69°.35E, h275km±34km, mb3.1/1, mb1 3.0/7, mb1mx2.7/50, mbtmp3.8/7, Error ellipse: s-maj=78.9km s-min=22.8km az=155.0*

ISC 21 22:25:08.3±1.0, 36°.66N±0°.08×69°.40E±0°.09, h250km, n18, σ1§41/22, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.15**	**32**	P	**Pn**	**22 26 52.9**	**+2.0**
	1.6nm,0.3s,baz=188,slow=4.2,SNR=42						
AAK				S	**S**	**22 28 12.7**	**-0.5**
	0.0nm,0.3s,baz=162,slow=20,SNR=3.4						
DHRM	**DHARAMSHALA**	**7.20**	**126**	*e*P	**Pn**	**22 26 53.5**	**+1.7**
DHRM				*e*S	**S**	**22 28 14.5**	**-0.4**
DHRM				IAML		22 28 16.0	
	comp=E,53nm,0.4s						
SMLA	**Simla**	**8.49**	**128**	*e*P	**Pn**	**22 27 09.1**	**+1.3**
SMLA				*e*S	**S**	**22 28 42.2**	**-2.1**
SMLA				IAML		22 28 48.1	
	comp=N,13nm,0.6s						
SMLA				IAML		22 28 53.0	
	comp=E,10nm,0.0s						
GEYT	**Alibeck**	**9.08**	**281**	P	**Pn**	**22 27 14.8**	**-0.5**
	comp=E,0.2nm,0.3s,baz=107,slow=13,SNR=3.9						
JOSI	**Joshimath**	**10.43**	**123**	*e*P	**Pn**	**22 27 33.5**	**+0.9**
JOSI				*ex*	x	22 29 22.3	
JOSI				*e*S	**S**	**22 29 26.8**	**-3.0**
JOSI				IAML		22 29 31.4	
	comp=N,11nm,0.1s						
JOSI				IAML		22 29 31.8	
	comp=E,11nm,0.1s						
JOSI				IAML		22 29 43.8	
	comp=N,26nm,0.3s						
JOSI				IAML		22 29 43.9	
	comp=E,12nm,0.4s						
MKAR	**Makanchi Array**	**13.95**	**39**	P	**Pn**	**22 28 15.7**	**0.0**
	comp=E,0.2nm,0.3s,baz=234,slow=12,SNR=9.3						
DANN	**Dangsing**	**14.67**	**120**	*e*P	**P**	**22 28 25.4**	**+0.6**
	comp=E,4.3nm,0.2s						
KOLN	**Koldanda**	**14.92**	**122**	*e*P	**P**	**22 28 28.1**	**+0.5**
	comp=E,2.4nm,0.3s						
KURBB	**Kurchatov Arra**	**15.42**	**22**	P	**P**	**22 28 32.4**	**-0.2**
	comp=E,0.3nm,0.3s,baz=212,slow=11,SNR=15						
GKN	**Gorkha**	**15.49**	**120**	*e*P	**P**	**22 28 33.8**	**0.0**
	comp=E,9.5nm,0.2s						
AKTO	**Aktyubinsk**	**16.02**	**333**	P	**P**	**22 28 38.4**	**-0.8**
	comp=E,0.4nm,0.3s,baz=138,slow=15,SNR=8.0						
PKIN	**Phulchoki**	**16.29**	**119**	*e*P	**P**	**22 28 43.4**	**+0.8**
BVAR	**Borovoye Array**	**16.38**	**2**	P	**P**	**22 28 42.4**	**-0.7**
	comp=E,0.7nm,0.3s,baz=170,slow=9.0,SNR=21						
GUN	**Gumba**	**16.43**	**117**	*e*P	**P**	**22 28 47.0**	**+2.8**
	comp=E,2.8nm,0.3s						
JIRN	**Jiri**	**16.80**	**118**	*e*P	**P**	**22 28 48.8**	**+0.5**
	comp=E,11nm,0.4s						
RAMN	**Ramite**	**17.52**	**119**	*e*P	**P**	**22 28 55.6**	**-0.4**
	comp=E,4.8nm,0.4s						
TAPN	**Taplejung**	**18.07**	**116**	*e*P	**P**	**22 29 02.5**	**+0.5**
	comp=E,2.4nm,0.3s						
ZALV	**Zalesovo Beam**	**20.33**	**27**	P	**P**	**22 29 23.6**	**-2.0**
	comp=E,1.2nm,0.3s,baz=218,slow=10,SNR=6.2						

MAN 21 22:29:56.1, 9°.71N×123°.63E, h31km, mb4.0, ML2.8, MS2.4, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.68**	**29**	*e*P	Pn	22 30 09.8	+0.1
LLP				*i* S	Sb	22 30 16.9	-1.9
MSLP	**Maasin**	**1.28**	**71**	*e*P	Pn	22 30 17.8	-0.1
MSLP				*e*S	Sn	22 30 34.0	+0.1

*NEIC **21** 22:30:44.9±1.6, 15°.95N±0°.06×94°.70W±0°.03, h67km±13km, Error ellipse: s-maj=8.8km s-min=3.0km az=200.0*
*IDC **21** 22:30:45.7±5.4, 16°.25N×94°.13W, h58km±34km, mb3.1/4, mb1 3.5/5, mb1mx3.3/26, mbtmp3.3/5, ML3.5/1, Error ellipse: s-maj=143.7km s-min=47.6km az=50.0*
*MEX **21** 22:30:46.7±0.6, 15°.95N×94°.71W, h58km±14km, MD4.2*

ISC 21 22:30:45.4±0.9, 15°.97N±0°.05×94°.67W±0°.03, h66km±10km, n28, σ1§65/39, mb3.4/5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**1.14**	**350**	P	**Pn**	**22 31 05.1**	**-0.3**
	54nm,0.3s,baz=175,slow=11,SNR=557						
CMIG				S	**Sn**	**22 31 19.6**	**-0.8**
	149nm,0.3s,baz=324,slow=19,SNR=18						
CMIG	**Matias Romero**	**1.14**	**350**	*e*P	**Pn**	**22 31 05.2**	**-0.2**
CMIG				*e*S	**Sn**	**22 31 19.7**	**-0.7**
CMIG	**Matias Romero**	**1.14**	**350**		**Pn**	**22 31 05.2**	**-0.2**
CMIG					**Sn**	**22 31 19.7**	**-0.7**
HUIG	**Huatulco**	**1.40**	**262**	*e*P	**Pn**	**22 31 08.1**	**-0.8**
HUIG				*i* S	**Sn**	**22 31 25.0**	**-1.6**
HUIG	**Huatulco**	**1.40**	**262**		**Pn**	**22 31 08.1**	**-0.8**
HUIG					**Sn**	**22 31 25.0**	**-1.6**
PCIG		**1.42**	**100**	*e*P	**Pn**	**22 31 09.0**	**-0.2**
PCIG				*e*S	**Sn**	**22 31 26.5**	**-0.6**
PCIG		**1.42**	**100**		**Pn**	**22 31 09.0**	**-0.2**
PCIG					**Sn**	**22 31 26.5**	**-0.6**
VHO	**Vista Hermosa**	**2.26**	**299**	*i* P	**Pn**	**22 31 20.5**	**-0.2**
VHO				*i* S	**Sn**	**22 31 46.5**	**-1.2**
CCIG	**Comitan**	**2.46**	**82**	*e*P	**Pn**	**22 31 22.9**	**-0.4**
CCIG				*i* S	**Sn**	**22 31 53.1**	**+0.7**
CCIG	**Comitan**	**2.46**	**82**		**Pn**	**22 31 22.9**	**-0.4**
CCIG					**Sn**	**22 31 45.3**	**-7.0**
CCIG	**Comitan**	**2.46**	**82**		**Pn**	**22 31 22.9**	**-0.4**
CCIG					**Sn**	**22 31 53.1**	**+0.7**
PNIG	**Pinotepa**	**3.35**	**278**	*e*P	**Pn**	**22 31 35.3**	**0.0**
PNIG				*i* S	**Sn**	**22 32 13.2**	**-0.7**
PNIG	**Pinotepa**	**3.35**	**278**		**Pn**	**22 31 35.3**	**0.0**
PNIG					**Sn**	**22 32 13.8**	**-0.1**
TLIG	**Tlapa**	**4.05**	**294**		**Pn**	**22 31 44.5**	**-0.6**
JTS	**Las Juntas de**	**11.02**	**120**	Pn	**Pn**	**22 33 22.4**	**+2.1**
833A	**Chaparral WMA,**	**13.05**	**341**	Pn	**Pn**	**22 33 49.5**	**+1.7**
435B	**Jarrell**	**14.99**	**350**	Pn	**Pn**	**22 34 11.6**	**-1.8**
JCT	**Junction City**	**15.19**	**343**	Pn	**Pn**	**22 34 17.5**	**+1.4**
JCT				IAmb	IAmb	22 34 33.1	
	comp=Z,4.7nm,0.6s						
TXAR	**Lajitas Array**	**15.67**	**330**	P	**P**	**22 34 24.8**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=147,slow=17,SNR=4.8						
W35A	**Tecumseh**	**19.21**	**355**	P	**P**	**22 35 03.6**	**-0.3**
BLA	**Blacksburg**	**24.64**	**28**		sP	22 36 21.6	-2.0
R55A	**Marlinton**	**25.66**	**27**	P	**P**	**22 36 08.2**	**-0.8**
R55A				IAmb	IAmb	22 36 27.8	
	comp=Z,26nm,1.1s						
PDAR	**Pinedale Array**	**29.60**	**337**	P	**P**	**22 36 46.8**	**+2.3**
	comp=Z,0.2nm,0.4s,baz=133,slow=11,SNR=2.2						
NVAR	**Mina Array Bea**	**30.53**	**322**	P	**P**	**22 36 55.0**	**+2.2**
	comp=Z,0.6nm,0.7s,baz=131,slow=9.7,SNR=4.7						
YKA	**Yellowknife Ar**	**48.55**	**348**	P	**P**	**22 39 21.1**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=153,slow=7.6,SNR=2.6						
EPYK	**Eagle Plains**	**57.44**	**341**		pP	22 40 44.4	0.0
ILAR	**Eielson Array**	**60.03**	**337**	P	**P**	**22 40 45.0**	**0.0**
	comp=Z,0.3nm,0.8s,baz=131,slow=6.3,SNR=3.1						
BWN	**Browne**	**60.74**	**336**		**PcP**	**22 41 30.3**	**-3.0**

ATH 21 22:49:34.5, 38°.35N×21°.97E, h6km±3km, ML1.6/2, Error ellipse: s-maj=3.4km s-min=0.8km az=68.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.08**	**77**	P	Pg	22 49 36.4	0.0
TRIZ				S	Sg	22 49 38.2	+0.5
EFP	**Efpalio**	**0.10**	**328**	P	Pg	22 49 36.3	-0.3
EFP				S	Sg	22 49 38.2	+0.2
EFP				AML	AML	22 49 38.4	
	comp=N,1003μm,0.2s						
EFP				AML	AML	22 49 38.4	
	comp=E,1593μm,0.2s						
SERG	**Sergoula**	**0.10**	**45**	P	Pg	22 49 36.6	0.0
SERG				S	Sg	22 49 38.4	+0.4
SERG				AML	AML	22 49 39.2	
	comp=N,1145μm,0.2s						
SERG				AML	AML	22 49 39.3	
	comp=E,846μm,0.2s						
LAKA	**Lakka**	**0.11**	**177**	P	Pg	22 49 36.8	0.0
LAKA				S	Sg	22 49 38.7	+0.4
KALE	**Kalithea**	**0.14**	**71**	P	Pg	22 49 37.5	+0.2
KALE				S	Sg	22 49 39.5	+0.2
KLV	**Kalavryta, Ach**	**0.33**	**155**	P	Pg	22 49 40.9	-0.1
PVO	**Paravola**	**0.44**	**308**	P	Pg	22 49 43.3	+0.3
DRO	**Drossia**	**0.44**	**208**	P	Pg	22 49 43.0	-0.1
DRO				S	Sg	22 49 49.4	+0.5
EVR	**Evrytania**	**0.58**	**347**	P	Pg	22 49 45.4	-0.4
PDO	**Prodromos**	**0.67**	**292**	P	Pg	22 49 47.5	+0.2
MAKR	**Makrakomi, Fth**	**0.68**	**11**	P	Pg	22 49 47.4	-0.1
AXAR	**Agios Charalam**	**0.68**	**52**	P	Pg	22 49 47.5	-0.1
AGG	**Agios Georgios**	**0.73**	**23**	P	Pg	22 49 48.4	-0.1

IDC 21 22:56:35.9±1.6, 13°.81S×167°.25E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/31, mbtmp3.7/5, Error ellipse: s-maj=77.8km s-min=30.6km az=146.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**29.58**	**228**	P	P	23 02 42.8	+0.1
	1.3nm,0.4s,baz=20,slow=11,SNR=5.1						
WRA	**Warramunga Arr**	**32.04**	**254**	P	P	23 03 04.9	+0.3
	0.3nm,0.4s,baz=85,slow=9.4,SNR=2.0						
ASAR	**Alice Springs**	**32.99**	**248**	P	P	23 03 12.6	-0.3
	0.4nm,0.4s,baz=77,slow=9.0,SNR=8.1						
TXAR	**Lajitas Array**	**95.86**	**61**	P	P	23 10 04.9	-0.1
	0.1nm,0.4s,baz=230,slow=5.6,SNR=2.6						
MKAR	**Makanchi Array**	**96.53**	**316**	P	P	23 10 07.3	-0.2
	0.2nm,0.7s,baz=119,slow=5.1,SNR=2.4						

*IDC **21** 23:24:47.1±0.8, 52°.07N×173°.31E, h0km, mb4.0/22, mb1 4.1/25, mb1mx4.0/40, mbtmp4.0/25, ML5.2/1, MS3.2/6, Ms1 3.2/6, ms1mx2.8/38, Error ellipse: s-maj=21.4km s-min=12.9km az=178.0*
*NEIC **21** 23:24:50.9±1.4, 52°.11N±0°.1×173°.4E±0°.1, h23km±5km, mb4.4/28, Error ellipse: s-maj=18.8km s-min=9.6km az=157.0*

ISC 21 23:24:51.6±0.7, 52°.2N±0°.1×173°.29E±0°.06, h24km, n69, σ1§61/61, mb4.2/39, MS3.4/6, 1C, Near Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMY	**Shemya**	**0.70**	**45**		**Pn**	**23 25 05.6**	**-0.3**
PETK	**Petropavlovsk-**	**9.51**	**281**	Pn	**Pn**	**23 27 06.6**	**-0.4**
	0.7nm,0.3s,baz=110,slow=18,SNR=4.5						
PETK				Sn	**Sn**	**23 28 46.3**	**-6.7**
	0.6nm,0.3s,baz=79,slow=22,SNR=4.7						
MA2	**Magadan**	**14.55**	**309**	Pn	**Pn**	**23 28 14.4**	**-1.3**
	1.0nm,0.3s,baz=131,slow=19,SNR=2.4						
MA2				LR	LR	23 33 51.8	
	comp=Z,57nm,20.0s,baz=106,slow=37						
SEY	**Seymchan**	**15.41**	**322**	Pn	**Pn**	**23 28 26.6**	**-0.6**
	0.1nm,0.3s,baz=63,slow=16,SNR=3.3						
ANM	**Nome**	**16.54**	**34**	P	**P**	**23 28 44.0**	**0.0**
KDAK	**Kodiak Island**	**20.19**	**61**	P	**P**	**23 29 23.1**	**-1.0**
	8.3nm,0.8s,baz=301,slow=3.8,SNR=12						
KDAK				LR	LR	23 37 28.0	
	comp=Z,33nm,18.2s,baz=247,slow=38						
WRH	**Wood River Hil**	**23.23**	**43**	P	**P**	**23 29 57.6**	**+1.0**
WRH				IAmb	IAmb	23 30 10.5	
	comp=Z,6.4nm,0.8s						
CCB	**Clear Creek Bu**	**23.40**	**43**	P	**P**	**23 29 58.3**	**+0.1**
CCB				IAmb	IAmb	23 30 00.7	
	comp=Z,6.4nm,0.6s						
COLA	**College**	**23.43**	**42**	P	**P**	**23 29 58.8**	**+0.2**
IL31		**23.81**	**43**	P	**P**	**23 30 02.3**	**+0.1**
ILAR	**Eielson Array**	**23.81**	**43**	P	**P**	**23 30 02.1**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=251,slow=8.6,SNR=25						
YAK	**Yakutsk**	**25.12**	**310**	P	**P**	**23 30 15.0**	**+0.8**
	comp=Z,6.7nm,0.5s,baz=111,slow=2.4,SNR=3.2						
YAK	**Yakutsk**	**25.12**	**310**	P	**P**	**23 30 15.1**	**+0.8**
TIXI	**Tiksi**	**27.49**	**331**	LR	LR	23 40 48.6	
	comp=Z,37nm,18.5s,baz=226,slow=35						
TIXI	**Tiksi**	**27.49**	**331**	P	**P**	**23 30 33.9**	**-1.6**
INK	**Inuvik**	**29.65**	**37**	P	**P**	**23 30 55.2**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=263,slow=13,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**32.83**	**191**	T	T	00 06 27.4	
	baz=7.9,slow=76,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**32.84**	**191**	T	T	00 06 28.2	
	baz=7.9,slow=76,SNR=11						
H11N1	**WAKE ISLAND Hy**	**32.85**	**191**	T	T	00 06 24.3	
	baz=7.9,slow=76,SNR=7.7						
H11S1	**WAKE ISLAND Hy**	**34.06**	**191**	T	T	00 08 00.3	
	baz=9.4						
H11S3	**WAKE ISLAND Hy**	**34.08**	**191**	T	T	00 08 03.4	
	baz=9.4						
H11S2	**WAKE ISLAND Hy**	**34.08**	**191**	T	T	00 07 58.3	
	baz=9.4						
YKA	**Yellowknife Ar**	**38.17**	**46**	P	**P**	**23 32 09.3**	**+0.7**
	comp=Z,1.5nm,0.5s,baz=286,slow=8.0,SNR=20						
YKA				LR	LR	23 48 11.7	
	comp=Z,75nm,19.5s,baz=0.0,slow=37						
SONM	**Songino Array**	**41.81**	**292**	P	**P**	**23 32 39.6**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=62,slow=8.3,SNR=4.3						
HHC	**Hu-ho-hao-te**	**42.71**	**280**	*e*P	**P**	**23 32 47.6**	**+1.0**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,57nm,6.6s						
NVAR	**Mina Array Bea**	**48.25**	**78**	P	**P**	**23 33 28.3**	**-2.4**
	comp=Z,0.2nm,0.6s,baz=287,slow=7.4,SNR=1.8						
LZH	**Lanzhou**	**50.41**	**280**	*e*P	**P**	**23 33 48.9**	**+1.9**
LZH				pP	pwP	23 33 58.1	+3.9
LZH				sP	sP	23 34 02.6	+5.5
LZH				PP	**PP**	**23 35 49.1**	**+6.7**
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,75nm,4.9s						
GTA	**Gaotai**	**50.64**	**286**	⇑P	**P**	**23 33 49.5**	**+0.8**
GTA				pP	pwP	23 33 58.6	+2.7
GTA				sP	sP	23 34 02.8	+4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ULM	**Lac du Bonnet**	**53.21**	**53**	P	**P**	**23 34 07.6**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=300,slow=8.1,SNR=2.0						
PHWY	**Pilot Hill**	**53.92**	**67**	P	**P**	**23 34 10.8**	**-2.4**
WMQ	**Urumqi**	**54.66**	**298**	*e*P	**P**	**23 34 21.0**	**+2.7**
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,15nm,5.3s						
WMQ				LR	LR		
	comp=N,280nm,29.0s						
WMQ				LR	LR		
	comp=E,260nm,29.1s						
WMQ				LR	LR		
	comp=Z,200nm,29.1s						
KURK	**Kurchatov**	**54.76**	**309**	P	**P**	**23 34 18.6**	**-0.2**
MK31	**Makanchi Array**	**55.55**	**304**	P	**P**	**23 34 23.7**	**-0.9**
MKAR	**Makanchi Array**	**55.55**	**304**	P	**P**	**23 34 23.9**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=53,slow=6.2,SNR=13						
OGNE	**Ogallala**	**56.08**	**65**	P	**P**	**23 34 29.1**	**+0.5**
ARCES	**ARCESS Array B**	**56.27**	**347**	P	**P**	**23 34 29.6**	**+0.2**
	comp=Z,6.3nm,1.1s,baz=32,slow=8.6,SNR=7.2						
KMI	**Kunming**	**58.76**	**271**	P	**P**	**23 34 49.4**	**+1.6**
KMI				pP	pwP	23 34 57.8	+0.3
KMI				pmax	pmax		
	comp=Z,5.0nm,2.0s						
MNTX	**Cornudas Mount**	**60.57**	**75**	P	**P**	**23 34 59.9**	**-0.1**
MNTX				IAmb	IAmb	23 35 13.4	
	comp=Z,3.6nm,1.1s						
SCHQ	**Schefferville**	**62.23**	**35**	P	**P**	**23 35 10.8**	**0.0**
	comp=Z,4.1nm,0.6s,baz=347,slow=5.6,SNR=11						
SCHQ	**Schefferville**	**62.23**	**35**	IAmb	IAmb	23 35 22.4	
	comp=Z,5.7nm,1.0s						
AAK	**Ala-Archa**	**62.43**	**305**	P	**P**	**23 35 13.1**	**+0.5**
AAK				IAmb	IAmb	23 35 23.2	
	comp=Z,3.0nm,1.1s						
HNR	**Honiara**	**62.49**	**195**	LR	LR	00 00 09.1	
	comp=Z,29nm,18.5s,baz=12,slow=34						
TX31	**Lajitas Ar. Si**	**63.30**	**76**	P	**P**	**23 35 18.4**	**0.0**
TX31				IAmb	IAmb	23 35 28.5	
	comp=Z,3.5nm,1.1s						
TX32	**Lajitas Array**	**63.30**	**76**	P	**P**	**23 35 18.4**	**0.0**
TX32				IAmb	IAmb	23 35 28.5	
	comp=Z,3.7nm,1.1s						
TXAR	**Lajitas Array**	**63.30**	**76**	P	**P**	**23 35 18.3**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=296,slow=3.3,SNR=16						
FINES	**FINESS Array B**	**63.69**	**343**	P	**P**	**23 35 20.7**	**+0.3**
	comp=Z,3.1nm,0.7s,baz=16,slow=7.1,SNR=12						
KSH	**Kashi**	**63.94**	**301**	P	**P**	**23 35 25.4**	**+2.8**
KSH				pP	pwP	23 35 34.3	+4.3
KSH				pmax	pmax		
	comp=Z,310nm,5.3s						
KK31	**Karatay Array**	**64.06**	**307**	P	**P**	**23 35 23.3**	**0.0**
KK31				IAmb	IAmb	23 35 33.9	
	comp=Z,2.7nm,1.1s						
KKAR	**Karatay Array**	**64.06**	**307**	P	**P**	**23 35 22.8**	**-0.4**
KKAR				IAmb	IAmb	23 35 33.8	
	comp=Z,2.7nm,1.1s						
ABKAR	**Akbulak array**	**64.14**	**318**	P	**P**	**23 35 23.6**	**0.0**
ABKAR				IAmb	IAmb	23 35 34.3	
	comp=Z,2.8nm,0.7s						
JCT	**Junction City**	**64.75**	**72**	P	**P**	**23 35 26.9**	**-1.0**
JCT				IAmb	IAmb	23 35 29.6	
	comp=Z,2.9nm,0.7s						
CMAR	**Chiang Mai Arr**	**66.07**	**269**	P	**P**	**23 35 36.7**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=20,slow=8.2,SNR=2.8						
NB2	**NORSAR Subarra**	**66.16**	**351**	P	**P**	**23 35 36.8**	**+0.3**
	comp=Z,1.9nm,0.9s,baz=14,slow=6.5						
NOA	**NORSAR Array B**	**66.16**	**351**	P	**P**	**23 35 36.9**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=13,slow=6.5,SNR=4.0						
BTK	**Batken**	**66.19**	**305**	P	**P**	**23 35 37.8**	**+0.7**
BTK				IAmb	IAmb	23 35 47.7	
	comp=Z,2.7nm,0.8s						
GAR	**Garm**	**67.25**	**305**	P	**P**	**23 35 44.2**	**+0.2**
CHGR	**Chuyangaron**	**68.09**	**305**	P	**P**	**23 35 49.7**	**+0.4**
NIL	**Nilore**	**69.78**	**299**	P	**P**	**23 36 00.6**	**+0.8**
NIL				IAmb	IAmb	23 36 10.6	
	comp=Z,4.2nm,0.8s						
KBL	**Kabul**	**71.32**	**302**	P	**P**	**23 36 08.4**	**-1.0**
KBL				IAmb	IAmb	23 36 18.6	
	comp=Z,3.2nm,0.7s						
AKASG	**Malin Array Be**	**73.02**	**337**	P	**P**	**23 36 19.1**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=26,slow=6.0,SNR=2.9						
GEYT	**Alibeck**	**73.98**	**312**	P	**P**	**23 36 25.4**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=72,slow=4.7,SNR=2.3						
DZM	**Mont Dzumac**	**74.24**	**187**	LR	LR	00 05 04.3	
	comp=Z,20nm,20.1s,baz=34,slow=33						
KBZ	**Khabaz**	**75.26**	**325**	P	**P**	**23 36 32.7**	**+0.6**
	comp=Z,1.5nm,0.9s,baz=338,slow=5.4,SNR=3.0						
VYHS	**Vyhne**	**77.30**	**343**	*e*P	**P**	**23 36 45.4**	**+1.7**
GERES	**GERESS Array B**	**77.80**	**346**	P	**P**	**23 36 47.3**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=15,slow=5.5,SNR=5.3						
WRA	**Warramunga Arr**	**79.48**	**217**	P	**P**	**23 36 53.6**	**-2.3**
	comp=Z,0.4nm,0.9s,baz=34,slow=6.3,SNR=4.6						
BRTR	**Keskin Array B**	**81.92**	**330**	P	**P**	**23 37 09.6**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=13,slow=5.2,SNR=3.8						
ASAR	**Alice Springs**	**83.05**	**216**	P	**P**	**23 37 13.6**	**-1.2**
	comp=Z,0.5nm,0.8s,baz=23,slow=5.0,SNR=3.6						
BOSA	**Boshof**	**146.55**	**302**	PKPbc	**PKPab**	**23 44 30.7**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=117,slow=4.5,SNR=3.7						

IDC 21 23:46:08.6±4.5, 3°.49S×146°.23E, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.7/30, mbtmp3.8/5, MS3.0/1, Ms1 3.0/1, ms1mx2.4/32, Error ellipse: s-maj=131.6km s-min=26.9km az=96.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.05**	**214**	P	P	23 50 44.2	+0.6
	3.6nm,0.9s,baz=37,slow=12,SNR=11						
ASAR	**Alice Springs**	**23.33**	**210**	P	P	23 51 18.2	-0.5
	1.8nm,0.9s,baz=35,slow=9.1,SNR=10.0						
FITZ	**Fitzroy Crossi**	**24.85**	**233**	LR	LR	00 01 43.1	
	comp=Z,33nm,20.4s,baz=74,slow=38						
CMAR	**Chiang Mai Arr**	**51.42**	**297**	P	P	23 55 16.1	+0.2
	1.2nm,0.3s,baz=139,slow=6.0,SNR=4.1						
SONM	**Songino Array**	**61.85**	**331**	P	P	23 56 29.3	-0.5
	0.2nm,0.5s,baz=147,slow=7.6,SNR=1.9						
MKAR	**Makanchi Array**	**75.09**	**320**	P	P	23 57 52.9	+0.3
	0.9nm,1.0s,baz=99,slow=7.5,SNR=4.6						

JMA 21 23:57:27.9±0.2, 31°.18N×142°.27E, h13km, M4.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**3.63**	**343**	P	Pn	23 58 25.6	+2.3
CBIJ	**Chichi jima**	**4.07**	**181**	P	Pn	23 58 31.9	+2.0
CBIJ				*e*S	Sn	23 59 18.2	+0.8
BSO4	**Boso 4**	**4.13**	**337**	*e*S	Sn	23 59 21.8	+3.1
JOD2	**Odawara 2**	**4.87**	**328**	*e*S	Sn	23 59 38.7	+1.6
JRY	**Ryogami san**	**5.58**	**331**	*e*S	Sn	23 59 59.0	+4.3
JAG	**Ashikaga**	**5.73**	**337**	P	Pn	23 58 55.2	+2.5
JAG				*e*S	Sn	23 59 58.8	+0.4

*IDC **22** 00:14:26.9±3.7, 26°.22N×95°.91E, h122km±37km, mb3.9/3, mb1 4.0/4, mb1mx3.1/46, mbtmp4.2/4, Error ellipse: s-maj=71.8km s-min=17.7km az=71.0*

ISC 22 00:14:24.4±0.9, 26°.3N±0°.1×95°.71E±0°.08, h100km, n17, σ1§65/28, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAPN	**Taplejung**	**7.22**	**280**	*e*Pn	**Pn**	**00 16 09.3**	**+1.7**

JHU	**Hanno**	**5.52**	**328**	P	**Pn**	**00 26 43.8**	**-0.3**
JHU				*e*S	**Sn**	**00 27 44.0**	**-3.6**
JRY	**Ryogami san**	**5.83**	**326**	P	**Pn**	**00 26 48.9**	**+0.5**
JRY				S	**Sn**	**00 27 52.8**	**-2.5**
JFK	**Kawauchi**	**6.36**	**345**	*e*S	**Sn**	**00 28 00.0**	**-8.4**
MJAR	**Matsushiro Arr**	**6.59**	**325**	Pn	**Pn**	**00 26 59.3**	**+0.6**
	0.2nm,0.3s,baz=142,slow=11,SNR=6.3						
SONM	**Songino Array**	**32.31**	**311**	P	**P**	**00 31 54.4**	**+3.3**
	0.4nm,0.8s,baz=106,slow=11,SNR=3.2						
MKAR	**Makanchi Array**	**48.42**	**307**	P	P	00 34 08.8	+4.6
	0.7nm,0.5s,baz=88,slow=9.3,SNR=12						
WRA	**Warramunga Arr**	**51.52**	**190**	P	**P**	**00 34 28.5**	**+0.5**
	0.9nm,0.8s,baz=9.5,slow=8.3,SNR=5.8						
BRTR	**Keskin Array B**	**83.66**	**313**	P	**P**	**00 37 52.7**	**+1.7**
	0.6nm,0.8s,baz=72,slow=4.7,SNR=4.1						

NEIC ***22*** *00:46:27.8±0.9, 9.07S±0.08×152.88E±0.10, h25km±4km, mb4.4/17, Error ellipse: s-maj=16.7km s-min=7.4km az=52.0*
DJA ***22*** *00:46:29.8±3.2, 9.3S±15.1×15.3E±1.6, h33km±17km, M4.7/11, mb4.4/11, mB5.1/1, MLv4.8/1, Mw(mB)4.5/1*
IDC ***22*** *00:46:29.7±6.0, 9.03S×152.70E, h33km±43km, mb4.0/10, mb1 4.3/12, mb1mx4.1/36, mbtmp4.3/12, ML4.4/2, MS3.5/11, Ms1 3.5/11, ms1mx3.2/40, Error ellipse: s-maj=38.4km s-min=16.7km az=109.0*

ISC 22 00:46:29.3±0.6, 9.07S±0.07×152.8E±0.1, h35km, n39, σ0.82/32, mb4.4/13, MS3.5/7, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KRVT	**Keravat (AS076**	**4.79**	**350**	Pn	**Pn**		**00 47 39.1**	**0.0**
	8.6nm,0.3s,baz=156,slow=4.9,SNR=4.3							
KRVT				Sn	**Sn**		**00 48 31.7**	**-1.8**
	67nm,0.3s,baz=206,slow=23,SNR=8.8							
KRVT				LR	LR		00 49 08.2	
	comp=Z,191nm,21.9s,baz=83,slow=34							
PMG	**Port Moresby**	**5.60**	**266**	LR	LR		00 50 20.0	
	comp=Z,605nm,18.6s,baz=347,slow=42							
PMG	**Port Moresby**	**5.60**	**266**		**Pn**		**00 47 50.5**	**+0.3**
HNR	**Honiara**	**7.04**	**94**	LR	LR		00 50 38.5	
	comp=Z,320nm,18.5s,baz=327,slow=35							
MANU	**Manus Island**	**8.84**	**322**	Pn	**Pn**		**00 48 34.9**	**+0.2**
CTA	**Charters Tower**	**12.66**	**209**	Pn	**Pn**		**00 49 26.8**	**-0.3**
	2.1nm,0.3s,baz=31,slow=14,SNR=12							
EIDS	**Eidsvold**	**16.30**	**186**	Pn	**Pn**		**00 50 15.9**	**+0.3**
NOUC	**Port Laguerre**	**18.33**	**137**	P	**P**		**00 50 38.8**	**-1.9**
NOUC				IAmb	IAmb		00 50 45.0	
	comp=Z,27nm,1.2s							
DZM	**Mont Dzumac**	**18.40**	**136**	LR	LR		00 56 27.8	
	comp=Z,222nm,18.6s,baz=27,slow=32							
DZM	**Mont Dzumac**	**18.40**	**136**	P	**P**		**00 50 41.4**	**-0.3**
DZM				IAmb	IAmb		00 50 50.4	
	comp=Z,29nm,1.3s							
WR0	**Warramunga Arr**	**20.72**	**236**	P	**P**		**00 51 06.9**	**0.0**
WB0	**Warramunga Arr**	**20.75**	**237**	P	**P**		**00 51 07.3**	**0.0**
WB0				IAmb	IAmb		00 51 16.2	
	comp=Z,21nm,1.0s							
WRAB	**Tennant Creek**	**20.87**	**237**	P	**P**		**00 51 07.8**	**-0.7**
WRAB				IAmb	IAmb		00 51 17.4	
	comp=Z,14nm,0.8s							
WB2	**Warramunga Arr**	**20.87**	**237**	P	**P**		**00 51 09.4**	**+0.8**
WRA	**Warramunga Arr**	**20.88**	**237**	P	**P**		**00 51 09.8**	**+1.2**
	comp=Z,11nm,0.7s,baz=62,slow=11,SNR=34							
WRA				LR	LR		00 59 10.3	
	comp=Z,155nm,22.0s,baz=60,slow=37							
ARMA	**Armidale**	**21.27**	**183**	P	**P**		**00 51 12.5**	**-0.4**
ARMA				IAmb	IAmb		00 51 19.8	
	comp=Z,20nm,0.8s							
AS31	**Alice Springs**	**23.20**	**229**	P	**P**		**00 51 33.6**	**+0.3**
AS31				IAmb	IAmb		00 51 35.5	
	comp=Z,6.7nm,0.5s							
ASAR	**Alice Springs**	**23.20**	**229**	P	**P**		**00 51 33.5**	**+0.2**
	comp=Z,10nm,0.6s,baz=66,slow=8.8,SNR=112							
ASAR				LR	LR		01 00 22.1	
	comp=Z,156nm,18.6s,baz=60,slow=36							
STKA	**Stephens Creek**	**24.98**	**203**	P	**P**		**00 51 49.7**	**0.0**
	comp=Z,9.0nm,0.7s,baz=6.0,slow=8.9,SNR=19							
STKA				LR	LR		01 02 01.5	
	comp=Z,135nm,18.0s,baz=25,slow=37							
STKA	**Stephens Creek**	**24.98**	**203**	P	**P**		**00 51 49.8**	**0.0**
FITZ	**Fitzroy Crossi**	**27.87**	**248**	P	**P**		**00 52 15.6**	**-0.4**
	comp=Z,3.5nm,0.5s,baz=59,slow=8.6,SNR=19							
H11S3	**WAKE ISLAND Hy**	**30.61**	**27**	T	T		01 24 52.5	
	baz=208,slow=76,SNR=28							
H11S2	**WAKE ISLAND Hy**	**30.62**	**27**	T	T		01 24 55.3	
	baz=208,slow=76,SNR=40							
H11S1	**WAKE ISLAND Hy**	**30.63**	**27**	T	T		01 24 50.6	
	baz=208,slow=76,SNR=30							
FORT	**Forrest**	**31.61**	**223**	P	**P**		**00 52 48.4**	**-0.7**
AFI	**Afiamalu**	**35.00**	**101**	LR	LR		01 06 01.3	
	comp=Z,41nm,21.2s,baz=326,slow=33							
URZ	**Urewera**	**36.37**	**147**	LR	LR		01 06 26.4	
	comp=Z,92nm,18.3s,baz=330,slow=33							
NWAO	**Narrogin (SRO)**	**40.52**	**229**	P	**P**		**00 54 04.9**	**-0.3**
	comp=Z,6.3nm,0.6s,baz=70,slow=8.3,SNR=5.7							
NWAO				LR	LR		01 10 54.1	
	comp=Z,127nm,19.6s,baz=33,slow=36							
SONM	**Songino Array**	**69.94**	**329**	P	**P**		**00 57 38.1**	**+0.9**
	comp=Z,1.2nm,0.6s,baz=144,slow=5.0,SNR=10							
QSPA	**South Pole Qui**	**80.92**	**180**	P	**P**		**00 58 39.6**	**-0.4**
QSPA				IAmb	IAmb		00 58 41.0	
	comp=Z,5.1nm,0.9s							
MK31	**Makanchi Array**	**83.54**	**319**	P	**P**		**00 58 54.1**	**+0.3**
MKAR	**Makanchi Array**	**83.54**	**319**	P	**P**		**00 58 53.8**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=118,slow=5.0,SNR=5.7							
MAKZ	**Makanchi**	**83.75**	**319**	P	**P**		**00 58 55.0**	**+0.1**
ZAA0	**Zalesovo Array**	**84.70**	**327**	P	**P**		**00 58 59.9**	**+0.4**
ZAA0				IAmb	IAmb		00 59 05.1	
	comp=Z,2.3nm,0.8s							
ZALV	**Zalesovo Beam**	**84.70**	**327**	P	**P**		**00 58 58.7**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=115,slow=6.6,SNR=6.1							
ILAR	**Eielson Array**	**86.08**	**22**	P	**P**		**00 59 05.6**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=232,slow=4.4,SNR=7.3							
ILAR				LR	LR		01 34 29.0	
	comp=Z,29nm,18.9s,baz=230,slow=33							
NVAR	**Mina Array Bea**	**94.69**	**52**	P	**P**		**00 59 50.0**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=269,slow=7.2,SNR=2.4							
GERES	**GERESS Array B**	**127.65**	**327**	PKP	**PKPdf**		**01 05 31.6**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=8.5,slow=2.7,SNR=4.1							
TORD	**Torodi Ar. Bea**	**151.39**	**281**	PKPbc	**PKPbc**		**01 06 20.6**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=68,slow=2.6,SNR=13							

TIR ***22*** *00:48:28.3, 40.39N×19.64E, h59km, Md2.5/6*

ISC 22 00:48:26.9±1.6, 40.25N±0.06×19.29E±0.07, h19km±5km, n12, σ1.80/17, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VLO	**Vlora**	**0.27**	**36**	*i* PG		**Pg**	**00 48 34.2**	**+1.3**
VLO				*i* SG		**Sg**	**00 48 37.8**	**+0.7**
TPE	**Tepelena**	**0.55**	**85**	*i* PG		Pg	00 48 35.6	-2.3
TPE				*i* SG		**Sg**	**00 48 41.8**	**-3.6**
SRN	**Sarande**	**0.66**	**124**	*i* PG		**Pg**	**00 48 39.5**	**-0.4**
SRN				*i* SG		**Sg**	**00 48 49.6**	**+1.0**
TIR	**Tirane**	**1.18**	**21**	*i* PG		Pg	00 48 47.4	-2.3
TIR				*i* SG		**Sg**	**00 49 02.3**	**-2.9**
PHP	**Peshkopia**	**1.68**	**31**	*i* PN		**Pn**	**00 48 55.8**	**+0.5**
PHP				*i* SN		**Sn**	**00 49 18.4**	**+2.1**
PUK	**Puka**	**1.85**	**14**	*i* PN		**Pn**	**00 48 57.6**	**-0.1**
PUK				*i* SN		**Sn**	**00 49 22.0**	**+1.4**
STON	**Ston**	**2.88**	**336**	*e*Pn		Pn	00 49 10.0	-1.7
STON				Sn		**Sn**	**00 49 43.9**	**-1.9**
MAKA	**Makarska**	**3.48**	**331**	*i* Pn		**Pn**	**00 49 20.3**	**+0.4**
MAKA				Sn		**Sn**	**00 49 58.6**	**-2.0**
KIJV	**Kijevo**	**4.32**	**331**	*e*Pn		**Pn**	**00 49 32.1**	**+0.4**
ZIRJ	**Zirje**	**4.35**	**323**	*e*Pn		**Pn**	**00 49 32.3**	**+0.3**
MORI	**Morici**	**4.49**	**325**	*e*Pn		**Pn**	**00 49 34.8**	**+0.9**
DUGI	**Dugi Otok**	**4.89**	**321**	*i* Pn		**Pn**	**00 49 40.8**	**+1.5**

ATH 22 00:48:45.1, 39.00N×23.29E, h19km±4km, ML1.6/1, Error ellipse: s-maj=4.6km s-min=0.9km az=19.0, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKIA	**Skiathos**	**0.21**	**40**	P		Pg	00 48 50.5	+0.1
SKIA				S		Sg	00 48 54.3	+0.3
SKIA				AML		AML	00 48 54.6	
	comp=N,474μm,0.2s							
SKIA				AML		AML	00 48 55.1	
	comp=E,374μm,0.2s							
XOR	**Xorichti**	**0.37**	**348**	S		Sg	00 48 58.3	-0.1
MRKA	**Markates**	**0.38**	**142**	P		Pg	00 48 52.7	-0.3
MRKA				S		Sg	00 48 58.5	+0.2
LKR	**Lokris**	**0.42**	**213**	P		Pg	00 48 53.8	0.0
LKR				S		Sb	00 48 59.8	-0.2
AOS	**Alonnisos**	**0.49**	**70**	P		Pg	00 48 54.9	-0.2
AOS				S		Sb	00 49 02.2	+0.2
AXAR	**Agios Charalam**	**0.55**	**245**	P		Pb	00 48 56.0	0.0
VIL2	**Platees**	**0.79**	**181**	P		Pn	00 49 01.2	-0.1
VIL2				S		Sn	00 49 13.2	+0.7

NIED ***22*** *01:17:00, 37.70N×144.00E, h8km, Mw3.6 Best double couple: M0.2.62000×10^14 NP1:ϕs170.00000°, δ74.00000°, λ-107.00000°. NP2:ϕs38.00000°, δ23.00000°, λ-44.00000°.*
IDC ***22*** *01:17:36.5±1.0, 37.53N×144.26E, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.6/43, mbtmp3.6/6, ML3.0/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/32, Error ellipse: s-maj=33.6km s-min=22.0km az=118.0*
JMA ***22*** *01:17:40.2±0.1, 37.73N×143.99E, h43km, M3.6*
NEIC ***22*** *01:17:40.7±1.5, 37.64N±0.10×144.2E±0.2, h37km±10km, mb4.3/6, Error ellipse: s-maj=21.2km s-min=13.2km az=109.0*

ISC 22 01:17:41.1±0.9, 37.79N±0.06×144.08E±0.07, h35km, n30, σ1.90/43, mb3.9/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakibobu**	**2.13**	**285**	P		**Pn**	**01 18 13.7**	**-0.5**
JIKH				S		**Sn**	**01 18 38.2**	**-1.2**
JIO	**Ouri**	**2.26**	**288**	P		**Pn**	**01 18 15.5**	**-0.4**
JIO				S		**Sn**	**01 18 42.0**	**-0.5**
JKMT	**Kesennumamotoy**	**2.29**	**297**	P		**Pn**	**01 18 16.1**	**-0.3**
JKMT				S		**Sn**	**01 18 43.1**	**-0.3**
OFUJ	**Ofunato**	**2.29**	**305**	P		**Pn**	**01 18 16.4**	**0.0**
OFUJ				S		**Sn**	**01 18 43.5**	**+0.1**
JMK	**Ichinoseki**	**2.53**	**298**	P		**Pn**	**01 18 19.9**	**+0.2**
JMK				S		**Sn**	**01 18 49.1**	**-0.2**
JOM	**Ohasama**	**2.76**	**308**	P		**Pn**	**01 18 23.3**	**+0.5**
JOM				S		**Sn**	**01 18 55.5**	**+0.6**
JFT	**Otama**	**2.99**	**266**	P		**Pn**	**01 18 25.7**	**-0.3**
JFT				S		**Sn**	**01 18 59.7**	**-0.9**
JYK	**Kaneyama**	**3.14**	**292**	P		**Pn**	**01 18 28.9**	**+0.9**
ERM	**Erimo**	**4.28**	**351**	Pn		**Pn**	**01 18 45.6**	**+1.9**
ERM				Sn		**Sn**	**01 19 28.5**	**-3.8**
JRY	**Ryogami san**	**4.51**	**248**	P		**Pn**	**01 18 45.6**	**-1.4**
JRY				S		**Sn**	**01 19 34.7**	**-3.6**
JOD2	**Odawara 2**	**4.75**	**239**	P		**Pn**	**01 18 47.8**	**-2.4**
JOD2				S		**Sn**	**01 19 39.7**	**-4.4**
JCH	**Churui**	**4.85**	**354**	P		**Pn**	**01 18 51.6**	**0.0**
JCH				S		**Sn**	**01 19 44.6**	**-1.8**
MJAR	**Matsushiro Arr**	**4.86**	**257**	Pn		**Pn**	**01 18 52.1**	**+0.4**
	0.6nm,0.3s,baz=83,slow=16,SNR=21							
MAJO	**Matsushiro**	**4.86**	**257**			**Pn**	**01 18 52.5**	**+0.8**
MAT	**Matsushiro**	**4.86**	**257**	P		**Pn**	**01 18 52.6**	**+0.9**
MAT				*e*S		**Sn**	**01 19 48.8**	**+2.1**
MJB9	**Matsu-Tunnel**	**4.86**	**257**			**Pn**	**01 18 52.4**	**+0.6**
NEM2	**Nemuro 2**	**5.71**	**12**	P		**Pn**	**01 19 01.4**	**-1.9**
NEM2				*e*S		**Sn**	**01 20 02.6**	**-5.0**
JTKR	**Abashiri--Toko**	**6.17**	**359**	P		**Pn**	**01 19 09.5**	**-0.2**
JTKR				*e*S		**Sn**	**01 20 17.4**	**-1.7**
KSRS	**Korea Array**	**12.82**	**273**	LR		LR	01 25 00.6	
	comp=Z,18nm,19.0s,baz=145,slow=34							
MK31	**Makanchi Array**	**45.52**	**302**	P		**P**	**01 25 59.3**	**+2.1**
MKAR	**Makanchi Array**	**45.52**	**302**	P		**P**	**01 25 59.4**	**+2.2**
	0.4nm,0.8s,baz=84,slow=9.4,SNR=3.4							
MLY	**Manley**	**46.08**	**32**	P		**P**	**01 26 01.5**	**+0.2**
MLY				IAmb		IAmb	01 26 04.4	
	comp=Z,2.4nm,1.0s							
PMR	**Palmer**	**46.74**	**37**	P		**P**	**01 26 06.6**	**+0.1**
ILAR	**Eielson Array**	**47.71**	**33**	P		**P**	**01 26 15.4**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=259,slow=6.6,SNR=8.6							
WB0	**Warramunga Arr**	**57.97**	**191**	P		**P**	**01 27 27.5**	**-2.6**
WB0				IAmb		IAmb	01 27 41.7	
	comp=Z,3.7nm,1.1s							
WR0	**Warramunga Arr**	**58.14**	**191**	P		**P**	**01 27 29.3**	**-2.0**
WR0				IAmb		IAmb	01 27 40.6	
	comp=Z,3.0nm,1.1s							
WB2	**Warramunga Arr**	**58.15**	**191**	P		**P**	**01 27 28.1**	**-3.3**
WB2				IAmb		IAmb	01 27 30.9	
	comp=Z,2.8nm,0.9s							
WRA	**Warramunga Arr**	**58.15**	**191**	P		**P**	**01 27 30.2**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=11,slow=7.4,SNR=4.8							
WRA				LR		LR	01 50 34.4	
	comp=Z,20nm,20.5s,baz=25,slow=34							
ASAR	**Alice Springs**	**61.88**	**191**	P		**P**	**01 27 56.1**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=16,slow=6.8,SNR=3.6							
YKA	**Yellowknife Ar**	**62.08**	**31**	P		**P**	**01 27 59.8**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=299,slow=6.5,SNR=3.1							

HEL ***22*** *01:25:15.1, 67.88N×20.26E, h0km, ML1.9, Explosion*

UPP 22 01:25:13.4±0.0, 67.84N×20.20E, h0km, ML2.1, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RATU	**Laukkuluspa**	**0.23**	**267**	*i* P		Pg	01 25 18.1	+0.3
RATU				*i* S		Sg	01 25 20.7	-0.1
RATU	**Laukkuluspa**	**0.23**	**267**	P		Pg	01 25 18.1	+0.3
RATU				S		Sg	01 25 20.7	-0.1
RATU	**Laukkuluspa**	**0.23**	**267**	S		Sg	01 25 26.4	+5.7
KOVU	**Salmi**	**0.39**	**358**	*i* P		Pg	01 25 20.9	+0.1
KOVU				*i* S		Sg	01 25 25.9	+0.1
KOVU	**Salmi**	**0.39**	**358**	P		Pg	01 25 20.9	+0.1
KOVU				S		Sg	01 25 25.9	+0.1
KOVU	**Salmi**	**0.39**	**358**	S		Sb	01 25 31.3	+1.7
LANU	**Lannavaara**	**0.71**	**72**	*i* P		Pg	01 25 26.7	-0.2
LANU				*i* S		Sg	01 25 36.6	+0.5
LANU	**Lannavaara**	**0.71**	**72**	P		Pg	01 25 26.7	-0.2
LANU				S		Sg	01 25 36.6	+0.5
LANU	**Lannavaara**	**0.71**	**72**	S		Sn	01 25 41.5	-0.8
DUNU	**Dundret**	**0.73**	**169**	*i* P		Pg	01 25 27.1	-0.3
DUNU	**Dundret**	**0.73**	**169**	P		Pg	01 25 27.1	-0.3
MASU	**Masugnsbyn**	**0.79**	**118**	*i* P		Pg	01 25 28.3	-0.1
MASU	**Masugnsbyn**	**0.79**	**118**	P		Pg	01 25 28.3	-0.1
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*P		Pg	01 25 35.8	-0.4
	baz=187							
KIF				MSG			01 25 51.1	
	comp=Z,8.5nm,0.2s							
KIF				*e*SN		Sn	01 25 56.9	+2.7
KIF	**Kilpisjarvi**	**1.19**	**10**	*e*P		Pb	01 25 36.7	-0.1
PAJU	**Pajala**	**1.39**	**125**	*e*P		Pg	01 25 38.8	-1.2
PAJU	**Pajala**	**1.39**	**125**	P		Pg	01 25 38.8	-1.2
PAJU	**Pajala**	**1.39**	**125**	P		Pb	01 25 43.9	+3.7
PAJU				S		Sn	01 26 02.0	+2.9
HEF	**Hetta**	**1.42**	**65**	*e*P		Pn	01 25 39.3	-1.1
	baz=248							
HEF				MSG			01 25 56.8	
	comp=Z,8.0nm,0.2s							
HEF				*e*SN		Sn	01 26 03.3	+3.6
HEF	**Hetta**	**1.42**	**65**	*e*P		Pn	01 25 39.9	-0.5
HARU	**Harads**	**1.71**	**169**	*e*P		Pn	01 25 44.4	0.0
HARU	**Harads**	**1.71**	**169**	P		Pn	01 25 44.4	0.0
KALU	**Kalix**	**2.35**	**146**	*e*P		Pn	01 25 54.2	+1.1
KALU				*e*			01 26 31.0	
KALU	**Kalix**	**2.35**	**146**	P		Pn	01 25 54.2	+1.1
TOF	**Tornio**	**2.40**	**135**	*e*P		Pn	01 25 54.9	+1.1
	baz=318							
TOF				MSG			01 26 26.4	
	comp=Z,8.0nm,0.2s							
TOF				*e*SG		Sg	01 26 29.1	-1.2
SJUU	**Sjulsmark**	**2.41**	**166**	*e*P		Pn	01 25 55.1	+1.1
SJUU	**Sjulsmark**	**2.41**	**166**	P		Pn	01 25 55.1	+1.1
SGF	**Sodankyl**	**2.45**	**96**	*e*P		Pn	01 25 56.2	+1.6
	baz=285							
SGF				*e*SG		Sg	01 26 30.9	-1.1
RNF	**Rovaniemi**	**2.58**	**116**	*e*P		Pn	01 25 57.8	+1.5
RNF				*e*SG		Sb	01 26 33.3	+0.7
ARE0	**ARCESS Array S**	**2.58**	**46**	*e*P		Pn	01 25 57.7	+1.3
	baz=228							
ARE0				*e*			01 26 24.2	
KEV	**Kevo**	**3.13**	**49**	*e*PG		Pg	01 26 12.3	-1.1
KEV				MSG			01 26 46.0	
	comp=Z,4.6nm,0.2s							
KEV				*e*SB		Sb	01 26 47.6	-1.0
BURU	**Burvik**	**3.30**	**171**	*e*P		Pn	01 26 08.3	+2.1
VRF	**Varrio**	**3.58**	**87**	*e*P		Pn	01 26 11.5	+1.5
UMAU	**Umeaa**	**3.98**	**177**	*e*P		Pn	01 26 17.4	+1.9
KU6	**Riekki**	**4.22**	**111**	*e*SG		Sg	01 27 25.9	-3.0

NIED ***22*** *01:44:00, 37.70N×141.90E, h8km, Mw4.0 Best double couple: Mo1.05000×10^15 NP1:ϕs148.00000°, δ67.00000°, λ-72.00000°. NP2:ϕs288.00000°, δ29.00000°, λ-127.00000°.*
IDC ***22*** *01:44:57.8±0.7, 37.69N×141.87E, h0km, mb3.8/13, mb1 4.0/14, mb1mx3.9/33, mbtmp3.8/14, ML2.8/1, MS2.9/3, Ms1 2.9/3, ms1mx2.5/44, Error ellipse: s-maj=20.6km s-min=17.7km az=141.0*
MOS ***22*** *01:44:59.1±0.9, 37.69N×141.98E, h25km, mb4.6/4, Error ellipse: s-maj=11.8km s-min=7.9km az=85.9*
JMA ***22*** *01:44:59.4±0.1, 37.69N×141.90E, h23km±2km, M4.2*
NEIC ***22*** *01:45:02.7±1.1, 37.65N±0.06×141.88E±0.02, h35km±2km, mb4.4/9, Error ellipse: s-maj=10.8km s-min=3.0km az=173.0*

ISC 22 01:44:56.8±1.8, 37.67N±0.04×142.02E±0.05, h0km±10km, n67, σ1.77/76, mb4.0/21, 1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIKH	**Ishinomakibobu**	**0.78**	**326**	P		**Pg**	**01 45 12.8**	**+1.1**
JIKH				S		**Sg**	**01 45 21.8**	**0.0**
JMST	**Minamisoumatoc**	**0.90**	**274**	P		**Pg**	**01 45 14.1**	**0.0**
JMST				S		**Sg**	**01 45 24.6**	**-1.1**
JIO	**Ouri**	**0.95**	**326**	P		**Pg**	**01 45 15.6**	**+0.6**
JIO				S		**Sg**	**01 45 26.8**	**-0.5**
JFK	**Kawauchi**	**0.96**	**252**	P		**Pg**	**01 45 15.5**	**+0.3**
JFK				*e*S		**Sg**	**01 45 26.8**	**-0.8**
JMM	**Marumori**	**0.99**	**282**	P		**Pg**	**01 45 15.7**	**-0.1**
JMM				S		**Sg**	**01 45 27.2**	**-1.5**
ONAJ	**Iwakimizuishiy**	**1.12**	**240**	P		**Pg**	**01 45 18.1**	**-0.3**
JKMT	**Kesennumamotoy**	**1.22**	**340**	P		**Pg**	**01 45 20.1**	**-0.1**
JKMT				S		**Sg**	**01 45 34.4**	**-1.6**
JOU	**Okura**	**1.28**	**303**	P		**Pg**	**01 45 21.1**	**-0.2**
JOU				S		**Sg**	**01 45 36.4**	**-1.5**
JFT	**Otama**	**1.34**	**264**	P		**Pg**	**01 45 21.9**	**-0.7**
JFT				S		**Sg**	**01 45 39.3**	**-0.7**
JMK	**Ichinoseki**	**1.43**	**334**	P		**Pn**	**01 45 23.5**	**-0.5**
JMK				*e*S		**Sb**	**01 45 40.8**	**-2.2**
JYS	**Shirataka**	**1.64**	**290**	P		**Pn**	**01 45 27.0**	**+0.1**
JYS				S		**Sn**	**01 45 47.2**	**-1.5**
JYK	**Kaneyama**	**1.81**	**314**	P		**Pn**	**01 45 28.7**	**-0.5**
JFY	**Yanaizu**	**1.86**	**263**	P		**Pn**	**01 45 29.8**	**-0.1**
JFY				S		**Sn**	**01 45 52.9**	**-1.2**
MJAR	**Matsushiro Arr**	**3.25**	**251**	Pn		**Pn**	**01 45 49.7**	**+0.7**
	1.2nm,0.3s,baz=64,slow=11,SNR=58							
MAJO	**Matsushiro**	**3.25**	**251**	P		**Pn**	**01 45 49.7**	**+0.7**
MAJO							01 46 24.9	
MAJO	**Matsushiro**	**3.25**	**251**			**Pn**	**01 45 49.7**	**+0.7**
MAJO				Sn		**Sn**	**01 46 24.9**	**-3.5**
MAT	**Matsushiro**	**3.25**	**251**	P		**Pn**	**01 45 50.1**	**+1.1**
MAT				S		**Sn**	**01 46 31.7**	**+3.3**
MJB9	**Matsu-Tunnel**	**3.25**	**251**			**Pn**	**01 45 49.8**	**+0.7**
ERM	**Erimo**	**4.43**	**11**	P		**Pn**	**01 46 08.1**	**+2.9**
ERM							01 46 56.5	
ERM	**Erimo**	**4.43**	**11**	Pn		**Pn**	**01 46 08.1**	**+2.9**
ERM				Sn		**Sn**	**01 46 56.5**	**-1.0**
INU	**Inuyama**	**4.65**	**242**			**Pn**	**01 46 07.8**	**-0.5**
JHJ2	**Mitsune**	**4.89**	**202**	Pn		**Pn**	**01 46 11.6**	**+0.1**
JHJ2				Sn		**Sn**	**01 47 06.0**	**-2.8**
ASAJ	**Asahikawa**	**6.46**	**4**	LR		LR	01 49 13.6	
	comp=Z,81nm,20.1s,baz=57,slow=40							
GLVR	**Golovnino**	**6.62**	**23**	*e*P		**Pn**	**01 46 38.2**	**+2.9**
GLVR				*e*S		**Sn**	**01 47 47.0**	**-4.4**
GLVR				pmax		pmax		
	comp=Z,122nm,0.6s							
GLVR				smax		smax		
	comp=N,131nm,0.4s							
GLVR				smax		smax		
	comp=E,165nm,0.4s							
GRPR	**Tuman**	**6.93**	**23**	*e*P		**Pn**	**01 46 40.9**	**+1.4**
GRPR				*e*S		**Sn**	**01 47 52.2**	**-6.8**
GRPR				pmax		pmax		
	comp=Z,103nm,0.3s							
YUK	**Yuzh-Kuril'sk

NEIC ***22*** *01:59:44.1±1.4, 19°.14N×0°.09×121°.12E±0°.10, h19km±3km, mb4.7/31, Error ellipse: s-maj=13.7km s-min=12.7km az=67.0*

IDC ***22*** *01:59:47.2±6.2, 19°.17N×121°.21E, h33km±47km, mb4.0/20, mb1 4.2/22, mb1mx4.1/53, mbtmp4.2/22, ML4.0/2, MS3.6/13, Ms1 3.6/13, ms1mx3.4/37, Error ellipse: s-maj=18.5km s-min=13.2km az=73.0*

MAN ***22*** *01:59:47.9, 19°.13N×121°.11E, h15km, MS3.9*

BJI ***22*** *01:59:53.2±0.0, 19°.73N×120°.72E, h47km, mB4.7/37, mb4.4/47, ML4.0/3, Ms4.2/27, Ms7 3.9/29*

ISC 22 01:59:48.0±1.4, 19°.29N±0°.03×121°.14E±0°.06, h38km±10km, n131, σ2§03/138, mb4.6/49, MS3.6/14, 25C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**1.50**	**205**	⇑*eP*		**Pn**	**02 00 10.9**	**-1.6**
SIPP				*eS*		**Sn**	**02 00 25.5**	**-5.3**
CVP	**Callao Caves**	**1.71**	**157**	⇑*iP*		**Pn**	**02 00 17.8**	**+2.6**
CVP				*i* S		**Sn**	**02 00 28.5**	**-7.3**
TWG	**Pinlang**	**3.51**	**359**			**Pn**	**02 00 38.9**	**-1.2**
TWG				Sn		**Sn**	**02 01 19.5**	**-0.9**
PCPH	**Palayan**	**3.71**	**181**	⇑*eP*		**Pn**	**02 00 45.8**	**+3.1**
TPUB	**Ta-pu**	**4.02**	**353**			**Pn**	**02 00 46.0**	**-1.0**
TPUB				Sn		**Sn**	**02 01 27.2**	**-5.7**
YULB	**Yu-li**	**4.08**	**2**			**Pn**	**02 00 48.1**	**+0.2**
YULB				Sn		**Sn**	**02 01 28.8**	**-5.7**
SSLB	**Suanglung**	**4.48**	**358**			**Pn**	**02 00 53.3**	**-0.1**
SSLB				Sn		**Sn**	**02 01 38.7**	**-5.6**
NACB	**Ninganchiao**	**4.88**	**5**			**Pn**	**02 00 58.8**	**-0.1**
NACB				Sn		**Sn**	**02 01 49.4**	**-4.7**
YHNB	**Yeheng**	**5.36**	**2**			**Pn**	**02 01 06.1**	**+0.6**
YHNB				Sn		**Sn**	**02 02 02.3**	**-3.7**
QIZ	**Qiongzhong**	**10.68**	**270**	P		**Pn**	**02 02 19.8**	**+1.4**
QIZ				S		Sn	02 04 09.8	-6.9
QIZ				LR		LR		
	comp=N,660nm,18.6s							
QIZ				LR		LR		
	comp=E,440nm,18.1s							
QIZ				LR		LR		
	comp=Z,570nm,13.2s							
QIZ	**Qiongzhong**	**10.68**	**270**	Pn		Pn	02 02 15.9	-2.6
WHN	**Wuhan**	**12.78**	**333**	P		**Pn**	**02 02 49.5**	**+2.4**
WHN				S		**Sn**	**02 05 05.9**	**-2.2**
WHN				pmax		pmax		
	comp=Z,28nm,0.5s							
WHN				LR		LR		
	comp=Z,1μm,14.1s							
NJ2	**Nanjing**	**12.87**	**351**	*eP*		**Pn**	**02 02 47.5**	**-0.9**
NJ2				pmax		pmax		
	comp=Z,11nm,0.6s							
DAV	**Davao City (W)**	**12.89**	**160**	LR		LR	02 08 26.2	
	comp=Z,399nm,21.1s,baz=352,slow=41							
GYA	**Guiyang**	**15.12**	**301**	P		**Pn**	**02 03 18.4**	**-0.6**
GYA				pP		P	02 03 27.6	+3.9
GYA				sP		pP	02 03 33.3	+0.6
GYA				S		**Sn**	**02 05 59.6**	**-5.8**
GYA				SS		**SnSn**	**02 06 17.8**	**-0.5**
GYA				pmax		pmax		
	comp=Z,20nm,0.7s							
GYA				pmax		pmax		
	comp=Z,120nm,4.9s							
GYA				LR		LR		
	comp=N,840nm,14.2s							
GYA				LR		LR		
	comp=E,920nm,12.8s							
GYA				LR		LR		
	comp=Z,720nm,14.0s							
JNU	**Nakatsue**	**16.30**	**30**	Pn		**Pn**	**02 03 35.1**	**+1.0**
	0.4nm,0.3s,baz=190,slow=17,SNR=3.4							
JNU				LR		LR	02 10 41.0	
	comp=Z,134nm,18.7s,baz=199,slow=40							
JNU	**Nakatsue**	**16.30**	**30**			**Pn**	**02 03 34.9**	**+0.7**
KMI	**Kunming**	**17.99**	**292**	P		**Pn**	**02 03 55.3**	**-0.1**
KMI				pmax		pmax		
	comp=Z,10.0nm,1.9s							
KMI				LR		LR		
	comp=N,530nm,17.8s							
KMI				LR		LR		
	comp=E,310nm,18.5s							
KMI				LR		LR		
	comp=Z,380nm,14.5s							
XAN	**Xi'an**	**18.28**	**326**	P		**Pn**	**02 04 00.1**	**+1.4**
XAN				pmax		pmax		
	comp=Z,11nm,1.3s							
XAN				pmax		pmax		
	comp=Z,140nm,4.1s							
XAN				LR		LR		
	comp=N,320nm,11.9s							
XAN				LR		LR		
	comp=E,320nm,10.8s							
XAN				LR		LR		
	comp=Z,250nm,16.3s							
XAN	**Xi'an**	**18.28**	**326**	P		**P**	**02 03 57.1**	**-1.5**
KSRS	**Korea Array**	**19.05**	**17**	P		**P**	**02 04 07.1**	**+0.2**
	0.7nm,0.3s,baz=199,slow=13,SNR=14							
KSRS				LR		LR	02 12 12.7	
	comp=Z,174nm,18.9s,baz=194,slow=39							
CD2	**Chengdu**	**19.50**	**310**	⇑P		**Pn**	**02 04 13.0**	**-0.5**
CD2				S		**S**	**02 07 44.6**	**-5.9**
CD2				pmax		pmax		
	comp=Z,30nm,0.6s							
CD2				pmax		pmax		
	comp=Z,100nm,4.9s							
CD2				LR		LR		
	comp=E,560nm,10.6s							
CD2				LR		LR		
	comp=Z,470nm,12.0s							
CMAR	**Chiang Mai Arr**	**21.02**	**271**	P		**P**	**02 04 29.4**	**+0.8**
	1.1nm,0.3s,baz=80,slow=9.6,SNR=9.3							
CMAR				LR		LR	02 12 34.5	
	comp=Z,105nm,18.5s,baz=90,slow=36							
BJT	**Baijiatuan**	**21.10**	**349**	P		**P**	**02 04 28.9**	**-0.3**
BJT				IAmb		IAmb	02 04 35.9	
	comp=Z,28nm,0.8s							
BJI	**Beijing**	**21.12**	**349**	P		**P**	**02 04 30.4**	**+1.0**
BJI				pmax		pmax		
	comp=Z,8.0nm,0.8s							
LZH	**Lanzhou**	**22.62**	**321**	⇑P		**P**	**02 04 47.3**	**+1.5**
LZH				pP		pwP	02 04 58.0	0.0
LZH				sP		sP	02 05 03.4	+4.7
LZH				PP		pP	02 05 12.4	+18
LZH				pmax		pmax		
	comp=Z,20nm,1.4s							
LZH				pmax		pmax		
	comp=Z,120nm,5.5s							
LZH				LR		LR		
	comp=Z,240nm,15.2s							
LZH				LR		LR		
	comp=Z,280nm,13.0s							
LZH				LR		LR		
	comp=Z,350nm,15.2s							
MJAR	**Matsushiro Arr**	**22.81**	**38**	P		**P**	**02 04 48.4**	**+0.8**
	comp=Z,1.8nm,0.6s,baz=206,slow=6.3,SNR=3.7							
HHC	**Hu-ho-hao-te**	**23.00**	**341**	*eP*		**P**	**02 04 51.3**	**+1.7**
HHC				pP		pwP	02 05 02.8	-0.1
HHC				PP		sP	02 05 19.6	+17
HHC				S		**S**	**02 08 52.6**	**-5.0**
HHC				sS		Sn	02 09 05.5	-10
HHC				pmax		pmax		
	comp=Z,13nm,1.1s							
HHC				pmax		pmax		
	comp=Z,75nm,6.1s							
HHC				LR		LR		
	comp=Z,180nm,12.9s							
HHC				LR		LR		
	comp=Z,160nm,10.4s							
HHC				LR		LR		
	comp=Z,200nm,14.1s							
GUMO	**Guam**	**23.45**	**100**	LR		LR	02 14 15.8	
	comp=Z,96nm,18.8s,baz=88,slow=37							
USRK	**Ussuriysk Ar.**	**26.45**	**18**	P		**P**	**02 05 22.5**	**+1.2**
	comp=Z,2.4nm,0.7s,baz=198,slow=6.9,SNR=5.6							
GTA	**Gaotai**	**27.21**	**322**	⇑P		**P**	**02 05 29.0**	**+0.5**
GTA				pP		sP	02 05 41.9	-0.2
GTA				sP		pwP	02 05 47.3	+5.7
GTA				PcP		**PcP**	**02 08 49.3**	**+1.3**
GTA				S		**S**	**02 10 02.0**	**-3.0**
GTA				sS		sS	02 10 24.5	+1.7
GTA				pmax		pmax		
	comp=Z,2.0nm,0.7s							
GTA				pmax		pmax		
	comp=Z,100nm,8.7s							
GTA				LR		LR		
	comp=Z,110nm,17.5s							
GTA				LR		LR		
	comp=Z,350nm,15.9s							
GTA				LR		LR		
	comp=Z,190nm,15.6s							
KSI	**Kapahiang**	**29.20**	**221**	P		P	02 05 37.7	-8.6
ASAJ	**Asahikawa**	**30.58**	**31**	LR		LR	02 19 54.6	
	comp=Z,74nm,18.5s,baz=120,slow=39							
ULN	**Ulaanbaatar**	**30.72**	**341**	P		**P**	**02 05 57.7**	**-1.9**
SONM	**Songino Array**	**30.90**	**340**	P		**P**	**02 06 01.9**	**+0.9**
	comp=Z,2.4nm,0.7s,baz=162,slow=10.0,SNR=20							
SONM				LR		LR	02 19 56.4	
	comp=Z,122nm,18.4s,baz=158,slow=39							
KLR	**Kul'dur**	**31.07**	**14**	LR		LR	02 20 18.1	
	comp=Z,119nm,18.9s,baz=205,slow=40							
TAPN	**Taplejung**	**31.65**	**291**	*eP*		**P**	**02 06 08.8**	**+0.6**
ODAN	**Odare**	**31.88**	**290**	*eP*		**P**	**02 06 10.6**	**+0.5**
	comp=Z,16nm,0.7s							
RAMN	**Ramite**	**32.59**	**290**	*eP*		**P**	**02 06 17.1**	**+0.7**
	comp=Z,23nm,0.8s							
JIRN	**Jiri**	**33.03**	**291**	*eP*		**P**	**02 06 20.9**	**+0.5**
	comp=Z,22nm,0.7s							
GUN	**Gumba**	**33.33**	**292**	*eP*		**P**	**02 06 23.2**	**+0.2**
	comp=Z,24nm,0.8s							
MANU	**Manus Island**	**33.37**	**127**	P		**P**	**02 06 19.9**	**-3.1**
MANU				IAmb		IAmb	02 06 38.4	
	comp=Z,13nm,1.0s							
DANN	**Dangsing**	**35.24**	**292**	*eP*		**P**	**02 06 39.7**	**+0.2**
KOLN	**Koldanda**	**35.32**	**291**	*eP*		**P**	**02 06 39.9**	**-0.2**
	comp=Z,29nm,1.0s							
WMQ	**Urumqi**	**37.15**	**319**	*eP*		**P**	**02 06 56.8**	**+1.5**
WMQ				pP		pP	02 07 03.6	-1.4
WMQ				S		**S**	**02 12 33.4**	**-5.9**
WMQ				pmax		pmax		
	comp=Z,11nm,0.8s							
WMQ				pmax		pmax		
	comp=Z,44nm,3.7s							
WMQ				LR		LR		
	comp=Z,510nm,28.9s							
WMQ				LR		LR		
	comp=Z,560nm,29.1s							
WMQ				LR		LR		
	comp=Z,180nm,21.9s							
WRA	**Warramunga Arr**	**41.08**	**161**	P		**P**	**02 07 25.7**	**-2.6**
	comp=Z,2.2nm,0.5s,baz=341,slow=8.9,SNR=21							
WRA				PcP		**PcP**	**02 09 27.9**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=342,slow=3.0,SNR=5.0							
WR0	**Warramunga Arr**	**41.16**	**161**	P		**P**	**02 07 26.2**	**-2.7**
MK31	**Makanchi Array**	**41.92**	**320**	P		**P**	**02 07 34.8**	**-0.2**
MK31				IAmb		IAmb	02 07 37.3	
	comp=Z,10nm,1.0s							
MKAR	**Makanchi Array**	**41.92**	**320**	P		**P**	**02 07 36.2**	**+1.3**
	comp=Z,6.2nm,0.6s,baz=114,slow=9.0,SNR=78							
MKAR				LR		LR	02 28 17.1	
	comp=Z,73nm,18.4s,baz=54,slow=41							
MAKZ	**Makanchi**	**42.12**	**320**	P		**P**	**02 07 35.9**	**-0.7**
MAKZ				IAmb		IAmb	02 07 38.9	
	comp=Z,14nm,1.1s							
H11S3	**WAKE ISLAND Hy**	**43.01**	**83**	T		T	02 53 26.8	
	baz=278,slow=75,SNR=39							
H11S1	**WAKE ISLAND Hy**	**43.02**	**83**	T		T	02 53 43.6	
	baz=278,slow=75,SNR=14							
H11S2	**WAKE ISLAND Hy**	**43.03**	**83**	T		T	02 53 43.7	
	baz=278,slow=75,SNR=17							
H11N1	**WAKE ISLAND Hy**	**43.03**	**82**	T		T	02 53 43.5	
	baz=277,slow=75,SNR=67							
H11N2	**WAKE ISLAND Hy**	**43.03**	**81**	T		T	02 53 42.9	
	baz=277,slow=75,SNR=57							
H11N3	**WAKE ISLAND Hy**	**43.05**	**81**	T		T	02 53 44.3	
	baz=277,slow=75,SNR=46							
KSH	**Kashi**	**43.67**	**307**	P		**P**	**02 07 53.4**	**+4.0**
KSH				sP		pwP	02 08 12.1	+8.6
KSH				PP		**PcP**	**02 09 35.3**	**-0.9**
KSH				S		**S**	**02 14 22.8**	**+5.9**
KSH				pmax		pmax		
	comp=Z,15nm,0.7s							
KSH				pmax		pmax		
	comp=Z,350nm,5.8s							
KSH				LR		LR		
	comp=Z,120nm,4.0s							
KSH				LR		LR		
	comp=Z,190nm,5.0s							
KSH				LR		LR		
	comp=Z,400nm,5.3s							
PETK	**Petropavlovsk-**	**44.00**	**31**	P		**P**	**02 07 52.0**	**+0.3**
	comp=Z,5.7nm,1.1s,baz=270,slow=7.2,SNR=3.3							
NRN	**Naryn**	**44.15**	**310**	P		**P**	**02 07 52.4**	**-1.1**
NRN				IAmb		IAmb	02 07 56.3	
	comp=Z,12nm,1.1s							
ZAA0	**Zalesovo Array**	**44.38**	**330**	P		**P**	**02 07 53.8**	**-0.9**
ZAA0				IAmb		IAmb	02 07 56.2	
	comp=Z,9.0nm,0.8s							
ZALV	**Zalesovo Beam**	**44.38**	**330**	P		**P**	**02 07 55.1**	**+0.5**
	comp=Z,7.0nm,0.7s,baz=117,slow=7.6,SNR=29							
ZALV				LR		LR	02 26 42.0	
	comp=Z,77nm,19.6s,baz=82,slow=36							
AS31	**Alice Springs**	**44.48**	**163**	P		**P**	**02 07 53.2**	**-2.6**
ASAR	**Alice Springs**	**44.48**	**163**	P		**P**	**02 07 54.0**	**-1.8**
	comp=Z,1.2nm,0.4s,baz=345,slow=7.2,SNR=22							
NIL	**Nilore**	**44.81**	**299**	P		**P**	**02 07 56.5**	**-1.9**
KURK	**Kurchatov**	**45.89**	**323**	P		**P**	**02 08 06.2**	**-0.5**
KURK				IAmb		IAmb	02 08 08.7	
	comp=Z,17nm,0.9s							
BTK	**Batken**	**47.67**	**307**	P		**P**	**02 08 20.4**	**-0.5**
BTK				IAmb		IAmb	02 08 22.7	
	comp=Z,4.6nm,0.8s							
KBL	**Kabul**	**48.36**	**299**	P		**P**	**02 08 25.2**	**-1.3**
KBL				IAmb		IAmb	02 08 28.5	
	comp=Z,10nm,0.8s							
KK31	**Karatay Array**	**48.51**	**311**	P		**P**	**02 08 26.8**	**-0.6**
KK31				IAmb		IAmb	02 08 29.6	
	comp=Z,9.3nm,1.1s							
KK31				PcP		**PcP**	**02 09 51.6**	**-1.3**
KKAR	**Karatay Array**	**48.51**	**311**	P		**P**	**02 08 27.1**	**-0.2**
KKAR				IAmb		IAmb	02 08 29.5	
	comp=Z,9.3nm,1.1s							
KKAR				PcP		**PcP**	**02 09 51.8**	**-1.1**
BRVK	**Borovoye**	**51.56**	**323**	P		**P**	**02 08 48.6**	**-1.6**
BRVK				IAmb		IAmb	02 08 51.9	
	comp=Z,6.7nm,0.9s							
TIXI	**Tiksi**	**52.56**	**3**	LR		LR	02 34 16.5	
	comp=Z,66nm,18.8s,baz=204,slow=39							
TIXI	**Tiksi**	**52.56**	**3**	P		**P**	**02 08 56.9**	**-0.4**
STKA	**Stephens Creek**	**54.53**	**159**	P		**P**	**02 09 11.6**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=346,slow=6.9,SNR=4.7							
STKA	**Stephens Creek**	**54.53**	**159**	P		**P**	**02 09 11.3**	**-1.0**
ABKAR	**Akbulak array**	**56.89**	**317**	P		**P**	**02 09 29.0**	**0.0**
ABKAR				IAmb		IAmb	02 09 31.0	
	comp=Z,10nm,0.9s							
GEYT	**Alibeck**	**57.32**	**303**	P		**P**	**02 09 34.1**	**+1.7**
	comp=Z,1.1nm,0.5s,baz=103,slow=6.4,SNR=7.2							
ARU	**Arti**	**59.02**	**325**	P		**P**	**02 09 43.8**	**-0.1**
AKH	**Akhalkalaki**	**68.38**	**308**	⇑P		**P**	**02 10 48.0**	**+1.8**
KLMR	**Klimovskoe**	**69.28**	**329**	*eP*		**P**	**02 10 50.4**	**-0.7**
KLMR				AMP			02 10 51.5	
	comp=Z,15nm,1.0s							
RAYN	**Ar Rayn**	**69.79**	**289**	P		**P**	**02 10 53.8**	**-1.3**
RAYN				IAmb		IAmb	02 10 55.8	
	comp=Z,6.4nm,0.9s							
ILAR	**Eielson Array**	**73.58**	**27**	P		**P**	**02 11 16.4**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=262,slow=5.0,SNR=11							
ARCES	**ARCESS Array B**	**74.05**	**339**	P		**P**	**02 11 20.1**	**+0.4**
	comp=Z,2.3nm,0.6s,baz=71,slow=8.2,SNR=13							
FID	**Port Fidalgo**	**74.53**	**31**			**PcP**	**02 11 38.9**	**+1.9**
FINES	**FINESS Array B**	**75.64**	**330**	P		**P**	**02 11 28.9**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=116,slow=4.4,SNR=7.6							
BRTR	**Keskin Array B**	**76.06**	**307**	P		**P**	**02 11 31.3**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=114,slow=2.9,SNR=4.8							
BRTR				LR		LR	02 48 23.2	
	comp=Z,26nm,18.0s,baz=347,slow=38							
AKASG	**Malin Array Be**	**76.50**	**319**	P		**P**	**02 11 33.1**	**-1.0**
	comp=Z,2.6nm,0.7s,baz=62,slow=5.3,SNR=6.9							
MWH	**Moku'aweowe**	**77.68**	**74**	P		**P**	**02 11 40.2**	**-1.8**
HMH	**Humu'ula Sheep**	**77.75**	**73**	P		**P**	**02 11 40.2**	**-1.9**
AIN	**Ainahou**	**77.84**	**74**	P		**P**	**02 11 40.8**	**-1.7**
TLCR		**78.16**	**314**	⇑P		**P**	**02 11 43.7**	**+0.2**
TOPG	**Topolog**	**78.54**	**314**	⇑P		**P**	**02 11 46.3**	**+0.6**
CFR	**Carcaliu**	**78.63**	**314**	⇑P		**P**	**02 11 46.1**	**0.0**
SUW	**Suwalki**	**79.17**	**323**	*eP*		**P**	**02 11 49.2**	**+0.3**
SUW	**Suwalki**	**79.17**	**323**	P		**P**	**02 11 47.8**	**-1.1**
TESR	**Tescani**	**79.25**	**316**	⇑P		**P**	**02 11 49.4**	**-0.1**
VRI	**Vrincioaia**	**79.39**	**315**	⇑P		**P**	**02 11 51.5**	**+1.2**
BIZ	**Bicaz**	**79.49**	**316**	⇑P		**P**	**02 11 51.0**	**+0.2**
BURAR	**Bucovina Array**	**79.87**	**317**	⇑P		**P**	**02 11 53.5**	**+0.5**
BUR08	**Bucovina Ar. S**	**79.87**	**317**	P		**P**	**02 11 52.5**	**-0.5**
BUR08				IAmb		IAmb	02 11 54.0	
	comp=Z,5.1nm,0.9s							
MLR	**Muntele Rosu**	**80.02**	**315**	⇑P		**P**	**02 11 54.7**	**+0.8**
SULR		**80.05**	**314**	⇑P		**P**	**02 11 54.9**	**+1.1**
DOPR	**Dopca**	**80.25**	**315**	⇑P		**P**	**02 11 55.6**	**+0.7**
ARR	**Arges**	**80.94**	**315**	⇑P		**P**	**02 11 59.2**	**+0.5**
HUMR	**Humele**	**80.96**	**314**	⇑P		**P**	**02 11 58.7**	**-0.1**
TRPA	**Tarpa**	**81.42**	**318**	⇑P		**P**	**02 12 01.1**	**0.0**
NIE	**Niedzica**	**82.37**	**320**	*eP*		**P**	**02 12 07.1**	**+0.9**
OJC	**Ojcow**	**82.39**	**321**	*eP*		**P**	**02 12 06.5**	**+0.3**
OJC	**Ojcow**	**82.39**	**321**	P		**P**	**02 12 06.5**	**+0.3**
OJC				IAmb		IAmb	02 12 07.3	
	comp=Z,8.1nm,0.7s							
NB2	**NORSAR Subarra**	**82.52**	**333**	P		**P**	**02 12 05.8**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=61,slow=5.1							
NOA	**NORSAR Array B**	**82.52**	**333**	P		**P**	**02 12 06.1**	**-0.6**
	comp=Z,1.5nm,0.8s,baz=64,slow=5.1,SNR=5.0							
HERR	**Herculane**	**82.58**	**315**	⇑P		**P**	**02 12 07.8**	**+0.5**
VTS	**Vitosha**	**82.78**	**313**	⇑P		**P**	**02 12 09.3**	**+0.7**
VTS	**Vitosha**	**82.78**	**313**	P		**P**	**02 12 07.8**	**-0.7**
VTS				IAmb		IAmb	02 12 09.4	
	comp=Z,5.5nm,0.8s							
BZS	**Buzias**	**82.86**	**316**	⇑P		**P**	**02 12 08.7**	**-0.1**
MDVR	**Moldovita**	**83.08**	**315**	⇑P		**P**	**02 12 10.4**	**+0.4**
VYHS	**Vyhne**	**83.61**	**319**	*eP*		**P**	**02 12 12.4**	**-0.2**
KSP	**Ksiaz**	**84.23**	**322**	*eP*		**P**	**02 12 16.0**	**+0.3**
KRLC	**Kraliky**	**84.25**	**321**	*eP*		**P**	**02 12 16.2**	**+0.4**
DPC	**Dobruska-Polom**	**84.41**	**322**	*eP*		**P**	**02 12 17.4**	**+0.8**
KMBO	**Kilima Mbogo**	**84.59**	**267**	P		**P**	**02 12 19.7**	**+1.2**
	comp=Z,2.8nm,0.9s,baz=250,slow=23,SNR=5.4							
VRAC	**Vranov**	**84.66**	**320**	⇑P		**P**	**02 12 18.9**	**+1.0**
TREC	**Trest**	**85.33**	**321**	*eP*		**P**	**02 12 22.1**	**+0.8**
PVCC	**Panska Ves**	**85.36**	**322**	*eP*		**P**	**02 12 22.1**	**+0.8**
BRG	**Berggiesshubel**	**85.58**	**323**	*eP*		**P**	**02 12 22.8**	**+0.4**
	comp=Z,26nm,1.8s							
PRU	**Pruhonice**	**85.60**	**322**	*eP*		**P**	**02 12 23.1**	**+0.5**
CLL	**Collm**	**85.92**	**323**	*eP*		**P**	**02 12 24.0**	**-0.1**
KHC	**Kasperske Hory**	**86.53**	**321**	*eP*		**P**	**02 12 26.6**	**-0.7**
GERES	**GERESS Array B**	**86.58**	**321**	P		**P**	**02 12 28.5**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=75,slow=5.7,SNR=8.0							
YKA	**Yellowknife Ar**	**87.48**	**23**	P		**P**	**02 12 32.0**	**+0.5**
	comp=Z,4.5nm,0.8s,baz=311,slow=4.7,SNR=78							
MAW	**Mawson**	**96.48**	**199**	LR		LR	02 51 51.4	
	comp=Z,59nm,18.1s,baz=60,slow=32							
TXAR	**Lajitas Array**	**115.16**	**43**	PKP		**PKPdf**	**02 18 26.4**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=184,slow=1.2,SNR=8.6							

JMA ***22*** *02:06:37.7±0.2, 31°.30N×142°.83E, h27km, M4.2*

IDC ***22*** *02:06:37.4±0.7, 31°.22N×142°.89E, h0km, mb3.9/11, mb1 4.2/13, mb1mx3.9/43, mbtmp3.9/13, ML3.6/2, Error ellipse: s-maj=23.6km s-min=18.0km az=85.0*

NEIC ***22*** *02:06:41.8±1.2, 31°.24N±0°.08×142°.74E±0°.09, h31km±6km, mb4.5/12, Error ellipse: s-maj=14.9km s-min=6.2km az=221.0*

ISC 22 02:06:41.9±0.6, 31°.32N±0°.06×142°.94E±0°.09, h35km, n44, σ2§10/50, mb4.1/17, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.19**	**305**	P		**Pn**	**02 07 26.9**	**-2.7**
JHJ2				S		**Sn**	**02 08 04.3**	**-2.1**
JHJ2	**Mitsune**	**3.19**	**305**	Pn		**Pn**	**02 07 28.1**	**-1.5**
JHJ2				Sn		**Sn**	**02 08 04.7**	**-1.7**
BSO1	**Boso 1**	**3.71**	**334**	P		**Pn**	**02 07 35.2**	**-1.0**
BSO3	**Boso 3**	**4.03**	**330**	P		**Pn**	**02 07 39.2**	**-1.6**
CBIJ	**Chichi jima**	**4.26**	**189**	P		**Pn**	**02 07 42.5**	**-1.8**
JCJ	**Chichijima**	**4.26**	**189**	Pn		**Pn**	**02 07 43.1**	**-1.2**
	9.7nm,0.3s,baz=0.0,slow=20,SNR=5.1							
JCJ				Sn		**Sn**	**02 08 27.4**	**-5.4**
	21nm,0.3s,baz=276,slow=23,SNR=7.3							
BSO4	**Boso 4**	**4.26**	**330**	P		**Pn**	**02 07 44.2**	**0.0**
JOD2	**Odawara 2**	**5.09**	**322**	P		**Pn**	**02 07 54.4**	**-1.2**
JHU	**Hanno**	**5.46**	**327**	P		**Pn**	**02 07 59.6**	**-1.1**
JHU				*eS*		**Sn**	**02 08 58.2**	**-4.0**
JRY	**Ryogami san**	**5.77**	**325**	P		**Pn**	**02 08 03.7**	**-1.3**
JRY				*eS*		**Sn**	**02 09 07.5**	**-2.5**
JAG	**Ashikaga**	**5.86**	**331**	P		**Pn**	**02 08 05.2**	**-1.0**
JFK	**Kawauchi**	**6.27**	**345**	*eS*		**Sn**	**02 09 15.4**	**-6.9**
MJAR	**Matsushiro Arr**	**6.53**	**324**	Pn		**Pn**	**02 08 14.8**	**-0.6**
	0.5nm,0.3s,baz=147,slow=10,SNR=10.0							
MAJO	**Matsushiro**	**6.53**	**324**			**Pn**	**02 08 15.5**	**0.0**
MAT	**Matsushiro**	**6.53**	**324**	P		**Pn**	**02 08 15.2**	**-0.2**
MAT				*eS*		**Sn**	**02 09 27.3**	**-1.4**
MJB9	**Matsu-Tunnel**	**6.53**	**324**			**Pn**	**02 08 15.7**	**+0.2**
JTNC	**Tanabenakahech**	**6.67**	**294**	P		**Pn**	**02 08 18.7**	**+1.3**
JMK	**Ichinoseki**	**7.74**	**350**	*eS*		**Sn**	**02 09 52.7**	**-5.8**
JCH	**Churui**	**11.28**	**2**	P		**Pn**	**02 09 17.7**	**-2.8**
JCH				*eS*		Sn	02 11 11.8	-13
SONM	**Songino Array**	**32.28**	**311**	P		**P**	**02 13 09.4**	**+2.1**
	1.1nm,0.7s,baz=112,slow=6.6,SNR=8.6							
MK31	**Makanchi Array**	**48.39**	**307**	P		**P**	**02 15 20.4**	**0.0**
MK31		

PIEI END
PIEI END
SSP9 Sansepolcro 0.32 305 P Pb 02 10 03.5 +1.1

NIED ***22*** *02:31:00,37˚.30N×141˚.80E,h38km,Mw4.4 Best double couple: M₀4.73000×10¹⁵ NP1:φ₀44.00000°,δ72.00000°, λ94.00000°. NP2:φ₀211.00000°,δ19.00000°,λ78.00000°.*
BJI ***22*** *02:31:16.0±0.0,37˚.29N×141˚.53E,h10km,mB4.9/20, mb4.7/32,Ms4.2/5,Ms7 3.9/4*
MOS ***22*** *02:31:19.2±1.2,37˚.41N×141˚.74E,h38km,mb4.9/31,Error ellipse: s-maj=7.9km s-min=4.8km az=98.8*
JMA ***22*** *02:31:20.2±0.1,37˚.28N×141˚.72E,h45km±2km,M4.4*
JMA Felt II J1.
IDC ***22*** *02:31:21.1±0.7,37˚.27N×141˚.67E,h38km±4km,mb4.1/24, mb1 4.2/29,mb1mx4.1/51,mbtmp4.3/29,ML3.6/4,MS3.5/22, Ms1 3.5/22,ms1mx3.4/39,Error ellipse: s-maj=15.8km s-min=13.1km az=157.0*
NEIC ***22*** *02:31:21.3±1.2,37˚.28N±0˚.06×141˚.7E±0˚.1,h43km±6km, mb4.6/36,Error ellipse: s-maj=13.0km s-min=8.0km az=112.0*
ISC 22 02:31:19.8±0.5,37˚.25N±0˚.04×141˚.89E±0˚.05,h35km±1km, h35km:pP-P,n196,σ1§55/218,mb4.6/74,MS3.6/17,7C-9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res
JFK	**Kawauchi**	**0.82**	**279**	P		**Pn**	**02 31 33.5**	**-1.4**
JFK				S		**Sn**	**02 31 42.7**	**-3.1**
ONAJ	**Iwakimizuishiy**	**0.89**	**261**	P		**Pn**	**02 31 34.5**	**-1.3**
ONAJ				*i* S		**Sn**	**02 31 44.6**	**-2.9**
JMST	**Minamisoumatoc**	**0.93**	**301**	P		**Pn**	**02 31 35.0**	**-1.3**
JMST				*e*S		**Sn**	**02 31 45.4**	**-3.0**
JMM	**Marumori**	**1.07**	**306**	P		**Pn**	**02 31 37.0**	**-1.3**
JMM				S		**Sn**	**02 31 48.3**	**-3.6**
JFFD	**Fukushimafurud**	**1.07**	**262**	P		**Pn**	**02 31 37.2**	**-1.2**
JFFD				S		**Sn**	**02 31 49.1**	**-3.0**
JHO	**Hitachi**	**1.24**	**239**	P		**Pn**	**02 31 39.3**	**-1.3**
JHO				S		**Sn**	**02 31 53.0**	**-3.0**
JFT	**Otama**	**1.27**	**283**	P		**Pn**	**02 31 40.7**	**-0.3**
JFT				S		**Sn**	**02 31 55.0**	**-1.8**
JIO	**Ouri**	**1.28**	**341**	P		**Pn**	**02 31 40.5**	**-0.7**
JIO				S		**Sn**	**02 31 55.1**	**-2.0**
JOU	**Okura**	**1.48**	**319**	P		**Pn**	**02 31 43.5**	**-0.5**
JOU				S		**Sn**	**02 32 01.6**	**-0.5**
JYS	**Shirataka**	**1.74**	**304**	P		**Pn**	**02 31 47.5**	**-0.1**
JYS				*e*S		**Sn**	**02 32 08.1**	**-0.5**
JFY	**Yanaizu**	**1.75**	**276**	P		**Pn**	**02 31 47.3**	**-0.4**
JFY				S		**Sn**	**02 32 07.6**	**-1.2**
JMK	**Ichinoseki**	**1.78**	**343**	P		**Pn**	**02 31 48.1**	**0.0**
MJAR	**Matsushiro Arr**	**3.04**	**258**	Pn		**Pn**	**02 32 05.7**	**+0.3**
	2.9nm,0.3s,baz=79,slow=16,SNR=36							
MJAR				LR		LR	02 33 29.7	
	comp=Z,646nm,20.5s,baz=85,slow=45							
MAJO	**Matsushiro**	**3.04**	**258**	*d*	*i* P	**Pn**	**02 32 06.1**	**+0.7**
MAJO	**Matsushiro**	**3.04**	**258**			**Pn**	**02 32 04.8**	**-0.6**
MAT	**Matsushiro**	**3.04**	**258**	P		**Pn**	**02 32 06.0**	**+0.6**
MAT				S		**Sn**	**02 32 44.4**	**+3.9**
MJB9	**Matsu-Tunnel**	**3.04**	**258**			**Pn**	**02 32 04.8**	**-0.6**
INU	**Inuyama**	**4.37**	**246**			**Pn**	**02 32 23.3**	**-0.4**
JHJ2	**Mitsune**	**4.46**	**203**	Pn		**Pn**	**02 32 25.5**	**+0.5**
JHJ2						**Sn**	**02 33 15.1**	**-0.6**
ERM	**Erimo**	**4.86**	**11**	P		**Pn**	**02 32 31.1**	**+0.7**
ERM							02 33 25.7	
ERM	**Erimo**	**4.86**	**11**			**Pn**	**02 32 31.1**	**+0.7**
ERM				Sn		**Sn**	**02 33 25.7**	**+0.3**
NMR	**Nemuro--Hokkai**	**6.78**	**24**	*d*	*i* P	**Pn**	**02 32 55.3**	**-1.4**
NMR				*i* S		**Sn**	**02 34 06.7**	**-6.0**
ASAJ	**Asahikawa**	**6.88**	**4**	Pn		**Pn**	**02 32 58.9**	**+0.7**
	4.6nm,0.3s,baz=199,slow=17,SNR=7.0							
ASAJ				Sn		**Sn**	**02 34 17.1**	**+1.9**
	2.4nm,0.3s,baz=213,slow=25,SNR=3.6							
JKA	**Kamikawa-asahi**	**6.88**	**4**			**Pn**	**02 32 58.9**	**+0.7**
JKA						**Sn**	**02 34 17.1**	**+1.9**
GLVR	**Golovnino**	**7.05**	**22**	*e*P		**Pn**	**02 33 00.1**	**-0.3**
GLVR				*e*S		**Sn**	**02 34 15.1**	**-4.1**
GLVR				pmax	pmax			
	comp=Z,138nm,0.4s							
GRPR	**Tuman**	**7.35**	**22**	*e*P		**Pn**	**02 33 03.3**	**-1.3**
GRPR				*e*S		**Sn**	**02 34 22.4**	**-4.4**
GRPR				pmax	pmax			
	comp=Z,80nm,0.3s							
YUK	**Yuzh-Kuril'sk**	**7.42**	**23**	⇓*i*	P	**Pn**	**02 33 05.0**	**-0.5**
YUK				*e*S		**Sn**	**02 34 25.3**	**-3.1**
YUK				pmax	pmax			
	comp=Z,99nm,0.6s							
SHO	**Shikotan**	**7.61**	**28**	*e*P		**Pn**	**02 33 06.2**	**-1.9**
SHO				*e*S		**Sn**	**02 34 26.3**	**-6.7**
SHO				pmax	pmax			
	comp=Z,24nm,0.5s							
TEY	**Ternei**	**8.74**	**335**	⇑*e*P		Pn	02 33 29.0	+5.4
TEY				pmax	pmax			
	comp=E,20nm,1.0s							
TEY				pmax	pmax			
	comp=N,30nm,1.0s							
TEY				pmax	pmax			
	comp=Z,40nm,0.8s							
KUR	**Kuril'sk**	**9.16**	**28**	*e*P		**Pn**	**02 33 27.5**	**-1.8**
KUR				*e*S		**Sn**	**02 35 05.9**	**-5.2**
YSS	**Yuzh-Sakhalins**	**9.72**	**4**	*e*P		**Pn**	**02 33 37.3**	**+0.3**
YSS				pmax	pmax			
	comp=Z,20nm,0.8s							
YSS	**Yuzh-Sakhalins**	**9.72**	**4**			**Pn**	**02 33 36.2**	**-0.9**
JNU	**Nakatsue**	**9.91**	**249**	LR		LR	02 37 50.6	
	comp=Z,125nm,19.5s,baz=53,slow=40							
USRK	**Ussuriysk Ar.**	**10.23**	**316**	Pn		**Pn**	**02 33 44.9**	**+0.9**
	baz=134,slow=12,SNR=7.5							
USRK				LR		LR	02 37 33.0	
	comp=Z,353nm,18.4s,baz=115,slow=37							
USA0B	**Ussuriysk Arra**	**10.23**	**316**	P		**Pn**	**02 33 43.6**	**-0.4**
USA0B	**Ussuriysk Arra**	**10.23**	**316**			**Pn**	**02 33 43.6**	**-0.4**
KSRS	**Korea Array**	**11.12**	**275**	Pn		**Pn**	**02 34 00.2**	**+4.0**
	comp=Z,0.4nm,0.3s,baz=90,slow=13,SNR=15							
KSRS				LR		LR	02 37 44.2	
	comp=Z,246nm,20.9s,baz=84,slow=35							
TYV	**Tymovskoe**	**13.62**	**2**	*e*P		**P**	**02 34 40.7**	**+1.9**
TYV				pmax	pmax			
	comp=Z,17nm,0.7s							
TYV				pmax	pmax			
	comp=Z,300nm,4.6s							
KLR	**Kul'dur**	**14.06**	**332**	*i* P		**Pn**	**02 34 35.8**	**-0.5**
KLR				pmax	pmax			
	comp=Z,5.0nm,0.9s							
KLR	**Kul'dur**	**14.06**	**332**	Pn		**Pn**	**02 34 36.7**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=149,slow=16,SNR=4.6							
KLR				LR		LR	02 39 58.1	
	comp=Z,226nm,18.9s,baz=156,slow=37							
GRNR	**Gornyy**	**14.07**	**346**	⇓*i*	P	Pn	02 34 24.8	-12
GRNR				pmax	pmax			
	comp=Z,3.0nm,0.6s							
GRNR				MLR	MLR			
	comp=Z,260nm,16.0s							
SKR	**Severo-Kuril's**	**16.85**	**33**	*e*P		Pn	02 34 57.1	-16
SKR				pmax	pmax			
	comp=Z,49nm,1.6s							
SKR				MLR	MLR			
	comp=Z,200nm,21.0s							
PETK	**Petropavlovsk-**	**19.31**	**30**	P		**P**	**02 35 42.7**	**+1.0**
	comp=Z,0.0nm,0.3s,baz=212,slow=9.8,SNR=4.2							
PETK				LR		LR	02 44 25.3	
	comp=Z,43nm,18.3s,baz=243,slow=40							
ZEA	**Zeya**	**19.36**	**333**	*e*P		**P**	**02 35 40.4**	**-1.8**
ZEA				pmax	pmax			
	comp=Z,15nm,0.8s							
ZEA				MLR	MLR			
	comp=Z,400nm,8.0s							
BJT	**Baijiatuan**	**20.26**	**286**	P		**P**	**02 35 49.6**	**-2.6**
BJT				pmax	pmax			
	comp=Z,7.0nm,0.6s							
BJT	**Baijiatuan**	**20.26**	**286**	P		**P**	**02 35 49.6**	**-2.6**
MA2	**Magadan**	**23.07**	**12**	*c*e	P	**P**	**02 36 23.4**	**+1.5**
MA2				pmax	pmax			
	comp=Z,33nm,1.7s							
MA2	**Magadan**	**23.07**	**12**	P		**P**	**02 36 22.4**	**+0.5**
MA2				IAmb		IAmb	02 36 24.1	
	comp=Z,19nm,0.8s							
GUMO	**Guam**	**23.71**	**173**	LR		LR	02 46 30.1	
	comp=Z,22nm,20.7s,baz=96,slow=38							
WHN	**Wuhan**	**23.77**	**262**	P		**P**	**02 36 29.1**	**+0.1**
WHN				pmax	pmax			
	comp=Z,30nm,0.6s							
YAK	**Yakutsk**	**25.95**	**347**	*e*P		**P**	**02 36 47.6**	**-1.0**
YAK				pmax	pmax			
	comp=Z,34nm,0.9s							
YAK				pmax	pmax			
	comp=N,14nm,1.1s							
YAK				pmax	pmax			
	comp=E,7.0nm,1.4s							
SEY	**Seymchan**	**26.51**	**11**	*i* P		**P**	**02 36 55.5**	**+1.8**
SEY	**Seymchan**	**26.51**	**11**	P		**P**	**02 36 54.6**	**+0.9**
	comp=E,7.3nm,0.6s,baz=195,slow=8.3,SNR=18							
XAN	**Xi'an**	**26.91**	**273**	P		**P**	**02 36 56.4**	**-1.3**
XAN				pmax	pmax			
	comp=E,10.0nm,0.6s							
XAN				pmax	pmax			
	comp=E,150nm,5.9s							
XAN	**Xi'an**	**26.91**	**273**	P		**P**	**02 36 56.3**	**-1.3**
XAN				pmax	pmax			
	comp=Z,7.0nm,0.7s							
XAN	**Xi'an**	**26.91**	**273**	P		**P**	**02 36 56.3**	**-1.3**
ULN	**Ulaanbaatar**	**27.55**	**304**	*c*e	P	**P**	**02 37 02.5**	**-0.9**
ULN				pmax	pmax			
	comp=Z,6.0nm,1.0s							
ULN	**Ulaanbaatar**	**27.55**	**304**	P		**P**	**02 37 01.8**	**-1.6**
BOD	**Bodaibo**	**27.55**	**327**	*e*P		**P**	**02 37 02.2**	**-0.9**
BOD				pmax	pmax			
	comp=Z,12nm,0.9s							
ENH	**Enshi**	**27.73**	**265**	P		**P**	**02 37 03.3**	**-1.7**
ENH				IAmb		IAmb	02 37 05.0	
	comp=Z,21nm,0.9s							
H11N2	**WAKE ISLAND Hy**	**27.93**	**122**	T		T	03 06 42.6	
	baz=314,slow=75,SNR=446							
H11N1	**WAKE ISLAND Hy**	**27.94**	**122**	T		T	03 06 47.3	
	baz=314,slow=75,SNR=573							
H11N3	**WAKE ISLAND Hy**	**27.95**	**122**	T		T	03 06 40.5	
	baz=314,slow=75,SNR=554							
SONM	**Songino Array**	**27.98**	**304**	P		**P**	**02 37 06.6**	**-0.6**
	comp=Z,5.4nm,0.6s,baz=96,slow=8.7,SNR=39							
SONM				LR		LR	02 48 26.9	
	comp=Z,70nm,20.7s,baz=34,slow=37							
H11S1	**WAKE ISLAND Hy**	**28.66**	**124**	T		T	03 07 34.2	
	baz=316,slow=76,SNR=375							
H11S3	**WAKE ISLAND Hy**	**28.66**	**124**	T		T	03 07 34.3	
	baz=316,slow=76,SNR=312							
H11S2	**WAKE ISLAND Hy**	**28.68**	**124**	T		T	03 07 30.9	
	baz=316,slow=76,SNR=257							
LZH	**Lanzhou**	**30.41**	**279**	*e*P		**P**	**02 37 27.6**	**-1.3**
LZH				pP		pP	02 37 33.4	-5.4
LZH				sP		sP	02 37 36.4	-6.3
LZH				pmax	pmax			
	comp=Z,16nm,1.1s							
ZAK	**Zakamensk**	**30.44**	**308**	*e*P		**P**	**02 37 25.6**	**-3.4**
ZAK				pmax	pmax			
	comp=Z,7.0nm,1.2s							
TLY	**Talaya**	**30.48**	**311**	*e*P		**P**	**02 37 29.7**	**+0.5**
TLY				pmax	pmax			
	comp=Z,23nm,1.5s							
TLY				MLR	MLR			
	comp=Z,326nm,14.0s							
TLY	**Talaya**	**30.48**	**311**	LR		LR	02 50 06.6	
	comp=Z,152nm,18.2s,baz=118,slow=37							
MOY	**Mondy**	**32.09**	**310**	*e*P		**P**	**02 37 43.2**	**-0.3**
GTA	**Gaotai**	**32.87**	**287**	*e*P		**P**	**02 37 50.6**	**+0.1**
GTA				pP		pP	02 37 56.5	-3.9
GTA				sP		sP	02 37 59.8	-4.5
GTA				PcP		**PcP**	**02 40 35.6**	**+1.0**
GTA				pmax	pmax			
	comp=Z,5.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,74nm,5.7s							
GTA				LR	LR			
	comp=Z,120nm,17.5s							
GTA				LR	LR			
	comp=Z,280nm,17.8s							
GTA				LR	LR			
	comp=Z,160nm,20.0s							
DAV	**Davao City (W)**	**33.51**	**210**	LR		LR	02 49 29.2	
	comp=Z,50nm,20.7s,baz=341,slow=32							
BILL	**Bilibino**	**33.71**	**16**	⇓*e*P		**P**	**02 37 58.0**	**+0.7**
BILL				*P		**sP**	**02 38 12.0**	**+0.7**
BILL				PPP		PPP	02 39 25.5	
BILL				SSS		SSS	02 45 54.0	
BILL				pmax	pmax			
	comp=Z,11nm,1.5s							
BILL	**Bilibino**	**33.71**	**16**	P		**P**	**02 37 56.9**	**-0.5**
TIXI	**Tiksi**	**35.12**	**353**	*i* P		**P**	**02 38 11.3**	**+1.8**
TIXI				pmax	pmax			
	comp=Z,1.0nm,0.9s							
KMI	**Kunming**	**35.37**	**261**	P		**P**	**02 38 11.8**	**-0.6**
KMI				pmax	pmax			
	comp=Z,15nm,1.1s							
CMAR	**Chiang Mai Arr**	**41.92**	**255**	LR		LR	02 57 49.0	
	comp=Z,40nm,19.1s,baz=45,slow=38							
ZAA0	**Zalesovo Array**	**42.05**	**312**	P		**P**	**02 39 07.4**	**-0.4**
ZAA0				IAmb		IAmb	02 39 18.9	
	comp=Z,14nm,1.1s							
ZALV	**Zalesovo Beam**	**42.05**	**312**	P		**P**	**02 39 07.5**	**-0.3**
	comp=Z,3.2nm,0.4s,baz=91,slow=6.4,SNR=21							
ZALV				pP		**pP**	**02 39 17.8**	**-0.1**
	comp=Z,7.5nm,0.8s,baz=86,slow=6.4,SNR=8.8							
ZALV				LR		LR	02 56 44.0	
	comp=Z,106nm,19.0s,baz=111,slow=36							
KRVT	**Keravat (AS076**	**42.41**	**165**	LR		LR	02 55 46.9	
	comp=Z,18nm,20.2s,baz=244,slow=34							
MK31	**Makanchi Array**	**44.33**	**302**	P		**P**	**02 39 25.6**	**-0.8**
MK31				pmax	pmax			
	comp=Z,7.0nm,0.8s							
MK31	**Makanchi Array**	**44.33**	**302**	P		**P**	**02 39 25.6**	**-0.8**
MK31				IAmb		IAmb	02 39 37.8	
	comp=Z,7.4nm,0.8s							
MKAR	**Makanchi Array**	**44.33**	**302**	P		**P**	**02 39 26.0**	**-0.3**
	comp=Z,8.3nm,0.7s,baz=88,slow=9.7,SNR=102							
MKAR				pP		**pP**	**02 39 36.7**	**+0.2**
	comp=Z,7.7nm,0.7s,baz=83,slow=9.8,SNR=15							
MKAR				LR		LR	02 57 24.2	
	comp=Z,62nm,18.7s,baz=68,slow=35							
MAKZ	**Makanchi**	**44.54**	**302**	P		**P**	**02 39 27.6**	**-0.4**
MAKZ				pmax	pmax			
	comp=Z,8.0nm,0.8s							
MAKZ	**Makanchi**	**44.54**	**302**	P		**P**	**02 39 27.6**	**-0.4**
MAKZ				IAmb		IAmb	02 39 39.5	
	comp=Z,8.4nm,0.8s							
KURK	**Kurchatov**	**46.10**	**308**	*c*e	P	**P**	**02 39 39.6**	**-0.7**
KURK				pmax	pmax			
	comp=Z,30nm,1.3s							
KURK	**Kurchatov**	**46.10**	**308**	P		**P**	**02 39 39.5**	**-0.8**
KURBB	**Kurchatov Arra**	**46.17**	**308**	P		**P**	**02 39 40.4**	**-0.5**
	comp=Z,13nm,0.5s,baz=83,slow=8.0,SNR=83							
KURBB				pP		**pP**	**02 39 51.5**	**+0.4**
	comp=Z,24nm,0.9s,baz=83,slow=8.5,SNR=19							
TAPN	**Taplejung**	**46.31**	**274**	*e*P		**P**	**02 39 42.5**	**-0.1**
	comp=Z,9.3nm,0.4s							
KDAK	**Kodiak Island**	**46.68**	**42**	P		**P**	**02 39 46.3**	**+1.6**
	comp=Z,13nm,0.8s,baz=204,slow=7.9,SNR=5.2							
KDAK	**Kodiak Island**	**46.68**	**42**	IAmb		IAmb	02 39 47.5	
	comp=Z,5.9nm,0.7s							
ODAN	**Odare**	**46.78**	**274**	*e*P		**P**	**02 39 46.4**	**+0.1**
RAMN	**Ramite**	**47.37**	**274**	*e*P		**P**	**02 39 50.8**	**-0.1**
	comp=Z,34nm,0.8s							
JIRN	**Jiri**	**47.38**	**275**	*e*P		**P**	**02 39 51.4**	**+0.3**
	comp=Z,22nm,0.6s							
GUN	**Gumba**	**47.51**	**276**	*e*P		**P**	**02 39 52.1**	**0.0**
	comp=Z,16nm,0.4s							
KKN	**Kakani**	**48.04**	**276**	*e*P		**P**	**02 39 56.3**	**+0.3**
PKIN	**Phulchoki**	**48.05**	**276**	*e*P		**P**	**02 39 55.6**	**-0.5**
DMN	**Daman**	**48.26**	**276**	*e*P		**P**	**02 39 57.8**	**0.0**
GKN	**Gorkha**	**48.46**	**276**	*e*P		**P**	**02 39 59.1**	**-0.1**
DANN	**Dangsing**	**49.00**	**277**	*e*P		**P**	**02 40 03.7**	**+0.2**
	comp=Z,92nm,0.8s							
IL31		**49.11**	**32**	P		**P**	**02 40 04.9**	**+1.5**
IL31				IAmb		IAmb	02 40 05.7	
	comp=Z,7.0nm,0.8s							
ILAR	**Eielson Array**	**49.11**	**32**	P		**P**	**02 40 05.0**	**+1.5**
ILAR	**Eielson Array**	**49.11**	**32**	P		**P**	**02 40 05.0**	**+1.5**
	comp=Z,5.3nm,0.8s,baz=268,slow=6.5,SNR=57							
KOLN	**Koldanda**	**49.38**	**277**	*e*P		**P**	**02 40 06.4**	**+0.1**
	comp=Z,47nm,1.1s							
HNR	**Honiara**	**49.43**	**156**	LR		LR	02 58 17.2	
	comp=Z,56nm,21.7s,baz=3.0,slow=33							
KSH	**Kashi**	**50.67**	**294**	P		**P**	**02 40 20.3**	**+4.5**
KSH				pmax	pmax			
	comp=Z,550nm,5.4s							
AAK	**Ala-Archa**	**50.72**	**298**	*c*e	P	**P**	**02 40 16.0**	**-0.2**
AAK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
AAK	**Ala-Archa**	**50.72**	**298**	P		**P**	**02 40 15.4**	**-0.8**
AAK				IAmb		IAmb	02 40 28.3	
	comp=Z,5.6nm,0.9s							
BRVK	**Borovoye**	**50.77**	**312**	P		**P**	**02 40 15.2**	**-1.0**
BRVK				pmax	pmax			
	comp=Z,7.0nm,0.9s							
BRVK	**Borovoye**	**50.77**	**312**	P		**P**	**02 40 15.2**	**-1.0**
BRVK				IAmb		IAmb	02 40 17.1	
	comp=Z,6.9nm,0.9s							
ARSB	**Arslanbob**	**52.21**	**297**	P		**P**	**02 40 26.7**	**-0.7**
KK31	**Karatay Array**	**53.35**	**300**	*i* P		**P**	**02 40 34.6**	**-1.0**
KK31	**Karatay Array**	**53.35**	**300**	P		**P**	**02 40 34.6**	**-1.0**
KK31				IAmb		IAmb	02 40 48.1	
	comp=Z,5.9nm,1.0s							
KKAR	**Karatay Array**	**53.35**	**300**	P		**P**	**02 40 33.9**	**-1.7**
KKAR				pmax	pmax			
	comp=Z,6.0nm,1.0s							
KKAR	**Karatay Array**	**53.35**	**300**	P		**P**	**02 40 33.9**	**-1.7**
KKAR				IAmb		IAmb	02 40 48.1	
	comp=Z,5.9nm,1.0s							
INK	**Inuvik**	**54.02**	**27**	P		**P**	**02 40 41.5**	**+1.5**
INK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
INK	**Inuvik**	**54.02**	**27**	P		**P**	**02 40 41.9**	**+1.8**
	comp=Z,3.0nm,0.7s,baz=340,slow=8.1,SNR=11							
INK	**Inuvik**	**54.02**	**27**	P		**P**	**02 40 41.5**	**+1.5**
INK				IAmb		IAmb	02 40 43.0	
	comp=Z,5.4nm,0.9s							
NIL	**Nilore**	**54.91**	**288**	P		**P**	**02 40 45.7**	**-1.4**
NIL				pmax	pmax			
	comp=Z,13nm,1.0s							
NIL	**Nilore**	**54.91**	**288**	P		**P**	**02 40 45.7**	**-1.4**
SVE	**Sverdlovsk**	**55.24**	**319**	*e*P		**P**	**02 40 49.6**	**+0.5**
SVE				pmax	pmax			
	comp=Z,19nm,1.0s							
ARU	**Arti**	**56.45**	**319**	*d*	*i* P	**P**	**02 40 57.4**	**-0.4**
ARU				*PP		**pP**	**02 41 08.5**	**+0.3**
ARU							02 43 00.3	
ARU				S		**S**	**02 48 46.4**	**+0.2**
ARU				SS		**SS**	**02 52 34.9**	**+1.8**
ARU				pmax	pmax			
	comp=Z,10.0nm,0.8s							
ARU	**Arti**	**56.45**	**319**	P		**P**	**02 40 56.9**	**-0.8**
WRA	**Warramunga Arr**	**57.33**	**188**	*c*e	P	**P**	**02 41 05.1**	**+0.8**
WRA				pmax	pmax			
	comp=Z,1.0nm,0.5s							
WRA	**Warramunga Arr**	**57.33**	**188**	P		**P**	**02 41 04.7**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=6.1,slow=7.3,SNR=11							
AB31	**Akbulak array**	**58.09**	**310**	*e*P		**P**	**02 41 08.5**	**-1.0**
ABKAR	**Akbulak array**	**58.09**	**310**	P		**P**	**02 41 08.4**	**-1.1**
ABKAR				IAmb		IAmb	02 41 09.8	
	comp=Z,4.8nm,1.0s							
PRGR	**Permogore**	**60.79**	**327**	*e*P		**P**	**02 41 27.8**	**-0.1**
PRGR				*e*PP		**pP**	**02 41 36.9**	**-1.4**
PRGR				pmax	pmax			
	comp=Z,9.0nm,1.0s							
ASAR	**Alice Springs**	**61.05**	**188**	P		**P**	**02 41 30.7**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=13,slow=6.6,SNR=4.4							
YKA	**Yellowknife Ar**	**63.43**	**30**	P		**P**	**02 41 46.6**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=303,slow=6.7,SNR=19							
KLMR	**Klimovskoe**	**63.78**	**328**	*e*P		P	02 41 42.6	-5.3
KLMR				pmax	pmax			
	comp=Z,10.0nm,1.2s							
KLMR	**Klimovskoe**	**63.78**	**328**	*e*P		P	02 41 42.6	-5.3
KLMR				AMP			02 41 49.5	
	comp=Z,10.0nm,1.2s							
ARCES	**ARCESS Array B**	**63.93**	**339**	P		**P**	**02 41 49.2**	**+0.5**
	comp=Z,3.3nm,0.8s,baz=48,slow=8.6,SNR=3.5							
ARCES				LR		LR	03 12 40.5	
	comp=Z,61nm,19.0s,baz=360,slow=39							
GEYT	**Alibeck**	**64.06**	**299**	P		**P**	**02 41 50.0**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=0.0,slow=5.9,SNR=4.5							
GEYT				LR		LR	03 12 38.1	
	comp=Z,32nm,18.5s,baz=335,slow=39							
VRH	**Novokhopyorsk**	**67.68**	**318**	*e*P		**P**	**02 42 11.8**	**-1.4**
VRH				*e*SP		**pP**	**02 42 23.8**	**+0.1**
VRH				pmax	pmax			
	comp=Z,8.0nm,0.7s							
OBN	**Obninsk**	**68.15**	**323**	⇓*e*P		**P**	**02 42 17.2**	**+1.1**
OBN				*e*PP		**sP**	**02 42 28.6**	**-2.0**
OBN				*e*			02 42 39.4	
OBN							02 44 43.0	
OBN				pmax	pmax			
	comp=Z,15nm,1.3s							
LPSR	**Galich'ya Gora**	**68.38**	**320**	*e*P		**P**	**02 42 17.0**	**-0.6**
LPSR				*e*SP		**pP**	**02 42 29.0**	**+0.8**
LPSR				pmax	pmax			
	comp=Z,7.0nm,0.9s							
STKA	**Stephens Creek**	**68.77**	**180**	LR		LR	03 11 26.6	
	comp=Z,18nm,21.2s,baz=26,slow=35							
FINES	**FINESS Array B**	**68.80**	**332**	P		**P**	**02 42 20.1**	**+0.1**
	comp=Z,3.8nm,0.9s,baz=51,slow=10.0,SNR=6.0							
FINES				pP		**pP**	**02 42 31.4**	**+0.8**
	comp=Z,5.0nm,0.6s,baz=39,slow=7.9,SNR=8.2							
FINES				LR		LR	03 13 48.5	
	comp=Z,70nm,18.2s,baz=350,slow=37							
VSR	**Storozhevoye**	**69.02**	**319**	*e*P		**P**	**02 42 19.2**	**-2.4**
VSR				*e*SP		**pP**	**02 42 31.9**	**-0.3**
VSR				pmax	pmax			
	comp=Z,10.0nm,1.2s							
PINE	**Pine Mountain**	**69.91**	**50**	P		**P**	**02 42 29.3**	**+1.8**
PINE				IAmb		IAmb	02 42 31.3	
	comp=Z,7.2nm,1.1s							
KBZ	**Khabaz**	**71.05**	**311**	*i* P		**P**	**02 42 34.2**	**+0.1**

RAYN	**Ar Rayn**	**80.93**	**293**	P	**P**	**02 43 28.3**	**-2.6**
CLL	**Collm**	**81.10**	**330**	*i*P	**P**	**02 43 31.7**	**+0.5**
CLL				*e*		02 43 44.0	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CLL	**Collm**	**81.10**	**330**	⇓*i*P	**P**	**02 43 31.7**	**+0.5**
	comp=Z,10.0nm,1.0s						
CLL				*e*pP	**sP**	**02 43 44.0**	**-1.9**
PRU	**Pruhonice**	**81.50**	**329**	*e*P	**P**	**02 43 33.9**	**+0.5**
PRU	**Pruhonice**	**81.50**	**329**	*e*P	**P**	**02 43 33.9**	**+0.5**
MODS	**Modra-Piesok**	**81.55**	**326**	*e*P	**P**	**02 43 33.7**	**0.0**
MODS	**Modra-Piesok**	**81.55**	**326**	*e*P	**P**	**02 43 33.7**	**0.0**
CONA	**Conrad Observa**	**82.51**	**327**	*e*PcP	**P**	**02 43 39.9**	**+1.0**
	comp=Z,3.5nm,0.9s						
KHC	**Kasperske Hory**	**82.56**	**329**	P	**P**	**02 43 37.5**	**-1.6**
KHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KHC	**Kasperske Hory**	**82.56**	**329**	*e*P	**P**	**02 43 39.4**	**+0.4**
KHC				*e*pP	**sP**	**02 43 52.2**	**-1.5**
KHC	**Kasperske Hory**	**82.56**	**329**	P	**P**	**02 43 37.5**	**-1.6**
GERES	**GERESS Array B**	**82.73**	**328**	P	**P**	**02 43 40.0**	**0.0**
	comp=Z,2.0nm,0.7s,baz=33,slow=5.8,SNR=13						
GERES				pP	**sP**	**02 43 52.8**	**-1.9**
	comp=Z,1.3nm,0.6s,baz=34,slow=6.6,SNR=7.0						
GERES				LR	LR	03 23 20.0	
	comp=Z,65nm,18.5s,baz=310,slow=38						
MOA	**Molln**	**83.26**	**328**	*e*PcP	**PcP**	**02 43 45.8**	**-1.3**
	comp=Z,4.8nm,1.2s						
SOKA	**Soboth**	**83.83**	**326**	*e*PcP	**P**	**02 43 46.1**	**+0.5**
	comp=Z,5.6nm,0.9s						
ANMO	**Albuquerque**	**84.16**	**50**	*ce*P	**P**	**02 43 49.8**	**+2.1**
ANMO				pmax	pmax		
	comp=Z,6.0nm,2.5s						
RETA	**Reutte**	**85.01**	**329**	PcP	**P**	**02 43 52.0**	**+0.3**
	comp=Z,2.1nm,0.6s						
SCHQ	**Schefferville**	**85.03**	**16**	P	**P**	**02 43 52.6**	**+1.2**
	comp=Z,5.4nm,1.0s,baz=340,slow=5.5,SNR=3.9						
SCHQ	**Schefferville**	**85.03**	**16**	P	**P**	**02 43 52.0**	**+0.5**
SCHQ				IAmb	IAmb	02 44 10.3	
	comp=Z,3.8nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**85.91**	**329**	P	**P**	**02 43 56.5**	**+0.2**
TXAR	**Lajitas Array**	**89.69**	**53**	P	**P**	**02 44 16.0**	**+1.4**
	comp=Z,0.7nm,0.7s,baz=289,slow=2.1,SNR=11						
U40A	**Yellville**	**90.92**	**41**	P	**P**	**02 44 19.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**117.45**	**315**	PKP	**PKPdf**	**02 50 01.7**	**-0.6**
	comp=Z,0.5nm,1.0s,baz=52,slow=1.2,SNR=6.3						
LPAZ	**La Paz**	**146.25**	**60**	PKPbc	**PKPab**	**02 50 58.9**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=300,slow=3.8,SNR=7.4						

IDC 22 02:34:30.8±1.6, 4.°04S×126.°59E, h0km, mb3.2/2, mb1 3.7/4, mb1mx3.4/40, mbtmp3.6/4, ML3.7/2, Error ellipse: s-maj=47.0km s-min=27.2km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.64**	**56**	Pn	Pn	02 35 56.0	+0.1
	4.6nm,0.3s,baz=242,slow=23,SNR=10						
SIJI				Sn	Sn	02 36 48.8	-13
	4.1nm,0.3s,baz=221,slow=22,SNR=6.4						
WRA	**Warramunga Arr**	**17.52**	**155**	P	Pn	02 38 36.4	-0.2
	0.2nm,0.3s,baz=334,slow=12,SNR=6.1						
ASAR	**Alice Springs**	**20.75**	**161**	P	P	02 39 13.3	0.0
	0.7nm,0.4s,baz=342,slow=12,SNR=5.7						
MKAR	**Makanchi Array**	**63.92**	**328**	P	P	02 45 05.7	0.0
	0.2nm,0.6s,baz=124,slow=7.7,SNR=2.6						

UCR 22 02:36:20.7±1.3, 9.°66N×84.°92W, h16km±57km, MD3.9, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLVR	**Palo Verde**	**0.81**	**328**	*e*P	Pg	02 36 35.5	-1.0
ARE1	**Arenal 1**	**0.82**	**14**	*e*P	Pb	02 36 36.2	-0.5
LCR2	**La Lucha 2**	**0.91**	**85**	*e*P	Pb	02 36 36.8	-1.4
CUI	**Cuipilapa**	**1.02**	**346**	*i*P	Pb	02 36 39.1	-1.0
CUI				*i*S	Sb	02 36 53.2	-0.2
COLC	**Colonia**	**1.04**	**344**	*i*P	Pb	02 36 39.4	-1.0
PTEN	**Parque Tenorio**	**1.05**	**356**	*i*P	Pb	02 36 39.8	-0.9
PTEN				*i*S	Sg	02 36 54.9	0.0
GUAB	**Guayabo de Bag**	**1.09**	**344**	*i*P	Pb	02 36 40.2	-1.0
EDDO	**Dominical**	**1.11**	**111**	*e*P	Pb	02 36 39.6	-2.1
NY14	**Universidad de**	**1.16**	**328**	*i*P	Pn	02 36 41.5	-0.8
GPS2	**Hotel Rincn d**	**1.17**	**339**	*i*P	Pn	02 36 40.9	-1.6
CVTR	**Volcan Turrial**	**1.20**	**72**	*e*P	Pn	02 36 42.6	-0.6
GB1A	**Borinquen Arri**	**1.25**	**338**	*i*P	Pn	02 36 42.8	-0.9
DRK0	**Durika**	**1.70**	**103**	*e*P	Pn	02 36 48.5	-1.4

UCR 22 02:48:14.0±1.1, 9.°64N×84.°92W, h23km±4km, MD3.7, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**0.65**	**357**	*e*P	Pb	02 48 25.4	-1.4
CASO	**Castillo**	**0.81**	**13**	*i*P	Pb	02 48 29.0	-0.5
PLVR	**Palo Verde**	**0.82**	**329**	*e*P	Pb	02 48 29.1	-0.6
ARE1	**Arenal 1**	**0.84**	**14**	*e*P	Pb	02 48 29.8	-0.2
FORC	**Fortuna**	**0.86**	**17**	*i*P	Pb	02 48 29.9	-0.4
FORC				*i*S	Sn	02 48 42.4	-0.2
LCR2	**La Lucha 2**	**0.91**	**83**	*e*P	Pb	02 48 30.5	-0.8
AMAS	**Alto Masis**	**0.97**	**356**	*i*P	Pb	02 48 31.5	-0.8
ACAL	**Aguas Claras**	**1.00**	**354**	*i*P	Pn	02 48 32.1	-0.6
CUI	**Cuipilapa**	**1.04**	**347**	*i*P	Pn	02 48 32.7	-0.5
CUI				*i*S	Sn	02 48 47.2	+0.1
PTEN	**Parque Tenorio**	**1.07**	**357**	*i*P	Pn	02 48 33.3	-0.4
HORNC	**Hornillas**	**1.10**	**347**	*i*P	Pn	02 48 33.5	-0.6
GUAB	**Guayabo de Bag**	**1.11**	**344**	*i*P	Pn	02 48 33.5	-0.6
MESS	**Mesas**	**1.13**	**346**	*i*P	Pn	02 48 34.5	0.0
LAPC	**Finca la Perla**	**1.23**	**336**	*i*P	Pn	02 48 35.6	-0.2
GBS3	**Finca Las Img**	**1.25**	**335**	*i*P	Pn	02 48 35.9	-0.2
GB1A	**Borinquen Arri**	**1.26**	**338**	*i*P	Pn	02 48 36.3	-0.1
DRK0	**Durika**	**1.70**	**103**	*e*P	Pn	02 48 42.3	0.0

*ZUR **22** 02:59:50.4, 48.°29N×9.°02E, h6km±4km, MLh2.0/24, Error ellipse: s-maj=7.9km s-min=1.4km az=177.0*
*BGR **22** 02:59:50.8±0.2, 48.°25N×8.°98E, h10km, ML1.9/10, Error ellipse: s-maj=2.2km s-min=2.2km az=23.0*
*STR **22** 02:59:51.1±0.4, 48.°N±.°×.°±.°, h10km, MLv1.9/6*
LDG 22 02:59:50.8±0.1, 48.°27N×9.°02E, h6km, Ml2.2/11, 9C-7D, Error ellipse: s-maj=1.3km s-min=1.1km az=111.0, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUT	**Gutenstein**	**0.21**	**162**	⇓Pg	Pg	02 59 54.6	-0.4
GUT				Sg	Sg	02 59 57.8	-0.1
GUT	**Gutenstein**	**0.21**	**162**	⇓*i*Pg	Pg	02 59 54.6	-0.4
GUT				Sg	Sg	02 59 57.8	0.0
TUBL	**Tuebingen-Lenn**	**0.26**	**10**	Pg	Pg	02 59 55.5	-0.3
TUBL				Sg	Sg	02 59 59.0	-0.2
BUCH	**Bad Urach**	**0.29**	**52**	⇑*i*Pg	Pg	02 59 56.2	-0.2
BUCH				Sg	Sg	03 00 00.5	+0.2
EMING	**Emmingen-Lipti**	**0.40**	**197**	⇑Pg	Pg	02 59 58.1	-0.4
EMING				⇑Pg	Pg	02 59 58.1	-0.4
	0.3nm,SNR=3.8						
EMING				Sg	Sg	03 00 03.5	-0.2
EMING	**Emmingen-Lipti**	**0.40**	**197**	⇓Pg	Pg	02 59 58.2	-0.3
EMING				Sg	Sg	03 00 03.6	-0.1
LBG	**Lerchenberg**	**0.42**	**340**	⇓*i*Pg	Pg	02 59 58.6	-0.3
LBG				Sg	Sg	03 00 04.4	-0.1
BFO	**Black Forest**	**0.46**	**277**	⇑Pg	Pg	02 59 59.4	-0.4
	0.2nm,SNR=2.8						
BFO				⇑Pg	Pg	02 59 59.4	-0.4
BFO	**Black Forest**	**0.46**	**277**	⇑Pg	Pg	02 59 59.4	-0.4
BFO				Sg	Sg	03 00 05.7	0.0
BFO				SmS		03 00 10.2	
STU	**Stuttgart**	**0.51**	**13**	PmP		03 00 02.7	
STU				SmS		03 00 11.3	
WALHA	**Wallhausen, DE**	**0.52**	**172**	⇓Pg	Pg	03 00 00.6	-0.3
	0.1nm,SNR=1.6						
WALHA				⇓Pg	Pg	03 00 00.6	-0.3
WALHA				Sg	Sg	03 00 07.9	+0.2
WALHA	**Wallhausen, DE**	**0.52**	**172**	⇓Pg	Pg	03 00 00.5	-0.3
WALHA				Sg	Sg	03 00 08.0	+0.3
SISB	**Singen-Schiene**	**0.59**	**183**	Pg	Pg	03 00 01.8	-0.3
SISB				Sg	Sg	03 00 10.1	+0.3
OPP	**Oppenau**	**0.60**	**292**	Pg	Pg	03 00 01.8	-0.5
OPP				Sg	Sg	03 00 09.6	-0.5
OPP	**Oppenau**	**0.60**	**292**	Pg	Pg	03 00 01.8	-0.5
OPP				SmS		03 00 13.0	
SLE	**Schleitheim**	**0.62**	**215**	Pg	Pg	03 00 02.0	-0.7
SLE				Pg	Pg	03 00 02.0	-0.7
	0.1nm,SNR=1.2						
SLE	**Schleitheim**	**0.62**	**215**	⇑Pg	Pg	03 00 02.1	-0.6
SLE				PmP		03 00 04.2	
SLE				Sg	Sg	03 00 10.7	-0.1
SLE				SmS		03 00 13.9	
BERGE	**Lenzkirch (DE)**	**0.69**	**235**	Pg	Pg	03 00 03.5	-0.6
BERGE				Pg	Pg	03 00 03.5	-0.6
	0.1nm,SNR=1.9						
BERGE	**Lenzkirch (DE)**	**0.69**	**235**	⇑Pg	Pg	03 00 03.5	-0.5
BERGE				PmP		03 00 05.3	
BERGE				*e*Sg	Sg	03 00 12.7	-0.3
BERGE				SmS		03 00 15.8	
WEIN	**Weingarten**	**0.74**	**182**	Pg	Pg	03 00 04.8	-0.3
	0.2nm,SNR=1.8						
WEIN				Pg	Pg	03 00 04.8	-0.3
METMA	**Mettma DE**	**0.76**	**223**	Pg	Pg	03 00 04.7	-0.7
METMA				PmP		03 00 06.3	
METMA				*e*Sg	Sg	03 00 14.4	-0.8
METMA				SmS		03 00 17.5	
BRET	**Bretten**	**0.77**	**344**	Pg	Pg	03 00 05.4	-0.2
BRET				PmP		03 00 06.4	
BRET				SmS		03 00 17.9	
FELD	**Feldberg im Sc**	**0.79**	**240**	Pn	Pg	03 00 05.1	-0.8
	0.1nm,SNR=2.7						
FELD				Pn	Pg	03 00 05.1	-0.8
FELD	**Feldberg im Sc**	**0.79**	**240**	Pg	Pg	03 00 05.3	-0.6
FELD				PmP		03 00 06.8	
FELD				SmS		03 00 18.4	
KIZ	**Kirchzarten**	**0.80**	**247**	Pn	Pg	03 00 06.5	+0.4
KIZ				Sn	Sb	03 00 17.8	-0.5
KIZ	**Kirchzarten**	**0.80**	**247**	Pn	Pg	03 00 05.4	-0.8
KIZ				Pn	Pg	03 00 05.4	-0.8
	0.1nm,SNR=1.1						
KIZ	**Kirchzarten**	**0.80**	**247**	Pg	Pg	03 00 05.5	-0.6
KIZ				PmP		03 00 06.5	
KIZ				SmS		03 00 17.7	
FBB	**Freiburg im Br**	**0.82**	**251**	SmS		03 00 18.5	
HDH	**Heidenheim-Cha**	**0.85**	**68**	Pg	Pg	03 00 06.3	-0.9
HDH				PmP		03 00 07.3	
HDH				SmS		03 00 20.5	
WILA	**Wila**	**0.86**	**185**	Pg	Pg	03 00 07.4	+0.1
WILA				Sg	Sg	03 00 18.9	+0.5
UBR	**Ueberruh**	**0.94**	**128**	Pg	Pg	03 00 08.7	-0.2
UBR				*e*Sg	Sg	03 00 21.5	+0.4
UBR				SmS		03 00 23.5	
SULZ	**Cheisacher**	**0.96**	**220**	Pg	Pg	03 00 08.6	-0.6
SULZ				PmP		03 00 09.4	
SULZ				Sg	Sg	03 00 21.8	+0.1
SUBF	**Surbourg**	**1.01**	**310**	Pg	Pg	03 00 09.5	-0.6
SUBF				Sg	Sb	03 00 23.7	-0.4
ENDD	**Endenburg**	**1.02**	**237**	⇑Pn	Pg	03 00 09.3	-1.1
ENDD				Pg	Pb	03 00 10.2	-0.8
ENDD				Sn	Sg	03 00 23.4	-0.3
ENDD				Sg	Sb	03 00 24.2	-0.5
LIENZ	**Kamor/St.Gall**	**1.03**	**162**	PmP		03 00 11.2	
LANF	**Langenberg**	**1.07**	**312**	Sg	Sg	03 00 25.4	+0.1
WLS	**Welschbruch**	**1.12**	**278**	Pn	Pg	03 00 11.8	-0.5
WLS				Sg	Sg	03 00 25.2	-1.5
WLS				Sn	Sb	03 00 26.9	-0.5
WLS	**Welschbruch**	**1.12**	**278**	Pg	Pg	03 00 11.9	-0.3
DAVA	**Damuels**	**1.15**	**149**	PmP		03 00 13.2	
DAVA				SmS		03 00 29.4	
DAVA	**Damuels**	**1.15**	**149**	Pg	Pb	03 00 13.1	0.0
	1.8nm,0.1s						
DAVA				Sg	Sb	03 00 28.5	+0.2
	5.7nm,0.2s						
SIND	**Sindeldorf**	**1.15**	**20**	Pg	Pg	03 00 12.0	-0.8
SIND				Sg	Sg	03 00 27.4	-0.2
NORI	**Noerdlinger Ri**	**1.16**	**67**	*e*Pg	Pg	03 00 12.5	-0.6
NORI				*e*Sg	Sg	03 00 28.3	+0.2
CDF	**Champ du Feu**	**1.17**	**278**	*e*Pg	Pg	03 00 12.5	-0.7
CDF				*e*Sg	Sg	03 00 27.5	-0.9
	14nm,0.2s						
PEB	**Petersbachel**	**1.17**	**313**	Pg	Pg	03 00 12.8	-0.5
PEB				Sg	Sg	03 00 28.6	+0.1
KTD	**Kalmit**	**1.22**	**330**	Pg	Pg	03 00 13.9	-0.2
KTD				Sg	Sb	03 00 30.3	+0.1
OBER	**Oberstdorf**	**1.22**	**135**	*e*Pg	Pn	03 00 15.0	+0.6
OBER				*e*Sg	Sn	03 00 31.2	-0.1
SWS	**Schriesheim-Wi**	**1.23**	**350**	Pg	Pg	03 00 13.7	-0.7
SWS				Sg	Sg	03 00 30.3	-0.1
ECH	**Echery**	**1.24**	**268**	Pg	Pg	03 00 12.5	-2.1
ECH				Sg	Sg	03 00 27.9	-2.8
ECH				Sn	Sb	03 00 30.6	-0.4
ECH	**Echery**	**1.24**	**268**	Pn	Pg	03 00 12.5	-2.1
ECH				Pn	Pb	03 00 13.8	-0.9
ECH				Sn	Sg	03 00 28.2	-2.5
ECH				Sg	Sb	03 00 30.5	-0.4
BALST	**Balsthal**	**1.29**	**224**	Pn	Pn	03 00 13.1	-2.4
BALST				Pg	Pb	03 00 14.8	-0.7
BALST				Sg	Sg	03 00 32.4	0.0
TOD	**Tromm**	**1.34**	**354**	Pg	Pn	03 00 15.4	-0.7
TOD				Sg	Sb	03 00 33.6	-0.3
RETA	**Reutte**	**1.41**	**123**	Sg	Sg	03 00 36.4	+0.2
RETA	**Reutte**	**1.41**	**123**	Pg	Pb	03 00 17.4	-0.2
	0.4nm,0.2s						
RETA				Sn	Sb	03 00 35.5	-0.4
	2.1nm,0.1s						
BOURR	**Bourrignon**	**1.49**	**235**	Sg	Sg	03 00 38.5	-0.1
FUR	**Furstenfeldbru**	**1.52**	**93**	*e*Pg	Pb	03 00 19.0	-0.4
FUR				*e*Sg	Sg	03 00 39.6	+0.1
HINF	**Hinteralfeld**	**1.52**	**253**	*e*Pn	Pn	03 00 16.5	-2.1
HINF	**Hinteralfeld**	**1.52**	**253**	*e*Pg	Pn	03 00 18.8	+0.2
HINF				*e*Sn	Sn	03 00 35.7	-3.0
HINF				*e*Sg	Sb	03 00 38.7	-0.3
	6.5nm,0.3s						
MOTA	**Moosalm**	**1.69**	**123**	Pg	Pb	03 00 22.0	-0.3
	0.3nm,0.1s						
MOTA				Sg	Sb	03 00 44.0	+0.2
	6.9nm,0.2s						
FETA	**Feichten**	**1.71**	**137**	Pg	Pb	03 00 22.3	-0.3
	0.1nm,0.2s						
FETA				Sg	Sg	03 00 45.3	-0.2
	6.0nm,0.5s						
HAU	**Haudompre**	**1.81**	**263**	*e*Pn	Pn	03 00 20.9	-1.6
HAU	**Haudompre**	**1.81**	**263**	*e*Pg	Pb	03 00 24.1	-0.2
HAU				*e*Sg	Sb	03 00 47.1	-0.1
	5.9nm,0.3s						
SQTA	**Sankt Quirin**	**1.82**	**125**	Pg	Pg	03 00 25.5	-0.1
	0.1nm,0.1s						
SQTA				Sg	Sb	03 00 47.4	-0.1
	2.6nm,0.2s						
ABH	**Alteburg**	**1.88**	**330**	Pg	Pb	03 00 25.6	+0.1
ABH	**Alteburg**	**1.88**	**330**	Pg	Pb	03 00 25.9	+0.3
WATA	**Walderalm**	**1.96**	**118**	*e*Sn	Sn	03 00 48.3	-1.5
	0.8nm,0.1s						
WATA				*i* Sg	Sb	03 00 52.8	+1.0
	2.5nm,0.2s						
GRF	**Grafenberg Arr**	**2.03**	**45**	Pn	Pn	03 00 22.8	-2.8
GRF				Pg	Pb	03 00 28.3	+0.2
GRF				Sg	Sb	03 00 54.4	+0.7
PAGF	**Fort de Pagny**	**2.21**	**279**	*e*Pn	Pn	03 00 26.2	-1.8
PAGF	**Fort de Pagny**	**2.21**	**279**	*e*Pg	Pb	03 00 31.7	+0.5
PAGF				*e*Sn	Sn	03 00 52.2	-3.5
PAGF				*e*Sg	Sb	03 01 00.2	+1.4
	1.9nm,0.2s						
CABF	**La Chapelle**	**2.59**	**231**	*e*Pn	Pn	03 00 31.1	-2.2
CABF	**La Chapelle**	**2.59**	**231**	*e*Pg	Pg	03 00 39.1	-1.3
CABF				*e*Sn	Sn	03 01 00.9	-4.3
CABF				*e*Sg	Sb	03 01 11.8	+2.0
	1.4nm,0.3s						
SFTF	**Sexfontaines**	**2.66**	**270**	*e*Pn	Pn	03 00 32.5	-1.7
SFTF	**Sexfontaines**	**2.66**	**270**	*e*Pg	Pb	03 00 40.2	+1.4
SFTF				*e*Sg	Sg	03 01 14.6	-1.6
	1.3nm,0.2s						
KHC	**Kasperske Hory**	**3.14**	**72**	*e*PG	Pb	03 00 48.0	+1.0
KHC				*e*SN	Sn	03 01 16.0	-2.7
KHC				*e*SG	Sg	03 01 30.5	-1.2
LOR	**Lormes**	**3.62**	**256**	*e*Pn	Pn	03 00 45.5	-1.9
LOR	**Lormes**	**3.62**	**256**	*e*Pg	Pg	03 00 57.8	-2.3
	baz=77						
LOR				*e*Sn	Sn	03 01 25.8	-4.6
LOR				*e*Sg	Sg	03 01 44.1	-2.9
	1.6nm,0.3s,baz=83						
SMF	**Signal de Mont**	**3.87**	**247**	*e*Pn	Pn	03 00 49.4	-1.4
SMF				*e*Sn	Sn	03 01 31.8	-4.8
SMF				*e*Sg	Sg	03 01 51.8	-3.2
	1.3nm,0.2s						
SSF	**Saint Saulge**	**3.92**	**254**	*e*Pn	Pn	03 00 49.8	-1.6
SSF	**Saint Saulge**	**3.92**	**254**	*e*Pg	Pg	03 01 03.4	-2.4
SSF				*e*Sg	Sg	03 01 53.0	-3.5
	0.7nm,0.3s						
AVF	**Avril sur Loir**	**4.11**	**251**	*e*Pn	Pn	03 00 52.3	-1.8
AVF	**Avril sur Loir**	**4.11**	**251**	*e*Pg	Pg	03 01 07.1	-2.5
AVF				*e*Sn	Sn	03 01 37.8	-4.7
AVF				*e*Sg	Sg	03 02 00.0	-2.8
	0.2nm,0.2s						

ROM 22 03:00:06.8±0.1, 43.°392N±0.°004×12.°501E±0.°004, h6km±1km, Md1.1/4, Error ellipse: s-maj=0.3km s-min=0.2km az=4.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.06**	**116**	P	Pg	03 00 08.5	+0.1
ATFO				S	Sg	03 00 09.8	+0.2
ATFO				END			
ATVO	**AVT- Monte Val**	**0.07**	**262**	P	Pg	03 00 08.7	+0.1
ATVO				S	Sg	03 00 10.0	+0.2
ATVO				END			
ATPI	**Pietralunga -**	**0.09**	**309**	P	Pg	03 00 09.2	+0.3
ATPI				S	Sg	03 00 10.9	+0.6
ATPI				END			
MURB	**Monte Urbino**	**0.13**	**172**	P	Pg	03 00 10.0	+0.5
MURB				S	Sg	03 00 12.6	+1.3
PIEI	**Pieia**	**0.15**	**10**	P	Pg	03 00 10.3	+0.5
PIEI				S	Sg	03 00 13.2	+1.3
PIEI				END			
FRON	**Frontone**	**0.21**	**52**	P	Pg	03 00 11.1	+0.2
FRON				S	Sg	03 00 15.0	+1.4
SSFR	**Montelago di S**	**0.21**	**78**	P	Pg	03 00 11.4	+0.4
SSFR				S	Sg	03 00 15.1	+1.3

*IDC **22** 03:13:02.9±1.2, 48.°98N×156.°27E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.5/46, mbtmp3.6/9, ML2.3/1, MS2.2/1, Ms1 2.2/1, ms1mx2.1/50, Error ellipse: s-maj=32.2km s-min=27.4km az=86.0*
*KRSC **22** 03:13:06.4±1.5, 49.°09N×156.°89E, h60km±25km, ML3.9*
ISC 22 03:13:08.1±1.0, 49.°10N±0.°08×156.°5E±0.°1, h34km, n30, σ0.°97/35, mb3.7/8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.60**	**352**	*e*P	**Pn**	**03 13 35.0**	**+1.0**
SKR				*e*S	**Sb**	**03 13 56.4**	**-0.6**
PAU	**Pauzhetka**	**2.38**	**5**	*e*P	**Pn**	**03 13 44.6**	**-0.1**
PAU				*e*S	**Sn**	**03 14 13.2**	**+0.5**
KDTR	**Khodutka, Kamc**	**2.90**	**20**	*e*P	**Pn**	**03 13 51.4**	**-0.5**
KDTR				*e*S	**Sn**	**03 14 24.2**	**-1.4**
ASAK	**Asacha**	**3.41**	**15**	*e*P	**Pn**	**03 13 59.2**	**+0.2**
MTVR	**Mutnovka**	**3.56**	**17**	*e*P	**Pn**	**03 14 01.2**	**+0.1**
RUS	**Russkaya**	**3.58**	**20**	*e*P	**Pn**	**03 14 01.9**	**+0.7**
RUS				*e*S	**Sn**	**03 14 42.4**	**+0.1**
GRL	**Gorelyy**	**3.61**	**16**	*e*P	**Pn**	**03 14 02.5**	**+0.8**
GRL				*e*S	**Sn**	**03 14 43.7**	**+0.6**
KRMR	**Karymshinskiy**	**3.88**	**15**	*e*P	**Pn**	**03 14 05.9**	**+0.6**
KRMR				*e*S	**Sn**	**03 14 49.2**	**-0.5**
PETK	**Petropavlovsk-**	**4.09**	**10**	Pn	**Pn**	**03 14 09.3**	**+1.1**
	0.9nm,0.3s,baz=172,slow=16,SNR=12						
PETK				LR	LR	03 15 31.7	
	comp=Z,29nm,21.4s,baz=60,slow=35						
UGLR	**Uglovaya**	**4.38**	**19**	*e*P	**Pn**	**03 14 13.2**	**+1.0**
AVH	**Avacha**	**4.41**	**18**	*e*P	**Pn**	**03 14 14.2**	**+1.5**
AVH				*e*S	**Sn**	**03 15 03.2**	**+0.3**
KOK	**Koryaka**	**4.42**	**17**	*e*P	**Pn**	**03 14 14.7**	**+1.9**
SMAR	**Somma**	**4.42**	**19**	*e*P	**Pn**	**03 14 13.7**	**+0.7**
KRER	**Koryakskii**	**4.45**	**18**	*e*P	**Pn**	**03 14 14.3**	**+1.0**
SDLR	**Sedlovina**	**4.45**	**19**	*e*P	**Pn**	**03 14 13.5**	**+0.2**
NLC	**Nalytchevo**	**4.46**	**23**	*e*S	**Sn**	**03 15 01.6**	**-2.4**
KRX	**Arik**	**4.48**	**17**	*e*P	**Pn**	**03 14 15.0**	**+1.3**
SPN	**Mys Shipunski**	**4.59**	**28**	*e*P	**Pn**	**03 14 15.5**	**+0.5**
SPN				*e*S	**Sn**	**03 15 06.0**	**-1.1**
KZV	**Kizimen**	**6.47**	**20**	*e*P	**Pn**	**03 14 42.5**	**+1.5**
H11S1	**WAKE ISLAND Hy**	**31.62**	**161**	T	T	03 53 26.5	
	baz=352						
H11S3	**WAKE ISLAND Hy**	**31.63**	**161**	T	T	03 53 29.6	
	baz=352,slow=74						
H11S2	**WAKE ISLAND Hy**	**31.64**	**161**	T	T	03 53 29.4	
	baz=352,slow=74						
MKAR	**Makanchi Array**	**47.88**	**297**	P	**P**	**03 21 41.9**	**-0.6**
	0.7nm,0.8s,baz=60,slow=7.2,SNR=6.5						
KURBB	**Kurchatov Arra**	**48.05**	**303**	P	**P**	**03 21 43.7**	**-0.1**
	0.6nm,0.5s,baz=68,slow=8.5,SNR=4.1						
BVAR	**Borovoye Array**	**51.11**	**309**	P	**P

SHME	Shamm	2.38	127	ePn	Pn	03 27 22.0	+3.0
NIAN	Nian	2.50	88	ePn	Pn	03 27 22.3	+1.5
NIAN				e		03 28 21.2	
NIAN	Nian	2.50	88	Pn	Pn	03 27 22.2	+1.5
SHI	Shiraz	2.52	329	P	Pn	03 27 21.7	+0.6
SHI	Shiraz	2.52	329	ePn	Pn	03 27 22.4	+1.3
SHI				e		03 28 15.4	
BANOM	Banah	2.57	127	eP	Pn	03 27 23.7	+2.1
	SNR=23						
MSFE	Esma-Masafi	2.86	137	eP	Pn	03 27 29.6	+3.9
	SNR=9.5						
MSFE	Esma-Masafi	2.86	137	ePn	Pn	03 27 29.6	+3.9
NAZ	Nazwa, Dubai	2.90	149	eP	Pb	03 27 30.7	-1.6
	SNR=22						
NAZ	Nazwa, Dubai	2.90	149	ePn	Pb	03 27 30.8	-1.6
MDH	Madha	2.99	136	ePn	Pn	03 27 31.3	+3.9
AJN	Ajban	3.04	163	iP	Pb	03 27 33.1	-1.8
	SNR=8.4						
ASUD	Al Ashush, Dub	3.09	157	iP	Pb	03 27 34.1	-1.5
	SNR=39						
ASUD	Al Ashush, Dub	3.09	157	ePn	Pb	03 27 33.9	-1.7
UOSS	Minazif	3.21	142	iP	Pn	03 27 33.9	+3.5
	SNR=13						
UOSS	Minazif	3.21	142	ePn	Pn	03 27 33.8	+3.5
UOSS	Minazif	3.21	142		Pn	03 27 31.6	+1.3
UOSS					Sn	03 28 09.6	+1.7
NGRK	Negar Kerman	3.21	47	ePn	Pn	03 27 31.6	+0.8
NGRK	Negar Kerman	3.21	47	Pn	Pn	03 27 31.2	+0.4
HATD	Hatta, Dubai	3.26	144	P	Pn	03 27 34.8	+3.6
HATD				S	Sn	03 28 13.4	+4.1
HATD	Hatta, Dubai	3.26	144	ePn	Pn	03 27 34.9	+3.7
KHNJ	Kahnooj	3.30	81	ePn	Pn	03 27 32.8	+1.1
ASHO	Ashiyiah	3.34	146	iP	Pn	03 27 36.3	+4.0
	SNR=37						
ASHO	Ashiyiah	3.34	146	ePn	Pn	03 27 36.3	+4.0
TVBK	TV Kerman	3.46	43	ePn	Pn	03 27 35.3	+1.1
TVBK				e		03 27 51.8	
TVBK	TV Kerman	3.46	43	Pn	Pn	03 27 35.5	+1.3
KHGB	Koh Gabri	3.59	36	ePn	Pn	03 27 37.1	+1.2
KHGB	Koh Gabri	3.59	36	Pn	Pn	03 27 37.1	+1.2
ALNE	Al Ain	3.76	155	ePn	Pn	03 27 42.3	+4.3
CHMN	Cheshme madani	3.90	52	ePn	Pn	03 27 42.3	+2.2
CHMN	Cheshme madani	3.90	52	Pn	Pn	03 27 42.5	+2.4
IMEH	Mehriz	3.92	7	ePn	Pn	03 27 41.9	+1.5
IMEH	Mehriz	3.92	7	Pn	Pn	03 27 41.6	+1.2
SLWS		4.04	229	ePn	Pn	03 27 46.1	+4.2
KLNJ	Kolanjah	4.10	329	ePn	Pn	03 27 43.3	+0.4
KLNJ	Kolanjah	4.10	329	Pn	Pn	03 27 43.0	+0.1
IBAF	Bafgh	4.30	18	ePn	Pn	03 27 46.5	+0.9
ISAD	Sadrabad	4.42	356	ePn	Pn	03 27 48.9	+1.6
BTHS		4.46	221	ePn	Pn	03 27 51.6	+4.0
IRAM	Ramesheh	4.53	342	ePn	Pn	03 27 49.7	+0.9
ICHK	Chekchek	4.75	4	ePn	Pn	03 27 53.1	+1.3
YZKH	Yazd	4.91	6	ePn	Pn	03 27 55.0	+1.1
YZKH	Yazd	4.91	6	eSn	Pn	03 27 55.0	+1.1
YZKH	Yazd	4.91	6	Pn	Pn	03 27 55.0	+1.1
IBRJ	Brojen	5.01	332	ePn	Pn	03 27 56.7	+1.2
ROKH	ROKH	5.49	333	ePn	Pn	03 28 02.7	+0.8
JHBN	Jahan bin	5.55	329	ePn	Pn	03 28 02.9	0.0
IZEF	Zefreh	5.58	345	ePn	Pn	03 28 03.1	-0.2
ANAR	Anarak	5.69	358	ePn	Pn	03 28 05.1	+0.5
IPIR	Pirpir	5.84	333	ePn	Pn	03 28 06.9	0.0
WSAR	Wadi Sarin	5.94	134	Pn	Pn	03 28 11.2	+3.2
	1.0nm,0.3s,baz=318,slow=9.0,SNR=18						
WSAR				Sn	Sn	03 29 15.8	+0.4
	4.7nm,0.3s,baz=254,slow=17,SNR=6.8						
TPRV	Parvadeh(Tabas	5.98	22	ePn	Pn	03 28 08.6	0.0
CHBR	Chabahar	6.09	107	ePn	Pn	03 28 11.5	+1.5
CHBR	Chabahar	6.09	107	eP	Pn	03 28 11.5	+1.5
CHBR	Chabahar	6.09	107	Pn	Pn	03 28 11.0	+1.0
IKLH	Kolahrood	6.18	341	ePn	Pn	03 28 11.5	0.0
ZHSF	Zahedan	6.31	69	ePn	Pn	03 28 13.9	+0.7
ZHSF	Zahedan	6.31	69	ePn	Pn	03 28 13.9	+0.7
ZHSF	Zahedan	6.31	69	Pn	Pn	03 28 13.0	-0.2
NHDN	Nehbandan	6.54	52	ePn	Pn	03 28 18.0	+1.7
QAM	Ghamsar	6.63	341	ePn	Pn	03 28 17.7	+0.1
KRSH	Karshahi	6.66	346	ePn	Pn	03 28 18.2	+0.2
TKDS	Koohdasht(Taba	6.67	23	ePn	Pn	03 28 18.1	+0.1
TABS	Tabas	6.70	23	ePn	Pn	03 28 18.4	0.0
TABS	Tabas	6.70	23	ePn	Pn	03 28 18.4	0.0
TABS	Tabas	6.70	23	Pn	Pn	03 28 18.0	-0.4
TNSJ	Nastanj	6.83	18	ePn	Pn	03 28 19.8	-0.4
KHMZ	Khomeyn	7.14	332	ePn	Pn	03 28 25.6	+1.0
KHMZ	Khomeyn	7.14	332	ePn	Pn	03 28 25.6	+1.0
KHMZ	Khomeyn	7.14	332	Pn	Pn	03 28 25.0	+0.4
GHVR	GHOM	7.35	342	ePn	Pn	03 28 28.4	+1.0
GHVR	GHOM	7.35	342	ePn	Pn	03 28 28.4	+1.0
GHVR	GHOM	7.35	342	Pn	Pn	03 28 28.0	+0.6
BMDN	Meydan	7.61	325	ePn	Pn	03 28 29.7	-1.4
IKMR	Kamar-syah	7.73	322	ePn	Pn	03 28 31.6	-0.8
IQOM	Qom	7.75	342	ePn	Pn	03 28 32.5	-0.5
BDRS	Dareh Seyedi	7.81	327	ePn	Pn	03 28 32.9	-1.0
ILAS	Lasjerd	7.92	354	ePn	Pn	03 28 36.6	+1.3
IANJ	Anjilo	7.95	359	ePn	Pn	03 28 35.7	-0.1
IDOB	Doab	8.04	323	ePn	Pn	03 28 35.5	-1.5
HSAM	Samen	8.16	327	ePn	Pn	03 28 37.9	-0.7
IFIR	Firoozkooh	8.20	353	ePn	Pn	03 28 39.9	+0.7
HAGD	Aghdareh	8.42	331	ePn	Pn	03 28 42.3	+0.1
IRAZ	Razeghan	8.63	337	ePn	Pn	03 28 44.5	-0.5
RAYN	Ar Rayn	8.64	245	P	Pn	03 28 46.0	+0.9
RAYN	Ar Rayn	8.64	245		Pn	03 28 46.0	+0.9
IKOM	Komasi	8.70	322	ePn	Pn	03 28 44.8	-1.1
IGLO	Ghaloghah	8.99	359	ePn	Pn	03 28 52.2	+2.2
QABG	Abgarm-Qazvin	9.02	336	ePn	Pn	03 28 49.3	-1.2
QALM	Alamut, Qazvin	9.36	343	ePn	Pn	03 28 55.1	0.0
SNGE	Sanandaj	9.48	325	ePn	Pn	03 28 59.3	+2.5
SNGE	Sanandaj	9.48	325	ePn	Pn	03 28 59.3	+2.5
SNGE	Sanandaj	9.48	325	Pn	Pn	03 28 59.0	+2.2
SHAO	Shalim	9.54	171	iP	Pn	03 28 60.0	+2.6
	SNR=8.5						
IDHR	Dehrash	9.71	320	ePn	Pn	03 28 58.8	-1.1
GNI	Garni	14.78	331	iP	Pn	03 30 08.3	-0.8
GNI	Garni	14.78	331	Pn	Pn	03 30 07.1	-2.0
ASF	Jabal al Asfar	15.57	292	Pn	Pn	03 30 17.3	-2.2
	0.3nm,0.3s,baz=241,slow=1.2,SNR=9.5						
MMAI	Mount Meron Ar	16.99	293	Pn	Pn	03 30 36.6	-1.1
	0.6nm,0.3s,baz=97,slow=14,SNR=6.9						
GROC	Groznyy	17.04	339	eP	Pn	03 30 38.4	+0.4
GROC				eS	Sn	03 33 44.9	-1.8
GROC				pmax	pmax		
	comp=Z,16nm,0.8s						
ZEI	Tsey	17.34	334	eP	P	03 30 42.5	-0.8
ZEI				pmax	pmax		
	comp=Z,22nm,1.3s						
NIL	Nilore	17.66	65	P	P	03 30 47.8	+1.1
NIL				pmax	pmax		
	comp=Z,12nm,1.0s						
KBZ	Khabaz	18.52	334	iP	Pn	03 30 57.6	+1.2
SHA1	Shidzhatmaz	18.63	333	iP	Pn	03 30 59.9	+2.0
BTK	Batken	18.73	44	P	P	03 30 55.0	-3.5
BTK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BTK	Batken	18.73	44	P	P	03 30 55.0	-3.5
KIV	Kislovodsk	18.80	334	eP	Pn	03 31 01.3	+1.5
KIV				pmax	pmax		
	comp=Z,46nm,1.1s						
KIV	Kislovodsk	18.80	334	P	P	03 30 56.1	-3.1
KIV				IAmb	IAmb	03 31 13.5	
	comp=Z,13nm,0.9s						
CSS	Mathiatis	19.18	298	P	P	03 31 02.8	-0.6
CSS				IAmb	IAmb	03 31 08.0	
	comp=Z,9.4nm,0.9s						
KK31	Karatay Array	20.53	36	P	P	03 31 15.7	-2.4
KK31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KK31	Karatay Array	20.53	36	P	P	03 31 15.7	-2.4
KKAR	Karatay Array	20.53	36	P	P	03 31 15.8	-2.3
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KKAR	Karatay Array	20.53	36	P	P	03 31 15.8	-2.3
BR131	Keskin Array S	20.85	311	P	P	03 31 20.2	-1.5
BR131				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BR131	Keskin Array S	20.85	311	P	P	03 31 20.2	-1.5
BR131				IAmb	IAmb	03 31 33.8	
	comp=Z,5.1nm,0.8s						
BRTR	Keskin Array B	20.85	311	iP	P	03 31 22.8	+1.1
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRTR	Keskin Array B	20.85	311	P	P	03 31 22.5	+0.8
	comp=Z,3.8nm,0.7s,baz=130,slow=12,SNR=25						
ABKAR	Akbulak array	22.21	10	P	P	03 31 33.5	-2.5
ABKAR				IAmb	IAmb	03 31 39.0	
	comp=Z,7.1nm,0.8s						
AAK	Ala-Archa	22.48	42	ceP	P	03 31 39.5	+0.2
AAK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
AAK	Ala-Archa	22.48	42	P	P	03 31 40.2	+0.9
	comp=Z,1.0nm,0.6s,baz=225,slow=10.0,SNR=4.4						
AAK	Ala-Archa	22.48	42	P	P	03 31 36.6	-2.7
AAK				IAmb	IAmb	03 31 46.3	
	comp=Z,4.1nm,1.1s						
NRN	Naryn	22.77	47	P	P	03 31 40.0	-2.5
NRN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NRN	Naryn	22.77	47	P	P	03 31 40.0	-2.5
NRN				IAmb	IAmb	03 31 43.5	
	comp=Z,5.2nm,0.8s						
AKTO	Aktyubinsk	23.12	7	P	P	03 31 46.2	+0.6
	comp=Z,7.0nm,0.8s,baz=190,slow=13,SNR=23						
VRH	Novokhopyorsk	25.45	342	eP	P	03 32 06.5	-0.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VORD	Divnogorie	25.97	338	eP	P	03 32 11.1	-1.0
VORD				pmax	pmax		
	comp=Z,7.0nm,0.6s						
IDI	Anoyia	25.98	295	P	P	03 32 13.9	+1.4
	comp=Z,8.4nm,0.7s,baz=243,slow=18,SNR=5.6						
VSR	Storozhevoye	26.23	339	eP	P	03 32 10.1	-4.3
VSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BRVK	Borovoye	28.26	21	P	P	03 32 31.0	-1.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	28.26	21	P	P	03 32 31.0	-1.6
BRVK				IAmb	IAmb	03 32 40.3	
	comp=Z,2.9nm,0.8s						
BVAR	Borovoye Array	28.27	21	P	P	03 32 33.0	+0.3
	comp=Z,2.8nm,0.9s,baz=210,slow=7.7,SNR=12						
BVAR				pP	pP	03 32 39.4	-0.6
	comp=Z,3.0nm,0.8s,baz=215,slow=7.2,SNR=12						
ARU	Arti	29.10	5	dP	P	03 32 41.3	+1.2
ARU						03 33 34.4	
ARU				S	S	03 37 37.6	+7.1
ARU				SS	SnSn	03 39 05.0	+10
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DOPR	Dopca	29.20	317	⇑P	P	03 32 41.9	+0.7
MAKZ	Makanchi	29.23	41	P	P	03 32 39.4	-2.0
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAKZ	Makanchi	29.23	41	P	P	03 32 39.4	-2.0
MAKZ				IAmb	IAmb	03 32 43.0	
	comp=Z,2.7nm,0.9s						
MK31	Makanchi Array	29.41	42	P	P	03 32 40.9	-2.1
MK31				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	Makanchi Array	29.41	42	P	P	03 32 40.9	-2.1
MKAR	Makanchi Array	29.41	42	ceP	P	03 32 43.4	+0.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	Makanchi Array	29.41	42	P	P	03 32 43.3	+0.3
	comp=Z,1.5nm,1.0s,baz=235,slow=10.0,SNR=9.5						
MKAR				pP	pP	03 32 49.6	-0.5
	comp=Z,1.2nm,0.9s,baz=218,slow=7.7,SNR=6.4						
KURBB	Kurchatov Arra	29.68	32	P	P	03 32 45.8	+0.5
	comp=Z,0.8nm,0.6s,baz=232,slow=8.9,SNR=7.0						
KURBB				pP	pP	03 32 52.2	-0.2
	comp=Z,0.9nm,0.7s,baz=232,slow=8.9,SNR=5.3						
KURK	Kurchatov	29.79	32	iP	P	03 32 45.8	-0.4
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURK	Kurchatov	29.79	32	P	P	03 32 45.0	-1.2
KURK				IAmb	IAmb	03 32 47.3	
	comp=Z,1.3nm,0.7s						
AKASG	Malin Array Be	29.86	328	P	P	03 32 46.1	-0.8
	comp=Z,0.7nm,0.5s,baz=120,slow=13,SNR=4.7						
AKASG				pP	pP	03 32 52.2	-1.9
	comp=Z,1.4nm,0.7s,baz=136,slow=7.8,SNR=3.1						
BURAR	Bucovina Array	30.14	320	⇑P	P	03 32 50.2	+0.7
KOLS	Kolonicke sedl	32.50	320	eP	P	03 33 11.6	+1.4
KOLS	Kolonicke sedl	32.50	320	eP	P	03 33 11.6	+1.4
KLMR	Klimovskoe	34.77	348	eP	P	03 33 26.4	-3.4
KLMR				pmax	pmax		
	comp=Z,17nm,1.2s						
KLMR	Klimovskoe	34.77	348	eP	P	03 33 26.4	-3.4
KLMR				AMP		03 33 29.6	
	comp=Z,17nm,1.2s						
ZAA0	Zalesovo Array	34.78	32	P	P	03 33 28.2	-1.7
ZALV	Zalesovo Beam	34.78	32	P	P	03 33 29.8	-0.1
	comp=Z,3.2nm,0.4s,baz=247,slow=9.0,SNR=12						
ZALV				pP	pP	03 33 36.0	-1.1
	comp=Z,4.2nm,0.7s,baz=246,slow=9.5,SNR=5.3						
FINES	FINESS Array B	38.76	339	P	P	03 34 03.2	-0.5
	comp=Z,1.7nm,0.5s,baz=148,slow=9.3,SNR=21						
CLL	Collm	38.91	319	eP	P	03 34 05.0	-0.1
CLL	Collm	38.91	319	eP	P	03 34 05.0	-0.1
FETA	Feichten	38.99	312	eP	P	03 34 05.6	-0.5
	comp=Z,1.4nm,0.6s						
DAVA	Damuels	39.61	312	eP	P	03 34 10.8	-0.5
	comp=Z,6.8nm,0.6s						
GTA	Gaotai	39.63	61	eP	P	03 34 12.8	+1.3
GTA				pP	pP	03 34 18.8	0.0
GTA				sP	sP	03 34 22.3	+0.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MOY	Mondy	42.55	42	eP	P	03 34 36.8	+1.5
TAM	Tamanrasset	43.93	275	P	P	03 34 47.0	+0.1
TAM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TAM	Tamanrasset	43.93	275	P	P	03 34 47.0	+0.1
TAM				IAmb	IAmb	03 34 49.4	
	comp=Z,3.6nm,1.0s						
NOA	NORSAR Array B	44.08	332	P	P	03 34 46.4	-1.1
	comp=Z,1.3nm,0.8s,baz=120,slow=7.9,SNR=3.9						
SONM	Songino Array	45.20	49	P	P	03 34 57.1	+0.5
	comp=Z,1.3nm,0.9s,baz=269,slow=10,SNR=7.3						
ARCES	ARCESS Array B	45.22	346	P	P	03 34 56.4	0.0
	comp=Z,1.4nm,0.6s,baz=138,slow=9.7,SNR=18						
ULN	Ulaanbaatar	45.64	49	ceP	P	03 35 00.0	-0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESDC	Sonseca Array	49.04	300	P	P	03 35 26.0	-0.7
	comp=Z,0.9nm,0.8s,baz=89,slow=30,SNR=4.8						
TOA0	Torodi Ar. Sit	50.75	265	P	P	03 35 40.5	+0.6
TORD	Torodi Ar. Bea	50.75	265	P	P	03 35 40.4	+0.5
	comp=Z,4.1nm,0.8s,baz=66,slow=7.9,SNR=28						
BOD	Bodaibo	51.27	36	eP	P	03 35 41.6	-1.6
BOD				pmax	pmax		
	comp=Z,7.0nm,2.2s						
SPITS	Spitsbergen Ar	53.54	351	P	P	03 36 00.2	+0.4
	comp=Z,4.1nm,0.8s,baz=146,slow=15,SNR=12						
DBIC	Dimbokro	59.39	261	P	P	03 36 43.0	+0.7
	comp=Z,4.9nm,0.7s,baz=34,slow=9.3,SNR=7.9						
KIC	Kosan Boka	59.44	261	ePKP1	P	03 36 43.4	+0.7
	comp=Z,8.1nm,0.9s						
TIC	Toumodi	59.55	261	ePKP1	P	03 36 43.8	+0.3
	comp=Z,4.5nm,0.3s						
LIC	Lamto	59.75	261	ePKP1	P	03 36 44.1	-0.8
	comp=Z,4.4nm,0.3s						
SUMG	Summit	64.77	341	P	P	03 37 17.2	-0.8
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SUMG	Summit	64.77	341	P	P	03 37 17.2	-0.8
SEY	Seymchan	69.56	29	P	P	03 37 49.0	+0.9
SEY	Seymchan	69.56	29	P	P	03 37 49.0	+0.9
	comp=Z,1.3nm,0.5s,baz=301,slow=8.2,SNR=5.0						
BILL	Bilibino	72.61	21	⇑eP	P	03 38 07.1	+0.6
BILL				e		03 38 14.5	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SCHQ	Schefferville	83.63	330	P	P	03 39 08.3	+0.4
	comp=Z,3.5nm,0.7s,baz=49,slow=8.8,SNR=5.6						
SCHQ	Schefferville	83.63	330	P	P	03 39 08.1	+0.2
ILAR	Eielson Array	86.61	9	P	P	03 39 22.4	-0.2
	comp=Z,0.4nm,0.7s,baz=309,slow=4.0,SNR=5.3						
ILAR				pP	pP	03 39 29.0	-1.5
	comp=Z,0.5nm,0.8s,baz=322,slow=4.0,SNR=4.1						
YKA	Yellowknife Ar	89.87	355	P	P	03 39 38.3	+0.2
	comp=Z,0.7nm,0.8s,baz=4.2,slow=5.3,SNR=8.0						
YKA				pP	pP	03 39 45.0	-1.0
	comp=Z,0.5nm,0.7s,baz=4.5,slow=5.0,SNR=5.1						

*IDC **22** 03:32:05.8±0.8,27.66N×53.84E, h0km, mb4.0/18, mb1 4.1/19, mb1mx3.9/52, mbtmp4.0/19, ML3.8/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/41, Error ellipse: s-maj=22.2km*

s-min=15.2km az=138.0
*DSN **22** 03:32:06.1±2.5,27.88N×53.93E, h10km, ML4.5/7, Error ellipse: s-maj=39.4km s-min=7.3km az=10.0*
*NEIC **22** 03:32:06.6±2.2,27.54N±0.06×54.06E±0.06, h10km±1km, Error ellipse: s-maj=10.4km s-min=7.8km az=208.0*
*THR **22** 03:32:07.5±0.5,27.63N×54.14E, h15km, ML4.3*
*TEH **22** 03:32:09.1,27.59N×54.10E, h19km, ML4.4*
*OMAN **22** 03:32:14.0±0.3,27.31N×54.02E, h167km, ml4.1/15, Error ellipse: s-maj=8.2km s-min=3.9km az=16.0*

ISC 22 03:32:09.1±0.5,27.63N±0.04×54.03E±0.04, h23km, n138, σ1.176/147, mb3.9/25, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LMD1	Lamerd	0.82	250	eP	g	Pn		03 32 26.3	+1.1
LMD1				eS	g	Sn		03 32 38.6	+2.0
LMD1				e				03 33 13.2	
LMD1	Lamerd	0.82	250	P	g	Pn		03 32 26.1	+0.9
JHRM	Jahrom	0.96	336	eP	g	Pn		03 32 27.8	+0.6
JHRM				e				03 33 19.2	
JHRM	Jahrom	0.96	336	P	g	Pn		03 32 28.1	+0.9
JHRM				S	g	Sn		03 32 43.4	+3.2
GENO	Geno	1.92	96	ePn		Pn		03 32 41.3	+0.8
GENO				e				03 33 41.4	
GENO	Geno	1.92	96	Pn		Pn		03 32 41.3	+0.8
SHI	Shiraz	2.41	327	ePn		Pb		03 32 51.3	-0.5
SHI				e				03 34 07.3	
SHME	Shamm	2.46	129	P		Pn		03 32 50.9	+3.1
SHME	Shamm	2.46	129	ePn		Pn		03 32 48.2	+0.4
NIAN	Nian	2.49	91	ePn		Pn		03 32 49.7	+1.5
NIAN	Nian	2.49	91	Pn		Pn		03 32 48.9	+0.7
UMQ	Umm Al-Quwin	2.56	145	P		Pn		03 32 51.7	+2.6
BANOM	Banah	2.65	129	P		Pn		03 32 51.0	+0.6
BANOM	Banah	2.65	129	P		Pb		03 32 56.5	+0.7
MSFE	Esma-Masafi	2.96	139	P		Pn		03 32 56.8	+2.1
MSFE	Esma-Masafi	2.96	139	ePn		Pn		03 32 58.0	+3.3
NAZ	Nazwa, Dubai	3.01	150	iP		Pn		03 32 58.2	+2.9
	SNR=6.7								
NAZ	Nazwa, Dubai	3.01	150	ePn		Pn		03 32 57.6	+2.2
NAZ	Nazwa, Dubai	3.01	150	P		Pn		03 32 58.2	+2.9
	SNR=6.2								
NAZ				S		Sn		03 33 33.5	+2.8
MDH	Madha	3.09	138	ePn		Pn		03 32 58.1	+1.7
MDH	Madha	3.09	138	P		Pn		03 32 59.6	+3.2
NGRK	Negar Kerman	3.11	49	ePn		Pn		03 32 58.6	+1.5
NGRK				e				03 34 31.4	
NGRK	Negar Kerman	3.11	49	Pn		Pn		03 32 58.0	+0.9
AJN	Ajban	3.17	164	ePn		Pn		03 33 00.0	+2.4
AJN	Ajban	3.17	164	S		Sn		03 33 37.8	+3.1
	SNR=5.4								
FAQ	Al Faqa, Dubai	3.20	154	ePn		Pn		03 33 00.9	+3.0
ASUD	Al Ashush, Dub	3.21	158	iP		Pn		03 33 00.9	+2.7
	SNR=9.7								
ASUD	Al Ashush, Dub	3.21	158	ePn		Pn		03 33 01.2	+3.1
ASUD	Al Ashush, Dub	3.21	158	P		Pn		03 33 01.2	+3.1
	SNR=9.7								
KHNJ	Kahnooj	3.28	84	ePn		Pn		03 33 00.5	+1.5
UOSS	Minazif	3.31	143	P		Pn		03 33 01.0	+1.5
UOSS	Minazif	3.31	143	ePn		Pn		03 33 01.3	+1.8
UOSS	Minazif	3.31	143			Pn		03 32 58.3	-1.2
UOSS						Sn		03 33 36.0	-2.1
UOSS	Minazif	3.31	143	P		Pn		03 33 02.4	+2.9
TVBK	TV Kerman	3.36	45	ePn		Pn		03 33 03.2	+2.8
TVBK				e				03 33 46.5	
TVBK	TV Kerman	3.36	45	Pn		Pn		03 33 03.0	+2.6
HATD	Hatta, Dubai	3.37	145	P		Pn		03 33 02.5	+2.1
HATD	Hatta, Dubai	3.37	145	ePn		Pn		03 33 02.6	+2.2
HATD	Hatta, Dubai	3.37	145	P		Pn		03 33 02.9	+2.5
HATD				S		Sn		03 33 42.3	+2.6
ASHO	Ashiyiah	3.46	148	iP		Pn		03 33 03.3	+1.7
	SNR=8.3								
ASHO	Ashiyiah	3.46	148	ePn		Pn		03 33 03.2	+1.7
ASHO	Ashiyiah	3.46	148	P		Pn		03 33 03.4	+1.9
	SNR=8.3								
ASHO				S		Sn		03 33 43.2	+1.5
KHGB	Koh Gabri	3.48	38	ePn		Pn		03 33 04.1	+2.1
KHGB	Koh Gabri	3.48	38	Pn		Pn		03 33 04.3	+2.3
IMEH	Mehriz	3.78	8	ePn		Pn		03 33 08.7	+2.5
CHMN	Cheshme madani	3.80	53	ePn		Pn		03 33 08.8	+2.2
CHMN	Cheshme madani	3.80	53	Pn		Pn		03 33 09.9	+3.3
ALNE	Al Ain	3.88	156	ePn		Pn		03 33

BR131					IAmb	IAmb	03 37 00.3		
	comp=Z,2.9nm,0.9s								
BRTR	**Keskin Array B**	**20.76**	**311**	P	**P**		**03 36 49.2**	**+0.7**	
	comp=Z,1.4nm,0.7s,baz=127,slow=11,SNR=9.0								
ABKAR	**Akbulak array**	**22.07**	**10**	P	**P**		**03 37 01.7**	**-0.5**	
ABKAR					IAmb	IAmb	03 37 05.8		
	comp=Z,3.2nm,0.7s								
AAK	**Ala-Archa**	**22.38**	**43**	P	**P**		**03 37 07.7**	**+1.9**	
	comp=Z,0.6nm,0.4s,baz=200,slow=12,SNR=3.1								
AAK				LR	LR		03 48 01.9		
	comp=Z,108nm,18.2s,baz=244,slow=43								
AAK	**Ala-Archa**	**22.38**	**43**	P	**P**		**03 37 04.9**	**-0.9**	
AAK					IAmb	IAmb	03 37 23.5		
	comp=Z,3.2nm,1.0s								
NRN	**Naryn**	**22.66**	**47**	P	**P**		**03 37 07.7**	**-1.4**	
AKTO	**Aktyubinsk**	**22.98**	**7**	P	**P**		**03 37 13.4**	**+1.5**	
	comp=Z,1.7nm,0.4s,baz=176,slow=12,SNR=12								
BVAR	**Borovoye Array**	**28.13**	**21**	P	**P**		**03 37 59.9**	**+0.7**	
	comp=Z,1.6nm,0.7s,baz=205,slow=6.6,SNR=5.7								
MK31	**Makanchi Array**	**29.30**	**42**	P	**P**		**03 38 09.0**	**-0.7**	
MK31					IAmb	IAmb	03 38 17.7		
	comp=Z,1.2nm,0.8s								
MKAR	**Makanchi Array**	**29.30**	**42**	P	**P**		**03 38 10.3**	**+0.6**	
	comp=Z,0.3nm,0.4s,baz=232,slow=11,SNR=9.6								
KURBB	**Kurchatov Arra**	**29.56**	**32**	P	**P**		**03 38 12.9**	**+1.1**	
	comp=Z,0.8nm,0.5s,baz=232,slow=8.6,SNR=8.1								
KURK	**Kurchatov**	**29.66**	**32**	P	**P**		**03 38 12.7**	**-0.1**	
KURK					IAmb	IAmb	03 38 31.3		
	comp=Z,1.3nm,1.1s								
AKASG	**Malin Array Be**	**29.75**	**327**	P	**P**		**03 38 13.0**	**-0.6**	
	comp=Z,0.4nm,0.4s,baz=142,slow=9.0,SNR=2.8								
BUR08	**Bucovina Ar. S**	**30.06**	**319**	P	**P**		**03 38 16.3**	**-0.3**	
BUR08					IAmb	IAmb	03 38 17.4		
	comp=Z,2.7nm,1.1s								
ZALV	**Zalesovo Beam**	**34.65**	**32**	P	**P**		**03 38 56.7**	**+0.2**	
	comp=Z,4.1nm,0.5s,baz=237,slow=9.8,SNR=13								
FINES	**FINESS Array B**	**38.63**	**339**	P	**P**		**03 39 29.9**	**-0.4**	
	comp=Z,1.3nm,0.6s,baz=142,slow=9.6,SNR=8.9								
GTA	**Gaotai**	**39.56**	**61**	*e*P	**P**		**03 39 40.3**	**+1.7**	
GTA				pP	sP		03 39 50.8	+1.9	
GTA				sP	pP		03 39 55.1	+9.2	
NOA	**NORSAR Array B**	**43.96**	**332**	P	**P**		**03 40 12.3**	**-1.9**	
	comp=Z,0.7nm,0.9s,baz=127,slow=8.0,SNR=3.0								
ARCES	**ARCESS Array B**	**45.09**	**346**	P	**P**		**03 40 21.7**	**-1.3**	
	comp=Z,2.6nm,0.9s,baz=133,slow=5.1,SNR=4.6								
SONM	**Songino Array**	**45.10**	**49**	P	**P**		**03 40 24.4**	**+0.8**	
	comp=Z,0.5nm,0.7s,baz=260,slow=8.7,SNR=5.4								
TORD	**Torodi Ar. Bea**	**50.77**	**265**	P	**P**		**03 41 07.0**	**-0.7**	
	comp=Z,2.7nm,0.5s,baz=63,slow=8.4,SNR=41								
DBIC	**Dimbokro**	**59.42**	**261**	P	**P**		**03 42 09.8**	**-0.4**	
	comp=Z,4.2nm,0.7s,baz=22,slow=6.1,SNR=8.2								
DBIC	**Dimbokro**	**59.42**	**261**	P	**P**		**03 42 09.9**	**-0.4**	
KIC	**Kosan Boka**	**59.47**	**261**	*e*P	**P**		**03 42 10.2**	**-0.4**	
	comp=Z,14nm,1.3s								
KIC	**Kosan Boka**	**59.47**	**261**	P	**P**		**03 42 10.2**	**-0.4**	
TIC	**Toumodi**	**59.58**	**261**	*e*P	**P**		**03 42 10.9**	**-0.5**	
	comp=Z,3.6nm,0.3s								
TIC	**Toumodi**	**59.58**	**261**	P	**P**		**03 42 10.9**	**-0.5**	
LIC	**Lamto**	**59.78**	**261**	*e*P	**P**		**03 42 12.4**	**-0.4**	
	comp=Z,6.5nm,0.4s								
LIC	**Lamto**	**59.78**	**261**	P	**P**		**03 42 12.4**	**-0.4**	
BOSA	**Boshof**	**62.35**	**209**	P	**P**		**03 42 30.0**	**0.0**	
	comp=Z,1.3nm,0.5s,baz=19,slow=10.0,SNR=5.9								
BOSA	**Boshof**	**62.35**	**209**	P	**P**		**03 42 29.2**	**-0.8**	
SEY	**Seymchan**	**69.44**	**29**	P	**P**		**03 43 15.7**	**+0.6**	
	comp=Z,1.4nm,0.4s,baz=270,slow=8.0,SNR=6.3								
SCHQ	**Schefferville**	**83.51**	**330**	P	**P**		**03 44 35.2**	**+0.3**	
	comp=Z,2.3nm,0.7s,baz=34,slow=3.0,SNR=5.0								
SCHQ	**Schefferville**	**83.51**	**330**	P	**P**		**03 44 34.9**	**0.0**	
ILAR	**Eielson Array**	**86.47**	**9**	P	**P**		**03 44 49.3**	**-0.3**	
	comp=Z,0.3nm,0.6s,baz=318,slow=5.4,SNR=4.9								
YKA	**Yellowknife Ar**	**89.73**	**355**	P	**P**		**03 45 05.4**	**+0.2**	
	comp=Z,0.2nm,0.4s,baz=4.1,slow=5.0,SNR=9.5								

MOS ***22*** *03:32:33.7±1.3,27.°50N×53.°99E,h19km,mb4.5/21,Error ellipse: s-maj=7.9km s-min=5.7km az=81.6*
IDC ***22*** *03:32:33.4±0.7,27.°57N×53.°93E,h0km,mb4.2/25, mb1 4.3/26,mb1mx4.1/51,mbtmp4.2/26,ML4.1/1,Error ellipse: s-maj=16.9km s-min=13.1km az=161.0*
NEIC ***22*** *03:32:34.0±1.7,27.°57N±0.°07×53.°99E±0.°06,h10km±1km, mb4.2/26,Error ellipse: s-maj=14.1km s-min=5.3km az=144.0*

ISC 22 03:32:36.3±0.4,27.°52N±0.°06×53.°96E±0.°05,h23km,n112, σ1$50/115,mb4.3/46,4C-1D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UOSS	**Minazif**	**3.27**	**141**	Pn	**Pn**	**03 33 24.5**	**-1.6**
WSAR	**Wadi Sarin**	**6.00**	**134**	Pn	**Pn**	**03 34 06.1**	**+2.3**
	4.4nm,0.3s,baz=330,slow=7.2,SNR=6.8						
WSAR				Sn	**Sn**	**03 35 11.8**	**-0.1**
	12nm,0.3s,baz=164,slow=18,SNR=10						
RAYN	**Ar Rayn**	**8.61**	**244**	P	**Pn**	**03 34 39.9**	**+0.2**
RAYN						03 36 14.6	
RAYN	**Ar Rayn**	**8.61**	**244**	Pn	**Pn**	**03 34 39.9**	**+0.2**
RAYN				Sn	**Sn**	**03 36 14.6**	**-1.5**
HRA	**Herat**	**9.87**	**44**	Pn	**Pn**	**03 34 56.4**	**-0.6**
GYA0B	**ALIBECK ARRAY**	**10.95**	**18**	Pn	**Pn**	**03 35 09.7**	**-1.9**
KBL	**Kabul**	**14.69**	**58**	P	**Pn**	**03 36 02.0**	**-1.0**
KBL	**Kabul**	**14.69**	**58**	Pn	**Pn**	**03 36 02.0**	**-1.0**
GNI	**Garni**	**14.73**	**331**	P	**Pn**	**03 36 03.5**	**+0.2**
GNI	**Garni**	**14.73**	**331**	P	**Pn**	**03 36 03.5**	**+0.2**
TBLG	**Delisi**	**16.06**	**334**	P	**Pn**	**03 36 18.3**	**-2.4**
TBLG				pmax	pmax		
	comp=Z,12nm,1.1s						
TBLG	**Delisi**	**16.06**	**334**	Pn	**Pn**	**03 36 18.3**	**-2.4**
CHGR	**Chuyangaron**	**16.87**	**45**	Pn	**Pn**	**03 36 28.6**	**-2.5**
CHGR				IAmb	IAmb	03 36 33.5	
	comp=Z,22nm,0.9s						
GROC	**Groznyy**	**16.99**	**339**	*e*P	**Pn**	**03 36 33.6**	**+1.2**
GROC				pmax	pmax		
	comp=Z,20nm,0.8s						
GAZ	**Gaziantep**	**17.09**	**308**	Pn	**Pn**	**03 36 31.7**	**-2.1**
NIL	**Nilore**	**17.69**	**65**	P	**Pn**	**03 36 39.4**	**-1.8**
NIL				pmax	pmax		
	comp=Z,16nm,0.8s						
NIL	**Nilore**	**17.69**	**65**	P	**Pn**	**03 36 39.4**	**-1.8**
NIL				IAmb	IAmb	03 36 44.5	
	comp=Z,16nm,0.8s						
GAR	**Garm**	**17.80**	**46**		**Pn**	**03 36 41.2**	**-1.5**
GAR				IAmb	IAmb	03 36 43.8	
	comp=Z,23nm,0.7s						
KBZ	**Khabaz**	**18.47**	**334**	*i* P	**Pn**	**03 36 52.0**	**+1.3**
KBZ	**Khabaz**	**18.47**	**334**	P	**Pn**	**03 36 52.1**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=135,slow=7.5,SNR=7.6						
SHA1	**Shidzhatmaz**	**18.57**	**334**	*i* P	**Pn**	**03 36 54.0**	**+1.8**
BTK	**Batken**	**18.74**	**44**	P	**P**	**03 36 51.5**	**-2.1**
BTK				pmax	pmax		
	comp=Z,11nm,1.0s						
BTK	**Batken**	**18.74**	**44**	P	**P**	**03 36 51.5**	**-2.1**
KIV	**Kislovodsk**	**18.75**	**334**	*e*P	**P**	**03 36 53.0**	**-0.6**
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
KIV	**Kislovodsk**	**18.75**	**334**	P	**P**	**03 36 51.7**	**-1.9**
KIV				IAmb	IAmb	03 36 56.5	
	comp=Z,12nm,1.0s						
CSS	**Mathiatis**	**19.11**	**298**	P	**P**	**03 36 55.3**	**-2.3**
CSS				IAmb	IAmb	03 37 02.4	
	comp=Z,12nm,1.0s						
SOC	**Sochi**	**19.73**	**328**	*e*P	**P**	**03 37 06.4**	**+2.1**
SOC				*e*		03 40 50.2	
SOC				pmax	pmax		
	comp=Z,45nm,1.2s						
SOC				MLR	MLR		
	comp=Z,164nm,15.0s						
KK31	**Karatay Array**	**20.53**	**37**	P	**P**	**03 37 12.0**	**-1.1**
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KK31	**Karatay Array**	**20.53**	**37**	P	**P**	**03 37 12.0**	**-1.1**
KKAR	**Karatay Array**	**20.53**	**37**	P	**P**	**03 37 11.9**	**-1.2**
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	**Karatay Array**	**20.53**	**37**	P	**P**	**03 37 11.9**	**-1.2**
BR131	**Keskin Array S**	**20.79**	**311**	P	**P**	**03 37 14.7**	**-1.3**
BR131				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BR131	**Keskin Array S**	**20.79**	**311**	P	**P**	**03 37 14.7**	**-1.3**
BR131				IAmb	IAmb	03 37 22.4	
	comp=Z,8.3nm,1.0s						
BRTR	**Keskin Array B**	**20.79**	**311**	P	**P**	**03 37 17.0**	**+1.0**
	comp=Z,4.6nm,0.8s,baz=130,slow=12,SNR=8.3						
ARSB	**Arslanbob**	**20.81**	**44**	P	**P**	**03 37 15.3**	**-1.0**
ARSB				IAmb	IAmb	03 37 17.1	
	comp=Z,14nm,0.7s						
ANN	**Anapa**	**21.73**	**327**	*e*P	**P**	**03 37 31.4**	**+5.5**
ANN				*e*		03 37 49.2	
ANN				pmax	pmax		
	comp=Z,144nm,1.8s						
KSH	**Kashi**	**21.84**	**51**	P	**P**	**03 37 24.9**	**-2.4**
KSH				pP	pP	03 37 28.1	-6.0
KSH				PP	**PnPn**	**03 37 46.1**	**-2.8**
KSH				S	S	03 41 10.8	-17
KSH				sS	pS	03 41 19.8	-18
KSH				SS	Sn	03 41 43.4	+5.5
KSH				pmax	pmax		
	comp=Z,29nm,1.0s						
KSH				pmax	pmax		
	comp=Z,290nm,5.9s						
KSH				LR	LR		
	comp=N,210nm,5.9s						
KSH				LR	LR		
	comp=E,200nm,4.9s						
KSH				LR	LR		
	comp=Z,320nm,5.9s						
ELL	**Elmali**	**22.30**	**300**	P	**P**	**03 37 30.8**	**-1.4**
ELL				pmax	pmax		
	comp=Z,52nm,1.0s						
ELL	**Elmali**	**22.30**	**300**	P	**P**	**03 37 30.8**	**-1.4**
AAK	**Ala-Archa**	**22.49**	**43**	*ce*P	**P**	**03 37 36.0**	**+1.7**
AAK				pmax	pmax		
	comp=Z,11nm,1.3s						
AAK	**Ala-Archa**	**22.49**	**43**	P	**P**	**03 37 35.8**	**+1.5**
	comp=Z,4.5nm,0.7s,baz=225,slow=10.0,SNR=7.6						
AAK	**Ala-Archa**	**22.49**	**43**	P	**P**	**03 37 31.8**	**-2.5**
AAK				IAmb	IAmb	03 37 41.2	
	comp=Z,5.2nm,0.8s						
NRN	**Naryn**	**22.78**	**47**	P	**P**	**03 37 35.5**	**-2.0**
NRN				pmax	pmax		
	comp=Z,14nm,0.7s						
NRN	**Naryn**	**22.78**	**47**	P	**P**	**03 37 35.5**	**-2.0**
AKTO	**Aktyubinsk**	**23.09**	**7**	P	**P**	**03 37 41.5**	**+1.2**
	comp=Z,6.0nm,0.5s,baz=195,slow=13,SNR=10						
IDI	**Anoyia**	**25.92**	**295**	P	**P**	**03 38 08.5**	**+1.6**
	comp=Z,6.2nm,0.6s,baz=253,slow=18,SNR=6.9						
BVAR	**Borovoye Array**	**28.25**	**21**	P	**P**	**03 38 27.8**	**+0.2**
	comp=Z,5.3nm,0.7s,baz=210,slow=8.6,SNR=14						
ARU	**Arti**	**29.07**	**5**	P	**P**	**03 38 36.1**	**+1.3**
ARU						03 39 24.5	
ARU				S	**S**	**03 43 30.6**	**+5.7**
ARU				SS	ScP	03 44 53.6	-29
MAKZ	**Makanchi**	**29.24**	**41**	P	**P**	**03 38 35.8**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAKZ	**Makanchi**	**29.24**	**41**	P	**P**	**03 38 35.8**	**-0.6**
MAKZ				IAmb	IAmb	03 38 37.8	
	comp=Z,7.1nm,1.1s						
MK31	**Makanchi Array**	**29.41**	**42**	P	**P**	**03 38 36.8**	**-1.2**
MK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK31	**Makanchi Array**	**29.41**	**42**	P	**P**	**03 38 36.8**	**-1.2**
MK31				IAmb	IAmb	03 38 39.3	
	comp=Z,3.3nm,1.1s						
MKAR	**Makanchi Array**	**29.41**	**42**	P	**P**	**03 38 36.8**	**+0.6**
	comp=Z,3.6nm,1.0s,baz=229,slow=8.9,SNR=12						
KURBB	**Kurchatov Arra**	**29.68**	**32**	P	**P**	**03 38 40.9**	**+0.7**
	comp=Z,3.1nm,0.7s,baz=232,slow=8.7,SNR=15						
KURK	**Kurchatov**	**29.78**	**32**	*ce*P	**P**	**03 38 41.7**	**+0.6**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KURK	**Kurchatov**	**29.78**	**32**	P	**P**	**03 38 40.5**	**-0.6**
KURK				IAmb	IAmb	03 38 42.5	
	comp=Z,3.0nm,0.7s						
AKASG	**Malin Array Be**	**29.81**	**328**	P	**P**	**03 38 40.7**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=132,slow=8.9,SNR=4.3						
OBN	**Obninsk**	**30.33**	**340**	*e*P	**P**	**03 38 46.6**	**+0.7**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KOLS	**Kolonicke sedl**	**32.44**	**320**	*e*P	**P**	**03 39 06.2**	**+1.5**
KOLS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KOLS	**Kolonicke sedl**	**32.44**	**320**	*e*P	**P**	**03 39 06.2**	**+1.5**
LANS	**Liptovska Anna**	**34.18**	**319**	*e*P	**P**	**03 39 21.0**	**+1.2**
LANS	**Liptovska Anna**	**34.18**	**319**	*e*P	**P**	**03 39 21.0**	**+1.2**
PRGR	**Permogore**	**34.56**	**353**	*e*P	**P**	**03 39 19.9**	**-3.0**
PRGR				pmax	pmax		
	comp=Z,11nm,1.3s						
KLMR	**Klimovskoe**	**34.73**	**348**	*e*P	**P**	**03 39 22.6**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,14nm,1.2s						
KLMR	**Klimovskoe**	**34.73**	**348**	*e*P	**P**	**03 39 22.6**	**-1.7**
KLMR				AMP		03 39 38.6	
	comp=Z,14nm,1.2s						
ZAA0	**Zalesovo Array**	**34.77**	**32**	P	**P**	**03 39 24.4**	**-0.4**
ZALV	**Zalesovo Beam**	**34.77**	**32**	P	**P**	**03 39 24.5**	**-0.3**
	comp=Z,10nm,0.5s,baz=238,slow=9.6,SNR=17						
FINES	**FINESS Array B**	**38.71**	**339**	P	**P**	**03 39 58.0**	**-0.2**
FINES	**FINESS Array B**	**38.71**	**339**	P	**P**	**03 39 58.0**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=141,slow=10,SNR=7.6						
GTA	**Gaotai**	**39.66**	**61**	*e*P	**P**	**03 40 07.3**	**+0.6**
GTA				pP	pP	03 40 14.5	+0.6
GTA				sP	sP	03 40 17.8	+0.9
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,6.5s						
GTA				LR	LR		
	comp=N,77nm,19.4s						
GTA				LR	LR		
	comp=E,360nm,19.7s						
GTA				LR	LR		
	comp=Z,130nm,18.7s						
SENIN	**Lac Senin/Sane**	**41.09**	**310**	P	**P**	**03 40 17.7**	**-0.8**
CMAR	**Chiang Mai Arr**	**42.19**	**92**	*i* P	**P**	**03 40 28.8**	**+1.2**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**42.19**	**92**	P	**P**	**03 40 28.9**	**+1.3**
	comp=Z,1.1nm,0.3s,baz=284,slow=9.9,SNR=5.1						
MOY	**Mondy**	**42.56**	**42**	*e*P	**P**	**03 40 31.7**	**+1.4**
MOY				pmax	pmax		
	comp=Z,12nm,1.7s						
ZAK	**Zakamensk**	**43.64**	**45**	*e*P	**P**	**03 40 38.4**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TAM	**Tamanrasset**	**43.88**	**275**	P	**P**	**03 40 41.5**	**+0.1**
TAM				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TAM	**Tamanrasset**	**43.88**	**275**	P	**P**	**03 40 41.5**	**+0.1**
TAM				IAmb	IAmb	03 40 43.4	
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**44.03**	**332**	P	**P**	**03 40 41.0**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=119,slow=7.5,SNR=3.6						
ARCES	**ARCESS Array B**	**45.18**	**346**	P	**P**	**03 40 51.2**	**+0.2**
	comp=Z,1.4nm,0.7s,baz=148,slow=7.2,SNR=5.9						
SONM	**Songino Array**	**45.21**	**49**	P	**P**	**03 40 52.6**	**+0.8**
	comp=Z,2.7nm,1.0s,baz=260,slow=9.2,SNR=14						
ULN	**Ulaanbaatar**	**45.66**	**49**	*i* P	**P**	**03 40 56.0**	**+0.7**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XAN	**Xi'an**	**47.20**	**68**	P	**P**	**03 41 07.0**	**-0.4**
XAN				pP	sP	03 41 19.9	+2.2
XAN				sP	pP	03 41 25.3	+10
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ESDC	**Sonseca Array**	**48.98**	**300**	P	**P**	**03 41 21.6**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=64,slow=7.2,SNR=3.7						
TOA0	**Torodi Ar. Sit**	**50.70**	**265**	P	**P**	**03 41 34.1**	**-0.3**
TOA0				IAmb	IAmb	03 41 35.4	
	comp=Z,4.3nm,0.7s						
TORD	**Torodi Ar. Bea**	**50.70**	**265**	P	**P**	**03 41 34.9**	**+0.4**
	comp=Z,3.5nm,0.6s,baz=64,slow=8.5,SNR=14						
WHN	**Wuhan**	**52.34**	**71**	P	**P**	**03 41 49.8**	**+3.3**
DBIC	**Dimbokro**	**59.35**	**261**	P	**P**	**03 42 36.9**	**-0.1**
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBIC	**Dimbokro**	**59.35**	**261**	P	**P**	**03 42 37.5**	**+0.5**
	comp=Z,5.7nm,0.7s,baz=38,slow=8.7,SNR=7.4						
DBIC	**Dimbokro**	**59.35**	**261**	P	**P**	**03 42 36.9**	**-0.1**
TIXI	**Tiksi**	**59.39**	**21**	*ce*P	**P**	**03 42 37.5**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.8s						
TIXI	**Tiksi**	**59.39**	**21**	P	**P**	**03 42 36.8**	**+0.4**
	comp=Z,1.4nm,0.3s,baz=331,slow=7.2,SNR=4.4						
TIXI	**Tiksi**	**59.39**	**21**	IAmb	IAmb	03 42 37.4	
	comp=Z,1.9nm,0.5s						
KIC	**Kosan Boka**	**59.39**	**261**	*e*P	**P**	**03 42 37.8**	**+0.5**
	comp=Z,4.3nm,0.8s						
KIC	**Kosan Boka**	**59.39**	**261**	P	**P**	**03 42 37.8**	**+0.5**
TIC	**Toumodi**	**59.50**	**261**	*e*P	**P**	**03 42 38.6**	**+0.5**
	comp=Z,3.3nm,0.3s						
TIC	**Toumodi**	**59.50**	**261**	P	**P**	**03 42 38.6**	**+0.5**
TIC	**Toumodi**	**59.50**	**261**	P	**P**	**03 42 38.6**	**+0.5**
LIC	**Lamto**	**59.71**	**261**	*e*P	**P**	**03 42 40.0**	**+0.5**
	comp=Z,5.1nm,0.3s						
LIC	**Lamto**	**59.71**	**261**	P	**P**	**03 42 40.0**	**+0.5**
KSRS	**Korea Array**	**61.73**	**60**	P	**P**	**03 42 52.4**	**-0.6**
	comp=Z,1.3nm,0.6s,baz=284,slow=6.5,SNR=5.5						
BOSA	**Boshof**	**62.23**	**209**	P	**P**	**03 42 56.7**	**+0.2**
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BOSA	**Boshof**	**62.23**	**209**	P	**P**	**03 42 57.6**	**+1.2**
	comp=Z,1.3nm,0.5s,baz=18,slow=6.4,SNR=3.4						
BOSA	**Boshof**	**62.23**	**209**	P	**P**	**03 42 56.6**	**+0.2**
SEY	**Seymchan**	**69.56**	**29**	P	**P**	**03 43 43.8**	**+0.8**
	comp=Z,3.2nm,0.6s,baz=301,slow=4.5,SNR=8.8						
YSS	**Yuzh-Sakhalins**	**69.66**	**47**	*e*P	**P**	**03 43 42.9**	**-1.0**
LUWI	**Luwuk**	**71.78**	**101**	P	**P**	**03 43 56.4**	**-1.0**
BILL	**Bilibino**	**72.60**	**21**	*e*P	**P**	**03 44 02.4**	**+1.0**
BILL				*e*		03 44 09.1	
BILL						03 44 25.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SCHQ	**Schefferville**	**83.58**	**330**	P	**P**	**03 45 02.6**	**+0.1**
	comp=Z,4.8nm,0.7s,baz=16,slow=5.7,SNR=5.2						
SCHQ	**Schefferville**	**83.58**	**330**	P	**P**	**03 45 02.0**	**-0.5**
ILAR	**Eielson Array**	**86.58**	**9**	P	**P**	**03 45 17.3**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=316,slow=4.2,SNR=6.2						
YKA	**Yellowknife Ar**	**89.83**	**355**	P	**P**	**03 45 33.3**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=3.5,slow=4.8,SNR=11						
ASAR	**Alice Springs**	**92.37**	**115**	P	**P**	**03 45 45.4**	**0.0**
	comp=Z,0.3nm,0.5s,baz=303,slow=4.9,SNR=3.8						

NEIC ***22*** *03:41:29.5±1.6,15.°11S±0.°08×174.°69W±0.°05,h11km±3km, mb4.9/58,Ms_20 5.2/214,Mwc5.5(GCMT),Error ellipse: s-maj=12.1km s-min=6.1km az=155.0*
MOS ***22*** *03:41:30.2±2.6,15.°70S×174.°32W,h15km,mb5.1/28, MS5.2/12,Error ellipse: s-maj=13.4km s-min=8.9km az=147.0*
IDC ***22*** *03:41:30.0±0.6,15.°43S×174.°91W,h0km,mb4.5/13, mb1 4.8/13,mb1mx4.4/37,mbtmp4.5/13,MS4.9/20, Ms1 4.9/20,ms1mx4.8/25,Error ellipse: s-maj=30.5km s-min=16.0km az=134.0*
BJI ***22*** *03:41:33.8±0.0,14.°72S×174.°52W,h10km,mB5.6/12, mb4.8/14,Ms5.4/10,Ms7 5.0/9*
GCMT ***22*** *03:41:36.5±0.1,15.°13S±0.°01×174.°80W±0.°01,h12km, MW5.4/154,Moment Tensor Solution. s116,c203; s154,c293; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr-0.26±.02; Mθθ 1.29±.02; Mϕϕ-1.03±.02; Mrθ0.32±.04; Mθϕ 1.22±.01; Mϕr-0.44±.04; Best double couple: M0 1.78300×10^17 NP1:ϕs23.00000°,δ74.00000°, λ-168.00000°. NP2:ϕs290.00000°,δ79.00000°, λ-17.00000°. Principal axes: T 1.8200, Plg3.0000°, Azm337.0000°; N -0.0750, Plg70.0000°, Azm77.0000°; P -1.7450, Plg20.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***22*** *03:41:37,15.°11S×174.°80W,h12km,Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr-0.29; Mθθ 1.39; Mϕϕ-1.10; Mrθ0.17; Mθϕ 1.24; Mϕr-0.33; Fault plane solution: M0 1.81000×10^17 NP1:ϕs23.00000°, δ79.00000°,λ-170.00000°. NP2:ϕs292.00000°, δ80.00000°,λ-11.00000°. Principal axes: T 1.9030, Plg1.0000°, Azm338.0000°; N -0.1955, Plg75.0000°, Azm71.0000°; P -1.7075, Plg15.0000°, Azm247.0000°;*
BGR ***22*** *03:41:40.9±0.0,15.°26S×175.°24W,h33km*
ISC 22 03:41:31.1±0.3,15.°13S±0.°06×174.°65W±0.°06,h10km, n351,σ2$31/215,mb4.9/63,MS5.2/139,16C-2D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.04**	**67**	P	**Pn**	**03 42 17.4**	**-1.9**
AFI						03 42 53.9	
AFI	**Afiamalu**	**3.04**	**67**	Pn	**Pn**	**03 42 17.9**	**-1.4**
	31nm,0.3s,baz=86,slow=17,SNR=16						
AFI				LR	LR	03 43 29.1	
	comp=Z,23μm,20.5s,baz=184,slow=35						
AFI	**Afiamalu**	**3.04**	**67**	Pn	**Pn**	**03 42 17.4**	**-1.9**
AFI				Sn	**Sn**	**03 42 53.9**	**-1.9**
NIUE	**Niue**	**5.98**	**132**	P	**Pn**	**03 43 00.2**	**+0.5**
	baz=6.1,SNR=4.9						
NIUE	**Niue**	**5.98**	**132**		**Pn**	**03 42 58.0**	**-1.6**
MSVF	**Nonsavu**	**7.47**	**249**	*

comp=Z,4µm,21.0s
EIDS Eidsvold 33.64 247 P **P** **03 48 07.3 -4.8**
baz=34,SNR=6.3
EIDS Eidsvold 33.64 247 P **P** **03 48 08.4 -3.7**
EIDS IAmb IAmb 03 48 15.2
comp=Z,15nm,0.8s
EIDS IAMs_20 IAMs_20 03 59 09.1
comp=Z,4µm,22.0s
WHZ Wether Hill Ro 33.97 202 IAMs_20 IAMs_20 04 00 54.6
comp=Z,3µm,18.0s
TAOE Nuku Hiva Isla 34.29 84 *e*LR LR 03 57 18.3
comp=Z,6µm,26.8s,baz=256
TAOE Nuku Hiva Isla 34.29 84 *e*T T 04 24 30.5
comp=Z,50nm,0.2s
PATS Pohnpei 34.56 307 IAMs_20 IAMs_20 03 58 45.6
comp=Z,5µm,20.0s
PYZ Puysegur Point 34.67 203 IAMs_20 IAMs_20 04 02 17.7
comp=Z,4µm,22.0s
CTA Charters Tower 37.53 257 P **P** **03 48 43.7 -1.9**
CTA Charters Tower 37.53 257 LR LR 04 02 13.1
comp=Z,1µm,19.6s,baz=75,slow=33
CTAO Charters Tower 37.53 257 P **P** **03 48 43.7 -1.9**
PMG Port Moresby 37.71 274 *ce*P P 03 48 52.2 +5.0
PMG pmax pmax
comp=Z,172nm,1.2s
PMG Port Moresby 37.71 274 P **P** **03 48 43.1 -4.1**
PMG IAmb IAmb 03 48 56.8
comp=Z,26nm,0.9s
PMG Port Moresby 37.71 274 IAMs_20 IAMs_20 04 00 07.1
comp=Z,3µm,20.0s
H11S2 WAKE ISLAND Hy 38.13 331 T T 04 29 14.2
baz=149,slow=75,SNR=61
H11S3 WAKE ISLAND Hy 38.14 331 T T 04 29 22.6
baz=149,slow=75,SNR=53
H11S1 WAKE ISLAND Hy 38.15 331 T T 04 29 13.9
baz=149,slow=75,SNR=425
CAN Canberra 38.24 232 IAMs_20 IAMs_20 04 05 00.3
comp=Z,3µm,19.0s
WAKE Wake Island 38.84 331 IAMs_20 IAMs_20 04 00 50.1
comp=Z,3µm,20.0s
H11N3 WAKE ISLAND Hy 39.10 332 T T 04 30 25.6
baz=151,slow=76,SNR=579
H11N1 WAKE ISLAND Hy 39.10 332 T T 04 30 24.7
baz=151,slow=76,SNR=876
H11N2 WAKE ISLAND Hy 39.11 332 T T 04 30 26.9
baz=151,slow=76,SNR=451
MTSU Mount Surprise 39.37 260 P **P** **03 48 59.6 -1.7**
baz=39,SNR=13
CMSA Cobar Meteorol 39.66 239 P **P** **03 49 03.5 +0.1**
baz=40,SNR=7.7
COEN Coen 40.80 266 P **P** **03 49 12.0 -1.0**
baz=41,SNR=8.4
COEN Coen 40.80 266 P **P** **03 49 11.2 -1.9**
COEN IAmb IAmb 03 49 21.9
comp=Z,33nm,1.2s
TOO Toolangi 41.71 230 P **P** **03 49 18.0 -2.2**
baz=42,SNR=7.9
TOO Toolangi 41.71 230 P **P** **03 49 18.1 -2.2**
TOO pmax pmax
comp=Z,56nm,1.1s
TOO MLR MLR
comp=Z,2µm,19.0s
TOO Toolangi 41.71 230 P **P** **03 49 18.1 -2.2**
TOO IAMs_20 IAMs_20 04 06 12.6
comp=Z,3µm,19.0s
STKA Stephens Creek 43.13 239 P **P** **03 49 31.2 -0.7**
baz=43,SNR=5.6
STKA Stephens Creek 43.13 239 P **P** **03 49 30.0 -1.9**
comp=Z,5.9nm,0.8s,baz=76,slow=12,SNR=3.5
STKA LR LR 04 05 31.6
comp=Z,2µm,20.8s,baz=77,slow=34
STKA Stephens Creek 43.13 239 P **P** **03 49 29.9 -1.9**
HTT Hallett 45.66 238 P **P** **03 49 50.2 -2.0**
baz=46,SNR=5.1
JAY Jayapura 45.75 281 LR LR 04 08 53.7
comp=Z,414nm,18.3s,baz=98,slow=36
BBOO Buckleboo 47.91 239 IAMs_20 IAMs_20 04 08 07.1
comp=Z,2µm,20.0s
WR0 Warramunga Arr 48.54 257 P **P** **03 50 12.5 -2.4**
WR0 IAmb IAmb 03 50 24.6
comp=Z,11nm,1.0s
WR0 IAMs_20 IAMs_20 04 12 09.6
comp=Z,1µm,18.0s
WR6 Warramunga Arr 48.62 257 IAMs_20 IAMs_20 04 12 21.2
comp=Z,2µm,18.0s
WB0 Warramunga Arr 48.69 257 P **P** **03 50 13.3 -2.7**
WB0 IAMs_20 IAMs_20 04 09 59.9
comp=Z,2µm,18.0s
WB8 Warramunga Arr 48.70 257 IAMs_20 IAMs_20 04 10 10.2
comp=Z,2µm,22.0s
WB5 Warramunga Arr 48.71 257 IAMs_20 IAMs_20 04 10 19.1
comp=Z,2µm,22.0s
WB2 Warramunga Arr 48.72 257 P **P** **03 50 14.2 -2.1**
baz=49
WB2 Warramunga Arr 48.72 257 P **P** **03 50 13.2 -3.0**
WRAB Tennant Creek 48.72 257 P **P** **03 50 13.3 -2.9**
WRAB pmax pmax
comp=Z,21nm,1.1s
WRAB Tennant Creek 48.72 257 P **P** **03 50 13.3 -2.9**
WRAB IAmb IAmb 03 50 27.7
comp=Z,21nm,1.1s
WB1 Warramunga Ar. 48.72 257 IAMs_20 IAMs_20 04 07 31.8
comp=Z,2µm,21.0s
WC4 Warramunga Arr 48.73 257 IAMs_20 IAMs_20 04 07 34.0
comp=Z,2µm,22.0s
WRA Warramunga Arr 48.73 257 *ce*P P 03 50 22.7 +6.4
WRA pmax pmax
comp=Z,14nm,0.9s
WRA Warramunga Arr 48.73 257 P **P** **03 50 12.8 -3.5**
comp=Z,3.7nm,0.9s,baz=91,slow=7.1,SNR=12
AS31 Alice Springs 49.05 252 P **P** **03 50 16.8 -2.0**
AS31 IAmb IAmb 03 50 28.5
comp=Z,9.2nm,0.8s
ASAR Alice Springs 49.05 252 P **P** **03 50 15.8 -3.0**
comp=Z,5.7nm,0.7s,baz=87,slow=8.6,SNR=30
WRKA Warakurna 54.15 250 P **P** **03 50 55.0 -2.0**
baz=54,SNR=21
SWI Sorong 55.23 280 P **P** **03 51 03.0 -1.9**
comp=Z,1µmcomp=Z,58nm,1.0s
FITZ Fitzroy Crossi 57.08 258 P **P** **03 51 16.0 -2.1**
FITZ IAmb IAmb 03 51 30.0
comp=Z,18nm,1.1s
FITZ IAMs_20 IAMs_20 04 12 48.4
comp=Z,2µm,21.0s
SOEI Soe 59.74 267 P **P** **03 51 35.3 -1.5**
comp=Z,130nm,1.6s
SOEI Soe 59.74 267 P **P** **03 51 34.0 -2.7**
PSAB3 Pilbara Seismi 62.11 253 IAMs_20 IAMs_20 04 16 07.6
comp=Z,2µm,20.0s
PSAD1 Pilbara Seismi 62.15 254 IAMs_20 IAMs_20 04 18 51.6
comp=Z,2µm,20.0s
MBWA Marble Bar 62.28 254 IAMs_20 IAMs_20 04 19 05.9
comp=Z,2µm,18.0s
LUWI Luwuk 63.30 277 P **P** **03 51 59.0 -1.7**
comp=Z,2µmcomp=Z,64nm,1.4s
VNDA Vanda 63.52 186 LR LR 04 13 24.8
comp=Z,476nm,21.7s,baz=25,slow=30
KCP Kidapawan 63.63 286 *ie*P P 03 52 09.2 +6.2
NWAO Narrogin (SRO) 63.70 241 IAMs_20 IAMs_20 04 17 26.2
comp=Z,2µm,21.0s
APSI Ampana 64.41 276 P **P** **03 52 06.3 -1.8**
comp=Z,41nm,1.2s
MORW Morawa 64.91 245 IAMs_20 IAMs_20 04 20 43.3
comp=Z,2µm,18.0s
BNSI Bone 64.97 272 P **P** **03 52 09.9 -1.8**
comp=Z,39nm,1.3s
MPSI Mapaga 66.44 277 P **P** **03 52 19.5 -1.7**
comp=Z,12nm,1.2s
MAJO Matsushiro 67.96 320 *i* P **P** **03 52 34.1 +3.7**
MAJO pmax pmax
comp=Z,6.0nm,1.0s
MAJO Matsushiro 67.96 320 IAMs_20 IAMs_20 04 15 41.6
comp=Z,2µm,22.0s
MJB9 Matsu-Tunnel 67.97 320 IAMs_20 IAMs_20 04 15 30.6
comp=Z,2µm,22.0s
KBKI Kotabaru 69.06 272 P P 03 52 50.5 +13
TGY Tagaytay City 70.01 291 LR LR 04 18 28.3
comp=Z,684nm,21.8s,baz=126,slow=32
SKR Severo-Kuril's 70.37 341 *e*P P 03 53 04.8 +20
SKR *e* 03 55 26.9
SKR *e*PPP PPP 03 57 13.3
SKR pmax pmax
comp=Z,40nm,1.6s
SKR pmax pmax
comp=Z,200nm,9.2s
SKR pmax pmax
comp=Z,400nm,13.0s
SKR MLR MLR
comp=Z,500nm,18.0s
SKR MLR MLR
comp=Z,800nm,18.0s
JNU Nakatsue 70.74 314 LR LR 04 20 28.2
comp=Z,652nm,19.0s,baz=119,slow=33
JNU Nakatsue 70.74 314 IAMs_20 IAMs_20 04 16 43.2
comp=Z,1µm,22.0s
YSS Yuzh-Sakhalins 72.66 331 *e*P **P** **03 53 00.5 +1.6**
YSS *e*SS SS 04 07 09.6 +5.7
YSS pmax pmax
comp=Z,40nm,0.8s
YSS MLR MLR
comp=Z,400nm,15.0s
ISA Isabella, Lake 73.31 45 P **P** **03 53 01.4 -1.8**
ISA pmax pmax
comp=Z,10.0nm,1.2s
ISA Isabella, Lake 73.31 45 P **P** **03 53 01.4 -1.8**
ISA IAmb IAmb 03 53 12.5
comp=Z,9.6nm,1.1s
CMB Columbia Colle 73.37 42 P **P** **03 53 01.7 -1.7**
CMB pmax pmax
comp=Z,15nm,1.5s
CMB Columbia Colle 73.37 42 P **P** **03 53 01.7 -1.7**
CMB IAmb IAmb 03 53 16.5
comp=Z,15nm,1.5s
NACB Ninganchiao 73.48 301 IAMs_20 IAMs_20 04 25 29.2
comp=Z,933nm,18.0s
WDC Whiskeytown Da 73.52 39 P **P** **03 53 00.2 -4.0**
WDC pmax pmax
comp=Z,35nm,1.9s
WDC Whiskeytown Da 73.52 39 P **P** **03 53 00.2 -4.0**
WDC IAmb IAmb 03 53 10.0
comp=Z,35nm,1.9s
AFDM Forest Hills D 73.52 41 P **P** **03 53 02.8 -1.5**
AFDM IAMs_20 IAMs_20 04 19 56.2
comp=Z,936nm,18.0s
YHNB Yeheng 73.87 302 IAMs_20 IAMs_20 04 18 06.6
comp=Z,1µm,22.0s
OMMB Old Mammoth Mi 74.03 43 P **P** **03 53 06.5 -1.2**
WAKR Walker 74.25 42 P **P** **03 53 07.2 -1.5**
WAKR IAmb IAmb 03 53 26.3
comp=Z,28nm,1.6s
PNTR Pine Nut 74.48 41 P **P** **03 53 09.5 -0.6**
VCNR Virginia City 74.56 41 P **P** **03 53 09.8 -0.8**
YERR Yerington 74.65 42 P **P** **03 53 10.0 -1.0**
YERR IAmb IAmb 03 53 25.2
comp=Z,12nm,1.2s
QSPA South Pole Qui 74.91 180 LR LR 04 20 28.6
comp=Z,872nm,21.3s,baz=40,slow=31
QSPA South Pole Qui 74.91 180 P **P** **03 53 11.6 -0.4**
QSPA South Pole Qui 74.91 180 IAMs_20 IAMs_20 04 19 54.9
comp=Z,933nm,21.0s
NVAR Mina Array Bea 74.94 43 P **P** **03 53 15.3 +2.5**
comp=Z,4.7nm,0.9s,baz=228,slow=9.8,SNR=25
NVAR LR LR 04 20 08.5
comp=Z,593nm,19.0s,baz=228,slow=31
PAHR Pah Rah Range 74.97 41 P **P** **03 53 12.5 -0.3**
PAHR IAmb IAmb 03 53 26.3
comp=Z,18nm,1.4s
NV11 Mina Array Sit 75.04 43 P **P** **03 53 13.2 -0.1**
NV11 IAmb IAmb 03 53 17.3
comp=Z,8.0nm,1.1s
Y12C Blythe 75.09 48 IAMs_20 IAMs_20 04 19 50.0
comp=Z,1µm,20.0s
KSRS Korea Array 75.13 316 LR LR 04 23 25.8
comp=Z,744nm,19.1s,baz=127,slow=34
113A Mohawk Valley, 75.16 50 IAMs_20 IAMs_20 04 16 35.9
comp=Z,1µm,20.0s
KVN Kaiserville 75.42 42 P **P** **03 53 14.0 -1.5**
KVN pmax pmax
comp=Z,15nm,1.3s
KVN Kaiserville 75.42 42 P **P** **03 53 14.0 -1.5**
KVN IAmb IAmb 03 53 31.7
comp=Z,14nm,1.3s
214A Organ Pipe Nat 75.47 51 IAMs_20 IAMs_20 04 18 40.4
comp=Z,1µm,19.0s
TPNV Topopah Spring 75.52 45 P **P** **03 53 14.8 -1.3**
TPNV pmax pmax
comp=Z,6.0nm,1.1s
TPNV Topopah Spring 75.52 45 P **P** **03 53 14.8 -1.3**
TYV Tymovskoe 75.57 334 *e*P P 03 53 21.7 +5.9
TYV pmax pmax
comp=Z,10.0nm,0.8s
MOD Modoc Plateau 75.67 39 P **P** **03 53 15.2 -1.6**
MOD IAmb IAmb 03 53 33.3
comp=Z,24nm,1.6s
INCN Inchon 76.01 316 IAMs_20 IAMs_20 04 23 59.7
comp=Z,934nm,20.0s
PINE Pine Mountain 76.41 37 P **P** **03 53 19.4 -1.7**
PINE IAmb IAmb 03 53 27.2
comp=Z,17nm,1.1s
USRK Ussuriysk Ar. 76.45 324 LR LR 04 20 51.1
comp=Z,2µm,21.5s,baz=118,slow=31
R11A Troy Canyon, C 76.70 44 P **P** **03 53 21.1 -1.7**
R11A IAmb IAmb 03 53 38.9
comp=Z,23nm,1.7s
SSE Sheshan 76.84 308 IAMs_20 IAMs_20 04 19 23.6
comp=Z,912nm,22.0s
WVOR Wild Horse Val 76.98 39 P **P** **03 53 23.8 -0.5**
WVOR pmax pmax
comp=Z,13nm,1.3s
WVOR Wild Horse Val 76.98 39 P **P** **03 53 23.8 -0.5**
WVOR IAmb IAmb 03 53 37.5
comp=Z,13nm,1.3s
TUC Tucson 77.16 51 P **P** **03 53 23.0 -2.4**
TUC pmax pmax
comp=Z,12nm,1.3s
TUC Tucson 77.16 51 P **P** **03 53 23.0 -2.4**
TUC IAmb IAmb 03 53 40.2
comp=Z,12nm,1.3s
U15A North Rim 78.00 47 P **P** **03 53 28.8 -1.5**
U15A IAmb IAmb 03 53 39.3
comp=Z,12nm,1.1s
WUAZ Wupatki 78.22 48 IAMs_20 IAMs_20 04 24 03.8
comp=Z,889nm,19.0s
GRNR Gornyy 78.32 331 *e*P P 03 53 38.8 +7.5
GRNR pmax pmax
comp=Z,9.0nm,1.4s
GAMB Gambell 78.69 1 IAMs_20 IAMs_20 04 23 04.3
comp=Z,868nm,20.0s
X18A Snowflake 78.79 50 P **P** **03 53 30.0 -4.6**
X18A IAmb IAmb 03 53 44.1
comp=Z,13nm,1.3s
HPIG 78.91 58 IAMs_20 IAMs_20 04 20 25.7
comp=Z,996nm,18.0s
MFID Camas Ranch 79.24 39 P **P** **03 53 33.0 -3.8**
DUG Dugway, Tooele 79.49 43 P **P** **03 53 36.8 -1.4**
DUG pmax pmax
comp=Z,7.0nm,1.1s
DUG Dugway, Tooele 79.49 43 P **P** **03 53 36.8 -1.4**
121A Cookes Peak, D 79.53 52 P **P** **03 53 37.1 -1.6**
MA2 Magadan 79.55 343 *ce*P **P** **03 53 41.8 +3.9**
MA2 pmax pmax
comp=Z,28nm,1.7s
MA2 Magadan 79.55 343 IAMs_20 IAMs_20 04 23 01.8
comp=Z,1µm,21.0s
KLR Kul'dur 79.64 328 *i* P **P** **03 53 41.0 +2.4**
KLR pmax pmax
comp=Z,5.0nm,1.1s
BGU Big Grassy Mou 79.72 43 P **P** **03 53 38.2 -1.3**
ZAIG Zacatecas 79.96 63 IAMs_20 IAMs_20 04 20 10.6
comp=Z,1µm,22.0s
EPT El Paso 80.20 53 IAMs_20 IAMs_20 04 22 39.5
comp=Z,1µm,20.0s
BARN Barnard Glacie 80.37 16 **PcP** **03 53 49.1 -0.5**
MNTX Cormudas Mount 81.04 54 P **P** **03 53 45.0 -1.7**
MCK McKinley 81.09 11 P **P** **03 53 44.4 -1.8**
MCK pmax pmax
comp=Z,20nm,1.1s
MCK McKinley 81.09 11 P **P** **03 53 44.4 -1.8**
MCK IAmb IAmb 03 53 52.7
comp=Z,20nm,1.1s
TXAR Lajitas Array 81.47 57 P **P** **03 53 52.6 +3.6**
comp=Z,1.6nm,0.9s,baz=223,slow=6.8,SNR=13
TXAR LR LR 04 21 59.1
comp=Z,445nm,21.9s,baz=0.0,slow=30
ANMO Albuquerque 81.56 50 *ce*P **P** **03 53 52.7 +3.2**
ANMO pmax pmax
comp=Z,15nm,1.6s
ANMO Albuquerque 81.56 50 P **P** **03 53 48.6 -0.9**
ANMO IAmb IAmb 03 54 06.8
comp=Z,29nm,1.6s
TLIG Tlapa 81.73 69 IAMs_20 IAMs_20 04 20 02.1
comp=Z,718nm,21.0s
UNM Universidad Na 81.75 67 IAMs_20 IAMs_20 04 21 36.4
comp=Z,1µm,21.0s
WRH Wood River Hil 81.92 11 P **P** **03 53 48.8 -1.7**
WRH IAmb IAmb 03 53 57.7
comp=Z,18nm,1.1s
SEY Seymchan 81.95 345 P **P** **03 53 51.7 +1.0**
comp=Z,4.0nm,0.8s,baz=114,slow=5.9,SNR=5.7
CCB Clear Creek Bu 82.14 11 P **P** **03 53 49.7 -1.9**
CCB IAmb IAmb 03 54 08.3
comp=Z,13nm,1.1s
MSO Missoula 82.19 37 P **P** **03 53 51.1 -1.3**
REDW Red Top Meadow 82.33 41 P **P** **03 53 51.2 -2.2**
ILAR Eielson Array 82.42 12 P **P** **03 53 54.2 +1.1**
comp=Z,4.1nm,1.1s,baz=228,slow=6.8,SNR=6.3
S22A 4UR Ranch, Cre 82.48 48 IAMs_20 IAMs_20 04 24 19.7
comp=Z,1µm,19.0s
O20A White River Ci 82.55 45 P **P** **03 53 51.7 -2.9**
LRM Limekiln Ridge 82.56 39 P **P** **03 53 56.6 +2.0**
PD31 Pinedale Array 82.88 42 P **P** **03 53 54.7 -1.6**
PD31 IAmb IAmb 03 54 04.0
comp=Z,6.3nm,1.1s
PDAR Pinedale Array 82.88 42 P **P** **03 53 58.5 +2.2**
comp=Z,2.4nm,0.9s,baz=202,slow=2.6,SNR=16
PDAR LR LR 04 26 35.4
comp=Z,397nm,18.2s,baz=247,slow=32
YNR Norris Junctio 83.09 40 P **P** **03 53 54.8 -2.6**
MSTX Muleshoe 83.95 53 P **P** **03 54 00.3 -1.6**
BILL Bilibino 84.09 353 *ie*P **P** **03 54 05.6 +3.9**
BILL *e* 03 54 11.9
BILL *e* 04 05 20.9
BILL pmax pmax
comp=Z,26nm,2.0s
BILL MLR MLR
comp=Z,522nm,19.0s
ZEA Zeya 84.58 330 *e*P P 03 54 14.8 +10
AMTX Amarillo 85.13 52 IAMs_20 IAMs_20 04 25 09.1
comp=Z,1µm,19.0s
ABTX Abilene, Hawle 85.89 55 P **P** **03 54 09.4 -2.2**
HIA Hailar 86.26 323 *i* P P 03 54 17.7 +4.7
HIA pmax pmax
comp=Z,16nm,0.9s
CCIG Comitan 87.22 72 IAMs_20 IAMs_20 04 23 51.3
comp=Z,852nm,20.0s
WMOK Wichita Mounta 87.31 53 IAMs_20 IAMs_20 04 27 15.8
comp=Z,1µm,20.0s
WHTX Lake Whitney, 87.41 56 IAMs_20 IAMs_20 04 26 49.8
comp=Z,1µm,19.0s
XAN Xi'an 87.50 306 P **P** **03 54 20.8 +1.4**
XAN pP pwP 03 54 33.3 +8.3
XAN pmax pmax
comp=Z,11nm,1.5s
XAN pmax pmax
comp=Z,220nm,5.9s
XAN LR LR
comp=Z,520nm,20.6s
MAW Mawson 87.66 199 P **P** **03 54 20.1 +0.6**
baz=88,SNR=4.9
MAW Mawson 87.66 199 P **P** **03 54 17.7 -1.8**
MAW pmax pmax
comp=Z,3.0nm,1.1s
MAW MLR MLR
comp=Z,200nm,18.0s
MAW Mawson 87.66 199 P **P** **03 54 19.7 +0.2**
comp=Z,7.3nm,0.9s,baz=94,slow=6.7,SNR=6.9
MAW LR LR 04 31 16.9
comp=Z,406nm,18.0s,baz=103,slow=34
MAW Mawson 87.66 199 P **P** **03 54 17.7 -1.8**
SLVN Son La 87.70 293 P **P** **03 54 16.4 -4.3**
HHC Hu-ho-hao-te 87.97 313 *e*P P 03 54 28.8 +7.2
HHC sP pwP 03 54 35.5 +8.4
HHC sS sS 04 05 22.3 +13
HHC pmax pmax
comp=Z,8.0nm,1.0s
HHC pmax pmax
comp=Z,140nm,6.2s
HHC LR LR
comp=Z,190nm,18.2s
HHC LR LR
comp=Z,230nm,17.3s
HHC LR LR
comp=Z,450nm,20.4s
INK Inuvik 88.30 14 P **P** **03 54 21.4 -0.9**
INK pmax pmax
comp=Z,6.0nm,1.2s
INK Inuvik 88.30 14 P **P** **03 54 24.5 +2.1**
comp=Z,4.5nm,1.1s,baz=213,slow=5.6,SNR=3.1
INK Inuvik 88.30 14 P **P** **03 54 21.4 -0.9**
INK IAmb IAmb 03 54 30.2
comp=Z,6.1nm,1.1s
YAK Yakutsk 88.40 337 *i* P **P** **03 54 26.6 +3.7**
YAK pmax pmax
comp=Z,6.0nm,0.9s
OKCFA Oklahoma City 88.56 53 IAMs_20 IAMs_20 04 29 23.9
comp=Z,908nm,20.0s
SNET Serv Nac Est T 89.20 76 IAMs_20 IAMs_20 04 24 47.9
comp=Z,862nm,20.0s
KMI Kunming 89.83 296 P **P** **03 54 30.8 0.0**
KMI pP pwP 03 54 38.3 +1.9
KMI sP sP 03 54 42.0 +7.6
KMI S **S** **04 05 27.8 +4.1**
KMI sS sS 04 05 41.5 +13
KMI SS **SS** **04 11 29.0 +7.7**
KMI pmax pmax
comp=Z,9.0nm,1.4s
KMI pmax pmax
comp=Z,300nm,6.5s
KMI LR LR
comp=Z,280nm,24.0s
KMI LR LR
comp=Z,530nm,18.7s
KMI LR LR
comp=Z,790nm,24.6s
YKA Yellowknife Ar 90.34 24 P **P** **03 54 33.8 +1.8**
comp=Z,3.5nm,1.1s,baz=242,slow=4.4,SNR=12
CMAR Chiang Mai Arr 91.39 289 *i* P **P** **03 54 41.5 +3.5**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR Chiang Mai Arr 91.39 289 P **P** **03 54 40.4 +2.4**
comp=Z,1.6nm,0.3s,baz=79,slow=3.4,SNR=5.1
GO05 Huala 91.51 127 IAMs_20 IAMs_20 04 25 41.2
comp=Z,583nm,20.0s
Z41A Richland Creek 91.54 56 IAMs_20 IAMs_20 04 28 10.0
comp=Z,1µm,21.0s
ESTN Estel 91.73 77 IAMs_20 IAMs_20 04 25 31.2
comp=Z,577nm,20.0s
LZH Lanzhou 92.10 307 *e*P P 03 54 48.5 +7.4
LZH pP pwP 03 54 56.0 +9.4
LZH sP sP 03 54 59.5 +15
LZH pmax pmax
comp=Z,13nm,1.4s
JTS Las Juntas de 92.35 80 IAMs_20 IAMs_20 04 26 33.6
comp=Z,949nm,20.0s
SYO Syowa Base 92.62 192 *ie*P **P** **03 54 40.0 -2.7**
SYO Syowa Base 92.62 192 *ie*pP pP 03 54 45.0 -0.3
HDC Heredia 93.08 81 IAMs_20 IAMs_20 04 25 42.8
comp=Z,641nm,22.0s
PEL Peldehue 93.11 125 IAMs_20 IAMs_20 04 26 07.0
comp=Z,744nm,21.0s
VNA3 Neumayer Olymp 93.22 175 P **P** **03 54 47.9 +2.4**
SNAA Sanae 93.23 177 P **P** **03 54 47.2 +1.6**
SNAA Sanae 93.23 177 IAMs_20 IAMs_20 04 30 42.0
comp=Z,1µm,22.0s
ULN Ulaanbaatar 93.44 319 *ce*P **P** **03 54 48.2 +1.2**
ULN pmax pmax
comp=Z,1.0nm,1.1s
ULN Ulaanbaatar 93.44 319 IAMs_20 IAMs_20 04 30 53.6
comp=Z,617nm,22.0s
LCAR Lake Charles 93.64 54 IAMs_20 IAMs_20 04 31 09.4
comp=Z,1µm,20.0s
VNA1 Neumayer--Stat 93.91 175 P **P** **03 54 50.6 +2.0**
TIXI Tiksi 94.43 345 *ce*P **P** **03 54 54.2 +3.4**
TIXI pmax pmax
comp=Z,7.0nm,1.1s
TIXI Tiksi 94.43 345 P **P** **03 54 53.9 +3.2**
comp=Z,2.4nm,0.6s,baz=119,slow=3.5,SNR=5.4
TIXI Tiksi 94.43 345 P **P** **03 54 48.9 -1.9**
TIXI IAmb IAmb 03 54 58.1
comp=Z,7.6nm,1.1s
TIXI IAMs_20 IAMs_20 04 31 52.7
comp=Z,793nm,22.0s
PEBM Pemiscott Bayo 94.66 54 IAMs_20 IAMs_20 04 32 07.5
comp=Z,1µm,19.0s
PARMO Parma 94.89 53 IAMs_20 IAMs_20 04 30 36.5
comp=Z,923nm,21.0s
HICK Hickman 95.26 54 IAMs_20 IAMs_20 04 31 27.4
comp=Z,1µm,20.0s
X48A Hartselle 96.47 56 IAMs_20 IAMs_20 04 34 56.7

	comp=Z,980nm,19.0s							
TKL	**Tuckaleechee C**	**99.36**	**56**	IAMs_20	IAMs_20	04 32 08.0		
	comp=Z,787nm,21.0s							
Q51A	**Peebles**	**100.36**	**52**	IAMs_20	IAMs_20	04 33 03.3		
	comp=Z,983nm,22.0s							
MEDO	**Medina**	**104.66**	**49**	IAMs_20	IAMs_20	04 29 17.8		
	comp=Z,806nm,19.0s							
PALK	**Pallekele**	**105.96**	**273**	IAMs_20	IAMs_20	04 49 07.4		
	comp=Z,593nm,19.0s							
ZAA0	**Zalesovo Array**	**108.28**	**322**	IAMs_20	IAMs_20	04 40 50.0		
	comp=Z,843nm,21.0s							
MKAR	**Makanchi Array**	**109.78**	**315**	PKKPab	PKKPab	04 11 16.3		-0.4
	comp=Z,0.6nm,1.0s,baz=321,slow=1.6,SNR=4.3							
MAKZ	**Makanchi**	**110.00**	**315**	IAMs_20	IAMs_20	04 45 30.0		
	comp=Z,577nm,20.0s							
KURK	**Kurchatov**	**112.15**	**319**	IAMs_20	IAMs_20	04 44 39.6		
	comp=Z,849nm,21.0s							
SEUS	**St. Eustatius**	**114.70**	**77**	IAMs_20	IAMs_20	04 49 10.6		
	comp=Z,465nm,21.0s							
AAK	**Ala-Archa**	**115.39**	**310**	IAMs_20	IAMs_20	04 45 24.5		
	comp=Z,674nm,20.0s							
SPB	**Sao Paulo**	**115.63**	**126**	IAMs_20	IAMs_20	04 40 20.3		
	comp=Z,614nm,21.0s							
GBN	**Guysborough**	**116.84**	**47**	IAMs_20	IAMs_20	04 44 29.8		
	comp=Z,859nm,22.0s							
ARU	**Arti**	**122.48**	**328**	*i* PKIKP	**PKiKP**		**04 00 29.3**	**+2.6**
ARU						04 02 05.9		
ARU						04 07 41.0		
ARU				SP	SP	04 12 03.0	+7.1	
ARU				SS	SS	04 18 57.8	+14	
ARU				MLR	MLR			
	comp=Z,1μm,20.0s							
HRA	**Herat**	**125.60**	**302**	IAMs_20	IAMs_20	04 53 02.4		
	comp=Z,394nm,21.0s							
MSEY	**Mahe Island**	**126.59**	**252**	IAMs_20	IAMs_20	04 50 11.7		
	comp=Z,657nm,20.0s							
KLMR	**Klimovskoe**	**128.13**	**340**	*e*PKIKP	**PKiKP**		**04 00 41.4**	**+3.7**
KLMR				pmax	pmax			
	comp=Z,22nm,1.5s							
KLMR	**Klimovskoe**	**128.13**	**340**	*e*PKPdf	**PKiKP**		**04 00 41.5**	**+3.7**
KLMR				AMP		04 00 47.2		
	comp=Z,22nm,1.5s							
KLMR				LQ	LQ	04 44 55.5		
KLMR				LQ	LQ	04 44 55.5		
KLMR				LR	LR	04 49 15.0		
GYA0B	**ALIBECK ARRAY**	**128.38**	**307**	IAMs_20	IAMs_20	05 01 09.2		
	comp=Z,362nm,22.0s							
SOCY	**Socotra**	**132.72**	**273**	IAMs_20	IAMs_20	05 00 39.5		
	comp=Z,423nm,19.0s							
OBN	**Obninsk**	**133.38**	**336**⇑	*e*PKIKP	**PKiKP**		**04 00 51.1**	**+2.6**
OBN				*i*		04 00 53.5		
OBN				*i*		04 00 59.2		
OBN				pmax	pmax			
	comp=Z,5.0nm,0.5s							
MAK	**Makhachkala**	**134.57**	**316**	*e*PKIKP	**PKPdf**		**04 00 49.8**	**-0.1**
KIV	**Kislovodsk**	**137.22**	**320**	*i* PKIKP	**PKiKP**		**04 00 58.9**	**+2.0**
KIV				pmax	pmax			
	comp=Z,14nm,1.1s							
KIV				MLR	MLR			
	comp=Z,1μm,24.0s							
KIV	**Kislovodsk**	**137.22**	**320**	IAMs_20	IAMs_20	04 59 52.9		
	comp=Z,485nm,20.0s							
GNI	**Garni**	**137.62**	**314**	IAMs_20	IAMs_20	05 01 36.1		
	comp=Z,418nm,20.0s							
AKASG	**Malin Array Be**	**139.62**	**337**	PKP	**PKiKP**		**04 01 00.6**	**-0.8**
	comp=Z,0.3nm,0.4s,baz=64,slow=2.2,SNR=3.3							
RAYN	**Ar Rayn**	**141.31**	**289**	IAMs_20	IAMs_20	05 07 15.0		
	comp=Z,350nm,20.0s							
LVV	**L'vov**	**142.21**	**340**	*e*P	**Pdif**		**03 58 31.5**	**+7.3**
LVV				MLR	MLR			
	comp=N,500nm,22.0s							
LVV				MLR	MLR			
	comp=E,300nm,22.0s							
LVV				MLR	MLR			
	comp=Z,700nm,22.0s							
LSZ	**Lusaka**	**142.28**	**218**	IAMs_20	IAMs_20	05 01 11.7		
	comp=Z,515nm,21.0s							
DAMY	**Dhamar**	**142.29**	**274**	IAMs_20	IAMs_20	05 01 54.8		
	comp=Z,493nm,20.0s							
CLL	**Collm**	**143.40**	**352**	*e*PKIKP	**PKiKP**		**04 01 08.0**	**-1.1**
CLL	**Collm**	**143.40**	**352**	*e*PKiKP	**PKiKP**		**04 01 08.0**	**-1.1**
CLL				*e*		04 01 26.0		
CLL				*e*SS	SS	04 23 00.0	+3.8	
CLL				*e*		04 25 18.0		
OSTC	**Ostas**	**143.59**	**348**	AMS	AMS	05 02 20.0		
	comp=Z,1μm,23.0s							
CHVC	**Chvalec**	**143.59**	**348**	AMS	AMS	05 02 20.0		
	comp=Z,1μm,25.3s							
UPC	**Upice**	**143.68**	**348**	AMS	AMS	04 59 30.0		
	comp=Z,900nm,22.3s							
BRG	**Berggiesshubel**	**143.68**	**351**	*e*PKP	**PKiKP**		**04 01 08.5**	**-1.2**
	comp=Z,7.7nm,1.4s							
BRG	**Berggiesshubel**	**143.68**	**351**	*e*PKIKP	**PKiKP**		**04 01 08.5**	**-1.2**
BRG				pmax	pmax			
	comp=Z,8.0nm,1.4s							
DPC	**Dobruska-Polom**	**143.76**	**348**	AMS	AMS	05 03 00.0		
	comp=Z,1μm,21.9s							
UZH	**Uzhgorod**	**143.81**	**341**	*e*PKIKP	**PKiKP**		**04 01 09.0**	**-1.0**
UZH				*e*		04 01 17.8		
TSUM	**Tsumeb**	**143.82**	**200**	IAMs_20	IAMs_20	04 59 48.8		
	comp=Z,540nm,21.0s							
OKC	**Ostrava-Krasne**	**143.85**	**346**	*e*PKIKP	**PKiKP**		**04 01 12.9**	**+2.8**
OKC				MLR	MLR			
	comp=Z,900nm,21.2s							
OKC	**Ostrava-Krasne**	**143.85**	**346**	*e*PKP	**PKiKP**		**04 01 12.9**	**+2.8**
OKC				AMS	AMS	05 02 10.0		
	comp=Z,900nm,21.2s							
PVCC	**Panska Ves**	**143.92**	**350**	AMS	AMS	05 00 00.0		
	comp=Z,1μm,24.4s							
KRLC	**Kraliky**	**143.93**	**347**	*e*PKIKP	**PKiKP**		**04 01 12.4**	**+2.1**
KRLC				MLR	MLR			
	comp=Z,1μm,23.5s							
KRLC	**Kraliky**	**143.93**	**347**	*e*PKP	**PKiKP**		**04 01 12.4**	**+2.1**
KRLC				AMS	AMS	05 02 20.0		
	comp=Z,1μm,23.5s							
GAZ	**Gaziantep**	**144.22**	**314**	IAMs_20	IAMs_20	05 17 34.8		
	comp=Z,367nm,20.0s							
ILGA	**Ilgaz**	**144.34**	**322**	IAMs_20	IAMs_20	05 04 58.9		
	comp=Z,364nm,21.0s							
PRA	**Prague**	**144.38**	**350**	AMS	AMS	05 00 10.0		
	comp=Z,1μm,25.1s							
PRU	**Pruhonice**	**144.44**	**350**	*e*PKIKP	**PKPdf**		**04 01 08.0**	**+0.3**
PRU				*e*		04 01 14.9		
PRU				MLR	MLR			
	comp=Z,1μm,23.2s							
PRU	**Pruhonice**	**144.44**	**350**	*e*PKP	**PKPdf**		**04 01 08.0**	**+0.3**
PRU				*ex*	x	04 01 14.9		
PRU				AMS	AMS	05 04 10.0		
	comp=Z,1μm,23.2s							
NKC	**Novy Kostel**	**144.52**	**352**	*e*PKIKP	**PKiKP**		**04 01 16.4**	**+4.9**
NKC				*e*		04 01 18.5		
NKC	**Novy Kostel**	**144.52**	**352**	*e*PKP	**PKiKP**		**04 01 16.4**	**+4.9**
NKC				*ex*	x	04 01 18.5		
KMBO	**Kilima Mbogo**	**144.55**	**246**	PKIKP	**PKPab**		**04 01 05.6**	**-2.1**
KMBO	**Kilima Mbogo**	**144.55**	**246**	PKP	**PKPdf**		**04 01 08.9**	**-0.3**
	comp=Z,4.3nm,1.0s,baz=64,slow=12,SNR=3.4							
KMBO	**Kilima Mbogo**	**144.55**	**246**		**PKPab**		**04 01 05.6**	**-2.1**
KMBO	**Kilima Mbogo**	**144.55**	**246**	IAMs_20	IAMs_20	05 01 13.3		
	comp=Z,423nm,18.0s							
VRAC	**Vranov**	**144.70**	**347**	⇑P	**PKPdf**		**04 01 08.5**	**+0.4**
VRAC	**Vranov**	**144.70**	**347**	*e*PKP	**PKPdf**		**04 01 08.4**	**+0.2**
PBCC	**Pribram**	**144.83**	**350**	*e*PKP	**PKPdf**		**04 01 08.7**	**+0.3**
JAVC	**Velka Javorina**	**144.88**	**346**	*e*PKP	**PKPdf**		**04 01 09.7**	**+1.1**
TNS	**Taunus Mts**	**144.91**	**357**	*e*PKPbc	**PKiKP**		**04 01 13.4**	**+1.1**
	baz=11,slow=3.2							
VYHS	**Vyhne**	**144.93**	**344**	*e*PKIKP	**PKiKP**		**04 01 13.5**	**+1.1**
VYHS	**Vyhne**	**144.93**	**344**	*e*PKP	**PKiKP**		**04 01 13.5**	**+1.1**
TREC	**Trest**	**144.94**	**348**	*e*PKIKP	**PKPdf**		**04 01 09.1**	**+0.5**
TREC				*e*		04 01 16.3		
TREC				MLR	MLR			
	comp=Z,900nm,21.7s							
TREC	**Trest**	**144.94**	**348**	*e*PKP	**PKPdf**		**04 01 09.1**	**+0.5**
TREC				*ex*	x	04 01 16.3		
TREC				AMS	AMS	04 57 20.0		
	comp=Z,900nm,21.7s							
DOPR	**Dopca**	**144.96**	**335**	⇓P	**PKiKP**		**04 01 14.6**	**+2.0**
KRUC	**Moravsky**	**144.97**	**347**	*e*PKP	**PKPdf**		**04 01 08.7**	**+0.1**
ROTZ	**Rotzenmuhle**	**145.01**	**352**	*e*PKPbc	**PKiKP**		**04 01 13.4**	**+0.9**
	baz=11,slow=3.2							
PSZ	**Piszkesteto**	**145.16**	**343**	⇑P	**PKPdf**		**04 01 10.3**	**+1.2**
BRTR	**Keskin Array B**	**145.19**	**320**	PKPbc	**PKPdf**		**04 01 09.2**	**-0.3**
	comp=Z,13nm,1.0s,baz=126,slow=3.5,SNR=23							
GRF	**Grafenberg Arr**	**145.20**	**353**	*e*PKPbc	**PKiKP**		**04 01 14.3**	**+1.3**
	baz=11,slow=3.2							
DRGR		**145.27**	**339**	⇑P	**PKiKP**		**04 01 11.3**	**-1.9**
MODS	**Modra-Piesok**	**145.43**	**346**	*e*PKP2	**PKiKP**		**04 01 14.7**	**+1.3**
MODS	**Modra-Piesok**	**145.43**	**346**	*e*PKP	**PKiKP**		**04 01 14.7**	**+1.3**
KHC	**Kasperske Hory**	**145.43**	**350**	*e*PKP2	**PKPab**		**04 01 10.6**	**+1.0**
KHC				MLR	MLR			
	comp=Z,1μm,22.1s							
KHC	**Kasperske Hory**	**145.43**	**350**	*e*PKP	**PKPab**		**04 01 10.6**	**+1.0**
KHC				*ex*	x	04 01 15.0		
KHC				*ex*	x	04 01 18.0		
KHC				AMS	AMS	05 02 20.0		
	comp=Z,1μm,22.1s							
WET	**Wettzell**	**145.53**	**351**	*e*PKPbc	**PKiKP**		**04 01 15.5**	**+1.9**
	baz=11,slow=3.2							
WLF	**Walferdange**	**145.56**	**359**	*e*PKPbc	**PKiKP**		**04 01 16.0**	**+2.4**
	baz=11,slow=3.2							
ANTO	**Ankara**	**145.62**	**321**	IAMs_20	IAMs_20	05 09 43.0		
	comp=Z,384nm,20.0s							
ZST	**Bratislava**	**145.63**	**346**	*e*PKP2	**PKiKP**		**04 01 16.1**	**+2.3**
ZST	**Bratislava**	**145.63**	**346**	*e*PKP	**PKiKP**		**04 01 16.1**	**+2.3**
GEC2	**GERESS Array S**	**145.69**	**350**	*e*PKPbc	**PKiKP**		**04 01 15.6**	**+1.6**
	baz=11,slow=3.2							
GERES	**GERESS Array B**	**145.69**	**350**	PKPbc	**PKPab**		**04 01 11.1**	**+0.5**
	comp=Z,4.8nm,1.0s,baz=40,slow=2.3,SNR=13							
ARR	**Arges**	**145.75**	**336**	⇑P	**PKiKP**		**04 01 12.7**	**-1.5**
SIRR	**Siria**	**146.09**	**340**	⇑P	**PKPab**		**04 01 12.9**	**+0.8**
CONA	**Conrad Observa**	**146.16**	**347**	*e*pPKPab	**PKiKP**		**04 01 13.6**	**-1.5**
	comp=Z,27nm,1.2s							
MOA	**Molln**	**146.55**	**349**	*e*PKPbc	**PKiKP**		**04 01 18.3**	**+2.5**
	baz=11,slow=3.2							
MOA	**Molln**	**146.55**	**349**	*i* pPKPab	**PKPab**		**04 01 15.4**	**+1.6**
	comp=Z,11nm,1.6s							
BFO	**Black Forest**	**146.81**	**356**	*e*PKPbc	**PKiKP**		**04 01 19.2**	**+3.0**
	baz=11,slow=3.2							
FURI	**Furi**	**146.85**	**263**	IAMs_20	IAMs_20	05 03 39.4		
	comp=Z,453nm,20.0s							
ARSA	**Arzberg**	**146.88**	**347**	*e*PKPbc	**PKiKP**		**04 01 19.9**	**+3.4**
	baz=11,slow=3.2							
ARSA	**Arzberg**	**146.88**	**347**	pPKPab	**PKPab**		**04 01 15.2**	**+0.1**
	comp=Z,14nm,1.3s							
RJOB	**Jochberg**	**146.91**	**351**	*e*PKPbc	**PKiKP**		**04 01 19.5**	**+2.9**
	baz=11,slow=3.2							
UBR	**Ueberruh**	**147.31**	**354**	*e*PKPbc	**PKiKP**		**04 01 21.3**	**+3.9**
	baz=11,slow=3.2							
RETA	**Reutte**	**147.43**	**353**	pPKiKP	**PKiKP**		**04 01 18.8**	**+1.2**
	comp=Z,14nm,1.4s							
KBA	**Koelnbreinsper**	**147.46**	**350**	*i* pPKPbc	**PKPab**		**04 01 16.4**	**-1.2**
	comp=Z,13nm,1.2s							
WATA	**Walderalm**	**147.48**	**352**	*e*pPKPab	**PKiKP**		**04 01 18.2**	**+0.3**
	comp=Z,19nm,1.1s							
SOKA	**Soboth**	**147.53**	**348**	*e*pPKPbc	**PKPab**		**04 01 16.4**	**-1.3**
	comp=Z,13nm,1.1s							
MOTA	**Moosalm**	**147.53**	**353**	*e*pPKiKP	**PKiKP**		**04 01 19.2**	**+1.3**
	comp=Z,23nm,1.6s							
SQTA	**Sankt Quirin**	**147.64**	**353**	*e*pPKiKP	**PKPab**		**04 01 21.5**	**+3.3**
	comp=Z,19nm,1.2s							
DAVA	**Damuels**	**147.72**	**354**	*e*PKPbc	**PKPab**		**04 01 22.2**	**+3.6**
	baz=11,slow=3.2							
DAVA	**Damuels**	**147.72**	**354**	*e*pPKiKP	**PKPab**		**04 01 19.1**	**+0.5**
	comp=Z,25nm,1.4s							
OBKA	**Obir**	**147.79**	**348**	*i* pPKiKP	**PKPab**		**04 01 21.6**	**+2.9**
	comp=Z,2.0nm,0.5s							
MYKA	**Terra Mystica**	**147.84**	**349**	*e*pPKiKP	**PKPab**		**04 01 21.2**	**+2.2**
	comp=Z,8.1nm,0.9s							
ABTA	**Abfaltersbach**	**147.92**	**351**	*e*pPKiKP	**PKPab**		**04 01 20.7**	**+1.4**
	comp=Z,24nm,1.2s							
CSS	**Mathiatis**	**148.05**	**313**	IAMs_20	IAMs_20	05 09 10.2		
	comp=Z,357nm,20.0s							
ISP	**Isparta**	**148.28**	**320**	IAMs_20	IAMs_20	05 08 54.3		
	comp=Z,472nm,22.0s							
FUORN	**Ofenpass-Fuorn**	**148.34**	**354**		**PKiKP**		**04 01 18.6**	**-1.2**
VTS	**Vitosha**	**148.59**	**334**	⇑P	**PKPab**		**04 01 27.6**	**+5.4**
CTI	**Castel Tesino**	**148.73**	**352**	PKP2	**PKiKP**		**04 01 20.0**	**-0.4**
CTI	**Castel Tesino**	**148.73**	**352**	PKPdf	**PKPdf**		**04 01 11.9**	**-3.3**
CTI					**PKiKP**		**04 01 20.0**	**-0.4**
ESDC	**Sonseca Array**	**154.22**	**17**	PKPab	**PKPab**		**04 01 47.2**	**+1.7**
	comp=Z,1.2nm,0.8s,baz=349,slow=3.1,SNR=5.6							
TORD	**Torodi Ar. Bea**	**175.94**	**119**	PKP	**PKPdf**		**04 01 41.6**	**-1.0**
	comp=Z,1.7nm,1.3s,baz=318,slow=2.0,SNR=3.6							
TORD				PKPab	**PKPab**		**04 03 22.3**	**+0.8**
	comp=Z,2.3nm,1.2s,baz=302,slow=8.3,SNR=2.5							

MOS ***22*** *03:45:45.1±1.1,44.°12N×148.°29E,h54km,mb4.0/4, Error ellipse: s-maj=11.1km s-min=9.1km az=60.4*

SKHL ***22*** *03:45:45.0±0.2,44.°00N×148.°40E,h70km±5km,mb4.6/7*

JMA ***22*** *03:45:45.3±0.3,43.°76N×147.°99E,h0km,M3.9*

IDC ***22*** *03:45:49.5±4.0,44.°28N×148.°13E,h66km±30km, mb3.4/7, mb1 3.6/9,mb1mx3.3/46,mbtmp3.7/9,ML3.1/2,MS2.7/2, Ms1 2.7/2,ms1mx2.3/40, Error ellipse: s-maj=60.2km s-min=25.1km az=167.0*

ISC 22 03:45:45.6±0.9, 43.°99N±0.°06×148.°34E±0.°07, h43km±8km, n62,σ1°04/75, mb3.6/9, 3C-9D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SHO	**Shikotan**	**1.10**	**265**	*d* iPN		**Pn**		**03 46 03.9**	**-0.6**
SHO				*i* S		**Sn**		**03 46 18.0**	**-0.5**
SHO				pmax	pmax				
	comp=N,28nm,0.4s								
SHO				pmax	pmax				
	comp=Z,127nm,0.4s								
SHO				pmax	pmax				
	comp=E,62nm,0.3s								
SHO				smax	smax				
	comp=E,1μm,0.6s								
SHO				smax	smax				
	comp=N,2μm,0.3s								
SHO	**Shikotan**	**1.10**	**265**	⇓*i* P		**Pn**		**03 46 03.9**	**-0.6**
SHO				AMB	AMB	03 46 04.0			
	comp=N,30nm,0.3s								
SHO				AMB	AMB	03 46 04.0			
	comp=N,60nm,0.3s								
SHO				AMB	AMB	03 46 04.0			
	comp=N,130nm,0.3s								
SHO				*i* S		**Sn**		**03 46 18.3**	**-0.2**
SHO				A	A	03 46 19.0			
	comp=N,2μm,0.5s								
SHO				A	A	03 46 19.0			
	comp=N,1μm,0.5s								
KUR	**Kuril'sk**	**1.29**	**345**	*c* iPN		**Pn**		**03 46 06.9**	**-0.2**
KUR				*i* S		**Sn**		**03 46 23.3**	**0.0**
KUR				pmax	pmax				
	comp=Z,518nm,0.4s								
KUR				pmax	pmax				
	comp=N,236nm,0.3s								
KUR				pmax	pmax				
	comp=E,211nm,0.3s								
KUR				smax	smax				
	comp=E,821nm,0.3s								
KUR				smax	smax				
	comp=N,740nm,0.4s								
KUR	**Kuril'sk**	**1.29**	**345**	⇓*i* P		**Pn**		**03 46 07.0**	**-0.2**
KUR				AMB	AMB	03 46 08.1			
	comp=N,230nm,0.5s								
KUR				AMB	AMB	03 46 08.1			
	comp=N,210nm,0.5s								
KUR				AMB	AMB	03 46 08.1			
	comp=N,520nm,0.5s								
KUR				*i* S		**Sn**		**03 46 23.6**	**+0.3**
KUR				A	A	03 46 26.0			
	comp=N,990nm,0.4s								
KUR				A	A	03 46 26.0			
	comp=N,1μm,0.4s								
YUK	**Yuzh-Kuril'sk**	**1.79**	**272**	*c* iPN		**Pn**		**03 46 14.2**	**+0.2**
YUK				*e*S		**Sn**		**03 46 36.1**	**+0.6**
YUK				pmax	pmax				
	comp=E,146nm,0.4s								
YUK				pmax	pmax				
	comp=Z,454nm,0.4s								
YUK				pmax	pmax				
	comp=N,48nm,0.3s								
YUK				smax	smax				
	comp=N,702nm,0.4s								
YUK				smax	smax				
	comp=E,1μm,0.4s								
YUK	**Yuzh-Kuril'sk**	**1.79**	**272**	⇑*i* P		**Pn**		**03 46 14.2**	**+0.2**
YUK				AMB	AMB	03 46 15.0			
	comp=E,50nm,0.5s								
YUK				AMB	AMB	03 46 15.0			
	comp=E,150nm,0.5s								
YUK				AMB	AMB	03 46 15.0			
	comp=E,450nm,0.5s								
YUK				*e*S		**Sn**		**03 46 36.3**	**+0.8**
YUK				A	A	03 46 39.0			
	comp=E,890nm,0.4s								
YUK				A	A	03 46 39.0			
	comp=E,1μm,0.4s								
GRPR	**Tuman**	**1.86**	**271**	⇓*i* PN		**Pn**		**03 46 14.7**	**-0.2**
GRPR				*i* S		**Sn**		**03 46 37.1**	**0.0**
GRPR				pmax	pmax				
	comp=Z,233nm,0.3s								
GRPR				pmax	pmax				
	comp=N,86nm,0.2s								
GRPR				pmax	pmax				
	comp=E,94nm,0.2s								
GRPR				smax	smax				
	comp=N,961nm,0.3s								
GRPR				smax	smax				
	comp=E,255nm,0.3s								
GRPR	**Tuman**	**1.86**	**271**	⇓*i* P		**Pn**		**03 46 15.1**	**+0.2**
GRPR				AMB	AMB	03 46 18.0			
	comp=E,80nm,0.4s								
GRPR				AMB	AMB	03 46 18.0			
	comp=E,90nm,0.4s								
GRPR				AMB	AMB	03 46 18.0			
	comp=E,230nm,0.4s								
GRPR				*i* S		**Sn**		**03 46 37.7**	**+0.6**
GRPR				A	A	03 46 38.0			
	comp=E,960nm,0.4s								
GRPR				A	A	03 46 38.0			
	comp=E,260nm,0.4s								
NEM2	**Nemuro 2**	**1.99**	**253**	P		**Pn**		**03 46 16.1**	**-0.5**
NEM2				*e*S		**Sn**		**03 46 38.7**	**-1.6**
NMR	**Nemuro--Hokkai**	**2.00**	**253**	*e*PN		**Pn**		**03 46 17.3**	**+0.5**
NMR				*e*S		**Sn**		**03 46 41.5**	**+1.0**
NMR	**Nemuro--Hokkai**	**2.00**	**253**	*e*P		**Pn**		**03 46 17.3**	**+0.5**
NMR				*e*S		**Sn**		**03 46 41.5**	**+1.0**
GLVR	**Golovnino**	**2.06**	**264**	⇓*i* PN		**Pn**		**03 46 18.0**	**+0.4**
GLVR				*i* S		**Sn**		**03 46 42.8**	**+0.8**
GLVR				pmax	pmax				
	comp=N,59nm,0.4s								
GLVR				pmax	pmax				
	comp=Z,351nm,0.4s								
GLVR				pmax	pmax				
	comp=E,54nm,0.2s								
GLVR				smax	smax				
	comp=N,563nm,0.3s								
GLVR				smax	smax				
	comp=E,1μm,0.3s								
GLVR	**Golovnino**	**2.06**	**264**	⇓*i* P		**Pn**		**03 46 18.0**	**+0.4**
GLVR				AMB	AMB	03 46 18.8			
	comp=E,60nm,0.5s								
GLVR				AMB	AMB	03 46 18.8			
	comp=E,50nm,0.5s								
GLVR				AMB	AMB	03 46 18.8			
	comp=E,350nm,0.5s								
GLVR				*i* S		**Sn**		**03 46 42.8**	**+0.8**
GLVR				A	A	03 46 47.0			
	comp=E,560nm,0.4s								
GLVR				A	A	03 46 47.0			
	comp=E,1μm,0.4s								
JRA	**Rausu**	**2.33**	**270**	P		**Pn**		**03 46 22.3**	**+1.0**
JNSB	**Nemuroshibetsu**	**2.42**	**266**	P		**Pn**		**03 46 23.5**	**+0.8**
JKHN	**Kushirohamanak**	**2.48**	**250**	P		**Pn**		**03 46 23.6**	**+0.1**
JKHN				*e*S		**Sn**		**03 46 51.7**	**-0.8**
JNK	**Nakash**	**2.66**	**263**	P		**Pn**		**03 46 26.3**	**+0.4**
JAK	**Akkeshi**	**2.83**	**251**	P		**Pn**		**03 46 28.2**	**-0.1**
JTKR	**Abashiri--Toko**	**3.20**	**271**	P		**Pn**		**03 46 34.7**	**+1.4**
JAR	**Ashorobuto**	**3.39**	**260**	P		**Pn**		**03 46 37.1**	**+1.1**
JAR				*e*S		**Sn**		**03 47 17.0**	**+2.1**
JOB	**Onbets**	**3.46**	**253**	P		**Pn**		**03 46 37.6**	**+0.8**
JOB				*e*S		**Sn**		**03 47 16.9**	**+0.4**
JMP	**Maruseppu**	**3.60**	**272**	P		**Pn**		**03 46 40.9**	**+2.0**
JCH	**Churui**	**3.88**	**251**	P		**Pn**		**03 46 43.9**	**+1.2**
JCH				*e*S		**Sn**		**03 47 27.2**	**+0.1**
JKA	**Kamikawa-asahi**	**4.14**	**274**	*e*P		**Pn**		**03 46 48.7**	**+2.4**
ASAJ	**Asahikawa**	**4.14**	**274**	P		**Pn**		**03 46 48.7**	**+2.4**
	comp=E,1.5nm,0.3s,baz=50,slow=5.8,SNR=7.5								
JFR	**Furan**	**4.26**	**261**	P		**Pn**		**03 46 50.6**	**+2.7**
ERM	**Erimo**	**4.28**	**244**	*i* PN		**Pn**		**03 46 48.9**	**+0.7**
JNBK	**Urakawa-nobuka**	**4.43**	**249**	P		**Pn**		**03 46 50.5**	**+0.3**
YSS	**Yuzh-Sakhalins**	**4.92**	**309**	*e*PN		**Pn**		**03 46 57.3**	**+0.3**
YSS				*e*S		**Sn**		**03 47 51.6**	**-1.0**
YSS				smax	smax				
	comp=E,30nm,0.7s								
YSS	**Yuzh-Sakhalins**	**4.92**	**309**	*e*P		**Pn**		**03 46 57.3**	**+0.3**
YSS				*e*S		**Sn**		**03 47 51.6**	**-1.0**
YSS				A	A	03 47 52.7			
	comp=E,30nm,0.6s								
JKB	**Kayabe**	**5.76**	**251**	P		**Pn**		**03 47 09.2**	**+0.7**
JKB				*e*S		**Sn**		**03 48 10.0**	**-3.2**
TYV	**Tymovskoe**	**7.88**	**333**	*e*P		**Pn**		**03 47 38.6**	**+1.0**
TYV				AMB	AMB	03 47 41.8			
	comp=E,20nm,0.9s								
TYV				AMB	AMB	03 47 41.8			
	comp=E,30nm,0.9s								
SKR	**Severo-Kuril's**	**8.53**	**35**	*i* PN		**Pn**		**03 47 46.2**	**-0.1**
SKR	**Severo-Kuril's**	**8.53**	**35**	*i* P		**Pn**		**03 47 46.2**	**-0.1**
MJAR	**Matsushiro Arr**	**10.73**	**230**	LR		LR		03 52 48.1	
	comp=E,24nm,19.2s,baz=125,slow=39								
PETK	**Petropavlovsk-**	**11.03**	**31**	P		**Pn**		**03 48 20.6**	**+0.1**

comp=Z,8.4nm,1.0s
WB2 Warramunga Arr 23.77 232 P **P** **03 59 13.9 -3.3**
WB2 IAmb IAmb 03 59 29.0
comp=Z,4.3nm,0.9s
WRA Warramunga Arr 23.78 232 P **P** **03 59 19.5 +2.2**
comp=Z,4.9nm,0.9s,baz=63,slow=9.5,SNR=11
WRA Warramunga Arr 23.78 232 P **P** **03 59 19.6 +2.2**
LHI Lord Howe Isla 25.95 170 P P 04 00 01.9 +25
ASAR Alice Springs 26.30 226 P **P** **03 59 40.6 +0.3**
comp=Z,0.4nm,0.6s,baz=60,slow=9.5,SNR=4.9
ASAR Alice Springs 26.30 226 P **P** **03 59 40.6 +0.3**
LEM Lembang 46.21 266 LR LR 04 25 37.1
comp=Z,531nm,21.0s,baz=152,slow=39
MK31 Makanchi Array 81.98 319 P **P** **04 06 24.1 0.0**
MK31 IAmb IAmb 04 06 26.6
comp=Z,3.7nm,0.8s
MKAR Makanchi Array 81.98 319 P **P** **04 06 25.8 +1.7**
comp=Z,4.4nm,0.7s,baz=102,slow=6.1,SNR=47
MKAR LR LR 04 45 05.9
comp=Z,425nm,19.7s,baz=86,slow=36
MKAR Makanchi Array 81.98 319 P **P** **04 06 25.8 +1.7**
MAKZ Makanchi 82.19 319 P **P** **04 06 24.4 -0.8**
MAKZ IAmb IAmb 04 06 27.7
comp=Z,5.0nm,0.8s
ZALV Zalesovo Beam 82.76 326 P **P** **04 06 28.1 +0.2**
comp=Z,2.6nm,0.5s,baz=104,slow=6.1,SNR=4.5
ZALV Zalesovo Beam 82.76 326 P **P** **04 06 28.1 +0.2**
KURK Kurchatov 85.41 322 P **P** **04 06 40.8 -0.6**
KURBB Kurchatov Arra 85.44 322 P **P** **04 06 42.0 +0.4**
comp=Z,0.4nm,0.3s,baz=94,slow=3.7,SNR=5.1
BVAR Borovoye Array 90.87 323 P **P** **04 07 06.5 -1.1**
comp=Z,0.6nm,0.5s,baz=134,slow=6.2,SNR=4.1
BVAR Borovoye Array 90.87 323 P **P** **04 07 06.5 -1.1**

IDC 22 04:07:39.4±3.1, 7.70S×117.72E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/52, mbtmp3.2/3, Error ellipse: s-maj=280.8km s-min=25.9km az=51.0, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.18**	**129**	P	P	04 12 15.2	-0.6
	0.3nm,0.6s,baz=302,slow=13,SNR=4.6						
ASAR	**Alice Springs**	**22.20**	**137**	P	P	04 12 38.0	+0.5
	0.8nm,0.6s,baz=313,slow=10.0,SNR=6.6						
MKAR	**Makanchi Array**	**62.73**	**333**	P	P	04 18 06.3	0.0
	0.1nm,0.3s,baz=133,slow=8.1,SNR=3.5						

*IPEC **22** 04:32:43.6±0.2, 51°.43N×16°.34E, h1km, ML2.1/3, Error ellipse: s-maj=1.5km s-min=0.8km az=40.0*
*VIE **22** 04:32:43.7±1.9, 51°.41N×16°.31E, h0km, mb2.2/3, ml2.7/5, Error ellipse: s-maj=23.6km s-min=6.2km az=29.0 60 km NW of Wroclaw Suspected Mining induced.*
ISC 22 04:32:42.9±0.9, 51°.46N±0°.04×16°.31E±0°.03, h0km, n28, σ0s81/58, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.62**	**181**	*i* Pg	**Pg**	**04 32 55.2**	**+0.4**
KSP				*e*Sg	**Sg**	**04 33 02.6**	**-0.2**
CHVC	**Chvalec**	**0.89**	**190**	*e*PG	**Pg**	**04 33 00.3**	**+0.4**
CHVC				*e*SG	**Sg**	**04 33 11.4**	**-0.1**
	comp=Z,33nm,0.5s						
OSTC	**Ostas**	**0.91**	**184**	*e*PG	**Pg**	**04 33 00.8**	**+0.5**
OSTC				*e*SG	**Sg**	**04 33 12.1**	**0.0**
	comp=Z,57nm,1.0s						
UPC	**Upice**	**0.97**	**191**	*e*PG	**Pg**	**04 33 01.6**	**0.0**
UPC				*e*SG	**Sg**	**04 33 13.5**	**-0.7**
	comp=Z,65nm,0.4s						
DPC	**Dobruska-Polom**	**1.11**	**180**	*e*PG	**Pg**	**04 33 04.0**	**-0.2**
DPC				*e*SG	**Sg**	**04 33 17.6**	**-1.1**
	comp=Z,25nm,0.5s						
KRLC	**Kraliky**	**1.42**	**168**	*e*PG	**Pn**	**04 33 09.6**	**-0.4**
KRLC				*e*SG	**Sg**	**04 33 27.5**	**-1.0**
	comp=Z,31nm,0.3s						
PVCC	**Panska Ves**	**1.44**	**230**	*e*PG	**Pn**	**04 33 10.3**	**0.0**
PVCC				*e*SG	**Sg**	**04 33 28.9**	**-0.3**
	comp=Z,116nm,0.4s						
BRG	**Berggiesshubel**	**1.60**	**249**	PN	**Pn**	**04 33 12.7**	**+0.3**
BRG				PG	**Pb**	**04 33 13.4**	**+0.1**
BRG				SG	**Sn**	**04 33 34.3**	**+0.5**
	32nm,0.3s						
PRA	**Prague**	**1.83**	**221**	*e*SG	**Sb**	**04 33 40.6**	**-0.2**
	comp=Z,22nm,0.7s						
PRU	**Pruhonice**	**1.85**	**218**	*e*PG	**Pb**	**04 33 17.5**	**-0.1**
PRU				*e*SG	**Sb**	**04 33 41.2**	**-0.2**
	comp=Z,25nm,0.2s						
MORC	**Moravsky Berou**	**1.86**	**155**	*e*PN	**Pn**	**04 33 15.9**	**-0.2**
MORC				*e*SG	**Sb**	**04 33 41.4**	**-0.3**
MORC	**Moravsky Berou**	**1.86**	**155**	*e*Pn	**Pn**	**04 33 15.8**	**-0.3**
	baz=336						
MORC				*e*Sg	**Sb**	**04 33 41.4**	**-0.3**
	15nm,0.3s,baz=336						
OKC	**Ostrava-Krasne**	**2.00**	**144**	*e*PG	**Pb**	**04 33 20.1**	**-0.1**
OKC				*e*SG	**Sg**	**04 33 47.1**	**-0.2**
	comp=Z,25nm,0.6s						
CLL	**Collm**	**2.08**	**267**	*e*Pn	**Pn**	**04 33 19.0**	**0.0**
CLL				*e*Pg	**Pb**	**04 33 22.0**	**+0.6**
CLL				*e*Sg	**Sg**	**04 33 50.0**	**+0.4**
	comp=Z,16nm,0.2s						
VRAC	**Vranov**	**2.17**	**175**	*e*PN	**Pn**	**04 33 20.5**	**+0.2**
VRAC				*e*SG	**Sb**	**04 33 49.9**	**-0.4**
VRAC	**Vranov**	**2.17**	**175**	*e*Pn	**Pn**	**04 33 20.4**	**+0.2**
	baz=356						
VRAC				*e*Sg	**Sb**	**04 33 49.9**	**-0.4**
	comp=Z,11nm,0.3s,baz=356						
TREC	**Trest**	**2.23**	**194**	*e*PN	**Pn**	**04 33 21.3**	**+0.1**
TREC				*e*PG	**Pb**	**04 33 23.8**	**-0.3**
TREC				*e*SG	**Sb**	**04 33 52.5**	**+0.2**
	comp=Z,12nm,0.3s						
PBCC	**Pribram**	**2.31**	**221**	*e*PG	**Pb**	**04 33 25.9**	**+0.5**
PBCC				*e*SG	**Sb**	**04 33 55.4**	**+0.9**
	comp=Z,4.7nm,0.7s						
KRUC	**Moravsky**	**2.41**	**179**	*e*PN	**Pn**	**04 33 23.6**	**+0.1**
KRUC				*e*SG	**Sb**	**04 33 57.4**	**+0.2**
KRUC	**Moravsky**	**2.41**	**179**	*e*Pn	**Pn**	**04 33 23.6**	**+0.1**
	baz=359						
KRUC				*e*Sg	**Sb**	**04 33 57.4**	**+0.2**
	comp=Z,6.0nm,0.3s,baz=359						
OJC	**Ojcow**	**2.54**	**118**	*e*Pg	**Pg**	**04 33 31.8**	**+0.3**
OJC				*e*Sg	**Sg**	**04 34 07.4**	**+3.0**
NKC	**Novy Kostel**	**2.74**	**245**	*e*PN	**Pn**	**04 33 28.7**	**+0.6**
NKC				*e*PG	**Pb**	**04 33 34.0**	**+1.3**
NKC				*e*SG	**Sg**	**04 34 11.1**	**+0.3**
	comp=Z,21nm,0.3s						
KHC	**Kasperske Hory**	**2.92**	**218**	*e*PN	**Pn**	**04 33 31.4**	**+0.8**
KHC				*e*PG	**Pb**	**04 33 36.7**	**+0.9**
KHC				*e*SN	**Sn**	**04 34 06.0**	**-0.4**
KHC				*e*SG	**Sg**	**04 34 14.8**	**-1.8**
	comp=Z,8.3nm,0.3s						
MODS	**Modra-Piesok**	**3.16**	**168**	*e*PN	Pn	04 33 26.1	-7.7
MODS				*e*PG	**Pg**	**04 33 42.8**	**-0.5**
MODS				*e*SG	**Sg**	**04 34 25.6**	**+1.4**
CONA	**Conrad Observa**	**3.55**	**185**	*e*Pn	**Pn**	**04 33 40.7**	**+1.4**
	comp=Z,0.3nm,0.1s						
BSD	**Bornholm Skovb**	**3.75**	**348**	*i* P	**Pn**	**04 33 42.2**	**+0.2**
BSD				*e*S	**Sn**	**04 34 23.7**	**-3.1**
MOA	**Molln**	**3.85**	**201**	*e*Pn	**Pn**	**04 33 43.4**	**0.0**
	comp=Z,0.8nm,0.3s						
ARSA	**Arzberg**	**4.25**	**187**	Pg	**Pg**	**04 34 03.9**	**-0.4**
	comp=Z,1.1nm,0.3s						

*GUC **22** 04:46:38.7±0.8, 18°.42S×69°.63W, h99km±5km, ML4.7*
*IDC **22** 04:46:39.4±0.6, 18°.51S×69°.60W, h106km±5km, mb4.3/13, mb1 4.4/18, mb1mx4.1/40, mbtmp4.6/18, Error ellipse: s-maj=13.1km s-min=8.0km az=96.0*
*VAO **22** 04:46:42.8±0.6, 18°.48S×69°.31W, h122km±5km, mb4.6*
ISC 22 04:46:38.7±0.5, 18°.50S±0°.04×69°.66W±0°.06, h99km±4km, n72, σ1s64/86, mb4.6/15, 4C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB16	**IPOC Station P**	**0.22**	**42**	⇓*i* P	**Pn**	**04 46 54.0**	**+0.5**
PB16				*i* S	**Sn**	**04 47 05.3**	**+0.7**
PB16				IAML		04 47 07.2	
	comp=E,27µm,0.3s						
MNMC	**Minye Minye**	**0.63**	**174**	⇓*i* P	**Pn**	**04 46 57.0**	**+1.3**
MNMC				*e*S	**Sn**	**04 47 10.5**	**+2.1**
MNMC				IAML		04 47 11.3	
	comp=E,80µm,0.4s						
AP01	**Chacalluta**	**0.66**	**281**	⇑*i* P	**Pn**	**04 46 55.4**	**-0.2**
AP01				*i* S	**Sn**	**04 47 08.2**	**0.0**
AP01				IAML		04 47 09.8	
	comp=E,81µm,0.6s						
PSGC	**Pisagua**	**1.17**	**202**	⇑*i* P	**Pn**	**04 47 01.5**	**+0.3**
PSGC				*i* S	**Sn**	**04 47 18.7**	**+0.7**
PSGC				IAML		04 47 19.5	
	comp=N,10µm,0.4s						
GO01	**Chusmiza**	**1.24**	**159**	*e*P	**Pn**	**04 47 04.4**	**+2.1**
GO01				*e*S	**Sn**	**04 47 22.9**	**+2.8**
GO01				IAML		04 47 26.6	
	comp=N,17µm,0.2s						
PB11	**IPOC Station P**	**1.25**	**180**	⇑*i* P	**Pn**	**04 47 03.2**	**+1.1**
PB11				*e*S	**Sn**	**04 47 21.1**	**+1.3**
PB11				IAML		04 47 23.6	
	comp=E,21µm,0.4s						
PB08	**IPOC Station P**	**1.70**	**164**	⇓*i* P	**Pn**	**04 47 10.0**	**+2.2**
PB08				*i* S	**Sn**	**04 47 32.5**	**+2.7**
PB08				IAML		04 47 34.8	
	comp=E,9µm,0.4s						
TA01	**Diego Aracena**	**2.11**	**193**	⇑*i* P	**Pn**	**04 47 12.5**	**-0.2**
TA01				*e*S	**Sn**	**04 47 38.1**	**-0.5**
TA01				IAML		04 47 48.0	
	comp=N,4µm,0.4s						
LPAZ	**La Paz**	**2.64**	**34**	P	**Pn**	**04 47 22.7**	**+2.4**
	comp=N,97nm,0.3s,baz=191,slow=2.9,SNR=2458						
LPAZ				S	**Sn**	**04 47 55.5**	**+3.4**
	comp=N,8.6nm,0.3s,baz=88,slow=9.1,SNR=6.5						
LPAZ	**La Paz**	**2.64**	**34**	*e*P	**Pn**	**04 47 22.9**	**+2.6**
LVC	**Limon Verde**	**4.15**	**170**	P	**Pn**	**04 47 42.0**	**+1.8**
	comp=N,9.8nm,0.3s,baz=22,slow=9.5,SNR=115						
LVC				S	**Sn**	**04 48 28.3**	**+0.5**
	comp=N,68nm,0.3s,baz=251,slow=23,SNR=14						
LVC	**Limon Verde**	**4.15**	**170**	*e*P	**Pn**	**04 47 43.8**	**+3.6**
SIV	**San Ignacio**	**8.58**	**74**	P	**Pn**	**04 48 38.4**	**-1.8**
	comp=N,31nm,0.3s,baz=271,slow=10.0,SNR=269						
NNA	**Nana**	**9.48**	**312**	P	**Pn**	**04 48 55.0**	**+2.5**
	comp=N,1.7nm,0.3s,baz=120,slow=10,SNR=4.4						
CFA	**Coronel Fontan**	**13.11**	**175**	P	**Pn**	**04 49 37.8**	**-3.4**
	comp=N,1.4nm,0.3s,baz=5.4,slow=12,SNR=18						
AQDB	**Aquidauana**	**13.31**	**101**	*e*P	**Pn**	**04 49 42.4**	**-1.4**
SALV	**Santo Antonio**	**13.60**	**81**	*e*P	**Pn**	**04 49 46.0**	**-1.5**
CPUP	**Villa Florida**	**13.81**	**127**	P	**Pn**	**04 49 48.5**	**-1.7**
	comp=N,0.3nm,0.3s,baz=316,slow=12,SNR=6.1						
CPUP	**Villa Florida**	**13.81**	**127**	*e*P	**Pn**	**04 49 50.1**	**-0.1**
PP1B	**Ponte de Pedra**	**14.09**	**89**	*e*P	**Pn**	**04 49 50.6**	**-3.3**
C2SB	**Chapadao do Su**	**15.95**	**94**	*e*P	**Pn**	**04 50 16.3**	**-1.2**
ITQB	**Itaqui**	**16.27**	**136**	*e*P	**P**	**04 50 22.0**	**-0.6**
TRCB	**Terra Rica**	**16.50**	**108**	*e*P	**Pn**	**04 50 23.8**	**-0.6**
ARAG	**Araguaiana, MT**	**17.29**	**83**	*e*P	**Pn**	**04 50 33.8**	**-0.2**
PTGB	**Pitanga**	**17.49**	**114**	*e*P	**Pn**	**04 50 36.7**	**+0.2**
PCMB	**Pacaembu**	**17.56**	**103**	*e*P	**P**	**04 50 35.9**	**-1.0**
FRTB	**Fartura**	**19.38**	**108**	*e*P	**P**	**04 50 56.0**	**-0.9**
PLTB	**Pedras Altas**	**19.61**	**135**	*e*P	**P**	**04 51 00.2**	**+1.0**
BB19B	**Bebedouro**	**20.05**	**101**	*e*P	**P**	**04 51 03.1**	**-1.1**
CNLB	**Canela**	**20.26**	**126**	*e*P	**P**	**04 51 04.5**	**-1.9**
IPMB	**Ipameri, GO**	**20.38**	**92**	*e*P	**P**	**04 51 06.3**	**-1.5**
OTAV	**Otavalo**	**20.53**	**334**	*e*P	Pn	04 51 12.9	+0.1
BDFB	**Brasilia**	**20.89**	**85**	P	**P**	**04 51 11.8**	**-1.5**
	comp=N,19nm,0.6s,baz=249,slow=12,SNR=8.6						
RCLB	**Rio Claro- Sao**	**21.09**	**104**	*e*P	**P**	**04 51 14.7**	**-0.8**
SPB	**Sao Paulo**	**21.35**	**108**	*e*P	**P**	**04 51 16.8**	**-1.3**
PEXB	**Peixe**	**21.55**	**76**	*e*P	**P**	**04 51 19.1**	**-1.3**
VAO	**Valinhos**	**21.69**	**106**	*e*P	**P**	**04 51 19.6**	**-2.1**
PMNB	**Patos De Minas**	**22.02**	**94**	*e*P	**P**	**04 51 23.7**	**-1.6**
PLCA	**Paso Flores**	**22.17**	**182**	P	**P**	**04 51 28.2**	**+1.5**
	comp=N,17nm,0.9s,baz=29,slow=10,SNR=21						
PLCA	**Paso Flores**	**22.17**	**182**	*e*P	**P**	**04 51 29.1**	**+2.4**
PARB	**Paraibuna**	**22.96**	**106**	*e*P	**P**	**04 51 33.2**	**-1.7**
SMTB	**Santa Maria do**	**23.47**	**69**	*e*P	**P**	**04 51 38.2**	**-1.5**
BSCB	**Bom Sucesso**	**23.55**	**100**	*e*P	**P**	**04 51 39.5**	**-1.0**
ESAR	**Angra dos Reis**	**24.00**	**105**	*e*P	**P**	**04 51 44.1**	**-0.2**
JANB	**Januaria**	**24.51**	**86**	*e*P	**P**	**04 51 47.7**	**-1.4**
VAS01	**Vassouras-RJ**	**24.85**	**103**	*e*P	**P**	**04 51 52.7**	**+0.5**
SJMB	**Sao Joao De Ma**	**26.98**	**95**	*e*P	**P**	**04 52 10.7**	**-0.7**
SDV	**Santo Domingo**	**27.23**	**358**	*e*P	**P**	**04 52 15.6**	**+1.7**
BSFB	**Barra de Sao F**	**27.29**	**95**	*e*P	**P**	**04 52 12.7**	**-1.5**
MDP	**Montagnes des**	**28.84**	**37**	P	**P**	**04 52 26.9**	**-1.1**
	comp=N,32nm,1.1s,baz=216,slow=6.0,SNR=5.3						
USHA	**Ushuaia**	**36.28**	**179**	P	**P**	**04 53 33.9**	**+1.6**
	comp=N,6.1nm,0.5s,baz=21,slow=9.2,SNR=7.5						
TXAR	**Lajitas Array**	**57.78**	**325**	P	**P**	**04 56 19.2**	**-0.6**
	comp=N,1.3nm,0.8s,baz=146,slow=7.6,SNR=16						
LIC	**Lamto**	**68.27**	**75**	*e*P	**P**	**04 57 27.8**	**-1.8**
	comp=N,6.0nm,0.4s						
TIC	**Toumodi**	**68.44**	**75**	*e*P	**P**	**04 57 30.5**	**-0.2**
	comp=N,2.8nm,0.3s						
KIC	**Kosan Boka**	**68.59**	**75**	*e*P	**P**	**04 57 30.9**	**-0.7**
	comp=N,18nm,0.5s						
DBIC	**Dimbokro**	**68.60**	**75**	P	**P**	**04 57 30.2**	**-1.4**
	comp=N,13nm,0.9s,baz=231,slow=6.3,SNR=16						
DBIC				pP	**PcP**	**04 57 57.2**	**+1.2**
	comp=N,8.5nm,0.8s,baz=204,slow=6.6,SNR=5.1						
PDAR	**Pinedale Array**	**71.17**	**330**	P	**P**	**04 57 46.6**	**-0.4**
	comp=N,0.9nm,0.7s,baz=128,slow=7.3,SNR=9.4						
ULM	**Lac du Bonnet**	**72.26**	**343**	P	**P**	**04 57 52.0**	**-1.1**
	comp=N,4.4nm,0.6s,baz=156,slow=4.9,SNR=14						
NVAR	**Mina Array Bea**	**72.71**	**322**	P	**P**	**04 57 57.1**	**+0.8**
	comp=N,2.8nm,0.9s,baz=150,slow=6.4,SNR=19						
TORD	**Torodi Ar. Bea**	**77.05**	**71**	P	**P**	**04 58 19.8**	**-1.7**
	comp=N,14nm,0.8s,baz=254,slow=5.3,SNR=40						
TORD				pP	**pP**	**04 58 47.2**	**-1.2**
	comp=N,5.7nm,0.7s,baz=253,slow=5.3,SNR=5.0						
ESDC	**Sonseca Array**	**84.21**	**45**	P	**P**	**04 58 59.6**	**+0.3**
	comp=N,2.3nm,0.8s,baz=249,slow=5.6,SNR=10.0						
MAW	**Mawson**	**87.39**	**164**	P	**P**	**04 59 15.6**	**+1.1**
	comp=N,1.8nm,0.7s,baz=175,slow=5.8,SNR=4.0						
YKA	**Yellowknife Ar**	**88.14**	**341**	P	**P**	**04 59 17.7**	**-0.3**
	comp=N,10nm,0.7s,baz=136,slow=4.7,SNR=194						
YKA				pP	**pP**	**04 59 44.4**	**-0.7**
	comp=N,5.3nm,0.8s,baz=136,slow=4.8,SNR=6.6						
ASAR	**Alice Springs**	**132.19**	**210**	PKP	**PKPdf**	**05 05 41.2**	**-0.7**
	comp=N,0.6nm,0.6s,baz=128,slow=1.9,SNR=6.7						
WRA	**Warramunga Arr**	**135.12**	**213**	PKP	**PKPdf**	**05 05 47.7**	**+0.3**
	comp=N,1.2nm,0.5s,baz=148,slow=1.9,SNR=7.9						
ZALV	**Zalesovo Beam**	**139.52**	**23**	PKP	**PKPdf**	**05 05 55.0**	**+0.6**
	comp=N,0.8nm,0.3s,baz=336,slow=3.3,SNR=4.2						
MKAR	**Makanchi Array**	**143.57**	**33**	PKP	**PKPdf**	**05 06 01.6**	**-0.4**
	comp=N,0.3nm,0.7s,baz=284,slow=1.8,SNR=3.6						
KSH	**Kashi**	**143.69**	**48**	*e*PKP	**PKPdf**	**05 06 02.4**	**-0.2**
KSH				*ep*PKP	pPKPdf	05 06 25.8	-5.2
KSH				*e*PP	**PP**	**05 09 22.0**	**+6.0**
KSH				AMB	AMB		
	comp=Z,360nm,5.2s						
USRK	**Ussuriysk Ar.**	**148.59**	**329**	PKPbc	**PKiKP**	**05 06 15.0**	**-0.7**
	comp=Z,3.9nm,0.7s,baz=34,slow=1.4,SNR=8.4						
MJAR	**Matsushiro Arr**	**149.60**	**312**	PKPbc	**PKPbc**	**05 06 17.0**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=97,slow=1.8,SNR=5.6						
SONM	**Songino Array**	**150.57**	**5**	PKPbc	**PKiKP**	**05 06 19.4**	**-0.5**
	comp=Z,1.4nm,0.6s,baz=323,slow=2.0,SNR=11						
SONM				pPKPbc	**pPKPbc**	**05 06 46.9**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=351,slow=2.5,SNR=3.9						
LZH	**Lanzhou**	**161.57**	**17**	*e*PKP	**PKPdf**	**05 06 27.1**	**-1.5**
LZH				pPKP	pPKPdf	05 06 51.0	-6.0
LZH				sPKP		05 07 02.8	

*BGR **22** 05:01:18.5±0.0, 23°.88S×179°.76W, h33km*
*IDC **22** 05:02:12.2±1.6, 24°.35S×179°.79E, h503km±15km, mb3.7/10, mb1 4.0/11, mb1mx3.7/26, mbtmp4.6/11, Error ellipse: s-maj=23.9km s-min=14.9km az=155.0*
*NEIC **22** 05:02:13.7±1.2, 24°.42S±0°.10×179°.7E±0°.1, h520km±6km, mb4.4/37, Error ellipse: s-maj=19.2km s-min=8.8km az=131.0*
ISC 22 05:02:13.2±0.4, 24°.41S±0°.07×179°.80E±0°.10, h517km, n106, σ1s01/100, mb4.3/27, 6C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.84**	**346**	P	**P**	**05 03 58.0**	**-0.6**
DZM	**Mont Dzumac**	**12.50**	**278**	P	**P**	**05 04 58.6**	**+1.5**
	0.9nm,0.3s,baz=93,slow=16,SNR=16						
DZM	**Mont Dzumac**	**12.50**	**278**	P	**P**	**05 04 58.1**	**+1.0**
NOUC	**Port Laguerre**	**12.62**	**278**	P	**P**	**05 04 59.1**	**+0.8**
KUZ	**Kuaotunu**	**12.78**	**195**	P	**P**	**05 05 01.8**	**+2.1**
MBAZ	**Motutapu North**	**13.02**	**198**	P	**P**	05 05 12.0	+10
MXZ	**Matakaoa Point**	**13.17**	**185**	P	**P**	**05 05 05.7**	**+2.0**
MXZ	**Matakaoa Point**	**13.17**	**185**	P	**P**	**05 05 03.6**	**-0.2**
MKAZ	**Moumakai**	**13.26**	**196**	P	**P**	05 05 11.7	+6.9
HAZ	**Te Kaha**	**13.41**	**187**	P	**P**	**05 05 06.7**	**+0.4**
WMGZ	**Waiomatatini S**	**13.42**	**185**	P	**P**	**05 05 07.8**	**+1.4**
PKGZ	**Pakihiroa**	**13.51**	**186**	P	**P**	**05 05 09.0**	**+1.6**
RUGZ	**Raukumara Rang**	**13.63**	**187**	P	**P**	**05 05 09.4**	**+0.6**
PUZ	**Puketiti**	**13.68**	**185**	P	**P**	**05 05 11.5**	**+2.3**
URZ	**Urewera**	**13.99**	**189**	P	**P**	**05 05 11.0**	**-1.4**
	9.1nm,0.3s,baz=82,slow=1.1,SNR=44						
URZ				S	**S**	**05 07 37.9**	**-2.3**
	0.5nm,0.3s,baz=167,slow=17,SNR=4.5						
URZ	**Urewera**	**13.99**	**189**	P	**P**	**05 05 12.2**	**-0.2**
URZ	**Urewera**	**13.99**	**189**	P	**P**	**05 05 11.4**	**-1.0**
MWZ	**Matawai**	**14.01**	**187**	P	**P**	**05 05 12.9**	**+0.2**
TKGZ	**Te Karaka**	**14.08**	**186**	P	**P**	**05 05 14.5**	**+1.2**
CNGZ	**Carnagh Statio**	**14.09**	**185**	P	**P**	**05 05 15.0**	**+1.6**
RIGZ	**Rimuhau**	**14.36**	**186**	P	**P**	**05 05 16.0**	**-0.2**
BKZ	**Black Stump Fm**	**14.97**	**190**	P	**P**	**05 05 22.7**	**0.0**
QRZ	**Quartz Range**	**17.46**	**199**	P	**P**	**05 05 48.3**	**+0.7**
QRZ				IAmb	IAmb	05 05 59.5	
	comp=Z,14nm,0.9s						
BSWZ	**Blackbirch Sta**	**17.95**	**195**	P	**P**	**05 05 52.2**	**+0.2**
THZ	**Tophouse**	**18.23**	**197**	P	**P**	**05 05 54.9**	**+0.3**
KHZ	**Kahutara**	**18.69**	**195**	P	**P**	**05 05 57.5**	**-1.3**
EIDS	**Eidsvold**	**26.05**	**262**	P	**P**	**05 07 05.6**	**+0.5**
EIDS				IAmb	IAmb	05 07 06.8	
	comp=Z,7.9nm,0.7s						
STKA	**Stephens Creek**	**34.37**	**249**	P	**P**	**05 08 17.6**	**+0.9**
	comp=Z,3.0nm,0.5s,baz=97,slow=9.9,SNR=12						
STKA	**Stephens Creek**	**34.37**	**249**	P	**P**	**05 08 17.2**	**+0.5**
PMG	**Port Moresby**	**34.49**	**290**	P	**P**	**05 08 18.0**	**0.0**
	comp=Z,30nm,0.8s,baz=147,slow=4.1,SNR=7.4						
COEN	**Coen**	**36.02**	**280**	P	**P**	**05 08 30.5**	**-0.2**
BBOO	**Buckleboo**	**39.08**	**247**	P	**P**	**05 08 55.3**	**-0.3**
AS31	**Alice Springs**	**41.77**	**261**	P	**P**	**05 09 17.4**	**+0.1**
ASAR	**Alice Springs**	**41.78**	**261**	P	**P**	**05 09 17.1**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=91,slow=7.7,SNR=32						
ASAR				ScP	**ScP**	**05 14 04.6**	**+2.0**
	comp=Z,1.3nm,0.9s,baz=125,slow=3.7,SNR=5.9						
WB2	**Warramunga Arr**	**42.18**	**267**	P	**P**	**05 09 19.6**	**-0.9**
WB2				IAmb	IAmb	05 09 20.8	
	comp=Z,9.9nm,0.6s						
WB0	**Warramunga Arr**	**42.19**	**267**	P	**P**	**05 09 20.1**	**-0.4**
WB0				IAmb	IAmb	05 09 20.8	
	comp=Z,8.7nm,0.6s						
WRA	**Warramunga Arr**	**42.20**	**267**	P	**P**	**05 09 19.8**	**-0.8**
	comp=Z,6.0nm,0.4s,baz=104,slow=8.1,SNR=48						
WRA				ScP	**ScP**	**05 14 05.9**	**+1.6**
	comp=Z,4.8nm,1.0s,baz=102,slow=4.5,SNR=9.4						
FORT	**Forrest**	**45.97**	**250**	P	**P**	**05 09 48.9**	**-0.7**
KNRA	**Kununurra**	**48.51**	**270**	P	**P**	**05 10 08.7**	**-0.2**
HMH	**Humu'ula Sheep**	**49.94**	**31**	P	**P**	**05 10 20.0**	**+0.3**
FITZ	**Fitzroy Crossi**	**50.61**	**266**	P	**P**	**05 10 24.6**	**+0.1**
FITZ				IAmb	IAmb	05 10 26.1	
	comp=Z,9.4nm,0.8s						
QSPA	**South Pole Qui**	**65.67**	**180**	P	**P**	**05 12 07.3**	**+1.4**
MJAR	**Matsushiro Arr**	**72.22**	**326**	P	**P**	**05 12 45.4**	**-0.3**
	comp=Z,4.3nm,0.9s,baz=150,slow=4.9,SNR=5.0						
PETK	**Petropavlovsk-**	**79.55**	**347**	P	**P**	**05 13 26.0**	**+0.2**
	comp=Z,2.5nm,0.7s,baz=124,slow=8.2,SNR=4.5						
SYO	**Syowa Base**	**82.47**	**193**	⇑*i* P	**P**	**05 13 39.4**	**-1.4**
KHMM	**Horse Mountain**	**83.46**	**40**	P	**P**	**05 13 47.4**	**+1.1**
KHMM				IAmb	IAmb	05 14 04.9	
	comp=Z,11nm,1.2s						
SNAA	**Sanae**	**84.16**	**179**	P	**P**	**05 13 49.4**	**+0.1**
SNAA	**Sanae**	**84.16**	**179**	P	**P**	**05 13 49.4**	**+0.1**
VNA3	**Neumayer Olymp**	**84.38**	**177**	P	**P**	**05 13 50.5**	**+0.2**
WAKR	**Walker**	**84.57**	**43**	IAmb	IAmb	05 13 54.2	
	comp=Z,

MAN 22 05:11:02.2, 10°.05N×124°.05E, h33km, mb3.8, ML2.6, MS2.1, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.28**	**342**	⇓*iP*	Pn	05 11 11.2	+1.2
LLP				*i* S	Sb	05 11 17.5	+2.6

*IDC **22** 05:21:54.7±0.7, 34°.20N×79°.77E, h0km, mb4.0/15, mb1 4.2/19, mb1mx4.0/43, mbtmp4.0/19, ML3.9/3, MS3.5/6, Ms1 3.5/6, ms1mx3.1/41, Error ellipse: s-maj=21.8km s-min=13.1km az=52.0*

*NNC **22** 05:21:56.7±2.1, 34°.32N×80°.21E, h0km, mb4.6, Error ellipse: s-maj=19.6km s-min=16.6km az=106.0*

*BJI **22** 05:21:57.5±0.0, 34°.37N×79°.95E, h6km, mB4.4/7, mb4.4/15, ML4.2/6, Ms3.8/9, Ms7 3.6/7*

*MOS **22** 05:21:59.6±0.9, 34°.38N×79°.73E, h42km, mb4.3/8, Error ellipse: s-maj=12.7km s-min=6.4km az=104.0*

*NEIC **22** 05:22:01.2±1.5, 34°.29N±0°.07×79°.8E±0°.1, h44km±7km, mb4.2/8, Error ellipse: s-maj=13.7km s-min=9.3km az=114.0*

ISC 22 05:21:57.4±0.5, 34°.27N±0°.05×79°.78E±0°.05, h10km, n87, σ2s 19/96, mb4.1/21, MS3.5/5, 7C-10D, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DHRM	**DHARAMSHALA**	**3.54**	**236**	*eP*	**Pb**	**05 23 00.3**	**0.0**
DHRM				*eS*	**Sg**	**05 23 55.7**	**+4.4**
SMLA	**Simla**	**3.83**	**216**	*ex*	Pn	05 23 02.3	+6.0
SMLA				*ex*	x	05 23 59.8	
SMLA				IAML		05 24 12.3	
DDI	**Dehra Dun**	**4.20**	**201**	*ex*	Pb	05 23 18.8	+7.5
NIL	**Nilore**	**5.46**	**265**	P	**Pn**	**05 23 20.3**	**+1.4**
NIL	**Nilore**	**5.46**	**265**		**Pn**	**05 23 20.3**	**+1.4**
KSH	**Kashi**	**6.06**	**331**	Pn	**Pn**	**05 23 28.6**	**+1.4**
KSH				Sn	**Sn**	**05 24 35.6**	**-1.1**
KSH				LR	LR		
	comp=N,920nm,4.1s						
KSH				LR	LR		
	comp=E,1μm,4.2s						
KSH				LR	LR		
	comp=Z,560nm,5.3s						
ULHL	**Ulahol**	**8.44**	**342**	P	Pn	05 24 04.2	+4.3
	SNR=7.2						
UCH	**Uchtor**	**8.96**	**334**	P	**Pn**	**05 24 10.0**	**+2.7**
	SNR=56						
PDGK	**Podgornoye**	**9.05**	**359**	P	**Pn**	**05 24 09.5**	**+1.3**
PDGK				S	**Sn**	**05 25 51.9**	**+1.6**
PDGK	**Podgornoye**	**9.05**	**359**	⇑P	**Pn**	**05 24 09.5**	**+1.3**
	25nm,1.0s						
PDGK				⇓S	**Sn**	**05 25 51.9**	**+1.6**
	37nm,1.0s						
MDOK	**Medeo**	**9.14**	**347**	P	**Pn**	**05 24 11.0**	**+1.6**
MDOK	**Medeo**	**9.14**	**347**	⇓P	**Pn**	**05 24 11.4**	**+2.0**
	9.4nm,0.6s						
MDOK				⇓S	**Sn**	**05 25 55.2**	**+2.9**
	47nm,1.2s						
AML	**Almayashu**	**9.20**	**330**	P	**Pn**	**05 24 13.2**	**+2.8**
	SNR=14						
AAK	**Ala-Archa**	**9.33**	**335**	*ce*P	**Pn**	**05 24 13.5**	**+1.5**
AAK				pmax	pmax		
	comp=Z,14nm,0.7s						
AAK	**Ala-Archa**	**9.33**	**335**	Pn	**Pn**	**05 24 15.1**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=152,slow=11,SNR=37						
AAK				Lg	Lg	05 26 54.3	
	comp=Z,0.6nm,0.3s,baz=336,slow=16,SNR=3.2						
AAK				LR	LR	05 28 12.0	
	comp=Z,174nm,20.8s,baz=142,slow=40						
AAK	**Ala-Archa**	**9.33**	**335**	P	**Pn**	**05 24 15.0**	**+3.0**
	SNR=14						
AAK	**Ala-Archa**	**9.33**	**335**	⇓P	**Pn**	**05 24 14.9**	**+2.9**
	comp=Z,14nm,0.8s						
AAK	**Ala-Archa**	**9.33**	**335**		**Pn**	**05 24 14.8**	**+2.7**
EKS2	**Erkin-Say**	**9.61**	**332**	P	**Pn**	**05 24 19.6**	**+3.7**
	SNR=5.1						
LSA	**Lhasa**	**10.67**	**112**	P	**Pn**	**05 24 32.8**	**+2.1**
WMQ	**Urumqi**	**11.35**	**30**	*ePn*	**Pn**	**05 24 39.9**	**+0.3**
WMQ				pP		05 24 42.8	
WMQ				sP		05 24 45.4	
WMQ				PP	**PnPn**	**05 24 52.0**	**+4.7**
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,46nm,4.5s						
WMQ				LR	LR		
	comp=Z,81nm,4.1s						
WMQ				LR	LR		
	comp=Z,130nm,5.1s						
WMQ	**Urumqi**	**11.35**	**30**	P	**Pn**	**05 24 40.6**	**+1.0**
WMQ	**Urumqi**	**11.35**	**30**		**Pn**	**05 24 40.6**	**+1.0**
KK31	**Karatay Array**	**11.41**	**323**	P	**Pn**	**05 24 41.4**	**+1.0**
KK31				S	**Sn**	**05 26 55.3**	**+7.4**
KK31	**Karatay Array**	**11.41**	**323**	P	**Pn**	**05 24 41.4**	**+1.0**
	comp=Z,1.8nm,0.5s,baz=132,slow=12,SNR=37						
KK31				⇓S	**Sn**	**05 26 55.3**	**+7.4**
	comp=Z,2.7nm,0.7s,baz=151,slow=21,SNR=3.0						
KK31	**Karatay Array**	**11.41**	**323**		**Pn**	**05 24 41.5**	**+1.1**
KKAR	**Karatay Array**	**11.41**	**323**	P	**Pn**	**05 24 41.6**	**+1.2**
KKAR	**Karatay Array**	**11.41**	**323**		**Pn**	**05 24 41.6**	**+1.2**
MAKZ	**Makanchi**	**12.64**	**7**	P	**Pn**	**05 24 55.8**	**-1.4**
MAKZ				S	**Sn**	**05 27 18.2**	**+0.3**
MAKZ	**Makanchi**	**12.64**	**7**	⇓P	**Pn**	**05 24 55.8**	**-1.4**
	comp=Z,25nm,1.2s						
MAKZ				⇓S	**Sn**	**05 27 18.2**	**+0.3**
	comp=Z,10nm,1.1s						
MAKZ	**Makanchi**	**12.64**	**7**		**Pn**	**05 24 57.1**	**-0.1**
MK31	**Makanchi Array**	**12.66**	**8**	P	**Pn**	**05 24 56.2**	**-1.3**
MK31				S	**Sn**	**05 27 18.6**	**+0.2**
MK31	**Makanchi Array**	**12.66**	**8**	⇑P	**Pn**	**05 24 56.2**	**-1.3**
	comp=Z,6.1nm,0.7s,baz=184,slow=12,SNR=45						
MK31				⇓S	**Sn**	**05 27 18.6**	**+0.2**
	comp=Z,9.8nm,0.9s,baz=191,slow=25,SNR=4.3						
MK31	**Makanchi Array**	**12.66**	**8**		**Pn**	**05 24 56.7**	**-0.8**
MKAR	**Makanchi Array**	**12.66**	**8**	Pn	**Pn**	**05 24 56.0**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=184,slow=14,SNR=46						
MKAR				Sn	**Sn**	**05 27 15.9**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=190,slow=23,SNR=4.8						
KURBB	**Kurchatov Arra**	**16.37**	**357**	Pn	**Pn**	**05 25 43.0**	**-4.2**
	baz=180,slow=12,SNR=6.8						
KURBB	**Kurchatov Arra**	**16.37**	**357**	⇓P	**Pn**	**05 25 47.5**	**+0.3**
	comp=Z,16nm,1.4s						
KURK	**Kurchatov**	**16.46**	**357**	*ce*P	**Pn**	**05 25 47.2**	**-1.1**
KURK				pmax	pmax		
	comp=Z,21nm,1.3s						
KURK	**Kurchatov**	**16.46**	**357**	⇑P	**Pn**	**05 25 47.6**	**-0.7**
	comp=Z,13nm,0.9s						
KURK	**Kurchatov**	**16.46**	**357**		**Pn**	**05 25 48.0**	**-0.3**
KURK				IAmb	IAmb	05 25 51.2	
	comp=Z,23nm,1.2s						
GTA	**Gaotai**	**16.83**	**66**	*eP*	**P**	**05 25 57.8**	**+2.5**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GEYT	**Alibeck**	**17.88**	**288**	P	**Pn**	**05 26 02.3**	**-4.0**
	comp=Z,0.3nm,0.3s,baz=142,slow=10,SNR=4.4						
BVAR	**Borovoye Array**	**19.91**	**343**	P	**P**	**05 26 28.0**	**-1.0**
BVAR	**Borovoye Array**	**19.91**	**343**	P	**P**	**05 26 28.0**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=158,slow=12,SNR=17						
BRVK	**Borovoye**	**19.97**	**343**	P	**P**	**05 26 29.1**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	**Borovoye**	**19.97**	**343**	P	**P**	**05 26 29.1**	**-0.5**
ZALV	**Zalesovo Beam**	**20.00**	**9**	P	**Pn**	**05 26 30.0**	**-1.6**
	comp=Z,1.3nm,0.3s,baz=198,slow=14,SNR=6.3						
AB31	**Akbulak array**	**20.96**	**322**	P	**P**	**05 26 39.0**	**-1.4**
ABKAR	**Akbulak array**	**20.96**	**322**	P	**P**	**05 26 40.6**	**+0.2**
AKTO	**Aktyubinsk**	**22.67**	**322**	P	**P**	**05 26 58.0**	**-0.8**
AKTO	**Aktyubinsk**	**22.67**	**322**	P	**P**	**05 26 58.0**	**-0.8**
	comp=Z,4.0nm,0.7s,baz=111,slow=9.0,SNR=13						
CMAR	**Chiang Mai Arr**	**23.23**	**128**	*eP*	**P**	**05 27 05.7**	**+0.9**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**23.23**	**128**	P	**P**	**05 27 03.0**	**-1.8**
	comp=Z,2.1nm,0.5s,baz=312,slow=10,SNR=10						
CMAR				LR	LR	05 37 02.6	
	comp=Z,34nm,19.0s,baz=315,slow=39						
ZAK	**Zakamensk**	**23.54**	**40**	*eP*	**P**	**05 27 11.7**	**+3.9**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SONM	**Songino Array**	**24.07**	**48**	P	**P**	**05 27 12.9**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=241,slow=10,SNR=14						
XAN	**Xi'an**	**24.08**	**82**	P	**P**	**05 27 18.9**	**+5.8**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	**Ulaanbaatar**	**24.49**	**48**	*ce*P	**P**	**05 27 16.5**	**-0.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU	**Arti**	**26.50**	**333**	*d* iP	**P**	**05 27 33.2**	**-1.6**
ARU						05 28 13.4	
ARU				S	**S**	**05 32 04.5**	**-4.2**
ARU				SS	**SnSn**	**05 33 13.8**	**+3.8**
ARU				pmax	pmax		
	comp=Z,15nm,2.8s						
ARU	**Arti**	**26.50**	**333**	P	**P**	**05 27 33.9**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=115,slow=4.3,SNR=4.6						
ARU				LR	LR	05 38 44.1	
	comp=Z,144nm,18.8s,baz=258,slow=38						
WHN	**Wuhan**	**29.34**	**88**	P	P	05 28 07.0	+6.7
KIV	**Kislovodsk**	**30.15**	**300**	P	**P**	**05 28 05.1**	**-2.5**
KSRS	**Korea Array**	**38.81**	**71**	LR	LR	05 46 52.5	
	comp=Z,74nm,19.1s,baz=334,slow=39						
AKASG	**Malin Array Be**	**39.91**	**310**	*ce*P	**P**	**05 29 30.6**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KLR	**Kul'dur**	**40.73**	**52**	*i* P	**P**	**05 29 37.6**	**-0.7**
KLR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KLR	**Kul'dur**	**40.73**	**52**	P	**P**	**05 29 37.9**	**-0.4**
	comp=Z,1.5nm,0.8s,baz=276,slow=10,SNR=4.9						
USRK	**Ussuriysk Ar.**	**41.02**	**60**	LR	LR	05 47 58.9	
	comp=Z,96nm,19.2s,baz=298,slow=38						
FINES	**FINESS Array B**	**43.36**	**326**	*eP*	**P**	**05 29 59.5**	**0.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	**FINESS Array B**	**43.36**	**326**	P	**P**	**05 29 59.3**	**-0.2**
	comp=Z,2.7nm,0.5s,baz=111,slow=9.4,SNR=22						
KWP	**Kalwaria Pacla**	**44.07**	**308**	P	**P**	**05 30 04.9**	**-0.5**
KWP				pmax	pmax		
	comp=Z,13nm,2.7s						
KOLS	**Kolonicke sedl**	**44.38**	**307**	*eP*	**P**	**05 30 08.2**	**+0.3**
KOLS	**Kolonicke sedl**	**44.38**	**307**	*eP*	**P**	**05 30 08.2**	**+0.3**
ARCES	**ARCESS Array B**	**46.00**	**337**	P	**P**	**05 30 20.1**	**-0.3**
	comp=Z,4.1nm,0.7s,baz=91,slow=7.5,SNR=11						
NB2	**NORSAR Subarra**	**50.44**	**324**	P	**P**	**05 30 54.2**	**-0.7**
	comp=Z,2.9nm,0.9s,baz=89,slow=7.9						
NOA	**NORSAR Array B**	**50.44**	**324**	P	**P**	**05 30 54.3**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=90,slow=7.5,SNR=5.6						
NOA				LR	LR	05 53 37.0	
	comp=Z,66nm,18.9s,baz=185,slow=38						
ESDC	**Sonseca Array**	**64.79**	**302**	P	**P**	**05 32 35.7**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=57,slow=6.7,SNR=7.6						
TOA0	**Torodi Ar. Sit**	**72.95**	**274**	P	**P**	**05 33 25.2**	**-2.3**
TOA0				IAmb	IAmb	05 33 38.5	
	comp=Z,5.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**72.95**	**274**	P	**P**	**05 33 25.8**	**-1.6**
	comp=Z,0.7nm,0.6s,baz=50,slow=5.3,SNR=8.5						
MLY	**Manley**	**73.50**	**20**	P	**P**	**05 33 29.7**	**-0.2**
MLY				IAmb	IAmb	05 33 31.7	
	comp=Z,2.6nm,1.0s						
WB0	**Warramunga Arr**	**74.73**	**127**	P	**P**	**05 33 36.7**	**-0.9**
INK	**Inuvik**	**74.75**	**12**	P	**P**	**05 33 36.0**	**-1.1**
INK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
INK	**Inuvik**	**74.75**	**12**	P	**P**	**05 33 36.0**	**-1.1**
INK				IAmb	IAmb	05 33 53.0	
	comp=Z,2.5nm,1.1s						
ILAR	**Eielson Array**	**74.76**	**19**	P	**P**	**05 33 36.2**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=307,slow=4.4,SNR=10						
WRA	**Warramunga Arr**	**74.82**	**127**	P	**P**	**05 33 37.2**	**-1.0**
	comp=Z,1.1nm,0.7s,baz=324,slow=5.7,SNR=8.5						
WB2	**Warramunga Arr**	**74.83**	**127**	P	**P**	**05 33 36.9**	**-1.3**
ASAR	**Alice Springs**	**77.21**	**130**	P	**P**	**05 33 50.8**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=316,slow=5.7,SNR=19						
YKA	**Yellowknife Ar**	**82.88**	**7**	P	**P**	**05 34 20.0**	**-1.8**
YKA	**Yellowknife Ar**	**82.88**	**7**	P	**P**	**05 34 20.0**	**-1.8**
	comp=Z,1.6nm,0.7s,baz=341,slow=5.1,SNR=28						

*GUC **22** 05:48:38.7±0.9, 19°.75S×70°.22W, h43km±3km, ML3.7*

*IDC **22** 05:48:42.3±2.9, 19°.87S×69°.91W, h87km±24km, mb3.3/2, mb1 3.6/5, mb1mx3.3/23, mbtmp3.8/5, MS2.4/1, Ms1 2.4/1, ms1mx2.2/13, Error ellipse: s-maj=48.4km s-min=27.5km az=97.0*

ISC 22 05:48:38.0±1.1, 19°.76S±0°.03×70°.25W±0°.07, h35km, n16, σ1s 70/27, 8C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.20**	**38**	*eP*	**Pn**	**05 48 45.2**	**+0.2**
PSGC				*i* S	**Sn**	**05 48 50.9**	**+1.1**
PSGC				IAML		05 48 51.1	
	comp=E,5μm,0.2s						
PB11	**IPOC Station P**	**0.56**	**90**	⇓*iP*	**Pn**	**05 48 49.7**	**0.0**
PB11				*i* S	**Sn**	**05 48 58.6**	**+0.7**
PB11				IAML		05 48 59.3	
	comp=E,18μm,0.5s						
TA01	**Diego Aracena**	**0.81**	**175**	⇑*iP*	**Pn**	**05 48 52.4**	**-0.5**
TA01				*i* S	**Sn**	**05 49 03.9**	**+0.2**
TA01				IAML		05 49 06.2	
	comp=E,2μm,0.6s						
MNMC	**Minye Minye**	**0.88**	**45**	⇑*iP*	**Pn**	**05 48 54.3**	**+0.1**
MNMC				*i* S	**Sn**	**05 49 06.5**	**+0.6**
MNMC				IAML		05 49 07.2	
	comp=E,11μm,0.2s						
GO01	**Chusmiza**	**1.00**	**85**	⇑*iP*	**Pn**	**05 48 56.3**	**+0.3**
GO01				*i* S	**Sn**	**05 49 09.9**	**+0.7**
GO01				IAML		05 49 11.6	
	comp=N,8μm,0.1s						
PATCX	**Punta Patache**	**1.06**	**175**	⇑*iP*	**Pn**	**05 48 56.1**	**-0.4**
PATCX				*i* S	**Sn**	**05 49 10.8**	**+0.7**
PATCX				IAML		05 49 12.5	
	comp=E,2μm,0.5s						
PB08	**IPOC Station P**	**1.10**	**110**	⇑*iP*	**Pn**	**05 48 57.6**	**+0.2**
PB08				*i* S	**Sn**	**05 49 12.7**	**+1.1**
AP01	**Chacalluta**	**1.38**	**357**	⇑*iP*	**Pn**	**05 49 01.4**	**+0.6**
AP01				*i* S	**Sn**	**05 49 19.3**	**+1.4**
AP01				IAML		05 49 25.4	
	comp=N,12μm,0.3s						
PB16	**IPOC Station P**	**1.58**	**27**	⇑*iP*	**Pn**	**05 49 04.6**	**+0.5**
PB16				*i* S	**Sn**	**05 49 25.1**	**+1.5**
PB16				IAML		05 49 27.9	
	comp=N,670nm,0.4s						
PB09	**IPOC Station P**	**2.24**	**155**	⇑*iP*	**Pn**	**05 49 14.2**	**+1.4**
PB09				*e*S	**Sn**	**05 49 41.3**	**+2.0**
PB09				IAML		05 49 52.3	
	comp=E,402nm,0.5s						
PB03	**IPOC Station P**	**2.33**	**168**	⇓*iP*	**Pn**	**05 49 14.4**	**+0.4**
LVC	**Limon Verde**	**3.10**	**156**	P	**Pn**	**05 49 26.5**	**+1.7**
	comp=E,2.9nm,0.3s,baz=340,slow=11,SNR=27						
LVC				S	**Sn**	**05 50 05.8**	**+4.8**
	comp=E,8.9nm,0.3s,baz=199,slow=18,SNR=15						
LVC				LR	LR	05 51 02.7	
	comp=E,66nm,20.0s,baz=59,slow=49						
LPAZ	**La Paz**	**4.00**	**31**	P	**Pn**	**05 49 41.6**	**+4.2**
	comp=E,3.5nm,0.3s,baz=207,slow=5.9,SNR=59						
SIV	**San Ignacio**	**9.51**	**68**	P	**Pn**	**05 50 52.3**	**-0.3**
	comp=E,2.9nm,0.3s,baz=274,slow=9.2,SNR=72						
TORD	**Torodi Ar. Bea**	**77.97**	**71**	P	**P**	**06 00 30.4**	**-2.9**
	comp=E,0.4nm,0.5s,baz=257,slow=4.9,SNR=7.4						
YKA	**Yellowknife Ar**	**89.14**	**341**	P	**P**	**06 01 28.4**	**-1.0**
	comp=E,0.3nm,0.6s,baz=140,slow=4.1,SNR=4.9						

IDC 22 06:49:08.0±6.2, 7°.60N×103°.13W, h0km, mb3.3/5, mb1 3.9/6, mb1mx3.7/31, mbtmp3.5/6, ML3.9/1, MS3.3/9, Ms1 3.3/9, ms1mx3.1/23, Error ellipse: s-maj=113.4km s-min=60.2km az=177.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**12.40**	**40**	LR	LR	06 55 33.4	
	comp=Z,196nm,20.6s,baz=194,slow=31						
H06E1	**SOCORRO T-PHASE**	**13.45**	**326**	T	T	07 05 13.1	
	SNR=7.0						
APG	**El Apazote**	**14.43**	**58**	Pn	Pn	06 52 34.6	+0.7
	0.5nm,0.3s,baz=236,slow=15,SNR=4.5						
APG				LR	LR	06 56 51.5	
	comp=Z,143nm,20.9s,baz=259,slow=32						
TEIG	**Tepich**	**19.09**	**47**	LR	LR	06 59 46.3	
	comp=Z,77nm,21.2s,baz=229,slow=33						
TXAR	**Lajitas Array**	**21.63**	**359**	P	P	06 53 59.6	-0.4
	0.8nm,0.7s,baz=185,slow=11,SNR=9.1						
TXAR				LR	LR	07 01 29.9	
	comp=Z,57nm,19.6s,baz=0.0,slow=34						
ATAH	**Atahualpa**	**28.68**	**120**	LR	LR	07 04 23.4	
	comp=Z,113nm,20.6s,baz=282,slow=32						
NNA	**Nana**	**32.59**	**126**	LR	LR	07 06 41.1	
	comp=Z,32nm,18.4s,baz=312,slow=32						
NVAR	**Mina Array Bea**	**33.62**	**338**	P	P	06 55 51.5	+1.0
	0.3nm,0.6s,baz=153,slow=6.1,SNR=3.2						
PDAR	**Pinedale Array**	**35.48**	**352**	P	P	06 56 06.3	-0.3
	0.9nm,0.8s,baz=147,slow=8.9,SNR=7.1						
LVC	**Limon Verde**	**44.99**	**133**	LR	LR	07 12 14.5	
	comp=Z,32nm,21.7s,baz=232,slow=31						
CFA	**Coronel Fontan**	**51.30**	**141**	LR	LR	07 15 30.0	
	comp=Z,40nm,19.9s,baz=348,slow=31						
PPT	**Papeete**	**52.26**	**241**	LR	LR	07 13 43.0	
	comp=Z,51nm,21.1s,baz=256,slow=28						
YKA	**Yellowknife Ar**	**55.43**	**354**	P	P	06 58 43.8	-0.3
	0.1nm,0.5s,baz=168,slow=6.6,SNR=3.5						
ILAR	**Eielson Array**	**64.81**	**341**	P	P	06 59 48.1	-0.3
	0.5nm,0.9s,baz=157,slow=4.5,SNR=4.9						

IDC 22 06:57:33.7±2.0, 54°.60N×83°.51E, h0km, mb1 2.8/2, mb1mx2.8/44, mbtmp2.8/2, ML2.5/2, Error ellipse: s-maj=18.5km s-min=11.1km az=166.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.01**	**130**	*i*		07 03 30.0	
	baz=310,slow=352,SNR=5.6						
ZALV	**Zalesovo Beam**	**1.01**	**130**	Pg	Pg	06 57 52.9	-0.1
	3.2nm,0.3s,baz=311,slow=16,SNR=34						
ZALV				Lg	Lg	06 58 07.4	
	7.2nm,0.3s,baz=312,slow=28,SNR=40						
ZALV				Rg	Rg	06 58 15.6	
	30nm,1.0s,baz=314,slow=32,SNR=13						
KURBB	**Kurchatov Arra**	**5.00**	**219**	Pn	Pn	06 58 50.1	+0.1
	0.1nm,0.3s,baz=39,slow=14,SNR=3.8						
MKAR	**Makanchi Array**	**7.85**	**186**	Pn	Pn	06 59 29.2	+0.1
	0.2nm,0.3s,baz=8.9,slow=12,SNR=11						

*NEIC **22** 07:04:45.6±1.4, 40°.67S±0°.07×175°.94E±0°.09, h48km±9km, Error ellipse: s-maj=14.5km s-min=2.6km az=137.0*

*WEL **22** 07:04:46.1, 40°.6S±0°.6×175°.9E±1°.0, h30km±1km, ML4.1/16, MLv3.8/91, Error ellipse: s-maj=0.0km s-min=0.0km az=103.5*

ISC 22 07:04:45.7±0.7, 40°.64S±0°.02×175°.87E±0°.02, h33km±7km, n129, σ1s 102/137, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRWZ	**Pori Road**	**0.12**	**44**	P	**Pn**	**07 04 52.1**	**+0.9**
PRWZ				S	Sn	07 04 56.8	+2.2
TIWZ	**Tintock**	**0.14**	**173**	P	**Pn**	**07 04 52.2**	**+0.5**
TIWZ				S	**Sn**	**07 04 56.3**	**+1.1**
MRZ	**Mangatainoka R**	**0.22**	**264**	P	**Pn**	**07 04 52.7**	**+0.3**
MRZ				S	**Sn**	**07 04 57.5**	**+0.4**
POWZ	**Post Office Ro**	**0.26**	**343**	P	**Pb**	**07 04 53.3**	**+0.5**
POWZ				S	**Sn**	**07 04 58.6**	**+0.5**
BFZ	**Birch Farm**	**0.29**	**98**	P	**Pb**	**07 04 54.0**	**+0.7**
BFZ				S	**Sn**	**07 04 59.9**	**+1.0**
BFZ	**Birch Farm**	**0.29**	**98**		**Pb**	**07 04 54.0**	**+0.7**
BFZ				Sg	**Sn**	**07 04 60.0**	**+1.0**
HOWZ	**Holdsworth Sta**	**0.37**	**226**	P	**Pn**	**07 04 54.9**	**+0.1**
HOWZ				S	**Sn**	**07 05 01.2**	**+0.3**
CPWZ	**Castlepoint**	**0.37**	**137**	P	**Pn**	**07 04 55.7**	**+0.9**
CPWZ				S	**Sn**	**07 05 03.4**	**+2.5**
DVHZ	**Dannevirke**	**0.41**	**34**	P	**Pb**	**07 04 55.4**	**+0.5**
DVHZ				S	**Sb**	**07 05 02.2**	**+1.0**
TMWZ	**Te Maipa**	**0.47**	**178**	P	**Pn**	**07 04 56.6**	**+0.4**
TMWZ				S	**Sn**	**07 05 04.7**	**+1.3**
ANWZ	**Angora Road**	**0.50**	**69**	P	**Pn**	**07 04 57.1**	**+0.6**
ANWZ				S	**Sn**	**07 05 04.8**	**+0.8**
OGWZ	**Otaki Gorge**	**0.56**	**251**	P	**Pn**	**07 04 57.7**	**+0.4**
TSZ	**Takapari Road**	**0.58**	**7**	P	**Pb**	**07 04 58.1**	**+0.5**
MTW	**Mount Morrison**	**0.59**	**208**	P	**Pn**	**07 04 58.1**	**+0.3**
MTW				S	**Sn**	**07 05 07.9**	**+1.6**
OHWZ	**Ohakea**	**0.60**	**316**	P	**Pn**	**07 04 59.3**	**+1.3**
PRHZ	**Porangahau**	**0.70**	**58**	P	**Pb**	**07 04 59.7**	**+0.3**
WPHZ	**Waipukurau**	**0.72**	**38**	P	**Pn**	**07 05 00.6**	**+1.0**
KIW	**Kapiti Island**	**0.76**	**253**	P	**Pb**	**07 05 00.9**	**+0.4**
CAW	**Cannon Point**	**0.77**	**232**	P	**Pb**	**07 05 00.7**	**+0.1**
PNHZ	**Pukenui**	**0.77**	**20**	P	**Pb**	**07 05 01.1**	**+0.4**
TRWZ	**Traveller**	**0.77**	**190**	P	**Pn**	**07 05 00.6**	**+0.3**
PAWZ	**Paruwai Farm**	**0.81**	**204**	P	**Pn**	**07 05 01.2**	**+0.3**
MSWZ	**Moikau Station**	**0.91**	**211**	P	**Pn**	**07 05 02.1**	**0.0**
MSWZ	**Moikau Station**	**0.91**	**211**	Pn	**Pn**	**07 05 02.1**	**0.0**
PXZ	**Pawanui**	**0.97**	**52**	P	**Pn**	**07 05 03.4**	**+0.4**
PLWZ	**Palliser**	**1.04**	**206**	P	**Pn**	**07 05 03.8**	**-0.2**
PLWZ	**Palliser**	**1.04**	**206**	Pn	**Pn**	**07 05 03.9**	**-0.1**
WEL	**Wellington**	**1.05**	**232**	P	**Pn**	**07 05 04.5**	**+0.4**
KERZ	**Kereru**	**1.07**	**21**	P	**Pn**	**07 05 05.1**	**+0.7**
BHW	**Baring Head**	**1.07**	**224**	P	**

URZ	Urewera	2.56	22	P	Pn	07 05 24.1	-0.9
URZ	Urewera	2.56	22		Pn	07 05 23.8	-1.2
MWZ	Matawai	2.64	30	P	Pn	07 05 25.0	-1.0
TKGZ	Te Karaka	2.68	36	P	Pn	07 05 25.6	-0.9
CNGZ	Carnagh Statio	2.81	41	P	Pn	07 05 27.6	-0.8
TOZ	Tahuroa Road	2.92	354	P	Pn	07 05 33.3	+3.5
RUGZ	Raukumara Rang	3.02	28	P	Pn	07 05 30.4	-0.9
PUZ	Puketiti	3.16	37	P	Pn	07 05 31.7	-1.5
PKGZ	Pakihiroa	3.24	33	P	Pn	07 05 33.0	-1.3
HAZ	Te Kaha	3.24	28	P	Pn	07 05 33.4	-0.8
DSZ	Denniston Nort	3.26	249	P	Pn	07 05 34.4	-0.1
LTZ	Lake Taylor	3.44	230	P	Pn	07 05 36.3	-0.7
LTZ	Lake Taylor	3.44	230	Pn	Pn	07 05 36.2	-0.7
WMGZ	Waiomatatini S	3.44	36	P	Pn	07 05 35.4	-1.6
MXZ	Matakaoa Point	3.61	33	P	Pn	07 05 38.8	-0.5
MXZ	Matakaoa Point	3.61	33	Pn	Pn	07 05 38.5	-0.8
AWAZ	Awhitu Peninsu	3.69	345	P	Pn	07 05 45.0	+4.5
OKCZ	Okains Bay	3.72	213	P	Pn	07 05 39.0	-1.9
WTAZ	Waiatarua	3.84	344	P	Pn	07 05 45.0	+2.6
MQZ	McQueen's Vall	3.88	217	P	Pn	07 05 40.6	-2.5
MQZ	McQueen's Vall	3.88	217	Pn	Pn	07 05 47.6	+4.5
AKCZ	Akaroa Harbour	3.91	213	P	Pn	07 05 43.1	-0.3
INZ	Inchbonnie	3.91	236	P	Pn	07 05 42.0	-1.4
RPZ	Rata Peaks	4.71	228	Pn	Pb	07 06 02.1	-5.4
FOZ	Fox Glacier	5.35	235	P	Pn	07 06 04.4	+1.2
LBZ	Lake Benmore	5.62	226	Pn	Pn	07 06 05.5	-1.5
ODZ	Otahua Downs	5.84	219	P	Pn	07 06 08.6	-1.3
ODZ	Otahua Downs	5.84	219	Pn	Pn	07 06 07.6	-2.3

NIED **22** *07:16:00, 43.70N×146.70E, h68km, Mw4.3 Best double couple: M₀3.15000×10¹⁵ NP1:φ=56.00000°, δ=80.00000°, λ=-98.00000°. NP2:φ=276.00000°, δ=13.00000°, λ=-51.00000°.*
MOS **22** *07:16:16.4±1.4, 43.74N×146.72E, h70km, mb4.3/9, Error ellipse: s-maj=10.0km s-min=6.8km az=84.2*
MOS Felt (III) at Malokuril'skoye.
SKHL **22** *07:16:17.0±0.1, 43.60N×146.80E, h70km±9km, mb5.1/14*
JMA **22** *07:16:18.3±0.2, 43.66N×146.62E, h58km±2km, M4.2*
JMA Felt I J1.
IDC **22** *07:16:20.0±2.2, 43.84N×146.51E, h81km±20km, mb3.8/20, mb1 3.9/24, mb1mx3.8/42, mbtmp4.0/24, MS3.3/12, Ms1 3.3/12, ms1mx3.1/41, Error ellipse: s-maj=16.7km s-min=12.8km az=137.0*
NEIC **22** *07:16:20.8±1.0, 43.84N±0.08×146.53E±0.03, h87km±7km, mb4.6/9, Error ellipse: s-maj=12.6km s-min=1.8km az=167.0*

ISC 22 07:16:17.6±0.6, 43.72N±0.04×146.67E±0.04, h64km±4km, n104, σ1s36/115, mb4.0/28, 28C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SHO	Shikotan	0.19	38	*d*	*i*	PN	Pn	07 16 27.6	+0.1
SHO					*i*	S	Sn	07 16 34.7	+0.1
SHO						pmax	pmax		
	comp=N,547nm,0.3s								
SHO						pmax	pmax		
	comp=Z,4μm,0.3s								
SHO						pmax	pmax		
	comp=E,1μm,0.4s								
SHO						smax	smax		
	comp=N,75μm,0.2s								
SHO						smax	smax		
	comp=E,17μm,0.2s								
SHO	Shikotan	0.19	38	⇓	*i*	P	Pn	07 16 27.7	+0.2
SHO						AMB	AMB	07 16 28.0	
	comp=E,550nm,0.3s								
SHO						AMB	AMB	07 16 28.0	
	comp=E,1μm,0.3s								
SHO						AMB	AMB	07 16 28.0	
	comp=E,4μm,0.3s								
SHO				⇑	*i*	S	Sn	07 16 34.8	+0.1
SHO						A	A	07 16 35.2	
	comp=E,75μm,0.3s								
SHO						A	A	07 16 35.2	
	comp=E,17μm,0.3s								
YUK	Yuzh-Kuril'sk	0.66	299	*c*	*i*	PN	Pn	07 16 31.4	-0.2
YUK					*i*	S	Sn	07 16 41.3	-0.6
YUK						pmax	pmax		
	comp=E,4μm,0.1s								
YUK						pmax	pmax		
	comp=Z,15μm,0.1s								
YUK						pmax	pmax		
	comp=N,2μm,0.2s								
YUK						smax	smax		
	comp=N,8μm,0.2s								
YUK						smax	smax		
	comp=E,15μm,0.2s								
YUK	Yuzh-Kuril'sk	0.66	299	⇑	*i*	P	Pn	07 16 31.4	-0.2
YUK						AMB	AMB	07 16 31.9	
	comp=E,210nm,0.2s								
YUK						AMB	AMB	07 16 31.9	
	comp=E,420nm,0.2s								
YUK						AMB	AMB	07 16 31.9	
	comp=E,2μm,0.2s								
YUK				⇑	*i*	S	Sn	07 16 41.8	-0.1
YUK						A	A	07 16 42.0	
	comp=E,8μm,0.2s								
YUK						A	A	07 16 42.0	
	comp=E,15μm,0.2s								
GRPR	Tuman	0.70	293	*c*	*i*	PN	Pn	07 16 31.8	-0.3
GRPR					*i*	S	Sn	07 16 41.9	-0.9
GRPR						pmax	pmax		
	comp=Z,4μm,0.2s								
GRPR						pmax	pmax		
	comp=N,1μm,0.1s								
GRPR						pmax	pmax		
	comp=E,1μm,0.1s								
GRPR						smax	smax		
	comp=N,7μm,0.2s								
GRPR						smax	smax		
	comp=E,11μm,0.2s								
GRPR	Tuman	0.70	293	⇑	*i*	P	Pn	07 16 31.8	-0.3
GRPR						AMB	AMB	07 16 32.0	
	comp=E,1μm,0.2s								
GRPR						AMB	AMB	07 16 32.0	
	comp=E,1μm,0.2s								
GRPR						AMB	AMB	07 16 32.0	
	comp=E,4μm,0.2s								
GRPR					*i*	S	Sn	07 16 42.5	-0.3
GRPR						A	A	07 16 43.0	
	comp=E,7μm,0.2s								
GRPR						A	A	07 16 43.0	
	comp=E,11μm,0.2s								
NEM2	Nemuro 2	0.76	243	⇑		P	Pn	07 16 32.6	-0.2
NEM2					eS		Sn	07 16 43.0	-0.9
NMR	Nemuro--Hokkai	0.77	243	*c*	*i*	PN	Pn	07 16 32.6	-0.3
NMR	Nemuro--Hokkai	0.77	243	⇑	*i*	P	Pn	07 16 32.6	-0.3
GLVR	Golovnino	0.83	272	*c*	*i*	PN	Pn	07 16 33.9	+0.2
GLVR					*i*	S	Sn	07 16 45.7	+0.2
GLVR						pmax	pmax		
	comp=N,1μm,0.1s								
GLVR						pmax	pmax		
	comp=E,689nm,0.1s								
GLVR						pmax	pmax		
	comp=Z,7μm,0.1s								
GLVR						smax	smax		
	comp=E,10μm,0.1s								
GLVR						smax	smax		
	comp=N,19μm,0.3s								
GLVR	Golovnino	0.83	272	⇑	*i*	P	Pn	07 16 33.9	+0.2
GLVR						AMB	AMB	07 16 34.0	
	comp=N,1μm,0.4s								
GLVR						AMB	AMB	07 16 34.0	
	comp=N,690nm,0.4s								
GLVR						AMB	AMB	07 16 34.0	
	comp=N,7μm,0.4s								
GLVR					*i*	S	Sn	07 16 46.5	+1.0
GLVR						A	A	07 16 46.6	
	comp=N,2μm,0.3s								
GLVR						A	A	07 16 46.6	
	comp=N,10μm,0.3s								
JRA	Rausu	1.14	282	⇑		P	Pn	07 16 38.0	+0.4
JRA					eS		Sn	07 16 52.7	+0.3
JNSB	Nemuroshibetsu	1.21	273	⇑		P	Pn	07 16 39.1	+0.6
JKHN	Kushirohamanak	1.27	240	⇑		P	Pn	07 16 39.5	+0.2
JKHN					eS		Sn	07 16 54.8	-0.7
JNK	Nakash	1.42	265	⇑		P	Pn	07 16 41.3	0.0
JNK					eS		Sn	07 16 58.7	-0.4
JAK	Akkeshi	1.61	244	⇑		P	Pn	07 16 43.7	-0.1
JAK					eS		Sn	07 17 02.8	-0.8
KUR	Kuril'sk	1.74	29	*c*	*i*	PN	Pn	07 16 46.2	+0.6
KUR					*i*	S	Sn	07 17 07.4	+0.6
KUR						pmax	pmax		
	comp=Z,618nm,0.4s								
KUR						pmax	pmax		
	comp=N,97nm,0.3s								
KUR						pmax	pmax		
	comp=E,169nm,0.2s								
KUR						smax	smax		
	comp=N,5μm,0.3s								
KUR						smax	smax		
	comp=E,3μm,0.3s								
KUR	Kuril'sk	1.74	29	⇑	*i*	P	Pn	07 16 46.3	+0.6
KUR						AMB	AMB	07 16 47.0	
	comp=E,100nm,0.4s								
KUR						AMB	AMB	07 16 47.0	
	comp=E,140nm,0.4s								
KUR						AMB	AMB	07 16 47.0	
	comp=E,620nm,0.4s								
KUR					*i*	S	Sn	07 17 07.1	+0.3
KUR						A	A	07 17 09.0	
	comp=E,5μm,0.3s								
KUR						A	A	07 17 09.0	
	comp=E,3μm,0.3s								
JTKR	Abashiri--Toko	2.01	278	⇑		P	Pn	07 16 50.1	+0.9
JAR	Ashorobuto	2.15	260	⇑		P	Pn	07 16 52.1	+1.0
JAR					eS		Sn	07 17 17.3	+0.6
JOB	Onbets	2.22	249	⇑		P	Pn	07 16 52.6	+0.5
JOB					eS		Sn	07 17 17.9	-0.5
JMP	Maruseppu	2.41	278	⇑		P	Pn	07 16 55.8	+1.1
JCH	Churui	2.66	247			P	Pn	07 16 58.0	0.0
JCH					eS		Sn	07 17 28.3	-0.8
JKA	Kamikawa-asahi	2.96	279	*e*		P	Pn	07 17 04.3	+2.0
JKA	Kamikawa-asahi	2.96	279			P	Pn	07 17 04.3	+2.0
ASAJ	Asahikawa	2.97	279			P	Pn	07 17 04.3	+2.0
	comp=E,10.0nm,0.3s,baz=96,slow=14,SNR=18								
ASAJ						LR	LR	07 18 29.3	
	comp=E,433nm,20.6s,baz=139,slow=46								
ERM	Erimo	3.09	238			PN	Pn	07 17 07.7	+3.7
ERM								07 17 42.2	
ERM	Erimo	3.09	238				Pn	07 17 07.7	+3.7
ERM						Sn	Sn	07 17 42.2	+2.5
YSS	Yuzh-Sakhalins	4.25	321	⇑	*i*	PN	Pn	07 17 21.2	+1.4
YSS					eS		Sn	07 18 09.0	+0.9
YSS						pmax	pmax		
	comp=Z,140nm,0.6s								
YSS						smax	smax		
	comp=N,50nm,0.9s								
YSS						smax	smax		
	comp=E,80nm,1.0s								
YSS						MLR	MLR		
	comp=Z,600nm,16.0s								
YSS	Yuzh-Sakhalins	4.25	321	⇑	*i*	P	Pn	07 17 21.2	+1.4
YSS						AMB	AMB	07 17 22.0	
	comp=Z,140nm,0.5s								
YSS					eS		Sn	07 18 08.5	+0.4
YSS						A	A	07 18 10.0	
	comp=Z,50nm,0.9s								
YSS						A	A	07 18 10.0	
	comp=Z,80nm,0.9s								
YSS	Yuzh-Sakhalins	4.25	321				Pn	07 17 21.1	+1.4
UGL	Uglegorsk	6.23	331	*e*		P	Pn	07 17 49.4	+2.5
UGL						AMB	AMB	07 17 49.8	
	comp=Z,21nm,0.4s								
TEY	Ternei	7.33	284	*e*		P	Pn	07 18 04.7	+2.8
TYV	Tymovskoe	7.65	341	*e*	PN		Pn	07 18 10.2	+4.0
TYV					eS		Sn	07 19 34.8	+3.5
TYV						pmax	pmax		
	comp=Z,300nm,5.8s								
TYV						pmax	pmax		
	comp=Z,11nm,0.7s								
TYV						smax	smax		
	comp=N,7.0nm,0.9s								
TYV	Tymovskoe	7.65	341	*e*		P	Pn	07 18 08.9	+2.7
TYV						AMB	AMB	07 18 13.2	
	comp=N,30nm,0.6s								
TYV					eS		Sn	07 19 31.4	+0.1
TYV						A	A	07 19 36.2	
	comp=N,70nm,0.9s								
SKR	Severo-Kuril's	9.48	39	*i*	PN		Pn	07 18 30.9	-0.3
SKR	Severo-Kuril's	9.48	39	*i*	P		Pn	07 18 32.2	+1.0
MJAR	Matsushiro Arr	9.65	225			P	Pn	07 18 34.6	+0.8
	comp=N,0.1nm,0.3s,baz=27,slow=12,SNR=5.1								
NKL	Nikolayevsk	10.24	339	*e*		P	Pn	07 18 43.6	+2.0
NKL						AMB	AMB	07 18 44.7	
	comp=N,80nm,0.7s								
USRK	Ussuriysk Ar.	10.60	278			LR	LR	07 22 54.3	
	comp=N,104nm,20.1s,baz=56,slow=38								
KLR	Kul'dur	11.66	303			P	Pn	07 19 04.8	+3.7
	comp=N,0.2nm,0.3s,baz=111,slow=14,SNR=18								
KLR						LR	LR	07 23 42.2	
	comp=N,93nm,19.3s,baz=110,slow=38								
PETK	Petropavlovsk-	11.90	34			P	Pn	07 19 06.3	+2.0
	comp=N,0.3nm,0.3s,baz=181,slow=12,SNR=6.2								
PETK						LR	LR	07 23 08.0	
	comp=N,55nm,18.8s,baz=69,slow=34								
PET	Petropavlovsk	12.24	36	*e*	PN		Pn	07 19 06.5	-2.4
PET						pmax	pmax		
	comp=Z,39nm,1.2s								
PET	Petropavlovsk	12.24	36	*e*	P		Pn	07 19 07.4	-1.5
EKMR	Ekimchan	13.04	321	*e*	P		Pn	07 19 20.0	+0.2
EKMR						AMB	AMB	07 19 23.6	
	comp=Z,10.0nm,0.8s								
KSRS	Korea Array	15.54	253			LR	LR	07 25 09.7	
	comp=Z,40nm,19.1s,baz=52,slow=34								
ZEA	Zeya	16.21	315	*e*	P		Pn	07 19 59.2	-1.9
KROS	Kirovskiy	16.71	317	*e*	P		Pn	07 20 05.6	-1.8
KROS						AMB	AMB	07 20 10.0	
	comp=Z,3.0nm,0.5s								
SEY	Seymchan	19.54	8	*i*	P		P	07 20 39.0	-0.6
SEY	Seymchan	19.54	8		P		P	07 20 38.7	-1.0
	comp=Z,0.4nm,0.3s,baz=194,slow=14,SNR=9.7								
YAK	Yakutsk	20.89	337	*i*	P		P	07 20 53.5	-0.8
YAK						pmax	pmax		
	comp=Z,5.0nm,0.7s								
BILL	Bilibino	26.49	16	⇑	*e*	P	P	07 21 48.3	-0.2
BILL					*e**	SP	sP	07 22 13.1	+1.7
BILL								07 22 32.0	
BILL						S	S	07 26 13.0	-4.6
BILL						pmax	pmax		
	comp=Z,1.0nm,1.1s								
SONM	Songino Array	28.16	293			P	P	07 22 03.5	-0.3
	comp=Z,1.1nm,0.5s,baz=84,slow=8.4,SNR=6.1								
SONM						LR	LR	07 34 27.1	
	comp=Z,92nm,18.2s,baz=104,slow=39								
H11N2	WAKE ISLAND Hy	29.31	138			T	T	07 53 06.9	
	baz=329,slow=75,SNR=635								
H11N1	WAKE ISLAND Hy	29.32	138			T	T	07 53 06.9	
	baz=329,slow=75,SNR=659								
H11N3	WAKE ISLAND Hy	29.33	138			T	T	07 53 16.6	
	baz=329,slow=75,SNR=645								
H11S1	WAKE ISLAND Hy	30.27	140			T	T	07 54 12.2	
	baz=330,slow=76,SNR=1529								
H11S3	WAKE ISLAND Hy	30.27	140			T	T	07 54 22.8	
	baz=330,slow=76,SNR=895								
H11S2	WAKE ISLAND Hy	30.29	140			T	T	07 54 19.9	
	baz=330,slow=76,SNR=753								
ZALV	Zalesovo Beam	40.74	307			PcP	PcP	07 25 52.4	+0.4
	comp=Z,1.4nm,0.5s,baz=60,slow=1.4,SNR=6.3								
ZALV						LR	LR	07 40 12.8	
	comp=Z,39nm,19.6s,baz=65,slow=35								
RND	Reindeer	40.92	38			P	P	07 23 53.8	+0.4
RND						pmax	pmax		
	comp=Z,41nm,1.8s								
RND	Reindeer	40.92	38			P	P	07 23 53.8	+0.4
DHY	Denali Highway	41.61	39			P	P	07 23 59.8	+0.6
ILAR	Eielson Array	41.72	36			P	P	07 24 00.6	+0.8
	comp=Z,1.2nm,0.8s,baz=266,slow=5.7,SNR=13								
MK31	Makanchi Array	44.29	297			P	P	07 24 20.2	-0.6
MK31						pmax	pmax		
	comp=Z,2.0nm,0.8s								
MK31	Makanchi Array	44.29	297			P	P	07 24 20.2	-0.6
MKAR	Makanchi Array	44.29	297	*c*	*e*	P	P	07 24 21.5	+0.7
MKAR						pmax	pmax		
	comp=Z,2.0nm,0.7s								
MKAR	Makanchi Array	44.29	297			P	P	07 24 20.1	-0.8
	comp=Z,1.6nm,0.7s,baz=79,slow=8.8,SNR=19								
MAKZ	Makanchi	44.48	298			P	P	07 24 21.7	-0.7
MAKZ						pmax	pmax		
	comp=Z,2.0nm,0.8s								
MAKZ	Makanchi	44.48	298			P	P	07 24 21.7	-0.7
KURK	Kurchatov	45.26	304	*i*		P	P	07 24 27.0	-1.4
KURK						pmax	pmax		
	comp=Z,1.0nm,1.0s								
INK	Inuvik	46.61	30			P	P	07 24 38.4	-0.4
	comp=Z,1.2nm,0.5s,baz=301,slow=6.9,SNR=13								
INK	Inuvik	46.61	30			IAmb	IAmb	07 24 47.7	
	comp=Z,14nm,1.6s								
BOOM	Boomskoye usch	50.17	295			P	P	07 25 06.6	-0.2
BOOM						pmax	pmax		
	comp=Z,3.0nm,0.7s								
BOOM	Boomskoye usch	50.17	295			P	P	07 25 06.6	-0.2
BOOM						IAmb	IAmb	07 25 08.2	
	comp=Z,3.2nm,0.7s								
KKAR	Karatay Array	53.42	298			IAmb	IAmb	07 26 41.6	
	comp=Z,13nm,1.9s								
YKA	Yellowknife Ar	56.02	34			P	P	07 25 49.5	+0.2
	comp=Z,0.9nm,0.6s,baz=297,slow=6.8,SNR=19								
ABKAR	Akbulak array	56.81	309			P	P	07 25 55.0	-0.1
ABKAR						IAmb	IAmb	07 26 34.2	
	comp=Z,10nm,1.8s								
AKTO	Aktyubinsk	57.29	311			LR	LR	07 53 54.9	
	comp=Z,51nm,19.2s,baz=81,slow=40								
KIRV	Kirov	57.40	322			LR	LR	07 54 47.9	
	comp=Z,83nm,19.6s,baz=98,slow=40								
ARCES	ARCESS Array B	59.15	339			P	P	07 26 11.1	-0.1
	comp=Z,1.4nm,0.8s,baz=40,slow=7.1,SNR=2.3								
WRA	Warramunga Arr	64.35	193			P	P	07 26 47.4	+0.8
	comp=Z,1.8nm,0.9s,baz=9.6,slow=6.5,SNR=7.1								
FINES	FINESS Array B	64.74	333	*c*	*e*	P	P	07 26 46.4	-2.3
FINES						pmax	pmax		
	comp=Z,2.0nm,0.6s								
FINES	FINESS Array B	64.74	333			P	P	07 26 47.3	-1.4
	comp=Z,2.1nm,0.6s,baz=57,slow=8.1,SNR=11								
NVAR	Mina Array Bea	67.89	58			P	P	07 27 11.2	+1.6
	comp=Z,0.5nm,0.5s,baz=286,slow=7.1,SNR=6.3								
ASAR	Alice Springs	68.07	193			P	P	07 27 11.6	+1.2
	comp=Z,1.8nm,0.7s,baz=8.3,slow=4.8,SNR=22								
FRB	Frobisher Bay	69.31	16			P	P	07 27 16.6	-1.0
	comp=Z,2.9nm,0.6s,baz=345,slow=8.5,SNR=5.6								
NOA	NORSAR Array B	69.50	339			P	P	07 27 18.2	-0.8
	comp=Z,1.0nm,0.7s,baz=41,slow=5.8,SNR=3.5								
NOA						LR	LR	08 01 00.4	
	comp=Z,21nm,21.0s,baz=250,slow=39								
KIV	Kislovodsk	69.52	312	*e*		P	P	07 27 20.3	+0.9
KIV						MLR	MLR		
	comp=Z,134nm,17.0s								
KIV	Kislovodsk	69.52	312	*e*		P	P	07 27 20.3	+0.9
KBZ	Khabaz	69.56	311			P	P	07 27 20.4	+0.9
	comp=Z,4.4nm,0.7s,baz=84,slow=6.3,SNR=9.4								
PDAR	Pinedale Array	70.20	49			P	P	07 27 24.6	+0.8
	comp=Z,0.6nm,0.6s,baz=234,slow=1.9,SNR=7.0								
AKASG	Malin Array Be	71.40	323	*c*	*e*	P	P	07 27 30.2	-0.4
AKASG						pmax	pmax		
	comp=Z,1.0nm,0.5s								
AKASG	Malin Array Be	71.40	323			P	P	07 27 29.7	-0.9
	comp=Z,1.9nm,0.6s,baz=39,slow=6.1,SNR=8.9								
ULM	Lac du Bonnet	71.74	37			P	P	07 27 32.7	+0.1
	comp=Z,0.9nm,0.4s,baz=310,slow=6.5,SNR=3.6								
ULM	Lac du Bonnet	71.74	37			IAmb	IAmb	07 27 33.1	
	comp=Z,22nm,1.8s								
CLL	Collm	77.18	332	*i*		P	P	07 28 03.4	-0.8
CLL	Collm	77.18	332	*i*		P	P	07 28 03.4	-0.8
BRTR	Keskin Array B	77.31	313	*c*	*e*	P	P	07 28 05.5	+0.1
BRTR						pmax	pmax		
	comp=Z,1.0nm,0.6s								
BRTR	Keskin Array B	77.31	313			P	P	07 28 05.4	0.0
	comp=Z,0.9nm,0.6s,baz=85,slow=3.8,SNR=5.1								
SCHQ	Schefferville	77.77	19			P	P	07 28 07.0	-0.4
	comp=Z,2.3nm,0.7s,baz=291,slow=8.6,SNR=7.3								
GERES	GERESS Array B	79.01	330			P	P	07 28 14.2	-0.3
	comp=Z,0.9nm,0.6s,baz=40,slow=5.1,SNR=6.4								
GERES						LR	LR	08 10 44.5	
	comp=Z,39nm,19.0s,baz=314,slow=41								
TXAR	Lajitas Array	82.96	56			P	P	07 28 36.9	+1.0
	comp=Z,0.4nm,0.5s,baz=291,slow=3.6,SNR=9.3								
PPT	Papeete	84.31	121			LR	LR	08 02 20.7	
	comp=Z,38nm,19.6s,baz=178,slow=33								

NNC **22** *07:17:06.9±3.1, 43.26N×82.16E, h0km, mb2.8, mpv2.4, Error ellipse: s-maj=33.5km s-min=13.7km az=142.0*
SOME **22** *07:17:07.0, 43.45N×82.00E, h5km*

ISC 22 07:17:04.2±2.4, 43.40N±0.09×82.17E±0.09, h17km±13km, n10, σ2s30/18, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
DJR	Jarkent	1.95	299	*e*	P		Pb	07 17 41.3	+1.9
DJR					eS		Sg	07 18 05.5	-1.5
	2.3nm,0.4s								
PDGK	Podgornoye	1.95	269	⇓	P	n	Pb	07 17 41.2	+1.8
PDGK					⇓	g	Lg	07 18 08.1	
	3.5nm,0.3s								
SHLS	Shalkode	1.99	264	*e*	P		Pn	07 17 37.0	-0.3
SHLS					eS		Sn	07 17 57.9	-4.0
	9.2nm,0.6s								
UZB	Uzynbulak	2.31	265	*e*	P		Pg	07 17 48.4	-0.2
UZB					eS		Sg	07 18 17.7	-0.8
	6.2nm,0.4s								
KPKS	Kokpek	2.54	273	*e*	P		Pb	07 17 51.5	+2.1
KPKS					eS		Sg	07 18 23.1	-2.7
	6.8nm,0.1s								
KAPS	Kapalarasan	2.76	314	*e*	P		Pb	07 17 55.9	+2.8
KAPS					eS		Sg	07 18 30.9	-1.8
	6.6nm,0.4s								
SATY	Saty	2.77	264	*e*	P		Pb	07 17 55.8	+2.4
SATY					eS		Sg	07 18 30.6	-2.6
	1.0nm,0.2s								
ARXS	Arharly	3.24	286	*e*	P		Pb	07 18 03.5	+2.1
ARXS					eS		Sb	07 18 43.2	+2.6
	3.1nm,0.5s								
MK31	Makanchi Array	3.39	1	⇓	P	n	Pb	07 18 04.1	+0.3
MK31					Pg		Pg	07 18 10.2	+1.0
	1.0nm,0.3s								
MK31				⇑	L	g	Lg	07 18 59.9	
	3.1nm,0.4s								
MAKZ	Makanchi	3.41	358	⇑	P	n	Pb	07 18 03.9	-0.2
MAKZ				⇑	L	g	Lg	07 18 56.9	
	0.4nm,0.6s,baz=178,slow=26								
	1.8nm,1.4s								

IDC **22** *07:29:29.3±2.5, 29.87N×87.94E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.5/47, mbtmp3.6/7, ML3.2/1, MS3.1/7, Ms1 3.1/7, ms1mx2.9/45, Error ellipse: s-maj=55.8km s-min=33.5km az=142.0*
BJI **22** *07:29:30.6±

TORD	**Torodi Ar. Bea**	**80.57**	**280**	P		**P**	**07 41 43.5**	**+0.7**
	0.4nm,0.7s,baz=70,slow=3.7,SNR=2.4							
YKA	**Yellowknife Ar**	**86.27**	**10**	P		**P**	**07 42 11.6**	**+0.3**
	0.3nm,0.7s,baz=331,slow=4.8,SNR=5.3							

*NNC **22** 07:40:52.7±2.4, 48°.37N×70°.10E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=31.5km s-min=9.1km az=72.0, Suspected Mining explosion.*
*SOME **22** 07:40:55.8, 48°.40N×70°.73E*
ISC 22 07:40:58.3±2.3, 48°.6N±0°.1×70°.6E±0°.3, h0km, n11, σ1s63/9, 4C-4D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTLS	**Baital**	**4.24**	**145**	Pg	**Pb**	**07 42 13.8**	**+0.2**
	0.2nm,0.1s						
BTLS				Lg	Lg	07 43 09.5	
	2.3nm,0.3s						
BRVK	**Borovoye**	**4.51**	**358**	⇓Pg	**Pb**	**07 42 20.1**	**+1.9**
	1.7nm,0.9s						
BRVK				⇑Sn	**Sn**	**07 42 59.9**	**-1.0**
	1.5nm,0.6s						
BRVK				⇑Lg	Lg	07 43 21.3	
	5.5nm,0.8s						
KK31	**Karatay Array**	**5.46**	**181**	⇓Lg	Lg	07 43 37.0	
	1.7nm,0.8s,baz=349,slow=28,SNR=3.9						
KURBB	**Kurchatov Arra**	**5.55**	**65**	⇓Lg	Lg	07 44 02.2	
	7.0nm,0.7s						
KURK	**Kurchatov**	**5.63**	**64**	⇓Lg	Lg	07 44 03.2	
	3.2nm,0.8s						
SGDS	**Sogindy**	**5.83**	**150**	Pg	**Pb**	**07 42 41.2**	**+0.5**
	1.8nm,0.4s						
SGDS				Lg	Lg	07 43 57.0	
	2.1nm,0.6s						
KRBS	**Karabastau**	**6.00**	**142**	Pg	**Pb**	**07 42 43.1**	**-0.7**
	0.4nm,0.3s						
KRBS				Lg	Lg	07 44 00.3	
	1.4nm,0.8s						
DGS	**Degeres**	**6.42**	**144**	Pg	**Pb**	**07 42 51.7**	**+0.8**
	0.5nm,0.3s						
DGS				Lg	Lg	07 44 15.0	
	3.5nm,0.6s						
KTBS	**Karatobe**	**6.43**	**137**	Pg	**Pb**	**07 42 52.8**	**+1.8**
	0.7nm,0.2s						
KTBS				Lg	Lg	07 44 16.8	
	3.1nm,0.8s						
ARXS	**Arharly**	**6.62**	**128**	Pg	**Pb**	**07 42 56.2**	**+2.0**
	0.8nm,0.2s						
ARXS				Lg	Lg	07 44 22.7	
	2.8nm,0.6s						
MK31	**Makanchi Array**	**8.08**	**98**	⇑Pn	**Pn**	**07 42 55.1**	**-1.7**
	0.6nm,0.7s,baz=271,slow=14,SNR=5.7						
MK31				⇑Lg	Lg	07 45 17.4	
	0.8nm,0.7s,baz=279,slow=29,SNR=4.3						

IDC 22 08:06:23.4±12.0, 6°.61S×128°.55E, h353km±154km, mb2.5/1, mb1 3.1/4, mb1mx2.8/27, mbtmp3.8/4, Error ellipse: s-maj=78.2km s-min=56.1km az=35.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.77**	**194**	P	P	08 09 01.9	-0.5
FITZ				S	S	08 11 12.8	-0.7
	0.1nm,0.3s,baz=355,slow=18,SNR=3.7						
WRA	**Warramunga Arr**	**14.40**	**158**	P	P	08 09 29.9	-1.5
	0.3nm,0.3s,baz=333,slow=12,SNR=7.7						
ASAR	**Alice Springs**	**17.72**	**164**	P	P	08 10 07.7	+0.3
	1.2nm,0.3s,baz=344,slow=11,SNR=56						
MKAR	**Makanchi Array**	**67.12**	**327**	P	P	08 16 40.0	0.0
	0.1nm,0.4s,baz=139,slow=8.3,SNR=2.9						

*ASRS **22** 08:21:26.3, 53°.75N×90°.97E, M2.2, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 22 08:21:31.4±7.4, 53°.61N×90°.78E, h0km, mb3.8, mpv3.5, 7C-7D, Error ellipse: s-maj=55.8km s-min=40.0km az=57.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.55**	**278**	⇓Pg	Pb	08 22 34.1	-1.0
	2.1nm,0.7s						
ZAA0				⇓Lg	Lg	08 23 24.9	
	15nm,0.9s						
KURK	**Kurchatov**	**8.02**	**254**	⇓Pn	Pn	08 23 30.0	+0.9
	7.6nm,1.2s						
KURK				⇑Sn	Sn	08 24 59.8	-0.6
	12nm,0.9s						
KURK				⇑Lg	Lg	08 25 47.0	
	38nm,1.3s						
KURBB	**Kurchatov Arra**	**8.11**	**253**	⇓Pn	Pn	08 23 31.0	+0.6
	5.1nm,0.6s						
KURBB				⇓Sn	Sn	08 25 02.0	-0.7
	48nm,1.1s						
KURBB				⇓Lg	Lg	08 25 50.0	
	42nm,0.8s						
MK31	**Makanchi Array**	**8.73**	**222**	⇓Pn	Pn	08 23 40.8	+2.0
	0.7nm,0.5s,baz=34,slow=12,SNR=26						
MK31				⇑Sn	Sn	08 25 21.8	+3.9
MK31				⇑Lg	Lg	08 26 07.8	
	13nm,1.1s,baz=44,slow=31						
MAKZ	**Makanchi**	**8.84**	**223**	⇑Pn	Pn	08 23 42.2	+1.9
	1.3nm,0.6s						
MAKZ				⇑Sn	Sn	08 25 21.0	+0.3
	2.9nm,0.9s						
MAKZ				⇑Lg	Lg	08 26 11.7	
	7.5nm,1.2s						

IDC 22 08:53:33.0±8.7, 22°.31N×143°.30E, h234km±76km, mb3.1/8, mb1 3.2/8, mb1mx3.0/60, mbtmp3.7/8, MS2.5/1, Ms1 2.5/1, ms1mx2.3/15, Error ellipse: s-maj=78.8km s-min=16.0km az=73.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**8.80**	**170**	LR	LR	08 57 41.1	
	comp=Z,27nm,19.1s,baz=109,slow=28						
KSRS	**Korea Array**	**20.09**	**322**	P	P	08 57 49.4	+0.4
	1.0nm,0.7s,baz=142,slow=8.8,SNR=4.6						
SONM	**Songino Array**	**38.94**	**320**	P	P	09 00 36.0	-0.4
	0.4nm,0.6s,baz=117,slow=8.3,SNR=3.8						
WRA	**Warramunga Arr**	**42.90**	**192**	P	P	09 01 08.8	0.0
	0.4nm,0.3s,baz=17,slow=8.8,SNR=4.6						
ASAR	**Alice Springs**	**46.61**	**192**	P	P	09 01 37.6	-0.4
	0.4nm,0.8s,baz=11,slow=10,SNR=4.2						
ZALV	**Zalesovo Beam**	**53.80**	**321**	P	P	09 02 30.1	-1.3
	0.6nm,0.4s,baz=104,slow=9.5,SNR=3.7						
MKAR	**Makanchi Array**	**54.36**	**312**	P	P	09 02 36.1	+0.4
	0.5nm,0.5s,baz=86,slow=8.9,SNR=8.1						
KURBB	**Kurchatov Arra**	**57.15**	**317**	P	P	09 02 55.4	+0.1
	1.0nm,0.6s,baz=93,slow=7.6,SNR=7.6						
BVAR	**Borovoye Array**	**62.28**	**319**	P	P	09 03 30.2	0.0
	1.5nm,0.4s,baz=86,slow=6.9,SNR=12						
PLCA	**Paso Flores**	**146.08**	**131**	PKPbc	PKPbc	09 12 45.1	-0.6
	1.6nm,0.7s,baz=236,slow=9.4,SNR=4.1						

*BER **22** 09:03:55.4±1.2, 59°.57N×14°.61E, h0km±60km, ML1.3*
UPP 22 09:03:56.1±0.1, 59°.74N×14°.24E, h0km, ML1.8, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRAU	**Nora**	**0.44**	**112**	P	Pg	09 04 04.6	+0.1
NRAU				S	Sg	09 04 10.3	+0.1
UDD	**Uddeholm**	**0.47**	**318**	P	Pg	09 04 05.2	0.0
UDD				S	Sg	09 04 11.7	+0.3
ASKU	**Askersund**	**0.90**	**160**	P	Pg	09 04 12.9	-0.4
ASKU				S	Sg	09 04 24.4	-0.5
FALU	**Falun**	**1.10**	**46**	P	Pg	09 04 16.8	-0.4
BACU	**Backbrunna**	**1.46**	**84**	P	Pn	09 04 23.0	-0.6
OSTU	**Oestervaala**	**1.54**	**70**	P	Pn	09 04 24.3	-0.4
FIBU	**Brunna**	**1.58**	**83**	P	Pn	09 04 25.2	-0.1
FKPU	**Falk**	**1.61**	**190**	P	Pn	09 04 26.0	+0.3
LNKU	**Linkoeping**	**1.66**	**156**	P	Pn	09 04 26.6	+0.3
NC602	**NORSAR Array S**	**1.68**	**308**	*e*P	Pn	09 04 26.8	+0.1
STRU	**Stroemstad**	**1.71**	**247**	*e*P	Pn	09 04 26.4	-0.7
STRU				*e*S	Sn	09 04 49.1	-0.7
VIKU	**Vikbolandet**	**1.77**	**133**	P	Pn	09 04 28.4	+0.4
NB201	**NORSAR Array S**	**1.97**	**313**	*e*P	Pn	09 04 31.4	+0.8
NB201				*e*S	Sg	09 04 58.7	-0.5
NB201				IAML		09 05 01.1	
	comp=Z,2.9nm,0.6s						
NAO01	**NORSAR Array S**	**2.00**	**305**	*e*P	Pb	09 04 32.4	-1.0
NAO01				*e*S	Sb	09 04 58.8	-0.1
NAO01				IAML		09 05 00.4	
	comp=Z,5.1nm,0.8s						
NC303	**NORSAR Array S**	**2.06**	**318**	*e*P	Pn	09 04 33.1	+1.1
NC303				*e*S	Sb	09 05 00.9	+0.5
NC303				IAML		09 05 02.3	
	comp=Z,2.3nm,0.3s						
NBO00	**NORSAR Array S**	**2.15**	**309**	*e*P	Pn	09 04 33.3	+0.1
NBO00				*e*S	Sb	09 05 02.7	-0.4
NBO00				IAML		09 05 04.6	
	comp=Z,5.1nm,0.8s						
NC204	**NORSAR Array S**	**2.31**	**313**	*e*P	Pn	09 04 36.4	+1.0
NC204				*e*S	Sn	09 05 05.7	+1.2
NC204				IAML		09 05 08.9	
	comp=Z,2.8nm,0.7s						
KONO	**Kongsberg**	**2.35**	**270**	*e*S	Sn	09 05 05.7	+0.2

LVSN 22 09:04:17.8±4.6, 59°.66N×26°.96E, h0km±49km, ML1.3, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTSE	**Matsula**	**1.87**	**241**	*e*P	Pn	09 04 49.8	-1.3
MTSE				*e*S	Sb	09 05 16.6	-0.1
RAF	**Rauma**	**2.92**	**300**	*e*P	Pb	09 05 08.4	-2.3
RAF				AML	AML	09 05 38.5	
	comp=Z,2.1nm,0.6s						
RAF				AML	AML	09 05 52.6	
	comp=E,2.2nm,0.7s						
RAF				AML	AML	09 06 00.1	
	comp=N,2.5nm,0.9s						
SLIT	**Slitere, Latvi**	**3.17**	**232**	*e*S	Sb	09 05 52.7	-1.5

*ATH **22** 09:27:52.0, 38°.37N×20°.49E, h20km±2km, ML2.7/5, Error ellipse: s-maj=3.0km s-min=0.9km az=262.0*
*THE **22** 09:27:53.0, 38°.37N×20°.52E, h8km, ML2.7/15, Error ellipse: s-maj=0.9km s-min=0.5km az=77.0*
ISC 22 09:27:52.1±0.9, 38°.36N±0°.02×20°.46E±0°.04, h17km±6km, n45, σ0s58/67, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.21**	**151**	P	**Pg**	**09 27 57.0**	**-0.1**
VLS				S	**Sg**	**09 28 00.8**	**+0.3**
	3μm,0.1s						
VLS	**Valsamata**	**0.21**	**151**	P	**Pg**	**09 27 57.0**	**-0.1**
VLS				S	**Sg**	**09 28 00.8**	**+0.3**
VLS				AML	AML	09 28 02.2	
	comp=E,4715μm,0.1s						
VLS				AML	AML	09 28 04.1	
	comp=N,7941μm,0.1s						
EVGI	**Lefkada island**	**0.30**	**31**	P	**Pg**	**09 27 58.2**	**-0.3**
EVGI				S	**Sg**	**09 28 02.9**	**0.0**
	comp=N,4μm,0.2s						
EVGI	**Lefkada island**	**0.30**	**31**	P	**Pg**	**09 27 58.3**	**-0.3**
EVGI				S	**Sg**	**09 28 02.9**	**0.0**
KFL	**Anninata**	**0.36**	**134**	P	**Pg**	**09 27 59.6**	**0.0**
KFL				S	**Sg**	**09 28 04.6**	**-0.1**
	comp=N,4μm,0.2s						
KFL	**Anninata**	**0.36**	**134**	P	**Pg**	**09 27 59.6**	**0.0**
KFL				S	**Sb**	**09 28 05.2**	**-0.4**
KFL				AML	AML	09 28 07.6	
	comp=N,4472μm,0.2s						
KFL				AML	AML	09 28 07.7	
	comp=E,10513μm,0.3s						
LKD2	**Lefkada island**	**0.45**	**20**	P	**Pg**	**09 28 00.9**	**-0.3**
LKD2				S	**Sb**	**09 28 07.8**	**-0.4**
	comp=E,985nm,0.3s						
LKD2	**Lefkada island**	**0.45**	**20**	P	**Pg**	**09 28 00.9**	**-0.3**
LKD2				S	**Sg**	**09 28 07.6**	**+0.2**
LKD2				AML	AML	09 28 11.4	
	comp=E,1933μm,0.2s						
LKD2				AML	AML	09 28 14.4	
	comp=N,1997μm,0.4s						
TSLK	**Tsoukalades, L**	**0.48**	**18**	P	**Pg**	**09 28 01.5**	**-0.4**
TSLK				S	**Sg**	**09 28 08.6**	**+0.2**
	comp=N,2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.48**	**18**	P	**Pg**	**09 28 01.6**	**-0.2**
TSLK				S	**Sg**	**09 28 08.4**	**-0.1**
TSLK				AML	AML	09 28 10.3	
	comp=E,3358μm,0.4s						
TSLK				AML	AML	09 28 13.1	
	comp=N,3113μm,0.7s						
VLMS	**Volimes, Zakyn**	**0.51**	**162**	P	**Pg**	**09 28 02.5**	**+0.1**
RLS	**Riolos of Patr**	**0.85**	**111**	P	**Pg**	**09 28 08.2**	**-0.5**
RLS				S	**Sb**	**09 28 19.7**	**+0.1**
	comp=N,260nm,0.5s						
RLS	**Riolos of Patr**	**0.85**	**111**	P	**Pg**	**09 28 08.3**	**-0.3**
RLS				S	**Sb**	**09 28 20.2**	**+0.6**
RLS				AML	AML	09 28 30.1	
	comp=E,471μm,0.4s						
RLS				AML	AML	09 28 30.1	
	comp=N,526μm,0.7s						
PVO	**Paravola**	**0.87**	**73**	P	**Pg**	**09 28 08.8**	**-0.3**
PVO				S	**Sn**	**09 28 21.4**	**-0.7**
	comp=N,658nm,0.4s						
PVO	**Paravola**	**0.87**	**73**	P	**Pg**	**09 28 08.7**	**-0.3**
DRO	**Drossia**	**1.07**	**112**	P	**Pb**	**09 28 11.9**	**-0.3**
DRO				S	**Sn**	**09 28 27.0**	**+0.1**
	comp=N,785nm,0.3s						
DRO	**Drossia**	**1.07**	**112**	P	**Pb**	**09 28 12.2**	**0.0**
EFP	**Efpalio**	**1.14**	**86**	P	**Pb**	**09 28 12.9**	**-0.5**
EFP				S	**Sn**	**09 28 28.7**	**+0.1**
	comp=N,518nm,0.6s						
ANX	**Ano Chora**	**1.17**	**78**	P	**Pb**	**09 28 13.7**	**-0.3**
ANX				S	**Sn**	**09 28 30.4**	**+0.9**
	comp=N,470nm,0.6s						
ANX	**Ano Chora**	**1.17**	**78**	P	**Pb**	**09 28 13.6**	**-0.4**
IGT	**Igoumenitsa**	**1.17**	**355**	P	**Pg**	**09 28 15.1**	**+0.4**
IGT				S	**Sg**	**09 28 32.0**	**+1.9**
	comp=N,268nm,0.5s						
EVR	**Evrytania**	**1.19**	**62**	P	**Pb**	**09 28 14.0**	**-0.3**
EVR				S	**Sn**	**09 28 31.6**	**+1.5**
	comp=N,145nm,0.3s						
EVR	**Evrytania**	**1.19**	**62**	P	**Pb**	**09 28 14.0**	**-0.3**
LAKA	**Lakka**	**1.20**	**95**	P	**Pn**	**09 28 14.1**	**-0.1**
LAKA	**Lakka**	**1.20**	**95**	P	**Pn**	**09 28 14.1**	**-0.1**
SERG	**Sergoula**	**1.26**	**87**	P	**Pn**	**09 28 15.0**	**0.0**
SERG	**Sergoula**	**1.26**	**87**	P	**Pn**	**09 28 15.2**	**+0.2**
TRIZ	**Trizonia**	**1.27**	**89**	P	**Pn**	**09 28 15.0**	**-0.1**
TRIZ	**Trizonia**	**1.27**	**89**	P	**Pn**	**09 28 15.2**	**+0.1**
AMT	**Artemida-Makis**	**1.29**	**130**	P	**Pn**	**09 28 15.2**	**-0.3**
AMT				S	**Sg**	**09 28 34.3**	**+0.4**
	comp=N,360nm,0.8s						
ALIK	**Aliki, Aigiali**	**1.30**	**94**	P	**Pn**	**09 28 15.8**	**+0.2**
KALE	**Kalithea**	**1.32**	**88**	P	**Pn**	**09 28 15.9**	**0.0**
KALE	**Kalithea**	**1.32**	**88**	P	**Pn**	**09 28 16.0**	**+0.1**
JAN	**Janina**	**1.33**	**13**	P	**Pb**	**09 28 17.3**	**+0.7**
JAN				S	**Sg**	**09 28 35.1**	**+0.1**
	comp=N,222nm,0.4s						
KLV	**Kalavryta, Ach**	**1.37**	**103**	P	**Pn**	**09 28 17.0**	**+0.5**
KLV	**Kalavryta, Ach**	**1.37**	**103**	P	**Pn**	**09 28 17.1**	**+0.5**
AGG	**Agios Georgios**	**1.60**	**65**	P	**Pn**	**09 28 20.6**	**+0.8**
AGG				S	**Sb**	**09 28 41.6**	**+0.2**
	comp=N,90nm,0.7s						
THL	**Klokotos Trika**	**1.71**	**45**	P	**Pb**	**09 28 22.8**	**-0.2**
DBRK	**Dubrovnik**	**4.65**	**338**	Sn	**Sn**	**09 29 53.7**	**-1.5**
STON	**Ston**	**4.97**	**336**	*e*Pn	**Pn**	**09 29 06.1**	**+0.2**
KIJV	**Kijevo**	**6.41**	**333**	*i* Pn	**Pn**	**09 29 26.4**	**+0.6**
KIJV				Sn	**Sn**	**09 30 36.4**	**-2.2**
ZIRJ	**Zirje**	**6.42**	**327**	*e*Pn	**Pn**	**09 29 25.2**	**-0.6**
MORI	**Morici**	**6.56**	**328**	*e*Pn	**Pn**	**09 29 28.7**	**+0.8**
DUGI	**Dugi Otok**	**6.94**	**326**	*e*Pn	**Pn**	**09 29 33.4**	**+0.4**
NVLJ	**Novalja**	**7.48**	**328**	*e*Pn	**Pn**	**09 29 41.0**	**+0.6**

MAN 22 09:34:09.1, 10°.06N×124°.20E, h0km, mb3.9, ML2.7, MS2.2, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.34**	**318**	⇓*i* P	Pg	09 34 16.0	+0.3
LLP				*i* S	Sg	09 34 21.2	+1.1
MSLP	**Maasin**	**0.65**	**83**	*e*P	Pg	09 34 22.0	+0.4
MSLP				*e*S	Sb	09 34 33.2	+0.2
OCLP	**Ormoc**	**1.06**	**22**	*e*P	Pb	09 34 30.1	-0.3
OCLP				*e*S	Sn	09 34 46.4	-0.3

*NNC **22** 09:42:21.5±10.0, 37°.02N×70°.48E, h0km, mb4.2, mpv3.7, Error ellipse: s-maj=89.0km s-min=63.1km az=156.0*
*IDC **22** 09:42:25.2±7.6, 36°.89N×71°.69E, h263km±45km, mb3.4/6, mb1 3.4/12, mb1mx3.1/65, mbtmp4.1/12, Error ellipse: s-maj=74.2km s-min=25.8km az=178.0*
ISC 22 09:42:23.3±0.9, 36°.78N±0°.08×71°.6E±0°.1, h250km, n26, σ1s40/29, mb3.7/6, 4C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**6.26**	**20**	P	**Pn**	**09 43 55.8**	**+1.1**
	1.1nm,0.3s,baz=179,slow=6.1,SNR=14						
AAK				S	**S**	**09 45 07.1**	**-0.8**
	1.8nm,0.3s,baz=322,slow=23,SNR=24						
AAK	**Ala-Archa**	**6.26**	**20**	⇑Pn	**Pn**	**09 43 55.8**	**+1.1**
	1.9nm,0.5s						
AAK				⇑Sn	**S**	**09 45 10.0**	**+2.1**
	20nm,0.6s						
KK31	**Karatay Array**	**6.37**	**353**	⇑Pn	**Pn**	**09 43 55.7**	**-0.3**
	8.2nm,0.7s,baz=177,slow=13,SNR=65						
KK31				⇓Sn	**S**	**09 45 05.0**	**-5.2**
	4.8nm,0.5s,baz=184,slow=26,SNR=11						
MKAR	**Makanchi Array**	**12.78**	**35**	P	**Pn**	**09 45 16.4**	**0.0**
	0.9nm,0.3s,baz=214,slow=17,SNR=38						
DANN	**Dangsing**	**13.25**	**126**	*e*P	**Pn**	**09 45 22.2**	**-0.4**
	25nm,0.3s						
KOLN	**Koldanda**	**13.55**	**128**	*e*P	**Pn**	**09 45 26.2**	**0.0**
	13nm,0.3s						
GKN	**Gorkha**	**14.06**	**125**	*e*P	**Pn**	**09 45 31.6**	**-0.7**
	44nm,0.4s						
KKN	**Kakani**	**14.62**	**124**	*e*P	**Pn**	**09 45 38.5**	**-0.7**
	56nm,0.5s						
DMN	**Daman**	**14.63**	**125**	*e*P	**P**	**09 45 38.4**	**-0.9**
KURBB	**Kurchatov Arra**	**14.71**	**18**	P	**P**	**09 45 38.7**	**-0.9**
	0.1nm,0.3s,baz=208,slow=11,SNR=4.8						
PKIN	**Phulchoki**	**14.84**	**124**	*e*P	**P**	**09 45 41.5**	**-0.2**
	29nm,0.5s						
GUN	**Gumba**	**14.95**	**122**	*e*P	**P**	**09 45 42.9**	**-0.1**
	23nm,0.4s						
AB31	**Akbulak array**	**15.08**	**329**	Pn	**Pn**	**09 45 47.2**	**+3.0**
	0.9nm,0.3s,baz=138,slow=11,SNR=46						
JIRN	**Jiri**	**15.32**	**122**	*e*P	**P**	**09 45 47.4**	**+0.3**
	32nm,0.3s						
RAMN	**Ramite**	**16.06**	**123**	*e*P	**P**	**09 45 55.7**	**+0.6**
	25nm,0.4s						
BVAR	**Borovoye Array**	**16.27**	**357**	P	**P**	**09 45 57.1**	**+0.3**
	1.0nm,0.3s,baz=162,slow=12,SNR=14						
AKTO	**Aktyubinsk**	**16.78**	**329**	P	**P**	**09 46 03.1**	**+0.6**
	2.5nm,0.3s,baz=136,slow=9.6,SNR=29						
AKTO	**Aktyubinsk**	**16.78**	**329**	⇑Pn	**Pn**	**09 46 05.9**	**+1.5**
	12nm,0.7s						
ZALV	**Zalesovo Beam**	**19.46**	**24**	P	**P**	**09 46 30.9**	**-0.4**
	2.7nm,0.3s,baz=214,slow=12,SNR=17						
ARU	**Arti**	**21.53**	**340**	P	**P**	**09 46 53.4**	**+0.7**
	0.8nm,0.3s,baz=106,slow=8.1,SNR=4.3						
FINES	**FINESS Array B**	**37.52**	**326**	P	**P**	**09 49 13.2**	**+0.1**
	1.3nm,0.5s,baz=120,slow=9.9,SNR=8.5						
ARCES	**ACCESS Array B**	**41.07**	**327**	P	**P**	**09 49 42.6**	**+0.4**
	1.7nm,0.4s,baz=119,slow=9.1,SNR=32						
NB2	**NORSAR Subarra**	**44.45**	**323**	P	**P**	**09 50 08.7**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.45**	**323**	P	**P**	**09 50 08.8**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=96,slow=7.7,SNR=4.9						
TIXI	**Tiksi**	**45.33**	**22**	P	**P**	**09 50 16.2**	**0.0**
	comp=Z,2.0nm,0.3s,baz=180,slow=24,SNR=6.3						
YKA	**Yellowknife Ar**	**80.94**	**3**	P	**P**	**09 54 09.0**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=348,slow=5.3,SNR=13						

*ATH **22** 09:43:36.6, 38°.37N×20°.50E, h16km±2km, ML2.9/7, Error ellipse: s-maj=2.7km s-min=0.8km az=266.0*
*THE **22** 09:43:37.0, 38°.37N×20°.51E, h0km±1km, ML2.8/14, Error ellipse: s-maj=1.9km s-min=0.4km az=252.0*
ISC 22 09:43:35.8±1.0, 38°.36N±0°.02×20°.41E±0°.04, h16km±6km, n43, σ0s82/70, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.23**	**141**	P	**Pg**	**09 43 41.2**	**+0.2**
VLS				S	**Sg**	**09 43 44.2**	**-0.4**
	3μm,0.2s						
VLS	**Valsamata**	**0.23**	**141**	P	**Pg**	**09 43 41.2**	**+0.2**
VLS				S	**Sg**	**09 43 44.6**	**0.0**
VLS				AML	AML	09 43 46.7	
	comp=E,5365μm,0.1s						
VLS				AML	AML	09 43 46.9	
	comp=N,6834μm,0.2s						
EVGI	**Lefkada island**	**0.33**	**37**	P	**Pg**	**09 43 42.5**	**-0.1**
EVGI				S	**Sg**	**09 43 47.1**	**-0.2**
	comp=N,4μm,0.2s						
EVGI	**Lefkada island**	**0.33**	**37**	P	**Pg**	**09 43 42.6**	**-0.1**
EVGI				S	**Sg**	**09 43 47.3**	**0.0**
KFL	**Anninata**	**0.39**	**129**	P	**Pg**	**09 43 43.9**	**+0.1**
KFL				S	**Sg**	**09 43 48.5**	**-0.7**
	comp=N,3μm,0.5s						
KFL	**Anninata**	**0.39**	**129**	P	**Pg**	**09 43 43.9**	**+0.1**
KFL				S	**Sg**	**09 43 49.3**	**+0.1**
KFL				AML	AML	09 43 52.0	
	comp=N,5537μm,0.3s						
KFL				AML	AML	09 43 52.4	
	comp=E,7319μm,0.5s						
MGNA	**Meganis**	**0.42**	**45**	P	**Pg**	**09 43 44.1**	**-0.3**
MGNA				S	**Sg**	**09 43 49.6**	**-0.6**
LKD2	**Lefkada island**	**0.47**	**25**	P	**Pg**	**09 43 44.9**	**-0.4**
LKD2				S	**Sg**	**09 43 52.0**	**+0.3**
	comp=E,1μm,0.6s						
LKD2	**Lefkada island**	**0.47**	**25**	P	**Pg**	**09 43 45.1**	**-0.2**
LKD2				S	**Sg**	**09 43 51.9**	**+0.1**
LKD2				AML	AML	09 43 58.8	
	comp=N,2416μm,0.5s						
LKD2				AML	AML	09 43 59.1	
	comp=E,2434μm,0.5s						
TSLK	**Tsoukalades, L**	**0.51**	**23**	P	**Pg**	**09 43 45.7**	**-0.2**
TSLK				S	**Sg**	**09 43 53.0**	**+0.3**
	comp=E,2μm,0.6s						
TSLK	**Tsoukalades, L**	**0.51**	**23**	P	**Pg**	**09 43 45.9**	**0.0**
TSLK				S	**Sg**	**09 43 53.1**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.52**	**157**	P	**Pg**	**09 43 46.7**	**+0.5**

comp=N,700µm,0.6s
SERG AML AML 09 44 26.5
comp=E,715µm,0.5s
TRIZ Trizonia 1.31 89 P **Pn 09 43 59.4 0.0**
AMT Artemida-Makis 1.32 128 P **Pg 09 44 01.5 +0.3**
AMT S **Sg 09 44 19.2 +0.8**
comp=E,555nm,0.8s
AMT Artemida-Makis 1.32 128 P **Pg 09 44 01.6 +0.3**
JAN Janina 1.34 15 P **Pg 09 44 02.4 +0.7**
JAN S **Sg 09 44 21.1 +1.9**
comp=E,278nm,0.6s
KALE Kalíthea 1.36 88 P **Pn 09 44 00.3 +0.1**
KLV Kalavryta, Ach 1.41 102 P **Pn 09 44 01.4 +0.5**
MAKR Makrakomi, Fth 1.50 64 P **Pb 09 44 03.4 +0.1**
AGG Agios Georgios 1.65 66 P **Pb 09 44 05.8 0.0**
AGG Agios Georgios 1.65 66 P **Pb 09 44 06.2 +0.4**
THL Klokotos Trika 1.74 46 P **Pb 09 44 08.3 +0.9**
MAKA Makarska 5.55 334 *e*Pn **Pn 09 44 58.1 +0.3**
MAKA Sn **Sn 09 46 00.3 -0.9**
KIJV Kijevo 6.40 333 *e*Pn **Pn 09 45 10.0 +0.6**
KIJV Sn **Sn 09 46 19.6 -2.5**
ZIRJ Zirje 6.40 327 *e*Pn **Pn 09 45 10.1 +0.7**
ZIRJ Sn **Sn 09 46 19.4 -2.7**
MORI Morici 6.55 329 *i*Pn **Pn 09 45 12.7 +1.3**
MORI Sn **Sn 09 46 24.0 -1.7**
DUGI Dugi Otok 6.92 326 *e*Pn **Pn 09 45 17.5 +0.9**
DUGI Sn **Sn 09 46 32.2 -2.8**

IDC 22 09:53:20.8±8.4,**4°37S×152°92E,h33**km±57km,**mb3.8**/3,**mb1 4.0**/3,**mb1mx3.4**/36,**mbtmp4.0**/3,**Error ellipse: s-maj=48.1km s-min=43.0km az=52.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.90**	**274**	Pn		Pn	09 53 37.1	0.0
	60nm,0.3s,baz=0.0,slow=8.1,SNR=38							
KRVT				Sn		Sn	09 53 49.2	+0.2
	251nm,0.3s,baz=126,slow=22,SNR=55							
KRVT				LR		LR	09 54 05.8	
	comp=Z,132nm,19.1s,baz=79,slow=50							
WRA	**Warramunga Arr**	**23.82**	**228**	P		P	09 58 31.0	-0.1
	2.6nm,0.6s,baz=53,slow=9.7,SNR=14							
ASAR	**Alice Springs**	**26.55**	**222**	P		P	09 58 56.0	+0.1
	0.3nm,0.4s,baz=54,slow=9.0,SNR=9.7							
FITZ	**Fitzroy Crossi**	**29.97**	**241**	P		P	09 59 26.3	-0.1
	6.6nm,1.0s,baz=37,slow=5.1,SNR=3.6							
TORD	**Torodi Ar. Bea**	**150.29**	**289**	PKPbc		PKPbc	10 13 09.2	-0.5
	0.4nm,0.3s,baz=73,slow=2.6,SNR=5.8							

*BJI **22** 10:20:29.0±0.0,20.40S×172.50E,h10km,mB5.5/43, mb4.9/53,Ms5.2/45,Ms7 5.0/44*
*IDC **22** 10:20:29.0±0.5,20.52S×172.59E,h0km,mb4.7/21, mb1 4.8/25,mb1mx4.7/35,mbtmp4.7/25,ML4.1/3,MS5.0/28, Ms1 5.0/28,ms1mx4.9/39,Error ellipse: s-maj=17.9km s-min=13.6km az=136.0*
*NEIC **22** 10:20:30.7±1.4,20.49S±0.08×172.52E±0.07,h10km±1km, mb5.3/159,Ms_20 5.3/213,Mwb5.6/20,Mwc5.6(GCMT), Error ellipse: s-maj=11.7km s-min=10.0km az=158.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr0.25; Mθθ-1.64; Mφφ 1.39; Mrθ 1.16; Mθφ 1.54; Mrφ1.34; Fault plane solution: M₀2.80000×10¹⁷ NP1:φ₁69.61000°, δ79.31000°,λ34.10000°. NP2:φ₂332.46000°,δ56.57000°, λ167.16000°. Principal axes: T 3.0614, Plg31.0000°, Azm296.0000°; N -0.6360, Plg54.0000°, Azm85.0000°; P -2.4254, Plg15.0000°, Azm197.0000°;*
*BGR **22** 10:20:31.5±0.0,21.25S×173.72E,h33km*
*MOS **22** 10:20:31.0±1.0,20.46S×172.47E,h19km,mb5.4/40, MS5.2/8,Error ellipse: s-maj=8.5km s-min=7.5km az=137.1*
*GCMT **22** 10:20:33.7±0.1,20.53S±0.01×172.50E±0.01,h15km, MW5.6/159,Moment Tensor Solution. s110,c195; s159,c319; Duration: 1ⁱ5 Moment tensor: Scale 10¹⁷ Nm; Mrr-0.17±.03; Mθθ-1.93±.03; Mφφ2.09±.03; Mrθ-0.09±.09; Mθφ 1.71±.03; Mφr0.64±.10; Best double couple: M₀2.71400×10¹⁷ NP1:φ₁66.00000°,δ77.00000°, λ3.00000°. NP2:φ₂335.00000°,δ87.00000°,λ167.00000°. Principal axes: T 2.8300, Plg11.0000°, Azm290.0000°; N -0.2370, Plg77.0000°, Azm144.0000°; P -2.5970, Plg7.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **22** 10:20:34.20.55S×172.51E,h17km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr-0.30; Mθθ-1.98; Mφφ2.29; Mrθ-0.15; Mθφ 1.86; Mφr0.63; Fault plane solution: M₀2.92000×10¹⁷ NP1:φ₁66.00000°, δ77.00000°,λ0.00000°. NP2:φ₂336.00000°,δ90.00000°, λ167.00000°. Principal axes: T 3.0695, Plg9.0000°, Azm290.0000°; N -0.3359, Plg77.0000°, Azm155.0000°; P -2.7336, Plg9.0000°, Azm21.0000°;*

ISC 22 10:20:34.3±0.3,**20.60S**±0.05×**172.63E**±0.05,**h35**km,**n685,** σ1§**52**/597,**mb5.2**/116,**MS5.2**/149,**55C-9D,Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.87**	**62**	*c i*P		**Pn**	**10 22 00.2**	**+1.4**
MSVF	**Nonsavu**	**5.87**	**62**	Pn		**Pn**	**10 21 58.4**	**-0.4**
DZM	**Mont Dzumac**	**5.95**	**255**	*e*Pn		**Pn**	**10 21 58.9**	**-1.0**
	442nm,1.4s							
DZM				*e*LR		LR	10 23 23.4	
	comp=Z,25µm,24.8s							
DZM	**Mont Dzumac**	**5.95**	**255**	Pn		**Pn**	**10 21 58.9**	**-1.0**
	3.5nm,0.3s,baz=108,slow=21,SNR=26							
DZM	**Mont Dzumac**	**5.95**	**255**			**Pn**	**10 21 58.1**	**-1.8**
NOUC	**Port Laguerre**	**6.08**	**255**			**Pn**	**10 22 00.6**	**-1.0**
SANVU	**Saraoutou**	**7.27**	**314**			**Pn**	**10 22 15.2**	**-2.9**
NFK	**Norfolk Island**	**9.42**	**206**	P		**Pn**	**10 22 47.4**	**-0.1**
	baz=9.5,SNR=5.9							
RAO	**Raoul Island**	**12.15**	**137**	LR		LR	10 27 08.8	
	comp=Z,8µm,18.9s,baz=313,slow=33							
OUZ	**Omahuta**	**14.59**	**177**			**Pn**	**10 23 59.6**	**+1.5**
AFI	**Afiamalu**	**16.31**	**68**	P		**Pn**	**10 24 21.1**	**+0.3**
AFI				pmax		pmax		
	comp=Z,58nm,1.1s							
AFI	**Afiamalu**	**16.31**	**68**	Pn		**Pn**	**10 24 20.6**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=260,slow=6.1,SNR=2.1							
AFI				LR		LR	10 29 21.7	
	comp=Z,3µm,21.5s,baz=235,slow=33							
AFI	**Afiamalu**	**16.31**	**68**	Pn		**Pn**	**10 24 21.1**	**+0.3**
HNR	**Honiara**	**16.52**	**310**	P		**Pn**	**10 24 21.1**	**-2.3**
HNR				pmax		pmax		
	comp=Z,177nm,1.0s							
HNR	**Honiara**	**16.52**	**310**	Pn		**Pn**	**10 24 21.6**	**-1.8**
	baz=137,slow=13,SNR=3.9							
HNR				LR		LR	10 29 44.7	
	comp=Z,5µm,19.0s,baz=140,slow=34							
HNR	**Honiara**	**16.52**	**310**	P		**P**	**10 24 26.0**	**+0.3**
HNR	**Honiara**	**16.52**	**310**	Pn		**Pn**	**10 24 21.1**	**-2.3**
HNR				IAmb		IAmb	10 24 33.8	
	comp=Z,177nm,1.0s							
MXZ	**Matakaoa Point**	**17.61**	**165**	P		**P**	**10 24 38.6**	**+1.1**
MXZ				IAmb		IAmb	10 24 53.3	
	comp=Z,268nm,1.5s							
HIZ	**Hauiti**	**17.95**	**174**			**P**	**10 24 43.1**	**+1.7**
HIZ				IAmb		IAmb	10 24 51.0	
	comp=Z,364nm,1.3s							
URZ	**Urewera**	**18.02**	**169**	P		**P**	**10 24 43.4**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=355,slow=7.3,SNR=27							
URZ				LR		LR	10 30 07.3	
	comp=Z,4µm,18.3s,baz=352,slow=32							
URZ	**Urewera**	**18.02**	**169**	P		**Pn**	**10 24 41.8**	**-0.1**
URZ				IAmb		IAmb	10 24 51.8	
	comp=Z,171nm,1.0s							
BKZ	**Black Stump Fm**	**18.80**	**171**	P		**Pn**	**10 24 53.0**	**+1.6**
BKZ				IAmb		IAmb	10 24 56.4	
	comp=Z,182nm,1.2s							
PNHZ	**Pukenui**	**19.49**	**172**	P		**Pn**	**10 25 06.6**	**+6.9**
TSZ	**Takapari Road**	**19.60**	**172**	P		**Pn**	**10 25 03.6**	**+2.6**
DVHZ	**Dannevirke**	**19.87**	**172**	P		**P**	**10 25 00.8**	**-1.6**
POWZ	**Post Office Ro**	**19.91**	**173**	P		**P**	**10 24 58.9**	**-3.9**
PRWZ	**Pori Road**	**20.09**	**173**	P		**P**	**10 24 57.7**	**-7.1**
QRZ	**Quartz Range**	**20.16**	**180**	P		Pn	10 25 08.1	+0.5
QRZ				IAms_20		IAms_20	10 31 51.3	
	comp=Z,12µm,19.0s							
BFZ	**Birch Farm**	**20.25**	**172**	P		**P**	**10 24 59.6**	**-7.0**
BFZ	**Birch Farm**	**20.25**	**172**	P		**P**	**10 25 06.0**	**-0.6**
BFZ				IAmb		IAmb	10 25 19.6	
	comp=Z,138nm,1.0s							
HOWZ	**Holdsworth Sta**	**20.38**	**174**	P		P	10 24 55.1	-13
EIDS	**Eidsvold**	**20.39**	**252**	P		Pn	10 25 09.9	-0.5
	baz=20,SNR=6.8							
EIDS	**Eidsvold**	**20.39**	**252**	P		**P**	**10 25 07.1**	**-1.1**
EIDS				IAmb		IAmb	10 25 23.3	
	comp=Z,132nm,1.2s							
CPWZ	**Castlepoint**	**20.47**	**172**	P		P	10 25 01.2	-7.7
CAW	**Cannon Point**	**20.55**	**175**	P		**P**	**10 25 06.8**	**-2.9**
NNZ	**Nelson**	**20.56**	**178**	P		Pn	10 25 11.1	-1.1
NNZ				IAms_20		IAms_20	10 32 07.0	
	comp=Z,10µm,19.0s							
TMWZ	**Te Maipa**	**20.63**	**173**	P		P	10 25 02.5	-8.2
MTW	**Mount Morrison**	**20.64**	**174**	P		**P**	**10 25 03.9**	**-6.8**
SNZO	**South Karori**	**20.72**	**176**	P		Pn	10 25 13.1	-0.9
SNZO				IAmb		IAmb	10 25 26.7	
	comp=Z,160nm,0.9s							
TUWZ	**Tuamarina**	**20.79**	**177**	P		Pn	10 25 14.3	-0.6
BHW	**Baring Head**	**20.83**	**175**	P		**P**	**10 25 12.4**	**-0.3**
MSWZ	**Moikau Station**	**20.87**	**174**	P		**P**	**10 25 07.9**	**-5.3**
MSWZ	**Moikau Station**	**20.87**	**174**	P		**P**	**10 25 13.4**	**+0.2**
TRWZ	**Traveller**	**20.89**	**174**	P		**P**	**10 25 06.4**	**-7.1**
PLWZ	**Palliser**	**21.02**	**174**	P		**P**	**10 25 09.7**	**-5.2**
PLWZ	**Palliser**	**21.02**	**174**	P		**P**	**10 25 15.3**	**+0.4**
BSWZ	**Blackbirch Sta**	**21.07**	**177**	P		**P**	**10 25 18.2**	**+2.7**
THZ	**Tophouse**	**21.10**	**179**	P		**P**	**10 25 17.1**	**+1.4**
THZ				IAmb		IAmb	10 25 39.4	
	comp=Z,165nm,1.1s							
THZ				IAMs_20		IAMs_20	10 32 49.1	
	comp=Z,10µm,18.0s							
CMWZ	**Cape Campbell**	**21.12**	**177**	P		**P**	**10 25 16.8**	**+0.9**
ARMA	**Armidale**	**21.29**	**238**	P		**P**	**10 25 18.5**	**+0.5**
	baz=21,SNR=4.2							
ARMA	**Armidale**	**21.29**	**238**	P		**P**	**10 25 17.3**	**-0.7**
KHZ	**Kahutara**	**21.76**	**178**	P		**P**	**10 25 25.3**	**+2.5**
KHZ				IAmb		IAmb	10 25 48.1	
	comp=Z,150nm,1.2s							
LTZ	**Lake Taylor**	**22.12**	**181**	P		**P**	**10 25 27.8**	**+1.1**
LTZ				IAmb		IAmb	10 25 38.2	
	comp=Z,163nm,1.1s							
LTZ				IAMs_20		IAMs_20	10 33 03.0	
	comp=Z,11µm,19.0s							
RMQ	**Roma**	**22.64**	**250**	P		**P**	**10 25 33.3**	**+1.0**
	baz=23,SNR=11							
FOZ	**Fox Glacier**	**22.98**	**185**	P		**P**	**10 25 37.2**	**+1.5**
RPZ	**Rata Peaks**	**23.08**	**183**	P		**P**	**10 25 38.4**	**+1.6**
	comp=Z,48nm,0.9s,baz=312,slow=5.4,SNR=4.0							
RPZ				LR		LR	10 33 30.0	
	comp=Z,7µm,20.8s,baz=5.0,slow=34							
RPZ	**Rata Peaks**	**23.08**	**183**	P		**P**	**10 25 37.1**	**+0.3**
RPZ				IAMs_20		IAMs_20	10 33 19.5	
	comp=Z,7µm,20.0s							
RIV	**Riverview**	**23.14**	**231**	P		**P**	**10 25 38.2**	**+0.8**
	baz=23,SNR=4.1							
KNTN	**Kaon**	**23.39**	**43**	P		**P**	**10 25 39.1**	**-0.9**
LBZ	**Lake Benmore**	**23.80**	**184**	P		**P**	**10 25 44.7**	**+0.9**
WKZ	**Wanaka**	**24.34**	**186**	P		**P**	**10 25 48.8**	**-0.1**
WKZ				IAMs_20		IAMs_20	10 33 31.6	
	comp=Z,6µm,20.0s							
CTA	**Charters Tower**	**24.73**	**267**	P		**P**	**10 25 53.1**	**+0.6**
	comp=Z,12nm,1.0s,baz=84,slow=14,SNR=7.4							
CTA				LR		LR	10 34 57.1	
	comp=Z,5µm,19.7s,baz=87,slow=35							
MLZ	**Mavora Lakes**	**24.98**	**188**	P		**P**	**10 25 56.3**	**+1.7**
MLZ				IAMs_20		IAMs_20	10 33 50.3	
	comp=Z,7µm,22.0s							
CNB	**Canberra Magne**	**25.15**	**229**	P		**P**	**10 25 57.6**	**+1.2**
	baz=25,SNR=6.2							
YNG	**Young**	**25.38**	**232**	P		**P**	**10 25 59.3**	**+0.9**
	baz=25,SNR=10							
CAN	**Canberra**	**25.42**	**230**	P		**P**	**10 25 58.1**	**-0.6**
CAN				pmax		pmax		
	comp=Z,91nm,1.5s							
CAN	**Canberra**	**25.42**	**230**	P		**P**	**10 25 58.1**	**-0.6**
CAN				IAmb		IAmb	10 26 04.6	
	comp=Z,91nm,1.5s							
WHZ	**Wether Hill Ro**	**25.52**	**188**	P		**P**	**10 26 00.6**	**+1.2**
WHZ				IAMs_20		IAMs_20	10 34 27.6	
	comp=Z,7µm,20.0s							
RAR	**Rarotonga**	**25.78**	**96**	LR		LR	10 33 56.9	
	comp=Z,3µm,21.2s,baz=267,slow=31							
RAR	**Rarotonga**	**25.78**	**96**	IAMs_20		IAMs_20	10 33 34.0	
	comp=Z,6µm,20.0s							
PYZ	**Puysegur Point**	**25.96**	**189**	IAMs_20		IAMs_20	10 34 03.2	
	comp=Z,6µm,21.0s							
MILA	**Mila**	**26.19**	**226**	P		**P**	**10 26 07.1**	**+1.4**
	baz=26,SNR=3.9							
CMSA	**Cobar Meteorol**	**26.46**	**240**	P		**P**	**10 26 08.6**	**+0.5**
	baz=26,SNR=11							
MTSU	**Mount Surprise**	**26.81**	**270**	P		**P**	**10 26 11.8**	**+0.4**
	baz=27,SNR=11							
PMG	**Port Moresby**	**26.95**	**291**	*c e*P		**P**	**10 26 08.8**	**-3.9**
PMG				pmax		pmax		
	comp=Z,42nm,0.8s							
PMG	**Port Moresby**	**26.95**	**291**	LR		LR	10 35 20.1	
	comp=Z,4µm,19.9s,baz=110,slow=33							
PMG	**Port Moresby**	**26.95**	**291**	P		**P**	**10 26 08.8**	**-3.9**
PMG	**Port Moresby**	**26.95**	**291**	IAMs_20		IAMs_20	10 36 23.2	
	comp=Z,7µm,18.0s							
COEN	**Coen**	**28.86**	**278**	P		**P**	**10 26 30.7**	**+0.9**
	baz=29,SNR=5.2							
COEN	**Coen**	**28.86**	**278**	P		**P**	**10 26 28.8**	**-0.9**
COEN				IAMs_20		IAMs_20	10 35 40.2	
	comp=Z,5µm,22.0s							
TOO	**Toolangi**	**28.98**	**228**	P		**P**	**10 26 30.5**	**-0.1**
TOO				pmax		pmax		
	comp=Z,62nm,1.3s							
TOO	**Toolangi**	**28.98**	**228**	P		**P**	**10 26 30.5**	**-0.1**
TOO				IAmb		IAmb	10 26 56.6	
	comp=Z,62nm,1.3s							
STKA	**Stephens Creek**	**29.91**	**242**	P		**P**	**10 26 39.2**	**+0.3**
	baz=30,SNR=16							
STKA	**Stephens Creek**	**29.91**	**242**	*e*P		**P**	**10 26 39.2**	**+0.3**
STKA	**Stephens Creek**	**29.91**	**242**	P		**P**	**10 26 39.0**	**+0.1**
	comp=Z,21nm,1.0s,baz=66,slow=8.7,SNR=22							
STKA				LR		LR	10 37 30.0	
	comp=Z,1µm,18.9s,baz=70,slow=34							
STKA	**Stephens Creek**	**29.91**	**242**	P		**P**	**10 26 39.2**	**+0.3**
MOO	**Moorlands**	**30.52**	**219**	P		**P**	**10 26 44.8**	**+0.6**
	baz=30,SNR=4.3							
TAU	**Tasmania Unive**	**30.73**	**218**	IAMs_20		IAMs_20	10 36 58.8	
	comp=Z,6µm,20.0s							
HTT	**Hallett**	**32.48**	**240**	P		**P**	**10 27 01.5**	**-0.2**
	baz=32,SNR=5.5							
BBOO	**Buckleboo**	**34.69**	**242**	P		**P**	**10 27 20.5**	**-0.3**
	baz=35,SNR=5.8							
BBOO	**Buckleboo**	**34.69**	**242**	P		**P**	**10 27 20.5**	**-0.3**
BBOO				IAmb		IAmb	10 27 26.6	
	comp=Z,51nm,1.1s							
TBI	**Tubuai**	**35.20**	**102**	*e*S		**S**	**10 32 53.8**	**-2.7**
	comp=Z,826nm,26.5s							
TBI				*e*LQ		LQ	10 35 19.4	
	comp=Z,2µm,31.2s							
TBI				*e*LR		LR	10 36 43.1	
	comp=Z,8µm,30.5s,baz=265							
WR0	**Warramunga Arr**	**35.68**	**264**	P		**P**	**10 27 27.9**	**-1.5**
WR0				IAMs_20		IAMs_20	10 41 38.8	
	comp=Z,6µm,20.0s							
WR9	**Warramunga Arr**	**35.70**	**264**	IAMs_20		IAMs_20	10 41 27.4	
	comp=Z,8µm,22.0s							
WR8	**Warramunga Arr**	**35.72**	**264**	IAMs_20		IAMs_20	10 41 39.8	
	comp=Z,6µm,19.0s							
WR7	**Warramunga Arr**	**35.74**	**264**	IAMs_20		IAMs_20	10 41 40.4	
	comp=Z,6µm,20.0s							
WR6	**Warramunga Arr**	**35.76**	**264**	IAMs_20		IAMs_20	10 41 41.9	
	comp=Z,6µm,19.0s							
WR5	**Warramunga Arr**	**35.78**	**264**	IAMs_20		IAMs_20	10 41 32.5	
	comp=Z,6µm,20.0s							
PPT2	**Papeete2**	**35.79**	**92**	*e*S		**S**	**10 33 02.4**	**-3.5**
	comp=Z,838nm,25.2s							
PPT2				*e*LQ		LQ	10 35 10.5	
	comp=Z,3µm,31.0s							
PPT2				*e*LR		LR	10 37 01.8	
	comp=Z,10µm,26.5s,baz=253							
PPT	**Papeete**	**35.80**	**92**	LR		LR	10 40 59.6	
	comp=Z,2µm,18.5s,baz=241,slow=34							
WR4	**Warramunga Arr**	**35.80**	**264**	IAMs_20		IAMs_20	10 41 42.4	
	comp=Z,6µm,20.0s							
WC3	**Warramunga Arr**	**35.83**	**264**	IAMs_20		IAMs_20	10 41 43.9	
	comp=Z,6µm,20.0s							
WB0	**Warramunga Arr**	**35.84**	**264**	P		**P**	**10 27 28.7**	**-2.2**
WB0				IAMs_20		IAMs_20	10 41 44.1	
	comp=Z,5µm,19.0s							
WB7	**Warramunga Arr**	**35.84**	**264**	IAMs_20		IAMs_20	10 41 43.4	
	comp=Z,5µm,21.0s							
WR2	**Warramunga Arr**	**35.84**	**264**	IAMs_20		IAMs_20	10 41 43.2	
	comp=Z,5µm,19.0s							
WB8	**Warramunga Arr**	**35.85**	**264**	IAMs_20		IAMs_20	10 41 43.2	
	comp=Z,5µm,20.0s							
WB9	**Warramunga Arr**	**35.85**	**264**	IAMs_20		IAMs_20	10 41 53.2	
	comp=Z,5µm,18.0s							
WB5	**Warramunga Arr**	**35.85**	**264**	IAMs_20		IAMs_20	10 41 34.4	
	comp=Z,5µm,20.0s							
WB3	**Warramunga Arr**	**35.85**	**264**	IAMs_20		IAMs_20	10 41 53.5	
	comp=Z,6µm,20.0s							
WB2	**Warramunga Arr**	**35.86**	**264**	P		**P**	**10 27 29.9**	**-1.1**
WB2				IAMs_20		IAMs_20	10 41 44.5	
	comp=Z,6µm,19.0s							
WB1	**Warramunga Ar.**	**35.86**	**264**	IAMs_20		IAMs_20	10 41 44.6	
	comp=Z,6µm,20.0s							
WRAB	**Tennant Creek**	**35.86**	**264**	P		**P**	**10 27 29.8**	**-1.2**
WRAB				pmax		pmax		
	comp=Z,44nm,1.7s							
WRAB				MLR		MLR		
	comp=Z,6µm,19.0s							
WRAB	**Tennant Creek**	**35.86**	**264**	P		**P**	**10 27 29.8**	**-1.2**
WRAB	**Tennant Creek**	**35.86**	**264**	IAMs_20		IAMs_20	10 41 43.6	
	comp=Z,6µm,19.0s							
WR1	**Warramunga Arr**	**35.87**	**264**	IAMs_20		IAMs_20	10 41 44.8	
	comp=Z,6µm,20.0s							
WRA	**Warramunga Arr**	**35.87**	**264**	P		**P**	**10 27 29.7**	**-1.4**
	comp=Z,5.9nm,1.1s,baz=97,slow=8.1,SNR=8.9							
WRA				LR		LR	10 42 05.4	
	comp=Z,5µm,19.1s,baz=90,slow=36							
WC1	**Warramunga Arr**	**35.87**	**264**	IAMs_20		IAMs_20	10 41 44.9	
	comp=Z,6µm,20.0s							
AS31	**Alice Springs**	**35.92**	**258**	P		**P**	**10 27 30.4**	**-1.1**
ASAR	**Alice Springs**	**35.93**	**258**	P		**P**	**10 27 30.2**	**-1.4**
	comp=Z,18nm,0.6s,baz=83,slow=8.9,SNR=36							
ASAR				LR		LR	10 41 20.0	
	comp=Z,4µm,19.6s,baz=98,slow=35							
JAY	**Jayapura**	**35.94**	**296**	LR		LR	10 41 42.1	
	comp=Z,3µm,20.8s,baz=122,slow=36							
GENI	**Genyem**	**36.35**	**295**	P		**P**	**10 27 35.8**	**+0.6**
	comp=Z,108nm,1.2s							
KDU	**Kakadu**	**39.19**	**275**	P		**P**	**10 27 59.0**	**-0.2**
	baz=39,SNR=3.9							
H11S2	**WAKE ISLAND Hy**	**39.28**	**351**	T		T	11 09 44.9	
	baz=171,slow=76							
H11S3	**WAKE ISLAND Hy**	**39.29**	**351**	T		T	11 09 53.2	
	baz=171							
H11S1	**WAKE ISLAND Hy**	**39.30**	**351**	T		T	11 09 46.8	
	baz=171,slow=76							
MTN	**Manton Dam**	**40.39**	**274**	P		**P**	**10 28 08.4**	**-0.8**
	baz=40,SNR=3.8							
MTN	**Manton Dam**	**40.39**	**274**	P		**P**	**10 28 08.1**	**-1.1**
WRKA	**Warakurna**	**40.96**	**255**	P		**P**	**10 28 13.6**	**-0.4**
	baz=41,SNR=9.9							
FORT	**Forrest**	**41.19**	**247**	P		**P**	**10 28 15.1**	**-0.6**
FORT				IAmb		IAmb	10 28 34.5	
	comp=Z,71nm,0.9s							
KNRA	**Kununurra**	**41.88**	**269**	P		**P**	**10 28 20.6**	**-0.9**
KNRA				IAMs_20		IAMs_20	10 45 14.8	
	comp=Z,4µm,20.0s							
GUMO	**Guam**	**43.58**	**319**	*e*P		**P**	**10 28 33.6**	**-1.6**
GUMO	**Guam**	**43.58**	**319**	LR		LR	10 44 52.3	
	comp=Z,2µm,21.8s,baz=136,slow=34							
FITZ	**Fitzroy Crossi**	**44.29**	**265**	P		**P**	**10 28 41.6**	**+0.7**
	baz=44,SNR=4.4							
FITZ	**Fitzroy Crossi**	**44.29**	**265**	P		**P**	**10 28 40.4**	**-0.5**
	comp=Z,10.0nm,1.0s,baz=108,slow=9.3							
FITZ				LR		LR	10 46 34.9	
	comp=Z,4µm,20.7s,baz=102,slow=35							
FITZ	**Fitzroy Crossi**	**44.29**	**265**	P		**P**	**10 28 41.0**	**+0.1**
FITZ				IAmb		IAmb	10 28 56.7	
	comp=Z,42nm,1.2s							
FITZ				IAMs_20		IAMs_20	10 46 12.8	
	comp=Z,4µm,21.0s							
SIJI	**Sorong**	**44.90**	**291**	LR		LR	10 47 19.2	
	comp=Z,2µm,20.8s,baz=112,slow=36							
SOEI	**Soe**	**47.74**	**276**	IAMs_20		IAMs_20	10 47 53.8	
	comp=Z,3µm,22.0s							
PSA00	**Pilbara Seismi**	**49.06**	**259**	IAMs_20		IAMs_20	10 49 50.5	
	comp=Z,4µm,20.0s							
PSAA2	**Pilbara Seismi**	**49.06**	**259**	IAMs_20		IAMs_20	10 49 59.6	
	comp=Z,4µm,20.0s							
SANI	**Sanana**	**49.06**	**286**	P		**P**	**10 29 19.0**	**+0.6**
	comp=Z,862nmcomp=Z,31nm,1.7s							
PSAC3	**Pilbara Seismi**	**49.06**	**259**	IAMs_20		IAMs_20	10 50 09.8	
	comp=Z,4µm,20.0s							
PSAB1	**Pilbara Seismi**	**49.08**	**259**	IAMs_20		IAMs_20	10 50 00.1	
	comp=Z,4µm,20.0s							
PSAD3	**Pilbara Seismi**	**49.11**	**259**	IAMs_20		IAMs_20	10 50 20.9	
	comp=Z,4µm,20.0s							
KLBR	**Kellerberrin**	**50.03**	**246**	P		**P**	**10 29 24.8**	**-0.8**
	baz=50,SNR=4.7							
NWAO	**Narrogin (SRO)**	**50.45**	**244**	P		**P**	**10 29 28.6**	**-0.1**
NWAO				pmax		pmax		
	comp=Z,39nm,1.1s							
NWAO	**Narrogin (SRO)**	**50.45**	**244**	P		**P**	**10 29 27.8**	**-1.0**
	comp=Z,18nm,0.9s,baz=95,slow=5.0,SNR=4.9					

NJ2 S **SKiKP** **10 41 33.5 +2.0**
NJ2 pmax pmax
comp=Z,22nm,1.1s
NJ2 pmax pmax
comp=Z,670nm,5.1s
NJ2 LR LR
comp=Z,680nm,22.8s
NJ2 LR LR
comp=Z,560nm,24.5s
NJ2 LR LR
comp=Z,940nm,25.0s
PET **Petropavlovsk** **74.31 351** *e*P **P** **10 32 07.5 -0.2**
PET *e*S **S** **10 41 38.4 -0.7**
PET *e*SS **SS** **10 46 33.5 +7.4**
PET MLR MLR
comp=Z,1μm,22.0s
USRK **Ussuriysk Ar.** **74.44 331** P **P** **10 32 09.7 +1.0**
comp=Z,4.9nm,0.9s,baz=118,slow=5.9,SNR=7.6
USRK LR LR 11 02 47.0
comp=Z,226nm,19.6s,baz=133,slow=34
USA0B **Ussuriysk Arra** **74.44 331** *d iP* **P** **10 32 08.4 -0.3**
PEA0B **Petropavlovsk-** **74.53 351**⇑ *iP* **P** **10 32 09.8 +0.7**
PETK **Petropavlovsk-** **74.53 351** P **P** **10 32 09.6 +0.5**
comp=Z,13nm,0.9s,baz=134,slow=6.4,SNR=9.9
WHN **Wuhan** **75.64 311** ⇓P P 10 32 30.8 +15
WHN S **S** **10 41 58.3 +3.5**
WHN pmax pmax
comp=Z,34nm,0.6s
WHN LR LR
comp=Z,3μm,21.7s
RPSI **Rantau Prapat** **75.74 278** P **P** **10 32 16.0 -0.9**
RPSI IAMs_20 IAMs_20 11 08 13.9
comp=Z,1μm,20.0s
PSI **Prapat** **75.78 279** P **P** **10 32 16.0 -1.3**
PSI pmax pmax
comp=Z,14nm,0.9s
PSI MLR MLR
comp=Z,1μm,20.0s
MDJ **Mudanjiang** **75.87 330** P **P** **10 32 17.0 +0.1**
DL2 **Dalian** **76.04 321** P **P** **10 32 18.4 +0.3**
DL2 pmax pmax
comp=Z,46nm,1.1s
DL2 pmax pmax
comp=Z,310nm,5.0s
DL2 LR LR
comp=Z,300nm,20.4s
DL2 LR LR
comp=Z,560nm,23.5s
DL2 LR LR
comp=Z,720nm,21.1s
GSI **Gunungsitoli** **76.48 277** IAMs_20 IAMs_20 11 06 33.6
comp=Z,2μm,21.0s
TIA **Tai'an** **77.09 317** P **P** **10 32 24.3 +0.2**
TIA S **S** **10 42 18.3 +7.6**
TIA pmax pmax
comp=Z,13nm,0.8s
TIA pmax pmax
comp=Z,410nm,4.4s
TIA LR LR
comp=Z,500nm,19.9s
TIA LR LR
comp=Z,410nm,23.5s
TIA LR LR
comp=Z,660nm,19.2s
CN2 **Changchun** **77.30 327** *e*P **P** **10 32 25.0 -0.1**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
GRNR **Gornyy** **77.89 337**⇓ *i*P **P** **10 32 28.1 -0.1**
GRNR *e*S **S** **10 42 23.4 +4.7**
GRNR pmax pmax
comp=Z,7.0nm,1.4s
GRNR smax smax
comp=N,1.0nm,1.1s
GRNR MLR MLR
comp=Z,670nm,16.0s
MAW **Mawson** **78.36 202** P **P** **10 32 31.5 +0.8**
MAW pmax pmax
comp=Z,8.0nm,1.7s
MAW **Mawson** **78.36 202** P **P** **10 32 31.6 +1.0**
comp=Z,5.4nm,1.1s,baz=44,slow=2.8,SNR=5.3
MAW LR LR 11 04 22.4
comp=Z,873nm,18.3s,baz=84,slow=34
MAW **Mawson** **78.36 202** P **P** **10 32 31.5 +0.8**
KLR **Kul'dur** **78.45 334**⇑ *i*P **P** **10 32 31.6 +0.3**
KLR pmax pmax
comp=Z,31nm,3.0s
ENH **Enshi** **79.00 308** P **P** **10 32 34.5 -0.4**
ENH IAmb IAmb 10 32 49.8
comp=Z,27nm,1.2s
SDPT **Sand Point** **79.04 15** P **P** **10 32 35.5 +1.1**
GYA **Guiyang** **79.22 304** P **P** **10 32 34.0 -2.3**
GYA PP **PP** **10 35 33.9 -2.5**
GYA S **S** **10 42 32.8 -1.4**
GYA SKS **SKSac** **10 42 44.8 -5.3**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.6s
BJT **Baijiatuau** **80.01 319** P **P** **10 32 39.9 -0.2**
BJT pmax pmax
comp=Z,14nm,1.2s
BJT **Baijiatuau** **80.01 319** P **P** **10 32 39.9 -0.2**
BJI **Beijing** **80.02 319** P **P** **10 32 39.9 -0.2**
BJI S **S** **10 42 47.5 +5.7**
BJI pmax pmax
comp=Z,10.0nm,1.2s
BJI LR LR
comp=Z,330nm,20.8s
BJI LR LR
comp=Z,340nm,22.3s
BJI LR LR
comp=Z,920nm,37.1s
XAN **Xi'an** **81.39 311** P **P** **10 32 48.0 +0.3**
XAN S **S** **10 42 58.9 +2.4**
XAN pmax pmax
comp=Z,9.0nm,1.4s
XAN LR LR
comp=Z,380nm,24.9s
XAN LR LR
comp=Z,490nm,21.7s
XAN LR LR
comp=Z,810nm,22.8s
XAN **Xi'an** **81.39 311** P **P** **10 32 46.0 -1.7**
XAN pmax pmax
comp=Z,18nm,1.1s
XAN **Xi'an** **81.39 311** P **P** **10 32 46.0 -1.7**
KMI **Kunming** **81.70 301** P **P** **10 32 49.8 0.0**
KMI pP PcP 10 32 55.3 -0.2
KMI sP pP 10 32 58.6 -1.1
KMI S **S** **10 43 02.9 +2.4**
KMI sS SKKSac 10 43 09.4 -1.1
KMI SS **SS** **10 48 19.5 +0.5**
KMI pmax pmax
comp=Z,11nm,1.5s
KMI pmax pmax
comp=Z,160nm,3.4s
KMI LR LR
comp=Z,380nm,25.1s
KMI LR LR
comp=Z,350nm,42.9s
KMI LR LR
comp=Z,930nm,30.6s
MA2 **Magadan** **81.87 349**⇑ *i*P **P** **10 32 48.8 -0.7**
MA2 pmax pmax
comp=Z,29nm,2.4s
MA2 **Magadan** **81.87 349** IAMs_20 IAMs_20 11 07 52.4
comp=Z,1μm,18.0s
CMAR **Chiang Mai Arr** **81.97 293** *ce*P **P** **10 32 52.7 +1.7**
CMAR pmax pmax
comp=Z,6.0nm,1.0s
CMAR **Chiang Mai Arr** **81.97 293** P **P** **10 32 52.2 +1.2**
comp=Z,2.0nm,0.4s,baz=130,slow=4.3,SNR=14
CHTO **Chiang Mai** **82.11 293** P **P** **10 32 51.7 -0.1**
CHTO pmax pmax
comp=Z,12nm,1.1s
CHTO MLR MLR
comp=Z,300nm,21.0s
CHTO **Chiang Mai** **82.11 293** P **P** **10 32 51.6 -0.1**
HHC **Hu-ho-hao-te** **83.34 318** *e*P **P** **10 33 02.1 +4.3**
HHC sP sP 10 33 10.6 -0.8
HHC S **S** **10 43 24.4 +8.0**
HHC sS sS 10 43 31.5 -1.5
HHC pmax pmax
comp=Z,8.0nm,1.0s
HHC pmax pmax
comp=Z,53nm,5.3s
HHC LR LR
comp=Z,270nm,19.8s
HHC LR LR
comp=Z,190nm,18.4s
HHC LR LR
comp=Z,350nm,16.1s
CD2 **Chengdu** **83.60 306** P **P** **10 32 59.6 +0.3**
CD2 pP PcP 10 33 03.0 -0.5
CD2 S **S** **10 43 25.6 +6.3**
CD2 sS pS 10 43 29.8 -2.1
CD2 SS **SS** **10 48 48.3 +1.6**
CD2 pmax pmax
comp=Z,10.0nm,0.4s
CD2 pmax pmax
comp=Z,230nm,5.5s
CD2 LR LR
comp=Z,960nm,21.6s
CD2 LR LR
comp=Z,1μm,24.5s
CD2 LR LR
comp=Z,1μm,20.1s
ZEA **Zeya** **83.71 335** *e*P P 10 33 06.4 +7.2
ZEA pmax pmax
comp=Z,24nm,1.6s
SAO **San Andreas Ge** **84.35 47** P **P** **10 33 03.3 +0.4**
SAO pmax pmax
comp=Z,29nm,1.1s
SAO **San Andreas Ge** **84.35 47** P **P** **10 33 03.3 +0.4**
SYO **Syowa Base** **84.49 195**⇑ *e*P **P** **10 33 01.8 -1.3**
SYO **Syowa Base** **84.49 195**⇑ *e*PP PP 10 36 18.4 +0.3
PKM **Mcpherson Peak** **84.56 50** P **P** **10 33 05.4 +1.1**
baz=240
SEY **Seymchan** **84.78 351**⇑ *i*P **P** **10 33 03.9 -0.5**
PBA **Port Blair** **84.78 284** IAMs_20 IAMs_20 11 11 34.1
comp=Z,1μm,20.0s
GAMB **Gambell** **84.99 7** P **P** **10 33 05.9 +0.4**
GAMB IAMs_20 IAMs_20 11 03 36.0
comp=Z,841nm,20.0s
OSI **Osito Audit: C** **85.21 50** P **P** **10 33 08.2 +0.8**
O02D **Mt. Diablo Mer** **85.22 44** P **P** **10 33 08.8 +1.4**
baz=238,SNR=8.1
ARVC **Arvin** **85.38 50** P **P** **10 33 09.0 +0.9**
baz=241,SNR=9.7
PASC **Pasadena Art C** **85.39 51** P **P** **10 33 08.8 +0.6**
MWC **Mount Wilson** **85.51 51** P **P** **10 33 08.3 -0.8**
MWC pmax pmax
comp=Z,29nm,1.3s
MWC **Mount Wilson** **85.51 51** P **P** **10 33 08.3 -0.8**
MWC IAmb IAmb 10 33 28.0
comp=Z,29nm,1.2s
VES **Vestal, Richgr** **85.55 49** P **P** **10 33 09.7 +0.8**
baz=241
109C **Camp Elliot, M** **85.58 53** P **P** **10 33 09.9 +0.8**
109C IAmb IAmb 10 33 21.7
comp=Z,32nm,1.4s
109C **Camp Elliot, M** **85.58 53** P **P** **10 33 10.0 +0.8**
baz=242
WDC **Whiskeytown Da** **85.60 44** P **P** **10 33 09.9 +0.8**
WDC pmax pmax
comp=Z,49nm,1.6s
WDC **Whiskeytown Da** **85.60 44** P **P** **10 33 09.9 +0.8**
KEBM **Edson Butte** **85.69 41** P **P** **10 33 10.4 +0.9**
N02D **Trinity Center** **85.70 43** P **P** **10 33 10.9 +1.2**
baz=238,SNR=7.6
CMB **Columbia Colle** **85.72 47** P **P** **10 33 10.7 +0.8**
CMB pmax pmax
comp=Z,18nm,1.1s
CMB **Columbia Colle** **85.72 47** P **P** **10 33 10.7 +0.8**
CMB IAmb IAmb 10 33 18.1
comp=Z,18nm,1.1s
ORV **Oroville** **85.75 45** P **P** **10 33 10.0 +0.1**
ORV pmax pmax
comp=Z,22nm,1.2s
ORV **Oroville** **85.75 45** P **P** **10 33 09.9 +0.1**
ORV IAmb IAmb 10 33 11.8
comp=Z,22nm,1.2s
L02E **Cave Junction** **85.76 42** P **P** **10 33 10.9 +1.0**
baz=238
AFDM **Forest Hills D** **85.79 46** P **P** **10 33 10.7 +0.6**
AFDM IAmb IAmb 10 33 18.3
comp=Z,24nm,1.1s
BFSC **Mount Baldy Ra** **85.81 51** P **P** **10 33 10.7 +0.2**
baz=242,SNR=6.5
M02C **Callahan** **85.83 43** P **P** **10 33 11.6 +1.3**
baz=238,SNR=12
MURC **Murrieta** **85.84 52** P **P** **10 33 11.4 +0.9**
baz=242
EDW2 **Edwards Air Fo** **85.87 50** P **P** **10 33 11.2 +0.6**
baz=242,SNR=14
ISA **Isabella, Lake** **85.89 50** P **P** **10 33 11.0 +0.2**
ISA pmax pmax
comp=Z,44nm,1.1s
ISA **Isabella, Lake** **85.89 50** P **P** **10 33 11.0 +0.2**
ISA **Isabella, Lake** **85.89 50** P **P** **10 33 11.6 +0.8**
baz=241,SNR=24
O03E **Paynes Creek** **85.93 44** P **P** **10 33 11.3 +0.5**
baz=239,SNR=14
K02D **Willamette Mer** **86.01 41** P **P** **10 33 12.3 +1.1**
baz=237
LZH **Lanzhou** **86.02 311**⇑ P **P** **10 33 12.4 +0.9**
LZH sP pP 10 33 19.3 -2.2
LZH S **S** **10 43 42.9 -0.4**
LZH sS pS 10 43 54.6 -1.4
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,190nm,5.3s
LZH LR LR
comp=Z,440nm,17.9s
LZH LR LR
comp=Z,350nm,18.1s
LZH LR LR
comp=Z,730nm,18.9s
MONP2 **Monument Peak** **86.09 53** P **P** **10 33 12.5 +0.5**
baz=243,SNR=6.6
YBH **Yreka Blue Hor** **86.10 43** P **P** **10 33 11.2 -0.4**
YBH pmax pmax
comp=Z,38nm,1.5s
YBH **Yreka Blue Hor** **86.10 43** P **P** **10 33 11.2 -0.4**
YBH IAmb IAmb 10 33 25.7
comp=Z,38nm,1.4s
J01E **Myrtle Point** **86.10 41** P **P** **10 33 12.6 +1.1**
baz=237
IKP **In-Ko-Pah, Jac** **86.21 53** P **P** **10 33 13.2 +0.8**
baz=243
BBRC **Big Bear Solar** **86.36 51** P **P** **10 33 14.1 +0.8**
baz=242,SNR=6.7
LRMC **Laurel Mtn Rad** **86.37 50** P **P** **10 33 13.6 +0.3**
baz=242,SNR=6.6
RUBR **Rubicon Trail** **86.39 46** P **P** **10 33 14.7 +1.3**
PFO **Pinyon Flats O** **86.39 52** P **P** **10 33 13.5 +0.1**
PFO pmax pmax
comp=Z,33nm,1.7s
PFO **Pinyon Flats O** **86.39 52** P **P** **10 33 13.5 +0.1**
PFO IAmb IAmb 10 33 25.9
comp=Z,33nm,1.6s
PFO **Pinyon Flats O** **86.39 52** P **P** **10 33 14.0 +0.6**
baz=243
XPFO **Pion Flat** **86.40 52** P **P** **10 33 13.3 0.0**
XPFO IAmb IAmb 10 33 25.9
comp=Z,36nm,1.7s
HUMO **Hull Mountain** **86.41 42** P **P** **10 33 14.5 +1.4**
HUMO IAmb IAmb 10 33 17.4
comp=Z,29nm,1.1s
MDPB **Devils Postpil** **86.42 48** P **P** **10 33 14.2 +0.6**
MDPB IAmb IAmb 10 33 15.6
comp=Z,18nm,1.2s
OMMB **Old Mammoth Mi** **86.47 48** P **P** **10 33 13.8 -0.1**
OMMB IAmb IAmb 10 33 22.9
comp=Z,20nm,1.2s
SWSC **Sam W. Stewart** **86.58 53** P **P** **10 33 14.8 +0.6**
baz=243,SNR=6.1
MLAC **Mammoth, Mammo** **86.59 48** P **P** **10 33 14.9 +0.5**
baz=241
WAKR **Walker** **86.61 47** P **P** **10 33 14.9 +0.5**
L04D **Klamath Falls** **86.61 42** P **P** **10 33 14.8 +0.6**
baz=238,SNR=8.3
BEKR **Beckworth** **86.66 45** P **P** **10 33 14.2 -0.4**
BEKR IAmb IAmb 10 33 27.2
comp=Z,24nm,1.2s
I02D **Swisshome** **86.66 40** P **P** **10 33 15.4 +1.2**
baz=237
M04C **Macdoel** **86.68 43** P **P** **10 33 15.2 +0.7**
baz=239,SNR=8.2
I03D **Drain, OR** **86.75 41** P **P** **10 33 15.7 +1.1**
baz=238
PNTR **Pine Nut** **86.78 46** P **P** **10 33 16.2 +0.9**
MPMC **Manual Prospec** **86.79 50** P **P** **10 33 16.1 +0.8**
baz=242,SNR=11
DAC **Darwin (Calif)** **86.81 49** P **P** **10 33 15.7 +0.2**
DAC pmax pmax
comp=Z,35nm,1.8s
DAC **Darwin (Calif)** **86.81 49** P **P** **10 33 15.7 +0.2**
DAC IAmb IAmb 10 33 30.7
comp=Z,35nm,1.8s
TTA **Tatalina** **86.85 14** P **P** **10 33 15.9 +1.1**
TTA **Tatalina** **86.85 14** P **P** **10 33 15.9 +1.1**
VCNR **Virginia City** **86.85 46** P **P** **10 33 16.2 +0.6**
BELC **Belle Mtn. Jos** **86.91 52** P **P** **10 33 16.5 +0.6**
baz=243,SNR=15
GSC **Goldstone, Bar** **86.92 51** P **P** **10 33 16.0 +0.1**
GSC pmax pmax
comp=Z,22nm,1.3s
GSC **Goldstone, Bar** **86.92 51** P **P** **10 33 15.9 +0.1**
GSC IAmb IAmb 10 33 46.7
comp=Z,22nm,1.3s
GSC **Goldstone, Bar** **86.92 51** P **P** **10 33 16.4 +0.5**
baz=242,SNR=7.7
YERR **Yerington** **86.98 46** P **P** **10 33 16.3 +0.1**
YERR IAmb IAmb 10 33 24.4
comp=Z,20nm,1.2s
HEC **Hector,Ludlow** **87.05 51** P **P** **10 33 16.9 +0.4**
baz=243,SNR=5.6
BC3 **Big Chuckawall** **87.16 53** P **P** **10 33 18.1 +1.0**
baz=243,SNR=6.1
K04D **Chiloquin, OR** **87.17 42** P **P** **10 33 18.0 +1.1**
baz=239
PAHR **Pah Rah Range** **87.23 46** P **P** **10 33 17.8 +0.5**
PAHR IAmb IAmb 10 33 30.1
comp=Z,29nm,1.4s
J04D **Umpqua Nationa** **87.27 42** P **P** **10 33 18.2 +0.7**
baz=238,SNR=6.6
RYN **Ryan** **87.29 47** P **P** **10 33 18.4 +0.7**
RYN IAmb IAmb 10 33 30.2
comp=Z,17nm,1.3s
GRAC **Grapevine Rang** **87.32 49** P **P** **10 33 18.7 +1.0**
baz=242
NVAR **Mina Array Bea** **87.35 47** P **P** **10 33 18.9 +0.8**
comp=Z,5.1nm,0.9s,baz=227,slow=8.1,SNR=29
NVAR LR LR 11 04 46.2
comp=Z,1μm,20.8s,baz=230,slow=30
GLA **Glamis** **87.36 53** P **P** **10 33 19.5 +1.5**
GLA pmax pmax
comp=Z,22nm,1.1s
GLA **Glamis** **87.36 53** P **P** **10 33 19.5 +1.5**
GLA IAmb IAmb 10 33 30.5
comp=Z,22nm,1.1s
GLA **Glamis** **87.36 53** P **P** **10 33 18.7 +0.7**
baz=244
I04A **Tendick Farm,** **87.37 41** P **P** **10 33 18.5 +0.7**
baz=238
FURC **Furnace Creek,** **87.42 50** P **P** **10 33 18.7 +0.6**
baz=242,SNR=8.1
NV11 **Mina Array Sit** **87.45 47** P **P** **10 33 18.7 +0.3**
GMRC **Granite Mounta** **87.52 51** P **P** **10 33 19.2 +0.4**
baz=243,SNR=5.5
H04D **Lebanon** **87.56 40** P **P** **10 33 19.5 +0.9**
baz=238
SHOC **Shoshone, Teco** **87.58 50** P **P** **10 33 19.5 +0.6**
baz=243
IRM **Iron Mountain** **87.62 52** P **P** **10 33 19.9 +0.8**
baz=243,SNR=12
TUQ **Turquoise Moun** **87.62 51** P **P** **10 33 19.8 +0.5**
baz=243,SNR=7.7
MOD **Modoc Plateau** **87.72 43** P **P** **10 33 20.0 +0.3**
MOD IAmb IAmb 10 33 27.9
comp=Z,24nm,1.2s
K05A **Summer Lake** **87.77 43** P **P** **10 33 19.5 -0.4**
KVN **Kaiserville** **87.78 47** P **P** **10 33 20.3 +0.2**
KVN pmax pmax
comp=Z,22nm,1.4s
KVN **Kaiserville** **87.78 47** P **P** **10 33 20.3 +0.2**
KVN IAmb IAmb 10 33 32.6
comp=Z,22nm,1.4s
J05D **Fort Rock, OR** **87.84 42** P **P** **10 33 20.9 +0.8**
baz=239,SNR=18
NVL **N'lazarevskaya** **87.89 186** *e*P **P** **10 33 19.4 -0.4**
Y12C **Blythe** **87.90 53** P **P** **10 33 20.5 +0.1**
Y12C IAmb IAmb 10 33 29.1
comp=Z,26nm,1.4s
Y12C **Blythe** **87.90 53** P **P** **10 33 21.3 +0.9**
baz=244
SNAA **Sanae** **87.92 181** IAMs_20 IAMs_20 11 09 19.4
comp=Z,1μm,22.0s
H04A **Detroit Lake** **87.98 40** P **P** **10 33 20.9 +0.2**
113A **Mohawk Valley,** **88.03 54** P **P** **10 33 21.6 +0.5**
TPNV **Topopah Spring** **88.08 49** P **P** **10 33 21.9 +0.4**
TPNV pmax pmax
comp=Z,18nm,1.1s
TPNV **Topopah Spring** **88.08 49** P **P** **10 33 21.9 +0.4**
TPNV IAmb IAmb 10 33 29.3
comp=Z,18nm,1.1s
TPNV **Topopah Spring** **88.08 49** P **P** **10 33 22.4 +0.8**
baz=243,SNR=17
PINE **Pine Mountain** **88.28 42** P **P** **10 33 22.8 +0.4**
I05D **Terrebonne, OR** **88.31 41** P **P** **10 33 23.0 +0.7**
baz=239
VNA3 **Neumayer Olymp** **88.39 179** P **P** **10 33 20.4 -1.8**
214A **Organ Pipe Nat** **88.41 55** P **P** **10 33 23.0 0.0**
214A IAmb IAmb 10 33 36.0
comp=Z,18nm,1.3s
214A **Organ Pipe Nat** **88.41 55** P **P** **10 33 23.7 +0.6**
baz=245
NLWA **Neilton Lookou** **88.44 37** P **P** **10 33 22.6 -0.1**
F04A **Amboy** **88.50 39** P **P** **10 33 22.4 -0.6**
BILL **Bilibino** **88.50 358** *de*P **P** **10 33 22.3 -0.2**
BILL *e**PP **PcP** **10 33 25.7 +1.6**
BILL *e**SP **pP** **10 33 28.5 -4.2**
BILL *e*S **SKSac** **10 43 52.1 +3.7**
BILL *e*SS **SS** **10 49 59.5 +2.4**
BILL pmax pmax
comp=Z,23nm,1.7s
BILL MLR MLR
comp=Z,568nm,16.0s
BILL **Bilibino** **88.50 358** P **P** **10 33 22.4 -0.1**
BILL IAmb IAmb 10 33 30.8
comp=Z,30nm,1.5s
HSIG **88.64 58** P **P** **10 33 23.4 -0.7**
HSIG IAmb IAmb 10 33 32.4
comp=Z,17nm,1.2s
SHPR **Sheep Range** **88.66 50** P **P** **10 33 24.8 +0.6**
TRF **Thorofare Moun** **88.66 16** IAMs_20 IAMs_20 11 04 11.1
comp=Z,2μm,20.0s
E04D **Cinebar** **88.74 39** P **P** **10 33 25.4 +1.3**
baz=238
VRDI **Verde Repeater** **88.83 20** IAMs_20 IAMs_20 11 01 49.2
comp=Z,1μm,21.0s
GLB **Gilahina Butte** **88.89 19** IAMs_20 IAMs_20 11 04 14.6
comp=Z,1μm,19.0s
D04E **Lakebay** **88.95 38** P **P** **10 33 26.1 +1.0**
baz=238
D03D **Eldon** **88.96 38** P **P** **10 33 25.8 +0.6**
baz=238
W13A **Hualapai Mount** **88.96 52** P **P** **10 33 25.7 -0.1**
W13A IAmb IAmb 10 33 38.8
comp=Z,26nm,1.6s
VNA1 **Neumayer--Stat** **88.99 180** P **P** **10 33 25.1 +0.1**
F05D **White Salmon** **89.04 40** P **P** **10 33 26.1 +0.4**
baz=239
WVOR **Wild Horse Val** **89.06 44** P **P** **10 33 26.6 +0.7**
WVOR pmax pmax
comp=Z,41nm,1.4s
WVOR **Wild Horse Val** **89.06 44** P **P** **10 33 26.6 +0.7**
MCARA **McCarthy VSAT** **89.09 20** IAMs_20 IAMs_20 11 04 57.9
comp=Z,1μm,18.0s
Y14A **Wickenburg** **89.11 53** P **P** **10 33 26.8 +0.5**
YAK **Yakutsk** **89.15 341** P **P** **10 33 25.8 +0.1**
YAK pmax pmax
comp=Z,19nm,1.2s
YAK **Yakutsk** **89.15 341** P **P** **10 33 25.8 +0.1**
YAK IAmb IAmb 10 33 26.1
comp=Z,19nm,1.2s
R11A **Troy Canyon, C** **89.19 48** P **P** **10 33 26.6 -0.1**
R11A **Troy Canyon, C** **89.19 48** P **P** **10 33 26.8 +0.1**
baz=243,SNR=9.0
G06A **Carlson Farm,** **89.20 40** IAMs_20 IAMs_20 11 03 33.8
comp=Z,2μm,22.0s
LON **Longmire** **89.28 39** P **P** **10 33 26.4 -0.4**
LON pmax pmax
comp=Z,19nm,1.4s
LON **Longmire** **89.28 39** P **P** **10 33 26.4 -0.4**
LON IAmb IAmb 10 33 28.1

comp=Z,19nm,1.4s
I07A Izee 89.32 42 P **P** **10 33 27.7 +0.5**
I07A IAmb IAmb 10 33 36.2
comp=Z,22nm,1.3s
PGC Sidney 89.35 37 P **P** **10 33 26.6 -0.3**
D05A Enumclaw 89.41 38 P **P** **10 33 28.0 +0.8**
J08A Circle Bar Ran 89.62 43 P **P** **10 33 29.0 +0.5**
J08A IAmb IAmb 10 33 36.8
comp=Z,27nm,1.1s
A04D Lummi Island 89.81 37 P **P** **10 33 30.8 +1.7**
baz=238
MLY Manley 89.86 15 IAMs_20 IAMs_20 11 06 46.0
comp=Z,1µm,22.0s
ULN Ulaanbaatar 89.87 322 P **P** **10 33 29.2 -0.4**
ULN pmax pmax
comp=Z,21nm,1.4s
ULN Ulaanbaatar 89.87 322 P **P** **10 33 29.2 -0.4**
ULN IAmb IAmb 10 33 30.7
comp=Z,21nm,1.4s
B05A Bryant 89.91 37 P **P** **10 33 30.3 +0.8**
baz=238
WRH Wood River Hil 90.06 16 P **P** **10 33 28.6 -1.3**
TUC Tucson 90.12 55 P **P** **10 33 31.9 +0.8**
TUC pmax pmax
comp=Z,17nm,1.3s
TUC Tucson 90.12 55 P **P** **10 33 31.9 +0.8**
TUC IAmb IAmb 10 33 44.3
comp=Z,16nm,1.2s
TUC Tucson 90.12 55 P **P** **10 33 32.1 +1.0**
baz=246
LTY Liberty 90.21 39 P **P** **10 33 31.3 +0.2**
LTY IAmb IAmb 10 33 43.2
comp=Z,24nm,1.4s
SONM Songino Array 90.23 322 P **P** **10 33 31.3 0.0**
comp=Z,3.7nm,1.0s,baz=136,slow=4.5,SNR=12
SONM LR LR 11 10 54.9
comp=Z,223nm,21.6s,baz=117,slow=34
G08A Pilot Rock 90.26 41 P **P** **10 33 31.4 0.0**
G08A IAmb IAmb 10 33 33.1
comp=Z,17nm,1.1s
LCMT Little Creek M 90.27 50 P **P** **10 33 31.3 -0.4**
CCB Clear Creek Bu 90.28 16 P **P** **10 33 29.4 -1.4**
HDA Harding Lake 90.31 16 P **P** **10 33 29.9 -1.2**
HDA Harding Lake 90.31 16 P **P** **10 33 30.1 -0.9**
baz=218
GTA Gaotai 90.39 312 ⇑P **P** **10 33 32.9 +0.7**
GTA pP PcP 10 33 37.4 +4.1
GTA sP pP 10 33 39.9 -2.4
GTA SKS **SKSac** **10 44 01.6 +0.5**
GTA S **ScS** **10 44 26.8 -1.5**
GTA sS pS 10 44 32.3 -5.2
GTA pmax pmax
comp=Z,7.0nm,1.1s
GTA pmax pmax
comp=Z,110nm,7.9s
GTA LR LR
comp=Z,330nm,20.0s
GTA LR LR
comp=Z,550nm,21.6s
GTA LR LR
comp=Z,540nm,21.3s
B06A Marblemount 90.39 37 P **P** **10 33 31.8 0.0**
B06A IAmb IAmb 10 33 39.5
comp=Z,29nm,1.2s
CCUT Cedar City 90.41 50 P **P** **10 33 32.7 +0.2**
MDM Murphy Dome 90.42 16 IAMs_20 IAMs_20 11 06 58.8
comp=Z,1µm,19.0s
C06D Leavenworth 90.42 38 P **P** **10 33 32.8 +0.8**
baz=239
HAWA Hanford 90.45 40 P **P** **10 33 32.6 +0.4**
HAWA IAmb IAmb 10 33 40.5
comp=Z,27nm,1.1s
X16A Lo Mia Camp, P 90.49 53 P **P** **10 33 33.1 +0.2**
PSUT Pine Spring 90.49 49 P **P** **10 33 32.2 -0.6**
ELK Elko 90.52 46 P **P** **10 33 33.3 +0.3**
ELK pmax pmax
comp=Z,14nm,1.1s
ELK Elko 90.52 46 P **P** **10 33 33.3 +0.3**
ELK IAmb IAmb 10 33 41.2
comp=Z,14nm,1.1s
KNB Kanab 90.57 50 P **P** **10 33 33.8 +0.6**
KNB pmax pmax
comp=Z,73nm,1.6s
KNB Kanab 90.57 50 P **P** **10 33 33.8 +0.6**
IL31 90.61 16 P **P** **10 33 30.9 -1.5**
IL31 IAmb IAmb 10 35 32.9
comp=Z,35nm,1.9s
ILAR Eielson Array 90.61 16 P **P** **10 33 31.1 -1.4**
comp=Z,1.9nm,0.8s,baz=232,slow=4.4,SNR=20
ILAR LR LR 11 07 51.6
comp=Z,2µm,20.6s,baz=230,slow=31
SZCU Shurtz Canyon 90.63 50 P **P** **10 33 34.1 +0.6**
U15A North Rim 90.71 51 P **P** **10 33 34.9 +0.9**
SCRK Sand Creek 90.78 18 P **P** **10 33 33.3 -0.1**
SCRK IAmb IAmb 10 34 11.5
comp=Z,29nm,1.6s
SCRK IAMs_20 IAMs_20 11 08 56.5
comp=Z,2µm,21.0s
319A Douglas 90.91 57 P **P** **10 33 35.1 +0.2**
319A IAmb IAmb 10 33 48.0
comp=Z,17nm,1.1s
WUAZ Wupatki 91.00 52 P **P** **10 33 35.3 +0.1**
WUAZ Wupatki 91.00 52 P **P** **10 33 36.7 +1.5**
baz=246
BMO Blue Mountains 91.07 42 P **P** **10 33 34.6 -0.7**
BMO pmax pmax
comp=Z,21nm,1.5s
BMO Blue Mountains 91.07 42 P **P** **10 33 34.5 -0.7**
BMO IAmb IAmb 10 33 47.4
comp=Z,22nm,1.4s
BMO IAMs_20 IAMs_20 11 04 40.4
comp=Z,1µm,21.0s
PKCU Pink Cliffs 91.12 50 P **P** **10 33 37.6 +1.7**
LLLB Lillooet 91.26 35 P **P** **10 33 35.4 -0.5**
LLLB IAmb IAmb 10 33 52.2
comp=Z,14nm,1.1s
MFID Camas Ranch 91.34 44 P **P** **10 33 37.2 +0.6**
MFID IAmb IAmb 10 33 57.1
comp=Z,20nm,1.4s
MTPU Mount Pierson 91.47 50 P **P** **10 33 37.2 -0.4**
F10A Beach Ranch, E 91.65 41 P **P** **10 33 37.5 -0.4**
X18A Snowflake 91.66 54 P **P** **10 33 38.6 +0.3**
X18A IAmb IAmb 10 33 51.2
comp=Z,17nm,1.2s
MSU Marysvale 91.67 49 P **P** **10 33 40.3 +2.0**
MSU Marysvale 91.67 49 P **P** **10 33 40.3 +2.0**
DUG Dugway, Tooele 91.94 48 P **P** **10 33 40.2 +0.7**
DUG pmax pmax
comp=Z,10.0nm,1.3s
DUG Dugway, Tooele 91.94 48 P **P** **10 33 40.1 +0.7**
DUG IAMs_20 IAMs_20 11 08 09.0
comp=Z,1µm,20.0s
DUG Dugway, Tooele 91.94 48 P **P** **10 33 40.1 +0.6**
baz=245
BOD Bodaibo 91.97 333 *e*P **P** **10 33 37.5 -1.4**
BOD pmax pmax
comp=Z,10.0nm,1.8s
W18A Petrified Fore 92.06 53 P **P** **10 33 40.4 +0.2**
W18A IAmb IAmb 10 33 49.2
comp=Z,20nm,1.1s
W18A Petrified Fore 92.06 53 P **P** **10 33 41.1 +0.9**
baz=246
BGU Big Grassy Mou 92.10 47 P **P** **10 33 40.9 +0.7**
EGAK Eagle 92.20 18 P **P** **10 33 39.6 -0.2**
DAWY Dawson 92.20 19 P **P** **10 33 39.4 -0.6**
DAWY IAmb IAmb 10 33 40.5
comp=Z,12nm,1.1s
DAWY IAMs_20 IAMs_20 11 10 02.7
comp=Z,1µm,20.0s
NLU North Lily Min 92.35 48 P **P** **10 33 41.2 -0.2**
121A Cookes Peak, D 92.53 56 P **P** **10 33 43.7 +1.3**
121A IAmb IAmb 10 33 54.7
comp=Z,18nm,1.2s
121A Cookes Peak, D 92.53 56 P **P** **10 33 43.3 +0.8**
baz=247
Q16A Castle Valley 92.55 49 P **P** **10 33 43.1 +0.8**
MPU Maple Canyon 92.68 48 P **P** **10 33 43.6 +0.6**
TMUT Trail Mountain 92.68 49 P **P** **10 33 44.3 +1.2**
NEW Newport 92.79 39 P **P** **10 33 43.6 +0.6**
NEW pmax pmax
comp=Z,18nm,1.9s
NEW Newport 92.79 39 P **P** **10 33 42.6 -0.4**
comp=Z,0.9nm,0.6s,baz=248,slow=4.9,SNR=3.9
NEW Newport 92.79 39 P **P** **10 33 43.6 +0.6**
NEW IAmb IAmb 10 34 06.2
comp=Z,18nm,1.9s
NEW Newport 92.79 39 P **P** **10 33 43.6 +0.6**
baz=242
CTU Camp Tracy 92.89 48 P **P** **10 33 43.5 -0.3**
JLU Jordanelle 93.06 48 P **P** **10 33 44.9 +0.2**
SRU San Rafael Swe 93.09 49 P **P** **10 33 45.2 +0.4**
SRU pmax pmax
comp=Z,9.0nm,1.0s
SRU San Rafael Swe 93.09 49 P **P** **10 33 45.2 +0.4**
ZAK Zakamensk 93.28 323 *e*P **P** **10 33 43.4 -1.9**
ZAK pmax pmax
comp=Z,7.0nm,1.2s
TLY Talaya 93.70 324 *i* P **P** **10 33 46.7 -0.4**
TLY pmax pmax
comp=Z,8.0nm,1.1s
Y22D IRIS PASSCAL I 93.79 55 IAMs_20 IAMs_20 11 09 24.0
comp=Z,930nm,19.0s
MVCO Mesa Verde 93.80 52 P **P** **10 33 48.6 +0.4**
baz=247
MNTX Cornudas Mount 94.11 58 P **P** **10 33 49.6 +0.1**
MNTX Cornudas Mount 94.11 58 P **P** **10 33 50.1 +0.6**
baz=248
PALK Pallekele 94.31 276 IAMs_20 IAMs_20 11 14 12.1
comp=Z,1µm,20.0s
ANMO Albuquerque 94.47 54⇑ *i*P **P** **10 33 52.2 +0.9**
ANMO pmax pmax
comp=Z,9.0nm,2.5s
ANMO Albuquerque 94.47 54 P **P** **10 33 51.1 -0.2**
ANMO Albuquerque 94.47 54 P **P** **10 33 51.8 +0.5**
baz=248
REDW Red Top Meadow 94.59 45 P **P** **10 33 51.9 +0.2**
EPYK Eagle Plains 94.63 18 P **P** **10 33 49.6 -1.5**
EPYK IAmb IAmb 10 33 53.5
comp=Z,15nm,1.1s
TX31 Lajitas Ar. Si 94.64 61 P **P** **10 33 50.8 -1.3**
TX32 Lajitas Array 94.64 61 P **P** **10 33 52.0 0.0**
TXAR Lajitas Array 94.64 61 P **P** **10 33 53.2 +1.2**
comp=Z,2.2nm,0.9s,baz=227,slow=4.1,SNR=17
TXAR LR LR 11 07 50.1
comp=Z,719nm,21.8s,baz=0.0,slow=30
SNOW Snow King Moun 94.70 45 P **P** **10 33 52.4 +0.2**
SNOW IAmb IAmb 10 34 35.9
comp=Z,19nm,1.7s
TLIG Tlapa 94.95 73 IAMs_20 IAMs_20 11 05 50.7
comp=Z,837nm,22.0s
FLWY Flagg Ranch 94.99 45 IAMs_20 IAMs_20 11 09 32.3
comp=Z,910nm,20.0s
H17A Grant Village 95.19 44 P **P** **10 33 55.6 +1.1**
baz=246
PD31 Pinedale Array 95.22 46 P **P** **10 33 52.2 -2.4**
PD31 IAmb IAmb 10 34 34.6
comp=Z,16nm,1.8s
PDAR Pinedale Array 95.22 46 P **P** **10 33 54.5 -0.1**
comp=Z,1.3nm,1.0s,baz=228,slow=3.8,SNR=5.1
PDAR LR LR 11 13 48.0
comp=Z,493nm,18.1s,baz=257,slow=34
S22A 4UR Ranch, Cre 95.23 52 P **P** **10 33 54.6 -0.2**
S22A 4UR Ranch, Cre 95.23 52 P **P** **10 33 55.8 +0.9**
baz=248
PLCA Paso Flores 95.39 137 LR LR 11 07 31.0
comp=Z,559nm,21.9s,baz=266,slow=30
SDCO Great Sand Dun 96.21 52 P **P** **10 33 59.6 +0.3**
SDCO Great Sand Dun 96.21 52 P **P** **10 34 00.1 +0.8**
baz=249
TIXI Tiksi 96.75 347 IAMs_20 IAMs_20 11 12 11.5
comp=Z,782nm,22.0s
T25A Trinidad 96.81 53 P **P** **10 34 02.5 +0.6**
T25A Trinidad 96.81 53 P **P** **10 34 03.2 +1.3**
baz=250
INK Inuvik 96.85 18 P **P** **10 34 00.8 -0.2**
INK pmax pmax
comp=Z,9.0nm,1.3s
INK Inuvik 96.85 18 P **P** **10 33 59.8 -1.2**
comp=Z,3.1nm,1.0s,baz=217,slow=3.8,SNR=6.1
INK LR LR 11 10 56.0
comp=Z,1µm,21.2s,baz=221,slow=31
INK Inuvik 96.85 18 P **P** **10 34 00.8 -0.2**
INK IAmb IAmb 10 34 01.2
comp=Z,9.3nm,1.2s
MSTX Muleshoe 96.97 56 P **P** **10 34 03.3 +0.7**
baz=250
N23A Red Feather La 97.03 49 P **P** **10 34 02.9 +0.1**
baz=249
K22A Casper 97.25 47 IAMs_20 IAMs_20 11 13 13.6
comp=Z,1µm,18.0s
GO05 Huala 97.50 132 IAMs_20 IAMs_20 11 12 33.1
comp=Z,562nm,18.0s
CMIG Matias Romero 98.11 75 LR LR 11 08 59.7
comp=Z,858nm,21.1s,baz=243,slow=30
PEL Peldehue 99.36 131 IAMs_20 IAMs_20 11 08 30.0
comp=Z,715nm,21.0s
435B Jarrell 100.09 61 IAMs_20 IAMs_20 11 11 12.5
comp=Z,943nm,21.0s
YKA Yellowknife Ar 100.43 27 P **Pdif** **10 34 15.3 -1.9**
comp=Z,0.8nm,1.0s,baz=236,slow=4.4,SNR=3.0
WMQ Urumqi 100.45 313 *e*P **Pdif** **10 34 18.4 +0.5**
WMQ S **Sdif** **10 45 45.4 -6.5**
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ pmax pmax
comp=Z,47nm,4.9s
WMQ LR LR
comp=Z,260nm,7.7s
WMQ LR LR
comp=Z,180nm,9.5s
WMQ LR LR
comp=Z,670nm,25.1s
U32A Winter Ranch, 100.67 55 IAMs_20 IAMs_20 11 13 42.1
comp=Z,953nm,18.0s
GO04 Toloán Observa 100.84 128 IAMs_20 IAMs_20 11 09 13.1
comp=Z,952nm,22.0s
CBKS Cedar Bluff 100.85 53 IAMs_20 IAMs_20 11 18 14.5
comp=Z,807nm,20.0s
OKCFA Oklahoma City 101.58 56 IAMs_20 IAMs_20 11 11 54.5
comp=Z,1µm,20.0s
GO03 Copiap 102.60 126 IAMs_20 IAMs_20 11 11 32.9
comp=Z,638nm,19.0s
TUL1 Leonard 103.02 56 IAMs_20 IAMs_20 11 14 59.5
comp=Z,1µm,20.0s
NNA Nana 104.44 109 IAMs_20 IAMs_20 11 18 33.7
comp=Z,776nm,18.0s
MKAR Makanchi Array 104.95 315 Pdiff **Pdif** **10 34 39.2 +1.4**
comp=Z,1.7nm,1.0s,baz=97,slow=6.6,SNR=5.3
MKAR PP **PP** **10 39 04.0 +5.4**
comp=Z,0.1nm,0.4s,baz=79,slow=7.8,SNR=3.6
MKAR PKKPbc **PKKPbc** **10 50 24.7 +3.3**
comp=Z,0.9nm,1.0s,baz=264,slow=4.1,SNR=4.0
JTS Las Juntas de 105.09 85 IAMs_20 IAMs_20 11 11 31.4
comp=Z,655nm,20.0s
MAKZ Makanchi 105.16 315 IAMs_20 IAMs_20 11 30 02.0
comp=Z,578nm,21.0s
PB04 IPOC Station P 105.35 121 IAMs_20 IAMs_20 11 11 32.1
comp=Z,1µm,22.0s
PB11 IPOC Station P 107.03 119 IAMs_20 IAMs_20 11 12 32.7
comp=Z,917nm,20.0s
MNMC Minye Minye 107.39 119 IAMs_20 IAMs_20 11 12 44.3
comp=Z,986nm,21.0s
GO01 Chusmiza 107.45 119 IAMs_20 IAMs_20 11 13 06.9
comp=Z,922nm,21.0s
OTAV Otavalo 107.77 97 IAMs_20 IAMs_20 11 12 17.3
comp=Z,922nm,22.0s
NRN Naryn 108.17 308 IAMs_20 IAMs_20 11 21 52.5
comp=Z,607nm,22.0s
L46A Eue Claire 111.56 52 IAMs_20 IAMs_20 11 18 09.8
comp=Z,772nm,20.0s
GAR Garm 112.02 305 IAMs_20 IAMs_20 11 37 00.2
comp=Z,600nm,19.0s
CHGR Chuyangaron 112.86 304 IAMs_20 IAMs_20 11 24 21.5
comp=Z,830nm,22.0s
MSEY Mahe Island 113.44 255 IAMs_20 IAMs_20 11 23 30.6
comp=Z,853nm,21.0s
BRVK Borovoye 113.56 320 IAMs_20 IAMs_20 11 23 58.9
comp=Z,638nm,22.0s
JSC Jenkinsville 114.30 61 IAMs_20 IAMs_20 11 19 04.7
comp=Z,636nm,21.0s
SAML Samuel 117.78 113 IAMs_20 IAMs_20 11 19 14.1
comp=Z,665nm,22.0s
N58A Sunbury 118.60 54 P **PKiKP** **10 39 18.9 +0.2**
baz=267
K57A Scipio Center 118.83 52 P **PKiKP** **10 39 19.8 +0.7**
baz=268
SDDR Presa de Saban 120.19 80 IAMs_20 IAMs_20 11 19 34.1
comp=Z,635nm,22.0s
ARU Arti 120.20 324 *i* PKIKP **PKPdf** **10 39 20.2 -1.0**
ARU 10 40 43.7
ARU 10 46 32.0
ARU MLR MLR
comp=Z,532nm,18.0s
FRB Frobisher Bay 120.94 27 PKIKP **PKPdf** **10 39 21.0 -1.4**
FRB Frobisher Bay 120.94 27 PKP **PKPdf** **10 39 21.0 -1.4**
comp=Z,4.7nm,1.0s,baz=328,slow=3.9,SNR=4.0
BDFB Brasilia 126.24 129 PKIKP **PKPdf** **10 39 32.8 -1.4**
BDFB Brasilia 126.24 129 PKP **PKPdf** **10 39 33.4 -0.8**
comp=Z,1.7nm,0.3s,baz=318,slow=5.8,SNR=3.3
BDFB Brasilia 126.24 129 **PKPdf** **10 39 32.8 -1.4**
SMRT St. Maarten 127.59 83 IAMs_20 IAMs_20 11 23 31.3
comp=Z,469nm,18.0s
KLMR Klimovskoe 128.20 333 *e*PKIKP **PKPdf** **10 39 35.7 -0.6**
KLMR pmax pmax
comp=Z,22nm,1.5s
KLMR Klimovskoe 128.20 333 *e*PKPdf **PKPdf** **10 39 35.8 -0.6**
KLMR AMP 10 39 49.4
comp=Z,22nm,1.5s
KLMR LQ LQ 11 28 17.3
KLMR LQ LQ 11 28 17.3
KLMR LR LR 11 32 29.5
AKT Akhty 129.31 307 *e*PKIKP **PKiKP** **10 39 47.0 +7.0**
AKT *e* 10 41 58.3
AKT pmax pmax
comp=Z,19nm,1.2s
LSZ Lusaka 130.08 227 IAMs_20 IAMs_20 11 34 07.3
comp=Z,518nm,18.0s
DAMY Dhamar 130.45 272 IAMs_20 IAMs_20 11 29 15.1
comp=Z,727nm,22.0s
ATD Arta Tunnel 131.07 267 IAMs_20 IAMs_20 11 33 05.6
comp=Z,440nm,20.0s
RAYN Ar Rayn 131.13 284 IAMs_20 IAMs_20 11 44 54.3
comp=Z,458nm,18.0s
KMBO Kilima Mbogo 131.28 249*c* *i*PKIKP **PKiKP** **10 39 46.0 +1.0**
KMBO pmax pmax
comp=Z,1.0nm,0.3s
KMBO Kilima Mbogo 131.28 249 IAMs_20 IAMs_20 11 30 46.6
comp=Z,506nm,22.0s
KIV Kislovodsk 132.56 311 *i* PKIKP **PKiKP** **10 39 46.3 -0.1**
KIV pmax pmax
comp=Z,13nm,1.0s
FINES FINESS Array B 133.03 339*c* *i*PKIKP **PKiKP** **10 39 48.2 +1.5**
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 133.03 339 PKP **PKPdf** **10 39 43.9 -1.6**
comp=Z,2.4nm,0.9s,baz=107,slow=1.5,SNR=4.0
FURI Furi 134.12 262 IAMs_20 IAMs_20 11 34 28.7
comp=Z,734nm,21.0s
AKASG Malin Array Be 138.44 325*c* *i*PKIKP **PKiKP** **10 39 58.4 +0.4**
AKASG Malin Array Be 138.44 325 PKhKP PKPpre 10 39 47.0
comp=Z,0.1nm,0.3s,baz=46,slow=2.2,SNR=2.9
ILGA Ilgaz 139.72 310 **PKPdf** **10 39 57.9 -1.0**
BRTR Keskin Array B 140.16 308*c* *i*PKIKP **PKiKP** **10 40 01.3 -0.8**
BRTR pmax pmax
comp=Z,2.0nm,1.0s
BRTR Keskin Array B 140.16 308 PKP **PKPdf** **10 39 59.1 -0.5**
comp=Z,1.6nm,1.0s,baz=62,slow=3.4,SNR=4.8
CSS Mathiatis 141.52 301 IAMs_20 IAMs_20 11 47 15.7
comp=Z,526nm,21.0s
BURAR Bucovina Array 142.34 323⇑PKIKP **PKPdf** **10 40 02.1 -1.1**
BURAR Bucovina Array 142.34 323⇑P **PKPdf** **10 40 02.1 -1.1**
VRI Vrincioaia 142.40 320⇑PKIKP **PKPdf** **10 40 04.1 +0.8**
VRI Vrincioaia 142.40 320⇑P **PKPdf** **10 40 04.1 +0.8**
MLR Muntele Rosu 143.06 320 PKIKP **PKPdf** **10 40 04.2 -0.4**
MLR Muntele Rosu 143.06 320⇑P **PKPdf** **10 40 04.0 -0.6**
MLR Muntele Rosu 143.06 320 **PKPdf** **10 40 04.2 -0.4**
MLR IAMs_20 IAMs_20 11 46 22.2
comp=Z,495nm,21.0s
DOPR Dopca 143.14 321⇑P PKPbc 10 40 01.6 0.0
UZH Uzhgorod 143.30 327 *e*PKHKP PKPab 10 39 59.5 -1.1
UZH *i* 10 40 01.7
VOIR 143.63 320⇑PKIKP PKPbc 10 40 04.2 +1.2
VOIR 143.63 320⇑P PKPbc 10 40 04.2 +1.2
ARR Arges 143.91 321⇑P **PKPdf** **10 40 05.5 -0.6**
BSEG Bad Segeberg 144.08 342 *e*PKPbc PKPbc 10 40 03.9 -0.1
baz=31,slow=2.9
HUMR Humele 144.15 319⇑P **PKPab** **10 40 03.2 -0.8**
RUE Ruedersdorf 144.21 338 *e*PKPbc PKPbc 10 40 04.2 -0.1
baz=31,slow=2.9
DRGR 144.21 324⇑PKIKP PKPbc 10 40 05.1 +0.4
DRGR 144.21 324⇑P PKPbc 10 40 05.1 +0.3
KECS Kecovo 144.31 328 *e*PKIKP PKPbc 10 40 05.2 +0.3
KECS Kecovo 144.31 328 *e*PKP PKPbc 10 40 05.2 +0.3
ELND Elena 144.37 316⇑P **PKPab** **10 40 05.0 0.0**
LOT Lotru 144.38 321⇑P **PKPab** **10 40 04.6 -0.5**
OKC Ostrava-Krasne 144.49 331 *e*PKIKP PKPbc 10 40 05.5 +0.1
OKC Ostrava-Krasne 144.49 331 *e*PKP PKPbc 10 40 05.5 +0.1
DEV Deva 144.63 323⇑PKIKP PKPbc 10 40 06.0 0.0
DEV Deva 144.63 323⇑P PKPbc 10 40 06.0 0.0
VLAD Vladila 144.77 319⇑P PKPbc 10 40 06.6 +0.1
OSTC Ostas 144.79 334 *e*PKP **PKPdf** **10 40 06.9 -0.4**
OSTC *ex* x 10 40 12.3
MORC Moravsky Berou 144.80 332 PKIKP PKPbc 10 40 06.6 +0.1
MORC Moravsky Berou 144.80 332⇑P **PKPab** **10 40 05.9 -0.4**
MORC Moravsky Berou 144.80 332 *e*PKP **PKPab** **10 40 06.4 0.0**
MORC Moravsky Berou 144.80 332 PKPbc 10 40 06.6 +0.1
CHVC Chvalec 144.83 334 *e*PKP PKPbc 10 40 06.7 +0.2
CHVC *ex* x 10 40 12.4
DPC Dobruska-Polom 144.90 333 *e*PKIKP **PKPab** **10 40 06.6 -0.1**
DPC *e* 10 40 13.1
DPC Dobruska-Polom 144.90 333 *e*PKP **PKPab** **10 40 06.6 -0.1**
DPC *ep*PKP **PKiKP** **10 40 13.1 +1.7**
DPC *ex* x 10 40 18.7
UPC Upice 144.91 334 *e*PKIKP **PKPdf** **10 40 07.2 -0.3**
UPC *e* 10 40 13.0
UPC Upice 144.91 334 *e*PKP **PKPdf** **10 40 07.2 -0.3**
UPC *ep*PKP **PKiKP** **10 40 13.0 +1.7**
KRLC Kraliky 144.91 333 *e*PKIKP **PKPab** **10 40 06.8 0.0**
KRLC *e* 10 40 12.5
KRLC Kraliky 144.91 333 *e*PKP **PKPab** **10 40 06.8 0.0**
KRLC *ep*PKP **PKiKP** **10 40 12.5 +1.1**
PLVB Pleven 144.95 318⇑P **PKPdf** **10 40 07.8 0.0**
PSZ Piszkesteto 144.98 328⇑PKIKP **PKPab** **10 40 07.5 +0.3**
PSZ Piszkesteto 144.98 328⇑P **PKPab** **10 40 07.5 +0.3**
PSZ Piszkesteto 144.98 328 PKPbc 10 40 07.2 0.0
GZR Gura Zlata 144.99 322⇑PKIKP **PKPab** **10 40 07.3 +0.1**
GZR Gura Zlata 144.99 322⇑P **PKPab** **10 40 07.3 +0.1**
SIRR Siria 145.10 324⇑P **PKPdf** **10 40 08.1 +0.1**
VYHS Vyhne 145.11 329 *e*PKIKP **PKPdf** **10 40 08.0 0.0**
VYHS Vyhne 145.11 329 *e*PKP **PKPdf** **10 40 08.0 0.0**
VYHS *e* 11 00 53.9
NRDL Niedersach Rie 145.40 341 *e*PKPbc **PKPab** **10 40 08.4 +0.1**
baz=31,slow=2.9
JAVC Velka Javorina 145.41 331 *e*PKP **PKPab** **10 40 09.9 +1.2**
RETH Rethem/Aller, 145.41 342 *e*PKPbc **PKPab** **10 40 08.4 0.0**
baz=31,slow=2.9
CLL Collm 145.44 337⇑ *i*PKIKP **PKPbc** **10 40 08.5 +0.1**
CLL pmax pmax
comp=Z,83nm,1.1s
CLL MLR MLR
comp=Z,400nm,18.6s
CLL Collm 145.44 337 *i*PKPbc **PKPbc** **10 40 08.5 +0.1**
comp=Z,83nm,1.1s
CLL *e*SSS SSS 11 07 48.0
CLL Lm MLR 11 52 00.0
comp=N,400nm,19.3s
CLL Lm MLR 11 52 00.0
comp=E,300nm,18.9s
CLL Lm MLR 11 52 00.0
comp=Z,400nm,18.6s
CLL Collm 145.44 337 *e*PKPbc **PKPdf** **10 40 08.4 0.0**
baz=31,slow=2.9
CLL Collm 145.44 337 **PKPab** **10 40 08.7 +0.1**
BRG Berggiesshubel 145.44 336 *i* PKP **PKPab** **10 40 08.7 0.0**
comp=Z,95nm,1.2s
BRG Berggiesshubel 145.44 336 *i* PKIKP **PKPab** **10 40 08.7 0.0**
BRG pmax pmax
comp=Z,95nm,1.2s
BRG Berggiesshubel 145.44 336 *e*PKPbc **PKPab** **10 40 08.6 0.0**
baz=31,slow=2.9
PVCC Panska Ves 145.48 335 *e*PKIKP **PKPab** **10 40 08.8 0.0**
PVCC *e* 10 40 15.0
PVCC Panska Ves 145.48 335 *e*PKP **PKPab** **10 40 08.8 0.0**
PVCC *ep*PKP **PKiKP** **10 40 15.0 +2.5**
HERR Herculane 145.49 321⇑P **PKPdf** **10 40 08.4 -0.3**
BZS Buzias 145.52 323⇑PKIKP **PKPdf** **10 40 08.8 +0.1**
BZS Buzias 145.52 323⇑P **PKPdf** **10 40 08.8 +0.1**
ASSE Asse, Remlinge 145.54 340 *e*PKPbc **PKPab** **10 40 09.0 +0.1**
baz=31,slow=2.9
VRAC Vranov 145.56 332⇑PKIKP **PKPab** **10 40 09.5 +0.3**
VRAC Vranov 145.56 332⇑P **PKPab** **10 40 09.5 +0.3**
VRAC Vranov 145.56 332 *e*PKP **PKPab** **10 40 09.2 0.0**
FBE Freiberg 145.63 337 *e*PKPbc **PKPab** **10 40 09.5 +0.2**
baz=31,slow=2.9
SMOL Smolenice 145.76 330 *e*PKIKP **PKPab** **10 40 10.5 +0.6**

SMOL	Smolenice	145.76	330	ePKP	PKPab	10 40 10.5 +0.6
KRUC	Moravsky	145.83	332	ePKP	PKPbc	10 40 09.9 +0.2
CLZ	Clausthal baz=31,slow=2.9	145.88	340	ePKPbc	PKPbc	10 40 09.6 -0.2
PRU	Pruhonice	145.91	335	ePKP2	PKPbc	10 40 09.9 0.0
PRU	Pruhonice	145.91	335	ePKP	PKPbc	10 40 09.9 0.0
MODS	Modra-Piesok	145.94	330	ePKP2	PKPbc	10 40 10.0 -0.1
MODS	Modra-Piesok	145.94	330	ePKP	PKPbc	10 40 10.0 -0.1
MODS				e		11 00 58.6
MDVR	Moldovita	145.96	322	⇑P	PKPdf	10 40 09.5 0.0
NEUB	Neuenburg baz=31,slow=2.9	145.96	338	ePKPbc	PKPbc	10 40 10.1 +0.1
TREC	Trest	146.05	333	ePKP2	PKPbc	10 40 10.6 +0.2
TREC	Trest	146.05	333	ePKP	PKPbc	10 40 10.6 +0.2
TREC				ex	x	10 40 17.5
ZST	Bratislava	146.14	330	ePKP2	PKPbc	10 40 10.7 0.0
ZST	Bratislava	146.14	330	ePKP	PKPbc	10 40 10.7 0.0
VTS	Vitosha	146.22	317	⇑PKP2	PKPdf	10 40 09.9 -0.3
VTS	Vitosha	146.22	317	⇑P	PKPdf	10 40 09.9 -0.3
VTS	Vitosha	146.22	317		PKPbc	10 40 11.5 +0.1
IBBN	Ibbenburen baz=31,slow=2.9	146.24	343	ePKPbc	PKPbc	10 40 10.8 0.0
GTTG	Gyttingen baz=31,slow=2.9	146.27	340	ePKPbc	PKPbc	10 40 10.8 -0.2
PBCC	Pribram	146.37	335	ePKP	PKPbc	10 40 11.4 +0.1
PBCC				ex	x	10 40 17.2
TANN	Tannenbergstha baz=31,slow=2.9	146.37	337	ePKPbc	PKPbc	10 40 11.5 +0.1
PLN	Plauen baz=31,slow=2.9	146.42	337	ePKPbc	PKPbc	10 40 11.6 +0.1
GUNZ	Gunzen baz=31,slow=2.9	146.46	337	ePKPbc	PKPbc	10 40 11.9 +0.3
MOX	Moxa baz=31,slow=2.9	146.48	338	ePKPbc	PKPbc	10 40 11.6 -0.1
WERN	Wernitzgruen baz=31,slow=2.9	146.51	337	ePKPbc	PKPbc	10 40 12.2 +0.4
NKC	Novy Kostel	146.52	337	ePKP2	PKPbc	10 40 12.1 +0.3
NKC	Novy Kostel	146.52	337	ePKP	PKPbc	10 40 12.1 +0.3
NKC				epPKP	pPKPdf	10 40 18.2 -2.5
TIH	Tihany	146.67	328	ePKiKP	PKPab	10 40 13.1 -0.3
MORH	Mrgy, Hungar	146.75	326	⇓iP	PKPdf	10 40 11.5 +0.7
FRGS	Fruska Gora	146.81	324	⇓iP	PKPdf	10 40 11.5 +0.5
MANZ	Manzenberg baz=31,slow=2.9	146.85	337	ePKPbc	PKPbc	10 40 13.0 +0.3
UBBA	Unterbreizbach baz=31,slow=2.9	146.88	340	ePKPbc	PKPbc	10 40 12.8 +0.2
CONA	Conrad Observa comp=Z,28nm,1.3s,SNR=12	146.91	331	epPKPdf	PKPbc	10 40 13.3 +0.2
KHC	Kasperske Hory	146.97	334	ePKP2	PKPbc	10 40 13.2 +0.1
KHC	Kasperske Hory	146.97	334	ePKP	PKPbc	10 40 13.2 +0.1
KHC				ex	x	10 40 32.5
KHC	Kasperske Hory	146.97	334		PKPbc	10 40 13.4 +0.3
ROTZ	Rotzenmuhle baz=31,slow=2.9	147.00	336	ePKPbc	PKPbc	10 40 13.5 +0.3
GEC2	GERESS Array S baz=31,slow=2.9	147.15	334	ePKPbc	PKPbc	10 40 13.7 0.0
GEC2	GERESS Array S	147.15	334		PKPbc	10 40 13.7 0.0
GERES	GERESS Array B comp=Z,13nm,0.9s,baz=33,slow=3.2,SNR=50	147.15	334	PKPbc	PKPbc	10 40 13.4 -0.3
WET	Wettzell baz=31,slow=2.9	147.24	335	ePKPbc	PKPbc	10 40 14.1 +0.2
VAY	Valandovo	147.30	316	iP	PKiKP	10 40 16.7 +0.2
DIVS	Divibare	147.35	322	⇓iP	PKPbc	10 40 13.9 -0.5
STIP	Stip	147.36	317	iP	PKPbc	10 40 14.7 +0.3
GRF	Grafenberg Arr baz=31,slow=2.9	147.42	337	ePKPbc	PKPbc	10 40 14.3 -0.1
ARSA	Arzberg comp=Z,16nm,1.6s	147.56	330	epPKPdf	PKPbc	10 40 14.5 -0.3
MOA	Molln comp=Z,16nm,1.1s	147.68	332	epPKPdf	PKPbc	10 40 15.1 0.0
SKO	Skopje	147.69	318	iP	PKPbc	10 40 15.7 +0.3
BBLS	Lazići	147.83	322	eP	PKPbc	10 40 15.3 -0.4
TNS	Taunus Mts baz=31,slow=2.9	147.89	341	ePKPbc	PKPbc	10 40 15.4 -0.3
LIT	Litokhoron	147.95	314	PKP2	PKPbc	10 40 15.5 -0.6
LIT	Litokhoron	147.95	314		PKPbc	10 40 15.5 -0.6
AHRW	Bad Neuenahr-A baz=31,slow=2.9	148.01	343	ePKPbc	PKPbc	10 40 16.0 +0.1
SOKA	Soboth comp=Z,12nm,1.3s	148.21	330	epPKPdf	PKPbc	10 40 16.3 -0.4
MEM	Membach	148.25	344	x	x	10 40 15.8
MEM				PKiKP	PKiKP	10 40 18.3 +0.1
RJOB	Jochberg baz=31,slow=2.9	148.39	334	ePKPbc	PKPbc	10 40 16.7 -0.3
BLY	Banja Luka	148.49	325	⇑P	PKPdf	10 40 14.0 +0.3
BLY	Banja Luka	148.49	325	⇓iP	PKPbc	10 40 17.0 -0.3
BLY	Banja Luka	148.49	325		PKPbc	10 40 17.4 +0.1
OHR	Ohrid	148.56	317	iP	PKPbc	10 40 17.0 -0.7
OBKA	Obir comp=Z,7.9nm,1.1s	148.56	330	PKPbc	PKPbc	10 40 16.7 -0.9
CRES	Cresnjev	148.63	329	iPKPbc	PKPbc	10 40 17.1 -0.6
CRES	Cresnjev	148.63	329	eP	PKPbc	10 40 16.6 -1.1
FUR	Furstenfeldbru baz=31,slow=2.9	148.66	336	ePKPbc	PKPbc	10 40 17.8 +0.1
KBA	Koelnbreinsper comp=Z,11nm,1.1s	148.67	332	ePKPbc	PKPbc	10 40 17.1 -0.9
MGRS	Mrkonjic Grad	148.77	325	⇑iP	PKPab	10 40 22.4 +0.5
PDG	Podgorica	148.78	320	⇑P	PKPdf	10 40 14.8 +0.5
PDG	Podgorica	148.78	320	eP	PKPab	10 40 20.9 -1.0
BMRD	Maredsous	148.84	345	PKPbc	PKPbc	10 40 17.9 -0.1
BMRD				PKiKP	PKiKP	10 40 19.7 +0.3
MYKA	Terra Mystica	148.89	331	iPKPbc	PKPbc	10 40 17.6 -0.7
STU	Stuttgart baz=31,slow=2.9	148.91	339	ePKPbc	PKPbc	10 40 18.4 +0.2
LJU	Ljubljana	148.92	330	iPKPbc	PKPbc	10 40 18.0 -0.4
LJU	Ljubljana	148.92	330	eP	PKPbc	10 40 17.6 -0.8
WLF	Walferdange	149.06	343	PKP2	PKPbc	10 40 19.2 +0.6
WLF	Walferdange baz=31,slow=2.9	149.06	343	ePKPbc	PKPbc	10 40 19.0 +0.4
WLF	Walferdange	149.06	343		PKPbc	10 40 19.2 +0.6
DOU	Dourbes	149.07	345	x	x	10 40 17.7
DOU				PKPbc	PKPbc	10 40 18.6 0.0
DOU				PKiKP	PKiKP	10 40 20.1 +0.2
CADS	Cadrg	149.15	331	ePKPbc	PKPdf	10 40 16.8 +2.0
CEY	Cerknica	149.19	329	⇓iP	PKPbc	10 40 18.2 -0.9
WATA	Walderalm comp=Z,8.6nm,0.9s	149.21	334	ePKPbc	PKPbc	10 40 18.6 -0.7
ABTA	Abfaltersbach comp=Z,13nm,0.9s	149.29	333	ePKPbc	PKPbc	10 40 18.4 -1.0
MOTA	Moosalm comp=Z,30nm,1.2s,SNR=11	149.40	335	ePKPbc	PKPbc	10 40 18.8 -1.0
RETA	Reutte comp=Z,12nm,1.0s	149.41	335	ePKiKP	PKPbc	10 40 19.3 -0.3
SQTA	Sankt Quirin comp=Z,15nm,0.8s,SNR=10	149.46	335	ePKPbc	PKPbc	10 40 19.2 -0.7
UBR	Ueberruh baz=31,slow=2.9	149.50	336	ePKPbc	PKPbc	10 40 19.6 -0.3
BFO	Black Forest	149.58	339	PKP2	PKPbc	10 40 19.8 -0.2
BFO	Black Forest baz=31,slow=2.9	149.58	339	ePKPbc	PKPbc	10 40 19.7 -0.2
BFO	Black Forest	149.58	339		PKPbc	10 40 19.8 -0.2
STAL	STALIGIAL	149.58	332		PKPbc	10 40 19.5 -0.6
FETA	Feichten comp=Z,24nm,1.2s,SNR=9.2	149.81	335	ePKiKP	PKPbc	10 40 20.9 +0.1
DAVA	Damuels comp=Z,16nm,1.0s	149.92	336	ePKiKP	PKPbc	10 40 20.9 -0.2
ECH	Echery	150.06	340	PKP2	PKPbc	10 40 20.4 -0.8
ECH	Echery	150.06	340		PKPbc	10 40 20.4 -0.8
CTI	Castel Tesino	150.21	333	PKIKP	PKPbc	10 40 21.0 -0.7
CTI	Castel Tesino	150.21	333		PKPbc	10 40 21.0 -0.7
FUORN	Ofenpass-Fuorn	150.32	335		PKPbc	10 40 21.8 -0.4
TUE	Stuetta	150.80	336		PKPbc	10 40 22.1 -1.1
SENIN	Lac Senin/Sane	151.64	338		PKPbc	10 40 23.0 -2.2
ZCCA	Zocca	151.84	331		PKiKP	10 40 26.3 +0.4
MURB	Monte Urbino	151.93	328		PKPdf	10 40 18.8 -0.5
NRCA	Norcia comp=Z,2.1nm,0.8s,baz=12,slow=3.5,SNR=6.5	151.94	327		PKPdf	10 40 17.5 -1.8
NRCA				PKPbc	PKPbc	10 40 25.3 -0.5
INTR	Introdacqua	152.11	325		PKPdf	10 40 18.1 -1.5
INTR				PKPbc	PKPbc	10 40 25.4 -0.8
BNI	Bardonecchia	152.99	338	PKIKP	PKPdf	10 40 20.5 -0.4
BNI	Bardonecchia	152.99	338		PKPdf	10 40 20.5 -0.4
ESDC	Sonseca Array comp=Z,2.1nm,0.8s,baz=12,slow=3.5,SNR=6.5	160.77	352	PKPab	PKPab	10 41 12.9 +0.1
TOA0	Torodi Ar. Sit	168.59	231		PKPdf	10 40 37.4 -0.9
TORD	Torodi Ar. Bea comp=Z,2.1nm,1.0s,baz=135,slow=0.4,SNR=6.7	168.59	231	PKP	PKPdf	10 40 37.4 -0.9
TORD				PKPab	PKPab	10 41 47.7 -0.3

baz=123,slow=5.3

IDC 22 10:27:37.4±4.0, 16°.17S×174°.58W, h0km, mb3.5/3, mb1 3.9/4, mb1mx3.6/42, mbtmp3.6/4, ML3.2/1, Error ellipse: s-maj=276.0km s-min=22.5km az=151.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu 1.9nm,0.3s,baz=214,slow=14,SNR=9.6	3.52	51	Pn	Pn	10 28 31.7	-1.7
H11S2	WAKE ISLAND Hy baz=150,slow=76,SNR=10	39.06	331	T	T	11 15 53.6	
H11S3	WAKE ISLAND Hy baz=150,slow=76,SNR=6.4	39.07	331	T	T	11 15 51.3	
H11S1	WAKE ISLAND Hy baz=150,slow=76,SNR=7.7	39.08	331	T	T	11 15 53.1	
H11N3	WAKE ISLAND Hy baz=151,slow=76,SNR=11	40.03	332	T	T	11 16 56.7	
H11N1	WAKE ISLAND Hy baz=151,slow=76,SNR=22	40.04	332	T	T	11 16 55.5	
H11N2	WAKE ISLAND Hy baz=151,slow=76,SNR=15	40.05	332	T	T	11 17 06.7	
WRA	Warramunga Arr 1.0nm,0.9s,baz=89,slow=7.8,SNR=3.2	48.56	258	P	P	10 36 22.3	-0.6
ASAR	Alice Springs 1.3nm,1.1s,baz=88,slow=8.4,SNR=5.1	48.79	253	P	P	10 36 24.4	-0.3
NVAR	Mina Array Bea 0.3nm,0.7s,baz=229,slow=8.2,SNR=2.4	75.66	42	P	P	10 39 24.9	+0.1
PDAR	Pinedale Array 0.1nm,0.6s,baz=206,slow=6.0,SNR=2.5	83.59	42	P	P	10 40 08.4	+0.5
BRTR	Keskin Array B 2.3nm,0.9s,baz=62,slow=3.9,SNR=8.0	146.01	319	PKPbc	PKPbc	10 47 19.4	-0.2

*NEIC **22** 10:36:13.6±1.7, 1°.24N×0°.06×124°.19E±0°.09, h233km±10km, mb4.4/18, Error ellipse: s-maj=14.1km s-min=8.5km az=106.0*

*DJA **22** 10:36:15.5±1.7, 1°.5S×12°.5E±°, h14km±14km, M4.4/6, mb4.7/1, MLv4.3/6, Mwp5.2/1*

*IDC **22** 10:36:21.4±6.7, 1°.18N×124°.39E, h321km±79km, mb3.3/6, mb1 3.5/7, mb1mx3.1/42, mbtmp4.0/7, Error ellipse: s-maj=36.9km s-min=15.3km az=78.0*

ISC 22 10:36:15.1±0.6, 1°.14N±0°.06×124°.33E±0°.06, h250km, n35, σ1§72/39, mb4.2/15, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	0.66	212	P	Pn	10 36 47.5	-1.0
KMSI				S	S	10 37 12.8	-2.0
LUWI	Luwuk	2.67	216	P	Pn	10 37 01.2	-2.9
LUWI	Luwuk	2.67	216		Pn	10 37 01.6	-2.4
LUWI					S	10 37 39.6	-3.2
TNTI	Ternate	3.06	97	Pn	Pn	10 37 08.4	+0.2
TNTI					S	10 37 46.3	-4.0
APSI	Ampana	3.36	233	P	Pn	10 37 11.3	-0.3
APSI				S	S	10 37 53.8	-2.6
SANI	Sanana	3.58	152	P	Pn	10 37 10.8	-3.2
SANI				S	S	10 37 52.3	-8.4
TTSI	Tana Toraja	6.13	227	P	Pn	10 37 46.2	+1.3
MTN	Manton Dam	15.45	154	P	Pn	10 39 40.7	0.0
MTN	comp=Z,25nm,1.3s			IAmb	IAmb	10 39 59.6	
KNRA	Kununurra	17.27	165	P	Pn	10 40 01.2	-1.0
FITZ	Fitzroy Crossi comp=Z,0.6nm,0.3s,baz=0.4,slow=13,SNR=11	19.16	176	P	Pn	10 40 22.9	-1.4
FITZ	Fitzroy Crossi	19.16	176	P	P	10 40 21.8	+1.6
FITZ	comp=Z,12nm,1.2s			IAmb	IAmb	10 40 29.7	
PSA00	Pilbara Seismi	22.99	191	P	P	10 40 59.1	+0.8
WB0	Warramunga Arr	23.00	155	P	P	10 40 58.8	+0.5
WB0	comp=Z,11nm,0.5s			IAmb	IAmb	10 41 00.1	
WRAB	Tennant Creek	23.13	155	P	P	10 41 00.2	+0.6
WRAB	comp=Z,8.3nm,0.6s			IAmb	IAmb	10 41 00.4	
WRA	Warramunga Arr comp=Z,6.8nm,0.4s,baz=335,slow=9.9,SNR=39	23.14	155	P	P	10 40 59.9	+0.3
COEN	Coen	23.95	129	P	P	10 41 07.3	+0.3
COEN	comp=Z,11nm,1.4s			IAmb	IAmb	10 41 15.3	
AS31	Alice Springs	26.35	160	P	P	10 41 29.3	+0.7
AS31	comp=Z,1.6nm,0.3s			IAmb	IAmb	10 41 30.9	
ASAR	Alice Springs comp=Z,18nm,0.5s,baz=338,slow=7.3,SNR=42	26.36	160	P	P	10 41 29.3	+0.7
FORT	Forrest	31.94	174	P	P	10 42 19.4	+1.7
BBOO	Buckleboo	35.54	163	P	P	10 42 49.4	+0.7
BBOO	comp=Z,20nm,1.4s			IAmb	IAmb	10 42 59.0	
STKA	Stephens Creek comp=Z,0.8nm,0.3s,baz=323,slow=11,SNR=6.2	36.69	155	P	P	10 42 59.2	+0.8
STKA	Stephens Creek	36.69	155	P	P	10 42 59.3	+0.9
MJAR	Matsushiro Arr comp=Z,1.7nm,0.7s,baz=194,slow=7.6,SNR=3.0	37.50	19	P	P	10 43 04.2	-1.0
SHL	Shillong	39.60	311		S	10 49 07.8	+0.8
ARMA	Armidale	40.75	143	P	P	10 43 34.3	+2.0
ARMA	comp=Z,12nm,1.1s			IAmb	IAmb	10 43 43.4	
CAN	Canberra	42.98	150	P	P	10 43 52.4	+2.4
CAN	comp=Z,21nm,1.5s			IAmb	IAmb	10 44 02.6	
TOO	Toolangi	43.21	155	P	P	10 43 54.6	+2.8
USRK	Ussurisyk Ar. comp=Z,0.8nm,0.4s,baz=207,slow=7.3,SNR=4.3	43.41	8	P	P	10 43 53.7	+0.4
TAU	Tasmania Unive	48.48	157	P	P	10 44 34.3	+1.6
SONM	Songino Array comp=Z,0.4nm,0.6s,baz=156,slow=6.1,SNR=4.7	49.05	344	P	P	10 44 36.1	-1.0
MK31	Makanchi Array	58.36	327	P	P	10 45 43.0	-1.4
MKAR	Makanchi Array comp=Z,0.6nm,0.3s,baz=126,slow=8.0,SNR=16	58.36	327	P	P	10 45 43.7	-0.7
MAKZ	Makanchi	58.54	327	P	P	10 45 44.6	-1.0
YAK	Yakutsk	60.88	3	P	P	10 46 01.1	0.0
YAK	comp=Z,7.7nm,0.6s			IAmb	IAmb	10 46 06.1	
BSWZ	Blackbirch Sta	61.80	140	P	P	10 46 09.5	+1.8

HEL 22 10:37:36.8±0.1, 64°.52N×24°.57E, h0km, ML1.5, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OBF0	Syolatti, Pyha	0.15	260	eP	Pg	10 37 39.1	-0.5
OBF0				eS	Sg	10 37 41.2	-0.3
OUF	Merijarvi	0.17	156	eP	Pg	10 37 39.7	-0.3
OUF				eS	Sg	10 37 42.2	-0.1
OBF6	Kekajrvi, Yli	0.39	180	eP	Pg	10 37 43.7	-0.5
OBF6				eS	Sg	10 37 48.8	-0.3
OBF7	Kamusenper, K	0.42	213	eP	Pg	10 37 44.3	-0.5
OBF7				eS	Sg	10 37 50.0	-0.1
OUL	Oulu	0.80	45	eP	Pg	10 37 50.9	-1.2
OUL				eS	Sg	10 38 01.5	-0.9
BURU	Burvik	1.38	274	eP	Pg	10 38 01.6	-1.6
KALU	Kalix	1.44	340	eP	Pn	10 38 02.6	-1.5
KALU				eS	Sg	10 38 21.7	-1.2
TOF	Tornio	1.57	356	eP	Pn	10 38 04.6	-1.2
TOF				eS	Sn	10 38 26.0	-0.8
TOF	comp=Z,2.6nm,0.2s			MSG		10 38 28.6	
VAF	Ylistaro	1.71	210	eP	Pn	10 38 08.0	+0.2
VAF				eS	Sn	10 38 30.7	+0.3
VAF	comp=Z,2.6nm,0.1s			MSG		10 38 30.9	
SUF	Sumiainen comp=Z,2.5nm,0.2s	1.94	158	MSG		10 38 38.8	

BUC 22 10:38:47.2±0.6, 44°.22N×28°.46E, h11km±2km, ml1.6/1, 8C-4D, Error ellipse: s-maj=12.1km s-min=2.2km az=91.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MFTR	Murfatlar	0.04	214	⇑P	Pg	10 38 49.7	+0.4
MFTR				⇑S	Sg	10 38 51.4	+0.6
MFTR	Murfatlar	0.04	214	⇑P	Pg	10 38 49.7	+0.4
MFTR				⇑S	Sg	10 38 51.4	+0.6
TIRR	Tirgusor	0.24	352	⇑P	Pg	10 38 52.3	0.0
TIRR				⇓S	Sg	10 38 56.0	+0.2
TIRR	Tirgusor	0.24	352	⇑P	Pg	10 38 52.3	0.0
TIRR				⇓S	Sg	10 38 56.0	+0.2
CFR	Carcaliu	0.99	347	⇑P	Pg	10 39 06.2	-0.1
CFR				⇓S	Sb	10 39 20.1	+0.7
CFR	Carcaliu	0.99	347	⇑P	Pg	10 39 06.2	-0.1
CFR				⇓S	Sb	10 39 20.1	+0.7

*IDC **22** 10:41:14.8±1.7, 20°.32S×172°.41E, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.9/31, mbtmp3.9/7, ML3.5/1, MS4.1/10, Ms1 4.1/10, ms1mx3.8/44, Error ellipse: s-maj=102.0km s-min=21.2km az=154.0*

*NEIC **22** 10:41:15.6±1.6, 20°.7S±0°.1×172°.70E±0°.07, h10km±3km, mb4.3/8, Error ellipse: s-maj=18.2km s-min=3.1km az=150.0*

ISC 22 10:41:19.4±0.7, 20°.6S±0°.1×172°.60E±0°.09, h35km, n31, σ1§13/23, mb4.0/10, MS4.2/7, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.88	62		Pn	10 42 43.0	-1.1
DZM	Mont Dzumac 1.3nm,0.3s,baz=157,slow=8.7,SNR=17	5.93	254	Pn	Pn	10 42 44.8	0.0
DZM	Mont Dzumac	5.93	254		Pn	10 42 44.9	+0.1
NOUC	Port Laguerre	6.06	254	Pn	Pn	10 42 46.7	+0.2
SANVU	Saraoutou	7.23	314		Pn	10 43 03.3	+0.7
RAO	Raoul Island comp=Z,589nm,20.1s,baz=324,slow=29	12.19	137	LR	LR	10 47 16.1	
AFI	Afiamalu comp=Z,417nm,21.3s,baz=243,slow=32	16.32	69	LR	LR	10 49 52.1	
HNR	Honiara comp=Z,376nm,18.2s,baz=170,slow=37	16.48	310	LR	LR	10 51 07.0	
URZ	Urewera comp=Z,673nm,19.1s,baz=354,slow=32	18.06	168	LR	LR	10 50 53.5	
BKZ	Black Stump Fm comp=Z,22nm,1.4s	18.83	171	P IAmb	Pn IAmb	10 45 38.5 10 45 55.2	+1.5
EIDS	Eidsvold comp=Z,25nm,1.1s	20.37	252	P IAmb	P IAmb	10 45 54.7 10 46 08.7	+1.6
ARMA	Armidale comp=Z,12nm,0.9s	21.28	238	P IAmb	P IAmb	10 46 04.9 10 46 12.9	+1.8
CTA	Charters Tower comp=Z,3.4nm,1.0s,baz=94,slow=13,SNR=2.8	24.70	266	P	P	10 46 38.2	+0.8
STKA	Stephens Creek comp=Z,3.1nm,1.0s,baz=85,slow=9.2,SNR=3.3	29.90	242	P LR	P LR	10 47 23.6 10 58 28.8	-0.4
STKA	Stephens Creek comp=Z,386nm,18.4s,baz=24,slow=35	29.90	242	P LR	P LR	10 47 23.9	0.0
BBOO	Buckleboo	34.68	242	P	P	10 48 05.8	0.0
WRA	Warramunga Arr comp=Z,0.6nm,0.8s,baz=100,slow=7.9,SNR=4.5	35.84	264	P	P	10 48 13.9	-2.2
AS31	Alice Springs comp=Z,1.5nm,0.8s	35.91	258	P IAmb	P IAmb	10 48 16.0 10 48 30.5	-0.5
ASAR	Alice Springs comp=Z,1.1nm,0.9s,baz=92,slow=9.3,SNR=13	35.91	258	P	P	10 48 15.4	-1.2
NWAO	Narrogin (SRO) comp=Z,370nm,19.3s,baz=80,slow=35	50.44	244	LR	LR	11 10 25.2	
NWAO	Narrogin (SRO)	50.44	244	P	P	10 50 12.8	-1.0
QSPA	South Pole Qui QSPA comp=Z,2.7nm,1.0s	69.49	180	P IAmb	P IAmb	10 52 22.9 10 52 33.5	-1.3
PETK	Petropavlovsk- comp=Z,85nm,18.2s,baz=236,slow=34	74.50	351	LR	LR	11 23 42.8	
MA2	Magadan comp=Z,84nm,19.9s,baz=138,slow=32	81.84	349	LR	LR	11 24 26.0	
LPIG	La Paz comp=Z,144nm,20.5s,baz=311,slow=30	87.17	63	LR	LR	11 25 36.3	
NVAR	Mina Array Bea comp=Z,0.4nm,0.7s,baz=224,slow=7.6,SNR=3.6	87.34	47	P	P	10 54 04.2	+1.1
ILAR	Eielson Array comp=Z,0.6nm,0.8s,baz=252,slow=4.0,SNR=4.9	90.59	16	P	P	10 54 16.2	-1.3
TXAR	Lajitas Array comp=Z,0.6nm,0.9s,baz=212,slow=4.4,SNR=4.3	94.64	61	P LR	P LR	10 54 38.7 11 29 37.6	+1.5
CLL	Collm comp=Z,6.0nm,0.8s	145.40	337	ePKPbc	PKPab	11 00 54.0	+0.4
CLL	comp=Z,400nm,18.4s			Lm	MLR	12 09 00.0	
BRG	Berggiesshubel comp=Z,7.5nm,1.0s	145.41	336	ePKP	PKPab	11 00 54.2	+0.5
BRG	comp=Z,14nm,1.1s			i		11 01 02.7	
GERES	GERESS Array B comp=Z,1.5nm,0.7s,baz=335,slow=1.9,SNR=7.0	147.11	334	PKPbc	PKPbc	11 00 59.3	+0.6

*IDC **22** 10:44:53.2±1.6, 4°.99S×141°.98E, h108km±14km, mb3.7/9, mb1 3.9/12, mb1mx3.7/31, mbtmp4.2/12, Error ellipse: s-maj=24.2km s-min=13.1km az=77.0*

*NEIC **22** 10:44:53.7±2.1, 4°.94S±0°.07×141°.95E±0°.09, h115km±7km, mb4.1/18, Error ellipse: s-maj=16.6km s-min=3.6km az=52.0*

ISC 22 10:44:53.0±0.5, 4°.97S±0°.06×142°.00E±0°.06, h100km, n37, σ1§84/43, mb4.1/13, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	Jayapura 13nm,0.3s,baz=173,slow=9.3,SNR=38	2.77	332	P	Pn	10 45 36.2	+0.5
JAY	15nm,0.3s,baz=244,slow=13,SNR=4.2			S	Sn	10 46 09.5	+1.0
PMG	Port Moresby 6.8nm,0.3s,baz=12,slow=1.7,SNR=32	6.75	131	P	Pn	10 46 31.4	+1.9
PMG	baz=221,slow=19,SNR=2.0			S	Sn	10 47 43.2	-1.8
PMG	Port Moresby	6.75	131		Pn	10 46 32.1	+2.6
PMG					Sn	10 47 47.5	+2.6
COEN	Coen	9.00	173	Pn	Pn	10 47 02.7	+2.5
FAKI	Fak Fak	9.94	281	Pn	Pn	10 47 15.5	+2.5
FAKI				Sn	Sn	10 49 07.7	+4.9
MTN	Manton Dam	13.28	233	Pn	Pn	10 47 56.7	-0.9
WB0	Warramunga Arr	16.47	206	P	Pn	10 48 38.0	-0.1
WR0	Warramunga Arr	16.57	205	P	Pn	10 48 38.9	-0.5
WR0	comp=Z,10nm,0.7s			IAmb	IAmb	10 48 39.5	
WRAB	Tennant Creek	16.63	206	P	Pn	10 48 39.5	-0.7
WRAB	comp=Z,8.9nm,0.8s			IAmb	IAmb	10 48 55.0	
WB2	Warramunga Arr	16.64	206	P	Pn	10 48 40.2	-0.1
WB2	comp=Z,15nm,1.2s			IAmb	IAmb	10 48 44.0	
WRA	Warramunga Arr comp=Z,1.4nm,0.3s,baz=27,slow=13,SNR=25	16.64	206	P	Pn	10 48 39.0	-1.4
KNRA	Kununurra	16.80	230		Pn	10 48 41.6	-0.6
KNRA	comp=Z,18nm,1.1s			IAmb	IAmb	10 48 47.2	
SOEI	Soe	18.21	254	P	Pn	10 49 00.7	+1.2
AS31	Alice Springs	20.16	202	P	P	10 49 19.2	-0.3
ASAR	Alice Springs comp=Z,1.4nm,0.5s,baz=32,slow=7.3,SNR=22	20.16	202	P	P	10 49 18.8	-0.8
ASAR	comp=Z,0.8nm,0.7s,baz=21,slow=21,SNR=4.4			S	S	10 52 56.6	-3.9

comp=Z,0.5nm,0.6s,baz=261,slow=5.0,SNR=2.9
ABKAR Akbulak array 88.56 320 P **P** **10 57 32.8 -1.8**
ABKAR IAmb IAmb 10 57 34.4
comp=Z,1.5nm,0.9s
TORD Torodi Ar. Bea 140.02 284 PKP **PKPdf** **11 04 11.6 +0.8**
comp=Z,0.6nm,0.7s,baz=89,slow=1.1,SNR=3.5
SIV San Ignacio 149.09 133 PKPbc **PKPbc** **11 04 29.7 -1.0**
comp=Z,0.4nm,0.5s,baz=217,slow=2.2,SNR=4.0

*IDC **22** 10:48:27.2±4.3,24.07°S×176.54°W,h60km±48km,mb4.1/3, mb1 4.2/5,mb1mx3.6/46,mbtmp4.4/5,ML4.0/2,Error ellipse: s-maj=73.8km s-min=33.2km az=127.0*
ISC 22 10:48:27.5±1.5,24.05°±0.2°S×176.3°W±0.3°,h82km,n6, σ1§60/7,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**10.94**	**24**	P		**Pn**	**10 51 02.8**	**+1.6**
	2.3nm,0.3s,baz=150,slow=20,SNR=4.2							
AFI				S		**Sn**	**10 52 59.7**	**-2.1**
	1.4nm,0.3s,baz=27,slow=18,SNR=2.7							
URZ	**Urewera**	**15.26**	**200**	P		**Pn**	**10 51 57.5**	**-0.7**
	0.3nm,0.3s,baz=348,slow=19,SNR=4.8							
URZ				S		Sn	10 54 29.9	-17
	0.1nm,0.3s,baz=287,slow=14,SNR=2.6							
CTA	**Charters Tower**	**34.86**	**269**	P		**P**	**10 55 11.4**	**+0.2**
	2.3nm,0.5s,baz=91,slow=7.8,SNR=5.5							
ASAR	**Alice Springs**	**45.35**	**260**	P		**P**	**10 56 38.9**	**+1.0**
	9.3nm,0.3s,baz=93,slow=7.4,SNR=6.5							
WRA	**Warramunga Arr**	**45.77**	**265**	P		**P**	**10 56 39.9**	**-1.3**
	0.3nm,0.3s,baz=106,slow=8.6,SNR=4.8							
AKASG	**Malin Array Be**	**146.85**	**330**	PKPbc		**PKPab**	**11 08 01.5**	**0.0**
	0.7nm,0.4s,baz=40,slow=4.0,SNR=2.6							

*IDC **22** 10:52:33.5±0.7,7.70°N×79.24°W,h0km,mb3.9/14, mb1 4.2/17,mb1mx4.1/34,mbtmp4.0/17,ML3.7/3,MS4.0/7, Ms1 4.0/7,ms1mx3.5/45,Error ellipse: s-maj=25.4km s-min=14.3km az=59.0*
*NEIC **22** 10:52:35.0±2.0,7.63°N±0.05°×79.21°W±0.01°,h10km±3km, mb4.4/36,Error ellipse: s-maj=7.4km s-min=0.9km az=189.0*
*RSNC **22** 10:52:36.5±1.5,7.50°N×79.24°W,h32km±14km,ML3.9, Mw4.3,Fault plane solution: NP1:φs111.00000°, δ87.00000°,λ-42.00000°.*
*UPA **22** 10:52:36.5±1.0,7.58°N×79.24°W,h19km±6km,MW4.9*
ISC 22 10:52:34.6±1.6,7.59°N±0.03°×79.20°W±0.02°,h8km±11km, n185,σ1§86/238,mb4.3/29,MS4.2/5,29C-37D,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ACHO3	**Achotines, Los**	**0.98**	**260**	*iP*		**Pg**	**10 52 53.0**	**-0.4**
AZU	**Azuero**	**1.08**	**281**	⇓*iP*		**Pb**	**10 52 54.2**	**-1.4**
AZU				*eS*		**Sb**	**10 53 07.4**	**-2.5**
AZU				*i*			10 53 08.7	
	comp=Z,57μm,0.4s							
AZU	**Azuero**	**1.08**	**281**	⇓*iP*		**Pb**	**10 52 54.3**	**-1.4**
AZU				*i*	S	**Sb**	**10 53 08.3**	**-1.6**
CHIT3	**Chitre**	**1.26**	**287**	⇓*iP*		**Pn**	**10 52 57.1**	**-1.4**
CHIT3				*eS*		**Sb**	**10 53 12.9**	**-2.2**
FLAM	**Flamenco Islan**	**1.36**	**346**	⇑*iP*		**Pn**	**10 52 59.0**	**-1.0**
FLAM				*eS*		**Sb**	**10 53 16.1**	**-1.8**
VTON	**El Valle, Cocl**	**1.36**	**319**	⇑*iP*		**Pn**	**10 52 59.2**	**-0.9**
VTON				*eS*		**Sb**	**10 53 16.3**	**-1.8**
CHOR3	**La Chorrera**	**1.42**	**337**	⇑*iP*		**Pn**	**10 53 00.2**	**-0.6**
CHOR3				*eS*		**Sn**	**10 53 18.3**	**-1.3**
UPA	**Univ. de Panam**	**1.43**	**347**	⇑*iP*		**Pn**	**10 53 00.2**	**-0.7**
UPA				*eS*		**Sn**	**10 53 18.4**	**-1.4**
UPA				*i*			10 53 21.7	
	comp=Z,3μm,0.4s							
UPA	**Univ. de Panam**	**1.43**	**347**	⇑*iP*		**Pn**	**10 53 00.1**	**-0.7**
UPA				*eS*		**Sn**	**10 53 18.4**	**-1.4**
PNME	**Penonome**	**1.43**	**309**	⇑*iP*		**Pn**	**10 52 60.0**	**-0.9**
PNME				*eS*		**Sn**	**10 53 17.4**	**-2.5**
PNME	**Penonome**	**1.43**	**309**	⇑*iP*		**Pn**	**10 52 59.9**	**-0.9**
PNME				*eS*		**Sn**	**10 53 17.4**	**-2.5**
PESE3	**Pese, Herrera**	**1.44**	**283**	⇓*iP*		**Pn**	**10 52 59.9**	**-1.1**
PESE3				*eS*		**Sn**	**10 53 17.9**	**-2.2**
PTAC	**Punta Ardita,**	**1.45**	**107**	⇓*iP*		**Pn**	**10 52 59.7**	**-1.4**
PTAC				*eS*		**Sn**	**10 53 16.1**	**-4.3**
PTAC				*i*			10 53 17.0	
	comp=Z,8μm,0.3s							
PTAC	**Punta Ardita,**	**1.45**	**107**	*eP*		**Pn**	**10 52 59.7**	**-1.4**
MFS3	**Miraflores**	**1.46**	**345**	⇑*iP*		**Pn**	**10 53 00.7**	**-0.6**
MFS3				*eS*		**Sn**	**10 53 19.0**	**-1.6**
PML3	**Paraiso**	**1.48**	**344**	⇑*iP*		**Pn**	**10 53 01.2**	**-0.5**
PML3				*eS*		**Sn**	**10 53 20.3**	**-0.9**
ZANG	**Zanguenga, Cho**	**1.51**	**334**	⇑*iP*		**Pn**	**10 53 01.6**	**-0.4**
ZANG				*eS*		**Sn**	**10 53 21.3**	**-0.7**
UPD2	**Meteti**	**1.52**	**51**	⇓*iP*		**Pn**	**10 53 02.1**	**+0.1**
UPD2				*eS*		**Sn**	**10 53 21.6**	**-0.4**
UPD2				*i*			10 53 26.6	
	comp=Z,7μm,0.8s							
UPD2	**Meteti**	**1.52**	**51**	⇓*iP*		**Pn**	**10 53 02.1**	**+0.1**
UPD2				*eS*		**Sn**	**10 53 21.5**	**-0.5**
CRIS3	**El Cristo, Coc**	**1.55**	**295**	⇓*eP*		**Pn**	**10 53 01.6**	**-1.0**
CRIS3				*eS*		**Sn**	**10 53 21.3**	**-1.6**
CHPO	**Chepo, Panama**	**1.58**	**3**	⇑*eP*		**Pn**	**10 53 02.2**	**-0.8**
CHPO				*eS*		**Sn**	**10 53 22.6**	**-1.0**
OCU3	**Ocu, Herrera**	**1.60**	**283**	⇓*iP*		**Pn**	**10 53 02.6**	**-0.7**
OCU3				*i*	S	**Sn**	**10 53 22.4**	**-1.7**
GAMB1	**Gamboa**	**1.61**	**342**	⇑*eP*		**Pn**	**10 53 03.0**	**-0.3**
GAMB1				*eS*		**Sn**	**10 53 22.8**	**-1.4**
CACAO	**El Cacao, Vera**	**1.66**	**262**	⇓*iP*		**Pn**	**10 53 02.6**	**-1.5**
CACAO				*eS*		**Sn**	**10 53 24.0**	**-1.7**
MAD3	**Madden Dam**	**1.67**	**346**	⇑*eP*		**Pn**	**10 53 04.2**	**0.0**
BCIP	**Isla Barro Col**	**1.69**	**338**	⇑*eP*		**Pn**	**10 53 04.1**	**-0.4**
	comp=Z,6μm,0.8s							
BCIP				*eS*		**Sn**	**10 53 25.4**	**-1.0**
BCIP				*i*			10 53 41.6	
	comp=Z,6μm,0.8s							
BCIP	**Isla Barro Col**	**1.69**	**338**	⇑*iP*		**Pn**	**10 53 04.5**	**0.0**
BCIP				*i*	S	**Sb**	**10 53 27.0**	**-0.5**
BCIP	**Isla Barro Col**	**1.69**	**338**	Pn		**Pn**	**10 53 04.6**	**+0.1**
BCIP					Sn	**Sn**	**10 53 26.1**	**-0.3**
FRIJ	**El Hiral**	**1.71**	**342**	⇓*eP*		**Pn**	**10 53 04.7**	**0.0**
FRIJ				*eS*		**Sn**	**10 53 26.6**	**-0.2**
MLIR	**Monte Lirio**	**1.77**	**339**	⇓*eP*		**Pn**	**10 53 05.7**	**+0.1**
MLIR				*eS*		**Sn**	**10 53 28.8**	**+0.6**
MARI3	**Mariato, Verag**	**1.77**	**272**	⇓*eP*		**Pn**	**10 53 05.6**	**0.0**
MARI3				*eS*		**Sn**	**10 53 28.2**	**-0.2**
CALO3	**Calobre, Verag**	**1.78**	**294**	⇑*eP*		**Pn**	**10 53 05.2**	**-0.5**
CALO3				*eS*		**Sn**	**10 53 27.2**	**-1.4**
PONU3	**Ponuga, Veragu**	**1.79**	**280**	⇓*eP*		**Pn**	**10 53 05.5**	**-0.3**
PONU3				*eS*		**Sn**	**10 53 26.5**	**-2.2**
STIA3	**Santiago, Vera**	**1.83**	**286**	⇓*eP*		**Pn**	**10 53 06.2**	**-0.2**
PINA	**Piqa, Costa Ab**	**1.86**	**333**	⇑*eP*		**Pn**	**10 53 07.2**	**+0.3**
PINA				*eS*		**Sn**	**10 53 31.1**	**+0.5**
RSUS3	**Rio de Jesus,**	**1.98**	**282**	⇑*eP*		**Pn**	**10 53 08.8**	**+0.3**
GMAL	**Guarumal, Vera**	**2.02**	**275**	⇓*iP*		**Pn**	**10 53 09.4**	**+0.4**
GMAL				*eS*		**Sn**	**10 53 34.1**	**-0.4**
MESA3	**La Mesa, Verag**	**2.04**	**286**	⇓*iP*		**Pn**	**10 53 10.4**	**+1.0**
MESA3				*eS*		**Sn**	**10 53 35.1**	**+0.1**
CNAZ3	**Canazas, Verag**	**2.13**	**291**	⇓*eP*		**Pn**	**10 53 10.9**	**+0.4**
CNAZ3				*i*	S	**Sn**	**10 53 37.1**	**-0.1**
SOLC	**Bahia Solano**	**2.23**	**127**	⇑*iP*		**Pn**	**10 53 10.1**	**-1.8**
SOLC				*eS*		**Sn**	**10 53 35.3**	**-4.5**
SOLC				*i*			10 53 38.0	
	comp=Z,899nm,0.5s							
SOLC	**Bahia Solano**	**2.23**	**127**	*eP*		**Pn**	**10 53 10.1**	**-1.8**
SOLC				*eS*		**Sn**	**10 53 35.2**	**-4.5**
PVID3	**Puerto Vidal,**	**2.43**	**281**	⇑*eP*		**Pn**	**10 53 15.6**	**+1.0**
NANC3	**Nancito, Chiri**	**2.59**	**285**	⇑*iP*		**Pn**	**10 53 17.8**	**+0.9**
DBBC	**Dabeiba**	**3.02**	**101**	⇓*iP*		**Pn**	**10 53 23.5**	**+0.7**
DBBC				*eS*		**Sn**	**10 53 56.8**	**-2.5**
DBBC				*i*			10 54 00.8	
	comp=Z,719nm,0.7s							
PIZC	**Pizarro, Choco**	**3.18**	**145**	⇑*iP*		**Pn**	**10 53 23.5**	**-1.5**
PIZC				*eS*		**Sn**	**10 53 59.9**	**-3.2**
PIZC				*i*			10 54 11.7	
	comp=Z,211nm,0.6s							
CHIR3	**Chiriqui UPA,**	**3.20**	**285**	⇓*eP*		**Pn**	**10 53 27.8**	**+2.5**
CHIR3				*eS*		**Sn**	**10 54 07.2**	**+3.5**
CHGR2	**Aguacate**	**3.21**	**295**	⇑*eP*		**Pn**	**10 53 26.3**	**+0.9**
GUAL3	**Gualaca, Chiri**	**3.21**	**287**	⇓*eP*		**Pn**	**10 53 28.3**	**+3.0**
GUAL3				*eS*		**Sb**	**10 54 10.5**	**-0.7**
LOMA3	**Las Lomas, Chi**	**3.27**	**285**	⇓*eP*		**Pn**	**10 53 29.1**	**+2.9**
LOCO3	**Loma Colorada,**	**3.29**	**285**	⇓*iP*		**Pn**	**10 53 28.7**	**+2.2**
DVD	**David**	**3.33**	**285**	⇓*eP*		**Pn**	**10 53 28.9**	**+1.9**
BAGA3	**Bagala, Chiriq**	**3.41**	**285**	*eP*		**Pn**	**10 53 30.8**	**+2.7**
PTAR3	**Potrerillos Ar**	**3.44**	**289**	*eP*		**Pn**	**10 53 29.2**	**+0.5**
BCO2	**Palmira**	**3.48**	**289**	⇓*iP*		**Pn**	**10 53 32.3**	**+3.0**
CBOC	**Ciudad Bolivar**	**3.60**	**118**	*eP*		**Pn**	**10 53 30.5**	**-0.4**
CBOC				*eS*		**Sn**	**10 54 06.9**	**-6.8**
CBOC				*i*			10 54 12.2	
	comp=Z,175nm,0.7s							
UREC	**San Jos de Ur**	**3.64**	**87**	⇓*iP*		**Pn**	**10 53 33.0**	**+1.7**
UREC				*eS*		**Sn**	**10 54 12.4**	**-2.1**
UREC				*i*			10 54 17.1	
	comp=Z,176nm,0.8s							
BRU2	**Volcan**	**3.66**	**289**	⇓*eP*		**Pn**	**10 53 34.3**	**+2.6**
CNI2	**El Empalme, Bo**	**3.71**	**300**	*eP*		**Pb**	**10 53 40.3**	**-0.3**
SBAR3	**San Bartolo, C**	**3.72**	**282**	⇓*eP*		**Pn**	**10 53 33.7**	**+1.3**
HELC	**Santa Helena**	**3.90**	**111**	⇓*iP*		**Pn**	**10 53 36.4**	**+1.2**
HELC				*eS*		**Sn**	**10 54 18.5**	**-2.9**
HELC				*i*			10 54 23.3	
	comp=Z,318nm,0.7s							
HELC	**Santa Helena**	**3.90**	**111**	⇓*eP*		**Pn**	**10 53 36.4**	**+1.2**
HELC				*eS*		**Sn**	**10 54 21.6**	**+0.2**
EDSV	**San Vito**	**3.93**	**288**	*eP*		**Pn**	**10 53 38.4**	**+3.0**
PLMC	**San Jos del P**	**3.94**	**132**	*eP*		**Pn**	**10 53 34.4**	**-1.1**
PLMC				*i*			10 54 25.3	
	comp=Z,170nm,0.6s							
MALC	**Bahia Malaga**	**4.00**	**152**	⇑*iP*		**Pn**	**10 53 35.9**	**-0.5**
MALC				*i*			10 54 46.2	
	comp=Z,58nm,1.1s							
PTJ1	**Puerto Jimnez**	**4.17**	**283**	⇓*eP*		**Pn**	**10 53 39.5**	**+0.9**
ZARC	**Zaragoza, Cauc**	**4.31**	**91**	⇓*iP*		**Pn**	**10 53 42.0**	**+1.5**
ZARC				*eS*		**Sn**	**10 54 28.6**	**-2.4**
ZARC				*i*			10 54 34.2	
	comp=Z,102nm,0.7s							
DRK0	**Durika**	**4.33**	**293**	*eP*		**Pn**	**10 53 42.0**	**+1.0**
GUY2C	**Guyana, Caldas**	**4.48**	**121**	*eP*		**Pn**	**10 53 43.2**	**-0.1**
GUY2C				*i*			10 54 40.1	
	comp=Z,114nm,0.5s							
YOTC	**Yotoco, Valle**	**4.57**	**141**	⇑*iP*		**Pn**	**10 53 43.0**	**-1.2**
YOTC				*eS*		**Sn**	**10 54 33.1**	**-4.5**
YOTC				*i*			10 54 41.0	
	comp=Z,59nm,0.7s							
SJCC	**San Jacinto, C**	**4.59**	**60**	⇑*iP*		**Pn**	**10 53 46.6**	**+2.1**
SJCC				*eS*		**Sn**	**10 54 33.6**	**-4.5**
SJCC				*i*			10 54 57.5	
	comp=Z,97nm,0.7s							
SJCC	**San Jacinto, C**	**4.59**	**60**	⇑*eP*		**Pn**	**10 53 46.6**	**+2.1**
NORC	**Norcasia**	**4.75**	**115**	⇑*eP*		**Pn**	**10 53 48.4**	**+1.8**
NORC				*eS*		**Sn**	**10 54 38.1**	**-3.8**
NORC				*i*			10 54 45.6	
	comp=Z,73nm,1.0s							
PTBC	**PUERTO BERRIO,**	**4.82**	**102**	*eP*		**Pn**	**10 53 49.5**	**+1.9**
PTBC				*eS*		**Sn**	**10 54 41.5**	**-2.2**
PTBC				*i*			10 55 01.5	
	comp=Z,96nm,0.9s							
EDDO	**Dominical**	**4.90**	**290**	*eP*		**Pn**	**10 53 51.9**	**+3.2**
CVTR	**Volcan Turrial**	**5.11**	**299**	*eP*		Pb	10 53 58.8	-5.9
LCR2	**La Lucha 2**	**5.21**	**295**	*eP*		**Pn**	**10 53 55.3**	**+2.2**
SMLC	**San Martn de**	**5.22**	**76**	*eP*		**Pn**	**10 53 54.1**	**+1.1**
SMLC				*i*			10 55 09.7	
	comp=Z,50nm,1.0s							
ORTC	**Ortega, Tolima**	**5.37**	**133**	*eP*		**Pn**	**10 53 56.6**	**+1.5**
ORTC				*eS*		**Sn**	**10 54 58.1**	**+0.8**
ORTC				*i*			10 55 27.1	
	comp=Z,57nm,1.0s							
ARGC	**Ariguani, Magd**	**5.39**	**65**	*eP*		**Pn**	**10 53 58.4**	**+2.9**
ARGC				*eS*		**Sn**	**10 54 53.9**	**-3.9**
ARGC				*i*			10 55 10.9	
	comp=Z,52nm,0.7s							
HDC	**Heredia**	**5.42**	**297**	*eP*		**Pn**	**10 53 59.0**	**+3.1**
HDC	**Heredia**	**5.42**	**297**			**Pn**	**10 53 58.2**	**+2.3**
ROSC	**El Rosal**	**5.57**	**119**	Pn		**Pn**	**10 54 01.9**	**+3.8**
	comp=Z,3.2nm,0.3s,baz=281,slow=16,SNR=4.7							
ROSC					Sn	**Sn**	**10 55 07.9**	**+5.3**
	comp=Z,4.2nm,0.3s,baz=267,slow=15,SNR=4.3							
ROSC	**El Rosal**	**5.57**	**119**			**Pn**	**10 53 59.4**	**+1.2**
PRAC	**Prado**	**5.76**	**132**	*eP*		**Pn**	**10 54 03.0**	**+2.4**
PRAC				*eS*		**Sn**	**10 55 09.8**	**+2.8**
PRAC				*i*			10 55 15.9	
	comp=Z,51nm,0.6s							
BBAC	**Balboa, Cauca**	**5.86**	**160**	*eP*		**Pn**	**10 54 03.5**	**+1.4**
BBAC				*i*			10 55 19.4	
	comp=Z,24nm,0.4s							
OCAC	**Ocana**	**5.86**	**83**	*eP*		**Pn**	**10 54 03.2**	**+1.2**
OCAC				*eS*		**Sn**	**10 55 09.2**	**-0.3**
OCAC				*i*			10 55 22.8	
	comp=Z,66nm,0.4s							
PCON	**Cinco Dias**	**5.92**	**152**	*eP*		**Pn**	**10 54 04.6**	**+1.4**
PCON				*i*			10 55 31.0	
	comp=Z,46nm,0.8s							
SOTA	**Rioblanco**	**6.00**	**154**	*eP*		**Pn**	**10 54 05.0**	**+0.8**
SOTA				*i*			10 55 28.2	
	comp=Z,38nm,0.9s							
BARC	**Barichara**	**6.05**	**99**	⇓*iP*		**Pn**	**10 54 06.7**	**+2.0**
BARC				*eS*		**Sn**	**10 55 14.0**	**-0.4**
BARC				*i*			10 55 32.8	
	comp=Z,240nm,1.0s							
BETC	**Betania**	**6.14**	**142**	*eP*		**Pn**	**10 54 08.4**	**+2.6**
BETC				*i*			10 55 21.8	
	comp=Z,46nm,1.0s							
CODC	**Agustn Codazz**	**6.15**	**67**	⇓*iP*		**Pn**	**10 54 07.2**	**+1.4**
CODC				*i*			10 55 38.1	
	comp=Z,30nm,0.5s							
ARE1	**Arenal 1**	**6.15**	**298**	*eP*		**Pn**	**10 54 10.3**	**+4.4**
CHIC	**Chingaza**	**6.18**	**118**	*eP*		**Pn**	**10 54 09.5**	**+2.9**
CHIC				*i*			10 55 38.2	
	comp=Z,27nm,0.8s							
JTS	**Las Juntas de**	**6.29**	**296**	Pn		**Pn**	**10 54 10.3**	**+2.6**
	comp=Z,4.8nm,0.3s,baz=159,slow=8.0,SNR=13							
JTS					Lg	Lg	10 55 43.6	
	baz=18,slow=20,SNR=2.2							
JTS	**Las Juntas de**	**6.29**	**296**	*eP*		**Pn**	**10 54 10.8**	**+3.0**
JTS	**Las Juntas de**	**6.29**	**296**	⇓*eP*		**Pn**	**10 54 10.8**	**+3.0**
JTS	**Las Juntas de**	**6.29**	**296**			**Pn**	**10 54 10.1**	**+2.3**
RUSC	**La Rusia**	**6.30**	**105**	⇓*iP*		**Pn**	**10 54 10.4**	**+2.0**
RUSC				*eS*		**Sn**	**10 55 17.9**	**-3.0**
RUSC				*i*			10 55 52.5	
	comp=Z,98nm,0.9s							
RUSC	**La Rusia**	**6.30**	**105**			**Pn**	**10 54 09.7**	**+1.2**
CRUC	**La Cruz**	**6.38**	**159**	*eP*		**Pn**	**10 54 10.7**	**+1.3**
CRUC				*i*			10 55 30.6	
	comp=Z,27nm,0.6s							
PAMC	**Pamplona, Colo**	**6.45**	**92**	*eP*		**Pn**	**10 54 12.5**	**+2.0**
PAMC				*eS*		**Sn**	**10 55 21.9**	**-2.7**
PAMC				*i*			10 55 34.2	
	comp=Z,44nm,0.6s							
GCUF	**Volcan Galeras**	**6.58**	**164**	*eP*		**Pn**	**10 54 15.2**	**+2.9**
GCUF				*i*			10 55 46.8	
	comp=Z,15nm,1.2s							
CUI	**Cuipilapa**	**6.63**	**298**	*eP*		**Pn**	**10 54 13.1**	**+0.6**
PLVR	**Palo Verde**	**6.67**	**295**	*eP*		Pn	10 54 19.2	+6.1
FLOC	**Florencia**	**6.93**	**149**	⇑*iP*		**Pn**	**10 54 18.9**	**+2.3**
FLOC				*eS*		**Sn**	**10 55 35.9**	**+0.2**
FLOC				*i*			10 55 40.3	
	comp=Z,84nm,0.8s							
FLOC	**Florencia**	**6.93**	**149**	Pn		**Pn**	**10 54 18.7**	**+2.0**
FLOC					Sn	**Sn**	**10 55 38.0**	**+2.2**
ACON	**Acoyapa**	**7.32**	**307**	*eP*		**Pn**	**10 54 26.2**	**+4.2**
ACON	**Acoyapa**	**7.32**	**307**			**Pn**	**10 54 21.8**	**-0.2**
OTAV	**Otavalo**	**7.34**	**174**			**Pn**	**10 54 23.4**	**+0.8**
MACC	**Macarena, Meta**	**7.59**	**135**	⇓*iP*		**Pn**	**10 54 27.1**	**+1.4**
MACC				*eS*		**Sn**	**10 55 49.4**	**-2.6**
MACC				*i*			10 55 58.1	
	comp=Z,39nm,0.6s							
URIC	**Uribia, Colomb**	**8.20**	**60**			**Pn**	**10 54 32.8**	**-1.2**
MATN	**Matagalpa**	**8.48**	**309**	*eP*		Pn	10 54 43.0	+5.0
SDV	**Santo Domingo**	**8.58**	**81**	Pn		**Pn**	**10 54 41.1**	**+1.7**
	comp=Z,2.8nm,0.3s,baz=282,slow=9.1,SNR=30							
SDV					Sn	**Sn**	**10 56 13.5**	**-3.1**
	comp=Z,4.0nm,0.3s,baz=336,slow=20,SNR=2.8							
SDV	**Santo Domingo**	**8.58**	**81**			**Pn**	**10 54 40.8**	**+1.4**
ESTN	**Estel**	**8.93**	**308**			Pn	10 54 49.0	+4.9
TGUH	**Tegucigalpa,Un**	**10.21**	**310**	Pn		**Pn**	**10 55 01.4**	**-0.2**
MTDJ	**Mount Denham**	**10.70**	**9**	Pn		**Pn**	**10 55 07.5**	**-0.9**
FSCY	**Frank Sound, G**	**11.82**	**351**	Pn		**Pn**	**10 55 22.5**	**-1.1**
GTBY	**Guantanamo Bay**	**12.89**	**18**	Pn		**Pn**	**10 55 37.6**	**-0.7**
SDDR	**Presa de Saban**	**13.69**	**33**			**Pn**	**10 55 48.1**	**-1.2**
BANI	**BANI**	**13.76**	**38**			**Pn**	**10 55 47.6**	**-2.7**
PAYG	**Puerto Ayora**	**13.77**	**234**	Pn		**Pn**	**10 55 49.8**	**-0.5**
PCRV	**Puerto La Cruz**	**14.62**	**79**	Pn		**Pn**	**10 56 03.7**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=278,slow=7.1,SNR=3.2							
PCRV					LR	LR	11 03 03.9	
	comp=Z,296nm,20.5s,slow=43							
ATAH	**Atahualpa**	**14.64**	**177**	Pn		**Pn**	**10 56 05.8**	**+3.1**
	comp=Z,0.5nm,0.3s,baz=348,slow=6.2,SNR=4.5							
PLCV	**Puerto La Cruz**	**14.66**	**79**			**Pn**	**10 56 03.7**	**+1.1**
TEIG	**Tepich**	**15.34**	**326**	Pn		**P**	**10 56 15.3**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=138,slow=4.7,SNR=7.9							
TEIG				LR		LR	11 02 31.8	
	comp=Z,129nm,18.6s,baz=140,slow=39							
TEIG	**Tepich**	**15.34**	**326**			**Pn**	**10 56 10.6**	**-0.9**
TEIG				IAmb		IAmb	10 56 11.3	
	comp=Z,36nm,1.3s							
SAML	**Samuel**	**22.90**	**136**	P		**P**	**10 57 39.2**	**0.0**
SAML				IAmb		IAmb	10 57 46.8	
	comp=Z,7.3nm,0.7s							
LPAZ	**La Paz**	**26.13**	**155**	P		**P**	**10 58 12.0**	**+1.9**
	comp=Z,1.6nm,0.7s,baz=5.2,slow=13,SNR=4.5							
LPAZ	**La Paz**	**26.13**	**155**	P		**P**	**10 58 09.5**	**-0.6**
MNMC	**Minye Minye**	**28.18**	**160**	P		**P**	**10 58 28.3**	**+0.1**
PB11	**IPOC Station P**	**28.75**	**161**	P		**P**	**10 58 33.4**	**+0.3**
PB11				IAmb		IAmb	10 58 47.8	
	comp=Z,9.5nm,1.0s							
GO01	**Chusmiza**	**28.82**	**160**	P		**P**	**10 58 34.2**	**+0.2**
GO01				IAmb		IAmb	10 58 43.1	
	comp=Z,6.8nm,1.0s							
SIV	**San Ignacio**	**29.51**	**143**	P		**P**	**10 58 39.8**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=331,slow=10,SNR=12							
TX32	**Lajitas Array**	**31.59**	**316**	P		**P**	**10 58 57.9**	**-0.2**
TX32				IAmb		IAmb	10 59 10.6	
	comp=Z,6.0nm,1.4s							
TXAR	**Lajitas Array**	**31.59**	**316**	P		**P**	**10 58 57.2**	**-0.9**
	comp=Z,0.2nm,0.5s,baz=125,slow=9.1,SNR=5.9							
P48A	**Milroy**	**32.23**	**351**	P		**P**	**10 59 02.7**	**-0.8**
CCM	**Cathedral Cave**	**32.23**	**342**	P		**P**	**10 59 02.5**	**-1.1**
GO02	**Mina Guanaco**	**33.87**	**164**	P		**P**	**10 59 21.5**	**+3.2**
GO02				IAmb		IAmb	10 59 22.5	
	comp=Z,2.6nm,0.7s							
MSTX	**Muleshoe**	**34.10**	**324**	P		**P**	**10 59 18.8**	**-1.2**
MSTX				IAmb		IAmb	10 59 26.1	
	comp=Z,5.0nm,0.8s							
MNTX	**Cornudas Mount**	**34.22**	**318**	P		**P**	**10 59 19.8**	**-1.2**
ANMO	**Albuquerque**	**36.99**	**321**	P		**P**	**10 59 44.7**	**-0.3**
SDCO	**Great Sand Dun**	**38.33**	**326**	P		**P**	**10 59 58.6**	**+2.2**
ECSD	**EROS Data Cent**	**39.10**	**340**	P		**P**	**11 00 00.8**	**-1.7**
E43A	**Lone Tree Farm**	**39.23**	**351**	P		**P**	**11 00 02.6**	**-0.8**
D53A	**Lac Vacive, Po**	**39.37**	**2**	P		**P**	**11 00 05.7**	**+1.1**
D53A				IAmb		IAmb	11 00 19.7	
	comp=Z,10nm,1.2s							
CPUP	**Villa Florida**	**39.84**	**149**	LR		LR	11 16 52.1	
	comp=Z,287nm,20.4s,baz=239,slow=36							
WUAZ	**Wupatki**	**40.50**	**318**	P		**P**	**11 00 13.1**	**-1.4**
PKCU	**Pink Cliffs**	**42.24**	**

PAU	**Pauzhetka**	**2.35**	**5**	*e*P	**Pn**	**11 00 44.4 +1.2**
PAU				*e*S	**Sn**	**11 01 12.4 +1.5**
PAU	**Pauzhetka**	**2.35**	**5**	*e*P	**Pn**	**11 00 44.4 +1.2**
PAU				*e*S	**Sn**	**11 01 12.4 +1.5**
KDTR	**Khodutka, Kamc**	**2.87**	**20**	PN	**Pn**	**11 00 50.4 0.0**
KDTR				S	**Sn**	**11 01 24.5 +0.7**
KDTR	**Khodutka, Kamc**	**2.87**	**20**	*e*P	**Pn**	**11 00 50.4 0.0**
KDTR				*e*S	**Sn**	**11 01 24.5 +0.7**
ASAK	**Asacha**	**3.38**	**15**	PN	**Pn**	**11 00 58.4 +0.9**
ASAK				S	**Sn**	**11 01 37.8 +1.3**
ASAK	**Asacha**	**3.38**	**15**	*e*P	**Pn**	**11 00 58.4 +0.9**
ASAK				*e*S	**Sn**	**11 01 37.8 +1.3**
MTVR	**Mutnovka**	**3.53**	**17**	PN	**Pn**	**11 01 00.6 +1.0**
MTVR	**Mutnovka**	**3.53**	**17**	*e*P	**Pn**	**11 01 00.6 +1.0**
RUS	**Russkaya**	**3.56**	**21**	PN	**Pn**	**11 01 00.6 +0.8**
RUS				S	**Sn**	**11 01 40.4 -0.2**
RUS	**Russkaya**	**3.56**	**21**	*e*P	**Pn**	**11 01 00.6 +0.8**
RUS				*e*S	**Sn**	**11 01 40.4 -0.2**
RUS	**Russkaya**	**3.56**	**21**	*e*P	**Pn**	**11 01 00.6 +0.8**
GRL	**Gorelyy**	**3.58**	**16**	PN	**Pn**	**11 01 01.7 +1.5**
GRL				S	**Sn**	**11 01 42.9 +1.6**
GRL	**Gorelyy**	**3.58**	**16**	*e*P	**Pn**	**11 01 01.7 +1.5**
GRL				*e*S	**Sn**	**11 01 42.9 +1.6**
APC	**Apacha**	**3.83**	**6**	PN	**Pn**	**11 01 05.5 +2.0**
APC				S	**Sn**	**11 01 49.2 +2.0**
APC	**Apacha**	**3.83**	**6**	*e*P	**Pn**	**11 01 05.5 +2.0**
APC				*e*S	**Sn**	**11 01 49.2 +2.0**
KRMR	**Karymshinskiy**	**3.85**	**15**	PN	**Pn**	**11 01 04.9 +1.0**
KRMR				S	**Sn**	**11 01 48.9 +1.0**
KRMR	**Karymshinskiy**	**3.85**	**15**	*e*P	**Pn**	**11 01 04.9 +1.0**
KRMR				*e*S	**Sn**	**11 01 48.9 +1.0**
PEA0B	**Petropavlovsk-**	**4.06**	**11**	PN	**Pn**	**11 01 08.5 +1.8**
PEA0B	**Petropavlovsk-**	**4.06**	**11**		**Sn**	**11 01 08.5 +1.8**
PEA0B				Sn	**Sn**	**11 01 51.4 -1.6**
PETK	**Petropavlovsk-**	**4.06**	**11**	P	**Pn**	**11 01 08.7 +1.9**
	9.5nm,0.3s,baz=282,slow=14,SNR=354					
PET	**Petropavlovsk**	**4.14**	**19**	PN	**Pn**	**11 01 08.5 +0.8**
PET				S	**Sn**	**11 01 55.1 +0.2**
PET	**Petropavlovsk**	**4.14**	**19**	*e*P	**Pn**	**11 01 08.6 +0.8**
PET				AMB	AMB	11 01 19.4
	110nm,0.5s					
PET				*e*S	**Sn**	**11 01 55.5 +0.6**
PET				A	A	11 01 56.5
	1µm,3.0s					
PET				A	A	11 01 56.5
	800nm,3.0s					
PET				A	A	11 02 09.7
	670nm,0.5s					
PET				A	A	11 02 09.7
	950nm,0.5s					
PET				AMS	AMS	11 03 36.0
	2µm,11.0s					
PET				AMS	AMS	11 03 36.0
	2µm,11.0s					
PET				AMS	AMS	11 03 36.0
	2µm,11.0s					
PET	**Petropavlovsk**	**4.14**	**19**		**Pn**	**11 01 08.7 +0.9**
UGLR	**Uglovaya**	**4.35**	**19**	PN	**Pn**	**11 01 11.6 +0.8**
UGLR				S	**Sn**	**11 02 00.6 +0.3**
UGLR	**Uglovaya**	**4.35**	**19**	*e*P	**Pn**	**11 01 11.6 +0.8**
UGLR				*e*S	**Sn**	**11 02 00.6 +0.3**
AVH	**Avacha**	**4.38**	**18**	PN	**Pn**	**11 01 12.9 +1.7**
AVH	**Avacha**	**4.38**	**18**	*e*P	**Pn**	**11 01 12.9 +1.7**
KOK	**Koryaka**	**4.39**	**17**	PN	**Pn**	**11 01 13.1 +1.8**
KOK	**Koryaka**	**4.39**	**17**	*e*P	**Pn**	**11 01 13.1 +1.8**
KOK	**Koryaka**	**4.39**	**17**	*e*P	**Pn**	**11 01 13.1 +1.8**
SMAR	**Somma**	**4.39**	**19**	PN	**Pn**	**11 01 13.0 +1.5**
SMAR	**Somma**	**4.39**	**19**	*e*P	**Pn**	**11 01 13.0 +1.5**
KRER	**Koryakskii**	**4.42**	**18**	PN	**Pn**	**11 01 13.1 +1.2**
KRER				S	**Sn**	**11 02 02.5 +0.3**
KRER	**Koryakskii**	**4.42**	**18**	*e*P	**Pn**	**11 01 13.1 +1.2**
KRER				*e*S	**Sn**	**11 02 02.5 +0.3**
SDLR	**Sedlovina**	**4.42**	**19**	PN	**Pn**	**11 01 12.7 +0.8**
SDLR	**Sedlovina**	**4.42**	**19**	*e*P	**Pn**	**11 01 12.7 +0.8**
NLC	**Nalytchevo**	**4.43**	**23**	PN	**Pn**	**11 01 11.8 -0.1**
NLC	**Nalytchevo**	**4.43**	**23**	*e*P	**Pn**	**11 01 11.8 -0.1**
NLC				*e*S	**Sn**	**11 02 00.5 -1.7**
NLC	**Nalytchevo**	**4.43**	**23**	*e*P	**Pn**	**11 01 11.8 -0.1**
KRX	**Arik**	**4.45**	**17**	PN	**Pn**	**11 01 13.8 +1.5**
KRX				S	**Sn**	**11 02 04.7 +1.8**
KRX	**Arik**	**4.45**	**17**	*e*P	**Pn**	**11 01 13.8 +1.5**
KRX				*e*S	**Sn**	**11 02 04.7 +1.8**
SPN	**Mys Shipunski**	**4.56**	**28**	PN	**Pn**	**11 01 13.9 +0.3**
SPN	**Mys Shipunski**	**4.56**	**28**	*e*P	**Pn**	**11 01 13.9 +0.3**
SPN				*e*S	**Sn**	**11 02 05.1 -0.3**
SPN	**Mys Shipunski**	**4.56**	**28**	*e*P	**Pn**	**11 01 13.9 +0.3**
MKZ	**Mys Kozlova**	**6.34**	**29**	PN	**Pn**	**11 01 37.9 -0.1**
MKZ	**Mys Kozlova**	**6.34**	**29**	*e*P	**Pn**	**11 01 37.9 -0.1**
MKZ				*e*S	**Sn**	**11 02 47.2 -1.9**
KZV	**Kizimen**	**6.44**	**20**	PN	**Pn**	**11 01 40.8 +1.3**
KZV	**Kizimen**	**6.44**	**20**	*e*P	**Pn**	**11 01 40.8 +1.3**
KZV				*e*S	**Sn**	**11 02 50.9 -0.9**
TUMD	**Tumrok D**	**6.55**	**20**	*e*P	**Pn**	**11 01 41.3 +0.4**
TUMD				*e*S	**Sn**	**11 02 53.3 -1.0**
TUMR	**Tumrok**	**6.56**	**19**	PN	**Pn**	**11 01 41.3 +0.1**
TUMR	**Tumrok**	**6.56**	**19**	*e*P	**Pn**	**11 01 42.9 +1.7**
ESO	**Esso**	**6.94**	**10**	PN	**Pn**	**11 01 47.7 +1.4**
ESO	**Esso**	**6.94**	**10**	*e*P	**Pn**	**11 01 47.7 +1.4**
ESO	**Esso**	**6.94**	**10**	*e*P	**Pn**	**11 01 47.7 +1.4**
KMNR	**Kamenistaya**	**7.03**	**18**	PN	**Pn**	**11 01 49.5 +2.0**
KMNR	**Kamenistaya**	**7.03**	**18**	*e*P	**Pn**	**11 01 49.5 +2.0**
KUR	**Kuril'sk**	**7.03**	**240** ⇓	*i*PN	**Pn**	**11 01 48.4 +0.9**
KUR				pmax	pmax	
	comp=N,29nm,0.4s					
KUR				pmax	pmax	
	comp=Z,117nm,0.4s					
KUR				pmax	pmax	
	comp=E,25nm,0.3s					
KUR				pmax	pmax	
	comp=Z,295nm,1.8s					
KUR				MLR	MLR	
	comp=Z,511nm,8.0s					
KUR	**Kuril'sk**	**7.03**	**240** ⇓	*i*P	**Pn**	**11 01 48.4 +0.9**
KUR				AMB	AMB	11 01 55.4
	comp=Z,30nm,0.5s					
KUR				AMB	AMB	11 01 55.4
	comp=Z,30nm,0.5s					
KUR				AMB	AMB	11 01 55.4
	comp=Z,120nm,0.5s					
KUR				AMB	AMB	11 02 01.0
	comp=Z,200nm,3.0s					
KUR				*i* S	**Sn**	**11 03 05.5 -0.7**
KUR				A	A	11 03 19.0
	comp=Z,600nm,2.2s					
KUR				A	A	11 03 19.0
	comp=Z,700nm,2.2s					
KUR				A	A	11 03 21.9
	comp=Z,580nm,0.7s					
KUR				A	A	11 03 21.9
	comp=Z,800nm,0.7s					
KUR				AMS	AMS	11 04 22.1
	comp=Z,2µm,13.0s					
KUR				AMS	AMS	11 04 22.1
	comp=Z,2µm,13.0s					
KUR				AMS	AMS	11 04 22.1
	comp=Z,1µm,13.0s					
KPT	**Kopyto**	**7.22**	**17**	PN	**Pn**	**11 01 52.1 +1.9**
KPT	**Kopyto**	**7.22**	**17**	*e*P	**Pn**	**11 01 52.1 +1.9**
KIRR	**Kirishev**	**7.23**	**18**	PN	**Pn**	**11 01 50.6 +0.2**
KIRR	**Kirishev**	**7.23**	**18**	*e*P	**Pn**	**11 01 50.6 +0.2**
KOZ	**Kozyrevsk**	**7.24**	**15**	PN	**Pn**	**11 01 52.8 +2.4**
KOZ	**Kozyrevsk**	**7.24**	**15**	*e*P	**Pn**	**11 01 52.8 +2.4**
KOZ	**Kozyrevsk**	**7.24**	**15**	*e*P	**Pn**	**11 01 52.8 +2.4**
SRDR	**Sredinnyy**	**7.46**	**14**	PN	**Pn**	**11 01 55.6 +2.1**
SRDR	**Sredinnyy**	**7.46**	**14**	*e*P	**Pn**	**11 01 55.6 +2.1**
KLY	**Klyuchi**	**7.63**	**18**	PN	**Pn**	**11 01 57.1 +1.4**
KLY	**Klyuchi**	**7.63**	**18**	*e*P	**Pn**	**11 01 57.1 +1.4**
SMKR	**Semkarok**	**8.05**	**20**	PN	**Pn**	**11 02 02.7 +1.1**
SMKR	**Semkarok**	**8.05**	**20**	P	**Pn**	**11 02 02.7 +1.1**
SRKR	**Sorokina**	**8.05**	**19**	PN	**Pn**	**11 02 02.8 +1.2**
SRKR	**Sorokina**	**8.05**	**19**	*e*P	**Pn**	**11 02 02.8 +1.2**
KBG	**Krutoberegovo**	**8.08**	**26**	PN	**Pn**	**11 02 02.1 +0.3**
KBG	**Krutoberegovo**	**8.08**	**26**	*e*P	**Pn**	**11 02 02.1 +0.3**
BKI	**Bering**	**8.43**	**40**	PN	**Pn**	**11 02 05.2 -1.5**
BKI	**Bering**	**8.43**	**40**	*e*P	**Pn**	**11 02 05.2 -1.5**
BKI				*e*S	**Sn**	**11 03 32.0 -8.6**
SHO	**Shikotan**	**8.47**	**235** ⇑	*i*P	**Pn**	**11 02 04.3 -3.0**
SHO				AMB	AMB	11 02 08.8
	comp=Z,20nm,0.9s					
SHO				AMB	AMB	11 02 08.8
	comp=Z,110nm,0.9s					
SHO				AMS	AMS	11 05 06.5
	comp=Z,900nm,12.0s					
SHO				AMS	AMS	11 05 06.5
	comp=Z,700nm,12.0s					
YUK	**Yuzh-Kuril'sk**	**8.90**	**239**	*e*PN	**Pn**	**11 02 12.4 -0.7**
YUK				pmax	pmax	
	comp=Z,131nm,0.8s					
YUK				MLR	MLR	
	comp=Z,799nm,15.0s					
YUK	**Yuzh-Kuril'sk**	**8.90**	**239**	*e*P	**Pn**	**11 02 13.9 +0.8**
YUK				AMB	AMB	11 02 16.0
	comp=Z,130nm,0.8s					
YUK				AMS	AMS	11 05 21.5
	comp=Z,2µm,15.0s					
YUK				AMS	AMS	11 05 21.5
	comp=Z,2µm,15.0s					
YUK				AMS	AMS	11 05 21.5
	comp=Z,1µm,15.0s					
GRPR	**Tuman**	**8.97**	**239**	PN	**Pn**	**11 02 12.9 -1.3**
GRPR				pmax	pmax	
	comp=Z,125nm,0.7s					
GRPR	**Tuman**	**8.97**	**239**	*e*P	**Pn**	**11 02 14.0 -0.2**
GRPR				AMB	AMB	11 02 22.0
	comp=Z,130nm,0.7s					
TYV	**Tymovskoe**	**9.06**	**286**	*e*PN	**Pn**	**11 02 19.6 +4.3**
TYV				*e*S	**Sn**	**11 04 00.0 +4.0**
TYV				pmax	pmax	
	comp=Z,15nm,0.9s					
TYV				smax	smax	
	comp=N,5.0nm,0.8s					
TYV				MLR	MLR	
	comp=N,3µm,17.0s					
TYV				MLR	MLR	
	comp=Z,2µm,16.0s					
TYV	**Tymovskoe**	**9.06**	**286** ⇑	*e*P	**Pn**	**11 02 18.4 +3.1**
TYV				AMB	AMB	11 02 20.4
	comp=Z,150nm,0.7s					
TYV				*e*S	**Sn**	**11 03 57.3 +1.3**
TYV				A	A	11 04 00.2
	comp=Z,50nm,0.8s					
TYV				A	A	11 04 00.2
	comp=Z,30nm,0.8s					
TYV				AMS	AMS	11 06 45.3
	comp=Z,3µm,15.0s					
TYV				AMS	AMS	11 06 45.3
	comp=Z,2µm,15.0s					
TYV				AMS	AMS	11 06 45.3
	comp=Z,2µm,15.0s					
NMR	**Nemuro--Hokkai**	**9.40**	**236**	*e*PN	**Pn**	**11 02 16.1 -3.9**
YSS	**Yuzh-Sakhalins**	**9.44**	**262** ⇓	*e*PN	**Pn**	**11 02 23.5 +3.0**
YSS				pmax	pmax	
	comp=Z,35nm,0.5s					
YSS				MLR	MLR	
	comp=Z,900nm,10.0s					
YSS	**Yuzh-Sakhalins**	**9.44**	**262**	*e*P	**Pn**	**11 02 22.7 +2.2**
YSS				AMB	AMB	11 02 26.1
	comp=Z,40nm,0.5s					
YSS	**Yuzh-Sakhalins**	**9.44**	**262**		**Pn**	**11 02 20.1 -0.4**
UGL	**Uglegorsk**	**9.44**	**275**	*e*PN	**Pn**	**11 02 32.1 +12**
UGL				S	Sn	11 04 20.0 +15
UGL				pmax	pmax	
	comp=Z,98nm,0.9s					
UGL				MLR	MLR	
	comp=Z,2µm,13.0s					
UGL				MLR	MLR	
	comp=E,2µm,11.0s					
UGL	**Uglegorsk**	**9.44**	**275**	*e*P	**Pn**	**11 02 24.0 +3.4**
UGL				AMB	AMB	11 02 34.0
	comp=E,100nm,0.9s					
UGL				*e*S	**Sn**	**11 04 06.8 +1.4**
UGL				AMS	AMS	11 06 33.0
	comp=E,2µm,13.0s					
UGL				AMS	AMS	11 06 33.0
	comp=E,2µm,13.0s					
UGL				AMS	AMS	11 06 33.0
	comp=E,2µm,13.0s					
OKH	**Okha**	**9.55**	**303**	*e*P	**Pn**	**11 02 25.2 +3.2**
OKH				AMB	AMB	11 02 27.4
	comp=E,60nm,0.6s					
OKH				AMS	AMS	11 07 16.5
	comp=E,600nm,15.0s					
OKH				AMS	AMS	11 07 16.5
	comp=E,1µm,15.0s					
OKH				AMS	AMS	11 07 16.5
	comp=E,800nm,15.0s					
NKL	**Nikolayevsk**	**10.70**	**298**	*e*P	**Pn**	**11 02 39.7 +2.0**
NKL				AMB	AMB	11 02 42.8
	comp=E,60nm,0.9s					
NKL				AMS	AMS	11 08 02.8
	comp=E,900nm,16.0s					
NKL				AMS	AMS	11 08 02.8
	comp=E,300nm,16.0s					
NKL				AMS	AMS	11 08 02.8
	comp=E,800nm,16.0s					
JKA	**Kamikawa-asahi**	**10.77**	**247**	*e*P	**Pn**	**11 02 40.0 +1.3**
JKA	**Kamikawa-asahi**	**10.77**	**247**		**Pn**	**11 02 40.0 +1.3**
ASAJ	**Asahikawa**	**10.77**	**247**	P	**Pn**	**11 02 40.0 +1.3**
	comp=E,2.9nm,0.3s,baz=70,slow=16,SNR=22					
ASAJ				LR	LR	11 06 36.4
	comp=E,861nm,19.2s,baz=120,slow=36					
OSSR	**Ossora**	**10.85**	**18**	PN	**Pn**	**11 02 41.3 +1.6**
OSSR	**Ossora**	**10.85**	**18**	P	**Pn**	**11 02 41.3 +1.6**
MA2	**Magadan**	**10.97**	**345** ⇑	*i*PN	**Pn**	**11 02 42.8 +1.3**
MA2				pmax	pmax	
	comp=Z,23nm,1.3s					
MA2	**Magadan**	**10.97**	**345**	P	**Pn**	**11 02 42.7 +1.3**
	comp=Z,1.6nm,0.3s,baz=158,slow=10.0,SNR=12					
MA2	**Magadan**	**10.97**	**345**	Pn	**Pn**	**11 02 43.4 +1.9**
SMY	**Shemya**	**11.70**	**65**	PN	**Pn**	**11 02 50.7 -0.7**
SMY	**Shemya**	**11.70**	**65**	Pn	**Pn**	**11 02 50.7 -0.7**
ERM	**Erimo**	**11.72**	**238**	*e*PN	**Pn**	**11 02 52.7 +1.0**
ERM	**Erimo**	**11.72**	**238**	Pn	**Pn**	**11 02 50.9 -0.8**
TILK	**Tilichiki**	**12.62**	**22**	PN	**Pn**	**11 03 04.1 +0.1**
TILK	**Tilichiki**	**12.62**	**22**	P	**Pn**	**11 03 04.1 +0.1**
GRNR	**Gornyy**	**13.01**	**285**	*e*P	**Pn**	**11 03 09.5 +0.2**
GRNR				AMS	AMS	11 09 03.5
	comp=Z,300nm,17.0s					
GRNR				AMS	AMS	11 09 03.5
	comp=Z,500nm,17.0s					
GRNR				AMS	AMS	11 09 03.5
	comp=Z,800nm,17.0s					
SEY	**Seymchan**	**14.02**	**352**	*e*P	**Pn**	**11 03 23.4 +0.4**
SEY	**Seymchan**	**14.02**	**352**	P	**Pn**	**11 03 23.6 +0.7**
	comp=Z,0.2nm,0.3s,baz=152,slow=11,SNR=4.3					
SEY	**Seymchan**	**14.02**	**352**	*e*P	**Pn**	**11 03 23.4 +0.4**
TEY	**Ternei**	**14.13**	**261**	*e*P	**P**	**11 03 29.5 -2.2**
TEY	**Ternei**	**14.13**	**261**	*e*P	**Pn**	**11 03 23.2 -1.4**
TEY				AMB	AMB	11 03 24.7
	comp=Z,30nm,1.0s					
KMSK	**Kamenskaya**	**14.42**	**18**	P	**Pn**	**11 03 27.4 -1.1**
KMSK	**Kamenskaya**	**14.42**	**18**	*e*P	**Pn**	**11 03 27.4 -1.1**
EKMR	**Ekimchan**	**15.26**	**294**	*e*P	**Pn**	**11 03 38.7 -1.1**
EKMR				AMB	AMB	11 03 47.0
	comp=Z,20nm,0.7s					
KLR	**Kul'dur**	**16.14**	**280**	P	**P**	**11 03 53.9 -0.2**
	comp=Z,0.7nm,0.3s,baz=83,slow=9.5,SNR=22					
KLR				S	**Sn**	**11 06 40.8 -8.1**
	comp=Z,0.2nm,0.3s,baz=0.0,slow=20,SNR=3.5					
USA0B	**Ussuriysk Arra**	**17.47**	**263** ⇑	*i*P	**Pn**	**11 04 07.0 -0.9**
USA0B	**Ussuriysk Arra**	**17.47**	**263**		**Pn**	**11 04 08.0 +0.1**
USRK	**Ussuriysk Ar.**	**17.47**	**263**	P	**Pn**	**11 04 07.3 -0.6**
	baz=59,slow=11,SNR=10					
BMKR	**Bomnak**	**17.86**	**299** ⇓	*e*P	**P**	**11 04 13.2 +0.2**
BMKR				AMB	AMB	11 04 16.0
	comp=Z,10.0nm,0.7s					
VLA	**Vladivostok**	**18.02**	**260**	*e*P	**Pn**	**11 04 12.6 -2.1**
VLA				pmax	pmax	
	comp=Z,42nm,1.8s					
MAJO	**Matsushiro**	**18.31**	**233** ⇑	*i*P	**P**	**11 04 17.6 -0.5**
MAJO				pmax	pmax	
	comp=Z,11nm,1.2s					
MAJO	**Matsushiro**	**18.31**	**233**	P	**Pn**	**11 04 18.8 +0.6**
MAT	**Matsushiro**	**18.31**	**233**	P	**P**	**11 04 17.9 -0.2**
MAT				S	**Sn**	**11 07 41.5 -0.1**
MJAR	**Matsushiro Arr**	**18.31**	**233**	P	**Pn**	**11 04 20.3 +2.1**
	comp=Z,0.1nm,0.3s,baz=24,slow=10,SNR=8.3					
MJB9	**Matsu-Tunnel**	**18.31**	**233**	P	**Pn**	**11 04 18.7 +0.4**
ZEA	**Zeya**	**18.71**	**295**	*e*P	**Pn**	**11 04 24.2 +1.2**
ZEA				pmax	pmax	
	comp=Z,12nm,1.0s					
ZEA				MLR	MLR	
	comp=N,400nm,14.0s					
ZEA				MLR	MLR	
	comp=E,500nm,14.0s					
ZEA				MLR	MLR	
	comp=Z,800nm,14.0s					
ZEA	**Zeya**	**18.71**	**295**	*e*P	**Pn**	**11 04 24.2 +1.2**
ZEA				AMB	AMB	11 04 25.8
	comp=Z,10.0nm,1.0s					
ZEA				AMS	AMS	11 13 14.0
	comp=Z,400nm,14.0s					
ZEA				AMS	AMS	11 13 14.0
	comp=Z,500nm,14.0s					
ZEA				AMS	AMS	11 13 14.0
	comp=Z,800nm,14.0s					
MSHR	**Mys Shultsa**	**18.75**	**259**	*e*P	**P**	**11 04 23.0 +0.1**
ATKA	**Atka Island**	**18.79**	**69**	P	**P**	**11 04 22.8 -0.5**
ATKA				IAmb	IAmb	11 04 31.5
	comp=Z,70nm,1.5s					
MDJ	**Mudanjiang**	**18.87**	**266**	P	**P**	**11 04 23.7 -0.5**
KROS	**Kirovskiy**	**18.91**	**297**	*e*P	**Pn**	**11 04 24.9 -0.6**
KROS				AMB	AMB	11 04 25.9
	comp=Z,10.0nm,0.8s					
BILL	**Bilibino**	**19.59**	**11** ⇑	*e*P	**P**	**11 04 32.0 +0.1**
BILL				*e*S	**S**	**11 08 08.0 -2.9**
BILL				pmax	pmax	
	comp=Z,18nm,1.1s					
BILL				MLR	MLR	
	comp=Z,596nm,17.0s					
BILL	**Bilibino**	**19.59**	**11**	P	**Pn**	**11 04 32.4 -1.1**
YAK	**Yakutsk**	**19.71**	**321**	*e*P	**P**	**11 04 31.6 -1.6**
YAK				pmax	pmax	
	comp=Z,33nm,0.9s					
YAK				pmax	pmax	
	comp=N,18nm,1.2s					
YAK				pmax	pmax	
	comp=E,30nm,1.4s					
YAK	**Yakutsk**	**19.71**	**321**	P	**P**	**11 04 32.2 -1.0**
	comp=E,0.2nm,0.3s,baz=110,slow=3.0,SNR=13					
YAK	**Yakutsk**	**19.71**	**321**	P	**P**	**11 04 32.3 -0.9**
YAK				IAmb	IAmb	11 04 32.9
	comp=Z,35nm,1.0s					
INU	**Inuyama**	**19.84**	**233**	P	**P**	**11 04 34.8 -0.1**
JHJ2	**Mitsune**	**20.26**	**224**	P	**P**	**11 04 39.6 +0.2**
CN2	**Changchun**	**21.92**	**268**	*e*P	**P**	**11 04 48.9 -8.4**
GAMB	**Gambell**	**22.57**	**38**	P	**P**	**11 05 05.0 +1.0**
KSRS	**Korea Array**	**23.68**	**251**	P	**P**	**11 05 15.5 +0.1**
	comp=Z,11nm,0.9s,baz=48,slow=9.7,SNR=20					
KS19	**Wonju Array Si**	**23.68**	**251**	P	**P**	**11 05 15.5 0.0**
KS19				IAmb	IAmb	11 05 29.3
	comp=Z,25nm,1.1s					
TJN	**Taejon**	**24.70**	**250**	*c i*P	**P**	**11 05 24.9 0.0**
JNU	**Nakatsue**	**24.87**	**239**	P	**P**	**11 05 27.6 +1.1**
JNU				IAmb	IAmb	11 05 31.6
	comp=Z,37nm,1.1s					
ANM	**Nome**	**25.43**	**38**	P	**P**	**11 05 31.5 +0.3**
ANM				pmax	pmax	
	comp=Z,15nm,1.0s					
ANM	**Nome**	**25.43**	**38**	P	**P**	**11 05 31.5 +0.3**
ANM				IAmb	IAmb	11 05 47.8
	comp=Z,15nm,1.0s					
TIXI	**Tiksi**	**25.90**	**340** ⇓	*i*P	**P**	**11 05 33.4 -1.9**
TIXI				pmax	pmax	
	comp=Z,10.0nm,0.6s					
TIXI	**Tiksi**	**25.90**	**340**	P	**P**	**11 05 33.4 -1.9**
	comp=Z,11nm,0.6s,baz=180,slow=24,SNR=30					
TIXI	**Tiksi**	**25.90**	**340**	P	**P**	**11 05 34.1 -1.3**
TIXI				IAmb	IAmb	11 05 35.5
	comp=Z,12nm,0.6s					
RDOG	**Red Dog Mine**	**27.61**	**32**	P	**P**	**11 05 51.9 +1.0**
H11N2	**WAKE ISLAND Hy**	**30.51**	**160**	T	T	11 39 18.5
	baz=347					
H11N1	**WAKE ISLAND Hy**	**30.52**	**160**	T	T	11 39 23.9
	baz=347					
H11N3	**WAKE ISLAND Hy**	**30.52**	**160**	T	T	11 39 35.2
	baz=347					
H11S1	**WAKE ISLAND Hy**	**31.65**	**161**	T	T	11 40 45.8
	baz=346,slow=76					
H11S3	**WAKE ISLAND Hy**	**31.66**	**161**	T	T	11 40 37.0
	baz=346,slow=76					
H11S2	**WAKE ISLAND Hy**	**31.67**	**161**	T	T	11 40 41.4
	baz=346,slow=76					
SEW	**Seward**	**32.27**	**49**	P	**P**	**11 06 32.3 +0.3**
ULN	**Ulaanbaatar**	**32.30**	**287**	*i*P	**P**	**11 06 30.1 -2.6**
ULN				pmax	pmax	
	comp=Z,3.0nm,1.5s					
NEA	**Nenana**	**32.33**	**41**	P	**P**	**11 06 32.6 0.0**
HHC	**Hu-ho-hao-te**	**32.41**	**272**	*e*P	**P**	**11 06 34.3 +0.7**
HHC				sP	pwP	11 06 50.8 +3.8
HHC				S	**S**	**11 11 46.5 +0.8**
HHC				sS	sS	11 11 59.6 -2.1
HHC				SS	**SnSn**	**11 13 36.3 -3.4**
HHC				pmax	pmax	
	comp=Z,5.0nm,1.0s					
HHC				pmax	pmax	
	comp=Z,180nm,8.6s					
HHC				LR	LR	
	comp=Z,220nm,17.5s					
HHC				LR	LR	
	comp=Z,230nm,15.7s					
HHC				LR	LR	
	comp=Z,290nm,14.4s					
RND	**Reindeer**	**32.41**	**43**	P	**P**	**11 06 32.6 -0.9**
RND				pmax	pmax	
	comp=Z,5.0nm,1.0s					
RND	**Reindeer**	**32.41**	**43**	P	**P**	**11 06 32.6 -0.9**
RND				IAmb	IAmb	11 06 42.2
	comp=Z,5.1nm,1.0s					
KNK	**Knik Glacier**	**32.66**	**47**	P	**P**	**11 06 34.4 -1.2**
KNK				IAmb	IAmb	11 06 40.0
	comp=Z,7.4nm,1.0s					
SML	**Sawmill**	**32.70**	**46**	P	**P**	**11 06 35.5 -0.4**
SONM	**Songino Array**	**32.72**	**287**	P	**P**	**11 06 34.8 -1.6**
	comp=Z,0.3nm,0.3s,baz=74,slow=7.6,SNR=5.1					
WRH	**Wood River Hil**	**32.76**	**41**	P	**P**	**11 06 37.5 +1.2**
WRH				IAmb	IAmb	11 06 56.1
	comp=Z,14nm,1.4s					
NJ2	**Nanjing**	**32.85**	**253**	*e*P	**P**	**11 06 37.1 -0.3**
NJ2				pmax	pmax	
	comp=Z,15nm,0.7s					
CCB	**Clear Creek Bu**	**32.88**	**41**	P	**P**	**11 06 38.6 +1.2**
TLY	**Talaya**	**33.15**	**295**	*e*P	**P**	**11 06 39.9 -0.1**
TLY				pmax	pmax	
	comp=Z,21nm,0.8s					
TLY	**Talaya**	**33.15**	**295**	*e*P	**P**	**11 06 39.9 -0.1**
TLY	**Talaya**	**33.15**	**295**	P	**P**	**11 06 39.6 -0.4**
TLY				IAmb	IAmb	11 06 40

LZH pmax pmax
comp=Z,73nm,4.9s
LZH LR LR
comp=Z,470nm,15.2s
LZH LR LR
comp=Z,350nm,15.2s
LZH LR LR
comp=Z,540nm,14.1s
GTA Gaotai 40.84 278 *e*P **P 11 07 44.9 -0.6**
GTA pP sP 11 07 56.3 -1.0
GTA sP pwP 11 08 00.3 +1.2
GTA PcP **PcP 11 09 50.3 +4.5**
GTA pmax pmax
comp=Z,5.0nm,1.2s
GTA pmax pmax
comp=Z,210nm,7.3s
GTA LR LR
comp=Z,330nm,17.1s
GTA LR LR
comp=Z,440nm,19.0s
GTA LR LR
comp=Z,520nm,15.9s
C36M Paulatuk 41.62 32 P **P 11 07 53.4 +2.1**
C36M lAmb lAmb 11 08 09.1
comp=Z,14nm,1.1s
ZAA0 Zalesovo Array 43.07 305 P **P 11 08 01.5 -1.8**
ZALV Zalesovo Beam 43.07 305 P **P 11 08 01.8 -1.5**
comp=Z,1.5nm,0.4s,baz=56,slow=7.2,SNR=11
ZALV PcP **PcP 11 09 53.5 +0.8**
comp=Z,0.7nm,0.4s,baz=85,slow=3.6,SNR=3.8
CD2 Chengdu 43.32 265 *e*P **P 11 08 04.0 -1.7**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
TGY Tagaytay City 45.47 232 LR LR 11 27 58.2
comp=Z,78nm,20.8s,baz=128,slow=37
WMQ Urumqi 46.17 291 *e*P **P 11 08 29.0 +0.7**
WMQ pP pP 11 08 37.8 +0.1
WMQ sP pwP 11 08 45.8 +4.9
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,140nm,10.5s
WMQ LR LR
comp=Z,440nm,29.0s
WMQ LR LR
comp=Z,1μm,29.5s
WMQ LR LR
comp=Z,510nm,29.5s
YKA Yellowknife Ar 47.66 39 P **P 11 08 40.9 +1.3**
comp=Z,1.4nm,0.7s,baz=296,slow=7.8,SNR=13
YKA PcP **PcP 11 10 09.8 +1.3**
comp=Z,0.7nm,0.9s,baz=280,slow=3.7,SNR=3.7
RES Resolute Bay 47.85 20 P **P 11 08 42.9 +2.0**
RES pmax pmax
comp=Z,6.0nm,0.9s
RES Resolute Bay 47.85 20 P **P 11 08 42.9 +2.0**
RES lAmb lAmb 11 08 43.0
comp=Z,5.5nm,0.9s
MK31 Makanchi Array 47.86 297 P **P 11 08 41.0 -0.4**
MK31 pmax pmax
comp=Z,5.0nm,0.9s
MK31 Makanchi Array 47.86 297 P **P 11 08 41.0 -0.4**
MK31 lAmb lAmb 11 08 41.5
comp=Z,5.0nm,0.9s
MKAR Makanchi Array 47.86 297 P **P 11 08 40.2 -1.1**
comp=Z,5.9nm,0.8s,baz=66,slow=7.3,SNR=37
MKAR LR LR 11 30 07.8
comp=Z,545nm,20.1s,baz=100,slow=38
KMI Kunming 47.88 260 P **P 11 08 42.4 +0.4**
KMI S **S 11 15 32.5 -4.5**
KMI pmax pmax
comp=Z,12nm,1.0s
KMI pmax pmax
comp=Z,140nm,6.7s
KURK Kurchatov 47.93 303*c i*P **P 11 08 40.5 -1.3**
KURK pmax pmax
comp=Z,13nm,0.8s
KURK Kurchatov 47.93 303 *i*P **P 11 08 40.5 -1.3**
KURK Kurchatov 47.93 303 P **P 11 08 41.2 -0.6**
BRVK Borovoye 51.12 309 P **P 11 09 05.5 -0.6**
BRVK pmax pmax
comp=Z,11nm,1.0s
BRVK Borovoye 51.12 309 *e*P **P 11 09 05.5 -0.6**
BRVK Borovoye 51.12 309 P **P 11 09 05.5 -0.6**
BRVK lAmb lAmb 11 09 06.1
comp=Z,11nm,0.9s
SVE Sverdlovsk 53.61 317 *e*P **P 11 09 23.7 -0.8**
SVE pmax pmax
comp=Z,23nm,0.9s
SVE Sverdlovsk 53.61 317 *e*P **P 11 09 23.7 -0.8**
BOOM Boomskoye usch 54.02 296 P **P 11 09 28.3 +0.4**
BOOM pmax pmax
comp=Z,6.0nm,1.0s
BOOM Boomskoye usch 54.02 296 P **P 11 09 28.3 +0.4**
BOOM lAmb lAmb 11 09 29.1
comp=Z,5.8nm,1.0s
DAG Danmarks Havn 54.34 359 *i*P **P 11 09 28.7 -0.8**
DAG Danmarks Havn 54.34 359 *i*P **P 11 09 28.7 -0.8**
SHL Shillong 54.67 269 P **P 11 09 32.5 -0.4**
SHL pmax pmax
comp=Z,10.0nm,0.8s
SHL Shillong 54.67 269 P **P 11 09 32.5 -0.4**
SHL lAmb lAmb 11 09 35.0
comp=Z,10nm,0.8s
ARU Arti 54.77 318*c i*P **P 11 09 31.7 -1.3**
ARU *PP **sP 11 09 43.8 -1.0**
ARU S **S 11 17 10.0 -1.0**
ARU SS **SS 11 20 47.5 -6.1**
ARU pmax pmax
comp=Z,26nm,0.7s
ARU Arti 54.77 318 *i*P **P 11 09 31.7 -1.3**
ARU Arti 54.77 318 P **P 11 09 32.1 -0.8**
AAK Ala-Archa 54.78 297⇑*i*P **11 09 32.8 -0.7**
AAK pmax pmax
comp=Z,3.0nm,1.0s
AAK Ala-Archa 54.78 297 *i*P **P 11 09 32.8 -0.7**
AAK Ala-Archa 54.78 297 P **P 11 09 33.3 -0.2**
CHTO Chiang Mai 54.84 258 P **P 11 09 34.2 +0.2**
CHTO pmax pmax
comp=Z,16nm,1.1s
CHTO Chiang Mai 54.84 258 P **P 11 09 34.1 +0.2**
CMAR Chiang Mai Arr 55.10 257 P **P 11 09 37.0 +1.2**
comp=Z,3.9nm,0.7s,baz=31,slow=7.1,SNR=16
K05A Summer Lake 55.13 63 P **P 11 09 38.3 +2.3**
K05A lAmb lAmb 11 09 54.0
comp=Z,14nm,1.2s
WALA Waterton Lakes 55.20 53 P **P 11 09 38.8 +2.4**
WALA lAmb lAmb 11 09 45.7
comp=Z,4.0nm,0.8s
KSH Kashi 55.81 293 *e*P P 11 09 50.8 +10
KSH *e*S **S 11 17 33.6 +7.9**
KSH *es*S sS 11 17 46.1 +7.7
KSH Kashi 55.81 293 *e*SS **SS 11 21 13.4 +2.4**
KSH pmax pmax
comp=Z,450nm,4.9s
KSH LR LR
comp=N,150nm,5.6s
KSH LR LR
comp=E,180nm,5.9s
KSH LR LR
comp=Z,280nm,6.6s
MOD Modoc Plateau 55.98 63 P **P 11 09 44.5 +2.4**
MOD lAmb lAmb 11 09 58.0
comp=Z,17nm,1.4s
TAPN Taplejung 56.20 274 *e*P **P 11 09 44.4 +0.4**
comp=Z,12nm,0.7s
ARCES ARCESS Array B 56.33 341 P **P 11 09 42.3 -1.7**
comp=Z,2.5nm,0.8s,baz=40,slow=7.8,SNR=8.6
PRGR Permogore 56.57 328 *e*P **P 11 09 41.5 -4.2**
PRGR pmax pmax
comp=Z,25nm,0.8s
WVOR Wild Horse Val 56.63 62 P **P 11 09 47.1 +0.5**
WVOR pmax pmax
comp=Z,8.0nm,1.2s
WVOR Wild Horse Val 56.63 62 P **P 11 09 47.1 +0.5**
WVOR lAmb lAmb 11 10 02.6
comp=Z,8.3nm,1.1s
KK31 Karatay Array 56.81 299 P **P 11 09 46.8 -1.0**
KK31 pmax pmax
comp=Z,2.0nm,0.7s
KK31 Karatay Array 56.81 299 P **P 11 09 46.8 -1.0**
KKAR Karatay Array 56.81 299 P **P 11 09 47.0 -0.8**
KKAR pmax pmax
comp=Z,2.0nm,0.7s
KKAR Karatay Array 56.81 299 P **P 11 09 47.0 -0.8**
JIRN Jiri 56.98 275 *e*P **P 11 09 49.8 +0.1**
comp=Z,19nm,0.7s
GUN Gumba 57.02 276 *e*P **P 11 09 50.0 +0.1**
comp=Z,9.9nm,0.5s
RAMN Ramite 57.19 274 *e*P **P 11 09 51.2 +0.2**
comp=Z,22nm,0.7s
KKN Kakani 57.49 276 *e*P **P 11 09 52.4 -0.6**
DMN Daman 57.73 276 *e*P **P 11 09 55.4 +0.6**
VCNR Virginia City 58.01 65 P **P 11 09 58.6 +2.1**
VCNR lAmb lAmb 11 10 11.7
comp=Z,4.0nm,1.1s
DANN Dangsing 58.10 278 *e*P **P 11 09 57.6 +0.1**
comp=Z,18nm,0.7s
SUMG Summit 58.15 5 *i*P **P 11 09 58.0 +0.8**
SUMG *i* 11 10 10.0
SUMG pmax pmax
comp=Z,50nm,1.0s
SUMG Summit 58.15 5 *i*P **P 11 09 58.0 +0.8**
comp=Z,50nm,1.0s
SUMG *i* 11 10 10.0
SUMG Summit 58.15 5 P **P 11 09 58.9 +1.7**
PNTR Pine Nut 58.17 66 P **P 11 09 59.9 +2.2**
PNTR lAmb lAmb 11 10 14.7
comp=Z,4.2nm,0.8s
KOLN Koldanda 58.60 277 *e*P **P 11 10 01.2 +0.4**
comp=Z,24nm,0.9s
ABKAR Akbulak array 58.61 310 P **P 11 10 00.1 -0.3**
KLMR Klimovskoe 59.22 329 *e*P **P 11 10 02.5 -1.8**
KLMR pmax pmax
comp=Z,17nm,1.5s
KLMR Klimovskoe 59.22 329 *e*P **P 11 10 02.5 -1.8**
KLMR AMP 11 10 11.8
comp=Z,17nm,1.5s
NVAR Mina Array Bea 59.37 65 P **P 11 10 07.8 +1.8**
comp=Z,1.0nm,0.7s,baz=288,slow=7.7,SNR=8.7
YHH Holmes Hill 59.51 56 P **P 11 10 09.4 +2.5**
RLMT Red Lodge 60.14 54 P P 11 10 16.3 +5.0
RLMT lAmb lAmb 11 10 20.1
comp=Z,12nm,1.4s
R11A Troy Canyon, C 61.03 64 P **P 11 10 18.3 +0.9**
NIL Nilore 61.27 289 P **P 11 10 19.4 +0.5**
NIL pmax pmax
comp=Z,15nm,0.8s
NIL Nilore 61.27 289 P **P 11 10 19.4 +0.5**
PD31 Pinedale Array 61.54 57 P **P 11 10 22.1 +1.3**
PD31 lAmb lAmb 11 10 35.8
comp=Z,5.3nm,0.9s
PDAR Pinedale Array 61.54 57 P **P 11 10 22.4 +1.6**
comp=Z,0.7nm,0.7s,baz=293,slow=1.8,SNR=6.5
FINES FINESS Array B 62.82 336*ce*P **P 11 10 26.8 -1.9**
FINES pmax pmax
comp=Z,5.0nm,0.9s
FINES FINESS Array B 62.82 336 P **P 11 10 26.9 -1.8**
comp=Z,4.7nm,0.9s,baz=35,slow=7.7,SNR=12
RDMU Red Mountain 63.01 59 P **P 11 10 31.4 +0.7**
KBL Kabul 63.25 293 P **P 11 10 31.2 -1.2**
KBL pmax pmax
comp=Z,6.0nm,1.1s
KBL Kabul 63.25 293 P **P 11 10 31.2 -1.2**
KBL lAmb lAmb 11 10 32.2
comp=Z,5.9nm,1.1s
SRU San Rafael Swe 63.46 60 P **P 11 10 33.8 +0.2**
SRU pmax pmax
comp=Z,8.0nm,0.8s
SRU San Rafael Swe 63.46 60 P **P 11 10 33.8 +0.2**
PFO Pinyon Flats O 63.68 68⇑*i*P **P 11 10 33.6 -1.5**
PFO pmax pmax
comp=Z,7.0nm,1.3s
OBN Obninsk 64.59 327⇓*e*P **P 11 10 39.7 -0.8**
OBN *PP **pP 11 10 51.0 +1.0**
OBN 11 11 12.0
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN MLR MLR
comp=Z,161nm,17.0s
OBN Obninsk 64.59 327 *e*P **P 11 10 39.7 -0.8**
WUAZ Wupatki 65.43 64 P **P 11 10 47.4 +0.9**
WUAZ lAmb lAmb 11 11 06.2
comp=Z,6.4nm,1.3s
VRH Novokhopyorsk 65.59 321 *e*P **P 11 10 45.3 -1.8**
VRH pmax pmax
comp=Z,30nm,0.8s
LPSR Galich'ya Gora 65.65 324 *e*P **P 11 10 46.3 -1.1**
LPSR pmax pmax
comp=Z,20nm,0.8s
ISCO Idaho Springs 65.74 57 P **P 11 10 48.0 -0.6**
ISCO pmax pmax
comp=Z,4.0nm,0.9s
ISCO Idaho Springs 65.74 57 P **P 11 10 48.0 -0.6**
ISCO lAmb lAmb 11 11 04.1
comp=Z,4.1nm,0.8s
VSR Storozhevoye 66.62 322 *e*P **P 11 10 52.4 -1.3**
VSR pmax pmax
comp=Z,8.0nm,0.6s
NB2 NORSAR Subarra 66.67 342 P **P 11 10 53.9 0.0**
comp=Z,1.7nm,0.8s,baz=20,slow=6.5
NOA NORSAR Array B 66.67 342 P **P 11 10 53.3 -0.6**
comp=Z,1.9nm,0.8s,baz=23,slow=6.4,SNR=5.3
VORD Divnogorie 66.76 322 *e*P **P 11 10 52.2 -2.4**
VORD pmax pmax
comp=Z,10.0nm,0.8s
GEYT Alibeck 67.28 302 P **P 11 10 57.9 -0.3**
comp=Z,1.9nm,0.4s,baz=15,slow=6.2,SNR=3.6
SCHQ Schefferville 70.22 25 P **P 11 11 16.9 +0.8**
comp=Z,2.3nm,0.6s,baz=330,slow=5.6,SNR=5.1
KIV Kislovodsk 70.71 316 *e*P **P 11 11 19.2 -0.2**
KIV pmax pmax
comp=Z,22nm,1.0s
KIV Kislovodsk 70.71 316 *e*P **P 11 11 19.2 -0.2**
AKASG Malin Array Be 70.78 328*ce*P **P 11 11 19.2 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 70.78 328 P **P 11 11 18.6 -1.0**
comp=Z,0.6nm,0.3s,baz=34,slow=6.0,SNR=4.5
KBZ Khabaz 70.79 315 P **P 11 11 20.2 +0.5**
comp=Z,6.5nm,0.8s,baz=81,slow=3.4,SNR=10.0
WB0 Warramunga Arr 71.35 202 P **P 11 11 23.5 +0.2**
WB0 lAmb lAmb 11 11 23.9
comp=Z,4.5nm,0.9s
WR0 Warramunga Arr 71.50 202 P **P 11 11 24.6 +0.4**
WR0 lAmb lAmb 11 11 25.2
comp=Z,8.1nm,1.2s
WRAB Tennant Creek 71.52 202 P **P 11 11 24.8 +0.5**
WRAB pmax pmax
comp=Z,4.0nm,0.9s
WRAB Tennant Creek 71.52 202 P **P 11 11 24.8 +0.5**
WB2 Warramunga Arr 71.53 202 P **P 11 11 24.7 +0.3**
WB2 lAmb lAmb 11 11 25.1
comp=Z,4.7nm,0.9s
WRA Warramunga Arr 71.53 202*ce*P **P 11 11 23.7 -0.7**
WRA pmax pmax
comp=Z,3.0nm,0.9s
WRA Warramunga Arr 71.53 202 P **P 11 11 23.8 -0.6**
comp=Z,2.8nm,0.9s,baz=18,slow=6.3,SNR=8.9
GNI Garni 72.66 312 *i*P **P 11 11 30.4 -0.9**
GNI pmax pmax
comp=Z,9.0nm,0.9s
SORM Soroca 73.24 327⇑P **P 11 11 33.6 -0.7**
KWP Kalwaria Pacla 73.89 331 P **P 11 11 39.1 +0.9**
KWP pmax pmax
comp=Z,39nm,1.1s
KWP Kalwaria Pacla 73.89 331 *e*P **P 11 11 39.4 +1.2**
KWP Kalwaria Pacla 73.89 331 P **P 11 11 39.1 +0.9**
OJC Ojcow 74.28 333 *e*P **P 11 11 39.6 -0.9**
OJC Ojcow 74.28 333 *e*P **P 11 11 39.6 -0.9**
TX31 Lajitas Ar. Si 74.39 63 P **P 11 11 42.4 +0.8**
TX32 Lajitas Array 74.39 63 P **P 11 11 42.4 +0.8**
TXAR Lajitas Array 74.39 63 P **P 11 11 42.7 +1.1**
comp=Z,2.1nm,0.7s,baz=300,slow=4.9,SNR=19
ESK Eskdalemuir 74.54 348 P **P 11 11 42.8 +1.0**
ESK pmax pmax
comp=Z,25nm,1.2s
ESK Eskdalemuir 74.54 348 P **P 11 11 42.8 +1.0**
KOLS Kolonicke sedl 74.64 331 *e*P **P 11 11 43.2 +0.6**
KOLS pmax pmax
comp=Z,10.0nm,1.0s
KOLS Kolonicke sedl 74.64 331 *e*P **P 11 11 43.1 +0.5**
KSP Ksiaz 74.73 335 *e*P **P 11 11 44.0 +0.9**
KSP Ksiaz 74.73 335 *e*P **P 11 11 44.0 +0.9**
RETH Rethem/Aller, 74.73 340 *e*P **P 11 11 44.1 +1.1**
comp=Z,25nm,1.2s,baz=23,slow=5.7
BUR08 Bucovina Ar. S 74.78 328 P **P 11 11 43.3 -0.3**
BUR08 lAmb lAmb 11 11 44.6
comp=Z,7.2nm,0.8s
BURAR Bucovina Array 74.80 328⇑P **P 11 11 44.1 +0.5**
NIE Niedzica 74.83 332 *e*P **P 11 11 44.5 +0.8**
NIE Niedzica 74.83 332 *e*P **P 11 11 44.5 +0.8**
ASSE Asse, Remlinge 75.00 339 *e*P **P 11 11 45.3 +0.8**
comp=Z,8.4nm,0.9s,baz=23,slow=5.7
BIZ Bicaz 75.06 327⇑P **P 11 11 45.5 +0.5**
UPC Upice 75.11 335 *e*P **P 11 11 46.3 +1.0**
UPC Upice 75.11 335 *e*P **P 11 11 46.3 +1.0**
DPC Dobruska-Polom 75.17 335 *e*P **P 11 11 46.6 +0.9**
DPC Dobruska-Polom 75.17 335 *e*P **P 11 11 46.6 +0.9**
CLL Collm 75.18 337⇓*i*P **P 11 11 46.1 +0.5**
CLL pmax pmax
comp=Z,21nm,1.0s
CLL Collm 75.18 337⇓*i*P **P 11 11 46.1 +0.5**
comp=Z,21nm,1.0s
CLL Collm 75.18 337 *e*P **P 11 11 45.9 +0.3**
comp=Z,20nm,1.0s,baz=23,slow=5.7
CLL Collm 75.18 337 P **P 11 11 45.5 -0.1**
ASAR Alice Springs 75.21 201 P **P 11 11 46.3 +0.2**
comp=Z,0.6nm,0.7s,baz=23,slow=5.8,SNR=7.0
TESR Tescani 75.23 327⇑P **P 11 11 46.1 0.0**
TRPA Tarpa 75.25 330⇑*e*P **P 11 11 46.4 +0.3**
TRPA Tarpa 75.25 330⇓P **P 11 11 47.1 +1.1**
KRLC Kraliky 75.29 334 *e*P **P 11 11 47.1 +0.8**
KRLC Kraliky 75.29 334 *e*P **P 11 11 47.1 +0.8**
LANS Liptovska Anna 75.32 332 *e*P **P 11 11 48.4 +1.8**
LANS pmax pmax
comp=Z,11nm,0.8s
LANS Liptovska Anna 75.32 332 *e*P **P 11 11 48.4 +1.8**
CLZ Clausthal 75.33 339 *e*P **P 11 11 47.6 +1.1**
comp=Z,18nm,1.0s,baz=23,slow=5.7
MORC Moravsky Berou 75.34 334 P **P 11 11 46.8 +0.2**
MORC Moravsky Berou 75.34 334⇑P **P 11 11 47.6 +1.0**
MORC Moravsky Berou 75.34 334 *e*P **P 11 11 47.3 +0.7**
MORC Moravsky Berou 75.34 334 P **P 11 11 46.8 +0.2**
BRG Berggiesshubel 75.34 337 *e*P **P 11 11 47.0 +0.5**
comp=Z,7.3nm,1.0s
BRG Berggiesshubel 75.34 337 *e*P **P 11 11 47.0 +0.5**
BRG pmax pmax
comp=Z,7.0nm,1.0s
BRG Berggiesshubel 75.34 337 *e*P **P 11 11 47.1 +0.5**
comp=Z,9.4nm,1.1s,baz=23,slow=5.7
FBE Freiberg 75.45 337 *e*P **P 11 11 48.1 +0.9**
comp=Z,12nm,1.0s,baz=23,slow=5.7
TLCR 75.56 325⇑P **P 11 11 48.4 +0.6**
NEUB Neuenburg 75.58 338 *e*P **P 11 11 49.5 +1.5**
comp=Z,18nm,1.0s,baz=23,slow=5.7
KECS Kecovo 75.60 331 *e*P **P 11 11 48.6 +0.5**
KECS pmax pmax
comp=Z,3.0nm,0.8s
KECS Kecovo 75.60 331 *e*P **P 11 11 48.6 +0.5**
CFR Carcaliu 75.82 325⇑P **P 11 11 49.3 -0.1**
PRU Pruhonice 75.98 336 *e*P **P 11 11 50.9 +0.6**
PRU Pruhonice 75.98 336 *e*P **P 11 11 50.9 +0.6**
VRAC Vranov 76.03 334 *e*P **P 11 11 51.5 +0.9**
BISRR Bisoca 76.03 326⇑P **P 11 11 52.1 +1.4**
VYHS Vyhne 76.10 332 *e*P **P 11 11 52.1 +1.1**
VYHS pmax pmax
comp=Z,11nm,1.1s
VYHS Vyhne 76.10 332 *e*P **P 11 11 52.1 +1.1**
JAVC Velka Javorina 76.12 333 *e*P **P 11 11 52.7 +1.5**
MOX Moxa 76.14 338 P **P 11 11 52.0 +0.8**
MOX pmax pmax
comp=Z,12nm,1.0s
MOX Moxa 76.14 338 *e*P **P 11 11 51.8 +0.6**
comp=Z,10nm,0.9s,baz=23,slow=5.7
MOX *e*L L 11 50 23.9
comp=Z,485nm,21.5s
PLN Plauen 76.15 337 *e*P **P 11 11 52.3 +1.1**
comp=Z,9.5nm,1.0s,baz=23,slow=5.7
GUNZ Gunzen 76.22 337 *e*P **P 11 11 52.5 +0.8**
comp=Z,11nm,1.0s,baz=23,slow=5.7
WERN Wernitzgruen 76.28 337 *e*P **P 11 11 53.0 +1.1**
comp=Z,11nm,0.9s,baz=23,slow=5.7
PSZ Piszkesteto 76.28 332 P **P 11 11 51.9 -0.2**
PSZ pmax pmax
comp=Z,9.0nm,1.0s
PSZ Piszkesteto 76.28 332⇑P **P 11 11 52.9 +0.8**
PSZ Piszkesteto 76.28 332 P **P 11 11 51.9 -0.2**
PSZ lAmb lAmb 11 11 54.0
comp=Z,9.4nm,1.0s
KRUC Moravsky 76.31 334 *e*P **P 11 11 52.9 +0.8**
NKC Novy Kostel 76.31 337 *e*P **P 11 11 53.0 +0.8**
NKC Novy Kostel 76.31 337 *e*P **P 11 11 53.0 +0.8**
TIRR Tirgusor 76.33 325⇑P **P 11 11 52.9 +0.6**
TREC Trest 76.35 335 *e*P **P 11 11 53.5 +1.1**
TREC Trest 76.35 335 *e*P **P 11 11 53.5 +1.1**
MLR Muntele Rosu 76.36 327 P **P 11 11 52.5 -0.2**
MLR pmax pmax
comp=Z,15nm,0.9s
MLR Muntele Rosu 76.36 327⇑P **P 11 11 53.7 +1.0**
MLR Muntele Rosu 76.36 327 P **P 11 11 52.5 -0.2**
DRGR 76.36 329 P **P 11 11 52.8 +0.2**
UBBA Unterbreizbach 76.37 339 *e*P **P 11 11 53.1 +0.8**
comp=Z,30nm,2.0s,baz=23,slow=5.7
BUG Bochum--Univer 76.41 341 *e*P **P 11 11 53.5 +0.9**
comp=Z,24nm,1.0s,baz=23,slow=5.7
ISR Istrita 76.46 326⇑P **P 11 11 53.9 +0.8**
SMOL Smolenice 76.50 333 *e*P **P 11 11 54.9 +1.6**
SMOL pmax pmax
comp=Z,9.0nm,1.0s
SMOL Smolenice 76.50 333 *e*P **P 11 11 54.9 +1.6**
MANZ Manzenberg 76.62 337 *e*P **P 11 11 54.8 +0.9**
comp=Z,10nm,1.1s,baz=23,slow=5.7
MODS Modra-Piesok 76.67 333 *e*P **P 11 11 54.1 -0.1**
MODS pmax pmax
comp=Z,15nm,1.0s
MODS Modra-Piesok 76.67 333 *e*P **P 11 11 54.1 -0.1**
VOIR 76.73 327⇑P **P 11 11 55.5 +0.8**
ROTZ Rotzenmuhle 76.80 337 *e*P **P 11 11 55.7 +0.8**
comp=Z,11nm,1.0s,baz=23,slow=5.7
ICOR Ion Corvin 76.85 325⇑P **P 11 11 56.5 +1.2**
ZST Bratislava 76.88 333 *e*P **P 11 11 55.7 +0.3**
ZST pmax pmax
comp=Z,12nm,0.9s
ZST Bratislava 76.88 333 *e*P **P 11 11 55.7 +0.3**
ARR Arges 76.94 327⇑P **P 11 11 56.9 +1.1**
KHC Kasperske Hory 77.03 336 *i*P **P 11 11 57.3 +1.1**
KHC pmax pmax
comp=Z,27nm,0.9s
KHC Kasperske Hory 77.03 336 *e*P **P 11 11 57.4 +1.2**
KHC *ex* x 11 12 04.5
KHC *es*P **pwP 11 12 12.2 +2.4**
KHC Kasperske Hory 77.03 336 P **P 11 11 56.8 +0.6**
KHC lAmb lAmb 11 11 58.3
comp=Z,5.5nm,0.8s
GRA1 Grafenberg Arr 77.12 338 P **P 11 11 57.8 +1.1**
GRF Grafenberg Arr 77.12 338 P **P 11 11 57.8 +1.1**
GRF pmax pmax
comp=Z,23nm,0.9s
GRF Grafenberg Arr 77.12 338 *e*P **P 11 11 57.8 +1.1**
comp=Z,26nm,1.0s,baz=23,slow=5.7
GRF *e*L L 11 51 33.9
comp=Z,346nm,20.1s
WET Wettzell 77.20 336 *e*P **P 11 11 58.2 +1.0**
comp=Z,14nm,1.0s,baz=23,slow=5.7
GEC2 GERESS Array S 77.25 336 *e*P **P 11 11 58.3 +0.7**
comp=Z,6.0nm,0.8s,baz=23,slow=5.7
GEC2 GERESS Array S 77.25 336 P **P 11 11 57.0 -0.6**
GEC2 lAmb lAmb 11 11 58.6
comp=Z,4.2nm,0.7s
GERES GERESS Array B 77.25 336 P **P 11 11 58.3 +0.7**
comp=Z,4.9nm,0.8s,baz=31,slow=5.2,SNR=26
TNS Taunus Mts 77.29 340 *e*P **P 11 11 58.7 +1.0**
comp=Z,15nm,0.8s,baz=23,slow=5.7
AHRW Bad Neuenahr-A 77.30 341 *e*P **P 11 11 58.7 +1.0**
comp=Z,14nm,0.9s,baz=23,slow=5.7
CONA Conrad Observa 77.49 334 *e*P **P 11 12 00.2 +1.3**
comp=Z,13nm,0.8s
GZR Gura Zlata 77.56 329⇑P **P 11 11 59.6 +0.3**
MPLH Magyarpolny 77.67 333⇑*e*P **P 11 12 00.8 +1.0**
BZS Buzias 77.76 329⇑P **P 11 12 00.5 +0.2**
COPA Copaceanca 77.79 326⇓P **P 11 12 00.5 0.0**
UOSS Minazif 77.87 294 P **P 11 12 00.8 -0.5**
MOA Molln 78.01 335 *e*P **P 11 12 02.8 +1.1**
comp=Z,5.3nm,0.7s
HERR Herculane 78.13 329⇑P **P 11 12 02.5 +0.1**
BR131 Keskin Array S 78.14 319 P **P 11 12 03.1 +0.3**
BR131 pmax pmax
comp=Z,12nm,1.0s
BR131 Keskin Array S 78.14 319 P **P 11 12 03.1 +0.3**
BR131 lAmb lAmb 11 12 04.3
comp=Z,12nm,1.0s
BRTR Keskin Array B 78.15 319 *i*P **P 11 12 03.4 +0.6**

BRTR				pmax	pmax			
	comp=Z,8.0nm,0.9s							
BRTR	**Keskin Array B**	**78.15**	**319**	P	**P**	**11**	**12**	**03.4 +0.6**
	comp=Z,8.5nm,0.9s,baz=52,slow=3.4,SNR=29							
MORH	**Mrgy, Hungar**	**78.19**	**332**⇓	*eP*	**P**	**11**	**12**	**02.4 -0.3**
ARSA	**Arzberg**	**78.20**	**334**	*eP*	**P**	**11**	**12**	**04.1 +1.3**
	comp=Z,10nm,1.0s							
ANTO	**Ankara**	**78.39**	**319**	P	**P**	**11**	**12**	**04.6 +0.5**
ANTO				pmax	pmax			
	comp=Z,13nm,0.9s							
ANTO	**Ankara**	**78.39**	**319**	P	**P**	**11**	**12**	**04.6 +0.5**
MDVR	**Moldovita**	**78.46**	**329**	⇑P	**P**	**11**	**12**	**04.4 +0.1**
RJOB	**Jochberg**	**78.51**	**336**	*eP*	**P**	**11**	**12**	**05.3 +0.7**
	comp=Z,12nm,1.1s,baz=23,slow=5.7							
SOKA	**Soboth**	**78.86**	**334**	*eP*	**P**	**11**	**12**	**07.4 +0.9**
	comp=Z,17nm,1.0s,SNR=7.2							
PERS	**Pernice**	**78.87**	**334**	*i* P	**P**	**11**	**12**	**07.5 +0.9**
KBA	**Koelnbreinsper**	**78.97**	**335**	*eP*	**P**	**11**	**12**	**08.6 +1.4**
	comp=Z,24nm,0.7s,SNR=14							
BFO	**Black Forest**	**79.09**	**339**	*eP*	**P**	**11**	**12**	**08.5 +0.8**
	comp=Z,18nm,1.4s,baz=23,slow=5.7							
OBKA	**Obir**	**79.15**	**334**	*eP*	**P**	**11**	**12**	**09.1 +1.0**
	comp=Z,8.8nm,1.4s							
WATA	**Walderalm**	**79.20**	**337**	*eP*	**P**	**11**	**12**	**09.6 +1.1**
	comp=Z,21nm,1.1s,SNR=5.4							
UBR	**Ueberruh**	**79.26**	**338**	*eP*	**P**	**11**	**12**	**09.4 +0.7**
	comp=Z,12nm,1.1s,baz=23,slow=5.7							
RETA	**Reutte**	**79.27**	**337**	*eP*	**P**	**11**	**12**	**10.0 +1.2**
	comp=Z,4.5nm,0.7s							
MYKA	**Terra Mystica**	**79.30**	**335**	*eP*	**P**	**11**	**12**	**09.7 +0.8**
	comp=Z,7.1nm,0.9s							
MOTA	**Moosalm**	**79.32**	**337**	*eP*	**P**	**11**	**12**	**10.3 +1.2**
	comp=Z,25nm,1.0s,SNR=7.9							
SQTA	**Sankt Quirin**	**79.41**	**337**	*i* P	**P**	**11**	**12**	**10.9 +1.4**
	comp=Z,14nm,0.8s,SNR=6.8							
ECH	**Echery**	**79.47**	**340**	P	**P**	**11**	**12**	**10.4 +0.7**
ECH				pmax	pmax			
	comp=Z,12nm,1.0s							
ECH	**Echery**	**79.47**	**340**	P	**P**	**11**	**12**	**10.4 +0.7**
ECH				IAmb	IAmb	11	12	11.4
	comp=Z,12nm,1.0s							
ABTA	**Abfaltersbach**	**79.50**	**336**	*eP*	**P**	**11**	**12**	**11.2 +1.2**
	comp=Z,10nm,0.8s							
DAVA	**Damuels**	**79.68**	**338**	*eP*	**P**	**11**	**12**	**11.9 +0.8**
	comp=Z,14nm,1.1s							
FETA	**Feichten**	**79.72**	**337**	*eP*	**P**	**11**	**12**	**12.4 +1.1**
	comp=Z,9.0nm,0.9s							
VTS	**Vitosha**	**79.83**	**327**	P	**P**	**11**	**12**	**12.7 +0.7**
VTS				pmax	pmax			
	comp=Z,17nm,0.9s							
VTS	**Vitosha**	**79.83**	**327**	⇑P	**P**	**11**	**12**	**12.7 +0.7**
VTS	**Vitosha**	**79.83**	**327**	P	**P**	**11**	**12**	**12.7 +0.7**
FUORN	**Ofenpass-Fuorn**	**80.21**	**337**	P	**P**	**11**	**12**	**13.7 -0.4**
FUORN				IAmb	IAmb	11	12	16.0
	comp=Z,9.9nm,0.9s							
CTI	**Castel Tesino**	**80.37**	**336**	P	**P**	**11**	**12**	**14.5 -0.3**
CTI				pmax	pmax			
	comp=Z,8.0nm,0.9s							
CTI	**Castel Tesino**	**80.37**	**336**	P	**P**	**11**	**12**	**14.5 -0.3**
CTI				IAmb	IAmb	11	12	15.9
	comp=Z,8.2nm,0.9s							
MANT	**Manisa**	**81.33**	**321**	P	**P**	**11**	**12**	**20.6 +0.4**
PDG	**Podgorica**	**81.37**	**329**	⇑P	**P**	**11**	**12**	**20.7 +0.7**
NRCA	**Norcia**	**82.92**	**334**	P	**P**	**11**	**12**	**28.7 +0.5**
RAYN	**Ar Rayn**	**85.20**	**301**	P	**P**	**11**	**12**	**40.4 +0.3**
RAYN				pmax	pmax			
	comp=Z,14nm,1.5s							
RAYN	**Ar Rayn**	**85.20**	**301**	P	**P**	**11**	**12**	**40.4 +0.3**
RAYN				IAmb	IAmb	11	12	54.4
	comp=Z,14nm,1.4s							
CPUP	**Villa Florida**	**145.34**	**61**	PKIKP	**PKPbc**	**11**	**19**	**41.0 0.0**
CPUP	**Villa Florida**	**145.34**	**61**	PKPbc	**PKPbc**	**11**	**19**	**41.0 0.0**
	comp=Z,1.7nm,0.6s,baz=327,slow=2.0,SNR=4.5							

*IDC **22** 11:00:33.4±2.8, 28°.93S×136°.56E, h0km, mb1 3.8/4, mb1mx3.6/30, mbtmp3.6/4, ML3.5/4, Error ellipse: s-maj=54.9km s-min=15.7km az=50.0*
*AUST **22** 11:00:36.7±0.3, 28°.82S×136°.56E, h12km, Error ellipse: s-maj=3.6km s-min=2.8km az=32.0*
ISC 22 11:00:35.1±0.7, 28°.84S±0°.05×136°.59E±0°.05, h10km, n14, σ1§76/23, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
OOD	**Oodnadatta**	**1.31**	**323**	P		**Pg**	**11 01 01.6**	**+1.4**
OOD	baz=1.3,SNR=105			S		**Sg**	**11 01 18.5**	**+1.3**
	baz=1.3							
LCRK	**Leigh Creek**	**2.14**	**139**	P		**Pb**	**11 01 13.0**	**-0.9**
LCRK	baz=2.2,SNR=52			S		**Sb**	**11 01 40.7**	**+0.2**
	baz=2.2							
MULG	**Mulgathing**	**2.63**	**236**	P		**Pn**	**11 01 17.8**	**+0.2**
MULG	baz=2.6,SNR=8.4			S		**Sn**	**11 01 50.8**	**+1.2**
	baz=2.6							
INKA	**Innaminka**	**3.83**	**74**	P		**Pn**	**11 01 36.1**	**+2.1**
INKA	baz=3.8			S		**Sn**	**11 02 20.2**	**+1.1**
	baz=3.8							
BBOO	**Buckleboo**	**3.98**	**186**	P		**Pn**	**11 01 37.4**	**+1.2**
BBOO	baz=4.0,SNR=6.1			S		**Sn**	**11 02 21.1**	**-1.9**
	baz=4.0							
HTT	**Hallett**	**4.99**	**157**	P		**Pn**	**11 01 53.0**	**+2.8**
	baz=5.0							
STKA	**Stephens Creek**	**5.28**	**126**	P		**Pn**	**11 01 55.1**	**+1.1**
	baz=5.3,SNR=4.5							
STKA				S		**Sn**	**11 02 53.4**	**-1.6**
	baz=5.3							
STKA	**Stephens Creek**	**5.28**	**126**	Pn		**Pn**	**11 01 54.6**	**+0.6**
	0.4nm,0.3s,baz=303,slow=15,SNR=8.2							
STKA				Sn		**Sn**	**11 02 53.9**	**-1.1**
	2.1nm,0.3s,baz=233,slow=20,SNR=6.6							
STKA				Lg		Lg	11 03 18.7	
	2.0nm,0.3s,baz=201,slow=21,SNR=4.4							
AS19	**Alice Springs**	**5.63**	**335**	P		**Pn**	**11 02 00.0**	**+1.1**
	baz=5.6							
ASAR	**Alice Springs**	**5.69**	**334**	Pn		**Pn**	**11 02 01.6**	**+1.9**
	1.8nm,0.3s,baz=152,slow=14,SNR=82							
ASAR				Sn		**Sn**	**11 03 02.9**	**-2.2**
	1.8nm,0.3s,baz=158,slow=22,SNR=10							
ASAR				Lg		Lg	11 03 36.8	
	0.5nm,0.3s,baz=157,slow=24,SNR=3.1							
FORT	**Forrest**	**7.66**	**253**	P		**Pn**	**11 02 27.1**	**+0.4**
	baz=7.6							
CMSA	**Cobar Meteorol**	**8.33**	**111**	P		**Pn**	**11 02 37.5**	**+1.7**
	baz=8.3							
WRA	**Warramunga Arr**	**9.09**	**346**	Pn		**Pn**	**11 02 46.5**	**0.0**
	0.5nm,0.3s,baz=171,slow=12,SNR=12							
WRA				Sn		**Sn**	**11 04 24.9**	**-4.0**
	0.4nm,0.3s,baz=162,slow=24,SNR=5.1							
WRA				Lg		Lg	11 05 24.2	
	0.3nm,0.3s,baz=168,slow=29,SNR=3.8							
FITZ	**Fitzroy Crossi**	**14.66**	**314**	Pn		**Pn**	**11 04 00.8**	**-1.8**
	0.3nm,0.3s,baz=141,slow=14,SNR=6.3							

*JMA **22** 11:12:57.4±0.4, 44°.03N×148°.11E, h0km, M3.8*
*SKHL **22** 11:12:58.0±0.6, 44°.40N×148°.30E, h30km±4km, mb4.4/5*
ISC 22 11:12:54.6±2.0, 44°.25N±0°.08×148°.1E±0°.1, h10km, n17, σ2§10/28, 3D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KUR	**Kuril'sk**	**1.00**	**349**⇓	*iP*		**Pg**	**11 13 13.3**	**-0.5**
KUR				AMB		AMB	11 13 13.7	
	90nm,0.2s							
KUR				AMB		AMB	11 13 13.7	
	100nm,0.2s							
KUR				AMB		AMB	11 13 13.7	
	150nm,0.2s							
KUR				*i* S		**Sg**	**11 13 25.2**	**-1.6**
KUR				A		A	11 13 25.8	
	520nm,0.2s							
KUR				A		A	11 13 25.8	
	790nm,0.2s							
SHO	**Shikotan**	**1.01**	**248**⇓	*iP*		**Pn**	**11 13 17.7**	**+2.8**
SHO				AMB		AMB	11 13 18.0	
	20nm,0.3s							
SHO				AMB		AMB	11 13 18.0	
	40nm,0.3s							
SHO				AMB		AMB	11 13 18.0	
	50nm,0.3s							
SHO				*i* S		**Sn**	**11 13 31.5**	**+2.3**
	220nm,0.2s							
SHO				A		A	11 13 34.0	
	560nm,0.2s							
YUK	**Yuzh-Kuril'sk**	**1.65**	**263**⇓	*iP*		**Pg**	**11 13 26.7**	**+0.5**
YUK				AMB		AMB	11 13 27.0	
	100nm,0.2s							
YUK				*i* S		**Sg**	**11 13 47.8**	**+0.2**
YUK				A		A	11 13 53.0	
	300nm,0.2s							
YUK				A		A	11 13 53.0	
	340nm,0.2s							
GRPR	**Tuman**	**1.72**	**262**	*eP*		**Pg**	**11 13 27.6**	**0.0**
GRPR				AMB		AMB	11 13 30.0	
	100nm,0.2s							
GRPR				*eS*		**Sg**	**11 13 50.9**	**+1.0**
GRPR				A		A	11 13 54.0	
	180nm,0.2s							
GRPR				A		A	11 13 54.0	
	250nm,0.2s							
NEM2	**Nemuro 2**	**1.94**	**244**	P		**Pg**	**11 13 30.6**	**-1.3**
NEM2				*eS*		**Sb**	**11 13 54.8**	**+0.4**
GLVR	**Golovnino**	**1.96**	**256**	*eP*		**Pg**	**11 13 31.0**	**-1.1**
GLVR				AMB		AMB	11 13 33.0	
	50nm,0.3s							
GLVR				*eS*		**Sg**	**11 13 57.0**	**-0.4**
GLVR				A		A	11 14 00.0	
	440nm,0.3s							
GLVR				A		A	11 14 00.0	
	250nm,0.3s							
JRA	**Rausu**	**2.19**	**263**	P		**Pg**	**11 13 35.2**	**-1.4**
JRA				*eS*		**Sg**	**11 14 03.3**	**-1.7**
JNSB	**Nemuroshibetsu**	**2.31**	**259**	P		**Pb**	**11 13 36.7**	**+0.4**
JKHN	**Kushirohamanak**	**2.45**	**243**	P		**Pb**	**11 13 38.0**	**-0.8**
JKHN				*eS*		**Sb**	**11 14 07.6**	**-1.4**
JNK	**Nakash**	**2.56**	**256**	P		**Pb**	**11 13 40.1**	**-0.4**
JNK				*eS*		**Sb**	**11 14 10.7**	**-1.3**
JAK	**Akkeshi**	**2.79**	**244**	P		**Pb**	**11 13 42.7**	**-1.9**
JAK				*eS*		**Sb**	**11 14 15.4**	**-3.4**
JAR	**Ashorobuto**	**3.30**	**255**	P		**Pb**	**11 13 51.1**	**-2.1**
JAR				*eS*		**Sb**	**11 14 31.0**	**-2.5**
JCH	**Churui**	**3.84**	**246**	P		**Pb**	**11 13 57.7**	**-4.7**
JCH				*eS*		**Sn**	**11 14 42.2**	**+3.3**
JNBK	**Urakawa-nobuka**	**4.40**	**245**	P		Pn	11 14 05.4	+4.0
JKB	**Kayabe**	**5.71**	**248**	P		Pn	11 14 23.8	+4.4
JKB				*eS*		**Sn**	**11 15 27.5**	**+2.5**
JOT	**Ohata**	**5.95**	**244**	P		**Pn**	**11 14 26.3**	**+3.6**
JANG	**Nango**	**6.25**	**234**	*eS*		**Sn**	**11 15 36.9**	**-1.4**

*IDC **22** 11:18:02.5±0.9, 35°.28N×140°.49E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.4/71, mbtmp3.5/7, ML3.1/2, MS2.5/1, Ms1 2.5/1, ms1mx2.4/38, Error ellipse: s-maj=27.9km s-min=20.0km az=88.0*
*JMA **22** 11:18:06.1±0.1, 35°.37N×140°.51E, h26km±2km, M3.4 Broadband fault plane solution: P waves. NP1: ϕs=276.00000°, δ32.00000°, λ125.00000°. NP2: ϕs=57.00000°, δ64.00000°, λ71.00000°. Principal axes: T Plg65.0000°, Azm293.0000°; N Plg17.0000°, Azm65.0000°; P Plg17.0000°, Azm161.0000°; Principal axes: T Plg65.0000°, Azm293.0000°; N Plg17.0000°, Azm65.0000°; P Plg17.0000°, Azm161.0000°;*
JMA Felt I J1.
ISC 22 11:18:06.2±0.9, 35°.35N±0°.03×140°.52E±0°.05, h27km±6km, n26, σ0§91/29, mb3.6/6, 3C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KTR	**Katsuura**	**0.26**	**219**	⇑P		**Pb**	**11 18 12.5**	**-0.3**
KTR				*eS*		**Sb**	**11 18 17.0**	**-0.4**
JCN	**Nagara**	**0.27**	**285**	⇓P		**Pb**	**11 18 13.1**	**+0.2**
JCN				*eS*		**Sb**	**11 18 18.6**	**+1.1**
JSMT	**Sammumatsuo**	**0.30**	**349**	⇓P		**Pb**	**11 18 13.2**	**-0.2**
JSMT				S		**Sb**	**11 18 19.1**	**+0.8**
JKUC	**kamogawauchiur**	**0.32**	**234**	⇑P		**Pb**	**11 18 13.3**	**-0.4**
JKUC				S		**Sb**	**11 18 18.9**	**+0.1**
BSO4	**Boso 4**	**0.39**	**202**	P		**Pb**	**11 18 15.2**	**+0.6**
BSO4				X			11 18 23.6	
CHOJ	**Chosi**	**0.45**	**38**	⇓P		**Pb**	**11 18 15.3**	**-0.4**
CHOJ				S		**Sb**	**11 18 21.8**	**-0.4**
BSO3	**Boso 3**	**0.55**	**180**	⇓P		**Pb**	**11 18 17.5**	**+0.4**
BSO1	**Boso 1**	**0.79**	**151**	⇓P		**Pn**	**11 18 20.3**	**-0.8**
BSO1				X			11 18 32.3	
JYT	**Yasato**	**0.91**	**344**	⇓P		**Pn**	**11 18 21.9**	**-1.4**
JYT				S		**Sb**	**11 18 34.0**	**-1.2**
JIM2	**Oshima 3**	**1.09**	**235**	P		**Pn**	**11 18 24.2**	**-1.5**
JIM2				*eS*		**Sn**	**11 18 37.7**	**-2.2**
JOD2	**Odawara 2**	**1.17**	**266**	⇑P		**Pn**	**11 18 26.2**	**-0.6**
JOD2				S		**Sn**	**11 18 40.7**	**-1.2**
MJAR	**Matsushiro Arr**	**2.22**	**303**	Pn		**Pn**	**11 18 41.4**	**+0.1**
	1.2nm,0.3s,baz=142,slow=14,SNR=25							
MJAR				LR		LR	11 19 37.3	
	comp=Z,110nm,20.6s,baz=100,slow=43							
MAT	**Matsushiro**	**2.22**	**303**	P		**Pn**	**11 18 42.1**	**+0.9**
MAT				S		**Sn**	**11 19 08.1**	**+0.3**
ASAJ	**Asahikawa**	**8.90**	**10**	Pn		**Pn**	**11 20 12.2**	**-0.8**
	0.5nm,0.3s,baz=219,slow=14,SNR=3.2							
H11N2	**WAKE ISLAND Hy**	**27.98**	**117**	T		T	11 52 56.6	
	baz=309,slow=75,SNR=31							
H11N1	**WAKE ISLAND Hy**	**27.98**	**117**	T		T	11 53 01.5	
	baz=309,slow=75,SNR=18							
H11N3	**WAKE ISLAND Hy**	**27.99**	**117**	T		T	11 53 02.2	
	baz=309,slow=75,SNR=23							
H11S1	**WAKE ISLAND Hy**	**28.62**	**119**	T		T	11 53 55.2	
	baz=312,slow=75,SNR=84							
H11S3	**WAKE ISLAND Hy**	**28.62**	**119**	T		T	11 53 56.5	
	baz=312,slow=75,SNR=66							
H11S2	**WAKE ISLAND Hy**	**28.63**	**119**	T		T	11 53 57.7	
	baz=312,slow=75,SNR=46							
ZALV	**Zalesovo Beam**	**42.53**	**314**	P		**P**	**11 25 59.4**	**+0.3**
	0.5nm,0.3s,baz=77,slow=6.5,SNR=5.9							
MKAR	**Makanchi Array**	**44.42**	**303**	P		**P**	**11 26 14.6**	**+0.1**
	0.3nm,0.5s,baz=84,slow=9.5,SNR=5.8							
ILAR	**Eielson Array**	**51.30**	**32**	P		**P**	**11 27 08.9**	**+1.4**
	0.4nm,0.8s,baz=266,slow=6.9,SNR=4.0							
WRA	**Warramunga Arr**	**55.30**	**187**	P		**P**	**11 27 36.8**	**-0.6**
	1.2nm,0.7s,baz=0.5,slow=7.5,SNR=7.0							
ASAR	**Alice Springs**	**59.03**	**187**	P		**P**	**11 28 03.9**	**+0.2**
	0.4nm,0.4s,baz=18,slow=11,SNR=7.3							
YKA	**Yellowknife Ar**	**65.63**	**30**	P		**P**	**11 28 48.4**	**+0.9**
	0.2nm,0.7s,baz=298,slow=6.9,SNR=2.5							

*SOME **22** 11:49:14.2, 43°.73N×69°.63E*
NNC 22 11:49:16.7±1.4, 43°.61N×69°.68E, h0km, mb3.5, mpv2.9, 1C, Error ellipse: s-maj=7.3km s-min=5.0km az=111.0, Suspected Mining explosion., Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KK31	**Karatay Array**	**0.79**	**129**	⇑P		Pg	11 49 31.8	0.0
	0.2nm,0.2s,baz=318,slow=16,SNR=40							
KK31				S		Sg	11 49 43.2	+1.1
	104nm,1.1s,baz=308,slow=28,SNR=117							
BTLS	**Baital**	**3.45**	**64**	Pg		Pg	11 50 21.6	-1.1
	3.5nm,0.5s							
BTLS				Lg		Lg	11 51 10.7	
	5.0nm,0.6s							
AAK	**Ala-Archa**	**3.66**	**104**	Pg		Pb	11 50 23.0	+0.7
	2.0nm,0.7s							
AAK				Lg		Lg	11 51 12.6	
	3.3nm,0.5s							
KRBS	**Karabastau**	**4.35**	**87**	Pg		Pb	11 50 35.6	+1.5
	1.6nm,0.8s							
KRBS				Pg		Pg	11 50 35.7	-4.4
	1.6nm,0.7s							
KRBS				Lg		Lg	11 51 33.4	
	1.3nm,0.6s							
KST	**Kastek**	**4.62**	**95**	Pg		Pb	11 50 41.5	+2.8
	2.4nm,0.5s							
KST				Pg		Pb	11 50 41.5	+2.8
	2.1nm,0.4s							
KST				Lg		Lg	11 51 42.9	
	4.0nm,0.7s							
KUU	**Kurty**	**4.83**	**84**	Pg		Pb	11 50 44.4	+2.2
	1.8nm,0.6s							
KUU				Lg		Lg	11 51 49.3	
	5.4nm,0.8s							
KTBS	**Karatobe**	**5.08**	**86**	Pg		Pb	11 50 48.5	+2.0
	1.1nm,0.5s							
KTBS				Lg		Lg	11 51 56.5	
	6.1nm,0.8s							
KTBS				Lg		Lg	11 51 56.5	
	6.1nm,0.8s							
IZV	**Izvestkoviy**	**5.09**	**94**	Pg		Pg	11 50 51.7	-2.6
	1.3nm,0.5s							
IZV				Lg		Lg	11 52 00.1	
	6.0nm,0.6s							

*VIE **22** 11:58:44.1±0.5, 50°.51N×14°.19E, h0km, mb2.0/2, ml2.6/3, Error ellipse: s-maj=4.8km s-min=2.8km az=170.0 53 km NNW of Praha Suspected Mining induced.*
*BGR **22** 11:58:44.4±0.6, 50°.58N×14°.13E, h0km, ML2.3/8, Error ellipse: s-maj=4.4km s-min=3.3km az=80.0, Mining explosion.*
ISC 22 11:58:44.6±0.8, 50°.58N±0°.04×14°.03E±0°.03, h0km, n17, σ0§71/28, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
BRG	**Berggiesshubel**	**0.30**	**349**	*ePg*		**Pg**	**11 58 50.7**	**+0.4**
BRG				*eSg*		**Sg**	**11 58 54.4**	**+0.3**
TANN	**Tannenbergstha**	**1.01**	**261**	*ePg*		**Pb**	**11 59 04.7**	**-0.4**
TANN				*eSg*		**Sb**	**11 59 18.9**	**-0.1**
MODW	**Modelwitz**	**1.05**	**291**	*ePg*		**Pb**	**11 59 05.4**	**-0.3**
MODW				*eSg*		**Sb**	**11 59 19.9**	**-0.2**
NKC	**Novy Kostel**	**1.07**	**252**	*ePg*		**Pb**	**11 59 06.2**	**+0.2**
NKC				*eSg*		**Sb**	**11 59 20.7**	**+0.1**
GUNZ	**Gunzen**	**1.11**	**259**	*ePg*		**Pb**	**11 59 06.5**	**-0.1**
GUNZ				*eSg*		**Sb**	**11 59 21.3**	**-0.3**
PLN	**Plauen**	**1.20**	**266**	*ePg*		**Pb**	**11 59 08.3**	**+0.1**
PLN				*eSg*		**Sn**	**11 59 25.1**	**-0.5**
KSP	**Ksiaz**	**1.46**	**79**	*ePg*		**Pg**	**11 59 12.0**	**-0.3**
KSP				*eSg*		**Sg**	**11 59 31.4**	**-0.1**
MOX	**Moxa**	**1.54**	**273**	*ePg*		**Pg**	**11 59 14.0**	**0.0**
MOX				*eSg*		**Sb**	**11 59 34.5**	**+0.5**
GEC2	**GERESS Array S**	**1.75**	**187**	*ePg*		**Pb**	**11 59 17.7**	**0.0**
GEC2				*eSg*		**Sn**	**11 59 39.7**	**+0.3**
VRAC	**Vranov**	**2.09**	**127**	*ePN*		Pn	11 59 14.4	-6.5
VRAC				*eSG*		**Sb**	**11 59 49.2**	**-0.7**
MORC	**Moravsky Berou**	**2.40**	**108**	*eSG*		**Pn**	**11 59 25.6**	**+0.5**
MORC	**Moravsky Berou**	**2.40**	**108**	*eSG*		**Sb**	**11 59 58.3**	**-0.5**
CONA	**Conrad Observa**	**2.92**	**155**	Pg		**Pb**	**11 59 37.4**	**-0.1**
	1.6nm,0.4s							
CONA				Sg		**Sg**	**12 00 16.1**	**-2.1**
	19nm,0.7s							
MODS	**Modra-Piesok**	**3.06**	**135**	*ePG*		**Pg**	**11 59 44.5**	**+1.3**
MODS				*eSG*		**Sg**	**12 00 23.7**	**+0.8**
ZST	**Bratislava**	**3.12**	**139**	*eSG*		**Sg**	**12 00 24.6**	**-0.2**
ARSA	**Arzberg**	**3.48**	**163**	Sg		**Sg**	**12 00 36.8**	**+0.6**
	10.0nm,0.5s							
VYHS	**Vyhne**	**3.76**	**122**	*ePN*		Pn	11 59 36.8	-7.1
VYHS				*eSG*		**Sg**	**12 00 43.6**	**-1.9**

*TEH **22** 12:12:46.9, 28°.29N×51°.58E, h16km, ML2.9*
*OMAN **22** 12:12:53.1±0.9, 28°.01N×51°.69E, h25km, ml3.3/5, Error ellipse: s-maj=25.4km s-min=13.2km az=76.0*
ISC 22 12:12:49.0±1.8, 28°.25N±0°.07×51°.6E±0°.2, h16km, n10, σ1§27/15, Southern Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
IKAZ	**Kazeroun**	**1.53**	**7**	*ePg*		**Pb**	**12 13 16.7**	**-0.6**
IKAZ				*e*			12 13 23.9	
IKAZ				*eSg*		**Sg**	**12 13 38.5**	**-0.1**
KLNJ	**Kolanjah**	**2.75**	**359**	*ePn*		**Pn**	**12 13 33.3**	**+0.5**
IMEH	**Mehriz**	**4.06**	**39**	*ePn*		**Pn**	**12 13 52.5**	**+1.7**
BANOM	**Banah**	**4.77**	**118**	P		**Pn**	**12 14 00.2**	**-0.1**
	SNR=9.2							
BANOM				S		**Sn**	**12 14 54.0**	**-1.3**
ASUD	**Al Ashush, Dub**	**4.91**	**137**	P		**Pn**	**12 14 04.3**	**+2.1**
	SNR=5.1							
ASUD				S		**Sn**	**12 14 58.8**	**+0.2**
MDH	**Madha**	**5.11**	**124**	P		**Pn**	**12 14 05.5**	**+0.5**
MDH				S		**Sn**	**12 15 02.2**	**-1.4**
HATD	**Hatta, Dubai**	**5.28**	**129**	P		Pn	12 14 10.6	+3.2
HATD				S		**Sn**	**12 15 07.8**	**-0.2**
ASHO	**Ashiyiah**	**5.33**	**131**	P		**Pn**	**12 14 09.9**	**+1.9**
ASHO				S		**Sn**	**12 15 07.6**	**-1.5**
MHTO	**MHTO**	**9.25**	**140**	P		**Pn**	**12 15 02.7**	**+0.9**
	SNR=6.4							
DMTO	**DMTO**	**10.92**	**163**	P		**Pn**	**12 15 24.0**	**-0.7**
	SNR=9.1							

*ISK **22** 12:21:59.9, 39°.92N×41°.86E, h17km, ML2.3/7*
*DDA **22** 12:22:01.5, 39°.94N×41°.85E, h16km±1km, ML2.6*
ISC 22 12:22:01.2±0.9, 39°.93N±0°.02×41°.90E±0°.03, h12km±6km, n20, σ1§16/35, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KOPR	**Koprukoy-ERZUR**	**0.07**	**334**	PG		**Pg**	**12 22 03.5**	**-0.4**
HOMI	**Horasan**	**0.12**	**4**	*iP*		**Pg**	**12 22 04.3**	**-0.3**
HOMI				IAML			12 22 07.0	
	comp=N,3μm,0.5s							
HOMI				*i* S		**Sg**	**12 22 07.8**	**+0.9**
HOMI				IAML			12 22 10.0	
	comp=E,5μm,0.3s							
EATA	**Eleskirt**	**0.46**	**98**	*i* P		**Pb**	**12 22 11.6**	**+0.1**
EATA				*i* S		**Sb**	**12 22 19.4**	**+1.0**
SENK	**Senkaya-Erzuru**	**0.72**	**29**	PG		**Pg**	**12 22 14.7**	**-0.6**
SENK				SG		**Sb**	**12 22 25.7**	**-0.2**
ECAT	**Cat-ERZURUM**	**0.78**	**246**	*i* P		**Pg**	**12 22 16.0**	**-0.3**
ECAT				*i* S		**Sb**	**12 22 27.7**	**+0.3**
VRTB	**Varto-Mus**	**0.84**	**204**	PG		**Pg**	**12 22 16.3**	**-1.1**
VRTB

SONM	**Songino Array**	**90.39**	**323**	P		**P**	**12 43 37.3**	**-0.2**
	0.4nm,0.7s,baz=137,slow=4.7,SNR=4.4							
ARCES	**ARCESS Array B**	**128.38**	**345**	PKP		**PKPdf**	**12 49 40.7**	**-1.3**
	3.0nm,0.9s,baz=59,slow=2.4,SNR=5.0							
MORC	**Moravsky Berou**	**145.32**	**329**	*e*PKP		**PKPbc**	**12 50 13.4**	**-0.2**
OSTC	**Ostas**	**145.40**	**331**	*e*PKP		**PKPbc**	**12 50 13.6**	**-0.3**
CHVC	**Chvalec**	**145.45**	**331**	*e*PKP		**PKPbc**	**12 50 13.9**	**-0.1**
KRLC	**Kraliky**	**145.48**	**330**	*e*PKP		**PKPdf**	**12 50 14.0**	**-0.1**
DPC	**Dobruska-Polom**	**145.50**	**330**	*e*PKP		**PKPdf**	**12 50 14.1**	**0.0**
UPC	**Upice**	**145.53**	**331**	*e*PKP		**PKPbc**	**12 50 14.4**	**+0.2**
JAVC	**Velka Javorina**	**145.87**	**327**	*e*PKP		**PKPab**	**12 50 16.3**	**+0.4**
VRAC	**Vranov**	**146.09**	**329**	*e*PKP		**PKPbc**	**12 50 16.0**	**0.0**
KRUC	**Moravsky**	**146.36**	**329**	*e*PKP		**PKPdf**	**12 50 15.0**	**-0.5**
MODS	**Modra-Piesok**	**146.38**	**327**	*e*Pn		**PKPdf**	**12 50 15.7**	**+0.1**
MODS	**Modra-Piesok**	**146.38**	**327**	*e*PG		**PKPdf**	**12 50 15.7**	**+0.1**
EKA	**Eskdalemuir Ar**	**146.75**	**353**	PKPbc		**PKPdf**	**12 50 15.9**	**-0.1**
	1.1nm,0.5s,baz=358,slow=3.0,SNR=3.5							
KHC	**Kasperske Hory**	**147.62**	**331**	*e*PKP		**PKPbc**	**12 50 20.6**	**+0.2**
GERES	**GERESS Array B**	**147.77**	**331**	PKPbc		**PKPdf**	**12 50 19.5**	**+1.5**
	0.6nm,0.6s,baz=49,slow=4.1,SNR=6.4							

TEH ***22*** *12:32:28.6,34.37N×45.57E,h13km, ML2.9*
ISN ***22*** *12:32:28.5±0.6,34.40N×45.50E,h16km±4km, ML2.7*
ISC 22 12:32:29.5±1.0**,34.39N**±0.04×**45.56E**±0.04**, h18km, n10, σ0.98/15, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDHR	**Dehrash**	**0.75**	**66**	*e*Pg		**Pb**	**12 32 43.2**	**-1.0**
IDHR				*e*Sg		**Sg**	**12 32 54.3**	**-0.1**
IDHR				*e*			12 32 55.7	
IGHG	**Ghaleghazi**	**0.84**	**94**	*e*Pg		**Pb**	**12 32 44.7**	**-1.0**
IGHG				*e*			12 32 45.5	
IVIS	**Veis**	**1.08**	**82**	*e*Pg		**Pb**	**12 32 48.8**	**-0.9**
IVIS				*e*			12 32 51.8	
KCHF	**Cheshme Sefid,**	**1.23**	**95**	*e*Pg		**Pb**	**12 32 51.9**	**-0.5**
KCHF				*e*			12 32 53.9	
IBDR	**Badra**	**1.31**	**166**	*e*Pg		**Pb**	**12 32 53.0**	**-0.7**
IBDR				AML		AML	12 32 54.1	
	comp=Z,251nm,0.4s							
IBDR				*e*Sg		**Sg**	**12 33 11.0**	**-1.1**
IKRK	**Kirkuk**	**1.42**	**316**	*e*Pn		**Pb**	**12 32 55.0**	**-0.5**
IKRK				AML		AML	12 32 58.3	
	comp=Z,52nm,0.4s							
IKRK				*e*Sn		**Sg**	**12 33 15.0**	**-0.4**
BHD	**Baghdad**	**1.48**	**222**	*e*Pn		**Pb**	**12 32 56.0**	**-0.6**
BHD				*e*Sn		**Sg**	**12 33 16.0**	**-1.5**
IKOM	**Komasi**	**1.63**	**97**	*e*Pg		**Pb**	**12 32 59.0**	**-0.2**
IKOM				*e*			12 33 00.6	
MSL	**Mosul**	**2.83**	**316**	AML		AML	12 33 13.3	
MSL				*e*Sn		**Sn**	**12 33 48.0**	**+0.5**
NSR	**Nassriya**	**3.41**	**172**	*e*Pn		**Pn**	**12 33 23.0**	**+1.2**
NSR				AML		AML	12 33 26.3	
	comp=Z,129nm,0.3s							
NSR				*e*Sn		**Sn**	**12 34 03.0**	**+1.3**

GEN ***22*** *12:48:28.3,44.84N×9.80E,h23km±5km, Ml2.1*
ROM ***22*** *12:48:28.1±0.1,44.805N±0.009×9.80E±0.02,h30km±1km, ML2.3/1, Error ellipse: s-maj=1.0km s-min=1.0km az=117.0*
LDG ***22*** *12:48:28.1±0.1,44.82N×9.84E,h25km, Ml2.4/7, Error ellipse: s-maj=2.3km s-min=1.9km az=73.0*
STR ***22*** *12:48:30.4±1.2,45.7N×1.0E±.,h0km, MLv2.2/5*
ISC 22 12:48:28.2±0.9**,44.81N**±0.02×**9.77E**±0.03**, h32km**±7km**, n33, σ1.45/51, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BOB	**Bobbio (Coli)**	**0.23**	**258**	P		**Pb**	**12 48 34.7**	**-0.4**
BOB				S		**Sb**	**12 48 40.3**	**+0.5**
GRAM	**Graiana**	**0.39**	**146**	P		**Pb**	**12 48 36.0**	**-1.1**
GRAM				S		**Sb**	**12 48 42.9**	**-0.3**
GRAM				AML		AML		
	comp=N,571μm,0.3s							
GRAM				AML		AML		
	comp=E,972μm,0.2s							
GRAM	**Graiana**	**0.39**	**146**	P		**Pb**	**12 48 36.0**	**-1.1**
GRAM				S		**Sb**	**12 48 42.3**	**-0.9**
GORR	**Gorreto**	**0.40**	**239**	P		**Pb**	**12 48 37.1**	**-0.1**
GORR				S		**Sb**	**12 48 44.4**	**+1.1**
GORR	**Gorreto**	**0.40**	**239**	P		**Pb**	**12 48 37.0**	**-0.2**
GORR				S		**Sb**	**12 48 43.8**	**+0.5**
MSSA	**Maissana**	**0.53**	**200**	P		**Pb**	**12 48 38.9**	**-0.4**
MSSA				S		**Sb**	**12 48 47.2**	**+0.4**
MSSA				AML		AML		
	comp=E,162μm,1.6s							
MSSA				AML		AML		
	comp=N,156μm,1.6s							
ERBM	**Eremo**	**0.61**	**130**	P		**Pb**	**12 48 40.3**	**-0.2**
ERBM				AML		AML		
	comp=E,103μm,1.6s							
ERBM				AML		AML		
	comp=N,122μm,1.6s							
EQUI	**Equi**	**0.70**	**157**	P		**Pb**	**12 48 41.5**	**-0.6**
EQUI				S		**Sn**	**12 48 52.8**	**+1.0**
EQUI	**Equi**	**0.70**	**157**	P		**Pb**	**12 48 41.4**	**-0.7**
EQUI				S		**Sn**	**12 48 52.7**	**+1.0**
SARO	**Sassorosso**	**0.78**	**144**	P		**Pb**	**12 48 42.8**	**-0.5**
VLC	**Villacollemand**	**0.79**	**146**	P		**Pb**	**12 48 43.1**	**-0.5**
MERA	**Merate**	**0.89**	**344**	P		**Pn**	**12 48 46.4**	**+1.8**
MDI	**Monti di Nese**	**0.96**	**358**	P		**Pb**	**12 48 46.3**	**-0.2**
MDI				S		**Sn**	**12 49 00.2**	**+1.9**
MDI				AML		AML		
	comp=N,252μm,0.4s							
MDI				AML		AML		
	comp=E,246μm,0.2s							
VOBA	**Vobarno**	**0.98**	**32**	AML		AML		
	comp=E,354μm,0.5s							
VOBA				AML		AML		
	comp=N,356μm,0.2s							
MAGA	**Magasa**	**1.14**	**32**	P		**Pn**	**12 48 48.4**	**+0.3**
MAGA				S		**Sb**	**12 49 04.4**	**+0.4**
MAGA				AML		AML		
	comp=N,290μm,0.4s							
MAGA				AML		AML		
	comp=E,329μm,0.4s							
MTCR	**Monte La Croce**	**1.18**	**131**	P		**Pb**	**12 48 50.2**	**0.0**
MUGIO	**Muggio**	**1.22**	**336**	P		**Pb**	**12 48 50.6**	**-0.2**
ROVR	**Rover Verones**	**1.24**	**47**	P		**Pn**	**12 48 49.7**	**+0.2**
ROVR				S		**Sn**	**12 49 05.3**	**0.0**
ROVR				AML		AML		
	comp=N,100μm,0.3s							
ROVR				AML		AML		
	comp=E,45μm,0.4s							
MABI	**Malga Bissina**	**1.35**	**23**	P		**Pn**	**12 48 51.6**	**+0.6**
MABI				AML		AML		
	comp=E,80μm,0.4s							
MABI				AML		AML		
	comp=N,54μm,0.4s							
SAOF	**Saorge**	**1.79**	**243**	P		**Pn**	**12 48 59.3**	**+2.4**
SAOF				S		**Sb**	**12 49 22.9**	**+0.5**
TURF	**col de Turini**	**1.90**	**245**	P		**Pb**	**12 49 01.4**	**-0.9**
TURF				S		**Sb**	**12 49 25.6**	**0.0**
SBF	**Sospel**	**1.92**	**241**	*e*P		**Pn**	**12 49 00.7**	**+1.9**
SBF				*e*Sn		**Sn**	**12 49 20.5**	**-1.4**
	comp=N,10.0nm,0.3s							
MBDF	**Montbardon**	**2.13**	**269**	*e*P		**Pn**	**12 49 04.1**	**+2.3**
MBDF				*e*Sn		**Sn**	**12 49 25.7**	**-1.6**
	comp=N,2.0nm,0.3s							
CALF	**Calern**	**2.30**	**244**	P		**Pn**	**12 49 05.4**	**+1.4**
CALF				S		**Sb**	**12 49 36.4**	**-0.8**
PGF	**Pioggiola**	**2.33**	**194**	*e*Pn		**Pn**	**12 49 03.3**	**-1.2**
PGF	**Pioggiola**	**2.33**	**194**	*e*P		**Pn**	**12 49 06.0**	**+1.5**
PGF				*e*Sn		**Sn**	**12 49 29.8**	**-2.3**
	comp=N,1.4nm,0.2s							
PGF	**Pioggiola**	**2.33**	**194**	S		**Sn**	**12 49 33.3**	**+1.2**
SMPL	**Sampolo**	**2.74**	**187**	P		**Pn**	**12 49 11.4**	**+1.4**
LMR	**La Mourre**	**2.77**	**239**	*e*Sn		**Sn**	**12 49 40.9**	**-1.9**
	comp=N,1.2nm,0.2s							
HINF	**Hinteralfeld**	**3.62**	**327**	*e*Sn		**Sn**	**12 50 00.8**	**-2.9**
	comp=N,1.8nm,0.2s							
VIVF	**Saint-Julien-l**	**3.62**	**272**	*e*Pn		**Pn**	**12 49 21.6**	**-0.5**
HAU	**Haudompre**	**3.97**	**325**	*e*P		**Pn**	**12 49 29.4**	**+2.5**
HAU				*e*Sn		**Sn**	**12 50 09.2**	**-3.2**
	comp=N,7.0nm,0.3s							
CDF	**Champ du Feu**	**3.99**	**335**	*e*P		**Pn**	**12 49 29.7**	**+2.5**
CDF				*e*Sn		**Sn**	**12 50 09.3**	**-3.6**
	comp=N,3.1nm,0.4s							

BUD 22 12:49:48.5,48.07N×19.46E, h10km±2km, ML1.6/1,2C, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSZ	**Piszkesteto**	**0.33**	**118**	*e*Pg		Pg	12 49 55.3	+0.2
PSZ				*e*Sg		Sg	12 50 00.2	+0.7
VYHS	**Vyhne**	**0.59**	**315**	*e*Pg		Pb	12 50 00.6	-0.4
VYHS				*e*Sg		Sg	12 50 08.6	+0.8
VYHS	**Vyhne**	**0.59**	**315**	*e*PG		Pb	12 50 00.6	-0.4
VYHS				*e*SG		Sg	12 50 08.6	+0.8
KECS	**Kecovo**	**0.80**	**59**	*e*Pg		Pb	12 50 04.7	+0.2
KECS				*e*Sg		Sn	12 50 16.9	-0.9
KECS	**Kecovo**	**0.80**	**59**	*e*PG		Pb	12 50 04.7	+0.2
KECS				*e*SG		Sn	12 50 16.9	-0.9
KOLL	**Kolacno**	**0.87**	**306**	*e*PG		Pb	12 50 05.6	-0.1
KOLL				*e*SG		Sg	12 50 16.7	+0.2
BSZH	**Besenyszg**	**0.95**	**145**	*e*P*		Pg	12 49 59.2	-7.5
BSZH	**Besenyszg**	**0.95**	**145**	*e*Pg		Pn	12 50 11.0	+3.2
LANS	**Liptovska Anna**	**1.08**	**0**	*e*Sn		Sn	12 50 25.3	+0.6
LANS	**Liptovska Anna**	**1.08**	**0**	*e*SG		Sn	12 50 25.3	+0.6
LANS				*e*LG		Lg	12 50 27.5	

MAN 22 13:08:31.5,9.84N×123.94E, h11km, MS3.6, 4C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.47**	**3**	*e*P		Pg	13 08 41.1	+0.4
LLP				*i* S		Sb	13 08 48.7	-0.2
SNPH	**Sibulan**	**0.85**	**234**	*i*P		Pb	13 08 48.2	-0.1
SNPH				*i* S		Sn	13 09 02.2	+0.1
MSLP	**Maasin**	**0.95**	**72**	*e*P		Pg	13 08 49.1	-0.8
MSLP				*e*S		Sn	13 09 04.0	-0.4
OCLP	**Ormoc**	**1.37**	**29**	*e*P		Pn	13 08 56.5	-0.1
OCLP				*e*S		Sg	13 09 22.7	+7.0
DCPH	**Dipolog City**	**1.38**	**205**	*e*P		Pn	13 08 56.1	-0.6
GUIM	**Jordan**	**1.54**	**300**	*e*P		Pn	13 08 57.3	-1.6
GUIM				*e*S		Sg	13 09 20.5	-0.6
CGP	**Cagayan de Oro**	**1.57**	**152**	*e*P		Pn	13 08 57.9	-1.4
PAGZ	**Pagadian**	**2.06**	**196**	*e*P		Pn	13 09 05.1	-0.9
PAGZ				*e*S		Sn	13 09 31.8	+0.1
RCP	**Roxas**	**2.07**	**326**	*e*P		Pn	13 09 07.4	+1.2
RCP				*e*S		Sb	13 09 35.3	+0.5
BUKP	**Musuan**	**2.25**	**150**	*e*P		Pn	13 09 09.6	+0.9
BUKP				*e*S		Sb	13 09 39.9	-0.1
KCP	**Kidapawan**	**3.04**	**158**	*e*P		Pn	13 09 20.2	+0.5
KCP				*e*S		Sg	13 10 13.2	+4.0

MAN 22 13:15:03.0,9.73N×123.30E, h37km, mb3.7, ML2.5, MS1.9, Negros

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SNPH	**Sibulan**	**0.39**	**190**	*i* P		Pn	13 15 13.9	+1.9
SNPH				*i* S		Sn	13 15 21.4	+2.6
GUIM	**Jordan**	**1.13**	**322**	*e*P		Pn	13 15 22.6	+0.3
GUIM				*e*S		Sn	13 15 37.6	+1.0

IDC ***22*** *13:23:34.4±1.9,39.67N×141.72E, h141km±18km, mb3.1/3, mb1 3.1/6, mb1mx2.9/32, mbtmp3.4/6, Error ellipse: s-maj=33.6km s-min=15.5km az=98.0*
JMA ***22*** *13:23:34.1±0.1,39.51N×141.26E, h122km±1km, M3.1*
ISC 22 13:23:33.2±0.9**,39.52N**±0.04×**141.43E**±0.09**, h126km**±6km**, n25, σ0.82/29, mb3.6/4, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JOM	**Ohasama**	**0.12**	**248**	P		**Pn**	**13 23 50.7**	**+0.4**
JOM				S		**Sn**	**13 24 03.1**	**-0.1**
JSZI	**Iwateshizukuis**	**0.43**	**301**	P		**Pn**	**13 23 51.8**	**+0.4**
JSZI				*e*S		**Sn**	**13 24 05.3**	**+0.1**
JMK	**Ichinoseki**	**0.59**	**196**	P		**Pn**	**13 23 52.5**	**+0.2**
JMK				*e*S		**Sn**	**13 24 05.9**	**-0.8**
JRG	**Rokugo**	**0.63**	**259**	P		**Pn**	**13 23 52.6**	**0.0**
JRG				S		**Sn**	**13 24 06.5**	**-0.7**
JANG	**Nango**	**0.86**	**4**	P		**Pn**	**13 23 54.9**	**+0.5**
JANG				S		**Sn**	**13 24 10.2**	**-0.3**
JAH	**Hinai**	**0.91**	**318**	P		**Pn**	**13 23 54.9**	**+0.1**
JAH				S		**Sn**	**13 24 10.3**	**-1.0**
JYK	**Kaneyama**	**1.03**	**235**	P		**Pn**	**13 23 55.8**	**-0.2**
JYK				S		**Sn**	**13 24 12.1**	**-1.1**
JIO	**Ouri**	**1.06**	**184**	P		**Pn**	**13 23 56.7**	**+0.4**
JIO				S		**Sn**	**13 24 13.4**	**-0.4**
JOU	**Okura**	**1.30**	**208**	P		**Pn**	**13 23 59.1**	**+0.3**
JTM	**Tenmabayashi**	**1.30**	**348**	P		**Pn**	**13 23 59.0**	**+0.3**
JTM				S		**Sn**	**13 24 17.7**	**-0.5**
JOT	**Ohata**	**1.89**	**351**	P		**Pn**	**13 24 06.0**	**+0.5**
JOT				S		**Sn**	**13 24 30.4**	**+0.2**
JAW	**Awa shima**	**2.01**	**239**	P		**Pn**	**13 24 06.6**	**-0.4**
MJAR	**Matsushiro Arr**	**3.91**	**222**	P		Pn	13 24 37.4	+5.7
	0.1nm,0.3s,baz=28,slow=15,SNR=5.8							
ASAJ	**Asahikawa**	**4.68**	**10**	P		**Pn**	**13 24 41.6**	**-0.2**
	0.4nm,0.3s,baz=205,slow=14,SNR=9.5							
ASAJ				S		**Sn**	**13 25 32.4**	**-2.7**
	0.5nm,0.3s,baz=253,slow=19,SNR=4.2							
USRK	**Ussuriysk Ar.**	**8.46**	**307**	P		**Pn**	**13 25 34.5**	**+1.8**
	baz=118,slow=15,SNR=4.5							
H11N2	**WAKE ISLAND Hy**	**29.47**	**125**	T		T	14 00 22.6	
	baz=317,slow=75,SNR=23							
H11N1	**WAKE ISLAND Hy**	**29.48**	**125**	T		T	14 00 15.8	
	baz=317,slow=75,SNR=24							
H11N3	**WAKE ISLAND Hy**	**29.49**	**125**	T		T	14 00 19.0	
	baz=317,slow=75,SNR=21							
H11S1	**WAKE ISLAND Hy**	**30.26**	**127**	T		T	14 01 17.6	
	baz=318,slow=76,SNR=7.9							
H11S3	**WAKE ISLAND Hy**	**30.26**	**127**	T		T	14 01 20.1	
	baz=318,slow=76,SNR=8.8							
H11S2	**WAKE ISLAND Hy**	**30.27**	**127**	T		T	14 01 15.0	
	baz=318,slow=76,SNR=7.6							
MKAR	**Makanchi Array**	**42.85**	**300**	P		**P**	**13 31 18.6**	**-0.1**
	0.3nm,0.6s,baz=85,slow=9.3,SNR=5.7							
WRA	**Warramunga Arr**	**59.52**	**188**	P		**P**	**13 33 23.2**	**0.0**
	0.4nm,0.9s,baz=3.6,slow=7.0,SNR=4.2							
ASAR	**Alice Springs**	**63.25**	**189**	P		**P**	**13 33 49.1**	**+0.8**
	11nm,0.3s,baz=2.3,slow=7.4,SNR=4.9							
FINES	**FINESS Array B**	**66.63**	**332**	P		**P**	**13 34 09.8**	**+0.1**
	1.2nm,0.8s,baz=46,slow=12,SNR=2.5							

IDC 22 14:28:24.4±7.8,6.50S×147.55E, h98km±46km, mb3.9/2, mb1 3.6/4, mb1mx3.2/29, mbtmp3.8/4, MS3.5/2, Ms1 3.5/2, ms1mx2.6/33, Error ellipse: s-maj=75.2km s-min=57.4km az=69.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**2.91**	**188**	P		Pn	14 29 08.7	-0.3
	4.4nm,0.3s,baz=3.4,slow=11,SNR=24							
PMG				S		Sn	14 29 43.9	+0.7
	9.2nm,0.3s,baz=22,slow=18,SNR=10.0							
WRA	**Warramunga Arr**	**18.52**	**223**	P		P	14 32 32.7	-0.6
	0.1nm,0.3s,baz=49,slow=11,SNR=5.1							
ASAR	**Alice Springs**	**21.52**	**216**	P		P	14 33 06.0	+0.2
	0.6nm,0.4s,baz=51,slow=8.7,SNR=12							
STKA	**Stephens Creek**	**25.85**	**192**	P		P	14 33 47.0	+0.1
	0.5nm,0.4s,baz=8.6,slow=13,SNR=3.0							
AFI	**Afiamalu**	**40.65**	**104**	LR		LR	14 49 46.7	
	comp=Z,229nm,18.7s,baz=180,slow=32							
KSRS	**Korea Array**	**47.41**	**339**	LR		LR	14 55 46.8	
	comp=Z,12nm,19.4s,baz=110,slow=35							

IDC 22 14:34:04.7±9.3,12.01S×166.65E, h318km±104km, mb3.1/5, mb1 3.4/6, mb1mx3.1/36, mbtmp3.7/6, Error ellipse: s-maj=77.1km s-min=26.1km az=167.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.00**	**181**	P		Pn	14 36 23.5	+0.6
	0.5nm,0.3s,baz=61,slow=19,SNR=12							
DZM				S		S	14 38 15.7	-0.2
	0.1nm,0.3s,baz=94,slow=2.8,SNR=2.5							
WRA	**Warramunga Arr**	**32.00**	**252**	P		P	14 40 02.0	-0.4
	0.2nm,0.4s,baz=85,slow=9.2,SNR=6.4							
ASAR	**Alice Springs**	**33.17**	**245**	P		P	14 40 11.9	-0.6
	0.3nm,0.3s,baz=68,slow=10.0,SNR=5.7							
CMAR	**Chiang Mai Arr**	**73.31**	**294**	P		P	14 45 03.4	+0.9
	0.6nm,0.8s,baz=95,slow=4.9,SNR=3.2							
ILAR	**Eielson Array**	**84.15**	**18**	P		P	14 45 58.8	-1.4
	0.6nm,0.7s,baz=224,slow=5.5,SNR=6.3							
MKAR	**Makanchi Array**	**94.83**	**317**	P		P	14 46 50.8	0.0
	0.4nm,0.7s,baz=118,slow=5.5,SNR=3.9							
TXAR	**Lajitas Array**	**95.51**	**61**	P		P	14 46 55.3	+0.8
	0.1nm,0.6s,baz=262,slow=6.9,SNR=2.5							

NIED ***22*** *14:47:00,32.00N×138.30E, h380km, Mw4.4 Best double couple: M0 4.47000×10^15 NP1:φ203.00000°, δ88.00000°, λ94.00000°. NP2:φ316.00000°, δ5.00000°, λ23.00000°.*
JMA ***22*** *14:47:46.1±0.1,32.00N×138.32E, h380km, M4.2*
BJI ***22*** *14:47:46.2±0.0,32.00N×138.09E, h351km, mB4.5/36, mb4.5/50*
MOS ***22*** *14:47:47.3±0.8,31.97N×138.09E, h358km, mb4.5/40, Error ellipse: s-maj=7.9km s-min=4.4km az=112.1*
NEIC ***22*** *14:47:48.0±1.1,31.93N±0.07×138.10E±0.09, h351km±5km, mb4.5/112, Error ellipse: s-maj=11.4km s-min=9.8km az=76.0*
IDC ***22*** *14:47:48.2±1.0,31.95N×138.11E, h351km±9km, mb3.9/29, mb1 4.0/35, mb1mx4.0/46, mbtmp4.6/35, Error ellipse: s-maj=10.0km s-min=7.4km az=96.0*
ISC 22 14:47:48.0±0.5**,31.96N**±0.04×**138.22E**±0.04**, h354km**±4km**, n329, σ1.13/362, mb4.4/130, 24C-15D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.40**	**69**	P		**Pn**	**14 48 36.7**	**+0.6**
JHCJ	**Hachijojimakas**	**1.74**	**50**	P		**Pn**	**14 48 38.4**	**+0.5**
JHJ2	**Mitsune**	**1.77**	**49**	P		**Pn**	**14 48 38.4**	**+0.3**
JHJ2	**Mitsune**	**1.77**	**49**	Pn		**Pn**	**14 48 39.2**	**+1.0**
TK01	**Tokai 1**	**1.88**	**344**	P		**Pn**	**14 48 39.3**	**+0.9**
TK02	**Tokai 2**	**2.02**	**349**	P		**Pn**	**14 48 40.4**	**+0.9**
TTO3	**TONANKAI O.B.S**	**2.02**	**340**	P		**Pn**	**14 48 40.7**	**+1.1**
TTO1	**TONANKAI O.B.S**	**2.05**	**324**	P		**Pn**	**14 48 40.6**	**+1.0**
TTO4	**TONANKAI O.B.S**	**2.12**	**345**	P		**Pn**	**14 48 41.0**	**+0.8**
TK03	**Tokai 3**	**2.21**	**355**	P		**Pn**	**14 48 42.4**	**+1.4**
JMKN	**Mikurajimanish**	**2.25**	**31**	P		**Pn**	**14 48 41.8**	**+0.4**
TTO5	**TONANKAI O.B.S**	**2.33**	**350**	P		**Pn**	**14 48 42.6**	**+0.8**
JIE	**Ise**	**2.74**	**333**	P		**Pn**	**14 48 46.0**	**+0.7**
JIE				*e*S		**S**	**14 49 31.4**	**-0.1**
JTNC	**Tanabenakahech**	**2.87**	**311**	P		**Pn**	**14 48 46.6**	**+0.1**
JWY	**Kouya**	**3.15**	**316**	P		**Pn**	**14 48 49.8**	**+0.7**
JFNN	**Fujinakano**	**3.25**	**7**	P		**Pn**	**14 48 50.6**	**+0.7**
JOD2	**Odawara 2**	**3.38**	**12**	P		**Pn**	**14 48 50.7**	**-0.4**
JOD2				S		**S**	**14 49 41.6**	**-0.3**
INU	**Inuyama**	**3.53**	**344**			**Pn**	**14 48 53.0**	**+0.6**
JYN	**Shimob**	**3.54**	**4**	P		**Pn**	**14 48 53.2**	**+0.5**
BSO1	**Boso 1**	**3.55**	**40**	P		**Pn**	**14 48 50.2**	**-1.5**
BSO1				*e*S		**S**	**14 49 39.9**	**-3.9**
JAI	**Aioi**	**3.66**	**301**	P		**Pn**	**14 48 54.1**	**+0.3**
JRY	**Ryogami san**	**4.09**	**8**	P		**Pn**	**14 48 58.0**	**-0.1**
JRY				*e*S		**S**	**14 49 54.1**	**-0.6**
MJAR	**Matsushiro Arr**	**4.57**	**360**	P		**Pn**	**14 49 02.9**	**-0.3**
	4.0nm,0.3s,baz=169,slow=12,SNR=273							
MJAR				S		**S**	**14 50 02.5**	**-1.4**
	baz=175,slow=18,SNR=6.9							
MAJO	**Matsushiro**	**4.57**	**360**	*c i*P		**Pn**	**14 49 02.7**	**-0.5**
MAJO	**Matsushiro**	**4.57**	**360**			**Pn**	**14 49 02.7**	**-0.5**
MAT	**Matsushiro**	**4.57**	**360**	P		**Pn**	**14 49 02.9**	**-0.3**
MAT				S		**S**	**14 50 03.0**	**-0.9**
MJB9	**Matsu-Tunnel**	**4.58**	**360**			**Pn**	**14 49 02.6**	**-0.6**
JTO	**Tosashimizu**	**4.67**	**283**	P		**Pn**	**14 49 04.5**	**-1.3**
JHS	**Saijyo**	**5.23**	**307**	P		**Pn**	**14 49 10.7**	**+0.4**
JHS				S		**S**	**14 50 17.4**	**+0.4**
JCJ	**Chichijima**	**5.95**	**143**	P		**Pn**	**14 49 16.2**	**-2.3**
	92nm,0.3s,baz=283,slow=21,SNR=24							
JCJ				S		**S**	**14 50 24.7**	**-7.2**
	411nm,0.3s,baz=256,slow=21,SNR=28							
JOI	**OKI**	**5.97**	**318**	P		**Pn**	**14 49 18.9**	**+0.3**
JNU	**Nakatsue**	**6.31**	**283**			**Pn**	**14 49 22.9**	**+0.5**
TJN	**Taejon**	**10.01**	**299**	*ce*P		**Pn**	**14 50 06.0**	**0.0**
JOW	**Kunigami**	**10.06**	**242**	P		**Pn**	**14 50 06.9**	**+0.1**
	0.7nm,0.3s,baz=111,slow=15,SNR=6.3							
JOW	**Kunigami**	**10.06**	**242**	P		**P**	**14 50 08.5**	**+0.4**
KSRS	**Korea Array**	**10.09**	**306**	P		**P**	**14 50 08.1**	**-0.1**
	0.8nm,0.3s,baz=121,slow=11,SNR=33							
KSRS				S		**S**	**14 52 02.1**	**+1.2**
	baz=109,slow=22,SNR=4.8							
KSRS				ScP		**ScP**	**14 58 39.1**	**+0.5**
	0.1nm,0.3s,baz=139,slow=1.1,SNR=7.0

HHC pmax pmax
comp=Z,67nm,5.1s
ZEA Zeya 23.15 343 *eP* **P 14 52 24.4 +0.3**
ZEA pmax pmax
comp=Z,31nm,0.8s
XAN Xi'an 24.62 283 P **P 14 52 36.3 -1.4**
XAN pmax pmax
comp=Z,12nm,0.6s
XAN pmax pmax
comp=Z,120nm,4.5s
XAN Xi'an 24.62 283 P **P 14 52 35.9 -1.8**
XAN pmax pmax
comp=Z,9.0nm,0.7s
XAN Xi'an 24.62 283 P **P 14 52 35.9 -1.8**
ENH Enshi 24.63 274 P **P 14 52 36.2 -1.5**
ENH IAmb IAmb 14 52 44.4
comp=Z,33nm,1.7s
PETK Petropavlovsk- 25.39 28 P **P 14 52 45.6 +1.3**
comp=Z,2.6nm,0.8s,baz=232,slow=7.1,SNR=3.7
ULN Ulaanbaatar 28.46 313 *ceP* **P 14 53 12.0 +0.4**
ULN pmax pmax
comp=Z,17nm,1.0s
ULN Ulaanbaatar 28.46 313 P **P 14 53 12.0 +0.4**
ULN IAmb IAmb 14 53 13.0
comp=Z,18nm,0.8s
LZH Lanzhou 28.70 288 *eP* **P 14 53 12.4 -1.5**
LZH pP pP 14 54 19.5 +0.3
LZH PP **PP 14 54 29.3 +2.0**
LZH sP sP 14 55 02.9 +2.5
LZH pmax pmax
comp=Z,16nm,1.3s
LZH pmax pmax
comp=Z,62nm,4.3s
SONM Songino Array 28.85 313 P **P 14 53 15.4 +0.3**
comp=Z,6.4nm,0.6s,baz=108,slow=7.7,SNR=47
SONM ScP **ScP 14 59 21.7 +0.2**
comp=Z,0.7nm,0.5s,baz=123,slow=2.4,SNR=4.8
MA2 Magadan 28.87 13 *ceP* **P 14 53 14.9 0.0**
MA2 pmax pmax
comp=Z,9.0nm,0.9s
MA2 Magadan 28.87 13 P **P 14 53 15.9 +1.0**
comp=Z,5.2nm,0.9s,baz=196,slow=11,SNR=7.2
MA2 Magadan 28.87 13 P **P 14 53 16.2 +1.3**
MA2 IAmb IAmb 14 53 49.3
comp=Z,93nm,2.0s
YAK Yakutsk 30.59 352 *i* P **P 14 53 29.4 -0.5**
YAK pmax pmax
comp=Z,13nm,0.8s
YAK Yakutsk 30.59 352 P **P 14 53 29.8 -0.1**
YAK IAmb IAmb 14 53 30.6
comp=Z,18nm,0.7s
ZAK Zakamensk 31.71 316 *eP* **P 14 53 40.1 +0.2**
ZAK pmax pmax
comp=Z,10.0nm,1.1s
GTA Gaotai 31.88 294 ⇑P **P 14 53 41.0 -0.7**
GTA sP sP 14 55 31.5 +2.6
GTA PcP **PcP 14 56 23.8 +1.2**
GTA S **S 14 58 24.0 -2.0**
GTA ScP **ScP 14 59 33.0 +1.3**
GTA pmax pmax
comp=Z,8.0nm,1.0s
GTA pmax pmax
comp=Z,88nm,6.7s
TLY Talaya 32.01 318 *eP* **P 14 53 42.9 +0.4**
TLY pmax pmax
comp=Z,25nm,0.7s
TLY Talaya 32.01 318 P **P 14 53 43.1 +0.7**
TLY IAmb IAmb 14 53 44.3
comp=Z,12nm,0.8s
SEY Seymchan 32.28 12 P **P 14 53 45.5 +0.9**
comp=Z,0.7nm,0.7s,baz=162,slow=20,SNR=3.3
MOY Mondy 33.52 317 *eP* **P 14 53 55.2 -0.4**
MOY pmax pmax
comp=Z,16nm,1.4s
DLV T Lat 33.83 241 P **P 14 53 58.8 0.0**
FAKI Fak Fak 35.15 190 P **P 14 54 09.5 -0.1**
FAKI IAmb IAmb 14 55 33.6
comp=Z,60nm,1.3s
SANI Sanana 35.76 201 P **P 14 54 13.0 -1.8**
comp=Z,13nm,0.6s
CHTO Chiang Mai 37.61 259 P **P 14 54 29.3 -1.0**
CHTO pmax pmax
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 37.61 259 P **P 14 54 29.3 -1.0**
CM31 Chiang Mai Arr 37.78 259 P **P 14 54 31.0 -0.7**
CMAR Chiang Mai Arr 37.78 259 *i* P **P 14 54 31.3 -0.4**
CMAR pmax pmax
comp=Z,2.0nm,0.7s
CMAR Chiang Mai Arr 37.78 259 P **P 14 54 31.1 -0.7**
comp=Z,1.7nm,0.7s,baz=48,slow=7.4,SNR=16
BILL Bilibino 39.63 16 *di* P **P 14 54 47.4 +1.2**
BILL 14 56 30.0
BILL 14 56 48.0
BILL *e*S **S 15 00 24.0 +2.1**
BILL pmax pmax
comp=Z,10.0nm,1.0s
BILL Bilibino 39.63 16 P **P 14 54 47.5 +1.2**
TIXI Tiksi 40.07 355 *ceP* **P 14 54 49.1 -0.6**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
TIXI Tiksi 40.07 355 P **P 14 54 49.5 -0.2**
comp=Z,5.2nm,0.6s,baz=158,slow=6.6,SNR=23
TIXI Tiksi 40.07 355 P **P 14 54 49.4 -0.2**
KSM Kuching 40.15 227 P **P 14 54 51.4 +0.2**
KSM IAmb IAmb 14 56 06.4
comp=Z,97nm,1.8s
LSA Lhasa 40.23 280 P **P 14 54 51.9 -0.4**
LSA pmax pmax
comp=Z,5.0nm,1.0s
LSA Lhasa 40.23 280 P **P 14 54 51.9 -0.4**
WMQ Urumqi 41.01 302 *eP* **P 14 54 58.3 +0.4**
WMQ pmax pmax
comp=Z,21nm,0.9s
WMQ pmax pmax
comp=Z,75nm,6.5s
WMQ LR LR
comp=Z,690nm,29.0s
WMQ LR LR
comp=Z,1μm,28.8s
WMQ LR LR
comp=Z,170nm,29.2s
WMQ Urumqi 41.01 302 P **P 14 54 57.9 0.0**
WMQ pmax pmax
comp=Z,34nm,1.2s
WMQ Urumqi 41.01 302 P **P 14 54 57.9 0.0**
WMQ IAmb IAmb 14 54 59.8
comp=Z,34nm,1.2s
PMG Port Moresby 42.01 167 P **P 14 55 05.8 -0.2**
PMG pmax pmax
comp=Z,17nm,1.3s
PMG Port Moresby 42.01 167 P **P 14 55 05.8 -0.2**
SOEI Soe 43.57 200 P **P 14 55 18.4 -0.2**
ZAA0 Zalesovo Array 43.58 316 P **P 14 55 17.1 -1.0**
ZAA0 PcP **PcP 14 56 58.4 0.0**
ZALV Zalesovo Beam 43.58 316 P **P 14 55 17.7 -0.4**
comp=Z,4.1nm,0.4s,baz=90,slow=7.3,SNR=22
ZALV PcP **PcP 14 56 58.6 +0.1**
comp=Z,5.2nm,0.7s,baz=105,slow=3.0,SNR=13
TAPN Taplejung 43.82 278 *eP* **P 14 55 20.1 -0.7**
comp=Z,17nm,0.4s
KULM Kulim 44.01 241 P **P 14 55 21.0 -1.0**
KULM IAmb IAmb 14 56 47.3
comp=Z,71nm,2.0s
ODAN Odare 44.24 277 *eP* **P 14 55 23.3 -0.7**
comp=Z,29nm,0.5s
GAMB Gambell 44.42 29 P **P 14 55 25.1 +0.5**
MK31 Makanchi Array 44.77 306 P **P 14 55 27.3 -0.3**
MK31 pmax pmax
comp=Z,16nm,0.7s
MK31 Makanchi Array 44.77 306 P **P 14 55 27.3 -0.3**
MK31 IAmb IAmb 14 55 28.3
comp=Z,16nm,0.7s
MKAR Makanchi Array 44.77 306 *i* P **P 14 55 27.3 -0.3**
MKAR pmax pmax
comp=Z,20nm,0.6s
MKAR Makanchi Array 44.77 306 P **P 14 55 27.7 0.0**
comp=Z,20nm,0.6s,baz=90,slow=9.8,SNR=204
MKAR PcP **PcP 14 57 03.0 +0.2**
comp=Z,1.2nm,0.6s,baz=80,slow=5.9,SNR=3.9
MKAR ScP **ScP 15 00 20.6 0.0**
comp=Z,2.2nm,0.6s,baz=82,slow=5.8,SNR=16
RAMN Ramite 44.88 277 *eP* **P 14 55 28.5 -0.5**
comp=Z,46nm,0.7s
MAKZ Makanchi 44.99 306 P **P 14 55 29.0 -0.3**
MAKZ pmax pmax
comp=Z,17nm,0.6s
MAKZ Makanchi 44.99 306 P **P 14 55 29.0 -0.3**
MAKZ IAmb IAmb 14 55 30.0
comp=Z,17nm,0.6s
JIRN Jiri 45.00 279 *eP* **P 14 55 29.9 -0.2**
comp=Z,128nm,0.7s
MTN Manton Dam 45.06 190 P **P 14 55 29.4 -0.7**
MTN IAmb IAmb 14 56 05.6
comp=Z,33nm,1.4s
GUN Gumba 45.18 279 *eP* **P 14 55 31.2 -0.3**
comp=Z,80nm,0.7s
PKIN Phulchoki 45.69 279 *eP* **P 14 55 34.4 -0.9**
comp=Z,14nm,0.6s
KKN Kakani 45.72 279 *eP* **P 14 55 34.8 -0.7**
comp=Z,57nm,0.8s
COEN Coen 45.90 173 P **P 14 55 37.0 +0.4**
DMN Daman 45.92 279 *eP* **P 14 55 36.2 -0.9**
comp=Z,20nm,0.7s
GKN Gorkha 46.19 280 *eP* **P 14 55 38.5 -0.6**
comp=Z,54nm,0.8s
PBA Port Blair 46.40 255 P P 14 55 39.5 -1.1
DANN Dangsing 46.82 280 *eP* **P 14 55 43.8 -0.2**
comp=Z,76nm,0.7s
LHMI Lhok Sumawe 46.85 244 P **P 14 55 43.1 -0.9**
PSI Prapat 46.95 240 P **P 14 55 44.7 -0.3**
comp=Z,4.9nm,0.6s,baz=67,slow=3.1
PDGK Podgornoye 46.99 301 P **P 14 55 43.5 -1.5**
RPSI Rantau Prapat 47.02 240 P **P 14 55 44.7 -0.7**
RPSI Rantau Prapat 47.02 240 P **P 14 55 44.7 -0.7**
KOLN Koldanda 47.14 280 *eP* **P 14 55 46.0 -0.4**
comp=Z,53nm,0.9s
KURK Kurchatov 47.15 312 P **P 14 55 44.7 -1.2**
KURK pmax pmax
comp=Z,21nm,0.8s
KURK Kurchatov 47.15 312 P **P 14 55 44.7 -1.2**
KURK IAmb IAmb 14 55 46.7
comp=Z,21nm,0.8s
ANM Nome 47.30 29 P **P 14 55 47.8 +1.0**
ANM pmax pmax
comp=Z,12nm,1.6s
ANM Nome 47.30 29 P **P 14 55 47.8 +1.0**
PRZ Przheval'sk 47.89 300 P **P 14 55 51.9 0.0**
PRZ pmax pmax
comp=Z,41nm,0.7s
PRZ Przheval'sk 47.89 300 P **P 14 55 51.9 0.0**
PRZ IAmb IAmb 14 55 53.4
comp=Z,41nm,0.7s
KNRA Kununurra 48.22 192 P **P 14 55 54.3 -0.1**
KNRA IAmb IAmb 14 55 55.1
comp=Z,14nm,0.7s
KDJ Kajisay 48.84 300 P **P 14 55 59.0 0.0**
KDJ pmax pmax
comp=Z,11nm,0.9s
KDJ Kajisay 48.84 300 P **P 14 55 59.0 0.0**
GSI Gunungsitoli 48.95 240 P **P 14 55 59.9 -0.1**
comp=Z,47nm,1.0s
GSI Gunungsitoli 48.95 240 P **P 14 55 59.7 -0.2**
GSI IAmb IAmb 14 56 00.6
comp=Z,27nm,0.8s
MNAI Manna 49.28 229 P **P 14 56 01.1 -1.3**
NRN Naryn 49.82 299 P **P 14 56 06.6 0.0**
NRN pmax pmax
comp=Z,12nm,1.1s
NRN Naryn 49.82 299 P **P 14 56 06.6 0.0**
KSH Kashi 50.21 297 P **P 14 56 12.9 +3.6**
KSH pP pwP 14 57 24.5 -0.1
KSH S **S 15 02 56.4 +2.7**
KSH ScS **ScS 15 05 21.4 -0.9**
KSH pmax pmax
comp=Z,60nm,0.6s
KSH pmax pmax
comp=Z,390nm,4.1s
KSH LR LR
comp=Z,310nm,6.0s
KSH LR LR
comp=Z,330nm,5.6s
KSH LR LR
comp=Z,440nm,5.9s
KZA Kyzart 50.26 300 P **P 14 56 10.6 +0.6**
SNR=6.4
KBK Karagaybulak 50.38 301 P **P 14 56 10.8 +0.2**
SNR=20
CHMS Chumysh 50.47 302 P **P 14 56 10.9 -0.1**
SNR=5.3
FRU1 Bishkek 50.59 301 P **P 14 56 12.4 +0.5**
FRU1 pmax pmax
comp=Z,12nm,0.7s
FRU1 Bishkek 50.59 301 P **P 14 56 12.4 +0.5**
FRU1 IAmb IAmb 14 56 13.4
comp=Z,12nm,0.7s
USP Osenovka 50.60 302 P **P 14 56 11.9 -0.1**
SNR=10
AAK Ala-Archa 50.72 301 *ceP* **P 14 56 12.5 -0.5**
AAK pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 50.72 301 PcP **PcP 14 57 24.7 +0.2**
comp=Z,1.5nm,0.5s,baz=101,slow=5.2,SNR=4.3
AAK ScP **ScP 15 00 45.8 -0.2**
comp=Z,0.9nm,0.6s,baz=111,slow=5.2,SNR=4.1
AAK Ala-Archa 50.72 301 P **P 14 56 12.9 -0.1**
SNR=12
AAK Ala-Archa 50.72 301 P **P 14 56 13.1 +0.1**
UCH Uchtor 50.77 301 P **P 14 56 14.3 +0.5**
SNR=13
TTA Tatalina 51.10 32 P **P 14 56 16.4 +1.0**
TTA Tatalina 51.10 32 P **P 14 56 16.4 +1.0**
FITZ Fitzroy Crossi 51.21 195 P **P 14 56 16.7 +0.1**
FITZ IAmb IAmb 14 57 04.3
comp=Z,54nm,2.0s
EKS2 Erkin-Say 51.23 301 P **P 14 56 16.7 -0.1**
SNR=9.2
AML Almayashu 51.39 301 P **P 14 56 18.6 +0.3**
SNR=34
WRAB Tennant Creek 51.73 185 P **P 14 56 20.1 -0.3**
WRAB pmax pmax
comp=Z,12nm,1.2s
WRAB Tennant Creek 51.73 185 P **P 14 56 20.1 -0.3**
WB2 Warramunga Arr 51.74 185 P **P 14 56 20.2 -0.3**
WB2 IAmb IAmb 14 56 46.0
comp=Z,28nm,1.8s
WRA Warramunga Arr 51.74 185 P **P 14 56 20.2 -0.2**
comp=Z,2.5nm,0.3s,baz=1.0,slow=7.6,SNR=30
WRA PcP **PcP 14 57 29.4 +1.1**
comp=Z,1.1nm,0.6s,baz=0.3,slow=4.0,SNR=3.1
WRA ScP **ScP 15 00 50.9 +0.6**
comp=Z,0.5nm,0.7s,baz=0.7,slow=4.7,SNR=4.0
WR0 Warramunga Arr 51.74 184 P **P 14 56 20.2 -0.3**
BRVK Borovoye 52.22 315 P **P 14 56 23.2 -0.4**
BRVK pmax pmax
comp=Z,7.0nm,0.9s
BRVK Borovoye 52.22 315 P **P 14 56 23.2 -0.4**
KDAK Kodiak Island 52.66 39 P **P 14 56 27.4 +0.6**
KDAK pmax pmax
comp=Z,164nm,1.8s
KDAK Kodiak Island 52.66 39 P **P 14 56 27.2 +0.4**
comp=Z,10nm,0.8s,baz=35,slow=6.8,SNR=4.8
KDAK Kodiak Island 52.66 39 P **P 14 56 27.4 +0.6**
PPLA Purkeypile 52.84 33 P **P 14 56 30.0 +1.8**
PPLA IAmb IAmb 14 58 27.3
comp=Z,62nm,1.8s
SKT Skwentna 53.13 34 P **P 14 56 31.2 +1.0**
SKT IAmb IAmb 14 57 40.0
comp=Z,22nm,1.6s
BPAW Bear Paw Mtn. 53.41 31 P **P 14 56 33.1 +1.0**
BPAW IAmb IAmb 14 56 46.5
comp=Z,29nm,1.8s
KTH Kantishna Hill 53.43 32 P **P 14 56 32.6 +0.2**
KTH IAmb IAmb 14 57 17.3
comp=Z,25nm,1.6s
BRLK Bradley Lake 53.48 37 P **P 14 56 33.7 +1.0**
KK31 Karatay Array 53.50 303 P **P 14 56 32.8 -0.3**
KK31 pmax pmax
comp=Z,24nm,0.8s
KK31 Karatay Array 53.50 303 P **P 14 56 32.8 -0.3**
KK31 IAmb IAmb 14 56 33.9
comp=Z,24nm,0.8s
KKAR Karatay Array 53.50 303 P **P 14 56 32.8 -0.3**
KKAR pmax pmax
comp=Z,24nm,0.8s
KKAR Karatay Array 53.50 303 P **P 14 56 32.8 -0.3**
KKAR IAmb IAmb 14 56 33.9
comp=Z,24nm,0.8s
SUA Susitna One 53.51 34 P **P 14 56 33.8 +0.8**
SUA IAmb IAmb 14 58 29.9
comp=Z,77nm,1.9s
MLY Manley 53.55 30 P **P 14 56 34.6 +1.4**
TRF Thorofare Moun 53.72 32 P **P 14 56 35.8 +1.3**
TRF IAmb IAmb 14 57 11.1
comp=Z,44nm,1.8s
NIL Nilore 53.80 291 P **P 14 56 35.8 +0.3**
NIL pmax pmax
comp=Z,40nm,0.8s
NIL Nilore 53.80 291 P **P 14 56 35.8 +0.3**
NIL IAmb IAmb 14 56 36.7
comp=Z,40nm,0.8s
BTK Batken 53.96 299 P **P 14 56 36.1 -0.5**
BTK pmax pmax
comp=Z,12nm,1.1s
BTK Batken 53.96 299 P **P 14 56 36.1 -0.5**
SEW Seward 54.19 36 P **P 14 56 38.6 +1.0**
PMR Palmer 54.28 34 P **P 14 56 39.2 +0.8**
PMR pmax pmax
comp=Z,43nm,1.8s
PMR Palmer 54.28 34 P **P 14 56 39.1 +0.8**
PMR IAmb IAmb 14 57 36.9
comp=Z,43nm,1.8s
MCK McKinley 54.32 32 P **P 14 56 39.6 +1.0**
MCK pmax pmax
comp=Z,43nm,1.9s
MCK McKinley 54.32 32 P **P 14 56 39.6 +1.0**
MCK IAmb IAmb 14 57 15.7
comp=Z,43nm,1.9s
RND Reindeer 54.36 32 P **P 14 56 39.9 +0.9**
RND pmax pmax
comp=Z,9.0nm,1.0s
RND Reindeer 54.36 32 P **P 14 56 39.9 +0.9**
GHO Glory Hole Cre 54.37 34 P **P 14 56 40.1 +1.0**
GAR Garm 54.60 298 P **P 14 56 40.8 -0.4**
KNK Knik Glacier 54.61 34 P **P 14 56 41.5 +0.8**
KNK IAmb IAmb 14 58 15.8
comp=Z,68nm,1.7s
MDM Murphy Dome 54.61 30 P **P 14 56 42.0 +1.2**
MDM IAmb IAmb 14 58 47.3
comp=Z,19nm,1.6s
SML Sawmill 54.65 34 P **P 14 56 42.2 +1.1**
SML IAmb IAmb 14 57 00.0
comp=Z,46nm,1.5s
WRH Wood River Hil 54.68 31 P **P 14 56 42.7 +1.6**
WRH IAmb IAmb 14 57 58.0
comp=Z,24nm,1.8s
COLA College 54.78 30 P **P 14 56 42.9 +1.1**
COLA pmax pmax
comp=Z,6.0nm,1.0s
COLA College 54.78 30 P **P 14 56 42.9 +1.1**
CCB Clear Creek Bu 54.80 30 P **P 14 56 43.3 +1.3**
CCB IAmb IAmb 14 58 20.7
comp=Z,20nm,2.0s
SCM Sheep Creek Mo 55.13 34 P **P 14 56 45.8 +1.3**
SCM pmax pmax
comp=Z,108nm,1.9s
SCM Sheep Creek Mo 55.13 34 P **P 14 56 45.8 +1.3**
HDA Harding Lake 55.18 31 P **P 14 56 45.1 +0.4**
ILAR Eielson Array 55.19 30 P **P 14 56 45.1 +0.3**
comp=Z,0.5nm,0.7s,baz=258,slow=5.7,SNR=6.8
GLI Glacier Island 55.30 35 P **P 14 56 46.9 +1.2**
AS31 Alice Springs 55.46 185 P **P 14 56 46.9 -0.3**
ASAR Alice Springs 55.46 185 P **P 14 56 47.2 0.0**
comp=Z,3.0nm,0.5s,baz=18,slow=12,SNR=59
ASAR ScP **ScP 15 01 07.3 +0.7**
comp=Z,0.4nm,0.6s,baz=3.1,slow=4.6,SNR=5.2
CHGR Chuyangaron 55.56 298 P **P 14 56 47.8 -0.2**
FYU Fort Yukon 55.82 28 P **P 14 56 51.1 +2.0**
FYU IAmb IAmb 14 58 47.6
comp=Z,55nm,1.9s
PSAD1 Pilbara Seismi 55.95 201 P **P 14 56 50.3 -0.3**
PSAA2 Pilbara Seismi 56.05 201 P **P 14 56 50.9 -0.5**
PSAB1 Pilbara Seismi 56.06 201 P **P 14 56 51.2 -0.2**
PSAA1 Pilbara Seismi 56.07 201 P **P 14 56 51.7 +0.2**
RIDG Independent Ri 56.14 31 P **P 14 56 52.0 +0.4**
RIDG IAmb IAmb 14 58 36.4
comp=Z,50nm,2.0s
FUNA Funafuti 56.14 129 P **P 14 56 51.9 -0.2**
DOT Dot Lake 56.49 32 P **P 14 56 54.4 +0.4**
SCRK Sand Creek 56.50 31 P **P 14 56 54.6 +0.5**
SCRK IAmb IAmb 14 58 01.0
comp=Z,20nm,1.8s
MENT Mentasta 56.71 32 P **P 14 56 57.3 +1.7**
MENT IAmb IAmb 14 58 04.5
comp=Z,21nm,1.6s
KBL Kabul 56.85 293 P **P 14 56 56.4 -0.8**
KBL pmax pmax
comp=Z,24nm,0.7s
KBL Kabul 56.85 293 P **P 14 56 56.4 -0.8**
KBL IAmb IAmb 14 56 57.7
comp=Z,24nm,0.7s
MCARA McCarthy VSAT 57.22 34 P **P 14 57 01.1 +2.0**
MCARA IAmb IAmb 14 57 02.3
comp=Z,49nm,1.6s
SVE Sverdlovsk 57.28 320 *eP* **P 14 56 59.9 +0.4**
SVE pmax pmax
comp=Z,19nm,0.8s
EGAK Eagle 57.64 30 P **P 14 57 02.8 +0.9**
EGAK IAmb IAmb 14 58 10.6
comp=Z,22nm,1.8s
EIDS Eidsvold 58.31 166 P **P 14 57 07.5 +0.5**
EIDS IAmb IAmb 14 57 19.2
comp=Z,34nm,1.7s
ARU Arti 58.48 320 *di* P **P 14 57 07.0 -0.8**
ARU 14 59 18.6
ARU S **S 15 04 41.4 -1.1**
ARU SS **SS 15 08 38.9 -2.1**
ARU pmax pmax
comp=Z,20nm,0.8s
ARU Arti 58.48 320 P **P 14 57 07.5 -0.3**
ARU IAmb IAmb 14 57 08.3
comp=Z,19nm,0.8s
DAWY Dawson 58.50 31 P **P 14 57 09.0 +1.2**
DAWY IAmb IAmb 14 59 07.4
comp=Z,27nm,1.9s
KNTN Kanton 58.69 116 P **P 14 57 11.3 +1.5**
PALK Pallekele 58.73 258 P **P 14 57 09.9 -0.3**
PALK pmax pmax
comp=Z,44nm,1.4s
PALK Pallekele 58.73 258 P **P 14 57 09.9 -0.3**
PALK IAmb IAmb 14 58 06.0
comp=Z,44nm,1.4s
EPYK Eagle Plains 59.23 28 P **P 14 57 14.6 +1.8**
EPYK IAmb IAmb 14 57 15.2
comp=Z,11nm,0.5s
AB31 Akbulak array 59.26 312 P **P 14 57 12.5 -0.7**
ABKAR Akbulak array 59.26 312 P **P 14 57 12.9 -0.3**
INK Inuvik 60.09 25 P **P 14 57 19.4 +0.9**
comp=Z,1.3nm,0.4s,baz=283,slow=5.8,SNR=12
INK Inuvik 60.09 25 IAmb IAmb 14 58 26.4
comp=Z,19nm,2.0s
HRA Herat 62.19 295 P **P 14 57 33.1 -0.2**
HRA IAmb IAmb 14 57 34.6
comp=Z,16nm,0.7s
STKA Stephens Creek 63.57 177 P **P 14 57 42.5 +0.6**
STKA pmax pmax
comp=Z,2.0nm,0.7s
STKA Stephens Creek 63.57 177 P **P 14 57 42.6 +0.6**
comp=Z,7.4nm,0.5s,baz=358,slow=6.5,SNR=32
STKA Stephens Creek 63.57 177 P **P 14 57 42.5 +0.6**
PRGR Permogore 63.61 328 *eP* **P 14 57 40.2 -1.6**
PRGR pmax pmax
comp=Z,17nm,0.8s
GEYT Alibeck 64.03 300 P **P 14 57 45.2 +0.2**
comp=Z,5.6nm,0.7s,baz=54,slow=3.8,SNR=16
GYA0B ALIBECK ARRAY 64.03 300 P **P 14 57 44.2 -0.8**
GYA0B IAmb IAmb 14 57 46.1
comp=Z,8.4nm,0.8s
SPITS Spitsbergen Ar 64.98 349 P **P 14 57 50.7 +0.3**
comp=Z,5.2nm,0.6s,baz=108,slow=8.2,SNR=7.8
KLMR Klimovskoe 66.65 328 *eP* **P 14 57 59.0 -2.2**
KLMR AMP 14 58 03.3
comp=Z,27nm,1.5s
ARCES ARCESS Array B 67.81 339 P **P 14 58 08.8 +0.5**
comp=Z,5.6nm,0.6s,baz=66,slow=8.8,SNR=37
RES Resolute Bay 68.15 13 P **P 14 58 11.1 +0.8**
RES pmax pmax
comp=Z,3.0nm,0.7s
RES Resolute Bay 68.15 13 P **P 14 58 11.2 +1.0**
comp=Z,4.2nm,0.7s,baz=310,slow=6.4,SNR=12
RES Resolute Bay 68.15 13 P **P 14 58 11.1 +0.8**
YKA Yellowknife Ar 69.52 28 P **P 14 58 19.7 +0.9**
comp=Z,1.1nm,0.6s,baz=299,slow=6.5,SNR=12
VRH Novokhopyorsk 69.58 318 *eP* **P 14 58 18.7 -0.7**
VRH pmax pmax
comp=Z,20nm,0.4s
WSAR Wadi Sarin 69.64 285 P **P 14 58 20.5 +0.2**

comp=Z,7.7nm,0.7s,baz=107,slow=11,SNR=5.4
AKT Akhty 69.99 307 *e*P **P** 14 58 22.4 +0.1
AKT *e* 14 58 39.0
AKT *e**PP **pP** 14 59 38.9 -0.8
AKT *e**SP **sP** 15 00 20.0 +3.2
AKT *e* 15 01 02.9
AKT pmax pmax
comp=Z,23nm,0.6s
LPSR Galich'ya Gora 70.51 320 *e*P **P** 14 58 24.6 -0.3
LPSR pmax pmax
comp=Z,10.0nm,1.0s
OBN Obninsk 70.58 323⇓*e*P **P** 14 58 25.3 0.0
OBN 14 58 44.0
OBN *PP **pwP** 14 59 47.0 +1.0
OBN pmax pmax
comp=Z,18nm,0.8s
VSR Storozhevoye 71.01 319 *e*P **P** 14 58 27.0 -1.0
VSR pmax pmax
comp=Z,30nm,1.0s
SUF Sumiainen 71.32 333 P **P** 14 58 29.5 -0.1
SUF pmax pmax
comp=Z,18nm,0.9s
ZEI Tsey 71.98 309 *e*P **P** 14 58 33.0 -1.2
ZEI pmax pmax
comp=Z,5.0nm,0.6s
FINES FINESS Array B 72.06 332 *i* P **P** 14 58 34.0 0.0
FINES pmax pmax
comp=Z,11nm,0.4s
FINES FINESS Array B 72.06 332 P **P** 14 58 34.2 +0.2
comp=Z,11nm,0.4s,baz=60,slow=5.7,SNR=107
KBZ Khabaz 72.20 311 P **P** 14 58 36.0 +0.8
KBZ Khabaz 72.20 311 P **P** 14 58 36.0 +0.8
comp=Z,17nm,0.8s,baz=93,slow=5.3,SNR=23
KIV Kislovodsk 72.23 311 *e*P **P** 14 58 35.8 +0.3
KIV pmax pmax
comp=Z,71nm,1.1s
KIV Kislovodsk 72.23 311 P **P** 14 58 35.4 -0.1
SHA1 Shidzhatmaz 72.35 311 *i* P **P** 14 58 35.8 -0.6
NEY Neytrino 72.53 310 *i* P **P** 14 58 36.7 -0.7
NEY pmax pmax
comp=Z,2.0nm,1.0s
VSU Vasula 73.47 329*c*e**P** **P** 14 58 41.7 -0.6
VSU pmax pmax
comp=Z,41nm,0.9s
AKASG Malin Array Be 76.67 322 P **P** 14 59 00.4 -0.1
comp=Z,11nm,0.6s,baz=50,slow=6.1,SNR=52
AKBB Malin Array Si 76.67 322 P **P** 14 59 00.1 -0.4
AKBB pmax pmax
comp=Z,15nm,0.7s
AKBB Malin Array Si 76.67 322 P **P** 14 59 00.1 -0.4
NC405 NORSAR Array S 77.59 336 P **P** 14 59 05.4 -0.1
NC204 NORSAR Array S 77.79 337 P **P** 14 59 06.8 +0.2
NB2 NORSAR Subarra 77.81 337 P **P** 14 59 06.8 +0.1
comp=Z,2.3nm,0.5s,baz=43,slow=5.3
NOA NORSAR Array B 77.81 337 P **P** 14 59 06.7 0.0
comp=Z,7.9nm,0.8s,baz=44,slow=5.5,SNR=19
SORM Soroca 78.60 320 ⇓P **P** 14 59 10.9 -0.3
SORM Soroca 78.60 320 ⇓P **P** 14 59 10.9 -0.3
KLNR Kaliningrad 78.69 328 *i* P **P** 14 59 11.0 -0.5
KLNR pmax pmax
comp=Z,42nm,1.0s
RAYN Ar Rayn 80.09 291 P **P** 14 59 19.6 -0.1
RAYN pmax pmax
comp=Z,15nm,0.8s
RAYN Ar Rayn 80.09 291 P **P** 14 59 19.6 -0.1
NVAR Mina Array Bea 80.19 51 P **P** 14 59 21.0 +0.9
comp=Z,0.9nm,0.7s,baz=284,slow=5.5,SNR=8.4
BR131 Keskin Array S 80.20 311 P **P** 14 59 20.2 +0.1
BR131 pmax pmax
comp=Z,7.0nm,0.8s
BR131 Keskin Array S 80.20 311 P **P** 14 59 20.2 +0.1
BR131 IAmb IAmb 14 59 21.2
comp=Z,7.0nm,0.8s
BRTR Keskin Array B 80.20 311 P **P** 14 59 20.6 +0.5
comp=Z,7.7nm,0.9s,baz=101,slow=4.1,SNR=27
TOPG Topolog 80.49 317 ⇓P **P** 14 59 21.9 +0.6
TESR Tescani 80.50 319 ⇓P **P** 14 59 21.6 +0.3
BIZ Bicaz 80.54 320 ⇑P **P** 14 59 22.4 +0.8
BURAR Bucovina Array 80.61 321 ⇑P **P** 14 59 22.8 +0.8
BURAR Bucovina Array 80.61 321 ⇑P **P** 14 59 22.8 +0.8
KWP Kalwaria Pacla 80.67 324 P **P** 14 59 22.9 +0.7
KWP Kalwaria Pacla 80.67 324 P **P** 14 59 22.9 +0.7
VRI Vrincioaia 80.84 319 ⇓P **P** 14 59 24.5 +1.3
VRI Vrincioaia 80.84 319 ⇓P **P** 14 59 24.5 +1.3
HARR Harsova 80.85 317 ⇑P **P** 14 59 23.8 +0.6
HARR Harsova 80.85 317 ⇑P **P** 14 59 23.8 +0.6
BISRR Bisoca 81.04 319 ⇑P **P** 14 59 25.9 +1.6
MLR Muntele Rosu 81.50 319 ⇓P **P** 14 59 27.1 +0.3
MLR Muntele Rosu 81.50 319 ⇓P **P** 14 59 27.1 +0.3
DOPR Dopca 81.52 319 ⇑P **P** 14 59 27.2 +0.5
TRPA Tarpa 81.70 322 ⇑P **P** 14 59 28.6 +1.1
VOIR 82.03 319 ⇓P **P** 14 59 29.7 +0.2
VOIR 82.03 319 ⇓P **P** 14 59 29.7 +0.2
ARR Arges 82.31 319 ⇓P **P** 14 59 32.0 +1.2
PDAR Pinedale Array 83.13 49 P **P** 14 59 36.4 +1.0
comp=Z,0.6nm,0.7s,baz=13,slow=2.0,SNR=5.3
VYHS Vyhne 83.35 324 *e*P **P** 14 59 36.6 +0.6
VYHS Vyhne 83.35 324 *e*P **P** 14 59 36.6 +0.6
PFO Pinyon Flats O 84.10 54 P **P** 14 59 41.2 +0.9
PFO pmax pmax
comp=Z,13nm,1.7s
PFO Pinyon Flats O 84.10 54 P **P** 14 59 41.1 +0.9
comp=Z,1.6nm,0.7s,baz=295,slow=17,SNR=3.2
PFO Pinyon Flats O 84.10 54 IAmb IAmb 15 01 08.2
comp=Z,13nm,1.6s
CLL Collm 84.12 329 *i* P **P** 14 59 39.3 -0.5
CLL pmax pmax
comp=Z,5.0nm,0.7s
CLL Collm 84.12 329 *i* P **P** 14 59 39.3 -0.5
comp=Z,5.0nm,0.7s
SRU San Rafael Swe 84.77 47 P **P** 14 59 44.8 +1.2
SRU pmax pmax
comp=Z,3.0nm,0.7s
SRU San Rafael Swe 84.77 47 P **P** 14 59 44.8 +1.2
GERES GERESS Array B 85.57 327 P **P** 14 59 46.9 -0.2
comp=Z,0.9nm,0.7s,baz=54,slow=6.8,SNR=6.8
TXAR Lajitas Array 95.34 51 P **P** 15 00 34.6 +1.6
comp=Z,0.7nm,0.7s,baz=291,slow=2.1,SNR=9.3
TORD Torodi Ar. Bea 118.81 310 PKP **PKPdf** 15 05 54.9 -0.4
comp=Z,0.3nm,0.4s,baz=95,slow=0.8,SNR=4.5
LPAZ La Paz 151.44 63 PKPbc **PKiKP** 15 07 02.9 +0.8
comp=Z,0.6nm,0.4s,baz=348,slow=9.3,SNR=5.2

*IDC **22** 14:56:58.8±2.4, 22.41N×94.46E, h105km±27km, mb3.4/4, mb1 3.5/5, mb1mx3.1/55, mbtmp3.6/5, Error ellipse: s-maj=53.6km s-min=15.2km az=53.0*
ISC 22 14:56:58.3±0.9, 22.5N±0.2×94.3E±0.1, h106km, n18, σ2s22/29, mb3.9/5, Myanmar

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**2.46**	**275**	P		**Pn**	**14 57 39.7**	**+2.7**
	0.4nm,0.3s,baz=0.0,slow=20,SNR=2.0							
BRDH				S		**Sn**	**14 58 09.6**	**+2.8**
	baz=180,slow=24,SNR=13							
CMAR	**Chiang Mai Arr**	**5.93**	**132**	P		**Pn**	**14 58 21.6**	**-2.1**
	0.3nm,0.3s,baz=309,slow=13,SNR=11							
ODAN	**Odare**	**7.64**	**306**	*e*Pn		**Pn**	**14 58 48.8**	**+1.8**
ODAN				*e*Sn		**Sn**	**15 00 10.5**	**-1.6**
	48nm,0.2s							
TAPN	**Taplejung**	**7.69**	**310**	*e*Pn		**Pn**	**14 58 48.9**	**+1.1**
TAPN				*e*Sn		**Sn**	**15 00 11.9**	**-1.5**
	49nm,0.3s							
RAMN	**Ramite**	**8.28**	**304**	*e*Pn		**Pn**	**14 58 57.5**	**+1.7**
JIRN	**Jiri**	**8.97**	**307**	*e*Pn		**Pn**	**14 59 06.2**	**+1.0**
JIRN				*e*Sn		**Sn**	**15 00 42.3**	**-2.3**
	103nm,0.3s							
GUN	**Gumba**	**9.33**	**307**	*e*Pn		**Pn**	**14 59 10.8**	**+0.6**
GUN				*e*Sn		**Sn**	**15 00 51.4**	**-2.1**
	63nm,0.4s							
PKIN	**Phulchoki**	**9.52**	**304**	*e*Pn		**Pn**	**14 59 13.4**	**+0.7**
PKIN				*e*Sn		**Sn**	**15 00 56.2**	**-1.8**
	44nm,0.5s							
KKN	**Kakani**	**9.72**	**305**	*e*Pn		**Pn**	**14 59 16.5**	**+1.2**
KKN				*e*Sn		**Sn**	**15 01 00.2**	**-2.5**
	22nm,0.2s							
DMN	**Daman**	**9.76**	**303**	*e*Pn		**Pn**	**14 59 18.6**	**+2.7**
DMN				*e*Sn		**Sn**	**15 01 02.0**	**-1.8**
	15nm,0.4s							
GKN	**Gorkha**	**10.32**	**304**	*e*Pn		**Pn**	**14 59 23.9**	**+0.5**
GKN				*e*Sn		**Sn**	**15 01 13.3**	**-3.9**
	34nm,0.2s							
KOLN	**Koldanda**	**11.02**	**301**	*e*Pn		**Pn**	**14 59 33.8**	**+0.9**
KOLN				*e*Sn		**Sn**	**15 01 30.2**	**-4.1**
	27nm,0.3s							
DANN	**Dangsing**	**11.16**	**304**	*e*Pn		**Pn**	**14 59 36.4**	**+1.5**
DANN				*e*Sn		**Sn**	**15 01 33.5**	**-4.4**
	20nm,0.4s							
MKAR	**Makanchi Array**	**26.11**	**341**	P		**P**	**15 02 24.4**	**+2.2**
	0.3nm,0.4s,baz=150,slow=11,SNR=8.7							
ZALV	**Zalesovo Beam**	**32.22**	**349**	P		**P**	**15 03 17.8**	**+1.6**
	0.5nm,0.4s,baz=181,slow=9.7,SNR=3.1							
WRA	**Warramunga Arr**	**57.52**	**134**	P		**P**	**15 06 36.0**	**-0.9**
	0.5nm,0.4s,baz=316,slow=7.5,SNR=7.4							
ASAR	**Alice Springs**	**59.91**	**137**	P		**P**	**15 06 52.9**	**-0.4**
	0.6nm,0.5s,baz=320,slow=6.9,SNR=14							
ARCES	**ARCESS Array B**	**61.72**	**338**	P		**P**	**15 07 06.0**	**+1.1**
	1.4nm,0.8s,baz=96,slow=8.2,SNR=3.1							

*UPA **22** 15:06:00.9±2.2, 5.87N×78.24W, h20km±24km, MW3.5*
*RSNC **22** 15:06:02.2±0.4, 5.72N×78.05W, h19km±2km, ML2.6*
ISC 22 15:05:57.0±1.5, 5.83N±0.04×78.19W±0.04, h13km±11km, n16, σ1s81/28, 2C, South of Panama

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SOLC	**Bahia Solano**	**0.87**	**63**	*e*P		**Pn**	**15 06 16.9**	**+1.8**
SOLC				*i*			15 06 17.8	
	comp=Z,267nm,0.8s							
SOLC				*e*S		**Sn**	**15 06 28.0**	**+0.4**
SOLC	**Bahia Solano**	**0.87**	**63**	⇑*i*P		**Pn**	**15 06 16.8**	**+1.8**
SOLC				*e*S		**Sn**	**15 06 27.5**	**-0.1**
PIZC	**Pizarro, Choco**	**1.20**	**136**	*e*P		**Pg**	**15 06 19.9**	**-0.1**
PIZC				*e*S		**Sb**	**15 06 34.2**	**-0.8**
PIZC				*i*			15 06 36.1	
	comp=Z,140nm,0.3s							
PTAC	**Punta Ardita,**	**1.36**	**16**	*e*P		**Pg**	**15 06 24.2**	**+1.0**
PTAC				*e*S		**Sb**	**15 06 35.5**	**-4.3**
PTAC	**Punta Ardita,**	**1.36**	**16**	*e*P		**Pg**	**15 06 24.1**	**+0.9**
PTAC				*e*S		**Sg**	**15 06 40.2**	**-0.8**
MALC	**Bahia Malaga**	**2.00**	**155**	*e*S		**Sn**	**15 06 54.5**	**-0.9**
PLMC	**San Jos del P**	**2.11**	**116**	*e*P		**Pn**	**15 06 33.6**	**+1.4**
PLMC				*e*S		**Sn**	**15 06 57.5**	**-0.8**
CBOC	**Ciudad Bolivar**	**2.17**	**89**	*e*P		**Pb**	**15 06 34.9**	**-1.4**
CBOC				*e*S		**Sn**	**15 06 59.9**	**0.0**
DBBC	**Dabeiba**	**2.30**	**59**	*e*P		**Pb**	**15 06 38.9**	**+0.5**
	comp=Z,29nm,0.2s							
DBBC	**Dabeiba**	**2.30**	**59**	⇑*i*P		**Pb**	**15 06 38.8**	**+0.4**
DBBC				*e*S		**Sb**	**15 07 05.5**	**-1.3**
YOTC	**Yotoco, Valle**	**2.60**	**135**	*e*P		**Pn**	**15 06 39.9**	**+1.0**
YOTC				*e*S		**Sn**	**15 07 07.4**	**-3.0**
YOTC				*i*			15 07 09.5	
	comp=Z,14nm,0.5s							
HELC	**Santa Helena**	**2.67**	**82**	*e*P		**Pb**	**15 06 43.9**	**-1.1**
AZU	**Azuero**	**2.84**	**313**	*e*P		**Pn**	**15 06 43.4**	**+1.3**
AZU				*e*S		**Sn**	**15 07 18.2**	**+2.0**
CACAO	**El Cacao, Vera**	**3.05**	**300**	*e*P		**Pn**	**15 06 45.5**	**+0.5**
CACAO				*e*S		**Sn**	**15 07 21.0**	**-0.4**
URCC	**San Jos de Ur**	**3.26**	**54**	*e*P		**Pb**	**15 06 53.2**	**-1.6**
PRAC	**Prado**	**3.91**	**122**	*e*P		**Pn**	**15 07 01.1**	**+4.2**
PRAC				*e*S		**Sn**	**15 07 45.0**	**+2.3**

*IDC **22** 15:07:01.8±4.5, 2.06N×127.84E, h154km±48km, mb3.5/3, mb1 3.5/4, mb1mx3.1/37, mbtmp3.8/4, Error ellipse: s-maj=106.4km s-min=18.8km az=68.0*
*NEIC **22** 15:07:02.4±1.2, 2.28N±0.08×128.1E±0.1, h176km±7km, mb4.3/10, Error ellipse: s-maj=18.7km s-min=10.6km az=75.0*
ISC 22 15:07:00.5±0.9, 2.2N±0.2×127.8E±0.3, h150km, n17, σ0s90/17, mb4.1/10, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.45**	**196**	Pn		Pn	15 07 35.9	+6.4
DDMP	**Don Marcelino,**	**4.41**	**332**	*e*S		**Sn**	**15 08 57.0**	**-0.3**
SIJI	**Sorong**	**4.62**	**131**	P		**Pn**	**15 08 08.7**	**-0.3**
	1.1nm,0.3s,baz=331,slow=21,SNR=5.0							
FAKI	**Fak Fak**	**6.76**	**138**	Pn		**Pn**	**15 08 37.9**	**+0.5**
MTN	**Manton Dam**	**15.29**	**167**	P		**P**	**15 10 29.5**	**-0.4**
KNRA	**Kununurra**	**17.76**	**177**			**Pn**	**15 10 59.1**	**+0.5**
WB0	**Warramunga Arr**	**22.75**	**164**	P		**P**	**15 11 49.5**	**-0.5**
WB0				IAmb	IAmb	IAmb	15 11 50.8	
	comp=Z,4.1nm,0.6s							
WRAB	**Tennant Creek**	**22.90**	**164**	P		**P**	**15 11 51.1**	**-0.3**
WRAB				IAmb	IAmb	IAmb	15 11 59.0	
	comp=Z,22nm,1.8s							
WRA	**Warramunga Arr**	**22.91**	**164**	P		**P**	**15 11 51.1**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=344,slow=10,SNR=30							
WB2	**Warramunga Arr**	**22.91**	**164**	P		**P**	**15 11 51.1**	**-0.4**
WR0	**Warramunga Arr**	**22.98**	**163**	P		**P**	**15 11 51.8**	**-0.3**
WR0				IAmb	IAmb	IAmb	15 12 10.5	
	comp=Z,28nm,1.9s							
ASAR	**Alice Springs**	**26.37**	**167**	P		**P**	**15 12 23.0**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=348,slow=8.5,SNR=6.7							
ASAR				PcP		**PcP**	**15 15 44.6**	**-0.3**
	comp=Z,0.3nm,0.9s,baz=345,slow=2.6,SNR=3.7							
STKA	**Stephens Creek**	**36.32**	**160**	P		**P**	**15 13 49.7**	**-0.2**
	comp=Z,1.6nm,0.4s,baz=333,slow=10,SNR=9.3							
MKAR	**Makanchi Array**	**59.41**	**325**	P		**P**	**15 16 49.2**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=120,slow=7.8,SNR=15							
MAKZ	**Makanchi**	**59.60**	**325**	P		**P**	**15 16 49.8**	**+1.3**
MAKZ				IAmb	IAmb	IAmb	15 18 52.8	
	comp=Z,4.4nm,1.4s							
KK31	**Karatay Array**	**65.07**	**317**	P		**P**	**15 17 23.5**	**-1.5**
KK31				IAmb	IAmb	IAmb	15 19 43.0	
	comp=Z,6.8nm,1.3s							
KKAR	**Karatay Array**	**65.07**	**317**	P		**P**	**15 17 23.6**	**-1.4**
KKAR				IAmb	IAmb	IAmb	15 19 43.0	
	comp=Z,6.8nm,1.3s							

*KRNET **22** 15:16:15.7±0.1, 40.67N×78.67E, mb3.4*
*SOME **22** 15:16:15.6, 40.68N×78.63E, h10km*
*IDC **22** 15:16:17.4±3.1, 40.85N×78.58E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.3/32, mbtmp3.5/4, ML2.9/2, Error ellipse: s-maj=48.5km s-min=30.0km az=131.0*
*NNC **22** 15:16:18.9±1.1, 40.79N×78.58E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=8.0km s-min=6.2km az=176.0*
ISC 22 15:16:18.9±1.3, 40.78N±0.07×78.67E±0.04, h10km, n71, σ1s49/105, 32C-9D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**1.71**	**353**	⇑*i*P		**Pb**	**15 16 49.7**	**-0.8**
	baz=54							
PRZ				⇑*i*S		**Sg**	**15 17 14.7**	**+0.8**
	baz=54							
KDJ	**Kajisay**	**1.75**	**321**	⇑*i*P		**Pn**	**15 16 50.0**	**+0.6**
	baz=23							
KDJ				⇑*i*S		**Sg**	**15 17 14.9**	**-0.2**
	baz=23							
NRN	**Naryn**	**2.12**	**289**	⇑*i*P		**Pn**	**15 16 55.4**	**+0.8**
	baz=91							
NRN				⇑*i*S		**Sb**	**15 17 24.0**	**0.0**
	baz=91							
ANVS	**Anan'yevo**	**2.13**	**340**	⇓*i*P		**Pb**	**15 16 56.4**	**-1.3**
	baz=41							
ANVS				⇓*i*S		**Sb**	**15 17 26.1**	**+1.8**
	baz=41							
SATY	**Saty**	**2.28**	**355**	*e*P		**Pb**	**15 17 00.4**	**+0.2**
	104nm,0.5s							
SATY				*e*S		**Sg**	**15 17 33.1**	**+0.9**
	437nm,0.4s							
SATY	**Saty**	**2.28**	**355**	Pg		**Pb**	**15 17 00.4**	**+0.2**
	104nm,0.5s							
SATY				Lg		Lg	15 17 33.1	
	437nm,0.4s							
ULHL	**Ulahol**	**2.33**	**310**	⇓*i*P		**Pn**	**15 16 58.9**	**+1.4**
	baz=12							
ULHL				⇓*i*S		**Sb**	**15 17 29.9**	**-0.2**
	baz=12							
ULHL	**Ulahol**	**2.33**	**310**	P		**Pb**	**15 17 00.1**	**-1.0**
	SNR=55							
UZB	**Uzynbulak**	**2.38**	**6**	*e*P		**Pb**	**15 17 01.7**	**-0.2**
	31nm,0.7s							
UZB				*e*S		**Sg**	**15 17 34.9**	**-0.3**
	170nm,0.5s							
UZB	**Uzynbulak**	**2.38**	**6**	Pg		**Pb**	**15 17 01.7**	**-0.2**
	31nm,0.7s							
UZB				Lg		Lg	15 17 34.9	
	170nm,0.5s							
SHLS	**Shalkode**	**2.44**	**14**	*e*P		**Pg**	**15 17 04.6**	**-1.1**
	191nm,0.3s							
SHLS				*e*S		**Sg**	**15 17 40.0**	**+2.6**
	210nm,0.4s							
SHLS	**Shalkode**	**2.44**	**14**	Pg		**Pg**	**15 17 04.6**	**-1.1**
	191nm,0.3s							
SHLS				Lg		Lg	15 17 40.0	
	210nm,0.4s							
TNSS	**Tian-Shan**	**2.59**	**331**	*e*P		**Pb**	**15 17 05.8**	**+0.1**
	30nm,0.4s							
TNSS				*e*S		**Sg**	**15 17 42.1**	**0.0**
	46nm,0.3s							
TNSS	**Tian-Shan**	**2.59**	**331**	Pg		**Pb**	**15 17 05.8**	**+0.1**
	30nm,0.4s							
TNSS				Lg		Lg	15 17 42.1	
	46nm,0.3s							
PDGK	**Podgornoye**	**2.62**	**13**	Pg		**Pb**	**15 17 05.4**	**-0.5**
	6.4nm,0.3s							
PDGK				Lg		Lg	15 17 41.7	
	72nm,0.8s							
PDGK	**Podgornoye**	**2.62**	**13**	⇑Pn		**Pb**	**15 17 03.6**	**-2.3**
	8.4nm,0.4s							
PDGK				⇓Lg		Lg	15 17 41.2	
	167nm,0.8s							
BOOM	**Boomskoye usch**	**2.66**	**311**	⇑*i*P		**Pn**	**15 17 03.1**	**+1.1**
	baz=13							
BOOM				⇑*i*S		**Sb**	**15 17 37.3**	**-2.2**
	baz=13							
MDOK	**Medeo**	**2.67**	**334**	*e*P		**Pb**	**15 17 07.0**	**+0.2**
	31nm,0.3s							
MDOK				*e*S		**Sg**	**15 17 44.3**	**-0.3**
	136nm,0.6s							
MDOK	**Medeo**	**2.67**	**334**	Pn		**Pb**	**15 17 04.7**	**-2.0**
	25nm,0.6s							
MDOK				Lg		Lg	15 17 43.0	
	139nm,0.6s							
MDOK	**Medeo**	**2.67**	**334**	Pg		**Pb**	**15 17 07.0**	**+0.2**
	31nm,0.3s							
MDOK				Lg		Lg	15 17 44.3	
	136nm,0.6s							
KPKS	**Kokpek**	**2.68**	**0**	*e*P		**Pb**	**15 17 07.2**	**+0.2**
	71nm,0.2s							
KPKS				*e*S		**Sg**	**15 17 44.2**	**-0.7**
	469nm,0.5s							
KOTS	**Kotyrbulak**	**2.71**	**335**	*e*P		**Pb**	**15 17 08.2**	**+0.6**
	94nm,0.3s							
KOTS				*e*S		**Sg**	**15 17 45.8**	**-0.1**
	93nm,0.3s							
KOTS	**Kotyrbulak**	**2.71**	**335**	Pg		**Pb**	**15 17 08.2**	**+0.6**
	94nm,0.3s							
KOTS				Lg		Lg	15 17 45.8	
	93nm,0.3s							
IZV	**Izvestkoviy**	**2.72**	**326**	*e*P		**Pb**	**15 17 08.0**	**+0.2**
	14nm,0.3s							
IZV				*e*S		**Sg**	**15 17 46.0**	**-0.3**
	75nm,0.6s							
IZV	**Izvestkoviy**	**2.72**	**326**	Pg		**Pb**	**15 17 08.0**	**+0.2**
	14nm,0.3s							
IZV				Lg		Lg	15 17 46.0	
	75nm,0.6s							
KNDC	**Almaty**	**2.74**	**333**	⇑Pg		**Pb**	**15 17 05.7**	**-2.3**
	22nm,0.4s							
KNDC				⇑Lg		Lg	15 17 43.8	
	98nm,0.6s							
KZA	**Kyzart**	**2.88**	**298**	⇑*i*P		**Pn**	**15 17 06.3**	**+1.2**
	baz=0.0							
KZA				⇑*i*S		**Sn**	**15 17 41.7**	**+1.7**
	baz=0.0							
KZA	**Kyzart**	**2.88**	**298**	P		**Pb**	**15 17 10.5**	**0.0**
	SNR=10							
MTBS	**Maitube**	**2.88**	**325**	*e*P		**Pb**	**15 17 10.7**	**+0.4**
	14nm,0.2s							
MTBS				*e*S		**Sg**	**15 17 50.4**	**-0.9**
	40nm,0.4s							
MTBS	**Maitube**	**2.88**	**325**	Pg		**Pb**	**15 17 10.7**	**+0.4**
	14nm,0.2s							
MTBS				Lg		Lg	15 17 50.4	
	40nm,0.4s							
KST	**Kastek**	**3.03**	**319**	*e*P		**Pb**	**15 17 13.3**	**+0.4**
	30nm,0.2s							
KST				*e*S		**Sg**	**15 17 54.7**	**-1.4**
	121nm,0.5s							
KST	**Kastek**	**3.03**	**319**	Pg		**Pb**	**15 17 13.3**	**+0.4**
	30nm,0.2s							
KST				Lg		Lg	15 17 54.7	
	120nm,0.5s							
DGS	**Degeres**	**3.27**	**320**	*e*P		**Pb**	**15 17 16.5**	**-0.5**
	18nm,0.6s							
DGS				*e*S		**Sb**	**15 18 00.7**	**+3.8**
	97nm,0.7s							
DGS	**Degeres**	**3.27**	**320**	Pg		**Pb**	**15 17 16.5**	**-0.5**
	18nm,0.6s							
DGS				Lg		Lg	15 18 00.7	
	97nm,0.7s							
KTBS	**Karatobe**	**3.28**	**334**	*e*P		**Pb**	**15 17 17.3**	**+0.2**
	14nm,0.4s							
KTBS				*e*S		**Sg**	**15 18 01.6**	**-2.5**
	46nm,0.7s							
KTBS	**Karatobe**	**3.28**	**334**	Pg		**Pb**	**15 17 17.3**	**+0.2**
	14nm,0.4s							
KTBS				Lg		Lg	15 18 01.6	
	46nm,0.7s							
CHKK	**Chushkaly**	**3.31**	**338**	*e*P		**Pb**	**15 17 18.4**	**+0.7**
	12nm,0.3s							
CHKK				*e*S		**Sg**	**15 18 03.3**	**-1.9**
	168nm,0.6s							
CHKK	**Chushkaly**	**3.31**	**338**	Pg		**Pb**	**15 17 18.4**	**+0.7**
	12nm,0.3s							
CHKK				Lg		Lg	15 18 03.3	
	168nm,0.6s							
KBK	**Karagaybulak**	**3.35**	**305**	⇑*i*P		**Pn**	**15 17 12.7**	**+1.2**
	baz=7.0							
KBK				⇑*i*S		**Sn**	**15 17 54.2**	**+2.7**
	baz=7.0							
KBK	**Karagaybulak**	**3.35**	**305**	P		**Pb**	**15 17 19.6**	**+1.1**
	SNR=13							
UCH	**Uchtor**	**3.44**	**296**	⇑*i*P		**Pn**	**15 17 14.2**	**+1.3**
	baz=98							
UCH				⇑*i*S		**Sn**	**15 17 56.2**	**+2.3**
	baz=98							
UCH	**Uchtor**	**3.44**	**296**	P		**Pb**	**15 17 20.4**	**+0.3**
	SNR=13							
ARLS	**Aral**	**3.44**	**290**	⇑*i*P		**Pn**	**15 17 13.8**	**+1.1**
	baz=92							
ARLS				⇑*i*S		**Sn**	**15 17 56.0**	**+2.3**
	baz=92							
ARXS	**Arharly**	**3.48**	**350**	*e*P		**Pb**	**15 17 21.6**	**+1.0**
	27nm,0.6s							
ARXS				*e*S		**Sg**	**15 18 08.8**	**-1.9**
	65nm,0.5s							
ARXS	**Arharly**	**3.48**	**350**	Pg		**Pb**	**15 17 21.6**	**+1.0**
	27nm,0.6s							
ARXS				Lg		Lg	15 18 08.8	
	65nm,0.5s							
KUU	**Kurty**	**3.55**	**332**	*e*P		**Pb**	**15 17 22.1**	**+0.3**
	5.7nm,0.5s							
KUU				*e*S		**Sg**	**15 18 09.8**	**-3.2**
	23nm,0.5s							
KUU	**Kurty**	**3.55**	**332**	Pg		**Pb**	**15 17 22.1**	**+0.3**
	5.7nm,0.5s							
KUU				Lg		Lg	15 18 09.8	
	23nm,0.5s							
AAK	**Ala-Archa**	**3.63**	**302**	⇑*i*P		**Pn**	**15 17 16.8**	**+1.5**
	baz=4.0							
AAK				⇑*i*S		**Sn**	**15 18 00.6**	**+2.3**
	baz=4.0							
AAK	**Ala-Archa**	**3.63**	**302**	P

CHMS	**Chumysh**	**3.67**	**308**	P		**Pb**	**15 17 23.7**	**0.0**
	SNR=6.8							
AML	**Almayashu**	**3.97**	**291**	⇓*iP*		**Pn**	**15 17 21.6**	**+1.4**
	baz=93							
AML				⇓*iS*		**Sn**	**15 18 08.6**	**+1.6**
	baz=93							
AML	**Almayashu**	**3.97**	**291**	P		**Pb**	**15 17 30.3**	**+1.1**
	SNR=8.2							
USP	**Ospenovka**	**3.97**	**310**	⇑*iP*		**Pn**	**15 17 21.8**	**+1.9**
	baz=11							
USP				⇑*iS*		**Sn**	**15 18 09.3**	**+2.7**
	baz=11							
USP	**Ospenovka**	**3.97**	**310**	P		**Pb**	**15 17 28.1**	**-0.9**
	SNR=6.2							
EKS2	**Erkin-Say**	**4.11**	**299**	⇑*iP*		**Pn**	**15 17 23.5**	**+1.6**
	baz=0.0							
EKS2				⇑*iS*		**Sn**	**15 18 12.0**	**+1.9**
	baz=0.0							
EKS2	**Erkin-Say**	**4.11**	**299**	P		**Pb**	**15 17 32.9**	**+1.5**
	SNR=13							
KAPS	**Kapalarasan**	**4.53**	**6**	*eP*		**Pb**	**15 17 40.4**	**+2.0**
	4.4nm,0.4s							
KAPS				*eS*		**Sg**	**15 18 41.1**	**-3.1**
	19nm,0.7s							
KAPS	**Kapalarasan**	**4.53**	**6**	Pg		**Pg**	**15 17 42.7**	**-2.8**
	4.4nm,0.4s							
KAPS				Lg		Lg	15 18 45.9	
	19nm,0.7s							
MAKZ	**Makanchi**	**6.48**	**21**	⇑Pn		**Pn**	**15 17 57.2**	**+2.9**
	1.8nm,1.1s							
MAKZ				⇑Lg		Lg	15 19 44.0	
	5.5nm,1.4s							
KK31	**Karatay Array**	**6.51**	**294**	⇑Pg		**Pg**	**15 18 19.7**	**-3.7**
	2.0nm,0.7s,baz=109,slow=16,SNR=12							
KK31				⇑Lg		Lg	15 19 40.8	
	1.0nm,0.5s,baz=110,slow=27,SNR=4.3							
MK31	**Makanchi Array**	**6.55**	**22**	⇓Pn		**Pn**	**15 17 56.4**	**+1.1**
	0.3nm,0.3s,baz=201,slow=12,SNR=35							
MK31				⇑Lg		Lg	15 19 46.2	
	3.5nm,0.9s,baz=209,slow=31,SNR=3.6							
MKAR	**Makanchi Array**	**6.55**	**22**	Pn		**Pn**	**15 17 56.5**	**+1.2**
	0.5nm,0.3s,baz=201,slow=13,SNR=35							
MKAR				Sn		**Sn**	**15 19 09.9**	**-0.2**
	0.2nm,0.3s,baz=211,slow=22,SNR=2.8							
MKAR				Lg		Lg	15 19 43.0	
	0.4nm,0.3s,baz=206,slow=28,SNR=5.1							
ZALV	**Zalesovo Beam**	**13.81**	**15**	Pn		**Pn**	**15 19 33.6**	**-0.9**
	0.2nm,0.3s,baz=205,slow=13,SNR=2.9							
SONM	**Songino Array**	**20.98**	**61**	P		**P**	**15 21 01.9**	**-0.4**
	0.2nm,0.5s,baz=263,slow=12,SNR=2.2							
ARCES	**ARCESS Array B**	**39.72**	**334**	P		**P**	**15 23 49.9**	**-1.0**
	3.6nm,1.0s,baz=96,slow=9.3,SNR=4.5							

*IDC **22** 15:31:22.7±0.6,31.°14N×142.°93E,h0km,mb3.9/17, mb1 4.1/20,mb1mx4.0/31,mbtmp3.9/20,ML3.5/3,MS2.9/4, Ms1 3.0/4,ms1mx2.7/28,Error ellipse: s-maj=19.9km s-min=16.1km az=90.0*

*BJI **22** 15:31:23.9±0.0,31.°41N×143.°29E,h22km,mB4.9/23, mb4.3/33,Ms4.3/8,Ms7 4.1/4*

*NEIC **22** 15:31:24.8±2.9,31.°50N±0.°08×143.°6E±0.°1,h29km±5km, mb4.7/27,Error ellipse: s-maj=14.8km s-min=10.4km az=113.0*

*MOS **22** 15:31:26.3±1.6,31.°39N×143.°05E,h33km,mb4.6/11,Error ellipse: s-maj=12.4km s-min=6.5km az=110.8*

*JMA **22** 15:31:27.7±0.1,31.°61N×142.°98E,h57km,M4.2*

ISC 22 15:31:27.9±0.4,**31.°43N**±0.°04×**143.°19E**±0.°05,**h35**km,**n109,** σ2**8**31/108,**mb4.3**/41,**1C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.31**	**301**	P	**Pn**	**15 32 15.0**	**-2.2**
JHJ2				*eS*	**Sn**	**15 32 50.6**	**-4.8**
JHJ2	**Mitsune**	**3.31**	**301**	Pn	**Pn**	**15 32 15.8**	**-1.4**
BSO3	**Boso 3**	**4.04**	**327**	P	**Pn**	**15 32 25.7**	**-1.4**
JCJ	**Chichijima**	**4.41**	**192**	Pn	Pn	15 32 25.1	-7.2
	6.9nm,0.3s,baz=44,slow=14,SNR=3.9						
JCJ				Sn	Sn	15 33 08.7	-14
	8.9nm,0.3s,baz=53,slow=20,SNR=4.4						
JOD2	**Odawara 2**	**5.14**	**319**	P	**Pn**	**15 32 40.7**	**-1.7**
JOD2				*eS*	**Sn**	**15 33 35.7**	**-4.7**
JHU	**Hanno**	**5.48**	**325**	P	**Pn**	**15 32 45.4**	**-1.7**
JHU				*eS*	**Sn**	**15 33 44.5**	**-4.4**
JHO	**Hitachi**	**5.61**	**338**	P	**Pn**	**15 32 47.4**	**-1.4**
JHO				*eS*	**Sn**	**15 33 47.9**	**-4.1**
JRY	**Ryogami san**	**5.80**	**323**	P	**Pn**	**15 32 49.7**	**-1.8**
JRY				*eS*	**Sn**	**15 33 52.2**	**-4.7**
JAG	**Ashikaga**	**5.87**	**329**	P	**Pn**	**15 32 51.0**	**-1.4**
JAG				*eS*	**Sn**	**15 33 54.2**	**-4.3**
INU	**Inuyama**	**6.47**	**309**	Pn	**Pn**	**15 32 59.7**	**-1.0**
MJAR	**Matsushiro Arr**	**6.56**	**322**	Pn	**Pn**	**15 33 01.1**	**-0.9**
	0.5nm,0.3s,baz=145,slow=11,SNR=42						
MJAR				Sn	**Sn**	**15 34 11.6**	**-4.0**
	baz=133,slow=19,SNR=2.4						
MAJO	**Matsushiro**	**6.57**	**322**	P	**Pn**	**15 33 01.4**	**-0.6**
MAJO	**Matsushiro**	**6.57**	**322**		**Pn**	**15 33 01.4**	**-0.6**
MAT	**Matsushiro**	**6.57**	**322**	P	**Pn**	**15 33 01.2**	**-0.8**
MAT				S	**Sn**	**15 34 12.9**	**-2.7**
MJB9	**Matsu-Tunnel**	**6.57**	**322**		**Pn**	**15 33 01.7**	**-0.4**
JTNC	**Tanabenakahech**	**6.82**	**292**	P	**Pn**	**15 33 04.3**	**-1.2**
JMK	**Ichinoseki**	**7.68**	**348**	P	**Pn**	**15 33 15.8**	**-1.4**
JNU	**Nakatsue**	**10.56**	**282**	Pn	Pn	15 33 59.6	+2.9
ERM	**Erimo**	**10.56**	**360**	P	**Pn**	**15 33 53.0**	**-3.7**
ERM	**Erimo**	**10.56**	**360**	Pn	**Pn**	**15 33 53.0**	**-3.7**
JCH	**Churui**	**11.16**	**1**	P	**Pn**	**15 34 02.8**	**-2.2**
JCH				*eS*	Sn	15 35 59.8	-8.7
NMR	**Nemuro--Hokkai**	**12.09**	**9**	P	**Pn**	**15 34 16.9**	**-0.7**
ASAJ	**Asahikawa**	**12.67**	**358**	Pn	**Pn**	**15 34 24.6**	**-1.0**
	0.7nm,0.3s,baz=225,slow=13,SNR=12						
ASAJ				Sn	**Sn**	**15 36 39.6**	**-5.8**
	0.2nm,0.3s,baz=261,slow=19,SNR=2.8						
ASAJ				LR	LR	15 40 52.1	
	comp=Z,22nm,20.9s,baz=184,slow=44						
JKA	**Kamikawa-asahi**	**12.67**	**358**		**Pn**	**15 34 24.6**	**-1.0**
JKA					**Sn**	**15 36 39.6**	**-5.8**
SHO	**Shikotan**	**12.75**	**12**	*eP*	**Pn**	**15 34 26.4**	**-0.2**
JOW	**Kunigami**	**13.81**	**254**	P	P	15 34 53.8	+4.6
KSRS	**Korea Array**	**13.95**	**300**	Pn	**Pn**	**15 34 43.9**	**+0.8**
	0.2nm,0.3s,baz=110,slow=14,SNR=7.1						
KSRS				LR	LR	15 41 23.3	
	comp=Z,30nm,18.2s,baz=135,slow=43						
KS19	**Wonju Array Si**	**14.01**	**300**	Pn	P	15 34 46.3	-5.0
SARN	**Sarigan**	**14.85**	**170**		**P**	**15 34 57.2**	**-3.6**
USA0B	**Ussuriysk Arra**	**15.50**	**328**	P	**Pn**	**15 35 02.5**	**-1.3**
USA0B				pmax	pmax		
	comp=Z,53nm,2.0s						
USA0B	**Ussuriysk Arra**	**15.50**	**328**	Pn	**Pn**	**15 35 02.5**	**-1.3**
YSS	**Yuzh-Sakhalins**	**15.51**	**359**	*eP*	**Pn**	**15 35 01.3**	**-2.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**15.51**	**359**	Pn	**Pn**	**15 35 00.9**	**-3.0**
YSS				IAmb	IAmb	15 35 47.2	
	comp=Z,87nm,1.9s						
KLR	**Kul'dur**	**19.76**	**337**	P	**Pn**	**15 35 57.2**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=3.4						
NJ2	**Nanjing**	**20.70**	**278**	*eP*	Pn	15 36 07.1	-0.5
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TPUB	**Ta-pu**	**21.58**	**254**	P	**P**	**15 36 15.6**	**+1.0**
TPUB				IAmb	IAmb	15 36 36.3	
	comp=Z,87nm,1.5s						
KNMB	**Chin-men Tao**	**22.95**	**259**	P	**P**	**15 36 29.9**	**+0.7**
BJI	**Beijing**	**23.48**	**299**	P	**P**	**15 36 33.8**	**-0.6**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BJT	**Baijiatuau**	**23.48**	**299**	P	**P**	**15 36 33.3**	**-1.1**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BJT	**Baijiatuau**	**23.48**	**299**	P	**P**	**15 36 33.3**	**-1.1**
WHN	**Wuhan**	**24.71**	**276**	P	**P**	**15 36 45.6**	**-0.3**
ZEA	**Zeya**	**25.08**	**337**	*eP*	**P**	**15 36 49.8**	**+0.8**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC	**Hu-ho-hao-te**	**27.09**	**299**	*eP*	**P**	**15 37 08.4**	**+0.9**
HHC				sP	pwP	15 37 24.1	+0.5
HHC				S	**S**	**15 41 46.8**	**+3.5**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,61nm,5.8s						
XAN	**Xi'an**	**28.87**	**284**	P	**P**	**15 37 21.6**	**-1.7**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN	**Xi'an**	**28.87**	**284**	P	**P**	**15 37 23.3**	**0.0**
XAN				pmax	pmax		
	comp=Z,28nm,1.9s						
XAN	**Xi'an**	**28.87**	**284**	P	**P**	**15 37 23.3**	**0.0**
XAN				IAmb	IAmb	15 37 29.8	
	comp=Z,28nm,1.9s						
ULN	**Ulaanbaatar**	**31.95**	**311**	P	**P**	**15 37 51.8**	**+1.3**
ULN				pmax	pmax		
	comp=Z,17nm,1.8s						
ULN	**Ulaanbaatar**	**31.95**	**311**	P	**P**	**15 37 51.8**	**+1.3**
ULN				IAmb	IAmb	15 37 57.9	
	comp=Z,17nm,1.8s						
SEY	**Seymchan**	**32.06**	**8**	P	**P**	**15 37 53.7**	**+2.6**
	comp=Z,1.1nm,0.6s,baz=252,slow=20,SNR=3.5						
SONM	**Songino Array**	**32.36**	**311**	P	**P**	**15 37 55.8**	**+1.7**
	comp=Z,0.9nm,0.6s,baz=128,slow=9.6,SNR=8.5						
LZH	**Lanzhou**	**32.88**	**289**	*eP*	**P**	**15 37 59.0**	**+0.2**
LZH				pP	pwP	15 38 10.6	-4.5
LZH				sP	sP	15 38 13.4	+2.8
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,63nm,4.9s						
CD2	**Chengdu**	**33.62**	**280**	*eP*	**P**	**15 38 05.5**	**+0.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KMI	**Kunming**	**36.02**	**270**	P	P	15 38 31.8	+5.6
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BILL	**Bilibino**	**39.05**	**14**	P	**P**	**15 38 53.6**	**+2.6**
BILL				pmax	pmax		
	comp=Z,4.0nm,2.8s						
CHTO	**Chiang Mai**	**41.72**	**263**	P	**P**	**15 39 11.4**	**-2.3**
CHTO				pmax	pmax		
	comp=Z,5.0nm,2.0s						
CMAR	**Chiang Mai Arr**	**41.88**	**263**	P	**P**	**15 39 12.7**	**-2.3**
	comp=Z,0.3nm,0.3s,baz=61,slow=7.3,SNR=3.4						
CMAR				LR	LR	16 00 35.1	
	comp=Z,16nm,18.2s,baz=105,slow=42						
WMQ	**Urumqi**	**44.88**	**302**	*eP*	**P**	**15 39 40.8**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,11nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,25nm,3.7s						
WMQ				LR	LR		
	comp=Z,730nm,29.3s						
WMQ				LR	LR		
	comp=Z,750nm,28.8s						
COEN	**Coen**	**45.13**	**180**	P	**P**	**15 39 41.6**	**+0.5**
COEN				IAmb	IAmb	15 41 04.4	
	comp=Z,37nm,1.9s						
MTN	**Manton Dam**	**45.52**	**197**	P	**P**	**15 39 42.6**	**-1.6**
ZALV	**Zalesovo Beam**	**46.88**	**316**	P	**P**	**15 39 54.0**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=87,slow=9.1,SNR=3.8						
ZALV				PcP	**PcP**	**15 41 26.4**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=114,slow=3.6,SNR=3.7						
MK31	**Makanchi Array**	**48.49**	**307**	P	**P**	**15 40 08.4**	**+1.2**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	**Makanchi Array**	**48.49**	**307**	P	**P**	**15 40 08.4**	**+1.2**
MKAR	**Makanchi Array**	**48.49**	**307**	P	**P**	**15 40 06.5**	**-0.7**
	comp=Z,2.5nm,0.6s,baz=90,slow=8.5,SNR=34						
MAKZ	**Makanchi**	**48.71**	**307**	P	**P**	**15 40 09.7**	**+0.9**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MAKZ	**Makanchi**	**48.71**	**307**	P	**P**	**15 40 09.7**	**+0.9**
MAKZ				IAmb	IAmb	15 40 13.9	
	comp=Z,2.8nm,0.6s						
PBA	**Port Blair**	**50.40**	**259**	P	P	15 40 25.0	+3.0
KURK	**Kurchatov**	**50.66**	**312**	P	**P**	**15 40 24.3**	**+0.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	**Kurchatov**	**50.66**	**312**	P	**P**	**15 40 24.3**	**+0.7**
SPU	**Mount Spurr**	**50.91**	**34**	P	P	15 40 20.0	-5.4
WB0	**Warramunga Arr**	**51.60**	**191**	P	**P**	**15 40 29.3**	**-1.6**
WB0				IAmb	IAmb	15 41 55.0	
	comp=Z,28nm,2.0s						
WR0	**Warramunga Arr**	**51.77**	**190**	P	**P**	**15 40 30.6**	**-1.6**
WR0				IAmb	IAmb	15 40 45.8	
	comp=Z,18nm,1.8s						
WB2	**Warramunga Arr**	**51.78**	**191**	P	**P**	**15 40 31.0**	**-1.2**
WB2				IAmb	IAmb	15 41 07.0	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**51.78**	**191**	P	**P**	**15 40 29.9**	**-2.4**
	comp=Z,1.7nm,0.8s,baz=7.7,slow=7.6,SNR=7.4						
SML	**Sawmill**	**52.73**	**34**	P	P	15 40 33.6	-5.4
ILAR	**Eielson Array**	**53.52**	**30**	P	**P**	**15 40 44.8**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=267,slow=7.4,SNR=5.7						
EYAK	**Cordova Ski Ar**	**53.97**	**35**	P	P	15 40 42.2	-5.8
KSH	**Kashi**	**54.20**	**298**	P	P	15 40 54.9	+4.7
KSH				pP	pwP	15 41 02.4	-4.2
KSH				S	**S**	**15 48 31.1**	**+6.0**
KSH				sS	sS	15 48 47.0	+7.7
KSH				SS	**SS**	**15 52 13.4**	**+6.5**
KSH				pmax	pmax		
	comp=Z,21nm,0.6s						
KSH				pmax	pmax		
	comp=Z,330nm,4.2s						
KSH				LR	LR		
	comp=Z,300nm,4.4s						
KSH				LR	LR		
	comp=Z,280nm,4.4s						
KSH				LR	LR		
	comp=Z,440nm,5.1s						
FYU	**Fort Yukon**	**54.29**	**28**	P	P	15 40 44.4	-5.9
GLB	**Gilahina Butte**	**54.89**	**34**	P	**P**	**15 40 50.6**	**-4.1**
MCARA	**McCarthy VSAT**	**55.27**	**34**	P	**P**	**15 40 54.1**	**-3.3**
ASAR	**Alice Springs**	**55.50**	**190**	P	**P**	**15 40 57.4**	**-2.1**
	comp=Z,0.4nm,0.5s,baz=15,slow=14,SNR=11						
BRVK	**Borovoye**	**55.57**	**316**	P	**P**	**15 41 01.2**	**+1.5**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.7s						
BRVK	**Borovoye**	**55.57**	**316**	P	**P**	**15 41 01.1**	**+1.5**
BRVK				IAmb	IAmb	15 41 02.2	
	comp=Z,8.7nm,1.6s						
PSAC2	**Pilbara Seismi**	**57.23**	**206**	P	**P**	**15 41 11.4**	**-0.4**
PSAC1	**Pilbara Seismi**	**57.23**	**206**	P	**P**	**15 41 11.3**	**-0.5**
PSAB1	**Pilbara Seismi**	**57.26**	**206**	P	**P**	**15 41 11.7**	**-0.4**
INK	**Inuvik**	**58.74**	**26**	P	**P**	**15 41 24.5**	**+2.6**
	comp=Z,1.9nm,0.9s,baz=272,slow=3.9,SNR=4.4						
CHGR	**Chuyangaron**	**59.54**	**299**	P	**P**	**15 41 28.7**	**+0.6**
ARU	**Arti**	**61.58**	**321**	P	**P**	**15 41 42.1**	**+0.6**
ABKAR	**Akbulak array**	**62.75**	**313**	P	**P**	**15 41 49.2**	**-0.2**
RES	**Resolute Bay**	**67.66**	**14**	P	**P**	**15 42 22.4**	**+1.6**
GEYT	**Alibeck**	**67.93**	**302**	LR	LR	16 15 15.4	
	comp=Z,33nm,18.3s,baz=325,slow=39						
YKA	**Yellowknife Ar**	**67.94**	**29**	P	**P**	**15 42 24.8**	**+2.0**
	comp=Z,0.4nm,0.4s,baz=292,slow=6.3,SNR=8.7						
APA	**Apatity**	**68.40**	**337**	⇑*iP*	**P**	**15 42 21.1**	**-4.5**
APA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ARCES	**ARCESS Array B**	**69.75**	**341**	P	**P**	**15 42 35.4**	**+1.4**
	comp=Z,2.6nm,0.9s,baz=64,slow=7.3,SNR=3.2						
FINES	**FINESS Array B**	**74.46**	**334**	P	**P**	**15 43 03.4**	**+1.2**
	comp=Z,4.9nm,1.1s,baz=60,slow=8.2,SNR=2.6						
NVAR	**Mina Array Bea**	**77.18**	**53**	P	P	15 43 21.6	+3.1
	comp=Z,1.5nm,0.7s,baz=291,slow=5.8,SNR=13						
FFC	**Flin Flon**	**77.62**	**33**	P	**P**	**15 43 22.9**	**+2.5**
AKASG	**Malin Array Be**	**79.65**	**324**	P	**P**	**15 43 32.4**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=51,slow=5.6,SNR=3.8						
NB2	**NORSAR Subarra**	**79.92**	**338**	P	**P**	**15 43 33.7**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=40,slow=5.3						
NOA	**NORSAR Array B**	**79.92**	**338**	P	**P**	**15 43 33.5**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=45,slow=4.5,SNR=3.8						
PDAR	**Pinedale Array**	**80.54**	**45**	P	**P**	**15 43 38.1**	**+1.2**
	comp=Z,0.5nm,0.7s,baz=294,slow=1.5,SNR=5.5						
BRTR	**Keskin Array B**	**83.70**	**313**	P	**P**	**15 43 54.9**	**+1.4**
	comp=Z,1.0nm,0.8s,baz=73,slow=4.3,SNR=4.8						
RAYN	**Ar Rayn**	**84.20**	**294**	P	**P**	**15 43 56.9**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RAYN	**Ar Rayn**	**84.20**	**294**	P	**P**	**15 43 56.9**	**+0.7**
RAYN				IAmb	IAmb	15 43 58.9	
	comp=Z,3.2nm,0.8s						
VYHS	**Vyhne**	**86.18**	**327**	*eP*	**P**	**15 44 07.6**	**+2.0**
VYHS	**Vyhne**	**86.18**	**327**	*eP*	**P**	**15 44 07.6**	**+2.0**
TXAR	**Lajitas Array**	**92.32**	**53**	P	P	15 44 37.3	+2.3
	comp=Z,0.4nm,0.7s,baz=225,slow=1.6,SNR=4.3						
LPAZ	**La Paz**	**147.78**	**69**	PKPbc	**PKPab**	**15 51 11.6**	**-1.3**
	comp=Z,1.7nm,0.8s,baz=350,slow=4.1,SNR=6.2						

*SOME **22** 15:39:25.5,41.°82N×76.°55E,h10km*

*KRNET **22** 15:39:25.2±0.1,41.°79N×76.°58E,h18km,mb3.0*

*NNC **22** 15:39:25.9±0.6,41.°83N×76.°60E,h0km,mb3.9,mpv3.7, Error ellipse: s-maj=3.7km s-min=2.3km az=162.0*

*KNET **22** 15:39:27.6±0.5,41.°83N×76.°38E,h6km±2km,ml2.4,Error ellipse: s-maj=3.2km s-min=2.7km az=159.0*

ISC 22 15:39:26.1±1.1,**41.°85N**±0.°03×**76.°56E**±0.°02,**h7**km±9km, **n75,** σ1**9**06/132,**44C-25D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**0.46**	**330**	⇓*iP*	**Pg**	**15 39 35.5**	**+0.3**
	baz=31						
ULHL				⇓*iS*	**Sb**	**15 39 42.9**	**-1.0**
	baz=31						
ULHL	**Ulahol**	**0.46**	**330**	P	**Pg**	**15 39 35.6**	**+0.4**
	44nm,0.1s,SNR=357						
ULHL				⇑*iS*	**Sb**	**15 39 43.0**	**-1.0**
	300nm,0.2s						
KDJ	**Kajisay**	**0.55**	**58**	⇓*iP*	**Pg**	**15 39 36.0**	**-0.7**
	baz=53						
KDJ				⇓*iS*	**Sg**	**15 39 43.9**	**0.0**
	baz=53						
NRN	**Naryn**	**0.59**	**226**	⇓*iP*	**Pg**	**15 39 36.5**	**-1.0**
	baz=32						
NRN				⇓*iS*	**Sg**	**15 39 44.6**	**-0.6**
	baz=32						
BOOM	**Boomskoye usch**	**0.79**	**325**	⇓*iP*	**Pg**	**15 39 41.3**	**-0.1**
	baz=26						
BOOM				⇓*iS*	**Sb**	**15 39 53.0**	**-0.3**
	baz=26						
KZA	**Kyzart**	**1.00**	**284**	⇑*iP*	**Pg**	**15 39 44.5**	**-0.9**
	baz=87						
KZA				⇑*iS*	**Sg**	**15 39 58.7**	**+0.3**
	baz=87						
KZA	**Kyzart**	**1.00**	**284**	P	**Pg**	**15 39 44.7**	**-0.7**
	105nm,0.3s,SNR=185						
KZA				⇑S	**Sg**	**15 39 58.3**	**-0.2**
	70nm,0.2s						
IZV	**Izvestkoviy**	**1.19**	**2**	⇓*iP*	**Pb**	**15 39 48.5**	**-0.7**
	62nm,0.3s						
IZV				*eS*	**Sn**	**15 40 05.6**	**-0.3**
	95nm,0.2s						
IZV	**Izvestkoviy**	**1.19**	**2**	P	**Pb**	**15 39 48.5**	**-0.7**
	62nm,0.3s						
IZV				S	**Sg**	**15 40 05.0**	**+0.5**
	95nm,0.2s						
TNSS	**Tian-Shan**	**1.23**	**14**	⇓*iP*	**Pb**	**15 39 49.1**	**-0.8**
	60nm,0.2s						
TNSS				⇓*iS*	**Sn**	**15 40 06.2**	**-0.8**
	39nm,0.3s						
TNSS	**Tian-Shan**	**1.23**	**14**	P	**Pb**	**15 39 49.1**	**-0.8**
	60nm,0.2s						
TNSS				S	**Sn**	**15 40 06.2**	**-0.8**
	39nm,0.3s						
ANVS	**Anan'yevo**	**1.25**	**41**	⇓*iP*	**Pn**	**15 39 49.2**	**-1.0**
	baz=38						
ANVS				⇓*iS*	**Sn**	**15 40 06.2**	**-1.1**
	baz=38						
KST	**Kastek**	**1.27**	**340**	⇓*iP*	**Pn**	**15 39 50.2**	**-0.3**
	34nm,0.2s						
KST				⇓*iS*	**Sn**	**15 40 08.1**	**+0.2**
	85nm,0.2s						
KST	**Kastek**	**1.27**	**340**	P	**Pn**	**15 39 50.2**	**-0.3**
	34nm,0.2s						
KST				S	**Sn**	**15 40 08.1**	**+0.2**
	85nm,0.2s						
MTBS	**Maitube**	**1.29**	**356**	⇓*iP*	**Pn**	**15 39 50.2**	**-0.4**
	33nm,0.3s						
MTBS				⇓*iS*	**Sg**	**15 40 08.0**	**+0.4**
	108nm,0.3s						
MTBS	**Maitube**	**1.29**	**356**	P	**Pn**	**15 39 50.2**	**-0.4**
	33nm,0.3s						
MTBS				S	**Sg**	**15 40 08.0**	**+0.4**
	108nm,0.3s						
MDOK	**Medeo**	**1.37**	**15**	⇑*iP*	**Pn**	**15 39 51.4**	**-0.4**
	86nm,0.3s						
MDOK				⇓*iS*	**Sg**	**15 40 10.1**	**0.0**
	24nm,0.4s						
MDOK	**Medeo**	**1.37**	**15**	⇑P	**Pn**	**15 39 51.3**	**-0.5**
	29nm,0.3s						
MDOK				S	**Sn**	**15 40 09.5**	**-0.7**
	20nm,0.6s						
MDOK	**Medeo**	**1.37**	**15**	Pg	**Pn**	**15 39 51.4**	**-0.4**
	86nm,0.3s						
MDOK				Lg	Lg	15 40 10.1	
	24nm,0.4s						
AAA	**Alma-Ata**	**1.39**	**11**	*eP*	**Pb**	**15 39 52.1**	**-0.3**
	42nm,0.3s						
AAA				*eS*	**Sg**	**15 40 11.2**	**+0.4**
	29nm,0.2s						
AAA	**Alma-Ata**	**1.39**	**11**	P	**Pb**	**15 39 52.1**	**-0.3**
	42nm,0.3s						
AAA				S	**Sg**	**15 40 11.2**	**+0.4**
	29nm,0.2s						
KNDC	**Almaty**	**1.40**	**12**	⇑*iP*	**Pb**	**15 39 52.4**	**-0.3**
	24nm,0.5s						
KNDC				⇑S	**Sg**	**15 40 12.3**	**+1.0**
	45nm,0.3s						
KBK	**Karagaybulak**	**1.44**	**305**	⇑*iP*	**Pb**	**15 39 53.0**	**-0.4**
	baz=6.0						
KBK				⇑*iS*	**Sg**	**15 40 12.9**	**+0.3**
	baz=6.0						
KBK	**Karagaybulak**	**1.44**	**305**	P	**Pb**	**15 39 53.4**	**-0.1**
	13nm,0.1s,SNR=

KTBS	**Karatobe**	**1.87**	**3**	⇑*i*P		**Pb**	**15 40 00.8**	**+0.2**
	14nm,0.2s							
KTBS				⇓*i*S		**Sg**	**15 40 26.3**	**+0.1**
	201nm,0.4s							
KTBS	**Karatobe**	**1.87**	**3**	Pg		**Pb**	**15 40 00.8**	**+0.2**
	14nm,0.2s							
KTBS				Lg		Lg	15 40 26.3	
	201nm,0.4s							
ZHN	**Zhinishke**	**1.92**	**46**	*e*P		**Pb**	**15 40 00.5**	**-1.1**
	39nm,0.2s							
ZHN				*e*S		**Sb**	**15 40 25.4**	**-0.3**
	113nm,0.2s							
ZHN	**Zhinishke**	**1.92**	**46**	P		**Pb**	**15 40 00.4**	**-1.1**
	39nm,0.2s							
ZHN				S		**Sb**	**15 40 25.4**	**-0.3**
	113nm,0.2s							
KRBS	**Karabastau**	**1.96**	**341**	*e*P		**Pb**	**15 40 02.5**	**+0.3**
	24nm,0.3s							
KRBS				*e*S		**Sg**	**15 40 29.1**	**0.0**
	33nm,0.3s							
KRBS	**Karabastau**	**1.96**	**341**	Pg		**Pb**	**15 40 02.5**	**+0.3**
	24nm,0.3s							
KRBS				Lg		Lg	15 40 29.1	
	33nm,0.3s							
CHKK	**Chushkaly**	**2.03**	**9**	*e*P		**Pb**	**15 40 03.2**	**-0.2**
	29nm,0.2s							
CHKK				*e*S		**Sg**	**15 40 30.1**	**-1.3**
	58nm,0.3s							
CHKK	**Chushkaly**	**2.03**	**9**	Pg		**Pb**	**15 40 03.2**	**-0.2**
	29nm,0.2s							
CHKK				Lg		Lg	15 40 30.1	
	58nm,0.3s							
KUU	**Kurty**	**2.05**	**356**	*e*P		**Pb**	**15 40 03.9**	**+0.1**
	14nm,0.2s							
KUU				*e*S		**Sg**	**15 40 31.5**	**-0.6**
	85nm,0.3s							
KUU	**Kurty**	**2.05**	**356**	Pg		**Pb**	**15 40 03.9**	**+0.1**
	14nm,0.2s							
KUU				Lg		Lg	15 40 31.5	
	85nm,0.3s							
USP	**Ospenovka**	**2.08**	**314**	⇑*i*P		**Pb**	**15 40 03.2**	**-1.0**
	baz=15							
USP				⇑*i*S		**Sb**	**15 40 30.1**	**-0.2**
	baz=15							
USP	**Ospenovka**	**2.08**	**314**	⇑P		**Pb**	**15 40 04.5**	**+0.2**
	8.7nm,0.2s,SNR=17							
SGDS	**Sogindy**	**2.14**	**319**	Pg		**Pb**	**15 40 05.9**	**+0.6**
	8.2nm,0.3s							
SGDS				Lg		Lg	15 40 35.1	
	30nm,0.5s							
AML	**Almayashu**	**2.15**	**279**	⇑*i*P		**Pb**	**15 40 04.2**	**-1.5**
	baz=80							
AML				⇑*i*S		**Sb**	**15 40 31.8**	**-0.9**
	baz=80							
AML	**Almayashu**	**2.15**	**279**	P		**Pb**	**15 40 05.2**	**-0.4**
	9.1nm,0.2s,SNR=44							
EKS2	**Erkin-Say**	**2.22**	**292**	⇑*i*P		**Pb**	**15 40 05.0**	**-1.6**
	baz=94							
EKS2				⇑*i*S		**Sb**	**15 40 33.5**	**-0.8**
	baz=94							
EKS2	**Erkin-Say**	**2.22**	**292**	⇑P		**Pb**	**15 40 07.1**	**+0.5**
	6.4nm,0.2s,SNR=25							
UZB	**Uzynbulak**	**2.24**	**54**	*e*P		**Pb**	**15 40 06.2**	**-0.8**
	30nm,0.3s							
UZB				*e*S		**Sb**	**15 40 35.1**	**+0.1**
	61nm,0.3s							
UZB	**Uzynbulak**	**2.24**	**54**	Pg		**Pb**	**15 40 06.2**	**-0.8**
	30nm,0.3s							
UZB				Lg		Lg	15 40 35.1	
	61nm,0.3s							
KPKS	**Kokpek**	**2.25**	**43**	*e*P		**Pb**	**15 40 06.6**	**-0.7**
	39nm,0.4s							
KPKS				*e*S		**Sb**	**15 40 36.2**	**+0.8**
	218nm,0.4s							
SHLS	**Shalkode**	**2.52**	**58**	*e*P		**Pg**	**15 40 16.1**	**+1.7**
	14nm,0.3s							
SHLS				*e*S		**Sg**	**15 40 52.2**	**+5.2**
	105nm,0.6s							
SHLS	**Shalkode**	**2.52**	**58**	Pg		**Pg**	**15 40 16.1**	**+1.7**
	14nm,0.3s							
SHLS				Lg		Lg	15 40 52.2	
	105nm,0.6s							
ARXS	**Arharly**	**2.54**	**21**	*e*P		**Pb**	**15 40 12.5**	**+0.4**
	11nm,0.3s							
ARXS				*e*S		**Sg**	**15 40 46.1**	**-1.7**
	18nm,0.6s							
ARXS	**Arharly**	**2.54**	**21**	Pg		**Pb**	**15 40 12.5**	**+0.4**
	11nm,0.3s							
ARXS				Lg		Lg	15 40 46.1	
	18nm,0.6s							
PDGK	**Podgornoye**	**2.62**	**55**	Pg		**Pb**	**15 40 13.0**	**-0.6**
	3.1nm,0.2s							
PDGK				Lg		Lg	15 40 47.2	
	37nm,0.8s							
PDGK	**Podgornoye**	**2.62**	**55**	⇑Pg		**Pn**	**15 40 10.4**	**+1.4**
	3.8nm,0.4s							
PDGK				⇓Lg		Lg	15 40 47.0	
	47nm,0.5s							
MRKS	**Merke**	**2.63**	**291**	*e*P		**Pb**	**15 40 14.4**	**+0.8**
	13nm,0.4s							
MRKS				*e*S		**Sg**	**15 40 49.4**	**-1.2**
	24nm,0.2s							
MRKS	**Merke**	**2.63**	**291**	Pg		**Pb**	**15 40 14.4**	**+0.8**
	13nm,0.4s							
MRKS				Lg		Lg	15 40 49.4	
	24nm,0.2s							
ARSB	**Arslanbob**	**2.73**	**260**	⇑*i*P		**Pn**	**15 40 11.7**	**+1.2**
	baz=62							
ARSB				⇑*i*S		**Sn**	**15 40 45.1**	**+1.2**
	baz=62							
DJR	**Jarkent**	**3.43**	**43**	*e*P		**Pb**	**15 40 27.8**	**+0.5**
	2.5nm,0.3s							
DJR				*e*S		**Sg**	**15 41 12.3**	**-4.1**
	13nm,0.3s							
DJR	**Jarkent**	**3.43**	**43**	Pg		**Pb**	**15 40 27.8**	**+0.5**
	2.5nm,0.3s							
DJR				Lg		Lg	15 41 12.3	
	13nm,0.3s							
BTLS	**Baital**	**3.68**	**331**	*e*P		**Pb**	**15 40 32.8**	**+1.3**
	1.0nm,0.4s							
BTLS				*e*S		**Sg**	**15 41 20.8**	**-3.5**
	11nm,0.3s							
KAPS	**Kapalarasan**	**4.00**	**30**	*e*P		**Pb**	**15 40 39.2**	**+2.4**
	6.2nm,0.4s							
KAPS				*e*S		**Sg**	**15 41 31.9**	**-2.5**
	6.0nm,0.4s							
KAPS	**Kapalarasan**	**4.00**	**30**	Pg		**Pb**	**15 40 39.2**	**+2.4**
	6.2nm,0.4s							
KAPS				Lg		Lg	15 41 31.9	
	6.0nm,0.4s							
KK31	**Karatay Array**	**4.64**	**288**	⇑Pg		**Pb**	**15 40 51.2**	**+3.3**
	0.3nm,0.3s,baz=100,slow=15,SNR=6.1							
KK31				⇑Lg		Lg	15 41 52.9	
	1.7nm,0.3s,baz=92,slow=28,SNR=8.1							

IDC 22 16:00:59.5±6.0, 31°.44S×76°.77E, h0km, mb3.5/3, mb1 3.6/3, mb1mx3.4/28, mbtmp3.5/3, MS3.3/5, Ms1 3.3/5, ms1mx3.0/26, Error ellipse: s-maj=217.0km s-min=42.4km az=40.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**24.00**	**350**	T	T	16 31 18.9	
	baz=172,slow=76,SNR=81						
H08S1	**Diego Carcia H**	**24.01**	**349**	T	T	16 31 19.3	
	baz=172,slow=76,SNR=42						
H08S3	**Diego Garcia H**	**24.02**	**350**	T	T	16 31 20.5	
	baz=172,slow=76,SNR=186						
H01W2	**Cape Leeuwin H**	**31.35**	**107**	T	T	16 40 04.1	
	baz=265,slow=74,SNR=11						
H01W3	**Cape Leeuwin H**	**31.35**	**106**	T	T	16 40 06.3	
	baz=265,slow=74,SNR=14						
H01W1	**Cape Leeuwin H**	**31.36**	**106**	T	T	16 40 05.1	
	baz=265,slow=74,SNR=16						
BOSA	**Boshof**	**44.36**	**260**	LR	LR	16 25 01.3	
	comp=Z,30nm,20.0s,baz=116,slow=32						
FITZ	**Fitzroy Crossi**	**45.97**	**85**	LR	LR	16 24 31.1	
	comp=Z,40nm,19.1s,baz=281,slow=31						
ASAR	**Alice Springs**	**50.77**	**96**	P	P	16 10 01.6	-0.1
	0.4nm,0.8s,baz=238,slow=6.7,SNR=7.3						
STKA	**Stephens Creek**	**54.40**	**109**	LR	LR	16 30 59.6	
	comp=Z,27nm,18.6s,baz=24,slow=33						
PMG	**Port Moresby**	**68.45**	**88**	LR	LR	16 39 11.9	
	comp=Z,32nm,21.3s,baz=280,slow=34						
MKAR	**Makanchi Array**	**78.03**	**4**	P	P	16 12 59.8	+0.2
	0.1nm,0.5s,baz=193,slow=5.9,SNR=3.1						
IDI	**Anoyia**	**82.35**	**320**	LR	LR	16 44 13.7	
	comp=Z,17nm,19.4s,baz=280,slow=32						
ZALV	**Zalesovo Beam**	**85.31**	**5**	P	P	16 13 37.5	-0.3
	0.4nm,0.4s,baz=204,slow=3.2,SNR=2.2						
YKA	**Yellowknife Ar**	**148.07**	**10**	PKPbc	PKPbc	16 20 45.8	-0.5
	0.3nm,0.7s,baz=331,slow=3.8,SNR=3.9						

DDA 22 16:16:58.6, 35°.73N×31°.55E, h7km±2km, ML2.0
ISK 22 16:17:00.7, 35°.64N×31°.73E, h8km, ML2.5/13
NIC 22 16:17:01.8±0.0, 35°.65N×31°.72E, h22km, Ml2.5/3

ISC 22 16:16:59.5±1.9, 35°.66N±0°.04×31°.62E±0°.08, h11km±11km, n21, σ1s16/30, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.80**	**44**	PG	**Pb**	**16 17 15.9**	**+0.4**
GAZI				SG	**Sb**	**16 17 26.9**	**+0.5**
GAZI	**Gazipasa**	**0.80**	**44**	*i* P	**Pb**	**16 17 16.0**	**+0.5**
GAZI				*i* S	**Sg**	**16 17 25.4**	**-0.2**
GAZI				IAML		16 17 29.0	
	comp=N,70nm,0.6s						
GAZI				IAML		16 17 29.0	
	comp=E,66nm,0.7s						
AKMS	**Akamas**	**0.87**	**138**	P	**Pg**	**16 17 16.4**	**+0.1**
AKMS				S	**Sb**	**16 17 29.1**	**+0.8**
AKMS				AML	AML	16 17 32.1	
	comp=E,0.5nm,0.2s						
AKMS				AML	AML	16 17 32.1	
	comp=E,0.5nm,0.2s						
AKMS				AML	AML	16 17 32.6	
	comp=E,1.0nm,0.3s						
AKMS				AML	AML	16 17 32.6	
	comp=E,1.0nm,0.3s						
ALFC	**Alefka**	**0.95**	**122**	P	**Pb**	**16 17 18.6**	**+0.6**
ALFC				S	**Sn**	**16 17 31.1**	**-1.2**
ALFC				AML	AML	16 17 37.2	
	comp=E,0.9nm,0.3s						
ALFC				AML	AML	16 17 37.2	
	comp=E,0.9nm,0.3s						
ALFC				AML	AML	16 17 37.8	
	comp=E,0.8nm,0.2s						
ALFC				AML	AML	16 17 37.8	
	comp=E,0.8nm,0.2s						
LEF	**Lefka**	**1.17**	**117**	PG	**Pg**	**16 17 21.3**	**-0.7**
LEF				SG	**Sb**	**16 17 36.4**	**-0.5**
LEF	**Lefka**	**1.17**	**117**	*i* P	**Pg**	**16 17 21.6**	**-0.4**
LEF				*i* S	**Sb**	**16 17 36.3**	**-0.6**
LEF				IAML		16 17 44.0	
	comp=N,60nm,0.6s						
LEF				IAML		16 17 44.0	
	comp=E,48nm,0.4s						
KEPZ	**Antalya-Kepez**	**1.24**	**359**	*i* P	**Pn**	**16 17 21.1**	**-1.7**
KEPZ				*i* S	**Sb**	**16 17 37.5**	**-1.4**
KEPZ				IAML		16 17 41.0	
	comp=E,30nm,0.7s						
KEPZ				IAML		16 17 42.0	
	comp=N,18nm,0.3s						
TEKE	**Tekeli-Mersin**	**1.30**	**68**	PN	**Pn**	**16 17 23.7**	**0.0**
BERE	**Bereket-Mersin**	**1.47**	**62**	PN	**Pb**	**16 17 27.1**	**+0.2**
BERE				SN	**Sg**	**16 17 46.4**	**-0.4**
CSS	**Mathiatis**	**1.56**	**116**	PN	**Pn**	**16 17 28.1**	**+0.8**
AKKU	**Akkuyu-Mersin**	**1.64**	**72**	PN	**Pn**	**16 17 29.3**	**+1.0**
GULN	**MERSIN_Gulnar**	**1.65**	**71**	*i* P	**Pb**	**16 17 30.4**	**+0.6**
GULN				IAML		16 17 57.0	
	comp=N,23nm,0.6s						
GULN				IAML		16 18 01.0	
	comp=E,23nm,0.3s						
TEVE	**Tevekalti-Mers**	**1.67**	**62**	PN	**Pb**	**16 17 30.2**	**-0.1**
MVOU	**Mavrovouni**	**1.77**	**111**	P	**Pn**	**16 17 29.9**	**-0.1**
MVOU				AML	AML	16 17 50.4	
	comp=E,0.1nm,1.2s						
MVOU				AML	AML	16 17 50.4	
	comp=E,0.1nm,1.2s						
MVOU				S	**Sn**	**16 17 51.1**	**-1.4**
MVOU				AML	AML	16 17 51.5	
	comp=E,0.1nm,1.3s						
MVOU				AML	AML	16 17 51.5	
	comp=E,0.1nm,1.3s						
IKL	**Isikli**	**1.77**	**70**	PN	**Pb**	**16 17 31.5**	**-0.5**
KEBE	**Keben-Mersin**	**1.87**	**65**	PN	**Pb**	**16 17 33.2**	**-0.5**
EREN	**Erenkoy**	**2.08**	**93**	PN	**Pn**	**16 17 35.9**	**+1.5**
KIZK	**Mersin**	**2.20**	**68**	PN	**Pn**	**16 17 37.9**	**+1.9**
KIZK	**Mersin**	**2.20**	**68**	*i* P	**Pb**	**16 17 39.5**	**+0.2**
KIZK				IAML		16 18 15.0	
	comp=N,20nm,0.6s						
KIZK				IAML		16 18 23.0	
	comp=E,20nm,1.0s						
KONT	**Konya--Tatoy**	**2.35**	**14**	PN	**Pn**	**16 17 40.9**	**+2.7**
LADK	**Ladik-KONYA**	**2.60**	**13**	PN	**Pn**	**16 17 44.3**	**+2.7**

MAN 22 16:17:37.6, 9°.73N×123°.30E, h34km, mb3.9, ML2.6, MS2.2, 2C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.39**	**190**	⇑*i*P	Pn	16 17 48.0	+1.0
SNPH				*i* S	Sn	16 17 55.5	+2.4
GUIM	**Jordan**	**1.13**	**322**	*e*P	Pn	16 17 57.6	+0.5
GUIM				*e*S	Sn	16 18 11.7	+0.3
DCPH	**Dipolog City**	**1.14**	**178**	⇑*e*P	Sn	16 18 16.1	+4.4
PAGZ	**Pagadian**	**1.87**	**178**	*e*P	Pb	16 18 12.2	+0.9
PAGZ				*e*S	Sb	16 18 41.2	+6.8

IDC 22 16:21:13.4±1.7, 5°.83N×126°.22E, h173km±10km, mb3.1/4, mb1 3.2/4, mb1mx2.9/35, mbtmp3.5/4, Error ellipse: s-maj=117.8km s-min=17.0km az=68.0
MAN 22 16:21:14.0, 5°.77N×125°.79E, h156km, mb4.5, ML3.4, MS3.2

ISC 22 16:21:12.8±1.0, 5°.57N±0°.09×125°.77E±0°.09, h154km±9km, n12, σ1s14/20, mb3.3/4, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.54**	**354**	*e*P	**Pn**	**16 21 35.5**	**+0.5**
DDMP				*e*S	**Sn**	**16 21 51.9**	**+0.1**
GSPH	**General Santos**	**0.97**	**302**	⇑*i*P	**Pn**	**16 21 38.6**	**+0.7**
GSPH				*i* S	**Sn**	**16 21 56.6**	**-0.4**
MATI	**Mati**	**1.46**	**19**	*e*P	**Pn**	**16 21 41.5**	**-0.8**
MATI				*e*S	**Sn**	**16 22 03.6**	**-1.4**
DAV	**Davao City (W)**	**1.51**	**353**	P	**Pn**	**16 21 42.5**	**-0.3**
	40nm,0.3s,baz=243,slow=2.3,SNR=2.5						
DAV				S	**Sn**	**16 22 07.3**	**+1.4**
	71nm,0.3s,baz=242,slow=15,SNR=9.6						
SKMP	**Bagumbayan, Su**	**1.54**	**308**	*e*P	**Pn**	**16 21 42.4**	**-0.8**
SKMP				*e*S	**Sn**	**16 22 05.2**	**-1.3**
KCP	**Kidapawan**	**1.58**	**335**	⇑*i*P	**Pn**	**16 21 44.8**	**+1.1**
KCP				*e*S	**Sn**	**16 22 06.9**	**-0.5**
CTBH	**Cotabato--PC H**	**2.23**	**317**	*e*P	**Pn**	**16 21 51.4**	**+0.4**
CTBH				*i* S	**Sn**	**16 22 19.7**	**-0.7**
BUKP	**Musuan**	**2.40**	**343**	*e*P	**Pn**	**16 21 53.4**	**+0.3**
BUKP				*e*S	**Sn**	**16 22 27.1**	**+2.9**
FITZ	**Fitzroy Crossi**	**23.51**	**180**	P	**P**	**16 26 09.6**	**+0.6**
	2.1nm,0.7s,baz=354,slow=10,SNR=4.7						
WRA	**Warramunga Arr**	**26.71**	**162**	P	**P**	**16 26 37.9**	**-0.1**
	0.4nm,1.1s,baz=345,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**30.12**	**165**	P	**P**	**16 27 08.8**	**+0.6**
	0.3nm,0.7s,baz=341,slow=7.1,SNR=6.5						
MKAR	**Makanchi Array**	**55.51**	**325**	P	**P**	**16 30 30.7**	**-1.2**
	0.2nm,0.3s,baz=120,slow=7.4,SNR=13						

IDC 22 16:28:34.1±0.8, 23°.63N×121°.59E, h0km, mb3.8/8, mb1 3.8/9, mb1mx3.6/45, mbtmp3.8/9, ML3.0/1, Error ellipse: s-maj=37.3km s-min=16.8km az=67.0
JMA 22 16:28:36.8±0.1, 23°.69N×121°.46E, h26km±3km, M3.7
BJI 22 16:28:37.2±0.0, 23°.75N×121°.44E, h8km, mb3.9/9, ML3.6/5
TAP 22 16:28:37.7, 23°.73N×121°.43E, h22km, ML4.3, C
NEIC 22 16:28:37.2±2.2, 23°.71N±0°.03×121°.44E±0°.05, h23km±6km, mb4.3/10, ML4.1(TAP), Error ellipse: s-maj=6.3km s-min=3.5km az=111.0
ASIES 22 16:28:38.6, 23°.72N×121°.38E, h20km, MW3.5

ISC 22 16:28:38.0±0.6, 23°.72N±0°.01×121°.46E±0°.02, h22km±3km, n188, σ0s95/292, mb3.8/15, 18C-32D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESL	**Shilin**	**0.10**	**346**	⇓*i*P	**Pb**	**16 28 42.0**	**-0.3**
	baz=6.0						
ESL				*i* S	**Sb**	**16 28 44.5**	**-0.8**
	baz=6.0						
ENLB	**Shoufeng**	**0.23**	**35**	⇑*i*P	**Pb**	**16 28 43.2**	**-0.6**
	baz=35						
ENLB				*e*S	**Sb**	**16 28 48.0**	**+0.3**
	baz=35						
HGSD	**Ruisui**	**0.23**	**188**	⇓P	**Pb**	**16 28 44.1**	**+0.4**
	baz=188						
HGSD				S	**Sb**	**16 28 48.7**	**+1.0**
	baz=188						
EHY	**Hungye**	**0.25**	**211**	⇓*i*P	**Pb**	**16 28 43.5**	**-0.5**
	baz=197						
EHY				S	**Sb**	**16 28 47.5**	**-0.7**
	baz=197						
HWA	**Hwalien**	**0.29**	**27**	*e*P	**Pb**	**16 28 45.0**	**+0.3**
	baz=25						
HWA				*e*S	**Sb**	**16 28 50.1**	**+0.8**
	baz=25						
VWDT	**VWDT**	**0.29**	**277**	⇑P	**Pb**	**16 28 44.4**	**-0.3**
	baz=275						
VWDT				S	**Sb**	**16 28 48.3**	**-1.0**
	baz=275						
OWD	**Renai**	**0.35**	**312**	⇓*i*P	**Pb**	**16 28 45.1**	**-0.6**
	baz=313						
OWD				*e*S	**Sb**	**16 28 49.1**	**-1.9**
	baz=313						
YULB	**Yu-li**	**0.36**	**205**	⇓P	**Pb**	**16 28 44.9**	**-0.8**
	baz=193						
YULB				S	**Sb**	**16 28 50.8**	**-0.1**
	baz=193						
YULB	**Yu-li**	**0.36**	**205**		**Pb**	**16 28 44.8**	**-0.8**
YULB				Sg	**Sb**	**16 28 50.0**	**-0.9**
TWD	**Chiawan**	**0.38**	**19**	⇑*i*P	**Pb**	**16 28 45.8**	**-0.3**
	baz=17						
TWD				*e*S	**Sb**	**16 28 51.1**	**-0.6**
	baz=17						
TWF1	**Yuli**	**0.39**	**202**	⇓*i*P	**Pb**	**16 28 45.5**	**-0.8**
	baz=197						
TWF1				S	**Sb**	**16 28 52.1**	**+0.1**
	baz=197						
CHGB	**Renai**	**0.43**	**323**	⇓P	**Pb**	**16 28 46.6**	**-0.5**
	baz=330						
CHGB				S	**Sb**	**16 28 51.6**	**-1.6**
	baz=330						
WHF	**Hehuan Shan**	**0.46**	**337**	⇓*i*P	**Pb**	**16 28 47.0**	**-0.7**
	baz=340						
WHF				S	**Sb**	**16 28 52.7**	**-1.6**
	baz=340						
SSLB	**Suanglung**	**0.47**	**279**	⇑P	**Pb**	**16 28 46.7**	**-0.9**
	baz=284						
SSLB				*e*S	**Sb**	**16 28 52.0**	**-2.2**
	baz=284						
SSLB	**Suanglung**	**0.47**	**279**		**Pb**	**16 28 46.5**	**-1.1**
NACB	**Ninganchiao**	**0.47**	**15**	⇑P	**Pb**	**16 28 46.9**	**-0.8**
	baz=18						
NACB				S	**Sb**	**16 28 53.4**	**-0.8**
	baz=18						
NACB	**Ninganchiao**	**0.47**	**15**		**Pb**	**16 28 46.3**	**-1.4**
NACB				Sg	**Sb**	**16 28 52.9**	**-1.3**
ETLH	**Xiulin Townshi**	**0.49**	**2**	⇑P	**Pb**	**16 28 47.3**	**-0.7**
	baz=4.0						
ETLH				*e*S	**Sb**	**16 28 54.0**	**-0.7**
	baz=4.0						
YUS	**Yu-Shan**	**0.52**	**244**	⇑*i*P	**Pb**	**16 28 48.5**	**-0.3**
	baz=241						
YUS				S	**Sb**	**16 28 55.1**	**-1.0**
	baz=241						
FULB	**Fuli**	**0.54**	**196**	⇓P	**Pb**	**16 28 48.4**	**-0.4**
	baz=204						
FULB				*e*S	**Sn**	**16 28 58.1**	**-0.6**
	baz=204						
SMLT	**Sun Moon Lake**	**0.54**	**288**	⇓*i*P	**Pb**	**16 28 48.1**	**-0.7**
	baz=291						
SMLT				*i* S	**Sb**	**16 28 54.6**	**-1.7**
	baz=291						
WHYT	**Xinyi Township**	**0.56**	**268**	⇑*i*P	**Pb**	**16 28 48.8**	**-0.3**
	baz=267						
WHYT				S	**Sb**	**16 28 55.5**	**-1.2**
	baz=267						
DPDB	**Guoxing**	**0.58**	**303**	⇓*i*P	**Pb**	**16 28 49.0**	**-0.6**
	baz=308						
DPDB				*e*S	**Sb**	**16 28 56.0**	**-1.4**
	baz=308						
TYC	**Yuchr**	**0.58**	**289**	⇓*i*P	**Pb**	**16 28 48.7**	**-0.8**
	baz=292						
TYC				S	**Sb**	**16 28 55.7**	**-1.7**
	baz=292						
TWT	**Tachien**	**0.59**	**334**	⇓*i*P	**Pb**	**16 28 49.7**	**-0.2**
	baz=334						
TWT				S	**Sb**	**16 28 56.6**	**-1.3**
	baz=334						
TDCB	**Techi**	**0.60**	**333**	⇓P	**Pb**	**16 28 49.7**	**-0.3**
	baz=329						
TDCB				S	**Sb**	**16 28 56.5**	**-1.6**
	baz=329						
CHKT	**Chengkung**	**0.62**	**188**	*e*P	**Pb**	**16 28 49.9**	**-0.3**
	baz=174						
CHKT				*e*S	**Sb**	**16 28 59.5**	**+1.0**
	baz=174						
ALS	**Alishan**	**0.64**	**251**	⇑P	**Pb**	**16 28 50.4**	**-0.2**
	baz=249						
ALS				S	**Sb**	**16 28 58.4**	**-0.9**
	baz=249						
ELDTW	**Lidau**	**0.67**	**218**	⇓P	**Pb**	**16 28 49.8**	**-1.2**
	baz=208						
ELDTW				*e*S	**Sb**	**16 28 59.6**	**-0.3**
	baz=208						
WJS	**Zhushan**	**0.68**	**279**	*e*P	**Pb**	**16 28 51.2**	**+0.1**
	baz=278						
WJS				S	**Sb**	**16 29 01.0**	**+0.8**
	baz=278						
NNSB	**Datong**	**0.71**	**354**	⇑P	**Pb**	**16 28 51.5**	**-0.3**
	baz=4.0						
NNSB				S	**Sb**	**16 29 00.5**	**-0.7**
	baz=4.0						
NNSH	**Datong**	**0.71**	**354**	⇑P	**Pb**	**16 28 51.5**	**-0.4**
	baz=4.0						
NNSH				*e*S	**Sb**	**16 29 00.5**	**-0.7**
	baz=4.0						
NNS	**Nan Shan**	**0.72**	**354**	⇑*i*P	**Pb**	**16 28 51.7**	**-0.3**
	baz=4.0						
NNS				S	**Sb**	**16 29 01.2**	**-0.4**
	baz=4.0						
CHN5	**Tsauling**	**0.73**	**261**	⇑*i*P	**Pb**	**16 28 52.2**	**+0.1**
	baz=251						
CHN5				S	**Sb**	**16 29 01.6**	**-0.1**
	baz=251						
WNT	**Mingjian**	**0.73**	**283**	⇓*i*P	**Pn**	**16 28 52.5**	**-0.4**
	baz=282						
WNT				S	**Sb**	**16 29 02.3**	**+0.8**
	baz=282						
WHP	**Taichung City**	**0.73**	**320**	⇓P	**Pb**	**16 28 51.7**	**-0.4**
	baz=325						
WHP				*e*S	**Sb**	**16 29 00.1**	**-1.6**
	baz=325						
ENA	**Nanau**	**0.75**	**20**	⇑*i*P	**Pb**	**16 28 51.5**	**-1.0**
	baz=22						
ENA				*e*S	**Sb**	**16 29 02.5**	**+0.3**
	baz=22						
NANB	**Nanao**	**0.76**	**20**	⇑*i*P	**Pb**	**16 28 51.4**	**-1.0**
	baz=22						
NANB				*e*S	**Sb**	**16 29 02.0**	**-0.4**
	baz=22						
WGK	**Gukeng**	**0.82**	**268**	⇓*i*P	**Pn**	**16 28 54.1**	**-0.2**
	baz=267						
WGK				S	**Sn**	**16 29 05.3**	**-0.4**
	baz=267						
**

baz=4.0
TWQ1 Liyutan 0.89 315 ⇓*i*P Pn 16 28 55.3 +0.2
baz=316
TWQ1 S Sn 16 29 07.1 -0.3
baz=316
WCHH Zhanghua 0.90 294 ⇓P Pn 16 28 55.3 0.0
baz=293
WCHH *e*S Sn 16 29 07.6 0.0
baz=293
WTP Ta-pu 0.91 239 ⇑*i*P Pn 16 28 55.4 0.0
baz=237
WTP S Sn 16 29 07.9 0.0
baz=237
CHN2 Minshiung 0.92 259 *e*P Pn 16 28 55.8 +0.2
baz=258
CHN2 S Sn 16 29 08.6 +0.4
baz=258
ENTT Nioudou 0.92 6 *e*P Pb 16 28 54.4 -0.9
baz=7.0
ENTT *e*S Sn 16 29 07.5 -0.7
baz=7.0
NSY Sanyi 0.94 318 ⇓*i*P Pn 16 28 56.6 +0.7
baz=318
NSY *e*S Sn 16 29 09.0 +0.3
baz=318
YHNB Yeheng 0.95 355 *e*P Pb 16 28 55.4 -0.4
baz=356
YHNB S Sb 16 29 07.5 -0.6
baz=356
YHNB Yeheng 0.95 355 Pb 16 28 55.5 -0.4
TWC Suao 0.96 22 *e*P Pb 16 28 54.9 -1.0
baz=15
TWC *e*S Sb 16 29 08.1 0.0
baz=15
NSK Sanguang 0.96 354 P Pb 16 28 55.7 -0.3
baz=356
NSK *e*S Sb 16 29 07.5 -0.8
baz=356
TWG Pinlang 0.96 202 *e*P Pb 16 28 55.5 -0.4
baz=187
TWG *e*S Sn 16 29 09.6 +0.5
baz=187
TWG Pinlang 0.96 202 Pb 16 28 55.5 -0.4
TWGBT Beinan 0.96 201 *e*P Pb 16 28 53.6 -2.4
baz=187
TWGBT *e*S Sn 16 29 09.6 +0.4
baz=187
CHY Chiayi 0.97 257 *e*P Pn 16 28 56.5 +0.2
baz=256
CHY *e*S Sn 16 29 09.9 +0.5
baz=256
WDJ Dajia District 0.98 310 ⇓*i*P Pn 16 28 57.1 +0.8
baz=321
WDJ *e*S Sn 16 29 10.9 +1.4
baz=321
TWK Hsinying 1.00 243 P Pn 16 28 56.9 +0.1
baz=241
TWK *e*S Sn 16 29 10.3 +0.2
baz=241
NSTT Nanjuang 1.00 335 ⇓*i*P Pn 16 28 57.1 +0.4
baz=344
NSTT *e*S Sb 16 29 09.1 -0.4
baz=344
PTSB Yuanli 1.00 317 *e*P Pn 16 28 57.0 +0.3
baz=317
PTSB *e*S Sn 16 29 10.3 +0.1
baz=317
TTN Taitung 1.00 197 *e*P Pb 16 28 54.8 -1.9
baz=177
TWH Lutao 1.00 179 *e*P Pb 16 28 55.6 -1.0
baz=177
TWH *e*S Sb 16 29 09.3 -0.2
baz=177
CHN1 Nanshi 1.01 238 P Pn 16 28 57.1 +0.3
baz=237
CHN1 *e*S Sn 16 29 10.8 +0.5
baz=237
LIOB Emei 1.01 336 ⇓P Pn 16 28 57.4 +0.5
baz=344
LIOB S Sb 16 29 09.7 +0.1
baz=344
SNST Tainan City 1.01 241 *e*P Pn 16 28 57.2 +0.4
baz=239
SNST *e*S Sn 16 29 10.7 +0.2
baz=239
TWE Neicheng 1.02 11 *e*P Pb 16 28 55.8 -1.2
baz=24
TWE *e*S Sn 16 29 10.0 -0.5
baz=24
NMLH Miaoli 1.02 323 ⇓*e*P Pn 16 28 57.8 +0.9
baz=324
NMLH *e*S Sn 16 29 10.3 -0.3
baz=324
RLNB Erlin 1.02 280 ⇓P Pn 16 28 57.0 0.0
baz=280
RLNB S Sn 16 29 10.6 0.0
baz=280
SGST Jiashian 1.02 232 P Pb 16 28 56.7 -0.3
baz=230
SGST *e*S Sn 16 29 11.2 +0.5
baz=230
EOS1 EOS1 1.03 36 *e*P Pn 16 28 57.7 +0.7
baz=38
EOS1 *e*S Sn 16 29 12.9 +2.2
baz=38
SLGT Liugui 1.04 226 ⇓*e*P Pn 16 28 57.4 +0.2
baz=224
SLGT *e*S Sn 16 29 11.5 +0.5
baz=224
SLBB Yuanshan 1.04 9 *e*P Pb 16 28 55.4 -2.0
baz=23
NWLT Wulai 1.05 2 *e*P Pb 16 28 56.7 -0.9
baz=13
NWLT *e*S Sb 16 29 10.9 -0.1
baz=13
ILA Ilan 1.08 14 *e*P Pn 16 28 57.7 -0.1
baz=19
WLGB Puzi 1.09 258 *e*P Pb 16 28 58.6 +0.4
baz=256
WLGB *e*S Sn 16 29 13.3 +1.0
baz=256
WMLT Mailiao 1.14 275 *e*P Pn 16 28 58.2 -0.4
baz=263
WMLT *e*S Sn 16 29 14.1 +0.7
baz=263
WSF Szhu 1.14 266 *e*P Pb 16 28 58.9 -0.1
baz=265
WSF *e*S Sn 16 29 13.4 -0.1
baz=265
WLTB Daxi 1.15 351 P Pb 16 29 00.0 +0.9
baz=358
WLTB *e*S Sn 16 29 14.2 +0.6
baz=358
SBCB Hsinchu 1.15 338 *e*P Pb 16 29 00.2 +1.0
baz=339
SBCB *e*S Sn 16 29 14.6 +0.7
baz=339
HSN Hsinchu 1.17 338 *e*P Pb 16 29 00.1 +0.6
baz=326
HSN *e*S Sn 16 29 15.3 +1.1
baz=326
NTC Toucheng 1.18 17 *e*P Pn 16 28 58.7 -0.5
baz=18
NTC *e*S Sn 16 29 15.3 +0.8
baz=18
CHN3 Shinhua 1.19 238 *e*P Pb 16 29 00.6 +0.7
baz=236
CHN3 *e*S Sn 16 29 18.2 +3.4
baz=236
CHN8 Yiju 1.20 252 *e*P Pb 16 29 00.1 0.0
baz=251
CHN8 S Sn 16 29 16.2 +1.1
baz=251
ECL Taimali 1.21 203 *e*P Pn 16 28 59.5 0.0
baz=184
SSD Sandimen 1.23 218 P Pb 16 29 00.5 0.0
baz=216
SSD *e*S Sn 16 29 17.4 +1.6
baz=216
NHDH Xindian Distri 1.24 3 *e*P Pb 16 29 00.3 -0.4
baz=18
NHDH *e*S Sn 16 29 17.4 +1.3
baz=18
TATO Taipei 1.25 1 *e*P Pb 16 29 00.4 -0.5
baz=16
TATO *e*S Sn 16 29 16.6 +0.3
baz=16
TATO Taipei 1.25 1 Pb 16 29 00.4 -0.5

TWA Mucha 1.26 5 *e*P Pb 16 29 00.6 -0.5
baz=20
TWA *e*S Sb 16 29 17.3 +0.3
baz=20
NCUH Zhongli 1.27 349 *e*P Pb 16 29 01.6 +0.3
baz=349
NCUH *e*S Sb 16 29 18.9 +1.7
baz=349
NCU National Centr 1.27 349 *e*P Pb 16 29 01.1 -0.2
baz=350
NCU *e*S Sb 16 29 18.8 +1.6
baz=350
SCLT Jiali 1.28 245 *e*P Pb 16 29 01.5 +0.1
baz=243
SCLT *e*S Sb 16 29 18.9 +1.4
baz=243
TIPB Shuangxi 1.29 15 *e*P Pn 16 29 00.2 -0.6
baz=16
TIPB *e*S Sb 16 29 17.7 -0.1
baz=16
TWM1 Shoushan 1.30 227 *e*P Pb 16 29 03.0 +1.2
baz=235
TAP Taipei 1.32 2 *e*P Pb 16 29 01.9 -0.2
baz=16
TAP *e*S Sb 16 29 19.2 +0.8
baz=16
TAP1 Taipei 1.32 2 *e*P Pn 16 29 01.2 +0.2
baz=16
TAP1 *e*S Sb 16 29 20.0 +1.5
baz=16
TAI1 Yung-k'ang 1.32 239 *e*P Pb 16 29 03.0 +1.0
baz=231
SGLT Jiouru 1.33 222 *e*P Pb 16 29 02.9 +0.7
baz=207
MASBT Mashibuluo 1.34 215 *e*P Pn 16 29 01.2 -0.2
baz=213
MASBT *e*S Sb 16 29 20.2 +1.1
baz=213
TWB1 Santiao Chiao 1.37 20 *e*P Pb 16 29 02.2 -0.7
baz=26
TWS1 Kuangyinshan 1.38 358 *e*P Pb 16 29 02.4 -0.6
baz=18
TWS1 *e*S Sb 16 29 22.6 +2.4
baz=18
NWF Wu-fen Shan 1.38 12 *e*P Pn 16 29 02.1 +0.1
baz=24
NWF *e*S Sn 16 29 19.4 -0.2
baz=24
WFSB Wu-fen Shan 1.38 12 *e*P Pn 16 29 02.2 +0.3
baz=24
WFSB *e*S Sb 16 29 21.2 +1.0
baz=24
YM01 YM01 1.43 4 *e*P Pn 16 29 02.4 -0.1
baz=12
YM10 YM10 1.43 4 *e*P Pn 16 29 02.8 +0.1
baz=29
NTST Danshui 1.44 360 *e*P Pn 16 29 03.2 +0.5
baz=26
EAST Anshuo 1.44 203 *e*P Pn 16 29 01.2 -1.6
baz=186
YM11 YM11 1.45 4 *e*P Pn 16 29 02.3 -0.6
baz=12
ANP Anpu 1.46 2 *e*P Pb 16 29 04.8 +0.2
baz=28
YM08 YM08 1.47 5 *e*P Pn 16 29 02.5 -0.7
baz=12
SSPT Xinbi 1.48 214 *e*P Pb 16 29 04.1 -0.7
baz=203
JYNG Yonagunijimaku 1.54 61 P Pn 16 29 04.7 +0.6
JYNG S Sb 16 29 24.5 -0.4
SCZT Fangliau 1.55 210 *e*P Pb 16 29 05.5 -0.5
baz=202
TWY Chenhua 1.56 5 *e*P Pn 16 29 04.2 -0.1
baz=12
YOJ Yonaguni jima 1.60 62 *e*P Pn 16 29 05.5 +0.6
baz=62
YOJ *e*S Sb 16 29 26.8 +0.2
baz=62
YOJ Yonaguni jima 1.60 62 P Pn 16 29 05.5 +0.6
YOJ *e*S Sb 16 29 25.7 -0.9
YOJ Yonaguni jima 1.60 62 Pn 16 29 05.2 +0.3
LAY Lan-yu 1.67 177 *e*P Pn 16 29 04.5 -1.5
baz=174
WLCH Liuqiu 1.69 216 *e*P Pb 16 29 10.2 +1.9
baz=224
WDGT Dungji 1.71 255 *e*P Pn 16 29 06.3 -0.2
baz=253
WDGT *e*S Sn 16 29 28.4 +0.6
baz=253
PHUB P'eng-hu 1.74 264 *e*P Pn 16 29 07.0 +0.1
baz=246
PHUB *e*S Sn 16 29 28.2 -0.2
baz=246
PNG Penghu 1.75 265 *e*P Pn 16 29 06.7 -0.3
baz=260
HEN Hengchun 1.83 201 *e*P Pb 16 29 10.1 -0.7
baz=186
TWK1 Hengchun 1.87 199 *e*P Pb 16 29 12.1 +0.6
baz=185
TWKBT Hengchun 1.87 199 *e*P Pn 16 29 09.5 +0.9
baz=185
VCHM Qimei 1.93 255 *e*P Pn 16 29 10.1 +0.6
baz=248
PCYT Pengchaiyu 1.98 16 *e*P Pb 16 29 12.0 -1.4
baz=24
IRIF Iriomote-Funau 2.17 73 P Pn 16 29 13.4 +0.7
HATJ Hateruma jima 2.17 81 P Pn 16 29 13.2 +0.4
HATJ *e*S Sn 16 29 39.1 +0.1
VWUC VWUC 2.23 305 *e*P Pn 16 29 13.0 -0.6
baz=310
PTTC Pingtan 2.35 319 *e*P Pn 16 29 15.1 -0.1
baz=327
JKRS Kuro-shima 2.39 77 P Pn 16 29 16.7 +0.9
JKRS *e*S Sn 16 29 45.2 +0.8
PTMZ Houxiangcun 2.51 302 *e*P Pn 16 29 17.0 -0.4
baz=306
JIJ Ishigaki jima 2.54 75 P Pn 16 29 18.1 +0.3
JIJ S Sn 16 29 48.1 +0.1
JISG Ishigakijimahi 2.74 71 P Pn 16 29 20.9 +0.2
JISG *e*S Sn 16 29 53.1 0.0
MATB Ma-tsu 2.79 331 *e*P Pn 16 29 21.2 0.0
baz=340
KNM Kinmen 2.85 285 ⇓*e*P Pn 16 29 23.6 +1.4
baz=266
QZH Quanzhou 2.89 296 Pn Pn 16 29 21.9 -0.7
QZH Sn Sn 16 29 55.5 -1.2
QZH smax smax
comp=N,170nm,0.8s
QZH smax smax
comp=E,130nm,0.5s
KNMB Chin-men Tao 2.90 285 ⇓*e*P Pn 16 29 22.5 -0.4
baz=267
KNMB Chin-men Tao 2.90 285 Pn 16 29 22.4 -0.4
JTJ Tarama 3.10 72 P Pn 16 29 26.2 +0.6
JTJ *e*S Sn 16 30 02.1 +0.2
LYJJ Jianjiangzhen 3.21 332 *e*P Pb 16 29 31.6 -2.7
baz=342
MHZQ Yeshan 3.24 318 *e*P Pn 16 29 27.3 -0.2
baz=326
AXDP Jialang 3.39 291 *e*P Pn 16 29 29.8 +0.2
baz=286
XPSS Dashiqiu 3.40 341 *e*P Pn 16 29 29.8 +0.1
baz=339
ZPLA Ao Xicun 3.40 274 *e*P Pn 16 29 30.0 +0.3
baz=268
JIRB Irabujima 3.56 71 P Pn 16 29 32.7 +0.8
JIRB *e*S Sn 16 30 14.3 +0.9
ZZJH Jiuhuzhen 3.58 283 *e*P Pn 16 29 32.1 0.0
baz=264
JIKM Ikemajima 3.66 70 P Pn 16 29 34.3 +1.1
JIKM *e*S Sn 16 30 15.6 -0.1
JMJ Miyako jima 2 3.67 72 *e*P Pn 16 29 34.7 +1.4
baz=69
JMJ *e*S Sn 16 30 16.5 +0.6
baz=69
JMJ2 Miyako jima3 3.67 73 P Pn 16 29 34.0 +0.5
JMJ2 *e*S Sn 16 30 16.8 +0.7
JOGS Gusukube 3.75 73 P Pn 16 29 36.1 +1.6
JOW Kunigami 6.90 62 *e*P Pn 16 30 17.8 -0.1
baz=63
JOW Kunigami 6.90 62 Pn Pn 16 30 16.9 -1.0
0.6nm,0.3s,baz=238,slow=19,SNR=17
JOW Sn Sn 16 31 32.7 -3.1
baz=208,slow=3.1,SNR=2.3
JOW Kunigami 6.90 62 Pn 16 30 17.0 -0.8
WHN Wuhan 9.29 319 P Pn 16 30 49.8 -0.8
KSRS Korea Array 14.77 21 Pn Pn 16 32 08.2 +2.7

0.1nm,0.3s,baz=200,slow=12,SNR=3.2
CHTO Chiang Mai 21.53 261 P P 16 33 24.7 -1.1
CMAR Chiang Mai Arr 21.64 260 P P 16 33 30.5 +3.6
0.7nm,0.8s,baz=62,slow=8.1,SNR=5.3
GTA Gaotai 24.09 316 *e*P P 16 33 54.0 +1.9
GTA pP pP 16 33 57.5 -1.6
GTA sP sP 16 34 00.3 -1.8
GTA pmax pmax
comp=Z,2.0nm,1.1s
SONM Songino Array 26.89 337 P P 16 34 18.5 +1.1
1.1nm,0.7s,baz=156,slow=9.2,SNR=6.0
WMQ Urumqi 34.16 314 *e*P P 16 35 24.4 +2.8
MTN Manton Dam 37.55 164 P P 16 35 49.0 -1.7
MK31 Makanchi Array 38.85 316 P P 16 36 02.7 +1.2
MKAR Makanchi Array 38.85 316 P P 16 36 02.4 +0.9
0.9nm,0.5s,baz=107,slow=10,SNR=12
MAKZ Makanchi 39.05 316 P P 16 36 04.2 +1.0
MAKZ IAmb IAmb 16 36 06.5
comp=Z,4.2nm,1.4s
ZAA0 Zalesovo Array 40.77 327 P P 16 36 17.0 -0.3
ZAA0 IAmb IAmb 16 36 18.8
comp=Z,2.4nm,0.9s
ZALV Zalesovo Beam 40.77 327 P P 16 36 16.9 -0.4
comp=Z,1.2nm,0.5s,baz=121,slow=7.9,SNR=5.6
H11N1 WAKE ISLAND Hy 42.26 86 T T 17 21 33.3
baz=283,slow=75,SNR=9.7
H11N2 WAKE ISLAND Hy 42.26 86 T T 17 21 31.9
baz=283,slow=75,SNR=14
H11N3 WAKE ISLAND Hy 42.28 86 T T 17 21 33.0
baz=283,slow=75,SNR=10
H11S3 WAKE ISLAND Hy 42.38 88 T T 17 21 42.2
baz=285,slow=75,SNR=41
H11S1 WAKE ISLAND Hy 42.39 88 T T 17 21 41.9
baz=285,slow=75,SNR=16
H11S2 WAKE ISLAND Hy 42.40 88 T T 17 21 41.4
baz=285,slow=75,SNR=18
WB0 Warramunga Arr 45.02 163 P P 16 36 49.3 -2.8
WB0 IAmb IAmb 16 37 08.3
comp=Z,8.6nm,1.4s
PSA00 Pilbara Seismi 45.05 182 P P 16 36 50.2 -2.0
WRA Warramunga Arr 45.18 163 P P 16 36 51.3 -2.0
comp=Z,0.4nm,0.5s,baz=345,slow=8.7,SNR=6.0
WB2 Warramunga Arr 45.18 163 P P 16 36 52.2 -1.1
WB2 IAmb IAmb 16 38 27.4
comp=Z,11nm,1.5s
WR0 Warramunga Arr 45.25 163 P P 16 36 52.0 -1.9
WR0 IAmb IAmb 16 37 18.5
comp=Z,6.1nm,1.2s
ASAR Alice Springs 48.63 165 P P 16 37 19.1 -1.2
comp=Z,0.4nm,0.5s,baz=340,slow=6.7,SNR=12
ASAR PcP **PcP 16 38 44.2 -1.4**
comp=Z,0.3nm,0.9s,baz=348,slow=4.7,SNR=3.1
STKA Stephens Creek 58.54 160 P P 16 38 32.1 -0.7
comp=Z,1.0nm,0.7s,baz=330,slow=8.1,SNR=3.1
STKA Stephens Creek 58.54 160 IAmb IAmb 16 39 46.5
comp=Z,3.2nm,1.6s
FINES FINESS Array B 71.97 330 P P 16 40 00.8 +1.2
comp=Z,2.3nm,0.9s,baz=46,slow=8.2,SNR=4.0
YKA Yellowknife Ar 83.30 23 P P 16 41 01.6 -1.1
comp=Z,0.1nm,0.4s,baz=315,slow=5.2,SNR=4.4

*IDC **22** 16:31:56.7±2.0, 19°.95N×120°.40E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/45, mbtmp3.4/4, MS2.9/1, Ms1 3.1/1, ms1mx2.5/25, Error ellipse: s-maj=75.1km s-min=25.4km az=51.0*
*JMA **22** 16:31:58.7±0.5, 20°.27N×120°.64E, h0km, M3.9*
ISC 22 16:31:56.5±1.3, 20°.5N±0°.1×120°.8E±0°.2, h29km, n10, σ2.9 01/14, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**4.45**	**38**	*e*S	**Sb**	**16 34 10.1**	**+3.0**
IRIF	**Iriomote-Funau**	**4.63**	**35**	P	**Pb**	**16 33 16.7**	**-0.3**
IRIF				*e*S	**Sb**	**16 34 15.7**	**+3.4**
JKRS	**Kuro-shima**	**4.71**	**38**	P	**Pb**	**16 33 18.2**	**-0.1**
JKRS				*e*S	**Sb**	**16 34 16.6**	**+2.1**
JIJ	**Ishigaki jima**	**4.88**	**38**	P	**Pb**	**16 33 20.0**	**-1.3**
JIJ				*e*S	**Sb**	**16 34 19.7**	**+0.1**
JISG	**Ishigakijimahi**	**5.15**	**38**	P	**Pb**	**16 33 23.8**	**-2.1**
JISG				*e*S	**Sb**	**16 34 26.9**	**-0.4**
JTJ	**Tarama**	**5.42**	**40**	P	**Pb**	**16 33 27.7**	**-2.8**
JTJ				S	**Sb**	**16 34 33.3**	**-1.8**
CMAR	**Chiang Mai Arr**	**20.74**	**268**	P	**P**	**16 36 34.5**	**-0.5**
0.5nm,0.7s,baz=84,slow=8.5,SNR=4.0							
CMAR				LR	LR	16 44 11.5	
comp=Z,31nm,18.5s,baz=85,slow=36							
MKAR	**Makanchi Array**	**40.80**	**319**	P	P	16 39 41.0	+5.7
0.9nm,0.6s,baz=117,slow=7.7,SNR=3.9							
WRA	**Warramunga Arr**	**42.35**	**161**	P	**P**	**16 39 48.5**	**+0.3**
0.5nm,0.6s,baz=341,slow=9.2,SNR=4.6							
ASAR	**Alice Springs**	**45.75**	**163**	P	**P**	**16 40 16.9**	**+1.4**
0.4nm,0.3s,baz=342,slow=7.2,SNR=22							

*DDA **22** 16:42:53.7, 40°.06N×25°.10E, h10km±1km, MW3.6*
*ISK **22** 16:42:53.2, 40°.05N×25°.12E, h8km, ML3.6/31*
*THE **22** 16:42:53.9, 40°.02N×25°.12E, h11km, ML3.2/13, Error ellipse: s-maj=0.9km s-min=0.3km az=63.0*
*ATH **22** 16:42:53.0, 40°.05N×25°.09E, h26km±1km, ML3.1/21, Error ellipse: s-maj=1.2km s-min=0.7km az=76.0*
*SOF **22** 16:42:54.6, 40°.20N×25°.07E, h13km, MD2.9*
ISC 22 16:42:53.5±1.0, 40°.04N±0°.01×25°.09E±0°.01, h10km±9km, n129, σ0.672/179, 12C-7D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFSA	**Agios Efstrati**	**0.51**	**189**	P	**Pb**	**16 43 04.5**	**-0.1**
EFSA				S	**Sb**	**16 43 11.4**	**-0.5**
EFSA				AML	AML	16 43 12.4	
comp=N,28361μm,0.7s							
EFSA				AML	AML	16 43 14.4	
comp=E,11208μm,0.6s							
SMTH	**Samothraki Isl**	**0.54**	**38**	P	**Pg**	**16 43 04.2**	**+0.1**
SMTH				S	**Sb**	**16 43 12.1**	**-0.9**
comp=E,1μm,0.3s							
SMTH	**Samothraki Isl**	**0.54**	**38**	P	**Pg**	**16 43 04.3**	**+0.2**
SMTH				S	**Sg**	**16 43 11.4**	**+0.1**
SMTH				AML	AML	16 43 12.5	
comp=E,2092μm,0.3s							
SMTH				AML	AML	16 43 15.6	
comp=N,2528μm,0.3s							
THAS	**Thassos island**	**0.63**	**333**	P	**Pb**	**16 43 06.3**	**-0.3**
THAS				S	**Sb**	**16 43 16.4**	**+0.9**
comp=N,4μm,0.4s							
THAS	**Thassos island**	**0.63**	**333**	P	**Pg**	**16 43 06.0**	**+0.3**
THAS				S	**Sb**	**16 43 15.3**	**-0.2**
THAS				AML	AML	16 43 18.1	
comp=E,7863μm,0.3s							
THAS				AML	AML	16 43 18.4	
comp=N,9232μm,0.5s							
GADA	**Gvkgeada**	**0.64**	**76**	P	**Pg**	**16 43 05.8**	**-0.1**
GADA				S	**Sg**	**16 43 14.3**	**+0.1**
GADA	**Gvkgeada**	**0.64**	**76**	PG	**Pg**	**16 43 06.0**	**+0.1**
GADA				SG	**Sg**	**16 43 14.6**	**+0.4**
BOZC	**Bozcaada**	**0.77**	**105**	PG	**Pg**	**16 43 08.2**	**-0.1**
BOZC				SG	**Sg**	**16 43 18.4**	**+0.1**
BOZC	**Bozcaada**	**0.77**	**105**	*i*P	**Pg**	**16 43 08.3**	**-0.1**
BOZC				*i*S	**Sg**	**16 43 16.3**	**-2.0**
BOZC				IAML		16 43 20.0	
comp=N,1μm,0.5s							
BOZC				IAML		16 43 20.0	
comp=E,988nm,0.2s							
EZN	**Ezine**	**0.97**	**102**	P	**Pg**	**16 43 11.9**	**-0.3**
EZN				S	**Sb**	**16 43 25.2**	**-0.1**
comp=E,4μm,0.4s							
EZN	**Ezine**	**0.97**	**102**	⇓P	**Pn**	**16 43 14.2**	**+1.0**
EZN				⇓S	**Sb**	**16 43 26.0**	**+0.6**
EZN	**Ezine**	**0.97**	**102**	PG	**Pg**	**16 43 12.0**	**-0.3**
EZN				SG	**Sb**	**16 43 25.4**	**+0.1**
ENZZ	**Sultanice-Enez**	**0.98**	**55**	PG	**Pg**	**16 43 12.1**	**-0.3**
ENZZ				SG	**Sb**	**16 43 26.1**	**+0.5**
GPNR	**Gulpinar-Canak**	**0.99**	**126**	PG	**Pg**	**16 43 12.5**	**-0.2**
GPNR				SG	**Sb**	**16 43 26.6**	**+0.7**
SIGR	**SIGRI**	**1.02**	**144**	P	**Pg**	**16 43 12.7**	**-0.4**
SIGR				S	**Sb**	**16 43 27.0**	**+0.4**
comp=E,2μm,0.6s							
SIGR	**SIGRI**	**1.02**	**144**	P	**Pg**	**16 43 12.9**	**-0.2**
SIGR				S	**Sg**	**16 43 26.5**	**+0.1**
SIGR				AML	AML	16 43 28.6	
comp=N,5330μm,0.6s							
SIGR				AML	AML	16 43 30.2	
comp=E,4013μm,0.6s							
SIGR	**SIGRI**	**1.02**	**144**	PG	**Pg**	**16 43 13.1**	**0.0**

SIGR SG **Sn** **16 43 27.6 -0.6**
KAVA Kavala 1.05 335 P **Pg** **16 43 13.9 +0.2**
KAVA S **Sn** **16 43 29.4 +0.4**
comp=E,1μm,0.4s
KAVA Kavala 1.05 335 P **Pb** **16 43 13.6 -0.1**
KAVA S **Sb** **16 43 27.6 +0.1**
KAVA AML AML 16 43 30.9
comp=N,2413μm,0.4s
KAVA AML AML 16 43 31.0
comp=E,2639μm,0.4s
ENEZ Enez 1.07 49 PG **Pn** **16 43 14.3 -0.2**
ENEZ SG **Sn** **16 43 28.8 -0.6**
PAIG Paliouri 1.09 264 P **Pb** **16 43 14.3 -0.1**
PAIG S **Sn** **16 43 29.8 -0.1**
comp=E,578nm,0.4s
PAIG Paliouri 1.09 264 P **Pb** **16 43 14.3 -0.1**
PAIG S **Sb** **16 43 28.8 +0.1**
PAIG AML AML 16 43 32.4
comp=N,1550μm,0.4s
PAIG AML AML 16 43 32.8
comp=E,709μm,0.4s
GELI Tayfur-Gelibol 1.12 71 PN **Pb** **16 43 14.7 -0.2**
GELI SN **Sn** **16 43 30.4 -0.2**
ALN Alexandroupoli 1.12 40 P **Pb** **16 43 14.5 -0.4**
ALN S **Sn** **16 43 30.6 -0.1**
comp=E,740nm,0.6s
ALN Alexandroupoli 1.12 40 P **Pb** **16 43 14.3 -0.7**
ALN S **Sg** **16 43 29.9 +0.2**
ALN AML AML 16 43 32.7
comp=E,1507μm,0.4s
ALN AML AML 16 43 35.3
comp=N,1453μm,0.7s
ALN Alexandroupoli 1.12 40 PN **Pb** **16 43 14.6 -0.4**
ALN SN **Sn** **16 43 30.4 -0.3**
RDO Rodhopi 1.15 17 P **Pb** **16 43 15.1 -0.4**
RDO S **Sn** **16 43 31.5 0.0**
comp=N,555nm,0.4s
RDO Rodhopi 1.15 17 P **Pb** **16 43 15.1 -0.4**
RDO S **Sb** **16 43 30.2 -0.4**
RDO AML AML 16 43 34.0
comp=E,1206μm,0.4s
RDO AML AML 16 43 35.9
comp=N,1024μm,0.4s
RDO Rodhopi 1.15 17 PN **Pb** **16 43 15.3 -0.2**
BAYC CANAKKALE_Bayr 1.16 105 *i* P **Pb** **16 43 15.5 -0.1**
BAYC *i* S **Sb** **16 43 29.5 -1.2**
BAYC IAML 16 43 31.0
comp=N,883nm,0.3s
BAYC IAML 16 43 33.0
comp=E,896nm,0.3s
PRK Paraskevi 1.21 131 P **Pb** **16 43 16.8 +0.3**
PRK S **Sn** **16 43 32.9 0.0**
PRK AML AML 16 43 35.8
comp=N,4762μm,0.8s
PRK AML AML 16 43 37.5
comp=E,3799μm,0.4s
SKY Skiros Island 1.24 200 P **Pn** **16 43 16.3 -0.5**
SKY S **Sb** **16 43 33.1 +0.2**
comp=E,2μm,0.6s
SKY Skiros Island 1.24 200 P **Pn** **16 43 16.1 -0.7**
SKY S **Sg** **16 43 33.5 +0.2**
SKY AML AML 16 43 35.5
comp=N,2750μm,0.6s
SKY AML AML 16 43 36.9
comp=E,3475μm,0.7s
ERIK Erikli-Kesan 1.25 60 PN **Pn** **16 43 16.2 -0.9**
ERIK SN **Sg** **16 43 34.5 +0.6**
AOS Alonnisos 1.28 227 P **Pn** **16 43 16.8 -0.6**
AOS S **Sn** **16 43 34.8 +0.2**
comp=E,468nm,0.9s
AOS Alonnisos 1.28 227 P **Pn** **16 43 16.8 -0.6**
AOS S **Sn** **16 43 34.6 0.0**
AOS AML AML 16 43 39.2
comp=E,1045μm,0.8s
AOS AML AML 16 43 47.2
comp=N,858μm,0.9s
AOS Alonnisos 1.28 227 PN **Pb** **16 43 18.1 +0.4**
PLG Polygyros 1.30 285 P **Pn** **16 43 17.8 0.0**
PLG S **Sg** **16 43 36.3 +0.9**
comp=N,920nm,0.6s
PLG Polygyros 1.30 285 P **Pn** **16 43 17.7 -0.1**
PLG S **Sb** **16 43 34.8 -0.1**
PLG AML AML 16 43 38.3
comp=N,1889μm,0.5s
PLG AML AML 16 43 39.9
comp=E,1850μm,0.7s
LPK Lapseki 1.32 75 PN **Pn** **16 43 17.9 -0.1**
LPK SN **Sg** **16 43 36.2 +0.2**
AYVA Ayvalik 1.44 120 *i* P **Pb** **16 43 20.2 -0.2**
AYVA *i* S **Sb** **16 43 39.2 +0.6**
AYVA IAML 16 43 41.0
comp=N,1μm,0.5s
AYVA IAML 16 43 42.0
comp=E,542nm,0.6s
KESN Edirne-Kesan 1.44 57 *i* P **Pn** **16 43 19.4 -0.6**
KESN *i* S **Sn** **16 43 38.7 -0.5**
KESN IAML 16 43 43.0
comp=N,405nm,0.5s
KESN IAML 16 43 44.0
comp=E,560nm,0.6s
SKIA Skiathos 1.53 236 P **Pn** **16 43 20.2 -0.7**
SKIA S **Sn** **16 43 40.8 0.0**
comp=E,800nm,0.6s
SKIA Skiathos 1.53 236 P **Pn** **16 43 20.2 -0.7**
SKIA S **Sn** **16 43 40.7 -0.2**
SKIA AML AML 16 43 46.4
comp=N,1347μm,0.6s
SKIA AML AML 16 43 48.5
comp=E,1894μm,0.6s
SOH Sokhos 1.54 301 P **Pn** **16 43 20.9 -0.1**
SOH S **Sb** **16 43 42.0 +0.4**
comp=E,458nm,0.5s
SOH Sokhos 1.54 301 P **Pn** **16 43 21.2 +0.2**
SOH S **Sn** **16 43 40.8 -0.3**
SOH AML AML 16 43 47.0
comp=N,703μm,0.5s
SOH AML AML 16 43 51.3
comp=E,1125μm,0.5s
SRS Serrai 1.57 314 P **Pn** **16 43 21.0 -0.4**
SRS Serrai 1.57 314 P **Pn** **16 43 21.2 -0.2**
SRS AML AML 16 43 46.5
comp=E,712μm,0.5s
SRS AML AML 16 43 47.4
comp=N,380μm,0.5s
UKOP Uzunkopru-Edir 1.60 47 PN **Pn** **16 43 21.9 +0.1**
UKOP SN **Sb** **16 43 43.1 -0.2**
NVR Nevrokopi 1.60 325 P **Pn** **16 43 21.8 -0.1**
NVR Nevrokopi 1.60 325 P **Pn** **16 43 21.9 -0.1**
NVR S **Sn** **16 43 42.3 -0.5**
NVR AML AML 16 43 52.9
comp=E,444μm,0.7s
NVR AML AML 16 43 53.0
comp=N,383μm,0.6s
XOR Xorichti 1.61 246 P **Pn** **16 43 21.5 -0.6**
XOR Xorichti 1.61 246 P **Pn** **16 43 21.4 -0.6**
XOR AML AML 16 43 42.9
comp=N,461μm,0.3s
XOR AML AML 16 43 45.6
comp=E,349μm,0.6s
NEO Neokhori 1.62 244 P **Pn** **16 43 21.4 -0.7**
HORT Hortiatis 1.62 291 P **Pn** **16 43 22.4 +0.2**
HORT Hortiatis 1.62 291 P **Pn** **16 43 22.3 +0.2**
HORT S **Sb** **16 43 43.9 -0.1**
HORT AML AML 16 43 51.9
comp=N,337μm,0.8s
HORT AML AML 16 43 53.7
comp=E,520μm,0.7s
HORT Hortiatis 1.62 291 PN **Pn** **16 43 22.7 +0.5**
KDZ Kurdzhali 1.62 9 *i* P **Pn** **16 43 21.5 -0.7**
KDZ Kurdzhali 1.62 9 PN **Pn** **16 43 21.8 -0.4**
RZN Rozhen 1.67 350 *i* P **Pn** **16 43 23.4 +0.4**
DKL Dikili 1.71 124 PN **Pn** **16 43 23.8 +0.5**
RKY Sarkoy-Tekirda 1.72 67 PN **Pn** **16 43 23.2 -0.3**
KRBG Karabiga-Canak 1.73 78 PN **Pn** **16 43 23.8 +0.2**
MRKA Markates 1.77 222 P **Pn** **16 43 24.0 -0.2**
MRKA Markates 1.77 222 P **Pn** **16 43 24.0 -0.2**
MRKA AML AML 16 43 54.5
comp=E,862μm,0.5s
MRKA AML AML 16 43 56.6
comp=N,1013μm,0.6s
CHOS Chios island 1.82 155 P **Pn** **16 43 24.5 -0.4**
CHOS Chios island 1.82 155 P **Pn** **16 43 24.9 0.0**
CHOS AML AML 16 43 56.6
comp=N,881μm,0.6s
CHOS AML AML 16 43 57.3
comp=E,1081μm,0.5s
CHOS Chios island 1.82 155 PN **Pn** **16 43 25.1 +0.2**
KRBN Karaburun 1.84 141 PN **Pn** **16 43 25.6 +0.5**
EREA Eretria 1.85 209 P **Pn** **16 43 24.7 -0.7**
EREA Eretria 1.85 209 P **Pn** **16 43 25.1 -0.3**
EREA AML AML 16 43 57.5
comp=E,952μm,0.8s
EREA AML AML 16 43 58.3
comp=N,998μm,0.4s
MMB Musomiste 1.86 327 *i* P **Pn** **16 43 25.3 -0.1**
ZEDA zmir-Bergama 1.88 124 *i* P **Pb** **16 43 26.9 -0.9**
ZEDA *i* S **Sn** **16 43 50.0 +0.7**
ZEDA IAML 16 43 55.0
comp=N,302nm,0.7s
ZEDA IAML 16 43 56.0
comp=E,195nm,0.8s
KNL Balıkesir 1.88 82 *i* P **Pb** **16 43 27.0 -0.9**
KNL *i* S **Sb** **16 43 52.5 +1.1**
KNL IAML 16 43 55.0
comp=N,508nm,0.8s
KNL IAML 16 43 57.0
comp=E,783nm,0.5s
BALY Balya 1.97 98 *i* P **Pn** **16 43 27.9 +1.0**
BALY *i* S **Sn** **16 43 52.7 +1.0**
BALY IAML 16 43 56.0
comp=N,688nm,0.5s
BALY IAML 16 43 59.0
comp=E,477nm,0.5s
GONE Gonen-Balikesi 1.99 89 PN **Pn** **16 43 27.7 +0.5**
MRMT Marmara Adasi 2.00 73 PN **Pn** **16 43 27.6 +0.3**
LIT Litokhoron 2.00 272 P **Pn** **16 43 27.5 +0.2**
KNT Kendrikon 2.01 305 P **Pn** **16 43 27.7 +0.2**
KNT Kendrikon 2.01 305 PN **Pn** **16 43 28.2 +0.7**
DIM Dimitrovgrad 2.03 9 *i* P **Pg** **16 43 32.2 -0.3**
KARY Karystos 2.07 194 P **Pn** **16 43 27.8 -0.6**
PLD Plovdiv 2.08 352 *e*P **Pg** **16 43 33.5 +0.1**
PLD Plovdiv 2.08 352 PN **Pn** **16 43 29.1 +0.7**
TKR Tekirdag 2.09 62 PN **Pn** **16 43 28.9 +0.3**
STEP BALIKESIR_Sava 2.13 107 *i* P **Pn** **16 43 30.5 +1.3**
STEP IAML 16 44 03.0
comp=E,274nm,0.3s
STEP IAML 16 44 04.0
comp=N,315nm,0.5s
LKR Lokris 2.14 230 P **Pn** **16 43 28.6 -0.6**
EDC Edincik 2.15 81 PN **Pn** **16 43 30.5 +1.2**
BALB Balikesir 2.19 106 PN **Pn** **16 43 30.2 +0.3**
EDRB Edirne 2.19 34 P **Pn** **16 43 29.7 -0.3**
EDRB Edirne 2.19 34 PN **Pn** **16 43 30.6 +0.6**
BLCB Balcova 2.25 137 PN **Pn** **16 43 31.3 +0.6**
CRLT Corlu 2.29 61 PN **Pn** **16 43 31.3 0.0**
VAY Valandovo 2.30 304 *i* Pn **Pg** **16 43 39.0 +1.3**
KIRK Kırklareli 2.31 41 *i* P **Pn** **16 43 30.7 -0.9**
VILL Villia 2.33 217 P **Pn** **16 43 31.6 -0.3**
AGG Agios Georgios 2.37 245 P **Pn** **16 43 32.4 0.0**
DGB zmir 2.43 144 *i* P **Pn** **16 43 33.1 -0.1**
PHSR Pinarhisar 2.43 49 PN **Pn** **16 43 33.9 +0.6**
KCTX Karacabey (Bur 2.51 84 PN **Pn** **16 43 34.8 +0.4**
SLVT Silivri 2.65 62 PN **Pn** **16 43 37.1 +0.8**
JMB Yambol 2.67 24 *e*P **Pg** **16 43 43.9 -0.8**
SMG Samos 2.70 149 P **Pn** **16 43 36.8 -0.2**
STIP Stip 2.75 308 *i* Pn **Pn** **16 43 37.2 -0.5**
CTYL Yalikoy Yolu 2.82 58 ⇓P **Pn** **16 43 39.9 +1.4**
CTYL Yalikoy Yolu 2.82 58 PN **Pn** **16 43 38.7 +0.1**
CTKS Kastanelik-??a 2.86 64 PN **Pn** **16 43 39.6 +0.5**
GCAM G?zlecami? 2.88 144 PN **Pn** **16 43 40.3 +0.9**
MDNY Mudanya-Bursa 2.92 82 PN **Pn** **16 43 40.8 +0.8**
VTS Vitosha 2.93 332 ⇓P **Pn** **16 43 40.8 +0.5**
ARMT Armutlu 2.93 79 PN **Pn** **16 43 41.1 +0.9**
ELND Elena 2.94 11 ⇑P **Pn** **16 43 41.2 +0.8**
BGKT Bogazkoy 3.02 67 PN **Pn** **16 43 42.5 +1.1**
KLYT Kilyos 3.24 67 ⇑P **Pn** **16 43 44.5 +0.2**
KLYT Kilyos 3.24 67 PN **Pn** **16 43 44.5 +0.2**
YLV Yalova 3.32 80 ⇑P **Pn** **16 43 43.9 -1.6**
YLV Yalova 3.32 80 PN **Pn** **16 43 46.5 +1.0**
PLVB Pleven 3.36 354 ⇓P **Pn** **16 43 47.1 +1.0**
BLKB Belogradchik 4.01 334 ⇑S **Sb** **16 44 48.4 -4.3**
COPA Copaceanca 4.09 1 ⇑S **Sb** **16 44 53.9 -1.1**
HUMR Humele 4.48 359 ⇑P **Pn** **16 44 02.5 +1.1**
TIRR Tirgusor 5.05 28 ⇓P **Pn** **16 44 11.1 +1.8**
HERR Herculane 5.22 339 ⇑P **Pn** **16 44 11.8 +0.1**
MDVR Moldovita 5.35 333 ⇑P **Pn** **16 44 14.4 +1.0**
VOIR 5.39 360 ⇑P **Pn** **16 44 15.4 +1.4**
MLR Muntele Rosu 5.48 6 ⇓P **Pn** **16 44 17.9 +2.6**
CFR Carcaliu 5.60 23 ⇑P **Pn** **16 44 18.9 +2.1**
GZR Gura Zlata 5.61 343 ⇑P **Pn** **16 44 17.6 +0.5**
BZS Buzias 6.13 337 ⇓P **Pn** **16 44 23.8 -0.2**

*RSPR **22** 17:02:18.6, 18°.96N×67°.54W, h5km±31km, MD3.1/10*
*NEIC **22** 17:02:19.4±2.5, 18°.90N±0°.05×67°.51W±0°.04, h25km±11km, Error ellipse: s-maj=7.4km s-min=5.5km az=185.0*
ISC 22 17:02:19.5±1.3, 18°.88N±0°.07×67°.53W±0°.03, h27km, n43, σ1s02/52, 10C-3D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
IDE	**Isla Desecheo**	**0.49**	**174**	⇓*e*P		**Pb**	**17 02 29.0**	**-0.8**
IDE	**Isla Desecheo**	**0.49**	**174**	*e*S		**Sb**	**17 02 38.1**	**+1.4**
IDE	**Isla Desecheo**	**0.49**	**174**			**Pb**	**17 02 29.0**	**-0.8**
IDE						**Sb**	**17 02 38.1**	**+1.4**
AGPR	**Aguadilla, PR**	**0.57**	**136**	⇑*e*P		**Pb**	**17 02 29.9**	**-1.1**
AGPR	**Aguadilla, PR**	**0.57**	**136**	*e*S		**Sb**	**17 02 39.8**	**+1.0**
AGPR	**Aguadilla, PR**	**0.57**	**136**			**Pb**	**17 02 29.2**	**-1.8**
MPR	**Mayaguez**	**0.76**	**151**			**Pb**	**17 02 33.3**	**-0.9**
LSP	**Las Mesas**	**0.82**	**149**	⇑*e*P		**Pn**	**17 02 34.4**	**-0.9**
LSP	**Las Mesas**	**0.82**	**149**	*e*S		**Sb**	**17 02 47.2**	**+1.4**
LSP	**Las Mesas**	**0.82**	**149**			**Pn**	**17 02 34.4**	**-0.9**
LSP						**Sb**	**17 02 47.2**	**+1.4**
PCDR	**Punta Cana, DR**	**0.89**	**246**	⇑*e*P		**Pn**	**17 02 34.6**	**-1.6**
PCDR	**Punta Cana, DR**	**0.89**	**246**	⇓*e*P		**Pn**	**17 02 34.6**	**-1.6**
PCDR				*e*S		**Sb**	**17 02 48.0**	**+0.2**
PCDR	**Punta Cana, DR**	**0.89**	**246**			**Pn**	**17 02 34.6**	**-1.6**
PCDR	**Punta Cana, DR**	**0.89**	**246**			**Pn**	**17 02 33.9**	**-2.4**
AOPR	**Arecibo Observ**	**0.91**	**126**	⇓*e*P		**Pn**	**17 02 34.8**	**-1.7**
AOPR	**Arecibo Observ**	**0.91**	**126**	*e*S		**Sb**	**17 02 48.7**	**+0.3**
AOPR	**Arecibo Observ**	**0.91**	**126**			**Pn**	**17 02 34.8**	**-1.7**
AOPR						**Sb**	**17 02 48.7**	**+0.3**
CRPR	**Cabo Rojo, PR**	**0.96**	**155**	⇑*e*P		**Pn**	**17 02 36.6**	**-0.5**
CRPR	**Cabo Rojo, PR**	**0.96**	**155**	*e*S		**Sn**	**17 02 51.1**	**+1.2**
CRPR	**Cabo Rojo, PR**	**0.96**	**155**			**Pn**	**17 02 36.6**	**-0.5**
CRPR						**Sn**	**17 02 51.1**	**+1.2**
MLPR	**Magueyes Islan**	**1.02**	**153**	⇑*e*P		**Pn**	**17 02 37.0**	**-1.0**
MLPR	**Magueyes Islan**	**1.02**	**153**	*e*S		**Sn**	**17 02 52.0**	**+0.6**
MLPR	**Magueyes Islan**	**1.02**	**153**			**Pn**	**17 02 37.0**	**-1.0**
MLPR						**Sn**	**17 02 52.0**	**+0.6**
EMPR	**Esperanza - Ma**	**1.03**	**113**	⇑*e*P		**Pn**	**17 02 37.5**	**-0.6**
EMPR	**Esperanza - Ma**	**1.03**	**113**	*e*S		**Sn**	**17 02 51.3**	**-0.4**
GBPR	**Guanica, Bosqu**	**1.09**	**145**	⇑*e*P		**Pn**	**17 02 38.7**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.09**	**145**	*e*S		**Sn**	**17 02 54.4**	**+1.1**
GBPR	**Guanica, Bosqu**	**1.09**	**145**			**Pn**	**17 02 38.7**	**-0.3**
GBPR						**Sn**	**17 02 54.4**	**+1.1**
OBIP	**Obispado Ponce**	**1.21**	**133**	⇑*e*P		**Pn**	**17 02 40.4**	**-0.2**
OBIP	**Obispado Ponce**	**1.21**	**133**	*e*S		**Sn**	**17 02 56.5**	**+0.4**
OBIP	**Obispado Ponce**	**1.21**	**133**			**Pn**	**17 02 40.4**	**-0.2**
OBIP						**Sn**	**17 02 56.5**	**+0.4**
GCPR	**Guaynabo City**	**1.48**	**112**			**Pb**	**17 02 45.8**	**-0.7**
IGPR	**InterUniversit**	**1.63**	**124**	*e*S		**Sn**	**17 03 06.6**	**+0.1**
CBYP	**Canovanas**	**1.70**	**111**	⇑*e*P		**Pn**	**17 02 47.8**	**+0.3**
CBYP	**Canovanas**	**1.70**	**111**	*e*S		**Sn**	**17 03 09.1**	**+0.8**
CBYP	**Canovanas**	**1.70**	**111**			**Sn**	**17 03 09.1**	**+0.8**
CBYP	**Canovanas**	**1.70**	**111**	Pn		**Pn**	**17 02 48.0**	**+0.5**
HUMP	**Col San Antoni**	**1.75**	**114**	⇑*e*P		**Pn**	**17 02 48.4**	**+0.2**
HUMP	**Col San Antoni**	**1.75**	**114**	*e*S		**Sn**	**17 03 09.6**	**-0.1**
HUMP	**Col San Antoni**	**1.75**	**114**			**Pn**	**17 02 48.4**	**+0.2**
HUMP						**Sn**	**17 03 09.6**	**-0.1**
DR12	**Loma Pena Alta**	**1.76**	**267**			**Pn**	**17 02 49.4**	**+1.1**
MTP	**Monte Pirata**	**2.03**	**112**	Pn		**Pn**	**17 02 51.6**	**-0.4**
SDDR	**Presa de Saban**	**3.56**	**272**			**Pn**	**17 03 14.3**	**+1.2**

*IDC **22** 17:11:05.1±2.4, 7°.54S×128°.34E, h170km±25km, mb3.2/4, mb1 3.5/7, mb1mx3.2/36, mbtmp3.9/7, Error ellipse: s-maj=39.4km s-min=19.0km az=82.0*
ISC 22 17:11:03.1±0.8, 7°.61S±0°.06×128°.5E±0°.1, h151km, n9, σ2s82/13, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
SIJI	**Sorong**	**7.25**	**23**	P		**Pn**	**17 12 48.7**	**+2.2**
	3.7nm,0.3s,baz=231,slow=23,SNR=21							
SIJI				S		**Sn**	**17 14 05.2**	**-2.6**
	0.4nm,0.3s,baz=198,slow=19,SNR=2.0							
FITZ	**Fitzroy Crossi**	**10.78**	**195**	P		**Pn**	**17 13 35.5**	**+2.0**
	2.0nm,0.3s,baz=34,slow=9.8,SNR=38							
FITZ				S		**Sn**	**17 15 29.9**	**-2.8**
	0.8nm,0.3s,baz=300,slow=20,SNR=3.3							
WRA	**Warramunga Arr**	**13.51**	**156**	P		**Pn**	**17 14 11.3**	**+2.6**
	0.4nm,0.3s,baz=328,slow=14,SNR=19							
WRA				S		**Sn**	**17 16 35.3**	**-3.1**
	1.6nm,0.3s,baz=333,slow=22,SNR=12							
ASAR	**Alice Springs**	**16.79**	**163**	P		**Pn**	**17 14 54.1**	**+4.7**
	0.5nm,0.3s,baz=335,slow=11,SNR=61							
ASAR				S		**S**	**17 17 52.4**	**-3.7**
	0.2nm,0.3s,baz=329,slow=20,SNR=3.7							
CMAR	**Chiang Mai Arr**	**39.00**	**312**	P		**P**	**17 18 14.5**	**-0.5**
	0.1nm,0.4s,baz=145,slow=7.0,SNR=4.1							
SONM	**Songkhla Array**	**58.56**	**343**	P		**P**	**17 20 43.7**	**-0.2**
	0.3nm,0.6s,baz=154,slow=7.7,SNR=2.5							
MKAR	**Makanchi Array**	**67.93**	**328**	P		**P**	**17 21 44.5**	**-1.0**
	0.5nm,0.4s,baz=118,slow=8.1,SNR=9.0							
ZALV	**Zalesovo Beam**	**71.48**	**335**	P		**P**	**17 22 05.2**	**-1.8**
	0.9nm,0.7s,baz=124,slow=4.3,SNR=4.4							
LPAZ	**La Paz**	**151.11**	**145**	PKPbc		**PKiKP**	**17 30 40.4**	**-0.2**
	0.5nm,0.4s,baz=222,slow=5.0,SNR=3.4							

*IDC **22** 17:13:16.3±0.9, 16°.90N×93°.63W, h161km±10km, mb3.8/12, mb1 3.9/16, mb1mx3.6/41, mbtmp4.2/16, MS2.9/3, Ms1 2.9/3, ms1mx2.6/29, Error ellipse: s-maj=23.8km s-min=11.0km az=47.0*
*NEIC **22** 17:13:16.2±2.2, 16°.85N±0°.05×93°.85W±0°.05, h169km±5km, Error ellipse: s-maj=8.3km s-min=6.4km az=219.0*
*MEX **22** 17:13:17.4±1.2, 16°.86N×93°.89W, h173km±8km, MD4.9*
ISC 22 17:13:16.3±0.7, 16°.79N±0°.07×93°.85W±0°.04, h171km±6km, n49, σ1s55/55, mb4.2/13, Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**1.03**	**287**	P		**Pn**	**17 13 43.1**	**-0.2**
	365nm,0.3s,baz=104,slow=5.7,SNR=2359							
CMIG				S		**Sn**	**17 14 02.8**	**-1.4**
	260nm,0.3s,baz=53,slow=20,SNR=24							
CMIG				LR		LR	17 14 19.4	
	comp=Z,254nm,18.3s,baz=218,slow=52							
CMIG	**Matias Romero**	**1.03**	**287**	*e*P		**Pn**	**17 13 43.3**	**0.0**
CMIG				*e*S		**Sn**	**17 14 03.0**	**-1.2**
CMIG	**Matias Romero**	**1.03**	**287**			**Pn**	**17 13 43.3**	**0.0**
PCIG		**1.24**	**150**	*e*P		**Pn**	**17 13 46.0**	**+0.9**
PCIG				*i* S		**Sn**	**17 14 07.7**	**+0.4**
PCIG		**1.24**	**150**			**Pn**	**17 13 46.0**	**+0.9**
PCIG						**Sn**	**17 14 07.7**	**+0.4**
CCIG	**Comitan**	**1.72**	**107**	*e*P		**Pn**	**17 13 50.4**	**+0.5**
CCIG				*i* S		**Sn**	**17 14 16.6**	**+0.8**
CCIG	**Comitan**	**1.72**	**107**			**Pn**	**17 13 50.0**	**+0.1**
CCIG	**Comitan**	**1.72**	**107**			**Pn**	**17 13 50.4**	**+0.5**
CCIG						**Sn**	**17 14 16.6**	**+0.8**
HUIG	**Huatulco**	**2.39**	**245**	*e*P		**Pn**	**17 13 55.7**	**-1.5**
HUIG				*e*S		**Sn**	**17 14 28.1**	**-0.8**
HUIG	**Huatulco**	**2.39**	**245**			**Pn**	**17 13 55.7**	**-1.5**
HUIG						**Sn**	**17 14 28.1**	**-0.8**
VHO	**Vista Hermosa**	**2.77**	**276**	*e*P		**Pn**	**17 14 02.9**	**+0.9**
VHO				*i* S		**Sn**	**17 14 35.9**	**-1.4**
APG	**El Apazote**	**3.71**	**118**	P		**Pn**	**17 14 12.1**	**-1.6**
	5.2nm,0.3s,baz=318,slow=13,SNR=10							
APG				S		**Sn**	**17 14 50.9**	**-7.5**
	8.4nm,0.3s,baz=338,slow=12,SNR=7.4							
PNIG	**Pinotepa**	**4.12**	**265**	*e*P		**Pn**	**17 14 18.0**	**-0.7**
PNIG				*i* S		**Sn**	**17 15 06.0**	**-1.4**
PNIG	**Pinotepa**	**4.12**	**265**			**Pn**	**17 14 18.0**	**-0.7**
PNIG						**Sn**	**17 15 06.0**	**-1.4**
TLIG	**Tlapa**	**4.57**	**280**			**Pn**	**17 14 23.9**	**-0.7**
TEIG	**Tepich**	**6.30**	**56**	P		**Pn**	**17 14 45.2**	**-1.9**
	7.1nm,0.3s,baz=321,slow=0.3,SNR=31							
TEIG	**Tepich**	**6.30**	**56**	Pn		**Pn**	**17 14 45.3**	**-1.8**
TGUH	**Tegucigalpa,Un**	**6.90**	**112**			**Pn**	**17 14 56.8**	**+1.5**
JTS	**Las Juntas de**	**10.80**	**126**	P		**Pn**	**17 15 47.0**	**+0.4**
	1.1nm,0.3s,baz=343,slow=11,SNR=3.5							
JTS				LR		LR	17 19 31.4	
	comp=Z,30nm,20.9s,baz=166,slow=35							
JTS	**Las Juntas de**	**10.80**	**126**			**Pn**	**17 15 48.1**	**+1.6**
TXAR	**Lajitas Array**	**15.40**	**326**	P		**P**	**17 16 47.0**	**+1.4**
	0.3nm,0.3s,baz=154,slow=13,SNR=8.1							
AMTX	**Amarillo**	**19.33**	**340**	P		**P**	**17 17 28.7**	**0.0**
AMTX				IAmb		IAmb	17 17 33.8	
	comp=Z,15nm,0.6s							
LCAR	**Lake Charles**	**19.35**	**7**	P		**P**	**17 17 28.1**	**-0.6**
W52A	**Murphy**	**20.27**	**24**	P		**P**	**17 17 37.9**	**-0.8**
BG3	**Lake Jocassee**	**20.59**	**26**	P		**P**	**17 17 41.0**	**-1.1**
BG3				IAmb		IAmb	17 18 11.7	
	comp=Z,11nm,0.6s							
V52A	**Sevierville**	**21.06**	**24**	P		**P**	**17 17 45.2**	**-1.8**
V55A	**Taylorsville**	**22.07**	**28**	P		**P**	**17 17 57.5**	**0.0**
V55A				IAmb		IAmb	17 18 10.4	
	comp=Z,16nm,0.7s							
SDV	**Santo Domingo**	**23.94**	**106**	P		**P**	**17 18 13.6**	**-1.6**
	comp=Z,6.7nm,0.5s,baz=285,slow=3.7,SNR=13							
SDV	**Santo Domingo**	**23.94**	**106**	P		**P**	**17 18 13.6**	**-1.6**
SDV				IAmb		IAmb	17 18 15.1	
	comp=Z,9.1nm,0.8s							
N49A	**Columbus Grove**	**25.46**	**17**			pP	17 19 03.5	+0.1
SJG	**San Juan**	**26.45**	**83**	LR		LR	17 29 22.3	
	comp=Z,9.5nm,21.7s,baz=124,slow=37							
NVAR	**Mina Array Bea**	**30.39**	**320**	P		**P**	**17 19 15.8**	**+3.1**
	comp=Z,1.1nm,0.7s,baz=144,slow=9.5,SNR=7.0							
ULM	**Lac du Bonnet**	**33.42**	**358**	P		**P**	**17 19 37.1**	**-1.5**
	comp=Z,2.5nm,0.7s,baz=198,slow=6.4,SNR=5.2							
ULM	**Lac du Bonnet**	**33.42**	**358**	IAmb		IAmb	17 19 48.9	
	comp=Z,34nm,1.9s							
LPAZ	**La Paz**	**41.52**	**141**	P		**P**	**17 20 48.5**	**+0.7**
	comp=Z,4.4nm,0.7s,baz=329,slow=6.3,SNR=18							
LPAZ	**La Paz**	**41.52**	**141**	P		**P**	**17 20 48.3**	**+0.6**
LVC	**Limon Verde**	**46.14**	**147**	LR		LR	17 38 42.3	
	comp=Z,70nm,19.7s,baz=230,slow=33							
YKA	**Yellowknife Ar**	**47.92**	**347**	P		**P**	**17 21 37.1**	**0.0**
	comp=Z,2.2nm,0.7s,baz=153,slow=7.3,SNR=28							
CPUP	**Villa Florida**	**55.66**	**140**	P		**P**	**17 22 34.5**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=353,slow=10,SNR=3.4							
CPUP	**Villa Florida**	**55.66**	**140**	IAmb		IAmb	17 22 48.5	
	comp=Z,20nm,1.9s							
INK	**Inuvik**	**57.27**	**344**	P		**P**	**17 22 46.1**	**+0.5**
	comp=Z,3.8nm,0.8s,baz=127,slow=6.2,SNR=14							
INK	**Inuvik**	**57.27**	**344**	IAmb		IAmb	17 22 47.4	
	comp=Z,6.9nm,1.2s							
ILAR	**Eielson Array**	**59.59**	**337**	P		**P**	**17 23 02.8**	**+1.0**
	comp=Z,0.6nm,0.9s,baz=123,slow=5.4,SNR=3.7							
NB2	**NORSAR Subarra**	**82.55**	**28**	P		**P**	**17 25 19.9**	**0.0**
	comp=Z,1.8nm,0.8s,baz=289,slow=5.3							
NOA	**NORSAR Array B**	**82.55**	**28**	P		**P**	**17 25 20.3**	**+0.3**
	comp=Z,2.2nm,0.7s,baz=292,slow=5.1,SNR=8.8							
ARCES	**ARCESS Array B**	**84.06**	**18**	P		**P**	**17 25 27.9**	**+0.5**
	comp=Z,4.5nm,0.7s,baz=286,slow=5.5,SNR=13							
GERES

ASAR				ScP	**ScP**	**17 25 39.2**	**+3.8**	
	comp=Z,0.8nm,0.9s,baz=106,slow=4.6,SNR=6.6							
WR0	**Warramunga Arr**	**42.24**	**266**	P	**P**	**17 20 52.7**	**-0.3**	
WR0				IAmb	IAmb	17 20 58.0		
	comp=Z,11nm,1.4s							
WB2	**Warramunga Arr**	**42.42**	**266**	P	**P**	**17 20 54.9**	**+0.5**	
WB2				IAmb	IAmb	17 22 38.6		
	comp=Z,12nm,1.4s							
WRAB	**Tennant Creek**	**42.42**	**266**	P	**P**	**17 20 53.7**	**-0.7**	
WRA	**Warramunga Arr**	**42.43**	**266**	P	**P**	**17 20 54.9**	**+0.4**	
	comp=Z,3.2nm,0.5s,baz=97,slow=8.4,SNR=10							
PTCN	**Pitcairn Islan**	**45.13**	**102**		**P**	**17 21 14.6**	**-0.7**	
FORT	**Forrest**	**46.27**	**250**		**P**	**17 21 23.4**	**-0.5**	
MTN	**Manton Dam**	**47.52**	**275**		**P**	**17 21 30.6**	**-2.9**	
KNRA	**Kununurra**	**48.73**	**270**	P	**P**	**17 21 42.1**	**-0.5**	
NVAR	**Mina Array Bea**	**84.90**	**44**	P	**P**	**17 25 25.4**	**-0.1**	
	comp=Z,0.2nm,0.4s,baz=204,slow=8.6,SNR=2.9							
TXAR	**Lajitas Array**	**90.53**	**58**	P	**P**	**17 25 53.5**	**+1.4**	
	comp=Z,0.5nm,0.6s,baz=213,slow=6.5,SNR=5.7							

GUC ***22*** *17:36:50.0±0.8,20°.71S×70°.52W,h35km±2km, ML3.3*
IDC ***22*** *17:36:55.7±4.8,20°.66S×70°.24W,h71km±30km, mb3.6/1, mb1 3.5/4, mb1mx3.3/27, mbtmp3.6/4, MS2.4/1, Ms1 2.5/1, ms1mx2.3/26, Error ellipse: s-maj=73.7km s-min=17.8km az=83.0*

ISC 22 17:36:50.1±1.6, 20°.69S±0°.04×70°.5W±0°.1, h30km±8km, n20, σ1§49/22, 3C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TA01	**Diego Aracena**	**0.30**	**66**	⇓*eP*	**Pb**	**17 36 57.2**	**-0.4**
TA01				*eS*	**Sb**	**17 37 03.1**	**+0.3**
TA01				IAML		17 37 04.2	
	comp=E,2μm,0.5s						
PATCX	**Punta Patache**	**0.33**	**113**	⇓*iP*	**Pb**	**17 36 57.9**	**-0.2**
PATCX				*eS*	**Sn**	**17 37 04.2**	**-0.5**
PATCX				IAML		17 37 04.8	
	comp=E,3μm,0.1s						
PSGC	**Pisagua**	**1.14**	**17**	⇑*iP*	**Pn**	**17 37 09.4**	**-0.7**
PSGC				*eS*	**Sb**	**17 37 24.9**	**-0.9**
PSGC				IAML		17 37 26.4	
	comp=N,2μm,0.4s						
PB11	**IPOC Station P**	**1.21**	**40**	⇓*iP*	**Pn**	**17 37 11.0**	**-0.1**
PB11				*eS*	**Sb**	**17 37 27.6**	**-0.2**
PB11				IAML		17 37 31.2	
	comp=N,1μm,0.4s						
PB08	**IPOC Station P**	**1.36**	**66**	⇑*iP*	**Pb**	**17 37 13.9**	**-1.3**
PB08				*eS*	**Sb**	**17 37 32.1**	**-0.2**
PB08				IAML		17 37 34.7	
	comp=E,524nm,0.2s						
GO01	**Chusmiza**	**1.58**	**50**	⇑*iP*	**Pb**	**17 37 17.5**	**-1.5**
GO01				*eS*	**Sb**	**17 37 38.7**	**0.0**
PB09	**IPOC Station P**	**1.59**	**134**	IAML		17 37 44.8	
	comp=E,420nm,0.4s						
PB04	**IPOC Station P**	**1.66**	**169**	*eP*	**Pn**	**17 37 16.6**	**-0.7**
PB04				*eS*	**Sn**	**17 37 38.2**	**+0.4**
PB04				IAML		17 37 52.4	
	comp=N,774nm,0.3s						
MNMC	**Minye Minye**	**1.76**	**28**	*eP*	**Pn**	**17 37 18.8**	**0.0**
MNMC				*i* S	**Sn**	**17 37 41.0**	**+0.6**
MNMC				IAML		17 37 45.2	
	comp=E,916nm,0.3s						
LVC	**Limon Verde**	**2.40**	**143**	P	**Pn**	**17 37 29.9**	**+2.2**
	comp=E,7.8nm,0.3s,baz=332,slow=14,SNR=17						
LVC				S	**Sb**	**17 38 00.3**	**-2.0**
	comp=E,15nm,0.3s,baz=340,slow=12,SNR=11						
LPAZ	**La Paz**	**4.91**	**27**	P	**Pn**	**17 38 07.2**	**+4.7**
	comp=E,0.2nm,0.3s,baz=229,slow=5.0,SNR=5.0						
LPAZ				LR	LR	17 40 22.1	
	comp=E,42nm,20.1s,baz=305,slow=43						
SIV	**San Ignacio**	**10.08**	**64**	P	**Pn**	**17 39 13.9**	**+1.0**
	comp=E,0.6nm,0.3s,baz=263,slow=14,SNR=12						
TORD	**Torodi Ar. Bea**	**78.47**	**71**	P	**P**	**17 48 47.9**	**-0.9**
	comp=E,0.6nm,0.5s,baz=259,slow=6.6,SNR=5.0						
H11S2	**WAKE ISLAND Hy**	**26.32**	**278**	T	T	20 14 55.8	
	baz=103,slow=75,SNR=37						
H11S1	**WAKE ISLAND Hy**	**26.33**	**278**	T	T	20 14 44.4	
	baz=103,slow=75,SNR=20						
H11S3	**WAKE ISLAND Hy**	**26.34**	**278**	T	T	20 14 41.2	
	baz=103,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**26.38**	**280**	T	T	20 14 39.4	
	baz=102,slow=75,SNR=13						
H11N2	**WAKE ISLAND Hy**	**26.40**	**280**	T	T	20 14 47.6	
	baz=102,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**26.40**	**280**	T	T	20 14 49.9	
	baz=102,slow=75,SNR=12						
MKAR	**Makanchi Array**	**145.81**	**34**	PKPbc	**PKPdf**	**17 56 26.3**	**+0.5**
	comp=E,0.4nm,0.6s,baz=324,slow=3.7,SNR=5.6						

IDC ***22*** *17:41:09.0±1.3,6°.79S×106°.54E,h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/29, mbtmp3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.5/36, Error ellipse: s-maj=37.8km s-min=17.3km az=24.0*
DJA ***22*** *17:41:10.7±0.4,7°.S±3°×10°.7E±°,h10km, M3.8/8, MLv3.8/8*

ISC 22 17:41:10.6±0.7, 6°.75S±0°.04×106°.70E±0°.04, h10km, n19, σ1§18/22, mb3.5/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBJI	**Dramaga**	**0.20**	**14**	P	**Pg**	**17 41 14.9**	**+0.1**
SKJI	**Sukabumi**	**0.29**	**209**	P	**Pg**	**17 41 16.2**	**-0.4**
CBJI	**Citeko**	**0.36**	**25**	P	**Pg**	**17 41 16.4**	**-1.3**
TNG	**Tangerang**	**0.57**	**355**	P	**Pg**	**17 41 21.7**	**-0.1**
CNJI	**Cibinong**	**0.70**	**143**	P	**Pg**	**17 41 23.7**	**-0.5**
CNJI				S	**Sb**	**17 41 34.1**	**-0.6**
LEM	**Lembang**	**0.91**	**95**	Pg	**Pn**	**17 41 29.4**	**-0.3**
	67nm,0.3s,baz=234,slow=7.4,SNR=49						
LEM				LR	LR	17 41 57.8	
	comp=Z,362nm,18.6s,baz=236,slow=46						
LEM	**Lembang**	**0.91**	**95**	P	**Pb**	**17 41 29.0**	**+0.3**
CISI	**Cisompet, Garu**	**1.37**	**126**	P	**Pn**	**17 41 35.1**	**-0.8**
CISI				S	**Sg**	**17 41 54.3**	**-0.4**
CMJI	**Cimerak**	**2.02**	**121**	P	**Pn**	**17 41 45.4**	**+0.7**
CMJI				S	**Sn**	**17 42 10.9**	**+0.9**
KPJI	**Karang Pucung**	**2.29**	**105**	P	**Pn**	**17 41 48.9**	**+0.4**
KPJI				S	**Sn**	**17 42 16.7**	**0.0**
KASI	**Kota Agung**	**2.51**	**299**	P	**Pn**	**17 41 53.7**	**+2.2**
KLSI		**2.83**	**316**	P	**Pb**	**17 42 00.7**	**-0.6**
MDSI	**Maura Dua**	**3.37**	**312**	P	**Pb**	**17 42 07.9**	**-2.6**
PSI	**Prapat**	**12.26**	**320**	LR	LR	17 49 46.8	
	comp=Z,106nm,20.1s,baz=137,slow=43						
CMAR	**Chiang Mai Arr**	**26.19**	**343**	P	**P**	**17 46 46.9**	**+1.3**
	0.5nm,0.7s,baz=171,slow=8.8,SNR=4.3						
WRA	**Warramunga Arr**	**29.85**	**119**	P	**P**	**17 47 20.4**	**+1.9**
	0.7nm,1.0s,baz=297,slow=10,SNR=3.3						
ASAR	**Alice Springs**	**31.08**	**126**	P	**P**	**17 47 29.9**	**+0.6**
	0.3nm,0.9s,baz=303,slow=8.2,SNR=4.3						
STKA	**Stephens Creek**	**41.03**	**132**	P	**P**	**17 48 54.9**	**+0.6**
	2.6nm,0.6s,baz=299,slow=10.0,SNR=7.1						
BRTR	**Keskin Array B**	**81.44**	**312**	P	**P**	**17 53 26.5**	**-1.8**
	0.8nm,0.8s,baz=118,slow=5.9,SNR=5.3						

IDC ***22*** *18:10:52.1±0.9,25°.84N×126°.88E,h0km, mb3.6/8, mb1 3.7/8, mb1mx3.4/42, mbtmp3.6/8, Error ellipse: s-maj=37.5km s-min=19.2km az=72.0*
JMA ***22*** *18:10:54.8±0.2,25°.89N×127°.09E,h15km±3km, MJ3.6*

ISC 22 18:10:52.7±2.7, 25°.87N±0°.09×127°.08E±0°.06, h5km±16km, n20, σ0§64/19, mb3.5/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.53**	**330**	P	**Pb**	**18 11 04.9**	**+0.4**
JKE				S	**Sb**	**18 11 12.4**	**0.0**
JJT3	**Tamagusuku3**	**0.69**	**66**	P	**Pb**	**18 11 07.9**	**+0.6**
JJT3				S	**Sb**	**18 11 17.7**	**+0.6**
JAGN	**Aguni-jima**	**0.73**	**12**	P	**Pb**	**18 11 08.6**	**+0.6**
JAGN				S	**Sb**	**18 11 18.4**	**0.0**
JNTH	**Nagotoyohara**	**1.07**	**52**	P	**Pb**	**18 11 13.3**	**-0.4**
JNTH				S	**Sb**	**18 11 27.2**	**-0.8**
JIH	**Iheya**	**1.41**	**34**	P	**Pg**	**18 11 19.6**	**-0.2**
JIH				*eS*	**Sg**	**18 11 38.2**	**+0.1**
JOW	**Kunigami**	**1.44**	**48**	P	**Pb**	**18 11 20.0**	**-0.1**
H11N1	**WAKE ISLAND Hy**	**37.11**	**91**	T	T	18 57 26.8	
	baz=283						
H11N2	**WAKE ISLAND Hy**	**37.11**	**91**	T	T	18 57 23.0	
	baz=283						
H11N3	**WAKE ISLAND Hy**	**37.12**	**91**	T	T	18 57 29.7	
	baz=283						
H11S3	**WAKE ISLAND Hy**	**37.30**	**93**	T	T	18 57 36.9	
	baz=289,slow=75,SNR=3.4						
H11S1	**WAKE ISLAND Hy**	**37.30**	**93**	T	T	18 57 27.6	
	baz=289,slow=75,SNR=6.2						
H11S2	**WAKE ISLAND Hy**	**37.31**	**93**	T	T	18 57 31.1	
	baz=289,slow=75,SNR=6.6						
SEY	**Seymchan**	**40.67**	**17**	P	**P**	**18 18 34.6**	**+0.9**
	1.0nm,0.8s,baz=252,slow=20,SNR=4.0						
MKAR	**Makanchi Array**	**41.01**	**312**	P	**P**	**18 18 36.5**	**-0.3**
	0.4nm,0.4s,baz=96,slow=9.8,SNR=18						
ZALV	**Zalesovo Beam**	**41.91**	**323**	P	**P**	**18 18 43.4**	**-0.6**
	0.8nm,0.4s,baz=116,slow=8.5,SNR=4.8						
WRA	**Warramunga Arr**	**46.08**	**170**	P	**P**	**18 19 18.0**	**+0.2**
	0.5nm,1.2s,baz=354,slow=9.6,SNR=2.9						
ASAR	**Alice Springs**	**49.68**	**172**	P	**P**	**18 19 45.9**	**+0.2**
	0.5nm,1.1s,baz=356,slow=7.8,SNR=3.9						
BVAR	**Borovoye Array**	**49.86**	**319**	P	**P**	**18 19 46.4**	**-0.3**
	0.4nm,0.3s,baz=101,slow=8.9,SNR=9.2						
AKASG	**Malin Array Be**	**75.13**	**319**	P	**P**	**18 22 34.4**	**-1.4**
	0.2nm,0.3s,baz=64,slow=5.8,SNR=3.1						
YKA	**Yellowknife Ar**	**79.29**	**25**	P	**P**	**18 22 59.7**	**+0.8**
	0.2nm,0.5s,baz=300,slow=5.6,SNR=3.4						

IDC ***22*** *18:18:55.4±1.0,51°.95N×96°.08E,h0km, mb3.7/5, mb1 3.6/8, mb1mx3.3/46, mbtmp3.5/8, ML3.0/3, MS4.0/2, Ms1 4.1/2, ms1mx2.8/42, Error ellipse: s-maj=29.5km s-min=11.5km az=5.0*
MOS ***22*** *18:18:56.1±3.2,51°.56N×95°.93E,h10km, mb3.6/1, Error ellipse: s-maj=11.4km s-min=9.7km az=129.9*
ASRS ***22*** *18:19:00.3±0.4,52°.N±2°×9°.5E±°,h5km, MLv4.2/15, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*

ISC 22 18:18:57.6±1.2, 51°.93N±0°.04×95°.70E±0°.03, h6km±9km, n39, σ1§92/50, mb3.5/5, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TDJR	**Todzha**	**0.53**	**27**	PG	**Pg**	**18 19 08.1**	**+0.2**
TDJR	**Todzha**	**0.53**	**27**	Pg	**Pg**	**18 19 08.1**	**+0.2**
TDJR				Sg	**Sg**	**18 19 15.9**	**+1.1**
KZLR	**Kyzyl**	**0.81**	**254**	PG	**Pn**	**18 19 13.5**	**-2.0**
KZLR						18 19 25.1	
KZLR	**Kyzyl**	**0.81**	**254**	Pg	**Pn**	**18 19 13.6**	**-2.0**
KZLR				Sg	**Sn**	**18 19 25.1**	**-2.7**
ORL	**Orlik**	**2.60**	**75**	*e*PN	**Pn**	**18 19 39.8**	**-0.5**
ORL				*e*		18 20 14.5	
ORL				pmax	pmax		
	comp=Z,114nm,0.4s						
ORL				smax	smax		
	comp=N,281nm,0.6s						
DJOS	**Djoyskaya Sosn**	**2.78**	**290**	Pn	**Pb**	**18 19 45.2**	**-2.4**
DJOS				Pg	**Pg**	**18 19 49.8**	**-0.9**
DJOS				Sg	**Sg**	**18 20 26.1**	**-0.6**
CERR	**Cheremushki**	**2.78**	**291**	PN	**Pg**	**18 19 50.0**	**-0.9**
CERR						18 20 26.3	
CERR	**Cheremushki**	**2.78**	**291**	Pn	**Pb**	**18 19 45.1**	**-2.6**
CERR				Pg	**Pg**	**18 19 50.0**	**-0.9**
CERR				Sg	**Sg**	**18 20 26.4**	**-0.6**
DJO	**Djoy, Khakassi**	**2.88**	**289**	Pg	**Pg**	**18 19 52.0**	**-0.8**
DJO				Sg	**Sg**	**18 20 29.1**	**-0.8**
ORY	**Orie**	**3.10**	**354**	PN	**Pb**	**18 19 53.6**	**+0.5**
ORY						18 20 33.0	
ORY	**Orie**	**3.10**	**354**	Pg	**Pb**	**18 19 53.7**	**+0.5**
ORY				Sg	**Sb**	**18 20 33.1**	**+1.9**
MINR	**Mina**	**3.11**	**344**	PN	**Pg**	**18 19 56.6**	**-0.5**
MINR						18 20 37.3	
MINR	**Mina**	**3.11**	**344**	Pg	**Pg**	**18 19 56.7**	**-0.5**
MINR				Sg	**Sg**	**18 20 37.4**	**0.0**
MOY	**Mondy**	**3.30**	**92**	*e*PN	**Pb**	**18 19 52.4**	**-4.2**
MOY				*e*		18 20 34.9	
MOY				pmax	pmax		
	comp=Z,46nm,0.6s						
MOY				smax	smax		
	comp=N,239nm,0.8s						
VEH	**Verkhnyaya Baz**	**3.54**	**294**	Pg	**Pg**	**18 20 04.0**	**-1.4**
VEH				Sg	**Sg**	**18 20 50.2**	**-1.0**
ARS	**Arshan**	**4.16**	**87**	*e*PN	**Pn**	**18 20 01.0**	**-0.7**
ARS				*e*		18 20 09.9	
ARS				*e*		18 21 02.9	
ARS				pmax	pmax		
	comp=Z,45nm,0.3s						
ARS				smax	smax		
	comp=E,461nm,0.5s						
LUZB	**Luzhba, Kemero**	**4.48**	**295**	Pg	**Pg**	**18 20 21.0**	**-2.3**
LUZB				Sg	**Sg**	**18 21 18.0**	**-3.3**
TASR	**Tashtagol**	**4.87**	**283**	Pg	**Pg**	**18 20 30.6**	**-0.1**
TASR				Sg	**Sg**	**18 21 32.5**	**-1.3**
TLY	**Talaya**	**4.94**	**90**	Pg	Pb	18 20 19.0	-5.5
	comp=E,0.0nm,0.3s,baz=266,slow=14,SNR=4.0						
TLY				Lg	Lg	18 21 23.7	
	comp=E,0.1nm,0.3s,baz=48,slow=15,SNR=9.1						
CUR	**Chagan-Uzun**	**4.99**	**251**	Pg	**Pg**	**18 20 32.6**	**-0.5**
CUR				Sg	**Sg**	**18 21 41.4**	**+3.7**
ULGR	**Ulagan, Altay**	**5.03**	**258**	Sg	**Sg**	**18 21 44.3**	**+5.2**
ARTR	**Artybash**	**5.22**	**272**	Pg	**Pg**	**18 20 36.9**	**-0.6**
ARTR				Sg	**Sg**	**18 21 44.4**	**-0.7**
CHBI	**Chibit, Altay**	**5.41**	**256**	Pg	Pg	18 20 43.9	+2.7
CHBI				Sg	**Sg**	**18 21 55.8**	**+4.6**
ELT	**Eltsovka**	**5.92**	**287**	Sg	**Sg**	**18 22 06.1**	**-1.4**
ELDR	**Elanda**	**6.03**	**267**	Sg	**Sg**	**18 22 11.2**	**0.0**
TRG	**Tyrgan**	**6.58**	**79**	*e*PN	**Pn**	**18 20 31.8**	**-3.1**
TRG				*e*		18 20 52.1	
TRG				*e*		18 22 15.6	
TRG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TRG				smax	smax		
	comp=N,79nm,1.0s						
ZALV	**Zalesovo Beam**	**6.88**	**291**	Pn	**Pn**	**18 20 40.8**	**+1.9**
	comp=N,0.5nm,0.3s,baz=104,slow=11,SNR=6.6						
ZALV				Sn	**Sn**	**18 22 00.4**	**+2.9**
	comp=N,0.8nm,0.3s,baz=106,slow=20,SNR=3.4						
ZALV				Lg	Lg	18 22 30.2	
	comp=N,2.6nm,0.3s,baz=108,slow=26,SNR=12						
ZALV				LR	LR	18 23 28.1	
	comp=N,46nm,21.1s,baz=26,slow=38						
OGRR	**Ongureny**	**7.42**	**72**	*eP*	**Pn**	**18 20 46.0**	**-0.3**
OGRR				pmax	pmax		
	comp=Z,11nm,0.7s						
SONM	**Songino Array**	**8.03**	**116**	Pg	**Pb**	**18 21 17.1**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=308,slow=16,SNR=12						
SONM				Lg	Lg	18 23 02.5	
	comp=Z,1.2nm,0.3s,baz=304,slow=27,SNR=7.9						
MKAR	**Makanchi Array**	**10.14**	**245**	Pn	**Pn**	**18 21 25.8**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=50,slow=16,SNR=7.3						
MKAR				Lg	Lg	18 24 18.0	
	comp=Z,0.1nm,0.3s,baz=68,slow=39,SNR=3.3						
KURBB	**Kurchatov Arra**	**10.84**	**270**	Lg	Lg	18 24 38.4	
	comp=Z,0.1nm,0.3s,baz=77,slow=32,SNR=8.2						
BVAR	**Borovoye Array**	**15.44**	**284**	Pn	**Pn**	**18 22 35.3**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=81,slow=11,SNR=3.0						
AKTO	**Aktyubinsk**	**23.50**	**281**	P	**P**	**18 24 08.8**	**+0.9**
	comp=Z,2.4nm,0.6s,baz=79,slow=13,SNR=11						
FINES	**FINESS Array B**	**37.60**	**312**	P	**P**	**18 26 12.8**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=65,slow=11,SNR=2.9						
BRTR	**Keskin Array B**	**43.65**	**279**	P	**P**	**18 27 02.6**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=63,slow=8.0,SNR=3.0						
NOA	**NORSAR Array B**	**44.36**	**316**	P	**P**	**18 27 07.9**	**-0.4**
	comp=Z,0.5nm,0.8s,baz=57,slow=7.4,SNR=2.7						
ILAR	**Eielson Array**	**54.04**	**28**	LR	LR	18 55 15.9	
	comp=Z,220nm,20.6s,baz=278,slow=40						
TORD	**Torodi Ar. Bea**	**82.22**	**281**	P	**P**	**18 31 19.0**	**-0.7**
	comp=Z,0.7nm,1.0s,baz=42,slow=6.1,SNR=3.7						
PDAR	**Pinedale Array**	**83.17**	**18**	LR	LR	19 12 18.2	
	comp=Z,64nm,19.8s,baz=359,slow=38						

IDC ***22*** *18:32:02.8±0.5,49°.21N×156°.20E,h0km, mb4.3/24, mb1 4.5/29, mb1mx4.4/44, mbtmp4.3/29, ML4.9/2, MS4.1/22, Ms1 4.1/22, ms1mx3.9/37, Error ellipse: s-maj=13.7km s-min=11.5km az=147.0*
KRSC ***22*** *18:32:03.7±2.1,48°.98N×156°.72E,h86km±27km, ML4.9*
BJI ***22*** *18:32:06.2±0.0,49°.32N×156°.37E,h44km, mB5.0/42, mb4.7/58, Ms4.7/43, Ms7 4.5/41*
SKHL ***22*** *18:32:06.0±0.2,49°.00N×156°.80E,h53km±7km, mb5.0/13, mbv5.2/4, ms4.5/11, msh5.1/5*
MOS ***22*** *18:32:08.8±1.3,49°.31N×156°.30E,h54km, mb5.2/29, MS3.9/12, Error ellipse: s-maj=6.3km s-min=2.9km az=82.0*
NEIC ***22*** *18:32:09.8±2.0,49°.26N±0°.10×156°.3E±0°.1,h44km±6km, mb4.8/110, Error ellipse: s-maj=16.1km s-min=10.1km az=137.0*
BGR ***22*** *18:32:18.5±0.0,50°.87N×155°.08E,h33km, mb5.2*

ISC 22 18:32:07.3±0.7, 49°.06N±0°.05×156°.45E±0°.04, h33km±4km, n557, σ1§45/599, mb4.9/171, MS4.3/32, 42C-25D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.64**	**353**	PN	**Pn**	**18 32 33.8**	**+0.1**
SKR	**Severo-Kuril's**	**1.64**	**353**	*i* P	**Pn**	**18 32 33.8**	**+0.1**
SKR				*e*S	**Sn**	**18 32 54.9**	**+1.3**
SKR	**Severo-Kuril's**	**1.64**	**353**	*e*P	**Pn**	**18 32 33.8**	**+0.1**
SKR				AMB	AMB	18 32 39.0	
	1μm,0.7s						
SKR				*i* S	**Sn**	**18 32 53.2**	**-0.4**
SKR				A	A	18 33 12.0	
	5μm,0.8s						
SKR				A	A	18 33 12.0	
	3μm,0.8s						
SKR				AMS	AMS	18 33 22.0	
	7μm,11.0s						
SKR				AMS	AMS	18 33 22.0	
	8μm,11.0s						
SKR				AMS	AMS	18 33 22.0	
	5μm,11.0s						
PAU	**Pauzhetka**	**2.42**	**5**	PN	**Pn**	**18 32 44.5**	**+0.1**
PAU				S	**Sn**	**18 33 14.0**	**+1.1**
PAU	**Pauzhetka**	**2.42**	**5**	*e*P	**Pn**	**18 32 44.5**	**+0.1**
PAU				*e*S	**Sn**	**18 33 14.0**	**+1.1**
PAU	**Pauzhetka**	**2.42**	**5**	*e*P	**Pn**	**18 32 44.5**	**+0.1**
KDTR	**Khodutka, Kamc**	**2.94**	**20**	PN	**Pn**	**18 32 50.5**	**-1.1**
KDTR				S	**Sn**	**18 33 24.3**	**-1.4**
KDTR	**Khodutka, Kamc**	**2.94**	**20**	*e*P	**Pn**	**18 32 50.5**	**-1.1**
KDTR				*e*S	**Sn**	**18 33 24.3**	**-1.4**
ASAK	**Asacha**	**3.45**	**15**	PN	**Pn**	**18 32 58.8**	**+0.1**
ASAK				S	**Sn**	**18 33 38.8**	**+0.4**
ASAK	**Asacha**	**3.45**	**15**	*e*P	**Pn**	**18 32 58.8**	**+0.1**
ASAK				*e*S	**Sn**	**18 33 38.8**	**+0.4**
MTVR	**Mutnovka**	**3.60**	**17**	PN	**Pn**	**18 33 00.4**	**-0.4**
MTVR	**Mutnovka**	**3.60**	**17**	*e*P	**Pn**	**18 33 00.4**	**-0.4**
RUS	**Russkaya**	**3.62**	**20**	PN	**Pn**	**18 33 00.4**	**-0.5**
RUS				S	**Sn**	**18 33 40.8**	**-1.7**
RUS	**Russkaya**	**3.62**	**20**	*e*P	**Pn**	**18 33 00.4**	**-0.5**
RUS				*e*S	**Sn**	**18 33 40.8**	**-1.7**
RUS	**Russkaya**	**3.62**	**20**	*e*P	**Pn**	**18 33 00.4**	**-0.5**
GRL	**Gorelyy**	**3.64**	**16**	PN	**Pn**	**18 33 01.8**	**+0.4**
GRL				S	**Sn**	**18 33 44.6**	**+1.4**
GRL	**Gorelyy**	**3.64**	**16**	*e*P	**Pn**	**18 33 01.8**	**+0.4**
GRL				*e*S	**Sn**	**18 33 44.6**	**+1.4**
APC	**Apacha**	**3.89**	**6**	PN	**Pn**	**18 33 05.1**	**+0.4**
APC	**Apacha**	**3.89**	**6**	*e*P	**Pn**	**18 33 05.1**	**+0.4**
KRMR	**Karymshinskiy**	**3.92**	**15**	PN	**Pn**	**18 33 04.6**	**-0.5**
KRMR				S	**Sn**	**18 33 49.0**	**-0.8**
KRMR	**Karymshinskiy**	**3.92**	**15**	*e*P	**Pn**	**18 33 04.6**	**-0.5**
KRMR				*e*S	**Sn**	**18 33 49.0**	**-0.8**
PEA0B	**Petropavlovsk-**	**4.13**	**11**	PN	**Pn**	**18 33 08.4**	**+0.5**
PEA0B	**Petropavlovsk-**	**4.13**	**11**		**Pn**	**18 33 08.4**	**+0.5**
PETK	**Petropavlovsk-**	**4.13**	**11**	Pn	**Pn**	**18 33 09.0**	**+1.1**
	4.0nm,0.3s,baz=171,slow=13,SNR=92						
PETK				Sn	**Sb**	**18 34 07.1**	**-1.4**
	2.3nm,0.3s,baz=181,slow=16,SNR=2.5						
PET	**Petropavlovsk**	**4.20**	**18**	*e*PN	**Pn**	**18 33 08.7**	**-0.2**
PET				*e*S	**Sn**	**18 34 02.5**	**+5.7**
PET				pmax	pmax		
	comp=Z,129nm,0.6s						
PET				smax	smax		
	comp=N,475nm,0.6s						
PET				smax	smax		
	comp=E,593nm,0.9s						
PET				MLR	MLR		
	comp=Z,1μm,14.0s						
PET				MLR	MLR		
	comp=Z,2μm,13.0s						
PET	**Petropavlovsk**	**4.20**	**18**	*e*P	**Pn**	**18 33 08.9**	**0.0**
PET				AMB	AMB	18 33 15.2	
	comp=Z,130nm,0.6s						
PET				*e*S	**Sn**	**18 33 55.0**	**-1.8**
PET				A	A	18 34 08.8	
	comp=Z,480nm,0.6s						
PET				A	A	18 34 08.8	
	comp=Z,590nm,0.6s						
PET				AMS	AMS	18 34 53.8	
	comp=Z,2μm,12.0s						
PET				AMS	AMS	18 34 53.8	
	comp=Z,3μm,12.0s						
PET				AMS	AMS	18 34 53.8	
	comp=Z,2μm,12.0s						
PET	**Petropavlovsk**	**4.20**	**18**		**Pn**	**18 33 09.0**	**0.0**
UGLR	**Uglovaya**	**4.41**	**19**	PN	**Pn**	**18 33 12.8**	**+0.8**
UGLR	**Uglovaya**	**4.41**	**19**	*e*P	**Pn**	**18 33 12.8**	**+0.8**
AVH	**Avacha**	**4.45**	**18**	PN	**Pn**	**18 33 13.3**	**+0.9**
AVH				S	**Sn**	**18 34 04.2**	**+1.2**
AVH	**Avacha**	**4.45**	**18**	*e*P	**Pn**	**18 33 13.3**	**+0.9**
AVH				*e*S	**Sn**	**18 34 04.2**	**+1.2**
**KOK

KIRR	**Kirishev**	**7.30**	**17**	PN	**Pn**	**18 33 51.6**	**0.0**	UGL		AMS	AMS	18 38 33.9	
KIRR	**Kirishev**	**7.30**	**17**	*e*P	**Pn**	**18 33 51.6**	**0.0**	comp=E,3μm,15.0s					
KOZ	**Kozyrevsk**	**7.31**	**15**	PN	**Pn**	**18 33 52.3**	**+0.7**	UGL		AMS	AMS	18 38 33.9	
KOZ	**Kozyrevsk**	**7.31**	**15**	*e*P	**Pn**	**18 33 52.3**	**+0.7**	comp=E,3μm,15.0s					
KOZ	**Kozyrevsk**	**7.31**	**15**	*e*P	**Pn**	**18 33 52.3**	**+0.7**	**OKH**	**Okha**	**9.58 303**	*de*PN	Pn	18 34 07.8 -15
SRDR	**Sredinnyy**	**7.53**	**14**	PN	**Pn**	**18 33 55.2**	**+0.5**	OKH			MLR	MLR	
SRDR	**Sredinnyy**	**7.53**	**14**	*e*P	**Pn**	**18 33 55.2**	**+0.5**	comp=Z,1μm,14.0s					
KRSR	**Krestovskiy**	**7.59**	**18**	PN	**Pn**	**18 33 55.6**	**+0.1**	OKH			MLR	MLR	
KRSR	**Krestovskiy**	**7.59**	**18**	*e*P	**Pn**	**18 33 55.6**	**+0.1**	comp=E,2μm,13.0s					
KLY	**Klyuchi**	**7.70**	**18**	PN	**Pn**	**18 33 56.7**	**-0.2**	OKH			MLR	MLR	
KLY	**Klyuchi**	**7.70**	**18**	P	**Pn**	**18 33 56.7**	**-0.2**	comp=N,800nm,13.0s					
BDR	**Baidarnaya**	**8.05**	**19**	PN	**Pn**	**18 34 01.3**	**-0.5**	**OKH**	**Okha**	**9.58 303**	*e*P	**Pn**	**18 34 26.8 +4.1**
BDR	**Baidarnaya**	**8.05**	**19**	*e*P	**Pn**	**18 34 01.3**	**-0.5**	OKH			A	A	18 35 43.0
SMKR	**Semkarok**	**8.12**	**20**	PN	**Pn**	**18 34 03.0**	**+0.2**	comp=N,500nm,6.0s					
SMKR	**Semkarok**	**8.12**	**20**	P	**Pn**	**18 34 03.0**	**+0.2**	OKH			AMS	AMS	18 39 10.4
SRKR	**Sorokina**	**8.12**	**19**	PN	**Pn**	**18 34 01.9**	**-0.9**	comp=N,800nm,13.0s					
SRKR	**Sorokina**	**8.12**	**19**	*e*P	**Pn**	**18 34 01.9**	**-0.9**	OKH			AMS	AMS	18 39 10.4
KBTR	**Krutoberegovo**	**8.13**	**26**	PN	**Pn**	**18 34 01.1**	**-1.8**	comp=N,2μm,13.0s					
KBTR	**Krutoberegovo**	**8.13**	**26**	*e*P	**Pn**	**18 34 01.1**	**-1.8**	OKH			AMS	AMS	18 39 10.4
KBG	**Krutoberegovo**	**8.14**	**25**	PN	**Pn**	**18 34 01.9**	**-1.1**	comp=N,1μm,13.0s					
KBG	**Krutoberegovo**	**8.14**	**25**	*e*P	**Pn**	**18 34 01.9**	**-1.1**	**PALN**	**Palana**	**10.25 10**	PN	**Pn**	**18 34 31.5 -0.4**
KBG	**Krutoberegovo**	**8.14**	**25**	*e*P	**Pn**	**18 34 01.9**	**-1.1**	**PALN**	**Palana**	**10.25 10**	P	**Pn**	**18 34 31.5 -0.4**
SHO	**Shikotan**	**8.43 236**	*c*	*i*PN	**Pn**	**18 34 04.9**	**-2.1**	**NKL**	**Nikolayevsk**	**10.72 298**	⇑*i*P	**Pn**	**18 34 42.3 +4.0**
SHO				pmax	pmax			NKL			AMB	AMB	18 34 43.8
	comp=Z,40nm,0.7s								comp=N,80nm,1.0s				
SHO				pmax	pmax			NKL			AMS	AMS	18 39 44.0
	comp=N,14nm,0.6s								comp=N,600nm,15.0s				
SHO				pmax	pmax			NKL			AMS	AMS	18 39 44.0
	comp=E,18nm,0.4s								comp=N,600nm,15.0s				
SHO				pmax	pmax			NKL			AMS	AMS	18 39 44.0
	comp=Z,189nm,1.5s								comp=N,1μm,15.0s				
SHO				MLR	MLR			**JKA**	**Kamikawa-asahi**	**10.74 248**	*e*P	**Pn**	**18 34 40.2 +1.6**
	comp=Z,754nm,11.0s							**JKA**	**Kamikawa-asahi**	**10.74 248**		**Pn**	**18 34 40.2 +1.6**
SHO	**Shikotan**	**8.43 236**	⇓	*i*P	**Pn**	**18 34 07.4**	**+0.4**	**ASAJ**	**Asahikawa**	**10.74 248**	Pn	**Pn**	**18 34 40.2 +1.6**
SHO				AMB	AMB	18 34 09.0		comp=N,2.1nm,0.3s,baz=74,slow=13,SNR=28					
	comp=Z,10.0nm,0.6s							**MA2**	**Magadan**	**11.04 345**	*ce*PN	**Pn**	**18 34 44.2 +1.6**
SHO				AMB	AMB	18 34 09.0		MA2			pmax	pmax	
	comp=Z,20nm,0.6s								comp=Z,84nm,2.5s				
SHO				AMB	AMB	18 34 09.0		**MA2**	**Magadan**	**11.04 345**	Pn	**Pn**	**18 34 43.8 +1.1**
	comp=Z,40nm,0.6s								comp=Z,1.0nm,0.3s,baz=159,slow=12,SNR=13				
SHO				AMB	AMB	18 34 13.5		**MA2**	**Magadan**	**11.04 345**	⇑*e*P	**Pn**	**18 34 44.2 +1.6**
	comp=Z,200nm,3.0s							**MA2**	**Magadan**	**11.04 345**		**Pn**	**18 34 43.3 +0.7**
SHO			⇑	*i*S	**Sn**	**18 35 36.1**	**-4.8**	**ERM**	**Erimo**	**11.68 238**	PN	**Pn**	**18 34 53.6 +2.2**
SHO				A	A	18 35 45.0		**ERM**	**Erimo**	**11.68 238**	Pn	**Pn**	**18 34 53.6 +2.2**
	comp=Z,100nm,2.0s							**TILK**	**Tilichiki**	**12.69 22**	PN	**Pn**	**18 35 02.5 -2.6**
SHO				A	A	18 35 45.0		**TILK**	**Tilichiki**	**12.69 22**	*e*P	**Pn**	**18 35 02.5 -2.6**
	comp=Z,200nm,2.0s							**GRNR**	**Gornyy**	**13.02 285**	*e*PN	**Pn**	**18 35 12.1 +2.3**
SHO				AMS	AMS	18 36 57.0		GRNR			*e*S	**Sn**	**18 37 39.0 +5.7**
	comp=Z,2μm,15.0s							GRNR			pmax	pmax	
SHO				AMS	AMS	18 36 57.0			comp=Z,5.0nm,0.7s				
	comp=Z,700nm,15.0s							GRNR			smax	smax	
SHO				AMS	AMS	18 36 57.0			comp=N,4.0nm,0.7s				
	comp=Z,1μm,15.0s							GRNR			MLR	MLR	
BKI	**Bering**	**8.49**	**40**	PN	**Pn**	**18 34 05.3**	**-2.4**		comp=Z,1μm,16.0s				
BKI	**Bering**	**8.49**	**40**	*e*P	**Pn**	**18 34 05.3**	**-2.4**	**GRNR**	**Gornyy**	**13.02 285**	*e*P	**Pn**	**18 35 12.1 +2.3**
BKI				*e*S	Sn	18 35 32.2	-10	GRNR			AMB	AMB	18 35 16.1
YUK	**Yuzh-Kuril'sk**	**8.86 239**	*c*	*i*PN	**Pn**	**18 34 14.4**	**+1.5**		comp=Z,10.0nm,0.7s				
YUK				pmax	pmax			GRNR			AMS	AMS	18 40 57.0
	comp=Z,317nm,2.2s								comp=Z,900nm,16.0s				
YUK				pmax	pmax			GRNR			AMS	AMS	18 40 57.0
	comp=Z,201nm,0.4s								comp=Z,1μm,16.0s				
YUK				pmax	pmax			**SEY**	**Seymchan**	**14.08 352**	*i* P	**Pn**	**18 35 24.8 +0.6**
	comp=N,26nm,0.2s							**SEY**	**Seymchan**	**14.08 352**	Pn	**Pn**	**18 35 24.5 +0.3**
YUK				pmax	pmax				comp=Z,0.1nm,0.3s,baz=162,slow=12,SNR=7.0				
	comp=E,22nm,0.2s							**SEY**	**Seymchan**	**14.08 352**	*i* P	**Pn**	**18 35 24.8 +0.6**
YUK				MLR	MLR			**TEY**	**Ternei**	**14.11 261**	*e*P	**Pn**	**18 35 24.5 -0.2**
	comp=Z,2μm,18.0s							TEY			AMB	AMB	18 35 32.3
YUK	**Yuzh-Kuril'sk**	**8.86 239**	⇑	*i*P	**Pn**	**18 34 14.4**	**+1.5**		comp=Z,30nm,1.1s				
YUK				AMB	AMB	18 34 18.0		**KMSK**	**Kamenskaya**	**14.48 18**	P	**Pn**	**18 35 27.9 -1.7**
	comp=Z,300nm,3.0s							**KMSK**	**Kamenskaya**	**14.48 18**	*e*P	**Pn**	**18 35 27.9 -1.7**
YUK				AMB	AMB	18 34 22.0		**EKMR**	**Ekimchan**	**15.29 294**	*e*P	**Pn**	**18 35 40.0 -0.4**
	comp=Z,30nm,0.4s							EKMR			AMB	AMB	18 35 47.5
YUK				AMB	AMB	18 34 22.0			comp=Z,40nm,0.9s				
	comp=Z,20nm,0.4s							**KLR**	**Kul'dur**	**16.15 280**	*e*P	**Pn**	**18 35 53.7 +2.1**
YUK				AMB	AMB	18 34 22.0		**KLR**	**Kul'dur**	**16.15 280**	Pn	**Pn**	**18 35 52.7 +1.1**
	comp=Z,200nm,0.4s								comp=Z,0.1nm,0.3s,baz=78,slow=12,SNR=16				
YUK			⇑	*i*S	**Sn**	**18 35 51.7**	**+0.2**	KLR			LR	LR	18 42 42.0
YUK				A	A	18 35 55.0			comp=Z,1μm,18.4s,baz=84,slow=40				
	comp=Z,600nm,3.0s							**USA0B**	**Ussuriysk Arra**	**17.46 263**	*i* P	**Pn**	**18 36 07.1 -0.9**
YUK				A	A	18 35 55.0		**USA0B**	**Ussuriysk Arra**	**17.46 263**	P	**Pn**	**18 36 08.3 +0.3**
	comp=Z,400nm,3.0s							**USRK**	**Ussuriysk Ar.**	**17.46 263**	P	**Pn**	**18 36 06.2 -1.9**
YUK				AMS	AMS	18 37 16.0			baz=70,slow=8.9,SNR=9.7				
	comp=Z,2μm,18.0s							**BMKR**	**Bomnak**	**17.89 299**	⇓*i*P	**P**	**18 36 14.4 +0.7**
YUK				AMS	AMS	18 37 16.0		BMKR			AMB	AMB	18 36 15.5
	comp=Z,2μm,18.0s								comp=Z,10.0nm,0.7s				
YUK				AMS	AMS	18 37 16.0		**VLA**	**Vladivostok**	**18.00 260**	*i* P	**P**	**18 36 16.2 +1.2**
	comp=Z,2μm,18.0s							VLA			pmax	pmax	
GRPR	**Tuman**	**8.94 239**	*c*	*i*PN	**Pn**	**18 34 13.4**	**-0.5**		comp=Z,19nm,1.6s				
GRPR				pmax	pmax			**VLA**	**Vladivostok**	**18.00 260**	*i* P	**P**	**18 36 16.2 +1.2**
	comp=Z,108nm,0.5s							**MAJO**	**Matsushiro**	**18.27 234**	P	**P**	**18 36 18.9 +0.9**
GRPR	**Tuman**	**8.94 239**	*i*	P	**Pn**	**18 34 14.4**	**+0.5**	MAJO			pmax	pmax	
GRPR				AMB	AMB	18 34 18.0			comp=Z,49nm,1.5s				
	comp=Z,110nm,0.5s							**MAJO**	**Matsushiro**	**18.27 234**	P	**P**	**18 36 18.9 +0.9**
GRPR				*e*S	**Sn**	**18 35 51.3**	**-2.1**	**MAT**	**Matsushiro**	**18.27 234**	P	**P**	**18 36 18.9 +0.9**
GRPR				A	A	18 36 02.0		**MJAR**	**Matsushiro Arr**	**18.27 234**	P	**Pn**	**18 36 17.0 -1.0**
	comp=Z,400nm,2.0s								comp=Z,0.1nm,0.3s,baz=29,slow=12,SNR=11				
GRPR				A	A	18 36 02.0		MJAR			LR	LR	18 44 13.6
	comp=Z,300nm,2.0s								comp=Z,446nm,19.6s,baz=60,slow=40				
TYV	**Tymovskoe**	**9.07 287**		*e*PN	Pn	18 34 21.0	+5.2	**MJB9**	**Matsu-Tunnel**	**18.27 234**	P	**P**	**18 36 18.6 +0.6**
TYV				*e*S	Sn	18 36 07.5	+11	**ZEA**	**Zeya**	**18.74 296**	*e*P	**P**	**18 36 23.2 +0.2**
TYV				pmax	pmax			ZEA			pmax	pmax	
	comp=Z,200nm,2.3s								comp=Z,17nm,1.0s				
TYV				pmax	pmax			ZEA			MLR	MLR	
	comp=Z,29nm,1.3s								comp=Z,1μm,14.0s				
TYV				smax	smax			ZEA			MLR	MLR	
	comp=E,11nm,1.1s								comp=E,600nm,13.0s				
TYV				MLR	MLR			**ZEA**	**Zeya**	**18.74 296**	*e*P	**P**	**18 36 23.4 +0.4**
	comp=Z,2μm,15.0s							ZEA			AMB	AMB	18 36 26.8
TYV				MLR	MLR				comp=E,20nm,1.0s				
	comp=N,4μm,16.0s							ZEA			AMS	AMS	18 45 36.0
TYV	**Tymovskoe**	**9.07 287**	*e*P		**Pn**	**18 34 19.0**	**+3.2**		comp=E,600nm,14.0s				
TYV				AMB	AMB	18 34 21.2		ZEA			AMS	AMS	18 45 36.0
	comp=N,200nm,3.0s								comp=E,1μm,14.0s				
TYV				AMB	AMB	18 34 22.4		**MDJ**	**Mudanjiang**	**18.86 267**	P	**P**	**18 36 22.9 -1.6**
	comp=N,30nm,1.0s							**KROS**	**Kirovskiy**	**18.94 298**	⇓*i*P	**P**	**18 36 25.6 +0.3**
TYV				*e*S	**Sn**	**18 35 57.6**	**+0.9**	KROS			AMB	AMB	18 36 26.7
TYV				A	A	18 36 10.8			comp=E,10.0nm,0.8s				
	comp=N,110nm,1.0s							**BILL**	**Bilibino**	**19.66 11**	⇓*e*P	**P**	**18 36 31.7 -1.3**
TYV				AMS	AMS	18 38 39.6		BILL			pmax	pmax	
	comp=N,4μm,15.0s								comp=Z,22nm,1.0s				
TYV				AMS	AMS	18 38 39.6		BILL			MLR	MLR	
	comp=N,2μm,15.0s								comp=Z,791nm,15.0s				
GLVR	**Golovnino**	**9.24 239**	*e*PN		**Pn**	**18 34 18.2**	**+0.1**	**BILL**	**Bilibino**	**19.66 11**	P	**P**	**18 36 31.4 -1.6**
GLVR	**Golovnino**	**9.24 239**	*e*P		**Pn**	**18 34 18.5**	**+0.4**	**YAK**	**Yakutsk**	**19.76 321**	*d* *i*P	**P**	**18 36 33.1 -1.0**
NMR	**Nemuro--Hokkai**	**9.36 237**	⇑	*i*PN	**Pn**	**18 34 17.5**	**-2.2**	YAK			*e*S	**S**	**18 40 12.6 -2.1**
NMR	**Nemuro--Hokkai**	**9.36 237**	*e*P		**Pn**	**18 34 17.5**	**-2.2**	YAK			pmax	pmax	
YSS	**Yuzh-Sakhalins**	**9.42 262**	*e*PN		**Pn**	**18 34 24.6**	**+4.0**		comp=Z,49nm,1.0s				
YSS				*e*S	**Sn**	**18 36 09.6**	**+4.3**	YAK			pmax	pmax	
YSS				pmax	pmax				comp=N,23nm,1.4s				
	comp=Z,40nm,1.4s							YAK			pmax	pmax	
YSS				smax	smax				comp=E,45nm,1.4s				
	comp=N,10.0nm,0.8s							YAK			smax	smax	
YSS				MLR	MLR				comp=N,89nm,12.2s				
	comp=E,700nm,18.0s							YAK			smax	smax	
YSS				MLR	MLR				comp=E,66nm,12.9s				
	comp=Z,1μm,18.0s							YAK			MLR	MLR	
YSS	**Yuzh-Sakhalins**	**9.42 262**	*e*P		**Pn**	**18 34 23.0**	**+2.4**		comp=Z,551nm,17.0s				
YSS				AMB	AMB	18 34 25.7		YAK			MLR	MLR	
	comp=Z,40nm,1.0s								comp=N,329nm,17.0s				
YSS				*e*S	**Sn**	**18 36 05.6**	**+0.3**	YAK			MLR	MLR	
YSS				A	A	18 36 11.3			comp=E,323nm,14.0s				
	comp=Z,100nm,0.8s							**YAK**	**Yakutsk**	**19.76 321**	P	**P**	**18 36 32.4 -1.6**
YSS				AMS	AMS	18 37 17.0			comp=E,0.1nm,0.3s,baz=48,slow=1.8,SNR=25				
	comp=Z,1μm,18.0s							**YAK**	**Yakutsk**	**19.76 321**	P	**P**	**18 36 32.2 -1.8**
YSS				AMS	AMS	18 37 17.0		YAK			IAmb	IAmb	18 36 34.2
	comp=Z,800nm,18.0s								comp=Z,44nm,1.0s				
YSS				AMS	AMS	18 37 17.0		**INU**	**Inuyama**	**19.80 233**	P	**Pn**	**18 36 36.2 -0.2**
	comp=Z,1μm,18.0s							**CN2**	**Changchun**	**21.91 268**	*e*P	P	18 36 50.8 -6.7
YSS	**Yuzh-Sakhalins**	**9.42 262**			**Pn**	**18 34 22.8**	**+2.2**	CN2			*e*S	S	18 40 30.9 -27
UGL	**Uglegorsk**	**9.45 276**	*e*PN		Pn	18 34 26.2	+5.3	CN2			LR	LR	
UGL				S	**Sn**	**18 36 10.2**	**+4.4**		comp=N,540nm,15.0s				
UGL				pmax	pmax			CN2			LR	LR	
	comp=Z,131nm,0.9s								comp=E,440nm,15.0s				
UGL				smax	smax			CN2			LR	LR	
	comp=E,76nm,0.9s								comp=Z,620nm,16.0s				
UGL				MLR	MLR			**GAMB**	**Gambell**	**22.62 38**	P	**P**	**18 37 05.8 +0.9**
	comp=Z,3μm,18.0s							**KSRS**	**Korea Array**	**23.65 251**	P	**P**	**18 37 15.6 +0.1**
UGL				MLR	MLR				comp=Z,14nm,0.9s,baz=50,slow=9.5,SNR=37				
	comp=E,3μm,15.0s							KSRS			LR	LR	18 46 10.7
UGL	**Uglegorsk**	**9.45 276**	*e*P		**Pn**	**18 34 24.0**	**+3.1**		comp=Z,399nm,18.9s,baz=60,slow=36				
UGL				AMB	AMB	18 34 34.0		**KS19**	**Wonju Array Si**	**23.66 252**	P	**P**	**18 37 16.6 +1.1**
	comp=E,130nm,0.9s							**HIA**	**Hailar**	**23.86 285**	P	**P**	**18 37 16.0 -1.4**
UGL				*e*S	**Sn**	**18 36 07.1**	**+1.3**	HIA			pmax	pmax	
UGL				A	A	18 36 17.0			comp=Z,11nm,1.1s				
	comp=E,80nm,0.9s							**HIA**	**Hailar**	**23.86 285**	P	**P**	**18 37 16.0 -1.4**
								TJN	**Taejon**	**24.68 250**	*ce*P	**P**	**18 37 25.1 +0.1**
JNU	**Nakatsue**	**24.83 240**		P	**P**	**18 37 28.1**	**+1.6**
JNU				IAmb	IAmb	18 37 29.3	
	comp=Z,30nm,1.1s						
ANM	**Nome**	**25.49 38**		P	**P**	**18 37 33.2**	**+1.1**
ANM				pmax	pmax		
	comp=Z,30nm,1.2s						
ANM	**Nome**	**25.49 38**		P	**P**	**18 37 33.2**	**+1.1**
ANM				IAmb	IAmb	18 37 36.4	
	comp=Z,30nm,1.2s						
TIXI	**Tiksi**	**25.96 340**	*ce*	P	**P**	**18 37 32.7**	**-3.5**
TIXI				pmax	pmax		
	comp=Z,15nm,0.8s						
TIXI	**Tiksi**	**25.96 340**		P	**P**	**18 37 34.2**	**-2.0**
	comp=Z,13nm,0.7s,baz=180,slow=24,SNR=49						
TIXI				LR	LR	18 48 35.1	
	comp=Z,336nm,18.9s,baz=169,slow=38						
TIXI	**Tiksi**	**25.96 340**		P	**P**	**18 37 33.6**	**-2.6**
BOD	**Bodaibo**	**26.36 306**		*e*P	**P**	**18 37 35.9**	**-4.1**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.5s						
RDOG	**Red Dog Mine**	**27.67 32**		P	**P**	**18 37 52.0**	**+0.2**
RDOG				IAmb	IAmb	18 38 07.6	
	comp=Z,28nm,1.5s						
BJI	**Beijing**	**29.78 268**		P	**P**	**18 38 09.8**	**-0.9**
BJI				pmax	pmax		
	comp=Z,6.0nm,2.0s						
H11N2	**WAKE ISLAND Hy**	**30.45 160**		T	T	19 11 14.6	
	baz=342,slow=75,SNR=2.2						
H11N1	**WAKE ISLAND Hy**	**30.46 160**		T	T	19 11 05.2	
	baz=342,slow=75,SNR=3.0						
H11N3	**WAKE ISLAND Hy**	**30.46 160**		T	T	19 11 21.1	
	baz=342,slow=75,SNR=7.7						
KDAK	**Kodiak Island**	**30.91 54**		LR	LR	18 53 25.2	
	comp=Z,214nm,18.2s,baz=301,slow=41						
H11S1	**WAKE ISLAND Hy**	**31.59 161**		T	T	19 12 31.2	
	baz=346,slow=76,SNR=55						
H11S3	**WAKE ISLAND Hy**	**31.60 161**		T	T	19 12 32.0	
	baz=346,slow=76,SNR=57						
H11S2	**WAKE ISLAND Hy**	**31.61 161**		T	T	19 12 31.4	
	baz=346,slow=76,SNR=19						
COLD	**Coldfoot**	**32.15 36**		P	**P**	**18 38 31.7**	**+0.4**
ULN	**Ulaanbaatar**	**32.31 287**		P	**P**	**18 38 31.5**	**-1.7**
ULN				pmax	pmax		
	comp=Z,12nm,1.9s						
ULN	**Ulaanbaatar**	**32.31 287**		P	**P**	**18 38 31.4**	**-1.7**
HHC	**Hu-ho-hao-te**	**32.40 273**		*e*P	**P**	**18 38 33.8**	**-0.2**
HHC				sP	pwP	18 38 51.1	+4.1
HHC				S	**S**	**18 43 41.3**	**-4.8**
HHC				sS	sS	18 44 03.8	+3.0
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,72nm,7.9s						
HHC				LR	LR		
	comp=Z,320nm,15.3s						
HHC				LR	LR		
	comp=Z,260nm,13.1s						
HHC				LR	LR		
	comp=Z,400nm,13.3s						
SONM	**Songino Array**	**32.74 287**		P	**P**	**18 38 35.4**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=79,slow=7.7,SNR=3.7						
SONM				PcP	**PcP**	**18 41 22.2**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=64,slow=3.4,SNR=3.1						
SONM				LR	LR	18 53 10.4	
	comp=Z,687nm,18.4s,baz=86,slow=39						
SML	**Sawmill**	**32.74 46**		P	**P**	**18 38 37.3**	**+0.6**
SML				IAmb	IAmb	18 38 50.1	
	comp=Z,25nm,1.0s						
WRH	**Wood River Hil**	**32.81 41**		P	**P**	**18 38 37.2**	**+0.1**
NJ2	**Nanjing**	**32.82 253**		*e*P	**P**	**18 38 38.3**	**+0.7**
NJ2				S	**S**	**18 43 52.9**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,290nm,5.3s						
NJ2				LR	LR		
	comp=Z,690nm,14.3s						
NJ2				LR	LR		
	comp=Z,470nm,16.1s						
NJ2				LR	LR		
	comp=Z,660nm,15.5s						
TLY	**Talaya**	**33.18 295**		*e*P	**P**	**18 38 40.0**	**-0.5**
TLY				*e*S	**S**	**18 44 00.8**	**+3.0**
TLY				pmax	pmax		
	comp=Z,38nm,0.9s						
TLY				MLR	MLR		
	comp=Z,1μm,15.0s						
TLY	**Talaya**	**33.18 295**		*e*P	**P**	**18 38 40.0**	**-0.5**
TLY	**Talaya**	**33.18 295**		P	**P**	**18 38 39.2**	**-1.3**
TLY				IAmb	IAmb	18 38 41.4	
	comp=Z,13nm,0.8s						
SCM	**Sheep Creek Mo**	**33.22 46**		P	**P**	**18 38 42.8**	**+2.0**
SCM				pmax	pmax		
	comp=Z,35nm,1.3s						
SCM	**Sheep Creek Mo**	**33.22 46**		P	**P**	**18 38 42.8**	**+2.0**
HDA	**Harding Lake**	**33.31 41**		P	**P**	**18 38 42.0**	**+0.6**
HDA				IAmb	IAmb	18 38 55.6	
	comp=Z,20nm,1.5s						
IL31		**33.33 41**		P	**P**	**18 38 41.3**	**-0.3**
ILAR	**Eielson Array**	**33.33 41**		P	**P**	**18 38 42.0**	**+0.3**
	comp=Z,1.8nm,1.0s,baz=246,slow=8.0,SNR=13						
ILAR				PcP	**PcP**	**18 41 22.6**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=274,slow=4.2,SNR=3.1						
ZAK	**Zakamensk**	**33.79 293**		*e*P	**P**	**18 38 45.3**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAK	**Zakamensk**	**33.79 293**		*e*P	**P**	**18 38 45.3**	**-0.7**
PRP	**Porcupine Dome**	**33.91 39**		P	**P**	**18 38 47.9**	**+1.0**
PRP				IAmb	IAmb	18 39 04.8	
	comp=Z,30nm,1.8s						
FYU	**Fort Yukon**	**34.05 37**		P	**P**	**18 38 49.5**	**+1.6**
SCRK	**Sand Creek**	**34.62 42**		P	**P**	**18 38 52.2**	**-0.8**
EGAK	**Eagle**	**35.79 40**		P	**P**	**18 39 02.0**	**-0.9**
EGAK				IAmb	IAmb	18 39 17.9	
	comp=Z,8.7nm,0.8s						
WHN	**Wuhan**	**36.69 256**	⇑	*i*P	**P**	**18 39 10.9**	**0.0**
WHN				S	**S**	**18 44 52.6**	**+0.6**
WHN				pmax	pmax		
	comp=Z,66nm,0.8s						
WHN				LR	LR		
	comp=Z,350nm,8.4s						
WHN				LR	LR		
	comp=Z,740nm,10.2s						
WHN				LR	LR		
	comp=Z,560nm,16.6s						
XAN	**Xi'an**	**37.96 265**		P	**P**	**18 39 20.3**	**-1.4**
XAN				pP	sP	18 39 31.8	-1.6
XAN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,170nm,5.4s						
XAN				LR	LR		
	comp=Z,330nm,20.6s						
XAN				LR	LR		
	comp=Z,390nm,17.4s						
INK	**Inuvik**	**38.48 34**		P	**P**	**18 39 26.1**	**+0.4**
INK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
INK	**Inuvik**	**38.48 34**		P	**P**	**18 39 26.4**	**+0.8**
	comp=Z,4.7nm,0.7s,baz=286,slow=7.9,SNR=18						
INK	**Inuvik**	**38.48 34**		P	**P**	**18 39 26.1**	**+0.4**
ENH	**Enshi**	**39.99 260**		P	**P**	**18 39 38.6**	**-0.1**
ENH				IAmb	IAmb	18 39 40.0	
	comp=Z,48nm,1.7s						
LZH	**Lanzhou**	**40.07 271**	⇓	P	**P**	**18 39 40.1**	**+0.6**
LZH				pP	pwP	18 39 52.5	-0.1
LZH				sP	sP	18 40 00.4	+9.2
LZH				PP	**PP**	**18 41 13.3**	**+1.5**
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,69nm,5.4s						
LZH				LR	LR		
	comp=Z,520nm,15.2s						
LZH				LR	LR		
	comp=Z,270nm,12.5s						
LZH				LR	LR		
	comp=Z,770nm,14.6s						
GTA	**Gaotai**	**40.84 278**		*e*P	**P**	**18 39 44.5**	**-1.3**
GTA				pP	pwP	18 39 59.8	+1.7
GTA				sP	sP	18 40 06.8	+9.3
GTA				S	**S**	**18 45 52.1**	**-2.7**
GTA				sS	sS	18 46 15.1	+5.3
GTA				SS	**SS**	**18 48 49.9**	**-6.5**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						

GTA pmax pmax
comp=Z,120nm,6.5s
GTA LR LR
comp=Z,410nm,15.6s
GTA LR LR
comp=Z,650nm,14.6s
GTA LR LR
comp=Z,760nm,16.2s
C36M Paulatuk 41.68 32 P **P** **18 39 53.4 +1.3**
C36M IAmb IAmb 18 40 07.5
comp=Z,18nm,1.1s
ZAA0 Zalesovo Array 43.11 305 P **P** **18 40 02.1 -1.9**
ZAA0 **PcP** **18 41 54.2 +1.0**
ZALV Zalesovo Beam 43.11 305 P **P** **18 40 02.5 -1.4**
comp=Z,3.2nm,0.7s,baz=62,slow=7.3,SNR=16
ZALV PcP **PcP** **18 41 53.4 +0.1**
comp=Z,2.6nm,0.9s,baz=62,slow=3.5,SNR=5.3
ZALV LR LR 18 59 16.2
comp=Z,191nm,18.9s,baz=14,slow=38
CD2 Chengdu 43.31 265 *eP* **P** **18 40 06.0 0.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GYA Guiyang 44.40 258 *eP* **P** **18 40 15.3 +0.5**
GYA pmax pmax
comp=Z,10.0nm,1.0s
BBB Bella Bella 45.94 56 LR LR 19 00 22.8
comp=Z,104nm,18.8s,baz=336,slow=37
WMQ Urumqi 46.19 291 *eP* **P** **18 40 28.8 0.0**
WMQ pmax pmax
comp=Z,9.0nm,0.9s
WMQ pmax pmax
comp=Z,110nm,4.9s
WMQ LR LR
comp=Z,200nm,15.1s
WMQ LR LR
comp=Z,300nm,14.3s
WMQ LR LR
comp=Z,200nm,15.3s
YKA Yellowknife Ar 47.72 39 P **P** **18 40 41.2 +0.9**
comp=Z,2.2nm,0.8s,baz=296,slow=7.8,SNR=17
YKA PcP **PcP** **18 42 10.2 +1.1**
comp=Z,0.8nm,0.8s,baz=294,slow=3.4,SNR=3.1
KMI Kunming 47.86 260 P **P** **18 40 43.1 +0.9**
KMI pP pwP 18 40 55.5 -0.7
KMI sP sP 18 41 01.8 +7.8
KMI S **S** **18 47 35.1 -2.2**
KMI pmax pmax
comp=Z,19nm,0.9s
KMI pmax pmax
comp=Z,120nm,5.0s
KMI LR LR
comp=Z,250nm,20.0s
KMI LR LR
comp=Z,180nm,17.2s
KMI LR LR
comp=Z,180nm,21.1s
KMI Kunming 47.86 260 P **P** **18 40 42.7 +0.5**
KMI pmax pmax
comp=Z,19nm,1.0s
KMI Kunming 47.86 260 P **P** **18 40 42.7 +0.5**
MK31 Makanchi Array 47.88 297 *i* P **P** **18 40 40.7 -1.2**
MK31 Makanchi Array 47.88 297 P **P** **18 40 40.7 -1.2**
MKAR Makanchi Array 47.88 297 *i* P **P** **18 40 41.0 -0.9**
MKAR pmax pmax
comp=Z,7.0nm,0.8s
MKAR Makanchi Array 47.88 297 P **P** **18 40 40.7 -1.2**
comp=Z,7.2nm,0.8s,baz=63,slow=7.7,SNR=60
MKAR LR LR 19 02 17.3
comp=Z,722nm,18.2s,baz=40,slow=38
MKAR Makanchi Array 47.88 297 *eP* **P** **18 40 41.0 -0.9**
RES Resolute Bay 47.91 20 P **P** **18 40 42.8 +1.1**
RES pmax pmax
comp=Z,8.0nm,1.5s
RES Resolute Bay 47.91 20 P **P** **18 40 42.8 +1.1**
KURK Kurchatov 47.97 303 P **P** **18 40 41.5 -0.9**
KURK pmax pmax
comp=Z,17nm,0.8s
KURK Kurchatov 47.97 303 *eP* **P** **18 40 41.5 -0.9**
KURK Kurchatov 47.97 303 P **P** **18 40 41.5 -0.9**
MAKZ Makanchi 48.06 297 P **P** **18 40 42.2 -1.1**
MAKZ pmax pmax
comp=Z,7.0nm,1.1s
MAKZ Makanchi 48.06 297 P **P** **18 40 42.1 -1.1**
SLVN Son La 49.81 256 P **P** **18 40 58.2 +1.2**
SLVN IAmb IAmb 18 40 59.5
comp=Z,8.2nm,0.8s
BRVK Borovoye 51.16 309 P **P** **18 41 06.0 -0.8**
BRVK pmax pmax
comp=Z,16nm,1.0s
BRVK Borovoye 51.16 309 *eP* **P** **18 41 06.0 -0.8**
BRVK Borovoye 51.16 309 P **P** **18 41 06.0 -0.8**
BRVK IAmb IAmb 18 41 07.0
comp=Z,16nm,1.0s
PDGK Podgornoye 51.44 295 P **P** **18 41 06.6 -2.6**
LSA Lhasa 52.38 274 P **P** **18 41 17.6 +0.9**
LSA pmax pmax
comp=Z,5.0nm,0.8s
LSA Lhasa 52.38 274 *eP* **P** **18 41 17.6 +0.9**
LSA Lhasa 52.38 274 P **P** **18 41 17.6 +0.9**
KDJ Kajisay 53.52 295 P **P** **18 41 24.2 -0.5**
KDJ pmax pmax
comp=Z,5.0nm,0.8s
KDJ Kajisay 53.52 295 P **P** **18 41 24.2 -0.5**
SVE Sverdlovsk 53.66 317 *eP* **P** **18 41 24.7 -0.5**
SVE pmax pmax
comp=Z,28nm,0.9s
SVE Sverdlovsk 53.66 317 *eP* **P** **18 41 24.7 -0.5**
BOOM Boomskoye usch 54.05 296 P **P** **18 41 28.5 0.0**
BOOM Boomskoye usch 54.05 296 P **P** **18 41 28.5 0.0**
DAG Danmarks Havn 54.40 359 *i* P **P** **18 41 30.0 -0.3**
DAG pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 54.40 359 *i* P **P** **18 41 30.0 -0.3**
comp=Z,5.6nm,0.9s
SHL Shillong 54.66 269 P **P** **18 41 33.5 +0.4**
SHL pmax pmax
comp=Z,22nm,1.0s
SHL Shillong 54.66 269 P **P** **18 41 33.5 +0.4**
SHL Shillong 54.66 269 P **P** **18 41 34.6 +1.5**
SNR=5.3
AAK Ala-Archa 54.81 297 *ceP* **P** **18 41 33.3 -0.7**
AAK pmax pmax
comp=Z,4.0nm,0.8s
AAK Ala-Archa 54.81 297 *i* P **P** **18 41 34.0 0.0**
SNR=7.1
AAK Ala-Archa 54.81 297⇑ *eP* **P** **18 41 33.3 -0.7**
AAK Ala-Archa 54.81 297 P **P** **18 41 33.3 -0.7**
ARU Arti 54.82 318 *d iP* **P** **18 41 32.7 -0.9**
ARU *PP **pwP** **18 41 46.6 -0.5**
ARU 18 42 33.8
ARU 18 43 33.3
ARU S **S** **18 49 10.6 -1.4**
ARU pmax pmax
comp=Z,39nm,0.9s
ARU Arti 54.82 318⇓ *iP* **P** **18 41 32.7 -0.9**
ARU Arti 54.82 318 P **P** **18 41 32.5 -1.2**
CHTO Chiang Mai 54.82 258 P **P** **18 41 35.5 +1.4**
CHTO pmax pmax
comp=Z,17nm,1.1s
CHTO Chiang Mai 54.82 258 P **P** **18 41 35.5 +1.4**
CHTO IAmb IAmb 18 41 49.6
comp=Z,17nm,1.1s
CMAR Chiang Mai Arr 55.08 258 P **P** **18 41 35.9 -0.2**
comp=Z,6.4nm,0.9s,baz=31,slow=7.3,SNR=31
CMAR LR LR 19 06 09.9
comp=Z,148nm,20.4s,baz=51,slow=37
K05A Summer Lake 55.17 63 P **P** **18 41 39.6 +3.0**
K05A IAmb IAmb 18 41 52.0
comp=Z,11nm,0.9s
WALA Waterton Lakes 55.24 53 P **P** **18 41 38.7 +1.7**
WALA IAmb IAmb 18 42 09.2
comp=Z,31nm,1.9s
KSH Kashi 55.84 293 P **P** **18 41 45.3 +3.9**
KSH PP **PP** **18 43 51.3 +5.5**
KSH S **S** **18 49 26.3 -0.1**
KSH SS **SS** **18 53 11.5 -0.3**
KSH pmax pmax
comp=Z,430nm,6.4s
KSH LR LR
comp=Z,390nm,5.8s
KSH LR LR
comp=Z,230nm,5.5s
KSH LR LR
comp=Z,980nm,8.6s
BMO Blue Mountains 55.94 59 P **P** **18 41 46.7 +4.7**
BMO pmax pmax
comp=Z,15nm,1.6s
BMO Blue Mountains 55.94 59 P **P** **18 41 46.7 +4.7**
BMO IAmb IAmb 18 41 56.9
comp=Z,15nm,1.6s
MOD Modoc Plateau 56.02 63 P **P** **18 41 44.8 +2.1**
MOD IAmb IAmb 18 41 57.6
comp=Z,6.9nm,0.8s
TAPN Taplejung 56.20 274 *eP* **P** **18 41 44.3 0.0**
ARCES ARCESS Array B 56.39 341 P **P** **18 41 43.5 -1.3**
comp=Z,2.3nm,1.0s,baz=42,slow=9.6,SNR=3.8
ARCES LR LR 19 10 37.7
comp=Z,197nm,18.3s,baz=22,slow=41
ARSB Arslanbob 56.51 296 P **P** **18 41 46.2 0.0**
ARSB IAmb IAmb 18 42 58.7
comp=Z,10nm,1.3s
MSO Missoula 56.58 55 P **P** **18 41 48.1 +1.5**
MSO IAmb IAmb 18 41 53.0
comp=Z,8.1nm,1.1s
PRGR Permogore 56.62 328 *eP* P 18 41 42.3 -4.2
PRGR pmax pmax
comp=Z,11nm,0.9s
WVOR Wild Horse Val 56.66 62 P **P** **18 41 49.0 +1.8**
WVOR pmax pmax
comp=Z,9.0nm,1.1s
WVOR Wild Horse Val 56.66 62 P **P** **18 41 49.0 +1.8**
WVOR IAmb IAmb 18 42 02.2
comp=Z,9.5nm,1.1s
ODAN Odare 56.74 274 *eP* **P** **18 41 48.0 -0.1**
KK31 Karatay Array 56.84 299 P **P** **18 41 46.9 -1.5**
KK31 Karatay Array 56.84 299 P **P** **18 41 46.9 -1.5**
KKAR Karatay Array 56.84 299 P **P** **18 41 47.0 -1.4**
KKAR pmax pmax
comp=Z,4.0nm,1.2s
KKAR Karatay Array 56.84 299 P **P** **18 41 47.0 -1.4**
JIRN Jiri 56.98 275 *eP* **P** **18 41 50.4 +0.4**
comp=Z,35nm,0.9s
GUN Gumba 57.02 276 *eP* **P** **18 41 50.0 -0.2**
RAMN Ramite 57.19 274 *eP* **P** **18 41 51.6 +0.3**
comp=Z,38nm,0.9s
TMCR Tamitsa 57.32 333 *eP* **P** **18 41 50.5 -0.8**
KKN Kakani 57.49 276 *eP* **P** **18 41 53.1 -0.3**
comp=Z,35nm,1.0s
FFC Flin Flon 57.52 42 P **P** **18 41 54.1 +1.2**
FFC pmax pmax
comp=Z,7.0nm,1.0s
FFC Flin Flon 57.52 42 P **P** **18 41 54.1 +1.2**
FFC IAmb IAmb 18 42 07.7
comp=Z,7.5nm,1.0s
PKIN Phulchoki 57.56 276 *eP* **P** **18 41 53.8 -0.1**
DMN Daman 57.73 276 *eP* **P** **18 41 55.8 +0.7**
comp=Z,39nm,0.9s
GKN Gorkha 57.77 277 *eP* **P** **18 41 55.9 +0.6**
comp=Z,30nm,0.9s
FCC Fort Churchill 58.08 35 P **P** **18 41 57.2 +0.4**
FCC pmax pmax
comp=Z,25nm,1.7s
FCC Fort Churchill 58.08 35 P **P** **18 41 57.2 +0.4**
FCC IAmb IAmb 18 42 10.4
comp=Z,25nm,1.6s
DANN Dangsing 58.11 278 *eP* **P** **18 41 58.9 +1.1**
comp=Z,30nm,0.8s
PNTR Pine Nut 58.20 66 P **P** **18 42 01.4 +3.2**
PNTR IAmb IAmb 18 42 14.9
comp=Z,5.5nm,0.8s
SUMG Summit 58.21 5 *i* P **P** **18 41 58.7 +0.7**
SUMG pmax pmax
comp=Z,67nm,1.0s
SUMG Summit 58.21 5 *i* P **P** **18 41 58.7 +0.7**
comp=Z,67nm,1.0s
SUMG Summit 58.21 5 P **P** **18 41 58.6 +0.5**
BTK Batken 58.58 296 P **P** **18 42 00.2 -0.5**
BTK pmax pmax
comp=Z,8.0nm,1.0s
BTK Batken 58.58 296 P **P** **18 42 00.2 -0.5**
BTK IAmb IAmb 18 42 02.0
comp=Z,8.1nm,0.9s
KOLN Koldanda 58.60 277 *eP* **P** **18 42 02.0 +0.8**
comp=Z,28nm,0.9s
AB31 Akbulak array 58.65 310 *i* P **P** **18 41 59.9 -1.1**
ABKAR Akbulak array 58.65 310 P **P** **18 42 00.2 -0.7**
KVN Kaiserville 59.12 65 P **P** **18 42 06.3 +1.7**
KVN pmax pmax
comp=Z,7.0nm,1.0s
KVN Kaiserville 59.12 65 P **P** **18 42 06.3 +1.7**
KVN IAmb IAmb 18 42 19.4
comp=Z,6.6nm,1.0s
RYN Ryan 59.14 65 P **P** **18 42 06.8 +2.1**
QLMT Earthquake Lak 59.21 56 P **P** **18 42 07.4 +2.2**
KLMR Klimovskoe 59.27 329 *eP* **P** **18 42 02.8 -2.2**
KLMR AMP 18 42 05.1
comp=Z,16nm,1.1s
YHL Hebgen Lake 59.33 56 P **P** **18 42 08.3 +2.2**
YHB Horse Butte 59.38 56 P **P** **18 42 06.3 -0.1**
NVAR Mina Array Bea 59.40 65 P **P** **18 42 07.5 +0.9**
comp=Z,1.2nm,0.8s,baz=291,slow=8.1,SNR=8.7
NVAR LR LR 19 03 28.5
comp=Z,45nm,21.2s,baz=272,slow=32
MDPB Devils Postpil 59.45 67 P P 18 42 12.1 +5.1
MDPB IAmb IAmb 18 44 14.2
comp=Z,9.0nm,1.3s
GCMT Greycliff 59.53 54 P **P** **18 42 08.0 +0.7**
YHH Holmes Hill 59.55 56 **P** **18 42 09.2 +1.6**
YMR Madison River 59.56 56 **P** **18 42 08.0 +0.3**
ELK Elko 59.70 62 P **P** **18 42 12.0 +3.3**
ELK pmax pmax
comp=Z,10.0nm,1.8s
ELK Elko 59.70 62 P **P** **18 42 10.0 +1.3**
comp=Z,1.8nm,1.0s,baz=296,slow=7.9
ELK Elko 59.70 62 P **P** **18 42 12.0 +3.3**
ELK IAmb IAmb 18 43 40.6
comp=Z,10nm,1.8s
YNE Yellowstone No 59.86 55 **P** **18 42 10.2 +0.5**
YPP Pitchstone Pla 59.91 56 P P 18 42 17.3 +7.2
LKWY Lake 59.94 56 P **P** **18 42 14.0 +3.8**
LKWY pmax pmax
comp=Z,14nm,1.4s
LKWY Lake 59.94 56 **P** **18 42 14.0 +3.8**
LKWY IAmb IAmb 18 42 28.8
comp=Z,14nm,1.4s
H17A Grant Village 59.95 56 P **P** **18 42 13.0 +2.6**
H17A IAmb IAmb 18 42 27.7
comp=Z,9.4nm,1.1s
IMW Indian Meadow 60.08 56 P **P** **18 42 14.6 +3.3**
IMW IAmb IAmb 18 42 40.9
comp=Z,8.3nm,1.2s
FLWY Flagg Ranch 60.09 56 P **P** **18 42 13.8 +2.5**
FLWY IAmb IAmb 18 42 30.0
comp=Z,6.9nm,1.0s
RLMT Red Lodge 60.18 54 **P** **18 42 13.8 +1.9**
MOOW Moose Ponds 60.28 56 **P** **18 42 14.8 +2.2**
MOOW IAmb IAmb 18 42 23.2
comp=Z,12nm,1.7s
TPAW Teton Pass 60.34 57 P **P** **18 42 16.1 +3.1**
TPAW IAmb IAmb 18 42 29.0
comp=Z,16nm,1.2s
REDW Red Top Meadow 60.48 57 **P** **18 42 14.6 +0.7**
REDW IAmb IAmb 18 42 30.4
comp=Z,17nm,1.2s
SPUT South Promonto 60.93 60 P **P** **18 42 18.5 +1.5**
NIL Nilore 61.29 289 P **P** **18 42 19.4 +0.1**
NIL pmax pmax
comp=Z,26nm,0.9s
NIL Nilore 61.29 289 P **P** **18 42 19.4 +0.1**
DUG Dugway, Tooele 61.46 61 P **P** **18 42 20.1 -0.4**
DUG pmax pmax
comp=Z,24nm,1.8s
DUG Dugway, Tooele 61.46 61 P **P** **18 42 20.1 -0.4**
DUG IAmb IAmb 18 42 35.6
comp=Z,24nm,1.8s
PDAR Pinedale Array 61.58 57 P **P** **18 42 22.3 +0.9**
comp=Z,1.1nm,0.7s,baz=231,slow=1.8,SNR=11
FINES FINESS Array B 62.88 336 P **P** **18 42 28.7 -0.8**
comp=Z,5.4nm,0.9s,baz=28,slow=8.6,SNR=7.8
FINES LR LR 19 12 54.7
comp=Z,250nm,18.7s,baz=12,slow=39
LCMT Little Creek M 63.34 64 P **P** **18 42 35.1 +1.9**
KNB Kanab 63.59 63 P **P** **18 42 38.6 +3.8**
KNB pmax pmax
comp=Z,28nm,1.7s
KNB Kanab 63.59 63 P **P** **18 42 38.6 +3.8**
RSSD Black Hills 63.62 52 P **P** **18 42 36.0 +1.0**
RSSD pmax pmax
comp=Z,8.0nm,0.7s
RSSD Black Hills 63.62 52 P **P** **18 42 36.0 +1.0**
RSSD IAmb IAmb 18 44 21.5
comp=Z,7.5nm,0.7s
OBN Obninsk 64.64 327⇑ *eP* **P** **18 42 40.1 -1.1**
OBN *PP **pwP** **18 42 55.0 -0.1**
OBN *SP sP 18 42 58.0 +4.8
OBN *e* 18 43 12.5
OBN S **S** **18 51 16.0 -2.4**
OBN *SS sS 18 51 48.0 +15
OBN pmax pmax
comp=Z,33nm,2.5s
OBN MLR MLR
comp=Z,140nm,17.0s
OBN Obninsk 64.64 327⇑ *eP* **P** **18 42 40.1 -1.1**
PHWY Pilot Hill 64.82 56 P **P** **18 42 42.3 -0.7**
VSU Vasula 65.17 334 *i* P **P** **18 42 42.3 -2.3**
VSU pmax pmax
comp=Z,28nm,1.0s
VRH Novokhopyorsk 65.64 321 *eP* **P** **18 42 45.9 -1.8**
VRH pmax pmax
comp=Z,30nm,0.8s
LPSR Galich'ya Gora 65.70 324 *eP* **P** **18 42 46.7 -1.4**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
VSR Storozhevoye 66.67 323 *eP* **P** **18 42 52.7 -1.7**
VSR pmax pmax
comp=Z,10.0nm,1.1s
NB2 NORSAR Subarra 66.73 342 P **P** **18 42 54.8 +0.2**
comp=Z,13nm,1.1s,baz=24,slow=6.5
NOA NORSAR Array B 66.73 342 P **P** **18 42 54.3 -0.4**
comp=Z,3.0nm,0.8s,baz=24,slow=6.5,SNR=12
NOA LR LR 19 16 38.0
comp=Z,216nm,18.6s,baz=30,slow=40
VORD Divnogorie 66.81 322 *eP* **P** **18 42 54.3 -1.0**
VORD pmax pmax
comp=Z,10.0nm,0.8s
GEYT Alibeck 67.31 302 P **P** **18 42 57.9 -0.8**
comp=Z,3.0nm,0.7s,baz=358,slow=4.9,SNR=7.4
GEYT LR LR 19 14 36.8
comp=Z,115nm,18.2s,baz=75,slow=38
GOF Gofitskoye 69.75 316⇓ *eP* **P** **18 43 14.8 +1.1**
GOF pmax pmax
comp=Z,19nm,0.6s
SCHQ Schefferville 70.28 25 P **P** **18 43 16.6 -0.3**
comp=Z,4.8nm,0.8s,baz=339,slow=7.5,SNR=5.4
SCHQ LR LR 19 15 56.9
comp=Z,58nm,20.6s,baz=330,slow=38
KIV Kislovodsk 70.76 316 *eP* **P** **18 43 19.6 -0.5**
KIV pmax pmax
comp=Z,39nm,1.1s
KIV Kislovodsk 70.76 316 *eP* **P** **18 43 19.6 -0.5**
KIV Kislovodsk 70.76 316 P **P** **18 43 20.3 +0.2**
KBZ Khabaz 70.83 315 P **P** **18 43 18.8 -1.5**
comp=Z,7.6nm,0.8s,baz=109,slow=2.0,SNR=11
KBZ LR LR 19 19 41.9
comp=Z,159nm,18.1s,baz=26,slow=40
AKASG Malin Array Be 70.83 328 *i* P **P** **18 43 19.5 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 70.83 328 P **P** **18 43 18.9 -1.3**
comp=Z,2.3nm,0.6s,baz=32,slow=6.1,SNR=11
AKASG LR LR 19 16 39.5
comp=Z,202nm,19.8s,baz=335,slow=38
ZEI Tsey 71.09 314 *eP* **P** **18 43 21.8 -0.4**
ZEI pmax pmax
comp=Z,7.0nm,0.9s
ZEI Tsey 71.09 314 *eP* **P** **18 43 21.8 -0.4**
WRA Warramunga Arr 71.47 202 P **P** **18 43 24.5 +0.1**
comp=Z,4.1nm,0.9s,baz=17,slow=6.3,SNR=11
TBLG Delisi 71.50 313 P **P** **18 43 24.7 +0.2**
TBLG pmax pmax
comp=Z,17nm,1.1s
TBLG Delisi 71.50 313 P **P** **18 43 24.6 +0.2**
TBLG IAmb IAmb 18 43 27.8
comp=Z,17nm,1.1s
FITZ Fitzroy Crossi 72.26 211 LR LR 19 16 14.3
comp=Z,24nm,19.0s,baz=22,slow=37
AKH Akhalkalaki 72.34 313 P **P** **18 43 27.8 -2.0**
AKH pmax pmax
comp=Z,12nm,0.9s
AKH Akhalkalaki 72.34 313⇑ P **P** **18 43 31.1 +1.3**
AKH Akhalkalaki 72.34 313 P **P** **18 43 27.8 -2.0**
AKH IAmb IAmb 18 43 33.4
comp=Z,12nm,0.9s
GNI Garni 72.70 312 P **P** **18 43 33.6 +1.7**
SORM Soroca 73.30 327⇓ P **P** **18 43 34.8 -0.2**
RUE Ruedersdorf 73.97 337 *eP* **P** **18 43 39.5 +0.6**
comp=Z,28nm,0.9s,baz=23,slow=5.8
ABTX Abilene, Hawle 74.29 58 P **P** **18 43 42.9 +1.7**
ABTX IAmb IAmb 18 43 55.1
comp=Z,9.7nm,0.7s
OJC Ojcow 74.33 333 P **P** **18 43 40.0 -1.1**
OJC pmax pmax
comp=Z,16nm,0.9s
OJC Ojcow 74.33 333 *eP* **P** **18 43 41.3 +0.2**
OJC Ojcow 74.33 333 P **P** **18 43 40.0 -1.1**
OJC IAmb IAmb 18 43 42.8
comp=Z,16nm,0.9s
TXAR Lajitas Array 74.42 63 P **P** **18 43 43.6 +1.5**
comp=Z,3.4nm,0.8s,baz=296,slow=4.2,SNR=12
KOLS Kolonicke sedl 74.69 331 *eP* **P** **18 43 43.7 +0.5**
KOLS pmax pmax
comp=Z,12nm,1.1s
KOLS Kolonicke sedl 74.69 331 *eP* **P** **18 43 43.7 +0.5**
KSP Ksiaz 74.79 335 *eP* **P** **18 43 44.3 +0.5**
KSP Ksiaz 74.79 335 *eP* **P** **18 43 44.3 +0.5**
RETH Rethem/Aller, 74.80 340 *eP* **P** **18 43 44.6 +0.9**
comp=Z,44nm,1.3s,baz=23,slow=5.8
BUR08 Bucovina Ar. S 74.83 328 P **P** **18 43 43.7 -0.5**
BUR08 IAmb IAmb 18 43 45.4
comp=Z,8.5nm,0.8s
BURAR Bucovina Array 74.85 328⇑ P **P** **18 43 45.1 +0.8**
NRDL Niedersach Rie 74.85 339 *eP* **P** **18 43 44.5 +0.5**
comp=Z,16nm,1.0s,baz=23,slow=5.8
NIE Niedzica 74.89 332 *eP* **P** **18 43 45.8 +1.4**
NIE Niedzica 74.89 332 *eP* **P** **18 43 45.8 +1.4**
ASSE Asse, Remlinge 75.06 339 *eP* **P** **18 43 45.6 +0.5**
comp=Z,14nm,1.1s,baz=23,slow=5.8
OSTC Ostas 75.07 335 *eP* **P** **18 43 45.9 +0.5**
CHVC Chvalec 75.09 335 *eP* **P** **18 43 46.6 +1.1**
BIZ Bicaz 75.12 327⇑ P **P** **18 43 46.1 +0.4**
ASAR Alice Springs 75.15 201 P **P** **18 43 47.5 +1.5**
comp=Z,1.4nm,0.9s,baz=15,slow=5.4,SNR=9.8
OKC Ostrava-Krasne 75.17 334 *eP* **P** **18 43 46.6 +0.7**
OKC Ostrava-Krasne 75.17 334 *eP* **P** **18 43 46.6 +0.7**
UPC Upice 75.17 335 *eP* **P** **18 43 47.0 +1.0**
UPC Upice 75.17 335 *eP* **P** **18 43 47.0 +1.0**
DPC Dobruska-Polom 75.23 335 *eP* **P** **18 43 47.0 +0.7**
DPC *e* 18 43 55.1
DPC Dobruska-Polom 75.23 335 *eP* **P** **18 43 47.0 +0.7**
DPC *ex* x 18 43 55.1
CLL Collm 75.24 337⇑ *iP* **P** **18 43 46.5 +0.1**
CLL *e*SP **PcP** **18 44 05.0 +5.4**
CLL pmax pmax
comp=Z,26nm,1.0s
CLL Collm 75.24 337⇑ *iP* **P** **18 43 46.5 +0.1**
comp=Z,26nm,1.0s
CLL *es*P **PcP** **18 44 05.0 +5.4**
CLL *e*PP **PP** **18 46 32.0 -2.3**
CLL Lm MLR 19 20 00.0
comp=Z,200nm,18.7s
CLL Collm 75.24 337 *eP* **P** **18 43 46.4 +0.1**
comp=Z,26nm,1.0s,baz=23,slow=5.8
CLL Collm 75.24 337 P **P** **18 43 46.2 -0.1**
TESR Tescani 75.29 327⇑ P **P** **18 43 46.9 +0.1**
TRPA Tarpa 75.31 330⇓ P **P** **18 43 47.9 +1.1**
KRLC Kraliky 75.34 334 *eP* **P** **18 43 47.4 +0.4**
KRLC Kraliky 75.34 334 *eP* **P** **18 43 47.4 +0.4**
VARL Varlezi 75.37 326⇓ P **P** **18 43 48.1 +0.9**
LANS Liptovska Anna 75.38 332 *eP* **P** **18 43 48.9 +1.7**
LANS pmax pmax
comp=Z,16nm,0.9s
LANS Liptovska Anna 75.38 332 *eP* **P** **18 43 48.8 +1.6**
CLZ Clausthal 75.39 339 *eP* **P** **18 43 48.2 +0.9**
comp=Z,33nm,1.1s,baz=23,slow=5.8
MORC Moravsky Berou 75.39 334 P **P** **18 43 47.9 +0.6**
MORC pmax pmax
comp=Z,23nm,0.9s
MORC Moravsky Berou 75.39 334⇓ P **P** **18 43 48.7 +1.4**
MORC Moravsky Berou 75.39 334 *eP* **P** **18 43 48.2 +0.9**
MORC Moravsky Berou 75.39 334 P **P** **18 43 47.9 +0.6**
BRG Berggiesshubel 75.40 337 *eP* **P** **18 43 47.3 +0.1**
comp=Z,14nm,1.2s
BRG Berggiesshubel 75.40 337 *eP* **P** **18 43 47.3 +0.1**
BRG pmax pmax
comp=Z,14nm,1.2s

BRG	**Berggiesshubel**	**75.40 337**	*e*P		**P**	**18 43 47.4**	**+0.2**
	comp=Z,14nm,1.2s,baz=23,slow=5.8							
FBE	**Freiberg**	**75.51 337**	*e*P		**P**	**18 43 48.5**	**+0.6**
	comp=Z,38nm,1.5s,baz=23,slow=5.8							
PVCC	**Panska Ves**	**75.55 336**	*e*P		**P**	**18 43 49.5**	**+1.4**
PVCC	**Panska Ves**	**75.55 336**	*e*P		**P**	**18 43 49.5**	**+1.4**
IBBN	**Ibbenburen**	**75.55 341**	*e*P		**P**	**18 43 48.7**	**+0.6**
	comp=Z,44nm,1.3s,baz=23,slow=5.8							
ARCR	**ARCALIA**	**75.60 329**	⇑P		**P**	**18 43 49.5**	**+1.0**
TLCR		**75.61 325**	⇑P		**P**	**18 43 49.2**	**+0.7**
NEUB	**Neuenburg**	**75.64 338**	*e*P		**P**	**18 43 49.0**	**+0.4**
	comp=Z,26nm,1.1s,baz=23,slow=5.8							
GTTG	**Gvttingen**	**75.77 339**	*e*P		**P**	**18 43 50.1**	**+0.8**
	comp=Z,40nm,1.2s,baz=23,slow=5.8							
CFR	**Carcaliu**	**75.87 325**	⇑P		**P**	**18 43 50.5**	**+0.4**
TOPG	**Topolog**	**76.04 325**	⇓P		**P**	**18 43 51.8**	**+0.8**
PRU	**Pruhonice**	**76.04 336**	*e*P		**P**	**18 43 51.5**	**+0.5**
PRU	**Pruhonice**	**76.04 336**	*e*P		**P**	**18 43 51.5**	**+0.5**
BISRR	**Bisoca**	**76.09 326**	⇓P		**P**	**18 43 51.0**	**-0.3**
VRAC	**Vranov**	**76.09 334**	⇓P		**P**	**18 43 52.7**	**+1.5**
VRAC	**Vranov**	**76.09 334**	*e*P		**P**	**18 43 52.1**	**+0.8**
VYHS	**Vyhne**	**76.16 332**	*e*P		**P**	**18 43 52.6**	**+0.9**
VYHS				pmax	pmax			
	comp=Z,20nm,1.2s							
VYHS	**Vyhne**	**76.16 332**	*e*P		**P**	**18 43 52.6**	**+0.9**
JAVC	**Velka Javorina**	**76.18 333**	*e*P		**P**	**18 43 53.6**	**+1.8**
TANN	**Tannenbergstha**	**76.20 337**	*e*P		**P**	**18 43 52.3**	**+0.4**
	comp=Z,65nm,1.9s,baz=23,slow=5.8							
MOX	**Moxa**	**76.20 338**	P		**P**	**18 43 53.0**	**+1.1**
MOX				pmax	pmax			
	comp=Z,20nm,1.0s							
MOX	**Moxa**	**76.20 338**	*e*P		**P**	**18 43 52.4**	**+0.5**
	comp=Z,23nm,1.2s,baz=23,slow=5.8							
DOPR	**Dopca**	**76.21 327**	⇑P		**P**	**18 43 50.8**	**-1.2**
PLN	**Plauen**	**76.21 337**	*e*P		**P**	**18 43 52.4**	**+0.5**
	comp=Z,18nm,1.1s,baz=23,slow=5.8							
GUNZ	**Gunzen**	**76.28 337**	*e*P		**P**	**18 43 53.0**	**+0.7**
	comp=Z,20nm,1.1s,baz=23,slow=5.8							
WERN	**Wernitzgruen**	**76.34 337**	*e*P		**P**	**18 43 53.4**	**+0.7**
	comp=Z,21nm,0.9s,baz=23,slow=5.8							
PSZ	**Piszkesteto**	**76.34 332**	P		**P**	**18 43 52.4**	**-0.4**
PSZ				pmax	pmax			
	comp=Z,15nm,1.1s							
PSZ	**Piszkesteto**	**76.34 332**	⇓P		**P**	**18 43 54.1**	**+1.4**
PSZ	**Piszkesteto**	**76.34 332**	P		**P**	**18 43 52.4**	**-0.4**
PSZ				IAmb	IAmb	18 43 54.9		
	comp=Z,15nm,1.1s							
HARR	**Harsova**	**76.36 325**	⇑P		**P**	**18 43 52.7**	**-0.2**
KRUC	**Moravsky**	**76.37 334**	*e*P		**P**	**18 43 53.6**	**+0.8**
NKC	**Novy Kostel**	**76.37 337**	*e*P		**P**	**18 43 53.7**	**+0.9**
NKC	**Novy Kostel**	**76.37 337**	*e*P		**P**	**18 43 53.7**	**+0.9**
TIRR	**Tirgusor**	**76.38 325**	⇑P		**P**	**18 43 53.4**	**+0.5**
MLR	**Muntele Rosu**	**76.42 327**	P		**P**	**18 43 54.2**	**+0.9**
MLR				pmax	pmax			
	comp=Z,17nm,0.9s							
MLR	**Muntele Rosu**	**76.42 327**	⇑P		**P**	**18 43 54.4**	**+1.0**
MLR	**Muntele Rosu**	**76.42 327**	P		**P**	**18 43 54.2**	**+0.9**
MLR				IAmb	IAmb	18 43 55.6		
	comp=Z,17nm,0.9s							
DRGR		**76.42 329**	⇑P		**P**	**18 43 53.7**	**+0.5**
UBBA	**Unterbreizbach**	**76.43 339**	*e*P		**P**	**18 43 53.5**	**+0.5**
	comp=Z,12nm,1.1s,baz=23,slow=5.8							
PBCC	**Pribram**	**76.47 336**	*e*P		**P**	**18 43 53.8**	**+0.4**
BUG	**Bochum--Univer**	**76.47 341**	*e*P		**P**	**18 43 53.9**	**+0.6**
	comp=Z,25nm,1.1s,baz=23,slow=5.8							
SMOL	**Smolenice**	**76.56 333**	*e*P		**P**	**18 43 55.5**	**+1.6**
SMOL				pmax	pmax			
	comp=Z,9.0nm,1.0s							
SMOL	**Smolenice**	**76.56 333**	*e*P		**P**	**18 43 55.5**	**+1.6**
MANZ	**Manzenberg**	**76.68 337**	*e*P		**P**	**18 43 55.2**	**+0.6**
	comp=Z,12nm,1.1s,baz=23,slow=5.8							
MODS	**Modra-Piesok**	**76.73 333**	*e*P		**P**	**18 43 55.5**	**+0.6**
MODS				pmax	pmax			
	comp=Z,22nm,1.0s							
MODS	**Modra-Piesok**	**76.73 333**	*e*P		**P**	**18 43 55.5**	**+0.6**
VOIR		**76.78 327**	⇑P		**P**	**18 43 56.3**	**+1.0**
ROTZ	**Rotzenmuhle**	**76.86 337**	*e*P		**P**	**18 43 56.5**	**+0.9**
	comp=Z,21nm,1.0s,baz=23,slow=5.8							
ICOR	**Ion Corvin**	**76.90 325**	⇑P		**P**	**18 43 56.1**	**+0.2**
SRO	**Srobarova**	**76.92 332**	*e*P		**P**	**18 43 57.2**	**+1.3**
SRO				pmax	pmax			
	comp=Z,24nm,0.9s							
SRO	**Srobarova**	**76.92 332**	*e*P		**P**	**18 43 57.2**	**+1.3**
ZST	**Bratislava**	**76.94 333**	*e*P		**P**	**18 43 57.0**	**+0.9**
ZST				pmax	pmax			
	comp=Z,21nm,1.1s							
ZST	**Bratislava**	**76.94 333**	*e*P		**P**	**18 43 57.0**	**+0.9**
ARR	**Arges**	**76.99 327**	⇓P		**P**	**18 43 57.7**	**+1.2**
BUD	**Budapest**	**77.00 332**	⇑*e*P		**P**	**18 43 57.1**	**+0.7**
KHC	**Kasperske Hory**	**77.08 336**	P		**P**	**18 43 57.4**	**+0.5**
KHC				pmax	pmax			
	comp=Z,9.0nm,0.9s							
KHC	**Kasperske Hory**	**77.08 336**	*e*P		**P**	**18 43 57.7**	**+0.8**
KHC			*e*PCP		**pP**	**18 44 05.4**	**-0.6**
KHC	**Kasperske Hory**	**77.08 336**	P		**P**	**18 43 57.4**	**+0.5**
KHC				IAmb	IAmb	18 43 59.1		
	comp=Z,9.1nm,0.9s							
BANOM	**Banah**	**77.11 295**	*i* P		**P**	**18 43 57.9**	**+0.5**
	SNR=13							
BANOM	**Banah**	**77.11 295**	P		**P**	**18 43 58.6**	**+1.1**
	SNR=7.2							
GRA1	**Grafenberg Arr**	**77.18 338**	P		**P**	**18 43 58.1**	**+0.7**
GRF	**Grafenberg Arr**	**77.18 338**	P		**P**	**18 43 58.1**	**+0.7**
GRF				pmax	pmax			
	comp=Z,33nm,0.9s							
GRF	**Grafenberg Arr**	**77.18 338**	*e*P		**P**	**18 43 58.4**	**+1.0**
	comp=Z,46nm,1.1s,baz=23,slow=5.8							
SIRR	**Siria**	**77.23 330**	⇓P		**P**	**18 43 58.3**	**+0.6**
WET	**Wettzell**	**77.26 336**	*e*P		**P**	**18 43 59.0**	**+1.2**
	comp=Z,28nm,1.1s,baz=23,slow=5.8							
GEC2	**GERESS Array S**	**77.31 336**	*e*P		**P**	**18 43 58.7**	**+0.4**
	comp=Z,22nm,1.5s,baz=23,slow=5.8							
GERES	**GERESS Array B**	**77.31 336**	P		**P**	**18 43 58.5**	**+0.3**
	comp=Z,4.5nm,0.8s,baz=32,slow=5.2,SNR=33							
GERES				LR	LR	19 22 04.6		
	comp=Z,365nm,19.0s,baz=16,slow=39							
CSKK	**Cskako**	**77.34 332**	*e*P		**P**	**18 43 59.7**	**+1.4**
TNS	**Taunus Mts**	**77.35 340**	*e*P		**P**	**18 43 59.1**	**+0.7**
	comp=Z,18nm,0.8s,baz=23,slow=5.8							
AHRW	**Bad Neuenahr-A**	**77.36 341**	*e*P		**P**	**18 43 59.2**	**+0.9**
	comp=Z,33nm,1.2s,baz=23,slow=5.8							
MEM	**Membach**	**77.53 341**	⇑P		**P**	**18 44 00.1**	**+0.8**
	comp=Z,28nm,1.0s							
CONA	**Conrad Observa**	**77.54 334**	*i* P		**P**	**18 44 01.0**	**+1.4**
	comp=Z,15nm,0.8s,SNR=7.2							
GZR	**Gura Zlata**	**77.62 329**	⇓P		**P**	**18 44 00.5**	**+0.6**
BSTI	**Sart Tilman**	**77.64 341**	P		**P**	**18 44 01.2**	**+1.2**
BSTI			pP		**pwP**	**18 44 12.2**	**-1.8**
MPLH	**Magyarpolny**	**77.73 333**	⇑*e*P		P	18 43 54.1	-6.4
BZS	**Buzias**	**77.81 329**	⇑P		**P**	**18 44 01.1**	**+0.1**
COPA	**Copaceanca**	**77.85 326**	⇓P		**P**	**18 44 01.4**	**+0.2**
BCLA	**Clavier**	**77.85 342**	P		**P**	**18 44 02.1**	**+1.0**
UOSS	**Minazif**	**77.89 294**	*i* P		**P**	**18 44 02.5**	**+0.7**
	SNR=15							
UOSS	**Minazif**	**77.89 294**	P		**P**	**18 44 01.9**	**+0.1**
BGES	**Gesves**	**77.93 342**	P		**P**	**18 44 02.5**	**+0.9**
HATD	**Hatta, Dubai**	**78.03 294**	*i* P		**P**	**18 44 04.0**	**+1.4**
	SNR=14							
HATD	**Hatta, Dubai**	**78.03 294**	P		**P**	**18 44 03.4**	**+0.8**
	SNR=8.1							
MOA	**Molln**	**78.07 335**	*i* P		**P**	**18 44 03.4**	**+1.0**
	comp=Z,9.8nm,0.9s							
BMRD	**Maredsous**	**78.07 342**	P		**P**	**18 44 03.4**	**+1.1**
ASHO	**Ashiyiah**	**78.18 294**	*i* P		**P**	**18 44 03.9**	**+0.5**
	SNR=14							
ASHO	**Ashiyiah**	**78.18 294**	P		**P**	**18 44 03.9**	**+0.5**
	SNR=14							
NAZ	**Nazwa, Dubai**	**78.19 294**	P		**P**	**18 44 04.5**	**+1.1**
HERR	**Herculane**	**78.19 329**	⇓P		**P**	**18 44 03.2**	**+0.2**
BR131	**Keskin Array S**	**78.19 319**	P		**P**	**18 44 03.5**	**+0.1**
BR131				pmax	pmax			
	comp=Z,17nm,1.1s							
BR131	**Keskin Array S**	**78.19 319**	P		**P**	**18 44 03.5**	**+0.1**
BR131				IAmb	IAmb	18 44 05.1		
	comp=Z,17nm,1.1s							
BR131	**Keskin Array S**	**78.19 319**	P		**P**	**18 44 03.9**	**+0.4**
	SNR=17							
BRTR	**Keskin Array B**	**78.19 319**	P		**P**	**18 44 03.8**	**+0.4**
	comp=Z,12nm,0.9s,baz=59,slow=3.3,SNR=41							
BRTR				LR	LR	19 25 05.8		
	comp=Z,37nm,19.2s,baz=356,slow=41							
ARSA	**Arzberg**	**78.25 334**	*i* P		**P**	**18 44 04.3**	**+0.8**
	comp=Z,18nm,1.2s,SNR=9.7							
ANTO	**Ankara**	**78.44 319**	P		**P**	**18 44 03.9**	**-0.8**
ANTO				pmax	pmax			
	comp=Z,16nm,0.8s							
ANTO	**Ankara**	**78.44 319**	P		**P**	**18 44 03.9**	**-0.8**
MDVR	**Moldovita**	**78.52 329**	⇑P		**P**	**18 44 04.8**	**-0.2**
STU	**Stuttgart**	**78.53 339**	*e*P		**P**	**18 44 06.1**	**+1.1**
	comp=Z,22nm,1.1s,baz=23,slow=5.8							
RJOB	**Jochberg**	**78.57 336**	*e*P		**P**	**18 44 06.2**	**+1.0**
	comp=Z,16nm,1.2s,baz=23,slow=5.8							
FUR	**Furstenfeldbru**	**78.58 337**	*e*P		**P**	**18 44 06.1**	**+0.9**
	comp=Z,48nm,1.2s,baz=23,slow=5.8							
MDUB	**Mudurnu**	**78.62 321**	P		**P**	**18 44 05.4**	**-0.3**
ELND	**Elena**	**78.64 325**	⇑P		**P**	**18 44 05.3**	**-0.3**
GAZ	**Gaziantep**	**78.67 315**	P		**P**	**18 44 06.8**	**+0.9**
PLVB	**Pleven**	**78.71 326**	⇑P		**P**	**18 44 06.9**	**+0.9**
SOKA	**Soboth**	**78.92 334**	*i* P		**P**	**18 44 08.3**	**+1.1**
	comp=Z,31nm,1.2s,SNR=15							
PERS	**Pernice**	**78.93 334**	*i* P		**P**	**18 44 08.0**	**+0.8**
GROS	**Grobnik**	**78.98 334**	*i* P		**P**	**18 44 08.1**	**+0.6**
KBA	**Koelnbreinsper**	**79.03 335**	*i* P		**P**	**18 44 09.4**	**+1.5**
	comp=Z,51nm,1.0s,SNR=29							
BFO	**Black Forest**	**79.15 339**	P		**P**	**18 44 07.6**	**-0.7**
BFO				pmax	pmax			
	comp=Z,16nm,1.1s							
BFO	**Black Forest**	**79.15 339**	*e*P		**P**	**18 44 09.0**	**+0.7**
	comp=Z,25nm,1.3s,baz=23,slow=5.8							
BFO	**Black Forest**	**79.15 339**	P		**P**	**18 44 07.6**	**-0.7**
BFO				IAmb	IAmb	18 44 10.1		
	comp=Z,16nm,1.1s							
OBKA	**Obir**	**79.21 334**	*i* P		**P**	**18 44 09.8**	**+1.0**
	comp=Z,10nm,0.8s,SNR=6.2							
WATA	**Walderalm**	**79.26 337**	*i* P		**P**	**18 44 10.4**	**+1.3**
	comp=Z,32nm,1.2s,SNR=7.8							
UBR	**Ueberruh**	**79.32 338**	*e*P		**P**	**18 44 10.3**	**+0.9**
	comp=Z,23nm,1.5s,baz=23,slow=5.8							
RETA	**Reutte**	**79.33 337**	*i* P		**P**	**18 44 10.7**	**+1.3**
	comp=Z,12nm,0.8s							
MYKA	**Terra Mystica**	**79.35 335**	*i* P		**P**	**18 44 10.2**	**+0.7**
	comp=Z,11nm,1.0s							
MOTA	**Moosalm**	**79.38 337**	*i* P		**P**	**18 44 11.1**	**+1.3**
	comp=Z,37nm,1.0s,SNR=9.3							
SQTA	**Sankt Quirin**	**79.47 337**	*i* P		**P**	**18 44 11.6**	**+1.4**
	comp=Z,32nm,1.3s,SNR=9.7							
ECH	**Echery**	**79.53 340**	P		**P**	**18 44 10.8**	**+0.4**
ECH				pmax	pmax			
	comp=Z,14nm,1.0s							
ECH	**Echery**	**79.53 340**	P		**P**	**18 44 10.8**	**+0.4**
ECH				IAmb	IAmb	18 44 12.2		
	comp=Z,14nm,1.0s							
ABTA	**Abfaltersbach**	**79.56 336**	*i* P		**P**	**18 44 11.4**	**+0.7**
	comp=Z,17nm,1.1s,SNR=6.8							
DAVA	**Damuels**	**79.74 338**	*i* P		**P**	**18 44 12.9**	**+1.1**
	comp=Z,15nm,0.9s							
ROBS	**Robic**	**79.74 335**	*e*P		**P**	**18 44 11.2**	**-0.4**
MHTO	**MHTO**	**79.77 290**	P		**P**	**18 44 12.8**	**+0.7**
	SNR=5.5							
FETA	**Feichten**	**79.78 337**	*i* P		**P**	**18 44 13.2**	**+1.2**
	comp=Z,16nm,1.1s							
VTS	**Vitosha**	**79.88 327**	P		**P**	**18 44 11.9**	**-0.7**
VTS				pmax	pmax			
	comp=Z,25nm,1.0s							
VTS	**Vitosha**	**79.88 327**	⇑P		**P**	**18 44 12.9**	**+0.3**
VTS	**Vitosha**	**79.88 327**	P		**P**	**18 44 11.9**	**-0.7**
FUORN	**Ofenpass-Fuorn**	**80.27 337**	P		**P**	**18 44 15.7**	**+0.9**
FUORN				IAmb	IAmb	18 44 17.3		
	comp=Z,19nm,1.0s							
CTI	**Castel Tesino**	**80.43 336**	P		**P**	**18 44 15.0**	**-0.5**
CTI				pmax	pmax			
	comp=Z,16nm,1.1s							
CTI	**Castel Tesino**	**80.43 336**	P		**P**	**18 44 15.0**	**-0.5**
CTI				IAmb	IAmb	18 44 16.6		
	comp=Z,16nm,1.1s							
STIP	**Stip**	**81.06 327**	*i* P		**P**	**18 44 18.5**	**-0.3**
SKO	**Skopje**	**81.08 328**	*i* P		**P**	**18 44 20.0**	**+1.1**
SENIN	**Lac Senin/Sane**	**81.24 339**	*i* P		**P**	**18 44 20.0**	**+0.1**
VAY	**Valandovo**	**81.25 327**	*i* P		**P**	**18 44 20.7**	**+0.9**
MANT	**Manisa**	**81.38 321**	P		**P**	**18 44 20.9**	**+0.1**
PDG	**Podgorica**	**81.43 329**	⇓P		**P**	**18 44 21.0**	**+0.4**
MURB	**Monte Urbino**	**82.76 334**	P		**P**	**18 44 28.4**	**+0.6**
NRCA	**Norcia**	**82.98 334**	P		**P**	**18 44 29.4**	**+0.5**
WHFO	**Wadi Hawf**	**84.67 291**	P		**P**	**18 44 38.4**	**+0.5**
	SNR=5.8							
RAYN	**Ar Rayn**	**85.23 301**	P		**P**	**18 44 41.0**	**+0.3**
RAYN				pmax	pmax			
	comp=Z,13nm,1.0s							
RAYN	**Ar Rayn**	**85.23 301**	*i* P		**P**	**18 44 41.4**	**+0.7**
	SNR=13							
RAYN	**Ar Rayn**	**85.23 301**	P		**P**	**18 44 41.0**	**+0.3**
RAYN				IAmb	IAmb	18 44 54.5		
	comp=Z,13nm,1.0s							
KEST	**Kesra**	**90.65 334**	LR		LR	19 30 22.0		
	comp=Z,182nm,19.3s,baz=304,slow=39							
CPUP	**Villa Florida**	**145.38 61**	PKPbc		**PKPbc**	**18 51 41.1**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=0.1,slow=2.7,SNR=6.6							
CPUP	**Villa Florida**	**145.38 61**			**PKPab**	**18 51 42.9**	**+1.2**

*ARE **22** 18:36:41±2.5, 17.°0S±0.°1×72.°6W±0.°2, h38km±6km, Error ellipse: s-maj=21.2km s-min=16.4km az=106.0*
*IDC **22** 18:36:48.9±1.7, 17.°10S×72.°41W, h97km±16km, mb3.6/2, mb1 3.7/6, mb1mx3.4/46, mbtmp4.0/6, MS2.7/5, Ms1 2.7/5, ms1mx2.5/27, Error ellipse: s-maj=31.0km s-min=13.6km az=49.0*
*NEIC **22** 18:36:48.3±0.9, 17.°2S±0.°1×72.°5W±0.°1, h95km±7km, ML4.1(ARE), Error ellipse: s-maj=17.1km s-min=13.9km az=61.0*

ISC 22 18:36:48.7±0.8, 17.°18S±0.°06×72.°49W±0.°07, h100km, n40, σ0§96/42, 5C, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
AP01	**Chacalluta**	**2.37**	**120**	*e*P		**Pn**	**18 37 25.1**	**-1.0**
AP01				*e*S		**Sn**	**18 37 55.8**	**+1.0**
AP01				IAML			18 38 11.3	
	comp=N,881nm,0.4s							
PB16	**IPOC Station P**	**3.07**	**113**	*e*P		**Pn**	**18 37 34.4**	**-1.5**
PB16				*i* S		**Sn**	**18 38 13.6**	**+1.3**
PB16				IAML			18 38 28.4	
	comp=N,131nm,0.6s							
PSGC	**Pisagua**	**3.30**	**137**	⇑*i*P		**Pn**	**18 37 37.3**	**-1.3**
PSGC				*e*S		**Sn**	**18 38 18.0**	**+1.0**
MNMC	**Minye Minye**	**3.37**	**126**	*e*P		**Pn**	**18 37 38.6**	**-1.1**
MNMC				*e*S		**Sn**	**18 38 19.2**	**+0.1**
MNMC	**Minye Minye**	**3.37**	**126**			**Pn**	**18 37 38.5**	**-1.2**
PB11	**IPOC Station P**	**3.72**	**134**	⇑*i*P		**Pn**	**18 37 43.2**	**-1.1**
PB11	**IPOC Station P**	**3.72**	**134**			**Pn**	**18 37 43.0**	**-1.3**
GO01	**Chusmiza**	**4.00**	**129**	*e*P		**Pn**	**18 37 47.8**	**-0.5**
GO01				*e*S		**Sn**	**18 38 37.0**	**+2.7**
GO01	**Chusmiza**	**4.00**	**129**			**Pn**	**18 37 47.3**	**-1.0**
TA01	**Diego Aracena**	**4.02**	**147**	*e*P		**Pn**	**18 37 47.5**	**-0.7**
PATCX	**Punta Patache**	**4.25**	**149**	⇑*i*P		**Pn**	**18 37 50.8**	**-0.6**
PATCX				*i* S		**Sn**	**18 38 39.9**	**-0.1**
LPAZ	**La Paz**	**4.27**	**79**	⇑*i*P		**Pn**	**18 37 51.4**	**-0.7**
LPAZ	**La Paz**	**4.27**	**79**	P		**Pn**	**18 37 51.5**	**-0.7**
	comp=N,3.3nm,0.3s,baz=259,slow=11,SNR=53							
LPAZ				LR		LR	18 39 46.7	
	comp=N,54nm,19.3s,baz=276,slow=42							
PB08	**IPOC Station P**	**4.33**	**133**	*e*P		**Pn**	**18 37 51.9**	**-0.8**
PB08				*i* S		**Sn**	**18 38 43.6**	**+1.3**
PB03	**IPOC Station P**	**5.49**	**152**	⇑*i*P		**Pn**	**18 38 07.8**	**-0.5**
PB04	**IPOC Station P**	**5.59**	**157**	*e*P		**Pn**	**18 38 09.0**	**-0.5**
PB04				*i* S		**Sn**	**18 39 12.4**	**-0.1**
PB04	**IPOC Station P**	**5.59**	**157**			**Pn**	**18 38 09.1**	**-0.5**
PB05	**IPOC Station P**	**6.05**	**160**	*e*P		**Pn**	**18 38 14.8**	**-0.9**
PB06	**IPOC Station P**	**6.15**	**154**	*e*P		**Pn**	**18 38 16.6**	**-0.6**
LVC	**Limon Verde**	**6.37**	**149**	P		**Pn**	**18 38 20.5**	**+0.2**
	comp=N,3.2nm,0.3s,baz=342,slow=9.6,SNR=20							
LVC				S		**Sn**	**18 39 33.3**	**+1.4**
	comp=N,2.6nm,0.3s,baz=81,slow=22,SNR=7.5							
LVC				LR		LR	18 40 09.3	
	comp=N,18nm,19.4s,baz=360,slow=31							
LVC	**Limon Verde**	**6.37**	**149**			**Pn**	**18 38 20.4**	**0.0**
PB10	**IPOC Station P**	**6.56**	**164**			**Pn**	**18 38 22.0**	**-0.7**
NNA	**Nana**	**6.66**	**320**	P		**Pn**	**18 38 23.5**	**-0.5**
	comp=N,5.1nm,0.3s,baz=148,slow=16,SNR=4.6							
NNA				S		**Sn**	**18 39 39.7**	**+1.2**
	comp=N,2.9nm,0.3s,baz=222,slow=18,SNR=7.8							
NNA				LR		LR	18 41 13.8	
	comp=N,34nm,18.1s,baz=286,slow=40							
NNA	**Nana**	**6.66**	**320**			**Pn**	**18 38 23.8**	**-0.3**
GO02	**Mina Guanaco**	**8.40**	**162**			**Pn**	**18 38 47.7**	**-0.2**
SIV	**San Ignacio**	**11.01**	**86**	P		**Pn**	**18 39 22.5**	**-0.8**
	comp=N,0.4nm,0.3s,baz=266,slow=17,SNR=5.2							
ATAH	**Atahualpa**	**11.52**	**329**	LR		LR	18 43 56.2	
	comp=N,46nm,18.5s,baz=258,slow=37							
APG	**El Apazote**	**36.56**	**330**	LR		LR	18 59 01.6	
	comp=N,84nm,20.2s,baz=54,slow=36							
TORD	**Torodi Ar. Bea**	**79.20**	**73**	P		**P**	**18 48 43.1**	**-0.2**
	comp=N,1.3nm,0.8s,baz=246,slow=4.9,SNR=5.5							
YKA	**Yellowknife Ar**	**86.02**	**342**	P		**P**	**18 49 17.8**	**+0.2**
	comp=N,0.4nm,0.6s,baz=137,slow=5.1,SNR=7.2							
H11N3	**WAKE ISLAND Hyl**	**23.84**	**283**	T		T	21 11 18.0	
	baz=95							
H11N2	**WAKE ISLAND Hyl**	**23.85**	**283**	T		T	21 11 17.7	
	baz=95,slow=74							
H11N1	**WAKE ISLAND Hyl**	**23.85**	**282**	T		T	21 11 09.9	
	baz=95,slow=74							
H11S2	**WAKE ISLAND Hyl**	**23.85**	**281**	T		T	21 11 17.9	
	baz=99,slow=75,SNR=11							
H11S1	**WAKE ISLAND Hyl**	**23.86**	**281**	T		T	21 11 13.2	
	baz=99,slow=75,SNR=7.9							
H11S3	**WAKE ISLAND Hyl**	**23.87**	**281**	T		T	21 11 14.6	
	baz=99,slow=75,SNR=7.7							
ASAR	**Alice Springs**	**131.91**	**213**	PKP		**PKPdf**	**18 55 50.5**	**-0.7**
	comp=N,0.2nm,0.5s,baz=134,slow=3.3,SNR=4.4							
WRA	**Warramunga Arr**	**134.67**	**217**	PKP		**PKiKP**	**18 55 58.8**	**+0.9**
	comp=N,0.3nm,0.6s,baz=131,slow=2.2,SNR=4.0							
MKAR	**Makanchi Array**	**143.85**	**30**	PKP		**PKPdf**	**18 56 11.9**	**-0.5**
	comp=N,0.2nm,0.7s,baz=303,slow=3.0,SNR=2.5							
SONM	**Songino Array**	**149.41**	**1**	PKPbc		**PKiKP**	**18 56 26.9**	**-0.4**
	comp=N,0.3nm,0.6s,baz=0.0,slow=2.9,SNR=2.5							

*ANF **22** 18:45:02.0±0.3, 37.°24N×104.°64W, h0km, ML3.6/11, Error ellipse: s-maj=3.8km s-min=2.0km az=35.0*
*NEIC **22** 18:45:04.0±1.7, 37.°23N±0.°04×104.°64W±0.°05, h4km±7km, mb_Lg3.5/64, ML3.6/53, Error ellipse: s-maj=7.3km s-min=1.5km az=46.0*
*IDC **22** 18:45:04.3±1.3, 37.°32N×104.°76W, h0km, mb1 3.6/4, mb1mx3.3/43, mbtmp3.4/4, ML3.3/4, Error ellipse: s-maj=26.7km s-min=11.8km az=79.0*

ISC 22 18:45:03.7±0.7, 37.°27N±0.°03×104.°60W±0.°03, h10km, n74, σ1§67/85, Colorado

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
T25A	**Trinidad**	**0.20**	**131**			**Pg**	**18 45 06.1**	**-2.1**
T25A				Sg		**Sg**	**18 45 09.0**	**-2.1**
T25A	**Trinidad**	**0.20**	**131**	P		**Pg**	**18 45 06.4**	**-1.7**
	baz=301							
T25A				S		**Sg**	**18 45 09.1**	**-2.1**
	baz=301							
SDCO	**Great Sand Dun**	**0.85**	**304**			**Pg**	**18 45 18.6**	**-1.6**
SDCO				Sg		**Sg**	**18 45 29.9**	**-1.5**
SDCO	**Great Sand Dun**	**0.85**	**304**	P		**Pg**	**18 45 18.9**	**-1.3**
	baz=126							
SDCO				S		**Sg**	**18 45 30.1**	**-1.3**
	baz=126							
Q24A	**Divide**	**1.74**	**346**			**Pb**	**18 45 35.0**	**-1.0**
Q24A				IAML			18 45 58.2	
	comp=E,533nm,0.3s							
Q24A				IAML			18 45 59.1	
	comp=N,420nm,0.3s							
Q24A	**Divide**	**1.74**	**346**	P		**Pb**	**18 45 35.0**	**-1.0**
	baz=166							
Q24A				S		**Sb**	**18 45 57.8**	**-0.2**

KNB	**Kanab**	**6.57**	**270**			Pg		18 47 03.8	-5.7	
W35A	**Tecumseh**	**6.60**	**106**		Pn	**Pn**		**18 46 40.1**	**-0.7**	
PDAR	**Pinedale Array**	**6.67**	**327**		Pn	**Pn**		**18 46 45.4**	**+3.4**	
	comp=N,0.3nm,0.3s,baz=133,slow=13,SNR=7.1									
PDAR					Pg	**Pb**		**18 47 00.1**	**+0.2**	
	comp=N,0.2nm,0.3s,baz=144,slow=17,SNR=4.9									
PDAR					Lg	Lg		18 48 31.1		
	comp=N,0.7nm,0.3s,baz=137,slow=33,SNR=5.8									
SZCU	**Shurtz Canyon**	**6.76**	**275**			**Pb**		**18 47 05.0**	**+3.6**	
RSSD	**Black Hills**	**6.85**	**3**			**Pn**		**18 46 44.2**	**-0.3**	
RSSD					Pg	**Pb**		**18 47 06.3**	**+3.3**	
RSSD				IAmb_Lg				18 48 49.9		
	comp=Z,44nm,1.0s									
319A	**Douglas**	**7.04**	**215**			**Pb**		**18 47 06.8**	**+0.6**	
TUC	**Tucson**	**7.10**	**228**			**Pb**		**18 47 09.8**	**+2.7**	
TUL1	**Leonard**	**7.22**	**98**	IAmb_Lg				18 48 59.4		
	comp=Z,58nm,0.9s									
Y14A	**Wickenburg**	**7.61**	**247**			**Pb**		**18 47 18.8**	**+3.0**	
JCT	**Junction City**	**7.87**	**148**			**Pb**		**18 47 18.8**	**-1.3**	
JCT				IAmb_Lg				18 49 24.2		
	comp=Z,43nm,0.9s									
TPAW	**Teton Pass**	**7.87**	**324**			**Pb**		**18 47 23.4**	**+3.0**	
WHTX	**Lake Whitney,**	**7.90**	**130**			**Pb**		**18 47 20.4**	**-0.4**	
X37A	**Clayton**	**7.95**	**107**		Pn	**Pn**		**18 47 00.6**	**+1.2**	
X37A				IAmb_Lg				18 49 33.1		
	comp=Z,42nm,0.8s									
TX31	**Lajitas Ar. Si**	**7.96**	**174**			**Pb**		**18 47 21.6**	**-0.2**	
TX32	**Lajitas Array**	**7.96**	**174**			**Pb**		**18 47 21.3**	**-0.5**	
TXAR	**Lajitas Array**	**7.96**	**174**		Pn	**Pn**		**18 47 02.7**	**+3.2**	
	comp=Z,0.1nm,0.3s,baz=1.5,slow=10,SNR=4.2									
TXAR					Pg	Pb		18 47 26.8	+5.0	
	comp=Z,1.9nm,0.3s,baz=353,slow=15,SNR=13									
TXAR					Lg	Lg		18 49 09.0		
	comp=Z,3.0nm,0.3s,baz=2.7,slow=29,SNR=11									
MOOW	**Moose Ponds**	**7.98**	**326**			**Pg**		**18 47 32.6**	**-3.8**	
ECSD	**EROS Data Cent**	**8.87**	**41**		Pn	**Pn**		**18 47 13.0**	**+1.1**	
ECSD				IAmb_Lg				18 49 48.3		
	comp=Z,31nm,0.8s									
W39A	**Magazine**	**8.98**	**100**	IAmb_Lg				18 50 05.4		
	comp=Z,47nm,1.0s									
U40A	**Yellville**	**9.47**	**92**	IAmb_Lg				18 50 11.0		
	comp=Z,40nm,1.0s									
MGMO	**Mountain Grove**	**9.84**	**87**	IAmb_Lg				18 50 19.9		
	comp=Z,37nm,0.7s									
833A	**Chaparral WMA,**	**9.94**	**152**	IAmb_Lg				18 50 28.0		
	comp=Z,33nm,0.9s									
X40A	**Basin Creek Fa**	**9.95**	**103**	IAmb_Lg				18 50 27.3		
	comp=Z,45nm,1.1s									
ULM	**Lac du Bonnet**	**14.41**	**23**		Pn	**Pn**		**18 48 27.5**	**-0.1**	
	comp=Z,0.3nm,0.3s,baz=204,slow=10.0,SNR=2.0									
ULM					Lg	Lg		18 52 29.5		
	comp=Z,0.2nm,0.3s,baz=282,slow=21,SNR=3.5									

RISSC ***22*** *19:35:01.7, 40˚.44N×15˚.13E, h7km, ML3.6/17*
IDC ***22*** *19:35:01.7±0.8, 40˚.58N×14˚.97E, h0km, mb3.7/8, mb1 3.7/16, mb1mx3.6/41, mbtmp3.7/16, ML3.7/6, MS3.0/2, Ms1 3.0/2, ms1mx2.5/43, Error ellipse: s-maj=16.5km s-min=12.8km az=110.0*
ROM ***22*** *19:35:01.8±0.2, 40˚.441N±0˚.008×15˚.14E±0˚.01, h6km±1km, ML3.7/1, Mw3.6, Error ellipse: s-maj=1.2km s-min=0.5km az=58.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}-1.37; $M_{\theta\theta}$-1.43; $M_{\phi\phi}$2.80; $M_{r\theta}$-1.26; $M_{\theta\phi}$1.02; $M_{\phi r}$0.82; Fault plane solution: M_o3.02939×10^{14} NP1: ϕ_s157.00000°, δ67.00000°, λ-142.00000°. NP2: ϕ_s50.00000°, δ56.00000°, λ-28.00000°.*
PRU ***22*** *19:35:03.7±0.0, 40˚.30N×15˚.04E, h14km*
ISC 22 19:35:02.5±0.9, 40˚.43N±0˚.02×15˚.12E±0˚.02, h8km±6km, n172, σ1$34/191, mb3.9/7, 10C-19D, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CDRU	**Civita di Ruta**	**0.15**	**68**	P		**Pg**		**19 35 05.2**	**-0.5**
CDRU				S		**Sg**		**19 35 07.8**	**-0.2**
CDRU				AML	AML				
	comp=N,79200μm,0.1s								
CDRU				AML	AML				
CDRU				AML	AML				
	comp=N,79200μm,0.1s								
CDRU				AML	AML				
CMPR	**Campora**	**0.18**	**130**	P		**Pg**		**19 35 06.3**	**+0.1**
CMPR				S		**Sg**		**19 35 09.4**	**+0.7**
CMPR				AML	AML				
	comp=N,61150μm,0.4s								
CMPR				AML	AML				
CMPR				AML	AML				
	comp=N,61150μm,0.4s								
SRN3	**Sant'Arsenio**	**0.26**	**78**	*i*P		**Pg**		**19 35 07.2**	**-0.5**
SRN3				*i* S		**Sg**		**19 35 11.4**	**+0.1**
COL3	**Colliano**	**0.30**	**32**	⇓*i*P		**Pg**		**19 35 08.2**	**-0.2**
SNR3	**Senerchia**	**0.31**	**10**	⇓*i*P		**Pg**		**19 35 08.2**	**-0.4**
TEGI	**Teggiano - Ist**	**0.32**	**100**	*i*P		**Pg**		**19 35 08.4**	**-0.4**
CGG3	**Caggiano**	**0.32**	**70**	⇓*i*P		**Pg**		**19 35 08.6**	**-0.3**
MCRV	**Calabrutti - M**	**0.35**	**6**	P		**Pg**		**19 35 08.9**	**-0.5**
MCRV				S		**Sb**		**19 35 14.6**	**-2.2**
MCRV				AML	AML				
	comp=E,10900μm,0.5s								
MCRV				AML	AML				
	comp=N,12000μm,0.7s								
SLCN	**Sala Consilina**	**0.39**	**96**	P		**Pg**		**19 35 09.8**	**-0.4**
SLCN				S		**Sb**		**19 35 17.5**	**-0.4**
SLCN				AML	AML				
	comp=N,29650μm,0.3s								
SLCN				AML	AML				
	comp=E,46950μm,0.5s								
SLCN				AML	AML				
	comp=E,46950μm,0.5s								
SLCN				AML	AML				
	comp=N,29650μm,0.3s								
SCL3	**Muro Lucano (S**	**0.39**	**48**	⇓*i*P		**Pg**		**19 35 09.9**	**-0.3**
NSC3	**Nusco**	**0.41**	**360**	⇓*i*P		**Pg**		**19 35 10.1**	**-0.5**
STN3	**Satriano di Lu**	**0.41**	**76**	⇓*i*P		**Pg**		**19 35 10.4**	**-0.1**
MRLC	**Muro Lucano**	**0.43**	**41**	P		**Pg**		**19 35 10.2**	**-0.6**
MRLC				AML	AML				
	comp=N,8445μm,0.4s								
MRLC				AML	AML				
	comp=E,7350μm,0.8s								
MRLC				AML	AML				
	comp=E,7355μm,0.8s								
MRLC				AML	AML				
	comp=N,7360μm,0.4s								
MRLC				AML	AML				
	comp=E,6725μm,0.8s								
MGR	**Morigerati**	**0.44**	**132**	P		**Pg**		**19 35 10.6**	**-0.4**
MGR				S		**Sb**		**19 35 17.6**	**-1.7**
MGR				AML	AML				
	comp=N,49700μm,0.4s								
MGR				AML	AML				
	comp=E,47100μm,0.4s								
MGR				AML	AML				
	comp=N,49650μm,0.4s								
MGR				AML	AML				
	comp=E,51600μm,0.4s								
MGR				AML	AML				
	comp=E,47150μm,0.4s								
MGR				AML	AML				
	comp=N,49700μm,0.4s								
MGR				AML	AML				
	comp=N,49600μm,0.5s								
MGR				AML	AML				
	comp=N,49700μm,0.4s								
MGR				AML	AML				
	comp=E,51600μm,0.4s								
MGR				AML	AML				
	comp=N,49600μm,0.5s								
MGR				AML	AML				
	comp=E,47150μm,0.4s								
MRN3	**Marsico Nuovo**	**0.46**	**91**	*i*P		**Pg**		**19 35 11.4**	**0.0**
LIO3	**Lioni**	**0.47**	**5**	⇓*i*P		**Pg**		**19 35 11.0**	**-0.5**
SNAL	**S. Angelo Dei**	**0.50**	**8**	P		**Pg**		**19 35 11.8**	**-0.3**
SNAL				AML	AML				
	comp=N,57850μm,1.6s								
SNAL				AML	AML				
	comp=N,9210μm,1.5s								
SNAL				AML	AML				
	comp=E,47000μm,1.6s								
SNAL				AML	AML				
	comp=N,57850μm,1.6s								
SNAL				AML	AML				
	comp=N,57900μm,1.6s								
SNAL				AML	AML				
	comp=E,7815μm,1.6s								
SNAL				AML	AML				
	comp=N,57900μm,1.6s								
SALI3	**CIMA - Sant'An**	**0.50**	**5**	*i*P		**Pg**		**19 35 11.6**	**-0.5**
MTSN	**Montesano sull**	**0.51**	**109**	P		**Pg**		**19 35 11.9**	**-0.4**
MTSN				AML	AML				
	comp=N,20850μm,0.3s								
MTSN				AML	AML				
	comp=E,14500μm,0.4s								
AND3	**Andretta**	**0.52**	**18**	*i*P		**Pg**		**19 35 12.2**	**-0.4**
MCEL	**Monticello**	**0.53**	**102**	P		**Pg**		**19 35 12.3**	**-0.4**
MCEL				S		**Sb**		**19 35 21.8**	**-0.1**
MCEL				AML	AML				
	comp=E,12750μm,0.6s								
MCEL				AML	AML				
	comp=N,10695μm,1.3s								
MCEL				AML	AML				
	comp=N,10900μm,1.3s								
MCEL				AML	AML				
	comp=N,10700μm,1.3s								
MCEL				AML	AML				
	comp=E,12800μm,0.6s								
PGN3	**Pignola, Italy**	**0.53**	**75**	*i*P		**Pb**		**19 35 12.8**	**-1.3**
RSF3	**Rocca San Feli**	**0.53**	**4**	*i*P		**Pg**		**19 35 12.0**	**-0.8**
CAFE	**Carife**	**0.60**	**8**	P		**Pg**		**19 35 13.5**	**-0.6**
CAFE				AML	AML				
	comp=E,4515μm,0.8s								
CAFE				AML	AML				
	comp=E,4630μm,0.8s								
CAFE				AML	AML				
	comp=N,5235μm,0.5s								
CAFE				AML	AML				
	comp=E,4605μm,0.8s								
CAFE				AML	AML				
	comp=N,5155μm,0.5s								
CAFE				AML	AML				
	comp=E,4645μm,0.8s								
SIRI	**Monte Sirino -**	**0.62**	**114**	P		**Pg**		**19 35 13.8**	**-0.7**
SIRI				S		**Sb**		**19 35 25.2**	**+0.6**
SIRI				AML	AML				
	comp=N,11990μm,0.6s								
SIRI				AML	AML				
	comp=N,11980μm,0.6s								
SIRI				AML	AML				
	comp=E,14600μm,1.6s								
SIRI				AML	AML				
	comp=N,12040μm,0.6s								
SIRI				AML	AML				
	comp=E,14500μm,1.6s								
SSB3	**San Sossio Bar**	**0.65**	**7**	*i*P		**Pg**		**19 35 14.3**	**-0.7**
NL9	**Nola**	**0.66**	**318**	P		**Pb**		**19 35 15.2**	**-1.0**
OVO	**Vesuviano**	**0.68**	**306**	P		**Pb**		**19 35 16.6**	**0.0**
MRB1	**Monte Rocchett**	**0.70**	**351**	P		**Pg**		**19 35 15.2**	**-0.8**
MRB1				AML	AML				
	comp=N,9995μm,0.7s								
MRB1				AML	AML				
	comp=N,10040μm,0.7s								
MRB1				AML	AML				
	comp=N,10395μm,0.7s								
MRB1				AML	AML				
	comp=E,12300μm,0.6s								
MRB1				AML	AML				
	comp=N,10020μm,0.7s								
MRB1				AML	AML				
	comp=E,12100μm,0.6s								
ACER	**Acerenza**	**0.72**	**60**	P		**Pg**		**19 35 15.7**	**-0.6**
ACER				AML	AML				
	comp=E,9955μm,0.7s								
ACER				AML	AML				
	comp=E,9935μm,0.7s								
ACER				AML	AML				
	comp=N,8335μm,0.6s								
ACER				AML	AML				
	comp=N,8635μm,0.6s								
ACER				AML	AML				
	comp=E,10160μm,0.7s								
PALZ	**Palazzo San Ge**	**0.81**	**51**	P		**Pg**		**19 35 17.1**	**-1.1**
PALZ				AML	AML				
	comp=E,4115μm,1.1s								
PALZ				AML	AML				
	comp=E,5245μm,0.9s								
PALZ				AML	AML				
	comp=N,5905μm,0.6s								
T0721	**Laino Castello**	**0.82**	**127**	P		**Pg**		**19 35 17.6**	**-0.6**
T0721				AML	AML				
	comp=E,16600μm,0.6s								
T0721				AML	AML				
	comp=N,13600μm,0.6s								
T0721				AML	AML				
	comp=E,16600μm,0.6s								
T0721				AML	AML				
	comp=E,17000μm,0.6s								
T0721				AML	AML				
	comp=N,14000μm,0.8s								
IPOZ	**Pozzuoli**	**0.86**	**297**	P		**Pn**		**19 35 20.7**	**-0.1**
MMN	**Mormanno**	**0.86**	**129**	P		**Pg**		**19 35 18.4**	**-0.5**
MMN				AML	AML				
	comp=E,4470μm,0.4s								
MMN				AML	AML				
	comp=N,4835μm,0.4s								
MMN				AML	AML				
	comp=N,4830μm,0.4s								
MMN				AML	AML				
	comp=E,4475μm,0.4s								
SACR	**S. Croce Del S**	**1.01**	**342**	P		**Pb**		**19 35 22.0**	**-0.3**
SACR				AML	AML				
	comp=E,2570μm,0.9s								
SACR				AML	AML				
	comp=N,2005μm,0.7s								
SACR				AML	AML				
	comp=N,2010μm,0.7s								
SACR				AML	AML				
	comp=N,2145μm,0.8s								
SACR				AML	AML				
	comp=N,2210μm,0.8s								
SACR				AML	AML				
	comp=E,2465μm,0.8s								
SACR				AML	AML				
	comp=E,2565μm,0.9s								
MIGL	**Miglionico**	**1.02**	**80**	P		**Pg**		**19 35 20.8**	**-1.2**
MIGL				AML	AML				
	comp=E,9465μm,0.4s								
MIGL				AML	AML				
	comp=E,9470μm,0.4s								
MIGL				AML	AML				
	comp=N,11600μm,0.5s								
T0702	**Acquaformosa (**	**1.02**	**134**	P		**Pg**		**19 35 20.8**	**-1.4**
T0702				S		**Sb**		**19 35 36.2**	**+0.1**
T0702				AML	AML				
	comp=E,4505μm,0.6s								
T0702				AML	AML				
	comp=N,3010μm,0.8s								
T0702				AML	AML				
	comp=N,3020μm,0.8s								
T0702				AML	AML				
	comp=E,4530μm,0.9s								
MRVN	**Minervino Murg**	**1.03**	**52**	P		**Pb**		**19 35 21.7**	**-0.8**
MRVN				AML	AML				
	comp=N,1865μm,0.6s								
MRVN				AML	AML				
	comp=E,2200μm,0.5s								
PIGN	**Pignataro Magg**	**1.05**	**317**	P		**Pg**		**19 35 21.7**	**-0.9**
PIGN				AML	AML				
	comp=E,1228μm,1.4s								
PIGN				AML	AML				
	comp=N,1526μm,1.0s								
PIGN				AML	AML				
	comp=N,1525μm,1.0s								
PIGN				AML	AML				
	comp=N,1488μm,1.0s								
PIGN				AML	AML				
	comp=E,1236μm,1.4s								
PIGN				AML	AML				
	comp=E,1230μm,1.4s								
SALB	**San Lorenzo Be**	**1.09**	**120**	P		**Pg**		**19 35 21.5**	**-1.9**
SALB				AML	AML				
	comp=E,2985μm,0.8s								
SALB				AML	AML				
	comp=N,2040μm,0.5s								
SALB				AML	AML				
	comp=N,1995μm,0.5s								
SALB				AML	AML				
	comp=E,2980μm,0.8s								
SALB				AML	AML				
	comp=N,2045μm,0.5s								
CET2	**Cetraro**	**1.11**	**144**	P		**Pb**		**19 35 23.3**	**-0.6**
CET2				AML	AML				
	comp=E,14050μm,1.0s								
CET2				AML	AML				
	comp=N,13350μm,0.8s								
BSSO	**Busso**	**1.18**	**340**	P		**Pg**		**19 35 24.4**	**-0.8**
BSSO				AML	AML				
	comp=N,1480μm,0.8s								
BSSO				AML	AML				
	comp=E,632μm,1.6s								
BSSO				AML	AML				
	comp=N,614μm,0.8s								
BSSO				AML	AML				
	comp=E,632μm,1.6s								
BSSO				AML	AML				
	comp=N,1690μm,1.1s								
BSSO				AML	AML				
	comp=E,1440μm,1.6s								
BSSO				AML	AML				
	comp=N,652μm,0.8s								
VAGA	**Valle Agricola**	**1.19**	**326**	P		**Pn**		**19 35 25.2**	**-0.3**
VAGA				AML	AML				
	comp=E,866μm,0.7s								
VAGA				AML	AML				
	comp=E,886μm,0.8s								
VAGA				AML	AML				
	comp=N,1780μm,0.9s								
VAGA				AML	AML				
	comp=E,934μm,1.2s								
VAGA				AML	AML				
	comp=E,958μm,1.2s								
VAGA				AML	AML				
	comp=N,1740μm,0.9s								
AMUR	**Altamura**	**1.22**	**67**	P		**Pg**		**19 35 25.1**	**-0.9**
AMUR				AML	AML				
	comp=N,2240μm,1.2s								
AMUR				AML	AML				
	comp=E,1870μm,0.4s								
MATE	**Matera**	**1.22**	**79**	P		**Pb**		**19 35 25.1**	**-0.8**
MATE				AML	AML				
	comp=N,2355μm,0.6s								
MATE				AML	AML				
	comp=E,2135μm,0.5s								
CIGN	**Sant'Elia a Pi**	**1.23**	**352**	P		**Pn**		**19 35 26.6**	**+0.6**
CIGN				AML	AML				
	comp=N,874μm,1.6s								
CIGN				AML	AML				
	comp=E,1120μm,0.8s								
SG1	**Sgolgore (BA)**	**1.25**	**71**	⇓*i*Pn		**Pb**		**19 35 25.4**	**-0.9**
SG1				Sn		**Sn**		**19 35 46.1**	**+2.8**
MELA	**Melanico ??? S**	**1.27**	**0**	P		**Pb**		**19 35 25.9**	**-0.7**
MELA				AML	AML				
	comp=N,2410μm,0.7s								
MELA				AML	AML				
	comp=E,3010μm,0.9s								
MELA				AML	AML				
	comp=N,2505μm,0.7s								
MELA				AML	AML				
	comp=N,2435μm,1.2s								
MELA				AML	AML				
	comp=E,2905μm,0.9s								
LTRZ	**Laterza**	**1.30**	**82**	P		**Pb**		**19 35 26.5**	**-0.7**
LTRZ				S		**Sn**		**19 35 45.1**	**+0.5**
LTRZ				AML	AML				
	comp=N,1870μm,0.5s								
LTRZ				AML	AML				
	comp=E,1590μm,1.0s								
SGRT	**San Giovanni R**	**1.40**	**19**	P		**Pn**		**19 35 27.4**	**-1.0**
SGRT				AML	AML				
	comp=N,1250μm,0.9s								
SGRT				AML	AML				
	comp=E,1665μm,0.5s								
MSAG	**Monte S. Angel**	**1.41**	**25**	P		**Pn**		**19 35 27.6**	**-0.9**
MSAG				AML	AML				
	comp=E,1725μm,0.6s								
MSAG				AML	AML				
	comp=N,3520μm,0.5s								
MSAG				AML	AML				
	comp=N,3525μm,0.5s								
MSAG				AML	AML				
	comp=E,1845μm,0.6s								
MSAG				AML	AML				
	comp=N,3570μm,0.5s								
MSAG				AML	AML				
	comp=E,1730μm,0.6s								
CAR1	**CAROLEI**	**1.45**	**144**	P		**Pn**		**19 35 28.3**	**-0.7**
CAR1				AML	AML				
	comp=E,5310μm,0.5s								
CAR1				AML	AML				
	comp=E,5775μm,0.5s								
CAR1				AML	AML				
	comp=N,5375μm,0.5s								
CAR1				AML	AML				
	comp=E,5315μm,0.5s								
CAR1				AML	AML				
	comp=N,6245μm,0.5s								
CELI	**Celico**	**1.48**	**134**	P		**Pn**		**19 35 29.1**	**-0.4**
CELI				S		**Sg**		**19 35 50.3**	**+0.2**
CELI				AML	AML				
	comp=N,2220μm,0.5s								
CELI				AML	AML				
	comp=E,4190μm,0.6s								
CELI				AML	AML				
	comp=N,5540μm,0.5s								
CELI				AML	AML				
	comp=E,1750μm,0.6s								
BAI	**Bari**	**1.49**	**63**	*e*Pn		**Pn**		**19 35 29.0**	**-0.6**
BAI				Sn		**Sg**		**19 35 54.9**	**+4.4**
NOCI	**Noci**	**1.52**	**76**	P		**Pn**		**19 35 29.4**	**-0.6**
NOCI				AML	AML				
	comp=N,1530μm,0.4s								
NOCI				AML	AML				
	comp=N,1795μm,0.6s								
NOCI				AML	AML				
	comp=E,1815μm,0.7s								
MASS	**Massafra**	**1.55**	**82**	⇓*i*Pn		**Pn**		**19 35 30.1**	**-0.3**
PIPA	**Pietrapaola**	**1.61**	**126**	P		**Pb**		**19 35 31.8**	**-0.7**
TAR1	**Taranto**	**1.65**	**86**	⇓*i*Pn		**Pn**		**19 35 31.6**	**-0.1**
TIP	**Timpagrande**	**1.78**	**134**	P		**Pb**		**19 35 34.3**	**-1.0**
TIP	**Timpagrande**	**1.78**	**134**	P		**Pb**		**19 35 34.0**	**-1.3**
TIP				AML	AML				
	comp=E,546μm,1.6s								
TIP				AML	AML				
	comp=N,619μm,0.9s								
TIP				AML	AML				
	comp=E,466μm,1.6s								
TIP				AML	AML				
	comp=N,488μm,0.9s								
CGL1	**Ceglie Messapi**	**1.81**	**82**	*e*Pn		**Pn**		**19 35 33.8**	**-0.1**
SERS	**Sersale**	**1.84**	**139**	P		**Pn**		**19 35 34.9**	**+0.3**
SERS				AML	AML				
	comp=E,711μm,0.7s								
SERS				AML	AML				
	comp=N,856μm,0.6s								
JOPP	**Joppolo**	**1.92**	**162**	P		**Pn**		**19 35 34.4**	**-1.0**
JOPP				AML	AML				
	comp=N,610μm,0.4s								
JOPP				AML	AML				
	comp=E,836μm,0.5s								
VPL	**Vulcano Piano**	**2.06**	**183**	AML	AML				
	comp=E,1865μm,1.0s								
VPL				AML	AML				
	comp=N,1910μm,0.5s								
MSRU	**Castanea**	**2.19**	**172**	P		**Pn**		**19 35 37.8**	**-1.3**
MSRU				AML	AML				
	comp=E,843μm,0.5s								
MSRU				AML	AML				
	comp=N,1026μm,0.5s								
PLAC	**Placanica**	**2.23**	**152**	AML	AML				
	comp=N,1120μm,0.5s								
PLAC				AML	AML				
	comp=E,1160μm,0.5s								
PLAC				AML	AML				
	comp=N,1080μm,0.8s								
PLAC				AML	AML				
	comp=E,1070μm,0.8s								
ATN	**Antennamare**	**2.29**	**173**	AML	AML				
	comp=E,1078μm,0.4s								
ATN				AML	AML				
	comp=N,1182μm,0.6s								
MPNC	**Port Mandanici**	**2.29**	**175**	AML	AML				
	comp=E,1550μm,0.6s								
MPNC				AML	AML				
	comp=N,912μm,0.5s								
AQU	**L'Aquila**	**2.31**	**327**	*e*Pn		**Pg**		**19 35 48.2**	**+1.4**
MUCR	**Ucria**	**2.40**	**185**	AML	AML				
	comp=E,348μm,0.5s								
MUCR				AML	AML				
	comp=N,516μm,0.5s								
SOI	**Samo**	**2.47**	**163**	AML	AML				
	comp=E,502μm,0.5s								
SOI				AML	AML				

comp=N,778µm,0.6s
MPAZ Palizzi 2.57 164 AML AML
comp=N,795µm,0.5s
MPAZ AML AML
comp=E,556µm,0.5s
VAE Valguarnera 3.00 191 Pn **Pb** 19 35 54.4 -1.8
comp=E,2.1nm,0.3s,baz=114,slow=4.6,SNR=8.8
VAE Lg Lg 19 36 38.5
comp=E,2.2nm,0.3s,baz=67,slow=18,SNR=1.1
STON Ston 3.11 38 *e*Pn **Pn** 19 35 51.3 -0.5
STON Sn **Sn** 19 36 28.8 -0.3
STON Ston 3.11 38 *e*Pn **Pn** 19 35 50.9 -0.8
DBRK Dubrovnik 3.18 44 *e*Pn **Pn** 19 35 54.2 +1.4
DBRK Sn **Sn** 19 36 30.8 -0.1
MAKA Makarska 3.18 26 *e*Pn **Pn** 19 35 53.4 +0.6
HCY Herceg Novi 3.23 50 *e*Pn **Pn** 19 35 52.9 -0.6
ZIRJ Zirje 3.24 7 *e*Pn **Pn** 19 35 52.6 -1.0
HVZN Vizzini 3.27 186 AML AML
comp=E,941µm,0.9s
HVZN AML AML
comp=N,925µm,0.6s
TREB Trebinje 3.33 46 *e*Pn **Pn** 19 35 55.0 +0.2
MORI Morici 3.46 7 *e*Pn **Pn** 19 35 56.0 -0.6
DRME Dracevica, Mon 3.52 59 *e*Pn **Pn** 19 35 57.2 -0.3
BRY Bratogost 3.55 45 *e*Pn **Pn** 19 35 58.0 0.0
DUGI Dugi Otok 3.56 359 *e*Pn **Pn** 19 35 56.8 -1.2
DUGI Sn **Sn** 19 36 36.3 -3.8
PDG Podgorica 3.69 56 ⇓P **Pn** 19 36 01.2 +1.5
PDG Podgorica 3.69 56 *e*Pn **Pn** 19 35 59.3 -0.5
KIJV Kijevo 3.69 15 *e*Pn **Pn** 19 36 00.3 +0.5
UPM Unac-Piva 3.96 44 *e*Pn **Pn** 19 36 03.7 +0.1
UDBI Udbina 4.12 6 *e*Pn **Pn** 19 36 06.5 +0.7
NVLJ Novalja 4.13 357 *e*Pn **Pn** 19 36 04.5 -1.3
NVLJ Sn **Sn** 19 36 50.4 -3.9
PHP Peshkopia 4.21 71 P **Pn** 19 36 08.2 +1.2
MGRS Mrkonjic Grad 4.24 19 *e*Pn **Pn** 19 36 08.6 +1.3
OHR Ohrid 4.36 79 *e*Pn **Pn** 19 36 08.4 -0.7
RUDO Rudo 4.49 43 *e*Pn **Pn** 19 36 11.5 +0.8
BLY Banja Luka 4.57 19 ⇓P **Pn** 19 36 13.1 +1.3
BLY Banja Luka 4.57 19 *e*Pn **Pn** 19 36 13.2 +1.3
HAPS Han Pijesak,BI 4.62 37 *e*Pn **Pn** 19 36 12.4 -0.3
BBLS Lazići 4.68 41 *e*Pn **Pn** 19 36 13.4 0.0
FNA Florina 4.77 84 P **Pn** 19 36 15.4 +0.7
BOJS Bojanci 5.07 1 *e*Pn **Pn** 19 36 20.2 +1.4
DIVS Divibare 5.14 43 *e*Pn **Pn** 19 36 19.8 0.0
MOSL Moslavina 5.31 12 *e*Pn **Pn** 19 36 22.1 0.0
CEY Cerknica 5.33 355 *e*Pn **Pn** 19 36 24.3 +2.0
VISS Visnje 5.37 358 *e*Pn **Pn** 19 36 22.5 -0.4
CRES Cresnjev 5.39 2 *e*Pn **Pn** 19 36 23.6 +0.4
STIP Stip 5.49 74 *i* Pn Pn 19 36 28.8 +4.3
GRG Griva 5.56 82 P **Pn** 19 36 25.8 +0.3
ANX Ano Chora 5.57 107 P **Pn** 19 36 28.1 +2.4
MAKR Makrakomi, Fth 5.59 102 P Pn 19 36 32.3 +6.4
LIT Litokhoron 5.64 91 P **Pn** 19 36 27.7 +1.0
CRNS Crni Vrh 5.68 354 *e*Pn **Pn** 19 36 27.2 0.0
CRNS *e*Sn **Sn** 19 37 28.4 -4.2
VAY Valandovo 5.71 79 *i* Pn **Pn** 19 36 28.5 +0.9
FRGS Fruska Gora 5.84 35 *e*Pn **Pn** 19 36 26.5 -2.9
KNT Kendrikon 5.95 80 P **Pn** 19 36 31.4 +0.6
OBKA Obir 6.09 356 *e*Pn **Pn** 19 36 33.2 +0.4
comp=N,6.2nm,0.6s
OBKA *e*Sn **Sn** 19 37 42.8 +0.2
comp=N,20nm,0.8s
BEHE Becsehely 6.15 11 *e*Pn **Pn** 19 36 34.2 +0.6
KKB Krupnik 6.18 74 *e*P **Pn** 19 36 36.0 +2.0
SOKA Soboth 6.24 359 *e*Pn **Pn** 19 36 34.9 0.0
comp=N,1.6nm,0.4s
SOKA *i* Sn **Sn** 19 37 47.3 +0.8
comp=N,3.0nm,0.6s
MYKA Terra Mystica 6.29 351 *e*Pn **Pn** 19 36 37.0 +1.5
comp=N,3.5nm,0.4s
MORH Mrgy, Hungar 6.32 23 *e*Pn **Pn** 19 36 35.2 -0.7
PLG Polygyros 6.35 88 P **Pn** 19 36 37.4 +1.0
VTS Vitosha 6.47 68 P **Pn** 19 36 38.0 -0.1
VTS Vitosha 6.47 68 ⇑P **Pn** 19 36 38.7 +0.6
VTS Vitosha 6.47 68 *e*P **Pn** 19 36 38.6 +0.5
MDVR Moldovita 6.52 46 ⇑P **Pn** 19 36 39.5 +0.8
KEST Kesra 6.54 226 Pn **Pn** 19 36 40.5 +1.4
comp=N,0.5nm,0.3s,baz=328,slow=3.3,SNR=9.0
KEST Sn **Sn** 19 37 54.8 +0.9
baz=21,slow=23,SNR=1.2
ABTA Abfaltersbach 6.59 344 *i* Pn **Pn** 19 36 40.2 +0.5
comp=N,2.7nm,0.6s
ABTA *i* Sn **Sn** 19 37 55.2 +0.2
comp=N,11nm,0.7s
MMB Musomiste 6.61 77 *e*P **Pn** 19 36 41.1 +1.2
NVR Nevrokopi 6.69 79 P **Pn** 19 36 42.0 +1.0
KBA Koelnbreinsper 6.77 350 *i* Pn **Pn** 19 36 40.7 -1.5
comp=N,2.6nm,0.4s
KBA *i* Sn **Sn** 19 38 00.2 +0.7
comp=N,2.9nm,0.6s
ARSA Arzberg 6.82 2 Pn **Pn** 19 36 44.0 +1.2
comp=N,1.6nm,0.4s
HERR Herculane 6.97 48 ⇑P **Pn** 19 36 45.4 +0.6
BZS Buzias 7.03 40 ⇑P **Pn** 19 36 45.9 +0.3
MPEP Malo Peshtene 7.06 63 *e*P **Pn** 19 36 47.3 +1.2
PGB Panagyurishte 7.11 70 *e*P **Pn** 19 36 49.4 +2.6
FETA Feichten 7.31 336 *i* Pn Pn 19 36 54.3 +4.6
comp=N,4.0nm,0.8s
FETA *i* Sn **Sn** 19 38 15.4 +2.5
comp=N,2.7nm,0.6s
SQTA Sankt Quirin 7.35 339 *i* Pn **Pn** 19 36 53.3 +3.1
comp=N,1.2nm,0.3s
SQTA *e*Sn **Sn** 19 38 15.3 +1.5
comp=N,5.2nm,0.4s
MOA Molln 7.44 356 *e*Pn **Pn** 19 36 52.7 +1.4
comp=N,6.7nm,0.5s
MOA *e*Sn **Sn** 19 38 15.8 0.0
comp=N,5.7nm,0.5s
GZR Gura Zlata 7.49 46 ⇓P **Pn** 19 36 52.2 +0.2
MOTA Moosalm 7.49 339 *e*Pn Pn 19 36 56.7 +4.5
comp=N,1.9nm,0.6s
MOTA *e*Sn **Sn** 19 38 19.2 +1.9
comp=N,2.8nm,0.4s
CONA Conrad Observa 7.51 4 *i* Pn **Pn** 19 36 54.2 +1.8
comp=N,1.8nm,0.5s
PLVB Pleven 7.67 64 ⇑P **Pn** 19 36 56.0 +1.5
MODS Modra-Piesok 8.09 10 *e*PN **Pn** 19 37 00.1 -0.1
ELND Elena 8.42 69 ⇑P **Pn** 19 37 06.7 +1.9
GERES GERESS Array B 8.47 354 Pn **Pn** 19 37 04.2 -1.3
comp=N,0.6nm,0.3s,baz=170,slow=13,SNR=19
GERES Sn **Sn** 19 38 34.2 -7.1
comp=N,0.2nm,0.3s,baz=165,slow=23,SNR=2.6
GERES LR LR 19 41 20.7
comp=N,88nm,19.0s,baz=17,slow=46
VYHS Vyhne 8.48 17 *e*PN **Pn** 19 37 06.1 +0.5
VYHS *e*SN **Sn** 19 38 41.0 -0.5
ARR Arges 8.54 52 ⇓P **Pn** 19 37 08.6 +2.1
KHC Kasperske Hory 8.77 353 *e*PN **Pn** 19 37 10.9 +1.4
KHC *e*SN **Sn** 19 38 46.1 -2.3
VOIR 8.83 52 ⇓P **Pn** 19 37 12.5 +2.1
IDI Anoyia 9.27 121 Pn **Pn** 19 37 17.8 +1.3
comp=N,0.5nm,0.3s,baz=334,slow=18,SNR=3.8
IDI Sn **Sn** 19 38 58.5 -2.5
comp=N,0.9nm,0.3s,baz=111,slow=22,SNR=2.1
DOPR Dopca 9.31 50 ⇑P **Pn** 19 37 18.4 +1.5
TRPA Tarpa 9.35 32 ⇓P **Pn** 19 37 17.9 +0.5
MLR Muntele Rosu 9.40 54 Pn **Pn** 19 37 19.7 +1.4
comp=N,0.5nm,0.3s,baz=156,slow=19,SNR=15
MLR Muntele Rosu 9.40 54 ⇑P **Pn** 19 37 19.3 +1.0
ARCR ARCALIA 9.42 42 ⇑P **Pn** 19 37 20.2 +1.8
PLOR Plostina 10.01 53 ⇓P **Pn** 19 37 28.2 +1.6
VRI Vrincioaia 10.06 54 ⇓P **Pn** 19 37 28.2 +1.0
BURAR Bucovina Array 10.21 42 ⇑P **Pn** 19 37 31.1 +1.8
CLL Collm 10.97 353 *e*Pn **Pn** 19 37 39.0 -0.7
BRTR Keskin Array B 14.20 87 Pn **Pn** 19 38 26.1 +2.2
comp=N,0.0nm,0.3s,baz=274,slow=12,SNR=3.8
MMAI Mount Meron Ar 17.84 108 P **P** 19 39 12.3 +0.5
comp=N,0.7nm,0.3s,baz=318,slow=11,SNR=2.8
HFS Hagfors 19.74 358 P **P** 19 39 31.2 -1.3
comp=N,0.0nm,0.3s,baz=165,slow=12,SNR=3.0
NB2 NORSAR Subarra 20.77 355 P **P** 19 39 42.1 -1.6
comp=Z,1.1nm,0.8s,baz=172,slow=11
NOA NORSAR Array B 20.77 355 P **P** 19 39 42.6 -1.0
comp=Z,0.8nm,0.7s,baz=180,slow=7.7,SNR=3.0
NOA LR LR 19 49 26.5
comp=Z,40nm,19.0s,baz=285,slow=42
FINES FINESS Array B 22.08 14 P **P** 19 39 56.5 -1.2
comp=Z,2.8nm,0.7s,baz=179,slow=10,SNR=7.9
TORD Torodi Ar. Bea 29.63 207 P **P** 19 41 08.5 +0.2
comp=Z,0.6nm,0.8s,baz=27,slow=10.0,SNR=3.3
DBIC Dimbokro 38.08 213 P **P** 19 42 22.4 +0.7
comp=Z,1.3nm,0.6s,baz=10,slow=12,SNR=3.8
ZALV Zalesovo Beam 47.34 49 P **P** 19 43 37.4 +0.9
comp=Z,0.8nm,0.4s,baz=272,slow=8.3,SNR=4.7
MKAR Makanchi Array 47.71 59 P **P** 19 43 40.5 +0.9
comp=Z,0.8nm,0.7s,baz=280,slow=8.0,SNR=10
SONM Songino Array 62.23 50 P **P** 19 45 25.6 +1.0
comp=Z,1.4nm,0.8s,baz=290,slow=6.7,SNR=12
YKA Yellowknife Ar 69.78 338 P **P** 19 46 11.2 -1.5
comp=Z,0.1nm,0.4s,baz=40,slow=5.6,SNR=3.3

*IDC **22** 21:06:56.3±2.0, 43°.31N×105°.26W, h0km, mb1 3.6/4, mb1mx3.3/48, mbtmp3.3/4, ML3.4/4, Error ellipse: s-maj=44.6km s-min=8.8km az=153.0*
*NEIC **22** 21:06:59.5±2.5, 43°.65N±0°.04×105°.26W±0°.06, h0km±2km, ML3.3/65, Error ellipse: s-maj=8.0km s-min=6.5km az=140.0*
ISC 22 21:06:59.3±0.8, **43°.69N**±0°.05×**105°.27W**±0°.04, **h0**km, **n43, σ1°50/43, Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.99**	**64**				**Pb**	**21 07 18.8**	**-0.7**
RSSD						Sg	**Sg**	**21 07 30.9**	**-0.3**
K22A	**Casper**	**1.39**	**222**				**Pg**	**21 07 24.4**	**-1.4**
K22A				IAML				21 07 45.4	
	comp=E,396nm,0.3s								
K22A				IAML				21 07 48.8	
	comp=N,541nm,0.3s								
PHWY	**Pilot Hill**	**2.39**	**183**				**Pn**	**21 07 38.4**	**-1.7**
RWWY	**Rawlins**	**2.46**	**216**				**Pn**	**21 07 41.1**	**+0.2**
RWWY				IAML				21 08 15.5	
	comp=N,246nm,0.7s								
RWWY				IAML				21 08 18.6	
	comp=N,234nm,0.8s								
N23A	**Red Feather La**	**2.84**	**190**				**Pn**	**21 07 44.4**	**-1.7**
N23A				IAML				21 08 27.7	
	comp=E,107nm,0.8s								
N23A				IAML				21 08 27.8	
	comp=N,114nm,0.5s								
LAO	**LASA Array**	**3.07**	**348**				**Pn**	**21 07 49.2**	**0.0**
LAO				IAML				21 08 48.6	
	comp=N,89nm,0.9s								
RLMT	**Red Lodge**	**3.20**	**298**				**Pn**	**21 07 50.8**	**-0.2**
RLMT				IAML				21 08 46.6	
	comp=N,42nm,0.8s								
PD31	**Pinedale Array**	**3.26**	**255**				**Pn**	**21 07 52.0**	**0.0**
PDAR	**Pinedale Array**	**3.26**	**255**	Pn		Pn	**Pn**	**21 07 52.5**	**+0.5**
	comp=N,5.5nm,0.3s,baz=78,slow=17,SNR=71								
PDAR				Lg		Lg		21 08 35.6	
	comp=N,13nm,0.3s,baz=77,slow=26,SNR=18								
YNE	**Yellowstone No**	**3.64**	**293**				**Pn**	**21 07 57.7**	**+0.5**
OGNE	**Ogallala**	**3.65**	**138**				**Pn**	**21 07 57.5**	**+0.4**
YMP	**Mirror Lake Pl**	**3.66**	**288**				**Pn**	**21 07 57.9**	**+0.4**
GCMT	**Greyclift**	**3.77**	**305**				**Pn**	**21 07 59.8**	**+1.0**
LKWY	**Lake**	**3.79**	**285**				**Pn**	**21 08 01.1**	**+1.8**
LKWY							**Sn**	**21 08 41.6**	**-3.1**
LKWY				IAML				21 09 03.4	
	comp=N,30nm,2.6s								
H17A	**Grant Village**	**3.89**	**282**				**Pn**	**21 08 00.3**	**-0.2**
ISCO	**Idaho Springs**	**3.90**	**184**				**Pn**	**21 08 01.2**	**+0.4**
YUF	**Upper Falls**	**3.90**	**287**				**Pn**	**21 08 01.0**	**+0.3**
FLWY	**Flagg Ranch**	**3.94**	**278**				**Pn**	**21 08 02.3**	**+1.0**
FLWY							**Pb**	**21 08 11.0**	**+1.2**
FLWY							**Sn**	**21 08 43.5**	**-4.8**
FLWY				IAML				21 09 19.9	
	comp=N,31nm,3.1s								
FLWY				IAML				21 09 34.2	
	comp=N,28nm,4.5s								
YNR	**Norris Junctio**	**4.02**	**287**	Pn		**Pn**	**Pn**	**21 08 01.8**	**-0.6**
YPP	**Pitchstone Pla**	**4.03**	**280**				**Pn**	**21 08 03.6**	**+1.0**
REDW	**Red Top Meadow**	**4.07**	**267**				**Pn**	**21 08 04.6**	**+1.6**
REDW				IAML				21 09 16.4	
	comp=N,58nm,0.8s								
REDW				IAML				21 09 18.0	
	comp=N,42nm,0.7s								
IMW	**Indian Meadow**	**4.11**	**275**	IAML				21 09 15.5	
	comp=N,21nm,0.5s								
IMW				IAML				21 09 15.8	
	comp=N,31nm,0.6s								
TPAW	**Teton Pass**	**4.13**	**269**	IAML				21 09 21.0	
	comp=N,30nm,1.5s								
O20A	**White River Ci**	**4.19**	**213**	IAML				21 09 17.5	
	comp=E,46nm,0.6s								
O20A				IAML				21 10 17.1	
	comp=N,51nm,4.8s								
YMR	**Madison River**	**4.21**	**285**				**Pn**	**21 08 06.7**	**+1.7**
AHID	**Auburn Hatcher**	**4.36**	**260**				**Pn**	**21 08 08.2**	**+1.3**
AHID				IAML				21 09 22.6	
	comp=E,35nm,1.3s								
AHID				IAML				21 09 28.0	
	comp=N,40nm,0.7s								
YHB	**Horse Butte**	**4.39**	**286**				**Pn**	**21 08 08.0**	**+0.6**
YHL	**Hebgen Lake**	**4.40**	**287**				**Pn**	**21 08 06.1**	**-1.5**
YHL							**Pb**	**21 08 18.8**	**+1.2**
RDMU	**Red Mountain**	**4.46**	**227**				**Pn**	**21 08 07.7**	**-0.7**
SMCO	**Snowmass**	**4.69**	**196**	IAML				21 09 33.0	
	comp=N,41nm,4.9s								
SMCO				IAML				21 09 50.7	
	comp=N,29nm,4.8s								
DGMT	**Dagmar**	**4.84**	**9**				**Pn**	**21 08 15.0**	**+1.6**
KSCO	**Kaye Shedlock'**	**5.08**	**156**				**Pn**	**21 08 17.3**	**+0.4**
HWUT	**Hardware Ranch**	**5.09**	**248**	IAML				21 10 16.4	
	comp=N,20nm,3.9s								
EGMT	**Eagleton**	**5.34**	**326**				**Pn**	**21 08 21.1**	**+0.7**
EGMT							**Sn**	**21 09 21.0**	**-1.7**
SPUT	**South Promonto**	**5.81**	**248**				**Pn**	**21 08 27.1**	**+0.2**
P17A	**Butcher Ranch,**	**5.88**	**226**				**Pn**	**21 08 28.1**	**+0.3**
TMUT	**Trail Mountain**	**6.25**	**227**				**Pn**	**21 08 33.7**	**+0.6**
ECSD	**EROS Data Cent**	**6.28**	**87**	Pn			**Pn**	**21 08 33.6**	**+0.4**
ECSD							**Pb**	**21 08 53.3**	**+3.8**
CBKS	**Cedar Bluff**	**6.41**	**138**				**Pn**	**21 08 33.1**	**-2.0**
I10CA	**LAC DU BONNET**	**9.07**	**41**	*i*				22 06 20.0	
	baz=222,slow=349,SNR=0.7								
ULM	**Lac du Bonnet**	**9.18**	**41**	Pn			**Pn**	**21 09 11.6**	**-1.3**
	comp=N,1.9nm,0.3s,baz=235,slow=14,SNR=12								
ULM				Lg		Lg		21 11 45.6	
	comp=N,0.5nm,0.3s,baz=348,slow=12,SNR=2.7								
NVAR	**Mina Array Bea**	**11.15**	**246**	Pn		Pn		21 09 35.6	-4.6
	comp=N,0.1nm,0.3s,baz=67,slow=15,SNR=2.4								
YKA	**Yellowknife Ar**	**19.61**	**347**	P		**P**		**21 11 28.2**	**-0.8**
	comp=N,0.1nm,0.3s,baz=162,slow=12,SNR=4.1								

KRSC 22 21:13:00.7±1.6, **49°.09N×157°.03E, h40km**±32**km, ML3.6, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.70**	**340**			P	Pn	21 13 29.5	+1.7
SKR						S	Sn	21 13 49.5	+1.2
PAU	**Pauzhetka**	**2.38**	**357**			P	Pn	21 13 39.6	+2.4
PAU						S	Sn	21 14 08.8	+3.6
KDTR	**Khodutka, Kamc**	**2.81**	**13**			P	Pn	21 13 45.8	+2.9
KDTR						S	Sn	21 14 20.0	+4.5
ASAK	**Asacha**	**3.34**	**9**			P	Pn	21 13 54.7	+4.2
MTVR	**Mutnovka**	**3.48**	**12**			P	Pn	21 13 56.3	+4.0
RUS	**Russkaya**	**3.48**	**15**			P	Pn	21 13 55.8	+3.6
RUS						S	Sn	21 14 36.5	+4.4
GRL	**Gorelyy**	**3.53**	**10**			P	Pn	21 13 56.8	+3.8
GRL						S	Sn	21 14 38.4	+4.8
KRMR	**Karymshinskiy**	**3.81**	**10**			S	Sn	21 14 46.2	+5.9
UGLR	**Uglovaya**	**4.28**	**15**			P	Pn	21 14 08.4	+5.1
AVH	**Avacha**	**4.32**	**14**			P	Pn	21 14 09.4	+5.6
KOK	**Koryaka**	**4.33**	**13**			P	Pn	21 14 09.4	+5.4
SPN	**Mys Shipunski**	**4.44**	**24**			P	Pn	21 14 10.6	+5.3
SPN						S	Sn	21 15 00.9	+5.2
MKZ	**Mys Kozlova**	**6.20**	**26**			P	Pn	21 14 33.2	+3.7
KBTR	**Krutoberegovo**	**7.95**	**24**			P	Pn	21 14 56.4	+2.9

*PDG **22** 21:17:11.4±0.1, 42°.34N×18°.91E, h12km±1km, MD2.7/6, ML2.5/13, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
*RHSSO **22** 21:17:12.4±0.3, 42°.35N×18°.96E, h4km±1km, ML2.8/13*
*BEO **22** 21:17:13.6±0.3, 42°.33N×18°.93E, h0km, ML2.5/14*
ISC 22 21:17:11.8±1.1, **42°.35N**±0°.02×**18°.93E**±0°.02, **h1**km±9km, **n75, σ1°36/134, 7C-1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BUM	**Brajici-Budva**	**0.05**	**206**	⇑*i*		Pg	**Pg**	**21 17 12.8**	**0.0**
BUM						*e*Sg	**Sg**	**21 17 13.7**	**+0.2**
CEME	**Cevo**	**0.20**	**358**			*e*Pg	**Pg**	**21 17 15.7**	**0.0**
CEME						*e*Sg	**Sg**	**21 17 18.7**	**+0.4**
DRME	**Dracevica, Mon**	**0.25**	**130**	⇑*i*		Pg	**Pg**	**21 17 16.4**	**-0.2**
DRME						*e*Sg	**Sg**	**21 17 20.8**	**+0.9**
PDG	**Podgorica**	**0.26**	**71**			*e*Pg	**Pg**	**21 17 16.3**	**-0.5**
PDG						*e*Sg	**Sg**	**21 17 20.8**	**+0.6**
PDG	**Podgorica**	**0.26**	**71**	⇑*i*		Pg	**Pg**	**21 17 16.5**	**-0.3**
PDG						*e*Sg	**Sg**	**21 17 20.7**	**+0.6**
TTG	**Podgorica**	**0.26**	**71**			*e*Pg	**Pg**	**21 17 16.5**	**-0.3**
TTG						*e*Sg	**Sg**	**21 17 20.7**	**+0.6**
HCY	**Herceg Novi**	**0.34**	**287**	⇑*i*		Pg	**Pg**	**21 17 18.4**	**+0.2**
HCY						*e*Sg	**Sg**	**21 17 24.1**	**+1.5**
HCY	**Herceg Novi**	**0.34**	**287**			*e*Pg	**Pg**	**21 17 17.8**	**-0.4**
HCY						*e*Sg	**Sg**	**21 17 23.0**	**+0.4**
NKME	**Niksic**	**0.42**	**3**			*e*Pg	**Pg**	**21 17 19.3**	**-0.6**
NKME						*e*Sg	**Sg**	**21 17 26.3**	**+1.0**
ULC	**Ulcinj**	**0.45**	**148**			*e*Pg	**Pg**	**21 17 20.1**	**-0.4**
ULC						*e*Sg	**Sg**	**21 17 27.5**	**+1.2**
NKY	**Niksic**	**0.47**	**6**			*e*Pg	**Pg**	**21 17 20.3**	**-0.5**
NKY						*e*Sg	**Sg**	**21 17 28.2**	**+1.3**
TREB	**Trebinje**	**0.56**	**311**			*e*Pg	**Pg**	**21 17 22.2**	**-0.4**
TREB						*e*Sg	**Sb**	**21 17 33.2**	**+0.1**
TREB	**Trebinje**	**0.56**	**311**			*e*Pg	**Pg**	**21 17 22.0**	**-0.6**
TREB						*e*Sg	**Sb**	**21 17 31.9**	**-1.2**
BRY	**Bratogost**	**0.62**	**333**	⇑*i*		Pg	**Pg**	**21 17 23.1**	**-0.7**
BRY						*e*Sg	**Sg**	**21 17 33.3**	**+1.4**
BRY	**Bratogost**	**0.62**	**333**			*e*Pg	**Pg**	**21 17 23.2**	**-0.6**
BRY						*e*Sg	**Sg**	**21 17 33.0**	**+1.1**
DBRK	**Dubrovnik**	**0.66**	**299**			*e*Pg	**Pg**	**21 17 24.1**	**-0.4**
DBRK						Sg	**Sb**	**21 17 35.3**	**-0.6**
KOME	**Kolasin**	**0.67**	**41**			*e*Pg	**Pg**	**21 17 23.9**	**-0.7**
KOME						*e*Sg	**Sb**	**21 17 34.7**	**-1.4**
PVY	**Plav**	**0.80**	**72**			*e*Pg	**Pg**	**21 17 26.9**	**-0.3**
PVY						*e*Sg	**Sb**	**21 17 39.4**	**-0.7**
UPM	**Unac-Piva**	**0.85**	**359**			*e*Pg	**Pg**	**21 17 27.0**	**-1.2**
UPM						*e*Sg	**Sg**	**21 17 40.1**	**+0.8**
UPM	**Unac-Piva**	**0.85**	**359**	⇓*i*		Pg	**Pg**	**21 17 27.1**	**-1.2**
UPM						*e*Sg	**Sb**	**21 17 41.0**	**-0.7**
IVA	**Berane**	**0.89**	**53**			*e*Pg	**Pg**	**21 17 28.0**	**-0.8**
IVA						*e*Sg	**Sb**	**21 17 42.4**	**-0.1**
PLE	**Pljevlja**	**1.04**	**19**			*e*Pg	**Pg**	**21 17 30.7**	**-1.1**
PLE						*e*Sg	**Sn**	**21 17 47.5**	**-1.5**
STON	**Ston**	**1.04**	**300**			*e*Pg	**Pg**	**21 17 30.6**	**-1.2**
STON						Sg	**Sb**	**21 17 47.0**	**0.0**
STON	**Ston**	**1.04**	**300**			*e*Pg	**Pg**	**21 17 31.4**	**-0.5**
STON						*e*Sg	**Sn**	**21 17 48.0**	**-0.9**
STON	**Ston**	**1.04**	**300**			*e*Pg	**Pg**	**21 17 30.6**	**-1.2**
STON						*e*Sg	**Sb**	**21 17 46.6**	**-0.3**
SJES	**Sjenica**	**1.20**	**40**			*e*Pg	**Pb**	**21 17 34.5**	**-0.9**
SJES						*e*Sg	**Sn**	**21 17 53.1**	**+0.3**
TIR	**Tirane**	**1.22**	**145**			*e*Pg	**Pg**	**21 17 35.7**	**+0.5**
TIR						*e*Sg	**Sn**	**21 17 52.8**	**-0.5**
RUDO	**Rudo**	**1.31**	**14**	⇑*i*		Pg	**Pn**	**21 17 35.8**	**-1.6**
IVAS	**Ivanjica**	**1.52**	**36**			*e*Pg	**Pb**	**21 17 40.5**	**-0.4**
IVAS						*e*Sg	**Sg**	**21 18 02.6**	**+1.8**
BBLS	**Lazići**	**1.56**	**13**			*e*Pg	**Pg**	**21 17 41.9**	**+0.2**
BBLS						*e*Sg	**Sg**	**21 18 04.2**	**+2.3**
BBLS	**Lazići**	**1.56**	**13**			*e*Pn	**Pb**	**21 17 41.0**	**-0.5**
BBLS						*e*Sn	**Sb**	**21 18 01.6**	**-0.2**
MAKA	**Makarska**	**1.69**	**304**			*e*Pn	**Pn**	**21 17 42.4**	**-0.1**
MAKA						Sn	**Sg**	**21 18 07.6**	**+1.6**
HAPS	**Han Pijesak,BI**	**1.74**	**1**			*e*Pn	**Pb**	**21 17 43.8**	**-0.8**
HAPS						*e*Sg	**Sg**	**21 18 09.0**	**+1.3**
HAPS	**Han Pijesak,BI**	**1.74**	**1**			*e*Pn	**Pn**	**21 17 43.3**	**0.0**
HAPS						*e*Sn	**Sb**	**21 18 06.2**	**-0.8**
SELS	**Selova**	**1.83**	**61**			*e*Pn	**Pb**	**21 17 45.2**	**-1.0**
SELS						*e*Sn	**Sg**	**21 18 11.2**	**+0.4**
SKOP	**Skopje**	**1.91**	**101**			*e*Pn	**Pb**	**21 17 46.9**	**-0.5**
DIVS	**Divibare**	**1.92**	**24**			*e*Pg	**Pg**	**21 17 48.3**	**-0.2**
DIVS						*e*Sg	**Sg**	**21 18 15.2**	**+1.8**
DIVS	**Divibare**	**1.92**	**24**			*e*Pn	**Pn**	**21 17 46.0**	**+0.3**
DIVS						*e*Sn	**Sn**	**21 18 10.1**	**-0.4**
GRUS	**Gruza**	**2.02**	**40**			*e*Pn	**Pb**	**21 17 49.8**	**+0.4**
TRUS	**Trudelj**	**2.16**	**29**			*e*Pn	**Pb**	**21 17 51.2**	**-0.6**
TRUS						*e*Sn	**Sb**	**21 18 19.0**	**-0.2**
BARS	**Barje**	**2.19**	**77**			*e*Pn	**Pb**	**21 17 51.9**	**-0.3**
BARS						*e*Sn	**Sb**	**21 18 18.3**	**-1.5**
TEKS	**Tekeris**	**2.24**	**11**			*e*Pn	**Pb**	**21 17 52.9**	**-0.3**
SG1	**Sgolgore (BA)**	**2.26**	**229**	*e*	(Pn)		Pn	21 17 41.6	-8.8
SG1					(Sn)		**Sn**	**21 18 16.0**	**-3.0**
BOVS	**Bovan**	**2.41**	**57**			*e*Pn	**Pb**	**21 17 54.0**	**-2.0**
MGRS	**Mrkonjic Grad**	**2.46**	**328**			*e*Pn	**Pn**	**21 17 54.0**	**+0.8**
MGRS						*e*Sn	**Sn**	**21 18 24.5**	**+0.5**
KIJV	**Kijevo**	**2.48**	**313**			*e*Pn	**Pn**	**21 17 54.9**	**+1.5**
KIJV						Sn	**Sb**	**21 18 27.6**	**-0.6**
STIP

SNST	**Tainan City** baz=289	**0.28**	**289**	*e*P	Pb	21 59 31.4	-0.5
CHN4	**Tsaushan** baz=331	**0.28**	**321**	P	Pb	21 59 31.6	-0.2
CHN4	baz=331			*e*S	Sg	21 59 35.3	+1.4
TWK	**Hsinying** baz=297	**0.31**	**296**	*e*P	Pb	21 59 32.1	-0.2
TWK	baz=297			S	Sb	21 59 36.3	-1.3
TWG	**Pinlang** baz=131	**0.41**	**139**	*e*P	Pb	21 59 33.2	-0.8
SSD	**Sandimen** baz=192	**0.41**	**200**	*e*P	Pg	21 59 33.0	+0.7
TWGBT	**Beinan** baz=131	**0.41**	**139**	*e*P	Pg	21 59 33.0	+0.5
CHN5	**Tsauling** baz=348	**0.47**	**348**	*e*P	Pb	21 59 35.1	-0.2
TWF1	**Yuli** baz=73	**0.52**	**65**	P	Pb	21 59 35.2	-0.7
MASBT	**Mashibuluo** baz=195	**0.54**	**195**	*e*P	Pb	21 59 35.5	-0.7
YULB	**Yu-li** baz=61	**0.54**	**61**	*e*P	Pg	21 59 35.2	+0.4
ECL	**Taimali** baz=155	**0.55**	**164**	*e*P	Pg	21 59 35.5	+0.4
EHY	**Hungye** baz=63	**0.62**	**53**	*e*P	Pg	21 59 36.8	+0.4
SSLB	**Suanglung** baz=14	**0.67**	**13**	*e*P	Pg	21 59 37.9	+0.5
HGSD	**Ruisui** baz=58	**0.69**	**58**	*e*P	Pb	21 59 38.3	-0.5
VWDT	**VWDT** baz=37	**0.70**	**28**	*e*P	Pg	21 59 38.5	+0.5
EAST	**Anshuo** baz=181	**0.75**	**176**	P	Pb	21 59 39.5	-0.3

TAP 22 21:59:26.2,23.11N×120.81E,h12km,ML2.3,1D,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYT	**Tauyuan** baz=322	**0.07**	**318**	⇓*i*P	Pg	21 59 29.3	+0.4
STYT	baz=322			*i* S	Sg	21 59 31.2	+0.5
SLGT	**Liugui** baz=232	**0.19**	**232**	*i* P	Pb	21 59 31.3	-0.3
SLGT	baz=232			*e*S	Sg	21 59 34.5	+1.1
ELDTW	**Lidau** baz=68	**0.21**	**68**	*i* P	Pb	21 59 31.6	-0.4
ELDTW	baz=68			*i* S	Sg	21 59 35.2	+1.3
SGST	**Jiashian** baz=261	**0.21**	**262**	P	Pb	21 59 31.6	-0.4
SGST	baz=261			*i* S	Sg	21 59 34.7	+0.8
WTP	**Ta-pu** baz=307	**0.22**	**307**	*i* P	Pb	21 59 31.8	-0.5
WTP	baz=307			*i* S	Sg	21 59 35.6	+1.3
WTP	**Ta-pu** baz=307	**0.22**	**307**	*i* S	Pb	21 59 31.8	-0.5
TPUB	**Ta-pu** baz=319	**0.25**	**319**	P	Pb	21 59 32.3	-0.5
TPUB	baz=319			S	Sb	21 59 36.4	-0.7
CHN1	**Nanshi** baz=286	**0.27**	**286**	P	Pb	21 59 32.7	-0.3
CHN1	baz=286			S	Sg	21 59 36.3	+0.7
SNST	**Tainan City** baz=290	**0.31**	**291**	P	Pb	21 59 33.6	0.0
SNST	baz=290			S	Sb	21 59 38.9	+0.2
CHN4	**Tsaushan** baz=320	**0.31**	**321**	P	Pb	21 59 33.6	-0.1
CHN4	baz=320			S	Sb	21 59 38.7	-0.1
TWK	**Hsinying** baz=298	**0.33**	**298**	P	Pb	21 59 34.1	0.0
TWK	baz=298			S	Sb	21 59 39.1	-0.4
TWG	**Pinlang** baz=139	**0.38**	**140**	*i* P	Pb	21 59 35.0	+0.1
TWG	baz=139			*i* S	Sb	21 59 40.8	+0.1
TWGBT	**Beinan** baz=139	**0.38**	**139**	P	Pb	21 59 35.0	0.0
TWGBT	baz=139			S	Sb	21 59 40.9	0.0
SSD	**Sandimen** baz=203	**0.40**	**204**	P	Pb	21 59 34.9	-0.4
SSD	baz=203			S	Sg	21 59 40.2	+0.8
ALS	**Alishan**	**0.40**	**360**	P	Pb	21 59 35.0	-0.5
ALS				S	Sb	21 59 41.1	-0.5
CHN3	**Shinhua** baz=265	**0.41**	**265**	*e*P	Pb	21 59 35.1	-0.3
CHN3	baz=265			*e*S	Sb	21 59 41.7	+0.1
FULB	**Fuli** baz=72	**0.46**	**79**	P	Pg	21 59 34.8	-0.5
FULB	**Fuli** baz=78	**0.46**	**79**	*i* P	Pg	21 59 34.9	-0.3
FULB	baz=78			S	Sb	21 59 43.3	+0.3
TWM1	**Shoushan** baz=230	**0.46**	**231**	*e*S	Sb	21 59 42.5	-0.4
SGLT	**Jiouru** baz=216	**0.48**	**217**	*e*P	Pg	21 59 36.0	+0.3
SGLT	baz=216			*e*S	Sb	21 59 43.7	0.0
CHN5	**Tsauling** baz=346	**0.50**	**346**	P	Pb	21 59 37.2	+0.2
CHN5	baz=346			S	Sb	21 59 44.0	-0.3
TWF1	**Yuli** baz=62	**0.51**	**62**	P	Pb	21 59 36.9	-0.2
TWF1	baz=62			S	Sb	21 59 43.8	-0.7
CHKT	**Chengkung** baz=91	**0.51**	**91**	*e*P	Pb	21 59 37.9	+0.7
CHKT	baz=91			*e*S	Sb	21 59 45.4	+0.8
MASBT	**Mashibuluo** baz=198	**0.52**	**198**	P	Pb	21 59 37.2	-0.1
MASBT	baz=198			*e*S	Sb	21 59 45.1	+0.2
ECL	**Taimali** baz=164	**0.53**	**165**	*i* P	Pb	21 59 37.3	-0.1
ECL	baz=164			S	Sb	21 59 45.6	+0.6
YULB	**Yu-li** baz=57	**0.53**	**58**	P	Pb	21 59 37.3	-0.2
TAI1	**Yung-k'ang** baz=262	**0.54**	**263**	*e*P	Pb	21 59 37.3	-0.3
TAI1	baz=262			*e*S	Sb	21 59 45.5	+0.2
WHYT	**Xinyi Township** baz=4.0	**0.58**	**4**	P	Pb	21 59 38.5	+0.1
WHYT	baz=4.0			S	Sb	21 59 47.0	+0.2
EHY	**Hungye** baz=50	**0.61**	**50**	P	Pb	21 59 39.0	0.0
WDLH	**Douliu** baz=336	**0.63**	**337**	*e*S	Sb	21 59 48.5	+0.6
HGSD	**Ruisui** baz=56	**0.68**	**56**	*e*P	Pb	21 59 40.8	+0.7
HGSD	baz=56			*e*S	Sb	21 59 50.4	+0.9
SSLB	**Suanglung** baz=11	**0.69**	**11**	*e*P	Pb	21 59 40.1	-0.1
VWDT	**VWDT** baz=25	**0.71**	**25**	*e*P	Pg	21 59 40.1	+0.1
WJS	**Zhushan** baz=354	**0.71**	**354**	*e*P	Pb	21 59 41.2	+0.6
EAST	**Anshuo** baz=176	**0.72**	**177**	*e*P	Pb	21 59 41.2	+0.3
TYC	**Yuchr** baz=4.0	**0.79**	**3**	*e*P	Pb	21 59 42.2	+0.3
TYC	baz=4.0			*e*S	Sb	21 59 53.2	+0.6
CHGB	**Renai** baz=19	**1.00**	**19**	*e*P	Pn	21 59 46.9	+0.5
CHGB	baz=19			*e*S	Sn	22 00 00.4	-0.2

TAP 22 21:59:50.4,23.12N×120.81E,h12km,ML1.9,1D,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYT	**Tauyuan** baz=314	**0.06**	**311**	⇓*i*P	Pg	21 59 53.4	+0.4
STYT	baz=314			S	Sg	21 59 55.2	+0.4
SLGT	**Liugui** baz=228	**0.20**	**229**	*i* P	Pb	21 59 55.5	-0.5
ELDTW	**Lidau** baz=72	**0.20**	**72**	P	Pb	21 59 55.9	-0.3
SGST	**Jiashian** baz=257	**0.21**	**259**	*e*P	Pg	21 59 55.5	+0.5
WTP	**Ta-pu** baz=305	**0.21**	**305**	*i* P	Pb	21 59 55.8	-0.5
TPUB	**Ta-pu** baz=317	**0.24**	**317**	P	Pb	21 59 56.4	-0.3
CHN1	**Nanshi** baz=283	**0.26**	**283**	P	Pg	21 59 56.3	+0.4
CHN1	baz=283			S	Sb	22 00 01.4	-0.2
CHN4	**Tsaushan** baz=319	**0.30**	**319**	*e*P	Pb	21 59 57.4	-0.4
ALS	**Alishan** baz=1.0	**0.39**	**360**	P	Pb	21 59 59.1	-0.3
TWG	**Pinlang** baz=140	**0.39**	**141**	*e*S	Sb	22 00 05.5	+0.4
TWGBT	**Beinan** baz=140	**0.40**	**140**	*e*P	Pb	21 59 59.0	-0.3
TWGBT	baz=140			*e*S	Sb	22 00 05.4	0.0

TAP 22 21:59:53.9,23.11N×120.81E,h11km,ML2.0,1D,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYT	**Tauyuan** baz=321	**0.08**	**318**	⇓*i*P	Pg	21 59 57.0	+0.5
STYT	baz=321			*i* S	Sg	21 59 58.9	+0.6
SLGT	**Liugui** baz=233	**0.19**	**234**	P	Pb	21 59 59.0	-0.3
SLGT	baz=233			S	Sg	22 00 02.2	+1.3
SLGT	**Liugui** baz=228	**0.19**	**234**	*e*S	Pb	21 59 59.0	-0.4
ELDTW	**Lidau** baz=67	**0.20**	**66**	*i* P	Pb	21 59 59.2	-0.5
ELDTW	baz=67			*i* S	Sg	22 00 03.0	+1.6
ELDTW	**Lidau** baz=72	**0.20**	**66**	S	Pb	21 59 59.4	-0.3
SGST	**Jiashian** baz=262	**0.21**	**264**	*e*P	Pg	21 59 59.0	+0.5
SGST	baz=262			S	Sg	22 00 02.2	+0.6
SGST	**Jiashian** baz=257	**0.21**	**264**	S	Pg	21 59 59.4	+1.0
WTP	**Ta-pu** baz=308	**0.23**	**307**	P	Pb	21 59 59.5	-0.7
WTP	baz=308			*i* S	Sg	22 00 03.5	+1.4
WTP	**Ta-pu** baz=305	**0.23**	**307**	*i* S	Pb	21 59 59.6	-0.5
TPUB	**Ta-pu** baz=318	**0.26**	**319**	P	Pb	22 00 00.1	-0.4
TPUB	baz=318			S	Sb	22 00 04.1	-0.9
TPUB	**Ta-pu** baz=317	**0.26**	**319**	S	Pb	22 00 00.1	-0.4
CHN1	**Nanshi** baz=286	**0.27**	**287**	P	Pb	22 00 00.8	0.0
CHN1	baz=286			S	Sb	22 00 05.2	-0.3
SNST	**Tainan City** baz=291	**0.31**	**291**	*e*S	Sb	22 00 06.5	-0.1
CHN4	**Tsaushan** baz=320	**0.32**	**320**	*e*P	Pb	22 00 01.3	-0.3
CHN4	baz=320			*e*S	Sb	22 00 06.4	-0.3
TWK	**Hsinying** baz=298	**0.34**	**298**	S	Pb	22 00 06.9	-0.5
TWG	**Pinlang** baz=139	**0.37**	**140**	*e*P	Pb	22 00 02.3	-0.2
TWG	baz=139			*e*S	Sb	22 00 08.3	+0.1
TWGBT	**Beinan** baz=139	**0.38**	**139**	*e*P	Pb	22 00 02.0	-0.6
TWGBT	baz=139			*e*S	Sb	22 00 08.5	+0.1
SSD	**Sandimen** baz=203	**0.40**	**205**	*e*S	Sb	22 00 09.1	+0.1
ALS	**Alishan**	**0.40**	**359**	P	Pb	22 00 02.7	-0.5
CHN3	**Shinhua** baz=265	**0.41**	**266**	*e*P	Pb	22 00 03.0	-0.2
CHN3	baz=265			*e*S	Sb	22 00 09.5	0.0

TAP 22 22:04:14.2,23.11N×120.81E,h12km,ML2.4,1C-5D,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYT	**Tauyuan** baz=318	**0.07**	**315**	⇓*i*P	Pg	22 04 17.2	+0.3
STYT	baz=318			*i* S	Sg	22 04 19.5	+0.7
SLGT	**Liugui** baz=232	**0.19**	**233**	P	Pb	22 04 19.2	-0.5
ELDTW	**Lidau** baz=68	**0.20**	**67**	⇑*i*P	Pb	22 04 19.5	-0.4
SGST	**Jiashian** baz=261	**0.21**	**263**	P	Pg	22 04 18.5	-0.3
WTP	**Ta-pu** baz=307	**0.23**	**306**	*i* P	Pg	22 04 19.6	+0.4
TPUB	**Ta-pu** baz=318	**0.25**	**318**	⇓P	Pg	22 04 20.1	+0.5
CHN1	**Nanshi** baz=285	**0.27**	**286**	P	Pb	22 04 20.6	-0.5
SNST	**Tainan City** baz=290	**0.31**	**291**	P	Pb	22 04 21.4	-0.3
CHN4	**Tsaushan** baz=319	**0.31**	**320**	⇓*i*P	Pb	22 04 21.4	-0.4
TWK	**Hsinying** baz=298	**0.34**	**298**	P	Pb	22 04 22.0	-0.2
TWG	**Pinlang** baz=139	**0.37**	**140**	*i* P	Pb	22 04 22.9	+0.1
TWGBT	**Beinan** baz=139	**0.38**	**140**	⇓P	Pb	22 04 22.9	0.0
YUS	**Yu-Shan** baz=18	**0.40**	**19**	*i* P	Pg	22 04 22.9	+0.5
ALS	**Alishan** baz=359	**0.40**	**359**	⇓P	Pg	22 04 22.8	+0.5
SSD	**Sandimen** baz=203	**0.40**	**205**	P	Pb	22 04 22.8	-0.4
FULB	**Fuli** baz=78	**0.45**	**79**	P	Pb	22 04 24.7	+0.5
CHN5	**Tsauling** baz=345	**0.50**	**346**	*e*P	Pb	22 04 25.1	0.0
TWF1	**Yuli** baz=62	**0.51**	**61**	P	Pb	22 04 24.6	-0.4
MASBT	**Mashibuluo** baz=198	**0.52**	**199**	*e*P	Pb	22 04 25.1	-0.2
YULB	**Yu-li** baz=57	**0.53**	**58**	*e*P	Pg	22 04 24.8	+0.2
ECL	**Taimali** baz=165	**0.53**	**166**	P	Pb	22 04 25.4	0.0
WHYT	**Xinyi Township** baz=3.0	**0.58**	**4**	*e*P	Pg	22 04 26.0	+0.3

TAP 22 22:04:18.1,23.09N×120.81E,h11km,ML2.4,1D,A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STYT	**Tauyuan** baz=329	**0.09**	**326**	⇓*i*P	Pg	22 04 21.7	+0.8
STYT	baz=329			*i* S	Sg	22 04 23.6	+0.8
SLGT	**Liugui** baz=237	**0.18**	**238**	*e*P	Pg	22 04 22.3	+0.2
SLGT	baz=237			*e*S	Sg	22 04 26.3	+1.4
SLGT	**Liugui** baz=232	**0.18**	**238**	*e*S	Pg	22 04 22.3	+0.2
SGST	**Jiashian** baz=267	**0.21**	**268**	P	Pg	22 04 23.2	+0.6
SGST	baz=267			*i* S	Sg	22 04 26.5	+0.8
SGST	**Jiashian** baz=261	**0.21**	**268**	*e*S	Pg	22 04 23.4	+0.8
ELDTW	**Lidau** baz=63	**0.21**	**62**	*e*P	Pb	22 04 23.5	-0.6
ELDTW	baz=63			S	Sg	22 04 27.4	+1.4
ELDTW	**Lidau** baz=68	**0.21**	**62**	*i* S	Pg	22 04 23.2	+0.4
WTP	**Ta-pu** baz=311	**0.24**	**311**	P	Pg	22 04 23.7	+0.5
WTP	baz=311			*i* S	Sg	22 04 28.1	+1.5
WTP	**Ta-pu** baz=307	**0.24**	**311**	*i* S	Pg	22 04 24.1	+1.0
TPUB	**Ta-pu** baz=321	**0.27**	**321**	*e*P	Pg	22 04 24.1	+0.4
TPUB	baz=321			S	Sb	22 04 28.9	-0.7
CHN1	**Nanshi** baz=290	**0.28**	**290**	*i* S	Sb	22 04 29.7	-0.1
SNST	**Tainan City** baz=294	**0.32**	**294**	*e*P	Pg	22 04 25.0	+0.5
SNST	baz=294			S	Sb	22 04 31.1	+0.2
CHN4	**Tsaushan** baz=322	**0.33**	**322**	S	Sb	22 04 31.3	0.0
TWK	**Hsinying** baz=301	**0.34**	**301**	S	Sb	22 04 31.6	-0.2
TWG	**Pinlang** baz=137	**0.36**	**138**	S	Sb	22 04 33.1	+0.9
TWGBT	**Beinan** baz=137	**0.37**	**138**	S	Sb	22 04 33.1	+0.8
CHN3	**Shinhua** baz=268	**0.41**	**268**	S	Sb	22 04 33.4	-0.3
ALS	**Alishan**	**0.42**	**359**	P	Pb	22 04 27.2	-0.5
ALS				*e*S	Sb	22 04 33.6	-0.6
YUS	**Yu-Shan** baz=18	**0.42**	**18**	*i* P	Pg	22 04 27.1	+0.5
YUS	baz=18			*i* S	Sb	22 04 33.6	-0.8
TTN	**Taitung** baz=136	**0.46**	**137**	*e*P	Pg	22 04 27.6	+0.5
FULB	**Fuli** baz=76	**0.46**	**76**	*e*S	Sb	22 04 36.1	+1.1
MASBT	**Mashibuluo** baz=199	**0.50**	**199**	*e*P	Pg	22 04 27.8	-0.2
MASBT	baz=199			*e*S	Sb	22 04 36.3	+0.1
ECL	**Taimali** baz=164	**0.51**	**165**	*e*S	Sb	22 04 36.8	+0.4
CHKT	**Chengkung** baz=89	**0.51**	**89**	*e*S	Sb	22 04 37.1	+0.6
TWF1	**Yuli** baz=60	**0.52**	**60**	*e*P	Pb	22 04 28.9	-0.3
TWF1	baz=60			S	Sb	22 04 36.2	-0.5
CHN5	**Tsauling** baz=346	**0.52**	**346**	P	Pb	22 04 29.4	+0.1
CHN5	baz=346			*e*S	Sb	22 04 37.1	+0.2
YULB	**Yu-li** baz=56	**0.54**	**56**	*e*P	Pg	22 04 29.0	+0.3
YULB	baz=56			*e*S	Sg	22 04 36.2	+0.4
CHY	**Chiayi** baz=319	**0.54**	**319**	*e*P	Pb	22 04 29.5	-0.1
CHY	baz=319			*e*S	Sb	22 04 37.7	+0.3
EHY	**Hungye** baz=49	**0.63**	**49**	*e*P	Pb	22 04 31.2	+0.1
EHY	baz=49			*e*S	Sb	22 04 40.6	+0.7
WDLH	**Douliu** baz=337	**0.65**	**337**	*e*S	Sb	22 04 41.3	+0.9
SSLB	**Suanglung** baz=10.0	**0.71**	**11**	*e*P	Pb	22 04 32.3	-0.2
SSLB	baz=10.0			*e*S	Sb	22 04 43.0	+0.8

IDC ***22*** *22:31:39.2±0.7,27.66S×13.38W, h0km, mb4.1/12, mb1 4.2/12, mb1mx3.9/44, mbtmp4.1/12, MS3.5/10, Ms1 3.5/10, ms1mx3.3/33, Error ellipse: s-maj=33.2km s-min=15.1km az=177.0*

NEIC ***22*** *22:31:40.5±1.1, 27.5S±0.1×13.38W±0.0,3, h10km±1km, mb4.6/15, Error ellipse: s-maj=21.8km s-min=4.1km az=171.0*

ISC 22 22:31:41.0±0.6, 27.4S±0.1×13.41W±0.10, h13km, n39, σ0.94/32, mb4.4/18, MS3.5/10, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHEL	**Horse Pasture**	**13.45**	**33**		**Pn**	**22 34 50.7**	**-1.0**
TSUM	**Tsumeb** 1.9nm,0.6s,baz=255,slow=12,SNR=6.8	**29.55**	**81**	P	**P**	**22 37 45.7**	**-0.1**
TSUM	comp=Z,117nm,18.1s,baz=319,slow=33			LR	LR	22 47 50.1	
TSUM	**Tsumeb** comp=Z,8.0nm,1.4s	**29.55**	**81**	IAmb	IAmb	22 37 54.7	
BOSA	**Boshof** comp=Z,3.7nm,0.6s,baz=266,slow=7.7,SNR=10	**34.05**	**101**	P	**P**	**22 38 24.8**	**-0.4**
BOSA	comp=Z,94nm,21.5s,baz=306,slow=32			LR	LR	22 49 32.5	
BOSA	**Boshof** comp=Z,4.1nm,0.7s	**34.05**	**101**	P	**P**	**22 38 24.4**	**-0.8**
BOSA				IAmb	IAmb	22 38 27.5	
BDFB	**Brasilia** comp=Z,6.0nm,0.8s,baz=119,slow=9.1,SNR=8.2	**34.15**	**283**	P	**P**	**22 38 26.8**	**+0.7**
BDFB	comp=Z,107nm,20.1s,baz=189,slow=32			LR	LR	22 49 51.3	
BDFB	**Brasilia** comp=Z,6.8nm,0.8s	**34.15**	**283**	P	**P**	**22 38 26.6**	**+0.5**
BDFB				IAmb	IAmb	22 38 34.3	
DBIC	**Dimbokro** comp=Z,62nm,19.7s,baz=130,slow=29	**34.90**	**15**	LR	LR	22 48 38.7	
DBIC	**Dimbokro** comp=Z,6.0nm,1.1s	**34.90**	**15**	P	**P**	**22 38 31.9**	**-0.4**
DBIC				IAmb	IAmb	22 38 39.3	
LBTB	**Lobatse** comp=Z,14nm,0.9s	**34.98**	**95**	P	**P**	**22 38 32.9**	**-0.4**
LBTB				IAmb	IAmb	22 38 33.8	
MATP	**Matopo** comp=Z,7.9nm,0.9s,baz=239,slow=8.3,SNR=14	**38.80**	**89**	P	**P**	**22 39 05.6**	**-0.2**
CPUP	**Villa Florida** comp=Z,73nm,19.4s,baz=111,slow=34	**39.04**	**261**	LR	LR	22 53 43.7	
LSZ	**Lusaka** comp=Z,1.9nm,0.2s,baz=239,slow=11,SNR=5.3	**40.40**	**81**	P	**P**	**22 39 20.8**	**+1.6**
TOA0	**Torodi Ar. Sit**	**42.92**	**22**	P	**P**	**22 39 40.3**	**+0.7**
TORD	**Torodi Ar. Bea** comp=Z,1.4nm,1.0s,baz=203,slow=8.7,SNR=7.6	**42.92**	**22**	P	**P**	**22 39 41.0**	**+1.4**
TORD	comp=Z,70nm,20.7s,baz=315,slow=31			LR	LR	22 53 54.0	
SIV	**San Ignacio** comp=Z,1.1nm,0.5s,baz=110,slow=9.9,SNR=6.5	**45.48**	**274**	P	**P**	**22 40 01.5**	**+1.2**
CFA	**Coronel Fontan** comp=Z,1.3nm,0.4s,baz=153,slow=6.8,SNR=3.3	**47.48**	**251**	P	**P**	**22 40 15.6**	**-0.3**
PLCA	**Paso Flores** comp=Z,35nm,20.8s,baz=115,slow=33	**48.37**	**239**	LR	LR	22 58 20.2	
GO01	**Chusmiza** comp=Z,7.3nm,1.0s	**51.37**	**266**	P	**P**	**22 40 46.5**	**+0.3**
GO01				IAmb	IAmb	22 40 54.2	
LPAZ	**La Paz** comp=Z,1.0nm,0.6s,baz=125,slow=5.4,SNR=4.4	**51.63**	**270**	P	**P**	**22 40 48.6**	**+0.2**
LPAZ	comp=Z,61nm,18.9s,baz=98,slow=34			LR	LR	23 01 17.3	
LPAZ	**La Paz** comp=Z,2.6nm,1.0s	**51.63**	**270**	IAmb	IAmb	22 40 49.0	
MNMC	**Minye Minye** comp=Z,8.1nm,1.3s	**51.91**	**266**	P	**P**	**22 40 49.7**	**-0.3**
MNMC				IAmb	IAmb	22 40 51.1	
QSPA	**South Pole Qui** comp=Z,4.2nm,0.8s	**62.79**	**180**	P	**P**	**22 42 06.6**	**+0.6**
QSPA				IAmb	IAmb	22 42 07.2	
MTE	**Manteigas**	**67.70**	**5**	P	**P**	**22 42 37.9**	**0.0**
HUMP	**Col San Antoni**	**68.08**	**306**	P	**P**	**22 42 38.2**	**-2.5**
SANT	**Santorini**	**73.26**	**32**	P	**P**	**22 43 11.5**	**-0.5**
CASP	**Castiglione de**	**73.36**	**18**	P	**P**	**22 43 12.5**	**+0.1**
CASP				IAmb	IAmb	22 43 28.3	

comp=Z,18nm,1.2s
VNDA Vanda 75.25 179 LR LR 23 11 46.7
comp=Z,34nm,21.3s,baz=189,slow=32
GERES GERESS Array B 79.71 18 P **P 22 43 50.4 +2.1**
comp=Z,0.2nm,0.5s,baz=204,slow=2.2,SNR=2.3
MLR Muntele Rosu 80.92 27 P **P 22 43 55.9 +1.0**
comp=Z,1.8nm,0.8s,baz=144,slow=11,SNR=3.5
MLR Muntele Rosu 80.92 27 P **P 22 43 55.0 0.0**
AKASG Malin Array Be 86.44 26 P **P 22 44 23.6 +0.7**
comp=Z,0.1nm,0.3s,baz=233,slow=5.7,SNR=2.4
OBN Obninsk 92.67 26 LR LR 23 25 24.0
comp=Z,18nm,18.1s,baz=70,slow=35
YKA Yellowknife Ar 119.08 329 PKP **PKiKP 22 50 29.0 0.0**
comp=Z,0.2nm,0.6s,baz=87,slow=2.6,SNR=3.4
ASAR Alice Springs 120.20 145 PKP **PKPdf 22 50 32.2 -0.2**
comp=Z,0.6nm,0.6s,baz=200,slow=1.3,SNR=6.7
WRA Warramunga Arr 123.49 143 PKP **PKPdf 22 50 37.1 -1.7**
comp=Z,0.5nm,0.8s,baz=229,slow=2.5,SNR=3.9
ILAR Eielson Array 132.54 335 PKP **PKiKP 22 50 55.3 -0.4**
comp=Z,0.3nm,0.8s,baz=42,slow=1.1,SNR=4.2
KLR Kul'dur 145.51 41 PKPbc **PKPab 22 51 19.0 0.0**
comp=Z,2.4nm,1.1s,baz=320,slow=5.7,SNR=2.9
KSRS Korea Array 146.07 63 PKPbc **PKPab 22 51 21.1 -0.3**
comp=Z,0.8nm,0.5s,baz=290,slow=2.5,SNR=4.1

IDC ***22*** *22:33:57.2±1.0,28.˙58N×103.˙54E,h0km,mb3.7/8, mb1 3.8/9,mb1mx3.5/54,mbtmp3.6/9,ML2.8/1,Error ellipse: s-maj=38.0km s-min=18.3km az=59.0*
ISC 22 22:34:02.4±1.2,28.˙6N±0.˙2×103.˙6E±0.˙2,h35km,n9, σ1§13/9,mb3.7/8,Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**19.30**	**6**	P		**P**		**22 38 23.6**	**-0.7**
	0.0nm,0.3s,baz=187,slow=11,SNR=3.9								
KSRS	**Korea Array**	**22.18**	**60**	P		**P**		**22 38 56.8**	**+1.4**
	0.9nm,0.8s,baz=242,slow=11,SNR=3.4								
MKAR	**Makanchi Array**	**24.61**	**323**	P		**P**		**22 39 20.8**	**+1.4**
	0.7nm,0.7s,baz=124,slow=13,SNR=11								
ZALV	**Zalesovo Beam**	**28.77**	**337**	P		**P**		**22 39 56.5**	**-0.1**
	2.2nm,1.0s,baz=145,slow=10,SNR=4.3								
WRA	**Warramunga Arr**	**56.70**	**145**	P		**P**		**22 43 41.8**	**-0.8**
	0.5nm,0.7s,baz=313,slow=7.6,SNR=6.0								
ARCES	**ARCESS Array B**	**59.33**	**336**	P		**P**		**22 44 00.7**	**+0.3**
	1.0nm,0.7s,baz=96,slow=8.3,SNR=3.3								
FINES	**FINESS Array B**	**59.37**	**327**	P		**P**		**22 44 01.1**	**+0.3**
	3.9nm,1.1s,baz=110,slow=8.0,SNR=3.8								
ASAR	**Alice Springs**	**59.64**	**148**	P		**P**		**22 44 03.8**	**+0.6**
	0.4nm,0.5s,baz=338,slow=7.0,SNR=5.3								
YKA	**Yellowknife Ar**	**84.18**	**17**	P		**P**		**22 46 28.4**	**-1.4**
	0.3nm,0.6s,baz=328,slow=4.9,SNR=6.2								

PRU ***22*** *22:44:07.9±0.0,40.˙35N×14.˙73E,h0km,M4.0*
ROM ***22*** *22:44:10.9±0.2,40.˙441N±0.˙006×15.˙15E±0.˙01,h8km, ML3.7,Mw3.7,Error ellipse: s-maj=1.0km s-min=0.4km az=59.0,Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}2.85; $M_{\theta\theta}$-3.24; $M_{\phi\phi}$0.39; $M_{r\theta}$-2.11; $M_{r\phi}$0.80; $M_{\theta\phi}$0.35; Fault plane solution: M_o3.78839×10^{14} NP1: ϕ_s280.00000°,δ62.00000°,λ88.00000°. NP2: ϕ_s104.00000°,δ28.00000°,λ93.00000°.*
IDC ***22*** *22:44:11.3±0.8,40.˙57N×14.˙98E,h0km,mb3.9/12, mb1 3.9/22,mb1mx3.8/44,mbtmp3.8/22,ML3.8/9,MS3.1/8, Ms1 3.2/8,ms1mx2.9/43 Error ellipse: s-maj=14.6km s-min=10.3km az=87.0*
RISSC ***22*** *22:44:11.2,40.˙46N×15.˙14E,h9km,ML1.9/6*
PDG ***22*** *22:44:11.6±0.7,40.˙45N×15.˙15E,h11km,ML3.6/14,Error ellipse: s-maj=0.7km s-min=1.1km az=0.0*
LDG ***22*** *22:44:11.5±0.2,40.˙47N×15.˙14E,h10km,Ml3.2/1,Error ellipse: s-maj=4.1km s-min=2.9km az=60.0*
NEIC ***22*** *22:44:11.7±1.9,40.˙47N±0.˙04×15.˙17E±0.˙03,h3km±5km, Error ellipse: s-maj=5.9km s-min=1.7km az=148.0*
ISC 22 22:44:11.9±0.9,40.˙44N±0.˙02×15.˙14E±0.˙02,h7km±6km, n269,σ1§34/311,mb4.0/14,MS3.2/3,27C-31D,Southern Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CDRU	**Civita di Ruta**	**0.14**	**69**	P		**P**	**Pg**	**22 44 14.1**	**-0.7**
CDRU				S		**Sg**	**Sg**	**22 44 16.5**	**-0.3**
CDRU						AML	AML		
	comp=N,64800μm,1.4s								
CDRU						AML	AML		
	comp=E,66350μm,0.3s								
CDRU						AML	AML		
	comp=E,66350μm,0.3s								
CDRU						AML	AML		
	comp=N,64800μm,1.4s								
CDRU	**Civita di Ruta**	**0.14**	**69**				**Pg**	**22 44 14.1**	**-0.7**
CMPR	**Campora**	**0.17**	**134**	P			**Pg**	**22 44 15.0**	**-0.5**
CMPR				S			**Sg**	**22 44 18.2**	**+0.3**
CMPR						AML	AML		
	comp=E,58150μm,0.2s								
CMPR						AML	AML		
	comp=E,58150μm,0.2s								
CMPR						AML	AML		
	comp=N,56000μm,0.6s								
CMPR	**Campora**	**0.17**	**134**				**Pg**	**22 44 15.0**	**-0.5**
SRN3	**Sant'Arsenio**	**0.25**	**79**	↓*i* P			**Pg**	**22 44 16.2**	**-0.6**
SRN3				*i* S			**Sg**	**22 44 20.5**	**+0.4**
SRN3	**Sant'Arsenio**	**0.25**	**79**	↓*i* P			**Pg**	**22 44 16.2**	**-0.6**
SRN3				*i* S			**Sg**	**22 44 20.5**	**+0.4**
COL3	**Colliano**	**0.29**	**31**	↓*i* P			**Pg**	**22 44 17.1**	**-0.4**
COL3	**Colliano**	**0.29**	**31**	↓*i* P			**Pg**	**22 44 17.1**	**-0.4**
SNR3	**Senerchia**	**0.30**	**8**	↓*i* P			**Pg**	**22 44 17.2**	**-0.6**
SNR3	**Senerchia**	**0.30**	**8**	↓*i* P			**Pg**	**22 44 17.2**	**-0.6**
CGG3	**Caggiano**	**0.31**	**71**	↓*i* P			**Pg**	**22 44 17.5**	**-0.5**
CGG3	**Caggiano**	**0.31**	**71**	↓*i* P			**Pg**	**22 44 17.5**	**-0.5**
TEGI	**Teggiano - Ist**	**0.31**	**101**	*i* P			**Pg**	**22 44 17.3**	**-0.6**
TEGI	**Teggiano - Ist**	**0.31**	**101**	*i* P			**Pg**	**22 44 17.3**	**-0.6**
MCRV	**Calabrutti - M**	**0.34**	**4**	P			**Pg**	**22 44 17.8**	**-0.8**
MCRV				S			**Sg**	**22 44 23.3**	**+0.1**
MCRV						AML	AML		
	comp=N,14600μm,0.3s								
MCRV						AML	AML		
	comp=N,14600μm,0.3s								
MCRV						AML	AML		
	comp=E,12750μm,0.4s								
MCRV	**Calabrutti - M**	**0.34**	**4**				**Pg**	**22 44 17.8**	**-0.8**
SCL3	**Muro Lucano (S**	**0.38**	**48**	↓*i* P			**Pg**	**22 44 18.8**	**-0.5**
SCL3	**Muro Lucano (S**	**0.38**	**48**	↓*i* P			**Pg**	**22 44 18.8**	**-0.5**
SLCN	**Sala Consilina**	**0.38**	**97**	P			**Pg**	**22 44 18.7**	**-0.6**
SLCN				S			**Sg**	**22 44 25.1**	**+0.8**
SLCN						AML	AML		
	comp=E,43800μm,0.4s								
SLCN						AML	AML		
	comp=N,32250μm,0.8s								
SLCN						AML	AML		
	comp=E,43800μm,0.4s								
SLCN	**Sala Consilina**	**0.38**	**97**				**Pg**	**22 44 18.6**	**-0.6**
STN3	**Satriano di Lu**	**0.40**	**77**	↓*i* P			**Pg**	**22 44 19.2**	**-0.4**
STN3	**Satriano di Lu**	**0.40**	**77**	↓*i* P			**Pg**	**22 44 19.2**	**-0.4**
NSC3	**Nusco**	**0.41**	**358**	↓*i* P			**Pg**	**22 44 19.0**	**-0.8**
NSC3	**Nusco**	**0.41**	**358**	↓*i* P			**Pg**	**22 44 19.0**	**-0.8**
MRLC	**Muro Lucano**	**0.41**	**40**	P			**Pg**	**22 44 19.4**	**-0.5**
MRLC						AML	AML		
	comp=N,10085μm,1.4s								
MRLC						AML	AML		
	comp=E,10750μm,1.6s								
MRLC						AML	AML		
	comp=N,11600μm,1.4s								
MRLC						AML	AML		
	comp=N,10065μm,1.4s								
MRLC						AML	AML		
	comp=E,9300μm,1.6s								
MRLC	**Muro Lucano**	**0.41**	**40**				**Pg**	**22 44 19.4**	**-0.5**
MGR	**Morigerati**	**0.44**	**134**	P			**Pg**	**22 44 19.6**	**-0.8**
MGR				S			**Sg**	**22 44 26.6**	**+0.5**
MGR						AML	AML		
	comp=E,38900μm,0.5s								
MGR						AML	AML		
	comp=N,61450μm,0.5s								
MGR						AML	AML		
	comp=N,66200μm,0.5s								
MGR						AML	AML		
	comp=E,38850μm,0.5s								
MGR						AML	AML		
	comp=N,61450μm,0.5s								
MGR						AML	AML		
	comp=E,37000μm,0.5s								
MGR						AML	AML		
	comp=E,38850μm,0.5s								
MGR						AML	AML		
	comp=N,66200μm,0.5s								
MGR						AML	AML		
	comp=N,61500μm,0.5s								
MGR						AML	AML		
	comp=E,37000μm,0.5s								
MGR						AML	AML		
	comp=E,38850μm,0.5s								
MRN3	**Marsico Nuovo**	**0.45**	**92**	*i* P			**Pg**	**22 44 20.4**	**-0.2**
MRN3	**Marsico Nuovo**	**0.45**	**92**	*i* P			**Pg**	**22 44 20.4**	**-0.2**
LIO3	**Lioni**	**0.46**	**4**	↓*i* P			**Pg**	**22 44 20.0**	**-0.8**
LIO3	**Lioni**	**0.46**	**4**	↓*i* P			**Pg**	**22 44 20.0**	**-0.8**
SNAL	**S. Angelo Dei**	**0.49**	**6**	P			**Pg**	**22 44 20.6**	**-0.7**
SNAL						AML	AML		
	comp=E,11875μm,1.2s								
SNAL						AML	AML		
	comp=E,11870μm,1.2s								
SNAL						AML	AML		
	comp=N,15400μm,1.0s								
SNAL						AML	AML		
	comp=N,15400μm,1.0s								
SNAL						AML	AML		
	comp=E,12550μm,1.4s								
SNAL	**S. Angelo Dei**	**0.49**	**6**				**Pg**	**22 44 20.6**	**-0.7**
SALI3	**CIMA - Sant'An**	**0.49**	**4**	↓*i* P			**Pg**	**22 44 20.6**	**-0.8**
SALI3	**CIMA - Sant'An**	**0.49**	**4**	↓*i* P			**Pg**	**22 44 20.6**	**-0.8**
MTSN	**Montesano sull**	**0.50**	**110**	P			**Pg**	**22 44 20.8**	**-0.7**
MTSN						AML	AML		
	comp=E,19350μm,0.5s								
MTSN						AML	AML		
	comp=N,19200μm,0.4s								
MTSN						AML	AML		
	comp=E,19350μm,0.5s								
MTSN	**Montesano sull**	**0.50**	**110**				**Pg**	**22 44 21.0**	**-0.5**
AND3	**Andretta**	**0.51**	**17**	*i* P			**Pg**	**22 44 21.2**	**-0.6**
AND3	**Andretta**	**0.51**	**17**	*i* P			**Pg**	**22 44 21.2**	**-0.6**
PGN3	**Pignola, Italy**	**0.52**	**75**	*i* P			**Pg**	**22 44 21.7**	**-0.2**
PGN3	**Pignola, Italy**	**0.52**	**75**	*i* P			**Pg**	**22 44 21.7**	**-0.2**
MCEL	**Monticello**	**0.52**	**103**	P			**Pg**	**22 44 21.4**	**-0.5**
MCEL				S			**Sb**	**22 44 30.0**	**-1.1**
MCEL						AML	AML		
	comp=E,11950μm,0.5s								
MCEL						AML	AML		
	comp=N,15250μm,0.9s								
MCEL						AML	AML		
	comp=N,15450μm,1.0s								
MCEL						AML	AML		
	comp=N,15450μm,1.0s								
MCEL						AML	AML		
	comp=E,12050μm,0.5s								
MCEL	**Monticello**	**0.52**	**103**				**Pg**	**22 44 21.4**	**-0.5**
RSF3	**Rocca San Feli**	**0.52**	**3**	*i* P			**Pg**	**22 44 20.9**	**-1.1**
RSF3	**Rocca San Feli**	**0.52**	**3**	*i* P			**Pg**	**22 44 20.9**	**-1.1**
CAFE	**Carife**	**0.59**	**7**	P			**Pg**	**22 44 22.5**	**-0.8**
CAFE						AML	AML		
	comp=E,9320μm,0.8s								
CAFE						AML	AML		
	comp=E,9375μm,0.8s								
CAFE						AML	AML		
	comp=E,9325μm,0.8s								
CAFE						AML	AML		
	comp=N,7700μm,0.9s								
CAFE						AML	AML		
	comp=N,7585μm,0.9s								
CAFE						AML	AML		
	comp=E,9370μm,0.8s								
CAFE						AML	AML		
	comp=E,9340μm,0.8s								
CAFE	**Carife**	**0.59**	**7**				**Pg**	**22 44 22.5**	**-0.8**
SIRI	**Monte Sirino -**	**0.61**	**115**	P			**Pg**	**22 44 22.7**	**-1.0**
SIRI				S			**Sb**	**22 44 33.0**	**-0.9**
SIRI						AML	AML		
	comp=N,10305μm,1.3s								
SIRI						AML	AML		
	comp=N,10300μm,1.3s								
SIRI						AML	AML		
	comp=E,10550μm,0.6s								
SIRI						AML	AML		
	comp=N,10280μm,1.3s								
SIRI						AML	AML		
	comp=N,10390μm,1.3s								
SIRI						AML	AML		
	comp=E,10750μm,0.6s								
SIRI	**Monte Sirino -**	**0.61**	**115**				**Pg**	**22 44 22.7**	**-1.0**
VULT	**Monte Vulture**	**0.63**	**35**	P			**Pg**	**22 44 23.5**	**-0.5**
VULT						AML	AML		
	comp=E,8420μm,0.9s								
VULT						AML	AML		
	comp=N,9990μm,0.8s								
VULT						AML	AML		
	comp=E,8445μm,0.9s								
VULT						AML	AML		
	comp=N,10175μm,0.8s								
VULT						AML	AML		
	comp=N,9995μm,0.8s								
VULT						AML	AML		
	comp=N,10180μm,0.8s								
VULT	**Monte Vulture**	**0.63**	**35**				**Pg**	**22 44 23.6**	**-0.4**
SSB3	**San Sossio Bar**	**0.64**	**6**	*i* P			**Pg**	**22 44 23.2**	**-1.1**
SSB3	**San Sossio Bar**	**0.64**	**6**	*i* P			**Pg**	**22 44 23.2**	**-1.1**
NL9	**Nola**	**0.66**	**317**	P			**Pg**	**22 44 23.9**	**-0.6**
OVO	**Vesuviano**	**0.68**	**305**	P			**Pg**	**22 44 25.0**	**-0.1**
MRB1	**Monte Rocchett**	**0.70**	**350**	P			**Pg**	**22 44 24.1**	**-1.2**
MRB1						AML	AML		
	comp=E,12550μm,1.4s								
MRB1						AML	AML		
	comp=N,17250μm,0.7s								
MRB1						AML	AML		
	comp=E,12500μm,1.4s								
MRB1						AML	AML		
	comp=E,12500μm,1.4s								
MRB1						AML	AML		
	comp=N,17200μm,0.7s								
MRB1						AML	AML		
	comp=E,12600μm,1.4s								
MRB1						AML	AML		
	comp=N,17900μm,0.7s								
MRB1						AML	AML		
	comp=N,17200μm,0.7s								
ACER	**Acerenza**	**0.70**	**60**	P			**Pg**	**22 44 24.7**	**-0.7**
ACER						AML	AML		
	comp=N,10400μm,0.8s								
ACER						AML	AML		
	comp=E,12100μm,0.5s								
ACER						AML	AML		
	comp=N,10450μm,0.8s								
ACER						AML	AML		
	comp=N,10750μm,0.8s								
ACER						AML	AML		
	comp=E,12450μm,0.5s								
ACER	**Acerenza**	**0.70**	**60**				**Pg**	**22 44 24.5**	**-0.9**
PAOL	**Paolisi**	**0.73**	**324**	P			**Pg**	**22 44 24.9**	**-1.0**
PAOL						AML	AML		
	comp=E,5130μm,1.1s								
PAOL						AML	AML		
	comp=E,5135μm,1.1s								
PAOL						AML	AML		
	comp=N,6100μm,1.0s								
PAOL	**Paolisi**	**0.73**	**324**				**Pg**	**22 44 24.9**	**-1.0**
PAOL	**Paolisi**	**0.73**	**324**	Pg			**Pg**	**22 44 24.8**	**-1.2**
PALZ	**Palazzo San Ge**	**0.80**	**51**	P			**Pg**	**22 44 25.9**	**-1.3**
PALZ						AML	AML		
	comp=N,6510μm,0.8s								
PALZ						AML	AML		
	comp=E,6770μm,0.7s								
PALZ						AML	AML		
	comp=N,7290μm,1.3s								
T0721	**Laino Castello**	**0.82**	**128**	P			**Pg**	**22 44 26.5**	**-1.0**
T0721						AML	AML		
	comp=N,17000μm,1.6s								
T0721						AML	AML		
	comp=E,11550μm,0.6s								
T0721						AML	AML		
	comp=N,17000μm,1.6s								
T0721						AML	AML		
	comp=E,10755μm,0.6s								
T0721						AML	AML		
	comp=N,16500μm,1.6s								
IPOZ	**Pozzuoli**	**0.86**	**296**	P			**Pb**	**22 44 29.0**	**-0.2**
MIGL	**Miglionico**	**1.01**	**80**	P			**Pg**	**22 44 29.8**	**-1.4**
MIGL						AML	AML		
	comp=E,15850μm,0.8s								
MIGL						AML	AML		
	comp=N,18600μm,0.7s								
MIGL						AML	AML		
	comp=N,18600μm,0.7s								
SACR	**S. Croce Del S**	**1.01**	**341**	P			**Pg**	**22 44 30.5**	**-0.8**
SACR						AML	AML		
	comp=E,4665μm,0.9s								
SACR						AML	AML		
	comp=N,3365μm,1.6s								
SACR						AML	AML		
	comp=E,4595μm,0.9s								
SACR						AML	AML		
	comp=N,3360μm,1.6s								
SACR						AML	AML		
	comp=E,4660μm,0.9s								
MRVN	**Minervino Murg**	**1.01**	**52**	P			**Pg**	**22 44 29.8**	**-1.5**
MRVN						AML	AML		
	comp=E,2395μm,0.7s								
MRVN						AML	AML		
	comp=N,2155μm,0.5s								
T0702	**Acquaformosa (**	**1.02**	**134**	P			**Pg**	**22 44 29.8**	**-1.7**
T0702						AML	AML		
	comp=E,5605μm,1.1s								
T0702						AML	AML		
	comp=N,4870μm,0.7s								
T0702						AML	AML		
	comp=E,5595μm,1.1s								
T0702						AML	AML		
	comp=N,4850μm,0.7s								
PIGN	**Pignataro Magg**	**1.05**	**317**	P			**Pg**	**22 44 31.0**	**-1.1**
ORI	**Oriolo Calabro**	**1.07**	**110**	P			**Pg**	**22 44 31.7**	**-0.7**
ORI						AML	AML		
	comp=E,8675μm,0.8s								
ORI						AML	AML		
	comp=N,8215μm,0.6s								
SALB	**San Lorenzo Be**	**1.08**	**121**	P			**Pg**	**22 44 30.5**	**-2.2**
SALB						AML	AML		
	comp=N,2880μm,0.5s								
SALB						AML	AML		
	comp=N,2825μm,0.5s								
SALB						AML	AML		
	comp=E,3415μm,0.7s								
SALB						AML	AML		
	comp=E,3215μm,0.7s								
SALB						AML	AML		
	comp=N,2885μm,0.5s								
GATE	**Gambatesa**	**1.08**	**351**	P			**Pb**	**22 44 32.8**	**-0.2**
GATE						AML	AML		
	comp=N,2380μm,0.9s								
GATE						AML	AML		
	comp=N,2345μm,0.9s								
GATE						AML	AML		
	comp=E,1160μm,0.7s								
GATE						AML	AML		
	comp=E,2240μm,0.6s								
CET2	**Cetraro**	**1.11**	**145**	P			**Pg**	**22 44 31.9**	**-1.1**
CET2						AML	AML		
	comp=N,15150μm,0.9s								
CET2						AML	AML		
	comp=E,12950μm,0.9s								
BSSO	**Busso**	**1.18**	**340**	P			**Pg**	**22 44 33.6**	**-0.9**
BSSO						AML	AML		
	comp=E,1191μm,0.8s								
BSSO						AML	AML		
	comp=E,2925μm,0.8s								
BSSO						AML	AML		
	comp=N,2410μm,1.0s								
BSSO						AML	AML		
	comp=N,946μm,1.0s								
AMUR	**Altamura**	**1.21**	**67**	P			**Pg**	**22 44 33.8**	**-1.2**
AMUR						AML	AML		
	comp=E,2220μm,0.6s								
AMUR						AML	AML		
	comp=N,2580μm,0.7s								
MATE	**Matera**	**1.21**	**80**	P			**Pg**	**22 44 34.0**	**-1.1**
MATE						AML	AML		
	comp=E,2190μm,0.7s								
MATE						AML	AML		
	comp=N,3285μm,1.0s								
CIGN	**Sant'Elia a Pi**	**1.23**	**352**	P			**Pg**	**22 44 35.3**	**-0.1**
CIGN						AML	AML		
	comp=E,1710μm,1.6s								
CIGN						AML	AML		
	comp=N,1425μm,0.8s								
SG1	**Sgolgore (BA)**	**1.24**	**71**	↓*i* Pn			**Pb**	**22 44 34.3**	**-1.3**
SG1						Sn	**Sn**	**22 44 53.2**	**+0.6**
MELA	**Melanico ??? S**	**1.26**	**360**	P			**Pn**	**22 44 35.3**	**-0.6**
MELA						AML	AML		
	comp=E,4915μm,1.0s								
MELA						AML	AML		
	comp=N,4990μm,1.3s								
MELA						AML	AML		
	comp=N,4840μm,1.3s								
MELA						AML	AML		
	comp=E,4905μm,1.0s								
SGRT	**San Giovanni R**	**1.39**	**19**	P			**Pn**	**22 44 36.4**	**-1.4**
SGRT						AML	AML		
	comp=N,1915μm,0.7s								
SGRT						AML	AML		
	comp=E,2035μm,0.8s								
SGRT	**San Giovanni R**	**1.39**	**19**				**Pn**	**22 44 36.3**	**-1.4**
TRIV	**Trivento**	**1.40**	**342**	P			**Pn**	**22 44 37.5**	**-0.4**
TRIV						AML	AML		
	comp=N,1615μm,1.2s								
TRIV						AML	AML		
	comp=E,1495μm,1.1s								
TRIV						AML	AML		
	comp=E,1445μm,1.1s								
TRIV						AML	AML		
	comp=N,1730μm,1.0s								
MSAG	**Monte S. Angel**	**1.40**	**24**	P			**Pn**	**22 44 35.5**	**-2.4**
MSAG						AML	AML		
	comp=E,2060μm,0.8s								
MSAG						AML	AML		
	comp=N,3780μm,0.7s								
MSAG						AML	AML		
	comp=N,3810μm,0.7s								
MSAG						AML	AML		
	comp=E,2065μm,0.8s								
MSAG						AML	AML		
	comp=E,2120μm,0.8s								
CAR1	**CAROLEI**	**1.45**	**145**	P			**Pn**	**22 44 37.3**	**-1.2**
CAR1				S			**Sn**	**22 44 57.1**	**-0.6**
CAR1						AML	AML		
	comp=N,4750μm,0.6s								
CAR1						AML	AML		
	comp=E,6180μm,0.6s								
CAR1						AML	AML		
	comp=N,4530μm,0.6s								
CAR1						AML	AML		
	comp=N,4755μm,0.6s								
CAR1						AML	AML		
	comp=E,5365μm,0.6s								
RNI2	**Rionero Sannit**	**1.47**	**330**	P			**Pn**	**22 44 38.4**	**-0.4**
RNI2						AML	AML		
	comp=E,1515μm,0.9s								
RNI2						AML	AML		
	comp=N,1265μm,0.7s								
RNI2						AML	AML		
	comp=E,1510μm,0.9s								
RNI2						AML	AML		
	comp=N,1245μm,0.7s								
CELI	**Celico**	**1.48**	**134**	P			**Pn**	**22 44 38.5**	**-0.5**
CELI						AML	AML		
	comp=N,5155μm,0.6s								
CELI						AML	AML		
	comp=E,1900μm,0.6s								
CELI						AML	AML		
	comp=N,2130μm,0.6s								
CELI						AML	AML		
	comp=E,4650μm,0.6s								
BAI	**Bari**	**1.48**	**63**	↓*i* Pn			**Pn**	**22 44 37.7**	**-1.2**
BAI						Sn	**Sg**	**22 44 59.5**	**+0.1**
NOCI	**Noci**	**1.51**	**76**	P			**Pn**	**22 44 38.2**	**-1.1**
NOCI						AML	AML		
	comp=E,2910μm,0.7s								
NOCI						AML	AML		
	comp=N,2370μm,0.9s								
MASS	**Massafra**	**1.54**	**82**	↓*i* Pn			**Pn**	**22 44 39.0**	**-0.8**
MASS						Sn	**Sg**	**22 45 01.1**	**-0.3**
TAR1	**Taranto**	**1.64**	**86**	↓*i* Pn			**Pn**	**22 44 40.5**	**-0.6**
TIP	**Timpagrande**	**1.77**	**135**				**Pn**	**22 44 43.0**	**0.0**
CGL1	**Ceglie Messapi**	**1.79**	**82**	*e* Pn			**Pn**	**22 44 42.5**	**-0.8**
INTR	**Introdacqua**	**1.82**	**330**				**Pn**	**22 44 43.7**	**-0.1**
SERS	**Sersale**	**1.84**	**139**	P			**Pn**	**22 44 43.9**	**-0.1**
SERS						AML	AML		
	comp=E,784μm,1.4s								
SERS						AML	AML		
	comp=N,793μm,0.7s								
SERS						AML	AML		
	comp=N,850μm,1.5s								

SERS AML AML
comp=E,830µm,0.7s
MSRU Castanea 2.19 172 P **Pn** **22 44 46.9 -1.9**
MSRU AML AML
comp=E,1040µm,0.5s
MSRU AML AML
comp=N,1084µm,0.6s
PLAC Placanica 2.23 153 P **Pn** **22 44 48.7 -0.5**
PLAC AML AML
comp=N,1365µm,0.6s
PLAC AML AML
comp=E,1410µm,0.6s
PLAC AML AML
comp=N,1365µm,0.7s
PLAC AML AML
comp=E,1340µm,0.7s
CEL Celeste 2.26 165 Pn **Pn** **22 44 48.4 -1.3**
AQU L'Aquila 2.31 326 *e*Pn **Pg** **22 44 56.1 -0.1**
AQU L'Aquila 2.31 326 **Pb** **22 44 52.6 -1.4**
MCSR Castroreale 2.38 178 P **Pn** **22 44 49.6 -1.7**
MCSR AML AML
comp=E,754µm,1.5s
MCSR AML AML
comp=N,582µm,1.1s
MUCR Ucria 2.40 185 P **Pn** **22 44 50.5 -1.2**
MUCR AML AML
comp=E,314µm,0.5s
MUCR AML AML
comp=N,350µm,0.6s
AIO Antillo 2.47 178 AML AML
comp=E,210µm,1.3s
AIO AML AML
comp=N,250µm,0.6s
MPAZ Palizzi 2.57 165 AML AML
comp=E,516µm,0.6s
MPAZ AML AML
comp=N,886µm,0.7s
SCTE Santa Cesarea 2.57 97 **Pn** **22 44 55.2 +1.2**
NRCA Norcia 2.83 328 **Pn** **22 44 58.4 +0.8**
CORL Corleone 2.92 210 **Pn** **22 44 59.3 +0.5**
VAE Valguarnera 3.01 191 Pn **Pb** **22 45 03.0 -2.8**
comp=N,2.4nm,0.3s,baz=118,slow=4.0,SNR=15
STON Ston 3.10 37 *e*Pn **Pn** **22 45 00.2 -0.9**
STON Ston 3.10 37 AML AML
comp=E,165µm,1.4s
STON AML AML
comp=N,267µm,1.0s
STON Ston 3.10 37 *e*Pn **Pn** **22 45 00.1 -1.0**
DBRK Dubrovnik 3.17 44 *i* Pn **Pn** **22 45 02.5 +0.3**
DBRK Sn **Sn** **22 45 35.0 -5.3**
MAKA Makarska 3.17 26 *e*Pn **Pn** **22 45 01.5 -0.6**
MAKA Sn **Sn** **22 45 39.6 -0.7**
AGST Augusta-Monte 3.18 179 AML AML
comp=N,250µm,0.9s
AGST AML AML
comp=E,260µm,0.6s
HCY Herceg Novi 3.22 50 *e*Pn **Pn** **22 45 01.2 -1.7**
HCY Herceg Novi 3.22 50 ⇑*i* Pn **Pn** **22 45 02.1 -0.8**
HCY *e*Sn **Sn** **22 45 43.4 +1.9**
CLTB Caltabellotta 3.23 208 **Pn** **22 45 04.1 +1.1**
ZIRJ Zirje 3.23 7 *e*Pn **Pn** **22 45 02.3 -0.7**
ZIRJ Sn **Sn** **22 45 40.7 -1.1**
TREB Trebinje 3.31 46 *e*Pn **Pn** **22 45 04.4 +0.3**
LATE Laterza 3.31 312 **Pn** **22 45 03.3 -0.9**
BUM Brajici-Budva 3.38 55 ⇑*i* Pn **Pn** **22 45 04.6 -0.5**
BUM *e*Sn **Sn** **22 45 46.8 +1.2**
MURB Monte Urbino 3.43 326 Pn **Pn** **22 45 04.9 -0.9**
MORI Morici 3.45 7 *e*Pn **Pn** **22 45 05.2 -0.7**
MORI Sn **Sn** **22 45 46.4 -0.7**
ULC Ulcinj 3.45 63 ⇓*i* Pn **Pn** **22 45 06.1 0.0**
ULC *e*Sn **Sn** **22 45 48.9 +1.7**
DRME Dracevica, Mon 3.51 59 *e*Pn **Pn** **22 45 06.7 -0.2**
DRME Dracevica, Mon 3.51 59 ⇓*i* Pn **Pn** **22 45 07.0 +0.1**
DRME *e*Sn **Sn** **22 45 50.0 +1.3**
CEME Cevo 3.53 52 ⇓*i* Pn **Pn** **22 45 06.8 -0.4**
CEME *e*Sn **Sn** **22 45 49.8 +0.5**
BRY Bratogost 3.54 45 *e*Pn **Pn** **22 45 06.8 -0.6**
BRY Bratogost 3.54 45 ⇓*i* Pn **Pn** **22 45 07.6 +0.2**
BRY *e*Sn **Sn** **22 45 50.4 +0.8**
DUGI Dugi Otok 3.55 359 *i* Pn **Pn** **22 45 06.2 -1.2**
PDG Podgorica 3.68 56 *e*Pn **Pn** **22 45 09.2 +0.1**
PDG Podgorica 3.68 56 **Pn** **22 45 08.8 -0.3**
TTG Podgorica 3.68 56 ⇓*i* Pn **Pn** **22 45 09.4 -0.1**
TTG *e*Sn **Sn** **22 45 53.4 +0.7**
KIJV Kijevo 3.68 14 *e*Pn **Pn** **22 45 09.6 +0.3**
NKME Niksic 3.69 50 ⇑*i* Pn **Pn** **22 45 09.2 -0.1**
NKME *e*Sn **Sn** **22 45 53.9 +0.9**
TIR Tirane 3.69 74 Pn **Pn** **22 45 09.8 +0.4**
NKY Niksic 3.74 49 ⇑*i* Pn **Pn** **22 45 11.1 +1.0**
NKY *e*Sn **Sn** **22 45 54.5 +0.1**
UPM Unac-Piva 3.94 44 *e*Pn **Pn** **22 45 13.2 +0.2**
UPM Unac-Piva 3.94 44 ⇑*i* Pn **Pn** **22 45 12.9 -0.1**
UPM *e*Sn **Sn** **22 46 00.3 +0.8**
CASP Castiglione de 3.97 308 Pn **Pn** **22 45 12.8 -0.4**
KOME Kolasin 4.07 52 ⇑*i* Pn **Pn** **22 45 15.7 +1.1**
KOME *e*Sn **Sn** **22 46 03.2 +0.7**
IGT Igoumenitsa 4.09 101 P **Pn** **22 45 16.3 +1.5**
UDBI Udbina 4.11 6 *e*Pn **Pn** **22 45 15.4 +0.3**
NVLJ Novalja 4.12 357 *e*Pn **Pn** **22 45 14.1 -1.2**
PVY Plav 4.21 58 ⇑*i* Pn **Pn** **22 45 17.0 +0.4**
PVY *e*Sn **Sn** **22 46 07.1 +1.0**
MGRS Mrkonjic Grad 4.23 19 ⇑*i* Pn **Pn** **22 45 17.9 +1.2**
PLE Pljevlja 4.29 46 ⇑*i* Pn **Pn** **22 45 18.6 +0.9**
PLE *e*Sn **Sn** **22 46 08.6 +0.6**
IVA Berane 4.31 54 ⇓*i* Pn **Pn** **22 45 19.0 +1.1**
IVA *e*Sn **Sn** **22 46 09.6 +1.1**
OHR Ohrid 4.35 79 *i* Pn **Pn** **22 45 21.4 +3.0**
JAN Janina 4.45 98 P **Pn** **22 45 21.0 +1.2**
RUDO Rudo 4.47 43 *e*Pn **Pn** **22 45 20.5 +0.4**
BLY Banja Luka 4.56 19 ⇑P **Pn** **22 45 22.6 +1.3**
BLY Banja Luka 4.56 19 *e*Pn **Pn** **22 45 21.3 0.0**
BLY Banja Luka 4.56 19 **Pn** **22 45 22.3 +1.0**
HAPS Han Pijesak,BI 4.61 37 *e*Pn **Pn** **22 45 21.3 -0.8**
BBLS Lazići 4.67 41 *e*Pn **Pn** **22 45 22.6 -0.2**
FNA Florina 4.76 84 P **Pn** **22 45 24.9 +0.8**
FNA Florina 4.76 84 Pn **Pn** **22 45 25.1 +1.1**
KPRO Kipourio 4.79 94 P **Pn** **22 45 26.5 +2.0**
RIY Rijeka 4.91 355 *e*Pn **Pn** **22 45 24.7 -1.3**
SKO Skopje 4.99 70 *i* Pn **Pn** **22 45 28.2 +0.9**
PGF Pioggiola 5.07 297 *e*Pn **Pn** **22 45 27.9 -0.5**
DIVS Divibare 5.13 43 *e*Pn **Pn** **22 45 28.8 -0.4**
OZLJ Ozalj 5.18 3 *e*Pn **Pn** **22 45 31.0 +1.3**
MOSL Moslavina 5.30 12 *e*Pn **Pn** **22 45 30.9 -0.6**
CEY Cerknica 5.32 355 *e*Pn **Pn** **22 45 31.2 -0.6**
THL Klokotos Trika 5.35 97 P **Pn** **22 45 33.9 +1.8**
TRI Trieste 5.36 350 **Pn** **22 45 31.4 -0.8**
CRES Cresnjev 5.39 2 *e*Pn **Pn** **22 45 30.7 -2.0**
STIP Stip 5.47 74 *i* Pn **Pn** **22 45 36.7 +2.9**
TEOL Teolo 5.54 334 Pn **Pn** **22 45 34.3 -0.4**
GRG Griva 5.54 82 P **Pn** **22 45 34.6 -0.2**
LJU Ljubljana 5.62 356 *e*Pn **Pn** **22 45 35.1 -0.7**
LIT Litokhoron 5.63 91 P **Pn** **22 45 36.5 +0.5**
LIT Litokhoron 5.63 91 **Pn** **22 45 37.3 +1.2**
LIT **Sn** **22 46 43.6 +2.6**
AGG Agios Georgios 5.72 102 Pn **Pn** **22 45 39.8 +2.5**
FRGS Fruska Gora 5.83 35 *e*Pn **Pn** **22 45 36.1 -2.7**
KNT Kendrikon 5.93 81 P **Pn** **22 45 40.0 -0.1**
OBKA Obir 6.08 356 *e*Pn **Pn** **22 45 40.9 -1.4**
comp=E,9.0nm,0.5s,SNR=5.7
BEHE Becsehely 6.14 11 *e*Pn **Pn** **22 45 43.2 +0.2**
SALO Salr 6.18 328 Pn **Pn** **22 45 44.8 +1.3**
ITM Ithomi 6.22 119 Pn **Pn** **22 45 46.0 +1.9**
ITM **Sn** **22 46 55.4 0.0**
SOKA Soboth 6.24 359 *i* Pn **Pn** **22 45 43.0 -1.3**
comp=E,4.9nm,0.5s
SOH Sokhos 6.26 84 P **Pn** **22 45 44.9 +0.2**
MYKA Terra Mystica 6.28 351 *e*Pn **Pn** **22 45 45.2 +0.2**
comp=E,5.2nm,0.4s
MYKA *i* Sn **Sn** **22 46 55.9 -1.2**
comp=E,7.3nm,0.6s
MORH Mrgy, Hungar 6.31 23 *e*Pn **Pn** **22 45 44.2 -1.1**
PLG Polygyros 6.34 88 P **Pn** **22 45 45.7 -0.1**
SRS Serrai 6.45 81 P **Pn** **22 45 46.9 -0.4**
VTS Vitosha 6.45 68 ⇑P **Pn** **22 45 47.9 +0.5**
VTS Vitosha 6.45 68 **Pn** **22 45 47.3 -0.1**
VTS **Sn** **22 47 00.6 -0.8**
KEST Kesra 6.55 226 Pn **Pn** **22 45 51.0 +2.2**
comp=E,0.6nm,0.3s,baz=302,slow=8.1,SNR=12
KEST LR LR 22 48 29.3
comp=E,176nm,18.7s,baz=12,slow=39
KEST Kesra 6.55 226 **Pn** **22 45 51.5 +2.8**
ABTA Abfaltersbach 6.59 344 *i* Pn **Pn** **22 45 48.3 -0.9**
comp=E,5.0nm,0.5s,SNR=13
ABTA *i* Sn **Sn** **22 47 06.2 +1.6**
comp=E,23nm,0.8s
SBF Sospel 6.67 303 *e*Pn **Pn** **22 45 47.9 -2.4**
NVR Nevrokopi 6.67 79 P **Pn** **22 45 50.4 +0.1**
KBA Koelnbreinsper 6.76 350 Pn **Pn** **22 45 52.1 +0.4**
comp=E,3.7nm,0.4s,SNR=6.7
KBA *i* Sn **Sn** **22 47 08.9 -0.1**
comp=E,5.8nm,0.6s
ARSA Arzberg 6.81 2 *i* Pn **Pn** **22 45 52.2 0.0**
comp=E,4.4nm,0.5s
HERR Herculane 6.96 48 ⇑P **Pn** **22 45 53.8 -0.4**
BZS Buzias 7.02 40 ⇑P **Pn** **22 45 54.3 -0.7**
FUORN Ofenpass-Fuorn 7.12 332 Pn **Pn** **22 45 57.0 +0.4**
FETA Feichten 7.31 336 *i* Pn **Pn** **22 46 00.6 +1.4**
comp=E,4.0nm,0.7s
FETA *i* Sn **Sn** **22 47 24.5 +2.0**
comp=E,3.7nm,0.7s
SQTA Sankt Quirin 7.35 339 *i* Pn **Pn** **22 46 01.1 +1.5**
comp=E,5.1nm,0.6s
SQTA *i* Sn **Sn** **22 47 24.0 +0.7**
comp=E,5.6nm,0.5s
WATA Walderalm 7.36 341 *i* Pn **Pn** **22 46 02.1 +2.3**
comp=E,6.7nm,0.5s
WATA *i* Sn **Sn** **22 47 25.5 +1.9**
comp=E,7.0nm,0.7s
MOA Molln 7.43 355 Pn **Pn** **22 46 00.7 -0.1**
comp=E,22nm,0.6s,SNR=40
MOA *i* Sn **Sn** **22 47 26.0 +0.7**
comp=E,6.1nm,0.5s
GZR Gura Zlata 7.48 46 ⇑P **Pn** **22 46 01.2 -0.2**
MOTA Moosalm 7.49 338 *i* Pn **Pn** **22 46 03.4 +1.7**
comp=E,2.8nm,0.5s
MOTA *i* Sn **Sn** **22 47 28.4 +1.5**
comp=E,4.4nm,0.5s
CONA Conrad Observa 7.50 4 *i* Pn **Pn** **22 46 02.3 +0.5**
comp=E,3.5nm,0.6s
MBDF Montbardon 7.51 308 *e*Pn Pn 22 46 08.4 +6.4
PLVB Pleven 7.66 64 ⇓P **Pn** **22 46 05.3 +1.4**
LPG La Plagne 7.96 312 *e*Pn **Pn** **22 46 12.7 +4.5**
MODS Modra-Piesok 8.08 10 *e*PN **Pn** **22 46 08.9 -0.7**
ORIF Oris-en-Rattie 8.16 306 *e*Pn **Pn** **22 46 14.9 +4.2**
ALN Alexandroupoli 8.30 83 **Pn** **22 46 13.5 +0.9**
ELND Elena 8.41 69 ⇑P **Pn** **22 46 16.0 +1.9**
GERES GERESS Array B 8.47 354 Pn **Pn** **22 46 13.4 -1.5**
comp=E,1.5nm,0.3s,baz=173,slow=13,SNR=51
GERES Sn **Sn** **22 47 46.5 -4.3**
comp=E,0.3nm,0.3s,baz=169,slow=23,SNR=3.9
GERES LR LR 22 50 13.4
comp=E,123nm,18.9s,baz=208,slow=44
VYHS Vyhne 8.47 17 *e*PN **Pn** **22 46 15.0 0.0**
VYHS *e*SN **Sn** **22 47 47.6 -3.2**
ARR Arges 8.53 52 ⇑P **Pn** **22 46 17.5 +1.7**
KHC Kasperske Hory 8.76 353 *e*PN **Pn** **22 46 17.2 -1.7**
KHC *e*SN **Sn** **22 47 53.6 -4.3**
VOIR 8.82 52 ⇓P **Pn** **22 46 20.9 +1.2**
TREC Trest 8.86 1 *e*PN **Pn** **22 46 20.0 -0.3**
VRAC Vranov 8.93 6 Pn **Pn** **22 46 21.8 +0.6**
comp=E,0.3nm,0.3s,baz=194,slow=16,SNR=3.4
VRAC LR LR 22 49 49.1
comp=E,104nm,20.4s,baz=233,slow=38
VRAC Vranov 8.93 6 ⇑P **Pn** **22 46 21.8 +0.6**
RAZG Razgrad 9.02 66 ⇑P **Pn** **22 46 23.5 +1.0**
LANS Liptovska Anna 9.23 18 *e*PN **Pn** **22 46 27.9 +2.5**
SECR 9.26 57 ⇑P **Pn** **22 46 27.0 +1.3**
IDI Anoyia 9.27 121 Pn **Pn** **22 46 26.7 +0.8**
comp=E,0.5nm,0.3s,baz=310,slow=17,SNR=5.9
IDI Sn **Sn** **22 48 05.0 -5.5**
comp=E,0.6nm,0.3s,baz=98,slow=19,SNR=3.3
IDI LR LR 22 51 24.8
comp=E,19nm,19.6s,baz=189,slow=46
DOPR Dopca 9.30 50 ⇑P **Pn** **22 46 26.9 +0.6**
TRPA Tarpa 9.34 32 ⇑P **Pn** **22 46 26.4 -0.3**
MLR Muntele Rosu 9.39 54 Pn **Pn** **22 46 29.6 +2.0**
comp=E,1.0nm,0.3s,baz=213,slow=11,SNR=23
MLR LR LR 22 51 17.4
comp=E,195nm,18.0s,baz=314,slow=45
MLR Muntele Rosu 9.39 54 ⇑P **Pn** **22 46 29.2 +1.5**
MLR Muntele Rosu 9.39 54 **Pn** **22 46 29.2 +1.5**
PRU Pruhonice 9.56 358 *e*PN **Pn** **22 46 28.2 -1.6**
OZUR 9.60 50 ⇑P **Pn** **22 46 31.3 +0.8**
CDF Champ du Feu 9.75 327 *e*Pn **Pn** **22 46 32.1 -0.4**
CDF *e*Sn **Sn** **22 48 14.7 -7.6**
comp=E,0.7nm,0.3s
BISRR Bisoca 9.89 55 ⇑P **Pn** **22 46 36.2 +1.7**
PLOR Plostina 10.00 53 ⇑P **Pn** **22 46 36.8 +0.9**
VRI Vrincioaia 10.05 54 ⇓P **Pn** **22 46 38.0 +1.4**
ICOR Ion Corvin 10.08 54 ⇑P **Pn** **22 46 38.2 +1.3**
BURAR Bucovina Array 10.20 42 ⇑P **Pn** **22 46 40.6 +1.9**
BUR08 Bucovina Ar. S 10.21 42 **Pn** **22 46 40.6 +1.7**
TIRR Tirgusor 10.60 63 Pn **Pn** **22 46 44.3 +0.3**
KWP Kalwaria Pacla 10.63 28 Pn **Pn** **22 46 48.0 +3.5**
CLL Collm 10.97 353 *e*Pn **Pn** **22 46 48.0 -1.1**
CLL *e* 22 49 13.0
CLL Collm 10.97 353 Pn **Pn** **22 46 47.6 -1.5**
BRTR Keskin Array B 14.19 87 Pn **Pn** **22 47 35.8 +2.5**
comp=E,0.1nm,0.3s,baz=292,slow=7.6,SNR=4.4
AKASG Malin Array Be 14.21 39 Pn **Pn** **22 47 32.5 -0.8**
comp=E,0.2nm,0.3s,baz=231,slow=10,SNR=3.2
MMAI Mount Meron Ar 17.83 108 P **P** **22 48 22.2 +0.9**
comp=E,0.3nm,0.3s,baz=308,slow=14,SNR=4.1
HFS Hagfors 19.74 358 P **P** **22 48 41.1 -0.8**
comp=E,0.1nm,0.3s,baz=178,slow=7.2,SNR=3.9
NB2 NORSAR Subarra 20.77 355 P **P** **22 48 52.8 -0.4**
comp=Z,1.5nm,0.6s,baz=169,slow=11
NOA NORSAR Array B 20.77 355 P **P** **22 48 52.6 -0.5**
comp=Z,1.3nm,0.6s,baz=171,slow=11,SNR=8.5
NOA LR LR 22 58 19.4
comp=Z,79nm,19.7s,baz=355,slow=41
NB201 NORSAR Array S 20.77 355 P **P** **22 48 52.6 -0.5**
NBO00 NORSAR Array S 20.79 354 P **P** **22 48 53.1 -0.3**
NC405 NORSAR Array S 20.81 355 P **P** **22 48 53.4 -0.1**
NC303 NORSAR Array S 20.94 355 P **P** **22 48 54.0 -1.0**
FINES FINESS Array B 22.07 14 P **P** **22 49 07.3 +0.2**
comp=Z,3.5nm,0.6s,baz=188,slow=9.5,SNR=12
FINES LR LR 22 59 32.3
comp=Z,94nm,18.8s,baz=300,slow=42
FIA1 FINESS Array S 22.07 14 P **P** **22 49 06.5 -0.6**
FIA1 IAmb IAmb 22 49 07.5
comp=Z,5.0nm,0.9s
TORD Torodi Ar. Bea 29.64 207 P **P** **22 50 18.7 +0.7**
comp=Z,0.9nm,0.9s,baz=19,slow=9.2,SNR=3.8
ARCES ARCESS Array B 29.67 7 P **P** **22 50 16.6 -1.2**
comp=Z,1.3nm,0.8s,baz=209,slow=7.2,SNR=3.5
GEYT Alibeck 33.17 80 P **P** **22 50 50.5 +1.5**
comp=Z,0.9nm,0.7s,baz=273,slow=8.1,SNR=3.5
HRA Herat 37.55 84 P **P** **22 51 25.7 -1.2**
DBIC Dimbokro 38.10 213 P **P** **22 51 31.9 +0.5**
comp=Z,2.6nm,0.9s,baz=13,slow=12,SNR=3.8
DBIC Dimbokro 38.10 213 P **P** **22 51 30.2 -1.2**
DBIC IAmb IAmb 22 51 32.4
comp=Z,5.3nm,1.1s
BRVK Borovoye 38.88 52 P **P** **22 51 37.5 -0.2**
BRVK IAmb IAmb 22 51 42.5
comp=Z,2.6nm,0.7s
AAK Ala-Archa 43.69 67 P **P** **22 52 19.3 +1.8**
comp=Z,0.2nm,0.3s,baz=274,slow=13,SNR=3.8
KURBB Kurchatov Arra 44.29 55 P **P** **22 52 23.7 +1.7**
comp=Z,0.8nm,0.3s,baz=292,slow=8.7,SNR=8.5
ZALV Zalesovo Beam 47.33 49 P **P** **22 52 46.6 +0.6**
comp=Z,1.4nm,0.7s,baz=289,slow=9.0,SNR=7.0
MK31 Makanchi Array 47.69 59 P **P** **22 52 48.3 -0.7**
MK31 IAmb IAmb 22 52 52.1
comp=Z,1.2nm,0.9s
MKAR Makanchi Array 47.69 59 P **P** **22 52 49.5 +0.5**
comp=Z,1.0nm,0.5s,baz=285,slow=6.7,SNR=16
SONM Songino Array 62.21 50 P **P** **22 54 33.9 -0.2**
comp=Z,1.8nm,0.8s,baz=294,slow=6.9,SNR=15
CMAR Chiang Mai Arr 73.65 80 P **P** **22 55 47.2 +0.8**
comp=Z,0.5nm,0.7s,baz=331,slow=6.6,SNR=3.0
CMAR LR LR 23 33 53.8
comp=Z,22nm,18.9s,baz=198,slow=40

*IDC **22** 23:00:06.7±13.0, 17.66S×178.34W, h450km±132km, mb3.3/4, mb1 3.5/4, mb1mx3.1/29, mbtmp4.1/4, Error ellipse: s-maj=99.0km s-min=43.5km az=116.0*
*NEIC **22** 23:00:11.8±1.5, 17.8S±0.2×178.3W±0.1, h516km±11km, mb4.0/6, Error ellipse: s-maj=26.5km s-min=12.0km az=140.0*
ISC 22 23:00:15.4±1.3, 17.7S±0.2×178.8W±0.2, h547km, n15, σ1°37/14, mb3.8/7, Fiji Islands region

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

MSVF Nonsavu 3.05 269 P **P** **23 01 29.0 -1.7**
MSVF S **S** **23 02 29.3 -2.5**
NIUE Niue 8.48 100 P P 23 02 07.9 -10
SNZO South Karori 24.16 192 P **P** **23 04 47.0 -1.7**
ARMA Armidale 29.75 239 P **P** **23 05 39.8 +1.8**
ARMA IAmb IAmb 23 05 47.4
comp=Z,4.1nm,0.9s
STKA Stephens Creek 38.43 241 P **P** **23 06 51.4 +0.8**
comp=Z,0.9nm,0.4s,baz=90,slow=15,SNR=2.9
STKA Stephens Creek 38.43 241 IAmb IAmb 23 06 59.8
comp=Z,0.3nm,0.8s
BBOO Buckleboo 43.21 241 P **P** **23 07 29.6 +1.0**
BBOO IAmb IAmb 23 07 31.3
comp=Z,6.7nm,1.1s
AS31 Alice Springs 44.53 254 P **P** **23 07 39.8 +0.8**
AS31 IAmb IAmb 23 07 40.5
comp=Z,2.0nm,0.6s
ASAR Alice Springs 44.53 254 P **P** **23 07 40.0 +1.0**
comp=Z,7.3nm,0.6s,baz=88,slow=8.2,SNR=82
FORT Forrest 49.79 244 P **P** **23 08 19.1 +0.7**
MJAR Matsushiro Arr 67.57 324 P **P** **23 10 18.2 +0.4**
comp=Z,1.4nm,0.5s,baz=130,slow=6.0,SNR=4.0
ILAR Eielson Array 85.79 13 P **P** **23 11 56.0 -0.7**
comp=Z,0.2nm,0.5s,baz=226,slow=5.9,SNR=4.9
BRTR Keskin Array B 144.43 315 PKP **PKPab** **23 18 51.1 +0.6**
comp=Z,0.9nm,0.8s,baz=49,slow=0.3,SNR=4.5
MMAI Mount Meron Ar 145.78 303 PKPbc **PKPbc** **23 18 55.0 +0.9**
comp=Z,0.8nm,0.5s,baz=81,slow=5.4,SNR=4.6
GERES GERESS Array B 147.36 345 PKPbc **PKPbc** **23 18 58.3 +0.3**
comp=Z,0.8nm,0.5s,baz=20,slow=4.3,SNR=4.6

*IDC **22** 23:05:14.2±0.8, 21.21N×45.81W, h0km, mb3.8/13, mb1 4.0/13, mb1mx3.8/61, mbtmp3.8/13, MS3.7/22, Ms1 3.7/22, ms1mx3.6/34, Error ellipse: s-maj=21.7km s-min=19.1km az=167.0*
*NEIC **22** 23:05:16.0±2.6, 21.2N±0.1×45.9W±0.1, h10km±1km, mb4.5/15, Error ellipse: s-maj=24.6km s-min=14.1km az=150.0*
ISC 22 23:05:16.1±0.6, 21.2N±0.1×45.85W±0.09, h10km, n54, σ1°24/32, mb4.1/20, MS3.8/20, Northern Mid-Atlantic Ridge

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

FDF Fort de France 15.88 249 Pn **Pn** **23 08 59.5 -0.4**
FDF IAmb IAmb 23 09 06.6
comp=Z,63nm,1.1s
MDP Montagnes des 17.26 203 LR LR 23 14 45.9
comp=Z,40nm,20.9s,baz=34,slow=33
SJG San Juan 19.35 265 LR LR 23 15 36.1
comp=Z,287nm,21.8s,baz=93,slow=32
SDV Santo Domingo 26.81 247 LR LR 23 20 33.2
comp=Z,101nm,19.1s,baz=49,slow=34
RUSC La Rusia 30.43 244 P **P** **23 11 29.0 -0.5**
ROSC El Rosal 32.03 244 LR LR 23 23 35.7
comp=Z,77nm,21.5s,baz=54,slow=34
BDFB Brasilia 36.62 183 LR LR 23 26 45.0
comp=Z,56nm,18.1s,baz=219,slow=35
SCHQ Schefferville 37.17 340 LR LR 23 26 46.5
comp=Z,42nm,19.0s,baz=148,slow=35
MDT Midelt 38.33 64 LR LR 23 25 30.4
comp=Z,97nm,18.5s,baz=344,slow=32
ESDC Sonseca Array 40.15 53 P **P** **23 12 51.3 -1.2**
comp=Z,0.1nm,0.4s,baz=253,slow=12,SNR=2.6
ESDC LR LR 23 26 30.3
comp=Z,82nm,18.4s,baz=20,slow=32
DBIC Dimbokro 42.16 104 P **P** **23 13 08.9 -0.3**
comp=Z,3.1nm,0.8s,baz=276,slow=10,SNR=6.2
DBIC LR LR 23 26 56.3
comp=Z,117nm,20.0s,baz=278,slow=31
DBIC Dimbokro 42.16 104 IAmb IAmb 23 13 15.4
comp=Z,4.9nm,0.8s
H10N3 ASCENSION HYDR 42.16 130 T T 23 57 57.6
baz=313,slow=75,SNR=83
H10N2 ASCENSION HYDR 42.17 130 T T 23 57 57.7
baz=313,slow=75,SNR=107
H10N1 ASCENSION HYDR 42.18 130 T T 23 57 59.0
baz=313,slow=75,SNR=87
H10S3 ASCENSION HYDR 42.82 131 T T 23 58 52.4
baz=313,slow=74,SNR=45
H10S2 ASCENSION HYDR 42.84 131 T T 23 58 54.0
baz=267,slow=74,SNR=39
LPAZ La Paz 43.15 212 P **P** **23 13 18.5 +0.7**
comp=Z,1.9nm,0.9s,baz=23,slow=6.9,SNR=6.4
LPAZ LR LR 23 30 32.0
comp=Z,99nm,20.8s,baz=12,slow=35
LPAZ La Paz 43.15 212 P **P** **23 13 20.4 +2.6**
TOA0 Torodi Ar. Sit 45.99 92 P **P** **23 13 40.4 +0.5**
TORD Torodi Ar. Bea 45.99 92 P **P** **23 13 38.5 -1.4**
comp=Z,1.4nm,1.1s,baz=297,slow=6.3,SNR=5.8
TORD LR LR 23 30 52.9
comp=Z,198nm,19.4s,baz=320,slow=34
TAM Tamanrasset 47.48 78 P **P** **23 13 53.8 +2.1**
CPUP Villa Florida 48.49 194 P **P** **23 13 58.5 -0.6**
comp=Z,0.9nm,0.4s,baz=5.9,slow=11,SNR=4.6
CPUP LR LR 23 34 09.8
comp=Z,45nm,18.1s,baz=12,slow=36
ULM Lac du Bonnet 48.70 319 LR LR 23 32 32.8
comp=Z,112nm,18.5s,baz=102,slow=34
LVC Limon Verde 48.96 209 P **P** **23 14 03.3 0.0**
LVC IAmb IAmb 23 14 13.9
comp=Z,6.7nm,1.1s
BNI Bardonecchia 49.04 48 P **P** **23 14 04.3 +0.8**
BNI IAmb IAmb 23 14 12.3
comp=Z,8.9nm,1.1s
PB04 IPOC Station P 49.29 210 P **P** **23 14 05.5 -0.1**
KEST Kesra 50.06 61 LR LR 23 33 23.5
comp=Z,82nm,20.1s,baz=245,slow=34
GO02 Mina Guanaco 51.49 208 P **P** **23 14 21.8 -0.5**
FETA Feichten 52.17 46 *i* pP **P** **23 14 29.4 +2.3**
comp=Z,16nm,1.2s
MOTA Moosalm 52.48 46 *i* pP **P** **23 14 30.9 +1.5**
comp=Z,17nm,1.3s
TXAR Lajitas Array 52.48 291 P **P** **23 14 29.7 0.0**
comp=Z,0.1nm,0.5s,baz=98,slow=6.5,SNR=2.4
SQTA Sankt Quirin 52.53 46 *i* pP **P** **23 14 31.1 +1.4**
comp=Z,15nm,1.0s
TEOL Teolo 52.58 48 P **P** **23 14 28.3 -1.6**
CTI Castel Tesino 52.65 48 P **P** **23 14 30.0 -0.6**
WATA Walderalm 52.79 46 *i* pP **P** **23 14 33.2 +1.6**
comp=Z,12nm,1.1s
JMIC Jan Mayen 54.41 14 LR LR 23 32 39.8
comp=Z,88nm,18.4s,baz=325,slow=30
GERES GERESS Array B 54.43 44 P **P** **23 14 42.2 -1.4**
comp=Z,0.3nm,0.5s,baz=280,slow=17,SNR=3.0
NOA NORSAR Array B 55.92 30 LR LR 23 34 42.6
comp=Z,87nm,19.4s,baz=255,slow=32
PDAR Pinedale Array 56.83 308 LR LR 23 37 05.4
comp=Z,75nm,20.7s,baz=97,slow=34
SPUT South Promonto 58.99 306 P **P** **23 15 17.1 +0.9**
BGU Big Grassy Mou 59.44 306 P **P** **23 15 21.3 +1.9**
ELK Elko 61.13 306 P **P** **23 15 32.4 +1.3**
ELK IAmb IAmb 23 15 32.5
comp=Z,1.3nm,0.8s
YKA Yellowknife Ar 61.66 331 P **P** **23 15 32.7 -1.2**
comp=Z,0.5nm,0.6s,baz=99,slow=7.2,SNR=9.8
YKA LR LR 23 41 27.6
comp=Z,63nm,18.1s,baz=0.0,slow=35
MLR Muntele Rosu 62.61 49 P **P** **23 15 40.9 +0.1**
comp=Z,3.0nm,0.9s,baz=270,slow=6.1,SNR=4.8
MLR Muntele Rosu 62.61 49 P **P** **23 15 41.1 +0.3**
FINES FINESS Array B 63.02 31 LR LR 23 37 53.3
comp=Z,126nm,18.9s,baz=296,slow=31
NVAR Mina Array Bea 63.70 303 LR LR 23 43 02.9
comp=Z,69nm,19.1s,baz=104,slow=36
AKASG Malin Array Be 64.56 43 P **P** **23 15 52.1 -1.3**
comp=Z,0.4nm,0.6s,baz=271,slow=5.4,SNR=3.6
INK Inuk 69.59 337 P **P** **23 16 24.6 -1.1**
comp=Z,1.3nm,0.8s,baz=70,slow=6.0,SNR=2.6
ILAR Eielson Array 75.67 334 P **P** **23 17 01.2 -0.1**
comp=Z,1.2nm,0.8s,baz=67,slow=4.5,SNR=11
AKTO Aktyubinsk 82.38 39 P **P** **23 17 38.9 +0.6**
comp=Z,1.5nm,0.9s,baz=292,slow=11,SNR=2.7
BOSA Boshof 84.56 123 LR LR 23 49 11.8
comp=Z,50nm,20.0s,baz=310,slow=31
ZALV Zalesovo Beam 94.03 27 LR LR 23 59 03.8
comp=Z,44nm,18.1s,baz=23,slow=34

*IDC **22** 23:13:24.1±2.4, 5.42S×151.92E, h55km±15km, mb3.6/8, mb1 3.9/9, mb1mx3.6/40, mbtmp3.9/9, ML2.4/1, MS3.2/9, Ms1 3.3/9, ms1mx3.1/25, Error ellipse: s-maj=44.9km s-min=9.6km az=119.0*
ISC 22 23:13:22.9±1.1, 5.5S±0.1×152.1E±0.2, h45km, n19,

σ0$92/14, mb3.9/8, MS3.2/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.14**	**359**	P	**Pn**	**23 13 42.6**	**+0.2**
	1μm,0.3s,baz=126,slow=0.9,SNR=347						
KRVT				S	**Sn**	**23 13 58.1**	**+1.2**
	3μm,0.3s,baz=294,slow=20,SNR=27						
KRVT				LR	LR	23 14 27.8	
	comp=Z,1μm,20.5s,baz=244,slow=57						
PMG	**Port Moresby**	**6.24**	**231**	P	**Pn**	**23 14 53.9**	**+1.4**
	5.4nm,0.3s,baz=48,slow=10,SNR=12						
PMG				S	**Sn**	**23 16 02.7**	**+0.1**
	11nm,0.3s,baz=174,slow=18,SNR=8.7						
HNR	**Honiara**	**8.77**	**117**	LR	LR	23 18 55.5	
	comp=Z,109nm,18.0s,baz=300,slow=37						
WRA	**Warramunga Arr**	**22.46**	**229**	P	**P**	**23 18 17.6**	**-0.8**
	2.1nm,0.4s,baz=53,slow=10,SNR=14						
ASAR	**Alice Springs**	**25.17**	**222**	P	**P**	**23 18 44.6**	**+0.3**
	4.7nm,0.7s,baz=56,slow=9.0,SNR=36						
ASAR				LR	LR	23 30 17.1	
	comp=Z,70nm,18.4s,baz=66,slow=40						
STKA	**Stephens Creek**	**28.05**	**199**	LR	LR	23 30 49.1	
	comp=Z,89nm,18.1s,baz=23,slow=37						
FITZ	**Fitzroy Crossi**	**28.70**	**242**	P	**P**	**23 19 14.7**	**-1.3**
	2.9nm,0.6s,baz=66,slow=10,SNR=11						
FITZ				LR	LR	23 31 12.3	
	comp=Z,42nm,20.1s,baz=102,slow=37						
DAV	**Davao City (W)**	**29.20**	**295**	LR	LR	23 31 32.1	
	comp=Z,47nm,18.5s,baz=99,slow=37						
MJAR	**Matsushiro Arr**	**43.74**	**344**	LR	LR	23 38 43.6	
	comp=Z,28nm,20.8s,baz=205,slow=35						
KSRS	**Korea Array**	**48.25**	**334**	LR	LR	23 40 35.3	
	comp=Z,33nm,21.1s,baz=118,slow=34						
CMAR	**Chiang Mai Arr**	**57.48**	**296**	LR	LR	23 46 08.8	
	comp=Z,14nm,21.3s,baz=115,slow=34						
PETK	**Petropavlovsk-**	**58.53**	**4**	LR	LR	23 45 11.9	
	comp=Z,30nm,19.8s,baz=63,slow=33						
SONM	**Songino Array**	**66.48**	**326**	P	**P**	**23 24 07.3**	**-0.7**
	0.5nm,0.5s,baz=148,slow=5.3,SNR=7.0						
MKAR	**Makanchi Array**	**80.33**	**319**	P	**P**	**23 25 28.5**	**-0.9**
	0.2nm,0.5s,baz=99,slow=6.8,SNR=4.2						
ZALV	**Zalesovo Beam**	**81.28**	**327**	P	**P**	**23 25 35.4**	**+1.2**
	0.5nm,0.4s,baz=97,slow=7.4,SNR=2.7						
ILAR	**Eielson Array**	**83.04**	**22**	P	**P**	**23 25 43.4**	**+0.1**
	0.4nm,0.5s,baz=245,slow=5.1,SNR=8.7						
NVAR	**Mina Array Bea**	**93.07**	**52**	P	**P**	**23 26 33.0**	**+0.5**
	0.2nm,0.3s,baz=302,slow=5.2,SNR=3.0						
GERES	**GERESS Array B**	**124.21**	**328**	PKP	**PKPdf**	**23 32 16.8**	**-0.2**
	0.3nm,0.4s,baz=100,slow=1.6,SNR=6.1						
TORD	**Torodi Ar. Bea**	**149.79**	**287**	PKPbc	**PKPbc**	**23 33 08.2**	**-0.9**
	0.7nm,0.3s,baz=87,slow=2.3,SNR=27						

*IDC **22** 23:23:43.7±1.6,3.°19N×126.°47E,h0km,mb3.5/4, mb1 3.7/4,mb1mx3.4/33,mbtmp3.5/4,MS3.4/2,Ms1 3.4/2, ms1mx2.8/20,Error ellipse: s-maj=156.7km s-min=23.1km az=68.0*

ISC 22 23:23:51.7±1.3,3.°2N±0.°2×126.°4E±0.°4,h63km,n8,σ0$70/8, mb3.4/4,1D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**3.01**	**346**	*e*P	Pn	23 24 31.5	-5.4
DDMP				*e*S	**Sn**	**23 25 10.8**	**-1.0**
SKMP	**Bagumbayan, Su**	**3.83**	**331**	*e*P	**Pn**	**23 24 47.6**	**-0.6**
SKMP				*e*S	**Sn**	**23 25 32.4**	**+0.5**
KCP	**Kidapawan**	**4.05**	**341**	⇓*e*P	**Pn**	**23 24 52.1**	**+0.9**
PMG	**Port Moresby**	**24.14**	**121**	LR	LR	23 39 24.9	
	comp=Z,39nm,18.4s,baz=262,slow=39						
WRA	**Warramunga Arr**	**24.24**	**162**	P	**P**	**23 29 02.8**	**-0.1**
	0.5nm,0.5s,baz=341,slow=10,SNR=3.9						
ASAR	**Alice Springs**	**27.64**	**165**	P	**P**	**23 29 33.5**	**-0.1**
	1.3nm,1.3s,baz=354,slow=6.5,SNR=1.8						
SONM	**Songino Array**	**47.74**	**342**	P	**P**	**23 32 22.4**	**-0.1**
	0.2nm,0.5s,baz=152,slow=6.8,SNR=2.0						
MKAR	**Makanchi Array**	**57.85**	**326**	P	**P**	**23 33 37.0**	**+0.1**
	0.4nm,0.4s,baz=118,slow=7.7,SNR=13						
MKAR				LR	LR	23 59 38.1	
	comp=Z,58nm,18.2s,baz=264,slow=37						

IDC 22 23:43:21.9±4.3,16.°84S×176.°94W,h0km,mb4.3/3, mb1 4.5/3,mb1mx3.8/27,mbtmp4.3/3,Error ellipse: s-maj=184.5km s-min=43.5km az=139.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**40.37**	**240**	P	P	23 51 03.1	+1.4
	0.6nm,0.3s,baz=94,slow=14,SNR=3.4						
WRA	**Warramunga Arr**	**46.21**	**258**	P	P	23 51 47.9	-1.3
	1.0nm,0.4s,baz=95,slow=7.4,SNR=16						
ASAR	**Alice Springs**	**46.44**	**253**	P	P	23 51 50.6	-0.2
	8.0nm,0.5s,baz=88,slow=8.4,SNR=103						
BRTR	**Keskin Array B**	**145.00**	**317**	PKPbc	PKPab	00 02 59.4	-1.6
	0.6nm,0.6s,baz=34,slow=3.6,SNR=3.0						
GERES	**GERESS Array B**	**146.92**	**347**	PKPbc	PKPbc	00 03 06.7	+0.2
	0.3nm,0.5s,baz=28,slow=4.4,SNR=2.5						

*SJA **23** 00:25:27.9±0.8,31.°77S×70.°08W,h118km±4km,ML3.1, MW3.0*

*GUC **23** 00:25:27.6±0.7,31.°79S×70.°41W,h120km±8km,ML3.2*

ISC 23 00:25:27.0±1.6,31.°80S±0.°04×70.°13W±0.°05, h131km±12km,n25,σ0$79/40,1C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.71**	**90**	*i*P	**Pn**	**00 25 47.8**	**-0.2**
RTLS				*e*S	**Sn**	**00 26 03.0**	**-0.8**
RTLS				IAML		00 26 04.7	
	comp=Z,212nm,0.3s						
CO02	**Combarbal**	**0.95**	**308**	⇑*i*P	**Pn**	**00 25 50.0**	**+0.3**
VA03	**San Esteban**	**1.03**	**200**	⇓*i*P	**Pn**	**00 25 50.3**	**-0.1**
VA03				*i*S	**Sn**	**00 26 07.3**	**-0.9**
VA03				IAML		00 26 08.7	
	comp=E,769nm,0.1s						
ZON	**Zonda**	**1.27**	**79**	*i*P	**Pn**	**00 25 53.0**	**+0.3**
ZON				*e*S	**Sn**	**00 26 11.4**	**-0.8**
ASAL	**Salagasta**	**1.36**	**126**	*i*P	**Pn**	**00 25 54.5**	**+0.7**
ASAL				*e*S	**Sn**	**00 26 13.6**	**-0.5**
RTCV	**Cerro Valdivia**	**1.36**	**93**	*i*P	**Pn**	**00 25 54.0**	**+0.3**
RTCV				*e*S	**Sn**	**00 26 13.1**	**-0.9**
ARCO	**CERRO ARCO**	**1.46**	**136**	*i*P	**Pn**	**00 25 56.0**	**+1.1**
ARCO				*e*S	**Sn**	**00 26 15.7**	**-0.4**
ARCO				IAML		00 26 18.6	
	comp=Z,301nm,0.5s						
RTLL	**Cerro Villicun**	**1.49**	**72**	*i*P	**Pn**	**00 25 55.4**	**+0.2**
RTLL				IAML		00 25 55.5	
	comp=Z,245nm,0.3s						
RTLL				*e*S	**Sn**	**00 26 16.0**	**-0.6**
FCH	**Farellones**	**1.53**	**185**	⇓*i*P	**Pn**	**00 25 56.6**	**+0.7**
FCH				*i*S	**Sn**	**00 26 18.8**	**+0.9**
FCH				IAML		00 26 19.7	
	comp=E,232nm,0.3s						
CFA	**Coronel Fontan**	**1.63**	**84**	*i*P	**Pn**	**00 25 56.9**	**+0.3**
CLCH	**Cerro Calan**	**1.63**	**192**	*e*P	**Pn**	**00 25 57.3**	**+0.5**
CLCH				*i*S	**Sn**	**00 26 19.3**	**-0.2**
CLCH				IAML		00 26 21.9	
	comp=E,129nm,0.2s						
AMOG	**MOGNA**	**1.64**	**59**	*i*P	**Pn**	**00 25 57.6**	**+0.7**
AMOG				*e*S	**Sn**	**00 26 19.0**	**-0.7**
MT05	**Renca**	**1.67**	**198**	*e*P	**Pn**	**00 25 57.4**	**+0.2**
MT05				*e*S	**Sn**	**00 26 19.9**	**-0.4**
MT05				IAML		00 26 20.9	
	comp=N,611nm,0.5s						
AAGR	**Agrelo**	**1.69**	**140**	*i*P	**Pn**	**00 25 59.0**	**+1.5**
GO04	**Tololo Observa**	**1.72**	**340**	*i*P	**Pn**	**00 25 58.8**	**+0.8**
GO04				*e*S	**Sn**	**00 26 21.9**	**+0.4**
MT03	**Universidad Ad**	**1.72**	**191**	*e*P	**Pn**	**00 25 58.5**	**+0.6**
MT03				*i*S	**Sn**	**00 26 22.2**	**+0.8**
MT03				IAML		00 26 23.7	
	comp=E,352nm,0.3s						
LMEL	**Las Melosas**	**2.05**	**182**	*e*P	**Pn**	**00 26 02.7**	**+0.9**
LMEL				*i*S	**Sn**	**00 26 29.9**	**+1.5**
LMEL				IAML		00 26 33.1	
	comp=N,122nm,0.1s						
MT01	**Popeta**	**2.27**	**204**	⇓*i*P	**Pn**	**00 26 03.9**	**-0.5**
MT01				*i*S	**Sn**	**00 26 31.5**	**-1.5**
MT01				IAML		00 26 32.9	
	comp=E,120nm,0.3s						
ACAN	**Cantantal**	**2.55**	**102**	*i*P	**Pn**	**00 26 08.5**	**+0.6**
APLL	**PUNTA DE LOS L**	**3.39**	**67**	*i*P	**Pn**	**00 26 19.2**	**+0.3**
VCA	**Vinchina**	**3.48**	**29**	*i*P	**Pn**	**00 26 21.2**	**+1.1**
GO05	**Huala**	**3.54**	**205**	*i*P	**Pn**	**00 26 19.5**	**-1.2**
ACLC	**CERRO LA CRUZ**	**3.62**	**50**	*i*P	**Pn**	**00 26 22.7**	**+0.7**
TCA	**Tanti**	**4.75**	**86**	*i*P	**Pn**	**00 26 36.5**	**-0.3**
CYA	**Choya**	**5.03**	**49**	*i*P	**Pn**	**00 26 39.9**	**-0.6**

*IPEC **23** 00:34:04.6±0.2,49.°82N×18.°52E,h1km±3km,ML1.4/3, Error ellipse: s-maj=1.6km s-min=1.1km az=163.0*

PRU 23 00:34:05.0±0.0,49.°81N×18.°45E,h0km,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.20**	**278**	*e*PG	Pg	00 34 09.6	+0.8
OKC				*e*SG	Sg	00 34 12.7	+1.4
	comp=Z,25nm,0.4s						
MORC	**Moravsky Berou**	**0.59**	**267**	*e*PG	Pg	00 34 16.9	+0.6
MORC				*e*SG	Sg	00 34 24.7	+0.8
MORC	**Moravsky Berou**	**0.59**	**267**	*e*Pg	Pg	00 34 16.9	+0.6
	baz=86						
MORC				*e*Sg	Sg	00 34 24.7	+0.8
	6.9nm,0.3s,baz=86						
LANS	**Liptovska Anna**	**0.94**	**134**	*e*PG	Pg	00 34 22.6	-0.3
LANS				*e*SG	Sg	00 34 35.9	+0.9
LANS				*e*LG	Lg	00 34 39.9	
OJC	**Ojcow**	**0.96**	**64**	*e*Pg	Pg	00 34 21.7	-1.7
OJC				*e*Sg	Sg	00 34 35.8	-0.1
JAVC	**Velka Javorina**	**1.08**	**208**	*e*PG	Pb	00 34 26.3	-0.3
JAVC	**Velka Javorina**	**1.08**	**208**	*e*Pg	Pb	00 34 26.2	-0.4
	baz=30						
KRLC	**Kraliky**	**1.11**	**284**	*e*PG	Pg	00 34 25.0	-1.3
KRLC				*e*SG	Sb	00 34 41.5	-0.6
	comp=Z,6.1nm,0.6s						
NIE	**Niedzica**	**1.27**	**107**	*e*Pg	Pg	00 34 28.0	-1.2
NIE				*e*Sg	Sn	00 34 47.3	-0.4
VRAC	**Vranov**	**1.31**	**248**	*e*PG	Pg	00 34 29.6	-0.5
VRAC				*e*SG	Sg	00 34 47.0	0.0
VRAC	**Vranov**	**1.31**	**248**	*e*Pg	Pg	00 34 29.6	-0.5
	baz=67						
VRAC				*e*Sg	Sg	00 34 47.0	0.0
	5.7nm,0.5s,baz=67						
VYHS	**Vyhne**	**1.34**	**169**	*e*PG	Pg	00 34 29.4	-1.3
SMOL	**Smolenice**	**1.46**	**208**	*e*PG	Pn	00 34 31.7	-0.9
SMOL				*e*SG	Sb	00 34 52.1	0.0
DPC	**Dobruska-Polom**	**1.47**	**292**	*e*PG	Pn	00 34 32.1	-0.8
DPC				*e*SG	Sg	00 34 52.1	-0.2
	comp=Z,2.7nm,0.5s						
KRUC	**Moravsky**	**1.54**	**242**	*e*PG	Pn	00 34 33.0	-0.7
KRUC				*e*SG	Sn	00 34 54.1	-0.2
KRUC	**Moravsky**	**1.54**	**242**	*e*Pg	Pn	00 34 33.0	-0.7
	baz=61						
KRUC				*e*Sg	Sn	00 34 54.1	-0.2
	3.0nm,0.2s,baz=61						
OSTC	**Ostas**	**1.62**	**298**	*e*PG	Pn	00 34 34.2	-0.6
OSTC				*e*SG	Sg	00 34 57.7	+0.7
CHVC	**Chvalec**	**1.73**	**298**	*e*PG	Pn	00 34 36.3	0.0
CHVC				*e*SG	Sb	00 34 59.8	0.0
PRU	**Pruhonice**	**2.53**	**276**	*e*SG	Sg	00 35 25.0	-1.3
KHC	**Kasperske Hory**	**3.25**	**260**	*e*PG	Pb	00 35 03.0	-0.6
KHC				*e*SG	Sg	00 35 47.4	-1.9

*NEIC **23** 00:43:15.3±1.6,11.°7S±0.°1×162.°5E±0.°2,h10km±1km, mb4.2/5,Error ellipse: s-maj=32.9km s-min=8.3km az=51.0*

*IDC **23** 00:43:19.8±3.3,11.°78S×162.°45E,h42km±29km,mb3.8/5, mb1 4.0/7,mb1mx3.7/48,mbtmp4.2/7,ML4.7/2,MS3.6/3, Ms1 3.6/3,ms1mx3.1/44,Error ellipse: s-maj=39.5km s-min=26.3km az=83.0*

ISC 23 00:43:19.2±0.9,11.°8S±0.°1×162.°5E±0.°2,h39km,n25, σ2$19/22,mb4.1/6,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.43**	**313**	P	**Pn**	**00 44 10.0**	**-0.1**
	133nm,0.3s,baz=161,slow=1.9,SNR=23						
HNR				S	**Sn**	**00 44 47.0**	**-2.5**
	319nm,0.3s,baz=39,slow=22,SNR=17						
HNR	**Honiara**	**3.43**	**313**	*e*P	**Pn**	**00 44 11.0**	**+0.9**
HNR				*i*S	**Sn**	**00 44 51.0**	**+1.5**
HNR	**Honiara**	**3.43**	**313**		**Pn**	**00 44 10.3**	**+0.2**
HNR					**Sn**	**00 44 43.4**	**-6.1**
NOUC	**Port Laguerre**	**10.89**	**161**	Pn	**Pn**	**00 45 53.4**	**+0.8**
NOUC					**Sn**	**00 47 52.3**	**-0.9**
DZM	**Mont Dzumac**	**10.91**	**160**	P	**Pn**	**00 45 53.6**	**+0.6**
	2.5nm,0.3s,baz=52,slow=6.7,SNR=36						
DZM				S	**Sn**	**00 47 49.3**	**-4.6**
	0.6nm,0.3s,baz=323,slow=20,SNR=2.9						
DZM				LR	LR	00 49 24.4	
	comp=Z,189nm,19.3s,baz=33,slow=33						
DZM	**Mont Dzumac**	**10.91**	**160**		**Sn**	**00 47 50.7**	**-3.1**
PMG	**Port Moresby**	**15.27**	**277**	LR	LR	00 52 46.5	
	comp=Z,138nm,19.0s,baz=120,slow=37						
COEN	**Coen**	**18.97**	**261**	P	**Pn**	**00 47 41.3**	**+2.9**
COEN				IAmb	IAmb	00 47 42.3	
	comp=Z,11nm,0.8s						
WB0	**Warramunga Arr**	**28.16**	**250**	P	**P**	**00 49 08.3**	**+0.1**
WB2	**Warramunga Arr**	**28.24**	**250**	P	**P**	**00 49 09.2**	**+0.3**
WB2				IAmb	IAmb	00 49 12.6	
	comp=Z,5.0nm,1.2s						
WRA	**Warramunga Arr**	**28.25**	**250**	P	**P**	**00 49 08.8**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=80,slow=9.3,SNR=3.1						
ASAR	**Alice Springs**	**29.63**	**243**	P	**P**	**00 49 20.9**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=72,slow=9.8,SNR=5.9						
BKZ	**Black Stump Fm**	**29.98**	**158**	P	**P**	**00 49 26.0**	**+1.9**
H11S2	**WAKE ISLAND Hy**	**30.36**	**8**	T	T	01 21 20.0	
	baz=188,slow=76,SNR=9.3						
H11S3	**WAKE ISLAND Hy**	**30.36**	**8**	T	T	01 21 19.8	
	baz=188,slow=76,SNR=8.2						
H11S1	**WAKE ISLAND Hy**	**30.37**	**8**	T	T	01 21 21.6	
	baz=188,slow=76,SNR=7.4						
H11N1	**WAKE ISLAND Hy**	**31.59**	**8**	T	T	01 22 50.3	
	baz=188,slow=74						
H11N3	**WAKE ISLAND Hy**	**31.59**	**8**	T	T	01 22 58.2	
	baz=188,slow=74						
H11N2	**WAKE ISLAND Hy**	**31.60**	**8**	T	T	01 22 51.3	
	baz=188						
USRK	**Ussuriysk Ar.**	**62.23**	**336**	P	**P**	**00 53 37.1**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=164,slow=7.5,SNR=9.7						
SONM	**Songino Array**	**77.40**	**325**	P	**P**	**00 55 10.5**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=143,slow=5.2,SNR=12						
MAW	**Mawson**	**82.85**	**202**	LR	LR	01 29 44.0	
	comp=Z,82nm,18.8s,baz=2.5,slow=34						
MK31	**Makanchi Array**	**91.89**	**317**	P	**P**	**00 56 23.4**	**-0.2**
MKAR	**Makanchi Array**	**91.89**	**317**	P	**P**	**00 56 23.1**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=97,slow=6.1,SNR=19						
ARCES	**ARCESS Array B**	**116.21**	**344**	PKP	**PKPdf**	**01 01 57.7**	**-0.1**
	comp=Z,3.0nm,1.0s,baz=64,slow=2.1,SNR=3.0						

*BJI **23** 00:52:09.6±0.0,7.°79S×120.°78E,h600km,mB5.0/48, mb5.4/80*

*MOS **23** 00:52:14.5±0.9,7.°01S×120.°30E,h581km,mb5.6/48,Error ellipse: s-maj=8.0km s-min=5.0km az=113.9*

*IDC **23** 00:52:15.4±0.6,7.°12S×120.°28E,h579km±6km,mb4.8/42, mb1 4.8/47,mb1mx4.7/53,mbtmp5.7/47,Error ellipse: s-maj=7.7km s-min=5.3km az=71.0*

*DJA **23** 00:52:15.3±0.1,7.°5S±2.°×12.°0E±.°,h585km±2km,M5.2/86, mB5.7/67,mb5.5/86,MLv5.7/20,Mw(mB)5.2/67,Mwp5.3/11*

*NEIC **23** 00:52:15.3±1.9,7.°10S±0.°05×120.°32E±0.°06,h579km±1km, mb5.4/155,Mwb5.5/24,Mwc5.5(GCMT),Error ellipse: s-maj=13.2km s-min=3.3km az=228.0,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.96; $M_{\theta\theta}$1.43; $M_{\phi\phi}$0.54; $M_{r\theta}$-1.15; $M_{\theta\phi}$-0.42; $M_{\phi r}$-0.61; Fault plane solution: $M_0$2.23000×10^{17} NP1:ϕ_s88.10000°, δ61.73000°,λ-107.94000°. NP2:ϕ_s302.46000°, δ33.08000°,λ-60.20000°. Principal axes: T 1.8218, Plg15.0000°, Azm191.0000°; N 0.6582, Plg16.0000°, Azm97.0000°; P -2.4800, Plg68.0000°, Azm323.0000°;*

*KLM **23** 00:52:16.0,7.°22S×120.°30E,h585km,mb5.5*

*GCMT **23** 00:52:16.3±0.2,6.°98S±0.°01×120.°16E±0.°02,h587km±1km, MW5.5/138,Moment Tensor Solution. s138,c227; Duration: 1$3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.90±.03; $M_{\theta\theta}$1.62±.05; $M_{\phi\phi}$0.28±.06; $M_{r\theta}$-0.66±.05; $M_{\theta\phi}$-0.44±.05; $M_{\phi r}$-0.14±.06; Best double couple: $M_0$1.94500×10^{17} NP1:ϕ_s295.00000°,δ37.00000°, λ-77.00000°. NP2:ϕ_s98.00000°,δ55.00000°, λ-100.00000°. Principal axes: T 1.8490, Plg9.0000°, Azm195.0000°; N 0.1960, Plg8.0000°, Azm104.0000°; P -2.0420, Plg78.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

*NEIC **23** 00:52:18.7±0.3S×120.°43E,h599km,Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.94; $M_{\theta\theta}$1.72; $M_{\phi\phi}$0.22; $M_{r\theta}$-0.63; $M_{\theta\phi}$-0.41; $M_{\phi r}$-0.29; Fault plane solution: $M_0$2.01000×10^{17} NP1:ϕ_s295.00000°, δ38.00000°,λ-73.00000°. NP2:ϕ_s93.00000°,δ54.00000°, λ-103.00000°. Principal axes: T 1.8997, Plg8.0000°, Azm192.0000°; N 0.1996, Plg11.0000°, Azm101.0000°; P -2.0993, Plg77.0000°, Azm319.0000°;*

ISC 23 00:52:15.7±0.3,7.°14S±0.°03×120.°30E±0.°03,h590km±2km, h591km:pP-P,n1201,σ1$65/1284,mb5.4/178,49C-34D, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKSI	**Bulukumba**	**1.81**	**355**	P	**P**	**00 53 28.8**	**+0.4**
WSI	**Waingapu**	**2.52**	**180**	P	**P**	**00 53 30.3**	**-1.1**
BNSI	**Bone**	**2.72**	**356**	P	**P**	**00 53 34.0**	**+1.4**
BNSI				S	**S**	**00 54 37.4**	**+2.4**
BBSI	**Bau Bau**	**2.79**	**54**	P	**P**	**00 53 35.0**	**+2.1**
BBSI				S	**S**	**00 54 37.6**	**+1.9**
PLAI	**Plampang**	**3.01**	**236**	P	**P**	**00 53 32.9**	**-1.2**
PLAI				S	**S**	**00 54 34.1**	**-3.8**
SPSI	**Sidrap Palu**	**3.19**	**351**	P	**P**	**00 53 36.3**	**+1.1**
SPSI				S	**S**	**00 54 40.0**	**+0.1**
KDI	**Kendari**	**3.91**	**36**	P	**P**	**00 53 41.1**	**+1.2**
KDI				S	**S**	**00 54 48.8**	**+0.4**
TTSI	**Tana Toraja**	**4.09**	**353**	P	**P**	**00 53 41.7**	**+0.5**
TTSI				S	**S**	**00 54 51.0**	**+0.3**
SOEI	**Soe**	**4.71**	**124**	P	**P**	**00 53 44.7**	**-1.2**
SOEI				S	**S**	**00 54 56.7**	**-2.7**
SOEI	**Soe**	**4.71**	**124**	P	**P**	**00 53 45.1**	**-0.8**
SOEI				S	**S**	**00 54 54.8**	**-4.6**
SRBI	**Singaraja**	**5.12**	**259**	S	**S**	**00 55 02.2**	**-2.9**
IGBI	**Denpasar**	**5.37**	**251**	P	**P**	**00 53 49.6**	**-1.4**
	5.9nm21μm810nm,0.5s						
KBKI	**Kotabaru**	**5.60**	**313**	P	**P**	**00 53 53.5**	**+0.5**
	0.8nm2μm270nm,0.7s						
JAGI	**Jajag, Banyuwa**	**6.23**	**257**	P	**P**	**00 53 56.3**	**-2.1**
	2.6nm8μm203nm,0.5s						
JAGI	**Jajag, Banyuwa**	**6.23**	**257**	P	**P**	**00 53 56.6**	**-1.8**
JAGI				S	**S**	**00 55 15.6**	**-6.8**
APSI	**Ampana**	**6.33**	**12**	P	**P**	**00 54 00.1**	**+0.8**
	6.0nm5μm21μm2μm,1.0s						
LUWI	**Luwuk**	**6.54**	**22**	P	**P**	**00 54 02.1**	**+0.9**
	14nm8μm44μm3μm,0.8s						
LUWI	**Luwuk**	**6.54**	**22**	P	**P**	**00 54 02.2**	**+1.1**
BKB	**Balikpapan**	**6.75**	**330**	P	**P**	**00 54 05.5**	**+2.4**
	5.1nm7μm18μm2μm,1.0s						
BKB	**Balikpapan**	**6.75**	**330**	P	**P**	**00 54 05.8**	**+2.8**
GMJI	**Gumukmas**	**6.88**	**260**	P	**P**	**00 54 02.9**	**-1.3**
	1.4nm4μm113nm,1.0s						
SMKI	**Samarinda**	**7.32**	**335**	P	**P**	**00 54 11.1**	**+2.7**
	7.9nm6μm28μm2μm,0.8s						
MPSI	**Mapaga**	**7.43**	**357**	P	**P**	**00 54 10.4**	**+1.0**
	21nm7μm51μm5μm,0.7s						
SANI	**Sanana**	**7.60**	**49**	P	**P**	**00 54 11.1**	**+0.2**
	29nm6μm66μm8μm,0.7s						
MRSI	**Marisa**	**7.74**	**12**	P	**P**	**00 54 13.0**	**+0.7**
	36nm10μm106μm12μm,0.9s						
GRJI	**Gresik**	**7.76**	**271**	P	**P**	**00 54 12.0**	**-0.5**
	1.7nm4μm519nm,0.8s						
KMSI	**Cibinong**	**8.49**	**26**	P	**P**	**00 54 20.4**	**+0.9**
	1μm32μm3μm,0.6s						
PCJI	**Pacitan**	**9.10**	**263**	P	**P**	**00 54 23.4**	**-2.0**
	4μm392nm,0.8s						
WOJI	**Wonogiri, Jawa**	**9.32**	**265**	P	**P**	**00 54 26.8**	**-0.8**
	194nm,0.9s						
MSAI	**Masohi**	**9.38**	**67**	P	**P**	**00 54 26.2**	**-2.1**
	2μm165nm,0.6s						
PBKI	**Pangkalan Bun**	**9.65**	**297**	P	**P**	**00 54 32.7**	**+1.8**
	11μm1μm,0.8s						
LBMI	**Labuha**	**9.66**	**48**	P	**P**	**00 54 31.3**	**+0.3**
	18μm2μm,0.8s						
UGM	**Wanagama**	**9.72**	**265**	P	**P**	**00 54 31.2**	**-0.4**
	484nm,1.1s						
UGM	**Wanagama**	**9.72**	**265**	P	**P**	**00 54 31.4**	**-0.2**
UGM				S	**S**	**00 56 17.6**	**-5.5**
SMRI	**Semarang**	**9.78**	**270**	P	**P**	**00 54 33.0**	**+0.8**
TNTI	**Ternate**	**10.56**	**42**	P	**P**	**00 54 39.1**	**-0.8**
	3μm8μm635nm,0.7s						
TNTI	**Ternate**	**10.56**	**42**	P	**P**	**00 54 38.7**	**-1.2**
SAUI	**Saumlaki**	**10.94**	**95**	P	**P**	**00 54 41.8**	**-2.0**
	17μm2μm,1.2s						
SAUI	**Saumlaki**	**10.94**	**95**	P	**P**	**00 54 42.5**	**-1.4**
SAUI				S	**S**	**00 56 40.8**	**-4.6**
KPJI	**Karang Pucung**	**11.28**	**268**	P	**P**	**00 54 46.2**	**-1.0**
	6μm565nm,0.6s						
CMJI	**Cimerak**	**11.77**	**266**	P	**P**	**00 54 50.3**	**-1.8**
	5μm555nm,0.8s						
KNRA	**Kununurra**	**11.87**	**136**	P	**P**	**00 54 52.4**

WRA Warramunga Arr 18.65 134 P **P** **00 55 57.5 -0.3**
comp=Z,19nm,0.3s,baz=315,slow=10,SNR=291
WRA S **S** **00 58 54.8 -3.1**
baz=308,slow=17,SNR=6.8
WRA PcP **PcP** **00 59 56.5 +0.6**
comp=Z,1.8nm,0.3s,baz=315,slow=1.7,SNR=3.9
WRA ScP **ScP** **01 02 36.7 +0.1**
comp=Z,0.6nm,0.3s,baz=278,slow=3.4,SNR=6.1
WRA PKiKP **PKiKP** **01 07 45.2 -1.0**
comp=Z,0.2nm,0.3s,baz=301,slow=1.1,SNR=4.7
WRAB Tennant Creek 18.65 134 P **P** **00 55 58.1 +0.3**
WRAB pmax pmax
comp=Z,158nm,0.8s
WRAB Tennant Creek 18.65 134 P **P** **00 55 58.1 +0.3**
WRAB IAmb IAmb 00 56 01.6
comp=Z,158nm,0.8s
MYKOM Kota Tinggi 18.65 298 P **P** **00 55 59.5 +1.6**
MYKOM IAmb IAmb 00 56 00.9
comp=Z,163nm,0.8s
WB2 Warramunga Arr 18.66 134 P **P** **00 55 58.0 +0.2**
WB2 IAmb IAmb 00 56 01.6
comp=Z,152nm,0.8s
RCP Roxas 18.73 7⇓*e*P **P** **00 55 58.7 +0.2**
SMPI Sarmi 19.05 75 P **P** **00 55 59.0 -2.5**
comp=Z,2µmcomp=Z,196nm,1.3s
KRJI Kerinci 19.42 284 P **P** **00 56 03.8 -1.2**
comp=Z,17µmcomp=Z,506nm,0.8s
SDSI Sungai Dareh 19.79 287 P **P** **00 56 07.0 -1.2**
comp=Z,20µmcomp=Z,125nm,0.7s
GENI Genyem 20.30 78 P **P** **00 56 12.6 -0.2**
comp=Z,154nm,1.0s
BKNI Bangkinang 20.59 290 P **P** **00 56 13.7 -1.7**
comp=Z,3µmcomp=Z,304nm,0.9s
PPSI Pulau Pagai 20.67 281 P **P** **00 56 15.1 -1.0**
comp=Z,249nm,0.7s
PDSI Padang 20.72 286 P **P** **00 56 14.8 -1.8**
comp=Z,2µmcomp=Z,38nm,0.7s
JAY Jayapura 20.84 78 P **P** **00 56 17.6 -0.2**
comp=Z,17nm,0.5s,baz=240,slow=11,SNR=7.0
JAY Jayapura 20.84 78 P **P** **00 56 18.1 +0.4**
comp=Z,22nm,0.8s
JRMM Jerantut 20.88 301 P **P** **00 56 19.0 +1.0**
AS31 Alice Springs 21.00 143 IAmb IAmb 00 56 21.2
comp=Z,32nm,0.4s
ASAR Alice Springs 21.00 143 P **P** **00 56 18.9 0.0**
comp=Z,52nm,0.4s,baz=321,slow=8.2,SNR=497
ASAR S **S** **00 59 34.1 -1.1**
comp=Z,12nm,0.7s,baz=304,slow=15,SNR=4.1
ASAR PcP **PcP** **01 00 00.7 +0.3**
comp=Z,27nm,0.5s,baz=333,slow=1.7,SNR=15
ASAR ScP **ScP** **01 02 42.8 +0.7**
comp=Z,37nm,0.7s,baz=340,slow=2.4,SNR=17
ASAR ScS **ScS** **01 06 23.7 -3.0**
comp=Z,8.3nm,1.0s,baz=324,slow=4.6,SNR=6.1
TGY Tagaytay City 21.11 2 P **P** **00 56 20.3 +0.3**
comp=Z,140nm,0.3s,baz=201,slow=14,SNR=3.3
TGY S **S** **00 59 37.5 +0.4**
comp=Z,254nm,0.3s,baz=354,slow=23,SNR=4.7
SISI Saibi 21.91 284 P **P** **00 56 26.7 -0.5**
comp=Z,38nm,0.7s
DLV T Lat 22.30 328 IAmb IAmb 00 56 33.5
comp=Z,46nm,0.7s
IPM Ipoh 22.43 300 P **P** **00 56 31.3 -0.5**
IPM IAmb IAmb 00 56 33.8
comp=Z,125nm,1.2s
IPM Ipoh 22.43 300 P **P** **00 56 33.0 +1.2**
PBSI Pulau Batu 23.06 287 P **P** **00 56 39.1 +1.7**
comp=Z,147nm,0.6s
KULM Kulim 23.17 302 IAmb IAmb 00 56 40.0
comp=Z,90nm,0.8s
RPSI Rantau Prapat 23.46 294 P **P** **00 56 42.0 +1.0**
COEN Coen 23.48 109 P **P** **00 56 41.5 +0.4**
PSI Prapat 23.50 294 P **P** **00 56 42.0 +0.5**
PSI pmax pmax
comp=Z,260nm,0.8s
GSI Gunungsitoli 24.17 289 P **P** **00 56 46.3 -1.0**
comp=Z,4µmcomp=Z,278nm,0.7s
GSI Gunungsitoli 24.17 289 P **P** **00 56 46.6 -0.7**
GSI PcP **PcP** **01 00 09.8 +2.7**
SNSI Sinabang, Aceh 25.73 291 P **P** **00 57 01.7 +0.6**
comp=Z,11µmcomp=Z,1µm,0.8s
NWAO Narrogin (SRO) 25.82 186 P **P** **00 57 02.0 +0.4**
NWAO pmax pmax
comp=Z,238nm,0.9s
NWAO Narrogin (SRO) 25.82 186 P **P** **00 57 01.3 -0.3**
comp=Z,196nm,0.7s,baz=19,slow=8.3,SNR=122
NWAO S **S** **01 00 50.8 +0.1**
comp=Z,50nm,1.1s,baz=129,slow=22,SNR=7.4
NWAO ScP **ScP** **01 02 55.5 +0.5**
comp=Z,41nm,1.0s,baz=39,slow=4.8,SNR=4.2
NWAO Narrogin (SRO) 25.82 186 P **P** **00 57 02.0 +0.4**
LHMI Lhok Sumawe 26.34 297 P **P** **00 57 05.8 -0.6**
comp=Z,3µmcomp=Z,283nm,0.7s
MLSI Meulaboh, Aceh 26.40 295 P **P** **00 57 06.2 -0.7**
comp=Z,13µmcomp=Z,1µm,0.8s
PMG Port Moresby 26.68 97 P **P** **00 57 09.7 +0.4**
comp=Z,17nm,0.5s,baz=248,slow=19,SNR=4.8
PMG ScP **ScP** **01 02 58.8 +0.9**
comp=Z,18nm,0.6s,baz=356,slow=5.4,SNR=6.2
QIZ Qiongzhong 27.97 339 P **P** **00 57 21.3 +0.8**
QIZ sP **sP** **01 00 03.3 +0.3**
QIZ S **S** **01 01 24.4 0.0**
QIZ pmax pmax
comp=Z,73nm,0.8s
QIZ Qiongzhong 27.97 339 IAmb IAmb 00 57 23.1
comp=Z,159nm,1.4s
CTA Charters Tower 28.27 120 P **P** **00 57 23.5 +0.3**
comp=Z,12nm,0.7s,baz=297,slow=11,SNR=17
CTA PcP **PcP** **01 00 17.5 +0.7**
comp=Z,41nm,0.7s,baz=303,slow=3.6,SNR=14
CTA S **S** **01 01 29.8 +0.6**
comp=Z,12nm,1.0s,baz=92,slow=18,SNR=7.0
CTA ScP **ScP** **01 03 03.0 +0.2**
comp=Z,24nm,1.0s,baz=318,slow=5.4,SNR=7.2
BBOO Buckleboo 29.45 152 P **P** **00 57 33.2 0.0**
BBOO S **S** **01 01 47.1 +0.1**
BBOO ScP **ScP** **01 03 07.1 +0.8**
TPUB Ta-pu 30.25 1 P **P** **00 57 41.0 +0.7**
NACB Ninganchiao 31.14 2 P **P** **00 57 46.6 -1.2**
KNMB Chin-men Tao 31.46 357 P **P** **00 57 50.8 +0.3**
KNMB IAmb IAmb 00 58 08.1
comp=Z,80nm,1.1s
YHNB Yeheng 31.63 2 P **P** **00 57 51.6 -0.5**
YHNB IAmb IAmb 00 57 52.7
comp=Z,68nm,0.5s
YHNB S **S** **01 02 16.7 -4.0**
STKA Stephens Creek 31.63 144 P **P** **00 57 52.9 +1.0**
STKA 01 00 26.2
STKA S **S** **01 02 21.6 +1.1**
STKA pmax pmax
comp=Z,20nm,0.5s
STKA Stephens Creek 31.63 144 P **P** **00 57 52.2 +0.3**
comp=Z,77nm,0.4s,baz=316,slow=9.1,SNR=326
STKA PcP **PcP** **01 00 25.7 +0.1**
comp=Z,30nm,0.4s,baz=8.3,slow=4.1,SNR=7.0
STKA S **S** **01 02 20.4 -0.2**
comp=Z,12nm,0.7s,baz=89,slow=23,SNR=3.7
STKA ScP **ScP** **01 03 13.8 +0.2**
comp=Z,40nm,0.7s,baz=318,slow=5.7,SNR=9.3
STKA Stephens Creek 31.63 144 P **P** **00 57 52.9 +1.0**
STKA PcP **PcP** **01 00 26.1 +0.6**
STKA S **S** **01 02 21.6 +1.1**
GUMO Guam 31.93 50 P **P** **00 57 54.7 +0.1**
GUMO pmax pmax
comp=Z,538nm,0.9s
GUMO Guam 31.93 50 P **P** **00 57 54.3 -0.3**
comp=Z,232nm,0.3s,baz=190,slow=4.5,SNR=17
GUMO S **S** **01 02 25.4 +0.1**
comp=Z,109nm,0.6s,baz=56,slow=23,SNR=5.6
GUMO Guam 31.93 50 P **P** **00 57 54.7 +0.1**
SLVN Son La 32.55 331 IAmb IAmb 00 58 02.9
comp=Z,88nm,0.8s
CM31 Chiang Mai Arr 33.02 321 P **P** **00 58 05.0 +1.1**
CM31 IAmb IAmb 00 58 06.4
comp=Z,87nm,0.7s
CM31 PcP **PcP** **01 00 31.3 +1.6**
CM31 Chiang Mai Arr 33.02 321 P **P** **00 58 04.5 +0.7**
SNR=13
CMAR Chiang Mai Arr 33.02 321 P **P** **00 58 04.9 +1.1**
comp=Z,46nm,0.7s,baz=146,slow=6.6,SNR=116
CMAR PcP **PcP** **01 00 31.5 +1.8**
comp=Z,35nm,0.6s,baz=178,slow=2.5,SNR=16
CMAR ScP **ScP** **01 03 20.3 +1.6**
comp=Z,8.6nm,0.8s,baz=171,slow=3.2,SNR=7.4
CMAR PKiKP **PKiKP** **01 07 54.6 +0.1**
comp=Z,0.9nm,0.3s,baz=227,slow=1.8,SNR=4.5

CHTO Chiang Mai 33.29 321 P **P** **00 58 07.0 +1.0**
CHTO 01 00 32.7
CHTO pmax pmax
comp=Z,102nm,0.7s
CHTO Chiang Mai 33.29 321 P **P** **00 58 07.0 +1.0**
CHTO IAmb IAmb 00 58 08.4
comp=Z,102nm,0.7s
CHTO PcP **PcP** **01 00 32.7 +2.2**
EIDS Eidsvold 34.53 125 P **P** **00 58 17.0 +0.6**
JOW Kunigami 34.64 13 P **P** **00 58 16.9 -0.3**
comp=Z,20nm,0.6s,baz=180,slow=13,SNR=4.3
JOW Kunigami 34.64 13 IAmb IAmb 00 58 31.2
comp=Z,127nm,1.7s
GYA Guiyang 35.92 339⇑*i*P **P** **00 58 29.4 +1.5**
GYA PP **PP** **01 00 13.4 +0.4**
GYA PcP **PcP** **01 00 38.8 +0.5**
GYA sP sP 01 01 16.0 +3.1
GYA S **S** **01 03 30.5 +5.1**
GYA sS sS 01 06 31.8 +5.6
GYA ScS **ScS** **01 07 32.5 -4.4**
GYA pmax pmax
comp=Z,40nm,0.9s
GYA pmax pmax
comp=Z,160nm,5.9s
KMI Kunming 36.34 333 P **P** **00 58 33.6 +2.1**
KMI pP PP 01 00 18.3 +1.5
KMI PcP **PcP** **01 00 41.1 +1.4**
KMI sP sP 01 01 20.5 +3.5
KMI S **S** **01 03 33.1 +1.2**
KMI pmax pmax
comp=Z,200nm,1.1s
KMI pmax pmax
comp=Z,500nm,3.1s
KMI Kunming 36.34 333 IAmb IAmb 00 58 35.0
comp=Z,171nm,0.9s
ARMA Armidale 37.41 132 P **P** **00 58 41.8 +1.7**
WHN Wuhan 37.89 352⇑P **P** **00 58 45.3 +1.5**
WHN pP **PP** **01 00 27.1 -3.4**
WHN S **S** **01 03 53.6 -0.7**
WHN pmax pmax
comp=Z,200nm,1.2s
SIMRM Sittwe 38.23 316 IAmb IAmb 00 58 49.6
comp=Z,99nm,0.7s
CAN Canberra 38.48 141 P **P** **00 58 49.7 +1.0**
CAN pmax pmax
comp=Z,33nm,1.2s
CAN Canberra 38.48 141 P **P** **00 58 49.7 +1.0**
ENH Enshi 38.61 345 IAmb IAmb 00 58 51.5
comp=Z,185nm,1.0s
NJ2 Nanjing 38.99 358⇑*i*P **P** **00 58 54.5 +1.8**
NJ2 pP **pP** **01 00 35.4 +1.9**
NJ2 PcP **PcP** **01 00 49.1 +1.5**
NJ2 S **S** **01 04 10.9 +0.6**
NJ2 SS **SS** **01 07 36.3 +3.4**
NJ2 pmax pmax
comp=Z,66nm,0.7s
NJ2 pmax pmax
comp=Z,320nm,5.7s
HNR Honiara 39.29 96 P **P** **00 58 55.7 +0.3**
HNR pmax pmax
comp=Z,152nm,0.8s
HNR Honiara 39.29 96 P **P** **00 58 56.2 +0.8**
comp=Z,143nm,0.7s,baz=182,slow=2.2,SNR=12
HNR S **S** **01 04 13.8 -1.5**
comp=Z,30nm,0.3s,baz=298,slow=23,SNR=9.0
HNR Honiara 39.29 96 P **P** **00 58 55.6 +0.3**
HNR IAmb IAmb 00 59 00.5
comp=Z,152nm,0.8s
JCJ Chichijima 40.09 31 P **P** **00 59 01.8 +0.1**
comp=Z,461nm,0.5s,baz=248,slow=5.4,SNR=30
JCJ S **S** **01 04 21.4 -5.1**
comp=Z,261nm,0.6s,baz=278,slow=23,SNR=12
CD2 Chengdu 41.01 338⇓*i*P **P** **00 59 09.5 +0.6**
CD2 sP sP 01 01 55.1 -1.2
CD2 S **S** **01 04 37.8 -2.0**
CD2 sS sS 01 07 51.9 +6.7
CD2 SS **ScS** **01 08 10.1 +3.4**
CD2 pmax pmax
comp=Z,250nm,3.4s
PALK Pallekele 42.00 289 *i* P **P** **00 59 16.8 -0.2**
SNR=9.3
PALK Pallekele 42.00 289 P **P** **00 59 16.2 -0.8**
PALK IAmb IAmb 00 59 18.2
comp=Z,69nm,0.8s
PALK ScP **ScP** **01 03 55.7 +2.6**
XAN Xi'an 42.34 346 P **P** **00 59 19.3 0.0**
XAN PcP **PcP** **01 00 59.5 +0.7**
XAN pP pwP 01 01 07.3 +3.5
XAN sP sP 01 02 05.1 -2.7
XAN S **S** **01 04 54.8 -4.0**
XAN ScS **ScS** **01 08 14.1 -0.8**
XAN pmax pmax
comp=Z,230nm,0.8s
XAN pmax pmax
comp=Z,360nm,3.5s
XAN Xi'an 42.34 346 IAmb IAmb 00 59 20.4
comp=Z,168nm,0.7s
SHL Shillong 42.66 321 P **P** **00 59 21.9 -0.2**
SHL pmax pmax
comp=Z,176nm,1.0s
SHL Shillong 42.66 321 P **P** **00 59 21.9 -0.2**
SHL IAmb IAmb 00 59 23.2
comp=Z,176nm,1.0s
SHL Shillong 42.66 321 P **P** **00 59 22.1 0.0**
SNR=46
TIA Tai'an 43.22 356 P **P** **00 59 25.5 -0.5**
TIA pmax pmax
comp=Z,41nm,0.6s
TJN Taejon 43.79 8*ce*P **P** **00 59 29.5 -0.9**
CHLP Challavanipeta 43.90 306 *e*P **P** **00 59 31.9 +0.4**
CHLP IAmb IAmb 00 59 33.1
comp=Z,48nm,0.8s
KSRS Korea Array 44.93 9 P **P** **00 59 39.5 +0.4**
comp=Z,21nm,0.6s,baz=189,slow=7.9,SNR=79
KSRS PcP **PcP** **01 01 09.2 +1.6**
comp=Z,32nm,0.6s,baz=180,slow=2.9,SNR=36
KS19 Wonju Array Si 44.96 9 P **P** **00 59 39.3 -0.1**
KS19 **PcP** **01 01 09.5 +1.8**
TIY Taiyuan 45.21 351 *e*P **P** **00 59 41.3 -0.1**
TIY S **S** **01 05 36.0 -3.3**
TIY SS **SS** **01 09 15.8 +2.3**
TIY pmax pmax
comp=Z,23nm,0.5s
PVM Polavaram 45.25 303 *e*P **P** **00 59 42.0 +0.1**
PVM IAmb IAmb 00 59 43.1
comp=Z,108nm,1.1s
SKHT Srikalahasti 45.31 297 *e*P **P** **00 59 42.6 +0.2**
SKHT IAmb IAmb 00 59 43.8
comp=Z,127nm,1.0s
LZH Lanzhou 45.69 341 *e*P **P** **00 59 46.8 +1.6**
LZH PcP **PcP** **01 01 12.6 +2.0**
LZH sP sP 01 02 37.6 +2.5
LZH S **S** **01 05 45.3 -0.9**
LZH ScS **ScS** **01 08 36.4 -0.3**
LZH sS sS 01 09 06.3 +10
LZH pmax pmax
comp=Z,330nm,1.0s
LZH pmax pmax
comp=Z,830nm,4.9s
DL2 Dalian 45.82 1 P **P** **00 59 46.1 +0.2**
DL2 PcP **PcP** **01 01 12.3 +1.6**
DL2 S **S** **01 05 44.3 -3.2**
DL2 pmax pmax
comp=Z,98nm,0.8s
MYLAV Mylavaram 45.84 302 *e*P **P** **00 59 46.7 +0.3**
MYLAV IAmb IAmb 00 59 47.8
comp=Z,117nm,0.7s
ADKI Addanki 46.00 300 *e*P **P** **00 59 48.3 +0.7**
ADKI IAmb IAmb 00 59 48.9
comp=Z,92nm,0.7s
LSA Lhasa 46.11 324 P **P** **00 59 50.1 +1.3**
LSA SS SS 01 09 39.9 +11
LSA Lhasa 46.11 324 P **P** **00 59 50.1 +1.3**
ODAN Odare 46.46 318 *e*P **P** **00 59 51.6 +0.3**
comp=Z,210nm,0.6s
TAPN Taplejung 46.58 319 *e*P **P** **00 59 52.9 +0.7**
comp=Z,531nm,0.5s
MAJO Matsushiro 46.58 20*d i*P **P** **00 59 50.8 -0.9**
MAJO pmax pmax
comp=Z,28nm,0.9s
MAJO Matsushiro 46.58 20 P **P** **00 59 51.2 -0.5**
MAJO PcP **PcP** **01 01 14.5 +1.0**
MAT Matsushiro 46.58 20 P **P** **00 59 50.4 -1.3**
MAT S **S** **01 05 55.2 -3.1**

MJAR Matsushiro Arr 46.58 20 P **P** **00 59 50.7 -1.0**
comp=Z,24nm,0.5s,baz=194,slow=8.1,SNR=51
MJAR PcP **PcP** **01 01 14.4 +0.8**
comp=Z,24nm,0.9s,baz=211,slow=4.6,SNR=15
MJAR S **S** **01 05 55.5 -2.8**
comp=Z,3.8nm,0.6s,baz=193,slow=15,SNR=6.3
MJB9 Matsu-Tunnel 46.59 20 P **P** **00 59 50.7 -1.0**
MJB9 **PcP** **01 01 14.4 +0.8**
GGR Gangavaram 46.72 303 *e*P **P** **00 59 52.7 -0.3**
GGR IAmb IAmb 00 59 53.8
comp=Z,152nm,1.1s
DZM Mont Dzumac 46.86 114 P **P** **00 59 55.8 +1.6**
comp=Z,24nm,0.8s,baz=252,slow=11,SNR=16
DZM Mont Dzumac 46.86 114 P **P** **00 59 54.8 +0.6**
DZM ScP **ScP** **01 04 14.5 +1.4**
NJS Nagarjunasagar 46.88 300 *e*P **P** **00 59 53.8 -0.5**
NJS IAmb IAmb 00 59 54.9
comp=Z,92nm,1.0s
SRLM Srisailam 47.04 300 *e*P **P** **00 59 54.8 -0.7**
SRLM IAmb IAmb 00 59 56.2
comp=Z,50nm,0.8s
RAMN Ramite 47.05 317 *e*P **P** **00 59 56.3 +0.6**
comp=Z,724nm,0.6s
BJT Baijiatuau 47.07 356 IAmb IAmb 00 59 56.7
comp=Z,138nm,0.6s
BJI Beijing 47.09 356⇓*i*P **P** **00 59 55.5 +0.1**
BJI PcP **PcP** **01 01 16.6 +1.4**
BJI S **S** **01 06 03.6 -1.5**
BJI sS **sS** **01 09 20.0 +3.4**
BJI pmax pmax
comp=Z,180nm,0.5s
H08S2 Diego Garcia H 47.39 266 P **P** **00 59 59.0 +1.2**
baz=54,slow=9.4,SNR=9.0
H08S3 Diego Garcia H 47.40 266 P **P** **00 59 58.9 +0.9**
baz=54,slow=9.4,SNR=38
H08S1 Diego Carcia H 47.41 266 P **P** **00 59 59.3 +1.3**
baz=54,slow=9.4,SNR=5.4
DGAR Diego Garcia 47.44 266 *i* P **P** **00 59 58.2 -0.3**
DGAR pmax pmax
comp=Z,183nm,0.9s
DGAR Diego Garcia 47.44 266 P **P** **00 59 59.7 +1.1**
JIRN Jiri 47.79 318 *e*P **P** **01 00 01.8 +0.4**
comp=Z,728nm,0.7s
HYB Hyderabad 47.92 301 *i* P **P** **01 00 02.0 -0.1**
comp=Z,96nm,0.8s
HYBB Hyderabad (bro 47.92 301 *e*P **P** **01 00 01.3 -0.8**
HYBB IAmb IAmb 01 00 02.1
comp=Z,81nm,0.6s
RPR Rampur 47.97 303 *e*P **P** **01 00 01.9 -0.4**
RPR IAmb IAmb 01 00 03.0
comp=Z,98nm,0.9s
URV Uravakonda 47.97 297 *e*P **P** **01 00 01.7 -0.8**
URV IAmb IAmb 01 00 02.9
comp=Z,101nm,0.9s
GUN Gumba 48.16 318 *e*P **P** **01 00 04.5 +0.4**
comp=Z,806nm,0.7s
PKI Pulchoki 48.26 317 *e*P **P** **01 00 04.7 -0.1**
comp=Z,44nm,0.5s
PKIN Phulchoki 48.27 317 *e*P **P** **01 00 04.7 -0.1**
comp=Z,310nm,0.4s
HHC Hu-ho-hao-te 48.42 351 *e*P **P** **01 00 05.8 +0.3**
HHC S **S** **01 06 23.4 -0.2**
HHC pmax pmax
comp=Z,42nm,1.0s
HHC pmax pmax
comp=Z,190nm,5.0s
BTO Baotou 48.44 350 *e*P **P** **01 00 06.4 +0.8**
KKN Kakani 48.48 317 *e*P **P** **01 00 06.4 +0.1**
comp=Z,261nm,0.6s
DMN Daman 48.48 317 *e*P **P** **01 00 06.5 +0.1**
comp=Z,213nm,0.5s
SRSP Sriramsagar 48.79 303 *e*P **P** **01 00 07.6 -0.9**
SRSP IAmb IAmb 01 00 08.8
comp=Z,62nm,0.9s
H08N1 Diego Carcia H 48.93 268 P **P** **01 00 08.5 -0.7**
baz=121,slow=3.6,SNR=29
H08N2 Diego Garcia H 48.94 268 P **P** **01 00 08.6 -0.7**
baz=121,slow=3.6,SNR=46
H08N3 Diego Garcia H 48.95 268 P **P** **01 00 08.6 -0.8**
baz=121,slow=3.6,SNR=30
GKN Gorkha 49.05 317 *e*P **P** **01 00 10.6 +0.1**
comp=Z,504nm,0.5s
NGP Nagpur 49.29 306 *i* P **P** **01 00 11.5 -0.6**
KOLN Koldanda 49.62 316 *e*P **P** **01 00 14.7 0.0**
comp=Z,406nm,0.6s
DANN Dangsing 49.87 317 *e*P **P** **01 00 16.8 +0.2**
comp=Z,1µm,0.5s
KLRI Killari 49.87 301 *e*P **P** **01 00 15.4 -1.1**
KLRI IAmb IAmb 01 00 16.2
comp=Z,55nm,0.6s
GTA Gaotai 50.05 339⇓P **P** **01 00 19.0 +1.5**
GTA PcP **PcP** **01 01 28.1 +1.8**
GTA pP pwP 01 02 06.8 -0.9
GTA S **S** **01 06 48.4 +2.6**
GTA ScS **ScS** **01 09 06.0 0.0**
GTA pmax pmax
comp=Z,220nm,1.1s
GTA pmax pmax
comp=Z,590nm,8.7s
MSHR Mys Shultsa 50.46 10 *i* P **P** **01 00 19.8 -0.4**
CN2 Changchun 50.91 5 *e*P **P** **01 00 23.0 -0.5**
CN2 PcP **PcP** **01 01 30.3 +1.0**
CN2 *e*S **S** **01 06 59.5 +2.6**
CN2 *e*ScS **ScS** **01 09 13.5 +2.0**
CN2 pmax pmax
comp=Z,40nm,1.0s
VLA Vladivostok 51.11 11 *i* P **P** **01 00 25.0 +0.1**
VLA pmax pmax
comp=Z,64nm,1.0s
USA0B Ussuriysk Arra 52.18 11*d i*P **P** **01 00 32.4 -0.2**
USA0B Ussuriysk Arra 52.18 11 IAmb IAmb 01 00 33.7
comp=Z,85nm,0.7s
USRK Ussuriysk Ar. 52.18 11 P **P** **01 00 32.6 +0.1**
comp=Z,87nm,0.4s,baz=200,slow=6.5,SNR=412
MDJ Mudanjiang 52.19 8 P **P** **01 00 32.8 +0.1**
MDJ S **S** **01 07 13.3 -0.7**
MDJ ScS **ScS** **01 09 20.3 -0.2**
MDJ SS **SS** **01 11 02.9 -0.3**
MDJ pmax pmax
comp=Z,150nm,0.7s
MDJ Mudanjiang 52.19 8 IAmb IAmb 01 00 34.1
comp=Z,116nm,0.9s
TEY Ternei 53.96 14⇓*i*P **P** **01 00 45.9 +0.7**
TEY pmax pmax
comp=N,40nm,1.0s
TEY pmax pmax
comp=Z,100nm,1.0s
ASAJ Asahikawa 54.85 20 P **P** **01 00 52.2 +0.8**
comp=Z,68nm,0.4s,baz=240,slow=8.2,SNR=44
ULN Ulaanbaatar 56.00 349*ce*P **P** **01 01 00.1 +0.6**
ULN pmax pmax
comp=Z,136nm,1.3s
ULN Ulaanbaatar 56.00 349 P **P** **01 01 00.4 +0.9**
ULN IAmb IAmb 01 01 01.5
comp=Z,412nm,1.4s
SONM Songino Array 56.09 349 P **P** **01 01 00.9 +0.7**
comp=Z,128nm,0.4s,baz=163,slow=8.0,SNR=929
SONM PcP **PcP** **01 01 50.3 +0.9**
comp=Z,23nm,0.7s,baz=172,slow=3.7,SNR=5.3
SONM ScP **ScP** **01 04 53.7 +1.1**
comp=Z,5.8nm,0.9s,baz=171,slow=3.8,SNR=3.5
SONM S **S** **01 07 58.1 -7.0**
comp=Z,7.4nm,1.1s,baz=172,slow=8.4,SNR=3.5
SONM PKPPKP **P'P'df** **01 30 47.0 +0.5**
comp=Z,1.1nm,0.9s,baz=190,slow=0.9,SNR=3.7
SONM P4KPbc 01 38 06.2
comp=Z,0.5nm,0.4s,baz=169,slow=5.8,SNR=5.4
HIA Hailar 56.17 360*d i*P **P** **01 01 00.3 -0.2**
HIA pmax pmax
comp=Z,211nm,1.4s
KLR Kul'dur 57.02 9*d i*P **P** **01 01 05.7 -0.6**
KLR Kul'dur 57.02 9 P **P** **01 01 05.9 -0.3**
comp=Z,17nm,0.4s,baz=196,slow=6.5,SNR=98
KLR PcP **PcP** **01 01 53.3 +0.5**
comp=Z,21nm,0.7s,baz=220,slow=2.3,SNR=7.8
MSVF Nonsavu 57.18 106 *i* P **P** **01 01 07.4 -0.7**
MSVF pmax pmax
comp=Z,48nm,1.0s
RPZ Rata Peaks 57.31 138 P **P** **01 01 08.9 +0.4**
comp=Z,73nm,0.4s,baz=276,slow=2.7,SNR=38
RPZ pP **pP** **01 03 03.7 +2.6**
comp=Z,40nm,1.0s,baz=23,slow=2.6,SNR=4.0
RPZ Rata Peaks 57.31 138 P **P** **01 01 09.4 +0.9**
YSS Yuzh-Sakhalins 57.43 18⇑*e*P **P** **01 01 08.9 -0.2**
YSS *e* 01 01 55.5
YSS *e**PP **pP** **01 03 00.8 -1.5**

YSS e*SP **sP** **01 04 06.4 +1.0**
YSS eS **S** **01 08 22.3 +0.4**
YSS pmax pmax
comp=Z,120nm,0.7s
YSS Yuzh-Sakhalins 57.43 18 P **P** **01 01 09.5 +0.5**
YSS IAmb IAmb 01 01 10.7
comp=Z,95nm,0.7s
YSS PcP **PcP** **01 01 56.2 +1.7**
TUWZ Tuamarina 58.42 135 P **P** **01 01 16.5 +0.5**
TUWZ PcP **PcP** **01 01 58.8 +0.1**
WMQ Urumqi 58.67 333 eP **P** **01 01 19.3 +1.7**
WMQ pmax pmax
comp=Z,150nm,0.9s
WMQ pmax pmax
comp=Z,360nm,3.7s
WMQ Urumqi 58.67 333 IAmb IAmb 01 01 20.3
comp=Z,201nm,0.9s
ZAK Zakamensk 59.15 347 eP **P** **01 01 21.3 +0.5**
ZAK e 01 02 02.6
ZAK pmax pmax
comp=Z,81nm,1.0s
CIT Chita 59.20 355 eP **P** **01 01 20.2 -0.8**
CIT e 01 02 02.9
URZ Urewera 59.76 130 P **P** **01 01 25.3 +0.4**
comp=Z,18nm,0.4s,baz=254,slow=7.6,SNR=13
NIL Nilore 60.26 315 P **P** **01 01 28.1 -0.3**
NIL pmax pmax
comp=Z,591nm,0.5s
NIL Nilore 60.26 315 P **P** **01 01 28.1 -0.3**
TLY Talaya 60.30 348*d* iP **P** **01 01 29.1 +0.8**
TLY eS **S** **01 08 59.0 +1.0**
TLY pmax pmax
comp=Z,259nm,0.9s
TLY Talaya 60.30 348 P **P** **01 01 28.8 +0.6**
comp=Z,39nm,0.4s,baz=177,slow=6.3,SNR=56
TLY Talaya 60.30 348 P **P** **01 01 29.3 +1.0**
TLY PcP **PcP** **01 02 07.8 +1.7**
IRK Irkutsk 60.71 349 eP **P** **01 01 31.2 +0.3**
IRK e 01 02 08.4
IRK pmax pmax
comp=Z,156nm,1.3s
MOY Mondy 60.87 346 eP **P** **01 01 33.0 +0.9**
MOY pmax pmax
comp=Z,196nm,1.8s
TYV Tymovskoe 60.91 16 eP **P** **01 01 34.5 +2.3**
TYV eS **PcP** **01 02 11.2 +2.7**
TYV pmax pmax
comp=Z,94nm,0.9s
ZEA Zeya 60.93 5 eP **P** **01 01 32.6 +0.3**
ZEA eS **S** **01 09 04.0 -1.5**
ZEA pmax pmax
comp=E,29nm,0.6s
ZEA pmax pmax
comp=N,94nm,0.8s
ZEA pmax pmax
comp=Z,200nm,1.0s
ZEA smax smax
comp=N,500nm,8.0s
KSH Kashi 61.90 322⇓ iP **P** **01 01 39.8 +0.7**
KSH pP pwP 01 03 37.3 +1.0
KSH PP **PP** **01 04 09.8 +4.1**
KSH sS sS 01 12 46.8 +2.9
KSH pmax pmax
comp=N,650nm,0.8s
PDGK Podgornoye 62.37 327 P **P** **01 01 42.4 +0.3**
PRZ Przheval'sk 62.39 326 IAmb IAmb 01 01 45.5
comp=Z,240nm,1.0s
KDJ Kajisay 62.84 325 IAmb IAmb 01 01 47.6
comp=Z,218nm,1.3s
NRN Naryn 63.08 324 IAmb IAmb 01 01 48.6
comp=Z,94nm,0.8s
MK31 Makanchi Array 63.41 332 eP **P** **01 01 49.3 +0.8**
MKAR Makanchi Array 63.41 332 P **P** **01 01 49.4 +0.9**
comp=Z,348nm,0.6s,baz=147,slow=7.2,SNR=4293
MKAR S **S** **01 09 36.0 -0.2**
comp=Z,5.5nm,1.0s,baz=138,slow=13,SNR=6.9
MKAR PKPPKP **P'P'df** **01 30 32.4 -3.3**
comp=Z,0.7nm,0.8s,baz=270,slow=2.2,SNR=4.5
MKAR PKP2bc 01 30 42.5
comp=Z,1.4nm,0.8s,baz=323,slow=1.8,SNR=9.7
MKAR P4KPbc 01 38 39.8
comp=Z,0.7nm,0.6s,baz=139,slow=5.4,SNR=9.0
ULHL Ulahol 63.45 325 P **P** **01 01 50.1 +1.0**
SNR=6.0
MAKZ Makanchi 63.57 332 P **P** **01 01 50.3 +0.8**
MAKZ pmax pmax
comp=Z,186nm,0.9s
MAKZ Makanchi 63.57 332 P **P** **01 01 50.3 +0.8**
MAKZ IAmb IAmb 01 01 51.5
comp=Z,186nm,0.8s
KBL Kabul 63.70 314 P **P** **01 01 51.2 +0.4**
KBL pmax pmax
comp=Z,295nm,0.7s
KBL Kabul 63.70 314 P **P** **01 01 51.2 +0.4**
RER Riviere de l'E 63.75 250 IAmb IAmb 01 01 54.9
comp=Z,98nm,1.0s
KZA Kyzart 63.92 324 P **P** **01 01 53.5 +1.2**
SNR=116
UCH Uchtor 64.44 324 P **P** **01 01 56.6 +0.9**
SNR=116
KBK Karagaybulak 64.46 324 P **P** **01 01 56.4 +0.9**
SNR=175
AAK Ala-Archa 64.71 324 P **P** **01 01 58.0 +1.0**
comp=Z,142nm,0.6s,baz=126,slow=5.3,SNR=491
AAK S **S** **01 09 52.4 +0.2**
comp=Z,3.9nm,0.9s,baz=316,slow=20,SNR=10
AAK Ala-Archa 64.71 324 P **P** **01 01 58.1 +1.0**
SNR=224
AAK Ala-Archa 64.71 324 *i* P **P** **01 01 58.1 +1.0**
SNR=310
AAK Ala-Archa 64.71 324 P **P** **01 01 58.0 +1.0**
AAK IAmb IAmb 01 01 59.4
comp=Z,181nm,0.8s
AAK PcP **PcP** **01 02 24.7 +0.2**
FRU1 Bishkek 64.73 324 IAmb IAmb 01 01 59.2
comp=Z,200nm,1.4s
CHMS Chumysh 64.78 325 P **P** **01 01 57.5 +0.2**
SNR=36
AML Almayashu 64.87 323 P **P** **01 01 59.2 +0.9**
SNR=26
BOD Bodaibo 64.94 356 eP **P** **01 01 58.2 +0.3**
BOD pmax pmax
comp=Z,121nm,1.2s
USP Ospenovka 65.09 325 P **P** **01 01 59.9 +0.6**
SNR=12
EKS2 Erkin-Say 65.14 324 P **P** **01 02 00.7 +1.1**
SNR=226
SKR Severo-Kuril's 65.38 24 *i* P **P** **01 02 01.5 +0.8**
BTK Batken 65.43 320 IAmb IAmb 01 02 04.4
comp=Z,276nm,1.3s
WBK Wadi Bani Khal 66.87 298 P **P** **01 02 11.1 +0.4**
SNR=13
AFI Afiamalu 66.95 102 P **P** **01 02 12.9 +1.6**
comp=Z,38nm,0.8s,baz=270,slow=15,SNR=6.4
MHTO MHTO 67.25 296 P **P** **01 02 12.7 -0.2**
SNR=17
DQM DQM 67.32 295 P **P** **01 02 13.6 +0.1**
SNR=6.2
KK31 Karatay Array 67.34 323 eP **P** **01 02 13.3 +0.2**
KK31 Karatay Array 67.34 323 IAmb IAmb 01 02 15.4
comp=Z,105nm,1.1s
KKAR Karatay Array 67.34 323 IAmb IAmb 01 02 15.4
comp=Z,105nm,1.1s
WSAR Wadi Sarin 67.37 299 P **P** **01 02 14.1 +0.4**
comp=Z,106nm,0.6s,baz=136,slow=6.1,SNR=197
WSAR Wadi Sarin 67.37 299 P **P** **01 02 14.3 +0.7**
SNR=32
JMDO Jabal Madar 67.55 298 P **P** **01 02 14.9 0.0**
SNR=13
ZALV Zalesovo Beam 67.78 338 P **P** **01 02 15.2 -0.2**
comp=Z,389nm,0.4s,baz=139,slow=4.8,SNR=1453
ZALV S **S** **01 10 23.9 -3.7**
comp=Z,23nm,0.9s,baz=134,slow=10,SNR=23
ZALV PKPPKP 01 30 28.6
comp=Z,0.7nm,0.3s,baz=298,slow=3.2,SNR=5.0
SMDO Samad 67.82 298 P **P** **01 02 16.8 +0.3**
SNR=21
KNTN Kanton 67.82 90 P **P** **01 02 18.2 +1.6**
KNTN IAmb IAmb 01 02 19.7
comp=Z,88nm,1.1s
PEA0B Petropavlovsk- 67.86 23 *i* P **P** **01 02 17.3 +1.3**
PEA0B Petropavlovsk- 67.86 23 IAmb IAmb 01 02 18.5
comp=Z,99nm,0.7s
PETK Petropavlovsk- 67.86 23 P **P** **01 02 17.2 +1.1**
comp=Z,101nm,0.8s,baz=218,slow=2.6,SNR=117
KURBB Kurchatov Arra 67.89 333 S **S** **01 10 23.2 -5.8**
comp=Z,1.8nm,1.0s,baz=139,slow=12,SNR=6.2
BIDO Bidbid 67.89 299 P **P** **01 02 17.5 +0.7**
SNR=41
KURK Kurchatov 67.92 333*ce* P **P** **01 02 16.6 +0.2**
KURK pmax pmax
comp=Z,306nm,0.9s
KURK Kurchatov 67.92 333 P **P** **01 02 16.9 +0.6**
PET Petropavlovsk 68.18 24 P **P** **01 02 18.7 +0.8**
PET pmax pmax
comp=Z,98nm,1.0s
PET Petropavlovsk 68.18 24 P **P** **01 02 18.7 +0.8**
PET IAmb IAmb 01 02 20.3
comp=Z,98nm,1.0s
BSY Bisya 68.46 298 P **P** **01 02 20.3 0.0**
SNR=14
SHAO Shalim 68.53 292 *i* P **P** **01 02 21.0 +0.2**
SNR=29
HOQ Hoqain 68.62 299 P **P** **01 02 21.8 +0.5**
SNR=26
SOCY Socotra 68.65 286 IAmb IAmb 01 02 23.0
comp=Z,184nm,0.8s
SOCY Socotra 68.65 286 P **P** **01 02 21.8 +0.1**
SNR=5.8
ARQ Araqi 69.24 298 P **P** **01 02 26.3 +1.3**
SNR=9.7
YAK Yakutsk 69.34 5*d* iP **P** **01 02 24.6 -0.1**
YAK *e* 01 02 43.9
YAK eS **S** **01 10 40.9 -4.3**
YAK *e* 01 11 24.5
YAK eSS **SS** **01 15 26.6 -2.0**
YAK pmax pmax
comp=Z,149nm,0.8s
YAK pmax pmax
comp=N,73nm,1.1s
YAK smax smax
comp=N,208nm,2.3s
YAK smax smax
comp=E,45nm,1.4s
YAK Yakutsk 69.34 5 P **P** **01 02 24.9 +0.2**
comp=E,89nm,0.7s,baz=113,slow=0.2,SNR=40
YAK Yakutsk 69.34 5 IAmb IAmb 01 02 26.0
comp=Z,192nm,0.9s
SOHO SOHO 69.47 299 P **P** **01 02 26.4 +0.1**
SNR=26
RBK Rabkut 69.70 292 P **P** **01 02 28.2 +0.3**
SNR=7.3
UOSS Minazif 70.01 300 *i* P **P** **01 02 29.5 0.0**
SNR=28
UOSS Minazif 70.01 300 P **P** **01 02 29.7 +0.2**
UOSS IAmb IAmb 01 02 30.8
comp=Z,72nm,0.8s
HATD Hatta, Dubai 70.03 300 *i* P **P** **01 02 30.1 +0.4**
SNR=79
HATD Hatta, Dubai 70.03 300 P **P** **01 02 30.2 +0.6**
SNR=35
MDH Madha 70.04 300 *i* P **P** **01 02 28.8 -0.9**
SNR=15
MDH Madha 70.04 300 P **P** **01 02 28.5 -1.2**
SNR=9.9
ASHO Ashiyiah 70.05 299 *i* P **P** **01 02 30.2 +0.4**
SNR=81
ASHO Ashiyiah 70.05 299 P **P** **01 02 30.3 +0.4**
SNR=36
WHFO Wadi Hawf 70.20 292 P **P** **01 02 30.3 -0.5**
SNR=15
BANOM Banah 70.23 301 *i* P **P** **01 02 31.2 +0.3**
SNR=21
BANOM Banah 70.23 301 P **P** **01 02 31.4 +0.5**
SNR=14
FAQ Al Faqa, Dubai 70.48 299 *i* P **P** **01 02 32.6 +0.3**
SNR=19
FAQ Al Faqa, Dubai 70.48 299 P **P** **01 02 32.8 +0.5**
SNR=9.7
NAZ Nazwa, Dubai 70.49 300 *i* P **P** **01 02 32.4 +0.1**
SNR=34
NAZ Nazwa, Dubai 70.49 300 P **P** **01 02 32.6 +0.3**
SNR=25
ABTO Aybut 70.50 291 P **P** **01 02 32.8 +0.2**
SNR=17
ASUD Al Ashush, Dub 70.67 299 *i* P **P** **01 02 34.1 +0.7**
SNR=60
ASUD Al Ashush, Dub 70.67 299 P **P** **01 02 34.1 +0.7**
SNR=19
MA2 Magadan 70.79 16*ce* P **P** **01 02 34.2 +0.9**
MA2 pmax pmax
comp=Z,165nm,1.0s
MA2 Magadan 70.79 16 P **P** **01 02 34.5 +1.1**
comp=Z,123nm,0.6s,baz=188,slow=5.2,SNR=59
MA2 Magadan 70.79 16 P **P** **01 02 34.8 +1.4**
MA2 IAmb IAmb 01 02 35.9
comp=Z,157nm,0.8s
MAW Mawson 71.42 200 P **P** **01 02 37.8 +0.9**
comp=Z,6.7nm,0.9s,baz=73,slow=9.2,SNR=8.8
ABPO Ambohimpanom 71.73 252 P **P** **01 02 39.8 -0.2**
ABPO pmax pmax
comp=Z,20nm,0.8s
ABPO Ambohimpanom 71.73 252 P **P** **01 02 39.8 -0.2**
OPO Ambohidratompo 71.78 253 P **P** **01 02 41.1 +0.8**
comp=Z,42nm,0.7s,baz=85,slow=3.8,SNR=54
GEYT Alibeck 73.10 313 P **P** **01 02 48.2 +1.0**
comp=Z,96nm,0.6s,baz=149,slow=4.3,SNR=228
GYA0B ALIBECK ARRAY 73.10 313 IAmb IAmb 01 02 49.7
comp=Z,156nm,0.9s
BVAR Borovoye Array 73.28 331 S **S** **01 11 25.3 -4.4**
comp=Z,8.8nm,1.0s,baz=96,slow=14,SNR=13
BRVK Borovoye 73.35 331 P **P** **01 02 48.5 +0.2**
BRVK pmax pmax
comp=Z,128nm,0.9s
BRVK Borovoye 73.35 331 P **P** **01 02 48.5 +0.2**
BRVK IAmb IAmb 01 02 49.8
comp=Z,128nm,0.8s
VNDA Vanda 73.62 171 P **P** **01 02 49.9 +0.5**
comp=Z,7.1nm,0.3s,baz=313,slow=6.2,SNR=101
SEY Seymchan 74.04 15 *i* P **P** **01 02 52.6 +0.6**
SEY Seymchan 74.04 15 P **P** **01 02 53.2 +1.2**
comp=Z,105nm,0.5s,baz=215,slow=4.9,SNR=247
SMY Shemya 75.02 31 IAmb IAmb 01 02 60.0
comp=Z,194nm,0.9s
AB31 Akbulak array 76.80 324 *i* P **P** **01 03 07.5 0.0**
ABKAR Akbulak array 76.80 324 IAmb IAmb 01 03 08.8
comp=Z,99nm,0.6s
DAMY Dhamar 78.28 286 IAmb IAmb 01 03 20.3
comp=Z,155nm,1.0s
DAMY Dhamar 78.28 286 P **P** **01 03 18.9 +2.3**
SNR=9.3
TIXI Tiksi 78.83 3*ce* P **P** **01 03 17.4 -0.5**
TIXI pmax pmax
comp=Z,148nm,0.9s
TIXI Tiksi 78.83 3 P **P** **01 03 17.7 -0.3**
comp=Z,129nm,0.8s,baz=180,slow=24,SNR=158
TIXI S **S** **01 12 23.9 -4.1**
comp=Z,1.3nm,0.4s,baz=360,slow=24,SNR=6.4
TIXI Tiksi 78.83 3 P **P** **01 03 17.5 -0.4**
TIXI IAmb IAmb 01 03 19.0
comp=Z,140nm,0.8s
RAYN Ar Rayn 79.05 296 P **P** **01 03 21.0 +0.7**
RAYN pmax pmax
comp=Z,138nm,0.8s
RAYN Ar Rayn 79.05 296 *i* P **P** **01 03 21.0 +0.7**
SNR=34
RAYN Ar Rayn 79.05 296 P **P** **01 03 21.0 +0.7**
RAYN IAmb IAmb 01 03 22.5
comp=Z,138nm,0.8s
ADK Adak 79.50 34 P **P** **01 03 22.6 +0.7**
ADK pmax pmax
comp=Z,120nm,1.3s
ADK Adak 79.50 34 P **P** **01 03 22.6 +0.7**
ADK IAmb IAmb 01 03 24.5
comp=Z,120nm,1.2s
SYO Syowa Base 80.05 201⇓ *e* P **P** **01 03 23.5 -1.0**
SVE Sverdlovsk 80.06 331*c* iP **P** **01 03 24.6 -0.2**
SVE eS **S** **01 12 36.8 -4.5**
SVE pmax pmax
comp=Z,93nm,0.6s
ARU Arti 80.88 330*d* iP **P** **01 03 28.3 -0.7**
ARU 01 06 42.4
ARU S **S** **01 12 49.2 -0.4**
ARU SS **SS** **01 18 25.2 +3.8**
ARU pmax pmax
comp=Z,161nm,1.4s
ARU Arti 80.88 330 P **P** **01 03 28.4 -0.7**
ARU IAmb IAmb 01 03 29.7
comp=Z,161nm,1.3s
BILL Bilibino 81.66 16 *e* P **P** **01 03 33.0 +0.3**
BILL *e**PP **pP** **01 05 32.5 -4.6**
BILL *e**SP **sP** **01 06 35.7 -1.0**
BILL *e* 01 06 50.8
BILL *e*PPP PPP 01 08 47.0
BILL pmax pmax
comp=Z,13nm,0.8s
BILL Bilibino 81.66 16 P **P** **01 03 32.5 -0.2**
AKT Akhty 81.84 314 *e*P **P** **01 03 35.4 +1.0**
AKT pmax pmax
comp=Z,140nm,0.7s
KIBK Kibwezi 82.03 269 P **P** **01 03 37.0 +1.1**
SNR=7.1
QSPA South Pole Qui 82.85 180 P **P** **01 03 39.0 0.0**
comp=Z,7.3nm,0.5s,baz=307,slow=0.4,SNR=49
QSPA pP **pP** **01 05 43.3 -1.3**
comp=Z,13nm,1.1s,baz=37,slow=1.8,SNR=5.7
QSPA S **S** **01 13 01.9 -7.3**
comp=Z,4.0nm,1.0s,baz=302,slow=2.3,SNR=4.4
QSPA South Pole Qui 82.85 180 P **P** **01 03 39.3 +0.3**
KMBO Kilima Mbogo 82.96 270 P **P** **01 03 42.0 +1.2**
KMBO pmax pmax
comp=Z,47nm,1.1s
KMBO Kilima Mbogo 82.96 270 P **P** **01 03 41.9 +1.2**
comp=Z,26nm,0.9s,baz=68,slow=7.2,SNR=51
KMBO Kilima Mbogo 82.96 270 *i* P **P** **01 03 42.0 +1.2**
SNR=29
KMBO Kilima Mbogo 82.96 270 P **P** **01 03 42.0 +1.2**
GNI Garni 83.66 312*d* iP **P** **01 03 44.5 +0.9**
GNI pmax pmax
comp=Z,216nm,1.1s
GNI Garni 83.66 312 *i* P **P** **01 03 45.6 +2.0**
SNR=15
GNI Garni 83.66 312 P **P** **01 03 45.0 +1.4**
GNI IAmb IAmb 01 03 52.5
comp=Z,61nm,0.8s
GROC Groznyy 83.70 315 eP **P** **01 03 42.4 -1.1**
GROC e*SP **sP** **01 06 49.3 +1.0**
GROC *e* 01 07 06.8
GROC eS **S** **01 13 15.4 -2.7**
GROC pmax pmax
comp=Z,139nm,0.9s
CUKT Cukurca 83.80 309 eP **P** **01 03 45.0 +0.6**
TASB TASBURUN-IGDIR 83.99 311 eP **P** **01 03 46.6 +1.5**
CLDR Caldiran 84.02 311 eP **P** **01 03 47.1 +1.6**
VANB Van 84.29 310 eP **P** **01 03 47.6 +0.9**
AKDM Akdamar-Van 84.54 310 eP **P** **01 03 48.4 +0.4**
SIRT Sirnak 84.77 309 eP **P** **01 03 49.6 +0.6**
AGRB Hanur-Agry 84.82 311 eP **P** **01 03 50.9 +1.5**
AKH Akhalkalaki 84.89 313 IAmb IAmb 01 03 52.7
comp=Z,161nm,0.8s
ZEI Tsey 84.93 314 eP **P** **01 03 48.8 -1.1**
ZEI pmax pmax
comp=Z,90nm,0.6s
MLAZ Malazgirt-MUS 85.05 310 eP **P** **01 03 51.9 +1.4**
GURO Guroymak-BITLI 85.31 310 eP **P** **01 03 53.2 +1.5**
LODK Lodwar 85.40 274 P **P** **01 03 53.9 +1.3**
SNR=12
SENK Senkaya-Erzuru 85.53 312 eP **P** **01 03 54.6 +1.8**
KOPR Koprukoy-ERZUR 85.77 311 eP **P** **01 03 55.2 +1.3**
SVAN Silvan-Diyarba 85.87 309 eP **P** **01 03 54.3 +0.1**
KBZ Khabaz 85.87 315*d* iP **P** **01 03 54.3 +0.3**
KBZ Khabaz 85.87 315 P **P** **01 03 54.6 +0.6**
comp=Z,56nm,0.8s,baz=104,slow=3.6,SNR=72
KBZ PKKPbc **PKKPbc** **01 21 51.6 -0.9**
comp=Z,3.8nm,0.9s,baz=238,slow=9.5,SNR=6.0
NEY Neytrino 85.88 314*c* iP **P** **01 03 54.2 -0.2**
NEY pmax pmax
comp=Z,24nm,1.2s
VRTB Varto-Mus 85.89 310 eP **P** **01 03 55.5 +1.1**
SHA1 Shidzhatmaz 86.04 315*d* iP **P** **01 03 55.0 -0.2**
KIV Kislovodsk 86.08 315 eP **P** **01 03 54.6 -0.5**
KIV pmax pmax
comp=Z,117nm,1.0s
KIV MLR MLR
comp=Z,155nm,20.0s
KIV Kislovodsk 86.08 315 *i* P **P** **01 03 56.2 +1.1**
SNR=12
KIV Kislovodsk 86.08 315 P **P** **01 03 56.2 +1.1**
GOF Gofitskoye 86.09 316⇑ *i* P **P** **01 03 56.4 +1.3**
GOF pmax pmax
comp=Z,231nm,1.0s
KARO Karlova-Bingo 86.23 310 eP **P** **01 03 57.2 +1.1**
MAZI Mazidag 86.30 308 eP **P** **01 03 57.3 +0.9**
BNGB Bingl 86.44 310 eP **P** **01 03 56.4 -0.6**
YEDI Yedisu-Bingol 86.64 310 eP **P** **01 03 58.6 +0.6**
DYBB Diyarbakir 86.64 309 eP **P** **01 03 58.0 +0.1**
URFA Urfa 87.57 308 eP **P** **01 04 02.9 +0.6**
MALT Malatya 88.04 309 eP **P** **01 04 05.5 +1.0**
VRH Novokhopyorsk 88.41 322 eP **P** **01 04 05.1 -0.6**
VRH *e* 01 13 36.3
VRH eS **S** **01 13 59.3 -2.9**
VRH pmax pmax
comp=Z,110nm,0.6s
VRH smax smax
comp=E,110nm,1.2s
GAZ Gaziantep 88.78 308 IAmb IAmb 01 04 09.9
comp=Z,42nm,0.7s
PRGR Permogore 89.03 333⇑ *i* P **P** **01 04 07.6 -0.8**
PRGR eS **SKSac** **01 13 38.0 -4.0**
PRGR pmax pmax
comp=Z,46nm,0.7s
KMRS Kahramanmaras 89.08 308 eP **P** **01 04 09.8 +0.5**
MATP Matopo 89.22 250 *i* P **P** **01 04 11.2 +0.8**
MATP Matopo 89.22 250 *i* **P** **01 04 11.2 +0.8**
baz=91,slow=5.1
MATP *i* P **P** **01 04 11.2 +0.8**
MATP Matopo 89.22 250 *i* P **P** **01 04 09.7 -0.7**
NVL N'lazarevskaya 89.30 198 eP **P** **01 04 10.1 +0.6**
NVL eS **SKSac** **01 13 39.7 -3.7**
NVL pmax pmax
comp=Z,21nm,1.1s
MBAR Mbarara 89.49 269 P **P** **01 04 12.8 +1.0**
MBAR pmax pmax
comp=Z,26nm,0.9s
MBAR Mbarara 89.49 269 P **P** **01 04 12.8 +1.0**
MBAR IAmb IAmb 01 04 14.0
comp=Z,26nm,0.8s
TOKT Tokat 89.82 311 eP **P** **01 04 12.7 0.0**
VORD Divnogorie 89.85 321 eP **P** **01 04 11.6 -0.8**
VORD pmax pmax
comp=Z,40nm,0.6s
KOZT Kozan 89.92 308 eP **P** **01 04 11.3 -1.8**
ANN Anapa 89.93 315 eP **P** **01 04 12.3 -0.7**
ANN pmax pmax
comp=Z,81nm,0.8s
VSR Storozhevoye 89.98 322 eP **P** **01 04 11.7 -1.3**
VSR *e* 01 13 45.8
VSR eS **S** **01 14 12.7 -3.7**
VSR pmax pmax
comp=Z,70nm,0.6s
VSR smax smax
comp=N,50nm,1.2s
LSZ Lusaka 90.17 255 *i* P **P** **01 04 15.8 +0.9**
LSZ Lusaka 90.17 255 *i* P **P** **01 04 13.8 -1.1**
KVT Kavak 90.32 311 eP **P** **01 04 15.0 +0.1**
LPSR Galich'ya Gora 90.40 323 eP **P** **01 04 14.4 -0.5**
LPSR pmax pmax
comp=Z,50nm,0.7s
BOSA Boshof 91.02 241 *i* P **P** **01 04 19.7 +1.1**
BOSA Boshof 91.02 241 *i* P **P** **01 04 19.7 +1.1**
BOSA *i* 01 04 19.7
BOSA Boshof 91.02 241 P **P** **01 04 18.9 +0.3**
comp=Z,21nm,0.7s,baz=95,slow=3.9,SNR=55
BOSA pP **pP** **01 06 26.9 +0.3**
comp=Z,5.8nm,0.9s,baz=95,slow=5.0,SNR=5.5
BOSA PKKPbc **PKKPbc** **01 21 40.1 +0.5**
comp=Z,2.6nm,1.0s,baz=257,slow=6.1,SNR=4.7
BOSA Boshof 91.02 241 *i* P **P** **01 04 17.8 -0.8**
BOSA Boshof 91.02 241 IAmb IAmb 01 04 20.4
comp=Z,27nm,0.8s
KEBE Keben-Mersin 91.45 306 eP **P** **01 04 19.7 -0.6**
CSS Mathiatis 91.56 305 IAmb IAmb 01 04 22.0
comp=Z,24nm,0.8s
YESY Yesilyurt 91.60 308 eP **P** **01 04 21.1 +0.1**
KLMR Klimovskoe 91.70 331 eP **P** **01 04 19.4 -1.3**
KLMR e*PP **pP** **01 06 28.5 -0.3**
KLMR pmax pmax
comp=Z,41nm,0.6s
KLMR Klimovskoe 91.70 331 eP **P** **01 04 19.5 -1.3**
KLMR AMP 01 04 21.0
comp=Z,41nm,0.6s
KLMR e*pP **pP** **01 06 28.6 -0.3**
MOS Moscow 91.73 326 eP **P** **01 04 18.1 -2.9**
MOS e*PP **pP** **01 06 28.5 -0.5**
MOS *e* 01 07 20.8
MOS *e* 01 08 07.5

MOS eS SKSac 01 13 54.2 -3.3
MOS pmax pmax
comp=Z,106nm,0.6s
MOS pmax pmax
comp=Z,100nm,0.7s
SULT Sultanhani-AKS 91.84 308 *e*P **P 01 04 21.6 -0.5**
BR131 Keskin Array S 91.94 310 IAmb IAmb 01 04 23.3
comp=Z,35nm,0.9s
BR131 Keskin Array S 91.94 310 P P **01 04 22.2 -0.4**
SNR=16
BRTR Keskin Array B 91.94 310 *ce*P **P 01 04 21.8 -0.8**
BRTR pmax pmax
comp=Z,27nm,0.9s
BRTR Keskin Array B 91.94 310 P **P 01 04 21.9 -0.7**
comp=Z,27nm,0.9s,baz=128,slow=4.8,SNR=111
BRTR PP **PP 01 08 11.8 -1.1**
comp=Z,1.8nm,0.8s,baz=105,slow=6.3,SNR=4.6
OBN Obninsk 92.22 325 *d*/*e*P **P 01 04 22.6 -0.6**
OBN *e**PP **pP 01 06 32.7 +1.4**
OBN *e* 01 08 14.5
OBN pmax pmax
comp=Z,61nm,0.9s
OBN Obninsk 92.22 325 P **P 01 04 23.1 -0.2**
SIM Simferopol' 92.29 315 *de*P **P 01 04 23.6 -0.2**
SIM pmax pmax
comp=Z,23nm,1.0s
AFSR Afar-Bala (An 92.34 309 *e*P **P 01 04 23.4 -1.0**
ANTO Ankara 92.61 310 P **P 01 04 25.4 -0.1**
ANTO pmax pmax
comp=Z,29nm,0.9s
ANTO Ankara 92.61 310 P P **01 04 25.4 -0.1**
ANTO IAmb IAmb 01 04 26.6
comp=Z,29nm,0.9s
LADK Ladik-KONYA 92.74 308 *e*P **P 01 04 26.1 -0.1**
TMCR Tamitsa 93.00 334 *e*P **P 01 04 24.6 -2.0**
TMCR pmax pmax
comp=Z,67nm,0.8s
SNAA Sanae 93.13 195 P **P 01 04 28.1 +0.9**
KIZT Kizilcal 93.19 309 *e*P **P 01 04 26.1 -2.2**
TTA Tatalina 93.43 27 IAmb IAmb 01 04 30.4
comp=Z,30nm,1.1s
SUR Sutherland 94.16 237 P **P 01 04 34.4 +1.4**
SUR IAmb IAmb 01 04 35.9
comp=Z,50nm,1.2s
KDAK Kodiak Island 94.44 32 P **P 01 04 33.2 -0.1**
KDAK pmax pmax
comp=Z,120nm,1.5s
KDAK Kodiak Island 94.44 32 P **P 01 04 32.9 -0.4**
comp=Z,13nm,0.7s,baz=208,slow=7.5,SNR=7.0
KDAK Kodiak Island 94.44 32 P **P 01 04 33.2 -0.1**
VNA3 Neumayer Olymp 95.13 194 P **P 01 04 37.4 +1.1**
VNA1 Neumayer--Stat 95.16 195 P **P 01 04 37.7 +1.4**
SKT Skwentna 95.38 28 IAmb IAmb 01 04 37.6
comp=Z,45nm,1.1s
KTH Kantishna Hill 95.79 27 IAmb IAmb 01 04 40.9
comp=Z,35nm,1.1s
BPAW Bear Paw Mtn. 95.80 26 IAmb IAmb 01 04 40.5
comp=Z,15nm,0.6s
JURR Jurilovca 95.97 314 ⇑P **P 01 04 40.0 -0.6**
TLCR 96.05 315 ⇑P **P 01 04 40.7 -0.2**
TLCR 96.05 315 ⇑P **P 01 04 40.7 -0.2**
TRF Thorofare Moun 96.07 27 IAmb IAmb 01 04 41.4
comp=Z,29nm,1.0s
MANR Mangalia 96.11 313 ⇓P **P 01 04 40.9 -0.3**
AKASG Malin Array Be 96.14 320 *ce*P **P 01 04 40.0 -1.2**
AKASG pmax pmax
comp=Z,13nm,0.6s
AKASG Malin Array Be 96.14 320 P **P 01 04 40.0 -1.2**
comp=Z,8.7nm,0.6s,baz=78,slow=4.6,SNR=38
AKASG PP **PP 01 08 45.1 +0.7**
comp=Z,5.3nm,0.8s,baz=78,slow=6.7,SNR=13
AKASG PKiKP **PKiKP 01 09 15.7 +0.2**
comp=Z,1.5nm,0.4s,baz=70,slow=2.5,SNR=7.3
AKASG PKKP **PKKPdf 01 21 25.0 -2.0**
comp=Z,0.3nm,0.3s,baz=267,slow=3.4,SNR=4.4
AKBB Malin Array Si 96.14 320 IAmb IAmb 01 04 41.3
comp=Z,20nm,0.8s
TIRR Tirgusor 96.28 314 IAmb IAmb 01 04 42.6
comp=Z,32nm,0.8s
COLD Coldfoot 96.33 23 IAmb IAmb 01 04 44.1
comp=Z,28nm,1.3s
TOPG Topolog 96.34 314 ⇑P **P 01 04 41.4 -0.8**
PMR Palmer 96.50 29 IAmb IAmb 01 04 43.1
comp=Z,31nm,1.1s
CFR Carcaliu 96.53 315 ⇓P **P 01 04 42.5 -0.5**
CFR Carcaliu 96.53 315 ⇓P **P 01 04 42.5 -0.5**
SORM Soroca 96.56 318 ⇑P **P 01 04 42.1 -1.0**
SORM Soroca 96.56 318 ⇑P **P 01 04 42.1 -1.0**
MCK McKinley 96.69 27 IAmb IAmb 01 04 44.1
comp=Z,38nm,0.9s
ICOR Ion Corvin 96.70 314 ⇓P **P 01 04 44.6 +0.8**
WRH Wood River Hil 97.08 26 IAmb IAmb 01 04 45.8
comp=Z,51nm,1.2s
GHRR 97.09 316 ⇑P **P 01 04 46.2 +0.7**
CCB Clear Creek Bu 97.21 26 IAmb IAmb 01 04 46.2
comp=Z,19nm,0.7s
POKR Poker Plat Res 97.38 25 P **P 01 04 46.4 0.0**
baz=269
VRI Vrincioaia 97.55 315 ⇑P **P 01 04 47.7 +0.1**
VRI Vrincioaia 97.55 315 ⇑P **P 01 04 47.7 +0.1**
HDA Harding Lake 97.58 26 P Pdif 01 04 47.2 -0.1
baz=269
PLOR Plostina 97.61 315 ⇑P Pdif 01 04 47.8 -0.1
PLOR Plostina 97.61 315 ⇑P Pdif 01 04 47.8 -0.1
ILAR Eielson Array 97.61 26 P Pdif 01 04 46.2 -1.2
comp=Z,2.1nm,0.5s,baz=253,slow=4.3,SNR=49
ILAR PKiKP **PKiKP 01 09 17.4 -0.3**
comp=Z,0.7nm,0.5s,baz=252,slow=4.2,SNR=4.5
ILAR PKKPbc **PKKPbc 01 21 21.7 -1.9**
comp=Z,3.0nm,0.8s,baz=93,slow=1.7,SNR=21
TESR Tescani 97.63 316 ⇑P **P 01 04 48.5 +0.5**
VSU Vasula 97.89 328 *ce*P Pdif 01 04 48.0 -0.8
VSU pmax pmax
comp=Z,115nm,0.9s
PRAR RASCA 97.95 317 ⇓P **P 01 04 49.6 +0.2**
BIZ Bicaz 98.02 316 ⇑P **P 01 04 49.9 +0.1**
ELND Elena 98.04 312 ⇑P Pdif 01 04 49.7 -0.2
MLR Muntele Rosu 98.08 315 ⇑P Pdif 01 04 50.0 -0.2
MLR Muntele Rosu 98.08 315 ⇑P Pdif 01 04 50.0 -0.2
MLR Muntele Rosu 98.08 315 IAmb IAmb 01 04 51.2
comp=Z,14nm,1.0s
FIA1 FINESS Array S 98.24 331 IAmb IAmb 01 04 50.9
comp=Z,19nm,0.8s
FINES FINESS Array B 98.24 331 *i* P Pdif 01 04 50.0 -0.3
FINES pmax pmax
comp=Z,12nm,0.6s
FINES FINESS Array B 98.24 331 P Pdif 01 04 49.5 -0.7
comp=Z,12nm,0.6s,baz=73,slow=5.0,SNR=41
FINES PKiKP **PKiKP 01 09 19.5 +0.6**
comp=Z,2.5nm,0.5s,baz=110,slow=3.5,SNR=19
FINES PKKPbc **PKKPbc 01 21 19.6 -2.1**
comp=Z,0.7nm,0.5s,baz=207,slow=2.1,SNR=5.6
ARCES ARCESS Array B 98.32 339 P Pdif 01 04 49.9 -0.6
comp=Z,18nm,0.9s,baz=86,slow=7.5,SNR=29
ARCES PKiKP **PKiKP 01 09 19.2 +0.3**
comp=Z,1.4nm,0.5s,baz=137,slow=1.1,SNR=11
ARE0 ARCESS Array S 98.32 339 *e*P Pdif 01 04 49.9 -0.6
COPA Copaceanca 98.56 314 ⇑P **P 01 04 52.2 0.0**
BURAR Bucovina Array 98.64 317 ⇑P **P 01 04 53.0 +0.4**
BURAR Bucovina Array 98.64 317 ⇑P **P 01 04 53.0 +0.4**
BUR08 Bucovina Ar. S 98.66 317 IAmb IAmb 01 04 54.0
comp=Z,10nm,0.8s
HUMR Humele 98.74 314 ⇓P **P 01 04 53.0 0.0**
SCRK Sand Creek 98.88 26 IAmb IAmb 01 04 54.8
comp=Z,10nm,0.8s
HAMF Hammerfest 98.88 340 *e*P Pdif 01 04 52.8 -0.2
PLVB Pleven 98.97 313 ⇑P Pdif 01 04 53.4 -0.6
ARR Arges 99.00 315 ⇓P **Pdif 01 04 54.6 +0.4**
VLAD Vladila 99.14 313 ⇑P **Pdif 01 04 55.0 +0.3**
KTK1 Kautokeino 99.15 339 *e*P **Pdif 01 04 53.8 -0.4**
ARCR ARCALIA 99.22 316 ⇓P **Pdif 01 04 56.3 +1.2**
LVV L'vov 99.45 319 *e*P **Pdif 01 04 56.2 +0.2**
SPA0 Spitsbergen Ar 99.79 348 *e*P **Pdif 01 04 56.1 -0.8**
SUW Suwalki 99.91 324 *e*P **Pdif 01 04 58.0 +0.1**
SUW Suwalki 99.91 324 *e*P **Pdif 01 04 58.0 +0.1**
VTS Vitosha 99.98 312 ⇑P **Pdif 01 04 58.2 -0.5**
VTS Vitosha 99.98 312 ⇑P **Pdif 01 04 58.2 -0.5**
DEV Deva 100.22 315 ⇓P **Pdif 01 05 00.7 +1.2**
DEV Deva 100.22 315 ⇓P **Pdif 01 05 00.7 +1.2**
KWP Kalwaria Pacla 100.31 319 *e*P **Pdif 01 05 00.8 +1.0**
KWP Kalwaria Pacla 100.31 319 *e*P **Pdif 01 05 00.8 +1.0**
GZR Gura Zlata 100.31 315 ⇓P **Pdif 01 05 00.9 +0.9**
GZR Gura Zlata 100.31 315 ⇓P **Pdif 01 05 00.9 +0.9**
TRPA Tarpa 100.45 318 ⇓P **Pdif 01 05 00.5 +0.1**

KBS Kingsbay 100.45 349 *e*P **Pdif 01 04 58.8 -1.0**
HERR Herculane 100.57 314 ⇑P **Pdif 01 05 00.8 -0.2**
UZH Uzhgorod 100.60 318 *e*P **Pdif 01 05 03.0 +1.9**
TRO Tromso 100.61 340 *e*P **Pdif 01 04 59.5 -1.1**
KOLS Kolonicke sedl 100.61 318 *e*P **Pdif 01 05 02.1 +0.9**
KOLS Kolonicke sedl 100.61 318 *e*PDIFF **Pdif 01 05 02.0 +0.9**
MDVR Moldovita 101.07 314 ⇑P **Pdif 01 05 03.2 -0.2**
BZS Buzias 101.13 315 ⇑P **Pdif 01 05 03.5 0.0**
BZS Buzias 101.13 315 ⇑P **Pdif 01 05 03.5 0.0**
EPYK Eagle Plains 101.70 24 P **Pdif 01 05 06.5 +0.9**
baz=279
NIE Niedzica 101.88 319 *e*P **Pdif 01 05 07.8 +1.0**
NIE Niedzica 101.88 319 *e*P **Pdif 01 05 07.8 +1.0**
STEI Steigen 102.22 338 *e*P **Pdif 01 05 07.2 -0.6**
INK Inuvik 102.55 21 Pdiff **Pdif 01 05 10.0 +0.7**
comp=Z,4.7nm,0.7s,baz=303,slow=3.8,SNR=24
INK PKiKP **PKiKP 01 09 26.5 0.0**
comp=Z,2.7nm,0.7s,baz=317,slow=3.1,SNR=7.8
INK PKKPbc **PKKPbc 01 21 07.0 -2.8**
comp=Z,2.6nm,0.8s,baz=79,slow=5.7,SNR=8.8
LOF Lofoten 102.80 338 *e*P **Pdif 01 05 10.0 -0.4**
MOR8 Moi Rana 102.88 336 *e*P **Pdif 01 05 09.9 -0.9**
VYHS Vyhne 102.90 318 *e*P **Pdif 01 05 11.8 +0.4**
VYHS Vyhne 102.90 318 *e*PDIFF **Pdif 01 05 11.8 +0.4**
NOR Nord 103.22 354 *i* P **Pdif 01 05 12.1 0.0**
comp=Z,12nm,1.1s
NSS Namsos 104.25 335 *e*P **Pdif 01 05 16.5 -0.5**
CONA Conrad Observa 104.93 318 *i* PKKPbc PKKPbc 01 21 01.6 -0.6
comp=Z,2.5nm,0.5s
ARSA Arzberg 105.23 317 *i* PKiKP **PKiKP 01 09 32.5 +0.3**
comp=Z,1.4nm,0.4s
NC602 NORSAR Array S 105.32 331 *e*P **Pdif 01 05 21.2 -0.6**
NB2 NORSAR Subarra 105.41 332 P **Pdif 01 05 21.5 -0.8**
comp=Z,3.1nm,0.6s,baz=75,slow=4.4
NB2 NORSAR Subarra 105.41 332 P **Pdif 01 05 21.5 -0.8**
baz=75,slow=4.4
NOA NORSAR Array B 105.41 332 Pdiff **Pdif 01 05 21.6 -0.6**
comp=Z,5.3nm,0.8s,baz=76,slow=4.5,SNR=17
C36M Paulatuk 105.53 19 P **PKiKP 01 09 33.2 +1.2**
baz=292
SOKA Soboth 105.62 316 *i* PKiKP **PKiKP 01 09 33.3 +0.4**
comp=Z,2.4nm,0.6s
BRG Berggiesshubel 105.81 321 *e*PDIFF **Pdif 01 05 24.8 +0.6**
comp=Z,13nm,1.4s
BRG Berggiesshubel 105.81 321 *e*P **Pdif 01 05 24.8 +0.6**
BRG pmax pmax
comp=Z,13nm,1.4s
OBKA Obir 105.97 316 *i* PKiKP **PKiKP 01 09 34.5 +0.8**
comp=Z,1.6nm,0.5s
FBE Freiberg 106.17 321 *e*PKiKP **PKiKP 01 09 35.4 +1.7**
GEC2 GERESS Array S 106.25 319 *e*PKiKP **PKiKP 01 09 34.9 +0.8**
GERES GERESS Array B 106.25 319 Pdiff **Pdif 01 05 25.9 -0.5**
comp=Z,0.7nm,0.7s,baz=90,slow=2.7,SNR=6.2
GERES PKiKP **PKiKP 01 09 34.6 +0.5**
comp=Z,4.3nm,0.7s,baz=60,slow=2.1,SNR=19
GERES PKKPbc **PKKPbc 01 20 57.8 -0.6**
comp=Z,0.7nm,0.6s,baz=270,slow=1.3,SNR=6.4
KHC Kasperske Hory 106.29 319 *e*PKP **PKiKP 01 09 34.0 -0.1**
CLL Collm 106.33 321 *e*P **Pdif 01 05 25.0 -1.5**
CLL *e* 01 09 55.0
CLL Collm 106.33 321 *e*PKPdf **PKiKP 01 09 36.0 +2.0**
CLL *e*PP **PP 01 09 55.0 -4.7**
KBA Koelnbreinsper 106.73 317 *i* PKiKP **PKiKP 01 09 34.7 -0.4**
comp=Z,1.6nm,0.4s
KBA *i* PKKPbc **PKKPbc 01 20 56.1 -0.8**
comp=Z,1.6nm,0.4s
WET Wettzell 106.74 319 *e*PKiKP **PKiKP 01 09 36.7 +1.8**
TANN Tannenbergstha 106.81 320 *e*PKiKP **PKiKP 01 09 36.5 +1.4**
WERN Wernitzgruen 106.89 320 *e*PKiKP **PKiKP 01 09 36.6 +1.4**
GUNZ Gunzen 106.90 320 *e*PKiKP **PKiKP 01 09 36.9 +1.7**
DAG Danmarks Havn 107.00 351 *i* P **Pdif 01 05 28.7 -0.3**
DAG pmax pmax
comp=Z,10.0nm,1.1s
DAG Danmarks Havn 107.00 351 *i* P **Pdif 01 05 28.7 -0.3**
comp=Z,9.8nm,1.1s
RJOB Jochberg 107.00 318 *e*PKiKP **PKiKP 01 09 35.3 -0.1**
MANZ Manzenberg 107.11 320 *e*PKiKP **PKiKP 01 09 36.8 +1.2**
ABTA Abfaltersbach 107.34 317 *i* PKiKP **PKiKP 01 09 36.1 0.0**
comp=Z,4.6nm,0.7s,SNR=8.0
ABTA PKKPbc **PKKPbc 01 20 55.0 +0.1**
comp=Z,4.6nm,1.0s
BSEG Bad Segeberg 107.46 324 *e*PKiKP **PKiKP 01 09 37.8 +1.8**
CLZ Clausthal 107.85 322 *e*PKiKP **PKiKP 01 09 38.4 +1.5**
WATA Walderalm 107.88 317 *i* PKiKP **PKiKP 01 09 37.5 +0.3**
comp=Z,3.5nm,0.3s
FUR Furstenfeldbru 107.95 318 *e*PKiKP **PKiKP 01 09 37.5 +0.3**
SQTA Sankt Quirin 108.15 317 *i* PKiKP **PKiKP 01 09 38.1 +0.4**
comp=Z,2.7nm,0.5s
SQTA PKKPbc **PKKPbc 01 20 52.3 -0.2**
comp=Z,6.5nm,1.2s
GTTG Gyttingen 108.16 322 *e*PKiKP **PKiKP 01 09 38.6 +1.2**
MOTA Moosalm 108.20 317 *i* PKiKP **PKiKP 01 09 38.2 +0.3**
comp=Z,6.1nm,0.5s,SNR=8.6
RETA Reutte 108.40 318 *i* PKiKP **PKiKP 01 09 38.3 +0.2**
comp=Z,1.7nm,0.4s,SNR=5.3
FETA Feichten 108.50 317 *i* PKiKP **PKiKP 01 09 39.0 +0.5**
comp=Z,2.2nm,0.5s,SNR=5.2
UBR Ueberruh 108.81 318 *e*PKiKP **PKiKP 01 09 39.3 +0.4**
DAVA Damuels 109.03 318 *i* PKiKP **PKiKP 01 09 39.7 +0.3**
comp=Z,6.6nm,0.4s
TNS Taunus Mts 109.38 321 *e*PKiKP **PKiKP 01 09 41.0 +1.2**
BUG Bochum--Univer 109.83 322 *e*PKiKP **PKiKP 01 09 41.5 +1.0**
BFO Black Forest 109.85 319 *e*PKiKP **PKiKP 01 09 41.0 +0.2**
AHRW Bad Neuenahr-A 110.16 321 *e*PKiKP **PKiKP 01 09 42.3 +1.1**
MEM Membach 110.80 322 PKiKP **PKiKP 01 09 43.6 +1.2**
KEST Kesra 111.12 305 PKiKP **PKiKP 01 09 44.8 +1.2**
comp=Z,6.1nm,0.8s,baz=88,slow=2.0,SNR=11
KEST PP **PP 01 10 33.0 -1.6**
comp=Z,10nm,0.8s,baz=352,slow=8.7,SNR=6.0
BCLA Clavier 111.29 322 PKiKP **PKiKP 01 09 44.3 +0.9**
BMRD Maredsous 111.65 321 PKiKP **PKiKP 01 09 45.2 +1.1**
DOU Dourbes 111.81 321 PKiKP **PKiKP 01 09 45.6 +1.2**
YKA Yellowknife Ar 111.98 24 Pdiff **Pdif 01 05 52.0 +0.6**
comp=Z,1.0nm,0.8s,baz=298,slow=4.8,SNR=12
YKA PKiKP **PKiKP 01 09 44.2 -0.1**
comp=Z,10nm,0.4s,baz=296,slow=2.0,SNR=208
YKA SKP 01 12 24.2
comp=Z,1.2nm,0.6s,baz=302,slow=2.2,SNR=6.6
YKA PKKPbc **PKKPbc 01 20 38.0 -2.5**
comp=Z,1.9nm,0.7s,baz=113,slow=2.8,SNR=18
YKA SKKPbc SKKPbc 01 23 26.1 -3.6
comp=Z,0.4nm,0.5s,baz=122,slow=3.3,SNR=6.2
A04D Lummi Island 113.00 40 P **PKiKP 01 09 47.0 +0.4**
baz=286
D03D Eldon 113.08 41 P **PKiKP 01 09 48.1 +1.2**
baz=285
D04E Lakebay 113.38 41 P **PKiKP 01 09 48.8 +1.3**
baz=286
I02D Swisshome 113.41 45 P **PKiKP 01 09 48.8 +1.2**
baz=283
F04D Rainier, OR 113.51 43 P **PKiKP 01 09 49.5 +1.7**
baz=285
B05A Bryant 113.52 40 P **PKiKP 01 09 48.8 +1.1**
baz=286
G03D McMinnville, O 113.56 44 P **PKiKP 01 09 48.9 +1.0**
baz=284
GDLE Glaisdale, N Y 113.56 327 *e*P **PKiKP 01 09 48.0 +0.4**
E04D Cinebar 113.68 42 P **PKiKP 01 09 49.3 +1.3**
baz=285
I03D Drain, OR 113.86 45 P **PKiKP 01 09 49.6 +1.1**
baz=284
K02D Willamette Mer 113.86 46 P **PKiKP 01 09 49.6 +0.9**
baz=283
EDMD Edmundbyers 114.02 328 *e*P PKPdf 01 09 48.3 -0.2
EDMD IAmb IAmb 01 09 50.0
comp=Z,22nm,0.8s
L02E Cave Junction 114.03 47 P **PKiKP 01 09 49.9 +1.0**
baz=283
H04D Lebanon 114.09 44 P **PKiKP 01 09 50.2 +1.3**
baz=284
HPK Haverah Park 114.18 327 *e*P **PKiKP 01 09 49.4 +0.6**
C06D Leavenworth 114.39 40 P **PKiKP 01 09 50.3 +0.9**
baz=287
INVG Invergeldie, C 114.43 330 *e*P **PKiKP 01 09 49.6 +0.4**
LBWR Ladybower, Pea 114.45 326 *e*P **PKiKP 01 09 49.8 +0.5**
LBWR IAmb IAmb 01 09 51.0
comp=Z,43nm,1.1s
CWF Charnwood Fore 114.47 325 *e*P **PKiKP 01 09 49.8 +0.5**
ESK Eskdalemuir 114.48 328 *e*P **PKiKP 01 09 49.6 +0.3**
I04A Tendick Farm, 114.50 45 P **PKiKP 01 09 50.5 +0.7**
baz=284
F05D White Salmon 114.60 43 P **PKiKP 01 09 50.7 +0.9**
baz=286
KESW Keswick, Cumbr 114.73 328 *e*P **PKiKP 01 09 50.3 +0.5**
KESW IAmb IAmb 01 09 51.6

comp=Z,24nm,0.8s
M02C Callahan 114.74 48 P **PKiKP 01 09 51.7 +1.3**
baz=283
KPL Plockton 114.81 331 *e*P **PKiKP 01 09 50.2 +0.4**
J04D Umpqua Nationa 114.84 46 P **PKiKP 01 09 52.0 +1.3**
baz=284
G05D Wamic, OR 114.88 43 P **PKiKP 01 09 51.5 +1.0**
baz=286
N02D Trinity Center 114.94 48 P **PKiKP 01 09 52.0 +1.2**
baz=283
L04D Klamath Falls 114.95 47 P **PKiKP 01 09 51.9 +1.0**
baz=284
O02D Mt. Diablo Mer 115.06 49 P **PKiKP 01 09 52.9 +1.8**
baz=282
I05D Terrebonne, OR 115.10 44 P **PKiKP 01 09 52.4 +1.4**
baz=285
SWN1 Swindon 115.20 324 *e*P **PKiKP 01 09 51.4 +0.5**
SWN1 IAmb IAmb 01 09 52.1
comp=Z,59nm,0.6s
K04D Chiloquin, OR 115.25 46 P **PKiKP 01 09 52.4 +1.1**
baz=284
STRD Stroud 115.31 325 *e*P **PKiKP 01 09 51.5 +0.5**
STRD IAmb IAmb 01 09 52.1
comp=Z,43nm,0.8s
M04C Macdoel 115.39 47 P **PKiKP 01 09 52.9 +1.2**
baz=284
HLM1 Long Mynd 115.44 326 *e*P **PKiKP 01 09 51.7 +0.4**
HLM1 IAmb IAmb 01 09 53.0
comp=Z,29nm,1.1s
GAL1 Galloway 115.45 328 *e*P **PKiKP 01 09 51.3 +0.1**
J05D Fort Rock, OR 115.45 45 P **PKiKP 01 09 53.2 +1.4**
baz=285
FOEL Foel Wylfa 115.47 326 *e*P **PKiKP 01 09 51.9 +0.6**
MONM Monmouth 115.66 325 *e*P **PKiKP 01 09 51.8 +0.1**
MCH1 Michaelchurch 115.71 325 *e*P **PKPdf 01 09 51.8 0.0**
LLW Llanuwchllyn 115.74 326 *e*P **PKiKP 01 09 52.1 +0.3**
LLW IAmb IAmb 01 09 53.4
comp=Z,14nm,0.6s
WIM Isle of Man 115.74 328 *e*P **PKiKP 01 09 52.2 +0.4**
O03E Paynes Creek 115.77 49 P **PKiKP 01 09 53.1 +0.7**
baz=283
WME Myndd Eilian 115.86 327 *e*P **PKiKP 01 09 52.5 +0.5**
WLF1 Llynfaes 115.96 327 *e*P **PKiKP 01 09 52.8 +0.5**
WLF1 IAmb IAmb 01 09 53.9
comp=Z,81nm,0.8s
NEW Newport 116.67 39 P **PKiKP 01 09 55.6 +1.7**
baz=291
USHA Ushuaia 117.83 174 PKP **PKiKP 01 09 56.9 +1.0**
comp=Z,17nm,0.8s,baz=150,slow=1.8,SNR=7.6
SMMC Simmler 118.24 54 P **PKiKP 01 09 58.9 +1.6**
baz=282
PKM Mcpherson Peak 118.48 54 P **PKiKP 01 09 59.4 +1.4**
baz=282,SNR=6.9
SCZ2 Santa Cruz Isl 118.80 55 P **PKiKP 01 09 59.7 +1.3**
baz=282
NVAR Mina Array Bea 118.85 50 PKP **PKiKP 01 09 59.8 +1.2**
comp=Z,8.0nm,0.7s,baz=264,slow=1.7,SNR=62
NVAR PP **PP 01 11 26.9 -1.1**
comp=Z,1.0nm,0.8s,baz=277,slow=7.2,SNR=4.4
NVAR SKP 01 12 40.1
comp=Z,0.6nm,0.6s,baz=288,slow=2.5,SNR=3.9
NVAR PKKPbc **PKKPbc 01 20 17.6 +0.8**
comp=Z,2.2nm,0.7s,baz=138,slow=4.3,SNR=13
SNCC San Nicolas Is 119.04 56 P **PKiKP 01 09 59.9 +1.1**
baz=281
MSO Missoula 119.20 40 P **PKiKP 01 09 59.7 +0.8**
baz=293
ARVC Arvin 119.22 54 P **PKiKP 01 10 00.7 +1.6**
baz=283
BLG Laguna Peak, P 119.24 55 P **PKiKP 01 10 00.4 +1.2**
baz=282
TIN Tinemaha, Big 119.25 51 P **PKiKP 01 10 00.8 +1.4**
baz=284
ISA Isabella, Lake 119.38 53 P **PKiKP 01 10 00.6 +1.0**
baz=283,SNR=5.3
TOA0 Torodi Ar. Sit 119.38 281 P **PKiKP 01 10 00.1 +0.1**
SNR=5.0
TORD Torodi Ar. Bea 119.38 281 PKP **PKPdf 01 09 59.9 0.0**
comp=Z,30nm,0.6s,baz=83,slow=1.7,SNR=211
TORD SKP 01 12 41.0
comp=Z,7.8nm,0.8s,baz=60,slow=2.4,SNR=9.7
TORD PKKPbc **PKKPbc 01 20 14.2 +0.2**
comp=Z,1.8nm,0.9s,baz=302,slow=3.9,SNR=11
TORD SKKPbc SKKPbc 01 22 58.9 -6.1
comp=Z,1.5nm,1.0s,baz=222,slow=4.3,SNR=5.1
CWC Cottonwood Cre 119.51 52 P **PKiKP 01 10 01.2 +1.2**
baz=284
DECC Green Verdugo 119.80 55 P **PKiKP 01 10 01.7 +1.3**
baz=282
SCI2 San Clemente I 119.89 56 P **PKiKP 01 10 01.3 +0.8**
baz=282
CIS Catalina Islan 119.92 56 P **PKiKP 01 10 02.2 +1.6**
baz=282
GRAC Grapevine Rang 119.93 51 P **PKiKP 01 10 01.9 +1.4**
baz=285,SNR=7.5
EDW2 Edwards Air Fo 119.94 54 P **PKiKP 01 10 02.1 +1.4**
baz=283,SNR=31
SESP Santiago Espad 120.02 310 P **PKiKP 01 10 01.9 +1.0**
SNR=7.2
SESP Santiago Espad 120.02 310 P **PKiKP 01 10 01.9 +1.0**
SNR=7.2
LRMC Laurel Mtn Rad 120.05 53 P **PKiKP 01 10 02.2 +1.2**
baz=284,SNR=10
MPMC Manual Prospec 120.06 52 P **PKiKP 01 10 02.3 +1.2**
baz=284,SNR=20
BFSC Mount Baldy Ra 120.35 54 P **PKiKP 01 10 02.5 +0.9**
baz=283,SNR=8.3
FIGM Figuig 120.39 303 P **PKiKP 01 10 03.1 +1.4**
SNR=7.1
FIGM Figuig 120.39 303 P **PKiKP 01 10 03.1 +1.4**
SNR=7.1
FURC Furnace Creek, 120.45 52 P **PKiKP 01 10 02.9 +1.4**
baz=285,SNR=10
ESDC Sonseca Array 120.64 312 PKP **PKiKP 01 10 02.4 +0.5**
comp=Z,3.6nm,0.6s,baz=23,slow=2.7,SNR=25
ESDC PP **PP 01 11 36.9 -2.8**
comp=Z,1.3nm,0.6s,baz=73,slow=6.0,SNR=7.5
GSC Goldstone, Bar 120.79 53 P **PKiKP 01 10 03.8 +1.4**
baz=284,SNR=20
TPNV Topopah Spring 120.81 51 P **PKiKP 01 10 03.5 +1.1**
baz=286,SNR=12
MURC Murrieta 120.87 55 P **PKiKP 01 10 03.7 +1.2**
baz=283,SNR=5.4
R11A Troy Canyon, C 120.92 49 P **PKiKP 01 10 03.9 +1.2**
baz=287
BBRC Big Bear Solar 120.94 54 P **PKiKP 01 10 04.4 +1.5**
baz=284
PAB San Pablo 120.96 312 PKIKP **PKiKP 01 10 02.6 0.0**
PAB 01 11 39.5
PAB San Pablo 120.96 312 **PKiKP 01 10 02.5 0.0**
PAB PP **PP 01 11 39.5 -2.4**
SHOC Shoshone, Teco 121.06 52 P **PKiKP 01 10 04.5 +1.7**
baz=285
109C Camp Elliot, M 121.10 56 P **PKiKP 01 10 04.4 +1.5**
baz=283
RPN Rapa Nui 121.13 128 PKIKP **PKiKP 01 10 05.0 +1.8**
RPN Rapa Nui 121.13 128 PKP **PKiKP 01 10 05.0 +1.8**
comp=Z,45nm,0.7s,baz=225,slow=1.0,SNR=3.6
HEC Hector,Ludlow 121.28 54 P **PKiKP 01 10 04.8 +1.5**
baz=284,SNR=13
EGMT Eagleton 121.28 37 P **PKiKP 01 10 03.9 +1.0**
baz=297
TUQ Turquoise Moun 121.45 53 P **PKiKP 01 10 05.0 +1.3**
baz=285,SNR=12
PFO Pinyon Flats O 121.47 55 PKIKP **PKiKP 01 10 04.3 +0.5**
PFO Pinyon Flats O 121.47 55 **PKiKP 01 10 04.3 +0.5**
PFO Pinyon Flats O 121.47 55 P **PKiKP 01 10 05.2 +1.4**
baz=283,SNR=17
XPFO Pion Flat 121.47 55 **PKiKP 01 10 04.3 +0.5**
MONP2 Monument Peak 121.66 56 P **PKiKP 01 10 05.7 +1.4**
baz=283,SNR=11
BELC Belle Mtn. Jos 121.75 54 P **PKiKP 01 10 05.9 +1.6**
baz=284,SNR=25
FFC Flin Flon 121.77 27 PKIKP **PKiKP 01 10 04.0 +0.4**
FFC Flin Flon 121.77 27 **PKiKP 01 10 04.0 +0.4**
GMRC Granite Mounta 121.83 53 P **PKiKP 01 10 06.1 +1.6**
baz=285,SNR=23
PBRG Braganca 121.92 315 *e*PKPdf **PKiKP 01 10 05.7 +1.3**
IKP In-Ko-Pah, Jac 121.97 56 P **PKiKP 01 10 06.3 +1.6**
baz=283,SNR=8.2
SWSC Sam W. Stewart 122.16 56 P **PKiKP 01 10 06.5 +1.5**
baz=284,SNR=8.5
BC3 Big Chuckawall 122.27 55 P **PKiKP 01 10 06.9 +1.5**
baz=284,SNR=17
H17A Grant Village 122.34 41 P **PKiKP 01 10 07.5 +2.1**
baz=294
MVO Moncorvo 122.36 315 *e*PKPdf **PKiKP 01 10 06.8 +1.5**

DUG	Dugway, Tooele	122.39	47	P		PKiKP	01 10 06.8	+1.4
	baz=290							
IRM	Iron Mountain	122.40	54	P		PKiKP	01 10 07.3	+1.8
	baz=285,SNR=15							
RLMT	Red Lodge	122.88	40	P		PKiKP	01 10 07.4	+1.0
	baz=296							
GLA	Glamis	122.93	55	P		PKiKP	01 10 07.7	+1.1
	baz=284,SNR=5.5							
MTE	Manteigas	122.99	314	ePKPdf		PKiKP	01 10 08.0	+1.5
Y12C	Blythe	123.00	54	P		PKiKP	01 10 08.0	+1.4
	baz=285,SNR=9.3							
ARF	Arif	123.00	303	P		PKiKP	01 10 08.0	+1.2
	SNR=11							
ARF	Arif	123.00	303	P		PKiKP	01 10 08.0	+1.2
	SNR=11							
MDT	Midelt	123.00	305	P		PKiKP	01 10 08.0	+1.2
	SNR=14							
MDT	Midelt	123.00	305	P		PKiKP	01 10 08.0	+1.2
	SNR=14							
PCBR	Castelo Branco	123.14	313	ePKPdf		PKiKP	01 10 08.2	+1.5
PDMCI	Parker Dam,Lak	123.16	54	P		PKiKP	01 10 08.1	+1.2
	baz=285,SNR=7.3							
PMRV	Marv??o	123.22	313	ePKPdf		PKiKP	01 10 08.2	+1.2
PDAR	Pinedale Array	123.69	43	PKP		PKiKP	01 10 08.6	+0.5
	comp=Z,4.8nm,0.5s,baz=117,slow=1.6,SNR=33							
PDAR				PKKPbc		PKKPab	01 19 58.8	0.0
	comp=Z,2.3nm,0.7s,baz=120,slow=6.1,SNR=18							
PDAR				SKKPbc	SKKPbc		01 22 50.2	-2.4
	comp=Z,0.7nm,0.7s,baz=124,slow=5.2,SNR=5.3							
PCAS	Casmilo, Conde	123.80	314	ePKPdf		PKPdf	01 10 07.6	-0.1
PTOM	Tomar	123.89	313	ePKPdf		PKiKP	01 10 10.3	+2.1
EVO	Evora	123.99	312	ePKPdf		PKiKP	01 10 10.9	+2.4
LAO	LASA Array	124.03	37	P		PKiKP	01 10 09.8	+1.4
	baz=300							
PBEJ	Beja	124.05	311	ePKPdf		PKiKP	01 10 10.2	+1.6
PVAQ	Vaqueiros	124.14	311	ePKPdf		PKiKP	01 10 10.2	+1.4
TZRR	Tazzarine	124.28	302	P		PKiKP	01 10 11.0	+1.6
	SNR=16							
TZRR	Tazzarine	124.28	302	P		PKiKP	01 10 11.0	+1.6
	SNR=16							
DGMT	Dagmar	124.28	34	P		PKiKP	01 10 09.9	+1.1
	baz=303							
PCVE	Castro Verde	124.31	311	ePKPdf		PKiKP	01 10 10.6	+1.5
ZGR	Zagora	124.47	302	P		PKiKP	01 10 11.0	+1.2
	SNR=14							
ZGR	Zagora	124.47	302	P		PKiKP	01 10 11.0	+1.2
	SNR=14							
PNCL	Nicolau / Gran	124.51	312	ePKPdf		PKiKP	01 10 11.0	+1.5
214A	Organ Pipe Nat	124.85	56	P		PKiKP	01 10 11.5	+1.0
	baz=285,SNR=13							
PTEO	Sao Teotonio	124.85	311	ePKPdf		PKiKP	01 10 13.7	+3.5
WUAZ	Wupatki	124.99	51	P		PKiKP	01 10 11.9	+1.2
	baz=288,SNR=22							
IVI	Ivigtut	125.36	353			PKiKP	01 10 10.4	-0.1
KIC	Kosan Boka	125.44	273	⇑iPKIKP		PKiKP	01 10 12.6	+0.6
	comp=Z,44nm,0.7s							
DBIC	Dimbokro	125.57	273	PKIKP		PKiKP	01 10 12.6	+0.3
DBIC	Dimbokro	125.57	273	PKP		PKPdf	01 10 11.9	+0.1
	comp=Z,32nm,0.9s,baz=85,slow=1.9,SNR=32							
DBIC	Dimbokro	125.57	273			PKiKP	01 10 12.6	+0.3
O20A	White River Ci	125.66	45	P		PKiKP	01 10 13.6	+1.6
	baz=294							
LIC	Lamto	125.71	273	⇑iPKIKP		PKiKP	01 10 12.9	+0.3
	comp=Z,140nm,1.0s							
TIC	Toumodi	125.73	273	⇑iPKIKP		PKiKP	01 10 13.0	+0.3
	comp=Z,7.3nm,0.4s							
K22A	Casper	125.75	42	P		PKiKP	01 10 12.5	+0.4
	baz=297							
W18A	Petrified Fore	126.39	51	P		PKiKP	01 10 14.4	+0.7
	baz=289,SNR=8.7							
TUC	Tucson	126.41	55	PKIKP		PKiKP	01 10 14.0	+0.4
TUC	Tucson	126.41	55			PKiKP	01 10 14.0	+0.4
TUC	Tucson	126.41	55	P		PKiKP	01 10 14.6	+1.0
	baz=286							
MVCO	Mesa Verde	126.60	48	P		PKiKP	01 10 15.2	+1.1
	baz=292							
RSSD	Black Hills	126.64	39	PKIKP		PKiKP	01 10 13.9	0.0
RSSD	Black Hills	126.64	39			PKiKP	01 10 13.9	0.0
RSSD	Black Hills	126.64	39	P		PKiKP	01 10 14.3	+0.4
	baz=300							
N23A	Red Feather La	126.93	43	P		PKiKP	01 10 15.7	+1.0
	baz=296							
MDND	Maddock	127.16	33	P		PKiKP	01 10 15.4	+0.8
	baz=307							
ULM	Lac du Bonnet	127.51	29	PKP		PKPdf	01 10 14.1	-0.4
	comp=Z,11nm,0.6s,baz=304,slow=2.5,SNR=22							
ULM				SKPbc	SKPbc		01 12 38.1	
	comp=Z,8.2nm,0.7s,baz=323,slow=5.9,SNR=9.1							
S22A	4UR Ranch, Cre	127.62	47	P		PKiKP	01 10 17.3	+1.2
	baz=293							
ISCO	Idaho Springs	127.63	44	P		PKiKP	01 10 17.0	+0.9
	baz=296							
Q24A	Divide	128.32	45	P		PKiKP	01 10 18.5	+1.0
	baz=296							
SDCO	Great Sand Dun	128.59	47	P		PKiKP	01 10 19.4	+1.3
	baz=295							
121A	Cookes Peak, D	128.76	54	P		PKiKP	01 10 19.4	+0.9
	baz=289,SNR=8.9							
ANMO	Albuquerque	128.97	50	PKIKP		PKiKP	01 10 19.4	+0.6
ANMO	Albuquerque	128.97	50			PKiKP	01 10 19.4	+0.6
ANMO	Albuquerque	128.97	50	P		PKiKP	01 10 19.9	+1.1
	baz=292							
OGNE	Ogallala	129.52	41	P		PKiKP	01 10 20.2	+0.6
	baz=300							
SUSD	Miller	129.53	36	P		PKiKP	01 10 20.2	+0.8
	baz=306							
T25A	Trinidad	129.63	47	P		PKiKP	01 10 21.0	+0.9
	baz=295							
KSCO	Kaye Shedlock'	130.05	44	P		PKiKP	01 10 21.2	+0.4
	baz=298							
MNTX	Cornudas Mount	130.96	54	P		PKiKP	01 10 22.8	+0.2
	baz=290,SNR=19							
EYMN	Ely	131.18	28	P		PKiKP	01 10 22.8	+0.2
	baz=316							
ECSD	EROS Data Cent	131.31	35	P		PKiKP	01 10 23.1	+0.1
	baz=308							
PLCA	Paso Flores	131.33	169	PKP		PKiKP	01 10 23.2	-0.1
	comp=Z,8.5nm,0.7s,baz=283,slow=1.5,SNR=28							
PLCA				SKPbc		SKPab	01 12 54.4	+0.4
	comp=Z,17nm,1.1s,baz=211,slow=3.8,SNR=15							
PLCA	Paso Flores	131.33	169			PKiKP	01 10 24.1	+0.8
BGNE	Belgrade	131.75	39	P		PKiKP	01 10 24.0	0.0
	baz=304							
SCHQ	Schefferville	132.09	6	PKP		PKiKP	01 10 24.1	-0.1
	comp=Z,24nm,0.6s,baz=350,slow=2.0,SNR=35							
SCHQ				SKPbc		SKPbc	01 12 55.8	+0.8
	comp=Z,20nm,0.9s,baz=32,slow=2.9,SNR=11							
CBKS	Cedar Bluff	132.12	43	P		PKiKP	01 10 25.2	+0.3
	baz=301							
MSTX	Muleshoe	132.15	50	P		PKiKP	01 10 24.9	-0.3
	baz=294,SNR=11							
SPMN	Marine on St.	132.44	32	P		PKiKP	01 10 25.5	+0.3
	baz=313							
AMTX	Amarillo	132.59	48	P		PKiKP	01 10 26.0	0.0
	baz=296							
TXAR	Lajitas Array	133.15	56	PKhKP	PKPpre		01 10 13.2	
	comp=Z,2.6nm,0.6s,baz=243,slow=2.2,SNR=32							
TXAR				PKP		PKiKP	01 10 27.8	+0.5
	comp=Z,6.1nm,0.8s,baz=282,slow=1.0,SNR=15							
TXAR				SKPbc		SKPbc	01 13 00.5	+1.0
	comp=Z,6.5nm,0.9s,baz=264,slow=2.5,SNR=16							
TXAR				SKKPbc		SKKPbc	01 22 17.4	-1.7
	comp=Z,0.7nm,1.0s,baz=131,slow=5.7,SNR=3.6							
KSU1	Kansas State U	134.02	41	P		PKiKP	01 10 28.6	0.0
	baz=304							
E44A	Grand Marais A	134.67	25	P		PKiKP	01 10 30.0	+0.3
	baz=322							
WMOK	Wichita Mounta	134.78	47	P		PKiKP	01 10 30.0	-0.3
	baz=298							
MATQ	Matagami	134.93	16	P		PKiKP	01 10 30.2	+0.1
	baz=334							
ABTX	Abilene, Hawle	135.10	50	P		PKiKP	01 10 31.0	-0.1
	baz=296							
D46A	Sault St. Mari	135.23	24	P		PKiKP	01 10 30.8	-0.1
	baz=325							
JFWS	Jewell Farm	135.36	32	P		PKiKP	01 10 31.3	0.0
	baz=314							
D47A	Chapleau	135.46	23	P		PKiKP	01 10 31.1	-0.3
	baz=326							
F45A	CMU Biological	135.58	26	P		PKiKP	01 10 31.5	0.0
	baz=322							
LSQQ	Lebel-sur-Quev	135.75	16	P		PKiKP	01 10 31.8	0.0
	baz=335							
D48A	Paudash Townsh	135.85	22	P		PKiKP	01 10 32.1	0.0
	baz=328							
JCT	Junction City	135.86	53	P		PKiKP	01 10 31.9	-0.8
	baz=294,SNR=9.7							
E47A	Iron Bridge	135.89	23	P		PKiKP	01 10 32.4	+0.2
	baz=325							
D49A	Beulah Townshi	135.93	21	P		PKiKP	01 10 32.0	-0.2
	baz=328							
E48A	Lockeyer	136.30	22	P		PKiKP	01 10 33.0	0.0
	baz=327							
TUL1	Leonard	136.31	44	P		PKiKP	01 10 33.4	0.0
	baz=302							
H46A	Fife Lake	136.62	27	P		PKiKP	01 10 33.8	0.0
	baz=322							
GLMI	Grayling	136.65	26	P		PKiKP	01 10 33.4	-0.4
	baz=323							
F48A	Evansville	136.66	23	P		PKiKP	01 10 33.6	-0.2
	baz=326							
G47A	Hillman	136.70	25	P		PKiKP	01 10 33.6	-0.3
	baz=324							
D51A	Lot 18 Range I	136.77	20	P		PKiKP	01 10 33.8	-0.2
	baz=331							
E50A	Wahnapitae	136.87	21	P		PKiKP	01 10 34.1	-0.1
	baz=329							
F49A	Sandfield	136.94	23	P		PKiKP	01 10 33.9	-0.5
	baz=327							
I46A	Reed City	136.97	27	P		PKiKP	01 10 34.1	-0.4
	baz=321							
H47A	Mio	137.01	26	P		PKiKP	01 10 34.8	+0.3
	baz=323							
833A	Chaparral WMA,	137.01	56	P		PKiKP	01 10 35.2	+0.2
	baz=292							
WHTX	Lake Whitney,	137.03	50	P		PKiKP	01 10 34.6	-0.4
	baz=297,SNR=6.1							
H48A	Harrisville	137.30	25	P		PKiKP	01 10 35.5	+0.3
	baz=324							
D53A	Lac Vacive, Po	137.32	18	P		PKiKP	01 10 35.0	-0.1
	baz=333							
I47A	Gladwin	137.33	27	P		PKiKP	01 10 35.4	+0.2
	baz=322							
J46A	Howard City	137.34	28	P		PKiKP	01 10 35.3	+0.1
	baz=320							
435B	Jarrell	137.47	51	P		PKiKP	01 10 35.7	-0.2
	baz=296							
HDIL	Hopedale	137.51	34	P		PKiKP	01 10 35.8	+0.1
	baz=314							
I48A	Sherman Twp	137.55	26	P		PKiKP	01 10 35.4	-0.3
	baz=323							
D54A	Lac Fusel, La	137.56	17	P		PKiKP	01 10 35.5	-0.1
	baz=335							
F51A	Arnstein	137.59	21	P		PKiKP	01 10 35.1	-0.6
	baz=330							
E52A	Mattawa	137.71	20	P		PKPdf	01 10 34.8	+1.0
	baz=332							
K46A	Dorr	137.78	29	P		PKiKP	01 10 35.9	-0.3
	baz=320							
J47A	Sunmer	137.81	28	P		PKiKP	01 10 36.2	0.0
	baz=321							
F52A	Sundridge	137.91	21	P		PKiKP	01 10 36.1	-0.3
	baz=330							
E53A	Dumoine, Ponti	137.95	19	P		PKiKP	01 10 36.3	-0.1
	baz=333							
CCM	Cathedral Cave	138.02	38	PKIKP		PKPdf	01 10 35.0	+0.4
CCM	Cathedral Cave	138.02	38			PKPpre	01 10 24.9	
CCM				PKPdf		PKPdf	01 10 35.0	+0.4
CCM	Cathedral Cave	138.02	38	P		PKiKP	01 10 36.4	-0.4
	baz=309							
D55A	Sainte-Anne-du	138.02	16	P		PKiKP	01 10 36.6	+0.1
	baz=336							
U40A	Yellville	138.03	41	P		PKiKP	01 10 37.1	+0.2
	baz=306,SNR=8.9							
E54A	Lac Daplat, Po	138.05	18	P		PKiKP	01 10 36.5	-0.1
	baz=334							
W39A	Magazine	138.07	43	P		PKiKP	01 10 37.2	+0.2
	baz=304,SNR=5.4							
I49A	Point Hope	138.13	25	P		PKPdf	01 10 35.6	+1.0
	baz=324							
K47A	Vermontville	138.16	28	P		PKPdf	01 10 35.7	+0.9
	baz=321							
D56A	ZEC Mazanza, M	138.19	15	P		PKPdf	01 10 35.6	+0.9
	baz=337							
ALGO	Algonquin Park	138.20	19	P		PKiKP	01 10 36.6	-0.3
	baz=332							
J48A	Bridge Port	138.23	27	P		PKPdf	01 10 35.8	+1.0
	baz=323							
LATQ	La Tuque	138.36	13	P		PKiKP	01 10 36.1	-1.1
	baz=340							
E55A	Montcerf-Lytto	138.37	17	P		PKiKP	01 10 36.6	-0.7
	baz=335							
D57A	Chemin Vers le	138.44	15	P		PKiKP	01 10 36.8	-0.6
	baz=339							
J49A	Marlette	138.46	26	P		PKiKP	01 10 36.9	-0.7
	baz=324							
K48A	Perry	138.47	27	P		PKiKP	01 10 36.4	-1.1
	baz=322							
MIAR	Mount Ida	138.57	44	P		PKiKP	01 10 38.6	+0.5
	baz=303,SNR=14							
E56A	St. Veronique	138.58	16	P		PKiKP	01 10 37.3	-0.4
	baz=337							
D58A	Chemin du LacG	138.61	14	P		PKiKP	01 10 37.5	-0.3
	baz=340							
G54A	Lake Saint Pet	138.68	20	P		PKiKP	01 10 37.8	-0.1
	baz=332							
H52A	Wyevale	138.70	22	P		PKiKP	01 10 37.9	-0.1
	baz=336							
G53A	Haliburton	138.74	20	P		PKiKP	01 10 37.9	-0.1
	baz=331							
F55A	Otter Lake	138.85	18	P		PKiKP	01 10 38.0	-0.2
	baz=334							
M47A	Cromwell	138.86	30	P		PKiKP	01 10 38.4	0.0
	baz=319							
D59A	Saint-Raymond	138.93	13	P		PKiKP	01 10 38.6	+0.2
	baz=342							
E57A	Chemin Saint G	138.94	15	P		PKiKP	01 10 38.4	-0.1
	baz=338							
I51A	Listowel	138.98	24	P		PKiKP	01 10 38.8	+0.2
	baz=327							
L48A	N Adams	138.99	28	P		PKiKP	01 10 39.0	+0.3
	baz=321							
D61A	St Aubert, Com	139.08	11	P		PKiKP	01 10 38.0	-0.7
	baz=344							
X40A	Basin Creek Fa	139.11	44	P		PKiKP	01 10 39.5	+0.4
	baz=304							
K50A	Casco	139.16	26	P		PKiKP	01 10 38.6	-0.4
	baz=324							
L49A	Milan	139.17	28	P		PKiKP	01 10 39.3	+0.3
	baz=322							
E58A	La Victoria	139.19	14	P		PKiKP	01 10 39.3	+0.4
	baz=339							
HKT	Hockley	139.19	52	PKHKP	PKPpre		01 10 29.5	
HKT							01 10 37.0	
HKT	Hockley	139.19	52		PKPpre		01 10 29.5	
HKT				PKPdf		PKPdf	01 10 37.0	+0.1
NATX	Nacogdoches	139.24	48	P		PKiKP	01 10 39.8	+0.3
	baz=300							
G55A	Calabogie	139.25	18	P		PKiKP	01 10 39.3	+0.2
	baz=334							
D62A	Allapoint, All	139.40	10	P		PKiKP	01 10 40.1	+0.8
	baz=346							
M49A	Liberty Center	139.57	28	P		PKiKP	01 10 40.0	+0.2
	baz=321							
L50A	Kingsville	139.66	27	P		PKiKP	01 10 40.3	+0.3
	baz=323							
J52A	Paris	139.67	24	P		PKiKP	01 10 40.2	+0.2
	baz=327							
H55A	Tweed	139.73	19	P		PKiKP	01 10 40.4	+0.3
	baz=333							
F59A	Saint Guilaume	139.80	14	P		PKiKP	01 10 40.3	+0.1
	baz=340							
Z41A	Richland Creek	139.81	45	P		PKiKP	01 10 40.9	+0.3
	baz=303							
F60A	Warwick	139.89	13	P		PKiKP	01 10 40.9	+0.5
	baz=341							
N49A	Columbus Grove	139.90	29	P		PKiKP	01 10 41.0	+0.4
	baz=320							
G57A	Newington	139.91	17	P		PKiKP	01 10 40.8	+0.4
	baz=336							
O48A	Farmland	139.92	31	P		PKiKP	01 10 40.8	+0.1
	baz=319							
G58A	Ormstown	140.13	16	P		PKiKP	01 10 41.1	+0.2
	baz=338							
E64A	Bridgewater	140.24	9	P		PKiKP	01 10 41.7	+0.7
	baz=347							
J54A	Appleton	140.34	22	P		PKiKP	01 10 42.1	+0.7
	baz=330							
P48A	Milroy	140.37	32	P		PKiKP	01 10 41.8	+0.2
	baz=318							
H57A	Richville	140.38	18	P		PKiKP	01 10 41.9	+0.5
	baz=335							
O49A	Covington	140.38	30	P		PKiKP	01 10 41.7	+0.1
	baz=320							
N50A	Nevada	140.51	28	P		PKiKP	01 10 41.9	+0.1
	baz=322,SNR=9.1							
Q48A	North Vernon	140.60	33	P		PKPdf	01 10 34.0	-5.2
	baz=317							
CFA	Coronel Fontan	140.62	168	PKhKP	PKPpre		01 10 34.1	
	comp=Z,12nm,0.5s,baz=239,slow=3.3,SNR=37							
CFA				PKP		PKPdf	01 10 40.5	+0.9
	comp=Z,28nm,0.5s,baz=224,slow=3.8,SNR=21							
CFA				SKPbc		SKPbc	01 13 21.8	+0.5
	comp=Z,34nm,1.0s,baz=199,slow=1.5,SNR=22							
J55A	Hilton	140.65	21	P		PKPdf	01 10 33.8	-5.3
	baz=331							
P49A	Miami Univ. Ec	140.69	31	P		PKPdf	01 10 34.3	-5.1
	baz=319,SNR=7.0							
H59A	Cadyville	140.69	16	P		PKPdf	01 10 34.0	-5.2
	baz=338							
F64A	Sherman	140.70	10	P		PKPdf	01 10 34.1	-5.1
	baz=346							
M52A	Chesterland	140.71	26	P		PKPdf	01 10 34.1	-5.3
	baz=325							
N51A	Ashland	140.75	27	P		PKPdf	01 10 34.1	-5.4
	baz=323							
I57A	Carthage	140.77	18	P		PKPdf	01 10 34.2	-5.3
	baz=335							
O50A	Cable	140.77	29	P		PKPdf	01 10 34.4	-5.2
	baz=321,SNR=18							
H58A	Gabriels	140.77	16	P		PKPdf	01 10 34.2	-5.3
	baz=337							
WCI	Wyandotte Cave	140.80	34			PKPdf	01 10 34.0	-5.6
WCI	Wyandotte Cave	140.80	34	P		PKPdf	01 10 34.5	-5.1
	baz=316							
ERPA	Erie	140.80	24	P		PKPdf	01 10 34.7	-4.8
	baz=327							
L53A	Girard	140.83	24	P		PKPdf	01 10 34.4	-5.2
	baz=327							
K54A	Basiliko Farm,	140.89	22	P		PKPdf	01 10 34.9	-4.8
	baz=329,SNR=8.2							
G62A	West of Eustis	140.91	12	P		PKPdf	01 10 34.7	-4.9
	baz=343							
J56A	Wolcott	140.97	20	P		PKPdf	01 10 34.8	-5.0
	baz=332							
L54A	Sinclairville	140.97	23	P		PKPdf	01 10 35.1	-4.8
	baz=328,SNR=8.5							
Q49A	Aurora	140.99	32	P		PKPdf	01 10 35.4	-4.6
	baz=318,SNR=8.3							
ACSO	Alum Creek Sta	141.01	29	P		PKPdf	01 10 35.3	-4.7
	baz=322,SNR=9.1							
K55A	Perry	141.02	22	P		PKPdf	01 10 35.3	-4.7
	baz=330,SNR=9.2							
H60A	Morristown	141.03	15	P		PKPdf	01 10 35.4	-4.5
	baz=339							
M53A	WI Miller and	141.08	25	P		PKPdf	01 10 35.9	-4.1
	baz=326,SNR=9.2							
P50A	Jamestown	141.09	30	P		PKPdf	01 10 35.7	-4.5
	baz=320,SNR=25							
PKME	Peaks-Kenny Pk	141.11	11	P		PKPdf	01 10 35.7	-4.3
	baz=345							
J57A	Williamstown	141.14	19	P		PKPdf	01 10 36.3	-3.8
	baz=334,SNR=8.3							
N52A	McGinn's Farm,	141.15	27	P		PKPdf	01 10 36.0	-4.2
	baz=324							
G63A	Kingsbury	141.20	11	P		PKPdf	01 10 36.2	-4.0
	baz=344							
G64A	Maxfield	141.22	10	P		PKPdf	01 10 36.3	-3.8
	baz=346							
H61A	Lyndonville	141.25	14	P		PKPdf	01 10 36.6	-3.7
	baz=340,SNR=5.2							
K56A	Middlesex	141.32	21	P		PKPdf	01 10 36.3	-4.2
	baz=331							
WVT	Waverly	141.35	38			PKPdf	01 10 35.9	-4.8
WVT	Waverly	141.35	38	P		PKPdf	01 10 36.9	-3.8
	baz=312							
L55A	Hinsdale	141.36	22	P		PKPdf	01 10 36.5	-4.1
	baz=329,SNR=12							
R49A	Shelbyville	141.37	33	P		PKPdf	01 10 36.6	-4.0
	baz=317,SNR=14							
OXF	Oxford	141.39	41	P		PKPdf	01 10 36.9	-3.8
	baz=308							
H62A	Milan	141.39	13	P		PKPdf	01 10 36.4	-4.1
	baz=342							
J58A	Remsen	141.41	18	P		PKPdf	01 10 36.9	-3.7
	baz=335							
M54A	Oil Creek Stat	141.45	24	P		PKPdf	01 10 36.6	-4.2
	baz=327,SNR=6.9							
LBNH	Lisbon	141.53	14	P		PKPdf	01 10 37.2	-3.6
	baz=340							
N53A	Lisbon	141.53	26	P		PKPdf	01 10 37.1	-3.8
	baz=325,SNR=6.6							
I60A	Shoreham	141.54	16	P		PKPdf	01 10 37.2	-3.6
	baz=338,SNR=6.0							
H63A	New Sharon	141.55	12	P		PKPdf	01 10 37.5	-3.3
	baz=343							
J59A	Piesco	141.55	17	P		PKPdf	01 10 37.1	-3.7
	baz=336							
P51A	Williamsport	141.56	30	P		PKPdf	01 10 36.5	-4.4
	baz=321,SNR=26							
K57A	Scipio Center	141.57	20	P		PKPdf	01 10 37.0	-3.9
	baz=333,SNR=11							
Q50A	Georgetown	141.58	31	P		PKPdf	01 10 36.7	-4.3
	baz=319,SNR=8.4							
O52A	Adamsville	141.64	28	P		PKPdf	01 10 37.6	-3.5
	baz=323,SNR=9.7							
S49A	Springfield	141.67	33	P		PKPdf	01 10 37.4	-3.8
	baz=316,SNR=28							
L56A	Greenwood	141.72	22	P		PKPdf	01 10 37.6	-3.6
	baz=331,SNR=9.3							
H64A	Troy	141.73	11	P		PKPdf	01 10 37.4	-3.6
	baz=345							
I61A	Oroboro, Fairl	141.75	15	P		PKPdf	01 10 37.8	-3.3
	baz=340							
Q51A	Peebles	141.76	30	P		PKPdf	01 10 37.3	-4.1
	baz=320,SNR=21							
N54A	Moraine State	141.77	25	P		PKPdf	01 10 37.8	-3.5
	baz=326,SNR=6.0							
O53A	New Philadelph	141.82	27	P		PKPdf	01 10 38.3	-3.1
	baz=324,SNR=9.4							
R50A	Paris	141.82	32	P		PKPdf	01 10 37.8	-3.7
	baz=318,SNR=24							
K58A	Earlville	141.83	19	P		PKPdf	01 10 38.0	-3.4
	baz=334							
M55A	Ridgway	141.84	23	P		PKPdf	01 10 37.9	-3.5
	baz=328,SNR=6.8							
H65A	Eastbrook	141.85	10

baz=340,SNR=5.6
K60A Five Rivers En 142.51 17 P PKPdf 01 10 40.5 -2.0
baz=337,SNR=7.4
L59A Walton 142.54 19 P PKPdf 01 10 40.4 -2.3
baz=334,SNR=6.7
M57A Sunshine Farm, 142.58 22 P PKPdf 01 10 40.8 -2.0
baz=331,SNR=27
J63A Strafford 142.63 14 P PKPdf 01 10 41.0 -1.7
baz=341,SNR=9.2
K61A Williamstown 142.64 17 P PKPdf 01 10 41.1 -1.7
baz=338,SNR=9.3
R52A Catlettsburg 142.65 30 P PKPdf 01 10 40.2 -2.8
baz=320,SNR=14
P54A Burton 142.67 27 P PKPdf 01 10 41.0 -2.0
baz=325,SNR=48
O55A Ligonier 142.68 25 P PKPdf 01 10 40.7 -2.3
baz=327,SNR=11
S51A Beattyville 142.69 32 P PKPdf 01 10 40.4 -2.6
baz=319,SNR=43
V49A McMinnville 142.74 36 P PKPdf 01 10 40.7 -2.5
baz=314,SNR=54
Q53A Leroy 142.78 29 P PKPdf 01 10 41.3 -1.9
baz=323,SNR=29
M58A Price's Panora 142.79 21 P PKPdf 01 10 41.3 -1.8
baz=332,SNR=18
SSPA Standing Stone 142.90 23 PKPdf 01 10 41.5 -1.8
SSPA Standing Stone 142.90 23 P PKPdf 01 10 41.6 -1.8
baz=329
U50A Jamestown 142.90 35 P PKPdf 01 10 41.7 -1.8
baz=316,SNR=186
MCWV Mont Chateau 142.91 26 P PKPdf 01 10 41.8 -1.5
baz=326,SNR=75
N57A Milroy 142.92 23 P PKPdf 01 10 41.5 -1.9
baz=330,SNR=41
K62A Royalston 142.92 15 P PKPdf 01 10 42.0 -1.3
baz=339,SNR=9.3
S52A Salyersville 142.93 31 P PKPdf 01 10 41.4 -2.0
baz=319,SNR=13
O56A Blue Knob Stat 142.94 24 P PKPdf 01 10 41.6 -1.9
baz=328,SNR=29
W49A Belvidere 142.97 37 P PKPdf 01 10 41.3 -2.3
baz=313,SNR=88
L60A Shokan 142.98 18 P PKPdf 01 10 41.7 -1.7
baz=336,SNR=5.7
L61A Hillsdale 1, H 142.99 17 P PKPdf 01 10 41.9 -1.5
baz=337,SNR=16
M59A Waymart 142.99 20 P PKPdf 01 10 41.9 -1.6
baz=334,SNR=13
R53A Hurricane 142.99 30 P PKPdf 01 10 41.5 -2.0
baz=322,SNR=22
T51A Gray 143.00 33 P PKPdf 01 10 42.1 -1.5
baz=318,SNR=77
L61B Northampton 143.00 16 P PKPbc 01 10 41.9 +0.3
baz=338,SNR=9.8
Q54A Coxs Mills 143.01 28 P PKPbc 01 10 42.4 +0.6
baz=324,SNR=85
P55A Reedsville 143.04 26 P PKPbc 01 10 42.3 +0.4
baz=326,SNR=55
K63A Dunstable 143.08 15 P PKPdf 01 10 42.8 -0.7
baz=340
N58A Sunbury 143.16 22 P PKPbc 01 10 42.3 +0.2
baz=331,SNR=32
HRV Adam Dziewonsk 143.25 15 PKIKP PKPdf 01 10 43.5 -0.3
HRV Adam Dziewonsk 143.25 15 PKPdf 01 10 43.5 -0.3
HRV Adam Dziewonsk 143.25 15 P PKPbc 01 10 42.7 +0.4
baz=340
V50A Pikevile 143.28 36 P PKPbc 01 10 42.5 -0.1
baz=315,SNR=62
Q55A Buckhannon 143.34 27 P PKPbc 01 10 43.1 +0.3
baz=325,SNR=61
O57A Amberson 143.36 23 P PKPbc 01 10 43.0 +0.3
baz=329,SNR=31
U51A La Follette 143.39 34 P PKPbc 01 10 43.1 +0.1
baz=317,SNR=92
L62A Suffield 143.40 16 P PKPdf 01 10 43.7 -0.4
baz=338,SNR=10
T52A Hallie 143.41 32 P PKPbc 01 10 43.2 +0.2
baz=319,SNR=65
S53A Williamson 143.41 31 P PKPbc 01 10 43.3 +0.2
baz=321,SNR=26
N59A State Game Lan 143.43 21 P PKPbc 01 10 43.5 +0.5
baz=333,SNR=87
M60A Port Jervis 143.45 19 P PKPbc 01 10 43.5 +0.4
baz=335,SNR=33
P56A Dayton Farm, R 143.47 25 P PKPbc 01 10 43.4 +0.3
baz=327,SNR=114
W50A Signal Mountai 143.48 36 P PKPbc 01 10 43.4 +0.1
baz=314,SNR=106
TZTN Tazewell 143.52 33 P PKPbc 01 10 43.8 +0.4
baz=318,SNR=122
R54A Victor 143.58 29 P PKPbc 01 10 43.6 +0.1
baz=323,SNR=58
V51A Loudon 143.62 35 P PKPbc 01 10 43.9 +0.2
baz=316,SNR=154
Q56A Snyder Ridge, 143.70 26 P PKPab 01 10 44.2 +0.3
baz=326,SNR=46
N60A Cedar Hill Far 143.71 20 P PKPab 01 10 44.1 +0.3
baz=334,SNR=51
O58A Lewisberry 143.71 23 P PKPab 01 10 43.9 +0.1
baz=330,SNR=50
S54A Dingess, Beckl 143.72 30 P PKPab 01 10 44.3 +0.2
baz=322,SNR=71
U52A Thorn Hill 143.73 33 P PKPab 01 10 44.4 +0.3
baz=318,SNR=96
T53A Wise 143.74 32 P PKPab 01 10 44.4 +0.3
baz=320,SNR=48
M61A Granite Spring 143.74 18 P PKPdf 01 10 44.4 -0.3
baz=336,SNR=33
SACV Santiago Islan 143.77 286 PKPdf 01 10 46.5 +1.0
O59A Robesonia 143.82 22 P PKPab 01 10 44.3 0.0
baz=332,SNR=49
P57A Homestead Farm 143.83 24 P PKPab 01 10 44.3 0.0
baz=328,SNR=54
W51A Cleveland 143.84 36 P PKPab 01 10 44.8 +0.3
baz=315,SNR=80
L63A North Scituate 143.84 15 P PKPdf 01 10 44.7 -0.1
baz=340,SNR=12
LRAL Lakeview Retre 143.88 41 P PKPdf 01 10 45.2 0.0
baz=310,SNR=122
M62A Hamden 143.88 17 P PKPab 01 10 44.5 +0.1
baz=338,SNR=6.4
R55A Marlinton 143.91 28 P PKPdf 01 10 45.1 -0.1
baz=324,SNR=59
L64A Middleborough 143.96 14 P PKPdf 01 10 45.4 +0.3
baz=341,SNR=19
PAL Palisades 143.97 18 P PKPdf 01 10 45.6 +0.5
baz=336,SNR=67
V52A Sevierville 144.01 34 P PKPdf 01 10 45.7 +0.3
baz=317,SNR=100
Q57A Strasburg 144.04 25 P PKPab 01 10 45.2 0.0
baz=327,SNR=37
O60A Telford 144.09 21 P PKPdf 01 10 45.5 +0.2
baz=333,SNR=27
P58A Pank, Wackersv 144.11 24 P PKPdf 01 10 45.5 +0.1
baz=329,SNR=50
R56A Bull Pasture M 144.13 27 P PKPab 01 10 45.6 0.0
baz=325,SNR=24
S55A Lewisburg 144.14 29 P PKPbc 01 10 45.3 0.0
baz=323,SNR=17
M63A Gales Ferry 144.15 16 P PKPab 01 10 45.6 +0.2
baz=339,SNR=14
T54A Tazewell 144.17 31 P PKPdf 01 10 45.6 -0.1
baz=321,SNR=65
N62A Caumsett State 144.18 18 P PKPab 01 10 45.8 +0.3
baz=336,SNR=8.9
U53A Fall Branch 144.18 32 P PKPab 01 10 45.8 0.0
baz=319,SNR=50
X51A Calhoun 144.19 37 P PKPab 01 10 45.8 0.0
baz=314,SNR=60
M64A Tiverton 144.23 15 P PKPab 01 10 45.9 +0.1
baz=340,SNR=8.5
P59A Jarrettsville 144.34 22 P PKPab 01 10 46.1 -0.2
baz=331,SNR=31
W52A Murphy 144.36 35 P PKPab 01 10 46.4 -0.1
baz=316,SNR=54
N63A Mattituck 144.40 17 P PKPdf 01 10 45.7 -0.2
baz=338
Z50A Ashland 144.42 40 P PKPbc 01 10 46.5 +0.2
baz=311,SNR=154
Q58A Fox Den Farm, 144.42 24 P PKPab 01 10 46.5 -0.1
baz=328,SNR=31
U54A Nelsons Funny 144.46 31 P PKPab 01 10 46.7 -0.3
baz=320,SNR=38
P60A Greenville 144.46 21 P PKPab 01 10 46.4 -0.3
baz=332,SNR=44
T55A Pulaski 144.52 30 P PKPab 01 10 46.8 -0.3
baz=322,SNR=28
Y51A Rockmart 144.52 38 P PKPbc 01 10 46.5 -0.1
baz=313,SNR=49
V53A Saluda 144.57 33 P PKPab 01 10 47.4 0.0
baz=318,SNR=105
O61A Allentown 144.59 20 P PKPab 01 10 47.0 -0.1
baz=334,SNR=9.2
R57A Stanardsville 144.61 26 P PKPab 01 10 47.1 -0.2
baz=327,SNR=18
BLA Blacksburg 144.62 29 P PKPbc 01 10 46.8 0.0
baz=323,SNR=15
S56A Natural Bridge 144.65 28 P PKPbc 01 10 47.0 +0.1
baz=324,SNR=15
X52A Dahlonega 144.73 36 P PKPab 01 10 47.7 -0.3
baz=315,SNR=41
W53A Cullowhee 144.74 34 P PKPab 01 10 48.1 -0.1
baz=317,SNR=101
R58A Rapidan 144.83 25 P PKPbc 01 10 47.6 +0.2
baz=327,SNR=18
S57A Dark Hollow, R 144.86 27 P PKPbc 01 10 47.7 +0.2
baz=326,SNR=18
U55A TA2, Sparta 144.87 31 P PKPbc 01 10 47.9 +0.2
baz=321,SNR=33
P61A Hammonton 144.88 20 P PKPbc 01 10 47.8 +0.4
baz=333
Q59A Harwood 144.90 23 P PKPab 01 10 48.3 -0.1
baz=330,SNR=15
T56A Rocky Mt 144.95 29 P PKPbc 01 10 48.0 +0.2
baz=323,SNR=29
V54A Nebo 144.96 32 P PKPab 01 10 48.5 -0.3
baz=319,SNR=40
BRAL Brewton 145.00 43 P PKPab 01 10 49.5 +0.4
baz=308,SNR=44
Q60A Greensboro 145.09 22 P PKPab 01 10 48.9 -0.2
baz=331,SNR=10
X53A Estanollee 145.15 35 P PKPab 01 10 49.6 +0.1
baz=316,SNR=78
Y52A Lilburn 145.15 37 P PKPab 01 10 49.4 -0.2
baz=314,SNR=55
R58B Mineral 145.17 26 P PKPbc 01 10 48.6 +0.3
baz=327,SNR=20
CBN Corbin Frederi 145.18 25 P PKPbc 01 10 48.9 +0.6
baz=328,SNR=14
V55A Taylorsville 145.28 32 P PKPbc 01 10 49.2 +0.4
baz=320,SNR=35
R59A King George, V 145.29 24 P PKPbc 01 10 49.3 +0.6
baz=329,SNR=7.7
U56A King 145.32 30 P PKPbc 01 10 49.1 +0.3
baz=322,SNR=18
W54A Cherokee Point 145.34 33 P PKPbc 01 10 49.6 +0.7
baz=318,SNR=37
T57A Hurt 145.35 28 P PKPbc 01 10 49.2 +0.3
baz=324,SNR=30
S58A Poland Farm, P 145.39 26 P PKPbc 01 10 49.3 +0.4
baz=327,SNR=18
Q61A Milford 145.39 22 P PKPab 01 10 50.4 +0.1
baz=332
Z52A Williamson 145.40 38 P PKPbc 01 10 49.9 +0.7
baz=313,SNR=51
Y53A Monroe 145.44 36 P PKPab 01 10 50.0 -0.7
baz=315,SNR=60
R60A Leonardtown, M 145.44 24 P PKPab 01 10 50.0 -0.6
baz=330,SNR=6.4
152A Waverly Hall 145.57 39 P PKPbc 01 10 50.3 +0.6
baz=326,SNR=96
S59A Mechanicsville 145.59 25 P PKPbc 01 10 50.2 +0.6
baz=328,SNR=21
X54A Belton 145.64 34 P PKPbc 01 10 50.6 +0.8
baz=318,SNR=64
V56A Mocksville 145.69 31 P PKPbc 01 10 50.3 +0.4
baz=322,SNR=28
T58A Grand View Acr 145.72 27 P PKPbc 01 10 50.2 +0.2
baz=326,SNR=26
KMSC Kings Mountain 145.76 32 P PKPbc 01 10 50.7 +0.5
baz=320,SNR=51
U57A Blanch 145.76 29 P PKPbc 01 10 50.4 +0.3
baz=324,SNR=31
GOGA Godfrey 145.82 37 P PKPbc 01 10 51.2 +0.9
baz=315,SNR=38
Z53A Monticello 145.85 37 P PKPbc 01 10 51.2 +0.8
baz=314,SNR=47
R61A Willards 145.87 22 P PKPab 01 10 51.4 -0.8
baz=332
S60A Water View 145.90 24 P PKPbc 01 10 51.3 +0.9
baz=329,SNR=17
Y54A Tignall 145.96 35 P PKPab 01 10 51.8 -1.0
baz=316,SNR=85
V57A Coltrane Farms 145.99 30 P PKPbc 01 10 51.0 +0.3
baz=323,SNR=34
252A Lumpkin 146.00 40 P PKPbc 01 10 51.9 +1.0
baz=312
X55A Gracelyn & Ava 146.11 34 P PKPbc 01 10 52.0 +0.9
baz=316,SNR=39
153A Fort Valley 146.13 38 P PKPbc 01 10 52.1 +0.9
baz=314,SNR=29
T59A Double "B" Far 146.14 26 P PKPbc 01 10 51.9 +0.8
baz=327,SNR=28
W56A Indian Trail 146.16 32 P PKPbc 01 10 51.8 +0.5
baz=321,SNR=30
U58A Oxford 146.17 28 P PKPbc 01 10 51.8 +0.6
baz=325,SNR=44
352A Blakely 146.22 41 P PKPbc 01 10 52.4 +0.9
baz=311,SNR=18
Z54A Sparta 146.32 36 P PKPbc 01 10 52.6 +0.9
baz=316,SNR=34
253A Americus 146.34 39 P PKPbc 01 10 52.7 +0.9
baz=312,SNR=30
T60A Surry 146.35 25 P PKPbc 01 10 52.5 +0.8
baz=328,SNR=21
Y55A Saluda 146.38 34 P PKPbc 01 10 52.8 +0.9
baz=318,SNR=48
V58A Windy Hill, Pi 146.38 29 P PKPbc 01 10 52.3 +0.5
baz=324,SNR=24
X56A White Oak 146.42 33 P PKPbc 01 10 52.6 +0.6
baz=319,SNR=21
W57A Gilead 146.45 31 P PKPbc 01 10 52.6 +0.6
baz=322,SNR=30
U59A Littleton 146.55 27 P PKPbc 01 10 52.8 +0.5
baz=326,SNR=14
154A Montrose 146.60 38 P PKPbc 01 10 53.3 +0.8
baz=314,SNR=13
CPUP Villa Florida 146.66 184 PKPbc PKPdf 01 10 51.1 +0.9
comp=Z,80nm,0.9s,baz=160,slow=1.6,SNR=39
U60A Pendleton 146.73 26 P PKPbc 01 10 53.3 +0.6
baz=327,SNR=16
Z55A Blythe 146.74 36 P PKiKP 01 10 54.1 -0.7
baz=316,SNR=27
353A Camilla 146.76 40 P PKiKP 01 10 54.0 -0.9
baz=312,SNR=18
Y56A Pelion 146.79 34 P PKiKP 01 10 54.1 -0.9
baz=318,SNR=12
V59A Middlesex 146.82 28 P PKPbc 01 10 53.5 +0.5
baz=325,SNR=14
X57A Johnson Farm, 146.94 32 P PKPbc 01 10 54.1 +0.8
baz=321,SNR=12
W58A Raeford 146.94 30 P PKPbc 01 10 53.9 +0.6
baz=323,SNR=16
254A Abbeville 146.94 39 P PKiKP 01 10 54.4 -0.9
baz=313,SNR=10
155A Kite 146.97 37 P PKiKP 01 10 54.6 -0.7
baz=315,SNR=24
TIGA Tifton 147.10 40 P PKiKP 01 10 54.9 -0.8
baz=312,SNR=18
Z56A Williston 147.10 35 P PKiKP 01 10 54.9 -0.7
baz=318,SNR=16
Y57A Sumter 147.12 33 P PKPbc 01 10 54.6 +0.7
baz=320,SNR=11
U61A Possum Corner 147.16 25 P PKiKP 01 10 54.8 -0.8
baz=328,SNR=6.7
W59A Clinton 147.21 29 P PKPbc 01 10 54.8 +0.7
baz=324,SNR=11
X58A Rowland 147.26 31 P PKPbc 01 10 54.8 +0.6
baz=322,SNR=18
V60A Jim Taylor Roa 147.27 27 P PKPbc 01 10 54.9 +0.7
baz=326,SNR=24
CNNC Cliffs of the 147.42 28 P PKiKP 01 10 55.4 -0.8
baz=325,SNR=6.3
255A Hazlehurst 147.46 38 P PKiKP 01 10 55.7 -0.6
baz=315,SNR=15
Z57A Bowman 147.50 34 P PKiKP 01 10 55.8 -0.6
baz=319,SNR=22
156A Sylvania 147.52 36 P PKiKP 01 10 56.3 -0.1
baz=317,SNR=7.5
V61A Roper 147.56 26 P PKiKP 01 10 56.0 -0.4
baz=328,SNR=6.4
Y58A Scranton 147.59 32 P PKiKP 01 10 56.0 -0.6
baz=321,SNR=11
X59A McDuffie Farm, 147.61 30 P PKPbc 01 10 55.8 +0.7
baz=323,SNR=12
W60A Pink Hill 147.65 28 P PKiKP 01 10 55.9 -0.7
baz=325,SNR=12
157A Early Branch 147.79 35 P PKiKP 01 10 57.2 +0.2
baz=318,SNR=10
W61A Ground Anchor 147.88 27 P PKPbc 01 10 56.4 +0.7
baz=326
X60A Albert Glenn T 147.91 29 P PKiKP 01 10 56.7 -0.5
baz=324,SNR=19
NHSC New Hope 147.93 34 P PKiKP 01 10 57.1 -0.2
baz=319,SNR=5.9
Y59A Loris 147.94 31 P PKiKP 01 10 56.7 -0.6
baz=322,SNR=9.9
Z58A St. Stephen 147.95 33 P PKiKP 01 10 57.1 -0.2
baz=320,SNR=10
V62A Hyde County Ai 148.02 26 P PKiKP 01 10 57.5 +0.2
baz=328
158A Hollywood 148.20 34 P PKiKP 01 10 58.1 +0.3
baz=319
Y60A Bolivia 148.26 30 P PKiKP 01 10 57.5 -0.4
baz=323
Z59A Georgetown, SC 148.31 32 P PKiKP 01 10 58.3 +0.2
baz=321
LVC Limon Verde 149.09 163 PKP PKPdf 01 10 56.0 +1.3
comp=Z,12nm,0.9s,baz=278,slow=7.1,SNR=8.7
LVC PKPbc PKiKP 01 11 01.0 +0.5
comp=Z,74nm,0.9s,baz=254,slow=1.3,SNR=24
LVC Limon Verde 149.09 163 PKPbc PKiKP 01 11 01.4 +0.9
TEIG Tepich 149.41 62 PKiKP 01 11 00.9 +0.3
DWPF Disney Wildern 150.71 42 PKiKP 01 11 03.7 +0.5
DWPF Disney Wildern 150.71 42 P PKiKP 01 11 03.6 +0.5
baz=312
TGUH Tegucigalpa,Un 152.06 73 eP PKPbc 01 11 05.1 -1.2
060A Indiantown 152.13 42 P PKiKP 01 11 06.9 +0.8
baz=312
061Z Ochoppi 152.51 45 P PKiKP 01 11 07.6 +0.7
baz=309
RCBR Riachuelo 152.98 242 PKIKP PKiKP 01 11 09.5 +1.2
RCBR 01 11 23.8
RCBR Riachuelo 152.98 242 PKPdf 01 11 02.0 +1.6
RCBR PKPbc PKiKP 01 11 09.5 +1.2
RCBR PKPab 01 11 23.8 +1.2
NNA Nana 154.48 138 PKP PKPdf 01 11 03.5 +1.1
comp=Z,23nm,1.1s,baz=283,slow=3.0,SNR=8.2
NNA PKPbc PKPbc 01 11 12.4 +1.0
comp=Z,20nm,0.6s,baz=258,slow=5.3,SNR=15
NNA Nana 154.48 138 PKPdf PKPdf 01 11 02.3 -0.1
NNA PKPbc 01 11 12.3 +0.9
BDFB Brasilia 154.58 207 PKP PKPdf 01 11 03.5 +0.9
comp=Z,22nm,0.8s,baz=100,slow=1.4,SNR=30
BDFB PKPbc PKPbc 01 11 12.4 +0.8
comp=Z,9.3nm,0.7s,baz=210,slow=7.5,SNR=7.3
BDFB PKPab PKPab 01 11 30.8 +1.5
comp=Z,18nm,0.9s,baz=58,slow=2.7,SNR=7.3
LPAZ La Paz 155.28 160 PKP PKPdf 01 11 05.8 +1.6
comp=Z,11nm,0.9s,baz=133,slow=1.0,SNR=41
LPAZ PKPab PKPab 01 11 33.9 +1.1
comp=Z,18nm,0.5s,baz=199,slow=5.7,SNR=17
ATAH Atahualpa 156.58 127 PKP PKPdf 01 11 07.8 +2.1
comp=Z,17nm,0.9s,baz=230,slow=1.2,SNR=19
ATAH PKPab PKPab 01 11 40.1 +1.7
comp=Z,11nm,0.9s,baz=198,slow=6.8,SNR=6.0
SIV San Ignacio 156.98 177 PKP PKPdf 01 11 07.1 +1.5
comp=Z,11nm,1.0s,baz=200,slow=1.5,SNR=38
SIV PKPab PKPab 01 11 40.2 +0.7
comp=Z,13nm,0.8s,baz=191,slow=4.4,SNR=14
OTAV Otavalo 160.09 109 PKIKP PKPdf 01 11 11.0 +1.1
OTAV Otavalo 160.09 109 PKPdf 01 11 11.0 +1.1
UPA Univ. de Panam 160.28 83 eP PKPdf 01 11 06.5 -3.1
GTBY Guantanamo Bay 160.38 48 eP PKPdf 01 11 12.4 +3.0
BBAC Balboa, Cauca 161.80 105 eP PKPdf 01 11 10.4 -1.0
SOLC Bahia Solano 162.39 92 eP PKPdf 01 11 11.1 -0.6
SOTA Rioblanco 162.44 106 eP PKPdf 01 11 10.4 -2.0
POPC Popayan, Colom 162.49 104 eP PKPdf 01 11 08.4 -3.7
YOTC Yotoco, Valle 163.15 100 eP PKPdf 01 11 11.1 -1.5
FLOC Florencia 163.18 108 eP PKPdf 01 11 10.4 -2.1
LCBC Los crdobas, 163.41 83 eP PKPdf 01 11 11.8 -0.9
PTLC Puerto Leguiza 163.44 114 eP PKPdf 01 11 11.1 -1.6
DBBC Dabeiba 163.62 89 eP PKPdf 01 11 11.1 -1.9
SAML Samuel 163.65 168 PKIKP PKPdf 01 11 14.0 +1.1
SAML 01 12 09.7
SAML Samuel 163.65 168 PKPdf 01 11 14.0 +1.1
SAML PKPab 01 12 09.7 +1.1
CBOC Ciudad Bolivar 163.75 94 eP PKPdf 01 11 13.1 -0.1
ANIL Santa Ana 164.16 99 eP PKPdf 01 11 13.8 0.0
ORTC Ortega, Tolima 164.21 101 eP PKPdf 01 11 12.4 -1.0
HELC Santa Helena 164.25 92 eP PKPdf 01 11 11.8 -2.1
RREF El Recreo 164.29 97 eP PKPdf 01 11 13.8 -0.5
UREC San Jos de Ur 164.29 87 eP PKPdf 01 11 09.8 -3.7
GUY2C Guyana, Caldas 164.32 96 eP PKPdf 01 11 12.4 -1.7
SJCC San Jacinto, C 164.45 79 eP PKPdf 01 11 13.1 -0.6
PRAC Prado 164.51 102 eP PKPdf 01 11 11.8 -2.0
NORC Norcasia 164.85 95 eP PKPdf 01 11 13.1 -0.9
ZARC Zaragoza, Cauc 164.97 88 eP PKPdf 01 11 11.1 -3.0
MACC Macarena, Meta 165.06 109 eP PKPdf 01 11 13.8 -0.4
ROSC El Rosal 165.29 98 PKP PKPdf 01 11 15.9 +1.1
comp=Z,14nm,0.8s,baz=188,slow=2.8,SNR=14
ROSC PKPab PKPab 01 12 18.6 +1.8
comp=Z,13nm,0.7s,baz=127,slow=14,SNR=4.1
ROSC El Rosal 165.29 98 eP PKPdf 01 11 13.1 -1.7
PTBC PUERTO BERRIO 165.34 91 eP PKPdf 01 11 10.4 -3.9
SPBC San Pablo de B 165.65 95 eP PKPdf 01 11 10.4 -4.3
SMLC San Martn de 165.68 82 eP PKPdf 01 11 12.4 -2.2
CHIC Chingaza 165.83 99 eP PKPdf 01 11 13.8 -1.5
OCAC Ocana 166.46 84 eP PKPdf 01 11 13.1 -2.3
BARC Barichara 166.61 91 eP PKPdf 01 11 16.4 +0.8
RUSC La Rusia 166.65 95 eP PKPdf 01 11 15.1 -0.9
PAMC Pamplona, Colo 167.11 88 eP PKPdf 01 11 15.1 -1.2
PTGC Puerto Gaitan, 167.29 103 eP PKPdf 01 11 11.8 -4.1
SJG San Juan 167.41 29 PKPab PKPab 01 12 24.8 -0.4
baz=349,slow=10
SJG San Juan 167.41 29 PKPdf PKPdf 01 11 10.9 -4.9
TAMC Tame, Arauca 167.98 93 eP PKPdf 01 11 10.4 -5.9
DABV Dabajuro 168.57 70 eP PKPdf 01 11 17.1 +0.4
SOCV Socops 168.89 83 eP PKPdf 01 11 13.1 -3.8
SDV Santo Domingo 169.04 80 PKP PKPdf 01 11 16.5 -0.8
comp=Z,18nm,1.0s,baz=311,slow=11,SNR=6.8
SDV PKPab PKPab 01 12 34.4 +1.2
comp=Z,14nm,0.6s,baz=337,slow=1.5,SNR=13
SDV Santo Domingo 169.04 80 PKPdf 01 11 17.0 -0.2
SDV PKPab 01 12 32.6 -0.5
ELOV Elorza 170.29 90 eP PKPdf 01 11 17.7 0.0
MDP Montagnes des 172.69 254 PKPab PKPab 01 12 49.6 +0.4
comp=Z,6.6nm,0.7s,baz=124,slow=7.3,SNR=3.7

IDC ***23*** *01:01:23.4s 3.2,24°20'S x 179°7'9W, h492km s 30km, mb3.7/11, mb1 3.7/12, mb1mx3.4/44, mbtmp4.5/12, Error ellipse: s-maj=29.9km s-min=13.8km az=57.0*
NEIC ***23*** *01:01:23.1s 0.7,24°3'S s 0'.1 x 179°8'W s 0'.2, h498km s 9km, mb4.4/15, Error ellipse: s-maj=22.4km s-min=18.7km az=102.0*

ISC 23 01:01:23.9 s 0.7, 24°27'S s 0'.09 x 179°8'W s 0'.1, h500 km, n38, g 0 s 96/39, mb4.3/18, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	12.78	38	P	P	01 04 10.0	-1.0
DZM	Mont Dzumac	12.86	277	P	P	01 04 13.8	+2.0
	0.6nm,0.3s,baz=102,slow=14,SNR=6.6						
DZM	Mont Dzumac	12.86	277	P	P	01 04 11.1	-0.7
URZ	Urewera	14.20	190	P	P	01 04 26.7	+1.2
	2.1nm,0.3s,baz=299,slow=3.8,SNR=7.7						
URZ				S	S	01 06 52.7	-2.5
	0.9nm,0.3s,baz=84,slow=13,SNR=4.6						
URZ	Urewera	14.20	190	P	P	01 04 26.8	+1.3
QRZ	Quartz Range	17.72	200	P	P	01 05 01.0	-0.5
PLWZ	Palliser	17.74	192	P	P	01 05 00.1	-1.7
TUWZ	Tuamarina	17.90	196	P	P	01 05 02.4	-0.8
KHZ	Kahutara	18.93	195	P	P	01 05 12.0	-0.5
RPZ	Rata Peaks	20.80	199	P	P	01 05 29.7	0.0
	7.4nm,0.5s,baz=10,slow=5.0,SNR=3.4						
RPZ	Rata Peaks	20.80	199	IAmb	IAmb	01 05 36.4	
	comp=Z,21nm,1.0s						
EIDS	Eidsvold	26.45	261	P	P	01 06 20.2	-0.2
EIDS				IAmb	IAmb	01 06 21.4	
	comp=Z,5.1nm,0.7s						
CTA	Charters Tower	31.68	271	P	P	01 07 06.4	+0.5
	comp=Z,16nm,0.5s,baz=95,slow=11,SNR=17						
STKA	Stephens Creek	34.78	249	P	P	01 07 32.2	+0.2
	comp=Z,3.4nm,0.5s,baz=117,slow=12,SNR=3.4						
STKA	Stephens Creek	34.78	249	P	P	01 07 31.9	-0.1
BBOO	Buckleboo	39.49	247	P	P	01 08 09.8	-0.9
BBOO				IAmb	IAmb	01 08 21.9	
	comp=Z,9.8nm,1.1s						
AS31	Alice Springs	42.18	261	P	P	01 08 31.8	-0.5
ASAR	Alice Springs	42.18	261	P	P	01 08 31.8	-0.6

comp=Z,3.0nm,0.8s,baz=93,slow=6.9,SNR=14
WB2 **Warramunga Arr** **42.58 266** P **P** **01 08 34.9 -0.6**
WB2 IAmb IAmb 01 08 35.3
comp=Z,9.2nm,0.5s
WRAB **Tennant Creek** **42.58 266** P **P** **01 08 35.0 -0.6**
WRAB IAmb IAmb 01 08 35.2
comp=Z,6.6nm,0.5s
WB0 **Warramunga Arr** **42.58 267** P **P** **01 08 34.8 -0.8**
WB0 IAmb IAmb 01 08 35.3
comp=Z,9.5nm,0.8s
WRA **Warramunga Arr** **42.59 266** P **P** **01 08 35.0 -0.7**
comp=Z,8.0nm,0.5s,baz=100,slow=8.2,SNR=29
WRA ScP **ScP** **01 13 21.0 +1.2**
comp=Z,1.5nm,0.8s,baz=96,slow=3.9,SNR=5.1
FORT **Forrest** **46.38 250** P **P** **01 09 03.7 -1.0**
FORT IAmb IAmb 01 09 12.2
comp=Z,28nm,1.1s
MTN **Manton Dam** **47.69 275** P **P** **01 09 14.2 -0.6**
MTN IAmb IAmb 01 09 25.0
comp=Z,14nm,1.1s
KNRA **Kununurra** **48.89 270** P **P** **01 09 23.4 -0.4**
KNRA IAmb IAmb 01 09 24.5
comp=Z,28nm,1.1s
FITZ **Fitzroy Crossi** **51.01 266** P **P** **01 09 39.6 +0.2**
comp=Z,4.0nm,0.6s,baz=118,slow=8.4,SNR=6.2
FITZ **Fitzroy Crossi** **51.01 266** P **P** **01 09 38.9 -0.5**
SIJI **Sorong** **52.75 289** P **P** **01 09 51.9 -0.1**
comp=Z,18nm,0.6s,baz=107,slow=3.4,SNR=7.4
VNDA **Vanda** **54.03 185** P **P** **01 10 01.5 +1.4**
comp=Z,1.8nm,0.8s,baz=18,slow=5.6,SNR=4.2
QSPA **South Pole Qui** **65.81 180** P **P** **01 11 19.5 +0.6**
comp=Z,4.8nm,0.7s,baz=358,slow=0.6,SNR=11
QSPA **South Pole Qui** **65.81 180** P **P** **01 11 19.4 +0.4**
QSPA IAmb IAmb 01 11 22.1
comp=Z,7.1nm,0.9s
MJAR **Matsushiro Ant** **72.32 326** P **P** **01 11 58.3 -0.1**
comp=Z,1.2nm,0.6s,baz=159,slow=7.8,SNR=2.9
MAW **Mawson** **77.47 200** P **P** **01 12 27.5 +0.6**
comp=Z,1.2nm,0.5s,baz=153,slow=3.6,SNR=4.3
BVAR **Borovoye Array** **120.85 319** PKP **PKPdf** **01 19 17.9 -0.7**
comp=Z,0.2nm,0.3s,baz=93,slow=1.5,SNR=4.7
FINES **FINESS Array B** **138.86 341** PKP **PKPdf** **01 19 54.0 +1.7**
comp=Z,3.4nm,1.1s,baz=85,slow=6.1,SNR=3.5
AKASG **Malin Array Be** **145.39 327** PKPbc **PKPdf** **01 20 04.4 +0.2**
comp=Z,0.7nm,0.4s,baz=46,slow=4.3,SNR=6.2
BRTR **Keskin Array B** **147.96 307** PKPbc **PKPbc** **01 20 12.4 -0.5**
comp=Z,0.7nm,0.6s,baz=140,slow=2.9,SNR=4.2
TORD **Torodi Ar. Bea** **168.85 187** PKPab **PKPab** **01 21 47.1 -0.7**
comp=Z,1.0nm,0.7s,baz=171,slow=3.6,SNR=4.6

IDC 23 01:14:02.5±14.0, 25°40S×177°45W, h200km±125km, mb3.3/5, mb1 3.6/5, mb1mx3.3/42, mbtmp3.8/5, Error ellipse: s-maj=74.2km s-min=35.6km az=146.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**44.09 262**		P	P	01 21 50.5	-0.7
	0.8nm,0.9s,baz=112,slow=6.7,SNR=5.5						
WRA	**Warramunga Arr**	**44.63 267**		P	P	01 21 56.0	+0.5
	0.4nm,0.8s,baz=106,slow=7.9,SNR=3.9						
PETK	**Petropavlovsk-**	**81.11 345**		P	P	01 25 55.2	0.0
	3.2nm,0.6s,baz=151,slow=7.4,SNR=6.7						
NVAR	**Mina Array Bea**	**84.25 43**		P	P	01 26 12.2	+0.3
	0.1nm,0.3s,baz=227,slow=7.3,SNR=3.6						
PDAR	**Pinedale Array**	**92.18 43**		P	P	01 26 49.3	-0.3
	0.3nm,0.7s,baz=217,slow=5.7,SNR=3.9						
NOA	**NORSAR Array B**	**143.88 353**		PKP	PKPbc	01 33 11.6	-0.1
	0.6nm,0.8s,baz=21,slow=3.9,SNR=4.7						
AKASG	**Malin Array Be**	**147.47 328**		PKPbc	PKPbc	01 33 21.5	-1.1
	1.0nm,0.7s,baz=42,slow=3.7,SNR=6.8						
BRTR	**Keskin Array B**	**150.33 306**		PKPbc	PKPbc	01 33 30.4	+0.1
	0.1nm,0.4s,baz=144,slow=3.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	**167.78 176**		PKP	PKPdf	01 33 45.3	-0.3
	0.4nm,0.8s,baz=229,slow=1.3,SNR=2.9						

STR 23 01:23:15.4±0.6, 49°N±2°×±°, h21km±2km, MLv1.4/5
LDG 23 01:23:15.1±0.1, 49.34N×8.27E, h17km, Ml2.0/5, Error ellipse: s-maj=1.4km s-min=1.0km az=127.0, Germany

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KTD	**Kalmit**	**0.13 263**		Pg	Pb	01 23 19.3	+0.2
KTD				Sg	Sb	01 23 21.8	+0.1
LANF	**Langenberg**	**0.47 221**		Pg	Pg	01 23 24.7	+0.2
LANF				Sg	Sg	01 23 31.0	+0.1
SUBF	**Surbourg**	**0.51 214**		Pg	Pb	01 23 25.5	0.0
ABH	**Alteburg**	**0.72 319**		Pg	Pb	01 23 29.2	0.0
ABH				Sg	Sg	01 23 38.3	-0.6
OPP	**Oppenau**	**0.84 184**		Pg	Pb	01 23 30.5	-0.7
OPP				Pn	Pg	01 23 31.3	-0.2
OPP				Sg	Sb	01 23 41.0	-1.3
OPP				Sn	Sg	01 23 42.4	-0.2
WLS	**Welschbruch**	**1.10 214**		Pg	Pn	01 23 36.0	+0.2
WLS				Sg	Sn	01 23 50.4	-0.3
CDF	**Champ du Feu**	**1.14 216**		*e*Pn	Pn	01 23 33.5	-2.8
CDF	**Champ du Feu**	**1.14 216**		*e*Pg	Pn	01 23 36.2	-0.1
CDF				*e*Sg	Sb	01 23 51.0	+0.2
	1.8nm,0.2s						
ECH	**Echery**	**1.34 214**		Pg	Pb	01 23 40.3	+0.5
ECH				Sg	Sg	01 23 57.7	-0.8
HINF	**Hinteralfeld**	**1.79 212**		*e*Pg	Pg	01 23 48.5	-1.0
HINF				*e*Sg	Sb	01 24 10.9	+1.3
	3.3nm,0.2s						
HAU	**Haudompre**	**1.84 225**		*e*Pn	Pn	01 23 43.3	-2.7
HAU	**Haudompre**	**1.84 225**		*e*Pg	Pg	01 23 49.6	-0.9
HAU				*e*Sn	Sn	01 24 04.4	-4.5
HAU				*e*Sg	Sg	01 24 13.1	-1.4
	2.0nm,0.2s						
PAGF	**Fort de Pagny**	**1.85 246**		*e*Pn	Pn	01 23 43.2	-2.9
PAGF	**Fort de Pagny**	**1.85 246**		*e*Pg	Pg	01 23 49.8	-0.9
PAGF				*e*Sg	Sg	01 24 13.3	-1.4
	0.7nm,0.2s						
MEZF	**Maizieres J'vi**	**2.28 250**		*e*Pn	Pn	01 23 48.7	-3.3
MEZF				*e*Sg	Sg	01 24 26.7	-1.8
	1.7nm,0.3s						

TAP 23 01:23:45.1, 23°27N×121°02E, h2km, ML1.7, 3C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.08 183**		⇑*i* P	Pg	01 23 47.4	+0.6
	baz=178						
YUS	**Yu-Shan**	**0.23 343**		*i* P	Pg	01 23 50.4	+0.8
	baz=344						
YUS				S	Sg	01 23 54.0	+1.4
	baz=344						
FULB	**Fuli**	**0.26 106**		P	Pb	01 23 51.8	-0.8
	baz=107						
FULB				S	Sb	01 23 55.7	-1.8
	baz=107						
TWF1	**Yuli**	**0.27 72**		⇑*i* P	Pg	01 23 51.4	+1.1
	baz=74						
TWF1				*i* S	Sg	01 23 54.9	+1.2
	baz=74						
STYT	**Tauyuan**	**0.27 246**		P	Pg	01 23 51.1	+0.8
	baz=247						
YULB	**Yu-li**	**0.28 65**		P	Pg	01 23 51.4	+0.9
	baz=67						
ALS	**Alishan**	**0.31 320**		*e*P	Pg	01 23 52.3	+1.1
	baz=320						
ALS				*e*S	Sg	01 23 57.0	+1.8
	baz=320						
EHY	**Hungye**	**0.36 50**		*e*P	Pb	01 23 53.3	-1.0
	baz=51						
TPUB	**Ta-pu**	**0.36 275**		*e*P	Pg	01 23 53.2	+1.1
	baz=276						
WTP	**Ta-pu**	**0.38 266**		P	Pb	01 23 53.5	-1.1
	baz=268						
CHN4	**Tsaushan**	**0.40 281**		*i* P	Pb	01 23 54.3	-0.7
	baz=283						
SLGT	**Liugui**	**0.44 231**		*e*P	Pg	01 23 54.6	+0.9
	baz=219						
CHN5	**Tsauling**	**0.45 316**		*e*P	Pb	01 23 55.4	-0.5
	baz=314						
TWG	**Pinlang**	**0.45 174**		*e*P	Pg	01 23 54.4	+0.6
	baz=163						
TWGBT	**Beinan**	**0.46 173**		*e*P	Pg	01 23 54.4	+0.5
	baz=163						
CHN1	**Nanshi**	**0.46 259**		*e*P	Pb	01 23 55.4	-0.6
	baz=261						
TWK	**Hsinying**	**0.49 269**		*e*P	Pb	01 23 56.0	-0.5
	baz=271						
TWK				*e*S	Sg	01 24 02.6	+1.6
	baz=271						
VWDT	**VWDT**	**0.49 13**		*e*P	Pg	01 23 54.9	+0.3
	baz=11						
SSLB	**Suanglung**	**0.52 353**		*e*P	Pg	01 23 55.6	+0.5
	baz=343						

TAP 23 01:23:46.9, 23°27N×121°02E, h3km, ML1.9, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.08 185**		*i* P	Pg	01 23 48.7	+0.2
	baz=179						
ELDTW				*i* S	Sg	01 23 50.4	+0.8
	baz=179						
ELDTW	**Lidau**	**0.08 185**		*e*S	Pg	01 23 48.7	+0.2
	baz=178						
YUS	**Yu-Shan**	**0.23 344**		*i* P	Pg	01 23 52.2	+0.7
	baz=344						
YUS				S	Sg	01 23 56.0	+1.3
	baz=344						
STYT	**Tauyuan**	**0.27 248**		P	Pg	01 23 52.6	+0.5
	baz=246						
STYT				S	Sg	01 23 56.5	+1.0
	baz=246						
TWF1	**Yuli**	**0.27 71**		P	Pg	01 23 52.9	+0.8
	baz=72						
TWF1				S	Sg	01 23 56.7	+1.2
	baz=72						
YULB	**Yu-li**	**0.28 63**		P	Pg	01 23 53.1	+0.7
	baz=64						
YULB				*e*S	Sg	01 23 56.8	+0.7
	baz=64						
ALS	**Alishan**	**0.32 321**		*e*P	Pg	01 23 54.1	+1.0
	baz=321						
ALS				*e*S	Sg	01 23 58.6	+1.3
	baz=321						
CHKT	**Chengkung**	**0.35 118**		*e*P	Pb	01 23 55.8	0.0
	baz=117						
EHY	**Hungye**	**0.36 49**		*e*P	Pg	01 23 54.7	+0.7
	baz=66						
TPUB	**Ta-pu**	**0.36 276**		P	Pb	01 23 55.3	-0.8
	baz=287						
TPUB				S	Sg	01 24 00.3	+1.6
	baz=287						
WTP	**Ta-pu**	**0.38 267**		P	Pb	01 23 55.4	-0.9
	baz=267						
WTP				S	Sg	01 24 00.8	+1.6
	baz=267						
CHN4	**Tsaushan**	**0.41 282**		*i* P	Pb	01 23 56.1	-0.6
	baz=293						
CHN4				S	Sb	01 24 02.6	-0.8
	baz=293						
HGSD	**Ruisui**	**0.43 58**		*e*P	Pb	01 23 56.2	-1.0
	baz=60						
SLGT	**Liugui**	**0.44 232**		P	Pg	01 23 56.2	+0.8
	baz=225						
SLGT				*e*S	Sg	01 24 02.2	+1.1
	baz=225						
TWG	**Pinlang**	**0.44 174**		P	Pg	01 23 56.1	+0.6
	baz=164						
TWG				S	Sg	01 24 02.3	+1.1
	baz=164						
TWGBT	**Beinan**	**0.45 173**		*e*P	Pg	01 23 56.2	+0.7
	baz=164						
TWGBT				*e*S	Sg	01 24 02.4	+1.0
	baz=164						
CHN5	**Tsauling**	**0.46 316**		P	Pb	01 23 57.0	-0.7
	baz=315						
CHN5				*e*S	Sb	01 24 04.1	-0.8
	baz=315						
CHN1	**Nanshi**	**0.46 260**		*e*P	Pb	01 23 57.6	-0.2
	baz=260						
CHN1				S	Sb	01 24 04.3	-0.7
	baz=260						
TWK	**Hsinying**	**0.49 270**		P	Pb	01 23 58.0	-0.3
	baz=270						
TWK				*e*S	Sb	01 24 05.2	-0.7
	baz=270						
VWDT	**VWDT**	**0.50 12**		*e*P	Pg	01 23 56.7	+0.2
	baz=21						
VWDT				*e*S	Sb	01 24 05.5	-0.5
	baz=21						
SSLB	**Suanglung**	**0.52 353**		*e*P	Pg	01 23 57.5	+0.5
	baz=342						
ESL	**Shilin**	**0.66 34**		*e*P	Pg	01 24 00.2	+0.6
	baz=36						

IDC 23 01:34:06.7±0.8, 12°31N×85°93W, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.6/43, mbtmp3.5/6, ML3.4/1, MS2.8/2, Ms1 2.8/2, ms1mx2.6/25, Error ellipse: s-maj=83.1km s-min=12.7km az=60.0
INET 23 01:34:12.0, 11°45N×86°81W, h58km, ML3.9
NEIC 23 01:34:13.3±1.2, 11°61N±0°06×86°65W±0°08, h70km±12km, mb4.0/8, Error ellipse: s-maj=12.3km s-min=7.0km az=54.0
ISC 23 01:34:13.5±0.8, 11°65N±0°08×86°61W±0°09, h65km, n21, σ1s05/27, mb3.9/9, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACON	**Acoyapa**	**1.44 77**			**Pn**	**01 34 38.2**	**+0.7**
ACON				Sn	**Sn**	**01 34 56.1**	**+0.6**
ESTN	**Estel**	**1.46 9**			**Pn**	**01 34 38.5**	**+0.6**
ESTN				Sn	**Sn**	**01 34 57.0**	**+0.8**
JTS	**Las Juntas de**	**2.11 130**		Pn	**Pn**	**01 34 46.6**	**0.0**
	12nm,0.3s,baz=5.7,slow=13,SNR=15						
JTS				Lg	Lg	01 35 18.0	
	28nm,0.3s,baz=323,slow=20,SNR=11						
JTS				LR	LR	01 35 27.0	
	comp=Z,93nm,19.6s,baz=226,slow=36						
JTS	**Las Juntas de**	**2.11 130**			**Pn**	**01 34 47.0**	**+0.4**
JTS				Sn	**Sn**	**01 35 09.9**	**-2.0**
TGUH	**Tegucigalpa,Un**	**2.48 345**			**Pn**	**01 34 51.9**	**+0.2**
TGUH				Sn	**Sn**	**01 35 19.6**	**-1.3**
CCIG	**Comitan**	**7.07 311**		Pn	**Pn**	**01 35 54.1**	**-0.4**
SJG	**San Juan**	**20.78 70**		LR	LR	01 45 28.3	
	comp=Z,66nm,19.8s,baz=248,slow=34						
CBYP	**Canovanas**	**21.09 69**		P	**P**	**01 38 51.2**	**-1.5**
Y58A	**Scranton**	**23.04 15**		P	**P**	**01 39 12.3**	**-0.9**
MIAR	**Mount Ida**	**23.66 346**		P	**P**	**01 39 18.7**	**-0.3**
MIAR				IAmb	IAmb	01 39 21.6	
	comp=Z,4.9nm,0.9s						
TXAR	**Lajitas Array**	**23.71 320**		P	**P**	**01 39 19.1**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=141,slow=11,SNR=9.9						
TXAR				PcP	**PcP**	**01 43 05.0**	**+2.6**
	comp=Z,0.3nm,0.7s,baz=152,slow=4.1,SNR=3.8						
TX31	**Lajitas Ar. Si**	**23.71 320**		P	**P**	**01 39 19.0**	**-0.8**
ABTX	**Abilene, Hawle**	**24.07 332**		P	**P**	**01 39 23.8**	**+1.0**
ABTX				IAmb	IAmb	01 39 25.0	
	comp=Z,4.2nm,0.6s						
WHAR	**Wooly Hollow**	**24.09 349**		P	**P**	**01 39 23.6**	**+0.6**
V58A	**Windy Hill, Pi**	**24.97 15**		P	**P**	**01 39 29.8**	**-1.2**
V58A				IAmb	IAmb	01 39 34.4	
	comp=Z,2.3nm,0.6s						
WMOK	**Wichita Mounta**	**25.51 336**		P	**P**	**01 39 35.7**	**-0.2**
WMOK				IAmb	IAmb	01 39 38.3	
	comp=Z,8.8nm,1.0s						
PDAR	**Pinedale Array**	**36.86 331**		P	**P**	**01 41 15.5**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=137,slow=9.8,SNR=5.4						
SIV	**San Ignacio**	**37.32 137**		P	**P**	**01 41 20.2**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=335,slow=10,SNR=12						
NVAR	**Mina Array Bea**	**38.84 319**		P	**P**	**01 41 33.6**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=127,slow=8.9,SNR=2.9						
NVAR				PcP	**PcP**	**01 43 44.2**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=139,slow=4.4,SNR=4.4						
YKA	**Yellowknife Ar**	**54.59 344**		P	**P**	**01 43 34.1**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=141,slow=7.3,SNR=9.4						
YKA				PcP	**PcP**	**01 44 37.5**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=146,slow=4.3,SNR=5.5						
WRA	**Warramunga Arr**	**139.83 253**		PKP	**PKiKP**	**01 53 37.5**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=92,slow=1.9,SNR=5.3						

IDC 23 01:47:45.2±7.3, 36°30N×71°38E, h87km±67km, mb1 3.2/5, mb1mx2.9/34, mbtmp3.5/5, ML3.3/5, Error ellipse: s-maj=101.1km s-min=27.9km az=141.0
ISC 23 01:47:50.5±2.4, 36.7N±0°2×71.1E±0°1, h150km, n12, σ0s86/15, 1C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**5.80 19**		P	**Pn**	**01 49 15.3**	**+0.5**
	SNR=70						
UCH	**Uchtor**	**6.13 24**		P	**Pn**	**01 49 19.8**	**+0.6**
	SNR=11						
EKS2	**Erkin-Say**	**6.31 18**		P	**Pn**	**01 49 22.2**	**+0.8**
	SNR=9.9						
KK31	**Karatay Array**	**6.42 356**		⇓P	**Pn**	**01 49 24.4**	**+1.6**
	6.9nm,0.3s,baz=178,slow=13,SNR=97						
KK31				⇓S	**Sn**	**01 50 34.3**	**-0.8**
	0.9nm,0.4s,baz=182,slow=23,SNR=4.7						
AAK	**Ala-Archa**	**6.49 23**		P	**Pn**	**01 49 24.1**	**+0.3**
	1.3nm,0.3s,baz=180,slow=5.1,SNR=26						
AAK				S	**Sn**	**01 50 35.9**	**-1.0**
	0.3nm,0.3s,baz=304,slow=21,SNR=6.2						
AAK	**Ala-Archa**	**6.49 23**		P	**Pn**	**01 49 24.5**	**+0.7**
	SNR=8.7						
AAK	**Ala-Archa**	**6.49 23**		⇑P	**Pn**	**01 49 24.2**	**+0.3**
	4.0nm,0.5s						
AAK				S	**Sn**	**01 50 36.6**	**-0.4**
	5.3nm,0.8s						
USP	**Ospenovka**	**7.07 21**		P	**Pn**	**01 49 32.1**	**+0.7**
	SNR=6.6						
GEYT	**Alibeck**	**10.41 281**		P	**Pn**	**01 50 15.4**	**-0.5**
	0.2nm,0.3s,baz=114,slow=13,SNR=4.2						
MKAR	**Makanchi Array**	**13.09 36**		P	**Pn**	**01 50 50.3**	**-0.4**
	0.1nm,0.3s,baz=219,slow=13,SNR=2.5						
KURBB	**Kurchatov Arra**	**14.92 19**		P	**P**	**01 51 16.5**	**+0.9**
	0.0nm,0.3s,baz=205,slow=11,SNR=4.4						
ZALV	**Zalesovo Beam**	**19.71 25**		P	**Pn**	**01 52 10.1**	**-0.9**
	1.1nm,0.3s,baz=206,slow=10,SNR=14						

FUNV 23 01:50:01.5, 6°95N×73°22W, h157km, MW3.0
RSNC 23 01:50:02.5±0.9, 6°83N×73°14W, h147km±4km, ML3.2, Mw3.4
IDC 23 01:50:04.2±4.8, 6°86N×73°71W, h177km±28km, mb2.8/1, mb1 3.2/2, mb1mx2.8/25, mbtmp3.4/2, Error ellipse: s-maj=184.2km s-min=38.3km az=94.0
ISC 23 01:50:00.7±1.0, 6.87N±0°03×73.08W±0°03, h159km±6km, n43, σ1s93/80, 4C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.29 201**		⇓*i* P	**Pn**	**01 50 22.6**	**-0.1**
BARC				*e*S	**Sn**	**01 50 37.8**	**-1.7**
BARC				*i*		01 50 39.4	
	comp=Z,599nm,0.5s						
PAMC	**Pamplona, Colo**	**0.60 39**		⇑*e*P	**Pn**	**01 50 25.3**	**+1.1**
PAMC				*e*S	**Sn**	**01 50 42.3**	**+0.2**
PAMC				*i*		01 50 44.3	
	comp=Z,121nm,0.5s						
RUSC	**La Rusia**	**0.97 180**		⇑*i* P	**Pn**	**01 50 26.4**	**-0.3**
RUSC				*e*S	**Sn**	**01 50 44.8**	**-1.9**
RUSC				*i*		01 50 46.2	
	comp=Z,218nm,0.4s						
RUSC				*i*		01 50 46.2	
	comp=Z,192nm,0.3s						
TAMC	**Tame, Arauca**	**1.35 109**		⇓*i* P	**Pn**	**01 50 30.8**	**+1.3**
TAMC				*e*S	**Sn**	**01 50 52.0**	**+0.4**
TAMC				*i*		01 50 53.1	
	comp=Z,85nm,0.2s						
TAMC				*i*		01 50 53.1	
	comp=Z,92nm,0.5s						
OCAC	**Ocana**	**1.38 350**		*e*P	**Pn**	**01 50 30.7**	**+0.7**
OCAC				*e*S	**Sn**	**01 50 52.5**	**0.0**
OCAC				*i*		01 50 56.9	
	comp=Z,222nm,0.2s						
OCAC				*i*		01 50 58.5	
	comp=Z,219nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.41 257**		⇑*i* P	**Pn**	**01 50 29.1**	**-1.0**
PTBC				*e*S	**Sn**	**01 50 50.6**	**-2.0**
PTBC				*i*		01 50 57.6	
	comp=Z,257nm,0.4s						
PTBC				*i*		01 50 57.7	
	comp=Z,223nm,0.4s						
SPBC	**San Pablo de B**	**1.56 219**		*e*P	**Pn**	**01 50 31.5**	**-0.3**
SPBC				*e*S	**Sn**	**01 50 53.9**	**-1.8**
SPBC				*i*		01 50 58.2	
	comp=Z,246nm,0.2s						
SPBC				*i*		01 50 58.2	
	comp=Z,236nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.87 289**		*e*P	**Pn**	**01 50 34.8**	**-0.2**
ZARC				*e*S	**Sn**	**01 51 00.4**	**-1.0**
ZARC				*i*		01 51 06.6	
	comp=Z,337nm,0.5s						
ZARC				*i*		01 51 06.7	
	comp=Z,291nm,0.3s						
SMLC	**San Martn de**	**2.16 333**		*e*P	**Pn**	**01 50 38.9**	**+0.7**
SMLC				*e*S	**Sn**	**01 51 07.6**	**+0.3**
SMLC				*i*		01 51 15.3	
	comp=Z,181nm,0.3s						
SMLC				*i*		01 51 15.3	
	comp=Z,164nm,0.1s						
NORC	**Norcasia**	**2.21 234**		*e*P	**Pn**	**01 50 38.4**	**-0.5**
NORC				*e*S	**Sn**	**01 51 07.1**	**-1.2**
NORC				*i*		01 51 11.9	
	comp=Z,131nm,0.3s						
NORC				*i*		01 51 11.9	
	comp=Z,139nm,0.3s						
CHIC	**Chingaza**	**2.32 196**		⇑*e*P	**Pn**	**01 50 40.6**	**0.0**
CHIC				*e*S	**Sn**	**01 51 09.7**	**-1.6**
CHIC				*i*		01 51 19.8	
	comp=Z,74nm,0.3s						
CHIC				*i*		01 51 19.9	
	comp=Z,72nm,0.3s						
ROSC	**El Rosal**	**2.37 212**		P	**Pn**	**01 50 42.5**	**+1.4**
	comp=Z,14nm,0.3s,baz=25,slow=16,SNR=48						
ROSC				S	**Sn**	**01 51 12.6**	**+0.3**
	comp=Z,26nm,0.3s,baz=198,slow=20,SNR=14						
ROSC	**El Rosal**	**2.37 212**		*e*P	**Pn**	**01 50 42.3**	**+1.2**
ROSC				*e*S	**Sn**	**01 51 11.6**	**-0.7**
ROSC				*i*		01 51 15.9	
	comp=Z,197nm,0.5s						
HELC	**Santa Helena**	**2.53 255**		*e*P	**Pn**	**01 50 43.7**	**+0.7**
HELC				*e*S	**Sn**	**01 51 14.2**	**-1.5**
HELC				*i*		01 51 21.9	
	comp=Z,83nm,0.3s						
HELC				*i*		01 51 22.1	
	comp=Z,81nm,0.5s						
UREC	**San Jos de Ur**	**2.59 290**		*e*P	**Pn**	**01 50 42.6**	**-0.8**
UREC				*e*S	**Sn**	**01 51 14.0**	**-2.5**
UREC				*i*		01 51 26.6	
	comp=Z,150nm,0.2s						
UREC				*i*		01 51 26.6	
	comp=Z,150nm,0.3s						
VIGV	**El Vigia**	**2.59 41**		*e*P	**Pn**	**01 50 44.1**	**+0.7**
VIGV				*e*S	**Sn**	**01 51 13.8**	**-2.7**
SOCV	**Socops**	**2.61 57**		*e*P	**Pn**	**01 50 44.8**	**+1.1**
SOCV				*e*S	**Sn**	**01 51 16.1**	**-0.8**
GUY2C	**Guyana, Caldas**	**2.80 234**		*e*P	**Pn**	**01 50 46.9**	**+0.4**
GUY2C				*e*S	**Sn**	**01 51 23.0**	**+1.2**
GUY2C				*i*		01 50 30.3	
	comp=Z,110nm,0.7s						
GUY2C				*i*		01 51 31.4	
	comp=Z,115nm,0.5s						
VILC	**Villavicencio,**	**2.81 193**		*e*P	**Pn**	**01 50 45.1**	**-1.1**
VILC				*e*S	**Sn**	**01 51 19.0**	**-2.5**
VILC				*i*		01 51 26.6	
	comp=Z,92nm,0.4s						
PTGC	**Puerto Gaitan,**	**2.81 160**		⇓*e*P	**Pn**	**01 50 45.5**	**-0.6**
PTGC				*e*S	**Sn**	**01 51 18.6**	**-2.9**
PTGC				*i*		01 51 21.4	
	comp=Z,93nm,0.2s						
PTGC				*i*		01 51 21.4	
	comp=Z,

SDV	**Santo Domingo**	**3.14**	**50**	*e*P		**Pn**	**01 50 50.9**	**+0.5**
SDV				*e*S		**Sn**	**01 51 27.7**	**-1.3**
ARGC	**Ariguani, Magd**	**3.19**	**339**	*e*P		**Pn**	**01 50 52.2**	**+1.4**
ARGC				*e*S		**Sn**	**01 51 30.1**	**+0.3**
ARGC				*i*			01 51 36.4	
	comp=Z,21nm,1.3s							
ARGC				*i*			01 51 42.2	
	comp=Z,32nm,0.2s							
ANIL	**Santa Ana**	**3.31**	**225**	*e*P		**Pn**	**01 50 53.3**	**+0.7**
ANIL				*e*S		**Sn**	**01 51 31.8**	**-1.2**
ELOV	**Elorza**	**3.57**	**88**	*e*P		**Pn**	**01 50 56.6**	**+0.9**
ELOV				*e*S		**Sn**	**01 51 38.1**	**-0.3**
PRAC	**Prado**	**3.62**	**210**	*e*P		**Pn**	**01 50 56.0**	**-0.4**
PRAC				*e*S		**Sn**	**01 51 37.8**	**-1.9**
PRAC				*i*			01 51 42.0	
	comp=Z,98nm,0.4s							
PRAC				*i*			01 51 42.0	
	comp=Z,71nm,0.3s							
ORTC	**Ortega, Tolima**	**3.65**	**216**	*e*P		**Pn**	**01 50 56.8**	**0.0**
ORTC				*e*S		**Sn**	**01 51 39.6**	**-0.7**
ORTC				*i*			01 51 44.4	
	comp=Z,38nm,0.4s							
ORTC				*i*			01 51 51.7	
	comp=Z,32nm,0.3s							
SJCC	**San Jacinto, C**	**3.66**	**325**	*e*P		**Pn**	**01 50 56.3**	**-0.6**
SJCC				*e*S		**Sn**	**01 51 37.7**	**-2.9**
SJCC				*i*			01 51 53.7	
	comp=Z,23nm,0.3s							
SJCC				*i*			01 51 58.8	
	comp=Z,30nm,1.1s							
PLMC	**San Jos del P**	**3.74**	**239**	*e*P		**Pn**	**01 50 58.3**	**+0.3**
PLMC				*e*S		**Sn**	**01 51 40.2**	**-2.2**
PLMC				*i*			01 51 49.7	
	comp=Z,52nm,0.2s							
PLMC				*i*			01 51 51.1	
	comp=Z,39nm,0.2s							
QARV	**Quebrada Arrib**	**4.17**	**37**	*e*P		**Pn**	**01 51 02.9**	**-0.6**
QARV				*e*S		**Sn**	**01 51 47.7**	**-4.7**
YOTC	**Yotoco, Valle**	**4.34**	**229**	*e*P		**Pn**	**01 51 05.1**	**-0.7**
YOTC				*e*S		**Sn**	**01 51 53.7**	**-2.7**
YOTC				*i*			01 52 02.4	
	comp=Z,4.2nm,0.5s							
YOTC				*i*			01 52 08.4	
	comp=Z,6.7nm,0.8s							
CURV	**Curarigua**	**4.39**	**44**	*e*P		**Pn**	**01 51 07.0**	**+0.7**
CURV				*e*S		**Sn**	**01 51 53.8**	**-3.8**
SMRC	**Santa Marta, M**	**4.42**	**345**	*e*P		**Pn**	**01 51 07.5**	**+0.8**
SMRC				*e*S		**Sn**	**01 51 50.9**	**-7.3**
MACC	**Macarena, Meta**	**4.76**	**189**	*e*P		**Pn**	**01 51 09.4**	**-1.8**
MACC				*e*S		**Sn**	**01 51 59.6**	**-6.6**
MACC				*i*			01 52 08.0	
	comp=Z,10nm,0.5s							
MACC				*i*			01 52 22.4	
	comp=Z,14nm,0.8s							
URIC	**Uribia, Colomb**	**4.92**	**12**	*e*P		**Pn**	**01 51 12.7**	**-0.6**
URIC				*e*S		**Sn**	**01 52 05.8**	**-4.1**
BAUV	**El Baul**	**5.39**	**67**	*e*P		**Pn**	**01 51 18.1**	**-1.4**
MAPV	**Macapo**	**5.43**	**57**	*e*P		**Pn**	**01 51 20.1**	**0.0**
BBAC	**Balboa, Cauca**	**6.36**	**221**	*e*P		Pn	01 51 22.4	-10
BBAC				*e*S		Sn	01 52 00.5	-44
YKA	**Yellowknife Ar**	**63.23**	**340**	P		**P**	**02 00 12.1**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=136,slow=6.8,SNR=8.3							
WRA	**Warramunga Arr**	**150.40**	**241**	PKPbc		**PKPdf**	**02 09 33.9**	**+5.0**
	comp=Z,0.5nm,0.8s,baz=110,slow=2.6,SNR=6.2							

ROM 23 02:03:33.4±0.1, 43°40'N±0°00'3×12°47'4E±0°00'4, h8km, ML2.4/30, Error ellipse: s-maj=0.3km s-min=0.1km az=29.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.08**	**220**	*i* P	Pg	02 03 35.7	+0.2
ATVO				S	Sg	02 03 37.3	+0.4
ATVO				AML	AML		
	comp=E,7120μm,0.4s						
ATVO				AML	AML		
	comp=N,6670μm,0.9s						
ATFO	**Monte Foce - G**	**0.10**	**136**	*i* P	Pg	02 03 36.2	+0.4
ATFO				S	Sg	02 03 38.1	+0.5
ATFO				AML	AML		
	comp=N,4405μm,0.4s						
ATFO				AML	AML		
	comp=E,4040μm,0.2s						
ATFO				AML	AML		
	comp=E,4035μm,0.2s						
PIEI	**Pieia**	**0.11**	**25**	*e*P	Pg	02 03 36.4	+0.5
PIEI				S	Sg	02 03 38.9	+1.2
PIEI				AML	AML		
	comp=N,6935μm,0.3s						
PIEI				AML	AML		
	comp=N,6930μm,0.3s						
PIEI				AML	AML		
	comp=E,8390μm,0.2s						
CDCA	**Citt' di Caste**	**0.18**	**276**	P	Pg	02 03 37.9	+0.8
CDCA				S	Sg	02 03 41.2	+1.7
CDCA				AML	AML		
	comp=E,1880μm,0.5s						
CDCA				AML	AML		
	comp=N,2291μm,0.6s						
CDCA				AML	AML		
	comp=N,9305μm,0.6s						
CDCA				AML	AML		
	comp=E,6800μm,1.4s						
BADI	**Badiali**	**0.18**	**293**	*e*P	Pg	02 03 37.6	+0.5
BADI				S	Sg	02 03 41.0	+1.3
BADI				AML	AML		
	comp=E,2950μm,1.1s						
BADI				AML	AML		
	comp=N,2875μm,0.1s						
MURB	**Monte Urbino**	**0.18**	**168**	*e*P	Pg	02 03 37.8	+0.6
MURB				S	Sg	02 03 41.5	+1.7
MURB				AML	AML		
	comp=E,10510μm,0.3s						
MURB				AML	AML		
	comp=N,8095μm,0.3s						
MURB				AML	AML		
	comp=E,10500μm,0.3s						
MURB				AML	AML		
	comp=E,10535μm,0.3s						
MURB				AML	AML		
	comp=E,11600μm,0.3s						
MURB				AML	AML		
	comp=N,8370μm,0.3s						
MURB				AML	AML		
	comp=N,8100μm,0.3s						
NARO	**Abbazia di Nar**	**0.19**	**24**	*e*P	Pg	02 03 37.7	+0.4
NARO				S	Sg	02 03 41.1	+1.2
NARO				AML	AML		
	comp=N,1515μm,0.3s						
NARO				AML	AML		
	comp=N,1520μm,0.3s						
NARO				AML	AML		
	comp=E,1825μm,1.1s						
FRON	**Frontone**	**0.20**	**67**	*i* P	Pg	02 03 38.1	+0.6
FRON				S	Sg	02 03 41.6	+1.4
FRON				AML	AML		
	comp=N,2225μm,1.0s						
FRON				AML	AML		
	comp=E,1300μm,0.6s						
SSFR	**Montelago di S**	**0.23**	**91**	*i* P	Pg	02 03 38.6	+0.6
SSFR				S	Sg	02 03 42.6	+1.6
SSFR				AML	AML		
	comp=N,3860μm,0.2s						
SSFR				AML	AML		
	comp=E,3655μm,0.2s						
SSFR				AML	AML		
	comp=E,3580μm,0.2s						
SSFR				AML	AML		
	comp=N,3595μm,0.2s						
FOSV	**Fossato di Vic**	**0.26**	**125**	P	Pg	02 03 39.1	+0.6
FOSV				S	Sb	02 03 44.0	-0.9
FOSV				AML	AML		
	comp=E,560μm,1.6s						
FOSV				AML	AML		
	comp=E,560μm,1.6s						
FOSV				AML	AML		
	comp=N,510μm,0.2s						
PE3	**Peglio**	**0.26**	**4**	*i* P	Pg	02 03 39.3	+0.7
PE3				S	Sb	02 03 44.1	-0.9
PE3				AML	AML		
	comp=E,2690μm,0.5s						
PE3				AML	AML		
	comp=E,2685μm,0.5s						
PE3				AML	AML		
	comp=N,2730μm,1.6s						
ATTE	**AVT- Monte Tez**	**0.26**	**200**	*e*P	Pg	02 03 38.9	+0.3
ATTE				S	Sb	02 03 43.6	-1.5
ATTE				AML	AML		
	comp=N,946μm,0.4s						
ATTE				AML	AML		
	comp=E,1355μm,0.2s						
PARC	**Parchiule**	**0.27**	**321**	P	Pg	02 03 39.3	+0.5
PARC				S	Sb	02 03 44.4	-1.0
PARC				AML	AML		
	comp=E,1575μm,0.3s						
PARC				AML	AML		
	comp=N,1960μm,0.4s						
MPAG	**Monte Paganucc**	**0.28**	**48**	P	Pg	02 03 39.6	+0.6
MPAG				S	Sb	02 03 44.5	-1.2
MPAG				AML	AML		
	comp=E,876μm,0.3s						
MPAG				AML	AML		
	comp=N,634μm,0.7s						
MPAG				AML	AML		
	comp=N,634μm,0.7s						
MPAG				AML	AML		
	comp=E,876μm,0.3s						
SSP9	**Sansepolcro**	**0.28**	**298**	P	Pg	02 03 39.5	+0.5
SSP9				AML	AML		
	comp=E,426μm,0.4s						
SSP9				AML	AML		
	comp=N,483μm,0.2s						
SSP9				AML	AML		
	comp=E,428μm,0.4s						
SSP9				AML	AML		
	comp=N,484μm,0.2s						
FSSB	**Fossombrone**	**0.34**	**41**	P	Pg	02 03 40.6	+0.5
FSSB				S	Sb	02 03 46.6	-0.6
FSSB				AML	AML		
	comp=E,1560μm,1.4s						
FSSB				AML	AML		
	comp=N,1500μm,1.2s						
ARVD	**Arcevia**	**0.34**	**80**	*i* P	Pg	02 03 40.8	+0.6
ARVD				S	Sb	02 03 46.8	-0.8
ARVD				AML	AML		
	comp=N,590μm,0.5s						
ARVD				AML	AML		
	comp=E,504μm,0.9s						
CPGN	**Carpegna, Ital**	**0.38**	**343**	*i* P	Pb	02 03 42.0	-0.6
CPGN				AML	AML		
	comp=E,558μm,0.4s						
CPGN				AML	AML		
	comp=N,472μm,0.4s						
CPGN				AML	AML		
	comp=E,509μm,0.4s						
CPGN				AML	AML		
	comp=N,456μm,0.8s						
CPGN				AML	AML		
	comp=N,500μm,0.8s						
CPGN				AML	AML		
	comp=E,512μm,0.5s						
SNTG	**Esanatoglia**	**0.39**	**118**	*e*P	Pg	02 03 41.5	+0.5
SNTG				S	Sb	02 03 48.1	-0.6
SNTG				AML	AML		
	comp=E,374μm,0.3s						
SNTG				AML	AML		
	comp=N,843μm,0.3s						
SNTG				AML	AML		
	comp=E,374μm,0.3s						
ASSB	**Assisi San Ben**	**0.42**	**161**	P	Pg	02 03 42.0	+0.3
ASSB				AML	AML		
	comp=E,565μm,1.3s						
ASSB				AML	AML		
	comp=N,854μm,0.3s						
CRE	**Caprese Michel**	**0.42**	**295**	P	Pg	02 03 42.0	+0.3
CRE				AML	AML		
	comp=E,472μm,0.2s						
CRE				AML	AML		
	comp=N,523μm,0.6s						
CRE				AML	AML		
	comp=E,472μm,0.2s						
COR1	**Corinaldo**	**0.43**	**63**	P	Pb	02 03 42.9	-0.4
COR1				AML	AML		
	comp=E,629μm,0.2s						
COR1				AML	AML		
	comp=N,1018μm,0.2s						
COR1				AML	AML		
	comp=N,1024μm,0.2s						
EL6	**Elcito**	**0.47**	**103**	P	Pg	02 03 43.2	+0.6
EL6				S	Sb	02 03 51.0	-0.2
EL6				AML	AML		
	comp=E,576μm,0.8s						
EL6				AML	AML		
	comp=N,775μm,0.5s						
CING	**Cingoli**	**0.53**	**97**	P	Pg	02 03 44.1	+0.4
CING				S	Sb	02 03 52.9	+0.1
CING				AML	AML		
	comp=E,168μm,0.6s						
CING				AML	AML		
	comp=N,312μm,0.8s						
CESI	**CESI - Serrava**	**0.54**	**144**	P	Pg	02 03 44.1	+0.3
CESI				S	Sb	02 03 53.0	-0.1
CESI				AML	AML		
	comp=E,58μm,0.3s						
CESI				AML	AML		
	comp=N,166μm,0.5s						
CESI				AML	AML		
	comp=N,166μm,0.5s						
CESI				AML	AML		
	comp=E,58μm,0.3s						
PESA	**Pesaro**	**0.57**	**28**	P	Pb	02 03 45.1	-0.5
PESA				AML	AML		
	comp=N,732μm,0.2s						
PESA				AML	AML		
	comp=E,708μm,0.2s						
MGAB	**Montegabbione**	**0.59**	**207**	P	Pg	02 03 45.1	+0.3
MGAB				S	Sb	02 03 55.1	+0.6
FDMO	**Fiordimonte**	**0.60**	**132**	P	Pg	02 03 45.3	+0.2
FDMO				AML	AML		
	comp=E,175μm,0.6s						
FDMO				AML	AML		
	comp=N,200μm,0.4s						
FDMO				AML	AML		
	comp=E,174μm,0.6s						
ASQU	**Asqua**	**0.61**	**306**	P	Pg	02 03 45.4	+0.2
ASQU				AML	AML		
	comp=E,155μm,0.3s						
ASQU				AML	AML		
	comp=N,208μm,1.3s						
CSP1	**Cessapalombo**	**0.64**	**123**	P	Pg	02 03 46.2	+0.4
MOMA	**Monte Martano**	**0.64**	**174**	P	Pb	02 03 46.7	-0.2
MOMA				AML	AML		
	comp=N,410μm,0.3s						
MOMA				AML	AML		
	comp=E,418μm,0.4s						
MOMA				AML	AML		
	comp=E,456μm,1.5s						
MOMA				AML	AML		
	comp=N,682μm,1.6s						
SFI	**Santa Sofia**	**0.65**	**316**	P	Pg	02 03 46.1	+0.1
SFI				AML	AML		
	comp=E,139μm,1.2s						
SFI				AML	AML		
	comp=N,106μm,1.3s						
SFI				AML	AML		
	comp=E,138μm,1.2s						
SFI				AML	AML		
	comp=N,106μm,1.3s						
RUFI	**Rufina**	**0.81**	**300**	P	Pg	02 03 49.1	+0.2
LNSS	**Leonessa**	**0.93**	**153**	P	Pb	02 03 51.7	-0.3
LNSS				AML	AML		
	comp=E,325μm,1.1s						
LNSS				AML	AML		
	comp=N,324μm,0.3s						
MTCR	**Monte La Croce**	**1.22**	**299**	P	Pn	02 03 57.2	+0.3
ROM9	**Roma**	**1.61**	**179**	S	Sg	02 04 27.0	+1.8
SARO	**Sassorosso**	**1.68**	**297**	S	Sg	02 04 29.0	+1.7
TRI	**Trieste**	**2.45**	**22**	P	Pn	02 04 13.7	0.0
TRI				AML	AML		
	comp=E,19μm,1.5s						
TRI				AML	AML		
	comp=N,16μm,0.9s						

ROM 23 02:03:43.8±0.1, 43°41'N±0°00'2×12°47'1E±0°00'3, h8km, ML2.4/29, Error ellipse: s-maj=0.2km s-min=0.0km az=220.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.08**	**219**	*i* P	Pg	02 03 46.0	+0.1
ATVO				S	Sg	02 03 47.5	+0.2
ATVO				AML	AML		
	comp=N,6670μm,0.9s						
ATVO				AML	AML		
	comp=E,7120μm,0.4s						
ATFO	**Monte Foce - G**	**0.10**	**136**	P	Pg	02 03 46.6	+0.3
ATFO				S	Sg	02 03 48.6	+0.6
ATFO				AML	AML		
	comp=E,4040μm,0.2s						
ATFO				AML	AML		
	comp=N,4405μm,0.4s						
ATFO				AML	AML		
	comp=E,4035μm,0.2s						
PIEI	**Pieia**	**0.10**	**26**	P	Pg	02 03 46.6	+0.4
PIEI				S	Sg	02 03 49.1	+1.0
PIEI				AML	AML		
	comp=E,8390μm,0.2s						
PIEI				AML	AML		
	comp=N,6930μm,0.3s						
CDCA	**Citt' di Caste**	**0.17**	**276**	P	Pg	02 03 48.1	+0.8
CDCA				AML	AML		
	comp=E,1890μm,0.5s						
CDCA				AML	AML		
	comp=N,2293μm,0.6s						
CDCA				AML	AML		
	comp=E,1895μm,0.5s						
CDCA				AML	AML		
	comp=N,2297μm,0.6s						
CDCA				AML	AML		
	comp=N,9305μm,0.6s						
CDCA				AML	AML		
	comp=E,6800μm,1.4s						
BADI	**Badiali**	**0.18**	**293**	P	Pg	02 03 47.9	+0.5
BADI				S	Sg	02 03 51.1	+1.1
BADI				AML	AML		
	comp=E,2945μm,1.1s						
BADI				AML	AML		
	comp=N,2875μm,0.1s						
BADI				AML	AML		
	comp=E,2950μm,1.1s						
MURB	**Monte Urbino**	**0.18**	**168**	P	Pg	02 03 48.2	+0.6
MURB				S	Sg	02 03 51.7	+1.6
MURB				AML	AML		
	comp=E,10515μm,0.3s						
MURB				AML	AML		
	comp=E,10495μm,0.3s						
MURB				AML	AML		
	comp=N,8100μm,0.3s						
MURB				AML	AML		
	comp=E,10500μm,0.3s						
MURB				AML	AML		
	comp=E,11600μm,0.3s						
MURB				AML	AML		
	comp=N,8370μm,0.3s						
MURB				AML	AML		
	comp=E,10535μm,0.3s						
NARO	**Abbazia di Nar**	**0.19**	**25**	P	Pg	02 03 48.0	+0.4
NARO				S	Sg	02 03 51.4	+1.1
NARO				AML	AML		
	comp=E,1825μm,1.1s						
NARO				AML	AML		
	comp=N,1520μm,0.3s						
FRON	**Frontone**	**0.20**	**67**	P	Pg	02 03 48.3	+0.5
FRON				S	Sg	02 03 52.0	+1.3
FRON				AML	AML		
	comp=N,2225μm,1.0s						
FRON				AML	AML		
	comp=E,1300μm,0.6s						
SSFR	**Montelago di S**	**0.23**	**91**	P	Pg	02 03 49.1	+0.7
SSFR				S	Sg	02 03 53.0	+1.5
SSFR				AML	AML		
	comp=E,3585μm,0.2s						
SSFR				AML	AML		
	comp=N,3860μm,0.2s						
SSFR				AML	AML		
	comp=N,3595μm,0.2s						
SSFR				AML	AML		
	comp=E,3655μm,0.2s						
SSFR				AML	AML		
	comp=E,3580μm,0.2s						
PE3	**Peglio**	**0.26**	**4**	AML	AML		
	comp=N,2730μm,1.6s						
PE3				AML	AML		
	comp=E,2685μm,0.5s						
FOSV	**Fossato di Vic**	**0.26**	**125**	P	Pg	02 03 49.6	+0.7
FOSV				S	Sb	02 03 54.2	-1.0
FOSV				AML	AML		
	comp=N,509μm,0.2s						
FOSV				AML	AML		
	comp=E,560μm,1.6s						
FOSV				AML	AML		
	comp=N,510μm,0.2s						
ATTE	**AVT- Monte Tez**	**0.26**	**199**	P	Pb	02 03 50.2	-0.5
ATTE				S	Sg	02 03 53.8	+1.4
ATTE				AML	AML		
	comp=E,1355μm,0.2s						
ATTE				AML	AML		
	comp=N,946μm,0.4s						
PARC	**Parchiule**	**0.27**	**321**	P	Pb	02 03 50.3	-0.5
PARC				S	Sb	02 03 54.6	-1.0
PARC				AML	AML		
	comp=E,1575μm,0.3s						
PARC				AML	AML		
	comp=N,1960μm,0.4s						
MPAG	**Monte Paganucc**	**0.28**	**48**	P	Pg	02 03 49.9	+0.5
MPAG				S	Sb	02 03 54.8	-1.3
MPAG				AML	AML		
	comp=E,876μm,0.3s						
MPAG				AML	AML		
	comp=N,634μm,0.7s						
MPAG				AML	AML		
	comp=E,876μm,0.3s						
MPAG				AML	AML		
	comp=N,634μm,0.7s						
FSSB	**Fossombrone**	**0.34**	**41**	AML	AML		
	comp=E,1560μm,1.4s						
FSSB				AML	AML		
	comp=N,1500μm,1.2s						
ARVD	**Arcevia**	**0.35**	**80**	AML	AML		
	comp=E,504μm,0.9s						
ARVD				AML	AML		
	comp=N,590μm,0.5s						
CPGN	**Carpegna, Ital**	**0.38**	**343**	AML	AML		
	comp=N,500μm,0.8s						
CPGN				AML	AML		
	comp=E,513μm,0.5s						
CPGN				AML	AML		
	comp=N,501μm,0.8s						
CPGN				AML	AML		
	comp=E,512μm,0.5s						
SNTG	**Esanatoglia**	**0.39**	**118**	P	Pb	02 03 52.2	-0.7
SNTG				AML	AML		
	comp=E,374μm,0.3s						
SNTG				AML	AML		
	comp=N,843μm,0.3s						
CRE	**Caprese Michel**	**0.42**	**295**	P	Pg	02 03 52.5	+0.6
CRE				S	Sb	02 03 59.4	-0.7
CRE				AML	AML		
	comp=N,523μm,0.6s						
CRE				AML	AML		
	comp=E,472μm,0.2s						
ASSB	**Assisi San Ben**	**0.42**	**161**	P	Pb	02 03 52.9	-0.6
ASSB				S	Sb	02 03 59.3	-0.7
ASSB				AML	AML		
	comp=E,565μm,1.3s						
ASSB				AML	AML		
	comp=N,854μm,0.3s						
COR1	**Corinaldo**	**0.43**	**63**	AML	AML		
	comp=E,629μm,0.2s						
COR1				AML	AML		
	comp=N,1024μm,0.2s						
CING	**Cingoli**	**0.53**	**97**	AML	AML		
	comp=E,168μm,0.6s						
CING				AML	AML		
	comp=N,312μm,0.8s						
CESI	**CESI - Serrava**	**0.54**	**144**	AML	AML		
	comp=E,58μm,0.3s						
CESI				AML	AML		
	comp=N,166μm,0.5s						
CESI				AML	AML		
	comp=N,166μm,0.5s						
PESA	**Pesaro**	**0.57**	**28**	AML	AML		
	comp=N,732μm,0.2s						
PESA				AML	AML		
	comp=E,708μm,0.2s						
FDMO	**Fiordimonte**	**0.60**	**132**	AML	AML		

	comp=E,175μm,0.6s							
FDMO					AML	AML		
	comp=E,174μm,0.6s							
FDMO					AML	AML		
	comp=N,200μm,0.4s							
ASQU	**Asqua**	**0.61**	**306**		AML	AML		
	comp=N,208μm,1.3s							
ASQU					AML	AML		
	comp=E,155μm,0.3s							
MOMA	**Monte Martano**	**0.64**	**173**		AML	AML		
	comp=E,419μm,0.4s							
MOMA					AML	AML		
	comp=N,682μm,1.6s							
MOMA					AML	AML		
	comp=N,410μm,0.3s							
MOMA					AML	AML		
	comp=E,456μm,1.5s							
MOMA					AML	AML		
	comp=E,418μm,0.4s							
SFI	**Santa Sofia**	**0.65**	**316**		AML	AML		
	comp=E,138μm,1.2s							
SFI					AML	AML		
	comp=N,106μm,1.3s							
SFI					AML	AML		
	comp=E,138μm,1.2s							
SFI					AML	AML		
	comp=N,106μm,1.3s							
LNSS	**Leonessa**	**0.94**	**153**		AML	AML		
	comp=N,324μm,0.3s							
LNSS					AML	AML		
	comp=E,325μm,1.1s							
TRI	**Trieste**	**2.45**	**22**		AML	AML		
	comp=N,16μm,0.9s							
TRI					AML	AML		
	comp=E,19μm,1.5s							
ABTA	**Abfaltersbach**	**3.31**	**0**	*e*Pn		Pn	02 04 36.5	+0.7
	comp=E,0.3nm,0.2s							
OBKA	**Obir**	**3.40**	**25**	*e*Pn		Pn	02 04 38.4	+1.2
	comp=E,1.0nm,0.5s							
OBKA				*i* Sn		Sb	02 05 29.3	+3.4
	comp=E,5.6nm,0.5s							
KBA	**Koelnbreinsper**	**3.69**	**9**	*i* Pn		Pn	02 04 33.9	-7.3
	comp=E,1.1nm,0.3s							

BJI ***23*** *02:36:32.0±0.0, 7°.78S×129°.59E, h82km, mB5.1/45, mb5.2/63, Ms4.7/18, Ms7 4.5/19*

MOS ***23*** *02:36:33.2±0.9, 7°.73S×129°.23E, h80km, mb5.3/47, Error ellipse: s-maj=9.7km s-min=5.6km az=112.2*

KLM ***23*** *02:36:33.0, 8°.09S×129°.57E, h56km, mb5.4*

IDC ***23*** *02:36:34.2±1.5, 7°.58S×129°.20E, h59km±12km, mb4.6/31, mb1 4.6/33, mb1mx4.5/51, mbtmp4.9/33, MS4.0/32, Ms1 4.0/32, ms1mx3.9/39, Error ellipse: s-maj=15.9km s-min=9.0km az=75.0*

NEIC ***23*** *02:36:34.1±1.4, 7°.77S±0°.05×129°.29E±0°.04, h79km±4km, mb5.1/76, Error ellipse: s-maj=8.0km s-min=3.2km az=213.0*

GCMT ***23*** *02:36:35.1±0.1, 7°.84S±0°.01×129°.29E±0°.01, h61km±1km, MW5.2/109, Moment Tensor Solution. s108,c156; s109,c166; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=6.12±.16; Mθθ=-5.40±.14; Mϕϕ=-0.72±.16; Mrθ=3.76±.11; Mrϕ=-0.98±.13; Mθϕ=1.26±.12; Best double couple: M=7.07400×10^16 NP1:ϕ=262.00000°, δ=28.00000°, λ=96.00000°. NP2:ϕ=75.00000°, δ=62.00000°, λ=87.00000°. Principal axes: T 7.3470, Plg73.0000°, Azm337.0000°; N -0.5530, Plg3.0000°, Azm76.0000°; P -6.8000, Plg17.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***23*** *02:36:35.1±0.2, 8°.S±2°×12°.9E±°, h57km±5km, M5.2/36, mb5.5/36, mB5.7/31, MLv5.6/14, Mw(mB)5.2/31, Mwp5.2/9*

ISC 23 02:36:30.3±0.2, 7.78S±0.03×129.31E±0.04, h35km, n441, σ 2s 05/424, mb5.1/97, MS4.0/36, 13C-3D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.99**	**96**	P	Pn	02 37 07.5	+6.1
SAUI	**Saumlaki**	**1.99**	**96**		Pn	02 37 06.8	+5.4
SAUI				Sn	**Sn**	**02 37 30.1**	**+5.0**
AAI	**Ambon**	**4.21**	**345**	P	Pn	02 37 36.8	+4.7
AAI				S	**Sn**	**02 38 21.1**	**+1.0**
MSAI	**Masohi**	**4.42**	**355**	P	**Pn**	**02 37 39.3**	**+4.3**
MSAI				S	**Sn**	**02 38 29.3**	**+4.0**
NLAI	**Namlea**	**5.02**	**334**	P	Pn	02 37 48.6	+5.5
	2.1nm6μm552nm,0.7s						
MTN	**Manton Dam**	**5.34**	**160**	S	**Sn**	**02 38 52.1**	**+4.2**
	baz=5.2						
MTN	**Manton Dam**	**5.34**	**160**		**Pn**	**02 37 51.9**	**+4.3**
MTN				Sn	**Sn**	**02 38 50.6**	**+2.7**
SOEI	**Soe**	**5.35**	**248**	P	Pn	02 37 55.9	+8.1
	6.0nm14μm553nm,0.8s						
SOEI	**Soe**	**5.35**	**248**		**Pn**	**02 37 51.7**	**+3.9**
SOEI				Sn	**Sn**	**02 38 53.1**	**+4.7**
FAKI	**Fak Fak**	**5.65**	**31**	P	**Pn**	**02 37 56.2**	**+4.3**
	3.4nm6μm8μm780nm,1.3s						
FAKI	**Fak Fak**	**5.65**	**31**		**Pn**	**02 37 56.2**	**+4.3**
FAKI				Sn	**Sn**	**02 38 58.0**	**+2.5**
KDU	**Kakadu**	**5.79**	**148**	P	**Pn**	**02 37 56.8**	**+3.2**
	baz=5.7,SNR=190						
KDU				S	**Sn**	**02 38 59.5**	**+0.6**
	baz=5.7						
KMPI	**Kaimana, Papua**	**5.99**	**47**	P	Pn	02 38 02.1	+5.6
SANI	**Sanana**	**6.58**	**330**	P	Pn	02 38 10.6	+5.9
	1.3nm5μm3μm344nm,0.9s						
SIJI	**Sorong**	**7.14**	**16**	P	**Pn**	**02 38 15.8**	**+3.4**
	31nm,0.3s,baz=192,slow=7.8,SNR=98						
SIJI				S	**Sn**	**02 39 35.4**	**+3.1**
	17nm,0.3s,baz=218,slow=23,SNR=5.6						
SWI	**Sorong**	**7.14**	**16**	P	**Pn**	**02 38 16.9**	**+4.5**
	1.8nm5μm6μm545nm,1.0s						
KDI	**Kendari**	**7.66**	**299**	P	Pn	02 38 24.9	+5.5
	0.8nm3μm184nm,1.2s						
KNRA	**Kununurra**	**7.87**	**184**	P	**Pn**	**02 38 24.9**	**+2.6**
	baz=7.8,SNR=789						
KNRA				S	**Sn**	**02 39 48.5**	**-1.6**
	baz=7.8						
KNRA	**Kununurra**	**7.87**	**184**		**Pn**	**02 38 25.7**	**+3.4**
KNRA				Sn	**Sn**	**02 39 51.0**	**+0.9**
RKPI	**Ransiki, Papua**	**7.90**	**38**	P	**Pn**	**02 38 26.2**	**+3.5**
	5.2nm8μm755nm,0.9s						
TNTI	**Ternate**	**8.71**	**347**	P	Pn	02 38 40.9	+7.0
	3μm301nm,1.0s						
TNTI	**Ternate**	**8.71**	**347**		Pn	02 38 40.3	+6.4
LUWI	**Luwuk**	**9.34**	**315**	P	Pn	02 38 50.2	+7.7
	4μm456nm,1.2s						
LUWI	**Luwuk**	**9.34**	**315**		Pn	02 38 48.6	+6.1
BKSI	**Bulukumba**	**9.45**	**284**	P	Pn	02 38 50.3	+6.4
	3μm139nm,1.2s						
BNSI	**Bone**	**9.74**	**290**	P	Pn	02 38 53.9	+5.9
	2μm174nm,1.1s						
KMSI	**Cibinong**	**9.85**	**327**	P	Pn	02 38 54.8	+5.2
	508nm,0.9s						
KAPI	**Kappang**	**9.88**	**286**	P	**Pn**	**02 38 54.3**	**+4.3**
KAPI	**Kappang**	**9.88**	**286**		**Pn**	**02 38 54.3**	**+4.3**
SPSI	**Sidrap Palu**	**10.21**	**291**	P	Pn	02 39 00.0	+5.5
	3μm178nm,1.3s						
APSI	**Ampana**	**10.24**	**311**	P	Pn	02 39 02.6	+7.8
	3μm223nm,1.5s						
TTSI	**Tana Toraja**	**10.55**	**296**	P	Pn	02 39 05.3	+6.2
	2μm88nm,1.1s						
FITZ	**Fitzroy Crossi**	**10.86**	**199**	P	**Pn**	**02 39 04.2**	**+0.9**
	baz=11,SNR=174						
FITZ				S	**Sn**	**02 40 58.9**	**-4.7**
	baz=11						
FITZ	**Fitzroy Crossi**	**10.86**	**199**	P	**Pn**	**02 39 04.5**	**+1.2**
	29nm,0.3s,baz=31,slow=10,SNR=506						
FITZ				S	**Sn**	**02 40 57.6**	**-6.0**
	20nm,0.3s,baz=106,slow=17,SNR=9.8						
FITZ				LR	LR	02 44 01.6	
	comp=Z,2μm,20.6s,baz=24,slow=41						
FITZ	**Fitzroy Crossi**	**10.86**	**199**	Pn	**Pn**	**02 39 05.7**	**+2.3**
SMPI	**Sarmi**	**10.99**	**59**	P	**Pn**	**02 39 09.8**	**+4.6**
	15μm163nm,1.1s						
MRSI	**Marisa**	**11.01**	**318**	P	Pn	02 39 13.3	+7.9
	3μm2μm118nm,1.3s						
PLAI	**Plampang**	**11.46**	**264**	P	Pn	02 39 16.6	+5.1
	2μm2μm180nm,0.6s						
JAY	**Jayapura**	**12.50**	**66**	P	Pn	02 39 31.4	+5.5
	1.3nm,0.3s,baz=275,slow=11,SNR=6.4						
JAY				S	**Sn**	**02 41 40.4**	**-3.5**
	0.5nm,0.3s,baz=31,slow=19,SNR=2.3						
JAY	**Jayapura**	**12.50**	**66**	P	Pn	02 39 31.4	+5.6
	43nm,1.1s						
WB0	**Warramunga Arr**	**12.90**	**158**	Pn	**Pn**	**02 39 31.5**	**+0.3**
WRAB	**Tennant Creek**	**13.03**	**158**	P	**Pn**	**02 39 33.4**	**+0.3**
WRAB	**Tennant Creek**	**13.03**	**158**	Pn	**Pn**	**02 39 33.4**	**+0.3**
WRA	**Warramunga Arr**	**13.04**	**159**	P	**Pn**	**02 39 32.5**	**-0.7**
	26nm,0.3s,baz=329,slow=13,SNR=142						
WRA				S	**Sn**	**02 41 51.4**	**-5.6**
	30nm,0.3s,baz=323,slow=23,SNR=6.1						
WRA				LR	LR	02 45 10.8	
	comp=Z,4μm,18.8s,baz=335,slow=39						
WB2	**Warramunga Arr**	**13.04**	**158**	Pn	**Pn**	**02 39 33.5**	**+0.3**
WR0	**Warramunga Arr**	**13.13**	**158**		**Pn**	**02 39 34.5**	**+0.2**
DDMP	**Don Marcelino,**	**14.25**	**345**	*e*P	**P**	**02 39 55.1**	**-1.5**
COEN	**Coen**	**14.94**	**115**	Pn	**Pn**	**02 40 00.3**	**+1.4**
MATI	**Mati**	**14.94**	**348**	*e*P	**P**	**02 40 03.5**	**-0.8**
SKMP	**Bagumbayan, Su**	**14.98**	**341**	*e*P	**Pn**	**02 40 01.9**	**+2.4**
DAV	**Davao City (W)**	**15.21**	**346**	LR	LR	02 47 06.4	
	comp=Z,744nm,19.4s,baz=158,slow=42						
DAV	**Davao City (W)**	**15.21**	**346**	⇑*i*P	**P**	**02 40 09.1**	**+1.8**
KCP	**Kidapawan**	**15.28**	**344**	⇓*i*P	**P**	**02 40 07.3**	**-0.8**
BUKP	**Musuan**	**16.12**	**345**	*e*P	**P**	**02 40 18.4**	**+1.0**
AS31	**Alice Springs**	**16.40**	**165**		**Pn**	**02 40 18.6**	**+0.7**
AS31				IAmb	IAmb	02 40 26.3	
	comp=Z,121nm,0.7s						
ASAR	**Alice Springs**	**16.40**	**165**	P	**Pn**	**02 40 18.2**	**+0.3**
	comp=Z,16nm,0.3s,baz=326,slow=9.7,SNR=338						
ASAR				S	**Sn**	**02 43 14.7**	**-4.3**
	comp=Z,13nm,0.3s,baz=329,slow=15,SNR=5.7						
ASAR				LR	LR	02 47 33.5	
	comp=Z,1μm,19.6s,baz=358,slow=40						
ASAR				ScP	**ScP**	**02 48 39.1**	**-2.5**
	comp=Z,1.5nm,0.3s,baz=343,slow=2.9,SNR=6.4						
PSA00	**Pilbara Seismi**	**16.47**	**213**		**Pn**	**02 40 19.0**	**+0.1**
PAGZ	**Pagadian**	**16.61**	**339**	*e*P	**P**	**02 40 24.1**	**+1.3**
CGP	**Cagayan de Oro**	**16.77**	**344**	*e*P	**P**	**02 40 30.4**	**+5.9**
BUTP	**Butuan**	**17.04**	**347**	*e*P	**P**	**02 40 29.4**	**+1.9**
PMG	**Port Moresby**	**17.73**	**97**	P	**P**	**02 40 35.6**	**+0.5**
PMG				pmax	pmax		
	comp=Z,154nm,1.0s						
PMG	**Port Moresby**	**17.73**	**97**	P	**P**	**02 40 35.6**	**+0.5**
PMG				IAmb	IAmb	02 40 42.3	
	comp=Z,154nm,0.9s						
MTSU	**Mount Surprise**	**17.87**	**127**	P	**P**	**02 40 37.9**	**+1.2**
	baz=18,SNR=277						
MSLP	**Maasin**	**18.34**	**346**	*e*P	**Pn**	**02 40 44.6**	**+2.6**
UGM	**Wanagama**	**18.61**	**268**	P	**Pn**	**02 40 45.6**	**+0.2**
UGM				IAmb	IAmb	02 41 02.0	
	comp=Z,66nm,0.7s						
MANU	**Manus Island**	**18.87**	**73**	P	**P**	**02 40 47.8**	**+0.1**
MANU				IAmb	IAmb	02 40 55.2	
	comp=Z,73nm,0.8s						
KKM	**Kota Kinabalu**	**18.95**	**316**	P	**P**	**02 40 48.2**	**-0.5**
KKM				IAmb	IAmb	02 40 59.6	
	comp=Z,108nm,1.1s						
OCLP	**Ormoc**	**19.28**	**346**	*e*P	**Pn**	**02 40 55.6**	**+2.1**
GUIM	**Jordan**	**19.47**	**340**	*e*P	**P**	**02 40 52.7**	**-1.6**
SBUM	**Sibu**	**19.84**	**300**	P	**P**	**02 40 58.6**	**+0.2**
SBUM	**Sibu**	**19.84**	**300**	P	**Pn**	**02 41 02.0**	**+1.8**
BATP	**Bataraza**	**20.07**	**325**	*e*P	Pn	02 41 02.9	+0.1
RCP	**Roxas**	**20.29**	**341**	⇑*e*P	Pn	02 41 05.5	+0.1
CTA	**Charters Tower**	**20.47**	**128**	P	Pn	02 41 09.6	+2.0
	comp=Z,132nm,1.0s,baz=300,slow=13,SNR=33						
CTA				S	**Sn**	**02 44 53.9**	**+1.2**
	comp=Z,11nm,0.8s,baz=233,slow=20,SNR=2.2						
CTA				LR	LR	02 50 16.2	
	comp=Z,2μm,19.9s,baz=288,slow=40						
CTAO	**Charters Tower**	**20.47**	**128**	P	**P**	**02 41 03.1**	**-2.1**
CTAO				pmax	pmax		
	comp=Z,18nm,0.6s						
CTAO	**Charters Tower**	**20.47**	**128**	P	**P**	**02 41 03.1**	**-2.1**
GIRL	**Giralia**	**20.70**	**223**	P	Pn	02 41 10.6	+0.5
	baz=21,SNR=7.2						
GIRL	**Giralia**	**20.70**	**223**	P	Pn	02 41 11.6	+1.5
GIRL				IAmb	IAmb	02 41 19.1	
	comp=Z,195nm,1.1s						
KSM	**Kuching**	**21.06**	**295**	P	**P**	**02 41 11.9**	**+0.4**
KSM				IAmb	IAmb	02 41 18.9	
	comp=Z,105nm,0.8s						
KSM	**Kuching**	**21.06**	**295**	P	**P**	**02 41 15.0**	**+3.4**
OTRP	**Odiongan**	**21.28**	**340**	*e*P	**P**	**02 41 15.7**	**+1.8**
CISI	**Cisompet, Garu**	**21.30**	**269**	P	**P**	**02 41 14.7**	**+0.5**
CISI				IAmb	IAmb	02 41 27.2	
	comp=Z,67nm,0.6s						
LEM	**Lembang**	**21.53**	**271**	LR	LR	02 51 15.0	
	comp=Z,639nm,21.8s,baz=95,slow=41						
PVCP	**Virac**	**21.85**	**346**	*e*P	**P**	**02 41 20.2**	**+0.3**
BOAC	**Boac**	**22.36**	**341**	*e*P	**P**	**02 41 27.5**	**+2.0**
KRVT	**Keravat (AS076**	**22.85**	**83**	LR	LR	02 52 11.0	
	comp=Z,341nm,21.5s,baz=252,slow=41						
FORT	**Forrest**	**22.91**	**183**	P	**P**	**02 41 33.8**	**+2.6**
	baz=23,SNR=32						
FORT	**Forrest**	**22.91**	**183**	P	**P**	**02 41 29.7**	**-1.5**
LUBP	**Lubang**	**23.19**	**337**	*e*P	**P**	**02 41 33.4**	**-0.7**
TGY	**Tagaytay City**	**23.27**	**339**	P	**P**	**02 41 35.4**	**+0.4**
	comp=Z,242nm,0.6s,baz=127,slow=13,SNR=5.4						
TGY				LR	LR	02 51 37.2	
	comp=Z,167nm,20.2s,baz=49,slow=39						
QLP	**Quilpie**	**23.47**	**145**	P	**P**	**02 41 40.4**	**+3.6**
	baz=24,SNR=101						
POLP	**Polilio Island**	**23.53**	**342**	*e*P	**P**	**02 41 38.9**	**+1.5**
MORW	**Morawa**	**24.59**	**209**	P	**P**	**02 41 50.3**	**+3.1**
	baz=24,SNR=4.4						
MORW	**Morawa**	**24.59**	**209**	P	**P**	**02 41 50.1**	**+2.8**
CAUP	**Cauayan**	**25.66**	**343**	*e*P	**P**	**02 41 58.3**	**+1.3**
BBOO	**Buckleboo**	**25.68**	**167**	P	**P**	**02 41 59.4**	**+2.3**
	baz=26,SNR=126						
BBOO	**Buckleboo**	**25.68**	**167**	P	**P**	**02 41 55.7**	**-1.4**
KLBR	**Kellerberrin**	**26.02**	**203**	P	**P**	**02 42 02.8**	**+2.6**
	baz=26,SNR=9.1						
RMQ	**Roma**	**26.23**	**138**	P	**P**	**02 42 06.3**	**+4.2**
	baz=26,SNR=6.7						
STKA	**Stephens Creek**	**26.57**	**156**	P	**P**	**02 42 07.9**	**+2.8**
	baz=27,SNR=40						
STKA	**Stephens Creek**	**26.57**	**156**	P	**P**	**02 42 05.9**	**+0.7**
STKA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
STKA	**Stephens Creek**	**26.57**	**156**	P	**P**	**02 42 07.5**	**+2.3**
	comp=Z,42nm,1.0s,baz=329,slow=9.3,SNR=64						
STKA				LR	LR	02 53 58.1	
	comp=Z,1μm,20.2s,baz=321,slow=39						
STKA	**Stephens Creek**	**26.57**	**156**	P	**P**	**02 42 05.9**	**+0.7**
MUN	**Mundaring**	**26.99**	**205**	P	**P**	**02 42 12.1**	**+3.1**
	baz=27,SNR=4.3						
HTT	**Hallett**	**27.03**	**162**	P	**P**	**02 42 11.9**	**+2.6**
	baz=27,SNR=16						
EIDS	**Eidsvold**	**27.15**	**133**	P	**P**	**02 42 14.2**	**+3.7**
NWAO	**Narrogin (SRO)**	**27.41**	**202**	P	**P**	**02 42 15.1**	**+2.4**
	baz=27,SNR=4.3						
NWAO	**Narrogin (SRO)**	**27.41**	**202**	P	**P**	**02 42 13.7**	**+1.0**
NWAO				pmax	pmax		
	comp=Z,30nm,1.2s						
NWAO	**Narrogin (SRO)**	**27.41**	**202**	P	**P**	**02 42 14.8**	**+2.1**
	comp=Z,23nm,1.1s,baz=24,slow=13,SNR=4.9						
NWAO				LR	LR	02 54 26.0	
	comp=Z,672nm,18.3s,baz=16,slow=39						
NWAO	**Narrogin (SRO)**	**27.41**	**202**	P	**P**	**02 42 13.7**	**+1.0**
CMSA	**Cobar Meteorol**	**28.15**	**149**	P	**P**	**02 42 22.5**	**+3.2**
	baz=28,SNR=81						
JRMM	**Jerantut**	**29.17**	**292**	P	**P**	**02 42 32.0**	**+3.4**
HNR	**Honiara**	**30.34**	**95**	LR	LR	02 56 07.5	
	comp=Z,269nm,19.2s,baz=279,slow=38						
ARMA	**Armidale**	**30.73**	**140**	P	**P**	**02 42 44.7**	**+2.3**
	baz=31,SNR=5.1						
ARMA	**Armidale**	**30.73**	**140**	P	**P**	**02 42 46.0**	**+3.7**
ARPS	**Mount Arapiles**	**31.03**	**160**	P	**P**	**02 42 48.4**	**+3.6**
	baz=31,SNR=133						
KULM	**Kulim**	**31.40**	**294**	P	**P**	**02 42 50.0**	**+1.7**
YNG	**Young**	**31.71**	**149**	P	**P**	**02 42 54.7**	**+3.8**
	baz=32,SNR=29						
RPSI	**Rantau Prapat**	**32.05**	**288**	P	**P**	**02 42 53.4**	**-0.6**
RPSI				IAmb	IAmb	02 42 56.2	
	comp=Z,34nm,1.0s						
PSI	**Prapat**	**32.08**	**288**	P	**P**	**02 42 53.4**	**-1.1**
PSI				pmax	pmax		
	comp=Z,34nm,1.0s						
CAN	**Canberra**	**32.82**	**149**	P	**P**	**02 43 00.7**	**+0.1**
CAN				pmax	pmax		
	comp=Z,45nm,0.7s						
CAN	**Canberra**	**32.82**	**149**	P	**P**	**02 43 00.7**	**+0.1**
QIZ	**Qiongzhong**	**32.83**	**324**	P	**P**	**02 43 01.6**	**+0.8**
QIZ				S	**S**	**02 48 18.9**	**+2.9**
CNB	**Canberra Magne**	**33.00**	**149**	P	**P**	**02 43 04.8**	**+2.6**
	baz=33,SNR=10						
TOO	**Toolangi**	**33.09**	**156**	P	**P**	**02 43 05.8**	**+2.9**
	baz=33,SNR=22						
TOO	**Toolangi**	**33.09**	**156**	P	**P**	**02 43 03.2**	**+0.3**
TOO				pmax	pmax		
	comp=Z,13nm,0.6s						
TOO	**Toolangi**	**33.09**	**156**	P	**P**	**02 43 03.2**	**+0.3**
TOO				IAmb	IAmb	02 43 09.4	
	comp=Z,13nm,0.6s						
MILA	**Mila**	**34.28**	**151**	P	**P**	**02 43 15.9**	**+2.6**
	baz=34,SNR=3.2						
JOW	**Kunigami**	**34.42**	**358**	P	**P**	**02 43 15.2**	**+0.7**
	comp=Z,7.3nm,0.8s,baz=169,slow=12,SNR=9.8						
JOW	**Kunigami**	**34.42**	**358**	P	**P**	**02 43 13.0**	**-1.5**
MOO	**Moorlands**	**37.96**	**158**	P	**P**	**02 43 47.6**	**+3.0**
	baz=38,SNR=3.9						
SLVN	**Son La**	**38.20**	**320**	P	**P**	**02 43 45.3**	**-1.6**
DZM	**Mont Dzumac**	**38.47**	**116**	*e*S	**S**	**02 49 39.5**	**-3.2**
	comp=Z,284nm,29.4s						
DZM				*e*LR	LR	02 54 27.5	
	comp=Z,2μm,33.2s						
DZM	**Mont Dzumac**	**38.47**	**116**	P	**P**	**02 43 51.7**	**+2.4**
	comp=Z,12nm,0.9s,baz=258,slow=8.6,SNR=6.4						
DZM				LR	LR	03 01 29.8	
	comp=Z,289nm,18.2s,baz=221,slow=39						
DZM	**Mont Dzumac**	**38.47**	**116**	P	**P**	**02 43 48.6**	**-0.7**
DZM				IAmb	IAmb	02 44 03.0	
	comp=Z,22nm,1.1s						
CMAR	**Chiang Mai Arr**	**39.72**	**311**	P	**P**	**02 44 00.1**	**+0.4**
	comp=Z,4.7nm,0.7s,baz=141,slow=7.1,SNR=25						
CMAR				PcP	**PcP**	**02 46 07.0**	**+1.1**
	comp=Z,1.2nm,0.3s,baz=138,slow=2.0,SNR=4.2						
CMAR				ScP	**ScP**	**02 49 50.9**	**-1.4**
	comp=Z,1.5nm,0.3s,baz=149,slow=3.6,SNR=7.9						
CHTO	**Chiang Mai**	**39.94**	**312**	P	**P**	**02 44 00.4**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,15nm,0.9s						
CHTO	**Chiang Mai**	**39.94**	**312**	P	**P**	**02 44 00.4**	**-1.1**
CHTO				IAmb	IAmb	02 44 04.5	
	comp=Z,15nm,0.9s						
GYA	**Guiyang**	**40.52**	**328**	P	**P**	**02 44 07.3**	**+1.0**
GYA				pP	pwP	02 44 25.4	+5.8
GYA				PP	**PnPn**	**02 45 44.8**	**+0.7**
GYA				S	**S**	**02 50 09.5**	**-3.8**
GYA				sS	sS	02 50 41.3	+12
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,520nm,18.3s						
GYA				LR	LR		
	comp=Z,470nm,18.0s						
GYA				LR	LR		
	comp=Z,410nm,18.9s						
JNU	**Nakatsue**	**40.70**	**2**	P	**P**	**02 44 07.3**	**-0.4**
WHN	**Wuhan**	**40.72**	**340**	⇓P	**P**	**02 44 08.1**	**+0.4**
WHN				pmax	pmax		
	comp=Z,84nm,1.3s						
NJ2	**Nanjing**	**40.85**	**346**	*e*P	**P**	**02 44 11.0**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
KMI	**Kunming**	**41.70**	**322**	P	**P**	**02 44 17.4**	**+1.2**
KMI				pP	pwP	02 44 36.3	+6.6
KMI				sP	sP	02 44 50.8	+21
KMI				pmax	pmax		
	comp=Z,58nm,1.1s						
KMI	**Kunming**	**41.70**	**322**	P	**P**	**02 44 15.3**	**-0.9**
KMI				pmax	pmax		
	comp=Z,67nm,1.1s						
KMI	**Kunming**	**41.70**	**322**	P	**P**	**02 44 15.2**	**-0.9**
ENH	**Enshi**	**42.35**	**334**	P	**P**	**02 44 20.6**	**-0.6**
TJN	**Taejon**	**43.96**	**358**	*ce*P	**P**	**02 44 33.9**	**-0.2**
MJAR	**Matsushiro Arr**	**44.87**	**10**	P	**P**	**02 44 39.8**	**-1.7**
	comp=Z,24nm,0.9s,baz=190,slow=9.5,SNR=24						
MJAR				LR	LR	03 02 55.0	
	comp=Z,79nm,21.4s,baz=210,slow=35						
MAJO	**Matsushiro**	**44.88**	**10**	P	**P**	**02 44 40.7**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,34nm,1.0s						
MAJO	**Matsushiro**	**44.88**	**10**	P	**P**	**02 44 40.7**	**-0.7**
MAJO				IAmb	IAmb	02 44 41.9	
	comp=Z,34nm,0.9s						
MAT	**Matsushiro**	**44.88**	**10**	P	**P**	**02 44 38.9**	**-2.5**
MJB9	**Matsu-Tunnel**	**44.88**	**10**	P	**P**	**02 44 40.6**	**-0.8**
MJB9				IAmb	IAmb	02 44 41.9	
	comp=Z,35nm,0.9s						
KSRS	**Korea Array**	**45.02**	**358**	P	**P**	**02 44 43.0**	**+0.5**
KSRS	**Korea Array**	**45.02**	**358**	P	**P**	**02 44 43.0**	**+0.5**
	comp=Z,9.9nm,0.9s,baz=177,slow=12,SNR=28						
KSRS				LR	LR	03 03 46.1	
	comp=Z,116nm,20.1s,baz=172,slow=36						
KS19	**Wonju Array Si**	**45.07**	**358**	P	**P**	**02 44 42.2**	**-0.7**
KS19				IAmb	IAmb	02 44 45.0	
	comp=Z,26nm,1.1s						
CD2	**Chengdu**	**45.60**	**329**	*e*P	**P**	**02 44 47.0**	**-0.3**
CD2				S	**S**	**02 51 27.8**	**+0.2**
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,220nm,5.5s						
CD2				LR	LR		
	comp=Z,280nm,8.4s						
CD2				LR	LR		
	comp=Z,250nm,9.4s						
XAN	**Xi'an**	**45.86**	**336**	P	**P**	**02 44 47.6**	**-1.7**
XAN				pP	pwP	02 45 08.3	+5.4
XAN				sP	sP	02 45 18.6	+16
XAN				PcP	**PcP**	**02 46 25.9**	**-0.3**
XAN				pmax	pmax		
	comp=Z,24nm,0.9s						
XAN				p

HHC pmax pmax
comp=Z,10.0nm,1.0s
HHC pmax pmax
comp=Z,58nm,5.5s
USRK Ussuriysk Ar. 51.79 2 P **P** **02 45 34.5 -0.1**
comp=Z,16nm,0.8s,baz=186,slow=6.7,SNR=23
USRK LR LR 03 08 28.8
comp=Z,72nm,19.4s,baz=156,slow=37
USA0B Ussuriysk Arra 51.80 2 P **P** **02 45 34.5 -0.1**
USA0B pmax pmax
comp=Z,18nm,0.9s
USA0B Ussuriysk Arra 51.80 2 P **P** **02 45 34.5 -0.1**
USA0B IAmb IAmb 02 45 36.0
comp=Z,18nm,0.9s
MDJ Mudanjiang 52.16 0 P **P** **02 45 37.3 0.0**
MDJ sP sP 02 46 04.8 +14
MDJ pmax pmax
comp=Z,24nm,1.0s
MDJ pmax pmax
comp=Z,210nm,6.4s
MDJ Mudanjiang 52.16 0 IAmb IAmb 02 45 38.5
comp=Z,21nm,1.0s
LSA Lhasa 52.29 317 P **P** **02 45 39.8 +0.6**
LSA pmax pmax
comp=Z,170nm,1.3s
LSA Lhasa 52.29 317 P **P** **02 45 38.7 -0.5**
LSA pmax pmax
comp=Z,36nm,0.9s
LSA Lhasa 52.29 317 P **P** **02 45 38.7 -0.5**
URZ Urewera 52.63 133 LR LR 03 07 13.3
comp=Z,247nm,20.5s,baz=312,slow=35
TEY Ternei 52.98 6⇑ *eP* **P** **02 45 43.4 0.0**
TEY pmax pmax
comp=E,10.0nm,1.3s
TEY pmax pmax
comp=N,20nm,1.1s
TEY pmax pmax
comp=Z,30nm,1.0s
ASAJ Asahikawa 53.04 12 P **P** **02 45 43.8 0.0**
comp=Z,13nm,0.7s,baz=215,slow=7.8,SNR=5.6
ODAN Odare 53.25 312 *eP* **P** **02 45 45.6 -0.5**
comp=Z,69nm,0.9s
TAPN Taplejung 53.30 313 *eP* **P** **02 45 46.0 -0.4**
comp=Z,46nm,0.4s
RAMN Ramite 53.89 311 *eP* **P** **02 45 50.4 -0.3**
comp=Z,68nm,0.6s
RAO Raoul Island 53.90 121 LR LR 03 07 18.7
comp=Z,363nm,19.6s,baz=260,slow=34
GTA Gaotai 54.33 332⇑P **P** **02 45 53.4 -0.2**
GTA pP pwP 02 46 12.4 +4.9
GTA sP sP 02 46 21.5 +15
GTA S **S** **02 53 27.3 -2.0**
GTA pmax pmax
comp=Z,36nm,1.1s
GTA pmax pmax
comp=Z,230nm,7.5s
GTA LR LR
comp=Z,190nm,20.9s
GTA LR LR
comp=Z,190nm,20.3s
GTA LR LR
comp=Z,320nm,21.9s
JIRN Jiri 54.59 312 *eP* **P** **02 45 55.4 -0.5**
comp=Z,126nm,1.0s
GUN Gumba 54.95 312 *eP* **P** **02 45 58.0 -0.6**
comp=Z,65nm,0.6s
PKI Pulchoki 55.12 311 *eP* **P** **02 45 59.0 -0.7**
comp=Z,3.1nm,0.6s
PKIN Phulchoki 55.13 311 *eP* **P** **02 45 58.8 -1.0**
comp=Z,20nm,0.6s
KKN Kakani 55.33 312 *eP* **P** **02 46 00.4 -0.7**
comp=Z,28nm,0.7s
DMN Daman 55.36 311 *eP* **P** **02 46 01.0 -0.4**
comp=Z,41nm,0.9s
YSS Yuzh-Sakhalins 55.79 11 *eP* **P** **02 46 03.3 -0.5**
YSS *eS* **S** **02 53 43.4 -4.9**
YSS pmax pmax
comp=Z,20nm,0.9s
GKN Gorkha 55.92 311 *eP* **P** **02 46 04.8 -0.5**
comp=Z,28nm,0.3s
HYB Hyderabad 56.05 297 *i* P **P** **02 46 06.0 -0.2**
KOLN Koldanda 56.58 311 *eP* **P** **02 46 09.5 -0.6**
comp=Z,65nm,0.7s
DANN Dangsing 56.76 311 *eP* **P** **02 46 10.8 -0.7**
comp=Z,49nm,0.8s
KLR Kul'dur 56.81 2 *i* P **P** **02 46 10.4 -0.6**
KLR pmax pmax
comp=Z,21nm,1.0s
KLR Kul'dur 56.81 2 P **P** **02 46 10.5 -0.6**
comp=Z,15nm,1.0s,baz=219,slow=3.6,SNR=29
HIA Hailar 57.42 353 *i* P **P** **02 46 15.5 +0.1**
HIA pmax pmax
comp=Z,31nm,1.0s
AFI Afiamalu 58.07 102 LR LR 03 09 54.8
comp=Z,114nm,21.2s,baz=258,slow=34
GRNR Gornyy 58.64 5⇑ *iP* **P** **02 46 24.1 +0.2**
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR MLR MLR
comp=Z,110nm,10.0s
ULN Ulaanbaatar 58.80 343 *ceP* **P** **02 46 25.7 +0.5**
ULN pmax pmax
comp=Z,22nm,1.7s
SONM Songino Array 58.97 342 P **P** **02 46 26.2 -0.2**
comp=Z,2.7nm,0.6s,baz=156,slow=7.2,SNR=25
SONM ScP **ScP** **02 51 11.1 -2.2**
comp=Z,0.3nm,0.4s,baz=160,slow=4.6,SNR=4.7
SONM LR LR 03 13 26.9
comp=Z,56nm,20.4s,baz=76,slow=38
ZEA Zeya 61.31 359 *eP* **P** **02 46 41.6 -0.5**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,41nm,1.0s
ZAK Zakamensk 62.18 341 *eP* **P** **02 46 47.8 -0.4**
ZAK pmax pmax
comp=Z,6.0nm,1.2s
TLY Talaya 63.20 342 *eP* **P** **02 46 58.2 +3.3**
TLY pmax pmax
comp=Z,17nm,1.0s
WMQ Urumqi 63.67 328 *eP* **P** **02 46 58.8 +0.6**
WMQ pP sP 02 47 19.4 +7.5
WMQ sP PcP 02 47 28.6 -5.7
WMQ PcP pwP 02 47 36.5 +25
WMQ pmax pmax
comp=Z,29nm,1.1s
WMQ pmax pmax
comp=Z,21nm,3.7s
WMQ LR LR
comp=Z,340nm,29.3s
WMQ LR LR
comp=Z,690nm,29.0s
WMQ Urumqi 63.67 328 IAmb IAmb 02 47 01.4
comp=Z,28nm,0.9s
MOY Mondy 64.02 341 *eP* **P** **02 47 00.6 +0.2**
MOY pmax pmax
comp=Z,37nm,1.6s
DHRM DHARAMSHALA 64.29 311 *eP* **P** **02 47 02.9 +0.1**
DHRM IAmb IAmb 02 47 13.6
comp=Z,22nm,0.8s
PETK Petropavlovsk- 65.28 18 P **P** **02 47 09.2 +0.7**
comp=Z,10nm,0.8s,baz=193,slow=6.3,SNR=9.5
PETK LR LR 03 10 43.0
comp=Z,69nm,21.9s,baz=241,slow=32
BOD Bodaibo 66.55 351 *eP* **P** **02 47 15.8 -0.7**
BOD pmax pmax
comp=Z,19nm,1.1s
NIL Nilore 67.21 311 P **P** **02 47 20.5 -0.8**
NIL pmax pmax
comp=Z,14nm,0.7s
NIL Nilore 67.21 311 P **P** **02 47 20.4 -0.8**
NIL IAmb IAmb 02 47 23.6
comp=Z,14nm,0.7s
PDGK Podgornoye 68.00 323 P **P** **02 47 26.7 +0.5**
KSH Kashi 68.13 318 P **P** **02 47 28.3 +1.2**
KSH PP PP **02 50 02.8 +5.0**
KSH S **S** **02 56 20.1 -4.8**
KSH SS **SS** **03 00 50.1 +1.9**
KSH pmax pmax
comp=Z,45nm,0.6s
KSH pmax pmax
comp=Z,530nm,5.1s
KSH LR LR
comp=Z,220nm,5.3s
KSH LR LR
comp=Z,290nm,4.9s
KSH LR LR
comp=Z,310nm,5.6s
MK31 Makanchi Array 68.50 327 P **P** **02 47 28.8 -0.3**
MK31 pmax pmax
comp=Z,25nm,1.1s
MK31 Makanchi Array 68.50 327 P **P** **02 47 28.8 -0.3**
MK31 IAmb IAmb 02 47 32.3
comp=Z,25nm,1.1s
MKAR Makanchi Array 68.50 327 P **P** **02 47 28.8 -0.4**
comp=Z,11nm,0.4s,baz=122,slow=5.8,SNR=167
MKAR LR LR 03 19 13.7
comp=Z,37nm,20.7s,baz=137,slow=38
MAKZ Makanchi 68.68 327 P **P** **02 47 29.3 -0.9**
MAKZ pmax pmax
comp=Z,8.0nm,0.9s
MAKZ Makanchi 68.68 327 P **P** **02 47 29.3 -0.9**
NRN Naryn 69.11 320 P **P** **02 47 32.7 -0.7**
NRN pmax pmax
comp=Z,9.0nm,1.1s
NRN Naryn 69.11 320 P **P** **02 47 32.7 -0.7**
MA2 Magadan 69.30 11 *ceP* **P** **02 47 33.8 +0.1**
MA2 pmax pmax
comp=Z,42nm,1.7s
MA2 Magadan 69.30 11 P **P** **02 47 32.7 -1.0**
MA2 IAmb IAmb 02 47 37.7
comp=Z,31nm,1.1s
YAK Yakutsk 69.60 0 *eP* **P** **02 47 35.7 +0.1**
YAK *e* 02 47 56.6
YAK *eS* **S** **02 56 37.2 -3.9**
YAK *e* 02 57 27.5
YAK pmax pmax
comp=Z,80nm,0.9s
YAK pmax pmax
comp=N,24nm,0.9s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK smax smax
comp=E,39nm,1.6s
YAK smax smax
comp=N,20nm,1.7s
YAK Yakutsk 69.60 0 P **P** **02 47 34.6 -0.9**
KZA Kyzart 69.93 320 P **P** **02 47 39.5 +1.0**
SNR=9.7
KBK Karagaybulak 70.42 320 P **P** **02 47 41.8 +0.5**
SNR=6.7
UCH Uchtor 70.47 320 P **P** **02 47 43.0 +1.1**
SNR=19
AAK Ala-Archa 70.69 320 P **P** **02 47 40.6 -2.3**
AAK pmax pmax
comp=Z,22nm,1.1s
AAK Ala-Archa 70.69 320 P **P** **02 47 43.6 +0.6**
SNR=14
AAK Ala-Archa 70.69 320 P **P** **02 47 40.6 -2.3**
AAK IAmb IAmb 02 47 44.8
comp=Z,22nm,1.1s
KBL Kabul 70.74 311 P **P** **02 47 42.0 -1.5**
KBL pmax pmax
comp=Z,13nm,1.2s
KBL Kabul 70.74 311 P **P** **02 47 42.0 -1.5**
AML Almayashu 70.95 320 P **P** **02 47 45.3 +0.5**
SNR=25
USP Ospenovka 71.02 321 P **P** **02 47 45.0 +0.3**
SNR=16
EKS2 Erkin-Say 71.16 320 P **P** **02 47 46.9 +1.2**
SNR=17
VNDA Vanda 71.76 173 P **P** **02 47 50.7 +2.1**
comp=Z,2.4nm,0.7s,baz=318,slow=6.9,SNR=10
VNDA LR LR 03 18 23.7
comp=Z,290nm,20.3s,baz=342,slow=35
BTK Batken 71.86 316 IAmb IAmb 02 47 54.3
comp=Z,18nm,1.1s
ZAA0 Zalesovo Array 71.98 334 IAmb IAmb 02 47 52.5
comp=Z,18nm,1.1s
ZALV Zalesovo Beam 71.98 334 *iP* **P** **02 47 49.0 -1.2**
ZALV pmax pmax
comp=Z,9.0nm,0.8s
ZALV Zalesovo Beam 71.98 334 P **P** **02 47 49.0 -1.2**
comp=Z,9.0nm,0.8s,baz=115,slow=4.6,SNR=38
ZALV LR LR 03 20 41.4
comp=Z,56nm,21.5s,baz=112,slow=37
SEY Seymchan 72.70 11 *iP* **P** **02 47 53.7 -0.6**
KURK Kurchatov 72.83 329 *ceP* **P** **02 47 54.8 -0.5**
KURK pmax pmax
comp=Z,67nm,1.3s
KURK Kurchatov 72.83 329 P **P** **02 47 54.9 -0.4**
KK31 Karatay Array 73.47 319 P **P** **02 47 57.9 -1.5**
KK31 pmax pmax
comp=Z,18nm,1.1s
KK31 Karatay Array 73.47 319 P **P** **02 47 57.9 -1.5**
KK31 IAmb IAmb 02 48 00.5
comp=Z,18nm,1.1s
KKAR Karatay Array 73.47 319 P **P** **02 47 57.9 -1.5**
KKAR pmax pmax
comp=Z,18nm,1.1s
KKAR Karatay Array 73.47 319 P **P** **02 47 57.9 -1.5**
KKAR IAmb IAmb 02 48 00.5
comp=Z,18nm,1.1s
MAW Mawson 73.98 201 P **P** **02 48 05.1 +3.3**
baz=74,SNR=19
MAW Mawson 73.98 201 P **P** **02 48 01.9 +0.1**
MAW pmax pmax
comp=Z,2.0nm,0.7s
MAW Mawson 73.98 201 P **P** **02 48 04.4 +2.6**
comp=Z,6.9nm,0.6s,baz=88,slow=5.4,SNR=19
MAW LR LR 03 17 42.1
comp=Z,177nm,21.7s,baz=60,slow=33
MAW Mawson 73.98 201 P **P** **02 48 01.9 +0.1**
WSAR Wadi Sarin 75.59 296 P **P** **02 48 13.1 +1.0**
comp=Z,9.0nm,1.0s,baz=179,slow=5.9,SNR=3.3
HRA Herat 75.89 308 P **P** **02 48 12.5 -1.3**
BVAR Borovoye Array 78.36 328 P **P** **02 48 26.1 -0.9**
comp=Z,12nm,0.9s,baz=132,slow=6.2,SNR=40
BRVK Borovoye 78.43 328 P **P** **02 48 26.2 -1.2**
BRVK Borovoye 78.43 328 P **P** **02 48 26.2 -1.2**
BRVK IAmb IAmb 02 48 29.1
comp=Z,18nm,1.0s
TBI Tubuai 78.94 112 *eLQ* LQ 03 09 53.2
comp=Z,989nm,38.8s
TBI *eLR* LR 03 13 14.2
comp=Z,554nm,31.8s
PPT2 Papeete2 79.26 106 *eLQ* LQ 03 09 55.4
comp=Z,2µm,35.0s
PPT2 *eLR* LR 03 13 20.8
comp=Z,480nm,30.5s
PPT Papeete 79.26 106 LR LR 03 20 25.9
comp=Z,60nm,20.9s,baz=286,slow=33
TIXI Tiksi 79.26 360 *ceP* **P** **02 48 30.6 -1.0**
TIXI pmax pmax
comp=Z,23nm,1.0s
TIXI Tiksi 79.26 360 P **P** **02 48 30.2 -1.3**
TIXI IAmb IAmb 02 48 32.6
comp=Z,16nm,0.8s
BILL Bilibino 80.03 13 *eP* **P** **02 48 33.6 -2.2**
BILL *e* 02 48 41.0
BILL *e* 02 51 41.0
BILL pmax pmax
comp=Z,4.0nm,1.1s
GEYT Alibeck 80.19 311 P **P** **02 48 37.3 -0.1**
comp=Z,2.6nm,0.6s,baz=169,slow=3.9,SNR=8.1
QSPA South Pole Qui 82.20 180 P **P** **02 48 49.5 +1.8**
comp=Z,5.2nm,0.7s,baz=302,slow=1.4,SNR=18
QSPA South Pole Qui 82.20 180 P **P** **02 48 47.6 -0.1**
SYO Syowa Base 82.69 201⇑ *iP* **P** **02 48 48.4 -1.6**
SYO Syowa Base 82.69 201⇑ *ePcP* **PcP** **02 48 54.0 -0.8**
AB31 Akbulak array 82.69 322 P **P** **02 48 49.1 -1.2**
ABKAR Akbulak array 82.69 322 P **P** **02 48 48.9 -1.5**
GAMB Gambell 83.90 23 P **P** **02 48 55.4 -0.7**
GAMB IAmb IAmb 02 48 58.7
comp=Z,22nm,1.2s
AKTO Aktyubinsk 84.27 323 P **P** **02 48 57.7 -0.7**
comp=Z,8.4nm,1.0s,baz=110,slow=5.8,SNR=28
AKTO LR LR 03 30 01.5
comp=Z,55nm,21.3s,baz=130,slow=38
SVE Sverdlovsk 85.08 329 *eP* **P** **02 49 01.7 -0.6**
SVE pmax pmax
comp=Z,41nm,1.3s
ARU Arti 86.00 328 *diP* **P** **02 49 06.7 -0.2**
ARU *PP **sP** **02 49 25.9 +4.8**
ARU 02 52 27.1
ARU S **SKSac** **02 59 25.4 -4.7**
ARU pmax pmax
comp=Z,21nm,1.0s
ARU Arti 86.00 328 P **P** **02 49 06.4 -0.5**
comp=Z,4.0nm,0.2s,baz=77,slow=1.5,SNR=17
ARU LR LR 03 31 41.0
comp=Z,34nm,18.4s,baz=104,slow=39
ARU Arti 86.00 328 P **P** **02 49 04.4 -2.5**
ARU IAmb IAmb 02 49 09.0
comp=Z,19nm,1.0s
RAYN Ar Rayn 87.43 294 P **P** **02 49 12.5 -2.2**
RAYN pmax pmax
comp=Z,11nm,1.0s
RAYN Ar Rayn 87.43 294 P **P** **02 49 12.5 -2.2**
RAYN IAmb IAmb 02 49 18.2
comp=Z,11nm,0.9s
GNI Garni 90.83 310 LR LR 03 38 13.1
comp=Z,50nm,18.5s,baz=98,slow=41
ZEI Tsey 91.87 313 *eP* **P** **02 49 37.3 +1.9**
ZEI pmax pmax
comp=Z,6.0nm,0.9s
KMBO Kilima Mbogo 91.88 269 P **P** **02 49 34.3 -1.8**
KMBO pmax pmax
comp=Z,4.0nm,1.0s
KMBO Kilima Mbogo 91.88 269 P **P** **02 49 36.4 +0.2**
comp=Z,4.1nm,1.0s,baz=44,slow=7.6,SNR=6.8
KMBO Kilima Mbogo 91.88 269 P **P** **02 49 34.2 -1.8**
KTH Kantishna Hill 92.38 26 IAmb IAmb 02 49 38.4
comp=Z,8.6nm,1.0s
NEY Neytrino 92.79 313 *iP* **P** **02 49 36.7 -2.9**
NEY pmax pmax
comp=Z,1.0nm,1.0s
KIV Kislovodsk 92.91 314 *eP* **P** **02 49 37.3 -2.7**
KIV pmax pmax
comp=Z,16nm,1.1s
KIV MLR MLR
comp=Z,211nm,20.0s
MCK McKinley 93.28 26 P **P** **02 49 41.0 -0.2**
MCK pmax pmax
comp=Z,16nm,1.0s
MCK McKinley 93.28 26 P **P** **02 49 41.0 -0.2**
HDA Harding Lake 94.26 26 IAmb IAmb 02 49 46.5
comp=Z,11nm,0.9s
HDA Harding Lake 94.26 26 P **P** **02 49 45.4 -0.2**
baz=261
IL31 94.34 25 IAmb IAmb 02 49 46.1
comp=Z,8.0nm,0.9s
ILAR Eielson Array 94.34 25 P **P** **02 49 44.8 -1.2**
comp=Z,4.7nm,0.8s,baz=270,slow=4.4,SNR=36
ILAR PP **PP** **02 53 31.6 -1.8**
comp=Z,1.5nm,1.1s,baz=251,slow=7.6,SNR=5.2
ILAR PKKP **PKKPdf** **03 06 47.5 -0.6**
comp=Z,0.3nm,0.7s,baz=52,slow=0.1,SNR=4.6
ILAR LR LR 03 26 32.5
comp=Z,40nm,20.6s,baz=260,slow=32
SNAA Sanae 94.75 194 P **P** **02 49 49.6 +1.7**
SNAA Sanae 94.75 194 P **P** **02 49 47.1 -0.8**
SNAA pmax pmax
comp=Z,5.0nm,1.0s
SNAA Sanae 94.75 194 P **P** **02 49 47.1 -0.8**
KLMR Klimovskoe 96.63 330 *eP* P 02 49 50.9 -5.6
KLMR *e* 02 53 46.6
KLMR pmax pmax
comp=Z,19nm,1.6s
KLMR Klimovskoe 96.63 330 *eP* P 02 49 50.9 -5.6
KLMR AMP 02 50 01.1
comp=Z,19nm,1.6s
KLMR *ePP **PP** **02 53 46.7 -4.5**
MATP Matopo 97.33 248 P Pdif 02 50 01.6 +0.7
comp=Z,4.1nm,1.0s,baz=123,slow=3.7,SNR=6.3
MMAI Mount Meron Ar 97.45 302 P **P** **02 50 00.3 -0.6**
comp=Z,0.4nm,0.4s,baz=58,slow=8.9,SNR=3.5
OBN Obninsk 97.89 325 *eP* **P** **02 50 01.3 -1.0**
OBN *e* 02 54 01.5
OBN *ePPP PPP 02 56 06.3
OBN pmax pmax
comp=Z,3.0nm,0.8s
OBN Obninsk 97.89 325 LR LR 03 37 13.2
comp=Z,27nm,21.5s,baz=176,slow=37
BOSA Boshof 98.48 240 P **P** **02 50 04.5 -1.3**
BOSA pmax pmax
comp=Z,6.0nm,1.1s
BOSA Boshof 98.48 240 P Pdif 02 50 06.9 +1.1
comp=Z,5.3nm,1.1s,baz=99,slow=9.9,SNR=4.4
BOSA Boshof 98.48 240 P **P** **02 50 04.5 -1.3**
BOSA IAmb IAmb 02 50 08.3
comp=Z,6.4nm,1.1s
LSZ Lusaka 98.58 253 P Pdif 02 50 08.2 +1.7
comp=Z,1.6nm,0.5s,baz=116,slow=3.6,SNR=5.8
LBTB Lobatse 99.00 243 P 02 50 06.6
LBTB pmax pmax
comp=Z,4.0nm,0.7s
LBTB Lobatse 99.00 243 P Pdif 02 50 09.1 +0.8
comp=Z,5.6nm,0.8s,baz=139,slow=4.7,SNR=6.7
LBTB Lobatse 99.00 243 P 02 50 06.6
LBTB IAmb IAmb 02 50 10.6
comp=Z,4.5nm,0.7s
BRTR Keskin Array B 99.27 309 LR LR 03 42 22.9
comp=Z,14nm,21.2s,baz=66,slow=40
ARCES ARCESS Array B 102.07 340 P **Pdif** **02 50 20.1 -0.6**
comp=Z,2.7nm,0.8s,baz=74,slow=6.7,SNR=5.1
FINES FINESS Array B 103.12 331 PP **PKiKP** **02 54 45.5 +0.5**
comp=Z,0.9nm,0.8s,baz=116,slow=6.3,SNR=3.0
MLR Muntele Rosu 104.87 315 PP **PKiKP** **02 54 54.4 +5.5**
comp=Z,2.5nm,1.0s,baz=108,slow=8.8,SNR=3.4
YKA Yellowknife Ar 108.75 26 Pdiff **Pdif** **02 50 51.2 +0.7**
comp=Z,0.3nm,0.8s,baz=296,slow=4.9,SNR=3.7
YKA PKiKP **PKiKP** **02 54 55.9 +0.5**
comp=Z,0.4nm,0.6s,baz=294,slow=1.7,SNR=12
YKA PKKPbc **PKKPbc** **03 06 05.0 -1.6**
comp=Z,0.5nm,0.6s,baz=108,slow=3.1,SNR=11
VYHS Vyhne 109.33 319 *eP* **Pdif** **02 50 52.4 -1.0**
VYHS Vyhne 109.33 319 *ePDIFF* **Pdif** **02 50 52.3 -1.1**
NVAR Mina Array Bea 112.32 52 PKiKP **PKiKP** **02 55 04.3 +1.1**
comp=Z,1.0nm,0.8s,baz=249,slow=2.5,SNR=6.3
CLL Collm 112.35 323 *eP* **Pdif** **02 51 03.0 -3.8**
GERES GERESS Array B 112.57 320 PKiKP **PKiKP** **02 55 03.6 +0.4**
comp=Z,0.6nm,0.6s,baz=70,slow=1.6,SNR=6.7
EDW2 Edwards Air Fo 113.02 55 P **PKiKP** **02 55 06.9 +2.5**
baz=277
LRMC Laurel Mtn Rad 113.20 55 P **PKiKP** **02 55 07.1 +2.3**
baz=277
GRAC Grapevine Rang 113.25 53 P **PKiKP** **02 55 06.9 +2.1**
baz=278
MPMC Manual Prospec 113.28 54 P **PKiKP** **02 55 07.4 +2.3**
baz=278
GSC Goldstone, Bar 113.93 55 P **PKiKP** **02 55 08.1 +1.9**
baz=278
TPNV Topopah Spring 114.14 53 P **PKiKP** **02 55 08.6 +1.9**
baz=279
SHOC Shoshone, Teco 114.28 54 P **PKiKP** **02 55 09.7 +3.0**
baz=278
HEC Hector,Ludlow 114.38 55 P **PKiKP** **02 55 09.8 +2.7**
baz=278
PFO Pinyon Flats O 114.43 57 P **PKiKP** **02 55 09.5 +2.2**
baz=277
TPFO Pinon Flats 114.43 57 P **PKiKP** **02 55 09.9 +2.6**
baz=277
R11A Troy Canyon, C 114.44 51 P **PKiKP** **02 55 09.5 +2.3**
baz=280
MONP2 Monument Peak 114.55 57 P **PKiKP** **02 55 10.2 +2.6**
baz=277
BELC Belle Mtn. Jos 114.76 56 P **PKiKP** **02 55 10.2 +2.3**
baz=278
IKP In-Ko-Pah, Jac 114.83 58 P **PKiKP** **02 55 10.4 +2.4**
baz=277
GMRC Granite Mounta 114.93 55 P **PKiKP** **02 55 10.8 +2.6**
baz=278
BC3 Big Chuckawall 115.25 57 P **PKiKP** **02 55 11.0 +2.2**
baz=278
IRM Iron Mountain 115.44 56 P **PKiKP** **02 55 11.3 +2.3**
baz=278
Y12C Blythe 116.01 56 P **PKiKP** **02 55 12.4 +2.3**
baz=278
DUG Dugway, Tooele 116.19 49 P **PKiKP** **02 55 12.2 +1.7**
baz=283
EGMT Eagleton 116.21 40 **PKPdf** **02 55 09.9 -0.3**
EGMT Eagleton 116.21 40 P **PKiKP** **02 55 11.6 +1.4**
baz=289
PDMCI Parker Dam,Lak 116.24 56 P **PKiKP** **02 55 12.6 +2.0**
baz=279
PDAR Pinedale Array 117.92 46 PKP **PKiKP** **02 55 15.2 +1.3**
comp=Z,1.7nm,0.8s,baz=222,slow=1.2,SNR=16
PDAR PKKPbc **PKKPbc** **03 05 35.6 +0.3**
comp=Z,0.5nm,0.6s,baz=135,slow=7.6,SNR=4.3
WUAZ Wupatki 118.27 54 P **PKiKP** **02 55 17.0 +2.3**
baz=281
KEST Kesra 118.74 306 PKP **PKiKP** **02 55 17.6 +2.1**
comp=Z,1.9nm,0.6s,baz=76,slow=1.5,SNR=4.9
LAO LASA Array 118.92 40 P **PKiKP** **02 55 17.2 +1.7**
baz=291
TUC Tucson 119.34 57 PKIKP **PKPdf** **02 55 15.2 -1.5**
TUC Tucson 119.34 57 **PKPdf** **02 55 15.2 -1.5**
TUC Tucson 119.34 57 P **PKiKP** **02 55 19.0 +2.2**

	baz=280							
EKA	**Eskdalemuir Ar**	**119.52**	**331**	PKP	**PKiKP**	**02 55 16.7**	**+0.5**	
	comp=Z,1.1nm,0.7s,baz=33,slow=2.7,SNR=3.6							
O20A	**White River Ci**	**119.61**	**48**	P	**PKiKP**	**02 55 19.1**	**+2.0**	
	baz=286							
MVCO	**Mesa Verde**	**120.17**	**51**	P	**PKiKP**	**02 55 20.3**	**+1.9**	
	baz=284							
N23A	**Red Feather La**	**121.06**	**47**	P	**PKiKP**	**02 55 21.8**	**+1.7**	
	baz=288							
RSSD	**Black Hills**	**121.29**	**43**	PKIKP	**PKPdf**	**02 55 17.8**	**-2.5**	
RSSD	**Black Hills**	**121.29**	**43**		**PKPdf**	**02 55 17.8**	**-2.5**	
RSSD	**Black Hills**	**121.29**	**43**	P	**PKiKP**	**02 55 20.6**	**+0.2**	
	baz=292							
S22A	**4UR Ranch, Cre**	**121.31**	**50**	P	**PKiKP**	**02 55 23.4**	**+2.6**	
	baz=286							
ISCO	**Idaho Springs**	**121.64**	**48**	P	**PKiKP**	**02 55 23.2**	**+1.9**	
	baz=288							
121A	**Cookes Peak, D**	**121.79**	**57**	P	**PKiKP**	**02 55 24.0**	**+2.3**	
	baz=282							
ANMO	**Albuquerque**	**122.32**	**53**	PKIKP	**PKPdf**	**02 55 21.2**	**-1.3**	
ANMO	**Albuquerque**	**122.32**	**53**		**PKPdf**	**02 55 21.2**	**-1.3**	
ANMO	**Albuquerque**	**122.32**	**53**	P	**PKiKP**	**02 55 24.3**	**+1.7**	
	baz=284							
ULM	**Lac du Bonnet**	**123.47**	**33**	PKIKP	**PKPdf**	**02 55 24.0**	**0.0**	
ULM	**Lac du Bonnet**	**123.47**	**33**	PKP	**PKPdf**	**02 55 24.0**	**0.0**	
	comp=Z,2.8nm,0.8s,baz=347,slow=7.7,SNR=4.2							
ULM	**Lac du Bonnet**	**123.47**	**33**		**PKPdf**	**02 55 23.8**	**-0.1**	
MNTX	**Cornudas Mount**	**123.96**	**57**	P	**PKiKP**	**02 55 27.5**	**+1.8**	
	baz=283							
KSCO	**Kaye Shedlock'**	**124.08**	**48**	P	**PKiKP**	**02 55 27.4**	**+1.5**	
	baz=290							
MSTX	**Muleshoe**	**125.52**	**54**	P	**PKiKP**	**02 55 29.9**	**+1.0**	
	baz=286							
TXAR	**Lajitas Array**	**125.92**	**59**	PKP	**PKiKP**	**02 55 31.2**	**+1.4**	
	comp=Z,3.6nm,0.9s,baz=259,slow=1.1,SNR=33							
AMTX	**Amarillo**	**126.11**	**52**	P	**PKiKP**	**02 55 31.8**	**+1.8**	
	baz=288							
CBKS	**Cedar Bluff**	**126.26**	**47**	P	**PKiKP**	**02 55 31.5**	**+1.3**	
	baz=292							
ECSD	**EROS Data Cent**	**126.32**	**40**	P	**PKiKP**	**02 55 30.7**	**+0.6**	
	baz=298							
BGNE	**Belgrade**	**126.34**	**43**	P	**PKiKP**	**02 55 31.2**	**+0.9**	
	baz=295							
ESDC	**Sonseca Array**	**127.57**	**315**	PKP	**PKPdf**	**02 55 32.0**	**-0.2**	
	comp=Z,1.8nm,1.0s,baz=67,slow=3.3,SNR=5.1							
TOA0	**Torodi Ar. Sit**	**128.28**	**281**		**PKPdf**	**02 55 32.2**	**-2.0**	
TORD	**Torodi Ar. Bea**	**128.28**	**281**	PKP	**PKPdf**	**02 55 34.2**	**+0.1**	
	comp=Z,5.5nm,0.9s,baz=91,slow=2.1,SNR=28							
TORD				SKPbc	SKPbc	02 58 48.2		
	comp=Z,1.6nm,1.0s,baz=91,slow=2.3,SNR=5.3							
PLCA	**Paso Flores**	**128.38**	**161**	PKIKP	**PKiKP**	**02 55 36.0**	**+1.5**	
PLCA	**Paso Flores**	**128.38**	**161**	PKP	**PKiKP**	**02 55 36.0**	**+1.5**	
	comp=Z,5.0nm,0.8s,baz=239,slow=2.4,SNR=9.0							
KSU1	**Kansas State U**	**128.38**	**45**	P	**PKiKP**	**02 55 35.0**	**+0.7**	
	baz=295							
ABTX	**Abilene, Hawle**	**128.41**	**54**	P	**PKiKP**	**02 55 35.7**	**+1.0**	
	baz=288							
WMOK	**Wichita Mounta**	**128.42**	**51**	P	**PKiKP**	**02 55 35.8**	**+1.3**	
	baz=290							
JCT	**Junction City**	**128.90**	**57**	P	**PKiKP**	**02 55 37.1**	**+1.4**	
	baz=286							
TUL1	**Leonard**	**130.27**	**49**	P	**PKiKP**	**02 55 39.8**	**+1.6**	
	baz=293							
SCHQ	**Schefferville**	**131.33**	**12**	SKPbc	**SKPbc**	**02 58 58.3**	**-3.0**	
	comp=Z,8.6nm,1.0s,baz=5.8,slow=6.8,SNR=4.5							
W39A	**Magazine**	**132.06**	**49**	P	**PKiKP**	**02 55 42.0**	**+0.2**	
	baz=294							
D47A	**Chapleau**	**132.08**	**30**	P	**PKiKP**	**02 55 42.5**	**+0.9**	
	baz=314							
U40A	**Yellville**	**132.25**	**47**	P	**PKiKP**	**02 55 42.1**	**-0.1**	
	baz=296							
MIAR	**Mount Ida**	**132.48**	**50**	P	**PKiKP**	**02 55 44.3**	**+1.6**	
	baz=294							
CCM	**Cathedral Cave**	**132.60**	**44**	P	**PKiKP**	**02 55 43.1**	**+0.3**	
	baz=299							
KIC	**Kosan Boka**	**134.39**	**271**	*e*P	**PKPdf**	**02 55 46.0**	**+0.2**	
	comp=Z,16nm,1.1s							
DBIC	**Dimbokro**	**134.53**	**272**	PKP	**PKiKP**	**02 55 46.9**	**-0.5**	
	comp=Z,6.7nm,0.9s,baz=41,slow=6.0,SNR=5.4							
DBIC				SKPbc	**SKPbc**	**02 59 10.4**	**-3.1**	
	comp=Z,3.9nm,0.8s,baz=21,slow=3.6,SNR=4.3							
LIC	**Lamto**	**134.66**	**271**	*e*P	**PKiKP**	**02 55 47.7**	**0.0**	
	comp=Z,3.4nm,0.3s							
TIC	**Toumodi**	**134.69**	**272**	*e*P	**PKiKP**	**02 55 47.6**	**-0.2**	
	comp=Z,2.9nm,0.3s							
L48A	**N Adams**	**134.77**	**36**	P	**PKiKP**	**02 55 47.5**	**+0.3**	
	baz=309							
Q48A	**North Vernon**	**135.81**	**40**	P	**PKiKP**	**02 55 49.6**	**+0.3**	
	baz=305							
O49A	**Covington**	**135.93**	**38**	P	**PKiKP**	**02 55 49.7**	**+0.2**	
	baz=308							
WVT	**Waverly**	**135.93**	**45**	P	**PKiKP**	**02 55 49.1**	**-0.5**	
	baz=301							
P49A	**Miami Univ. Ec**	**136.09**	**39**	P	**PKiKP**	**02 55 50.6**	**+0.7**	
	baz=307							
P50A	**Jamestown**	**136.61**	**38**	P	**PKiKP**	**02 55 51.8**	**+0.8**	
	baz=308							
ACSO	**Alum Creek Sta**	**136.71**	**37**	P	**PKiKP**	**02 55 51.9**	**+0.7**	
	baz=310							
T50A	**Nancy**	**137.48**	**42**	P	**PKiKP**	**02 55 52.5**	**-0.3**	
	baz=305							
U50A	**Jamestown**	**137.82**	**42**	P	**PKiKP**	**02 55 53.9**	**+0.4**	
	baz=304							
W50A	**Signal Mountai**	**138.16**	**44**	P	**PKPdf**	**02 55 52.7**	**+0.5**	
	baz=303							
Z50A	**Ashland**	**138.74**	**47**	P	**PKiKP**	**02 55 54.7**	**-0.8**	
	baz=300							
V52A	**Sevierville**	**138.97**	**42**	P	**PKiKP**	**02 55 55.2**	**-0.6**	
	baz=305							
Y52A	**Lilburn**	**139.75**	**45**	P	**PKiKP**	**02 55 57.2**	**-0.3**	
	baz=303							
Z52A	**Williamson**	**139.85**	**46**	P	**PKiKP**	**02 55 57.0**	**-0.8**	
	baz=302							
CPUP	**Villa Florida**	**145.49**	**169**	PKP2	**PKPbc**	**02 56 04.5**	**-1.0**	
CPUP	**Villa Florida**	**145.49**	**169**	PKPbc	**PKiKP**	**02 56 07.7**	**-1.8**	
	comp=Z,9.4nm,0.5s,baz=200,slow=1.4,SNR=33							
CPUP				SKPbc	**SKPbc**	**02 59 41.0**	**-1.9**	
	comp=Z,12nm,1.0s,baz=236,slow=2.2,SNR=9.6							
CPUP	**Villa Florida**	**145.49**	**169**		**PKPbc**	**02 56 04.5**	**-1.0**	
PB11	**IPOC Station P**	**146.87**	**146**		**PKPdf**	**02 56 04.8**	**-3.4**	
NNA	**Nana**	**147.42**	**127**	PKIKP	**PKPdf**	**02 56 07.4**	**-1.8**	
NNA	**Nana**	**147.42**	**127**		**PKPdf**	**02 56 07.4**	**-1.8**	
CBCY	**The Bluff, Cay**	**149.43**	**64**		**PKPdf**	**02 56 10.9**	**-1.3**	
LPAZ	**La Paz**	**150.51**	**144**	PKP	**PKPdf**	**02 56 17.2**	**+2.4**	
	comp=Z,3.4nm,0.9s,baz=295,slow=2.1,SNR=17							
LPAZ				PKPbc	**PKiKP**	**02 56 22.1**	**+1.2**	
	comp=Z,19nm,0.8s,baz=170,slow=2.2,SNR=38							
LPAZ	**La Paz**	**150.51**	**144**		**PKPdf**	**02 56 12.2**	**-2.6**	
BBAC	**Balboa, Cauca**	**152.94**	**101**	*e*P	PKPdf	02 56 04.8	-13	
UPD2	**Meteti**	**152.95**	**86**	*e*P	PKPdf	02 56 04.8	-13	
CRUC	**La Cruz**	**153.13**	**102**	*e*P	PKPdf	02 56 00.8	-18	
SOTA	**Rioblanco**	**153.59**	**101**	*e*P	**PKPdf**	**02 56 12.8**	**-6.6**	
PCON	**Cinco Dias**	**153.84**	**101**	*e*P	**PKPdf**	**02 56 18.7**	**-1.1**	
CGR1C	**Isla Gorgona,**	**154.21**	**99**	*e*P	PKPdf	02 56 03.5	-16	
DBBC	**Dabeiba**	**154.69**	**90**	*e*P	**PKPbc**	**02 56 26.1**	**-2.9**	
PTLC	**Puerto Leguiza**	**154.81**	**106**	*e*P	**PKPdf**	**02 56 19.4**	**-1.1**	
ORTC	**Ortega, Tolima**	**155.28**	**98**	*e*P	**PKPdf**	**02 56 21.4**	**+0.3**	
HELC	**Santa Helena**	**155.30**	**92**	*e*P	PKPdf	02 56 33.4	+12	
GUY2C	**Guyana, Caldas**	**155.36**	**94**	*e*P	PKPdf	02 56 31.4	+10	
PRAC	**Prado**	**155.60**	**98**	*e*P	**PKPdf**	**02 56 23.4**	**+1.8**	
SJCC	**San Jacinto, C**	**155.72**	**83**	*e*P	**PKPdf**	**02 56 24.1**	**+2.3**	
BDFB	**Brasilia**	**156.58**	**187**	PKP	**PKPdf**	**02 56 23.8**	**+0.9**	
	comp=Z,4.8nm,0.8s,baz=155,slow=4.1,SNR=9.1							
CHIC	**Chingaza**	**156.89**	**96**	*e*P	**PKPdf**	**02 56 22.7**	**-1.0**	
RUSC	**La Rusia**	**157.69**	**93**	*e*P	**PKPdf**	**02 56 24.7**	**-0.1**	
RUSC	**La Rusia**	**157.69**	**93**		**PKPdf**	**02 56 22.3**	**-2.6**	
SAML	**Samuel**	**159.24**	**143**	PKIKP	**PKPdf**	**02 56 22.8**	**-3.2**	
SAML	**Samuel**	**159.24**	**143**		**PKPdf**	**02 56 22.8**	**-3.2**	
SDV	**Santo Domingo**	**160.24**	**85**		**PKPdf**	**02 56 23.7**	**-3.8**	
ELOV	**Elorza**	**161.35**	**91**	*e*P	**PKPdf**	**02 56 31.4**	**+3.0**	
HUMP	**Col San Antoni**	**162.01**	**54**		**PKPdf**	**02 56 24.7**	**-4.2**	

NIED ***23*** *02:40:00, 38.˚70N×142.˚30E, h35km, Mw3.6 Best double couple: M₀2.40000×10¹⁴ NP1:φ₀=26.00000°, δ=74.00000°, λ=95.00000°. NP2:φ₀=186.00000°, δ=16.00000°, λ=71.00000°.*

JMA 23 02:40:32.1±0.1, 38.˚75N×142.˚29E, h39km±2km, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.59**	**304**	P	Pn	02 40 44.1	+0.1
OFUJ				S	Sn	02 40 52.4	0.0
JKMT	**Kesennumamotoy**	**0.64**	**276**	P	Pn	02 40 44.8	+0.1
JKMT				S	Sn	02 40 53.5	-0.2
JIKH	**Ishinomakikobu**	**0.78**	**236**	P	Pn	02 40 46.6	0.0
JIKH				S	Sn	02 40 56.5	-0.6
JIO	**Ouri**	**0.79**	**248**	P	Pn	02 40 46.8	0.0
JIO				S	Sn	02 40 57.0	-0.4
JMK	**Ichinoseki**	**0.86**	**284**	P	Pn	02 40 48.1	+0.4
JMK				*e*S	Sn	02 40 58.7	-0.4
JOM	**Ohasama**	**1.06**	**313**	P	Pn	02 40 51.1	+0.7
JOM				S	Sn	02 41 05.3	+1.3
JTH	**Tanohata**	**1.23**	**345**	P	Pn	02 40 53.1	+0.3
JOU	**Okura**	**1.33**	**254**	P	Pn	02 40 55.0	+0.8
JOU				*e*S	Sn	02 41 12.0	+1.3
JRG	**Rokugo**	**1.44**	**297**	P	Pn	02 40 56.8	+1.1
JRG				*e*S	Sn	02 41 16.4	+3.0
JMM	**Marumori**	**1.47**	**234**	P	Pn	02 40 56.3	+0.2
JMM				*e*S	Sn	02 41 14.1	0.0
JYK	**Kaneyama**	**1.52**	**277**	P	Pn	02 40 57.7	+1.0
JYK				*e*S	Sn	02 41 15.7	+0.5
MAT	**Matsushiro**	**3.92**	**237**	P	Pn	02 42 19.4	+4.9
MAT				*e*S	Sn	02 41 29.9	+0.2

TAP ***23*** *03:05:32.6, 24.˚72N×122.˚37E, h10km, ML3.0, C*
JMA ***23*** *03:05:33.4±0.1, 24.˚69N×122.˚42E, h20km, M2.4*

ISC 23 03:05:32.8±1.0, 24.˚70N±0.˚02×122.˚40E±0.˚02, h14km±8km, n65, σ0.55/118, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.49**	**310**	P	**Pg**	**03 05 42.3**	**-0.1**
	baz=309						
TWB1				S	**Sg**	**03 05 48.4**	**-0.6**
	baz=309						
TWC	**Suao**	**0.51**	**260**	*i* P	**Pg**	**03 05 42.1**	**-0.8**
	baz=267						
TWC				S	**Sg**	**03 05 49.9**	**+0.2**
	baz=267						
NTC	**Toucheng**	**0.54**	**287**	P	**Pg**	**03 05 43.2**	**-0.3**
	baz=284						
NTC				S	**Sb**	**03 05 51.8**	**0.0**
	baz=284						
JYNG	**Yonaguni jima**	**0.55**	**116**	P	**Pg**	**03 05 43.8**	**+0.2**
JYNG				*e*S	**Sg**	**03 05 51.4**	**+0.4**
TIPB	**Shuangxi**	**0.59**	**298**	P	**Pg**	**03 05 44.5**	**0.0**
	baz=295						
YOJ	**Yonaguni jima**	**0.60**	**113**	P	**Pg**	**03 05 44.9**	**+0.3**
	baz=104						
YOJ				*e*S	**Sb**	**03 05 53.9**	**+0.4**
	baz=104						
YOJ	**Yonaguni jima**	**0.60**	**113**	P	**Pg**	**03 05 44.7**	**+0.1**
YOJ				*e*S	**Sg**	**03 05 52.6**	**0.0**
NANB	**Nanao**	**0.65**	**246**	*i* P	**Pg**	**03 05 44.8**	**-0.7**
	baz=252						
NANB				S	**Sb**	**03 05 54.9**	**0.0**
	baz=252						
ENA	**Nanau**	**0.66**	**246**	P	**Pg**	**03 05 45.0**	**-0.7**
	baz=252						
ENA				S	**Sb**	**03 05 55.1**	**-0.1**
	baz=252						
TWE	**Neicheng**	**0.67**	**272**	*i* P	**Pg**	**03 05 45.2**	**-0.6**
	baz=262						
TWE				S	**Sg**	**03 05 54.4**	**-0.3**
	baz=262						
NWF	**Wu-fen Shan**	**0.68**	**304**	*i* P	**Pb**	**03 05 46.7**	**+0.2**
	baz=303						
NWF				S	**Sb**	**03 05 55.8**	**0.0**
	baz=303						
WFSB	**Wu-fen Shan**	**0.68**	**304**	*i* P	**Pb**	**03 05 46.7**	**+0.2**
	baz=303						
WFSB				S	**Sb**	**03 05 56.0**	**+0.3**
	baz=303						
SLBB	**Yuanshan**	**0.70**	**275**	P	**Pg**	**03 05 45.1**	**-1.4**
	baz=263						
ENTT	**Nioudou**	**0.76**	**266**	P	**Pg**	**03 05 47.3**	**-0.3**
	baz=254						
ENTT				S	**Sg**	**03 05 57.9**	**+0.2**
	baz=254						
TWA	**Mucha**	**0.80**	**291**	P	**Pb**	**03 05 48.5**	**+0.1**
	baz=289						
TWA				S	**Sn**	**03 06 00.5**	**-0.9**
	baz=289						
NDT	**Datong Townshi**	**0.81**	**264**	P	**Pg**	**03 05 48.1**	**-0.5**
	baz=253						
NDT				S	**Sb**	**03 05 59.9**	**+0.2**
	baz=253						
NWLT	**Wulai**	**0.82**	**276**	P	**Pg**	**03 05 48.1**	**-0.6**
	baz=273						
NWLT				S	**Sg**	**03 05 59.5**	**0.0**
	baz=273						
NHDH	**Xindian Distri**	**0.84**	**289**	P	**Pn**	**03 05 49.9**	**-0.4**
	baz=277						
NHDH				S	**Sb**	**03 06 00.8**	**+0.4**
	baz=277						
TATO	**Taipei**	**0.88**	**289**	P	**Pg**	**03 05 50.2**	**+0.5**
	baz=278						
TATO				S	**Sg**	**03 06 01.8**	**+0.6**
	baz=278						
YM01	**YM01**	**0.88**	**301**	P	**Pg**	**03 05 50.1**	**+0.2**
	baz=300						
YM01				S	**Sg**	**03 06 02.0**	**+0.6**
	baz=300						
YM08	**YM08**	**0.89**	**304**	P	**Pg**	**03 05 50.1**	**+0.2**
	baz=303						
YM08				S	**Sb**	**03 06 01.1**	**-0.6**
	baz=303						
YM11	**YM11**	**0.89**	**302**	P	**Pg**	**03 05 50.4**	**+0.4**
	baz=301						
YM11				S	**Sg**	**03 06 02.2**	**+0.6**
	baz=301						
YM10	**YM10**	**0.89**	**301**	P	**Pg**	**03 05 50.3**	**+0.2**
	baz=300						
YM10				S	**Sg**	**03 06 01.9**	**+0.2**
	baz=300						
NACB	**Ninganchiao**	**0.90**	**235**	P	**Pb**	**03 05 49.4**	**-0.9**
	baz=231						
NACB				S	**Sb**	**03 06 01.5**	**-0.6**
	baz=231						
TWY	**Chenhua**	**0.93**	**309**	S	**Sg**	**03 06 03.4**	**+0.4**
	baz=308						
YHNB	**Yeheng**	**0.93**	**269**	P	**Pb**	**03 05 50.6**	**-0.2**
	baz=266						
YHNB				S	**Sb**	**03 06 02.6**	**-0.6**
	baz=266						
NSK	**Sanguang**	**0.95**	**269**	P	**Pb**	**03 05 50.6**	**-0.5**
	baz=266						
NSK				S	**Sb**	**03 06 02.8**	**-0.8**
	baz=266						
TWD	**Chiawan**	**0.96**	**230**	P	**Pb**	**03 05 51.4**	**+0.2**
	baz=235						
TWD				*e*S	**Sn**	**03 06 04.9**	**-0.5**
	baz=235						
NNSB	**Datong**	**0.97**	**254**	P	**Pb**	**03 05 50.5**	**-0.9**
	baz=251						
NNSB				S	**Sg**	**03 06 04.4**	**+0.2**
	baz=251						
NNSH	**Datong**	**0.97**	**254**	P	**Pb**	**03 05 50.6**	**-0.8**
	baz=243						
NNSH				S	**Sg**	**03 06 04.4**	**+0.2**
	baz=243						
ETLH	**Xiulin Townshi**	**0.97**	**240**	P	**Pb**	**03 05 51.0**	**-0.5**
	baz=236						
ETLH				*e*S	**Sn**	**03 06 05.8**	**-0.1**
	baz=236						
NNS	**Nan Shan**	**0.97**	**255**	P	**Pb**	**03 05 51.3**	**-0.2**
	baz=251						
NNS				S	**Sb**	**03 06 04.2**	**-0.1**
	baz=251						
PCYT	**Pengchaiyu**	**0.98**	**342**	P	**Pn**	**03 05 52.2**	**+0.1**
	baz=344						
WHF	**Hehuan Shan**	**1.17**	**242**	*i* P	**Pb**	**03 05 54.8**	**-0.3**
	baz=239						
WHF				S	**Sn**	**03 06 11.5**	**+0.2**
	baz=239						
TWT	**Tachien**	**1.20**	**249**	*e*P	**Pg**	**03 05 56.6**	**+0.6**
	baz=238						
TWT				*e*S	**Sg**	**03 06 12.9**	**+1.3**
	baz=238						
TDCB	**Techi**	**1.22**	**249**	P	**Pb**	**03 05 56.1**	**+0.3**
	baz=238						
TDCB				S	**Sg**	**03 06 12.2**	**0.0**
	baz=238						
ESL	**Shilin**	**1.25**	**225**	P	**Pn**	**03 05 56.1**	**+0.2**
	baz=221						
ESL				*e*S	**Sg**	**03 06 13.6**	**+0.5**
	baz=221						
IRIF	**Iriomote-Funau**	**1.26**	**106**	P	**Pn**	**03 05 56.4**	**+0.3**
IRIF				S	**Sb**	**03 06 11.6**	**-0.9**
LIOB	**Emei**	**1.26**	**268**	P	**Pb**	**03 05 56.5**	**0.0**
	baz=265						
LIOB				*e*S	**Sn**	**03 06 13.1**	**+0.1**
	baz=265						
NSTT	**Nanjuang**	**1.28**	**267**	*e*P	**Pg**	**03 05 57.2**	**-0.2**
	baz=264						
NSTT				*e*S	**Sn**	**03 06 13.6**	**+0.3**
	baz=264						
CHGB	**Renai**	**1.29**	**241**	P	**Pb**	**03 05 57.4**	**+0.4**
	baz=237						
CHGB				*e*S	**Sg**	**03 06 15.2**	**+0.8**
	baz=237						
OWD	**Renai**	**1.34**	**237**	P	**Pb**	**03 05 57.8**	**0.0**
	baz=240						
OWD				S	**Sg**	**03 06 16.5**	**+0.4**
	baz=240						
WHP	**Taichung City**	**1.39**	**253**	P	**Pg**	**03 05 59.4**	**-0.2**
	baz=249						
WHP				S	**Sg**	**03 06 17.1**	**-0.6**
	baz=249						
HATJ	**Hateruma jima**	**1.43**	**116**	S	**Sn**	**03 06 16.1**	**-0.9**
VWDT	**VWDT**	**1.48**	**231**	*e*P	**Pb**	**03 05 59.8**	**-0.5**
	baz=209						
VWDT				*e*S	**Sb**	**03 06 19.2**	**+0.3**
	baz=209						
HGSD	**Ruisui**	**1.50**	**217**	*e*P	**Pn**	**03 05 59.2**	**-0.1**
	baz=198						
HGSD				*e*S	**Sb**	**03 06 19.5**	**+0.3**
	baz=198						
JKRS	**Kuro-shima**	**1.53**	**107**	*e*S	**Sn**	**03 06 18.4**	**-1.2**
EHY	**Hungye**	**1.54**	**220**	*e*P	**Pn**	**03 05 60.0**	**0.0**
	baz=215						
EHY				S	**Sb**	**03 06 21.4**	**+0.7**
	baz=215						
SMLT	**Sun Moon Lake**	**1.59**	**240**	P	**Pb**	**03 06 02.5**	**+0.4**
	baz=243						
SMLT				*e*S	**Sg**	**03 06 23.9**	**-0.2**
	baz=243						
SSLB	**Suanglung**	**1.60**	**236**	P	**Pb**	**03 06 02.1**	**-0.1**
	baz=215						
SSLB				S	**Sb**	**03 06 22.7**	**+0.3**
	baz=215						
TYC	**Yuchr**	**1.61**	**241**	P	**Pb**	**03 06 03.1**	**+0.7**
	baz=251						
TYC				*e*S	**Sg**	**03 06 24.5**	**-0.3**
	baz=251						
JIJ	**Ishigaki jima**	**1.62**	**101**	P	**Pn**	**03 06 00.9**	**-0.1**
JIJ				*e*S	**Sn**	**03 06 20.8**	**-0.9**
YULB	**Yu-li**	**1.65**	**218**	P	**Pn**	**03 06 01.3**	**-0.1**
	baz=213						
YULB				S	**Sn**	**03 06 22.2**	**-0.2**
	baz=213						
TWF1	**Yuli**	**1.68**	**217**	*e*P	**Pn**	**03 06 02.2**	**+0.4**
	baz=212						
TWF1				*e*S	**Sn**	**03 06 23.2**	**0.0**
	baz=212						
JISG	**Ishigakijimahi**	**1.74**	**93**	P	**Pn**	**03 06 03.6**	**+0.9**
YUS	**Yu-Shan**	**1.79**	**228**	P	**Pb**	**03 06 05.2**	**-0.5**
	baz=207						
YUS				S	**Sn**	**03 06 26.8**	**+0.2**
	baz=207						
FULB	**Fuli**	**1.80**	**214**	*e*P	**Pn**	**03 06 03.6**	**+0.1**
	baz=195						
FULB				S	**Sn**	**03 06 27.2**	**+0.9**
	baz=195						
ALS	**Alishan**	**1.88**	**231**	*e*S	**Sb**	**03 06 30.9**	**+0.4**
	baz=210						
CHN5	**Tsauling**	**1.92**	**236**	*e*S	**Sb**	**03 06 33.1**	**+1.5**
	baz=213						
ELDTW	**Lidau**	**1.96**	**220**	P	**Pn**	**03 06 06.1**	**+0.2**
	baz=202						
ELDTW				*e*S	**Sn**	**03 06 30.6**	**+0.2**
	baz=202						
CHN4	**Tsaushan**	**2.13**	**231**	P	**Pb**	**03 06 10.4**	**-0.9**
	baz=210						
CHN4				S	**Sb**	**03 06 38.3**	**+0.8**
	baz=210						
WTP	**Ta-pu**	**2.18**	**229**	*e*P	**Pb**	**03 06 11.6**	**-0.6**
	baz=207						
WTP				*e*S	**Sb**	**03 06 39.3**	**+0.2**
	baz=207						
TWK	**Hsinying**	**2.26**	**231**	*e*P	**Pn**	**03 06 11.6**	**+1.7**
	baz=227						
CHN1	**Nanshi**	**2.28**	**229**	*e*S	**Sb**	**03 06 42.0**	**0.0**
	baz=209						
SLGT	**Liugui**	**2.34**	**224**	S	**Sb**	**03 06 42.7**	**-0.8**
	baz=219						

NEIC ***23*** *03:05:38.9±1.8, 28.˚47S±0.˚05×67.˚42W±0.˚07, h144km±8km, Error ellipse: s-maj=10.7km s-min=3.8km az=56.0*
VAO ***23*** *03:05:39.7±0.6, 28.˚67S×67.˚80W, h192km±8km, mb4.1*
SJA ***23*** *03:05:40.1±0.7, 28.˚50S×67.˚40W, h148km±4km, ML4.1, MW3.7*
IDC ***23*** *03:05:41.5±0.8, 28.˚44S×67.˚34W, h136km±6km, mb3.9/6, mb1 3.9/10, mb1mx3.7/26, mbtmp4.2/10, Error ellipse: s-maj=20.3km s-min=15.7km az=88.0*

ISC 23 03:05:39.9±0.6, 28.˚43S±0.˚04×67.˚50W±0.˚05, h143km±5km, n90, σ1.936/109, mb4.2/9, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VCA	**Vinchina**	**0.69**	**244**	*i* P	**Pn**	**03 06 03.2**	**+1.4**
VCA				*e*S	**Sn**	**03 06 20.9**	**+2.4**
AGUA	**GUANDACOL**	**1.37**	**219**	*e*P	**Pn**	**03 06 08.9**	**+1.3**
AGUA				*e*S	**Sn**	**03 06 30.8**	**+1.9**
CYA	**Choya**	**1.49**	**91**	*e*P	**Pn**	**03 06 09.7**	**+0.8**
CYA				*e*S	**Sn**	**03 06 30.2**	**-0.9**
CYA				IAML		03 06 30.9	
	comp=Z,1μm,0.8s						
GO03	**Copiap**	**2.56**	**288**		**Pn**	**03 06 22.8**	**+1.3**
GO03				Sn	**Sn**	**03 06 53.1**	**-0.4**
AMOG	**MOGNA**	**2.65**	**199**	*i* P	**Pn**	**03 06

MNMC	**Minye Minye**		**9.45**	**348**	Pn		**Pn**	**03 07 52.8**	**-0.3**
ITQB	**Itaqui**		**9.60**	**100**	*e*P		**Pn**	**03 07 56.8**	**+2.2**
LPAZ	**La Paz**		**12.10**	**357**	P		**Pn**	**03 08 29.2**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=179,slow=8.5,SNR=12								
LPAZ	**La Paz**		**12.10**	**357**	*e*P		**Pn**	**03 08 28.9**	**+0.6**
LPAZ	**La Paz**		**12.10**	**357**	Pn		**Pn**	**03 08 28.0**	**-0.3**
OGAUY	**Aigu**		**12.40**	**122**	*e*P		**Pn**	**03 08 29.9**	**-1.7**
CPSB	**Cacapava Do Su**		**12.41**	**103**	*e*P		**Pn**	**03 08 32.8**	**+1.0**
PLTB	**Pedras Altas**		**12.48**	**109**	*e*P		**Pn**	**03 08 33.2**	**+0.5**
PLCA	**Paso Flores**		**12.53**	**191**	*e*P		Pn	03 08 27.8	-5.4
PLCA	**Paso Flores**		**12.53**	**191**	Pn		**Pn**	**03 08 33.6**	**+0.4**
ITAB	**Concordia**		**13.65**	**89**	*e*P		**P**	**03 08 49.1**	**-2.5**
SIV	**San Ignacio**		**13.73**	**27**	P		**Pn**	**03 08 47.3**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=197,slow=11,SNR=17								
PTGB	**Pitanga**		**14.29**	**79**	*e*P		**P**	**03 08 58.2**	**-0.7**
TRCB	**Terra Rica**		**14.53**	**71**	*e*P		**P**	**03 09 00.6**	**-0.9**
CNLB	**Canela**		**14.61**	**97**	*e*P		**P**	**03 09 00.5**	**-1.9**
PP1B	**Ponte de Pedra**		**15.83**	**50**	*e*P		**P**	**03 09 16.4**	**+0.5**
PCMB	**Pacaembu**		**16.20**	**69**	*e*P		**P**	**03 09 20.1**	**+0.2**
C2SB	**Chapadao do Su**		**16.51**	**58**	*e*P		**P**	**03 09 23.7**	**+0.4**
SALV	**Santo Antonio**		**16.57**	**44**	*e*P		**P**	**03 09 23.3**	**-0.7**
FRTB	**Fartura**		**16.91**	**77**	*e*P		**Pn**	**03 09 27.8**	**-0.3**
ITRB	**Iturama**		**17.88**	**65**	*e*P		**Pn**	**03 09 38.7**	**-1.2**
SPB	**Sao Paulo**		**18.66**	**80**	*e*P		**P**	**03 09 46.7**	**-0.2**
BB19B	**Bebedouro**		**18.71**	**71**	*e*P		**P**	**03 09 47.5**	**-0.1**
RCLB	**Rio Claro- Sao**		**18.99**	**76**	*e*P		**P**	**03 09 50.5**	**-0.1**
ARAG	**Araguaiana, MT**		**19.25**	**52**	*e*P		**P**	**03 09 53.5**	**+0.2**
VAO	**Valinhos**		**19.27**	**78**	*e*P		**P**	**03 09 53.3**	**-0.3**
SAML	**Samuel**		**19.80**	**13**	*e*P		**Pn**	**03 10 00.9**	**-1.4**
SAML	**Samuel**		**19.80**	**13**	P		**P**	**03 09 58.0**	**-1.3**
PARB	**Paraibuna**		**20.32**	**81**	*e*P		**P**	**03 10 04.5**	**-0.4**
IPMB	**Ipameri, GO**		**20.52**	**64**	*e*P		**P**	**03 10 06.5**	**-0.6**
CLDB	**Colider**		**20.62**	**34**	*e*P		**P**	**03 10 07.1**	**-1.1**
PMNB	**Patos De Minas**		**21.65**	**68**	*e*P		**P**	**03 10 18.3**	**-0.9**
BSCB	**Bom Sucesso**		**21.91**	**75**	*e*P		**P**	**03 10 20.8**	**-1.1**
BDFB	**Brasilia**		**22.05**	**59**	P		**P**	**03 10 22.5**	**-0.9**
	comp=Z,3.6nm,0.3s,baz=205,slow=8.1,SNR=12								
BDFB	**Brasilia**		**22.05**	**59**	P		**P**	**03 10 22.1**	**-1.4**
JANB	**Januaria**		**25.25**	**63**	*e*P		**P**	**03 10 52.0**	**-1.0**
SMTB	**Santa Maria do**		**27.02**	**48**	*e*P		**P**	**03 11 05.7**	**-3.1**
RUSC	**La Rusia**		**34.54**	**350**	P		**P**	**03 12 15.4**	**0.0**
HDC	**Heredia**		**41.44**	**335**	P		**P**	**03 13 12.3**	**-0.5**
VNA3	**Neumayer Olymp**		**53.14**	**160**	P		**P**	**03 14 44.6**	**+2.0**
SNAA	**Sanae**		**55.35**	**160**	P		**P**	**03 15 00.4**	**+1.8**
SNAA	**Sanae**		**55.35**	**160**	P		**P**	**03 15 00.3**	**+1.8**
	comp=Z,3.0nm,0.6s,baz=280,slow=7.0,SNR=26								
SNAA	**Sanae**		**55.35**	**160**	P		**P**	**03 14 58.1**	**-0.4**
SNAA					IAmb		IAmb	03 15 00.9	
	comp=Z,3.7nm,0.7s								
QSPA	**South Pole Qui**		**61.79**	**180**	P		**P**	**03 15 41.9**	**-1.4**
QSPA					IAmb		IAmb	03 15 48.3	
	comp=Z,4.5nm,0.9s								
TXAR	**Lajitas Array**		**67.05**	**326**	P		**P**	**03 16 20.9**	**+3.1**
	comp=Z,0.1nm,0.4s,baz=154,slow=8.6,SNR=2.9								
DBIC	**Dimbokro**		**69.67**	**70**	P		**P**	**03 16 36.1**	**+1.7**
	comp=Z,1.7nm,0.6s,baz=152,slow=9.2,SNR=3.4								
DBIC	**Dimbokro**		**69.67**	**70**	P		**P**	**03 16 32.1**	**-2.3**
DBIC					IAmb		IAmb	03 16 39.7	
	comp=Z,4.4nm,1.0s								
GLA	**Glamis**		**75.86**	**320**	P		**P**	**03 17 09.6**	**-1.0**
GLA					IAmb		IAmb	03 17 15.8	
	comp=Z,8.2nm,0.7s								
TORD	**Torodi Ar. Bea**		**78.60**	**68**	P		**P**	**03 17 28.5**	**+2.4**
	comp=Z,1.4nm,0.6s,baz=274,slow=5.6,SNR=19								
TORD					pP		**pP**	**03 18 01.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=245,slow=6.6,SNR=1.6								
BOSA	**Boshof**		**79.14**	**117**	P		**P**	**03 17 31.0**	**+1.8**
	comp=Z,14nm,1.3s,baz=231,slow=1.4,SNR=4.9								
BOSA	**Boshof**		**79.14**	**117**	P		**P**	**03 17 27.2**	**-2.0**
PDAR	**Pinedale Array**		**80.73**	**330**	P		**P**	**03 17 39.8**	**+2.4**
	comp=Z,0.4nm,0.6s,baz=129,slow=8.7,SNR=5.3								
ASAR	**Alice Springs**		**124.25**	**204**	PKP		**PKiKP**	**03 24 23.7**	**+1.1**
	comp=Z,1.1nm,0.7s,baz=140,slow=1.7,SNR=13								
WRA	**Warramunga Arr**		**127.48**	**206**	PKP		**PKiKP**	**03 24 30.1**	**+1.0**
	comp=Z,1.4nm,0.6s,baz=165,slow=1.7,SNR=9.6								
KURBB	**Kurchatov Arra**		**146.13**	**40**	PKPbc		**PKiKP**	**03 25 05.4**	**-0.6**
	baz=298,slow=3.2								
KURBB					pPKPbc		pPKPab	03 25 43.3	+2.0
	comp=Z,0.3nm,0.5s,baz=265,slow=3.7,SNR=1.7								
KURK	**Kurchatov**		**146.14**	**40**	PKPdf		**PKPab**	**03 25 03.1**	**-0.7**
ZALV	**Zalesovo Beam**		**147.46**	**31**	PKPbc		**PKPab**	**03 25 09.0**	**0.0**
	comp=Z,1.7nm,0.5s,baz=305,slow=4.4,SNR=8.7								
ZALV					pPKPbc		**pPKPbc**	**03 25 44.9**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=294,slow=3.7,SNR=2.9								
MKAR	**Makanchi Array**		**150.12**	**44**	PKPbc		**PKiKP**	**03 25 16.0**	**+1.6**
	comp=Z,1.6nm,0.8s,baz=295,slow=2.2,SNR=16								
MKAR					pPKPbc		**pPKPbc**	**03 25 51.8**	**0.0**
	comp=Z,0.9nm,0.9s,baz=298,slow=2.6,SNR=2.8								

***IDC 23** 03:27:56.5±1.1,5°21S×126°70E, h0km, mb3.9/5, mb1 4.0/9, mb1mx3.8/38, mbtmp4.0/9, ML3.8/4, Error ellipse: s-maj=43.0km s-min=20.8km az=79.0, Banda Sea*

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.27**	**47**	Pn	Pn	03 29 28.5	-1.9
	2.6nm,0.3s,baz=200,slow=4.1,SNR=4.2						
SIJI				Sn	Sn	03 30 32.3	-11
	1.9nm,0.3s,baz=87,slow=22,SNR=3.6						
FITZ	**Fitzroy Crossi**	**12.85**	**185**	Pn	Pn	03 30 59.8	-0.8
	0.4nm,0.3s,baz=50,slow=5.7,SNR=8.5						
WRA	**Warramunga Arr**	**16.43**	**154**	Pn	Pn	03 31 46.5	-2.1
	0.3nm,0.3s,baz=323,slow=13,SNR=7.1						
ASAR	**Alice Springs**	**19.62**	**160**	P	Pn	03 32 28.3	+0.3
	0.4nm,0.3s,baz=344,slow=11,SNR=40						
KSRS	**Korea Array**	**42.46**	**1**	P	P	03 35 53.7	+0.5
	1.5nm,0.8s,baz=181,slow=9.8,SNR=7.0						
USRK	**Ussuriysk Ar.**	**49.41**	**5**	P	P	03 36 48.7	+0.6
	2.1nm,0.5s,baz=196,slow=8.1,SNR=5.3						
SONM	**Songino Array**	**55.76**	**344**	P	P	03 37 35.5	+0.2
	1.1nm,0.9s,baz=154,slow=7.5,SNR=4.1						
MKAR	**Makanchi Array**	**64.96**	**328**	P	P	03 38 38.1	0.0
	1.1nm,0.7s,baz=127,slow=7.8,SNR=12						
KURBB	**Kurchatov Arra**	**69.29**	**330**	P	P	03 39 04.6	-1.0
	0.6nm,0.6s,baz=129,slow=6.0,SNR=6.7						

*IDC **23** 03:45:38.8±0.9,21°.86S×67°.96W,h121km±12km,mb3.4/2, mb1 3.5/5,mb1mx3.3/27,mbtmp3.7/5, Error ellipse: s-maj=28.0km s-min=12.8km az=112.0*

*SJA **23** 03:45:38.5±0.7,21°.82S×68°.39W,h145km±4km, ML3.2, MW3.0*

*GUC **23** 03:45:39.9±0.5,21°.76S×68°.41W,h140km±4km, ML3.5*

ISC 23 03:45:39.0±0.9,21°.75S±0°.04×68°.34W±0°.07,h135km±8km, n26,σ1°.36/44, 7C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.84**	**266**	⇑*i*P	Pn	**03 46 01.6**	**+0.4**
PB09				*i* S	Sn	**03 46 18.8**	**+0.9**
PB09				IAML		03 46 21.3	
	comp=E,754nm,0.2s						
PB09	**IPOC Station P**	**0.84**	**266**	*i* P	Pn	**03 46 01.6**	**+0.4**
PB09				*e*S	Sn	**03 46 19.2**	**+1.2**
LVC	**Limon Verde**	**1.01**	**211**	*i* S	Sn	**03 46 21.0**	**0.0**
LVC	**Limon Verde**	**1.01**	**211**	P	Pn	**03 46 02.9**	**+0.1**
	comp=E,95nm,0.3s,baz=49,slow=11,SNR=14						
LVC				S	Sn	**03 46 21.0**	**0.0**
	comp=E,47nm,0.3s,baz=73,slow=19,SNR=16						
LVC	**Limon Verde**	**1.01**	**211**	⇑*i*P	Pn	**03 46 02.9**	**+0.1**
LVC				IAML		03 46 03.6	
	comp=Z,277nm,0.3s						
LVC				*e*S	Sn	**03 46 21.4**	**+0.4**
PB03	**IPOC Station P**	**1.35**	**257**	⇑*i*P	Pn	**03 46 05.9**	**0.0**
PB03				*i* S	Sn	**03 46 25.8**	**-0.6**
PB03				IAML		03 46 26.6	
	comp=E,2μm,0.2s						
PB06	**IPOC Station P**	**1.49**	**230**	⇑*i*P	Pn	**03 46 07.8**	**+0.3**
PB06				*e*S	Sn	**03 46 29.2**	**0.0**
PB06				IAML		03 46 31.7	
	comp=E,356nm,0.5s						
PB08	**IPOC Station P**	**1.77**	**334**	*e*P	Pn	**03 46 11.9**	**+1.0**
PB08				*i* S	Sn	**03 46 36.1**	**+0.9**
PB08				IAML		03 46 38.1	
	comp=E,279nm,0.3s						
PB04	**IPOC Station P**	**1.78**	**250**	⇑*i*P	Pn	**03 46 10.7**	**0.0**
PB04				*i* S	Sn	**03 46 33.9**	**-1.2**
PB04				IAML		03 46 36.5	
	comp=N,548nm,0.2s						
PB04	**IPOC Station P**	**1.78**	**250**	*i* P	Pn	**03 46 10.7**	**0.0**
PB04				*e*S	Sn	**03 46 35.1**	**0.0**
PB15	**IPOC Station P**	**1.79**	**215**	⇑*i*P	Pn	**03 46 11.3**	**+0.4**
PB15				*e*S	Sn	**03 46 35.5**	**0.0**
PB15	**IPOC Station P**	**1.79**	**215**	*e*P	Pn	**03 46 11.1**	**+0.2**
PB15				*e*S	Sn	**03 46 35.3**	**-0.1**
PATCX	**Punta Patache**	**1.92**	**298**	*e*P	Pn	**03 46 12.0**	**-0.4**
PATCX				*i* S	Sn	**03 46 36.9**	**-1.1**
PATCX				IAML		03 46 38.8	
	comp=E,957nm,0.2s						
PB05	**IPOC Station P**	**2.05**	**237**	⇑*i*P	Pn	**03 46 13.7**	**-0.1**
PB05				*e*S	Sn	**03 46 39.6**	**-1.1**
PB05				IAML		03 46 46.1	
	comp=E,155nm,0.2s						
PB05	**IPOC Station P**	**2.05**	**237**	*i* P	Pn	**03 46 13.8**	**-0.1**
TA01	**Diego Aracena**	**2.08**	**304**	*e*P	Pn	**03 46 13.7**	**-0.5**
TA01				*i* S	Sn	**03 46 40.0**	**-1.2**
TA01				IAML		03 46 41.9	
	comp=E,724nm,0.2s						
GO01	**Chusmiza**	**2.21**	**339**	⇓*i*P	Pn	**03 46 16.9**	**+0.5**
PB11	**IPOC Station P**	**2.33**	**328**	*e*P	Pn	**03 46 17.2**	**-0.2**
PB11				*i* S	Sn	**03 46 46.5**	**-0.4**
PB11				IAML		03 46 48.2	
	comp=N,354nm,0.5s						
PB10	**IPOC Station P**	**2.70**	**229**	*i* P	Pn	**03 46 21.4**	**-0.5**
GO02	**Mina Guanaco**	**3.59**	**198**	⇑*i*P	Pn	**03 46 33.5**	**-0.2**
GO02				*e*S	Sn	**03 47 15.5**	**-0.7**
LPAZ	**La Paz**	**5.43**	**2**	P	Pn	**03 47 00.1**	**+1.6**
	comp=N,0.5nm,0.3s,baz=154,slow=5.5,SNR=16						
LPAZ				S	Sn	**03 48 03.0**	**+2.6**
	comp=N,0.3nm,0.3s,baz=304,slow=7.3,SNR=3.8						
LPAZ	**La Paz**	**5.43**	**2**	⇑*i*P	Pn	**03 47 00.6**	**+2.1**
SIV	**San Ignacio**	**8.95**	**51**	P	Pn	**03 47 42.3**	**-2.9**
	comp=N,4.5nm,0.3s,baz=246,slow=11,SNR=100						
SIV				S	Sn	**03 49 19.3**	**-5.2**
	comp=N,0.2nm,0.3s,baz=150,slow=20,SNR=2.6						
CFA	**Coronel Fontan**	**9.82**	**179**	P	Pn	**03 47 53.7**	**-3.1**
	comp=N,0.2nm,0.3s,baz=352,slow=15,SNR=2.1						
TORD	**Torodi Ar. Bea**	**76.94**	**70**	P	**P**	**03 57 17.5**	**+0.5**
	comp=N,0.5nm,0.5s,baz=236,slow=6.5,SNR=7.0						
YKA	**Yellowknife Ar**	**91.59**	**340**	P	**P**	**03 58 31.8**	**+1.7**
	comp=N,0.3nm,0.7s,baz=132,slow=4.2,SNR=6.2						

*IDC **23** 04:10:40.2±0.8,40°.50N×125°.01W,h0km,mb4.0/13, mb1 4.2/19,mb1mx4.0/63,mbtmp4.0/19,ML4.3/5,MS3.6/15, Ms1 3.6/15,ms1mx3.4/48, Error ellipse: s-maj=15.1km s-min=9.6km az=35.0*

*NCEDC **23** 04:10:41.2±1.7,40°.41N±0°.04×125°.34W±0°.05,h24km±4km, Mwr4.6/5,mb4.5/43(NEIC), Error ellipse: s-maj=6.1km s-min=5.0km az=56.0, Moment Tensor Solution. Moment tensor: Scale 10^16Nm; Mrr=0.89; Mθθ=2.76; Mϕϕ3.65; Mrθ=2.56; Mθϕ=9.86; Mrϕ=1.93;*

*ANF **23** 04:10:42.1±0.9,40°.56N×124°.90W,h0km,ML4.2/18 Error ellipse: s-maj=12.2km s-min=4.3km az=72.0*

*GCMT **23** 04:10:43.2±0.6,40°.44N±0°.03×125°.27W±0°.04,h24km±2km, MW4.8/75,Moment Tensor Solution. s11,c11; s75,c90; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=0.42±.16; Mθθ-0.15±.13; Mϕϕ0.56±.12; Mrθ-0.04±.15; Mθϕ-1.87±.09; Mϕr0.04±.17; Best double couple: M0 1.90500×10^16 NP1:ϕ5.00000°,δ89.00000°,λ1.00000°. NP2: ϕ275.00000°,δ89.00000°,λ179.00000°. Principal axes: T 2.1150, Plg1.0000°, Azm230.0000°; N -0.4190, Plg89.0000°, Azm60.0000°; P -1.6950, Plg0.0000°, Azm320.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 04:10:41.4±2.1,40°.45N±0°.04×125°.18W±0°.05, h14km±13km,n484,σ1s25/502,mb4.4/29,MS3.6/12,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.64**	**87**		**Pb**	**04 10 55.0**	**+0.6**
KCTM					**Sn**	**04 11 05.8**	**-0.3**
KMPM	**Mount Pierce**	**0.81**	**92**		**Pb**	**04 10 57.1**	**-0.2**
KMPM					**Sg**	**04 11 09.1**	**+1.4**
KSMM	**Slide Mountain**	**0.81**	**108**		**Pb**	**04 10 56.4**	**-0.9**
JCC	**Jacoby Creek,**	**0.95**	**67**		**Pb**	**04 10 58.5**	**-1.1**
JCC					**Sb**	**04 11 10.6**	**-1.4**
KCRM	**Chalk Rock**	**1.04**	**91**		**Pb**	**04 11 00.6**	**-0.6**
KRPM	**Rodgers**	**1.13**	**51**		**Pn**	**04 11 01.1**	**-1.7**
KMRM	**Mail Ridge**	**1.15**	**101**		**Pn**	**04 11 02.1**	**-0.9**
KMRM					**Sb**	**04 11 17.9**	**+0.1**
KHMM	**Horse Mountain**	**1.18**	**68**		**Pn**	**04 11 02.4**	**-1.3**
KHMM					**Sb**	**04 11 18.2**	**-0.6**
KCSM	**Cold Springs**	**1.27**	**85**		**Pn**	**04 11 04.1**	**-0.8**
KBSM	**Bell Springs**	**1.32**	**113**		**Pn**	**04 11 04.3**	**-1.2**
KPPM	**Pickett Peak**	**1.39**	**94**		**Pn**	**04 11 05.7**	**-0.8**
KCPM	**Cahto Peak**	**1.44**	**121**		**Pn**	**04 11 06.1**	**-1.1**
KCPM					**Sn**	**04 11 24.2**	**-1.7**
KRMB	**Red Mountain**	**1.44**	**41**		**Pn**	**04 11 05.2**	**-2.0**
KIPM	**Iron Peak**	**1.45**	**116**		**Pn**	**04 11 06.0**	**-1.3**
KHBM	**Hayfork Bally**	**1.51**	**81**		**Pn**	**04 11 07.2**	**-0.9**
KOMM	**Orleans Mounta**	**1.55**	**57**		**Pn**	**04 11 07.6**	**-1.1**
KFPM	**Farley Peak**	**1.57**	**120**		**Pn**	**04 11 07.4**	**-1.4**
KBNM	**Bluenose Ridge**	**1.62**	**109**		**Pn**	**04 11 08.7**	**-0.9**
GTC	**Three Chop Rid**	**1.63**	**129**		**Pn**	**04 11 07.2**	**-2.5**
KSXB	**Camp Six Broad**	**1.70**	**35**		**Pn**	**04 11 08.9**	**-1.8**
GNAM	**Navarro Ridge**	**1.73**	**136**		**Pn**	**04 11 08.0**	**-3.0**
LBPM	**Beegum Peak**	**1.76**	**93**		**Pn**	**04 11 10.5**	**-1.0**
KRKM	**Rackout Spring**	**1.77**	**119**		**Pn**	**04 11 10.6**	**-1.1**
LGPM	**Granite Peak**	**1.85**	**75**		**Pn**	**04 11 11.8**	**-1.0**
O02D	**Mt. Diablo Mer**	**1.85**	**98**		**Pn**	**04 11 12.0**	**-0.7**
O02D	**Mt. Diablo Mer**	**1.85**	**98**	P	**Pn**	**04 11 11.9**	**-0.8**
	baz=279,SNR=1000						
O02D				S	**Sn**	**04 11 34.7**	**-1.1**
	baz=279						
GHOM	**Hamilton Openi**	**1.89**	**137**		**Pn**	**04 11 10.2**	**-3.0**
KBO	**Bosley Butte**	**1.90**	**22**		**Pn**	**04 11 12.2**	**-1.3**
N02D	**Trinity Center**	**1.95**	**74**		**Pn**	**04 11 13.3**	**-0.8**
N02D	**Trinity Center**	**1.95**	**74**	P	**Pn**	**04 11 13.2**	**-1.0**
	baz=255,SNR=1000						
N02D				S	**Sn**	**04 11 37.2**	**-1.2**
	baz=255						
GHMM	**Hull Mountain**	**1.97**	**118**		**Pn**	**04 11 13.3**	**-1.1**
GROM	**Round Mountain**	**1.99**	**105**		**Pn**	**04 11 14.2**	**-0.5**
KTRM	**Thompson Ridge**	**2.00**	**42**		**Pn**	**04 11 13.4**	**-1.4**
M02C	**Callahan**	**2.00**	**61**		**Pn**	**04 11 13.6**	**-1.2**
M02C	**Callahan**	**2.00**	**61**	P	**Pn**	**04 11 13.6**	**-1.2**
	baz=243,SNR=764						
M02C				S	**Sn**	**04 11 38.4**	**-1.2**
	baz=243						
LBKM	**Bonanza King**	**2.01**	**71**		**Pn**	**04 11 14.2**	**-0.9**
WDC	**Whiskeytown Da**	**2.01**	**85**		**Pn**	**04 11 14.4**	**-0.5**
WDC					**Sn**	**04 11 39.2**	**-0.7**
GVV	**Valley View**	**2.03**	**108**		**Pn**	**04 11 14.2**	**-1.1**
GASB	**Alder Springs**	**2.05**	**112**		**Pn**	**04 11 14.3**	**-1.2**
GGUM	**Gualala**	**2.05**	**140**		**Pn**	**04 11 11.9**	**-3.6**
L02E	**Cave Junction**	**2.08**	**34**		**Pn**	**04 11 14.5**	**-1.4**
L02E	**Cave Junction**	**2.08**	**34**	P	**Pn**	**04 11 14.5**	**-1.4**
	baz=216,SNR=50						
L02E				S	**Sn**	**04 11 39.7**	**-1.9**
	baz=216						
GSNM	**Snow Mountain**	**2.15**	**134**		**Pn**	**04 11 14.2**	**-2.6**
GHLM	**Highland Sprin**	**2.18**	**129**		**Pn**	**04 11 14.8**	**-2.5**
HOPS	**Hopland Field**	**2.18**	**131**		**Pn**	**04 11 14.8**	**-2.4**
HOPS	**Hopland Field**	**2.18**	**131**		**Pn**	**04 11 16.1**	**-1.1**
HOPS					**Sn**	**04 11 41.5**	**-2.4**
GDCM	**Dry Creek**	**2.25**	**138**		**Pn**	**04 11 15.3**	**-2.9**
LAMM	**Antelope Mount**	**2.25**	**58**		**Pn**	**04 11 17.6**	**-0.8**
YBH	**Yreka Blue Hor**	**2.26**	**55**	Pn	**Pn**	**04 11 17.7**	**-0.8**
	46nm,0.3s,baz=253,slow=13,SNR=336						
YBH				Lg	Lg	04 11 45.4	
	57nm,0.3s,baz=38,slow=19,SNR=7.4						
YBH				LR	LR	04 12 05.3	
	comp=Z,844nm,19.6s,baz=138,slow=40						
YBH	**Yreka Blue Hor**	**2.26**	**55**		**Pn**	**04 11 17.9**	**-0.5**
YBH					**Sn**	**04 11 47.1**	**+0.9**
GTSM	**Trough Springs**	**2.28**	**119**		**Pn**	**04 11 17.7**	**-1.0**
GCK	**Clark Valley**	**2.29**	**112**		**Pn**	**04 11 18.6**	**-0.1**
LCSM	**College of the**	**2.32**	**64**		**Pn**	**04 11 18.9**	**-0.4**
LTCM	**Tuscan Springs**	**2.35**	**95**		**Pn**	**04 11 19.0**	**-0.5**
GPMM	**Pine Mountain**	**2.35**	**132**		**Pn**	**04 11 17.4**	**-2.2**
GMKM	**Mount Konoctai**	**2.36**	**128**		**Pn**	**04 11 18.1**	**-1.7**
GCVM	**Cloverdale**	**2.37**	**134**		**Pn**	**04 11 17.1**	**-2.7**
GACM	**Adobe Creek**	**2.38**	**131**		**Pn**	**04 11 17.9**	**-2.1**
GHCM	**House Creek**	**2.39**	**140**		**Pn**	**04 11 17.2**	**-2.9**
LSHM	**Sage Hen Hill**	**2.41**	**81**		**Pn**	**04 11 20.1**	**-0.4**
LGBM	**Gray Butte**	**2.43**	**67**		**Pn**	**04 11 20.9**	**0.0**
GBMM	**Baldy Mountain**	**2.44**	**121**		**Pn**	**04 11 20.1**	**-0.8**
M03C	**McCloud**	**2.46**	**69**		**Pn**	**04 11 21.2**	**0.0**
GDXM	**Geysers**	**2.46**	**131**		**Pn**	**04 11 20.1**	**-1.1**
GDXM					**Sn**	**04 11 49.7**	**-1.4**
GSGM	**Seigler Mounta**	**2.47**	**129**		**Pn**	**04 11 20.6**	**-0.6**
FTR	**Fort Ross**	**2.48**	**140**		**Pn**	**04 11 17.9**	**-3.4**
GFC	**Funks Creek**	**2.49**	**116**		**Pn**	**04 11 21.3**	**-0.1**
GWKM	**Walker Ridge**	**2.50**	**123**		**Pn**	**04 11 21.0**	**-0.6**
B040	**Montague**	**2.50**	**56**		**Pn**	**04 11 21.4**	**-0.3**
KEBM	**Edson Butte**	**2.50**	**14**		**Pn**	**04 11 20.6**	**-1.2**
KEBM					**Sn**	**04 11 48.2**	**-3.9**
LMPM	**Military Pass**	**2.51**	**65**		**Pn**	**04 11 22.4**	**+0.5**
K02D	**Willamette Mer**	**2.52**	**26**	P	**Pn**	**04 11 20.7**	**-1.3**
	baz=208,SNR=583						
K02D				S	**Sn**	**04 11 49.5**	**-3.0**
	baz=208						
GBGM	**Boggs Mountain**	**2.53**	**129**		**Pn**	**04 11 21.4**	**-0.7**
LHEM	**Herd Peak**	**2.53**	**61**		**Pn**	**04 11 22.5**	**+0.2**
GCRM	**Castle Rock Sp**	**2.53**	**131**		**Pn**	**04 11 20.9**	**-1.2**
NMCNC	**Mill Creek, So**	**2.55**	**136**		**Pn**	**04 11 19.3**	**-2.9**
GAXM	**Alexander Vall**	**2.55**	**132**		**Pn**	**04 11 20.1**	**-2.2**
O03E	**Paynes Creek**	**2.58**	**92**		**Pn**	**04 11 21.9**	**-0.9**
O03E	**Paynes Creek**	**2.58**	**92**	P	**Pn**	**04 11 21.9**	**-0.9**
	baz=274,SNR=940						
O03E				S	**Sn**	**04 11 52.7**	**-1.4**
	baz=274						
LDBM	**Digger Butte**	**2.59**	**89**		**Pn**	**04 11 22.2**	**-0.8**
LBFM	**Black Fox Moun**	**2.65**	**69**		**Pn**	**04 11 24.1**	**+0.2**
HUMO	**Hull Mountain**	**2.73**	**37**		**Pn**	**04 11 24.0**	**-0.8**
HUMO					**Sn**	**04 11 56.8**	**-0.7**
LMEM	**Manzanita Entr**	**2.75**	**87**		**Pn**	**04 11 26.7**	**+1.5**
NSHM	**Saint Helena R**	**2.77**	**133**		**Pn**	**04 11 24.4**	**-0.8**
LGMM	**Garner Mountai**	**2.78**	**64**		**Pn**	**04 11 25.8**	**+0.2**
L04D	**Klamath Falls**	**2.79**	**50**		**Pn**	**04 11 26.4**	**+0.6**
L04D	**Klamath Falls**	**2.79**	**50**	P	**Pn**	**04 11 26.2**	**+0.4**
	baz=232,SNR=1000						
LCMM	**Colby Mountain**	**2.81**	**95**		**Pn**	**04 11 25.8**	**-0.3**
NTYM	**Taylor**	**2.83**	**136**		**Pn**	**04 11 24.9**	**-1.2**
LRDM	**Redding Peak**	**2.84**	**88**		**Pn**	**04 11 26.2**	**-0.1**
MGL	**Magalia**	**2.85**	**102**		**Pn**	**04 11 25.3**	**-1.1**
HATC	**Hat Creek Radi**	**2.85**	**81**		**Pn**	**04 11 26.8**	**+0.2**
M04C	**Macdoel**	**2.85**	**61**	P	**Pn**	**04 11 26.6**	**0.0**
	baz=243,SNR=81						
J01E	**Myrtle Point**	**2.87**	**19**	P	**Pn**	**04 11 25.7**	**-0.9**
	baz=200,SNR=26						
J01E				S	**Sn**	**04 11 57.9**	**-3.0**
	baz=200						
SUTB	**Sutter Butte**	**2.88**	**114**		**Pn**	**04 11 25.5**	**-1.3**
MCCM	**Marconi Confer**	**2.91**	**141**		**Pn**	**04 11 25.3**	**-1.9**
MCCM					**Sn**	**04 12 01.6**	**-0.3**
NBPM	**Berryessa Peak**	**2.91**	**127**		**Pn**	**04 11 27.4**	**+0.1**
ORV	**Oroville**	**2.96**	**106**		**Pn**	**04 11 27.0**	**-1.0**
ORV					**Sn**	**04 12 02.0**	**-1.3**
NAPC	**Atlas Peak**	**3.02**	**131**		**Pn**	**04 11 27.3**	**-1.5**
NOLM	**Olema**	**3.03**	**142**		**Pn**	**04 11 27.1**	**-1.1**
SNT	**Sears Point**	**3.10**	**136**		**Pn**	**04 11 28.6**	**-1.2**
NADM	**Allendale**	**3.18**	**128**		**Pn

F04A	Amboy	5.84	19			Pn	04 12 07.5	-0.1
F04D	Rainier, OR	5.85	15	S		Sn	04 13 14.0	-0.5
	baz=197							
F05D	White Salmon	6.08	25	P		Pn	04 12 12.3	+1.5
	baz=208,SNR=16							
F05D				S		Sn	04 13 19.0	-1.0
	baz=208							
PAGB	Antelope Grade	6.10	139			Pn	04 12 09.1	-2.1
E03A	Lebam	6.21	10			Pn	04 12 12.3	-0.2
E04D	Cinebar	6.39	16	P		Pn	04 12 16.4	+1.3
	baz=198,SNR=7.7							
E04D				S		Sn	04 13 25.8	-2.1
	baz=198							
VES	Vestal, Richgr	6.65	132	P		Pn	04 12 18.5	-0.1
	baz=316							
G08A	Pilot Rock	6.65	41			Pn	04 12 17.2	-1.6
LON	Longmire	6.76	20			Pn	04 12 19.6	-0.6
CWC	Cottonwood Cre	6.86	123	P		Pn	04 12 23.3	+1.7
	baz=308							
PKM	Mcpherson Peak	6.99	141	P		Pn	04 12 22.0	-1.5
	baz=324							
PKM				S		Sn	04 13 39.7	-3.1
	baz=324							
NLWA	Neilton Lookou	7.01	7	Pn		Pn	04 12 22.1	-1.4
NLWA						Sn	04 13 38.4	-4.6
D05A	Enumclaw	7.12	18			Pn	04 12 22.5	-2.6
ISA	Isabella, Lake	7.12	130			Pn	04 12 24.1	-1.2
ISA	Isabella, Lake	7.12	130	P		Pn	04 12 26.0	+0.7
	baz=314							
HAWA	Hanford	7.22	33			Pn	04 12 26.6	+0.2
D03D	Eldon	7.24	11	P		Pn	04 12 27.6	+0.8
	baz=193,SNR=19							
D03D				S		Sn	04 13 45.4	-3.4
	baz=193							
DAC	Darwin (Calif)	7.27	123			Pn	04 12 27.0	-0.3
BMO	Blue Mountains	7.28	50			Pn	04 12 26.0	-1.4
ARVC	Arvin	7.31	135	P		Pn	04 12 26.7	-1.0
	baz=318							
MPMC	Manual Prospec	7.47	123	P		Pn	04 12 31.3	+1.2
	baz=308							
LTY	Liberty	7.55	24			Pn	04 12 30.6	-0.4
ELK	Elko	7.57	85	Pn		Pn	04 12 31.9	+0.4
	0.3nm,0.3s,baz=285,slow=12,SNR=18							
ELK					Lg	Lg	04 14 25.6	
	0.2nm,0.3s,baz=172,slow=18,SNR=3.0							
ELK					LR	LR	04 15 40.5	
	comp=Z,423nm,20.4s,baz=264,slow=40							
MFID	Camas Ranch	7.58	64			Pn	04 12 31.7	+0.2
R11A	Troy Canyon, C	7.72	103			Pn	04 12 33.2	-0.3
R11A	Troy Canyon, C	7.72	103	P		Pn	04 12 34.0	+0.5
	baz=289							
LRMC	Laurel Mtn Rad	7.72	128	P		Pn	04 12 34.3	+0.8
	baz=312							
TPNV	Topopah Spring	7.80	114			Pn	04 12 34.4	-0.3
EDW2	Edwards Air Fo	7.96	132	P		Pn	04 12 36.2	-0.4
	baz=316							
F10A	Beach Ranch, E	8.01	44			Pn	04 12 37.3	-0.1
B05A	Bryant	8.12	15	P		Pn	04 12 40.0	+1.2
	baz=197							
GSC	Goldstone, Bar	8.38	125			Pn	04 12 42.1	-0.4
GSC	Goldstone, Bar	8.38	125	P		Pn	04 12 43.4	+1.0
	baz=310							
SHPR	Sheep Range	8.79	113			Pn	04 12 47.6	-0.5
C09A	Chrisman Ranch	8.87	32			Pn	04 12 48.5	-0.5
PSUT	Pine Spring	8.96	99			Pn	04 12 49.6	-0.9
HEC	Hector,Ludlow	8.98	126	P		Pn	04 12 51.4	+0.8
	baz=311							
BBRC	Big Bear Solar	9.01	131	P		Pn	04 12 52.1	+0.8
	baz=316							
BGU	Big Grassy Mou	9.24	83			Pn	04 12 54.6	+0.2
GMRC	Granite Mounta	9.43	124	P		Pn	04 12 56.9	0.0
	baz=310							
DUG	Dugway, Tooele	9.45	88			Pn	04 12 57.2	0.0
DUG	Dugway, Tooele	9.45	88	P		Pn	04 12 58.6	+1.5
	baz=276							
HVU	Hansel Valley	9.46	78			Pn	04 12 57.4	+0.1
CCUT	Cedar City	9.64	104			Pn	04 13 00.1	+0.2
SPUT	South Promonto	9.68	81			Pn	04 13 00.5	+0.1
NEW	Newport	9.71	34	Pn		Pn	04 13 01.9	+1.3
	0.8nm,0.3s,baz=213,slow=13,SNR=14							
NEW					LR	LR	04 16 42.0	
	comp=Z,573nm,21.5s,baz=224,slow=38							
NEW	Newport	9.71	34			Pn	04 13 00.5	-0.1
NEW	Newport	9.71	34	P		Pn	04 13 01.5	+0.9
	baz=219							
BELC	Belle Mtn. Jos	9.74	128	P		Pn	04 13 01.2	0.0
	baz=314							
PFO	Pinyon Flats O	9.75	132	Pn		Pn	04 13 02.1	+0.8
	1.0nm,0.3s,baz=318,slow=13,SNR=11							
PFO					LR	LR	04 16 57.3	
	comp=Z,387nm,21.3s,baz=273,slow=39							
PFO	Pinyon Flats O	9.75	132			Pn	04 13 00.9	-0.4
PFO	Pinyon Flats O	9.75	132	P		Pn	04 13 01.1	-0.2
	baz=317							
XPFO	Pion Flat	9.75	132			Pn	04 13 00.5	-0.8
NLU	North Lily Min	10.04	89			Pn	04 13 05.7	+0.4
MCMT	McKenzie Canyo	10.08	60			Pn	04 13 05.9	0.0
IRM	Iron Mountain	10.16	125	P		Pn	04 13 07.2	+0.4
	baz=311							
CTU	Camp Tracy	10.22	84			Pn	04 13 07.9	+0.2
MSU	Marysvale	10.23	97			Pn	04 13 08.3	+0.3
MONP2	Monument Peak	10.30	134	P		Pn	04 13 08.7	-0.3
	baz=320							
BC3	Big Chuckawall	10.31	128	P		Pn	04 13 08.2	-0.7
	baz=314							
MSO	Missoula	10.34	48			Pn	04 13 09.4	0.0
MSO	Missoula	10.34	48	P		Pn	04 13 10.9	+1.5
	baz=236							
MTPU	Mount Pierson	10.36	99			Pn	04 13 09.6	-0.3
MPU	Maple Canyon	10.37	88			Pn	04 13 09.7	-0.1
W13A	Hualapai Mount	10.41	117			Pn	04 13 09.8	-0.6
DLMT	Dillon	10.45	58			Pn	04 13 11.2	+0.3
JLU	Jordanelle	10.46	85			Pn	04 13 10.7	-0.3
TCUT	Toone Canyon	10.47	82			Pn	04 13 10.8	-0.4
JTMT	Jette	10.70	43			Pn	04 13 14.5	+0.2
AHID	Auburn Hatcher	10.79	73			Pn	04 13 15.4	-0.2
TMUT	Trail Mountain	10.80	92			Pn	04 13 15.6	-0.2
Y12C	Blythe	10.81	125	P		Pn	04 13 16.1	+0.4
	baz=311							
Q16A	Castle Valley	10.90	94			Pn	04 13 16.8	-0.4
TPAW	Teton Pass	11.02	69			Pn	04 13 18.6	-0.2
QLMT	Earthquake Lak	11.03	62	Pn		Pn	04 13 18.3	-0.6
REDW	Red Top Meadow	11.07	70	Pn		Pn	04 13 19.5	+0.1
GLA	Glamis	11.10	128	P		Pn	04 13 19.7	-0.1
	baz=315							
IMW	Indian Meadow	11.12	67			Pn	04 13 23.6	+3.5
P17A	Butcher Ranch,	11.13	90	Pn		Pn	04 13 20.3	+0.2
SNOW	Snow King Moun	11.16	70	Pn		Pn	04 13 21.0	+0.3
YHB	Horse Butte	11.17	63	Pn		Pn	04 13 20.7	0.0
YHL	Hebgen Lake	11.21	62	Pn		Pn	04 13 21.5	+0.1
MOOW	Moose Ponds	11.22	68			Pn	04 13 21.7	+0.2
YMR	Madison River	11.30	63			Pn	04 13 22.5	-0.1
YPP	Pitchstone Pla	11.30	66			Pn	04 13 22.8	+0.2
FLWY	Flagg Ranch	11.33	67			Pn	04 13 23.2	+0.3
SRU	San Rafael Swe	11.36	92			Pn	04 13 23.2	-0.2
H17A	Grant Village	11.49	65			Pn	04 13 25.0	-0.2
H17A	Grant Village	11.49	65	P		Pn	04 13 26.8	+1.6
	baz=255							
YNR	Norris Junctio	11.51	63			Pn	04 13 25.3	-0.1
YUF	Upper Falls	11.62	64			Pn	04 13 27.3	+0.3
LKWY	Lake	11.66	64			Pn	04 13 27.3	-0.2
Y14A	Wickenburg	11.67	120			Pn	04 13 27.4	-0.2
YMP	Mirror Lake Pl	11.87	64			Pn	04 13 30.5	0.0
RDMU	Red Mountain	11.89	84			Pn	04 13 30.8	+0.2
BBB	Bella Bella	11.91	351	Pn		Pn	04 13 34.2	+3.6
	0.1nm,0.3s,baz=146,slow=18,SNR=3.0							
PD31	Pinedale Array	11.92	74			Pn	04 13 31.4	+0.3
PDAR	Pinedale Array	11.92	74	Pn		Pn	04 13 33.1	+2.0
	0.5nm,0.3s,baz=236,slow=10,SNR=20							
PDAR					LR	LR	04 18 46.3	
	comp=Z,157nm,18.7s,baz=261,slow=41							
YNE	Yellowstone No	12.05	63			Pn	04 13 33.0	+0.2
X16A	Lo Mia Camp, P	12.46	115			Pn	04 13 37.7	-0.8
GCMT	Greycliff	12.52	60			Pn	04 13 39.2	0.0
RLMT	Red Lodge	12.58	63			Pn	04 13 40.1	0.0
RLMT	Red Lodge	12.58	63	P		Pn	04 13 42.2	+2.1
	baz=254							
O20A	White River Ci	12.94	86			Pn	04 13 45.0	0.0
O20A	White River Ci	12.94	86	P		Pn	04 13 46.3	+1.4
	baz=277							
214A	Organ Pipe Nat	13.09	126	P		Pn	04 13 48.6	+1.7
	baz=314							
EGMT	Eagleton	13.39	50			Pn	04 13 49.3	-1.6
EGMT	Eagleton	13.39	50	P		Pn	04 13 50.8	-0.1
	baz=241							
MVCO	Mesa Verde	13.40	99	P		Pn	04 13 51.9	+0.6
	baz=289							
H02S1	DAWSON INLET T	13.69	341	T		T	04 29 04.6	
SMCO	Snowmass	14.05	89			Pn	04 14 03.8	+3.4
TUC	Tucson	14.14	121			Pn	04 14 00.5	-0.9
TUC	Tucson	14.14	121	P		Pn	04 14 02.8	+1.5
	baz=309							
K22A	Casper	14.14	75			Pn	04 14 00.7	-0.7
K22A	Casper	14.14	75	P		Pn	04 14 01.0	-0.4
	baz=267							
S22A	4UR Ranch, Cre	14.50	95			Pn	04 14 06.1	-0.4
S22A	4UR Ranch, Cre	14.50	95	P		Pn	04 14 07.7	+1.3
	baz=286							
N23A	Red Feather La	14.61	82			Pn	04 14 07.7	-0.2
N23A	Red Feather La	14.61	82	P		Pn	04 14 07.6	-0.2
	baz=275							
PHWY	Pilot Hill	14.95	80			Pn	04 14 11.7	-0.8
PHWY					IAmb	IAmb	04 14 12.8	
	comp=Z,23nm,1.1s							
ISCO	Idaho Springs	14.98	86			Pn	04 14 12.7	-0.3
ISCO	Idaho Springs	14.98	86	P		Pn	04 14 13.3	+0.3
	baz=279							
LAO	LASA Array	15.07	59			Pn	04 14 12.4	-1.5
LAO					IAmb	IAmb	04 14 23.2	
	comp=Z,25nm,0.8s							
LAO	LASA Array	15.07	59	P		Pn	04 14 12.6	-1.3
	baz=252							
Q24A	Divide	15.49	89	P		Pn	04 14 19.2	-0.4
Q24A	Divide	15.49	89	P		Pn	04 14 20.3	+0.6
	baz=282							
SDCO	Great Sand Dun	15.51	94	P		Pn	04 14 21.0	+1.0
	baz=286							
319A	Douglas	15.72	120	P		Pn	04 14 22.1	-0.5
319A					IAmb	IAmb	04 14 27.5	
	comp=Z,41nm,1.1s							
ANMO	Albuquerque	15.79	104	Pn		Pn	04 14 25.6	+2.1
	comp=Z,0.1nm,0.3s,baz=294,slow=12,SNR=6.3							
ANMO	Albuquerque	15.79	104	P		Pn	04 14 22.8	-0.7
ANMO	Albuquerque	15.79	104	P		Pn	04 14 22.7	-0.7
	baz=296							
121A	Cookes Peak, D	16.05	114	P		Pn	04 14 22.3	-4.5
121A	Cookes Peak, D	16.05	114	P		Pn	04 14 26.5	-0.3
	baz=304							
RSSD	Black Hills	16.06	70			Pn	04 14 24.3	-2.6
RSSD	Black Hills	16.06	70	P		Pn	04 14 24.4	-2.5
	baz=264							
T25A	Trinidad	16.52	95	P		Pn	04 14 32.2	-0.7
T25A	Trinidad	16.52	95	P		Pn	04 14 34.2	+1.4
	baz=288							
DGMT	Dagmar	16.95	55			Pn	04 14 35.7	-2.4
DGMT					IAmb	IAmb	04 14 44.9	
	comp=Z,22nm,1.1s							
DGMT	Dagmar	16.95	55	P		Pn	04 14 36.9	-1.2
	baz=250							
KSCO	Kaye Shedlock'	17.40	87	P		Pn	04 14 43.2	-0.6
KSCO					IAmb	IAmb	04 14 48.2	
	comp=Z,34nm,0.8s							
KSCO	Kaye Shedlock'	17.40	87	P		Pn	04 14 44.7	+0.8
	baz=282							
OGNE	Ogallala	17.55	81	Pn		Pn	04 14 44.3	-1.4
OGNE					IAmb	IAmb	04 14 49.6	
	comp=Z,30nm,0.8s							
OGNE	Ogallala	17.55	81	P		Pn	04 14 45.7	0.0
	baz=276							
MNTX	Cornudas Mount	18.20	112	P		Pn	04 14 52.4	-1.2
MNTX	Cornudas Mount	18.20	112	P		P	04 14 56.0	+2.2
	baz=304							
CBKS	Cedar Bluff	19.65	87	P		P	04 15 08.2	-1.5
CBKS	Cedar Bluff	19.65	87	P		P	04 15 10.2	+0.5
	baz=283							
SUSD	Miller	19.73	70	P		P	04 15 08.9	-1.5
SUSD					IAmb	IAmb	04 15 13.9	
	comp=Z,25nm,0.8s							
MDND	Maddock	19.73	59	P		P	04 15 09.6	-0.8
MDND	Maddock	19.73	59	P		P	04 15 10.6	+0.1
	baz=257							
TX31	Lajitas Ar. Si	20.78	116	P		P	04 15 19.5	-2.7
TX32	Lajitas Array	20.78	116	P		P	04 15 18.9	-3.2
TXAR	Lajitas Array	20.78	116	P		Pn	04 15 24.6	+0.1
	comp=Z,4.4nm,0.9s,baz=305,slow=8.7,SNR=38							
TXAR					LR	LR	04 24 20.5	
	comp=Z,138nm,21.6s,baz=0.0,slow=40							
FFC	Flin Flon	21.05	40	P		P	04 15 25.4	+0.7
ECSD	EROS Data Cent	21.40	72	P		P	04 15 25.5	-3.1
ECSD					IAmb	IAmb	04 15 33.2	
	comp=Z,23nm,0.8s							
ECSD	EROS Data Cent	21.40	72	P		P	04 15 27.0	-1.6
	baz=271							
ABTX	Abilene, Hawle	21.90	103	P		P	04 15 31.9	-2.2
ABTX					IAmb	IAmb	04 15 36.6	
	comp=Z,19nm,1.2s							
KSU1	Kansas State U	21.96	84	P		P	04 15 35.1	+0.5
	baz=283							
OKCFA	Oklahoma City	22.39	94	P		P	04 15 39.3	-0.1
OKCFA					IAmb	IAmb	04 15 43.2	
	comp=Z,20nm,1.0s							
ULM	Lac du Bonnet	22.68	55	P		P	04 15 41.4	-0.7
	comp=Z,33nm,1.0s,baz=258,slow=10,SNR=37							
ULM					LR	LR	04 24 49.2	
	comp=Z,202nm,19.2s,baz=234,slow=38							
ULM	Lac du Bonnet	22.68	55	P		P	04 15 41.8	-0.4
JCT	Junction City	22.87	108	P		P	04 15 43.8	-0.7
JCT					IAmb	IAmb	04 15 49.6	
	comp=Z,8.7nm,0.8s							
JCT	Junction City	22.87	108	P		P	04 15 44.6	+0.2
	baz=303							
YKA	Yellowknife Ar	22.98	13	P		P	04 15 45.8	+0.6
	comp=Z,3.4nm,0.9s,baz=200,slow=9.2,SNR=23							
YKA					LR	LR	04 23 47.0	
	comp=Z,126nm,21.7s,baz=0.0,slow=34							
TUL1	Leonard	23.48	92	P		P	04 15 49.2	-1.4
TUL1					IAmb	IAmb	04 15 52.5	
	comp=Z,10nm,0.8s							
TUL1	Leonard	23.48	92	P		P	04 15 50.0	-0.6
	baz=290							
WHTX	Lake Whitney,	23.83	102	P		P	04 15 53.8	-0.2
WHTX					IAmb	IAmb	04 15 56.2	
	comp=Z,13nm,0.9s							
WHTX	Lake Whitney,	23.83	102	P		P	04 15 54.2	+0.2
	baz=299							
SPMN	Marine on St.	24.12	68	P		P	04 15 57.0	+0.4
SPMN	Marine on St.	24.12	68	P		P	04 15 56.5	0.0
	baz=270							
HHAR	Hobbs	24.77	90	P		P	04 16 03.0	+0.3
EYMN	Ely	25.13	61	P		P	04 16 05.7	-0.1
EYMN	Ely	25.13	61	P		P	04 16 06.6	+0.8
	baz=265							
W39A	Magazine	25.27	92	P		P	04 16 07.5	+0.4
W39A					IAmb	IAmb	04 16 18.6	
	comp=Z,15nm,1.1s							
W39A	Magazine	25.27	92	P		P	04 16 07.8	+0.7
	baz=291							
U40A	Yellville	25.58	89	P		P	04 16 08.9	-1.1
U40A					IAmb	IAmb	04 16 14.0	
	comp=Z,9.4nm,1.0s							
U40A	Yellville	25.58	89	P		P	04 16 09.8	-0.2
	baz=289							
MIAR	Mount Ida	25.67	93	P		P	04 16 09.9	-0.8
MIAR					IAmb	IAmb	04 16 15.7	
	comp=Z,10nm,1.2s							
MIAR	Mount Ida	25.67	93	P		P	04 16 10.8	0.0
	baz=293							
I40A	Norwalk	25.73	71	P		P	04 16 10.6	-0.7
MGMO	Mountain Grove	25.77	87	P		P	04 16 10.9	-0.8
G40A	Rib Lake	25.96	68	P		P	04 16 12.9	-0.4
G40A					IAmb	IAmb	04 16 17.8	
	comp=Z,16nm,1.0s							
JFWS	Jewell Farm	26.09	73	P		P	04 16 14.9	+0.4
	baz=277							
CCM	Cathedral Cave	26.29	84	P		P	04 16 16.4	0.0
	baz=286							
WHAR	Wooly Hollow	26.38	91	P		P	04 16 16.7	-0.4
WHAR					IAmb	IAmb	04 16 21.1	
	comp=Z,23nm,1.2s							
W41B	Gary Mavity, V	26.45	91	P		P	04 16 17.1	-0.7
W41B					IAmb	IAmb	04 16 21.8	
	comp=Z,14nm,1.1s							
W41B	Gary Mavity, V	26.45	91	P		P	04 16 17.6	-0.2
	baz=291							
EPYK	Eagle Plains	26.77	350	P		P	04 16 22.4	+1.9
	baz=160							
I42A	Draeger Farm,	26.96	71	P		P	04 16 21.8	-0.6
ILAR	Eielson Array	27.41	340	P		P	04 16 28.1	+1.9
	comp=Z,1.5nm,0.9s,baz=150,slow=8.4,SNR=17							
ILAR					LR	LR	04 25 29.0	
	comp=Z,154nm,19.6s,baz=152,slow=32							
POKR	Poker Plat Res	27.83	340	P		P	04 16 29.8	-0.1
	baz=142							
INK	Inuvik	28.28	353	P		P	04 16 35.2	+1.3
	comp=Z,1.4nm,0.9s,baz=171,slow=11,SNR=4.0							
INK					LR	LR	04 26 32.7	
	comp=Z,130nm,21.2s,baz=115,slow=34							
INK	Inuvik	28.28	353	P		P	04 16 32.5	-1.3
INK					IAmb	IAmb	04 16 45.1	
	comp=Z,11nm,1.4s							
L46A	Eue Claire	29.12	74	P		P	04 16 41.0	-0.7
	baz=280							
M47A	Cromwell	29.74	75	P		P	04 16 47.3	+0.1
	baz=282							
D46A	Sault St. Mari	30.18	64	P		P	04 16 50.2	-0.8
	baz=273							
H47A	Mio	30.25	68	P		P	04 16 51.5	-0.2
	baz=277							
L48A	N Adams	30.50	74	P		P	04 16 53.9	+0.1
	baz=281							
E47A	Iron Bridge	30.73	65	P		P	04 16 55.9	+0.1
	baz=274							
J48A	Bridge Port	30.73	71	P		P	04 16 57.3	+1.5
	baz=279							
D47A	Chapleau	30.81	63	P		P	04 16 56.3	-0.3
	baz=273							
T49A	Edmonton	30.91	83	P		P	04 16 57.4	-0.1
	baz=289							
J49A	Marlette	31.19	71	P		P	04 17 01.1	+1.2
	baz=279							
N50A	Nevada	31.69	75	P		P	04 17 04.2	-0.2
	baz=284							
W50A	Signal Mountai	31.73	87	P		P	04 17 05.8	+0.9
	baz=292							
ACSO	Alum Creek Sta	31.94	76	P		P	04 17 07.5	+0.9
	baz=284							
W51A	Cleveland	32.16	86	P		P	04 17 09.0	+0.4
	baz=292							
N51A	Ashland	32.23	75	P		P	04 17 10.2	+1.1
	baz=284							
V51A	Loudon	32.24	85	P		P	04 17 09.7	+0.4
	baz=291							
U51A	La Follette	32.30	84	P		P	04 17 10.2	+0.4
	baz=290							
Y51A	Rockmart	32.41	89	P		P	04 17 11.0	+0.2
	baz=294							
X52A	Dahlonega	33.03	87	P		P	04 17 15.8	-0.5
	baz=293							
D51A	Lot 18 Range I	33.35	63	P		P	04 17 18.5	-0.3
	baz=276							
V53A	Saluda	33.46	84	P		P	04 17 20.3	+0.3
	baz=291							
F52A	Sundridge	33.53	65	P		P	04 17 20.4	-0.1
	baz=278							
L53A	Girard	33.54	72	P		P	04 17 20.5	-0.1
	baz=283							
M54A	Oil Creek Stat	34.08	73	P		P	04 17 23.2	-2.0
	baz=284							
V54A	Nebo	34.08	84	P		P	04 17 25.9	+0.6
	baz=291							
G53A	Haliburton	34.11	66	P		P	04 17 25.7	+0.2
	baz=279							
L54A	Sinclairville	34.16	72	P		P	04 17 27.0	+1.0
	baz=283							
H53A	Bobcaygeon	34.23	67	P		P	04 17 27.5	+1.0
	baz=280							
MATQ	Matagami	34.31	58	P		P	04 17 26.2	-0.9
	baz=273							
ALGO	Algonquin Park	34.39	65	P		P	04 17 28.3	+0.4
	baz=278							
G54A	Lake Saint Pet	34.44	66	P		P	04 17 28.2	-0.1
	baz=279							
P55A	Reedsville	34.48	76	P		P	04 17 29.8	+1.0
	baz=286							
D53A	Lac Vacive, Po	34.49	63	P		P	04 17 27.5	-1.2
D53A					IAmb	IAmb	04 17 43.8	
	comp=Z,4.3nm,1.1s							
D53A	Lac Vacive, Po	34.49	63	P		P	04 17 29.7	+1.0
	baz=277							
T55A	Pulaski	34.49	81	P		P	04 17 30.0	+1.0
	baz=290							
254A	Abbeville	34.59	91	P		P	04 17 30.4	+0.7
	baz=296							
E53A	Dumoine, Ponti	34.60	64	P		P	04 17 30.7	+1.0
	baz=278							
V55A	Taylorsville	34.61	83	P		P	04 17 29.6	-0.3
	baz=291							
O55A	Ligonier	34.67	75	P		P	04 17 31.1	+0.7
	baz=286							
BLA	Blacksburg	34.74	81	P		P	04 17 31.5	+0.5
	baz=290							
M55A	Ridgway	34.74	73	P		P	04 17 32.3	+1.2
	baz=284							
N55A	Marion Center	34.75	74	P		P	04 17 30.2	-1.0
	baz=285							
KMSC	Kings Mountain	34.78	84	P		P	04 17 31.9	+0.6
	baz=292							
LSQQ	Lebel-sur-Quev	34.78	59	P		P	04 17 31.1	-0.1
	baz=274							
X55A	Gracelyn & Ava	34.80	86	P		P	04 17 32.2	+0.6
	baz=293							
L55A	Hinsdale	34.81	71	P		P	04 17 32.0	+0.4
	baz=283							
E54A	Lac Daplat, Po	34.92	64	P		P	04 17 30.9	-1.5
	baz=278							
K55A	Perry	34.95	70	P		P	04 17 31.6	-1.3
	baz=283							
J55A	Hilton	35.02	69	P		P	04 17 32.2	-1.2
	baz=282							
M56A	Emporium	35.16	73	P		P	04 17 35.6	+0.9
	baz=284							
H55A	Tweed	35.22	67	P		P	04 17 36.0	+1.0
	baz=280							
N56A	West Decatur	35.22	74	P		P	04 17 35.9	+0.7
	baz=285							
L56A	Greenwood	35.46	71	P		P	04 17 38.1	+0.9
	baz=284							
K56A	Middlesex	35.50	70	P		P	04 17 38.2	+0.6
	baz=283							
F55A	Otter Lake	35.58	65	P		P	04 17 38.0	-0.2
	baz=279							
SSPA	Standing Stone	35.59	74	P		P	04 17 38.0	-0.4
	baz=286							
N57A	Milroy	35.81	74	P

	baz=281							
F61A	**St Evariste**	**39.23**	**63**	P		**P**	**04 18 09.6**	**+0.5**
	baz=282							
D61A	**St Aubert, Com**	**39.53**	**61**	P		**P**	**04 18 12.4**	**+0.8**
	baz=281							
SCHQ	**Schefferville**	**40.64**	**49**	P		**P**	**04 18 20.6**	**-0.1**
	comp=Z,7.4nm,0.9s,baz=329,slow=4.3,SNR=5.3							
SCHQ				LR		LR	04 33 44.9	
	comp=Z,173nm,21.5s,baz=313,slow=34							
SCHQ	**Schefferville**	**40.64**	**49**	P		**P**	**04 18 20.3**	**-0.4**
SCHQ				IAmb		IAmb	04 18 27.0	
	comp=Z,12nm,1.3s							
TAOE	**Nuku Hiva Isla**	**50.97**	**199**	*e*LR		LR	04 34 19.8	
	comp=Z,343nm,28.4s							
TAOE	**Nuku Hiva Isla**	**50.97**	**199**	*e*T		T	05 14 19.1	
	comp=Z,58nm,0.2s							
SUMG	**Summit**	**51.00**	**23**	*i* P		**P**	**04 19 44.4**	**+1.7**
	comp=Z,24nm,1.0s							
SUMG	**Summit**	**51.00**	**23**	P		**P**	**04 19 41.4**	**-1.3**
SUMG				IAmb		IAmb	04 19 53.8	
	comp=Z,1.8nm,0.6s							
SEY	**Seymchan**	**51.64**	**325**	P		**P**	**04 19 48.4**	**+1.2**
	comp=Z,2.2nm,0.6s,baz=52,slow=8.5,SNR=7.4							
PETK	**Petropavlovsk-**	**51.82**	**312**	P		**P**	**04 19 49.5**	**+0.9**
	comp=Z,3.0nm,0.9s,baz=90,slow=14,SNR=3.0							
MA2	**Magadan**	**53.38**	**321**	LR		LR	04 42 08.8	
	comp=Z,34nm,18.1s,baz=30,slow=35							
TIXI	**Tiksi**	**56.87**	**339**	P		**P**	**04 20 24.7**	**-0.4**
	comp=Z,0.7nm,0.4s,baz=57,slow=3.8,SNR=3.5							
H11S1	**WAKE ISLAND Hy**	**61.72**	**271**	T		T	05 29 33.3	
	baz=53							
H11S2	**WAKE ISLAND Hy**	**61.73**	**271**	T		T	05 29 31.0	
	baz=53							
H11S3	**WAKE ISLAND Hy**	**61.74**	**271**	T		T	05 29 24.2	
	baz=53							
MEH	**Mehetia**	**61.81**	**205**	*e*T		T	05 27 52.3	
	comp=Z,37nm,0.3s							
TIAR	**Tiarei**	**61.94**	**206**	*e*T		T	05 28 01.5	
	comp=Z,5.0nm,0.3s							
PPT2	**Papeete2**	**62.04**	**206**	*e*LR		LR	04 39 23.6	
	comp=Z,124nm,25.8s							
PPT2	**Papeete2**	**62.04**	**206**	*e*T		T	05 28 09.2	
	comp=Z,7.5nm,0.3s							
PAE	**Paea**	**62.11**	**206**	*e*T		T	05 28 14.6	
	comp=Z,2.4nm,0.3s							
TVO	**Taravao**	**62.11**	**206**	*e*T		T	05 28 14.8	
	comp=Z,2.4nm,0.3s							
NOA	**NORSAR Array B**	**72.81**	**21**	LR		LR	04 53 20.7	
	comp=Z,87nm,18.4s,baz=0.0,slow=35							
SONM	**Songino Array**	**80.91**	**328**	P		**P**	**04 22 56.5**	**+1.4**
	comp=Z,0.7nm,1.0s,baz=90,slow=2.1,SNR=4.0							
CLL	**Collm**	**81.60**	**25**	*e*P		**P**	**04 22 59.0**	**+0.5**
SIV	**San Ignacio**	**81.74**	**119**	P		**P**	**04 23 00.3**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=260,slow=8.7,SNR=3.8							
ZALV	**Zalesovo Beam**	**82.50**	**343**	P		**P**	**04 23 04.6**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=43,slow=8.7,SNR=2.3							
VYHS	**Vyhne**	**85.89**	**23**	*e*P		**P**	**04 23 22.4**	**+1.8**
BVAR	**Borovoye Array**	**85.93**	**351**	P		**P**	**04 23 22.5**	**+1.8**
	comp=Z,0.6nm,0.6s,baz=20,slow=4.6,SNR=2.8							
NJ2	**Nanjing**	**86.70**	**310**	*e*P		**P**	**04 23 23.8**	**-1.1**
NJ2				pmax		pmax		
	comp=Z,11nm,0.7s							
KURBB	**Kurchatov Array**	**86.96**	**345**	P		**P**	**04 23 26.7**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=12,slow=4.7,SNR=2.3							
WMQ	**Urumqi**	**91.03**	**337**	*e*P		**P**	**04 23 44.5**	**-0.8**
WMQ				pmax		pmax		
	comp=Z,4.0nm,0.6s							
WMQ				pmax		pmax		
	comp=Z,87nm,5.9s							
WMQ				LR		LR		
	comp=N,440nm,29.2s							
WMQ				LR		LR		
	comp=E,510nm,29.0s							
WMQ				LR		LR		
	comp=Z,58nm,27.7s							

NEIC ***23*** *04:11:25.1±1.1,0°.21N±0°.10×121°.9E±0°.1,h197km±6km, mb4.3/19,Error ellipse: s-maj=18.5km s-min=11.6km az=57.0*

IDC ***23*** *04:11:25.9±1.0,0°.21N×121°.90E,h197km±9km,mb3.8/9, mb1 3.9/10,mb1mx3.5/54,mbtmp4.3/10,Error ellipse: s-maj=47.6km s-min=9.5km az=66.0*

DJA ***23*** *04:11:27.8±0.5,0°N±3°×12°2E±°,h152km±5km,M4.4/10, mB5.0/1,mb4.8/2,MLv4.2/10,Mw(mB)4.3/1*

ISC 23 04:11:25.0±0.6,0°.24N±0°.06×121°.97E±0°.05,h192km±5km, n56,σ1§34/70,mb4.2/24,2C,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.24**	**352**	P	**Pn**	**04 11 49.0**	**-1.4**
APSI	**Ampana**	**1.19**	**196**	P	**Pn**	**04 11 56.1**	**+0.7**
APSI				S	**Sn**	**04 12 15.9**	**-3.1**
LUWI	**Luwuk**	**1.50**	**148**	P	**Pn**	**04 11 58.4**	**+0.4**
LUWI				S	**Sn**	**04 12 22.4**	**-1.3**
LUWI	**Luwuk**	**1.50**	**148**		**Pn**	**04 11 58.2**	**+0.2**
LUWI				Sn	**Sn**	**04 12 23.5**	**-0.2**
KMSI	**Cibinong**	**2.03**	**81**	P	**Pn**	**04 12 03.2**	**-0.1**
KMSI				S	**Sn**	**04 12 31.9**	**-1.1**
MPSI	**Mapaga**	**2.08**	**273**	P	**Pn**	**04 12 04.3**	**+0.6**
MPSI				S	**Sn**	**04 12 30.9**	**-2.9**
TTSI	**Tana Toraja**	**3.91**	**213**	P	**Pn**	**04 12 27.5**	**+2.1**
SANI	**Sanana**	**4.61**	**120**	P	**Pn**	**04 12 35.8**	**+1.5**
SPSI	**Sidrap Palu**	**4.72**	**208**	P	**Pn**	**04 12 37.5**	**+1.8**
BNSI	**Bone**	**4.97**	**202**	P	**Pn**	**04 12 41.7**	**+2.8**
	0.5nm2μm183nm,0.8s							
KAPI	**Kappang**	**5.67**	**203**		**Pn**	**04 12 49.0**	**+1.1**
BKSI	**Bulukumba**	**5.83**	**198**	P	**Pn**	**04 12 52.5**	**+2.5**
KCP	**Kidapawan**	**7.41**	**25**	⇑*i* P	**Pn**	**04 13 14.1**	**+3.5**
SOEI	**Soe**	**10.19**	**167**	Pn	**Pn**	**04 13 45.9**	**-1.2**
MTN	**Manton Dam**	**15.86**	**145**	P	**P**	**04 14 57.6**	**-0.4**
KNRA	**Kununurra**	**17.18**	**157**	Pn	**Pn**	**04 15 13.5**	**-0.4**
KNRA				IAmb	IAmb	04 15 17.2	
	comp=Z,20nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.58**	**169**	P	**P**	**04 15 28.4**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=356,slow=7.2,SNR=17						
FITZ	**Fitzroy Crossi**	**18.58**	**169**	P	**P**	**04 15 27.6**	**-0.2**
FITZ				IAmb	IAmb	04 15 32.7	
	comp=Z,7.3nm,0.8s						
BKNI	**Bangkinang**	**20.93**	**270**	P	**P**	**04 15 50.4**	**-2.8**
WB0	**Warramunga Arr**	**23.32**	**149**	P	**P**	**04 16 15.6**	**-0.5**
WB0				IAmb	IAmb	04 16 17.3	
	comp=Z,8.6nm,0.8s						
WRAB	**Tennant Creek**	**23.43**	**150**	P	**P**	**04 16 16.7**	**-0.5**
WRAB				IAmb	IAmb	04 16 18.7	
	comp=Z,6.6nm,0.7s						
WRA	**Warramunga Arr**	**23.43**	**150**	P	**P**	**04 16 16.8**	**-0.3**
	comp=Z,7.8nm,0.6s,baz=326,slow=11,SNR=36						
WRA				pP	**pP**	**04 16 55.0**	**+2.2**
	comp=Z,2.1nm,0.8s,baz=331,slow=10,SNR=2.8						
WRA				PcP	**PcP**	**04 19 57.6**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=331,slow=2.2,SNR=4.8						
WB2	**Warramunga Arr**	**23.44**	**150**	P	**P**	**04 16 16.4**	**-0.8**
WB2				IAmb	IAmb	04 16 18.7	
	comp=Z,6.2nm,0.7s						
WB2				PcP	**PcP**	**04 19 57.2**	**-0.8**
WR0	**Warramunga Arr**	**23.55**	**149**	P	**P**	**04 16 17.9**	**-0.3**
WR0				PcP	**PcP**	**04 19 57.5**	**-0.7**
AS31	**Alice Springs**	**26.44**	**155**	P	**P**	**04 16 43.9**	**-0.4**
ASAR	**Alice Springs**	**26.44**	**155**	P	**P**	**04 16 44.8**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=344,slow=13,SNR=27						
ASAR				pP	**pP**	**04 17 23.8**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=327,slow=7.3,SNR=3.4						
ASAR				PcP	**PcP**	**04 20 04.5**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=345,slow=2.2,SNR=7.3						
ASAR				S	**S**	**04 21 02.0**	**-1.8**
	comp=Z,0.7nm,0.9s,baz=338,slow=19,SNR=4.1						
BBOO	**Buckleboo**	**35.46**	**159**	P	**P**	**04 18 02.6**	**-0.5**
BBOO				IAmb	IAmb	04 18 21.7	
	comp=Z,6.6nm,1.1s						
STKA	**Stephens Creek**	**36.95**	**152**	P	**P**	**04 18 16.7**	**+0.9**
	comp=Z,7.8nm,0.8s,baz=325,slow=7.1,SNR=19						
STKA	**Stephens Creek**	**36.95**	**152**	P	**P**	**04 18 15.4**	**-0.4**
LSA	**Lhasa**	**41.48**	**318**	P	**P**	**04 18 52.6**	**-1.3**
LSA				IAmb	IAmb	04 18 57.2	
	comp=Z,5.7nm,0.7s						
TAPN	**Taplejung**	**42.52**	**312**	*e*P	**P**	**04 19 03.8**	**+1.6**
	comp=Z,6.8nm,0.4s						
RAMN	**Ramite**	**43.14**	**311**	*e*P	**P**	**04 19 09.2**	**+2.1**
	comp=Z,17nm,0.5s						
JIRN	**Jiri**	**43.82**	**311**	*e*P	**P**	**04 19 14.6**	**+1.9**
	comp=Z,22nm,0.4s						
GTA	**Gaotai**	**43.94**	**335**	⇑P	**P**	**04 19 15.0**	**+1.9**
GTA				pP	pP	04 19 56.0	+1.5
GTA				sP	sP	04 20 11.3	-4.7
GTA				PcP	**PcP**	**04 20 55.8**	**+0.2**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
GUN	**Gumba**	**44.19**	**312**	*e*P	**P**	**04 19 17.1**	**+1.5**
	comp=Z,20nm,0.6s						
DMN	**Daman**	**44.61**	**311**	*e*P	**P**	**04 19 20.0**	**+1.1**
USRK	**Ussuriysk Ar.**	**44.67**	**10**	P	**P**	**04 19 18.8**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=196,slow=5.6,SNR=4.2						
GKN	**Gorkha**	**45.17**	**311**	*e*P	**P**	**04 19 24.7**	**+1.6**
	comp=Z,7.5nm,0.2s						
KOLN	**Koldanda**	**45.84**	**310**	*e*P	**P**	**04 19 29.9**	**+1.4**
DANN	**Dangsing**	**46.01**	**311**	*e*P	**P**	**04 19 31.2**	**+1.3**
ULN	**Ulaanbaatar**	**49.18**	**347**	P	**P**	**04 19 52.9**	**-0.9**
ULN				IAmb	IAmb	04 19 55.5	
	comp=Z,6.9nm,0.7s						
SONM	**Songino Array**	**49.30**	**346**	P	**P**	**04 19 55.6**	**+1.0**
	comp=Z,6.1nm,0.7s,baz=165,slow=8.9,SNR=55						
KSH	**Kashi**	**57.32**	**319**	P	**P**	**04 20 53.8**	**+0.6**
KSH				pP	pP	04 21 40.8	+3.8
KSH				pmax	pmax		
	comp=Z,190nm,4.5s						
MK31	**Makanchi Array**	**57.87**	**329**	P	**P**	**04 20 56.7**	**-0.1**
MK31				IAmb	IAmb	04 20 58.5	
	comp=Z,2.6nm,0.8s						
MKAR	**Makanchi Array**	**57.87**	**329**	P	**P**	**04 20 57.6**	**+0.8**
	comp=Z,2.1nm,0.3s,baz=124,slow=8.6,SNR=67						
MKAR				pP	**pP**	**04 21 41.9**	**+1.3**
	comp=Z,0.4nm,0.6s,baz=122,slow=8.3,SNR=1.3						
MAKZ	**Makanchi**	**58.05**	**329**	P	**P**	**04 20 58.0**	**0.0**
KBL	**Kabul**	**60.00**	**310**	P	**P**	**04 21 12.1**	**+0.2**
ARSB	**Arslanbob**	**60.20**	**319**	P	**P**	**04 21 11.9**	**-1.2**
ARSB				IAmb	IAmb	04 21 16.6	
	comp=Z,3.7nm,0.8s						
ZALV	**Zalesovo Beam**	**61.67**	**336**	P	**P**	**04 21 22.1**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=121,slow=6.3,SNR=7.2						
KURBB	**Kurchatov Arra**	**62.24**	**330**	P	**P**	**04 21 26.8**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=128,slow=6.1,SNR=4.6						
KURK	**Kurchatov**	**62.26**	**330**	P	**P**	**04 21 25.6**	**-0.9**
KURK				IAmb	IAmb	04 21 28.5	
	comp=Z,6.3nm,1.1s						
TIXI	**Tiksi**	**71.43**	**2**	P	**P**	**04 22 23.1**	**-0.9**
BRTR	**Keskin Array B**	**88.56**	**310**	P	**P**	**04 23 55.8**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=155,slow=4.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**119.36**	**285**	PKP	**PKPdf**	**04 29 51.4**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=88,slow=2.3,SNR=5.5						
CFA	**Coronel Fontan**	**147.34**	**164**	PKPbc	**PKPbc**	**04 30 46.5**	**-0.2**
	comp=Z,2.0nm,0.4s,baz=266,slow=7.0,SNR=8.9						
LPAZ	**La Paz**	**161.20**	**148**	PKPab	**PKPab**	**04 31 49.6**	**+1.0**
	comp=Z,0.8nm,0.8s,baz=227,slow=9.4,SNR=3.6						

ANF ***23*** *04:14:44.4±1.9,40°.51N×124°.88W,h0km,ML2.6/1,Error ellipse: s-maj=21.0km s-min=7.9km az=49.0*

NCEDC ***23*** *04:14:44.6±2.0,40°.29N±0°.05×125°.25W±0°.07,h24km±8km, ML3.0/7,Error ellipse: s-maj=8.0km s-min=6.8km az=103.0*

ISC 23 04:14:44.6±2.1,40°.38N±0°.05×125°.21W±0°.10, h32km±13km,n40,σ0§72/49,Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.67**	**81**		**Pb**	**04 14 58.1**	**+0.2**
KCTM					**Sb**	**04 15 08.2**	**+1.1**
KSMM	**Slide Mountain**	**0.81**	**103**		**Pb**	**04 14 58.9**	**-1.5**
KMPM	**Mount Pierce**	**0.83**	**87**		**Pb**	**04 14 59.9**	**-0.8**
JCC	**Jacoby Creek,**	**1.00**	**63**		**Pn**	**04 15 01.3**	**-1.1**
KCRM	**Chalk Rock**	**1.06**	**87**		**Pn**	**04 15 03.1**	**-0.2**
KMRM	**Mail Ridge**	**1.16**	**97**		**Pn**	**04 15 04.9**	**+0.2**
KMRM					**Sn**	**04 15 20.5**	**+1.0**
KHMM	**Horse Mountain**	**1.23**	**66**		**Pn**	**04 15 05.2**	**-0.6**
KHMM				Sn	**Sn**	**04 15 20.8**	**-0.5**
KCSM	**Cold Springs**	**1.30**	**82**		**Pn**	**04 15 06.8**	**0.0**
KBSM	**Bell Springs**	**1.32**	**110**		**Pn**	**04 15 06.8**	**-0.1**
KCPM	**Cahto Peak**	**1.43**	**118**		**Pn**	**04 15 08.3**	**-0.2**
KCPM				Sn	**Sn**	**04 15 26.2**	**0.0**
KIPM	**Iron Peak**	**1.44**	**113**		**Pn**	**04 15 08.6**	**-0.1**
KHBM	**Hayfork Bally**	**1.54**	**79**		**Pn**	**04 15 09.9**	**-0.2**
KFPM	**Farley Peak**	**1.55**	**118**		**Pn**	**04 15 10.1**	**-0.1**
GTC	**Three Chop Rid**	**1.60**	**127**		**Pn**	**04 15 10.6**	**-0.1**
KBNM	**Bluenose Ridge**	**1.62**	**107**		**Pn**	**04 15 11.6**	**+0.5**
GNAM	**Navarro Ridge**	**1.69**	**134**		**Pn**	**04 15 12.0**	**0.0**
LBPM	**Beegum Peak**	**1.78**	**91**		**Pn**	**04 15 13.6**	**+0.3**
GHOM	**Hamilton Openi**	**1.85**	**135**		**Pn**	**04 15 14.2**	**0.0**
O02D	**Mt. Diablo Mer**	**1.86**	**95**	P	**Pn**	**04 15 14.7**	**+0.3**
	baz=276,SNR=57						
O02D				S	**Sn**	**04 15 36.8**	**-0.1**
	baz=276						
N02D	**Trinity Center**	**1.99**	**72**	P	**Pn**	**04 15 15.7**	**-0.6**
	baz=251,SNR=116						
N02D				S	**Sn**	**04 15 40.0**	**-0.2**
	baz=251						
GGUM	**Gualala**	**2.01**	**138**		**Pn**	**04 15 16.3**	**-0.2**
M02C	**Callahan**	**2.05**	**60**	P	**Pn**	**04 15 16.2**	**-0.8**
	baz=238,SNR=56						
M02C				S	**Sn**	**04 15 41.5**	**-0.1**
	baz=238						
GSNM	**Snow Mountain**	**2.12**	**132**		**Pn**	**04 15 18.1**	**+0.2**
HOPS	**Hopland Field**	**2.15**	**129**		**Pn**	**04 15 18.9**	**+0.6**
GHLM	**Highland Sprin**	**2.15**	**128**		**Pn**	**04 15 18.3**	**-0.1**
L02E	**Cave Junction**	**2.15**	**34**	P	**Pn**	**04 15 18.1**	**-0.2**
	baz=210						
GDCM	**Dry Creek**	**2.21**	**136**		**Pn**	**04 15 19.1**	**-0.2**
GPMM	**Pine Mountain**	**2.32**	**130**		**Pn**	**04 15 20.9**	**+0.2**
GCVM	**Cloverdale**	**2.33**	**133**		**Pn**	**04 15 21.4**	**+0.6**
GMKM	**Mount Konoctai**	**2.34**	**126**		**Pn**	**04 15 21.7**	**+0.7**
GACM	**Adobe Creek**	**2.35**	**129**		**Pn**	**04 15 21.7**	**+0.6**
GHCM	**House Creek**	**2.35**	**138**		**Pn**	**04 15 21.6**	**+0.5**
K02D	**Willamette Mer**	**2.59**	**26**	P	**Pn**	**04 15 23.8**	**-0.7**
	baz=203,SNR=45						
K02D				S	**Sn**	**04 15 53.3**	**-1.6**
	baz=203						
O03E	**Paynes Creek**	**2.60**	**91**	P	**Pn**	**04 15 24.6**	**0.0**
	baz=272,SNR=30						
O03E				S	**Sn**	**04 15 55.1**	**-0.1**
	baz=272						
L04D	**Klamath Falls**	**2.86**	**49**	P	**Pn**	**04 15 29.8**	**+1.6**
	baz=228,SNR=57						
K04D	**Chiloquin, OR**	**3.43**	**48**	P	**Pn**	**04 15 37.2**	**+1.2**
	baz=226						
I03D	**Drain, OR**	**3.59**	**22**	P	**Pn**	**04 15 38.8**	**+0.7**
	baz=200						
I04A	**Tendick Farm,**	**4.00**	**30**	P	**Pn**	**04 15 45.2**	**+1.5**
	baz=210,SNR=5.7						
J05D	**Fort Rock, OR**	**4.15**	**44**	P	**Pn**	**04 15 47.3**	**+1.3**
	baz=225,SNR=9.0						
H04D	**Lebanon**	**4.53**	**23**	P	**Pn**	**04 15 52.1**	**+1.1**
	baz=202						

IDC ***23*** *04:30:07.4±9.4,41°.34N×19°.49E,h0km,mb3.6/3, mb1 3.5/4,mb1mx3.3/50,mbtmp3.5/4,ML3.0/1,Error ellipse: s-maj=178.3km s-min=25.1km az=32.0*

BEO ***23*** *04:30:08.8±0.6,41°.17N×19°.41E,h4km±2km,ML2.8/16*

RHSSO ***23*** *04:30:10.8±0.7,41°.28N×19°.42E,h14km±2km,ML3.2/11*

THE ***23*** *04:30:10.7,41°.48N×19°.48E,h8km±1km,ML2.8/7,Error ellipse: s-maj=2.1km s-min=1.1km az=310.0*

TIR ***23*** *04:30:10.5,41°.40N×19°.49E,h11km,Md3.0/7*

SKO ***23*** *04:30:11.6,41°.31N×19°.47E,h12km*

PDG ***23*** *04:30:11.8±0.4,41°.41N×19°.60E,h13km,MD3.3/4, ML3.3/13,Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

ISC 23 04:30:10.9±0.9,41°.35N±0°.02×19°.49E±0°.02,h15km±6km, n114,σ1§20/184,9C-12D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.28**	**91**	P	**Pg**	**04 30 16.6**	**-0.3**
TIR				S	**Sg**	**04 30 21.4**	**+0.3**
	2μm,0.2s						
TIR	**Tirane**	**0.28**	**91**	*e*Pg	**Pg**	**04 30 16.6**	**-0.3**
TIR				*e*Sg	**Sg**	**04 30 21.4**	**+0.3**
TIR	**Tirane**	**0.28**	**91**	*i* PG	**Pg**	**04 30 16.6**	**-0.3**
TIR				*i* SG	**Sg**	**04 30 21.4**	**+0.3**
TIR	**Tirane**	**0.28**	**91**	P	**Pg**	**04 30 16.4**	**-0.5**
TIR				⇑S	**Sg**	**04 30 21.3**	**+0.3**
ULC	**Ulcinj**	**0.64**	**344**	*e*Pg	**Pg**	**04 30 23.1**	**-0.3**
ULC				*e*Sg	**Sb**	**04 30 33.2**	**+0.8**
PUK	**Puka**	**0.75**	**24**	*i* PG	**Pg**	**04 30 24.7**	**-0.9**
PUK				*i* SG	**Sg**	**04 30 35.5**	**0.0**
PHP	**Peshkopia**	**0.79**	**65**	P	**Pg**	**04 30 24.8**	**-1.4**
PHP	**Peshkopia**	**0.79**	**65**	*i* PG	**Pg**	**04 30 25.1**	**-1.1**
PHP				*i* SG	**Sb**	**04 30 37.4**	**+0.5**
DRME	**Dracevica, Mon**	**0.86**	**345**	⇓*i* Pg	**Pb**	**04 30 27.5**	**-0.1**
DRME				*e*Sg	**Sn**	**04 30 41.0**	**+0.2**
DRME	**Dracevica, Mon**	**0.86**	**345**	*e*Pg	**Pb**	**04 30 27.5**	**-0.1**
DRME				*e*Sg	**Sn**	**04 30 41.0**	**+0.2**
VLO	**Vlora**	**0.88**	**180**	P	**Pn**	**04 30 29.9**	**+1.2**
VLO				S	**Sn**	**04 30 44.5**	**+3.3**
	2μm,0.6s						
VLO	**Vlora**	**0.88**	**180**	*i* PG	**Pn**	**04 30 30.2**	**+1.5**
VLO				*i* SG	**Sn**	**04 30 43.5**	**+2.3**
OHR	**Ohrid**	**1.02**	**103**	*i* Pg	**Pb**	**04 30 29.8**	**-0.5**
OHR				*i* Sg	**Sn**	**04 30 45.8**	**+1.0**
OHR				*e*Lg	Lg	04 30 47.7	
	comp=N,319nm,0.7s						
OHR				*e*Lg	Lg	04 30 48.3	
	comp=E,319nm,0.6s						
BUM	**Brajici-Budva**	**1.05**	**335**	⇓*i* Pg	**Pn**	**04 30 31.3**	**+0.2**
BUM				*e*Sg	**Sn**	**04 30 47.5**	**+2.1**
PDG	**Podgorica**	**1.09**	**351**	*e*Pg	**Pg**	**04 30 32.0**	**+0.1**
PDG				*e*Sg	**Sn**	**04 30 48.7**	**+2.3**
PDG	**Podgorica**	**1.09**	**351**	⇓P	**Pg**	**04 30 31.7**	**-0.2**
PDG	**Podgorica**	**1.09**	**351**	⇑S	**Sn**	**04 30 47.1**	**+0.7**
PDG	**Podgorica**	**1.09**	**351**	*e*Pg	**Pb**	**04 30 31.1**	**-0.3**
PDG				*e*Sg	**Sn**	**04 30 47.9**	**+1.5**
TTG	**Podgorica**	**1.09**	**351**	*e*Pg	**Pg**	**04 30 31.6**	**-0.3**
TTG				*e*Sg	**Sn**	**04 30 48.2**	**+1.8**
BCI	**Bajram Curri**	**1.10**	**23**	*i* PN	**Pb**	**04 30 30.4**	**-1.2**
BCI				*i* SN	**Sn**	**04 30 47.3**	**+0.6**
TPE	**Tepelena**	**1.13**	**159**	P	**Pg**	**04 30 32.8**	**+0.1**
TPE				S	**Sn**	**04 30 51.1**	**+3.8**
	comp=E,572nm,0.8s						
TPE	**Tepelena**	**1.13**	**159**	*i* PN	**Pg**	**04 30 32.6**	**0.0**
TPE				*i* SN	**Sn**	**04 30 50.6**	**+3.3**
CEME	**Cevo**	**1.27**	**341**	*e*Pg	**Pg**	**04 30 34.8**	**-0.5**
CEME				*e*Sg	**Sg**	**04 30 54.0**	**+2.2**
PVY	**Plav**	**1.29**	**16**	*e*Pg	**Pn**	**04 30 34.3**	**-0.2**
PVY				*e*Sg	**Sg**	**04 30 53.9**	**+1.3**
HCY	**Herceg Novi**	**1.32**	**326**	*e*Pg	**Pb**	**04 30 35.1**	**-0.3**
HCY	**Herceg Novi**	**1.32**	**326**	*e*Pg	**Pb**	**04 30 35.4**	**0.0**
HCY				*e*Sg	**Sg**	**04 30 57.1**	**+3.6**
NKME	**Niksic**	**1.47**	**344**	*e*Pg	**Pb**	**04 30 38.2**	**+0.3**
NKME				*e*Sg	**Sg**	**04 31 00.1**	**+1.9**
KOME	**Kolasin**	**1.50**	**1**	*e*Pg	**Pb**	**04 30 38.6**	**+0.2**
KOME				*e*Sg	**Sg**	**04 30 59.7**	**+0.5**
NKY	**Niksic**	**1.50**	**346**	*e*Pg	**Pb**	**04 30 38.9**	**+0.3**
NKY				*e*Sg	**Sg**	**04 31 00.7**	**+1.3**
NEST	**Nestorio**	**1.51**	**128**	P	**Pg**	**04 30 39.6**	**-0.3**
NEST				S	**Sg**	**04 31 00.0**	**+0.4**
	comp=E,132nm,0.6s						
SRN	**Sarande**	**1.52**	**165**	P	**Pb**	**04 30 38.3**	**-0.5**
SRN				S	**Sg**	**04 31 01.0**	**+1.1**
	comp=E,140nm,0.5s						
SRN	**Sarande**	**1.52**	**165**	*i* PN	**Pn**	**04 30 38.0**	**+0.5**
SRN				*i* SN	**Sg**	**04 31 01.0**	**+1.1**
FNA	**Florina**	**1.54**	**111**	P	**Pb**	**04 30 38.7**	**-0.4**
FNA				S	**Sg**	**04 31 00.5**	**+0.1**
	comp=E,378nm,0.5s						
IVA	**Berane**	**1.55**	**11**	*e*Pg	**Pb**	**04 30 39.2**	**-0.1**
IVA				*e*Sg	**Sg**	**04 31 00.7**	**-0.1**
SKO	**Skopje**	**1.59**	**66**	*e*Pg	**Pb**	**04 30 40.0**	**+0.1**
SKO				*e*Sg	**Sg**	**04 31 03.6**	**+1.5**
SKO	**Skopje**	**1.59**	**66**	⇓*i* Pg	**Pb**	**04 30 40.0**	**+0.1**
SKO				*i* Sg	**Sg**	**04 31 01.5**	**-0.6**
SKO				*e*Lg	Lg	04 31 04.1	
	comp=E,10.0nm,0.6s						
SKO				*e*Lg	Lg	04 31 04.7	
	comp=N,11nm,0.4s						
TREB	**Trebinje**	**1.60**	**329**	*e*Pn	**Pb**	**04 30 39.3**	**-0.9**
TREB				*e*Sn	**Sg**	**04 31 03.3**	**+0.7**
TREB	**Trebinje**	**1.60**	**329**	⇑*i* Pn	**Pn**	**04 30 39.1**	**+0.4**
TREB				*e*Sn	**Sb**	**04 31 00.6**	**+0.3**
DBRK	**Dubrovnik**	**1.65**	**323**	*i* Pn

MORH eSn Sn 04 32 20.2 -0.1
BOJS Bojanci 5.17 325 iPn Pn 04 31 28.5 +0.8
BOJS eSn Sn 04 32 24.8 -2.2
comp=Z,5.0nm,0.4s
PTJ Puntijarka 5.22 332 ePn Pn 04 31 28.8 +0.4
KALN Kalnik 5.26 336 ePn Pn 04 31 28.5 -0.4
CRES Cresnjev 5.34 328 ePn Pn 04 31 29.9 -0.1
CRES eSn Sn 04 32 30.0 -1.3
CEY Cerknica 5.72 322 ePn Pn 04 31 35.4 +0.1
CEY eSn Sn 04 32 38.3 -2.3
VOIR 5.75 43 ⇑P Pn 04 31 37.1 +1.4
SOKA Soboth 6.22 330 iPn Pn 04 31 42.8 +0.7
comp=Z,0.1nm,0.1s
OBKA Obir 6.27 327 iPn Pn 04 31 44.5 +1.7
comp=Z,1.0nm,0.3s
OBKA iSn Sn 04 32 55.8 +1.7
comp=Z,2.2nm,0.3s
DOPR Dopca 6.29 41 ⇓P Pn 04 31 43.6 +0.6
VYHS Vyhne 7.16 357 ePN Pn 04 31 54.4 -0.5
VYHS eSN Sn 04 33 15.2 -0.7
ABTA Abfaltersbach 7.37 319 ePn Pn 04 31 59.1 +1.2
comp=Z,0.7nm,0.2s
ABTA iSn Sn 04 33 22.8 +1.5
comp=Z,4.3nm,0.6s
SQTA Sankt Quirin 8.34 317 iPn Pn 04 32 13.5 +2.2
comp=Z,2.0nm,0.3s
MOTA Moosalm 8.48 318 iPn Pn 04 32 15.1 +1.9
comp=Z,1.0nm,0.3s
MOTA iSn Sn 04 33 48.6 0.0
comp=Z,3.8nm,0.6s
GERES GERESS Array B 8.53 333 Pn Pn 04 32 13.9 0.0
comp=Z,0.1nm,0.3s,baz=156,slow=12,SNR=2.7
FINES FINESS Array B 20.51 9 P P 04 34 47.3 -0.9
comp=Z,1.6nm,0.8s,baz=181,slow=11,SNR=3.8
ZALV Zalesovo Beam 44.22 50 P P 04 38 17.4 -1.7
comp=Z,0.7nm,0.4s,baz=282,slow=7.2,SNR=2.6
MKAR Makanchi Array 44.39 61 P P 04 38 19.7 -0.9
comp=Z,0.5nm,0.6s,baz=299,slow=6.5,SNR=7.3

NIED 23 04:32:00, 34.°20N×140.°30E, h50km, Mw4.1 Best double couple: M0 1.37000×10^15 NP1:ϕs69.00000°, δ69.00000°, λ35.00000°. NP2:ϕs325.00000°, δ58.00000°, λ155.00000°.
IDC 23 04:32:03.4±6.1, 34.°12N×140.°33E, h33km±47km, mb3.7/10, mb1 3.9/13, mb1mx3.7/48, mbtmp3.9/13, ML3.8/3, MS2.8/2, Ms1 2.8/2, ms1mx2.5/37, Error ellipse: s-maj=34.4km s-min=19.7km az=72.0
NEIC 23 04:32:03.8±1.3, 34.°24N±0.°05×140.°5E±0.°1, h45km±9km, mb4.3/6, Error ellipse: s-maj=13.0km s-min=6.3km az=108.0
JMA 23 04:32:05.3±0.1, 34.°27N×140.°31E, h49km±3km, M3.9 Broadband fault plane solution: P waves. NP1: ϕs215.00000°, δ10.00000°, λ-11.00000°. NP2: ϕs316.00000°, δ88.00000°, λ-100.00000°. Principal axes: T Plg42.0000°, Azm56.0000°; N Plg10.0000°, Azm317.0000°; P Plg46.0000°, Azm216.0000°;
JMA Felt I J1.
ISC 23 04:32:04.3±1.0, 34.°23N±0.°04×140.°41E±0.°05, h45km±10km, n46, σ1s35/58, mb4.0/14, 5C-4D, Near east coast of eastern Honshu

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BSO3 Boso 3 0.58 8 ⇓P Pn 04 32 17.6 +1.6
BSO1 Boso 1 0.63 48 ⇓P Pn 04 32 18.2 +1.8
JMKN Mikurajimanish 0.76 244 ⇑P Pn 04 32 19.2 +0.6
JMKN S Sn 04 32 29.1 +0.1
BSO4 Boso 4 0.76 356 ⇓P Pn 04 32 20.1 +1.5
JIM2 Oshima 3 0.94 301 ⇑P Pn 04 32 21.0 -0.1
JIM2 eS Sn 04 32 32.2 -1.3
JTHY Toshimahigashi 0.97 288 P Pn 04 32 21.9 +0.4
JTHY S Sn 04 32 33.9 -0.3
JKO Kozu shima 1.05 268 P Pn 04 32 22.7 +0.1
JKO eS Sn 04 32 35.8 -0.4
JHJ2 Mitsune 1.22 204 ⇓P Pn 04 32 25.6 +0.7
JHJ2 S Sn 04 32 40.4 +0.2
JHJ2 Mitsune 1.22 204 Pn 04 32 25.6 +0.7
JHJ2 Sn Sn 04 32 40.6 +0.4
KTJ3 Kamata3 1.31 303 ⇑P Pn 04 32 25.9 -0.2
KTJ3 S Sn 04 32 40.5 -1.9
JIZS Izushimoda 1.35 292 ⇑P Pn 04 32 26.9 +0.2
JIZS S Sn 04 32 42.9 -0.6
JSMT Sammumatsuo 1.41 1 P Pn 04 32 28.3 +0.8
JOD2 Odawara 2 1.50 314 ⇑P Pn 04 32 28.8 +0.1
JOD2 S Sn 04 32 45.7 -1.4
JFNN Fujinakano 1.71 305 P Pn 04 32 32.6 +0.9
JFNN S Sn 04 32 52.1 -0.3
MJAR Matsushiro Arr 2.92 323 Pn Pn 04 32 49.6 +1.4
3.4nm,0.3s,baz=137,slow=12,SNR=105
MJAR Sn Sn 04 33 22.2 0.0
9.2nm,0.3s,baz=122,slow=14,SNR=18
MJAR LR LR 04 34 16.4
comp=Z,183nm,19.2s,baz=130,slow=45
MAJO Matsushiro 2.93 323 Pn 04 32 48.2 -0.1
MAJO Sn Sn 04 33 23.2 +1.0
MAT Matsushiro 2.93 323 P Pn 04 32 50.3 +2.0
MAT S Sn 04 33 22.1 -0.1
MJB9 Matsu-Tunnel 2.93 323 Pn 04 32 48.1 -0.2
MJB9 Sn Sn 04 33 23.0 +0.6
INU Inuyama 3.01 293 Pn 04 32 50.2 +0.8
INU Sn 04 33 24.5 +0.4
ERM Erimo 8.07 15 Pn Pn 04 33 59.1 +0.3
ERM Sn Sn 04 35 26.1 -2.6
ASAJ Asahikawa 10.02 9 Pn Pn 04 34 24.6 -0.9
1.6nm,0.3s,baz=195,slow=16,SNR=3.9
ASAJ Sn Sn 04 36 12.3 -4.2
0.5nm,0.3s,baz=150,slow=20,SNR=2.1
JKA Kamikawa-asahi 10.02 9 Pn 04 34 24.6 -0.9
JKA Sn 04 36 12.3 -4.2
KSRS Korea Array 10.63 291 Pn Pn 04 34 37.9 +4.0
0.2nm,0.3s,baz=110,slow=14,SNR=15
KSRS LR LR 04 38 23.3
comp=Z,38nm,21.5s,baz=100,slow=36
KLR Kul'dur 16.30 339 Pn Pn 04 35 49.0 -0.9
0.3nm,0.3s,baz=162,slow=8.5,SNR=8.6
H11N2 WAKE ISLAND Hy 27.57 115 T T 05 06 48.8
baz=306
H11N1 WAKE ISLAND Hy 27.57 115 T T 05 07 39.3
baz=306,slow=74
H11N3 WAKE ISLAND Hy 27.59 115 T T 05 07 07.4
baz=306,slow=74
H11S3 WAKE ISLAND Hy 28.17 117 T T 05 07 47.7
baz=312,slow=75,SNR=10
H11S1 WAKE ISLAND Hy 28.17 117 T T 05 07 39.8
baz=312,slow=75,SNR=12
H11S2 WAKE ISLAND Hy 28.18 117 T T 05 07 46.8
baz=312,slow=75,SNR=9.5
SONM Songino Array 28.78 308 P P 04 37 58.4 +0.5
0.7nm,0.9s,baz=119,slow=9.5,SNR=4.0
ZALV Zalesovo Beam 43.25 315 P P 04 40 01.3 +0.3
1.1nm,0.5s,baz=116,slow=7.0,SNR=6.9
MKAR Makanchi Array 44.97 304 P P 04 40 14.9 0.0
1.3nm,0.8s,baz=90,slow=9.7,SNR=13
KURK Kurchatov 47.06 310 P P 04 40 31.2 -0.1
KURK IAmb IAmb 04 40 31.9
comp=Z,2.9nm,0.8s
KURBB Kurchatov Arra 47.12 310 P P 04 40 31.7 -0.1
comp=Z,0.8nm,0.4s,baz=85,slow=7.1,SNR=9.0
ILAR Eielson Array 52.30 31 P P 04 41 12.9 +1.9
comp=Z,0.4nm,0.9s,baz=270,slow=9.6,SNR=4.3
KK31 Karatay Array 53.86 302 P P 04 41 22.8 0.0
KK31 IAmb IAmb 04 41 23.6
comp=Z,1.8nm,0.8s
KKAR Karatay Array 53.86 302 P P 04 41 22.7 -0.1
WRAB Tennant Creek 54.17 187 P P 04 41 24.5 -0.7
WRAB IAmb IAmb 04 41 27.7
comp=Z,4.6nm,0.9s
WRA Warramunga Arr 54.18 187 P P 04 41 24.5 -0.7
comp=Z,4.5nm,0.7s,baz=5.0,slow=7.7,SNR=21
CHGR Chuyangaron 56.16 297 P P 04 41 38.6 -1.0
ASAR Alice Springs 57.91 187 P P 04 41 51.4 -0.4
comp=Z,0.8nm,0.6s,baz=13,slow=14,SNR=4.1
ABKAR Akbulak array 59.14 311 P P 04 41 59.7 -0.6
ABKAR IAmb IAmb 04 42 01.2
comp=Z,2.2nm,0.9s
KBZ Khabaz 72.11 311 P P 04 43 24.9 +1.0
comp=Z,2.1nm,0.8s,baz=157,slow=2.7,SNR=3.6
AKASG Malin Array Be 76.01 322 P P 04 43 46.2 -0.4
comp=Z,0.4nm,0.4s,baz=45,slow=6.2,SNR=4.3
BRTR Keskin Array B 80.09 311 P P 04 44 11.6 +2.0
comp=Z,0.6nm,0.8s,baz=76,slow=5.4,SNR=3.4

IDC 23 04:32:49.7±4.6, 61.°43N×4.°80E, h0km, mb1 3.5/3, mb1mx3.1/47, mbtmp3.4/3, ML2.7/3, Error ellipse: s-maj=43.2km s-min=25.5km az=79.0
NAO 23 04:32:49.7±1.0, 61.°24N×4.°79E, h10km±6km, ML2.6
BGS 23 04:32:50.1±1.6, 61.°27N×4.°46E, h10km, ML3.0
BER 23 04:32:50.7±2.3, 61.°27N×4.°51E, h12km, ML2.6, ML3.0(BGS), Confirmed Earthquake
HEL 23 04:32:50.4±0.3, 61.°19N×4.°87E, h10km, ML2.0, ML2.0(UPP), Confirmed Earthquake
UPP 23 04:32:52.5±2.4, 61.°09N×5.°21E, h0km, ML2.0, Suspected explosion
ISC 23 04:32:46.2±0.7, 61.°26N±0.°03×4.°44E±0.°04, h10km, n135, σ2s47/217, 6C, Southern Norway

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
SUE Sulen 0.26 143 ⇑iP Pb 04 32 54.9 +2.0
SUE eS Sb 04 32 57.8 +0.4
SUE IAML 04 32 58.5
comp=Z,2μm,0.1s
FOO Floro 0.44 41 Pg Pb 04 32 57.5 +1.4
FOO Lg Lg 04 33 02.3
FOO Floro 0.44 41 ⇑iP Pb 04 32 57.5 +1.4
FOO eS Sg 04 33 02.4 +1.7
FOO IAML 04 33 02.8
comp=E,421nm,0.4s
FOO IAML 04 33 03.7
comp=N,322nm,0.2s
FOO Floro 0.44 41 ⇑iP Pb 04 32 57.5 +1.4
FOO eS Sg 04 33 02.4 +1.7
FOO IAML 04 33 02.8
comp=E,421nm,0.4s
FOO IAML 04 33 03.7
comp=N,322nm,0.2s
FOO Floro 0.44 41 ⇑iP Pb 04 32 57.5 +1.4
FOO eS Sg 04 33 02.4 +1.7
FOO IAML 04 33 03.0
comp=Z,2μm,0.2s
HYA Hoyanger 0.85 96 Pg Pg 04 33 03.9 +1.4
HYA Lg Lg 04 33 13.9
ASK Askoy 0.87 155 eP Pb 04 33 05.5 +2.2
ASK eS Sb 04 33 16.8 +1.9
ASK IAML 04 33 19.3
comp=Z,433nm,0.4s
BER Bergen 0.99 153 Pg Pn 04 33 07.7 +1.7
BER Lg Lg 04 33 20.4
BER Bergen 0.99 153 eP Pn 04 33 07.5 +1.5
BER eS Sb 04 33 20.4 +2.0
BER IAML 04 33 21.4
comp=N,124nm,0.2s
BER IAML 04 33 22.3
comp=E,220nm,0.2s
BER Bergen 0.99 153 eP Pn 04 33 07.5 +1.5
BER eS Sb 04 33 20.4 +2.0
BER IAML 04 33 21.4
comp=N,124nm,0.2s
BER IAML 04 33 22.3
comp=E,220nm,0.2s
BER Bergen 0.99 153 eP Pn 04 33 07.6 +1.5
BER eS Sb 04 33 20.3 +2.0
BER IAML 04 33 22.2
comp=Z,419nm,0.2s
AKN Aaknes 1.52 52 Pg Pb 04 33 15.7 +1.2
AKN Lg Lg 04 33 34.6
AKN Aaknes 1.52 52 eP Pb 04 33 15.5 +1.0
AKN eS Sn 04 33 34.5 +1.1
AKN IAML 04 33 36.1
comp=Z,606nm,0.1s
ODD1 Odda 1.73 141 eP Pn 04 33 18.7 +2.3
ODD1 eS Sn 04 33 39.6 +1.0
ODD1 IAML 04 33 42.5
comp=Z,535nm,0.3s
MOL Molde 1.97 47 Pn Pn 04 33 21.6 +2.0
MOL Sn Sn 04 33 45.8 +1.5
MOL Molde 1.97 47 eP Pb 04 33 22.3 +0.2
MOL eS Sn 04 33 46.0 +1.7
MOL IAML 04 33 46.3
comp=E,258nm,0.2s
MOL IAML 04 33 50.2
comp=N,214nm,0.3s
MOL Molde 1.97 47 eP Pb 04 33 22.3 +0.2
MOL eS Sn 04 33 46.0 +1.7
MOL IAML 04 33 46.3
comp=E,258nm,0.2s
MOL IAML 04 33 50.2
comp=N,214nm,0.3s
MOL Molde 1.97 47 ⇑iP Pb 04 33 22.3 +0.2
MOL eS Sn 04 33 46.0 +1.7
MOL IAML 04 33 48.8
comp=Z,153nm,0.3s
SKAR Skarslia 1.97 106 eP Pn 04 33 22.0 +2.3
SKAR eS Sn 04 33 45.4 +1.0
SKAR IAML 04 33 49.5
comp=Z,275nm,0.6s
KMY Karmoy 2.10 169 Pn Pn 04 33 23.8 +2.4
KMY Pg Pb 04 33 26.9 +2.6
KMY Lg Lg 04 33 54.2
KMY Karmoy 2.10 169 eP Pn 04 33 23.7 +2.4
KMY eS Sn 04 33 47.8 +0.4
KMY IAML 04 34 03.4
comp=Z,54nm,0.6s
BLS5 Blasjo 2.10 151 Pn Pn 04 33 24.0 +2.6
BLS5 Pg Pb 04 33 26.8 +2.4
BLS5 Sn Sn 04 33 48.2 +0.6
BLS5 Lg Lg 04 33 53.2
BLS5 Blasjo 2.10 151 eP Pn 04 33 23.9 +2.4
BLS5 eS Sn 04 33 48.4 +0.8
BLS5 IAML 04 33 54.8
comp=Z,87nm,0.3s
DOMB Dombas 2.34 68 Pn Pn 04 33 27.4 +2.6
DOMB Pg Pb 04 33 29.4 +1.0
DOMB Lg Lg 04 33 58.9
DOMB Dombas 2.34 68 eP Pn 04 33 27.3 +2.6
DOMB eS Sn 04 33 55.4 +1.9
DOMB IAML 04 34 03.0
comp=Z,86nm,0.5s
LRW Lerwick 2.99 250 eS Sn 04 34 10.3 +1.0
LRW IAML 04 34 12.6
comp=N,17nm,0.3s
LRW IAML 04 34 13.2
comp=E,24nm,0.4s
LRW Lerwick 2.99 250 eS Sn 04 34 10.3 +1.0
LRW IAML 04 34 12.6
comp=N,17nm,0.3s
LRW IAML 04 34 13.2
comp=E,24nm,0.4s
LRW Lerwick 2.99 250 eS Sn 04 34 10.3 +1.0
LRW IAML 04 34 12.6
comp=N,17nm,0.3s
LRW IAML 04 34 13.2
comp=E,24nm,0.4s
KON Kongsberg 3.02 120 Pn Pn 04 33 35.6 +1.5
KON Sn Sn 04 34 09.9 -0.5
KON Lg Lg 04 34 18.3
KONO Kongsberg 3.02 120 eP Pn 04 33 36.2 +2.2
KONO eS Sn 04 34 10.2 -0.1
KONO IAML 04 34 23.5
comp=Z,66nm,0.5s
NC204 NORSAR Array S 3.05 87 eP Pn 04 33 36.0 +1.5
NC204 eS Sn 04 34 10.1 -1.0
NC204 IAML 04 34 24.0
comp=Z,50nm,0.7s
SAN1 Sandwick 3.06 248 eS Sn 04 34 10.9 -0.3
SAN1 Sandwick 3.06 248 eS Sn 04 34 10.9 -0.3
SAN1 Sandwick 3.06 248 eS Sn 04 34 10.9 -0.3
NBO00 NORSAR Array S 3.08 92 eP Pn 04 33 36.7 +1.8
NBO00 eS Sn 04 34 12.0 +0.2
NBO00 IAML 04 34 28.6
comp=Z,42nm,0.1s
WAL1 Walls 3.14 254 eS Sn 04 34 12.5 -0.6
WAL1 Walls 3.14 254 eS Sn 04 34 12.5 -0.6
WAL1 Walls 3.14 254 eS Sn 04 34 12.5 -0.6
NAO01 NORSAR Array S 3.16 95 ⇑iP Pn 04 33 37.8 +1.8
NAO01 eS Sn 04 34 13.1 -0.7
NAO01 IAML 04 34 27.4
comp=Z,85nm,0.5s
SNART Snartemo 3.25 153 eP Pn 04 33 39.5 +2.3
SNART eS Sn 04 34 15.2 -0.7
SNART IAML 04 34 29.0
comp=Z,62nm,0.2s
NB2 NORSAR Subarra 3.29 91 Pn Pn 04 33 39.3 +1.5
baz=276,slow=14
NB2 Pg Pb 04 33 44.7 +0.1
NB2 Sn Sn 04 34 16.1 -0.8
baz=279,slow=22
NB2 Lg Lg 04 34 27.1
baz=276,slow=37
NB2 NORSAR Subarra 3.29 91 Pn Pn 04 33 39.3 +1.5
baz=276,slow=14
NB2 Pg Pb 04 33 44.7 +0.1
NB2 Sn Sn 04 34 16.1 -0.8
baz=279,slow=22
NB2 Sg Sb 04 34 27.1 +2.3
baz=276,slow=37
NOA NORSAR Array B 3.29 91 eP Pn 04 33 39.6 +1.8
NOA eS Sn 04 34 17.1 +0.1
NOA NORSAR Array B 3.29 91 eP Pn 04 33 39.6 +1.8
NOA eS Sn 04 34 17.1 +0.1
NOA NORSAR Array B 3.29 91 Pn Pn 04 33 38.3 +0.5
comp=Z,0.3nm,0.3s,baz=276,slow=15,SNR=44
NOA Pg Pb 04 33 44.0 -0.6
comp=Z,0.5nm,0.3s,baz=280,slow=17,SNR=53
NOA Lg Lg 04 34 23.0
comp=Z,1.0nm,0.3s,baz=6.1,slow=14,SNR=8.2
NOA NORSAR Array B 3.29 91 eP Pn 04 33 39.6 +1.8
NOA eS Sn 04 34 17.1 +0.1
NB201 NORSAR Array S 3.33 91 eP Pn 04 33 39.6 +1.4
NB201 eS Sn 04 34 17.1 -0.8
NB201 IAML 04 34 32.3
comp=Z,56nm,0.5s
NC303 NORSAR Array S 3.35 88 eP Pn 04 33 40.0 +1.5
NC303 eS Sn 04 34 17.2 -1.1
NC303 IAML 04 34 38.7
comp=Z,60nm,0.6s
OSL Oslo 3.37 111 eP Pn 04 33 41.0 +2.1
OSL eS Sn 04 34 18.4 -0.4
OSL IAML 04 34 37.7
comp=Z,74nm,0.3s
NC602 NORSAR Array S 3.50 96 eP Pn 04 33 41.8 +1.2
NC602 eS Sn 04 34 20.3 -1.7
NRA0 NORESS Array S 3.50 96 Pn Pn 04 33 41.8 +1.2
baz=296,slow=14
NRA0 Sn Sn 04 34 20.2 -1.8
baz=287,slow=22
NRA0 Lg Lg 04 34 32.9
baz=279,slow=28
NRA0 NORESS Array S 3.50 96 Pn Pn 04 33 41.8 +1.2
baz=296,slow=14
NRA0 Sn Sn 04 34 20.2 -1.8
baz=287,slow=22
NRA0 Sg Sb 04 34 32.9 +2.3
baz=279,slow=28
HOMB Homborsund 3.64 144 Pn Pn 04 33 44.7 +2.3
HOMB Sn Sn 04 34 24.7 -0.7
HOMB Lg Lg 04 34 37.5
HOMB Homborsund 3.64 144 eP Pn 04 33 44.8 +2.3
HOMB eS Sn 04 34 24.6 -0.8
HOMB IAML 04 34 41.7
comp=Z,30nm,0.5s
STRU Stroemstad 4.04 121 eP Pn 04 33 48.3 +0.2
STRU Stroemstad 4.04 121 eP Pn 04 33 48.3 +0.2
STRU eP Pb 04 33 49.5 -7.9
STRU Stroemstad 4.04 121 P Pn 04 33 48.3 +0.2
FINU Finntorp 4.41 112 eP Pn 04 33 54.4 +1.3
FINU eS Sn 04 34 41.3 -3.1
FINU Finntorp 4.41 112 P Pn 04 33 54.4 +1.3
FINU S Sn 04 34 41.3 -3.1
UDD Uddeholm 4.66 101 eP Pn 04 33 57.8 +1.3
UDD eS Sn 04 34 48.5 -2.0
UDD Uddeholm 4.66 101 P Pn 04 33 57.8 +1.3
UDD S Sn 04 34 48.5 -2.0
HFS Hagfors 4.69 100 Pn Pn 04 33 58.2 +1.3
baz=278,slow=14
HFS Sn Sn 04 34 48.7 -2.6
baz=281,slow=28
HFS Lg Lg 04 35 09.5
baz=277,slow=37
HFS Hagfors 4.69 100 Pn Pn 04 33 58.2 +1.3
baz=278,slow=14
HFS Sn Sn 04 34 48.7 -2.6
baz=281,slow=28
NSS Namsos 4.75 43 eP Pn 04 33 59.7 +2.0
NSS eS Sn 04 34 53.0 +0.1
NSS IAML 04 35 23.5
comp=Z,19nm,0.4s
TJOU Tjoern 4.88 128 eP Pn 04 34 01.1 +1.7
TJOU eS Sn 04 34 52.8 -3.1
TJOU Tjoern 4.88 128 P Pn 04 34 01.1 +1.7
TJOU S Sn 04 34 52.8 -3.1
NASU Vaermlandsnaes 4.96 114 eP Pn 04 34 01.9 +1.2
NASU Vaermlandsnaes 4.96 114 P Pn 04 34 01.9 +1.2
BIGH Upper Bighouse 5.04 240 eS Sn 04 34 59.1 -0.9
BIGH IAML 04 35 01.4
comp=E,13nm,0.2s
BIGH IAML 04 35 02.3
comp=N,13nm,0.2s
BIGH Upper Bighouse 5.04 240 eS Sn 04 34 59.1 -0.9
BIGH IAML 04 35 01.4
comp=E,13nm,0.2s
BIGH IAML 04 35 02.3
comp=N,13nm,0.2s
BIGH Upper Bighouse 5.04 240 eS Sn 04 34 59.1 -0.9
BIGH IAML 04 35 01.4
comp=E,13nm,0.2s
BIGH IAML 04 35 02.3
comp=N,13nm,0.2s
NOD Norderasen 5.32 61 eP Pn 04 34 07.7 +2.1
MCD Coleburn Disti 5.39 230 eS Sn 04 35 07.0 -1.6
MCD IAML 04 35 10.5
comp=N,9.9nm,0.2s
MCD IAML 04 35 11.6
comp=E,12nm,0.2s
MCD Coleburn Disti 5.39 230 eS Sn 04 35 07.0 -1.6
MCD IAML 04 35 10.5
comp=N,9.9nm,0.2s
MCD IAML 04 35 11.6
comp=E,12nm,0.2s
MCD Coleburn Disti 5.39 230 eS Sn 04 35 07.0 -1.6
MCD IAML 04 35 10.5
comp=N,9.9nm,0.2s
MCD IAML 04 35 11.6
comp=E,12nm,0.2s
ROTU Roteberg 5.48 83 eP Pn 04 34 09.0 +1.3
ROTU eS Sn 04 35 07.3 -3.4
ROTU Roteberg 5.48 83 P Pn 04 34 09.0 +1.3
ROTU S Sn 04 35 07.3 -3.4
NRAU Nora 5.52 103 eP Pn 04 34 10.3 +2.0
NRAU Nora 5.52 103 P Pn 04 34 10.3 +2.0
BORU Boraas 5.59 127 eP Pn 04 34 11.1 +1.7
BORU Boraas 5.59 127 iP Pn 04 34 11.3 +2.0
BORU eS Sn 04 35 12.1 -1.4
BORU Boraas 5.59 127 P Pn 04 34 11.1 +1.7
FALU Falun 5.62 93 eP Pn 04 34 11.6 +1.9
FALU Falun 5.62 93 P Pn 04 34 11.6 +1.9
FKPU Falk 5.63 119 eP Pn 04 34 11.5 +1.5
FKPU Falk 5.63 119 P Pn 04 34 11.5 +1.5
DRUM Mains of Drumt 5.64 222 eS Sn 04 35 13.8 -0.9
DRUM IAML 04 35 16.5
comp=E,13nm,0.2s
DRUM IAML 04 35 18.5
comp=N,17nm,0.3s
DRUM Mains of Drumt 5.64 222 eS Sn 04 35 13.8 -0.9
DRUM IAML 04 35 16.5
comp=E,13nm,0.2s
DRUM IAML 04 35 18.5
comp=N,17nm,0.3s
DRUM Mains of Drumt 5.64 222 eS Sn 04 35 13.8 -0.9
DRUM IAML 04 35 16.5
comp=E,13nm,0.2s
DRUM IAML 04 35 18.5
comp=N,17nm,0.3s
ASKU Askersund 5.72 110 eP Pn 04 34 12.4 +1.4
ASKU Askersund 5.72 110 P Pn 04 34 12.4 +1.4
HASU Hassela 5.86 76 eP Pn 04 34 14.9 +1.9
HASU Hassela 5.86 76 P Pn 04 34 14.9 +1.9
ARNU Arnoeviken 6.21 80 eP Pn 04 34 19.1 +1.3
ARNU Arnoeviken 6.21 80 P Pn 04 34 19.1 +1.3
STOK Stokkvaagen 6.34 33 eP Pn 04 34 22.5 +2.9
STOK eS Sn 04 35 30.2 -1.8
INVG Invergeldie, C 6.55 226 eS Sn 04 35 35.2 -1.9
INVG IAML 04 35 37.9
comp=N,5.0nm,0.2s
INVG IAML 04 35 39.9
comp=E,3.8nm,0.2s
INVG Invergeldie, C 6.55 226 eS Sn 04 35 35.2 -1.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
INVG				IAML		04 35 37.9	
	comp=N,5.0nm,0.2s						
INVG				IAML		04 35 39.9	
	comp=E,3.8nm,0.2s						
INVG	**Invergeldie, C**	**6.55**	**226**	*e*S	**Sn**	**04 35 35.2**	**-1.9**
INVG				IAML		04 35 37.9	
	comp=N,5.0nm,0.2s						
INVG				IAML		04 35 39.9	
	comp=E,3.8nm,0.2s						
DEL	**Delary**	**6.85**	**130**	*e*P	**Pn**	**04 34 29.5**	**+2.9**
DEL				*e*S	**Sn**	**04 35 42.0**	**-2.6**
LAWE	**Loch Awe, Argy**	**7.16**	**230**	*e*S	**Sn**	**04 35 49.5**	**-2.7**
LAWE				IAML		04 35 51.8	
	comp=N,5.5nm,0.3s						
LAWE				IAML		04 35 53.4	
	comp=E,5.1nm,0.3s						
LAWE	**Loch Awe, Argy**	**7.16**	**230**	*e*S	**Sn**	**04 35 49.5**	**-2.7**
LAWE				IAML		04 35 51.8	
	comp=N,5.5nm,0.3s						
LAWE				IAML		04 35 53.4	
	comp=E,5.1nm,0.3s						
LAWE	**Loch Awe, Argy**	**7.16**	**230**	*e*S	**Sn**	**04 35 49.5**	**-2.7**
LAWE				IAML		04 35 51.8	
	comp=N,5.5nm,0.3s						
LAWE				IAML		04 35 53.4	
	comp=E,5.1nm,0.3s						
EKA	**Eskdalemuir Ar**	**7.17**	**217**	Pn	**Pn**	**04 34 34.0**	**+3.1**
EKA				Sn	**Sn**	**04 35 50.0**	**-2.4**
EKA	**Eskdalemuir Ar**	**7.17**	**217**	Pn	**Pn**	**04 34 34.0**	**+3.1**
EKA				Sn	**Sn**	**04 35 50.0**	**-2.4**
ESK	**Eskdalemuir**	**7.19**	**217**	*e*S	**Sn**	**04 35 51.0**	**-1.9**
ESK				IAML		04 35 55.0	
	comp=N,5.8nm,0.4s						
ESK				IAML		04 35 56.5	
	comp=E,3.7nm,0.2s						
ESK	**Eskdalemuir**	**7.19**	**217**	*e*S	**Sn**	**04 35 51.0**	**-1.9**
ESK				IAML		04 35 55.0	
	comp=N,5.8nm,0.4s						
ESK				IAML		04 35 56.5	
	comp=E,3.7nm,0.2s						
ESK	**Eskdalemuir**	**7.19**	**217**	*e*S	**Sn**	**04 35 51.0**	**-1.9**
ESK				IAML		04 35 55.0	
	comp=N,5.8nm,0.4s						
ESK				IAML		04 35 56.5	
	comp=E,3.7nm,0.2s						
LUNU	**Lund**	**7.36**	**136**	*i* P	**Pn**	**04 34 35.3**	**+1.7**
AAL	**Aland**	**7.70**	**91**	*e*P	**Pn**	**04 34 39.0**	**+0.8**
AAL				*e*S	**Sn**	**04 36 01.6**	**-3.9**
BSD	**Bornholm Skovb**	**8.28**	**133**	*i* P	**Pn**	**04 34 46.9**	**+0.8**
BSD				*e*S	**Sn**	**04 36 13.7**	**-5.8**
BSD	**Bornholm Skovb**	**8.28**	**133**	*e*P	**Pn**	**04 34 47.0**	**+0.8**
BSD				*e*S	**Sn**	**04 36 13.7**	**-5.8**
BSD				IAML		04 37 18.2	
	comp=Z,5.6nm,0.4s						
RAF	**Rauma**	**8.38**	**84**	*e*P	**Pn**	**04 34 47.7**	**+0.1**
RAF				*e*S	**Sn**	**04 36 17.2**	**-4.9**
RAF					MSG	04 36 24.6	
	comp=Z,0.5nm,0.1s						
RAF	**Rauma**	**8.38**	**84**	*e*P	**Pn**	**04 34 47.7**	**+0.1**
RAF				*e*S	**Sn**	**04 36 17.2**	**-4.9**
RAF					MSG	04 36 24.6	
	comp=Z,0.5nm,0.1s						
VAF	**Ylistaro**	**8.71**	**70**	*e*P	**Pn**	**04 34 53.1**	**+1.0**
VAF				*e*S	**Sn**	**04 36 24.3**	**-5.9**
VAF					MSG	04 36 37.5	
	comp=Z,0.6nm,0.1s						
VAF	**Ylistaro**	**8.71**	**70**	*e*P	**Pn**	**04 34 53.1**	**+1.0**
VAF				*e*S	**Sn**	**04 36 24.3**	**-5.9**
VAF					MSG	04 36 37.5	
	comp=Z,0.6nm,0.1s						
KEF	**Keuruu**	**9.73**	**76**	*e*P	**Pn**	**04 35 05.9**	**-0.2**
KEF				*e*S	**Sn**	**04 36 48.5**	**-6.7**
KEF	**Keuruu**	**9.73**	**76**	*e*P	**Pn**	**04 35 05.9**	**-0.2**
KEF				*e*S	**Sn**	**04 36 48.5**	**-6.7**
OUF	**Merijarvi**	**9.78**	**63**	*e*P	**Pn**	**04 35 05.9**	**-0.7**
OUF				*e*S	**Sn**	**04 36 49.9**	**-6.4**
OUF	**Merijarvi**	**9.78**	**63**	*e*P	**Pn**	**04 35 05.9**	**-0.7**
OUF				*e*S	**Sn**	**04 36 49.9**	**-6.4**
LANU	**Lannavaara**	**10.11**	**40**	*e*P	**Pn**	**04 35 10.8**	**-0.4**
LANU				*e*S	**Sn**	**04 36 58.1**	**-6.4**
LANU	**Lannavaara**	**10.11**	**40**	*e*P	**Pn**	**04 35 10.8**	**-0.4**
LANU				*e*S	**Sn**	**04 36 58.1**	**-6.4**
SUF	**Sumiainen**	**10.30**	**72**	*e*P	**Pn**	**04 35 13.5**	**-0.3**
SUF				*e*S	**Sn**	**04 37 01.7**	**-7.5**
SUF	**Sumiainen**	**10.30**	**72**	*e*P	**Pn**	**04 35 13.5**	**-0.3**
SUF				*e*S	**Sn**	**04 37 01.7**	**-7.5**
FIA0	**FINESS Array S**	**10.38**	**80**	Pn	**Pn**	**04 35 13.0**	**-1.9**
FIA0	**FINESS Array S**	**10.38**	**80**	*e*P	**Pn**	**04 35 14.3**	**-0.6**
FIA0				*e*S	**Sn**	**04 37 04.2**	**-6.9**
FIA0	**FINESS Array S**	**10.38**	**80**	*e*P	**Pn**	**04 35 14.3**	**-0.6**
FIA0				*e*S	**Sn**	**04 37 04.2**	**-6.9**
FINES	**FINESS Array B**	**10.38**	**80**	Pn	**Pn**	**04 35 16.3**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=282,slow=11,SNR=5.8						
FINES				Sn	**Sn**	**04 37 05.9**	**-5.2**
	comp=Z,0.1nm,0.3s,baz=283,slow=21,SNR=2.2						
FINES				Lg	Lg	04 38 02.7	
	comp=Z,0.3nm,0.3s,baz=270,slow=26,SNR=2.8						
FIA1	**FINESS Array S**	**10.38**	**80**	*e*P	**Pn**	**04 35 14.3**	**-0.6**
FIA1				*e*S	**Sn**	**04 37 04.2**	**-6.9**
FIA1	**FINESS Array S**	**10.38**	**80**	*e*P	**Pn**	**04 35 14.3**	**-0.6**
FIA1				*e*S	**Sn**	**04 37 04.2**	**-6.9**
ARA0	**ARCESS Array S**	**12.00**	**37**	Pn	**Pn**	**04 35 37.3**	**+0.2**
	baz=231,slow=14						
ARA0	**ARCESS Array S**	**12.00**	**37**	Pn	**Pn**	**04 35 37.3**	**+0.2**
	baz=231,slow=14						
ARCES	**ARCESS Array B**	**12.00**	**37**	Pn	**Pn**	**04 35 36.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=230,slow=13,SNR=7.1						
ARCES				Lg	Lg	04 38 56.0	
	comp=Z,0.1nm,0.3s,baz=231,slow=34,SNR=3.0						
SPA0	**Spitsbergen Ar**	**17.41**	**8**	P	**P**	**04 36 51.9**	**+1.8**
	baz=209,slow=12						
SPA0	**Spitsbergen Ar**	**17.41**	**8**	P	**P**	**04 36 51.9**	**+1.8**
	baz=209,slow=12						

IDC **23** *04:35:38.1±1.6, 2.98S×130.02E, h0km, mb3.6/2, mb1 4.0/5, mb1mx3.6/32, mbtmp3.8/5, ML3.4/3, Error ellipse: s-maj=46.1km s-min=21.3km az=99.0*

DJA **23** *04:35:42.4±0.3, 3˚S±4˚×130˚E±˚, h10km, M3.5/7, MLv3.7/7*

ISC 23 04:35:41.2±1.0, 2.86S±0.06×130.19E±0.05, h25km, n8, σ1.89/12, Seram

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
MSAI	**Masohi**	**1.35**	**249**	P	**Pb**	**04 36 05.3**	**-0.5**
MSAI				S	**Sb**	**04 36 25.3**	**+2.6**
FAKI	**Fak Fak**	**2.06**	**92**	P	**Pb**	**04 36 17.7**	**-0.1**
FAKI				S	**Sb**	**04 36 45.8**	**+2.8**
SIJI	**Sorong**	**2.25**	**29**	Pn	**Pb**	**04 36 19.3**	**-1.9**
	5.5nm,0.3s,baz=109,slow=3.7,SNR=7.8						
SIJI				Sn	**Sb**	**04 36 49.9**	**+1.3**
	11nm,0.3s,baz=242,slow=20,SNR=3.6						
SWI	**Sorong**	**2.25**	**28**	P	**Pb**	**04 36 20.9**	**-0.3**
SWI				S	**Sb**	**04 36 49.8**	**+1.1**
FITZ	**Fitzroy Crossi**	**15.79**	**196**	Pn	**Pn**	**04 39 19.8**	**-2.2**
	0.1nm,0.3s,baz=22,slow=11,SNR=2.3						
WRA	**Warramunga Arr**	**17.45**	**167**	P	**Pn**	**04 39 41.2**	**-1.9**
	0.2nm,0.3s,baz=346,slow=12,SNR=5.2						
ASAR	**Alice Springs**	**20.99**	**170**	P	**P**	**04 40 22.2**	**-0.7**
	3.5nm,0.5s,baz=352,slow=11,SNR=23						
MKAR	**Makanchi Array**	**64.91**	**326**	P	**P**	**04 46 19.9**	**+1.3**
	0.1nm,0.4s,baz=123,slow=8.3,SNR=1.9						

NEIC **23** *04:42:52.0±1.7, 7.91S±0.05×129.3E±0.1, h61km±4km, mb4.2/8, Error ellipse: s-maj=14.6km s-min=7.7km az=79.0*

IDC **23** *04:42:53.3±2.6, 7.73S×129.09E, h44km±26km, mb3.9/8, mb1 4.2/11, mb1mx4.0/29, mbtmp4.3/11, ML4.6/2, MS3.3/4, Ms1 3.3/4, ms1mx3.3/44, Error ellipse: s-maj=29.7km s-min=15.5km az=69.0*

DJA **23** *04:42:57.9±0.4, 8˚S±3˚×12˚9E±˚, h141km±10km, M4.6/8, mb4.6/7, mB5.2/3, MLv4.6/8, Mw(mB)4.6/3, Mwp6.0/1*

ISC 23 04:42:52.4±0.5, 7.88S±0.05×129.25E±0.06, h50km, n51, σ1.84/50, mb4.2/11, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
SAUI	**Saumlaki**	**2.04**	**93**	P	Pn	04 43 34.1	+10
AAI	**Ambon**	**4.29**	**346**	P	**Pn**	**04 43 57.3**	**+2.1**
NLAI	**Namlea**	**5.08**	**335**	P	**Pn**	**04 44 08.0**	**+2.0**
NLAI				S	**Sn**	**04 45 05.4**	**+2.0**
SOEI	**Soe**	**5.26**	**249**	P	Pn	04 44 15.7	+7.1
	1.1nm98nm,0.7s						
MTN	**Manton Dam**	**5.27**	**160**		Pn	04 44 07.3	-1.3
MTN				Sn	**Sn**	**04 45 07.8**	**-0.4**
FAKI	**Fak Fak**	**5.76**	**31**	P	**Pn**	**04 44 16.3**	**+0.9**
	0.4nm46nm,0.6s						
FAKI	**Fak Fak**	**5.76**	**31**		**Pn**	**04 44 15.1**	**-0.3**
FAKI				Sn	**Sn**	**04 45 18.1**	**-2.1**
SIJI	**Sorong**	**7.25**	**16**	P	**Pn**	**04 44 37.1**	**+1.3**
	8.1nm,0.3s,baz=205,slow=5.6,SNR=14						
SIJI				S	**Sn**	**04 45 54.1**	**-2.7**
	5.6nm,0.3s,baz=252,slow=19,SNR=4.2						
SIJI				LR	LR	04 47 53.6	
	comp=Z,140nm,21.2s,baz=242,slow=42						
SWI	**Sorong**	**7.25**	**16**	P	**Pn**	**04 44 37.2**	**+1.4**
	0.3nm57nm,1.0s						
SWI				S	**Sn**	**04 45 56.0**	**-0.9**
	0.3nm57nm,1.0s						
KNRA	**Kununurra**	**7.77**	**183**		Pn	04 44 40.7	-2.2
KNRA				Sn	**Sn**	**04 46 06.9**	**-2.6**
WSI	**Waingapu**	**9.02**	**258**	P	**Pn**	**04 45 01.9**	**+1.8**
LUWI	**Luwuk**	**9.37**	**316**	P	Pn	04 45 11.7	+6.9
LUWI	**Luwuk**	**9.37**	**316**		**Pn**	**04 45 04.9**	**+0.1**
SPSI	**Sidrap Palu**	**10.20**	**292**	P	Pn	04 45 21.7	+5.5
FITZ	**Fitzroy Crossi**	**10.75**	**199**	P	**Pn**	**04 45 25.0**	**+1.3**
	4.3nm,0.3s,baz=36,slow=10,SNR=102						
FITZ				S	**Sn**	**04 47 17.7**	**-5.0**
	2.2nm,0.3s,baz=90,slow=12,SNR=8.6						
FITZ				LR	LR	04 50 40.8	
	comp=Z,143nm,18.6s,baz=26,slow=43						
FITZ	**Fitzroy Crossi**	**10.75**	**199**		**Pn**	**04 45 23.6**	**-0.1**
FITZ					**Sn**	**04 47 22.0**	**-0.6**
SMPI	**Sarmi**	**11.09**	**59**	P	**Pn**	**04 45 31.2**	**+2.8**
	42µm3µm35nm,0.9s						
WB0	**Warramunga Arr**	**12.83**	**158**		**Pn**	**04 45 51.1**	**-1.1**
WB0				Sn	Sn	04 48 09.8	-3.8
WRAB	**Tennant Creek**	**12.96**	**158**		Pn	04 45 52.6	-1.5
WRA	**Warramunga Arr**	**12.97**	**158**	P	**Pn**	**04 45 52.9**	**-1.2**
	3.1nm,0.3s,baz=335,slow=13,SNR=34						
WRA				S	Sn	04 48 11.0	-6.0
	3.0nm,0.3s,baz=327,slow=20,SNR=10						
WRA				LR	LR	04 51 30.3	
	comp=Z,240nm,18.1s,baz=345,slow=39						
WB2	**Warramunga Arr**	**12.97**	**158**		Pn	04 45 52.3	-1.9
WR0	**Warramunga Arr**	**13.06**	**157**		Pn	04 45 54.0	-1.3
WR0				Sn	Sn	04 48 15.1	-4.1
COEN	**Coen**	**14.95**	**115**		**Pn**	**04 46 19.8**	**-0.8**
AS31	**Alice Springs**	**16.32**	**165**	P	**Pn**	**04 46 37.5**	**-0.8**
AS31				IAmb	IAmb	04 46 46.3	
	comp=Z,13nm,0.6s						
ASAR	**Alice Springs**	**16.32**	**165**	P	**Pn**	**04 46 38.5**	**+0.2**
	comp=Z,0.8nm,0.3s,baz=319,slow=7.1,SNR=30						
ASAR				S	Sn	04 49 31.5	-7.1
	comp=Z,0.8nm,0.3s,baz=348,slow=26,SNR=5.4						
ASAR				LR	LR	04 53 33.6	
	comp=Z,120nm,19.7s,baz=343,slow=39						
ASAR				ScP	**ScP**	**04 55 00.1**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=350,slow=2.3,SNR=9.1						
PMG	**Port Moresby**	**17.77**	**96**	P	**P**	**04 46 59.5**	**+2.9**
	comp=Z,1.2nm,0.3s,baz=285,slow=10,SNR=4.5						
PMG	**Port Moresby**	**17.77**	**96**	P	**Pn**	**04 46 55.0**	**-1.3**
PMG				IAmb	IAmb	04 47 02.1	
	comp=Z,23nm,0.8s						
CTA	**Charters Tower**	**20.46**	**128**	P	**P**	**04 47 30.3**	**+4.2**
	comp=Z,9.2nm,0.9s,baz=320,slow=9.9,SNR=5.5						
STKA	**Stephens Creek**	**26.50**	**156**	P	**P**	**04 48 27.7**	**+2.4**
	comp=Z,4.0nm,0.7s,baz=328,slow=12,SNR=9.5						
STKA	**Stephens Creek**	**26.50**	**156**	P	**P**	**04 48 25.2**	**0.0**
CMAR	**Chiang Mai Arr**	**39.73**	**311**	P	**P**	**04 50 20.7**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=138,slow=9.6,SNR=4.4						
WHN	**Wuhan**	**40.79**	**340**	P	**P**	**04 50 28.8**	**-0.1**
MJAR	**Matsushiro Arr**	**44.98**	**10**	P	**P**	**04 51 01.4**	**-1.4**
	comp=Z,1.1nm,0.2s,baz=198,slow=9.8,SNR=5.0						
KSRS	**Korea Array**	**45.11**	**359**	P	**P**	**04 51 04.2**	**+0.4**
	comp=Z,1.3nm,0.7s,baz=179,slow=12,SNR=5.2						
XAN	**Xi'an**	**45.93**	**336**	P	**P**	**04 51 08.4**	**-2.0**
XAN				pP	pP	04 51 18.6	-4.0
XAN				sP	sP	04 51 23.4	-4.6
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GTA	**Gaotai**	**54.38**	**332**	*e*P	**P**	**04 52 14.3**	**-0.2**
GTA				pP	pwP	04 52 34.3	+2.6
GTA				sP	sP	04 52 42.9	+10
GTA				PcP	PP	04 54 27.4	+10
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SONM	**Songino Array**	**59.04**	**342**	P	**P**	**04 52 48.2**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=156,slow=7.0,SNR=5.0						
KSH	**Kashi**	**68.16**	**318**	P	P	04 53 55.6	+7.9
KSH				pP	pP	04 54 00.0	-0.9
KSH				pmax	pmax		
	comp=Z,380nm,5.9s						
MK31	**Makanchi Array**	**68.55**	**327**	P	**P**	**04 53 49.3**	**-0.5**
MK31				IAmb	IAmb	04 53 52.1	
	comp=Z,1.6nm,0.7s						
MKAR	**Makanchi Array**	**68.55**	**327**	P	**P**	**04 53 50.2**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=116,slow=8.1,SNR=35						
MAKZ	**Makanchi**	**68.73**	**327**	P	**P**	**04 53 50.2**	**-0.8**
GAR	**Garm**	**71.76**	**315**	P	**P**	**04 54 07.4**	**-2.4**
ZALV	**Zalesovo Beam**	**72.04**	**334**	P	**P**	**04 54 10.2**	**-0.7**
	comp=Z,2.4nm,0.7s,baz=121,slow=4.8,SNR=6.8						
CHGR	**Chuyangaron**	**72.42**	**315**	P	**P**	**04 54 12.4**	**-1.3**
ABKAR	**Akbulak array**	**82.73**	**322**	P	**P**	**04 55 09.7**	**-1.2**
ABKAR				IAmb	IAmb	04 55 25.4	
	comp=Z,2.6nm,1.1s						
TXAR	**Lajitas Array**	**126.02**	**59**	PKP	**PKiKP**	**05 01 51.6**	**+1.4**
	comp=Z,0.4nm,0.9s,baz=249,slow=0.8,SNR=3.1						
TORD	**Torodi Ar. Bea**	**128.24**	**280**	PKP	**PKiKP**	**05 01 55.8**	**+0.9**
	comp=Z,0.7nm,0.9s,baz=98,slow=1.8,SNR=3.7						
CPUP	**Villa Florida**	**145.40**	**170**	PKPbc	**PKPab**	**05 02 27.4**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=170,slow=1.4,SNR=3.5						
CPUP	**Villa Florida**	**145.40**	**170**		**PKPdf**	**05 02 22.9**	**-2.7**
LPAZ	**La Paz**	**150.47**	**144**	PKPbc	**PKiKP**	**05 02 43.0**	**+2.0**
	comp=Z,1.4nm,0.8s,baz=118,slow=5.8,SNR=4.0						
LPAZ	**La Paz**	**150.47**	**144**	PKPdf	**PKPdf**	**05 02 31.3**	**-3.6**

DDA **23** *04:50:19.7, 38.55N×43.08E, h8km±3km, MW3.5*

NSSP **23** *04:50:20.0, 38.67N×43.00E, h5km, Ms3.1*

ISK **23** *04:50:20.2, 38.65N×43.06E, h4km, ML3.3/15*

ISC 23 04:50:21.2±0.9, 38.61N±0.02×43.05E±0.02, h14km±8km, n40, σ0.98/58, 12C, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
VANB	**Van**	**0.27**	**93**	PG	**Pg**	**04 50 27.0**	**+0.1**
VANB				SG	**Sg**	**04 50 32.1**	**+1.4**
AKDM	**Akdamar-Van**	**0.29**	**191**	PG	**Pg**	**04 50 27.2**	**-0.1**
AKDM				SG	**Sg**	**04 50 31.9**	**+0.5**
ADCV	**BITLIS_Adilcev**	**0.32**	**308**	*i* P	**Pg**	**04 50 27.6**	**-0.4**
ADCV				IAML		04 50 33.0	
	comp=N,3µm,0.2s						
ADCV				IAML		04 50 33.0	
	comp=E,5µm,0.2s						
ADCV				*i* S	**Sg**	**04 50 33.3**	**+0.8**
MLAZ	**Malazgirt-MUS**	**0.66**	**324**	PG	**Pg**	**04 50 33.2**	**-0.9**
MLAZ				SG	**Sg**	**04 50 42.8**	**-0.1**
BLIS	**Bitlis-Merkez**	**0.76**	**255**	*i* P	**Pb**	**04 50 35.5**	**-0.9**
BLIS				*i* S	**Sb**	**04 50 45.8**	**-0.9**
BLIS				IAML		04 50 48.0	
	comp=N,993nm,0.4s						
BLIS				IAML		04 50 49.0	
	comp=E,1µm,0.6s						
GURO	**Guroymak-BITLI**	**0.80**	**266**	PG	**Pb**	**04 50 36.1**	**-1.0**
CLDR	**Caldiran**	**0.86**	**52**	PG	**Pg**	**04 50 36.9**	**-1.0**
CLDR				SG	**Sg**	**04 50 48.0**	**-0.4**
CLDR	**Caldiran**	**0.86**	**52**	*i* P	**Pg**	**04 50 36.2**	**-1.7**
CLDR				*i* S	**Sb**	**04 50 49.3**	**-0.3**
CLDR				IAML		04 50 50.0	
	comp=N,425nm,0.5s						
CLDR				IAML		04 50 50.0	
	comp=E,501nm,0.4s						
AGRB	**Hanur-Agry**	**0.96**	**357**	PG	**Pg**	**04 50 37.8**	**-2.1**
SRTM	**Siirt_Merkez**	**1.08**	**236**	*i* P	**Pn**	**04 50 42.4**	**+0.2**
SRTM				*i* S	**Sn**	**04 50 59.6**	**+2.6**
SRTM				IAML		04 51 05.0	
	comp=E,451nm,0.6s						
SRTM				IAML		04 51 09.0	
	comp=N,520nm,0.7s						
SIRT	**Sirnak**	**1.21**	**204**	PN	**Pn**	**04 50 44.8**	**+0.9**
MUSM	**Mu-Merkez**	**1.21**	**276**	*i* P	**Pn**	**04 50 42.4**	**-1.5**
MUSM				*i* S	**Sg**	**04 50 59.8**	**-0.5**
VRTB	**Varto-Mus**	**1.36**	**294**	PN	**Pn**	**04 50 45.9**	**-0.1**
VRTB	**Varto-Mus**	**1.36**	**294**	*i* P	**Pb**	**04 50 46.3**	**-0.4**
VRTB				IAML		04 51 18.0	
	comp=N,234nm,0.6s						
VRTB				IAML		04 51 33.0	
	comp=E,256nm,0.8s						
CUKT	**Cukurca**	**1.43**	**162**	PN	**Pg**	**04 50 47.9**	**-0.9**
CUKT	**Cukurca**	**1.43**	**162**	*i* P	**Pg**	**04 50 47.8**	**-0.9**
CUKT				IAML		04 51 14.0	
	comp=E,236nm,0.5s						
CUKT				IAML		04 51 19.0	
	comp=N,237nm,1.0s						
IGDI	**IGDIR**	**1.49**	**32**	*i* P	**Pn**	**04 50 47.8**	**+0.2**
IGDI				IAML		04 51 14.0	
	comp=E,124nm,0.8s						
SVAN	**Silvan-Diyarba**	**1.53**	**253**	PN	**Pg**	**04 50 49.4**	**-1.2**
SVAN	**Silvan-Diyarba**	**1.53**	**253**	*i* P	**Pg**	**04 50 50.2**	**-0.4**
SVAN				*i* S	**Sg**	**04 51 11.2**	**+0.7**
VNNZ	**Vanand**	**1.61**	**22**	⇑*i*P	**Pb**	**04 50 50.3**	**-0.5**
VNNZ				⇑S	**Sb**	**04 51 12.1**	**+1.1**
KOPR	**Koprukoy-ERZUR**	**1.66**	**326**	PN	**Pn**	**04 50 50.6**	**+0.4**
KARO	**Karliova-Bingo**	**1.71**	**295**	PN	**Pb**	**04 50 51.6**	**-1.0**
METS	**Metsamor**	**1.73**	**27**	⇑*i*P	**Pg**	**04 50 53.4**	**-1.1**
METS				⇑S	**Sg**	**04 51 17.2**	**+0.2**
ARUZ	**Aruch**	**1.85**	**25**	⇑*i*P	**Pn**	**04 50 53.4**	**+0.7**
ARUZ				⇑S	**Sb**	**04 51 18.7**	**+0.6**
NRKZ	**NAREK**	**1.87**	**41**	⇑*i*P	**Pb**	**04 50 54.0**	**-1.2**
NRKZ				⇑S	**Sb**	**04 51 18.7**	**+0.3**
BNGB	**Bingl**	**1.89**	**282**	PN	**Pb**	**04 50 54.4**	**-1.3**
ECAT	**Cat-ERZURUM**	**1.90**	**302**	*i* P	**Pb**	**04 50 55.5**	**-0.3**
ECAT				*i* S	**Sg**	**04 51 22.1**	**-0.2**
AKDA	**Akdag**	**1.98**	**319**	*i* P	**Pn**	**04 50 55.4**	**+0.8**
GNI	**Garni**	**2.02**	**40**	⇑*i*P	**Pn**	**04 50 55.8**	**+0.7**
GNI				⇑S	**Sb**	**04 51 22.2**	**-0.7**
SENK	**Senkaya-Erzuru**	**2.02**	**345**	PN	**Pn**	**04 50 55.9**	**+0.7**
HANI	**Diyarbakir_Han**	**2.09**	**265**	*i* P	**Pb**	**04 50 58.7**	**-0.3**
HANI				*i* S	**Sg**	**04 51 28.5**	**+0.1**
HANI				IAML		04 51 30.0	
	comp=E,90nm,0.6s						
HANI				IAML		04 51 35.0	
	comp=N,88nm,0.9s						
EAK	**Akyaka**	**2.12**	**12**	*i* P	**Pg**	**04 51 00.9**	**-0.9**
EAK				IAML		04 51 40.0	
	comp=E,99nm,0.9s						
EAK				IAML		04 51 44.0	
	comp=N,78nm,0.9s						
YEDI	**Yedisu-Bingol**	**2.12**	**294**	PN	**Pn**	**04 50 57.1**	**+0.6**
KAPZ	**Kaputan**	**2.13**	**36**	⇑*i*P	**Pn**	**04 50 57.5**	**+0.9**
KAPZ				⇑S	**Sb**	**04 51 25.0**	**-1.2**
EMRE	**Erzurum,Aziziy**	**2.15**	**312**	*i* P	**Pb**	**04 51 00.3**	**+0.3**
EMRE				IAML		04 51 35.0	
	comp=N,130nm,0.8s						
EMRE				IAML		04 51 45.0	
	comp=E,127nm,0.9s						
KRIK	**Erzurum-spir**	**2.38**	**317**	*i* P	**Pg**	**04 51 07.9**	**+1.0**
DYBB	**Diyarbakir**	**2.38**	**255**	PN	**Pb**	**04 51 01.6**	**-2.4**
KOPT	**Kop Dagi**	**2.43**	**306**	*i* P	**Pb**	**04 51 05.8**	**+0.9**
KOPT				IAML		04 51 50.0	
	comp=N,49nm,0.9s						
DBAD	**Bademkaya**	**2.62**	**337**	*i* P	**Pb**	**04 51 08.3**	**+0.2**
BAYB	**BAYBURT**	**2.72**	**308**	*i* P	**Pb**	**04 51 10.9**	**+1.1**

DJA **23** *04:59:48.0±0.4, 14˚N±4˚×14˚7E±˚, h10km, M5.8/78, mb5.7/78, mB6.2/75, MLv5.8/1, Mw(mB)5.9/75, Mwp5.7/40*

NEIC **23** *04:59:49.8±1.9, 13.36N±0.07×146.13E±0.05, h7km±1km, mb5.5/259, Ms_20 5.9/580, Mwb5.8/40, Mww5.8, Mwc5.8(GCMT), Error ellipse: s-maj=11.3km s-min=8.7km az=186.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}2.84; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$-1.52; $M_{r\theta}$3.25; $M_{r\phi}$-1.52; $M_{\theta\phi}$4.83; Fault plane solution: $M_0$6.50000×10^{17} NP1:ϕ_s231.66000°, δ13.66000°, λ106.29000°. NP2: ϕ_s34.92000°, δ76.90000°, λ86.10000°. Principal axes: T 6.4815, Plg58.0000°, Azm300.0000°; N 0.0400, Plg4.0000°, Azm36.0000°; P -6.5215, Plg32.0000°, Azm128.0000°;*

BJI **23** *04:59:49.8±0.0, 13.39N×146.46E, h22km, mB5.8/78, mb5.3/79, Ms5.9/90, Ms7 5.7/84*

IDC **23** *04:59:50.5±0.3, 13.50N×146.12E, h0km, mb5.2/52, mb1 5.2/54, mb1mx5.2/54, mbtmp5.2/54, ML3.9/1, MS5.6/32, Ms1 5.6/32, ms1mx5.3/44, Error ellipse: s-maj=10.4km s-min=8.9km az=72.0*

MOS **23** *04:59:51.4±1.1, 13.42N×146.06E, h21km, mb5.6/67, MS5.7/33, Error ellipse: s-maj=7.8km s-min=4.2km az=115.3*

GCMT **23** *04:59:57.8±0.1, 13.28N±0.01×146.30E, h12km, MW5.8/160, Moment Tensor Solution. s152,c303; s160,c504; Duration: 1.9 Moment tensor: Scale 10^{17} Nm; M_{rr}5.00±.04; $M_{\theta\theta}$-1.37±.04; $M_{\phi\phi}$-3.63±.04; $M_{r\theta}$-0.29±.10; $M_{r\phi}$-2.81±.03; $M_{\theta\phi}$2.08±.11; Best double couple: $M_0$5.68500×10^{17} NP1:ϕ_s229.00000°, δ39.00000°, λ114.00000°. NP2:ϕ_s19.00000°, δ55.00000°, λ72.00000°. Principal axes: T 5.6070, Plg73.0000°, Azm241.0000°; N 0.1550, Plg15.0000°, Azm30.0000°; P -5.7620, Plg8.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC **23** *04:59:59, 13.37N×146.52E, h26km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}4.75; $M_{\theta\theta}$-1.47; $M_{\phi\phi}$-3.28; $M_{r\theta}$2.56; $M_{r\phi}$-2.91; $M_{\theta\phi}$2.07; Fault plane solution: $M_0$6.09000×10^{17} NP1:ϕ_s206.00000°, δ30.00000°, λ74.00000°. NP2:ϕ_s45.00000°, δ62.00000°, λ99.00000°. Principal axes: T 5.7874, Plg72.0000°, Azm336.0000°; N 0.5578, Plg8.0000°, Azm221.0000°; P -6.3452, Plg16.0000°, Azm128.0000°;*

NEIC **23** *04:59:59, 13.27N×146.31E, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}5.04; $M_{\theta\theta}$-1.32; $M_{\phi\phi}$-3.72; $M_{r\theta}$0.47; $M_{r\phi}$-2.85; $M_{\theta\phi}$2.75; Fault plane solution: $M_0$6.03000×10^{17} NP1:ϕ_s226.00000°, δ33.00000°, λ110.00000°. NP2:ϕ_s22.00000°, δ59.00000°, λ77.00000°. Principal axes: T 5.8499, Plg73.0000°, Azm260.0000°; N 0.3502, Plg11.0000°, Azm29.0000°; P -6.2002, Plg13.0000°, Azm121.0000°;*

ISC 23 04:59:54.4±0.4, 13.39N±0.03×146.22E±0.03, h30km±2km, h31km:pP-P, n1118, σ2.14/918, mb5.5/286, MS5.9/378, 45C-23D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res
GUMO	**Guam**	**1.33**	**279**	P	**Pn**	**05 00 13.1**	**-3.9**
GUMO						05 00 31.2	
GUMO	**Guam**	**1.33**	**279**	Pn	**Pn**	**05 00 16.0**	**-0.9**
	1µm,0.3s,baz=110,slow=5.7,SNR=104						
GUMO				Sn	**Sn**	**05 00 34.0**	**+0.3**
	4µm,0.3s,baz=139,slow=19,SNR=14						
GUMO	**Guam**	**1.33**	**279**		**Pn**	**05 00 13.1**	**-3.9**
GUMO				Sn	**Sn**	**05 00 31.2**	**-2.5**
ANA2	**Anatahan**	**2.98**	**351**	Pn	**Pn**	**05 00 37.6**	**-2.1**
SARN	**Sarigan**	**3.32**	**353**		**Pn**	**05 00 41.8**	**-2.7**
PATS	**Pohnpei**	**13.56**	**117**		**Pn**	**05 03 01.7**	**-3.2**
JCJ	**Chichijima**	**14.15**	**345**	Pn	**Pn**	**05 03 15.3**	**+2.4**
	6.0nm,0.3s,baz=150,slow=18,SNR=2.7						
JCJ				Sn	**Sn**	**05 05 46.4**	**-2.7**
	3.6nm,0.3s,baz=258,slow=20,SNR=1.9						
JAY	**Jayapura**	**16.72**	**199**	Pn	**Pn**	**05 03 47.6**	**+1.0**
	0.4nm,0.3s,baz=337,slow=5.3,SNR=9.6						
JAY	**Jayapura**	**16.72**	**199**	P	**P**	**05 03 47.9**	**-0.8**
GENI	**Genyem**	**16.97**	**201**	P	**P**	**05 03 49.8**	**+1.2**
	15µm18µm388nm,1.9s						
SMPI	**Sarmi**	**17.00**	**207**	P	**P**	**05 03 51.8**	**+0.1**
	6µm164nm,1.7s						
KRVT	**Keravat (AS076**	**18.50**	**161**	P	**Pn**	**05 04 10.3**	**+1.7**
	baz=18,slow=20,SNR=4.1						
RKPI	**Ransiki, Papua**	**19.02**	**220**	P	**Pn**	**05 04 17.3**	**+2.4**
	12µm147nm,1.8s						
SIJI	**Sorong**	**20.50**	**227**	P	Pn	05 04 32.4	-0.2
	327nm,0.9s,baz=34,slow=11,SNR=38						
SWI	**Sorong**	**20.50**	**227**	P	Pn	05 04 33.9	+1.4
	30µm18µm391nm,1.0s						
MATI	**Mati**	**20.66**	**254**	*e*P	Pn	05 04 35.5	+1.1
MSLP	**Maasin**	**21.16**	**264**	*e*P	**P**	**05 04 41.2**	**+3.9**
OCLP	**Ormoc**	**21.25**	**266**	*e*P	P	05 04 48.6	+10
DAV	**Davao City (W)**	**21.25**	**255**	P	**P**	**05 04 39.4**	**+1.0**
	128nm,0.4s,baz=42,slow=6.6,SNR=8.1						
DAV	**Davao City (W)**	**21.25**	**255**	⇓*e*P	**P**	**05 04 39.4**	**+1.0**
DAV	**Davao City (W)**	**21.25**	**255**	P	**P**	**05 04 35.5**	**-2.9**
FAKI	**Fak Fak**	**21.32**	**222**	P	**P**	**05 04 41.0**	**+1.9**
	21µm20µm792nm,1.4s						
FAKI	**Fak Fak**	**21.32**	**222**	P	**P**	**05 04 38.0**	**-1.1**
DDMP	**Don Marcelino,**	**21.45**	**252**	*e*P	**P**	**05 04 41.6**	**+1.1**
PVCP	**Virac**	**21.46**	**273**	*e*P	**P**	**05 04 39.9**	**-0.7**

JOW Kunigami 21.48 311 P P 05 04 41.2 +0.5
30nm,0.8s,baz=139,slow=13,SNR=30
JOW Kunigami 21.48 311 P P 05 04 37.0 -3.7
JOW IAmb IAmb 05 04 45.0
comp=Z,136nm,0.8s
BUKP Musuan 21.49 257 eP P 05 04 42.4 +1.3
CGP Cagayan de Oro 21.69 259⇓ eP P 05 04 51.4 +8.3
KCP Kidapawan 21.73 255⇓ eP P 05 04 43.8 +0.2
SKMP Bagumbayan, Su 22.40 254 eP P 05 04 53.8 +3.1
TNTI Ternate 22.49 238 P P 05 04 52.9 +1.3
comp=Z,6µmcomp=Z,4µmcomp=Z,137nm,1.8s
TNTI Ternate 22.49 238 P P 05 04 49.4 -2.3
TNTI IAmb IAmb 05 05 07.8
comp=Z,145nm,1.1s
PMG Port Moresby 22.66 178 ceP P 05 04 55.1 +1.7
PMG pmax pmax
comp=Z,228nm,0.9s
PMG Port Moresby 22.66 178 P P 05 04 55.4 +2.0
comp=Z,59nm,0.9s,baz=351,slow=4.0,SNR=11
PMG Port Moresby 22.66 178 P P 05 04 52.8 -0.7
PMG IAmb IAmb 05 05 11.1
comp=Z,110nm,1.0s
RCP Roxas 22.99 268⇑ eP P 05 04 56.1 -0.9
PAGZ Pagadian 23.10 259 eP P 05 05 00.1 +2.0
GUIM Jordan 23.27 266 eP P 05 05 01.6 +1.8
INU Inuyama 23.39 341 P P 05 04 59.5 -1.2
OTRP Odiongan 23.61 270 eP P 05 05 03.6 +0.5
BOAC Boac 23.71 273 eP P 05 05 03.8 -0.2
CAUP Cauayan 23.80 282 eP P 05 05 08.5 +3.6
MSAI Masohi 23.89 227 P P 05 05 08.3 +2.6
comp=Z,85nm,1.4s
JNU Nakatsue 24.12 327 P P 05 05 05.7 -2.0
MJAR Matsushiro Arr 24.15 344 P P 05 05 07.2 -0.7
comp=Z,11nm,0.5s,baz=161,slow=9.1,SNR=18
MJAR LR LR 05 13 45.4
comp=Z,21µm,18.3s,baz=165,slow=35
MAJO Matsushiro 24.16 344 P P 05 05 07.5 -0.5
MAJO pmax pmax
comp=Z,62nm,0.9s
MAJO MLR MLR
comp=Z,22µm,18.0s
MAJO Matsushiro 24.16 344 P P 05 05 07.5 -0.5
MAT Matsushiro 24.16 344 P P 05 05 05.7 -2.3
MAT S S 05 09 19.4 -4.8
MJB9 Matsu-Tunnel 24.16 344 P P 05 05 06.3 -1.8
APYP Conner 24.45 284 eP P 05 05 11.1 +0.2
YOJ Yonaguni jima 24.52 300 P P 05 05 08.5 -3.0
YOJ pmax pmax
comp=Z,174nm,1.1s
TGY Tagaytay City 24.57 275 P P 05 05 13.4 +1.3
comp=Z,218nm,0.4s,baz=132,slow=5.4,SNR=4.9
AAI Ambon 24.66 228 P P 05 05 13.2 +0.5
comp=Z,12µmcomp=Z,8µmcomp=Z,776nm,0.9s
ABRA Dolores 24.93 283 eP P 05 05 17.3 +2.1
NLAI Namlea 25.16 230 P P 05 05 17.3 0.0
comp=Z,5µmcomp=Z,66nm,1.9s
LUBP Lubang 25.25 274 eP P 05 05 21.1 +3.0
SANI Sanana 25.26 234 P P 05 05 16.6 -1.6
comp=Z,11µmcomp=Z,6µmcomp=Z,123nm,1.2s
TATO Taipei 26.00 300 IAMs_20 IAMs_20 05 17 22.6
comp=Z,27µm,19.0s
ENPP El Nido 26.26 268 eP P 05 05 25.6 -1.7
HNR Honiara 26.45 148 P P 05 05 28.1 -0.9
HNR pmax pmax
comp=Z,123nm,1.1s
HNR MLR MLR
comp=Z,21µm,19.0s
HNR Honiara 26.45 148 P P 05 05 30.7 +1.7
comp=Z,48nm,0.4s,baz=253,slow=9.4,SNR=2.7
HNR Honiara 26.45 148 P P 05 05 41.0 +12
HNR Honiara 26.45 148 P P 05 05 28.1 -0.9
HNR IAmb IAmb 05 05 45.6
comp=Z,123nm,1.1s
MRSI Marisa 27.25 244 P P 05 05 36.0 -0.3
comp=Z,11µmcomp=Z,5µmcomp=Z,419nm,0.8s
LUWI Luwuk 27.31 240 P P 05 05 34.8 -2.0
comp=Z,10µmcomp=Z,10µmcomp=Z,767nm,1.1s
LUWI Luwuk 27.31 240 P P 05 05 35.3 -1.5
COEN Coen 27.33 186 P P 05 05 35.4 -1.5
APSI Ampana 28.20 242 P P 05 05 45.8 +1.1
comp=Z,2µmcomp=Z,89nm,0.9s
BATP Bataraza 28.25 264 eP P 05 05 44.8 -0.4
QZH Quanzhou 28.45 298⇑ iP P 05 05 47.5 +0.6
QZH S S 05 10 41.8 +9.2
QZH pmax pmax
comp=Z,41nm,1.1s
QZH pmax pmax
comp=Z,2µm,9.9s
QZH LR LR
comp=Z,8µm,17.0s
QZH LR LR
comp=Z,8µm,16.6s
QZH LR LR
comp=Z,14µm,19.4s
TJN Taejon 28.47 327 eP P 05 05 47.3 +0.4
SSE Sheshan 29.00 312 P P 05 05 51.0 -0.7
SSE S S **05 10 41.8 +0.8**
SSE pmax pmax
comp=Z,11nm,0.8s
SSE pmax pmax
comp=Z,670nm,7.0s
SSE LR LR
comp=Z,5µm,16.0s
SSE LR LR
comp=Z,940nm,11.8s
KSRS Korea Array 29.00 329 P P 05 05 50.8 -0.8
comp=Z,67nm,1.0s,baz=146,slow=9.4,SNR=66
KSRS PcP **PcP 05 09 01.7 +2.0**
comp=Z,6.1nm,0.8s,baz=160,slow=1.3,SNR=4.1
KS19 Wonju Array Si 29.07 329 P P 05 05 50.4 -1.8
KS19 IAmb IAmb 05 05 58.5
comp=Z,107nm,1.0s
KDI Kendari 29.08 235 P P 05 05 54.8 +2.2
comp=Z,10µmcomp=Z,134nm,1.1s
MPSI Mapaga 29.12 246 P P 05 05 53.1 +0.2
comp=Z,7µmcomp=Z,3µmcomp=Z,176nm,1.1s
MTN Manton Dam 30.05 210 P P 05 06 00.2 -0.9
MTN IAmb IAmb 05 06 04.8
comp=Z,98nm,1.1s
YUK Yuzh-Kuril'sk 30.55 359 eP P 05 06 01.0 -4.2
YUK e 05 08 59.4
YUK eS S **05 11 03.1 -1.9**
YUK MLR MLR
comp=Z,4µm,13.0s
YUK MLR MLR
comp=N,5µm,15.0s
YUK MLR MLR
comp=E,3µm,12.0s
ASAJ Asahikawa 30.78 355 LR LR 05 21 48.5
comp=E,5µm,18.3s,baz=200,slow=43
TTSI Tana Toraja 30.87 240 P P 05 06 09.1 +0.7
comp=E,6µmcomp=E,3µmcomp=E,97nm,1.1s
NJ2 Nanjing 31.20 311 eP P 05 06 11.4 +0.3
NJ2 pP **pP 05 06 16.9 -0.6**
NJ2 sP **sP 05 06 19.8 -0.4**
NJ2 PP **PnPn 05 07 17.4 +3.9**
NJ2 S **S 05 11 15.8 +0.3**
NJ2 sS **sS 05 11 29.0 +1.5**
NJ2 pmax pmax
comp=E,15nm,0.8s
NJ2 pmax pmax
comp=E,990nm,7.6s
NJ2 LR LR
comp=E,5µm,18.9s
NJ2 LR LR
comp=E,8µm,16.6s
NJ2 LR LR
comp=E,12µm,14.2s
BNSI Bone 31.38 237 P P 05 06 13.4 +0.5
comp=E,4µmcomp=E,312nm,1.2s
SPSI Sidrap Palu 31.41 239 P P 05 06 13.2 0.0
comp=E,2µmcomp=E,115nm,1.2s
SOEI Soe 31.68 225 P P 05 06 16.3 +0.7
comp=E,5µmcomp=E,4µmcomp=E,264nm,1.3s
SOEI Soe 31.68 225 P P 05 06 14.6 -1.0
KUR Kuril'sk 31.77 2 P P 05 06 19.9 +3.9
KUR eS S **05 11 30.9 +6.7**
KUR i SSS SSS 05 13 37.8
KUR MLR MLR
comp=E,5µm,17.0s
KUR MLR MLR
comp=N,3µm,11.0s
MSHR Mys Shultsa 31.88 339 eP P 05 06 15.5 -1.5
BKSI Bulukumba 31.89 236 P P 05 06 18.4 +1.0
comp=N,2µmcomp=N,104nm,1.1s

KAPI Kappang 32.01 237 P P 05 06 16.7 -1.8
KAPI pmax pmax
comp=Z,88nm,1.0s
KAPI Kappang 32.01 237 P P 05 06 16.7 -1.8
KAPI IAmb IAmb 05 06 21.3
comp=Z,88nm,0.9s
TEY Ternei 32.59 347⇑ eP P 05 06 24.2 +1.0
TEY e 05 07 27.1
TEY pmax pmax
comp=Z,10.0nm,1.5s
TEY MLR MLR
comp=E,400nm,15.0s
TEY MLR MLR
comp=N,500nm,18.0s
TEY MLR MLR
comp=Z,600nm,17.0s
GZH Guangzhou 32.61 292 P P 05 06 23.8 +0.1
GZH PP **PnPn 05 07 30.1 -1.8**
GZH S **S 05 11 38.3 +0.5**
GZH LR LR
comp=Z,6µm,20.8s
GZH LR LR
comp=Z,13µm,18.8s
USRK Ussuriysk Ar. 33.04 341 P P 05 06 27.8 +0.7
comp=Z,11nm,1.0s,baz=178,slow=8.1,SNR=16
USRK LR LR 05 18 55.0
comp=Z,11µm,18.8s,baz=146,slow=35
USA0B Ussuriysk Arra 33.04 341 eP P 05 06 27.1 0.0
CTA Charters Tower 33.26 180 P P 05 06 30.4 +1.1
CTA pmax pmax
comp=Z,37nm,2.2s
YSS Yuzh-Sakhalins 33.59 356 eP P 05 06 30.1 -1.8
YSS e 05 07 38.1
YSS ePPP PPP 05 07 59.3
YSS eS **S 05 11 47.1 -5.3**
YSS eSSS SSS 05 14 16.3
YSS pmax pmax
comp=Z,1µm,7.2s
YSS MLR MLR
comp=Z,12µm,15.0s
YSS MLR MLR
comp=N,8µm,16.0s
YSS MLR MLR
comp=E,6µm,16.0s
WHN Wuhan 33.97 305 P P 05 06 35.6 +0.2
WHN PP **PnPn 05 07 47.5 -1.4**
WHN S **S 05 11 52.4 -6.3**
WHN pmax pmax
comp=E,2µm,7.9s
WHN LR LR
comp=E,25µm,15.7s
WHN LR LR
comp=E,31µm,22.6s
WHN LR LR
comp=E,32µm,18.9s
KBKI Kotabaru 34.12 243 P P 05 06 38.0 +1.1
comp=E,40nm,1.1s
MDJ Mudanjiang 34.21 339 P P 05 06 37.5 +0.2
MDJ pP sP 05 06 45.5 -1.1
MDJ S **S 05 12 05.3 +3.2**
MDJ pmax pmax
comp=E,2µm,5.3s
MDJ LR LR
comp=E,13µm,17.8s
MDJ LR LR
comp=E,9µm,18.2s
MDJ LR LR
comp=E,13µm,18.2s
SNY Shenyang 34.50 329 ⇓P P 05 06 37.5 -2.4
SNY PP **PP 05 07 57.0 -1.3**
SNY S **S 05 12 06.6 -0.1**
SNY pmax pmax
comp=E,40nm,1.1s
SNY LR LR
comp=E,13µm,16.0s
SNY LR LR
comp=E,9µm,19.6s
SNY LR LR
comp=E,23µm,17.8s
TIA Tai'an 34.61 316 P P 05 06 40.6 -0.3
TIA PP **PP 05 08 00.0 +0.3**
TIA S **S 05 12 12.8 +4.2**
TIA pmax pmax
comp=E,2µm,9.4s
TIA LR LR
comp=E,7µm,17.7s
TIA LR LR
comp=E,13µm,17.7s
TIA LR LR
comp=E,19µm,17.5s
WB0 Warramunga Arr 34.94 200 IAmb IAmb 05 07 03.6
comp=Z,47nm,0.8s
WR0 Warramunga Arr 35.07 199 IAmb IAmb 05 06 52.0
comp=Z,56nm,1.0s
WRAB Tennant Creek 35.11 200 eP P 05 06 45.4 +0.1
WRAB pmax pmax
comp=Z,62nm,1.0s
WRAB Tennant Creek 35.11 200 P P 05 06 43.0 -2.3
WRAB IAmb IAmb 05 06 52.3
comp=Z,76nm,1.1s
WB2 Warramunga Arr 35.12 200 IAmb IAmb 05 07 03.3
comp=Z,73nm,0.9s
WRA Warramunga Arr 35.12 200 iP P 05 06 46.0 +0.5
WRA pmax pmax
comp=Z,38nm,1.0s
WRA Warramunga Arr 35.12 200 P P 05 06 45.4 0.0
comp=Z,38nm,1.0s,baz=21,slow=9.6,SNR=69
WRA LR LR 05 21 00.6
comp=Z,8µm,21.2s,baz=25,slow=36
CN2 Changchun 35.16 334 eP P 05 06 44.9 -0.7
CN2 esP pwP 05 06 59.4 -1.0
CN2 eS **S 05 12 14.6 -2.2**
CN2 pmax pmax
comp=Z,40nm,1.2s
CN2 pmax pmax
comp=Z,1µm,5.0s
CN2 LR LR
comp=Z,9µm,15.0s
CN2 LR LR
comp=Z,15µm,15.0s
CN2 LR LR
comp=Z,12µm,18.0s
SBUM Sibu 35.33 255 P P 05 06 45.6 -1.7
SBUM Sibu 35.33 255 P P 05 06 46.0 -1.4
QIZ Qiongzhong 35.33 284 P P 05 06 43.5 -3.9
QIZ PP **PP 05 08 06.5 -1.4**
QIZ S **S 05 12 19.4 -0.7**
QIZ pmax pmax
comp=Z,18nm,1.5s
QIZ pmax pmax
comp=Z,1µm,5.3s
QIZ LR LR
comp=Z,3µm,17.2s
QIZ LR LR
comp=Z,9µm,17.2s
QIZ LR LR
comp=Z,12µm,18.1s
QIZ Qiongzhong 35.33 284 IAMs_20 IAMs_20 05 21 29.8
comp=Z,14µm,19.0s
PLAI Plampang 35.84 234 P P 05 06 49.9 -1.8
comp=Z,6µmcomp=Z,2µmcomp=Z,64nm,0.8s
STKI Sintang 36.88 252 P P 05 07 00.6 0.0
FITZ Fitzroy Crossi 37.29 213 IAmb IAmb 05 07 08.9
comp=Z,54nm,0.9s
BJT Baijiatuau 37.42 321 IAmb IAmb 05 07 08.4
comp=Z,58nm,0.9s
BJI Beijing 37.43 321 ⇓iP P 05 07 03.8 -1.1
BJI pP **pP 05 07 10.5 -0.9**
BJI PP **PnPn 05 08 31.6 +0.1**
BJI S **S 05 12 52.3 +0.8**
BJI pmax pmax
comp=Z,61nm,1.0s
BJI LR LR
comp=Z,6µm,18.8s
BJI LR LR
comp=Z,6µm,17.7s
BJI LR LR
comp=Z,7µm,18.9s
KSM Kuching 37.45 255 P P 05 07 04.5 -1.0
SRBI Singaraja 37.46 237 P P 05 07 05.8 +0.3
comp=Z,6µmcomp=Z,331nm,1.5s
KLR Kul'dur 37.68 344 eP P 05 07 05.3 -1.7
KLR pmax pmax
comp=Z,22nm,1.1s
KLR Kul'dur 37.68 344 P P 05 07 06.0 -1.0
comp=Z,16nm,0.7s,baz=152,slow=9.2,SNR=16

KLR PcP **PcP 05 09 25.2 +1.3**
comp=Z,9.3nm,0.7s,baz=163,slow=2.6,SNR=3.6
KLR LR LR 05 22 29.5
comp=Z,16µm,18.3s,baz=156,slow=36
DNP Denpasar 37.80 236 P P 05 07 09.3 +0.9
comp=Z,617nm,1.4s
ENH Enshi 37.80 302 IAmb IAmb 05 07 22.1
comp=Z,70nm,0.9s
IGBI Denpasar 37.93 236 P P 05 07 09.7 +0.2
comp=Z,3µmcomp=Z,3µmcomp=Z,128nm,1.5s
SKR Severo-Kuril's 38.06 10 eP P 05 06 51.4 -19
SKR eSS **S 05 13 06.6 +5.8**
SKR 05 15 45.9
SKR pmax pmax
comp=Z,900nm,6.7s
SKR pmax pmax
comp=Z,800nm,9.2s
SKR MLR MLR
comp=Z,5µm,19.0s
GRNR Gornyy 38.13 350 ⇓iP P 05 07 11.2 +0.5
GRNR e 05 08 38.6
GRNR eS **S 05 13 04.0 +2.1**
GRNR eSS **SnSn 05 15 38.3 -8.3**
GRNR pmax pmax
comp=Z,6.0nm,1.1s
GRNR smax smax
comp=N,5.0nm,1.2s
GRNR MLR MLR
comp=Z,7µm,18.0s
JAGI Jajag, Banyuwa 38.54 237 P P 05 07 12.8 -1.9
comp=Z,5µmcomp=Z,5µmcomp=Z,184nm,0.8s
JAGI Jajag, Banyuwa 38.54 237 IAmb IAmb 05 07 18.9
comp=Z,122nm,0.8s
TIY Taiyuan 38.59 315 eP P 05 07 18.4 +3.4
TIY S **S 05 13 06.3 -3.2**
TIY sS **sS 05 13 22.4 +1.1**
TIY pmax pmax
comp=Z,59nm,0.7s
TIY LR LR
comp=Z,7µm,15.4s
TIY LR LR
comp=Z,6µm,13.1s
TIY LR LR
comp=Z,13µm,16.4s
ASAR Alice Springs 38.74 198 P P 05 07 16.1 -0.2
comp=Z,12nm,1.0s,baz=23,slow=7.6,SNR=54
ASAR LR LR 05 23 34.0
comp=Z,7µm,20.2s,baz=14,slow=37
EIDS Eidsvold 38.81 173 P P 05 07 15.2 -1.5
GMJI Gumukmas 39.02 238 P P 05 07 20.0 +1.4
comp=Z,6µmcomp=Z,501nm,1.1s
GYA Guiyang 39.23 295⇑ iP P 05 07 16.4 -4.1
GYA pP pP 05 07 26.6 -0.5
GYA sP sP 05 07 32.6 +2.8
GYA PcP **PcP 05 09 30.4 +1.0**
GYA ScP **ScP 05 13 15.8 -0.2**
GYA ScS **ScS 05 17 26.6 -1.4**
GYA pmax pmax
comp=Z,50nm,0.9s
GYA pmax pmax
comp=Z,210nm,5.4s
GYA LR LR
comp=Z,10µm,17.9s
GYA LR LR
comp=Z,12µm,18.2s
GYA LR LR
comp=Z,10µm,18.9s
FUNA Funafuti 39.32 122 P P 05 07 21.4 +0.2
XAN Xi'an 39.55 308 P P 05 07 22.0 -1.0
XAN pP sP 05 07 34.6 +2.4
XAN PP **PP 05 08 53.3 -0.8**
XAN PcP **PcP 05 09 34.3 +4.1**
XAN ScP **ScP 05 13 20.1 +3.1**
XAN sS sS 05 13 40.6 +4.4
XAN SS **SS 05 16 13.4 -6.0**
XAN pmax pmax
comp=Z,49nm,0.7s
XAN pmax pmax
comp=Z,2µm,7.4s
XAN LR LR
comp=Z,4µm,17.4s
XAN LR LR
comp=Z,9µm,18.4s
XAN LR LR
comp=Z,12µm,18.6s
XAN Xi'an 39.55 308 P P 05 07 21.0 -2.0
XAN pmax pmax
comp=Z,36nm,0.6s
XAN MLR MLR
comp=Z,13µm,19.0s
XAN Xi'an 39.55 308 P P 05 07 21.0 -2.0
XAN Xi'an 39.55 308 IAMs_20 IAMs_20 05 25 23.1
comp=Z,13µm,19.0s
NKL Nikolayevsk 39.91 355 eP P 05 07 23.9 -1.7
NKL e 05 09 24.5
NKL pmax pmax
comp=Z,10.0nm,1.1s
NKL pmax pmax
comp=N,9.0nm,0.8s
NKL pmax pmax
comp=E,2.0nm,1.0s
NKL MLR MLR
comp=Z,3µm,15.0s
NGJI Ngawi 40.21 241 P P 05 07 28.5 -0.1
comp=Z,8µmcomp=Z,295nm,1.4s
PWJI Pagerwojo 40.25 240 P P 05 07 28.6 -0.3
comp=Z,8µmcomp=Z,379nm,0.8s
NOUC Port Laguerre 40.40 151 P P 05 07 29.2 -0.8
DZM Mont Dzumac 40.44 150 eP P 05 07 31.7 +1.3
comp=Z,142nm,1.4s
DZM eS **S 05 13 38.0 +0.7**
DZM comp=Z,3µm,22.8s eLR LR 05 18 43.3
comp=Z,12µm,21.1s
DZM Mont Dzumac 40.44 150 P P 05 07 31.8 +1.4
comp=Z,15nm,0.9s,baz=1.7,slow=5.2,SNR=7.3
DZM Mont Dzumac 40.44 150 P P 05 07 29.1 -1.4
DZM IAMs_20 IAMs_20 05 23 39.8
comp=Z,11µm,19.0s
PEA0B Petropavlovsk- 40.67 11 IAMs_20 IAMs_20 05 23 47.8
comp=Z,11µm,20.0s
PETK Petropavlovsk- 40.67 11 P P 05 07 32.2 +0.3
comp=Z,8.2nm,0.9s,baz=179,slow=9.5,SNR=6.8
PETK LR LR 05 23 48.7
comp=Z,11µm,21.0s,baz=194,slow=35
PET Petropavlovsk 40.77 11 eP P 05 07 34.2 +1.5
PET eS **S 05 13 42.6 +1.2**
PET pmax pmax
comp=Z,1µm,6.1s
HHC Hu-ho-hao-te 40.79 319 eP P 05 07 33.6 +0.4
HHC sP pwP 05 07 46.3 -3.2
HHC S **S 05 13 45.9 +3.6**
HHC sS sS 05 13 59.5 +5.2
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,980nm,5.3s
HHC LR LR
comp=Z,3µm,14.2s
HHC LR LR
comp=Z,4µm,15.6s
HHC LR LR
comp=Z,6µm,16.0s
PCJI Pacitan 40.87 240 P P 05 07 33.8 -0.3
comp=Z,7µmcomp=Z,369nm,1.3s
WOJI Wonogiri, Jawa 40.90 241 P P 05 07 35.4 +1.1
comp=Z,3µmcomp=Z,3µmcomp=Z,109nm,1.1s
SLVN Son La 41.05 287 P P 05 07 33.0 -2.6
SLVN IAMs_20 IAMs_20 05 23 35.4
comp=Z,14µm,20.0s
UGM Wanagama 41.28 241 P P 05 07 37.1 -0.4
comp=Z,6µmcomp=Z,439nm,1.1s
UGM Wanagama 41.28 241 P P 05 07 35.1 -2.4
TPI Tanjungpandan 41.49 250 P P 05 07 39.3 +0.1
comp=Z,2µmcomp=Z,98nm,1.2s
BTO Baotou 41.66 317 eP P 05 07 41.8 +1.4
HIA Hailar 41.89 334 IAmb IAmb 05 07 57.7
comp=Z,63nm,1.0s
KPJI Karang Pucung 42.37 243 P P 05 07 47.7 +1.4
comp=Z,5µmcomp=Z,231nm,1.5s
KMI Kunming 42.50 293 ⇑P P 05 07 49.0 +1.4
KMI pP sP 05 07 56.0 -0.9
KMI PcS **PcS 05 13 28.9 -3.6**
KMI S **S 05 14 13.9 +5.5**
KMI pmax pmax
comp=Z,35nm,1.0s

KMI pmax pmax
comp=Z,2µm,8.5s
KMI LR LR
comp=Z,5µm,19.0s
KMI LR LR
comp=Z,4µm,20.5s
KMI LR LR
comp=Z,6µm,20.5s
CD2 Chengdu 42.72 301 ⇑P **P 05 07 48.8 -0.3**
CD2 sP pwP 05 08 01.8 -3.5
CD2 PP **PP 05 09 29.9 +1.4**
CD2 PcS **PcS 05 13 31.6 -1.3**
CD2 S **S 05 14 07.6 -3.5**
CD2 sS sS 05 14 27.1 +3.7
CD2 pmax pmax
comp=Z,60nm,0.6s
CD2 pmax pmax
comp=Z,2µm,7.3s
CD2 LR LR
comp=Z,12µm,19.1s
CD2 LR LR
comp=Z,11µm,16.7s
CD2 LR LR
comp=Z,12µm,18.6s
ZEA Zeya 42.97 344 *e*P **P 05 07 49.6 -1.1**
ZEA *e* 05 09 26.0
ZEA *e* 05 17 54.0
ZEA pmax pmax
comp=N,96nm,1.8s
ZEA pmax pmax
comp=Z,130nm,1.8s
ZEA pmax pmax
comp=Z,1µm,11.0s
ZEA pmax pmax
comp=N,600nm,8.0s
ZEA pmax pmax
comp=N,600nm,8.0s
ZEA pmax pmax
comp=Z,1µm,8.0s
ZEA pmax pmax
comp=E,400nm,7.0s
ZEA MLR MLR
comp=Z,14µm,17.0s
ZEA MLR MLR
comp=E,7µm,16.0s
ZEA MLR MLR
comp=N,12µm,17.0s
LEM Lembang 43.28 245 P **P 05 07 53.7 -0.2**
comp=N,4µmcomp=N,3µmcomp=N,75nm,0.9s
PSA00 Pilbara Seismi 43.33 217 P **P 05 07 54.0 0.0**
PSA00 IAmb IAmb 05 07 58.4
comp=Z,79nm,1.1s
CISI Cisompet, Garu 43.44 244 P **P 05 07 54.7 -0.4**
comp=Z,4µmcomp=Z,3µmcomp=Z,270nm,1.1s
CISI Cisompet, Garu 43.44 244 P **P 05 07 54.1 -1.1**
CISI IAmb IAmb 05 07 56.2
comp=Z,112nm,0.8s
MYKOM Kota Tinggi 43.47 258 P **P 05 07 53.2 -2.1**
MYKOM IAmb IAmb 05 08 04.4
comp=Z,116nm,1.0s
MYKOM Kota Tinggi 43.47 258 P **P 05 07 54.0 -1.3**
ARMA Armidale 43.86 173 P **P 05 07 56.3 -2.0**
MSVF Nonsavu 44.08 134 *e*P **P 05 08 01.9 +1.7**
MSVF pmax pmax
comp=Z,82nm,1.3s
MSVF Nonsavu 44.08 134 P **P 05 07 58.9 -1.2**
LZH Lanzhou 44.17 308 *e*P **P 05 08 02.0 +1.1**
LZH pP sP 05 08 10.0 -0.1
LZH S **S 05 14 35.3 +2.8**
LZH sS sS 05 14 50.8 +6.2
LZH pmax pmax
comp=Z,81nm,1.2s
LZH pmax pmax
comp=Z,2µm,7.6s
LZH LR LR
comp=Z,7µm,11.8s
LZH LR LR
comp=Z,8µm,12.5s
LZH LR LR
comp=Z,9µm,15.2s
KNTN Kanton 44.72 108 IAMs_20 IAMs_20 05 26 01.0
comp=Z,15µm,18.0s
KLSI 44.94 249 P **P 05 08 07.5 +0.4**
comp=Z,2µmcomp=Z,69nm,1.5s
SMY Shemya 45.11 24 P **P 05 08 08.4 +0.5**
SMY pmax pmax
comp=Z,201nm,0.8s
SMY Shemya 45.11 24 P **P 05 08 08.4 +0.5**
STKA Stephens Creek 45.22 186 P **P 05 08 08.6 -0.4**
STKA pmax pmax
comp=Z,8.0nm,1.0s
STKA MLR MLR
comp=Z,2µm,20.0s
STKA Stephens Creek 45.22 186 P **P 05 08 08.4 -0.5**
comp=Z,15nm,0.9s,baz=347,slow=8.6,SNR=24
STKA LR LR 05 27 29.8
comp=Z,10µm,20.8s,baz=1.7,slow=37
STKA Stephens Creek 45.22 186 P **P 05 08 08.6 -0.4**
MDSI Maura Dua 45.36 250 P **P 05 08 09.4 -1.0**
comp=Z,3µmcomp=Z,155nm,1.4s
IPM Ipoh 45.45 263 P **P 05 08 09.5 -1.6**
KASI Kota Agung 45.49 248 P **P 05 08 10.4 -1.0**
comp=Z,3µmcomp=Z,186nm,1.0s
KULM Kulim 45.62 264 P **P 05 08 10.9 -1.6**
KULM IAmb IAmb 05 08 28.5
comp=Z,58nm,1.0s
KULM Kulim 45.62 264 P **P 05 08 13.0 +0.5**
CHTO Chiang Mai 45.64 283 P **P 05 08 10.5 -2.1**
CHTO pmax pmax
comp=Z,17nm,1.1s
CHTO MLR MLR
comp=Z,7µm,19.0s
CHTO Chiang Mai 45.64 283 P **P 05 08 10.5 -2.1**
CMAR Chiang Mai Arr 45.64 283 *i* P **P 05 08 12.6 -0.1**
CMAR pmax pmax
comp=Z,10.0nm,0.5s
CMAR Chiang Mai Arr 45.64 283 P **P 05 08 12.6 -0.1**
comp=Z,14nm,0.8s,baz=86,slow=6.1,SNR=28
CMAR PcP **PcP 05 09 53.3 +2.6**
comp=Z,9.4nm,0.6s,baz=89,slow=2.6,SNR=4.2
CMAR LR LR 05 28 00.7
comp=Z,4µm,18.0s,baz=90,slow=37
LWLI Liwa 45.68 249 P **P 05 08 11.3 -1.8**
comp=Z,155µmcomp=Z,161nm,0.9s
MA2 Magadan 46.23 3*ce*P **P 05 08 18.0 +1.3**
MA2 pmax pmax
comp=Z,45nm,1.3s
MA2 Magadan 46.23 3 P **P 05 08 15.8 -0.8**
comp=Z,28nm,0.8s,baz=189,slow=8.6,SNR=10
MA2 LR LR 05 26 03.6
comp=Z,4µm,22.0s,baz=188,slow=34
MA2 Magadan 46.23 3 P **P 05 08 15.8 -0.8**
MA2 IAmb IAmb 05 08 34.8
comp=Z,64nm,0.9s
MNAI Manna 46.43 251 P **P 05 08 18.5 -0.4**
comp=Z,838nm,1.2s
MNAI Manna 46.43 251 P **P 05 08 17.1 -1.8**
KSI Kapahiang 46.49 252 P **P 05 08 18.1 -1.3**
comp=Z,10µmcomp=Z,325nm,0.9s
BKNI Bangkinang 46.59 258 P **P 05 08 18.5 -1.6**
comp=Z,5µmcomp=Z,3µmcomp=Z,88nm,1.2s
CIT Chita 46.60 333 *e*P **P 05 08 20.3 +0.6**
SDSI Sungai Dareh 46.62 256 P **P 05 08 20.6 +0.2**
comp=Z,2µmcomp=Z,70nm,1.9s
KRJI Kerinci 46.98 254 P **P 05 08 24.4 +1.1**
comp=Z,13µmcomp=Z,361nm,1.2s
FORT Forrest 47.26 201 P **P 05 08 24.0 -1.0**
ULN Ulaanbaatar 47.30 325 P **P 05 08 24.2 -1.2**
ULN pmax pmax
comp=Z,40nm,0.9s
ULN MLR MLR
comp=Z,14µm,18.0s
ULN Ulaanbaatar 47.30 325 P **P 05 08 24.2 -1.2**
ULN IAmb IAmb 05 08 43.1
comp=Z,40nm,0.9s
ULN Ulaanbaatar 47.30 325 IAMs_20 IAMs_20 05 30 32.6
comp=Z,15µm,18.0s
PDSI Padang 47.52 256 P **P 05 08 27.2 -0.3**
comp=Z,2µmcomp=Z,2µmcomp=Z,43nm,1.0s
SONM Songino Array 47.66 324 P **P 05 08 27.5 -0.7**
comp=Z,14nm,0.8s,baz=138,slow=8.4,SNR=50
SONM PcP **PcP 05 09 59.3 +1.9**
comp=Z,9.6nm,0.7s,baz=147,slow=5.0,SNR=3.6
SONM LR LR 05 30 15.1
comp=Z,9µm,18.2s,baz=117,slow=38
PSI Prapat 47.90 262 P **P 05 08 28.4 -2.1**
PSI pmax pmax
comp=Z,52nm,0.9s
RPSI Rantau Prapat 47.93 261 P **P 05 08 28.4 -2.2**
RPSI IAmb IAmb 05 08 38.7
comp=Z,52nm,0.9s
GTA Gaotai 48.29 311 ⇑P **P 05 08 33.5 +0.3**
GTA pP pP 05 08 39.3 -0.6
GTA sP sP 05 08 42.1 -0.4
GTA PcP **PcP 05 10 02.4 +2.5**
GTA ScP **ScP 05 13 56.0 +3.4**
GTA PcS **PcS 05 13 57.8 +2.0**
GTA S **S 05 15 29.1 -2.4**
GTA sS sS 05 15 48.3 +4.6
GTA SS **SS 05 18 54.0 -7.1**
GTA pmax pmax
comp=Z,9.0nm,1.3s
GTA pmax pmax
comp=Z,2µm,7.0s
GTA LR LR
comp=Z,4µm,18.1s
GTA LR LR
comp=Z,5µm,20.0s
GTA LR LR
comp=Z,6µm,18.1s
KIWB Kanaga Island 48.33 30 P **P 05 08 33.1 -0.1**
CAN Canberra 48.51 177 P **P 05 08 33.0 -1.7**
CAN pmax pmax
comp=Z,25nm,1.1s
CAN Canberra 48.51 177 P **P 05 08 33.0 -1.7**
ADK Adak 48.58 30 P **P 05 08 32.6 -2.4**
ADK pmax pmax
comp=Z,196nm,1.2s
ADK Adak 48.58 30 P **P 05 08 32.6 -2.4**
LKP Lekhapani 48.91 295 *e*P **P 05 08 38.4 +0.4**
SISI Saibi 48.96 256 P **P 05 08 36.6 -1.9**
comp=Z,2µmcomp=Z,166nm,0.8s
TPTI 49.46 263 P **P 05 08 42.1 -0.3**
comp=Z,575nmcomp=Z,26nm,1.4s
GSI Gunungsitoli 49.60 260 P **P 05 08 41.0 -2.5**
comp=Z,6µmcomp=Z,7µmcomp=Z,96nm,1.1s
GSI Gunungsitoli 49.60 260 P **P 05 08 40.8 -2.6**
AFI Afiamalu 49.66 122 P **P 05 08 40.7 -3.2**
AFI pmax pmax
comp=Z,53nm,1.1s
AFI Afiamalu 49.66 122 P **P 05 08 45.1 +1.2**
comp=Z,20nm,0.9s,baz=278,slow=17,SNR=3.7
AFI Afiamalu 49.66 122 P **P 05 08 40.6 -3.2**
AFI IAmb IAmb 05 08 52.5
comp=Z,53nm,1.1s
AFI Afiamalu 49.66 122 IAMs_20 IAMs_20 05 25 49.7
comp=Z,10µm,20.0s
SEY Seymchan 49.67 4 *e*P **P 05 08 43.4 +0.2**
SEY Seymchan 49.67 4 P **P 05 08 42.9 -0.3**
comp=Z,13nm,1.1s,baz=197,slow=19
MLSI Meulaboh, Aceh 49.97 264 P **P 05 08 44.4 -1.8**
comp=Z,70nm,1.6s
ATKA Atka Island 49.99 31 P **P 05 08 43.9 -1.9**
YAK Yakutsk 50.01 350 *e*P **P 05 08 44.6 -1.1**
YAK *e**PP **sP 05 08 56.1 +1.4**
YAK *e* 05 10 40.7
YAK *e*S **S 05 15 52.7 -1.8**
YAK *e**SS sS 05 16 12.9 +6.3
YAK *e*SS **SS 05 19 26.9 -0.7**
YAK pmax pmax
comp=Z,47nm,0.9s
YAK pmax pmax
comp=N,28nm,1.0s
YAK pmax pmax
comp=E,10.0nm,1.0s
YAK pmax pmax
comp=Z,311nm,3.9s
YAK pmax pmax
comp=N,180nm,3.3s
YAK pmax pmax
comp=E,86nm,3.0s
YAK smax smax
comp=E,129nm,3.3s
YAK smax smax
comp=N,137nm,4.1s
YAK Yakutsk 50.01 350 P **P 05 08 44.4 -1.4**
comp=N,32nm,0.9s,baz=177,slow=1.7,SNR=9.6
YAK LR LR 05 29 33.3
comp=N,2µm,21.8s,baz=156,slow=36
YAK Yakutsk 50.01 350 P **P 05 08 44.4 -1.4**
YAK IAMs_20 IAMs_20 05 29 36.1
comp=Z,9µm,18.0s
SNSI Sinabang, Aceh 50.51 262 P **P 05 08 51.9 +1.6**
comp=Z,5µmcomp=Z,263nm,1.1s
BOD Bodaibo 50.58 338 *e*P **P 05 08 48.1 -2.1**
BOD pmax pmax
comp=Z,68nm,2.2s
TOO Toolangi 50.69 181 P **P 05 08 49.5 -1.8**
TOO pmax pmax
comp=Z,42nm,1.1s
TOO Toolangi 50.69 181 P **P 05 08 49.5 -1.8**
TOO IAmb IAmb 05 09 08.7
comp=Z,42nm,1.1s
ZAK Zakamensk 50.74 326 *e*P **P 05 08 51.2 -0.5**
ZAK pmax pmax
comp=Z,31nm,1.1s
IRK Irkutsk 51.21 328 *e*P **P 05 08 54.4 -0.7**
IRK *e*S **S 05 16 15.4 +3.8**
IRK pmax pmax
comp=Z,198nm,2.8s
TLY Talaya 51.23 327*c i*P **P 05 08 55.5 +0.2**
TLY *e* 05 10 13.0
TLY *e* 05 10 54.4
TLY *e*S **S 05 16 09.3 -2.6**
TLY *e* 05 18 47.0
TLY pmax pmax
comp=Z,114nm,1.4s
TLY MLR MLR
comp=Z,19µm,17.0s
TLY Talaya 51.23 327 P **P 05 08 55.4 +0.2**
comp=Z,16nm,0.7s,baz=148,slow=6.7,SNR=11
TLY Talaya 51.23 327 P **P 05 08 53.9 -1.3**
MORW Morawa 51.30 214 P **P 05 08 54.7 -1.2**
MORW IAmb IAmb 05 09 00.5
comp=Z,48nm,0.9s
TEZP TEZPUR 51.56 293 *e*P **P 05 08 58.1 +0.1**
TEZP *i* x x 05 28 12.3
DGPR DIGLIPUR 51.78 276 *ex* **P 05 09 01.3 +1.4**
MOY Mondy 52.64 326 *e*P **P 05 09 05.4 -0.4**
MOY pmax pmax
comp=Z,161nm,2.5s
AGT Agartala 52.85 290 *e*P **P 05 09 09.1 +1.5**
LSA Lhasa 53.26 297 P **P 05 09 11.3 +0.1**
LSA pP **pP 05 09 17.8 -0.2**
LSA S **S 05 16 42.1 +0.8**
LSA pmax pmax
comp=Z,49nm,0.6s
LSA pmax pmax
comp=Z,5µm,9.3s
LSA LR LR
comp=Z,6µm,21.4s
LSA LR LR
comp=Z,5µm,18.5s
LSA LR LR
comp=Z,8µm,18.5s
LSA Lhasa 53.26 297 P **P 05 09 09.0 -2.2**
LSA pmax pmax
comp=Z,76nm,0.8s
LSA MLR MLR
comp=Z,3µm,20.0s
LSA Lhasa 53.26 297 P **P 05 09 11.8 +0.6**
LSA Lhasa 53.26 297 P **P 05 09 09.0 -2.2**
NWAO Narrogin (SRO) 53.74 210 IAMs_20 IAMs_20 05 35 06.1
comp=Z,9µm,18.0s
UNV Unalaska Valle 54.79 32 IAMs_20 IAMs_20 05 29 35.1
comp=Z,11µm,22.0s
GTK Tadong 55.34 294 *e*P **P 05 09 25.8 -0.2**
GTK IAmb IAmb 05 09 29.8
comp=Z,30nm,0.7s
TAPN Taplejung 56.13 294 *e*P **P 05 09 30.8 -1.1**
comp=Z,200nm,0.9s
BILL Bilibino 56.15 9*ce*P **P 05 09 31.2 +0.2**
BILL *e* 05 10 25.7
BILL *e* 05 11 34.8
BILL *e*PPP PPP 05 12 51.0
BILL *e*S **S 05 17 19.2 +1.2**
BILL *e*SS **SS 05 21 07.3 +2.8**
BILL pmax pmax
comp=Z,123nm,2.0s
BILL Bilibino 56.15 9 P **P 05 09 30.9 0.0**
BILL IAmb IAmb 05 09 36.4
comp=Z,74nm,1.0s
ODAN Odare 56.40 293 *e*P **P 05 09 32.3 -1.5**
comp=Z,454nm,1.5s
RAMN Ramite 57.11 294 *e*P **P 05 09 38.0 -0.8**
comp=Z,200nm,1.1s
JIRN Jiri 57.49 294 *e*P **P 05 09 40.6 -1.0**
comp=Z,250nm,1.0s
BOK Bokaro 57.76 290 *e*P **P 05 09 43.2 +0.1**
BOK IAmb IAmb 05 09 45.6
comp=Z,24nm,0.7s
GUN Gumba 57.77 295 *e*P **P 05 09 42.5 -1.1**
comp=Z,253nm,0.8s
BWNR Bhubaneshwar 57.97 286 *e*P **P 05 09 46.1 +1.5**
PKI Pulchoki 58.18 294 *e*P **P 05 09 44.8 -1.6**
PKIN Phulchoki 58.19 294 *e*P **P 05 09 44.8 -1.6**
GAMB Gambell 58.20 21 P **P 05 09 45.7 +0.3**
GAMB IAmb IAmb 05 09 52.9
comp=Z,58nm,1.1s
WMQ Urumqi 58.23 313 *e*P **P 05 09 46.6 +0.4**
WMQ pmax pmax
comp=Z,20nm,1.1s
WMQ pmax pmax
comp=Z,450nm,5.7s
WMQ LR LR
comp=Z,4µm,20.7s
WMQ LR LR
comp=Z,3µm,23.3s
WMQ LR LR
comp=Z,4µm,23.3s
WMQ Urumqi 58.23 313 IAMs_20 IAMs_20 05 38 22.4
comp=Z,8µm,18.0s
KKN Kakani 58.30 294 *e*P **P 05 09 46.3 -0.8**
comp=Z,100nm,0.9s
DMN Daman 58.45 294 *e*P **P 05 09 47.0 -1.2**
comp=Z,153nm,0.9s
GKN Gorkha 58.87 295 *e*P **P 05 09 49.7 -1.3**
comp=Z,561nm,1.2s
TIXI Tiksi 59.18 354 *e*P **P 05 09 50.7 -1.4**
TIXI pmax pmax
comp=Z,18nm,1.1s
TIXI Tiksi 59.18 354 P **P 05 09 50.5 -1.7**
comp=Z,13nm,0.9s,baz=165,slow=4.7,SNR=14
TIXI Tiksi 59.18 354 P **P 05 09 50.9 -1.2**
TIXI IAmb IAmb 05 10 09.6
comp=Z,26nm,1.0s
BKZ Black Stump Fm 59.42 153 P **P 05 09 54.3 -0.1**
BKZ IAmb IAmb 05 10 11.5
comp=Z,36nm,1.2s
DANN Dangsing 59.65 295 *e*P **P 05 09 55.5 -1.1**
comp=Z,208nm,0.6s
CHLP Challavanipeta 59.75 284 *e*P **P 05 09 57.6 +0.7**
CHLP IAmb IAmb 05 10 05.7
comp=Z,21nm,1.0s
KOLN Koldanda 59.79 294 *e*P **P 05 09 56.1 -1.3**
comp=Z,164nm,0.9s
SNZO South Karori 60.45 156 IAMs_20 IAMs_20 05 35 37.5
comp=Z,8µm,19.0s
FOZ Fox Glacier 60.61 160 IAMs_20 IAMs_20 05 33 43.4
comp=Z,12µm,21.0s
LTZ Lake Taylor 60.79 158 IAMs_20 IAMs_20 05 34 47.3
comp=Z,9µm,18.0s
ANM Nome 60.89 22 P **P 05 10 04.3 +0.3**
ANM pmax pmax
comp=Z,63nm,1.1s
ANM Nome 60.89 22 P **P 05 10 04.3 +0.3**
ANM IAmb IAmb 05 10 13.1
comp=Z,63nm,1.1s
KHZ Kahutara 60.94 157 IAMs_20 IAMs_20 05 34 49.4
comp=Z,7µm,21.0s
ZSN Zaisan 60.95 317*d i*P **P 05 10 08.1 +3.3**
ZSN *e*S **S 05 18 15.9 -5.3**
ZSN Zaisan 60.95 317 ‖ *i*P **P 05 10 08.1 +3.3**
ZSN *e*S **S 05 18 16.0 -5.3**
OXZ Oxford 61.18 159 P **P 05 10 04.9 -1.3**
OXZ IAmb IAmb 05 10 10.1
comp=Z,35nm,0.8s
OXZ IAMs_20 IAMs_20 05 35 11.6
comp=Z,7µm,20.0s
RPZ Rata Peaks 61.18 160 IAMs_20 IAMs_20 05 33 18.6
comp=Z,11µm,20.0s
LBZ Lake Benmore 61.49 161 IAMs_20 IAMs_20 05 34 20.7
comp=Z,11µm,21.0s
PVM Polavaram 62.18 283 *e*P **P 05 10 15.5 +1.9**
PVM IAmb IAmb 05 10 21.3
comp=Z,42nm,1.5s
ODZ Otahua Downs 62.23 161 IAMs_20 IAMs_20 05 34 43.0
comp=Z,10µm,21.0s
MK31 Makanchi Array 62.55 316 P **P 05 10 14.6 -1.0**
MK31 pmax pmax
comp=Z,20nm,0.8s
MK31 Makanchi Array 62.55 316 P **P 05 10 14.6 -1.0**
MK31 IAmb IAmb 05 10 21.2
comp=Z,20nm,0.8s
MKAR Makanchi Array 62.55 316 P **P 05 10 14.8 -0.8**
comp=Z,11nm,0.4s,baz=91,slow=8.4,SNR=60
ZAA0 Zalesovo Array 62.55 324 P **P 05 10 14.7 -0.7**
ZAA0 IAmb IAmb 05 10 26.4
comp=Z,25nm,0.7s
ZAA0 IAMs_20 IAMs_20 05 39 00.1
comp=Z,7µm,19.0s
ZALV Zalesovo Beam 62.55 324 P **P 05 10 14.4 -1.0**
comp=Z,20nm,0.7s,baz=103,slow=6.5,SNR=42
ZALV LR LR 05 38 52.2
comp=Z,7µm,18.9s,baz=104,slow=38
MAKZ Makanchi 62.76 316 P **P 05 10 16.3 -0.7**
OHAK Old Harbor 63.02 32 IAMs_20 IAMs_20 05 34 40.5
comp=Z,9µm,20.0s
MYLAV Mylavaram 63.17 282 *e*P **P 05 10 22.2 +2.1**
GGR Gangavaram 63.46 283 *e*P **P 05 10 23.4 +1.3**
GGR IAmb IAmb 05 10 26.1
comp=Z,109nm,1.9s
KDAK Kodiak Island 63.55 32 P **P 05 10 22.0 +0.1**
KDAK pmax pmax
comp=Z,46nm,1.0s
KDAK Kodiak Island 63.55 32 P **P 05 10 22.7 +0.7**
baz=328,slow=7.5
KDAK Kodiak Island 63.55 32 P **P 05 10 22.0 +0.1**
KDAK IAmb IAmb 05 10 27.7
comp=Z,46nm,1.0s
TTA Tatalina 63.77 26 P **P 05 10 23.5 +0.1**
TTA pmax pmax
comp=Z,24nm,1.0s
TTA Tatalina 63.77 26 P **P 05 10 23.5 +0.1**
TTA IAmb IAmb 05 10 32.4
comp=Z,24nm,1.0s
ADKI Addanki 63.92 281 *e*P **P 05 10 25.6 +0.4**
ADKI IAmb IAmb 05 10 29.5
comp=Z,71nm,1.9s
PDGK Podgornoye 64.03 312 P **P 05 10 25.0 -0.6**
SHLS Shalkode 64.04 312 *e*P **P 05 10 23.6 -2.0**
SHLS pmax pmax
comp=Z,196nm,3.5s
SHLS Shalkode 64.04 312 *e*P **P 05 10 23.7 -2.0**
comp=Z,196nm,3.5s
RPR Rampur 64.21 285 *e*P **P 05 10 28.6 +1.6**
RPR IAmb IAmb 05 10 35.6
comp=Z,15nm,0.5s
NGP Nagpur 64.22 287 *e*P **P 05 10 26.7 -0.4**
UZB Uzynbulak 64.36 312 *e*P **P 05 10 27.6 -0.1**
UZB *e*S **S 05 19 05.2 +0.8**
UZB pmax pmax
comp=Z,59nm,2.4s
UZB Uzynbulak 64.36 312 *e*P **P 05 10 27.7 -0.1**
comp=Z,59nm,2.4s
UZB *e*S **S 05 19 05.3 +0.8**
SKHT Srikalahasti 64.45 279 *e*P **P 05 10 29.4 +0.7**
SKHT IAmb IAmb 05 10 33.9
comp=Z,51nm,1.5s
NJS Nagarjunasagar 64.46 282 *e*P **P 05 10 29.9 +1.3**
NJS IAmb IAmb 05 10 32.4
comp=Z,29nm,1.2s
HOM Homer 64.59 30 IAMs_20 IAMs_20 05 35 03.8
comp=Z,7µm,22.0s
PALK Pallekele 64.59 272 *e*P **P 05 10 30.4 +0.7**
PALK pmax pmax
comp=Z,57nm,1.5s
PALK Pallekele 64.59 272 P **P 05 10 31.1 +1.5**
DDI Dehra Dun 64.62 297 *e*P **P 05 10 27.8 -1.9**
DDI IAmb IAmb 05 10 30.1
comp=Z,114nm,0.7s
KPKS Kokpek 64.63 312 *e*P **P 05 10 29.5 0.0**
KPKS *e*S **S 05 19 06.6 -1.1**
KPKS pmax pmax
comp=Z,302nm,4.9s
KPKS Kokpek 64.63 312 *e*P **P 05 10 29.5 0.0**
comp=Z,302nm,4.9s

KPKS eS S 05 19 06.7 -1.1
CNPM China Poot 64.75 30 P P 05 10 28.7 -1.1
CNPM IAMs_20 IAMs_20 05 35 21.1
comp=Z,7µm,21.0s
PRZ Przheval'sk 64.75 311 P P 05 10 28.3 -2.1
PRZ pmax pmax
comp=Z,94nm,1.1s
PRZ MLR MLR
comp=Z,5µm,18.0s
PRZ Przheval'sk 64.75 311 P P 05 10 28.3 -2.1
ZHN Zhinishke 64.78 312 *i* P P 05 10 29.2 -1.3
ZHN Zhinishke 64.78 312 *i* P P 05 10 29.3 -1.3
SATY Saty 64.80 311 *e*P P 05 10 31.1 +0.5
SATY pmax pmax
comp=Z,51nm,1.5s
SATY Saty 64.80 311 *e*P P 05 10 31.1 +0.5
comp=Z,51nm,1.5s
SRLM Srisailam 64.91 282 *e*P P 05 10 32.4 +0.7
SRLM IAmb IAmb 05 10 36.4
comp=Z,44nm,1.4s
TDK Taldyqorghan 64.99 314 *e*P P 05 10 32.8 +1.1
TDK Taldyqorghan 64.99 314 *e*P P 05 10 32.8 +1.1
BRLK Bradley Lake 64.99 30 IAMs_20 IAMs_20 05 35 17.1
comp=Z,6µm,22.0s
HYB Hyderabad 65.07 283 *i* P P 05 10 33.0 +0.3
comp=Z,50nm,1.0s
HYB *e*S S 05 19 18.0 +4.3
HYB Hyderabad 65.07 283 *e*P P 05 10 33.3 +0.6
HYB IAmb IAmb 05 10 40.7
comp=Z,72nm,1.4s
HYBB Hyderabad (bro 65.07 283 *e*P P 05 10 33.1 +0.3
HYBB IAmb IAmb 05 10 37.3
comp=Z,16nm,0.9s
SRSP Sriramsagar 65.09 285 *e*P P 05 10 32.5 -0.3
SRSP IAmb IAmb 05 10 35.3
comp=Z,35nm,1.4s
SKT Skwentna 65.37 27 IAMs_20 IAMs_20 05 43 03.3
comp=Z,5µm,20.0s
BHPL Bhopal 65.54 290 *e*P P 05 10 37.4 +1.7
BHPL IAmb IAmb 05 10 38.6
comp=Z,17nm,0.9s
BHPL *e*S S 05 19 21.4 +2.1
KURK Kurchatov 65.59 320 P P 05 10 34.0 -1.4
KURK Kurchatov 65.59 320 P P 05 10 34.0 -1.4
KURBB Kurchatov Arra 65.63 320 P P 05 10 34.7 -1.0
comp=Z,45nm,0.6s,baz=101,slow=6.8,SNR=75
SEW Seward 65.78 30 IAMs_20 IAMs_20 05 36 29.3
comp=Z,11µm,22.0s
MDOK Medeo 65.80 311 *e*P P 05 10 36.9 -0.2
MDOK *e*S S 05 19 20.5 -1.6
MDOK Medeo 65.80 311 *e*P P 05 10 36.9 -0.2
MDOK *e*S S 05 19 20.6 -1.6
MDOK *e*LR LR 05 41 07.4
TNSS Tian-Shan 65.86 311 *e*P P 05 10 37.7 -0.2
TNSS Tian-Shan 65.86 311 *e*P P 05 10 37.7 -0.2
AAA Alma-Ata 65.90 311 *e*P P 05 10 40.5 +2.8
AAA *e*S S 05 19 30.4 +7.3
AAA pmax pmax
comp=Z,1µm,5.7s
AAA smax smax
comp=N,800nm,8.8s
AAA MLR MLR
comp=Z,3µm,18.0s
AAA Alma-Ata 65.90 311 *e*P P 05 10 35.0 -2.6
AAA *e*S S 05 19 20.2 -2.9
RC01 Rabbit Creek A 65.92 29 IAMs_20 IAMs_20 05 37 07.9
comp=Z,6µm,21.0s
DHRM DHARAMSHALA 66.09 299 *e*P P 05 10 36.6 -2.7
DHRM IAmb IAmb 05 10 40.9
comp=Z,48nm,0.8s
DHRM *e*S S 05 19 25.1 -1.1
DHRM *i* x x 05 37 02.9
MTBS Maitube 66.25 311 *i* P P 05 10 38.1 -1.8
MTBS Maitube 66.25 311 *i* P P 05 10 38.1 -1.8
BPAW Bear Paw Mtn. 66.29 25 IAMs_20 IAMs_20 05 43 22.5
comp=Z,6µm,20.0s
KUU Kurty 66.36 312 *e*P P 05 10 39.8 -0.8
KUU *e*S S 05 19 27.8 -0.9
KUU Kurty 66.36 312 *e*P P 05 10 39.9 -0.8
KUU *i* S S 05 19 23.8 -4.9
KUU *e*S S 05 19 27.8 -0.9
TRF Thorofare Moun 66.38 26 IAMs_20 IAMs_20 05 35 27.8
comp=Z,6µm,21.0s
KSH Kashi 66.41 307⇑ *i*P P 05 10 45.9 +4.8
KSH sP pwP 05 10 58.4 +1.0
KSH PP PP **05 13 12.3 +4.9**
KSH S S **05 19 36.8 +7.2**
KSH sS sS 05 19 49.3 +7.6
KSH SS SS **05 23 50.3 +3.9**
KSH pmax pmax
comp=Z,110nm,1.3s
KSH pmax pmax
comp=Z,4µm,6.4s
KSH LR LR
comp=Z,2µm,10.6s
KSH LR LR
comp=Z,2µm,8.3s
KSH LR LR
comp=Z,6µm,16.3s
NRN Naryn 66.47 309 IAmb IAmb 05 10 53.4
comp=Z,21nm,0.9s
BOOM Boomskoye usch 66.57 311 IAmb IAmb 05 10 54.0
comp=Z,23nm,0.8s
BOOM IAMs_20 IAMs_20 05 44 02.0
comp=Z,5µm,18.0s
KNK Knik Glacier 66.60 28 IAMs_20 IAMs_20 05 37 38.0
comp=Z,6µm,20.0s
URV Uravakonda 66.63 281 *e*P P 05 10 43.8 +1.0
URV IAmb IAmb 05 10 46.5
comp=Z,64nm,1.3s
MLY Manley 66.70 24 IAMs_20 IAMs_20 05 38 55.1
comp=Z,7µm,20.0s
SML Sawmill 66.77 28 IAMs_20 IAMs_20 05 37 50.3
comp=Z,6µm,20.0s
KLRI Killari 66.84 284 *e*P P 05 10 44.6 +0.5
KLRI IAmb IAmb 05 10 46.3
comp=Z,24nm,1.1s
MCK McKinley 67.04 26 IAmb IAmb 05 10 52.7
comp=Z,48nm,1.2s
MCK IAMs_20 IAMs_20 05 35 47.3
comp=Z,6µm,21.0s
KZA Kyzart 67.06 310 P P 05 10 46.4 +0.9
SNR=22
GLI Glacier Island 67.11 29 IAMs_20 IAMs_20 05 36 49.4
comp=Z,10µm,22.0s
NEA Nenana 67.23 25 IAMs_20 IAMs_20 05 43 51.5
comp=Z,6µm,18.0s
SCM Sheep Creek Mo 67.23 28 IAMs_20 IAMs_20 05 36 42.8
comp=Z,6µm,21.0s
HIN Hinchinbrook I 67.28 30 IAMs_20 IAMs_20 05 36 03.9
comp=Z,10µm,22.0s
KBK Karagaybulak 67.31 311 P P 05 10 49.5 +2.7
SNR=11
CHMS Chumysh 67.47 311 P P 05 10 48.3 +0.6
SNR=12
DHY Denali Highway 67.53 27 IAmb IAmb 05 10 57.5
comp=Z,48nm,1.0s
DHY IAMs_20 IAMs_20 05 39 04.1
comp=Z,7µm,21.0s
SGDS Sogindy 67.58 312 *e*P P 05 10 49.1 +0.7
comp=Z,314nm,5.5s
UCH Uchtor 67.61 310 P P 05 10 50.5 +1.4
SNR=36
COLD Coldfoot 67.64 22 IAMs_20 IAMs_20 05 44 10.7
comp=Z,5µm,20.0s
AAK Ala-Archa 67.64 311 P P 05 10 47.5 -1.4
AAK pmax pmax
comp=Z,15nm,1.0s
AAK Ala-Archa 67.64 311 P P 05 10 47.9 -1.0
comp=Z,5.4nm,0.5s,baz=75,slow=5.9,SNR=12
AAK LR LR 05 42 57.2
comp=Z,5µm,19.2s,baz=75,slow=38
AAK Ala-Archa 67.64 311 P P 05 10 49.6 +0.7
SNR=5.2
AAK Ala-Archa 67.64 311 P P 05 10 49.5 +0.6
AAK Ala-Archa 67.64 311 P P 05 10 47.5 -1.4
USP Ospenovka 67.66 311 P P 05 10 49.1 +0.2
SNR=13
EYAK Cordova Ski Ar 67.67 30 IAMs_20 IAMs_20 05 43 31.4
comp=Z,6µm,20.0s
MDM Murphy Dome 67.69 25 IAmb IAmb 05 11 09.1
comp=Z,27nm,0.8s
CCB Clear Creek Bu 67.78 25 IAmb IAmb 05 10 56.9
comp=Z,28nm,1.0s
CCB IAMs_20 IAMs_20 05 39 51.4
comp=Z,6µm,19.0s

TCOL CIGO, UAF Yank 67.82 25 P P 05 10 50.6 +1.2
baz=254
COLA College 67.82 25 P P 05 10 49.4 0.0
COLA pmax pmax
comp=Z,42nm,1.1s
COLA College 67.82 25 P P 05 10 49.4 0.0
COLA IAmb IAmb 05 10 56.6
comp=Z,42nm,1.1s
COLA College 67.82 25 IAMs_20 IAMs_20 05 39 21.8
comp=Z,6µm,20.0s
TRD Trivandrum 68.00 274 *e*P P 05 10 53.6 +2.2
TRD IAmb IAmb 05 11 00.2
comp=Z,65nm,1.1s
TRD *e*S S 05 19 55.2 +6.0
TRD *i* x x 05 32 38.9
POKR Poker Plat Res 68.06 25 P P 05 10 52.0 +1.0
baz=254
HDA Harding Lake 68.07 25 IAmb IAmb 05 11 08.0
comp=Z,38nm,0.8s
HDA IAMs_20 IAMs_20 05 39 11.5
comp=Z,5µm,19.0s
HDA Harding Lake 68.07 25 P P 05 10 51.8 +0.8
baz=255
BTLS Baital 68.07 313 *e*P P 05 10 50.1 -1.3
BTLS pmax pmax
comp=Z,59nm,3.7s
BTLS Baital 68.07 313 *e*P P 05 10 50.1 -1.3
comp=Z,59nm,3.7s
EKS2 Erkin-Say 68.17 311 P P 05 10 53.1 +0.9
SNR=13
IL31 68.19 25 IAmb IAmb 05 10 59.0
comp=Z,58nm,1.1s
ILAR Eielson Array 68.19 25 P P 05 10 50.6 -1.1
comp=Z,11nm,0.9s,baz=250,slow=5.8,SNR=56
ILAR LR LR 05 40 05.4
comp=Z,3µm,20.3s,baz=252,slow=35
AML Almayashu 68.22 310 P P 05 10 54.2 +1.3
SNR=30
PAX Paxson 68.35 27 IAmb IAmb 05 11 01.9
comp=Z,39nm,0.9s
PAX IAMs_20 IAMs_20 05 43 57.1
comp=Z,5µm,20.0s
HMT Hamilton 68.35 30 IAMs_20 IAMs_20 05 37 00.3
comp=Z,10µm,21.0s
NIL Nilore 68.61 301 P P 05 10 52.8 -2.3
NIL pmax pmax
comp=Z,251nm,1.0s
NIL Nilore 68.61 301 P P 05 10 52.8 -2.3
ARSB Arslanbob 68.73 309 IAMs_20 IAMs_20 05 46 00.7
comp=Z,5µm,18.0s
GLB Gilahina Butte 68.78 29 IAmb IAmb 05 11 05.1
comp=Z,48nm,1.0s
GLB IAMs_20 IAMs_20 05 38 56.7
comp=Z,7µm,21.0s
RIDG Independent Ri 68.80 26 IAMs_20 IAMs_20 05 37 14.9
comp=Z,8µm,22.0s
DOT Dot Lake 69.12 27 IAMs_20 IAMs_20 05 44 14.3
comp=Z,7µm,19.0s
TGL Tana Glacier 69.12 30 IAMs_20 IAMs_20 05 37 49.7
comp=Z,7µm,22.0s
SCRK Sand Creek 69.22 26 P P 05 10 59.6 +1.2
SCRK IAmb IAmb 05 11 09.9
comp=Z,36nm,1.0s
SCRK IAMs_20 IAMs_20 05 37 04.8
comp=Z,7µm,22.0s
BRZS Berezniki 69.29 319 *e*P P 05 10 58.3 -0.6
BRZS pmax pmax
comp=Z,334nm,3.5s
BRZS Berezniki 69.29 319 *e*P P 05 10 58.4 -0.6
comp=Z,334nm,3.5s
BRZS *e*LR LR 05 43 05.0
FYU Fort Yukon 69.32 23 IAMs_20 IAMs_20 05 45 22.3
comp=Z,8µm,19.0s
POO Poona 69.37 285 *e*P P 05 10 59.7 -0.3
BALM Baldy 69.41 30 IAMs_20 IAMs_20 05 38 00.2
comp=Z,7µm,22.0s
GOA Goa 69.83 282 *e*P P 05 11 03.4 +0.6
CTGM Chitina Glacie 69.88 30 IAMs_20 IAMs_20 05 37 39.7
comp=Z,6µm,22.0s
BTK Batken 70.38 308 IAmb IAmb 05 11 17.6
comp=Z,41nm,1.1s
PPT Papeete 70.43 114 LR LR 05 36 19.1
comp=Z,7µm,20.5s,baz=256,slow=31
PPT2 Papeete2 70.44 114 *e*S S 05 20 16.2 -1.8
comp=Z,3µm,28.5s
PPT2 *e*LQ LQ 05 29 29.4
comp=Z,1µm,23.8s
PPT2 *e*LR LR 05 32 21.7
comp=Z,10µm,21.5s,baz=292
PPTF Pamatai, Papee 70.45 114 IAMs_20 IAMs_20 05 36 29.7
comp=Z,8µm,19.0s
JBG Jabagly 70.56 310 *e*P P 05 11 07.3 +0.3
JBG pmax pmax
comp=Z,165nm,3.4s
KK31 Karatay Array 70.58 311 *i* P P 05 11 06.2 -0.7
KK31 Karatay Array 70.58 311 IAmb IAmb 05 11 10.1
comp=Z,32nm,1.0s
KKAR Karatay Array 70.58 311 IAmb IAmb 05 11 10.1
comp=Z,32nm,1.0s
EGAK Eagle 70.59 26 IAmb IAmb 05 11 22.9
comp=Z,38nm,0.9s
EGAK IAMs_20 IAMs_20 05 40 48.0
comp=Z,6µm,20.0s
BVAR Borovoye Array 70.90 322 P P 05 11 08.1 -0.6
comp=Z,49nm,0.7s,baz=103,slow=7.2,SNR=97
IUG luzhnay 70.94 310 *e*P P 05 11 09.7 +0.4
IUG pmax pmax
comp=Z,28nm,3.9s
IUG luzhnay 70.94 310 *e*P P 05 11 09.8 +0.4
comp=Z,28nm,3.9s
BRVK Borovoye 70.97 322 P P 05 11 08.1 -1.0
BRVK pmax pmax
comp=Z,52nm,0.7s
BRVK Borovoye 70.97 322 P P 05 11 08.1 -1.0
DAWY Dawson 71.23 27 IAmb IAmb 05 11 20.1
comp=Z,37nm,1.0s
CHM Chimkent 71.25 310 *e*P P 05 11 09.9 -1.2
CHM Chimkent 71.25 310 *e*P P 05 11 10.0 -1.2
KBL Kabul 72.05 302 P P 05 11 14.1 -2.2
KBL pmax pmax
comp=Z,90nm,1.1s
KBL MLR MLR
comp=Z,3µm,20.0s
KBL Kabul 72.05 302 P P 05 11 14.1 -2.2
EPYK Eagle Plains 72.64 24 IAmb IAmb 05 11 37.5
comp=Z,44nm,1.0s
EPYK IAMs_20 IAMs_20 05 47 28.2
comp=Z,9µm,19.0s
EPYK Eagle Plains 72.64 24 P P 05 11 20.3 +1.3
baz=264
BHUJ Bhuj 72.65 290 *e*P P 05 11 18.5 -1.2
BHUJ IAmb IAmb 05 11 22.8
comp=Z,115nm,1.4s
BHUJ *e*S S 05 20 44.5 +1.2
BHUJ *i* x x 05 20 52.3
TBI Tubuai 72.73 120 *e*S S 05 20 43.1 -0.9
comp=Z,2µm,27.0s
TBI Tubuai 72.73 120 *e*LR LR 05 33 12.3
comp=Z,5µm,21.5s,baz=290
JIS Juneau Island 73.15 33 IAMs_20 IAMs_20 05 37 02.5
comp=Z,5µm,22.0s
CRAG Craig 73.80 36 IAMs_20 IAMs_20 05 42 59.3
comp=Z,7µm,20.0s
INK Inuvik 74.05 22 IAmb IAmb 05 11 34.1
comp=Z,64nm,1.1s
WRAK Wrangell Islan 74.23 35 IAMs_20 IAMs_20 05 45 06.3
comp=Z,6µm,19.0s
DLBC Dease Lake 75.44 33 P P 05 11 37.9 +2.4
comp=Z,31nm,0.9s,baz=286,slow=5.9,SNR=4.3
DLBC Dease Lake 75.44 33 P P 05 11 34.9 -0.6
DLBC IAmb IAmb 05 11 49.9
comp=Z,81nm,1.1s
TAOE Nuku Hiva Isla 76.36 103 *e*S S 05 21 23.3 -2.0
comp=Z,4µm,25.2s
TAOE Nuku Hiva Isla 76.36 103 *e*LR LR 05 34 53.2
comp=Z,6µm,21.2s,baz=289
SVE Sverdlovsk 76.50 326 *ce*P P 05 11 42.4 +0.9
SVE *e*S S 05 21 21.6 -3.7
SVE *e*SS SS 05 26 28.2 +8.1
SVE pmax pmax
comp=Z,52nm,1.0s
SVE MLR MLR
comp=E,4µm,19.0s
SVE MLR MLR
comp=Z,6µm,19.0s
BBB Bella Bella 76.91 39 P P 05 11 45.2 +1.4
comp=Z,40nm,1.1s,baz=272,slow=7.9,SNR=4.9

BBB Bella Bella 76.91 39 IAmb IAmb 05 11 52.4
comp=Z,58nm,1.1s
H08N1 Diego Garcia H 77.19 260 P P 05 11 45.7 0.0
baz=113,slow=1.7,SNR=22
H08N2 Diego Garcia H 77.20 260 P P 05 11 45.9 +0.1
baz=113,slow=1.7,SNR=21
H08N3 Diego Garcia H 77.21 260 P P 05 11 45.8 -0.1
baz=113,slow=1.7,SNR=16
C36M Paulatuk 77.48 21 P P 05 11 47.4 +0.7
baz=275
AB31 Akbulak array 77.57 318 P P 05 11 46.0 -1.7
HRA Herat 77.66 303 IAmb IAmb 05 11 52.3
comp=Z,46nm,0.8s
ARU Arti 77.68 325*c i*P P 05 11 48.2 +0.1
ARU 05 14 41.2
ARU PPP PPP 05 16 34.2
ARU S S **05 21 39.5 +1.4**
ARU SS SS **05 26 42.9 +5.1**
ARU pmax pmax
comp=Z,74nm,1.3s
ARU MLR MLR
comp=Z,6µm,18.0s
ARU Arti 77.68 325 P P 05 11 47.4 -0.7
comp=Z,9.3nm,0.8s,baz=94,slow=3.0,SNR=16
ARU LR LR 05 48 49.4
comp=Z,6µm,18.1s,baz=80,slow=38
ARU Arti 77.68 325 P P 05 11 47.1 -1.0
ARU IAmb IAmb 05 11 55.6
comp=Z,42nm,0.9s
ARU IAMs_20 IAMs_20 05 48 27.2
comp=Z,7µm,18.0s
AKTO Aktyubinsk 78.68 319 P P 05 11 52.5 -1.3
comp=Z,10nm,0.8s,baz=103,slow=5.9,SNR=20
AKTO LR LR 05 48 55.3
comp=Z,5µm,18.8s,baz=83,slow=38
NLWA Neilton Lookou 80.22 44 IAmb IAmb 05 12 14.1
comp=Z,50nm,1.0s
GEYT Alibeck 80.43 307 P P 05 12 04.7 +1.0
comp=Z,22nm,1.0s,baz=119,slow=1.9,SNR=18
GEYT LR LR 05 49 41.2
comp=Z,3µm,21.9s,baz=65,slow=37
GYA0B ALIBECK ARRAY 80.43 307 IAMs_20 IAMs_20 05 54 03.2
comp=Z,4µm,19.0s
KEBM Edson Butte 80.63 48 IAMs_20 IAMs_20 05 40 21.1
comp=Z,6µm,20.0s
D03D Eldon 80.72 43 P P 05 12 06.6 +1.6
baz=280
I02D Swisshome 80.77 47 P P 05 12 06.4 +1.2
baz=280
A04D Lummi Island 80.78 42 P P 05 12 06.0 +0.9
baz=280
J01E Myrtle Point 80.87 48 P P 05 12 06.8 +1.0
baz=280
LLLB Lillooet 80.98 40 IAmb IAmb 05 12 20.4
comp=Z,50nm,1.1s
D04E Lakebay 81.00 44 P P 05 12 07.3 +1.0
baz=280
G03D McMinnville, O 81.00 46 P P 05 12 07.3 +0.8
baz=280
COR Corvallis 81.08 46 P P 05 12 05.7 -1.1
COR pmax pmax
comp=Z,61nm,1.1s
COR Corvallis 81.08 46 P P 05 12 05.7 -1.1
COR IAmb IAmb 05 12 22.3
comp=Z,61nm,1.1s
K02D Willamette Mer 81.14 48 P P 05 12 07.8 +0.4
baz=280
KRMB Red Mountain 81.17 49 IAMs_20 IAMs_20 05 44 05.5
comp=Z,6µm,19.0s
I03D Drain, OR 81.20 47 P P 05 12 08.2 +0.7
baz=280
JCC Jacoby Creek, 81.20 50 IAMs_20 IAMs_20 05 40 58.4
comp=Z,7µm,20.0s
E04D Cinebar 81.24 44 P P 05 12 09.2 +1.5
baz=280,SNR=22
B05A Bryant 81.26 43 P P 05 12 08.5 +0.7
baz=280
L02E Cave Junction 81.28 49 P P 05 12 09.4 +1.3
baz=280,SNR=7.1
H04D Lebanon 81.48 46 P P 05 12 10.8 +1.7
baz=280,SNR=15
HUMO Hull Mountain 81.67 48 IAmb IAmb 05 12 27.2
comp=Z,38nm,1.1s
LON Longmire 81.72 44 IAmb IAmb 05 12 18.7
comp=Z,31nm,1.1s
H04A Detroit Lake 81.84 46 IAmb IAmb 05 12 20.1
comp=Z,71nm,1.2s
I04A Tendick Farm, 81.85 47 P P 05 12 12.8 +1.7
baz=281,SNR=15
M02C Callahan 81.97 49 P P 05 12 13.8 +2.0
baz=281,SNR=13
YBH Yreka Blue Hor 82.01 49 P P 05 12 14.2 +2.1
comp=Z,22nm,0.9s,baz=282,slow=1.1,SNR=27
YBH Yreka Blue Hor 82.01 49 IAmb IAmb 05 12 29.1
comp=Z,35nm,1.1s
YBH IAMs_20 IAMs_20 05 41 04.9
comp=Z,7µm,21.0s
C06D Leavenworth 82.11 43 P P 05 12 14.0 +1.7
baz=281
F05D White Salmon 82.12 45 P P 05 12 14.4 +2.0
baz=281,SNR=12
N02D Trinity Center 82.16 50 P P 05 12 15.2 +2.4
baz=281,SNR=11
J04D Umpqua Nationa 82.17 48 P P 05 12 14.4 +1.4
baz=281
KIRV Kirov 82.21 328 P P 05 12 13.6 +1.1
comp=Z,46nm,0.6s,baz=76,slow=6.2,SNR=14
L04D Klamath Falls 82.22 49 P P 05 12 15.0 +1.8
baz=281,SNR=20
O02D Mt. Diablo Mer 82.25 51 P P 05 12 15.0 +1.7
baz=281,SNR=17
G05D Wamic, OR 82.34 45 P P 05 12 15.4 +1.8
baz=281,SNR=9.9
WDC Whiskeytown Da 82.36 50 IAmb IAmb 05 12 30.9
comp=Z,27nm,1.1s
LTY Liberty 82.39 43 IAmb IAmb 05 12 24.5
comp=Z,44nm,1.1s
YKA Yellowknife Ar 82.43 28 P P 05 12 13.7 0.0
comp=Z,24nm,1.1s,baz=285,slow=5.5,SNR=64
YKA PKKPbc **PKKPbc 05 30 44.4 +2.3**
comp=Z,0.2nm,0.8s,baz=118,slow=1.8,SNR=3.9
YKA LR LR 05 47 40.8
comp=Z,4µm,21.0s,baz=0.0,slow=35
WBK Wadi Bani Khal 82.47 291 P P 05 12 15.2 +0.5
SNR=22
WBK P P 05 12 15.2 +0.5
SNR=22
GDXM Geysers 82.50 52 IAMs_20 IAMs_20 05 42 31.1
comp=Z,5µm,20.0s
I05D Terrebonne, OR 82.50 46 P P 05 12 16.0 +1.5
baz=281,SNR=14
K04D Chiloquin, OR 82.54 48 P P 05 12 16.8 +2.0
baz=281,SNR=12
MCCM Marconi Confer 82.56 53 IAMs_20 IAMs_20 05 45 11.8
comp=Z,5µm,18.0s
M04C Macdoel 82.64 49 P P 05 12 17.0 +1.6
baz=281,SNR=26
WSAR Wadi Sarin 82.65 292 LR LR 05 50 33.4
comp=Z,1µm,20.8s,baz=96,slow=37
WSAR Wadi Sarin 82.65 292 P P 05 12 15.9 +0.3
SNR=26
J05D Fort Rock, OR 82.79 47 P P 05 12 17.7 +1.6
baz=282
O03E Paynes Creek 82.97 50 P P 05 12 18.9 +1.9
baz=282,SNR=16
BIDO Bidbid 83.05 292 P P 05 12 18.1 +0.5
SNR=43
BIDO P P 05 12 18.1 +0.5
SNR=43
SMDO Samad 83.21 292 P P 05 12 18.5 -0.1
SNR=17
SMDO P P 05 12 18.5 -0.1
SNR=17
PRGR Permogore 83.30 332 *e*P P 05 12 15.5 -2.6
PRGR pmax pmax
comp=Z,135nm,1.3s
JMDO Jabal Madar 83.30 291 P P 05 12 19.4 +0.4
SNR=15
JMDO P P 05 12 19.4 +0.4
SNR=15
HAWA Hanford 83.33 44 IAmb IAmb 05 12 23.3
comp=Z,18nm,0.9s
HAWA IAMs_20 IAMs_20 05 45 27.0
comp=Z,4µm,20.0s
ORV Oroville 83.34 51 IAmb IAmb 05 12 28.5
comp=Z,32nm,1.1s
MHTO MHTO 83.70 290 P P 05 12 20.7 -0.3
SNR=38

MHTO P P 05 12 20.7 -0.3
SNR=38
MOD Modoc Plateau 83.74 49 IAmb IAmb 05 12 30.2
comp=Z,33nm,0.9s
MOD IAMs_20 IAMs_20 05 42 44.6
comp=Z,4µm,20.0s
HOQ Hoqain 83.77 293 P P 05 12 21.5 +0.1
SNR=70
HOQ P P 05 12 21.5 +0.1
SNR=70
I07A Izee 83.85 46 IAmb IAmb 05 12 40.4
comp=Z,25nm,1.1s
C09A Chrisman Ranch 83.86 42 IAmb IAmb 05 12 29.0
comp=Z,34nm,1.1s
AFDM Forest Hills D 83.87 52 IAmb IAmb 05 12 41.3
comp=Z,29nm,1.1s
G08A Pilot Rock 83.96 45 IAmb IAmb 05 12 32.2
comp=Z,25nm,1.1s
BSY Bisya 84.04 292 P P 05 12 22.8 0.0
SNR=27
BSY P P 05 12 22.8 0.0
SNR=27
BEKR Beckworth 84.14 51 IAmb IAmb 05 12 31.6
comp=Z,51nm,1.0s
BEKR IAMs_20 IAMs_20 05 42 33.2
comp=Z,5µm,22.0s
BANOM Banah 84.19 295 *i* P P 05 12 25.1 +1.5
SNR=22
BANOM Banah 84.19 295 P P 05 12 24.3 +0.8
SNR=26
BANOM P P 05 12 24.3 +0.8
SNR=26
DQM DQM 84.32 289 P P 05 12 25.9 +1.7
SNR=11
DQM P P 05 12 25.9 +1.7
SNR=11
MDH Madha 84.32 295 *i* P P 05 12 26.5 +2.4
SNR=26
MDH Madha 84.32 295 P P 05 12 27.7 +3.5
SNR=16
SOHO SOHO 84.35 293 P P 05 12 24.2 -0.1
SNR=52
SOHO P P 05 12 24.2 -0.1
SNR=52
RES Resolute Bay 84.44 14 IAmb IAmb 05 12 32.3
comp=Z,40nm,0.8s
SPA0 Spitsbergen Ar 84.46 351 IAmb IAmb 05 12 44.4
comp=Z,40nm,1.1s
SPITS Spitsbergen Ar 84.46 351 P P 05 12 23.7 -0.1
comp=Z,34nm,1.1s,baz=142,slow=7.4,SNR=12
RUBR Rubicon Trail 84.47 51 IAMs_20 IAMs_20 05 43 01.0
comp=Z,4µm,20.0s
UOSS Minazif 84.48 294 *i* P P 05 12 25.5 +0.6
SNR=9.8
UOSS Minazif 84.48 294 P P 05 12 23.0 -1.9
NEW Newport 84.51 42 P P 05 12 26.2 +1.5
comp=Z,21nm,1.0s,baz=283,slow=4.2,SNR=25
NEW Newport 84.51 42 IAmb IAmb 05 12 34.7
comp=Z,22nm,0.8s
NEW Newport 84.51 42 IAMs_20 IAMs_20 05 53 39.1
comp=Z,4µm,18.0s
NEW Newport 84.51 42 P P 05 12 26.2 +1.5
baz=284
CMB Columbia Colle 84.51 52 IAmb IAmb 05 12 29.1
comp=Z,21nm,1.0s
CMB IAMs_20 IAMs_20 05 47 22.9
comp=Z,4µm,18.0s
ARQ Araqi 84.53 293 P P 05 12 26.4 +1.1
SNR=65
ARQ P P 05 12 26.4 +1.1
SNR=65
HATD Hatta, Dubai 84.57 294 *i* P P 05 12 26.5 +1.1
SNR=57
HATD Hatta, Dubai 84.57 294 P P 05 12 25.9 +0.5
SNR=48
HATD P P 05 12 25.9 +0.5
SNR=48
PMPB Monarch Peak 84.58 54 IAMs_20 IAMs_20 05 51 19.3
comp=Z,5µm,18.0s
KBS Kingsbay 84.59 352 P P 05 12 23.9 -0.6
KBS pmax pmax
comp=Z,58nm,1.2s
KBS MLR MLR
comp=Z,4µm,18.0s
KBS Kingsbay 84.59 352 P P 05 12 23.9 -0.6
KBS Kingsbay 84.59 352 IAMs_20 IAMs_20 05 52 32.6
comp=Z,4µm,18.0s
ASHO Ashiyiah 84.66 294 *i* P P 05 12 26.5 +0.5
SNR=20
ASHO Ashiyiah 84.66 294 P P 05 12 26.8 +0.8
SNR=38
ASHO P P 05 12 26.8 +0.8
SNR=38
J08A Circle Bar Ran 84.74 47 IAmb IAmb 05 12 39.9
comp=Z,35nm,1.0s
NOR Nord 84.79 358⇑ *i* P P 05 12 27.3 +1.8
comp=Z,41nm,1.3s
comp=Z,3µm,21.0s
VCNR Virginia City 84.80 51 IAmb IAmb 05 12 38.6
comp=Z,25nm,1.0s
VCNR IAMs_20 IAMs_20 05 43 25.3
comp=Z,5µm,21.0s
WVOR Wild Horse Val 84.83 48 IAmb IAmb 05 12 30.2
comp=Z,25nm,1.1s
WVOR IAMs_20 IAMs_20 05 46 37.4
comp=Z,6µm,19.0s
PNTR Pine Nut 84.88 51 IAMs_20 IAMs_20 05 46 04.9
comp=Z,4µm,19.0s
PAHR Pah Rah Range 84.90 51 IAmb IAmb 05 12 38.0
comp=Z,29nm,1.1s
PAHR IAMs_20 IAMs_20 05 43 29.5
comp=Z,5µm,21.0s
NAZ Nazwa, Dubai 84.95 294 *i* P P 05 12 28.6 +1.3
SNR=28
NAZ Nazwa, Dubai 84.95 294 P P 05 12 28.2 +0.8
SNR=20
NAZ P P 05 12 28.2 +0.8
SNR=20
F10A Beach Ranch, E 84.99 44 IAmb IAmb 05 12 37.4
comp=Z,26nm,1.1s
FAQ Al Faqa, Dubai 85.06 294 *i* P P 05 12 30.7 +2.8
SNR=14
FAQ Al Faqa, Dubai 85.06 294 P P 05 12 30.8 +2.9
SNR=8.8
WAKR Walker 85.14 52 IAMs_20 IAMs_20 05 47 55.7
comp=Z,3µm,18.0s
YERR Yerington 85.18 51 IAmb IAmb 05 12 41.5
comp=Z,26nm,1.1s
YERR IAMs_20 IAMs_20 05 47 23.8
comp=Z,5µm,20.0s
BMO Blue Mountains 85.20 45 IAmb IAmb 05 12 39.1
comp=Z,31nm,1.1s
BMO IAMs_20 IAMs_20 05 43 43.9
comp=Z,5µm,21.0s
ASUD Al Ashush, Dub 85.32 294 *i* P P 05 12 30.9 +1.7
SNR=8.6
ASUD Al Ashush, Dub 85.32 294 P P 05 12 30.7 +1.5
SNR=20
ASUD P P 05 12 30.7 +1.5
SNR=20
SMMC Simmler 85.42 55 P P 05 12 31.3 +1.7
baz=283
LVZ Lovozero 85.55 339 *e* P P 05 12 29.6 +0.1
LVZ pmax pmax
comp=Z,83nm,1.4s
MDPB Devils Postpil 85.61 53 IAmb IAmb 05 12 39.4
comp=Z,48nm,1.2s
MDPB IAMs_20 IAMs_20 05 46 49.4
comp=Z,3µm,20.0s
PKM Mcpherson Peak 85.66 55 P P 05 12 32.0 +1.1
baz=283
OMMB Old Mammoth Mi 85.68 53 IAmb IAmb 05 12 39.9
comp=Z,43nm,1.2s
OMMB IAMs_20 IAMs_20 05 47 10.1
comp=Z,4µm,20.0s
VOG Valley Oaks Go 85.68 54 P P 05 12 32.2 +1.5
baz=284
TMCR Tamitsa 85.77 335 *e* P P 05 12 29.1 -1.5
TMCR pmax pmax
comp=Z,82nm,0.9s
MLAC Mammoth, Mammo 85.80 52 P P 05 12 33.0 +1.3
baz=284
RYN Ryan 85.80 51 IAmb IAmb 05 12 40.4
comp=Z,53nm,1.2s
RYN IAMs_20 IAMs_20 05 47 24.4
comp=Z,4µm,18.0s
SBC Santa Barbara 85.84 56 P P 05 12 32.6 +1.0
baz=283

NVAR Mina Array Bea 86.02 52 P P 05 12 33.8 +1.2
comp=Z,10nm,0.7s,baz=270,slow=5.2,SNR=50
NVAR LR LR 05 48 02.6
comp=Z,2µm,19.1s,baz=299,slow=34
VES Vestal, Richgr 86.02 54 P P 05 12 33.7 +1.2
baz=284,SNR=11
KVN Kaiserville 86.03 51 IAMs_20 IAMs_20 05 47 23.2
comp=Z,4µm,19.0s
APA Apatity 86.12 339⇑ *i* P P 05 12 31.5 -0.8
APA *i* 05 22 51.0
APA *i* S **SKSac** 05 22 57.0 +1.0
APA pmax pmax
comp=Z,22nm,1.0s
KLMR Klimovskoe 86.35 332 *e* P P 05 12 31.7 -1.8
KLMR *e* 05 15 51.7
KLMR *e* S **SKSac** 05 22 54.3 -3.4
KLMR *e* SS **SS** 05 28 46.1 -0.2
KLMR pmax pmax
comp=Z,123nm,1.5s
KLMR MLR MLR
comp=Z,5µm,18.0s
KLMR Klimovskoe 86.35 332 *e* P P 05 12 31.8 -1.8
KLMR AMP 05 12 39.7
comp=Z,123nm,1.5s
KLMR *e* PP **PP** 05 15 51.8 -2.6
KLMR *e* S **SKSac** 05 22 54.3 -3.4
KLMR *e* S **SKSac** 05 22 54.3 -3.4
KLMR *e* SS **SS** 05 28 46.1 -0.2
KLMR *e* SS **SS** 05 28 46.1 -0.2
KLMR LQ LQ 05 43 00.2
KLMR LQ LQ 05 43 00.2
KLMR LR LR 05 52 07.9
KLMR AMP 05 54 04.6
comp=Z,5µm,17.9s
ARVC Arvin 86.39 55 P P 05 12 36.5 +2.2
baz=284,SNR=7.2
TIN Tinemaha, Big 86.41 53 P P 05 12 36.7 +2.2
baz=284,SNR=10
JTMT Jette 86.48 42 IAmb IAmb 05 12 53.8
comp=Z,30nm,1.0s
JTMT IAMs_20 IAMs_20 05 55 17.9
comp=Z,3µm,18.0s
SHAO Shalim 86.50 288 *i* P P 05 12 36.6 +1.5
SNR=10
SHAO Shalim 86.50 288 P P 05 12 36.0 +0.9
SNR=6.4
SHAO P P 05 12 36.0 +0.9
SNR=6.4
ISA Isabella, Lake 86.55 54 IAMs_20 IAMs_20 05 52 42.4
comp=Z,3µm,19.0s
ISA Isabella, Lake 86.55 54 P P 05 12 36.6 +1.4
baz=284,SNR=12
MFID Camas Ranch 86.59 46 IAmb IAmb 05 12 39.5
comp=Z,45nm,1.1s
MFID IAMs_20 IAMs_20 05 47 34.8
comp=Z,6µm,20.0s
CWC Cottonwood Cre 86.67 53 P P 05 12 37.3 +1.4
baz=284
MSO Missoula 86.96 43 P P 05 12 38.4 +1.4
baz=286
DECC Green Verdugo 87.00 56 P P 05 12 38.7 +1.3
baz=284
GRAC Grapevine Rang 87.09 53 P P 05 12 39.4 +1.7
baz=285
DAC Darwin (Calif) 87.09 54 IAMs_20 IAMs_20 05 47 46.7
comp=Z,5µm,20.0s
EDW2 Edwards Air Fo 87.12 55 P P 05 12 39.6 +1.6
baz=284,SNR=14
PASC Pasadena Art C 87.14 56 IAMs_20 IAMs_20 05 46 32.1
comp=Z,6µm,19.0s
CIS Catalina Islan 87.14 57 P P 05 12 39.6 +1.6
baz=284
DMTO DMTO 87.19 287 P P 05 12 39.4 +0.8
SNR=14
DMTO P P 05 12 39.4 +0.8
SNR=14
LRMC Laurel Mtn Rad 87.22 54 P P 05 12 40.1 +1.5
baz=284,SNR=27
MPMC Manual Prospec 87.23 54 P P 05 12 40.3 +1.7
baz=285,SNR=59
MWC Mount Wilson 87.23 56 IAMs_20 IAMs_20 05 47 14.5
comp=Z,7µm,20.0s
MAK Makhachkala 87.25 313 *e* P P 05 12 33.2 -5.1
MAK *e* 05 15 58.4
MAK *e* S **SKSac** 05 22 55.8 -8.1
MAK *e* SSS SSS 05 32 29.8
MAK MLR MLR
comp=Z,4µm,14.0s
BFSC Mount Baldy Ra 87.54 56 P P 05 12 42.8 +2.7
baz=285,SNR=6.6
FURC Furnace Creek, 87.61 53 P P 05 12 42.2 +2.0
baz=285,SNR=26
ARCES ARCESS Array B 87.68 342 P P 05 12 38.7 -1.2
comp=Z,20nm,0.8s,baz=63,slow=5.4,SNR=29
ARCES LR LR 05 55 35.8
comp=Z,3µm,18.6s,baz=64,slow=38
ARE0 ARCESS Array S 87.68 342 P P 05 12 39.1 -0.8
ELK Elko 87.72 49 P P 05 12 43.1 +2.1
comp=Z,44nm,1.0s,baz=285,slow=5.6,SNR=60
ELK Elko 87.72 49 IAMs_20 IAMs_20 05 47 58.9
comp=Z,6µm,20.0s
RRX Edison Barstow 87.91 55 P P 05 12 43.3 +1.5
baz=285
RBK Rabkut 87.93 287 P P 05 12 42.2 +0.1
SNR=20
GSC Goldstone, Bar 87.96 54 IAmb IAmb 05 12 48.6
comp=Z,25nm,1.1s
GSC Goldstone, Bar 87.96 54 P P 05 12 44.0 +2.0
baz=285,SNR=19
TPNV Topopah Spring 87.97 53 IAmb IAmb 05 12 48.7
comp=Z,32nm,1.1s
TPNV IAMs_20 IAMs_20 05 47 55.8
comp=Z,3µm,18.0s
TPNV Topopah Spring 87.97 53 P P 05 12 44.0 +1.9
baz=285,SNR=34
MURC Murrieta 88.08 56 P P 05 12 44.1 +1.5
baz=285
R11A Troy Canyon, C 88.11 51 IAmb IAmb 05 13 01.1
comp=Z,20nm,1.1s
R11A IAMs_20 IAMs_20 05 48 57.3
comp=Z,3µm,19.0s
R11A Troy Canyon, C 88.11 51 P P 05 12 44.3 +1.5
baz=286,SNR=27
BBRC Big Bear Solar 88.13 55 P P 05 12 44.1 +1.0
baz=285
SHOC Shoshone, Teco 88.22 54 P P 05 12 45.1 +2.0
baz=285,SNR=18
WHFO Wadi Hawf 88.24 288 P P 05 12 43.4 -0.2
SNR=9.9
WHFO P P 05 12 43.4 -0.2
SNR=9.9
DLMT Dillon 88.28 44 IAmb IAmb 05 12 51.1
comp=Z,20nm,0.9s
109C Camp Elliot, M 88.33 57 IAMs_20 IAMs_20 05 45 53.5
comp=Z,6µm,20.0s
109C Camp Elliot, M 88.33 57 P P 05 12 44.8 +1.1
baz=285,SNR=11
HEC Hector,Ludlow 88.45 55 P P 05 12 45.8 +1.4
baz=285,SNR=24
VRH Novokhopyorsk 88.54 322 *e* P P 05 12 43.1 -1.1
VRH pmax pmax
comp=Z,130nm,1.1s
VRH MLR MLR
comp=Z,4µm,16.0s
TUQ Turquoise Moun 88.62 54 P P 05 12 46.7 +1.5
baz=286,SNR=28
PFO Pinyon Flats O 88.67 56 P P 05 12 47.5 +2.1
PFO pmax pmax
comp=Z,13nm,1.0s
PFO Pinyon Flats O 88.67 56 P P 05 12 47.4 +1.9
comp=Z,12nm,0.9s,baz=247,slow=3.1,SNR=16
PFO Pinyon Flats O 88.67 56 P P 05 12 47.5 +2.1
PFO Pinyon Flats O 88.67 56 IAMs_20 IAMs_20 05 48 12.7
comp=Z,6µm,20.0s
PFO Pinyon Flats O 88.67 56 P P 05 12 47.1 +1.6
baz=285,SNR=18
XPFO Pion Flat 88.67 56 P P 05 12 45.0 -0.5
XPFO Pion Flat 88.67 56 IAMs_20 IAMs_20 05 48 12.7
comp=Z,6µm,20.0s
BAR Barrett 88.74 57 P P 05 12 44.5 -1.2
ABTO Aybut 88.81 287 P P 05 12 46.9 +0.6
SNR=18
ABTO P P 05 12 46.9 +0.6
SNR=18
MONP2 Monument Peak 88.89 57 P P 05 12 47.9 +1.3
baz=285,SNR=20
SHPR Sheep Range 88.93 53 IAmb IAmb 05 12 53.8
comp=Z,31nm,1.2s
SHPR IAMs_20 IAMs_20 05 48 06.3
comp=Z,4µm,20.0s
BELC Belle Mtn. Jos 88.94 55 P P 05 12 48.4 +1.7
baz=286,SNR=18
GMRC Granite Mounta 89.00 55 P P 05 12 48.4 +1.4
baz=286,SNR=22
MOS Moscow 89.19 328 *e* P P 05 12 45.7 -1.5
MOS *e* 05 16 19.6
MOS *e* S **SKSac** 05 23 12.9 -2.1
MOS pmax pmax
comp=Z,92nm,1.1s
MOS MLR MLR
comp=E,3µm,17.0s
MOS MLR MLR
comp=Z,4µm,17.0s
MOS MLR MLR
comp=N,2µm,19.0s
IKP In-Ko-Pah, Jac 89.20 57 P P 05 12 48.9 +1.0
baz=286,SNR=11
EGMT Eagleton 89.30 41 P P 05 12 49.2 +1.1
baz=289
SOCY Socotra 89.36 282 P P 05 12 48.9 -0.1
SNR=5.4
SWSC Sam W. Stewart 89.38 56 P P 05 12 50.4 +1.8
baz=286,SNR=12
BC3 Big Chuckawall 89.47 56 P P 05 12 50.1 +0.9
baz=286,SNR=21
DAG Danmarks Havn 89.57 357 *i* P P 05 12 49.0 +0.4
DAG pmax pmax
comp=Z,17nm,0.9s
DAG MLR MLR
comp=Z,2µm,18.0s
DAG Danmarks Havn 89.57 357 *i* P P 05 12 49.0 +0.4
comp=Z,16nm,0.9s
comp=Z,2µm,18.0s
IRM Iron Mountain 89.58 55 P P 05 12 51.0 +1.4
baz=286,SNR=20
DUG Dugway, Tooele 89.65 49 IAMs_20 IAMs_20 05 49 31.0
comp=Z,5µm,19.0s
DUG Dugway, Tooele 89.65 49 P P 05 12 51.4 +1.4
baz=287
LPSR Galich'ya Gora 89.66 324 *e* P P 05 12 48.2 -1.3
LPSR pmax pmax
comp=Z,210nm,1.0s
LPSR MLR MLR
comp=Z,5µm,18.0s
GOF Gofitskoye 89.71 316⇑ *e* P P 05 12 49.9 0.0
GOF *e* S **SKSac** 05 23 19.2 +0.6
GOF pmax pmax
comp=Z,58nm,1.4s
NEE2 Needles Airpor 89.83 54 P P 05 12 52.9 +2.2
baz=286
ZEI Tsey 89.84 314 *e* P P 05 12 48.9 -1.9
ZEI pmax pmax
comp=Z,36nm,1.4s
IMW Indian Meadow 89.85 45 IAMs_20 IAMs_20 05 46 37.9
comp=Z,6µm,21.0s
H17A Grant Village 89.94 44 IAMs_20 IAMs_20 05 54 46.7
comp=Z,5µm,19.0s
H17A Grant Village 89.94 44 P P 05 12 54.4 +3.0
baz=289
FLWY Flagg Ranch 89.96 45 IAMs_20 IAMs_20 05 47 02.1
comp=Z,6µm,21.0s
TPAW Teton Pass 89.97 45 IAmb IAmb 05 13 06.4
comp=Z,24nm,1.1s
OBN Obninsk 89.99 327 *e* P P 05 12 50.0 -0.9
OBN *e* 05 12 54.7
OBN *e* 05 16 22.4
OBN *e* PPP PPP 05 18 16.8
OBN *e* S **SKSac** 05 23 18.2 -1.5
OBN *e* SS **SS** 05 29 39.4 0.0
OBN pmax pmax
comp=Z,84nm,1.2s
OBN MLR MLR
comp=Z,6µm,17.0s
OBN Obninsk 89.99 327 P P 05 12 49.4 -1.5
LKWY Lake 90.01 44 IAMs_20 IAMs_20 05 48 30.9
comp=Z,5µm,21.0s
MOOW Moose Ponds 90.03 45 IAMs_20 IAMs_20 05 49 40.7
comp=Z,5µm,19.0s
VSR Storozhevoye 90.04 323 *e* P P 05 12 49.7 -1.6
VSR pmax pmax
comp=Z,120nm,1.0s
VSR MLR MLR
comp=Z,5µm,17.0s
VORD Divnogorie 90.06 323 *e* P P 05 12 50.3 -1.1
VORD pmax pmax
comp=Z,50nm,0.6s
REDW Red Top Meadow 90.08 45 IAMs_20 IAMs_20 05 47 43.0
comp=Z,3µm,20.0s
AHID Auburn Hatcher 90.10 46 IAmb IAmb 05 12 56.2
comp=Z,36nm,1.1s
AHID IAMs_20 IAMs_20 05 49 39.5
comp=Z,7µm,20.0s
SNOW Snow King Moun 90.12 45 IAMs_20 IAMs_20 05 48 24.9
comp=Z,3µm,19.0s
GLA Glamis 90.13 56 IAMs_20 IAMs_20 05 49 07.5
comp=Z,4µm,19.0s
GLA Glamis 90.13 56 P P 05 12 54.5 +2.2
baz=286
Y12C Blythe 90.19 55 P P 05 12 53.5 +1.1
baz=286,SNR=8.5
KBZ Khabaz 90.24 315 P P 05 12 52.5 +0.1
comp=Z,18nm,1.0s,baz=58,slow=4.2,SNR=13
KBZ LR LR 05 57 35.5
comp=Z,3µm,19.4s,baz=68,slow=38
KIV Kislovodsk 90.31 315 *e* P P 05 12 52.8 -0.1
KIV *e* 05 16 26.2
KIV *e* 05 23 20.3
KIV *e* SS SS 05 29 43.8 -1.2
KIV pmax pmax
comp=Z,108nm,1.0s
KIV pmax pmax
comp=Z,530nm,4.6s
KIV Kislovodsk 90.31 315 *i* P P 05 12 52.7 -0.2
SNR=5.7
KIV Kislovodsk 90.31 315 P P 05 12 51.0 -1.8
KIV IAmb IAmb 05 12 55.8
comp=Z,34nm,1.0s
KIV IAMs_20 IAMs_20 05 58 57.4
comp=Z,4µm,20.0s
PDMCI Parker Dam,Lak 90.33 55 P P 05 12 54.6 +1.5
baz=287,SNR=13
AKH Akhalkalaki 90.56 313 ⇑P P 05 12 54.8 +0.6
AKH Akhalkalaki 90.56 313 IAmb IAmb 05 12 58.2
comp=Z,22nm,1.0s
RLMT Red Lodge 90.58 43 IAmb IAmb 05 13 05.8
comp=Z,24nm,0.9s
RLMT Red Lodge 90.58 43 P P 05 12 56.5 +2.2
baz=290
CLDR Caldiran 90.95 311 *e* P P 05 12 59.3 +3.1
PUL Pulkovo 90.95 333 *e* P P 05 12 55.8 +0.4
PUL pmax pmax
comp=Z,90nm,0.8s
KULLO Kullorsuaq 90.99 6 *e* P P 05 12 55.1 -0.2
KULLO pmax pmax
comp=Z,42nm,1.1s
KULLO Kullorsuaq 90.99 6 *i* P P 05 12 55.1 -0.2
comp=Z,42nm,1.1s
113A Mohawk Valley, 91.07 56 IAMs_20 IAMs_20 05 46 42.3
comp=Z,3µm,20.0s
U15A North Rim 91.17 52 IAMs_20 IAMs_20 05 49 20.4
comp=Z,4µm,20.0s
BW06 Boulder Array 91.17 46 IAMs_20 IAMs_20 05 50 54.9
comp=Z,4µm,19.0s
BW06 Boulder Array 91.17 46 P P 05 12 58.2 +1.0
baz=290
PDAR Pinedale Array 91.17 46 P P 05 12 58.0 +0.9
comp=Z,4.1nm,0.8s,baz=231,slow=2.6,SNR=24
PDAR PP PP 05 16 35.1 +1.3
comp=Z,2.0nm,1.1s,baz=316,slow=5.1,SNR=3.6
PDAR LR LR 05 50 18.8
comp=Z,3µm,19.5s,baz=310,slow=33
VNDA Vanda 91.18 177 P P 05 12 57.4 +1.4
comp=Z,2.9nm,1.0s,baz=306,slow=9.5,SNR=3.2
VNDA LR LR 05 53 46.0
comp=Z,2µm,18.2s,baz=344,slow=35
FFC Flin Flon 91.28 33 P P 05 12 56.6 -0.4
FFC pmax pmax
comp=Z,13nm,1.1s
FFC MLR MLR
comp=Z,5µm,19.0s
FFC Flin Flon 91.28 33 P P 05 12 56.6 -0.4
FFC Flin Flon 91.28 33 IAMs_20 IAMs_20 05 55 13.8
comp=Z,5µm,19.0s
Y14A Wickenburg 91.34 55 IAmb IAmb 05 13 06.6

comp=Z,42nm,1.1s
AGRB Hanur-Agry 91.50 311 *e*P **P** **05 13 00.1 +1.5**
VANB Van 91.52 310 *e*P **P** **05 13 01.7 +3.1**
SENK Senkaya-Erzuru 91.65 312 *e*P **P** **05 13 01.1 +1.8**
CUKT Cukurca 91.77 309 *e*P **P** **05 12 59.9 0.0**
RDMU Red Mountain 91.89 48 P **P** **05 12 59.9 -0.6**
FINES FINESS Array B 91.90 335 P **P** **05 12 58.1 -1.6**
comp=Z,18nm,0.5s,baz=66,slow=4.2,SNR=61
FINES LR LR 05 56 07.4
comp=Z,3µm,20.9s,baz=62,slow=37
AKDM Akdamar-Van 91.90 310 *e*P **P** **05 12 59.5 -1.0**
LAO LASA Array 92.02 41 P **P** **05 13 02.4 +1.7**
baz=292
214A Organ Pipe Nat 92.08 57 P **P** **05 13 03.6 +2.3**
baz=287
WUAZ Wupatki 92.15 53 P **P** **05 13 04.1 +2.4**
baz=288
X16A Lo Mia Camp, P 92.44 54 IAms_20 IAms_20 05 51 14.2
comp=Z,6µm,20.0s
SOC Sochi 92.46 316 *e*P **P** **05 13 03.9 +1.2**
SOC *e*PPP PPP 05 18 46.6
SOC *e*S **SKSac** **05 23 34.9 +0.6**
SOC *e* 05 25 11.2
SOC *e*SS **SS** **05 30 25.6 +10**
SOC pmax pmax
comp=Z,67nm,1.3s
GURO Guroymak-BITLI 92.54 310 *e*P **P** **05 13 05.3 +1.9**
DGMT Dagmar 92.60 39 IAmb IAmb 05 13 07.0
comp=Z,22nm,1.1s
DGMT Dagmar 92.60 39 IAms_20 IAms_20 05 48 25.0
comp=Z,5µm,21.0s
DGMT Dagmar 92.60 39 P **P** **05 13 05.3 +1.9**
baz=294
VRTB Varto-Mus 92.76 311 *e*P **P** **05 13 07.2 +2.8**
O20A White River Ci 92.99 48 IAmb IAmb 05 13 09.2
comp=Z,14nm,0.9s
O20A White River Ci 92.99 48 P **P** **05 13 07.0 +1.5**
baz=290
VSU Vasula 93.22 333 *e*P **P** **05 13 04.1 -1.7**
VSU pmax pmax
comp=Z,160nm,1.2s
SVAN Silvan-Diyarba 93.29 310 *e*P **P** **05 13 07.6 +0.9**
K22A Casper 93.31 45 IAmb IAmb 05 13 16.7
comp=Z,25nm,1.1s
K22A IAms_20 IAms_20 05 49 11.3
comp=Z,5µm,20.0s
K22A Casper 93.31 45 P **P** **05 13 08.5 +1.6**
baz=292
YEDI Yedisu-Bingol 93.33 312 *e*P **P** **05 13 05.5 -1.6**
BNGB Bingl 93.39 311 *e*P **P** **05 13 08.4 +1.1**
ANN Anapa 93.53 318 *e*P **P** **05 13 09.5 +1.9**
ANN *e* 05 23 42.6
ANN *e* 05 24 18.9
ANN pmax pmax
comp=Z,185nm,2.1s
W18A Petrified Fore 93.55 53 IAmb IAmb 05 13 18.0
comp=Z,38nm,1.1s
W18A Petrified Fore 93.55 53 P **P** **05 13 10.3 +2.1**
baz=289
X18A Snowflake 93.57 53 IAmb IAmb 05 13 18.1
comp=Z,21nm,1.1s
X18A IAms_20 IAms_20 05 50 27.2
comp=Z,5µm,20.0s
TUC Tucson 93.61 56 P **P** **05 13 07.5 -0.9**
TUC pmax pmax
comp=Z,9.0nm,1.1s
TUC Tucson 93.61 56 P **P** **05 13 07.5 -0.9**
TUC Tucson 93.61 56 IAms_20 IAms_20 05 48 38.5
comp=Z,4µm,20.0s
TUC Tucson 93.61 56 P **P** **05 13 10.8 +2.4**
baz=288
MVCO Mesa Verde 93.80 51 IAmb IAmb 05 13 18.5
comp=Z,25nm,1.1s
MVCO IAms_20 IAms_20 05 52 25.0
comp=Z,6µm,20.0s
MVCO Mesa Verde 93.80 51 P **P** **05 13 11.4 +2.0**
baz=290
SRIG Santa Rosalia 93.91 61 IAms_20 IAms_20 05 50 44.0
comp=Z,4µm,19.0s
SUMG Summit 94.18 1 *i* P **P** **05 13 11.0 +0.4**
SUMG pmax pmax
comp=Z,81nm,1.4s
SUMG Summit 94.18 1 *i* P **P** **05 13 11.0 +0.4**
comp=Z,81nm,1.4s
SMCO Snowmass 94.24 48 IAmb IAmb 05 13 19.9
comp=Z,30nm,1.0s
RAYN Ar Rayn 94.29 295 P **P** **05 13 09.5 -2.1**
RAYN pmax pmax
comp=Z,24nm,1.1s
RAYN Ar Rayn 94.29 295 *i* P **P** **05 13 11.1 -0.5**
SNR=14
RAYN Ar Rayn 94.29 295 P **P** **05 13 09.5 -2.1**
RAYN IAmb IAmb 05 13 14.2
comp=Z,24nm,1.1s
N23A Red Feather La 94.36 46 IAmb IAmb 05 13 24.9
comp=Z,35nm,1.1s
N23A IAms_20 IAms_20 05 52 38.3
comp=Z,6µm,21.0s
N23A Red Feather La 94.36 46 P **P** **05 13 13.8 +1.9**
baz=292
RSSD Black Hills 94.43 43 P **P** **05 13 11.6 -0.5**
RSSD pmax pmax
comp=Z,12nm,0.9s
RSSD MLR MLR
comp=Z,2µm,20.0s
RSSD Black Hills 94.43 43 P **P** **05 13 11.6 -0.5**
RSSD Black Hills 94.43 43 P **P** **05 13 13.3 +1.2**
baz=294
HSIG 94.49 59 IAMs_20 IAMs_20 05 52 00.1
comp=Z,5µm,19.0s
PHWY Pilot Hill 94.55 46 IAMs_20 IAMs_20 05 52 16.2
comp=Z,4µm,20.0s
MICGM Minsk 94.74 329 *e*P **P** **05 13 12.0 -0.9**
MICGM *e*PPP PPP 05 19 12.0
MICGM *e*SKS **SKSac** **05 23 37.0 -9.4**
MICGM *e*S **S** **05 24 21.0 -3.4**
MICGM *e*PS **PS** **05 25 45.0 +1.3**
MICGM *e*SS SS 05 31 20.0 +32
MICGM *e*SSS SSS 05 34 34.0
MICGM *e*LR LR 05 50 10.0
MICGM LRM MLR 06 01 18.0
comp=Z,6.5nm,16.0s
MNK Minsk 94.74 329 *e*P **P** **05 13 12.0 -0.9**
MNK *e*PPP PPP 05 19 12.0
MNK *e*S **S** **05 24 21.0 -3.4**
MNK *e*PS PS 05 25 45.0 +1.3
MNK *e*SSS SSS 05 34 34.0
S22A 4UR Ranch, Cre 94.86 50 IAMs_20 IAMs_20 05 54 09.9
comp=Z,5µm,19.0s
S22A 4UR Ranch, Cre 94.86 50 P **P** **05 13 16.1 +1.8**
baz=291
ISCO Idaho Springs 95.00 47 P **P** **05 13 16.6 +1.7**
baz=292
319A Douglas 95.12 56 IAMs_20 IAMs_20 05 50 53.5
comp=Z,5µm,20.0s
RSDY Resadiye-TOKAT 95.29 313 *e*P **P** **05 13 18.5 +2.6**
URFA Urfa 95.30 310 *e*P **P** **05 13 17.3 +1.3**
SIM Simferopol' 95.63 319 P **P** **05 13 15.0 -2.3**
SIM 05 17 04.7
SIM pmax pmax
comp=Z,120nm,8.4s
SIM pmax pmax
comp=Z,250nm,9.4s
Q24A Divide 95.64 48 IAMs_20 IAMs_20 05 53 41.5
comp=Z,6µm,20.0s
Q24A Divide 95.64 48 P **P** **05 13 19.3 +1.5**
baz=292
MDND Maddock 95.65 38 P **P** **05 13 19.3 +1.9**
baz=297
SDCO Great Sand Dun 95.84 49 IAMs_20 IAMs_20 05 49 23.8
comp=Z,4µm,22.0s
SDCO Great Sand Dun 95.84 49 P **P** **05 13 20.6 +1.8**
baz=292
DARE Darende-Malaty 95.87 312 *e*P **P** **05 13 20.7 +2.1**
TOKT Tokat 95.87 314 *e*P **P** **05 13 18.5 0.0**
AKASG Malin Array Be 95.93 325 *i* P **P** **05 13 17.6 -0.9**
AKASG pmax pmax
comp=Z,6.0nm,0.9s
AKASG Malin Array Be 95.93 325 P **P** **05 13 16.7 -1.8**
comp=Z,5.6nm,0.9s,baz=50,slow=5.2,SNR=18
AKASG LR LR 05 59 31.4
comp=Z,7µm,19.2s,baz=60,slow=37
121A Cookes Peak, D 95.94 55 IAmb IAmb 05 13 32.6
comp=Z,14nm,1.1s
121A IAMs_20 IAMs_20 05 49 47.9
comp=Z,3µm,21.0s
121A Cookes Peak, D 95.94 55 P **P** **05 13 21.5 +2.3**
baz=290
ANMO Albuquerque 96.14 52 P **P** **05 13 17.3 -2.8**
ANMO pmax pmax
comp=Z,5.0nm,1.1s
ANMO MLR MLR
comp=Z,3µm,19.0s
ANMO Albuquerque 96.14 52 P **P** **05 13 20.5 +0.5**
comp=Z,2.7nm,0.9s,baz=243,slow=4.9,SNR=7.6
ANMO Albuquerque 96.14 52 P **P** **05 13 17.3 -2.8**
ANMO Albuquerque 96.14 52 IAMs_20 IAMs_20 06 00 09.0
comp=Z,3µm,19.0s
ANMO Albuquerque 96.14 52 P **P** **05 13 20.3 +0.2**
baz=291
GAZ Gaziantep 96.59 311 IAMs_20 IAMs_20 06 03 39.0
comp=Z,5µm,19.0s
ULM Lac du Bonnet 96.66 35 *e*P **P** **05 13 22.0 +0.2**
ULM Lac du Bonnet 96.66 35 P **P** **05 13 22.5 +0.7**
comp=Z,5.7nm,0.9s,baz=305,slow=5.7,SNR=7.1
ULM LR LR 05 57 19.8
comp=Z,4µm,18.6s,baz=300,slow=36
ULM Lac du Bonnet 96.66 35 IAmb IAmb 05 13 40.9
comp=Z,11nm,1.1s
ULM IAMs_20 IAMs_20 05 58 23.6
comp=Z,6µm,20.0s
T25A Trinidad 96.87 49 IAmb IAmb 05 13 31.6
comp=Z,8.5nm,1.0s
T25A IAMs_20 IAMs_20 05 50 52.2
comp=Z,4µm,21.0s
T25A Trinidad 96.87 49 P **P** **05 13 24.0 +0.6**
baz=293
BNN Bunyan 96.94 312 *e*P **P** **05 13 24.3 +0.8**
OGNE Ogallala 97.06 45 IAMs_20 IAMs_20 05 54 18.8
comp=Z,5µm,19.0s
SUW Suwalki 97.32 330 IAMs_20 IAMs_20 05 59 58.2
comp=Z,4µm,20.0s
KSCO Kaye Shedlock' 97.44 47 P Pdif 05 13 27.0 +1.2
baz=294
SORM Soroca 97.70 323 ⇓P **P** **05 13 25.9 -0.6**
SORM Soroca 97.70 323 ⇓P **P** **05 13 25.9 -0.6**
NB2 NORSAR Subarra 97.70 340 P **P** **05 13 24.8 -1.5**
comp=Z,4.2nm,0.8s,baz=43,slow=5.1
NOA NORSAR Array B 97.70 340 P **P** **05 13 24.9 -1.4**
comp=Z,1.7nm,0.9s,baz=51,slow=4.2,SNR=11
NOA PP **PP** **05 17 23.5 -0.2**
comp=Z,1.3nm,0.8s,baz=42,slow=7.8,SNR=3.3
NOA LR LR 06 00 11.3
comp=Z,4µm,21.2s,baz=45,slow=37
KIS Kishinev 97.98 322 *e* P 05 13 23.0 -4.8
KIS Kishinev 97.98 322 *e*P Pdif 05 13 29.0 +1.1
KIS *i* SKS SKSac 05 24 15.0 +11
KIS *e*SKKS **SKKSac** **05 24 27.0 -5.4**
KIS Kishinev 97.98 322 *e*P Pdif 05 13 29.0 +1.1
KIS *e* 05 13 33.0
KIS *i* 05 24 05.0
KIS *e*PS **PS** **05 26 22.0 +2.5**
KIS MLR MLR
comp=Z,4µm,18.0s
MNTX Cornudas Mount 98.14 55 P **P** **05 13 26.4 -2.5**
MNTX IAmb IAmb 05 13 37.6
comp=Z,17nm,1.1s
MNTX IAMs_20 IAMs_20 05 51 08.3
comp=Z,3µm,20.0s
MNTX Cornudas Mount 98.14 55 P Pdif 05 13 30.4 +1.5
baz=291
BR131 Keskin Array S 98.15 314 P **P** **05 13 25.8 -3.2**
BR131 pmax pmax
comp=Z,12nm,1.1s
BR131 Keskin Array S 98.15 314 P **P** **05 13 25.8 -3.2**
BR131 IAmb IAmb 05 13 30.9
comp=Z,12nm,1.1s
BR131 Keskin Array S 98.15 314 P **P** **05 13 28.1 -0.9**
SNR=5.9
BR131 P **P** **05 13 28.1 -0.9**
SNR=5.9
BRTR Keskin Array B 98.15 314 *i* P **P** **05 13 28.5 -0.5**
BRTR pmax pmax
comp=Z,14nm,1.2s
BRTR Keskin Array B 98.15 314 P **P** **05 13 27.8 -1.1**
comp=Z,13nm,1.1s,baz=98,slow=2.6,SNR=24
BRTR LR LR 06 04 02.2
comp=Z,772nm,18.6s,baz=34,slow=39
ANTO Ankara 98.68 314 IAMs_20 IAMs_20 06 04 35.5
comp=Z,3µm,19.0s
LVV L'vov 99.24 326 *e*P **Pdif** **05 13 37.2 +3.8**
LVV *e* 05 17 39.0
LVV *e* 05 24 14.7
LVV *e* 05 26 38.3
LVV *e* 05 31 55.4
LVV *e* 05 35 43.7
TOPG Topolog 99.29 320 ⇑P **Pdif** **05 13 33.3 -0.4**
CFR Carcaliu 99.29 321 ⇓P **Pdif** **05 13 33.8 +0.1**
CFR Carcaliu 99.29 321 ⇓P **Pdif** **05 13 33.8 +0.1**
MSTX Muleshoe 99.32 52 IAMs_20 IAMs_20 05 57 37.4
comp=Z,4µm,20.0s
ECSD EROS Data Cent 99.42 41 IAMs_20 IAMs_20 06 03 19.5
comp=Z,2µm,19.0s
ECSD EROS Data Cent 99.42 41 P **Pdif** **05 13 34.8 +0.4**
baz=299
TESR Tescani 99.52 322 ⇑P **Pdif** **05 13 34.9 +0.2**
CBKS Cedar Bluff 99.56 46 IAMs_20 IAMs_20 05 55 28.1
comp=Z,4µm,20.0s
BIZ Bicaz 99.62 323 ⇑P **Pdif** **05 13 35.5 +0.3**
MAW Mawson 99.75 203 LR LR 05 58 26.3
comp=Z,2µm,18.7s,baz=76,slow=35
BUR08 Bucovina Ar. S 99.77 324 IAmb IAmb 05 13 38.6
comp=Z,18nm,1.1s
BURAR Bucovina Array 99.77 324 ⇑P **Pdif** **05 13 35.3 -0.7**
BURAR Bucovina Array 99.77 324 ⇑P **Pdif** **05 13 35.3 -0.7**
AMTX Amarillo 99.79 51 IAMs_20 IAMs_20 05 53 35.6
comp=Z,3µm,20.0s
AMTX Amarillo 99.79 51 P **Pdif** **05 13 37.8 +1.4**
baz=294
VRI Vrincioaia 99.80 322 ⇑P **Pdif** **05 13 36.0 -0.1**
VRI Vrincioaia 99.80 322 ⇑P **Pdif** **05 13 36.0 -0.1**
PLOR Plostina 99.85 322 ⇑P **Pdif** **05 13 36.7 +0.4**
PLOR Plostina 99.85 322 ⇑P **Pdif** **05 13 36.7 +0.4**
BISRR Bisoca 99.97 322 ⇑P **Pdif** **05 13 37.4 +0.5**
KWP Kalwaria Pacla 100.06 327 *e*P **Pdif** **05 13 35.9 -1.2**
KWP Kalwaria Pacla 100.06 327 *e*P **Pdif** **05 13 35.9 -1.2**
OZUR 100.24 322 ⇓P **Pdif** **05 13 38.5 +0.4**
CSS Mathiatis 100.35 310 IAMs_20 IAMs_20 06 06 24.5
comp=Z,5µm,19.0s
TXAR Lajitas Array 100.38 56 P **Pdif** **05 13 41.0 +1.9**
comp=Z,1.6nm,1.0s,baz=293,slow=2.5,SNR=9.5
TXAR PP **PP** **05 17 50.5 +5.2**
comp=Z,0.7nm,0.9s,baz=298,slow=6.1,SNR=3.4
TXAR PKKPbo **PKKPbc** **05 29 57.0 +1.5**
comp=Z,0.7nm,1.0s,baz=73,slow=4.3,SNR=3.4
MLR Muntele Rosu 100.46 322 ⇑P **Pdif** **05 13 39.3 +0.2**
MLR Muntele Rosu 100.46 322 ⇑P **Pdif** **05 13 39.3 +0.2**
MLR Muntele Rosu 100.46 322 **Pdif** **05 13 37.4 -1.8**
DOPR Dopca 100.55 322 ⇑P **Pdif** **05 13 39.1 -0.3**
SECR 100.62 321 ⇑P **Pdif** **05 13 40.7 +1.0**
KOLS Kolonicke sedl 100.69 326 *e*P **Pdif** **05 13 40.3 +0.3**
KOLS Kolonicke sedl 100.69 326 *e*PDIFF **Pdif** **05 13 40.2 +0.3**
UZH Uzhgorod 100.85 326 *d* iP **Pdif** **05 13 40.5 -0.1**
UZH *i* 05 17 49.3
UZH *i* 05 24 21.0
UZH *e*S **Sdif** **05 25 09.8 -6.9**
UZH *e*SS **SS** **05 32 23.8 +10**
VOIR 101.03 322 ⇓P **Pdif** **05 13 41.7 +0.1**
VOIR 101.03 322 ⇓P **Pdif** **05 13 41.7 +0.1**
U32A Winter Ranch, 101.15 48 IAMs_20 IAMs_20 05 54 25.2
comp=Z,5µm,20.0s
OJC Ojcow 101.24 328 *e*P **Pdif** **05 13 42.2 -0.1**
OJC Ojcow 101.24 328 *e*P **Pdif** **05 13 42.2 -0.1**
ARR Arges 101.31 322 ⇑P **Pdif** **05 13 43.9 +1.0**
NIE Niedzica 101.46 327 *e*P **Pdif** **05 13 43.6 +0.2**
NIE Niedzica 101.46 327 *e*P **Pdif** **05 13 43.6 +0.2**
KSU1 Kansas State U 101.61 45 IAMs_20 IAMs_20 05 56 50.2
comp=Z,5µm,21.0s
SZH Strazhica 101.62 320 *e*P **Pdif** **05 13 46.5 +2.3**
DRGR 101.66 324 ⇓P **Pdif** **05 13 44.1 -0.2**
DRGR 101.66 324 ⇓P **Pdif** **05 13 44.1 -0.2**
DRGR 101.66 324 *e*P **Pdif** **05 13 44.3 -0.1**
LTVH Ltavrtes, Hu 101.78 325 *e*PKiKP **PP** **05 17 55.4 +0.4**
LOT Lotru 101.78 323 ⇓P **Pdif** **05 13 45.5 +0.5**
WMOK Wichita Mounta 102.02 50 IAMs_20 IAMs_20 05 59 44.5
comp=Z,3µm,20.0s
WMOK Wichita Mounta 102.02 50 P **Pdif** **05 13 46.6 +0.4**
baz=296
ABTX Abilene, Hawle 102.26 52 IAMs_20 IAMs_20 05 57 04.2
comp=Z,5µm,20.0s
OKC Ostrava-Krasne 102.31 329 *e*SKS **SKSac** **05 24 26.5 +1.7**
OKC AMS AMS 06 07 30.0
comp=Z,4µm,17.5s
GZR Gura Zlata 102.40 323 ⇑P **Pdif** **05 13 48.0 +0.3**
GZR Gura Zlata 102.40 323 ⇑P **Pdif** **05 13 48.0 +0.3**
PSZ Piszkesteto 102.57 326 P **Pdif** **05 13 44.5 -3.9**
PSZ Piszkesteto 102.57 326 ⇑P **Pdif** **05 13 48.8 +0.4**
PSZ Piszkesteto 102.57 326 **Pdif** **05 13 44.5 -3.9**
KSP Ksiaz 102.60 330 *e*P **Pdif** **05 13 46.7 -1.6**
KSP Ksiaz 102.60 330 *e*P **Pdif** **05 13 46.7 -1.6**
MORC Moravsky Berou 102.66 329 ⇑P **Pdif** **05 13 48.6 -0.1**
MORC Moravsky Berou 102.66 329 ⇑P **Pdif** **05 13 48.6 -0.1**
VYHS Vyhne 102.78 327 *e*P **Pdif** **05 13 50.1 +0.8**
VYHS Vyhne 102.78 327 *e*PDIFF **Pdif** **05 13 50.1 +0.8**
OSTC Ostas 102.82 330 *e*SKS **SKSac** **05 24 35.4 +8.2**
OSTC AMS AMS 06 04 30.0
comp=Z,3µm,17.3s
KRLC Kraliky 102.85 329 *e*SKS **SKSac** **05 24 32.6 +5.2**
KRLC AMS AMS 06 06 40.0
comp=Z,4µm,16.3s
CHVC Chvalec 102.88 330 AMS AMS 06 06 30.0
comp=Z,3µm,17.9s
HERR Herculane 102.89 323 ⇑P **Pdif** **05 13 49.6 -0.2**
DPC Dobruska-Polom 102.90 330 *e*SKS **SKSac** **05 24 32.8 +5.1**
DPC AMS AMS 06 04 20.0
comp=Z,3µm,17.0s
BZS Buzias 102.95 324 ⇓P **Pdif** **05 13 50.2 +0.2**
BZS Buzias 102.95 324 ⇓P **Pdif** **05 13 50.2 +0.2**
UPC Upice 102.95 330 *e*SKS **SKSac** **05 24 33.1 +5.3**
UPC AMS AMS 06 04 30.0
comp=Z,4µm,18.1s
PGB Panagyurishte 103.10 320 *e*P **Pdif** **05 13 52.6 +1.7**
QSPA South Pole Qui 103.23 180 IAMs_20 IAMs_20 06 00 38.6
comp=Z,4µm,21.0s
MDVR Moldovita 103.36 323 ⇑P **Pdif** **05 13 51.8 -0.2**
PVCC Panska Ves 103.63 331 AMS AMS 06 09 30.0
comp=Z,3µm,17.1s
VTS Vitosha 103.64 320 P **Pdif** **05 13 51.3 -2.1**
VTS Vitosha 103.64 320 ⇑P **Pdif** **05 13 53.7 +0.3**
VTS Vitosha 103.64 320 *e*P **Pdif** **05 13 55.8 +2.4**
VTS Vitosha 103.64 320 **Pdif** **05 13 51.3 -2.1**
VTS IAMs_20 IAMs_20 06 07 07.9
comp=Z,3µm,21.0s
MODS Modra-Piesok 103.67 328 *e*P **Pdif** **05 13 54.4 +1.2**
MODS Modra-Piesok 103.67 328 *e*PDIFF **Pdif** **05 13 54.4 +1.2**
TUL1 Leonard 103.68 48 IAMs_20 IAMs_20 05 58 12.8
comp=Z,5µm,20.0s
L40A Anamosa 103.68 40 IAMs_20 IAMs_20 06 02 47.7
comp=Z,3µm,20.0s
ZAIG Zacatecas 103.68 62 IAMs_20 IAMs_20 05 54 09.9
comp=Z,3µm,20.0s
BRG Berggiesshubel 103.70 331 *e*PKP **PKiKP** **05 18 12.0 +0.7**
BRG SKS 05 24 38.0
BRG SS **SKKPbc** **05 33 19.0 -6.1**
comp=N,2µm,15.7s
comp=E,2µm,16.4s
comp=Z,3µm,19.9s
BRG Berggiesshubel 103.70 331 *e*P **Pdif** **05 13 54.1 +0.8**
BRG pmax pmax
comp=Z,8.0nm,1.3s
BRG Berggiesshubel 103.70 331 *e*PDIFF **Pdif** **05 13 54.1 +0.8**
comp=Z,7.5nm,1.3s
BRG *e* 05 14 06.6
comp=Z,15nm,1.7s
E43A Lone Tree Farm 103.74 35 IAMs_20 IAMs_20 06 01 36.8
comp=Z,4µm,20.0s
JFWS Jewell Farm 103.82 39 IAMs_20 IAMs_20 06 01 35.9
comp=Z,5µm,20.0s
CLL Collm 103.84 332 *e*P **Pdif** **05 13 53.0 -0.9**
CLL *e* 05 18 09.0
CLL *e* 05 24 31.0
CLL *e*S **Sdif** **05 25 43.0 +1.4**
CLL MLR MLR
comp=Z,5µm,17.9s
CLL Collm 103.84 332 *e*Pdif **Pdif** **05 13 53.0 -0.9**
CLL *e* 05 14 05.0
comp=Z,23nm,1.5s
CLL *e* 05 17 20.0
CLL *e*PP **PP** **05 18 09.0 -1.3**
CLL *e*PPP PPP 05 20 18.0
CLL *e*SKSac **SKSac** **05 24 31.0 -0.8**
CLL *e*Sdif **Sdif** **05 25 43.0 +1.4**
CLL *e*PS **PS** **05 27 23.0 +1.3**
CLL *e*PPS PPS 05 28 06.0
CLL *e*SS **SS** **05 32 54.0 -0.7**
CLL *e*SSS SSS 05 36 48.0
CLL *e* 05 38 42.0
CLL *e* 05 42 18.0
TREC Trest 104.00 329 *e*SKS **SKSac** **05 24 38.1 +5.4**
TREC AMS AMS 06 04 00.0
comp=Z,5µm,18.7s
PRA Prague 104.00 330 AMS AMS 06 07 00.0
comp=Z,4µm,17.6s
PRU Pruhonice 104.00 330 *e*SKS **SKSac** **05 24 33.7 +1.0**
PRU AMS AMS 06 05 20.0
comp=Z,4µm,16.8s
KKB Krupnik 104.15 320 *e*P **Pdif** **05 13 56.5 +1.0**
WHTX Lake Whitney, 104.21 52 IAMs_20 IAMs_20 05 56 58.7
comp=Z,4µm,20.0s
SOP Sopron 104.48 328 *e*PKiKP PKiKP 05 18 03.5 -9.4
435B Jarrell 104.63 53 IAMs_20 IAMs_20 06 00 34.0
comp=Z,3µm,20.0s
NKC Novy Kostel 104.83 331 AMS AMS 06 05 20.0
comp=Z,4µm,16.9s
KHC Kasperske Hory 105.05 330 *e*PKP **PKiKP** **05 18 09.5 -4.4**
KHC *e*PP **PP** **05 18 20.5 +1.2**
KHC *e*SKS **SKSac** **05 24 38.2 +0.6**
KHC AMS AMS 06 05 40.0
comp=Z,5µm,18.4s
MANZ Manzenberg 105.16 331 *e*PP **PP** **05 18 25.0 +4.8**
GEC2 GERESS Array S 105.18 330 IAMs_20 IAMs_20 06 05 59.0
comp=Z,4µm,19.0s
GERES GERESS Array B 105.18 330 Pdiff **Pdif** **05 13 59.3 -0.7**
comp=Z,0.8nm,0.7s,baz=46,slow=3.9,SNR=5.1
GERES PP **PP** **05 18 21.0 +0.6**
comp=Z,0.9nm,0.7s,baz=46,slow=5.6,SNR=3.0
W39A Magazine 105.46 47 IAMs_20 IAMs_20 05 56 13.2
comp=Z,3µm,20.0s
LIT Litokhoron 105.48 319 P **Pdif** **05 13 59.3 -2.2**
LIT Litokhoron 105.48 319 **Pdif** **05 13 59.3 -2.2**
LIT IAMs_20 IAMs_20 06 06 46.6
comp=Z,3µm,18.0s
UBBA Unterbreizbach 105.54 333 *e*PP **PP** **05 18 27.9 +5.1**
MGMO Mountain Grove 105.55 45 IAMs_20 IAMs_20 05 56 14.4
comp=Z,3µm,21.0s
HDIL Hopedale 105.72 41 IAMs_20 IAMs_20 06 01 39.2
comp=Z,3µm,21.0s
KVTX Kingsville 105.75 56 IAMs_20 IAMs_20 05 58 30.1
comp=Z,4µm,20.0s
GRA1 Grafenberg Arr 105.78 331 IAMs_20 IAMs_20 06 06 31.9
comp=Z,3µm,19.0s
GRF Grafenberg Arr 105.78 331 *e*PP **PP** **05 18 31.4 +6.7**
CCM Cathedral Cave 105.78 44 IAMs_20 IAMs_20 05 56 22.4
comp=Z,3µm,20.0s
BLY Banja Luka 105.98 325 IAMs_20 IAMs_20 06 04 25.8
comp=Z,5µm,21.0s
GLMI Grayling 106.01 35 IAMs_20 IAMs_20 06 02 46.8
comp=Z,4µm,19.0s
M44A Midewin, Midew 106.03 39 IAMs_20 IAMs_20 06 03 46.4
comp=Z,4µm,20.0s
PDG Podgorica 106.18 322 IAMs_20 IAMs_20 06 06 57.8
comp=Z,3µm,20.0s
HKT Hockley 106.36 53 IAMs_20 IAMs_20 05 59 22.4
comp=Z,3µm,21.0s
NATX Nacogdoches 106.44 51 IAMs_20 IAMs_20 05 59 39.6
comp=Z,3µm,19.0s
TIR Tirane 106.44 321 IAMs_20 IAMs_20 06 07 33.8
comp=Z,4µm,20.0s
O44A Mansfield 106.47 41 IAMs_20 IAMs_20 06 02 19.7
comp=Z,3µm,20.0s
X40A Basin Creek Fa 106.48 48 IAMs_20 IAMs_20 06 00 18.4
comp=Z,5µm,20.0s
UALR University of 106.69 47 IAMs_20 IAMs_20 06 00 53.9
comp=Z,4µm,19.0s
FUR Furstenfeldbru 106.82 330 *e*PP **PP** **05 18 35.0 +2.6**
LCAR Lake Charles 106.87 45 IAMs_20 IAMs_20 05 57 18.5
comp=Z,4µm,20.0s
PBMO Poplar Bluff 107.00 45 IAMs_20 IAMs_20 05 57 29.8
comp=Z,3µm,21.0s
SFIN Lafayette 107.20 40 IAMs_20 IAMs_20 06 04 40.4
comp=Z,3µm,20.0s
TRI Trieste 107.23 327 IAMs_20 IAMs_20 06 12 38.3
comp=Z,4µm,18.0s
S44A Carbondale 107.31 43 IAMs_20 IAMs_20 06 04 44.7
comp=Z,3µm,19.0s
STU Stuttgart 107.37 332 *e*PP **PP** **05 18 38.9 +2.5**

STU	Stuttgart	107.37	332		IAMs_20	IAMs_20	06 07 10.8	
	comp=Z,3μm,20.0s							
STAL	STALIGIAL	107.41	328		IAMs_20	IAMs_20	06 06 52.1	
	comp=Z,3μm,18.0s							
PARMO	Parma	107.53	44		IAMs_20	IAMs_20	05 57 35.6	
	comp=Z,3μm,21.0s							
P46A	Rosedale	107.57	41		IAMs_20	IAMs_20	06 12 43.2	
	comp=Z,3μm,19.0s							
HENM	Henderson Moun	107.69	44		IAMs_20	IAMs_20	06 02 12.9	
	comp=Z,3μm,19.0s							
PVMO	Portageville	107.69	45		IAMs_20	IAMs_20	05 58 03.1	
	comp=Z,3μm,20.0s							
LPAR	Lepanto	107.71	46		IAMs_20	IAMs_20	06 01 01.6	
	comp=Z,5μm,19.0s							
PENMO	Penman	107.72	44		IAMs_20	IAMs_20	05 58 01.9	
	comp=Z,3μm,20.0s							
PEBM	Pemiscott Bayo	107.74	45		IAMs_20	IAMs_20	05 57 43.4	
	comp=Z,3μm,20.0s							
UNM	Universidad Na	107.87	64		IAMs_20	IAMs_20	06 06 33.2	
	comp=Z,3μm,19.0s							
HICK	Hickman	107.95	44		IAMs_20	IAMs_20	06 02 20.7	
	comp=Z,3μm,20.0s							
LNXT	Lenox	108.00	45		IAMs_20	IAMs_20	05 57 51.3	
	comp=Z,3μm,21.0s							
SCTE	Santa Cesarea	108.04	320		IAMs_20	IAMs_20	06 09 02.3	
	comp=Z,3μm,19.0s							
GLAT	Glass	108.05	44		IAMs_20	IAMs_20	06 01 09.6	
	comp=Z,3μm,20.0s							
WLF	Walferdange	108.06	334		IAMs_20	IAMs_20	06 10 39.2	
	comp=Z,4μm,20.0s							
BFO	Black Forest	108.09	332	*e*PP		PP	05 18 43.9	+2.3
HALT	Halls	108.21	45		IAMs_20	IAMs_20	05 57 55.5	
	comp=Z,3μm,21.0s							
SYO	Syowa Base	108.36	201	⇑*i*Pdiff		Pdif	05 14 13.6	+0.2
ECH	Echery	108.70	332		IAMs_20	IAMs_20	06 08 44.2	
	comp=Z,3μm,18.0s							
RPN	Rapa Nui	108.71	114		IAMs_20	IAMs_20	05 55 36.2	
	comp=Z,4μm,20.0s							
P48A	Milroy	108.78	40		IAMs_20	IAMs_20	06 04 34.1	
	comp=Z,4μm,20.0s							
WCI	Wyandotte Cave	108.95	41		IAMs_20	IAMs_20	06 10 56.5	
	comp=Z,3μm,20.0s							
SALO	Salr	108.96	329		IAMs_20	IAMs_20	06 11 58.1	
	comp=Z,4μm,19.0s							
TLIG	Tlapa	109.06	66		IAMs_20	IAMs_20	05 56 28.9	
	comp=Z,3μm,19.0s							
WVT	Waverly	109.12	44		IAMs_20	IAMs_20	06 01 52.7	
	comp=Z,3μm,20.0s							
T47A	Sharon Grove	109.12	43		IAMs_20	IAMs_20	06 03 47.7	
	comp=Z,4μm,21.0s							
ACER	Acerenza	109.15	322		IAMs_20	IAMs_20	06 09 27.6	
	comp=Z,3μm,18.0s							
PLAL	Pickwick Lake	109.58	45		IAMs_20	IAMs_20	05 58 49.0	
	comp=Z,3μm,20.0s							
ZCCA	Zocca	109.61	328		IAMs_20	IAMs_20	06 13 29.2	
	comp=Z,4μm,20.0s							
AQU	L'Aquila	109.63	325		IAMs_20	IAMs_20	06 09 09.1	
	comp=Z,5μm,20.0s							
PAOL	Paolisi	109.81	323		IAMs_20	IAMs_20	06 08 19.0	
	comp=Z,3μm,18.0s							
SENIN	Lac Senin/Sane	110.00	331		IAMs_20	IAMs_20	06 10 14.4	
	comp=Z,3μm,19.0s							
V48A	Smith Brothers	110.01	44		IAMs_20	IAMs_20	06 02 48.4	
	comp=Z,4μm,20.0s							
OSSC	Osservatorio P	110.03	327		IAMs_20	IAMs_20	06 14 43.8	
	comp=Z,3μm,18.0s							
VLC	Villacollemand	110.04	328		IAMs_20	IAMs_20	06 09 29.8	
	comp=Z,3μm,19.0s							
T49A	Edmonton	110.09	42		IAMs_20	IAMs_20	06 04 14.1	
	comp=Z,4μm,20.0s							
R50A	Paris	110.17	40		IAMs_20	IAMs_20	06 07 28.0	
	comp=Z,3μm,20.0s							
Q51A	Peebles	110.33	39		IAMs_20	IAMs_20	05 59 28.1	
	comp=Z,3μm,22.0s							
MSSA	Maissana	110.38	328		IAMs_20	IAMs_20	06 12 17.8	
	comp=Z,2μm,18.0s							
X48A	Hartselle	110.58	45		IAMs_20	IAMs_20	06 01 11.5	
	comp=Z,3μm,21.0s							
SWET	Sewanee	110.91	44		IAMs_20	IAMs_20	06 03 24.1	
	comp=Z,3μm,21.0s							
S51A	Beattyville	111.02	41		IAMs_20	IAMs_20	06 05 42.5	
	comp=Z,3μm,20.0s							
J56A	Wolcott	111.23	32		IAMs_20	IAMs_20	06 07 10.5	
	comp=Z,5μm,21.0s							
W50A	Signal Mountai	111.33	44		IAMs_20	IAMs_20	06 09 47.3	
	comp=Z,3μm,19.0s							
LONY	Lake Ozonia	111.41	30		IAMs_20	IAMs_20	06 05 45.1	
	comp=Z,4μm,20.0s							
V51A	Loudon	111.62	42		IAMs_20	IAMs_20	06 02 30.8	
	comp=Z,4μm,22.0s							
TZTN	Tazewell	111.70	41		IAMs_20	IAMs_20	06 00 50.8	
	comp=Z,3μm,20.0s							
CPCT	Cooper Cave	111.72	43		IAMs_20	IAMs_20	06 08 59.3	
	comp=Z,3μm,19.0s							
J58A	Remsen	111.97	31		IAMs_20	IAMs_20	06 03 28.8	
	comp=Z,4μm,20.0s							
X51A	Calhoun	112.00	44		IAMs_20	IAMs_20	06 08 07.1	
	comp=Z,3μm,20.0s							
MCWV	Mont Chateau	112.03	37		IAMs_20	IAMs_20	06 04 35.7	
	comp=Z,4μm,20.0s							
D62A	Allapoint, All	112.03	25		IAMs_20	IAMs_20	06 01 13.7	
	comp=Z,4μm,21.0s							
TKL	Tuckaleechee C	112.09	42		IAMs_20	IAMs_20	06 04 13.0	
	comp=Z,4μm,20.0s							
V52A	Sevierville	112.09	42		IAMs_20	IAMs_20	06 04 25.2	
	comp=Z,3μm,20.0s							
SSB	Saint Sauveur	112.10	332		IAMs_20	IAMs_20	06 10 56.8	
	comp=Z,4μm,19.0s							
K58A	Earlville	112.22	32		IAMs_20	IAMs_20	06 07 30.3	
	comp=Z,4μm,20.0s							
W52A	Murphy	112.32	43		IAMs_20	IAMs_20	06 09 08.3	
	comp=Z,4μm,20.0s							
250A	Grady	112.48	47		IAMs_20	IAMs_20	06 03 38.2	
	comp=Z,4μm,20.0s							
CORL	Corleone	112.56	321		IAMs_20	IAMs_20	06 11 41.9	
	comp=Z,3μm,21.0s							
V53A	Saluda	112.71	42		IAMs_20	IAMs_20	06 04 55.4	
	comp=Z,3μm,20.0s							
CLTB	Caltabellotta	112.81	321		IAMs_20	IAMs_20	06 12 01.7	
	comp=Z,4μm,20.0s							
U54A	Nelsons Funny	112.82	41		IAMs_20	IAMs_20	06 07 03.3	
	comp=Z,3μm,19.0s							
Y52A	Lilburn	112.95	44		IAMs_20	IAMs_20	06 12 18.1	
	comp=Z,3μm,20.0s							
BLA	Blacksburg	113.26	39		IAMs_20	IAMs_20	06 01 17.7	
	comp=Z,5μm,21.0s							
GOGA	Godfrey	113.61	44		IAMs_20	IAMs_20	06 09 06.7	
	comp=Z,3μm,19.0s							
V55A	Taylorsville	113.62	41		IAMs_20	IAMs_20	06 02 01.8	
	comp=Z,5μm,21.0s							
352A	Blakely	113.71	47		IAMs_20	IAMs_20	06 04 15.6	
	comp=Z,4μm,20.0s							
PAULI	Pauline	113.87	42		IAMs_20	IAMs_20	06 08 50.2	
	comp=Z,3μm,20.0s							
HODGE	Hodges	113.94	43		IAMs_20	IAMs_20	06 11 55.1	
	comp=Z,3μm,19.0s							
154A	Montrose	114.33	45		IAMs_20	IAMs_20	06 04 27.7	
	comp=Z,4μm,20.0s							
TIGA	Tifton	114.67	46		IAMs_20	IAMs_20	06 01 58.0	
	comp=Z,3μm,20.0s							
V58A	Windy Hill, Pi	114.98	40		IAMs_20	IAMs_20	06 08 52.2	
	comp=Z,4μm,20.0s							
Z56A	Williston	115.07	43		IAMs_20	IAMs_20	06 12 02.2	
	comp=Z,3μm,19.0s							
Y57A	Sumter	115.29	42		IAMs_20	IAMs_20	06 05 42.8	
	comp=Z,3μm,20.0s							
Y58A	Scranton	115.83	42		IAMs_20	IAMs_20	06 17 20.0	
	comp=Z,3μm,20.0s							
NHSC	New Hope	115.99	43		IAMs_20	IAMs_20	06 13 14.5	
	comp=Z,3μm,18.0s							
CNNC	Cliffs of the	116.09	39		IAMs_20	IAMs_20	06 09 04.8	
	comp=Z,4μm,20.0s							
456A	Hilliard	116.18	46		IAMs_20	IAMs_20	06 06 20.9	
	comp=Z,4μm,20.0s							
KEST	Kesra	116.37	322		IAMs_20	IAMs_20	06 14 56.9	
	comp=Z,3μm,18.0s							
656A	Willston	116.60	47		IAMs_20	IAMs_20	06 10 12.3	
	comp=Z,4μm,20.0s							
TEIG	Tepich	116.85	59		IAMs_20	IAMs_20	06 05 08.5	
	comp=Z,2μm,21.0s							
SNAA	Sanae	118.83	191		PKiKP	PKPdf	05 18 38.5	-0.8
SNAA	Sanae	118.83	191		PKiKP	PKPdf	05 18 37.6	-1.8
SNAA	Sanae	118.83	191			PKPdf	05 18 37.6	-1.8
SNAA					IAMs_20	IAMs_20	06 12 49.1	
	comp=Z,3μm,18.0s							
VNA3	Neumayer Olymp	120.35	189		PKiKP	PKiKP	05 18 42.7	+0.4
MVO	Moncorvo	120.35	337		eLQ	LQ	05 55 12.5	
MVO					eLR	LR	05 59 24.4	
	comp=Z,2μm,18.0s							
ESBB	Sonseca Array	120.36	334		IAMs_20	IAMs_20	06 17 16.4	
	comp=Z,2μm,18.0s							
ESDC	Sonseca Array	120.36	334		PP	PP	05 20 08.1	-0.4
	comp=Z,7.9nm,1.1s,baz=25,slow=6.7,SNR=11							
PAB	San Pablo	120.63	334		IAMs_20	IAMs_20	06 18 20.7	
	comp=Z,2μm,20.0s							
VNA1	Neumayer--Stat	120.64	190		PKiKP	PKiKP	05 18 44.0	+1.2
MTE	Manteigas	121.21	337		eLQ	LQ	05 53 42.7	
MTE					eLR	LR	06 00 58.5	
	comp=Z,3μm,20.0s							
PMRV	Marv??o	121.98	336	*i* P		SP	05 30 05.3	-4.6
PMRV	Marv??o	121.98	336	*e*LQ		LQ	05 55 51.5	
PMRV					eLR	LR	06 00 12.8	
	comp=Z,2μm,20.0s							
PESTR	Estremoz	122.55	336	*i* P		SP	05 30 08.1	-6.8
PMTG	Montargil	122.62	337	*i* P		PKKPdf	05 29 28.7	+10
PAYG	Puerto Ayora	122.66	82		IAMs_20	IAMs_20	06 13 21.5	
	comp=Z,2μm,18.0s							
PMAFR	Mafra	123.12	337	*i* P		PKKPdf	05 29 53.0	+35
BOSA	Boshof	123.35	244		PKP	PKiKP	05 18 50.4	+0.8
	comp=Z,1.2nm,0.5s,baz=124,slow=3.6,SNR=3.0							
PNCL	Nicolau / Gran	123.57	336	*i* P		SP	05 30 07.1	-17
PCVE	Castro Verde	123.79	335	*i* P		SP	05 30 22.2	-3.6
PVAQ	Vaqueiros	123.85	335	*i* P		SP	05 30 23.7	-2.7
PVAQ	Vaqueiros	123.85	335	*e*LQ		LQ	05 53 26.3	
PVAQ					eLR	LR	06 00 12.6	
	comp=Z,4μm,18.0s							
SFS	San Fernando	124.00	333		IAMs_20	IAMs_20	06 22 34.0	
	comp=Z,2μm,19.0s							
JTS	Las Juntas de	124.03	68	*e*PKiKP		PKiKP	05 18 51.8	+0.6
PBDV	Barranco-do-Ve	124.08	335	*i* P		SP	05 30 18.1	-10
MORF	Marmelete	124.31	336	*i* P		SP	05 30 34.7	+4.2
PFVI	Vila Bisbo	124.53	336	*i* P		SP	05 30 20.2	-12
PFVI	Vila Bisbo	124.53	336		IAMs_20	IAMs_20	06 19 14.0	
	comp=Z,3μm,18.0s							
GTBY	Guantanamo Bay	127.56	52		IAMs_20	IAMs_20	06 12 52.9	
	comp=Z,3μm,20.0s							
SDDR	Presa de Saban	131.01	50		IAMs_20	IAMs_20	06 17 49.3	
	comp=Z,3μm,20.0s							
SC01	Santiago de lo	131.15	49		IAMs_20	IAMs_20	06 15 53.6	
	comp=Z,3μm,20.0s							
PTAC	Punta Ardita,	131.75	68	⇑*e*P		PKiKP	05 19 20.1	+13
PTAC				⇑*e*P		sPKPdf	05 19 22.8	+7.8
SOLC	Bahia Solano	132.50	68	*e*P		PKiKP	05 19 13.5	+5.3
TUMC	Tumaco	132.94	75	*e*P		PKiKP	05 19 13.5	+4.4
DBBC	Dabeiba	133.24	67	⇓*e*P		PKiKP	05 19 14.2	+4.4
UREC	San Jos de Ur	133.52	66	*e*P		PKiKP	05 19 15.5	+5.2
OTAV	Otavalo	133.72	77		IAMs_20	IAMs_20	06 10 17.2	
	comp=Z,2μm,20.0s							
CBOC	Ciudad Bolivar	133.91	68	*e*P		PKiKP	05 19 10.8	-0.4
PLMC	San Jos del P	134.06	70	*e*P		PKiKP	05 19 17.5	+6.0
HELC	Santa Helena	134.21	67	*e*P		PKiKP	05 19 15.5	+3.4
ZARC	Zaragoza, Cauc	134.24	65	*e*P		PKiKP	05 19 13.5	+1.8
CODC	Agustn Codazz	134.32	62	*e*P		PKPdf	05 19 10.2	-0.3
SMLC	San Martn de	134.32	63	*e*P		PKiKP	05 19 12.8	+1.0
YOTC	Yotoco, Valle	134.36	71	*e*P		PKiKP	05 19 15.5	+3.4
URIC	Uribia, Colomb	134.64	58	*e*P		PKiKP	05 19 15.5	+3.0
GUY2C	Guyana, Caldas	134.76	69	⇑*e*P		PKiKP	05 19 14.2	+0.8
SOTA	Rioblanco	134.81	73	*e*P		PKiKP	05 19 14.8	+1.3
PCON	Cinco Dias	134.94	73	*e*P		PKiKP	05 19 16.8	+3.0
PTBC	PUERTO BERRIO	135.02	66	*e*P		PKiKP	05 19 20.8	+7.5
NORC	Norcasia	135.07	68	*e*P		PKiKP	05 19 14.2	+0.7
OCAC	Ocana	135.25	64	*e*P		PKiKP	05 19 17.5	+3.6
SJG	San Juan	135.29	46		IAMs_20	IAMs_20	06 23 17.2	
	comp=Z,2μm,20.0s							
ORTC	Ortega, Tolima	135.40	70	*e*P		PKiKP	05 19 14.8	+0.7
SPBC	San Pablo de B	135.75	67	*e*P		PKiKP	05 19 15.5	+0.6
PRAC	Prado	135.81	70	*e*P		PKiKP	05 19 18.8	+3.8
ROSC	El Rosal	135.87	68	PKP		PKiKP	05 19 16.0	+0.5
	comp=Z,2.7nm,0.4s,baz=195,slow=20,SNR=2.5							
ROSC	El Rosal	135.87	68	*e*P		PKiKP	05 19 18.8	+3.3
ROSC	El Rosal	135.87	68			PKPdf	05 19 09.7	-4.2
FLOC	Florencia	135.90	73	*e*P		PKiKP	05 19 18.8	+3.7
FLOC	Florencia	135.90	73			PKPdf	05 19 10.8	-2.7
TORD	Torodi Ar. Bea	136.06	305	PKhKP		PKPpre	05 19 01.3	
	comp=Z,1.3nm,0.9s,baz=47,slow=1.2,SNR=4.9							
TORD				PKP		PKPdf	05 19 13.4	-0.3
	comp=Z,1.9nm,0.6s,baz=19,slow=2.2,SNR=15							
TORD				PP		PP	05 21 53.5	+0.8
	comp=Z,5.2nm,1.0s,baz=52,slow=5.5,SNR=4.4							
BARC	Barichara	136.12	65	⇓*e*P		PKPdf	05 19 02.9	-11
PAMC	Pamplona, Colo	136.21	64	*e*P		PKiKP	05 19 20.1	+3.8
CHIC	Chingaza	136.49	68	*e*P		PKPdf	05 19 10.8	-4.2
RUSC	La Rusia	136.53	66	*e*P		PKiKP	05 19 20.8	+3.8
VILC	Villavicencio,	136.73	69	*e*P		PKiKP	05 19 19.5	+2.5
VILC				*e*P		pPKPdf	05 19 20.8	-1.4
PTLC	Puerto Leguiza	137.19	75	*e*P		PKiKP	05 19 20.8	+3.1
PLCA	Paso Flores	137.90	137	PKP		PKPdf	05 19 17.5	+1.0
	comp=Z,5.5nm,1.0s,baz=288,slow=2.3,SNR=6.2							
PTGC	Puerto Gaitan,	138.11	68	*e*P		PKiKP	05 19 23.5	+3.9
ANWB	Willy Bob	138.57	43		IAMs_20	IAMs_20	06 15 35.6	
	comp=Z,3μm,22.0s							
GO05	Huala	139.43	129		IAMs_20	IAMs_20	06 14 43.9	
	comp=Z,2μm,19.0s							
FDF	Fort de France	141.08	45		IAMs_20	IAMs_20	06 26 02.4	
	comp=Z,2μm,20.0s							
PEL	Peldehue	141.08	127		IAMs_20	IAMs_20	06 10 44.3	
	comp=Z,2μm,20.0s							
GO04	Tololo Observa	141.99	122		IAMs_20	IAMs_20	06 17 24.8	
	comp=Z,3μm,18.0s							
GRGR	Grenville	142.49	49		IAMs_20	IAMs_20	06 20 16.4	
	comp=Z,2μm,21.0s							
GO03	Copiap	143.20	118			PKPbc	05 19 24.8	+1.4
GO03					IAMs_20	IAMs_20	06 13 33.3	
	comp=Z,2μm,19.0s							
PB10	IPOC Station P	143.79	112	*e*P		PKPdf	05 19 27.4	-0.1
PB10	IPOC Station P	143.79	112			PKPdf	05 19 26.4	-1.0
PB10					IAMs_20	IAMs_20	06 11 49.7	
	comp=Z,3μm,20.0s							
PB05	IPOC Station P	144.21	111	*e*P		PKPdf	05 19 28.2	-0.2
PB04	IPOC Station P	144.34	110	*e*P		PKPdf	05 19 28.8	+0.1
PB04	IPOC Station P	144.34	110		IAMs_20	IAMs_20	06 11 26.5	
	comp=Z,3μm,21.0s							
GO02	Mina Guanaco	144.34	115		IAMs_20	IAMs_20	06 14 29.9	
	comp=Z,2μm,19.0s							
PATCX	Punta Patache	144.52	107	*e*P		PKPdf	05 19 28.9	-0.1
TA01	Diego Aracena	144.52	107	*e*P		PKPdf	05 19 28.9	+0.1
PSGC	Pisagua	144.66	105	*e*P		PKPdf	05 19 29.2	0.0
PB03	IPOC Station P	144.74	109	*e*P		PKPdf	05 19 30.0	+0.6
PB06	IPOC Station P	144.81	110	*i* P		PKPdf	05 19 29.9	+0.4
PB15	IPOC Station P	144.82	111	*e*P		PKPdf	05 19 30.7	+1.2
DBIC	Dimbokro	145.04	303	PKiKP		PKPbc	05 19 27.1	-2.2
DBIC	Dimbokro	145.04	303	PKP		PKPbc	05 19 28.9	-0.4
	comp=Z,27nm,0.7s,baz=37,slow=4.2,SNR=42							
DBIC	Dimbokro	145.04	303			PKPbc	05 19 27.1	-2.2
PB11	IPOC Station P	145.09	105	*e*P		PKPdf	05 19 30.3	+0.3
PB11	IPOC Station P	145.09	105		IAMs_20	IAMs_20	06 15 15.8	
	comp=Z,2μm,20.0s							
KIC	Kosan Boka	145.12	302	*e*PKP1		PKPdf	05 19 30.1	0.0
	comp=Z,68nm,0.8s							
TIC	Toumodi	145.19	303	*e*PKP1		PKPdf	05 19 30.1	-0.1
	comp=Z,224nm,1.4s							
MNMC	Minye Minye	145.19	104	*e*P		PKPdf	05 19 31.0	+0.6
MNMC	Minye Minye	145.19	104		IAMs_20	IAMs_20	06 16 00.6	
	comp=Z,3μm,19.0s							
PB09	IPOC Station P	145.25	109	*e*P		PKPdf	05 19 32.1	+1.8
PB16	IPOC Station P	145.32	103	*e*P		PKPdf	05 19 32.2	+1.2
LVC	Limon Verde	145.43	110	PKiKP		PKPab	05 19 32.2	+1.2
LVC	Limon Verde	145.43	110	PKPab		PKPab	05 19 32.2	+1.2
LVC	Limon Verde	145.43	110		IAMs_20	IAMs_20	06 12 30.8	
	comp=Z,3μm,20.0s							
LIC	Lamto	145.43	303	*e*PKP1		PKPab	05 19 31.0	+0.2
	comp=Z,140nm,0.8s							
PB08	IPOC Station P	145.52	106	*e*P		PKPab	05 19 33.0	+1.6
GO01	Chusmiza	145.53	105		IAMs_20	IAMs_20	06 15 29.9	
	comp=Z,2μm,20.0s							
LPAZ	La Paz	146.69	99	PKPbc		PKPbc	05 19 35.5	+0.4
	comp=Z,25nm,0.8s,baz=334,slow=2.4,SNR=29							
SACV	Santiago Islan	150.08	340			PKPab	05 19 46.8	-2.2
SACV					IAMs_20	IAMs_20	06 33 48.7	
	comp=Z,1μm,19.0s							
SAML	Samuel	150.83	84	PKiKP		PKPdf	05 19 38.1	-1.3
SAML	Samuel	150.83	84			PKPdf	05 19 38.1	-1.3
CPUP	Villa Florida	154.44	124	PKiKP		PKPbc	05 19 50.4	-2.4
CPUP	Villa Florida	154.44	124	PKPbc		PKiKP	05 19 53.6	+0.8
	comp=Z,3.1nm,0.9s,baz=36,slow=1.0,SNR=6.2							
CPUP	Villa Florida	154.44	124			PKPbc	05 19 50.4	-2.4
BDFB	Brasilia	166.04	101	PKP2		PKPab	05 20 58.5	+0.5
BDFB							06 19 54.8	
BDFB	Brasilia	166.04	101	PKP		PKPdf	05 19 59.1	+1.4
	comp=Z,5.8nm,1.1s,baz=36,slow=3.2,SNR=4.6							
BDFB				PKPab		PKPab	05 20 59.7	+1.7
	comp=Z,7.4nm,1.1s,baz=224,slow=1.9,SNR=2.9							
BDFB	Brasilia	166.04	101			PKPdf	05 19 54.8	-2.9
BDFB						PKPab	05 20 58.5	+0.5

PRU 23 05:04:27.1±0.0, 51°47N×16°16E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.63	172	*e*Pg	Pg	05 04 39.5	+0.3
KSP				*e*Sg	Sg	05 04 47.9	+0.5
CHVC	Chvalec	0.89	184	*e*PG	Pg	05 04 44.2	+0.2
CHVC				*e*SG	Sg	05 04 56.1	+0.6
OSTC	Ostas	0.92	178	*e*PG	Pg	05 04 44.8	+0.2
OSTC				*e*SG	Sg	05 04 56.6	+0.1
UPC	Upice	0.97	186	*e*PG	Pg	05 04 45.7	+0.1
UPC				*e*SG	Sg	05 04 58.9	+0.7
	comp=Z,12nm,0.4s						
DPC	Dobruska-Polom	1.13	175	*e*PG	Pg	05 04 47.8	-0.9
DPC				*e*SG	Sg	05 05 03.4	+0.2
PVCC	Panska Ves	1.38	227	*e*PG	Pg	05 04 52.4	-1.1
PVCC				*e*SG	Sb	05 05 11.7	-0.2
	comp=Z,9.9nm,0.2s						
KRLC	Kraliky	1.45	164	*e*PG	Pn	05 04 54.4	-0.2
KRLC				*e*SG	Sg	05 05 12.4	-1.3
BRG	Berggiesshubel	1.52	248	PG	Pn	05 04 55.1	-0.4
BRG				SG	Sg	05 05 15.0	-0.8
	5.3nm,0.4s						
PRU	Pruhonice	1.81	215	*e*SG	Sb	05 05 24.0	-0.1
MORC	Moravsky Berou	1.91	152	*e*PN	Pn	05 05 00.4	-0.5
MORC				*e*SG	Sb	05 05 27.0	-0.2
CLL	Collm	1.98	267	*e*Sg	Sb	05 05 30.0	+0.7
NKC	Novy Kostel	2.66	244	*e*PG	Pb	05 05 16.5	+0.9
NKC				*e*SG	Sg	05 05 52.3	-0.2
	comp=Z,4.2nm,0.3s						
KHC	Kasperske Hory	2.87	216	*e*PG	Pb	05 05 19.3	+0.2
KHC				*e*SG	Sg	05 05 57.9	-1.3
MODS	Modra-Piesok	3.18	166	*e*PG	Pg	05 05 28.1	0.0
ZST	Bratislava	3.33	169	*e*PN	Pn	05 05 14.2	-6.2
ZST				*e*PG	Pg	05 05 33.4	+2.4

PRU 23 05:07:31.6±0.0, 50°07N×18°44E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.30	219	*e*PG	Pg	05 07 37.4	+0.1
OKC				*e*SG	Sg	05 07 41.1	-0.1
	comp=Z,18nm,0.5s						
MORC	Moravsky Berou	0.65	244	*e*PG	Pg	05 07 43.8	-0.2
MORC				*e*SG	Sg	05 07 52.6	+0.2
KRLC	Kraliky	1.07	271	*e*PG	Pg	05 07 50.8	-1.3
KRLC				*e*SG	Sg	05 08 05.0	-0.9
	comp=Z,5.3nm,0.3s						
LANS	Liptovska Anna	1.14	144	*e*PG	Pg	05 07 52.9	-0.5
LANS				*e*SG	Sb	05 08 09.8	+0.3
LANS				*e*LG	Lg	05 08 13.4	
DPC	Dobruska-Polom	1.39	282	*e*PG	Pg	05 07 57.3	-0.9
DPC				*e*SG	Sg	05 08 16.1	-0.1
	comp=Z,3.6nm,0.5s						
OSTC	Ostas	1.51	290	*e*PG	Pn	05 07 59.3	-0.6
OST

ARLS	**Aral**	**2.84**	**98**	⇓*i*P	**Pb**	**05 16 40.7**	**0.0**
	baz=98							
ARLS				⇓*i*S	**Sb**	**05 17 16.1**	**0.0**
	baz=98							
AAK	**Ala-Archa**	**2.93**	**83**	⇑*i*P	**Pb**	**05 16 42.1**	**-0.1**
	baz=83							
AAK				⇑*i*S	**Sb**	**05 17 18.6**	**-0.1**
	baz=83							
AAK	**Ala-Archa**	**2.93**	**83**	⇑Pg	**Pg**	**05 16 45.2**	**0.0**
	3.3nm,0.8s							
AAK				⇑Lg	Lg	05 17 24.4		
	3.4nm,0.5s							
UCH	**Uchtor**	**2.94**	**91**	⇑*i*P	**Pb**	**05 16 42.5**	**0.0**
	baz=91							
UCH				⇑*i*S	**Sb**	**05 17 19.7**	**+0.5**
	baz=91							
USP	**Ospenovka**	**3.05**	**71**	⇑*i*P	**Pb**	**05 16 43.5**	**-0.7**
	baz=71							
USP				⇑*i*S	**Sb**	**05 17 21.2**	**-0.9**
	baz=71							
KBK	**Karagaybulak**	**3.27**	**83**	⇓*i*P	**Pb**	**05 16 47.2**	**-0.7**
	baz=83							
KBK				⇓*i*S	**Sb**	**05 17 27.2**	**-1.1**
	baz=83							
KZA	**Kyzart**	**3.50**	**92**	⇑*i*P	**Pb**	**05 16 50.4**	**-1.6**
	baz=93							
KZA				⇑*i*S	**Sb**	**05 17 33.2**	**-2.0**
	baz=93							
BTLS	**Baital**	**3.71**	**42**	*e*P	**Pg**	**05 17 00.2**	**+0.1**
	baz=42							
BTLS				*e*S	**Sg**	**05 17 50.2**	**+2.0**
	baz=42							
BTLS	**Baital**	**3.71**	**42**	*e*P	**Pg**	**05 17 00.2**	**+0.1**
	2.9nm,0.2s							
BTLS				*e*S	**Sg**	**05 17 50.2**	**+2.0**
	4.8nm,0.2s							
DGS	**Degeres**	**3.95**	**75**	*e*P	**Pg**	**05 17 04.0**	**-0.7**
	baz=75							
DGS				*e*S	**Sg**	**05 17 56.4**	**+0.6**
	baz=75							
DGS	**Degeres**	**3.95**	**75**	*e*P	**Pg**	**05 17 04.0**	**-0.7**
	2.3nm,0.4s							
DGS				*e*S	**Sg**	**05 17 56.4**	**+0.6**
	8.4nm,0.5s							
DGS	**Degeres**	**3.95**	**75**	Pg	**Pg**	**05 17 04.0**	**-0.7**
	2.3nm,0.4s							
DGS				Lg	Lg	05 17 56.4		
	8.4nm,0.5s							
KRBS	**Karabastau**	**4.00**	**68**	*e*P	**Pg**	**05 17 04.7**	**-0.9**
	2.5nm,0.5s							
KRBS				*e*S	**Sg**	**05 17 58.1**	**+0.7**
	2.7nm,0.5s							
KRBS	**Karabastau**	**4.00**	**68**	Pg	**Pg**	**05 17 04.7**	**-0.9**
	2.5nm,0.5s							
KRBS				Lg	Lg	05 17 58.1		
	2.7nm,0.5s							
KST	**Kastek**	**4.05**	**78**	*e*P	**Pg**	**05 17 05.3**	**-1.3**
	baz=78							
KST				*e*S	**Sg**	**05 17 58.8**	**-0.4**
	baz=78							
KST	**Kastek**	**4.05**	**78**	*e*P	**Pg**	**05 17 05.3**	**-1.3**
	2.5nm,0.3s							
KST				*e*S	**Sg**	**05 17 58.8**	**-0.4**
	8.9nm,0.4s							
KST	**Kastek**	**4.05**	**78**	Pg	**Pg**	**05 17 05.3**	**-1.3**
	3.1nm,0.5s							
KST				Lg	Lg	05 17 58.8		
	8.9nm,0.4s							
KUU	**Kurty**	**4.52**	**68**	*e*P	**Pg**	**05 17 14.3**	**-1.2**
	baz=68							
KUU				*e*S	**Sg**	**05 18 14.0**	**-0.1**
	baz=68							
KUU	**Kurty**	**4.52**	**68**	*e*P	**Pg**	**05 17 14.3**	**-1.2**
	1.0nm,0.3s							
KUU				*e*S	**Sg**	**05 18 13.9**	**-0.1**
	5.2nm,0.3s							
KUU	**Kurty**	**4.52**	**68**	Pg	**Pg**	**05 17 14.3**	**-1.2**
	1.0nm,0.4s							
KUU				Lg	Lg	05 18 13.9		
	5.8nm,0.6s							
IZV	**Izvestkoviy**	**4.53**	**79**	*e*P	**Pg**	**05 17 14.2**	**-1.5**
	baz=79							
IZV				*e*S	**Sg**	**05 18 13.9**	**-0.4**
	baz=79							
IZV	**Izvestkoviy**	**4.53**	**79**	*e*P	**Pg**	**05 17 14.2**	**-1.5**
	2.1nm,0.2s							
IZV				*e*S	**Sg**	**05 18 13.9**	**-0.4**
	4.3nm,0.2s							
IZV	**Izvestkoviy**	**4.53**	**79**	Pg	**Pg**	**05 17 14.2**	**-1.5**
	4.9nm,0.3s							
IZV				Lg	Lg	05 18 14.6		
	7.3nm,0.3s							
KTBS	**Karatobe**	**4.70**	**71**	*e*P	**Pg**	**05 17 17.5**	**-1.6**
	baz=70							
KTBS				*e*S	**Sg**	**05 18 19.6**	**-0.4**
	baz=70							
KTBS	**Karatobe**	**4.70**	**71**	*e*P	**Pg**	**05 17 17.5**	**-1.6**
	2.0nm,0.5s							
KTBS				*e*S	**Sg**	**05 18 19.6**	**-0.4**
	8.5nm,0.5s							
KTBS	**Karatobe**	**4.70**	**71**	Pg	**Pg**	**05 17 17.5**	**-1.6**
	2.0nm,0.5s							
KTBS				Lg	Lg	05 18 19.6		
	8.5nm,0.5s							
TNSS	**Tian-Shan**	**4.77**	**79**	*e*P	**Pg**	**05 17 18.4**	**-2.0**
	baz=79							
TNSS				*e*S	**Sg**	**05 18 21.8**	**-0.4**
	baz=79							
TNSS	**Tian-Shan**	**4.77**	**79**	*e*P	**Pg**	**05 17 18.4**	**-2.0**
	0.3nm,0.0s							
TNSS				*e*S	**Sg**	**05 18 21.8**	**-0.4**
	5.1nm,0.6s							
TNSS	**Tian-Shan**	**4.77**	**79**	Pg	**Pg**	**05 17 18.4**	**-2.0**
	3.1nm,0.3s							
TNSS				Lg	Lg	05 18 21.8		
	5.1nm,0.6s							
MDOK	**Medeo**	**4.86**	**78**	Pg	**Pg**	**05 17 20.1**	**-1.9**
	3.3nm,0.2s							
MDOK				Lg	Lg	05 18 24.5		
	4.2nm,0.5s							

IDC ***23*** *05:23:58.0±0.4, 13˚.51N×146˚.25E, h0km, mb5.1/42, mb1 5.1/44, mb1mx5.1/49, mbtmp5.1/44, ML4.7/2, MS5.4/34, Ms1 5.4/34, ms1mx5.3/51, Error ellipse: s-maj=12.9km s-min=10.1km az=79.0*

DJA ***23*** *05:23:58.0±0.4, 14˚.N±4˚×14˚.6E±˚, h10km, M5.8/67, mb5.6/67, mB6.3/20, MLv5.4/1, Mw(mB)6.0/20*

BJI ***23*** *05:23:59.5±0.0, 13˚.42N×146˚.47E, h32km, mB5.9/21, mb5.3/32, Ms5.7/54, Ms7 5.5/53*

NEIC ***23*** *05:23:59.5±1.9, 13˚.39N±0˚.07×146˚.18E±0˚.07, h10km±1km, mb5.5/219, Mwc5.7(GCMT), Error ellipse: s-maj=12.1km s-min=10.8km az=137.0*

MOS ***23*** *05:24:01.2±1.1, 13˚.46N×146˚.07E, h29km, mb5.6/74, MS5.6/13, Error ellipse: s-maj=6.9km s-min=4.3km az=109.8*

GCMT ***23*** *05:24:06.5±0.1, 13˚.30N±0˚.01×146˚.31E±0˚.01, h14km, MW5.6/153, Moment Tensor Solution. s116,c199; s153,c318; Duration: 1†5 Moment tensor: Scale 10^17 Nm; Mrr2.88±.06; Mθθ-0.58±.04; Mφφ-2.30±.04; Mrθ-0.13±.09; Mrφ-1.39±.03; Mθφ1.02±.09; Best double couple: Mo3.15400×10^17 NP1:φ221.00000°, δ38.00000°, λ109.00000°. NP2:φ18.00000°, δ54.00000°, λ76.00000°. Principal axes: T 3.1180, Plg76.0000°, Azm242.0000°; N 0.0710, Plg11.0000°, Azm26.0000°; P -3.1890, Plg8.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***23*** *05:24:07, 13˚.28N×146˚.32E, h16km, Moment Tensor Solution. Moment tensor: Scale 10^17Nm; Mrr3.04; Mθθ-0.60; Mφφ-2.44; Mrθ0.33; Mrφ-1.49; Mθφ1.77; Fault plane solution: Mo3.64000×10^17 NP1:φ219.00000°, δ32.00000°, λ107.00000°. NP2:φ20.00000°, δ60.00000°, λ80.00000°. Principal axes: T 3.5661, Plg73.0000°, Azm264.0000°; N 0.1408, Plg9.0000°, Azm25.0000°; P -3.7068, Plg14.0000°, Azm117.0000°;*

ISC 23 05:24:02.4±0.5, 13˚.42N±0˚.04×146˚.14E±0˚.04, h27km±3km, h28km:pP-P, n791, σ1§41/810, mb5.5/63, 40C-10D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**		**1.25 278**	Pn	**Pb**	**05 24 23.9**	**-1.3**
	2µm,0.3s,baz=127,slow=8.5,SNR=141						
GUMO				Sn	**Sb**	**05 24 44.1**	**+3.2**
	2µm,0.3s,baz=0.4,slow=23,SNR=11						
GUMO	**Guam**		**1.25 278**		**Pb**	**05 24 24.4**	**-0.9**
ANA2	**Anatahan**		**2.93 352**		**Pn**	**05 24 46.2**	**-1.1**
SARN	**Sarigan**		**3.28 354**		**Pn**	**05 24 51.4**	**-0.7**
PATS	**Pohnpei**		**13.65 117**	Pn	Pn	05 27 08.5	-5.8
JCJ	**Chichijima**		**14.10 345**	LR	LR	05 31 56.7	
	comp=Z,10µm,21.8s,baz=162,slow=34						
MANU	**Manus Island**		**15.41 175**	Pn	**Pn**	**05 27 36.1**	**-2.0**
JAY	**Jayapura**		**16.72 199**	Pn	**P**	**05 27 56.8**	**-0.2**
	0.7nm,0.3s,baz=3.6,slow=4.7,SNR=9.4						
JAY				LR	LR	05 34 07.1	
	comp=Z,12µm,18.8s,baz=22,slow=36						
GENI	**Genyem**		**16.98 201**	P	**P**	**05 28 00.3**	**+0.5**
	9µm212nm,1.4s						
SMPI	**Sarmi**		**16.99 206**	P	**Pn**	**05 27 57.0**	**-1.3**
	117nm,1.9s						
KRVT	**Keravat (AS076**		**18.56 161**	P	**Pn**	**05 28 18.4**	**+0.8**
	8.5nm,0.3s,baz=130,slow=7.9,SNR=3.0						
KRVT				LR	LR	05 34 59.0	
	comp=Z,12µm,19.2s,baz=340,slow=36						
RKPI	**Ransiki, Papua**		**18.99 220**	P	**Pn**	**05 28 23.7**	**+0.8**
	120nm,1.4s						
SIJI	**Sorong**		**20.47 227**	P	Pn	05 28 40.6	+0.2
	130nm,0.8s,baz=36,slow=11,SNR=40						
SIJI				LR	LR	05 37 54.0	
	comp=Z,13µm,18.4s,baz=41,slow=41						
SWI	**Sorong**		**20.47 227**	P	Pn	05 28 40.3	-0.1
	10µm458nm,1.1s						
MATI	**Mati**		**20.59 254**	*e*P	Pn	05 28 44.0	+2.1
H11N1	**WAKE ISLAND Hy**	**20.84**	**70**	T	T	05 50 25.0	
	baz=260						
H11N2	**WAKE ISLAND Hy**	**20.85**	**70**	T	T	05 50 39.4	
	baz=260						
H11N3	**WAKE ISLAND Hy**	**20.86**	**70**	T	T	05 50 46.6	
	baz=260						
KMPI	**Kaimana, Papua**		**20.98 217**	P	Pn	05 28 48.4	+2.0
	357nm,0.9s						
MSLP	**Maasin**		**21.08 263**	*e*P	**P**	**05 28 50.7**	**+5.8**
OCLP	**Ormoc**		**21.17 266**	*e*P	**P**	**05 28 52.0**	**+6.2**
DAV	**Davao City (W)**		**21.18 255**	P	**P**	**05 28 48.3**	**+2.3**
	131nm,0.3s,baz=3.4,slow=2.8,SNR=5.0						
DAV				LR	LR	05 36 24.3	
	comp=Z,6µm,20.4s,baz=86,slow=35						
DAV	**Davao City (W)**		**21.18 255**	P	**P**	**05 28 48.4**	**+2.5**
FAKI	**Fak Fak**		**21.29 221**	P	**P**	**05 28 48.5**	**+1.4**
	13µm832nm,1.7s						
FAKI	**Fak Fak**		**21.29 221**	P	**P**	**05 28 48.5**	**+1.4**
DDMP	**Don Marcelino,**		**21.39 252**	*e*P	**P**	**05 28 50.1**	**+1.9**
JOW	**Kunigami**		**21.39 311**	P	**P**	**05 28 48.7**	**+0.6**
	17nm,0.7s,baz=143,slow=13,SNR=19						
JOW	**Kunigami**		**21.39 311**	P	**P**	**05 28 45.8**	**-2.4**
BUKP	**Musuan**		**21.42 257**	*e*P	**P**	**05 28 50.2**	**+1.7**
BUKP	**Musuan**		**21.42 257**	*e*P	**P**	**05 28 50.4**	**+1.9**
KCP	**Kidapawan**		**21.66 255**	⇓*i*P	**P**	**05 28 53.2**	**+2.1**
SKMP	**Bagumbayan, Su**		**22.33 254**	*e*P	P	05 29 06.9	+8.7
TNTI	**Ternate**		**22.44 237**	P	**P**	**05 28 57.9**	**-1.5**
	125nm,1.5s						
TNTI	**Ternate**		**22.44 237**	P	**P**	**05 28 57.6**	**-1.8**
PMG	**Port Moresby**		**22.70 177**	P	**P**	**05 29 00.2**	**-1.9**
PMG				pmax	pmax		
	comp=Z,127nm,0.9s						
PMG	**Port Moresby**		**22.70 177**	P	**P**	**05 29 02.1**	**-0.1**
	comp=Z,57nm,0.9s,baz=342,slow=12,SNR=6.4						
PMG	**Port Moresby**		**22.70 177**	P	**P**	**05 29 00.2**	**-1.9**
PMG				lAmb	lAmb	05 29 22.2	
	comp=Z,127nm,0.9s						
PAGZ	**Pagadian**		**23.03 258**	*e*P	**P**	**05 29 08.0**	**+2.4**
GUIM	**Jordan**		**23.20 266**	*e*P	**P**	**05 29 10.2**	**+3.0**
INU	**Inuyama**		**23.34 341**	P	**P**	**05 29 08.4**	**-0.1**
INU				lAmb	lAmb	05 29 25.8	
	comp=Z,216nm,1.1s						
OTRP	**Odiongan**		**23.53 270**	*e*P	**P**	**05 29 11.8**	**+1.2**
BOAC	**Boac**		**23.63 273**	*e*P	**P**	**05 29 13.0**	**+1.4**
CAUP	**Cauayan**		**23.72 282**	*e*P	**P**	**05 29 12.6**	**+0.2**
MSAI	**Masohi**		**23.86 227**	P	**P**	**05 29 17.2**	**+3.5**
	comp=Z,33nm,0.7s						
JNU	**Nakatsue**		**24.05 327**	P	**P**	**05 29 14.7**	**-0.8**
MJAR	**Matsushiro Arr**		**24.10 344**	P	**P**	**05 29 14.2**	**-1.6**
	comp=Z,15nm,0.8s,baz=163,slow=9.6,SNR=12						
MJAR				LR	LR	05 37 52.5	
	comp=Z,14µm,18.3s,baz=170,slow=35						
MAJO	**Matsushiro**		**24.10 344**	*e*P	**P**	**05 29 15.7**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,49nm,0.9s						
MAJO	**Matsushiro**		**24.10 344**	P	**P**	**05 29 15.9**	**+0.1**
MAT	**Matsushiro**		**24.10 344**	P	**P**	**05 29 14.2**	**-1.6**
MAT				S	**S**	**05 33 27.2**	**-4.7**
MJB9	**Matsu-Tunnel**		**24.10 344**	P	**P**	**05 29 15.9**	**0.0**
YOJ	**Yonaguni jima**		**24.44 300**	P	**P**	**05 29 18.0**	**-1.0**
YOJ				pmax	pmax		
	comp=Z,143nm,1.1s						
YOJ	**Yonaguni jima**		**24.44 300**	P	**P**	**05 29 18.0**	**-1.0**
YOJ				lAmb	lAmb	05 29 35.6	
	comp=Z,143nm,1.1s						
TGY	**Tagaytay City**		**24.48 275**	P	**P**	**05 29 21.1**	**+1.5**
	comp=Z,208nm,0.3s,baz=120,slow=8.1,SNR=4.5						
TGY				LR	LR	05 37 52.2	
	comp=Z,6µm,19.5s,baz=86,slow=34						
AAI	**Ambon**		**24.62 228**	P	**P**	**05 29 23.1**	**+2.4**
	comp=Z,371nm,0.9s						
SANI	**Sanana**		**25.21 234**	P	**P**	**05 29 25.0**	**-1.1**
	comp=Z,4µmcomp=Z,78nm,1.4s						
KMSI	**Cibinong**		**25.39 242**	P	**P**	**05 29 27.6**	**-0.1**
	comp=Z,875nm,1.1s						
SAUI	**Saumlaki**		**25.87 216**	P	**P**	**05 29 30.2**	**-1.9**
HNR	**Honiara**		**26.52 148**	P	**P**	**05 29 36.8**	**-1.1**
HNR				pmax	pmax		
	comp=Z,135nm,0.9s						
HNR	**Honiara**		**26.52 148**	P	**P**	**05 29 39.1**	**+1.1**
	comp=Z,58nm,0.5s,baz=333,slow=19,SNR=2.7						
HNR	**Honiara**		**26.52 148**	P	**P**	**05 29 40.0**	**+2.1**
HNR	**Honiara**		**26.52 148**	P	**P**	**05 29 36.8**	**-1.1**
HNR				lAmb	lAmb	05 30 31.8	
	comp=Z,135nm,0.9s						
MRSI	**Marisa**		**27.20 244**	P	**P**	**05 29 44.7**	**+0.6**
	comp=Z,4µmcomp=Z,364nm,1.0s						
LUWI	**Luwuk**		**27.26 240**	P	**P**	**05 29 46.2**	**+1.6**
	comp=Z,8µmcomp=Z,821nm,1.0s						
LUWI	**Luwuk**		**27.26 240**	P	**P**	**05 29 43.7**	**-1.0**
COEN	**Coen**		**27.36 186**	P	**P**	**05 29 44.5**	**-1.0**
APSI	**Ampana**		**28.14 241**	P	**P**	**05 29 53.5**	**+0.9**
	comp=Z,110nm,1.4s						
BATP	**Bataraza**		**28.17 264**	*e*P	**P**	**05 29 53.6**	**+0.8**
TJN	**Taejon**		**28.40 327**	*e*P	**P**	**05 29 53.8**	**-0.8**
SSE	**Sheshan**		**28.92 312**	P	**P**	**05 29 58.3**	**-1.0**
SSE				lAmb	lAmb	05 30 29.8	
	comp=Z,198nm,1.8s						
KSRS	**Korea Array**		**28.93 329**	P	**P**	**05 29 58.5**	**-0.8**
	comp=Z,69nm,1.0s,baz=142,slow=8.5,SNR=88						
KS19	**Wonju Array Si**		**29.00 329**	P	**P**	**05 29 59.2**	**-0.7**
KDI	**Kendari**		**29.04 235**	P	P	05 30 07.1	+6.6
MPSI	**Mapaga**		**29.06 246**	P	**P**	**05 30 01.4**	**+0.7**
	comp=Z,113nm,1.3s						
MTN	**Manton Dam**		**30.03 210**	P	**P**	**05 30 09.1**	**-0.1**
KKM	**Kota Kinabalu**		**30.36 259**	P	**P**	**05 30 09.8**	**-2.6**
KKM				lAmb	lAmb	05 30 48.4	
	comp=Z,72nm,1.2s						
TTSI	**Tana Toraja**		**30.82 240**	P	**P**	**05 30 18.2**	**+1.9**
	comp=Z,3µmcomp=Z,73nm,1.1s						
NJ2	**Nanjing**		**31.11 311**	*e*P	**P**	**05 30 19.8**	**+1.1**
NJ2				PP	**PP**	**05 31 27.3**	**-1.9**
NJ2				LR	LR		
	comp=Z,3µm,19.9s						
NJ2				LR	LR		
	comp=Z,5µm,15.2s						
NJ2				LR	LR		
	comp=Z,6µm,16.1s						
BNSI	**Bone**		**31.33 237**	P	**P**	**05 30 22.6**	**+1.9**
	comp=Z,177nm,1.2s						
SPSI	**Sidrap Palu**		**31.36 238**	P	**P**	**05 30 23.5**	**+2.5**
	comp=Z,110nm,1.1s						
SOEI	**Soe**		**31.64 224**	P	**P**	**05 30 23.5**	**-0.2**
	comp=Z,161nm,0.9s						
SOEI	**Soe**		**31.64 224**	P	P	**05 30 23.3**	**-0.3**
SMKI	**Samarinda**		**31.81 247**	P	P	05 30 29.8	+4.8
	comp=Z,211nm,1.0s						
MSHR	**Mys Shultsa**		**31.82 339**	*e*P	**P**	**05 30 25.6**	**+0.8**
BKSI	**Bulukumba**		**31.84 236**	P	**P**	**05 30 27.2**	**+1.9**
	comp=Z,45nm,1.1s						
BKB	**Balikpapan**		**32.45 246**	P	**P**	**05 30 29.1**	**-1.5**
TEY	**Ternei**		**32.54 347**	⇑*e*P	P	05 30 45.0	+14
TEY				MLR	MLR		
	comp=N,400nm,15.0s						
TEY				MLR	MLR		
	comp=E,300nm,15.0s						
TEY				MLR	MLR		
	comp=Z,400nm,16.0s						
USRK	**Ussuriysk Ar.**		**32.98 341**	P	**P**	**05 30 35.1**	**+0.2**
	comp=Z,3.4nm,0.6s,baz=123,slow=8.0,SNR=6.8						
USRK				LR	LR	05 43 01.6	
	comp=Z,9µm,18.3s,baz=145,slow=35						
USA0B	**Ussuriysk Arra**		**32.98 341**	P	**P**	**05 30 33.6**	**-1.4**
USA0B	**Ussuriysk Arra**		**32.98 341**	P	**P**	**05 30 33.6**	**-1.4**
YSS	**Yuzh-Sakhalins**		**33.55 356**	*e*P	**P**	**05 30 41.3**	**+1.5**
YSS				*e**PP	**pwP**	**05 30 52.9**	**-1.7**
YSS				*e*PPP	PPP	05 32 09.0	
YSS				*e*S	**S**	**05 35 58.7**	**-1.6**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,7µm,15.0s						
YSS				MLR	MLR		
	comp=N,6µm,17.0s						
YSS	**Yuzh-Sakhalins**		**33.55 356**	P	**P**	**05 30 40.9**	**+1.1**
WHN	**Wuhan**		**33.88 305**	P	**P**	**05 30 44.3**	**+1.3**
KBKI	**Kotabaru**		**34.07 243**	P	**P**	**05 30 46.7**	**+1.9**
	comp=N,2µmcomp=N,33nm,1.2s						
MDJ	**Mudanjiang**		**34.15 339**	P	**P**	**05 30 45.3**	**+0.2**
MDJ				pP	sP	05 30 54.5	+1.2
MDJ				sP	pwP	05 30 59.3	-0.7
MDJ				S	**S**	**05 36 11.4**	**+1.7**
MDJ				sS	sS	05 36 29.3	+9.1
MDJ				LR	LR		
	comp=N,8µm,16.1s						
MDJ				LR	LR		
	comp=N,6µm,17.6s						
MDJ				LR	LR		
	comp=N,9µm,16.9s						
MDJ	**Mudanjiang**		**34.15 339**	P	**P**	**05 30 45.5**	**+0.4**
SNY	**Shenyang**		**34.43 330**	⇓P	**P**	**05 30 45.4**	**-2.2**
SNY				S	**S**	**05 36 22.0**	**+7.9**
SNY				LR	LR		
	comp=N,9µm,14.6s						
SNY				LR	LR		
	comp=N,7µm,16.7s						
SNY				LR	LR		
	comp=N,14µm,17.8s						
WB0	**Warramunga Arr**		**34.95 200**	P	**P**	**05 30 50.9**	**-1.4**
WR0	**Warramunga Arr**		**35.08 199**	P	**P**	**05 30 51.7**	**-1.7**
CN2	**Changchun**		**35.10 334**	*e*P	**P**	**05 30 53.6**	**+0.3**
CN2				*es*P	pwP	05 31 06.3	-0.8
CN2				pmax	pmax		
	comp=N,40nm,1.0s						
WRAB	**Tennant Creek**		**35.11 200**	⇓*e*P	**P**	**05 30 55.0**	**+1.3**
WRAB				pmax	pmax		
	comp=Z,44nm,1.0s						
WB2	**Warramunga Arr**		**35.12 200**	P	**P**	**05 30 53.4**	**-0.4**
WB2				lAmb	lAmb	05 30 58.8	
	comp=Z,66nm,1.1s						
WRA	**Warramunga Arr**		**35.13 200**	*i* P	**P**	**05 30 55.2**	**+1.4**
WRA				pmax	pmax		
	comp=Z,41nm,0.9s						
WRA	**Warramunga Arr**		**35.13 200**	P	**P**	**05 30 52.8**	**-1.1**
	comp=Z,41nm,0.9s,baz=21,slow=9.5,SNR=37						
WRA				PcP	**PcP**	**05 33 26.0**	**+0.9**
	comp=Z,4.1nm,0.7s,baz=16,slow=3.3,SNR=4.5						
WRA				ScP	**ScP**	**05 37 10.6**	**+1.5**
	comp=Z,5.3nm,1.2s,baz=9.7,slow=3.8,SNR=5.3						
WRA				LR	LR	05 44 57.7	
	comp=Z,4µm,21.7s,baz=25,slow=36						
QIZ	**Qiongzhong**		**35.25 284**	P	**P**	**05 30 52.9**	**-2.1**
QIZ				S	**S**	**05 36 29.5**	**+2.3**
QIZ				LR	LR		
	comp=Z,2µm,12.4s						
QIZ				LR	LR		
	comp=Z,5µm,18.6s						
QIZ				LR	LR		
	comp=Z,7µm,17.5s						
SBUM	**Sibu**		**35.26 255**	P	**P**	**05 30 52.6**	**-2.5**
SBUM	**Sibu**		**35.26 255**	P	**P**	**05 30 57.0**	**+1.9**
STKI	**Sintang**		**36.81 252**	P	**P**	**05 31 09.2**	**+0.8**
	comp=Z,74nm,0.8s						
FITZ	**Fitzroy Crossi**		**37.28 213**	P	**P**	**05 31 10.5**	**-1.7**
BJT	**Baijiatuau**		**37.34 321**	P	**P**	**05 31 12.6**	**0.0**
BJT				pmax	pmax		
	comp=Z,124nm,1.4s						
BJT	**Baijiatuau**		**37.34 321**	P	**P**	**05 31 12.6**	**0.0**
BJT				lAmb	lAmb	05 31 29.3	
	comp=Z,124nm,1.4s						
BJI	**Beijing**		**37.35 321**	⇑*i*P	**P**	**05 31 12.5**	**-0.1**
BJI				pP	**sP**	**05 31 21.8**	**+1.0**
KSM	**Kuching**		**37.39 255**	P	**P**	**05 31 10.8**	**-2.5**
KSM				lAmb	lAmb	05 31 21.3	
	comp=Z,111nm,1.2s						
KSM	**Kuching**		**37.39 255**	P	**P**	**05 31 15.0**	**+1.7**
SRBI	**Singaraja**		**37.41 237**	P	**P**	**05 31 14.0**	**+0.6**
	comp=Z,4µmcomp=Z,301nm,1.3s						
KLR	**Kul'dur**		**37.63 345**	*e*P	**P**	**05 31 13.1**	**-1.7**
KLR				pmax	pmax		
	comp=Z,30nm,1.5s						
KLR	**Kul'dur**		**37.63 345**	P	**P**	**05 31 13.1**	**-1.7**
	comp=Z,6.5nm,0.7s,baz=190,slow=2.3,SNR=13						
KLR				LR	LR	05 46 45.6	
	comp=Z,10µm,18.2s,baz=157,slow=36						
ENH	**Enshi**		**37.72 302**	P	**P**	**05 31 16.3**	**+0.3**
ENH				lAmb	lAmb	05 31 55.1	
	comp=Z,125nm,1.3s						
DNP	**Denpasar**		**37.75 236**	P	P	05 31 23.0	+6.7
PBKI	**Pangkalan Bun**		**37.76 247**	P	**P**	**05 31 18.2**	**+1.7**
	comp=Z,5µmcomp=Z,397nm,1.2s						
KMMI	**Kalianget**		**37.87 239**	P	P	05 31 26.7	+9.4
GRNR	**Gornyy**		**38.08 350**	⇓*i*P	**P**	**05 31 19.2**	**+0.5**
GRNR				*e*S	**S**	**05 37 11.6**	**+1.9**
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GRNR				smax	smax		
	comp=N,3.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,4µm,17.0s						
JAGI	**Jajag, Banyuwa**		**38.49 237**	P	**P**	**05 31 21.1**	**-1.5**
	comp=Z,3µmcomp=Z,147nm,1.3s						
JAGI	**Jajag, Banyuwa**		**38.49 237**	P	P	**05 31 21.5**	**-1.1**
TIY	**Taiyuan**		**38.51 315**	*e*P	**P**	**05 31 23.8**	**+1.2**
TIY				pP	**pwP**	**05 31 34.8

comp=Z,32nm,0.7s
XAN LR LR
comp=Z,5µm,15.2s
XAN LR LR
comp=Z,4µm,17.4s
XAN LR LR
comp=Z,7µm,18.4s
XAN Xi'an 39.47 308 P P 05 31 29.4 -1.3
XAN pmax pmax
comp=Z,24nm,0.7s
XAN Xi'an 39.47 308 P P 05 31 29.4 -1.3
NGJI Ngawi 40.15 241 P P 05 31 38.8 +2.3
comp=Z,219nm,1.2s
PWJI Pagerwojo 40.20 240 P P 05 31 36.2 -0.6
comp=Z,5µmcomp=Z,547nm,1.0s
NOUC Port Laguerre 40.46 150 P P 05 31 37.9 -0.9
DZM Mont Dzumac 40.51 150 *e*P **P 05 31 39.8 +0.5**
comp=Z,145nm,1.4s
DZM Mont Dzumac 40.51 150 *e*LR LR 05 42 53.0
comp=Z,5µm,21.1s
DZM Mont Dzumac 40.51 150 P P 05 31 39.7 +0.3
PETK Petropavlovsk- 40.65 11 P P 05 31 40.0 -0.1
comp=Z,12nm,1.0s,baz=200,slow=7.7,SNR=4.9
PETK LR LR 05 48 04.8
comp=Z,7µm,20.9s,baz=201,slow=36
HHC Hu-ho-hao-te 40.71 319 *e*P **P 05 31 42.1 +1.2**
HHC pP pP 05 31 46.6 -0.8
HHC sP pwP 05 31 56.0 +1.3
HHC pmax pmax
comp=Z,330nm,4.7s
HHC LR LR
comp=Z,2µm,14.8s
HHC LR LR
comp=Z,3µm,16.7s
HHC LR LR
comp=Z,4µm,16.2s
PET Petropavlovsk 40.75 12 P P 05 31 40.5 -0.3
PET pmax pmax
comp=Z,105nm,1.5s
PET Petropavlovsk 40.75 12 P P 05 31 40.5 -0.3
PCJI Pacitan 40.82 240 P P 05 31 41.8 -0.2
comp=Z,5µmcomp=Z,477nm,1.1s
WOJI Wonogiri, Jawa 40.85 241 P P 05 31 43.1 +0.9
comp=Z,82nm,1.0s
SLVN Son La 40.97 287 P P 05 31 42.0 -1.2
UGM Wanagama 41.23 241 P P 05 31 47.0 +1.6
comp=Z,414nm,1.1s
TPI Tanjungpandan 41.43 250 P P 05 31 49.6 +2.6
comp=Z,130nm,1.1s
BTO Baotou 41.59 317 *e*P P 05 31 58.6 +10
HIA Hailar 41.83 334 P P 05 31 50.0 +0.2
HIA pmax pmax
comp=Z,102nm,1.2s
HIA Hailar 41.83 334 P P 05 31 50.0 +0.2
HIA IAmb IAmb 05 32 06.6
comp=Z,102nm,1.2s
KPJI Karang Pucung 42.31 243 P P 05 31 55.9 +1.7
comp=Z,117nm,1.3s
KMI Kunming 42.41 293 ⇑P **P 05 31 58.0 +2.7**
KMI pP pwP 05 32 07.1 -3.3
KMI sP sP 05 32 11.0 +6.9
KMI LR LR
comp=Z,3µm,17.9s
KMI LR LR
comp=Z,5µm,17.5s
KMI LR LR
comp=Z,5µm,19.1s
KMI Kunming 42.41 293 P P 05 31 54.7 -0.6
KMI pmax pmax
comp=Z,29nm,1.0s
KMI Kunming 42.41 293 P P 05 31 54.7 -0.6
CD2 Chengdu 42.64 301 ⇑P **P 05 31 56.5 -0.3**
CD2 S **S 05 38 16.6 -1.8**
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 LR LR
comp=Z,5µm,13.1s
CD2 LR LR
comp=Z,5µm,15.1s
CD2 LR LR
comp=Z,6µm,17.1s
ZEA Zeya 42.91 344 *e*P **P 05 31 57.4 -1.1**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,35nm,1.0s
CISI Cisompet, Garu 43.39 244 P P 05 32 01.2 -1.8
comp=Z,143nm,0.9s
CISI Cisompet, Garu 43.39 244 P P 05 32 01.8 -1.2
CISI IAmb IAmb 05 32 08.6
comp=Z,104nm,0.9s
MYKOM **Kota Tinggi 43.39 258 P P 05 32 04.1 +1.1**
MYKOM IAmb IAmb 05 32 11.6
comp=Z,125nm,1.0s
MYKOM **Kota Tinggi 43.39 258 P P 05 32 06.0 +3.0**
DBJI Dramaga 43.86 245 P P 05 32 08.3 +1.5
comp=Z,114nm,1.2s
LZH Lanzhou 44.09 308 *e*P **P 05 32 08.9 +0.3**
LZH pP pwP 05 32 18.6 -5.1
LZH sP sP 05 32 23.6 +6.1
LZH pmax pmax
comp=Z,130nm,4.6s
LZH LR LR
comp=Z,3µm,13.6s
LZH LR LR
comp=Z,4µm,13.6s
LZH LR LR
comp=Z,6µm,13.9s
PMBI Palembang 44.14 251 P P 05 32 11.6 +2.6
MSVF Nonsavu 44.16 134 *e*P **P 05 32 11.2 +2.0**
MSVF pmax pmax
comp=Z,35nm,1.1s
KNTN Kanton 44.80 108 P 05 32 13.7 -0.6
KNTN IAmb IAmb 05 32 45.9
comp=Z,108nm,1.2s
KLSI 44.87 249 P P 05 32 15.7 +0.8
comp=Z,53nm,1.0s
SMY Shemya 45.11 24 P P 05 32 15.4 -0.8
SMY pmax pmax
comp=Z,389nm,1.5s
SMY Shemya 45.11 24 P P 05 32 15.4 -0.8
STKA Stephens Creek 45.25 185 P P 05 32 17.4 -0.1
STKA pmax pmax
comp=Z,36nm,2.0s
STKA Stephens Creek 45.25 185 P P 05 32 15.9 -1.6
comp=Z,14nm,0.7s,baz=349,slow=9.6,SNR=23
STKA LR LR 05 51 36.9
comp=Z,6µm,20.7s,baz=1.7,slow=37
STKA Stephens Creek 45.25 185 P P 05 32 17.4 -0.1
MDSI Maura Dua 45.29 250 P P 05 32 17.5 -0.7
comp=Z,2µmcomp=Z,150nm,1.0s
IPM Ipoh 45.37 263 P P 05 32 17.7 -1.2
KASI Kota Agung 45.43 248 P P 05 32 20.4 +1.1
comp=Z,176nm,0.9s
KULM Kulim 45.54 264 P P 05 32 18.1 -2.1
KULM IAmb IAmb 05 32 24.1
comp=Z,111nm,1.3s
CHTO Chiang Mai 45.55 283 P P 05 32 19.2 -1.1
CHTO pmax pmax
comp=Z,15nm,1.2s
CHTO Chiang Mai 45.55 283 P P 05 32 19.2 -1.1
CMAR Chiang Mai Arr 45.56 283 P P 05 32 20.9 +0.6
comp=Z,15nm,0.8s,baz=87,slow=6.0,SNR=28
CMAR PcP **PcP 05 34 01.7 +3.0**
comp=Z,11nm,0.8s,baz=83,slow=2.1,SNR=5.3
CMAR LR LR 05 52 18.2
comp=Z,3µm,18.1s,baz=90,slow=37
MA2 Magadan 46.20 3 *e*P **P 05 32 25.5 +0.7**
MA2 pmax pmax
comp=Z,30nm,1.2s
MA2 Magadan 46.20 3 P P 05 32 23.7 -1.0
comp=Z,14nm,0.7s,baz=180,slow=4.4,SNR=7.8
MA2 LR LR 05 50 08.9
comp=Z,3µm,20.4s,baz=190,slow=34
MA2 Magadan 46.20 3 P P 05 32 25.1 +0.3
MA2 IAmb IAmb 05 32 55.6
comp=Z,50nm,1.1s
MNAI Manna 46.36 251 P P 05 32 24.8 -1.9
KSI Kapahiang 46.42 252 P P 05 32 25.5 -1.7
comp=Z,209nm,1.1s
BKNI Bangkinang 46.51 257 P P 05 32 28.4 +0.5
comp=Z,83nm,1.0s
BKNI Bangkinang 46.51 257 P P 05 32 28.2 +0.3
CIT Chita 46.53 333 *e*P **P 05 32 27.2 -0.3**
CIT *e* 05 34 17.7
CIT pmax pmax
comp=Z,168nm,1.9s
SDSI Sungai Dareh 46.55 256 P P 05 32 28.5 +0.3
comp=Z,40nm,1.1s
KRJI Kerinci 46.91 254 P P 05 32 32.0 +0.9
comp=Z,9µmcomp=Z,280nm,1.1s
ULN Ulaanbaatar 47.23 325 *e*P **P 05 32 33.1 -0.1**
ULN pmax pmax
comp=Z,16nm,0.9s
ULN Ulaanbaatar 47.23 325 P P 05 32 32.7 -0.5
ULN **P 05 32 34.5 +1.3**
ULN IAmb IAmb 05 32 39.0
comp=Z,31nm,0.9s
SONM Songino Array 47.58 324 P P 05 32 35.6 -0.3
comp=Z,11nm,0.7s,baz=135,slow=8.3,SNR=38
SONM PcP **PcP 05 34 07.4 +1.9**
comp=Z,9.0nm,0.7s,baz=138,slow=2.9,SNR=5.4
SONM ScP **ScP 05 38 00.1 +2.1**
comp=Z,5.7nm,1.3s,baz=106,slow=4.7,SNR=3.4
SONM LR LR 05 54 22.1
comp=Z,5µm,18.4s,baz=116,slow=38
PSI Prapat 47.83 262 P P 05 32 36.3 -2.0
PSI pmax pmax
comp=Z,31nm,0.8s
RPSI Rantau Prapat 47.85 261 P P 05 32 36.3 -2.1
RPSI IAmb IAmb 05 32 41.2
comp=Z,31nm,0.8s
GTA Gaotai 48.21 311 ⇑P **P 05 32 41.8 +0.9**
GTA pP pwP 05 32 52.4 -3.6
GTA sP sP 05 32 56.4 +7.1
GTA ScP **ScP 05 38 02.6 +1.7**
GTA LR LR
comp=Z,3µm,17.8s
GTA LR LR
comp=Z,3µm,18.7s
GTA LR LR
comp=Z,4µm,18.1s
CAN Canberra 48.55 177 P P 05 32 42.7 -0.6
CAN pmax pmax
comp=Z,49nm,1.5s
CAN Canberra 48.55 177 P P 05 32 42.7 -0.6
ADK Adak 48.59 30 P P 05 32 44.0 +0.6
ADK pmax pmax
comp=Z,117nm,1.1s
ADK Adak 48.59 30 P P 05 32 44.0 +0.6
SISI Saibi 48.89 256 P P 05 32 46.0 -0.3
comp=Z,117nm,1.1s
TPTI 49.39 263 P P 05 32 50.2 +0.1
comp=Z,24nm,1.4s
GSI Gunungsitoli 49.53 260 P P 05 32 51.1 -0.2
comp=Z,84nm,1.2s
GSI Gunungsitoli 49.53 260 P P 05 32 50.1 -1.2
GSI IAmb IAmb 05 32 53.1
comp=Z,77nm,1.0s
SEY Seymchan 49.64 4 *e*P **P 05 32 51.3 0.0**
YAK Yakutsk 49.96 350 *e*P **P 05 32 52.8 -0.9**
YAK *e**PP **pwP 05 33 05.7 -2.9**
YAK *e*S **S 05 40 01.0 -1.4**
YAK pmax pmax
comp=Z,70nm,0.9s
YAK pmax pmax
comp=N,38nm,1.1s
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK smax smax
comp=E,310nm,5.0s
YAK smax smax
comp=N,549nm,6.7s
YAK Yakutsk 49.96 350 P P 05 32 53.0 -0.7
comp=N,16nm,0.5s,baz=160,slow=18,SNR=12
YAK LR LR 05 59 44.6
comp=N,2µm,19.0s,baz=162,slow=43
YAK Yakutsk 49.96 350 P P 05 32 53.0 -0.7
SNSI Sinabang, Aceh 50.43 262 P P 05 32 59.0 +0.9
comp=N,178nm,1.4s
BOD Bodaibo 50.52 338 *e*P **P 05 32 57.4 -0.7**
BOD pmax pmax
comp=Z,38nm,2.0s
ZAK Zakamensk 50.67 326 *e*P **P 05 32 58.6 -0.9**
ZAK pmax pmax
comp=Z,30nm,1.3s
TOO Toolangi 50.72 181 P P 05 32 58.7 -1.1
TOO pmax pmax
comp=Z,84nm,1.6s
TOO Toolangi 50.72 181 P P 05 32 58.7 -1.1
TOO IAmb IAmb 05 33 06.9
comp=Z,84nm,1.6s
IRK Irkutsk 51.14 328 *e*P **P 05 33 03.7 +0.8**
IRK *e* 05 34 13.4
IRK pmax pmax
comp=Z,82nm,2.3s
TLY Talaya 51.16 327 *e*P **P 05 33 04.6 +1.6**
TLY pmax pmax
comp=Z,85nm,1.2s
TLY MLR MLR
comp=Z,9µm,12.0s
SIMRM Sittwe 51.25 285 P P 05 33 04.0 -0.2
TEZP TEZPUR 51.47 293 *e*P **P 05 33 05.3 -0.4**
TEZP IAmb IAmb 05 33 10.1
comp=Z,51nm,0.7s
SHL Shillong 52.24 292 *e*P **P 05 33 12.2 +0.5**
SHL IAmb IAmb 05 33 27.0
comp=Z,33nm,1.1s
MOY Mondy 52.56 326 *e*P **P 05 33 13.6 0.0**
MOY pmax pmax
comp=Z,64nm,2.4s
LSA Lhasa 53.17 297 P P 05 33 19.3 +0.4
LSA pmax pmax
comp=Z,51nm,0.7s
LSA Lhasa 53.17 297 P P 05 33 17.7 -1.2
LSA pmax pmax
comp=Z,61nm,0.8s
LSA Lhasa 53.17 297 *i* P **P 05 33 19.8 +0.9**
SNR=13
LSA Lhasa 53.17 297 P P 05 33 17.6 -1.2
LSA IAmb IAmb 05 33 22.8
comp=Z,61nm,0.8s
RAO Raoul Island 54.81 141 LR LR 05 53 14.9
comp=Z,3µm,20.9s,baz=324,slow=32
TAPN Taplejung 56.05 294 *e*P **P 05 33 38.9 -0.7**
comp=Z,258nm,1.2s
BILL Bilibino 56.13 9 *ce*P **P 05 33 40.2 +1.1**
BILL *e* 05 33 55.8
BILL *e* 05 34 36.8
BILL *e* 05 35 43.9
BILL *e*S **S 05 41 29.9 +3.6**
BILL pmax pmax
comp=Z,43nm,1.0s
BILL MLR MLR
comp=Z,2µm,17.0s
BILL Bilibino 56.13 9 P P 05 33 39.2 +0.1
BILL IAmb IAmb 05 33 57.7
comp=Z,39nm,0.9s
UWE Uwekahuna 56.28 76 P P 05 33 41.7 +0.5
ODAN Odare 56.32 293 *e*P **P 05 33 40.6 -0.9**
comp=Z,300nm,1.4s
RAMN Ramite 57.02 293 *e*P **P 05 33 45.6 -0.9**
JIRN Jiri 57.40 294 *e*P **P 05 33 48.5 -0.9**
comp=Z,198nm,0.8s
BOK Bokaro 57.67 290 *e*P **P 05 33 52.7 +1.8**
BOK IAmb IAmb 05 33 59.0
comp=Z,48nm,1.1s
GUN Gumba 57.68 295 *e*P **P 05 33 50.5 -0.8**
comp=Z,220nm,0.9s
PKIN Phulchoki 58.10 294 *e*P **P 05 33 52.8 -1.4**
WMQ Urumqi 58.15 313 *e*P **P 05 33 55.5 +1.5**
WMQ LR LR
comp=Z,2µm,17.9s
WMQ LR LR
comp=Z,890nm,18.1s
WMQ LR LR
comp=Z,2µm,20.1s
WMQ Urumqi 58.15 313 P P 05 33 54.3 +0.4
WMQ pmax pmax
comp=Z,136nm,1.6s
WMQ Urumqi 58.15 313 P P 05 33 54.3 +0.4
GAMB Gambell 58.19 21 P P 05 33 53.0 -0.7
GAMB IAmb IAmb 05 34 14.7
comp=Z,86nm,1.4s
DMN Daman 58.36 294 *e*P **P 05 33 54.9 -1.1**
comp=Z,108nm,0.9s
GKN Gorkha 58.78 295 *e*P **P 05 33 57.7 -1.1**
comp=Z,271nm,1.0s
CNBA Chernabura Isl 58.88 33 P P 05 33 56.9 -1.8
URZ Urewera 59.03 152 LR LR 05 57 53.8
comp=Z,2µm,18.6s,baz=335,slow=34
TIXI Tiksi 59.13 354 *e*P **P 05 33 59.7 -0.5**
TIXI pmax pmax
comp=Z,24nm,0.9s
TIXI Tiksi 59.13 354 P P 05 33 58.7 -1.5
comp=Z,23nm,0.9s,baz=180,slow=24,SNR=20
TIXI Tiksi 59.13 354 P P 05 33 59.3 -0.9
DANN Dangsing 59.56 295 *e*P **P 05 34 03.4 -0.9**
comp=Z,239nm,0.7s
CHLP Challavanipeta 59.66 284 *e*P **P 05 34 05.5 +0.8**
KOLN Koldanda 59.70 294 *e*P **P 05 34 04.1 -1.1**
comp=Z,159nm,0.9s
ANM Nome 60.89 22 P P 05 34 12.8 +0.4
ANM pmax pmax
comp=Z,53nm,1.0s
ANM Nome 60.89 22 P P 05 34 12.8 +0.4
ANM IAmb IAmb 05 34 29.2
comp=Z,53nm,1.0s
RPZ Rata Peaks 61.24 160 LR LR 05 57 36.3
comp=Z,5µm,21.9s,baz=320,slow=33
PVM Polavaram 62.09 283 *e*P **P 05 34 22.4 +1.1**
MK31 Makanchi Array 62.47 316 P P 05 34 22.5 -0.9
MK31 Makanchi Array 62.47 316 P P 05 34 22.5 -0.9
MKAR Makanchi Array 62.47 316 P P 05 34 22.8 -0.6
comp=Z,7.8nm,0.4s,baz=91,slow=7.9,SNR=81
MKAR LR LR 06 03 25.6
comp=Z,2µm,18.2s,baz=79,slow=38
ZAA0 Zalesovo Array 62.48 324 P P 05 34 21.6 -1.7
ZALV Zalesovo Beam 62.48 324 P P 05 34 22.4 -0.9
comp=Z,10.0nm,0.5s,baz=99,slow=7.2,SNR=31
ZALV LR LR 06 02 59.7
comp=Z,4µm,18.8s,baz=104,slow=38
MAKZ Makanchi 62.68 316 P P 05 34 23.8 -1.0
MAKZ pmax pmax
comp=Z,39nm,1.1s
MAKZ Makanchi 62.68 316 P P 05 34 23.8 -1.0
MAKZ IAmb IAmb 05 34 30.1
comp=Z,39nm,1.1s
MYLAV **Mylavaram 63.09 282** *e*P **P 05 34 28.9 +0.9**
RAR Rarotonga 63.28 122 LR LR 05 56 22.6
comp=Z,3µm,19.6s,baz=298,slow=31
GGR Gangavaram 63.38 283 *e*P **P 05 34 29.1 -0.8**
RDOG Red Dog Mine 63.63 19 P P 05 34 31.4 +0.7
RDOG IAmb IAmb 05 34 49.4
comp=Z,44nm,1.0s
TTA Tatalina 63.77 26 P P 05 34 33.4 +1.6
TTA Tatalina 63.77 26 P P 05 34 33.4 +1.6
ADKI Addanki 63.83 281 *e*P **P 05 34 33.8 +0.9**
PDGK Podgornoye 63.95 312 P P 05 34 33.5 +0.1
RPR Rampur 64.12 285 *e*P **P 05 34 34.6 -0.2**
RSO Redoubt South 64.33 29 P P 05 34 36.4 +0.8
SKHT Srikalahasti 64.37 279 *e*P **P 05 34 36.5 +0.1**
NJS Nagarjunasagar 64.38 282 *e*P **P 05 34 36.9 +0.4**
PALK Pallekele 64.51 272 *e*P **P 05 34 36.5 -1.0**
PALK pmax pmax
comp=Z,43nm,1.5s
PALK Pallekele 64.51 272 P P 05 34 42.9 +5.4
PRZ Przheval'sk 64.67 311 P P 05 34 37.9 -0.3
PRZ pmax pmax
comp=Z,70nm,1.2s
PRZ Przheval'sk 64.67 311 P P 05 34 37.9 -0.3
CNPM China Poot 64.76 30 P P 05 34 39.4 +1.1
SRLM Srisailam 64.83 282 *e*P **P 05 34 40.2 +0.7**
HYB Hyderabad 64.98 283 *i* P **P 05 34 41.0 +0.5**
HYB Hyderabad 64.98 283 *e*P **P 05 34 42.9 +2.4**
HYB IAmb IAmb 05 34 58.1
comp=Z,165nm,2.1s
HYBB Hyderabad (bro 64.99 283 *e*P **P 05 34 41.0 +0.5**
BRLK Bradley Lake 65.00 30 P P 05 34 37.6 -2.2
SRSP Sriramsagar 65.01 285 *e*P **P 05 34 40.8 +0.2**
SKT Skwentna 65.38 27 P P 05 34 41.5 -0.7
SKT IAmb IAmb 05 34 59.4
comp=Z,48nm,1.2s
PPLA Purkeypile 65.39 26 P P 05 34 44.6 +2.1
BHPL Bhopal 65.45 290 *e*P **P 05 34 44.8 +1.3**
BHPL IAmb IAmb 05 34 49.0
comp=Z,16nm,0.6s
KURK Kurchatov 65.51 320 P P 05 34 42.3 -1.0
KURK Kurchatov 65.51 320 P P 05 34 42.3 -1.0
KURBB **Kurchatov Arra 65.55 320 P P 05 34 42.3 -1.2**
comp=Z,45nm,0.7s,baz=99,slow=6.6,SNR=59
SUA Susitna One 65.57 28 P P 05 34 46.6 +3.0
SEW Seward 65.79 30 P P 05 34 44.6 -0.3
RC01 Rabbit Creek A 65.93 29 P P 05 34 46.6 +0.8
DHRM DHARAMSHALA 66.00 299 *e*P **P 05 34 48.7 +1.6**
DHRM IAmb IAmb 05 35 14.7
comp=Z,46nm,1.1s
KTH Kantishna Hill 66.15 26 P P 05 34 47.0 -0.3
ULHL Ulahol 66.25 310 P P 05 34 51.0 +2.5
SNR=5.4
BPAW Bear Paw Mtn. 66.30 25 P P 05 34 48.5 +0.4
KSH Kashi 66.33 307 P P 05 34 51.3 +2.4
KSH pP pwP 05 35 02.4 -1.5
KSH PP PP 05 37 23.4 +8.4
KSH S **S 05 43 38.1 +0.9**
KSH sS sS 05 43 56.3 +8.6
KSH SS **SS 05 47 57.4 +3.7**
KSH pmax pmax
comp=Z,73nm,0.8s
KSH LR LR
comp=Z,2µm,12.0s
KSH LR LR
comp=Z,870nm,9.6s
KSH LR LR
comp=Z,5µm,17.2s
PMR Palmer 66.35 28 P P 05 34 49.1 +0.7
PMR pmax pmax
comp=Z,77nm,1.4s
PMR Palmer 66.35 28 P P 05 34 49.1 +0.7
TRF Thorofare Moun 66.38 26 P P 05 34 49.9 +1.0
TRF IAmb IAmb 05 35 31.1
comp=Z,57nm,1.2s
BOOM Boomskoye usch 66.48 311 P P 05 34 49.8 -0.2
BOOM pmax pmax
comp=Z,16nm,0.8s
BOOM Boomskoye usch 66.48 311 P P 05 34 49.8 -0.2
GHO Glory Hole Cre 66.50 28 P P 05 34 49.8 +0.3
URV Uravakonda 66.54 281 *e*P **P 05 34 51.2 +0.6**
KNK Knik Glacier 66.61 28 P P 05 34 50.1 -0.1
MLY Manley 66.70 24 P P 05 34 50.5 -0.2
MLY IAmb IAmb 05 35 07.3
comp=Z,51nm,1.2s
KLRI Killari 66.75 284 *e*P **P 05 34 53.6 +1.6**
SML Sawmill 66.78 28 P P 05 34 51.6 +0.3
BWN Browne 66.95 25 P P 05 34 53.1 +0.8
KZA Kyzart 66.97 310 P P 05 34 53.5 +0.1
SNR=15
RND Reindeer 66.99 26 P P 05 34 51.9 -0.7
RND pmax pmax
comp=Z,33nm,1.0s
RND Reindeer 66.99 26 P P 05 34 51.9 -0.7
RND IAmb IAmb 05 35 09.6
comp=Z,33nm,1.0s
MCK McKinley 67.05 26 P P 05 34 53.7 +0.8
MCK pmax pmax
comp=Z,84nm,1.6s
MCK McKinley 67.05 26 P P 05 34 53.7 +0.8
MCK IAmb IAmb 05 35 28.6
comp=Z,84nm,1.6s
KBK Karagaybulak 67.22 311 P P 05 34 57.1 +2.4
SNR=6.9
SCM Sheep Creek Mo 67.24 28 P P 05 34 54.9 +0.7
SCM pmax pmax
comp=Z,94nm,1.1s
SCM Sheep Creek Mo 67.24 28 P P 05 34 54.9 +0.7
FID Port Fidalgo 67.38 29 P P 05 34 55.3 +0.2
CHMS Chumysh 67.38 311 P P 05 34 57.0 +1.5
SNR=9.2
UCH Uchtor 67.53 310 P P 05 34 57.2 +0.3
SNR=24
DHY Denali Highway 67.54 27 P P 05 34 56.8 +0.6
DHY IAmb IAmb 05 35 13.2
comp=Z,68nm,1.5s
AAK Ala-Archa 67.56 311 *e*P **P 05 34 57.4 +0.7**
AAK pmax pmax
comp=Z,12nm,1.2s
AAK Ala-Archa 67.56 311 P P 05 34 57.2 +0.5
comp=Z,7.3nm,1.0s,baz=88,slow=4.4,SNR=11
AAK Ala-Archa 67.56 311 P P 05 34 57.9 +1.1
SNR=6.5
AAK Ala-Archa 67.56 311 *i* P **P 05 34 57.3 +0.5**
SNR=9.4
USP Ospenovka 67.58 311 P P 05 34 57.7 +1.0
SNR=9.1
WRH Wood River Hil 67.61 25 P P 05 34 55.8 -0.7
WRH IAmb IAmb 05 35 31.9

comp=Z,33nm,1.0s
COLD Coldfoot 67.64 22 P **P** **05 34 58.4 +1.8**
MDM Murphy Dome 67.69 25 P **P** **05 34 57.9 +0.9**
CCB Clear Creek Bu 67.78 25 P **P** **05 34 58.1 +0.6**
CCB IAmb IAmb 05 35 39.3

comp=Z,34nm,1.1s
TCOL CIGO, UAF Yank 67.82 25 P **P** **05 34 59.3 +1.6**
baz=254
COLA College 67.83 25 P **P** **05 34 57.9 +0.1**
COLA pmax pmax

comp=Z,20nm,0.8s
COLA College 67.83 25 P **P** **05 34 57.9 +0.1**
POKR Poker Plat Res 68.06 25 P **P** **05 35 00.8 +1.5**
baz=254
HDA Harding Lake 68.07 26 P **P** **05 34 59.5 +0.1**
HDA Harding Lake 68.07 26 P **P** **05 34 59.7 +0.3**
baz=255
EKS2 Erkin-Say 68.09 311 P **P** **05 34 59.0 -1.0**
SNR=7.9
AML Almayashu 68.13 310 P **P** **05 35 03.5 +2.8**
SNR=15
IL31 68.19 25 P **P** **05 35 00.2 +0.2**
ILAR Eielson Array 68.19 25 P **P** **05 34 58.1 -2.0**
comp=Z,4.0nm,0.5s,baz=252,slow=5.6,SNR=45
ILAR LR LR 06 04 31.6

comp=Z,2µm,20.1s,baz=252,slow=36
PAX Paxson 68.36 27 P **P** **05 35 01.1 -0.2**
PAX Paxson 68.36 27 P **P** **05 35 01.1 -0.2**
PAX IAmb IAmb 05 35 34.8

comp=Z,40nm,1.1s
NIL Nilore 68.53 301 P **P** **05 35 02.4 -0.4**
NIL Nilore 68.53 301 P **P** **05 35 02.4 -0.4**
ARSB Arslanbob 68.65 309 P **P** **05 35 03.2 -0.4**
ARSB IAmb IAmb 05 35 10.0

comp=Z,23nm,0.8s
GLB Gilahina Butte 68.79 29 P **P** **05 35 04.0 0.0**
RIDG Independent Ri 68.81 26 P **P** **05 35 05.8 +1.8**
DOT Dot Lake 69.13 27 P **P** **05 35 06.0 0.0**
DOT IAmb IAmb 05 35 35.6

comp=Z,28nm,0.8s
MENT Mentasta 69.13 27 P **P** **05 35 07.5 +1.4**
TGL Tana Glacier 69.13 30 P **P** **05 35 06.7 +0.5**
MCARA McCarthy VSAT 69.15 29 P **P** **05 35 07.6 +1.4**
MCARA IAmb IAmb 05 35 36.2

comp=Z,48nm,1.0s
SCRK Sand Creek 69.23 26 P **P** **05 35 08.1 +1.3**
POO Poona 69.28 285 *e*P **P** **05 35 09.4 +1.6**
POO IAmb IAmb 05 35 12.4

comp=Z,31nm,0.6s
FYU Fort Yukon 69.32 23 P **P** **05 35 07.9 +0.9**
BALM Baldy 69.42 30 P **P** **05 35 09.5 +1.6**
BALM IAmb IAmb 05 35 45.8

comp=Z,45nm,1.2s
BARN Barnard Glacie 69.75 30 P **P** **05 35 10.9 +0.8**
BARN IAmb IAmb 05 35 28.4

comp=Z,48nm,1.3s
CTGM Chitina Glacie 69.89 30 P **P** **05 35 12.7 +1.8**
CTGM IAmb IAmb 05 35 29.9

comp=Z,46nm,1.0s
KK31 Karatay Array 70.49 311 P **P** **05 35 15.4 +0.6**
KK31 Karatay Array 70.49 311 P **P** **05 35 15.3 +0.6**
KKAR Karatay Array 70.49 311 P **P** **05 35 15.3 +0.5**
KKAR pmax pmax

comp=Z,32nm,1.1s
KKAR Karatay Array 70.49 311 P **P** **05 35 15.3 +0.5**
KKAR IAmb IAmb 05 35 41.3

comp=Z,32nm,1.1s
PPT Papeete 70.52 114 LR LR 06 00 25.0
comp=Z,4µm,20.5s,baz=263,slow=31
PPT2 Papeete2 70.52 114 *e*LR LR 05 56 43.2
comp=Z,6µm,21.0s,baz=290
EGAK Eagle 70.59 26 P **P** **05 35 16.1 +1.2**
EGAK IAmb IAmb 05 35 24.3

comp=Z,66nm,1.4s
BVAR Borovoye Array 70.82 322 P **P** **05 35 15.7 -0.9**
comp=Z,33nm,0.5s,baz=101,slow=7.8,SNR=61
BRVK Borovoye 70.89 322 P **P** **05 35 15.4 -1.6**
HYT Haines Junctio 71.73 30 P **P** **05 35 22.9 +0.8**
HYT IAmb IAmb 05 35 41.0

comp=Z,42nm,1.0s
EPYK Eagle Plains 72.64 24 P **P** **05 35 27.1 -0.2**
EPYK Eagle Plains 72.64 24 P **P** **05 35 27.9 +0.6**
baz=264
TBI Tubuai 72.81 120 *e*LR LR 05 57 21.7
comp=Z,3µm,21.8s,baz=293
INK Inuvik 74.05 22 P **P** **05 35 35.5 0.0**
INK pmax pmax

comp=Z,43nm,1.1s
INK Inuvik 74.05 22 P **P** **05 35 35.5 0.0**
INK IAmb IAmb 05 35 44.4

comp=Z,43nm,1.1s
SVE Sverdlovsk 76.43 326 *e*P **P** **05 35 50.3 +0.9**
SVE pmax pmax

comp=Z,53nm,1.1s
SVE MLR MLR

comp=E,3µm,20.0s
SVE MLR MLR

comp=Z,4µm,20.0s
TAOE Nuku Hiva Isla 76.44 103 *e*LR LR 05 59 14.8
comp=Z,3µm,21.3s,baz=288
H08N1 Diego Carcia H 77.11 260 P **P** **05 35 55.8 +2.1**
baz=315,slow=75,SNR=9.5
H08N2 Diego Garcia H 77.12 260 P **P** **05 35 54.9 +1.2**
baz=325,slow=75,SNR=8.0
H08N3 Diego Garcia H 77.14 260 P **P** **05 35 55.2 +1.4**
C36M Paulatuk 77.48 21 P **P** **05 35 54.5 -0.5**
C36M IAmb IAmb 05 36 03.0

comp=Z,69nm,1.2s
C36M Paulatuk 77.48 21 P **P** **05 35 55.6 +0.5**
baz=275
AB31 Akbulak array 77.50 318 *i* P **P** **05 35 54.2 -1.4**
ABKAR Akbulak array 77.50 318 P **P** **05 35 55.1 -0.5**
ABKAR IAmb IAmb 05 36 01.9

comp=Z,33nm,0.8s
ARU Arti 77.61 325 *d i* P **P** **05 35 57.0 +0.9**
ARU S **S** **05 45 48.0 +2.1**
ARU SS **SS** **05 50 48.8 +3.6**
ARU pmax pmax

comp=Z,37nm,1.0s
ARU MLR MLR

comp=Z,4µm,18.0s
ARU Arti 77.61 325 P **P** **05 35 56.5 +0.5**
comp=Z,5.0nm,0.4s,baz=67,slow=1.2,SNR=20
AKTO Aktyubinsk 78.60 319 P **P** **05 36 01.8 +0.1**
AKTO Aktyubinsk 78.60 319 P **P** **05 36 01.4 -0.2**
comp=Z,14nm,0.9s,baz=97,slow=6.0,SNR=13
NLWA Neilton Lookou 80.25 44 P **P** **05 36 11.2 +0.4**
NLWA IAmb IAmb 05 36 18.0

comp=Z,48nm,1.1s
PGC Sidney 80.33 42 P **P** **05 36 13.9 +2.8**
PGC IAmb IAmb 05 36 18.3

comp=Z,46nm,0.9s
GEYT Alibeck 80.34 307 P **P** **05 36 12.8 +1.3**
comp=Z,24nm,1.0s,baz=31,slow=0.9,SNR=15
D03D Eldon 80.75 43 P **P** **05 36 16.1 +2.6**
baz=280
A04D Lummi Island 80.81 42 P **P** **05 36 15.1 +1.4**
baz=280
I02D Swisshome 80.81 47 P **P** **05 36 15.2 +1.4**
baz=280
J01E Myrtle Point 80.91 48 P **P** **05 36 15.0 +0.7**
baz=280
G03D McMinnville, O 81.03 46 P **P** **05 36 16.4 +1.4**
baz=280
K02D Willamette Mer 81.18 48 P **P** **05 36 16.7 +0.8**
baz=280
I03D Drain, OR 81.23 47 P **P** **05 36 16.7 +0.7**
baz=280
E04D Cinebar 81.27 44 P **P** **05 36 16.5 +0.3**
baz=280,SNR=10
B05A Bryant 81.28 43 P **P** **05 36 17.2 +0.9**
baz=280
L02E Cave Junction 81.32 49 P **P** **05 36 17.7 +1.1**
baz=280
H04D Lebanon 81.52 46 P **P** **05 36 17.8 +0.3**
baz=281,SNR=7.8
HUMO Hull Mountain 81.71 48 P **P** **05 36 19.6 +1.0**
I04A Tendick Farm, 81.88 47 P **P** **05 36 19.4 -0.2**
baz=281
M02C Callahan 82.01 49 P **P** **05 36 21.3 +1.0**
baz=281
YBH Yreka Blue Hor 82.05 49 P **P** **05 36 20.9 +0.3**
YBH pmax pmax

comp=Z,44nm,1.2s
YBH Yreka Blue Hor 82.05 49 P **P** **05 36 20.9 +0.3**
YBH IAmb IAmb 05 36 25.8

comp=Z,44nm,1.2s
KIRV Kirov 82.14 328 P **P** **05 36 21.1 +0.6**
comp=Z,39nm,0.6s,baz=60,slow=9.0,SNR=16
C06D Leavenworth 82.14 43 P **P** **05 36 22.4 +1.5**
baz=281
F05D White Salmon 82.15 45 P **P** **05 36 22.2 +1.3**
baz=281
N02D Trinity Center 82.20 50 P **P** **05 36 21.4 0.0**
baz=281
L04D Klamath Falls 82.26 49 P **P** **05 36 22.3 +0.6**
baz=281,SNR=8.6
O02D Mt. Diablo Mer 82.29 51 P **P** **05 36 22.6 +0.7**
baz=281
G05D Wamic, OR 82.38 45 P **P** **05 36 22.9 +0.8**
baz=282
WBK Wadi Bani Khal 82.38 291 P **P** **05 36 23.5 +0.9**
SNR=14
WBK P **P** **05 36 23.5 +0.9**
SNR=14
WDC Whiskeytown Da 82.40 50 P **P** **05 36 22.2 -0.1**
WDC pmax pmax

comp=Z,33nm,1.4s
WDC Whiskeytown Da 82.40 50 P **P** **05 36 22.2 -0.1**
YKA Yellowknife Ar 82.44 28 P **P** **05 36 21.1 -0.9**
comp=Z,3.0nm,0.6s,baz=284,slow=5.2,SNR=44
YKA LR LR 06 11 57.1

comp=Z,2µm,20.9s,baz=0.0,slow=35
I05D Terrebonne, OR 82.54 46 P **P** **05 36 23.6 +0.6**
baz=282,SNR=6.3
GDXM Geysers 82.54 52 P **P** **05 36 23.2 0.0**
GDXM IAmb IAmb 05 37 55.0

comp=Z,27nm,0.6s
WSAR Wadi Sarin 82.56 292 P **P** **05 36 23.9 +0.4**
comp=Z,15nm,0.7s,baz=151,slow=4.4,SNR=19
WSAR Wadi Sarin 82.56 292 P **P** **05 36 25.0 +1.4**
SNR=16
K04D Chiloquin, OR 82.58 48 P **P** **05 36 24.0 +0.7**
baz=282
M04C Macdoel 82.68 49 P **P** **05 36 24.6 +0.7**
baz=282,SNR=15
J05D Fort Rock, OR 82.82 47 P **P** **05 36 25.8 +1.1**
baz=282,SNR=32
BIDO Bidbid 82.96 292 P **P** **05 36 26.9 +1.3**
SNR=34
O03E Paynes Creek 83.00 50 P **P** **05 36 26.3 +0.8**
baz=282,SNR=10
SMDO Samad 83.12 292 P **P** **05 36 27.0 +0.5**
SNR=15
SMDO P **P** **05 36 27.0 +0.5**
SNR=15
JMDO Jabal Madar 83.21 291 P **P** **05 36 28.6 +1.7**
SNR=14
JMDO P **P** **05 36 28.6 +1.7**
SNR=14
PRGR Permogore 83.23 332 *e*P **P** **05 36 24.3 -1.8**
PRGR *e**SP **pwP** **05 36 39.8 -2.6**
PRGR *e*S **S** **05 46 42.3 -2.3**
PRGR pmax pmax

comp=Z,82nm,1.2s
HAWA Hanford 83.36 44 P **P** **05 36 27.3 +0.1**
ORV Oroville 83.38 51 P **P** **05 36 26.2 -1.3**
ORV pmax pmax

comp=Z,28nm,1.1s
ORV Oroville 83.38 51 P **P** **05 36 26.2 -1.3**
ORV IAmb IAmb 05 36 33.7

comp=Z,28nm,1.1s
MHTO MHTO 83.62 290 P **P** **05 36 29.1 +0.1**
SNR=33
MHTO P **P** **05 36 29.1 +0.1**
SNR=33
HOQ Hoqain 83.68 293 P **P** **05 36 29.7 +0.3**
SNR=29
HOQ P **P** **05 36 29.7 +0.3**
SNR=29
MOD Modoc Plateau 83.78 49 P **P** **05 36 30.0 +0.4**
MOD IAmb IAmb 05 36 35.9

comp=Z,47nm,1.1s
AFDM Forest Hills D 83.91 52 P **P** **05 36 30.9 +0.7**
AFDM IAmb IAmb 05 36 34.9

comp=Z,27nm,1.1s
BSY Bisya 83.95 292 P **P** **05 36 33.1 +2.4**
SNR=10.0
BSY P **P** **05 36 33.1 +2.4**
SNR=10.0
SAO San Andreas Ge 84.00 54 P **P** **05 36 30.4 -0.3**
SAO pmax pmax

comp=Z,24nm,1.1s
SAO San Andreas Ge 84.00 54 P **P** **05 36 30.4 -0.3**
SAO IAmb IAmb 05 36 50.3

comp=Z,24nm,1.1s
BANOM Banah 84.10 295 *i* P **P** **05 36 33.0 +1.6**
SNR=14
BANOM Banah 84.10 295 P **P** **05 36 32.8 +1.4**
SNR=11
BANOM P **P** **05 36 32.8 +1.4**
SNR=11
BEKR Beckworth 84.18 51 P **P** **05 36 31.9 +0.2**
BEKR IAmb IAmb 05 36 36.1

comp=Z,30nm,0.9s
MDH Madha 84.23 295 *i* P **P** **05 36 34.8 +2.8**
SNR=12
MDH Madha 84.23 295 P **P** **05 36 32.0 0.0**
SNR=5.8
SOHO SOHO 84.27 293 P **P** **05 36 31.9 -0.3**
SNR=25
SOHO P **P** **05 36 31.9 -0.3**
SNR=25
UOSS Minazif 84.39 294 *i* P **P** **05 36 35.3 +2.4**
SNR=12
SPA0 Spitsbergen Ar 84.42 351 *e*P **P** **05 36 31.9 -0.1**
SPA0 Spitsbergen Ar 84.42 351 P **P** **05 36 28.9 -3.1**
RES Resolute Bay 84.43 14 P **P** **05 36 32.5 +0.5**
RES pmax pmax

comp=Z,103nm,1.4s
RES Resolute Bay 84.43 14 P **P** **05 36 32.5 +0.5**
ARQ Araqi 84.44 293 P **P** **05 36 34.4 +1.2**
SNR=25
ARQ P **P** **05 36 34.4 +1.2**
SNR=25
HATD Hatta, Dubai 84.48 294 *i* P **P** **05 36 34.9 +1.5**
SNR=20
HATD Hatta, Dubai 84.48 294 P **P** **05 36 35.1 +1.8**
SNR=21
HATD P **P** **05 36 35.1 +1.8**
SNR=21
RUBR Rubicon Trail 84.51 51 P **P** **05 36 32.8 -0.7**
RUBR IAmb IAmb 05 37 01.8

comp=Z,47nm,1.2s
NEW Newport 84.53 42 P **P** **05 36 33.0 -0.2**
NEW pmax pmax

comp=Z,36nm,1.1s
NEW Newport 84.53 42 P **P** **05 36 33.0 -0.2**
NEW IAmb IAmb 05 36 39.4

comp=Z,36nm,1.1s
NEW Newport 84.53 42 P **P** **05 36 34.6 +1.4**
baz=284
KBS Kingsbay 84.54 352 P **P** **05 36 32.2 -0.4**
KBS pmax pmax

comp=Z,38nm,1.0s
KBS Kingsbay 84.54 352 *e*P **P** **05 36 33.1 +0.5**
KBS Kingsbay 84.54 352 P **P** **05 36 32.2 -0.4**
KBS IAmb IAmb 05 36 49.5

comp=Z,38nm,1.0s
CMB Columbia Colle 84.56 52 P **P** **05 36 33.7 +0.2**
CMB pmax pmax

comp=Z,25nm,1.1s
CMB Columbia Colle 84.56 52 P **P** **05 36 33.7 +0.2**
CMB IAmb IAmb 05 36 39.9

comp=Z,24nm,1.1s
ASHO Ashiyiah 84.57 294 *i* P **P** **05 36 34.6 +0.8**
SNR=11
ASHO Ashiyiah 84.57 294 P **P** **05 36 36.6 +2.7**
SNR=18
PMPB Monarch Peak 84.63 54 P **P** **05 36 33.6 -0.3**
PMPB IAmb IAmb 05 37 01.8

comp=Z,46nm,1.2s
NOR Nord 84.76 358 *i* P **P** **05 36 34.4 +0.8**
comp=Z,45nm,1.5s
VCNR Virginia City 84.84 51 P **P** **05 36 35.1 0.0**
NAZ Nazwa, Dubai 84.86 294 *i* P **P** **05 36 35.3 +0.1**
SNR=11
NAZ Nazwa, Dubai 84.86 294 P **P** **05 36 37.9 +2.7**
SNR=13
NAZ P **P** **05 36 37.9 +2.7**
SNR=13
PNTR Pine Nut 84.92 51 P **P** **05 36 36.8 +1.2**
PNTR IAmb IAmb 05 36 45.0

comp=Z,27nm,0.8s
PAHR Pah Rah Range 84.94 51 P **P** **05 36 35.1 -0.5**
PAGB Antelope Grade 85.17 55 P **P** **05 36 35.6 -1.1**
PAGB IAmb IAmb 05 36 47.5

comp=Z,59nm,1.3s
WAKR Walker 85.18 52 P **P** **05 36 38.2 +1.3**
WAKR IAmb IAmb 05 36 46.3

comp=Z,67nm,1.7s
YERR Yerington 85.22 51 P **P** **05 36 37.7 +0.7**
YERR IAmb IAmb 05 36 46.8

comp=Z,39nm,1.3s
ASUD Al Ashush, Dub 85.23 294 *i* P **P** **05 36 38.9 +1.8**
SNR=14
ASUD Al Ashush, Dub 85.23 294 P **P** **05 36 40.1 +3.0**
SNR=11
BMO Blue Mountains 85.24 45 P **P** **05 36 37.1 +0.2**
BMO pmax pmax

comp=Z,25nm,1.0s
BMO Blue Mountains 85.24 45 P **P** **05 36 37.1 +0.2**
BMO IAmb IAmb 05 36 43.0

comp=Z,24nm,0.9s
HSPB Hornsund (broa 85.34 350 *e*P **P** **05 36 36.9 +0.3**
SMMC Simmler 85.47 55 P **P** **05 36 39.6 +1.4**
baz=283
MDPB Devils Postpil 85.65 53 P **P** **05 36 40.4 +1.1**
PKM Mcpherson Peak 85.71 55 P **P** **05 36 40.5 +1.0**
baz=284
TMCR Tamitsa 85.71 335 *e*P **P** **05 36 36.5 -2.1**
TMCR pmax pmax

comp=Z,71nm,1.1s
OMMB Old Mammoth Mi 85.72 53 P **P** **05 36 38.3 -1.4**
MLAC Mammoth, Mammo 85.84 52 P **P** **05 36 41.4 +1.1**
baz=284
RYN Ryan 85.85 51 P **P** **05 36 39.2 -0.9**
RYN IAmb IAmb 05 36 44.9

comp=Z,41nm,1.5s
NVAR Mina Array Bea 86.06 52 P **P** **05 36 41.6 +0.3**
comp=Z,9.2nm,0.7s,baz=262,slow=6.0,SNR=40
NVAR LR LR 06 07 58.0
comp=Z,1µm,20.9s,baz=304,slow=31
APA Apatity 86.06 339 *j i* P **P** **05 36 40.7 +0.4**
APA pmax pmax

comp=Z,36nm,1.1s
APA MLR MLR

comp=Z,2µm,18.0s
KVN Kaiserville 86.07 51 P **P** **05 36 41.4 +0.1**
KVN pmax pmax

comp=Z,26nm,1.3s
KVN Kaiserville 86.07 51 P **P** **05 36 41.4 +0.1**
VES Vestal, Richgr 86.07 54 P **P** **05 36 42.1 +1.0**
baz=284,SNR=9.1
NV11 Mina Array Sit 86.17 52 P **P** **05 36 41.9 +0.2**
KLMR Klimovskoe 86.28 332 *e*P **P** **05 36 39.7 -1.8**
KLMR pmax pmax

comp=Z,74nm,1.2s
KLMR Klimovskoe 86.28 332 *e*P **P** **05 36 39.7 -1.8**
KLMR AMP 05 36 58.3

comp=Z,74nm,1.2s
WALA Waterton Lakes 86.38 40 P **P** **05 36 43.2 +0.7**
WALA IAmb IAmb 05 37 09.8

comp=Z,56nm,1.1s
SHAO Shalim 86.41 288 P **P** **05 36 44.6 +1.6**
ARVC Arvin 86.44 55 P **P** **05 36 44.3 +1.4**
baz=284
TIN Tinemaha, Big 86.45 53 P **P** **05 36 44.5 +1.4**
baz=284,SNR=8.4
JTMT Jette 86.51 42 P **P** **05 36 43.1 0.0**
JTMT IAmb IAmb 05 36 49.8

comp=Z,51nm,1.4s
ISA Isabella, Lake 86.59 54 P **P** **05 36 43.1 -0.6**
ISA pmax pmax

comp=Z,13nm,1.1s
ISA Isabella, Lake 86.59 54 P **P** **05 36 43.1 -0.6**
ISA Isabella, Lake 86.59 54 P **P** **05 36 44.9 +1.1**
baz=284,SNR=9.8
MFID Camas Ranch 86.63 46 P **P** **05 36 43.9 0.0**
MFID IAmb IAmb 05 36 53.4

comp=Z,51nm,1.1s
CWC Cottonwood Cre 86.71 53 P **P** **05 36 45.4 +1.0**
baz=284
MSO Missoula 86.99 43 P **P** **05 36 45.5 0.0**
MSO Missoula 86.99 43 P **P** **05 36 46.7 +1.2**
baz=286
DECC Green Verdugo 87.05 56 P **P** **05 36 47.3 +1.4**
baz=284
DMTO DMTO 87.11 287 P **P** **05 36 47.2 +0.7**
SNR=8.9
GRAC Grapevine Rang 87.13 53 P **P** **05 36 47.7 +1.3**
baz=285
EDW2 Edwards Air Fo 87.16 55 P **P** **05 36 47.5 +1.0**
baz=284,SNR=5.6
MAK Makhachkala 87.17 313 *e*P **P** **05 36 44.4 -1.9**
MAK *e* 05 40 05.6
MAK *e*PPP PPP 05 42 01.2
MAK *e*S **SKSac** **05 47 08.4 -3.6**
MAK *e*SS **SS** **05 53 04.0 -3.8**
MAK *e*SSS SSS 05 56 36.9
SCI2 San Clemente I 87.18 57 P **P** **05 36 46.8 +0.2**
baz=284
PASC Pasadena Art C 87.19 56 P **P** **05 36 46.6 0.0**
PASC IAmb IAmb 05 36 50.9

comp=Z,82nm,1.8s
CIS Catalina Islan 87.19 56 P **P** **05 36 47.3 +0.6**
baz=284
LRMC Laurel Mtn Rad 87.26 54 P **P** **05 36 48.1 +1.0**
baz=285,SNR=21
MPMC Manual Prospec 87.27 54 P **P** **05 36 48.1 +0.9**
baz=285,SNR=28
MWC Mount Wilson 87.27 56 P **P** **05 36 47.3 0.0**
MWC pmax pmax

comp=Z,50nm,1.4s
MWC Mount Wilson 87.27 56 P **P** **05 36 47.3 0.0**
MWC IAmb IAmb 05 36 57.3

comp=Z,50nm,1.4s
HAMF Hammerfest 87.52 344 *e*P **P** **05 36 47.3 0.0**
ARCES ARCESS Array B 87.62 342 P **P** **05 36 47.0 -0.9**
ARCES ARCESS Array B 87.62 342 P **P** **05 36 47.0 -0.9**
comp=Z,11nm,0.7s,baz=51,slow=4.7,SNR=19
ARE0 ARCESS Array S 87.62 342 *e*P **P** **05 36 48.9 +1.0**
ARE0 ARCESS Array S 87.62 342 P **P** **05 36 48.8 +0.8**
FURC Furnace Creek, 87.66 53 P **P** **05 36 49.9 +1.1**
baz=285,SNR=18
ELK Elko 87.76 49 P **P** **05 36 49.7 +0.2**
ELK pmax pmax

comp=Z,49nm,1.0s
ELK Elko 87.76 49 P **P** **05 36 49.7 +0.2**
RBK Rabkut 87.84 287 P **P** **05 36 52.3 +2.3**
SNR=11
TULEG Thule 87.86 8 P **P** **05 36 48.7 -0.2**
GSC Goldstone, Bar 88.00 54 P **P** **05 36 51.3 +0.8**
baz=285
TPNV Topopah Spring 88.01 53 P **P** **05 36 50.1 -0.6**
TPNV pmax pmax

comp=Z,32nm,1.1s
TPNV Topopah Spring 88.01 53 P **P** **05 36 50.1 -0.6**
TPNV IAmb IAmb 05 36 56.0

comp=Z,32nm,1.1s
TPNV Topopah Spring 88.01 53 P **P** **05 36 51.6 +0.9**
baz=285,SNR=23
MURC Murrieta 88.12 56 P **P** **05 36 52.2 +1.1**
baz=285
R11A Troy Canyon, C 88.15 51 P **P** **05 36 50.6 -0.7**
R11A IAmb IAmb 05 37 23.4

comp=Z,37nm,1.4s
R11A Troy Canyon, C 88.15 51 P **P** **05 36 52.1 +0.8**
baz=286,SNR=17
WHFO Wadi Hawf 88.15 288 P **P** **05 36 53.5 +2.0**
SNR=6.4
WHFO P **P** **05 36 53.5 +2.0**
SNR=6.4
BBRC Big Bear Solar 88.18 55 P **P** **05 36 52.9 +1.3**
baz=285
SHOC Shoshone, Teco 88.26 54 P **P** **05 36 53.4 +1.7**
baz=285,SNR=17
LRM Limekiln Ridge 88.27 43 P **P** **05 36 51.5 -0.3**
MCMT McKenzie Canyo 88.30 44 P **P** **05 36 51.7 -0.3**
DLMT Dillon 88.31 44 P **P** **05 36 51.8 -0.1**
DLMT IAmb IAmb 05 36 58.6

comp=Z,39nm,1.3s
109C Camp Elliot, M 88.38 57 P **P** **05 36 52.5 +0.2**
109C IAmb IAmb 05 36 59.0

comp=Z,45nm,1.1s
109C Camp Elliot, M 88.38 57 P **P** **05 36 54.4 +2.1**
baz=285,SNR=6.0
VRH Novokhopyorsk 88.46 322 *e*P **P** **05 36 51.3 -1.0**
VRH pmax pmax

comp=Z,90nm,0.8s
VRH MLR MLR
comp=Z,3µm,17.0s
HEC Hector,Ludlow 88.50 55 P **P** **05 36 54.4 +1.5**
baz=285,SNR=21
KTK1 Kautokeino 88.58 342 *e*P **P** **05 36 53.0 +0.5**
TUQ Turquoise Moun 88.66 54 P **P** **05 36 55.1 +1.3**
baz=286,SNR=20
PFO Pinyon Flats O 88.72 56‖ *e*P **P** **05 36 54.9 +0.9**
PFO pmax pmax
comp=Z,35nm,1.2s
PFO Pinyon Flats O 88.72 56 P **P** **05 36 55.6 +1.5**
baz=285,SNR=11
ABTO Aybut 88.72 287 P **P** **05 36 54.7 +0.5**
SNR=5.6
BAR Barrett 88.78 57 P **P** **05 36 53.9 -0.4**
BAR IAmb IAmb 05 37 21.2
comp=Z,39nm,1.3s
MONP2 Monument Peak 88.93 57 P **P** **05 36 56.2 +1.0**
baz=285,SNR=13
SHPR Sheep Range 88.97 53 P **P** **05 36 55.6 +0.4**
SHPR IAmb IAmb 05 37 02.7
comp=Z,25nm,1.1s
BELC Belle Mtn. Jos 88.98 55 P **P** **05 36 56.2 +0.9**
baz=286
GMRC Granite Mounta 89.04 55 P **P** **05 36 56.5 +1.0**
baz=286,SNR=14
MOS Moscow 89.11 328 *e*P **P** **05 36 54.1 -1.1**
MOS *e* 05 40 24.7
MOS pmax pmax
comp=Z,67nm,1.1s
MOS MLR MLR
comp=Z,2µm,17.0s
HVU Hansel Valley 89.25 47 P **P** **05 36 57.4 +1.0**
HVU pmax pmax
comp=Z,83nm,1.5s
HVU Hansel Valley 89.25 47 P **P** **05 36 57.4 +1.0**
IKP In-Ko-Pah, Jac 89.25 57 P **P** **05 36 57.0 +0.5**
baz=286
QLMT Earthquake Lak 89.26 44 P **P** **05 36 57.0 +0.5**
BGU Big Grassy Mou 89.32 48 P **P** **05 36 57.0 +0.3**
EGMT Eagleton 89.33 41 P **P** **05 36 57.6 +1.0**
EGMT IAmb IAmb 05 37 30.1
comp=Z,45nm,1.5s
EGMT Eagleton 89.33 41 P **P** **05 36 56.5 0.0**
baz=290
PSUT Pine Spring 89.40 51 P **P** **05 36 57.5 +0.3**
YHL Hebgen Lake 89.42 44 P **P** **05 36 57.6 +0.3**
SWSC Sam W. Stewart 89.42 56 P **P** **05 36 57.6 +0.4**
baz=286
TRO Tromso 89.43 344 *e*P **P** **05 36 56.4 -0.1**
YHB Horse Butte 89.44 44 P **P** **05 36 58.1 +0.8**
BC3 Big Chuckawall 89.51 56 P **P** **05 36 59.5 +1.8**
baz=286,SNR=9.2
DAG Danmarks Havn 89.53 357 *i* P **P** **05 36 56.0 -0.8**
DAG pmax pmax
comp=Z,21nm,1.1s
DAG Danmarks Havn 89.53 357 *i* P **P** **05 36 56.0 -0.8**
comp=Z,21nm,1.1s
LPSR Galich'ya Gora 89.59 324 *e*P **P** **05 36 56.8 -0.7**
LPSR pmax pmax
comp=Z,120nm,0.9s
LPSR MLR MLR
comp=Z,4µm,18.0s
IRM Iron Mountain 89.62 55 P **P** **05 36 59.5 +1.3**
baz=286,SNR=13
SPUT South Promonto 89.62 48 P **P** **05 36 58.5 +0.3**
YMR Madison River 89.62 44 P **P** **05 36 58.7 +0.5**
GOF Gofitskoye 89.63 316‖ *e*P **P** **05 36 58.4 +0.5**
GOF pmax pmax
comp=Z,91nm,1.6s
DUG Dugway, Tooele 89.69 49 P **P** **05 36 58.2 -0.3**
DUG pmax pmax
comp=Z,53nm,1.1s
DUG Dugway, Tooele 89.69 49 P **P** **05 36 58.2 -0.3**
DUG IAmb IAmb 05 37 05.5
comp=Z,53nm,1.1s
DUG Dugway, Tooele 89.69 49 P **P** **05 36 59.9 +1.4**
baz=288
ZEI Tsey 89.75 314 *e*P **P** **05 36 57.2 -1.6**
ZEI pmax pmax
comp=Z,18nm,0.9s
YNR Norris Junctio 89.80 44 P **P** **05 37 00.8 +1.7**
IMW Indian Meadow 89.89 45 P **P** **05 37 00.1 +0.6**
OBN Obninsk 89.91 327 *c*eP **P** **05 36 59.4 +0.5**
OBN *e*SS SS 05 53 46.7 -0.2
OBN *e*SSS SSS 05 57 26.3
OBN pmax pmax
comp=Z,62nm,1.3s
OBN MLR MLR
comp=Z,4µm,16.0s
OBN Obninsk 89.91 327 P **P** **05 36 59.5 +0.5**
comp=Z,4.3nm,0.3s,baz=60,slow=12,SNR=9.7
GNI Garni 89.96 311 LR LR 06 21 35.3
comp=Z,1µm,18.4s,baz=59,slow=38
VSR Storozhevoye 89.96 323 *e*P **P** **05 36 58.1 -1.2**
VSR pmax pmax
comp=Z,80nm,0.7s
VSR MLR MLR
comp=Z,4µm,16.0s
H17A Grant Village 89.97 44 P **P** **05 37 03.8 +3.9**
baz=289
VORD Divnogorie 89.98 323 *e*P **P** **05 36 58.1 -1.3**
VORD pmax pmax
comp=Z,50nm,0.7s
FLWY Flagg Ranch 89.99 45 P **P** **05 37 00.2 +0.2**
FLWY IAmb IAmb 05 37 21.1
comp=Z,47nm,1.2s
TPAW Teton Pass 90.01 45 P **P** **05 36 58.9 -1.2**
LKWY Lake 90.04 44 P **P** **05 37 00.4 +0.2**
LKWY pmax pmax
comp=Z,29nm,1.2s
LKWY Lake 90.04 44 P **P** **05 37 00.4 +0.2**
LKWY IAmb IAmb 05 37 26.8
comp=Z,29nm,1.1s
CCUT Cedar City 90.06 51 P **P** **05 36 58.6 -1.8**
MOOW Moose Ponds 90.06 45 P **P** **05 37 00.2 0.0**
GCMT Greycliff 90.13 43 P **P** **05 37 00.2 -0.2**
AHID Auburn Hatcher 90.13 46 P **P** **05 37 01.2 +0.6**
AHID IAmb IAmb 05 37 07.0
comp=Z,31nm,1.0s
KBZ Khabaz 90.16 315‖ *e*P **P** **05 37 00.1 -0.3**
KBZ Khabaz 90.16 315 P **P** **05 37 00.6 +0.2**
comp=Z,15nm,0.9s,baz=142,slow=3.3,SNR=13
GLA Glamis 90.18 56 P **P** **05 37 01.6 +0.8**
GLA pmax pmax
comp=Z,31nm,1.3s
GLA Glamis 90.18 56 P **P** **05 37 01.6 +0.8**
GLA IAmb IAmb 05 37 05.6
comp=Z,31nm,1.2s
GLA Glamis 90.18 56 P **P** **05 37 02.0 +1.2**
baz=286,SNR=7.0
KIV Kislovodsk 90.23 315 *e*P **P** **05 37 01.4 +0.5**
KIV pmax pmax
comp=Z,90nm,1.0s
KIV Kislovodsk 90.23 315 ⇑P **P** **05 37 02.4 +1.6**
KIV Kislovodsk 90.23 315 P **P** **05 37 01.2 +0.3**
Y12C Blythe 90.23 55 P **P** **05 37 01.0 +0.1**
Y12C Blythe 90.23 55 P **P** **05 37 01.7 +0.8**
baz=286,SNR=5.7
SZCU Shurtz Canyon 90.25 51 P **P** **05 37 01.8 +0.5**
NLU North Lily Min 90.30 49 P **P** **05 37 02.2 +0.7**
LCMT Little Creek M 90.30 52 P **P** **05 37 01.4 -0.1**
CTU Camp Tracy 90.31 48 P **P** **05 37 02.1 +0.6**
W13A Hualapai Mount 90.36 54 P **P** **05 37 01.6 -0.2**
W13A IAmb IAmb 05 37 30.4
comp=Z,48nm,1.6s
PDMCI Parker Dam,Lak 90.38 55 P **P** **05 37 03.3 +1.7**
baz=287,SNR=11
TCUT Toone Canyon 90.43 48 P **P** **05 37 01.9 -0.1**
AKH Akhalkalaki 90.47 313 P **P** **05 37 01.9 -0.3**
AKH pmax pmax
comp=Z,20nm,1.0s
AKH Akhalkalaki 90.47 313 P **P** **05 37 01.9 -0.3**
JLU Jordanelle 90.56 48 P **P** **05 37 03.2 +0.5**
MPU Maple Canyon 90.61 49 P **P** **05 37 03.0 +0.2**
RLMT Red Lodge 90.61 43 P **P** **05 37 03.8 +0.9**
RLMT IAmb IAmb 05 37 08.1
comp=Z,23nm,1.1s
RLMT Red Lodge 90.61 43 P **P** **05 37 03.5 +0.7**
baz=290
KNB Kanab 90.62 52 P **P** **05 37 02.9 -0.1**
KNB pmax pmax
comp=Z,53nm,1.1s
KNB Kanab 90.62 52 P **P** **05 37 02.9 -0.1**

MSU Marysvale 90.67 50 P **P** **05 37 03.9 +0.7**
MSU Marysvale 90.67 50 P **P** **05 37 03.9 +0.7**
MTPU Mount Pierson 90.80 51 P **P** **05 37 04.6 +0.6**
113A Mohawk Valley, 91.12 56 P **P** **05 37 04.9 -0.2**
113A IAmb IAmb 05 37 15.5
comp=Z,26nm,1.4s
TMUT Trail Mountain 91.14 49 P **P** **05 37 05.9 +0.4**
BW06 Boulder Array 91.20 46 P **P** **05 37 04.7 -0.9**
BW06 Boulder Array 91.20 46 P **P** **05 37 06.6 +0.9**
baz=290
PD31 Pinedale Array 91.20 46 P **P** **05 37 04.3 -1.3**
PDAR Pinedale Array 91.20 46 P **P** **05 37 04.7 -0.9**
comp=Z,2.4nm,0.6s,baz=268,slow=2.5,SNR=22
PDAR PP **PP** **05 40 46.2 +3.8**
comp=Z,1.1nm,1.0s,baz=290,slow=4.3,SNR=4.2
PDAR LR LR 06 14 24.9
comp=Z,2µm,19.5s,baz=317,slow=33
U15A North Rim 91.21 52 P **P** **05 37 05.6 -0.3**
U15A IAmb IAmb 05 37 13.4
comp=Z,29nm,1.0s
VNDA Vanda 91.22 177 P **P** **05 37 06.3 +1.8**
comp=Z,6.7nm,1.1s,baz=80,slow=6.1,SNR=3.4
Q16A Castle Valley 91.29 50 P **P** **05 37 06.3 +0.3**
Y14A Wickenburg 91.39 55 P **P** **05 37 06.3 -0.2**
Y14A IAmb IAmb 05 37 13.0
comp=Z,32nm,1.2s
P17A Butcher Ranch, 91.43 49 P **P** **05 37 06.0 -0.6**
STEI Steigen 91.56 343 *e*P **P** **05 37 07.4 +1.1**
SRU San Rafael Swe 91.71 49 P **P** **05 37 07.5 -0.5**
SRU pmax pmax
comp=Z,19nm,1.0s
SRU San Rafael Swe 91.71 49 P **P** **05 37 07.5 -0.5**
FIA1 FINESS Array S 91.83 335 P **P** **05 37 06.4 -1.3**
FINES FINESS Array B 91.83 335 *i* P **P** **05 37 05.6 -2.2**
FINES pmax pmax
comp=Z,14nm,0.5s
FINES FINESS Array B 91.83 335 P **P** **05 37 05.9 -1.9**
comp=Z,14nm,0.5s,baz=63,slow=4.6,SNR=45
FINES LR LR 06 20 34.6
comp=Z,2µm,20.1s,baz=64,slow=37
LOF Lofoten 91.89 344 *e*P **P** **05 37 07.6 -0.3**
RDMU Red Mountain 91.93 48 P **P** **05 37 08.7 -0.3**
LAO LASA Array 92.05 41 P **P** **05 37 08.9 -0.3**
LAO LASA Array 92.05 41 P **P** **05 37 10.3 +1.1**
baz=292
214A Organ Pipe Nat 92.13 57 P **P** **05 37 09.1 -0.7**
214A Organ Pipe Nat 92.13 57 P **P** **05 37 11.3 +1.5**
baz=287,SNR=6.3
WUAZ Wupatki 92.19 53 P **P** **05 37 08.9 -1.4**
WUAZ IAmb IAmb 05 37 16.1
comp=Z,39nm,1.1s
WUAZ Wupatki 92.19 53 P **P** **05 37 11.3 +1.0**
baz=288
X16A Lo Mia Camp, P 92.48 54 P **P** **05 37 12.8 +1.2**
DGMT Dagmar 92.63 39 P **P** **05 37 11.5 -0.3**
DGMT IAmb IAmb 05 37 16.1
comp=Z,21nm,1.1s
DGMT Dagmar 92.63 39 P **P** **05 37 13.2 +1.4**
baz=294
MOR8 Moi Rana 93.00 342 *e*P **P** **05 37 12.5 -0.6**
O20A White River Ci 93.03 48 P **P** **05 37 13.8 -0.2**
O20A IAmb IAmb 05 37 19.9
comp=Z,21nm,1.1s
O20A White River Ci 93.03 48 P **P** **05 37 14.5 +0.4**
baz=290
VSU Vasula 93.15 333⇑ *e*P **P** **05 37 13.9 0.0**
VSU pmax pmax
comp=Z,113nm,1.0s
RWWY Rawlins 93.21 46 P **P** **05 37 13.6 -1.4**
RWWY IAmb IAmb 05 37 20.4
comp=Z,28nm,1.1s
K22A Casper 93.34 45 P **P** **05 37 15.1 -0.3**
K22A Casper 93.34 45 P **P** **05 37 17.1 +1.7**
baz=292
W18A Petrified Fore 93.59 53 P **P** **05 37 18.4 +1.7**
baz=289
X18A Snowflake 93.61 53 P **P** **05 37 17.1 +0.2**
X18A IAmb IAmb 05 37 22.0
comp=Z,19nm,1.2s
TUC Tucson 93.66 56 P **P** **05 37 15.4 -1.6**
TUC pmax pmax
comp=Z,14nm,1.3s
TUC Tucson 93.66 56 P **P** **05 37 15.4 -1.6**
TUC Tucson 93.66 56 P **P** **05 37 18.3 +1.4**
baz=288
MVCO Mesa Verde 93.84 50 P **P** **05 37 19.5 +1.6**
baz=290
SUMG Summit 94.15 1 *i* P **P** **05 37 20.0 +1.2**
SUMG pmax pmax
comp=Z,29nm,0.9s
SUMG Summit 94.15 1 *i* P **P** **05 37 20.0 +1.2**
comp=Z,28nm,0.9s
RAYN Ar Rayn 94.20 295 *i* P **P** **05 37 20.7 +1.1**
SNR=9.0
SMCO Snowmass 94.28 48 P **P** **05 37 18.9 -1.2**
SMCO IAmb IAmb 05 37 26.8
comp=Z,24nm,0.9s
N23A Red Feather La 94.39 46 P **P** **05 37 18.5 -1.9**
N23A Red Feather La 94.39 46 P **P** **05 37 20.5 +0.1**
baz=292
RSSD Black Hills 94.46 43 P **P** **05 37 19.0 -1.6**
RSSD pmax pmax
comp=Z,9.0nm,0.9s
RSSD Black Hills 94.46 43 P **P** **05 37 19.0 -1.6**
RSSD Black Hills 94.46 43 P **P** **05 37 20.7 +0.1**
baz=294
NSS Namsos 94.89 342 *e*P **P** **05 37 22.0 +0.3**
S22A 4UR Ranch, Cre 94.90 50 P **P** **05 37 22.0 -0.9**
S22A IAmb IAmb 05 37 28.6
comp=Z,29nm,1.6s
S22A 4UR Ranch, Cre 94.90 50 P **P** **05 37 22.6 -0.2**
baz=291
ISCO Idaho Springs 95.03 47 P **P** **05 37 23.7 +0.2**
baz=292
AKASG Malin Array Be 95.86 325 P **P** **05 37 25.5 -1.0**
AKASG pmax pmax
comp=Z,7.0nm,1.2s
AKASG Malin Array Be 95.86 325 P **P** **05 37 24.9 -1.6**
comp=Z,4.9nm,0.9s,baz=49,slow=5.0,SNR=10.0
AKASG Malin Array Be 95.86 325 P **P** **05 37 25.5 -1.0**
AKBB Malin Array Si 95.86 325 P **P** **05 37 25.2 -1.3**
AKBB pmax pmax
comp=Z,36nm,1.7s
AKBB Malin Array Si 95.86 325 P **P** **05 37 25.2 -1.3**
AKBB IAmb IAmb 05 37 31.0
comp=Z,36nm,1.6s
121A Cookes Peak, D 95.98 55 P **P** **05 37 26.6 -1.1**
121A Cookes Peak, D 95.98 55 P **P** **05 37 28.1 +0.4**
baz=290
ANMO Albuquerque 96.18 52 *e*P **P** **05 37 29.5 +0.9**
ANMO pmax pmax
comp=Z,2.0nm,0.9s
ANMO Albuquerque 96.18 52 P **P** **05 37 29.0 +0.3**
baz=291
TBLU Trondheim 96.34 342 *e*P **P** **05 37 27.7 -0.7**
ULM Lac du Bonnet 96.68 35 P **P** **05 37 30.0 -0.3**
ULM pmax pmax
comp=Z,51nm,1.9s
ULM Lac du Bonnet 96.68 35 P **P** **05 37 29.0 -1.2**
comp=Z,5.2nm,0.9s,baz=297,slow=4.7,SNR=7.6
ULM LR LR 06 20 18.6
comp=Z,3µm,18.8s,baz=310,slow=35
ULM Lac du Bonnet 96.68 35 P **P** **05 37 30.0 -0.3**
T25A Trinidad 96.91 49 P **P** **05 37 31.0 -0.9**
HFS Hagfors 97.41 338 P **P** **05 37 33.0 -0.3**
baz=73,slow=5.0
SORM Soroca 97.62 323 ⇑P **P** **05 37 34.0 -0.5**
SORM Soroca 97.62 323 ⇑P **P** **05 37 34.0 -0.5**
NB2 NORSAR Subarra 97.64 340 P Pdif 05 37 34.8 +0.3
comp=Z,9.2nm,1.1s,baz=46,slow=4.6
NB2 NORSAR Subarra 97.64 340 P Pdif 05 37 34.8 +0.3
baz=46,slow=4.6
NOA NORSAR Array B 97.64 340 P Pdif 05 37 34.6 +0.2
comp=Z,3.4nm,0.8s,baz=51,slow=4.2,SNR=9.9
MOL Molde 97.68 342 *e*P Pdif 05 37 35.0 +0.5
KIS Kishinev 97.91 322 *e*P Pdif 05 37 37.0 +1.1
KIS LRM MLR 06 20 30.0
comp=Z,2µm,17.0s
KIS Kishinev 97.91 322 *e*P Pdif 05 37 37.0 +1.1
KIS MLR MLR
comp=Z,2µm,18.0s
KIS MLR MLR
comp=N,2µm,17.0s
BR131 Keskin Array S 98.07 314 *e*P **P** **05 37 35.7 -1.3**
BR131 Keskin Array S 98.07 314 P **P** **05 37 35.4 -1.5**

BRTR Keskin Array B 98.07 314 *c*eP **P** **05 37 35.0 -2.0**
BRTR pmax pmax
comp=Z,6.0nm,0.9s
BRTR Keskin Array B 98.07 314 P Pdif 05 37 37.6 +0.6
comp=Z,5.9nm,0.9s,baz=63,slow=3.9,SNR=22
MNTX Cornudas Mount 98.18 55 P **P** **05 37 37.4 0.0**
MNTX IAmb IAmb 05 37 42.2
comp=Z,10.0nm,1.1s
MNTX Cornudas Mount 98.18 55 P **P** **05 37 37.5 0.0**
baz=291
ASF Jabal al Asfar 98.61 306 P Pdif 05 37 40.5 +1.0
comp=Z,4.7nm,1.0s,baz=132,slow=5.5,SNR=4.7
ASF LR LR 06 27 51.9
comp=Z,679nm,20.3s,baz=26,slow=39
TOPG Topolog 99.21 320 ⇑P **Pdif** **05 37 41.7 -0.1**
CFR Carcaliu 99.21 321 ⇓P **Pdif** **05 37 42.7 +1.0**
CFR Carcaliu 99.21 321 ⇓P **Pdif** **05 37 42.7 +1.0**
TESR Tescani 99.44 322 ⇑P **Pdif** **05 37 44.1 +1.3**
ECSD EROS Data Cent 99.44 41 P **Pdif** **05 37 43.5 +0.6**
baz=299
MMAI Mount Meron Ar 99.46 307 P **Pdif** **05 37 44.2 +1.0**
comp=Z,4.0nm,0.6s,baz=55,slow=7.2,SNR=7.2
MMAI LR LR 06 28 46.9
comp=Z,612nm,18.9s,baz=60,slow=39
BURAR Bucovina Array 99.70 324 ⇑P **Pdif** **05 37 43.7 -0.3**
BURAR Bucovina Array 99.70 324 ⇑P **Pdif** **05 37 43.7 -0.3**
VRI Vrincioaia 99.72 322 ⇑P **Pdif** **05 37 45.1 +1.0**
VRI Vrincioaia 99.72 322 ⇑P **Pdif** **05 37 45.1 +1.0**
MAW Mawson 99.75 203 LR LR 06 22 34.4
comp=Z,1µm,18.6s,baz=74,slow=35
PLOR Plostina 99.78 322 ⇑P **Pdif** **05 37 44.3 0.0**
PLOR Plostina 99.78 322 ⇑P **Pdif** **05 37 44.3 0.0**
AMTX Amarillo 99.83 51 P **Pdif** **05 37 45.7 +0.8**
baz=294
OZUR 100.17 322 ⇑P **Pdif** **05 37 46.7 +0.6**
EYMN Ely 100.34 35 P **Pdif** **05 37 47.3 +0.5**
baz=304
MLR Muntele Rosu 100.39 322 P **Pdif** **05 37 47.4 +0.2**
comp=Z,8.5nm,1.0s,baz=56,slow=7.0,SNR=7.0
MLR Muntele Rosu 100.39 322 ⇑P **Pdif** **05 37 48.8 +1.6**
TXAR Lajitas Array 100.42 56 P **Pdif** **05 37 47.8 +0.1**
comp=Z,2.4nm,1.1s,baz=267,slow=6.5,SNR=9.0
DOPR Dopca 100.47 322 ⇑P **Pdif** **05 37 49.4 +2.0**
KOLS Kolonicke sedl 100.61 326 *e*P **Pdif** **05 37 49.1 +1.1**
KOLS Kolonicke sedl 100.61 326 *e*PDIFF **Pdif** **05 37 49.1 +1.1**
UZH Uzhgorod 100.78 326 *e*P **Pdif** **05 37 47.0 -1.6**
TRPA Tarpa 100.92 325 ⇑P **Pdif** **05 37 48.5 -0.8**
VOIR 100.95 322 ⇑P **Pdif** **05 37 50.0 +0.4**
VOIR 100.95 322 ⇑P **Pdif** **05 37 50.0 +0.4**
EIL Elat 101.10 304 P **Pdif** **05 37 51.2 +0.7**
comp=Z,11nm,0.9s,baz=10,slow=6.4,SNR=5.6
ARR Arges 101.24 322 ⇑P **Pdif** **05 37 51.2 +0.3**
DRGR 101.58 324 ⇑P **Pdif** **05 37 53.3 +0.9**
DRGR 101.58 324 ⇑P **Pdif** **05 37 53.3 +0.9**
GZR Gura Zlata 102.32 323 ⇑P **Pdif** **05 37 56.0 +0.3**
GZR Gura Zlata 102.32 323 ⇑P **Pdif** **05 37 56.0 +0.3**
VYHS Vyhne 102.71 327 *e*P **Pdif** **05 37 58.7 +1.4**
VYHS Vyhne 102.71 327 *e*PDIFF **Pdif** **05 37 58.7 +1.4**
BZS Buzias 102.87 324 ⇑P **Pdif** **05 37 59.4 +1.3**
BZS Buzias 102.87 324 ⇑P **Pdif** **05 37 59.4 +1.3**
MDVR Moldovita 103.29 323 ⇑P **Pdif** **05 38 00.4 +0.4**
VTS Vitosha 103.57 320 ⇑P **Pdif** **05 38 02.9 +1.5**
VTS Vitosha 103.57 320 ⇑P **Pdif** **05 38 02.9 +1.5**
MODS Modra-Piesok 103.60 328 *e*P **Pdif** **05 38 03.6 +2.3**
MODS Modra-Piesok 103.60 328 *e*PDIFF **Pdif** **05 38 03.6 +2.3**
CLL Collm 103.77 332 *e*P **Pdif** **05 38 02.0 +0.1**
CLL Collm 103.77 332 *e*Pdif **Pdif** **05 38 02.0 +0.1**
CLL *e* 05 38 14.0
CLL *e* 05 41 36.0
CLL *e*PP **PP** **05 42 17.0 -1.1**
GERES GERESS Array B 105.11 330 Pdiff **Pdif** **05 38 11.8 +3.7**
comp=Z,1.0nm,0.7s,baz=44,slow=3.4,SNR=6.1
GERES PP **PP** **05 42 27.1 -1.1**
comp=Z,1.4nm,0.9s,baz=95,slow=5.9,SNR=3.7
GRF Grafenberg Arr 105.71 331 *e*PP **PP** **05 42 31.2 -1.3**
PDG Podgorica 106.10 322 ⇑P **Pdif** **05 38 13.7 +1.3**
EKA Eskdalemuir Ar 106.79 342 PP **PP** **05 42 40.5 +0.4**
comp=Z,3.8nm,0.9s,baz=300,slow=30,SNR=4.2
SYO Syowa Base 108.36 201⇑ *e*X **Pdif** **05 38 16.9 -4.8**
SNAA Sanae 118.85 191 PKiKP **PKiKP** **05 42 49.3 +1.5**
SNAA Sanae 118.85 191 *i* PKiKP **PKiKP** **05 42 48.7 +0.9**
ESDC Sonseca Array 120.29 334 PP PP 05 44 17.2 +0.8
comp=Z,3.1nm,0.9s,baz=17,slow=5.3,SNR=7.0
VNA3 Neumayer Olymp 120.35 189 PKiKP **PKiKP** **05 42 52.4 +1.7**
VNA1 Neumayer–Stat 120.66 190 PKiKP **PKiKP** **05 42 53.9 +2.7**
TORD Torodi Ar. Bea 135.97 305 PKhKP PKPpre 05 43 11.7
comp=Z,1.3nm,0.9s,baz=33,slow=3.5,SNR=3.9
TORD PKP **PKiKP** **05 43 23.0 -0.5**
comp=Z,1.5nm,0.6s,baz=32,slow=1.2,SNR=12
TORD PP **PP** **05 45 57.6 -2.9**
comp=Z,2.6nm,1.0s,baz=49,slow=8.3,SNR=3.9
SDV Santo Domingo 137.29 61 PKhKP PKPpre 05 43 17.9
comp=Z,4.0nm,1.0s,baz=245,slow=10,SNR=3.9
SDV PKP **PKiKP** **05 43 26.1 -0.4**
comp=Z,16nm,1.1s,baz=266,slow=2.2,SNR=7.6
PLCA Paso Flores 137.97 137 PKiKP **PKPdf** **05 43 24.0 -1.0**
PLCA Paso Flores 137.97 137 PKP **PKiKP** **05 43 26.8 -0.2**
comp=Z,4.8nm,0.9s,baz=222,slow=10,SNR=5.5
PLCA Paso Flores 137.97 137 **PKPdf** **05 43 24.0 -1.0**
CFA Coronel Fontan 143.66 126 PKP PKPbc 05 43 33.5 +0.6
comp=Z,9.1nm,0.8s,baz=202,slow=2.2,SNR=5.4
PB04 IPOC Station P 144.42 110 PKPbc 05 43 35.7 0.0
GO02 Mina Guanaco 144.42 115 **PKPab** **05 43 35.6 +0.1**
DBIC Dimbokro 144.96 303 PKiKP **PKPab** **05 43 37.3 -0.1**
DBIC Dimbokro 144.96 303 PKPbc **PKPab** **05 43 36.9 -0.5**
comp=Z,34nm,0.7s,baz=39,slow=4.2,SNR=30
DBIC Dimbokro 144.96 303 **PKPab** **05 43 37.3 -0.1**
KIC Kosan Boka 145.03 302 *e*P **PKPbc** **05 43 37.0 -0.7**
comp=Z,32nm,0.6s
KIC Kosan Boka 145.03 302 **PKPbc** **05 43 37.0 -0.7**
TIC Toumodi 145.10 303 *e*P **PKPbc** **05 43 37.5 -0.4**
comp=Z,17nm,0.5s
TIC Toumodi 145.10 303 PKiKP **PKPbc** **05 43 37.5 -0.4**
TIC Toumodi 145.10 303 **PKPbc** **05 43 37.5 -0.4**
PB11 IPOC Station P 145.17 105 **PKPbc** **05 43 37.6 -0.6**
MNMC Minye Minye 145.28 104 **PKPbc** **05 43 38.5 -0.2**
LIC Lamto 145.35 303 *e*P **PKPbc** **05 43 38.5 -0.2**
comp=Z,148nm,0.8s
LIC Lamto 145.35 303 **PKPbc** **05 43 38.5 -0.2**
LVC Limon Verde 145.51 110 PKP2 **PKPdf** **05 43 38.1 -1.3**
LVC Limon Verde 145.51 110 PKPbc **PKPdf** **05 43 39.3 0.0**
comp=Z,24nm,0.8s,baz=264,slow=5.2,SNR=18
LVC Limon Verde 145.51 110 **PKPdf** **05 43 38.1 -1.3**
GO01 Chusmiza 145.61 105 **PKPdf** **05 43 38.8 -1.0**
LPAZ La Paz 146.78 99 PKiKP **PKPdf** **05 43 40.9 -1.1**
LPAZ La Paz 146.78 99 PKPbc **PKPbc** **05 43 43.1 -0.6**
comp=Z,12nm,0.7s,baz=288,slow=1.5,SNR=26
LPAZ La Paz 146.78 99 **PKPdf** **05 43 40.9 -1.1**
SAML Samuel 150.91 84 PKiKP **PKPdf** **05 43 45.8 -2.1**
SAML Samuel 150.91 84 **PKPdf** **05 43 45.8 -2.1**
SIV San Ignacio 153.57 99 PKPbc **PKPbc** **05 43 56.3 -3.3**
comp=Z,2.3nm,0.9s,baz=152,slow=2.8,SNR=8.4
MDP Montagnes des 153.80 47 PKPbc **PKPbc** **05 43 59.7 -0.5**
comp=Z,11nm,1.0s,baz=22,slow=2.6,SNR=2.7
CPUP Villa Florida 154.52 124 PKPbc **PKPbc** **05 44 01.1 -0.2**
comp=Z,1.5nm,0.2s,baz=265,slow=2.5,SNR=6.8
BDFB Brasilia 166.12 101 PKP **PKPdf** **05 44 06.7 +0.6**
comp=Z,3.1nm,0.8s,baz=277,slow=8.4,SNR=3.8
BDFB PKPab **PKPab** **05 45 06.1 -0.7**
comp=Z,4.2nm,0.8s,baz=306,slow=5.9,SNR=3.8
BDFB Brasilia 166.12 101 **PKPdf** **05 44 04.5 -1.6**

IDC ***23*** *05:34:26.7±10.0, 35°.95N×70°.32E, h107km±41km, mb3.8/2, mb1 3.7/6, mb1mx3.2/59, mbtmp4.1/6, Error ellipse: s-maj=150.2km s-min=31.3km az=159.0*
NNC ***23*** *05:34:27.1±12.0, 36°.44N×70°.61E, h0km, mb4.4, mpv4.1, Error ellipse: s-maj=114.4km s-min=78.6km az=154.0*
NEIC ***23*** *05:34:28.2±2.2, 36°.13N±0°.04×70°.20E±0°.10, h122km±8km, mb4.0/2, Error ellipse: s-maj=11.3km s-min=5.9km az=92.0*
ISC 23 05:34:28.3±0.8, 36°.14N±0°.05×70°.14E±0°.07, h124km, n19,
α2ᵖ33/30, 2C-2D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.83**	**210**		**Pn**	**05 35 00.6**	**+0.5**
KBL				Sn	**Sn**	**05 35 25.5**	**+1.2**
NIL	**Nilore**	**3.57**	**133**	Pn	**Pn**	**05 35 21.3**	**-0.9**
NIL				Sn	**Sn**	**05 36 02.0**	**-1.9**
BTK	**Batken**	**3.95**	**8**	Pn	**Pn**	**05 35 28.8**	**+1.6**
BTK				Sn	**Sn**	**05 36 15.0**	**+2.1**
ARSB	**Arslanbob**	**5.63**	**22**	Pn	**Pn**	**05 35 49.3**	**-0.5**

ARSB				Sn		Sn	05 36 52.4	-1.1
HRA	**Herat**	**6.69**	**257**	Pn		Pn	05 36 00.3	-3.9
HRA				Sn		Sn	05 37 19.1	0.0
KK31	**Karatay Array**	**6.96**	**2**	P		Pn	05 36 07.0	-0.5
	6.4nm,0.4s,baz=176,slow=13,SNR=66							
KK31				⇑S		Sn	05 37 22.6	-2.7
	5.8nm,0.4s,baz=175,slow=23,SNR=10							
KK31	**Karatay Array**	**6.96**	**2**	Pn		Pn	05 36 07.3	-0.3
KK31				Sn		Sn	05 37 25.8	+0.5
KKAR	**Karatay Array**	**6.96**	**2**	Pn		Pn	05 36 07.4	-0.2
KKAR				Sn		Sn	05 37 25.8	+0.5
AAK	**Ala-Archa**	**7.31**	**26**	P		Pn	05 36 11.9	-0.5
	1.4nm,0.3s,baz=178,slow=5.4,SNR=2.8							
AAK				S		Sn	05 37 30.8	-3.2
	0.5nm,0.3s,baz=141,slow=23,SNR=2.7							
AAK	**Ala-Archa**	**7.31**	**26**	⇓P		Pn	05 36 10.5	-2.0
	8.6nm,0.8s							
AAK				⇓S		Sn	05 37 30.8	-3.2
	8.9nm,0.6s							
GEYT	**Alibeck**	**9.78**	**284**	P		Pn	05 36 46.4	+0.8
	0.5nm,0.3s,baz=91,slow=14,SNR=4.0							
MAKZ	**Makanchi**	**13.85**	**36**	P		P	05 37 44.5	+1.1
AB31	**Akbulak array**	**15.08**	**334**	⇑P		Pn	05 37 55.3	+0.7
	1.9nm,0.4s,baz=167,slow=11,SNR=30							
ABKAR	**Akbulak array**	**15.08**	**334**			Pn	05 37 55.5	+0.8
ABKAR				IAmb		IAmb	05 38 04.8	
	comp=Z,8.8nm,1.1s							
KURBB	**Kurchatov Arra**	**15.69**	**20**	P		P	05 38 04.6	+0.9
	comp=Z,0.1nm,0.3s,baz=209,slow=10,SNR=4.6							
AKTO	**Aktyubinsk**	**16.76**	**332**	P		P	05 38 18.9	+3.4
	comp=Z,0.3nm,0.3s,baz=136,slow=16,SNR=2.0							
AKTO				S		Sn	05 41 13.8	-8.0
	comp=Z,0.2nm,0.3s,baz=198,slow=20,SNR=2.8							
ZAA0	**Zalesovo Array**	**20.53**	**25**	P		P	05 38 57.7	+1.1
ZAA0				IAmb		IAmb	05 38 58.8	
	comp=Z,5.6nm,0.6s							
ZALV	**Zalesovo Beam**	**20.53**	**25**	P		P	05 38 57.4	+0.8
	comp=Z,4.8nm,0.4s,baz=213,slow=11,SNR=12							
ARCES	**ARCESS Array B**	**41.21**	**338**	P		P	05 42 02.0	+1.6
	comp=Z,2.6nm,1.0s,baz=125,slow=8.9,SNR=1.4							

*NEIC **23** 05:43:38.3±1.8,9°.62S±0°.08×74°.59W±0°.10,h131km±7km, mb4.3/28, Error ellipse: s-maj=14.5km s-min=10.2km az=63.0*
*IDC **23** 05:43:38.6±0.6,9°.61S×74°.61W,h136km±6km,mb3.6/10, mb1 3.8/15,mb1mx3.7/37,mbtmp4.1/15,MS3.0/1, Ms1 3.0/1,ms1mx2.9/23,Error ellipse: s-maj=11.8km s-min=11.4km az=118.0*

ISC 23 05:43:38.3±0.5,9°.58S±0°.06×74°.55W±0°.08,h130km,n57, σ0s84/66,mb4.2/22,Central Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.29**	**223**	P		P	Pn	05 44 28.5	-0.2
	48nm,0.3s,baz=50,slow=7.1,SNR=123								
NNA				S		Sn	Sn	05 45 06.8	-1.0
	104nm,0.3s,baz=281,slow=20,SNR=13								
NNA				LR		LR	LR	05 46 09.5	
	comp=Z,265nm,21.3s,baz=128,slow=47								
NNA	**Nana**	**3.29**	**223**			Pn	Pn	05 44 28.7	-0.1
NNA						Sn	Sn	05 45 06.3	-1.5
ATAH	**Atahualpa**	**4.51**	**302**	P		Pn	Pn	05 44 44.8	-0.5
	7.1nm,0.3s,baz=90,slow=1.6,SNR=64								
ATAH				S		Sn	Sn	05 45 37.4	+0.1
	8.4nm,0.3s,baz=158,slow=22,SNR=7.7								
LPAZ	**La Paz**	**9.14**	**138**	P		Pn	Pn	05 45 50.0	+2.2
	0.3nm,0.3s,baz=303,slow=6.2,SNR=2.6								
LPAZ	**La Paz**	**9.14**	**138**			Pn	Pn	05 45 48.7	+0.9
OTAV	**Otavalo**	**10.49**	**338**	Pn		Pn	Pn	05 46 08.7	+2.9
SAML	**Samuel**	**11.24**	**88**	Pn		Pn	Pn	05 46 13.6	-1.6
GO01	**Chusmiza**	**11.29**	**153**	Pn		Pn	Pn	05 46 17.3	+0.9
SIV	**San Ignacio**	**14.60**	**117**	P		Pn	Pn	05 46 59.4	+0.6
	2.1nm,0.3s,baz=304,slow=10,SNR=23								
SDV	**Santo Domingo**	**18.75**	**12**	P		P	P	05 47 48.0	+0.5
	2.2nm,0.3s,baz=163,slow=2.3,SNR=26								
SDV	**Santo Domingo**	**18.75**	**12**	P		P	P	05 47 48.1	+0.5
SDV				IAmb		IAmb	IAmb	05 47 49.8	
	comp=Z,8.3nm,0.5s								
W50A	**Signal Mountai**	**45.68**	**348**	P		P	P	05 51 46.2	0.0
W50A				IAmb		IAmb	IAmb	05 51 48.0	
	comp=Z,9.9nm,1.2s								
CPCT	**Cooper Cave**	**45.76**	**349**	P		P	P	05 51 46.5	-0.3
T57A	**Hurt**	**46.54**	**355**	P		P	P	05 51 53.3	+0.5
S57A	**Dark Hollow, R**	**47.27**	**355**	P		P	P	05 51 59.2	+0.7
S57A				IAmb		IAmb	IAmb	05 51 59.7	
	comp=Z,9.4nm,1.0s								
W41B	**Gary Mavity, V**	**47.55**	**340**	P		P	P	05 52 00.3	-0.4
W41B				IAmb		IAmb	IAmb	05 52 00.6	
	comp=Z,6.8nm,0.8s								
WHAR	**Wooly Hollow**	**47.67**	**340**	P		P	P	05 52 00.8	-0.8
WHAR				IAmb		IAmb	IAmb	05 52 05.7	
	comp=Z,10nm,1.3s								
TXAR	**Lajitas Array**	**47.80**	**325**	P		P	P	05 52 03.1	+0.3
	comp=Z,1.5nm,0.4s,baz=151,slow=8.7,SNR=52								
TXAR				PcP		PcP	PcP	05 53 30.0	+0.2
	comp=Z,0.1nm,0.5s,baz=170,slow=5.5,SNR=2.8								
TX31	**Lajitas Ar. Si**	**47.80**	**325**	P		P	P	05 52 03.4	+0.6
TX31				IAmb		IAmb	IAmb	05 52 03.5	
	comp=Z,2.1nm,0.5s								
TX32	**Lajitas Array**	**47.80**	**325**	P		P	P	05 52 03.6	+0.7
R55A	**Marlinton**	**47.89**	**354**	P		P	P	05 52 04.3	+0.9
U40A	**Yellville**	**48.83**	**340**	P		P	P	05 52 10.0	-0.6
U40A				IAmb		IAmb	IAmb	05 52 11.2	
	comp=Z,4.1nm,0.7s								
MVL	**Millersville**	**49.35**	**358**	P		P	P	05 52 15.5	+1.1
MVL				IAmb		IAmb	IAmb	05 52 25.3	
	comp=Z,8.5nm,1.3s								
MGMO	**Mountain Grove**	**49.37**	**341**	P		P	P	05 52 14.1	-0.6
MGMO				IAmb		IAmb	IAmb	05 52 14.2	
	comp=Z,4.9nm,0.7s								
BLO	**Bloomington**	**49.76**	**348**	P		P	P	05 52 16.9	-0.6
K58A	**Earlville**	**52.09**	**359**	P		P	P	05 52 35.9	+0.9
PSUT	**Pine Spring**	**60.27**	**325**	P		P	P	05 53 33.8	+0.3
DRLN	**Deer Lake**	**60.47**	**13**	P		P	P	05 53 34.1	-0.1
PDAR	**Pinedale Array**	**61.12**	**331**	P		P	P	05 53 38.4	-0.7
	comp=Z,0.3nm,0.4s,baz=121,slow=9.3,SNR=7.8								
PDAR				PcP		PcP	PcP	05 54 19.9	-0.9
	comp=Z,0.2nm,0.5s,baz=134,slow=5.2,SNR=3.0								
REDW	**Red Top Meadow**	**62.19**	**331**	P		P	P	05 53 45.6	-0.7
REDW				IAmb		IAmb	IAmb	05 53 51.8	
	comp=Z,7.4nm,1.5s								
ULM	**Lac du Bonnet**	**62.41**	**345**	P		P	P	05 53 46.1	-1.2
	comp=Z,4.0nm,0.6s,baz=160,slow=6.0,SNR=8.1								
ULM	**Lac du Bonnet**	**62.41**	**345**	P		P	P	05 53 46.7	-0.6
ULM				IAmb		IAmb	IAmb	05 54 06.1	
	comp=Z,5.3nm,1.1s								
MOOW	**Moose Ponds**	**62.43**	**331**	P		P	P	05 53 47.5	-0.4
NVAR	**Mina Array Bea**	**62.79**	**322**	P		P	P	05 53 50.9	+0.5
	comp=Z,0.6nm,0.7s,baz=157,slow=7.5,SNR=5.2								
KVN	**Kaiserville**	**63.07**	**323**	P		P	P	05 53 52.8	+0.6
YHL	**Hebgen Lake**	**63.46**	**332**	P		P	P	05 53 56.2	+1.5
SCHQ	**Schefferville**	**64.49**	**5**	P		P	P	05 53 59.8	-1.1
	comp=Z,2.4nm,0.8s,baz=282,slow=14,SNR=3.1								
SCHQ	**Schefferville**	**64.49**	**5**	P		P	P	05 54 00.1	-0.9
AFDM	**Forest Hills D**	**64.74**	**321**	P		P	P	05 54 03.5	+0.5
WDC	**Whiskeytown Da**	**66.70**	**322**	P		P	P	05 54 14.4	-1.0
WDC				IAmb		IAmb	IAmb	05 54 20.8	
	comp=Z,6.1nm,1.2s								
I07A	**Izee**	**67.14**	**326**	P		P	P	05 54 18.9	+0.6
F10A	**Beach Ranch, E**	**67.22**	**329**	P		P	P	05 54 19.5	+0.8
WALA	**Waterton Lakes**	**67.85**	**333**	P		P	P	05 54 22.5	-0.1
FCC	**Fort Churchill**	**69.92**	**349**	P		P	P	05 54 34.5	-0.5
FCC				IAmb		IAmb	IAmb	05 54 35.2	
	comp=Z,3.1nm,1.1s								
DBIC	**Dimbokro**	**71.28**	**80**	P		P	P	05 54 43.6	-0.7
	comp=Z,0.6nm,0.3s,baz=243,slow=4.5,SNR=2.9								
SNAA	**Sanae**	**75.24**	**162**	P		P	P	05 55 06.7	+0.1
SNAA				IAmb		IAmb	IAmb	05 55 18.8	
	comp=Z,4.2nm,1.5s								
YKA	**Yellowknife Ar**	**78.22**	**342**	P		P	P	05 55 22.4	-0.8
	comp=Z,0.4nm,0.5s,baz=141,slow=5.8,SNR=11								
YKA				pP		pP	pP	05 55 56.0	+0.1
	comp=Z,0.1nm,0.5s,baz=145,slow=5.8,SNR=1.6								
TORD	**Torodi Ar. Bea**	**78.98**	**75**	P		P	P	05 55 27.8	-0.6
	comp=Z,1.1nm,0.8s,baz=238,slow=4.6,SNR=11								
ESDC	**Sonseca Array**	**81.49**	**47**	P		P	P	05 55 42.4	+0.9
	comp=Z,0.5nm,0.5s,baz=247,slow=5.0,SNR=3.6								
INK	**Inuvik**	**87.96**	**341**	P		P	P	05 56 13.4	+0.3
ILAR	**Eielson Array**	**91.21**	**336**	P		P	P	05 56 28.1	-0.3
	comp=Z,0.3nm,0.8s,baz=134,slow=2.6,SNR=3.3								
ZALV	**Zalesovo Beam**	**132.76**	**16**	PKP		**PKPdf**	**PKPdf**	**06 02 37.8**	**0.0**
ZALV				pPKP		**pPKPdf**	**PKPdf**	**06 03 14.2**	**+1.0**
	comp=Z,0.8nm,0.4s,baz=11,slow=1.5,SNR=3.0								
	comp=Z,0.7nm,0.4s,baz=270,slow=2.9,SNR=2.0								
ASAR	**Alice Springs**	**136.81**	**220**	PKP		**PKPdf**	**PKPdf**	**06 02 45.9**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=114,slow=2.2,SNR=5.3								
MKAR	**Makanchi Array**	**138.00**	**24**	PKP		**PKPdf**	**PKPdf**	**06 02 47.8**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=336,slow=3.0,SNR=4.3								
MKAR				pPKP		**pPKPdf**	**pPKPdf**	**06 03 23.7**	**+0.8**
	comp=Z,0.6nm,0.9s,baz=281,slow=0.8,SNR=3.1								
WRA	**Warramunga Arr**	**139.14**	**224**	PKP		**PKPdf**	**PKPdf**	**06 02 50.2**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=133,slow=1.9,SNR=8.7								
WRA				pPKP		**pPKPdf**	**pPKPdf**	**06 03 26.3**	**+0.4**
	comp=Z,1.1nm,0.8s,baz=130,slow=1.7,SNR=3.8								
SONM	**Songino Array**	**141.86**	**359**	PKP		**PKPdf**	**PKPdf**	**06 02 55.1**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=321,slow=1.3,SNR=3.0								
KSRS	**Korea Array**	**145.62**	**327**	PKPbc		**PKPbc**	**PKPbc**	**06 03 02.1**	**0.0**
	comp=Z,3.2nm,0.9s,baz=44,slow=3.1,SNR=7.9								
KSRS				pPKPbc		pPKPbc	pPKPbc	06 03 37.4	+0.3
	comp=Z,1.4nm,0.7s,baz=43,slow=3.5,SNR=3.2								

IDC 23 05:46:31.9±75.0,12°.87S×168°.01E,h0km,mb3.6/3, mb1 3.8/3,mb1mx3.5/34,mbtmp3.6/3,Error ellipse: s-maj=1266.0km s-min=130.7km az=63.0,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**30.75**	**228**	P		P	P	05 52 49.0	0.0
	0.9nm,0.6s,baz=61,slow=11,SNR=3.5								
WRA	**Warramunga Arr**	**33.01**	**253**	P		P	P	05 53 09.5	+0.5
	0.3nm,0.6s,baz=85,slow=9.0,SNR=3.9								
ASAR	**Alice Springs**	**34.03**	**247**	P		P	P	05 53 17.5	-0.5
	0.5nm,0.5s,baz=73,slow=9.1,SNR=8.5								

*IDC **23** 06:08:22.1±0.7,13°.52N×146°.16E,h0km,mb4.1/15, mb1 4.3/15,mb1mx4.1/53,mbtmp4.1/15,Error ellipse: s-maj=17.6km s-min=15.9km az=108.0*
*BJI **23** 06:08:24.3±0.0,13°.28N×145°.87E,h34km,mB5.1/8, mb4.6/19,Ms5.1/4,Ms7 4.8/3*
*NEIC **23** 06:08:26.8±2.3,13°.38N±0°.08×145°.97E±0°.07,h35km±2km, mb4.6/37,Error ellipse: s-maj=11.4km s-min=9.4km az=149.0*

ISC 23 06:08:27.8±0.5,13°.42N±0°.07×146°.03E±0°.07,h43km,n83, σ1s46/84,mb4.5/40,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.14**	**278**	Pn		Pn	Pn	06 08 48.4	+1.1
	254nm,0.3s,baz=116,slow=6.5,SNR=73								
GUMO				Sn		Sn	Sn	06 09 05.7	+3.9
	291nm,0.3s,baz=203,slow=16,SNR=15								
GUMO	**Guam**	**1.14**	**278**			Pn	Pn	06 08 47.9	+0.6
ANA2	**Anatahan**	**2.92**	**354**			Pn	Pn	06 09 10.2	-1.6
SARN	**Sarigan**	**3.27**	**356**	Pn		Pn	Pn	06 09 14.6	-1.9
PATS	**Pohnpei**	**13.74**	**117**	Pn		Pn	Pn	06 11 32.8	-7.4
WAKE	**Wake Island**	**20.62**	**71**	P		P	P	06 13 04.1	+0.5
FAKI	**Fak Fak**	**21.23**	**221**	P		P	P	06 13 06.7	-3.5
JOW	**Kunigami**	**21.31**	**311**	P		P	P	06 13 06.8	-4.3
TNTI	**Ternate**	**22.35**	**237**	P		P	P	06 13 20.0	-2.3
PMG	**Port Moresby**	**22.71**	**177**	P		P	P	06 13 25.3	-0.8
PMG				IAmb		IAmb	IAmb	06 13 40.5	
	comp=Z,13nm,0.8s								
INU	**Inuyama**	**23.30**	**341**	P		P	P	06 13 31.1	-0.7
INU				IAmb		IAmb	IAmb	06 13 49.6	
	comp=Z,42nm,1.3s								
JNU	**Nakatsue**	**23.99**	**327**	P		P	P	06 13 37.6	-0.9
JNU				IAmb		IAmb	IAmb	06 13 39.9	
	comp=Z,28nm,1.2s								
SAUI	**Saumlaki**	**25.81**	**215**	P		P	P	06 13 54.4	-0.7
LUWI	**Luwuk**	**27.17**	**240**	P		P	P	06 14 04.9	-2.5
KSRS	**Korea Array**	**28.87**	**329**	P		P	P	06 14 21.7	-0.7
	comp=Z,2.5nm,0.6s,baz=139,slow=10.0,SNR=8.9								
NJ2	**Nanjing**	**31.03**	**311**	*e*P		P		06 14 40.3	-1.3
NJ2				pmax		pmax			
	comp=Z,10.0nm,1.0s								
WHN	**Wuhan**	**33.80**	**305**	P		P		06 15 11.8	+6.0
MDJ	**Mudanjiang**	**34.11**	**339**	P		P		06 15 06.9	-1.4
MDJ				IAmb		IAmb		06 15 22.7	
	comp=Z,7.5nm,1.1s								
WB0	**Warramunga Arr**	**34.91**	**199**	P		P		06 15 14.2	-1.3
CN2	**Changchun**	**35.05**	**334**	*e*P		P		06 15 17.3	+0.8
WRAB	**Tennant Creek**	**35.08**	**199**	P		P		06 15 16.0	-1.1
WRAB				IAmb		IAmb		06 15 18.7	
	comp=Z,16nm,1.5s								
WB2	**Warramunga Arr**	**35.09**	**199**	P		P		06 15 19.9	-1.1
WB2				IAmb		IAmb		06 15 20.8	
	comp=Z,8.4nm,1.1s								
WRA	**Warramunga Arr**	**35.09**	**199**	P		P		06 15 17.7	+0.6
	comp=Z,5.2nm,1.0s,baz=21,slow=9.6,SNR=11								
FITZ	**Fitzroy Crossi**	**37.22**	**213**	P		P		06 15 33.4	-1.9
BJT	**Baijiatuan**	**37.27**	**321**	P		P		06 15 34.3	-1.2
KSM	**Kuching**	**37.29**	**254**	P		P		06 15 34.0	-2.0
KLR	**Kul'dur**	**37.59**	**345**	P		P		06 15 39.5	+1.4
	comp=Z,0.8nm,0.4s,baz=174,slow=14,SNR=4.2								
ASAR	**Alice Springs**	**38.72**	**198**	P		P		06 15 48.9	+0.9
	comp=Z,3.2nm,1.1s,baz=19,slow=7.9,SNR=13								
EIDS	**Eidsvold**	**38.87**	**173**	P		P		06 15 48.5	-0.6
EIDS				IAmb		IAmb		06 15 53.7	
	comp=Z,15nm,1.4s								
HHC	**Hu-ho-hao-te**	**40.64**	**319**	*e*P		P		06 16 03.0	-0.8
HHC				pmax		pmax			
	comp=Z,7.0nm,0.8s								
HHC				pmax		pmax			
	comp=Z,150nm,5.5s								
CD2	**Chengdu**	**42.55**	**301**	*e*P		P		06 16 17.0	-2.6
ARMA	**Armidale**	**43.92**	**173**	P		P		06 16 29.6	-1.0
LZH	**Lanzhou**	**44.01**	**308**	*e*P		P		06 16 32.8	+1.4
LZH				pP		pP		06 16 41.8	-0.1
LZH				sP		sP		06 16 45.8	-0.6
LZH				pmax		pmax			
	comp=Z,16nm,1.0s								
STKA	**Stephens Creek**	**45.24**	**185**	P		P		06 16 42.6	+1.6
	comp=Z,1.7nm,0.9s,baz=15,slow=16,SNR=2.6								
CMAR	**Chiang Mai Arr**	**45.46**	**283**	P		P		06 16 44.4	+1.4
	comp=Z,1.0nm,0.3s,baz=90,slow=5.4,SNR=4.1								
SONM	**Songino Array**	**47.52**	**324**	P		P		06 16 59.4	+0.4
	comp=Z,0.8nm,0.5s,baz=142,slow=8.5,SNR=5.4								
SONM				PcP		PcP		06 18 28.6	+0.1
	comp=Z,0.6nm,0.5s,baz=123,slow=5.3,SNR=3.1								
GTA	**Gaotai**	**48.13**	**311**	*e*P		P		06 17 03.3	-0.5
GTA				pP		pP		06 17 13.8	-0.6
GTA				sP		sP		06 17 17.4	-1.5
GTA				PcP		PcP		06 18 32.3	+1.4
HUH	**Hualalai**	**55.86**	**75**	P		P		06 18 03.1	+1.4
TAPN	**Taplejung**	**55.95**	**294**	*e*P		P		06 18 02.5	+0.1
BILL	**Bilibino**	**56.14**	**9**	P		P		06 18 03.4	+0.7
ODAN	**Odare**	**56.22**	**293**	*e*P		P		06 18 04.5	+0.3
RAMN	**Ramite**	**56.92**	**293**	*e*P		P		06 18 10.3	+1.0
JIRN	**Jiri**	**57.31**	**294**	*e*P		P		06 18 12.7	+0.6
	comp=Z,6.9nm,0.4s								
GUN	**Gumba**	**57.59**	**295**	*e*P		P		06 18 14.6	+0.5
	comp=Z,11nm,0.5s								
PKIN	**Phulchoki**	**58.01**	**294**	*e*P		P		06 18 16.7	-0.2
	comp=Z,7.4nm,0.5s								
WMQ	**Urumqi**	**58.07**	**313**	*e*P		P		06 18 17.9	+1.1
WMQ				pmax		pmax			
	comp=Z,6.0nm,0.7s								
WMQ				pmax		pmax			
	comp=Z,240nm,6.1s								
WMQ				LR		LR			
	comp=Z,440nm,19.7s								
WMQ				LR		LR			
	comp=Z,1μm,29.1s								
DANN	**Dangsing**	**59.47**	**295**	*e*P		P		06 18 27.5	+0.4
	comp=Z,18nm,0.6s								
KOLN	**Koldanda**	**59.60**	**294**	*e*P		P		06 18 28.2	+0.3
	comp=Z,16nm,0.8s								
MK31	**Makanchi Array**	**62.39**	**316**	P		P		06 18 46.4	0.0
MK31				IAmb		IAmb		06 19 02.1	
	comp=Z,2.9nm,0.7s								
MKAR	**Makanchi Array**	**62.39**	**316**	P		P		06 18 46.9	+0.6
	comp=Z,0.9nm,0.5s,baz=111,slow=6.2,SNR=7.0								
ZALV	**Zalesovo Beam**	**62.42**	**324**	P		P		06 18 46.2	0.0
	comp=Z,1.6nm,0.6s,baz=109,slow=6.4,SNR=4.7								
MAKZ	**Makanchi**	**62.61**	**316**	P		P		06 18 45.9	-1.9
MAKZ				IAmb		IAmb		06 19 05.3	
	comp=Z,4.1nm,0.9s								
TTA	**Tatalina**	**63.81**	**26**	P		P		06 18 56.0	+0.5
KSH	**Kashi**	**66.24**	**307**	P		P		06 19 14.1	+2.3
IL31		**68.24**	**25**	P		P		06 19 23.3	-0.4
ILAR	**Eielson Array**	**68.24**	**25**	P		P		06 19 22.6	-1.1
	comp=Z,0.5nm,0.4s,baz=252,slow=5.5,SNR=8.6								
PAX	**Paxson**	**68.40**	**27**	P		P		06 19 25.9	+0.9
PAX				IAmb		IAmb		06 19 40.6	
	comp=Z,10.0nm,1.4s								
BVAR	**Borovoye Array**	**70.76**	**322**	P		P		06 19 39.4	-0.2
	comp=Z,3.7nm,0.5s,baz=109,slow=7.2,SNR=24								
CHGR	**Chuyangaron**	**71.55**	**307**	P		P		06 19 43.6	-1.1
INK	**Inuvik**	**74.09**	**22**	P		P		06 20 00.0	+1.0
	comp=Z,2.0nm,1.0s,baz=277,slow=8.1,SNR=4.0								
C36M	**Paulatuk**	**77.51**	**21**	P		P		06 20 19.4	+0.8
C36M				IAmb		IAmb		06 20 33.3	
	comp=Z,6.0nm,1.1s								
WSAR	**Wadi Sarin**	**82.47**	**292**	P		P		06 20 47.6	+1.3
	comp=Z,1.6nm,0.5s,baz=104,slow=4.2,SNR=3.6								
YKA	**Yellowknife Ar**	**82.48**	**28**	P		P		06 20 45.2	-0.4
	comp=Z,0.8nm,0.6s,baz=285,slow=5.2,SNR=9.9								
RES	**Resolute Bay**	**84.45**	**13**	P		P		06 20 56.6	+1.2
RES				IAmb		IAmb		06 21 10.5	
	comp=Z,5.4nm,0.9s								
NVAR	**Mina Array Bea**	**86.14**	**52**	P		P		06 21 06.6	+1.6
	comp=Z,1.0nm,0.8s,baz=274,slow=5.0,SNR=4.9								
MFID	**Camas Ranch**	**86.70**	**46**	P		P		06 21 07.7	+0.2
MFID				IAmb		IAmb		06 21 12.4	
	comp=Z,5.5nm,1.1s								
ELK	**Elko**	**87.84**	**49**	P		P		06 21 14.0	+0.8
ELK				IAmb		IAmb		06 21 18.1	
	comp=Z,4.6nm,1.0s								
LRM	**Limekiln Ridge**	**88.34**	**43**	P		P		06 21 14.3	-1.1
QLMT	**Earthquake Lak**	**89.33**	**44**	P		P		06 21 23.0	+2.9
PSUT	**Pine Spring**	**89.48**	**51**	P		P		06 21 23.4	+2.4
YHL	**Hebgen Lake**	**89.49**	**44**	P		P		06 21 24.1	+3.1
SPUT	**South Promonto**	**89.70**	**48**	P		P		06 21 23.4	+1.5
DUG	**Dugway, Tooele**	**89.77**	**49**	P		P		06 21 22.6	+0.4
DUG				IAmb		IAmb		06 21 27.1	
	comp=Z,3.5nm,0.9s								
KNB	**Kanab**	**90.70**	**52**	P		P		06 21 29.0	+2.3
SMCO	**Snowmass**	**94.36**	**48**	P		P		06 21 44.6	+0.9
SDCO	**Great Sand Dun**	**95.95**	**49**	P		P		06 21 49.8	-1.2
SDCO				IAmb		IAmb		06 22 04.5	
	comp=Z,2.8nm,0.9s								
DBIC	**Dimbokro**	**144.87**	**303**	PKP		**PKPdf**		**06 28 01.0**	**-0.2**
	comp=Z,3.7nm,0.7s,baz=36,slow=5.9,SNR=4.4								
DBIC	**Dimbokro**	**144.87**	**303**			**PKPdf**		**06 28 01.6**	**+0.4**
KIC	**Kosan Boka**	**144.94**	**302**	*e*P		**PKPdf**		**06 28 01.8**	**+0.4**
	comp=Z,2.9nm,0.6s								
TIC	**Toumodi**	**145.01**	**303**	*e*P		**PKPdf**		**06 28 01.8**	**+0.3**
LIC	**Lamto**	**145.26**	**302**	*e*P		**PKPdf**		**06 28 03.4**	**+1.5**
	comp=Z,10nm,0.6s								
LPAZ	**La Paz**	**146.88**	**99**	PKPbc		**PKPbc**		**06 28 07.8**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=288,slow=3.2,SNR=4.0								
LPAZ	**La Paz**	**146.88**	**99**			**PKiKP**		**06 28 10.1**	**+0.3**

KRSC 23 06:12:21.2±1.9,49°.07N×156°.74E,h44km±25km,ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.67**	**346**	*e*P		P	Pn	06 12 48.4	+0.5
SKR				*e*

LPL				*e*Sn		**Sn**	**06 15 15.8**	**-3.2**
	comp=E,1.0nm,0.4s							
LMR	**La Mourre**	**2.88**	**244**	*e*Pn		**Pn**	**06 14 51.7**	**-1.8**
LMR	**La Mourre**	**2.88**	**244**	*e*P		**Pn**	**06 14 54.8**	**+1.3**
LMR				*e*Sn		**Sn**	**06 15 23.9**	**-3.5**
LMR				*e*Sg		**Sb**	**06 15 40.3**	**+5.9**
	comp=E,0.9nm,0.3s							
ORIF	**Oris-en-Rattie**	**3.00**	**277**	*e*P		**Pn**	**06 14 56.1**	**+0.9**
ORIF				*e*Sn		**Sn**	**06 15 27.3**	**-3.1**
	comp=E,0.7nm,0.3s							
SMRF	**Simiane la Rot**	**3.29**	**260**	*e*P		**Pn**	**06 15 00.6**	**+1.4**
SMRF				*e*Sg		**Sb**	**06 15 51.9**	**+5.6**
	comp=E,0.2nm,0.2s							
CABF	**La Chapelle**	**3.42**	**307**	*e*P		**Pn**	**06 15 01.5**	**+0.4**
CABF				*e*Sg		**Sb**	**06 15 55.8**	**+5.6**
	comp=E,0.6nm,0.2s							
AVF	**Avril sur Loir**	**5.17**	**297**	*e*Pn		**Pn**	**06 15 22.9**	**-2.1**
AVF	**Avril sur Loir**	**5.17**	**297**	*e*Pg		Pb	06 15 44.6	+5.8
AVF				*e*Sn		**Sn**	**06 16 18.8**	**-5.2**
	comp=E,0.9nm,0.3s							

BJI ***23*** *06:15:01.0±0.0, 45°.40N×26°.30E, h127km, mB5.1/8, mb4.6/15*

SIGU ***23*** *06:15:03.8±0.1, 45°.5N±0°.8×26°.3E±0°.9, h138km, mb4.5/11*

MOS ***23*** *06:15:03.1±0.9, 45°.54N×26°.27E, h137km, mb4.5/13, Error ellipse: s-maj=4.7km s-min=3.3km az=110.3*

NEIC ***23*** *06:15:04.5±1.7, 45°.47N±0°.03×26°.22E±0°.05, h135km±3km, Error ellipse: s-maj=5.4km s-min=3.8km az=48.0*

BUC ***23*** *06:15:04.7±0.3, 45°.49N×26°.25E, h132km±2km, ml4.9/47, Error ellipse: s-maj=2.3km s-min=2.1km az=115.0*

IDC ***23*** *06:15:04.5±0.4, 45°.50N×26°.11E, h133km±3km, mb3.9/30, mb1 4.0/42, mb1mx4.0/54, mbtmp4.4/42, Error ellipse: s-maj=8.6km s-min=7.5km az=150.0*

SOF ***23*** *06:15:05.3, 45°.49N×26°.19E, h88km, MD4.6*

BEO ***23*** *06:15:05.9±1.3, 45°.40N×26°.24E, h55km±9km, ML4.3/15*

ISC 23 06:15:04.1±0.4, 45°.48N±0°.03×26°.25E±0°.02, h135km±3km, h135km:pP-P, n625, σ1s55/726, mb4.5/71, 95C-65D, Romania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h	m	s	Res ISC
MLR	**Muntele Rosu**	**0.21**	**273**	⇑P		**Pn**		**06 15 23.3**			**+0.6**
MLR				⇑S		**Sn**		**06 15 36.8**			**0.0**
MLR	**Muntele Rosu**	**0.21**	**273**	P		**Pn**		**06 15 23.1**			**+0.4**
	1μm,0.3s,baz=146,slow=3.6										
MLR				S		**Sn**		**06 15 37.0**			**+0.2**
	3μm,0.3s,baz=248,slow=21,SNR=48										
MLR	**Muntele Rosu**	**0.21**	**273**	⇑P		**Pn**		**06 15 23.3**			**+0.6**
MLR	**Muntele Rosu**	**0.21**	**273**	⇑S		**Sn**		**06 15 36.8**			**0.0**
BISRR	**Bisoca**	**0.33**	**78**	⇑P		**Pn**		**06 15 23.9**			**+0.9**
BISRR				⇓S		**Sn**		**06 15 38.9**			**+1.5**
BISRR	**Bisoca**	**0.33**	**78**	⇑P		**Pn**		**06 15 23.9**			**+0.9**
BISRR	**Bisoca**	**0.33**	**78**			**Pn**		**06 15 23.9**			**+0.9**
ISR	**Istrita**	**0.42**	**150**	P		**Pn**		**06 15 24.1**			**+0.7**
ISR	**Istrita**	**0.42**	**150**			**Pn**		**06 15 24.1**			**+0.7**
SECR		**0.46**	**196**	⇑P		**Pn**		**06 15 24.5**			**+0.9**
SECR				⇑S		**Sn**		**06 15 39.1**			**+0.9**
SECR		**0.46**	**196**	⇑P		**Pn**		**06 15 24.5**			**+0.9**
PLOR	**Plostina**	**0.47**	**37**	P		**Pn**		**06 15 23.8**			**+0.3**
PLOR				S		**Sn**		**06 15 38.5**			**+0.1**
PLOR	**Plostina**	**0.47**	**37**	⇑P		**Pn**		**06 15 23.9**			**+0.3**
PLOR				⇑S		**Sn**		**06 15 38.5**			**+0.1**
PLOR	**Plostina**	**0.47**	**37**	⇑P		**Pn**		**06 15 23.9**			**+0.3**
PLOR	**Plostina**	**0.47**	**37**			**Pn**		**06 15 23.9**			**+0.3**
PLOR						**Sn**		**06 15 38.5**			**+0.1**
VRI	**Vrincioaia**	**0.51**	**41**	P		**Pn**		**06 15 24.3**			**+0.5**
VRI								06 15 39.8			
VRI	**Vrincioaia**	**0.51**	**41**	⇑P		**Pn**		**06 15 24.3**			**+0.5**
VRI				⇑S		**Sn**		**06 15 39.8**			**+1.0**
VRI	**Vrincioaia**	**0.51**	**41**	⇑P		**Pn**		**06 15 24.3**			**+0.5**
VRI	**Vrincioaia**	**0.51**	**41**			**Pn**		**06 15 24.3**			**+0.5**
VRI						**Sn**		**06 15 39.8**			**+1.0**
GRER		**0.52**	**101**	⇑S		**Sn**		**06 15 39.9**			**+1.2**
GRER		**0.52**	**101**	⇑S		**Sn**		**06 15 39.9**			**+1.2**
GRER		**0.52**	**101**			**Sn**		**06 15 38.6**			**-0.1**
PLAR	**PLOIESTI**	**0.59**	**195**	⇑P		**Pn**		**06 15 25.2**			**+1.0**
PLAR				⇓S		**Sn**		**06 15 41.0**			**+1.6**
PLAR	**PLOIESTI**	**0.59**	**195**	⇑P		**Pn**		**06 15 25.2**			**+1.0**
ODBI	**Odobesti**	**0.64**	**63**	⇑P		**Pn**		**06 15 25.9**			**+1.4**
ODBI				⇑S		**Sn**		**06 15 39.4**			**-0.5**
ODBI	**Odobesti**	**0.64**	**63**	⇑P		**Pn**		**06 15 25.9**			**+1.4**
ODBI	**Odobesti**	**0.64**	**63**			**Pn**		**06 15 25.9**			**+1.4**
OZUR		**0.69**	**333**	⇑P		**Pn**		**06 15 25.1**			**+0.1**
OZUR				⇓S		**Sn**		**06 15 40.0**			**-0.9**
OZUR		**0.69**	**333**	⇑P		**Pn**		**06 15 25.1**			**+0.1**
PETR	**Petresti**	**0.73**	**70**	⇑P		**Pn**		**06 15 26.1**			**+1.0**
PETR				⇑S		**Sn**		**06 15 41.9**			**+0.7**
PETR	**Petresti**	**0.73**	**70**	⇑P		**Pn**		**06 15 26.1**			**+1.0**
PETR	**Petresti**	**0.73**	**70**			**Pn**		**06 15 26.1**			**+1.0**
PETR						**Sn**		**06 15 41.9**			**+0.7**
DOPR	**Dopca**	**0.77**	**309**	⇓S		**Sn**		**06 15 41.2**			**-0.6**
DOPR	**Dopca**	**0.77**	**309**	⇓S		**Sn**		**06 15 41.2**			**-0.6**
DOPR	**Dopca**	**0.77**	**309**			**Pn**		**06 15 25.7**			**+0.2**
DOPR						**Sn**		**06 15 41.2**			**-0.6**
PGOR	**Pogoanele**	**0.78**	**137**	⇑S		**Sn**		**06 15 43.2**			**+1.5**
PGOR	**Pogoanele**	**0.78**	**137**	⇑S		**Sn**		**06 15 43.2**			**+1.5**
SULR		**0.80**	**179**	⇑P		**Pn**		**06 15 26.5**			**+0.8**
SULR				⇑S		**Sn**		**06 15 43.2**			**+1.2**
SULR		**0.80**	**179**	⇑P		**Pn**		**06 15 26.5**			**+0.8**
VOIR		**0.84**	**267**	P		**Pn**		**06 15 26.4**			**+0.3**
VOIR								06 15 42.1			
VOIR		**0.84**	**267**	⇑S		**Sn**		**06 15 42.1**			**-0.8**
VOIR		**0.84**	**267**	⇑S		**Sn**		**06 15 42.1**			**-0.8**
VOIR		**0.84**	**267**			**Pn**		**06 15 26.4**			**+0.3**
VOIR						**Sn**		**06 15 42.1**			**-0.8**
GHRR		**1.00**	**54**	⇑P		**Pn**		**06 15 28.1**			**+0.8**
GHRR				⇑S		**Sn**		**06 15 44.3**			**-0.8**
GHRR		**1.00**	**54**	⇑P		**Pn**		**06 15 28.1**			**+0.8**
TUDR		**1.01**	**83**	⇑P		**Pn**		**06 15 27.4**			**0.0**
TUDR				⇓S		**Sn**		**06 15 44.7**			**-0.5**
TUDR		**1.01**	**83**	⇑P		**Pn**		**06 15 27.4**			**0.0**
TUDR		**1.01**	**83**			**Pn**		**06 15 27.4**			**0.0**
TUDR						**Sn**		**06 15 44.7**			**-0.5**
INCR	**INCERC-Sediu C**	**1.04**	**183**	⇑S		**Sn**		**06 15 45.8**			**+0.1**
INCR	**INCERC-Sediu C**	**1.04**	**183**	⇑S		**Sn**		**06 15 45.8**			**+0.1**
TESR	**Tescani**	**1.07**	**15**	⇑P		**Pn**		**06 15 28.3**			**+0.2**
TESR	**Tescani**	**1.07**	**15**	⇑P		**Pn**		**06 15 28.3**			**+0.2**
IZVR	**Izvoarele**	**1.07**	**86**	⇑P		**Pn**		**06 15 27.8**			**-0.2**
IZVR	**Izvoarele**	**1.07**	**86**	⇑P		**Pn**		**06 15 27.8**			**-0.2**
SLCR	**Slobozia Conac**	**1.08**	**84**	⇑P		**Pn**		**06 15 28.0**			**-0.1**
SLCR	**Slobozia Conac**	**1.08**	**84**	⇑P		**Pn**		**06 15 28.0**			**-0.1**
LEHL	**Lehliu**	**1.09**	**158**	⇓P		**Pn**		**06 15 28.9**			**+0.7**
LEHL	**Lehliu**	**1.09**	**158**	⇓P		**Pn**		**06 15 28.9**			**+0.7**
GOLR		**1.11**	**235**	⇑P		**Pn**		**06 15 29.2**			**+0.8**
GOLR		**1.11**	**235**	⇑P		**Pn**		**06 15 29.2**			**+0.8**
BRAG	**Branistea**	**1.12**	**91**	⇑P		**Pn**		**06 15 28.3**			**-0.2**
BRAG	**Branistea**	**1.12**	**91**	⇑P		**Pn**		**06 15 28.3**			**-0.2**
ARR	**Arges**	**1.14**	**265**	⇓P		**Pn**		**06 15 29.4**			**+0.6**
ARR	**Arges**	**1.14**	**265**	⇓P		**Pn**		**06 15 29.4**			**+0.6**
ARR	**Arges**	**1.14**	**265**			**Pn**		**06 15 29.4**			**+0.6**
ARR						**Sn**		**06 15 47.0**			**-0.6**
NEGR	**Negresti**	**1.14**	**87**	⇑P		**Pn**		**06 15 28.9**			**+0.2**
NEGR	**Negresti**	**1.14**	**87**	⇑P		**Pn**		**06 15 28.9**			**+0.2**
BUC1	**Bucharest**	**1.14**	**188**	⇓P		**Pn**		**06 15 29.4**			**+0.7**
BUC1	**Bucharest**	**1.14**	**188**	⇓P		**Pn**		**06 15 29.4**			**+0.7**
BIR	**Birlad**	**1.25**	**50**	⇑P		**Pn**		**06 15 30.3**			**+0.6**
BIR	**Birlad**	**1.25**	**50**	⇑P		**Pn**		**06 15 30.3**			**+0.6**
SGRR	**Singureni**	**1.27**	**189**	⇓P		**Pn**		**06 15 30.4**			**+0.3**
SGRR	**Singureni**	**1.27**	**189**	⇓P		**Pn**		**06 15 30.4**			**+0.3**
HUMR	**Humele**	**1.31**	**224**			**Pn**		**06 15 30.8**			**+0.4**
HUMR						**Sn**		**06 15 50.5**			**0.0**
CFR	**Carcaliu**	**1.37**	**102**	⇑P		**Pn**		**06 15 30.8**			**-0.2**
CFR	**Carcaliu**	**1.37**	**102**	⇓P		**Pn**		**06 15 30.8**			**-0.2**
GIUM	**Giurgiulesti**	**1.38**	**89**	⇑P		**Pn**		**06 15 31.7**			**+0.5**
GIUM	**Giurgiulesti**	**1.38**	**89**	⇑P		**Pn**		**06 15 31.7**			**+0.5**
RASA	**Rasa**	**1.42**	**153**	⇓P		**Pn**		**06 15 31.9**			**+0.3**
RASA	**Rasa**	**1.42**	**153**	⇑P		**Pn**		**06 15 31.9**			**+0.3**
HARR	**Harsova**	**1.43**	**123**	⇓P		**Pn**		**06 15 31.9**			**+0.2**
HARR	**Harsova**	**1.43**	**123**	⇓P		**Pn**		**06 15 31.9**			**+0.2**
BIZ	**Bicaz**	**1.46**	**356**	⇑P		**Pn**		**06 15 33.4**			**+1.3**
BIZ	**Bicaz**	**1.46**	**356**	⇑P		**Pn**		**06 15 33.4**			**+1.3**
MDB	**Medias**	**1.46**	**298**			**Pn**		**06 15 33.3**			**+1.2**
MDB						**Sn**		**06 15 55.2**			**+1.8**
GIRR	**Girov**	**1.49**	**7**	⇑P		**Pn**		**06 15 33.2**			**+0.9**
GIRR	**Girov**	**1.49**	**7**	⇑P		**Pn**		**06 15 33.2**			**+0.9**
COPA	**Copaceanca**	**1.53**	**209**	⇓P		**Pn**		**06 15 33.2**			**+0.3**
COPA	**Copaceanca**	**1.53**	**209**	⇓P		**Pn**		**06 15 33.2**			**+0.3**
TOPG	**Topolog**	**1.62**	**111**	⇓P		**Pn**		**06 15 33.8**			**-0.1**
TOPG	**Topolog**	**1.62**	**111**	⇑P		**Pn**		**06 15 33.8**			**-0.1**
LEOM	**Leova**	**1.71**	**54**	P		**Pn**		**06 15 34.6**			**-0.2**
LEOM	**Leova**	**1.71**	**54**	⇑P		**Pn**		**06 15 35.3**			**+0.4**
LEOM	**Leova**	**1.71**	**54**	P		**Pn**		**06 15 34.6**			**-0.2**
LEOM	**Leova**	**1.71**	**54**	⇑P		**Pn**		**06 15 35.3**			**+0.4**
CVDA	**Cernavoda**	**1.71**	**131**	⇓P		**Pn**		**06 15 35.2**			**+0.3**
CVDA	**Cernavoda**	**1.71**	**131**	⇑P		**Pn**		**06 15 35.2**			**+0.3**
CVDA	**Cernavoda**	**1.71**	**131**			**Pn**		**06 15 35.4**			**+0.5**
CVDA						**Sn**		**06 15 57.3**			**-1.1**
LOT	**Lotru**	**1.74**	**270**			**Pn**		**06 15 35.5**			**+0.1**
ICOR	**Ion Corvin**	**1.76**	**140**	⇓P		**Pn**		**06 15 35.9**			**+0.5**
ICOR	**Ion Corvin**	**1.76**	**140**	⇑P		**Pn**		**06 15 35.9**			**+0.5**
TLCR		**1.84**	**98**	⇑P		**Pn**		**06 15 36.4**			**+0.1**
TLCR		**1.84**	**98**	⇑P		**Pn**		**06 15 36.4**			**+0.1**
TIRR	**Tirgusor**	**1.85**	**123**	⇓P		**Pn**		**06 15 36.6**			**+0.2**
TIRR	**Tirgusor**	**1.85**	**123**	⇓P		**Pn**		**06 15 36.6**			**+0.2**
TIRR	**Tirgusor**	**1.85**	**123**			**Pn**		**06 15 36.6**			**+0.2**
TIRR					Sn	**Sn**		**06 15 59.9**			**-1.3**
PRAR	**RASCA**	**1.88**	**360**	⇑P		**Pn**		**06 15 38.1**			**+1.2**
PRAR	**RASCA**	**1.88**	**360**	⇑P		**Pn**		**06 15 38.1**			**+1.2**
PRAR	**RASCA**	**1.88**	**360**			**Pn**		**06 15 38.1**			**+1.2**
RAZG	**Razgrad**	**1.92**	**174**	⇓P		**Pn**		**06 15 37.6**			**+0.2**
RAZG	**Razgrad**	**1.92**	**174**	⇓P		**Pn**		**06 15 37.6**			**+0.2**
ZIMR		**1.93**	**199**	⇓P		**Pn**		**06 15 37.7**			**+0.3**
ZIMR		**1.93**	**199**	⇓P		**Pn**		**06 15 37.7**			**+0.3**
ZIMR		**1.93**	**199**			**Pn**		**06 15 37.7**			**+0.3**
ZIMR						**Sn**		**06 16 02.1**			**-0.8**
IAS	**Iasi**	**1.94**	**28**	⇑P		**Pn**		**06 15 37.8**			**+0.2**
IAS	**Iasi**	**1.94**	**28**	⇑P		**Pn**		**06 15 37.8**			**+0.2**
VLAD	**Vladila**	**1.98**	**222**	⇑P		**Pn**		**06 15 38.2**			**+0.1**
VLAD	**Vladila**	**1.98**	**222**	⇑P		**Pn**		**06 15 38.2**			**+0.1**
MFTR	**Murfatlar**	**2.02**	**129**	⇓P		**Pn**		**06 15 38.7**			**+0.2**
MFTR	**Murfatlar**	**2.02**	**129**	⇓P		**Pn**		**06 15 38.7**			**+0.2**
MFTR	**Murfatlar**	**2.02**	**129**			**Pn**		**06 15 38.7**			**+0.2**
MFTR						**Sn**		**06 16 03.5**			**-1.4**
ARCR	**ARCALIA**	**2.07**	**321**	⇓P		**Pn**		**06 15 39.5**			**+0.3**
ARCR	**ARCALIA**	**2.07**	**321**	⇓P		**Pn**		**06 15 39.5**			**+0.3**
EFOR	**EFORIE**	**2.20**	**129**	⇓P		**Pn**		**06 15 41.1**			**+0.3**
EFOR	**EFORIE**	**2.20**	**129**	⇑P		**Pn**		**06 15 41.1**			**+0.3**
CJR	**Cluj-Napoca**	**2.22**	**305**	⇓P		**Pn**		**06 15 41.6**			**+0.7**
CJR	**Cluj-Napoca**	**2.22**	**305**	⇓P		**Pn**		**06 15 41.6**			**+0.7**
SZH	**Strazhica**	**2.23**	**186**	*i* P		**Pn**		**06 15 41.3**			**+0.2**
BURAR	**Bucovina Array**	**2.25**	**342**	⇓P		**Pn**		**06 15 43.4**			**+1.9**
BURAR	**Bucovina Array**	**2.25**	**342**	⇑P		**Pn**		**06 15 43.4**			**+1.9**
BURAR	**Bucovina Array**	**2.25**	**342**			**Pn**		**06 15 43.5**			**+2.1**
PSN	**Preselentsi**	**2.27**	**142**	*i* P		**Pn**		**06 15 42.2**			**+0.6**
BUR08	**Bucovina Ar. S**	**2.28**	**342**			**Pn**		**06 15 43.4**			**+1.5**
MILM	**Milestii Mici**	**2.29**	**50**	⇑P		**Pn**		**06 15 42.0**			**+0.2**
MILM	**Milestii Mici**	**2.29**	**50**	P		**Pn**		**06 15 41.9**			**+0.2**
MILM	**Milestii Mici**	**2.29**	**50**	⇑P		**Pn**		**06 15 42.0**			**+0.2**
MILM	**Milestii Mici**	**2.29**	**50**			**Pn**		**06 15 42.0**			**+0.2**
KIS	**Kishinev**	**2.34**	**49**	⇑*i*P		**Pn**		**06 15 43.0**			**+0.5**
	8μm,0.4s										
KIS				*i* S		**Sn**		**06 16 11.0**			**-1.0**
	31μm,0.5s										
KIS	**Kishinev**	**2.34**	**49**	⇑*i*P		**Pn**		**06 15 43.0**			**+0.5**
KIS				*i* S		**Sn**		**06 16 11.0**			**-1.0**
KIS				pmax	pmax						
	comp=N,7μm,0.4s										
KIS				pmax	pmax						
	comp=Z,8μm,0.4s										
KIS				smax	smax						
	comp=N,31μm,0.5s										
KIS	**Kishinev**	**2.34**	**49**	⇑P		**Pn**		**06 15 42.7**			**+0.3**
KIS	**Kishinev**	**2.34**	**49**	P		**Pn**		**06 15 42.7**			**+0.3**
KIS				Pm				06 15 43.5			
KIS				⇓*i*S		**Sn**		**06 16 11.0**			**-1.0**
KIS				Sm				06 16 11.3			
KIS				m				06 16 11.5			
KIS	**Kishinev**	**2.34**	**49**	⇑P		**Pn**		**06 15 42.7**			**+0.3**
KIS	**Kishinev**	**2.34**	**49**			**Pn**		**06 15 42.7**			**+0.3**
PVL	**Pavlikeni**	**2.36**	**196**	*i* P		**Pn**		**06 15 44.4**			**+1.7**
MANR	**Mangalia**	**2.36**	**134**	⇓P		**Pn**		**06 15 42.9**			**+0.3**
MANR	**Mangalia**	**2.36**	**134**	⇑P		**Pn**		**06 15 42.9**			**+0.3**
TSMN	**Mangalia Port-**	**2.37**	**134**			**Pn**		**06 15 43.1**			**+0.2**
TSMN						**Sn**		**06 16 12.7**			**0.0**
DEV	**Deva**	**2.38**	**281**	⇓P		**Pn**		**06 15 43.6**			**+0.7**
DEV	**Deva**	**2.38**	**281**	⇓P		**Pn**		**06 15 43.6**			**+0.7**
PLVB	**Pleven**	**2.40**	**210**	⇓P		**Pn**		**06 15 43.4**			**+0.3**
PLVB	**Pleven**	**2.40**	**210**	⇓P		**Pn**		**06 15 43.4**			**+0.3**
DJES	**Djerdap**	**2.76**	**254**	*e*Pn		**Pn**		**06 15 47.2**			**-0.6**
DJES				*e*Sn		**Sn**		**06 16 16.4**			**-5.0**
DRGR		**2.79**	**299**	*e*Pn		**Pn**		**06 15 48.2**			**+0.1**
DRGR		**2.79**	**299**	P		**Pn**		**06 15 48.3**			**+0.1**
CHRU	**Chernivtsi**	**2.83**	**356**	⇑*i*P		**Pn**		**06 15 49.0**			**+0.4**
CHRU				Pm				06 15 49.7			
CHRU				*i* S		**Sn**		**06 16 23.7**			**+0.8**
CHRU				Sm				06 16 24.7			
RAKU	**Rahkiv**	**2.92**	**331**	*i* P		**Pn**		**06 15 50.6**			**+0.8**
RAKU				Pm				06 15 51.4			
RAKU				*i* S		**Sn**		**06 16 26.0**			**+0.9**
RAKU				Sm				06 17 01.3			
KSV	**Kosov**	**2.95**	**345**	⇑*i*P		**Pn**		**06 15 50.6**			**+0.5**
KSV				Pm				06 15 52.0			
KSV				⇑*i*S		**Sn**		**06 16 26.7**			**+0.9**
KSV				Sm				06 16 32.2			
NSLU	**Nyzhne Selyshc**	**2.98**	**336**	⇑*i*P		Pn		06 15 55.4			+4.8
NSLU				Pm				06 15 56.8			
NSLU				*i* S		Sn		06 16 36.0			+10
NSLU				Sm				06 17 03.4			
JMB	**Yambol**	**3.02**	**175**	*i* P		**Pn**		**06 15 51.1**			**0.0**
KMPD	**K-Podol'skiy**	**3.09**	**3**	⇓*i*P		**Pn**		**06 15 52.2**			**+0.3**
KMPD				*i* S		**Sn**		**06 16 28.9**			**0.0**
NDNU	**Novodnistrovsk**	**3.21**	**13**	⇑*i*P		**Pn**		**06 15 53.6**			**+0.1**
NDNU				Pm				06 15 53.9			
NDNU				⇑*i*S		**Sn**		**06 16 29.4**			**-2.3**
NDNU				Sm				06 16 30.5			
BZS	**Buzias**	**3.25**	**274**	*e*Pn		**Pn**		**06 15 53.7**			**-0.4**
BZS				*e*Sn		**Sn**		**06 16 28.3**			**-4.5**
ZAGS	**Zajecar**	**3.31**	**241**	*e*Pn		**Pn**		**06 15 53.7**			**-1.2**
ZAGS				*e*Sn		**Sn**		**06 16 28.6**			**-5.6**
ZAPS	**Zavoj**	**3.40**	**231**	*e*Pn		**Pn**		**06 15 56.4**			**+0.3**
ZAPS				*e*Sn		**Sn**		**06 16 30.4**			**-5.9**
KUBS	**Kucevo**	**3.42**	**253**	*e*Pn		**Pn**		**06 15 55.0**			**-1.2**
KORU	**Korolevo**	**3.42**	**323**	⇓*i*P		**Pn**		**06 15 57.1**			**+0.8**
KORU				*e*S		**Sn**		**06 16 38.3**			**+1.6**
STNU	**Starunia**	**3.44**	**340**	P		**Pn**		**06 15 57.6**			**+1.0**
STNU				*e*S		**Sn**		**06 16 38.0**			**+0.8**
TRSU	**Trosnyk**	**3.46**	**320**	*i* P		**Pn**		**06 15 57.3**			**+0.6**
TRSU				*e*S		**Sn**		**06 16 38.5**			**+1.1**
MEZ	**Mezhgor'ye**	**3.56**	**329**	⇓*i*P		**Pn**		**06 15 59.4**			**+1.3**
MEZ				Pm				06 16 00.7			
MEZ				*i* S		**Sn**		**06 16 41.5**			**+1.5**
MEZ				Sm				06 16 43.9			
VTS	**Vitosha**	**3.59**	**218**	P		**Pn**		**06 15 59.1**			**+0.4**
VTS	**Vitosha**	**3.59**	**218**	*e*Pn		**Pn**		**06 15 58.6**			**-0.1**
VTS				*e*Sn		**Sn**		**06 16 34.6**			**-6.3**
VTS	**Vitosha**	**3.59**	**218**	P		**Pn**		**06 15 59.2**			**+0.5**
VTS	**Vitosha**	**3.59**	**218**			**Pn**		**06 15 59.2**			**+0.5**
EDRB	**Edirne**	**3.65**	**174**	P		**Pn**		**06 15 59.5**			**+0.2**
EDRB	**Edirne**	**3.65**	**174**	P		**Pn**		**06 15 59.7**			**+0.4**
BERU	**Beregovo**	**3.70**	**319**	⇓*i*P		**Pn**		**06 15 59.0**			**-0.9**
BERU				*e*S		**Sn**		**06 16 44.7**			**+1.6**
HORU	**Horodok**	**3.74**	**2**	*i* P		**Pn**		**06 16 00.8**			**+0.4**
HORU				*i* S		**Sn**		**06 16 45.3**			**+1.2**
SVIS	**Svilajnac**	**3.78**	**253**	*e*Pn		**Pn**		**06 16 00.0**			**-0.9**
MUKU	**Mukachevo**	**3.84**	**322**	⇓*i*P		**Pn**		**06 16 02.6**			**+0.8**
MUKU				*e*S		**Sn**		**06 16 47.7**			**+1.1**
KDZ	**Kurdzhali**	**3.88**	**189**	*i* P		**Pn**		**06 16 02.6**			**+0.3**
RZN	**Rozhen**	**3.95**	**197**	*i* P		**Pn**		**06 16 03.6**			**+0.1**
PHSR	**Pinarhisar**	**3.96**	**166**	P		**Pn**		**06 16 03.6**			**+0.2**
MORS	**Morshin**	**3.99**	**337**	⇓*i*P		**Pn**		**06 16 05.3**			**+1.6**
MORS				*e*S		**Sn**		**06 16 51.7**			**+1.7**
BOSS	**Bosilegrad**	**4.04**	**224**	*e*Pn		**Pn**		**06 16 05.0**			**+0.6**
BOSS				*e*Sn		**Sn**		**06 16 45.5**			**-5.7**
UZH	**Uzhgorod**	**4.15**	**321**	*e*P		**Pn**		**06 16 05.2**			**-0.6**
UZH				*e*S		**Sn**		**06 16 51.9**			**-1.9**
UZH				smax	smax						
	comp=N,30nm,0.8s										
UZH				smax	smax						
	comp=E,40nm,0.8s										
UZH	**Uzhgorod**	**4.15**	**321**	⇓*i*P		**Pn**		**06 16 06.7**			**+0.9**
UZH				*e*S		**Sn**		**06 16 55.4**			**+1.6**
BARS	**Barje**	**4.15**	**232**	*e*Pn		Pn		06 15 52.8			-13
BARS	**Barje**	**4.15**	**232**	*e*Pn		**Pn**		**06 16 06.3**			**+0.3**
BARS				*e*Sn		Sn		06 16 29.0			-25
SHIU	**Shidnytsya**	**4.23**	**333**	⇓*i*P		**Pn**		**06 16 08.2**			**+1.3**
SHIU				*e*S		**Sn**		**06 16 57.3**			**+1.6**
GRUS	**Gruza**	**4.25**	**250**	*e*Pn		**Pn**		**06 16 07.5**			**+0.3**
GRUS				*e*Sn		**Sn**		**06 16 51.7**			**-4.6**
CTYL	**Yalikoy Yolu**	**4.27**	**159**	P		**Pn**		**06 16 07.5**			**0.0**
SELS	**Selova**	**4.32**	**240**	*e*Pn		**Pn**		**06 16 08.2**			**+0.1**
SELS				*e*Sn		**Sn**

XOR	Xorichti	6.51	201	P		Pn	06 16 36.9	-0.6	
NEO	Neokhori	6.56	201	P		Pn	06 16 37.7	-0.5	
MGRS	Mrkonjic Grad	6.59	264	*e*Pn		Pn	06 16 40.2	+1.7	
SKIA	Skiathos	6.64	199	P		Pn	06 16 38.2	-1.0	
BEHE	Becsehely	6.67	282	*e*Pn		Pn	06 16 41.6	+2.0	
STON	Ston	6.67	250	*e*Pn		Pn	06 16 41.2	+1.6	
SMOL	Smolenice	6.75	300	*e*P		Pn	06 16 40.5	-0.1	
SMOL	Smolenice	6.75	300	*e*PN		Pn	06 16 40.4	-0.1	
JAVC	Velka Javorina	6.75	303	‖ *i*PN		Pn	06 16 41.8	+1.1	
MODS	Modra-Piesok	6.79	298	*e*P		Pn	06 16 40.4	-0.7	
MODS	Modra-Piesok	6.79	298	*e*PN		Pn	06 16 40.4	-0.7	
ZST	Bratislava	6.83	297	*e*P		Pn	06 16 41.3	-0.4	
ZST	Bratislava	6.83	297	*e*PN		Pn	06 16 41.3	-0.4	
OKC	Ostrava-Krasne	6.99	311	*e*P		Pn	06 16 43.3	-0.5	
OKC	Ostrava-Krasne	6.99	311	*e*PN		Pn	06 16 43.3	-0.5	
AGG	Agios Georgios	7.08	206	P		Pn	06 16 45.8	+0.7	
AGG	Agios Georgios	7.08	206	Pn		Pn	06 16 45.8	+0.7	
CHOS	Chios island	7.09	181	P		Pn	06 16 45.3	0.0	
MANT	Manisa	7.19	165			Pn	06 16 46.5	-0.3	
MORC	Moravsky Berou	7.28	309	P		Pn	06 16 47.8	0.0	
MORC	Moravsky Berou	7.28	309	‖ *i*PN		Pn	06 16 47.2	-0.6	
MORC	Moravsky Berou	7.28	309			Pn	06 16 47.8	0.0	
BEL	Belsk	7.31	332	*e*P		Pn	06 16 49.7	+1.6	
BEL	Belsk	7.31	332	*e*P		Pn	06 16 49.6	+1.6	
ANTO	Ankara	7.40	137	P		Pn	06 16 50.1	+0.7	
ANTO	Ankara	7.40	137			Pn	06 16 50.1	+0.7	
GCIS	Gornji Cirnik	7.45	277	*i* P		Pn	06 16 51.9	+1.8	
CONA	Conrad Observa	7.55	293	*i* Pn		Pn	06 16 52.3	+0.9	
	comp=E,54nm,1.9s,SNR=14								
GROS	Grobnik	7.55	281	*i* P		Pn	06 16 52.9	+1.5	
CRES	Cresnjev	7.57	276	*e*Pn		Pn	06 16 53.2	+1.6	
VRAC	Vranov	7.58	304	P		Pn	06 16 52.1	+0.3	
	comp=E,1.1nm,0.3s,baz=115,slow=13,SNR=56								
VRAC	Vranov	7.58	304	‖ *i*PN		Pn	06 16 52.3	+0.5	
ANX	Ano Chora	7.60	207	P		Pn	06 16 52.8	+0.7	
KRUC	Moravsky	7.60	302	‖ *i*PN		Pn	06 16 52.0	0.0	
ARSA	Arzberg	7.63	287	*i* Pn		Pn	06 16 54.0	+1.6	
	comp=E,17nm,0.7s,SNR=6.5								
LEGS	Legarje	7.66	277	*i* P		Pn	06 16 54.7	+1.8	
KRLC	Kraliky	7.86	309	*e*P		Pn	06 16 54.6	-0.9	
KRLC	Kraliky	7.86	309	*e*PN		Pn	06 16 54.6	-0.9	
SCTE	Santa Cesarea	7.87	229	Pn		Pn	06 16 58.2	+2.5	
PDKS	Podkum	7.89	278	*i* P		Pn	06 16 58.4	+2.5	
SOKA	Soboth	7.89	283	*i* Pn		Pn	06 16 57.5	+1.5	
	comp=E,27nm,0.8s,SNR=18								
BR131	Keskin Array S	7.92	134	P		Pn	06 16 56.7	+0.1	
BR131	Keskin Array S	7.92	134			Pn	06 16 56.7	+0.1	
BRTR	Keskin Array B	7.92	134	P		Pn	06 16 56.7	+0.1	
	comp=E,2.2nm,0.3s,baz=321,slow=11,SNR=114								
BRTR				PcP		PcP	06 23 21.4	+0.7	
	comp=E,0.4nm,0.3s,baz=320,slow=3.2,SNR=9.2								
ANN	Anapa	7.94	91	*e*P		Pn	06 16 53.7	-2.9	
ANN				*e*S		Sn	06 18 21.8	-3.0	
ANN				pmax		pmax			
	comp=Z,112nm,1.6s								
OBKA	Obir	8.21	281	*i* Pn		Pn	06 17 02.2	+1.9	
	comp=Z,7.5nm,0.8s								
TREC	Trest	8.24	301	*e*P		Pn	06 17 01.7	+1.1	
TREC	Trest	8.24	301	*e*PN		Pn	06 17 01.7	+1.1	
DPC	Dobruska-Polom	8.25	310	*e*P		Pn	06 17 00.6	-0.2	
DPC	Dobruska-Polom	8.25	310	*e*PN		Pn	06 17 00.6	-0.2	
CEY	Cerknica	8.29	276	*e*Pn		Pn	06 17 01.6	+0.2	
ISP	Isparta	8.29	156	P		Pn	06 17 02.3	+0.8	
ISP	Isparta	8.29	156	Pn		Pn	06 17 02.3	+0.8	
APE	Apeiranthos	8.42	184	*e*P		Pn	06 17 02.5	-0.7	
OSTC	Ostas	8.42	311	*e*PN		Pn	06 17 02.9	-0.2	
OSTC				*ex*		x	06 17 11.9		
SGRT	San Giovanni R	8.48	248	Pn		Pn	06 17 03.3	-0.7	
UPC	Upice	8.51	310	*e*P		Pn	06 17 03.8	-0.4	
UPC	Upice	8.51	310	*e*PN		Pn	06 17 03.8	-0.4	
CHVC	Chvalec	8.53	310	*e*PN		Pn	06 17 04.4	-0.1	
CHVC				*ex*		x	06 17 12.9		
KSP	Ksiaz	8.54	312	*e*P		Pn	06 17 04.3	-0.4	
KSP	Ksiaz	8.54	312	*e*P		Pn	06 17 04.3	-0.4	
MOA	Molln	8.57	290	*i* Pn		Pn	06 17 06.7	+1.6	
	comp=Z,21nm,1.4s,SNR=9.2								
SUW	Suwalki	8.77	348	P		Pn	06 17 06.4	-1.2	
SUW	Suwalki	8.77	348	*e*P		Pn	06 17 06.0	-1.6	
SUW				*e*			06 19 09.9		
SUW	Suwalki	8.77	348			Pn	06 17 06.4	-1.2	
MYKA	Terra Mystica	8.84	282	Pn		Pn	06 17 11.1	+2.3	
	comp=Z,9.9nm,1.0s								
ACER	Acerenza	8.87	242			Pn	06 17 09.2	0.0	
ITM	Ithomi	8.90	203	Pn		Pn	06 17 09.2	-0.4	
KBA	Koelnbreinsper	9.08	285	*i* Pn		Pn	06 17 14.1	+2.1	
	comp=Z,40nm,1.0s,SNR=20								
PRU	Pruhonice	9.08	304	*e*P		Pn	06 17 11.8	-0.1	
PRU	Pruhonice	9.08	304	*e*PN		Pn	06 17 11.8	-0.1	
MICGM	Minsk	9.09	6	*e*P		Pn	06 17 08.0	-4.0	
MICGM				*e*S		Sn	06 18 47.0	-5.5	
MNK	Minsk	9.09	6	*e*P		Pn	06 17 08.0	-4.0	
MNK				*e*S		Sn	06 18 47.0	-5.5	
ELL	Elmali	9.15	161	P		Pn	06 17 12.6	-0.4	
ELL	Elmali	9.15	161	Pn		Pn	06 17 12.6	-0.4	
GEC2	GERESS Array S	9.18	296	*e*Pn		Pn	06 17 13.9	+0.6	
GEC2	GERESS Array S	9.18	296			Pn	06 17 14.5	+1.1	
GERES	GERESS Array B	9.18	296	P		Pn	06 17 14.4	+1.1	
	comp=Z,0.7nm,0.3s,baz=106,slow=14,SNR=79								
PVCC	Panska Ves	9.31	307	*e*P		Pn	06 17 14.8	-0.1	
PVCC	Panska Ves	9.31	307	*e*PN		Pn	06 17 14.8	-0.1	
KHC	Kasperske Hory	9.35	298	*e*P		Pn	06 17 16.6	+1.1	
KHC	Kasperske Hory	9.35	298	*e*PN		Pn	06 17 16.6	+1.1	
KHC				*ex*		x	06 17 24.9		
KHC	Kasperske Hory	9.35	298			Pn	06 17 17.4	+1.9	
TIP	Timpagrande	9.43	231			Pn	06 17 16.9	+0.2	
NACGM	Naroch	9.44	2	*e*P		Pn	06 17 15.0	-1.6	
NACGM				*e*S		Sn	06 18 49.0	-12	
INTR	Introdacqua	9.58	253			Pn	06 17 19.0	+0.3	
ABTA	Abfaltersbach	9.62	282	*i* Pn		Pn	06 17 23.3	+4.0	
	comp=Z,14nm,1.3s								
GKP	Gorka Klasztor	9.75	326	*e*P		Pn	06 17 20.1	-0.7	
GKP	Gorka Klasztor	9.75	326	*e*P		Pn	06 17 20.1	-0.7	
AQU	L'Aquila	9.78	256	P		Pn	06 17 21.8	+0.4	
AQU	L'Aquila	9.78	256			Pn	06 17 21.8	+0.4	
WET	Wettzell	9.79	297	*e*Pn		Pn	06 17 22.4	+0.7	
NRCA	Norcia	9.80	259			Pn	06 17 22.3	+0.6	
BRG	Berggiesshubel	9.83	308	*i* P		Pn	06 17 21.5	-0.3	
	comp=Z,22nm,1.1s								
BRG	Berggiesshubel	9.83	308	*i* P		Pn	06 17 21.5	-0.3	
BRG				pmax		pmax			
	comp=Z,22nm,1.1s								
BRG	Berggiesshubel	9.83	308	*e*Pn		Pn	06 17 20.6	-1.3	
IIGN	Ignalina	9.88	360	*e*P		Pn	06 17 20.6	-2.0	
IIGN				IAmb		IAmb	06 17 21.3		
	comp=E,39nm,0.4s								
KARP	Karpathos	9.95	176	Pn		Pn	06 17 24.7	+1.1	
MURB	Monte Urbino	10.07	262			Pn	06 17 24.4	-0.8	
ISAL	Salakas	10.10	360	*e*P		Pn	06 17 23.2	-2.3	
ISAL				IAmb		IAmb	06 17 24.1		
	comp=Z,20nm,0.7s								
PABE	Paberze	10.14	353	*e*P		Pn	06 17 24.6	-1.4	
PABE				IAmb		IAmb	06 17 25.1		
	comp=Z,111nm,0.7s								
FBE	Freiberg	10.18	307	*e*Pn		Pn	06 17 26.2	-0.3	
IDI	Anoyia	10.23	186	P		Pn	06 17 26.9	-0.6	
	comp=Z,0.4nm,0.3s,baz=15,slow=16,SNR=2.8								
IZAR	Zarasai	10.28	0	*e*P		Pn	06 17 25.8	-2.0	
IZAR				IAmb		IAmb	06 17 26.2		
	comp=Z,25nm,0.5s								
VORD	Divnogorie	10.29	53	*e*P		Pn	06 17 26.6	-1.4	
VORD				pmax		pmax			
	comp=Z,30nm,0.4s								
VSR	Storozhevoye	10.33	52	*e*P		Pn	06 17 27.5	-1.1	
VSR				pmax		pmax			
	comp=Z,70nm,0.4s								
NKC	Novy Kostel	10.42	302	*e*P		Pn	06 17 30.9	+1.1	
NKC	Novy Kostel	10.42	302	*e*PN		Pn	06 17 30.9	+1.1	
TANN	Tannenbergstha	10.48	303	*e*Pn		Pn	06 17 31.8	+1.2	
WERN	Wernitzgruen	10.48	302	*e*Pn		Pn	06 17 31.4	+0.8	
	comp=Z,54nm,1.3s								
MANZ	Manzenberg	10.53	300	*e*Pn		Pn	06 17 32.1	+0.7	
GUNZ	Gunzen	10.53	303	*e*Pn		Pn	06 17 32.3	+1.0	
SQTA	Sankt Quirin	10.54	285	*i* Pn		Pn	06 17 35.8	+4.3	
	comp=Z,24nm,0.9s,SNR=7.9								
CLL	Collm	10.55	308	*i* P		Pn	06 17 30.6	-0.9	
CLL	Collm	10.55	308	*i* P		Pn	06 17 30.6	-0.9	
CLL				*i*			06 17 38.1		
	comp=Z,23nm,1.6s								
CLL				*i*			06 18 35.3		
VORR	Voronezh	10.58	50	P		Pn	06 17 31.0	-0.9	
VORR				pmax		pmax			
	comp=Z,300nm,1.0s								
MOTA	Moosalm	10.62	286	*i* Pn		Pn	06 17 36.3	+3.6	
	comp=Z,23nm,1.3s,SNR=6.0								
PLN	Plauen	10.68	303	*e*Pn		Pn	06 17 34.4	+1.1	
FETA	Feichten	10.86	284	*i* Pn		Pn	06 17 38.5	+2.7	
	comp=Z,13nm,1.1s								
RETA	Reutte	10.87	286	*i* Pn		Pn	06 17 39.4	+3.6	
	comp=Z,5.4nm,0.9s								
PBUR	Paburg	10.90	347	*e*P		Pn	06 17 34.3	-1.8	
LPSR	Galich'ya Gora	10.95	45	*e*P		Pn	06 17 35.3	-1.4	
LPSR				pmax		pmax			
	comp=Z,10.0nm,0.4s								
MOX	Moxa	11.06	303	P		Pn	06 17 39.3	+1.0	
MOX				pmax		pmax			
	comp=Z,11nm,1.8s								
MOX	Moxa	11.06	303	*e*Pn		Pn	06 17 40.1	+1.7	
FUORN	Ofenpass-Fuorn	11.17	282	Pn		Pn	06 17 40.4	+0.4	
NEUB	Neuenburg	11.20	306	*e*Pn		Pn	06 17 39.9	-0.2	
UBR	Ueberruh	11.32	287	*e*Pn		P	06 17 51.3	+0.9	
DAVA	Damuels	11.45	285	*i* Pn		Pn	06 17 45.2	+1.6	
	comp=Z,12nm,0.9s								
OBN	Obninsk	11.67	31	*e*P		Pn	06 17 44.5	-1.8	
OBN				*i* S		Sn	06 19 44.2	-11	
OBN				pmax		pmax			
	comp=Z,21nm,0.4s								
VRH	Novokhopyorsk	11.77	55	*e*P		Pn	06 17 46.1	-1.5	
VRH				pmax		pmax			
	comp=Z,90nm,0.6s								
KIV	Kislovodsk	11.80	92	*e*P		Pn	06 17 45.6	-2.6	
KIV				*e*S		Sn	06 19 56.2	-2.0	
KIV				pmax		pmax			
	comp=Z,29nm,1.1s								
TUE	Stuetta	11.80	281	Pn		Pn	06 17 49.4	+1.1	
KVAR	Kislovodsk Arr	11.81	92	P		P	06 17 53.5	-2.3	
	baz=75,slow=16,SNR=2.4								
GOF	Gofitskoye	11.85	86	‖ *e*P		Pn	06 17 50.6	+1.9	
GOF				*i* S		Sn	06 19 53.8	-5.5	
GOF				pmax		pmax			
	comp=Z,26nm,0.5s								
GOF				smax		smax			
	comp=N,46nm,0.6s								
GOF				smax		smax			
	comp=E,105nm,0.6s								
VAE	Valguarnera	11.93	232	P		Pn	06 17 53.5	+3.6	
	comp=E,6.2nm,0.3s,baz=0.8,slow=4.2,SNR=2.2								
KBZ	Khabaz	12.00	92	P		Pn	06 17 51.2	+0.5	
	comp=E,0.3nm,0.3s,baz=301,slow=5.9,SNR=4.5								
SLIT	Slitere, Latvi	12.41	350	*e*P		Pn	06 17 52.4	-3.5	
MOS	Moscow	12.54	31	*e*P		Pn	06 17 56.4	-1.2	
MOS				*e*			06 20 04.7		
NRDL	Niedersach Rie	12.70	309	*e*Pn		Pn	06 17 58.9	-0.6	
VSU	Vasula	13.01	1	‖ *e*P		Pn	06 18 01.5	-2.1	
VSU				pmax		pmax			
	comp=Z,90nm,0.8s								
VSU	Vasula	13.01	1	*e*P		Pn	06 18 00.0	-3.6	
AKH	Akhalkalaki	13.17	102	P		Pn	06 18 06.9	+0.8	
AKH	Akhalkalaki	13.17	102	Pn		Pn	06 18 06.9	+0.8	
BNI	Bardonecchia	13.79	275	P		Pn	06 18 15.0	+1.1	
BNI	Bardonecchia	13.79	275			Pn	06 18 15.0	+1.1	
WLF	Walferdange	14.19	294	P		Pn	06 18 19.0	+0.3	
WLF	Walferdange	14.19	294	Pn		Pn	06 18 19.0	+0.3	
MMAI	Mount Meron Ar	14.31	147	P		P	06 18 22.7	-1.0	
	baz=334,slow=13,SNR=2.5								
MEM	Membach	14.46	298	P		P	06 18 26.8	+1.7	
MEM				sPn		sPn	06 18 52.7	-4.3	
GNI	Garni	14.57	105	P		Pn	06 18 24.3	+0.4	
GNI	Garni	14.57	105	P		P	06 18 26.9	+0.3	
	comp=Z,0.8nm,0.3s,baz=322,slow=19,SNR=4.1								
GNI	Garni	14.57	105			Pn	06 18 24.3	+0.4	
BMRD	Maredsous	15.18	296	P		P	06 18 35.5	+2.5	
ASF	Jabal al Asfar	15.65	144	P		P	06 18 40.0	+1.5	
ASF	Jabal al Asfar	15.65	144	P		P	06 18 40.0	+1.5	
	comp=Z,0.3nm,0.3s,baz=306,slow=3.7,SNR=8.1								
SSF	Saint Saulge	15.80	284	*e*P		P	06 18 39.9	-0.1	
SSF				pmax		pmax			
	comp=Z,10.0nm,0.7s								
FINES	FINESS Array B	15.99	360	P		Pn	06 18 37.9	-3.3	
	comp=Z,1.4nm,0.3s,baz=176,slow=12,SNR=35								
KEST	Kesra	16.08	239	P		P	06 18 44.2	+0.9	
	comp=Z,2.1nm,0.3s,baz=73,slow=11,SNR=27								
KEST	Kesra	16.08	239	P		P	06 18 43.2	0.0	
KEST				IAmb		IAmb	06 18 47.0		
	comp=Z,22nm,0.7s								
HFS	Hagfors	16.47	337	P		Pn	06 18 44.6	-2.5	
	comp=Z,0.9nm,0.3s,baz=149,slow=13,SNR=42								
EIL	Elat	17.21	154	P		Pn	06 18 56.4	+0.2	
	comp=Z,0.6nm,0.3s,baz=356,slow=6.8,SNR=5.3								
KLMR	Klimovskoe	17.28	22	*e*P		P	06 18 53.9	-2.2	
KLMR				*e*			06 22 03.3		
KLMR				pmax		pmax			
	comp=Z,37nm,1.2s								
KLMR	Klimovskoe	17.28	22	*e*Pn		P	06 18 54.0	-2.2	
KLMR				AMP			06 19 10.6		
	comp=Z,37nm,1.2s								
KLMR				*e*Sn		S	06 22 03.4	-5.6	
KLMR				*e*Sn		S	06 22 03.4	-5.6	
KONO	Kongsberg	17.35	331	*e*P		Pn	06 18 57.8	+0.2	
NC602	NORSAR Array S	17.58	336	*e*P		P	06 18 58.3	-1.1	
NC602	NORSAR Array S	17.58	336	P		P	06 18 58.5	-0.9	
NC602				IAmb		IAmb	06 19 00.1		
	comp=Z,29nm,0.8s								
NC405	NORSAR Array S	17.83	337	P		P	06 19 01.5	-0.8	
NAO01	NORSAR Array S	17.86	335	P		P	06 19 02.4	-0.1	
NB201	NORSAR Array S	17.90	336	P		P	06 19 02.9	-0.1	
NB2	NORSAR Subarra	17.92	336	P		P	06 19 01.6	-1.6	
	comp=Z,4.9nm,0.6s,baz=141,slow=12								
NB2	NORSAR Subarra	17.92	336	P		P	06 19 01.6	-1.6	
	baz=141,slow=12								
NOA	NORSAR Array B	17.92	336	P		P	06 19 02.3	-0.9	
	comp=Z,0.2nm,0.3s,baz=142,slow=10,SNR=39								
NC303	NORSAR Array S	18.02	336	P		P	06 19 04.8	+0.5	
NC303				IAmb		IAmb	06 19 06.5		
	comp=Z,40nm,0.8s								
NBO00	NORSAR Array S	18.04	335	P		Pn	06 19 05.2	-0.6	
NC204	NORSAR Array S	18.24	336	P		P	06 19 06.3	-0.4	
NC204				IAmb		IAmb	06 19 09.1		
	comp=Z,39nm,0.8s								
MFF	Saint Martin d	18.33	283	*e*P		P	06 19 07.8	0.0	
MFF				pmax		pmax			
	comp=Z,30nm,0.7s								
BLS5	Blasjo	18.34	327	*e*P		Pn	06 19 09.7	+0.3	
DOMB	Dombas	19.34	335	*e*P		P	06 19 19.8	+1.1	
HYA	Hoyanger	19.62	330	*e*P		Pn	06 19 23.3	-1.1	
PRGR	Permogore	19.73	28	*e*P		Pn	06 19 26.0	+0.4	
PRGR				*e*S		S	06 22 53.3	-4.2	
PRGR				pmax		pmax			
	comp=Z,13nm,0.6s								
TMCR	Tamitsa	19.85	15	*e*P		P	06 19 24.1	0.0	
TMCR				pmax		pmax			
	comp=Z,21nm,0.4s								
AKN	Aaknes	20.08	333	*e*P		P	06 19 28.1	+1.4	
MOL	Molde	20.20	335	*e*P		P	06 19 29.4	+1.5	
NSS	Namsos	20.68	342	*e*P		P	06 19 31.7	-1.2	
EKA	Eskdalemuir Ar	21.02	309	P		P	06 19 37.2	+0.5	
	comp=Z,1.7nm,0.5s,baz=108,slow=12,SNR=3.4								
AKTO	Aktyubinsk	21.75	65	P		P	06 19 46.5	+1.9	
	comp=Z,1.1nm,0.3s,baz=274,slow=5.2,SNR=9.9								
KONS	Konsvik	22.21	346	*e*P		P	06 19 49.1	-0.1	
APA	Apatity	22.46	7	‖ *i*P		P	06 19 55.9	+4.3	
APA				pmax		pmax			
	comp=Z,38nm,0.7s								
ARU	Arti	22.90	50	*d i*P		P	06 19 56.5	+0.7	
ARU							06 20 33.4		
ARU				S		S	06 23 57.3	+2.2	
ARU				SS		SnSn	06 24 51.3	+8.3	
ARU				pmax		pmax			
	comp=Z,16nm,1.4s								
ARU	Arti	22.90	50	P		P	06 19 56.6	+0.7	
	comp=Z,3.3nm,0.4s,baz=246,slow=6.0,SNR=11								
LVZ	Lovozero	22.90	8	‖ *e*P		P	06 19 53.2	-2.6	
LVZ				pmax		pmax			
	comp=Z,93nm,1.8s								
ESBB	Sonseca Array	22.91	266	P		P	06 19 55.2	-1.0	
ESBB				IAmb		IAmb	06 19 56.9		
	comp=Z,43nm,1.2s								
ESDC	Sonseca Array	22.91	266	P		P	06 19 55.5	-0.8	
	comp=Z,10nm,0.6s,baz=64,slow=9.8,SNR=70								
STEI	Steigen	23.23	349	*e*P		P	06 19 58.6	-0.2	
PAB	San Pablo	23.23	266	P		P	06 19 58.7	-0.5	
PAB				pmax		pmax			
	comp=Z,16nm,0.7s								
PAB	San Pablo	23.23	266	P		P	06 19 58.7	-0.5	
PAB				IAmb		IAmb	06 19 59.6		
	comp=Z,16nm,0.7s								
KTK1	Kautokeino	23.64	357	*e*P		P	06 20 02.9	+0.3	
PBRG	Braganca	24.05	273	*e*P		P	06 20 07.0	+0.3	
	comp=Z,58nm,2.0s								
ARCES	ARCESS Array B	24.12	359	P		P	06 20 07.1	+0.2	
	comp=Z,1.7nm,0.5s,baz=179,slow=9.2,SNR=18								
ARCES				pP		pP	06 20 33.1	-1.6	
	comp=Z,4.8nm,0.5s,baz=177,slow=9.6,SNR=5.5								
ARCES				PcP		PcP	06 23 44.5	+0.5	
	comp=Z,0.7nm,0.4s,baz=160,slow=2.9,SNR=4.4								
ARE0	ARCESS Array S	24.12	359	*e*P		P	06 20 06.9	-0.1	
MVO	Moncorvo	24.48	272	*e*P		P	06 20 09.9	-0.7	
	comp=Z,48nm,0.8s								
TRO	Tromso	24.50	354	*e*P		P	06 20 11.1	+0.8	
GEYT	Alibeck	24.84	96	P		P	06 20 16.0	+2.1	
	comp=Z,1.0nm,0.3s,baz=287,slow=6.9,SNR=2.9								
GEYT				PcP		PcP	06 23 47.1	+0.8	
	comp=Z,1.2nm,0.5s,baz=229,slow=8.8,SNR=3.5								
PVRL	Vila Real	24.93	272	*e*P		P	06 20 14.0	-0.6	
MTE	Manteigas	25.13	270	*e*P		P	06 20 15.7	-0.8	
	comp=Z,59nm,1.9s								
MTE	Manteigas	25.13	270	P		P	06 20 16.2	-0.3	
MTE				IAmb		IAmb	06 20 17.8		
	comp=Z,24nm,0.9s								
PVIS	Viseu	25.26	271	*e*P		P	06 20 16.9	-0.7	
PCBR	Castelo Branco	25.31	269	*e*P		P	06 20 17.2	-0.8	
PMRV	Marv??o	25.42	268	*e*P		P	06 20 18.1	-0.9	
	comp=Z,50nm,1.4s								
PESTR	Estremoz	25.80	267	*e*P		P	06 20 21.4	-1.0	
	comp=Z,47nm,1.8s								
PESTR	Estremoz	25.80	267	P		P	06 20 21.6	-0.8	
PESTR				IAmb		IAmb	06 20 22.2		
	comp=Z,11nm,0.7s								
COI	Coimbra	25.82	271	*e*P		P	06 20 22.3	-0.3	
	comp=Z,70nm,1.7s								
PCAS	Casmilo, Conde	25.94	270	*e*P		P	06 20 21.6	-2.1	
PTOM	Tomar	26.06	269	*e*P		P	06 20 25.1	+0.4	
PMTG	Montargil	26.16	268	*e*P		P	06 20 24.3	-1.3	
EVO	Evora	26.24	267	*e*P		P	06 20 25.3	-1.1	
	comp=Z,54nm,2.2s								
PBEJ	Beja	26.37	266	*e*P		P	06 20 28.6	+1.0	
	comp=Z,47nm,1.8s								
PNCL	Nicolau / Gran	26.79	266	*e*P		P	06 20 31.4	0.0	
MDT	Midelt	26.89	253	P		P	06 20 32.6	+0.2	
	comp=Z,9.0nm,0.7s,baz=31,slow=5.2,SNR=6.9								
BVAR	Borovoye Array	29.39	59	P		P	06 20 55.8	+1.5	
	comp=Z,1.0nm,0.6s,baz=258,slow=7.2,SNR=2.9								
BVAR				pP		pP	06 21 24.1	+1.0	
	comp=Z,5.0nm,0.8s,baz=275,slow=7.1,SNR=10								
KK31	Karatay Array	31.48	78	P		P	06 21 14.5	+1.7	
KK31				pmax		pmax			
	comp=Z,2.0nm,0.7s								
KK31	Karatay Array	31.48	78	P		P	06 21 14.5	+1.7	
SPA0	Spitsbergen Ar	33.04	356	*e*P		P	06 21 26.6	+0.6	
SPITS	Spitsbergen Ar	33.04	356	P		P	06 21 26.8	+0.8	
	comp=Z,4.9nm,0.7s,baz=140,slow=11,SNR=18								
SPITS				PcP		PcP	06 24 07.2	+1.0	
	comp=Z,2.0nm,0.5s,baz=172,slow=4.4,SNR=6.

BILL				*e*			06 25 49.9	
BILL				*e*			06 27 30.7	
BILL				pmax		pmax		
	comp=Z,2.0nm,1.0s							
SEY	**Seymchan**	**63.76**	**24**⇓	*e*P		**P**	**06 25 21.6**	**+0.6**
SEY	**Seymchan**	**63.76**	**24**	P		**P**	**06 25 22.2**	**+1.2**
	comp=Z,1.9nm,0.6s,baz=343,slow=4.3,SNR=6.1							
CHTO	**Chiang Mai**	**64.79**	**88**	P		**P**	**06 25 29.3**	**+0.9**
CHTO				pmax		pmax		
	comp=Z,7.0nm,0.7s							
CHTO	**Chiang Mai**	**64.79**	**88**	P		**P**	**06 25 29.3**	**+0.9**
CHTO				IAmb		IAmb	06 25 29.7	
	comp=Z,7.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**65.02**	**89**	P		**P**	**06 25 31.1**	**+1.1**
	comp=Z,6.6nm,0.7s,baz=304,slow=7.4,SNR=15							
CMAR				pP		**pP**	**06 26 03.3**	**+0.8**
	comp=Z,2.1nm,0.5s,baz=305,slow=8.0,SNR=1.8							
CMAR	**Chiang Mai Arr**	**65.02**	**89**	P		**P**	**06 25 31.2**	**+1.3**
INK	**Inuvik**	**65.53**	**352**	P		**P**	**06 25 32.2**	**-0.1**
	comp=Z,1.7nm,0.3s,baz=33,slow=6.6,SNR=39							
KLR	**Kul'dur**	**65.58**	**44**⇑	*e*P		**P**	**06 25 32.2**	**-0.9**
KLR				pmax		pmax		
	comp=Z,7.0nm,2.3s							
YKA	**Yellowknife Ar**	**67.91**	**342**	P		**P**	**06 25 47.5**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=26,slow=5.6,SNR=63							
YKA				pP		**pP**	**06 26 19.6**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=25,slow=6.1,SNR=5.1							
USA0B	**Ussuriysk Arra**	**69.12**	**48**	*e*P		**P**	**06 25 56.1**	**+0.7**
USRK	**Ussuriysk Ar.**	**69.12**	**48**	P		**P**	**06 25 56.5**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=290,slow=4.4,SNR=4.0							
NJ2	**Nanjing**	**69.63**	**65**	*e*P		**P**	**06 25 58.6**	**-0.1**
NJ2				pmax		pmax		
	comp=Z,14nm,1.0s							
ILAR	**Eielson Array**	**69.96**	**357**	P		**P**	**06 26 00.9**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=2.6,slow=4.9,SNR=10							
LBTB	**Lobatse**	**70.16**	**181**	P		**P**	**06 26 03.0**	**+1.1**
LBTB				pmax		pmax		
	comp=Z,8.0nm,0.8s							
LBTB	**Lobatse**	**70.16**	**181**	P		**P**	**06 26 03.0**	**+1.1**
LBTB				IAmb		IAmb	06 26 04.1	
	comp=Z,8.3nm,0.8s							
DAWY	**Dawson**	**70.21**	**353**	P		**P**	**06 26 03.1**	**+1.3**
DAWY				IAmb		IAmb	06 26 03.7	
	comp=Z,6.1nm,0.8s							
DOT	**Dot Lake**	**70.94**	**355**	P		**P**	**06 26 07.3**	**+1.0**
DOT				IAmb		IAmb	06 26 08.5	
	comp=Z,9.4nm,0.7s							
KSRS	**Korea Array**	**71.52**	**55**	P		**P**	**06 26 11.1**	**+1.1**
	comp=Z,0.7nm,0.4s,baz=306,slow=6.0,SNR=3.4							
KSRS				pP		**pP**	**06 26 43.8**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=312,slow=4.9,SNR=4.4							
ULM	**Lac du Bonnet**	**72.26**	**325**	P		**P**	**06 26 13.9**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=38,slow=6.2,SNR=5.2							
G40A	**Rib Lake**	**73.62**	**319**	P		**P**	**06 26 22.6**	**+0.1**
G40A				IAmb		IAmb	06 26 25.6	
	comp=Z,17nm,1.4s							
BOSA	**Boshof**	**73.75**	**181**	P		**P**	**06 26 24.3**	**+1.0**
BOSA				pmax		pmax		
	comp=Z,6.0nm,1.2s							
BOSA	**Boshof**	**73.75**	**181**	P		**P**	**06 26 23.5**	**+0.3**
	comp=Z,1.9nm,0.4s,baz=2.2,slow=5.4,SNR=7.3							
BOSA	**Boshof**	**73.75**	**181**	P		**P**	**06 26 24.3**	**+1.0**
TGL	**Tana Glacier**	**73.75**	**354**	P		**P**	**06 26 24.2**	**+1.2**
PET	**Petropavlovsk**	**73.76**	**28**	*e*P		**P**	**06 26 21.3**	**-1.7**
PET				pmax		pmax		
	comp=Z,48nm,1.8s							
KDAK	**Kodiak Island**	**77.10**	**359**	P		**P**	**06 26 43.3**	**+1.3**
	comp=Z,7.5nm,0.8s,baz=335,slow=2.6,SNR=4.5							
W50A	**Signal Mountai**	**78.69**	**309**	P		**P**	**06 26 51.9**	**+0.6**
LAO	**LASA Array**	**79.14**	**329**	P		**P**	**06 26 55.2**	**+1.6**
LAO				IAmb		IAmb	06 26 55.3	
	comp=Z,9.7nm,0.8s							
EGMT	**Eagleton**	**79.22**	**332**	P		**P**	**06 26 54.8**	**+0.8**
EGMT				IAmb		IAmb	06 26 55.3	
	comp=Z,11nm,0.7s							
OBIP	**Obispado Ponce**	**79.31**	**285**	P		**P**	**06 26 55.8**	**+1.0**
OBIP				IAmb		IAmb	06 27 02.2	
	comp=Z,16nm,1.1s							
AGPR	**Aguadilla, PR**	**79.36**	**285**	P		**P**	**06 26 56.1**	**+1.0**
MPR	**Mayaguez**	**79.56**	**285**	P		**P**	**06 26 57.0**	**+0.9**
WALA	**Waterton Lakes**	**79.63**	**335**	P		**P**	**06 26 56.4**	**+0.1**
MLPR	**Magueyes Islan**	**79.66**	**285**	P		**P**	**06 26 56.9**	**+0.2**
MLPR				IAmb		IAmb	06 26 57.2	
	comp=Z,12nm,0.7s							
JTMT	**Jette**	**80.92**	**334**	P		**P**	**06 27 03.9**	**+0.7**
SDDR	**Presa de Saban**	**81.81**	**289**	P		**P**	**06 27 10.1**	**+1.9**
F10A	**Beach Ranch, E**	**83.39**	**335**	P		**P**	**06 27 16.2**	**+0.1**
PD31	**Pinedale Array**	**83.72**	**329**	P		**P**	**06 27 18.0**	**0.0**
PDAR	**Pinedale Array**	**83.72**	**329**	P		**P**	**06 27 17.4**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=64,slow=4.9,SNR=11							
BMO	**Blue Mountains**	**84.43**	**335**	P		**P**	**06 27 20.9**	**-0.5**
BMO				pmax		pmax		
	comp=Z,9.0nm,0.8s							
BMO	**Blue Mountains**	**84.43**	**335**	P		**P**	**06 27 20.9**	**-0.5**
BMO				IAmb		IAmb	06 27 22.0	
	comp=Z,8.7nm,0.8s							
MFID	**Camas Ranch**	**85.28**	**333**	P		**P**	**06 27 25.6**	**-0.1**
MFID				IAmb		IAmb	06 27 26.7	
	comp=Z,5.6nm,0.6s							
SDV	**Santo Domingo**	**88.52**	**281**	P		**P**	**06 27 42.4**	**+0.5**
SDV				IAmb		IAmb	06 27 42.6	
	comp=Z,3.9nm,0.7s							
ANMO	**Albuquerque**	**89.24**	**323**	*e*P		**P**	**06 27 43.6**	**-1.4**
ANMO				pmax		pmax		
	comp=Z,1.0nm,1.1s							
BDFB	**Brasilia**	**90.37**	**248**	P		**P**	**06 27 52.2**	**+2.0**
BDFB				pmax		pmax		
	comp=Z,7.0nm,0.9s							
BDFB	**Brasilia**	**90.37**	**248**	P		**P**	**06 27 51.6**	**+1.3**
	comp=Z,5.8nm,0.7s,baz=58,slow=6.8,SNR=10							
BDFB	**Brasilia**	**90.37**	**248**	P		**P**	**06 27 52.2**	**+2.0**
BDFB				IAmb		IAmb	06 27 53.1	
	comp=Z,7.0nm,0.9s							
TXAR	**Lajitas Array**	**92.74**	**318**	P		**P**	**06 28 00.4**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=90,slow=6.3,SNR=4.5							
PFO	**Pinyon Flats O**	**94.33**	**330**⇓	*e*P		**P**	**06 28 07.6**	**-0.8**
PFO				pmax		pmax		
	comp=Z,5.0nm,1.3s							
MAW	**Mawson**	**116.11**	**165**	PKIKP		**PKiKP**	**06 33 30.0**	**+0.3**
MAW	**Mawson**	**116.11**	**165**	PKP		**PKiKP**	**06 33 30.0**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=236,slow=3.6,SNR=3.1							
WRA	**Warramunga Arr**	**116.52**	**92**	PKP		**PKPdf**	**06 33 31.8**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=316,slow=1.7,SNR=6.4							
WRAB	**Tennant Creek**	**116.52**	**92**⇓	*i*PKIKP		**PKPdf**	**06 33 30.0**	**-2.0**
PMG	**Port Moresby**	**118.17**	**74**⇑	*i*PKIKP		**PKPdf**	**06 33 33.3**	**-2.1**
ASAR	**Alice Springs**	**118.64**	**95**	PKP		**PKPdf**	**06 33 35.9**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=312,slow=1.6,SNR=25							
PLCA	**Paso Flores**	**121.68**	**242**	PKP		**PKPdf**	**06 33 40.6**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=327,slow=3.9,SNR=4.8							
STKA	**Stephens Creek**	**129.03**	**98**	PKP		**PKiKP**	**06 33 56.3**	**-0.1**
	comp=Z,1.8nm,0.4s,baz=51,slow=1.2,SNR=10.0							
VNDA	**Vanda**	**143.42**	**165**	PKhKP		PKPab	06 34 17.8	+0.4
	comp=Z,0.8nm,0.4s,baz=237,slow=1.8,SNR=4.5							

TEH ***23*** *06:40:58.8,34.˚38N×45.˚47E,h10km, ML3.2*
ISN ***23*** *06:41:01.0±1.3,34.˚46N×45.˚60E,h15km±8km, ML2.9*
THR ***23*** *06:41:02.8±0.3,34.˚65N×45.˚55E,h38km±4km, ML3.1*

ISC 23 06:41:03.2±1.4,34.˚47N±0.˚04×45.˚60E±0.˚03,h21km±5km, n24,σ1°11/32,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDHR	**Dehrash**	**0.69**	**70**	*e*Pg		**Pb**	**06 41 14.3**	**-2.4**
IDHR				*e*			06 41 28.8	
IGHG	**Ghaleghazi**	**0.81**	**100**	*e*Pg		**Pb**	**06 41 16.6**	**-2.2**
IGHG				*e*Sg		**Sb**	**06 41 30.6**	**+1.2**
IVIS	**Veis**	**1.03**	**86**	*e*Pg		**Pn**	**06 41 20.8**	**-1.8**
IVIS				*e*			06 41 40.3	
KCHF	**Cheshme Sefid,**	**1.21**	**99**	*e*Pg		**Pn**	**06 41 24.0**	**-1.0**
KCHF				*e*Sg		**Sb**	**06 41 43.0**	**+2.4**
KCHF				*e*			06 41 45.1	
ILIN	**Lien**	**1.21**	**68**	*e*Pg		**Pb**	**06 41 25.4**	**-0.1**
ILIN				*e*			06 41 46.4	
KER	**Kermanshah**	**1.27**	**93**	*e*Pg		**Pn**	**06 41 25.4**	**-0.4**
IBDR	**Badra**	**1.38**	**169**	*e*Pn		**Pn**	**06 41 27.0**	**-0.3**
IBDR				AML		AML	06 41 35.6	
	comp=Z,280nm,0.4s							
IBDR				*e*Sn		**Sb**	**06 41 46.0**	**+0.4**
IKRK	**Kirkuk**	**1.39**	**312**	*e*Pg		**Pn**	**06 41 26.0**	**-1.4**
IKRK				*e*Sg		**Sb**	**06 41 46.0**	**+0.1**
SNGE	**Sanandaj**	**1.56**	**66**	*e*Pg		**Pb**	**06 41 31.0**	**-0.6**
SNGE	**Sanandaj**	**1.56**	**66**	*e*Pg		**Pb**	**06 41 31.0**	**-0.6**
SNGE				*e*Sg		**Sb**	**06 41 51.6**	**+0.6**
SNGE				IAML			06 41 58.9	
	comp=N,219nm,0.5s							
BHD	**Baghdad**	**1.57**	**221**	*e*Pn		**Pn**	**06 41 30.0**	**+0.2**
BHD				*e*Sn		**Sb**	**06 41 51.0**	**0.0**
IKOM	**Komasi**	**1.61**	**100**	*e*Pn		**Pn**	**06 41 30.5**	**0.0**
IKOM				*e*			06 42 08.1	
IKFM	**Kafar-mosalman**	**2.09**	**116**	*e*Pn		**Pn**	**06 41 36.9**	**-0.1**
IKFM				*e*			06 42 13.5	
IDOB	**Doab**	**2.24**	**107**	*e*Pn		**Pn**	**06 41 39.2**	**-0.1**
IDOB				*e*			06 42 24.7	
MAHB	**Mahabad**	**2.29**	**2**	*e*Pn		**Pn**	**06 41 40.7**	**+0.7**
MAHB				*e*			06 42 18.0	
HSRG	**Sareghieh**	**2.33**	**70**	*e*Pn		**Pn**	**06 41 42.0**	**+1.4**
HSRG				*e*			06 42 23.3	
HSAM	**Samen**	**2.50**	**95**	*e*Pn		**Pn**	**06 41 43.1**	**+0.3**
IKMR	**Kamar-syah**	**2.50**	**112**	*e*Pn		**Pn**	**06 41 42.5**	**-0.1**
IKMR				*e*			06 42 24.8	
MSL	**Mosul**	**2.80**	**314**	*e*Pn		**Pn**	**06 41 48.0**	**+1.2**
MSL				AML		AML	06 41 49.9	
	comp=Z,124nm,0.2s							
MSL				*e*Sn		**Sn**	**06 42 21.0**	**+1.0**
ZNJK	**Zanjan**	**3.34**	**48**	*e*Pn		**Pn**	**06 41 53.4**	**-1.0**
ZNJK	**Zanjan**	**3.34**	**48**	*e*Pn		**Pn**	**06 41 53.4**	**-1.0**
NSR	**Nassriya**	**3.48**	**172**	*e*Pn		**Pn**	**06 41 57.0**	**+0.9**
NSR				*e*Sn		**Sn**	**06 42 37.0**	**+0.4**
ASAO	**Ashtian**	**3.65**	**88**	*e*Pn		**Pn**	**06 41 59.6**	**+0.8**
ASAO	**Ashtian**	**3.65**	**88**	*e*Pn		**Pn**	**06 41 59.5**	**+0.8**

IDC ***23*** *07:00:47.6±0.9, 13.˚53N×146.˚26E, h0km, mb3.9/11, mb1 4.1/11, mb1mx3.8/41, mbtmp3.9/11, MS3.8/1, Ms1 3.8/1, ms1mx3.1/37, Error ellipse: s-maj=22.9km s-min=19.4km az=152.0*
NEIC ***23*** *07:00:51.2±1.3, 13.˚94N±0.˚07×146.˚13E±0.˚10, h10km±2km, mb4.1/1, Error ellipse: s-maj=18.7km s-min=6.6km az=125.0*

ISC 23 07:00:48.5±0.7,13.˚5N±0.˚1×146.˚28E±0.˚06,h10km,n20, σ1°30/22,mb3.9/12,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**1.38**	**272**	Pn		**Pg**	**07 01 14.7**	**-0.3**
	73nm,0.3s,baz=108,slow=6.1,SNR=29							
GUMO				Sn		**Sg**	**07 01 32.6**	**-0.2**
	214nm,0.3s,baz=13,slow=22,SNR=21							
GUMO				LR		LR	07 01 46.3	
	comp=Z,157nm,20.1s,baz=337,slow=43							
GUMO	**Guam**	**1.38**	**272**			**Pg**	**07 01 14.4**	**-0.5**
GUMO						**Sg**	**07 01 31.8**	**-1.1**
SARN	**Sarigan**	**3.18**	**351**	Pn		**Pn**	**07 01 35.3**	**-3.4**
PATS	**Pohnpei**	**13.58**	**118**			**Pn**	**07 03 58.7**	**-2.7**
KSRS	**Korea Array**	**28.90**	**329**	P		**P**	**07 06 48.4**	**+0.8**
	1.2nm,0.5s,baz=142,slow=10.0,SNR=5.9							
WRA	**Warramunga Arr**	**35.29**	**200**	P		**P**	**07 07 43.8**	**-0.1**
	1.1nm,1.0s,baz=19,slow=9.7,SNR=4.3							
ASAR	**Alice Springs**	**38.91**	**198**	P		**P**	**07 08 14.9**	**+0.2**
	0.3nm,0.7s,baz=12,slow=9.0,SNR=3.0							
MA2	**Magadan 3**	**46.07**		LR		LR	07 26 30.8	
	comp=Z,110nm,19.9s,baz=43,slow=34							
SONM	**Songino Array**	**47.57**	**324**	P		**P**	**07 09 25.1**	**+0.6**
	0.4nm,0.5s,baz=129,slow=5.9,SNR=3.4							
SONM				PcP		**PcP**	**07 10 56.0**	**+1.6**
	0.4nm,0.6s,baz=129,slow=3.1,SNR=3.3							
ZALV	**Zalesovo Beam**	**62.46**	**324**	P		**P**	**07 11 12.1**	**+0.1**
	0.8nm,0.4s,baz=94,slow=6.7,SNR=3.4							
ZALV	**Zalesovo Beam**	**62.46**	**324**	P		**P**	**07 11 12.0**	**0.0**
MK31	**Makanchi Array**	**62.48**	**316**	P		**P**	**07 11 12.8**	**+0.5**
MK31				IAmb		IAmb	07 11 19.0	
	comp=Z,1.7nm,1.2s							
MKAR	**Makanchi Array**	**62.48**	**316**	P		**P**	**07 11 13.1**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=89,slow=9.3,SNR=18							
MKAR	**Makanchi Array**	**62.48**	**316**	P		**P**	**07 11 12.8**	**+0.5**
ILAR	**Eielson Array**	**68.02**	**25**	P		**P**	**07 11 48.3**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=257,slow=5.6,SNR=7.2							
ABKAR	**Akbulak array**	**77.50**	**318**	P		**P**	**07 12 44.9**	**+0.4**
YKA	**Yellowknife Ar**	**82.27**	**28**	P		**P**	**07 13 10.6**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=283,slow=5.2,SNR=5.9							
NVAR	**Mina Array Bea**	**85.87**	**2**	P		**P**	**07 13 31.5**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=264,slow=4.9,SNR=4.5							
ARCES	**ARCESS Array B**	**87.55**	**342**	P		**P**	**07 13 37.4**	**+0.9**
	comp=Z,2.4nm,0.9s,baz=68,slow=8.2,SNR=3.6							
FINES	**FINESS Array B**	**91.78**	**335**	P		**P**	**07 13 56.0**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=64,slow=4.4,SNR=8.3							

MAN 23 07:07:30.8,9.˚98N×124.˚01E,h34km,mb4.1,ML2.9,MS2.5, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.34**	**353**⇑	*i*P		Pn	07 07 40.9	+1.5
LLP				*i* S		Sb	07 07 47.3	+2.5
MSLP	**Maasin**	**0.85**	**80**	*e*P		Pn	07 07 46.3	-0.1
MSLP				*e*S		Sb	07 07 58.6	+0.3

IDC ***23*** *07:20:21.9±0.8, 13.˚49N×146.˚25E, h0km, mb3.9/14, mb1 4.2/14, mb1mx3.9/48, mbtmp3.9/14, Error ellipse: s-maj=22.4km s-min=17.4km az=158.0*
NEIC ***23*** *07:20:21.9±1.0, 13.˚2N±0.˚2×146.˚27E±0.˚07, h10km±2km, mb4.4/3, Error ellipse: s-maj=40.3km s-min=4.8km az=196.0*

ISC 23 07:20:25.0±0.6,13.˚4N±0.˚1×146.˚30E±0.˚08,h26km,n31, σ0°97/31,mb4.0/17,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**1.41**	**279**	Pn		**Pn**	**07 20 48.8**	**-0.2**
	44nm,0.3s,baz=139,slow=8.8,SNR=12							
GUMO				Sn		**Sn**	**07 21 07.1**	**+0.3**
	160nm,0.3s,baz=83,slow=22,SNR=23							
GUMO	**Guam**	**1.41**	**279**			**Pn**	**07 20 48.6**	**-0.4**
GUMO						**Sn**	**07 21 06.3**	**-0.5**
PATS	**Pohnpei**	**13.48**	**118**	Pn		**Pn**	**07 23 32.7**	**-2.0**
H11N1	**WAKE ISLAND Hy**	**20.71**	**70**	T		T	07 46 47.3	
	baz=255,slow=75,SNR=4.6							
H11N2	**WAKE ISLAND Hy**	**20.72**	**69**	T		T	07 46 52.0	
	baz=255,slow=75,SNR=5.3							
H11N3	**WAKE ISLAND Hy**	**20.73**	**70**	T		T	07 46 47.3	
	baz=255,slow=75,SNR=2.9							
KSRS	**Korea Array**	**29.06**	**329**	P		**P**	**07 26 22.4**	**-0.8**
	1.8nm,0.6s,baz=142,slow=9.9,SNR=7.1							
WRA	**Warramunga Arr**	**35.13**	**200**	P		**P**	**07 27 17.3**	**+0.6**
	0.5nm,0.7s,baz=26,slow=9.5,SNR=3.8							
ASAR	**Alice Springs**	**38.75**	**198**	P		**P**	**07 27 49.0**	**+1.6**
	0.3nm,0.6s,baz=15,slow=6.5,SNR=3.6							
CMAR	**Chiang Mai Arr**	**45.73**	**283**	P		**P**	**07 28 44.8**	**+0.4**
	1.0nm,0.3s,baz=82,slow=6.6,SNR=2.7							
SONM	**Songino Array**	**47.72**	**324**	P		**P**	**07 28 60.0**	**+0.2**
	0.7nm,0.6s,baz=117,slow=8.5,SNR=4.5							
SONM				PcP		**PcP**	**07 30 30.2**	**+1.4**
	0.4nm,0.5s,baz=131,slow=3.3,SNR=3.9							
ZALV	**Zalesovo Beam**	**62.62**	**324**	P		**P**	**07 30 46.8**	**-0.2**
	0.9nm,0.3s,baz=100,slow=7.2,SNR=2.0							
MK31	**Makanchi Array**	**62.62**	**316**	P		**P**	**07 30 47.2**	**0.0**
MK31				IAmb		IAmb	07 31 12.5	
	comp=Z,1.9nm,1.1s							
MKAR	**Makanchi Array**	**62.62**	**316**	P		**P**	**07 30 47.1**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=93,slow=12,SNR=8.4							
MKAR	**Makanchi Array**	**62.62**	**316**	P		**P**	**07 30 47.4**	**+0.2**
ILAR	**Eielson Array**	**68.17**	**25**	P		**P**	**07 31 22.6**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=251,slow=6.0,SNR=11							
ILAR	**Eielson Array**	**68.17**	**25**	P		**P**	**07 31 22.9**	**+0.2**
KK31	**Karatay Array**	**70.65**	**311**	P		**P**	**07 31 38.3**	**-0.3**
KK31				IAmb		IAmb	07 31 47.0	
	comp=Z,5.1nm,1.4s							
KKAR	**Karatay Array**	**70.65**	**311**	P		**P**	**07 31 37.0**	**-1.5**
KNB	**Inuvik**	**74.04**	**22**	P		**P**	**07 31 59.2**	**+1.0**
	comp=Z,1.1nm,1.0s,baz=238,slow=8.8,SNR=2.8							
C36M	**Paulatuk**	**77.46**	**21**	P		**P**	**07 32 19.0**	**+1.3**
C36M				IAmb		IAmb	07 34 47.1	
	comp=Z,12nm,1.8s							
ABKAR	**Akbulak array**	**77.64**	**318**	P		**P**	**07 32 18.4**	**-0.8**
YKA	**Yellowknife Ar**	**82.41**	**28**	P		**P**	**07 32 45.3**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=287,slow=5.2,SNR=5.7							
NVAR	**Mina Array Bea**	**85.97**	**52**	P		**P**	**07 33 05.6**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=285,slow=4.8,SNR=4.5							
ARCES	**ARCESS Array B**	**87.72**	**342**	P		**P**	**07 33 10.8**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=39,slow=5.8,SNR=4.4							
ARCES	**ARCESS Array B**	**87.72**	**342**	P		**P**	**07 33 11.3**	**+0.1**
PDAR	**Pinedale Array**	**91.12**	**46**	P		**P**	**07 33 29.3**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=273,slow=3.5,SNR=3.5							
FINES	**FINESS Array B**	**91.94**	**335**	P		**P**	**07 33 30.0**	**-1.1**
	comp=Z,1.7nm,0.6s,baz=57,slow=7.0,SNR=7.7							
FINES	**FINESS Array B**	**91.94**	**335**	P		**P**	**07 33 30.1**	**-1.0**
DBIC	**Dimbokro**	**145.12**	**303**	PKPbc		**PKPdf**	**07 40 01.7**	**+0.4**
	comp=Z,1.4nm,0.4s,baz=61,slow=3.5,SNR=4.0							
DBIC	**Dimbokro**	**145.12**	**303**			**PKPbc**	**07 39 59.5**	**-1.2**

NNC 23 07:23:16.5±0.3,50.˚02N×78.˚71E,h0km,mb3.8,mpv3.5, 14C-10D,Error ellipse: s-maj=3.0km s-min=1.4km az=73.0,Suspected Mining explosion.,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.58**	**348**	⇑P		Pg	07 23 27.7	+0.2
KUR07				⇓S		Sg	07 23 36.6	+1.5
KUR06	**Kurchatov Arra**	**0.60**	**349**	⇑P		Pg	07 23 28.1	+0.2
KUR06				⇓S		Sg	07 23 36.8	+1.2
KUR14	**Kurchatov Arra**	**0.60**	**353**	⇑P		Pg	07 23 27.8	-0.2
KUR14				⇓S		Sg	07 23 36.6	+0.8
KUR15	**Kurchatov Arra**	**0.61**	**351**	⇑P		Pg	07 23 28.3	+0.1
KUR15				⇓S		Sg	07 23 36.7	+0.6
KURBB	**Kurchatov Arra**	**0.62**	**349**	⇑P		Pg	07 23 28.6	+0.3
	20nm,0.3s							
KURBB				⇑S		Sg	07 23 37.5	+1.2
	131nm,0.5s							
KUR16	**Kurchatov Arra**	**0.62**	**348**	⇓P		Pg	07 23 28.6	+0.2
KUR16				⇑S		Sg	07 23 37.5	+0.9
KUR17	**Kurchatov Arra**	**0.63**	**346**	⇓P		Pg	07 23 29.0	+0.4
KUR17				⇑S		Sg	07 23 38.0	+1.2
KUR05	**Kurchatov Arra**	**0.64**	**350**	⇑P		Pg	07 23 28.7	+0.1
KUR05				⇑S		Sg	07 23 37.8	+0.9
KUR04	**Kurchatov Arra**	**0.65**	**351**	⇓P		Pg	07 23 29.3	+0.3
KUR04				⇓S		Sg	07 23 38.3	+0.8
KURK	**Kurchatov**	**0.70**	**355**	⇑P		Pg	07 23 29.9	0.0
	9.9nm,0.4s							
KURK				⇓S		Sg	07 23 39.7	+0.7
	12nm,0.3s							
SEM	**Semipalatinsk**	**1.06**	**68**	P		Pg	07 23 37.2	+0.3
	10.0nm,0.2s							
SEM				S		Sb	07 23 51.7	-0.7
	34nm,0.2s							
MAKZ	**Makanchi**	**3.88**	**145**	⇑Pg		Pg	07 24 28.7	-2.1
	1.0nm,0.3s							
MAKZ				⇑Lg		Lg	07 25 16.7	
	2.1nm,0.3s							
BRZS	**Berezniki**	**3.89**	**272**	Pg		Pg	07 24 28.5	-2.5
	11nm,0.3s							
BRZS				Lg		Lg	07 25 19.9	
	15nm,0.3s							
MK31	**Makanchi Array**	**4.01**	**142**	Pn		Pn	07 24 20.6	+1.4
	0.1nm,0.2s,baz=322,slow=11,SNR=57							
MK31				⇑Pg		Pb	07 24 28.7	+0.6
	1.2nm,0.4s,baz=320,slow=12,SNR=21							
MK31				⇓Lg		Lg	07 25 21.8	
	2.1nm,0.5s,baz=322,slow=26,SNR=4.1							
KAPS	**Kapalarasan**	**4.76**	**174**	Pg		Pb	07 24 42.7	+2.0
	1.7nm,0.3s							
KAPS				Lg		Lg	07 25 44.5	
	5.7nm,1.0s							
ZSN	**Zaisan**	**4.82**	**120**	Pg		Pb	07 24 40.8	-0.9
	4.1nm,0.2s							
ZSN	

comp=Z,0.3nm,0.4s,baz=188,slow=8.7,SNR=2.6
SONM PcP **PcP** 07 39 01.6 +0.1
comp=Z,1.2nm,0.5s,baz=189,slow=3.5,SNR=6.4
WB0 Warramunga Arr 45.99 124 P **P** 07 37 34.5 -0.4
WB0 IAmb IAmb 07 37 35.0
comp=Z,3.4nm,0.5s
WRA Warramunga Ar 46.03 124 P **P** 07 37 35.1 -0.2
comp=Z,1.5nm,0.4s,baz=303,slow=9.1,SNR=11
WRA pP **pP** 07 37 56.0 +0.2
comp=Z,0.5nm,0.4s,baz=301,slow=9.5,SNR=2.5
WRA PcP **PcP** 07 39 11.1 +0.5
comp=Z,0.3nm,0.5s,baz=309,slow=2.9,SNR=5.1
WRA Warramunga Ar 46.03 124 P **P** 07 37 35.2 -0.1
WB2 Warramunga Ar 46.05 124 P **P** 07 37 35.3 0.0
WB2 IAmb IAmb 07 37 51.1
comp=Z,5.8nm,1.2s
WR0 Warramunga Ar 46.21 124 P **P** 07 37 36.2 -0.4
WR0 IAmb IAmb 07 37 43.0
comp=Z,9.5nm,1.5s
KURBB Kurchatov Arra 47.26 346 P **P** 07 37 43.7 -0.7
comp=Z,0.3nm,0.3s,baz=165,slow=6.3,SNR=4.7
KURBB PcP **PcP** 07 39 15.0 +0.7
comp=Z,0.5nm,0.6s,baz=149,slow=2.9,SNR=3.2
KURK Kurchatov 47.33 346 P **P** 07 37 43.7 -1.1
KURK **PcP** 07 39 14.9 +0.5
AS31 Alice Springs 47.57 129 P **P** 07 37 47.0 -0.2
ASAR Alice Springs 47.57 129 P **P** 07 37 47.4 +0.1
comp=Z,1.6nm,0.7s,baz=300,slow=7.7,SNR=20
ASAR pP **pP** 07 38 06.8 -1.0
comp=Z,0.7nm,0.5s,baz=300,slow=8.1,SNR=3.9
ASAR PcP **PcP** 07 39 16.9 +0.9
comp=Z,0.4nm,0.5s,baz=300,slow=2.8,SNR=3.7
ASAR Alice Springs 47.57 129 P **P** 07 37 48.3 +1.0
ZALV Zalesovo Beam 49.23 352 P **P** 07 37 58.8 -0.5
comp=Z,0.6nm,0.4s,baz=181,slow=5.8,SNR=2.8
BVAR Borovoye Array 51.72 341 P **P** 07 38 17.0 -1.2
comp=Z,0.6nm,0.5s,baz=145,slow=11,SNR=5.6
ABKAR Akbulak array 52.93 332 P **P** 07 38 27.8 +0.6
AKTO Aktyubinsk 54.65 332 P **P** 07 38 40.2 +0.4
comp=Z,0.9nm,0.5s,baz=140,slow=7.9,SNR=3.0
AKASG Malin Array Be 70.75 322 P **P** 07 40 26.0 -0.8
comp=Z,1.9nm,0.6s,baz=88,slow=5.4,SNR=5.9
MLR Muntele Rosu 71.66 316 P **P** 07 40 34.0 +1.4
comp=Z,1.0nm,0.4s,baz=141,slow=2.2,SNR=4.9
FINES FINESS Array B 75.42 332 P **P** 07 40 53.9 -0.2
comp=Z,1.3nm,0.5s,baz=108,slow=6.2,SNR=4.8
FINES pP **pP** 07 41 15.9 -0.2
comp=Z,1.6nm,0.8s,baz=108,slow=4.2,SNR=2.3
FINES FINESS Array B 75.42 332 P **P** 07 40 54.0 -0.1
ARCES ARCESS Array B 78.00 340 P **P** 07 41 08.1 -0.4
comp=Z,3.9nm,0.9s,baz=105,slow=7.4,SNR=5.6
ARCES ARCESS Array B 78.00 340 P **P** 07 41 08.4 -0.1
GERES GERESS Array B 80.36 319 P **P** 07 41 22.9 +1.0
comp=Z,0.9nm,0.6s,baz=76,slow=5.6,SNR=7.0
GERES GERESS Array B 80.36 319 P **P** 07 41 22.7 +0.7
HFS Hagfors 81.14 330 P **P** 07 41 25.7 -0.1
comp=Z,1.2nm,0.5s,baz=137,slow=9.5,SNR=8.6
TXAR Lajitas Array 141.15 27 PKhKP PKPpre 07 48 36.2
comp=Z,0.2nm,0.6s,baz=349,slow=0.9,SNR=3.0
CPUP Villa Florida 146.34 229 PKPbc **PKiKP** 07 48 54.9 +0.4
comp=Z,0.5nm,0.5s,baz=68,slow=5.4,SNR=3.1

GCG ***23*** *07:29:19.9±0.8, 11°.78N×88°.87W, h1km±108km, MD5.0*
SNET ***23*** *07:29:39.2±1.2, 12°.83N×88°.64W, h50km±18km, ML5.4*
IDC ***23*** *07:29:40.0±0.5, 13°.11N×88°.28W, h64km±4km, mb4.5/23, mb1 4.7/27, mb1mx4.6/37, mbtmp4.8/27, MS4.0/29, Ms1 4.1/29, ms1mx4.0/33, Error ellipse: s-maj=15.6km s-min=8.3km az=53.0*
UCR ***23*** *07:29:40.7±1.5, 12°.91N×88°.64W, h48km±19km, ML5.2, mb4.9(NEIC)*
INET ***23*** *07:29:40.3, 12°.84N×88°.57W, h24km, ML5.2*
NEIC ***23*** *07:29:40.9±2.0, 12°.91N±0°.04×88°.53W±0°.05, h73km±3km, Error ellipse: s-maj=7.9km s-min=4.8km az=70.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁶Nm; M_{rr}1.20; $M_{\theta\theta}$-0.72; $M_{\phi\phi}$-0.48; $M_{r\theta}$2.16; $M_{\theta\phi}$0.49; $M_{\phi r}$-0.11; Fault plane solution: $M_0$2.45000×10¹⁶ NP1:ϕ_s98.47000°, δ77.03000°, λ78.79000°. NP2:ϕ_s319.93000°, δ17.08000°, λ130.18000°. Principal axes: T 2.6122, Plg57.0000°, Azm354.0000°; N -0.3636, Plg11.0000°, Azm101.0000°; P -2.2486, Plg31.0000°, Azm198.0000°;*
GCMT ***23*** *07:29:41.0±0.2, 12°.83N±0°.02×88°.93W±0°.02, h60km±1km, MW5.1/106, Moment Tensor Solution. s70,c87; s106,c146; Duration: 0 Moment tensor: Scale 10¹⁶Nm; M_{rr}5.02±.17; $M_{\theta\theta}$-3.88±.15; $M_{\phi\phi}$-1.14±.16; $M_{r\theta}$1.04±.10; $M_{\theta\phi}$2.63±.14; $M_{\phi r}$-0.12±.10; Best double couple: $M_0$5.35400×10¹⁶ NP1:ϕ_s307.00000°, δ40.00000°, λ98.00000°. NP2:ϕ_s116.00000°, δ50.00000°, λ83.00000°. Principal axes: T 5.1460, Plg83.0000°, Azm345.0000°; N 0.4150, Plg5.0000°, Azm120.0000°; P -5.5610, Plg5.0000°, Azm211.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***23*** *07:29:42.4±1.4, 13°.07N×88°.37W, h97km, mb5.0/29 Error ellipse: s-maj=10.8km s-min=4.9km az=110.7*
MEX ***23*** *07:29:44.9±0.3, 13°.01N×88°.83W, h74km±25km, MD5.0*
ISC 23 07:29:39.3±0.4, 12°.89N±0°.04×88°.58W±0°.03, h65km±3km, h65km:pP-P, n972, σ1§18/986, mb5.1/167, 2C-6D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ALJI	**Alcalda de J**	**0.44**	**2**	*eP*		**Pn**	**07 29 50.8**	**-0.4**
ALJI				*eS*		**Sn**	**07 29 59.6**	**-0.2**
JUCU	**Jucuar¡n**	**0.49**	**42**	*eP*		**Pn**	**07 29 51.6**	**-0.2**
JUCU				*eS*		**Sn**	**07 30 00.6**	**-0.2**
LCY	**Lacayo**	**0.60**	**28**	*eP*		**Pn**	**07 29 53.0**	**+0.1**
LCY	**Lacayo**	**0.60**	**28**	*eP*		**Pn**	**07 29 53.0**	**+0.1**
COEB	**Comit de Eme**	**0.61**	**5**	*eP*		**Pn**	**07 29 53.0**	**-0.1**
COEB				*eS*		**Sn**	**07 30 03.4**	**+0.3**
COEB					IAML		07 30 06.1	
	comp=Z,141µm,0.5s							
PACA	**Pacayal**	**0.63**	**24**	*eP*		**Pn**	**07 29 53.5**	**+0.2**
PACA				*eS*		**Sn**	**07 30 04.3**	**+0.8**
PACA	**Pacayal**	**0.63**	**24**	*eP*		**Pn**	**07 29 53.5**	**+0.2**
PACA				*eS*		**Sn**	**07 30 04.3**	**+0.8**
COEG	**Centro de Oper**	**0.78**	**338**	*eS*		**Sn**	**07 30 06.5**	**0.0**
LFRS	**El Faro**	**0.87**	**328**	*eP*		**Pn**	**07 29 55.8**	**-0.3**
PAVA	**Las Pavas**	**0.89**	**337**	*eS*		**Sn**	**07 30 09.9**	**+1.0**
PAVA	**Las Pavas**	**0.89**	**337**	*eS*		**Sn**	**07 30 09.9**	**+1.0**
FAGO	**Alcalda de S**	**0.93**	**30**	*eP*		**Pn**	**07 29 57.2**	**+0.5**
LBRS	**Las Brisas**	**0.96**	**332**	*eP*		**Pn**	**07 29 57.3**	**+0.2**
AEIL	**Aeropuerto Ilo**	**0.96**	**327**	*eP*		**Pn**	**07 29 57.2**	**+0.1**
AEIL				*eS*		**Sn**	**07 30 11.1**	**+0.8**
AEIL					IAML		07 30 15.9	
	comp=Z,129µm,0.6s							
UDBS	**Universidad Do**	**0.99**	**326**		IAML		07 30 14.0	
	comp=Z,126µm,0.5s							
UDBS	**Universidad Do**	**0.99**	**326**		IAML		07 30 14.0	
	comp=Z,126µm,0.5s							
LFU	**La Fuente**	**1.00**	**329**	*eP*		**Pn**	**07 29 57.8**	**+0.1**
LFU	**La Fuente**	**1.00**	**329**	*eP*		**Pn**	**07 29 57.8**	**+0.1**
OPAM	**Oficina de Pla**	**1.01**	**324**	*eS*		**Sn**	**07 30 12.1**	**+0.4**
OPAM					IAML		07 30 14.7	
	comp=Z,64µm,0.3s							
OPAM	**Oficina de Pla**	**1.01**	**324**	*eS*		**Sn**	**07 30 12.1**	**+0.4**
OPAM					IAML		07 30 14.7	
	comp=Z,64µm,0.3s							
SNET	**Serv Nac Est T**	**1.01**	**322**	*eS*		**Sn**	**07 30 11.2**	**-0.4**
SNET					IAML		07 30 15.3	
	comp=Z,47µm,0.7s							
SNET	**Serv Nac Est T**	**1.01**	**322**	*eS*		**Sn**	**07 30 11.2**	**-0.4**
SNET					IAML		07 30 15.3	
	comp=Z,47µm,0.7s							
UEES	**Universidad Ev**	**1.04**	**322**		IAML		07 30 15.8	
	comp=Z,61µm,0.5s							
UEES	**Universidad Ev**	**1.04**	**322**		IAML		07 30 15.8	
	comp=Z,61µm,0.5s							
CEVE	**Cerro Verde**	**1.38**	**313**	*eP*		**Pn**	**07 30 03.3**	**+0.5**
CEVE					IAML		07 30 23.8	
	comp=Z,73µm,0.5s							
CEVE	**Cerro Verde**	**1.38**	**313**	*eP*		**Pn**	**07 30 03.3**	**+0.5**
CEVE					IAML		07 30 23.8	
	comp=Z,73µm,0.5s							
SNJE	**San Jose**	**1.39**	**315**	*eP*		**Pn**	**07 30 03.0**	**+0.1**
SNJE	**San Jose**	**1.39**	**315**	*eP*		**Pn**	**07 30 03.0**	**+0.1**
FAME	**Alcalda de S**	**1.69**	**304**	*eP*		**Pn**	**07 30 04.8**	**-1.9**
TGUH	**Tegucigalpa,Un**	**1.73**	**47**	Pn		**Pn**	**07 30 08.4**	**+1.1**
TGUH				Sn		**Sn**	**07 30 25.3**	**-3.2**
IXG	**Ixpaco**	**2.21**	**305**	*eP*		**Pn**	**07 30 15.0**	**+1.1**
NBG	**Las Nubes**	**2.41**	**315**	*eP*		**Pn**	**07 30 18.9**	**+2.2**
NBG				*eS*		Sn	07 31 05.3	+20
MRL	**Marmol**	**2.43**	**334**	*eP*		**Pn**	**07 30 19.1**	**+2.1**
MRL				*eS*		Sn	07 31 06.0	+20
PCG	**Pacaya**	**2.47**	**307**	*eP*		**Pn**	**07 30 19.8**	**+2.3**
FUG	**Fuego 3**	**2.69**	**306**	*eP*		**Pn**	**07 30 22.3**	**+1.9**
FUG				*eS*		Sn	07 31 10.0	+18
APG	**El Apazote**	**2.79**	**319**	P		**Pn**	**07 30 23.0**	**+1.2**
	comp=Z,18nm,0.3s,baz=137,slow=5.0,SNR=144							
ERG	**Entre ros, C**	**3.29**	**298**	*eP*		**Pn**	**07 30 29.6**	**+1.2**
ERG				*eS*		Sn	07 31 21.2	+15
STG3	**Santiaguito 3,**	**3.42**	**302**	*eP*		**Pn**	**07 30 31.9**	**+1.5**
GBS3	**Finca Las Img**	**3.71**	**124**	*eP*		**Pn**	**07 30 36.9**	**+2.7**
NY14	**Universidad de**	**3.72**	**126**	*eP*		**Pn**	**07 30 36.7**	**+2.3**
LAPC	**Finca la Perla**	**3.73**	**124**	*eP*		**Pn**	**07 30 37.0**	**+2.4**
GPS3	**Bodega del ICE**	**3.80**	**124**	*eP*		**Pn**	**07 30 38.3**	**+2.8**
GPS2	**Hotel Rincn d**	**3.81**	**124**	*eP*		**Pn**	**07 30 37.9**	**+2.3**
LIM1	**Limonal**	**3.92**	**123**	*eP*		**Pn**	**07 30 40.2**	**+3.1**
GUAB	**Guayabo de Bag**	**3.93**	**123**	*eP*		**Pn**	**07 30 39.6**	**+2.3**
MESS	**Mesas**	**3.94**	**122**	*eP*		**Pn**	**07 30 39.7**	**+2.2**
HORNC	**Hornillas**	**3.97**	**123**	*eP*		**Pn**	**07 30 41.3**	**+3.4**
COLC	**Colonia**	**3.98**	**123**	*eP*		**Pn**	**07 30 40.1**	**+2.2**
CUI	**Cuipilapa**	**4.01**	**123**	*eP*		**Pn**	**07 30 41.4**	**+3.0**
PLVR	**Palo Verde**	**4.05**	**128**	*eP*		**Pn**	**07 30 41.1**	**+2.1**
THIG		**4.10**	**300**	*eP*		**Pn**	**07 30 40.7**	**+1.2**
THIG				*i*	S	**Sn**	**07 31 23.6**	**-2.7**
THIG		**4.10**	**300**			**Pn**	**07 30 40.7**	**+1.2**
THIG						**Sn**	**07 31 23.6**	**-2.7**
ACAL	**Aguas Claras**	**4.13**	**122**	*eP*		**Pn**	**07 30 41.3**	**+1.2**
AMAS	**Alto Masis**	**4.18**	**122**	*eP*		**Pn**	**07 30 43.2**	**+2.5**
JTS	**Las Juntas de**	**4.39**	**126**	*eP*		**Pn**	**07 30 45.7**	**+2.1**
JTS	**Las Juntas de**	**4.39**	**126**	P		**Pn**	**07 30 44.8**	**+1.2**
	comp=Z,10nm,0.3s,baz=345,slow=13,SNR=38							
JTS					S	**Sn**	**07 31 31.4**	**-2.2**
	comp=Z,24nm,0.3s,baz=2.7,slow=12,SNR=4.5							
ARE1	**Arenal 1**	**4.49**	**122**	*i*	P	**Pn**	**07 30 48.5**	**+3.7**
CCIG	**Comitan**	**4.82**	**315**	*i*	P	**Pn**	**07 30 51.4**	**+1.9**
CCIG				*i*	S	**Sn**	**07 31 42.4**	**-1.8**
CCIG	**Comitan**	**4.82**	**315**		Pn	**Pn**	**07 30 51.9**	**+2.3**
CCIG					Sn	**Sn**	**07 31 42.1**	**-2.0**
CCIG	**Comitan**	**4.82**	**315**			**Pn**	**07 30 51.4**	**+1.9**
CCIG						**Sn**	**07 31 42.4**	**-1.8**
HDC	**Heredia**	**5.24**	**123**			**Pn**	**07 30 59.0**	**+3.8**
PCIG		**5.29**	**302**	*eP*		**Pn**	**07 30 57.0**	**+1.1**
PCIG				*i*	S	**Sn**	**07 31 54.2**	**-1.3**
PCIG		**5.29**	**302**			**Pn**	**07 30 57.0**	**+1.1**
PCIG						**Sn**	**07 31 54.2**	**-1.3**
SJS	**Escuela Geolog**	**5.32**	**123**	*eP*		**Pn**	**07 31 00.6**	**+4.2**
EDDO	**Dominical**	**5.87**	**127**	*eP*		**Pn**	**07 31 06.8**	**+3.0**
EDLM	**Las Mercedes**	**6.07**	**126**	*eP*		**Pn**	**07 31 09.7**	**+3.1**
EDPN	**Palmar Norte**	**6.37**	**127**	*eP*		**Pn**	**07 31 14.3**	**+3.7**
EDBA	**Buenos Aires**	**6.39**	**125**	*eP*		**Pn**	**07 31 13.1**	**+2.1**
PTJ1	**Puerto Jimnez**	**6.75**	**129**	*eP*		**Pn**	**07 31 18.8**	**+2.9**
EDSV	**San Vito**	**6.83**	**126**	*eP*		**Pn**	**07 31 20.2**	**+3.1**
BRU2	**Volcan**	**7.07**	**125**	*eP*		**Pn**	**07 31 23.0**	**+2.6**
TEIG	**Tepich**	**7.30**	**2**	P		**Pn**	**07 31 26.3**	**+2.9**
	comp=Z,33nm,0.3s,baz=139,slow=8.7,SNR=189							
TEIG					LR	LR	07 34 39.1	
	comp=Z,2µm,19.9s,baz=206,slow=42							
TEIG	**Tepich**	**7.30**	**2**			**Pn**	**07 31 25.8**	**+2.4**
CMIG	**Matias Romero**	**7.38**	**305**	P		**Pn**	**07 31 26.2**	**+1.7**
	comp=Z,9.7nm,0.3s,baz=104,slow=9.8,SNR=45							
CMIG					S	**Sn**	**07 32 49.5**	**+2.7**
	comp=Z,11nm,0.3s,baz=118,slow=11,SNR=3.6							
CMIG	**Matias Romero**	**7.38**	**305**	*eP*		**Pn**	**07 31 26.4**	**+1.9**
CMIG				*i*	S	**Sn**	**07 32 45.3**	**-1.5**
CMIG	**Matias Romero**	**7.38**	**305**			**Pn**	**07 31 26.4**	**+1.9**
CMIG						**Sn**	**07 32 45.3**	**-1.5**
ICCO	**Coco Island**	**7.45**	**168**	*eP*		**Pn**	**07 31 28.2**	**+2.8**
BCIP	**Isla Barro Col**	**9.35**	**112**	P		**Pn**	**07 31 52.4**	**+1.0**
BCIP	**Isla Barro Col**	**9.35**	**112**	Pn		**Pn**	**07 31 52.4**	**+1.0**
FSCV	**Frank Sound, G**	**9.56**	**47**			**Pn**	**07 31 55.9**	**+1.7**
TLIG	**Tilapa**	**10.70**	**297**			**Pn**	**07 32 10.3**	**+0.4**
CBCY	**The Bluff, Cay**	**10.87**	**50**			**Pn**	**07 32 14.0**	**+1.9**
MTDJ	**Mount Denham**	**11.89**	**62**			**Pn**	**07 32 29.4**	**+3.2**
061Z	**Ochoppi**	**14.79**	**28**	P		**P**	**07 33 09.1**	**-0.2**
	baz=210							
060A	**Indiantown**	**16.05**	**27**	P		**P**	**07 33 24.3**	**+1.1**
	baz=210,SNR=7.9							
OTAV	**Otavalo**	**16.09**	**141**	*eP*		**Pn**	**07 33 21.9**	**-0.1**
ROSC	**El Rosal**	**16.19**	**118**	LR		LR	07 41 12.2	
	comp=Z,476nm,18.2s,baz=9.0,slow=43							
DWPF	**Disney Wildern**	**16.55**	**23**	P		**P**	**07 33 29.8**	**+1.0**
DWPF					IAmb	IAmb	07 33 34.5	
	comp=Z,140nm,0.8s							
DWPF	**Disney Wildern**	**16.55**	**23**	P		**P**	**07 33 30.3**	**+1.5**
	baz=205							
656A	**Willston**	**17.34**	**18**	P		**P**	**07 33 38.2**	**+0.8**
656A					IAmb	IAmb	07 33 44.9	
	comp=Z,227nm,1.1s							
553A	**Crawfordville**	**17.64**	**12**	P		**P**	**07 33 42.9**	**+2.1**
553A					IAmb	IAmb	07 34 00.3	
	comp=Z,253nm,1.3s							
SDDR	**Presa de Saban**	**17.70**	**68**	P		**P**	**07 33 43.1**	**+1.6**
451A	**Vernon**	**17.84**	**8**	P		**Pn**	**07 33 46.8**	**+3.8**
451A					IAmb	IAmb	07 34 09.4	
	comp=Z,133nm,0.9s							
SDV	**Santo Domingo**	**18.07**	**101**	P		**P**	**07 33 45.8**	**-0.1**
	comp=Z,2.5nm,0.3s,baz=279,slow=5.4,SNR=38							
SDV					PcP	**PcP**	**07 38 19.1**	**+1.3**
	comp=Z,0.5nm,0.3s,baz=249,slow=2.1,SNR=6.3							
SDV					pPcP		07 38 36.5	
	comp=Z,0.3nm,0.3s,baz=338,slow=1.6,SNR=6.8							
SDV					LR	LR	07 42 18.3	
	comp=Z,228nm,18.9s,baz=258,slow=43							
SDV	**Santo Domingo**	**18.07**	**101**	*eP*		**P**	**07 33 45.5**	**-0.3**
SDV	**Santo Domingo**	**18.07**	**101**	P		**Pn**	**07 33 46.0**	**-0.2**
HKT	**Hockley**	**18.26**	**340**	P		**Pn**	**07 33 49.3**	**+1.2**
HKT					pmax	pmax		
	comp=Z,45nm,1.2s							
HKT	**Hockley**	**18.26**	**340**	P		**Pn**	**07 33 49.3**	**+1.2**
833A	**Chaparral WMA,**	**18.37**	**328**	P		**Pn**	**07 33 50.5**	**+1.0**
833A	**Chaparral WMA,**	**18.37**	**328**	P		**Pn**	**07 33 50.6**	**+1.0**
	baz=145,SNR=19							
BANI	**BANI**	**18.38**	**70**	P		**P**	**07 33 49.1**	**0.0**
456A	**Hilliard**	**18.76**	**18**	P		**Pn**	**07 33 54.7**	**+0.5**
456A					IAmb	IAmb	07 34 27.3	
	comp=Z,108nm,0.9s							
352A	**Blakely**	**18.81**	**10**	P		**Pn**	**07 33 57.3**	**+2.5**
352A	**Blakely**	**18.81**	**10**	P		**Pn**	**07 33 56.9**	**+2.2**
	baz=191,SNR=76							
353A	**Camilla**	**18.81**	**12**	P		**Pn**	**07 33 56.2**	**+1.5**
	baz=193,SNR=31							
TIGA	**Tifton**	**19.03**	**13**	P		**Pn**	**07 33 57.8**	**+0.4**
TIGA					IAmb	IAmb	07 34 22.5	
	comp=Z,174nm,1.0s							
TIGA	**Tifton**	**19.03**	**13**	P		**Pn**	**07 33 58.6**	**+1.2**
	baz=195,SNR=22							
250A	**Grady**	**19.12**	**6**	P		**Pn**	**07 33 58.5**	**0.0**
VBMS	**Vicksburg**	**19.32**	**355**	P		**Pn**	**07 34 02.7**	**+1.8**
	baz=174,SNR=38							
252A	**Lumpkin**	**19.34**	**10**	P		**Pn**	**07 34 02.5**	**+1.3**
	baz=191							
DR12	**Loma Pena Alta**	**19.38**	**70**	P		**Pn**	**07 34 01.5**	**-0.2**
253A	**Americus**	**19.52**	**11**	P		**Pn**	**07 34 04.1**	**+0.9**
	baz=193,SNR=18							
254A	**Abbeville**	**19.58**	**14**	P		**Pn**	**07 34 04.7**	**+0.7**
	baz=196,SNR=6.9							
NATX	**Nacogdoches**	**19.60**	**344**	P		**Pn**	**07 34 03.9**	**-0.2**
NATX	**Nacogdoches**	**19.60**	**344**	P		**Pn**	**07 34 05.1**	**+0.9**
	baz=162							
435B	**Jarrell**	**19.65**	**336**	P		**Pn**	**07 34 04.4**	**-0.5**
435B					IAmb	IAmb	07 34 16.5	
	comp=Z,75nm,0.8s							
435B	**Jarrell**	**19.65**	**336**	P		**Pn**	**07 34 04.3**	**-0.5**
	baz=153,SNR=12							
255A	**Hazlehurst**	**19.76**	**16**	P		**Pn**	**07 34 06.6**	**+0.6**
	baz=198,SNR=7.1							
152A	**Waverly Hall**	**20.01**	**10**	P		Pn	07 34 09.2	+0.3
	baz=191,SNR=43							
LRAL	**Lakeview Retre**	**20.11**	**4**	P		**P**	**07 34 08.9**	**+1.2**
LRAL					IAmb	IAmb	07 34 12.8	
	comp=Z,76nm,0.8s							
LRAL	**Lakeview Retre**	**20.11**	**4**	P		Pn	07 34 10.7	+0.6
	baz=184,SNR=50							
153A	**Fort Valley**	**20.15**	**12**	P		Pn	07 34 10.7	+0.1
	baz=194,SNR=9.3							
PCDR	**Punta Cana, DR**	**20.23**	**71**	P		**P**	**07 34 10.2**	**+0.9**
PCDR					IAmb	IAmb	07 34 27.9	
	comp=Z,115nm,0.8s							
154A	**Montrose**	**20.27**	**13**	P		Pn	07 34 11.9	-0.1
	baz=196,SNR=19							
JCT	**Junction City**	**20.35**	**331**	P		**P**	**07 34 11.4**	**+0.9**
JCT					pmax	pmax		
	comp=Z,66nm,0.7s							
JCT	**Junction City**	**20.35**	**331**	P		**P**	**07 34 11.4**	**+0.9**
JCT					IAmb	IAmb	07 34 16.6	
	comp=Z,66nm,0.7s							
JCT	**Junction City**	**20.35**	**331**	P		**P**	**07 34 11.5**	**+1.1**
	baz=147,SNR=48							
Z50A	**Ashland**	**20.42**	**6**	P		Pn	07 34 14.3	+0.5
	baz=187,SNR=29							
155A	**Kite**	**20.43**	**15**	P		Pn	07 34 13.8	0.0
	baz=197,SNR=26							
Z52A	**Williamson**	**20.57**	**10**	P		Pn	07 34 16.3	+0.8
	baz=192,SNR=19							
Z41A	**Richland Creek**	**20.64**	**350**	P		**P**	**07 34 13.7**	**+0.1**
Z41A					IAmb	IAmb	07 34 22.1	
	comp=Z,98nm,0.8s							
Z41A	**Richland Creek**	**20.64**	**350**	P		Pn	07 34 17.9	+1.5
	baz=168,SNR=18							
WHTX	**Lake Whitney,**	**20.69**	**338**	P		**P**	**07 34 15.4**	**+1.3**
WHTX	**Lake Whitney,**	**20.69**	**338**	P		Pn	07 34 16.6	-0.4
	baz=155							
156A	**Sylvania**	**20.72**	**17**	P		Pn	07 34 16.9	-0.5
	baz=200,SNR=7.6							
Z53A	**Monticello**	**20.81**	**12**	P		Pn	07 34 17.5	-0.9
	baz=194,SNR=38							
157A	**Early Branch**	**20.89**	**18**	P		Pn	07 34 18.3	-1.0
	baz=201,SNR=8.0							
Z54A	**Sparta**	**20.92**	**14**	P		Pn	07 34 18.9	-0.9
	baz=196,SNR=19							
GOGA	**Godfrey**	**20.96**	**12**	P		Pn	07 34 19.6	-0.6
GOGA					pmax	pmax		
	comp=Z,69nm,0.8s							
GOGA	**Godfrey**	**20.96**	**12**	P		Pn	07 34 19.6	-0.6
GOGA					IAmb	IAmb	07 34 35.3	
	comp=Z,69nm,0.8s							
GOGA	**Godfrey**	**20.96**	**12**	P		Pn	07 34 19.0	-1.1
	baz=194,SNR=31							
Y49A	**Blount Mountai**	**20.97**	**5**	P		Pn	07 34 19.6	-0.7
Y49A					IAmb	IAmb	07 34 21.5	
	comp=Z,72nm,0.7s							
Z55A	**Blythe**	**21.08**	**15**	P		**P**	**07 34 20.5**	**+2.3**
	baz=198,SNR=8.4							
CCAR	**Cane Creek**	**21.14**	**353**	P		**P**	**07 34 21.5**	**+2.7**
Y51A	**Rockmart**	**21.16**	**8**	P		**P**	**07 34 21.0**	**+1.9**
	baz=190,SNR=50							
HPIG		**21.25**	**314**	P		**P**	**07 34 22.6**	**+2.2**
Y52A	**Lilburn**	**21.29**	**10**	P		**P**	**07 34 22.6**	**+2.1**
	baz=192,SNR=16							
CRPR	**Cabo Rojo, PR**	**21.31**	**73**	P		**P**	**07 34 21.0**	**+0.2**
CRPR					IAmb	IAmb	07 34 43.8	
	comp=Z,58nm,1.1s							
MPR	**Mayaguez**	**21.32**	**73**	P		**P**	**07 34 22.2**	**+1.3**
RGRS	**Roger Stewart**	**21.36**	**20**	P		**P**	**07 34 23.1**	**+1.9**
MLPR	**Magueyes Islan**	**21.36**	**74**	P		**P**	**07 34 21.1**	**-0.3**
MLPR					IAmb	IAmb	07 34 42.6	
	comp=Z,78nm,1.3s							
Y53A	**Monroe**	**21.36**	**11**	P		**P**	**07 34 23.3**	**+2.0**
	baz=193,SNR=26							
Z56A	**Williston**	**21.39**	**17**	P		**P**	**07 34 23.9**	**+2.4**
Z56A	**Williston**	**21.39**	**17**	P		**P**	**07 34 23.2**	**+1.7**
	baz=200,SNR=45							
X48A	**Hartselle**	**21.51**	**3**	P		**P**	**07 34 24.5**	**+1.6**
X48A					IAmb	IAmb	07 34 43.7	
	comp=Z,80nm,1.1s							
OXF	**Oxford**	**21.54**	**358**	P		**P**	**07 34 24.9**	**+1.7**
OXF					pmax	pmax		
	comp=Z,80nm,1.1s							
OXF	**Oxford**	**21.54**	**358**	P		**P**	**07 34 24.9**	**+1.7**
OXF					IAmb	IAmb	07 35 02.3	
	comp=Z,80nm,1.1s							
OXF	**Oxford**	**21.54**	**358**	P		**P**	**07 34 24.4**	**+1.3**
	baz=178,SNR=13							
NHSC	**New Hope**	**21.54**	**20**	P		**P**	**07 34 26.0**	**+2.8**
NHSC	**New Hope**	**21.54**	**20**	P		**P**	**07 34 25.8**	**+2.6**
	baz=203,SNR=8.2							
TX31	**Lajitas Ar. Si**	**21.54**	**322**	P		**P**	**07 34 24.6**	**+1.2

Y57A **Sumter** 22.32 18 P P 07 34 33.1 +1.6
baz=201,SNR=37
ATAH **Atahualpa** 22.32 152 P P 07 34 35.3 +3.1
comp=Z,12nm,0.8s,baz=343,slow=6.4,SNR=10
ATAH LR LR 07 42 18.4
comp=Z,463nm,20.9s,baz=346,slow=34
SWET **Sewanee** 22.36 6 P P 07 34 33.0 +1.0
X55A **Gracelyn & Ava** 22.39 15 P P 07 34 34.1 +1.7
baz=198,SNR=25
W50A **Signal Mountai** 22.41 7 P P 07 34 32.9 +0.3
W50A IAmb IAmb 07 34 54.0
comp=Z,52nm,0.9s
W50A **Signal Mountai** 22.41 7 P P 07 34 33.4 +0.8
baz=188,SNR=6.9
W41B **Gary Mavity, V** 22.43 352 P P 07 34 34.2 +1.4
W41B IAmb IAmb 07 34 58.2
comp=Z,78nm,1.0s
W41B **Gary Mavity, V** 22.43 352 P P 07 34 34.4 +1.6
baz=171,SNR=24
W51A **Cleveland** 22.44 8 P P 07 34 34.0 +1.1
baz=190,SNR=17
Y58A **Scranton** 22.44 20 P P 07 34 33.9 +1.0
Y58A **Scranton** 22.44 20 P P 07 34 34.1 +1.2
baz=203,SNR=12
W52A **Murphy** 22.51 10 P P 07 34 35.1 +1.5
W52A IAmb IAmb 07 35 07.6
comp=Z,52nm,0.9s
W52A **Murphy** 22.51 10 P P 07 34 35.1 +1.5
baz=192,SNR=14
HUMP **Col San Antoni** 22.51 74 P P 07 34 33.3 -0.5
HUMP IAmb IAmb 07 34 53.7
comp=Z,38nm,0.8s
CBYP **Canovanas** 22.53 73 P P 07 34 33.2 -0.8
CBYP IAmb IAmb 07 34 51.3
comp=Z,47nm,0.8s
WHAR **Wooly Hollow** 22.56 352 P P 07 34 35.8 +1.7
WHAR IAmb IAmb 07 34 57.7
comp=Z,101nm,0.9s
X56A **White Oak** 22.58 16 P P 07 34 35.5 +1.3
baz=199,SNR=20
BG3 **Lake Jocassee** 22.60 12 P P 07 34 36.8 +2.2
BG3 IAmb IAmb 07 35 00.1
comp=Z,110nm,1.3s
HBAR **Harrisburg** 22.65 356 P P 07 34 35.1 +0.1
LPAR **Lepanto** 22.67 356 P P 07 34 34.6 -0.6
PAULI **Pauline** 22.68 15 P P 07 34 35.9 +0.5
PAULI IAmb IAmb 07 35 03.1
comp=Z,60nm,1.0s
W39A **Magazine** 22.70 349 P P 07 34 36.9 +1.2
W39A IAmb IAmb 07 34 54.9
comp=Z,103nm,1.2s
W39A **Magazine** 22.70 349 P P 07 34 36.9 +1.2
baz=167,SNR=17
W53A **Cullowhee** 22.72 12 P P 07 34 37.1 +1.2
baz=194,SNR=7.3
CPCT **Cooper Cave** 22.76 9 P P 07 34 37.5 +1.2
CPCT IAmb IAmb 07 35 00.4
comp=Z,51nm,0.9s
MTP **Monte Pirata** 22.78 74 P P 07 34 35.2 -1.5
MTP IAmb IAmb 07 34 56.0
comp=Z,59nm,0.8s
Y59A **Loris** 22.79 21 P P 07 34 38.1 +1.6
Y59A **Loris** 22.79 21 P P 07 34 37.8 +1.2
baz=205,SNR=9.2
V48A **Smith Brothers** 22.81 4 P P 07 34 37.5 +0.8
X57A **Johnson Farm,** 22.82 18 P P 07 34 37.8 +0.9
baz=202,SNR=10
W54A **Cherokee Point** 22.85 14 P P 07 34 38.9 +1.8
baz=196,SNR=28
BIRD **Birdtown, Kers** 22.88 17 P P 07 34 38.9 +1.4
BIRD IAmb IAmb 07 34 39.9
comp=Z,92nm,0.7s
V50A **Pikeville** 22.90 7 P P 07 34 38.2 +0.5
baz=189,SNR=13
V49A **McMinnville** 22.91 6 P P 07 34 37.6 -0.2
baz=187,SNR=23
HALT **Halls** 22.93 358 P P 07 34 38.1 +0.1
Y60A **Bolivia** 23.04 22 P P 07 34 40.9 +1.8
Y60A **Bolivia** 23.04 22 P P 07 34 39.4 +0.3
baz=206,SNR=7.0
TKL **Tuckaleechee C** 23.08 10 P P 07 34 40.4 +0.9
TKL pmax pmax
comp=Z,129nm,1.1s
TKL **Tuckaleechee C** 23.08 10 P P 07 34 39.5 0.0
comp=Z,69nm,0.7s,baz=181,slow=10,SNR=60
TKL LR LR 07 43 26.9
comp=Z,640nm,21.9s,baz=186,slow=36
TKL **Tuckaleechee C** 23.08 10 P P 07 34 40.4 +0.9
TKL IAmb IAmb 07 35 06.3
comp=Z,128nm,1.1s
KMSC **Kings Mountain** 23.11 15 P P 07 34 41.0 +1.3
KMSC IAmb IAmb 07 35 05.2
comp=Z,104nm,1.0s
KMSC **Kings Mountain** 23.11 15 P P 07 34 40.4 +0.7
baz=198,SNR=14
LNXT **Lenox** 23.13 358 P P 07 34 38.4 -1.5
V51A **Loudon** 23.13 9 P P 07 34 40.7 +0.7
V51A IAmb IAmb 07 35 03.3
comp=Z,43nm,0.9s
V51A **Loudon** 23.13 9 P P 07 34 40.6 +0.6
baz=190,SNR=6.0
X58A **Rowland** 23.15 20 P P 07 34 41.3 +1.2
X58A **Rowland** 23.15 20 P P 07 34 41.1 +1.0
baz=203,SNR=21
WVT **Waverly** 23.15 2 P P 07 34 40.1 0.0
WVT pmax pmax
comp=Z,57nm,1.0s
WVT **Waverly** 23.15 2 P P 07 34 40.1 0.0
WVT IAmb IAmb 07 35 02.3
comp=Z,57nm,1.0s
WVT **Waverly** 23.15 2 P P 07 34 40.1 0.0
baz=182
PEBM **Pemiscott Bayo** 23.16 357 P P 07 34 40.8 +0.6
CLTN **Cedars of Leba** 23.19 5 P P 07 34 40.7 +0.1
LCAR **Lake Charles** 23.20 355 P P 07 34 41.0 +0.4
LCAR IAmb IAmb 07 35 03.9
comp=Z,64nm,0.9s
V53A **Saluda** 23.27 12 P P 07 34 42.4 +1.0
V53A IAmb IAmb 07 35 09.3
comp=Z,103nm,1.1s
V53A **Saluda** 23.27 12 P P 07 34 42.3 +0.9
baz=194,SNR=22
GLAT **Glass** 23.29 359 P P 07 34 42.6 +1.1
V52A **Sevierville** 23.29 10 P P 07 34 42.5 +0.9
V52A IAmb IAmb 07 35 06.5
comp=Z,81nm,1.1s
V52A **Sevierville** 23.29 10 P P 07 34 42.3 +0.8
baz=192,SNR=14
W56A **Indian Trail** 23.30 17 P P 07 34 42.6 +1.0
baz=200,SNR=18
UTMT **University of** 23.36 359 P P 07 34 42.4 +0.3
LPIG **La Paz** 23.39 302 P P 07 34 46.2 +3.7
comp=Z,41nm,0.8s,baz=76,slow=4.2,SNR=3.5
X59A **McDuffie Farm,** 23.41 21 P P 07 34 43.7 +1.1
baz=205,SNR=10.0
W57A **Gilead** 23.49 18 P P 07 34 43.9 +0.6
baz=201,SNR=9.9
HICK **Hickman** 23.56 359 P P 07 34 43.4 -0.5
V54A **Nebo** 23.56 14 P P 07 34 45.1 +1.0
baz=196,SNR=29
W58A **Raeford** 23.61 19 P P 07 34 45.4 +1.0
baz=203,SNR=32
PCRV **Puerto La Cruz** 23.61 94 P P 07 34 44.4 -0.3
comp=Z,15nm,0.5s,baz=185,slow=5.3,SNR=17
WMOK **Wichita Mounta** 23.64 339 P P 07 34 45.4 +0.7
WMOK pmax pmax
comp=Z,135nm,1.8s
WMOK **Wichita Mounta** 23.64 339 P P 07 34 45.4 +0.7
WMOK IAmb IAmb 07 34 47.4
comp=Z,135nm,1.8s
WMOK **Wichita Mounta** 23.64 339 P P 07 34 45.1 +0.4
baz=155,SNR=16
X60A **Albert Glenn T** 23.64 22 P P 07 34 45.5 +0.8
baz=206,SNR=9.0
U49A **Red Boiling Sp** 23.66 6 P P 07 34 44.9 0.0
baz=187,SNR=20
PLCV **Puerto La Cruz** 23.66 94 P P 07 34 44.4 -0.7
U50A **Jamestown** 23.67 8 P P 07 34 45.1 +0.1
baz=189,SNR=23
U40A **Yellville** 23.68 351 P P 07 34 45.8 +0.7
U40A **Yellville** 23.68 351 P P 07 34 45.6 +0.5
baz=170,SNR=66
PARMO **Parma** 23.70 358 P P 07 34 45.5 +0.3
HENM **Henderson Moun** 23.74 358 P P 07 34 46.2 +0.6
U51A **La Follette** 23.75 9 P P 07 34 46.1 +0.4
baz=191,SNR=16

HHAR **Hobbs** 23.79 349 P P 07 34 47.4 +1.3
HHAR IAmb IAmb 07 34 50.4
comp=Z,40nm,0.7s
V55A **Taylorsville** 23.81 15 P P 07 34 47.3 +1.1
baz=198,SNR=15
OKCFA **Oklahoma City** 23.82 342 P P 07 34 47.1 +0.7
OKCFA IAmb IAmb 07 35 36.4
comp=Z,53nm,0.8s
TUL1 **Leonard** 23.83 345 P P 07 34 46.8 +0.4
TUL1 IAmb IAmb 07 35 12.8
comp=Z,96nm,1.0s
TUL1 **Leonard** 23.83 345 P P 07 34 46.6 +0.2
baz=162,SNR=16
PBMO **Poplar Bluff** 23.85 356 P P 07 34 47.1 +0.6
U52A **Thorn Hill** 23.87 10 P P 07 34 47.6 +0.8
baz=193,SNR=7.5
V56A **Mocksville** 23.96 16 P P 07 34 48.2 +0.6
baz=200,SNR=24
TZTN **Tazewell** 23.99 10 P P 07 34 48.9 +1.1
TZTN IAmb IAmb 07 35 12.7
comp=Z,82nm,1.1s
TZTN **Tazewell** 23.99 10 P P 07 34 48.3 +0.5
baz=192,SNR=10
U53A **Fall Branch** 23.99 12 P P 07 34 48.5 +0.5
baz=194,SNR=27
W59A **Clinton** 24.01 21 P P 07 34 48.2 +0.3
baz=205
T47A **Sharon Grove** 24.04 3 P P 07 34 48.2 -0.1
W60A **Pink Hill** 24.16 22 P P 07 34 50.2 +0.8
baz=207,SNR=14
V57A **Coltrane Farms** 24.24 18 P P 07 34 50.9 +0.8
baz=201,SNR=12
T50A **Nancy** 24.27 7 P P 07 34 50.6 +0.3
baz=189,SNR=8.7
CNNC **Cliffs of the** 24.27 22 P P 07 34 50.6 +0.3
CNNC IAmb IAmb 07 34 52.3
comp=Z,52nm,0.8s
CNNC **Cliffs of the** 24.27 22 P P 07 34 51.2 +0.8
baz=206,SNR=10.0
MNTX **Cornudas Mount** 24.27 323 P P 07 34 50.7 +0.2
MNTX IAmb IAmb 07 34 53.6
comp=Z,46nm,1.2s
MNTX **Cornudas Mount** 24.27 323 P P 07 34 50.9 +0.4
baz=137,SNR=26
T49A **Edmonton** 24.27 6 P P 07 34 50.3 -0.1
baz=187,SNR=19
U54A **Nelsons Funny** 24.31 13 P P 07 34 51.9 +1.1
U54A **Nelsons Funny** 24.31 13 P P 07 34 51.5 +0.7
baz=196,SNR=15
T51A **Gray** 24.34 9 P P 07 34 51.5 +0.5
baz=191,SNR=12
V58A **Windy Hill, Pi** 24.36 19 P P 07 34 52.1 +1.0
baz=203,SNR=32
MGMO **Mountain Grove** 24.39 353 P P 07 34 52.1 +0.6
U55A **TA2, Sparta** 24.47 15 P P 07 34 53.1 +0.8
baz=198,SNR=11
U56A **King** 24.50 16 P P 07 34 53.7 +1.2
baz=200,SNR=9.4
W61A **Ground Anchor** 24.55 23 P P 07 34 53.5 +0.6
baz=208
T53A **Wise** 24.60 12 P P 07 34 54.1 +0.6
baz=194,SNR=6.5
V59A **Middlesex** 24.62 21 P P 07 34 54.4 +0.9
baz=205,SNR=9.2
T52A **Hallie** 24.64 11 P P 07 34 54.3 +0.6
baz=193
MSTX **Muleshoe** 24.64 331 P P 07 34 53.8 -0.1
MSTX P PcP 07 38 30.9 +0.8
MSTX **Muleshoe** 24.64 331 P P 07 34 54.3 +0.3
baz=145,SNR=63
S44A **Carbondale** 24.71 359 P P 07 34 54.6 +0.2
S44A IAmb IAmb 07 35 14.8
comp=Z,74nm,0.8s
U57A **Blanch** 24.88 18 P P 07 34 56.5 +0.6
baz=202,SNR=21
T54A **Tazewell** 24.88 13 P P 07 34 56.6 +0.6
baz=196,SNR=7.7
AMTX **Amarillo** 24.91 334 P P 07 34 56.5 +0.2
AMTX **Amarillo** 24.91 334 P P 07 34 57.9 +1.5
baz=148
V60A **Jim Taylor Roa** 24.96 22 P P 07 34 57.4 +0.7
baz=207,SNR=14
S49A **Springfield** 24.97 6 P P 07 34 56.7 0.0
baz=188
S50A **Richmond** 24.97 8 P P 07 34 56.9 +0.2
baz=190
USIN **University of** 24.99 2 P P 07 34 57.2 +0.3
USIN IAmb IAmb 07 35 23.2
comp=Z,86nm,1.1s
FVM **French Village** 25.05 357 P P 07 34 58.0 +0.5
FVM pmax pmax
comp=Z,18nm,0.9s
FVM **French Village** 25.05 357 P P 07 34 58.0 +0.5
S51A **Beattyville** 25.05 9 P P 07 34 57.8 +0.3
S51A IAmb IAmb 07 35 17.6
comp=Z,45nm,0.9s
S51A **Beattyville** 25.05 9 P P 07 34 57.9 +0.3
baz=192,SNR=6.9
U58A **Oxford** 25.09 19 P P 07 34 58.2 +0.4
baz=204,SNR=7.1
T55A **Pulaski** 25.12 15 P P 07 34 59.4 +1.2
baz=198,SNR=9.8
S52A **Salyersville** 25.17 10 P P 07 34 59.3 +0.7
baz=193
CCM **Cathedral Cave** 25.18 355 P P 07 34 59.0 +0.4
CCM pmax pmax
comp=Z,61nm,0.7s
CCM **Cathedral Cave** 25.18 355 P P 07 34 59.0 +0.4
CCM IAmb IAmb 07 35 01.2
comp=Z,61nm,0.7s
CCM **Cathedral Cave** 25.18 355 P P 07 34 59.4 +0.8
baz=174
T56A **Rocky Mt** 25.23 16 P P 07 35 00.2 +1.0
baz=200
V61A **Roper** 25.25 23 P P 07 35 00.9 +1.6
V61A **Roper** 25.25 23 P P 07 35 00.5 +1.3
baz=208,SNR=5.5
V62A **Hyde County Ai** 25.29 25 P P 07 35 00.3 +0.7
baz=210
BLA **Blacksburg** 25.30 15 P P 07 35 01.4 +1.6
BLA pmax pmax
comp=Z,89nm,0.9s
BLA **Blacksburg** 25.30 15 P P 07 35 01.4 +1.6
BLA IAmb IAmb 07 35 26.9
comp=Z,89nm,0.9s
BLA **Blacksburg** 25.30 15 P P 07 35 00.8 +1.0
baz=199,SNR=5.8
U59A **Littleton** 25.30 21 P P 07 35 00.8 +1.1
U59A IAmb IAmb 07 35 24.4
comp=Z,56nm,1.0s
U59A **Littleton** 25.30 21 P P 07 35 00.4 +0.6
baz=205,SNR=7.1
WCI **Wyandotte Cave** 25.32 4 P P 07 35 00.4 +0.5
WCI pmax pmax
comp=Z,42nm,0.8s
WCI **Wyandotte Cave** 25.32 4 P P 07 35 00.4 +0.5
WCI IAmb IAmb 07 35 02.1
comp=Z,42nm,0.8s
WCI **Wyandotte Cave** 25.32 4 P P 07 35 00.0 +0.1
baz=185
S53A **Williamson** 25.36 12 P P 07 35 00.6 +0.3
baz=195
T57A **Hurt** 25.43 18 P P 07 35 01.7 +0.8
baz=202,SNR=9.9
R49A **Shelbyville** 25.48 6 P P 07 35 01.6 +0.2
baz=188,SNR=5.8
R50A **Paris** 25.57 8 P P 07 35 02.4 +0.2
R50A **Paris** 25.57 8 P P 07 35 02.4 +0.2
baz=190,SNR=5.1
T58A **Grand View Acr** 25.60 19 P P 07 35 03.0 +0.5
baz=203
U60A **Pendleton** 25.63 22 P P 07 35 03.1 +0.4
baz=206,SNR=7.4
S54A **Dingess, Beckl** 25.64 13 P P 07 35 03.6 +0.6
baz=196,SNR=6.2
SLM **Saint Louis** 25.69 357 P P 07 35 02.2 -1.1
SLM pmax pmax
comp=Z,122nm,1.4s
SLM **Saint Louis** 25.69 357 P P 07 35 02.2 -1.1
SLM IAmb IAmb 07 35 28.9
comp=Z,122nm,1.4s
R51A **Hillsboro** 25.70 9 P P 07 35 03.6 +0.3
baz=191,SNR=9.1
OLIL **Olney** 25.75 1 P P 07 35 03.7 0.0
OLIL IAmb IAmb 07 35 04.9
comp=Z,32nm,0.8s
U61A **Possum Corner** 25.77 23 P P 07 35 04.6 +0.6
baz=208
S55A **Lewisburg** 25.81 15 P P 07 35 05.4 +1.0
baz=198
R52A **Catlettsburg** 25.89 11 P P 07 35 05.3 +0.2
baz=193
T59A **Double "B" Far** 25.94 21 P P 07 35 06.3 +0.7
baz=205,SNR=6.3
S56A **Natural Bridge** 25.97 16 P P 07 35 06.4 +0.5
baz=200,SNR=8.1
R53A **Hurricane** 26.02 12 P P 07 35 06.3 0.0
R53A IAmb IAmb 07 35 32.3
comp=Z,80nm,1.1s
R53A **Hurricane** 26.02 12 P P 07 35 06.6 +0.4
baz=195
Q48A **North Vernon** 26.06 5 P P 07 35 06.4 -0.2
baz=186
R54A **Victor** 26.08 14 P P 07 35 07.3 +0.4
baz=197
Q50A **Georgetown** 26.17 8 P P 07 35 07.9 +0.3
baz=190
Q49A **Aurora** 26.22 7 P P 07 35 08.2 +0.2
baz=188,SNR=5.7
S57A **Dark Hollow, R** 26.22 17 P P 07 35 07.0 -1.1
S57A IAmb IAmb 07 35 34.3
comp=Z,88nm,1.4s
S57A **Dark Hollow, R** 26.22 17 P P 07 35 08.4 +0.3
baz=202
BLO **Bloomington** 26.24 4 P P 07 35 08.1 -0.2
BLO pmax pmax
comp=Z,124nm,1.6s
BLO **Bloomington** 26.24 4 P P 07 35 08.1 -0.2
BLO IAmb IAmb 07 35 45.4
comp=Z,124nm,1.6s
121A **Cookes Peak, D** 26.30 321 P P 07 35 09.5 +0.4
121A PcP 07 38 35.4 +1.4
121A **Cookes Peak, D** 26.30 321 P P 07 35 10.8 +1.7
baz=134,SNR=20
S58A **Poland Farm, P** 26.36 19 IAmb IAmb 07 35 35.6
comp=Z,94nm,1.2s
S58A **Poland Farm, P** 26.36 19 P P 07 35 10.0 +0.7
baz=204
T60A **Surry** 26.38 22 P P 07 35 10.5 +1.0
baz=207,SNR=6.3
SRIG **Santa Rosalia** 26.38 307 P P 07 35 12.0 +2.3
SRIG IAmb IAmb 07 35 13.2
comp=Z,49nm,0.8s
R55A **Marlinton** 26.39 15 IAmb IAmb 07 35 36.5
comp=Z,94nm,1.1s
R55A **Marlinton** 26.39 15 P P 07 35 10.5 +0.8
baz=199,SNR=5.6
Q51A **Peebles** 26.45 9 IAmb IAmb 07 35 12.0
comp=Z,49nm,0.8s
Q51A **Peebles** 26.45 9 P P 07 35 10.4 +0.3
baz=192,SNR=18
Q52A **Bidwell** 26.57 11 P P 07 35 11.6 +0.4
baz=194,SNR=9.5
P48A **Milroy** 26.61 5 P P 07 35 11.0 -0.6
baz=187,SNR=6.4
Q53A **Leroy** 26.61 12 P P 07 35 12.2 +0.6
baz=195
P43A **Skaggs, Pawnee** 26.66 358 IAmb IAmb 07 36 00.7
comp=Z,28nm,0.8s
R56A **Bull Pasture M** 26.70 16 P P 07 35 13.2 +0.7
baz=200,SNR=6.5
R58B **Mineral** 26.74 19 P P 07 35 13.1 +0.4
baz=204,SNR=6.2
S59A **Mechanicsville** 26.74 20 P P 07 35 13.4 +0.6
baz=205
P49A **Miami Univ. Ec** 26.76 7 P P 07 35 12.3 -0.6
baz=188
R57A **Stanardsville** 26.84 18 P P 07 35 14.0 +0.3
baz=202,SNR=12
Q54A **Coxs Mills** 26.89 13 P P 07 35 14.2 +0.1
baz=197,SNR=12
Y22D **IRIS PASSCAL I** 26.89 325 P P 07 35 17.2 +2.9
baz=137
S60A **Water View** 26.91 21 P P 07 35 14.8 +0.5
baz=206
P51A **Williamsport** 26.94 9 P P 07 35 14.5 0.0
baz=192,SNR=5.6
P50A **Jamestown** 26.95 8 P P 07 35 14.8 +0.2
baz=190
R58A **Rapidan** 27.00 19 P P 07 35 15.9 +0.8
baz=203,SNR=6.8
KSU1 **Kansas State U** 27.06 346 P P 07 35 16.0 +0.4
baz=163
Q55A **Buckhannon** 27.07 15 P P 07 35 16.6 +0.8
baz=198
CBN **Corbin Frederi** 27.12 20 P P 07 35 17.2 +1.1
CBN **Corbin Frederi** 27.12 20 P P 07 35 17.0 +0.9
baz=204,SNR=7.0
O44A **Mansfield** 27.16 0 IAmb IAmb 07 35 19.4
comp=Z,25nm,0.6s
R59A **King George, V** 27.20 20 P P 07 35 18.0 +1.1
baz=205,SNR=9.0
P52A **Corning** 27.24 11 P P 07 35 17.2 -0.1
baz=194,SNR=7.8
P53A **Whipple** 27.25 12 IAmb IAmb 07 35 37.2
comp=Z,75nm,1.0s
P53A **Whipple** 27.25 12 P P 07 35 17.8 +0.5
baz=195,SNR=9.8
ANMO **Albuquerque** 27.28 327 P P 07 35 17.0 -0.9
ANMO pmax pmax
comp=Z,17nm,1.9s
ANMO **Albuquerque** 27.28 327 P P 07 35 16.4 -1.4
comp=Z,6.7nm,0.6s,baz=112,slow=11,SNR=19
ANMO PcP PcP 07 38 37.8 +1.5
comp=Z,5.4nm,0.6s,baz=103,slow=5.2,SNR=8.4
ANMO pPcP 07 38 54.8
comp=Z,5.8nm,0.8s,baz=141,slow=4.5,SNR=4.7
ANMO LR LR 07 48 05.4
comp=Z,211nm,20.3s,baz=112,slow=40
ANMO **Albuquerque** 27.28 327 P P 07 35 16.5 -1.4
ANMO P PcP 07 38 37.5 +1.2
ANMO **Albuquerque** 27.28 327 P P 07 35 17.5 -0.5
baz=139
NNA **Nana** 27.32 154 LR LR 07 44 27.2
comp=Z,297nm,21.3s,baz=336,slow=32
Q56A **Snyder Ridge,** 27.35 16 IAmb IAmb 07 35 47.2
comp=Z,100nm,1.4s
Q56A **Snyder Ridge,** 27.35 16 P P 07 35 19.0 +0.8
baz=200
SFIN **Lafayette** 27.42 2 IAmb IAmb 07 36 09.9
comp=Z,139nm,1.8s
SFIN **Lafayette** 27.42 2 P P 07 35 18.2 -0.6
baz=183,SNR=5.1
O48A **Farmland** 27.43 6 P P 07 35 18.5 -0.5
baz=187
R60A **Leonardtown, M** 27.44 21 P P 07 35 19.1 +0.1
baz=206,SNR=6.4
O49A **Covington** 27.45 7 P P 07 35 18.6 -0.5
baz=189,SNR=6.7
O50A **Cable** 27.50 8 P P 07 35 19.3 -0.3
baz=190,SNR=23
P54A **Burton** 27.56 14 P P 07 35 20.7 +0.6
baz=197,SNR=7.1
Q57A **Strasburg** 27.56 17 P P 07 35 21.0 +0.9
baz=202
HDIL **Hopedale** 27.57 359 P P 07 35 19.3 -0.8
HDIL IAmb IAmb 07 36 15.6
comp=Z,26nm,0.8s
HDIL **Hopedale** 27.57 359 P P 07 35 19.9 -0.2
baz=178
P55A **Reedsville** 27.62 15 P P 07 35 20.8 +0.1
baz=199
CBKS **Cedar Bluff** 27.66 341 P P 07 35 21.7 +0.7
CBKS pmax pmax
comp=Z,40nm,1.0s
CBKS **Cedar Bluff** 27.66 341 P P 07 35 21.7 +0.7
CBKS IAmb IAmb 07 36 04.6
comp=Z,40nm,1.0s
CBKS **Cedar Bluff** 27.66 341 P P 07 35 21.5 +0.5
baz=156,SNR=6.2
ACSO **Alum Creek Sta** 27.68 9 P P 07 35 20.2 -1.0
ACSO IAmb IAmb 07 35 22.7
comp=Z,42nm,0.7s
ACSO **Alum Creek Sta** 27.68 9 P P 07 35 21.1 0.0
baz=192,SNR=17
Q58A **Fox Den Farm,** 27.69 19 P P 07 35 21.9 +0.7
baz=203,SNR=6.0
MCWV **Mont Chateau** 27.76 15 P P 07 35 22.8 +0.9
MCWV **Mont Chateau** 27.76 15 P P 07 35 22.3 +0.4
baz=198,SNR=5.5
O52A **Adamsville** 27.77 11 P P 07 35 22.1 +0.2
baz=194,SNR=12
N41A **Harden Midland** 27.79 356 IAmb IAmb 07 35 23.0
comp=Z,22nm,0.7s
P56A **Dayton Farm, R** 27.88 16 P P 07 35 23.8 +0.9

baz=201
R61A **Willards** 27.95 23 P P 07 35 24.6 +1.1
baz=208
Q59A **Harwood** 27.95 20 P P 07 35 24.3 +0.7
baz=205
N47A **Urbana** 28.00 5 P P 07 35 23.4 -0.6
baz=186
T25A **Trinidad** 28.00 332 P P 07 35 26.2 +1.8
baz=146,SNR=6.6
O53A **New Philadelph** 28.02 12 P P 07 35 24.2 0.0
baz=195,SNR=8.1
N48A **Decatur** 28.04 6 P P 07 35 23.9 -0.5
baz=187
TUC **Tucson** 28.07 317 P P 07 35 26.1 +1.3
TUC 07 38 39.7
TUC pmax pmax
comp=Z,15nm,1.1s
TUC **Tucson** 28.07 317 P P 07 35 26.1 +1.3
TUC PcP 07 38 39.7 +1.6
TUC **Tucson** 28.07 317 P P 07 35 26.0 +1.1
baz=129
P57A **Homestead Farm** 28.09 18 IAmb IAmb 07 35 27.5
comp=Z,57nm,0.7s
P57A **Homestead Farm** 28.09 18 P P 07 35 26.3 +1.5
baz=202
O54A **Avella** 28.13 13 P P 07 35 25.2 0.0
baz=197,SNR=5.5
N50A **Nevada** 28.18 9 P P 07 35 25.5 -0.1
baz=191,SNR=7.3
N49A **Columbus Grove** 28.19 7 P P 07 35 25.5 -0.2
baz=189,SNR=8.2
P58A **Pank, Wackersv** 28.31 19 P P 07 35 27.5 +0.7
baz=204,SNR=8.6
SDMD **Soldier's Deli** 28.39 19 P P 07 35 28.3 +0.8
N51A **Ashland** 28.45 10 P P 07 35 27.5 -0.5
baz=193,SNR=5.5
N52A **McGinn's Farm,** 28.47 11 P P 07 35 28.1 -0.1
baz=194,SNR=13
M47A **Cromwell** 28.48 5 P P 07 35 27.9 -0.5
baz=186
N53A **Lisbon** 28.63 12 P P 07 35 29.3 -0.3
baz=196,SNR=5.6
O56A **Blue Knob Stat** 28.66 16 P P 07 35 30.3 +0.3
baz=201
P59A **Jarrettsville** 28.70 20 P P 07 35 30.7 +0.4
baz=205
M49A **Liberty Center** 28.76 7 P P 07 35 30.3 -0.5
baz=189
M50A **Fremont** 28.82 9 P P 07 35 31.2 -0.1
baz=191,SNR=18
KSCO **Kaye Shedlock'** 28.84 337 IAmb IAmb 07 35 33.9
comp=Z,52nm,0.7s
KSCO **Kaye Shedlock'** 28.84 337 P P 07 35 32.6 +0.9
baz=151
O57A **Amberson** 28.87 18 P P 07 35 32.2 +0.4
baz=202
M51A **Elyria** 28.89 10 P P 07 35 32.0 +0.1
baz=193
N54A **Moraine State** 28.96 14 P P 07 35 32.7 +0.1
baz=197,SNR=7.3
SDCO **Great Sand Dun** 29.00 332 P P 07 35 35.0 +1.7
SDCO **Great Sand Dun** 29.00 332 P P 07 35 34.6 +1.4
baz=144
O58A **Lewisberry** 29.01 19 P P 07 35 33.5 +0.5
baz=204,SNR=5.4
L42A **Oliver, Polo** 29.02 358 IAmb IAmb 07 36 31.2
comp=Z,31nm,1.1s
N55A **Marion Center** 29.04 15 P P 07 35 33.4 +0.1
baz=200
MVL **Millersville** 29.08 20 P P 07 35 35.1 +1.5
MVL IAmb IAmb 07 36 00.4
comp=Z,47nm,1.2s
L46A **Eue Claire** 29.09 4 P P 07 35 32.8 -0.9
baz=185
L47A **Sherwood** 29.13 5 P P 07 35 33.1 -0.9
baz=187
P60A **Greenville** 29.15 21 IAmb IAmb 07 36 00.5
comp=Z,39nm,0.9s
P60A **Greenville** 29.15 21 P P 07 35 34.5 +0.3
baz=207,SNR=5.7
L40A **Anamosa** 29.16 356 IAmb IAmb 07 35 38.6
comp=Z,30nm,0.7s
L48A **N Adams** 29.17 6 P P 07 35 33.7 -0.7
baz=188
SSPA **Standing Stone** 29.19 17 P P 07 35 35.5 +0.9
SSPA IAmb IAmb 07 36 00.4
comp=Z,34nm,1.1s
SSPA **Standing Stone** 29.19 17 P P 07 35 35.5 +0.9
baz=202
214A **Organ Pipe Nat** 29.23 314 P P 07 35 36.8 +1.6
214A PcP 07 38 42.5 +1.6
214A **Organ Pipe Nat** 29.23 314 P P 07 35 36.5 +1.4
baz=125,SNR=9.4
M52A **Chesterland** 29.23 11 IAmb IAmb 07 35 40.1
comp=Z,47nm,1.3s
M52A **Chesterland** 29.23 11 P P 07 35 35.6 +0.6
baz=194
M53A **WI Miller and** 29.27 12 P P 07 35 35.4 +0.1
baz=196,SNR=7.2
N56A **West Decatur** 29.34 16 P P 07 35 36.5 +0.5
baz=201,SNR=6.1
N57A **Milroy** 29.40 17 P P 07 35 37.1 +0.7
baz=202
L49A **Milan** 29.41 7 P P 07 35 36.4 -0.1
baz=190
O59A **Robesonia** 29.41 20 P P 07 35 37.7 +1.1
baz=205,SNR=5.2
L50A **Kingsville** 29.48 9 P P 07 35 36.9 -0.2
baz=191,SNR=5.8
M54A **Oil Creek Stat** 29.56 14 P P 07 35 38.2 +0.4
baz=198,SNR=6.2
BGNE **Belgrade** 29.62 345 P P 07 35 39.2 +0.8
baz=161
S22A **4UR Ranch, Cre** 29.63 330 P P 07 35 40.6 +1.7
baz=142,SNR=10
O60A **Telford** 29.68 21 P P 07 35 39.7 +0.8
baz=207
N58A **Sunbury** 29.73 18 P P 07 35 39.8 +0.5
baz=204
M55A **Ridgway** 29.74 15 P P 07 35 39.2 -0.2
baz=200
O61A **Allentown** 29.79 22 P P 07 35 40.1 +0.3
baz=208
K47A **Vermontville** 29.84 5 P P 07 35 39.2 -1.1
baz=187,SNR=6.6
L53A **Girard** 29.85 13 P P 07 35 40.5 +0.1
baz=196,SNR=5.6
M56A **Emporium** 29.90 16 P P 07 35 41.5 +0.6
M56A IAmb IAmb 07 35 60.0
comp=Z,51nm,0.9s
M56A **Emporium** 29.90 16 P P 07 35 41.1 +0.2
baz=201
JFWS **Jewell Farm** 29.95 358 P P 07 35 41.1 -0.3
JFWS pmax pmax
comp=Z,26nm,1.0s
JFWS **Jewell Farm** 29.95 358 P P 07 35 41.0 -0.3
JFWS IAmb IAmb 07 36 48.2
comp=Z,26nm,0.9s
JFWS **Jewell Farm** 29.95 358 P P 07 35 41.6 +0.2
baz=177
K48A **Perry** 30.06 7 P P 07 35 41.2 -1.0
baz=189,SNR=6.8
M57A **Sunshine Farm,** 30.06 17 P P 07 35 42.9 +0.6
baz=203,SNR=5.4
ERPA **Erie** 30.07 13 P P 07 35 42.1 -0.2
ERPA IAmb IAmb 07 35 44.8
comp=Z,26nm,0.8s
ERPA **Erie** 30.07 13 P P 07 35 42.2 -0.2
baz=197
MVCO **Mesa Verde** 30.07 327 P P 07 35 42.0 -0.8
MVCO PcP 07 38 44.5 +1.2
MVCO **Mesa Verde** 30.07 327 P P 07 35 43.5 +0.8
baz=139,SNR=8.5
N59A **State Game Lan** 30.10 20 P P 07 35 43.4 +0.7
baz=205,SNR=6.8
K49A **Clarkson** 30.12 8 P P 07 35 42.1 -0.7
baz=190,SNR=9.4
N60A **Cedar Hill Far** 30.28 21 P P 07 35 44.9 +0.6
baz=207
M58A **Price's Panora** 30.29 18 P P 07 35 44.7 +0.3
baz=204
BRNJ **Basking Ridge** 30.30 21 P P 07 35 44.7 +0.3
BRNJ IAmb IAmb 07 36 09.3
comp=Z,59nm,0.9s
L54A **Sinclairville** 30.33 14 P P 07 35 44.6 -0.1
baz=198
OGNE **Ogallala** 30.34 340 P P 07 35 43.3 -1.6
OGNE IAmb IAmb 07 36 52.8
comp=Z,44nm,1.2s
OGNE **Ogallala** 30.34 340 P P 07 35 43.5 -1.3
baz=153
K51A **Iona Station** 30.35 10 P P 07 35 44.5 -0.4
baz=194
J47A **Sunmer** 30.42 5 P P 07 35 44.4 -1.0
baz=187
L55A **Hinsdale** 30.49 15 P P 07 35 46.6 +0.4
baz=200
J45A **Montague** 30.50 3 P P 07 35 45.2 -0.9
baz=184
WUAZ **Wupatki** 30.51 322 P P 07 35 48.6 +2.1
WUAZ PcP 07 38 45.3 +0.9
WUAZ **Wupatki** 30.51 322 P P 07 35 48.2 +1.7
baz=132,SNR=16
K52A **Tillsonburg** 30.56 11 P P 07 35 46.5 -0.1
baz=195
J48A **Bridge Port** 30.59 7 P P 07 35 46.2 -0.7
baz=189
WVNY **West Valley, N** 30.66 15 P P 07 35 47.6 0.0
WVNY IAmb IAmb 07 36 07.1
comp=Z,43nm,0.9s
J49A **Marlette** 30.73 8 P P 07 35 47.3 -0.8
baz=190
ISCO **Idaho Springs** 30.73 334 P P 07 35 49.3 +0.7
ISCO 07 38 46.1
ISCO pmax pmax
comp=Z,20nm,0.8s
ISCO **Idaho Springs** 30.73 334 P P 07 35 49.3 +0.7
ISCO IAmb IAmb 07 35 52.4
comp=Z,20nm,0.8s
ISCO PcP 07 38 46.1 +1.1
ISCO **Idaho Springs** 30.73 334 P P 07 35 49.8 +1.2
baz=146,SNR=23
L57A **Andrews Acres** 30.75 17 P P 07 35 49.0 +0.5
baz=203
M59A **Waymart** 30.77 20 P P 07 35 49.3 +0.7
baz=206
PAL **Palisades** 30.82 22 P P 07 35 49.3 +0.3
baz=209
K54A **Basiliko Farm,** 30.83 14 P P 07 35 49.2 +0.1
baz=199
SMCO **Snowmass** 30.83 331 P P 07 35 51.1 +1.4
SMCO IAmb IAmb 07 35 52.7
comp=Z,25nm,0.7s
SMCO PcP 07 38 47.0 +1.5
M60A **Port Jervis** 30.85 21 P P 07 35 49.5 +0.3
baz=207
I42A **Draeger Farm,** 30.90 360 P P 07 35 49.4 -0.3
I42A IAmb IAmb 07 36 14.0
comp=Z,45nm,1.2s
J52A **Paris** 31.05 12 P P 07 35 50.9 0.0
baz=195
L58A **Harry Jones Me** 31.09 19 P P 07 35 51.6 +0.2
baz=204
M61A **Granite Spring** 31.14 22 P P 07 35 52.4 +0.6
baz=209,SNR=7.5
WSPT **Westport, CT** 31.18 23 IAmb IAmb 07 36 16.4
comp=Z,46nm,1.0s
BINY **Binghamton** 31.19 18 P P 07 35 52.8 +0.5
BINY IAmb IAmb 07 36 11.6
comp=Z,28nm,0.9s
BINY **Binghamton** 31.19 18 P P 07 35 52.5 +0.2
baz=204
I47A **Gladwin** 31.22 6 P P 07 35 51.7 -0.8
baz=188
GLA **Glamis** 31.26 314 P P 07 35 55.2 +2.1
GLA PcP 07 38 47.9 +1.7
K56A **Middlesex** 31.27 16 P P 07 35 53.4 +0.4
baz=201
I49A **Point Hope** 31.34 8 P P 07 35 53.4 -0.1
baz=191
Y12C **Blythe** 31.44 316 P P 07 35 56.0 +1.4
baz=125
I48A **Sherman Twp** 31.47 7 P P 07 35 55.0 +0.4
baz=189
J54A **Appleton** 31.47 14 P P 07 35 54.7 +0.1
baz=199
L59A **Walton** 31.48 19 P P 07 35 55.7 +0.8
baz=206
I51A **Listowel** 31.49 11 P P 07 35 54.6 -0.3
baz=194,SNR=6.9
ECSD **EROS Data Cent** 31.51 349 IAmb IAmb 07 35 56.1
comp=Z,59nm,1.8s
ECSD **EROS Data Cent** 31.51 349 P P 07 35 54.6 -0.4
baz=165,SNR=10
PDMCI **Parker Dam, Lak** 31.51 317 P P 07 35 56.7 +1.6
baz=126,SNR=12
K57A **Scipio Center** 31.52 17 P P 07 35 55.1 0.0
baz=203
L60A **Shokan** 31.57 21 P P 07 35 56.3 +0.6
baz=207
N23A **Red Feather La** 31.78 335 IAmb IAmb 07 36 00.2
comp=Z,20nm,0.7s
N23A **Red Feather La** 31.78 335 P P 07 35 58.3 +0.5
baz=147,SNR=13
I53A **Kortright Cn E** 31.78 12 P P 07 35 57.7 +0.3
baz=197
K58A **Earlville** 31.81 18 P P 07 35 58.0 +0.3
baz=204
H47A **Mio** 31.82 6 P P 07 35 58.2 +0.4
baz=188
M63A **Gales Ferry** 31.87 24 P P 07 35 58.5 +0.2
baz=212
I52A **Shelburne** 31.90 12 P P 07 35 58.5 0.0
baz=196
PHWY **Pilot Hill** 31.92 336 IAmb IAmb 07 36 01.4
comp=Z,20nm,0.8s
J56A **Wolcott** 31.93 16 P P 07 35 58.7 0.0
baz=202,SNR=7.9
L61A **Hillsdale 1, H** 31.99 21 P P 07 35 60.0 +0.7
baz=208
GLMI **Grayling** 32.01 5 P P 07 36 00.4 +1.0
baz=187
H48A **Harrisville** 32.02 7 P P 07 35 58.9 -0.6
baz=190
BC3 **Big Chuckawall** 32.03 315 P P 07 36 01.2 +1.3
baz=124,SNR=9.1
IRM **Iron Mountain** 32.10 316 P P 07 36 00.8 +0.4
baz=125
G45A **Suttons Bay** 32.14 4 P P 07 36 00.2 -0.3
baz=185
L62A **Suffield** 32.17 23 P P 07 36 01.1 +0.3
baz=210
O20A **White River Ci** 32.19 331 P P 07 36 03.2 +1.9
O20A PcP 07 38 49.6 +0.8
O20A **White River Ci** 32.19 331 P P 07 36 02.8 +1.5
baz=142,SNR=57
J57A **Williamstown** 32.30 17 P P 07 36 02.0 +0.1
baz=203
G40A **Rib Lake** 32.30 358 IAmb IAmb 07 36 02.5
comp=Z,17nm,0.9s
KNB **Kanab** 32.38 322 P P 07 36 05.1 +2.1
KNB pmax pmax
comp=Z,7.0nm,0.9s
KNB **Kanab** 32.38 322 P P 07 36 05.1 +2.1
G47A **Hillman** 32.43 6 P P 07 36 04.5 +1.5
baz=189
SPMN **Marine on St.** 32.43 354 P P 07 36 02.7 -0.4
SPMN **Marine on St.** 32.43 354 P P 07 36 02.4 -0.7
baz=172,SNR=40
L63A **North Scituate** 32.44 24 P P 07 36 03.7 +0.6
baz=212
J58A **Remsen** 32.46 18 P P 07 36 03.5 +0.1
J58A IAmb IAmb 07 36 22.1
comp=Z,32nm,1.1s
J58A **Remsen** 32.46 18 P P 07 36 03.2 -0.2
baz=205
K61A **Williamstown** 32.51 21 P P 07 36 04.9 +1.0
baz=208
H52A **Wyevale** 32.51 12 P P 07 36 03.5 -0.3
baz=196,SNR=7.7
L61B **Northampton** 32.53 22 P P 07 36 03.8 -0.2
baz=210
SRU **San Rafael Swe** 32.55 327 P P 07 36 05.9 +1.4
SRU PcP 07 38 50.9 +1.1
I55A **Frankford** 32.59 15 P P 07 36 04.8 +0.3
baz=200
BELC **Belle Mtn. Jos** 32.60 315 P P 07 36 06.3 +1.4
baz=124
SUSD **Miller** 32.68 346 P P 07 36 05.1 -0.2
SUSD **Miller** 32.68 346 P P 07 36 05.3 0.0
baz=161
PFO **Pinyon Flats O** 32.71 314 eP P 07 36 07.3 +1.5
PFO pmax pmax
comp=Z,5.0nm,1.0s
PFO **Pinyon Flats O** 32.71 314 P P 07 36 07.4 +1.5
baz=123
H53A **Bobcaygeon** 32.72 13 P P 07 36 05.5 -0.1
baz=198
SADO **Sadowa** 32.78 12 P P 07 36 05.3 -0.8
comp=Z,19nm,0.6s,baz=249,slow=7.3,SNR=20
SADO **Sadowa** 32.78 12 IAmb IAmb 07 36 06.3
comp=Z,19nm,0.7s
F45A **CMU Biological** 32.79 4 P P 07 36 06.3 +0.1
baz=186
GMRC **Granite Mounta** 32.81 316 P P 07 36 07.8 +1.1
baz=125,SNR=7.1
K62A **Royalston** 32.88 22 P P 07 36 08.4 +1.3
baz=210
HRV **Adam Dziewonsk** 33.00 23 P P 07 36 09.5 +1.3
baz=212
MSU **Marysvale** 33.02 325 P P 07 36 09.4 +0.7
MSU **Marysvale** 33.02 325 P P 07 36 09.3 +0.7
MSU PcP 07 38 52.9 +1.7
TMUT **Trail Mountain** 33.05 327 P P 07 36 10.3 +1.3
TMUT PcP 07 38 52.4 +1.1
CCUT **Cedar City** 33.05 322 P P 07 36 11.1 +2.1
CCUT PcP 07 38 53.4 +2.0
K63A **Dunstable** 33.17 23 P P 07 36 10.5 +0.9
baz=211
F48A **Evansville** 33.22 8 P P 07 36 08.8 -1.2
baz=191,SNR=5.8
MURC **Murrieta** 33.22 313 P P 07 36 12.0 +1.8
baz=122
G53A **Haliburton** 33.23 13 P P 07 36 10.0 -0.1
baz=198
SAML **Samuel** 33.27 129 P P 07 36 10.1 -0.7
SAML pmax pmax
comp=Z,37nm,0.8s
SAML **Samuel** 33.27 129 eP P 07 36 10.1 -0.7
SAML **Samuel** 33.27 129 P P 07 36 10.1 -0.7
SAML IAmb IAmb 07 36 11.6
comp=Z,37nm,0.8s
HEC **Hector,Ludlow** 33.29 316 P P 07 36 12.1 +1.3
baz=124
H56A **Elgin** 33.31 16 P P 07 36 11.1 +0.3
baz=202
J61A **Chester** 33.35 21 P P 07 36 12.2 +1.0
baz=209
TUQ **Turquoise Moun** 33.36 317 P P 07 36 13.0 +1.4
baz=126
E43A **Lone Tree Farm** 33.41 2 IAmb IAmb 07 36 11.6
comp=Z,28nm,0.8s
H57A **Richville** 33.43 17 P P 07 36 12.5 +0.7
baz=204
K22A **Casper** 33.48 336 IAmb IAmb 07 36 14.9
comp=Z,31nm,0.8s
K22A **Casper** 33.48 336 P P 07 36 13.5 +1.0
baz=147,SNR=22
SHPR **Sheep Range** 33.50 319 P P 07 36 14.6 +1.8
SHPR PcP 07 38 54.7 +2.2
J62A **Henniker** 33.52 22 P P 07 36 13.6 +1.0
baz=210
I60A **Shoreham** 33.53 20 P P 07 36 13.3 +0.6
baz=208
G54A **Lake Saint Pet** 33.61 13 P P 07 36 13.3 -0.1
baz=199
E44A **Grand Marais A** 33.70 3 P P 07 36 14.0 -0.1
baz=185
E38A **The Farm, Brul** 33.70 356 IAmb IAmb 07 36 15.6
comp=Z,28nm,0.8s
F52A **Sundridge** 33.73 12 P P 07 36 13.6 -0.8
baz=196,SNR=5.2
F51A **Arnstein** 33.74 11 P P 07 36 14.9 +0.4
baz=195
E47A **Iron Bridge** 33.76 7 P P 07 36 14.4 -0.3
baz=189
H58A **Gabriels** 33.76 19 P P 07 36 14.5 -0.2
baz=206
MPU **Maple Canyon** 33.79 327 P P 07 36 16.6 +1.3
MPU PcP 07 38 54.1 +0.8
G55A **Calabogie** 33.80 15 P P 07 36 14.8 -0.2
baz=201
LONY **Lake Ozonia** 33.82 18 P P 07 36 15.4 +0.2
LONY pP 07 36 33.0 +1.8
LONY **Lake Ozonia** 33.82 18 P P 07 36 15.0 -0.2
baz=205
RSSD **Black Hills** 33.83 340 P P 07 36 16.8 +1.2
RSSD pmax pmax
comp=Z,14nm,0.6s
RSSD **Black Hills** 33.83 340 P P 07 36 16.8 +1.2
RSSD IAmb IAmb 07 36 19.3
comp=Z,14nm,0.6s
RSSD **Black Hills** 33.83 340 P P 07 36 17.0 +1.3
baz=152
SHOC **Shoshone, Teco** 33.86 317 P P 07 36 18.0 +2.3
baz=126
GSC **Goldstone, Bar** 33.87 316 P P 07 36 17.5 +1.6
baz=124
BFSC **Mount Baldy Ra** 33.88 314 P P 07 36 17.5 +1.4
baz=122
E48A **Lockeyer** 33.92 8 P P 07 36 16.0 -0.1
baz=191
PSUT **Pine Spring** 34.00 323 P P 07 36 18.9 +1.8
PSUT PcP 07 38 55.6 +1.7
D46A **Sault St. Mari** 34.11 6 P P 07 36 17.6 -0.2
baz=188
H59A **Cadyville** 34.12 19 P P 07 36 17.7 -0.1
baz=206
ALGO **Algonquin Park** 34.15 13 P P 07 36 17.8 -0.2
baz=198
MWC **Mount Wilson** 34.16 313 P P 07 36 19.1 +0.6
MWC pmax pmax
comp=Z,10.0nm,0.9s
MWC **Mount Wilson** 34.16 313 P P 07 36 19.1 +0.6
I62A **Tamworth** 34.25 22 P P 07 36 19.9 +0.9
baz=211
E52A **Mattawa** 34.33 12 P P 07 36 19.4 -0.2
baz=197
CTU **Camp Tracy** 34.35 328 P P 07 36 21.6 +1.5
LBNH **Lisbon** 34.35 21 P P 07 36 20.4 +0.5
baz=210
H60A **Morristown** 34.37 20 P P 07 36 20.3 +0.3
baz=208
D47A **Chapleau** 34.37 7 P P 07 36 18.9 -1.1
baz=190
F55A **Otter Lake** 34.44 15 P P 07 36 20.9 +0.3
baz=201
G58A **Ormstown** 34.46 18 P P 07 36 21.3 +0.6
baz=206
EDW2 **Edwards Air Fo** 34.46 314 P P 07 36 22.5 +1.6
baz=122
TPNV **Topopah Spring** 34.46 319 P P 07 36 23.0 +1.9
TPNV 07 38 57.0
TPNV pmax pmax
comp=Z,6.0nm,0.8s
TPNV **Topopah Spring** 34.46 319 P P 07 36 23.0 +1.9
TPNV PcP 07 38 57.0 +1.8
TPNV **Topopah Spring** 34.46 319 P P 07 36 23.2 +2.1
baz=127,SNR=8.6
TCUT **Toone Canyon** 34.49 329 P P 07 36 21.6 +0.2
TCUT PcP 07 38 56.2 +0.8
DUG **Dugway, Tooele** 34.55 326 P P 07 36 23.8 +1.9
DUG pmax pmax
comp=Z,6.0nm,0.9s
DUG **Dugway, Tooele** 34.55 326 P P 07 36 23.8 +1.9
DUG **Dugway, Tooele** 34.55 326 P P 07 36 23.4 +1.5
baz=135,SNR=7.5
LRMC **Laurel Mtn Rad** 34.57 316 P P 07 36 23.6 +1.6
baz=123,SNR=6.7
FURC **Furnace Creek,** 34.58 318 P P 07 36 23.7 +1.9
baz=126,SNR=5.6
D48A **Paudash Townsh** 34.65 8 P P 07 36 21.5 -0.9
baz=192,SNR=8.5
G59A **Clarenceville** 34.67 19 P P 07 36 23.1 +0.6
baz=207
I63A **Otisfield** 34.69 23 P P 07 36 24.2 +1.4
baz=212
MPMC **Manual Prospec** 34.76 317 P P 07 36 25.0 +1.3
baz=124,SNR=9.3
E54A **Lac Daplat, Po** 34.80 14 P P 07 36 23.4 -0.2
baz=200
D49A **Beulah Townshi** 34.81 9 P P 07 36 22.9 -0.9
baz=192,SNR=8.3
BW06 **Boulder Array** 34.87 333 P P 07 36 25.3 +0.7
BW06 **Boulder Array** 34.87 333 P P 07 36 25.0 +0.3
baz=142,SNR=9.6
PD31 **Pinedale Array** 34.87 333 P P 07 36 25.4 +0.9
PDAR **Pinedale Array** 34.87 333 P P 07 36 25.6 +0.9
comp=Z,9.5nm,0.7s,baz=128,slow=10,SNR=99
PDAR PcP PcP 07 38 56.5 +0.1
comp=Z,3.4nm,0.6s,baz=140,slow=5.1,SNR=8.6

PDAR pPcP 07 39 14.7
comp=Z,2.7nm,0.6s,baz=158,slow=5.6,SNR=5.5
PDAR ScP **ScP** **07 42 37.4 +1.1**
comp=Z,0.5nm,0.8s,baz=144,slow=5.5,SNR=3.8
PDAR PKiKP **PKiKP** **07 46 18.4 -0.3**
comp=Z,0.6nm,0.6s,baz=122,slow=3.3,SNR=5.4
PDAR pPKiKP **pPKiKP** **07 46 35.4 -2.3**
comp=Z,0.6nm,0.6s,baz=132,slow=1.3,SNR=4.6
PDAR LR LR 07 54 46.5
comp=Z,230nm,19.2s,baz=116,slow=43
PDAR Pinedale Array 34.87 333 P **P** **07 36 24.9 +0.3**
R11A Troy Canyon, C 34.91 321 P **P** **07 36 26.8 +1.9**
R11A **PcP** **07 38 57.7 +1.2**
R11A Troy Canyon, C 34.91 321 P **P** **07 36 26.1 +1.1**
baz=129,SNR=10
D51A Lot 18 Range I 34.96 11 P **P** **07 36 24.2 -0.9**
baz=196
EYMN Ely 35.04 357 P **P** **07 36 24.8 -0.9**
EYMN IAmb IAmb 07 36 26.5
comp=Z,23nm,0.7s
EYMN Ely 35.04 357 P **P** **07 36 24.6 -1.1**
baz=175,SNR=7.3
SPUT South Promonto 35.16 328 P **P** **07 36 28.5 +1.4**
ARVC Arvin 35.17 314 P **P** **07 36 29.0 +2.0**
baz=122
BGU Big Grassy Mou 35.19 327 P **P** **07 36 28.6 +1.3**
BGU **PcP** **07 38 57.9 +0.6**
ISA Isabella, Lake 35.21 315 P **P** **07 36 29.6 +2.2**
ISA 07 38 58.7
ISA pmax pmax
comp=Z,14nm,1.5s
ISA Isabella, Lake 35.21 315 P **P** **07 36 29.6 +2.2**
ISA **PcP** **07 38 58.7 +1.4**
ISA Isabella, Lake 35.21 315 P **P** **07 36 29.7 +2.2**
baz=123
GRAC Grapevine Rang 35.21 318 P **P** **07 36 29.3 +1.9**
baz=126,SNR=5.6
D53A Lac Vacive, Po 35.29 13 IAmb IAmb 07 36 45.0
comp=Z,52nm,1.4s
D53A Lac Vacive, Po 35.29 13 P **P** **07 36 28.2 +0.3**
baz=198
LPAZ La Paz 35.34 145 P **P** **07 36 30.9 +1.5**
comp=Z,6.9nm,0.6s,baz=324,slow=8.5,SNR=22
LPAZ PcP **PcP** **07 39 00.3 +1.6**
comp=Z,1.9nm,0.5s,baz=348,slow=5.8,SNR=4.0
LPAZ LR LR 07 51 42.5
comp=Z,161nm,21.8s,baz=314,slow=37
LPAZ La Paz 35.34 145 *eP* **P** **07 36 29.1 -0.3**
LPAZ La Paz 35.34 145 P **P** **07 36 30.6 +1.2**
LPAZ **PcP** **07 38 59.5 +0.9**
H63A New Sharon 35.41 23 P **P** **07 36 29.4 +0.4**
baz=212
E56A St. Veronique 35.44 16 P **P** **07 36 29.7 +0.5**
baz=203
F59A Saint Guilaume 35.48 19 P **P** **07 36 29.9 +0.4**
baz=207
AHID Auburn Hatcher 35.58 331 IAmb IAmb 07 36 33.5
comp=Z,32nm,0.8s
D54A Lac Fusel, La 35.60 14 P **P** **07 36 30.2 -0.3**
baz=200,SNR=5.7
G62A West of Eustis 35.70 22 P **P** **07 36 32.3 +0.8**
baz=211
H64A Troy 35.71 24 P **P** **07 36 32.7 +1.2**
baz=214
VES Vestal, Richgr 35.72 315 P **P** **07 36 33.5 +1.8**
baz=122,SNR=5.5
D55A Sainte-Anne-du 35.77 15 P **P** **07 36 32.1 +0.2**
baz=202
E58A La Victoria 35.79 18 P **P** **07 36 32.5 +0.2**
baz=206
F60A Warwick 35.86 20 P **P** **07 36 33.0 +0.2**
baz=208
G63A Kingsbury 35.96 23 P **P** **07 36 34.3 +0.7**
baz=213
D56A ZEC Mazanza, M 35.98 16 P **P** **07 36 34.1 +0.3**
baz=203
MDND Maddock 36.05 347 P **P** **07 36 34.5 +0.1**
baz=162,SNR=11
D57A Chemin Vers le 36.20 17 P **P** **07 36 35.6 -0.1**
baz=205
PKME Peaks-Kenny Pk 36.21 23 P **P** **07 36 36.8 +1.1**
baz=213
ELK Elko 36.27 325 P **P** **07 36 37.3 +0.6**
ELK **PcP** **07 39 01.8 +1.2**
E60A Ste Agathe de 36.38 20 P **P** **07 36 37.7 +0.6**
baz=209
IMW Indian Meadow 36.38 332 IAmb IAmb 07 36 43.0
comp=Z,22nm,0.7s
G64A Maxfield 36.41 24 P **P** **07 36 38.3 +0.8**
baz=214
FLWY Flagg Ranch 36.42 333 IAmb IAmb 07 36 45.0
comp=Z,27nm,0.8s
PAGB Antelope Grade 36.48 314 P **P** **07 36 38.6 +0.4**
PAGB IAmb IAmb 07 36 57.5
comp=Z,42nm,1.3s
PAGB **PcP** **07 39 02.3 +1.3**
NV11 Mina Array Sit 36.56 319 P **P** **07 36 41.0 +1.9**
NV11 **PcP** **07 39 01.7 +0.3**
D58A Chemin du LacG 36.56 18 P **P** **07 36 38.8 0.0**
baz=206,SNR=5.1
H17A Grant Village 36.61 333 IAmb IAmb 07 36 47.5
comp=Z,19nm,0.7s
H17A Grant Village 36.61 333 P **P** **07 36 40.9 +1.3**
baz=142,SNR=25
OMMB Old Mammoth Mi 36.63 318 P **P** **07 36 41.9 +2.0**
OMMB **PcP** **07 39 03.1 +1.2**
RLMT Red Lodge 36.64 335 P **P** **07 36 40.5 +0.7**
baz=145,SNR=77
NVAR Mina Array Bea 36.65 319 P **P** **07 36 42.1 +2.2**
comp=Z,12nm,0.7s,baz=132,slow=7.3,SNR=77
NVAR PcP **PcP** **07 39 03.5 +1.8**
comp=Z,15nm,0.6s,baz=142,slow=2.5,SNR=39
NVAR pPcP 07 39 20.5
comp=Z,8.5nm,0.7s,baz=141,slow=4.0,SNR=9.7
NVAR ScP **ScP** **07 42 44.1 +1.1**
comp=Z,1.2nm,0.7s,baz=132,slow=4.3,SNR=5.3
NVAR LR LR 07 53 01.8
comp=Z,338nm,20.5s,baz=150,slow=38
LKWY Lake 36.67 334 IAmb IAmb 07 36 43.3
comp=Z,24nm,0.7s
LAO LASA Array 36.83 340 IAmb IAmb 07 36 44.5
comp=Z,27nm,0.7s
LAO LASA Array 36.83 340 P **P** **07 36 41.7 +0.5**
baz=151,SNR=20
LATQ La Tuque 36.85 18 IAmb IAmb 07 37 01.1
comp=Z,62nm,1.9s
LATQ La Tuque 36.85 18 P **P** **07 36 41.6 +0.4**
baz=206,SNR=5.1
MNMC Minye Minye 36.91 149 P **P** **07 36 43.6 +1.3**
MNMC IAmb IAmb 07 36 49.3
comp=Z,26nm,0.7s
D60A Saint Jean D'O 37.03 20 P **P** **07 36 42.8 +0.1**
baz=209
LSQQ Lebel-sur-Quev 37.32 13 P **P** **07 36 44.9 -0.3**
baz=199
GCMT Greycliff 37.35 335 P **P** **07 36 46.6 +0.9**
PB11 IPOC Station P 37.41 150 P **P** **07 36 47.3 +0.8**
PB11 IAmb IAmb 07 37 14.1
comp=Z,23nm,0.8s
WAKR Walker 37.42 319 P **P** **07 36 48.7 +2.3**
E63A Oxbow 37.51 23 P **P** **07 36 47.0 +0.2**
baz=213
D61A St Aubert, Com 37.53 21 P **P** **07 36 47.8 +0.9**
baz=210
GO01 Chusmiza 37.56 149 P **P** **07 36 50.7 +2.6**
GO01 IAmb IAmb 07 36 56.3
comp=Z,23nm,0.7s
ULM Lac du Bonnet 37.73 352 P **P** **07 36 47.7 -0.9**
comp=Z,41nm,0.7s,baz=168,slow=8.7,SNR=93
ULM LR LR 07 53 29.0
comp=Z,517nm,21.4s,baz=144,slow=38
E64A Bridgewater 37.73 24 P **P** **07 36 49.4 +0.7**
baz=214
CMB Columbia Colle 37.78 317 P **P** **07 36 51.4 +2.1**
CMB 07 39 06.4
CMB pmax pmax
comp=Z,16nm,1.8s
CMB Columbia Colle 37.78 317 P **P** **07 36 51.4 +2.1**
CMB **PcP** **07 39 06.4 +1.5**
D62A Allapoint, All 37.83 22 P **P** **07 36 49.8 +0.3**
baz=212
MATQ Matagami 37.85 12 P **P** **07 36 49.1 -0.6**
baz=198,SNR=11
PNTR Pine Nut 37.86 319 IAmb IAmb 07 36 54.9
comp=Z,14nm,0.7s
MCMT McKenzie Canyo 37.97 332 P **P** **07 36 53.2 +2.1**
PAHR Pah Rah Range 38.08 320 P **P** **07 36 53.7 +1.8**

D63A Stockholm 38.14 23 P **P** **07 36 52.5 +0.3**
baz=213
DLMT Dillon 38.27 332 P **P** **07 36 54.8 +1.4**
DLMT IAmb IAmb 07 36 56.1
comp=Z,31nm,0.9s
MFID Camas Ranch 38.42 328 P **P** **07 36 55.7 +1.1**
MFID **PcP** **07 39 08.3 +1.4**
AFDM Forest Hills D 38.66 318 P **P** **07 36 57.6 +1.0**
AFDM **PcP** **07 39 08.9 +1.2**
BEKR Beckworth 38.78 320 P **P** **07 36 59.1 +1.2**
BEKR **PcP** **07 39 08.6 +0.4**
EGMT Eagleton 39.22 337 P **P** **07 37 02.6 +1.3**
EGMT Eagleton 39.22 337 P **P** **07 37 02.4 +1.1**
baz=146,SNR=67
WVOR Wild Horse Val 39.30 324 P **P** **07 37 02.9 +0.8**
WVOR IAmb IAmb 07 37 04.8
comp=Z,14nm,0.8s
WVOR PcP **PcP** **07 39 11.5 +1.8**
ORV Oroville 39.34 318 P **P** **07 37 03.8 +1.5**
ORV **PcP** **07 39 11.1 +1.4**
O03E Paynes Creek 39.94 319 P **P** **07 37 08.6 +1.2**
baz=124
MSO Missoula 39.99 333 IAmb IAmb 07 37 09.6
comp=Z,32nm,0.9s
MSO Missoula 39.99 333 P **P** **07 37 08.6 +0.9**
baz=140,SNR=30
BMO Blue Mountains 40.18 328 P **P** **07 37 09.4 +0.1**
BMO pmax pmax
comp=Z,6.0nm,0.8s
BMO Blue Mountains 40.18 328 P **P** **07 37 09.4 +0.1**
LVC Limon Verde 40.20 151 P **P** **07 37 12.8 +2.8**
LVC pmax pmax
comp=Z,12nm,0.9s
LVC Limon Verde 40.20 151 *eP* **P** **07 37 09.2 -0.8**
LVC Limon Verde 40.20 151 P **P** **07 37 12.8 +2.8**
CLDB Colider 40.21 125 *eP* **P** **07 37 07.5 -2.3**
O02D Mt. Diablo Mer 40.51 318 P **P** **07 37 12.1 0.0**
baz=123
M04C Macdoel 40.80 321 P **P** **07 37 15.3 +0.7**
baz=125,SNR=7.2
F10A Beach Ranch, E 40.92 329 IAmb IAmb 07 37 18.4
comp=Z,21nm,0.7s
YBH Yreka Blue Hor 41.31 320 P **P** **07 37 18.0 -0.7**
YBH 07 39 16.5
YBH pmax pmax
comp=Z,36nm,2.0s
YBH Yreka Blue Hor 41.31 320 P **P** **07 37 18.0 -0.7**
YBH **PcP** **07 39 16.5 +0.3**
J05D Fort Rock, OR 41.33 323 P **P** **07 37 19.3 +0.4**
baz=127
L04D Klamath Falls 41.34 321 P **P** **07 37 19.1 +0.2**
baz=125,SNR=5.6
G08A Pilot Rock 41.34 327 P **P** **07 37 19.5 +0.6**
G08A **PcP** **07 39 17.0 +0.7**
PINE Pine Mountain 41.47 324 P **P** **07 37 20.3 +0.2**
PINE **PcP** **07 39 18.7 +1.9**
I05D Terrebonne, OR 42.03 325 P **P** **07 37 24.7 +0.2**
baz=128
I04A Tendick Farm, 42.32 323 P **P** **07 37 26.9 +0.1**
baz=126,SNR=8.3
K02D Willamette Mer 42.44 321 P **P** **07 37 27.9 +0.1**
baz=124
NEW Newport 42.50 332 P **P** **07 37 28.2 0.0**
baz=136,SNR=8.3
G05D Wamic, OR 42.58 326 P **P** **07 37 30.5 +1.6**
baz=129,SNR=8.0
I03D Drain, OR 42.81 323 P **P** **07 37 30.6 -0.1**
baz=125
J01E Myrtle Point 42.86 322 P **P** **07 37 31.9 +0.8**
baz=124
H04D Lebanon 42.94 324 P **P** **07 37 31.5 -0.3**
baz=127
F05D White Salmon 43.06 326 P **P** **07 37 33.7 +1.0**
baz=129
SALV Santo Antonio 43.32 130 *eP* **P** **07 37 34.3 -0.8**
SALV *epP* **pP** **07 37 51.5 0.0**
I02D Swisshome 43.34 323 P **P** **07 37 35.1 +0.1**
baz=125
G03D McMinnville, O 43.65 324 P **P** **07 37 38.0 +0.5**
baz=127,SNR=5.1
F04D Rainier, OR 44.03 326 P **P** **07 37 41.4 +0.9**
baz=128
C06D Leavenworth 44.08 329 P **P** **07 37 41.6 +0.7**
baz=132,SNR=7.1
E03A Lebam 44.62 326 IAmb IAmb 07 37 46.7
comp=Z,26nm,0.9s
B05A Bryant 44.92 328 P **P** **07 37 47.0 -0.5**
baz=130,SNR=7.6
D03D Eldon 44.97 327 P **P** **07 37 47.8 -0.1**
baz=129,SNR=6.8
PP1B Ponte de Pedra 45.00 132 *eP* **P** **07 37 48.6 0.0**
SCHQ Schefferville 45.19 18 P **P** **07 37 48.6 -1.0**
comp=Z,40nm,0.7s,baz=216,slow=6.4,SNR=66
SCHQ *pP* **pP** **07 38 05.4 -0.8**
comp=Z,24nm,0.8s,baz=204,slow=4.8,SNR=5.6
SCHQ PcP **PcP** **07 39 28.3 -0.6**
comp=Z,4.9nm,0.7s,baz=211,slow=4.3,SNR=3.2
SCHQ LR LR 07 57 41.3
comp=Z,415nm,18.3s,baz=198,slow=38
SCHQ Schefferville 45.19 18 P **P** **07 37 48.9 -0.7**
A04D Lummi Island 45.52 329 P **P** **07 37 52.2 -0.1**
baz=130
PGC Sidney 45.86 328 P **P** **07 37 55.3 +0.4**
PGC IAmb IAmb 07 37 57.1
comp=Z,25nm,0.9s
FCC Fort Churchill 45.97 356 P **P** **07 37 55.2 -0.5**
FCC pmax pmax
comp=Z,44nm,0.6s
FCC Fort Churchill 45.97 356 P **P** **07 37 55.2 -0.5**
SMTB Santa Maria do 46.10 116 *eP* **P** **07 37 57.8 +0.4**
ARAG Araguaiana, MT 46.16 127 *eP* **P** **07 37 56.7 -1.0**
AQDB Aquidauana 46.31 135 *eP* **P** **07 37 59.8 +0.9**
LLLB Lillooet 46.36 331 IAmb IAmb 07 38 03.4
comp=Z,15nm,0.8s
PEXB Peixe 47.05 120 *eP* **P** **07 38 04.0 -0.8**
C2SB Chapadao do Su 47.23 131 *eP* **P** **07 38 07.0 +0.9**
BDFB Brasilia 49.14 124 P **P** **07 38 19.5 -1.4**
comp=Z,13nm,0.6s,baz=287,slow=10,SNR=21
BDFB PcP **PcP** **07 39 44.6 +0.9**
comp=Z,7.3nm,0.9s,baz=251,slow=3.8,SNR=4.3
BDFB pPcP 07 40 02.1
comp=Z,12nm,1.0s,baz=213,slow=3.5,SNR=5.0
BDFB LR LR 07 59 30.5
comp=Z,141nm,18.2s,baz=317,slow=36
BDFB Brasilia 49.14 124 IAmb IAmb 07 38 21.4
comp=Z,13nm,0.7s
CPUP Villa Florida 49.43 142 P **P** **07 38 23.0 +0.1**
comp=Z,8.1nm,0.9s,baz=338,slow=8.4,SNR=20
CPUP PcP **PcP** **07 39 45.7 +1.3**
comp=Z,2.4nm,0.6s,baz=302,slow=1.5,SNR=4.1
CPUP LR LR 08 00 45.8
comp=Z,166nm,18.0s,baz=318,slow=38
CPUP Villa Florida 49.43 142 *eP* **P** **07 38 23.3 +0.3**
CPUP Villa Florida 49.43 142 IAmb IAmb 07 38 24.2
comp=Z,18nm,1.0s
ITRB Iturama 49.65 130 *eP* **P** **07 38 24.7 -0.1**
NBPS Pedro II - PI 49.87 107 *eP* **P** **07 38 25.5 -1.1**
TRCB Terra Rica 49.98 135 *eP* **P** **07 38 26.6 -0.6**
TRCB *epP* **pP** **07 38 42.9 -0.9**
PCMB Pacaembu 50.17 133 *eP* **P** **07 38 28.3 -0.4**
PCMB *epP* **pP** **07 38 45.0 -0.3**
GO05 Huala 50.19 162 IAmb IAmb 07 38 51.2
comp=Z,34nm,1.1s
IPMB Ipameri, GO 50.28 127 *eP* **P** **07 38 28.9 -0.7**
NBMO Morrinhos-CE 50.81 105 *eP* **P** **07 38 33.1 -0.6**
PTGB Pitanga 51.64 136 *eP* **P** **07 38 38.9 -0.8**
PTGB *epP* **pP** **07 38 56.0 -0.4**
BB19B Bebedouro 51.84 130 *eP* **P** **07 38 39.8 -1.4**
PMNB Patos De Minas 51.98 126 *eP* **P** **07 38 41.7 -0.6**
PMNB *epP* **pP** **07 38 58.7 -0.5**
ITQB Itaqui 52.35 144 *eP* **P** **07 38 44.5 -0.2**
FRTB Fartura 52.48 133 *eP* **P** **07 38 45.4 -0.6**
FRTB *epP* **pP** **07 39 01.8 -0.9**
NBCL Cascavel-CE 52.76 105 *eP* **P** **07 38 47.9 -0.3**
YKA Yellowknife Ar 52.91 345 P **P** **07 38 48.1 -0.4**
comp=Z,62nm,0.9s,baz=142,slow=7.6,SNR=551
YKA *pP* **pP** **07 39 04.5 -0.9**
comp=Z,8.1nm,0.6s,baz=162,slow=6.4,SNR=4.3
YKA PcP **PcP** **07 39 56.1 -0.6**
comp=Z,7.5nm,0.7s,baz=145,slow=4.6,SNR=6.9
YKA ScP **ScP** **07 43 49.9 +1.3**
comp=Z,0.5nm,0.8s,baz=144,slow=4.8,SNR=3.0
YKA LR LR 08 03 33.9
comp=Z,206nm,20.9s,baz=0.0,slow=38
ITAB Concordia 53.31 139 *eP* **P** **07 38 51.5 -0.4**

ITAB *epP* **pP** **07 39 09.2 +0.5**
RCLB Rio Claro- Sao 53.39 131 *eP* **P** **07 38 52.1 -0.6**
NBPN Ponto Novo - B 53.50 114 *eP* **P** **07 38 54.0 +0.4**
VAO Valinhos 54.15 131 *eP* **P** **07 38 58.0 -0.3**
SPB Sao Paulo 54.17 132 *eP* **P** **07 38 58.1 -0.1**
SPB *epP* **pP** **07 39 14.8 -0.4**
SPB Sao Paulo 54.17 132 P **P** **07 38 56.6 -1.6**
NBPA Parau_RN 54.38 107 *eP* **P** **07 38 59.1 -1.0**
BSCB Bom Sucesso 54.65 128 *eP* **P** **07 39 01.9 0.0**
DLBC Dease Lake 55.04 335 PKP2bc **P'P'bc** **08 09 28.7 +1.5**
comp=Z,11nm,0.9s,baz=309,slow=0.9,SNR=4.4
DLBC Dease Lake 55.04 335 P **P** **07 39 05.7 +1.5**
PARB Paraibuna 55.35 130 *eP* **P** **07 39 07.5 +0.6**
PARB *epP* **pP** **07 39 23.1 -0.8**
TAOE Nuku Hiva Isla 55.59 250 *e*LR LR 07 55 13.9
comp=Z,498nm,27.3s
TAOE Nuku Hiva Isla 55.59 250 *e*T T 08 38 25.1
comp=Z,65nm,0.2s
PLTB Pedras Altas 55.63 144 *eP* **P** **07 39 08.9 +0.1**
PLCA Paso Flores 55.90 163 P **P** **07 39 12.1 +1.5**
PLCA pmax pmax
comp=Z,18nm,1.2s
PLCA Paso Flores 55.90 163 P **P** **07 39 12.0 +1.5**
comp=Z,7.6nm,0.9s,baz=14,slow=9.6,SNR=11
PLCA LR LR 07 57 30.1
comp=Z,147nm,20.0s,baz=49,slow=30
PLCA Paso Flores 55.90 163 *eP* **P** **07 39 11.3 +0.7**
PLCA Paso Flores 55.90 163 P **P** **07 39 12.1 +1.5**
PLCA IAmb IAmb 07 39 13.1
comp=Z,18nm,1.2s
VAS01 Vassouras-RJ 56.39 128 *eP* **P** **07 39 13.4 -0.9**
BSFB Barra de Sao F 56.63 123 *eP* **P** **07 39 14.9 -1.1**
WHY Whitehorse 58.35 335 P **P** **07 39 27.8 +0.1**
WHY IAmb IAmb 07 39 28.6
comp=Z,12nm,0.8s
C36M Paulatuk 60.73 346 P **P** **07 39 42.8 -1.0**
C36M Paulatuk 60.73 346 P **P** **07 39 42.9 -0.9**
baz=140
TGL Tana Glacier 61.78 333 P **P** **07 39 51.9 +0.7**
RES Resolute Bay 61.89 358 P **P** **07 39 50.5 -1.0**
RES pmax pmax
comp=Z,21nm,1.0s
RES Resolute Bay 61.89 358 P **P** **07 39 50.5 -1.0**
RES IAmb IAmb 07 40 12.2
comp=Z,21nm,1.0s
EPYK Eagle Plains 62.28 340 P **P** **07 39 54.2 -0.1**
EPYK Eagle Plains 62.28 340 P **P** **07 39 54.2 -0.1**
baz=125,SNR=18
BCAR Beaver Creek A 62.40 336 P **P** **07 39 55.3 +0.1**
INK Inuvik 62.46 343 P **P** **07 39 55.4 0.0**
INK pmax pmax
comp=Z,42nm,0.8s
INK Inuvik 62.46 343 P **P** **07 39 55.3 0.0**
comp=Z,42nm,0.8s,baz=122,slow=7.4,SNR=152
INK Inuvik 62.46 343 P **P** **07 39 55.4 0.0**
EGAK Eagle 62.99 338 P **P** **07 39 58.2 -0.8**
EGAK IAmb IAmb 07 39 59.4
comp=Z,16nm,0.8s
DOT Dot Lake 63.58 336 P **P** **07 40 03.0 0.0**
PAX Paxson 63.86 335 P **P** **07 40 04.6 -0.3**
PAX pmax pmax
comp=Z,30nm,0.8s
PAX Paxson 63.86 335 P **P** **07 40 04.6 -0.3**
TULEG Thule 64.50 5 P **P** **07 40 08.4 -0.3**
TULEG IAmb IAmb 07 40 30.3
comp=Z,12nm,0.8s
PRP Porcupine Dome 64.97 337 P **P** **07 40 12.1 -0.1**
HDA Harding Lake 65.06 336 P **P** **07 40 12.3 -0.3**
baz=114,SNR=22
IL31 65.18 336 P **P** **07 40 12.5 -0.8**
IL31 IAmb IAmb 07 40 15.3
comp=Z,22nm,0.8s
ILAR Eielson Array 65.18 336 P **P** **07 40 13.0 -0.3**
comp=Z,21nm,0.9s,baz=109,slow=5.4,SNR=154
ILAR LR LR 08 10 49.4
comp=Z,157nm,21.4s,baz=122,slow=38
ILAR Eielson Array 65.18 336 P **P** **07 40 12.5 -0.9**
FYU Fort Yukon 65.32 338 P **P** **07 40 14.5 +0.3**
FYU IAmb IAmb 07 40 15.2
comp=Z,22nm,0.7s
BMAR Burnt Mountain 65.48 339 P **P** **07 40 15.8 +0.4**
POKR Poker Plat Res 65.53 337 P **P** **07 40 15.2 -0.4**
baz=114,SNR=14
COLA College 65.60 336 P **P** **07 40 15.6 -0.4**
COLA pmax pmax
comp=Z,29nm,0.8s
COLA College 65.60 336 P **P** **07 40 15.6 -0.4**
TCOL CIGO, UAF Yank 65.60 336 P **P** **07 40 15.6 -0.5**
baz=113,SNR=7.6
RSO Redoubt South 66.23 331 P **P** **07 40 20.3 -0.2**
SUMG Summit 66.44 15 P **P** **07 40 21.1 -0.8**
SUMG pmax pmax
comp=Z,37nm,1.3s
SUMG Summit 66.44 15 *i* P pP 07 40 38.2 -1.1
SUMG Summit 66.44 15 P **P** **07 40 21.1 -0.8**
SUMG IAmb IAmb 07 40 39.1
comp=Z,37nm,1.3s
PPT Papeete 67.38 245 LR LR 08 04 34.2
comp=Z,202nm,18.4s,baz=96,slow=31
COLD Coldfoot 67.38 338 P **P** **07 40 27.9 +0.5**
COLD IAmb IAmb 07 40 29.2
comp=Z,20nm,0.8s
PPT2 Papeete2 67.39 245 *e*LR LR 08 00 46.7
comp=Z,579nm,28.0s,baz=58
IMAR Indian Mountai 68.30 336 P **P** **07 40 32.0 -1.1**
TTA Tatalina 68.39 333 P **P** **07 40 32.9 -1.0**
TTA Tatalina 68.39 333 P **P** **07 40 32.9 -1.0**
TBI Tubuai 69.58 239 *e*LR LR 08 01 52.6
comp=Z,417nm,27.8s
TBI Tubuai 69.58 239 *e*T T 08 55 56.5
comp=Z,13nm,0.3s
DAG Danmarks Havn 72.98 13 *i* P **P** **07 40 59.6 -1.9**
DAG *i* 07 41 17.0
DAG pmax pmax
comp=Z,6.0nm,0.5s
DAG Danmarks Havn 72.98 13 *i* P **P** **07 40 59.6 -1.9**
comp=Z,6.0nm,0.5s
DAG *i* 07 41 17.0
NOR Nord 74.71 8 *i* P **P** **07 41 09.5 -2.0**
ESDC Sonseca Array 77.79 52 P **P** **07 41 27.8 -2.0**
comp=Z,2.7nm,0.8s,baz=286,slow=5.2,SNR=10
ESDC pP **pP** **07 41 46.5 -1.3**
comp=Z,2.7nm,0.7s,baz=284,slow=5.3,SNR=4.2
ESDC LR LR 08 10 34.4
comp=Z,106nm,20.7s,baz=350,slow=32
ESDC Sonseca Array 77.79 52 P **P** **07 41 27.4 -2.5**
DBIC Dimbokro 82.45 85 P **P** **07 41 54.0 -1.3**
comp=Z,2.6nm,0.7s,baz=227,slow=5.8,SNR=5.1
DBIC LR LR 08 15 18.4
comp=Z,85nm,21.1s,baz=289,slow=33
DBIC Dimbokro 82.45 85 IAmb IAmb 07 42 46.9
comp=Z,35nm,1.7s
NB2 NORSAR Subarra 83.52 29 P **P** **07 41 58.1 -1.9**
comp=Z,0.7nm,0.6s,baz=286,slow=5.1
NOA NORSAR Array B 83.52 29 P **P** **07 41 58.4 -1.6**
comp=Z,1.0nm,0.7s,baz=286,slow=4.9,SNR=5.2
NOA pP **pP** **07 42 17.6 -0.5**
comp=Z,1.9nm,0.8s,baz=286,slow=5.0,SNR=4.6
NOA LR LR 08 15 11.1
comp=Z,91nm,21.6s,baz=285,slow=33
BILL Bilibino 83.71 339 *eP* **P** **07 41 59.7 -1.1**
BILL *e* 07 45 12.8
BILL pmax pmax
comp=Z,19nm,1.0s
BILL MLR MLR
comp=Z,137nm,17.0s
BILL Bilibino 83.71 339 P **P** **07 42 00.0 -0.8**
BILL IAmb IAmb 07 42 01.4
comp=Z,16nm,0.9s
HFS Hagfors 84.95 29 P **P** **07 42 05.4 -1.8**
comp=Z,2.5nm,0.7s,baz=262,slow=4.4,SNR=2.9
ARCES ARCESS Array B 86.13 19 P **P** **07 42 11.6 -1.4**
comp=Z,3.5nm,0.9s,baz=306,slow=4.2,SNR=5.9
ARCES pP **pP** **07 42 31.0 -0.1**
comp=Z,2.1nm,0.7s,baz=297,slow=3.7,SNR=2.0
ARCES LR LR 08 19 41.1
comp=Z,74nm,18.9s,baz=330,slow=35
DAVOX Davos/Dischmat 86.42 43 P **P** **07 42 14.0 -1.1**
DAVOX Davos/Dischmat 86.42 43 P **P** **07 42 14.0 -1.1**
CLL Collm 87.16 38 *eP* **P** **07 42 18.0 -0.3**
CLL Collm 87.16 38 *eP* **P** **07 42 18.0 -0.3**
CLL *epP* **pP** **07 42 36.0 -0.5**
CLL *esP* **sP** **07 42 42.0 -1.6**
TORD Torodi Ar. Bea 87.39 77 P **P** **07 42 17.4 -2.7**
comp=Z,0.6nm,0.6s,baz=298,slow=4.8,SNR=5.0

TORD					LR	LR	08 18 06.6			
	comp=Z,92nm,21.3s,baz=325,slow=33									
GERES	**GERESS Array B**	**88.32**	**40**	P	**P**		**07 42 21.9**	**-2.1**		
	comp=Z,0.4nm,0.3s,baz=300,slow=2.6,SNR=5.1									
GERES				pP	**pP**		**07 42 40.2**	**-2.0**		
	comp=Z,1.1nm,0.8s,baz=318,slow=1.3,SNR=4.0									
GERES				LR	LR		08 17 10.4			
	comp=Z,115nm,19.8s,baz=293,slow=32									
FINES	**FINESS Array B**	**90.07**	**26**	LR	LR		08 20 53.9			
	comp=Z,73nm,21.9s,baz=301,slow=34									
SEY	**Seymchan**	**91.11**	**336**	*e*P	**P**		**07 42 36.2**	**-0.4**		
PAOL	**Paolisi**	**91.31**	**47**	IAMs_20	IAMs_20		08 10 41.7			
	comp=Z,209nm,19.0s									
CLTB	**Caltabellotta**	**91.37**	**51**	IAMs_20	IAMs_20		08 21 31.4			
	comp=Z,240nm,18.0s									
TIXI	**Tiksi**	**92.01**	**349**	*e*P	**P**		**07 42 39.2**	**-1.4**		
TIXI				pmax	pmax					
	comp=Z,8.0nm,0.9s									
TIXI	**Tiksi**	**92.01**	**349**	P	**P**		**07 42 38.9**	**-1.7**		
TIXI				IAmb	IAmb		07 42 40.5			
	comp=Z,9.9nm,1.0s									
PETK	**Petropavlovsk-**	**93.42**	**326**	LR	LR		08 27 44.7			
	comp=Z,155nm,19.7s,baz=61,slow=37									
FNA	**Florina**	**96.23**	**46**	IAMs_20	IAMs_20		08 25 50.9			
	comp=Z,169nm,18.0s									
AKASG	**Malin Array Be**	**96.79**	**35**	PP	PP		07 46 49.1	-9.0		
	comp=Z,0.2nm,0.3s,baz=306,slow=8.2,SNR=4.2									
AKASG				LR	LR		08 23 59.0			
	comp=Z,79nm,21.0s,baz=320,slow=34									
AGG	**Agios Georgios**	**97.60**	**47**	IAMs_20	IAMs_20		08 24 00.1			
	comp=Z,176nm,21.0s									
OBN	**Obninsk**	**98.12**	**28**	*e*P	**P**		**07 43 08.4**	**-0.4**		
OBN				*e*PPP	PPP		07 49 20.4			
OBN				pmax	pmax					
	comp=Z,7.0nm,0.4s									
OBN				MLR	MLR					
	comp=Z,153nm,16.0s									
YAK	**Yakutsk**	**99.53**	**343**	*e*P	**Pdif**		**07 43 13.9**	**-1.1**		
YAK				pmax	pmax					
	comp=Z,5.0nm,0.8s									
SNAA	**Sanae**	**100.80**	**161**	IAMs_20	IAMs_20		08 15 04.2			
	comp=Z,188nm,20.0s									
USA0B	**Ussuriysk Arra**	**112.26**	**330**	*i*PKIKP	**PKiKP**		**07 48 08.0**	**+0.1**		
KURK	**Kurchatov**	**115.69**	**9**	PKIKP	**PKiKP**		**07 48 13.6**	**-0.6**		
KURBB	**Kurchatov Arra**	**115.76**	**9**	PKP	**PKiKP**		**07 48 13.6**	**-0.8**		
	comp=Z,0.9nm,0.6s,baz=353,slow=1.7,SNR=9.1									
BOSA	**Boshof**	**116.88**	**116**	PKP	**PKiKP**		**07 48 17.7**	**+0.4**		
	comp=Z,9.1nm,0.8s,baz=299,slow=1.5,SNR=15									
BOSA	**Boshof**	**116.88**	**116**		**PKiKP**		**07 48 17.5**	**+0.2**		
ULN	**Ulaanbaatar**	**117.94**	**348**	*i*PKIKP	**PKiKP**		**07 48 19.7**	**+0.8**		
ULN	**Ulaanbaatar**	**117.94**	**348**		**PKiKP**		**07 48 19.1**	**+0.2**		
SONM	**Songino Array**	**118.09**	**349**	PKP	**PKPdf**		**07 48 18.9**	**-0.3**		
	comp=Z,2.6nm,0.6s,baz=334,slow=1.2,SNR=24									
SONM				PP	**PP**		**07 49 33.9**	**+0.4**		
	comp=Z,1.0nm,0.8s,baz=7.0,slow=7.0,SNR=4.3									
SONM				PKKPbc	**PKKPbc**		**07 58 38.8**	**-1.3**		
	comp=Z,1.0nm,0.7s,baz=198,slow=4.7,SNR=8.5									
SONM	**Songino Array**	**118.09**	**349**	PKPdf	**PKPdf**		**07 48 18.6**	**-0.6**		
LSZ	**Lusaka**	**118.81**	**100**	PKiKP	**PKiKP**		**07 48 21.8**	**+0.4**		
LSZ	**Lusaka**	**118.81**	**100**		**PKiKP**		**07 48 21.8**	**+0.4**		
KSRS	**Korea Array**	**119.31**	**327**	PKP	**PKiKP**		**07 48 22.4**	**+0.7**		
	comp=Z,6.2nm,0.6s,baz=15,slow=1.6,SNR=26									
KSRS				pPKP	**pPKPdf**		**07 48 39.4**	**-1.2**		
	comp=Z,4.7nm,0.8s,baz=5.1,slow=1.4,SNR=6.7									
MKAR	**Makanchi Array**	**120.03**	**7**	PKP	**PKPdf**		**07 48 21.1**	**-1.7**		
	comp=Z,0.5nm,0.5s,baz=317,slow=2.9,SNR=12									
MKAR				PKKPbc	**PKKPbc**		**07 58 31.7**	**-1.2**		
	comp=Z,0.3nm,0.7s,baz=134,slow=3.5,SNR=3.5									
MKAR	**Makanchi Array**	**120.03**	**7**		**PKPdf**		**07 48 20.8**	**-2.0**		
MAW	**Mawson**	**122.20**	**168**	PKP	**PKiKP**		**07 48 27.3**	**+0.9**		
	comp=Z,2.6nm,0.6s,baz=256,slow=2.4,SNR=7.0									
MAW	**Mawson**	**122.20**	**168**		**PKiKP**		**07 48 26.9**	**+0.6**		
RAYN	**Ar Rayn**	**122.33**	**51**	PKIKP	**PKiKP**		**07 48 28.5**	**+0.4**		
RAYN	**Ar Rayn**	**122.33**	**51**		**PKiKP**		**07 48 28.5**	**+0.4**		
HHC	**Hu-ho-hao-te**	**123.37**	**342**	*e*PKP	**PKPdf**		**07 48 28.8**	**-0.7**		
WMQ	**Urumqi**	**123.47**	**3**	*e*PKP	**PKiKP**		**07 48 29.8**	**0.0**		
WMQ				LR	LR					
	comp=Z,270nm,27.7s									
GAR	**Garm**	**124.75**	**20**		**PKPdf**		**07 48 32.2**	**-0.1**		
PMG	**Port Moresby**	**125.28**	**268**	*e*PKIKP	**PKPdf**		**07 48 33.8**	**+0.2**		
KSH	**Kashi**	**125.92**	**15**	PKP	**PKPdf**		**07 48 32.8**	**-1.6**		
KSH				sPKP			07 49 07.3			
CTAO	**Charters Tower**	**127.12**	**255**	IAMs_20	IAMs_20		08 26 15.9			
	comp=Z,125nm,20.0s									
GTA	**Gaotai**	**127.39**	**352**	⇑PKP	**PKPdf**		**07 48 37.0**	**-0.3**		
GTA				LR	LR					
	comp=Z,140nm,18.4s									
GTA				LR	LR					
	comp=Z,100nm,17.1s									
GTA				LR	LR					
	comp=Z,160nm,20.0s									
NJ2	**Nanjing**	**128.16**	**330**	*e*PKP	**PKiKP**		**07 48 39.1**	**-0.2**		
LZH	**Lanzhou**	**129.90**	**347**	*e*PKP	**PKPdf**		**07 48 38.6**	**-3.6**		
LZH				sPKP			07 49 14.0			
STKA	**Stephens Creek**	**130.37**	**239**	PKP	**PKiKP**		**07 48 44.4**	**+0.6**		
	comp=Z,2.2nm,0.5s,baz=96,slow=4.5,SNR=12									
STKA				pPKP	**pPKPdf**		**07 49 01.6**	**-0.2**		
	comp=Z,11nm,1.1s,baz=124,slow=2.0,SNR=8.0									
STKA	**Stephens Creek**	**130.37**	**239**		**PKiKP**		**07 48 43.9**	**+0.1**		
XAN	**Xi'an**	**130.45**	**341**	PKP	**PKiKP**		**07 48 44.3**	**+0.3**		
XAN	**Xi'an**	**130.45**	**341**	PKiKP	**PKiKP**		**07 48 43.9**	**-0.1**		
XAN	**Xi'an**	**130.45**	**341**		**PKiKP**		**07 48 43.9**	**-0.1**		
WHN	**Wuhan**	**131.51**	**333**	PKP	**PKPdf**		**07 48 44.9**	**-0.2**		
WSAR	**Wadi Sarin**	**131.84**	**42**	PKP	**PKPdf**		**07 48 45.4**	**-0.6**		
	comp=Z,2.3nm,0.5s,baz=294,slow=5.5,SNR=4.4									
WSAR				SKPbc	**SKPbc**		**07 52 05.4**	**-1.0**		
	comp=Z,5.3nm,0.7s,baz=273,slow=1.8,SNR=6.2									
ENH	**Enshi**	**133.70**	**338**		**PKPdf**		**07 48 48.1**	**-1.2**		
CD2	**Chengdu**	**134.87**	**345**	PKP	**PKPdf**		**07 48 50.5**	**-1.0**		
WR0	**Warramunga Arr**	**138.13**	**254**	PKPdf	**PKiKP**		**07 48 58.9**	**-0.9**		
WB0	**Warramunga Arr**	**138.28**	**255**	PKPdf	**PKPdf**		**07 48 59.0**	**+1.0**		
WB2	**Warramunga Arr**	**138.31**	**254**		**PKiKP**		**07 48 59.2**	**-0.9**		
WRAB	**Tennant Creek**	**138.31**	**254**	*e*PKIKP	**PKiKP**		**07 48 59.5**	**-0.7**		
WRA	**Warramunga Arr**	**138.32**	**254**	PKIKP	**PKiKP**		**07 49 00.0**	**-0.2**		
WRA	**Warramunga Arr**	**138.32**	**254**	PKhKP	PKPpre		07 48 49.9			
	comp=Z,1.6nm,0.8s,baz=88,slow=3.7,SNR=8.0									
WRA				PKP	**PKiKP**		**07 48 60.0**	**-0.2**		
	comp=Z,8.5nm,0.7s,baz=90,slow=1.6,SNR=24									
WRA				pPKP	pPKPdf		07 49 16.9	-0.2		
	comp=Z,10nm,0.7s,baz=89,slow=2.2,SNR=11									
WRA	**Warramunga Arr**	**138.32**	**254**		**PKiKP**		**07 48 59.5**	**-0.7**		
AS31	**Alice Springs**	**138.40**	**249**	PKPdf	**PKiKP**		**07 48 59.5**	**-0.8**		
ASAR	**Alice Springs**	**138.40**	**249**	PKhKP	PKPpre		07 48 49.7			
	comp=Z,2.1nm,0.8s,baz=110,slow=3.1,SNR=17									
ASAR				PKP	**PKiKP**		**07 48 59.9**	**-0.4**		
	comp=Z,5.0nm,0.7s,baz=98,slow=2.1,SNR=18									
ASAR	**Alice Springs**	**138.40**	**249**		**PKPdf**		**07 48 59.1**	**+0.9**		
RER	**Riviere de l'E**	**144.98**	**108**		**PKPdf**		**07 49 11.2**	**+1.2**		
FITZ	**Fitzroy Crossi**	**146.65**	**257**		**PKPab**		**07 49 15.6**	**-0.1**		
LUWI	**Luwuk**	**146.78**	**288**		**PKPbc**		**07 49 15.4**	**+0.3**		
HYB	**Hyderabad**	**147.32**	**23**	*i*PKP	**PKPdf**		**07 49 14.0**	**-0.1**		
CHTO	**Chiang Mai**	**147.64**	**347**	PKiKP	**PKPdf**		**07 49 15.4**	**+0.8**		
CHTO	**Chiang Mai**	**147.64**	**347**		**PKPdf**		**07 49 15.4**	**+0.8**		
CMAR	**Chiang Mai Arr**	**147.98**	**346**	PKIKP	**PKPdf**		**07 49 16.0**	**+0.8**		
CMAR	**Chiang Mai Arr**	**147.98**	**346**	PKPbc	**PKPdf**		**07 49 16.0**	**+0.8**		
	comp=Z,10.0nm,0.7s,baz=0.0,slow=2.7,SNR=25									
CMAR	**Chiang Mai Arr**	**147.98**	**346**		**PKPdf**		**07 49 15.8**	**+0.6**		
NWAO	**Narrogin (SRO)**	**149.11**	**226**	PKP2	**PKPbc**		**07 49 21.2**	**+0.4**		
NWAO	**Narrogin (SRO)**	**149.11**	**226**	PKPbc	**PKPbc**		**07 49 21.2**	**+0.4**		
NWAO	**Narrogin (SRO)**	**149.11**	**226**		**PKiKP**		**07 49 21.7**	**-0.3**		
PSA00	**Pilbara Seismi**	**151.55**	**248**		**PKiKP**		**07 49 27.9**	**+0.5**		
KSM	**Kuching**	**156.44**	**306**		**PKPab**		**07 49 57.5**	**+1.1**		
KSM				IAMs_20	IAMs_20		09 08 18.1			
	comp=Z,203nm,18.0s									
KULM	**Kulim**	**159.75**	**333**	IAMs_20	IAMs_20		09 00 26.3			
	comp=Z,162nm,22.0s									
PSI	**Prapat**	**162.72**	**334**	PKIKP	**PKPdf**		**07 49 35.2**	**0.0**		
RPSI	**Rantau Prapat**	**162.82**	**334**		**PKPdf**		**07 49 35.2**	**+0.1**		

*IDC **23** 07:37:29.8±1.4,41.°37N×50.°57E, h0km, mb3.5/6, mb1 3.7/12, mb1mx3.6/37, mbtmp3.6/12, ML3.7/6, Error ellipse: s-maj=29.6km s-min=12.5km az=177.0*
*AZER **23** 07:37:36.0,41.°83N×50.°50E, h36km, ML3.3*
ISC 23 07:37:38.3±0.9,**41.°63N**±0.°06×**50.°60E**±0.°05,**h74**km±12km, **n34**,σt°**79**/54,**mb3.4**/6,**Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NDR	**Nardaran**	**1.15**	**204**	Pn	**Pn**	**07 37 58.8**	**0.0**
NDR				Sn	**Sn**	**07 38 17.4**	**+3.3**
GOBA	**Gobu**	**1.39**	**208**	Pn	**Pn**	**07 38 02.8**	**+0.9**
SIZA	**Siyzn**	**1.40**	**247**	Pn	**Pn**	**07 38 02.9**	**+0.8**
	SNR=6.5						
SIZA				Sn	**Sn**	**07 38 22.0**	**+2.0**
ATGJ	**Altiaghaj**	**1.47**	**239**	Pn	**Pn**	**07 38 03.0**	**0.0**
	SNR=14						
ATGJ				Sn	**Sn**	**07 38 23.5**	**+1.8**
QUBA	**Quba, Azerbaij**	**1.61**	**261**	Pn	**Pn**	**07 38 04.3**	**-0.5**
	SNR=7.7						
QUBA				Sn	**Sn**	**07 38 26.4**	**+1.5**
GBS	**Qobustan**	**1.66**	**229**	Pn	**Pn**	**07 38 06.5**	**+0.9**
	SNR=3.2						
GBS				Sn	**Sn**	**07 38 29.2**	**+2.9**
PQL	**Pirkuli**	**1.73**	**242**	Pn	**Pn**	**07 38 07.0**	**+0.5**
	SNR=8.2						
PQL				Sn	**Sn**	**07 38 28.1**	**+0.1**
QSAR	**Qusar**	**1.76**	**267**	Pn	**Pn**	**07 38 06.0**	**-0.8**
	SNR=14						
QSAR				Sn	**Sn**	**07 38 30.4**	**+1.9**
XNQ	**Khinaliq**	**1.91**	**257**	Pn	**Pn**	**07 38 08.5**	**-0.5**
	SNR=91						
XNQ				Sn	**Sn**	**07 38 32.1**	**-0.2**
IML	**Ismayilli**	**2.01**	**246**	Sn	**Sn**	**07 38 36.6**	**+2.1**
QBL	**Gabala**	**2.19**	**253**	Pn	**Pn**	**07 38 13.3**	**+0.7**
	SNR=2.7						
QBL				Sn	**Sn**	**07 38 40.3**	**+1.4**
SEKA	**Sheki**	**2.59**	**262**	Pn	**Pn**	**07 38 18.4**	**+0.3**
	SNR=11						
SEKA				Sn	**Sn**	**07 38 44.8**	**-3.8**
BRDA	**Brd**	**2.93**	**243**	Sn	**Sn**	**07 38 57.4**	**+0.8**
ZKTA	**Zakatala**	**2.98**	**271**	Pn	**Pn**	**07 38 23.9**	**+0.6**
BLQ	**Beylaqan**	**3.00**	**232**	Sn	**Sn**	**07 38 56.8**	**-1.5**
AGDM	**Agdam**	**3.05**	**241**	Pn	**Pn**	**07 38 23.1**	**-1.1**
AGDM				Sn	**Sn**	**07 39 00.3**	**+0.6**
YRD	**Yardimli**	**3.26**	**214**	Pn	**Pn**	**07 38 27.7**	**+0.5**
YRD				Sn	**Sn**	**07 39 03.6**	**-1.3**
ASTR	**Astara**	**3.37**	**205**	Pn	**Pn**	**07 38 30.3**	**+1.8**
ASTR				Sn	**Sn**	**07 39 04.2**	**-3.0**
GANJ	**Ganja**	**3.38**	**255**	Pn	**Pn**	**07 38 27.1**	**-1.6**
GANJ				Sn	**Sn**	**07 39 06.4**	**-1.2**
GDB	**GEDABAY**	**3.77**	**258**	Pn	**Pn**	**07 38 32.4**	**-1.8**
GDB				Sn	**Sn**	**07 39 15.3**	**-2.1**
QZX	**Qazax, Azerbai**	**3.98**	**263**	Pn	**Pn**	**07 38 35.1**	**-1.8**
QZX				Sn	**Sn**	**07 39 20.1**	**-2.2**
ORD	**Ordubad**	**4.44**	**234**	Pn	**Pn**	**07 38 42.8**	**-0.3**
ORD				Sn	**Sn**	**07 39 32.1**	**-1.5**
KBZ	**Khabaz**	**6.05**	**293**	Pn	**Pn**	**07 39 03.4**	**-1.7**
	0.7nm,0.3s,baz=113,slow=8.9,SNR=18						
KBZ				Sn	**Sn**	**07 40 11.8**	**-1.1**
	1.2nm,0.3s,baz=11,slow=19,SNR=4.2						
KVAR	**Kislovodsk Ar**	**6.26**	**294**	Pn	**Pn**	**07 39 06.8**	**-1.3**
	baz=108,slow=20,SNR=3.3						
KVAR				Sn	**Sn**	**07 40 18.3**	**0.0**
	baz=180,slow=20,SNR=5.3						
GEYT	**Alibeck**	**6.87**	**120**	Pn	**Pn**	**07 39 11.7**	**-4.6**
	3.2nm,0.3s,baz=303,slow=16,SNR=22						
GEYT				Sn	**Sn**	**07 40 28.0**	**-5.0**
	0.6nm,0.3s,baz=301,slow=20,SNR=2.6						
AKTO	**Aktyubinsk**	**10.20**	**28**	Pn	**Pn**	**07 40 00.2**	**-1.5**
	0.2nm,0.3s,baz=201,slow=8.5,SNR=3.9						
AKTO				Sn		07 41 43.9	-10
	0.8nm,0.3s,baz=159,slow=22,SNR=9.6						
AKASG	**Malin Array Be**	**17.31**	**309**	P	**Pn**	**07 41 34.2**	**-0.7**
	1.9nm,0.3s,baz=108,slow=13,SNR=6.9						
BVAR	**Borovoye Array**	**17.54**	**43**	P	**P**	**07 41 38.5**	**+0.8**
	0.1nm,0.3s,baz=214,slow=12,SNR=3.0						
IDI	**Anoyia**	**21.06**	**261**	P	**P**	**07 42 15.1**	**-1.3**
	8.2nm,0.9s,baz=18,slow=19,SNR=3.8						
KURBB	**Kurchatov Arra**	**21.24**	**55**	P	**P**	**07 42 18.3**	**+0.3**
	0.3nm,0.5s,baz=258,slow=12,SNR=4.1						
MKAR	**Makanchi Array**	**23.20**	**66**	P	**P**	**07 42 39.5**	**+0.8**
	0.3nm,0.4s,baz=261,slow=11,SNR=9.5						
FINES	**FINESS Array B**	**24.75**	**332**	P	**P**	**07 42 53.5**	**+0.9**
	1.7nm,0.4s,baz=137,slow=11,SNR=13						
ESDC	**Sonseca Array**	**40.86**	**286**	P	**P**	**07 45 14.1**	**+1.2**
	0.4nm,0.4s,baz=64,slow=8.9,SNR=4.2						
YKA	**Yellowknife Ar**	**75.55**	**353**	P	**P**	**07 49 15.7**	**+1.4**
	0.1nm,0.4s,baz=6.3,slow=6.1,SNR=6.7						

*IDC **23** 08:00:06.7±0.9, 18.°99N×120.°27E, h0km, mb3.7/7, mb1 3.9/8, mb1mx3.7/42, mbtmp3.7/8, ML3.6/1, Error ellipse: s-maj=56.2km s-min=16.9km az=72.0*
*NEIC **23** 08:00:13.4±1.0, 18.°97N±0.°09×120.°5E±0.°2, h50km±9km, mb4.2/11, Error ellipse: s-maj=27.3km s-min=13.1km az=95.0*
ISC 23 08:00:10.8±0.7,**18.°95N**±0.°08×**120.°3E**±0.°2,**h28**km,**n25**, σt°**82**/25,**mb4.1**/13,**Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**6.02**	**24**	Pn	**Pn**	**08 01 38.2**	**+0.1**
YOJ				Sn	**Sn**	**08 02 47.1**	**+1.0**
KSRS	**Korea Array**	**19.60**	**18**	P	**Pn**	**08 04 37.3**	**-0.9**
	0.2nm,0.3s,baz=204,slow=11,SNR=4.4						
BJT	**Baijiatuan**	**21.30**	**351**	P		08 05 03.2	+8.0
BJT				IAmb	IAmb	08 05 03.8	
	comp=Z,9.7nm,0.9s						
SONM	**Songino Array**	**30.96**	**342**	P	**P**	**08 06 23.9**	**-1.8**
	comp=Z,0.3nm,0.7s,baz=153,slow=7.2,SNR=3.1						
KNRA	**Kununurra**	**35.40**	**166**	P	**P**	**08 07 04.6**	**+0.2**
FITZ	**Fitzroy Crossi**	**37.19**	**172**	P	**P**	**08 07 19.6**	**-0.1**
FITZ				IAmb	IAmb	08 07 30.0	
	comp=Z,9.3nm,1.5s						
WB0	**Warramunga Arr**	**40.88**	**160**	P	**P**	**08 07 50.2**	**-0.4**
WB0				IAmb	IAmb	08 08 07.8	
	comp=Z,4.0nm,1.1s						
WRAB	**Tennant Creek**	**41.02**	**160**	P	**P**	**08 07 51.4**	**-0.4**
WRAB				IAmb	IAmb	08 07 52.1	
	comp=Z,5.8nm,0.7s						
WRA	**Warramunga Arr**	**41.03**	**160**	P	**P**	**08 07 51.6**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=339,slow=9.3,SNR=9.4						
WRA				PcP	**PcP**	**08 09 52.3**	**+0.8**
	comp=Z,0.3nm,0.9s,baz=343,slow=3.4,SNR=3.2						
WRA	**Warramunga Arr**	**41.03**	**160**	P	**P**	**08 07 51.5**	**-0.2**
WB2	**Warramunga Arr**	**41.03**	**160**	P	**P**	**08 07 51.4**	**-0.5**
WB2				IAmb	IAmb	08 07 52.0	
	comp=Z,6.8nm,1.4s						
WR0	**Warramunga Arr**	**41.11**	**159**	P	**P**	**08 07 50.5**	**-2.0**
WR0				IAmb	IAmb	08 07 53.1	
	comp=Z,6.6nm,1.4s						
MKAR	**Makanchi Array**	**41.69**	**320**	P	**P**	**08 07 56.6**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=108,slow=9.6,SNR=4.3						
ZALV	**Zalesovo Beam**	**44.29**	**331**	P	**P**	**08 08 18.5**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=142,slow=7.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**44.29**	**331**	P	**P**	**08 08 18.1**	**+0.2**
AS31	**Alice Springs**	**44.38**	**162**	P	**P**	**08 08 19.1**	**0.0**
ASAR	**Alice Springs**	**44.39**	**162**	P	**P**	**08 08 19.4**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=341,slow=7.1,SNR=16						
ASAR	**Alice Springs**	**44.39**	**162**	P	**P**	**08 08 19.2**	**+0.2**
KKAR	**Karatay Array**	**48.15**	**311**	P	**P**	**08 08 49.5**	**+1.0**
BBOO	**Buckleboo**	**53.63**	**164**	P	**P**	**08 09 29.7**	**0.0**
STKA	**Stephens Creek**	**54.50**	**158**	P	**P**	**08 09 37.1**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=346,slow=8.4,SNR=7.1						
STKA	**Stephens Creek**	**54.50**	**158**	P	**P**	**08 09 37.0**	**+0.9**
ABKAR	**Akbulak array**	**56.60**	**317**	P	**P**	**08 09 52.0**	**+0.9**
RAGM	**Ragged Mountai**	**76.16**	**31**		pP	08 12 08.8	+4.5
YKA	**Yellowknife Ar**	**88.08**	**22**	P	**P**	**08 12 57.9**	**-0.6**
	comp=Z,0.8nm,0.9s,baz=316,slow=4.1,SNR=5.5						

*IDC **23** 08:06:41.1±0.9, 19.°02N×120.°46E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/37, mbtmp3.7/8, Error ellipse: s-maj=52.0km s-min=17.3km az=72.0*
*NEIC **23** 08:06:46.1±0.5, 18.°93N±0.°03×120.°4E±0.°2, h35km±7km, mb4.0/6, Error ellipse: s-maj=27.6km s-min=3.4km az=95.0*
ISC 23 08:06:45.1±0.7,**18.°94N**±0.°06×**120.°4E**±0.°2,**h28**km,**n20**, σt°**68**/21,**mb3.8**/11,**Luzon**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SZP	**Santa**	**1.38**	**177**	Pn	**Pn**	**08 07 08.9**	**+0.4**
SZP				Sn	**Sn**	**08 07 24.3**	**-1.5**
YOJ	**Yonaguni jima**	**6.02**	**24**	Pn	**Pn**	**08 08 12.7**	**+0.4**
SONM	**Songino Array**	**31.00**	**342**	P	**P**	**08 12 60.0**	**-0.3**
	0.2nm,0.5s,baz=158,slow=10,SNR=2.5						
WB0	**Warramunga Arr**	**40.84**	**160**	P	**P**	**08 14 24.2**	**-0.5**
WRA	**Warramunga Arr**	**40.99**	**160**	P	**P**	**08 14 25.8**	**-0.1**
	0.4nm,0.4s,baz=340,slow=9.1,SNR=12						
WRA	**Warramunga Arr**	**40.99**	**160**	P	**P**	**08 14 25.2**	**-0.6**
WB2	**Warramunga Arr**	**40.99**	**160**	P	**P**	**08 14 25.7**	**-0.1**
WB2				IAmb	IAmb	08 14 26.1	
	comp=Z,5.6nm,1.2s						
WR0	**Warramunga Arr**	**41.07**	**159**	P	**P**	**08 14 26.6**	**+0.1**
WR0				IAmb	IAmb	08 14 37.1	
	comp=Z,5.7nm,1.3s						
MKAR	**Makanchi Array**	**41.74**	**320**	P	**P**	**08 14 31.8**	**0.0**
	comp=Z,0.1nm,0.6s,baz=122,slow=10,SNR=3.5						
ZALV	**Zalesovo Beam**	**44.33**	**331**	P	**P**	**08 14 52.0**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=111,slow=7.9,SNR=3.4						
ZALV	**Zalesovo Beam**	**44.33**	**331**	P	**P**	**08 14 52.6**	**0.0**
AS31	**Alice Springs**	**44.35**	**162**	P	**P**	**08 14 53.6**	**+0.5**
AS31				IAmb	IAmb	08 15 03.6	
	comp=Z,1.8nm,1.4s						
ASAR	**Alice Springs**	**44.35**	**162**	P	**P**	**08 14 53.7**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=339,slow=7.1,SNR=19						
ASAR	**Alice Springs**	**44.35**	**162**	P	**P**	**08 14 53.9**	**+0.7**
PETK	**Petropavlovsk-**	**44.67**	**31**	P	**P**	**08 14 54.3**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=247,slow=11,SNR=2.3						
KKAR	**Karatay Array**	**48.21**	**311**	P	**P**	**08 15 23.2**	**-0.1**
STKA	**Stephens Creek**	**54.46**	**158**	P	**P**	**08 16 11.2**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=331,slow=3.1,SNR=7.7						
STKA	**Stephens Creek**	**54.46**	**158**	P	**P**	**08 16 11.3**	**+1.1**
ABKAR	**Akbulak array**	**56.66**	**317**	P	**P**	**08 16 26.2**	**+0.4**
YKA	**Yellowknife Ar**	**88.08**	**22**	P	**P**	**08 19 33.0**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=311,slow=4.7,SNR=8.6						

*IDC **23** 08:47:38.1±2.3,48.°76N×156.°29E, h0km, mb3.2/2, mb1 3.4/3, mb1mx3.2/55, mbtmp3.2/3, ML2.2/1, Error ellipse: s-maj=47.5km s-min=39.1km az=156.0*
*KRSC **23** 08:47:42.2±1.7, 49.°03N×157.°20E, h30km±27km, ML4.0*
ISC 23 08:47:44.5±1.6,**49.°09N**±0.°10×**156.°5E**±0.°1,**h34**km,**n21**, σ**2**°**30**/25,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.62**	**351**	*e*P	**Pb**	**08 48 11.7**	**-2.1**
SKR				*e*S	**Sb**	**08 48 34.1**	**+0.3**
PAU	**Pauzhetka**	**2.39**	**4**	*e*P	**Pn**	**08 48 22.8**	**+1.6**
PAU				*e*S	**Sn**	**08 48 52.7**	**+3.5**
KDTR	**Khodutka, Kamc**	**2.90**	**19**	*e*P	**Pn**	**08 48 28.7**	**+0.5**
ASAK	**Asacha**	**3.41**	**14**	*e*P	**Pn**	**08 48 37.3**	**+2.0**
MTVR	**Mutnovka**

ABKAR	**Akbulak array**	**59.17**	**311**	P		**P**	**09 01 51.6**	**+0.9**
ABKAR	comp=Z,5.2nm,1.4s			IAmb		IAmb	09 01 53.2	
ABKAR	**Akbulak array**	**59.17**	**311**	P		**P**	**09 01 51.1**	**+0.4**
AKTO	**Aktyubinsk**	**60.02**	**313**	P		**P**	**09 01 59.0**	**+2.4**
	comp=Z,0.8nm,0.5s,baz=97,slow=11,SNR=4.0							
C36M	**Paulatuk**	**61.47**	**24**	P		**P**	**09 02 06.3**	**+0.2**
C36M	comp=Z,5.7nm,0.8s			IAmb		IAmb	09 02 07.8	
RES	**Resolute Bay**	**66.59**	**14**	P		**P**	**09 02 40.0**	**+0.2**
RES	comp=Z,1.3nm,0.8s			IAmb		IAmb	09 02 40.9	
YKA	**Yellowknife Ar**	**67.82**	**29**	P		**P**	**09 02 47.1**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=292,slow=6.3,SNR=10.0							
FINES	**FINESS Array B**	**71.37**	**332**	P		**P**	**09 03 09.5**	**-0.1**
	comp=Z,4.8nm,1.0s,baz=64,slow=4.4,SNR=4.4							
NB2	**NORSAR Subarra**	**77.00**	**337**	P		**P**	**09 03 42.3**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=41,slow=5.6							
NOA	**NORSAR Array B**	**77.00**	**337**	P		**P**	**09 03 42.2**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=42,slow=5.4,SNR=4.8							
NVAR	**Mina Array Bea**	**78.51**	**52**	P		**P**	**09 03 51.5**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=299,slow=5.4,SNR=6.1							
BRTR	**Keskin Array B**	**80.12**	**311**	P		**P**	**09 04 01.2**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=15,slow=6.0,SNR=2.6							
R11A	**Troy Canyon, C**	**80.33**	**50**	P		**P**	**09 04 00.9**	**-0.6**
PDAR	**Pinedale Array**	**81.42**	**44**	P		**P**	**09 04 06.8**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=267,slow=1.8,SNR=4.5							
PDAR	**Pinedale Array**	**81.42**	**44**	P		**P**	**09 04 07.3**	**0.0**
TXAR	**Lajitas Array**	**93.66**	**51**	P		**P**	**09 05 06.7**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=286,slow=2.5,SNR=12							
TXAR	**Lajitas Array**	**93.66**	**51**	P		**P**	**09 05 07.0**	**0.0**
LPAZ	**La Paz**	**149.88**	**63**	PKPbc		**PKPbc**	**09 11 39.9**	**-1.8**
	comp=Z,1.2nm,0.7s,baz=300,slow=3.9,SNR=3.7							

*IDC **23** 08:58:22.4±3.0,23˚.75S×179˚.62W, h498km±40km, mb3.7/5, mb1 3.7/7, mb1mx3.3/38, mbtmp4.6/7, Error ellipse: s-maj=45.9km s-min=26.2km az=146.0*

*NEIC **23** 08:58:23.6±1.1,23˚.6S±0˚.2×179˚.7W±0˚.3, h511km±28km, mb4.3/13, Error ellipse: s-maj=44.4km s-min=21.1km az=98.0*

ISC 23 08:58:24.1±1.0,23˚.7S±0˚.1×179˚.5W±0˚.2, h536km±24km, n24, σ0s90/23, mb4.2/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**12.14**	**38**	P	**P**	**09 01 04.1**	**-0.2**
	1.5nm,0.3s,baz=225,slow=13,SNR=3.2						
AFI	**Afiamalu**	**12.14**	**38**	P	**P**	**09 01 04.4**	**+0.1**
URZ	**Urewera**	**14.83**	**191**	P	**P**	**09 01 29.5**	**-2.3**
	0.4nm,0.3s,baz=336,slow=10.0,SNR=3.5						
URZ	**Urewera**	**14.83**	**191**	P	**P**	**09 01 32.5**	**+0.7**
BKZ	**Black Stump Fm**	**15.82**	**192**	P	**P**	**09 01 42.1**	**+0.1**
BKZ	comp=Z,24nm,1.4s			IAmb	IAmb	09 01 53.4	
QRZ	**Quartz Range**	**18.38**	**200**	P	**P**	**09 02 06.7**	**+0.8**
LTZ	**Lake Taylor**	**20.25**	**198**	P	**P**	**09 02 24.1**	**+1.2**
RPZ	**Rata Peaks**	**21.46**	**199**	P	**P**	**09 02 35.5**	**+1.7**
EIDS	**Eidsvold**	**26.81**	**260**	P	**P**	**09 03 22.4**	**+0.8**
EIDS	comp=Z,5.7nm,1.1s			IAmb	IAmb	09 03 26.1	
CTA	**Charters Tower**	**31.95**	**270**	P	**P**	**09 04 06.4**	**+0.2**
	comp=Z,9.1nm,0.4s,baz=95,slow=11,SNR=26						
AS31	**Alice Springs**	**42.54**	**260**	P	**P**	**09 05 32.7**	**-0.2**
ASAR	**Alice Springs**	**42.54**	**260**	P	**P**	**09 05 32.6**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=98,slow=6.9,SNR=35						
ASAR	**Alice Springs**	**42.54**	**260**	P	**P**	**09 05 31.8**	**-1.1**
WR0	**Warramunga Arr**	**42.70**	**266**	P	**P**	**09 05 33.5**	**-0.8**
WB2	**Warramunga Arr**	**42.88**	**266**	P	**P**	**09 05 35.0**	**-0.6**
WB2	comp=Z,5.4nm,0.6s			IAmb	IAmb	09 05 35.5	
WRAB	**Tennant Creek**	**42.88**	**266**	P	**P**	**09 05 34.7**	**-0.9**
WRAB	comp=Z,7.1nm,0.9s			IAmb	IAmb	09 05 35.5	
WRA	**Warramunga Arr**	**42.89**	**266**	P	**P**	**09 05 35.0**	**-0.7**
	comp=Z,3.2nm,0.4s,baz=104,slow=8.5,SNR=26						
WRA	**Warramunga Arr**	**42.89**	**266**	IAmb	IAmb	09 05 35.5	
JAY	comp=Z,0.4nm,0.7s **Jayapura**	**43.86**	**293**	P	**P**	**09 05 42.9**	**-0.4**
	comp=Z,9.0nm,0.6s,baz=96,slow=10,SNR=3.1						
FORT	**Forrest**	**46.83**	**249**	P	**P**	**09 06 05.2**	**-0.6**
FORT	comp=Z,17nm,0.8s			IAmb	IAmb	09 06 12.0	
MTN	**Manton Dam**	**47.91**	**274**	P	**P**	**09 06 13.9**	**-0.1**
MTN	comp=Z,10nm,1.2s			IAmb	IAmb	09 06 16.7	
FITZ	**Fitzroy Crossi**	**51.32**	**265**	P	**P**	**09 06 39.6**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=123,slow=6.4,SNR=5.3						
FITZ	**Fitzroy Crossi**	**51.32**	**265**	P	**P**	**09 06 39.5**	**+0.4**
AKASG	**Malin Array Be**	**145.03**	**328**	PKPbc	**PKPab**	**09 17 02.2**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=40,slow=4.1,SNR=5.8						

*SJA **23** 08:59:12.1±0.9,33˚.36S×70˚.29W, h126km±8km, ML3.8, MW3.9*

*GUC **23** 08:59:13.9±0.7,33˚.33S×70˚.28W, h107km±2km, ML4.1*

*NEIC **23** 08:59:13.6±2.3,33˚.28S±0˚.04×70˚.28W±0˚.06, h102km±4km, Error ellipse: s-maj=8.4km s-min=4.5km az=57.0*

*IDC **23** 08:59:14.6±2.1,33˚.29S×70˚.18W, h101km±18km, mb3.6/5, mb1 3.8/11, mb1mx3.6/32, mbtmp3.9/11, Error ellipse: s-maj=27.1km s-min=15.3km az=102.0*

ISC 23 08:59:13.7±0.6,33˚.29S±0˚.04×70˚.34W±0˚.04, h102km±5km, n68, σ1s20/92, mb3.9/7, 4C-7D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**0.05**	**132**	*e*P	**Pn**	**08 59 28.1**	**-0.2**
FCH				*i* S	**Sn**	**08 59 39.2**	**+0.1**
FCH	comp=N,4μm,0.3s			IAML		08 59 40.1	
CLCH	**Cerro Calan**	**0.20**	**238**	↓*i*P	**Pn**	**08 59 28.5**	**+0.3**
CLCH				*i* S	**Sn**	**08 59 39.9**	**+0.9**
CLCH	comp=E,17μm,0.5s			IAML		08 59 41.3	
MT03	**Universidad Ad**	**0.25**	**216**	↓*i*P	**Pn**	**08 59 28.5**	**+0.1**
MT03				*i* S	**Sn**	**08 59 40.1**	**+0.7**
MT03	comp=N,22μm,0.3s			IAML		08 59 42.2	
STL	**Santa Lucia**	**0.29**	**241**	↓*i*P	**Pn**	**08 59 28.8**	**+0.3**
STL				*i* S	**Sn**	**08 59 40.2**	**+0.6**
PEL	**Peldehue**	**0.33**	**297**	*e*P	**Pn**	**08 59 29.0**	**+0.3**
PEL				*i* S	**Sn**	**08 59 40.7**	**+0.8**
PEL	comp=N,17μm,0.3s			IAML		08 59 41.4	
PEL	**Peldehue**	**0.33**	**297**		**Pn**	**08 59 29.1**	**+0.4**
PEL				Sn	**Sn**	**08 59 39.2**	**-0.7**
MT05	**Renca**	**0.35**	**253**	↓*i*P	**Pn**	**08 59 29.3**	**+0.5**
MT05				*i* S	**Sn**	**08 59 41.1**	**+0.9**
MT05	comp=E,17μm,0.3s			IAML		08 59 46.0	
ANTU	**Antumapu**	**0.37**	**222**	↑*i*P	**Pn**	**08 59 30.3**	**+1.3**
ANTU				*i* S	**Sn**	**08 59 41.6**	**+1.3**
ANTU	comp=E,9μm,0.6s			IAML		08 59 42.5	
VA03	**San Esteban**	**0.56**	**341**	↓*i*P	**Pn**	**08 59 30.7**	**+0.5**
VA03				*i* S	**Sn**	**08 59 44.1**	**+1.6**
VA03	comp=E,7μm,0.3s			IAML		08 59 46.0	
LMEL	**Las Melosas**	**0.56**	**169**	↓*i*P	**Pn**	**08 59 30.2**	**-0.2**
LMEL				*i* S	**Sn**	**08 59 42.7**	**-0.1**
LMEL	comp=N,6μm,0.3s			IAML		08 59 46.5	
ROC1	**El Roble**	**0.65**	**299**		**Pn**	**08 59 31.9**	**+0.8**
ROC1				Sn	**Sn**	**08 59 45.1**	**+0.9**
MT01	**Popeta**	**0.95**	**233**	↑*i*P	**Pn**	**08 59 33.8**	**0.0**
MT01				*i* S	**Sn**	**08 59 49.0**	**+0.2**
MT01	comp=E,2μm,0.5s			IAML		08 59 50.2	
VA01	**Torpederas**	**1.13**	**283**	↑*i*P	**Pn**	**08 59 36.9**	**+1.3**
VA01				*i* S	**Sn**	**08 59 54.0**	**+1.8**
ARCO	**CERRO ARCO**	**1.26**	**70**	*i* P	**Pn**	**08 59 38.0**	**+0.6**
ARCO				*e*S	**Sn**	**08 59 57.1**	**+1.8**
ARCO	comp=Z,1μm,0.4s			IAML		08 59 58.6	
AAGR	**Agrelo**	**1.28**	**81**	*i* P	**Pn**	**08 59 38.1**	**+0.5**
AAGR				*e*S	**Sn**	**08 59 56.9**	**+1.3**
UTNM	**Universidad Te**	**1.31**	**73**	*i* P	**Pn**	**08 59 38.6**	**+0.8**
UTNM				*e*S	**Sn**	**08 59 57.8**	**+1.8**
ASAL	**Salagasta**	**1.44**	**61**	*i* P	**Pn**	**08 59 40.2**	**+0.7**
ASAL				*e*S	**Sn**	**09 00 01.0**	**+2.1**
BO02	**Sierra Bellavi**	**1.54**	**194**	↑*i*P	**Pn**	**08 59 41.3**	**+0.6**
BO02				IAML		09 00 04.2	
	comp=E,3μm,0.2s						
RTLS	**Leoncito**	**1.73**	**31**	↓*i*P	**Pn**	**08 59 44.9**	**+1.7**
RTLS				IAML		08 59 45.9	
RTLS	comp=Z,1μm,0.4s			*e*S	**Sn**	**09 00 09.1**	**+3.5**
COIS	**El Sosneado**	**1.91**	**161**	↑*i*P	**Pn**	**08 59 44.3**	**-1.0**
RTCV	**Cerro Valdivia**	**2.08**	**47**	*i* P	**Pn**	**08 59 48.0**	**+0.5**
RTCV				*e*S	**Sn**	**09 00 14.8**	**+1.6**
GO05	**Huala**	**2.16**	**217**		**Pn**	**08 59 47.9**	**-0.6**
GO05				Sn	**Sn**	**09 00 14.6**	**-0.4**
GO05	**Huala**	**2.16**	**217**	*i* P	**Pn**	**08 59 48.4**	**0.0**
ZON	**Zonda**	**2.24**	**39**	*i* P	**Pn**	**08 59 50.0**	**+0.5**
ZON	comp=Z,157nm,0.4s			IAML		08 59 51.6	
ZON				*e*S	**Sn**	**09 00 18.5**	**+1.6**
PUMA	**Malargue**	**2.32**	**162**	*i* P	**Pn**	**08 59 50.5**	**0.0**
CFA	**Coronel Fontan**	**2.45**	**47**	P	**Pn**	**08 59 52.2**	**0.0**
CFA	comp=Z,82nm,0.3s,baz=231,slow=8.8,SNR=725			S	**Sn**	**09 00 21.2**	**-0.5**
	comp=Z,84nm,0.3s,baz=321,slow=18,SNR=18						
CFA	**Coronel Fontan**	**2.45**	**47**	↑P	**Pn**	**08 59 52.5**	**+0.3**
RTLL	**Cerro Villicun**	**2.51**	**39**	*i* P	**Pn**	**08 59 53.8**	**+0.7**
RTLL	comp=Z,831nm,0.3s			IAML		08 59 54.7	
EDS3	**Malargue**	**2.59**	**163**	*i* P	**Pn**	**08 59 55.2**	**+1.0**
AMOG	**MOGNA**	**2.82**	**34**	*i* P	**Pn**	**08 59 57.9**	**+0.7**
ACAN	**Cantantal**	**2.84**	**70**	↑*i*P	**Pn**	**08 59 57.4**	**0.0**
GO04	**Tololo Observa**	**3.13**	**353**		**Pn**	**09 00 01.9**	**+0.3**
GO04				Sn	**Sn**	**09 00 38.7**	**+0.4**
CCHI	**Chillan**	**3.60**	**203**	*i* P	**Pn**	**09 00 06.7**	**-0.8**
APLL	**PUNTA DE LOS L**	**4.34**	**49**	*i* P	**Pn**	**09 00 17.1**	**-0.5**
APLL	comp=Z,89nm,0.4s			IAML		09 01 10.4	
CANA	**Caviahue**	**4.62**	**187**	*i* P	**Pn**	**09 00 20.5**	**-0.9**
ACLC	**CERRO LA CRUZ**	**4.82**	**38**	*i* P	**Pn**	**09 00 23.0**	**-1.2**
TCA	**Tanti**	**5.24**	**70**	↑*i*P	**Pn**	**09 00 28.3**	**-1.4**
GO03	**Copiap**	**5.68**	**1**		**Pn**	**09 00 35.2**	**-0.5**
GO03				Sn	**Sn**	**09 01 38.6**	**-1.1**
GO03	**Copiap**	**5.68**	**1**	*i* P	**Pn**	**09 00 35.5**	**-0.3**
CYA	**Choya**	**6.21**	**40**	*i* P	**Pn**	**09 00 40.0**	**-2.9**
PLCA	**Paso Flores**	**7.43**	**181**	P	**Pn**	**09 00 59.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=8.7,slow=13,SNR=2.9						
PLCA	**Paso Flores**	**7.43**	**181**	Pn	**Pn**	**09 00 59.0**	**-0.4**
GO02	**Mina Guanaco**	**8.13**	**5**		**Pn**	**09 01 06.2**	**-3.0**
GO02				Sn	**Sn**	**09 02 35.9**	**-3.7**
LVC	**Limon Verde**	**10.72**	**7**	P	**Pn**	**09 01 43.2**	**-1.3**
	comp=Z,0.5nm,0.3s,baz=205,slow=11,SNR=3.8						
LVC	**Limon Verde**	**10.72**	**7**	Pn	**Pn**	**09 01 43.1**	**-1.4**
CPUP	**Villa Florida**	**13.25**	**62**	P	**Pn**	**09 02 15.4**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=220,slow=17,SNR=3.5						
CPUP	**Villa Florida**	**13.25**	**62**	Pn	**Pn**	**09 02 16.1**	**-1.7**
LPAZ	**La Paz**	**17.05**	**7**	P	**P**	**09 03 07.5**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=167,slow=11,SNR=7.2						
LPAZ	**La Paz**	**17.05**	**7**	Pn	**Pn**	**09 03 04.2**	**-2.3**
SIV	**San Ignacio**	**19.16**	**28**	P	**P**	**09 03 28.7**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=202,slow=8.8,SNR=37						
QSPA	**South Pole Qui**	**56.94**	**180**	P	**P**	**09 08 49.6**	**+1.5**
	comp=Z,2.8nm,0.7s,baz=152,slow=1.6,SNR=20						
QSPA	**South Pole Qui**	**56.94**	**180**	P	**P**	**09 08 49.0**	**+0.8**
QSPA	comp=Z,2.6nm,0.7s			IAmb	IAmb	09 08 50.2	
TXAR	**Lajitas Array**	**69.83**	**329**	P	**P**	**09 10 15.3**	**+1.9**
	comp=Z,0.8nm,0.6s,baz=154,slow=9.1,SNR=16						
TXAR	**Lajitas Array**	**69.83**	**329**	P	**P**	**09 10 13.0**	**-0.4**
TX31	**Lajitas Ar. Si**	**69.83**	**329**	P	**P**	**09 10 13.4**	**0.0**
TX32	**Lajitas Array**	**69.83**	**329**	P	**P**	**09 10 12.4**	**-1.0**
WVT	**Waverly**	**70.97**	**345**	P	**P**	**09 10 20.9**	**+0.9**
W39A	**Magazine**	**71.59**	**340**	P	**P**	**09 10 22.7**	**-1.1**
W39A	comp=Z,4.1nm,0.7s			IAmb	IAmb	09 10 26.3	
PBMO	**Poplar Bluff**	**72.19**	**343**	P	**P**	**09 10 27.7**	**+0.4**
PBMO	comp=Z,4.4nm,0.6s			IAmb	IAmb	09 10 30.3	
TORD	**Torodi Ar. Bea**	**82.63**	**69**	P	**P**	**09 11 25.6**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=256,slow=4.1,SNR=4.3						
TORD	**Torodi Ar. Bea**	**82.63**	**69**	IAmb	IAmb	09 11 27.5	
PDAR	comp=Z,0.9nm,0.7s **Pinedale Array**	**83.79**	**332**	P	**P**	**09 11 32.2**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=106,slow=5.3,SNR=3.5						
NVAR	**Mina Array Bea**	**84.13**	**324**	P	**P**	**09 11 35.1**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=145,slow=6.4,SNR=6.8						
WRA	**Warramunga Arr**	**122.06**	**208**	PKP	**PKPdf**	**09 17 56.8**	**-0.1**
	comp=Z,0.3nm,0.9s,baz=162,slow=1.7,SNR=4.4						
KURBB	**Kurchatov Arra**	**151.38**	**43**	PKPbc	**PKiKP**	**09 18 55.9**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=346,slow=1.9,SNR=4.6						
KURK	**Kurchatov**	**151.39**	**43**		**PKiKP**	**09 18 55.9**	**+0.3**
ZALV	**Zalesovo Beam**	**152.87**	**33**	PKPbc	**PKiKP**	**09 18 59.1**	**+0.7**
	comp=Z,2.4nm,0.5s,baz=299,slow=3.6,SNR=9.4						
MKAR	**Makanchi Array**	**155.23**	**49**	PKPab	**PKPab**	**09 19 20.7**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=305,slow=5.1,SNR=2.9						

*IDC **23** 09:01:19.2±6.6,6˚.91S×155˚.39E, h80km±52km, mb3.6/8, mb1 3.8/9, mb1mx3.6/33, mbtmp3.9/9, ML2.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/33, Error ellipse: s-maj=44.3km s-min=27.4km az=91.0*

ISC 23 09:01:15.5±1.1,6˚.9S±0˚.2×155˚.5E±0˚.1, h50km, n15, σ0s85/12, mb3.7/8, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**4.31**	**306**	LR	LR	09 04 15.2	
	comp=Z,137nm,19.0s,baz=75,slow=42						
HNR	**Honiara**	**5.07**	**121**	LR	LR	09 04 35.4	
	comp=Z,159nm,18.7s,baz=235,slow=38						
PMG	**Port Moresby**	**8.66**	**252**	P	**Pn**	**09 03 19.9**	**+1.6**
PMG	1.8nm,0.3s,baz=49,slow=11,SNR=3.9			S	**Sn**	**09 04 53.8**	**-0.8**
	0.4nm,0.3s,baz=164,slow=20,SNR=1.9						
WRA	**Warramunga Arr**	**24.32**	**236**	P	**P**	**09 06 28.4**	**-0.3**
	0.9nm,0.5s,baz=59,slow=9.6,SNR=5.6						
ASAR	**Alice Springs**	**26.66**	**229**	P	**P**	**09 06 49.0**	**-0.9**
	0.3nm,0.4s,baz=62,slow=9.7,SNR=5.8						
H11S3	**WAKE ISLAND Hy**	**27.50**	**23**	T	T	09 35 16.2	
	baz=203,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**27.50**	**23**	T	T	09 35 16.1	
	baz=203,slow=76,SNR=22						
H11S1	**WAKE ISLAND Hy**	**27.51**	**23**	T	T	09 35 17.8	
	baz=203,slow=76,SNR=8.5						
FITZ	**Fitzroy Crossi**	**31.19**	**246**	P	**P**	**09 07 29.8**	**-0.4**
	3.4nm,1.0s,baz=91,slow=6.9,SNR=3.0						
CMAR	**Chiang Mai Arr**	**61.20**	**295**	P	**P**	**09 11 26.1**	**+0.3**
	1.9nm,0.4s,baz=127,slow=5.4,SNR=9.0						
SONM	**Songimvang Array**	**69.51**	**327**	P	**P**	**09 12 19.0**	**-0.1**
	0.3nm,0.4s,baz=114,slow=7.0,SNR=2.2						
QSPA	**South Pole Qui**	**83.11**	**180**	P	**P**	**09 13 36.2**	**+0.3**
	0.8nm,0.7s,baz=282,slow=1.3,SNR=7.3						
MKAR	**Makanchi Array**	**83.65**	**319**	P	**P**	**09 13 38.4**	**-0.5**
	0.4nm,0.7s,baz=96,slow=4.5,SNR=4.6						
YKA	**Yellowknife Ar**	**95.97**	**28**	P	**P**	**09 14 37.6**	**+0.7**
	0.3nm,0.6s,baz=272,slow=4.8,SNR=4.7						
TORD	**Torodi Ar. Bea**	**153.50**	**286**	PKPbc	**PKPbc**	**09 21 09.0**	**-0.6**
	0.4nm,0.6s,baz=65,slow=2.9,SNR=3.4						
TORD				PKPab	**PKPab**	**09 21 21.1**	**-0.9**
	0.2nm,0.5s,baz=101,slow=4.8,SNR=4.8						

*IDC **23** 09:18:48.0±0.8, 13˚.49N×146˚.24E, h0km, mb3.9/10, mb1 4.2/10, mb1mx3.9/50, mbtmp3.9/10, MS3.5/3, Ms1 3.5/3, ms1mx3.0/38, Error ellipse: s-maj=23.9km s-min=17.4km az=154.0*

*NEIC **23** 09:18:49.1±1.5, 13˚.37N±0˚.08×146˚.28E±0˚.05, h10km±2km, mb4.4/4, Error ellipse: s-maj=14.5km s-min=7.0km az=202.0*

ISC 23 09:18:49.3±0.8, 13˚.4N±0˚.1×146˚.26E±0˚.08, h10km, n22, σ0s68/21, mb4.0/11, MS3.8/3, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.37**	**278**	Pn	**Pn**	**09 19 14.7**	**+0.2**
	86nm,0.3s,baz=94,slow=6.7,SNR=22						
GUMO				Sn	**Sb**	**09 19 33.1**	**+0.5**
	264nm,0.3s,baz=16,slow=20,SNR=34						
GUMO	**Guam**	**1.37**	**278**		**Pn**	**09 19 14.9**	**+0.4**
GUMO					**Sb**	**09 19 32.9**	**+0.3**
SARN	**Sarigan**	**3.32**	**352**	Pn	**Pn**	**09 19 42.0**	**+0.6**
MJAR	**Matsushiro Arr**	**24.15**	**344**	LR	LR	09 32 48.7	
	comp=Z,58nm,18.0s,baz=150,slow=35						
KSRS	**Korea Array**	**29.01**	**329**	P	**P**	**09 24 48.8**	**-0.7**
	4.7nm,0.9s,baz=138,slow=9.5,SNR=8.0						
WR0	**Warramunga Arr**	**35.10**	**199**	P	**P**	**09 25 42.1**	**-0.9**
WB2	**Warramunga Arr**	**35.14**	**200**	P	**P**	**09 25 43.7**	**+0.3**
WB2				IAmb	IAmb	09 25 44.8	
	comp=Z,11nm,1.4s						
WRA	**Warramunga Arr**	**35.15**	**200**	P	**P**	**09 25 44.1**	**+0.7**
	comp=Z,2.3nm,1.1s,baz=24,slow=9.3,SNR=4.7						
ASAR	**Alice Springs**	**38.77**	**198**	P	**P**	**09 26 14.8**	**+0.6**
	comp=Z,1.1nm,1.1s,baz=23,slow=6.8,SNR=4.1						
CMAR	**Chiang Mai Arr**	**45.68**	**283**	P	**P**	**09 27 10.5**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=88,slow=5.6,SNR=3.1						
ILAR	**Eielson Array**	**68.16**	**25**	P	**P**	**09 29 48.6**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=247,slow=5.9,SNR=9.4						
KKAR	**Karatay Array**	**70.60**	**311**	P	**P**	**09 30 05.0**	**-0.1**
INK	**Inuvik**	**74.03**	**22**	P	**P**	**09 30 25.6**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=260,slow=3.2,SNR=3.2						
INK	**Inuvik**	**74.03**	**22**	P	**P**	**09 30 25.8**	**+0.8**
INK				IAmb	IAmb	09 30 41.2	
	comp=Z,2.8nm,0.8s						
ABKAR	**Akbulak array**	**77.59**	**318**	P	**P**	**09 30 45.8**	**0.0**
YBH	**Yreka Blue Hor**	**81.98**	**49**	LR	LR	10 05 31.2	
	comp=Z,35nm,18.6s,baz=333,slow=34						
YKA	**Yellowknife Ar**	**82.41**	**28**	P	**P**	**09 31 11.9**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=291,slow=5.8,SNR=6.6						
NEW	**Newport**	**84.47**	**42**	LR	LR	10 03 37.2	
	comp=Z,35nm,19.9s,baz=310,slow=32						
NVAR	**Mina Array Bea**	**85.98**	**52**	P	**P**	**09 31 31.2**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=267,slow=6.0,SNR=7.1						
PDAR	**Pinedale Array**	**91.14**	**46**	P	**P**	**09 31 55.3**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=251,slow=2.8,SNR=2.8						
FINES	**FINESS Array B**	**91.90**	**335**	P	**P**	**09 31 56.2**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=66,slow=4.6,SNR=7.1						
DBIC	**Dimbokro**	**145.07**	**303**	PKPbc	**PKPbc**	**09 38 27.6**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=331,slow=7.7,SNR=3.2						

*NIED **23** 09:20:00,35˚.20N×141˚.00E, h17km, Mw4.3 Best double couple: M0 3.56000×10^15 NP1:φs290.00000°, δ60.00000°, λ78.00000°. NP2:φs134.00000°, δ32.00000°, λ111.00000°.*

*IDC **23** 09:20:53.2±0.5,35˚.11N×140˚.86E, h0km, mb4.4/32, mb1 4.5/35, mb1mx4.4/49, mbtmp4.4/35, ML3.4/2, MS3.7/10, Ms1 3.7/10, ms1mx3.3/46, Error ellipse: s-maj=13.9km s-min=12.6km az=87.0*

*BJI **23** 09:20:55.1±0.0,35˚.24N×140˚.75E, h18km, mB4.9/30, mb4.6/37, Ms4.2/12, Ms7 4.0/12*

*JMA **23** 09:20:56.7±0.1,35˚.22N×140˚.99E, h40km±2km, M4.5*

JMA Felt II J1.

*MOS **23** 09:20:56.1±1.5,35˚.37N×141˚.03E, h26km, mb4.8/25, Error ellipse: s-maj=8.7km s-min=4.8km az=92.5*

*NEIC **23** 09:20:57.4±1.5,35˚.14N±0˚.04×141˚.08E±0˚.08, h30km±4km, mb4.7/54, Error ellipse: s-maj=9.6km s-min=6.6km az=87.0*

ISC 23 09:20:57.5±0.8,35˚.20N±0˚.04×140˚.98E±0˚.04, h30km±5km, n194, σ1s72/201, mb4.5/81, MS3.8/11, 9C-11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.51**	**349**	↓P	**Pb**	**09 21 07.2**	**-0.8**
CHOJ				S	**Sb**	**09 21 15.3**	**0.0**
KTR	**Katsuura**	**0.54**	**264**	↓P	**Pb**	**09 21 08.2**	**-0.4**
KTR				S	**Sb**	**09 21 16.1**	**-0.1**
BSO1	**Boso 1**	**0.55**	**180**	↓P	**Pn**	**09 21 08.0**	**-0.7**
BSO3	**Boso 3**	**0.55**	**224**	↓P	**Pn**	**09 21 08.5**	**-0.5**
BSO4	**Boso 4**	**0.56**	**248**	↓P	**Pn**	**09 21 08.8**	**-0.5**
BSO4				X		09 21 18.2	
JSMT	**Sammumatsuo**	**0.61**	**316**	↓P	**Pb**	**09 21 09.4**	**-0.4**
JSMT				*e*S	**Sb**	**09 21 18.3**	**+0.1**
JKUC	**kamogawauchiur**	**0.64**	**266**	↓P	**Pb**	**09 21 09.4**	**-0.8**
JKUC				*e*S	**Sb**	**09 21 18.5**	**-0.3**
JYY	**Yasato**	**1.20**	**328**	P	**Pn**	**09 21 17.6**	**-0.6**
JHJ2	**Mitsune**	**2.30**	**205**		**Pn**	**09 21 33.0**	**-0.3**
JHJ2				Sn	**Sn**	**09 21 56.9**	**-3.6**
MJAR	**Matsushiro Arr**	**2.61**	**302**	Pn	**Pn**	**09 21 37.5**	**-0.1**
	2.4nm,0.3s,baz=130,slow=9.8,SNR=60						
MJAR				Sn	**Sn**	**09 22 09.7**	**+1.3**
	5.4nm,0.3s,baz=136,slow=21,SNR=6.8						
MAJO	**Matsushiro**	**2.62**	**302**	P	**Pn**	**09 21 38.5**	**+0.8**
MAJO	**Matsushiro**	**2.62**	**302

BJI	**Beijing**	**20.20**	**291**		pP	**P**	**09 25 29.0**	**-0.7**
BJI					pmax	pmax			
	comp=Z,6.0nm,0.6s								
ZEA	**Zeya**	**20.89**	**337**	*eP*		**P**	**09 25 33.6**	**-3.5**
ZEA					pmax	pmax			
	comp=Z,31nm,0.8s								
PEA0B	**Petropavlovsk-**	**21.45**	**28**		P	**P**	**09 25 45.1**	**+2.0**
PEA0B					pmax	pmax			
	comp=Z,30nm,1.1s								
PEA0B	**Petropavlovsk-**	**21.45**	**28**		P	**P**	**09 25 45.1**	**+2.0**
PEA0B					IAmb	IAmb	09 26 01.7		
	comp=Z,30nm,1.1s								
PETK	**Petropavlovsk-**	**21.45**	**28**		P	**P**	**09 25 44.5**	**+1.3**
	comp=Z,7.6nm,0.8s,baz=212,slow=13,SNR=8.0								
PETK					LR	LR	09 35 26.8		
	comp=Z,93nm,18.1s,baz=240,slow=40								
PETK	**Petropavlovsk-**	**21.45**	**28**		P	**P**	**09 25 45.2**	**+2.1**
PET	**Petropavlovsk**	**21.77**	**30**	*eP*		**P**	**09 25 48.3**	**+1.8**
PET					pmax	pmax			
	comp=Z,32nm,1.2s								
HHC	**Hu-ho-hao-te**	**23.78**	**293**	*eP*		**P**	**09 26 06.3**	**-1.2**
HHC					pmax	pmax			
	comp=Z,5.0nm,0.8s								
HHC					pmax	pmax			
	comp=Z,90nm,4.7s								
MA2	**Magadan**	**25.21**	**12**	⇓*eP*		**P**	**09 26 21.6**	**+1.3**
MA2					pmax	pmax			
	comp=Z,37nm,1.1s								
MA2	**Magadan**	**25.21**	**12**		P	**P**	**09 26 21.4**	**+1.1**
	comp=Z,21nm,0.7s,baz=195,slow=10,SNR=20								
MA2	**Magadan**	**25.21**	**12**		P	**P**	**09 26 21.4**	**+1.2**
MA2					IAmb	IAmb	09 26 24.4		
	comp=Z,31nm,0.9s								
XAN	**Xi'an**	**26.35**	**277**		P	**P**	09 26 38.4	+7.5	
XAN					pP	sP	09 26 47.3	+4.0	
XAN					sP	pP	09 26 51.8	+12	
XAN					pmax	pmax			
	comp=Z,7.0nm,0.8s								
XAN					LR	LR			
	comp=N,180nm,16.3s								
XAN					LR	LR			
	comp=Z,220nm,14.1s								
ENH	**Enshi**	**26.88**	**268**		P	**P**	**09 26 34.3**	**-1.3**
ENH					IAmb	IAmb	09 26 37.1		
	comp=Z,18nm,0.6s								
H11N2	**WAKE ISLAND Hy**	**27.57**	**117**		T	T	09 55 45.7		
	baz=310,slow=75,SNR=482								
H11N1	**WAKE ISLAND Hy**	**27.58**	**117**		T	T	09 55 51.6		
	baz=310,slow=75,SNR=561								
H11N3	**WAKE ISLAND Hy**	**27.59**	**117**		T	T	09 55 43.4		
	baz=310,slow=75,SNR=467								
YAK	**Yakutsk**	**27.78**	**349**	*eP*		**P**	**09 26 43.5**	**+0.1**
YAK					pmax	pmax			
	comp=Z,20nm,0.8s								
YAK					pmax	pmax			
	comp=N,9.0nm,1.0s								
YAK					pmax	pmax			
	comp=E,2.0nm,0.9s								
YAK	**Yakutsk**	**27.78**	**349**		P	**P**	**09 26 43.7**	**+0.3**
	comp=E,12nm,0.5s,baz=163,slow=3.6,SNR=8.4								
YAK	**Yakutsk**	**27.78**	**349**		P	**P**	**09 26 44.4**	**+1.0**
ULN	**Ulaanbaatar**	**28.13**	**307**	⇑*eP*		**P**	**09 26 47.4**	**+0.5**
ULN					pmax	pmax			
	comp=Z,3.0nm,1.2s								
ULN	**Ulaanbaatar**	**28.13**	**307**		P	**P**	**09 26 47.5**	**+0.5**
H11S3	**WAKE ISLAND Hy**	**28.22**	**119**		T	T	09 56 29.5		
	baz=312,slow=76,SNR=1239								
H11S1	**WAKE ISLAND Hy**	**28.22**	**119**		T	T	09 56 31.5		
	baz=312,slow=76,SNR=2256								
H11S2	**WAKE ISLAND Hy**	**28.23**	**119**		T	T	09 56 31.7		
	baz=312,slow=76,SNR=1069								
SONM	**Songino Array**	**28.55**	**307**		P	**P**	**09 26 50.9**	**+0.2**
SONM					pmax	pmax			
	comp=Z,2.0nm,0.8s								
SONM	**Songino Array**	**28.55**	**307**		P	**P**	**09 26 50.2**	**-0.4**
	comp=Z,2.3nm,0.6s,baz=117,slow=8.4,SNR=10								
SONM					LR	LR	09 38 54.1		
	comp=Z,147nm,19.5s,baz=128,slow=38								
SONM	**Songino Array**	**28.55**	**307**		P	**P**	**09 26 50.9**	**+0.2**
SEY	**Seymchan**	**28.65**	**11**	⇑*eP*		**P**	**09 26 52.2**	**+1.1**
SEY	**Seymchan**	**28.65**	**11**		P	**P**	**09 26 52.7**	**+1.6**
	comp=Z,3.3nm,0.6s,baz=183,slow=7.5,SNR=22								
BOD	**Bodaibo**	**28.91**	**330**	*eP*		**P**	**09 26 53.9**	**+0.4**
BOD					pmax	pmax			
	comp=Z,8.0nm,1.5s								
GYA	**Guiyang**	**30.60**	**263**	*eP*		**P**	**09 27 06.5**	**-2.5**
GYA					pmax	pmax			
	comp=Z,10.0nm,0.8s								
CD2	**Chengdu**	**31.36**	**273**	*eP*		**P**	**09 27 15.0**	**-0.6**
GTA	**Gaotai**	**32.80**	**290**	⇑P		**P**	**09 27 28.9**	**+0.7**
GTA					pP	sP	09 27 37.9	-2.8	
GTA					sP	pP	09 27 42.3	+5.3	
GTA					PcP	**PcP**	**09 30 14.5**	**+1.7**	
GTA					S	**S**	**09 32 42.0**	**-1.5**	
GTA					sS	sS	09 32 59.5	+1.4	
GTA					SS	SS	09 34 41.1	-24	
GTA					pmax	pmax			
	comp=Z,2.0nm,0.7s								
GTA					pmax	pmax			
	comp=Z,170nm,7.5s								
GTA					LR	LR			
	comp=Z,140nm,15.9s								
GTA					LR	LR			
	comp=Z,190nm,15.5s								
GTA					LR	LR			
	comp=Z,200nm,15.6s								
BILL	**Bilibino**	**35.88**	**16**	*eP*		**P**	**09 27 55.0**	**+0.7**
BILL					pmax	pmax			
	comp=Z,7.0nm,1.2s								
TIXI	**Tiksi**	**37.06**	**354**	⇑*eP*		**P**	**09 28 04.6**	**+0.3**
TIXI					pmax	pmax			
	comp=Z,5.0nm,0.8s								
TIXI	**Tiksi**	**37.06**	**354**		P	**P**	**09 28 04.8**	**+0.5**
	comp=Z,4.0nm,0.6s,baz=168,slow=6.2,SNR=8.3								
TIXI	**Tiksi**	**37.06**	**354**		P	**P**	**09 28 03.9**	**-0.4**
CMAR	**Chiang Mai Arr**	**40.71**	**257**		P	**P**	**09 28 35.4**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=48,slow=7.3,SNR=3.0								
WMQ	**Urumqi**	**41.38**	**299**	*eP*		**P**	**09 28 43.3**	**+2.5**
WMQ					pP	sP	09 28 50.9	-2.4	
WMQ					pmax	pmax			
	comp=Z,13nm,1.3s								
WMQ					pmax	pmax			
	comp=Z,48nm,5.3s								
WMQ					LR	LR			
	comp=Z,500nm,29.1s								
WMQ					LR	LR			
	comp=Z,760nm,29.1s								
WMQ					LR	LR			
	comp=Z,120nm,24.1s								
ZAA0	**Zalesovo Array**	**42.90**	**314**		P	**P**	**09 28 53.9**	**+0.9**
ZALV	**Zalesovo Beam**	**42.90**	**314**	*i* P		**P**	**09 28 53.7**	**+0.7**
ZALV					pmax	pmax			
	comp=Z,4.0nm,0.4s								
ZALV	**Zalesovo Beam**	**42.90**	**314**		P	**P**	**09 28 53.4**	**+0.3**
	comp=Z,4.2nm,0.5s,baz=100,slow=6.0,SNR=13								
ZALV	**Zalesovo Beam**	**42.90**	**314**		P	**P**	**09 28 53.8**	**+0.7**
MK31	**Makanchi Array**	**44.81**	**304**		P	**P**	**09 29 08.9**	**+0.4**
MK31					pmax	pmax			
	comp=Z,5.0nm,1.0s								
MK31	**Makanchi Array**	**44.81**	**304**		P	**P**	**09 29 08.9**	**+0.4**
MKAR	**Makanchi Array**	**44.81**	**304**	*eP*		**P**	**09 29 09.2**	**+0.7**
MKAR	**Makanchi Array**	**44.81**	**304**		P	**P**	**09 29 08.3**	**-0.2**
	comp=Z,2.8nm,0.6s,baz=83,slow=9.8,SNR=20								
MKAR					LR	LR	09 48 39.7		
	comp=Z,96nm,19.0s,baz=84,slow=37								
MKAR	**Makanchi Array**	**44.81**	**304**		P	**P**	**09 29 08.9**	**+0.4**
TAPN	**Taplejung**	**45.74**	**276**	*eP*		**P**	**09 29 16.5**	**0.0**
	comp=Z,8.4nm,0.4s								
ODAN	**Odare**	**46.20**	**275**	*eP*		**P**	**09 29 19.7**	**-0.3**
	comp=Z,6.6nm,0.4s								
KURK	**Kurchatov**	**46.80**	**309**		P	**P**	**09 29 24.4**	**+0.3**
KURK					pmax	pmax			
	comp=Z,12nm,0.9s								
KURK	**Kurchatov**	**46.80**	**309**		P	**P**	**09 29 24.4**	**+0.3**
KURK					IAmb	IAmb	09 29 43.4		
	comp=Z,12nm,0.8s								
RAMN	**Ramite**	**46.80**	**276**	*eP*		**P**	**09 29 24.8**	**0.0**
	comp=Z,24nm,0.5s								
JIRN	**Jiri**	**46.85**	**277**	*eP*		**P**	**09 29 25.9**	**+0.6**
	comp=Z,29nm,0.4s								
KURBB	**Kurchatov Arra**	**46.86**	**309**		P	**P**	**09 29 24.5**	**-0.1**
	comp=Z,8.6nm,0.7s,baz=87,slow=7.4,SNR=28								
GUN	**Gumba**	**47.01**	**277**	*eP*		**P**	**09 29 27.3**	**+0.8**
	comp=Z,18nm,0.7s								
GKN	**Gorkha**	**47.98**	**278**	*eP*		**P**	**09 29 34.6**	**+0.8**
	comp=Z,12nm,0.3s								

IMAR	**Indian Mountai**	**48.41**	**30**		P	**P**	**09 29 38.1**	**+1.7**
DANN	**Dangsing**	**48.55**	**279**	*eP*		**P**	**09 29 39.1**	**+0.7**
	comp=Z,38nm,0.5s								
MTN	**Manton Dam**	**48.69**	**193**		P	**P**	**09 29 38.5**	**-0.5**
COEN	**Coen**	**48.94**	**177**		P	**P**	**09 29 41.5**	**+0.5**
COEN					IAmb	IAmb	09 29 43.2		
	comp=Z,10nm,0.8s								
KSH	**Kashi**	**50.85**	**295**		P	**P**	**09 29 53.5**	**-2.0**
KSH					pP	sP	09 30 09.8	+1.6	
KSH					PP	**PP**	**09 31 56.1**	**+4.4**	
KSH					S	**S**	**09 37 02.1**	**-7.7**	
KSH					sS	sS	09 37 29.1	+4.2	
KSH	**Kashi**	**50.85**	**295**		SS	**SS**	**09 40 44.3**	**0.0**
KSH					pmax	pmax			
	comp=Z,400nm,5.9s								
KSH					LR	LR			
	comp=N,130nm,4.8s								
KSH					LR	LR			
	comp=E,160nm,4.0s								
KSH					LR	LR			
	comp=Z,440nm,6.6s								
AAK	**Ala-Archa**	**51.06**	**300**		P	**P**	**09 29 57.9**	**+0.8**
AAK					pmax	pmax			
	comp=Z,5.0nm,0.8s								
AAK	**Ala-Archa**	**51.06**	**300**		P	**P**	**09 29 57.3**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=140,slow=7.5,SNR=9.2								
AAK	**Ala-Archa**	**51.06**	**300**		P	**P**	**09 29 57.9**	**+0.8**
AAK					IAmb	IAmb	09 30 16.7		
	comp=Z,4.7nm,0.8s								
ILAR	**Eielson Array**	**51.23**	**32**		P	**P**	**09 29 59.0**	**+1.1**
	comp=Z,3.0nm,0.7s,baz=266,slow=6.1,SNR=23								
ILAR					PcP	**PcP**	**09 31 13.9**	**+1.1**	
	comp=Z,0.4nm,0.7s,baz=282,slow=3.9,SNR=2.0								
BVAR	**Borovoye Array**	**51.55**	**313**		P	**P**	**09 30 00.8**	**+0.3**
	comp=Z,2.5nm,0.4s,baz=112,slow=10.0,SNR=10								
BRVK	**Borovoye**	**51.61**	**313**		P	**P**	**09 30 02.1**	**+1.2**
BRVK					pmax	pmax			
	comp=Z,3.0nm,0.7s								
BRVK	**Borovoye**	**51.61**	**313**		P	**P**	**09 30 02.1**	**+1.2**
KNRA	**Kununurra**	**51.91**	**195**		P	**P**	**09 30 03.6**	**+0.2**
ARSB	**Arslanbob**	**52.51**	**298**		P	**P**	**09 30 08.5**	**+0.5**
ARSB					IAmb	IAmb	09 30 23.7		
	comp=Z,18nm,1.4s								
FITZ	**Fitzroy Crossi**	**54.97**	**198**		P	**P**	**09 30 26.1**	**+0.3**
FITZ					IAmb	IAmb	09 30 26.7		
	comp=Z,5.6nm,0.8s								
WB0	**Warramunga Arr**	**55.02**	**188**		P	**P**	**09 30 25.9**	**-0.3**
GAR	**Garm**	**55.18**	**296**		P	**P**	**09 30 27.9**	**+0.5**
GAR					IAmb	IAmb	09 30 35.6		
	comp=Z,8.0nm,0.8s								
WRAB	**Tennant Creek**	**55.19**	**188**		P	**P**	**09 30 27.2**	**-0.3**
WRAB					pmax	pmax			
	comp=Z,19nm,1.0s								
WRAB	**Tennant Creek**	**55.19**	**188**		P	**P**	**09 30 27.1**	**-0.3**
WR0	**Warramunga Arr**	**55.20**	**187**		P	**P**	**09 30 27.2**	**-0.3**
WB2	**Warramunga Arr**	**55.20**	**188**		P	**P**	**09 30 27.2**	**-0.3**
WRA	**Warramunga Arr**	**55.20**	**188**		P	**P**	**09 30 25.7**	**-1.8**
	comp=Z,29nm,0.4s,baz=5.5,slow=7.3,SNR=25								
CHGR	**Chuyangaron**	**56.14**	**296**		P	**P**	**09 30 34.8**	**+0.5**
INK	**Inuvik**	**56.17**	**26**		P	**P**	**09 30 35.1**	**+1.1**
	comp=Z,1.6nm,0.7s,baz=300,slow=6.7,SNR=9.5								
ARU	**Arti**	**57.50**	**319**	*d* iP		**P**	**09 30 43.8**	**+0.2**
ARU					*PP	**pwP**	**09 30 52.8**	**0.0**	
ARU							09 32 46.5		
ARU					S	**S**	**09 38 36.8**	**-2.0**	
ARU					pmax	pmax			
	comp=Z,11nm,0.9s								
ARU	**Arti**	**57.50**	**319**		P	**P**	**09 30 43.3**	**-0.2**
	comp=Z,2.4nm,0.4s,baz=72,slow=6.4,SNR=9.0								
ARU	**Arti**	**57.50**	**319**		P	**P**	**09 30 43.4**	**-0.2**
AS31	**Alice Springs**	**58.93**	**188**		P	**P**	**09 30 53.8**	**-0.1**
AS31					IAmb	IAmb	09 30 55.8		
	comp=Z,1.9nm,0.5s								
ASAR	**Alice Springs**	**58.93**	**188**		P	**P**	**09 30 53.8**	**-0.1**
	comp=Z,2.2nm,0.4s,baz=16,slow=11,SNR=64								
AKTO	**Aktyubinsk**	**59.64**	**313**		P	**P**	**09 30 59.6**	**+1.1**
	comp=Z,2.5nm,0.7s,baz=91,slow=9.3,SNR=3.7								
PSA00	**Pilbara Seismi**	**59.92**	**203**		P	**P**	**09 31 00.2**	**-0.5**
PSAA3	**Pilbara Seismi**	**59.92**	**203**		P	**P**	**09 31 00.1**	**-0.7**
PSAB1	**Pilbara Seismi**	**59.92**	**203**		P	**P**	**09 31 00.4**	**-0.3**
PSAA1	**Pilbara Seismi**	**59.93**	**203**		P	**P**	**09 31 00.7**	**-0.1**
PRGR	**Permogore**	**62.11**	**327**	*eP*		P	09 31 21.4	+6.3	
PRGR					pmax	pmax			
	comp=Z,4.0nm,0.6s								
KLMR	**Klimovskoe**	**65.11**	**328**	*eP*		**P**	**09 31 34.7**	**-0.2**
KLMR					pmax	pmax			
	comp=Z,14nm,1.3s								
KLMR	**Klimovskoe**	**65.11**	**328**	*eP*		**P**	**09 31 34.8**	**-0.2**
KLMR					AMP		09 31 36.9		
	comp=Z,14nm,1.3s								
YKA	**Yellowknife Ar**	**65.57**	**30**		P	**P**	**09 31 39.0**	**+1.1**
YKA	**Yellowknife Ar**	**65.57**	**30**		P	**P**	**09 31 39.0**	**+1.1**
	comp=Z,1.7nm,0.8s,baz=295,slow=6.2,SNR=12								
ARCES	**ARCESS Array B**	**65.58**	**340**		P	**P**	**09 31 37.7**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=54,slow=6.3,SNR=6.5								
ARCES					LR	LR	10 03 20.9		
	comp=Z,62nm,19.8s,baz=298,slow=39								
STKA	**Stephens Creek**	**66.73**	**179**		P	**P**	**09 31 45.5**	**-0.1**
STKA					pmax	pmax			
	comp=Z,1.0nm,1.0s								
STKA	**Stephens Creek**	**66.73**	**179**		P	**P**	**09 31 45.6**	**+0.1**
	comp=Z,1.0nm,0.5s,baz=1.4,slow=8.2,SNR=4.2								
STKA	**Stephens Creek**	**66.73**	**179**		P	**P**	**09 31 45.5**	**-0.1**
NLWA	**Neilton Lookou**	**68.22**	**47**		P	**P**	**09 31 56.6**	**+1.5**
OBN	**Obninsk**	**69.35**	**324**	*eP*		**P**	**09 32 02.6**	**+0.7**
OBN				*e*			09 32 28.7		
OBN					pmax	pmax			
	comp=Z,4.0nm,0.9s								
SUF	**Sumiainen**	**69.46**	**333**		P	**P**	**09 32 02.9**	**+0.5**
FINES	**FINESS Array B**	**70.27**	**332**		P	**P**	**09 32 08.0**	**+0.6**
FINES	**FINESS Array B**	**70.27**	**332**		P	**P**	**09 32 08.0**	**+0.6**
	comp=Z,1.1nm,0.4s,baz=55,slow=5.9,SNR=12								
FINES					LR	LR	10 04 06.9		
	comp=Z,51nm,18.6s,baz=360,slow=37								
KBZ	**Khabaz**	**71.83**	**311**		P	**P**	**09 32 18.3**	**+1.1**
	comp=Z,2.4nm,0.8s,baz=62,slow=7.8,SNR=4.2								
KIV	**Kislovodsk**	**71.84**	**311**	*eP*		**P**	**09 32 20.2**	**+2.8**
KIV					pmax	pmax			
	comp=Z,33nm,1.0s								
BMO	**Blue Mountains**	**73.44**	**47**		P	**P**	**09 32 27.7**	**+0.8**
BMO					pmax	pmax			
	comp=Z,2.0nm,0.6s								
BMO	**Blue Mountains**	**73.44**	**47**		P	**P**	**09 32 27.7**	**+0.8**
J08A	**Circle Bar Ran**	**73.55**	**48**		P	**P**	**09 32 30.1**	**+2.5**
J08A					IAmb	IAmb	09 32 32.1		
	comp=Z,13nm,1.5s								
JTMT	**Jette**	**73.57**	**43**		P	**P**	**09 32 27.9**	**+0.2**
JTMT					IAmb	IAmb	09 32 31.6		
	comp=Z,6.7nm,0.6s								
FFC	**Flin Flon**	**75.44**	**32**		P	**P**	**09 32 39.2**	**+1.0**
FFC					pmax	pmax			
	comp=Z,7.0nm,2.2s								
YERR	**Yerington**	**75.46**	**53**		P	**P**	**09 32 38.5**	**-0.4**
YERR					IAmb	IAmb	09 32 42.6		
	comp=Z,3.5nm,0.6s								
NC405	**NORSAR Array S**	**75.52**	**337**		P	**P**	**09 32 38.3**	**-0.3**
NC405					IAmb	IAmb	09 32 49.2		
	comp=Z,16nm,0.9s								
AKASG	**Malin Array Be**	**75.53**	**322**		P	**P**	**09 32 39.2**	**+0.4**
	comp=Z,1.1nm,0.4s,baz=49,slow=6.2,SNR=7.9								
NC204	**NORSAR Array S**	**75.69**	**338**		P	**P**	**09 32 40.7**	**+1.0**
NB2	**NORSAR Subarra**	**75.73**	**337**		P	**P**	**09 32 40.1**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=39,slow=6.2								
NOA	**NORSAR Array B**	**75.73**	**337**		P	**P**	**09 32 40.3**	**+0.5**
	comp=Z,1.7nm,0.7s,baz=39,slow=5.8,SNR=6.3								
NOA					LR	LR	10 08 59.6		
	comp=Z,58nm,19.1s,baz=15,slow=38								
FCC	**Fort Churchill**	**75.80**	**26**		P	**P**	**09 32 40.7**	**+0.5**
FCC					pmax	pmax			
	comp=Z,9.0nm,1.3s								
FCC	**Fort Churchill**	**75.80**	**26**		P	**P**	**09 32 40.7**	**+0.5**
FCC					IAmb	IAmb	09 32 42.2		
	comp=Z,8.9nm,1.3s								
EGMT	**Eagleton**	**75.88**	**41**		P	**P**	**09 32 42.8**	**+1.8**
EGMT					IAmb	IAmb	09 32 44.2		
	comp=Z,14nm,1.4s								
DLMT	**Dillon**	**75.89**	**44**		P	**P**	**09 32 42.4**	**+1.2**
DLMT					IAmb	IAmb	09 32 58.5		
	comp=Z,4.4nm,0.4s								
KVN	**Kaiserville**	**76.16**	**52**		P	**P**	**09 32 44.2**	**+1.3**
KVN					pmax	pmax			
	comp=Z,4.0nm,0.6s								
KVN	**Kaiserville**	**76.16**	**52**		P	**P**	**09 32 44.1**	**+1.3**
KVN					IAmb	IAmb	09 32 46.5		
	comp=Z,4.0nm,0.6s								

NVAR	**Mina Array Bea**	**76.37**	**53**		P	**P**	**09 32 46.4**	**+2.2**
	comp=Z,1.7nm,0.6s,baz=301,slow=5.6,SNR=13								
NV11	**Mina Array Sit**	**76.47**	**52**		P	**P**	**09 32 46.9**	**+2.2**
TPAW	**Teton Pass**	**77.96**	**45**		P	**P**	**09 32 54.4**	**+1.3**
R11A	**Troy Canyon, C**	**78.17**	**51**		P	**P**	**09 32 55.5**	**+1.3**
DUG	**Dugway, Tooele**	**78.83**	**49**		IAmb	IAmb	09 33 01.6		
	comp=Z,3.5nm,0.6s								
PD31	**Pinedale Array**	**79.20**	**45**		P	**P**	**09 33 00.0**	**+0.1**
PDAR	**Pinedale Array**	**79.20**	**45**		P	**P**	**09 33 01.2**	**+1.4**
	comp=Z,2.4nm,0.5s,baz=263,slow=1.6,SNR=33								
BRTR	**Keskin Array B**	**79.80**	**312**		P	**P**	**09 33 03.9**	**+0.9**
	comp=Z,0.4nm,0.7s,baz=5.6,slow=16,SNR=3.8								
PFO	**Pinyon Flats O**	**80.36**	**56**		P	**P**	**09 33 08.1**	**+1.9**
PFO					pmax	pmax			
	comp=Z,8.0nm,1.2s								
PFO	**Pinyon Flats O**	**80.36**	**56**		P	**P**	**09 33 08.1**	**+1.9**
PFO					IAmb	IAmb	09 33 10.8		
	comp=Z,8.0nm,1.1s								
XPFO	**Pion Flat**	**80.36**	**56**		P	**P**	**09 33 06.4**	**+0.2**
XPFO					IAmb	IAmb	09 33 10.8		
	comp=Z,8.0nm,1.1s								
BAR	**Barrett**	**80.75**	**57**		P	**P**	**09 33 07.7**	**-0.5**
BAR					IAmb	IAmb	09 33 11.5		
	comp=Z,6.7nm,0.8s								
SRU	**San Rafael Swe**	**80.89**	**48**		P	**P**	**09 33 08.1**	**-0.9**
SRU					pmax	pmax			
	comp=Z,4.0nm,0.6s								
SRU	**San Rafael Swe**	**80.89**	**48**		P	**P**	**09 33 08.1**	**-0.9**
ULM	**Lac du Bonnet**	**81.23**	**33**		P	**P**	**09 33 11.0**	**+0.7**
ULM	**Lac du Bonnet**	**81.23**	**33**		P	**P**	**09 33 11.0**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=285,slow=10,SNR=3.8								
VYHS	**Vyhne**	**82.03**	**325**	*eP*		**P**	**09 33 16.8**	**+2.2**
VYHS	**Vyhne**	**82.03**	**325**	*eP*		**P**	**09 33 16.8**	**+2.2**
CLL	**Collm**	**82.50**	**330**	*e*(sP)		sP	09 33 28.0	-1.8	
MVCO	**Mesa Verde**	**83.32**	**49**		P	**P**	**09 33 21.3**	**-0.6**
MVCO					IAmb	IAmb	09 33 32.8		
	comp=Z,5.8nm,1.2s								
S22A	**4UR Ranch, Cre**	**84.00**	**48**		P	**P**	**09 33 26.4**	**+1.0**
S22A					IAmb	IAmb	09 33 29.4		
	comp=Z,4.1nm,0.8s								
GERES	**GERESS Array B**	**84.08**	**328**		P	**P**	**09 33 26.4**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=8.7,slow=1.8,SNR=3.7								
GERES					LR	LR	10 12 20.4		
	comp=Z,38nm,19.0s,baz=0.0,slow=37								
SCHQ	**Schefferville**	**87.19**	**16**		P	**P**	**09 33 41.7**	**+1.1**
	comp=Z,6.3nm,1.1s,baz=320,slow=7.9,SNR=3.5								
TX32	**Lajitas Array**	**91.52**	**52**		IAmb	IAmb	09 34 06.8		
	comp=Z,1.6nm,0.8s								
TXAR	**Lajitas Array**	**91.52**	**52**		P	**P**	**09 34 02.7**	**+1.2**
	comp=Z,1.0nm,0.6s,baz=310,slow=2.0,SNR=11								
ESDC	**Sonseca Array**	**98.77**	**333**		LR	LR	10 25 28.2		
	comp=Z,31nm,18.9s,baz=335,slow=39								
TORD	**Torodi Ar. Bea**	**118.35**	**314**		PKP	**PKPdf**	**09 39 42.2**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=79,slow=1.3,SNR=5.5								
LPAZ	**La Paz**	**147.90**	**62**		PKPbc	**PKiKP**	**09 40 42.0**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=270,slow=1.0,SNR=6.8								

*KRAR **23** 09:22:53.9±0.9, 53°.62N×87°.75E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 23 09:22:56.4±1.7, 53°.63N×87°.96E, h0km, mb 3.5, mpv 3.2, 6C-2D, Error ellipse: s-maj=16.3km s-min=11.3km az=172.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**6.44**	**247**	⇑	Pn	Pn	09 24 32.5	+0.1
	4.5nm,1.3s							
KURK				⇑	Sn	Sn	09 25 47.9	+1.4
	1.8nm,0.9s							
KURK				⇑	Lg	Lg	09 26 21.2	
	7.3nm,1.1s							
KURBB	**Kurchatov Arra**	**6.54**	**246**	⇑	Pn	Pn	09 24 32.9	-0.8
	1.3nm,0.5s							
KURBB				⇑	Sn	Sn	09 25 50.1	+1.2
	3.1nm,0.6s							
KURBB				⇑	Lg	Lg	09 26 24.9	
	6.8nm,0.7s							
MK31	**Makanchi Array**	**7.74**	**210**		Pn	Pn	09 24

CUKT	**Cukurca**	**3.35**	**59**	*i* P		**Pn**	**09 45 21.7**	**+2.7**
CUKT				*i* S		**Sg**	**09 46 15.0**	**+0.9**
CUKT				IAML			09 46 21.0	
	comp=E,656nm,0.6s							
CUKT				IAML			09 46 25.0	
	comp=N,430nm,0.6s							
MUSM	**Mu-Merkez**	**3.36**	**21**	*i* P		**Pn**	**09 45 20.4**	**+1.2**
MUSM				*i* S		**Sg**	**09 46 13.0**	**-1.5**
GURO	**Guroymak-BITLI**	**3.38**	**28**	PN		**Pn**	**09 45 22.1**	**+2.7**
BNGB	**Bingl**	**3.45**	**9**	PN		**Pn**	**09 45 23.4**	**+3.1**
BNGL	**BINGOL**	**3.49**	**15**	*i* P		**Pn**	**09 45 24.6**	**+3.6**
BNGL				*i* S		**Sg**	**09 46 18.5**	**0.0**
TNCL	**Tunceli-Merkez**	**3.55**	**354**	*i* P		**Pb**	**09 45 25.5**	**-3.9**
TNCL				*i* S		**Sg**	**09 46 18.6**	**-1.9**
ANDN	**Andirin**	**3.56**	**305**	*i* P		**Pn**	**09 45 23.2**	**+1.4**
ANDN				*i* S		**Sg**	**09 46 20.4**	**-0.3**
HWQ	**Hawqa**	**3.58**	**250**	*e*P		**Pn**	**09 45 25.6**	**+3.5**
HWQ				*e*S		**Sb**	**09 46 12.6**	**-0.8**
DARE	**Darende-Malaty**	**3.60**	**327**	PN		**Pn**	**09 45 24.8**	**+2.4**
AKDM	**Akdamar-Van**	**3.64**	**40**	PN		**Pn**	**09 45 25.7**	**+2.8**
GEVA	**Gevas**	**3.67**	**41**	*i* P		**Pn**	**09 45 27.1**	**+3.7**
GEVA				*i* S		**Sg**	**09 46 22.5**	**-1.7**
KARO	**Karliova-Bingo**	**3.82**	**12**	PN		**Pn**	**09 45 28.7**	**+3.3**
KEMA	**Kemaliye**	**3.88**	**342**	*i* P		**Pn**	**09 45 29.0**	**+2.8**
KEMA				*i* S		**Sg**	**09 46 28.4**	**-2.5**
KEMA				IAML			09 46 41.0	
	comp=N,106nm,0.5s							
KEMA				IAML			09 46 41.0	
	comp=E,132nm,0.6s							
ADCV	**BITLIS_Adilcev**	**3.89**	**33**	*i* P		**Pn**	**09 45 30.7**	**+4.3**
ADCV				*i* S		**Sg**	**09 46 29.1**	**-2.2**
BHL	**Bhannes**	**3.95**	**246**	*e*P		**Pn**	**09 45 29.8**	**+2.6**
SARI	**SarD1z-Kayseri**	**4.03**	**316**	PN		**Pn**	**09 45 31.0**	**+2.7**
DQRL	**Deir Qamar**	**4.10**	**244**	*e*P		**Pn**	**09 45 31.4**	**+2.1**
DQRL				*e*S		**Sb**	**09 46 24.2**	**-4.3**
GULE	**Gulek**	**4.54**	**294**	*i* P		**Pn**	**09 45 36.9**	**+1.5**
GULE				*i* S		**Sb**	**09 46 43.2**	**+2.0**
GULE				IAML			09 47 04.0	
	comp=N,81nm,0.6s							
GULE				IAML			09 47 06.0	
	comp=E,81nm,0.8s							
AGRB	**Hanur-Agry**	**4.64**	**30**	PN		**Pn**	**09 45 40.3**	**+3.5**
KOPR	**Koprukoy-ERZUR**	**4.64**	**18**	PN		**Pn**	**09 45 40.3**	**+3.5**
KIZK	**Mersin**	**4.83**	**282**	*i* P		**Pn**	**09 45 41.1**	**+1.9**
KIZK				*i* S		**Sn**	**09 46 37.0**	**+1.8**
KERG	**Konya-Eregli**	**5.08**	**293**	*i* P		**Pn**	**09 45 45.0**	**+2.3**

*STR **23** 09:44:58.3±0.2, 48°№1°×°″, h2km, MLv2.0/2*
LDG 23 09:44:57.7±0.1, 48°36N×7°79E, h19km, Md2.1/2, Ml2.2/7,
Error ellipse: s-maj=1.0km s-min=0.9km az=1.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPP	**Oppenau**	**0.29**	**63**	Pg	Pg	09 45 04.2	0.0
WLS	**Welschbruch**	**0.30**	**280**	Pg	Pb	09 45 04.4	0.0
CDF	**Champ du Feu**	**0.35**	**278**	*e*Pg	Pg	09 45 05.1	-0.1
CDF				*e*Sg	Sg	09 45 10.0	-0.3
	17nm,0.2s						
KIZ	**Kirchzarten**	**0.41**	**168**	Pg	Pg	09 45 06.4	+0.1
ECH	**Echery**	**0.45**	**251**	Pg	Pg	09 45 07.0	+0.1
LANF	**Langenberg**	**0.62**	**1**	Pg	Pg	09 45 10.3	+0.3
LANF				Sg	Sb	09 45 18.2	0.0
MOF	**Molkenrain**	**0.68**	**221**	Pg	Pg	09 45 11.1	0.0
MOF				Sg	Sg	09 45 20.5	+0.3
SLE	**Schleitheim**	**0.76**	**142**	Pg	Pb	09 45 12.1	-0.2
SLE				Sg	Sb	09 45 22.2	-0.1
HINF	**Hinteralfeld**	**0.83**	**229**	*e*Pg	Pb	09 45 13.7	+0.1
HINF				*e*Sg	Sb	09 45 24.6	+0.1
	8.3nm,0.2s						
SULZ	**Cheisacher**	**0.86**	**166**	Pg	Pb	09 45 14.2	+0.1
SULZ				Sg	Sb	09 45 25.6	+0.3
BALST	**Balsthal**	**1.03**	**184**	Pg	Pn	09 45 17.3	+0.1
BALST				Sn	Sg	09 45 31.2	0.0
HAU	**Haudompre**	**1.03**	**250**	*e*Pn	Pb	09 45 15.5	-1.5
HAU	**Haudompre**	**1.03**	**250**	*e*Pg	Pn	09 45 17.1	-0.1
HAU				*e*Sg	Sb	09 45 30.4	+0.2
	5.3nm,0.2s						
BOURR	**Bourrignon**	**1.04**	**202**	Pg	Pn	09 45 17.6	+0.2
LOMF	**Lomont**	**1.20**	**213**	Pg	Pg	09 45 21.7	+0.7
LOMF				Sg	Sg	09 45 37.1	+0.3
CHMF	**Charmoille**	**1.35**	**215**	Pn	Pg	09 45 23.2	-0.6
PAGF	**Fort de Pagny**	**1.39**	**279**	*e*Pg	Pg	09 45 24.1	-0.4
	baz=101						
PAGF				*e*Sn	Sn	09 45 37.2	-2.8
	baz=83						
PAGF				*e*Sg	Sg	09 45 41.8	-0.9
	7.8nm,0.3s,baz=96						
MEZF	**Maizieres J'vi**	**1.83**	**275**	*e*P	Pn	09 45 28.5	+0.3
MEZF				*e*Sn	Sn	09 45 46.8	-4.0
	14nm,0.3s						
SFTF	**Sexfontaines**	**1.85**	**266**	*e*Pn	Pn	09 45 26.7	-1.7
SFTF	**Sexfontaines**	**1.85**	**266**	*e*P	Pn	09 45 28.9	+0.5
SFTF				*e*Sn	Sn	09 45 48.1	-3.2
SFTF				*e*Sg	Sg	09 45 56.1	-1.1
	2.4nm,0.2s						
CABF	**La Chapelle**	**2.10**	**214**	*e*Pn	Pn	09 45 30.5	-1.5
CABF	**La Chapelle**	**2.10**	**214**	*e*Pg	Pg	09 45 36.9	-1.1
CABF				*e*Sn	Sn	09 45 54.4	-3.2
CABF				*e*Sg	Sg	09 46 04.6	-0.7
	1.6nm,0.3s						
LOR	**Lormes**	**2.87**	**249**	*e*P	Pn	09 45 44.0	+1.5
	baz=69						
LOR	**Lormes**	**2.87**	**249**	*e*Pg	Pg	09 45 51.5	-1.2
LOR				*e*Sg	Sg	09 46 27.4	-2.5
	0.8nm,0.2s,baz=77						
AVF	**Avril sur Loir**	**3.39**	**244**	*e*Pn	Pn	09 45 48.0	-1.6

*NEIC **23** 09:49:05.2±1.4, 57°.66N±0°.03×154°.08W±0°.05, h64km±7km, Error ellipse: s-maj=5.3km s-min=2.4km az=213.0*
*AEIC **23** 09:49:06.2±1.9, 57°.65N±0°.04×154°.03W±0°.06, h52km±6km, ML3.2/65, Error ellipse: s-maj=6.0km s-min=4.3km az=203.0*
*IDC **23** 09:49:06.6±1.1, 57°.87N×153°.35W, h79km±28km, mb3.5/4, mb1 3.4/5, mb1mx3.1/49, mbtmp3.6/5, Error ellipse: s-maj=62.5km s-min=32.9km az=127.0*
ISC 23 09:49:04.8±0.8, 57°.67N±0°.04×154°.01W±0°.03, h50km, n72,
σ1§31/84, mb3.7/4, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OHAK	**Old Harbor**	**0.59**	**139**		**Pn**	**09 49 17.9**	**+0.8**
OHAK					**Sn**	**09 49 28.2**	**+2.2**
KDAK	**Kodiak Island**	**0.77**	**81**	P	**Pn**	**09 49 20.5**	**+1.1**
	97nm,0.3s,baz=285,slow=11,SNR=868						
KDAK				S	**Sn**	**09 49 32.7**	**+2.6**
	120nm,0.3s,baz=217,slow=20,SNR=29						
KDAK	**Kodiak Island**	**0.77**	**81**		**Pn**	**09 49 20.7**	**+1.3**
KCG	**Knife Ck. Glac**	**0.87**	**318**		**Pn**	**09 49 21.8**	**+1.0**
ACHA	**Angle Creek He**	**0.89**	**308**		**Pn**	**09 49 22.0**	**+0.9**
ACHA					**Sn**	**09 49 33.7**	**+0.7**
KABU	**Katmai Buttres**	**0.91**	**312**		**Pn**	**09 49 20.5**	**-0.9**
KARR	**Katmai Rainbow**	**0.91**	**336**		**Pn**	**09 49 22.9**	**+1.6**
ANCK	**Angle Creek**	**0.95**	**304**		**Pn**	**09 49 23.1**	**+1.1**
KAHC	**Katmai Hardscr**	**1.12**	**332**		**Pn**	**09 49 25.4**	**+1.2**
SII	**Sitkinak Islan**	**1.12**	**185**		**Pn**	**09 49 24.5**	**+0.4**
SII					**Sn**	**09 49 39.1**	**+0.7**
KELA	**Mount Kelaz**	**1.20**	**311**		**Pn**	**09 49 26.1**	**+0.8**
PLK3	**Peulik 3**	**1.21**	**272**		**Pn**	**09 49 26.4**	**+1.1**
PLK3					**Sn**	**09 49 41.6**	**+0.9**
PLK2	**Peulik 2**	**1.25**	**275**		**Pn**	**09 49 27.1**	**+1.3**
PLK1	**Peulik 1**	**1.40**	**277**		**Pn**	**09 49 29.1**	**+1.3**
PLK1					**Sn**	**09 49 46.5**	**+1.3**
PLBL	**Peulik Blue Cr**	**1.51**	**272**		**Pn**	**09 49 30.8**	**+1.4**
AUJK	**Augustine Jueg**	**1.71**	**10**		**Pn**	**09 49 33.2**	**+1.0**
AUP	**Augustine Pinn**	**1.73**	**10**		**Pn**	**09 49 33.5**	**+1.0**
AUW	**Augustine West**	**1.73**	**9**		**Pn**	**09 49 33.4**	**+1.0**
AUL	**Augustine Lava**	**1.74**	**10**		**Pn**	**09 49 33.9**	**+1.3**
CHIR	**Chirikof Islan**	**2.06**	**206**		**Pn**	**09 49 37.8**	**+1.0**
CHIR					**Sn**	**09 50 00.2**	**-1.0**
HOM	**Homer**	**2.35**	**31**		**Pn**	**09 49 42.2**	**+1.4**
HOM					**Sn**	**09 50 09.8**	**+1.4**
ILS	**Iliamna Low So**	**2.35**	**12**		**Pn**	**09 49 42.0**	**+1.1**
CNPM	**China Poot**	**2.36**	**37**		**Pn**	**09 49 42.1**	**+1.0**
ILW	**Iliamna West**	**2.44**	**10**		**Pn**	**09 49 43.3**	**+1.0**
BRLK	**Bradley Lake**	**2.66**	**36**		**Pn**	**09 49 45.7**	**+0.6**
BRSE	**Bradley Lake S**	**2.69**	**38**		**Pn**	**09 49 45.9**	**+0.3**
RSO	**Redoubt South**	**2.88**	**12**		**Pn**	**09 49 50.2**	**+2.0**
RSO				Sn	**Sn**	**09 50 25.4**	**+3.7**
DFR	**Drift River**	**3.01**	**13**		**Pn**	**09 49 51.2**	**+1.2**
VNHG	**Veniaminof 1**	**3.17**	**245**		**Pn**	**09 49 52.3**	**0.0**
SEW	**Seward**	**3.40**	**42**		**Pn**	**09 49 55.2**	**0.0**
SLKM	**Skilak Lake**	**3.45**	**33**		**Pn**	**09 49 56.5**	**+0.5**
SVW2	**Sparrevohn**	**3.53**	**348**		**Pn**	**09 49 57.5**	**+0.4**
CRP	**Crater Peak**	**3.73**	**14**		**Pn**	**09 50 01.3**	**+1.4**
RC01	**Rabbit Creek A**	**4.07**	**31**		**Pn**	**09 50 05.8**	**+1.4**
SUA	**Susitna One**	**4.15**	**22**		**Pn**	**09 50 06.8**	**+1.2**
SDPT	**Sand Point**	**4.27**	**240**		**Pn**	**09 50 07.0**	**-0.2**
PWL	**Port Wells**	**4.33**	**40**		**Pn**	**09 50 07.7**	**-0.2**
SKT	**Skwentna**	**4.50**	**15**		**Pn**	**09 50 11.3**	**+1.0**
PMR	**Palmer**	**4.65**	**30**		**Pn**	**09 50 12.9**	**+0.6**
KNK	**Knik Glacier**	**4.70**	**35**		**Pn**	**09 50 13.8**	**+0.8**
GLI	**Glacier Island**	**4.79**	**45**		**Pn**	**09 50 14.3**	**0.0**
GHO	**Glory Hole Cre**	**4.85**	**30**		**Pn**	**09 50 16.2**	**+1.0**
SML	**Sawmill**	**5.05**	**32**	Pn	**Pn**	**09 50 20.2**	**+2.4**
EYAK	**Cordova Ski Ar**	**5.14**	**52**		**Pn**	**09 50 19.0**	**0.0**
PPLA	**Purkeypile**	**5.32**	**9**	Pn	**Pn**	**09 50 24.2**	**+2.5**
TT01	**Tatalina**	**5.35**	**350**		**Pn**	**09 50 22.2**	**+0.2**
SCM	**Sheep Creek Mo**	**5.37**	**36**		**Pn**	**09 50 22.7**	**+0.4**
GOAT	**Goat Mountain**	**5.60**	**55**		**Pn**	**09 50 26.1**	**+0.6**
WAT1	**Susitna Watana**	**5.84**	**25**		**Pn**	**09 50 29.0**	**+0.2**
TRF	**Thorofare Moun**	**6.08**	**16**		**Pn**	**09 50 32.4**	**+0.3**
KTH	**Kantishna Hill**	**6.09**	**13**		**Pn**	**09 50 32.7**	**+0.5**
GRIN	**Grindle Hills**	**6.12**	**60**		**Pn**	**09 50 32.7**	**+0.2**
RND	**Reindeer**	**6.29**	**22**		**Pn**	**09 50 34.7**	**-0.2**
DHY	**Denali Highway**	**6.34**	**28**	Pn	**Pn**	**09 50 36.5**	**+0.8**
DHY				Sn	**Sn**	**09 51 48.0**	**+1.3**
GLB	**Gilahina Butte**	**6.42**	**50**	Pn	**Pn**	**09 50 36.6**	**0.0**
MCK	**McKinley**	**6.57**	**20**	Pn	**Pn**	**09 50 38.9**	**+0.2**
BPAW	**Bear Paw Mtn.**	**6.62**	**12**		**Pn**	**09 50 39.5**	**+0.1**
MCARA	**McCarthy VSAT**	**6.71**	**52**	Pn	**Pn**	**09 50 41.1**	**+0.5**
MCARA				Sn	**Sn**	**09 51 55.8**	**+0.2**
PAX	**Paxson**	**6.80**	**35**	Pn	**Pn**	**09 50 43.4**	**+1.5**
BALM	**Baldy**	**6.85**	**56**		**Pn**	**09 50 43.4**	**+0.8**
RKAV	**Rock Avalanche**	**7.05**	**63**		**Pn**	**09 50 45.7**	**+0.2**
MLY	**Manley**	**7.55**	**11**	Pn	**Pn**	**09 50 53.7**	**+1.6**
RIDG	**Independent Ri**	**7.56**	**33**	Pn	**Pn**	**09 50 54.5**	**+2.2**
HDA	**Harding Lake**	**7.58**	**24**	Pn	**Pn**	**09 50 53.2**	**+0.8**
CCB	**Clear Creek Bu**	**7.61**	**21**	Pn	**Pn**	**09 50 52.0**	**-0.9**
ILAR	**Eielson Array**	**7.91**	**23**	P	**Pn**	**09 50 55.2**	**-1.7**
	0.1nm,0.3s,baz=213,slow=13,SNR=10						
ILAR				S	**Sn**	**09 52 21.3**	**-3.6**
	0.1nm,0.3s,baz=215,slow=23,SNR=3.3						
IM03		**8.35**	**1**		**Pn**	**09 51 02.8**	**-0.1**
ANM	**Nome**	**8.82**	**326**		**Pn**	**09 51 09.7**	**+0.2**
PETK	**Petropavlovsk-**	**27.33**	**281**	P	**P**	**09 54 47.8**	**+3.2**
	2.2nm,0.9s,baz=78,slow=10,SNR=5.3						
SONM	**Songino Array**	**55.75**	**307**	P	**P**	**09 58 34.9**	**-1.2**
	0.4nm,0.7s,baz=54,slow=7.3,SNR=3.6						
MKAR	**Makanchi Array**	**65.93**	**321**	P	**P**	**09 59 43.3**	**-1.9**
	0.4nm,0.4s,baz=31,slow=7.2,SNR=5.1						
AKASG	**Malin Array Be**	**71.96**	**358**	P	**P**	**10 00 20.6**	**-1.8**
	0.2nm,0.3s,baz=358,slow=6.2,SNR=4.1						

*IDC **23** 09:51:01.8±3.0, 8°.15S×154°.90E, h0km, mb3.4/4, mb1 3.7/6, mb1mx3.6/40, mbtmp3.6/6, ML2.3/1, MS2.8/3, Ms1 2.8/3, ms1mx2.6/15, Error ellipse: s-maj=69.9km s-min=28.6km az=112.0*
ISC 23 09:51:07.6±1.8, 8°.1S±0°.1×154°.8E±0°.2, h35km, n6, σ1§14/8,
mb3.4/4, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**4.63**	**323**	Pn	**Pn**	**09 52 15.0**	**-0.1**
	7.8nm,0.3s,baz=125,slow=19,SNR=4.8						
KRVT				Sn	**Sn**	**09 53 07.1**	**-0.6**
	13nm,0.3s,baz=350,slow=22,SNR=13						
KRVT				LR	LR	09 53 50.1	
	comp=Z,48nm,20.1s,baz=282,slow=35						
PMG	**Port Moresby**	**7.67**	**259**	Pn	**Pn**	**09 52 56.4**	**-0.5**
	2.7nm,0.3s,baz=65,slow=8.4,SNR=6.7						
PMG				Sn	**Sn**	**09 54 23.8**	**+1.1**
	0.7nm,0.3s,baz=128,slow=19,SNR=2.1						
PMG				LR	LR	09 55 15.8	
	comp=Z,82nm,19.1s,baz=334,slow=33						
WRA	**Warramunga Arr**	**23.07**	**237**	P	**P**	**09 56 09.3**	**-1.0**
	1.6nm,0.9s,baz=61,slow=10,SNR=6.2						
WRA				LR	LR	10 04 34.4	
	comp=Z,43nm,20.5s,baz=70,slow=35						
ASAR	**Alice Springs**	**25.34**	**230**	P	**P**	**09 56 30.6**	**-0.9**
	0.3nm,0.7s,baz=60,slow=9.4,SNR=4.1						
SONM	**Songino Array**	**70.11**	**328**	P	**P**	**10 02 16.2**	**-0.4**
	0.2nm,0.6s,baz=120,slow=6.5,SNR=2.2						
MKAR	**Makanchi Array**	**84.06**	**319**	P	**P**	**10 03 36.4**	**+1.6**
	0.1nm,0.4s,baz=107,slow=3.5,SNR=2.8						

*IDC **23** 10:07:48.4±0.6, 52°.15N×173°.41W, h56km±5km, mb3.6/13, mb1 3.9/16, mb1mx3.6/47, mbtmp3.9/16, Error ellipse: s-maj=23.4km s-min=12.1km az=161.0*
*AEIC **23** 10:07:49.4±4.0, 52°.03N±0°.09×173°.34W±0°.07, h47km±5km, ML3.7/22, mb3.9/31(NEIC), Error ellipse: s-maj=13.1km s-min=6.1km az=186.0*
*NEIC **23** 10:07:49.1±2.6, 52°.1N±0°.1×173°.35W±0°.07, h60km±6km, Error ellipse: s-maj=17.9km s-min=6.2km az=171.0*
ISC 23 10:07:48.5±0.5, 52°.01N±0°.10×173°.28W±0°.04, h56km, n89,
σ1§11/94, mb4.0/14, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOFP	**Korovin Flat P**	**0.57**	**298**		**Pn**	**10 08 01.7**	**+0.7**
ATKA	**Atka Island**	**0.60**	**289**		**Pn**	**10 08 01.4**	**+0.2**
ATKA	**Atka Island**	**0.60**	**289**	Sn	**Sn**	**10 08 10.7**	**+0.2**
KOKL	**Mount Kliuchef**	**0.65**	**299**		**Pn**	**10 08 02.6**	**+0.7**
GSMY	**Great Sitkin M**	**1.72**	**272**		**Pn**	**10 08 16.9**	**+0.9**
GSTR	**Great Sitkin T**	**1.72**	**274**		**Pn**	**10 08 17.2**	**+1.1**
GSTR	**Great Sitkin T**	**1.72**	**274**	Sn	**Sn**	**10 08 38.4**	**+1.5**
GSTD	**Great Sitkin T**	**1.77**	**273**		**Pn**	**10 08 17.6**	**+0.8**
GSTD					**Sn**	**10 08 39.2**	**+1.0**
ADAG	**Mount Adagdak**	**2.06**	**270**		**Pn**	**10 08 22.2**	**+1.7**
ADK	**Adak**	**2.11**	**268**		**Pn**	**10 08 22.5**	**+1.2**
ADK	**Adak**	**2.11**	**268**	Sn	**Sn**	**10 08 47.5**	**+1.1**
KIWB	**Kanaga Island**	**2.40**	**268**		**Pn**	**10 08 26.6**	**+1.2**
KIWB				Sn	**Sn**	**10 08 55.7**	**+2.2**
KIKV	**Kanaga Island**	**2.41**	**268**		**Pn**	**10 08 26.8**	**+1.3**
KIMD	**Kanaga Island**	**2.46**	**266**		**Pn**	**10 08 27.8**	**+1.6**
NIKH	**Nikolski High**	**2.87**	**69**	Pn	**Pn**	**10 08 30.5**	**-1.2**
NIKH	**Nikolski High**	**2.87**	**69**		**Sn**	**10 09 07.5**	**+2.5**
TAFP	**Tanaga Falls P**	**2.91**	**270**		**Pn**	**10 08 33.2**	**+0.9**
TASE	**Tanaga Southea**	**2.95**	**268**		**Pn**	**10 08 34.0**	**+1.1**
OKSP	**Okmok Steeple**	**3.28**	**66**		**Pn**	**10 08 37.9**	**+0.5**
OKFG	**Magazine Ridge**	**3.55**	**65**		**Pn**	**10 08 43.2**	**+2.1**
MREP	**Makushin Rep't**	**4.35**	**63**		**Pn**	**10 08 54.4**	**+2.4**
MSW	**Makushin Switc**	**4.37**	**62**		**Pn**	**10 08 54.5**	**+2.3**
UNV	**Unalaska Valle**	**4.49**	**63**	Pn	**Pn**	**10 08 56.6**	**+2.7**
AKUT	**Akutan**	**5.00**	**62**	Pn	**Pn**	**10 09 02.5**	**+2.0**
GAMB	**Gambell**	**11.83**	**7**	Pn	**Pn**	**10 10 35.3**	**+1.2**
OHAK	**Old Harbor**	**12.69**	**58**	Pn	**Pn**	**10 10 44.8**	**-1.0**
KDAK	**Kodiak Island**	**13.21**	**56**	P	**Pn**	**10 10 54.2**	**+1.2**
	0.7nm,0.3s,baz=232,slow=6.4,SNR=4.8						
KDAK	**Kodiak Island**	**13.21**	**56**	Pn	**Pn**	**10 10 54.1**	**+1.1**
ANM	**Nome**	**13.24**	**15**		**Pn**	**10 10 54.1**	**+0.7**
TTA	**Tatalina**	**14.29**	**33**	Pn	**Pn**	**10 11 08.5**	**+0.8**
CNPM	**China Poot**	**14.46**	**50**	Pn	**Pn**	**10 11 10.9**	**+1.2**
SUA	**Susitna One**	**15.49**	**44**	P	**Pn**	**10 11 24.9**	**+1.7**
SUA				IAmb	IAmb	10 11 34.3	
	comp=Z,20nm,1.5s						
SEW	**Seward**	**15.51**	**49**	Pn	**Pn**	**10 11 22.6**	**-0.7**
PPLA	**Purkeypile**	**15.65**	**38**	Pn	**Pn**	**10 11 26.4**	**+1.2**
PPLA				IAmb	IAmb	10 11 34.2	
	comp=Z,7.4nm,1.1s						
GHO	**Glory Hole Cre**	**16.40**	**44**	Pn	**Pn**	**10 11 34.6**	**-0.1**
GHO				IAmb	IAmb	10 11 37.1	
	comp=Z,20nm,1.4s						
KTH	**Kantishna Hill**	**16.49**	**37**		**P**	**10 11 39.1**	**+1.4**
KTH				IAmb	IAmb	10 11 47.3	
	comp=Z,5.3nm,0.9s						
TRF	**Thorofare Moun**	**16.67**	**38**	Pn	**Pn**	**10 11 37.8**	**-0.4**
BPAW	**Bear Paw Mtn.**	**16.78**	**35**		**P**	**10 11 41.8**	**+0.9**
SCM	**Sheep Creek Mo**	**17.12**	**45**	Pn	**Pn**	**10 11 42.5**	**-1.1**
RND	**Reindeer**	**17.20**	**39**	Pn	**Pn**	**10 11 44.6**	**0.0**
MCK	**McKinley**	**17.34**	**38**	Pn	**Pn**	**10 11 46.0**	**-0.2**
MCK				IAmb	IAmb	10 11 46.5	
	comp=Z,7.9nm,1.1s						
MLY	**Manley**	**17.43**	**33**		**P**	**10 11 48.7**	**+0.7**
DHY	**Denali Highway**	**17.63**	**41**	Pn	**P**	**10 11 50.2**	**-0.2**
DHY				IAmb	IAmb	10 11 53.0	
	comp=Z,5.3nm,0.9s						
PETK	**Petropavlovsk-**	**17.63**	**285**	P	**Pn**	**10 11 49.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=114,slow=18,SNR=2.3						
WRH	**Wood River Hil**	**18.04**	**37**		**P**	**10 11 53.7**	**-0.9**
MDM	**Murphy Dome**	**18.25**	**35**		**Pn**	**10 11 57.4**	**0.0**
MDM				IAmb	IAmb	10 12 11.4	
	comp=Z,16nm,1.5s						
HDA	**Harding Lake**	**18.43**	**38**	P	**P**	**10 11 58.8**	**-0.2**
HDA				IAmb	IAmb	10 11 59.9	
	comp=Z,23nm,1.4s						
IL31		**18.64**	**37**	P	**P**	**10 11 59.6**	**-1.6**
IL31				IAmb	IAmb	10 12 01.8	
	comp=Z,3.6nm,0.7s						
ILAR	**Eielson Array**	**18.64**	**37**	P	**P**	**10 11 59.0**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=240,slow=10,SNR=37						
ILAR				PcP	**PcP**	**10 16 25.9**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=286,slow=3.4,SNR=4.9						
ILAR	**Eielson Array**	**18.64**	**37**	P	**P**	**10 11 59.4**	**-1.9**
RIDG	**Independent Ri**	**18.94**	**41**	P	**P**	**10 12 04.4**	**-0.2**
RIDG				IAmb	IAmb	10 12 10.8	
	comp=Z,11nm,1.2s						
SCRK	**Sand Creek**	**19.39**	**41**	P	**P**	**10 12 08.4**	**-1.2**
SCRK				IAmb	IAmb	10 12 10.2	
	comp=Z,5.9nm,0.6s						
BCAR	**Beaver Creek A**	**19.97**	**44**	P	**Pn**	**10 12 17.5**	**-0.4**
FYU	**Fort Yukon**	**20.17**	**33**	P	**P**	**10 12 18.1**	**+0.3**
FYU				IAmb	IAmb	10 12 35.2	
	comp=Z,6.3nm,0.9s						
EGAK	**Eagle**	**20.84**	**40**	P	**P**	**10 12 25.0**	**-0.1**
EPYK	**Eagle Plains**	**23.14**	**38**	P	**P**	**10 12 48.0**	**-1.5**
EPYK				IAmb	IAmb	10 13 07.1	
	comp=Z,4.9nm,1.1s						
INK	**Inuvik**	**24.98**	**34**	P	**P**	**10 13 05.3**	**-1.1**
	comp=Z,3.7nm,0.7s,baz=248,slow=7.1,SNR=28						
INK				pP	**pP**	**10 13 20.6**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=214,slow=13,SNR=4.5						
INK				PcP	**PcP**	**10 16 39.7**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=313,slow=3.4,SNR=5.9						
INK	**Inuvik**	**24.98**	**34**	P	**P**	**10 13 05.4**	**-1.0**
INK				IAmb	IAmb	10 13 05.8	
	comp=Z,3.8nm,0.7s						
C36M	**Paulatuk**	**28.57**	**34**	P	**P**	**10 13 37.7**	**-0.8**
YKA	**Yellowknife Ar**	**32.28**	**48**	P	**P**	**10 14 10.4**	**-1.0**
	comp=Z,0.7nm,0.7s,baz=270,slow=7.9,SNR=7.7						
YKA				PcP	**PcP**	**10 16 57.6**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=280,slow=2.8,SNR=4.1						
NEW	**Newport**	**35.42**	**73**	P	**P**	**10 14 39.4**	**+0.5**
	comp=Z,2.1nm,0.6s,baz=317,slow=7.5,SNR=5.2						
NEW				pP	**pP**	**10 14 53.8**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=291,slow=8.8,SNR=4.8						
H11N2	**WAKE ISLAND Hy**	**35.75**	**213**	T	T	10 52 42.3	
	baz=21,slow=76,SNR=109						
H11N3	**WAKE ISLAND Hy**	**35.76**	**213**	T	T	10 52 44.3	
	baz=21,slow=76,SNR=130						
H11N1	**WAKE ISLAND Hy**	**35.77**	**213**	T	T	10 52 42.5	
	baz=21,slow=76,SNR=128						
H11S1	**WAKE ISLAND Hy**	**36.96**	**213**	T	T	10 54 04.4	
	baz=20,slow=76,SNR=101		

HEL 23 10:34:14.0±0.6, 67.65N×34.08E, h0km, ML2.0, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	**Varrio**	**1.71**	**275**	PG	Pn	10 34 44.4	-0.6
	baz=87						
VRF				MSG		10 35 05.1	
	comp=Z,11nm,0.2s						
VRF				SN	Sn	10 35 06.8	-0.7
KU6	**Riekki**	**2.32**	**227**	PB	Pn	10 34 53.7	+0.3
KU6				MSG		10 35 22.7	
	comp=Z,5.8nm,0.2s						
KU6				SG	Sb	10 35 25.1	-0.8
SGF	**Sodankyl**	**2.91**	**269**	PG	Pb	10 35 05.4	-1.2
SGF				SG	Sb	10 35 42.1	-0.5
RNF	**Rovaniemi**	**3.32**	**255**	PN	Pn	10 35 06.7	-0.4
RNF				SN	Sn	10 35 47.3	+0.2
KEV	**Kevo**	**3.34**	**313**	PN	Pn	10 35 07.0	-0.3
KEV				SN	Sn	10 35 46.2	-1.4
KEV	**Kevo**	**3.34**	**313**	*e*P	Pn	10 35 07.1	-0.3
KEV				*e*S	Sn	10 35 46.2	-1.4
ARE0	**ARCESS Array S**	**3.67**	**305**	*e*P	Pn	10 35 11.3	-0.6
ARE0				*e*S	Sn	10 35 53.4	-2.4
TOF	**Tornio**	**4.16**	**252**	SN	Sn	10 36 07.2	-0.7
OUL	**Oulu**	**4.18**	**236**	SG	Sg	10 36 25.9	-2.1
KTK1	**Kautokeino**	**4.25**	**294**	*e*S	Sn	10 36 06.5	-3.6
KTK1				IAML		10 36 28.0	
	comp=Z,5.2nm,0.4s						
KALU	**Kalix**	**4.61**	**252**	PN	Pn	10 35 26.2	+1.4
KALU	**Kalix**	**4.61**	**252**	*e*S	Pn	10 35 26.2	+1.4
KIF	**Kilpisjarvi**	**5.11**	**292**	*e*P	Pn	10 35 28.3	-3.3
KIF				*e*S	Sn	10 36 25.2	-5.9

HEL 23 10:35:06.6±0.1, 65.56N×21.97E, h0km, ML1.0, ML1.1(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJUU	**Sjulsmark**	**0.16**	**252**	*i* P	Pg	10 35 09.0	-0.6
SJUU				*i* S	Sg	10 35 11.6	-0.2
KALU	**Kalix**	**0.65**	**61**	*e*P	Pg	10 35 17.9	-1.1
	baz=233						
HARU	**Harads**	**0.73**	**326**	*i* P	Pg	10 35 19.8	-0.8
LILU	**Lilltraesk**	**0.93**	**254**	*e*P	Pg	10 35 23.3	-1.1
BURU	**Burvik**	**1.01**	**195**	*e*S	Sg	10 35 37.9	-1.1
ODEU	**Stanfors**	**1.27**	**205**	*e*P	Pg	10 35 29.2	-1.7
OBF0	**Syolatti, Pyha**	**1.43**	**137**	*e*P	Pn	10 35 31.7	-2.1
OBF0				*e*SN	Sn	10 35 54.1	+0.8
SVAU	**Svanoeiden**	**1.48**	**225**	*e*P	Pn	10 35 32.9	-1.5
PAJU	**Pajala**	**1.54**	**17**	*e*P	Pn	10 35 34.2	-1.2
DUNU	**Dundret**	**1.67**	**341**	*e*P	Pn	10 35 36.8	-0.3
OUF	**Merijarvi**	**1.68**	**134**	*e*PG	Pn	10 35 36.4	-0.7
	baz=324						
OUF				MSG		10 35 56.6	
	comp=Z,0.8nm,0.2s						
OUF				*e*SN	Sb	10 35 59.8	0.0
UMAU	**Umeaa**	**1.77**	**199**	*e*PG	Pn	10 35 39.0	+0.5
	baz=18						
JOF	**Joensuu**	**4.86**	**119**	*e*P	Pn	10 36 23.0	+2.2

*TEH **23** 10:58:04.9, 34.44N×45.52E, h12km, ML2.6*
*ISN **23** 10:58:04.1±0.6, 34.41N×45.52E, h6km±3km, ML2.6*

ISC 23 10:58:05.6±1.8, 34.44N±0.04×45.53E±0.06, h3km±17km, n9, σ0s82/14, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDHR	**Dehrash**	**0.75**	**70**	*e*Pg	**Pg**	**10 58 19.9**	**-0.2**
IDHR				*e*Sg	**Sg**	**10 58 30.9**	**+1.1**
IDHR				*e*		10 58 35.4	
IGHG	**Ghaleghazi**	**0.86**	**97**	*e*Pg	**Pg**	**10 58 21.4**	**-0.8**
IGHG				*e*		10 58 37.6	
IBDR	**Badra**	**1.37**	**166**	*e*Pn	**Pn**	**10 58 31.0**	**-0.6**
IBDR				AML	AML	10 58 35.4	
	comp=Z,5.8nm,0.8s						
IBDR				*e*Sn	**Sg**	**10 58 51.0**	**+1.5**
IKRK	**Kirkuk**	**1.37**	**315**	*e*Pg	**Pn**	**10 58 31.0**	**-0.7**
IKRK				AML	AML	10 58 33.8	
	comp=Z,73nm,0.3s						
IKRK				*e*Sg	**Sb**	**10 58 50.0**	**+0.2**
BHD	**Baghdad**	**1.51**	**220**	*e*Pn	**Pn**	**10 58 33.0**	**-0.5**
BHD				AML	AML	10 58 36.3	
	comp=Z,5μm,0.4s						
BHD				*e*Sn	**Sb**	**10 58 54.0**	**+0.2**
IKOM	**Komasi**	**1.66**	**99**	*e*Pn	**Pb**	**10 58 36.4**	**-0.5**
IKOM				*e*		10 59 03.4	
IKFM	**Kafar-mosalman**	**2.13**	**115**	*e*Pn	**Pn**	**10 58 42.6**	**+0.6**
IKFM				*e*		10 59 21.3	
MSL	**Mosul**	**2.78**	**315**	*e*Pn	**Pn**	**10 58 51.0**	**-0.1**
MSL				*e*Sn	**Sn**	**10 59 26.0**	**+0.9**
BMDN	**Meydan**	**2.84**	**105**	*e*Pn	**Pn**	**10 58 51.4**	**-0.6**

*NNC **23** 11:07:33.4±1.9, 50.90N×73.71E, h0km, mb3.7, mpv3.4, Error ellipse: s-maj=28.4km s-min=9.9km az=24.0, Suspected Mining explosion.*
*IDC **23** 11:07:36.2±0.7, 50.76N×73.62E, h0km, mb3.4/2, mb1 3.3/8, mb1mx3.2/45, mbtmp3.1/8, ML2.4/6, Error ellipse: s-maj=11.6km s-min=7.8km az=25.0*

ISC 23 11:07:34.4±0.8, 50.77N±0.07×73.52E±0.06, h0km, n18, σ1s57/15, 5C-7D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BVAR	**Borovoye Array**	**2.98**	**321**	Pn	**Pn**	**11 08 26.2**	**+3.4**
	1.2nm,0.3s,baz=136,slow=16,SNR=26						
BVAR				Lg	Lg	11 09 07.7	
	4.0nm,0.3s,baz=134,slow=28,SNR=17						
BVA3	**Borovoye Array**	**2.98**	**321**	⇓Pg	**Pb**	**11 08 27.8**	**-0.5**
	5.6nm,0.5s						
BVA3				⇓Lg	Lg	11 09 08.4	
	51nm,0.8s						
KURBB	**Kurchatov Arra**	**3.19**	**91**	Pn	**Pn**	**11 08 26.9**	**+1.2**
	0.1nm,0.3s,baz=279,slow=13,SNR=32						
KURBB				Lg	Lg	11 09 13.5	
	0.8nm,0.3s,baz=278,slow=30,SNR=11						
KURBB	**Kurchatov Arra**	**3.19**	**91**	⇓Pg	**Pn**	**11 08 27.1**	**+1.3**
	14nm,0.5s						
KURBB				⇑Lg	Lg	11 09 16.2	
	217nm,0.8s						
KURK	**Kurchatov**	**3.24**	**89**	⇑Pg	**Pn**	**11 08 28.4**	**+2.0**
	8.5nm,0.8s						
KURK				⇓Lg	Lg	11 09 15.6	
	70nm,0.9s						
MAKZ	**Makanchi**	**6.85**	**122**	⇓Lg	Lg	11 11 09.6	
	24nm,0.9s						
MK31	**Makanchi Array**	**7.03**	**121**	⇓Pg	Pg	11 09 42.6	-6.3
	1.0nm,0.5s,baz=307,slow=14,SNR=5.0						
MK31				Lg	Lg	11 11 20.4	
	12nm,0.7s,baz=319,slow=25,SNR=6.0						
MKAR	**Makanchi Array**	**7.03**	**121**	Pn	**Pn**	**11 09 20.0**	**+1.6**
	0.1nm,0.3s,baz=313,slow=12,SNR=3.4						
MKAR				Sn	**Sn**	**11 10 38.2**	**-0.8**
	0.2nm,0.3s,baz=310,slow=22,SNR=5.0						
MKAR				Lg	Lg	11 11 14.4	
	0.7nm,0.3s,baz=312,slow=28,SNR=10						
ZALV	**Zalesovo Beam**	**7.62**	**61**	Pn	**Pn**	**11 09 26.7**	**+0.2**
	0.1nm,0.3s,baz=253,slow=13,SNR=5.3						
ZALV				Sn	**Sn**	**11 10 51.2**	**-2.2**
	0.2nm,0.3s,baz=252,slow=23,SNR=5.3						
ZALV				Lg	Lg	11 11 37.0	
	0.0nm,0.3s,baz=250,slow=29,SNR=3.0						
KK31	**Karatay Array**	**7.94**	**196**	⇑Lg	Lg	11 11 50.6	
	5.6nm,0.8s,baz=16,slow=27,SNR=2.6						
AAK	**Ala-Archa**	**8.16**	**175**	Pn	**Pn**	**11 09 34.5**	**+0.4**
	0.1nm,0.3s,baz=354,slow=19,SNR=2.2						
AAK				Sn	**Sn**	**11 11 07.0**	**-0.1**
	0.1nm,0.3s,baz=54,slow=8.7,SNR=4.2						
AAK				Lg	Lg	11 11 55.1	
	0.3nm,0.3s,baz=200,slow=19,SNR=5.6						
AAK	**Ala-Archa**	**8.16**	**175**	⇑Lg	Lg	11 12 00.2	
	13nm,0.9s						
AB31	**Akbulak array**	**8.87**	**265**	⇑Lg	Lg	11 12 23.7	
	2.8nm,0.8s,baz=73,slow=26,SNR=4.4						
AKTO	**Aktyubinsk**	**9.87**	**274**	Pn	**Pn**	**11 09 58.3**	**+0.9**
	0.2nm,0.3s,baz=74,slow=13,SNR=3.9						
AKTO				Sn	**Sn**	**11 11 47.5**	**-1.2**
	0.1nm,0.3s,baz=90,slow=20,SNR=1.9						
AKTO				Lg	Lg	11 12 51.1	
	0.1nm,0.3s,baz=356,slow=11,SNR=4.6						
AKTO	**Aktyubinsk**	**9.87**	**274**	⇓Lg	Lg	11 12 51.2	
	6.8nm,1.0s						
ARU	**Arti**	**10.53**	**308**	Lg	Lg	11 13 06.0	
	0.0nm,0.3s,baz=163,slow=19,SNR=2.4						
ILAR	**Eielson Array**	**60.62**	**19**	P	**P**	**11 17 46.5**	**+0.1**
	0.3nm,0.6s,baz=327,slow=4.6,SNR=5.6						
YKA	**Yellowknife Ar**	**66.90**	**4**	P	**P**	**11 18 27.8**	**0.0**
	0.3nm,0.8s,baz=353,slow=6.4,SNR=3.0						

*IDC **23** 11:18:43.9±0.9, 13.45N×146.23E, h0km, mb3.7/9, mb1 3.9/9, mb1mx3.7/58, mbtmp3.7/9, Error ellipse: s-maj=25.9km s-min=20.4km az=124.0*

ISC 23 11:18:50.0±0.9, 13.4N±0.2×146.1E±0.1, h43km, n10, σ0s92/11, mb3.7/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.24**	**278**	Pn	**Pn**	**11 19 10.6**	**-0.2**
	68nm,0.3s,baz=118,slow=4.4,SNR=24						
GUMO				Sn	**Sn**	**11 19 26.8**	**+0.4**
	118nm,0.3s,baz=52,slow=19,SNR=21						
GUMO				LR	LR	11 19 37.6	
	comp=Z,136nm,20.5s,baz=44,slow=40						
WRA	**Warramunga Arr**	**35.13**	**200**	P	**P**	**11 25 39.1**	**-0.5**
	0.7nm,0.7s,baz=22,slow=9.8,SNR=6.3						
ASAR	**Alice Springs**	**38.76**	**198**	P	**P**	**11 26 10.7**	**+0.3**
	0.3nm,0.5s,baz=19,slow=11,SNR=9.3						
SONM	**Songino Array**	**47.58**	**324**	P	**P**	**11 27 22.0**	**+0.5**
	0.2nm,0.5s,baz=136,slow=7.9,SNR=2.9						
MKAR	**Makanchi Array**	**52.46**	**316**	P	**P**	**11 29 09.3**	**+0.3**
	0.3nm,0.4s,baz=97,slow=6.0,SNR=3.8						
ILAR	**Eielson Array**	**68.19**	**25**	P	**P**	**11 29 44.5**	**-1.1**
	0.4nm,0.7s,baz=248,slow=5.7,SNR=6.2						
YKA	**Yellowknife Ar**	**82.44**	**28**	P	**P**	**11 31 07.8**	**+0.3**
	0.2nm,0.5s,baz=281,slow=5.4,SNR=4.1						
NVAR	**Mina Array Bea**	**86.06**	**52**	P	**P**	**11 31 27.9**	**+1.2**
	0.4nm,0.6s,baz=268,slow=4.1,SNR=4.0						
ELK	**Elko**	**87.76**	**49**	P	**P**	**11 31 36.1**	**+1.1**
	0.4nm,0.6s,baz=288,slow=3.2,SNR=4.3						
FINES	**FINESS Array B**	**91.82**	**335**	P	**P**	**11 31 51.8**	**-1.4**
	3.4nm,1.0s,baz=64,slow=4.4,SNR=3.7						

ROM 23 11:36:06.7±0.7, 41.39N±0.02×14.48E±0.06, h8km±3km, ML1.2/2, Error ellipse: s-maj=4.7km s-min=1.4km az=76.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SACR	**S. Croce Del S**	**0.17**	**88**	P	Pg	11 36 10.4	+0.1
SACR				S	Sg	11 36 14.0	+1.2
SACR				AML	AML		
	comp=E,180μm,0.9s						
SACR				AML	AML		
	comp=N,146μm,0.6s						
BSSO	**Busso**	**0.18**	**30**	P	Pg	11 36 10.9	+0.5
BSSO				S	Sg	11 36 14.4	+1.4
BSSO				AML	AML		
	comp=E,77μm,0.8s						
BSSO				AML	AML		
	comp=N,80μm,0.9s						
PSB1	**Pescosannita**	**0.30**	**123**	P	Pb	11 36 13.9	-0.5
TRIV	**Trivento**	**0.38**	**9**	P	Pb	11 36 15.0	-0.7

RHSSO 23 11:36:48.2±0.6, 43.63N×17.09E, h6km±5km, ML1.8/6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKA	**Makarska**	**0.34**	**189**	*e*Pg	Pg	11 36 54.9	0.0
MAKA				Sg	Sb	11 37 01.3	-1.1
KIJV	**Kijevo**	**0.62**	**307**	*e*Pg	Pg	11 37 00.1	-0.1
KIJV				Sg	Sb	11 37 10.7	+0.2
MGRS	**Mrkonjic Grad**	**0.79**	**359**	*e*Pg	Pg	11 37 02.2	-1.2
MGRS				*e*Sg	Sg	11 37 13.6	0.0
STON	**Ston**	**0.88**	**149**	*e*Pg	Pg	11 37 03.5	-1.5
STON				Sg	Sb	11 37 17.3	-0.4
STON	**Ston**	**0.88**	**149**	*e*Pg	Pg	11 37 03.4	-1.6
STON				*e*Sg	Sg	11 37 16.1	-0.3
MORI	**Morici**	**1.03**	**284**	*e*Pg	Pg	11 37 07.5	-0.5
MORI				Sg	Sn	11 37 24.3	+0.3
ZIRJ	**Zirje**	**1.05**	**272**	*e*Pg	Pg	11 37 07.7	-0.7
ZIRJ				Sg	Sn	11 37 24.6	+0.2
BLY	**Banja Luka**	**1.12**	**3**	*e*Pg	Pg	11 37 08.2	-1.5
BLY				*e*Sg	Sg	11 37 24.2	-0.1
DBRK	**Dubrovnik**	**1.23**	**141**	*e*Pg	Pg	11 37 10.4	-1.4
DBRK				Sg	Sb	11 37 28.1	+0.2
BRY	**Bratogost**	**1.28**	**124**	*e*Pg	Pn	11 37 11.0	-1.7
BRY				*e*Sg	Sg	11 37 29.4	0.0
TREB	**Trebinje**	**1.29**	**134**	*e*Pg	Pn	11 37 11.7	-1.1
TREB				*e*Sg	Sg	11 37 30.0	+0.2
HAPS	**Han Pijesak,Bl**	**1.42**	**71**	*e*Pg	Pn	11 37 13.9	-0.7
HAPS				*e*Sg	Sb	11 37 32.7	-0.8
DUGI	**Dugi Otok**	**1.52**	**285**	*i* Pn	Pb	11 37 16.9	+0.1
DUGI				Sn	Sg	11 37 39.4	+2.4
BBLS	**Lazići**	**1.69**	**81**	*e*Sn	Sn	11 37 40.4	+0.1

*IDC **23** 12:06:28.6±0.9, 53.90S×140.73E, h0km, mb4.1/6, mb1 4.3/6, mb1mx4.1/25, mbtmp4.2/6, MS4.3/9, Ms1 4.3/9, ms1mx3.9/22, Error ellipse: s-maj=56.1km s-min=17.7km az=84.0*
*GCMT **23** 12:06:32.0±0.3, 53.96S±0.01×140.56E±0.03, h12km, MW4.9/94, Moment Tensor Solution. s16,c17; s94,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.47±.10; $M_{\theta\theta}$-0.10±.09; $M_{\phi\phi}$-0.36±.11; $M_{r\theta}$-1.42±.29; $M_{\theta\phi}$-2.52±.06; $M_{\phi r}$0.38±.26; Best double couple: $M_0$2.94800×10^{16} NP1:ϕs1.00000°, δ61.00000°, λ12.00000°. NP2: ϕs266.00000°, δ80.00000°, λ150.00000°. Principal axes: T 2.9750, Plg28.0000°, Azm220.0000°; N -0.0540, Plg59.0000°, Azm69.0000°; P -2.9210, Plg13.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 23 12:06:30.4±0.9, 53.9S±0.1×141.1E±0.4, h10km, n48, σ1s37/33, mb4.1/6, MS4.3/12, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**22.01**	**1**	P	**P**	**12 11 25.6**	**+0.9**
	6.7nm,0.7s,baz=160,slow=14,SNR=16						
RPZ	**Rata Peaks**	**22.07**	**75**	LR	LR	12 18 24.6	
	comp=Z,1μm,19.1s,baz=217,slow=32						
VNDA	**Vanda**	**24.89**	**169**	P	**P**	**12 11 52.6**	**-0.1**
	1.4nm,0.6s,baz=336,slow=5.5,SNR=5.4						
VNDA				LR	LR	12 19 47.6	
	comp=Z,261nm,18.9s,baz=342,slow=32						
H01W1	**Cape Leeuwin H**	**26.77**	**304**	T	T	12 39 54.3	
	baz=143,slow=75,SNR=117						
H01W2	**Cape Leeuwin H**	**26.77**	**304**	T	T	12 39 54.6	
	baz=143,slow=75,SNR=125						
H01W3	**Cape Leeuwin H**	**26.78**	**304**	T	T	12 39 55.4	
	baz=143,slow=75,SNR=178						
NWAO	**Narrogin (SRO)**	**26.95**	**311**	LR	LR	12 20 16.3	
	comp=Z,855nm,20.2s,baz=148,slow=31						
URZ	**Urewera**	**29.10**	**72**	LR	LR	12 22 42.2	
	comp=Z,1μm,20.9s,baz=208,slow=33						
ASAR	**Alice Springs**	**30.67**	**347**	P	**P**	**12 12 44.1**	**-0.9**
	1.8nm,0.7s,baz=165,slow=9.6,SNR=24						
WRA	**Warramunga Arr**	**34.29**	**349**	P	**P**	**12 13 15.9**	**-0.7**
	4.7nm,0.9s,baz=167,slow=7.5,SNR=11						
QSPA	**South Pole Qui**	**36.21**	**180**	P	**P**	**12 13 32.7**	**-0.3**
	4.9nm,1.1s,baz=336,slow=5.4,SNR=9.0						
DZM	**Mont Dzumac**	**37.15**	**41**	*e*LR	LR	12 24 00.2	
	comp=Z,1μm,25.8s						
MAW	**Mawson**	**37.73**	**218**	LR	LR	12 27 55.5	
	comp=Z,672nm,19.5s,baz=68,slow=34						
TBI	**Tubuai**	**59.45**	**88**	*e*LR	LR	12 33 50.6	
	comp=Z,172nm,24.5s						
PPT2	**Papeete2**	**63.83**	**84**	*e*LQ	LQ	12 33 15.6	
	573nm,30.8s						
PPT2				*e*LR	LR	12 35 53.8	
	comp=Z,162nm,23.2s,baz=221						
PPT	**Papeete**	**63.84**	**84**	LR	LR	12 38 58.3	
	comp=Z,83nm,20.6s,baz=254,slow=30						
H08S2	**Diego Garcia H**	**71.28**	**283**	T	T	13 35 27.3	
	baz=144,slow=76,SNR=25						
H08S1	**Diego Garcia H**	**71.30**	**283**	T	T	13 35 27.0	
	baz=144,slow=76,SNR=7.9						
H08S3	**Diego Garcia H**	**71.30**	**283**	T	T	13 35 28.8	
	baz=144,slow=76,SNR=46						
RPN	**Rapa Nui**	**79.13**	**121**	LR	LR	12 45 30.4	
	comp=Z,148nm,18.9s,baz=221,slow=30						
CMAR	**Chiang Mai Arr**	**80.62**	**320**	P	**P**	**12 18 41.5**	**-1.6**
	0.8nm,0.4s,baz=171,slow=5.0,SNR=9.5						
CMAR				LR	LR	12 52 15.3	
	comp=Z,99nm,20.7s,baz=160,slow=34						
BOSA	**Boshof**	**80.94**	**233**	LR	LR	12 47 00.2	
	comp=Z,168nm,21.9s,baz=135,slow=30						
VYHS	**Vyhne**	**144.27**	**285**	*e*PKP	**PKiKP**	**12 26 09.5**	**+0.4**
JAVC	**Velka Javorina**	**145.12**	**285**	*e*PKP	**PKPbc**	**12 26 06.5**	**-0.1**
SOKA	**Soboth**	**145.51**	**280**	PKPdf	**PKPdf**	**12 26 08.3**	**+0.4**
	5.1nm,1.0s						
ARSA	**Arzberg**	**145.53**	**282**	*i* PKPdf	**PKPdf**	**12 26 07.5**	**-0.2**
	21nm,0.9s						
ULM	**Lac du Bonnet**	**145.62**	**72**	PKPbc	**PKPdf**	**12 26 07.7**	**-0.1**
	1.7nm,0.8s,baz=210,slow=6.7,SNR=3.5						
MORC	**Moravsky Berou**	**145.65**	**287**	*e*PKP	**PKPdf**	**12 26 07.7**	**-0.2**
CONA	**Conrad Observa**	**145.69**	**283**	*i* PKPab	**PKPdf**	**12 26 07.2**	**-1.0**
	11nm,1.4s						
OBKA	**Obir**	**145.70**	**280**	*e*PKPbc	**PKPdf**	**12 26 04.3**	**-3.9**
	7.6nm,1.3s						
FINES	**FINESS Array B**	**145.79**	**309**	PKPbc	**PKPdf**	**12 26 08.1**	**+0.4**
	0.8nm,0.8s,baz=75,slow=6.3,SNR=2.6						
KRUC	**Moravsky**	**145.95**	**285**	*e*PKP	**PKPdf**	**12 26 09.0**	**+0.6**
VRAC	**Vranov**	**145.96**	**285**	*e*PKP	**PKPdf**	**12 26 09.0**	**+0.6**
MYKA	**Terra Mystica**	**146.30**	**279**	*i* pPKPdf	**PKPdf**	**12 26 11.1**	**+1.9**
	7.1nm,1.2s						
MOA	**Molln**	**146.57**	**282**	*e*PKPdf	**PKPdf**	**12 26 07.1**	**-2.4**
	5.1nm,1.6s						
DPC	**Dobruska-Polom**	**146.62**	**287**	*e*PKP	**PKPdf**	**12 26 11.4**	**+1.8**
DPC				*ex*	x	12 26 17.8	
KBA	**Koelnbreinsper**	**146.71**	**280**	PKPdf	**PKPdf**	**12 26 09.2**	**-0.8**
	4.6nm,1.4s						
ABTA	**Abfaltersbach**	**147.02**	**279**	*i* PKPdf	**PKPdf**	**12 26 07.4**	**-3.0**
	9.0nm,0.9s						
GERES	**GERESS Array B**	**147.39**	**283**	PKPbc	**PKPdf**	**12 26 11.6**	**+0.6**
	1.3nm,0.9s,baz=321,slow=1.7,SNR=7.0						
KHC	**Kasperske Hory**	**147.60**	**283**	*e*PKP	**PKPdf**	**12 26 12.3**	**+1.1**
KHC				*ex*	x	12 26 20.6	
ARCES	**ARCESS Array B**	**147.60**	**324**	PKPbc	**PKPab**	**12 26 17.7**	**+2.1**
	2.6nm,0.7s,baz=107,slow=4.2,SNR=4.9						
SQTA	**Sankt Quirin**	**148.03**	**279**	*i* PKPab	**PKPbc**	**12 26 15.8**	**+0.5**
	12nm,1.3s						
MOTA	**Moosalm**	**148.15**	**279**	*i* pPKPab	**PKiKP**	**12 26 19.0**	**+1.6**
FETA	**Feichten**	**148.21**	**278**	*i* PKPab	**PKPbc**	**12 26 16.9**	**+1.1**
	6.3nm,0.9s						
RETA	**Reutte**	**148.43**	**279**	*i* pPKiKP	**PKPab**	**12 26 20.1**	**+0.5**
	6.4nm,1.0s						
DAVA	**Damuels**	**148.84**	**278**	*i* pPKPab	**PKPab**	**12 26 22.5**	**+1.1**
	7.8nm,0.8s						
SPITS	**Spitsbergen Ar**	**149.12**	**341**	PKPbc	**PKPbc**	**12 26 16.5**	**-0.6**
	2.9nm,0.7s,baz=23,slow=16,SNR=3.0						
ESDC	**Sonseca Array**	**152.48**	**253**	PKPbc	**PKPbc**	**12 26 25.6**	**-0.6**
	0.1nm,0.3s,baz=139,slow=1.6,SNR=2.8						
ESDC				PKPab	**PKPab**	**12 26 36.5**	**-0.1**
	1.4nm,0.8s,baz=341,slow=1.1,SNR=6.3						

*IDC **23** 12:08:55.8±1.8, 15.92S×174.86W, h0km, mb4.0/8, mb1 4.4/8, mb1mx4.1/24, mbtmp4.0/8, MS3.9/19, Ms1 3.9/19, ms1mx3.9/33, Error ellipse: s-maj=107.0km s-min=21.3km az=153.0*
*GCMT **23** 12:09:03.0±0.3, 15.17S±0.02×174.73W±0.02, h21km±1km, MW5.0/95, Moment Tensor Solution. s21,c27; s95,c122; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.20±.15; $M_{\theta\theta}$2.67±.15; $M_{\phi\phi}$-1.47±.10; $M_{r\theta}$0.90±.23; $M_{\theta\phi}$2.51±.12; $M_{\phi r}$0.42±.19; Best double couple: $M_0$3.34700×10^{16} NP1:ϕs19.00000°, δ82.00000°, λ172.00000°. NP2: ϕs110.00000°, δ83.00000°, λ8.00000°. Principal axes: T 4.0410, Plg11.0000°, Azm335.0000°; N -1.3870, Plg79.0000°, Azm154.0000°; P -2.6530, Plg0.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 23 12:08:58.6±1.1, 15.5S±0.3×175.2W±0.1, h10km, n39, σ0s81/11, mb4.0/8, MS4.0/18, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.62**	**65**	Pn	Pn	12 09 44.0	-11
	19nm,0.3s,baz=302,slow=0.6,SNR=34						
AFI				Sn	Sn	12 10 23.2	-15
	33nm,0.3s,baz=271,slow=20,SNR=6.1						
AFI				LR	LR	12 10 54.1	
	comp=Z,3μm,20.6s,baz=183,slow=33						
RAO	**Raoul Island**	**13.94**	**190**	LR	LR	12 16 16.5	
	comp=Z,382nm,20.8s,baz=348,slow=32						
RAR	**Rarotonga**	**15.67**	**114**	LR	LR	12 17 36.9	
	comp=Z,96nm,18.4s,baz=286,slow=34						
DZM	**Mont Dzumac**	**18.61**	**247**	*e*LR	LR	12 18 19.0	
	comp=Z,2μm,25.1s						
DZM	**Mont Dzumac**	**18.61**	**247**	LR	LR	12 19 24.4	
	comp=Z,819nm,19.9s,baz=144,slow=34						
PAE	**Paea**	**24.60**	**99**	*e*T	T	12 39 07.3	
	4.3nm,0.3s						
PPT	**Papeete**	**24.60**	**98**	LR	LR	12 21 11.2	
	comp=Z,100nm,20.2s,baz=270,slow=30						
PPT2	**Papeete2**	**24.60**	**98**	*e*S	**S**	**12 18 41.4**	**+0.8**
	65nm,23.8s						
PPT2				*e*LQ	LQ	12 19 05.6	
	2μm,25.5s						
PPT2				*e*LR	LR	12 20 07.8	
	comp=Z,481nm,26.0s						
PPT2	**Papeete2**	**24.60**	**98**	*e*T	T	12 39 07.8	
	5.1nm,0.3s	

0.7nm,1.1s,baz=245,slow=6.0,SNR=4.7
CMAR Chiang Mai Arr 91.04 289 P **P** **12 22 04.4 +0.6**
0.6nm,0.3s,baz=125,slow=7.8,SNR=4.3
BRTR Keskin Array B 145.14 319 PKPbc **PKPab** **12 28 36.5 0.0**
3.9nm,0.9s,baz=46,slow=2.2,SNR=12
GERES GERESS Array B 145.95 350 PKPbc **PKPab** **12 28 38.7 -0.4**
1.7nm,1.0s,baz=355,slow=2.4,SNR=6.3

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*IDC **23** 12:17:50.5±1.4, 18°14S×178°37W, h538km±18km, mb3.6/11, mb1 3.8/12, mb1mx3.5/25, mbtmp4.4/12, Error ellipse: s-maj=23.1km s-min=10.0km az=146.0*
*NEIC **23** 12:17:51±2.8, 18°2S±0°1×178°1W±0°1, h557km±7km, mb4.5/21, Error ellipse: s-maj=19.6km s-min=14.8km az=128.0*
ISC 23 12:17:53.3±0.6, 18°2S±0°1×178°28W±0°10, h579km, n40, σ1§12/41, mb4.4/20, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.52**	**277**	P	**P**		**P**	**12 19 14.1**	**+0.1**
AFI	**Afiamalu**	**7.56**	**57**	P	**P**		**P**	**12 19 44.7**	**-3.2**
	3.0nm,0.3s,baz=227,slow=19,SNR=5.3								
AFI				S			S	12 21 12.5	-9.2
	0.7nm,0.3s,baz=30,slow=20,SNR=2.0								
DZM	**Mont Dzumac**	**14.86**	**252**	P	**P**		**P**	**12 21 00.7**	**-0.2**
NOUC	**Port Laguerre**	**14.99**	**252**	P	**P**		**P**	**12 21 02.9**	**+0.9**
NOUC				IAmb	IAmb			12 21 03.8	
	comp=Z,14nm,0.9s								
OUZ	**Omahuta**	**18.44**	**201**	P	**P**		**P**	**12 21 35.5**	**+1.9**
URZ	**Urewera**	**20.40**	**190**	P	**P**		**P**	**12 21 49.4**	**-2.0**
	comp=Z,11nm,0.7s,baz=256,slow=4.5,SNR=9.9								
URZ	**Urewera**	**20.40**	**190**	P	**P**		**P**	**12 21 49.6**	**-1.8**
LTZ	**Lake Taylor**	**25.80**	**196**	P	**P**		**P**	**12 22 37.9**	**-1.5**
EIDS	**Eidsvold**	**29.29**	**250**	P	**P**		**P**	**12 23 10.0**	**-0.1**
EIDS				IAmb	IAmb			12 23 10.5	
	comp=Z,7.0nm,0.7s								
ARMA	**Armidale**	**29.91**	**240**	P	**P**		**P**	**12 23 15.1**	**-0.4**
ARMA				IAmb	IAmb			12 23 21.1	
	comp=Z,14nm,1.3s								
PMG	**Port Moresby**	**34.62**	**280**	P	**P**		**P**	**12 23 55.5**	**0.0**
COEN	**Coen**	**37.23**	**271**	P	**P**		**P**	**12 24 17.2**	**+0.2**
STKA	**Stephens Creek**	**38.60**	**241**	P	**P**		**P**	**12 24 28.7**	**+0.8**
	comp=Z,9.6nm,0.8s,baz=94,slow=10,SNR=17								
STKA	**Stephens Creek**	**38.60**	**241**	P	**P**		**P**	**12 24 28.6**	**+0.7**
JAY	**Jayapura**	**43.10**	**286**	P	**P**		**P**	**12 25 02.7**	**-1.1**
	comp=Z,26nm,0.8s,baz=110,slow=1.2,SNR=6.4								
BBOO	**Buckleboo**	**43.38**	**241**	P	**P**		**P**	**12 25 06.0**	**+0.4**
BBOO				IAmb	IAmb			12 25 06.7	
	comp=Z,13nm,0.9s								
WR0	**Warramunga Arr**	**44.51**	**260**	P	**P**		**P**	**12 25 13.7**	**-0.9**
WB0	**Warramunga Arr**	**44.67**	**260**	P	**P**		**P**	**12 25 15.0**	**-0.8**
WB0				IAmb	IAmb			12 25 15.7	
	comp=Z,9.6nm,0.6s								
WB2	**Warramunga Arr**	**44.69**	**260**	P	**P**		**P**	**12 25 15.2**	**-0.7**
WB2				IAmb	IAmb			12 25 16.0	
	comp=Z,13nm,0.7s								
WRAB	**Tennant Creek**	**44.69**	**260**	P	**P**		**P**	**12 25 15.1**	**-0.9**
WRAB				IAmb	IAmb			12 25 15.9	
	comp=Z,11nm,0.7s								
WRA	**Warramunga Arr**	**44.70**	**260**	P	**P**		**P**	**12 25 15.2**	**-0.8**
	comp=Z,6.6nm,0.5s,baz=96,slow=6.9,SNR=62								
WRA	**Warramunga Arr**	**44.70**	**260**	P	**P**		**P**	**12 25 15.1**	**-1.0**
ASAR	**Alice Springs**	**44.83**	**254**	P	**P**		**P**	**12 25 17.1**	**0.0**
	comp=Z,61nm,0.6s,baz=88,slow=8.7,SNR=1253								
ASAR				S			**S**	**12 31 11.9**	**-1.4**
	comp=Z,2.4nm,0.8s,baz=93,slow=16,SNR=17								
ASAR	**Alice Springs**	**44.83**	**254**	P	**P**		**P**	**12 25 16.6**	**-0.4**
MTN	**Manton Dam**	**48.91**	**269**	P	**P**		**P**	**12 25 47.4**	**-0.3**
MTN				IAmb	IAmb			12 25 53.2	
	comp=Z,33nm,1.5s								
PSA00	**Pilbara Seismi**	**57.96**	**256**	P	**P**		**P**	**12 26 51.3**	**-0.3**
QSPA	**South Pole Qui**	**71.87**	**180**	P	**P**		**P**	**12 28 19.3**	**+1.1**
PETK	**Petropavlovsk-**	**73.98**	**345**	P	**P**		**P**	**12 28 30.2**	**0.0**
	comp=Z,2.0nm,0.7s,baz=182,slow=10,SNR=3.7								
NVAR	**Mina Array Bea**	**79.54**	**44**	P	**P**		**P**	**12 29 02.7**	**+1.6**
	comp=Z,1.5nm,0.6s,baz=225,slow=8.4,SNR=14								
SUA	**Susitna One**	**82.38**	**13**	P	**P**		**P**	**12 29 15.1**	**+0.1**
SUA				IAmb	IAmb			12 29 24.3	
	comp=Z,17nm,1.3s								
U15A	**North Rim**	**82.61**	**48**	P	**P**		**P**	**12 29 17.3**	**+0.2**
TTA	**Tatalina**	**82.72**	**10**	P	**P**		**P**	**12 29 17.4**	**+0.6**
TTA				IAmb	IAmb			12 29 18.1	
	comp=Z,9.5nm,1.2s								
TXAR	**Lajitas Array**	**86.04**	**58**	P	**P**		**P**	**12 29 36.3**	**+2.5**
	comp=Z,1.8nm,0.7s,baz=217,slow=5.7,SNR=15								
ILAR	**Eielson Array**	**86.13**	**13**	P	**P**		**P**	**12 29 32.6**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=220,slow=5.0,SNR=17								
PDAR	**Pinedale Array**	**87.47**	**43**	P	**P**		**P**	**12 29 41.2**	**+0.9**
	comp=Z,1.1nm,0.6s,baz=214,slow=3.7,SNR=14								
PDAR	**Pinedale Array**	**87.47**	**43**	P	**P**		**P**	**12 29 39.7**	**-0.6**
CMAR	**Chiang Mai Arr**	**89.09**	**290**	P	**P**		**P**	**12 29 49.8**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=116,slow=3.0,SNR=6.9								
YKA	**Yellowknife Ar**	**94.53**	**25**	P	**P**		**P**	**12 30 12.1**	**0.0**
	comp=Z,0.3nm,0.6s,baz=241,slow=4.6,SNR=6.8								
BRTR	**Keskin Array B**	**145.06**	**315**	PKP	**PKPdf**			**12 36 25.9**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=70,slow=3.1,SNR=3.4								
GERES	**GERESS Array B**	**147.91**	**345**	PKPbc	**PKPbc**			**12 36 34.1**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=8.9,slow=7.0,SNR=3.8								

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*LVSN **23** 12:34:58.2±6.2, 59°57N×26°15E, h0km±111km*
EST 23 12:34:42.4±0.1, 59°24N×27°75E, h0km, ML1.3(HEL), **Explosion, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARBE	**Arbavere**	**0.93**	**283**	*e*P			Pg	12 34 59.0	-1.1
ARBE				*e*S			Sg	12 35 11.1	-1.0
VSU	**Vasula**	**0.94**	**214**	*e*S			Sn	12 35 35.7	+19
VSU	**Vasula**	**0.94**	**214**	*e*P			Pg	12 34 59.6	-0.8
VJF	**Virojoki**	**1.31**	**356**	*e*P			Pg	12 35 05.5	-1.9
VJF				MSG				12 35 22.5	
	comp=Z,2.6nm,0.2s								
VJF				*e*SB			Sg	12 35 23.5	-0.8
PVF	**Pernaja**	**1.62**	**325**	*e*PG			Pn	12 35 11.7	-0.5
PVF				MSG				12 35 31.1	
	comp=Z,2.4nm,0.2s								
PVF				*e*SG			Sn	12 35 32.2	-1.5
NUR	**Nurmijrvi**	**2.02**	**311**	*e*PG			Pn	12 35 18.6	+1.0
NUR				*e*SG			Sn	12 35 44.1	+0.7
MTSE	**Matsula**	**2.10**	**257**	*e*P			Pb	12 35 20.5	-0.9
MTSE				*e*S			Sn	12 35 46.7	+1.1
MTSE	**Matsula**	**2.10**	**257**	*e*PG			Pn	12 35 19.9	+1.1
MTSE				*e*SG			Sb	12 35 46.9	-1.1
FIA0	**FINESS Array S**	**2.36**	**340**	*e*P			Pn	12 35 22.2	-0.2
FIA0				*e*PB			Pb	12 35 23.5	-2.2
FIA0				*e*S			Sn	12 35 51.9	-0.2
FIA0				*e*SB			Sb	12 35 54.1	-1.3
FIA0				MSG				12 35 56.0	
	comp=Z,0.7nm,0.1s								
FIA1	**FINESS Array S**	**2.36**	**340**	*e*PB			Pn	12 35 23.5	+1.2
FIA1				*e*S			Sn	12 35 52.1	+0.1
FIA1				*e*SG			Sb	12 35 54.7	-0.8
FIA1				MSG				12 35 56.7	
	comp=Z,0.9nm,0.1s								
KAF	**Kangasniemi**	**2.97**	**347**	*e*PB			Pb	12 35 33.8	-2.3
KAF				*e*SG			Sb	12 36 13.3	+0.4
KAF				MSG				12 36 15.1	
	comp=Z,0.5nm,0.1s								
KEF	**Keuruu**	**3.26**	**336**	*e*PG			Pb	12 35 40.0	-1.1
RAF	**Rauma**	**3.49**	**303**	*e*S			Sn	12 36 19.7	0.0
RAF	**Rauma**	**3.49**	**303**	*e*P			Pn	12 35 39.0	+1.2
JOF	**Joensuu**	**4.08**	**24**	*e*P			Pn	12 35 45.4	-0.5

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*IDC **23** 12:39:39.8±8.0, 37°60N×72°06E, h216km±49km, mb3.3/3, mb1 3.1/8, mb1mx2.8/62, mbtmp3.6/8, MS3.1/2, Ms1 3.1/2, ms1mx2.5/31, Error ellipse: s-maj=77.9km s-min=44.8km az=178.0*
ISC 23 12:39:37.8±1.9, 37°5N±0°2×71°9E±0°1, h200km, n20, σ0§99/21, mb3.8/3, 2C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.83**	**16**	P			**Pn**	**12 40 50.9**	**+0.6**
	SNR=108								
UCH	**Uchtor**	**5.13**	**22**	P			**Pn**	**12 40 54.8**	**+0.7**
	SNR=45								
KZA	**Kyzart**	**5.24**	**28**	P			**Pn**	**12 40 55.7**	**+0.1**
	SNR=7.6								
EKS2	**Erkin-Say**	**5.36**	**15**	P			**Pn**	**12 40 58.4**	**+1.6**
	SNR=21								
AAK	**Ala-Archa**	**5.50**	**20**	P			**Pn**	**12 40 59.6**	**+1.0**
	5.5nm,0.3s,baz=164,slow=6.0,SNR=75								
AAK				S			**Sn**	**12 42 01.7**	**-1.0**
	0.8nm,0.3s,baz=202,slow=12,SNR=4.0								
AAK	**Ala-Archa**	**5.50**	**20**	P			**Pn**	**12 40 59.7**	**+1.0**
	SNR=19								
AAK	**Ala-Archa**	**5.50**	**20**	⇑Pn			**Pn**	**12 40 59.1**	**+0.5**
	6.1nm,0.4s								
AAK				⇑Sn			**Sn**	**12 42 03.0**	**+0.4**
	4.2nm,0.5s								
KBK	**Karagaybulak**	**5.65**	**23**	P			**Pn**	**12 41 01.9**	**+1.3**
	SNR=10								
KK31	**Karatay Array**	**5.71**	**349**	Pn			**Pn**	**12 41 01.0**	**-0.3**
	0.4nm,0.2s,baz=172,slow=13,SNR=9.6								
KK31				⇓Sn			**Sn**	**12 42 05.3**	**-2.1**
	5.5nm,0.5s,baz=178,slow=22,SNR=4.0								
ULHL	**Ulahol**	**5.79**	**33**	P			**Pn**	**12 41 02.1**	**-0.3**
	SNR=9.7								
CHMS	**Chumysh**	**5.91**	**20**	P			**Pn**	**12 41 04.8**	**+1.0**
	SNR=5.7								
MKAR	**Makanchi Array**	**12.05**	**36**	P			**Pn**	**12 42 22.7**	**-0.4**
	0.0nm,0.3s,baz=218,slow=16,SNR=2.2								
KURBB	**Kurchatov Arra**	**13.95**	**18**	P			**Pn**	**12 42 47.0**	**+0.2**
	0.0nm,0.3s,baz=207,slow=10,SNR=2.7								
BVAR	**Borovoye Array**	**15.57**	**356**	P			**P**	**12 43 08.3**	**+1.5**
	0.1nm,0.3s,baz=163,slow=10,SNR=2.9								
AKTO	**Aktyubinsk**	**16.34**	**327**	LR			LR	12 50 17.5	
	comp=Z,63nm,19.3s,baz=355,slow=39								
ZALV	**Zalesovo Beam**	**18.70**	**24**	P			**P**	**12 43 41.3**	**+0.4**
	0.7nm,0.3s,baz=219,slow=12,SNR=7.3								
TLY	**Talaya**	**26.41**	**47**	LR			LR	12 54 35.7	
	comp=Z,34nm,19.8s,baz=102,slow=34								
ARCES	**ARCESS Array B**	**40.53**	**337**	P			**P**	**12 46 57.0**	**+0.1**
	2.5nm,0.9s,baz=104,slow=6.9,SNR=3.6								
HFS	**Hagfors**	**42.76**	**321**	P			**P**	**12 47 14.9**	**-0.2**
	2.3nm,1.0s,baz=106,slow=9.1,SNR=1.5								
YKA	**Yellowknife Ar**	**80.22**	**3**	P			**P**	**12 51 24.6**	**-0.9**
	0.3nm,0.6s,baz=348,slow=5.7,SNR=4.2								

IDC 23 12:40:28.5±1.9, 15°34S×174°20W, h0km, mb3.9/3, mb1 3.9/4, mb1mx3.6/33, mbtmp3.8/4, ML2.9/1, Error ellipse: s-maj=193.2km s-min=23.2km az=152.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.75**	**59**	Pn			Pn	12 41 14.3	+0.5
	1.8nm,0.3s,baz=356,slow=6.0,SNR=4.4								
AFI				Sn			Sn	12 41 47.6	-0.3
	1.6nm,0.3s,baz=66,slow=20,SNR=1.5								
STKA	**Stephens Creek**	**43.40**	**240**	P			P	12 48 33.2	+0.2
	0.8nm,0.4s,baz=86,slow=12,SNR=6.4								
WRA	**Warramunga Arr**	**49.10**	**257**	P			P	12 49 17.3	-0.9
	0.3nm,0.7s,baz=95,slow=7.7,SNR=2.0								
ASAR	**Alice Springs**	**49.39**	**252**	P			P	12 49 20.4	0.0
	2.2nm,0.6s,baz=89,slow=7.8,SNR=43								

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*IDC **23** 12:41:27.6±4.1, 12°23N×141°22E, h80km±40km, mb3.2/7, mb1 3.5/8, mb1mx3.2/49, mbtmp3.6/8, ML3.9/1, Error ellipse: s-maj=33.9km s-min=21.6km az=96.0*
ISC 23 12:41:22.3±0.9, 12°3N±0°2×141°4E±0°1, h34km, n8, σ1§61/9, mb3.5/7, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.67**	**69**	P			**Pb**	**12 42 23.9**	**-2.6**
	9.8nm,0.3s,baz=234,slow=14,SNR=3.3								
GUMO				S			**Sb**	**12 43 13.5**	**+2.8**
	baz=342,slow=20,SNR=1.8								
WRA	**Warramunga Arr**	**32.74**	**192**	P			**P**	**12 47 52.7**	**+0.6**
	0.4nm,0.8s,baz=13,slow=4.7,SNR=3.2								
ASAR	**Alice Springs**	**36.45**	**192**	P			**P**	**12 48 24.1**	**-0.1**
	0.2nm,0.6s,baz=22,slow=12,SNR=4.9								
MKAR	**Makanchi Array**	**60.09**	**317**	P			**P**	**12 51 26.5**	**+0.3**
	0.2nm,0.5s,baz=111,slow=8.0,SNR=2.9								
KURBB	**Kurchatov Arra**	**63.44**	**321**	P			**P**	**12 51 48.1**	**-0.5**
	1.8nm,0.7s,baz=106,slow=6.7,SNR=9.6								
BVAR	**Borovoye Array**	**68.84**	**322**	P			**P**	**12 52 23.2**	**-0.2**
	1.0nm,0.6s,baz=118,slow=8.6,SNR=6.7								
YKA	**Yellowknife Ar**	**85.59**	**27**	P			**P**	**12 53 57.5**	**+0.4**
	0.1nm,0.4s,baz=290,slow=4.7,SNR=3.3								
NVAR	**Mina Array Bea**	**90.41**	**51**	P			**P**	**12 54 21.3**	**+0.3**
	0.1nm,0.3s,baz=297,slow=6.0,SNR=2.1								

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*ASIES **23** 12:41:54.4, 23°68N×121°33E, h25km, MW3.5*
*BJI **23** 12:41:54.6±0.0, 23°67N×121°41E, h8km, mb3.8/11, ML3.7/5, Ms3.7/4, Ms7 3.7/2*
*TAP **23** 12:41:54.4, 23°66N×121°41E, h17km, ML4.2, B*
*IDC **23** 12:42:00.8±3.8, 23°67N×121°80E, h79km±39km, mb3.3/9, mb1 3.4/11, mb1mx3.2/54, mbtmp3.6/11, Error ellipse: s-maj=27.3km s-min=17.0km az=65.0*
ISC 23 12:41:53.9±0.8, 23°59N±0°01×121°51E±0°02, h15km±5km, n162, σ1§36/252, mb3.6/10, 17C-27D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.11**	**314**	⇓*i*P			**Pg**	**12 41 57.5**	**+0.2**
	baz=52								
EGFH				S			**Sg**	**12 41 59.4**	**0.0**
	baz=52								
HGSD	**Ruisui**	**0.13**	**218**	⇑P			**Pb**	**12 41 59.5**	**+1.3**
	baz=176								
HGSD				S			**Sb**	**12 42 02.8**	**+1.9**
	baz=176								
EHY	**Hungye**	**0.19**	**243**	⇑*i*P			**Pb**	**12 41 58.8**	**-0.5**
	baz=205								
EHY				S			**Sg**	**12 42 01.5**	**0.0**
	baz=205								
ESL	**Shilin**	**0.23**	**342**	⇓*i*P			**Pg**	**12 41 58.8**	**-0.3**
	baz=12								
ESL				S			**Sg**	**12 42 01.1**	**-1.5**
	baz=12								
YULB	**Yu-li**	**0.28**	**224**	⇓P			**Pn**	**12 42 00.5**	**-3.0**
	baz=196								
YULB				S			**Sb**	**12 42 04.7**	**-0.5**
	baz=196								
TWF1	**Yuli**	**0.31**	**219**	⇓*i*P			**Pn**	**12 42 01.1**	**-2.8**
	baz=201								
TWF1				*i* S			**Sb**	**12 42 05.9**	**-0.2**
	baz=201								
ENLB	**Shoufeng**	**0.32**	**15**	⇑*i*P			**Pg**	**12 42 00.7**	**+0.1**
	baz=32								
ENLB				*e*S			**Sg**	**12 42 06.5**	**+1.4**
	baz=32								
VWDT	**VWDT**	**0.38**	**295**	⇑P			**Pg**	**12 42 00.6**	**-0.9**
	baz=292								
VWDT				S			**Sg**	**12 42 04.5**	**-2.2**
	baz=292								
HWA	**Hwalien**	**0.39**	**13**	P			**Pg**	**12 42 02.7**	**+0.9**
	baz=24								
HWA				S			**Sg**	**12 42 08.4**	**+1.1**
	baz=24								
FULB	**Fuli**	**0.44**	**207**	P			**Pn**	**12 42 04.0**	**-1.8**
	baz=202								
FULB				*e*S			**Sn**	**12 42 12.0**	**-1.6**
	baz=202								
OWD	**Renai**	**0.47**	**320**	⇓*i*P			**Pg**	**12 42 02.2**	**-1.2**
	baz=325								
OWD				*e*S			**Sg**	**12 42 06.3**	**-3.5**
	baz=325								
TWD	**Chiawan**	**0.49**	**9**	*e*P			**Pg**	**12 42 03.5**	**-0.2**
	baz=18								
TWD				S			**Sg**	**12 42 09.5**	**-0.8**
	baz=18								
CHKT	**Chengkung**	**0.51**	**195**	*e*P			**Pn**	**12 42 05.8**	**-0.9**
	baz=171								
YUS	**Yu-Shan**	**0.52**	**259**	⇑*i*P			**Pg**	**12 42 04.1**	**-0.3**
	baz=247								
YUS				*e*S			**Sg**	**12 42 09.6**	**-2.0**
	baz=247								
SSLB	**Suanglung**	**0.55**	**291**	⇓P			**Pg**	**12 42 03.2**	**-1.5**
	baz=294								
SSLB				S			**Sg**	**12 42 08.6**	**-3.4**
	baz=294								
CHGB	**Renai**	**0.56**	**326**	⇓P			**Pg**	**12 42 04.0**	**-1.0**
	baz=339								
CHGB				S			**Sg**	**12 42 09.6**	**-2.9**
	baz=339								
NACB	**Ninganchiao**	**0.58**	**8**	⇑P			**Pg**	**12 42 04.6**	**-0.8**
	baz=19								
NACB				S			**Sg**	**12 42 11.4**	**-1.8**
	baz=19								
WHF	**Hehuan Shan**	**0.59**	**338**	⇓*i*P			**Pg**	**12 42 04.6**	**-1.2**
	baz=347								
WHF				*e*S			**Sg**	**12 42 10.7**	**-3.0**
	baz=347								
ELDTW	**Lidau**	**0.61**	**229**	⇓*i*P			**Pn**	**12 42 05.6**	**-2.6**
	baz=211								
ELDTW				S			**Sb**	**12 42 13.0**	**-1.8**
	baz=211								
ETLH	**Xiulin Townshi**	**0.61**	**358**	⇑*e*P			**Pg**	**12 42 05.1**	**-0.9**
	baz=7.0								
ETLH				*e*S			**Sg**	**12 42 12.8**	**-1.3**
	baz=7.0								
WHYT	**Xinyi Township**	**0.61**	**280**	P			**Pg**	**12 42 05.1**	**-0.9**
	baz=275								
WHYT				S			**Sg**	**12 42 11.7**	**-2.4**
	baz=275								
SMLT	**Sun Moon Lake**	**0.63**	**297**	⇓*i*P			**Pg**	**12 42 04.8**	**-1.5**
	baz=303								
SMLT				S			**Sg**	**12 42 11.5**	**-3.2**
	baz=303								
ALS	**Alishan**	**0.65**	**263**	⇑P			**Pg**	**12 42 06.5**	**-0.4**
	baz=262								
ALS				S			**Sg**	**12 42 13.7**	**-1.8**
	baz=262								
DPDB	**Guoxing**	**0.69**	**309**	⇓*i*P			**Pg**	**12 42 06.2**	**-1.3**
	baz=319								
DPDB				S			**Sg**	**12 42 13.2**	**-3.4**
	baz=319								
TWT	**Tachien**	**0.72**	**335**	⇓*i*P			**Pg**	**12 42 07.3**	**-0.9**
	baz=340								
TWT				S			**Sg**	**12 42 14.8**	**-3.0**
	baz=340								
TDCB	**Techi**	**0.73**	**334**	⇓*i*P			**Pg**	**12 42 07.3**	**-0.9**
	baz=340								
TDCB				*e*S			**Sg**	**12 42 15.0**	**-3.0**
	baz=340								
WJS	**Zhushan**	**0.75**	**288**	*e*P			**Pg**	**12 42 08.3**	**-0.3**
	baz=285								
WJS				S			**Sg**	**12 42 17.9**	**-0.6**
	baz=285								
CHN5	**Tsauling**	**0.76**	**270**	⇓*i*P			**Pg**	**12 42 08.5**	**-0.4**
	baz=258								
CHN5				S			**Sg**	**12 42 17.6**	**-1.4**
	baz=258								
WNT	**Mingjian**	**0.81**	**291**	⇓*i*P			**Pg**	**12 42 09.5**	**-0.2**
	baz=295								
WNT				S			**Sg**	**12 42 19.6**	**-0.8**
	baz=295								
STYT	**Tauyuan**	**0.81**	**238**	⇑*i*P			**Pn**	**12 42 09.9**	**-1.0**
	baz=229								
STYT				*e*S			**Sb**	**12 42 20.1**	**-0.6**
	baz=229								
NNSB	**Datong**	**0.84**	**352**	⇑P			**Pb**	**12 42 09.2**	**-1.1**
	baz=5.0								
NNSB				*e*S			**Sg**	**12 42 19.3**	**-2.1**
	baz=5.0								
NNSH	**Datong**	**0.84**	**352**	⇑P			**Pb**	**12 42 09.2**	**-1.1**
	baz=4.0								
NNSH				*e*S			**Sg**	**12 42 19.4**	**-2.0**
	baz=4.0								
NNS	**Nan Shan**	**0.85**	**352**	⇑*e*P			**Pb**	**12 42 09.5**	**-1.1**
	baz=5.0								
NNS				S			**Sb**	**12 42 19.6**	**-2.3**
	baz=5.0								
WHP	**Taichung City**	**0.85**	**323**	⇓P			**Pb**	**12 42 09.2**	**-1.4**
	baz=327								
ENA	**Nanau**	**0.86**	**14**	P			**Pb**	**12 42 09.2**	**-1.4**
	baz=14								
ENA				*e*S			**Sb**	**12 42 20.9**	**-1.0**
	baz=14								
NANB	**Nanao**	**0.86**	**15**	⇑P			**Pb**	**12 42 09.2**	**-1.4**
	baz=14								
NANB				*e*S			**Sb**	**12 42 20.8**	**-1.1**
	baz=14								
TPUB	**Ta-pu**	**0.86**	**250**	⇑P			**Pb**	**12 42 10.6**	**-0.9**
	baz=243								
TPUB				S			**Sg**	**12 42 20.9**	**-1.1**
	baz=243								
TWGBT	**Beinan**	**0.87**	**207**	*e*P			**Pn**	**12 42 09.3**	**-2.4**
	baz=184								
TWGBT				S			**Sn**	**12 42 22.8**	**-1.3**
	baz=184								
TWG	**Pinlang**	**0.87**	**208**	*e*P			**Pn**	**12 42 11.0**	**-0.6**
	baz=184								
TWG				*e*S			**Sn**	**12 42 22.6**	**-1.4**
	baz=184								
WGK	**Gukeng**	**0.88**	**276**	⇓P			**Pb**	**12 42 10.7**	**-0.2**
	baz=272								
WGK				S			**Sg**	**12 42 21.9**	**-0.5**
	baz=272								
CHN4	**Tsaushan**	**0.88**	**254**	*e*P			**Pn**	**12 42 11.1**	**-0.7**
	baz=247								
CHN4				S			**Sg**	**12 42 21.8**	**-0.7**
	baz=247								
TWH	**Lutao**	**0.88**	**182**	*e*P			**Pn**	**12 42 11.3**	**-0.5**
	baz=177								
WTP	**Ta-pu**	**0.89**	**247**	⇑P			**Pn**	**12 42 11.3**	**-0.7**
	baz=250								
WTP				S			**Sb**	**12 42 22.5**	**-0.5**
	baz=250								
WDLH	**Douliu**	**0.90**	**276**	⇓*e*P			**Pb**	**12 42 11.0**	**-0.2**
	baz=272								
WDLH				*e*S			**Sb**	**12 42 22.7**	**-0.3**

RLNB	**Erlin**	**1.10**	**286**	*eP*	**Pn**	12 42 14.1	-0.6
	baz=284								
RLNB					*eS*	**Sb**	12 42 27.2	-1.5
	baz=284								
EOS1	**EOS1**	**1.11**	**31**	*eP*	**Pg**	12 42 15.4	+0.1
	baz=57								
EOS1					*eS*	**Sb**	12 42 30.5	+1.5
	baz=57								
ECL	**Taimali**	**1.12**	**207**	*eP*	**Pn**	12 42 14.5	-0.5
	baz=187								
ECL					*eS*	**Sn**	12 42 29.4	-0.8
	baz=187								
WLGB	**Puzi**	**1.12**	**264**	*eP*	**Pn**	12 42 13.9	-1.2
	baz=260								
WLGB					S	**Sg**	12 42 30.2	+0.1
	baz=260								
PTSB	**Yuanli**	**1.12**	**319**	*eP*	**Pn**	12 42 14.9	-0.3
	baz=335								
PTSB					*eS*	**Sb**	12 42 29.6	0.0
	baz=335								
TWE	**Neicheng**	**1.13**	**7**	*eP*	**Pn**	12 42 14.2	-1.1
	baz=23								
TWE					*eS*	**Sb**	12 42 28.9	-0.9
	baz=23								
NSTT	**Nanjuang**	**1.13**	**336**	⇓ *iP*	**Pn**	12 42 14.8	-0.5
	baz=340								
NSTT					*eS*	**Sb**	12 42 28.2	-1.7
	baz=340								
LIOB	**Emei**	**1.14**	**337**	⇓ *iP*	**Pn**	12 42 15.2	-0.2
	baz=341								
LIOB					S	**Sb**	12 42 28.9	-1.2
	baz=341								
NMLH	**Miaoli**	**1.15**	**325**	⇓ *eP*	**Pn**	12 42 15.7	+0.2
	baz=328								
NMLH					*eS*	**Sb**	12 42 30.2	0.0
	baz=328								
WTCT	**Ta-ch'eng**	**1.16**	**284**	*eP*	**Pn**	12 42 15.0	-0.6
	baz=280								
SLBB	**Yuanshan**	**1.16**	**6**	*eP*	**Pn**	12 42 13.4	-2.3
	baz=12								
SLBB					*eS*	**Sb**	12 42 28.7	-1.9
	baz=12								
SSD	**Sandimen**	**1.17**	**224**	*eP*	**Pg**	12 42 15.9	-0.6
	baz=215								
SSD					*eS*	**Sn**	12 42 32.3	+0.8
	baz=215								
CHN3	**Shinhua**	**1.17**	**244**	*eP*	**Pg**	12 42 17.3	+0.7
	baz=246								
CHN3					*eS*	**Sn**	12 42 33.3	+1.8
	baz=246								
WSF	**Szhu**	**1.18**	**272**	*eP*	**Pn**	12 42 15.6	-0.3
	baz=269								
WSF					*eS*	**Sb**	12 42 30.0	-1.3
	baz=269								
ILA	**Ilan**	**1.19**	**10**	*eP*	**Pn**	12 42 16.3	+0.3
	baz=20								
CHN8	**Yiju**	**1.22**	**259**	*eP*	**Pg**	12 42 16.7	-0.8
	baz=252								
CHN8					S	**Sg**	12 42 32.9	-0.4
	baz=252								
TWM1	**Shoushan**	**1.26**	**233**	*eP*	**Pg**	12 42 19.9	+1.6
	baz=211								
MASBT	**Mashibuluo**	**1.27**	**220**	P	**Pg**	12 42 17.8	-0.6
	baz=209								
MASBT					*eS*	**Sg**	12 42 34.5	-0.4
	baz=209								
SGLT	**Jiouru**	**1.28**	**228**	*eP*	**Pg**	12 42 19.3	+0.8
	baz=207								
WLTB	**Daxi**	**1.28**	**349**	*eP*	**Pn**	12 42 17.7	+0.5
	baz=2.0								
WLTB					*eS*	**Sn**	12 42 33.1	-1.0
	baz=2.0								
SCLT	**Jiali**	**1.28**	**251**	*eP*	**Pg**	12 42 17.7	-0.9
	baz=244								
SCLT					*eS*	**Sg**	12 42 35.3	0.0
	baz=244								
SBCB	**Hsinchu**	**1.29**	**338**	P	**Pn**	12 42 18.0	+0.6
	baz=342								
SBCB					*eS*	**Sn**	12 42 33.7	-0.7
	baz=342								
NTC	**Toucheng**	**1.29**	**13**	*eP*	**Pn**	12 42 17.4	0.0
	baz=23								
HSN	**Hsinchu**	**1.30**	**338**	*eP*	**Pn**	12 42 18.6	+1.0
	baz=344								
HSN					S	**Sn**	12 42 34.8	+0.1
	baz=344								
TAI1	**Yung-k'ang**	**1.30**	**245**	*eP*	**Pg**	12 42 18.9	-0.1
	baz=236								
EAST	**Anshuo**	**1.35**	**207**	*eP*	**Pg**	12 42 19.6	-0.4
	baz=188								
TAW	**Tawu**	**1.35**	**205**	*eP*	**Pg**	12 42 19.3	-0.7
	baz=187								
NHDH	**Xindian Distri**	**1.36**	**1**	*eP*	**Pn**	12 42 18.5	0.0
	baz=18								
TATO	**Taipei**	**1.38**	**359**	*eP*	**Pn**	12 42 18.2	-0.4
	baz=19								
TATO					*eS*	**Sn**	12 42 36.4	-0.2
	baz=19								
NCUH	**Zhongli**	**1.40**	**348**	*eP*	**Pn**	12 42 19.9	+0.9
	baz=352								
NCUH					*eS*	**Sn**	12 42 38.0	+0.8
	baz=352								
NCU	**National Centr**	**1.40**	**348**	*eP*	**Pn**	12 42 20.0	+1.0
	baz=353								
NCU					S	**Sn**	12 42 38.3	+1.0
	baz=353								
TIPB	**Shuangxi**	**1.40**	**12**	*eP*	**Pn**	12 42 18.7	-0.3
	baz=17								
TIPB					*eS*	**Sn**	12 42 36.8	-0.6
	baz=17								
SSPT	**Xinbi**	**1.41**	**218**	*eP*	**Pg**	12 42 20.7	-0.3
	baz=200								
TAP	**Taipei**	**1.44**	**360**	*eP*	**Pn**	12 42 20.8	+1.3
	baz=23								
SCZT	**Fangliau**	**1.47**	**214**	*eP*	**Pg**	12 42 21.3	-0.8
	baz=198								
TWB1	**Santiao Chiao**	**1.47**	**17**	*eP*	**Pn**	12 42 20.4	+0.4
	baz=22								
TWB1					*eS*	**Sn**	12 42 38.9	-0.1
	baz=22								
NWF	**Wu-fen Shan**	**1.49**	**9**	*eP*	**Pn**	12 42 20.4	+0.1
	baz=26								
NWF					*eS*	**Sn**	12 42 40.0	+0.5
	baz=26								
WFSB	**Wu-fen Shan**	**1.49**	**9**	*eP*	**Pn**	12 42 20.2	0.0
	baz=26								
WFSB					*eS*	**Sn**	12 42 40.2	+0.8
	baz=26								
TWS1	**Kuangyinshan**	**1.50**	**357**	*eP*	**Pn**	12 42 20.9	+0.5
	baz=21								
TWS1					*eS*	**Sn**	12 42 41.3	+1.5
	baz=21								
YM01	**YM01**	**1.55**	**2**	*eP*	**Pn**	12 42 20.6	-0.5
	baz=31								
LAY	**Lan-yu**	**1.55**	**179**	*eP*	**Pg**	12 42 20.6	-3.1
	baz=166								
LAY					*eS*	**Sg**	12 42 41.1	-2.8
	baz=166								
YM10	**YM10**	**1.56**	**2**	*eP*	**Pn**	12 42 22.2	+1.0
	baz=21								
YM10					*eS*	**Sn**	12 42 42.2	+1.1
	baz=21								
JYNG	**Yonagunijimaku**	**1.56**	**57**	P	**Pb**	12 42 22.2	-0.4
JYNG					S	**Sg**	12 42 43.3	-1.1
YM11	**YM11**	**1.57**	**2**	*eP*	**Pn**	12 42 22.3	+1.0
	baz=31								
YM03	**YM03**	**1.58**	**1**	*eP*	**Pn**	12 42 21.9	+0.4
	baz=28								
ANP	**Anpu**	**1.59**	**0**	*eP*	**Pn**	12 42 21.8	+0.1
	baz=30								
YM08	**YM08**	**1.59**	**3**	*eP*	**Pn**	12 42 22.7	+1.1
	baz=30								
WLCH	**Liuqiu**	**1.62**	**220**	*eP*	Pg	12 42 26.8	+1.8
	baz=207								
YOJ	**Yonaguni jima**	**1.62**	**57**	P	**Pb**	12 42 23.0	-0.6
	baz=61								
YOJ					S	**Sg**	12 42 44.4	-1.8
	baz=61								
YOJ	**Yonaguni jima**	**1.62**	**57**	P	**Pb**	12 42 23.0	-0.6
WDGT	**Dungji**	**1.73**	**259**	*eP*	**Pn**	12 42 23.1	-0.5
	baz=250								
TWK1	**Hengchun**	**1.77**	**202**	*eP*	**Pg**	12 42 26.3	-1.6
	baz=187								
TWKBT	**Hengchun**	**1.77**	**202**	*eP*	**Pg**	12 42 27.1	-0.8
	baz=187								
PHUB	**P'eng-hu**	**1.78**	**268**	*eP*	**Pn**	12 42 23.8	-0.4
	baz=261								
PNG	**Penghu**	**1.79**	**270**	*eP*	**Pn**	12 42 24.1	-0.3
	baz=266								
PNG					*eS*	**Sn**	12 42 45.2	-1.8
	baz=266								
VCHM	**Qimei**	**1.95**	**259**	*eP*	**Pn**	12 42 25.4	-1.2
	baz=250								
PCYT	**Pengchaiyu**	**2.09**	**14**	*eP*	**Pn**	12 42 29.3	+0.9
	baz=26								
HATJ	**Hateruma jima**	**2.15**	**77**	P	**Pb**	12 42 30.4	-2.2
IRIF	**Iriomote-Funau**	**2.16**	**70**	P	**Pb**	12 42 30.6	-2.2
VWUC	**VWUC**	**2.34**	**307**	*eP*	**Pn**	12 42 30.6	-1.3
	baz=308								
JKRS	**Kuro-shima**	**2.37**	**74**	P	**Pb**	12 42 34.0	-2.4
PTTC	**Pingtan**	**2.47**	**320**	*eP*	**Pn**	12 42 32.7	-1.0
	baz=324								
PTTC					*eS*	**Sn**	12 43 00.1	-3.6
	baz=324								
JIJ	**Ishigaki jima**	**2.53**	**72**	P	**Pb**	12 42 35.3	-3.7
JIJ					*eS*	**Sb**	12 43 06.5	-3.4
PTMZ	**Houxiangcun**	**2.61**	**304**	*eP*	**Pn**	12 42 34.9	-0.8
	baz=305								
JISG	**Ishigakijimahi**	**2.74**	**68**	P	**Pn**	12 42 38.2	+0.8
JISG					*eS*	**Sn**	12 43 11.1	+0.8
MATB	**Ma-tsu**	**2.92**	**331**	*eP*	**Pn**	12 42 39.1	-0.8
	baz=335								
KNM	**Kinmen**	**2.93**	**287**	*eP*	**Pn**	12 42 41.1	+1.1
	baz=284								
KNMB	**Chin-men Tao**	**2.98**	**288**	*eP*	**Pn**	12 42 39.8	-1.0
	baz=285								
QZH	**Quanzhou**	**2.98**	**297**	⇑ *iPn*	**Pn**	12 42 40.3	-0.4
QZH					Pg	**Pb**	12 42 48.8	+2.0
QZH					Sn	**Sn**	12 43 14.8	-1.5
QZH					smax	smax		
	comp=N,210nm,0.5s								
QZH					smax	smax		
	comp=E,120nm,0.6s								
JTJ	**Tarama**	**3.10**	**70**	P	**Pn**	12 42 43.6	+1.3
JTJ					*eS*	**Sn**	12 43 19.8	+0.7
LYJJ	**Jianjiangzhen**	**3.34**	**332**	*eP*	**Pn**	12 42 46.2	+0.5
	baz=337								
MHZQ	**Yeshan**	**3.36**	**318**	*eP*	**Pn**	12 42 45.6	-0.3
	baz=321								
ZPLA	**Ao Xicun**	**3.46**	**276**	*eP*	**Pn**	12 42 46.6	-0.7
	baz=272								
AXDP	**Jialang**	**3.48**	**293**	⇓ *eP*	**Pn**	12 42 46.9	-0.7
	baz=291								
XPSS	**Dashiqiu**	**3.53**	**340**	*eP*	**Pn**	12 42 47.5	-0.8
	baz=350								
JIRB	**Irabujima**	**3.56**	**69**	P	**Pn**	12 42 49.7	+1.0
ZZJH	**Jiuhuzhen**	**3.65**	**285**	*eP*	**Pn**	12 42 49.4	-0.6
	baz=286								
ZZJH					*eS*	**Sn**	12 43 33.2	+0.4
	baz=286								
JMJ	**Miyako jima 2**	**3.66**	**70**	*eP*	**Pn**	12 42 51.6	+1.5
	baz=80								
JMJ2	**Miyako jima3**	**3.67**	**71**	P	**Pn**	12 42 51.5	+1.3
JOGS	**Gusukube**	**3.74**	**71**	P	**Pn**	12 42 52.7	+1.5
JOW	**Kunigami**	**6.92**	**61**	P	**Pn**	12 43 35.2	+0.3
	0.3nm,0.3s,baz=206,slow=21,SNR=5.6								
WHN	**Wuhan**	**9.41**	**319**	P	**Pn**	12 44 09.0	-0.1
WHN					S	**Sn**	12 45 52.1	-2.6
WHN					LR	LR		
	comp=N,470nm,10.6s								
KSRS	**Korea Array**	**14.87**	**20**	P	**Pn**	12 45 25.8	+2.1
	0.1nm,0.3s,baz=197,slow=13,SNR=4.0								
XAN	**Xi'an**	**15.15**	**316**	P	**P**	12 45 35.4	+2.8
XAN					pmax	pmax			
	comp=Z,5.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**21.67**	**261**	P	**P**	12 46 48.3	+4.1
	comp=Z,0.8nm,0.3s,baz=61,slow=8.4,SNR=7.4								
GTA	**Gaotai**	**24.21**	**316**	*eP*	**P**	12 47 11.8	+1.5
GTA					pP	sP	12 47 16.4	-0.3
GTA					sP	pP	12 47 19.1	+4.3
GTA					pmax	pmax			
	comp=Z,3.0nm,1.2s								
SONM	**Songino Array**	**27.03**	**337**	P	**P**	12 47 36.6	+1.0
	comp=Z,1.8nm,1.0s,baz=155,slow=10,SNR=6.2								
TLY	**Talaya**	**31.23**	**338**	P	**P**	12 48 13.5	+0.7
	comp=Z,2.2nm,0.6s,baz=184,slow=6.2,SNR=4.1								
WMQ	**Urumqi**	**34.28**	**314**	*eP*	**P**	12 48 42.6	+3.0
MKAR	**Makanchi Array**	**38.97**	**316**	P	**P**	12 49 19.7	+0.1
	comp=Z,0.7nm,0.7s,baz=104,slow=9.9,SNR=9.4								
ZALV	**Zalesovo Beam**	**40.90**	**327**	P	**P**	12 49 34.6	-0.8
	comp=Z,0.9nm,0.5s,baz=119,slow=9.4,SNR=5.3								
H11N1	**WAKE ISLAND Hy**	**42.22**	**86**	T	T	13 34 48.1			
	baz=283,slow=75,SNR=15								
H11N2	**WAKE ISLAND Hy**	**42.23**	**86**	T	T	13 34 48.8			
	baz=283,slow=75,SNR=16								
H11N3	**WAKE ISLAND Hy**	**42.24**	**86**	T	T	13 34 48.5			
	baz=283,slow=75,SNR=18								
H11S3	**WAKE ISLAND Hy**	**42.34**	**88**	T	T	13 34 58.1			
	baz=284,slow=75,SNR=40								
H11S1	**WAKE ISLAND Hy**	**42.35**	**88**	T	T	13 34 58.5			
	baz=284,slow=75,SNR=21								
H11S2	**WAKE ISLAND Hy**	**42.35**	**88**	T	T	13 35 01.6			
	baz=284,slow=75,SNR=16								
KURBB	**Kurchatov Arra**	**42.75**	**320**	P	**P**	12 49 51.3	+0.7
	comp=Z,0.6nm,0.8s,baz=107,slow=9.7,SNR=3.7								
WRA	**Warramunga Arr**	**45.04**	**163**	P	**P**	12 50 08.6	-0.7
	comp=Z,0.5nm,0.8s,baz=345,slow=8.8,SNR=4.4								
ASAR	**Alice Springs**	**48.49**	**165**	P	**P**	12 50 36.0	-0.3
	comp=Z,0.2nm,0.4s,baz=343,slow=6.8,SNR=5.6								
YKA	**Yellowknife Ar**	**83.39**	**23**	P	**P**	12 54 18.1	-2.3
	comp=Z,0.7nm,1.2s,baz=291,slow=4.7,SNR=3.1								

IDC 23 12:57:18.8±14.0, 0°.11N×121°.97E, h243km±163km, mb2.9/4, mb1 3.1/5, mb1mx2.8/35, mbtmp3.5/5, Error ellipse: s-maj=109.5km s-min=26.9km az=59.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.45**	**169**	P	P	13 01 16.8	+0.1
	0.2nm,0.3s,baz=342,slow=6.4,SNR=9.3						
WRA	**Warramunga Arr**	**23.32**	**149**	P	P	13 02 05.0	-0.4
	0.8nm,0.5s,baz=312,slow=8.2,SNR=7.4						
ASAR	**Alice Springs**	**26.32**	**155**	P	P	13 02 32.8	+0.3
	0.3nm,0.5s,baz=343,slow=14,SNR=12						
SONM	**Songino Array**	**49.43**	**346**	P	P	13 05 44.1	-0.2
	0.6nm,0.6s,baz=168,slow=9.3,SNR=4.5						
MKAR	**Makanchi Array**	**57.99**	**329**	P	P	13 06 46.1	0.0
	0.4nm,0.4s,baz=132,slow=8.5,SNR=9.1						

*IDC **23** 13:00:42.8±1.8, 51°.48N×179°.09W, h0km, mb3.4/6, mb1 3.9/7, mb1mx3.5/38, mbtmp3.5/7, ML4.0/1, Error ellipse: s-maj=73.0km s-min=28.7km az=140.0*
*AEIC **23** 13:00:47.3±1.5, 51°.5N±0°.1×179°.0W±0°.2, h44km±7km, ML3.8/22, mb4.0/8(NEIC), Error ellipse: s-maj=18.7km s-min=8.4km az=137.0*
*NEIC **23** 13:00:48.1±2.0, 51°.46N±0°.09×178°.79W±0°.08, h30km±6km, Error ellipse: s-maj=14.5km s-min=4.7km az=157.0*

ISC 23 13:00:48.5±1.2, 51°.5N±0°.2×178°.91W±0°.09, h44km, n42, σ1°13/40, mb3.8/10, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAEA	**Gareloi East**	**0.28**	**22**		**Pn**	13 00 56.4	-0.5
TASE	**Tanaga Southea**	**0.63**	**60**		**Pn**	13 01 00.2	-0.9
TAFP	**Tanaga Falls P**	**0.69**	**57**		**Pn**	13 01 01.0	-0.9
TAFP					**Sn**	13 01 11.3	-0.3
KIMD	**Kanaga Island**	**1.07**	**77**		**Pn**	13 01 06.0	-1.1
KICM	**Kanaga Island**	**1.14**	**69**		**Pn**	13 01 07.8	-0.2
KIKV	**Kanaga Island**	**1.14**	**71**		**Pn**	13 01 07.4	-0.7
KIKV					**Sn**	13 01 22.5	0.0
KIWB	**Kanaga Island**	**1.15**	**73**		**Pn**	13 01 07.3	-0.8
KIWB	**Kanaga Island**	**1.15**	**73**	Sn	**Sn**	13 01 21.6	-1.0
KINC	**Kanaga Island**	**1.18**	**69**		**Pn**	13 01 08.3	-0.3
ADK	**Adak**	**1.43**	**75**		**Pn**	13 01 10.9	-1.1
ADK	**Adak**	**1.43**	**75**	Sn	**Sn**	13 01 29.8	+0.2
ADAG	**Mount Adagdak**	**1.51**	**72**		**Pn**	13 01 13.0	-0.1
GSTD	**Great Sitkin T**	**1.80**	**72**		**Pn**	13 01 17.0	-0.2
GSTD					**Sn**	13 01 40.1	+1.3
GSMY	**Great Sitkin M**	**1.85**	**73**		**Pn**	13 01 17.6	-0.2
GSTR	**Great Sitkin T**	**1.86**	**71**		**Pn**	13 01 17.6	-0.3
GSIG	**Igitkin Island**	**1.91**	**75**		**Pn**	13 01 18.8	+0.2
ATKA	**Atka Island**	**3.00**	**75**		**Pn**	13 01 33.5	0.0
ATKA					**Sn**	13 02 09.8	+1.6
KOKL	**Mount Kliuchef**	**3.02**	**73**		**Pn**	13 01 34.5	+0.6
KOFP	**Korovin Flat P**	**3.08**	**74**		**Pn**	13 01 35.3	+0.7
KDAK	**Kodiak Island**	**16.40**	**57**	Pn	**Pn**	13 04 34.1	-1.2
	0.6nm,0.3s,baz=301,slow=4.9,SNR=9.2						
KDAK	**Kodiak Island**	**16.40**	**57**	Pn	**Pn**	13 04 35.0	-0.3
KDAK					IAmb	IAmb	13 04 54.8		
	comp=Z,13nm,1.0s						
ILAR	**Eielson Array**	**21.17**	**39**	P	**P**	13 05 31.3	+1.6
	comp=Z,0.2nm,0.6s,baz=238,slow=8.2,SNR=3.5						
H11N2	**WAKE ISLAND Hy**	**33.63**	**205**	T	T	13 43 04.6	
	baz=9.1						
H11N3	**WAKE ISLAND Hy**	**33.64**	**205**	T	T	13 43 01.5	
	baz=9.1,slow=74						
H11N1	**WAKE ISLAND Hy**	**33.65**	**205**	T	T	13 43 05.9	
	baz=9.1,slow=74						
H11S1	**WAKE ISLAND Hy**	**34.85**	**204**	T	T	13 44 37.4	
	baz=16,slow=76,SNR=65						
H11S2	**WAKE ISLAND Hy**	**34.87**	**204**	T	T	13 44 37.9	
	baz=16,slow=76,SNR=35						
H11S3	**WAKE ISLAND Hy**	**34.87**	**204**	T	T	13 44 39.0	
	baz=16,slow=76,SNR=30						
YKA	**Yellowknife Ar**	**35.18**	**47**	P	**P**	13 07 38.4	+0.6
	comp=Z,0.1nm,0.6s,baz=278,slow=8.5,SNR=3.8						
HOPS	**Hopland Field**	**40.30**	**86**	P	**P**	13 08 17.4	-3.8
MOD	**Modoc Plateau**	**40.32**	**80**	P	**P**	13 08 20.7	-0.9
MOD					IAmb	IAmb	13 08 24.2		
	comp=Z,1.9nm,0.6s						
J08A	**Circle Bar Ran**	**40.62**	**77**	P	**P**	13 08 22.4	-1.6
J08A					IAmb	IAmb	13 08 29.6		
	comp=Z,2.6nm,1.2s						
NVAR	**Mina Array Bea**	**43.60**	**83**	P	**P**	13 08 50.6	+2.1
	comp=Z,0.5nm,0.8s,baz=296,slow=6.9,SNR=3.5						
NVAR	**Mina Array Bea**	**43.60**	**83**	P	**P**	13 08 46.7	-1.8
R11A	**Troy Canyon, C**	**45.34**	**81**	P	**P**	13 09 01.0	-1.3
R11A					IAmb	IAmb	13 09 12.6		
	comp=Z,1.2nm,0.9s						
PSUT	**Pine Spring**	**46.29**	**80**	P	**P**	13 09 08.9	-0.9
BW06	**Boulder Array**	**46.33**	**72**	P	**P**	13 09 09.7	-0.5
BW06					IAmb	IAmb	13 09 11.8		
	comp=Z,2.2nm,0.8s						
PD31	**Pinedale Array**	**46.33**	**72**	P	**P**	13 09 09.5	-0.6
PDAR	**Pinedale Array**	**46.33**	**72**	P	**P**	13 09 11.2	+1.1
	comp=Z,1.3nm,0.6s,baz=305,slow=3.8,SNR=16						
PDAR	**Pinedale Array**	**46.33**	**72**	P	**P**	13 09 10.2	+0.1
TXAR	**Lajitas Array**	**58.70**	**81**	P	**P**	13 10 42.3	+0.6
	comp=Z,0.6nm,0.5s,baz=316,slow=5.0,SNR=4.2						
ASAR	**Alice Springs**	**85.55**	**222**	P	**P**	13 13 22.2	+0.4
	comp=Z,0.3nm,0.8s,baz=22,slow=6.2,SNR=4.1						

IDC 23 13:01:08.8±1.7, 2°.03S×139°.07E, h0km, mb3.1/2, mb1 3.3/3, mb1mx3.2/29, mbtmp3.1/3, Error ellipse: s-maj=32.2km s-min=15.1km az=14.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**1.70**	**106**	Pg	Pb	13 01 40.9	-0.2
	4.8nm,0.3s,baz=227,slow=11,SNR=14						
JAY				Lg	Lg	13 02 02.1	
	6.2nm,0.3s,baz=133,slow=18,SNR=7.1						
JAY				LR	LR	13 02 22.7	
	comp=Z,100nm,18.9s,baz=208,slow=43						
WRA	**Warramunga Arr**	**18.39**	**194**	P	Pn	13 05 23.9	-1.6
	baz=19,slow=12,SNR=2.7						
ASAR	**Alice Springs**	**22.08**	**193**	P	P	13 06 05.8	+0.1
	0.2nm,0.6s,baz=20,slow=9.8,SNR=5.3						
MKAR	**Makanchi Array**	**69.47**	**322**	P	P	13 12 19.3	+0.1
	0.4nm,0.8s,baz=133,slow=6.1,SNR=3.9						

*IDC **23** 13:17:44.6±0.7, 53°.93S×140°.84E, h0km, mb4.3/7, mb1 4.4/7, mb1mx4.3/19, mbtmp4.3/7, MS4.1/16, Ms1 4.1/16, ms1mx4.0/21, Error ellipse: s-maj=42.8km s-min=15.8km az=89.0*
*NEIC **23** 13:17:45.7±1.8, 53°.97S±0°.09×140°.3E±0°.4, h10km±1km, mb4.7/23, Error ellipse: s-maj=35.5km s-min=14.6km az=97.0*
*GCMT **23** 13:17:47.7±0.2, 53°.95S±0°.01×140°.55E±0°.03, h18km±1km, MW5.0/98, Moment Tensor Solution. s27,c32; s98,c134; Duration: 0 Moment tensor: Scale 10^16Nm; Mr0.38±.14; Mθθ-0.03±.12; Mφφ-0.35±.14; Mre-1.73±.36; Mθφ-3.46±.10; Mθr0.76±.29; Best double couple: M0 3.94700×10^16 NP1: φs2.00000°, δ65.00000°, λ12.00000°. NP2: φs266.00000°, δ79.00000°, λ154.00000°. Principal axes: T 4.1280, Plg26.0000°, Azm221.0000°; N -0.3600, Plg62.0000°, Azm65.0000°; P -3.7670, Plg10.0000°, Azm316.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 13:17:46.1±0.5, 53°.95S±0°.07×140°.5E±0°.2, h10km, n84, σ1°26/68, mb4.7/16, MS4.1/19, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAU	**Tasmania Unive**	**11.92**	**25**	Pn	**Pn**	13 20 36.1	+0.1
TOO	**Toolangi**	**16.73**	**14**	P	**P**	13 21 44.6	+1.8
TOO					IAmb	IAmb	13 21 49.5		
	comp=Z,52nm,1.1s						
CAN	**Canberra**	**19.55**	**21**	P	**P**	13 22 14.1	+0.3
BBOO	**Buckleboo**	**21.36**	**350**	P	**P**	13 22 34.3	+0.8
BBOO					IAmb	IAmb	13 22 47.3		
	comp=Z,60nm,1.2s						
STKA	**Stephens Creek**	**22.07**	**2**	P	**P**	13 22 41.9	+0.8
	comp=Z,28nm,1.1s,baz=168,slow=11,SNR=38						
STKA	**Stephens Creek**	**22.07**	**2**	P	**P**	13 22 42.1	+1.0
RPZ	**Rata Peaks**	**22.39**	**75**	LR	LR	13 29 50.2	
	comp=Z,2μm,18.5s,baz=237,slow=33						
FORT	**Forrest**	**24.84**	**334**	P	**P**	13 23 08.3	-0.2
ARMA	**Armidale**	**24.85**	**23**	P	**P**	13 23 06.3	-2.4
ARMA					IAmb	IAmb	13 23 11.7		
	comp=Z,20nm,1.1s						
VNDA	**Vanda**	**24.90**	**169**	P	**P**	13 23 08.0	-0.7
	comp=Z,2

MAW	**Mawson**	**37.49**	**218**	P		**P**	**13 24 56.0**	**-3.3**
FITZ	**Fitzroy Crossi**	**37.58**	**336**	P		**P**	**13 25 01.0**	**+0.3**
FITZ				IAmb		IAmb	13 25 01.9	
	comp=Z,17nm,1.1s							
KNRA	**Kununurra**	**39.28**	**342**	P		**P**	**13 25 15.0**	**+0.1**
KNRA				IAmb		IAmb	13 25 25.2	
	comp=Z,23nm,0.9s							
COEN	**Coen**	**39.95**	**4**	P		**P**	**13 25 21.0**	**+0.5**
MTN	**Manton Dam**	**41.67**	**346**	P		**P**	**13 25 35.6**	**+0.9**
SNAA	**Sanae**	**52.04**	**194**	P		**P**	**13 26 55.0**	**-0.3**
SNAA	**Sanae**	**52.04**	**194**	P		**P**	**13 26 54.9**	**-0.4**
SNAA				IAmb		IAmb	13 27 05.9	
	comp=Z,6.6nm,0.9s							
SPSI	**Sidrap Palu**	**52.63**	**334**	P		**P**	**13 26 56.2**	**-4.0**
VNA3	**Neumayer Olymp**	**53.33**	**192**	P		**P**	**13 27 04.0**	**-0.7**
VNA1	**Neumayer--Stat**	**53.70**	**192**	P		**P**	**13 27 07.2**	**-0.2**
AFI	**Afiamalu**	**54.62**	**62**	LR		LR	13 46 13.4	
	comp=Z,195nm,21.8s,baz=234,slow=31							
RAR	**Rarotonga**	**55.37**	**78**	LR		LR	13 47 22.0	
	comp=Z,70nm,18.4s,baz=254,slow=32							
TBI	**Tubuai**	**59.77**	**89**	*e*LQ		LQ	13 42 58.2	
	comp=Z,242nm,26.5s							
TBI				*e*LR		LR	13 45 21.3	
	comp=Z,234nm,24.5s							
PPT2	**Papeete2**	**64.16**	**84**	*e*LQ		LQ	13 44 46.4	
	comp=Z,567nm,29.5s							
PPT2				*e*LR		LR	13 47 27.5	
	comp=Z,200nm,23.0s							
PPT	**Papeete**	**64.17**	**84**	LR		LR	13 50 13.7	
	comp=Z,108nm,20.3s,baz=242,slow=30							
USHA	**Ushuaia**	**68.99**	**163**	LR		LR	13 54 44.9	
	comp=Z,115nm,18.9s,baz=238,slow=32							
H08S2	**Diego Garcia H**	**70.98**	**284**	T		T	14 46 43.9	
	baz=144,slow=76,SNR=18							
H08S1	**Diego Carcia H**	**70.99**	**284**	T		T	14 46 44.8	
	baz=144,slow=76,SNR=10							
H08S3	**Diego Garcia H**	**71.00**	**284**	T		T	14 46 42.3	
	baz=144,slow=76,SNR=32							
CMAR	**Chiang Mai Arr**	**80.45**	**320**	P		**P**	**13 29 58.5**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=180,slow=5.4,SNR=5.7							
CMAR				LR		LR	14 03 30.2	
	comp=Z,109nm,20.3s,baz=180,slow=34							
BOSA	**Boshof**	**80.65**	**234**	LR		LR	13 58 36.6	
	comp=Z,216nm,21.1s,baz=166,slow=30							
PLCA	**Paso Flores**	**81.98**	**157**	LR		LR	13 59 37.0	
	comp=Z,53nm,20.1s,baz=244,slow=31							
MJAR	**Matsushiro Arr**	**90.14**	**358**	LR		LR	14 10 43.5	
	comp=Z,31nm,18.3s,baz=50,slow=35							
KSRS	**Korea Array**	**91.68**	**350**	LR		LR	14 11 43.9	
	comp=Z,56nm,21.1s,baz=151,slow=35							
CPUP	**Villa Florida**	**98.58**	**164**	LR		LR	14 15 15.9	
	comp=Z,23nm,18.1s,baz=210,slow=35							
YKA	**Yellowknife Ar**	**141.71**	**46**	PKhKP		PKPpre	13 37 11.4	
	comp=Z,0.3nm,0.6s,baz=233,slow=3.2,SNR=3.5							
VYHS	**Vyhne**	**143.97**	**286**	*e*PKP		**PKiKP**	**13 37 24.4**	**+0.1**
MODS	**Modra-Piesok**	**144.80**	**285**	*e*PKP		**PKiKP**	**13 37 26.6**	**+0.6**
JAVC	**Velka Javorina**	**144.82**	**286**	*e*PKP		**PKdf**	**13 37 23.0**	**+0.7**
SOKA	**Soboth**	**145.20**	**281**	*i* pPKPbc		**PKPdf**	**13 37 24.4**	**+1.4**
	comp=Z,7.7nm,1.4s							
ARSA	**Arzberg**	**145.22**	**282**	*i* pPKPbc		**PKPdf**	**13 37 24.2**	**+1.2**
	comp=Z,20nm,0.9s							
MORC	**Moravsky Berou**	**145.35**	**287**	*e*PKP		**PKPab**	**13 37 24.2**	**+0.9**
CONA	**Conrad Observa**	**145.38**	**283**	*i* pPKPbc		**PKPab**	**13 37 24.7**	**+1.2**
	comp=Z,7.0nm,1.0s							
KRUC	**Moravsky**	**145.65**	**285**	*e*PKP		**PKPab**	**13 37 25.7**	**+1.4**
VRAC	**Vranov**	**145.66**	**286**	*e*PKP		**PKPab**	**13 37 26.1**	**+1.7**
KRLC	**Kraliky**	**145.93**	**287**	*e*PKP		**PKPab**	**13 37 26.2**	**+0.8**
KRLC				*ep*PKP		sPKPab	13 37 32.3	+4.0
ULM	**Lac du Bonnet**	**145.94**	**73**	PKPbc		**PKPdf**	**13 37 23.6**	**-0.5**
	comp=Z,1.5nm,0.6s,baz=221,slow=4.8,SNR=3.7							
MYKA	**Terra Mystica**	**145.99**	**280**	*i* pPKPbc		pPKPbc	13 37 27.5	+0.2
	comp=Z,6.5nm,1.0s							
DPC	**Dobruska-Polom**	**146.32**	**287**	*e*PKP		**PKPab**	**13 37 27.4**	**+0.5**
DPC				*ep*PKP		sPKPab	13 37 32.3	+2.5
KBA	**Koelnbreinsper**	**146.40**	**280**	*i* pPKPdf		**PKPab**	**13 37 27.6**	**+0.2**
	comp=Z,5.2nm,0.8s							
ABTA	**Abfaltersbach**	**146.71**	**279**	*i* pPKPdf		**PKPbc**	**13 37 28.4**	**+1.0**
	comp=Z,7.6nm,1.0s							
GERES	**GERESS Array B**	**147.09**	**283**	PKPbc		**PKPbc**	**13 37 28.6**	**+0.2**
	comp=Z,1.1nm,0.7s,baz=137,slow=3.5,SNR=9.4							
KHC	**Kasperske Hory**	**147.30**	**284**	*e*PKP		**PKiKP**	**13 37 35.0**	**+3.9**
ARCES	**ARCESS Array B**	**147.45**	**324**	PKPbc		**PKPdf**	**13 37 26.9**	**+0.8**
	comp=Z,12nm,1.2s,baz=56,slow=3.6,SNR=7.1							
MDT	**Midelt**	**147.50**	**244**	PKPbc		**PKPbc**	**13 37 31.1**	**+1.1**
	comp=Z,4.4nm,0.3s,baz=148,slow=7.9,SNR=11							
FETA	**Feichten**	**147.89**	**278**	*i* PKiKP		**PKPbc**	**13 37 31.6**	**+0.9**
	comp=Z,9.8nm,1.1s							
BRG	**Berggiesshubel**	**147.91**	**287**	*e*PKP		**PKPab**	**13 37 35.9**	**+2.8**
	comp=Z,11nm,1.4s							
RETA	**Reutte**	**148.11**	**279**	*i* PKiKP		**PKPbc**	**13 37 32.2**	**+1.0**
	comp=Z,5.0nm,0.9s							
DAVOX	**Davos/Dischmat**	**148.26**	**277**	PKPbc		**PKiKP**	**13 37 33.9**	**+0.5**
	comp=Z,2.3nm,0.6s,baz=160,slow=12,SNR=3.6							
CLL	**Collm**	**148.63**	**287**	*e*PKPdf		**PKPdf**	**13 37 29.0**	**+0.5**
CLL				*e*PKPbc		**sPKPdf**	**13 37 32.0**	**+0.4**
CLL				*e*PKPab		**pPKPbc**	**13 37 35.0**	**+0.6**
CLL				*e*			13 37 38.0	
CLL				*e*			13 37 42.0	
CLL				LmV			14 50 00.0	
	comp=Z,200nm,19.5s							
SPITS	**Spitsbergen Ar**	**149.05**	**341**	PKPbc		**PKPbc**	**13 37 33.0**	**+0.3**
	comp=Z,3.9nm,0.7s,baz=148,slow=6.5,SNR=5.6							
RES	**Resolute Bay**	**150.08**	**26**	PKPbc		**PKPbc**	**13 37 35.2**	**0.0**
	comp=Z,2.8nm,0.9s,baz=222,slow=2.0,SNR=5.5							
ESDC	**Sonseca Array**	**152.15**	**254**	PKPbc		**PKiKP**	**13 37 42.7**	**+1.2**
	comp=Z,0.8nm,0.6s,baz=113,slow=3.0,SNR=4.7							
ESDC				PKPab		**PKPab**	**13 37 50.0**	**-1.0**
	comp=Z,2.9nm,0.9s,baz=103,slow=2.3,SNR=7.8							

*FUNV **23** 13:26:53.4, 10˚.90N×62˚.21W, h96km, MW2.5*
*TRN **23** 13:26:59.0, 10˚.97N×62˚.05W, h30km, MD2.7*
ISC 23 13:26:53.1±1.8, 10˚.82N±0˚.05×62˚.23W±0˚.06, h98km±13km, n9, σ1°33/15, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.17**	**179**	*e*P	**Pn**	**13 27 07.6**	**+0.6**
GUIV				*e*S	**Sn**	**13 27 16.8**	**-0.5**
TRN	**Trinidad (W)**	**0.82**	**102**	*e*P	**Pn**	**13 27 12.4**	**+0.8**
TRN				*e*S	**Sn**	**13 27 24.5**	**-0.8**
GUNV	**Guanoco**	**0.96**	**227**	*e*P	**Pn**	**13 27 13.8**	**+0.8**
GUNV				*e*S	**Sn**	**13 27 28.7**	**+0.8**
CRUV	**Carupano**	**1.00**	**262**	*e*P	**Pn**	**13 27 13.2**	**-0.3**
CRUV				*e*S	**Sn**	**13 27 27.6**	**-1.1**
GRGR	**Grenville**	**1.42**	**23**	*e*P	**Pn**	**13 27 20.9**	**+2.5**
GRGR				*e*S	**Sn**	**13 27 36.1**	**-1.3**
GRHS	**Sauteurs**	**1.51**	**22**	*e*S	**Sn**	**13 27 37.9**	**-1.5**
GRSS	**Sisters**	**1.59**	**22**	*e*S	**Sn**	**13 27 39.4**	**-1.8**
TOSP	**Speyside**	**1.73**	**74**	*e*S	**Sn**	**13 27 42.9**	**-1.3**
RIOV	**Rio Grande**	**2.76**	**172**	*e*P	**Pn**	**13 27 35.6**	**-0.1**
RIOV				*e*S	**Sn**	**13 28 08.1**	**-0.2**

*IDC **23** 13:44:05.0±0.7, 41˚.34S×104˚.62W±0˚.1, h0km, mb4.1/10, mb1 4.3/10, mb1mx4.2/34, mbtmp4.1/10, Error ellipse: s-maj=25.1km s-min=20.4km az=2.0*
*NEIC **23** 13:44:05.4±1.7, 41˚.4S±0˚.1×104˚.6W±0˚.2, h10km±1km, mb4.6/17, Error ellipse: s-maj=29.1km s-min=24.6km az=252.0*
ISC 23 13:44:05.9±0.7, 41˚4S±0˚.1×104˚6W±0˚.1, h10km, n46, σ0°99/37, mb4.2/16, Southern Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**14.73**	**343**	P	**P**	**13 47 39.9**	**-0.5**
GO09	**Cerro Castillo**	**24.20**	**125**	P	**P**	**13 49 21.1**	**-1.2**
GO09				IAmb	IAmb	13 49 27.5	
	comp=Z,19nm,1.1s						
PLCA	**Paso Flores**	**25.59**	**100**	P	**P**	**13 49 36.4**	**+1.3**
	comp=Z,2.5nm,0.8s,baz=287,slow=10,SNR=5.1						
PLCA	**Paso Flores**	**25.59**	**100**	P	**P**	**13 49 36.1**	**+1.0**
PLCA				IAmb	IAmb	13 49 43.4	
	comp=Z,13nm,1.4s						
CFA	**Coronel Fontan**	**30.62**	**83**	P	**P**	**13 50 21.7**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=270,slow=6.1,SNR=3.0						
GO02	**Mina Guanaco**	**33.16**	**72**	P	**P**	**13 50 40.9**	**-1.9**
GO02				IAmb	IAmb	13 50 44.1	
	comp=Z,7.3nm,1.4s						
PB10	**IPOC Station P**	**33.52**	**69**	P	**P**	**13 50 45.2**	**-0.5**
PB10				IAmb	IAmb	13 50 46.3	
	comp=Z,13nm,1.1s						
LVC	**Limon Verde**	**35.25**	**69**	P	**P**	**13 50 58.8**	**-2.3**
PB11	**IPOC Station P**	**36.64**	**65**	P	**P**	**13 51 12.3**	**-0.4**
PB11				IAmb	IAmb	13 51 18.2	
	comp=Z,8.4nm,1.0s						
LPAZ	**La Paz**	**40.10**	**62**	P	**P**	**13 51 43.0**	**+0.6**
	comp=Z,1.6nm,0.8s,baz=153,slow=5.1,SNR=4.8						
LPAZ	**La Paz**	**40.10**	**62**	P	**P**	**13 51 40.4**	**-2.1**
CPUP	**Villa Florida**	**41.51**	**84**	P	**P**	**13 51 53.4**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=153,slow=2.4,SNR=3.3						
CPUP	**Villa Florida**	**41.51**	**84**	P	**P**	**13 51 52.1**	**-1.1**
SIV	**San Ignacio**	**45.15**	**69**	P	**P**	**13 52 23.5**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=233,slow=6.4,SNR=8.7						
QSPA	**South Pole Qui**	**48.85**	**180**	P	**P**	**13 52 52.6**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=123,slow=5.3,SNR=4.4						
QSPA	**South Pole Qui**	**48.85**	**180**	P	**P**	**13 52 50.4**	**-0.9**
QSPA				IAmb	IAmb	13 52 54.9	
	comp=Z,4.3nm,1.2s						
TXAR	**Lajitas Array**	**70.35**	**1**	P	**P**	**13 55 20.5**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=176,slow=10.0,SNR=9.1						
NVAR	**Mina Array Bea**	**80.40**	**349**	P	**P**	**13 56 18.2**	**+0.8**
	comp=Z,2.1nm,0.9s,baz=188,slow=6.2,SNR=11						
NVAR	**Mina Array Bea**	**80.40**	**349**	P	**P**	**13 56 17.6**	**+0.2**
BW06	**Boulder Array**	**83.87**	**356**	P	**P**	**13 56 35.0**	**-0.6**
PD31	**Pinedale Array**	**83.87**	**356**	P	**P**	**13 56 35.9**	**+0.4**
PD31				IAmb	IAmb	13 56 36.9	
	comp=Z,5.9nm,0.8s						
PDAR	**Pinedale Array**	**83.87**	**356**	P	**P**	**13 56 36.0**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=160,slow=6.2,SNR=51						
PDAR	**Pinedale Array**	**83.87**	**356**	P	**P**	**13 56 35.8**	**+0.2**
TPAW	**Teton Pass**	**84.67**	**355**	P	**P**	**13 56 39.9**	**+0.2**
MOOW	**Moose Ponds**	**84.91**	**356**	P	**P**	**13 56 40.9**	**0.0**
ECSD	**EROS Data Cent**	**85.02**	**6**	P	**P**	**13 56 40.5**	**-0.6**
IMW	**Indian Meadow**	**85.07**	**355**	P	**P**	**13 56 42.7**	**+1.0**
IMW				IAmb	IAmb	13 56 43.4	
	comp=Z,7.8nm,1.1s						
RSSD	**Black Hills**	**85.11**	**0**	P	**P**	**13 56 40.9**	**-0.9**
J08A	**Circle Bar Ran**	**85.27**	**350**	P	**P**	**13 56 43.0**	**+0.5**
J08A				IAmb	IAmb	13 56 44.8	
	comp=Z,5.9nm,1.1s						
ASAR	**Alice Springs**	**95.61**	**232**	P	**P**	**13 57 31.1**	**-0.7**
	comp=Z,0.2nm,0.9s,baz=125,slow=4.8,SNR=3.9						
H01W1	**Cape Leeuwin H**	**96.18**	**211**	T	T	15 45 06.4	
	baz=151,slow=76,SNR=13						
H01W2	**Cape Leeuwin H**	**96.18**	**211**	T	T	15 45 04.6	
	baz=151,slow=76,SNR=6.6						
H01W3	**Cape Leeuwin H**	**96.19**	**211**	T	T	15 45 05.6	
	baz=151,slow=76,SNR=9.2						
H11S2	**WAKE ISLAND Hyl**	**101.03**	**285**	T	T	15 50 32.7	
	baz=131						
H11S1	**WAKE ISLAND Hyl**	**101.05**	**285**	T	T	15 50 34.0	
	baz=131						
H11S3	**WAKE ISLAND Hyl**	**101.05**	**285**	T	T	15 50 34.2	
	baz=131						
H11N3	**WAKE ISLAND Hyl**	**101.67**	**286**	T	T	15 51 19.7	
	baz=130,slow=76,SNR=18						
H11N1	**WAKE ISLAND Hyl**	**101.68**	**286**	T	T	15 51 19.8	
	baz=130,slow=76,SNR=50						
H11N2	**WAKE ISLAND Hyl**	**101.69**	**286**	T	T	15 51 21.0	
	baz=130,slow=76,SNR=20						
PETK	**Petropavlovsk-**	**125.88**	**312**	PKP	**PKiKP**	**14 03 08.6**	**+1.0**
	comp=Z,3.2nm,0.8s,baz=134,slow=8.3,SNR=3.6						
FINES	**FINESS Array B**	**144.40**	**39**	PKP	**PKPab**	**14 03 39.0**	**-0.5**
	comp=Z,3.0nm,0.7s,baz=252,slow=2.8,SNR=8.1						
AKASG	**Malin Array Be**	**147.09**	**58**	PKPbc	**PKPbc**	**14 03 47.4**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=275,slow=3.0,SNR=4.0						
BRTR	**Keskin Array B**	**148.44**	**79**	PKPbc	**PKPbc**	**14 03 52.6**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=232,slow=4.2,SNR=7.2						
CMAR	**Chiang Mai Arr**	**149.56**	**228**	PKPbc	**PKiKP**	**14 03 56.5**	**-0.4**
	comp=Z,1.7nm,0.9s,baz=186,slow=2.4,SNR=11						
SONM	**Songino Array**	**157.11**	**297**	PKPab	**PKPab**	**14 04 32.8**	**+0.7**
	comp=Z,2.2nm,1.0s,baz=100,slow=4.8,SNR=9.5						
ZALV	**Zalesovo Beam**	**165.32**	**337**	PKPab	**PKPab**	**14 05 10.8**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=18,slow=5.2,SNR=4.3						

*GUC **23** 13:52:41.6±0.8, 18˚.87S×69˚.59W, h92km±4km, ML3.7*
*IDC **23** 13:52:45.0±1.8, 18˚.90S×69˚.18W, h125km±16km, mb3.4/3, mb1 3.5/6, mb1mx3.3/25, mbtmp3.8/6, Error ellipse: s-maj=42.4km s-min=14.8km az=99.0*
ISC 23 13:52:42.1±0.9, 18˚86S±0˚.04×69˚.65W±0˚.08, h96km±7km, n16, σ1°73/27, mb3.6/3, 5C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNMC	**Minye Minye**	**0.28**	**169**	*i* P	**Pn**	**13 52 56.4**	**-0.1**
MNMC				*e*S	**Sn**	**13 53 07.4**	**+0.2**
MNMC				IAML		13 53 07.8	
	comp=N,10μm,0.2s						
PB16	**IPOC Station P**	**0.54**	**15**	*i* P	**Pn**	**13 52 58.6**	**+0.2**
PB16				*e*S	**Sn**	**13 53 11.1**	**+0.6**
PB16				IAML		13 53 12.4	
	comp=E,4μm,0.5s						
AP01	**Chacalluta**	**0.81**	**306**	*e*P	**Pn**	**13 53 00.9**	**+0.7**
AP01				*e*S	**Sn**	**13 53 15.3**	**+1.5**
AP01				IAML		13 53 16.2	
	comp=N,5μm,0.3s						
PSGC	**Pisagua**	**0.86**	**211**	*i* P	**Pn**	**13 53 00.8**	**-0.1**
PSGC				*e*S	**Sn**	**13 53 15.7**	**+0.8**
PSGC				IAML		13 53 18.8	
	comp=E,2μm,0.5s						
PB11	**IPOC Station P**	**0.90**	**180**	*i* P	**Pn**	**13 53 01.3**	**-0.1**
PB11				*e*S	**Sn**	**13 53 16.2**	**+0.5**
PB11				IAML		13 53 17.8	
	comp=E,3μm,0.2s						
GO01	**Chusmiza**	**0.92**	**152**	*i* P	**Pn**	**13 53 02.0**	**+0.1**
GO01				*e*S	**Sn**	**13 53 17.4**	**+0.8**
GO01				IAML		13 53 24.9	
	comp=N,2μm,0.1s						
PB08	**IPOC Station P**	**1.36**	**160**	*i* P	**Pn**	**13 53 07.1**	**+0.3**
PB08				*e*S	**Sn**	**13 53 26.2**	**+0.7**
PB08				IAML		13 53 28.1	
	comp=E,1μm,0.1s						
TA01	**Diego Aracena**	**1.77**	**196**	*i* P	**Pn**	**13 53 11.4**	**-0.2**
TA01				*e*S	**Sn**	**13 53 33.1**	**-0.9**
TA01				IAML		13 53 40.4	
	comp=E,1μm,0.1s						
PATCX	**Punta Patache**	**2.01**	**194**	*i* P	**Pn**	**13 53 15.0**	**+0.3**
PATCX				*e*S	**Sn**	**13 53 39.5**	**-0.2**
PATCX				IAML		13 53 49.4	
	comp=E,757nm,0.6s						
LPAZ	**La Paz**	**2.94**	**30**	P	**Pn**	**13 53 29.3**	**+1.8**
	comp=E,6.2nm,0.3s,baz=204,slow=8.3,SNR=98						
LPAZ				S	**Sn**	**13 54 04.0**	**+1.7**
	comp=E,0.6nm,0.3s,baz=252,slow=14,SNR=3.4						
LVC	**Limon Verde**	**3.80**	**170**	P	**Pn**	**13 53 39.8**	**+1.0**
	comp=E,8.2nm,0.3s,baz=344,slow=8.1,SNR=32						
LVC				S	**Sn**	**13 54 28.6**	**+5.9**
	comp=E,14nm,0.3s,baz=262,slow=21,SNR=13						
SIV	**San Ignacio**	**8.67**	**72**	P	**Pn**	**13 54 42.0**	**-2.8**
	comp=E,0.6nm,0.3s,baz=268,slow=9.0,SNR=7.0						
PLCA	**Paso Flores**	**21.82**	**182**	P	**P**	**13 57 28.4**	**+1.9**
	comp=E,1.5nm,0.7s,baz=356,slow=12,SNR=4.0						
TORD	**Torodi Ar. Bea**	**77.15**	**71**	P	**P**	**14 04 22.6**	**-3.1**
	comp=E,0.5nm,0.5s,baz=258,slow=4.3,SNR=3.0						
YKA	**Yellowknife Ar**	**88.47**	**341**	P	**P**	**14 05 23.1**	**-0.1**
	comp=E,0.4nm,0.5s,baz=136,slow=4.4,SNR=9.4						
SONM	**Songino Array**	**150.91**	**5**	PKPbc	**PKPbc**	**14 12 23.5**	**-0.2**
	comp=E,0.5nm,0.5s,baz=344,slow=1.5,SNR=4.5						

*IDC **23** 14:03:37.0±1.7, 8˚.42N×93˚.65E, h0km, mb3.4/6, mb1 3.5/8, mb1mx3.4/38, mbtmp3.4/8, ML3.5/2, Error ellipse: s-maj=66.3km s-min=18.6km az=63.0*
ISC 23 14:03:41.6±1.4, 8˚.5N±0˚.1×93˚.8E±0˚.3, h26km, n11, σ1°04/9, mb3.4/6, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**7.64**	**138**	Pn	**Pn**	**14 05 31.9**	**+0.5**
	0.6nm,0.3s,baz=352,slow=18,SNR=2.2						
CMAR	**Chiang Mai Arr**	**11.08**	**26**	Pn	**Pn**	**14 06 18.1**	**-0.5**
	comp=Z,0.3s,baz=212,slow=14,SNR=5.2						
H08S3	**Diego Garcia H**	**26.60**	**234**	T	T	14 36 14.1	
	baz=53,slow=74						
H08S2	**Diego Garcia H**	**26.61**	**233**	T	T	14 36 17.4	
	baz=53,slow=74						
H08S1	**Diego Carcia H**	**26.62**	**233**	T	T	14 36 19.7	
	baz=53						
AAK	**Ala-Archa**	**37.98**	**337**	P	**P**	**14 10 57.4**	**-0.1**
	0.3nm,0.4s,baz=188,slow=15,SNR=3.6						
MKAR	**Makanchi Array**	**39.39**	**349**	P	**P**	**14 11 08.0**	**-1.1**
	0.3nm,0.7s,baz=165,slow=13,SNR=3.0						
SONM	**Songino Array**	**40.62**	**13**	P	**P**	**14 11 21.0**	**+1.6**
	0.2nm,0.5s,baz=186,slow=7.9,SNR=2.7						
ZALV	**Zalesovo Beam**	**45.88**	**353**	P	**P**	**14 12 01.0**	**-0.6**
	1.3nm,0.5s,baz=184,slow=8.0,SNR=8.0						
WRA	**Warramunga Arr**	**48.92**	**126**	P	**P**	**14 12 25.3**	**-0.6**
	0.4nm,0.9s,baz=305,slow=8.8,SNR=5.1						
ASAR	**Alice Springs**	**50.60**	**130**	P	**P**	**14 12 37.5**	**-1.1**
	0.2nm,0.6s,baz=298,slow=7.6,SNR=4.9						
ASAR				PcP	**PcP**	**14 13 56.6**	**+0.5**
	0.3nm,0.8s,baz=306,slow=3.4,SNR=4.6						

*SJA **23** 14:10:15.2±0.6, 22˚.02S×68˚.67W, h116km±5km, ML3.1, MW3.2*
*GUC **23** 14:10:15.7±0.6, 22˚.04S×68˚.71W, h115km±4km, ML3.1*
ISC 23 14:10:17.2±1.6, 22˚03S±0˚.04×68˚67W±0˚.07, h106km±12km, n19, σ0°62/35, 4C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.58**	**294**	*i* P	**Pn**	**14 10 34.4**	**0.0**
PB09				*i* S	**Sn**	**14 10 48.2**	**+1.0**
PB09	**IPOC Station P**	**0.58**	**294**	*i* P	**Pn**	**14 10 34.5**	**0.0**
PB09				*i* S	**Sn**	**14 10 47.8**	**+0.6**
PB09				IAML		14 10 49.7	
	comp=Z,389nm,0.5s						
LVC	**Limon Verde**	**0.61**	**201**	*e*P	**Pn**	**14 10 34.1**	**-0.8**
LVC				*e*S	**Sn**	**14 10 47.0**	**-1.1**
PB03	**IPOC Station P**	**1.00**	**269**	*i* P	**Pn**	**14 10 37.8**	**-0.4**
PB03				*i* S	**Sn**	**14 10 54.5**	**+0.4**
PB03				IAML		14 10 56.4	
	comp=E,434nm,0.1s						
PB06	**IPOC Station P**	**1.07**	**231**	*e*P	**Pn**	**14 10 38.7**	**-0.3**
PB06				*e*S	**Sn**	**14 10 55.8**	**+0.5**
PB06				IAML		14 10 58.2	
	comp=E,337nm,0.2s						
PB06	**IPOC Station P**	**1.07**	**231**	*i* P	**Pn**	**14 10 38.7**	**-0.3**
PB06				*i* S	**Sn**	**14 10 55.9**	**+0.5**
PB15	**IPOC Station P**	**1.38**	**212**	*e*P	**Pn**	**14 10 42.4**	**-0.2**
PB15				*i* S	**Sn**	**14 11 02.3**	**+0.6**
PB15	**IPOC Station P**	**1.38**	**212**	*i* P	**Pn**	**14 10 42.4**	**-0.2**
PB15				*i* S	**Sn**	**14 11 02.4**	**+0.6**
PB04	**IPOC Station P**	**1.40**	**257**	*e*P	**Pn**	**14 10 42.4**	**-0.4**
PB04				*e*S	**Sn**	**14 11 02.1**	**0.0**
PB04				IAML		14 11 03.7	
	comp=N,370nm,0.2s						
PB04	**IPOC Station P**	**1.40**	**257**	*i* P	**Pn**	**14 10 42.4**	**-0.4**
PB04				*i* S	**Sn**	**14 11 02.5**	**+0.4**
PB04				IAML		14 11 04.5	
	comp=Z,223nm,0.4s						
PB05	**IPOC Station P**	**1.63**	**240**	*e*P	**Pn**	**14 10 44.9**	**-0.6**
PB05				*e*S	**Sn**	**14 11 06.8**	**-0.2**
PB05				IAML		14 11 10.8	
	comp=N,123nm,0.4s						
PB05	**IPOC Station P**	**1.63**	**240**	*i* P	**Pn**	**14 10 44.8**	**-0.7**
PATCX	**Punta Patache**	**1.83**	**311**	*e*P	**Pn**	**14 10 47.3**	**-0.7**
PATCX				*i* S	**Sn**	**14 11 11.9**	**+0.5**
PATCX				IAML		14 11 13.3	
	comp=E,268nm,0.2s						
PB08	**IPOC Station P**	**1.94**	**347**	*i* P	**Pn**	**14 10 50.0**	**+0.4**
PB08				*e*S	**Sn**	**14 11 15.2**	**+1.0**
PB08				IAML		14 11 17.9	
	comp=E,91nm,0.2s						
TA01	**Diego Aracena**	**2.03**	**316**	*e*P	**Pn**	**14 10 49.4**	**-1.0**
TA01				*e*S	**Sn**	**14 11 15.5**	**-0.2**
TA01				IAML		14 11 17.4	
	comp=N,224nm,0.5s						
PB10	**IPOC Station P**	**2.28**	**229**	*e*P	**Pn**	**14 10 54.8**	**+1.2**
GO01	**Chusmiza**	**2.40**	**348**	*i* P	**Pn**	**14 10 55.8**	**+0

JNU	Nakatsue	37.10	349	P	P	14 39 14.1	-3.6
OUZ	Omahuta	45.32	139	P	P	14 40 23.1	-1.9
MKAR	Makanchi Array	70.26	323	P	P	14 43 19.0	-0.8
	comp=Z,0.2nm,0.3s,baz=105,slow=7.3,SNR=4.4						
KSH	Kashi	71.45	314	P	P	14 43 30.0	+2.8
KSH				pP	sP	14 43 51.4	-2.8
KSH				PP	PP	14 46 13.6	+6.9
KSH				pmax	pmax		
	comp=Z,300nm,4.6s						
ZALV	Zalesovo Beam	72.48	330	P	P	14 43 31.9	-1.0
	comp=Z,0.5nm,0.4s,baz=121,slow=6.1,SNR=3.0						
VNDA	Vanda	75.05	175	P	P	14 43 48.2	+0.6
	comp=Z,0.9nm,0.6s,baz=323,slow=7.7,SNR=5.8						
VNDA	Vanda	75.05	175	P	P	14 43 48.6	+1.0
BVAR	Borovoye Array	79.81	325	P	P	14 44 14.9	+0.4
	comp=Z,1.7nm,0.7s,baz=120,slow=8.8,SNR=6.1						
CCB	Clear Creek Bu	86.19	24	P	P	14 44 46.9	-0.4
CCB				IAmb	IAmb	14 44 53.4	
	comp=Z,6.8nm,1.5s						
QSPA	South Pole Qui	86.48	180	P	P	14 44 49.1	+0.3
QSPA				IAmb	IAmb	14 44 49.9	
	comp=Z,3.9nm,0.7s						
IL31		86.61	24	P	P	14 44 47.8	-1.5
ILAR	Eielson Array	86.61	24	P	P	14 44 48.5	-0.9
	comp=Z,1.0nm,0.6s,baz=265,slow=4.3,SNR=27						
ILAR	Eielson Array	86.61	24	P	P	14 44 48.2	-1.1
CPUP	Villa Florida	146.65	154	PKPbc	PKPdf	14 51 46.9	+0.1
	comp=Z,2.0nm,0.9s,baz=226,slow=1.3,SNR=3.5						
LPAZ	La Paz	147.16	127	PKPbc	PKPab	14 51 52.6	0.0
	comp=Z,3.1nm,0.8s,baz=232,slow=0.9,SNR=10						

*IDC **23** 14:34:25.8±1.1, 44˚.42N×28˚.39W, h0km, mb3.8/10, mb1 4.0/11, mb1mx3.7/63, mbtmp3.8/11, ML4.5/1, MS3.7/21, Ms1 3.7/21, ms1mx3.5/43, Error ellipse: s-maj=35.5km s-min=18.2km az=22.0*

*GCMT **23** 14:34:29.0±0.4, 44˚.30N±0˚.03×28˚.20W±0˚.04, h28km±1km, MW4.9/76, Moment Tensor Solution. s19,c21; s76,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.18±.25; $M_{\theta\theta}$-0.45±.16; $M_{\phi\phi}$2.63±.16; $M_{r\theta}$-1.84±.26; $M_{\theta\phi}$0.32±.11; $M_{\phi r}$-0.51±.19; Best double couple: M_o3.07200×10^{16} NP1:ϕs36.00000°, δ61.00000°, λ-55.00000°. Principal axes: T 2.7840, Plg10.0000°, Azm101.0000°; N 0.5750, Plg30.0000°, Azm197.0000°; P -3.3600, Plg58.0000°, Azm355.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

ISC 23 14:34:27.2±1.2, 44˚.3N±0˚.2×28˚.5W±0˚.1, h10km, n33, σ1s51/16, mb3.8/10, MS3.6/20, 5C, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	18.79	96	P	Pn	14 38 46.7	-0.4
	0.3nm,0.3s,baz=296,slow=11,SNR=5.7						
ESDC				LR	LR	14 44 35.2	
	comp=Z,205nm,19.3s,baz=175,slow=32						
BORG	Borgarnes	20.86	9	LR	LR	14 44 53.5	
	comp=Z,207nm,20.0s,baz=86,slow=30						
MDT	Midelt	21.85	114	LR	LR	14 45 45.0	
	comp=Z,181nm,21.6s,baz=344,slow=31						
SFJD	Kangerlussuaq	25.63	340	LR	LR	14 47 51.7	
	comp=Z,177nm,20.4s,baz=62,slow=32						
SCHQ	Schefferville	26.67	307	LR	LR	14 48 54.2	
	comp=Z,263nm,18.3s,baz=64,slow=33						
NOA	NORSAR Array B	28.71	40	LR	LR	14 49 31.7	
	comp=Z,51nm,21.7s,baz=285,slow=32						
GERES	GERESS Array B	29.07	66	P	P	14 40 26.4	-1.2
	0.2nm,0.4s,baz=285,slow=7.7,SNR=2.9						
GERES				LR	LR	14 50 30.9	
	comp=Z,149nm,20.2s,baz=282,slow=33						
HFS	Hagfors	29.66	43	LR	LR	14 50 33.6	
	comp=Z,187nm,19.4s,baz=292,slow=33						
FRB	Frobisher Bay	29.77	325	LR	LR	14 48 53.2	
	comp=Z,209nm,19.8s,baz=14,slow=29						
KEST	Kesra	30.00	93	LR	LR	14 51 37.7	
	comp=Z,71nm,18.8s,baz=227,slow=34						
BZS	Buzias	35.01	70	⇑P	P	14 41 20.5	+0.9
MDVR	Moldovita	35.32	71	⇑P	P	14 41 21.0	-1.3
HERR	Herculane	35.76	71	⇑P	P	14 41 26.9	+0.8
FINES	FINESS Array B	35.85	42	LR	LR	14 54 05.3	
	comp=Z,91nm,20.7s,baz=280,slow=33						
GZR	Gura Zlata	35.85	70	⇑P	P	14 41 30.3	+3.3
ARCES	ARCESS Array B	36.85	28	LR	LR	14 53 45.4	
	comp=Z,27nm,21.3s,baz=334,slow=32						
BURAR	Bucovina Array	36.85	65	⇑P	P	14 41 39.0	+3.5
AKASG	Malin Array Be	38.63	59	LR	LR	14 58 10.9	
	comp=Z,71nm,18.0s,baz=280,slow=37						
TORD	Torodi Ar. Bea	40.38	131	P	P	14 42 05.2	-0.1
	5.8nm,0.8s,baz=325,slow=6.7,SNR=23						
TORD				LR	LR	14 57 21.7	
	comp=Z,234nm,20.1s,baz=335,slow=34						
RES	Resolute Bay	41.62	338	P	P	14 42 14.5	-0.3
	2.1nm,1.1s,baz=71,slow=5.3,SNR=4.0						
DBIC	Dimbokro	42.82	144	LR	LR	14 58 37.3	
	comp=Z,95nm,19.2s,baz=322,slow=34						
ULM	Lac du Bonnet	44.68	303	LR	LR	14 59 41.0	
	comp=Z,190nm,18.7s,baz=82,slow=34						
BRTR	Keskin Array B	45.41	73	P	P	14 42 45.8	-0.3
	1.0nm,0.9s,baz=287,slow=5.9,SNR=4.0						
YKA	Yellowknife Ar	50.26	323	P	P	14 43 22.8	-0.4
	0.5nm,0.9s,baz=70,slow=6.8,SNR=6.0						
ROSC	El Rosal	56.17	239	LR	LR	15 06 28.2	
	comp=Z,38nm,19.9s,baz=76,slow=34						
PDAR	Pinedale Array	56.41	299	P	P	14 44 09.1	+0.1
	1.2nm,1.1s,baz=66,slow=8.4,SNR=6.1						
PDAR				LR	LR	15 06 43.2	
	comp=Z,102nm,20.4s,baz=356,slow=34						
TXAR	Lajitas Array	60.02	283	LR	LR	15 10 30.9	
	comp=Z,92nm,18.9s,baz=0.0,slow=36						
BDFB	Brasilia	62.28	201	LR	LR	15 07 15.1	
	comp=Z,84nm,21.6s,baz=93,slow=32						
NVAR	Mina Array Bea	64.35	299	P	P	14 45 04.1	+0.8
	0.2nm,0.5s,baz=60,slow=4.3,SNR=3.6						
KURBB	Kurchatov Arra	66.24	42	P	P	14 45 14.4	-0.6
	1.8nm,0.8s,baz=310,slow=7.2,SNR=6.3						
MKAR	Makanchi Array	70.67	43	P	P	14 45 42.1	-0.8
	2.0nm,1.1s,baz=334,slow=5.3,SNR=6.7						
CPUP	Villa Florida	75.10	207	LR	LR	15 17 30.4	
	comp=Z,31nm,18.8s,baz=34,slow=34						
SONM	Songino Array	80.02	29	P	P	14 46 37.0	+0.2
	1.0nm,1.0s,baz=336,slow=3.3,SNR=6.6						

*IDC **23** 14:34:54.1±1.0, 36˚.14N×71˚.53E, h0km, mb3.9/15, mb1 4.0/21, mb1mx3.8/62, mbtmp3.9/21, ML4.4/4, MS3.1/2, Ms1 3.2/2, ms1mx2.6/49, Error ellipse: s-maj=19.9km s-min=17.3km az=6.0*

*MOS **23** 14:35:05.4±1.1, 36˚.58N×71˚.64E, h93km, mb4.4/8, Error ellipse: s-maj=10.9km s-min=6.4km az=92.4*

*NNC **23** 14:35:06.5±4.2, 36˚.67N×71˚.09E, h93km±103km, mb3.9, mpv4.3, Error ellipse: s-maj=40.7km s-min=22.4km az=148.0*

*BJI **23** 14:35:06.2±0.0, 36˚.63N×71˚.64E, h67km, mB4.3/5, mb4.1/8, ML4.3/3, Ms4.0/3*

ISC 23 14:35:07.1±0.5, 36˚.55N±0˚.05×71˚.73E±0˚.06, h100km, n89, σ2s27/96, mb3.8/20, 11C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.73	177	P	Pn	14 35 48.8	-0.5
CEP				S	Sn	14 36 27.0	+5.2
KBL	Kabul	2.97	228	PN	Pn	14 35 49.6	-3.0
CHCP	Chirah Chowk	3.15	156	P	Pn	14 35 56.3	+1.4
NIL	Nilore	3.15	156	PN	Pn	14 35 56.3	+1.4
THW	Thamme Wali	3.75	180	P	Pn	14 36 01.7	-1.2
ANR	Andizhan	4.23	7	P	Pn	14 36 23.8	+15
KSH	Kashi	4.47	47	P	Pn	14 36 11.0	-1.7
KSH				S	Sn	14 36 58.8	-4.8
KSH				smax	smax		
	comp=N,1μm,0.4s						
KSH				smax	smax		
	comp=E,1μm,0.4s						
THN	Thein Dam	5.26	140	eP	Pn	14 36 25.0	+1.7
THN				eS	Sn	14 37 22.0	-0.7
DHRM	DHARAMSHALA	5.72	137	eP	Pn	14 36 29.3	-0.4
DHRM				eS	Sn	14 37 32.5	-1.6
DHRM				IAML		14 37 35.2	
	comp=E,590nm,0.2s						
DHRM				IAML		14 37 35.4	
	comp=N,572nm,0.2s						
AML	Almayashu	5.78	15	P	Pn	14 36 32.2	+1.6
	SNR=183						
UCH	Uchtor	6.06	20	P	Pn	14 36 37.5	+2.9
	SNR=14						
KZA	Kyzart	6.16	25	P	Pn	14 36 38.4	+2.6
	SNR=7.1						
EKS2	Erkin-Say	6.30	14	P	Pn	14 36 39.7	+2.2
	SNR=52						
BHK	Bhakra	6.43	141	eP	Pn	14 36 43.0	+3.7
BHK				eS	Sn	14 37 51.0	-0.2
AAK	Ala-Archa	6.44	18	PN	Pn	14 36 41.0	+1.6
AAK	Ala-Archa	6.44	18	Pn	Pn	14 36 41.2	+1.8
	comp=N,6.6nm,0.3s,baz=167,slow=5.7,SNR=104						
AAK				Sn	Sn	14 37 53.1	+1.5
	comp=N,2.8nm,0.3s,baz=339,slow=22,SNR=10						
AAK	Ala-Archa	6.44	18	P	Pn	14 36 41.9	+2.5
	SNR=17						
AAK	Ala-Archa	6.44	18	⇓P	Pn	14 36 41.0	+1.6
	comp=N,6.3nm,0.3s						
AAK				S	Sn	14 37 51.5	0.0
	comp=N,26nm,0.7s						
KBK	Karagaybulak	6.58	21	P	Pn	14 36 44.7	+3.3
	SNR=7.3						
KK31	Karatay Array	6.61	352	PN	Pn	14 36 40.9	-0.7
KK31	Karatay Array	6.61	352	⇑P	Pn	14 36 41.0	-0.7
	comp=N,9.9nm,0.3s,baz=179,slow=13,SNR=256						
KK31				⇑S	Sn	14 37 51.9	-3.6
	comp=N,15nm,0.4s,baz=175,slow=23,SNR=7.2						
ULHL	Ulahol	6.67	30	P	Pn	14 36 45.7	+3.1
	SNR=7.4						
CHMS	Chumysh	6.85	19	P	Pn	14 36 46.8	+2.0
	SNR=13						
USP	Ospenovka	7.04	17	P	Pn	14 36 49.6	+2.1
	SNR=13						
SMLA	Simla	7.05	139	eP	Pn	14 36 47.8	+0.2
SMLA				eS	Sn	14 38 02.2	-4.0
SMLA				IAML		14 38 05.9	
	comp=E,200nm,0.5s						
SMLA				IAML		14 38 06.3	
	comp=N,212nm,0.7s						
DDI	Dehra Dun	8.15	138	eP	Pn	14 37 04.7	+1.9
PDGK	Podgornoye	9.02	39	P	Pn	14 37 15.1	+0.7
PDGK				S	Sn	14 39 05.3	+11
PDGK	Podgornoye	9.02	39	⇑P	Pn	14 37 15.1	+0.7
	comp=N,4.5nm,0.8s						
PDGK				⇑S	Sn	14 39 05.3	+11
	comp=N,14nm,1.2s						
NDI	New Delhi	9.11	148	eP	Pn	14 37 18.0	+2.4
NDI				eS	Sn	14 38 52.0	-4.3
GEYT	Alibeck	10.94	281	Pn	Pn	14 37 32.3	-8.2
	comp=N,5.3nm,0.3s,baz=118,slow=12,SNR=67						
GEYT				Sn	Sn	14 39 27.4	-14
	comp=N,1.9nm,0.3s,baz=126,slow=14,SNR=5.7						
GYA0B	ALIBECK ARRAY	10.94	281	⇑P	Pn	14 37 32.4	-8.1
GYA0B				⇑S	Sn	14 39 26.1	-15
MAKZ	Makanchi	12.78	34	P	Pn	14 38 03.8	-1.2
MKAR	Makanchi Array	12.91	34	P	Pn	14 38 06.0	-0.7
MKAR	Makanchi Array	12.91	34	Pn	Pn	14 38 06.0	-0.7
	comp=N,0.1nm,0.3s,baz=224,slow=15,SNR=4.8						
DANN	Dangsing	13.03	125	eP	Pn	14 38 05.8	-2.9
	comp=N,17nm,0.3s						
KOLN	Koldanda	13.32	128	eP	Pn	14 38 09.3	-3.1
	comp=N,9.9nm,0.3s						
GKN	Gorkha	13.84	124	eP	Pn	14 38 16.2	-2.9
	comp=N,18nm,0.2s						
BHPL	Bhopal	14.15	158	eP	P	14 38 28.0	+0.6
BHPL				eS	Sn	14 40 46.3	-13
BHPL				IAML		14 40 50.9	
	comp=N,15nm,0.4s						
BHPL				IAML		14 40 52.0	
	comp=E,11nm,0.2s						
KKN	Kakani	14.41	123	eP	Pn	14 38 23.4	-3.1
DMN	Daman	14.41	124	eP	Pn	14 38 24.3	-2.2
	comp=E,8.8nm,0.3s						
PKIN	Phulchoki	14.63	124	eP	Pn	14 38 26.7	-2.6
GUN	Gumba	14.74	122	eP	Pn	14 38 27.0	-3.8
	comp=E,14nm,0.3s						
KURBB	Kurchatov Arra	14.89	17	Pn	Pn	14 38 30.5	-1.7
	comp=E,0.0nm,0.3s,baz=212,slow=12,SNR=3.2						
KURK	Kurchatov	15.00	17	eP	Pn	14 38 33.8	+0.2
KURK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
JIRN	Jiri	15.11	122	eP	Pn	14 38 32.0	-3.5
	comp=Z,18nm,0.3s						
AB31	Akbulak array	15.33	330	P	Pn	14 38 33.1	-4.7
AB31	Akbulak array	15.33	330	⇑P	Pn	14 38 33.1	-4.7
	comp=Z,2.8nm,0.4s,baz=136,slow=14,SNR=136						
RAMN	Ramite	15.85	123	eP	Pn	14 38 41.6	-3.0
	comp=Z,17nm,0.5s						
TAPN	Taplejung	16.36	120	eP	Pn	14 38 48.5	-2.5
ODAN	Odarne	16.44	122	eP	Pn	14 38 48.9	-3.1
BVAR	Borovoye Array	16.50	357	Pn	Pn	14 38 49.4	-2.9
	comp=Z,0.5nm,0.3s,baz=161,slow=13,SNR=17						
AKTO	Aktyubinsk	17.03	329	P	Pn	14 38 55.8	-3.1
AKTO				S	Sn	14 41 55.4	-13
AKTO	Aktyubinsk	17.03	329	P	Pn	14 38 56.5	-2.4
	comp=Z,1.7nm,0.3s,baz=136,slow=11,SNR=30						
AKTO	Aktyubinsk	17.03	329	⇑P	Pn	14 38 55.8	-3.1
	comp=Z,7.3nm,0.8s						
ZALV	Zalesovo Beam	19.63	23	iP	P	14 39 29.0	+1.5
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV	Zalesovo Beam	19.63	23	P	P	14 39 27.5	0.0
	comp=Z,1.6nm,0.3s,baz=213,slow=10,SNR=7.9						
GNI	Garni	21.44	288	eP	P	14 39 47.3	+0.1
GNI				pmax	pmax		
	comp=Z,26nm,0.9s						
ARU	Arti	21.78	340	diP	P	14 39 50.4	-0.1
ARU						14 40 13.5	
ARU				S	S	14 43 48.9	+3.6
ARU				SS	SnSn	14 44 17.4	-2.0
ARU				pmax	pmax		
	comp=Z,11nm,1.3s						
ARU	Arti	21.78	340	P	P	14 39 49.8	-0.7
	comp=Z,1.0nm,0.3s,baz=113,slow=18,SNR=4.5						
GTA	Gaotai	22.29	74	⇑P	P	14 40 01.9	+5.7
KBZ	Khabaz	23.10	297	eP	P	14 40 03.7	-0.4
KBZ	Khabaz	23.10	297	P	P	14 40 02.2	-1.9
	comp=Z,1.9nm,0.6s,baz=102,slow=11,SNR=4.7						
KIV	Kislovodsk	23.28	298	eP	P	14 40 06.6	+0.6
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				MLR	MLR		
	comp=Z,130nm,14.0s						
SONM	Songino Array	27.82	55	P	P	14 40 48.1	+1.2
	comp=Z,0.2nm,0.3s,baz=279,slow=10,SNR=2.7						
CMAR	Chiang Mai Arr	29.97	120	LR	LR	14 56 20.2	
	comp=Z,17nm,19.7s,baz=130,slow=43						
OBN	Obninsk	30.28	319	eP	P	14 41 08.0	-0.4
OBN				e		14 42 08.7	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKASG	Malin Array Be	33.37	309	P	P	14 41 35.4	-0.2
	comp=Z,0.6nm,0.5s,baz=78,slow=7.5,SNR=5.4						
AKBB	Malin Array Si	33.37	309	iP	P	14 41 34.9	-0.7
CFR	Carcaliu	33.73	299	⇓P	P	14 41 38.6	-0.1
CFR	Carcaliu	33.73	299	⇓P	P	14 41 38.6	-0.1
MLR	Muntele Rosu	35.27	299	P	P	14 41 54.0	+1.8
MLR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
JOF	Joensuu	36.12	330	P	P	14 41 58.9	-0.1
JOF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
FINES	FINESS Array B	37.77	326	P	P	14 42 13.7	+0.7
	comp=Z,2.5nm,0.4s,baz=121,slow=8.1,SNR=20						
SUF	Sumiainen	38.19	328	P	P	14 42 17.4	+0.9
SUF				pmax	pmax		
	comp=Z,16nm,2.7s						
ARCES	ARCESS Array B	41.32	337	P	P	14 42 43.6	+1.1
	comp=Z,7.7nm,1.1s,baz=114,slow=9.2,SNR=21						
GERES	GERESS Array B	43.38	305	P	P	14 42 59.9	+0.4
	comp=Z,0.3nm,0.5s,baz=74,slow=7.2,SNR=2.3						
HFS	Hagfors	43.39	322	P	P	14 42 59.6	+0.4
	comp=Z,6.8nm,0.5s,baz=104,slow=9.5,SNR=26						
KSRS	Korea Array	44.31	71	LR	LR	15 06 05.8	
	comp=Z,44nm,20.4s,baz=166,slow=42						
NB2	NORSAR Subarra	44.69	323	P	P	14 43 09.7	0.0
	comp=Z,2.5nm,0.5s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.69	323	P	P	14 43 10.0	+0.3
	comp=Z,3.5nm,0.6s,baz=96,slow=7.7,SNR=15						
TIXI	Tiksi	45.51	22	eP	P	14 43 16.4	+0.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
USA0B	Ussuriysk Arra	45.63	61	⇑eP	P	14 43 18.0	+0.7
SEY	Seymchan	54.05	34	⇓eP	P	14 44 19.8	-1.0
BILL	Bilibino	58.30	26	eP	P	14 44 53.1	+2.2
BILL				e		14 45 42.7	
BILL				e		14 47 00.8	
BILL				pmax	pmax		
	comp=Z,4.0nm,2.1s						
TORD	Torodi Ar. Bea	66.31	269	P	P	14 45 42.6	-2.5
	comp=Z,0.8nm,0.6s,baz=52,slow=5.5,SNR=4.6						
INK	Inuvik	73.76	10	P	P	14 46 31.4	+1.6
	comp=Z,0.3nm,0.4s,baz=17,slow=0.8,SNR=4.2						
YKA	Yellowknife Ar	81.17	3	P	P	14 47 12.2	+1.1
	comp=Z,0.1nm,0.3s,baz=349,slow=5.6,SNR=4.5						
WRA	Warramunga Arr	81.52	122	P	P	14 47 14.2	+0.5
	comp=Z,0.9nm,1.0s,baz=288,slow=5.0,SNR=6.1						
ASAR	Alice Springs	83.80	125	P	P	14 47 25.2	-0.3
	comp=Z,0.6nm,1.0s,baz=310,slow=4.9,SNR=3.2						

MAN 23 14:45:52.5, 6.63N×125.28E, h34km, mb4.1, ML2.9, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.63	211	eP	Pn	14 46 04.2	-1.0
SKMP	Bagumbayan, Su	0.74	261	eP	Pb	14 46 07.1	0.0
SKMP				eS	Sn	14 46 14.8	-1.9
MATI	Mati	1.02	72	eP	Pn	14 46 10.6	+0.1

*KRNET **23** 14:51:26.4±0.1, 41˚.08N×73˚.65E, h14km, mb3.7*
*NNC **23** 14:51:26.4±0.7, 41˚.08N×73˚.59E, h0km, mb4.3, mpv4.0, Error ellipse: s-maj=5.6km s-min=3.3km az=174.0*
*SOME **23** 14:51:26.6, 41˚.05N×73˚.63E, h15km*
*KNET **23** 14:51:27.3±0.4, 41˚.16N×73˚.67E, h5km±2km, ml3.4, Error ellipse: s-maj=3.4km s-min=2.4km az=104.0*

ISC 23 14:51:26.7±1.1, 41˚.10N±0˚.03×73˚.65E±0˚.02, h17km±9km, n86, σ1s90/136, 33C-27D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.55	294	⇓iP	Pg	14 51 37.1	-0.7
	baz=96						
ARSB				⇓iS	Sg	14 51 45.3	+0.1
	baz=96						
ARLS	Aral	0.92	33	⇓iP	Pb	14 51 44.3	+0.1
	baz=33						
ARLS				⇓iS	Sn	14 51 57.4	-0.3
	baz=33						
AML	Almayashu	1.03	2	⇓eP	Pb	14 51 46.5	+0.2
	baz=2.0						
AML				⇓iS	Sn	14 52 01.3	+0.3
	baz=2.0						
AML	Almayashu	1.03	2	P	Pb	14 51 46.4	0.0
	173nm,0.2s,SNR=265						
AML				⇓S	Sn	14 52 00.9	-0.1
	452nm,0.2s						
ANR	Andizhan	1.04	251	P	Pb	14 51 45.9	-0.2
ANR				S	Sb	14 51 59.8	+0.4
UCH	Uchtor	1.30	29	⇓iP	Pg	14 51 51.5	-0.4
	baz=29						
UCH				⇓iS	Sg	14 52 09.4	+0.5
	baz=29						
UCH	Uchtor	1.30	29	⇑P	Pb	14 51 51.3	+0.4
	62nm,0.2s,SNR=178						
UCH				⇑S	Sg	14 52 09.8	+0.9
	361nm,0.2s						
ARK	Arkit	1.45	299	⇓iP	Pb	14 51 53.4	+0.2
	baz=0.0						
ARK				⇓iS	Sg	14 52 13.0	-0.5
	baz=0.0						
FRG	Fergana	1.46	256	P	Pg	14 51 55.6	+0.8
FRG				S	Sg	14 52 16.6	+2.8
KZA	Kyzart	1.55	50	⇓iP	Pb	14 51 55.8	+0.7
	baz=50						
KZA				⇓iS	Sg	14 52 17.3	+0.6
	baz=50						
KZA	Kyzart	1.55	50	⇑P	Pb	14 51 55.8	+0.7
	41nm,0.2s,SNR=52						
EKS2	Erkin-Say	1.57	3	⇓iP	Pg	14 51 56.1	-0.7
	baz=4.0						
EKS2				⇓iS	Sg	14 52 17.8	+0.6
	baz=4.0						
EKS2	Erkin-Say	1.57	3	⇓P	Pb	14 51 55.8	+0.6
	48nm,0.2s,SNR=85						
AAK	Ala-Archa	1.66	22	⇓iP	Pg	14 51 57.9	-0.8
	baz=22						
AAK				⇓iS	Sg	14 52 20.6	+0.3
	baz=22						
AAK	Ala-Archa	1.66	22	⇑P	Pg	14 51 58.2	-0.5
	69nm,0.2s,SNR=86						
AAK				⇓S	Sg	14 52 20.8	+0.5
	415nm,0.2s						
AAK	Ala-Archa	1.66	22	⇓P	Pb	14 51 57.8	+0.9
	36nm,0.5s						
AAK				⇑S	Sg	14 52 20.7	+0.3
	211nm,0.3s						
MRKS	Merke	1.68	349	eP	Pb	14 51 57.8	+0.7
	644nm,0.4s						
MRKS				eS	Sg	14 52 20.6	-0.2
	567nm,0.4s						
MRKS	Merke	1.68	349	P	Pb	14 51 57.8	+0.7
	644nm,0.4s						
MRKS				S	Sg	14 52 20.6	-0.2
	567nm,0.4s						
NRN	Naryn	1.80	78	⇑iP	Pb	14 52 00.0	+0.6
	baz=78						
NRN				⇑iS	Sg	14 52 24.1	-0.7
	baz=78						
KBK	Karagaybulak	1.83	31	⇑iP	Pg	14 52 01.0	-0.9
	baz=31						
KBK				⇑iS	Sg	14 52 25.7	-0.1
	baz=31						
KBK	Karagaybulak	1.83	31	⇓P	Pg	14 52 01.2	-0.7
	57nm,0.2s,SNR=92						
KBK				⇑S	Sg	14 52 26.8	+1.0
	727nm,0.3s						
FRU1	Bishkek	1.86	23	⇑iP	Pb	14 52 01.3	+1.1
	baz=23						
FRU1				⇑iS	Sg	14 52 26.5	-0.1
	baz=23						
CHMS	Chumysh	2.07	23	⇑iP	Pb	14 52 04.6	+0.8
	baz=23						
CHMS				⇑iS	Sg	14 52 32.2	-1.1
	baz=23						
CHMS	Chumysh	2.07	23	P	Pb	14 52 04.9	+1.1
	69nm,0.3s,SNR=62						
CHMS				⇑S	Sg	14 52 33.3	+0.1
	91nm,0.2s	

DGS	**Degeres**	**2.66**	**36**	*e*P	**Pg**	**14 52 16.2**	**-1.4**
	76nm,0.5s						
DGS				*e*S	**Sg**	**14 52 52.0**	**-0.2**
	257nm,0.6s						
DGS	**Degeres**	**2.66**	**36**	Pg	**Pg**	**14 52 16.2**	**-1.4**
	76nm,0.5s						
DGS				Lg	Lg	14 52 52.0	
	257nm,0.6s						
KDJ	**Kajisay**	**2.84**	**68**	⇑*i*P	**Pb**	**14 52 15.2**	**-1.8**
	baz=67						
KDJ				⇑*i*S	**Sb**	**14 52 50.8**	**-0.7**
	baz=67						
MTBS	**Maitube**	**2.90**	**45**	*e*P	**Pg**	**14 52 20.4**	**-1.8**
	52nm,0.4s						
MTBS				*e*S	**Sg**	**14 52 59.5**	**-0.3**
	166nm,0.5s						
MTBS	**Maitube**	**2.90**	**45**	Pg	**Pg**	**14 52 20.4**	**-1.8**
	52nm,0.4s						
MTBS				Lg	Lg	14 52 59.4	
	166nm,0.5s						
IUG	**Iuzhnay**	**2.91**	**292**	*e*P	**Pb**	**14 52 19.4**	**+1.3**
	8.2nm,0.3s						
IUG				*e*S	**Sg**	**14 52 57.5**	**-2.7**
	556nm,0.3s						
IZV	**Izvestkoviy**	**2.94**	**48**	*e*P	**Pb**	**14 52 20.3**	**+1.7**
	49nm,0.5s						
IZV				*e*S	**Sg**	**14 52 59.5**	**-1.5**
	181nm,0.9s						
IZV	**Izvestkoviy**	**2.94**	**48**	Pg	**Pb**	**14 52 20.3**	**+1.7**
	49nm,0.5s						
IZV				Lg	Lg	14 52 59.5	
	181nm,0.9s						
KRBS	**Karabastau**	**3.00**	**29**	*e*P	**Pb**	**14 52 21.7**	**+2.1**
	19nm,0.5s						
KRBS				*e*S	**Sg**	**14 53 02.0**	**-1.0**
	43nm,0.6s						
KRBS	**Karabastau**	**3.00**	**29**	Pg	**Pb**	**14 52 21.7**	**+2.1**
	19nm,0.5s						
KRBS				Lg	Lg	14 53 02.0	
	43nm,0.6s						
KK31	**Karatay Array**	**3.08**	**312**	⇑Pn	**Pn**	**14 52 16.1**	**+1.6**
	1.6nm,0.3s,baz=128,slow=13,SNR=246						
KK31				⇑Pg	**Pb**	**14 52 21.8**	**+0.9**
	15nm,0.4s,baz=136,slow=17,SNR=57						
KK31				⇑Lg	Lg	14 53 02.3	
	106nm,0.4s,baz=132,slow=27,SNR=13						
AAA	**Alma-Ata**	**3.21**	**48**	*e*P	**Pg**	**14 52 27.2**	**-1.1**
	68nm,0.3s						
AAA				*e*S	**Sg**	**14 53 10.5**	**+0.5**
	151nm,0.5s						
AAA	**Alma-Ata**	**3.21**	**48**	Pg	**Pg**	**14 52 27.2**	**-1.1**
	68nm,0.3s						
AAA				Lg	Lg	14 53 10.5	
	151nm,0.5s						
KNDC	**Almaty**	**3.25**	**48**	⇑Pg	**Pg**	**14 52 26.8**	**-2.1**
	39nm,0.6s						
KNDC				⇓Lg	Lg	14 53 10.8	
	280nm,0.8s						
MDOK	**Medeo**	**3.26**	**50**	*e*P	**Pg**	**14 52 27.2**	**-1.9**
	27nm,0.4s						
MDOK				*e*S	**Sg**	**14 53 10.6**	**-0.9**
	128nm,0.8s						
MDOK	**Medeo**	**3.26**	**50**	⇑Pg	**Pg**	**14 52 27.3**	**-1.9**
	28nm,0.7s						
MDOK				⇑Lg	Lg	14 53 10.6	
	122nm,0.6s						
MDOK	**Medeo**	**3.26**	**50**	Pg	**Pg**	**14 52 27.2**	**-1.9**
	27nm,0.4s						
MDOK				Lg	Lg	14 53 10.6	
	128nm,0.8s						
CHM	**Chimkent**	**3.27**	**293**	*e*P	**Pg**	**14 52 27.0**	**-2.2**
	87nm,0.4s						
CHM				*e*S	**Sg**	**14 53 10.4**	**-1.2**
	587nm,0.5s						
KOTS	**Kotyrbulak**	**3.34**	**49**	*e*P	**Pb**	**14 52 28.5**	**-2.2**
	78nm,0.4s						
KOTS				*e*S	**Sg**	**14 53 13.4**	**-0.7**
	144nm,0.7s						
KOTS	**Kotyrbulak**	**3.34**	**49**	Pg	**Pg**	**14 52 28.5**	**-2.2**
	78nm,0.4s						
KOTS				Lg	Lg	14 53 13.4	
	144nm,0.7s						
KUU	**Kurty**	**3.43**	**35**	*e*P	**Pb**	**14 52 29.5**	**+2.6**
	16nm,0.3s						
KUU				*e*S	**Sg**	**14 53 15.1**	**-1.7**
	80nm,0.5s						
KUU	**Kurty**	**3.43**	**35**	Pg	**Pb**	**14 52 29.5**	**+2.6**
	16nm,0.3s						
KUU				Lg	Lg	14 53 15.1	
	80nm,0.5s						
BRLS	**Borolday**	**3.44**	**305**	*e*P	**Pb**	**14 52 28.3**	**+1.3**
	3.8nm,0.5s						
BRLS				*e*S	**Sg**	**14 53 13.5**	**-3.5**
	23nm,0.5s						
KTBS	**Karatobe**	**3.44**	**40**	*e*P	**Pb**	**14 52 29.7**	**+2.5**
	16nm,0.5s						
KTBS				*e*S	**Sg**	**14 53 15.3**	**-2.0**
	109nm,0.4s						
KTBS	**Karatobe**	**3.44**	**40**	Pg	**Pb**	**14 52 29.7**	**+2.5**
	16nm,0.5s						
KTBS				Lg	Lg	14 53 15.3	
	109nm,0.4s						
CHKK	**Chushkaly**	**3.70**	**41**	*e*P	**Pb**	**14 52 34.3**	**+2.8**
	9.3nm,0.3s						
CHKK				*e*S	**Sg**	**14 53 23.0**	**-2.4**
	100nm,0.3s						
CHKK	**Chushkaly**	**3.70**	**41**	Pg	**Pb**	**14 52 34.3**	**+2.8**
	9.3nm,0.3s						
CHKK				Lg	Lg	14 53 23.0	
	100nm,0.3s						
BTLS	**Baital**	**3.95**	**4**	*e*P	**Pb**	**14 52 39.0**	**+3.2**
	2.9nm,0.4s						
BTLS				*e*S	**Sg**	**14 53 30.8**	**-2.7**
	68nm,0.6s						
BTLS	**Baital**	**3.95**	**4**	Pg	**Pb**	**14 52 39.1**	**+3.2**
	2.9nm,0.4s						
BTLS				Lg	Lg	14 53 30.8	
	68nm,0.6s						
SATY	**Saty**	**4.04**	**59**	*e*P	**Pb**	**14 52 40.8**	**+3.3**
	15nm,0.6s						
SATY				*e*S	**Sg**	**14 53 34.5**	**-2.1**
	68nm,0.4s						
SATY	**Saty**	**4.04**	**59**	Pg	**Pb**	**14 52 40.8**	**+3.3**
	15nm,0.6s						
SATY				Lg	Lg	14 53 34.5	
	68nm,0.4s						
ZHN	**Zhinishke**	**4.12**	**58**	*e*P	**Pg**	**14 52 42.9**	**-2.6**
	6.2nm,0.3s						
ZHN				*e*S	**Sg**	**14 53 37.3**	**-1.4**
	15nm,0.3s						
ZHN	**Zhinishke**	**4.12**	**58**	Pg	**Pg**	**14 52 42.9**	**-2.6**
	6.2nm,0.3s						
ZHN				Lg	Lg	14 53 37.3	
	15nm,0.3s						
KURS	**Kuram**	**4.12**	**53**	*e*P	**Pg**	**14 52 43.5**	**-2.0**
	7.1nm,0.7s						
KURS				*e*S	**Sg**	**14 53 38.2**	**-0.6**
	21nm,0.9s						
KURS	**Kuram**	**4.12**	**53**	Pg	**Pg**	**14 52 43.5**	**-2.0**
	7.1nm,0.7s						
KURS				Lg	Lg	14 53 38.2	
	21nm,0.9s						
ARXS	**Arharly**	**4.38**	**43**	*e*P	**Pb**	**14 52 46.3**	**+3.1**
	14nm,0.5s						
ARXS				*e*S	**Sg**	**14 53 43.2**	**-4.0**
	72nm,0.4s						
ARXS	**Arharly**	**4.38**	**43**	Pg	**Pb**	**14 52 46.3**	**+3.1**
	14nm,0.5s						
ARXS				Lg	Lg	14 53 43.2	
	72nm,0.4s						
KPKS	**Kokpek**	**4.42**	**56**	*e*P	**Pg**	**14 52 48.3**	**-3.0**
	23nm,0.5s						
KPKS				*e*S	**Sg**	**14 53 46.8**	**-1.7**
	87nm,0.5s						
UZB	**Uzynbulak**	**4.49**	**61**	*e*P	**Pg**	**14 52 49.1**	**-3.5**
	7.9nm,0.4s						
UZB				*e*S	**Sg**	**14 53 48.0**	**-2.7**
	40nm,0.4s						
UZB	**Uzynbulak**	**4.49**	**61**	Pg	**Pg**	**14 52 49.1**	**-3.5**
	7.9nm,0.4s						
UZB				Lg	Lg	14 53 48.0	
	40nm,0.4s						
SHLS	**Shalkode**	**4.79**	**63**	*e*P	**Pg**	**14 52 59.4**	**+1.1**
	14nm,0.7s						
SHLS				*e*S	**Sg**	**14 54 05.8**	**+5.5**
	62nm,0.3s						
SHLS	**Shalkode**	**4.79**	**63**	Pg	**Pg**	**14 52 59.4**	**+1.1**
	14nm,0.7s						
SHLS				Lg	Lg	14 54 05.8	
	62nm,0.3s						
PDGK	**Podgornoye**	**4.88**	**61**	Pg	**Pb**	**14 52 55.2**	**+3.5**
	2.1nm,0.6s						
PDGK				Lg	Lg	14 53 58.6	
	14nm,0.7s						
PDGK	**Podgornoye**	**4.88**	**61**	⇑Pg	**Pg**	**14 52 56.4**	**-3.6**
	9.5nm,0.7s						
PDGK				⇑Lg	Lg	14 53 59.0	
	45nm,1.0s						
TDK	**Taldyqorghan**	**5.23**	**40**	*e*P	**Pg**	**14 53 02.9**	**-3.9**
	25nm,0.1s						
TDK				*e*S	**Sg**	**14 54 11.7**	**-2.7**
	71nm,0.5s						
TDK	**Taldyqorghan**	**5.23**	**40**	Pg	**Pg**	**14 53 02.9**	**-3.9**
	25nm,0.1s						
TDK				Lg	Lg	14 54 11.7	
	71nm,0.5s						
DJR	**Jarkent**	**5.56**	**52**	Pg	**Pg**	**14 53 10.8**	**-2.2**
	3.2nm,0.4s						
DJR				Lg	Lg	14 54 25.8	
	27nm,0.7s						
KAPS	**Kapalarasan**	**5.91**	**43**	Pg	**Pg**	**14 53 15.9**	**-3.8**
	6.1nm,0.7s						
KAPS				Lg	Lg	14 54 34.2	
	17nm,0.5s						
MAKZ	**Makanchi**	**8.28**	**44**	⇓Lg	Lg	14 55 46.8	
	6.4nm,1.4s						
MK31	**Makanchi Array**	**8.44**	**45**	⇑Lg	Lg	14 55 52.4	
	3.8nm,0.7s						
BVB5	**Borovoye Array**	**12.14**	**351**	⇓P	**Pn**	**14 54 17.5**	**-1.2**
	2.8nm,0.8s						

MOS ***23*** *15:00:38.7±1.1, 17°.23N×42°.69E, h13km, mb4.6/22, Error ellipse: s-maj=11.1km s-min=5.9km az=82.5*
SGS ***23*** *15:00:38, 17°.33N×42°.66E, h9km, Ml5.1*
IDC ***23*** *15:00:38.2±1.6, 17°.21N×42°.64E, h0km, mb3.9/11, mb1 4.0/11,mb1mx3.8/41,mbtmp3.9/11,MS3.6/12, Ms1 3.6/12,ms1mx3.3/37,Error ellipse: s-maj=35.4km s-min=20.2km az=173.0*
NEIC ***23*** *15:00:41.5±2.4, 17°.32N±0°.06×42°.80E±0°.05,h18km±5km, mb4.5/42,Error ellipse: s-maj=9.0km s-min=7.0km az=184.0*

ISC 23 15:00:39.9±0.8, **17°.36N**±0°.03×**42°.82E**±0°.04, **h8**km±4km, **n155**, σ2ˢ**17**/168, **mb4.4**/43, **MS3.6**/12, **13C-4D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESHS	**BESHS**	**0.02**	**57**	P	**Pg**	**15 00 41.7**	**+0.4**
BESHS				S	**Sg**	**15 00 43.8**	**+1.5**
JAZS	**Jizan**	**0.30**	**163**	P	**Pg**	**15 00 45.2**	**-0.6**
JAZS				S	**Sg**	**15 00 50.0**	**+0.2**
DRBS	**Ad Darb**	**0.69**	**313**	P	Pb	15 00 49.5	-4.7
DRBS				S	**Sb**	**15 00 57.9**	**-5.9**
DJNS	**Zahran al Janu**	**0.77**	**63**	P	**Pb**	**15 00 55.0**	**-0.8**
FRSS	**Farasan al Kab**	**0.92**	**228**	P	Pb	15 00 52.7	-5.4
KNGHS	**KNGHS**	**1.13**	**34**	P	**Pn**	**15 01 00.6**	**-1.7**
ENMS	**ENMS**	**1.72**	**352**	P	**Pn**	**15 01 09.2**	**-1.2**
DAMY	**Dhamar**	**3.15**	**151**		**Pn**	**15 01 29.5**	**-0.7**
DAMY				Sn	**Sn**	**15 02 08.9**	**+0.7**
ATD	**Arta Tunnel**	**5.79**	**180**		**Pn**	**15 02 03.4**	**-2.9**
RAYN	**Ar Rayn**	**6.63**	**22**	P	**Pn**	**15 02 15.5**	**-2.3**
RAYN				SN	**Sn**	**15 03 34.6**	**+0.9**
RAYN	**Ar Rayn**	**6.63**	**22**	Pn	**Pn**	**15 02 15.5**	**-2.3**
RAYN				Sn	**Sn**	**15 03 34.6**	**+0.9**
FURI	**Furi**	**9.33**	**206**	Pn	**Pn**	**15 02 57.1**	**+2.0**
SOCY	**Socotra**	**11.95**	**114**	Pn	**Pn**	**15 03 31.1**	**+0.2**
ARQ	**Araqi**	**14.15**	**63**	P	**Pn**	**15 04 04.9**	**+4.0**
ARQ				S	**Sn**	**15 06 35.0**	**-3.3**
EIL	**Elat**	**14.22**	**331**	Sn	**Sn**	**15 06 46.1**	**+6.4**
	0.3nm,0.3s,baz=157,slow=9.8,SNR=2.8						
EIL				Lg	Lg	15 07 55.4	
	1.7nm,0.3s,baz=212,slow=22,SNR=12						
EIL				LR	LR	15 08 53.5	
	comp=Z,179nm,19.9s,baz=160,slow=35						
ASHO	**Ashiyiah**	**14.34**	**57**	P	**Pn**	**15 04 01.2**	**-2.3**
ASHO				S	**Sn**	**15 06 37.4**	**-5.5**
BSY	**Bisya**	**14.53**	**66**	P	**Pn**	**15 04 04.0**	**-2.0**
BSY				S	**Sn**	**15 06 40.3**	**-7.2**
UOSS	**Minazif**	**14.58**	**57**		**Pn**	**15 04 02.9**	**-3.9**
UOSS	**Minazif**	**14.58**	**57**	P	**Pn**	**15 04 06.3**	**-0.4**
UOSS				S	**Sn**	**15 06 46.5**	**-2.2**
MHTO	**MHTO**	**14.76**	**73**	P	**Pn**	**15 04 05.9**	**-3.2**
MHTO				S	Sn	15 06 42.2	-11
MDH	**Madha**	**14.83**	**56**	P	**Pn**	**15 04 09.2**	**-0.9**
MDH				S	**Sn**	**15 06 49.3**	**-5.4**
HOQ	**Hoqain**	**14.92**	**63**	P	**Pn**	**15 04 13.1**	**+1.8**
HOQ				S	**Sn**	**15 06 52.4**	**-4.4**
BANOM	**Banah**	**15.14**	**53**	P	**Pn**	**15 04 13.1**	**-1.3**
JMDO	**Jabal Madar**	**15.21**	**68**	P	**Pn**	**15 04 14.0**	**-1.3**
JMDO				S	**Sn**	**15 06 57.7**	**-6.4**
ASF	**Jabal al Asfar**	**15.70**	**341**	Sn	**Sn**	**15 07 11.4**	**-4.5**
	0.2nm,0.3s,baz=212,slow=3.2,SNR=4.3						
ASF				Lg	Lg	15 08 45.1	
	1.1nm,0.3s,baz=291,slow=20,SNR=13						
WSAR	**Wadi Sarin**	**15.94**	**66**	Pn	**Pn**	**15 04 21.2**	**-3.5**
	0.7nm,0.3s,baz=255,slow=15,SNR=12						
WSAR				Sn	**Sn**	**15 07 14.2**	**-7.5**
	3.5nm,0.3s,baz=32,slow=19,SNR=3.4						
WSAR				LR	LR	15 10 42.1	
	comp=Z,272nm,18.1s,baz=281,slow=37						
WBK	**Wadi Bani Khal**	**16.05**	**68**	P	**Pn**	**15 04 23.8**	**-2.4**
MMAI	**Mount Meron Ar**	**16.97**	**338**	Sn	**Sn**	**15 07 46.1**	**-0.7**
	0.7nm,0.3s,baz=166,slow=18,SNR=3.6						
MMAI				Lg	Lg	15 09 26.3	
	1.5nm,0.3s,baz=138,slow=20,SNR=3.7						
MMAI				LR	LR	15 09 56.5	
	comp=Z,83nm,21.9s,baz=40,slow=33						
KMBO	**Kilima Mbogo**	**19.17**	**197**	P	**P**	**15 05 03.5**	**-0.8**
KMBO				pmax	pmax		
	comp=Z,25nm,2.0s						
KMBO	**Kilima Mbogo**	**19.17**	**197**	P	**P**	**15 05 03.5**	**-0.8**
GAZ	**Gaziantep**	**20.35**	**347**	P	**P**	**15 05 17.6**	**+0.6**
MBAR	**Mbarara**	**21.45**	**215**	*e*P	**P**	**15 05 27.1**	**-2.0**
MBAR				pmax	pmax		
	comp=Z,9.0nm,1.8s						
MBAR	**Mbarara**	**21.45**	**215**	LR	LR	15 13 27.7	
	comp=Z,211nm,19.5s,baz=358,slow=36						
MBAR	**Mbarara**	**21.45**	**215**	P	**P**	**15 05 28.5**	**-0.6**
ELL	**Elmali**	**22.44**	**332**	P	**P**	**15 05 40.1**	**+0.6**
ELL				pmax	pmax		
	comp=Z,166nm,1.9s						
ELL	**Elmali**	**22.44**	**332**	P	**P**	**15 05 40.1**	**+0.6**
GNI	**Garni**	**22.77**	**4**	*e*P	**P**	**15 05 43.3**	**+0.2**
GNI				pmax	pmax		
	comp=Z,16nm,1.1s						
GNI	**Garni**	**22.77**	**4**	P	**P**	**15 05 46.1**	**+3.0**
	comp=Z,10.0nm,0.7s,baz=144,slow=6.4,SNR=8.0						
GNI				LR	LR	15 16 57.3	
	comp=Z,42nm,19.1s,baz=187,slow=43						
GNI	**Garni**	**22.77**	**4**	P	**P**	**15 05 43.5**	**+0.4**
GNI				IAmb	IAmb	15 05 50.4	
	comp=Z,12nm,0.8s						
BR131	**Keskin Array S**	**23.68**	**342**	*e*P	**P**	**15 05 52.9**	**+0.7**
BR131	**Keskin Array S**	**23.68**	**342**	P	**P**	**15 05 52.6**	**+0.4**
BR131				IAmb	IAmb	15 05 57.0	
	comp=Z,14nm,1.4s						
BRTR	**Keskin Array B**	**23.68**	**342**	P	**P**	**15 05 52.2**	**0.0**
BRTR	**Keskin Array B**	**23.68**	**342**	P	**P**	**15 05 52.9**	**+0.7**
	comp=Z,5.5nm,1.1s,baz=164,slow=10,SNR=13						
BRTR				LR	LR	15 14 14.3	
	comp=Z,142nm,19.9s,baz=141,slow=34						
BRTR	**Keskin Array B**	**23.68**	**342**	P	**P**	**15 05 52.2**	**0.0**
AKH	**Akhalkalaki**	**23.98**	**1**	P	**P**	**15 05 54.6**	**-0.6**
AKH				pmax	pmax		
	comp=Z,28nm,1.9s						
AKH	**Akhalkalaki**	**23.98**	**1**	P	**P**	**15 05 54.6**	**-0.6**
AKH				IAmb	IAmb	15 06 35.0	
	comp=Z,28nm,1.9s						
ANTO	**Ankara**	**24.06**	**341**	P	**P**	**15 05 56.2**	**+0.3**
ANTO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ANTO	**Ankara**	**24.06**	**341**	P	**P**	**15 05 56.2**	**+0.3**
ANTO				IAmb	IAmb	15 06 01.9	
	comp=Z,9.8nm,0.7s						
HRA	**Herat**	**24.28**	**42**	P	**P**	**15 05 58.7**	**+0.6**
HRA				IAmb	IAmb	15 06 03.0	
	comp=Z,9.6nm,0.7s						
AKT	**Akhty**	**24.41**	**9**	⇓*e*P	**P**	**15 05 58.2**	**-0.9**
AKT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GEYT	**Alibeck**	**24.50**	**30**	P	**P**	**15 06 01.8**	**+1.9**
	comp=Z,1.7nm,0.7s,baz=205,slow=9.8,SNR=4.4						
GEYT				LR	LR	15 16 00.6	
	comp=Z,87nm,18.8s,baz=245,slow=37						
GEYT	**Alibeck**	**24.50**	**30**	P	**P**	**15 05 59.6**	**-0.3**
GYA0B	**ALIBECK ARRAY**	**24.50**	**30**	P	**P**	**15 06 00.1**	**+0.3**
MSEY	**Mahe Island**	**25.21**	**149**	P	**P**	**15 06 05.7**	**-0.7**
MSEY				pmax	pmax		
	comp=Z,59nm,1.2s						
MSEY	**Mahe Island**	**25.21**	**149**	P	**P**	**15 06 05.7**	**-0.7**
KIV	**Kislovodsk**	**26.52**	**360**	*e*P	**P**	**15 06 18.1**	**0.0**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
KIV				MLR	MLR		
	comp=Z,154nm,15.0s						
KBL	**Kabul**	**29.00**	**49**	P	**P**	**15 06 41.0**	**+0.4**
KBL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KBL	**Kabul**	**29.00**	**49**	P	**P**	**15 06 41.0**	**+0.4**
WDD	**Wied Dalam**	**31.12**	**312**	P	**P**	**15 06 58.1**	**-1.0**
CHGR	**Chuyangaron**	**31.29**	**42**	P	**P**	**15 07 01.3**	**+0.6**
MLR	**Muntele Rosu**	**31.40**	**337**	P	**P**	**15 07 01.7**	**+0.1**
MLR				pmax	pmax		
	comp=Z,15nm,1.7s						
MLR	**Muntele Rosu**	**31.40**	**337**	P	**P**	**15 07 01.7**	**+0.1**
MLR				IAmb	IAmb	15 08 02.0	
	comp=Z,15nm,1.7s						
VRI	**Vrincioaia**	**31.43**	**338**	⇑P	**P**	**15 07 04.4**	**+2.6**
VRI	**Vrincioaia**	**31.43**	**338**	⇑P	**P**	**15 07 04.4**	**+2.6**
PLOR	**Plostina**	**31.45**	**338**	⇑P	**P**	**15 07 03.5**	**+1.6**
PLOR	**Plostina**	**31.45**	**338**	⇑P	**P**	**15 07 03.5**	**+1.6**
VOIR		**31.69**	**336**	⇑P	**P**	**15 07 04.5**	**+0.4**
VOIR		**31.69**	**336**	⇑P	**P**	**15 07 04.5**	**+0.4**
NIL	**Nilore**	**31.74**	**53**	P	**P**	**15 07 05.9**	**+1.2**
NIL				pmax	pmax		
	comp=Z,15nm,1.3s						
NIL	**Nilore**	**31.74**	**53**	P	**P**	**15 07 05.9**	**+1.2**
NIL				IAmb	IAmb	15 07 10.4	
	comp=Z,15nm,1.3s						
ARR	**Arges**	**31.80**	**335**	⇑P	**P**	**15 07 03.0**	**-2.0**
GAR	**Garm**	**32.23**	**42**	P	**P**	**15 07 09.9**	**+0.9**
MDVR	**Moldovita**	**32.58**	**332**	⇑P	**P**	**15 07 11.1**	**-0.8**
GZR	**Gura Zlata**	**32.59**	**333**	⇓P	**P**	**15 07 12.4**	**+0.4**
GZR	**Gura Zlata**	**32.59**	**333**	⇓P	**P**	**15 07 12.4**	**+0.4**
BTK	**Batken**	**33.14**	**41**	P	**P**	**15 07 18.0**	**+1.0**
BTK				pmax	pmax		
	comp=Z,22nm,1.5s						
BTK	**Batken**	**33.14**	**41**	P	**P**	**15 07 18.0**	**+1.0**
BZS	**Buzias**	**33.27**	**332**	⇑P	**P**	**15 07 17.1**	**-0.8**
BZS	**Buzias**	**33.27**	**332**	⇑P	**P**	**15 07 17.1**	**-0.8**
BURAR	**Bucovina Array**	**33.47**	**338**	⇑P	**P**	**15 07 22.8**	**+3.1**
BURAR	**Bucovina Array**	**33.47**	**338**	⇑P	**P**	**15 07 22.8**	**+3.1**
BURAR	**Bucovina Array**	**33.47**	**338**	P	**P**	**15 07 18.5**	**-1.2**
BUR08	**Bucovina Ar. S**	**33.50**	**338**	P	**P**	**15 07 19.7**	**-0.2**
BUR08				IAmb	IAmb	15 08 02.4	
	comp=Z,20nm,2.0s						
ABKAR	**Akbulak array**	**34.72**	**20**	P	**P**	**15 07 29.8**	**-0.6**
ABKAR	**Akbulak array**	**34.72**	**20**	P	**P**	**15 07 30.1**	**-0.2**
KK31	**Karatay Array**	**34.79**	**37**	P	**P**	**15 07 33.3**	**+2.2**
KK31				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KK31	**Karatay Array**	**34.79**	**37**	P	**P**	**15 07 33.3**	**+2.2**
KK31				IAmb	IAmb	15 07 37.1	
	comp=Z,4.3nm,1.0s						
KKAR	**Karatay Array**	**34.79**	**37**	P	**P**	**15 07 33.0**	**+1.9**
KKAR				P	**P**	**15 07 33.8**	**+2.6**
KKAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KKAR	**Karatay Array**	**34.79**	**37**	P	**P**	**15 07 33.0**	**+1.9**
KKAR				IAmb	IAmb	15 07 37.1	
	comp=Z,4.3nm,1.0s						
KKAR	**Karatay Array**	**34.79**	**37**	P	**P**	**15 07 33.8**	**+2.6**
KEST	**Kesra**	**34.87**	**308**	LR	LR	15 21 49.7	
	comp=Z,67nm,18.0s,baz=346,slow=36						
KEST	**Kesra**	**34.87**	**308**	P	**P**	**15 07 32.2**	**+0.3**
AKASG	**Malin Array Be**	**35.01**	**345**	P	**P**	**15 07 31.7**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=162,slow=7.4,SNR=4.6						
AKASG				LR	LR	15 22 44.9	
	comp=Z,80nm,18.7s,baz=145,slow=38						
ARSB	**Arslanbob**	**35.22**	**41**	P	**P**	**15 07 37.2**	**+2.2**
TAM	**Tamanrasset**	**35.38**	**285**	P	**P**	**15 07 35.8**	**-0.9**
TAM				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TAM	**Tamanrasset**	**35.38**	**285**	P	**P**	**15 07 35.8**	**-0.9**
TAM				IAmb	IAmb	15 07 37.5	
	comp=Z,3.0nm,0.6s						
KSH	**Kashi**	**36.25**	**46**	P	**P**	**15 07 40.6**	**-3.3**
KSH				pP	pP	15 07 47.5	+1.1
KSH				pmax	pmax		
	comp=Z,190nm,5.6s						
VYHS	**Vyhne**	**36.70**	**333**	*e*P	**P**	**15 07 47.1**	**-0.3**
VYHS	**Vyhne**	**36.70**	**333**	*e*P	**P**	**15 07 47.1**	**-0.3**
AAK	**Ala-Archa**	**36.88**	**40**	*e*P	**P**	**15 07 51.1**	**+1.8**
AAK	**Ala-Archa**	**36.88**	**40**	P	**P**	**15 07 48.8**	**-0.4**
NRN	**Naryn**	**37.20**	**43**	P	**P**	**15 07 54.3**	**+2.1**
NRN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NRN	**Naryn**	**37.20**	**43**	P	**P**	**15 07 54.3**	**+2.1**
OSSC	**Osservatorio P**	**37.32**	**321**	P	**P**	**15 07 56.0**	**+3.2**
OBN	**Obninsk**	**37.99**	**354**	*e*P	**P**	**15 07 57.9**	**-0.3**
OBN				*e*		15 09 23.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KDJ	**Kajisay**	**38.31**	**43**	P	**P**	**15 08 03.4**	**+1.9**
KDJ				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KDJ	**Kajisay**	**38.31**	**43**	P	**P**	**15 08 03.4**	**+1.9**
KDJ				IAmb	IAmb	15 08 05.7	
	comp=Z,9.6nm,1.3s						
GEC2	**GERESS Array S**	**39.31**	**330**	P	**P**	**15 08 07.8**	**-1.8**
GEC2				IAmb	IAmb	15 09 25.9	
	comp=Z,11nm,1.6s						
GERES	**GERESS Array B**	**39.31**	**330**	P	**P**	**15 08 07.5**	**-2.1**
GERES	**G

WMQ					PP	**PP**	**15 10 56.4**	**+4.5**
WMQ					pmax	pmax		
	comp=Z,5.0nm,0.8s							
WMQ					pmax	pmax		
	comp=Z,76nm,5.5s							
WMQ					LR	LR		
	comp=N,44nm,29.1s							
WMQ					LR	LR		
	comp=E,1μm,28.8s							
WMQ					LR	LR		
	comp=Z,140nm,29.5s							
ESDC	**Sonseca Array**	**46.12**	**309**		P	**P**	**15 09 03.8**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=107,slow=6.2,SNR=4.0							
ESDC	**Sonseca Array**	**46.12**	**309**		P	**P**	**15 09 02.4**	**-2.6**
KONO	**Kongsberg**	**48.62**	**338**		P	**P**	**15 09 22.5**	**-1.5**
KONO	**Kongsberg**	**48.62**	**338**		P	**P**	**15 09 22.5**	**-1.5**
BOSA	**Boshof**	**48.76**	**201**		LR	LR	15 30 11.4	
	comp=Z,123nm,18.4s,baz=332,slow=36							
ZAA0	**Zalesovo Array**	**48.80**	**32**		P	**P**	**15 09 25.7**	**+0.2**
ZALV	**Zalesovo Beam**	**48.80**	**32**		P	**P**	**15 09 24.9**	**-0.6**
ZALV	**Zalesovo Beam**	**48.80**	**32**		P	**P**	**15 09 25.7**	**+0.2**
	comp=Z,13nm,0.6s,baz=241,slow=8.7,SNR=42							
ZALV	**Zalesovo Beam**	**48.80**	**32**		P	**P**	**15 09 24.9**	**-0.6**
HVS	**Khovu-Aksy**	**52.42**	**38**	⇓	*e*P	**P**	**15 09 52.5**	**-0.5**
HVS					pmax	pmax		
	comp=Z,2.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**53.23**	**80**		P	**P**	**15 10 00.1**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=283,slow=8.1,SNR=4.0							
ARCES	**ARCESS Array B**	**53.26**	**352**		P	**P**	**15 09 59.4**	**+0.5**
ARCES	**ARCESS Array B**	**53.26**	**352**		P	**P**	**15 09 59.8**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=146,slow=7.2,SNR=4.7							
ARCES	**ARCESS Array B**	**53.26**	**352**		P	**P**	**15 09 59.4**	**+0.5**
GTA	**Gaotai**	**53.80**	**54**		*e*P	**P**	**15 10 07.0**	**+3.5**
GTA					pP	sP	15 10 11.8	+4.9
GTA					sP	pP	15 10 14.0	+7.9
GTA					S	**S**	**15 17 43.8**	**+5.1**
GTA					pmax	pmax		
	comp=Z,3.0nm,0.9s							
GTA					pmax	pmax		
	comp=Z,81nm,6.4s							
GTA					LR	LR		
	comp=N,160nm,18.7s							
GTA					LR	LR		
	comp=E,130nm,19.4s							
GTA					LR	LR		
	comp=Z,150nm,15.9s							
SONM	**Songino Array**	**59.64**	**44**		P	**P**	**15 10 45.6**	**+0.8**
SONM					pmax	pmax		
	comp=Z,2.0nm,1.2s							
SONM	**Songino Array**	**59.64**	**44**		P	**P**	**15 10 46.3**	**+1.4**
	comp=Z,1.7nm,0.9s,baz=253,slow=7.5,SNR=10							
SONM	**Songino Array**	**59.64**	**44**		P	**P**	**15 10 45.6**	**+0.8**
HHC	**Hu-ho-hao-te**	**62.88**	**53**		*e*P	**P**	**15 11 08.8**	**+1.9**
HHC					pmax	pmax		
	comp=Z,5.0nm,0.9s							
HHC					pmax	pmax		
	comp=Z,61nm,5.9s							
TIXI	**Tiksi**	**72.42**	**19**		P	**P**	**15 12 07.3**	**+0.9**
TIXI					pmax	pmax		
	comp=Z,8.0nm,0.3s							
TIXI	**Tiksi**	**72.42**	**19**		P	**P**	**15 12 07.3**	**+0.9**
BILL	**Bilibino**	**85.60**	**18**		*e*P	**P**	**15 13 18.9**	**+0.2**
BILL					*e*		15 16 44.1	
BILL					*e*PPP	PPP	15 18 33.3	
BILL					pmax	pmax		
	comp=Z,2.0nm,1.1s							
PETK	**Petropavlovsk-**	**90.32**	**33**		LR	LR	16 00 05.5	
	comp=Z,101nm,18.1s,baz=61,slow=39							

*IDC **23** 15:12:31.6±1.0, 13°.03N×144°.97E, h63km±6km, mb3.7/14, mb1 4.0/14, mb1mx3.7/33, mbtmp4.0/14, MS3.1/3, Ms1 3.3/3, ms1mx2.8/30, Error ellipse: s-maj=24.0km s-min=14.9km az=98.0*

*NEIC **23** 15:12:31.6±1.7, 12°.96N±0°.06×144°.9E±0°.1, h69km±5km, mb4.9/71, Error ellipse: s-maj=17.2km s-min=9.5km az=87.0*

ISC 23 15:12:30.2±0.4, **12°.88N**±0°.06×**144°.95E**±0°.09, **h57**km, **n115**, σ**1**§**00**/113, **mb4.8**/45, **MS3.1**/3, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.71**	**354**	P	**Pn**	**15 12 45.5**	**+1.0**
	1μm,0.3s,baz=144,slow=8.7,SNR=969						
GUMO				S	**Sn**	**15 12 55.9**	**+1.1**
	2μm,0.3s,baz=18,slow=20,SNR=53						
ANA2	**Anatahan**	**3.52**	**12**	Pn	**Pn**	**15 13 24.8**	**+2.3**
SARN	**Sarigan**	**3.88**	**12**	Pn	**Pn**	**15 13 29.7**	**+2.2**
PATS	**Pohnpei**	**14.46**	**113**	Pn	**Pn**	**15 15 50.3**	**-1.7**
H11N1	**WAKE ISLAND Hy**	**22.12**	**69**	T	T	15 40 53.2	
	baz=256,slow=75,SNR=22						
H11N2	**WAKE ISLAND Hy**	**22.13**	**69**	T	T	15 41 00.9	
	baz=256,slow=75,SNR=13						
H11N3	**WAKE ISLAND Hy**	**22.13**	**69**	T	T	15 41 01.5	
	baz=256,slow=75,SNR=22						
JNU	**Nakatsue**	**23.90**	**330**	P	**P**	**15 17 37.2**	**-1.6**
MJAR	**Matsushiro Arr**	**24.33**	**347**	P	**P**	**15 17 41.7**	**-1.0**
	2.2nm,0.8s,baz=159,slow=7.7,SNR=4.9						
MJAR	**Matsushiro Arr**	**24.33**	**347**	P	**P**	**15 17 42.0**	**-0.7**
MAJO	**Matsushiro**	**24.33**	**347**	P	**P**	**15 17 41.6**	**-1.1**
MJB9	**Matsu-Tunnel**	**24.34**	**347**	P	**P**	**15 17 41.4**	**-1.3**
LUWI	**Luwuk**	**25.99**	**239**	P	**P**	**15 17 58.4**	**+0.5**
LUWI				IAmb	IAmb	15 18 01.2	
	comp=Z,24nm,1.0s						
HNR	**Honiara**	**26.70**	**145**	LR	LR	15 27 36.1	
	comp=Z,33nm,21.8s,baz=342,slow=34						
COEN	**Coen**	**26.72**	**184**	P	**P**	**15 18 05.4**	**+0.9**
KSRS	**Korea Array**	**28.82**	**331**	P	**P**	**15 18 22.7**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=143,slow=9.6,SNR=4.8						
MTN	**Manton Dam**	**29.00**	**209**	P	**P**	**15 18 24.2**	**-0.6**
MTN				IAmb	IAmb	15 18 38.5	
	comp=Z,36nm,1.8s						
WB0	**Warramunga Arr**	**34.06**	**198**	P	**P**	**15 19 10.4**	**+1.1**
WR0	**Warramunga Arr**	**34.20**	**198**	P	**P**	**15 19 11.5**	**+1.1**
WB2	**Warramunga Arr**	**34.24**	**198**	P	**P**	**15 19 12.0**	**+1.1**
WB2				IAmb	IAmb	15 20 12.4	
	comp=Z,13nm,1.5s						
WRA	**Warramunga Arr**	**34.24**	**198**	P	**P**	**15 19 12.1**	**+1.3**
	comp=Z,2.2nm,0.9s,baz=19,slow=9.5,SNR=6.0						
WRA				PcP	**PcP**	**15 21 48.2**	**+1.6**
	comp=Z,1.4nm,1.0s,baz=5.5,slow=3.3,SNR=5.3						
WRA	**Warramunga Arr**	**34.24**	**198**	P	**P**	**15 19 12.2**	**+1.3**
FITZ	**Fitzroy Crossi**	**36.20**	**212**	P	**P**	**15 19 27.0**	**-0.6**
FITZ				IAmb	IAmb	15 19 30.5	
	comp=Z,11nm,1.2s						
AS31	**Alice Springs**	**37.89**	**197**	P	**P**	**15 19 43.8**	**+1.7**
ASAR	**Alice Springs**	**37.89**	**197**	P	**P**	**15 19 43.7**	**+1.7**
	comp=Z,0.4nm,0.6s,baz=22,slow=12,SNR=10						
ASAR				PcP	**PcP**	**15 21 58.8**	**+1.4**
	comp=Z,0.6nm,0.6s,baz=27,slow=4.3,SNR=7.5						
ASAR	**Alice Springs**	**37.89**	**197**	P	**P**	**15 19 42.7**	**+0.7**
DZM	**Mont Dzumac**	**40.63**	**149**	P	**P**	**15 20 05.7**	**+0.8**
DZM				IAmb	IAmb	15 21 39.7	
	comp=Z,36nm,1.3s						
CMAR	**Chiang Mai Arr**	**44.55**	**283**	P	**P**	**15 20 37.1**	**+0.3**
	comp=Z,0.9nm,0.5s,baz=88,slow=6.5,SNR=6.9						
CMAR				P	**PcP**	**15 22 20.0**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=104,slow=1.4,SNR=6.3						
CMAR				LR	LR	15 37 48.8	
	comp=Z,28nm,21.2s,baz=296,slow=34						
MA2	**Magadan**	**46.81**	**4**	P	**P**	**15 20 53.8**	**-0.3**
MA2				IAmb	IAmb	15 22 23.1	
	comp=Z,40nm,1.6s						
SONM	**Songino Array**	**47.36**	**325**	P	**P**	**15 20 58.9**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=116,slow=6.7,SNR=2.6						
SONM				PcP	**PcP**	**15 22 28.6**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=147,slow=3.9,SNR=5.0						
NWAO	**Narrogin (SRO)**	**52.68**	**209**	P	**P**	**15 21 38.2**	**-0.8**
UNV	**Unalaska Valle**	**55.88**	**32**	P	**P**	**15 22 01.5**	**-0.4**
GAMB	**Gambell**	**59.11**	**21**	P	**P**	**15 22 23.8**	**-0.6**
GAMB				IAmb	IAmb	15 24 13.9	
	comp=Z,28nm,2.0s						
BKZ	**Black Stump Fm**	**59.55**	**152**	P	**P**	**15 22 28.1**	**+0.1**
ANM	**Nome**	**61.82**	**22**	P	**P**	**15 22 42.4**	**-0.6**
ANM				IAmb	IAmb	15 24 56.9	
	comp=Z,14nm,1.8s						
MK31	**Makanchi Array**	**62.05**	**316**	P	**P**	**15 22 43.3**	**-1.7**
MKAR	**Makanchi Array**	**62.05**	**316**	P	**P**	**15 22 44.4**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=91,slow=7.8,SNR=5.4						
MKAR	**Makanchi Array**	**62.05**	**316**	P	**P**	**15 22 42.6**	**-2.3**
ZALV	**Zalesovo Beam**	**62.24**	**325**	PcP	**PcP**	**15 23 24.9**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=127,slow=4.6,SNR=7.5						
MAKZ	**Makanchi**	**62.27**	**316**	P	**P**	**15 22 45.7**	**-0.7**
KDAK	**Kodiak Island**	**64.63**	**32**	P	**P**	**15 23 02.4**	**+0.7**
KDJ	**Kajisay**	**65.01**	**311**	P	**P**	**15 23 05.2**	**+0.4**
KURK	**Kurchatov**	**65.18**	**320**	P	**P**	**15 23 04.1**	**-1.3**
RSO	**Redoubt South**	**65.36**	**29**	P	**P**	**15 23 06.9**	**+0.3**
HOM	**Homer**	**65.64**	**30**	P	**P**	**15 23 07.7**	**-0.6**
CNPM	**China Poot**	**65.81**	**30**	P	**P**	**15 23 09.6**	**+0.2**
BRLK	**Bradley Lake**	**66.04**	**30**	P	**P**	**15 23 10.3**	**-0.5**
PPLA	**Purkeypile**	**66.39**	**26**	P	**P**	**15 23 13.8**	**+0.6**
SKT	**Skwentna**	**66.39**	**27**	P	**P**	**15 23 12.4**	**-0.7**
SKT				IAmb	IAmb	15 25 14.3	
	comp=Z,56nm,1.9s						
SUA	**Susitna One**	**66.59**	**28**	P	**P**	**15 23 14.5**	**0.0**
IMAR	**Indian Mountai**	**66.81**	**23**	P	**P**	**15 23 15.8**	**+0.2**
SEW	**Seward**	**66.83**	**30**	P	**P**	**15 23 15.8**	**-0.1**
RC01	**Rabbit Creek A**	**66.95**	**29**	P	**P**	**15 23 16.9**	**+0.2**
RC01				IAmb	IAmb	15 23 17.1	
	comp=Z,42nm,1.4s						
KTH	**Kantishna Hill**	**67.14**	**26**	P	**P**	**15 23 17.3**	**-0.6**
KTH				IAmb	IAmb	15 23 33.3	
	comp=Z,52nm,1.8s						
BPAW	**Bear Paw Mtn.**	**67.28**	**25**	P	**P**	**15 23 17.7**	**-0.9**
BPAW				IAmb	IAmb	15 25 15.3	
	comp=Z,24nm,1.7s						
PMR	**Palmer**	**67.37**	**28**	P	**P**	**15 23 18.0**	**-1.3**
TRF	**Thorofare Moun**	**67.38**	**26**	P	**P**	**15 23 17.7**	**-1.8**
KNK	**Knik Glacier**	**67.64**	**29**	P	**P**	**15 23 21.1**	**+0.2**
MLY	**Manley**	**67.67**	**24**	P	**P**	**15 23 21.5**	**+0.3**
MLY				IAmb	IAmb	15 23 22.1	
	comp=Z,5.2nm,0.7s						
SML	**Sawmill**	**67.80**	**28**	P	**P**	**15 23 22.2**	**+0.2**
BWN	**Browne**	**67.94**	**25**	P	**P**	**15 23 22.4**	**-0.4**
RND	**Reindeer**	**67.98**	**26**	P	**P**	**15 23 22.5**	**-0.7**
RND				IAmb	IAmb	15 25 03.2	
	comp=Z,53nm,1.8s						
MCK	**McKinley**	**68.04**	**26**	P	**P**	**15 23 23.2**	**-0.3**
MCK				IAmb	IAmb	15 25 26.7	
	comp=Z,34nm,1.7s						
FID	**Port Fidalgo**	**68.42**	**29**	P	**P**	**15 23 26.9**	**+1.0**
WRH	**Wood River Hil**	**68.60**	**25**	P	**P**	**15 23 26.4**	**-0.5**
WRH				IAmb	IAmb	15 25 17.9	
	comp=Z,37nm,1.9s						
CCB	**Clear Creek Bu**	**68.76**	**25**	P	**P**	**15 23 26.3**	**-1.6**
CCB				IAmb	IAmb	15 24 40.1	
	comp=Z,31nm,2.0s						
HDA	**Harding Lake**	**69.06**	**26**	P	**P**	**15 23 28.3**	**-1.5**
HDA				IAmb	IAmb	15 23 41.2	
	comp=Z,30nm,1.7s						
IL31		**69.17**	**25**	P	**P**	**15 23 29.3**	**-1.1**
IL31				IAmb	IAmb	15 23 29.9	
	comp=Z,5.4nm,0.6s						
ILAR	**Eielson Array**	**69.17**	**25**	P	**P**	**15 23 29.3**	**-1.2**
	comp=Z,3.8nm,0.5s,baz=250,slow=5.9,SNR=86						
ILAR	**Eielson Array**	**69.17**	**25**	P	**P**	**15 23 29.2**	**-1.3**
PAX	**Paxson**	**69.36**	**27**	P	**P**	**15 23 32.3**	**+0.4**
PAX				IAmb	IAmb	15 25 31.5	
	comp=Z,30nm,1.6s						
HMT	**Hamilton**	**69.41**	**30**	P	**P**	**15 23 30.5**	**-1.6**
RIDG	**Independent Ri**	**69.80**	**26**	P	**P**	**15 23 34.5**	**0.0**
RIDG				IAmb	IAmb	15 25 39.0	
	comp=Z,51nm,1.9s						
MCARA	**McCarthy VSAT**	**70.19**	**29**	P	**P**	**15 23 37.3**	**+0.5**
SCRK	**Sand Creek**	**70.22**	**26**	P	**P**	**15 23 37.6**	**+0.4**
SCRK				IAmb	IAmb	15 24 17.8	
	comp=Z,24nm,1.8s						
FYU	**Fort Yukon**	**70.28**	**24**	P	**P**	**15 23 38.0**	**+0.8**
FYU				IAmb	IAmb	15 25 41.5	
	comp=Z,55nm,1.9s						
BALM	**Baldy**	**70.45**	**30**	P	**P**	**15 23 39.1**	**+0.5**
BRVK	**Borovoye**	**70.60**	**322**	P	**P**	**15 23 39.1**	**-0.3**
BMAR	**Burnt Mountain**	**70.72**	**23**	P	**P**	**15 23 40.7**	**+0.7**
BARN	**Barnard Glacie**	**70.79**	**30**	P	**P**	**15 23 39.1**	**-1.6**
CTGM	**Chitina Glacie**	**70.93**	**30**	P	**P**	**15 23 42.8**	**+1.3**
BCAR	**Beaver Creek A**	**71.03**	**27**	P	**P**	**15 23 42.3**	**+0.3**
EGAK	**Eagle**	**71.58**	**26**	P	**P**	**15 23 45.2**	**0.0**
EGAK				IAmb	IAmb	15 26 12.8	
	comp=Z,36nm,1.9s						
EPYK	**Eagle Plains**	**73.61**	**24**	P	**P**	**15 23 57.1**	**-0.2**
EPYK				IAmb	IAmb	15 24 54.7	
	comp=Z,43nm,1.8s						
WHY	**Whitehorse**	**74.06**	**30**	P	**P**	**15 23 58.8**	**-1.3**
WHY				IAmb	IAmb	15 25 44.9	
	comp=Z,25nm,1.6s						
INK	**Inuvik**	**74.99**	**22**	P	**P**	**15 24 05.0**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=252,slow=2.4,SNR=7.4						
INK	**Inuvik**	**74.99**	**22**	P	**P**	**15 24 04.9**	**-0.2**
INK				IAmb	IAmb	15 24 10.1	
	comp=Z,16nm,1.9s						
ABKAR	**Akbulak array**	**77.12**	**318**	P	**P**	**15 24 16.7**	**-0.9**
ABKAR	**Akbulak array**	**77.12**	**318**	P	**P**	**15 24 16.2**	**-1.4**
ABKAR				IAmb	IAmb	15 24 17.6	
	comp=Z,13nm,1.9s						
YKA	**Yellowknife Ar**	**83.45**	**27**	P	**P**	**15 24 51.5**	**0.0**
	comp=Z,0.7nm,0.6s,baz=286,slow=5.2,SNR=11						
UOSS	**Minazif**	**83.55**	**294**	P	**P**	**15 24 53.0**	**+0.3**
PINE	**Pine Mountain**	**84.14**	**47**	P	**P**	**15 24 56.1**	**+0.5**
PINE				IAmb	IAmb	15 26 41.6	
	comp=Z,38nm,1.9s						
SPITS	**Spitsbergen Ar**	**84.76**	**351**	P	**P**	**15 24 58.3**	**+0.5**
	comp=Z,8.9nm,1.0s,baz=85,slow=8.0,SNR=12						
RES	**Resolute Bay**	**85.22**	**13**	P	**P**	**15 24 59.9**	**-0.3**
RES				IAmb	IAmb	15 25 02.4	
	comp=Z,16nm,1.8s						
NEW	**Newport**	**85.71**	**42**	P	**P**	**15 25 04.1**	**+0.9**
BMO	**Blue Mountains**	**86.44**	**45**	P	**P**	**15 25 07.8**	**+0.8**
NVAR	**Mina Array Bea**	**87.30**	**51**	P	**P**	**15 25 11.9**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=278,slow=5.6,SNR=5.3						
NVAR	**Mina Array Bea**	**87.30**	**51**	P	**P**	**15 25 11.2**	**-0.2**
ARCES	**ARCESS Array B**	**87.78**	**342**	P	**P**	**15 25 13.1**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=72,slow=8.3,SNR=9.9						
ARCES	**ARCESS Array B**	**87.78**	**342**	P	**P**	**15 25 12.3**	**-0.5**
MFID	**Camas Ranch**	**87.84**	**46**	P	**P**	**15 25 14.3**	**+0.5**
MFID				IAmb	IAmb	15 25 16.3	
	comp=Z,6.0nm,1.1s						
ELK	**Elko**	**88.98**	**48**	P	**P**	**15 25 20.7**	**+1.3**
FINES	**FINESS Array B**	**91.84**	**335**	P	**P**	**15 25 31.1**	**-0.8**
	comp=Z,1.4nm,0.5s,baz=76,slow=5.9,SNR=11						
FINES	**FINESS Array B**	**91.84**	**335**	P	**P**	**15 25 30.7**	**-1.2**
SDCO	**Great Sand Dun**	**97.11**	**49**	P	**P**	**15 25 54.3**	**-2.7**
SDCO				IAmb	IAmb	15 26 06.3	
	comp=Z,4.4nm,0.8s						
NOA	**NORSAR Array B**	**97.74**	**339**	LR	LR	16 12 20.6	
	comp=Z,12nm,18.9s,baz=25,slow=37						
TORD	**Torodi Ar. Bea**	**135.33**	**304**	PKP	**PKPdf**	**15 31 45.0**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=48,slow=2.1,SNR=2.8						
TORD	**Torodi Ar. Bea**	**135.33**	**304**		**PKPdf**	**15 31 42.1**	**-2.5**
DBIC	**Dimbokro**	**144.26**	**301**	PKP	PKPbc	15 31 59.7	+0.5
	comp=Z,2.1nm,0.5s,baz=71,slow=1.5,SNR=5.1						
DBIC	**Dimbokro**	**144.26**	**301**		**PKPab**	**15 31 58.6**	**-0.2**
KIC	**Kosan Boka**	**144.33**	**301**	*e*PKP1	PKPbc	15 31 59.7	+0.3
	comp=Z,3.4nm,0.7s						
TIC	**Toumodi**	**144.41**	**301**	*e*PKP1	**PKPab**	**15 31 59.2**	**-0.2**
	comp=Z,2.5nm,0.3s						
LIC	**Lamto**	**144.64**	**301**	*e*PKP1	**PKPab**	**15 32 00.2**	**0.0**
	comp=Z,20nm,0.6s						
LPAZ	**La Paz**	**147.83**	**100**	PKPbc	**PKPbc**	**15 32 10.5**	**-0.1**
	comp=Z,2.6nm,0.6s,baz=266,slow=2.0,SNR=11						
LPAZ	**La Paz**	**147.83**	**100**		**PKPdf**	**15 32 08.1**	**+0.5**

*IDC **23** 15:28:19.8±0.6, 75°.16N×7°.65E, h0km, mb3.5/13, mb1 3.7/17, mb1mx3.6/40, mbtmp3.5/17, ML3.4/4, MS3.4/18, Ms1 3.4/18, ms1mx3.3/35, Error ellipse: s-maj=18.6km s-min=10.7km az=51.0*

*BER **23** 15:28:21.5±4.1, 75°.24N×7°.46E, h31km±30km, ML2.3, ML3.4(NAO), Confirmed Earthquake*

*NAO **23** 15:28:22.1±2.8, 75°.28N×9°.39E, ML3.4*

*IEPN **23** 15:28:25.0, 75°.44N×9°.09E, h15km*

ISC 23 15:28:20.3±0.5, **75°.26N**±0°.04×**7°.93E**±0°.06, **h10**km, **n66**, σ**3**§**18**/72, **mb3.5**/13, **MS3.4**/12, **3C-1D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSPB	**Hornsund (broa**	**2.54**	**43**	Pn	**Pn**	**15 29 00.6**	**-0.8**
HSPB				Sn	**Sn**	**15 29 26.5**	**-5.8**
HSPB	**Hornsund (broa**	**2.54**	**43**	*e*P	**Pn**	**15 29 00.4**	**-1.0**
HSPB				*e*		15 29 26.5	
HSPB				*e*S	**Sn**	**15 29 28.8**	**-3.5**
HSPB				IAML		15 29 29.4	
	comp=Z,38nm,0.5s						
HSPB	**Hornsund (broa**	**2.54**	**43**	⇑ *i*P	**Pn**	**15 29 00.5**	**-1.0**
HSPB				*i* S	**Sn**	**15 29 26.7**	**-5.6**
BJO1	**Bjornoya**	**3.00**	**99**	Pn	**Pn**	**15 29 07.1**	**-0.6**
BJO1				Sn	**Sn**	**15 29 39.2**	**-4.4**
BJO1	**Bjornoya**	**3.00**	**99**	*e*P	**Pn**	**15 29 07.2**	**-0.6**
BJO1				*e*S	**Sn**	**15 29 39.6**	**-4.0**
BJO1				IAML		15 29 46.8	
	comp=Z,40nm,0.3s						
BJO1	**Bjornoya**	**3.00**	**99**	*e*P	**Pn**	**15 29 07.9**	**+0.2**
BJO1				*e*S	**Sn**	**15 29 38.9**	**-4.8**
BRBA	**Barentsburg A**	**3.17**	**24**	Pn	**Pn**	**15 29 09.4**	**-0.7**
BRBA				Sn	Sn	15 29 40.0	-7.9
BRBA	**Barentsburg A**	**3.17**	**24**	Pn	**Pn**	**15 29 09.4**	**-0.7**
BRBA				Sn	Sn	15 29 40.0	-7.9
BRBB	**Barentsburg B**	**3.20**	**24**	Pn	**Pn**	**15 29 09.8**	**-0.7**
BRBB	**Barentsburg B**	**3.20**	**24**	Pn	**Pn**	**15 29 09.8**	**-0.7**
SPA0	**Spitsbergen Ar**	**3.52**	**30**	Pn	**Pn**	**15 29 15.1**	**+0.1**
	baz=204,slow=22						
SPA0				Sn	**Sn**	**15 29 53.2**	**-3.4**
	baz=189,slow=18						
SPA0	**Spitsbergen Ar**	**3.52**	**30**	Pn	**Pn**	**15 29 15.1**	**+0.1**
	baz=204,slow=22						
SPA0				Sn	**Sn**	**15 29 53.2**	**-3.4**
	baz=189,slow=18						
SPA0	**Spitsbergen Ar**	**3.52**	**30**	⇓ *i*P	**Pn**	**15 29 14.9**	**0.0**
SPA0				*e*S	**Sn**	**15 29 52.5**	**-4.1**
SPITS	**Spitsbergen Ar**	**3.52**	**30**	Pn	**Pn**	**15 29 15.2**	**+0.2**
	baz=200,slow=16,SNR=799						
SPITS				Sn	**Sn**	**15 29 53.2**	**-3.4**
	baz=217,slow=25,SNR=7.7						
SPITS				LR	LR	15 30 37.8	
	comp=Z,249nm,19.4s,baz=190,slow=38						
KBS	**Kingsbay**	**3.80**	**12**	Pn	**Pn**	**15 29 17.6**	**-1.1**
KBS				Sn	**Sn**	**15 29 58.4**	**-5.0**
KBS	**Kingsbay**	**3.80**	**12**	*e*P	**Pn**	**15 29 17.3**	**-1.4**
KBS				*e*S	**Sn**	**15 29 58.5**	**-4.8**
KBS				IAML		15 30 05.1	
	comp=Z,21nm,0.6s						
KBS	**Kingsbay**	**3.80**	**12**	⇑ *i*P	**Pn**	**15 29 17.7**	**-1.1**
KBS				*e*S	**Sn**	**15 29 57.2**	**-6.1**
HOPEN	**Hopen**	**4.36**	**65**	Pn	**Pn**	**15 29 26.0**	**-0.5**
HOPEN				Sn	**Sn**	**15 30 12.5**	**-4.7**
HOPEN	**Hopen**	**4.36**	**65**	*e*P	**Pn**	**15 29 25.9**	**-0.5**
HOPEN				*e*S	**Sn**	**15 30 11.9**	**-5.3**
HOPEN				IAML		15 30 17.0	
	comp=Z,44nm,0.4s						
HOPEN	**Hopen**	**4.36**	**65**	*e*P	**Pn**	**15 29 26.2**	**-0.2**
HOPEN				*i* S	**Sn**	**15 30 11.7**	**-5.5**
JMIC	**Jan Mayen**	**6.40**	**236**	LR	LR	15 31 44.1	
	comp=Z,211nm,21.3s,baz=76,slow=32						
HAMF	**Hammerfest**	**6.53**	**127**	Pn	**Pn**	**15 29 55.0**	**-1.3**
HAMF				Sn	**Sn**	**15 31 03.4**	**-7.2**
HAMF	**Hammerfest**	**6.53**	**127**	*e*P	**Pn**	**15 29 55.1**	**-1.1**
HAMF				*e*S	**Sn**	**15 31 03.5**	**-7.1**
HAMF				IAML		15 31 05.7	
	comp=Z,5.0nm,0.3s						
DAG	**Danmarks Havn**	**6.58**	**296**	*i* P	Pn	15 29 51.9	-5.0
	comp=Z,11nm,0.5s						
DAG	**Danmarks Havn**	**6.58**	**296**	*i* P	Pn	15 29 52.0	-4.9
DAG				*i*		15 29 53.2	
DAG				*i* S	Sn	15 30 58.2	-14
DAG	**Danmarks Havn**	**6.58**	**296**	*i* P	Pn	15 29 52.0	-4.9
DAG				*i*		15 29 53.2	
DAG				*i* S	Sn	15 30 58.2	-14
DBG	**Daneborg**	**7.42**	**276**	*i* P	Pn	15 30 02.4	-6.1
DBG				*i*		15 30 03.3	
DBG				*i* S	Sn	15 31 17.8	-15
DBG				IAML		15 31 27.4	
	comp=Z,1.8nm,0.4s						
STEI	**Steigen**	**7.71**	**159**	*e*P	**Pn**	**15 30 14.2**	**+1.8**
ARA0	**ARCESS Array S**	**7.80**	**128**	Pn	**Pn**	**15 30 11.9**	**-1.7**
	baz=328,slow=12						
ARA0				Sn	Sn	15 31 34.4	-7.4
	baz=332,slow=22						
ARA0	**ARCESS Array S**	**7.80**	**128**	Pn	**Pn**	**15 30 11.9**	**-1.7**
	baz=328,slow=12						
ARA0				Sn	Sn	15 31 34.4	-7.4
	baz=332,slow=22						
ARCES	**ARCESS Array B**	**7.80**	**128**	Pn	**Pn**	**15 30 12.7**	**-0.9**
	comp=Z,1.6nm,0.3s,ba

comp=Z,0.2nm,0.3s,baz=349,slow=7.4,SNR=2.4
ASAR Alice Springs 121.58 61 PKP **PKPdf 15 47 13.5 +0.1**
comp=Z,0.4nm,0.5s,baz=6.7,slow=1.7,SNR=15

NEIC ***23*** *15:41:21.0±1.8, 14°.33S±0°.08×73°.46W±0°.09, h73km±6km, mb4.6/26, Error ellipse: s-maj=16.8km s-min=1.8km az=224.0*
IDC ***23*** *15:41:22.1±1.9, 14°.07S×73°.35W, h75km±18km, mb3.9/8, mb1 4.2/13, mb1mx3.9/32, mbtmp4.3/13, MS3.2/1, Ms1 3.2/1, ms1mx2.5/31, Error ellipse: s-maj=29.3km s-min=13.2km az=36.0*
ISC 23 15:41:21.9±0.5, 14°.43S±0°.06×73°.60W±0°.08, h85km, n71, σ1s56/77, mb4.5/19, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.98 307**		P	**Pn**	**15 42 20.5**	**-0.3**
	49nm,0.3s,baz=136,slow=14,SNR=67						
NNA				S	**Sn**	**15 43 06.9**	**+0.5**
	80nm,0.3s,baz=227,slow=18,SNR=8.4						
NNA	**Nana**	**3.98 307**			**Pn**	**15 42 20.3**	**-0.4**
NNA				Sn	**Sn**	**15 43 06.3**	**-0.1**
LPAZ	**La Paz**	**5.59 110**		P	**Pn**	**15 42 46.0**	**+2.8**
	27nm,0.3s,baz=302,slow=9.6,SNR=355						
LPAZ				S	**Sn**	**15 43 45.0**	**-1.3**
	0.4nm,0.3s,baz=204,slow=20,SNR=1.3						
LPAZ	**La Paz**	**5.59 110**			**Pn**	**15 42 45.5**	**+2.4**
MNMC	**Minye Minye**	**6.05 141**			**Pn**	**15 42 49.3**	**+0.3**
MNMC				Sn	**Sn**	**15 43 55.8**	**-1.2**
PB11	**IPOC Station P**	**6.51 145**			**Pn**	**15 42 54.9**	**-0.3**
PB11				Sn	**Sn**	**15 44 05.7**	**-2.4**
GO01	**Chusmiza**	**6.70 142**			**Pn**	**15 42 58.6**	**+0.5**
GO01				Sn	**Sn**	**15 44 13.4**	**+0.1**
PB04	**IPOC Station P**	**8.52 158**			**Pn**	**15 43 21.1**	**-1.5**
PB04					**Sn**	**15 44 53.1**	**-4.1**
ATAH	**Atahualpa**	**8.64 326**		P	**Pn**	**15 43 24.7**	**+0.1**
	0.8nm,0.3s,baz=117,slow=14,SNR=2.7						
LVC	**Limon Verde**	**9.27 152**		P	**Pn**	**15 43 33.4**	**+0.3**
	1.2nm,0.3s,baz=340,slow=15,SNR=13						
LVC				S	**Sn**	**15 45 14.4**	**-1.5**
	2.4nm,0.3s,baz=141,slow=21,SNR=10						
LVC	**Limon Verde**	**9.27 152**		Pn	Pn	15 43 29.0	-4.2
LVC					**Sn**	**15 45 15.9**	**0.0**
PB10	**IPOC Station P**	**9.48 163**		Pn	Pn	15 43 33.1	-2.6
GO02	**Mina Guanaco**	**11.32 161**		Pn	**Pn**	**15 43 59.9**	**-1.1**
SAML	**Samuel**	**11.56 63**			Pn	15 43 57.8	-6.2
SIV	**San Ignacio**	**12.19 99**		P	**Pn**	**15 44 09.6**	**-2.9**
	4.4nm,0.3s,baz=288,slow=13,SNR=67						
CFA	**Coronel Fontan**	**17.79 165**		P	**Pn**	**15 45 27.9**	**+4.0**
	0.2nm,0.3s,baz=346,slow=12,SNR=8.5						
CPUP	**Villa Florida**	**19.28 130**		P	**Pn**	**15 45 42.0**	**+0.1**
	0.4nm,0.3s,baz=309,slow=10,SNR=13						
CPUP				LR	LR	15 54 15.4	
	comp=Z,78nm,21.6s,baz=10.0,slow=40						
CPUP	**Villa Florida**	**19.28 130**		P	**P**	**15 45 39.3**	**-0.7**
GUY2C	**Guyana, Caldas**	**19.60 355**		*eP*	**Pn**	**15 45 45.4**	**-0.8**
NORC	**Norcasia**	**19.90 356**		*eP*	**Pn**	**15 45 46.9**	**-2.3**
RUSC	**La Rusia**	**20.20 1**		P	**Pn**	**15 45 50.4**	**-2.7**
CBOC	**Ciudad Bolivar**	**20.30 353**		*eP*	**P**	**15 45 49.5**	**-1.8**
DBBC	**Dabeiba**	**21.46 353**		*eP*	**P**	**15 46 07.9**	**+4.2**
PAMC	**Pamplona, Colo**	**21.64 2**		*eP*	**P**	**15 46 06.9**	**+0.9**
SMLC	**San Martn de**	**23.08 359**		*eP*	**P**	**15 46 17.0**	**-3.5**
SDV	**Santo Domingo**	**23.35 7**		P	**P**	**15 46 21.4**	**-1.8**
	7.6nm,1.0s,baz=266,slow=8.0,SNR=6.3						
SDV	**Santo Domingo**	**23.35 7**		P	**P**	**15 46 21.6**	**-1.6**
BCIP	**Isla Barro Col**	**24.25 345**		P	**P**	**15 46 31.4**	**+0.3**
MTP	**Monte Pirata**	**33.28 14**		P	**P**	**15 47 52.3**	**+0.8**
MIAR	**Mount Ida**	**52.28 339**		P	**P**	**15 50 24.3**	**-0.3**
MIAR				IAmb	IAmb	15 50 24.8	
	comp=Z,5.2nm,0.8s						
TX31	**Lajitas Ar. Si**	**52.30 326**		P	**P**	**15 50 25.4**	**+0.3**
TX32	**Lajitas Array**	**52.30 326**		P	**P**	**15 50 25.5**	**+0.3**
TXAR	**Lajitas Array**	**52.30 326**		P	**P**	**15 50 25.4**	**+0.2**
	comp=Z,2.1nm,0.6s,baz=143,slow=7.9,SNR=7.9						
319A	**Douglas**	**56.99 323**		P	**P**	**15 50 59.9**	**+0.9**
121A	**Cookes Peak, D**	**57.01 326**		P	**P**	**15 50 59.6**	**+0.4**
121A				IAmb	IAmb	15 51 01.2	
	comp=Z,5.9nm,0.9s						
SDCO	**Great Sand Dun**	**59.93 331**		P	**P**	**15 51 19.7**	**+0.2**
SDCO				IAmb	IAmb	15 51 21.0	
	comp=Z,6.2nm,0.9s						
X16A	**Lo Mia Camp, P**	**60.45 324**		P	**P**	**15 51 23.9**	**+0.9**
X16A				IAmb	IAmb	15 51 25.1	
	comp=Z,3.7nm,0.8s						
S22A	**4UR Ranch, Cre**	**60.56 330**		P	**P**	**15 51 24.1**	**+0.2**
Y14A	**Wickenburg**	**61.00 323**		P	**P**	**15 51 26.1**	**-0.5**
Y14A				IAmb	IAmb	15 51 28.6	
	comp=Z,3.8nm,0.9s						
WUAZ	**Wupatki**	**61.22 325**		P	**P**	**15 51 28.1**	**-0.1**
SMCO	**Snowmass**	**61.77 331**		P	**P**	**15 51 32.6**	**+0.5**
SMCO				IAmb	IAmb	15 51 33.7	
	comp=Z,3.2nm,0.8s						
PFO	**Pinyon Flats O**	**62.86 320**		P	**P**	**15 51 40.1**	**+0.9**
PFO				IAmb	IAmb	15 51 41.4	
	comp=Z,4.9nm,0.9s						
DUG	**Dugway, Tooele**	**65.43 328**		P	**P**	**15 51 56.6**	**+0.7**
DUG				IAmb	IAmb	15 51 58.0	
	comp=Z,5.6nm,1.0s						
PDAR	**Pinedale Array**	**65.80 332**		P	**P**	**15 51 57.6**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=126,slow=6.1,SNR=3.7						
PDAR	**Pinedale Array**	**65.80 332**		P	**P**	**15 51 57.5**	**-0.9**
ULM	**Lac du Bonnet**	**67.31 345**		P	**P**	**15 52 06.2**	**-1.3**
	comp=Z,2.6nm,0.6s,baz=140,slow=4.7,SNR=6.2						
ULM	**Lac du Bonnet**	**67.31 345**		P	**P**	**15 52 05.8**	**-1.7**
FLWY	**Flagg Ranch**	**67.34 332**		P	**P**	**15 52 09.0**	**+0.8**
FLWY				IAmb	IAmb	15 52 09.8	
	comp=Z,6.1nm,0.9s						
YNE	**Yellowstone No**	**67.75 333**		P	**P**	**15 52 10.7**	**0.0**
YHL	**Hebgen Lake**	**68.16 332**		P	**P**	**15 52 14.1**	**+0.7**
VNA3	**Neumayer Olymp**	**68.16 162**		P	**P**	**15 52 16.5**	**+3.8**
SNAA	**Sanae**	**70.37 162**		P	**P**	**15 52 29.6**	**+3.2**
SNAA	**Sanae**	**70.37 162**		P	**P**	**15 52 28.6**	**+2.2**
SNAA				IAmb	IAmb	15 52 30.5	
	comp=Z,5.4nm,0.9s						
TOA0	**Torodi Ar. Sit**	**79.42 73**		P	**P**	**15 53 18.2**	**-1.2**
TOA0				IAmb	IAmb	15 53 19.4	
	comp=Z,5.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**79.42 73**		P	**P**	**15 53 18.6**	**-0.8**
	comp=Z,4.7nm,0.7s,baz=257,slow=5.5,SNR=18						
TORD	**Torodi Ar. Bea**	**79.42 73**		P	**P**	**15 53 18.6**	**-0.8**
YKA	**Yellowknife Ar**	**83.10 342**		P	**P**	**15 53 37.6**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=138,slow=5.2,SNR=28						
ESDC	**Sonseca Array**	**84.10 47**		P	**P**	**15 53 43.5**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=259,slow=5.2,SNR=7.6						
ESDC	**Sonseca Array**	**84.10 47**		P	**P**	**15 53 44.1**	**+0.4**
ILAR	**Eielson Array**	**95.99 336**		P	**P**	**15 54 39.4**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=90,slow=2.7,SNR=3.5						
ILAR	**Eielson Array**	**95.99 336**		P	**P**	**15 54 38.5**	**-0.6**
ASAR	**Alice Springs**	**133.56 216**		PKP	**PKPdf**	**16 00 30.8**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=132,slow=2.2,SNR=8.5						
ASAR	**Alice Springs**	**133.56 216**			**PKPdf**	**16 00 29.7**	**+0.3**
WRA	**Warramunga Arr**	**136.16 220**		PKP	**PKPdf**	**16 00 36.2**	**+1.9**
	comp=Z,1.6nm,0.9s,baz=139,slow=1.2,SNR=5.8						
WRA	**Warramunga Arr**	**136.16 220**			**PKPdf**	**16 00 35.8**	**+1.5**
ZAA0	**Zalesovo Array**	**137.07 19**			**PKPdf**	**16 00 35.6**	**+0.7**
ZALV	**Zalesovo Beam**	**137.07 19**		PKP	**PKPdf**	**16 00 35.5**	**+0.6**
	comp=Z,2.6nm,0.8s,baz=283,slow=2.6,SNR=9.6						
ULN	**Ulaanbaatar**	**146.66 359**			**PKPab**	**16 00 54.8**	**-0.5**
SONM	**Songino Array**	**146.69 0**		PKPbc	**PKPbc**	**16 00 54.6**	**+0.5**
	comp=Z,2.7nm,0.7s,baz=338,slow=3.2,SNR=12						
SONM	**Songino Array**	**146.69 0**			**PKPbc**	**16 00 53.8**	**-0.4**
KSRS	**Korea Array**	**150.14 324**		PKPbc	**PKiKP**	**16 01 04.5**	**+0.4**
	comp=Z,4.4nm,0.9s,baz=25,slow=1.7,SNR=10						

IDC 23 16:00:25.3±1.8, 8°.17S×130°.31E, h0km, mb3.5/1, mb1 3.9/5, mb1mx3.5/38, mbtmp3.7/5, ML3.7/4, Error ellipse: s-maj=65.7km s-min=25.1km az=87.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**7.31 8**		Pn	Pn	16 02 12.8	-0.7
	0.9nm,0.3s,baz=225,slow=19,SNR=14						
SIJI				Sn	Sn	16 03 29.9	-7.4
	0.7nm,0.3s,baz=239,slow=19,SNR=2.5						
FITZ	**Fitzroy Crossi**	**10.87 204**		Pn	Pn	16 03 03.4	+1.1
	0.5nm,0.3s,baz=32,slow=14,SNR=7.7						
FITZ				Sn	Sn	16 05 00.1	-4.5
	0.6nm,0.3s,baz=195,slow=20,SNR=5.2						
WRA	**Warramunga Arr**	**12.34 162**		Pn	Pn	16 03 21.7	-0.7
	0.5nm,0.3s,baz=342,slow=14,SNR=4.9						
WRA				Sn	Sn	16 05 34.1	-6.6
	0.4nm,0.3s,baz=337,slow=22,SNR=4.5						
ASAR	**Alice Springs**	**15.79 168**		Pn	Pn	16 04 08.4	-0.8
	0.4nm,0.3s,baz=342,slow=8.3,SNR=13						
ASAR				Sn	Sn	16 06 59.2	-5.9
	0.1nm,0.3s,baz=358,slow=26,SNR=3.8						
MKAR	**Makanchi Array**	**69.37 327**		P	P	16 11 35.2	+0.2
	0.2nm,0.4s,baz=122,slow=5.2,SNR=4.5						

IDC ***23*** *16:04:50.7±1.0, 4°.09S×137°.98E, h0km, mb3.9/4, mb1 4.3/10, mb1mx3.9/40, mbtmp4.2/10, ML4.1/5, MS3.5/1, Ms1 3.5/1, ms1mx2.7/28, Error ellipse: s-maj=26.2km s-min=18.4km az=264.0*
DJA ***23*** *16:04:52.8±0.3, 4°.5±4°×13°.8E±°, h74km±8km, M4.5/12, mb4.6/12, mB4.9/3, MLv4.5/7, Mw(mB)4.2/3*
NEIC ***23*** *16:04:52.6±2.3, 4°.25S±0°.07×137°.92E±0°.06, h25km±6km, mb4.4/17, Error ellipse: s-maj=11.2km s-min=7.7km az=136.0*
ISC 23 16:04:54.2±0.5, 4°.37S±0°.05×137°.90E±0°.06, h35km, n53, σ2s12/57, mb3.9/7, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**2.49 19**		P	**Pn**	**16 05 28.9**	**-3.4**
GENI	**Genyem**	**2.87 52**		P	**Pn**	**16 05 36.2**	**-1.2**
JAY	**Jayapura**	**3.35 57**		Pn	**Pn**	**16 05 41.6**	**-2.4**
	5.4nm,0.3s,baz=268,slow=10,SNR=12						
JAY				Lg	Lg	16 06 26.4	
	3.7nm,0.3s,baz=68,slow=17,SNR=4.3						
BAKI	**Biak**	**3.63 330**		P	**Pn**	**16 05 44.6**	**-3.3**
KMPI	**Kaimana, Papua**	**4.25 279**		P	**Pn**	**16 05 56.3**	**-0.1**
RKPI	**Ransiki, Papua**	**4.68 307**		P	Pn	16 06 08.4	+6.0
MMPI	**Merauke**	**4.76 149**		P	Pn	16 06 09.6	+6.1
FAKI	**Fak Fak**	**5.82 284**		P	**Pn**	**16 06 16.1**	**-2.0**
	0.2nm61nm,0.8s						
FAKI	**Fak Fak**	**5.82 284**			**Pn**	**16 06 17.3**	**-0.8**
SIJI	**Sorong**	**7.48 297**		Pn	**Pn**	**16 06 40.2**	**-0.7**
	2.7nm,0.3s,baz=68,slow=13,SNR=15						
SIJI				LR	LR	16 10 00.7	
	comp=Z,369nm,18.9s,baz=98,slow=42						
SWI	**Sorong**	**7.49 297**		P	**Pn**	**16 06 40.0**	**-1.0**
	0.2nm62nm,0.6s						
PMG	**Port Moresby**	**10.46 119**		Pn	**Pn**	**16 07 23.3**	**+1.5**
	0.8nm,0.3s,baz=294,slow=10.0,SNR=4.7						
PMG	**Port Moresby**	**10.46 119**			**Pn**	**16 07 21.2**	**-0.6**
MTN	**Manton Dam**	**10.76 218**			**Pn**	**16 07 27.3**	**+1.5**
MTN				Sn	**Sn**	**16 09 24.1**	**-1.0**
COEN	**Coen**	**10.86 152**			**Pn**	**16 07 28.4**	**+1.2**
COEN				Sn	**Sn**	**16 09 26.1**	**-1.5**
TNTI	**Ternate**	**11.70 296**			**Pn**	**16 07 38.8**	**+0.1**
SANI	**Sanana**	**12.12 281**		P	**Pn**	**16 07 41.4**	**-3.0**
	22nm,1.0s						
KNRA	**Kununurra**	**14.39 218**			**Pn**	**16 08 14.3**	**-1.2**
SOEI	**Soe**	**14.55 248**		P	**Pn**	**16 08 16.9**	**-0.9**
	42nm,1.1s						
SOEI	**Soe**	**14.55 248**			**Pn**	**16 08 15.3**	**-2.5**
KMSI	**Cibinong**	**14.75 289**		P	**Pn**	**16 08 18.8**	**-1.6**
	1µm61nm,0.8s						
LUWI	**Luwuk**	**15.47 282**		Pn	**Pn**	**16 08 28.4**	**-1.5**
LUWI				IAmb	IAmb	16 08 53.6	
	comp=Z,30nm,0.9s						
WB0	**Warramunga Arr**	**15.69 192**			**Pn**	**16 08 32.1**	**-0.6**
WB0				IAmb	IAmb	16 08 42.7	
	comp=Z,25nm,0.8s						
WR0	**Warramunga Arr**	**15.84 192**			**Pn**	**16 08 34.2**	**-0.5**
WR0				IAmb	IAmb	16 08 44.1	
	comp=Z,20nm,0.8s						
WRAB	**Tennant Creek**	**15.86 192**			**Pn**	**16 08 34.5**	**-0.3**
WRAB				IAmb	IAmb	16 08 42.2	
	comp=Z,33nm,0.8s						
WB2	**Warramunga Arr**	**15.86 192**			**Pn**	**16 08 34.7**	**-0.3**
WB2				IAmb	IAmb	16 08 42.3	
	comp=Z,31nm,0.8s						
WRA	**Warramunga Arr**	**15.87 192**		Pn	**Pn**	**16 08 35.0**	**0.0**
	comp=Z,0.9nm,0.3s,baz=14,slow=12,SNR=12						
WRA				Sn	**Sn**	**16 11 25.6**	**-4.3**
	comp=Z,0.5nm,0.3s,baz=9.4,slow=22,SNR=5.3						
WRA				Lg	Lg	16 13 17.1	
	comp=Z,0.4nm,0.3s,baz=19,slow=30,SNR=4.9						
WRA	**Warramunga Arr**	**15.87 192**			**Pn**	**16 08 35.7**	**+0.7**
APSI	**Ampana**	**16.59 281**		P	**P**	**16 08 46.1**	**-0.4**
MRSI	**Marisa**	**16.66 286**		P	**P**	**16 08 53.4**	**+6.2**
CTA	**Charters Tower**	**17.62 153**		P	**P**	**16 09 00.2**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=326,slow=12,SNR=6.2						
FITZ	**Fitzroy Crossi**	**18.17 220**		P	**Pn**	**16 09 07.4**	**+3.5**
	comp=Z,0.9nm,0.3s,baz=46,slow=11,SNR=15						
FITZ				S	**Sn**	**16 12 19.2**	**-6.5**
	comp=Z,0.3nm,0.3s,baz=181,slow=10,SNR=4.1						
FITZ	**Fitzroy Crossi**	**18.17 220**		P	**P**	**16 09 04.6**	**+0.7**
AS31	**Alice Springs**	**19.57 191**		P	**Pn**	**16 09 23.2**	**+2.4**
AS31					**S**	**16 12 57.8**	**-0.7**
ASAR	**Alice Springs**	**19.57 191**		P	**Pn**	**16 09 23.0**	**+2.2**
	comp=Z,2.0nm,0.3s,baz=17,slow=11,SNR=44						
ASAR				S	**S**	**16 12 58.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=16,slow=20,SNR=5.6						
ASAR	**Alice Springs**	**19.57 191**		P	**P**	**16 09 20.3**	**+1.0**
ASAR					**S**	**16 12 58.2**	**-0.3**
BKB	**Balikpapan**	**21.20 278**		P	**P**	**16 09 36.0**	**-1.0**
STKA	**Stephens Creek**	**27.59 173**		P	**P**	**16 10 42.3**	**+4.1**
	comp=Z,1.3nm,0.7s,baz=352,slow=13,SNR=4.1						
FORT	**Forrest**	**27.86 198**		P	**P**	**16 10 43.4**	**+2.7**
BBOO	**Buckleboo**	**28.35 183**		P	**P**	**16 10 45.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**44.59 302**		P	**P**	**16 13 04.8**	**+1.5**
	comp=Z,5.7nm,1.3s,baz=119,slow=5.6,SNR=6.2						
GTA	**Gaotai**	**55.93 325**		*eP*	**P**	**16 14 30.8**	**+1.7**
GTA				pP	pP	16 14 34.1	-6.0
GTA				sP	sP	16 14 37.3	-7.1
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM	**Songino Array**	**58.88 336**		P	**P**	**16 14 49.2**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=128,slow=5.9,SNR=1.8						
MK31	**Makanchi Array**	**70.61 323**		P	**P**	**16 16 05.9**	**-0.2**
MKAR	**Makanchi Array**	**70.61 323**		P	**P**	**16 16 07.2**	**+1.1**
	comp=Z,1.1nm,0.9s,baz=116,slow=7.3,SNR=6.8						
MKAR	**Makanchi Array**	**70.61 323**		P	**P**	**16 16 06.5**	**+0.4**
MAKZ	**Makanchi**	**70.81 323**		P	**P**	**16 16 06.8**	**-0.4**
MAKZ				IAmb	IAmb	16 16 18.1	
	comp=Z,2.9nm,1.1s						
KSH	**Kashi**	**71.64 314**		P	P	16 16 18.4	+5.8
KSH				PP	PP	16 18 58.6	+6.6
KSH				pmax	pmax		
	comp=Z,390nm,5.6s						
KKAR	**Karatay Array**	**76.75 316**		P	**P**	**16 16 42.3**	**+0.1**
KKAR				IAmb	IAmb	16 17 18.8	
	comp=Z,3.6nm,1.4s						
PPLA	**Purkeypile**	**84.86 26**		P	**P**	**16 17 22.8**	**-2.4**
SEW	**Seward**	**85.21 29**		P	**P**	**16 17 26.3**	**-0.5**
ABKAR	**Akbulak array**	**85.46 320**		P	**P**	**16 17 27.4**	**-1.0**
QSPA	**South Pole Qui**	**85.59 180**		P	**P**	**16 17 27.8**	**-1.1**

IDC ***23*** *16:08:14.5±3.9, 22°.37S×170°.45E, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.7/39, mbtmp3.9/4, ML3.8/1, MS3.7/15, Ms1 3.7/15, ms1mx3.5/29, Error ellipse: s-maj=153.4km s-min=44.8km az=163.0*
NEIC ***23*** *16:08:22.2±1.0, 22°.05S×171°.11E±0°.05, h48km±10km, mb4.7/8, Error ellipse: s-maj=15.2km s-min=6.3km az=191.0*
ISC 23 16:08:20.1±0.8, 22°.21S±0°.2×170°.16E±0°.08, h25km, n35, σ0s93/22, mb3.9/5, MS3.7/14, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.44 269**		*e*Pn	**Pn**	**16 09 12.9**	**+0.6**
	47nm,0.2s						
DZM				*e*Sn	**Sn**	**16 09 51.9**	**-0.4**
	29nm,0.2s						
DZM				*e*LR	LR	16 09 58.8	
	comp=Z,843nm,27.9s						
DZM	**Mont Dzumac**	**3.44 269**		Pn	**Pn**	**16 09 13.0**	**+0.8**
	7.3nm,0.3s,baz=101,slow=18,SNR=104						
DZM				Sn	**Sn**	**16 09 53.8**	**+1.5**
	4.8nm,0.3s,baz=311,slow=23,SNR=9.7						
DZM	**Mont Dzumac**	**3.44 269**			**Pn**	**16 09 12.9**	**+0.6**
DZM					**Sn**	**16 09 52.2**	**-0.1**
NOUC	**Port Laguerre**	**3.57 269**			**Pn**	**16 09 14.5**	**+0.6**
NOUC				Sn	**Sn**	**16 09 54.8**	**-0.6**
HNR	**Honiara**	**15.94 320**		LR	LR	16 17 17.9	
	comp=Z,200nm,19.1s,baz=138,slow=33						
URZ	**Urewera**	**17.21 161**		LR	LR	16 17 25.7	
	comp=Z,539nm,21.6s,baz=336,slow=33						
NIUE	**Niue**	**18.88 85**		P	**P**	**16 12 38.3**	**-0.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**18.99 68**		LR	LR	16 18 57.7	
	comp=Z,74nm,18.9s,baz=242,slow=34						
KHZ	**Kahutara**	**20.48 173**		P	Pn	16 12 57.7	-0.6
KHZ				IAmb	IAmb	16 13 01.6	
	comp=Z,53nm,1.2s						
LTZ	**Lake Taylor**	**20.73 176**		P	**P**	**16 12 59.9**	**+1.1**
LTZ				IAmb	IAmb	16 13 34.0	
	comp=Z,62nm,1.6s						
RPZ	**Rata Peaks**	**21.60 178**		LR	LR	16 19 47.3	
	comp=Z,357nm,18.9s,baz=30,slow=32						
PMG	**Port Moresby**	**25.42 296**		LR	LR	16 22 27.2	
	comp=Z,169nm,18.1s,baz=110,slow=33						
PMG	**Port Moresby**	**25.42 296**		P	**P**	**16 13 46.1**	**+0.1**
WRA	**Warramunga Arr**	**33.46 267**		P	**P**	**16 14 57.3**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=100,slow=7.9,SNR=5.4						
TBI	**Tubuai**	**37.19 100**		*e*LR	LR	16 25 32.5	
	comp=Z,160nm,28.2s						
PPT2	**Papeete2**	**38.06 91**		*e*LR	LR	16 25 53.9	
	comp=Z,144nm,28.5s						
MTN	**Manton Dam**	**38.25 277**		P	**P**	**16 15 38.9**	**+0.4**
MTN				IAmb	IAmb	16 15 52.5	
	comp=Z,13nm,1.1s						
PSAD3	**Pilbara Seismi**	**46.58 261**		P	**P**	**16 16 44.4**	**-1.9**
NWAO	**Narrogin (SRO)**	**47.74 245**		P	**P**	**16 16 53.8**	**-1.4**
VNDA	**Vanda**	**55.65 182**		LR	LR	16 39 55.8	
	comp=Z,80nm,18.1s,baz=2.0,slow=34						
MJAR	**Matsushiro Arr**	**65.64 332**		LR	LR	16 44 57.6	
	comp=Z,32nm,21.2s,baz=80,slow=33						
QSPA	**South Pole Qui**	**68.00 180**		P	**P**	**16 19 17.3**	**+0.3**
QSPA				IAmb	IAmb	16 19 38.3	
	comp=Z,15nm,1.6s						
ASAJ	**Asahikawa**	**70.54 339**		LR	LR	16 44 47.1	
	comp=Z,95nm,22.0s,baz=152,slow=31						
KSRS	**Korea Array**	**71.32 326**		LR	LR	16 48 12.7	
	comp=Z,24nm,20.5s,baz=60,slow=33						
USRK	**Ussuriysk Ar.**	**74.63 333**		LR	LR	16 50 03.1	
	comp=Z,43nm,20.9s,baz=44,slow=33						
PETK	**Petropavlovsk-**	**75.64 352**		LR	LR	16 47 05.1	
	comp=Z,77nm,19.9s,baz=61,slow=31						
CMAR	**Chiang Mai Arr**	**80.44 294**		P	**P**	**16 20 31.4**	**+1.2**
	comp=Z,0.8nm,0.7s,baz=125,slow=3.6,SNR=8.2						
CMAR				LR	LR	16 58 45.3	
	comp=Z,10nm,18.6s,baz=50,slow=38						
MA2	**Magadan**	**82.89 350**		LR	LR	16 51 30.7	
	comp=Z,87nm,20.4s,baz=138,slow=31						
SONM	**Songino Array**	**89.99 323**		P	**P**	**16 21 17.1**	**-0.4**
	comp=Z,0.9nm,1.0s,baz=134,slow=4.2,SNR=3.1						
PLCA	**Paso Flores**	**95.86 139**		LR	LR	16 55 15.6	
	comp=Z,2.0nm,20.6s,baz=252,slow=30						
TXAR	**Lajitas Array**	**97.36 61**		LR	LR	17 00 55.5	
	comp=Z,31nm,18.0s,baz=0.0,slow=32						
BRG	**Berggiesshubel**	**145.77 333**		*e*PKP	**PKPdf**	**16 27 56.0**	**-0.3**
	comp=Z,5.1nm,0.8s						
CLL	**Collm**	**145.83 334**		*i* PKPbc	**PKPdf**	**16 27 55.9**	**-0.5**
	comp=Z,4.0nm,0.6s						
CLL				*i*		16 28 03.2	
GERES	**GERESS Array B**	**147.38 331**		PKPbc	**PKPdf**	**16 28 00.5**	**+1.2**
	comp=Z,1.5nm,0.7s,baz=31,slow=3.1,SNR=13						
GERES	**GERESS Array B**	**147.38 331**			**PKPdf**	**16 28 00.4**	**+1.1**

NIED ***23*** *16:10:00, 36°.50N×140°.60E, h59km, Mw4.1 Best double couple: M0 1.84000×10^15 NP1:φs15.00000°, δ68.00000°, λ91.00000°. NP2:φs192.00000°, δ22.00000°, λ88.00000°.*
JMA ***23*** *16:10:53.3±0.1, 36°.45N×140°.61E, h55km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs193.00000°, δ27.00000°, λ90.00000°. NP2:φs13.00000°, δ63.00000°, λ90.00000°. Principal axes: T Plg72.0000°, Azm283.0000°; N Plg0.0000°, Azm13.0000°; P Plg18.0000°, Azm103.0000°;*
JMA Felt II J1.
IDC ***23*** *16:10:53.1±2.5, 36°.48N×140°.81E, h60km±20km, mb3.6/9, mb1 3.8/13, mb1mx3.5/48, mbtmp3.9/13, ML3.0/4, MS3.4/5, Ms

comp=Z,0.6nm,0.7s,baz=269,slow=5.3,SNR=4.9

ILAR	**Eielson Array**	**50.28**	**32**	P	**P**	**16 19 42.9**	**-0.3**
KKAR	**Karatay Array**	**52.91**	**300**	P	**P**	**16 20 03.3**	**0.0**
KKAR	**Karatay Array**	**52.91**	**300**	P	**P**	**16 20 03.0**	**-0.2**
KKAR				IAmb	IAmb	16 20 05.7	

comp=Z,4.4nm,1.4s

WR0	**Warramunga Arr**	**56.42**	**187**	P	**P**	**16 20 27.8**	**-0.9**
WB2	**Warramunga Arr**	**56.42**	**187**	P	**P**	**16 20 29.0**	**+0.2**
WB2				IAmb	IAmb	16 21 07.7	

comp=Z,4.5nm,1.1s

WRA	**Warramunga Arr**	**56.42**	**187**	P	**P**	**16 20 27.6**	**-1.2**

comp=Z,1.7nm,0.8s,baz=2.7,slow=7.7,SNR=14

SKAG	**Skagway**	**56.50**	**38**	P	**P**	**16 20 28.6**	**-0.2**
ABKAR	**Akbulak array**	**57.86**	**310**	P	**P**	**16 20 38.0**	**-0.7**
ABKAR				IAmb	IAmb	16 20 39.3	

comp=Z,3.8nm,1.1s

ABKAR	**Akbulak array**	**57.86**	**310**	P	**P**	**16 20 38.5**	**-0.2**
ASAR	**Alice Springs**	**60.15**	**187**	P	**P**	**16 20 55.1**	**+0.3**

comp=Z,0.9nm,0.8s,baz=12,slow=7.7,SNR=6.0

ASAR	**Alice Springs**	**60.15**	**187**	P	**P**	**16 20 54.2**	**-0.6**
SPITS	**Spitsbergen Ar**	**60.96**	**349**	LR	LR	16 49 38.9	

comp=Z,45nm,18.7s,baz=20,slow=38

RES	**Resolute Bay**	**63.29**	**14**	P	**P**	**16 21 16.4**	**+1.2**
RES				IAmb	IAmb	16 21 36.7	

comp=Z,2.7nm,1.2s

AKASG	**Malin Array Be**	**74.39**	**322**	P	**P**	**16 22 24.2**	**-0.3**

comp=Z,1.0nm,0.6s,baz=45,slow=6.1,SNR=5.9

NB2	**NORSAR Subarra**	**74.48**	**337**	P	**P**	**16 22 24.8**	**-0.2**

comp=Z,2.2nm,0.9s,baz=37,slow=5.9

NOA	**NORSAR Array B**	**74.48**	**337**	P	**P**	**16 22 25.1**	**+0.1**

comp=Z,1.8nm,0.8s,baz=38,slow=5.9,SNR=5.4

BRTR	**Keskin Array B**	**78.79**	**311**	P	**P**	**16 22 50.6**	**+0.7**

comp=Z,0.8nm,0.9s,baz=126,slow=3.4,SNR=3.9

PFO	**Pinyon Flats O**	**79.83**	**56**	LR	LR	16 51 55.5	

comp=Z,90nm,20.5s,baz=9.5,slow=31

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*NEIC **23** 16:13:13.6±2.6, 17.7°S±0.08°×69.5°W±0.2, h158km±3km, Error ellipse: s-maj=24.0km s-min=9.9km az=105.0*
*IDC **23** 16:13:14.6±1.4, 17.77°S×69.32°W, h156km±10km, mb3.8/3, mb1 3.7/5, mb1mx3.4/30, mbtmp4.1/5, Error ellipse: s-maj=26.8km s-min=11.2km az=105.0*
*GUC **23** 16:13:14.1±0.4, 17.87°S×69.85°W, h162km±5km, ML3.8*

ISC 23 16:13:12.6±1.0, 17.66S±0.07°×69.6W±0.1°, h153km±8km, n31, σ1§64/45, mb4.0/3, 6D, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MNMC	**Minye Minye**	**1.46**	**180**	↓*i*	*P*	**Pn**	**16 13 43.7**	**+1.3**
MNMC				*e*	S	**Sn**	**16 14 06.1**	**+0.9**
MNMC				IAML			16 14 07.5	

comp=E,2µm,0.5s

MNMC	**Minye Minye**	**1.46**	**180**			**Pn**	**16 13 43.7**	**+1.3**
MNMC				Sn		**Sn**	**16 14 05.9**	**+0.7**
LPAZ	**La Paz**	**1.96**	**46**	↓*i*	*P*	**Pn**	**16 13 49.5**	**+1.4**
LPAZ	**La Paz**	**1.96**	**46**	P		**Pn**	**16 13 49.4**	**+1.2**

baz=232,slow=6.0

LPAZ				S		**Sn**	**16 14 16.0**	**+0.7**

comp=E,2.6nm,0.3s,baz=18,slow=20,SNR=2.7

PSGC	**Pisagua**	**1.99**	**194**	*e*	*P*	**Pn**	**16 13 48.3**	**+0.4**
PSGC				*i*	S	**Sn**	**16 14 13.9**	**-1.2**
PSGC				IAML			16 14 14.8	

comp=N,351nm,0.4s

GO01	**Chusmiza**	**2.04**	**169**	↓*i*	*P*	**Pn**	**16 13 50.7**	**+1.8**
GO01				*e*	S	**Sn**	**16 14 18.7**	**+2.0**
GO01				IAML			16 14 23.0	

comp=N,770nm,0.2s

GO01	**Chusmiza**	**2.04**	**169**			**Pn**	**16 13 50.7**	**+1.8**
GO01				Sn		**Sn**	**16 14 18.7**	**+2.0**
PB11	**IPOC Station P**	**2.09**	**181**	↓*i*	*P*	**Pn**	**16 13 50.2**	**+1.1**
PB11				*e*	S	**Sn**	**16 14 17.5**	**+0.1**
PB11				IAML			16 14 19.1	

comp=E,668nm,0.5s

PB11	**IPOC Station P**	**2.09**	**181**			**Pn**	**16 13 50.0**	**+0.9**
PB11				Sn		**Sn**	**16 14 17.5**	**+0.1**
PB08	**IPOC Station P**	**2.50**	**170**	↓*i*	*P*	**Pn**	**16 13 56.1**	**+1.8**
PB08				*i*	S	**Sn**	**16 14 27.9**	**+1.3**
PB08				IAML			16 14 29.5	

comp=E,303nm,0.3s

TA01	**Diego Aracena**	**2.94**	**191**	↓*i*	*P*	**Pn**	**16 13 59.2**	**-0.1**
TA01				*i*	S	**Sn**	**16 14 33.1**	**-2.5**
PATCX	**Punta Patache**	**3.19**	**189**	*e*	*P*	**Pn**	**16 14 02.8**	**+0.2**
PATCX				*i*	S	**Sn**	**16 14 40.1**	**-1.2**
PB04	**IPOC Station P**	**4.68**	**186**			**Pn**	**16 14 22.0**	**0.0**
LVC	**Limon Verde**	**4.97**	**173**	P		**Pn**	**16 14 27.3**	**+1.3**

comp=E,12nm,0.3s,baz=346,slow=13,SNR=20

LVC				S		**Sn**	**16 15 21.6**	**-1.6**

comp=E,10nm,0.3s,baz=161,slow=17,SNR=14

PB10	**IPOC Station P**	**5.89**	**189**			**Pn**	**16 14 37.2**	**-0.7**
PB10				Sn		**Sn**	**16 15 41.5**	**-3.2**
GO02	**Mina Guanaco**	**7.47**	**180**			**Pn**	**16 14 58.5**	**-0.6**
SIV	**San Ignacio**	**8.34**	**80**	P		**Pn**	**16 15 10.8**	**+0.2**

comp=E,0.8nm,0.3s,baz=264,slow=12,SNR=9.4

SIV				S		**Sn**	**16 16 37.9**	**-5.6**

comp=E,0.2nm,0.3s,baz=8.5,slow=19,SNR=2.9

GO03	**Copiap**	**9.90**	**183**	Pn		**Pn**	**16 15 29.0**	**-2.3**
SAML	**Samuel**	**10.68**	**37**	Pn		**Pn**	**16 15 39.1**	**-2.5**
GO04	**Tololo Observa**	**12.50**	**185**	Pn		**Pn**	**16 16 03.5**	**-2.1**
DBIC	**Dimbokro**	**68.33**	**75**	P		**P**	**16 23 58.5**	**+0.6**

comp=E,2.5nm,0.6s,baz=231,slow=6.5,SNR=5.2

DBIC	**Dimbokro**	**68.33**	**75**	P		**P**	**16 23 57.0**	**-0.9**
DBIC				IAmb		IAmb	16 23 57.8	

comp=Z,9.4nm,1.3s

TORD	**Torodi Ar. Bea**	**76.72**	**71**	P		**P**	**16 24 47.8**	**+0.3**

comp=Z,1.8nm,0.6s,baz=256,slow=5.6,SNR=6.8

TORD	**Torodi Ar. Bea**	**76.72**	**71**	P		**P**	**16 24 48.1**	**+0.6**
YKA	**Yellowknife Ar**	**87.36**	**341**	P		**P**	**16 25 43.5**	**+1.6**

comp=Z,0.5nm,0.6s,baz=136,slow=4.9,SNR=8.5

ASAR	**Alice Springs**	**132.94**	**210**	PKP		**PKiKP**	**16 32 12.3**	**+0.5**

comp=Z,0.2nm,0.7s,baz=123,slow=3.4,SNR=3.1

WRA	**Warramunga Arr**	**135.85**	**213**	PKP		**PKiKP**	**16 32 18.1**	**+0.4**

comp=Z,0.5nm,1.0s,baz=135,slow=1.8,SNR=3.5

MKAR	**Makanchi Array**	**142.84**	**32**	PKP		**PKPdf**	**16 32 29.0**	**+1.1**

comp=Z,0.1nm,0.4s,baz=329,slow=1.5,SNR=2.8

MKAR	**Makanchi Array**	**142.84**	**32**			**PKPdf**	**16 32 28.6**	**+0.7**
SONM	**Songino Array**	**149.73**	**5**	PKPbc		**PKiKP**	**16 32 46.4**	**+0.9**

comp=Z,0.4nm,0.5s,baz=336,slow=1.9,SNR=3.7

SONM	**Songino Array**	**149.73**	**5**			**PKiKP**	**16 32 46.0**	**+0.5**

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*JMA **23** 16:26:50.7±0.1, 36.00N×140.15E, h60km±1km, M2.7*
*IDC **23** 16:26:52.7±4.0, 36.61N×139.87E, h137km±40km, mb3.1/2, mb1 3.3/2, mb1mx2.8/26, mbtmp3.5/2, Error ellipse: s-maj=85.3km s-min=63.2km az=141.0*

ISC 23 16:26:49.9±1.1, 35.93N±0.05×140.19E±0.06, h66km±9km, n14, σ0§72/23, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JIHU	**Itakohorinouch**	**0.28**	**83**	P		**Pn**	**16 27 01.3**	**+0.8**
JIHU				*e*	S	**Sn**	**16 27 09.4**	**+1.2**
JYT	**Yasato**	**0.29**	**1**	P		**Pn**	**16 27 00.4**	**-0.2**
JYT				S		**Sn**	**16 27 07.5**	**-0.9**
JAG	**Ashikaga**	**0.77**	**310**	P		**Pn**	**16 27 05.2**	**-0.2**
JAG				*e*	S	**Sn**	**16 27 15.9**	**-0.9**
JRY	**Ryogami san**	**1.05**	**275**	P		**Pn**	**16 27 09.1**	**+0.3**
JOD2	**Odawara 2**	**1.12**	**234**	P		**Pn**	**16 27 10.0**	**+0.3**
JOD2				S		**Sn**	**16 27 23.9**	**-0.6**
JKT	**Katashina**	**1.13**	**318**	P		**Pn**	**16 27 09.7**	**-0.2**
JKT				S		**Sn**	**16 27 24.0**	**-0.8**
JIM2	**Oshima 3**	**1.36**	**207**	P		**Pn**	**16 27 12.6**	**-0.3**
JIM2				S		**Sn**	**16 27 29.4**	**-0.8**
JYN	**Shimob**	**1.41**	**253**	P		**Pn**	**16 27 14.4**	**+0.9**
JYN				S		**Sn**	**16 27 31.6**	**+0.3**
JFY	**Yanaizu**	**1.52**	**345**	P		**Pn**	**16 27 15.4**	**+0.3**
JFK	**Kawauchi**	**1.54**	**21**	P		**Pn**	**16 27 15.4**	**+0.2**
MJAR	**Matsushiro Arr**	**1.71**	**291**	P		**Pn**	**16 27 18.4**	**+0.9**

2.2nm,0.3s,baz=90,slow=9.9,SNR=148

MJAR				S		**Sn**	**16 27 39.7**	**+1.2**

0.6nm,0.3s,baz=230,slow=23,SNR=6.4

MAT	**Matsushiro**	**1.71**	**291**	P		**Pn**	**16 27 18.1**	**+0.5**
MAT				S		**Sn**	**16 27 39.2**	**+0.6**
WRA	**Warramunga Arr**	**55.84**	**187**	P		**P**	**16 36 20.5**	**0.0**

0.7nm,0.8s,baz=0.1,slow=7.4,SNR=5.4

ASAR	**Alice Springs**	**59.57**	**187**	P		**P**	**16 36 46.2**	**-0.5**

0.2nm,0.7s,baz=7.8,slow=8.9,SNR=2.9

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*IDC **23** 16:40:05.2±0.8, 52.03N×171.67W, h0km, mb4.0/13, mb1 4.3/14, mb1mx3.9/42, mbtmp4.0/14, ML3.5/1, MS3.4/5, Ms1 3.4/5, ms1mx3.0/41, Error ellipse: s-maj=26.0km s-min=15.6km az=165.0*

*AEIC **23** 16:40:11.2±2.4, 52.1°N±0.1°×171.48W±0.07, h40km±2km, Error ellipse: s-maj=19.6km s-min=6.6km az=167.0*
*NEIC **23** 16:40:12.8±2.1, 52.07N±0.08°×171.47W±0.04, h57km±8km, mb4.3/57, ML3.7/31(AEIC), Error ellipse: s-maj=12.2km s-min=2.2km az=191.0*

ISC 23 16:40:11.5±0.6, 51.9N±0.1°×171.43W±0.04, h44km, n139, σ1§28/134, mb4.2/28, MS3.4/6, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KOSE	**Korovin Southe**	**1.67**	**286**			**Pn**	**16 40 38.8**	**+0.6**
KOSE						**Sn**	**16 41 00.5**	**+2.0**
KOFP	**Korovin Flat P**	**1.68**	**283**			**Pn**	**16 40 38.9**	**+0.5**
ATKA	**Atka Island**	**1.73**	**280**			**Pn**	**16 40 38.6**	**-0.4**
ATKA	**Atka Island**	**1.73**	**280**			**Sn**	**16 40 59.4**	**-0.4**
KOKV	**Korovin Volcan**	**1.74**	**286**			**Pn**	**16 40 39.3**	**+0.1**
KOKL	**Mount Kliuchef**	**1.75**	**284**			**Pn**	**16 40 40.2**	**+0.8**
KOWE	**Korovin West**	**1.79**	**285**			**Pn**	**16 40 40.8**	**+0.9**
NIKH	**Nikolski High**	**1.89**	**55**			**Pn**	**16 40 41.2**	**0.0**
NIKH	**Nikolski High**	**1.89**	**55**			**Sn**	**16 41 03.1**	**-0.8**
OKWE	**Okmok W'ng Wal**	**2.48**	**50**			**Pn**	**16 40 50.6**	**+1.2**
OKFG	**Magazine Ridge**	**2.61**	**54**			**Pn**	**16 40 52.1**	**+1.0**
OKFG						**Sn**	**16 41 22.9**	**+1.5**
GSMY	**Great Sitkin M**	**2.86**	**274**			**Pn**	**16 40 55.0**	**+0.4**
GSTR	**Great Sitkin T**	**2.87**	**275**			**Pn**	**16 40 54.6**	**-0.1**
GSTD	**Great Sitkin T**	**2.92**	**274**			**Pn**	**16 40 55.9**	**+0.5**
GSTD						**Sn**	**16 41 29.6**	**+0.4**
ADAG	**Mount Adagdak**	**3.20**	**273**			**Pn**	**16 41 00.6**	**+1.3**
ADK	**Adak**	**3.26**	**271**			**Pn**	**16 41 00.0**	**0.0**
MREP	**Makushin Rep't**	**3.41**	**55**			**Pn**	**16 41 03.1**	**+1.0**
MSW	**Makushin Switc**	**3.44**	**53**			**Pn**	**16 41 03.4**	**+0.9**
MSW						**Sn**	**16 41 43.3**	**+1.2**
KINC	**Kanaga Island**	**3.53**	**272**			**Pn**	**16 41 05.1**	**+1.4**
KIWB	**Kanaga Island**	**3.55**	**271**			**Pn**	**16 41 03.8**	**-0.1**
UNV	**Unalaska Valle**	**3.55**	**55**			**Pn**	**16 41 05.0**	**+1.0**
UNV	**Unalaska Valle**	**3.55**	**55**			**Sn**	**16 41 46.0**	**+1.5**
KIKV	**Kanaga Island**	**3.56**	**271**			**Pn**	**16 41 05.1**	**+1.0**
KIMD	**Kanaga Island**	**3.61**	**270**			**Pn**	**16 41 05.4**	**+0.7**
TAFP	**Tanaga Falls P**	**4.06**	**272**			**Pn**	**16 41 11.6**	**+0.6**
AKUT	**Akutan**	**4.07**	**55**	Pn		**Pn**	**16 41 13.0**	**+1.9**
TASE	**Tanaga Southea**	**4.10**	**271**			**Pn**	**16 41 12.7**	**+1.2**
FALS	**False Pass**	**5.62**	**55**	Pn		**Pn**	**16 41 33.6**	**+1.3**
SDPT	**Sand Point**	**7.36**	**58**			**Pn**	**16 41 58.2**	**+2.1**
OHAK	**Old Harbor**	**11.77**	**56**	Pn		**Pn**	**16 42 53.4**	**-3.2**
GAMB	**Gambell**	**11.88**	**359**			**Pn**	**16 43 00.2**	**+2.1**
KDAK	**Kodiak Island**	**12.32**	**54**	Pn		**Pn**	**16 43 02.2**	**-1.8**

0.4nm,0.3s,baz=202,slow=5.4,SNR=5.3

ANM	**Nome**	**13.06**	**12**			**Pn**	**16 43 12.4**	**-1.7**
RSO	**Redoubt South**	**13.41**	**43**	Pn		**Pn**	**16 43 21.9**	**+2.7**
CNPM	**China Poot**	**13.64**	**48**	Pn		**Pn**	**16 43 21.1**	**-1.0**
SEW	**Seward**	**14.71**	**48**	Pn		**Pn**	**16 43 34.2**	**-2.1**
SKT	**Skwentna**	**14.74**	**39**	Pn		**Pn**	**16 43 36.1**	**-0.7**
SUA	**Susitna One**	**14.77**	**42**	Pn		**Pn**	**16 43 37.7**	**+0.3**
RC01	**Rabbit Creek A**	**15.01**	**44**	Pn		**Pn**	**16 43 40.2**	**-0.2**
PPLA	**Purkeypile**	**15.03**	**36**			**P**	**16 43 43.4**	**-2.0**
GHO	**Glory Hole Cre**	**15.68**	**42**			**Pn**	**16 43 47.2**	**-1.9**
GHO					IAmb	IAmb	16 43 49.0	

comp=Z,28nm,1.5s

KTH	**Kantishna Hill**	**15.89**	**35**	P		**P**	**16 43 53.8**	**-1.0**
SML	**Sawmill**	**15.95**	**43**	Pn		**Pn**	**16 43 50.6**	**-1.9**
TRFF	**Thorofare Moun**	**16.05**	**36**	Pn		**Pn**	**16 43 53.8**	**-0.2**
TRF					IAmb	IAmb	16 44 13.5	

comp=Z,23nm,1.6s

BPAW	**Bear Paw Mtn.**	**16.21**	**33**	Pn		**Pn**	**16 43 53.9**	**-1.8**
FID	**Port Fidalgo**	**16.32**	**48**	Pn		**Pn**	**16 43 55.0**	**-2.2**
SCM	**Sheep Creek Mo**	**16.38**	**43**	Pn		**Pn**	**16 43 55.5**	**-2.6**
SCM					IAmb	IAmb	16 43 59.7	

comp=Z,48nm,1.4s

IMAR	**Indian Mountai**	**16.68**	**26**			**P**	**16 44 04.8**	**+1.2**
BWN	**Browne**	**16.78**	**35**			**P**	**16 44 03.8**	**-0.8**
BWN					IAmb	IAmb	16 44 24.0	

comp=Z,58nm,1.6s

MLY	**Manley**	**16.89**	**31**			**Pn**	**16 44 04.4**	**0.0**
NEA	**Nenana**	**17.16**	**34**	Pn		**Pn**	**16 44 06.0**	**-1.6**
NEA					IAmb	IAmb	16 44 18.8	

comp=Z,37nm,1.0s

WRH	**Wood River Hil**	**17.44**	**35**	Pn		**Pn**	**16 44 08.7**	**-2.5**
WRH					IAmb	IAmb	16 44 34.3	

comp=Z,19nm,1.6s

CCB	**Clear Creek Bu**	**17.64**	**35**	Pn		**Pn**	**16 44 11.5**	**-2.1**
PAX	**Paxson**	**17.67**	**41**	Pn		**Pn**	**16 44 11.5**	**-2.6**
GLB	**Gilahina Butte**	**17.77**	**47**	Pn		**Pn**	**16 44 13.1**	**-2.3**
GLB					IAmb	IAmb	16 44 37.5	

comp=Z,28nm,1.7s

HDA	**Harding Lake**	**17.82**	**36**	P		**Pn**	**16 44 15.0**	**-0.8**
IL31		**18.04**	**35**	P		**Pn**	**16 44 18.1**	**-0.4**
ILAR	**Eielson Array**	**18.04**	**35**	P		**Pn**	**16 44 16.3**	**-2.1**

comp=Z,0.1nm,0.3s,baz=226,slow=10,SNR=11

ILAR	**Eielson Array**	**18.04**	**35**	P		**Pn**	**16 44 17.5**	**-0.9**
MCARA	**McCarthy VSAT**	**18.11**	**47**	P		**P**	**16 44 19.9**	**+0.5**
MCARA					IAmb	IAmb	16 44 27.5	

comp=Z,47nm,1.4s

RIDG	**Independent Ri**	**18.27**	**39**	P		**Pn**	**16 44 21.4**	**0.0**
RIDG					IAmb	IAmb	16 44 45.8	

comp=Z,27nm,1.5s

BALM	**Baldy**	**18.32**	**49**	P		**P**	**16 44 19.6**	**-2.1**
BALM					IAmb	IAmb	16 44 38.5	

comp=Z,46nm,1.4s

DOT	**Dot Lake**	**18.54**	**40**	P		**P**	**16 44 23.2**	**-0.8**
DOT					IAmb	IAmb	16 44 45.1	

comp=Z,19nm,1.6s

COLD	**Coldfoot**	**18.56**	**26**	P		**Pn**	**16 44 24.4**	**-0.4**
BARN	**Barnard Glacie**	**18.64**	**49**	P		**Pn**	**16 44 27.5**	**+1.4**
BARN					IAmb	IAmb	16 44 29.0	

comp=Z,17nm,0.6s

PEA0B	**Petropavlovsk-**	**18.76**	**286**	P		**Pn**	**16 44 28.5**	**+1.2**
PETK	**Petropavlovsk-**	**18.76**	**286**	P		**Pn**	**16 44 27.3**	**0.0**

comp=Z,0.4nm,0.3s,baz=87,slow=15,SNR=14

PETK	**Petropavlovsk-**	**18.76**	**286**	P		**Pn**	**16 44 28.7**	**+1.4**
BCAR	**Beaver Creek A**	**19.24**	**43**	P		**P**	**16 44 31.2**	**-0.6**
BILL	**Bilibino**	**19.43**	**335**	P		**P**	**16 44 32.6**	**-1.2**
FYU	**Fort Yukon**	**19.63**	**32**	P		**P**	**16 44 34.2**	**-1.6**
EGAK	**Eagle**	**20.18**	**39**	P		**P**	**16 44 41.9**	**0.0**
EGAK					IAmb	IAmb	16 44 54.4	

comp=Z,11nm,1.2s

BMAR	**Burnt Mountain**	**20.34**	**30**	P		**P**	**16 44 42.3**	**-1.4**
SKAG	**Skagway**	**21.47**	**55**	P		**P**	**16 44 56.6**	**+0.8**
SKAG					IAmb	IAmb	16 45 04.1	

comp=Z,15nm,1.0s

BESE	**Bessie Mountai**	**21.66**	**58**	P		**P**	**16 44 56.6**	**-1.5**
WHY	**Whitehorse**	**21.82**	**52**	P		**P**	**16 44 59.8**	**+0.2**
WHY					IAmb	IAmb	16 45 08.4	

comp=Z,11nm,1.2s

JIS	**Juneau Island**	**21.91**	**59**	P		**P**	**16 45 00.1**	**-0.4**
SEY	**Seymchan**	**22.05**	**314**	P		**P**	**16 45 03.0**	**+1.0**

comp=Z,2.0nm,0.8s,baz=134,slow=11,SNR=6.4

CRAG	**Craig**	**22.75**	**66**	P		**P**	**16 45 10.3**	**+0.7**
DIB	**Dawson Inlet,**	**23.52**	**71**	P		**P**	**16 45 19.1**	**+1.9**
DLBC	**Dease Lake**	**24.20**	**58**	P		**P**	**16 45 25.1**	**+1.5**

comp=Z,7.5nm,0.6s,baz=275,slow=5.9,SNR=7.8

DLBC	**Dease Lake**	**24.20**	**58**	P		**P**	**16 45 24.9**	**+1.3**
INK	**Inuvik**	**24.41**	**34**	P		**P**	**16 45 24.7**	**-0.6**

comp=Z,2.3nm,0.5s,baz=243,slow=8.9,SNR=18

INK					LR	LR	16 57 00.4	

comp=Z,114nm,18.1s,baz=126,slow=42

INK	**Inuvik**	**24.41**	**34**	P		**P**	**16 45 24.3**	**-1.0**
INK					IAmb	IAmb	16 45 32.0	

comp=Z,13nm,1.6s

YKA	**Yellowknife Ar**	**31.48**	**48**	P		**P**	**16 46 28.8**	**+0.2**

comp=Z,0.9nm,0.6s,baz=272,slow=8.1,SNR=16

YKA					LR	LR	17 01 07.1	

comp=Z,98nm,19.1s,baz=0.0,slow=40

H11N2	**WAKE ISLAND Hy**	**36.33**	**216**	T		T	17 25 47.3	

baz=21,slow=76,SNR=69

H11N3	**WAKE ISLAND Hy**	**36.34**	**216**	T		T	17 25 48.7	

baz=21,slow=76,SNR=85

H11N1	**WAKE ISLAND Hy**	**36.35**	**216**	T		T	17 25 49.6	

baz=21,slow=76,SNR=55

H11S1	**WAKE ISLAND Hy**	**37.53**	**215**	T		T	17 27 20.0	

baz=22,slow=76,SNR=86

H11S2	**WAKE ISLAND Hy**	**37.54**	**215**	T		T	17 27 21.3	

baz=22,slow=76,SNR=55

H11S3	**WAKE ISLAND Hy**	**37.55**	**215**	T		T	17 27 17.5	

baz=22,slow=76,SNR=45

MJAR	**Matsushiro Arr**	**38.41**	**267**	LR		LR	17 02 31.0	

comp=Z,34nm,20.4s,baz=115,slow=35

MCMT	**McKenzie Canyo**	**38.61**	**77**	P		**P**	**16 47 28.7**	**-1.7**
PMPB	**Monarch Peak**	**38.78**	**94**	P		**P**	**16 47 32.6**	**+0.9**
EGMT	**Eagleton**	**38.81**	**71**	P		**P**	**16 47 31.6**	**-0.2**
NVAR	**Mina Array Bea**	**38.93**	**89**	P		**P**	**16 47 34.4**	**+1.3**

comp=Z,3.3nm,0.8s,baz=291,slow=8.8,SNR=12

YHL	**Hebgen Lake**	**39.60**	**76**	P		**P**	**16 47 38.5**	**-0.2**
YHH	**Holmes Hill**	**39.83**	**76**	P		**P**	**16 47 41.2**	**+0.6**
FFC	**Flin Flon**	**40.03**	**58**	P		**P**	**16 47 40.7**	**-1.1**
FFC				IAmb		IAmb	16 48 03.8	

comp=Z,4.8nm,1.4s

RLMT	**Red Lodge**	**40.60**	**74**	P		**P**	**16 47 47.3**	**+0.4**
RLMT				IAmb		IAmb	16 47 48.9	

comp=Z,5.4nm,0.9s

R11A	**Troy Canyon, C**	**40.66**	**87**	P		**P**	**16 47 48.4**	**+1.0**
PSUT	**Pine Spring**	**41.62**	**85**	P		**P**	**16 47 55.6**	**+0.3**
BW06	**Boulder Array**	**41.73**	**77**	P		**P**	**16 47 56.5**	**+0.3**
BW06				IAmb		IAmb	16 47 57.9	

comp=Z,2.9nm,0.8s

PD31	**Pinedale Array**	**41.73**	**77**	P		**P**	**16 47 56.8**	**+0.5**
PD31				IAmb		IAmb	16 47 58.8	

comp=Z,6.3nm,1.4s

PDAR	**Pinedale Array**	**41.73**	**77**	P		**P**	**16 47 56.9**	**+0.7**

comp=Z,2.3nm,0.9s,baz=306,slow=4.0,SNR=14

PDAR	**Pin

Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.71**	**125**	P	**Pn**	**17 26 58.0**	**+0.9**
HNR	**Honiara**	**3.71**	**125**	Pn	**Pn**	**17 26 58.0**	**+0.9**
	31nm,0.3s,baz=239,slow=2.9,SNR=17						
HNR				Sn	**Sb**	**17 27 48.4**	**-2.0**
	100nm,0.3s,baz=263,slow=20,SNR=4.0						
HNR	**Honiara**	**3.71**	**125**		**Pn**	**17 26 57.3**	**+0.3**
KRVT	**Keravat (AS076**	**5.66**	**301**	Pn	**Pn**	**17 27 25.2**	**+1.5**
	9.9nm,0.3s,baz=67,slow=7.7,SNR=2.2						
KRVT				Sn	Sb	17 28 35.0	-11
	11nm,0.3s,baz=3.4,slow=17,SNR=1.9						
KRVT				LR	LR	17 29 48.1	
	comp=Z,2μm,18.9s,baz=124,slow=41						
PMG	**Port Moresby**	**9.82**	**257**	Pn	**Pn**	**17 28 21.8**	**+0.8**
	0.5nm,0.3s,baz=72,slow=13,SNR=3.2						
PMG				Sn	**Sn**	**17 30 16.0**	**+4.5**
	0.3nm,0.3s,baz=246,slow=18,SNR=2.0						
PMG				LR	LR	17 31 55.3	
	comp=Z,767nm,18.2s,baz=56,slow=37						
PMG	**Port Moresby**	**9.82**	**257**	Pn	**Pn**	**17 28 19.3**	**-1.7**
PATS	**Pohnpei**	**14.12**	**6**	Pn	**Pn**	**17 29 19.3**	**-0.5**
COEN	**Coen**	**14.98**	**243**	P	**P**	**17 29 35.2**	**-2.0**
CTA	**Charters Tower**	**16.35**	**218**	Pn	**P**	**17 29 51.5**	**-0.8**
	0.2nm,0.3s,baz=27,slow=6.8,SNR=3.0						
DZM	**Mont Dzumac**	**17.35**	**149**	*e*P	P	17 30 15.2	+12
	51nm,1.2s						
DZM				*e*LQ	LQ	17 33 25.3	
	2μm,26.2s						
DZM				*e*LR	LR	17 34 15.0	
	comp=Z,1μm,27.2s						
DZM	**Mont Dzumac**	**17.35**	**149**	P	**P**	**17 30 05.3**	**+1.8**
	0.7nm,0.3s,baz=339,slow=14,SNR=6.7						
DZM				LR	LR	17 35 52.5	
	comp=Z,912nm,18.7s,baz=0.0,slow=34						
EIDS	**Eidsvold**	**18.79**	**196**		**Pn**	**17 30 20.8**	**+1.0**
SMPI	**Sarmi**	**18.84**	**285**	P	Pn	17 30 29.9	+10
MSVF	**Nonsavu**	**23.11**	**119**	*de*P	P	17 30 52.9	-13
MSVF				pmax	pmax		
	comp=Z,62nm,4.6s						
ARMA	**Armidale**	**23.51**	**191**	P	**P**	**17 31 11.7**	**+1.6**
GUMO	**Guam**	**23.93**	**330**	LR	LR	17 41 10.1	
	comp=Z,112nm,18.2s,baz=148,slow=38						
FAKI	**Fak Fak**	**24.89**	**279**	P	**P**	**17 31 22.9**	**-0.1**
FAKI				IAmb	IAmb	17 31 41.2	
	comp=Z,14nm,0.8s						
WR0	**Warramunga Arr**	**25.03**	**238**	P	**P**	**17 31 24.4**	**+0.2**
WR0				IAmb	IAmb	17 31 41.8	
	comp=Z,30nm,0.8s						
WB0	**Warramunga Arr**	**25.07**	**238**	P	**P**	**17 31 24.7**	**+0.2**
WB0				IAmb	IAmb	17 31 25.6	
	comp=Z,26nm,1.0s						
WRAB	**Tennant Creek**	**25.18**	**238**	*de*P	**P**	**17 31 25.0**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,24nm,0.8s						
WRAB	**Tennant Creek**	**25.18**	**238**	P	**P**	**17 31 25.6**	**+0.1**
WRAB				IAmb	IAmb	17 31 26.5	
	comp=Z,22nm,0.8s						
WB2	**Warramunga Arr**	**25.18**	**238**	P	**P**	**17 31 25.7**	**+0.2**
WB2				IAmb	IAmb	17 31 43.2	
	comp=Z,22nm,0.8s						
WRA	**Warramunga Arr**	**25.19**	**238**	P	**P**	**17 31 25.6**	**0.0**
	comp=Z,22nm,0.8s,baz=64,slow=9.3,SNR=79						
WRA				PcP	**PcP**	**17 34 59.5**	**0.0**
	comp=Z,2.1nm,0.4s,baz=66,slow=2.7,SNR=7.5						
WRA	**Warramunga Arr**	**25.19**	**238**	P	**P**	**17 31 24.1**	**-1.5**
MTN	**Manton Dam**	**25.91**	**256**	P	**P**	**17 31 31.9**	**-0.3**
MTN				IAmb	IAmb	17 31 32.8	
	comp=Z,37nm,1.2s						
SIJI	**Sorong**	**26.30**	**283**	P	**P**	**17 31 34.9**	**-0.9**
	comp=Z,8.7nm,0.3s,baz=75,slow=9.7,SNR=8.3						
SIJI				LR	LR	17 43 40.2	
	comp=Z,225nm,18.4s,baz=85,slow=40						
SWI	**Sorong**	**26.31**	**283**	P	**P**	**17 31 34.8**	**-1.0**
	comp=Z,30nm,0.6s						
AS31	**Alice Springs**	**27.39**	**231**	P	**P**	**17 31 44.7**	**-0.7**
ASAR	**Alice Springs**	**27.39**	**231**	P	**P**	**17 31 44.9**	**-0.6**
	comp=Z,4.5nm,0.9s,baz=58,slow=10.0,SNR=46						
ASAR				PcP	**PcP**	**17 35 04.5**	**0.0**
	comp=Z,1.0nm,0.5s,baz=72,slow=2.4,SNR=4.5						
ASAR				LR	LR	17 41 54.3	
	comp=Z,128nm,19.1s,baz=62,slow=35						
ASAR	**Alice Springs**	**27.39**	**231**	P	**P**	**17 31 43.7**	**-1.8**
ASAR					**PcP**	**17 35 04.3**	**-0.3**
H11S3	**WAKE ISLAND Hy**	**27.41**	**21**	T	T	17 59 56.3	
	baz=202,slow=75,SNR=570						
H11S2	**WAKE ISLAND Hy**	**27.41**	**21**	T	T	17 59 56.8	
	baz=202,slow=75,SNR=392						
H11S1	**WAKE ISLAND Hy**	**27.42**	**21**	T	T	17 59 58.0	
	baz=202,slow=75,SNR=381						
STKA	**Stephens Creek**	**28.29**	**208**	P	**P**	**17 31 53.3**	**-0.1**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**28.29**	**208**	P	**P**	**17 31 53.5**	**+0.1**
	comp=Z,6.7nm,0.7s,baz=29,slow=13,SNR=18						
STKA				LR	LR	17 43 10.2	
	comp=Z,265nm,18.6s,baz=26,slow=36						
STKA	**Stephens Creek**	**28.29**	**208**	P	**P**	**17 31 53.3**	**-0.1**
H11N1	**WAKE ISLAND Hy**	**28.61**	**20**	T	T	18 01 26.6	
	baz=202,slow=76,SNR=161						
H11N3	**WAKE ISLAND Hy**	**28.62**	**20**	T	T	18 01 33.9	
	baz=202,slow=76,SNR=168						
H11N2	**WAKE ISLAND Hy**	**28.62**	**20**	T	T	18 01 30.9	
	baz=202,slow=76,SNR=88						
KNRA	**Kununurra**	**28.73**	**251**	P	**P**	**17 31 57.7**	**+0.2**
KNRA				IAmb	IAmb	17 32 08.2	
	comp=Z,13nm,0.7s						
NLAI	**Namlea**	**29.90**	**276**	P	**P**	**17 32 08.8**	**+0.9**
	comp=Z,2μmcomp=Z,63nm,0.8s						
LBMI	**Labuha**	**30.01**	**281**	P	**P**	**17 32 08.5**	**-0.4**
	comp=Z,422nm,1.2s						
SANI	**Sanana**	**31.20**	**278**	P	**P**	**17 32 20.0**	**+0.6**
	comp=Z,50nm,0.9s						
AFI	**Afiamalu**	**31.49**	**105**	P	**P**	**17 32 23.2**	**+1.1**
	comp=Z,12nm,0.7s,baz=165,slow=14,SNR=3.5						
BBOO	**Buckleboo**	**31.89**	**214**	P	**P**	**17 32 24.6**	**-0.7**
BBOO				IAmb	IAmb	17 32 37.3	
	comp=Z,7.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**32.23**	**248**	P	**P**	**17 32 27.6**	**-0.8**
FITZ				IAmb	IAmb	17 32 35.4	
	comp=Z,11nm,0.9s						
KMSI	**Cibinong**	**33.72**	**282**	P	**P**	**17 32 41.5**	**0.0**
	comp=Z,963nmcomp=Z,104nm,0.6s						
LUWI	**Luwuk**	**34.55**	**279**	P	**P**	**17 32 49.1**	**+0.4**
	comp=Z,4μmcomp=Z,156nm,0.8s						
FORT	**Forrest**	**35.66**	**225**	P	**P**	**17 33 00.3**	**+2.2**
FORT				IAmb	IAmb	17 33 27.3	
	comp=Z,26nm,0.9s						
APSI	**Ampana**	**35.67**	**279**	P	**P**	**17 32 59.0**	**+0.6**
	comp=Z,926nmcomp=Z,111nm,0.6s						
MRSI	**Marisa**	**35.68**	**281**	P	**P**	**17 32 57.7**	**-0.7**
	comp=Z,29nm,0.6s						
KAPI	**Kappang**	**36.96**	**271**	P	**P**	**17 33 08.7**	**-0.7**
KAPI				pmax	pmax		
	comp=Z,39nm,1.4s						
KAPI	**Kappang**	**36.96**	**271**	P	**P**	**17 33 08.7**	**-0.7**
KAPI				IAmb	IAmb	17 33 14.2	
	comp=Z,39nm,1.4s						
THZ	**Tophouse**	**37.15**	**160**	P	**P**	**17 33 11.7**	**+1.0**
THZ				IAmb	IAmb	17 33 38.4	
	comp=Z,46nm,1.3s						
TUWZ	**Tuamarina**	**37.22**	**159**	P	**P**	**17 33 12.0**	**+0.7**
MPSI	**Mapaga**	**37.64**	**280**	P	**P**	**17 33 13.9**	**-1.3**
	comp=Z,66nm,0.8s						
KHZ	**Kahutara**	**37.95**	**160**	P	**P**	**17 33 19.3**	**+1.9**
KKM	**Kota Kinabalu**	**42.66**	**287**	P	**P**	**17 33 56.2**	**-0.8**
INU	**Inuyama**	**46.37**	**337**	P	**P**	**17 34 26.0**	**-0.1**
INU				IAmb	IAmb	17 34 27.9	
	comp=Z,15nm,0.9s						
MJAR	**Matsushiro Arr**	**46.99**	**339**	P	**P**	**17 34 30.4**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJAR	**Matsushiro Arr**	**46.99**	**339**	P	**P**	**17 34 30.6**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=161,slow=8.1,SNR=13						
MJAR				LR	LR	17 51 59.4	
	comp=Z,36nm,21.4s,baz=145,slow=33						
MJAR	**Matsushiro Arr**	**46.99**	**339**	P	**P**	**17 34 30.4**	**-0.7**
MAJO	**Matsushiro**	**47.00**	**339**	P	**P**	**17 34 30.9**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MAJO	**Matsushiro**	**47.00**	**339**	P	**P**	**17 34 30.9**	**-0.2**
MAJO				IAmb	IAmb	17 34 32.8	
	comp=Z,6.6nm,0.7s						
MAT	**Matsushiro**	**47.00**	**339**	P	**P**	**17 34 31.1**	**0.0**
MJB9	**Matsu-Tunnel**	**47.00**	**339**	P	**P**	**17 34 30.7**	**-0.4**
MJB9				IAmb	IAmb	17 34 32.7	
	comp=Z,6.8nm,0.7s						
KSM	**Kuching**	**47.26**	**279**	P	**P**	**17 34 32.1**	**-1.4**
KSM				IAmb	IAmb	17 34 52.6	
	comp=Z,15nm,1.0s						
CISI	**Cisompet, Garu**	**48.61**	**266**	P	**P**	**17 34 41.9**	**-2.2**
	comp=Z,91nm,0.6s						
CISI	**Cisompet, Garu**	**48.61**	**266**	P	**P**	**17 34 42.0**	**-2.2**
KSRS	**Korea Array**	**52.09**	**331**	P	**P**	**17 35 10.0**	**+0.1**
KSRS	**Korea Array**	**52.09**	**331**	P	**P**	**17 35 09.9**	**+0.1**
	comp=Z,2.7nm,0.8s,baz=147,slow=8.1,SNR=7.7						
KSRS				LR	LR	17 56 38.5	
	comp=Z,63nm,19.9s,baz=140,slow=35						
NJ2	**Nanjing**	**53.34**	**319**	*e*P	**P**	**17 35 19.4**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,13nm,1.0s						
TBI	**Tubuai**	**53.86**	**114**	*e*LQ	LQ	17 48 57.4	
	comp=Z,538nm,27.2s						
TBI				*e*LR	LR	17 51 14.4	
	comp=Z,196nm,35.0s						
YSS	**Yuzh-Sakhalins**	**55.45**	**348**	*e*P	**P**	**17 35 33.5**	**-0.9**
YSS				pmax	pmax		
	comp=Z,23nm,1.1s						
USA0B	**Ussuriysk Arra**	**55.97**	**339**	ǁ*e*P	**P**	**17 35 40.1**	**+1.9**
USRK	**Ussuriysk Ar.**	**55.97**	**339**	P	**P**	**17 35 39.4**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=106,slow=3.7,SNR=4.1						
USRK				LR	LR	17 57 57.3	
	comp=Z,35nm,20.4s,baz=93,slow=34						
MDJ	**Mudanjiang**	**57.23**	**337**	P	**P**	17 35 52.5	+5.4
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.1s						
SKR	**Severo-Kuril's**	**57.75**	**359**	ǁ*e*P	**P**	**17 35 49.6**	**-1.0**
CN2	**Changchun**	**58.27**	**334**	*e*P	**P**	**17 35 57.0**	**+2.6**
SLVN	**Son La**	**59.24**	**300**	P	**P**	**17 36 02.0**	**+0.3**
GSI	**Gunungsitoli**	**59.76**	**276**	P	**P**	17 35 59.5	-5.9
GSI	**Gunungsitoli**	**59.76**	**276**	P	**P**	**17 36 03.1**	**-2.3**
PBKT	**Sadao Pong**	**60.15**	**294**	P	**P**	**17 36 08.2**	**+0.2**
PBKT				IAmb	IAmb	17 36 08.5	
	comp=Z,8.5nm,0.8s						
PETK	**Petropavlovsk-**	**60.18**	**1**	P	**P**	**17 36 08.7**	**+1.1**
	comp=Z,4.2nm,0.9s,baz=177,slow=10.0,SNR=5.0						
PETK				LR	LR	17 58 56.1	
	comp=Z,105nm,21.0s,baz=238,slow=33						
KLR	**Kul'dur**	**60.43**	**341**	ǁ*e*P	**P**	**17 36 10.1**	**+0.8**
KLR				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GRNR	**Gornyy**	**60.48**	**345**	⇑*i*P	**P**	**17 36 09.7**	**+0.1**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,110nm,14.0s						
XAN	**Xi'an**	**61.22**	**315**	P	P	17 36 21.1	+6.1
XAN				pP	sP	17 36 30.9	+12
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KMI	**Kunming**	**61.73**	**303**	P	**P**	**17 36 20.0**	**+1.2**
KMI				pmax	pmax		
	comp=Z,16nm,0.7s						
CM31	**Chiang Mai Arr**	**62.59**	**295**	P	**P**	**17 36 24.6**	**+0.1**
CMAR	**Chiang Mai Ar**	**62.59**	**295**	P	**P**	**17 36 24.6**	**+0.1**
	comp=Z,13nm,0.8s,baz=122,slow=5.1,SNR=125						
CMAR				LR	LR	18 02 14.5	
	comp=Z,36nm,20.3s,baz=106,slow=35						
CHTO	**Chiang Mai**	**62.70**	**295**	P	**P**	**17 36 24.9**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,22nm,1.3s						
CHTO	**Chiang Mai**	**62.70**	**295**	P	**P**	**17 36 24.9**	**-0.3**
HHC	**Hu-ho-hao-te**	**63.44**	**323**	*e*P	**P**	**17 36 30.1**	**+0.2**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,38nm,6.4s						
ZEA	**Zeya**	**65.75**	**341**	*e*P	**P**	**17 36 45.8**	**+1.3**
ZEA				pmax	pmax		
	comp=Z,48nm,1.8s						
VNDA	**Vanda**	**70.23**	**179**	P	**P**	**17 37 13.7**	**+1.3**
	comp=Z,4.9nm,0.8s,baz=329,slow=6.2,SNR=11						
VNDA				LR	LR	18 03 25.4	
	comp=Z,81nm,18.7s,baz=6.0,slow=32						
GTA	**Gaotai**	**70.23**	**316**	⇑P	**P**	**17 37 14.3**	**+1.1**
GTA				pP	sP	17 37 18.4	+1.0
GTA				sP	pP	17 37 21.3	+5.0
GTA				sS	sS	17 46 34.3	+4.3
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,7.0s						
GTA				LR	LR		
	comp=Z,100nm,19.4s						
GTA				LR	LR		
	comp=Z,150nm,18.7s						
ULN	**Ulaanbaatar**	**70.26**	**327**	ǁ*e*P	**P**	**17 37 14.3**	**+1.0**
ULN				pmax	pmax		
	comp=Z,11nm,1.0s						
ULN	**Ulaanbaatar**	**70.26**	**327**	P	**P**	**17 37 14.4**	**+1.2**
ULN				IAmb	IAmb	17 37 15.4	
	comp=Z,11nm,0.9s						
SONM	**Songino Array**	**70.60**	**327**	P	**P**	**17 37 15.0**	**-0.3**
SONM				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SONM	**Songino Array**	**70.60**	**327**	P	**P**	**17 37 16.0**	**+0.7**
	comp=Z,12nm,0.9s,baz=134,slow=5.2,SNR=65						
SONM				LR	LR	18 09 18.1	
	comp=Z,65nm,18.3s,baz=139,slow=37						
SONM	**Songino Array**	**70.60**	**327**	P	**P**	**17 37 15.0**	**-0.3**
SHL	**Shillong**	**71.05**	**300**	P	**P**	**17 37 18.0**	**-0.6**
SHL				pmax	pmax		
	comp=Z,33nm,0.8s						
SHL	**Shillong**	**71.05**	**300**	P	**P**	**17 37 18.0**	**-0.6**
YAK	**Yakutsk**	**72.26**	**347**	*e*P	**P**	**17 37 25.4**	**+0.6**
YAK				pmax	pmax		
	comp=Z,12nm,1.0s						
LSA	**Lhasa**	**72.98**	**304**	P	**P**	**17 37 30.4**	**0.0**
LSA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LSA	**Lhasa**	**72.98**	**304**	P	**P**	**17 37 30.4**	**0.0**
LSA				IAmb	IAmb	17 37 32.0	
	comp=Z,10nm,1.0s						
BOD	**Bodaibo**	**73.59**	**338**	*e*P	**P**	**17 37 32.9**	**+0.1**
BOD				pmax	pmax		
	comp=Z,11nm,1.7s						
ZAK	**Zakamensk**	**73.74**	**328**	*e*P	**P**	**17 37 34.4**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TLY	**Talaya**	**74.28**	**329**	ǁ*e*P	**P**	**17 37 37.5**	**+0.5**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TLY	**Talaya**	**74.28**	**329**	P	**P**	**17 37 37.6**	**+0.5**
TAPN	**Taplejung**	**75.15**	**301**	*e*P	**P**	**17 37 42.6**	**-0.3**
	comp=Z,46nm,1.1s						
ODAN	**Odare**	**75.28**	**300**	*e*P	**P**	**17 37 43.4**	**-0.3**
	comp=Z,38nm,0.8s						
BILL	**Bilibino**	**75.46**	**4**	*e*P	**P**	**17 37 42.7**	**-0.8**
BILL				*e*		17 37 53.0	
BILL				*e*		17 40 31.9	
BILL				pmax	pmax		
	comp=Z,11nm,2.2s						
BILL	**Bilibino**	**75.46**	**4**	P	**P**	**17 37 43.5**	**+0.1**
MOY	**Mondy**	**75.65**	**328**	*e*P	**P**	**17 37 45.5**	**+0.4**
RAMN	**Ramite**	**75.99**	**300**	*e*P	**P**	**17 37 46.9**	**-0.8**
	comp=Z,9.3nm,0.6s						
JIRN	**Jiri**	**76.53**	**301**	*e*P	**P**	**17 37 50.5**	**-0.4**
	comp=Z,28nm,0.8s						
GUN	**Gumba**	**76.86**	**301**	*e*P	**P**	**17 37 52.3**	**-0.5**
	comp=Z,31nm,0.9s						
PKI	**Pulchoki**	**77.17**	**300**	*e*P	**P**	**17 37 53.8**	**-0.7**
PKIN	**Phulchoki**	**77.19**	**300**	*e*P	**P**	**17 37 53.7**	**-0.8**
	comp=Z,28nm,1.2s						
KKN	**Kakani**	**77.34**	**301**	*e*P	**P**	**17 37 54.8**	**-0.5**
DMN	**Daman**	**77.44**	**300**	*e*P	**P**	**17 37 55.5**	**-0.4**
	comp=Z,81nm,1.2s						
GKN	**Gorkha**	**77.95**	**301**	*e*P	**P**	**17 37 58.1**	**-0.5**
	comp=Z,51nm,1.0s						
KOLN	**Koldanda**	**78.78**	**300**	*e*P	**P**	**17 38 02.5**	**-0.8**
DANN	**Dangsing**	**78.78**	**301**	*e*P	**P**	**17 38 02.2**	**-1.2**
	comp=Z,14nm,0.5s						
WMQ	**Urumqi**	**80.31**	**317**	*e*P	**P**	**17 38 11.6**	**+0.5**
WMQ				sP	PcP	17 38 18.8	+0.5
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,14nm,3.8s						
WMQ				LR	LR		
	comp=Z,460nm,29.2s						
WMQ				LR	LR		
	comp=Z,940nm,29.2s						
TIXI	**Tiksi**	**80.93**	**351**	ǁ*e*P	**P**	**17 38 13.6**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TIXI	**Tiksi**	**80.93**	**351**	P	**P**	**17 38 13.7**	**-0.1**
IMAR	**Indian Mountai**	**81.43**	**18**	P	**P**	**17 38 16.6**	**+0.1**
MCK	**McKinley**	**81.66**	**21**	P	**P**	**17 38 18.0**	**+0.2**
MCK				pmax	pmax		
	comp=Z,19nm,1.0s						
MCK	**McKinley**	**81.66**	**21**	P	**P**	**17 38 18.0**	**+0.2**
QSPA	**South Pole Qui**	**82.67**	**180**	P	**P**	**17 38 23.8**	**+0.5**
ILAR	**Eielson Array**	**82.99**	**21**	P	**P**	**17 38 24.6**	**-0.1**
	comp=Z,2.0nm,0.9s,baz=253,slow=4.7,SNR=15						
ILAR	**Eielson Array**	**82.99**	**21**	P	**P**	**17 38 24.2**	**-0.5**
BCAR	**Beaver Creek A**	**84.02**	**24**	P	**P**	**17 38 29.4**	**-0.8**
MAW	**Mawson**	**84.83**	**203**	LR	LR	18 12 03.8	
	comp=Z,43nm,20.8s,baz=60,slow=33						
MK31	**Makanchi Array**	**84.86**	**318**	P	**P**	**17 38 34.4**	**-0.3**
MK31				pmax	pmax		
	comp=Z,13nm,1.2s						
MK31	**Makanchi Array**	**84.86**	**318**	P	**P**	**17 38 34.4**	**-0.3**
MK31				IAmb	IAmb	17 38 35.7	
	comp=Z,12nm,1.1s						
MKAR	**Makanchi Array**	**84.86**	**318**	*ce*P	**P**	**17 38 34.7**	**0.0**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MKAR	**Makanchi Array**	**84.86**	**318**	P	**P**	**17 38 34.9**	**+0.2**
	comp=Z,5.8nm,0.6s,baz=104,slow=6.2,SNR=65						
MKAR				LR	LR	18 15 18.2	
	comp=Z,52nm,21.5s,baz=46,slow=35						
MKAR	**Makanchi Array**	**84.86**	**318**	P	**P**	**17 38 33.8**	**-1.0**
MAKZ	**Makanchi**	**85.07**	**318**	P	**P**	**17 38 35.3**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,12nm,1.0s						
MAKZ	**Makanchi**	**85.07**	**318**	P	**P**	**17 38 35.3**	**-0.5**
ZALV	**Zalesovo Beam**	**85.47**	**326**	P	**P**	**17 38 36.6**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=110,slow=5.3,SNR=6.1						
ZALV				LR	LR	18 19 55.4	
	comp=Z,27nm,18.1s,baz=66,slow=38						
ZALV	**Zalesovo Beam**	**85.47**	**326**	P	**P**	**17 38 35.9**	**-1.6**
KSH	**Kashi**	**87.62**	**310**	P	**P**	**17 38 50.1**	**+1.5**
KSH				PP	**PP**	**17 42 19.8**	**+5.8**
KSH				SKS	**SKSac**	**17 49 16.0**	**-1.1**
KSH				S	**S**	**17 49 30.4**	**-0.4**
KSH				SS	**SS**	**17 55 21.8**	**+4.8**
KSH				pmax	pmax		
	comp=Z,22nm,1.3s						
KURK	**Kurchatov**	**88.22**	**321**	ǁ*e*P	**P**	**17 38 49.2**	**-1.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NIL	**Nilore**	**88.71**	**304**	P	**P**	**17 38 52.7**	**-1.1**
NIL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NIL	**Nilore**	**88.71**	**304**	P	**P**	**17 38 52.7**	**-1.1**
NIL				IAmb	IAmb	17 39 02.8	
	comp=Z,5.0nm,0.8s						
AAK	**Ala-Archa**	**89.31**	**313**	*e*P	**P**	**17 38 56.5**	**-0.1**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	**Ala-Archa**	**89.31**	**313**	P	**P**	**17 38 56.2**	**-0.4**
INK	**Inuvik**	**89.36**	**20**	P	**P**	**17 38 56.2**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=199,slow=4.4,SNR=3.5						
ARSB	**Arslanbob**	**90.19**	**312**	P	**P**	**17 39 00.6**	**-0.1**
NVAR	**Mina Array Bea**	**90.46**	**51**	P	**P**	**17 39 04.3**	**+2.1**
	comp=Z,0.8nm,0.9s,baz=264,slow=8.0,SNR=3.9						
BTK	**Batken**	**91.63**	**310**	P	**P**	**17 39 05.9**	**-1.5**
BTK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BTK	**Batken**	**91.63**	**310**	P	**P**	**17 39 05.9**	**-1.5**
BTK				IAmb	IAmb	17 39 14.8	
	comp=Z,3.1nm,0.9s						
KKAR	**Karatay Array**	**92.28**	**313**	P	**P**	**17 39 09.0**	**-1.2**
KKAR	**Karatay Array**	**92.28**	**313**	P	**P**	**17 39 09.0**	**-1.2**
LPIG	**La Paz**	**95.51**	**66**	LR	LR	18 18 31.7	
	comp=Z,156nm,18.6s,baz=286,slow=33						
YKA	**Yellowknife Ar**	**95.74**	**28**	P	**P**	**17 39 26.3**	**+0.7**
	comp=Z,0.8nm,0.7s,baz=264,slow=4.9,SNR=15						
PDAR	**Pinedale Array**	**97.53**	**48**	P	Pdif	17 39 35.9	+1.3
	comp=Z,0.1nm,0.5s,baz=276,slow=3.2,SNR=2.2						
OBN	**Obninsk**	**113.01**	**327**	*i* PKIKP	**PKiKP**	**17 44 33.1**	**-3.8**
OBN				*e*		17 45 27.2	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KOLS	**Kolonicke sedl**	**123.65**	**326**	*e*PKIKP	**PKiKP**	**17 44 56.8**	**-1.1**
KOLS	**Kolonicke sedl**	**123.65**	**326**	*e*PKP	**PKiKP**	**17 44 56.8**	**-1.1**
BDFB	**Brasilia**	**146.43**	**133**	PKPbc	**PKPab**	**17 45 42.2**	**-0.7**
	comp=Z,5.4nm,0.7s,baz=180,slow=2.2,SNR=6.7						
TORD	**Torodi Ar. Bea**	**154.89**	**285**	PKP	**PKPdf**	**17 45 54.0**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=5.7,slow=2.9,SNR=2.4						
TORD				PKPbc	**PKiKP**	**17 46 02.2**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=348,slow=0.7,SNR=6.0						
TORD				PKPab	**PKPab**	**17 46 16.0**	**-1.7**
	comp=Z,1.8nm,0.6s,baz=79,slow=4.3,SNR=8.6						
KIC	**Kosan Boka**	**161.71**	**268**	*e

PET				*e*S	Sn	17 32 45.7	+1.9	
KRMR	**Karymshinskiy**	**3.25**	**222**	*e*P	Pn	17 32 15.6	+0.8	
KRMR				*e*S	Sn	17 32 54.6	+2.3	
RUS	**Russkaya**	**3.44**	**214**	*e*P	Pn	17 32 19.5	+2.2	
RUS				*e*S	Sn	17 32 58.0	+1.1	
GRL	**Gorelyy**	**3.49**	**219**	*e*P	Pn	17 32 22.0	+3.8	
MTVR	**Mutnovka**	**3.51**	**218**	*e*P	Pn	17 32 21.3	+2.9	
APC	**Apacha**	**3.58**	**230**	*e*P	Pn	17 32 23.3	+4.1	
ASAK	**Asacha**	**3.69**	**219**	*e*P	Pn	17 32 24.6	+3.8	
OSSR	**Ossora**	**4.02**	**10**	*e*P	Pn	17 32 28.1	+2.8	
KDTR	**Khodutka, Kamc**	**4.11**	**213**	*e*P	Pn	17 32 28.6	+2.1	
TILK	**Tilichiki**	**5.68**	**23**	*e*P	Pn	17 32 51.7	+3.9	

NEIC ***23*** *17:32:38.8±0.8, 23.5°S±0.2×179.3°E±0.2, h552km±11km, mb4.4/11, Error ellipse: s-maj=25.8km s-min=21.8km az=158.0*
IDC ***23*** *17:32:44.1±8.9, 23.4°S×178.8°E, h590km±73km, mb3.2/4, mb1 3.3/5, mb1mx3.0/31, mbtmp4.2/5, Error ellipse: s-maj=110.1km s-min=56.8km az=131.0*
ISC 23 17:32:39.1±0.8, 23.5°S±0.1×179.3°E±0.1, h555km, n21, σ0.6s63/21, mb4.4/10, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MSVF	**Nonsavu**	**5.83**	**348**	P		**P**		**17 34 16.7**	**0.0**
NIUE	**Niue**	**10.96**	**68**	P		**P**		**17 35 07.1**	**0.0**
DZM	**Mont Dzumac**	**11.94**	**274**	P		**P**		**17 35 18.2**	**+1.0**
	0.3nm,0.3s,baz=122,slow=17,SNR=3.6								
CTA	**Charters Tower**	**30.83**	**270**	P		**P**		**17 38 10.8**	**+0.2**
	5.4nm,0.3s,baz=95,slow=11,SNR=25								
STKA	**Stephens Creek**	**34.28**	**247**	P		**P**		**17 38 39.6**	**0.0**
	1.7nm,0.9s,baz=86,slow=13,SNR=4.3								
BBOO	**Buckleboo**	**39.02**	**246**	P		**P**		**17 39 17.7**	**-0.9**
BBOO				IAmb		IAmb		17 39 51.6	
	comp=Z,42nm,1.9s								
AS31	**Alice Springs**	**41.46**	**260**	P		**P**		**17 39 37.9**	**-0.3**
ASAR	**Alice Springs**	**41.46**	**260**	P		**P**		**17 39 37.9**	**-0.4**
	comp=Z,2.1nm,0.8s,baz=93,slow=7.7,SNR=28								
ASAR	**Alice Springs**	**41.46**	**260**	P		**P**		**17 39 37.4**	**-0.9**
WR0	**Warramunga Arr**	**41.60**	**266**	P		**P**		**17 39 38.6**	**-0.7**
WR0				IAmb		IAmb		17 39 44.0	
	comp=Z,22nm,1.9s								
WB2	**Warramunga Arr**	**41.78**	**266**	P		**P**		**17 39 39.9**	**-0.8**
WB2				IAmb		IAmb		17 40 22.1	
	comp=Z,24nm,1.9s								
WB0	**Warramunga Arr**	**41.78**	**266**	P		**P**		**17 39 40.3**	**-0.4**
WB0				IAmb		IAmb		17 40 08.3	
	comp=Z,22nm,1.9s								
WRAB	**Tennant Creek**	**41.78**	**266**	P		**P**		**17 39 40.1**	**-0.7**
WRAB				IAmb		IAmb		17 41 26.8	
	comp=Z,25nm,1.9s								
WRA	**Warramunga Arr**	**41.79**	**266**	P		**P**		**17 39 40.2**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=101,slow=8.4,SNR=16								
WRA	**Warramunga Arr**	**41.79**	**266**	P		**P**		**17 39 40.1**	**-0.8**
KNRA	**Kununurra**	**48.04**	**270**	P		**P**		**17 40 28.7**	**0.0**
QSPA	**South Pole Qui**	**66.60**	**180**	P		**P**		**17 42 35.3**	**+0.8**
AKUT	**Akutan**	**78.36**	**9**	P		**P**		**17 43 41.8**	**-0.3**
SNAA	**Sanae**	**85.09**	**179**	P		**P**		**17 44 15.9**	**-0.4**
SNAA				IAmb		IAmb		17 45 27.1	
	comp=Z,12nm,1.7s								
AKASG	**Malin Array Be**	**144.27**	**327**	PKP		**PKPdf**		**17 51 12.5**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=54,slow=4.2,SNR=8.2								
BRTR	**Keskin Array B**	**146.81**	**307**	PKPbc		**PKPbc**		**17 51 19.5**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=67,slow=1.9,SNR=2.9								

WEL 23 17:35:27.0, 43.3°S±1.1°×17.3°E±0.9°, h37km±2km, M3.6/49, ML3.7/14, MLv3.6/49, Error ellipse: s-maj=0.0km s-min=0.0km az=70.7, South Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
LTZ	**Lake Taylor**	**0.45**	**273**	P			Pn	17 35 37.5	+0.8
LTZ				S			Sn	17 35 44.4	+0.7
KHZ	**Kahutara**	**0.63**	**52**	P			Pn	17 35 40.2	+0.8
OXZ	**Oxford**	**0.80**	**229**	P			Pn	17 35 42.2	+0.4
OXZ				S			Sn	17 35 53.1	+0.6
MQZ	**McQueen's Vall**	**0.92**	**190**	P			Pn	17 35 43.5	+0.2
OKCZ	**Okains Bay**	**0.93**	**172**	P			Pn	17 35 44.2	+0.7
THZ	**Tophouse**	**1.04**	**1**	P			Pn	17 35 46.0	+0.9
INZ	**Inchbonnie**	**1.06**	**274**	P			Pn	17 35 45.9	+0.7
AKCZ	**Akaroa Harbour**	**1.07**	**179**	P			Pn	17 35 45.8	+0.4
BSWZ	**Blackbirch Sta**	**1.32**	**35**	P			Pn	17 35 50.2	+1.4
DSZ	**Denniston Nort**	**1.32**	**323**	P			Pn	17 35 50.0	+1.0
CMWZ	**Cape Campbell**	**1.45**	**44**	P			Pn	17 35 52.4	+1.7
TUWZ	**Tuamarina**	**1.59**	**30**	P			Pn	17 35 53.5	+1.0
WVZ	**Waitaha Valley**	**1.59**	**260**	P			Pn	17 35 53.6	+1.0
RPZ	**Rata Peaks**	**1.61**	**235**	P			Pn	17 35 53.4	+0.5
NNZ	**Nelson**	**1.63**	**14**	P			Pn	17 35 54.8	+1.7
TCW	**Tory Channel**	**1.91**	**34**	P			Pn	17 35 57.4	+0.6
QRZ	**Quartz Range**	**2.00**	**352**	P			Pn	17 35 59.1	+0.9
BHW	**Baring Head**	**2.04**	**47**	P			Pn	17 35 59.0	+0.2
WEL	**Wellington**	**2.07**	**44**	P			Pn	17 35 59.7	+0.5
DUWZ	**D'Urville Isla**	**2.15**	**22**	P			Pn	17 36 01.3	+1.0
PLWZ	**Palliser**	**2.16**	**56**	P			Pn	17 36 00.3	-0.1
MSWZ	**Moikau Station**	**2.25**	**53**	P			Pn	17 36 01.6	-0.1
FOZ	**Fox Glacier**	**2.35**	**251**	P			Pn	17 36 04.3	+1.3
CAW	**Cannon Point**	**2.36**	**45**	P			Pn	17 36 03.3	+0.2
PAWZ	**Paruwai Farm**	**2.37**	**54**	P			Pn	17 36 03.0	-0.3
KIW	**Kapiti Island**	**2.47**	**39**	P			Pn	17 36 05.1	+0.5
LBZ	**Lake Benmore**	**2.51**	**230**	P			Pn	17 36 05.9	+0.6
TRWZ	**Traveller**	**2.52**	**57**	P			Pn	17 36 05.9	+0.6
MTW	**Mount Morrison**	**2.56**	**51**	P			Pn	17 36 05.6	-0.3
OGWZ	**Otaki Gorge**	**2.62**	**42**	P			Pn	17 36 06.9	+0.1
HOWZ	**Holdsworth Sta**	**2.74**	**47**	P			Pn	17 36 08.3	-0.1
ODZ	**Otahua Downs**	**2.76**	**215**	P			Pn	17 36 08.7	+0.1
TMWZ	**Te Maipa**	**2.82**	**54**	P			Pn	17 36 09.2	-0.3
MRZ	**Mangatainoka R**	**2.95**	**44**	P			Pn	17 36 09.9	-1.3
TIWZ	**Tintock**	**3.03**	**49**	P			Pn	17 36 12.7	+0.3
PRWZ	**Pori Road**	**3.23**	**47**	P			Pn	17 36 15.1	0.0
JCZ	**Jackson Bay**	**3.24**	**246**	P			Pn	17 36 15.8	+0.5
BFZ	**Birch Farm**	**3.30**	**51**	P			Pn	17 36 16.3	+0.3
WAZ	**Wanganui**	**3.44**	**28**	P			Pn	17 36 19.9	+1.9
WKZ	**Wanaka**	**3.45**	**233**	P			Pn	17 36 18.0	-0.1
NMEZ	**Namu Road**	**3.47**	**13**	P			Pn	17 36 21.8	+3.3
HHSZ	**Highcliff Hill**	**3.48**	**207**	P			Pn	17 36 18.8	+0.2
DVHZ	**Dannevirke**	**3.52**	**46**	P			Pn	17 36 18.0	-1.1
EAZ	**Earnscleugh**	**3.54**	**225**	P			Pn	17 36 19.4	+0.1
TSZ	**Takapari Road**	**3.59**	**41**	P			Pn	17 36 19.4	-0.8
KHEZ	**Kahui Hut**	**3.61**	**14**	P			Pn	17 36 22.9	+2.5
NBEZ	**Newall Road No**	**3.61**	**12**	P			Pn	17 36 23.0	+2.7
PKE	**Pukeiti**	**3.70**	**14**	P			Pn	17 36 24.9	+3.2
PNHZ	**Pukenui**	**3.82**	**42**	P			Pn	17 36 22.5	-0.8
TUZ	**Tuapeka**	**3.91**	**215**	P			Pn	17 36 24.6	+0.2
VRZ	**Vera Road**	**3.94**	**22**	P			Pn	17 36 27.2	+2.3
PKVZ	**Pokaka**	**3.98**	**29**	P			Pn	17 36 26.8	+1.3
MOVZ	**Moawhango**	**4.03**	**34**	P			Pn	17 36 26.5	+0.3
MSZ	**Milford Sound**	**4.04**	**241**	P			Pn	17 36 25.9	-0.3
TRVZ	**Turoa**	**4.04**	**31**	P			Pn	17 36 27.3	+0.7
BHHZ	**Black Hill Sta**	**4.09**	**37**	P			Pn	17 36 26.9	-0.1
TUVZ	**Tukino**	**4.11**	**32**	P			Pn	17 36 28.3	+0.9
KRHZ	**Kereru**	**4.11**	**41**	P			Pn	17 36 27.1	-0.2
NGZ	**Ngauruhoe**	**4.17**	**31**	P			Pn	17 36 29.3	+1.1
TWVZ	**Taurewa**	**4.21**	**28**	P			Pn	17 36 30.4	+1.8
WTVZ	**West Tongariro**	**4.22**	**30**	P			Pn	17 36 29.2	+0.3
KAHZ	**Kahuranaki**	**4.26**	**46**	P			Pn	17 36 29.5	+0.2
KRVZ	**Karewarewa**	**4.26**	**30**	P			Pn	17 36 32.7	+3.4
MLZ	**Mavora Lakes**	**4.28**	**232**	P			Pn	17 36 29.2	-0.3
HIZ	**Hauiti**	**4.54**	**20**	P			Pn	17 36 34.4	+1.2
BKZ	**Black Stump Fm**	**4.55**	**38**	P			Pn	17 36 32.9	-0.4
SYZ	**Scrubby Hill**	**4.58**	**214**	P			Pn	17 36 33.9	+0.2
WHZ	**Wether Hill Ro**	**4.69**	**227**	P			Pn	17 36 34.2	-1.0
MRHZ	**Matea Rd**	**4.79**	**35**	P			Pn	17 36 37.2	+0.6
TLZ	**Tolley Road**	**4.91**	**25**	P			Pn	17 36 39.7	+1.5
MTHZ	**Maungataniwha**	**4.96**	**39**	P			Pn	17 36 38.0	-1.0
APZ	**The Paps**	**5.32**	**219**	P			Pn	17 36 43.3	-0.5
TOZ	**Tahuroa Road**	**5.45**	**22**	P			Pn	17 36 46.8	+1.2
URZ	**Urewera**	**5.57**	**37**	P			Pn	17 36 46.2	-1.1
MWZ	**Matawai**	**5.70**	**40**	P			Pn	17 36 47.1	-2.0
MKAZ	**Moumakai**	**5.96**	**18**	P			Pn	17 36 53.8	+1.2
RUGZ	**Raukumara Rang**	**6.07**	**39**	P			Pn	17 36 53.3	-0.9
WIAZ	**Waiheke Island**	**6.25**	**17**	P			Pn	17 36 58.2	+1.5
HAZ	**Te Kaha**	**6.29**	**38**	P			Pn	17 36 55.8	-1.3

JMA ***23*** *17:46:09.5±0.3, 24.7°N×122.3°E, h6km, M2.5*
TAP ***23*** *17:46:10.7, 24.8°N×122.3°E, h9km±1km, ML2.6, C*
ISC 23 17:46:10.2±1.1, 24.8°N±0.3°×122.4°E±0.2°, h9km±10km, n55, σ0.5s0/97, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
EOS1	**EOS1**	**0.34**	**225**	P			**Pb**	**17 46 18.2**	**-0.2**
	baz=221								
EOS1				S			Sb	17 46 24.1	+0.1
	baz=221								
TWB1	**Santiao Chiao**	**0.43**	**300**	⇑*i* P			**Pb**	**17 46 19.6**	**-0.4**
	baz=300								
TWB1				*i* S			Sb	17 46 25.6	-0.9
	baz=300								
TWC	**Suao**	**0.53**	**250**	P			**Pb**	**17 46 21.4**	**-0.3**
	baz=247								
TWC				S			Sb	17 46 29.9	+0.4
	baz=247								
TIPB	**Shuangxi**	**0.55**	**289**	P			**Pb**	**17 46 22.6**	**+0.6**
	baz=288								
TIPB				S			Sb	17 46 30.5	+0.5
	baz=288								
JYNG	**Yonagunijimaku**	**0.60**	**124**	P			**Pg**	**17 46 21.6**	**-0.3**
JYNG				S			Sg	17 46 29.6	-0.2
NWF	**Wu-fen Shan**	**0.62**	**296**	*i* P			**Pb**	**17 46 23.8**	**+0.4**
	baz=296								
NWF				*i* S			Sb	17 46 33.0	+0.8
	baz=296								
WFSB	**Wu-fen Shan**	**0.62**	**296**	P			**Pb**	**17 46 23.7**	**+0.5**
	baz=296								
WFSB				S			Sb	17 46 32.5	+0.4
	baz=296								
YOJ	**Yonaguni jima**	**0.65**	**121**	P			**Pg**	**17 46 22.6**	**-0.2**
	baz=120								
YOJ	**Yonaguni jima**	**0.65**	**121**	P			**Pg**	**17 46 22.3**	**-0.4**
YOJ				*e*S			Sg	17 46 31.8	+0.6
TWE	**Neicheng**	**0.67**	**264**	*i* P			**Pb**	**17 46 24.4**	**+0.4**
	baz=262								
TWE				*i* S			Sb	17 46 33.7	+0.3
	baz=262								
NANB	**Nanao**	**0.69**	**238**	P			**Pb**	**17 46 23.9**	**-0.6**
	baz=236								
NANB				*e*S			Sb	17 46 34.2	+0.1
	baz=236								
SLBB	**Yuanshan**	**0.69**	**267**	P			**Pb**	**17 46 24.0**	**-0.5**
	baz=265								
SLBB				S			Sb	17 46 34.4	+0.3
	baz=265								
ENA	**Nanau**	**0.70**	**239**	*i* P			**Pb**	**17 46 24.2**	**-0.3**
	baz=236								
ENA				S			Sb	17 46 34.7	+0.4
	baz=236								
TWA	**Mucha**	**0.76**	**284**	*e*P			**Pn**	**17 46 26.2**	**-0.9**
	baz=283								
TWA				*e*S			Sb	17 46 36.6	+0.5
	baz=283								
ENTT	**Nioudou**	**0.77**	**259**	*i* P			**Pb**	**17 46 25.8**	**0.0**
	baz=257								
ENTT				*i* S			Sb	17 46 36.5	+0.1
	baz=257								
NHDH	**Xindian Distri**	**0.81**	**282**	*e*P			**Pb**	**17 46 26.1**	**-0.3**
	baz=281								
NHDH				S			Sb	17 46 38.0	+0.5
	baz=281								
NDT	**Datong Townshi**	**0.83**	**257**	P			**Pn**	**17 46 27.1**	**-0.9**
	baz=255								
NDT				S			Sn	17 46 39.1	-1.3
	baz=255								
YM01	**YM01**	**0.83**	**295**	*e*P			**Pb**	**17 46 26.8**	**+0.1**
	baz=295								
YM01				S			Sb	17 46 38.5	+0.4
	baz=295								
YM08	**YM08**	**0.83**	**298**	*e*P			**Pb**	**17 46 26.5**	**-0.3**
	baz=298								
YM08				S			Sb	17 46 37.9	-0.3
	baz=298								
YM11	**YM11**	**0.83**	**296**	P			**Pn**	**17 46 27.6**	**-0.6**
	baz=296								
YM11				*e*S			Sb	17 46 38.8	+0.5
	baz=296								
YM05	**YM05**	**0.84**	**296**	*e*P			**Pb**	**17 46 26.7**	**-0.3**
	baz=296								
YM05				*e*S			Sb	17 46 38.3	-0.1
	baz=296								
YM10	**YM10**	**0.84**	**296**	*e*P			**Pb**	**17 46 26.8**	**-0.1**
	baz=295								
YM10				*e*S			Sb	17 46 38.9	+0.5
	baz=295								
TATO	**Taipei**	**0.84**	**282**	*e*S			**Sb**	**17 46 38.8**	**+0.3**
	baz=282								
YM04	**YM04**	**0.86**	**295**	*e*P			**Pn**	**17 46 28.2**	**-0.3**
	baz=294								
YM04				*e*S			Sb	17 46 38.8	-0.2
	baz=294								
TWY	**Chenhua**	**0.87**	**304**	P			**Pn**	**17 46 28.0**	**-0.6**
	baz=303								
TWY				S			Sb	17 46 39.7	+0.5
	baz=303								
ANP	**Anpu**	**0.89**	**296**	*e*P			**Pn**	**17 46 28.3**	**-0.6**
	baz=296								
YHNB	**Yeheng**	**0.94**	**263**	P			**Pb**	**17 46 28.6**	**0.0**
	baz=261								
YHNB				*e*S			Sn	17 46 43.1	-0.1
	baz=261								
NSK	**Sanguang**	**0.95**	**263**	*i* P			**Pn**	**17 46 29.2**	**-0.6**
	baz=262								
NSK				S			Sb	17 46 41.8	+0.1
	baz=262								
NACB	**Ninganchiao**	**0.96**	**230**	P			**Pb**	**17 46 28.8**	**-0.2**
	baz=228								
NACB				S			Sn	17 46 42.8	-0.8
	baz=228								
NNSB	**Datong**	**0.99**	**249**	P			**Pn**	**17 46 30.0**	**-0.5**
	baz=247								
NNSB				S			Sn	17 46 44.6	-0.1
	baz=247								
NNSH	**Datong**	**0.99**	**249**	*e*P			**Pn**	**17 46 29.8**	**-0.6**
	baz=247								
NNSH				*e*S			Sn	17 46 44.6	-0.1
	baz=247								
NNS	**Nan Shan**	**1.00**	**249**	*i* P			**Pn**	**17 46 30.1**	**-0.4**
	baz=248								
NNS				*i* S			Sn	17 46 43.9	-0.8
	baz=248								
ETLH	**Xiulin Townshi**	**1.02**	**235**	*e*P			**Pb**	**17 46 30.1**	**+0.1**
	baz=233								
ETLH				*e*S			Sn	17 46 44.9	-0.4
	baz=233								
TWD	**Chiawan**	**1.02**	**226**	P			**Pn**	**17 46 30.1**	**-0.6**
	baz=224								
TWD				S			Sn	17 46 45.6	+0.5
	baz=224								
WHF	**Hehuan Shan**	**1.22**	**238**	P			**Pn**	**17 46 33.5**	**-0.3**
	baz=236								
WHF				*e*S			Sn	17 46 50.8	+0.2
	baz=236								
TWT	**Tachien**	**1.24**	**244**	P			**Pn**	**17 46 34.4**	**+0.6**
	baz=243								
TWT				S			Sn	17 46 51.1	+0.4
	baz=243								
TDCB	**Techi**	**1.25**	**245**	P			**Pn**	**17 46 34.6**	**+0.6**
	baz=243								
TDCB				S			Sn	17 46 52.5	+1.4
	baz=243								
LIOB	**Emei**	**1.27**	**264**	*e*P			**Pg**	**17 46 34.4**	**0.0**
	baz=262								
NSTT	**Nanjuang**	**1.28**	**263**	P			**Pg**	**17 46 35.0**	**+0.3**
	baz=262								
NSTT				*e*S			Sn	17 46 52.0	+0.4
	baz=262								
IRIF	**Iriomote-Funau**	**1.30**	**110**	P			**Pn**	**17 46 34.6**	**+0.1**
IRIF				*e*S			Sb	17 46 52.2	+0.7
CHGB	**Renai**	**1.33**	**237**	P			**Pg**	**17 46 36.2**	**+0.5**
	baz=235								
CHGB				*e*S			Sn	17 46 54.0	+0.7
	baz=235								
OWD	**Renai**	**1.39**	**233**	*e*P			**Pg**	**17 46 36.8**	**-0.1**
	baz=232								
OWD				*e*S			Sg	17 46 55.6	+0.6
	baz=232								
WHP	**Taichung City**	**1.42**	**249**	*e*P			**Pg**	**17 46 37.7**	**+0.3**
	baz=248								
WHP				*e*S			Sg	17 46 56.2	+0.4
	baz=248								
HATJ	**Hateruma jima**	**1.48**	**120**	*e*S			**Sn**	**17 46 56.5**	**0.0**
DPDB	**Guoxing**	**1.54**	**241**	*e*P			**Pb**	**17 46 38.6**	**-0.3**
	baz=239								
VWDT	**VWDT**	**1.54**	**228**	*e*P			**Pb**	**17 46 38.5**	**-0.5**
	baz=227								
JKRS	**Kuro-shima**	**1.57**	**110**	P			**Pn**	**17 46 38.8**	**+0.5**
JKRS				*e*S			Sn	17 46 59.6	+0.9
HGSD	**Ruisui**	**1.57**	**215**	*e*P			**Pb**	**17 46 38.8**	**-0.7**
	baz=213								
EHY	**Hungye**	**1.62**	**218**	*e*P			**Pb**	**17 46 39.8**	**-0.4**
	baz=216								
EHY				*e*S			Sn	17 46 59.9	0.0
	baz=216								
JIJ	**Ishigaki jima**	**1.65**	**105**	P			**Pn**	**17 46 39.0**	**-0.3**
JIJ				S			Sn	17 47 00.0	-0.6
SSLB	**Suanglung**	**1.66**	**233**	*e*P			**Pg**	**17 46 41.3**	**-0.6**
	baz=232								
TYC	**Yuchr**	**1.66**	**238**	*e*P			**Pg**	**17 46 41.8**	**-0.3**
	baz=236								
YULB	**Yu-li**	**1.72**	**216**	*e*S			**Sb**	**17 47 03.6**	**-0.1**
	baz=215								
JISG	**Ishigakijimahi**	**1.75**	**96**	P			**Pn**	**17 46 40.5**	**-0.3**
ELDTW	**Lidau**	**2.04**	**219**	*e*P			**Pn**	**17 46 45.6**	**+0.8**
	baz=217								

ISK ***23*** *18:10:34.9, 38.6°N×43.0°E, h5km, ML3.5/19*
DDA ***23*** *18:10:35.7, 38.6°N×43.0°E, h7km±3km, MW3.6*
NSSP ***23*** *18:10:35.0, 38.6°N×43.0°E, h5km, Ms3.4*
ISC 23 18:10:36.0±0.9, 38.6°N±0.0°×43.0°E±0.0°, h15km±8km, n64, σ1.9s04/93, 8C, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
VANB	**Van**	**0.25**	**98**	PG			**Pb**	**18 10 42.1**	**-0.1**
VANB				SG			**Sb**	**18 10 47.4**	**+1.0**
AKDM	**Akdamar-Van**	**0.31**	**194**	PG			**Pg**	**18 10 42.6**	**0.0**
AKDM				SG			**Sb**	**18 10 47.9**	**-0.4**
GEVA	**Gevas**	**0.32**	**183**	*i* P			**Pg**	**18 10 42.8**	**+0.1**
GEVA				*i* S			**Sg**	**18 10 47.6**	**+0.3**
GEVA					IAML			18 10 53.0	
	comp=N,3μm,0.7s								
GEVA					IAML			18 10 53.0	
	comp=E,3μm,0.5s								
ADCV	**BITLIS_Adilcev**	**0.33**	**303**	*i* P			**Pg**	**18 10 43.0**	**+0.1**
ADCV				*i* S			**Sb**	**18 10 48.3**	**-0.5**
ADCV					IAML			18 10 49.0	
	comp=N,5μm,0.4s								
ADCV					IAML			18 10 49.0	
	comp=E,15μm,0.5s								
VMUR	**Van-Muradiye**	**0.53**	**47**	*i* P			**Pg**	**18 10 46.5**	**0.0**
VMUR				*i* S			**Sg**	**18 10 53.5**	**-0.1**
VMUR					IAML			18 10 56.0	
	comp=E,1μm,0.3s								
VMUR					IAML			18 10 57.0	
	comp=N,1μm,0.7s								
MLAZ	**Malazgirt-MUS**	**0.66**	**321**	PG			**Pg**	**18 10 48.5**	**-0.4**
MLAZ				SG			**Sb**	**18 10 58.5**	**+0.3**
BLIS	**Bitlis-Merkez**	**0.78**	**254**	*i* P			**Pg**	**18 10 50.7**	**-0.5**
BLIS				*i* S			**Sg**	**18 11 00.5**	**-1.2**
BLIS					IAML			18 11 02.0	
	comp=N,5μm,0.4s								
BLIS					IAML			18 11 02.0	
	comp=E,2μm,0.4s								
TUTA	**Tutak**	**0.80**	**345**	*i* P			**Pg**	**18 10 50.7**	**-0.9**
TUTA				*i* S			**Sg**	**18 11 01.0**	**-1.1**
TUTA					IAML			18 11 04.0	
	comp=N,848nm,0.4s								
GURO	**Guroymak-BITLI**	**0.82**	**265**	PG			**Pg**	**18 10 51.4**	**-0.6**
CLDR	**Caldiran**	**0.83**	**52**	PG			**Pg**	**18 10 51.8**	**-0.4**
CLDR	**Caldiran**	**0.83**	**52**	*i* P			**Pg**	**18 10 51.3**	**-0.9**
CLDR				*i* S			**Sg**	**18 11 02.6**	**-0.6**
CLDR					IAML			18 11 05.0	
	comp=N,634nm,0.4s								
AGRB	**Hanur-Agry**	**0.95**	**356**	PG			**Pb**	**18 10 53.1**	**-1.1**
EKAR	**Karacoban**	**1.01**	**309**	*i* P			**Pb**	**18 10 55.3**	**0.0**
EKAR					IAML			18 11 18.0	
	comp=N,988nm,0.8s								
EKAR					IAML			18 11 24.0	
	comp=E,1μm,1.1s								
DYDN	**Diyadin**	**1.03**	**27**	*i* P			**Pn**	**18 10 56.0**	**0.0**
DYDN					IAML			18 11 15.0	
	comp=N,486nm,0.8s								
DYDN					IAML			18 11 15.0	
	comp=E,334nm,0.9s								
SRTM	**Siirt_Merkez**	**1.11**	**235**	*i* P			**Pn**	**18 10 57.2**	**+0.1**
SRTM				*i* S			**Sn**	**18 11 12.8**	**+0.7**
SRTM					IAML			18 11 17.0	
	comp=N,1μm,0.7s								
SRTM					IAML			18 11 20.0	
	comp=E,908nm,0.6s								
MUSM	**Mu-Merkez**	**1.23**	**275**	*i* P			**Pn**	**18 10 57.6**	**-1.1**
MUSM				*i* S			**Sb**	**18 11 13.8**	**-0.9**
MUSM					IAML			18 11 16.0	
	comp=N,321nm,0.6s								

EAK				IAML			18 11 59.0	
	comp=N,150nm,0.9s							
KAPZ	**Kaputan**	**2.10**	**36**	*i* P		**Pb**	**18 11 12.4**	**-1.6**
KAPZ				S		**Sb**	**18 11 39.3**	**-0.7**
HANI	**Diyarbakir_Han**	**2.11**	**265**	*i* P		**Pb**	**18 11 14.0**	**0.0**
HANI				IAML			18 11 46.0	
	comp=E,161nm,0.5s							
HANI				IAML			18 11 58.0	
	comp=N,160nm,1.1s							
YEDI	**Yedisu-Bingol**	**2.13**	**293**	PN		**Pb**	**18 11 12.8**	**-1.6**
MARD	**Mardin**	**2.24**	**235**	*i* P		**Pb**	**18 11 15.0**	**-1.2**
MARD				*i* S		**Sb**	**18 11 42.6**	**-1.2**
MARD				IAML			18 11 53.0	
	comp=N,610nm,0.7s							
MARD				IAML			18 11 53.0	
	comp=E,281nm,0.4s							
KRIK	**Erzurum-spir**	**2.38**	**316**	*i* P		**Pg**	**18 11 23.1**	**+1.5**
MAZI	**Mazidag**	**2.38**	**241**	PN		**Pb**	**18 11 17.1**	**-1.5**
DYBB	**Diyarbakir**	**2.41**	**255**	PN		**Pb**	**18 11 17.2**	**-1.8**
DIYA	**Diyarbakir**	**2.43**	**254**	*i* P		**Pb**	**18 11 19.2**	**-0.2**
DIYA				*i* S		**Sb**	**18 11 51.3**	**+2.1**
DIYA				IAML			18 12 12.0	
	comp=N,133nm,0.6s							
DIYA				IAML			18 12 20.0	
	comp=E,164nm,1.3s							
KOPT	**Kop Dagi**	**2.43**	**306**	*i* P		**Pg**	**18 11 21.1**	**-1.6**
KOPT				*i* S		**Sg**	**18 11 58.1**	**+3.9**
KOPT				IAML			18 12 06.0	
	comp=N,83nm,0.9s							
KOPT				IAML			18 12 07.0	
	comp=E,86nm,1.4s							
STE	**Stepanavan**	**2.57**	**22**	*eP*		**Pb**	**18 11 21.0**	**-0.8**
STE				*eS*		**Sg**	**18 12 01.0**	**+2.5**
DBAD	**Bademkaya**	**2.61**	**336**	*i* P		**Pb**	**18 11 23.8**	**+1.3**
BAYB	**BAYBURT**	**2.72**	**308**	*i* P		**Pb**	**18 11 26.0**	**+1.5**
TNCL	**Tunceli-Merkez**	**2.80**	**281**	*i* P		**Pb**	**18 11 26.5**	**+0.7**
TNCL				IAML			18 12 16.0	
	comp=N,59nm,0.7s							
TNCL				IAML			18 12 24.0	
	comp=E,81nm,0.9s							
EUZM	**Uzumlu**	**2.84**	**293**	*i* P		**Pb**	**18 11 28.3**	**+1.9**
EPOS	**Posof**	**2.88**	**355**	*i* P		**Pb**	**18 11 28.6**	**+1.4**
DBOC	**Borcka**	**2.92**	**339**	*i* P		**Pb**	**18 11 28.9**	**+1.2**
ELZG	**Elazig**	**3.21**	**269**	*i* P		**Pb**	**18 11 31.7**	**-1.1**
ELZG				IAML			18 12 25.0	
	comp=N,43nm,0.7s							
ELZG				IAML			18 12 31.0	
	comp=E,74nm,1.0s							
KELT	**Kelkit**	**3.33**	**298**	*i* P		**Pb**	**18 11 36.0**	**+1.2**
GZT	**Gaziantep**	**4.54**	**255**	*i* P		**Pg**	**18 12 00.0**	**-2.8**
GZT				*i* S		**Sg**	**18 13 00.4**	**-1.3**
HCB	**Kahramanmara**	**5.04**	**257**	*i* P		**Pg**	**18 12 11.7**	**-0.8**
KUZU	**Kuzuini**	**5.11**	**251**	*i* P		**Pg**	**18 12 14.8**	**+1.0**

*IDC **23** 18:13:19.7±47.0, 15.˚80S×173.˚60W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.7/40, mbtmp4.3/3, MS3.7/2, Ms1 3.7/2, ms1mx2.9/28, Error ellipse: s-maj=904.6km s-min=170.9km az=79.0*
*NEIC **23** 18:14:32.4±0.6, 16.˚6S±0.˚3×176.˚4W±0.˚3, h566km±20km, mb4.3/8, Error ellipse: s-maj=45.9km s-min=35.1km az=176.0*

ISC 23 18:14:30.6±3.6, 16.˚6S±0.˚4×176.˚2W±0.˚4, h550km, n16, σ0s75/14, mb4.0/8, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.65**	**257**	P	**P**	**18 16 07.3**	**+1.1**
RAO	**Raoul Island**	**12.71**	**187**	LR	LR	18 20 12.5	
	comp=Z,141nm,19.7s,baz=139,slow=30						
BFZ	**Birch Farm**	**24.90**	**194**	P	**P**	**18 19 10.5**	**+0.2**
CTA	**Charters Tower**	**35.80**	**259**	LR	LR	18 33 49.6	
	comp=Z,213nm,20.5s,baz=36,slow=32						
STKA	**Stephens Creek**	**41.15**	**240**	P	**P**	**18 21 27.0**	**-0.4**
	1.4nm,0.4s,baz=97,slow=9.7,SNR=11						
STKA	**Stephens Creek**	**41.15**	**240**	P	**P**	**18 21 27.0**	**-0.4**
BBOO	**Buckleboo**	**45.92**	**240**	P	**P**	**18 22 04.2**	**-0.2**
BBOO				IAmb	IAmb	18 22 05.1	
	comp=Z,11nm,1.0s						
WB0	**Warramunga Arr**	**46.96**	**258**	P	**P**	**18 22 12.6**	**+0.1**
WB0				IAmb	IAmb	18 22 28.0	
	comp=Z,14nm,1.6s						
WB2	**Warramunga Arr**	**46.98**	**258**	P	**P**	**18 22 12.2**	**-0.4**
WB2				IAmb	IAmb	18 23 15.9	
	comp=Z,19nm,1.6s						
WRA	**Warramunga Arr**	**47.00**	**258**	P	**P**	**18 22 12.5**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=96,slow=7.4,SNR=7.2						
WRA	**Warramunga Arr**	**47.00**	**258**	P	**P**	**18 22 11.1**	**-1.7**
AS31	**Alice Springs**	**47.22**	**253**	P	**P**	**18 22 13.8**	**-0.7**
AS31				IAmb	IAmb	18 22 14.8	
	comp=Z,2.2nm,0.6s						
ASAR	**Alice Springs**	**47.23**	**253**	P	**P**	**18 22 14.3**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=89,slow=8.1,SNR=20						
ASAR	**Alice Springs**	**47.23**	**253**	P	**P**	**18 22 13.8**	**-0.7**
FORT	**Forrest**	**52.52**	**244**	P	**P**	**18 22 52.5**	**-0.6**
FORT				IAmb	IAmb	18 24 54.6	
	comp=Z,22nm,0.9s						
LBTB	**Lobatse**	**133.53**	**208**		**PKPdf**	**18 32 45.9**	**+0.3**

*IDC **23** 18:17:09.4±1.6, 24.˚96S×179.˚52E, h505km±14km, mb3.9/19, mb1 3.9/22, mb1mx3.8/41, mbtmp4.7/22, Error ellipse: s-maj=16.6km s-min=10.8km az=78.0*
*NEIC **23** 18:17:09.1±1.7, 25.˚0S±0.˚1×179.˚6E±0.˚2, h508km±2km, mb4.6/25, Error ellipse: s-maj=21.1km s-min=15.1km az=90.0*

ISC 23 18:17:08.7±0.4, 24.˚98S±0.˚06×179.˚70E±0.˚08, h507km, n132, σ1s43/141, mb4.5/31, 4C-15D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.37**	**348**	P	**P**	**18 18 59.5**	**+0.3**
DZM	**Mont Dzumac**	**12.50**	**281**	P	**P**	**18 19 53.4**	**+0.7**
	0.6nm,0.3s,baz=89,slow=18,SNR=6.4						
TOZ	**Tahuroa Road**	**13.21**	**195**	P	**P**	**18 20 03.1**	**+3.3**
URZ	**Urewera**	**13.42**	**189**	P	**P**	**18 20 01.7**	**-0.3**
	5.6nm,0.3s,baz=343,slow=5.1,SNR=18						
URZ				S	**S**	**18 22 22.1**	**-2.9**
	1.6nm,0.3s,baz=73,slow=19,SNR=7.1						
URZ	**Urewera**	**13.42**	**189**	P	**P**	**18 20 00.9**	**-1.2**
URZ	**Urewera**	**13.42**	**189**	P	**P**	**18 20 00.0**	**-2.1**
RAGZ	**Rawiri**	**13.62**	**188**	P	**P**	**18 20 03.8**	**-0.4**
AFI	**Afiamalu**	**13.63**	**38**	P	**P**	**18 20 02.6**	**-2.0**
	6.2nm,0.3s,baz=140,slow=7.9,SNR=8.4						
AFI				S	**S**	**18 22 23.8**	**-5.9**
	3.8nm,0.3s,baz=214,slow=22,SNR=3.5						
AFI	**Afiamalu**	**13.63**	**38**	P	**P**	**18 20 02.4**	**-2.2**
RTZ	**Ruatahuna**	**13.79**	**189**	P	**P**	**18 20 02.2**	**-3.8**
SNGZ	**Shannon Statio**	**13.91**	**188**	P	**P**	**18 20 06.8**	**-0.4**
MTHZ	**Maungataniwha**	**14.04**	**189**	P	**P**	**18 20 09.5**	**+0.8**
MRHZ	**Matea Rd**	**14.09**	**191**	P	**P**	**18 20 09.6**	**+0.4**
NMHZ	**Naumai**	**14.29**	**189**	P	**P**	**18 20 13.8**	**+2.5**
BKZ	**Black Stump Fm**	**14.40**	**190**	P	**P**	**18 20 11.3**	**-1.1**
BKZ	**Black Stump Fm**	**14.40**	**190**	P	**P**	**18 20 11.1**	**-1.4**
BKZ				S	**S**	**18 22 40.5**	**-3.4**
NGZ	**Ngauruhoe**	**14.57**	**193**	P	**P**	**18 20 15.7**	**+1.4**
MCHZ	**McNeill Hill**	**14.64**	**189**	P	**P**	**18 20 15.0**	**0.0**
TUVZ	**Tukino**	**14.65**	**192**	P	**P**	**18 20 15.1**	**0.0**
FWVZ	**Far West T-bar**	**14.66**	**193**	P	**P**	**18 20 14.9**	**-0.4**
TRVZ	**Turoa**	**14.70**	**193**	P	**P**	**18 20 16.1**	**+0.3**
PKVZ	**Pokaka**	**14.73**	**193**	P	**P**	**18 20 16.7**	**+0.8**
MOVZ	**Moawhango**	**14.77**	**192**	P	**P**	**18 20 15.8**	**-0.5**
BHHZ	**Black Hill Sta**	**14.79**	**191**	P	**P**	**18 20 13.5**	**-3.0**
KRHZ	**Kereru**	**14.89**	**190**	P	**P**	**18 20 16.9**	**-0.6**
KAHZ	**Kahuranaki**	**14.96**	**188**	P	**P**	**18 20 17.7**	**-0.6**
PNHZ	**Pukenui**	**15.18**	**190**	P	**P**	**18 20 19.2**	**-1.3**
TSZ	**Takapari Road**	**15.36**	**191**	P	**P**	**18 20 21.8**	**-0.7**
DVHZ	**Dannevirke**	**15.56**	**190**	P	**P**	**18 20 23.6**	**-0.9**
ANWZ	**Angora Road**	**15.67**	**189**	P	**P**	**18 20 27.6**	**+2.0**
BFZ	**Birch Farm**	**15.92**	**190**	P	**P**	**18 20 27.1**	**-1.1**
FUNA	**Funafuti**	**16.37**	**358**	P	**P**	**18 20 31.3**	**-1.9**
LTZ	**Lake Taylor**	**18.78**	**197**	P	**P**	**18 20 55.2**	**-0.6**
RPZ	**Rata Peaks**	**19.98**	**199**	P	**P**	**18 21 06.9**	**+0.3**
	1.3nm,0.3s,baz=14,slow=4.2,SNR=6.1						
HNR	**Honiara**	**24.34**	**306**	P	**P**	**18 21 44.7**	**-1.4**
	91nm,0.6s,baz=155,slow=6.2,SNR=4.8						
TARA	**Tarawa**	**26.99**	**345**	P	**P**	**18 22 09.3**	**-0.2**
CTA	**Charters Tower**	**31.22**	**272**	P	**P**	**18 22 46.2**	**-0.2**
	19nm,0.5s,baz=96,slow=7.6,SNR=38						
STKA	**Stephens Creek**	**34.08**	**250**	P	**P**	**18 23 10.2**	**-0.3**
	2.7nm,0.4s,baz=93,slow=12,SNR=17						
PMG	**Port Moresby**	**34.60**	**291**	P	**P**	**18 23 14.4**	**-0.6**
	20nm,0.6s,baz=106,slow=7.8,SNR=15						
PMG	**Port Moresby**	**34.60**	**291**	P	**P**	**18 23 14.0**	**-1.1**
PMG				IAmb	IAmb	18 23 15.2	
	comp=Z,25nm,0.7s						
COEN	**Coen**	**36.03**	**281**	P	**P**	**18 23 26.0**	**-1.0**
COEN				IAmb	IAmb	18 23 27.7	
	comp=Z,14nm,0.8s						
AS31	**Alice Springs**	**41.60**	**262**	P	**P**	**18 24 11.2**	**-0.9**
ASAR	**Alice Springs**	**41.60**	**262**	P	**P**	**18 24 11.3**	**-0.8**
	comp=Z,10nm,0.9s,baz=100,slow=8.4,SNR=44						
ASAR				S	**S**	**18 29 47.4**	**-4.1**
	comp=Z,1.4nm,0.9s,baz=97,slow=17,SNR=7.2						
ASAR	**Alice Springs**	**41.60**	**262**	P	**P**	**18 24 10.4**	**-1.7**
WR0	**Warramunga Arr**	**41.88**	**267**	P	**P**	**18 24 13.0**	**-1.4**
WB2	**Warramunga Arr**	**42.06**	**267**	P	**P**	**18 24 14.4**	**-1.4**
WB2				IAmb	IAmb	18 24 15.3	
	comp=Z,14nm,0.8s						
WRAB	**Tennant Creek**	**42.06**	**267**	P	**P**	**18 24 14.3**	**-1.5**
WRAB				IAmb	IAmb	18 24 15.2	
	comp=Z,15nm,1.0s						
WB0	**Warramunga Arr**	**42.07**	**268**	P	**P**	**18 24 14.4**	**-1.5**
WB0				IAmb	IAmb	18 24 15.3	
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**42.07**	**267**	P	**P**	**18 24 14.5**	**-1.4**
	comp=Z,14nm,0.7s,baz=102,slow=8.2,SNR=40						
WRA				S	**S**	**18 29 53.0**	**-5.3**
	comp=Z,2.3nm,0.9s,baz=98,slow=15,SNR=5.9						
WRA	**Warramunga Arr**	**42.07**	**267**	P	**P**	**18 24 13.3**	**-2.6**
KNRA	**Kununurra**	**48.42**	**271**	P	**P**	**18 25 03.8**	**-0.8**
KNRA				IAmb	IAmb	18 25 04.6	
	comp=Z,39nm,1.1s						
VNDA	**Vanda**	**53.29**	**185**	P	**P**	**18 25 39.9**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=16,slow=8.3,SNR=5.2						
QSPA	**South Pole Qui**	**65.11**	**180**	P	**P**	**18 27 00.2**	**+1.4**
	comp=Z,19nm,1.0s,baz=19,slow=4.0,SNR=40						
QSPA	**South Pole Qui**	**65.11**	**180**	P	**P**	**18 27 00.2**	**+1.4**
QSPA				IAmb	IAmb	18 27 01.2	
	comp=Z,19nm,0.9s						
MJAR	**Matsushiro Arr**	**72.63**	**326**	P	**P**	**18 27 44.2**	**-0.2**
	comp=Z,14nm,0.8s,baz=145,slow=5.6,SNR=36						
MJAR	**Matsushiro Arr**	**72.63**	**326**	P	**P**	**18 27 44.0**	**-0.4**
MAJO	**Matsushiro**	**72.63**	**326**	P	**P**	**18 27 44.5**	**+0.1**
MAJO				IAmb	IAmb	18 27 45.1	
	comp=Z,19nm,0.8s						
MAT	**Matsushiro**	**72.63**	**326**	P	**P**	**18 27 44.0**	**-0.4**
MJB9	**Matsu-Tunnel**	**72.64**	**326**	P	**P**	**18 27 44.5**	**0.0**
MJB9				IAmb	IAmb	18 27 45.1	
	comp=Z,20nm,0.9s						
MAW	**Mawson**	**76.65**	**201**	P	**P**	**18 28 07.5**	**+0.9**
	comp=Z,3.0nm,0.4s,baz=144,slow=6.1,SNR=9.4						
MAW	**Mawson**	**76.65**	**201**	P	**P**	**18 28 07.1**	**+0.5**
KSRS	**Korea Array**	**79.90**	**320**	P	**P**	**18 28 19.9**	**+0.8**
	comp=Z,5.8nm,0.7s,baz=136,slow=5.4,SNR=20						
KSAR	**Wonju Array Be**	**78.91**	**320**	P	**P**	**18 28 19.4**	**+0.1**
PETK	**Petropavlovsk-**	**80.08**	**347**	P	**P**	**18 28 25.5**	**+0.4**
	comp=Z,9.9nm,0.9s,baz=134,slow=7.5,SNR=18						
PETK	**Petropavlovsk-**	**80.08**	**347**	P	**P**	**18 28 25.7**	**+0.7**
NJ2	**Nanjing**	**81.16**	**311**	*eP*	**P**	**18 28 32.8**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**81.52**	**327**	P	**P**	**18 28 33.7**	**+1.0**
	comp=Z,4.2nm,0.6s,baz=149,slow=4.0,SNR=6.1						
SNAA	**Sanae**	**83.60**	**179**	P	**P**	**18 28 43.2**	**+0.2**
SNAA	**Sanae**	**83.60**	**179**	P	**P**	**18 28 42.8**	**-0.2**
VNA3	**Neumayer Olymp**	**83.82**	**177**	P	**P**	**18 28 44.5**	**+0.4**
VNA1	**Neumayer--Stat**	**84.47**	**177**	P	**P**	**18 28 47.5**	**+0.3**
KLR	**Kul'dur**	**85.33**	**331**	P	**P**	**18 28 52.8**	**+1.2**
	comp=Z,1.7nm,0.8s,baz=104,slow=6.4,SNR=6.9						
NVAR	**Mina Array Bea**	**85.72**	**44**	P	**P**	**18 28 55.8**	**+1.7**
	comp=Z,0.9nm,0.7s,baz=221,slow=8.2,SNR=8.0						
ENH	**Enshi**	**86.84**	**305**	P	**P**	**18 28 59.1**	**-0.2**
ENH				IAmb	IAmb	18 29 00.4	
	comp=Z,6.3nm,0.9s						
I07A	**Izee**	**88.40**	**39**	P	**P**	**18 29 07.7**	**+1.3**
I07A				IAmb	IAmb	18 29 10.1	
	comp=Z,5.1nm,1.0s						
XAN	**Xi'an**	**89.19**	**308**	P	**P**	**18 29 10.8**	**+0.6**
XAN				pmax	pmax		
	comp=Z,11nm,1.2s						
XAN				pmax	pmax		
	comp=Z,170nm,5.5s						
XAN	**Xi'an**	**89.19**	**308**	P	**P**	**18 29 10.6**	**+0.4**
XAN				IAmb	IAmb	18 29 11.9	
	comp=Z,11nm,1.0s						
CMAR	**Chiang Mai Arr**	**89.64**	**290**	P	**P**	**18 29 14.1**	**+1.4**
	comp=Z,1.9nm,0.9s,baz=145,slow=3.2,SNR=15						
SEY	**Seymchan**	**90.26**	**348**	P	**P**	**18 29 15.0**	**+0.6**
	comp=Z,4.0nm,0.7s,baz=160,slow=5.2,SNR=11						
HHC	**Hu-ho-hao-te**	**90.98**	**315**	*eP*	**P**	**18 29 19.6**	**+1.1**
HHC				pmax	pmax		
	comp=Z,6.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,65nm,7.0s						
ILAR	**Eielson Array**	**93.14**	**14**	P	**P**	**18 29 27.5**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=225,slow=4.9,SNR=6.4						
SONM	**Songino Array**	**97.74**	**319**	P	**P**	**18 29 50.2**	**+1.2**
	comp=Z,0.4nm,0.7s,baz=146,slow=5.5,SNR=3.6						
SONM	**Songino Array**	**97.74**	**319**	IAmb	IAmb	18 29 50.6	
	comp=Z,2.3nm,1.5s						
MKAR	**Makanchi Array**	**112.68**	**312**	PKiKP	**PKiKP**	**18 34 46.4**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=186,slow=0.5,SNR=3.0						
KSH	**Kashi**	**115.64**	**304**	PKP	**PKiKP**	**18 34 54.4**	**+1.1**
KSH				PP	**PP**	**18 36 11.3**	**+5.9**
KSH				AMB	AMB		
	comp=Z,440nm,4.9s						
FRNY	**Flat Rock**	**118.74**	**51**		**PKiKP**	**18 35 00.2**	**+1.3**
ARCES	**ARCESS Array B**	**132.88**	**348**	PKP	**PKiKP**	**18 35 25.8**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=332,slow=1.8,SNR=7.7						
ARCES				SKPbc	**SKPbc**	**18 38 05.2**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=35,slow=4.9,SNR=11						
FINES	**FINESS Array B**	**139.37**	**341**	SKPbc	**SKPbc**	**18 38 25.2**	**+0.4**
	comp=Z,7.0nm,0.9s,baz=46,slow=5.5,SNR=12						
NB2	**NORSAR Subarra**	**143.10**	**351**	PKP	PKPab	18 35 41.3	-0.3
	comp=Z,11nm,1.2s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**143.10**	**351**	PKP	PKPbc	18 35 42.4	+0.2
	comp=Z,1.6nm,0.8s,baz=12,slow=4.1,SNR=16						
NOA				SKPbc	**SKPbc**	**18 38 34.0**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=15,slow=4.6,SNR=6.3						
AKASG	**Malin Array Be**	**145.72**	**326**	PKPbc	**PKPbc**	**18 35 49.8**	**-0.6**
	comp=Z,3.4nm,0.6s,baz=45,slow=4.0,SNR=22						
AKASG				SKPbc	**SKPbc**	**18 38 40.9**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=49,slow=3.2,SNR=5.1						
GAZ	**Gaziantep**	**145.86**			**PKPdf**	**18 35 50.3**	**+0.6**
BR131	**Keskin Array S**	**147.99**	**306**		**PKPbc**	**18 35 56.9**	**-0.2**
BRTR	**Keskin Array B**	**147.99**	**306**	PKPbc	**PKPbc**	**18 35 56.9**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=127,slow=3.0,SNR=8.4						
BRTR	**Keskin Array B**	**147.99**	**306**		**PKPbc**	**18 35 56.1**	**-0.9**
LEOM	**Leova**	**148.70**	**321**	ǁP	**PKPdf**	**18 35 52.9**	**-1.0**
CFR	**Carcaliu**	**149.46**	**318**	ǁP	**PKPbc**	**18 35 59.6**	**-0.7**
TOPG	**Topolog**	**149.47**	**318**	ǁP	**PKiKP**	**18 36 00.9**	**-0.2**
KWP	**Kalwaria Pacla**	**149.56**	**330**		**PKiKP**	**18 36 01.1**	**-0.1**
BIZ	**Bicaz**	**149.64**	**323**	ǁP	**PKiKP**	**18 36 01.5**	**0.0**
BUR08	**Bucovina Ar. S**	**149.69**	**325**		**PKiKP**	**18 36 02.0**	**+0.4**
BURAR	**Bucovina Array**	**149.70**	**325**	ǁP	**PKiKP**	**18 36 02.3**	**+0.7**
BURAR	**Bucovina Array**	**149.70**	**325**		**PKiKP**	**18 36 01.4**	**-0.3**
VRI	**Vrincioaia**	**149.92**	**321**	ǁP	**PKPbc**	**18 36 01.5**	**+0.1**
PLOR	**Plostina**	**149.97**	**321**	ǁP	**PKPbc**	**18 35 59.6**	**-2.0**
KOLS	**Kolonicke sedl**	**150.26**	**329**	*e*PKP	**PKiKP**	**18 36 03.1**	**+0.4**
KOLS				*e*		18 36 11.1	
OJC	**Ojcow**	**150.38**	**333**	*e*PKP	**PKiKP**	**18 36 02.6**	**-0.2**
MLR	**Muntele Rosu**	**150.58**	**321**	ǁP	**PKPbc**	**18 36 03.1**	**0.0**
DOPR	**Dopca**	**150.62**	**322**	ǁP	**PKiKP**	**18 36 03.5**	**0.0**
TRPA	**Tarpa**	**150.70**	**328**	ǁP	**PKiKP**	**18 36 03.4**	**-0.1**
PLAR	**PLOIESTI**	**150.86**	**320**	ǁP	**PKPdf**	**18 35 58.3**	**+0.9**
VOIR		**151.12**	**321**	ǁP	**PKPbc**	**18 36 04.2**	**-0.1**
KSP	**Ksiaz**	**151.18**	**338**	*e*PKP	**PKiKP**	**18 36 05.1**	**+0.7**
LANS	**Liptovska Anna**	**151.34**	**332**	*e*PKP	**PKPdf**	**18 35 57.6**	**-0.4**
ARR	**Arges**	**151.40**	**322**	ǁP	**PKiKP**	**18 36 06.0**	**+0.8**
OSTC	**Ostas**	**151.45**	**338**	ǁ*e*PKP	**PKiKP**	**18 36 05.7**	**+0.6**
CHVC	**Chvalec**	**151.48**	**338**	ǁ*e*PKP	**PKiKP**	**18 36 05.5**	**+0.4**
KRLC	**Kraliky**	**151.65**	**337**	ǁ*e*PKP	**PKiKP**	**18 36 06.1**	**+0.6**
CLL	**Collm**	**151.80**	**342**	*i* PKPbc	**PKiKP**	**18 36 05.8**	**0.0**
	comp=Z,7.0nm,0.8s						
CLL				*i* PKPab	**PKPab**	**18 36 16.8**	**0.0**
	comp=Z,5.0nm,0.7s						
CLL				*ep*PKPab	**pPKPab**	**18 38 11.0**	**+0.7**
CLL	**Collm**	**151.80**	**342**		**PKiKP**	**18 36 05.7**	**0.0**
VYHS	**Vyhne**	**152.12**	**332**	*e*PKP	**PKiKP**	**18 36 06.7**	**+0.2**
VYHS				*e*		18 36 17.6	
SIRR	**Siria**	**152.42**	**326**	ǁP	**PKPbc**	**18 36 07.1**	**0.0**
MODS	**Modra-Piesok**	**152.85**	**334**	*e*PKP	**PKiKP**	**18 36 08.1**	**+0.1**
KHC	**Kasperske Hory**	**153.56**	**339**	ǁ*e*PKP	**PKiKP**	**18 36 09.9**	**+0.4**
KHC				*e*PKPAB	**PKPab**	**18 36 25.3**	**+0.8**
GERES	**GERESS Array B**	**153.76**	**339**	PKPab	**PKPab**	**18 36 26.0**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=22,slow=4.3,SNR=5.2						
VTS	**Vitosha**	**153.83**	**318**	ǁP	**PKPab**	**18 36 27.3**	**+1.3**
VTS	**Vitosha**	**153.83**	**318**		**PKPab**	**18 36 27.0**	**+1.0**
LIT	**Litokhoron**	**155.67**	**314**		**PKPab**	**18 36 33.2**	**-0.7**
ESDC	**Sonseca Array**	**165.03**	**11**	PKPab	**PKPab**	**18 37 15.2**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=352,slow=4.1,SNR=5.0						
ESDC	**Sonseca Array**	**165.03**	**11**		**PKPab**	**18 37 15.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**168.08**	**189**	PKPab	**PKPab**	**18 37 28.9**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=166,slow=2.9,SNR=12						
TORD	**Torodi Ar. Bea**	**168.08**	**189**		**PKPab**	**18 37 28.7**	**+0.1**

WEL 23 18:22:09.7, 41.˚5S±4.˚7×17.˚2E±.˚, h5km, M3.7/26, ML3.9/26, MLv3.7/26, Error ellipse: s-maj=0.0km s-min=0.0km az=179.6, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.25**	**17**	P	Pb	18 22 15.6	-1.1
QRZ				S	Sg	18 22 18.9	+1.0
NNZ	**Nelson**	**0.73**	**102**	P	Pb	18 22 24.6	-0.2
THZ	**Tophouse**	**0.78**	**153**	P	Pb	18 22 25.8	0.0
DSZ	**Denniston Nort**	**0.82**	**215**	P	Pb	18 22 26.9	+0.4
DSZ				S	Sb	18 22 38.2	+0.3
DUWZ	**D'Urville Isla**	**1.16**	**77**	P	Pg	18 22 32.0	+0.1
DUWZ				S	Sn	18 22 48.8	+0.1
TUWZ	**Tuamarina**	**1.20**	**108**	P	Pb	18 22 32.7	0.0
BSWZ	**Blackbirch Sta**	**1.26**	**121**	P	Pn	18 22 35.1	+1.1
TCW	**Tory Channel**	**1.40**	**96**	P	Pb	18 22 36.2	-0.1
TCW				S	Sn	18 22 54.9	+0.2
CMWZ	**Cape Campbell**	**1.50**	**118**	P	Pg	18 22 40.2	+1.7
KHZ	**Kahutara**	**1.58**	**149**	P	Pg	18 22 40.6	+0.6
LTZ	**Lake Taylor**	**1.72**	**184**	P	Pb	18 22 41.8	+0.1
INZ	**Inchbonnie**	**1.81**	**204**	P	Pn	18 22 42.1	+0.6
BHW	**Baring Head**	**1.87**	**101**	P	Pb	18 22 44.5	+0.3
KIW	**Kapiti Island**	**1.89**	**85**	P	Pb	18 22 44.5	-0.1
GVZ	**Greta Valley S**	**1.95**	**167**	P	Pb	18 22 45.0	-0.7
NMEZ	**Namu Road**	**1.99**	**34**	P	Pn	18 22 44.6	+0.7
OGWZ	**Otaki Gorge**	**2.09**	**84**	P	Pb	18 22 48.2	+0.2
NBEZ	**Newall Road No**	**2.11**	**32**	P	Pn	18 22 45.9	+0.4
KHEZ	**Kahui Hut**	**2.15**	**35**	P	Pn	18 22 46.8	+0.7
MSWZ	**Moikau Station**	**2.15**	**100**	P	Pb	18 22 47.8	-1.3
PREZ	**Palmer Road**	**2.17**	**38**	P	Pn	18 22 47.5	+1.1
PLWZ	**Palliser**	**2.18**	**104**	P	Pb	18 22 48.2	-1.5
LREZ	**Lake Rotokare**	**2.20**	**44**	P	Pb	18 22 50.0	0.0
PKE	**Pukeiti**	**2.22**	**33**	P	Pn	18 22 47.7	+0.6
OXZ	**Oxford**	**2.27**	**187**	P	P

comp=N,2280μm,0.4s
CDCA Citt' di Caste 0.17 276 P Pg 18 56 36.6 +0.7
CDCA S Sg 18 56 39.8 +1.5
CDCA AML AML
comp=E,6094μm,1.2s
CDCA AML AML
comp=N,4630μm,0.7s
CDCA AML AML
comp=E,820μm,0.4s
CDCA AML AML
comp=N,1388μm,0.7s
CDCA AML AML
comp=E,818μm,0.4s
CDCA AML AML
comp=E,6100μm,1.2s
CDCA AML AML
comp=E,820μm,0.4s
CDCA AML AML
comp=N,1385μm,0.7s
CDCA AML AML
comp=N,4635μm,0.7s
CDCA AML AML
comp=N,1390μm,0.7s
CDCA AML AML
comp=E,6065μm,1.2s
BADI Badiali 0.17 293 P Pg 18 56 36.6 +0.6
BADI S Sg 18 56 39.6 +1.1
BADI AML AML
comp=E,1255μm,0.2s
BADI AML AML
comp=N,1270μm,0.5s
BADI AML AML
comp=N,1268μm,0.5s
ATMI Monte Miggiano 0.18 234 P Pg 18 56 36.6 +0.5
ATMI S Sg 18 56 40.1 +1.5
ATMI AML AML
comp=E,1250μm,0.9s
ATMI AML AML
comp=N,1595μm,0.3s
MURB Monte Urbino 0.18 167 P Pg 18 56 36.8 +0.7
MURB S Sg 18 56 40.0 +1.3
MURB AML AML
comp=E,5060μm,0.3s
MURB AML AML
comp=N,3940μm,1.6s
NARO Abbazia di Nar 0.19 26 P Pg 18 56 36.6 +0.4
NARO S Sg 18 56 40.0 +1.2
NARO AML AML
comp=N,612μm,1.5s
NARO AML AML
comp=E,740μm,0.6s
FRON Frontone 0.20 68 P Pg 18 56 37.0 +0.5
FRON S Sg 18 56 40.7 +1.4
FRON AML AML
comp=E,754μm,0.6s
FRON AML AML
comp=N,876μm,0.5s
FRON AML AML
comp=N,874μm,0.5s
SSFR Montelago di S 0.23 91 P Pg 18 56 37.6 +0.6
SSFR S Sg 18 56 41.8 +1.7
SSFR AML AML
comp=E,2135μm,0.2s
SSFR AML AML
comp=N,2280μm,1.0s
SSFR AML AML
comp=E,2135μm,0.2s
SSFR AML AML
comp=N,2280μm,1.0s
SSFR AML AML
comp=E,2265μm,0.2s
SSFR AML AML
comp=N,2100μm,0.2s
SSFR AML AML
comp=E,2270μm,0.2s
PE3 Peglio 0.26 5 P Pg 18 56 38.2 +0.7
PE3 S Sb 18 56 43.7 -0.2
PE3 AML AML
comp=E,1540μm,0.4s
PE3 AML AML
comp=E,1545μm,0.4s
PE3 AML AML
comp=N,1120μm,0.5s
ATTE AVT- Monte Tez 0.26 199 P Pg 18 56 37.9 +0.4
ATTE S Sb 18 56 42.5 -1.4
ATTE AML AML
comp=E,600μm,0.2s
ATTE AML AML
comp=N,409μm,0.3s
ATTE AML AML
comp=N,410μm,0.3s
FOSV Fossato di Vic 0.26 124 P Pg 18 56 38.2 +0.7
FOSV AML AML
comp=E,316μm,0.4s
FOSV AML AML
comp=N,277μm,0.2s
FOSV AML AML
comp=E,316μm,0.4s
PARC Parchiule 0.27 321 P Pg 18 56 38.2 +0.5
PARC S Sb 18 56 43.4 -0.8
PARC AML AML
comp=N,653μm,1.5s
PARC AML AML
comp=E,472μm,0.9s
MPAG Monte Paganucc 0.28 49 P Pg 18 56 38.6 +0.5
MPAG S Sb 18 56 43.6 -1.2
MPAG AML AML
comp=N,412μm,0.7s
MPAG AML AML
comp=E,442μm,0.3s
MPAG AML AML
comp=N,413μm,0.7s
ATCC AVT- Casa Cast 0.29 154 P Pg 18 56 38.8 +0.8
ATCC S Sb 18 56 44.1 -0.7
ATCC AML AML
comp=E,2600μm,1.0s
ATCC AML AML
comp=N,1775μm,0.3s
FSSB Fossombrone 0.34 42 P Pg 18 56 39.6 +0.6
FSSB S Sb 18 56 45.6 -0.7
FSSB AML AML
comp=E,679μm,0.3s
FSSB AML AML
comp=N,783μm,0.2s
FSSB AML AML
comp=E,678μm,0.3s
ARVD Arcevia 0.35 81 P Pg 18 56 39.8 +0.6
ARVD S Sb 18 56 45.8 -0.9
ARVD AML AML
comp=E,290μm,1.0s
ARVD AML AML
comp=N,304μm,0.9s
CPGN Carpegna, Ital 0.38 344 P Pb 18 56 40.9 -0.5
CPGN AML AML
comp=N,302μm,1.2s
CPGN AML AML
comp=E,271μm,1.5s
CAFI Castiglion Fio 0.38 253 P Pg 18 56 40.3 +0.5
CAFI S Sb 18 56 46.5 -1.1
CAFI AML AML
comp=E,175μm,0.7s
CAFI AML AML
comp=N,175μm,0.6s
SNTG Esanatoglia 0.39 118 P Pg 18 56 40.8 +0.7
SNTG S Sb 18 56 47.4 -0.4
SNTG AML AML
comp=E,217μm,0.5s
SNTG AML AML
comp=N,522μm,0.2s
CRE Caprese Michel 0.41 296 P Pg 18 56 41.1 +0.6
CRE S Sb 18 56 47.9 -0.7
CRE AML AML
comp=N,191μm,1.6s
CRE AML AML
comp=N,192μm,1.6s
CRE AML AML
comp=E,192μm,0.2s
ASSB Assisi San Ben 0.42 161 P Pg 18 56 41.0 +0.3
ASSB S Sb 18 56 48.3 -0.4
ASSB AML AML
comp=N,366μm,0.4s
ASSB AML AML
comp=E,346μm,0.9s
COR1 Corinaldo 0.43 64 P Pb 18 56 41.9 -0.4
COR1 AML AML
comp=E,266μm,0.4s
COR1 AML AML
comp=N,515μm,1.0s
EL6 Elcito 0.48 103 P Pg 18 56 42.1 +0.5
EL6 S Sb 18 56 50.1 -0.2
CESI CESI - Serrava 0.54 144 P Pg 18 56 43.3 +0.5
CESI S Sb 18 56 52.3 +0.2
CESI AML AML
comp=N,71μm,1.0s
CESI AML AML
comp=E,41μm,1.4s
MGAB Montegabbione 0.59 206 P Pg 18 56 44.0 +0.3
MGAB S Sb 18 56 54.1 +0.6
MGAB AML AML
comp=E,690μm,0.4s
MGAB AML AML
comp=N,540μm,0.6s
MGAB AML AML
comp=N,474μm,0.6s
MGAB AML AML
comp=E,592μm,1.1s
ASQU Asqua 0.61 306 P Pg 18 56 44.6 +0.5
ASQU AML AML
comp=E,101μm,0.9s
ASQU AML AML
comp=N,108μm,0.4s
ASQU AML AML
comp=E,101μm,0.9s
FDMO Fiordimonte 0.61 132 P Pg 18 56 44.4 +0.3
FDMO S Sb 18 56 54.3 +0.3
FDMO AML AML
comp=E,98μm,0.9s
FDMO AML AML
comp=E,98μm,0.9s
FDMO AML AML
comp=N,132μm,0.7s
MOMA Monte Martano 0.64 173 P Pb 18 56 45.6 -0.3
MOMA AML AML
comp=E,266μm,1.5s
MOMA AML AML
comp=N,860μm,1.2s
MOMA AML AML
comp=E,258μm,0.3s
MOMA AML AML
comp=N,167μm,0.3s
CSP1 Cessapalombo 0.64 123 P Pg 18 56 45.2 +0.4
NRCA Norcia 0.77 142 AML AML
comp=E,149μm,0.5s
NRCA AML AML
comp=N,162μm,0.4s
DUGI Dugi Otok 1.96 73 *e*Pn Pn 18 57 06.9 +1.0
DUGI Sn Sb 18 57 32.8 -0.1
NVLJ Novalja 2.07 56 *e*Pn Pn 18 57 08.3 +0.9
NVLJ Sn Sb 18 57 34.8 -1.1
ZIRJ Zirje 2.32 84 *e*Pn Pn 18 57 11.8 +1.0
ZIRJ Sn Sb 18 57 41.8 -1.4
MORI Morici 2.39 79 *e*Pn Pb 18 57 14.9 -0.7
MORI Sn Sb 18 57 44.7 -0.6
KIJV Kijevo 2.91 77 *e*Pn Pn 18 57 21.2 +2.1
KIJV Sn Sn 18 57 56.2 +2.1

ROM 23 18:57:12.8±0.1, 43°.446N±0°.003×12°.462E±0°.004, h8km, ML1.9/11, Error ellipse: s-maj=0.3km s-min=0.2km az=183.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.04**	**276**	P	Pg	18 57 14.4	0.0
ATPI				S	Sg	18 57 15.7	+0.1
ATVO	**AVT- Monte Val**	**0.07**	**212**	P	Pg	18 57 15.1	+0.3
ATVO				S	Sg	18 57 16.6	+0.4
PIEI	**Pieia**	**0.10**	**31**	P	Pg	18 57 15.8	+0.6
PIEI				S	Sg	18 57 18.1	+1.1
PIEI				AML	AML		
	comp=E,1580μm,1.2s						
PIEI				AML	AML		
	comp=N,1325μm,0.7s						
ATFO	**Monte Foce - G**	**0.11**	**135**	P	Pg	18 57 15.8	+0.5
ATFO				S	Sg	18 57 17.8	+0.6
ATFO				AML	AML		
	comp=E,1490μm,0.5s						
ATFO				AML	AML		
	comp=N,1610μm,0.2s						
ATFO				AML	AML		
	comp=E,1495μm,0.5s						
CDCA	**Citt' di Caste**	**0.17**	**274**	P	Pg	18 57 17.4	+1.2
BADI	**Badiali**	**0.17**	**292**	P	Pg	18 57 17.0	+0.7
BADI				S	Sg	18 57 20.2	+1.4
BADI				AML	AML		
	comp=E,1124μm,0.2s						
BADI				AML	AML		
	comp=N,875μm,0.2s						
BADI				AML	AML		
	comp=E,1125μm,0.2s						
BADI				AML	AML		
	comp=N,874μm,0.2s						
BADI				AML	AML		
	comp=E,1126μm,0.2s						
BADI				AML	AML		
	comp=N,873μm,0.2s						
ATMI	**Monte Miggiano**	**0.18**	**232**	P	Pg	18 57 17.0	+0.6
NARO	**Abbazia di Nar**	**0.19**	**28**	P	Pg	18 57 17.1	+0.5
NARO				S	Sg	18 57 20.1	+0.9
NARO				AML	AML		
	comp=N,324μm,0.8s						
NARO				AML	AML		
	comp=E,357μm,0.8s						
MURB	**Monte Urbino**	**0.19**	**166**	P	Pg	18 57 17.2	+0.6
MURB				S	Sg	18 57 20.9	+1.6
FRON	**Frontone**	**0.20**	**69**	P	Pg	18 57 17.5	+0.6
FRON				S	Sg	18 57 21.1	+1.3
FRON				AML	AML		
	comp=E,417μm,0.6s						
FRON				AML	AML		
	comp=N,622μm,0.2s						
FRON				AML	AML		
	comp=N,621μm,0.2s						
FRON				AML	AML		
	comp=E,416μm,0.6s						
PE3	**Peglio**	**0.25**	**6**	P	Pb	18 57 18.8	-0.8
ATTE	**AVT- Monte Tez**	**0.26**	**198**	P	Pg	18 57 18.5	+0.5
ATTE				S	Sb	18 57 23.1	-1.3
PARC	**Parchiule**	**0.26**	**321**	P	Pg	18 57 18.8	+0.9
FOSV	**Fossato di Vic**	**0.27**	**125**	P	Pg	18 57 18.8	+0.7
FOSV				S	Sb	18 57 23.2	-1.4
MPAG	**Monte Paganucc**	**0.28**	**50**	P	Pg	18 57 19.0	+0.6
MPAG				S	Sb	18 57 23.9	-1.2
MPAG				AML	AML		
	comp=E,252μm,0.3s						
MPAG				AML	AML		
	comp=N,198μm,0.7s						
MPAG				AML	AML		
	comp=E,253μm,0.3s						
MPAG				AML	AML		
	comp=N,199μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.29**	**153**	P	Pg	18 57 19.3	+0.8
ATCC				S	Sb	18 57 24.5	-0.7
ATCC				AML	AML		
	comp=E,1795μm,1.0s						
ATCC				AML	AML		
	comp=N,982μm,0.2s						
ATCC				AML	AML		
	comp=N,980μm,0.2s						
ATCC				AML	AML		
	comp=E,1790μm,1.0s						
FSSB	**Fossombrone**	**0.34**	**43**	P	Pg	18 57 20.0	+0.6
FSSB				S	Sb	18 57 25.8	-0.8
FSSB				AML	AML		
	comp=E,410μm,1.0s						
FSSB				AML	AML		
	comp=N,484μm,0.2s						
ARVD	**Arcevia**	**0.35**	**81**	P	Pg	18 57 20.2	+0.5
ARVD				S	Sb	18 57 26.2	-0.9
ARVD				AML	AML		
	comp=E,180μm,0.5s						
ARVD				AML	AML		
	comp=N,186μm,1.2s						
CPGN	**Carpegna, Ital**	**0.37**	**344**	P	Pb	18 57 21.4	-0.3
CAFI	**Castiglion Fio**	**0.38**	**252**	P	Pb	18 57 21.0	-0.7
CAFI				S	Sb	18 57 26.9	-1.0
SNTG	**Esanatoglia**	**0.40**	**118**	P	Pg	18 57 21.2	+0.7
SNTG				S	Sb	18 57 27.6	-0.8
SNTG				AML	AML		
	comp=N,273μm,0.2s						
SNTG				AML	AML		
	comp=E,146μm,1.5s						
CRE	**Caprese Michel**	**0.41**	**295**	P	Pg	18 57 21.4	+0.6
ASSB	**Assisi San Ben**	**0.43**	**160**	P	Pg	18 57 21.5	+0.4
ASSB				S	Sb	18 57 28.4	-0.8
ASSB				AML	AML		
	comp=E,177μm,1.3s						
ASSB				AML	AML		
	comp=N,228μm,0.4s						
EL6	**Elcito**	**0.48**	**104**	P	Pg	18 57 22.7	+0.6
EL6				S	Sb	18 57 30.6	-0.2
FDMO	**Fiordimonte**	**0.61**	**132**	P	Pg	18 57 24.7	+0.1
FDMO				S	Sb	18 57 34.7	+0.1
CSP1	**Cessapalombo**	**0.65**	**123**	P	Pg	18 57 25.6	+0.3
CSP1				S	Sb	18 57 36.1	+0.4

*JMA **23** 18:58:33.3±0.1, 42°.96N×146°.46E, h58km±2km, M3.7*
*SKHL **23** 18:58:34.1±0.5, 43°.00N×146°.50E, h46km±7km, mb4.3/5*
ISC 23 18:58:33.4±2.0, 42°.95N±0°.09×146°.52E±0°.07, h41km±46km, n18, σ0s56/34, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.70**	**307**	P	**Pn**	**18 58 47.1**	**+0.2**
NEM2				*e*S	**Sn**	**18 58 57.3**	**+0.7**
NMR	**Nemuro--Hokkai**	**0.72**	**307**	*i* P	**Pn**	**18 58 47.2**	**+0.2**
NMR				*i* S	**Sn**	**18 58 57.1**	**+0.2**
SHO	**Shikotan**	**0.95**	**14**	*i* P	**Pn**	**18 58 50.3**	**0.0**
SHO				AMB	AMB	18 58 50.6	
	290nm,0.3s						
SHO				*i* S	**Sn**	**18 59 02.4**	**-0.2**
SHO				A	A	18 59 03.0	
	1μm,0.3s						
SHO				A	A	18 59 03.0	
	440nm,0.3s						
JKHN	**Kushirohamanak**	**1.00**	**278**	P	**Pn**	**18 58 51.0**	**0.0**
JKHN				*e*S	**Sn**	**18 59 04.0**	**+0.1**
GLVR	**Golovnino**	**1.08**	**318**	*i* P	**Pn**	**18 58 51.9**	**-0.1**
GLVR				AMB	AMB	18 58 52.0	
	52nm,0.3s						
GLVR				*i* S	**Sn**	**18 59 05.0**	**-0.7**
GLVR				A	A	18 59 06.0	
	292nm,0.3s						
GLVR				A	A	18 59 06.0	
	2μm,0.3s						
GRPR	**Tuman**	**1.18**	**333**	*i* P	**Pn**	**18 58 53.0**	**-0.4**
GRPR				AMB	AMB	18 58 53.0	
	153nm,0.4s						
GRPR				*i* S	**Sn**	**18 59 07.1**	**-1.1**
GRPR				A	A	18 59 07.9	
	2μm,0.3s						
GRPR				A	A	18 59 07.9	
	309nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.19**	**337**	*e*P	**Pn**	**18 58 53.1**	**-0.4**
YUK				AMB	AMB	18 58 54.0	
	97nm,0.4s						
YUK				*e*S	**Sn**	**18 59 07.5**	**-0.9**
YUK				A	A	18 59 11.0	
	235nm,0.4s						
YUK				A	A	18 59 11.0	
	2μm,0.4s						
JAK	**Akkeshi**	**1.34**	**273**	P	**Pn**	**18 58 55.6**	**+0.1**
JAK				*e*S	**Sn**	**18 59 11.7**	**-0.4**
JNSB	**Nemuroshibetsu**	**1.38**	**307**	P	**Pn**	**18 58 56.0**	**-0.1**
JNSB				*e*S	**Sn**	**18 59 12.8**	**-0.4**
JRA	**Rausu**	**1.42**	**315**	P	**Pn**	**18 58 56.9**	**+0.2**
JRA				*e*S	**Sn**	**18 59 13.8**	**-0.3**
JNK	**Nakash**	**1.46**	**297**	P	**Pn**	**18 58 56.9**	**-0.3**
JNK				*e*S	**Sn**	**18 59 14.0**	**-0.8**
JOB	**Onbets**	**1.97**	**270**	P	**Pn**	**18 59 04.3**	**+0.1**
JOB				*e*S	**Sn**	**18 59 27.5**	**-0.2**
JAR	**Ashorobuto**	**2.04**	**281**	P	**Pn**	**18 59 05.4**	**+0.2**
JAR				*e*S	**Sn**	**18 59 28.9**	**-0.6**
JTKR	**Abashiri--Toko**	**2.16**	**299**	P	**Pn**	**18 59 07.6**	**+0.8**
JTKR				*e*S	**Sn**	**18 59 32.8**	**+0.5**
JCH	**Churui**	**2.34**	**263**	P	**Pn**	**18 59 09.4**	**0.0**
JCH				*e*S	**Sn**	**18 59 36.0**	**-0.9**
KUR	**Kuril'sk**	**2.48**	**23**	*e*P	**Pn**	**18 59 11.7**	**+0.4**
KUR				AMB	AMB	18 59 13.0	
	30nm,0.2s						
KUR				*i* S	**Sn**	**18 59 40.2**	**-0.2**
KUR				A	A	18 59 41.0	
	220nm,0.4s						
KUR				A	A	18 59 41.0	
	330nm,0.4s						
JMP	**Maruseppu**	**2.53**	**296**	P	**Pn**	**18 59 12.8**	**+0.8**
YSS	**Yuzh-Sakhalins**	**4.81**	**328**	*e*P	**Pn**	**18 59 44.5**	**+1.2**

*FUNV **23** 19:02:19.4, 10°.76N×62°.50W, h93km, MW2.8*
*TRN **23** 19:02:23.4, 10°.65N×62°.38W, h60km, MD2.9*
ISC 23 19:02:19.8±1.8, 10°.65N±0°.07×62°.51W±0°.05, h89km±12km, n9, σ1s28/16, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.28**	**90**	*e*P	**Pn**	**19 02 33.3**	**+0.3**
GUIV				*e*S	**Sn**	**19 02 42.8**	**-0.1**
GUNV	**Guanoco**	**0.64**	**221**	*e*P	**Pn**	**19 02 37.1**	**+1.4**
GUNV				*e*S	**Sn**	**19 02 49.5**	**+2.0**
CRUV	**Carupano**	**0.71**	**272**	*e*P	**Pn**	**19 02 35.6**	**-0.8**
CRUV				*e*S	**Sn**	**19 02 47.3**	**-1.4**
TRN	**Trinidad (W)**	**1.09**	**90**	*e*P	**Pn**	**19 02 40.6**	**+0.1**
TRN				*e*S	**Sn**	**19 02 54.4**	**-1.6**
TRN	**Trinidad (W)**	**1.09**	**90**	*e*P	**Pn**	**19 02 40.1**	**-0.4**
TRN				*e*S	**Sn**	**19 02 55.0**	**-1.0**
GRGR	**Grenville**	**1.70**	**30**	*e*S	**Sn**	**19 03 09.9**	**+0.4**
TOSP	**Speyside**	**2.04**	**71**	*e*P	**Pn**	**19 02 54.7**	**+2.1**
TOSP				*e*S	**Sn**	**19 03 16.4**	**-1.2**
RIOV	**Rio Grande**	**2.65**	**165**	*e*P	**Pn**	**19 03 00.8**	**+0.1**
RIOV				*e*S	**Sn**	**19 03 31.6**	**-0.6**
PRGV	**PARIAGUAN**	**2.82**	**228**	*e*S	**Sn**	**19 03 35.1**	**-1.0**

*DJA **23** 19:25:39.1±0.5, 12°N±4°×12°.5E±°, h57km±5km, M5.0/13, mb4.6/13, MLv5.2/1*
*NEIC **23** 19:25:42.6±1.5, 11°.38N±0°.07×125°.2E±0°.1, h103km±5km, mb4.4/32, Error ellipse: s-maj=15.9km s-min=8.5km az=62.0*
*IDC **23** 19:25:42.5±0.6, 11°.28N×125°.04E, h102km±4km, mb3.8/23, mb1 4.0/25, mb1mx3.8/45, mbtmp4.2/25, MS2.9/1, Ms1 3.1/1, ms1mx2.4/34, Error ellipse: s-maj=19.5km s-min=8.5km az=71.0*
*BJI **23** 19:25:43.0±0.0, 11°.60N×125°.30E, h96km, mB4.8/11, mb4.3/16*
*MAN **23** 19:25:44.0, 11°.38N×125°.11E, h84km, MS3.7*
ISC 23 19:25:42.7±0.5, 11°.38N±0°.04×125°.16E±0°.06, h103km±4km, h103km:pP-P, n97, σ1s56/111, mb4.3/51, 3C-5D, Samar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**1.58**	**228**	*e*P	**Pn**	**19 26 11.1**	**+1.0**
LLP				*e*S	**Sn**	**19 26 31.1**	**+0.2**
RCP	**Roxas**	**2.37**	**275**	*e*P	**Pn**	**19 26 20.9**	**+0.6**
RCP				*e*S	**Sn**	**19 26 49.4**	**+0.3**
SNPH	**Sibulan**	**2.77**	**223**	*i* P	**Pn**	**19 26 27.6**	**+2.0**
SNPH				*i* S	**Sn**	**19 26 59.2**	**+0.6**
CGP	**Cagayan de Oro**	**2.94**	**189**	*e*P	**Pn**	**19 26 32.2**	**+4.3**
CGP				*e*S	**Sn**	**19 27 05.5**	**+2.9**
DCPH	**Dipolog City**	**3.30**	**213**	*e*P	**Pn**	**19 26 34.3**	**+1.7**
KCP	**Kidapawan**	**4.34**	**181**	*e*P	**Pn**	**19 26 51.1**	**+4.4**
KCP				*e*S	**Sn**	**19 27 30.5**	**-5.8**
LQP	**Lukban**	**4.46**	**308**	*e*P	**Pn**	**19 26 49.0**	**+0.7**
TGY	**Tagaytay City**	**4.93**	**304**	P	**Pn**	**19 26 54.5**	**0.0**
	8.2nm,0.3s,baz=128,slow=9.3,SNR=4.2						
KKM	**Kota Kinabalu**	**10.31**	**240**		**Pn**	**19 28 08.5**	**+0.7**
PCI	**Palu**	**13.30**	**204**	P	P	19 29 04.7	+11
SIJI	**Sorong**	**13.60**	**153**	P	**Pn**	**19 28 52.5**	**+1.0**
	0.3nm,0.3s,baz=9.0,slow=19,SNR=2.2						
SIJI				S	**Sn**	**19 31 14.6**	**-6.7**
	0.8nm,0.3s,baz=287,slow=19,SNR=7.7						
TTSI	**Tana Toraja**	**15.28**	**201**	P	**P**	**19 29 15.4**	**-0.1**
	27nm,1.0s						
SBUM	**Sibu**	**15.60**	**236**	P	**P**	**19 29 20.5**	**+1.4**
SBUM				IAmb	IAmb	19 29 21.8	
	comp=Z,19nm,0.8s						
SPSI	**Sidrap Palu**	**16.16**	**200**	P	**P**	**19 29 30.8**	**+5.6**
	comp=Z,28nm,0.9s						
SMPI	**Sarmi**	**18.92**	**134**	P	**Pn**	**19 29 59.5**	**+2.1**
	comp=Z,47nm,1.2s						
SLVN	**Son La**	**22.64**	**299**	P	**P**	**19 30 35.3**	**-0.1**
ENH	**Enshi**	**23.78**	**325**	P	**P**	**19 30 44.9**	**-1.1**

PBKT	**Sadao Pong**	**24.02**	**285**	P	**P**	**19 30 48.2**	**-0.1**
IPM	**Ipoh**	**24.85**	**256**	P	**P**	**19 30 56.5**	**+0.6**
IPM				IAmb	IAmb	19 30 59.1	
	comp=Z,18nm,1.0s						
KSRS	**Korea Array**	**26.08**	**5**	P	**P**	**19 31 08.0**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=186,slow=10,SNR=6.3						
CM31	**Chiang Mai Arr**	**26.27**	**289**	P	**P**	**19 31 08.7**	**0.0**
CM31				IAmb	IAmb	19 31 09.9	
	comp=Z,10nm,0.9s						
CMAR	**Chiang Mai Arr**	**26.27**	**289**	P	**P**	**19 31 09.3**	**+0.7**
	comp=Z,4.5nm,0.8s,baz=100,slow=7.3,SNR=36						
CMAR				ScP	**ScP**	**19 38 01.9**	**-1.5**
	comp=Z,0.6nm,0.7s,baz=85,slow=1.5,SNR=5.5						
CMAR				LR	LR	19 40 34.0	
	comp=Z,25nm,18.6s,baz=90,slow=34						
CHTO	**Chiang Mai**	**26.34**	**289**	P	**P**	**19 31 09.2**	**-0.2**
XAN	**Xi'an**	**27.00**	**329**	P	**P**	**19 31 14.8**	**-0.2**
XAN				pP	pP	19 31 36.8	-1.1
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN	**Xi'an**	**27.00**	**329**	P	**P**	**19 31 14.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**29.29**	**179**	P	**P**	**19 31 33.1**	**-2.5**
	comp=Z,2.6nm,0.7s,baz=352,slow=7.1,SNR=3.0						
FITZ	**Fitzroy Crossi**	**29.29**	**179**	IAmb	IAmb	19 32 27.7	
	comp=Z,27nm,1.9s						
HHC	**Hu-ho-hao-te**	**31.70**	**340**	*e*P	**P**	**19 31 58.6**	**+1.8**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,25nm,4.0s						
WRA	**Warramunga Arr**	**32.41**	**164**	P	**P**	**19 32 02.5**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=347,slow=8.8,SNR=5.2						
WRA				PcP	**PcP**	**19 34 47.8**	**-0.5**
	comp=Z,0.4nm,0.7s,baz=338,slow=2.2,SNR=3.0						
WRA				ScP	**ScP**	**19 38 20.5**	**-2.4**
	comp=Z,0.7nm,0.8s,baz=345,slow=3.7,SNR=4.2						
USRK	**Ussuriysk Ar.**	**33.23**	**9**	P	**P**	**19 32 11.5**	**+1.6**
	comp=Z,3.5nm,0.6s,baz=180,slow=10,SNR=7.5						
USRK	**Ussuriysk Ar.**	**33.23**	**9**	P	**P**	**19 32 08.0**	**-1.9**
GTA	**Gaotai**	**35.85**	**326**	⇑P	**P**	**19 32 33.8**	**+1.0**
GTA				pP	pP	19 32 57.3	+1.2
GTA				sP	sP	19 33 10.6	+2.6
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AS31	**Alice Springs**	**35.87**	**166**	P	**P**	**19 32 33.8**	**+0.9**
AS31				IAmb	IAmb	19 32 36.6	
	comp=Z,1.8nm,0.3s						
ASAR	**Alice Springs**	**35.87**	**166**	P	**P**	**19 32 33.7**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=345,slow=6.9,SNR=4.7						
ASAR				pP	**pP**	**19 32 55.4**	**-0.9**
	comp=Z,1.2nm,0.5s,baz=351,slow=7.5,SNR=4.2						
ASAR				PcP	**PcP**	**19 34 58.2**	**0.0**
	comp=Z,0.3nm,0.3s,baz=338,slow=3.1,SNR=3.0						
ASAR				S	**S**	**19 38 01.8**	**-1.6**
	comp=Z,0.9nm,0.8s,baz=347,slow=14,SNR=7.9						
ASAR				ScP	**ScP**	**19 38 33.2**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=343,slow=3.4,SNR=6.1						
ASAJ	**Asahikawa**	**35.92**	**22**	P	**P**	**19 32 34.3**	**+1.2**
	comp=Z,7.0nm,0.9s,baz=191,slow=19,SNR=4.3						
JKA	**Kamikawa-asahi**	**35.92**	**22**	P	**P**	**19 32 34.3**	**+1.2**
LSA	**Lhasa**	**36.50**	**305**	P	**P**	**19 32 39.8**	**+1.0**
LSA				IAmb	IAmb	19 32 40.8	
	comp=Z,3.4nm,0.5s						
TAPN	**Taplejung**	**38.55**	**300**	*e*P	**P**	**19 32 56.1**	**+0.1**
	comp=Z,17nm,0.4s						
ODAN	**Odare**	**38.69**	**299**	*e*P	**P**	**19 32 57.1**	**+0.1**
	comp=Z,38nm,0.7s						
RAMN	**Ramite**	**39.39**	**299**	*e*P	**P**	**19 33 03.0**	**+0.1**
	comp=Z,13nm,0.5s						
ULN	**Ulaanbaatar**	**39.42**	**341**	P	**P**	**19 33 00.5**	**-2.2**
ULN				IAmb	IAmb	19 33 04.5	
	comp=Z,3.4nm,0.6s						
SONM	**Songino Array**	**39.61**	**340**	P	**P**	**19 33 05.0**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=158,slow=9.4,SNR=14						
SONM				pP	**pP**	**19 33 27.9**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=161,slow=9.1,SNR=3.9						
SONM	**Songino Array**	**39.61**	**340**	IAmb	IAmb	19 33 05.9	
	comp=Z,3.4nm,1.5s						
JIRN	**Jiri**	**39.94**	**300**	*e*P	**P**	**19 33 07.8**	**+0.2**
	comp=Z,30nm,0.4s						
GUN	**Gumba**	**40.27**	**300**	*e*P	**P**	**19 33 10.4**	**+0.1**
	comp=Z,38nm,0.8s						
PKI	**Pulchoki**	**40.58**	**299**	*e*P	**P**	**19 33 12.3**	**-0.5**
	comp=Z,1.7nm,0.5s						
PKIN	**Phulchoki**	**40.59**	**299**	*e*P	**P**	**19 33 12.2**	**-0.7**
	comp=Z,8.2nm,0.5s						
H11S3	**WAKE ISLAND Hy**	**40.67**	**75**	T	T	20 16 28.8	
	baz=274,slow=74,SNR=13						
H11S1	**WAKE ISLAND Hy**	**40.68**	**75**	T	T	20 16 27.6	
	baz=274,slow=74,SNR=6.5						
H11S2	**WAKE ISLAND Hy**	**40.69**	**75**	T	T	20 16 29.2	
	baz=274,slow=74,SNR=9.0						
KKN	**Kakani**	**40.75**	**300**	*e*P	**P**	**19 33 13.6**	**-0.5**
	comp=Z,8.9nm,0.4s						
DMN	**Daman**	**40.85**	**299**	*e*P	**P**	**19 33 14.5**	**-0.5**
	comp=Z,12nm,0.5s						
H11N1	**WAKE ISLAND Hy**	**40.96**	**73**	T	T	20 16 49.3	
	baz=266,slow=74,SNR=38						
H11N2	**WAKE ISLAND Hy**	**40.97**	**73**	T	T	20 16 48.8	
	baz=266,slow=74,SNR=39						
H11N3	**WAKE ISLAND Hy**	**40.98**	**73**	T	T	20 16 49.9	
	baz=266,slow=74,SNR=39						
GKN	**Gorkha**	**41.35**	**300**	*e*P	**P**	**19 33 18.4**	**-0.6**
	comp=Z,10nm,0.3s						
KOLN	**Koldanda**	**42.18**	**299**	*e*P	**P**	**19 33 25.5**	**-0.3**
	comp=Z,12nm,0.6s						
DANN	**Dangsing**	**42.19**	**300**	*e*P	**P**	**19 33 25.6**	**-0.4**
	comp=Z,33nm,0.5s						
WMQ	**Urumqi**	**45.68**	**322**	*e*P	**P**	**19 33 54.3**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,5.5s						
WMQ				LR	LR		
	comp=Z,460nm,29.1s						
WMQ				LR	LR		
	comp=Z,1μm,28.9s						
WMQ				LR	LR		
	comp=Z,65nm,22.7s						
STKA	**Stephens Creek**	**45.80**	**160**	P	**P**	**19 33 55.1**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=340,slow=6.5,SNR=14						
STKA				pP	**pP**	**19 34 17.5**	**-1.0**
	comp=Z,2.7nm,0.7s,baz=345,slow=5.2,SNR=3.9						
PETK	**Petropavlovsk-**	**49.10**	**25**	P	**P**	**19 34 21.2**	**+1.6**
	comp=Z,2.2nm,0.7s,baz=201,slow=7.7,SNR=3.1						
MK31	**Makanchi Array**	**50.49**	**323**	P	**P**	**19 34 30.4**	**+0.1**
MK31				IAmb	IAmb	19 34 31.5	
	comp=Z,2.5nm,0.7s						
MKAR	**Makanchi Array**	**50.49**	**323**	P	**P**	**19 34 30.9**	**+0.6**
	comp=Z,2.6nm,0.6s,baz=116,slow=8.3,SNR=46						
MKAR				PcP	**PcP**	**19 35 46.8**	**-0.2**
	comp=Z,0.4nm,0.5s,baz=126,slow=4.6,SNR=2.7						
MKAR				ScP	**ScP**	**19 39 30.9**	**-2.8**
	comp=Z,0.9nm,0.9s,baz=108,slow=5.2,SNR=6.3						
MKAR	**Makanchi Array**	**50.49**	**323**	P	**P**	**19 34 30.2**	**-0.1**
KSH	**Kashi**	**51.68**	**312**	*e*P	**P**	**19 34 42.1**	**+2.6**
NIL	**Nilore**	**52.21**	**304**	P	**P**	**19 34 43.3**	**-0.1**
ZALV	**Zalesovo Beam**	**53.13**	**331**	P	**P**	**19 34 49.5**	**-0.3**
	comp=Z,1.5nm,0.4s,baz=126,slow=6.6,SNR=10						
ZALV				pP	**pP**	**19 35 13.7**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=116,slow=5.5,SNR=3.3						
ZALV	**Zalesovo Beam**	**53.13**	**331**	P	**P**	**19 34 49.0**	**-0.7**
KURK	**Kurchatov**	**54.54**	**325**	P	**P**	**19 35 00.3**	**+0.2**
KURK					**pP**	**19 35 24.8**	**-0.2**
KURBB	**Kurchatov Arra**	**54.55**	**325**	P	**P**	**19 35 00.5**	**+0.4**
	baz=125,slow=6.9						
BTK	**Batken**	**55.64**	**311**	P	**P**	**19 35 08.0**	**-0.3**
BTK				IAmb	IAmb	19 37 01.5	
	comp=Z,12nm,1.9s						
GAR	**Garm**	**55.75**	**310**	P	**P**	**19 35 09.0**	**-0.1**
KBL	**Kabul**	**55.81**	**304**	P	**P**	**19 35 09.3**	**-0.5**
CHGR	**Chuyangaron**	**56.55**	**309**	P	**P**	**19 35 14.3**	**-0.4**
KK31	**Karatay Array**	**56.70**	**314**	P	**P**	**19 35 15.5**	**-0.2**
KK31				IAmb	IAmb	19 35 42.5	
	comp=Z,2.8nm,1.1s						
KKAR	**Karatay Array**	**56.70**	**314**	P	**P**	**19 35 15.5**	**-0.2**
KKAR	**Karatay Array**	**56.70**	**314**	P	**P**	**19 35 15.0**	**-0.7**
BRVK	**Borovoye**	**60.21**	**325**	P	**P**	**19 35 39.8**	**-0.1**
BRVK				IAmb	IAmb	19 36 07.2	
	comp=Z,3.0nm,0.8s						
HRA	**Herat**	**61.35**	**303**	P	**P**	**19 35 47.8**	**-0.5**
HRA				IAmb	IAmb	19 35 48.4	
	comp=Z,1.8nm,0.7s						
GEYT	**Alibeck**	**65.01**	**307**	P	**P**	**19 36 12.4**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=151,slow=6.4,SNR=5.4						
GEYT	**Alibeck**	**65.01**	**307**	IAmb	IAmb	19 36 13.0	
	comp=Z,1.4nm,0.7s						
ABKAR	**Akbulak array**	**65.33**	**319**	P	**P**	**19 36 13.9**	**0.0**
ABKAR				IAmb	IAmb	19 36 16.3	
	comp=Z,12nm,1.8s						
ABKAR				pP	**pP**	**19 36 38.9**	**-0.7**
ABKAR	**Akbulak array**	**65.33**	**319**	P	**P**	**19 36 13.7**	**-0.2**
ARU	**Arti**	**67.70**	**327**	P	**P**	**19 36 28.2**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=101,slow=5.3,SNR=17						
ARU	**Arti**	**67.70**	**327**	P	**P**	**19 36 28.2**	**-0.7**
KBZ	**Khabaz**	**76.66**	**312**	P	**P**	**19 37 22.0**	**-0.4**
	comp=Z,2.5nm,1.0s,baz=226,slow=5.0,SNR=4.8						
KVAR	**Kislovodsk Arr**	**76.79**	**313**	P	**P**	**19 37 22.8**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=78,slow=20,SNR=5.6						
KIV	**Kislovodsk**	**76.80**	**313**	P	**P**	**19 37 23.9**	**+0.5**
KIV				IAmb	IAmb	19 37 24.6	
	comp=Z,5.7nm,0.8s						
ILAR	**Eielson Array**	**78.92**	**26**	P	**P**	**19 37 34.5**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=260,slow=6.7,SNR=4.6						
ILAR				pP	**pP**	**19 38 01.1**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=239,slow=5.0,SNR=3.2						
BMAR	**Burnt Mountain**	**79.68**	**23**	P	**P**	**19 37 40.5**	**+1.7**
BMAR				pP	**pP**	**19 38 06.3**	**+0.9**
ARCES	**ARCESS Array B**	**82.78**	**340**	P	**P**	**19 37 55.2**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=86,slow=6.6,SNR=13						
ARCES				pP	**pP**	**19 38 20.7**	**-1.2**
	comp=Z,2.8nm,0.8s,baz=75,slow=6.0,SNR=2.1						
BRTR	**Keskin Array B**	**83.99**	**309**	P	**P**	**19 38 01.2**	**-0.9**
	comp=Z,0.4nm,0.6s,baz=128,slow=4.8,SNR=3.5						
FINES	**FINESS Array B**	**84.40**	**332**	P	**P**	**19 38 03.5**	**0.0**
	comp=Z,1.1nm,0.4s,baz=75,slow=4.2,SNR=17						
AKASG	**Malin Array Be**	**85.02**	**321**	P	**P**	**19 38 05.3**	**-1.5**
	comp=Z,0.8nm,0.4s,baz=61,slow=4.9,SNR=6.9						
AKASG				pP	**pP**	**19 38 32.3**	**-1.4**
	comp=Z,0.5nm,0.4s,baz=63,slow=5.1,SNR=2.0						
BUR08	**Bucovina Ar. S**	**88.30**	**318**	P	**P**	**19 38 22.7**	**-0.3**
YKA	**Yellowknife Ar**	**93.19**	**24**	P	**P**	**19 38 45.5**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=304,slow=4.4,SNR=3.8						
GERES	**GERESS Array B**	**95.15**	**322**	P	**P**	**19 38 54.2**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=67,slow=5.4,SNR=3.5						

NCEDC ***23*** *19:41:16.8±0.5, 40.˚56N±0.˚02×122.˚26W±0.˚02, h14km±2km, Md2.0/6, Error ellipse: s-maj=3.5km s-min=1.6km az=208.0*

NEIC 23 19:41:16.1±0.6, 40.˚55N±0.˚06×122.˚25W±0.˚06, h20km±5km, Error ellipse: s-maj=8.4km s-min=6.5km az=176.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDC	**Whiskeytown Da**	**0.22**	**279**		Pb	19 41 21.4	+0.1
WDC				Sg	Sb	19 41 24.8	+0.1
LSHM	**Sage Hen Hill**	**0.29**	**33**		Pg	19 41 22.9	+0.2
LDBM	**Digger Butte**	**0.38**	**108**		Pg	19 41 24.0	-0.1
LGPM	**Granite Peak**	**0.57**	**310**		Pb	19 41 27.3	-0.2
MDPB	**Devils Postpil**	**3.82**	**139**		Pn	19 42 09.5	-4.5

MAN ***23*** *19:54:54.0, 18.˚39N×119.˚54E, h1km, MS4.7*

BJI ***23*** *19:54:57.3±0.0, 18.˚10N×120.˚00E, h5km, mB4.9/43, mb4.5/40, Ms4.6/54, Ms7 4.3/50*

IDC ***23*** *19:54:57.9±0.5, 18.˚10N×120.˚00E, h0km, mb4.3/30, mb1 4.4/32, mb1mx4.4/44, mbtmp4.3/32, ML3.6/3, MS3.8/21, Ms1 3.9/21, ms1mx3.7/39, Error ellipse: s-maj=15.2km s-min=10.9km az=78.0*

NEIC ***23*** *19:54:59.6±1.8, 18.˚07N±0.˚06×119.˚86E±0.˚09, h13km±4km, mb5.0/95, Error ellipse: s-maj=12.7km s-min=8.7km az=66.0*

MOS ***23*** *19:54:59.1±0.8, 18.˚11N×119.˚97E, h20km, mb5.0/22, MS4.4/4, Error ellipse: s-maj=8.2km s-min=4.8km az=109.4*

GCMT ***23*** *19:55:01.6±0.3, 18.˚21N±0.˚03×119.˚80E±0.˚02, h12km±1km, MW4.8/81, Moment Tensor Solution. s16,c19; s81,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.57±.13; $M_{\theta\theta}$0.01±.06; $M_{\phi\phi}$-1.58±.09; $M_{r\theta}$-0.44±.21; $M_{r\phi}$-0.13±.04; $M_{\theta\phi}$-1.30±.24; Best double couple: M_o2.09300×10^{16} NP1:ϕs356.00000°,δ66.00000°,λ98.00000°. Principal axes: T 2.1050, Plg68.0000°, Azm119.0000°; N -0.0210, Plg7.0000°, Azm11.0000°; P -2.0820, Plg20.0000°, Azm278.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 19:55:00.8±0.6, 18.˚10N±0.˚03×119.˚90E±0.˚03, h17km±3km, n353, σ1§75/373, mb4.8/121, MS4.0/32, 26C-17D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.56**	**108**	‖*e*P	**Pn**	**19 55 12.9**	**-0.9**
SIPP				*i* S	**Sn**	**19 55 24.5**	**+1.8**
SZP	**Santa**	**0.76**	**136**	Pn	**Pn**	**19 55 16.3**	**-0.4**
BOLP	**Bolinao**	**1.71**	**180**	*e*P	**Pn**	**19 55 29.9**	**+0.2**
BOLP				eS	**Sg**	**19 55 59.8**	**+3.9**
CVP	**Callao Caves**	**1.87**	**102**	‖*e*P	**Pg**	**19 55 39.6**	**+2.9**
CVP				*i* S	**Sg**	**19 56 06.0**	**+5.0**
SGCP	**Mt. Cagua**	**2.04**	**86**	*e*P	**Pn**	**19 55 35.5**	**+1.1**
SGCP				eS	**Sg**	**19 56 05.5**	**-1.1**
SMPP	**San Manuel, Pa**	**2.07**	**159**	*e*P	**Pn**	**19 55 35.2**	**+0.4**
SMPP				eS	**Sb**	**19 56 02.3**	**-1.2**
CAUP	**Cauayan**	**2.16**	**122**	*e*P	**Pb**	**19 55 39.3**	**-0.1**
CAUP				eS	**Sg**	**19 56 12.2**	**+1.8**
SCZP	**Santa Cruz**	**2.31**	**180**	*e*P	**Pn**	**19 55 37.9**	**-0.1**
SCZP				eS	Sg	19 56 26.2	+11
PALP	**Palanan**	**2.62**	**113**	*e*P	**Pb**	**19 55 45.2**	**-2.0**
PALP				eS	**Sg**	**19 56 25.9**	**+0.9**
PCPH	**Palayan**	**2.77**	**155**	‖*e*P	**Pb**	**19 55 47.1**	**-2.7**
BALP	**Baler**	**2.84**	**145**	*e*P	**Pn**	**19 55 48.0**	**+2.7**
BALP				eS	**Sb**	**19 56 28.3**	**+2.8**
BBP	**Basco**	**3.04**	**40**	*e*P	Pn	19 55 38.8	-9.3
BBP				eS	**Sn**	**19 56 17.6**	**-6.4**
POLP	**Polilio Island**	**3.88**	**149**	*e*P	**Pb**	**19 56 08.2**	**-0.6**
POLP				eS	**Sn**	**19 56 43.6**	**-1.2**
TGY	**Tagaytay City**	**4.09**	**166**	Pn	**Pn**	**19 56 02.8**	**+0.1**
	8.5nm,0.3s,baz=15,slow=20,SNR=2.0						
LQP	**Lukban**	**4.26**	**158**	‖*e*P	**Pn**	**19 56 09.2**	**+4.1**
LQP				eS	Sn	19 56 42.9	-12
HKPS	**Hong Kong Po S**	**6.82**	**308**	Pn	**Pn**	**19 56 37.5**	**-2.7**
QZH	**Quanzhou**	**6.92**	**350**	‖*i*Pn	**Pn**	**19 56 38.3**	**-3.1**
QZH				LR	LR		
	comp=N,1μm,15.2s						
QZH				LR	LR		
	comp=E,940nm,10.9s						
QZH				LR	LR		
	comp=Z,2μm,10.9s						
YOJ	**Yonaguni jima**	**6.96**	**24**	P	**Pn**	**19 56 42.5**	**+0.5**
YOJ	**Yonaguni jima**	**6.96**	**24**	Pn	**Pn**	**19 56 42.5**	**+0.5**
TATO	**Taipei**	**7.00**	**12**	Pn	**Pn**	**19 56 40.6**	**-1.9**
QIZ	**Qiongzhong**	**9.59**	**277**	P	**Pn**	**19 57 14.6**	**-3.5**
QIZ				S	**Sn**	**19 59 04.3**	**-1.2**
QIZ				pmax	pmax		
	comp=Z,23nm,0.8s						
QIZ				LR	LR		
	comp=N,750nm,14.9s						
QIZ				LR	LR		
	comp=E,1μm,15.5s						
QIZ				LR	LR		
	comp=Z,1μm,19.0s						
QIZ	**Qiongzhong**	**9.59**	**277**		**Pn**	**19 57 14.3**	**-3.8**
JOW	**Kunigami**	**11.63**	**40**	Pn	**Pn**	**19 57 44.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=195,slow=18,SNR=6.0						
JOW	**Kunigami**	**11.63**	**40**	Pn	**Pn**	**19 57 41.9**	**-4.2**
DAV	**Davao City (W)**	**12.28**	**153**	LR	LR	20 02 50.5	
	comp=Z,517nm,19.4s,baz=349,slow=39						
DLV	**T Lat**	**12.61**	**243**	Pn	**Pn**	**19 57 55.4**	**-4.2**
WHN	**Wuhan**	**13.38**	**339**	P	**P**	**19 58 15.4**	**-4.0**
WHN				S	S	20 00 50.4	-12
WHN				LR	LR		
	comp=Z,2μm,11.5s						
WHN				LR	LR		
	comp=Z,2μm,12.1s						
WHN				LR	LR		
	comp=Z,2μm,10.5s						
NJ2	**Nanjing**	**13.93**	**356**	*e*P	**Pn**	**19 58 18.0**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,590nm,11.8s						
NJ2				LR	LR		
	comp=Z,1μm,13.3s						
NJ2				LR	LR		
	comp=Z,490nm,14.2s						
ENH	**Enshi**	**15.39**	**324**		**Pn**	**19 58 35.9**	**-1.3**
SLVN	**Son La**	**15.40**	**285**		**Pn**	**19 58 36.4**	**-1.1**
KMI	**Kunming**	**17.41**	**297**	P	**P**	**19 59 05.0**	**+0.5**
KMI				pP	pP	19 59 07.8	-0.7
KMI				pmax	pmax		
	comp=Z,210nm,7.4s						
KMI				LR	LR		
	comp=Z,2μm,14.4s						
KMI				LR	LR		
	comp=Z,1μm,17.4s						
KMI				LR	LR		
	comp=Z,810nm,17.9s						
JNU	**Nakatsue**	**17.92**	**31**	P	**Pn**	**19 59 08.5**	**-0.7**
PBKT	**Sadao Pong**	**18.14**	**268**	P	**Pn**	**19 59 10.2**	**-1.8**
XAN	**Xi'an**	**18.67**	**330**	P	**P**	**19 59 17.8**	**-0.3**
XAN				S	**S**	**20 02 50.3**	**+0.1**
XAN				pmax	pmax		
	comp=Z,200nm,5.3s						
XAN				LR	LR		
	comp=Z,1μm,11.2s						
XAN				LR	LR		
	comp=Z,910nm,11.6s						
XAN				LR	LR		
	comp=Z,1μm,11.8s						
XAN	**Xi'an**	**18.67**	**330**	P	**P**	**19 59 17.7**	**-0.3**
XAN				pmax	pmax		
	comp=Z,21nm,1.2s						
XAN	**Xi'an**	**18.67**	**330**	P	**P**	**19 59 17.6**	**-0.4**
TJN	**Taejon**	**19.37**	**18**	‖*e*P	**P**	**19 59 25.4**	**-0.2**
CD2	**Chengdu**	**19.43**	**314**	P	**Pn**	**19 59 27.3**	**-0.3**
CD2				sP	pwP	19 59 35.4	+1.4
CD2				PP	**PnPn**	**19 59 42.3**	**+1.4**
CD2				S	**S**	**20 03 08.3**	**+2.8**
CD2				SS	**SnSn**	**20 03 29.6**	**+10**
CD2				pmax	pmax		
	comp=Z,30nm,1.1s						
CD2				LR	LR		
	comp=Z,2μm,14.2s						
CD2				LR	LR		
	comp=Z,2μm,15.7s						
CD2				LR	LR		
	comp=Z,1μm,12.1s						
CHTO	**Chiang Mai**	**19.90**	**275**	P	**Pn**	**19 59 32.7**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,51nm,1.8s						
CHTO	**Chiang Mai**	**19.90**	**275**	P	**Pn**	**19 59 32.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**19.91**	**274**	P	**Pn**	**19 59 33.4**	**0.0**
	comp=Z,0.2nm,0.3s,baz=108,slow=8.6,SNR=17						
CMAR				PcP	**PcP**	**20 03 49.6**	**+1.0**
	baz=61,slow=2.4,SNR=4.1						
CMAR				LR	LR	20 06 52.3	
	comp=Z,296nm,19.8s,baz=91,slow=36						
KSAR	**Wonju Array Be**	**20.51**	**18**	P	**P**	**19 59 37.2**	**-0.8**
KSAR	**Wonju Array Be**	**20.51**	**18**	P	**P**	**19 59 37.2**	**-0.8**
KSRS	**Korea Array**	**20.53**	**18**	P	**P**	**19 59 37.5**	**-0.7**
	comp=Z,17nm,0.9s,baz=199,slow=11,SNR=35						
KSRS				LR	LR	20 08 48.2	
	comp=Z,255nm,18.0s,baz=197,slow=40						
KS19	**Wonju Array Si**	**20.56**	**18**	P	**P**	**19 59 38.3**	**-0.3**
TIY	**Taiyuan**	**20.61**	**343**	*e*P	**P**	**19 59 38.6**	**-0.6**
TIY				PP	**PnPn**	**20 00 04.5**	**+7.3**
TIY				S	**S**	**20 03 23.3**	**-5.8**
TIY				SS	**SnSn**	**20 03 59.1**	**+10**
TIY				LR	LR		
	comp=Z,640nm,11.3s						
TIY				LR	LR		
	comp=Z,290nm,9.7s						
TIY				LR	LR		
	comp=Z,600nm,13.2s						
SANI	**Sanana**	**20.90**	**163**	P	**P**	**19 59 39.7**	**-2.7**
	comp=Z,43nm,0.6s						
TTSI	**Tana Toraja**	**21.01**	**180**	P	**P**	**19 59 46.0**	**+2.4**
	comp=Z,473nmcomp=Z,23nm,1.0s						
SIJI	**Sorong**	**21.91**	**148**	P	**P**	**19 59 52.5**	**-0.9**
	comp=Z,6.5nm,0.5s,baz=324,slow=6.5,SNR=9.1						
SPSI	**Sidrap Palu**	**21.92**	**180**	P	**P**	**19 59 56.0**	**+2.6**
	comp=Z,35nm,1.1s						
BJT	**Baijiatuan**	**22.08**	**352**	P	**P**	**19 59 54.5**	**-0.5**
BJT				pmax	pmax		
	comp=Z,66nm,1.3s						
BJT	**Baijiatuan**	**22.08**	**352**	P	**P**	**19 59 54.5**	**-0.5**
BJT				IAmb	IAmb	20 00 07.1	
	comp=Z,66nm,1.3s						
BJI	**Beijing**	**22.10**	**352**	P	**P**	**19 59 55.5**	**+0.3**
BJI				pmax	pmax		
	comp=Z,17nm,1.3s						
BJI				LR	LR		
	comp=Z,440nm,11.4s						
BJI				LR	LR		
	comp=Z,180nm,11.6s						
NLAI	**Namlea**	**22.36**	**161**	P	**P**	**20 00 00.1**	**+2.0**
	comp=Z,89μmcomp=Z,1μmcomp=Z,40nm,1.1s						
JCJ	**Chichijima**	**22.41**	**62**	LR	LR	20 06 39.9	
	comp=Z,308nm,19.6s,baz=106,slow=31						
LZH	**Lanzhou**	**22.86**	**325**	*e*P	**P**	**20 00 04.8**	**+1.2**
LZH				sP	pwP	20 00 11.3	-0.5
LZH				S	**S**	**20 04 12.0**	**-0.6**
LZH				SS	**SnSn**	**20 04 54.8**	**+11**
LZH				pmax	pmax		
	comp=Z,29nm,1.4s						
LZH				pmax	pmax		
	comp=Z,330nm,4.3s						
LZH				LR	LR		
	comp=Z,1μm,11.

USRK LR LR 20 12 53.4
comp=Z,130nm,18.4s,baz=196,slow=38
USRK Ussuriysk Ar. 27.94 19 P **P** **20 00 49.2 -0.9**
LSA Lhasa 28.63 299 P **P** **20 00 58.1 +1.0**
LSA S **S** **20 05 46.0 +0.6**
LSA pmax pmax
comp=Z,71nm,1.8s
LSA LR LR
comp=Z,470nm,12.8s
LSA LR LR
comp=Z,850nm,13.2s
LSA LR LR
comp=Z,2µm,13.2s
LSA Lhasa 28.63 299 P **P** **20 00 57.7 +0.6**
LSA pmax pmax
comp=Z,6.0nm,1.0s
LSA Lhasa 28.63 299 P **P** **20 00 57.7 +0.6**
JAY Jayapura 28.97 133 LR LR 20 10 55.3
comp=Z,152nm,19.4s,baz=316,slow=33
ODAN Odare 31.21 292 *e*P **P** **20 01 20.4 +0.7**
comp=Z,15nm,0.6s
ULN Ulaanbaatar 31.50 343 *e*P **P** **20 01 22.1 +0.3**
ULN pmax pmax
comp=Z,3.0nm,1.3s
ULN Ulaanbaatar 31.50 343 P **P** **20 01 21.4 -0.4**
SONM Songino Array 31.65 343 P **P** **20 01 22.8 -0.4**
SONM pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 31.65 343 P **P** **20 01 23.5 +0.3**
comp=Z,0.9nm,0.6s,baz=166,slow=10,SNR=11
SONM PcP **PcP** **20 04 15.1 +0.1**
comp=Z,0.5nm,0.5s,baz=158,slow=4.2,SNR=4.5
SONM LR LR 20 16 02.2
comp=Z,200nm,18.1s,baz=154,slow=40
SONM Songino Array 31.65 343 P **P** **20 01 22.8 -0.4**
RAMN Ramite 31.92 292 *e*P **P** **20 01 27.0 +1.1**
comp=Z,30nm,0.7s
ASAJ Asahikawa 32.20 31 P **P** **20 01 27.1 -0.8**
comp=Z,6.7nm,0.9s,baz=292,slow=16,SNR=3.6
JKA Kamikawa-asahi 32.20 31 P **P** **20 01 27.1 -0.8**
JIRN Jiri 32.40 293 *e*P **P** **20 01 31.2 +0.9**
comp=Z,34nm,0.8s
KLR Kul'dur 32.50 15‖ *e*P **P** **20 01 31.5 +1.1**
KLR pmax pmax
comp=Z,10.0nm,1.0s
KLR Kul'dur 32.50 15 P **P** **20 01 30.6 +0.2**
comp=Z,6.4nm,0.7s,baz=232,slow=6.7,SNR=15
KLR LR LR 20 13 54.6
comp=Z,79nm,20.5s,baz=149,slow=35
GUN Gumba 32.71 294 *e*P **P** **20 01 33.8 +0.8**
comp=Z,94nm,1.3s
PKIN Phulchoki 33.08 293 *e*P **P** **20 01 36.2 +0.1**
KKN Kakani 33.22 293 *e*P **P** **20 01 38.3 +1.1**
DMN Daman 33.34 293 *e*P **P** **20 01 38.9 +0.5**
comp=Z,61nm,1.3s
GKN Gorkha 33.81 293 *e*P **P** **20 01 42.5 +0.1**
comp=Z,21nm,0.8s
YSS Yuzh-Sakhalins 34.38 28 *e*P **P** **20 01 46.6 -0.2**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,200nm,13.0s
DANN Dangsing 34.63 294 *e*P **P** **20 01 49.8 +0.2**
comp=Z,49nm,1.2s
KOLN Koldanda 34.68 293 *e*P **P** **20 01 50.2 +0.2**
comp=Z,93nm,1.5s
TLY Talaya 35.89 343 *e*P **P** **20 02 01.8 +1.9**
TLY pmax pmax
comp=Z,29nm,1.5s
TLY MLR MLR
comp=Z,444nm,12.0s
ZEA Zeya 36.02 7 *e*P **P** **20 02 01.4 +0.5**
ZEA pmax pmax
comp=Z,29nm,1.0s
MOY Mondy 36.68 340 *e*P **P** **20 02 07.5 +0.8**
MOY pmax pmax
comp=Z,28nm,1.6s
WMQ Urumqi 37.29 320 *e*P **P** **20 02 11.8 -0.2**
WMQ sP pwP 20 02 21.3 +0.7
WMQ pmax pmax
comp=Z,7.0nm,1.1s
WMQ pmax pmax
comp=Z,120nm,4.7s
WMQ LR LR
comp=Z,450nm,11.9s
WMQ LR LR
comp=Z,430nm,10.5s
WMQ LR LR
comp=Z,410nm,17.3s
BOD Bodaibo 39.90 355 *e*P **P** **20 02 34.1 +0.5**
BOD pmax pmax
comp=Z,12nm,1.9s
WB0 Warramunga Arr 40.23 159 P **P** **20 02 35.1 -1.6**
WRAB Tennant Creek 40.37 159 P **P** **20 02 36.3 -1.6**
WRAB pmax pmax
comp=Z,8.0nm,0.9s
WRAB Tennant Creek 40.37 159 P **P** **20 02 36.3 -1.6**
WRA Warramunga Ar 40.37 159 P **P** **20 02 36.6 -1.2**
comp=Z,4.7nm,0.6s,baz=342,slow=9.0,SNR=34
WRA PcP **PcP** **20 04 41.7 +0.6**
comp=Z,1.7nm,0.5s,baz=340,slow=3.2,SNR=6.2
WRA Warramunga Ar 40.37 159 P **P** **20 02 35.8 -2.1**
WRA PcP **PcP** **20 04 41.0 -0.1**
WB2 Warramunga Arr 40.38 159 P **P** **20 02 36.2 -1.8**
WB2 IAmb IAmb 20 02 37.4
comp=Z,28nm,1.6s
WR0 Warramunga Arr 40.46 159 P **P** **20 02 37.0 -1.6**
MK31 Makanchi Array 42.10 321 P **P** **20 02 52.8 +0.9**
MK31 pmax pmax
comp=Z,9.0nm,1.1s
MK31 Makanchi Array 42.10 321 P **P** **20 02 52.8 +0.9**
MKAR Makanchi Array 42.10 321 P **P** **20 02 53.1 +1.2**
comp=Z,5.0nm,1.0s,baz=117,slow=8.4,SNR=23
MKAR PcP **PcP** **20 04 46.7 +0.3**
comp=Z,0.7nm,0.6s,baz=207,slow=5.0,SNR=4.7
MKAR LR LR 20 19 27.9
comp=Z,232nm,19.0s,baz=108,slow=35
MKAR Makanchi Array 42.10 321 P **P** **20 02 52.5 +0.6**
MAKZ Makanchi 42.29 321 P **P** **20 02 54.2 +0.8**
MAKZ pmax pmax
comp=Z,30nm,1.6s
MAKZ Makanchi 42.29 321 P **P** **20 02 54.2 +0.8**
MAKZ IAmb IAmb 20 03 03.6
comp=Z,30nm,1.6s
PRZ Przheval'sk 42.72 314 P **P** **20 02 58.0 +0.8**
PRZ pmax pmax
comp=Z,17nm,1.1s
PRZ Przheval'sk 42.72 314 P **P** **20 02 58.0 +0.8**
KDJ Kajisay 43.44 313 P **P** **20 03 00.3 -2.8**
KDJ pmax pmax
comp=Z,10.0nm,1.1s
KDJ Kajisay 43.44 313 P **P** **20 03 00.3 -2.8**
KSH Kashi 43.49 309 P **P** **20 03 07.8 +4.4**
KSH sP pwP 20 03 12.6 +0.5
KSH PP **PP** **20 04 46.8 +2.2**
KSH S **S** **20 09 39.9 +8.4**
KSH sS sS 20 09 43.3 +4.3
KSH SS **SS** **20 12 40.1 -5.8**
KSH pmax pmax
comp=Z,330nm,4.5s
KSH LR LR
comp=Z,270nm,6.0s
KSH LR LR
comp=Z,220nm,5.3s
KSH LR LR
comp=Z,750nm,13.4s
AS31 Alice Springs 43.70 161 P **P** **20 03 03.8 -1.3**
ASAR Alice Springs 43.70 161 P **P** **20 03 04.0 -1.1**
ASAR 20 04 52.2
ASAR Alice Springs 43.70 161 P **P** **20 03 04.6 -0.5**
comp=Z,6.9nm,0.7s,baz=337,slow=6.6,SNR=73
ASAR PcP **PcP** **20 04 52.3 +0.2**
comp=Z,1.1nm,0.5s,baz=338,slow=3.3,SNR=6.2
ASAR Alice Springs 43.70 161 P **P** **20 03 04.0 -1.1**
ASAR **PcP** **20 04 52.2 +0.1**
NRN Naryn 44.04 311 P **P** **20 03 09.6 +1.5**
NRN pmax pmax
comp=Z,48nm,1.5s
NRN Naryn 44.04 311 P **P** **20 03 09.6 +1.5**
NRN IAmb IAmb 20 03 18.4
comp=Z,48nm,1.5s
NIL Nilore 44.37 300 P **P** **20 03 09.1 -1.4**
NIL pmax pmax
comp=Z,30nm,1.0s
NIL Nilore 44.37 300 P **P** **20 03 09.1 -1.4**

NIL IAmb IAmb 20 03 20.2
comp=Z,30nm,1.0s
YAK Yakutsk 44.42 7 *e*P **P** **20 03 09.9 -0.5**
YAK pmax pmax
comp=Z,10.0nm,1.0s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK Yakutsk 44.42 7 P **P** **20 03 09.6 -0.8**
YAK IAmb IAmb 20 03 10.8
comp=Z,10nm,0.8s
KZA Kyzart 44.78 312 P **P** **20 03 16.6 +2.6**
SNR=7.5
ZAA0 Zalesovo Array 44.84 331 P **P** **20 03 13.5 -0.3**
ZALV Zalesovo Beam 44.84 331 P **P** **20 03 13.7 -0.1**
ZALV Zalesovo Beam 44.84 331 P **P** **20 03 13.4 -0.4**
comp=Z,1.3nm,0.6s,baz=111,slow=8.1,SNR=6.5
ZALV LR LR 20 24 47.9
comp=Z,91nm,18.5s,baz=97,slow=40
ZALV Zalesovo Beam 44.84 331 P **P** **20 03 13.7 -0.1**
KBK Karagaybulak 45.17 313 P **P** **20 03 18.8 +1.9**
SNR=6.1
UCH Uchtor 45.34 312 P **P** **20 03 20.9 +2.2**
SNR=11
FRU1 Bishkek 45.44 313 P **P** **20 03 17.3 -1.6**
FRU1 pmax pmax
comp=Z,27nm,1.6s
FRU1 Bishkek 45.44 313 P **P** **20 03 17.3 -1.6**
FRU1 IAmb IAmb 20 03 29.2
comp=Z,27nm,1.6s
AAK Ala-Archa 45.48 313 *ce*P **P** **20 03 20.0 +0.6**
AAK *e* 20 05 07.9
AAK pmax pmax
comp=Z,12nm,1.8s
AAK Ala-Archa 45.48 313 P **P** **20 03 21.0 +1.7**
comp=Z,0.9nm,0.5s,baz=77,slow=9.8,SNR=6.7
AAK Ala-Archa 45.48 313 P **P** **20 03 19.6 +0.2**
AAK IAmb IAmb 20 03 30.1
comp=Z,13nm,1.2s
PETK Petropavlovsk- 45.62 31 P **P** **20 03 19.9 -0.2**
comp=Z,2.4nm,0.8s,baz=292,slow=4.0,SNR=4.3
PETK LR LR 20 23 37.8
comp=Z,60nm,18.3s,baz=241,slow=38
AML Almayashu 45.90 312 P **P** **20 03 24.8 +1.9**
SNR=9.1
EKS2 Erkin-Say 45.99 312 P **P** **20 03 25.2 +1.8**
SNR=5.4
KURK Kurchatov 46.16 324 P **P** **20 03 24.1 -0.2**
KURK pmax pmax
comp=Z,44nm,1.5s
KURK Kurchatov 46.16 324 P **P** **20 03 24.1 -0.2**
KURK IAmb IAmb 20 03 27.6
comp=Z,44nm,1.4s
MA2 Magadan 47.05 21 *e*P **P** **20 03 30.5 -0.7**
MA2 pmax pmax
comp=Z,13nm,1.0s
MA2 Magadan 47.05 21 P **P** **20 03 31.5 +0.2**
comp=Z,4.5nm,0.4s,baz=233,slow=4.7,SNR=4.8
MA2 Magadan 47.05 21 IAmb IAmb 20 03 32.6
comp=Z,24nm,1.1s
BTK Batken 47.47 308 P **P** **20 03 34.9 0.0**
BTK pmax pmax
comp=Z,17nm,1.4s
BTK Batken 47.47 308 P **P** **20 03 34.9 0.0**
BTK IAmb IAmb 20 03 44.9
comp=Z,17nm,1.4s
GAR Garm 47.62 307 P **P** **20 03 36.6 +0.5**
KBL Kabul 47.94 300 P **P** **20 03 38.6 -0.2**
KBL pmax pmax
comp=Z,44nm,1.6s
KBL Kabul 47.94 300 P **P** **20 03 38.6 -0.2**
KBL IAmb IAmb 20 03 48.4
comp=Z,44nm,1.6s
KK31 Karatay Array 48.42 312 P **P** **20 03 42.9 +0.8**
KK31 pmax pmax
comp=Z,51nm,1.7s
KK31 Karatay Array 48.42 312 P **P** **20 03 42.9 +0.8**
KKAR Karatay Array 48.42 312 P **P** **20 03 42.9 +0.7**
KKAR pmax pmax
comp=Z,51nm,1.7s
KKAR Karatay Array 48.42 312 P **P** **20 03 42.9 +0.7**
CHGR Chuyangaron 48.45 306 P **P** **20 03 42.7 +0.2**
TAS Tashkent 48.87 309 P **P** **20 03 46.3 +0.6**
TAS Tashkent 48.87 309 P **P** **20 03 46.3 +0.6**
SEY Seymchan 50.09 19‖ *e*P **P** **20 03 55.7 +1.2**
SEY Seymchan 50.09 19 P **P** **20 03 55.4 +0.8**
comp=Z,5.3nm,0.9s,baz=204,slow=4.1,SNR=11
SEY PcP **PcP** **20 05 14.5 +0.5**
comp=Z,1.0nm,0.5s,baz=198,slow=20,SNR=3.3
BRVK Borovoye 51.82 324 P **P** **20 04 08.0 +0.3**
BRVK pmax pmax
comp=Z,92nm,1.9s
BRVK Borovoye 51.82 324 P **P** **20 04 08.0 +0.3**
BBOO Buckleboo 52.93 163 P **P** **20 04 15.5 -0.6**
BBOO IAmb IAmb 20 04 17.5
comp=Z,25nm,1.1s
HRA Herat 53.53 300 P **P** **20 04 20.9 -0.1**
TIXI Tiksi 53.81 4 *e*P **P** **20 04 21.0 -1.1**
TIXI pmax pmax
comp=Z,12nm,1.8s
TIXI Tiksi 53.81 4 P **P** **20 04 21.3 -0.8**
comp=Z,2.8nm,0.8s,baz=180,slow=24,SNR=6.3
TIXI Tiksi 53.81 4 P **P** **20 04 20.6 -1.6**
TIXI IAmb IAmb 20 04 31.2
comp=Z,26nm,1.8s
STKA Stephens Creek 53.87 157 P **P** **20 04 22.5 -0.6**
STKA pmax pmax
comp=Z,6.0nm,1.5s
STKA Stephens Creek 53.87 157 P **P** **20 04 22.4 -0.7**
comp=Z,6.8nm,0.6s,baz=336,slow=8.1,SNR=31
STKA Stephens Creek 53.87 157 P **P** **20 04 22.5 -0.6**
ABKAR Akbulak array 56.96 317 P **P** **20 04 45.6 +0.4**
ABKAR IAmb IAmb 20 04 54.7
comp=Z,29nm,1.8s
ABKAR Akbulak array 56.96 317 P **P** **20 04 45.5 +0.3**
GEYT Alibeck 57.01 304 P **P** **20 04 46.1 +0.3**
comp=Z,0.6nm,0.4s,baz=116,slow=6.7,SNR=7.5
GEYT LR LR 20 31 47.8
comp=Z,141nm,18.2s,baz=170,slow=39
GEYT Alibeck 57.01 304 P **P** **20 04 45.0 -0.7**
GYA0B ALIBECK ARRAY 57.01 304 P **P** **20 04 43.4 -2.3**
GYA0B IAmb IAmb 20 04 56.1
comp=Z,46nm,1.9s
BILL Bilibino 57.80 19 *e*P **P** **20 04 49.1 -1.7**
BILL *e* 20 05 42.7
BILL *e* 20 07 02.4
BILL *e*PPP PPP 20 08 17.3
BILL pmax pmax
comp=Z,3.0nm,1.0s
BILL Bilibino 57.80 19 P **P** **20 04 50.4 -0.4**
BILL IAmb IAmb 20 04 59.5
comp=Z,23nm,1.6s
SVE Sverdlovsk 58.32 326 *e*P **P** **20 04 55.1 +0.5**
SVE pmax pmax
comp=Z,28nm,1.5s
ARU Arti 59.33 325 *c i*P **P** **20 05 01.5 -0.1**
ARU 20 05 46.3
ARU 20 07 11.2
ARU S **S** **20 13 12.8 +3.5**
ARU SS **SS** **20 17 06.3 +2.5**
ARU pmax pmax
comp=Z,16nm,1.5s
ARU Arti 59.33 325 P **P** **20 05 01.3 -0.4**
ARU IAmb IAmb 20 05 10.7
comp=Z,21nm,1.4s
DZM Mont Dzumac 60.56 129 *e*LR LR 20 22 59.7
comp=Z,193nm,27.4s
DZM Mont Dzumac 60.56 129 LR LR 20 28 56.9
comp=Z,81nm,18.6s,baz=190,slow=34
PRGR Permogore 66.77 330 *e*P **P** **20 05 47.2 -3.8**
PRGR pmax pmax
comp=Z,7.0nm,0.9s
ANM Nome 67.25 27 P **P** **20 05 54.8 +0.8**
ANM pmax pmax
comp=Z,12nm,1.2s
ANM Nome 67.25 27 P **P** **20 05 54.8 +0.8**
ANM IAmb IAmb 20 05 56.6
comp=Z,12nm,1.2s
AKH Akhalkalaki 68.19 308 P **P** **20 05 58.9 -1.7**
AKH pmax pmax
comp=Z,27nm,1.6s
AKH Akhalkalaki 68.19 308 P **P** **20 05 58.9 -1.7**
AKH IAmb IAmb 20 06 11.7
comp=Z,27nm,1.6s
KBZ Khabaz 68.43 311‖ *e*P **P** **20 06 02.1 +0.3**
KBZ Khabaz 68.43 311 P **P** **20 06 03.7 +2.0**
comp=Z,2.2nm,1.0s,baz=69,slow=8.6,SNR=2.8
KBZ LR LR 20 37 58.7
comp=Z,172nm,19.6s,baz=70,slow=38
KIV Kislovodsk 68.56 311 *e*P **P** **20 06 03.0 +0.2**
KIV pmax pmax
comp=Z,40nm,1.1s
KIV MLR MLR
comp=Z,293nm,17.0s
KIV Kislovodsk 68.56 311 P **P** **20 06 01.7 -1.0**
VRH Novokhopyorsk 68.74 319 *e*P **P** **20 06 02.9 -0.7**
VRH pmax pmax
comp=Z,20nm,1.6s
RAYN Ar Rayn 69.06 289 P **P** **20 06 06.2 0.0**
RAYN pmax pmax
comp=Z,25nm,1.7s
RAYN Ar Rayn 69.06 289 P **P** **20 06 06.2 0.0**
RAYN IAmb IAmb 20 06 15.2
comp=Z,25nm,1.7s
KLMR Klimovskoe 69.70 329 *e*P **P** **20 06 07.8 -1.5**
KLMR pmax pmax
comp=Z,29nm,1.4s
KLMR Klimovskoe 69.70 329 *e*P **P** **20 06 07.9 -1.4**
KLMR AMP 20 06 17.3
comp=Z,29nm,1.4s
VORD Divnogorie 70.29 318 *e*P **P** **20 06 10.3 -2.8**
VORD pmax pmax
comp=Z,3.0nm,0.4s
VSR Storozhevoye 70.35 319 *e*P **P** **20 06 12.3 -1.2**
VSR pmax pmax
comp=Z,6.0nm,0.8s
LPSR Galich'ya Gora 70.39 320 *e*P **P** **20 06 13.4 -0.3**
LPSR pmax pmax
comp=Z,10.0nm,1.4s
TTA Tatalina 71.37 29 P **P** **20 06 20.2 +0.5**
TTA Tatalina 71.37 29 P **P** **20 06 20.2 +0.5**
OBN Obninsk 71.57 323 *e*P **P** **20 06 20.7 -0.1**
OBN *e* 20 06 39.2
OBN *e* 20 08 56.6
OBN pmax pmax
comp=Z,6.0nm,1.0s
IMAR Indian Mountai 72.15 25 P **P** **20 06 24.2 0.0**
BPAW Bear Paw Mtn. 73.51 27 P **P** **20 06 32.9 +0.5**
BPAW IAmb IAmb 20 06 34.5
comp=Z,17nm,1.0s
SKT Skwentna 73.54 29 P **P** **20 06 31.9 -0.6**
SKT IAmb IAmb 20 06 33.5
comp=Z,50nm,1.6s
KDAK Kodiak Island 73.57 34 P **P** **20 06 32.2 -0.5**
KDAK pmax pmax
comp=Z,89nm,1.4s
KDAK Kodiak Island 73.57 34 P **P** **20 06 32.2 -0.5**
comp=Z,13nm,0.9s,baz=268,slow=4.3,SNR=4.4
GAZ Gaziantep 73.60 304 P **P** **20 06 33.2 -0.2**
GAZ IAmb IAmb 20 06 34.6
comp=Z,31nm,1.8s
KTH Kantishna Hill 73.61 28 P **P** **20 06 33.2 +0.2**
SUA Susitna One 73.98 30 P **P** **20 06 34.7 -0.6**
SUA IAmb IAmb 20 06 36.7
comp=Z,34nm,1.1s
MCK McKinley 74.46 28 P **P** **20 06 37.5 -0.4**
MCK pmax pmax
comp=Z,26nm,1.2s
MCK McKinley 74.46 28 P **P** **20 06 37.5 -0.4**
MCK IAmb IAmb 20 06 38.7
comp=Z,26nm,1.2s
RND Reindeer 74.55 28 P **P** **20 06 38.4 -0.1**
RND Reindeer 74.55 28 P **P** **20 06 38.4 -0.1**
RND IAmb IAmb 20 06 39.4
comp=Z,34nm,1.3s
MDM Murphy Dome 74.56 26 P **P** **20 06 38.0 -0.5**
MDM IAmb IAmb 20 06 48.1
comp=Z,22nm,1.1s
WRH Wood River Hil 74.70 27 P **P** **20 06 39.6 +0.3**
WRH IAmb IAmb 20 06 50.7
comp=Z,39nm,1.7s
ARCES ARCESS Array B 74.73 339 P **P** **20 06 39.1 -0.2**
comp=Z,2.8nm,0.7s,baz=80,slow=7.4,SNR=14
CCB Clear Creek Bu 74.79 26 P **P** **20 06 38.9 -0.8**
SML Sawmill 75.06 29 P **P** **20 06 40.8 -0.6**
KNK Knik Glacier 75.07 30 P **P** **20 06 41.4 -0.1**
SPA0 Spitsbergen Ar 75.15 348 P **P** **20 06 40.3 -1.3**
ILAR Eielson Array 75.16 26 P **P** **20 06 41.0 -0.9**
ILAR Eielson Array 75.16 26 P **P** **20 06 41.0 -0.9**
comp=Z,1.4nm,0.8s,baz=258,slow=5.0,SNR=16
HDA Harding Lake 75.20 27 P **P** **20 06 41.0 -1.1**
HDA IAmb IAmb 20 09 21.4
comp=Z,24nm,1.7s
SCM Sheep Creek Mo 75.52 29 P **P** **20 06 44.4 +0.3**
SCM pmax pmax
comp=Z,70nm,1.5s
SCM Sheep Creek Mo 75.52 29 P **P** **20 06 44.4 +0.3**
BMAR Burnt Mountain 75.55 23 P **P** **20 06 45.1 +1.0**
BRTR Keskin Array B 75.86 307 P **P** **20 06 45.1 -1.4**
comp=Z,0.3nm,0.5s,baz=104,slow=6.1,SNR=3.4
BRTR LR LR 20 44 14.8
comp=Z,41nm,19.9s,baz=80,slow=39
FIA1 FINESS Array S 76.10 330 P **P** **20 06 46.6 -0.7**
FIA1 IAmb IAmb 20 06 48.5
comp=Z,30nm,1.5s
FINES FINESS Array B 76.10 330 *i*P **P** **20 06 47.0 -0.3**
FINES pmax pmax
comp=Z,4.0nm,0.6s
FINES FINESS Array B 76.10 330 P **P** **20 06 47.1 -0.2**
comp=Z,4.3nm,0.6s,baz=45,slow=6.1,SNR=32
FINES LR LR 20 40 44.9
comp=Z,90nm,19.1s,baz=54,slow=36
FINES FINESS Array B 76.10 330 P **P** **20 06 46.8 -0.5**
PAX Paxson 76.14 28 P **P** **20 06 47.4 -0.2**
PAX pmax pmax
comp=Z,30nm,1.8s
PAX Paxson 76.14 28 P **P** **20 06 47.4 -0.2**
PAX IAmb IAmb 20 08 31.2
comp=Z,30nm,1.8s
RIDG Independent Ri 76.24 27 P **P** **20 06 47.8 -0.4**
RIDG IAmb IAmb 20 06 49.2
comp=Z,17nm,1.2s
HIZ Hauiti 76.29 139 P **P** **20 06 47.2 -1.5**
VSU Vasula 76.41 327 *e*P **P** **20 06 47.9 -1.2**
VSU pmax pmax
comp=Z,28nm,1.0s
DOT Dot Lake 76.60 27 P **P** **20 06 48.6 -1.6**
DOT IAmb IAmb 20 06 51.4
comp=Z,11nm,1.1s
AKASG Malin Array Be 76.64 319 P **P** **20 06 49.6 -1.0**
AKASG pmax pmax
comp=Z,4.0nm,1.2s
AKASG Malin Array Be 76.64 319 P **P** **20 06 49.5 -1.0**
comp=Z,1.9nm,0.7s,baz=62,slow=5.4,SNR=8.2
AKASG Malin Array Be 76.64 319 IAmb IAmb 20 06 58.8
comp=Z,3.5nm,1.1s
AKBB Malin Array Si 76.64 319 P **P** **20 06 49.2 -1.4**
AKBB pmax pmax
comp=Z,37nm,1.8s
AKBB Malin Array Si 76.64 319 P **P** **20 06 49.2 -1.4**
AKBB IAmb IAmb 20 06 58.5
comp=Z,37nm,1.8s
GLB Gilahina Butte 77.25 29 P **P** **20 06 53.6 -0.3**
LBZ Lake Benmore 77.26 146 P **P** **20 06 54.8 +0.7**
RPZ Rata Peaks 77.29 145 P **P** **20 06 53.1 -1.1**
BCAR Beaver Creek A 77.75 27 P **P** **20 06 57.7 +1.1**
CFR Carcaliu 78.61 314⇑P **P** **20 07 01.3 -0.4**
CFR Carcaliu 78.61 314⇑P **P** **20 07 01.3 -0.4**
TESR Tescani 79.28 315⇑P **P** **20 07 05.2 -0.2**
INK Inuvik 79.29 21 P **P** **20 07 04.7 -0.3**
INK pmax pmax
comp=Z,8.0nm,1.1s
INK Inuvik 79.29 21 P **P** **20 07 05.0 0.0**
comp=Z,7.3nm,1.2s,baz=282,slow=9.5,SNR=7.8
INK Inuvik 79.29 21 P **P** **20 07 04.7 -0.3**
VRI Vrincioaia 79.39 315⇑P **P** **20 07 04.7 +1.4**
VRI Vrincioaia 79.39 315⇑P **P** **20 07 07.4 +1.4**
PLOR Plostina 79.45 315⇑P **P** **20 07 06.4 0.0**
PLOR Plostina 79.45 315⇑P **P** **20 07 06.4 0.0**
BIZ Bicaz 79.53 316⇑P **P** **20 07 07.6 +0.8**
BURAR Bucovina Array 79.93 317⇑P **P** **20 07 09.1 +0.1**
BURAR Bucovina Array 79.93 317⇑P **P** **20 07 09.1 +0.1**
BURAR Bucovina Array 79.93 317 P **P** **20 07 08.5 -0.5**
BUR08 Bucovina Ar. S 79.94 317 P **P** **20 07 09.0 -0.1**
BUR08 IAmb IAmb 20 07 17.8
comp=Z,24nm,1.8s
MLR Muntele Rosu 80.02 315 P **P** **20 07 09.2 -0.4**
MLR pmax pmax
comp=Z,13nm,1.0s
MLR Muntele Rosu 80.02 315⇑P **P** **20 07 10.5 +0.9**

MLR	**Muntele Rosu**	**80.02**	**315**	P	**P**	**20 07 09.2**	**-0.4**
MLR				IAmb	IAmb	20 07 21.3	
	comp=Z,13nm,1.0s						
VOIR		**80.64**	**315**	⇑P	**P**	**20 07 12.2**	**-0.7**
VOIR		**80.64**	**315**	⇑P	**P**	**20 07 12.2**	**-0.7**
ARR	**Arges**	**80.94**	**315**	⇑P	**P**	**20 07 15.4**	**+0.9**
HUMR	**Humele**	**80.94**	**314**	⇓P	**P**	**20 07 14.3**	**-0.1**
CJR	**Cluj-Napoca**	**81.25**	**316**	⇑P	**P**	**20 07 16.8**	**+0.8**
CJR	**Cluj-Napoca**	**81.25**	**316**	⇑P	**P**	**20 07 16.8**	**+0.8**
KOLS	**Kolonicke sedl**	**81.44**	**319**	*e*P	**P**	**20 07 17.0**	**0.0**
KOLS	**Kolonicke sedl**	**81.44**	**319**	*e*P	**P**	**20 07 17.0**	**0.0**
TRPA	**Tarpa**	**81.52**	**318**	*e*P	**P**	**20 07 18.3**	**+1.0**
PLVB	**Pleven**	**81.52**	**313**	⇓P	**P**	**20 07 17.7**	**+0.3**
UZH	**Uzhgorod**	**81.52**	**318**	*c i*P	**P**	**20 07 17.1**	**-0.2**
UZH				*e*		20 07 20.5	
UZH				*i*		20 07 24.8	
DRGR		**81.81**	**316**	⇑P	**P**	**20 07 19.8**	**+0.8**
DRGR		**81.81**	**316**	⇑P	**P**	**20 07 19.8**	**+0.8**
C36M	**Paulatuk**	**81.92**	**19**	P	**P**	**20 07 18.4**	**-0.6**
C36M				IAmb	IAmb	20 07 27.6	
	comp=Z,13nm,1.2s						
GZR	**Gura Zlata**	**82.19**	**315**	⇓P	P	20 07 28.1	+7.1
GZR	**Gura Zlata**	**82.19**	**315**	⇓P	P	20 07 28.1	+7.1
HERR	**Herculane**	**82.59**	**315**	⇓P	**P**	**20 07 23.5**	**+0.5**
SIRR	**Siria**	**82.66**	**316**	⇓P	**P**	**20 07 23.8**	**+0.3**
VTS	**Vitosha**	**82.72**	**312**	P	**P**	**20 07 22.9**	**-1.1**
VTS				pmax	pmax		
	comp=Z,23nm,1.5s						
VTS	**Vitosha**	**82.72**	**312**	⇓P	**P**	**20 07 24.3**	**+0.3**
VTS	**Vitosha**	**82.72**	**312**	P	**P**	**20 07 22.9**	**-1.1**
VTS				IAmb	IAmb	20 07 33.1	
	comp=Z,23nm,1.5s						
NC405	**NORSAR Array S**	**82.78**	**332**	P	**P**	**20 07 22.6**	**-1.1**
BZS	**Buzias**	**82.89**	**316**	⇑P	**P**	**20 07 24.2**	**-0.5**
BZS	**Buzias**	**82.89**	**316**	⇑P	**P**	**20 07 24.2**	**-0.5**
NB201	**NORSAR Array S**	**82.99**	**332**	P	**P**	**20 07 23.8**	**-1.1**
NC602	**NORSAR Array S**	**83.01**	**332**	P	**P**	**20 07 23.6**	**-1.3**
NB2	**NORSAR Subarra**	**83.03**	**332**	P	**P**	**20 07 24.0**	**-1.1**
	comp=Z,1.5nm,0.6s,baz=64,slow=5.3						
NOA	**NORSAR Array B**	**83.03**	**332**	P	**P**	**20 07 24.0**	**-1.1**
	comp=Z,1.4nm,0.6s,baz=65,slow=5.2,SNR=9.3						
NOA				LR	LR	20 49 17.5	
	comp=Z,74nm,20.4s,baz=40,slow=39						
MDVR	**Moldovita**	**83.09**	**315**	⇓P	**P**	**20 07 25.7**	**0.0**
NC204	**NORSAR Array S**	**83.13**	**333**	P	**P**	**20 07 24.5**	**-1.1**
KMBO	**Kilima Mbogo**	**83.36**	**267**	P	**P**	**20 07 28.8**	**+0.9**
KMBO				pmax	pmax		
	comp=Z,13nm,1.4s						
KMBO	**Kilima Mbogo**	**83.36**	**267**	P	**P**	**20 07 28.8**	**+0.9**
	comp=Z,1.0nm,0.4s,baz=26,slow=2.4,SNR=5.2						
KMBO	**Kilima Mbogo**	**83.36**	**267**	IAmb	IAmb	20 07 30.7	
	comp=Z,13nm,1.4s						
VAY	**Valandovo**	**83.59**	**311**	*i* P	P	20 07 35.0	+6.7
VYHS	**Vyhne**	**83.74**	**319**	*e*P	**P**	**20 07 28.3**	**-0.7**
VYHS	**Vyhne**	**83.74**	**319**	*e*P	**P**	**20 07 28.3**	**-0.7**
STIP	**Stip**	**83.75**	**312**	*i* P	**P**	**20 07 27.1**	**-2.0**
LIT	**Litokhoron**	**84.03**	**310**	P	**P**	**20 07 29.5**	**-1.1**
LIT				pmax	pmax		
	comp=Z,17nm,1.4s						
LIT	**Litokhoron**	**84.03**	**310**	P	**P**	**20 07 29.5**	**-1.1**
LIT				IAmb	IAmb	20 07 44.1	
	comp=Z,17nm,1.4s						
MORC	**Moravsky Berou**	**84.08**	**320**	⇑P	P	20 07 39.7	+9.0
MORC	**Moravsky Berou**	**84.08**	**320**	⇑P	P	20 07 39.7	+9.0
MORC	**Moravsky Berou**	**84.08**	**320**	*e*P	**P**	**20 07 30.4**	**-0.3**
MORC				*e*		20 07 38.6	
SKO	**Skopje**	**84.19**	**312**	*i* P	**P**	**20 07 31.5**	**+0.1**
JAVC	**Velka Javorina**	**84.33**	**320**	*e*P	**P**	**20 07 33.3**	**+1.3**
JAVC				*e*		20 07 41.3	
KRLC	**Kraliky**	**84.43**	**321**	*e*P	**P**	**20 07 32.3**	**-0.2**
KRLC				*e*		20 07 40.2	
KRLC	**Kraliky**	**84.43**	**321**	*e*P	**P**	**20 07 32.3**	**-0.2**
KRLC				*e*pP	**pwP**	**20 07 40.2**	**-1.3**
OSTC	**Ostas**	**84.59**	**322**	*e*P	**P**	**20 07 33.1**	**-0.2**
OSTC				*ex*	x	20 07 41.9	
MORH	**Mrgy, Hungar**	**84.65**	**317**	*e*P	**P**	**20 07 33.5**	**-0.1**
VRAC	**Vranov**	**84.83**	**320**	*e*P	**P**	**20 07 34.8**	**+0.3**
VRAC				*e*		20 07 42.9	
KRUC	**Moravsky**	**85.04**	**320**	*e*P	**P**	**20 07 36.7**	**+1.2**
KRUC				*e*		20 07 43.7	
GOPC	**GO Pecny, Ondr**	**85.69**	**321**	*e*P	**P**	**20 07 38.8**	**0.0**
GOPC	**GO Pecny, Ondr**	**85.69**	**321**	*e*P	**P**	**20 07 38.8**	**0.0**
CONA	**Conrad Observa**	**85.80**	**319**	*i* PcP	**P**	**20 07 40.0**	**+0.6**
	comp=Z,6.2nm,1.3s						
BRG	**Berggiesshubel**	**85.80**	**322**	*e*P	**P**	**20 07 39.3**	**0.0**
	comp=Z,21nm,1.5s						
BRG				*e*		20 07 47.2	
	comp=Z,24nm,1.5s						
BRG				*e*PP	**PP**	**20 10 58.3**	**0.0**
	comp=Z,176nm,2.9s						
BRG	**Berggiesshubel**	**85.80**	**322**	*e*P	**P**	**20 07 39.3**	**0.0**
BRG				*e*		20 07 47.2	
BRG				*e*		20 10 58.3	
BRG				pmax	pmax		
	comp=Z,21nm,1.5s						
BRG				pmax	pmax		
	comp=Z,176nm,2.9s						
CLL	**Collm**	**86.17**	**323**	*e*P	**P**	**20 07 40.0**	**-1.1**
CLL				*i*		20 07 48.3	
CLL				pmax	pmax		
	comp=Z,12nm,1.4s						
CLL	**Collm**	**86.17**	**323**	*e*P	**P**	**20 07 40.0**	**-1.1**
	comp=Z,12nm,1.4s						
CLL				*i* sP	**sP**	**20 07 48.3**	**+0.8**
	comp=Z,30nm,1.7s						
CLL	**Collm**	**86.17**	**323**	P	**P**	**20 07 40.1**	**-1.1**
CLL				IAmb	IAmb	20 07 49.4	
	comp=Z,22nm,1.5s						
ARSA	**Arzberg**	**86.27**	**319**	*i* PcP	**P**	**20 07 42.5**	**+0.7**
	comp=Z,3.5nm,0.9s						
KHC	**Kasperske Hory**	**86.72**	**321**	P	**P**	**20 07 43.7**	**-0.2**
KHC				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KHC	**Kasperske Hory**	**86.72**	**321**	*e*P	**P**	**20 07 43.9**	**0.0**
KHC				*e*pP	**sP**	**20 07 51.1**	**+0.8**
KHC	**Kasperske Hory**	**86.72**	**321**	P	**P**	**20 07 43.7**	**-0.2**
GEC2	**GERESS Array S**	**86.76**	**321**	P	**P**	**20 07 44.0**	**-0.1**
GEC2				IAmb	IAmb	20 07 56.1	
	comp=Z,8.8nm,1.4s						
GERES	**GERESS Array B**	**86.76**	**321**	P	**P**	**20 07 43.7**	**-0.5**
GERES	**GERESS Array B**	**86.76**	**321**	P	**P**	**20 07 44.1**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=75,slow=5.7,SNR=8.0						
GERES	**GERESS Array B**	**86.76**	**321**	P	**P**	**20 07 43.7**	**-0.5**
SOKA	**Soboth**	**86.80**	**318**	*i* PcP	**P**	**20 07 43.9**	**-0.5**
	comp=Z,3.3nm,1.0s						
MOA	**Molln**	**86.82**	**319**	*i* PcP	**P**	**20 07 45.2**	**+0.8**
	comp=Z,16nm,1.4s						
WATA	**Walderalm**	**88.69**	**320**	*i* PcP	**P**	**20 07 53.5**	**0.0**
	comp=Z,7.9nm,1.0s						
SQTA	**Sankt Quirin**	**88.96**	**320**	*i* P	**P**	**20 07 53.0**	**-1.7**
	comp=Z,11nm,1.1s						
YKA	**Yellowknife Ar**	**89.02**	**22**	P	**P**	**20 07 54.7**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=313,slow=4.5,SNR=38						
RETA	**Reutte**	**89.12**	**320**	*i* pP	**P**	**20 07 56.6**	**+1.2**
	comp=Z,11nm,2.1s						
FUORN	**Ofenpass-Fuorn**	**89.81**	**320**	P	**P**	**20 07 58.4**	**-0.6**
FUORN				IAmb	IAmb	20 08 00.2	
	comp=Z,7.3nm,0.7s						
BNI	**Bardonecchia**	**92.76**	**319**	P	**P**	**20 08 12.3**	**-0.2**
BNI				pmax	pmax		
	comp=Z,39nm,1.8s						
BNI	**Bardonecchia**	**92.76**	**319**	P	**P**	**20 08 12.3**	**-0.2**
PPT	**Papeete**	**95.79**	**107**	LR	LR	20 45 44.5	
	comp=Z,29nm,19.3s,baz=311,slow=32						
PPT2	**Papeete2**	**95.80**	**107**	*e*LR	LR	20 39 19.4	
	comp=Z,170nm,30.2s						
TBI	**Tubuai**	**97.55**	**112**	*e*LR	LR	20 40 09.0	
	comp=Z,125nm,32.8s						
VNDA	**Vanda**	**98.48**	**172**	LR	LR	20 56 16.6	
	comp=Z,31nm,18.7s,baz=36,slow=37						
TXAR	**Lajitas Array**	**116.82**	**42**	PKIKP	**PKPdf**	**20 13 44.6**	**-0.5**
TXAR	**Lajitas Array**	**116.82**	**42**	PKP	**PKPdf**	**20 13 44.8**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=318,slow=1.2,SNR=2.5						
TXAR	**Lajitas Array**	**116.82**	**42**		**PKPdf**	**20 13 44.5**	**-0.5**
SDV	**Santo Domingo**	**151.24**	**22**		**PKPdf**	**20 14 47.1**	**-1.4**

HEL 23 20:00:33.0±0.2, 65.79N×24.66E, h0km, ML1.0, Explosion, Finland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TOF	**Tornio**	**0.32**	**334**	*e*P	Pg	20 00 39.0	-0.1
TOF				*e*S	Sg	20 00 42.5	-0.7
KALU	**Kalix**	**0.54**	**278**	*e*P	Pg	20 00 42.3	-1.1
KALU				*e*S	Sg	20 00 49.8	-0.6
OUL	**Oulu**	**0.88**	**144**	*e*P	Pg	20 00 48.3	-1.5
OUL				*e*S	Sg	20 01 00.4	-0.8
OBF0	**Syolatti, Pyha**	**1.31**	**188**	*e*P	Pg	20 00 56.8	-1.4
OBF0				*e*S	Sg	20 01 12.9	-2.3
OBF0				MSG		20 01 18.5	
	comp=Z,1.0nm,0.1s						
LANU	**Lannavaara**	**2.50**	**336**	*e*S	Sn	20 01 45.1	-0.9
UMAU	**Umea**	**2.57**	**223**	*e*P	Pn	20 01 15.9	+0.2
UMAU				*e*S	Sn	20 01 47.5	-0.1

BER 23 20:00:40.4±1.4, 66.60N×13.18E, h15km±999km, ML1.1, Northern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONS	**Konsvik**	**0.10**	**193**	*e*P	Pg	20 00 43.5	-0.2
KONS				*e*S	Sg	20 00 44.7	-1.1
KONS				IAML		20 00 44.8	
	comp=Z,38nm,0.6s						
STOK	**Stokkvaagen**	**0.28**	**193**	*e*P	Pg	20 00 46.5	+0.2
STOK				*e*S	Sg	20 00 50.1	-0.1
MOR8	**Moi Rana**	**0.67**	**130**	*e*	Pg	20 00 48.6	-4.8

*IDC **23** 20:03:53.0±5.6, 4.°55S×133.°00E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=338.4km s-min=26.0km az=75.0*
*DJA **23** 20:03:54.3±1.6, 4.°S±11.°×13.°4E±1.°1, h10km, M4.1/6, mb4.2/4, MLv4.0/6*
ISC 23 20:03:53.6±1.2, 4.°25S±0.°08×133.°62E±0.°10, h21km, n10, σ1s98/11, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMPI	**Kaimana, Papua**	**0.59**	**8**	P	Pb	20 04 03.8	-1.6
KMPI				S	Sb	20 04 10.9	-2.5
FAKI	**Fak Fak**	**1.91**	**314**	P	**Pn**	**20 04 24.5**	**-0.4**
RKPI	**Ransiki, Papua**	**2.78**	**12**	P	**Pn**	**20 04 36.9**	**0.0**
RKPI				S	**Sn**	**20 05 10.8**	**+0.9**
SIJI	**Sorong**	**4.10**	**325**	Pn	**Pn**	**20 04 55.4**	**+0.2**
	0.6nm,0.3s,baz=197,slow=19,SNR=6.0						
SIJI				Sn	**Sn**	**20 05 38.9**	**-3.7**
	2.4nm,0.3s,baz=147,slow=9.7,SNR=3.7						
AAI	**Ambon**	**5.44**	**276**	P	**Pn**	**20 05 15.1**	**+1.6**
	0.2nm41nm,0.8s						
NLAI	**Namlea**	**6.58**	**279**	P	**Pn**	**20 05 30.2**	**+1.0**
	0.1nm14nm,0.8s						
SANI	**Sanana**	**7.93**	**286**	P	**Pn**	**20 05 48.2**	**+0.5**
WRA	**Warramunga Arr**	**15.61**	**177**	Pn	**Pn**	**20 07 29.9**	**-2.7**
	0.3nm,0.3s,baz=354,slow=13,SNR=6.1						
WRA				Sn	Sn	20 10 12.1	-13
	0.2nm,0.3s,baz=360,slow=23,SNR=6.3						
ASAR	**Alice Springs**	**19.30**	**179**	P	**P**	**20 08 17.1**	**-0.3**
	0.3nm,0.3s,baz=2.1,slow=12,SNR=14						
ASAR				S	Sn	20 11 42.6	-12
	0.1nm,0.3s,baz=1.0,slow=28,SNR=5.3						
MKAR	**Makanchi Array**	**68.00**	**325**	P	**P**	**20 14 53.8**	**+2.4**
	0.3nm,0.5s,baz=118,slow=7.9,SNR=7.5						

*IDC **23** 20:27:55.8±4.1, 27.°05S×163.°76E, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.8/23, mbtmp3.8/5, ML3.9/2, MS3.1/4, Ms1 3.1/4, ms1mx2.8/27, Error ellipse: s-maj=110.1km s-min=25.9km az=139.0*
ISC 23 20:27:56.5±3.5, 27.°2S±0.°4×163.°9E±0.°5, h10km, n9, σ1s46/7, mb3.3/3, East of Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.58**	**25**	Pn	**Pn**	**20 29 20.9**	**+1.1**
	5.1nm,0.3s,baz=215,slow=15,SNR=85						
DZM				Sn	**Sn**	**20 30 22.4**	**-1.5**
	7.4nm,0.3s,baz=132,slow=22,SNR=7.3						
HNR	**Honiara**	**18.01**	**347**	LR	LR	20 38 52.7	
	comp=Z,63nm,18.4s,baz=28,slow=37						
STKA	**Stephens Creek**	**19.93**	**251**	P	**P**	**20 32 27.7**	**-0.9**
	0.2nm,0.3s,baz=93,slow=12,SNR=7.0						
STKA				LR	LR	20 39 17.3	
	comp=Z,48nm,18.4s,baz=25,slow=34						
PMG	**Port Moresby**	**23.68**	**315**	LR	LR	20 41 30.0	
	comp=Z,51nm,20.1s,baz=329,slow=35						
KRVT	**Keravat (AS076**	**25.38**	**331**	LR	LR	20 41 57.4	
	comp=Z,59nm,20.9s,baz=93,slow=33						
ASAR	**Alice Springs**	**27.25**	**271**	P	**P**	**20 33 40.8**	**-0.4**
	2.9nm,0.6s,baz=96,slow=8.9,SNR=54						
WRA	**Warramunga Arr**	**27.95**	**279**	P	**P**	**20 33 47.6**	**+0.2**
	0.7nm,1.1s,baz=100,slow=8.5,SNR=3.3						
CMAR	**Chiang Mai Arr**	**77.52**	**298**	P	**P**	**20 39 54.3**	**+1.3**
	0.1nm,0.4s,baz=134,slow=3.9,SNR=3.0						
GERES	**GERESS Array B**	**148.36**	**321**	PKPbc	**PKPbc**	**20 47 41.6**	**-1.5**
	0.4nm,0.7s,baz=12,slow=2.3,SNR=3.5						

*IDC **23** 21:06:09.2±1.4, 3.°49S×152.°05E, h0km, mb3.4/7, mb1 3.6/7, mb1mx3.4/37, mbtmp3.4/7, MS3.4/3, Ms1 3.4/3, ms1mx2.9/20, Error ellipse: s-maj=47.4km s-min=15.2km az=88.0*
ISC 23 21:06:10.5±1.2, 3.°54S±0.°10×152.°1E±0.°2, h10km, n12, σ1s38/10, mb3.4/7, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.77**	**188**	Pg	**Pg**	**21 06 24.8**	**-0.7**
	207nm,0.3s,baz=3.4,slow=6.9,SNR=9.5						
KRVT				Lg	Lg	21 06 34.1	
	186nm,0.3s,baz=25,slow=21,SNR=9.7						
PMG	**Port Moresby**	**7.64**	**220**	Pn	**Pn**	**21 08 04.5**	**+2.4**
	0.4nm,0.3s,baz=11,slow=8.4,SNR=2.1						
PMG				Sn	**Sn**	**21 09 27.2**	**-1.6**
	0.7nm,0.3s,baz=341,slow=21,SNR=1.1						
HNR	**Honiara**	**9.72**	**127**	LR	LR	21 12 23.5	
	comp=Z,397nm,21.5s,baz=302,slow=38						
GUMO	**Guam**	**18.48**	**337**	LR	LR	21 16 16.6	
	comp=Z,43nm,21.6s,baz=144,slow=33						
DZM	**Mont Dzumac**	**23.07**	**144**	LR	LR	21 19 05.0	
	comp=Z,139nm,19.1s,baz=26,slow=34						
WRA	**Warramunga Arr**	**23.82**	**225**	P	**P**	**21 11 23.8**	**-0.1**
	1.1nm,0.9s,baz=50,slow=9.8,SNR=4.3						
ASAR	**Alice Springs**	**26.66**	**220**	P	**P**	**21 11 49.7**	**-0.2**
	0.2nm,0.5s,baz=48,slow=9.1,SNR=2.0						
CMAR	**Chiang Mai Arr**	**56.75**	**295**	P	**P**	**21 15 54.9**	**-0.3**
	0.2nm,0.2s,baz=112,slow=5.0,SNR=1.7						
SONM	**Songino Array**	**64.91**	**328**	P	**P**	**21 16 49.2**	**-1.2**
	0.3nm,0.7s,baz=152,slow=6.5,SNR=1.9						
MKAR	**Makanchi Array**	**78.94**	**319**	P	**P**	**21 18 15.8**	**+1.2**
	0.1nm,0.5s,baz=116,slow=6.6,SNR=1.4						
ILAR	**Eielson Array**	**81.25**	**22**	P	**P**	**21 18 27.1**	**+0.5**
	0.3nm,0.8s,baz=247,slow=6.7,SNR=2.0						
BVAR	**Borovoye Array**	**87.84**	**323**	P	**P**	**21 18 59.2**	**-1.0**
	0.1nm,0.3s,baz=106,slow=4.8,SNR=1.6						

*KOLA **23** 21:07:05.9, 67.°69N×20.°25E, h0km*
*HEL **23** 21:07:07.4±0.0, 67.°18N×20.°67E, h0km, ML2.4, ML2.5(UPP), Explosion*
*NAO **23** 21:07:07.1±0.6, 67.°15N×20.°91E, ML2.8*
*IDC **23** 21:07:07.6±0.8, 67.°16N×20.°96E, h0km, mb1 3.3/5, mb1mx3.0/45, mbtmp3.3/5, ML2.6/5, Error ellipse: s-maj=13.2km s-min=6.5km az=110.0*
*BER **23** 21:07:09.1±2.9, 67.°11N×20.°85E, h0km, ML2.2, ML2.8(NAO), Suspected explosion*
ISC 23 21:07:05.9±0.7, 67.°14N±0.°02×20.°77E±0.°02, h0km, n60, σ1s47/105, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.08**	**259**	*i* P	**Pg**	**21 07 08.8**	**+1.3**
DUNU				*i* S	**Sg**	**21 07 09.9**	**+1.4**
MASU	**Masugnsbyn**	**0.57**	**55**	*i* P	**Pg**	**21 07 18.0**	**+1.1**
MASU				*i* S	**Sg**	**21 07 25.9**	**+1.6**
RATU	**Laukkuluspa**	**0.83**	**327**	*i* P	**Pg**	**21 07 21.2**	**-0.6**
RATU				*i* S	**Sg**	**21 07 31.3**	**-1.1**
KUA	**Kurravaara**	**0.84**	**349**	*i* P	**Pg**	**21 07 21.3**	**-0.6**
PAJU	**Pajala**	**0.92**	**96**	*e*P	**Pb**	**21 07 24.6**	**-0.2**
HARU	**Harads**	**0.98**	**175**	*e*P	**Pb**	**21 07 25.7**	**0.0**
LANU	**Lannavaara**	**1.03**	**26**	*e*P	**Pg**	**21 07 25.3**	**-0.3**
LANU				*e*S	**Sg**	**21 07 38.6**	**-0.3**
KOVU	**Salmi**	**1.11**	**348**	*e*P	**Pg**	**21 07 26.3**	**-0.9**
KALU	**Kalix**	**1.65**	**140**	*e*P	**Pb**	**21 07 37.6**	**+0.4**
SJUU	**Sjulsmark**	**1.67**	**168**	*e*P	**Pg**	**21 07 38.0**	**+0.1**
TOF	**Tornio**	**1.77**	**125**	*e*P	**Pb**	**21 07 39.7**	**+0.4**
TOF				*e*S	**Sg**	**21 08 03.1**	**+0.4**
TOF				MSG		21 08 06.4	
	comp=Z,29nm,0.1s						
KIF	**Kilpisjarvi**	**1.88**	**0**	Pn	**Pb**	**21 07 40.3**	**-0.7**
KIF				Sn	**Sg**	**21 08 05.7**	**-0.5**
KIF	**Kilpisjarvi**	**1.88**	**0**	*e*P	**Pn**	**21 07 40.2**	**+1.0**
KIF				*e*S	**Sb**	**21 08 05.0**	**0.0**
KIF				MSG		21 08 08.3	
	comp=Z,32nm,0.1s						
KIF	**Kilpisjarvi**	**1.88**	**0**	*e*P	**Pb**	**21 07 40.4**	**-0.7**
KIF				*e*S	**Sb**	**21 08 04.7**	**-0.3**
KTK1	**Kautokeino**	**2.10**	**25**	Pn	**Pb**	**21 07 44.1**	**-0.7**
KTK1				Sn	**Sb**	**21 08 12.1**	**+0.7**
KTK1	**Kautokeino**	**2.10**	**25**	*e*P	**Pb**	**21 07 44.0**	**-0.7**
KTK1				*e*S	**Sn**	**21 08 10.5**	**+1.4**
KTK1				IAML		21 08 12.9	
	comp=Z,31nm,0.2s						
RNF	**Rovaniemi**	**2.14**	**102**	*e*P	**Pb**	**21 07 45.1**	**-0.3**
RNF				*e*S	**Sb**	**21 08 12.6**	**+0.2**
SGF	**Sodankyl**	**2.25**	**80**	*e*P	**Pb**	**21 07 46.5**	**-0.9**
SGF				*e*S	**Sb**	**21 08 15.1**	**-0.7**
STEI	**Steigen**	**2.27**	**293**	Pn	**Pb**	**21 07 46.9**	**-0.8**
STEI				Sn	**Sb**	**21 08 16.9**	**+0.7**
STEI	**Steigen**	**2.27**	**293**	*e*P	**Pn**	**21 07 45.5**	**+0.9**
STEI				*e*S	**Sn**	**21 08 13.6**	**+0.4**
STEI				IAML		21 08 21.0	
	comp=Z,30nm,0.6s						
TRO	**Tromso**	**2.60**	**346**	*e*P	**Pn**	**21 07 50.6**	**+1.5**
TRO				*e*S	**Sn**	**21 08 21.6**	**+0.3**
TRO				IAML		21 08 27.5	
	comp=Z,25nm,0.3s						
MOR8	**Moi Rana**	**2.70**	**252**	*e*P	**Pn**	**21 07 50.9**	**+0.3**
OUL	**Oulu**	**2.93**	**132**	*e*P	**Pn**	**21 07 55.9**	**+2.2**
OUL				*e*S	**Sn**	**21 08 31.3**	**+1.8**
LOF	**Lofoten**	**2.94**	**293**	Pn	**Pn**	**21 07 53.5**	**-0.3**
LOF				Sn	**Sn**	**21 08 30.1**	**+0.4**
LOF	**Lofoten**	**2.94**	**293**	*e*P	**Pn**	**21 07 54.1**	**+0.3**
LOF				Sn	**Sn**	**21 08 30.1**	**+0.4**
ARA0	**ARCESS Array S**	**2.98**	**34**	Pn	**Pn**	**21 07 55.3**	**+0.9**
	baz=209,slow=14						
ARA0				Sn	**Sn**	**21 08 31.6**	**+0.7**
	baz=219,slow=28						
ARA0	**ARCESS Array S**	**2.98**	**34**	Pn	**Pn**	**21 07 55.3**	**+0.9**
	baz=209,slow=14						
ARA0				Sn	**Sn**	**21 08 31.6**	**+0.7**
	baz=219,slow=28						
ARCES	**ARCESS Array B**	**2.98**	**34**	Pn	**Pn**	**21 07 55.6**	**+1.1**
	comp=Z,1.8nm,0.3s,baz=212,slow=14,SNR=135						
ARCES				Sn	**Sn**	**21 08 31.0**	**+0.1**
	comp=Z,3.3nm,0.3s,baz=218,slow=16,SNR=15						
ARE0	**ARCESS Array S**	**2.98**	**34**	*e*P	**Pn**	**21 07 55.6**	**+1.2**
ARE0				*e*S	**Sn**	**21 08 31.3**	**+0.5**
OBF0	**Syolatti, Pyha**	**3.01**	**150**	*e*P	**Pn**	**21 07 57.0**	**+2.2**
OBF0				*e*S	**Sn**	**21 08 33.3**	**+1.9**
KONS	**Konsvik**	**3.10**	**262**	Pn	**Pn**	**21 07 57.4**	**+1.5**
KONS				Sn	**Sn**	**21 08 35.9**	**+2.4**
KONS	**Konsvik**	**3.10**	**262**	*e*P	**Pn**	**21 07 57.3**	**+1.3**
STOK	**Stokkvaagen**	**3.18**	**259**	Pn	**Pn**	**21 07 58.8**	**+1.7**
STOK				Sn	**Sn**	**21 08 38.2**	**+2.5**
STOK	**Stokkvaagen**	**3.18**	**259**	Pn	**Pn**	**21 07 58.8**	**+1.7**
STOK				Sn	**Sn**	**21 08 38.2**	**+2.5**
OUF	**Merijarvi**	**3.23**	**148**	*e*P	**Pn**	**21 07 59.8**	**+2.0**
VRF	**Varrio**	**3.46**	**76**	*e*P	**Pn**	**21 08 02.4**	**+1.4**
VRF				*e*S	**Sn**	**21 08 43.3**	**+0.6**
KEV	**Kevo**	**3.49**	**38**	Pn	**Pn**	**21 08 01.7**	**+0.3**
KEV				Sn	**Sn**	**21 08 44.3**	**+0.9**
KEV	**Kevo**	**3.49**	**38**	*e*P	**Pn**	**21 08 02.5**	**+1.1**
KEV				*e*S	**Sn**	**21 08 43.3**	**0.0**
KEV	**Kevo**	**3.49**	**38**	*e*P	**Pn**	**21 08 02.5**	**+1.1**
KEV				*e*S	**Sn**	**21 08 43.8**	**+0.4**
HAMF	**Hammerfest**	**3.68**	**15**	Pn	**Pn**	**21 08 04.6**	**+0.7**
HAMF				Sn	**Sn**	**21 08 50.0**	**+2.1**
HAMF	**Hammerfest**	**3.68**	**15**	*e*P	**Pn**	**21 08 05.4**	**+1.4**
HAMF				IAML		21 09 04.1	
	comp=Z,13nm,0.5s						
NOD	**Norderasen**	**4.46**	**217**	*e*P	**Pn**	**21 08 16.1**	**+1.3**
APA0	**Apatity Array**	**4.74**	**79**	Pn	**Pn**	**21 08 18.3**	**-0.3**
	baz=264,slow=11						
APA0				Sn	**Sn**	**21 09 12.9**	**-1.3**
	baz=265,slow=28						

n75,σ0.86/104, mb3.4/5, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLMS	**Volimes, Zakyn**	**0.28**	**276**	P	**Pb**	**21 10 23.5**	**-0.7**
VLMS				S	**Sb**	**21 10 27.8**	**-1.1**
KFL	**Anninata**	**0.32**	**325**	P	**Pg**	**21 10 23.7**	**+0.4**
KFL	**Anninata**	**0.32**	**325**	P	**Pg**	**21 10 23.9**	**+0.6**
KFL				S	**Sb**	**21 10 29.1**	**-0.8**
KFL				AML	AML	21 10 37.3	
	comp=E,9292μm,0.3s						
KFL				AML	AML	21 10 37.3	
	comp=N,7550μm,0.4s						
RLS	**Riolos of Patr**	**0.41**	**60**	P	**Pg**	**21 10 24.4**	**-0.6**
RLS				S	**Sg**	**21 10 30.9**	**+0.4**
	comp=N,5μm,0.5s						
RLS	**Riolos of Patr**	**0.41**	**60**	P	**Pg**	**21 10 24.4**	**-0.6**
RLS				S	**Sg**	**21 10 30.5**	**0.0**
RLS				AML	AML	21 10 34.0	
	comp=E,7920μm,0.5s						
RLS				AML	AML	21 10 34.9	
	comp=N,11452μm,0.4s						
VLS	**Valsamata**	**0.47**	**314**	P	**Pg**	**21 10 26.0**	**-0.1**
VLS	**Valsamata**	**0.47**	**314**	P	**Pg**	**21 10 26.5**	**+0.4**
VLS				S	**Sb**	**21 10 33.9**	**-0.5**
VLS				AML	AML	21 10 35.1	
	comp=E,2161μm,0.5s						
VLS				AML	AML	21 10 35.7	
	comp=N,3126μm,0.5s						
DRO	**Drossia**	**0.56**	**79**	P	**Pg**	**21 10 26.7**	**-1.1**
DRO				S	**Sb**	**21 10 37.2**	**+0.2**
	comp=N,8μm,0.4s						
DRO	**Drossia**	**0.56**	**79**	P	**Pg**	**21 10 27.1**	**-0.7**
DRO				S	**Sg**	**21 10 35.6**	**+0.4**
DRO				AML	AML	21 10 39.6	
	comp=N,10811μm,0.4s						
DRO				AML	AML	21 10 40.4	
	comp=E,17024μm,0.3s						
AMT	**Artemida-Makis**	**0.63**	**120**	P	**Pg**	**21 10 28.8**	**-0.4**
AMT	**Artemida-Makis**	**0.63**	**120**	P	**Pg**	**21 10 28.9**	**-0.3**
AMT				S	**Sg**	**21 10 38.0**	**+0.4**
AMT				AML	AML	21 10 46.4	
	comp=E,3224μm,0.4s						
AMT				AML	AML	21 10 49.3	
	comp=N,3203μm,0.4s						
UPR	**University Cam**	**0.75**	**54**	P	**Pn**	**21 10 32.7**	**-0.9**
UPR	**University Cam**	**0.75**	**54**	P	**Pb**	**21 10 32.3**	**+0.2**
EVGI	**Lefkada island**	**0.82**	**340**	P	**Pg**	**21 10 32.1**	**-0.7**
EVGI	**Lefkada island**	**0.82**	**340**	P	**Pg**	**21 10 32.5**	**-0.3**
MGNA	**Meganis**	**0.82**	**348**	P	**Pg**	**21 10 32.5**	**-0.4**
MGNA				S	**Sb**	**21 10 45.0**	**+0.4**
MGNA				AML	AML	21 10 58.5	
	comp=N,1311μm,0.4s						
MGNA				AML	AML	21 10 59.3	
	comp=E,1172μm,0.4s						
LAKA	**Lakka**	**0.85**	**63**	P	**Pg**	**21 10 33.4**	**0.0**
LAKA				S	**Sn**	**21 10 47.0**	**-0.8**
	comp=E,1μm,0.6s						
LAKA	**Lakka**	**0.85**	**63**	P	**Pg**	**21 10 33.2**	**-0.2**
LAKA				S	**Sg**	**21 10 44.6**	**+0.1**
LAKA				AML	AML	21 10 49.6	
	comp=E,2632μm,0.6s						
LAKA				AML	AML	21 10 57.8	
	comp=N,2287μm,0.6s						
PVO	**Paravola**	**0.86**	**28**	P	**Pg**	**21 10 33.6**	**0.0**
PVO	**Paravola**	**0.86**	**28**	P	**Pg**	**21 10 33.7**	**+0.1**
PVO				S	**Sg**	**21 10 45.1**	**+0.2**
PVO				AML	AML	21 10 54.5	
	comp=E,2403μm,0.3s						
PVO				AML	AML	21 10 57.4	
	comp=N,1886μm,0.5s						
EFP	**Efpalio**	**0.91**	**50**	P	**Pb**	**21 10 34.0**	**-0.8**
EFP				S	**Sn**	**21 10 48.4**	**-0.6**
	comp=N,1μm,0.5s						
EFP	**Efpalio**	**0.91**	**50**	P	**Pb**	**21 10 34.3**	**-0.5**
EFP				S	**Sb**	**21 10 47.1**	**0.0**
EFP				AML	AML	21 10 50.2	
	comp=N,3509μm,0.5s						
EFP				AML	AML	21 10 53.0	
	comp=E,2001μm,0.5s						
KLV	**Kalavryta, Ach**	**0.92**	**77**	P	**Pb**	**21 10 33.1**	**-1.9**
KLV				S	**Sn**	**21 10 48.5**	**-0.9**
	comp=E,682nm,0.5s						
KLV	**Kalavryta, Ach**	**0.92**	**77**	P	**Pb**	**21 10 34.1**	**-0.9**
KLV				S	**Sg**	**21 10 46.7**	**+0.1**
KLV				AML	AML	21 10 58.2	
	comp=N,1500μm,0.7s						
KLV				AML	AML	21 10 58.9	
	comp=E,1291μm,0.7s						
LKD2	**Lefkada island**	**0.98**	**343**	P	**Pb**	**21 10 35.0**	**-1.1**
LKD2	**Lefkada island**	**0.98**	**343**	P	**Pb**	**21 10 35.2**	**-0.9**
LKD2				S	**Sn**	**21 10 49.9**	**-1.0**
LKD2				AML	AML	21 10 58.6	
	comp=E,3477μm,0.4s						
LKD2				AML	AML	21 11 04.4	
	comp=N,1936μm,0.5s						
TRIZ	**Trizonia**	**0.98**	**58**	P	**Pb**	**21 10 34.9**	**-1.2**
TRIZ				S	**Sn**	**21 10 51.0**	**+0.2**
	comp=N,1μm,0.4s						
TRIZ	**Trizonia**	**0.98**	**58**	P	**Pb**	**21 10 35.3**	**-0.8**
ITM	**Ithomi**	**0.99**	**132**	P	**Pb**	**21 10 35.5**	**-0.6**
ITM	**Ithomi**	**0.99**	**132**	P	**Pb**	**21 10 35.5**	**-0.6**
ITM				S	**Sg**	**21 10 49.0**	**+0.3**
ITM				AML	AML	21 10 58.5	
	comp=E,1151μm,0.4s						
ITM				AML	AML	21 10 59.8	
	comp=N,1628μm,0.6s						
SERG	**Sergoula**	**0.99**	**55**	P	**Pb**	**21 10 35.6**	**-0.7**
SERG				S	**Sn**	**21 10 50.7**	**-0.6**
	comp=N,1μm,0.6s						
SERG	**Sergoula**	**0.99**	**55**	P	**Pb**	**21 10 35.7**	**-0.6**
SERG				S	**Sg**	**21 10 49.7**	**+0.6**
SERG				AML	AML	21 10 57.0	
	comp=N,2299μm,0.5s						
SERG				AML	AML	21 10 58.0	
	comp=E,1426μm,0.4s						
TSLK	**Tsoukalades, L**	**1.01**	**344**	P	**Pb**	**21 10 36.2**	**-0.5**
TSLK	**Tsoukalades, L**	**1.01**	**344**	P	**Pb**	**21 10 36.0**	**-0.7**
TSLK				S	**Sn**	**21 10 51.3**	**-0.4**
TSLK				AML	AML	21 11 01.6	
	comp=E,1525μm,0.4s						
TSLK				AML	AML	21 11 04.2	
	comp=N,1923μm,0.5s						
ANX	**Ano Chora**	**1.03**	**44**	P	**Pb**	**21 10 36.3**	**-0.7**
ANX				S	**Sn**	**21 10 53.1**	**+0.9**
	comp=N,2μm,0.6s						
ANX	**Ano Chora**	**1.03**	**44**	P	**Pb**	**21 10 36.5**	**-0.5**
ANX				S	**Sg**	**21 10 50.9**	**+0.8**
ANX				AML	AML	21 10 58.3	
	comp=E,2943μm,0.5s						
ANX				AML	AML	21 11 02.1	
	comp=N,4292μm,0.6s						
KALE	**Kalithea**	**1.04**	**58**	P	**Pb**	**21 10 36.3**	**-0.8**
KALE				S	**Sn**	**21 10 53.0**	**+0.6**
	comp=N,1μm,0.5s						
KALE	**Kalithea**	**1.04**	**58**	P	**Pb**	**21 10 36.2**	**-0.9**
KALE				S	**Sg**	**21 10 50.6**	**+0.2**
KALE				AML	AML	21 11 01.3	
	comp=E,2150μm,0.6s						
KALE				AML	AML	21 11 03.2	
	comp=N,3087μm,0.5s						
PYL	**PYLOS**	**1.11**	**148**	P	**Pb**	**21 10 37.3**	**-1.0**
PYL	**PYLOS**	**1.11**	**148**	P	**Pb**	**21 10 37.3**	**-1.0**
VLX	**Vlachokerasia**	**1.18**	**113**	P	**Pn**	**21 10 39.0**	**-0.7**
VLX	**Vlachokerasia**	**1.18**	**113**	P	**Pn**	**21 10 39.1**	**-0.6**
EVR	**Evrytania**	**1.23**	**30**	P	**Pn**	**21 10 39.7**	**-0.7**
EVR	**Evrytania**	**1.23**	**30**	P	**Pb**	**21 10 40.5**	**0.0**
EVR				S	**Sg**	**21 10 57.2**	**+0.5**
EVR				AML	AML	21 11 06.6	
	comp=N,978μm,0.5s						
EVR				AML	AML	21 11 06.7	
	comp=E,905μm,0.4s						
DLFA	**Delphi**	**1.32**	**61**	P	**Pb**	**21 10 42.1**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.46**	**37**	P	**Pg**	**21 10 44.6**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.46**	**37**	P	**Pg**	**21 10 44.6**	**-0.3**
MAKR				S	**Sg**	**21 11 04.0**	**+0.3**
MAKR				AML	AML	21 11 13.1	
	comp=E,1922μm,0.5s						
MAKR				AML	AML	21 11 14.8	
	comp=N,1757μm,0.6s						
DYR	**Agios Nikonas**	**1.51**	**136**	P	**Pb**	**21 10 44.9**	**-0.2**
DYR	**Agios Nikonas**	**1.51**	**136**	P	**Pb**	**21 10 45.2**	**+0.1**
PROD	**Prodromos**	**1.54**	**74**	P	**Pg**	**21 10 46.1**	**-0.4**
LTK	**Loutraki**	**1.55**	**83**	P	**Pb**	**21 10 45.0**	**-0.8**
LTK	**Loutraki**	**1.55**	**83**	P	**Pb**	**21 10 45.7**	**-0.1**
AGG	**Agios Georgios**	**1.56**	**41**	P	**Pb**	**21 10 45.3**	**-0.7**
AGG	**Agios Georgios**	**1.56**	**41**	P	**Pb**	**21 10 46.2**	**+0.2**
AGG				S	**Sg**	**21 11 07.8**	**+0.6**
AGG				AML	AML	21 11 19.2	
	comp=E,760μm,0.8s						
AGG				AML	AML	21 11 20.6	
	comp=N,657μm,0.6s						
AXAR	**Agios Charalam**	**1.58**	**54**	P	**Pb**	**21 10 46.5**	**+0.1**
LKR	**Lokris**	**1.75**	**62**	P	**Pb**	**21 10 49.5**	**+0.2**
IGT	**Igoumenitsa**	**1.76**	**343**	P	**Pb**	**21 10 49.5**	**0.0**
THL	**Klokotos Trika**	**1.88**	**24**	P	**Pb**	**21 10 51.3**	**-0.1**
VLI	**Velia**	**1.90**	**126**	P	**Pb**	**21 10 51.9**	**0.0**
STIP	**Stip**	**3.94**	**13**	*i* Pn	**Pb**	**21 11 22.6**	**-4.0**
MMB	**Musomiste**	**4.28**	**28**	*e*P	**Pn**	**21 11 22.6**	**+0.3**
MAKA	**Makarska**	**6.22**	**332**	*e*Pn	**Pn**	**21 11 47.9**	**-1.0**
KIJV	**Kijevo**	**7.07**	**332**	*e*Pn	**Pn**	**21 12 00.2**	**-0.3**
KIJV				Sn	**Sn**	**21 13 18.8**	**-2.2**
ZIRJ	**Zirje**	**7.09**	**327**	*i* Pn	**Pn**	**21 12 00.7**	**-0.1**
ZIRJ				Sn	**Sn**	**21 13 19.0**	**-2.4**
MORI	**Morici**	**7.23**	**328**	*e*Pn	**Pn**	**21 12 03.3**	**+0.6**
DUGI	**Dugi Otok**	**7.61**	**326**	*e*Pn	**Pn**	**21 12 09.3**	**+1.3**
UDBI	**Udbina**	**7.76**	**331**	*e*Pn	**Pn**	**21 12 10.3**	**+0.3**
NVLJ	**Novalja**	**8.15**	**327**	*e*Pn	**Pn**	**21 12 16.6**	**+1.4**
MLR	**Muntele Rosu**	**8.48**	**24**	P	Pn	21 12 27.6	+7.6
	comp=N,0.1nm,0.3s,baz=183,slow=18,SNR=4.0						
BRTR	**Keskin Array B**	**10.03**	**75**	P	Pn	21 12 47.2	+5.9
	comp=N,0.1nm,0.3s,baz=256,slow=12,SNR=2.2						
HFS	**Hagfors**	**22.79**	**351**	P	**P**	**21 15 22.0**	**+2.5**
	comp=N,3.7nm,0.8s,baz=155,slow=11,SNR=2.6						
FINES	**FINESS Array B**	**23.83**	**6**	P	**P**	**21 15 30.2**	**+0.2**
	comp=N,0.4nm,0.5s,baz=157,slow=7.5,SNR=2.8						
TORD	**Torodi Ar. Bea**	**30.02**	**220**	P	**P**	**21 16 27.1**	**+0.9**
	comp=N,0.3nm,0.6s,baz=23,slow=10,SNR=2.0						
MKAR	**Makanchi Array**	**45.14**	**58**	P	**P**	**21 18 34.8**	**+1.2**
	comp=N,0.2nm,0.4s,baz=276,slow=7.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**45.62**	**48**	P	**P**	**21 18 37.2**	**-0.1**
	comp=N,0.6nm,0.5s,baz=261,slow=9.7,SNR=2.5						

*IDC **23** 21:24:34.9±1.5,51.82N×175.30W,h38km±11km,mb4.2/40, mb1 4.3/42,mb1mx4.3/54,mbtmp4.5/42,ML4.5/2,MS4.1/33, Ms1 4.1/33,ms1mx4.0/51,Error ellipse: s-maj=14.3km s-min=8.7km az=168.0*

*NEIC **23** 21:24:34.7±1.9,51.60N±0.04×175.18W±0.05,h36km±2km, Error ellipse: s-maj=6.0km s-min=4.1km az=169.0*

*AEIC **23** 21:24:34±2.2,51.61N±0.07×175.21W±0.06,h26km±3km, ML4.6/30,mb4.9/307(NEIC),Error ellipse: s-maj=10.6km s-min=5.1km az=169.0*

*MOS **23** 21:24:34.7±1.1,51.77N×175.28W,h52km,mb4.8/21, Error ellipse: s-maj=7.2km s-min=5.6km az=83.5*

*GCMT **23** 21:24:36.0±0.3,51.58N±0.02×175.21W±0.03,h40km, MW5.0/94,Moment Tensor Solution. s68,c85; s94,c126; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr3.71±.15; Mθθ-3.09±.11; Mϕϕ-0.61±.11; Mrθ1.55±.12; Mrϕ-1.75±.10; Mθϕ1.39±.09; Best double couple: M0 4.38200×10^16^ NP1:ϕ250.00000°,δ32.00000°,λ103.00000°. NP2: ϕ55.00000°,δ59.00000°,λ82.00000°. Principal axes: T 4.2700, Plg75.0000°, Azm304.0000°; N 0.2290, Plg7.0000°, Azm59.0000°; P -4.4950, Plg14.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 23 21:24:35.4±0.7,**51.67N**±0.06×**175.30W**±0.03,**h45**km±4km, **n836,σ0.91/785, mb4.8**/205,**MS4.2**/40,**35C-1D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSIG	**Igitkin Island**	**0.50**	**310**		**Pn**	**21 24 46.8**	**+0.3**
GSMY	**Great Sitkin M**	**0.60**	**309**		**Pn**	**21 24 48.3**	**+0.6**
GSTR	**Great Sitkin T**	**0.64**	**312**		**Pn**	**21 24 49.2**	**+1.1**
GSCK	**Great Sitkin C**	**0.64**	**303**		**Pn**	**21 24 48.8**	**+0.7**
GSCK					**Sn**	**21 24 59.4**	**+2.1**
GSTD	**Great Sitkin T**	**0.65**	**307**		**Pn**	**21 24 49.0**	**+0.6**
ADAG	**Mount Adagdak**	**0.87**	**292**		**Pn**	**21 24 52.4**	**+1.2**
ATKA	**Atka Island**	**0.87**	**52**		**Sn**	**21 25 01.5**	**-1.2**
ATKA	**Atka Island**	**0.87**	**52**	Pn	**Pn**	**21 24 50.2**	**-1.0**
ADK	**Adak**	**0.89**	**285**	P	**Pn**	**21 24 51.9**	**+0.4**
ADK						21 25 04.1	
ADK	**Adak**	**0.89**	**285**		**Pn**	**21 24 51.9**	**+0.4**
ADK	**Adak**	**0.89**	**285**	Sn	**Sn**	**21 25 04.1**	**+0.9**
KOKL	**Mount Kliuchef**	**0.94**	**46**		**Pn**	**21 24 52.0**	**-0.3**
KOFP	**Korovin Flat P**	**0.96**	**50**		**Pn**	**21 24 52.1**	**-0.5**
KOSE	**Korovin Southe**	**1.03**	**48**		**Pn**	**21 24 53.3**	**-0.1**
KIWB	**Kanaga Island**	**1.17**	**280**		**Pn**	**21 24 55.7**	**+0.5**
KIKV	**Kanaga Island**	**1.18**	**281**		**Pn**	**21 24 56.1**	**+0.6**
KICM	**Kanaga Island**	**1.20**	**283**		**Pn**	**21 24 56.6**	**+0.8**
KIMD	**Kanaga Island**	**1.21**	**275**		**Pn**	**21 24 55.8**	**0.0**
TAFP	**Tanaga Falls P**	**1.68**	**279**		**Pn**	**21 25 03.5**	**+1.1**
TASE	**Tanaga Southea**	**1.71**	**277**		**Pn**	**21 25 03.9**	**+1.2**
GAEA	**Gareloi East**	**2.15**	**274**		**Pn**	**21 25 10.7**	**+2.0**
GALAA	**Gareloi Lava P**	**2.16**	**274**		**Pn**	**21 25 10.8**	**+1.9**
NIKH	**Nikolski High**	**4.16**	**69**		**Sn**	**21 26 24.5**	**+0.8**
NIKH	**Nikolski High**	**4.16**	**69**		**Pn**	**21 25 35.8**	**-0.6**
OKFG	**Magazine Ridge**	**4.84**	**66**		**Pn**	**21 25 47.3**	**+1.7**
MSW	**Makushin Switc**	**5.64**	**63**		**Pn**	**21 25 58.6**	**+2.0**
MSW					**Sn**	**21 27 02.9**	**+2.9**
UNV	**Unalaska Valle**	**5.77**	**64**		**Pn**	**21 25 57.8**	**-0.6**
UNV	**Unalaska Valle**	**5.77**	**64**		**Sn**	**21 27 05.9**	**+2.7**
AKUT	**Akutan**	**6.27**	**63**		**Pn**	**21 26 04.7**	**-0.5**
SMY	**Shemya**	**6.60**	**283**	P	**Pn**	**21 26 10.9**	**+1.1**
SMY	**Shemya**	**6.60**	**283**	Pn	**Pn**	**21 26 10.9**	**+1.1**
FALS	**False Pass**	**7.81**	**61**	Pn	**Pn**	**21 26 27.2**	**+0.9**
SDPT	**Sand Point**	**9.57**	**62**	Pn	**Pn**	**21 26 51.4**	**+1.0**
CNBA	**Chernabura Isl**	**9.93**	**65**	Pn	**Pn**	**21 26 55.0**	**-0.4**
GAMB	**Gambell**	**12.29**	**8**		**Pn**	**21 27 29.5**	**+2.0**
CHIR	**Chirikof Islan**	**12.36**	**63**	Pn	**Pn**	**21 27 28.4**	**-0.1**
ANM	**Nome**	**13.93**	**18**	P	**Pn**	**21 27 52.8**	**+2.9**
ANM	**Nome**	**13.93**	**18**	Pn	**Pn**	**21 27 52.8**	**+2.9**
OHAK	**Old Harbor**	**13.93**	**58**		**Pn**	**21 27 48.4**	**-1.5**
SVW2	**Sparrevohn**	**14.38**	**41**		**Pn**	**21 27 55.5**	**-0.5**
KDAK	**Kodiak Island**	**14.44**	**56**	Pn	**Pn**	**21 27 54.8**	**-2.0**
	1.8nm,0.3s,baz=283,slow=1.7,SNR=17						
KDAK					**Sn**	**21 30 35.0**	**-0.3**
	0.1nm,0.3s,baz=116,slow=8.8,SNR=2.0						
KDAK	**Kodiak Island**	**14.44**	**56**		**Pn**	**21 27 56.6**	**-0.2**
TTA	**Tatalina**	**15.28**	**35**	P	**Pn**	**21 28 09.4**	**+1.5**
TTA	**Tatalina**	**15.28**	**35**		**Pn**	**21 28 09.4**	**+1.5**
RSO	**Redoubt South**	**15.29**	**46**		**Pn**	**21 28 09.2**	**+1.1**
HOM	**Homer**	**15.49**	**50**		**P**	**21 28 12.9**	**-1.4**
CNPM	**China Poot**	**15.64**	**50**	Pn	**Pn**	**21 28 13.3**	**+0.8**
CNPM				IAmb	IAmb	21 28 27.6	
	comp=Z,146nm,1.4s						
PET	**Petropavlovsk**	**15.95**	**285**	P	**Pn**	**21 28 15.2**	**-1.3**
PET				pmax	pmax		
	comp=Z,44nm,1.3s						
PET	**Petropavlovsk**	**15.95**	**285**	Pn	**Pn**	**21 28 15.2**	**-1.3**
SKT	**Skwentna**	**16.50**	**42**	P	**P**	**21 28 26.3**	**+0.8**
PEA0B	**Petropavlovsk-**	**16.51**	**286**	P	**Pn**	**21 28 23.9**	**+0.3**
PEA0B				pmax	pmax		
	comp=Z,104nm,1.5s						
PEA0B	**Petropavlovsk-**	**16.51**	**286**	Pn	**Pn**	**21 28 23.9**	**+0.3**
PEA0B				IAmb	IAmb	21 28 42.4	
	comp=Z,104nm,1.4s						
PETK	**Petropavlovsk-**	**16.51**	**286**	P	**P**	**21 28 25.4**	**-0.3**
PETK	**Petropavlovsk-**	**16.51**	**286**	Pn	**P**	**21 28 26.2**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=96,slow=13,SNR=15						
PETK				LR	LR	21 34 21.1	
	comp=Z,539nm,21.0s,baz=66,slow=36						
PETK	**Petropavlovsk-**	**16.51**	**286**	P	**P**	**21 28 25.4**	**-0.3**
SUA	**Susitna One**	**16.60**	**44**	P	**P**	**21 28 26.6**	**-0.1**
SEW	**Seward**	**16.68**	**50**	Pn	**Pn**	**21 28 24.4**	**-1.2**
PPLA	**Purkeypile**	**16.69**	**39**	P	**P**	**21 28 27.9**	**+0.1**
RC01	**Rabbit Creek A**	**16.90**	**46**	Pn	**Pn**	**21 28 28.0**	**-0.4**
PMR	**Palmer**	**17.36**	**45**	P	**Pn**	**21 28 31.4**	**-2.7**
PMR				pmax	pmax		
	comp=Z,21nm,1.4s						
PMR	**Palmer**	**17.36**	**45**	Pn	**Pn**	**21 28 31.4**	**-2.7**
RDOG	**Red Dog Mine**	**17.51**	**16**	P	**P**	**21 28 39.7**	**+3.1**
GHO	**Glory Hole Cre**	**17.52**	**45**	P	**Pn**	**21 28 36.1**	**-0.2**
KTH	**Kantishna Hill**	**17.53**	**38**	P	**P**	**21 28 37.5**	**+0.6**
KTH				IAmb	IAmb	21 28 42.1	
	comp=Z,108nm,1.0s						
KNK	**Knik Glacier**	**17.59**	**46**	P	**Pn**	**21 28 36.0**	**-1.0**
TRF	**Thorofare Moun**	**17.72**	**39**	P	**P**	**21 28 39.0**	**-0.1**
BPAW	**Bear Paw Mtn.**	**17.79**	**36**	P	**P**	**21 28 40.6**	**+0.8**
BPAW				IAmb	IAmb	21 28 47.0	
	comp=Z,51nm,0.9s						
SML	**Sawmill**	**17.80**	**45**	P	**P**	**21 28 40.0**	**+0.1**
MID	**Middleton Isla**	**18.01**	**53**	P	**P**	**21 28 41.0**	**-1.2**
MID				pmax	pmax		
	comp=Z,343nm,1.0s						
MID	**Middleton Isla**	**18.01**	**53**	P	**P**	**21 28 41.0**	**-1.2**
IMAR	**Indian Mountai**	**18.02**	**29**	P	**P**	**21 28 42.2**	**0.0**
GLI	**Glacier Island**	**18.03**	**48**	P	**Pn**	**21 28 43.2**	**+0.8**
HIN	**Hinchinbrook I**	**18.17**	**50**	P	**Pn**	**21 28 44.3**	**+0.2**
HIN				IAmb	IAmb	21 28 47.8	
	comp=Z,199nm,1.5s						
SCM	**Sheep Creek Mo**	**18.25**	**45**	P	**P**	**21 28 44.4**	**-0.5**
SCM				pmax	pmax		
	comp=Z,38nm,1.1s						
SCM	**Sheep Creek Mo**	**18.25**	**45**	P	**P**	**21 28 44.4**	**-0.5**
RND	**Reindeer**	**18.26**	**40**	P	**Pn**	**21 28 45.6**	**+0.4**
RND				pmax	pmax		
	comp=Z,30nm,0.7s						
RND	**Reindeer**	**18.26**	**40**	P	**Pn**	**21 28 45.6**	**+0.4**
RND				IAmb	IAmb	21 28 48.9	
	comp=Z,30nm,0.7s						
FID	**Port Fidalgo**	**18.28**	**49**	P	**P**	**21 28 43.7**	**-1.5**
BWN	**Browne**	**18.40**	**37**	P	**Pn**	**21 28 49.2**	**+2.4**
BWN				IAmb	IAmb	21 28 57.1	
	comp=Z,93nm,1.0s						
MLY	**Manley**	**18.41**	**34**	IAmb	IAmb	21 28 52.8	
	comp=Z,55nm,1.1s						
EYAK	**Cordova Ski Ar**	**18.57**	**50**	P	**Pn**	**21 28 49.5**	**+0.6**
BILL	**Bilibino**	**18.70**	**338**	*e*P	**Pn**	**21 28 52.0**	**+1.5**
BILL				pmax	pmax		
	comp=Z,56nm,1.0s						
BILL				MLR	MLR		
	comp=Z,1μm,23.0s						
BILL	**Bilibino**	**18.70**	**338**	P	**Pn**	**21 28 51.9**	**+1.4**
BILL				IAmb	IAmb	21 28 56.4	
	comp=Z,85nm,1.1s						
NEA	**Nenana**	**18.75**	**36**	P	**P**	**21 28 50.2**	**-0.1**
MDM	**Murphy Dome**	**19.26**	**36**	IAmb	IAmb	21 29 02.9	
	comp=Z,35nm,0.6s						
TCOL	**CIGO, UAF Yank**	**19.35**	**36**	P	**P**	**21 28 57.5**	**+0.7**
	baz=240						
COLA	**College**	**19.36**	**36**	P	**Pn**	**21 28 59.1**	**+0.8**
COLA				pmax	pmax		
	comp=Z,33nm,0.9s						
COLA	**College**	**19.36**	**36**	P	**Pn**	**21 28 59.1**	**+0.8**
COLA				IAmb	IAmb	21 29 11.8	
	comp=Z,33nm,0.9s						
PAX	**Paxson**	**19.47**	**43**	P	**P**	**21 28 57.7**	**-0.6**
PAX				pmax	pmax		
	comp=Z,24nm,0.9s						
PAX	**Paxson**	**19.47**	**43**	P	**P**	**21 28 57.7**	**-0.6**
HDA	**Harding Lake**	**19.47**	**38**	IAmb	IAmb	21 29 04.9	
	comp=Z,29nm,0.8s						
HDA	**Harding Lake**	**19.47**	**38**	P	**P**	**21 28 58.6**	**+0.5**
	baz=242						
POKR	**Poker Plat Res**	**19.63**	**36**	P	**P**	**21 29 00.5**	**+0.6**
	baz=240						
IL31		**19.67**	**37**	P	**P**	**21 29 00.8**	**+0.6**
ILAR	**Eielson Array**	**19.67**	**37**	P	**P**	**21 28 59.8**	**-0.5**
ILAR				S	**S**	**21 32 37.2**	**-2.3**
ILAR	**Eielson Array**	**19.67**	**37**	P	**P**	**21 28 58.5**	**-1.8**
	comp=Z,1.9nm,0.3s,baz=227,slow=8.4,SNR=31						
ILAR				S	**S**	**21 32 37.2**	**-2.3**
	comp=Z,0.0nm,0.3s,baz=235,slow=19,SNR=2.4						
ILAR				LR	LR	21 36 31.5	
	comp=Z,426nm,21.8s,baz=266,slow=37						
ILAR				ScP	**ScP**	**21 36 49.9**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=286,slow=3.6,SNR=7.9						
ILAR	**Eielson Array**	**19.67**	**37**	P	**P**	**21 28 59.8**	**-0.5**
GLB	**Gilahina Butte**	**19.72**	**48**	P	**P**	**21 29 01.1**	**+0.1**
COLD	**Coldfoot**	**19.91**	**29**	P	**Pn**	**21 29 05.1**	**+0.3**
RIDG	**Independent Ri**	**20.02**	**41**	IAmb	IAmb	21 29 10.9	
	comp=Z,54nm,1.0s						
MENT	**Mentasta**	**20.21**	**44**	P	**P**	**21 29 06.1**	**-0.2**
MENT				IAmb	IAmb	21 29 16.0	
	comp=Z,25nm,0.6s						
BALM	**Baldy**	**20.31**	**50**	P	**P**	**21 29 06.4**	**-1.0**
DOT	**Dot Lake**	**20.31**	**42**	IAmb	IAmb	21 29 11.5	
	comp=Z,55nm,1.0s						
SCRK	**Sand Creek**	**20.47**	**41**	IAmb	IAmb	21 29 13.1	
	comp=Z,110nm,0.8s						
SEY	**Seymchan**	**20.53**	**316**	*e*P	Pn	21 29 11.5	-0.6
SEY	**Seymchan**	**20.53**	**316**	P	**P**	**21 29 09.4**	**-0.2**
	comp=Z,19nm,1.2s,baz=107,slow=12,SNR=17						
SEY				ScP	**ScP**	**21 36 52.7**	**+1.0**
	comp=Z,2.8nm,0.6s,baz=121,slow=2.8,SNR=8.5						
PRP	**Porcupine Dome**	**20.53**	**36**	P	**P**	**21 29 08.1**	**-1.7**
MA2	**Magadan**	**20.53**	**306**	*e*P	Pn

KLR **Kul'dur** 33.20 287 *ce*P P 21 31 07.1 -0.5
KLR pmax pmax
comp=Z,6.0nm,0.9s
KLR **Kul'dur** 33.20 287 P P 21 31 07.2 -0.3
comp=Z,6.4nm,0.4s,baz=69,slow=7.1,SNR=57
KLR LR LR 21 44 32.4
comp=Z,261nm,21.4s,baz=74,slow=36
YKA **Yellowknife Ar** 33.44 47 P P 21 31 08.7 -0.9
comp=Z,1.3nm,0.5s,baz=277,slow=9.2,SNR=14
YKA PcP PcP 21 33 50.3 +0.6
comp=Z,1.5nm,0.6s,baz=285,slow=3.3,SNR=13
YKA ScP ScP 21 37 29.6 -0.6
comp=Z,0.2nm,0.3s,baz=287,slow=3.5,SNR=4.4
YKA LR LR 21 45 35.7
comp=Z,516nm,20.2s,baz=0.0,slow=38
D03D **Eldon** 33.49 76 P P 21 31 11.1 +0.9
baz=297
B05A **Bryant** 33.76 74 P P 21 31 13.4 +0.9
baz=296
E04D **Cinebar** 34.26 77 P P 21 31 18.7 +1.8
baz=298
LON **Longmire** 34.63 77 P P 21 31 20.7 +0.6
LON pmax pmax
comp=Z,5.0nm,0.7s
LON **Longmire** 34.63 77 P P 21 31 20.7 +0.6
LON IAmb IAmb 21 31 34.4
comp=Z,5.3nm,0.7s
H11N2 **WAKE ISLAND Hy** 34.80 210 T T 22 08 01.2
baz=18,slow=76,SNR=2145
H11N3 **WAKE ISLAND Hy** 34.81 210 T T 22 08 08.3
baz=18,slow=76,SNR=2397
H11N1 **WAKE ISLAND Hy** 34.82 210 T T 22 08 02.7
baz=18,slow=76,SNR=1621
B08A **Colville Reser** 35.37 73 P P 21 31 26.8 +0.3
B08A IAmb IAmb 21 31 34.4
comp=Z,12nm,0.8s
H04A **Detroit Lake** 35.42 80 P P 21 31 27.2 +0.3
H04A IAmb IAmb 21 31 40.2
comp=Z,9.4nm,0.8s
USA0B **Ussuriysk Arra** 35.42 279 *e*P P 21 31 27.0 +0.1
USA0B **Ussuriysk Arra** 35.42 279 IAmb IAmb 21 31 29.1
comp=Z,24nm,1.2s
USRK **Ussuriysk Ar.** 35.42 279 P P 21 31 26.7 -0.1
comp=Z,18nm,0.9s,baz=55,slow=9.2,SNR=27
USRK PcP PcP 21 33 56.3 +0.6
comp=Z,3.4nm,0.6s,baz=46,slow=2.3,SNR=7.9
USRK LR LR 21 45 05.1
comp=Z,305nm,21.4s,baz=64,slow=35
G05D **Wamic, OR** 35.66 79 P P 21 31 30.4 +1.4
baz=300
I04A **Tendick Farm,** 35.74 81 P P 21 31 30.7 +0.9
baz=302
MJAR **Matsushiro Arr** 35.99 264 P P 21 31 32.5 +0.5
comp=Z,4.9nm,0.7s,baz=46,slow=8.0,SNR=15
MJAR PcP PcP 21 33 58.1 +0.5
comp=Z,2.4nm,0.8s,baz=37,slow=1.7,SNR=5.4
MJAR LR LR 21 48 18.6
comp=Z,238nm,18.7s,baz=125,slow=40
MJAR **Matsushiro Arr** 35.99 264 P P 21 31 32.4 +0.5
MJAR PcP 21 33 58.7 +1.0
MJB9 **Matsu-Tunnel** 35.99 264 P P 21 31 32.7 +0.8
MJB9 IAmb IAmb 21 31 35.8
comp=Z,21nm,0.9s
MAJO **Matsushiro** 35.99 264 ⇓ *e*P P 21 31 33.2 +1.3
MAJO pmax pmax
comp=Z,18nm,0.9s
MAJO **Matsushiro** 35.99 264 P P 21 31 32.4 +0.5
MAJO IAmb IAmb 21 31 35.8
comp=Z,20nm,0.9s
MAT **Matsushiro** 35.99 264 P P 21 31 32.4 +0.5
MAT S S 21 37 01.2 -6.2
H11S1 **WAKE ISLAND Hy** 36.01 210 T T 22 09 36.9
baz=17,slow=74
H11S2 **WAKE ISLAND Hy** 36.03 210 T T 22 09 40.1
baz=17
H11S3 **WAKE ISLAND Hy** 36.03 210 T T 22 09 38.1
baz=17,slow=74
HAWA **Hanford** 36.18 76 P P 21 31 32.4 -0.9
HAWA IAmb IAmb 21 31 41.8
comp=Z,15nm,0.7s
PINE **Pine Mountain** 36.64 80 P P 21 31 38.0 +0.4
PINE IAmb IAmb 21 31 44.0
comp=Z,10nm,1.2s
L04D **Klamath Falls** 36.66 84 P P 21 31 39.3 +1.6
baz=304
YBH **Yreka Blue Hor** 36.67 85 P P 21 31 37.8 0.0
YBH pmax pmax
comp=Z,13nm,1.4s
YBH **Yreka Blue Hor** 36.67 85 P P 21 31 37.8 0.0
YBH IAmb IAmb 21 31 45.6
comp=Z,13nm,1.4s
NEW **Newport** 36.72 72 P P 21 31 38.6 +0.5
baz=309,slow=8.6
NEW LR LR 21 44 00.2
comp=Z,382nm,18.4s,baz=248,slow=32
NEW **Newport** 36.72 72 IAmb IAmb 21 31 45.8
comp=Z,12nm,0.8s
NEW **Newport** 36.72 72 P P 21 31 38.8 +0.7
baz=298,SNR=10
J05D **Fort Rock, OR** 36.73 81 P P 21 31 39.8 +1.5
baz=302
KMRM **Mail Ridge** 36.92 87 P P 21 31 41.3 +1.5
KMRM IAmb IAmb 21 31 59.0
comp=Z,16nm,0.9s
N02D **Trinity Center** 37.11 86 P P 21 31 43.0 +1.5
baz=305
K05A **Summer Lake** 37.25 82 P P 21 31 44.0 +1.2
K05A IAmb IAmb 21 31 50.5
comp=Z,10nm,0.8s
JHJ2 **Mitsune** 37.27 258 P P 21 31 42.7 -0.1
I07A **Izee** 37.37 79 IAmb IAmb 21 32 01.8
comp=Z,13nm,1.4s
F10A **Beach Ranch, E** 37.77 75 IAmb IAmb 21 31 56.5
comp=Z,8.9nm,1.0s
MOD **Modoc Plateau** 38.07 83 P P 21 31 50.1 +0.5
BMO **Blue Mountains** 38.30 77 P P 21 31 51.4 -0.1
BMO pmax pmax
comp=Z,3.0nm,0.8s
BMO **Blue Mountains** 38.30 77 P P 21 31 51.4 -0.1
J08A **Circle Bar Ran** 38.39 79 P P 21 31 52.1 -0.2
RES **Resolute Bay** 38.57 25 P P 21 31 52.3 -1.0
comp=Z,1.8nm,0.6s,baz=245,slow=18,SNR=6.2
RES PcP PcP 21 34 04.7 -0.1
comp=Z,6.9nm,0.9s,baz=237,slow=2.0,SNR=13
RES **Resolute Bay** 38.57 25 P P 21 31 55.0 +1.8
RES PcP 21 34 05.0 +0.2
ORV **Oroville** 38.68 87 P P 21 31 55.8 +1.2
ORV pmax pmax
comp=Z,7.0nm,1.5s
ORV **Oroville** 38.68 87 P P 21 31 55.8 +1.2
WVOR **Wild Horse Val** 38.80 81 P P 21 31 53.1 -2.7
WVOR pmax pmax
comp=Z,12nm,0.9s
WVOR **Wild Horse Val** 38.80 81 P P 21 31 53.0 -2.7
WVOR IAmb IAmb 21 32 03.6
comp=Z,12nm,0.8s
MSO **Missoula** 39.30 72 IAmb IAmb 21 32 15.0
comp=Z,17nm,1.2s
MSO **Missoula** 39.30 72 P P 21 32 00.4 +0.5
baz=300,SNR=6.7
BOD **Bodaibo** 39.55 308 *e*P P 21 32 00.0 -1.6
BOD pmax pmax
comp=Z,5.0nm,1.4s
CN2 **Changchun** 39.63 283 *e*P P 21 32 05.1 +2.6
PAHR **Pah Rah Range** 39.91 85 P P 21 32 06.7 +1.7
PNTR **Pine Nut** 40.14 86 P P 21 32 07.6 +0.5
PNTR IAmb IAmb 21 32 19.1
comp=Z,15nm,0.7s
HIA **Hailar** 40.20 293 PcP 21 34 11.2 +0.8
JCJ **Chichijima** 40.21 249 P P 21 32 08.3 +0.8
comp=Z,236nm,1.0s,baz=322,slow=4.1,SNR=4.0
JCJ LR LR 21 44 38.2
comp=Z,638nm,21.8s,baz=60,slow=30
YERR **Yerington** 40.43 86 P P 21 32 09.7 +0.3
WAKR **Walker** 40.60 86 P P 21 32 12.2 +1.4
LRM **Limekiln Ridge** 40.71 73 P P 21 32 08.2 -3.5
DLMT **Dillon** 40.87 73 P P 21 32 12.6 -0.3
RYN **Ryan** 41.09 86 P P 21 32 15.9 +1.0
KVN **Kaiserville** 41.10 85 P P 21 32 13.9 -1.0
KVN pmax pmax
comp=Z,5.0nm,1.1s
KVN **Kaiserville** 41.10 85 P P 21 32 13.9 -1.0
EGMT **Eagleton** 41.15 68 IAmb IAmb 21 32 21.2
comp=Z,12nm,0.7s
EGMT **Eagleton** 41.15 68 P P 21 32 15.4 +0.3
baz=300

PMPB **Monarch Peak** 41.17 90 P P 21 32 13.9 -1.5
PMPB IAmb IAmb 21 32 30.7
comp=Z,67nm,1.4s
NVAR **Mina Array Bea** 41.35 86 P P 21 32 17.3 +0.2
comp=Z,1.1nm,0.7s,baz=308,slow=7.3,SNR=3.7
NVAR PcP PcP 21 34 15.1 +0.5
comp=Z,1.4nm,0.7s,baz=284,slow=3.6,SNR=3.7
NVAR ScP ScP 21 38 01.1 +0.4
comp=Z,0.8nm,0.8s,baz=282,slow=4.5,SNR=3.9
NVAR LR LR 21 46 18.5
comp=Z,184nm,19.0s,baz=322,slow=32
MDPB **Devils Postpil** 41.36 87 P P 21 32 17.9 +0.7
NV11 **Mina Array Sit** 41.44 85 P P 21 32 18.3 +0.6
KSRS **Korea Array** 41.81 273 P P 21 32 21.4 +0.8
comp=Z,12nm,0.8s,baz=56,slow=8.1,SNR=23
KS19 **Wonju Array Si** 41.82 273 P P 21 32 20.7 +0.1
KS19 IAmb IAmb 21 32 24.0
comp=Z,33nm,1.1s
KSAR **Wonju Array Be** 41.84 273 P P 21 32 21.1 +0.3
KSAR **Wonju Array Be** 41.84 273 P P 21 32 21.1 +0.3
ELK **Elko** 41.85 81 P P 21 32 22.0 +0.8
ELK pmax pmax
comp=Z,6.0nm,0.8s
ELK **Elko** 41.85 81 P P 21 32 21.9 +0.8
YHL **Hebgen Lake** 41.98 73 P P 21 32 21.9 -0.3
YHB **Horse Butte** 42.03 73 P P 21 32 22.3 -0.2
YMR **Madison River** 42.22 73 P P 21 32 24.3 +0.2
YHH **Holmes Hill** 42.22 73 P P 21 32 23.3 -0.8
YNR **Norris Junctio** 42.36 73 P P 21 32 26.2 +1.0
YPP **Pitchstone Pla** 42.53 74 P P 21 32 28.2 +1.5
H17A **Grant Village** 42.60 73 P P 21 32 28.4 +1.2
H17A IAmb IAmb 21 32 30.3
comp=Z,23nm,1.4s
H17A **Grant Village** 42.60 73 P P 21 32 28.8 +1.6
baz=304,SNR=7.3
LKWY **Lake** 42.61 73 P P 21 32 28.5 +1.2
LKWY **Lake** 42.61 73 P P 21 32 28.5 +1.2
IMW **Indian Meadow** 42.66 74 P P 21 32 27.8 +0.1
FLWY **Flagg Ranch** 42.70 74 P P 21 32 28.1 +0.2
JNU **Nakatsue** 42.78 266 P P 21 32 29.2 +0.7
JNU IAmb IAmb 21 32 32.8
comp=Z,24nm,1.0s
MOOW **Moose Ponds** 42.86 74 P P 21 32 30.0 +0.8
TPAW **Teton Pass** 42.88 75 P P 21 32 30.1 +0.6
RLMT **Red Lodge** 42.97 72 IAmb IAmb 21 32 42.0
comp=Z,14nm,0.8s
RLMT **Red Lodge** 42.97 72 P P 21 32 31.1 +0.9
baz=303
R11A **Troy Canyon, C** 43.08 84 P P 21 32 31.8 +0.7
baz=308
ARVC **Arvin** 43.10 90 P P 21 32 32.5 +1.4
baz=311
BGU **Big Grassy Mou** 43.10 79 P P 21 32 32.2 +1.1
TPNV **Topopah Spring** 43.54 86 P P 21 32 35.7 +0.9
TPNV pmax pmax
comp=Z,11nm,0.8s
TPNV **Topopah Spring** 43.54 86 P P 21 32 35.7 +0.9
TPNV IAmb IAmb 21 32 51.8
comp=Z,11nm,0.8s
TPNV **Topopah Spring** 43.54 86 P P 21 32 35.6 +0.8
baz=309
DUG **Dugway, Tooele** 43.67 80 P P 21 32 36.4 +0.7
DUG pmax pmax
comp=Z,12nm,1.1s
DUG **Dugway, Tooele** 43.67 80 P P 21 32 36.4 +0.7
DUG **Dugway, Tooele** 43.67 80 P P 21 32 36.9 +1.1
baz=307
TULEG **The** 44.01 19 P P 21 32 39.4 +1.6
PSUT **Pine Spring** 44.04 82 P P 21 32 39.6 +0.8
DGMT **Dagmar** 44.09 65 P P 21 32 39.3 +0.4
DGMT IAmb IAmb 21 32 40.2
comp=Z,41nm,1.3s
DGMT **Dagmar** 44.09 65 P P 21 32 39.0 +0.1
baz=302
BW06 **Boulder Array** 44.13 75 IAmb IAmb 21 32 40.9
comp=Z,11nm,0.8s
BW06 **Boulder Array** 44.13 75 P P 21 32 39.7 +0.2
baz=305,SNR=17
PD31 **Pinedale Array** 44.13 75 P P 21 32 39.4 -0.1
PD31 IAmb IAmb 21 32 40.9
comp=Z,10nm,0.8s
PDAR **Pinedale Array** 44.13 75 P P 21 32 39.6 +0.1
comp=Z,9.6nm,0.7s,baz=306,slow=4.1,SNR=82
PDAR LR LR 21 48 11.8
comp=Z,297nm,18.4s,baz=314,slow=32
PDAR **Pinedale Array** 44.13 75 P P 21 32 39.2 -0.4
FCC **Fort Churchill** 44.16 48 P P 21 32 38.2 -1.1
FCC pmax pmax
comp=Z,4.0nm,1.4s
FCC **Fort Churchill** 44.16 48 P P 21 32 38.2 -1.1
GSC **Goldstone, Bar** 44.25 88 P P 21 32 41.3 +0.9
baz=310
JLU **Jordanelle** 44.26 78 P P 21 32 39.7 -0.9
NLU **North Lily Min** 44.27 79 P P 21 32 40.5 -0.1
MSU **Marysvale** 45.09 81 P P 21 32 46.3 -0.9
MSU **Marysvale** 45.09 81 P P 21 32 46.3 -0.9
TMUT **Trail Mountain** 45.20 80 P P 21 32 48.7 +0.6
GMRC **Granite Mounta** 45.30 88 P P 21 32 49.4 +0.6
baz=311
LCMT **Little Creek M** 45.37 84 P P 21 32 49.9 +0.6
MTPU **Mount Pierson** 45.37 82 P P 21 32 48.1 -1.5
RDMU **Red Mountain** 45.42 77 P P 21 32 49.9 +0.1
Q16A **Castle Valley** 45.45 80 P P 21 32 50.6 +0.6
K22A **Casper** 46.01 73 P P 21 32 54.9 +0.5
baz=306
RWWY **Rawlins** 46.17 74 P P 21 32 55.0 -0.8
RWWY IAmb IAmb 21 33 11.2
comp=Z,13nm,1.1s
W13A **Hualapai Mount** 46.20 86 P P 21 32 56.9 +0.9
U15A **North Rim** 46.33 84 P P 21 32 56.9 -0.2
U15A IAmb IAmb 21 33 14.2
comp=Z,8.4nm,0.9s
O20A **White River Ci** 46.49 77 P P 21 32 58.1 -0.1
O20A IAmb IAmb 21 33 03.2
comp=Z,16nm,0.6s
O20A **White River Ci** 46.49 77 P P 21 32 58.8 +0.6
baz=308
MDND **Maddock** 47.01 63 P P 21 33 02.1 +0.2
MDND **Maddock** 47.01 63 P P 21 33 02.6 +0.7
baz=304
N23A **Red Feather La** 47.41 74 P P 21 33 05.5 0.0
N23A IAmb IAmb 21 33 22.6
comp=Z,8.8nm,0.9s
N23A **Red Feather La** 47.41 74 P P 21 33 05.2 -0.3
baz=308
BJI **Beijing** 47.44 284 P P 21 33 06.5 +1.2
BJI pmax pmax
comp=Z,11nm,0.9s
BJT **Baijiatuan** 47.46 284 IAmb IAmb 21 33 07.8
comp=Z,8.6nm,0.6s
WUAZ **Wupatki** 47.48 84 P P 21 33 06.0 +0.1
WUAZ IAmb IAmb 21 33 22.6
comp=Z,6.0nm,0.7s
WUAZ **Wupatki** 47.48 84 P P 21 33 06.5 +0.5
baz=311
ULM **Lac du Bonnet** 47.68 59 P P 21 33 06.5 -0.6
comp=Z,3.6nm,0.6s,baz=296,slow=7.2,SNR=6.3
ULM LR LR 21 54 51.8
comp=Z,180nm,18.8s,baz=282,slow=38
ULM **Lac du Bonnet** 47.68 59 IAmb IAmb 21 33 07.5
comp=Z,5.3nm,0.8s
TLY **Talaya** 47.74 304 PcP PcP 21 34 36.1 0.0
comp=Z,3.8nm,0.5s,baz=96,slow=2.1,SNR=6.0
MVCO **Mesa Verde** 48.16 80 P P 21 33 11.4 +0.1
baz=310
ISCO **Idaho Springs** 48.29 75 P P 21 33 12.2 -0.1
baz=308
SONM **Songino Array** 48.45 298 P P 21 33 12.6 -0.7
comp=Z,1.0nm,0.7s,baz=55,slow=6.8,SNR=7.9
SONM PcP PcP 21 34 38.5 -0.4
comp=Z,6.1nm,0.9s,baz=72,slow=2.2,SNR=16
SONM ScP ScP 21 38 29.8 +0.2
comp=Z,1.6nm,0.7s,baz=68,slow=3.4,SNR=9.1
SONM LR LR 21 53 54.3
comp=Z,276nm,20.7s,baz=38,slow=36
SONM **Songino Array** 48.45 298 ScP 21 38 30.3 +0.6
W18A **Petrified Fore** 48.76 83 P P 21 33 16.1 +0.3
baz=311
AGMN **Agassiz Nation** 48.80 61 IAmb IAmb 21 33 16.8
comp=Z,22nm,0.9s
AGMN **Agassiz Nation** 48.80 61 P P 21 33 15.2 -0.6
baz=306
S22A **4UR Ranch, Cre** 48.84 78 P P 21 33 17.2 +0.6
S22A IAmb IAmb 21 33 22.5
comp=Z,8.5nm,1.1s

S22A **4UR Ranch, Cre** 48.84 78 P P 21 33 16.9 +0.3
baz=310
X18A **Snowflake** 49.01 84 PcP 21 34 38.6 -2.6
TIA **Tai'an** 49.28 279 P P 21 33 19.0 -0.6
TIA pmax pmax
comp=Z,43nm,1.1s
SUSD **Miller** 49.36 67 P P 21 33 19.7 -0.4
SUSD **Miller** 49.36 67 P P 21 33 20.4 +0.2
baz=307
KBS **Kingsbay** 49.59 358 P P 21 33 22.5 +1.1
KBS pmax pmax
comp=Z,39nm,1.4s
KBS **Kingsbay** 49.59 358 P P 21 33 22.5 +1.1
SDCO **Great Sand Dun** 49.65 77 IAmb IAmb 21 33 27.6
comp=Z,8.2nm,1.1s
SDCO **Great Sand Dun** 49.65 77 P P 21 33 23.4 +0.6
baz=310,SNR=9.0
HHC **Hu-ho-hao-te** 49.70 288 *e*P P 21 33 23.1 +0.3
HHC pmax pmax
comp=Z,4.0nm,1.1s
HHC pmax pmax
comp=Z,72nm,6.2s
HHC LR LR
comp=N,240nm,15.6s
HHC LR LR
comp=E,290nm,15.6s
HHC LR LR
comp=Z,400nm,14.2s
TUC **Tucson** 49.98 87 P P 21 33 26.2 +1.2
baz=313
SSE **Sheshan** 50.18 272 P P 21 33 27.5 +1.0
SPA0 **Spitsbergen Ar** 50.22 357 IAmb IAmb 21 33 40.5
comp=Z,29nm,1.0s
SPITS **Spitsbergen Ar** 50.22 357 P P 21 33 25.5 -0.7
comp=Z,1.8nm,0.4s,baz=80,slow=6.0,SNR=38
KSCO **Kaye Shedlock'** 50.58 74 P P 21 33 29.2 -0.4
KSCO IAmb IAmb 21 33 38.5
comp=Z,25nm,1.2s
KSCO **Kaye Shedlock'** 50.58 74 P P 21 33 30.2 +0.6
baz=310
T25A **Trinidad** 50.71 77 P P 21 33 31.1 +0.4
T25A IAmb IAmb 21 33 33.1
comp=Z,19nm,1.0s
T25A **Trinidad** 50.71 77 P P 21 33 31.1 +0.4
baz=310,SNR=8.9
ANMO **Albuquerque** 50.89 81 P P 21 33 32.5 +0.5
ANMO pmax pmax
comp=Z,6.0nm,1.2s
ANMO **Albuquerque** 50.89 81 P P 21 33 32.5 +0.5
ANMO **Albuquerque** 50.89 81 P P 21 33 32.3 +0.3
baz=312
NJ2 **Nanjing** 50.98 274 *e*P P 21 33 32.8 +0.3
NJ2 S S 21 40 42.8 -3.3
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 pmax pmax
comp=Z,200nm,5.2s
NJ2 LR LR
comp=N,370nm,17.5s
NJ2 LR LR
comp=E,500nm,15.6s
NJ2 LR LR
comp=Z,530nm,18.6s
ECSD **EROS Data Cent** 51.13 66 IAmb IAmb 21 33 33.2
comp=Z,10nm,0.8s
ECSD **EROS Data Cent** 51.13 66 P P 21 33 32.7 -0.8
baz=308
EYMN **Ely** 51.36 59 IAmb IAmb 21 33 35.6
comp=Z,16nm,1.0s
EYMN **Ely** 51.36 59 P P 21 33 35.0 -0.2
baz=308
121A **Cookes Peak, D** 51.69 84 P P 21 33 39.1 +1.1
baz=313
BGNE **Belgrade** 51.70 69 P P 21 33 37.1 -0.8
BGNE **Belgrade** 51.70 69 P P 21 33 38.1 +0.2
baz=309
E38A **The Farm, Brul** 52.16 60 IAmb IAmb 21 33 41.2
comp=Z,31nm,1.0s
SPMN **Marine on St.** 52.34 62 P P 21 33 41.5 -0.9
SPMN IAmb IAmb 21 33 42.5
comp=Z,11nm,0.7s
SPMN **Marine on St.** 52.34 62 P P 21 33 42.3 -0.1
baz=309
CBKS **Cedar Bluff** 52.43 73 P P 21 33 43.0 -0.3
CBKS pmax pmax
comp=Z,20nm,0.7s
CBKS **Cedar Bluff** 52.43 73 P P 21 33 43.0 -0.3
CBKS IAmb IAmb 21 33 44.5
comp=Z,20nm,0.7s
CBKS **Cedar Bluff** 52.43 73 P P 21 33 43.6 +0.3
baz=310
ILULI **Ilulissat** 52.71 22 P P 21 33 45.1 +0.3
ILULI pmax pmax
comp=Z,48nm,1.5s
ILULI **Ilulissat** 52.71 22 P P 21 33 45.1 +0.3
G40A **Rib Lake** 53.73 61 IAmb IAmb 21 33 53.2
comp=Z,28nm,1.2s
MNTX **Cornudas Mount** 53.74 83 P P 21 33 52.8 -0.3
MNTX IAmb IAmb 21 34 00.5
comp=Z,5.6nm,0.8s
MNTX **Cornudas Mount** 53.74 83 P P 21 33 53.7 +0.6
baz=314
COWI **Conover** 53.78 59 P P 21 33 51.9 -1.2
COWI IAmb IAmb 21 33 53.8
comp=Z,17nm,0.9s
MSTX **Muleshoe** 53.80 79 P P 21 33 53.5 -0.1
MSTX IAmb IAmb 21 33 55.2
comp=Z,17nm,1.1s
MSTX **Muleshoe** 53.80 79 P P 21 33 54.0 +0.4
baz=313
AMTX **Amarillo** 53.85 78 P P 21 33 53.5 -0.4
AMTX IAmb IAmb 21 33 56.1
comp=Z,14nm,1.2s
AMTX **Amarillo** 53.85 78 P P 21 33 54.3 +0.4
baz=312
KSU1 **Kansas State U** 54.09 70 P P 21 33 55.4 -0.1
SCIA **State Center** 54.22 66 P P 21 33 56.1 -0.3
SCIA **State Center** 54.22 66 P P 21 33 56.5 +0.2
baz=310
I40A **Norwalk** 54.39 62 P P 21 33 56.5 -1.0
I40A IAmb IAmb 21 33 57.9
comp=Z,20nm,0.9s
U32A **Winter Ranch,** 54.47 74 P P 21 33 57.9 -0.4
F42A **Maple Grove Fa** 54.53 59 P P 21 33 58.2 -0.3
E43A **Lone Tree Farm** 54.74 58 IAmb IAmb 21 34 01.7
comp=Z,28nm,1.1s
WHN **Wuhan** 54.81 276 ⇑ P P 21 34 00.8 +0.1
E44A **Grand Marais A** 55.14 57 P P 21 34 03.0 0.0
baz=311
JFWS **Jewell Farm** 55.23 63 IAmb IAmb 21 34 03.4
comp=Z,22nm,0.8s
JFWS **Jewell Farm** 55.23 63 P P 21 34 02.9 -0.7
baz=311
L40A **Anamosa** 55.24 64 IAmb IAmb 21 34 04.1
comp=Z,11nm,0.7s
ZAA0 **Zalesovo Array** 55.40 315 P P 21 34 05.3 +0.7
ZALV **Zalesovo Beam** 55.40 315 *i* P P 21 34 06.0 +1.4
ZALV **Zalesovo Beam** 55.40 315 P P 21 34 04.2 -0.4
comp=Z,0.4nm,0.3s,baz=54,slow=5.7,SNR=4.1
ZALV PcP PcP 21 35 04.4 -0.1
comp=Z,4.9nm,0.9s,baz=38,slow=3.6,SNR=10
ZALV ScP ScP 21 38 58.9 -0.4
comp=Z,0.3nm,0.3s,baz=41,slow=4.6,SNR=3.3
ZALV LR LR 21 59 36.5
comp=Z,327nm,18.4s,baz=64,slow=38
ZALV **Zalesovo Beam** 55.40 315 PcP 21 35 04.7 +0.1
H43A **Windswept, Lux** 55.57 60 P P 21 34 05.4 -0.6
WMOK **Wichita Mounta** 55.71 76 P P 21 34 06.8 -0.4
WMOK pmax pmax
comp=Z,9.0nm,1.1s
WMOK **Wichita Mounta** 55.71 76 P P 21 34 06.8 -0.4
WMOK IAmb IAmb 21 34 08.8
comp=Z,8.7nm,1.1s
WMOK **Wichita Mounta** 55.71 76 P P 21 34 07.3 +0.1
baz=313,SNR=5.8
XAN **Xi'an** 55.74 283 P P 21 34 07.8 +0.3
XAN pP pP 21 34 23.3 +3.4
XAN PcP PcP 21 35 07.3 +1.0
XAN pmax pmax
comp=Z,12nm,1.0s
XAN pmax pmax
comp=Z,160nm,4.5s
XAN LR LR
comp=N,190nm,20.6s
XAN LR LR
comp=E,310nm,20.6s

XAN LR LR
comp=Z,430nm,22.8s
XAN Xi'an 55.74 283 IAmb IAmb 21 34 08.7
comp=Z,24nm,1.3s
D46A Sault St. Mari 55.95 56 P **P 21 34 08.4 -0.4**
baz=311
F45A CMU Biological 55.97 58 P **P 21 34 08.7 -0.2**
baz=311
E46A Sault Ste Mari 56.15 56 IAmb IAmb 21 34 11.1
comp=Z,19nm,0.9s
D47A Chapleau 56.31 55 P **P 21 34 11.0 -0.4**
baz=312
N41A Harden Midland 56.35 65 IAmb IAmb 21 34 12.9
comp=Z,37nm,1.4s
TX31 Lajitas Ar. Si 56.45 84 IAmb IAmb 21 34 24.9
comp=Z,5.7nm,0.9s
TX32 Lajitas Array 56.45 84 IAmb IAmb 21 34 24.9
comp=Z,5.8nm,0.9s
TXAR Lajitas Array 56.45 84 P **P 21 34 12.9 +0.2**
TXAR Lajitas Array 56.45 84 P **P 21 34 11.8 -0.8**
comp=Z,1.0nm,0.7s,baz=186,slow=15,SNR=4.1
TXAR LR LR 21 58 14.8
comp=Z,70nm,18.4s,baz=0.0,slow=36
TXAR Lajitas Array 56.45 84 P **P 21 34 12.9 +0.2**
W35A Tecumseh 56.58 74 P **P 21 34 13.1 -0.3**
E47A Iron Bridge 56.63 56 P **P 21 34 13.1 -0.5**
baz=312
ABTX Abilene, Hawle 56.63 78 P **P 21 34 14.0 +0.2**
ABTX IAmb IAmb 21 34 16.7
comp=Z,19nm,1.2s
ABTX Abilene, Hawle 56.63 78 P **P 21 34 14.4 +0.6**
baz=314
TUL1 Leonard 56.71 73 P **P 21 34 13.7 -0.6**
TUL1 IAmb IAmb 21 34 16.3
comp=Z,6.6nm,0.7s
TUL1 Leonard 56.71 73 P **P 21 34 14.3 0.0**
baz=313
H46A Fife Lake 56.90 59 P **P 21 34 15.3 -0.2**
baz=312
L44A Lake County Fo 57.01 62 P **P 21 34 16.0 -0.3**
baz=312
GLMI Grayling 57.02 58 P **P 21 34 15.2 -1.2**
GLMI Grayling 57.02 58 P **P 21 34 16.7 +0.4**
baz=312
E48A Lockeyer 57.18 55 P **P 21 34 17.3 -0.2**
baz=312
HDIL Hopedale 57.33 65 P **P 21 34 18.7 +0.1**
baz=312
F48A Evansville 57.39 56 P **P 21 34 19.0 +0.1**
baz=312
LZH Lanzhou 57.39 288 *e*P **P 21 34 20.1 +0.8**
LZH pP sP 21 34 36.8 0.0
LZH sP pP 21 34 44.3 +13
LZH PcP **PcP 21 35 13.8 +1.0**
LZH PP **PP 21 36 25.3 -1.3**
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,79nm,6.5s
LZH LR LR
comp=N,250nm,14.1s
LZH LR LR
comp=E,380nm,11.9s
LZH LR LR
comp=Z,370nm,14.1s
M44A Midewin, Midew 57.47 63 P **P 21 34 18.0 -1.5**
GTA Gaotai 57.47 294 *e*P **P 21 34 19.8 0.0**
GTA pP pP 21 34 34.4 +2.2
GTA sP sP 21 34 41.3 +4.1
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,85nm,6.5s
GTA LR LR
comp=N,260nm,19.0s
GTA LR LR
comp=E,250nm,20.0s
GTA LR LR
comp=Z,340nm,18.4s
K46A Dorr 57.83 61 P **P 21 34 22.0 -0.1**
baz=313
D50A G1974 Best Tow 57.89 53 P **P 21 34 22.2 -0.2**
baz=313
CCM Cathedral Cave 57.91 68 P **P 21 34 23.1 +0.4**
CCM pmax pmax
comp=Z,7.0nm,0.8s
CCM Cathedral Cave 57.91 68 P **P 21 34 23.1 +0.4**
CCM IAmb IAmb 21 34 42.5
comp=Z,6.7nm,0.8s
CCM Cathedral Cave 57.91 68 P **P 21 34 22.6 -0.1**
baz=313
I48A Sherman Twp 57.93 58 P **P 21 34 22.8 0.0**
baz=313
MGMO Mountain Grove 57.93 69 P **P 21 34 22.6 -0.3**
MGMO IAmb IAmb 21 34 26.5
comp=Z,20nm,1.4s
J47A Sunmer 57.98 60 P **P 21 34 22.9 -0.3**
baz=313
LSQQ Lebel-sur-Quev 57.99 50 P **P 21 34 22.5 -0.6**
baz=313
JCT Junction City 58.03 80 P **P 21 34 22.6 -1.1**
JCT pmax pmax
comp=Z,8.0nm,0.9s
JCT Junction City 58.03 80 P **P 21 34 22.6 -1.1**
JCT IAmb IAmb 21 34 23.9
comp=Z,7.9nm,0.9s
JCT Junction City 58.03 80 P **P 21 34 23.7 -0.1**
baz=315
O44A Mansfield 58.07 64 P **P 21 34 22.4 -1.4**
O44A IAmb IAmb 21 34 23.5
comp=Z,16nm,0.7s
U40A Yellville 58.14 70 P **P 21 34 23.1 -1.3**
U40A IAmb IAmb 21 34 28.6
comp=Z,6.1nm,0.7s
U40A Yellville 58.14 70 P **P 21 34 23.3 -1.1**
baz=313
ARCES ARCESS Array B 58.15 352 P **P 21 34 23.2 -0.8**
comp=Z,2.6nm,0.6s,baz=12,slow=8.0,SNR=14
ARCES PcP **PcP 21 35 14.8 -0.2**
comp=Z,2.6nm,0.8s,baz=16,slow=4.8,SNR=4.9
ARCES LR LR 22 03 57.2
comp=Z,119nm,18.1s,baz=352,slow=41
ARCES ARCESS Array B 58.15 352 P **P 21 34 24.7 +0.7**
D51A Lot 18 Range I 58.17 53 P **P 21 34 24.8 +0.4**
baz=313
K47A Vermontville 58.27 60 P **P 21 34 24.8 -0.4**
baz=313
W39A Magazine 58.39 72 P **P 21 34 25.7 -0.4**
baz=314
SCHQ Schefferville 58.40 40 P **P 21 34 25.2 -0.7**
comp=Z,10nm,1.1s,baz=310,slow=6.0,SNR=6.6
SCHQ LR LR 22 02 13.8
comp=Z,178nm,20.8s,baz=324,slow=39
SCHQ Schefferville 58.40 40 IAmb IAmb 21 34 26.8
comp=Z,20nm,1.2s
WHTX Lake Whitney, 58.40 77 P **P 21 34 26.5 +0.3**
baz=314
J48A Bridge Port 58.49 59 P **P 21 34 26.3 -0.4**
baz=313
L47A Sherwood 58.63 61 P **P 21 34 26.9 -0.8**
baz=313
K48A Perry 58.65 59 P **P 21 34 27.2 -0.6**
baz=313
SFIN Lafayette 58.68 63 P **P 21 34 28.2 +0.2**
baz=313
F51A Arnstein 58.70 54 P **P 21 34 27.7 -0.4**
baz=314
D52A ZEK Kipawa Sen 58.73 53 P **P 21 34 27.6 -0.7**
baz=314
J49A Marlette 58.79 58 P **P 21 34 28.7 -0.1**
baz=313
M47A Cromwell 58.82 62 P **P 21 34 28.3 -0.8**
baz=313
MIAR Mount Ida 58.96 72 IAmb IAmb 21 34 30.9
comp=Z,12nm,0.9s
MIAR Mount Ida 58.96 72 P **P 21 34 30.0 -0.1**
baz=314,SNR=6.8
D53A Lac Vacive, Po 59.01 52 P **P 21 34 29.4 -0.9**
D53A IAmb IAmb 21 34 31.5
comp=Z,9.6nm,1.1s
K49A Clarkson 59.02 59 P **P 21 34 30.4 0.0**
baz=313
L48A N Adams 59.07 60 P **P 21 34 30.1 -0.7**
baz=313
E52A Mattawa 59.09 53 P **P 21 34 30.1 -0.7**
baz=314
F52A Sundridge 59.09 54 P **P 21 34 30.2 -0.7**
baz=314
N47A Urbana 59.11 62 P **P 21 34 30.3 -0.8**
baz=314
M48A Edgerton 59.23 61 P **P 21 34 31.2 -0.7**
baz=314,SNR=6.0
W41B Gary Mavity, V 59.31 71 P **P 21 34 31.9 -0.6**
baz=314
L49A Milan 59.32 60 P **P 21 34 32.1 -0.4**
baz=314
D54A Lac Fusel, La 59.47 52 P **P 21 34 32.8 -0.6**
baz=314
N48A Decatur 59.49 62 P **P 21 34 32.8 -0.9**
baz=314
E53A Dumoine, Ponti 59.52 53 P **P 21 34 33.3 -0.5**
baz=314
I51A Listowel 59.60 57 P **P 21 34 34.8 +0.4**
baz=314
H52A Wyevale 59.60 55 P **P 21 34 34.7 +0.3**
baz=314
ALGO Algonquin Park 59.62 53 P **P 21 34 34.2 -0.3**
baz=314
M49A Liberty Center 59.64 61 P **P 21 34 34.7 0.0**
baz=314
E54A Lac Daplat, Po 59.71 52 P **P 21 34 34.8 -0.4**
baz=314
833A Chaparral WMA, 59.80 82 P **P 21 34 37.0 +1.0**
baz=316
O48A Farmland 59.84 62 P **P 21 34 34.9 -1.2**
baz=314,SNR=9.7
L50A Kingsville 59.88 59 P **P 21 34 36.1 -0.2**
baz=314
SADO Sadowa 59.90 55 LR LR 22 02 25.6
comp=Z,138nm,18.4s,baz=344,slow=38
SADO Sadowa 59.90 55 P **P 21 34 35.9 -0.5**
SADO IAmb IAmb 21 34 36.7
comp=Z,28nm,1.3s
N49A Columbus Grove 59.91 61 IAmb IAmb 21 34 36.5
comp=Z,15nm,0.7s
N49A Columbus Grove 59.91 61 P **P 21 34 36.1 -0.5**
baz=314
G53A Haliburton 59.91 54 P **P 21 34 36.6 +0.1**
baz=314,SNR=6.7
G54A Lake Saint Pet 59.99 54 P **P 21 34 36.9 -0.1**
baz=314
K51A Iona Station 60.10 58 P **P 21 34 38.3 +0.5**
baz=314
D55A Sainte-Anne-du 60.14 51 P **P 21 34 37.3 -0.8**
baz=315
M50A Fremont 60.20 60 P **P 21 34 38.6 +0.1**
baz=314
P48A Milroy 60.24 63 P **P 21 34 37.9 -1.0**
baz=314,SNR=6.9
J52A Paris 60.28 57 P **P 21 34 39.4 +0.3**
baz=314
H53A Bobcaygeon 60.32 55 P **P 21 34 39.1 -0.2**
baz=315
O49A Covington 60.34 62 P **P 21 34 39.4 -0.1**
baz=314
KURK Kurchatov 60.38 315 P **P 21 34 38.6 -1.0**
KURK pmax pmax
comp=Z,6.0nm,0.6s
KURK Kurchatov 60.38 315 P **P 21 34 38.6 -1.0**
KURK IAmb IAmb 21 34 41.2
comp=Z,6.1nm,0.6s
Q48A North Vernon 60.44 64 P **P 21 34 39.5 -0.7**
baz=314
D56A ZEC Mazanza, M 60.47 51 P **P 21 34 39.4 -0.9**
baz=315
K52A Tillsonburg 60.47 58 P **P 21 34 39.7 -0.7**
baz=314
KURBB Kurchatov Arra 60.48 315 P **P 21 34 39.1 -1.2**
comp=Z,4.8nm,0.5s,baz=43,slow=6.4,SNR=34
N50A Nevada 60.58 61 P **P 21 34 40.8 -0.3**
baz=314,SNR=7.2
P49A Miami Univ. Ec 60.59 63 P **P 21 34 40.2 -1.0**
baz=314,SNR=5.2
WCI Wyandotte Cave 60.62 65 P **P 21 34 41.3 -0.1**
WCI pmax pmax
comp=Z,15nm,0.7s
WCI Wyandotte Cave 60.62 65 P **P 21 34 41.3 -0.1**
WCI IAmb IAmb 21 34 45.3
comp=Z,15nm,0.7s
WCI Wyandotte Cave 60.62 65 P **P 21 34 40.7 -0.7**
baz=314
E56A St. Veronique 60.69 51 P **P 21 34 40.9 -0.9**
baz=315
M51A Elyria 60.71 60 P **P 21 34 41.7 -0.3**
baz=314
O50A Cable 60.76 61 P **P 21 34 41.9 -0.5**
baz=314,SNR=6.0
G55A Calabogie 60.78 53 P **P 21 34 42.0 -0.5**
baz=315
DELO Deloro Mine 60.85 54 IAmb IAmb 21 34 44.0
comp=Z,17nm,0.9s
Q49A Aurora 60.86 63 P **P 21 34 42.6 -0.4**
baz=314
N51A Ashland 60.90 60 P **P 21 34 42.8 -0.5**
baz=315,SNR=5.7
WMQ Urumqi 61.00 305 *e*P **P 21 34 45.9 +1.9**
WMQ pmax pmax
comp=Z,11nm,0.9s
WMQ pmax pmax
comp=Z,200nm,6.1s
WMQ LR LR
comp=N,550nm,29.3s
WMQ LR LR
comp=E,860nm,29.1s
WMQ LR LR
comp=Z,370nm,22.9s
M52A Chesterland 61.00 59 P **P 21 34 43.7 -0.3**
baz=315,SNR=5.4
I55A Frankford 61.03 55 P **P 21 34 44.2 +0.1**
baz=315,SNR=5.6
P50A Jamestown 61.04 62 P **P 21 34 43.9 -0.4**
baz=315,SNR=9.5
CD2 Chengdu 61.04 284 P **P 21 34 43.0 -1.5**
CD2 pmax pmax
comp=Z,20nm,1.0s
H55A Tweed 61.04 54 P **P 21 34 44.1 -0.1**
baz=315
ACSO Alum Creek Sta 61.05 61 P **P 21 34 43.5 -0.9**
ACSO IAmb IAmb 21 34 44.5
comp=Z,11nm,0.8s
ACSO Alum Creek Sta 61.05 61 P **P 21 34 44.1 -0.3**
baz=315
R49A Shelbyville 61.20 64 P **P 21 34 45.1 -0.3**
baz=315
J54A Appleton 61.21 56 P **P 21 34 45.1 -0.2**
J54A Appleton 61.21 56 P **P 21 34 45.4 +0.1**
baz=315
L53A Girard 61.30 58 P **P 21 34 45.9 -0.1**
baz=315,SNR=6.3
ERPA Erie 61.32 58 P **P 21 34 46.6 +0.4**
ERPA Erie 61.32 58 P **P 21 34 46.2 0.0**
baz=315,SNR=5.4
D58A Chemin du LacG 61.33 50 P **P 21 34 45.3 -0.8**
baz=316
N52A McGinn's Farm, 61.34 60 P **P 21 34 46.0 -0.3**
baz=315
MEDO Medina 61.38 56 P **P 21 34 46.7 +0.1**
OXF Oxford 61.44 70 P **P 21 34 47.2 +0.1**
baz=315
M53A WI Miller and 61.44 59 P **P 21 34 47.0 0.0**
baz=315,SNR=12
H56A Elgin 61.48 53 P **P 21 34 47.2 0.0**
baz=316
Q50A Georgetown 61.48 63 P **P 21 34 47.2 -0.1**
baz=315,SNR=5.9
S49A Springfield 61.49 64 P **P 21 34 47.1 -0.3**
baz=315
MKAR Makanchi Array 61.54 310 P **P 21 34 46.1 -1.5**
comp=Z,2.2nm,0.6s,baz=48,slow=6.1,SNR=28
MKAR LR LR 22 02 02.1
comp=Z,215nm,21.9s,baz=54,slow=37
MKAR Makanchi Array 61.54 310 P **P 21 34 45.9 -1.7**
L54A Sinclairville 61.59 57 P **P 21 34 48.1 +0.1**
baz=315,SNR=10
J55A Hilton 61.63 55 P **P 21 34 48.5 +0.4**
J55A Hilton 61.63 55 P **P 21 34 48.6 +0.4**
baz=315
K54A Basiliko Farm, 61.65 56 P **P 21 34 48.5 +0.1**
baz=315,SNR=6.9
MAKZ Makanchi 61.68 310 P **P 21 34 47.3 -1.3**
MAKZ pmax pmax
comp=Z,2.0nm,0.8s
MAKZ Makanchi 61.68 310 P **P 21 34 47.3 -1.3**
R50A Paris 61.68 63 P **P 21 34 48.3 -0.4**
R50A IAmb IAmb 21 34 49.5
comp=Z,13nm,0.9s
R50A Paris 61.68 63 P **P 21 34 48.6 -0.1**
baz=315
Q51A Peebles 61.70 62 P **P 21 34 48.7 -0.1**
baz=315,SNR=7.2
G57A Newington 61.74 52 P **P 21 34 47.3 -1.6**
baz=316
O52A Adamsville 61.75 60 P **P 21 34 48.8 -0.3**
baz=315,SNR=12
N53A Lisbon 61.80 59 P **P 21 34 49.3 -0.1**
baz=315,SNR=5.2
PLAL Pickwick Lake 61.88 68 IAmb IAmb 21 34 55.2
comp=Z,10nm,0.7s
K55A Perry 61.89 56 P **P 21 34 49.8 -0.2**
baz=316,SNR=5.7
M54A Oil Creek Stat 61.92 58 P **P 21 34 50.2 -0.1**
baz=315,SNR=8.0
P52A Corning 61.93 61 P **P 21 34 50.2 -0.1**
baz=315
O53A New Philadelph 61.99 60 P **P 21 34 50.5 -0.2**
baz=315,SNR=5.4
BVAR Borovoye Array 62.05 321 P **P 21 34 50.2 -0.7**
comp=Z,5.0nm,0.5s,baz=57,slow=6.4,SNR=51
S50A Richmond 62.06 64 P **P 21 34 51.4 +0.2**
baz=315
BRVK Borovoye 62.07 322 P **P 21 34 51.8 +0.8**
BRVK pmax pmax
comp=Z,6.0nm,1.0s
BRVK Borovoye 62.07 322 P **P 21 34 51.8 +0.8**
BRVK IAmb IAmb 21 35 05.8
comp=Z,6.4nm,1.0s
R51A Hillsboro 62.08 63 P **P 21 34 51.6 +0.3**
baz=315,SNR=18
L55A Hinsdale 62.09 57 P **P 21 34 51.4 0.0**
baz=316,SNR=6.3
CLTN Cedars of Leba 62.10 66 IAmb IAmb 21 34 55.9
comp=Z,7.7nm,0.8s
U49A Red Boiling Sp 62.11 66 P **P 21 34 51.7 +0.2**
baz=315
J56A Wolcott 62.12 55 P **P 21 34 52.1 +0.6**
J56A Wolcott 62.12 55 P **P 21 34 51.4 -0.1**
baz=316
N54A Moraine State 62.14 59 P **P 21 34 51.7 0.0**
baz=316,SNR=9.9
T50A Nancy 62.29 65 P **P 21 34 52.6 -0.1**
baz=315
LONY Lake Ozonia 62.29 52 P **P 21 34 52.3 -0.4**
baz=316
K56A Middlesex 62.29 56 P **P 21 34 53.0 +0.3**
baz=316,SNR=13
D60A Saint Jean D'O 62.38 49 P **P 21 34 52.5 -0.7**
baz=317
M55A Ridgway 62.43 57 P **P 21 34 53.7 +0.1**
baz=316,SNR=10
PRGR Permogore 62.44 339 *e*P **P 21 34 51.7 -1.6**
PRGR pmax pmax
comp=Z,5.0nm,0.6s
P53A Whipple 62.44 61 P **P 21 34 53.6 -0.1**
baz=316,SNR=6.6
J57A Williamstown 62.46 54 P **P 21 34 53.5 -0.2**
baz=316
O54A Avella 62.49 59 P **P 21 34 53.9 -0.1**
baz=316,SNR=11
SVE Sverdlovsk 62.50 329 *e*P **P 21 34 54.9 +1.1**
SVE pmax pmax
comp=Z,7.0nm,1.0s
D61A St Aubert, Com 62.51 48 P **P 21 34 52.9 -1.2**
baz=317
E60A Ste Agathe de 62.53 49 P **P 21 34 53.3 -0.9**
baz=317
S51A Beattyville 62.54 63 IAmb IAmb 21 34 58.0
comp=Z,19nm,0.9s
S51A Beattyville 62.54 63 P **P 21 34 54.5 0.0**
baz=316
R52A Catlettsburg 62.57 62 P **P 21 34 54.6 0.0**
baz=316
V49A McMinnville 62.57 66 P **P 21 34 54.3 -0.4**
baz=316
L56A Greenwood 62.58 56 P **P 21 34 54.8 +0.2**
baz=316,SNR=16
K57A Scipio Center 62.68 55 P **P 21 34 55.3 0.0**
baz=316,SNR=7.0
H59A Cadyville 62.71 52 P **P 21 34 55.2 -0.3**
baz=317
U50A Jamestown 62.71 65 P **P 21 34 55.1 -0.5**
baz=316
M56A Emporium 62.72 57 P **P 21 34 55.6 0.0**
baz=316,SNR=10
N55A Marion Center 62.80 58 P **P 21 34 56.0 -0.2**
baz=316,SNR=7.1
S52A Salyersville 62.80 63 P **P 21 34 56.5 +0.4**
baz=316
Q53A Leroy 62.81 61 P **P 21 34 56.4 +0.2**
baz=316
P54A Burton 62.85 60 P **P 21 34 56.4 -0.1**
baz=316,SNR=12
J58A Remsen 62.85 54 P **P 21 34 56.1 -0.4**
baz=316
L57A Andrews Acres 63.04 56 P **P 21 34 57.8 +0.1**
baz=316,SNR=11
O55A Ligonier 63.05 59 P **P 21 34 57.5 -0.2**
baz=316,SNR=5.7
N56A West Decatur 63.07 58 P **P 21 34 57.8 -0.1**
baz=316,SNR=8.2
V50A Pikevile 63.10 66 P **P 21 34 58.3 +0.2**
baz=316
Q54A Coxs Mills 63.10 61 P **P 21 34 58.3 +0.2**
baz=316
K58A Earlville 63.10 54 P **P 21 34 58.4 +0.3**
baz=316
D62A Allapoint, All 63.12 47 P **P 21 34 57.6 -0.5**
baz=318
MCWV Mont Chateau 63.15 59 P **P 21 34 57.8 -0.7**
MCWV Mont Chateau 63.15 59 P **P 21 34 58.5 0.0**
baz=316,SNR=6.2
J59A Piesco 63.17 53 P **P 21 34 58.0 -0.5**
baz=317
U51A La Follette 63.21 65 P **P 21 34 58.8 0.0**
baz=316
I59A Olmsteadville 63.24 53 P **P 21 34 58.8 -0.2**
baz=317
P55A Reedsville 63.27 60 P **P 21 34 59.3 +0.1**
baz=316,SNR=8.3
W50A Signal Mountai 63.31 66 P **P 21 34 59.6 0.0**
W50A IAmb IAmb 21 35 05.4
comp=Z,12nm,0.8s
W50A Signal Mountai 63.31 66 P **P 21 34 59.8 +0.1**
baz=316
BINY Binghamton 63.34 55 P **P 21 34 59.6 -0.1**
baz=317
TZTN Tazewell 63.35 64 P **P 21 34 59.4 -0.4**
baz=316
M57A Sunshine Farm, 63.38 56 P **P 21 34 59.8 -0.1**
baz=316,SNR=5.4
O56A Blue Knob Stat 63.39 58 P **P 21 34 59.7 -0.4**
baz=316,SNR=6.7
V51A Loudon 63.43 65 P **P 21 35 00.5 +0.2**
baz=316
ARU Arti 63.48 330 *c i*P **P 21 35 00.9 +0.6**
ARU *PP **pP 21 35 15.0 +2.0**
ARU 21 37 19.0
ARU S **S 21 43 31.2 +1.4**
ARU SS **SS 21 47 34.8 -1.5**
ARU pmax pmax
comp=Z,8.0nm,0.9s
ARU Arti 63.48 330 P **P 21 34 59.8 -0.5**
comp=Z,1.5nm,0.3s,baz=37,slow=6.0,SNR=12
ARU Arti 63.48 330 P **P 21 35 01.0 +0.7**
ARU IAmb IAmb 21 35 01.6
comp=Z,7.4nm,0.9s
SSPA Standing Stone 63.49 57 P **P 21 35 00.7 +0.1**
SSPA Standing Stone 63.49 57 P **P 21 35 00.5 -0.1**
baz=316
K59A Cooperstown 63.49 54 P **P 21 34 60.0 -0.7**
baz=317
Q55A Buckhannon 63.50 60 P **P 21 35 01.2 +0.4**
baz=316,SNR=5.4
L58A Harry Jones Me 63.52 55 P **P 21 35 01.1 +0.2**
baz=317,SNR=7.3
U52A Thorn Hill 63.56 64 P **P 21 35 01.3 0.0**
baz=316
N57A Milroy 63.58 57 P **P 21 35 01.3 0.0**
baz=316,SNR=6.1
D63A Stockholm 63.59 47 P **P 21 35 01.0 -0.2**
baz=318
R54A Victor 63.59 61 P **P 21 35 01.6 +0.2**
baz=316,SNR=13
FPAL Fort Paine 63.62 67 IAmb IAmb 21 35 05.5

comp=Z,7,3nm,0.7s
S54A **Dingess, Beckl** 63.69 62 P P 21 35 02.4 +0.3
baz=316,SNR=6.8
M58A **Price's Panora** 63.70 56 P P 21 35 02.3 +0.2
baz=317,SNR=8.4
P56A **Dayton Farm, R** 63.80 59 P P 21 35 03.0 +0.3
baz=316,SNR=13
G62A **West of Eustis** 63.81 50 P P 21 35 02.0 -0.7
baz=318
L59A **Walton** 63.83 55 P P 21 35 03.1 +0.2
baz=317
TKL **Tuckaleechee C** 63.86 65 LR LR 22 01 48.3
comp=Z,247nm,20.3s,baz=325,slow=35
J60A **Lant Hill Farm** 63.87 53 P P 21 35 02.7 -0.4
baz=317
E63A **Oxbow** 63.90 47 P P 21 35 02.5 -0.7
baz=318
O57A **Amberson** 63.93 58 P P 21 35 03.7 +0.2
baz=317,SNR=15
Q56A **Snyder Ridge,** 63.95 60 P P 21 35 03.7 0.0
baz=316,SNR=6.0
N58A **Sunbury** 63.95 57 P P 21 35 03.6 -0.1
baz=317,SNR=7.0
H62A **Milan** 63.99 50 P P 21 35 03.7 -0.2
baz=318
R55A **Marlinton** 63.99 61 P P 21 35 04.0 -0.1
baz=316
T54A **Tazewell** 64.08 63 P P 21 35 05.0 +0.3
baz=316,SNR=6.8
M59A **Waymart** 64.10 55 P P 21 35 04.6 -0.1
baz=317,SNR=8.1
S55A **Lewisburg** 64.15 61 P P 21 35 05.6 +0.5
baz=316,SNR=5.5
E64A **Bridgewater** 64.18 47 P P 21 35 04.1 -1.0
baz=319
KIRV **Kirov** 64.23 336 P P 21 35 04.7 -0.6
comp=Z,10nm,0.5s,baz=35,slow=6.0,SNR=6.0
P57A **Homestead Farm** 64.25 58 P P 21 35 05.6 -0.1
baz=317,SNR=9.5
R56A **Bull Pasture M** 64.29 60 P P 21 35 06.0 -0.1
baz=317,SNR=6.8
F64A **Sherman** 64.35 48 P P 21 35 05.3 -0.9
baz=319
Z50A **Ashland** 64.36 68 IAmb IAmb 21 35 11.2
comp=Z,14nm,0.7s
O58A **Lewisberry** 64.36 57 P P 21 35 06.4 0.0
baz=317,SNR=6.5
Q57A **Strasburg** 64.37 59 P P 21 35 06.5 +0.1
baz=317,SNR=6.4
N59A **State Game Lan** 64.38 56 P P 21 35 06.7 +0.1
baz=317,SNR=8.9
V53A **Saluda** 64.39 64 P P 21 35 06.7 0.0
baz=316
KLMR **Klimovskoe** 64.41 342 *e*P P 21 35 03.7 -2.6
KLMR pmax pmax
comp=Z,12nm,1.2s
KLMR **Klimovskoe** 64.41 342 *e*P P 21 35 03.8 -2.6
KLMR AMP 21 35 15.2
comp=Z,12nm,1.2s
T55A **Pulaski** 64.47 62 P P 21 35 07.5 +0.3
baz=317
HNR **Honiara** 64.49 207 LR LR 21 57 57.7
comp=Z,104nm,21.3s,baz=341,slow=31
X52A **Dahlonega** 64.55 66 P P 21 35 07.8 +0.1
baz=316
W53A **Cullowhee** 64.56 65 P P 21 35 08.0 +0.1
baz=316
L61A **Hillsdale 1, H** 64.57 54 P P 21 35 07.7 0.0
baz=318
BLA **Blacksburg** 64.61 62 P P 21 35 08.2 +0.2
baz=317
O59A **Robesonia** 64.61 57 P P 21 35 08.2 +0.1
baz=317,SNR=6.4
P58A **Pank, Wackersv** 64.63 58 P P 21 35 08.0 -0.1
baz=317
M60A **Port Jervis** 64.67 55 P P 21 35 08.4 0.0
baz=317,SNR=5.2
S56A **Natural Bridge** 64.73 61 P P 21 35 09.4 +0.5
baz=317
MVL **Millersville** 64.75 57 IAmb IAmb 21 35 09.9
comp=Z,21nm,1.0s
N60A **Cedar Hill Far** 64.76 56 P P 21 35 09.1 +0.1
baz=317,SNR=7.4
U55A **TA2, Sparta** 64.77 63 P P 21 35 09.4 +0.1
baz=317
V54A **Nebo** 64.80 64 P P 21 35 09.5 +0.1
baz=317
L61B **Northampton** 64.82 53 P P 21 35 09.1 -0.3
baz=318
Q58A **Fox Den Farm,** 64.83 59 P P 21 35 09.6 +0.1
baz=317,SNR=12
R57A **Stanardsville** 64.85 60 P P 21 35 09.9 +0.3
baz=317,SNR=13
ODNJ **Ogdensburg** 64.86 55 IAmb IAmb 21 35 10.8
comp=Z,25nm,1.1s
SDMD **Soldier's Deli** 64.93 58 IAmb IAmb 21 35 10.9
comp=Z,18nm,0.9s
T56A **Rocky Mt** 64.95 62 P P 21 35 10.3 0.0
baz=317
X53A **Estanollee** 64.96 66 P P 21 35 11.0 +0.6
baz=317
P59A **Jarrettsville** 65.00 57 P P 21 35 10.4 -0.1
baz=317,SNR=5.1
S57A **Dark Hollow, R** 65.00 60 P P 21 35 11.1 +0.5
baz=317
O60A **Telford** 65.01 56 P P 21 35 10.7 +0.1
baz=317
R58A **Rapidan** 65.12 59 P P 21 35 11.5 +0.2
baz=317,SNR=9.9
V55A **Taylorsville** 65.15 63 IAmb IAmb 21 35 16.2
comp=Z,15nm,0.9s
V55A **Taylorsville** 65.15 63 P P 21 35 12.3 +0.7
baz=317
W54A **Cherokee Point** 65.17 64 P P 21 35 12.0 +0.3
baz=317
G65A **Princeton** 65.22 48 P P 21 35 12.1 +0.2
baz=319
U56A **King** 65.25 62 P P 21 35 12.6 +0.3
baz=317
Y53A **Monroe** 65.27 66 P P 21 35 12.2 -0.2
baz=317
PAL **Palisades** 65.27 55 P P 21 35 12.6 +0.3
baz=318
Z52A **Williamson** 65.28 67 P P 21 35 12.1 -0.4
baz=317
H65A **Eastbrook** 65.28 49 P P 21 35 12.3 0.0
baz=319
T57A **Hurt** 65.40 61 P P 21 35 13.4 +0.2
baz=317
R58B **Mineral** 65.44 60 IAmb IAmb 21 35 14.7
comp=Z,18nm,0.8s
R58B **Mineral** 65.44 60 P P 21 35 13.6 +0.2
baz=317,SNR=7.0
V56A **Mocksville** 65.58 63 P P 21 35 14.8 +0.4
baz=317
S58A **Poland Farm, P** 65.60 60 P P 21 35 14.5 +0.1
baz=317
KMSC **Kings Mountain** 65.61 64 P P 21 35 14.9 +0.4
baz=317
O61A **Allentown** 65.62 56 P P 21 35 14.5 0.0
baz=318
GOGA **Godfrey** 65.66 67 P P 21 35 14.2 -0.8
baz=317
R59A **King George, V** 65.67 59 P P 21 35 15.1 +0.2
baz=317
Z53A **Monticello** 65.70 67 P P 21 35 14.5 -0.6
baz=317
HODGE **Hodges** 65.75 65 IAmb IAmb 21 35 19.4
comp=Z,9,9nm,0.7s
U57A **Blanch** 65.77 62 P P 21 35 15.9 +0.4
baz=317,SNR=6.0
Y54A **Tignall** 65.78 66 P P 21 35 15.4 -0.2
baz=317
T58A **Grand View Acr** 65.83 61 P P 21 35 15.8 -0.1
baz=317,SNR=5.9
KMI **Kunming** 65.84 280 P P 21 35 17.1 +0.6
KMI pmax pmax
comp=Z,29nm,0.9s
S59A **Mechanicsville** 65.90 59 P P 21 35 16.8 +0.4
baz=318
V57A **Coltrane Farms** 65.92 62 P P 21 35 16.7 +0.1
baz=317
X55A **Gracelyn & Ava** 65.93 65 P P 21 35 17.0 +0.4
baz=317
FINES **FINESS Array B** 65.95 349 *i* P P 21 35 15.3 -1.1
FINES pmax pmax
comp=Z,3,0nm,0.8s
FINES **FINESS Array B** 65.95 349 P P 21 35 15.2 -1.1
comp=Z,3.5nm,0.8s,baz=30,slow=8.8,SNR=7.4
FINES LR LR 22 07 37.3
comp=Z,163nm,19.0s,baz=17,slow=39
Z54A **Sparta** 66.14 66 P P 21 35 17.6 -0.4
baz=317
Y55A **Saluda** 66.19 65 P P 21 35 18.2 -0.1
baz=317
U58A **Oxford** 66.22 61 P P 21 35 18.7 +0.2
baz=318
X56A **White Oak** 66.25 64 P P 21 35 19.0 +0.3
baz=317
JSC **Jenkinsville** 66.28 64 IAmb IAmb 21 35 20.1
comp=Z,5.1nm,0.7s
S60A **Water View** 66.28 59 P P 21 35 18.8 -0.1
baz=318
T59A **Double "B" Far** 66.34 60 P P 21 35 19.6 +0.4
baz=318,SNR=11
W57A **Gilead** 66.34 63 P P 21 35 19.4 +0.2
baz=317
V58A **Windy Hill, Pi** 66.36 62 IAmb IAmb 21 35 23.4
comp=Z,18nm,0.9s
V58A **Windy Hill, Pi** 66.36 62 P P 21 35 20.0 +0.7
baz=318
BIRD **Birdtown, Kers** 66.46 64 IAmb IAmb 21 35 24.0
comp=Z,12nm,0.8s
U59A **Littleton** 66.67 61 P P 21 35 21.6 +0.3
baz=318
V59A **Middlesex** 66.86 61 P P 21 35 22.8 +0.3
baz=318,SNR=6.5
W58A **Raeford** 66.86 63 P P 21 35 23.0 +0.4
baz=318
U60A **Pendleton** 66.92 60 P P 21 35 23.5 +0.5
baz=318
V60A **Jim Taylor Roa** 67.39 61 P P 21 35 25.9 0.0
baz=318
U61A **Possum Corner** 67.41 60 P P 21 35 25.6 -0.4
baz=318
TAOE **Nuku Hiva Isla** 67.45 142 *e*T T 22 49 11.7
comp=Z,33nm,0.2s
NB2 **NORSAR Subarra** 67.52 357 P P 21 35 25.7 -0.7
comp=Z,15nm,1.1s,baz=3.7,slow=6.2
NOA **NORSAR Array B** 67.52 357 P P 21 35 25.9 -0.5
comp=Z,3.9nm,0.9s,baz=3.4,slow=6.5,SNR=9.9
NOA LR LR 22 04 57.5
comp=Z,83nm,20.8s,baz=0.0,slow=36
V61A **Roper** 67.74 60 P P 21 35 28.3 +0.2
baz=318
Z58A **St. Stephen** 67.78 64 P P 21 35 28.3 -0.1
baz=318
Y59A **Loris** 67.82 63 P P 21 35 29.0 +0.3
baz=318
X60A **Albert Glenn T** 67.88 62 P P 21 35 29.2 +0.1
baz=318
SLVN **Son La** 67.92 277 IAmb IAmb 21 35 31.8
comp=Z,14nm,0.8s
FRU1 **Bishkek** 68.13 312 IAmb IAmb 21 35 34.3
comp=Z,8.2nm,1.1s
V62A **Hyde County Ai** 68.25 60 P P 21 35 31.4 +0.1
baz=319
AAK **Ala-Archa** 68.33 312 P P 21 35 31.7 -0.3
AAK pmax pmax
comp=Z,3.0nm,0.9s
AAK **Ala-Archa** 68.33 312 P P 21 35 31.6 -0.3
comp=Z,2.3nm,0.5s,baz=120,slow=3.9,SNR=23
AAK **Ala-Archa** 68.33 312 P P 21 35 31.7 -0.3
PMG **Port Moresby** 68.89 220 LR LR 22 00 09.9
comp=Z,101nm,20.6s,baz=342,slow=31
SIJI **Sorong** 68.95 239 LR LR 21 59 41.7
comp=Z,223nm,21.3s,baz=9.5,slow=30
ABKAR **Akbulak array** 69.00 325 P P 21 35 35.7 -0.1
ABKAR **Akbulak array** 69.00 325 IAmb IAmb 21 35 37.4
comp=Z,12nm,1.4s
LSA **Lhasa** 69.38 292 P P 21 35 40.1 +1.0
LSA pP pP 21 35 45.8 -6.0
LSA pmax pmax
comp=Z,26nm,0.6s
LSA LR LR
comp=N,270nm,7.8s
LSA LR LR
comp=E,240nm,5.0s
LSA LR LR
comp=Z,130nm,8.5s
LSA **Lhasa** 69.38 292 IAmb IAmb 21 35 43.6
comp=Z,8.8nm,0.8s
KK31 **Karatay Array** 69.77 315 IAmb IAmb 21 35 42.2
comp=Z,3.9nm,0.6s
KKAR **Karatay Array** 69.77 315 P P 21 35 39.7 -1.0
KKAR **Karatay Array** 69.77 315 P P 21 35 39.7 -1.0
KKAR **Karatay Array** 69.77 315 IAmb IAmb 21 35 42.2
comp=Z,3.9nm,0.6s
KSH **Kashi** 70.05 309 P P 21 35 45.8 +3.2
KSH pP PcP 21 36 06.4 +1.9
KSH PP PP 21 38 25.4 +8.0
KSH S S 21 44 49.3 -0.6
KSH sS SKiKP 21 45 18.6 -5.8
KSH ScS ScS 21 45 42.8 +1.5
KSH **Kashi** 70.05 309 SS SS 21 49 22.1 +3.0
KSH pmax pmax
comp=Z,11nm,0.6s
KSH pmax pmax
comp=Z,390nm,4.9s
KSH LR LR
comp=N,230nm,4.4s
KSH LR LR
comp=E,220nm,5.1s
KSH LR LR
comp=Z,690nm,7.2s
ARSB **Arslanbob** 70.06 312 P P 21 35 42.7 +0.1
ARSB IAmb IAmb 21 35 51.2
comp=Z,8.8nm,1.4s
FAKI **Fak Fak** 70.16 237 P P 21 35 43.7 +0.4
FAKI IAmb IAmb 21 35 44.9
comp=Z,16nm,0.7s
OBN **Obninsk** 70.33 341 *e*P P 21 35 43.0 -0.9
OBN *e* 21 36 02.5
OBN *e* 21 38 20.5
OBN pmax pmax
comp=Z,5.0nm,0.9s
KKM **Kota Kinabalu** 72.00 257 P P 21 35 54.9 +0.3
LPSR **Galich'ya Gora** 72.18 339 *e*P P 21 35 53.5 -1.6
LPSR pmax pmax
comp=Z,8.0nm,0.8s
PPT **Papeete** 72.51 154 LR LR 22 02 06.4
comp=Z,322nm,21.1s,baz=349,slow=31
PPT2 **Papeete2** 72.53 154 *e*S S 21 45 22.9 +4.3
comp=Z,94nm,31.2s
PPT2 **Papeete2** 72.53 154 *e*LR LR 21 58 14.8
comp=Z,297nm,21.5s
PPT2 **Papeete2** 72.53 154 *e*T T 22 55 30.4
comp=Z,24nm,0.3s
TIAR **Tiarei** 72.57 154 *e*T T 22 55 32.6
comp=Z,2.9nm,0.3s
PAE **Paea** 72.60 154 *e*T T 22 55 35.2
comp=Z,4.2nm,0.3s
VRH **Novokhopyorsk** 72.82 337 *e*P P 21 35 57.0 -1.9
VRH pmax pmax
comp=Z,8.0nm,0.7s
CHTO **Chiang Mai** 72.88 279 P P 21 36 00.4 +0.6
CHTO pmax pmax
comp=Z,19nm,1.3s
CHTO **Chiang Mai** 72.88 279 P P 21 36 00.4 +0.6
CHTO IAmb IAmb 21 36 01.3
comp=Z,19nm,1.2s
TAPN **Taplejung** 73.13 293 *e*P P 21 36 01.8 +0.2
comp=Z,34nm,0.6s
CM31 **Chiang Mai Arr** 73.14 278 P P 21 36 02.7 +1.3
CM31 IAmb IAmb 21 36 03.3
comp=Z,21nm,1.1s
CMAR **Chiang Mai Arr** 73.14 278 *ce*P P 21 36 02.4 +1.0
CMAR pmax pmax
comp=Z,10.0nm,0.8s
CMAR **Chiang Mai Arr** 73.14 278 P P 21 36 01.8 +0.5
comp=Z,9.4nm,0.8s,baz=26,slow=7.2,SNR=58
PBKT **Sadao Pong** 73.32 276 IAmb IAmb 21 36 04.1
comp=Z,6.0nm,0.6s
VSR **Storozhevoye** 73.42 338 *e*P P 21 36 00.9 -1.6
VSR pmax pmax
comp=Z,10.0nm,1.1s
ODAN **Odare** 73.69 293 *e*P P 21 36 04.8 0.0
comp=Z,17nm,0.6s
GUN **Gumba** 73.75 294 *e*P P 21 36 05.5 +0.3
comp=Z,75nm,0.5s
JIRN **Jiri** 73.77 294 *e*P P 21 36 05.7 +0.3
comp=Z,65nm,0.5s
RAMN **Ramite** 74.08 293 *e*P P 21 36 07.1 +0.1
comp=Z,73nm,0.5s
KKN **Kakani** 74.18 295 *e*P P 21 36 07.7 +0.1
comp=Z,20nm,0.5s
PKI **Pulchoki** 74.28 294 *e*P P 21 36 08.1 -0.2
PKIN **Phulchoki** 74.28 294 *e*P P 21 36 08.1 -0.1
comp=Z,12nm,0.5s
GKN **Gorkha** 74.38 295 *e*P P 21 36 08.6 -0.1
comp=Z,24nm,0.4s
DMN **Daman** 74.42 295 *e*P P 21 36 09.1 +0.1
comp=Z,21nm,0.8s
DANN **Dangsing** 74.61 296 *e*P P 21 36 10.2 0.0
comp=Z,77nm,0.8s
KOLN **Koldanda** 75.14 296 *e*P P 21 36 12.5 -0.7
comp=Z,15nm,0.5s
DZM **Mont Dzumac** 75.15 197 *e*LR LR 21 59 25.8
comp=Z,281nm,27.5s
DZM **Mont Dzumac** 75.15 197 LR LR 22 03 30.1
comp=Z,134nm,19.9s,baz=36,slow=31
AKASG **Malin Array Be** 75.91 344 P P 21 36 15.9 -0.9
AKASG pmax pmax
comp=Z,2.0nm,1.4s
AKASG **Malin Array Be** 75.91 344 P P 21 36 15.7 -1.2
comp=Z,1.7nm,0.4s,baz=18,slow=6.2,SNR=9.3
AKASG LR LR 22 15 28.1
comp=Z,165nm,18.3s,baz=25,slow=40
AKASG **Malin Array Be** 75.91 344 P P 21 36 15.9 -0.9
AKBB **Malin Array Si** 75.91 344 IAmb IAmb 21 36 17.2
comp=Z,4.3nm,0.6s
NIL **Nilore** 76.02 307 P P 21 36 18.3 +0.4
NIL pmax pmax
comp=Z,15nm,1.3s
NIL **Nilore** 76.02 307 P P 21 36 18.3 +0.4
NIL IAmb IAmb 21 36 19.8
comp=Z,15nm,1.2s
CLL **Collm** 77.16 355 *i* P P 21 36 23.4 -0.5
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL **Collm** 77.16 355 *i* P P 21 36 23.4 -0.5
comp=Z,4.0nm,0.7s
SBUM **Sibu** 77.26 258 P P 21 36 25.6 +0.6
KBL **Kabul** 77.35 310 P P 21 36 24.8 -0.8
KBL pmax pmax
comp=Z,4.0nm,0.7s
KBL **Kabul** 77.35 310 P P 21 36 24.8 -0.8
KBL IAmb IAmb 21 36 29.0
comp=Z,4.4nm,0.7s
BRG **Berggiesshubel** 77.53 354 *e*P P 21 36 25.6 -0.4
comp=Z,14nm,1.4s
BRG **Berggiesshubel** 77.53 354 *e*P P 21 36 25.6 -0.4
BRG pmax pmax
comp=Z,14nm,1.4s
DPC **Dobruska-Polom** 77.88 352 *e*P P 21 36 28.2 +0.1
DPC **Dobruska-Polom** 77.88 352 *e*P P 21 36 28.2 +0.1
TBI **Tubuai** 78.06 156 *e*LR LR 22 00 40.0
comp=Z,313nm,23.5s
KRLC **Kraliky** 78.11 352 *e*P P 21 36 29.2 -0.2
KRLC **Kraliky** 78.11 352 *e*P P 21 36 29.2 -0.2
NKC **Novy Kostel** 78.26 355 *e*P P 21 36 29.9 -0.2
NKC **Novy Kostel** 78.26 355 *e*P P 21 36 29.9 -0.2
SORM **Soroca** 78.53 344 ⇑P P 21 36 31.2 -0.4
KOLS **Kolonicke sedl** 78.66 348 *e*P P 21 36 32.1 -0.2
KOLS **Kolonicke sedl** 78.66 348 *e*P P 21 36 32.1 -0.2
LANS **Liptovska Anna** 78.77 350 *e*P P 21 36 33.0 0.0
LANS pmax pmax
comp=Z,1.0nm,0.7s
LANS **Liptovska Anna** 78.77 350 *e*P P 21 36 33.0 0.0
VRAC **Vranov** 78.89 352 ⇑P P 21 36 33.3 -0.3
KIV **Kislovodsk** 79.24 333 ⇑P P 21 36 36.8 +1.0
KHC **Kasperske Hory** 79.29 354 *e*P P 21 36 33.9 -2.0
KHC pmax pmax
comp=Z,6.0nm,1.0s
KHC **Kasperske Hory** 79.29 354 *e*P P 21 36 35.9 0.0
GEYT **Alibeck** 79.31 320 P P 21 36 36.0 -0.2
comp=Z,2.6nm,0.9s,baz=1.4,slow=5.9,SNR=6.2
GEYT LR LR 22 17 48.7
comp=Z,136nm,18.1s,baz=195,slow=40
GEYT **Alibeck** 79.31 320 P P 21 36 36.6 +0.4
KBZ **Khabaz** 79.39 333 P P 21 36 36.1 -0.2
comp=Z,1.8nm,0.8s,baz=270,slow=8.7,SNR=3.6
KBZ LR LR 22 15 33.1
comp=Z,199nm,21.8s,baz=34,slow=39
TRPA **Tarpa** 79.41 348 ⇑P P 21 36 36.9 +0.4
VYHS **Vyhne** 79.49 350 *e*P P 21 36 36.7 -0.2
VYHS **Vyhne** 79.49 350 *e*P P 21 36 36.7 -0.2
BURAR **Bucovina Array** 79.54 346 ⇑P P 21 36 37.1 -0.2
BURAR **Bucovina Array** 79.54 346 P P 21 36 36.9 -0.4
GERES **GERESS Array B** 79.57 354 P P 21 36 35.8 -1.7
comp=Z,0.8nm,0.7s,baz=0.9,slow=6.0,SNR=6.1
SMOL **Smolenice** 79.60 351 *e*P P 21 36 38.1 +0.6
SMOL **Smolenice** 79.60 351 *e*P P 21 36 38.1 +0.6
MILM **Milestii Mici** 79.63 343 ⇑P P 21 36 37.5 -0.2
BIZ **Bicaz** 80.06 345 ⇑P P 21 36 40.4 +0.4
VASR **Vaslui** 80.08 344 ⇑P P 21 36 40.2 +0.1
ARCR **ARCALIA** 80.19 347 ⇑P P 21 36 41.6 +0.9
CONA **Conrad Observa** 80.32 352 *i* P P 21 36 41.8 +0.3
comp=Z,1.0nm,0.4s
DRGR 80.70 348 ⇑P P 21 36 43.5 -0.1
GHRR 80.70 344 ⇑P P 21 36 44.5 +1.1
VRI **Vrincioaia** 81.01 345 ⇑P P 21 36 44.7 -0.4
PLOR **Plostina** 81.03 345 ⇑P P 21 36 45.8 +0.5
DOPR **Dopca** 81.12 346 ⇑P P 21 36 46.2 +0.4
TLCR 81.30 343 ⇑P P 21 36 47.2 +0.6
BISRR **Bisoca** 81.32 345 ⇑P P 21 36 47.4 +0.6
KBA **Koelnbreinsper** 81.35 354 *i* P P 21 36 47.5 +0.4
comp=Z,3.2nm,0.7s
SIRR **Siria** 81.36 348 ⇑P P 21 36 47.2 +0.2
CFR **Carcaliu** 81.43 343 ⇑P P 21 36 47.8 +0.5
MLR **Muntele Rosu** 81.50 345 ⇑P P 21 36 49.3 +1.4
FETA **Feichten** 81.55 356 *i* P P 21 36 48.5 +0.3
comp=Z,1.7nm,0.7s
SOKA **Soboth** 81.63 353 *i* P P 21 36 48.3 -0.2
comp=Z,1.1nm,0.4s
TOPG **Topolog** 81.68 343 ⇑P P 21 36 49.3 +0.7
VOIR 81.69 346 ⇑P P 21 36 49.5 +0.6
ARR **Arges** 81.82 346 ⇑P P 21 36 49.4 -0.1
GZR **Ciura Zlata** 82.07 347 ⇑P P 21 36 50.5 -0.3
TIRR **Tirgusor** 82.08 343 ⇑P P 21 36 51.4 +0.7
KULM **Kulim** 82.19 269 P P 21 36 52.5 +0.8
KULM IAmb IAmb 21 37 02.5
comp=Z,22nm,1.3s
ICOR **Ion Corvin** 82.52 343 ⇑P P 21 36 53.1 0.0
HUMR **Humele** 82.59 346 ⇑P P 21 36 52.4 -1.0
COPA **Copaceanca** 82.94 345 ⇑P P 21 36 53.9 -1.4
WB0 **Warramunga Arr** 83.59 227 IAmb IAmb 21 36 58.8
comp=Z,7.1nm,1.0s
WR0 **Warramunga Arr** 83.70 227 P P 21 36 58.4 -0.9
WR0 IAmb IAmb 21 36 59.3
comp=Z,5.2nm,0.9s
WRAB **Tennant Creek** 83.76 227 *e*P P 21 36 59.2 -0.5
WRAB pmax pmax
comp=Z,9.0nm,1.1s
WRAB **Tennant Creek** 83.76 227 P P 21 36 59.2 -0.5
WRAB IAmb IAmb 21 37 00.3
comp=Z,11nm,1.1s
PLVB **Pleven** 83.76 346 ⇑P P 21 36 59.9 +0.4
WB2 **Warramunga Arr** 83.77 227 IAmb IAmb 21 37 01.0
comp=Z,8.1nm,0.9s
WRA **Warramunga Arr** 83.77 227 *i* P P 21 36 58.0 -1.7
WRA pmax pmax
comp=Z,14nm,1.3s
WRA **Warramunga Arr** 83.77 227 P P 21 36 59.0 -0.7
comp=Z,4.6nm,1.0s,baz=37,slow=6.4,SNR=11
WRA **Warramunga Arr** 83.77 227 P P 21 36 59.9 +0.2
ELND **Elena** 84.00 345 ⇑P P 21 37 00.7 -0.1
VTS **Vitosha** 84.72 346 ⇑P P 21 37 04.1 -0.5
VTS **Vitosha** 84.72 346 IAmb IAmb 21 37 06.5
comp=Z,3.8nm,0.8s
DR12 **Loma Pena Alta** 84.91 66 P P 21 37 07.0 +1.2
MURB **Monte Urbino** 85.20 354 P P 21 37 09.0 +2.1
MURB IAmb IAmb 21 37 23.4
comp=Z,11nm,1.2s
PDG **Podgorica** 85.43 349 ⇑P P 21 37 07.8 -0.1
BR131 **Keskin Array S** 85.54 338 *e*P P 21 37 07.4 -1.3
BRTR **Keskin Array B** 85.54 338 P P 21 37 08.4 -0.3
comp=Z,2.0nm,0.8s,baz=41,slow=3.4,SNR=11
BRTR LR LR 22 21 30.9
comp=Z,50nm,18.1s,baz=19,slow=40
BRTR **Keskin Array B** 85.54 338 P P 21 37 07.7 -1.0
NRCA **Norcia** 85.59 354 P P 21 37 09.9 +1.1
NRCA IAmb IAmb 21 37 11.2
comp=Z,4.3nm,0.7s
FITZ **Fitzroy Crossi** 86.39 235 IAmb IAmb 21 37 14.5
comp=Z,16nm,1.1s
ASAR **Alice Springs** 87.21 225 P P 21 37 17.1 +0.3
comp=Z,6.0nm,0.9s,baz=31,slow=4.6,SNR=43
ASAR **Alice Springs** 87.21 225 P P 21 37 15.6 -1.2

ESDC	**Sonseca Array**	**88.72**	**7**	P		**P**	**21 37 22.6**	**-1.4**
	comp=Z,1.7nm,0.9s,baz=355,slow=3.3,SNR=4.9							
ESDC	**Sonseca Array**	**88.72**	**7**	P		**P**	**21 37 23.7**	**-0.3**
STKA	**Stephens Creek**	**91.39**	**216**	P		**P**	**21 37 36.6**	**+0.4**
	comp=Z,4.0nm,0.6s,baz=354,slow=7.0,SNR=12							
STKA				LR		LR	22 13 05.3	
	comp=Z,119nm,21.1s,baz=25,slow=32							
WSAR	**Wadi Sarin**	**91.74**	**312**	P		**P**	**21 37 37.9**	**-0.4**
	comp=Z,3.8nm,0.9s,baz=240,slow=0.4,SNR=5.8							
PSA00	**Pilbara Seismi**	**92.28**	**237**	P		**P**	**21 37 39.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**115.40**	**3**	PKP		**PKiKP**	**21 43 11.7**	**-0.7**
	comp=Z,0.8nm,0.5s,baz=353,slow=2.4,SNR=20							
DBIC	**Dimbokro**	**121.32**	**11**	PKP		**PKPdf**	**21 43 23.2**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=316,slow=3.8,SNR=8.4							
PLCA	**Paso Flores**	**128.98**	**109**	PKP		**PKiKP**	**21 43 38.2**	**-0.1**
	comp=Z,2.0nm,0.7s,baz=270,slow=2.0,SNR=3.0							
QSPA	**South Pole Qui**	**141.43**	**180**	PKhKP	PKPpre		21 43 55.1	
	comp=Z,0.9nm,0.2s,baz=29,slow=3.7,SNR=3.3							
QSPA	**South Pole Qui**	**141.43**	**180**			**PKPdf**	**21 44 00.5**	**+0.5**
TSUM	**Tsumeb**	**146.05**	**338**			**PKPdf**	**21 44 10.0**	**+0.4**
MAW	**Mawson**	**148.05**	**218**	PKPbc		**PKPbc**	**21 44 14.7**	**+0.2**
	comp=Z,11nm,0.7s,baz=100,slow=3.9,SNR=15							
MAW	**Mawson**	**148.05**	**218**			**PKPbc**	**21 44 15.0**	**+0.5**
BOSA	**Boshof**	**152.31**	**318**	PKPbc		**PKPbc**	**21 44 26.1**	**0.0**
	comp=Z,17nm,0.5s,baz=6.4,slow=3.2,SNR=61							

IDC ***23*** *21:26:06.3±0.9, 27.90N×101.38E, h0km, mb3.5/8, mb1 3.7/9, mb1mx3.4/57, mbtmp3.5/9, ML3.2/1, Error ellipse: s-maj=28.0km s-min=16.7km az=70.0*

BJI ***23*** *21:26:08.0±0.0, 27.91N×101.40E, h15km, mb3.9/4, ML3.7/16, Ms3.6/4, Ms7 3.5/3*

ISC 23 21:26:08.6±0.7, 27.90N±0.04×101.54E±0.06, h10km, n16, σ1§68/25, mb3.7/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMI	**Kunming**	**2.97**	**158**	Pn		**Pn**	**21 26 57.6**	**+1.7**
KMI				Pg		**Pb**	**21 27 02.4**	**+0.7**
KMI				Sn		**Sn**	**21 27 35.8**	**+4.1**
KMI				Sg		**Sg**	**21 27 43.6**	**-0.3**
KMI				smax		smax		
	comp=N,440nm,0.8s							
KMI				smax		smax		
	comp=E,480nm,0.8s							
KMI				LR		LR		
	comp=E,600nm,3.8s							
KMI				LR		LR		
	comp=Z,340nm,4.7s							
CD2	**Chengdu**	**3.57**	**32**	Pn		**Pn**	**21 27 06.6**	**+2.5**
CD2				Pg		**Pg**	**21 27 16.0**	**-1.0**
CD2				Sn		**Sn**	**21 27 45.8**	**-0.5**
CD2				Sg		**Sb**	**21 27 59.1**	**+3.9**
CD2				smax		smax		
	comp=N,490nm,1.0s							
CD2				smax		smax		
	comp=E,630nm,1.3s							
CD2				LR		LR		
	comp=Z,1μm,5.9s							
GYA	**Guiyang**	**4.78**	**106**	Pn		**Pn**	**21 27 20.0**	**-0.8**
GYA				Pg		**Pg**	**21 27 38.3**	**-1.9**
GYA				Sn		**Sn**	**21 28 17.0**	**+0.6**
GYA				Sg		**Sg**	**21 28 41.8**	**-0.5**
GYA				smax		smax		
	comp=N,40nm,0.8s							
GYA				smax		smax		
	comp=E,30nm,1.0s							
LZH	**Lanzhou**	**8.39**	**13**	*e*P		**Pn**	**21 28 11.4**	**+1.0**
LZH				pP		Pb	21 28 15.9	-18
LZH				sP		Pg	21 28 18.8	-30
XAN	**Xi'an**	**8.81**	**44**	P		**Pn**	**21 28 17.1**	**+1.1**
XAN				S		**Sn**	**21 29 54.1**	**-1.2**
XAN				smax		smax		
	comp=E,48nm,1.1s							
XAN				LR		LR		
	comp=N,250nm,11.9s							
CMAR	**Chiang Mai Arr**	**9.70**	**195**	Pn		**Pn**	**21 28 28.7**	**+0.5**
	0.1nm,0.3s,baz=7.7,slow=11,SNR=6.5							
CMAR				Pg			21 29 08.9	
	0.1nm,0.3s,baz=4.9,slow=16,SNR=8.0							
CMAR				Lg		Lg	21 31 12.2	
	0.1nm,0.3s,baz=6.3,slow=28,SNR=2.5							
WHN	**Wuhan**	**11.50**	**74**	P		Pn	21 28 43.6	-9.2
WHN				S		Sn	21 30 41.6	-20
WHN				LR		LR		
	comp=N,820nm,7.9s							
WHN				LR		LR		
	comp=E,420nm,9.8s							
WMQ	**Urumqi**	**19.41**	**329**	*e*P		**Pn**	**21 30 35.9**	**-0.1**
WMQ				sP		sP	21 30 39.8	-0.4
WMQ				pmax		pmax		
	comp=E,6.0nm,0.8s							
WMQ				LR		LR		
	comp=E,420nm,29.1s							
SONM	**Songino Array**	**20.26**	**9**	P		**P**	**21 30 44.0**	**-0.2**
	comp=E,0.3nm,0.9s,baz=179,slow=11,SNR=2.7							
KSRS	**Korea Array**	**24.10**	**60**	P		**P**	**21 31 25.0**	**+0.7**
	comp=E,2.2nm,0.9s,baz=248,slow=12,SNR=5.3							
MKAR	**Makanchi Array**	**24.17**	**326**	P		**P**	**21 31 23.1**	**-1.9**
	comp=E,1.6nm,0.7s,baz=131,slow=10.0,SNR=18							
AAK	**Ala-Archa**	**26.39**	**311**	P		**P**	**21 31 43.9**	**-1.4**
	comp=E,0.2nm,0.3s,baz=153,slow=11,SNR=2.0							
KURBB	**Kurchatov Arra**	**28.63**	**329**	P		**P**	**21 32 03.6**	**-1.5**
	comp=E,0.4nm,0.4s,baz=135,slow=8.3,SNR=4.3							
WRA	**Warramunga Arr**	**57.18**	**143**	P		**P**	**21 35 54.5**	**-1.4**
	comp=E,0.9nm,0.5s,baz=331,slow=8.0,SNR=4.7							
ASAR	**Alice Springs**	**60.02**	**145**	P		**P**	**21 36 16.1**	**+0.4**
	comp=E,0.4nm,0.7s,baz=328,slow=6.8,SNR=4.1							
YKA	**Yellowknife Ar**	**85.39**	**16**	P		**P**	**21 38 45.1**	**-0.7**
	comp=E,0.3nm,0.7s,baz=328,slow=4.4,SNR=2.9							

NIED ***23*** *21:43:00, 29.00N×142.10E, h5km, Mw4.5 Best double couple: M0 7.35000×10^15 NP1:φs 58.00000°, δ63.00000°, λ126.00000°. NP2:φs 180.00000°, δ44.00000°, λ41.00000°.*

IDC ***23*** *21:43:15.8±0.5, 28.95N×142.57E, h0km, mb4.3/24, mb1 4.4/27, mb1mx4.3/52, mbtmp4.2/27, ML3.2/3, MS4.0/13, Ms1 4.0/13, ms1mx3.8/36, Error ellipse: s-maj=17.1km s-min=11.3km az=91.0*

MOS ***23*** *21:43:18.5±1.1, 28.99N×142.46E, h26km, mb4.8/19, Error ellipse: s-maj=11.1km s-min=5.1km az=114.4*

BJI ***23*** *21:43:18.8±0.0, 28.93N×142.33E, h29km, mB4.9/35, mb4.6/48, Ms4.5/29, Ms7 4.2/30*

GCMT ***23*** *21:43:19.7±0.5, 28.77N±0.04×142.65E±0.03, h17km±1km, MW4.8/78, Moment Tensor Solution. s11,c12; s78,c97; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 1.88±.17; Mθθ -0.01±.09; Mφφ -1.87±. 11; Mrθ 1.05±.28; Mφθ 0.35±.06; Mφr 0.31±.23; Best double couple: M0 2.16400×10^16 NP1:φs 147.00000°, δ48.00000°, λ56.00000°. NP2: φs 13.00000°, δ52.00000°, λ122.00000°. Principal axes: T 2.3900, Plg65.0000°, Azm346.0000°; N -0.4560, Plg25.0000°, Azm172.0000°; P -1.9380, Plg2.0000°, Azm81.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

JMA ***23*** *21:43:20.2±0.1, 28.99N×142.12E, h62km, M4.4*

NEIC ***23*** *21:43:21.7±2.1, 28.96N±0.05×142.4E±0.1, h35km±2km, mb4.7/48, Error ellipse: s-maj=15.7km s-min=7.4km az=85.0*

ISC 23 21:43:20.7±0.4, 29.01N±0.04×142.45E±0.07, h27km, n196, σ1§59/203, mb4.7/77, MS4.1/19, 4C-4D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.92**	**187**	P		**Pn**	**21 43 50.9**	**-0.7**
CBIJ				*e*S		**Sn**	**21 44 13.3**	**-1.6**
JCJ	**Chichijima**	**1.92**	**187**	Pn		**Pn**	**21 43 49.8**	**-1.9**
	13nm,0.3s,baz=18,slow=20,SNR=4.3							
JCJ				Sn		**Sn**	**21 44 12.8**	**-2.1**
	144nm,0.3s,baz=48,slow=22,SNR=8.2							
JHJ2	**Mitsune**	**4.67**	**332**	P		**Pn**	**21 44 28.8**	**-0.7**
JHJ2				*e*S		**Sn**	**21 45 21.3**	**-1.5**
JHJ2	**Mitsune**	**4.67**	**332**	Pn		**Pn**	**21 44 30.0**	**+0.5**
BSO1	**Boso 1**	**5.77**	**348**	*e*S		**Sn**	**21 45 46.4**	**-2.6**
BSO3	**Boso 3**	**6.01**	**345**	P		**Pn**	**21 44 45.7**	**-1.9**
BSO4	**Boso 4**	**6.23**	**344**	P		**Pn**	**21 44 51.5**	**+0.7**
JOD2	**Odawara 2**	**6.86**	**336**	P		**Pn**	**21 44 59.2**	**-0.3**
JOD2				*e*S		**Sn**	**21 46 15.8**	**-0.9**
JHU	**Hanno**	**7.33**	**339**	P		**Pn**	**21 45 05.1**	**-0.9**
JHU				*e*S		**Sn**	**21 46 26.8**	**-1.5**
JRY	**Ryogami san**	**7.60**	**338**	P		**Pn**	**21 45 09.4**	**-0.4**
JRY				S		**Sn**	**21 46 34.1**	**-1.0**
JHO	**Hitachi**	**7.75**	**349**	P		Pn	21 45 08.6	-3.1
JAG	**Ashikaga**	**7.81**	**342**	P		**Pn**	**21 45 10.9**	**-1.7**
JAG				*e*S		**Sn**	**21 46 37.7**	**-2.5**
INU	**Inuyama**	**7.82**	**325**	Pn		**Pn**	**21 45 12.1**	**-0.6**
MJAR	**Matsushiro Arr**	**8.32**	**336**	Pn		**Pn**	**21 45 18.8**	**-0.8**
	0.6nm,0.3s,baz=153,slow=10,SNR=36							
MJAR				Sn		**Sn**	**21 46 48.9**	**-3.7**
	0.2nm,0.3s,baz=270,slow=25,SNR=4.4							
MJAR	**Matsushiro Arr**	**8.32**	**336**	Pn		**Pn**	**21 45 18.2**	**-1.3**
MAJO	**Matsushiro**	**8.32**	**336**	*e*P		**Pn**	**21 45 19.8**	**+0.2**
MAJO				pmax		pmax		
	comp=Z,24nm,1.1s							
MAJO	**Matsushiro**	**8.32**	**336**			**Pn**	**21 45 18.9**	**-0.7**
MAT	**Matsushiro**	**8.32**	**336**	P		**Pn**	**21 45 18.3**	**-1.3**
MAT				S		**Sn**	**21 46 49.2**	**-3.4**
MJB9	**Matsu-Tunnel**	**8.32**	**336**			**Pn**	**21 45 19.3**	**-0.4**
JFK	**Kawauchi**	**8.44**	**351**	P		Pn	21 45 18.0	-3.2
JMK	**Ichinoseki**	**9.97**	**354**	P		**Pn**	**21 45 40.7**	**-1.5**
JMK				*e*S		Sn	21 47 23.3	-10
ERM	**Erimo**	**12.99**	**2**	P		**Pn**	**21 46 22.7**	**-0.7**
ERM	**Erimo**	**12.99**	**2**	Pn		**Pn**	**21 46 22.7**	**-0.7**
NMR	**Nemuro--Hokkai**	**14.57**	**10**	*e*P		Pn	21 46 40.2	-4.8
KSRS	**Korea Array**	**14.78**	**308**	P		**Pn**	**21 46 49.0**	**+1.1**
KSRS	**Korea Array**	**14.78**	**308**	Pn		**Pn**	**21 46 49.0**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=116,slow=12,SNR=19							
KSAR	**Wonju Array Be**	**14.80**	**308**	P		**Pn**	**21 46 47.5**	**-0.6**
KSAR	**Wonju Array Be**	**14.80**	**308**	Pn		**Pn**	**21 46 47.5**	**-0.6**
KS19	**Wonju Array Si**	**14.84**	**309**			**Pn**	**21 46 48.4**	**-0.3**
ASAJ	**Asahikawa**	**15.08**	**0**	LR		LR	21 54 03.7	
	comp=Z,484nm,21.1s,baz=182,slow=43							
INCN	**Inchon**	**15.69**	**307**	P		**Pn**	**21 46 59.2**	**-0.7**
INCN				pmax		pmax		
	comp=Z,22nm,0.9s							
INCN	**Inchon**	**15.69**	**307**	Pn		**Pn**	**21 46 59.2**	**-0.7**
USA0B	**Ussuriysk Arra**	**17.31**	**334**	P		**Pn**	**21 47 21.2**	**+0.8**
USA0B				pmax		pmax		
	comp=Z,13nm,1.2s							
USA0B	**Ussuriysk Arra**	**17.31**	**334**	Pn		**Pn**	**21 47 16.0**	**-4.3**
USRK	**Ussuriysk Ar.**	**17.31**	**334**	P		**Pn**	**21 47 19.1**	**-1.3**
	baz=152,slow=11,SNR=5.3							
YSS	**Yuzh-Sakhalins**	**17.92**	**1**	*e*P		**Pn**	**21 47 26.5**	**-1.4**
YSS				*e*			21 50 51.8	
YSS				MLR		MLR		
	comp=Z,700nm,10.0s							
YSS				MLR		MLR		
	comp=N,400nm,17.0s							
YSS	**Yuzh-Sakhalins**	**17.92**	**1**	Pn		**Pn**	**21 47 26.5**	**-1.4**
MDJ	**Mudanjiang**	**18.64**	**330**	P		**P**	**21 47 35.8**	**-0.4**
MDJ				sP		pwP	21 47 49.3	+0.8
MDJ				S		**Sn**	**21 50 57.4**	**-6.8**
MDJ				pmax		pmax		
	comp=N,10.0nm,0.8s							
MDJ				LR		LR		
	comp=N,520nm,13.5s							
MDJ				LR		LR		
	comp=N,680nm,15.2s							
MDJ				LR		LR		
	comp=N,580nm,14.2s							
MDJ	**Mudanjiang**	**18.64**	**330**	P		**P**	**21 47 35.2**	**-1.1**
NJ2	**Nanjing**	**20.54**	**284**	*e*P		**P**	**21 47 57.0**	**-0.2**
NJ2				pmax		pmax		
	comp=N,18nm,0.6s							
KLR	**Kul'dur**	**21.79**	**341**	*e*P		**P**	**21 48 10.5**	**+0.1**
KLR				pmax		pmax		
	comp=Z,9.0nm,1.2s							
KLR	**Kul'dur**	**21.79**	**341**	P		**P**	**21 48 09.3**	**-1.1**
	comp=Z,6.5nm,0.7s,baz=124,slow=6.3,SNR=12							
TYV	**Tymovskoe**	**21.83**	**0**	*e*P		**P**	**21 48 12.3**	**+1.5**
TYV				pmax		pmax		
	comp=Z,6.0nm,1.2s							
GRNR	**Gornyy**	**22.21**	**350**	*e*P		**P**	**21 48 12.6**	**-2.3**
GRNR				*e*			21 48 24.3	
GRNR				pmax		pmax		
	comp=Z,4.0nm,0.7s							
GRNR				MLR		MLR		
	comp=Z,250nm,14.0s							
BJT	**Baijiatuao**	**24.20**	**304**	P		**P**	**21 48 32.8**	**-2.2**
BJT				pmax		pmax		
	comp=Z,11nm,1.1s							
BJT	**Baijiatuao**	**24.20**	**304**	P		**P**	**21 48 32.8**	**-2.2**
BJI	**Beijing**	**24.20**	**304**	P		**P**	**21 48 33.6**	**-1.4**
BJI				sP		**sP**	**21 48 47.1**	**+2.8**
WHN	**Wuhan**	**24.42**	**281**	||P	**P**	**21 48 36.5**	**-0.6**
WHN				S		S	21 52 44.3	-11
WHN				LR		LR		
	comp=Z,1μm,16.7s							
WHN				LR		LR		
	comp=Z,610nm,14.3s							
PETK	**Petropavlovsk-**	**26.57**	**21**	LR		LR	22 00 04.3	
	comp=Z,198nm,20.1s,baz=241,slow=38							
HIA	**Hailar**	**26.64**	**326**	*e*P		**P**	**21 48 58.1**	**+1.0**
HIA				pmax		pmax		
	comp=Z,129nm,1.2s							
ZEA	**Zeya**	**27.10**	**340**	*e*P		**P**	**21 49 00.5**	**-0.6**
ZEA				*e*			21 59 50.0	
ZEA				pmax		pmax		
	comp=Z,23nm,1.0s							
HHC	**Hu-ho-hao-te**	**27.80**	**303**	*e*P		**P**	**21 49 06.6**	**-1.1**
HHC				pmax		pmax		
	comp=Z,8.0nm,0.9s							
HHC				pmax		pmax		
	comp=Z,67nm,4.4s							
HHC				LR		LR		
	comp=Z,240nm,13.0s							
HHC				LR		LR		
	comp=Z,170nm,13.2s							
HHC				LR		LR		
	comp=Z,400nm,13.1s							
ENH	**Enshi**	**28.63**	**281**	P		**P**	**21 49 13.9**	**-1.2**
XAN	**Xi'an**	**28.94**	**289**	P		**P**	**21 49 15.6**	**-2.2**
XAN				pP		sP	21 49 29.3	+2.2
XAN				pmax		pmax		
	comp=Z,6.0nm,1.1s							
XAN				LR		LR		
	comp=Z,390nm,15.2s							
XAN				LR		LR		
	comp=Z,450nm,17.3s							
XAN	**Xi'an**	**28.94**	**289**	P		**P**	**21 49 16.4**	**-1.4**
XAN				pmax		pmax		
	comp=Z,4.0nm,0.9s							
XAN	**Xi'an**	**28.94**	**289**	P		**P**	**21 49 16.4**	**-1.4**
MA2	**Magadan**	**31.09**	**8**	LR		LR	22 01 57.4	
	comp=Z,133nm,20.8s,baz=209,slow=36							
SIJI	**Sorong**	**31.58**	**202**	P		**P**	**21 49 40.7**	**-0.5**
	comp=Z,5.3nm,0.6s,baz=312,slow=17,SNR=4.1							
ULN	**Ulaanbaatar**	**33.13**	**314**	||*e*P	**P**	**21 49 55.8**	**+1.1**
ULN				pmax		pmax		
	comp=Z,10.0nm,1.0s							
ULN	**Ulaanbaatar**	**33.13**	**314**	P		**P**	**21 49 53.5**	**-1.2**
ULN				IAmb		IAmb	21 49 58.7	
	comp=Z,7.5nm,0.8s							
SONM	**Songino Array**	**33.53**	**314**	P		**P**	**21 49 58.0**	**-0.2**
SONM				pmax		pmax		
	comp=Z,6.0nm,0.9s							
SONM	**Songino Array**	**33.53**	**314**	P		**P**	**21 49 59.0**	**+0.8**
	comp=Z,6.7nm,0.9s,baz=110,slow=7.4,SNR=37							
SONM				LR		LR	22 04 18.7	
	comp=Z,266nm,18.9s,baz=52,slow=38							
SONM	**Songino Array**	**33.53**	**314**	P		**P**	**21 49 58.0**	**-0.2**
SEY	**Seymchan**	**34.54**	**8**	P		**P**	**21 50 06.2**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=172,slow=6.3,SNR=4.5							
BOD	**Bodaibo**	**34.94**	**334**	*e*P		**P**	**21 50 10.5**	**+0.4**
BOD				pmax		pmax		
	comp=Z,8.0nm,1.4s							
ZAK	**Zakamensk**	**36.35**	**317**	*e*P		**P**	**21 50 22.8**	**+0.3**
ZAK				pmax		pmax		
	comp=Z,18nm,1.4s							
GTA	**Gaotai**	**36.46**	**298**	||P	**P**	**21 50 22.9**	**-0.7**
GTA				pP		sP	21 50 33.8	+0.8
GTA				sP		pwP	21 50 37.8	+2.3
GTA				PcP		**PcP**	**21 52 48.4**	**+1.2**
GTA				S		**S**	**21 56 00.8**	**-3.1**
GTA				sS		sS	21 56 16.4	+1.5
GTA				SS		**SnSn**	**21 58 26.3**	**-6.9**
GTA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
GTA				pmax		pmax		
	comp=Z,130nm,7.9s							
GTA				LR		LR		
	comp=Z,300nm,16.5s							
GTA				LR		LR		
	comp=Z,300nm,18.1s							
GTA				LR		LR		
	comp=Z,330nm,18.4s							
IRK	**Irkutsk**	**36.50**	**320**	*e*P		**P**	**21 50 24.5**	**+0.9**
IRK				pmax		pmax		
	comp=Z,36nm,2.7s							
TLY	**Talaya**	**36.63**	**319**	*e*P		**P**	**21 50 26.4**	**+1.7**
TLY				pmax		pmax		
	comp=Z,65nm,1.3s							
TLY				MLR		MLR		
	comp=Z,1μm,19.0s							
TLY	**Talaya**	**36.63**	**319**	P		**P**	**21 50 25.4**	**+0.7**
	comp=Z,9.1nm,0.7s,baz=130,slow=5.9,SNR=14							
TLY				LR		LR	22 06 13.5	
	comp=Z,440nm,18.1s,baz=112,slow=38							
TLY	**Talaya**	**36.63**	**319**	P		**P**	**21 50 24.9**	**+0.2**
TLY						**S**	**21 56 10.0**	**+4.0**
MOY	**Mondy**	**38.16**	**318**	*e*P		**P**	**21 50 38.8**	**+1.0**
MOY				pmax		pmax		
	comp=Z,42nm,1.3s							
PBKT	**Sadao Pong**	**40.00**	**261**	P		**P**	**21 50 52.1**	**-1.3**
PBKT				IAmb		IAmb	21 50 55.5	
	comp=Z,8.0nm,0.9s							
KAPI	**Kappang**	**40.26**	**217**	P		**P**	**21 50 53.4**	**-2.1**
KAPI				pmax		pmax		
	comp=Z,23nm,1.2s							
KAPI	**Kappang**	**40.26**	**217**	P		**P**	**21 50 53.4**	**-2.1**
KAPI				IAmb		IAmb	21 50 53.8	
	comp=Z,23nm,1.1s							
CHTO	**Chiang Mai**	**40.85**	**266**	P		**P**	**21 51 00.1**	**-0.4**
CHTO				pmax		pmax		
	comp=Z,15nm,1.2s							
CHTO	**Chiang Mai**	**40.85**	**266**	P		**P**	**21 51 00.1**	**-0.4**
CHTO				IAmb		IAmb	21 51 01.4	
	comp=Z,15nm,1.1s							
CMAR	**Chiang Mai Arr**	**40.99**	**265**	*ce*P		**P**	**21 51 01.7**	**+0.1**
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.9s							
CMAR	**Chiang Mai Arr**	**40.99**	**265**	P		**P**	**21 51 01.3**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=54,slow=7.9,SNR=15							
BILL	**Bilibino**	**41.55**	**13**	*e*P		**P**	**21 51 04.9**	**-0.7**
BILL				*e*			21 52 39.1	
BILL				*e*PPP		PPP	21 53 06.4	
BILL				pmax		pmax		
	comp=Z,1.0nm,1.0s							
TIXI	**Tiksi**	**43.34**	**354**	*e*P		**P**	**21 51 19.2**	**-0.9**
TIXI				pmax		pmax		
	comp=Z,5.0nm,1.4s							
TIXI	**Tiksi**	**43.34**	**354**	P		**P**	**21 51 18.8**	**-1.3**
	comp=Z,1.4nm,0.3s,baz=180,slow=24,SNR=6.7							
TIXI	**Tiksi**	**43.34**	**354**	P		**P**	**21 51 18.4**	**-1.7**
WMQ	**Urumqi**	**45.67**	**304**	*e*P		**P**	**21 51 39.8**	**+0.6**
WMQ				pP		sP	21 51 50.6	+1.8
WMQ				sP		pwP	21 51 55.8	+3.7
WMQ				pmax		pmax		
	comp=Z,11nm,1.1s							
WMQ				pmax		pmax		
	comp=Z,120nm,4.1s							
WMQ				LR		LR		
	comp=Z,520nm,28.8s							
WMQ				LR		LR		
	comp=Z,670nm,28.5s							
WMQ				LR		LR		
	comp=Z,190nm,20.7s							
KULM	**Kulim**	**46.02**	**247**	P		**P**	**21 51 42.1**	**-0.1**
KULM				IAmb		IAmb	21 51 54.2	
	comp=Z,14nm,1.1s							
ZAA0	**Zalesovo Array**	**48.22**	**318**	P		**P**	**21 51 59.5**	**+0.7**
ZALV	**Zalesovo Beam**	**48.22**	**318**	*i* P		**P**	**21 51 59.4**	**+0.6**
ZALV				pmax		pmax		
	comp=Z,2.0nm,0.5s							
ZALV	**Zalesovo Beam**	**48.22**	**318**	P		**P**	**21 51 58.6**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=99,slow=6.9,SNR=9.7							
ZALV				LR		LR	22 13 05.8	
	comp=Z,285nm,18.2s,baz=74,slow=37							
ZALV	**Zalesovo Beam**	**48.22**	**318**	P		**P**	**21 51 59.2**	**+0.3**
ODAN	**Odare**	**48.32**	**281**	*e*P		**P**	**21 51 59.9**	**-0.4**
	comp=Z,32nm,1.3s							
RAMN	**Ramite**	**48.98**	**282**	*e*P		**P**	**21 52 04.9**	**-0.5**
	comp=Z,21nm,0.9s							
WB0	**Warramunga Arr**	**49.11**	**190**	P		**P**	**21 52 05.5**	**-0.6**
JIRN	**Jiri**	**49.13**	**283**	*e*P		**P**	**21 52 06.6**	**-0.1**
	comp=Z,62nm,1.1s							
WR0	**Warramunga Arr**	**49.28**	**190**	P		**P**	**21 52 06.1**	**-1.2**
WRAB	**Tennant Creek**	**49.28**	**190**	*e*P		**P**	**21 52 06.6**	**-0.7**
WRAB				pmax		pmax		
	comp=Z,13nm,1.0s							
WRAB	**Tennant Creek**	**49.28**	**190**	P		**P**	**21 52 06.5**	**-0.8**
WRA	**Warramunga Arr**	**49.29**	**190**	P		**P**	**21 52 06.6**	**-0.8**
	comp=Z,9.3nm,0.7s,baz=12,slow=8.3,SNR=37							
WRA	**Warramunga Arr**	**49.29**	**190**	P		**P**	**21 52 06.8**	**-0.6**
GUN	**Gumba**	**49.33**	**283**	*e*P		**P**	**21 52 08.0**	**-0.2**
	comp=Z,44nm,1.1s							
MKAR	**Makanchi Array**	**49.46**	**308**	P		**P**	**21 52 08.7**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=96,slow=7.8,SNR=26							
MKAR	**Makanchi Array**	**49.46**	**308**	P		**P**	**21 52 07.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**49.57**	**201**	P		**P**	**21 52 09.8**	**+0.3**
FITZ				IAmb		IAmb	21 52 10.0	
	comp=Z,8.2nm,1.1s							
MDSI	**Maura Dua**	**49.60**	**234**	P		**P**	**21 52 09.4**	**-0.5**
	comp=Z,34nm,1.1s							
MAKZ	**Makanchi**	**49.67**	**308**	P		**P**	**21 52 10.6**	**+0.4**
MAKZ				pmax		pmax		
	comp=Z,7.0nm,1.2s							
MAKZ	**Makanchi**	**49.67**	**308**	P		**P**	**21 52 10.6**	**+0.4**
MAKZ				IAmb		IAmb	21 52 14.7	
	comp=Z,6.9nm,1.1s							
PKIN	**Phulchoki**	**49.83**	**283**	*e*P		**P**	**21 52 11.1**	**-0.8**
KKN	**Kakani**	**49.88**	**283**	*e*P		**P**	**21 52 11.8**	**-0.4**
DMN	**Daman**	**50.

BRVK				pmax	pmax	
	comp=Z,13nm,1.1s					
BRVK	**Borovoye**	**56.87**	**317**	P	**P**	**21 53 04.0 +1.1**
BRVK				IAmb	IAmb	21 53 19.5
	comp=Z,12nm,1.1s					
KK31	**Karatay Array**	**58.17**	**305**	IAmb	IAmb	21 53 15.0
	comp=Z,7.7nm,0.9s					
KKAR	**Karatay Array**	**58.17**	**305**	P	**P**	**21 53 12.7 +0.4**
KKAR	**Karatay Array**	**58.17**	**305**	P	**P**	**21 53 12.7 +0.4**
KKAR	**Karatay Array**	**58.17**	**305**	IAmb	IAmb	21 53 15.0
	comp=Z,7.7nm,0.9s					
NIL	**Nilore**	**58.29**	**294**	P	**P**	**21 53 14.1 +0.8**
NIL				pmax	pmax	
	comp=Z,7.0nm,0.9s					
NIL	**Nilore**	**58.29**	**294**	P	**P**	**21 53 14.1 +0.8**
NIL				IAmb	IAmb	21 53 14.8
	comp=Z,7.1nm,0.8s					
STKA	**Stephens Creek**	**60.55**	**181**	P	**P**	**21 53 27.6 -1.1**
	comp=Z,1.5nm,0.7s,baz=339,slow=9.6,SNR=4.5					
FORT	**Forrest**	**61.02**	**194**	P	**P**	**21 53 31.0 -0.9**
INK	**Inuvik**	**61.20**	**25**	P	**P**	**21 53 33.4 +0.7**
INK				pmax	pmax	
	comp=Z,5.0nm,0.8s					
INK	**Inuvik**	**61.20**	**25**	P	**P**	**21 53 32.1 -0.5**
	comp=Z,4.0nm,0.9s,baz=266,slow=4.8,SNR=7.8					
INK	**Inuvik**	**61.20**	**25**	P	**P**	**21 53 33.4 +0.7**
INK				IAmb	IAmb	21 53 46.3
	comp=Z,5.4nm,0.8s					
WHY	**Whitehorse**	**61.65**	**34**	P	**P**	**21 53 36.9 +0.9**
WHY				IAmb	IAmb	21 53 52.2
	comp=Z,7.0nm,1.1s					
BBOO	**Buckleboo**	**61.78**	**186**	P	**P**	**21 53 37.5 +0.6**
BBOO				IAmb	IAmb	21 53 54.6
	comp=Z,5.3nm,0.9s					
SVE	**Sverdlovsk**	**61.86**	**322**	*e*P	**P**	**21 53 38.0 +0.6**
SVE				pmax	pmax	
	comp=Z,15nm,1.1s					
MORW	**Morawa**	**63.03**	**206**	P	**P**	**21 53 45.2 -0.2**
ARU	**Arti**	**63.07**	**322**	*c i*P	**P**	**21 53 45.6 +0.2**
ARU						21 56 04.4
ARU				S	**S**	**22 02 20.3 +6.0**
ARU				SS	**SS**	**22 06 20.2 +0.5**
ARU				pmax	pmax	
	comp=Z,18nm,1.4s					
ARU	**Arti**	**63.07**	**322**	P	**P**	**21 53 45.7 +0.2**
ARU				IAmb	IAmb	21 53 59.1
	comp=Z,6.1nm,0.8s					
ABKAR	**Akbulak array**	**63.94**	**314**	P	**P**	**21 53 51.8 +0.5**
ABKAR	**Akbulak array**	**63.94**	**314**	IAmb	IAmb	21 53 52.7
	comp=Z,6.6nm,0.7s					
HRA	**Herat**	**66.77**	**298**	P	**P**	**21 54 10.1 -0.1**
HRA				IAmb	IAmb	21 54 12.3
	comp=Z,5.2nm,1.1s					
GEYT	**Alibeck**	**68.67**	**302**	P	**P**	**21 54 22.1 +0.2**
	comp=Z,3.1nm,1.0s,baz=207,slow=2.3,SNR=7.5					
KBS	**Kingsbay**	**68.69**	**351**	P	**P**	**21 54 20.6 -0.7**
KBS				pmax	pmax	
	comp=Z,14nm,1.2s					
KBS	**Kingsbay**	**68.69**	**351**	P	**P**	**21 54 20.6 -0.7**
YKA	**Yellowknife Ar**	**70.36**	**29**	P	**P**	**21 54 31.2 -0.5**
	comp=Z,1.2nm,0.6s,baz=293,slow=6.4,SNR=13					
BANOM	**Banah**	**74.77**	**291**	*i* P	**P**	**21 55 00.1 +1.3**
	SNR=6.0					
RAR	**Rarotonga**	**74.80**	**125**	LR	LR	22 22 15.1
	comp=Z,188nm,19.8s,baz=306,slow=31					
OBN	**Obninsk**	**75.10**	**325**	*e*P	**P**	**21 55 00.4 +0.4**
OBN				*e*		21 55 13.6
OBN				*e*		21 57 49.6
OBN				pmax	pmax	
	comp=Z,6.0nm,0.9s					
MSFE	**Esma-Masafi**	**75.12**	**291**	P	**P**	**21 55 01.6 +0.7**
UOSS	**Minazif**	**75.26**	**291**	P	**P**	**21 55 01.9 +0.3**
UOSS	**Minazif**	**75.26**	**291**	P	**P**	**21 55 01.7 +0.1**
UOSS				IAmb	IAmb	21 55 02.4
	comp=Z,7.5nm,1.1s					
HATD	**Hatta, Dubai**	**75.37**	**290**	P	**P**	**21 55 03.4 +1.2**
ASHO	**Ashiyiah**	**75.49**	**290**	*i* P	**P**	**21 55 04.0 +1.0**
	SNR=5.4					
VSR	**Storozhevoye**	**75.61**	**321**	*e*P	**P**	**21 55 02.9 -0.2**
VSR				pmax	pmax	
	comp=Z,9.0nm,0.9s					
FINES	**FINESS Array B**	**76.34**	**334**	*i* P	**P**	**21 55 07.1 +0.1**
FINES				pmax	pmax	
	comp=Z,4.0nm,1.0s					
FINES	**FINESS Array B**	**76.34**	**334**	P	**P**	**21 55 07.2 +0.2**
	comp=Z,5.0nm,1.1s,baz=84,slow=9.8,SNR=4.8					
KBZ	**Khabaz**	**76.88**	**313**	*e*P	**P**	**21 55 11.3 +0.9**
KBZ				pmax	pmax	
	comp=Z,6.0nm,0.9s					
KBZ	**Khabaz**	**76.88**	**313**	P	**P**	**21 55 10.8 +0.4**
	comp=Z,4.2nm,0.8s,baz=60,slow=6.9,SNR=8.0					
KIV	**Kislovodsk**	**76.91**	**313**	*e*P	**P**	**21 55 12.7 +1.9**
KIV				pmax	pmax	
	comp=Z,23nm,1.1s					
KIV				MLR	MLR	
	comp=Z,253nm,19.0s					
GNI	**Garni**	**77.30**	**309**	P	**P**	**21 55 14.9 +1.8**
NVAR	**Mina Array Bea**	**79.16**	**52**	P	**P**	**21 55 23.2 -0.3**
	comp=Z,1.6nm,1.0s,baz=262,slow=6.2,SNR=6.1					
NVAR				LR	LR	22 26 43.5
	comp=Z,200nm,20.6s,baz=293,slow=33					
AKASG	**Malin Array Be**	**81.22**	**324**	P	**P**	**21 55 33.6 -0.5**
	comp=Z,1.3nm,0.6s,baz=49,slow=5.6,SNR=9.3					
AKBB	**Malin Array Si**	**81.22**	**324**	*i* P	**P**	**21 55 33.7 -0.4**
AKBB				pmax	pmax	
	comp=Z,3.0nm,0.9s					
NB2	**NORSAR Subarra**	**81.93**	**338**	P	**P**	**21 55 37.1 -0.6**
	comp=Z,4.4nm,0.7s,baz=41,slow=5.1					
NOA	**NORSAR Array B**	**81.93**	**338**	P	**P**	**21 55 37.3 -0.3**
	comp=Z,1.7nm,0.8s,baz=42,slow=5.0,SNR=3.9					
NOA				LR	LR	22 37 06.3
	comp=Z,71nm,20.3s,baz=40,slow=39					
PDAR	**Pinedale Array**	**82.69**	**45**	LR	LR	22 28 31.1
	comp=Z,101nm,19.7s,baz=308,slow=33					
PFO	**Pinyon Flats O**	**82.81**	**56**	*e*P	**P**	**21 55 42.5 -0.4**
PFO				pmax	pmax	
	comp=Z,5.0nm,1.0s					
RAYN	**Ar Rayn**	**84.59**	**294**	P	**P**	**21 55 53.2 +1.0**
RAYN				pmax	pmax	
	comp=Z,33nm,1.0s					
RAYN	**Ar Rayn**	**84.59**	**294**	*i* P	**P**	**21 55 53.3 +1.2**
	SNR=33					
RAYN	**Ar Rayn**	**84.59**	**294**	P	**P**	**21 55 53.2 +1.0**
BR131	**Keskin Array S**	**84.88**	**313**	*e*P	**P**	**21 55 54.1 +0.7**
BR131	**Keskin Array S**	**84.88**	**313**	IAmb	IAmb	21 55 55.0
	comp=Z,3.5nm,0.9s					
BRTR	**Keskin Array B**	**84.88**	**313**	*ce*P	**P**	**21 55 54.2 +0.8**
BRTR				pmax	pmax	
	comp=Z,3.0nm,0.8s					
BRTR	**Keskin Array B**	**84.88**	**313**	P	**P**	**21 55 53.5 0.0**
	comp=Z,2.7nm,0.8s,baz=105,slow=4.0,SNR=17					
BRTR	**Keskin Array B**	**84.88**	**313**	P	**P**	**21 55 52.0 -1.4**
ULM	**Lac du Bonnet**	**85.72**	**33**	LR	LR	22 34 33.5
	comp=Z,75nm,19.8s,baz=270,slow=36					
CLL	**Collm**	**88.50**	**331**	*e*P	**P**	**21 56 12.0 +1.3**
CLL	**Collm**	**88.50**	**331**	*e*P	**P**	**21 56 12.0 +1.3**
TX31	**Lajitas Ar. Si**	**94.27**	**53**	P	**P**	**21 56 40.2 +2.1**
TX31				IAmb	IAmb	21 56 41.8
	comp=Z,2.5nm,1.1s					
TXAR	**Lajitas Array**	**94.27**	**53**	P	**P**	**21 56 39.6 +1.6**
TXAR	**Lajitas Array**	**94.27**	**53**	P	**P**	**21 56 38.1 +0.1**
	comp=Z,3.8nm,1.2s,baz=151,slow=2.9,SNR=3.9					
TXAR				LR	LR	22 36 11.2
	comp=Z,56nm,19.4s,baz=0.0,slow=34					
TXAR	**Lajitas Array**	**94.27**	**53**	P	**P**	**21 56 39.6 +1.6**
QSPA	**South Pole Qui**	**118.77**	**180**	PKP	**PKPdf**	**22 02 04.9 -0.8**
	comp=Z,0.9nm,0.7s,baz=270,slow=1.0,SNR=3.0					
TORD	**Torodi Ar. Bea**	**123.49**	**312**	PKP	**PKPdf**	**22 02 15.9 -0.4**
	comp=Z,0.8nm,1.0s,baz=67,slow=1.7,SNR=5.4					
LPAZ	**La Paz**	**149.17**	**72**	PKPbc	**PKPdf**	**22 03 05.3 +1.4**
	comp=Z,3.1nm,1.0s,baz=279,slow=0.5,SNR=6.0					

IDC ***23*** *21:43:47.6±1.9, 59˚.89N×152˚.55W, h83km±33km, mb3.8/5, mb1 3.7/9, mb1mx3.3/61, mbtmp4.0/9, Error ellipse: s-maj=39.4km s-min=14.9km az=116.0*

NEIC ***23*** *21:43:47.8±1.3, 59˚.90N±0˚.04×152˚.55W±0˚.04, h90km±5km, Error ellipse: s-maj=5.2km s-min=2.7km az=182.0*

AEIC ***23*** *21:43:48.7±1.1, 59˚.91N±0˚.04×152˚.55W±0˚.04, h85km±4km, ML3.4/99, Error ellipse: s-maj=5.7km s-min=2.3km az=153.0*

ISC 23 21:43:47.8±0.8, 59˚.90N±0˚.03×152˚.48W±0˚.04, h90km±6km, n108, σ0s85/123, mb4.2/5, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
IVE	**Iliamna Volcan**	**0.30**	**293**				**Pn**	**21 44 00.4**	**-0.9**
IVE							**Sn**	**21 44 09.8**	**-1.6**
ILS	**Iliamna Low So**	**0.30**	**281**				**Pn**	**21 44 00.6**	**-0.7**
ILW	**Iliamna West**	**0.37**	**296**				**Pn**	**21 44 01.3**	**-0.5**
HOM	**Homer**	**0.49**	**120**				**Pn**	**21 44 02.5**	**+0.1**
HOM							**Sn**	**21 44 13.6**	**+0.4**
RED	**Redoubt Volcan**	**0.54**	**344**				**Pn**	**21 44 02.4**	**-0.6**
RED							**Sn**	**21 44 13.5**	**-0.7**
RSO	**Redoubt South**	**0.58**	**346**				**Pn**	**21 44 03.0**	**-0.4**
RDWB	**Redoubt West**	**0.62**	**343**				**Pn**	**21 44 03.2**	**-0.5**
RDWB							**Sn**	**21 44 14.4**	**-1.1**
AU2	**Augustine Isla**	**0.70**	**221**				**Pn**	**21 44 04.1**	**-0.2**
AUL	**Augustine Lava**	**0.71**	**224**				**Pn**	**21 44 04.2**	**-0.2**
AUL							**Sn**	**21 44 16.4**	**-0.4**
AUP	**Augustine Pinn**	**0.72**	**222**				**Pn**	**21 44 04.5**	**-0.1**
AUH	**Augustine H**	**0.73**	**223**				**Pn**	**21 44 04.5**	**-0.2**
CNPM	**China Poot**	**0.73**	**120**				**Pn**	**21 44 04.7**	**+0.1**
CNPM							**Sn**	**21 44 17.0**	**-0.2**
AUW	**Augustine West**	**0.73**	**224**				**Pn**	**21 44 04.4**	**-0.2**
BRLK	**Bradley Lake**	**0.81**	**99**				**Pn**	**21 44 05.5**	**0.0**
BRLK							**Sn**	**21 44 18.9**	**+0.2**
BRSE	**Bradley Lake S**	**0.89**	**100**				**Pn**	**21 44 06.1**	**-0.2**
BRSE							**Sn**	**21 44 20.4**	**+0.3**
CAPN	**Captain Cook N**	**1.09**	**36**				**Pn**	**21 44 10.4**	**+1.9**
SLKM	**Skilak Lake**	**1.28**	**61**				**Pn**	**21 44 11.0**	**+0.2**
CKL	**Chakachamna La**	**1.30**	**3**				**Pn**	**21 44 11.3**	**+0.1**
CRP	**Crater Peak**	**1.38**	**6**				**Pn**	**21 44 12.5**	**+0.3**
CRP							**Sn**	**21 44 32.0**	**+1.4**
SEW	**Seward**	**1.53**	**81**				**Pn**	**21 44 14.5**	**+0.6**
SUA	**Susitna One**	**1.78**	**28**				**Pn**	**21 44 17.9**	**+0.6**
SUA							**Sn**	**21 44 41.1**	**+1.5**
RC01	**Rabbit Creek A**	**1.81**	**47**				**Pn**	**21 44 18.5**	**+1.0**
SVW2	**Sparrevohn**	**1.95**	**309**				**Pn**	**21 44 18.9**	**-0.4**
SVW2							**Sn**	**21 44 41.3**	**-2.0**
KCG	**Knife Ck. Glac**	**2.10**	**222**				**Pn**	**21 44 21.7**	**+0.4**
KDAK	**Kodiak Island**	**2.13**	**182**	P			**Pn**	**21 44 21.1**	**-0.5**
	42nm,0.3s,baz=347,slow=14,SNR=129								
KDAK					S		**Sn**	**21 44 46.9**	**-0.5**
	27nm,0.3s,baz=338,slow=9.9,SNR=5.7								
KDAK	**Kodiak Island**	**2.13**	**182**				**Pn**	**21 44 21.1**	**-0.5**
KDAK							**Sn**	**21 44 47.5**	**0.0**
SKT	**Skwentna**	**2.14**	**12**				**Pn**	**21 44 21.9**	**+0.1**
KABU	**Katmai Buttres**	**2.19**	**223**				**Pn**	**21 44 22.8**	**+0.3**
KELA	**Mount Kelaz**	**2.23**	**230**				**Pn**	**21 44 23.4**	**+0.3**
PWL	**Port Wells**	**2.27**	**63**				**Pn**	**21 44 23.0**	**-0.5**
PMR	**Palmer**	**2.36**	**43**				**Pn**	**21 44 24.9**	**+0.2**
PMR							**Sn**	**21 44 52.1**	**-0.8**
KNK	**Knik Glacier**	**2.49**	**51**				**Pn**	**21 44 26.5**	**0.0**
GHO	**Glory Hole Cre**	**2.56**	**41**				**Pn**	**21 44 27.4**	**0.0**
OHAK	**Old Harbor**	**2.72**	**189**				**Pn**	**21 44 28.5**	**-1.0**
SML	**Sawmill**	**2.79**	**45**				**Pn**	**21 44 30.6**	**+0.1**
GLI	**Glacier Island**	**2.84**	**68**				**Sn**	**21 45 02.0**	**-2.6**
GLI	**Glacier Island**	**2.84**	**68**				**Pn**	**21 44 29.9**	**-1.2**
HIN	**Hinchinbrook I**	**3.03**	**78**				**Pn**	**21 44 33.0**	**-0.7**
FID	**Port Fidalgo**	**3.10**	**71**				**Sn**	**21 45 07.6**	**-3.2**
FID	**Port Fidalgo**	**3.10**	**71**				**Pn**	**21 44 33.0**	**-1.6**
JPK	**Jack Peak**	**3.13**	**66**				**Pn**	**21 44 34.5**	**-0.6**
SCM	**Sheep Creek Mo**	**3.18**	**50**				**Pn**	**21 44 36.0**	**+0.2**
EYAK	**Cordova Ski Ar**	**3.42**	**76**	Pn			**Pn**	**21 44 39.8**	**+0.9**
TT01	**Tatalina**	**3.46**	**332**				**Pn**	**21 44 39.5**	**0.0**
SII	**Sitkinak Islan**	**3.47**	**196**				**Pn**	**21 44 38.9**	**-0.7**
TTA	**Tatalina**	**3.48**	**332**				**Pn**	**21 44 39.7**	**-0.1**
WAT1	**Susitna Watana**	**3.49**	**31**				**Pn**	**21 44 40.5**	**+0.5**
WAT6	**Susitna Watana**	**3.53**	**38**				**Pn**	**21 44 41.0**	**+0.5**
WAT2	**Susitna Watana**	**3.60**	**30**				**Pn**	**21 44 41.9**	**+0.4**
TRF	**Thorofare Moun**	**3.71**	**15**				**Pn**	**21 44 43.6**	**+0.6**
KTH	**Kantishna Hill**	**3.74**	**11**				**Pn**	**21 44 43.8**	**+0.5**
RND	**Reindeer**	**3.92**	**25**				**Pn**	**21 44 46.2**	**+0.4**
GOAT	**Goat Mountain**	**3.92**	**77**				**Pn**	**21 44 44.8**	**-1.0**
PS12	**TAPS Pump St12**	**3.94**	**63**				**Pn**	**21 44 45.3**	**-0.7**
MCK	**McKinley**	**4.20**	**22**				**Pn**	**21 44 50.3**	**+0.9**
BPAW	**Bear Paw Mtn.**	**4.27**	**9**				**Pn**	**21 44 50.5**	**0.0**
BWN	**Browne**	**4.51**	**17**				**Pn**	**21 44 54.9**	**+1.2**
GLB	**Gilahina Butte**	**4.53**	**66**				**Pn**	**21 44 53.4**	**-0.7**
PAX	**Paxson**	**4.56**	**45**				**Pn**	**21 44 54.7**	**+0.3**
GRIN	**Grindle Hills**	**4.60**	**81**				**Pn**	**21 44 55.5**	**+0.5**
MCARA	**McCarthy VSAT**	**4.88**	**68**	Pn			**Pn**	**21 44 59.1**	**+0.3**
KULT	**Kultieth River**	**4.90**	**82**				**Pn**	**21 44 59.5**	**+0.4**
NEA	**Nenana**	**4.95**	**17**				**Pn**	**21 44 59.6**	**-0.1**
WRH	**Wood River Hil**	**5.03**	**22**				**Pn**	**21 45 01.1**	**+0.4**
KIAG	**Kiagna River**	**5.12**	**74**				**Pn**	**21 45 02.8**	**+0.7**
BALM	**Baldy**	**5.14**	**73**				**Pn**	**21 45 02.8**	**+0.5**
MENT	**Mentasta**	**5.19**	**50**	Pn			**Pn**	**21 45 04.1**	**+1.2**
HDA	**Harding Lake**	**5.21**	**27**				**Pn**	**21 45 03.8**	**+0.6**
MLY	**Manley**	**5.21**	**8**				**Pn**	**21 45 04.5**	**+1.3**
CCB	**Clear Creek Bu**	**5.24**	**23**				**Pn**	**21 45 03.8**	**+0.3**
RIDG	**Independent Ri**	**5.28**	**40**				**Pn**	**21 45 04.9**	**+0.7**
RIDG	**Independent Ri**	**5.28**	**40**	Sn			**Sn**	**21 46 03.3**	**-0.4**
MESA	**MESA**	**5.28**	**82**	Pn			**Pn**	**21 45 05.6**	**+1.2**
TCOL	**CIGO, UAF Yank**	**5.43**	**21**				**Pn**	**21 45 06.4**	**+0.3**
COLA	**College**	**5.43**	**21**				**Pn**	**21 45 06.7**	**+0.5**
COLA	**College**	**5.43**	**21**				**Pn**	**21 45 07.2**	**+1.1**
MDM	**Murphy Dome**	**5.45**	**19**				**Pn**	**21 45 06.9**	**+0.6**
BARN	**Barnard Glacie**	**5.47**	**73**				**Pn**	**21 45 07.0**	**0.0**
DOT	**Dot Lake**	**5.48**	**43**				**Pn**	**21 45 08.2**	**+1.3**
IL31		**5.54**	**26**				**Pn**	**21 45 07.7**	**+0.1**
ILAR	**Eielson Array**	**5.54**	**276**	P			**Pn**	**21 45 07.7**	**0.0**
	2.2nm,0.3s,baz=218,slow=13,SNR=74								
ILAR					S		**Sn**	**21 46 07.0**	**-2.7**
	2.1nm,0.3s,baz=210,slow=22,SNR=12								
CTGM	**Chitina Glacie**	**5.62**	**74**				**Pn**	**21 45 09.2**	**+0.3**
SCRK	**Sand Creek**	**5.72**	**41**				**Pn**	**21 45 10.5**	**+0.3**
POKR	**Poker Plat Res**	**5.73**	**22**				**Pn**	**21 45 10.2**	**0.0**
YUK2	**White River**	**5.99**	**67**				**Pn**	**21 45 13.6**	**-0.3**
BC03		**6.02**	**54**				**Pn**	**21 45 14.1**	**-0.1**
BCAR	**Beaver Creek A**	**6.02**	**54**	Pn			**Pn**	**21 45 15.9**	**+1.6**
IM03		**6.13**	**355**				**Pn**	**21 45 15.5**	**-0.2**
IMAR	**Indian Mountai**	**6.13**	**355**				**Pn**	**21 45 16.3**	**+0.6**
SDPT	**Sand Point**	**6.27**	**227**	Pn			**Pn**	**21 45 17.8**	**+0.3**
PRP	**Porcupine Dome**	**6.48**	**27**				**Pn**	**21 45 20.9**	**+0.4**
PNL	**Peninsula**	**6.61**	**86**				**Pn**	**21 45 22.5**	**-0.3**
DHAK	**Deception Hill**	**7.31**	**90**				**Pn**	**21 45 32.1**	**+0.3**
COLD	**Coldfoot**	**7.42**	**7**	Pn			**Pn**	**21 45 34.9**	**+1.6**
DAWY	**Dawson**	**7.44**	**50**				**Pn**	**21 45 32.7**	**-0.8**
ANM	**Nome**	**7.62**	**313**				**Pn**	**21 45 36.3**	**+0.4**
PLBC	**Pleasant Camp**	**8.17**	**86**				**Pn**	**21 45 44.0**	**+0.6**
BM03	**Burnt Mountain**	**8.31**	**21**				**Pn**	**21 45 44.7**	**-0.7**
BMAR	**Burnt Mountain**	**8.32**	**21**				**Pn**	**21 45 45.5**	**0.0**
WHY	**Whitehorse**	**8.77**	**77**				**Pn**	**21 45 51.1**	**-0.7**
BESE	**Bessie Mountai**	**9.12**	**91**	Pn			**Pn**	**21 45 57.6**	**+1.1**
INK	**Inuvik**	**11.76**	**36**	P			**Pn**	**21 46 32.2**	**+0.1**
	0.2nm,0.3s,baz=207,slow=11,SNR=6.8								
YKA	**Yellowknife Ar**	**18.25**	**66**	P			**Pn**	**21 47 55.0**	**+0.3**
	0.2nm,0.3s,baz=276,slow=11,SNR=10								
PETK	**Petropavlovsk-**	**27.74**	**278**	P			**P**	**21 49 27.5**	**0.0**
	2.3nm,0.8s,baz=70,slow=11,SNR=4.8								
KSRS	**Korea Array**	**53.46**	**283**	P			**P**	**21 52 58.0**	**-0.3**
	1.1nm,0.5s,baz=45,slow=7.3,SNR=4.5								
SONM	**Songino Array**	**55.06**	**306**	P			**P**	**21 53 11.7**	**+1.6**
	2.8nm,0.7s,baz=38,slow=6.6,SNR=13								
ZALV	**Zalesovo Beam**	**57.61**	**324**	P			**P**	**21 53 27.3**	**-0.6**
	2.1nm,0.5s,baz=40,slow=5.5,SNR=6.4								
MKAR	**Makanchi Array**	**64.67**	**322**	P			**P**	**21 54 15.0**	**-0.7**
	0.7nm,0.6s,baz=36,slow=5.7,SNR=3.0								

IDC ***23*** *21:54:08.1±2.8, 13˚.47N×92˚.39W, h0km, mb3.7/1, mb1 3.9/5, mb1mx3.6/37, mbtmp3.6/5, ML3.1/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/39, Error ellipse: s-maj=47.1km s-min=28.3km az=175.0*

ISC 23 21:54:12.4±2.2, 13˚.5N±0˚.2×92˚.28W±0˚.08, h32km, n6, σ0s99/8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
APG	**El Apazote**	**2.31**	**49**	Pn			**Pn**	**21 54 49.4**	**+0.9**
	5.5nm,0.3s,baz=218,slow=6.6,SNR=21								
APG				Sn			**Sb**	**21 55 21.1**	**-0.8**
	7.3nm,0.3s,baz=328,slow=13,SNR=3.9								
APG				LR			LR	21 55 57.1	
	comp=Z,234nm,20.2s,baz=241,slow=45								
CMIG	**Matias Romero**	**4.38**	**325**	Pn			**Pn**	**21 55 16.6**	**-0.1**
	0.3nm,0.3s,baz=140,slow=15,SNR=3.4								
CMIG				Sn			**Sn**	**21 56 08.0**	**+1.4**
	0.7nm,0.3s,baz=43,slow=11,SNR=4.8								
TEIG	**Tepich**	**7.72**	**29**	Pn			**Pn**	**21 56 02.5**	**0.0**
	1.0nm,0.3s,baz=135,slow=2.9,SNR=4.7								
TXAR	**Lajitas Array**	**18.98**	**328**	P			**P**	**21 58 30.2**	**-1.2**
	0.5nm,0.3s,baz=138,slow=15,SNR=5.9								

YKA	**Yellowknife Ar**	**51.46**	**347**	P	**P**	**22 03 14.3 -0.1**
	0.7nm,0.7s,baz=151,slow=7.5,SNR=12					
CMAR	**Chiang Mai Arr**	**146.38**	**341**	PKPbc	**PKPbc**	**22 13 51.3 +0.3**
	1.1nm,0.8s,baz=333,slow=3.0,SNR=9.0					

INET ***23*** *22:15:26.9, 11˚.49N×87˚.03W, h15km, ML3.6*

SNET 23 22:15:25.7±1.4, 11˚.39N×86˚.98W, h30km±8km, ML3.5, 1C, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.87**	**26**	*e*P			**Pn**	**22 15 42.1**	**+0.1**
COPN				*e*S			**Sb**	**22 15 54.6**	**+0.9**
MOMN	**Momotombo**	**1.10**	**23**	*e*P			**Pn**	**22 15 45.1**	**0.0**
MOMN				*e*S			**Sn**	**22 15 59.5**	**+0.2**
LCND	**La Caada**	**2.10**	**335**	*e*P			**Pn**	**22 15 58.9**	**-0.1**
LCND				*e*S			**Sn**	**22 16 24.3**	**+0.2**
LCND				IAML				**22 16 29.3**	
	comp=Z,447nm,0.3s								
JUCU	**Jucuarn**	**2.23**	**326**	*e*P			**Pn**	**22 16 00.3**	**-0.4**
JUCU				*e*S			**Sn**	**22 16 27.5**	**+0.3**
JUCU				IAML				**22 16 30.5**	
	comp=Z,239nm,0.3s								
PACA	**Pacayal**	**2.45**	**328**	*e*P			**Pn**	**22 16 04.4**	**+0.6**
PACA				*e*S			**Sn**	**22 16 35.0**	**+2.3**

NIED ***23*** *22:51:00, 24˚.70N×122˚.80E, h80km, Mw4.5 Best double couple: M0 7.00000×10^15 NP1:φs44.00000°, δ60.00000°, λ85.00000°. NP2:φs234.00000°, δ30.00000°, λ98.00000°.*

MOS ***23*** *22:51:28.4±0.9, 24˚.72N×122˚.84E, h92km, mb4.4/26, Error ellipse: s-maj=8.6km s-min=5.9km az=101.6*

BJI ***23*** *22:51:28.5±0.0, 24˚.62N×122˚.90E, h90km, mB4.5/26, mb4.2/41, Ms4.3/15, Ms7 4.0/11*

JMA ***23*** *22:51:30.6, 24˚.69N×122˚.82E, h83km±1km, M4.4*

TAP ***23*** *22:51:30.3, 24˚.56N×122˚.78E, h85km, ML5.2, B*

NEIC ***23*** *22:51:30.5±1.9, 24˚.70N±0˚.07×122˚.82E±0˚.07, h97km±4km, Error ellipse: s-maj=10.2km s-min=9.0km az=134.0*

IDC ***23*** *22:51:31.3±1.6, 24˚.77N×122˚.82E, h103km±14km, mb3.6/20, mb1 3.8/22, mb1mx3.7/45, mbtmp4.0/22, MS3.1/3, Ms1 3.2/3, ms1mx2.8/34, Error ellipse: s-maj=13.9km s-min=11.6km az=63.0*

ISC 23 22:51:30.0±0.5, 24˚.62N±0˚.03×122˚.80E±0˚.02, h92km±4km, n369, σ1s10/481, mb4.6/90, 12C-38D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.21**	**141**	P			**Pn**	**22 51 43.1**	**-0.2**
JYNG				S			**Sn**	**22 51 52.4**	**-0.7**
YOJ	**Yonaguni jima**	**0.25**	**129**	*e*P			**Pn**	**22 51 43.3**	**-0.2**
	baz=113								
YOJ				S			**Sn**	**22 51 52.5**	**-0.8**
	baz=113								
YOJ	**Yonaguni jima**	**0.25**	**129**	P			**Pn**	**22 51 43.2**	**-0.2**
YOJ				*e*S			**Sn**	**22 51 52.4**	**-1.0**
YOJ	**Yonaguni jima**	**0.25**	**129**	P			**Pn**	**22 51 43.2**	**-0.2**
YOJ	**Yonaguni jima**	**0.25**	**129**				**Pn**

JIJ Ishigaki jima 1.25 101 P Pn 22 51 52.9 +0.1
JIJ eS Sn 22 52 09.7 -0.3
HWA Hwalien 1.26 240 eP Pn 22 51 53.1 +0.2
baz=241
ETLH Xiulin Townshi 1.27 251 eP Pn 22 51 53.1 +0.1
baz=253
ETLH eS Sn 22 52 09.2 -1.2
baz=253
TWY Chenhua 1.27 301 ⇓iP Pn 22 51 53.7 +0.8
baz=303
TWY S Sn 22 52 11.2 +0.9
baz=303
YM03 YM03 1.27 296 ⇓P Pn 22 51 53.5 +0.4
baz=298
YM03 eS Sn 22 52 12.2 +1.7
baz=298
ANP Anpu 1.29 296⇓eP Pn 22 51 53.6 +0.3
baz=298
ANP eS Sn 22 52 12.2 +1.3
baz=298
YHNB Yeheng 1.29 273 ⇓P Pn 22 51 54.2 +0.9
baz=274
YHNB eS Sn 22 52 10.9 0.0
baz=274
NNSB Datong 1.30 262 eP Pn 22 51 53.9 +0.4
baz=264
NNSB eS Sn 22 52 09.6 -1.6
baz=264
NNSH Datong 1.30 262 eP Pn 22 51 54.0 +0.5
baz=264
NNSH eS Sn 22 52 10.7 -0.5
baz=264
ENLB Shoufeng 1.30 237 eP Pn 22 51 52.5 -0.9
baz=238
ENLB eS Sn 22 52 09.2 -1.8
baz=238
NNS Nan Shan 1.31 262 eP Pn 22 51 54.1 +0.5
baz=264
NNS eS Sn 22 52 10.6 -0.8
baz=264
NSK Sanguang 1.31 273 ⇓P Pn 22 51 54.3 +0.8
baz=275
NSK eS Sn 22 52 11.1 -0.2
baz=275
NTST Danshui 1.34 294 eP Pn 22 51 54.8 +1.0
baz=296
NTST eS Sn 22 52 12.8 +1.0
baz=296
TWS1 Kuangyinshan 1.34 291 ⇓iP Pn 22 51 54.8 +0.9
baz=293
TWS1 S Sn 22 52 12.7 +0.8
baz=293
JISG Ishigakijimahi 1.38 91 P Pn 22 51 54.5 +0.2
JISG S Sn 22 52 12.5 -0.2
WLTB Daxi 1.42 280 eP Pn 22 51 55.7 +0.9
baz=281
WLTB eS Sn 22 52 14.4 +0.7
baz=281
WHF Hehuan Shan 1.47 252 eP Pn 22 51 56.2 +0.3
baz=253
WHF eS Sn 22 52 14.0 -1.5
baz=253
ESL Shilin 1.48 238 eP Pn 22 51 55.4 -0.2
baz=238
ESL eS Sn 22 52 13.7 -1.2
baz=238
NCU National Centr 1.50 284 eP Pn 22 51 56.6 +0.8
baz=285
NCU eS Sn 22 52 16.4 +0.9
baz=285
NCUH Zhongli 1.50 284 eP Pn 22 51 56.7 +0.8
baz=285
NCUH eS Sn 22 52 16.2 +0.6
baz=285
TWT Tachien 1.52 257 eP Pn 22 51 57.2 +1.0
baz=258
TWT eS Sn 22 52 15.9 -0.3
baz=258
TDCB Techi 1.54 257 ⇓P Pn 22 51 57.3 +0.9
baz=258
TDCB eS Sn 22 52 15.3 -1.1
baz=258
CHGB Renai 1.58 250 eP Pn 22 51 57.6 +0.5
baz=251
CHGB S Sn 22 52 16.8 -0.8
baz=251
OWD Renai 1.62 246 eP Pn 22 51 57.7 +0.2
baz=247
OWD eS Sn 22 52 16.8 -1.5
baz=247
LIOB Emei 1.62 271 eP Pn 22 51 58.4 +1.0
baz=273
LIOB S Sn 22 52 18.7 +0.5
baz=273
NSTT Nanjuang 1.63 271 eP Pn 22 51 58.4 +0.9
baz=272
NSTT eS Sn 22 52 18.7 +0.2
baz=272
SBCB Hsinchu 1.66 276 eP Pn 22 51 59.1 +1.3
baz=278
SBCB eS Sn 22 52 19.1 +0.1
baz=278
HSN Hsinchu 1.67 277 eP Pn 22 51 58.2 +0.2
baz=279
HSN eS Sn 22 52 18.4 -0.8
baz=279
HGSD Ruisui 1.68 228 eP Pn 22 51 58.0 -0.2
baz=229
HGSD eS Sn 22 52 18.5 -1.0
baz=229
WHP Taichung City 1.72 259 eP Pn 22 52 00.4 +1.7
baz=260
WHP eS Sn 22 52 20.4 -0.1
baz=260
JTJ Tarama 1.73 89 P Pn 22 51 59.6 +0.8
JTJ S Sn 22 52 21.4 +0.7
VWDT VWDT 1.74 241 eP Pn 22 51 59.4 +0.6
baz=241
VWDT S Sn 22 52 20.2 -0.6
baz=241
EHY Hungye 1.74 231 eP Pn 22 51 58.7 -0.2
baz=231
DPDB Guoxing 1.80 252 eP Pn 22 52 00.4 +0.7
baz=252
DPDB eS Sn 22 52 22.1 -0.2
baz=252
NMLH Miaoli 1.83 268 eP Pn 22 52 01.1 +1.1
baz=269
NMLH eS Sn 22 52 22.3 -0.5
baz=269
YULB Yu-li 1.83 229⇑eP Pn 22 51 59.8 -0.3
baz=229
TWF1 Yuli 1.86 228 eP Pn 22 52 00.4 -0.1
baz=228
TWF1 eS Sn 22 52 21.8 -1.9
baz=228
TWQ1 Liyutan 1.86 262 eP Pn 22 52 01.5 +1.0
baz=263
TWQ1 eS Sn 22 52 24.0 +0.3
baz=263
NSY Sanyi 1.86 264 eP Pn 22 52 01.6 +1.0
baz=265
NSY eS Sn 22 52 24.2 +0.5
baz=265
SSLB Suanglung 1.87 244 eP Pn 22 52 01.2 +0.5
baz=245
SSLB eS Sn 22 52 22.1 -2.0
baz=245
SMLT Sun Moon Lake 1.88 247 eP Pn 22 52 01.9 +1.1
baz=248
SMLT eS Sn 22 52 24.4 +0.1
baz=248
TYC Yuchr 1.91 248 eP Pn 22 52 02.1 +1.0
baz=249
TYC eS Sn 22 52 24.5 -0.2
baz=249
PTSB Yuanli 1.91 265 eP Pn 22 52 01.0 -0.1
baz=266
PTSB eS Sn 22 52 25.1 +0.2
baz=266
FULB Fuli 1.97 225 ⇑P Pn 22 52 01.7 -0.2
baz=225
FULB eS Sn 22 52 24.7 -1.5
baz=225
WDJ Dajia District 1.98 263 eP Pn 22 52 02.9 +0.9
baz=263
WDJ eS Sn 22 52 26.4 0.0
baz=263
TCU Taichung 1.99 257 eP Pn 22 52 02.9 +0.7
baz=257
WHYT Xinyi Township 2.00 243 eP Pn 22 52 03.6 +1.4
baz=243
WHYT eS Sn 22 52 27.5 +0.6
baz=243
CHKT Chengkung 2.00 221 eP Pn 22 52 01.6 -0.6
baz=221
CHKT eS Sn 22 52 24.2 -2.6
baz=221
YUS Yu-Shan 2.03 237 eP Pn 22 52 03.8 +0.7
baz=237
YUS eS Sn 22 52 27.2 -1.0
baz=237
WJS Zhushan 2.05 248 eP Pn 22 52 04.5 +1.6
baz=248
WNT Mingjian 2.06 250 eP Pn 22 52 03.8 +0.7
baz=250
WCHH Zhanghua 2.11 256 eP Pn 22 52 04.9 +1.2
baz=256
WCHH eS Sn 22 52 29.6 +0.1
baz=256
ALS Alishan 2.13 239 eP Pn 22 52 05.5 +1.3
baz=239
ALS eS Sn 22 52 29.4 -1.0
baz=239
ELDTW Lidau 2.16 229⇑eP Pn 22 52 04.5 0.0
baz=229
ELDTW eS Sn 22 52 29.1 -1.8
baz=229
JIRB Irabujima 2.17 84 P Pn 22 52 05.4 +0.9
JIRB eS Sn 22 52 30.8 -0.1
CHN5 Tsauling 2.19 243 eP Pn 22 52 06.2 +1.4
baz=243
CHN5 eS Sn 22 52 31.8 +0.4
baz=243
WGK Gukeng 2.24 246 eP Pn 22 52 07.1 +1.7
baz=246
JIKM Ikemajima 2.25 82 P Pn 22 52 06.7 +1.2
JIKM S Sn 22 52 33.4 +0.7
TWH Lutao 2.25 213⇑iP Pn 22 52 05.5 -0.1
baz=212
TWH eS Sn 22 52 29.6 -3.2
baz=212
WDLH Douliu 2.26 246 eP Pn 22 52 07.7 +2.0
baz=247
JMJ Miyako jima 2 2.28 85⇓eP Pn 22 52 07.1 +1.2
baz=83
JMJ eS Sn 22 52 34.0 +0.5
baz=83
JMJ2 Miyako jima3 2.31 86 P Pn 22 52 06.9 +0.6
JMJ2 eS Sn 22 52 34.4 +0.3
RLNB Erlin 2.34 252 eP Pn 22 52 07.7 +1.0
baz=253
RLNB eS Sn 22 52 33.8 -1.0
baz=253
STYT Tauyuan 2.36 233⇑eP Pn 22 52 08.2 +1.1
baz=232
STYT eS Sn 22 52 35.4 -0.1
baz=232
CHN4 Tsaushan 2.38 238 eP Pn 22 52 09.0 +1.8
baz=238
TPUB Ta-pu 2.38 237 eP Pn 22 52 09.1 +1.8
baz=237
TPUB eS Sn 22 52 35.9 +0.1
baz=237
JOGS Gusukube 2.38 86 P Pn 22 52 08.5 +1.3
JOGS eS Sn 22 52 37.2 +1.4
CHN2 Minshiung 2.38 243 eP Pn 22 52 09.2 +2.0
baz=244
TWGBT Beinan 2.38 222⇑eP Pn 22 52 07.1 -0.3
baz=221
TWGBT eS Sn 22 52 33.4 -2.6
baz=221
TWG Pinlang 2.39 222⇑eP Pn 22 52 07.0 -0.4
baz=221
TWG eS Sn 22 52 34.1 -2.0
baz=221
TTN Taitung 2.39 219 eP Pn 22 52 08.0 +0.5
baz=219
TTN eS Sn 22 52 35.5 -0.7
baz=219
WTCT Ta-ch'eng 2.42 252 eP Pn 22 52 08.6 +0.9
baz=253
WTP Ta-pu 2.42 236 eP Pn 22 52 09.4 +1.6
baz=236
CHY Chiayi 2.44 243 eP Pn 22 52 09.1 +1.1
baz=243
TWK Hsinying 2.50 238 eP Pn 22 52 10.3 +1.3
baz=238
TWK eS Sn 22 52 39.5 +0.6
baz=238
CHN1 Nanshi 2.52 236 eP Pn 22 52 10.6 +1.5
baz=236
CHN1 eS Sn 22 52 39.9 +0.7
baz=236
SNST Tainan City 2.52 237 eP Pn 22 52 10.3 +1.1
baz=237
SGST Jiashian 2.54 233 eP Pn 22 52 10.2 +0.8
baz=233
SGST eS Sn 22 52 39.7 +0.1
baz=233
WSF Szhu 2.55 248 eP Pn 22 52 09.8 +0.3
baz=248
WSF eS Sn 22 52 40.1 +0.4
baz=248
SLGT Liugui 2.55 231 eP Pn 22 52 11.4 +1.9
baz=231
WLGB Puzi 2.55 244 eP Pn 22 52 11.1 +1.5
baz=244
ECL Taimali 2.63 220⇑eP Pn 22 52 10.0 -0.5
baz=220
ECL eS Sn 22 52 39.6 -2.2
baz=220
CHN8 Yiju 2.68 242 eP Pn 22 52 12.8 +1.5
baz=242
CHN8 eS Sn 22 52 44.3 +1.3
baz=242
SSD Sandimen 2.72 227 eP Pn 22 52 13.8 +2.0
baz=227
SSD eS Sn 22 52 44.6 +1.6
baz=227
SCLT Jiali 2.78 239 eP Pn 22 52 13.4 +0.8
baz=239
LAY Lan-yu 2.81 204 eP Pn 22 52 12.0 -1.0
baz=204
LAY eS Sn 22 52 42.3 -3.9
baz=204
MASBT Mashibuluo 2.81 225⇑eP Pn 22 52 13.8 +0.7
baz=225
MASBT eS Sn 22 52 46.4 +0.1
baz=225
TWM1 Shoushan 2.81 231 eP Pn 22 52 14.8 +1.7
baz=231
SGLT Jiouru 2.83 229 eP Pn 22 52 16.3 +3.0
baz=228
TAW Tawu 2.85 218 eP Pn 22 52 13.3 -0.3
baz=218
TAW eS Sn 22 52 45.1 -1.9
baz=218
EAST Anshuo 2.85 219 eP Pn 22 52 13.3 -0.4
baz=219
PTTC Pingtan 2.88 288 eP Pn 22 52 14.1 +0.2
baz=288
PTTC eS Sn 22 52 46.3 -1.5
baz=288
SSPT Xinbi 2.95 224 eP Pn 22 52 16.9 +2.0
baz=224
MATB Ma-tsu 3.00 301⇓eP Pn 22 52 15.8 +0.3
baz=301
SCZT Fangliau 3.00 222 eP Pn 22 52 16.9 +1.4
baz=222
VWUC VWUC 3.06 278 eP Pn 22 52 16.4 0.0
baz=278
PNG Penghu 3.14 251 eP Pn 22 52 17.4 -0.1
baz=251
PHUB P'eng-hu 3.15 250 eP Pn 22 52 17.2 -0.3
baz=250
PHUB eS Sn 22 52 51.8 -2.4
baz=250
WLCH Liuqiu 3.17 225 eP Pn 22 52 20.4 +2.6
baz=225
WDGT Dungji 3.17 245 eP Pn 22 52 18.4 +0.5
baz=245
HEN Hengchun 3.22 216 eP Pn 22 52 19.6 +1.1
baz=216
TSEB Hengchuen, Pin 3.22 213 eP Pn 22 52 19.9 +1.4
baz=213
TWKBT Hengchun 3.23 215 eP Pn 22 52 18.9 +0.3
baz=214
TWK1 Hengchun 3.23 215 eP Pn 22 52 19.0 +0.3
baz=214
XPSS Dashiqiu 3.29 315⇓eP Pn 22 52 19.4 0.0
baz=315
PTMZ Houxiangcun 3.37 278 eP Pn 22 52 20.6 +0.1
baz=278
PTMZ eS Sn 22 52 57.1 -2.4
baz=278
VCHM Qimei 3.38 246 eP Pn 22 52 21.5 +0.8
baz=246
VCHM eS Sn 22 52 58.9 -1.1
baz=246
MHZQ Yeshan 3.71 294⇓eP Pn 22 52 25.2 0.0
baz=294
QZH Quanzhou 3.83 276⇓iP Pn 22 52 26.8 0.0
QZH S Sn 22 53 07.6 -3.2
QZH smax smax
comp=N,310nm,0.6s
QZH smax smax
comp=E,250nm,0.8s
KNM Kinmen 3.98 268 eP Pn 22 52 30.4 +1.6
baz=267
KNMB Chin-men Tao 4.02 269⇓eP Pn 22 52 29.1 -0.2
baz=268
AXDP Jialang 4.40 275⇓eP Pn 22 52 34.7 +0.3
baz=274
ZPLA Ao Xicun 4.66 263 eP Pn 22 52 37.9 0.0
baz=262
ZZJH Jiuhuzhen 4.71 269 eP Pn 22 52 39.2 +0.5
baz=268
JOW Kunigami 5.41 65⇓eP Pn 22 52 47.6 -0.6
baz=65
JOW Kunigami 5.41 65 P Pn 22 52 47.6 -0.6
6.6nm,0.3s,baz=188,slow=15,SNR=108
JOW S Sn 22 53 49.0 -0.1
1.8nm,0.3s,baz=94,slow=18,SNR=1.8
JOW Kunigami 5.41 65 Pn 22 52 47.4 -0.9
SSE Sheshan 6.61 348 P Pn 22 53 06.3 +1.8
SSE S Sn 22 54 17.0 -1.3
SSE pmax pmax
comp=Z,15nm,0.7s
SSE smax smax
comp=N,45nm,1.3s
SSE smax smax
comp=E,53nm,1.0s
SSE LR LR
comp=N,350nm,7.5s
SSE Sheshan 6.61 348 Pn 22 53 04.2 -0.3
NJ2 Nanjing 8.18 336 ⇑P Pn 22 53 26.1 +0.2
NJ2 S Sn 22 54 56.1 -0.5
NJ2 smax smax
comp=N,92nm,1.4s
NJ2 smax smax
comp=E,72nm,1.5s
HKPS Hong Kong Po S 8.28 255 Pn Pn 22 53 28.3 +1.0
WHN Wuhan 9.54 310 ⇑P Pn 22 53 44.5 +0.1
WHN S Sn 22 55 31.0 +1.3
WHN LR LR
comp=E,600nm,4.0s
WHN LR LR
comp=Z,450nm,14.0s
JNU Nakatsue 11.04 38 Pn 22 54 04.7 -0.2
ENH Enshi 13.09 298 Pn Pn 22 54 31.4 -1.0
INCN Inchon 13.24 13 P Pn 22 54 33.5 -0.8
INCN Inchon 13.24 13 Pn Pn 22 54 33.5 -0.8
KSAR Wonju Array Be 13.50 18 P Pn 22 54 36.5 -1.2
KSAR Wonju Array Be 13.50 18 Pn Pn 22 54 36.5 -1.2
KSRS Korea Array 13.53 18 P Pn 22 54 39.1 +1.2
0.1nm,0.3s,baz=197,slow=12,SNR=3.0
KSRS LR LR 23 00 36.2
comp=Z,40nm,18.8s,baz=200,slow=41
KS19 Wonju Array Si 13.55 17 Pn Pn 22 54 37.5 -0.9
XAN Xi'an 15.30 311 P P 22 55 04.6 +0.9
XAN pP pP 22 55 14.4 -6.6
XAN pmax pmax
comp=Z,22nm,1.2s
XAN LR LR
comp=Z,160nm,13.0s
XAN Xi'an 15.30 311 P P 22 55 04.7 +1.0
XAN pmax pmax
comp=Z,41nm,1.3s
XAN Xi'an 15.30 311 P P 22 55 04.7 +1.0
XAN IAmb IAmb 22 55 06.3
comp=Z,41nm,1.3s
BJT Baijiatuau 16.34 342 P Pn 22 55 11.2 -2.6
BJT pmax pmax
comp=Z,5.0nm,0.7s
BJT Baijiatuau 16.34 342 Pn Pn 22 55 11.2 -2.6
JHJ2 Mitsune 17.13 57 Pn Pn 22 55 22.0 -1.6
JHJ2 IAmb IAmb 22 56 15.4
comp=Z,164nm,1.1s
SLVN Son La 17.70 263 P Pn 22 55 31.2 +0.5
MAJO Matsushiro 17.79 44 eP P 22 55 29.5 -1.6
MAJO pmax pmax
comp=Z,5.0nm,1.3s
MAJO Matsushiro 17.79 44 P P 22 55 29.6 -1.6
MJAR Matsushiro Arr 17.79 44 P P 22 55 31.0 -0.1
MJAR pmax pmax
comp=Z,2.0nm,0.7s
MJAR Matsushiro Arr 17.79 44 P P 22 55 31.0 -0.1
comp=Z,0.1nm,0.3s,baz=238,slow=9.3,SNR=3.3
MJAR LR LR 23 02 24.5
comp=Z,61nm,19.6s,baz=220,slow=37
MJB9 Matsu-Tunnel 17.79 44 P P 22 55 28.7 -2.4
CD2 Chengdu 17.97 295 P Pn 22 55 34.5 +0.7
CD2 pmax pmax
comp=Z,30nm,1.0s
KMI Kunming 18.21 276 P Pn 22 55 38.8 +1.8
KMI pmax pmax
comp=Z,11nm,0.9s
KMI Kunming 18.21 276 P P 22 55 35.3 -0.7
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI Kunming 18.21 276 P P 22 55 35.3 -0.7
HHC Hu-ho-hao-te 18.71 333 eP Pn 22 55 44.6 +1.8
HHC pmax pmax
comp=Z,3.0nm,0.8s
HHC pmax pmax
comp=Z,100nm,4.7s
KKM Kota Kinabalu 19.52 200 P Pn 22 55 52.2 -0.2
KKM IAmb IAmb 22 55 53.6
comp=Z,75nm,0.9s
LZH Lanzhou 19.91 309 eP Pn 22 55 57.3 +0.3
LZH pP pP 22 56 16.8 +4.5
LZH sP sP 22 56 27.8 +4.0
LZH pmax pmax
comp=Z,23nm,1.0s
LZH pmax pmax
comp=Z,84nm,4.3s
USA0B Ussuriysk Arra 20.93 19 eP P 22 56 04.3 -0.9
USA0B Ussuriysk Arra 20.93 19 P P 22 56 04.2 -0.9
USRK Ussuriysk Ar. 20.93 19 P P 22 56 05.1 0.0
USRK Ussuriysk Ar. 20.93 19 P P 22 56 04.5 -0.6
comp=Z,3.9nm,0.7s,baz=195,slow=9.6,SNR=8.7
USRK Ussuriysk Ar. 20.93 19 P P 22 56 05.1 0.0
PBKT Sadao Pong 21.92 253 P P 22 56 17.3 +1.3
CHTO Chiang Mai 22.88 260 P P 22 56 27.6 +1.5
CHTO pmax pmax
comp=Z,21nm,0.9s
CHTO Chiang Mai 22.88 260 P P 22 56 27.6 +1.5
CHTO IAmb IAmb 22 56 29.8
comp=Z,21nm,0.9s
CM31 Chiang Mai Arr 23.00 259 P P 22 56 29.2 +2.0
CMAR Chiang Mai Arr 23.00 259 iP P 22 56 28.8 +1.6
CMAR pmax pmax
comp=Z,13nm,1.0s
CMAR Chiang Mai Arr 23.00 259 P P 22 56 28.6 +1.4
comp=Z,13nm,1.0s,baz=58,slow=7.7,SNR=50
CMAR LR LR 23 05 02.3
comp=Z,66nm,18.5s,baz=86,slow=35
MRSI Marisa 24.01 182 P P 22 56 38.7 +2.3
comp=Z,37nm,0.6s
ERM Erimo 24.20 39 eP P 22 56 36.1 -1.8
ERM pmax pmax
comp=Z,24nm,1.0s
ERM Erimo 24.20 39 P P 22 56 36.7 -1.2
ERM IAmb IAmb 22 56 37.0
comp=Z,41nm,1.1s
SBUM Sibu 24.29 206 P P 22 56 39.8 +0.9
SBUM IAmb IAmb 22 56 41.4
comp=Z,28nm,1.1s
GTA Gaotai 24.34 313 ⇓P P 22 56 39.5 +0.1
GTA pP pP 22 57 02.8 +3.1

GTA sP sP 22 57 13.9 +3.4
GTA PcP **PcP** **23 00 18.1 +1.4**
GTA pmax pmax
comp=Z,3.0nm,0.9s
GTA pmax pmax
comp=Z,120nm,6.7s
GTA LR LR
comp=Z,130nm,14.3s
GTA LR LR
comp=Z,120nm,15.2s
GTA LR LR
comp=Z,87nm,15.2s
APSI Ampana 25.40 183 P **P** **22 56 52.7 +3.7**
comp=Z,30nm,1.0s
KLR Kul'dur 25.55 14 *e*P **P** **22 56 49.5 -0.6**
KLR pmax pmax
comp=Z,1.0nm,0.9s
KLR Kul'dur 25.55 14 P **P** **22 56 49.4 -0.6**
comp=Z,1.9nm,0.5s,baz=202,slow=9.4,SNR=18
KSM Kuching 25.98 210 IAmb IAmb 22 56 57.6
comp=Z,51nm,1.1s
ULN Ulaanbaatar 26.34 336 *e*P **P** **22 56 55.7 -1.8**
ULN pmax pmax
comp=Z,2.0nm,1.3s
ULN Ulaanbaatar 26.34 336 P **P** **22 56 57.4 -0.1**
ULN Ulaanbaatar 26.34 336 P **P** **22 56 57.2 -0.2**
ULN IAmb IAmb 22 57 25.9
comp=Z,2.1nm,0.7s
SONM Songino Array 26.57 335 P **P** **22 56 58.7 -0.8**
SONM pmax pmax
comp=Z,2.0nm,0.8s
SONM Songino Array 26.57 335 P **P** **22 56 59.0 -0.5**
comp=Z,2.1nm,0.9s,baz=147,slow=9.2,SNR=14
SONM ScP **ScP** **23 03 52.2 -1.1**
comp=Z,0.7nm,0.9s,baz=130,slow=4.5,SNR=4.2
SONM Songino Array 26.57 335 P **P** **22 56 58.7 -0.8**
LSA Lhasa 28.56 287 P **P** **22 57 19.4 +1.6**
LSA pmax pmax
comp=Z,40nm,0.9s
LSA Lhasa 28.56 287 P **P** **22 57 19.2 +1.4**
LSA pmax pmax
comp=Z,7.0nm,0.7s
LSA Lhasa 28.56 287 P **P** **22 57 19.2 +1.4**
KULM Kulim 28.67 231 P **P** **22 57 19.1 +0.7**
KULM IAmb IAmb 22 58 08.2
comp=Z,45nm,1.5s
FAKI Fak Fak 28.87 160 P **P** **22 57 20.6 +0.5**
FAKI IAmb IAmb 22 57 59.0
comp=Z,34nm,1.1s
IPM Ipoh 28.98 230 IAmb IAmb 22 57 23.2
comp=Z,21nm,0.7s
TLY Talaya 30.74 336 *e*P **P** **22 57 35.1 -1.2**
TLY pmax pmax
comp=Z,3.0nm,1.0s
LHMI Lhok Sumawe 31.43 236 P **P** **22 57 40.6 -2.2**
TAPN Taplejung 31.59 283 *e*P **P** **22 57 45.8 +1.3**
comp=Z,18nm,1.0s
RPSI Rantau Prapat 31.71 230 IAmb IAmb 22 57 47.5
comp=Z,20nm,0.9s
ODAN Odare 31.91 282 *e*P **P** **22 57 48.4 +1.2**
comp=Z,20nm,0.7s
BKNI Bangkinang 32.04 224 P **P** **22 57 48.2 +0.1**
MLSI Meulaboh, Aceh 32.47 236 P **P** **22 57 54.8 +2.9**
comp=Z,49nm,0.6s
RAMN Ramite 32.61 282 *e*P **P** **22 57 54.6 +1.3**
JIRN Jiri 32.93 283 *e*P **P** **22 57 57.2 +1.0**
comp=Z,25nm,0.9s
GUN Gumba 33.19 284 *e*P **P** **22 57 58.8 +0.3**
comp=Z,12nm,0.6s
PDSI Padang 33.36 224 P **P** **22 58 02.3 +2.6**
comp=Z,6.3nm,0.9s
GSI Gunungsitoli 33.64 230 P **P** **22 58 02.4 +0.4**
GSI IAmb IAmb 22 58 04.9
comp=Z,12nm,0.7s
KRJI Kerinci 33.67 221 P **P** **22 58 04.6 +2.1**
comp=Z,90nm,0.4s
KKN Kakani 33.73 284 *e*P **P** **22 58 03.6 +0.6**
comp=Z,18nm,0.9s
DMN Daman 33.89 283 *e*P **P** **22 58 05.4 +0.9**
comp=Z,18nm,0.8s
KLSI 34.03 214 P **P** **22 58 08.1 +2.7**
comp=Z,19nm,1.0s
MDSI Maura Dua 34.13 215 P **P** **22 58 08.1 +1.8**
comp=Z,37nm,1.1s
GKN Gorkha 34.28 284 *e*P **P** **22 58 08.2 +0.5**
comp=Z,10nm,0.5s
WMQ Urumqi 34.43 313 *e*P **P** **22 58 10.3 +1.6**
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ pmax pmax
comp=Z,120nm,4.3s
WMQ LR LR
comp=Z,260nm,29.1s
WMQ LR LR
comp=Z,740nm,29.1s
WMQ LR LR
comp=Z,2μm,29.1s
SISI Saibi 34.55 225 P **P** **22 58 12.8 +2.9**
comp=Z,20nm,1.3s
MNAI Manna 34.67 217 P **P** **22 58 12.1 +1.1**
DANN Dangsing 35.03 285 *e*P **P** **22 58 14.2 -0.2**
comp=Z,17nm,0.9s
CISI Cisompet, Garu 35.16 206 P **P** **22 58 15.2 0.0**
KOLN Koldanda 35.21 284 *e*P **P** **22 58 16.7 +0.9**
comp=Z,22nm,0.8s
SKR Severo-Kuril's 36.54 36⇑ *e*P **P** **22 58 24.3 -2.3**
YAK Yakutsk 37.69 5 *e*P **P** **22 58 33.7 -2.4**
YAK pmax pmax
comp=Z,6.0nm,0.8s
MTN Manton Dam 38.11 167 P **P** **22 58 39.5 -0.7**
MTN IAmb IAmb 22 58 41.2
comp=Z,32nm,1.5s
PATS Pohnpei 38.32 111 P **P** **22 58 40.6 -1.4**
PETK Petropavlovsk- 38.69 33 P **P** **22 58 45.1 +0.4**
PETK Petropavlovsk- 38.69 33 P **P** **22 58 45.1 +0.4**
MK31 Makanchi Array 39.06 315 *e*P **P** **22 58 46.4 -1.5**
MKAR Makanchi Array 39.06 315 *i* P **P** **22 58 47.5 -0.4**
MKAR pmax pmax
comp=Z,1.0nm,0.4s
MKAR Makanchi Array 39.06 315 P **P** **22 58 47.4 -0.6**
comp=Z,0.9nm,0.4s,baz=98,slow=9.5,SNR=19
MKAR PcP **PcP** **23 00 55.1 -1.0**
comp=Z,0.8nm,0.8s,baz=120,slow=4.9,SNR=3.8
MKAR ScP **ScP** **23 04 33.5 -2.8**
comp=Z,0.2nm,0.6s,baz=102,slow=4.7,SNR=2.3
MKAR Makanchi Array 39.06 315 P **P** **22 58 47.0 -0.9**
MAKZ Makanchi 39.27 315 P **P** **22 58 49.6 -0.1**
MAKZ pmax pmax
comp=Z,19nm,2.0s
MAKZ Makanchi 39.27 315 P **P** **22 58 49.6 -0.1**
MAKZ IAmb IAmb 22 58 52.8
comp=Z,19nm,2.0s
KNRA Kununurra 40.47 171 P **P** **22 58 59.9 +0.1**
KNRA IAmb IAmb 22 59 58.6
comp=Z,61nm,1.7s
ZALV Zalesovo Beam 40.69 326 *i* P **P** **22 58 59.7 -1.6**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 40.69 326 P **P** **22 58 58.9 -2.4**
comp=Z,0.9nm,0.4s,baz=128,slow=6.7,SNR=4.6
ZALV ScP **ScP** **23 04 40.4 -2.1**
comp=Z,0.3nm,0.4s,baz=116,slow=3.4,SNR=3.0
PMG Port Moresby 41.34 142 *e*P **P** **22 59 06.9 -0.1**
KDJ Kajisay 41.37 306 P **P** **22 59 07.2 -0.1**
KDJ pmax pmax
comp=Z,3.0nm,0.8s
KDJ Kajisay 41.37 306 P **P** **22 59 07.2 -0.1**
NRN Naryn 42.13 305 **PcP** **23 01 07.2 +0.6**
FITZ Fitzroy Crossi 42.55 176 IAmb IAmb 22 59 18.8
comp=Z,15nm,1.1s
KURK Kurchatov 42.71 319 P **P** **22 59 17.9 +0.1**
KURK pmax pmax
comp=Z,15nm,2.0s
KURK Kurchatov 42.71 319 P **P** **22 59 17.9 +0.1**
KURK IAmb IAmb 22 59 18.1
comp=Z,15nm,1.9s
KURBB Kurchatov Arra 42.73 319 P **P** **22 59 17.2 -0.7**
comp=Z,0.3nm,0.3s,baz=269,slow=11,SNR=8.3
COEN Coen 43.20 150 P **P** **22 59 24.0 +1.9**
COEN IAmb IAmb 22 59 24.7
comp=Z,9.4nm,0.8s
AAK Ala-Archa 43.42 307 *e*P **P** **22 59 22.7 -1.1**
AAK pmax pmax
comp=Z,1.0nm,0.9s
AAK Ala-Archa 43.42 307 P **P** **22 59 23.6 -0.2**
comp=Z,0.7nm,0.5s,baz=103,slow=4.2,SNR=3.4

AAK PcP **PcP** **23 01 10.3 -0.4**
comp=Z,0.6nm,0.4s,baz=128,slow=5.2,SNR=4.8
NIL Nilore 43.85 294 P **P** **22 59 27.5 +0.2**
NIL pmax pmax
comp=Z,5.0nm,1.0s
NIL Nilore 43.85 294 P **P** **22 59 27.8 +0.5**
KWAJ Kwajalein Atol 45.48 102 P **P** **22 59 40.2 -0.2**
WB0 Warramunga Arr 45.54 165 IAmb IAmb 22 59 42.7
comp=Z,14nm,0.8s
WRAB Tennant Creek 45.69 165⇓ *e*P **P** **22 59 42.3 +0.4**
WRAB pmax pmax
comp=Z,11nm,0.8s
WRAB Tennant Creek 45.69 165 P **P** **22 59 43.0 +1.2**
WRAB IAmb IAmb 22 59 44.0
comp=Z,14nm,0.8s
WRA Warramunga Arr 45.70 165 *i* P **P** **22 59 43.0 +1.1**
WRA pmax pmax
comp=Z,13nm,0.8s
WRA Warramunga Arr 45.70 165 P **P** **22 59 42.8 +0.9**
comp=Z,14nm,0.8s,baz=346,slow=8.4,SNR=40
WRA Warramunga Arr 45.70 165 P **P** **22 59 42.3 +0.4**
WB2 Warramunga Arr 45.70 165 IAmb IAmb 22 59 44.0
comp=Z,17nm,0.8s
WR0 Warramunga Arr 45.76 164 IAmb IAmb 22 59 45.0
comp=Z,17nm,1.0s
PSA00 Pilbara Seismi 46.00 184 P **P** **22 59 44.5 +0.2**
PSA00 IAmb IAmb 22 59 45.5
comp=Z,20nm,0.8s
PSA00 Pilbara Seismi 46.00 184 P **P** **22 59 44.5 +0.2**
PSA00 IAmb IAmb 22 59 45.8
comp=Z,12nm,0.9s
GAR Garm 46.24 301 P **P** **22 59 46.0 -0.3**
GAR IAmb IAmb 23 01 21.1
comp=Z,7.6nm,1.1s
KKAR Karatay Array 46.38 307 P **P** **22 59 47.7 +0.5**
KKAR Karatay Array 46.38 307 P **P** **22 59 47.7 +0.5**
TIXI Tiksi 47.19 3 *e*P **P** **22 59 52.5 -0.4**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
KBL Kabul 47.31 295 P **P** **22 59 55.7 +1.0**
KBL pmax pmax
comp=Z,4.0nm,0.7s
KBL Kabul 47.31 295 P **P** **22 59 55.3 +0.6**
KBL IAmb IAmb 22 59 57.0
comp=Z,4.0nm,0.7s
BVAR Borovoye Array 48.28 320 P **P** **23 00 01.1 -0.6**
comp=Z,0.4nm,0.5s,baz=106,slow=7.9,SNR=5.7
BVAR PcP **PcP** **23 01 26.5 -0.8**
comp=Z,0.5nm,0.4s,baz=104,slow=3.5,SNR=6.8
BVAR ScP **ScP** **23 05 11.3 -2.3**
comp=Z,0.7nm,0.8s,baz=103,slow=6.4,SNR=5.5
BRVK Borovoye 48.35 320 P **P** **23 00 02.1 -0.1**
BRVK pmax pmax
comp=Z,1.0nm,0.8s
BRVK Borovoye 48.35 320 P **P** **23 00 02.1 -0.1**
ASAR Alice Springs 49.19 167 P **P** **23 00 10.0 +1.0**
ASAR Alice Springs 49.19 167 P **P** **23 00 10.5 +1.6**
comp=Z,3.0nm,0.6s,baz=344,slow=8.0,SNR=24
ASAR Alice Springs 49.19 167 P **P** **23 00 10.0 +1.0**
BILL Bilibino 50.78 20 *e*P **P** **23 00 20.4 -0.1**
BILL pmax pmax
comp=Z,1.0nm,1.0s
FORT Forrest 55.31 174 P **P** **23 00 55.5 +1.4**
FORT IAmb IAmb 23 02 02.1
comp=Z,18nm,0.8s
ARU Arti 55.65 323 P **P** **23 00 55.6 -0.7**
ARU pmax pmax
comp=Z,7.0nm,1.3s
ARU Arti 55.65 323 P **P** **23 00 55.6 -0.7**
ARU IAmb IAmb 23 01 21.2
comp=Z,7.3nm,1.3s
NWAO Narrogin (SRO) 57.47 186 P **P** **23 01 10.5 +1.1**
NWAO pmax pmax
comp=Z,35nm,1.4s
NWAO Narrogin (SRO) 57.47 186 P **P** **23 01 10.5 +1.1**
NWAO Narrogin (SRO) 57.47 186 P **P** **23 01 08.8 -0.6**
NWAO IAmb IAmb 23 01 43.1
comp=Z,60nm,1.5s
BBOO Buckleboo 58.49 167 P **P** **23 01 17.8 +1.2**
BBOO IAmb IAmb 23 01 59.5
comp=Z,20nm,1.4s
STKA Stephens Creek 58.98 161 P **P** **23 01 20.9 +0.9**
STKA Stephens Creek 58.98 161 P **P** **23 01 20.6 +0.6**
comp=Z,1.3nm,0.5s,baz=345,slow=6.6,SNR=7.7
ANM Nome 60.25 28 P **P** **23 01 28.7 +0.3**
ANM pmax pmax
comp=Z,19nm,1.8s
ANM Nome 60.25 28 P **P** **23 01 28.7 +0.3**
ANM IAmb IAmb 23 01 33.6
comp=Z,19nm,1.8s
ARMA Armidale 61.31 152 P **P** **23 01 36.8 +0.8**
DZM Mont Dzumac 62.86 134 P **P** **23 01 47.6 +1.1**
TTA Tatalina 64.40 30 P **P** **23 01 55.9 -0.2**
TTA pmax pmax
comp=Z,42nm,2.0s
TTA Tatalina 64.40 30 P **P** **23 01 55.9 -0.2**
TTA IAmb IAmb 23 03 28.4
comp=Z,42nm,2.0s
IMAR Indian Mountai 65.14 27 P **P** **23 02 01.3 +0.5**
TOO Toolangi 65.44 160 P **P** **23 02 03.1 0.0**
TOO pmax pmax
comp=Z,44nm,1.7s
TOO Toolangi 65.44 160 P **P** **23 02 03.1 0.0**
TOO IAmb IAmb 23 03 12.2
comp=Z,44nm,1.6s
KBZ Khabaz 66.35 309 *i* P **P** **23 02 05.9 -3.1**
KBZ pmax pmax
comp=Z,11nm,2.6s
OHAK Old Harbor 66.42 36 P **P** **23 02 09.3 +0.2**
MLY Manley 66.49 28 P **P** **23 02 10.1 +0.5**
MLY IAmb IAmb 23 02 21.2
comp=Z,15nm,1.7s
BPAW Bear Paw Mtn. 66.51 29 P **P** **23 02 09.9 +0.3**
BPAW IAmb IAmb 23 04 33.8
comp=Z,61nm,2.0s
KTH Kantishna Hill 66.62 29 P **P** **23 02 10.3 -0.1**
KTH IAmb IAmb 23 02 15.6
comp=Z,35nm,1.8s
HOM Homer 66.88 33 P **P** **23 02 11.0 -1.0**
NEA Nenana 67.26 28 P **P** **23 02 14.8 +0.5**
NEA IAmb IAmb 23 03 54.0
comp=Z,30nm,1.9s
RND Reindeer 67.56 29 P **P** **23 02 16.2 -0.2**
RND pmax pmax
comp=Z,32nm,1.8s
RND Reindeer 67.56 29 P **P** **23 02 16.1 -0.2**
RND IAmb IAmb 23 04 17.5
comp=Z,32nm,1.8s
WRH Wood River Hil 67.70 28 P **P** **23 02 16.5 -0.6**
WRH IAmb IAmb 23 02 31.0
comp=Z,45nm,1.9s
OBN Obninsk 68.07 322 *e*P **P** **23 02 19.1 -0.5**
OBN *e* 23 02 44.6
OBN *e* 23 04 52.6
OBN *e*PPP PPP 23 06 28.5
OBN pmax pmax
comp=Z,60nm,4.1s
IL31 68.15 27 P **P** **23 02 20.3 +0.4**
IL31 IAmb IAmb 23 04 52.3
comp=Z,12nm,1.5s
ILAR Eielson Array 68.15 27 P **P** **23 02 20.5 +0.5**
ILAR Eielson Array 68.15 27 P **P** **23 02 19.2 -0.8**
comp=Z,0.3nm,0.5s,baz=272,slow=5.6,SNR=7.7
ILAR Eielson Array 68.15 27 P **P** **23 02 20.4 +0.5**
BMAR Burnt Mountain 68.53 24 P **P** **23 02 22.9 +0.6**
SCRK Sand Creek 69.56 28 P **P** **23 02 28.3 -0.6**
SCRK IAmb IAmb 23 04 28.5
comp=Z,24nm,1.9s
RAYN Ar Rayn 69.62 287 P **P** **23 02 30.1 +0.2**
RAYN pmax pmax
comp=Z,4.0nm,1.3s
RAYN Ar Rayn 69.62 287 P **P** **23 02 30.1 +0.2**
ARCES ARCESS Array B 69.69 338 P **P** **23 02 28.1 -1.3**
comp=Z,1.5nm,0.8s,baz=86,slow=5.5,SNR=3.5
GLB Gilahina Butte 70.28 31 P **P** **23 02 33.2 -0.1**
BARN Barnard Glacie 71.39 31 P **P** **23 02 39.7 -0.4**
CTGM Chitina Glacie 71.57 31 P **P** **23 02 41.2 +0.1**
FINES FINESS Array B 71.81 330 *i* P **P** **23 02 42.0 -0.4**
FINES pmax pmax
comp=Z,1.0nm,0.4s
FINES FINESS Array B 71.81 330 P **P** **23 02 41.9 -0.5**
comp=Z,0.8nm,0.4s,baz=48,slow=6.2,SNR=11
FINES FINESS Array B 71.81 330 P **P** **23 02 41.5 -0.9**
AKASG Malin Array Be 73.52 319 P **P** **23 02 51.7 -1.0**
comp=Z,0.3nm,0.4s,baz=56,slow=6.3,SNR=4.0

BR131 Keskin Array S 74.09 307 *de*P **P** **23 02 55.5 -1.0**
BRTR Keskin Array B 74.09 307 *i* P **P** **23 02 57.0 +0.5**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 74.09 307 P **P** **23 02 56.7 +0.2**
comp=Z,1.6nm,0.9s,baz=100,slow=5.6,SNR=8.3
WHY Whitehorse 74.64 30 P **P** **23 02 58.1 -1.1**
WHY IAmb IAmb 23 04 31.9
comp=Z,41nm,1.9s
BURAR Bucovina Array 77.07 317 P **P** **23 03 12.2 -1.1**
BURAR Bucovina Array 77.07 317 P **P** **23 03 12.2 -1.1**
MLR Muntele Rosu 77.40 314 P **P** **23 03 15.4 +0.2**
MLR pmax pmax
comp=Z,3.0nm,0.9s
MLR Muntele Rosu 77.40 314 P **P** **23 03 15.4 +0.2**
NB2 NORSAR Subarra 78.52 332 P **P** **23 03 20.2 -0.8**
comp=Z,0.4nm,0.5s,baz=55,slow=6.2
NOA NORSAR Array B 78.52 332 P **P** **23 03 20.4 -0.6**
comp=Z,0.8nm,0.7s,baz=55,slow=5.7,SNR=4.4
ALN Alexandroupoli 79.10 310 P **P** **23 03 24.0 -0.5**
ALN Alexandroupoli 79.10 310 P **P** **23 03 24.0 -0.5**
VTS Vitosha 80.33 312 P **P** **23 03 31.4 0.0**
VTS pmax pmax
comp=Z,3.0nm,1.0s
NNZ Nelson 80.56 144 P **P** **23 03 29.7 -2.4**
DCZ Deep Cove 80.58 150 P **P** **23 03 31.5 -0.6**
VYHS Vyhne 80.60 319 *e*P **P** **23 03 33.6 +1.1**
THZ Tophouse 80.69 144 P **P** **23 03 34.7 +1.8**
BKZ Black Stump Fm 80.89 141 P **P** **23 03 34.6 +0.6**
TUWZ Tuamarina 81.01 144 P **P** **23 03 34.3 -0.3**
MSWZ Moikau Station 81.71 143 P **P** **23 03 38.0 -0.3**
LIT Litokhoron 81.90 310 P **P** **23 03 38.0 -1.6**
LIT pmax pmax
comp=Z,6.0nm,1.2s
LIT Litokhoron 81.90 310 P **P** **23 03 38.0 -1.6**
YKA Yellowknife Ar 82.00 23 *i* P **P** **23 03 39.8 +0.2**
YKA Yellowknife Ar 82.00 23 P **P** **23 03 39.6 0.0**
comp=Z,1.1nm,0.7s,baz=310,slow=4.9,SNR=25
CLL Collm 82.59 323 *e*P **P** **23 03 47.0 +4.1**
GERES GERESS Array B 83.44 321 P **P** **23 03 47.0 -0.4**
GERES GERESS Array B 83.44 321 P **P** **23 03 46.5 -0.9**
comp=Z,0.8nm,0.8s,baz=60,slow=5.8,SNR=5.3
GERES GERESS Array B 83.44 321 P **P** **23 03 47.0 -0.4**
ITM Ithomi 83.56 308 P **P** **23 03 46.5 -1.7**
B08A Colville Reser 88.57 36 P **P** **23 04 12.9 +0.3**
KVN Kaiserville 94.86 43 P **P** **23 04 42.7 +0.5**
KVN pmax pmax
comp=Z,12nm,1.6s
KVN Kaiserville 94.86 43 P **P** **23 04 42.7 +0.5**
KVN IAmb IAmb 23 06 54.4
comp=Z,12nm,1.6s
NVAR Mina Array Bea 95.11 44 P **P** **23 04 42.3 -1.0**
comp=Z,0.9nm,0.7s,baz=279,slow=6.5,SNR=5.2

SOME ***23*** *22:55:31.9, 42.57N×72.50E, h10km*
KRNET ***23*** *22:55:32.5±0.1, 42.51N×72.57E, h18km, mb2.4*
NNC ***23*** *22:55:32.7±0.5, 42.65N×72.49E, h0km, mb2.5, mpv2.8,*
Error ellipse: s-maj=9.7km s-min=2.5km az=175.0
ISC 23 22:55:32.0±1.2, **42.49N**±0.03×**72.48E**±0.02, **h3**km±10km,
n35, σ**0 91**/61, **21C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MRKS	**Merke**	**0.61**	**65**	*e*P		**Pg**	**22 55 43.3**	**-0.3**
	baz=64							
MRKS				*e*S		**Sg**	**22 55 51.2**	**-0.4**
	baz=64							
MRKS	**Merke**	**0.61**	**65**	*e*P		**Pg**	**22 55 43.3**	**-0.3**
	19nm,0.1s							
MRKS				*e*S		**Sg**	**22 55 51.2**	**-0.4**
	16nm,0.1s							
MRKS	**Merke**	**0.61**	**65**	P		**Pg**	**22 55 43.3**	**-0.3**
	19nm,0.1s							
MRKS				S		**Sg**	**22 55 51.2**	**-0.4**
	17nm,0.1s							
ARK	**Arkit**	**0.79**	**209**⇑	*i*P		**Pn**	**22 55 48.7**	**-1.4**
	baz=11							
ARK			⇑	*i*S		**Sn**	**22 56 01.0**	**-1.5**
	baz=11							
AML	**Almayashu**	**0.97**	**111**⇑	*i*P		**Pg**	**22 55 50.4**	**-0.2**
	baz=14							
AML			⇑	*i*S		**Sg**	**22 56 03.6**	**+0.3**
	baz=14							
AML	**Almayashu**	**0.97**	**111**	P		**Pg**	**22 55 50.7**	**+0.1**
	SNR=16							
EKS2	**Erkin-Say**	**0.98**	**80**⇑	*i*P		**Pg**	**22 55 49.6**	**-1.1**
	baz=80							
EKS2			⇑	*i*S		**Sg**	**22 56 02.5**	**-0.8**
	baz=80							
EKS2	**Erkin-Say**	**0.98**	**80**	P		**Pg**	**22 55 50.3**	**-0.3**
	SNR=13							
ARSB	**Arslanbob**	**1.23**	**162**⇑	*i*P		**Pn**	**22 55 55.9**	**-0.2**
	baz=66							
ARSB			⇑	*i*S		**Sn**	**22 56 13.5**	**+0.2**
	baz=66							
AAK	**Ala-Archa**	**1.50**	**84**⇑	*i*P		**Pn**	**22 55 59.3**	**-0.6**
	baz=84							
AAK			⇑	*i*S		**Sn**	**22 56 19.3**	**-0.7**
	baz=84							
AAK	**Ala-Archa**	**1.50**	**84**	P		**Pb**	**22 56 00.6**	**+0.1**
	SNR=5.5							
AAK	**Ala-Archa**	**1.50**	**84**⇑	P		**Pn**	**22 55 59.8**	**0.0**
	1.1nm,0.3s							
AAK			⇓	S		**Sb**	**22 56 20.3**	**+0.3**
	0.5nm,0.2s							
UCH	**Uchtor**	**1.53**	**99**⇓	*i*P		**Pn**	**22 56 00.3**	**-0.3**
	baz=1.0							
UCH			⇓	*i*S		**Sn**	**22 56 20.9**	**-0.4**
	baz=1.0							
UCH	**Uchtor**	**1.53**	**99**	P		**Pn**	**22 56 00.3**	**-0.3**
	SNR=5.6							
KK31	**Karatay Array**	**1.57**	**294**	P		**Pb**	**22 56 00.6**	**-1.0**
	0.3nm,0.2s,baz=113,slow=17,SNR=16							
KK31			⇓	S		**Sb**	**22 56 20.6**	**-1.2**
	1.2nm,0.2s,baz=110,slow=31,SNR=15							
USP	**Ospenovka**	**1.68**	**62**⇑	*i*P		**Pn**	**22 56 01.9**	**-0.3**
	baz=61							
USP			⇑	*i*S		**Sn**	**22 56 23.8**	**-0.5**
	baz=61							
USP	**Ospenovka**	**1.68**	**62**	P		**Pn**	**22 56 02.4**	**+0.2**
	SNR=7.2							
CHMS	**Chumysh**	**1.75**	**72**⇑	*i*P		**Pn**	**22 56 03.5**	**+0.3**
	baz=72							
CHMS			⇑	*i*S		**Sn**	**22 56 26.4**	**+0.3**
	baz=72							
CHMS	**Chumysh**	**1.75**	**72**	P		**Pn**	**22 56 03.8**	**+0.5**
	SNR=7.0							
KBK	**Karagaybulak**	**1.83**	**84**⇑	*i*P		**Pn**	**22 56 05.1**	**+0.6**
	baz=84							
KBK			⇑	*i*S		**Sb**	**22 56 29.4**	**-0.2**
	baz=84							
IUG	**Iuzhnay**	**1.84**	**260**	*e*P		**Pg**	**22 56 07.9**	**+0.6**
	baz=60							
IUG				*e*S		**Sg**	**22 56 33.7**	**+2.5**
	baz=60							
IUG	**Iuzhnay**	**1.84**	**260**	*e*P		**Pg**	**22 56 07.9**	**+0.6**
	1.6nm,0.3s							
IUG				*e*S		**Sg**	**22 56 33.7**	**+2.5**
	8.7nm,0.2s							
IUG	**Iuzhnay**	**1.84**	**260**	Pg		**Pg**	**22 56 07.9**	**+0.6**
	1.6nm,0.3s							
IUG				Lg		Lg	22 56 33.7	
	9.2nm,0.3s							
SGDS	**Sogindy**	**1.85**	**58**	P		**Pn**	**22 56 05.1**	**+0.5**
	5.2nm,0.2s							
SGDS				S		**Sn**	**22 56 28.7**	**+0.2**
	7.1nm,0.2s							
KZA	**Kyzart**	**2.10**	**100**⇓	*i*P		**Pb**	**22 56 09.9**	**-1.0**
	baz=1.0							
KZA			⇓	*i*S		**Sb**	**22 56 38.0**	**+0.5**
	baz=1.0							
KST	**Kastek**	**2.63**	**77**	*e*P		**Pb**	**22 56 20.0**	**+0.3**
	baz=77							
KST				*e*S		**Sb**	**22 56 54.2**	**+1.8**
	baz=77							
KST	**Kastek**	**2.63**	**77**	*e*P		**Pb**	**22 56 20.0**	**+0.3**
	1.7nm,0.1s							
KST				*e*S		**Sb**	**22 56 54.1**	**+1.8**
	5.3nm,0.4s							
KST	**Kastek**	**2.63**	**77**	Pg		**Pb**	**22 56 20.0**	**+0.3**
	1.7nm,0.1s							
KST				Lg		Lg	22 56 54.1	
	5.3nm,0.4s							
BTK	**Batken**	**2.73**	**208**⇑	*i*P		**Pb**	**22 56 20.1**	**-1.4**
	baz=9.0							

BTK					⇑*i*S		**Sb**	**22 56 55.3**	**-0.2**
	baz=9.0								
BTLS	**Baital**	**2.79**	**24**	*e*P			**Pb**	**22 56 21.4**	**-1.0**
	baz=22								
BTLS					*e*S		**Sb**	**22 56 56.6**	**-0.4**
	baz=22								
BTLS	**Baital**	**2.79**	**24**	*e*P			**Pb**	**22 56 21.4**	**-1.0**
	0.3nm,0.1s								
BTLS					*e*S		**Sb**	**22 56 56.6**	**-0.4**
	1.3nm,0.1s								
ULHL	**Ulahol**	**2.80**	**94**	⇑*i*P			**Pn**	**22 56 19.6**	**+1.8**
	baz=94								
ULHL					⇑*i*S		**Sn**	**22 56 54.4**	**+2.2**
	baz=94								
KUU	**Kurty**	**3.15**	**62**	*e*P			**Pb**	**22 56 28.2**	**-0.4**
	baz=62								
KUU					*e*S		**Sb**	**22 57 08.2**	**+0.8**
	baz=62								
KUU	**Kurty**	**3.15**	**62**	*e*P			**Pb**	**22 56 28.2**	**-0.4**
	0.6nm,0.2s								
KUU					*e*S		**Sb**	**22 57 08.2**	**+0.8**
	2.1nm,0.5s								
KUU	**Kurty**	**3.15**	**62**	Pg			**Pb**	**22 56 28.2**	**-0.4**
	0.6nm,0.2s								
KUU					Lg		Lg	22 57 08.2	
	2.1nm,0.5s								

IDC ***23*** *23:03:06.3±1.0, 11°.48N×125°.99E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.7/35, mbtmp3.9/9, MS3.2/3, Ms1 3.3/3, ms1mx2.7/33, Error ellipse: s-maj=57.7km s-min=17.0km az=65.0*

NEIC ***23*** *23:03:11.6±1.1, 11°.4N±0°.1×126°.0E±0°.2, h35km±3km, mb4.1/4, Error ellipse: s-maj=30.2km s-min=11.4km az=68.0*

MAN ***23*** *23:03:13.3, 11°.45N×125°.80E, h26km, MS3.1*

ISC 23 23:03:10.7±0.9, 11°.49N±0°.07×126°.2E±0°.1, h33km, n34, σ1s36/24, mb4.1/16, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CGP	**Cagayan de Oro**	**3.36**	**206**	⇓*e*P		**Pn**	**23 04 02.7**	**+1.8**
CGP				*e*S		**Sn**	**23 04 40.4**	**+0.8**
RCP	**Roxas**	**3.39**	**272**	⇓*e*P		**Pn**	**23 04 00.6**	**-0.8**
DAV	**Davao City (W)**	**4.43**	**188**	Pn		**Pn**	**23 04 14.6**	**-1.1**
LQP	**Lukban**	**5.25**	**300**	⇑*e*P		**Pn**	**23 04 29.9**	**+2.8**
GUMO	**Guam**	**18.34**	**81**	LR		LR	23 12 38.5	
	comp=Z,86nm,21.8s,baz=212,slow=31							
UGM	**Wanagama**	**24.79**	**220**			**S**	**23 12 50.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**27.21**	**288**	P		**P**	**23 08 50.2**	**-1.6**
	2.4nm,1.0s,baz=96,slow=7.6,SNR=11							
CMAR				LR		LR	23 19 48.6	
	comp=Z,18nm,18.5s,baz=25,slow=37							
WRA	**Warramunga Arr**	**32.24**	**166**	P		**P**	**23 09 37.3**	**+0.9**
	0.5nm,0.9s,baz=347,slow=8.9,SNR=3.1							
ASAR	**Alice Springs**	**35.74**	**168**	P		**P**	**23 10 07.7**	**+1.0**
	0.4nm,0.8s,baz=354,slow=7.5,SNR=4.4							
TAPN	**Taplejung**	**39.39**	**299**	*e*P		**P**	**23 10 36.4**	**-1.6**
	5.5nm,0.4s							
ODAN	**Odare**	**39.54**	**298**	*e*P		**P**	**23 10 37.3**	**-1.8**
	10nm,0.6s							
H11S3	**WAKE ISLAND Hy**	**39.66**	**75**	T		T	23 53 45.7	
	baz=273,slow=74							
H11S1	**WAKE ISLAND Hy**	**39.67**	**75**	T		T	23 53 49.6	
	baz=273							
H11S2	**WAKE ISLAND Hy**	**39.67**	**75**	T		T	23 53 44.6	
	baz=273,slow=74							
SONM	**Songino Array**	**39.87**	**339**	P		**P**	**23 10 41.4**	**0.0**
	0.6nm,0.6s,baz=155,slow=8.0,SNR=5.5							
SONM	**Songino Array**	**39.87**	**339**	IAmb		IAmb	23 10 43.8	
	comp=Z,0.6nm,0.7s							
H11N1	**WAKE ISLAND Hy**	**39.95**	**73**	T		T	23 54 06.0	
	baz=265,slow=75,SNR=53							
H11N2	**WAKE ISLAND Hy**	**39.96**	**73**	T		T	23 54 05.9	
	baz=265,slow=75,SNR=54							
H11N3	**WAKE ISLAND Hy**	**39.97**	**73**	T		T	23 54 03.6	
	baz=265,slow=75,SNR=36							
RAMN	**Ramite**	**40.24**	**298**	*e*P		**P**	**23 10 43.6**	**-1.4**
	comp=Z,6.3nm,0.6s							
JIRN	**Jiri**	**40.77**	**299**	*e*P		**P**	**23 10 48.0**	**-1.5**
	comp=Z,12nm,0.4s							
GUN	**Gumba**	**41.11**	**299**	*e*P		**P**	**23 10 50.6**	**-1.6**
	comp=Z,10nm,0.8s							
DANN	**Dangsing**	**43.03**	**299**	*e*P		**P**	**23 11 05.9**	**-2.0**
STKA	**Stephens Creek**	**45.57**	**162**	P		**P**	**23 11 27.9**	**+0.3**
	comp=Z,1.2nm,0.7s,baz=327,slow=12,SNR=4.4							
STKA	**Stephens Creek**	**45.57**	**162**	IAmb		IAmb	23 13 11.9	
	comp=Z,2.3nm,1.5s							
MK31	**Makanchi Array**	**51.03**	**322**	P		**P**	**23 12 10.6**	**+0.9**
MK31				IAmb		IAmb	23 13 33.2	
	comp=Z,3.0nm,1.5s							
MKAR	**Makanchi Array**	**51.03**	**322**	P		**P**	**23 12 10.1**	**+0.4**
	comp=Z,0.6nm,0.3s,baz=119,slow=7.7,SNR=25							
MAKZ	**Makanchi**	**51.23**	**322**	P		**P**	**23 12 11.0**	**-0.1**
MAKZ				IAmb		IAmb	23 13 10.4	
	comp=Z,11nm,1.9s							
DZM	**Mont Dzumac**	**51.67**	**130**	LR		LR	23 35 15.1	
	comp=Z,70nm,19.1s,baz=41,slow=37							
ZALV	**Zalesovo Beam**	**53.54**	**331**	P		**P**	**23 12 26.6**	**-1.6**
	comp=Z,1.0nm,0.5s,baz=119,slow=6.7,SNR=5.6							
ZALV	**Zalesovo Beam**	**53.54**	**331**	P		**P**	**23 12 27.8**	**-0.4**
WRH	**Wood River Hil**	**77.87**	**26**			sP	23 15 18.1	+2.6
ARCES	**ARCESS Array B**	**83.04**	**340**	P		**P**	**23 15 33.2**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=74,slow=6.8,SNR=3.9							
FINES	**FINESS Array B**	**84.80**	**332**	P		**P**	**23 15 42.2**	**+0.6**
	comp=Z,3.2nm,1.0s,baz=108,slow=4.8,SNR=4.6							

IDC ***23*** *23:24:56.6±0.8, 7°.56S×130°.42E, h0km, mb4.2/7, mb1 4.3/10, mb1mx4.1/31, mbtmp4.2/10, ML4.1/3, MS3.5/11, Ms1 3.5/11, ms1mx3.3/30, Error ellipse: s-maj=35.5km s-min=17.0km az=70.0*

NEIC ***23*** *23:24:57.5±3.0, 7°.60S±0°.05×130°.27E±0°.04, h9km±4km, mb4.6/29, Error ellipse: s-maj=7.2km s-min=6.3km az=164.0*

DJA ***23*** *23:25:00.9±0.3, 8°.3S±3°×13°.0E±°, h61km±16km, M4.5/8, mB4.8/3, mb4.6/8, MLv4.5/8, Mw(mB)4.1/3*

ISC 23 23:24:59.9±0.4, 7°.65S±0°.04×130°.32E±0°.05, h27km, n81, σ2s03/78, mb4.6/24, MS3.6/8, 1C, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SAUI	**Saumlaki**	**1.02**	**109**	P		**Pb**	**23 25 19.5**	**+0.5**
SAUI				S		**Sn**	**23 25 31.1**	**-0.9**
SAUI	**Saumlaki**	**1.02**	**109**			**Pb**	**23 25 19.9**	**+0.9**
MSAI	**Masohi**	**4.50**	**342**	P		**Pb**	**23 26 15.3**	**-2.9**
FAKI	**Fak Fak**	**5.08**	**22**	P		**Pn**	**23 26 13.8**	**-0.5**
	0.4nm1µm93nm,0.8s							
FAKI	**Fak Fak**	**5.08**	**22**			**Pn**	**23 26 13.7**	**-0.5**
MTN	**Manton Dam**	**5.22**	**171**			**Pn**	**23 26 17.8**	**+1.6**
NLAI	**Namlea**	**5.43**	**324**	P		**Pn**	**23 26 19.0**	**-0.2**
	0.2nm57nm,0.9s							
SOEI	**Soe**	**6.34**	**250**	Pn		**Pn**	**23 26 31.6**	**-0.2**
SOEI						**Sb**	**23 28 03.2**	**-1.9**
SIJI	**Sorong**	**6.80**	**8**	Pn		**Pn**	**23 26 36.3**	**-1.7**
	2.8nm,0.3s,baz=184,slow=22,SNR=10.0							
SIJI				Sn		**Sn**	**23 27 49.0**	**-5.7**
	0.8nm,0.3s,baz=252,slow=23,SNR=1.6							
SWI	**Sorong**	**6.81**	**8**	P		**Pn**	**23 26 37.8**	**-0.3**
	0.1nm41nm,0.7s							
SANI	**Sanana**	**7.04**	**322**	P		**Pn**	**23 26 44.2**	**+2.9**
	0.3nm54nm,1.5s							
RKPI	**Ransiki, Papua**	**7.21**	**32**	P		**Pn**	**23 26 43.3**	**-0.3**
	0.8nm122nm,0.7s							
KNRA	**Kununurra**	**8.12**	**191**			**Pn**	**23 26 56.6**	**+0.5**
LUWI	**Luwuk**	**9.99**	**311**	Pn		**Pn**	**23 27 19.7**	**-2.0**
FITZ	**Fitzroy Crossi**	**11.34**	**203**	Pn		**Pn**	**23 27 39.6**	**-0.6**
	1.5nm,0.3s,baz=36,slow=11,SNR=42							
FITZ				Sn		**Sn**	**23 29 42.5**	**-3.7**
	1.0nm,0.3s,baz=117,slow=9.5,SNR=5.0							
FITZ				LR		LR	23 33 07.6	
	comp=Z,323nm,18.9s,baz=26,slow=43							
FITZ	**Fitzroy Crossi**	**11.34**	**203**	Pn		**Pn**	**23 27 39.8**	**-0.4**
FITZ						**Sn**	**23 29 42.8**	**-3.3**
MRSI	**Marisa**	**11.62**	**314**	P		Pn	23 27 52.6	+8.5
WB0	**Warramunga Arr**	**12.67**	**162**			**Pn**	**23 27 55.5**	**-3.1**
WRAB	**Tennant Creek**	**12.82**	**163**			**Pn**	**23 27 57.5**	**-3.0**
WRA	**Warramunga Arr**	**12.82**	**163**	Pn		**Pn**	**23 27 56.9**	**-3.7**
	0.8nm,0.3s,baz=349,slow=13,SNR=16							
WRA				Sn		**Sn**	**23 30 14.6**	**-7.9**
	1.0nm,0.3s,baz=343,slow=20,SNR=6.2							
WRA				LR		LR	23 33 36.3	
	comp=Z,353nm,20.4s,baz=320,slow=40							

WRA	**Warramunga Arr**	**12.82**	**163**	Pn			**Pn**	**23 27 56.4**	**-4.2**
WB2	**Warramunga Arr**	**12.83**	**163**				**Pn**	**23 27 57.2**	**-3.4**
WR0	**Warramunga Arr**	**12.90**	**162**				**Pn**	**23 27 58.7**	**-2.9**
COEN	**Coen**	**14.09**	**117**				**Pn**	**23 28 16.6**	**-1.3**
DAV	**Davao City (W)**	**15.37**	**342**	LR		LR		23 35 02.4	
	comp=Z,128nm,20.4s,baz=53,slow=40								
AS31	**Alice Springs**	**16.29**	**168**				**Pn**	**23 28 45.3**	**-1.7**
ASAR	**Alice Springs**	**16.29**	**168**	Pn			**Pn**	**23 28 43.6**	**-3.4**
	0.4nm,0.3s,baz=336,slow=8.9,SNR=18								
ASAR				Sn			Sn	23 31 35.1	-12
	0.1nm,0.3s,baz=341,slow=23,SNR=3.5								
ASAR				LR			LR	23 35 42.7	
	comp=Z,288nm,18.9s,baz=350,slow=40								
ASAR	**Alice Springs**	**16.29**	**168**	Pn			**Pn**	**23 28 46.0**	**-0.9**
PMG	**Port Moresby**	**16.74**	**97**	LR			LR	23 36 44.1	
	comp=Z,108nm,20.8s,baz=164,slow=42								
PMG	**Port Moresby**	**16.74**	**97**	Pn			**P**	**23 28 52.0**	**-2.7**
PSA00	**Pilbara Seismi**	**17.14**	**215**	P			**Pn**	**23 28 57.5**	**-0.2**
PSA00				IAmb			IAmb	23 29 02.8	
	comp=Z,31nm,0.9s								
KKM	**Kota Kinabalu**	**19.57**	**314**	P			**P**	**23 29 24.8**	**-1.3**
KKM				IAmb			IAmb	23 29 30.3	
	comp=Z,35nm,1.1s								
CTA	**Charters Tower**	**19.78**	**130**	P			**P**	**23 29 27.9**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=298,slow=11,SNR=5.3								
SBUM	**Sibu**	**20.66**	**298**	P			**P**	**23 29 37.3**	**-0.5**
FORT	**Forrest**	**23.11**	**185**	P			**P**	**23 30 05.9**	**+2.1**
MORW	**Morawa**	**25.20**	**210**	P			**P**	**23 30 24.7**	**+1.3**
GUMO	**Guam**	**25.57**	**34**	LR			LR	23 40 23.8	
	comp=Z,72nm,20.5s,baz=258,slow=36								
BBOO	**Buckleboo**	**25.59**	**169**	P			**P**	**23 30 28.3**	**+1.4**
STKA	**Stephens Creek**	**26.29**	**158**	P			**P**	**23 30 34.6**	**+1.3**
	comp=Z,5.3nm,0.6s,baz=328,slow=10,SNR=14								
STKA				LR			LR	23 42 01.3	
	comp=Z,218nm,19.9s,baz=17,slow=39								
STKA	**Stephens Creek**	**26.29**	**158**	P			**P**	**23 30 34.8**	**+1.5**
NWAO	**Narrogin (SRO)**	**27.93**	**204**	LR			LR	23 43 26.9	
	comp=Z,178nm,19.5s,baz=48,slow=40								
HNR	**Honiara**	**29.34**	**96**	LR			LR	23 43 22.9	
	comp=Z,126nm,18.1s,baz=324,slow=38								
CAN	**Canberra**	**32.43**	**151**	P			**P**	**23 31 29.1**	**+1.2**
TOO	**Toolangi**	**32.81**	**157**	P			**P**	**23 31 31.6**	**+0.4**
TOO				IAmb			IAmb	23 31 34.4	
	comp=Z,9.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**40.39**	**310**	P			**P**	**23 32 36.6**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=138,slow=7.3,SNR=13								
CMAR				PcP			**PcP**	**23 34 40.5**	**+1.6**
	comp=Z,1.1nm,0.8s,baz=169,slow=2.9,SNR=7.4								
CMAR				LR			LR	23 51 36.5	
	comp=Z,27nm,18.4s,baz=130,slow=40								
CHTO	**Chiang Mai**	**40.61**	**311**	P			**P**	**23 32 38.6**	**+0.9**
NJ2	**Nanjing**	**40.97**	**345**	*e*P			P	23 32 44.6	+4.1
NJ2				pmax			pmax		
	comp=Z,12nm,0.5s								
MAJO	**Matsushiro**	**44.58**	**9**	P			**P**	**23 33 08.8**	**-1.0**
MAJO				IAmb			IAmb	23 33 18.9	
	comp=Z,7.5nm,0.8s								
MJAR	**Matsushiro Arr**	**44.58**	**9**	P			**P**	**23 33 08.7**	**-1.0**
	comp=Z,3.7nm,0.7s,baz=187,slow=9.3,SNR=10								
MJAR	**Matsushiro Arr**	**44.58**	**9**	IAmb			IAmb	23 33 11.0	
	comp=Z,1.5nm,0.7s								
MJB9	**Matsu-Tunnel**	**44.58**	**9**	P			**P**	**23 33 09.1**	**-0.7**
MJB9				IAmb			IAmb	23 33 18.9	
	comp=Z,7.6nm,0.8s								
KSRS	**Korea Array**	**44.93**	**357**	LR			LR	23 51 15.4	
	comp=Z,27nm,20.9s,baz=215,slow=35								
XAN	**Xi'an**	**46.16**	**335**	P			**P**	**23 33 22.3**	**-0.1**
XAN				pmax			pmax		
	comp=Z,4.0nm,0.9s								
HHC	**Hu-ho-hao-te**	**51.26**	**342**	*e*P			**P**	**23 34 04.0**	**+2.5**
HHC				pmax			pmax		
	comp=Z,7.0nm,1.0s								
HHC				pmax			pmax		
	comp=Z,20nm,6.1s								
KHZ	**Kahutara**	**51.40**	**140**	P			**P**	**23 34 00.4**	**-2.1**
KHZ				IAmb			IAmb	23 34 03.7	
	comp=Z,5.6nm,0.7s								
USA0B	**Ussuriysk Arra**	**51.63**	**2**	P			**P**	**23 34 04.6**	**+0.5**
USA0B				IAmb			IAmb	23 34 22.2	
	comp=Z,4.7nm,0.7s								
USRK	**Ussuriysk Ar.**	**51.63**	**2**	P			**P**	**23 34 04.6**	**+0.5**
BKZ	**Black Stump Fm**	**51.91**	**135**	P			**P**	**23 34 07.1**	**+0.6**
GTA	**Gaotai**	**54.69**	**331**	⇑P			**P**	**23 34 28.3**	**+1.4**
GTA				pP			pP	23 34 32.3	-2.4
GTA				sP			pwP	23 34 35.3	-2.0
GTA				PcP			**PcP**	**23 35 31.3**	**+1.8**
GTA				S			**S**	**23 42 05.8**	**+0.1**
GTA				pmax			pmax		
	comp=Z,5.0nm,0.9s								
GTA				pmax			pmax		
	comp=Z,130nm,7.6s								
GTA				LR			LR		
	comp=N,120nm,16.2s								
GTA				LR			LR		
	comp=E,68nm,18.7s								
GTA				LR			LR		
	comp=Z,100nm,17.1s								
ULN	**Ulaanbaatar**	**58.98**	**342**				**P**	**23 34 57.4**	**+0.2**
ULN	**Ulaanbaatar**	**58.98**	**342**	P			**P**	**23 34 57.2**	**-0.1**
ULN				IAmb			IAmb	23 35 01.8	
	comp=Z,3.0nm,1.1s								
SONM	**Songino Array**	**59.16**	**341**	P			**P**	**23 34 59.5**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=160,slow=6.2,SNR=5.3								
SONM	**Songino Array**	**59.16**	**341**	P			**P**	**23 34 58.9**	**+0.5**
WMQ	**Urumqi**	**64.11**	**327**	*e*P			**P**	**23 35 34.0**	**+2.1**
WMQ				pmax			pmax		
	comp=Z,9.0nm,0.9s								
WMQ				pmax			pmax		
	comp=Z,43nm,5.9s								
WMQ				LR			LR		
	comp=N,290nm,29.2s								
WMQ				LR			LR		
	comp=E,1µm,29.1s								
WMQ				LR			LR		
	comp=Z,100nm,28.8s								
KSH	**Kashi**	**68.71**	**318**	P			**P**	**23 36 03.0**	**+1.5**
KSH				sP			pwP	23 36 12.1	+2.5
KSH				pmax			pmax		
	comp=Z,420nm,5.3s								
MK31	**Makanchi Array**	**68.94**	**327**	IAmb			IAmb	23 36 05.0	
	comp=Z,5.6nm,0.8s								
MKAR	**Makanchi Array**	**68.94**	**327**	P			**P**	**23 36 04.0**	**+1.3**
	comp=Z,5.1nm,0.6s,baz=123,slow=7.7,SNR=78								
MKAR	**Makanchi Array**	**68.94**	**327**	P			**P**	**23 36 03.5**	**+0.8**
MAKZ	**Makanchi**	**69.12**	**327**	P			**P**	**23 36 04.9**	**+1.2**
AAK	**Ala-Archa**	**71.24**	**320**	P			**P**	**23 36 18.6**	**+1.5**
AAK				IAmb			IAmb	23 36 26.1	
	comp=Z,3.2nm,1.0s								
VNDA	**Vanda**	**71.77**	**173**	P			**P**	**23 36 20.1**	**+0.7**
VNDA				IAmb			IAmb	23 36 32.3	
	comp=Z,6.8nm,1.1s								
ZALV	**Zalesovo Beam**	**72.31**	**334**	P			**P**	**23 36 23.2**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=132,slow=6.0,SNR=5.9								
GAR	**Garm**	**72.35**	**315**	P			**P**	**23 36 23.4**	**-0.3**
GAR				IAmb			IAmb	23 36 25.8	
	comp=Z,8.4nm,1.0s								
TIXI	**Tiksi**	**79.14**	**360**	P			**P**	**23 37 03.2**	**+1.5**
GEYT	**Alibeck**	**80.88**	**310**	P			**P**	**23 37 12.8**	**+1.0**
	comp=Z,0.9nm,0.7s,baz=120,slow=5.8,SNR=3.5								
GEYT	**Alibeck**	**80.88**	**310**	IAmb			IAmb	23 37 15.9	
	comp=Z,1.2nm,1.1s								
ABKAR	**Akbulak array**	**83.22**	**322**	P			**P**	**23 37 24.9**	**+1.1**
ABKAR	**Akbulak array**	**83.22**	**322**	IAmb			IAmb	23 37 28.8	
	comp=Z,3.2nm,1.1s								
RAYN	**Ar Rayn**	**88.30**	**294**	P			**P**	**23 37 50.9**	**+1.2**
RAYN				IAmb			IAmb	23 37 52.6	
	comp=Z,5.5nm,1.1s								
TORD	**Torodi Ar. Bea**	**129.25**	**281**	PKP			**PKiKP**	**23 44 07.8**	**+0.2**
	comp=Z,1.0nm,1.0s,baz=116,slow=3.4,SNR=3.7								
CPUP	**Villa Florida**	**145.41**	**168**	PKPbc			**PKPab**	**23 44 37.5**	**+1.2**
	comp=Z,5.3nm,1.0s,baz=214,slow=2.6,SNR=8.4								

GUC ***23*** *23:42:14.3±0.7, 19°.69S×69°.06W, h12km±2km, ML3.3*

IDC ***23*** *23:42:24.5±2.1, 19°.89S×68°.49W, h86km±22km, mb3.2/2, mb1 3.3/5, mb1mx3.2/28, mbtmp3.4/5, Error ellipse: s-maj=45.1km s-min=25.2km az=105.0*

ISC 23 23:42:14.5±0.9, 19°.68S±0°.03×69°.16W±0°.04, h11km±5km, n16, σ1s02/28, 10C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GO01	**Chusmiza**	**0.03**	**295**	⇑*e*P		**Pg**	**23 42 16.8**	**-0.4**
GO01				*i* S		**Sg**	**23 42 19.2**	**+0.3**
GO01				IAML			23 42 19.7	
	comp=N,9µm,0.1s							
PB08	**IPOC Station P**	**0.46**	**179**	⇑*i*P		**Pg**	**23 42 23.2**	**-0.4**
PB08				*i* S		**Sg**	**23 42 29.7**	**-0.1**
PB08				IAML			23 42 30.3	
	comp=E,5µm,0.4s							
PB11	**IPOC Station P**	**0.47**	**260**	⇓*i*P		**Pb**	**23 42 25.2**	**+0.2**
PB11				*i* S		**Sb**	**23 42 33.3**	**+1.2**
MNMC	**Minye Minye**	**0.68**	**323**	⇑*i*P		**Pb**	**23 42 28.2**	**-0.5**
MNMC				*i* S		**Sb**	**23 42 38.5**	**+0.2**
MNMC				IAML			23 42 41.7	
	comp=N,1µm,0.6s							
PSGC	**Pisagua**	**0.91**	**275**	⇑*i*P		**Pn**	**23 42 32.6**	**-0.8**
PSGC				*e*S		**Sn**	**23 42 46.3**	**-0.3**
TA01	**Diego Aracena**	**1.30**	**227**	⇑*i*P		**Pg**	**23 42 39.2**	**-0.3**
TA01				*i* S		**Sg**	**23 42 58.0**	**+1.6**
TA01				IAML			23 42 59.6	
	comp=N,226nm,0.2s							
PB16	**IPOC Station P**	**1.38**	**346**	⇑*i*P		**Pn**	**23 42 40.1**	**-0.2**
PB16				*i* S		**Sb**	**23 42 58.2**	**-0.3**
PATCX	**Punta Patache**	**1.47**	**219**	⇑*i*P		**Pb**	**23 42 42.1**	**+0.2**
PATCX				*i* S		**Sg**	**23 43 02.6**	**+0.9**
PATCX				IAML			23 43 05.5	
	comp=E,651nm,0.6s							
AP01	**Chacalluta**	**1.72**	**319**	⇑*i*P		**Pb**	**23 42 46.0**	**-0.1**
AP01				*i* S		**Sg**	**23 43 10.4**	**+0.6**
AP01				IAML			23 43 11.0	
	comp=N,2µm,0.3s							
PB09	**IPOC Station P**	**2.10**	**182**	⇑*i*P		**Pb**	**23 42 53.4**	**+0.6**
PB09				*i* S		**Sg**	**23 43 21.4**	**-0.9**
PB09				IAML			23 43 26.2	
	comp=E,358nm,0.5s							
PB03	**IPOC Station P**	**2.42**	**193**	⇑*i*P		**Pb**	**23 42 57.3**	**-0.9**
PB03				*i* S		**Sb**	**23 43 29.7**	**+1.6**
PB03				IAML			23 43 31.5	
	comp=E,366nm,0.6s							
LVC	**Limon Verde**	**2.92**	**175**	P		**Pb**	**23 43 06.7**	**-0.2**
	comp=E,16nm,0.3s,baz=15,slow=13,SNR=33							
LVC				S		Sb	**23 43 45.0**	**+2.1**
	comp=E,28nm,0.3s,baz=66,slow=23,SNR=6.6							
LPAZ	**La Paz**	**3.52**	**16**	P		**Pb**	**23 43 19.4**	**+2.2**
	comp=E,0.2nm,0.3s,baz=200,slow=8.3,SNR=3.4							
SIV	**San Ignacio**	**8.53**	**66**	P		**Pn**	**23 44 17.7**	**-0.5**
	comp=E,0.1nm,0.3s,baz=283,slow=16,SNR=3.1							
TORD	**Torodi Ar. Bea**	**76.98**	**71**	P		**P**	**23 54 06.3**	**-1.5**
	comp=E,0.5nm,0.9s,baz=247,slow=5.8,SNR=1.9							
YKA	**Yellowknife Ar**	**89.40**	**341**	P		**P**	**23 55 12.2**	**+1.3**
	comp=E,0.1nm,0.5s,baz=138,slow=4.3,SNR=2.8							

SJA 23 23:50:18.1±0.9, 31°.99S×72°.13W, h30km, ML3.3, MW3.8, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ROC1	**El Roble**	**1.36**	**136**	*i* P		Pb	23 50 43.4	+0.2
ROC1				*e*S		Sb	23 51 01.2	+0.9
PEL	**Peldehue**	**1.68**	**134**	*i* P		Pb	23 50 47.7	-0.7
PEL				*e*S		Sb	23 51 10.2	+1.1
GO04	**Tololo Observa**	**2.14**	**33**	*i* P		Pn	23 50 48.1	-3.9
RTLS	**Leoncito**	**2.42**	**86**	*i* P		Pn	23 50 56.8	+0.8
ARCO	**CERRO ARCO**	**2.84**	**108**	*i* P		Pb	23 51 08.0	-0.2
ARCO				IAML			23 51 50.5	
	comp=Z,95nm,0.7s							
ASAL	**Salagasta**	**2.86**	**103**	*i* P		Pn	23 51 04.8	+3.1
ZON	**Zonda**	**2.98**	**82**	*i* P		Pb	23 51 10.8	+0.3
AAGR	**Agrelo**	**3.00**	**112**	*i* P		Pb	23 51 09.9	-1.0
AAGR				IAML			23 51 57.8	
	comp=Z,86nm,1.3s							
AAGR				IAML			23 51 57.8	
	comp=Z,87nm,1.3s							
RTCV	**Cerro Valdivia**	**3.06**	**89**	*i* P		Pn	23 51 07.1	+2.6
RTLL	**Cerro Villicun**	**3.19**	**79**	*i* P		Pn	23 51 08.9	+2.7
AMOG	**MOGNA**	**3.28**	**72**	*i* P		Pn	23 51 09.1	+1.5
VCA	**Vinchina**	**4.70**	**47**	*i* P		Pn	23 51 28.6	+1.5
VCA				IAML			23 52 51.8	
	comp=Z,38nm,0.6s					

az=156.0
*NNC **24** 00:22:46.8±3.7,36.86N×70.70E,h159km±52km,mb2.9, mpv3.6,Error ellipse: s-maj=33.7km s-min=20.4km az=28.0*

ISC 24 00:22:42.0±0.9,**36.51N**±0.08×**70.83E**±0.07,**h188**km,**n23,** σ2°**09**/26,**6C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.59**	**358**	P	**Pn**	**00 24 16.9**	**+0.2**
	1.2nm,0.3s,baz=183,slow=14,SNR=33						
KK31				⇓S	**Sn**	**00 25 29.1**	**-2.5**
	1.0nm,0.3s,baz=191,slow=25,SNR=11						
AAK	**Ala-Archa**	**6.74**	**24**	P	**Pn**	**00 24 18.3**	**-0.5**
	1.3nm,0.3s,baz=158,slow=6.5,SNR=20						
AAK				S	**Sn**	**00 25 32.2**	**-3.2**
	1.4nm,0.3s,baz=326,slow=22,SNR=17						
AAK	**Ala-Archa**	**6.74**	**24**	⇑P	**Pn**	**00 24 19.6**	**+0.8**
	2.3nm,0.5s						
AAK				⇑S	**Sn**	**00 25 32.8**	**-2.6**
	14nm,0.7s						
MDOK	**Medeo**	**8.18**	**34**	⇑P	**Pn**	**00 24 39.1**	**+1.4**
	4.3nm,0.6s						
GEYT	**Alibeck**	**10.24**	**282**	P	**Pn**	**00 25 04.3**	**-0.2**
	0.3nm,0.3s,baz=106,slow=11,SNR=5.7						
GEYT				S	**Sn**	**00 26 58.0**	**-0.6**
	1.0nm,0.3s,baz=56,slow=30,SNR=10						
MK31	**Makanchi Array**	**13.36**	**36**	P	**P**	**00 25 49.6**	**+2.3**
	1.1nm,0.5s,baz=213,slow=10,SNR=11						
MKAR	**Makanchi Array**	**13.36**	**36**	P	**Pn**	**00 25 45.0**	**+0.8**
	0.2nm,0.3s,baz=220,slow=12,SNR=12						
DANN	**Dangsing**	**13.61**	**123**	*eP*	**Pn**	**00 25 45.5**	**-2.3**
	8.2nm,0.3s						
GKN	**Gorkha**	**14.42**	**122**	*eP*	**P**	**00 25 58.1**	**-1.3**
	50nm,0.6s						
KKN	**Kakani**	**15.00**	**121**	*eP*	**P**	**00 26 05.3**	**-0.6**
	20nm,0.6s						
AB31	**Akbulak array**	**15.01**	**331**	⇑P	**P**	**00 26 06.5**	**+1.0**
	0.2nm,0.3s,baz=146,slow=12,SNR=14						
AB31				⇑S	**Sn**	**00 28 47.5**	**-4.7**
	1.0nm,0.7s,baz=162,slow=21,SNR=6.0						
KURBB	**Kurchatov Arra**	**15.16**	**19**	P	**P**	**00 26 09.3**	**+2.2**
	0.1nm,0.3s,baz=205,slow=11,SNR=6.2						
PKIN	**Phulchoki**	**15.21**	**122**	*eP*	**P**	**00 26 07.3**	**-1.0**
	12nm,0.5s						
GUN	**Gumba**	**15.34**	**120**	*eP*	**P**	**00 26 08.9**	**-0.9**
	13nm,0.6s						
JIRN	**Jiri**	**15.71**	**120**	*eP*	**P**	**00 26 13.1**	**-0.8**
	20nm,0.5s						
RAMN	**Ramite**	**16.44**	**121**	*eP*	**P**	**00 26 20.9**	**-0.9**
	9.9nm,0.5s						
BVAR	**Borovoye Array**	**16.52**	**359**	P	**Pn**	**00 26 26.2**	**+3.4**
	0.2nm,0.3s,baz=161,slow=11,SNR=4.4						
AKTO	**Aktyubinsk**	**16.70**	**330**	P	**Pn**	**00 26 28.2**	**+3.1**
	0.1nm,0.3s,baz=134,slow=8.1,SNR=4.2						
AKTO	**Aktyubinsk**	**16.70**	**330**	⇑P	**Pn**	**00 26 26.7**	**+1.6**
	2.8nm,1.1s						
TAPN	**Taplejung**	**16.97**	**118**	*eP*	**Pn**	**00 26 29.4**	**+0.6**
	9.4nm,0.6s						
ZALV	**Zalesovo Beam**	**19.96**	**25**	P	**P**	**00 27 01.9**	**+2.4**
	0.4nm,0.3s,baz=122,slow=12,SNR=8.9						
FINES	**FINESS Array B**	**37.40**	**326**	P	P	00 29 41.7	+5.4
	1.2nm,0.9s,baz=122,slow=13,SNR=2.8						
TGY	**Tagaytay City**	**49.85**	**103**	LR	LR	00 54 32.3	
	comp=Z,114nm,19.5s,baz=128,slow=38						

*IDC **24** 00:25:48.6±1.8,59.64N×153.60W,h110km±29km, mb3.5/5, mb1 3.6/9,mb1mx3.2/49,mbtmp3.9/9,Error ellipse: s-maj=30.0km s-min=15.3km az=126.0*
*NEIC **24** 00:25:49.4±2.6,59.66N±0.04×153.5W±0.1,h125km±4km, Error ellipse: s-maj=8.5km s-min=4.3km az=114.0*
*AEIC **24** 00:25:51.0±2.3,59.66N±0.05×153.4W±0.1,h119km±5km, ML3.6/66,Error ellipse: s-maj=8.0km s-min=6.3km az=124.0*

ISC 24 00:25:50.0±0.7,**59.66N**±0.04×**153.38W**±0.05, **h128**km±6km,**n110,** σ1°**33**/125,**mb4.0/5,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUW	**Augustine West**	**0.29**	**189**		**Pn**	**00 26 07.2**	**-0.6**
AUH	**Augustine H**	**0.30**	**186**		**Pn**	**00 26 07.2**	**-0.7**
AUP	**Augustine Pinn**	**0.30**	**184**		**Pn**	**00 26 07.4**	**-0.6**
ILS	**Iliamna Low So**	**0.34**	**28**		**Pn**	**00 26 07.3**	**-0.8**
ILS					**Sn**	**00 26 20.1**	**-1.7**
ILW	**Iliamna West**	**0.42**	**17**		**Pn**	**00 26 07.6**	**-1.0**
RED	**Redoubt Volcan**	**0.82**	**22**		**Pn**	**00 26 10.8**	**-0.4**
RED					**Sn**	**00 26 26.2**	**-1.1**
RSO	**Redoubt South**	**0.87**	**21**		**Pn**	**00 26 11.2**	**-0.4**
RSO				Sn	**Sn**	**00 26 27.1**	**-1.0**
HOM	**Homer**	**0.88**	**89**		**Pn**	**00 26 11.6**	**+0.1**
HOM	**Homer**	**0.88**	**89**	Sn	**Sn**	**00 26 29.1**	**+1.2**
CNPM	**China Poot**	**1.10**	**96**		**Pn**	**00 26 13.3**	**-0.3**
CNPM					**Sn**	**00 26 30.7**	**-0.8**
BRLK	**Bradley Lake**	**1.27**	**84**		**Pn**	**00 26 14.7**	**-0.7**
BRSE	**Bradley Lake S**	**1.34**	**85**		**Pn**	**00 26 15.6**	**-0.5**
KCG	**Knife Ck. Glac**	**1.62**	**214**		**Pn**	**00 26 19.5**	**+0.1**
CKL	**Chakachamna La**	**1.63**	**18**		**Pn**	**00 26 19.5**	**+0.1**
KABU	**Katmai Buttres**	**1.71**	**216**		**Pn**	**00 26 19.8**	**-0.6**
KABU					**Sn**	**00 26 41.7**	**-1.8**
KELA	**Mount Kelaz**	**1.73**	**226**		**Pn**	**00 26 19.6**	**-1.0**
SLKM	**Skilak Lake**	**1.80**	**60**		**Pn**	**00 26 21.1**	**-0.2**
SVW2	**Sparrevohn**	**1.81**	**324**		**Pn**	**00 26 20.4**	**-1.1**
ANCK	**Angle Creek**	**1.83**	**218**		**Pn**	**00 26 21.1**	**-0.7**
KDAK	**Kodiak Island**	**1.93**	**167**	P	**Pn**	**00 26 21.6**	**-1.3**
	24nm,0.3s,baz=42,slow=4.7,SNR=308						
KDAK				S	**Sn**	**00 26 45.4**	**-2.6**
	174nm,0.3s,baz=206,slow=23,SNR=46						
KDAK	**Kodiak Island**	**1.93**	**167**		**Sn**	**00 26 45.5**	**-2.5**
SEW	**Seward**	**2.03**	**76**		**Pn**	**00 26 23.9**	**-0.1**
SEW	**Seward**	**2.03**	**76**	Sn	**Sn**	**00 26 49.1**	**-1.2**
SUA	**Susitna One**	**2.23**	**35**		**Pn**	**00 26 27.0**	**+0.2**
SUA					**Sn**	**00 26 54.7**	**-0.2**
RC01	**Rabbit Creek A**	**2.31**	**50**		**Pn**	**00 26 28.6**	**+1.1**
RC01				Sn	**Sn**	**00 26 56.0**	**-0.6**
OHAK	**Old Harbor**	**2.44**	**179**		**Pn**	**00 26 27.6**	**-1.7**
OHAK	**Old Harbor**	**2.44**	**179**	Sn	**Sn**	**00 26 56.6**	**-2.8**
SKT	**Skwentna**	**2.50**	**20**		**Pn**	**00 26 30.1**	**+0.1**
PWL	**Port Wells**	**2.79**	**62**		**Pn**	**00 26 33.1**	**-0.6**
PMR	**Palmer**	**2.85**	**45**		**Pn**	**00 26 34.0**	**-0.5**
KNK	**Knik Glacier**	**3.00**	**52**		**Pn**	**00 26 35.4**	**-1.1**
KNK	**Knik Glacier**	**3.00**	**52**	Sn	**Sn**	**00 27 10.7**	**-1.7**
GHO	**Glory Hole Cre**	**3.05**	**44**		**Pn**	**00 26 36.2**	**-0.9**
GHO	**Glory Hole Cre**	**3.05**	**44**	Sn	**Sn**	**00 27 11.6**	**-2.0**
SII	**Sitkinak Islan**	**3.14**	**188**		**Pn**	**00 26 36.5**	**-1.8**
SML	**Sawmill**	**3.29**	**47**		**Pn**	**00 26 39.4**	**-0.8**
SML	**Sawmill**	**3.29**	**47**	Sn	**Sn**	**00 27 17.0**	**-2.0**
PPLA	**Purkeypile**	**3.30**	**10**		**Pn**	**00 26 41.2**	**+0.8**
GLI	**Glacier Island**	**3.36**	**66**		**Pn**	**00 26 40.4**	**-0.7**
GLI	**Glacier Island**	**3.36**	**66**	Sn	**Sn**	**00 27 18.4**	**-2.3**
TT01	**Tatalina**	**3.50**	**340**		**Pn**	**00 26 42.1**	**-0.8**
TTA	**Tatalina**	**3.52**	**340**		**Pn**	**00 26 42.3**	**-1.0**
HIN	**Hinchinbrook I**	**3.53**	**75**		**Pn**	**00 26 42.9**	**-0.5**
HIN	**Hinchinbrook I**	**3.53**	**75**	Sn	**Sn**	**00 27 23.9**	**-0.8**
MID	**Middleton Isla**	**3.59**	**91**	Pn	**Pn**	**00 26 44.2**	**+0.1**
FID	**Port Fidalgo**	**3.62**	**69**		**Pn**	**00 26 43.8**	**-0.7**
JPK	**Jack Peak**	**3.65**	**65**		**Pn**	**00 26 44.7**	**-0.3**
SCM	**Sheep Creek Mo**	**3.69**	**51**		**Pn**	**00 26 45.4**	**-0.1**
HUR	**Hurricane**	**3.79**	**27**		**Pn**	**00 26 47.0**	**+0.2**
CAST	**Castle Rocks**	**3.83**	**9**		**Pn**	**00 26 48.0**	**+0.8**
EYAK	**Cordova Ski Ar**	**3.92**	**74**		**Sn**	**00 27 30.9**	**-3.0**
EYAK	**Cordova Ski Ar**	**3.92**	**74**		**Pn**	**00 26 48.1**	**-0.4**
WAT1	**Susitna Watana**	**3.95**	**34**		**Pn**	**00 26 48.3**	**-0.6**
WAT6	**Susitna Watana**	**4.01**	**41**		**Pn**	**00 26 49.1**	**-0.7**
CHIR	**Chirikof Islan**	**4.03**	**198**	Pn	**Pn**	**00 26 48.0**	**-2.0**
CHIR				Sn	**Sn**	**00 27 32.8**	**-3.8**
WAT2	**Susitna Watana**	**4.04**	**33**		**Pn**	**00 26 49.6**	**-0.7**
KTH	**Kantishna Hill**	**4.08**	**16**		**Pn**	**00 26 50.5**	**-0.2**
TRF	**Thorofare Moun**	**4.08**	**20**		**Pn**	**00 26 50.0**	**-0.8**
RND	**Reindeer**	**4.34**	**28**		**Pn**	**00 26 53.7**	**-0.4**
RND				Sn	**Sn**	**00 27 42.2**	**-1.8**
GOAT	**Goat Mountain**	**4.43**	**74**		**Pn**	**00 26 54.8**	**-0.5**
BPAW	**Bear Paw Mtn.**	**4.60**	**13**		**Pn**	**00 26 57.1**	**-0.4**
MCK	**McKinley**	**4.60**	**25**		**Pn**	**00 26 57.8**	**+0.2**
HMT	**Hamilton**	**4.63**	**78**	Pn	**Pn**	**00 26 57.9**	**0.0**
SUCK	**Suckling Hills**	**4.86**	**81**	Pn	**Pn**	**00 27 01.9**	**+0.8**
BWN	**Browne**	**4.89**	**21**		**Pn**	**00 27 01.2**	**-0.2**
GLB	**Gilahina Butte**	**5.05**	**65**		**Pn**	**00 27 04.3**	**+0.7**
PAX	**Paxson**	**5.05**	**46**		**Pn**	**00 27 03.5**	**-0.2**
GRIN	**Grindle Hills**	**5.09**	**79**		**Pn**	**00 27 04.8**	**+0.6**
PS10	**TAPS Pump St10**	**5.25**	**41**		**Pn**	**00 27 06.9**	**+0.7**
NEA	**Nenana**	**5.33**	**20**		**Pn**	**00 27 06.4**	**-0.9**
KULT	**Kultieth River**	**5.39**	**79**		**Pn**	**00 27 08.6**	**+0.4**
MCARA	**McCarthy VSAT**	**5.40**	**67**		**Pn**	**00 27 08.7**	**+0.4**
HDA	**Harding Lake**	**5.64**	**30**		**Pn**	**00 27 11.1**	**-0.5**
BALM	**Baldy**	**5.65**	**71**		**Pn**	**00 27 12.4**	**+0.7**
MENT	**Mentasta**	**5.70**	**51**		**Pn**	**00 27 13.2**	**+1.0**
RIDG	**Independent Ri**	**5.76**	**41**		**Pn**	**00 27 13.4**	**+0.2**
SDPT	**Sand Point**	**5.77**	**225**	Pn	**Pn**	**00 27 13.9**	**+0.7**
MESA	**MESA**	**5.77**	**80**	Pn	**Pn**	**00 27 14.1**	**+0.6**
COLA	**College**	**5.83**	**24**		**Pn**	**00 27 13.4**	**-0.6**
COLA				Sn	**Sn**	**00 28 18.9**	**-0.7**
IL31		**5.96**	**28**		**Pn**	**00 27 14.8**	**-0.9**
IL31				Sn	**Sn**	**00 28 19.0**	**-3.6**
ILAR	**Eielson Array**	**5.96**	**28**	P	**Pn**	**00 27 14.6**	**-1.2**
	9.4nm,0.3s,baz=216,slow=14,SNR=520						
ILAR				S	**Sn**	**00 28 17.9**	**-4.9**
	5.2nm,0.3s,baz=217,slow=24,SNR=11						
ILAR	**Eielson Array**	**5.96**	**28**		**Pn**	**00 27 14.6**	**-1.2**
ILAR					**Sn**	**00 28 20.1**	**-2.6**
DOT	**Dot Lake**	**5.97**	**44**	Sn	**Sn**	**00 28 22.3**	**-0.8**
BARN	**Barnard Glacie**	**5.98**	**71**	Sn	**Sn**	**00 28 21.8**	**-1.9**
IMAR	**Indian Mountai**	**6.35**	**359**		**Pn**	**00 27 20.9**	**-0.1**
BCAR	**Beaver Creek A**	**6.54**	**54**		**Pn**	**00 27 23.3**	**-0.3**
YKU2	**Yakutat**	**6.96**	**85**	Pn	**Pn**	**00 27 31.1**	**+1.9**
ANM	**Nome**	**7.47**	**316**		**Pn**	**00 27 36.9**	**+0.9**
DHAK	**Deception Hill**	**7.77**	**88**	Pn	**Pn**	**00 27 42.0**	**+1.8**
FYU	**Fort Yukon**	**7.85**	**25**		**Pn**	**00 27 41.4**	**+0.3**
BMAR	**Burnt Mountain**	**8.72**	**23**		**Pn**	**00 27 51.1**	**-1.8**
AKUT	**Akutan**	**8.74**	**236**	Pn	**Pn**	**00 27 54.3**	**+1.0**
SKAG	**Skagway**	**9.16**	**83**	Pn	**Pn**	**00 28 00.8**	**+1.9**
UNV	**Unalaska Valle**	**9.26**	**237**	Pn	**Pn**	**00 27 58.8**	**-1.4**
WHY	**Whitehorse**	**9.28**	**76**		**Sn**	**00 29 41.4**	**-1.6**
RDOG	**Red Dog Mine**	**9.40**	**338**	Pn	**Pn**	**00 28 03.2**	**+1.1**
BESE	**Bessie Mountai**	**9.59**	**88**	Pn	**Pn**	**00 28 07.2**	**+2.5**
GAMB	**Gambell**	**9.61**	**303**	Pn	**Pn**	**00 28 05.5**	**+0.7**
SIT	**Sitka**	**9.84**	**98**	Pn	**Pn**	**00 28 09.3**	**+1.4**
JIS	**Juneau Island**	**9.90**	**90**	Pn	**Pn**	**00 28 11.3**	**+2.5**
EPYK	**Eagle Plains**	**10.10**	**41**		**Pn**	**00 28 13.7**	**+2.2**
CRAG	**Craig**	**11.64**	**102**	Pn	**Pn**	**00 28 33.5**	**+1.5**
DLBC	**Dease Lake**	**12.07**	**86**	P	**Pn**	**00 28 39.3**	**+1.6**
	1.4nm,0.3s,baz=259,slow=5.8,SNR=11						
DLBC				S	**Sn**	**00 30 51.1**	**+0.6**
	0.3nm,0.3s,baz=35,slow=16,SNR=1.9						
INK	**Inuvik**	**12.23**	**37**	P	**Pn**	**00 28 40.0**	**+0.4**
	0.4nm,0.3s,baz=243,slow=16,SNR=14						
YKA	**Yellowknife Ar**	**18.77**	**65**	P	**P**	**00 30 00.4**	**+1.6**
	0.1nm,0.3s,baz=279,slow=10,SNR=12						
KSRS	**Korea Array**	**53.07**	**283**	P	**P**	**00 34 53.6**	**0.0**
	1.2nm,0.5s,baz=42,slow=6.8,SNR=3.8						
SONM	**Songino Array**	**54.84**	**306**	P	**P**	**00 35 07.1**	**+0.6**
	2.0nm,0.7s,baz=44,slow=6.2,SNR=17						
ZALV	**Zalesovo Beam**	**57.54**	**323**	P	**P**	**00 35 25.5**	**+0.1**
	1.1nm,0.4s,baz=18,slow=7.7,SNR=5.4						
BVAR	**Borovoye Array**	**62.28**	**332**	P	**P**	**00 35 57.9**	**0.0**
	0.6nm,0.6s,baz=29,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**64.58**	**321**	P	**P**	**00 36 12.1**	**-1.0**
	0.2nm,0.6s,baz=22,slow=7.0,SNR=3.4						

*NIED **24** 00:40:00,26.10N×128.70E,h8km,Mw3.7 Best double couple: M₀3.78000×10¹⁴ NP1:φs182.00000°,δ75.00000°, λ-136.00000°. NP2:φs78.00000°,δ48.00000°, λ-20.00000°.*

JMA 24 00:40:54.1±0.2,**26.11N×128.67E,h43**km±4km,**M3.6, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNTH	**Nagotoyohara**	**0.71**	**305**	P	Pn	00 41 07.6	-0.1
JNTH				*eS*	Sn	00 41 17.5	-0.1
JJT3	**Tamagusuku3**	**0.80**	**273**	P	Pn	00 41 09.1	+0.2
JJT3				*eS*	Sn	00 41 20.5	+0.8
JOW	**Kunigami**	**0.80**	**334**	P	Pn	00 41 09.3	+0.3
JOW				*eS*	Sn	00 41 20.0	+0.2
JYRO	**Yoronjima**	**0.93**	**348**	P	Pn	00 41 11.0	+0.2
JYRO				S	Sn	00 41 23.0	0.0
JIH	**Iheya**	**1.12**	**326**	P	Pn	00 41 14.2	+0.9
JIH				S	Sn	00 41 28.8	+1.3
JOKE	**Okinoerabujima**	**1.25**	**356**	P	Pn	00 41 15.8	+0.7
JOKE				S	Sn	00 41 31.6	+0.8
JAGN	**Aguni-jima**	**1.37**	**291**	P	Pn	00 41 17.6	+0.9
JAGN				*eS*	Sn	00 41 34.9	+1.3
JTK	**Tokunoshima**	**1.69**	**8**	P	Pn	00 41 21.5	+0.4
JTK				*eS*	Sn	00 41 41.0	-0.5
JKE	**Kume jima 2**	**1.71**	**278**	P	Pn	00 41 21.4	0.0
JKE				S	Sn	00 41 42.5	+0.5
JMZ	**Minamidaito 2**	**2.31**	**97**	P	Pn	00 41 27.2	-2.5
JMZ				S	Sn	00 41 51.3	-5.7
JKDJ	**Kitadaitoujima**	**2.37**	**93**	P	Pn	00 41 28.2	-2.3
JKDJ				*eS*	Sn	00 41 53.4	-4.9

*IDC **24** 00:51:35.2±2.5,23.83N×93.91E,h67km±26km,mb3.6/10, mb1 3.7/11,mb1mx3.4/53,mbtmp3.8/11,Error ellipse: s-maj=20.2km s-min=14.3km az=54.0*
*NDI **24** 00:51:35.5±2.2,24.12N×93.72E,h15km±83km,ML3.3, mb4.0(NEIC)*
*NEIC **24** 00:51:35.5±1.2,23.84N±0.08×93.94E±0.08,h71km±5km, mb4.0/13,Error ellipse: s-maj=12.7km s-min=9.8km az=208.0*

ISC 24 00:51:35.4±0.7,**23.91N**±0.06×**93.84E**±0.08,**h68**km,**n36,** σ1°**78**/**41**,**mb3.8**/16,**Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	**Bariadhala**	**2.37**	**239**	P	**Pn**	**00 52 11.8**	**-0.1**
	0.2nm,0.3s,baz=0.0,slow=20,SNR=3.8						
BRDH				S	**Sn**	**00 52 40.7**	**+0.8**
	0.7nm,0.3s,baz=359,slow=24,SNR=16						
SHL	**Shillong**	**2.42**	**313**	*eP*	**Pn**	**00 52 11.2**	**-1.7**
SHL				*eS*	**Sn**	**00 52 39.0**	**-2.6**
SHL				IAML		00 52 42.3	
	comp=N,188nm,0.1s						
SHL				IAML		00 52 42.7	
	comp=E,147nm,0.2s						
SHL	**Shillong**	**2.42**	**313**		**Pn**	**00 52 13.6**	**+0.7**
TEZP	**TEZPUR**	**2.85**	**341**	*eP*	**Pn**	**00 52 15.8**	**-2.8**
TEZP				*eS*	**Sn**	**00 52 47.5**	**-4.3**
TEZP				IAML		00 52 49.8	
	comp=E,257nm,0.2s						
TEZP				IAML		00 52 50.2	
	comp=N,225nm,0.2s						
LSA	**Lhasa**	**6.24**	**338**	Pn	**Pn**	**00 53 05.6**	**+0.2**
CMAR	**Chiang Mai Arr**	**7.22**	**138**	P	**Pn**	**00 53 16.7**	**-1.6**
	comp=N,0.5nm,0.3s,baz=311,slow=13,SNR=2.9						
BOK	**Bokaro**	**7.28**	**271**	*eP*	**Pn**	**00 53 18.2**	**-0.9**
BOK				*eS*	**Sn**	**00 54 35.6**	**-4.8**
BOK				IAML		00 54 38.2	
	comp=E,11nm,0.1s						
BOK				IAML		00 54 38.4	
	comp=N,37nm,0.4s						
AAK	**Ala-Archa**	**24.60**	**324**	P	**P**	**00 56 50.6**	**+1.3**
	comp=N,0.3nm,0.3s,baz=149,slow=5.9,SNR=4.5						
AAK	**Ala-Archa**	**24.60**	**324**	IAmb	IAmb	00 56 52.8	
	comp=Z,2.0nm,1.1s						
MK31	**Makanchi Array**	**24.64**	**341**	P	**P**	**00 56 50.2**	**+0.7**
MK31					**pP**	**00 57 09.8**	**+3.8**
MKAR	**Makanchi Array**	**24.64**	**341**	P	**P**	**00 56 50.5**	**+1.0**
	comp=Z,1.0nm,0.7s,baz=153,slow=9.2,SNR=15						
MKAR	**Makanchi Array**	**24.64**	**341**	P	**P**	**00 56 50.5**	**+1.0**
MKAR					**pP**	**00 57 09.6**	**+3.6**
GAR	**Garm**	**24.98**	**313**	P	**P**	**00 56 53.7**	**+0.9**
GAR				IAmb	IAmb	00 56 54.1	
	comp=Z,4.7nm,0.6s						
SONM	**Songino Array**	**25.88**	**20**	P	**P**	**00 57 02.1**	**+1.2**
	comp=Z,0.8nm,0.8s,baz=195,slow=8.2,SNR=6.1						
SONM	**Songino Array**	**25.88**	**20**	P	**P**	**00 57 01.9**	**+1.0**
KURBB	**Kurchatov Arra**	**29.19**	**340**	P	**P**	**00 57 30.6**	**+0.3**
	comp=Z,0.6nm,0.2s,baz=164,slow=7.7,SNR=3.0						
ZALV	**Zalesovo Beam**	**30.75**	**350**	P	**P**	**00 57 45.1**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=161,slow=9.2,SNR=3.3						
ABKAR	**Akbulak array**	**36.66**	**322**	P	**P**	**00 58 36.3**	**+1.0**
ABKAR	**Akbulak array**	**36.66**	**322**	P	**P**	**00 58 36.4**	**+1.1**
ABKAR				IAmb	IAmb	00 58 37.0	
	comp=Z,0.9nm,0.8s						
WRA	**Warramunga Arr**	**58.80**	**134**	P	**P**	**01 01 25.9**	**-1.0**
	comp=Z,2.8nm,0.5s,baz=320,slow=7.5,SNR=19						
ASAR	**Alice Springs**	**61.23**	**138**	P	**P**	**01 01 43.0**	**-0.6**
	comp=Z,2.0nm,0.5s,baz=320,slow=6.9,SNR=28						
GERES	**GERESS Array B**	**66.04**	**315**	P	**P**	**01 02 15.5**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=75,slow=7.1,SNR=5.3						
IMAR	**Indian Mountai**	**77.00**	**23**	P	**P**	**01 03 20.8**	**+0.2**
COLD	**Coldfoot**	**77.56**	**21**	P	**P**	**01 03 23.6**	**0.0**
COLD				IAmb	IAmb	01 03 25.6	
	comp=Z,3.9nm,1.1s						
TOO	**Toolangi**	**78.09**	**140**	P	**P**	**01 03 24.5**	**-2.5**
MLY	**Manley**	**78.57**	**23**	P	**P**	**01 03 29.4**	**+0.1**
BPAW	**Bear Paw Mtn.**	**78.98**	**24**	P	**P**	**01 03 32.0**	**+0.4**
BMAR	**Burnt Mountain**	**79.23**	**20**	P	**P**	**01 03 33.6**	**+0.7**
MCK	**McKinley**	**79.94**	**24**	P	**P**	**01 03 35.0**	**-1.8**
MCK				IAmb	IAmb	01 03 37.2	
	comp=Z,6.3nm,1.2s						
ILAR	**Eielson Array**	**80.07**	**22**	P	**P**	**01 03 36.5**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=286,slow=4.9,SNR=8.2						
RIDG	**Independent Ri**	**81.41**	**23**	P	**P**	**01 03 44.2**	**-0.4**
RIDG				IAmb	IAmb	01 03 51.1	
	comp=Z,0.7nm,0.6s						
SCRK	**Sand Creek**	**81.56**	**22**	P	**P**	**01 03 44.9**	**-0.7**
INK	**Inuvik**	**81.74**	**16**	P	**P**	**01 03 46.7**	**+0.5**
DOT	**Dot Lake**	**81.74**	**22**	P	**P**	**01 03 46.3**	**-0.1**
DOT				IAmb	IAmb	01 04 04.9	
	comp=Z,2.1nm,1.0s						
GLI	**Glacier Island**	**82.29**	**26**	P	**P**	**01 03 47.0**	**-2.3**
TORD	**Torodi Ar. Bea**	**86.69**	**283**	P	**P**	**01 04 13.3**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=71,slow=4.9,SNR=4.1						

*UPP **24** 00:55:03.4±0.0,67.84N×20.20E,h0km,ML2.5,Explosion*
*NAO **24** 00:55:04.6±0.9,67.83N×20.40E,ML2.4*
*HEL **24** 00:55:04.1±0.1,67.85N×20.19E,h0km,ML2.1, ML2.5(UPP), Explosion*
*BER **24** 00:55:06.8±3.3,67.77N×20.37E,h0km,ML1.6,Suspected explosion*

ISC 24 00:55:03.1±0.7,**67.76N**±0.02×**20.24E**±0.02,**h0**km,**n50,** σ1°**12**/**70**,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.20**	**11**	*i* P	**Pg**	**00 55 05.9**	**-1.0**
KUA	**Kurravaara**	**0.20**	**11**	P	**Pg**	**00 55 05.9**	**-1.0**
RATU	**Laukkuluspa**	**0.25**	**285**	*i* P	**Pg**	**00 55 08.1**	**+0.1**
RATU				*i* S	**Sg**	**00 55 11.6**	**+0.3**
RATU	**Laukkuluspa**	**0.25**	**285**	P	**Pg**	**00 55 08.1**	**+0.1**
RATU				S	**Sg**	**00 55 11.6**	**+0.3**
DUNU	**Dundret**	**0.65**	**168**	*i* P	**Pb**	**00 55 17.0**	**-0.4**
DUNU	**Dundret**	**0.65**	**168**	P	**Pb**	**00 55 17.0**	**-0.4**
LANU	**Lannavaara**	**0.72**	**65**	*eP*	**Pg**	**00 55 16.9**	**-0.1**
	baz=267						
LANU				*eS*	**Sg**	**00 55 26.5**	**+0.1**
LANU	**Lannavaara**	**0.72**	**65**	P	**Pg**	**00 55 17.0**	**0.0**
MASU	**Masugnsbyn**	**0.74**	**113**	*i* P	**Pb**	**00 55 18.3**	**-0.6**
MASU	**Masugnsbyn**	**0.74**	**113**	P	**Pb**	**00 55 18.3**	**-0.6**
KIF	**Kilpisjarvi**	**1.27**	**9**	Pg	**Pg**	**00 55 27.4**	**-0.1**
KIF				Lg	Lg	00 55 43.0	
KIF	**Kilpisjarvi**	**1.27**	**9**	*e*PB	**Pg**	**00 55 27.0**	**-0.5**
KIF				MSG		00 55 38.1	
	comp=Z,16nm,0.2s						
KIF				*e*SB	**Sg**	**00 55 42.8**	**-1.1**
PAJU	**Pajala**	**1.33**	**122**	*eP*	**Pb**	**00 55 28.9**	**-0.2**
PAJU	**Pajala**	**1.33**	**122**	P	**Pb**	**00 55 28.9**	**-0.2**
HARU	**Harads**	**1.63**	**169**	*eP*	**Pg**	**00 55 34.2**	**-0.1**
HARU	**Harads**	**

IDC 24 00:59:58.6±3.3, 30.28S×138.49E, h0km, mb1 3.1/3, mb1mx3.0/28, mbtmp2.9/3, ML2.8/3, Error ellipse: s-maj=87.0km s-min=16.0km az=43.0, South Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**3.10**	**122**	Pn	Pn	01 00 48.4	-0.5
	0.4nm,0.3s,baz=298,slow=15,SNR=12						
STKA				Pg	Pb	01 00 56.1	+1.4
	2.1nm,0.3s,baz=301,slow=14,SNR=24						
STKA				Sn	Sn	01 01 26.6	-0.1
	1.2nm,0.3s,baz=348,slow=20,SNR=4.7						
STKA				Lg	Lg	01 01 37.0	
	0.9nm,0.3s,baz=217,slow=20,SNR=3.5						
ASAR	**Alice Springs**	**7.75**	**327**	Pn	Pn	01 01 53.5	+0.7
	0.1nm,0.3s,baz=151,slow=13,SNR=4.9						
ASAR				Sn	Sn	01 03 21.1	-0.3
	0.1nm,0.3s,baz=153,slow=23,SNR=3.3						
WRA	**Warramunga Arr**	**10.96**	**339**	Pn	Pn	01 02 36.5	-0.3
	0.1nm,0.3s,baz=153,slow=13,SNR=6.5						

JMA 24 01:00:42.0±0.1, 33.92N×140.30E, h59km±4km, M2.5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMKN	**Mikurajimanish**	**0.59**	**268**	P	Pn	01 00 55.0	+0.1
JMKN				S	Sn	01 01 04.9	+0.6
BSO3	**Boso 3**	**0.90**	**11**	P	Pn	01 00 59.2	+0.8
JHJ2	**Mitsune**	**0.90**	**207**	P	Pn	01 00 58.8	+0.1
JHJ2				S	Sn	01 01 11.0	0.0
JHJ2	**Mitsune**	**0.90**	**207**		Sn	01 01 11.3	+0.3
BSO1	**Boso 1**	**0.92**	**37**	P	Pn	01 00 59.3	+0.8
JHCJ	**Hachijojimakas**	**0.94**	**207**	S	Sn	01 01 11.6	-0.4
JTHY	**Toshimahigashi**	**1.03**	**306**	P	Pn	01 01 01.0	+0.6
JTHY				S	Sn	01 01 14.7	+0.6
BSO4	**Boso 4**	**1.07**	**2**	P	Pn	01 01 01.5	+0.7

IDC 24 01:20:12.0±5.5, 37.54N×71.88E, h122km±46km, mb3.0/2, mb1 3.1/6, mb1mx2.9/37, mbtmp3.6/6, MS3.2/1, Ms1 3.2/1, ms1mx2.4/19, Error ellipse: s-maj=64.9km s-min=16.4km az=155.0

NNC 24 01:20:17.5±2.2, 37.85N×71.60E, h94km±52km, mb3.1, mpv3.9, Error ellipse: s-maj=19.2km s-min=13.0km az=151.0

ISC 24 01:20:10.9±0.8, 37.50N±0.07×71.94E±0.06, h130km, n30, σ2s42/36, 4C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**3.23**	**358**	*e*P	**Pn**	**01 21 00.1**	**-0.4**
FRG				SM		01 21 33.2	
AML	**Almayashu**	**4.82**	**16**	P	**Pn**	**01 21 24.2**	**+2.4**
	SNR=149						
UCH	**Uchtor**	**5.12**	**22**	P	**Pn**	**01 21 28.2**	**+2.3**
	SNR=64						
KZA	**Kyzart**	**5.23**	**28**	P	**Pn**	**01 21 29.1**	**+1.7**
	SNR=13						
EKS2	**Erkin-Say**	**5.34**	**15**	P	**Pn**	**01 21 31.3**	**+2.7**
	SNR=12						
AAK	**Ala-Archa**	**5.49**	**20**	P	**Pn**	**01 21 33.4**	**+2.8**
	5.3nm,0.3s,baz=184,slow=7.7,SNR=102						
AAK				S	**Sn**	**01 22 32.6**	**-0.2**
	2.4nm,0.3s,baz=318,slow=22,SNR=23						
AAK	**Ala-Archa**	**5.49**	**20**	P	**Pn**	**01 21 33.5**	**+2.8**
	SNR=26						
AAK	**Ala-Archa**	**5.49**	**20**	⇓P	**Pn**	**01 21 33.3**	**+2.8**
	8.3nm,0.3s						
AAK				⇑S	**Sn**	**01 22 33.0**	**+0.2**
	30nm,0.8s						
KBK	**Karagaybulak**	**5.64**	**23**	P	**Pn**	**01 21 35.9**	**+3.2**
	SNR=12						
KK31	**Karatay Array**	**5.70**	**349**	⇑P	**Pn**	**01 21 35.2**	**+1.8**
	2.1nm,0.2s,baz=170,slow=13,SNR=414						
KK31				⇓S	**Sn**	**01 22 35.7**	**-2.0**
	8.2nm,0.3s,baz=175,slow=21,SNR=18						
ULHL	**Ulahol**	**5.78**	**34**	P	**Pn**	**01 21 36.1**	**+1.5**
	SNR=9.2						
CHMS	**Chumysh**	**5.90**	**20**	P	**Pn**	**01 21 38.5**	**+2.5**
	SNR=7.7						
USP	**Ospenovka**	**6.08**	**18**	P	**Pn**	**01 21 41.0**	**+2.5**
	SNR=6.3						
GEYT	**Alibeck**	**10.96**	**276**	P	**Pn**	**01 22 45.5**	**+1.5**
	1.3nm,0.3s,baz=104,slow=12,SNR=12						
GEYT				S	**Sn**	**01 24 42.8**	**-2.1**
	0.7nm,0.3s,baz=36,slow=27,SNR=3.8						
GYA0B	**ALIBECK ARRAY**	**10.96**	**276**	⇓P	**Pn**	**01 22 46.9**	**+2.8**
GYA0B				⇓S	**Sn**	**01 24 44.4**	**-0.5**
MK31	**Makanchi Array**	**12.04**	**36**	P	**P**	**01 23 04.9**	**-0.6**
	0.2nm,0.4s,baz=211,slow=9.5,SNR=7.4						
MKAR	**Makanchi Array**	**12.04**	**36**	P	**Pn**	**01 22 59.8**	**+1.6**
	0.1nm,0.3s,baz=216,slow=14,SNR=4.1						
DANN	**Dangsing**	**13.47**	**129**	*e*P	**Pn**	**01 23 14.7**	**-2.5**
	5.7nm,0.2s						
KOLN	**Koldanda**	**13.79**	**131**	*e*P	**Pn**	**01 23 20.4**	**-0.8**
	4.7nm,0.3s						
AB31	**Akbulak array**	**14.61**	**327**	⇑P	**P**	**01 23 33.8**	**-0.1**
	0.2nm,0.3s,baz=286,slow=15,SNR=22						
AB31				S	**Sn**	**01 26 07.4**	**-5.3**
	0.9nm,0.3s,baz=150,slow=22,SNR=17						
PKIN	**Phulchoki**	**15.04**	**127**	*e*P	**Pn**	**01 23 35.1**	**-1.9**
GUN	**Gumba**	**15.12**	**125**	*e*P	**Pn**	**01 23 36.1**	**-2.0**
	5.8nm,0.5s						
JIRN	**Jiri**	**15.49**	**125**	*e*P	**Pn**	**01 23 41.6**	**-1.1**
	10nm,0.3s						
RAMN	**Ramite**	**16.24**	**126**	*e*P	**Pn**	**01 23 49.8**	**-2.1**
AKTO	**Aktyubinsk**	**16.32**	**327**	⇓P	**P**	**01 23 57.4**	**+4.5**
	0.9nm,0.7s						
AKTO				⇑S	**Sn**	**01 26 49.7**	**-4.1**
	1.7nm,0.6s						
ODAN	**Odare**	**16.82**	**125**	*e*P	**P**	**01 23 56.1**	**-2.7**
ZALV	**Zalesovo Beam**	**18.69**	**24**	P	**Pn**	**01 24 20.6**	**-0.2**
	0.2nm,0.3s,baz=215,slow=10,SNR=4.5						
ARU	**Arti**	**20.95**	**339**	LR	LR	01 33 36.5	
	comp=Z,60nm,18.4s,baz=334,slow=38						
SONM	**Songino Array**	**27.15**	**57**	P	**P**	**01 25 43.9**	**+1.9**
	0.2nm,0.6s,baz=264,slow=8.0,SNR=2.2						
TORD	**Torodi Ar. Bea**	**66.49**	**269**	P	**P**	**01 30 48.6**	**+1.7**
	0.3nm,0.4s,baz=49,slow=5.8,SNR=7.7						

NIED 24 01:43:00, 23.80N×121.50E, h8km, Mw3.6 Best double couple: M0 2.52000×10^14 NP1: φ=222.00000°, δ=56.00000°, λ=-63.00000°. NP2: φ=360.00000°, δ=42.00000°, λ=-123.00000°.

IDC 24 01:43:16.4±1.3, 23.78N×122.06E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.4/33, mbtmp3.7/3, MS3.6/1, Ms1 3.6/1, ms1mx2.7/48, Error ellipse: s-maj=64.5km s-min=29.0km az=66.0

JMA 24 01:43:18.3±0.1, 23.77N×121.52E, h4km±3km, M3.5

ASIES 24 01:43:18.8, 23.81N×121.45E, h17km, MW3.5

TAP 24 01:43:18.9, 23.80N×121.49E, h11km, ML4.0, C

BJI 24 01:43:19.0±0.0, 23.81N×121.50E, h16km, ML3.6/5

ISC 24 01:43:18.9±0.8, 23.80N±0.01×121.50E±0.02, h12km±5km, n139, σ0s67/220, mb3.6/3, 10C-24D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESL	**Shilin**	**0.07**	**284**	⇓P	**Pg**	**01 43 21.3**	**-0.1**
	baz=281						
ESL				S	**Sg**	**01 43 22.6**	**-0.8**
	baz=281						
ENLB	**Shoufeng**	**0.14**	**40**	⇑*i*P	**Pg**	**01 43 22.4**	**+0.1**
	baz=37						
ENLB				*e*S	**Sg**	**01 43 25.2**	**+0.4**
	baz=37						
HWA	**Hwalien**	**0.20**	**28**	P	**Pb**	**01 43 24.5**	**-0.1**
	baz=25						
HWA				S	**Sg**	**01 43 28.1**	**+1.7**
	baz=25						
TWD	**Chiawan**	**0.29**	**17**	⇓*i*P	**Pb**	**01 43 25.5**	**-0.6**
	baz=9.0						
TWD				*i* S	**Sg**	**01 43 29.5**	**+0.5**
	baz=9.0						
HGSD	**Ruisui**	**0.31**	**193**	⇑P	**Pg**	**01 43 25.8**	**+0.5**
	baz=196						
EHY	**Hungye**	**0.33**	**210**	⇑P	**Pg**	**01 43 25.4**	**-0.3**
	baz=212						
EHY				*e*S	**Sg**	**01 43 29.5**	**-0.8**
	baz=212						
OWD	**Renai**	**0.34**	**298**	⇓P	**Pg**	**01 43 25.8**	**-0.1**
	baz=297						
OWD				*e*S	**Sg**	**01 43 30.5**	**0.0**
	baz=297						
NACB	**Ninganchiao**	**0.38**	**13**	⇓P	**Pg**	**01 43 26.8**	**+0.1**
	baz=11						
NACB				S	**Sg**	**01 43 31.6**	**-0.2**
	baz=11						
CHGB	**Renai**	**0.40**	**311**	⇓P	**Pg**	**01 43 27.1**	**+0.1**
	baz=317						
CHGB				S	**Sg**	**01 43 32.5**	**+0.1**
	baz=317						
ETLH	**Xiulin Townshi**	**0.41**	**357**	⇓P	**Pg**	**01 43 27.3**	**+0.2**
	baz=356						
ETLH				*e*S	**Sg**	**01 43 32.8**	**+0.2**
	baz=356						
WHF	**Hehuan Shan**	**0.41**	**328**	⇓*i*P	**Pg**	**01 43 27.2**	**-0.1**
	baz=321						
WHF				S	**Sg**	**01 43 32.0**	**-0.9**
	baz=321						
YULB	**Yu-li**	**0.45**	**205**	⇓P	**Pg**	**01 43 27.3**	**-0.5**
	baz=206						
YULB				*e*S	**Sg**	**01 43 33.2**	**-0.5**
	baz=206						
TWF1	**Yuli**	**0.48**	**203**	*e*P	**Pg**	**01 43 28.0**	**-0.5**
	baz=212						
TWF1				*e*S	**Sg**	**01 43 33.7**	**-1.2**
	baz=212						
SSLB	**Suanglung**	**0.50**	**269**	⇓P	**Pg**	**01 43 28.8**	**-0.1**
	baz=268						
SSLB				S	**Sg**	**01 43 34.7**	**-0.8**
	baz=268						
TWT	**Tachien**	**0.54**	**327**	⇓P	**Pb**	**01 43 30.0**	**-0.5**
	baz=324						
TWT				S	**Sg**	**01 43 36.7**	**-0.3**
	baz=324						
TDCB	**Techi**	**0.55**	**325**	⇓P	**Pb**	**01 43 30.1**	**-0.5**
	baz=324						
TDCB				*e*S	**Sg**	**01 43 36.0**	**-1.2**
	baz=324						
SMLT	**Sun Moon Lake**	**0.56**	**279**	⇓*i*P	**Pg**	**01 43 30.0**	**+0.1**
	baz=278						
SMLT				*i* S	**Sg**	**01 43 37.4**	**0.0**
	baz=278						
DPDB	**Guoxing**	**0.58**	**294**	⇓*i*P	**Pb**	**01 43 30.5**	**-0.5**
	baz=293						
DPDB				*i* S	**Sg**	**01 43 37.5**	**-0.5**
	baz=293						
YUS	**Yu-Shan**	**0.59**	**239**	*e*P	**Pg**	**01 43 30.8**	**+0.2**
	baz=238						
YUS				S	**Sg**	**01 43 38.0**	**-0.5**
	baz=238						
TYC	**Yuchr**	**0.60**	**280**	⇓*i*P	**Pg**	**01 43 30.6**	**-0.1**
	baz=280						
TYC				S	**Sg**	**01 43 38.4**	**-0.3**
	baz=280						
WHYT	**Xinyi Township**	**0.60**	**261**	*e*P	**Pg**	**01 43 30.8**	**0.0**
	baz=260						
WHYT				*e*S	**Sg**	**01 43 38.5**	**-0.2**
	baz=260						
FULB	**Fuli**	**0.63**	**198**	*e*P	**Pb**	**01 43 32.5**	**+0.6**
	baz=209						
NNSB	**Datong**	**0.64**	**350**	⇓P	**Pb**	**01 43 31.7**	**-0.4**
	baz=349						
NNSB				S	**Sg**	**01 43 39.2**	**-0.7**
	baz=349						
NNSH	**Datong**	**0.64**	**350**	⇓*i*P	**Pb**	**01 43 31.7**	**-0.4**
	baz=349						
NNSH				S	**Sg**	**01 43 39.7**	**-0.2**
	baz=349						
NNS	**Nan Shan**	**0.65**	**349**	⇓*i*P	**Pb**	**01 43 31.9**	**-0.4**
	baz=349						
NNS				S	**Sg**	**01 43 39.9**	**-0.4**
	baz=349						
ENA	**Nanau**	**0.66**	**19**	P	**Pg**	**01 43 31.9**	**0.0**
	baz=6.0						
ENA				*e*S	**Sb**	**01 43 41.2**	**-0.4**
	baz=6.0						
NANB	**Nanao**	**0.67**	**20**	⇑*i*P	**Pg**	**01 43 31.9**	**-0.1**
	baz=6.0						
NANB				*e*S	**Sg**	**01 43 40.6**	**-0.1**
	baz=6.0						
WHP	**Taichung City**	**0.70**	**313**	*e*P	**Pb**	**01 43 32.8**	**-0.3**
	baz=313						
WHP				*e*S	**Sg**	**01 43 41.5**	**-0.3**
	baz=313						
ALS	**Alishan**	**0.70**	**246**	⇓P	**Pb**	**01 43 32.9**	**-0.3**
	baz=245						
ALS				*e*S	**Sg**	**01 43 42.0**	**0.0**
	baz=245						
CHKT	**Chengkung**	**0.71**	**190**	*e*P	**Pb**	**01 43 33.5**	**+0.4**
	baz=193						
CHKT				*e*S	**Sb**	**01 43 44.3**	**+1.5**
	baz=193						
WJS	**Zhushan**	**0.71**	**272**	*e*P	**Pn**	**01 43 33.9**	**-0.8**
	baz=276						
WJS				*e*S	**Sb**	**01 43 44.1**	**+1.2**
	baz=276						
ELDTW	**Lidau**	**0.75**	**216**	*e*P	**Pg**	**01 43 33.2**	**-0.4**
	baz=209						
ELDTW				*e*S	**Sg**	**01 43 42.8**	**-0.6**
	baz=209						
WNT	**Mingjian**	**0.75**	**276**	P	**Pn**	**01 43 34.6**	**-0.8**
	baz=279						
WNT				S	**Sn**	**01 43 45.7**	**-1.0**
	baz=279						
CHN5	**Tsauling**	**0.78**	**255**	⇓P	**Pb**	**01 43 34.8**	**+0.3**
	baz=243						
CHN5				*e*S	**Sb**	**01 43 45.7**	**+0.7**
	baz=243						
NDT	**Datong Townshi**	**0.80**	**1**	⇓P	**Pb**	**01 43 34.9**	**+0.1**
	baz=351						
NDT				S	**Sg**	**01 43 44.4**	**-0.6**
	baz=351						
TCU	**Taichung**	**0.83**	**295**	*e*P	**Pn**	**01 43 36.3**	**-0.1**
	baz=294						
TCU				*e*S	**Sn**	**01 43 48.0**	**-0.7**
	baz=294						
ENTT	**Nioudou**	**0.84**	**4**	*e*P	**Pb**	**01 43 35.5**	**0.0**
	baz=1.0						
ENTT				*e*S	**Sg**	**01 43 46.0**	**-0.2**
	baz=1.0						
TWQ1	**Liyutan**	**0.86**	**310**	*e*P	**Pn**	**01 43 37.0**	**+0.1**
	baz=316						
TWQ1				*e*S	**Sn**	**01 43 48.6**	**-0.8**
	baz=316						
TWC	**Suao**	**0.87**	**21**	*e*P	**Pg**	**01 43 35.3**	**-0.4**
	baz=11						
TWC				S	**Sg**	**01 43 47.0**	**-0.1**
	baz=11						
WGK	**Gukeng**	**0.87**	**263**	⇑P	**Pn**	**01 43 36.6**	**-0.3**
	baz=261						
WGK				S	**Sn**	**01 43 49.0**	**-0.5**
	baz=261						
YHNB	**Yeheng**	**0.88**	**352**	⇑P	**Pb**	**01 43 36.0**	**-0.2**
	baz=351						
YHNB				S	**Sg**	**01 43 46.8**	**-0.6**
	baz=351						
NSK	**Sanguang**	**0.89**	**351**	⇓*i*P	**Pb**	**01 43 36.3**	**0.0**
	baz=350						
NSK				S	**Sg**	**01 43 47.0**	**-0.7**
	baz=350						
WDLH	**Douliu**	**0.89**	**263**	⇑*e*P	**Pn**	**01 43 36.9**	**-0.3**
	baz=262						
WDLH				*e*S	**Sn**	**01 43 50.0**	**0.0**
	baz=262						
WCHH	**Zhanghua**	**0.91**	**288**	*e*P	**Pn**	**01 43 37.5**	**0.0**
	baz=287						
WCHH				*e*S	**Sn**	**01 43 50.3**	**-0.2**
	baz=287						
NSY	**Sanyi**	**0.92**	**312**	⇓P	**Pn**	**01 43 38.3**	**+0.7**
	baz=312						
NSY				*e*S	**Sn**	**01 43 50.9**	**+0.1**
	baz=312						
STYT	**Tauyuan**	**0.93**	**227**	P	**Pb**	**01 43 37.2**	**+0.1**
	baz=227						
STYT				*e*S	**Sb**	**01 43 49.5**	**+0.2**
	baz=227						
TWE	**Neicheng**	**0.93**	**9**	*e*P	**Pg**	**01 43 36.6**	**-0.3**
	baz=6.0						
TWE				S	**Sb**	**01 43 49.1**	**-0.2**
	baz=6.0						
EOS1	**EOS1**	**0.94**	**37**	*e*P	**Pn**	**01 43 38.5**	**+0.6**
	baz=24						
TPUB	**Ta-pu**	**0.94**	**239**	P	**Pn**	**01 43 37.7**	**-0.3**
	baz=238						
TPUB				S	**Sb**	**01 43 50.1**	**+0.5**
	baz=238						
CHN4	**Tsaushan**	**0.95**	**242**	⇑P	**Pn**	**01 43 38.0**	**0.0**
	baz=235						
CHN4				*e*S	**Sn**	**01 43 51.1**	**-0.3**
	baz=235						
NSTT	**Nanjuang**	**0.95**	**331**	P	**Pn**	**01 43 37.6**	**-0.4**
	baz=330						
NSTT				S	**Sb**	**01 43 49.5**	**-0.3**
	baz=330						
LIOB	**Emei**	**0.95**	**332**	⇑P	**Pn**	**01 43 37.9**	**-0.2**
	baz=331						
LIOB				S	**Sb**	**01 43 50.0**	**0.0**
	baz=331						
SLBB	**Yuanshan**	**0.96**	**7**	*e*P	**Pg**	**01 43 37.0**	**-0.5**
	baz=3.0						
SLBB				*e*S	**Sg**	**01 43 49.6**	**-0.4**
	baz=3.0						
WDJ	**Dajia District**	**0.96**	**305**	*e*P	**Pn**	**01 43 38.5**	**+0.3**
	baz=304						
WDJ				*e*S	**Sn**	**01 43 52.4**	**+0.7**
	baz=304						
PTSB	**Yuanli**	**0.97**	**312**	*e*P	**Pn**	**01 43 39.3**	**+0.9**
	baz=310						
PTSB				*e*S	**Sn**	**01 43 51.6**	**-0.5**
	baz=310						
CHN2	**Minshiung**	**0.98**	**255**	*e*P	**Pn**	**01 43 38.4**	**0.0**
	baz=253						
CHN2				*e*S	**Sn**	**01 43 52.4**	**+0.2**
	baz=253						
NMLH	**Miaoli**	**0.98**	**319**	*e*P	**Pn**	**01 43 39.2**	**+0.7**
	baz=325						
NMLH				*e*S	**Sn**	**01 43 51.8**	**-0.5**
	baz=325						
WTP	**Ta-pu**	**0.98**	**236**	⇓P	**Pn**	**01 43 38.5**	**-0.1**
	baz=241						
WTP				S	**Sb**	**01 43 51.7**	**+0.8**
	baz=241						
CHY	**Chiayi**	**1.03**	**253**	*e*P	**Pn**	**01 43 39.1**	**-0.1**
	baz=252						
CHY				*e*S	**Sn**	**01 43 53.9**	**+0.3**
	baz=252						
TWG	**Pinlang**	**1.05**	**202**	*e*P	**Pb**	**01 43 38.1**	**-0.9**
	baz=190						
TWGBT	**Beinan**	**1.05**	**202**	*e*P	**Pb**	**01 43 38.1**	**-0.9**
	baz=190						
RLNB	**Erlin**	**1.05**	**275**	P	**Pn**	**01 43 39.3**	**-0.1**
	baz=274						
RLNB				S	**Sn**	**01 43 54.2**	**+0.2**
	baz=274						
WLTB	**Daxi**	**1.07**	**348**	*e*P	**Pn**	**01 43 40.3**	**+0.6**
	baz=354						
WLTB				*e*S	**Sn**	**01 43 53.9**	**-0.7**
	baz=354						
TWH	**Lutao**	**1.08**	**181**	*e*P	**Pb**	**01 43 38.5**	**-1.1**
	baz=169						
CHN1	**Nanshi**	**1.08**	**236**	⇓P	**Pn**	**01 43 40.4**	**+0.5**
	baz=235						
CHN1				S	**Sn**	**01 43 55.5**	**+0.6**
	baz=235						
SNST	**Tainan City**	**1.09**	**238**	*e*P	**Pn**	**01 43 40.6**	**+0.7**
	baz=237						
SNST				S	**Sn**	**01 43 55.1**	**+0.2**
	baz=237						
TTN	**Taitung**	**1.09**	**198**	*e*P	**Pb**	**01 43 39.6**	**0.0**
	baz=198						
NTC	**Toucheng**	**1.09**	**16**	*e*P	**Pn**	**01 43 40.0**	**-0.1**
	baz=14						
SBCB	**Hsinchu**	**1.10**	**335**	P	**Pn**	**01 43 41.1**	**+1.0**
	baz=333						
SBCB				S	**Sn**	**01 43 56.4**	**+1.2**
	baz=333						
SGST	**Jiashian**	**1.10**	**230**	P	**Pb**	**01 43 40.0**	**0.0**
	baz=230						
SGST				S	**Sg**	**01 43 55.0**	**+0.3**
	baz=230						
HSN	**Hsinchu**	**1.11**	**334**	*e*P	**Pn**	**01 43 41.7**	**+1.4**
	baz=343						
HSN				*e*S	**Sn**	**01 43 56.7**	**+1.2**
	baz=343						
SLGT	**Liugui**	**1.12**	**225**	*e*P	**Pn**	**01 43 40.9**	**+0.5**
	baz=212						
WLGB	**Puzi**	**1.15**	**254**	*e*P	**Pn**	**01 43 40.8**	**0.0**
	baz=253						
WLGB				*e*S	**Sn**	**01 43 57.3**	**+0.9**
	baz=253						
NHDH	**Xindian Distri**	**1.16**	**1**	*e*P	**Pg**	**01 43 41.0**	**-0.4**
	baz=10.0						
WMLT	**Mailiao**	**1.17**	**271**	*e*P	**Pg**	**01 43 42.3**	**+0.8**
	baz=269						
TWA	**Mucha**	**1.18**	**4**	*e*P	**Pb**	**01 43 40.9**	**-0.4**
	baz=353						
TWA				S	**Sg**	**01 43 56.8**	**-0.3**
	baz=353						
WSF	**Szhu**	**1.19**	**263**	*e*P	**Pb**	**01 43 40.7**	**-0.6**
	baz=261						
WSF				*e*S	**Sn**	**01 43 58.0**	**+0.7**
	baz=261						
NCUH	**Zhongli**	**1.20**	**346**	*e*P	**Pb**	**01 43 42.9**	**+0.8**
	baz=345						
NCUH				*e*S	**Sn**	**01 43 59.4**	**+1.7**
	baz=345						
NCU	**National Centr**	**1.20**	**346**	*e*P	**Pg**	**01 43 42.9**	**+0.8**
	baz=345						
NCU				S	**Sn**	**01 44 00.0**	**+2.3**
	baz=345						
TIPB	**Shuangxi**	**1.21**	**14**	*e*P	**Pn**	**01 43 40.9**	**-0.7**
	baz=5.0						
TIPB				*e*S	**Sb**	**01 43 57.1**	**-0.2**
	baz=5.0						
TAP1	**Taipei**	**1.24**	**1**	*e*P	**Pg**	**01 43 42.6**	**-0.1**
	baz=358						
TAP1				*e*S	**Sg**	**01 43 59.4**	**+0.5**
	baz=358						
CHN8	**Yiju**	**1.27**	**250**	*e*P	**Pg**	**01 43 43.4**	**+0.1**
	baz=248						
CHN8				*e*S	**Sg**	**01 44 00.8**	**+0.9**
	baz=248						
TWB1	**Santiao Chiao**	**1.28**	**20**	*e*P	**Pg**	**01 43 43.3**	**-0.3**
	baz=7.0						
NWF	**Wu-fen Shan**	**1.29**	**11**	*e*P	**Pb**	**01 43 43.1**	**-0.1**
	baz=9.0						
WFSB	**Wu-fen Shan**	**1.29**	**11**	*e*P	**Pn**	**01 43 42.8**	**0.0**
	baz=2.0						
WFSB				*e*S	**Sg**	**01 44 00.6**	**0.0**
	baz=2.0						
ECL	**Taimali**	**1.30**	**203**	*e*P	**Pb**	**01 43 43.2**	**-0.1**
	baz=190						
TWS1	**Kuangyinshan**	**1.30**	**357**	*e*P	**Pg**	**01 43 43.9**	**-0.1**
	baz=3.0						
TWS1				*e*S	**Sg**	**01 44 02.7**	**+1.8**
	baz=3.0						
SSD	**Sandimen**	**1.32**	**218**	*e*P	**Pb**	**01 43 43.4**	**-0.2**
	baz=210						
YM01	**YM01**	**1.34**	**3**	*e*P	**Pb**	**01 43 44.0**	**0.0**
	baz=358						
YM01				*e*S	**Sg**	**01 44 02.0**	**-0.3**
	baz=358						
YM10	**YM10**	**1.35**	**2**	*e*P	**Pg**	**01 43 44.5**	**-0.4**
YM11	**YM11**	**1.36**	**3**	*e*P	**Pg**	**01 43 44.9**	**-0.3**
	baz=1.0						
YM03	**YM03**	**1.38**	**1**	*e*P	**Pn**	**01 43 44.1**	**+0.1**
	baz=19						
ANP	**Anpu**	**1.38**	**1**	*e*P	**Pg**	**01 43 45.4**	**-0.2**
	baz=18						
YM08	**YM08**	**1.39**	**3**	*e*P	**Pg**	**01 43 45.0**	**-0.6**
	baz=1.0						
TWM1	**Shoushan**	**1.39**	**226**	*e*P	**Pg**	**01 43 45.7**	**+0.1**
	baz=225						
MASBT	**Mashibuluo**	**1.43**	**214**	*e*P	**Pb**	**01 43 45.2**	**-0.2**
	baz=218						
MASBT				*e*S	**Sg**	**01 44 04.8**	**-0.1**
	baz=218						
JYNG	**Yonagunijimaku**	**1.47**	**63**	P	**Pn**	**01 43 45.6**	**+0.4**
JYNG				S	**Sb**	**01 44 05.2**	**+0.4**
YOJ	**Yonaguni jima**	**1.53**	**64**	*e*P	**Pn**	**01 43 46.4**	**+0.4**
	baz=64						
YOJ	**Yonaguni jima**	**1.53**	**64**	P	**Pn**	**01 43 46.3**	**+0.3**
YOJ				*e*S	**Sg**	**01 44 07.5**	**-0.7**
EAST	**Anshuo**	**1.53**	**203**	*e*P	**Pn**	**01 43 46.2**	**+0.1**
	baz

	baz=240								
PNG	**Penghu**	**1.80**	**263**	*e*P		**Pn**	**01 43 50.1**	**+0.4**
	baz=260								
PNG				*e*S		**Sn**	**01 44 12.8**	**+0.3**
	baz=260								
PCYT	**Pengchaiyu**	**1.90**	**16**	*e*P		**Pb**	**01 43 52.4**	**-1.1**
	baz=13								
TWK1	**Hengchun**	**1.95**	**199**	*e*P		**Pn**	**01 43 52.9**	**+1.0**
	baz=190								
TWKBT	**Hengchun**	**1.96**	**199**	*e*P		**Pn**	**01 43 52.4**	**+0.6**
	baz=191								
VCHM	**Qimei**	**1.99**	**253**	*e*P		**Pn**	**01 43 53.0**	**+0.6**
	baz=251								
IRIF	**Iriomote-Funau**	**2.10**	**75**	P		**Pn**	**01 43 54.1**	**+0.2**
IRIF				S		**Sn**	**01 44 21.2**	**+1.2**
HATJ	**Hateruma jima**	**2.12**	**83**	P		**Pn**	**01 43 54.0**	**-0.2**
HATJ				*e*S		**Sn**	**01 44 21.5**	**+1.1**
VWUC	**VWUC**	**2.22**	**303**	*e*P		**Pn**	**01 43 55.1**	**-0.4**
	baz=301								
PTTC	**Pingtan**	**2.31**	**317**	*e*P		**Pn**	**01 43 56.8**	**0.0**
	baz=318								
PTTC				*e*S		**Sn**	**01 44 24.4**	**-0.8**
	baz=318								
JKRS	**Kuro-shima**	**2.33**	**79**	P		**Pn**	**01 43 57.4**	**+0.3**
JKRS				*e*S		**Sn**	**01 44 26.6**	**+1.0**
JIJ	**Ishigaki jima**	**2.48**	**76**	P		**Pn**	**01 43 58.9**	**-0.2**
JIJ				*e*S		**Sn**	**01 44 29.0**	**-0.2**
PTMZ	**Houxiangcun**	**2.50**	**300**	*e*P		**Pn**	**01 43 59.1**	**-0.2**
	baz=298								
JISG	**Ishigakijimahi**	**2.68**	**72**	P		**Pn**	**01 44 02.4**	**+0.5**
JISG				S		**Sn**	**01 44 34.5**	**+0.2**
MATB	**Ma-tsu**	**2.74**	**329**	*e*P		**Pn**	**01 44 03.0**	**+0.3**
	baz=328								
KNM	**Kinmen**	**2.87**	**283**	*e*P		**Pn**	**01 44 06.1**	**+1.6**
	baz=267								
QZH	**Quanzhou**	**2.89**	**294**	⇑*i*Pn		**Pn**	**01 44 04.6**	**-0.1**
QZH				Pg		**Pb**	**01 44 11.8**	**+1.4**
QZH				Sn		**Sn**	**01 44 38.8**	**-0.6**
QZH				smax	smax			
	comp=N,140nm,0.4s								
QZH				smax	smax				
	comp=E,100nm,0.6s								
KNMB	**Chin-men Tao**	**2.92**	**284**	*e*P		**Pn**	**01 44 05.0**	**-0.2**
	baz=268								
LYJJ	**Jianjiangzhen**	**3.16**	**330**	*e*P		**Pb**	**01 44 12.8**	**-2.3**
	baz=330								
MHZQ	**Yeshan**	**3.21**	**316**	*e*P		**Pn**	**01 44 09.2**	**+0.1**
	baz=315								
XPSS	**Dashiqiu**	**3.34**	**339**	*e*P		**Pn**	**01 44 11.1**	**+0.2**
	baz=326								
AXDP	**Jialang**	**3.40**	**290**	*e*P		**Pn**	**01 44 12.1**	**+0.3**
	baz=286								
ZPLA	**Ao Xicun**	**3.44**	**273**	*e*P		**Pn**	**01 44 12.6**	**+0.3**
	baz=270								
ZZJH	**Jiuhuzhen**	**3.60**	**282**	*e*P		**Pn**	**01 44 14.9**	**+0.4**
	baz=266								
WMQ	**Urumqi**	**34.13**	**314**	*e*P		**P**	**01 50 05.8**	**+2.1**
MKAR	**Makanchi Array**	**38.82**	**316**	P		**P**	**01 50 46.0**	**+2.4**
	0.8nm,0.8s,baz=104,slow=9.7,SNR=8.6								
MA2	**Magadan**	**41.23**	**22**	LR		LR	02 09 12.0		
	comp=Z,74nm,18.8s,baz=44,slow=38								
H11N1	**WAKE ISLAND Hy**	**42.22**	**86**	T		T	02 36 12.1		
	baz=282,slow=76								
H11N2	**WAKE ISLAND Hy**	**42.22**	**86**	T		T	02 36 12.2		
	baz=282,slow=76								
H11N3	**WAKE ISLAND Hy**	**42.23**	**86**	T		T	02 36 13.3		
	baz=282,slow=76								
H11S3	**WAKE ISLAND Hy**	**42.34**	**88**	T		T	02 36 20.8		
	baz=284,slow=74,SNR=42								
H11S1	**WAKE ISLAND Hy**	**42.35**	**88**	T		T	02 36 21.7		
	baz=284,slow=74,SNR=23								
H11S2	**WAKE ISLAND Hy**	**42.36**	**88**	T		T	02 36 22.2		
	baz=284,slow=74,SNR=21								
WRA	**Warramunga Arr**	**45.24**	**163**	P		**P**	**01 51 34.3**	**-2.0**
	0.4nm,0.6s,baz=344,slow=8.8,SNR=5.2								
YKA	**Yellowknife Ar**	**83.21**	**23**	P		**P**	**01 55 43.4**	**-1.4**
	0.5nm,0.6s,baz=311,slow=5.2,SNR=9.0								

*BJI **24** 01:43:46.0±0.0, 36°.16N×137°.60E, h260km, mB4.5/15, mb4.1/16*
*IDC **24** 01:43:50.8±0.4, 36°.25N×137°.13E, h258km±3km, mb3.3/17, mb1 3.6/20, mb1mx3.5/35, mbtmp4.0/20, Error ellipse: s-maj=12.7km s-min=9.8km az=80.0*
*JMA **24** 01:43:51.5±0.1, 36°.26N×137°.26E, h262km±1km, M4.2 Broadband fault plane solution: P waves. NP1: ϕs=249.00000°, δ48.00000°, λ-142.00000°. NP2: ϕs=131.00000°, δ63.00000°, λ-49.00000°. Principal axes: T Plg9.0000°, Azm193.0000°; N Plg36.0000°, Azm289.0000°; P Plg53.0000°, Azm91.0000°;*
*NEIC **24** 01:43:51.1±1.1, 36°.31N±0°.08×137°.2E±0°.1, h262km±2km, mb4.1/16 Error ellipse: s-maj=13.0km s-min=11.1km az=72.0*

ISC 24 01:43:51.0±0.6, **36°.32N**±0°.05×**137°.18E**±0°.05, **h261**km±4km, **n82**,σ0**91**/103, **mb3.9**/24, **3C-10D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JGN	**Niukaw**	**0.14**	**131**	⇓P	**Pn**	**01 44 25.1**	**+0.4**
JGN				S	**S**	**01 44 50.7**	**-0.4**
JKG	**Kaga**	**0.69**	**267**	⇓P	**Pn**	**01 44 26.9**	**+1.1**
JYTA	**Yamagatataniai**	**0.81**	**207**	⇓P	**Pn**	**01 44 26.7**	**+0.4**
JYTA				*e*S	**S**	**01 44 53.4**	**-0.8**
MJB9	**Matsu-Tunnel**	**0.85**	**74**		**Pn**	**01 44 26.7**	**+0.1**
MJB9				S	**S**	**01 44 53.3**	**-0.2**
MAJO	**Matsushiro**	**0.86**	**74**		**Pn**	**01 44 26.8**	**+0.3**
MAJO				S	**S**	**01 44 54.1**	**-0.4**
MAT	**Matsushiro**	**0.86**	**74**	P	**Pn**	**01 44 27.1**	**+0.6**
MAT				S	**S**	**01 44 54.7**	**+0.2**
MAT	**Matsushiro**	**0.86**	**74**	P	**Pn**	**01 44 27.1**	**+0.6**
MAT				S	**S**	**01 44 54.8**	**+0.2**
MJAR	**Matsushiro Arr**	**0.86**	**74**	P	**Pn**	**01 44 27.3**	**+0.8**
	12nm,0.3s,baz=261,slow=5.7,SNR=441						
MJAR				S	**S**	**01 44 54.6**	**+0.1**
	2.0nm,0.3s,baz=276,slow=16,SNR=16						
MJAR	**Matsushiro Arr**	**0.86**	**74**		**Pn**	**01 44 26.8**	**+0.3**
INU	**Inuyama**	**0.97**	**188**		**Pn**	**01 44 27.1**	**-0.1**
JSZ	**Suzu**	**1.14**	**7**	⇓P	**Pn**	**01 44 28.8**	**+0.9**
JSZ				S	**S**	**01 44 57.8**	**+0.7**
JYN	**Shimob**	**1.37**	**126**	⇓P	**Pn**	**01 44 29.2**	**-0.4**
JRY	**Ryogami san**	**1.42**	**102**	P	**Pn**	**01 44 30.1**	**+0.2**
JHG	**Hegura jima**	**1.54**	**352**	⇓P	**Pn**	**01 44 32.0**	**+1.4**
JHG				S	**S**	**01 45 03.4**	**+1.4**
JWT	**Wachi**	**1.78**	**235**	⇓P	**Pn**	**01 44 33.1**	**+0.6**
JWT				S	**S**	**01 45 05.2**	**-0.2**
JAG	**Ashikaga**	**1.84**	**86**	⇑P	**Pn**	**01 44 32.7**	**-0.3**
JOD2	**Odawara 2**	**1.87**	**124**	⇑P	**Pn**	**01 44 33.6**	**+0.2**
JSD	**Sado**	**1.92**	**26**	⇑P	**Pn**	**01 44 34.5**	**+0.9**
JSD				S	**S**	**01 45 08.1**	**+0.6**
JIE	**Ise**	**1.96**	**192**	⇓P	**Pn**	**01 44 34.8**	**+0.7**
JIE				S	**S**	**01 45 08.1**	**-0.1**
JNS	**Sasagawa**	**2.27**	**48**	⇑P	**Pn**	**01 44 37.3**	**+0.5**
JNS				*e*S	**S**	**01 45 12.6**	**-0.5**
JWY	**Kouya**	**2.46**	**212**	⇓P	**Pn**	**01 44 39.6**	**+0.8**
JWY				S	**S**	**01 45 16.4**	**-0.3**
JHJ2	**Mitsune**	**3.86**	**145**	Pn	**Pn**	**01 44 53.8**	**0.0**
JHJ2					**S**	**01 45 43.3**	**-0.4**
JNU	**Nakatsue**	**6.09**	**240**		**Pn**	**01 45 20.9**	**+0.3**
ERM	**Erimo**	**7.34**	**37**		**Pn**	**01 45 34.0**	**-1.9**
KSRS	**Korea Array**	**7.51**	**281**	P	**Pn**	**01 45 39.8**	**+1.7**
	0.6nm,0.3s,baz=102,slow=13,SNR=19						
KSAR	**Wonju Array Be**	**7.54**	**281**	Pn	**Pn**	**01 45 38.5**	**0.0**
KS19	**Wonju Array Si**	**7.56**	**282**	Pn	**Pn**	**01 45 39.1**	**+0.3**
USA0B	**Ussuriysk Arra**	**8.82**	**335**		**Pn**	**01 45 55.3**	**+0.8**
USRK	**Ussuriysk Ar.**	**8.82**	**335**	P	**Pn**	**01 45 55.8**	**+1.4**
	baz=151,slow=12,SNR=60						
USRK	**Ussuriysk Ar.**	**8.82**	**335**		**Pn**	**01 45 55.7**	**+1.3**
ASAJ	**Asahikawa**	**8.82**	**26**	P	**Pn**	**01 45 52.6**	**-1.9**
	58nm,0.3s,baz=228,slow=9.6,SNR=89						
JKA	**Kamikawa-asahi**	**8.82**	**26**		**Pn**	**01 45 52.6**	**-1.9**
MDJ	**Mudanjiang**	**10.11**	**327**	P	**Pn**	**01 46 12.4**	**+1.8**
MDJ				pmax	pmax		
	comp=Z,42nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,240nm,6.5s						
MDJ	**Mudanjiang**	**10.11**	**327**		**Pn**	**01 46 11.1**	**+0.5**
JCJ	**Chichijima**	**10.13**	**154**	P	Pn	01 46 04.8	-6.3
	9.1nm,0.3s,baz=2.6,slow=21,SNR=7.8						
JCJ				S	S	01 47 49.2	-16
	81nm,0.3s,baz=280,slow=22,SNR=14						
YSS	**Yuzh-Sakhalins**	**11.41**	**20**		**Pn**	**01 46 25.1**	**-1.7**
KLR	**Kul'dur**	**13.51**	**345**	P	**Pn**	**01 46 51.5**	**-1.0**
	5.3nm,0.3s,baz=151,slow=12,SNR=109						
KLR				S	**S**	**01 49 18.1**	**-4.0**
	baz=111,slow=24,SNR=5.6						
HIA	**Hailar**	**18.15**	**321**	P	**P**	**01 47 42.5**	**-1.8**
HIA				IAmb	IAmb	01 47 43.8	
	comp=Z,6.4nm,0.8s						
HHC	**Hu-ho-hao-te**	**20.50**	**291**	*e*P	**P**	**01 48 08.3**	**-1.4**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,76nm,7.1s						
SONM	**Songino Array**	**25.42**	**307**	P	**P**	**01 48 54.9**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=105,slow=9.3,SNR=4.0						
TIXI	**Tiksi**	**35.67**	**355**	P	**P**	**01 50 23.8**	**-0.3**
TIXI				IAmb	IAmb	01 50 30.0	
	comp=Z,2.7nm,0.8s						
WMQ	**Urumqi**	**38.13**	**297**	*e*P	**P**	**01 50 47.3**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,38nm,4.5s						
WMQ				LR	LR		
	comp=Z,420nm,29.2s						
WMQ				LR	LR		
	comp=Z,950nm,29.1s						
WMQ				LR	LR		
	comp=Z,210nm,29.2s						
ZALV	**Zalesovo Beam**	**39.90**	**313**	P	**P**	**01 50 59.7**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=102,slow=8.3,SNR=4.2						
ZALV				PcP	**PcP**	**01 52 59.0**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=116,slow=3.4,SNR=5.2						
ZALV	**Zalesovo Beam**	**39.90**	**313**	P	**P**	**01 50 59.9**	**+0.3**
MKAR	**Makanchi Array**	**41.62**	**302**	P	**P**	**01 51 13.5**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=89,slow=8.8,SNR=2.7						
MKAR				PcP	**PcP**	**01 53 06.1**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=88,slow=3.5,SNR=2.8						
MKAR				ScP	**ScP**	**01 56 28.1**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=72,slow=4.7,SNR=3.2						
KURK	**Kurchatov**	**43.70**	**306**	P	**P**	**01 51 30.7**	**+0.4**
ILAR	**Eielson Array**	**51.91**	**32**	P	**P**	**01 52 33.1**	**+0.3**
	comp=Z,1.2nm,0.9s,baz=254,slow=5.8,SNR=13						
ILAR				PcP	**PcP**	**01 53 41.2**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=266,slow=3.4,SNR=4.5						
ILAR	**Eielson Array**	**51.91**	**32**	P	**P**	**01 52 34.0**	**+1.2**
BCAR	**Beaver Creek A**	**54.39**	**34**	P	**P**	**01 52 51.5**	**+0.6**
ABKAR	**Akbulak array**	**55.78**	**309**	P	**P**	**01 53 01.7**	**+0.7**
ABKAR				IAmb	IAmb	01 53 05.2	
	comp=Z,11nm,1.9s						
WB0	**Warramunga Arr**	**55.84**	**183**	P	**P**	**01 53 01.1**	**-0.4**
WB0				IAmb	IAmb	01 53 07.0	
	comp=Z,6.5nm,1.0s						
WB2	**Warramunga Arr**	**56.02**	**183**	P	**P**	**01 53 02.0**	**-0.9**
WRA	**Warramunga Arr**	**56.02**	**183**	P	**P**	**01 53 02.3**	**-0.5**
	comp=Z,3.9nm,0.3s,baz=359,slow=7.6,SNR=33						
WRA	**Warramunga Arr**	**56.02**	**183**	P	**P**	**01 53 02.0**	**-0.9**
WR0	**Warramunga Arr**	**56.02**	**183**	P	**P**	**01 53 02.3**	**-0.6**
C36M	**Paulatuk**	**59.49**	**24**	P	**P**	**01 53 26.7**	**+0.4**
AS31	**Alice Springs**	**59.74**	**183**	P	**P**	**01 53 28.3**	**-0.3**
AS31				IAmb	IAmb	01 53 34.2	
	comp=Z,2.3nm,0.3s						
ASAR	**Alice Springs**	**59.74**	**183**	P	**P**	**01 53 28.3**	**-0.3**
	comp=Z,1.1nm,0.3s,baz=358,slow=6.0,SNR=19						
ASAR				S	**S**	**02 01 18.0**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=21,slow=20,SNR=7.8						
ASAR	**Alice Springs**	**59.74**	**183**	P	**P**	**01 53 28.4**	**-0.1**
ARCES	**ARCESS Array B**	**63.45**	**339**	P	**P**	**01 53 53.3**	**+0.6**
	comp=Z,2.8nm,1.1s,baz=56,slow=6.7,SNR=5.2						
YKA	**Yellowknife Ar**	**66.11**	**29**	P	**P**	**01 54 10.4**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=306,slow=6.4,SNR=10						
FINES	**FINESS Array B**	**67.83**	**331**	P	**P**	**01 54 20.9**	**+0.2**
	comp=Z,1.2nm,0.4s,baz=71,slow=8.3,SNR=5.8						
STKA	**Stephens Creek**	**67.96**	**176**	P	**P**	**01 54 21.6**	**-0.2**
	comp=Z,1.8nm,0.8s,baz=298,slow=6.5,SNR=3.6						
AKASG	**Malin Array Be**	**72.74**	**321**	P	**P**	**01 54 50.3**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=48,slow=5.5,SNR=4.8						
NOA	**NORSAR Array B**	**73.49**	**336**	P	**P**	**01 54 54.9**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=42,slow=5.9,SNR=3.2						
JTMT	**Jette**	**74.82**	**42**	P	**P**	**01 55 03.8**	**+0.9**
JTMT				IAmb	IAmb	01 55 05.2	
	comp=Z,4.3nm,0.7s						
BURAR	**Bucovina Array**	**76.72**	**320**	P	**P**	**01 55 13.4**	**-0.1**
BRTR	**Keskin Array B**	**76.73**	**310**	P	**P**	**01 55 14.0**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=29,slow=3.3,SNR=3.2						
NVAR	**Mina Array Bea**	**78.11**	**51**	P	**P**	**01 55 22.7**	**+1.2**
	comp=Z,1.8nm,0.5s,baz=303,slow=5.1,SNR=14						
NVAR	**Mina Array Bea**	**78.11**	**51**	P	**P**	**01 55 22.2**	**+0.6**
CLL	**Collm**	**79.97**	**328**	*e*P	**P**	**01 55 31.0**	**0.0**
PD31	**Pinedale Array**	**80.56**	**43**	P	**P**	**01 55 34.7**	**+0.1**
PDAR	**Pinedale Array**	**80.56**	**43**	P	**P**	**01 55 35.5**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=312,slow=1.6,SNR=18						
PDAR	**Pinedale Array**	**80.56**	**43**	P	**P**	**01 55 35.0**	**+0.3**
GERES	**GERESS Array B**	**81.47**	**326**	P	**P**	**01 55 39.2**	**0.0**
	comp=Z,0.4nm,0.6s,baz=22,slow=6.4,SNR=4.3						
ULM	**Lac du Bonnet**	**81.92**	**31**	P	**P**	**01 55 41.1**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=317,slow=9.0,SNR=3.7						
TXAR	**Lajitas Array**	**93.22**	**50**	P	**P**	**01 56 37.2**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=301,slow=3.2,SNR=9.6						
TORD	**Torodi Ar. Bea**	**115.33**	**311**	PKP	**PKPdf**	**02 02 01.4**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=55,slow=3.2,SNR=2.4						
LPAZ	**La Paz**	**149.94**	**55**	PKPbc	**PKiKP**	**02 03 12.1**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=304,slow=3.6,SNR=5.3						
LPAZ	**La Paz**	**149.94**	**55**	PKiKP	**PKiKP**	**02 03 13.4**	**+0.9**
SIV	**San Ignacio**	**154.05**	**44**	PKPbc	**PKPbc**	**02 03 19.6**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=292,slow=5.7,SNR=6.5						
SIV				PKPab	**PKPab**	**02 03 35.0**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=312,slow=6.7,SNR=9.0						
CFA	**Coronel Fontan**	**158.42**	**85**	PKPab	**PKPab**	**02 03 54.1**	**+0.7**
	comp=Z,3.6nm,0.6s,baz=264,slow=5.8,SNR=9.1						

*NEIC **24** 01:53:04.9±1.1, 58°.63N±0°.04×136°.74W±0°.05, h11km±7km, Error ellipse: s-maj=6.1km s-min=2.7km az=206.0*
*PGC **24** 01:53:04.4±1.6, 58°.56N×136°.92W, h10km, ML2.6/8, ML2.2, 114km Wsw of Haines, Ak Southeastern Alaska*

ISC 24 01:53:04.3±1.6, **58°.59N**±0°.06×**136°.79W**±0°.05, **h8**km±11km, **n19**,σ0**°79**/32, **Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLBC	**Pleasant Camp**	**0.89**	**14**	P	**Pg**	**01 53 21.1**	**-0.3**
PLBC				S	**Sb**	**01 53 34.0**	**-0.1**
PLBC	**Pleasant Camp**	**0.89**	**14**		**Pg**	**01 53 21.1**	**-0.3**
PLBC					**Sb**	**01 53 34.0**	**-0.1**
DHAK	**Deception Hill**	**0.89**	**305**	Pn	**Pb**	**01 53 22.0**	**0.0**
BESE	**Bessie Mountai**	**1.01**	**90**	P	**Pg**	**01 53 23.8**	**+0.1**
BESE				S	**Sg**	**01 53 37.8**	**+1.0**
BESE	**Bessie Mountai**	**1.01**	**90**		**Pg**	**01 53 23.8**	**+0.1**
SKAG	**Skagway**	**1.15**	**40**	Pn	**Pb**	**01 53 25.4**	**-1.0**
JIS	**Juneau Island**	**1.30**	**103**	Pn	**Pn**	**01 53 28.4**	**-0.3**
JIS					**Sb**	**01 53 46.7**	**+0.8**
PNL	**Peninsula**	**1.72**	**310**	S	**Sn**	**01 53 55.2**	**-1.6**
YUK7	**Dusty Glacier**	**2.06**	**341**	Pn	**Pn**	**01 53 38.6**	**-0.8**
YUK7				Sn	**Sn**	**01 54 04.9**	**-0.5**
YUK7				Sg	**Sg**	**01 54 09.5**	**-1.0**
HYT	**Haines Junctio**	**2.27**	**351**	Pn	**Pn**	**01 53 42.1**	**-0.1**
HYT				Sn	**Sn**	**01 54 09.8**	**-0.5**
HYT				Sg	**Sb**	**01 54 15.3**	**+1.6**
HYT	**Haines Junctio**	**2.27**	**351**	Pn	**Pn**	**01 53 42.1**	**-0.1**
HYT				Sn	**Sn**	**01 54 09.8**	**-0.5**
WHY	**Whitehorse**	**2.29**	**24**	Pn	**Pn**	**01 53 43.0**	**+0.6**
WHY				Pg	**Pb**	**01 53 46.3**	**+0.5**
WHY				Sg	**Sg**	**01 54 17.3**	**-0.4**
WHY	**Whitehorse**	**2.29**	**24**	Pn	**Pn**	**01 53 43.0**	**+0.6**
YUK6	**Outpost Mounta**	**2.49**	**342**	Pn	**Pn**	**01 53 45.3**	**0.0**
YUK6				Sg	**Sb**	**01 54 21.8**	**+1.6**
YUK6	**Outpost Mounta**	**2.49**	**342**	Pn	**Pn**	**01 53 45.3**	**0.0**
YUK5	**Granite Creek**	**2.60**	**348**	Pn	**Pn**	**01 53 47.0**	**+0.3**
YUK5	**Granite Creek**	**2.60**	**348**	Pn	**Pn**	**01 53 47.0**	**+0.3**
YUK4	**Talbot Arm**	**2.91**	**342**	Pn	**Pn**	**01 53 52.2**	**+1.1**
YUK4				Pg	**Pb**	**01 53 57.6**	**+1.1**
DLBC	**Dease Lake**	**3.55**	**90**	Sg	**Sg**	**01 54 57.2**	**-1.0**

IDC 24 01:55:18.6±4.5, **7°.23S**×**132°.05E**, **h0**km, **mb3.6**/1, **mb1 3.5**/3, **mb1mx3.3**/27, **mbtmp3.3**/3, **ML3.1**/2, **Error ellipse: s-maj=314.5km s-min=32.2km az=74.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.83**	**170**	Pn	Pn	01 58 22.6	+0.1
	0.1nm,0.3s,baz=351,slow=13,SNR=8.0						
WRA				Sn	Sn	02 00 37.0	-9.1
	0.1nm,0.3s,baz=346,slow=24,SNR=3.6						
ASAR	**Alice Springs**	**16.44**	**174**	Pn	Pn	01 59 10.7	-0.2
	0.1nm,0.3s,baz=348,slow=8.9,SNR=3.4						
MKAR	**Makanchi Array**	**69.54**	**326**	P	P	02 06 29.3	0.0
	0.3nm,0.5s,baz=120,slow=7.7,SNR=1.3						

DJA 24 01:55:47.7±0.3, **7°.5S**×**10°.5E**±°, **h53**km±32km, **M4.0**/12, **mB5.8**/2, **mb3.8**/4, **MLv4.2**/12, **Mw(mB)5.4**/2, **Mwp5.3**/1, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKJI	**Sukabumi**	**1.47**	**89**	P	Pn	01 56 11.8	0.0
SKJI				S	Sn	01 56 30.6	+0.7
KASI	**Kota Agung**	**1.61**	**339**	S	Sn	01 56 31.8	-1.7
DBJI	**Dramaga**	**1.73**	**74**	P	Pn	01 56 15.3	-0.1
DBJI				S	Sn	01 56 37.3	+1.0
CNJI	**Cibinong**	**2.05**	**98**	P	Pn	01 56 19.0	-0.8
CNJI				S	Sn	01 56 44.0	-0.2
LWLI	**Liwa**	**2.25**	**333**	P	Pn	01 56 23.0	+0.3
KLSI		**2.36**	**351**	P	Pn	01 56 23.4	-0.6
LEM	**Lembang**	**2.53**	**85**	P	Pn	01 56 26.2	-0.3
MDSI	**Maura Dua**	**2.69**	**340**	P	Pn	01 56 28.5	-0.1
CISI	**Cisompet, Garu**	**2.76**	**101**	P	Pn	01 56 29.7	+0.1
MNAI	**Manna**	**3.40**	**321**	P	Pn	01 56 38.5	+0.2
CMJI	**Cimerak**	**3.42**	**103**	P	Pn	01 56 39.1	+0.5
KPJI	**Karang Pucung**	**3.83**	**95**	P	Pn	01 56 45.0	+0.8
PCJI	**Pacitan**	**6.15**	**101**	P	Pn	01 57 16.5	+0.5
	0.3nm39nm,1.9s						
PPSI	**Pulau Pagai**	**6.60**	**310**	P	Pn	01 57 21.0	-1.2
SISI	**Saibi**	**8.24**	**313**	P	Pn	01 57 42.8	-1.9

*NEIC **24** 02:05:16.6±1.6, 15°.54S±0°.09×167°.8E±0°.1, h125km±5km, mb4.2/6, Error ellipse: s-maj=18.0km s-min=11.2km az=58.0*
*IDC **24** 02:05:17.8±4.0, 15°.67S×167°.78E, h131km±36km, mb3.8/11, mb1 4.0/12, mb1mx3.8/32, mbtmp4.2/12, Error ellipse: s-maj=30.0km s-min=24.0km az=151.0*

ISC 24 02:05:13.8±0.6, **15°.53S**±0°.07×**168°.0E**±0°.1, **h100**km, **n32**, σ1**9**40/37, **mb4.0**/12, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**0.79**	**276**		**Pn**	**02 05 35.5**	**+3.4**
DZM	**Mont Dzumac**	**6.68**	**193**	P	**Pn**	**02 06 51.8**	**+2.4**
	8.7nm,0.3s,baz=20,slow=8.8,SNR=66						
DZM				S	**Sn**	**02 08 04.3**	**+0.2**
	8.2nm,0.3s,baz=320,slow=24,SNR=9.0						
DZM	**Mont Dzumac**	**6.68**	**193**		**Pn**	**02 06 51.0**	**+1.6**
DZM					**Sn**	**02 08 05.7**	**+1.6**
NOUC	**Port Laguerre**	**6.74**	**194**		**Pn**	**02 06 51.8**	**+1.7**
NOUC					**Sn**	**02 08 07.2**	**+1.8**
EIDS	**Eidsvold**	**18.63**	**236**	P	**P**	**02 09 23.1**	**-0.6**
EIDS				IAmb	IAmb	02 09 25.1	
	comp=Z,11nm,0.8s						
CTA	**Charters Tower**	**21.21**	**254**	P	**P**	**02 09 51.9**	**+0.3**
	comp=Z,2.9nm,0.6s,baz=88,slow=13,SNR=3.0						
STKA	**Stephens Creek**	**29.05**	**231**	P	**P**	**02 11 03.5**	**-1.2**
	comp=Z,1.7nm,0.6s,baz=35,slow=7.9,SNR=7.0						
WRA	**Warramunga Arr**	**32.35**	**257**	P	**P**	**02 11 31.1**	**-2.9**
	comp=Z,0.6nm,0.4s,baz=86,slow=8.9,SNR=6.1						
WRA				PcP	**PcP**	**02 14 18.3**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=85,slow=3.3,SNR=4.3						
AS31	**Alice Springs**	**33.08**	**250**	P	**P**	**02 11 38.3**	**-2.1**
AS31				IAmb	IAmb	02 11 38.9	
	comp=Z,1.5nm,0.3s						
ASAR	**Alice Springs**	**33.08**	**250**	P	**P**	**02 11 37.9**	**-2.4**
	comp=Z,1.4nm,0.3s,baz=81,slow=8.6,SNR=25						
ASAR				PcP	**PcP**	**02 14 20.9**	**-0.8**

PB09	**IPOC Station P**	**3.04**	**322**	*eP*	**Pn**	**02 06 44.5**	**+1.3**
PB09				*eS*	**Sn**	**02 07 22.1**	**+0.1**
PB05	**IPOC Station P**	**3.05**	**296**	⇑*iP*	**Pn**	**02 06 43.6**	**+0.4**
PB05				*i* S	**Sn**	**02 07 19.4**	**-2.5**
PB05				IAML		02 07 24.4	
	comp=E,210nm,0.3s						
PB05	**IPOC Station P**	**3.05**	**296**	*eP*	**Pn**	**02 06 43.9**	**+0.7**
PB10	**IPOC Station P**	**3.12**	**282**	⇑*iP*	**Pn**	**02 06 44.7**	**+0.8**
PB10				*eS*	**Sn**	**02 07 21.7**	**-1.6**
PB10				IAML		02 07 25.8	
	comp=N,160nm,0.3s						
PB10				IAML		02 07 29.1	
	comp=E,186nm,0.2s						
PB03	**IPOC Station P**	**3.17**	**312**	⇑*iP*	**Pn**	**02 06 45.2**	**+0.5**
PB03				*i* S	**Sn**	**02 07 23.0**	**-1.7**
PB03				IAML		02 07 25.1	
	comp=E,493nm,0.2s						
PB03	**IPOC Station P**	**3.17**	**312**	*eP*	**Pn**	**02 06 45.3**	**+0.5**
PB04	**IPOC Station P**	**3.28**	**304**	⇑*iP*	**Pn**	**02 06 46.4**	**+0.4**
PB04				*i* S	**Sn**	**02 07 24.8**	**-2.2**
PB04				IAML		02 07 26.9	
	comp=N,515nm,0.7s						
PB04	**IPOC Station P**	**3.28**	**304**	*eP*	**Pn**	**02 06 46.6**	**+0.5**
CFA	**Coronel Fontan**	**7.41**	**187**	P	**Pn**	**02 07 38.6**	**-0.4**
	comp=N,0.3nm,0.3s,baz=12,slow=9.3,SNR=4.6						
CFA				S	**Sn**	**02 08 59.8**	**-2.9**
	comp=N,0.4nm,0.3s,baz=294,slow=19,SNR=3.8						
LPAZ	**La Paz**	**7.94**	**354**	P	**Pn**	**02 07 47.7**	**+1.0**
LPAZ				S	**Sn**	**02 09 11.4**	**-4.8**
	comp=N,0.4nm,0.3s,baz=176,slow=14,SNR=6.9						
LPAZ				S	**Sn**	**02 09 11.4**	**-4.8**
	comp=N,0.1nm,0.3s,baz=216,slow=18,SNR=2.5						
SIV	**San Ignacio**	**10.02**	**36**	P	**Pn**	**02 08 11.0**	**-2.4**
	comp=N,0.3nm,0.3s,baz=239,slow=14,SNR=8.4						
SIV				S	Sn	02 09 53.4	-12
	baz=258,slow=18,SNR=3.7						
BDFB	**Brasilia**	**19.96**	**68**	P	**P**	**02 10 11.7**	**-0.1**
	comp=N,0.6nm,0.3s,baz=246,slow=10,SNR=13						
TORD	**Torodi Ar. Bea**	**76.84**	**69**	P	**P**	**02 17 26.0**	**+0.6**
	comp=N,0.4nm,0.6s,baz=249,slow=6.4,SNR=7.4						
YKA	**Yellowknife Ar**	**94.26**	**340**	P	**P**	**02 18 52.6**	**+1.6**
	comp=N,0.2nm,0.6s,baz=136,slow=5.0,SNR=5.7						
MKAR	**Makanchi Array**	**146.83**	**40**	PKPbc	**PKiKP**	**02 25 15.6**	**-0.7**
	comp=N,0.5nm,0.6s,baz=308,slow=3.2,SNR=6.7						

*IDC **24** 02:14:19.5±0.9,28°.18S×74°.31E, h0km, mb4.1/11, mb1 4.2/11, mb1mx3.9/53, mbtmp4.1/11, Error ellipse: s-maj=35.5km s-min=19.5km az=21.0*
*NEIC **24** 02:14:21.1±0.6,28°.3S±0°.2×74°.2E±0°.1, h10km±2km, mb4.5/20, Error ellipse: s-maj=24.4km s-min=18.5km az=183.0*

ISC 24 02:14:20.8±0.9,**28°.3S**±0°.2×**74°.3E**±0°.1,**h10**km,**n41,** σ0**78**/35,**mb4.3**/19,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**20.63**	**355**	T	T	02 40 01.5	
	baz=176,slow=75,SNR=5.6						
H08S1	**Diego Garcia H**	**20.63**	**355**	T	T	02 40 04.5	
	baz=176,slow=75,SNR=13						
H08S3	**Diego Garcia H**	**20.64**	**355**	T	T	02 40 00.9	
	baz=176,slow=75,SNR=6.1						
H01W2	**Cape Leeuwin H**	**34.43**	**111**	T	T	02 57 24.7	
	baz=270,slow=75,SNR=9.2						
H01W3	**Cape Leeuwin H**	**34.43**	**111**	T	T	02 57 26.9	
	baz=270,slow=75,SNR=8.2						
H01W1	**Cape Leeuwin H**	**34.45**	**111**	T	T	02 57 29.5	
	baz=270,slow=75,SNR=8.8						
CISI	**Cisompet, Garu**	**37.81**	**63**	P	**P**	**02 21 38.3**	**+0.5**
PMBI	**Palembang**	**38.51**	**55**	P	**P**	**02 21 44.8**	**+1.3**
MATP	**Matopo**	**42.21**	**270**	P	**P**	**02 22 15.6**	**+1.3**
	2.1nm,0.8s,baz=120,slow=9.4,SNR=4.8						
CMAR	**Chiang Mai Arr**	**52.27**	**30**	P	**P**	**02 23 31.9**	**-0.7**
	1.2nm,0.4s,baz=210,slow=7.3,SNR=4.4						
CHTO	**Chiang Mai**	**52.59**	**30**	P	**P**	**02 23 35.1**	**+0.2**
CHTO				IAmb	IAmb	02 24 53.8	
	comp=Z,10nm,1.6s						
ASAR	**Alice Springs**	**53.36**	**100**	P	**P**	**02 23 41.3**	**+0.6**
	comp=Z,2.7nm,0.7s,baz=251,slow=6.6,SNR=36						
ASAR				PcP	**PcP**	**02 24 47.7**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=241,slow=3.8,SNR=3.0						
AS31	**Alice Springs**	**53.37**	**100**	P	**P**	**02 23 41.5**	**+0.7**
WRA	**Warramunga Arr**	**55.00**	**95**	P	**P**	**02 23 53.4**	**+0.7**
	comp=Z,4.8nm,0.7s,baz=252,slow=7.5,SNR=17						
WRAB	**Tennant Creek**	**55.01**	**95**	P	**P**	**02 23 53.2**	**+0.4**
WB0	**Warramunga Arr**	**55.11**	**95**	P	**P**	**02 23 54.0**	**+0.4**
WB0				IAmb	IAmb	02 24 01.3	
	comp=Z,5.7nm,0.8s						
SHL	**Shillong**	**56.19**	**19**	P	**P**	**02 24 01.4**	**+0.2**
SHL				IAmb	IAmb	02 24 02.2	
	comp=Z,8.1nm,1.1s						
STKA	**Stephens Creek**	**57.53**	**111**	P	**P**	**02 24 09.1**	**-1.6**
	comp=Z,2.6nm,1.0s,baz=247,slow=7.7,SNR=4.1						
STKA	**Stephens Creek**	**57.53**	**111**	P	**P**	**02 24 10.6**	**0.0**
KBL	**Kabul**	**62.71**	**355**	P	**P**	**02 24 48.0**	**+1.9**
KBL				IAmb	IAmb	02 24 52.8	
	comp=Z,1.9nm,0.7s						
ARSB	**Arslanbob**	**69.30**	**359**	P	**P**	**02 25 28.4**	**+0.2**
NRN	**Naryn**	**69.42**	**1**	P	**P**	**02 25 29.3**	**+0.1**
NRN				IAmb	IAmb	02 25 30.0	
	comp=Z,4.6nm,0.8s						
BOOM	**Boomskoye usch**	**70.47**	**1**	P	**P**	**02 25 35.4**	**-0.1**
AAK	**Ala-Archa**	**70.60**	**0**	P	**P**	**02 25 36.6**	**+0.3**
AAK				IAmb	IAmb	02 25 37.3	
	comp=Z,3.2nm,1.1s						
KK31	**Karatay Array**	**71.15**	**357**	P	**P**	**02 25 39.6**	**+0.2**
KKAR	**Karatay Array**	**71.15**	**357**	P	**P**	**02 25 39.8**	**+0.3**
GTA	**Gaotai**	**71.47**	**21**	*eP*	**P**	**02 25 42.0**	**+0.4**
GTA				pP	sP	02 25 45.9	+1.4
GTA				sP	pwP	02 25 48.8	+0.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK31	**Makanchi Array**	**75.11**	**6**	P	**P**	**02 26 01.7**	**-1.1**
MKAR	**Makanchi Array**	**75.11**	**6**	P	**P**	**02 26 01.6**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=186,slow=5.4,SNR=7.4						
MKAR	**Makanchi Array**	**75.11**	**6**	P	**P**	**02 26 01.5**	**-1.3**
BR131	**Keskin Array S**	**77.53**	**329**	P	**P**	**02 26 16.8**	**-0.1**
BR131				IAmb	IAmb	02 28 36.7	
	comp=Z,5.2nm,1.6s						
BRTR	**Keskin Array B**	**77.53**	**329**	P	**P**	**02 26 16.9**	**0.0**
	comp=Z,0.9nm,0.8s,baz=151,slow=7.5,SNR=6.4						
ABKAR	**Akbulak array**	**78.27**	**350**	P	**P**	**02 26 19.8**	**-0.8**
BRVK	**Borovoye**	**81.10**	**358**	P	**P**	**02 26 36.0**	**+0.2**
BRVK				IAmb	IAmb	02 26 37.5	
	comp=Z,5.3nm,0.8s						
SONM	**Songino Array**	**81.12**	**21**	P	**P**	**02 26 36.5**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=195,slow=6.0,SNR=7.3						
SONM	**Songino Array**	**81.12**	**21**	IAmb	IAmb	02 26 37.4	
	comp=Z,1.1nm,0.8s						
TORD	**Torodi Ar. Bea**	**81.32**	**290**	P	**P**	**02 26 38.1**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=111,slow=4.1,SNR=4.5						
ZALV	**Zalesovo Beam**	**82.43**	**6**	P	**P**	**02 26 41.9**	**-0.9**
	comp=Z,0.8nm,0.2s,baz=180,slow=4.3,SNR=5.6						
CEL	**Celeste**	**85.80**	**318**	P	**P**	**02 26 59.5**	**-1.0**
AKASG	**Malin Array Be**	**88.16**	**333**	P	**P**	**02 27 11.2**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=134,slow=4.0,SNR=4.0						
YKA	**Yellowknife Ar**	**145.32**	**7**	PKPbc	**PKPbc**	**02 33 57.4**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=332,slow=3.9,SNR=19						

*IDC **24** 02:23:49.5±1.0,13°.54N×146°.16E, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.0/58, mbtmp4.1/14, MS3.3/2, Ms1 3.3/2, ms1mx2.7/48, Error ellipse: s-maj=24.3km s-min=17.6km az=170.0*
*NEIC **24** 02:23:51.0±1.5,13°.4N±0°.1×146°.30E±0°.08, h19km±3km, mb4.5/14, Error ellipse: s-maj=21.1km s-min=10.4km az=187.0*

ISC 24 02:23:50.0±0.7,**13°.4N**±0°.1×**146°.27E**±0°.08,**h10**km,**n37,** σ0**92**/33,**mb4.3**/18,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.38**	**278**	Pn	**Pn**	**02 24 15.4**	**+0.1**
	230nm,0.3s,baz=128,slow=7.7,SNR=50						
GUMO				Sn	**Sn**	**02 24 34.1**	**+0.6**
	251nm,0.3s,baz=180,slow=20,SNR=11						
PATS	**Pohnpei**	**13.53**	**118**		**Pn**	**02 27 00.5**	**-1.6**
JOW	**Kunigami**	**21.50**	**311**	P	**P**	**02 28 40.2**	**+1.1**
	1.7nm,0.2s,baz=92,slow=18,SNR=12						
JOW	**Kunigami**	**21.50**	**311**	IAmb	IAmb	02 28 41.6	
	comp=Z,18nm,0.9s						
MJAR	**Matsushiro Arr**	**24.15**	**344**	LR	LR	02 37 59.7	
	comp=Z,92nm,18.0s,baz=205,slow=36						
KSRS	**Korea Array**	**29.01**	**329**	P	**P**	**02 29 48.9**	**-1.2**
	comp=Z,4.2nm,0.9s,baz=143,slow=11,SNR=8.8						
ASAJ	**Asahikawa**	**30.77**	**355**	LR	LR	02 42 21.4	
	comp=Z,36nm,20.6s,baz=144,slow=36						
WRA	**Warramunga Arr**	**35.16**	**200**	P	**P**	**02 30 44.5**	**+0.3**
	comp=Z,1.6nm,0.9s,baz=18,slow=9.2,SNR=4.6						
BJT	**Baijiatuau**	**37.43**	**321**	P	**P**	**02 31 02.7**	**-0.8**
BJT				IAmb	IAmb	02 31 31.1	
	comp=Z,23nm,2.0s						
KLR	**Kul'dur**	**37.67**	**344**	P	**P**	**02 31 04.6**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=155,slow=9.6,SNR=5.2						
CMAR	**Chiang Mai Arr**	**45.69**	**283**	P	**P**	**02 32 11.9**	**+0.4**
	comp=Z,1.8nm,0.3s,baz=74,slow=6.7,SNR=3.5						
SONM	**Songino Array**	**47.67**	**324**	P	**P**	**02 32 26.8**	**0.0**
	comp=Z,0.9nm,0.9s,baz=140,slow=8.2,SNR=6.1						
SONM	**Songino Array**	**47.67**	**324**	IAmb	IAmb	02 32 35.5	
	comp=Z,1.0nm,1.0s						
ZALV	**Zalesovo Beam**	**62.57**	**324**	P	**P**	**02 34 13.2**	**-0.9**
	comp=Z,0.9nm,0.2s,baz=111,slow=8.3,SNR=4.5						
ZALV				PcP	**PcP**	**02 34 52.7**	**-0.4**
	comp=Z,1.3nm,0.2s,baz=120,slow=4.2,SNR=5.4						
MK31	**Makanchi Array**	**62.57**	**316**	P	**P**	**02 34 14.4**	**+0.1**
MKAR	**Makanchi Array**	**62.57**	**316**	P	**P**	**02 34 14.1**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=91,slow=9.3,SNR=22						
MKAR	**Makanchi Array**	**62.57**	**316**	P	**P**	**02 34 14.0**	**-0.3**
MAKZ	**Makanchi**	**62.78**	**316**	P	**P**	**02 34 15.2**	**-0.5**
MAKZ				IAmb	IAmb	02 34 18.3	
	comp=Z,3.7nm,1.1s						
KURK	**Kurchatov**	**65.60**	**320**	P	**P**	**02 34 33.5**	**-0.6**
KURK				IAmb	IAmb	02 34 34.4	
	comp=Z,3.5nm,0.8s						
BOOM	**Boomskoye usch**	**66.59**	**311**	P	**P**	**02 34 39.8**	**-1.1**
IL31		**68.15**	**25**	P	**P**	**02 34 51.0**	**+0.9**
ILAR	**Eielson Array**	**68.15**	**25**	P	**P**	**02 34 51.0**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=248,slow=5.6,SNR=10						
NIL	**Nilore**	**68.65**	**301**	P	**P**	**02 34 53.7**	**-0.2**
KK31	**Karatay Array**	**70.60**	**311**	P	**P**	**02 35 05.6**	**-0.1**
KKAR	**Karatay Array**	**70.60**	**311**	P	**P**	**02 35 05.2**	**-0.6**
KBL	**Kabul**	**72.09**	**302**	P	**P**	**02 35 14.9**	**-0.2**
KBL				IAmb	IAmb	02 35 17.5	
	comp=Z,5.9nm,1.2s						
INK	**Inuvik**	**74.01**	**22**	P	**P**	**02 35 25.9**	**+0.4**
	comp=Z,2.1nm,1.2s,baz=276,slow=5.3,SNR=2.6						
INK	**Inuvik**	**74.01**	**22**	IAmb	IAmb	02 36 50.6	
	comp=Z,8.8nm,1.6s						
ABKAR	**Akbulak array**	**77.59**	**318**	P	**P**	**02 35 45.5**	**-1.0**
HRA	**Herat**	**77.69**	**303**	P	**P**	**02 35 47.4**	**-0.1**
YKA	**Yellowknife Ar**	**82.39**	**28**	P	**P**	**02 36 13.9**	**+1.8**
	comp=Z,0.4nm,0.5s,baz=282,slow=5.6,SNR=5.6						
RES	**Resolute Bay**	**84.41**	**14**	P	**P**	**02 36 23.9**	**+1.6**
	comp=Z,1.0nm,0.5s,baz=303,slow=5.9,SNR=7.6						
RES	**Resolute Bay**	**84.41**	**14**	IAmb	IAmb	02 36 24.1	
	comp=Z,16nm,1.9s						
ARCES	**ARCESS Array B**	**87.67**	**342**	P	**P**	**02 36 38.2**	**-0.3**
	comp=Z,2.6nm,0.9s,baz=69,slow=4.9,SNR=5.2						
FINES	**FINESS Array B**	**91.90**	**335**	P	**P**	**02 36 56.9**	**-1.5**
	comp=Z,1.5nm,0.5s,baz=80,slow=5.0,SNR=11						
LPAZ	**La Paz**	**146.65**	**99**	PKPbc	**PKPab**	**02 43 36.6**	**+1.8**
	comp=Z,0.8nm,0.5s,baz=333,slow=2.3,SNR=3.0						
LPAZ	**La Paz**	**146.65**	**99**		**PKPdf**	**02 43 33.2**	**+1.1**

*DJA **24** 02:25:49.1±0.6,4°.S±6°×13°.1E±°, h78km±27km, M4.6/8, mB6.2/1, mb5.8/1, MLv4.0/8, Mw(mB)5.8/1*
*IDC **24** 02:25:52.4±1.1,2°.91S×129°.96E, h0km, mb3.9/4, mb1 4.0/7, mb1mx3.7/47, mbtmp3.9/7, ML3.5/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/32, Error ellipse: s-maj=37.8km s-min=19.5km az=91.0*
*NEIC **24** 02:25:55.7±1.6,2°.96S±0°.09×129°.93E±0°.08, h32km±6km, mb4.2/7, Error ellipse: s-maj=12.8km s-min=11.0km az=159.0*

ISC 24 02:25:54.6±0.8,**2°.94S**±0°.07×**130°.00E**±0°.04,**h25**km,**n26,** σ1**90**/21,**Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.14**	**249**	P	**Pb**	**02 26 18.7**	**+3.1**
BNDI	**Bandanaira**	**1.57**	**183**	P	Pn	02 26 11.2	-10
AAI	**Ambon**	**1.94**	**248**	P	**Pb**	**02 26 28.0**	**-1.3**
FAKI	**Fak Fak**	**2.25**	**90**	P	**Pb**	**02 26 33.2**	**-1.4**
FAKI	**Fak Fak**	**2.25**	**90**		**Pb**	**02 26 32.1**	**-2.5**
SIJI	**Sorong**	**2.42**	**32**	Pn	**Pn**	**02 26 33.7**	**+1.2**
	6.9nm,0.3s,baz=198,slow=22,SNR=84						
SIJI				Sn	**Sn**	**02 27 02.5**	**+1.1**
	14nm,0.3s,baz=143,slow=20,SNR=9.6						
SIJI				LR	LR	02 27 58.5	
	comp=Z,254nm,18.1s,baz=194,slow=52						
NLAI	**Namlea**	**2.91**	**264**	P	**Pb**	**02 26 42.9**	**-2.8**
SANI	**Sanana**	**4.10**	**282**	P	**Pb**	**02 27 01.9**	**-4.2**
RKPI	**Ransiki, Papua**	**4.41**	**71**	P	Pn	02 26 48.2	-12
LUWI	**Luwuk**	**7.46**	**284**	P	**Pn**	**02 27 41.3**	**-0.6**
LUWI	**Luwuk**	**7.46**	**284**		**Pn**	**02 27 41.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**15.66**	**196**	Pn	**Pn**	**02 29 34.5**	**+0.8**
	0.1nm,0.3s,baz=11,slow=16,SNR=2.6						
FITZ	**Fitzroy Crossi**	**15.66**	**196**	IAmb	IAmb	02 30 26.1	
	comp=Z,32nm,1.9s						
WRA	**Warramunga Arr**	**17.42**	**166**	P	**P**	**02 29 56.8**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=346,slow=12,SNR=6.5						
WRA				S	**Sn**	**02 33 06.8**	**-2.7**
	comp=Z,0.1nm,0.3s,baz=346,slow=28,SNR=2.9						
WRA	**Warramunga Arr**	**17.42**	**166**	IAmb	IAmb	02 30 47.1	
	comp=Z,0.2nm,0.9s						
AS31	**Alice Springs**	**20.95**	**170**	P	**P**	**02 30 36.2**	**+0.4**
ASAR	**Alice Springs**	**20.95**	**170**	P	Pn	02 30 37.4	-1.1
	comp=Z,9.0nm,0.8s,baz=347,slow=9.8,SNR=57						
ASAR	**Alice Springs**	**20.95**	**170**	P	Pn	02 30 37.5	-0.9
SONM	**Songino Array**	**54.62**	**341**	P	**P**	**02 35 23.0**	**+1.7**
	comp=Z,0.4nm,0.8s,baz=140,slow=9.1,SNR=2.5						
SONM	**Songino Array**	**54.62**	**341**	IAmb	IAmb	02 35 30.5	
	comp=Z,1.1nm,1.1s						
MK31	**Makanchi Array**	**64.86**	**326**	P	**P**	**02 36 31.5**	**-0.2**
MK31				IAmb	IAmb	02 38 48.9	
	comp=Z,3.6nm,1.7s						
MKAR	**Makanchi Array**	**64.86**	**326**	P	**P**	**02 36 32.7**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=127,slow=7.1,SNR=5.1						
ZAA0	**Zalesovo Array**	**67.97**	**333**	P	**P**	**02 36 51.4**	**+0.1**
ZALV	**Zalesovo Beam**	**67.97**	**333**	P	**P**	**02 36 53.1**	**+1.8**
	comp=Z,1.0nm,0.2s,baz=111,slow=7.9,SNR=3.0						
ZALV	**Zalesovo Beam**	**67.97**	**333**	P	**P**	**02 36 50.9**	**-0.4**
KURK	**Kurchatov**	**69.08**	**328**	P	**P**	**02 36 59.2**	**+0.9**

*JMA **24** 02:33:08.9±0.1,29°.10N×130°.30E, h68km±3km, M3.2*
*IDC **24** 02:33:09.8±5.1,29°.09N×130°.25E, h45km±62km, mb3.3/7, mb1 3.3/8, mb1mx3.2/56, mbtmp3.4/8, ML2.1/1, Error ellipse: s-maj=52.8km s-min=34.4km az=163.0*

ISC 24 02:33:08.9±1.2,**29°.02N**±0°.04×**130°.44E**±0°.07,**h45**km±12km, **n25,** σ0**81**/31,**mb3.4**/7,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JZK	**Kikaishima**	**0.81**	**211**	P	**Pn**	**02 33 25.5**	**+1.5**
JAM	**Amami Oshima**	**0.95**	**231**	P	**Pn**	**02 33 26.0**	**+0.2**
JAM				*eS*	**Sn**	**02 33 38.9**	**+0.6**
JNN	**Nakanoshima**	**0.96**	**329**	P	**Pn**	**02 33 25.4**	**-0.6**
JNN				*eS*	**Sn**	**02 33 38.2**	**-0.3**
JTAJ	**Takarajima**	**1.09**	**277**	P	**Pn**	**02 33 27.0**	**-0.8**
JYAK	**Yakushimahirau**	**1.22**	**3**	P	**Pn**	**02 33 29.5**	**0.0**
JYAK				*eS*	**Sn**	**02 33 44.8**	**0.0**
JAMN	**Amaminishikomi**	**1.35**	**236**	P	**Pn**	**02 33 31.5**	**+0.1**
JMTN	**Minamitane**	**1.43**	**16**	P	**Pn**	**02 33 32.6**	**+0.2**
JMTN				*eS*	**Sn**	**02 33 50.4**	**+0.3**
JTN	**Tanegashima 3**	**1.70**	**16**	P	**Pn**	**02 33 36.3**	**+0.2**
JTN				*eS*	**Sn**	**02 33 56.5**	**-0.1**
JTK	**Tokunoshima**	**1.80**	**227**	P	**Pn**	**02 33 38.1**	**+0.7**
JTSR	**Tashiro 2**	**2.18**	**11**	*eS*	**Sn**	**02 34 08.2**	**-0.3**
JOKE	**Okinoerabujima**	**2.33**	**225**	P	**Pn**	**02 33 45.5**	**+0.7**
JYRO	**Yoronjima**	**2.65**	**222**	P	**Pn**	**02 33 49.4**	**+0.2**
JOW	**Kunigami**	**2.90**	**222**	P	**Pn**	**02 33 52.7**	**+0.1**
JOW	**Kunigami**	**2.90**	**222**	P	**Pn**	**02 33 53.0**	**+0.4**
	0.5nm,0.3s,baz=86,slow=17,SNR=7.7						
JOW				S	**Sn**	**02 34 26.1**	**-0.1**
	1.3nm,0.3s,baz=92,slow=16,SNR=3.3						
JKDJ	**Kitadaitoujima**	**3.15**	**166**	*eS*	**Sn**	**02 34 30.5**	**-1.9**
JMZ	**Minamidaito 2**	**3.26**	**168**	*eS*	**Sn**	**02 34 32.9**	**-2.2**
JAGN	**Aguni-jima**	**3.73**	**230**	P	**Pn**	**02 34 03.9**	**0.0**
JKE	**Kume jima 2**	**4.21**	**231**	P	**Pn**	**02 34 10.6**	**+0.1**
SONM	**Songino Array**	**26.43**	**322**	P	**P**	**02 38 40.5**	**-1.0**
	0.2nm,0.5s,baz=140,slow=9.0,SNR=3.3						
MKAR	**Makanchi Array**	**41.22**	**309**	P	**P**	**02 40 49.5**	**+0.1**
	0.4nm,0.8s,baz=97,slow=7.7,SNR=3.6						
ILAR	**Eielson Array**	**61.06**	**29**	P	**P**	**02 43 18.2**	**+0.4**
	0.2nm,0.7s,baz=261,slow=6.0,SNR=4.4						
FINES	**FINESS Array B**	**71.41**	**331**	P	**P**	**02 44 23.6**	**-0.5**
	1.5nm,0.9s,baz=65,slow=6.6,SNR=3.6						
AKASG	**Malin Array Be**	**74.69**	**320**	P	**P**	**02 44 43.2**	**-0.5**
	0.6nm,0.6s,baz=58,slow=6.4,SNR=2.9						
YKA	**Yellowknife Ar**	**75.17**	**26**	P	**P**	**02 44 47.9**	**+1.6**
	0.2nm,0.8s,baz=303,slow=5.7,SNR=4.3						
BRTR	**Keskin Array B**	**76.87**	**308**	P	**P**	**02 44 56.6**	**0.0**
	0.5nm,0.7s,baz=106,slow=3.7,SNR=3.5						

WEL 24 02:35:18.3±0.6,**35°S**±6°×**17°9W**±1°2,**h33**km,**M4.5**/26, **ML4.8**/13,**MLv4.5**/26,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKGZ	**Pakihiroa**	**3.78**	**219**	P	Pn	02 36 14.6	+0.3
PKGZ				S	Sn	02 36 58.1	+0.5
PUZ	**Puketiti**	**3.84**	**215**	P	Pn	02 36 15.1	+0.1
PUZ				S	Sn	02 36 58.2	-0.8
HAZ	**Te Kaha**	**3.84**	**222**	P	Pn	02 36 15.8	+0.7
HAZ				S	Sn	02 37 01.2	+2.2
RUGZ	**Raukumara Rang**	**4.05**	**221**	P	Pn	02 36 18.7	+0.7
RUGZ				S	Sn	02 37 05.1	+0.7
TWGZ	**Tauwhareparae**	**4.05**	**217**	P	Pn	02 36 18.4	+0.4
TWGZ				S	Sn	02 37 05.0	+0.7
CNGZ	**Carnagh Statio**	**4.20**	**212**	P	Pn	02 36 20.0	+0.1
TKGZ	**Te Karaka**	**4.32**	**216**	P	Pn	02 36 22.8	+1.2
WHRZ	**Whale Island**	**4.38**	**228**	P	Pn	02 36 25.1	+2.6
MWZ	**Matawai**	**4.40**	**219**	P	Pn	02 36 23.0	+0.2
MWZ				S	Sn	02 37 11.9	-1.0
URZ	**Urewera**	**4.57**	**223**	P	Pn	02 36 25.6	+0.5
URZ				S	Sn	02 37 16.3	-0.7
RIGZ	**Rimuhau**	**4.58**	**214**	P	Pn	02 36 25.1	-0.1
RIGZ				S	Sn	02 37 16.8	-0.5
RAGZ	**Rawiri**	**4.58**	**219**	P	Pn	02 36 25.3	0.0
RAGZ				S	Sn	02 37 17.4	0.0
SNGZ	**Shannon Statio**	**4.84**	**217**	P	Pn	02 36 29.3	+0.6
SNGZ				S	Sn	02 37 21.9	-1.7
MHGZ	**Mahia Peninsul**	**4.88**	**210**	P	Pn	02 36 28.7	-0.7
RTZ	**Ruatahuna**	**4.90**	**221**	P	Pn	02 36 30.4	+0.7
TARZ	**Mount Tarawera**	**4.91**	**227**	P	Pn	02 36 31.0	+1.2
MUGZ	**Murupara**	**4.92**	**223**	P	Pn	02 36 30.1	+0.2
RAHZ	**Arahi**	**5.07**	**218**	P	Pn	02 36 32.9	+1.0
MTHZ	**Maungataniwha**	**5.15**	**220**	P	Pn	02 36 33.2	+0.2
TOZ	**Tahuroa Road**	**5.26**	**237**	P	Pn	02 36 36.7	+2.1
ARHZ	**Aropaoanui**	**5.38**	**216**	P	Pn	02 36 36.3	+0.1
BKZ	**Black Stump Fm**	**5.56**	**220**	P	Pn	02 36 38.4	-0.3
MCHZ	**McNeill Hill**	**5.67**	**217**	P	Pn	02 36 40.1	0.0
GLKZ	**Green Lake**	**5.75**	**9**	P	Pn	02 36 39.3	-2.0
GLKZ				S	Sn	02 37 46.1	0.0
KWHZ	**Kaweka Forest**	**5.79**	**218**	P	Pn	02 36 41.7	-0.2
KAHZ	**Kahuranaki**	**5.86**	**213**	P	Pn	02 36 41.2	-1.6
KRHZ	**Kereru**	**5.98**	**217**	P	Pn	02 36 43.8	-0.7
BHHZ	**Black Hill Sta**	**6.02**	**220**	P	Pn	02 36 45.2	+0.1
PNHZ	**Pukenui**	**6.27**	**217**	P	Pn	02 36 47.1	-1.4
HOWZ	**Holdsworth Sta**	**7.37**	**215**	P	Pn	02 37 01.8	-1.6
OKCZ	**Okains Bay**	**10.71**	**213**	P	Pn	02 37

SIV	**San Ignacio**	**49.67**	**250**	P		**P**		**02 44 18.4**	**-2.1**
	comp=Z,1.4nm,1.1s,baz=104,slow=8.3,SNR=2.6								
DAVA	**Damuels**	**52.10**	**20**	*i* P		**P**		**02 44 37.5**	**-0.9**
	comp=Z,18nm,1.1s								
FETA	**Feichten**	**52.16**	**20**	*i* P		**P**		**02 44 38.0**	**-0.9**
	comp=Z,8.3nm,1.2s								
LIT	**Litokhoron**	**52.17**	**34**	P		**P**		**02 44 36.7**	**-2.3**
LIT				IAmb		IAmb		02 44 40.0	
	comp=Z,6.8nm,0.9s								
KNDS	**Knezji Dol**	**52.29**	**24**	*i* P		**P**		**02 44 40.3**	**+0.6**
SQTA	**Sankt Quirin**	**52.50**	**21**	*i* P		**P**		**02 44 40.6**	**-0.7**
	comp=Z,18nm,1.3s								
MOTA	**Moosalm**	**52.56**	**20**	*i* P		**P**		**02 44 40.8**	**-1.1**
	comp=Z,7.5nm,1.0s								
ABTA	**Abfaltersbach**	**52.57**	**22**	*i* P		**P**		**02 44 43.4**	**+1.6**
	comp=Z,4.0nm,0.9s								
WATA	**Walderalm**	**52.72**	**21**	*i* P		**P**		**02 44 43.0**	**0.0**
	comp=Z,9.2nm,1.1s								
MYKA	**Terra Mystica**	**52.90**	**23**	*i* P		**P**		**02 44 45.8**	**+1.5**
	comp=Z,11nm,1.3s								
OBKA	**Obir**	**53.16**	**24**	*i* pP		**P**		**02 44 48.7**	**+2.6**
	comp=Z,11nm,1.3s								
SOKA	**Soboth**	**53.49**	**24**	*i* P		**P**		**02 44 48.8**	**+0.2**
	comp=Z,7.0nm,1.2s								
MOA	**Molln**	**54.15**	**22**	*i* P		**P**		**02 44 52.9**	**-0.4**
	comp=Z,8.3nm,1.3s								
ARSA	**Arzberg**	**54.15**	**24**	*i* P		**P**		**02 44 52.6**	**-0.8**
	comp=Z,7.9nm,1.6s								
VTS	**Vitosha**	**54.30**	**32**	⇑P		**P**		**02 44 56.0**	**+1.3**
VTS	**Vitosha**	**54.30**	**32**	P		**P**		**02 44 55.2**	**+0.5**
ALN	**Alexandroupoli**	**54.74**	**36**	P		**P**		**02 44 59.5**	**+1.7**
GEC2	**GERESS Array S**	**54.76**	**21**	P		**P**		**02 44 56.0**	**-2.0**
GEC2				IAmb		IAmb		02 44 58.5	
	comp=Z,13nm,1.1s								
GERES	**GERESS Array B**	**54.76**	**21**	P		**P**		**02 44 57.2**	**-0.7**
	comp=Z,5.5nm,0.9s,baz=191,slow=6.5,SNR=29								
CONA	**Conrad Observa**	**54.83**	**23**	*i* P		**P**		**02 44 58.5**	**+0.1**
	comp=Z,7.9nm,1.2s								
KHC	**Kasperske Hory**	**54.96**	**21**	*e*P		**P**		**02 44 59.7**	**+0.5**
KHC				*ex*		x		02 45 07.3	
KHC				AMS		AMS		03 08 40.0	
	comp=Z,800nm,17.5s								
KHC	**Kasperske Hory**	**54.96**	**21**	P		**P**		**02 44 58.9**	**-0.4**
MDVR	**Moldovita**	**55.03**	**30**	⇑P		**P**		**02 45 01.7**	**+1.8**
HERR	**Herculane**	**55.45**	**30**	⇑P		**P**		**02 45 04.2**	**+1.4**
ZST	**Bratislava**	**55.54**	**24**	*e*P		**P**		**02 45 02.8**	**-0.6**
SRO	**Srobarova**	**55.74**	**25**	*e*P		**P**		**02 45 05.5**	**+0.6**
MODS	**Modra-Piesok**	**55.76**	**24**	*e*P		**P**		**02 45 04.6**	**-0.4**
GZR	**Gura Zlata**	**56.00**	**30**	⇑P		**P**		**02 45 07.4**	**+0.6**
PRU	**Pruhonice**	**56.02**	**21**	AMS		AMS		03 09 50.0	
	comp=Z,800nm,19.0s								
GOPC	**GO Pecny, Ondr**	**56.05**	**21**	*e*P		**P**		**02 45 06.6**	**-0.4**
PRA	**Prague**	**56.05**	**21**	AMS		AMS		03 09 50.0	
	comp=Z,800nm,16.5s								
VRAC	**Vranov**	**56.23**	**23**	⇓P		**P**		**02 45 06.7**	**-1.6**
LPAZ	**La Paz**	**56.38**	**251**	LR		LR		03 07 11.4	
	comp=Z,229nm,20.9s,baz=88,slow=34								
VYHS	**Vyhne**	**56.49**	**25**	*e*P		**P**		**02 45 10.3**	**0.0**
PSZ	**Piszkesteto**	**56.51**	**26**	P		**P**		**02 45 10.7**	**+0.2**
PSZ				IAmb		IAmb		02 45 11.8	
	comp=Z,8.4nm,1.0s								
BRG	**Berggiesshubel**	**56.55**	**20**	*e*P		**P**		**02 45 10.2**	**-0.3**
	comp=Z,7.9nm,1.3s								
BRG				S		**S**		**02 53 08.0**	**+5.9**
	comp=N,889nm,20.3s								
	comp=E,496nm,20.4s								
	comp=Z,626nm,11.0s								
CLL	**Collm**	**56.60**	**19**	*e*P		**P**		**02 45 11.0**	**+0.1**
	comp=Z,13nm,1.5s								
CLL				*e*S		**S**		**02 53 06.0**	**+3.3**
	comp=N,400nm,25.7s								
CLL				*e*S		**S**		**02 53 06.0**	**+3.3**
	comp=E,400nm,29.4s								
CLL				*e*				02 57 30.0	
CLL				*e*				03 00 06.0	
CLL				LmH				03 05 00.0	
	comp=N,500nm,21.7s								
CLL				LmH				03 05 00.0	
	comp=E,400nm,21.6s								
CLL				LmV				03 08 00.0	
	comp=Z,400nm,21.8s								
ARR	**Arges**	**56.92**	**31**	⇑P		**P**		**02 45 14.1**	**+0.7**
DPC	**Dobruska-Polom**	**56.97**	**22**	*e*P		**P**		**02 45 13.2**	**-0.5**
MORC	**Moravsky Berou**	**56.98**	**23**	⇑P		**P**		**02 45 13.3**	**-0.4**
OSTC	**Ostas**	**57.10**	**22**	*e*P		**P**		**02 45 14.7**	**+0.2**
VOIR		**57.18**	**31**	⇑P		**P**		**02 45 15.5**	**+0.2**
MDUB	**Mudurnu**	**57.61**	**39**	P		**P**		**02 45 18.7**	**+0.2**
MLR	**Muntele Rosu**	**57.68**	**32**	⇑P		**P**		**02 45 19.2**	**+0.3**
MLR	**Muntele Rosu**	**57.68**	**32**	P		**P**		**02 45 19.0**	**+0.1**
MLR				IAmb		IAmb		02 45 29.2	
	comp=Z,14nm,1.3s								
DOPR	**Dopca**	**57.72**	**31**	⇑P		**P**		**02 45 18.5**	**-0.4**
TRPA	**Tarpa**	**57.85**	**27**	⇑P		**P**		**02 45 19.8**	**-0.1**
CRVS	**Cervenica-Dubn**	**57.94**	**26**	*e*P		**P**		**02 45 21.5**	**+1.1**
OJC	**Ojcow**	**58.23**	**24**	P		**P**		**02 45 21.9**	**-0.5**
OJC				IAmb		IAmb		02 45 23.3	
	comp=Z,4.8nm,0.8s								
PLOR	**Plostina**	**58.29**	**32**	⇑P		**P**		**02 45 21.1**	**-1.9**
KOLS	**Kolonicke sedl**	**58.32**	**27**	*e*P		**P**		**02 45 24.2**	**+1.1**
VRI	**Vrincioaia**	**58.34**	**32**	⇑P		**P**		**02 45 22.3**	**-1.1**
TESR	**Tescani**	**58.73**	**31**	⇑P		**P**		**02 45 25.2**	**-0.9**
BIZ	**Bicaz**	**58.74**	**30**	⇑P		**P**		**02 45 26.1**	**0.0**
BURAR	**Bucovina Array**	**58.76**	**29**	⇑P		**P**		**02 45 26.2**	**-0.1**
BURAR	**Bucovina Array**	**58.76**	**29**	P		**P**		**02 45 26.9**	**+0.5**
BUR08	**Bucovina Ar. S**	**58.77**	**29**	IAmb		IAmb		02 45 44.2	
	comp=Z,8.4nm,1.2s								
BRTR	**Keskin Array B**	**58.78**	**41**	P		**P**		**02 45 28.2**	**+1.6**
	comp=Z,1.4nm,0.7s,baz=224,slow=8.2,SNR=12								
BRTR				LR		LR		03 12 53.3	
	comp=Z,173nm,20.4s,baz=210,slow=38								
BRTR	**Keskin Array B**	**58.78**	**41**	P		**P**		**02 45 27.5**	**+0.8**
BR131	**Keskin Array S**	**58.78**	**41**	P		**P**		**02 45 27.3**	**+0.7**
GO02	**Mina Guanaco**	**59.59**	**241**	P		**P**		**02 45 36.2**	**+3.4**
GAZ	**Gaziantep**	**59.96**	**45**	P		**P**		**02 45 36.0**	**+1.2**
RUSC	**La Rusia**	**60.39**	**277**	P		**P**		**02 45 39.5**	**+0.9**
ROSC	**El Rosal**	**61.54**	**276**	P		**P**		**02 45 44.8**	**-1.6**
	comp=Z,4.1nm,0.4s,baz=90,slow=20,SNR=4.1								
ROSC				LR		LR		03 09 01.5	
	comp=Z,588nm,21.6s,baz=88,slow=33								
ROSC	**El Rosal**	**61.54**	**276**	IAmb		IAmb		02 45 57.4	
	comp=Z,14nm,1.5s								
RAYN	**Ar Rayn**	**61.79**	**63**	P		**P**		**02 45 49.4**	**+1.9**
RAYN				IAmb		IAmb		02 45 50.9	
	comp=Z,7.4nm,1.1s								
FLOC	**Florencia**	**62.71**	**272**	P		**P**		**02 45 57.0**	**+3.1**
AKASG	**Malin Array Be**	**62.78**	**29**	P		**P**		**02 45 51.8**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=226,slow=5.1,SNR=8.7								
AKASG				LR		LR		03 14 05.9	
	comp=Z,311nm,20.7s,baz=235,slow=37								
AKASG	**Malin Array Be**	**62.78**	**29**	IAmb		IAmb		02 45 53.4	
	comp=Z,2.7nm,1.2s								
NB2	**NORSAR Subarra**	**64.62**	**13**	P		**P**		**02 46 04.8**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=206,slow=6.9								
NOA	**NORSAR Array B**	**64.62**	**13**	P		**P**		**02 46 02.8**	**-2.8**
	comp=Z,2.5nm,0.9s,baz=207,slow=6.8,SNR=4.8								
PLCA	**Paso Flores**	**65.23**	**225**	LR		LR		03 09 47.3	
	comp=Z,388nm,21.8s,baz=100,slow=32								
BORG	**Borgarnes**	**65.89**	**356**	LR		LR		03 09 52.4	
	comp=Z,141nm,21.4s,baz=159,slow=31								
KBZ	**Khabaz**	**66.77**	**41**	P		**P**		**02 46 20.3**	**+0.6**
	comp=Z,4.7nm,0.8s,baz=246,slow=3.9,SNR=10								
FINES	**FINESS Array B**	**69.04**	**19**	P		**P**		**02 46 32.6**	**-1.1**
	comp=Z,1.9nm,0.5s,baz=220,slow=5.2,SNR=12								
SNAA	**Sanae**	**70.85**	**177**	P		**P**		**02 46 43.9**	**-0.8**
	comp=Z,1.7nm,1.0s,baz=7.1,slow=8.1,SNR=3.8								
SNAA	**Sanae**	**70.85**	**177**	IAmb		IAmb		02 47 03.5	
	comp=Z,7.3nm,1.3s								
SCHQ	**Schefferville**	**70.91**	**330**	LR		LR		03 12 53.8	
	comp=Z,154nm,19.1s,baz=132,slow=32								
UOSS	**Minazif**	**71.64**	**63**	P		**P**		**02 46 50.6**	**+0.3**
SFJD	**Kangerlussuaq**	**72.84**	**345**	LR		LR		03 12 43.4	
	comp=Z,188nm,19.1s,baz=144,slow=31								
KLMR	**Klimovskoe**	**73.58**	**24**	*e*P		**P**		**02 46 57.9**	**-3.2**
KLMR				AMP				02 47 01.3	
	comp=Z,12nm,1.4s								
KLMR				LQ		LQ		03 14 35.7	
KLMR				LQ		LQ		03 14 35.7	
KLMR				LR		LR		03 19 02.3	
SADO	**Sadowa**	**74.00**	**317**	LR		LR		03 13 44.0	
	comp=Z,482nm,19.7s,baz=134,slow=31								
ARCES	**ARCESS Array B**	**75.00**	**13**	P		**P**		**02 47 07.8**	**-1.5**
	comp=Z,2.3nm,0.8s,baz=254,slow=3.4,SNR=10.0								
ARCES				LR		LR		03 22 21.3	
	comp=Z,292nm,18.6s,baz=212,slow=38								
GEYT	**Alibeck**	**75.80**	**51**	P		**P**		**02 47 15.3**	**+0.7**
	comp=Z,3.5nm,0.8s,baz=296,slow=8.1,SNR=7.7								
GEYT				LR		LR		03 22 15.5	
	comp=Z,301nm,21.3s,baz=225,slow=37								
GEYT	**Alibeck**	**75.80**	**51**	P		**P**		**02 47 15.2**	**+0.6**
GYA0B	**ALIBECK ARRAY**	**75.80**	**51**	P		**P**		**02 47 14.9**	**+0.3**
GYA0B				IAmb		IAmb		02 47 33.2	
	comp=Z,8.1nm,1.1s								
M50A	**Fremont**	**75.81**	**313**	P		**P**		**02 47 16.7**	**+2.2**
HRA	**Herat**	**78.41**	**55**	P		**P**		**02 47 30.4**	**+0.9**
HRA				IAmb		IAmb		02 47 31.6	
	comp=Z,9.8nm,1.1s								
ABKAR	**Akbulak array**	**79.69**	**40**	P		**P**		**02 47 36.1**	**+0.2**
ARU	**Arti**	**80.72**	**32**	P		**P**		**02 47 41.0**	**-0.3**
ARU				IAmb		IAmb		02 47 42.1	
	comp=Z,11nm,0.9s								
MAW	**Mawson**	**83.70**	**158**	LR		LR		03 18 46.3	
	comp=Z,176nm,18.3s,baz=264,slow=31								
KBL	**Kabul**	**84.00**	**55**	P		**P**		**02 47 58.9**	**-0.4**
KBL				IAmb		IAmb		02 48 00.4	
	comp=Z,4.0nm,0.6s								
CHGR	**Chuyangaron**	**84.49**	**51**	P		**P**		**02 48 01.2**	**-0.4**
KK31	**Karatay Array**	**85.93**	**47**	P		**P**		**02 48 08.5**	**0.0**
KKAR	**Karatay Array**	**85.93**	**47**	P		**P**		**02 48 08.5**	**0.0**
ULM	**Lac du Bonnet**	**86.21**	**320**	LR		LR		03 20 41.9	
	comp=Z,169nm,21.1s,baz=96,slow=32								
AAK	**Ala-Archa**	**88.82**	**48**	P		**P**		**02 48 23.7**	**+1.0**
KSH	**Kashi**	**89.83**	**51**	P		**P**		**02 48 28.1**	**+0.6**
KSH				sP		pwP		02 48 38.0	+3.1
KSH				PP		**PP**		**02 51 57.0**	**-3.0**
KSH	**Kashi**	**89.83**	**51**	SKS		**SKSac**		**02 58 53.4**	**-5.2**
KSH	**Kashi**	**89.83**	**51**	S		**S**		**02 59 17.0**	**-3.0**
KSH	**Kashi**	**89.83**	**51**	SS		SS		03 05 10.6	-6.7
KSH				pmax		pmax			
	comp=Z,19nm,0.9s								
KSH				pmax		pmax			
	comp=Z,460nm,5.4s								
KSH				LR		LR			
	comp=N,180nm,4.8s								
KSH				LR		LR			
	comp=E,170nm,4.9s								
KSH				LR		LR			
	comp=Z,540nm,10.5s								
TXAR	**Lajitas Array**	**91.08**	**299**	LR		LR		03 25 07.9	
	comp=Z,96nm,20.9s,baz=0.0,slow=33								
MK31	**Makanchi Array**	**94.36**	**43**	P		**P**		**02 48 47.7**	**-0.5**
MKAR	**Makanchi Array**	**94.36**	**43**	P		**P**		**02 48 47.8**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=268,slow=2.9,SNR=8.5								
MKAR				LR		LR		03 36 25.1	
	comp=Z,111nm,19.5s,baz=265,slow=39								
MKAR	**Makanchi Array**	**94.36**	**43**	P		**P**		**02 48 47.3**	**-0.8**
ZALV	**Zalesovo Beam**	**95.42**	**36**	LR		LR		03 36 41.3	
	comp=Z,166nm,18.2s,baz=281,slow=38								
PDAR	**Pinedale Array**	**95.51**	**313**	LR		LR		03 28 48.7	
	comp=Z,177nm,18.5s,baz=49,slow=34								
YKA	**Yellowknife Ar**	**96.26**	**333**	P		**P**		**02 48 55.0**	**-1.4**
	comp=Z,0.2nm,0.7s,baz=82,slow=4.6,SNR=3.6								
WMQ	**Urumqi**	**98.41**	**46**	*e*P		Pdif		02 49 07.5	+0.8
WMQ				pmax		pmax			
	comp=Z,5.0nm,0.6s								
WMQ				pmax		pmax			
	comp=Z,38nm,3.9s								
WMQ				LR		LR			
	comp=N,520nm,28.8s								
WMQ				LR		LR			
	comp=E,630nm,28.9s								
WMQ				LR		LR			
	comp=Z,170nm,29.0s								
TBI	**Tubuai**	**131.25**	**237**	*e*LR		LR		03 36 13.4	
	comp=Z,268nm,31.2s								
PPT2	**Papeete2**	**133.43**	**245**	*e*LR		LR		03 37 08.9	
	comp=Z,203nm,24.2s								
ASAR	**Alice Springs**	**139.55**	**129**	PKhKP		PKPpre		02 54 48.0	
	comp=Z,0.6nm,0.6s,baz=219,slow=2.9,SNR=7.6								
WRA	**Warramunga Arr**	**141.80**	**125**	PKhKP		PKPpre		02 54 55.5	
	comp=Z,0.9nm,0.9s,baz=244,slow=2.8,SNR=6.0								
DZM	**Mont Dzumac**	**157.05**	**179**	*e*LR		LR		03 48 10.3	
	comp=Z,282nm,26.4s								

IDC 24 02:37:48.6±1.4,2.87S×129.94E,h0km,mb3.5/2, mb1 3.8/5,mb1mx3.5/43,mbtmp3.6/5,ML3.6/3,MS2.8/1, Ms1 2.8/1,ms1mx2.3/21,Error ellipse: s-maj=41.6km s-min=20.8km az=97.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.39**	**34**	Pn	Pn	02 38 29.6	+0.5
	7.3nm,0.3s,baz=218,slow=23,SNR=86						
SIJI				Sn	Sn	02 38 58.7	-0.4
	10nm,0.3s,baz=224,slow=23,SNR=7.5						
FITZ	**Fitzroy Crossi**	**15.71**	**195**	Pn	Pn	02 41 32.5	+1.1
	0.2nm,0.3s,baz=22,slow=12,SNR=3.6						
WRA	**Warramunga Arr**	**17.50**	**166**	P	Pn	02 41 52.9	-1.4
	0.3nm,0.3s,baz=347,slow=12,SNR=6.4						
PMG	**Port Moresby**	**18.31**	**112**	LR	LR	02 50 27.0	
	comp=Z,26nm,18.6s,baz=148,slow=41						
ASAR	**Alice Springs**	**21.03**	**170**	P	P	02 42 34.5	+0.3
	2.7nm,0.6s,baz=348,slow=10,SNR=27						
MKAR	**Makanchi Array**	**64.78**	**326**	P	P	02 48 29.1	0.0
	0.2nm,0.6s,baz=127,slow=7.8,SNR=2.9						

NEIC ***24*** *02:39:14.6±1.0,53°.4S±0°.1×141°.5E±0°.5,h10km±2km, mb4.2/11,Error ellipse: s-maj=52.2km s-min=22.2km az=95.0*

IDC ***24*** *02:39:19.3±0.7,52°.76S×140°.46E,h0km,mb4.2/8, mb1 4.4/8,mb1mx4.1/31,mbtmp4.3/8,MS4.1/10, Ms1 4.1/10,ms1mx4.0/14,Error ellipse: s-maj=42.5km s-min=15.1km az=89.0*

GCMT ***24*** *02:39:21.6±0.2,52°.87S±0°.01×140°.20E±0°.02,h16km±1km, MW5.0/96,Moment Tensor Solution. s26,c30; s96,c130; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.35±.13; Mθθ0.58±.12; Mϕϕ-0.22±.14; Mrθ-0.92±.36; Mϕθ-3.81±.11; Mϕr-0.10±.34; Best double couple: Mw3.94600×10^16 NP1:ϕs357.00000°,δ76.00000°,λ-3.00000°. NP2: ϕs87.00000°,δ87.00000°,λ-166.00000°. Principal axes: T 4.0950, Plg8.0000°, Azm221.0000°; N -0.2990, Plg76.0000°, Azm97.0000°; P -3.7960, Plg12.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 24 02:39:20.9±0.6,52.79S±0°.08×140.7E±0°.2,h10km,n57, σ0.96/42,mb4.3/10,MS4.0/13,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TAU	**Tasmania Unive**	**10.83**	**27**	Pn	**Pn**	**02 41 55.0**	**-0.8**
TOO	**Toolangi**	**15.58**	**14**	Pn	**Pn**	**02 43 01.3**	**+0.8**
TOO				IAmb	IAmb	02 43 15.1	
	comp=Z,20nm,1.1s						
BBOO	**Buckleboo**	**20.25**	**349**	P	Pn	02 43 57.8	-0.3
BBOO				IAmb	IAmb	02 44 02.5	
	comp=Z,11nm,1.1s						
STKA	**Stephens Creek**	**20.91**	**2**	P	**P**	**02 44 03.4**	**0.0**
	comp=Z,8.3nm,1.1s,baz=157,slow=9.3,SNR=7.1						
STKA				LR	LR	02 51 01.4	
	comp=Z,341nm,19.0s,baz=183,slow=34						
STKA	**Stephens Creek**	**20.91**	**2**	P	**P**	**02 44 03.5**	**+0.2**
FORT	**Forrest**	**23.86**	**332**	P	**P**	**02 44 34.4**	**+0.1**
H01W1	**Cape Leeuwin H**	**25.98**	**303**	T	T	03 11 47.0	
	baz=142,slow=75,SNR=174						
H01W2	**Cape Leeuwin H**	**25.99**	**303**	T	T	03 11 47.3	
	baz=142,slow=75,SNR=191						
H01W3	**Cape Leeuwin H**	**26.00**	**303**	T	T	03 11 48.2	
	baz=142,slow=75,SNR=178						
VNDA	**Vanda**	**26.02**	**170**	P	**P**	**02 44 53.7**	**+0.2**
	comp=Z,8.7nm,1.0s,baz=340,slow=7.5,SNR=10						
VNDA				LR	LR	02 53 08.8	
	comp=Z,415nm,18.8s,baz=338,slow=32						
NWAO	**Narrogin (SRO)**	**26.07**	**310**	LR	LR	02 52 41.3	
	comp=Z,827nm,20.8s,baz=128,slow=31						
ASAR	**Alice Springs**	**29.54**	**347**	P	**P**	**02 45 24.1**	**-1.5**
	comp=Z,3.6nm,0.9s,baz=166,slow=9.4,SNR=15						
ASAR				LR	LR	02 56 15.0	
	comp=Z,202nm,20.6s,baz=170,slow=34						
ASAR	**Alice Springs**	**29.54**	**347**	P	**P**	**02 45 25.1**	**-0.4**
AS31	**Alice Springs**	**29.54**	**347**	P	**P**	**02 45 25.1**	**-0.4**
AS31				IAmb	IAmb	02 45 27.1	
	comp=Z,1.2nm,0.7s						
WR0	**Warramunga Arr**	**33.12**	**349**	P	**P**	**02 45 57.1**	**+0.2**
WR0				IAmb	IAmb	02 45 58.2	
	comp=Z,8.4nm,1.1s						
WB2	**Warramunga Arr**	**33.16**	**349**	P	**P**	**02 45 57.6**	**+0.2**
WRA	**Warramunga Arr**	**33.16**	**349**	P	**P**	**02 45 55.3**	**-2.0**
	comp=Z,9.4nm,1.1s,baz=177,slow=7.2,SNR=17						
WRA				PcP	**PcP**	**02 48 40.5**	**+0.3**
	comp=Z,0.8nm,0.9s,baz=178,slow=2.4,SNR=5.5						
WRA				LR	LR	02 58 38.6	
	comp=Z,232nm,19.0s,baz=155,slow=35						
WRA	**Warramunga Arr**	**33.16**	**349**	P	**P**	**02 45 56.6**	**-0.8**
WRAB	**Tennant Creek**	**33.16**	**349**	P	**P**	**02 45 57.3**	**-0.1**
WB0	**Warramunga Arr**	**33.32**	**349**	P	**P**	**02 45 58.5**	**-0.3**
DZM	**Mont Dzumac**	**36.45**	**43**	*e*S	**S**	**02 52 07.2**	**-0.5**
	comp=Z,126nm,28.1s						
DZM				*e*LR	LR	02 56 14.5	
	comp=Z,2μm,25.6s						
QSPA	**South Pole Qui**	**37.32**	**180**	P	**P**	**02 46 32.1**	**-0.9**
	comp=Z,6.1nm,0.8s,baz=358,slow=4.2,SNR=12						
MAW	**Mawson**	**38.48**	**217**	P	**P**	**02 46 42.6**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=117,slow=9.0,SNR=2.8						
MAW				LR	LR	03 00 51.6	
	comp=Z,996nm,19.8s,baz=81,slow=34						
SNAA	**Sanae**	**53.20**	**194**	P	**P**	**02 48 38.2**	**-0.4**
SNAA	**Sanae**	**53.20**	**194**	P	**P**	**02 48 37.3**	**-1.3**
	comp=Z,1.5nm,0.8s,baz=156,slow=13,SNR=4.5						
VNA1	**Neumayer--Stat**	**54.86**	**192**	P	**P**	**02 48 49.6**	**-1.0**
TBI	**Tubuai**	**59.62**	**89**	*e*LQ	LQ	03 04 09.3	
	comp=Z,352nm,27.0s						
TBI				*e*LR	LR	03 06 39.1	
	comp=Z,192nm,34.2s						
KSM	**Kuching**	**59.78**	**324**	P	**P**	**02 49 25.4**	**-0.7**
PPT2	**Papeete2**	**63.92**	**85**	*e*LQ	LQ	03 05 56.8	
	comp=Z,872nm,32.0s						
PPT2				*e*LR	LR	03 08 40.4	
	comp=Z,200nm,29.0s						
PPT	**Papeete**	**63.94**	**85**	LR	LR	03 13 24.9	
	comp=Z,67nm,18.9s,baz=250,slow=32						
H08S2	**Diego Garcia H**	**70.83**	**283**	T	T	04 07 35.9	
	baz=144,slow=76,SNR=23						
H08S1	**Diego Carcia H**	**70.85**	**283**	T	T	04 07 36.5	
	baz=144,slow=76,SNR=17						
H08S3	**Diego Garcia H**	**70.86**	**283**	T	T	04 07 37.3	
	baz=144,slow=76,SNR=21						
CMAR	**Chiang Mai Arr**	**79.64**	**320**	P	**P**	**02 51 28.0**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=179,slow=5.4,SNR=5.1						
CMAR				LR	LR	03 25 27.9	
	comp=Z,121nm,20.3s,baz=178,slow=35						
BOSA	**Boshof**	**81.44**	**233**	LR	LR	03 20 02.2	
	comp=Z,194nm,22.0s,baz=146,slow=30						
KSRS	**Korea Array**	**90.56**	**350**	LR	LR	03 32 08.1	
	comp=Z,46nm,21.5s,baz=290,slow=35						
HHC	**Hu-ho-hao-te**	**96.62**	**338**	*e*P	**P**	**02 52 49.5**	**-1.0**
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,53nm,6.6s						
NVAR	**Mina Array Bea**	**125.63**	**72**	PKP	**PKiKP**	**02 58 24.1**	**+1.7**
	comp=Z,0.2nm,0.4s,baz=212,slow=3.2,SNR=2.6						
FINES	**FINESS Array B**	**144.93**	**311**	PKP	**PKPab**	**02 58 55.4**	**-0.6**
	comp=Z,3.9nm,0.9s,baz=124,slow=3.4,SNR=6.5						
ARSA	**Arzberg**	**145.09**	**283**	*i* PKiKP	**PKPbc**	**02 58 56.9**	**-0.1**
	comp=Z,7.9nm,1.1s						
SOKA	**Soboth**	**145.09**	**282**	*i* pPKiKP	**PKPdf**	**02 58 59.5**	**+1.8**
	comp=Z,8.0nm,1.3s						
CONA	**Conrad Observa**	**145.22**	**285**	*i* pPKiKP	**PKPdf**	**02 58 59.0**	**+1.2**
	comp=Z,8.0nm,1.6s						
ULM	**Lac du Bonnet**	**145.47**	**71**	PKPbc	**PKPab**	**02 58 59.0**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=289,slow=4.6,SNR=3.9						
KRLC	**Kraliky**	**145.69**	**288**	*e*PKP	**PKiKP**	**02 59 01.3**	**-1.3**
KRLC				*ex*	x	02 59 07.9	
MYKA	**Terra Mystica**	**145.90**	**281**	*i* pPKPab	**PKPab**	**02 59 00.6**	**+0.4**
	comp=Z,13nm,1.1s						
CHVC	**Chvalec**	**146.34**	**289**	*e*

8.1nm,0.6s
TNSS Tian-Shan 2.15 312 *e*P **Pb** 03 16 16.8 -2.0
9.7nm,0.6s
TNSS *e*S **Sg** 03 16 50.0 +1.1
11nm,0.3s
TNSS Tian-Shan 2.15 312 Pg **Pb** 03 16 16.8 -2.0
9.7nm,0.6s
TNSS Lg Lg 03 16 50.0
11nm,0.3s
MDOK Medeo 2.18 315 *e*P **Pn** 03 16 14.7 -1.2
1.1nm,0.4s
MDOK *e*S **Sb** 03 16 46.0 -0.1
12nm,0.5s
MDOK Medeo 2.18 315 ⇑Pg **Pn** 03 16 15.6 -0.3
MDOK ⇑Lg Lg 03 16 49.2
KOTS Kotyrbulak 2.20 318 *e*P **Pb** 03 16 17.1 -2.3
10nm,0.4s
KOTS *e*S **Sg** 03 16 50.1 -0.2
31nm,0.5s
KOTS Kotyrbulak 2.20 318 Pg **Pb** 03 16 17.1 -2.3
10nm,0.4s
KOTS Lg Lg 03 16 50.9
31nm,0.5s
ULHL Ulahol 2.25 287⇑ *i*P **Pb** 03 16 19.2 -1.2
baz=88
ULHL ⇑ *i*S **Sb** 03 16 49.3 +1.1
baz=88
IZV Izvestkoviy 2.34 308 *e*P **Pb** 03 16 19.8 -2.1
6.5nm,0.7s
IZV *e*S **Sg** 03 16 54.9 -0.1
13nm,0.2s
IZV Izvestkoviy 2.34 308 Pg **Pb** 03 16 19.8 -2.1
6.5nm,0.7s
IZV Lg Lg 03 16 55.5
13nm,0.2s
NRN Naryn 2.37 266⇑ *i*P **Pb** 03 16 20.9 -1.5
baz=68
NRN ⇑ *i*S **Sb** 03 16 52.0 +0.3
baz=68
BOOM Boomskoye usch 2.53 291⇓ *i*P **Pb** 03 16 23.0 -2.2
baz=92
BOOM ⇓ *i*S **Sb** 03 16 55.7 -0.6
baz=92
CHKK Chushkaly 2.73 325 *e*P **Pb** 03 16 27.0 -1.4
0.8nm,0.1s
CHKK *e*S **Sg** 03 17 07.7 +0.3
25nm,0.4s
KST Kastek 2.75 302 *e*P **Pn** 03 16 25.1 +1.5
2.8nm,0.4s
KST *e*S **Sb** 03 17 04.6 +2.1
13nm,0.4s
KST Kastek 2.75 302 Pg **Pn** 03 16 25.1 +1.5
2.8nm,0.4s
KST Lg Lg 03 17 04.6
13nm,0.4s
ARXS Arharly 2.76 340 *e*P **Pb** 03 16 27.3 -1.7
1.6nm,0.6s
ARXS *e*S **Sg** 03 17 08.3 0.0
5.7nm,0.8s
ARXS Arharly 2.76 340 Pg **Pb** 03 16 27.3 -1.7
3.1nm,0.4s
ARXS Lg Lg 03 17 08.3
4.9nm,0.5s
KTBS Karatobe 2.76 320 *e*P **Pb** 03 16 26.3 -2.7
1.3nm,0.3s
KTBS *e*S **Sg** 03 17 06.5 -1.9
18nm,0.5s
KTBS Karatobe 2.76 320 Pg **Pb** 03 16 26.3 -2.7
1.3nm,0.3s
KTBS Lg Lg 03 17 06.5
18nm,0.5s
KZA Kyzart 2.94 280⇑ *i*P **Pb** 03 16 29.0 -3.3
baz=81
KZA ⇑ *i*S **Sb** 03 17 06.0 -2.3
baz=81
DGS Degeres 2.97 304 *e*P **Pn** 03 16 28.4 +1.7
1.7nm,0.5s
DGS *e*S **Sb** 03 17 10.2 +1.4
5.3nm,0.6s
DGS Degeres 2.97 304 Pg **Pn** 03 16 28.4 +1.7
1.7nm,0.5s
DGS Lg Lg 03 17 10.2
5.3nm,0.6s
KUU Kurty 3.06 319 *e*P **Pb** 03 16 32.0 -2.1
0.8nm,0.1s
KUU *e*S **Sg** 03 17 16.8 -1.2
8.3nm,0.4s
KUU Kurty 3.06 319 Pg **Pb** 03 16 32.0 -2.1
0.6nm,0.1s
KUU Lg Lg 03 17 16.8
7.9nm,0.4s
UCH Uchtor 3.50 281⇓ *i*P **Pn** 03 16 36.6 +2.2
baz=82
UCH ⇓ *i*S **Sb** 03 17 19.7 -4.8
baz=82
AML Almayashu 4.10 279⇑ *i*P **Pn** 03 16 45.1 +2.6
baz=80
AML ⇑ *i*S **Sn** 03 17 33.8 +3.3
baz=80

*BJI **24** 03:22:00.5±0.0, 11°.10S×163°.60E, h30km, mB5.0/18, mb4.7/18, Ms4.8/4, Ms7 4.4/5*
*NEIC **24** 03:22:01.9±2.3, 11°.23S±0°.09×163°.6E±0°.1, h35km±4km, mb4.5/19, Error ellipse: s-maj=16.9km s-min=9.1km az=50.0*
*IDC **24** 03:22:03.3±3.0, 11°.08S×163°.56E, h44km±25km, mb4.0/11, mb1 4.3/15, mb1mx4.2/32, mbtmp4.4/15, ML4.7/3, MS3.6/6, Ms1 3.7/6, ms1mx3.3/27, Error ellipse: s-maj=22.4km s-min=17.5km az=73.0*
ISC 24 03:22:01.7±0.6, 11°.19S±0°.07×163°.58E±0°.08, h31km, n60, σ1§23/53, mb4.4/22, MS3.7/5, 1C, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.98**	**296**	P		**Pn**	**03 23 01.4**	**+0.8**
	86nm,0.3s,baz=37,slow=0.9,SNR=18							
HNR				S		**Sn**	**03 23 45.9**	**-0.4**
	63nm,0.3s,baz=342,slow=20,SNR=1.8							
HNR				LR		LR	03 24 41.2	
	comp=Z,1μm,21.7s,baz=156,slow=40							
HNR	**Honiara**	**3.98**	**296**	*e*P		**Pn**	**03 23 02.0**	**+1.4**
HNR	**Honiara**	**3.98**	**296**			**Pn**	**03 23 02.4**	**+1.7**
SANVU	**Saraoutou**	**5.50**	**141**			**Pn**	**03 23 21.7**	**+0.2**
NOUC	**Port Laguerre**	**11.15**	**167**			**Pn**	**03 24 40.3**	**+1.2**
DZM	**Mont Dzumac**	**11.16**	**166**	P		**Pn**	**03 24 40.5**	**+1.3**
	8.0nm,0.3s,baz=308,slow=23,SNR=128							
DZM				S		**Sn**	**03 26 39.9**	**-3.2**
	1.1nm,0.3s,baz=149,slow=19,SNR=6.7							
DZM				LR		LR	03 28 16.1	
	comp=Z,296nm,21.9s,baz=32,slow=33							
DZM	**Mont Dzumac**	**11.16**	**166**			**Pn**	**03 24 40.3**	**+1.1**
PMG	**Port Moresby**	**16.26**	**275**	P		**Pn**	**03 25 48.4**	**+0.5**
	1.4nm,0.3s,baz=103,slow=18,SNR=2.6							
PMG				LR		LR	03 32 05.9	
	comp=Z,488nm,19.3s,baz=124,slow=37							
PMG	**Port Moresby**	**16.26**	**275**			**Pn**	**03 25 46.4**	**-1.5**
PMG				IAmb		IAmb	03 25 54.1	
	comp=Z,46nm,1.0s							
CTA	**Charters Tower**	**18.87**	**240**	P		**Pn**	**03 26 22.3**	**+2.0**
	comp=Z,1.0nm,0.3s,baz=66,slow=12,SNR=26							
COEN	**Coen**	**20.11**	**260**	P		**P**	**03 26 33.7**	**+0.6**
AFI	**Afiamalu**	**24.20**	**99**	LR		LR	03 35 20.0	
	comp=Z,92nm,21.3s,baz=276,slow=33							
STKA	**Stephens Creek**	**28.90**	**221**	P		**P**	**03 27 59.8**	**+1.9**
	comp=Z,3.5nm,0.7s,baz=37,slow=7.1,SNR=7.0							
STKA	**Stephens Creek**	**28.90**	**221**	IAmb		IAmb	03 28 04.8	
	comp=Z,1.0nm,0.8s							
WR0	**Warramunga Arr**	**29.26**	**249**	P		**P**	**03 28 01.1**	**-0.2**
WR0				IAmb		IAmb	03 28 01.9	
	comp=Z,6.2nm,0.7s							
WB0	**Warramunga Arr**	**29.36**	**250**	P		**P**	**03 28 00.9**	**-1.2**
WRAB	**Tennant Creek**	**29.43**	**249**	P		**P**	**03 28 02.2**	**-0.6**
WRAB				IAmb		IAmb	03 28 03.0	
	comp=Z,11nm,0.9s							
WB2	**Warramunga Arr**	**29.43**	**249**	P		**P**	**03 28 01.8**	**-1.0**
WB2				IAmb		IAmb	03 28 03.1	
	comp=Z,11nm,0.9s							
WRA	**Warramunga Arr**	**29.44**	**249**	P		**P**	**03 28 02.6**	**-0.3**
	comp=Z,7.2nm,0.7s,baz=79,slow=9.4,SNR=28							
WRA	**Warramunga Arr**	**29.44**	**249**	P		**P**	**03 28 01.3**	**-1.6**
H11S2	**WAKE ISLAND Hy**	**29.66**	**6**	T		T	03 59 00.9	
	baz=188,slow=76,SNR=22							
H11S3	**WAKE ISLAND Hy**	**29.66**	**6**	T		T	03 59 07.3	
	baz=188,slow=76,SNR=19							
H11S1	**WAKE ISLAND Hy**	**29.67**	**6**	T		T	03 59 07.0	
	baz=188,slow=76,SNR=21							
AS31	**Alice Springs**	**30.84**	**242**	P		**P**	**03 28 14.4**	**-0.8**
ASAR	**Alice Springs**	**30.84**	**242**	P		**P**	**03 28 14.7**	**-0.5**
	comp=Z,5.5nm,0.8s,baz=64,slow=10.0,SNR=46							
ASAR	**Alice Springs**	**30.84**	**242**	P		**P**	**03 28 14.4**	**-0.8**
H11N1	**WAKE ISLAND Hy**	**30.88**	**6**	T		T	04 00 40.8	
	baz=188,slow=76,SNR=12							
H11N3	**WAKE ISLAND Hy**	**30.89**	**6**	T		T	04 00 42.0	
	baz=188,slow=76,SNR=13							
H11N2	**WAKE ISLAND Hy**	**30.90**	**6**	T		T	04 00 34.5	
	baz=188,slow=76,SNR=13							
KNRA	**Kununurra**	**34.13**	**259**	P		**P**	**03 28 43.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**37.29**	**255**	P		**P**	**03 29 09.8**	**-1.4**
LUWI	**Luwuk**	**41.75**	**281**	P		**P**	**03 29 47.3**	**-1.2**
PSA00	**Pilbara Seismi**	**43.08**	**250**	P		**P**	**03 29 58.0**	**-1.3**
MPSI	**Mapaga**	**44.89**	**282**	P		**P**	**03 30 12.0**	**-1.8**
SMKI	**Samarinda**	**47.28**	**280**	P		**P**	**03 30 30.7**	**-1.9**
KSRS	**Korea Array**	**58.82**	**327**	P		**P**	**03 31 56.0**	**-1.2**
	comp=Z,2.9nm,0.9s,baz=136,slow=7.8,SNR=7.0							
NJ2	**Nanjing**	**60.65**	**317**	*e*P		**P**	**03 32 11.0**	**+1.0**
NJ2				pmax		pmax		
	comp=Z,6.0nm,0.5s							
VNDA	**Vanda**	**66.32**	**180**	LR		LR	03 58 57.1	
	comp=Z,42nm,18.1s,baz=16,slow=33							
XAN	**Xi'an**	**68.67**	**313**	P		**P**	**03 33 01.6**	**-0.8**
XAN				pP		pwP	03 33 16.3	-2.1
XAN				pmax		pmax		
	comp=Z,6.0nm,0.8s							
XAN				pmax		pmax		
	comp=Z,90nm,4.9s							
CMAR	**Chiang Mai Arr**	**70.23**	**294**	P		**P**	**03 33 11.4**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=120,slow=4.3,SNR=8.0							
CMAR				LR		LR	04 06 04.6	
	comp=Z,23nm,18.0s,baz=240,slow=38							
HHC	**Hu-ho-hao-te**	**70.58**	**321**	*e*P		**P**	**03 33 14.8**	**+0.7**
HHC				pmax		pmax		
	comp=Z,7.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,43nm,8.7s							
SONM	**Songino Array**	**77.54**	**325**	P		**P**	**03 33 54.9**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=146,slow=7.2,SNR=13							
SONM	**Songino Array**	**77.54**	**325**	P		**P**	**03 33 54.8**	**+0.1**
GTA	**Gaotai**	**77.64**	**315**	⇑P		**P**	**03 33 56.3**	**+0.9**
GTA				pP		sP	03 34 06.4	+0.5
GTA				sP		pwP	03 34 10.3	-1.3
GTA				pmax		pmax		
	comp=Z,4.0nm,1.0s							
GTA				pmax		pmax		
	comp=Z,47nm,6.5s							
GTA				LR		LR		
	comp=Z,100nm,16.5s							
GTA				LR		LR		
	comp=Z,120nm,18.1s							
GTA				LR		LR		
	comp=Z,73nm,19.7s							
SHL	**Shillong**	**78.73**	**299**	P		**P**	**03 34 00.8**	**-0.9**
SHL				IAmb		IAmb	03 34 15.4	
	comp=Z,4.1nm,0.6s							
QSPA	**South Pole Qui**	**78.81**	**180**	P		**P**	**03 34 03.1**	**+1.7**
QSPA				IAmb		IAmb	03 34 19.1	
	comp=Z,4.6nm,1.0s							
BILL	**Bilibino**	**79.05**	**1**	P		**P**	**03 34 03.1**	**+0.8**
IMAR	**Indian Mountai**	**83.15**	**16**	P		**P**	**03 34 24.4**	**+0.2**
GLB	**Gilahina Butte**	**83.27**	**23**	P		**P**	**03 34 26.4**	**+1.4**
ILAR	**Eielson Array**	**84.34**	**19**	P		**P**	**03 34 30.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=242,slow=4.6,SNR=16							
WMQ	**Urumqi**	**87.70**	**315**	*e*P		**P**	**03 34 48.8**	**+1.2**
WMQ				pmax		pmax		
	comp=Z,5.0nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,85nm,5.9s							
WMQ				LR		LR		
	comp=Z,420nm,28.8s							
WMQ				LR		LR		
	comp=Z,80nm,29.2s							
NVAR	**Mina Array Bea**	**87.75**	**50**	P		**P**	**03 34 48.1**	**0.0**
	comp=Z,0.7nm,0.8s,baz=243,slow=6.5,SNR=3.8							
NVAR	**Mina Array Bea**	**87.75**	**50**	P		**P**	**03 34 49.0**	**+0.9**
MK31	**Makanchi Array**	**92.18**	**317**	P		**P**	**03 35 08.4**	**0.0**
MKAR	**Makanchi Array**	**92.18**	**317**	P		**P**	**03 35 08.1**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=96,slow=6.1,SNR=16							
MAKZ	**Makanchi**	**92.39**	**317**	P		**P**	**03 35 09.5**	**+0.1**
MAKZ				IAmb		IAmb	03 35 29.2	
	comp=Z,1.8nm,1.1s							
ZALV	**Zalesovo Beam**	**92.44**	**325**	P		**P**	**03 35 07.8**	**-1.5**
	comp=Z,0.6nm,0.3s,baz=158,slow=4.3,SNR=3.8							
ZALV	**Zalesovo Beam**	**92.44**	**325**			**P**	**03 35 07.9**	**-1.4**
KSH	**Kashi**	**95.20**	**309**	P		**P**	**03 35 24.8**	**+2.2**
KSH				pP		sP	03 35 35.3	+2.2
YKA	**Yellowknife Ar**	**96.08**	**28**	P		**P**	**03 35 24.7**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=257,slow=4.7,SNR=4.6							

*MEX **24** 03:56:05.6±0.4, 14°.33N×92°.57W, h20km, MD3.6*
*GCG **24** 03:56:07.4±0.3, 14°.70N×92°.34W, h63km±44km, MD3.5*
ISC 24 03:56:05.7±2.2, 14°.52N±0°.09×92°.48W±0°.07, h29km±16km, n7, σ0§91/13, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
THIG		**0.44**	**28**	*i* P		**Pn**	**03 56 16.2**	**+0.2**
THIG				*i* S		**Sn**	**03 56 23.4**	**+0.5**
STG3	**Santiaguito 3,**	**0.90**	**77**	*e*P		**Pb**	**03 56 23.0**	**+0.2**
PCIG		**1.38**	**329**	*e*P		**Pn**	**03 56 28.4**	**-0.6**
PCIG				*e*S		**Sn**	**03 56 46.5**	**+0.2**
FUG	**Fuego 3**	**1.58**	**92**	*e*P		**Pn**	**03 56 32.4**	**+0.5**
FUG				*e*S		**Sn**	**03 56 51.9**	**+0.3**
CCIG	**Comitan**	**1.79**	**10**	*i* P		**Pn**	**03 56 34.7**	**0.0**
CCIG				*i* S		**Sb**	**03 56 59.4**	**-0.5**
IXG	**Ixpaco**	**2.00**	**100**	*e*P		**Pn**	**03 56 38.4**	**+0.8**
IXG				*e*S		**Sn**	**03 56 59.5**	**-2.3**
CMIG	**Matias Romero**	**3.45**	**318**	*i* P		**Pn**	**03 56 57.7**	**+0.2**
CMIG				*e*S		**Sn**	**03 57 38.0**	**+0.5**

*KRSC **24** 04:24:31.9±1.9, 50°.46N×157°.18E, h67km±21km, ML4.6, FELT [II] at Paujetka.*
*IDC **24** 04:24:34.2±0.6, 50°.77N×156°.40E, h79km±5km, mb3.6/14, mb1 3.9/16, mb1mx3.7/37, mbtmp3.9/16, MS3.0/1, Ms1 3.0/1, ms1mx2.6/33, Error ellipse: s-maj=19.1km s-min=11.7km az=142.0*
*MOS **24** 04:24:34.2±1.0, 50°.66N×156°.60E, h95km, mb4.3/2, Error ellipse: s-maj=14.9km s-min=3.9km az=74.1*
*NEIC **24** 04:24:37.0±1.5, 50°.8N±0°.1×156°.5E±0°.2, h104km±7km, mb4.3/7, Error ellipse: s-maj=18.5km s-min=12.4km az=130.0*
ISC 24 04:24:34.0±0.6, 50°.54N±0°.07×156°.79E±0°.05, h85km±4km, n116, σ1§35/133, mb4.1/16, 2C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.45**	**288**⇑	*i* PN		**Pn**	**04 24 47.7**	**0.0**
SKR				*e*S		**Sn**	**04 24 57.5**	**-0.4**
SKR				pmax		pmax		
	comp=Z,5μm,0.5s							
SKR				smax		smax		
	comp=N,7μm,0.7s							
SKR				smax		smax		
	comp=E,10μm,0.6s							
SKR	**Severo-Kuril's**	**0.45**	**288**	*e*P		**Pn**	**04 24 47.6**	**-0.1**
SKR				*e*S		**Sn**	**04 24 57.6**	**-0.4**
PAU	**Pauzhetka**	**0.93**	**1**	PN		**Pn**	**04 24 52.5**	**+0.1**
PAU				S		**Sn**	**04 25 05.9**	**-0.3**
PAU	**Pauzhetka**	**0.93**	**1**	*e*P		**Pn**	**04 24 52.5**	**+0.1**
PAU				*e*S		**Sn**	**04 25 05.9**	**-0.3**
KDTR	**Khodutka, Kamc**	**1.50**	**32**	PN		**Pn**	**04 24 58.6**	**-0.9**
KDTR				S		**Sn**	**04 25 16.9**	**-1.9**
KDTR	**Khodutka, Kamc**	**1.50**	**32**	*e*P		**Pn**	**04 24 58.6**	**-0.9**
KDTR				*e*S		**Sn**	**04 25 16.9**	**-1.9**
ASAK	**Asacha**	**1.97**	**20**	PN		**Pn**	**04 25 05.7**	**+0.1**
ASAK	**Asacha**	**1.97**	**20**	*e*P		**Pn**	**04 25 05.7**	**+0.1**
MTVR	**Mutnovka**	**2.13**	**24**	PN		**Pn**	**04 25 07.9**	**+0.1**
MTVR				S		**Sn**	**04 25 33.1**	**-0.5**
MTVR	**Mutnovka**	**2.13**	**24**	*e*P		**Pn**	**04 25 07.9**	**+0.1**
MTVR				*e*S		**Sn**	**04 25 33.1**	**-0.5**
GRL	**Gorelyy**	**2.17**	**21**	PN		**Pn**	**04 25 08.9**	**+0.6**
GRL	**Gorelyy**	**2.17**	**21**	*e*P		**Pn**	**04 25 08.9**	**+0.6**
RUS	**Russkaya**	**2.18**	**29**	PN		**Pn**	**04 25 07.6**	**-0.7**
RUS				S		**Sn**	**04 25 32.4**	**-2.1**
RUS	**Russkaya**	**2.18**	**29**	*e*P		**Pn**	**04 25 07.6**	**-0.7**
RUS				*e*S		**Sn**	**04 25 32.4**	**-2.1**
APC	**Apacha**	**2.40**	**5**	PN		**Pn**	**04 25 11.8**	**+0.6**
APC				S		**Sn**	**04 25 40.0**	**+0.3**
APC	**Apacha**	**2.40**	**5**	*e*P		**Pn**	**04 25 11.8**	**+0.6**
APC				*e*S		**Sn**	**04 25 40.0**	**+0.3**
KRMR	**Karymshinskiy**	**2.44**	**19**	PN		**Pn**	**04 25 12.1**	**+0.3**
KRMR	**Karymshinskiy**	**2.44**	**19**	*e*P		**Pn**	**04 25 12.1**	**+0.3**
PEA0B	**Petropavlovsk-**	**2.63**	**12**	*d i* PN		**Pn**	**04 25 15.5**	**+1.1**
PEA0B	**Petropavlovsk-**	**2.63**	**12**			**Pn**	**04 25 15.2**	**+0.8**
PETK	**Petropavlovsk-**	**2.63**	**12**	PN		**Pn**	**04 25 15.4**	**+1.0**
PETK	**Petropavlovsk-**	**2.63**	**12**	P		**Pn**	**04 25 15.5**	**+1.2**
	comp=E,82nm,0.3s,baz=178,slow=12,SNR=570							
PETK	**Petropavlovsk-**	**2.63**	**12**			**Pn**	**04 25 15.3**	**+1.0**
PET	**Petropavlovsk**	**2.74**	**24**	PN		**Pn**	**04 25 16.3**	**+0.5**
PET				S		**Sn**	**04 25 48.4**	**+0.4**
PET	**Petropavlovsk**	**2.74**	**24**	*e*P		**Pn**	**04 25 16.3**	**+0.5**
PET				*e*S		**Sn**	**04 25 48.4**	**+0.4**
PET	**Petropavlovsk**	**2.74**	**24**			**Pn**	**04 25 16.0**	**+0.2**
UGLR	**Uglovaya**	**2.95**	**24**	PN		**Pn**	**04 25 19.9**	**+1.1**
UGLR	**Uglovaya**	**2.95**	**24**	*e*P		**Pn**	**04 25 19.9**	**+1.1**
AVH	**Avacha**	**2.98**	**23**	PN		**Pn**	**04 25 20.7**	**+1.6**
AVH				S		**Sn**	**04 25 56.6**	**+2.7**
AVH	**Avacha**	**2.98**	**23**	*e*P		**Pn**	**04 25 20.7**	**+1.6**
AVH				*e*S		**Sn**	**04 25 56.6**	**+2.7**
KOK	**Koryaka**	**2.98**	**22**	PN		**Pn**	**04 25 20.9**	**+1.7**
KOK	**Koryaka**	**2.98**	**22**	*e*P		**Pn**	**04 25 20.9**	**+1.7**
SMAR	**Somma**	**3.00**	**24**	PN		**Pn**	**04 25 20.5**	**+1.0**
SMAR	**Somma**	**3.00**	**24**	*e*P		**Pn**	**04 25 20.5**	**+1.0**
KRER	**Koryakskii**	**3.02**	**23**	PN		**Pn**	**04 25 21.2**	**+1.4**
KRER	**Koryakskii**	**3.02**	**23**	*e*P		**Pn**	**04 25 21.2**	**+1.4**
SDLR	**Sedlovina**	**3.03**	**25**	PN		**Pn**	**04 25 20.5**	**+0.6**
SDLR	**Sedlovina**	**3.03**	**25**	*e*P		**Pn**	**04 25 20.5**	**+0.6**
KRX	**Arik**	**3.05**	**21**	PN		**Pn**	**04 25 21.8**	**+1.7**
KRX	**Arik**	**3.05**	**21**	*e*P		**Pn**	**04 25 21.8**	**+1.7**
NLC	**Nalytchevo**	**3.07**	**30**	PN		**Pn**	**04 25 19.3**	**-1.0**
NLC	**Nalytchevo**	**3.07**	**30**	*e*P		**Pn**	**04 25 19.3**	**-1.0**
SPN	**Mys Shipunski**	**3.25**	**37**	PN		**Pn**	**04 25 22.2**	**-0.5**
SPN				S		**Sn**	**04 25 58.5**	**-1.8**
SPN	**Mys Shipunski**	**3.25**	**37**	*e*P		**Pn**	**04 25 22.2**	**-0.5**
SPN				*e*S		**Sn**	**04 25 58.5**	**-1.8**
MKZ	**Mys Kozlova**	**5.02**	**35**	PN		**Pn**	**04 25 45.5**	**-1.2**
MKZ	**Mys Kozlova**	**5.02**	**35**	*e*P		**Pn**	**04 25 45.5**	**-1.2**
KZV	**Kizimen**	**5.05**	**24**	PN		**Pn**	**04 25 47.9**	**+0.7**
KZV	**Kizimen**	**5.05**	**24**	*e*P		**Pn**	**04 25 47.9**	**+0.7**
TUMD	**Tumrok D**	**5.15**	**24**	*e*P		**Pn**	**04 25 49.0**	**+0.4**
TUMR	**Tumrok**	**5.16**	**22**	PN		**Pn**	**04 25 50.5**	**+1.7**
TUMR	**Tumrok**	**5.16**	**22**	*e*P		**Pn**	**04 25 50.5**	**+1.7**
ESO	**Esso**	**5.51**	**11**	PN		**Pn**	**04 25 55.0**	**+1.6**
ESO	**Esso**	**5.51**	**11**	*e*P		**Pn**	**04 25 55.0**	**+1.6**
KMNR	**Kamenistaya**	**5.62**	**20**	PN		**Pn**	**04 25 58.2**	**+3.2**
KMNR	**Kamenistaya**	**5.62**	**20**	*e*P		**Pn**	**04 25 58.2**	**+3.2**
SRDR	**Sredinnyy**	**6.04**	**16**	PN		**Pn**	**04 26 02.2**	**+1.5**
SRDR	**Sredinnyy**	**6.04**	**16**	*e*P		**Pn**	**04 26 02.2**	**+1.5**
SRKR	**Sorokina**	**6.65**	**21**	PN		**Pn**	**04 26 09.8**	**+0.8**
SRKR	**Sorokina**	**6.65**	**21**	*e*P		**Pn**	**04 26 09.8**	**+0.8**
KBTR	**Krutoberegovo**	**6.72**	**30**	PN		**Pn**	**04 26 09.3**	**-0.6**
KBTR	**Krutoberegovo**	**6.72**	**30**	*e*P		**Pn**	**04 26 09.3**	**-0.6**
KBG	**Krutoberegovo**	**6.72**	**29**	PN		**Pn**	**04 26 09.0**	**-0.9**
KBG	**Krutoberegovo**	**6.72**	**29**	*e*P		**Pn**	**04 26 09.0**	**-0.9**
BKI	**Bering**	**7.25**	**46**	PN		**Pn**	**04 26 15.6**	**-1.5**
BKI	**Bering**	**7.25**	**46**	*e*P		**Pn**	**04 26 15.6**	**-1.5**
MA2	**Magadan**	**9.68**	**341**	PN		**Pn**	**04 26 50.0**	**-0.2**
MA2	**Magadan**	**9.68**	**341**	P		**Pn**	**04 26 50.0**	**-0.2**
	comp=E,0.5nm,0.3s,baz=118,slow=9.6,SNR=3.8							
YSS	**Yuzh-Sakhalins**	**9.94**	**254**	*e*PN		Pn	04 26 58.7	+4.9
JKA	**Kamikawa-asahi**	**11.57**	**242**			**Pn**	**04 27 17.4**	**+1.5**
ASAJ	**Asahikawa**	**11.57**	**242**	P		**Pn**	**04 27 17.4**	**+1.5**
	comp=E,2.5nm,0.3s,baz=93,slow=14,SNR=6.7							
ASAJ				LR		LR	04 31 05.2	
	comp=E,77nm,18.8s,baz=338,slow=34							
SEY	**Seymchan**	**12.65**	**351**⇑	*e*PN		**Pn**	**04 27 31.0**	**+0.6**
SEY	**Seymchan**	**12.65**	**351**	P		**Pn**	**04 27 31.2**	**+0.8**
	comp=E,0.2nm,0.3s,baz=169,slow=15,SNR=4.2							
KLR	**Kul'dur**	**16.17**	**275**	*i* P		**P**	**04 28 15.8**	**-1.8**
KLR				pmax		pmax		
	comp=Z,5.0nm,1.9s							
KLR	**Kul'dur**	**16.17**	**275**	P		**Pn**	**04 28 11.6**	**-4.3**
	comp=Z,0.1nm,0.3s,baz=115,slow=6.3,SNR=2.4							
BILL	**Bilibino**	**18.16**	**11**	*i* P		**Pn**	**04 28 41.5**	**+1.4**
BILL				pmax		pmax		
	comp=Z,2.0nm,0.9s							
YAK	**Yakutsk**	**18.77**	**318**	P		**P**	**04 28 44.9**	**-1.1**
YAK				pmax		pmax		
	comp=Z,38nm,0.9s							
YAK	**Yakutsk**	**18.77**	**318**	P		**P**	**04 28 44.9**	**-1.1**
MAJO	**Matsushiro**	**19.35**	**231**	*i* P		**Pn**	**04 28 54.0**	**-0.5**
MAJO				pmax		pmax		
	comp=Z,3.0nm,1.0s							
MJAR	**Matsushiro Arr**	**19.35**	**231**	P		**Pn**	**04 28 53.7**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=25,slow=11,SNR=5.0							
H11N2	**WAKE ISLAND Hy**	**31.77**	**162**	T		T	05 04 32.0	
	baz=348,slow=76							
H11N1	**WAKE ISLAND Hy**	**31.79**	**162**	T		T	05 04 33.8	
	baz=348,slow=76							
H11N3	**WAKE ISLAND Hy**	**31.79**	**162**	T		T	05 04 33.0	
	baz=348,slow=76							
ILAR	**Eielson Array**	**32.08**	**42**	P		**P**	**04 30 54.2**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=258,slow=8.0,SNR=11							
ILAR				pP		**pP**	**04 31 11.5**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=262,slow=6.4,SNR=3.2							
SONM	**Songino Array**	**32.54**	**285**	P		**P**	**04 30 56.2**	**-0.6**
	baz=80,slow=8.1							
H11S1	**WAKE ISLAND Hy**	**32.93**	**163**	T		T	05 05 58.9	
	baz=348,slow=76							
H11S3	**WAKE ISLAND Hy**	**32.94**	**163**	T		T	05 05 59.0	
	baz=348,slow=76							
H11S2	**WAKE ISLAND Hy**	**32.94**	**163**	T		T	05 06 00.6	
	baz=348,slow=76							

CPUP	**Villa Florida**	**144.46**	**60**	PKP		**PKPab**	**04 43 58.9**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=236,slow=5.1,SNR=5.1							
PLCA	**Paso Flores**	**146.00**	**92**	PKPbc		**PKPbc**	**04 44 04.0**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=294,slow=3.0,SNR=4.8							

REN ***24*** *04:40:17.1±2.3, 40.62N×0.05×116.57W±0.04, h8km±7km, ML3.8, Error ellipse: s-maj=6.9km s-min=4.6km az=159.0*
ANF ***24*** *04:40:17.8±0.6, 40.77N×116.20W, h24km±6km, ML3.9/13, Error ellipse: s-maj=5.4km s-min=4.5km az=74.0*
NEIC ***24*** *04:40:17.0±1.2, 40.54N±0.05×116.58W±0.04, h5km±2km, Error ellipse: s-maj=8.3km s-min=4.6km az=334.0*

ISC 24 04:40:17.3±0.8**, 40.57N**±0.03×**116.60W**±0.03**, h7**km**, n92,** σ1§**23**/101**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELK	**Elko**	**1.05**	**80**		**Pb**	**04 40 37.2**	**-0.7**
ELK				Sg	**Sb**	**04 40 50.5**	**-1.4**
KVN	**Kaiserville**	**1.91**	**218**	Pn	**Pn**	**04 40 50.0**	**-0.3**
KVN					**Pb**	**04 40 53.2**	**+0.7**
KVN					**Sn**	**04 41 14.0**	**-0.8**
PAHR	**Pah Rah Range**	**2.31**	**249**		**Pn**	**04 40 54.9**	**-0.9**
R11A	**Troy Canyon, C**	**2.35**	**160**		**Pn**	**04 40 56.1**	**-0.4**
R11A	**Troy Canyon, C**	**2.35**	**160**	P	**Pn**	**04 40 56.4**	**0.0**
	baz=341						
R11A				Sb	**Sb**	**04 41 32.0**	**+2.6**
	baz=341						
WVOR	**Wild Horse Val**	**2.41**	**321**		**Pn**	**04 40 56.6**	**-0.6**
WVOR				Sg	**Sb**	**04 41 31.7**	**+0.6**
RYN	**Ryan**	**2.44**	**218**		**Pn**	**04 40 57.4**	**-0.3**
NV11	**Mina Array Sit**	**2.45**	**210**		**Pn**	**04 40 57.6**	**-0.2**
NVAR	**Mina Array Bea**	**2.51**	**212**		**Pn**	**04 40 57.7**	**-1.1**
TPH	**Tonopah**	**2.54**	**191**		**Pn**	**04 40 59.5**	**+0.4**
YERR	**Yerington**	**2.58**	**233**		**Pn**	**04 40 58.8**	**-0.8**
VCNR	**Virginia City**	**2.67**	**243**		**Pn**	**04 41 00.3**	**-0.6**
BGU	**Big Grassy Mou**	**2.73**	**81**		**Pn**	**04 41 01.7**	**0.0**
PNTR	**Pine Nut**	**2.75**	**238**		**Pn**	**04 41 01.4**	**-0.5**
MFID	**Camas Ranch**	**2.90**	**11**		**Pn**	**04 41 04.1**	**+0.2**
DUG	**Dugway, Tooele**	**2.91**	**96**		**Pn**	**04 41 04.7**	**+0.5**
DUG	**Dugway, Tooele**	**2.91**	**96**	Pb	**Pn**	**04 41 04.9**	**+0.8**
	baz=280						
PSUT	**Pine Spring**	**2.94**	**133**		**Pn**	**04 41 05.1**	**+0.5**
BEKR	**Beckworth**	**2.97**	**258**		**Pn**	**04 41 04.5**	**-0.4**
WAKR	**Walker**	**3.01**	**228**		**Pn**	**04 41 05.4**	**-0.2**
MOD	**Modoc Plateau**	**3.10**	**297**		**Pn**	**04 41 07.0**	**+0.3**
J08A	**Circle Bar Ran**	**3.12**	**334**		**Pn**	**04 41 08.8**	**+1.8**
HVU	**Hansel Valley**	**3.13**	**66**		**Pn**	**04 41 08.5**	**+1.4**
SPUT	**South Promonto**	**3.23**	**75**		**Pn**	**04 41 08.4**	**-0.1**
MLAC	**Mammoth, Mammo**	**3.41**	**211**	Pb	**Pg**	**04 41 22.7**	**0.0**
	baz=29						
MLAC				S	**Sb**	**04 41 59.5**	**-0.5**
	baz=29						
OMMB	**Old Mammoth Mi**	**3.50**	**213**		**Pn**	**04 41 12.1**	**-0.2**
MDPB	**Devils Postpil**	**3.51**	**214**		**Pn**	**04 41 12.7**	**+0.2**
NLU	**North Lily Min**	**3.51**	**99**	Pn	**Pn**	**04 41 13.1**	**+0.6**
GRAC	**Grapevine Rang**	**3.62**	**190**	Pb	**Pg**	**04 41 26.6**	**0.0**
	baz=9.0						
TPNV	**Topopah Spring**	**3.63**	**176**		**Pn**	**04 41 14.8**	**+0.9**
TPNV				Pg	**Pg**	**04 41 26.2**	**-0.5**
TPNV	**Topopah Spring**	**3.63**	**176**	P	**Pn**	**04 41 14.9**	**+0.9**
	baz=356						
TPNV				Sb	**Sg**	**04 42 14.2**	**+0.5**
	baz=356						
CTU	**Camp Tracy**	**3.69**	**87**		**Pn**	**04 41 14.4**	**-0.4**
TIN	**Tinemaha, Big**	**3.73**	**201**	Pb	**Pg**	**04 41 28.2**	**-0.6**
	baz=19						
AFDM	**Forest Hills D**	**3.74**	**246**		**Pn**	**04 41 15.2**	**-0.3**
TCRU	**Three Creeks R**	**3.75**	**120**		**Pn**	**04 41 15.3**	**-0.5**
MPU	**Maple Canyon**	**3.83**	**97**		**Pn**	**04 41 16.9**	**0.0**
K05A	**Summer Lake**	**3.87**	**305**		**Pn**	**04 41 19.4**	**+2.0**
CMB	**Columbia Colle**	**3.88**	**230**		**Pn**	**04 41 16.6**	**-0.8**
ORV	**Oroville**	**3.90**	**257**	Pn	**Pn**	**04 41 17.6**	**0.0**
JLU	**Jordanelle**	**3.92**	**88**	Pn	**Pn**	**04 41 19.9**	**+1.9**
CCUT	**Cedar City**	**3.93**	**139**		**Pn**	**04 41 18.7**	**+0.6**
HWUT	**Hardware Ranch**	**3.94**	**73**		**Pn**	**04 41 18.4**	**+0.1**
TCUT	**Toone Canyon**	**3.97**	**80**	Pg	**Pg**	**04 41 31.7**	**-1.7**
O03E	**Paynes Creek**	**3.98**	**268**	Pb	**Pg**	**04 41 31.6**	**-1.9**
	baz=84						
MSU	**Marysvale**	**3.99**	**120**	Pn	**Pn**	**04 41 20.4**	**+1.4**
SZCU	**Shurtz Canyon**	**4.03**	**136**		**Pn**	**04 41 20.5**	**+0.9**
FURC	**Furnace Creek,**	**4.10**	**183**	P	**Pn**	**04 41 22.2**	**+1.9**
	baz=2.7						
FURC				Sb	**Sg**	**04 42 29.0**	**0.0**
	baz=2.7						
SHPR	**Sheep Range**	**4.21**	**164**		**Pn**	**04 41 22.4**	**+0.3**
MTPU	**Mount Pierson**	**4.25**	**125**		**Pn**	**04 41 21.0**	**-1.8**
CWC	**Cottonwood Cre**	**4.29**	**196**	Pb	**Pg**	**04 41 37.8**	**-1.5**
	baz=15						
BMO	**Blue Mountains**	**4.31**	**353**	Pn	**Pn**	**04 41 26.1**	**+2.8**
TMUT	**Trail Mountain**	**4.33**	**105**	Pn	**Pn**	**04 41 25.8**	**+1.9**
DAC	**Darwin (Calif)**	**4.36**	**191**	Pn	**Pn**	**04 41 27.3**	**+3.3**
J05D	**Fort Rock, OR**	**4.40**	**310**	P	**Pn**	**04 41 25.4**	**+0.9**
	baz=126						
LCMT	**Little Creek M**	**4.41**	**143**	Pn	**Pn**	**04 41 25.5**	**+0.7**
Q16A	**Castle Valley**	**4.50**	**110**	Pn	**Pn**	**04 41 26.7**	**+0.7**
WDC	**Whiskeytown Da**	**4.53**	**272**	Pg	**Pb**	**04 41 39.8**	**+2.8**
MPMC	**Manual Prospec**	**4.56**	**189**	P	**Pn**	**04 41 28.1**	**+1.3**
	baz=8.3						
PINE	**Pine Mountain**	**4.56**	**316**	Pn	**Pn**	**04 41 28.6**	**+1.7**
PKCU	**Pink Cliffs**	**4.57**	**132**	Pn	**Pn**	**04 41 28.8**	**+1.8**
KNB	**Kanab**	**4.61**	**139**		**Pn**	**04 41 27.5**	**-0.1**
P17A	**Butcher Ranch,**	**4.63**	**102**	Pn	**Pn**	**04 41 28.0**	**+0.2**
N02D	**Trinity Center**	**4.66**	**277**	Sb	**Sg**	**04 42 45.1**	**-1.7**
	baz=92						
AHID	**Auburn Hatcher**	**4.66**	**60**	Pn	**Pn**	**04 41 29.5**	**+1.2**
YBH	**Yreka Blue Hor**	**4.76**	**286**		**Pn**	**04 41 30.3**	**+0.8**
SRU	**San Rafael Swe**	**4.89**	**105**	Pn	**Pn**	**04 41 31.0**	**-0.5**
G08A	**Pilot Rock**	**5.03**	**341**	Pn	**Pn**	**04 41 33.0**	**-0.1**
MCMT	**McKenzie Canyo**	**5.07**	**32**		**Pn**	**04 41 35.1**	**+1.2**
REDW	**Red Top Meadow**	**5.11**	**55**		**Pn**	**04 41 35.2**	**+0.8**
TPAW	**Teton Pass**	**5.12**	**53**		**Pn**	**04 41 33.6**	**-1.0**
ISA	**Isabella, Lake**	**5.12**	**197**	Pn	**Pn**	**04 41 32.9**	**-1.5**
TUQ	**Turquoise Moun**	**5.15**	**174**	Sb	**Sg**	**04 43 00.5**	**-2.3**
	baz=354						
HUMO	**Hull Mountain**	**5.19**	**295**	Pg	**Pb**	**04 41 50.1**	**+1.8**
SNOW	**Snow King Moun**	**5.22**	**54**	Pn	**Pn**	**04 41 37.4**	**+1.4**
GSC	**Goldstone, Bar**	**5.26**	**182**		**Pn**	**04 41 36.7**	**+0.3**
U15A	**North Rim**	**5.34**	**139**		**Pn**	**04 41 37.6**	**0.0**
RDMU	**Red Mountain**	**5.35**	**88**	Pn	**Pn**	**04 41 40.9**	**+3.1**
IMW	**Indian Meadow**	**5.36**	**50**	Pn	**Pn**	**04 41 37.4**	**-0.5**
MOOW	**Moose Ponds**	**5.38**	**52**	Pn	**Pn**	**04 41 39.6**	**+1.4**
F10A	**Beach Ranch, E**	**5.42**	**355**	Pn	**Pn**	**04 41 41.3**	**+2.7**
FLWY	**Flagg Ranch**	**5.61**	**49**		**Pn**	**04 41 41.4**	**+0.2**
DLMT	**Dillon**	**5.62**	**30**		**Pn**	**04 41 42.7**	**+1.4**
YPP	**Pitchstone Pla**	**5.66**	**47**	Pn	**Pn**	**04 41 42.6**	**+0.6**
PD31	**Pinedale Array**	**5.71**	**65**	Pn	**Pn**	**04 41 42.9**	**+0.2**
QLMT	**Earthquake Lak**	**5.71**	**40**	Pn	**Pn**	**04 41 43.3**	**+0.7**
W13A	**Hualapai Mount**	**5.87**	**158**	Pn	**Pn**	**04 41 44.6**	**-0.2**
LRM	**Limekiln Ridge**	**6.06**	**29**	Pn	**Pb**	**04 42 04.2**	**+1.0**
YMP	**Mirror Lake Pl**	**6.32**	**47**	Pn	**Pn**	**04 41 52.4**	**+1.4**
MSO	**Missoula**	**6.55**	**16**		**Pn**	**04 41 55.9**	**+1.9**
PFO	**Pinyon Flats O**	**6.95**	**179**		**Pn**	**04 42 01.5**	**+2.0**
XPFO	**Pion Flat**	**6.95**	**179**	Pn	**Pn**	**04 42 00.4**	**+0.8**
Y14A	**Wickenburg**	**7.21**	**155**		**Pn**	**04 42 04.9**	**+1.8**

NEIC ***24*** *04:41:06.6±1.0, 7.3S±0.1×125.3E±0.2, h367km±14km, mb4.0/7, Error ellipse: s-maj=23.7km s-min=16.1km az=65.0*
DJA ***24*** *04:41:08.4±0.2, 7°S±3'×12°5E±°, h374km±6km, M4.5/20, mb4.5/20, mB5.0/6, MLv4.5/12, Mw(mB)4.4/6*
IDC ***24*** *04:41:09.8±3.7, 7.28S×125.31E, h407km±44km, mb3.3/3, mb1 3.6/5, mb1mx3.2/27, mbtmp4.3/5, Error ellipse: s-maj=101.2km s-min=12.5km az=65.0*

ISC 24 04:41:07.1±0.6**, 7.45S**±0.06×**125.03E**±0.07**, h371**km**, n42,** σ1§**42**/44**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.42**	**198**	P	**Pn**	**04 42 04.5**	**+1.0**
SOEI				S	**S**	**04 42 47.9**	**-0.9**
SOEI	**Soe**	**2.42**	**198**		**Pn**	**04 42 04.4**	**+1.0**
BBSI	**Bau Bau**	**3.12**	**308**	P	**Pn**	**04 42 12.1**	**+2.9**
KDI	**Kendari**	**4.21**	**325**	P	**Pn**	**04 42 21.2**	**+1.6**
NLAI	**Namlea**	**4.66**	**26**	P	**Pn**	**04 42 25.6**	**+1.4**
AAI	**Ambon**	**4.88**	**40**	P	**Pn**	**04 42 28.9**	**+2.4**
BKSI	**Bulukumba**	**5.31**	**293**	P	**Pn**	**04 42 32.6**	**+1.5**
	0.1nm31nm,0.8s						
SANI	**Sanana**	**5.45**	**10**	P	**Pn**	**04 42 32.4**	**-0.2**
BNDI	**Bandanaira**	**5.65**	**59**	P	**Pn**	**04 42 36.6**	**+1.8**
	2.4nm399nm,1.1s						
BNSI	**Bone**	**5.76**	**301**	P	**Pn**	**04 42 38.3**	**+2.3**
	0.2nm2µm69nm,0.8s						
SAUI	**Saumlaki**	**6.24**	**95**	P	**Pn**	**04 42 42.0**	**+0.6**
	1.3nm113nm,0.7s						
SPSI	**Sidrap Palu**	**6.27**	**303**	P	**Pn**	**04 42 42.3**	**+0.5**
LUWI	**Luwuk**	**6.75**	**340**	Pn	**Pn**	**04 42 45.9**	**-1.3**
LBMI	**Labuha**	**7.20**	**20**	P	**P**	**04 42 53.5**	**+0.1**
	1.7nm373nm,0.8s						
PLAI	**Plampang**	**7.31**	**259**	P	**Pn**	**04 42 51.3**	**-2.3**
KMSI	**Cibinong**	**8.04**	**352**	P	**P**	**04 43 05.6**	**+1.7**
MTN	**Manton Dam**	**8.05**	**132**		**Pn**	**04 43 02.3**	**+0.1**
MRSI	**Marisa**	**8.45**	**338**	P	**P**	**04 43 09.0**	**+0.5**
	803nm92nm,0.8s						
FAKI	**Fak Fak**	**8.48**	**58**	P	**Pn**	**04 43 06.2**	**-1.1**
	81nm,0.8s						
FAKI	**Fak Fak**	**8.48**	**58**		**Pn**	**04 43 03.2**	**-4.0**
KNRA	**Kununurra**	**8.96**	**156**		**Pn**	**04 43 13.3**	**+0.5**
SWI	**Sorong**	**9.02**	**44**	P	**P**	**04 43 14.6**	**-0.2**
	1µm87nm,0.6s						
MPSI	**Mapaga**	**9.27**	**326**	P	**P**	**04 43 19.4**	**+1.8**
	23nm,1.0s						
KMPI	**Kaimana, Papua**	**9.42**	**67**	P	**P**	**04 43 18.2**	**-1.0**
	10µm102nm,0.8s						
IGBI	**Denpasar**	**9.88**	**261**	P	**P**	**04 43 25.5**	**+1.1**
	8µm56nm,1.2s						
FITZ	**Fitzroy Crossi**	**10.61**	**177**		**Pn**	**04 43 32.2**	**0.0**
JAGI	**Jajag, Banyuwa**	**10.82**	**264**	P	**P**	**04 43 33.5**	**-1.4**
RKPI	**Ransiki, Papua**	**10.86**	**58**	P	**P**	**04 43 36.7**	**+1.4**
	87nm,0.7s						
GMJI	**Gumukmas**	**11.51**	**265**	P	**Pn**	**04 43 44.6**	**+1.7**
	31nm,2.0s						
PCJI	**Pacitan**	**13.74**	**266**	P	**Pn**	**04 44 08.9**	**-0.2**
	44nm,1.9s						
WB0	**Warramunga Arr**	**15.25**	**144**	P	**P**	**04 44 22.0**	**-1.5**
WB0				IAmb	IAmb	04 44 30.9	
	comp=Z,9.0nm,0.8s						
WRA	**Warramunga Arr**	**15.36**	**145**	P	**P**	**04 44 24.9**	**+0.2**
	comp=Z,2.3nm,0.3s,baz=325,slow=11,SNR=41						
WRA				S	**S**	**04 47 10.3**	**+1.8**
	baz=319,slow=19,SNR=4.6						
WRA	**Warramunga Arr**	**15.36**	**145**	P	**P**	**04 44 24.2**	**-0.5**
WB2	**Warramunga Arr**	**15.36**	**145**	P	**P**	**04 44 24.6**	**-0.2**
WB2				IAmb	IAmb	04 44 25.8	
	comp=Z,6.3nm,0.6s						
WR0	**Warramunga Arr**	**15.48**	**144**	P	**P**	**04 44 25.7**	**-0.4**
AS31	**Alice Springs**	**18.24**	**153**	P	**P**	**04 44 55.8**	**+0.2**
ASAR	**Alice Springs**	**18.24**	**153**	P	**P**	**04 44 56.5**	**+0.9**
	comp=Z,3.6nm,0.3s,baz=329,slow=11,SNR=126						
ASAR				S	**S**	**04 48 05.1**	**+0.2**
	baz=330,slow=16,SNR=5.1						
ASAR	**Alice Springs**	**18.24**	**153**	P	**P**	**04 44 55.7**	**+0.1**
STKA	**Stephens Creek**	**28.80**	**150**	P	**P**	**04 46 32.9**	**+0.5**
	comp=Z,3.0nm,0.5s,baz=336,slow=12,SNR=6.8						
STKA	**Stephens Creek**	**28.80**	**150**	IAmb	IAmb	04 46 33.6	
	comp=Z,0.7nm,0.7s						
SONM	**Songino Array**	**57.45**	**345**	P	**P**	**04 50 17.5**	**-1.1**
	comp=Z,0.2nm,0.5s,baz=174,slow=8.5,SNR=2.7						
MKAR	**Makanchi Array**	**65.99**	**329**	P	**P**	**04 51 14.1**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=120,slow=7.3,SNR=5.3						

SOME ***24*** *04:47:31.8, 45.87N×84.65E, h0km*
NNC ***24*** *04:47:33.4±0.9, 45.68N×84.71E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=8.1km s-min=3.6km az=117.0*

ISC 24 04:47:33.4±1.8**, 45.79N**±0.07×**84.60E**±0.09**, h10**km**, n16,** σ2§**51**/20**, 4C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZSN	**Zaisan**	**1.67**	**6**	*e*P	**Pb**	**04 48 04.9**	**+0.7**
	31nm,0.2s						
ZSN				*e*S	**Sg**	**04 48 28.5**	**+1.4**
	59nm,0.7s						
ZSN	**Zaisan**	**1.67**	**6**	P	**Pb**	**04 48 04.9**	**+0.7**
	31nm,0.2s						
ZSN				S	**Sg**	**04 48 29.0**	**+1.9**
	59nm,0.7s						
MK31	**Makanchi Array**	**1.89**	**303**	⇑Pn	**Pb**	**04 48 09.2**	**+1.2**
	1.6nm,0.2s,baz=120,slow=17,SNR=281						
MK31				Lg	Lg	04 48 38.2	
	6.1nm,0.2s,baz=118,slow=29,SNR=14						
MAKZ	**Makanchi**	**2.08**	**300**	⇑Pn	**Pb**	**04 48 11.7**	**+0.5**
	4.1nm,0.2s						
MAKZ				⇓Lg	Lg	04 48 43.0	
	16nm,0.4s						
DJR	**Jarkent**	**3.70**	**249**	*e*P	**Pg**	**04 48 42.1**	**-2.2**
	1.5nm,0.1s						
DJR				*e*S	**Sg**	**04 49 31.8**	**-0.5**
	10.0nm,0.9s						
DJR	**Jarkent**	**3.70**	**249**	Pg	**Pg**	**04 48 42.1**	**-2.2**
	2.2nm,0.3s						
DJR				Lg	Lg	04 49 31.8	
	7.6nm,0.9s						
KAPS	**Kapalarasan**	**3.71**	**264**	*e*P	**Pg**	**04 48 43.0**	**-1.6**
	6.2nm,0.4s						
KAPS				*e*S	**Sg**	**04 49 33.8**	**+1.1**
	8.8nm,0.5s						
KAPS	**Kapalarasan**	**3.71**	**264**	Pg	**Pg**	**04 48 43.0**	**-1.6**
	6.2nm,0.4s						
KAPS				Lg	Lg	04 49 33.8	
	8.8nm,0.5s						
PDGK	**Podgornoye**	**4.40**	**238**	Pg	**Pg**	**04 48 54.8**	**-2.9**
	1.8nm,0.4s						
PDGK				Lg	Lg	04 49 54.3	
	6.0nm,0.5s						
PDGK	**Podgornoye**	**4.40**	**238**	⇓Pg	**Pb**	**04 48 53.5**	**+2.6**
	3.4nm,0.8s						
PDGK				⇑Lg	Lg	04 49 53.2	
	13nm,0.6s						
UZB	**Uzynbulak**	**4.79**	**238**	Pg	**Pb**	**04 49 00.7**	**+3.2**
	3.0nm,0.6s						
UZB				Lg	Lg	04 50 03.5	
	6.7nm,0.6s						
ARXS	**Arharly**	**5.05**	**254**	*e*P	**Pg**	**04 49 07.2**	**-3.0**
	3.4nm,0.7s						
ARXS				*e*S	**Sg**	**04 50 15.1**	**-0.5**
	12nm,0.5s						
ARXS	**Arharly**	**5.05**	**254**	Pg	**Pg**	**04 49 07.1**	**-3.0**
	3.4nm,0.7s						
ARXS				Lg	Lg	04 50 15.1	
	12nm,0.5s						
SATY	**Saty**	**5.21**	**241**	Pg	**Pg**	**04 49 08.7**	**-4.4**
	12nm,0.9s						
SATY				Lg	Lg	04 50 17.4	
	15nm,0.5s						
KTBS	**Karatobe**	**6.01**	**253**	Pg	**Pb**	**04 49 22.6**	**+4.4**
	1.4nm,0.7s						
KTBS				Lg	Lg	04 50 41.3	
	8.7nm,0.6s						
KURBB	**Kurchatov Arra**	**6.31**	**322**	⇑Lg	Lg	04 50 58.5	
	18nm,0.6s						

IDC ***24*** *04:51:38.0±2.8, 50.99N×179.38E, h0km, mb3.4/6, mb1 3.8/7, mb1mx3.6/39, mbtmp3.6/7, ML4.0/1, Error ellipse: s-maj=79.7km s-min=22.6km az=172.0*
NEIC ***24*** *04:51:43.2±1.3, 50.8N±0.2×179.34E±0.03, h37km±11km, mb3.9/3, Error ellipse: s-maj=25.1km s-min=2.4km az=184.0*
AEIC ***24*** *04:51:44±3.2, 50.7N±0.1×179.7E±0.1, h32km±7km, Error ellipse: s-maj=21.9km s-min=6.5km az=160.0*

ISC 24 04:51:43.9±1.8**, 50.9N**±0.3×**179.37E**±0.06**, h48**km**, n18,** σ1§**01**/18**, mb3.5/6, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**1.87**	**59**		**Pn**	**04 52 13.5**	**0.0**
TAFP	**Tanaga Falls P**	**1.93**	**58**		**Pn**	**04 52 15.2**	**+0.9**
TAFP					**Sn**	**04 52 39.1**	**+1.8**
KIMD	**Kanaga Island**	**2.29**	**67**		**Pn**	**04 52 19.7**	**+0.5**
KIMD					**Sn**	**04 52 46.4**	**+0.2**
KIKV	**Kanaga Island**	**2.37**	**64**		**Pn**	**04 52 20.7**	**+0.3**
KIWB	**Kanaga Island**	**2.38**	**65**	Pn	**Pn**	**04 52 20.0**	**-0.3**
ADK	**Adak**	**2.66**	**67**	Pn	**Pn**	**04 52 23.8**	**-0.4**
GSMY	**Great Sitkin M**	**3.08**	**67**		**Pn**	**04 52 30.6**	**+0.6**
SMY	**Shemya**	**3.75**	**301**	Pn	**Pn**	**04 52 39.1**	**0.0**
ATKA	**Atka Island**	**4.22**	**70**	Pn	**Pn**	**04 52 45.3**	**-0.3**
KDAK	**Kodiak Island**	**17.64**	**56**	P	**Pn**	**04 55 43.3**	**-2.6**
	0.5nm,0.3s,baz=264,slow=9.2,SNR=5.4						
KDAK	**Kodiak Island**	**17.64**	**56**	IAmb	IAmb	04 56 00.1	
	comp=Z,2.1nm,1.1s						
ILAR	**Eielson Array**	**22.33**	**39**	P	**P**	**04 56 36.1**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=230,slow=8.2,SNR=9.2						
INK	**Inuvik**	**28.50**	**35**	P	**P**	**04 57 34.2**	**0.0**
	comp=Z,0.6nm,0.7s,baz=259,slow=9.3,SNR=3.0						
INK	**Inuvik**	**28.50**	**35**	IAmb	IAmb	04 57 51.4	
	comp=Z,2.0nm,1.1s						
YKA	**Yellowknife Ar**	**36.39**	**46**	P	**P**	**04 58 42.7**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=280,slow=8.1,SNR=8.1						
SONM	**Songino Array**	**45.82**	**296**	P	**P**	**05 00 01.8**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=62,slow=7.2,SNR=3.2						
PDAR	**Pinedale Array**	**47.55**	**71**	P	**P**	**05 00 15.7**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=303,slow=3.2,SNR=7.6						
MKAR	**Makanchi Array**	**59.42**	**308**	P	**P**	**05 01 41.1**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=51,slow=6.8,SNR=11						

BUL ***24*** *04:54:27.3±1.6, 21.37S×33.33E, h10km, MD4.0*
EAF ***24*** *04:54:29.0±1.4, 21.86S×33.07E, h10km, MD3.5*

ISC 24 04:54:31.0±3.1**, 22.09S**±0.10×**32.7E**±0.2**, h10**km**, n6,** σ1§**87**/10**, Mozambique**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSNA	**Messina**	**2.49**	**264**	*i* P	**Pg**	**04 55 17.9**	**-0.8**
MSNA				*i* S	**Sg**	**04 55 52.4**	**+1.5**
MSNA	**Messina**	**2.49**	**264**	*i* P	**Pb**	**04 55 15.2**	**-0.6**
MATP	**Matopo**	**4.25**	**292**	*i* P	**Pn**	**04 55 34.9**	**-1.1**
MATP				*i* S	**Sn**	**04 56 25.8**	**+0.1**
MATP	**Matopo**	**4.25**	**292**	*i* P	**Pn**	**04 55 37.4**	**+1.5**
MATP				*i* S	**Sn**	**04 56 25.8**	**+0.1**
BOSA	**Boshof**	**9.34**	**224**	*i* P	**Pn**	**04 56 49.4**	**+3.5**
BOSA	**Boshof**	**9.34**	**224**	*i* P	**Pn**	**04 56 45.5**	**-0.4**
BOSA				*i* S	**Sn**	**04 58 28.8**	**-2.3**

IDC ***24*** *05:12:31.3±2.0, 14.54S×73.33W, h73km±23km, mb3.6/2, mb1 3.8/5, mb1mx3.5/34, mbtmp4.0/5, MS2.3/1, Ms1 2.4/1, ms1mx2.1/30, Error ellipse: s-maj=63.6km s-min=15.0km az=36.0*

ISC 24 05:12:31.6±0.9**, 14.9S**±0.1×**73.7W**±0.1**, h100**km**, n7,** σ1§**71**/9**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**4.26**	**313**	P	**Pn**	**05 13 33.8**	**-0.5**
	3.5nm,0.3s,baz=122,slow=16,SNR=8.2						
NNA				S	**Sn**	**05 14 22.7**	**-0.4**
	29nm,0.3s,baz=24,slow=16,SNR=13						
LPAZ	**La Paz**	**5.49**	**105**	P	**Pn**	**05 13 53.9**	**+2.3**
	2.2nm,0.3s,baz=302,slow=10,SNR=34						
LPAZ				LR	LR	05 16 35.8	
	comp=Z,29nm,20.8s,baz=264,slow=46						
LVC	**Limon Verde**	**8.87**	**150**	P	**Pn**	**05 14 39.2**	**+1.9**
	0.9nm,0.3s,baz=334,slow=12,SNR=15						
LVC				S	**Sn**	**05 16 14.9**	**-0.8**
	0.5nm,0.3s,baz=306,slow=18,SNR=5.4						
SIV	**San Ignacio**	**12.17**	**97**	P	**Pn**	**05 15 19.2**	**-2.5**
	0.7nm,0.3s,baz=268,slow=16,SNR=18						
TORD	**Torodi Ar. Bea**	**79.60**	**73**	P	**P**	**05 24 28.5**	**+0.1**
	0.9nm,0.7s,baz=253,slow=5.1,SNR=5.2						
YKA	**Yellowknife Ar**	**83.55**	**342**	P	**P**	**05 24 49.2**	**+1.1**
	0.9nm,0.8s,baz=136,slow=5.0,SNR=16						
SONM	**Songino Array**	**147.18**	**360**	PKPbc	**PKiKP**	**05 32 05.8**	**+0.1**
	0.7nm,0.7s,baz=346,slow=3.2,SNR=5.9						

IDC ***24*** *05:14:29.3±3.4, 35.40N×78.55E, h0km, mb3.9/2, mb1 3.7/6, mb1mx3.3/44, mbtmp3.6/6, ML3.4/4, MS2.5/1, Ms1 2.7/1, ms1mx2.3/46, Error ellipse: s-maj=55.5km s-min=41.0km az=98.0*
BJI ***24*** *05:14:34.2±0.0, 35.61N×78.37E, h5km, ML3.6/6*

ISC 24 05:14:33.4±2.8**, 35.4N**±0.2×**78.6E**±0.2**, h26**km**, n9,** σ1§**06**/9**, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.59**	**334**	Pn	**Pn**	**05 15 40.8**	**-0.5**
KSH				Sn	**Sn**	**05 16 32.6**	**-1.2**
KSH				smax	smax		
	comp=N,110nm,0.9s				

comp=Z,19nm,1.1s
ALN Alexandroupoli 148.12 323 PKPdf 05 39 14.6 -0.5

IDC 24 05:23:09.8±7.2, 18°.40S×178°.60W, h645km±89km, mb2.9/6, mb1 3.2/6, mb1mx2.9/33, mbtmp3.9/6, Error ellipse: s-maj=102.5km s-min=28.9km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.24**	**242**	P	P	05 29 37.5	0.0
	1.6nm,0.8s,baz=80,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**44.37**	**260**	P	P	05 30 25.5	-0.2
	0.4nm,0.4s,baz=97,slow=6.9,SNR=6.6						
ASAR	**Alice Springs**	**44.48**	**255**	P	P	05 30 26.8	+0.2
	7.1nm,0.7s,baz=87,slow=8.4,SNR=42						
ASAR				PcP	PcP	05 31 55.2	-0.2
	0.2nm,0.5s,baz=98,slow=3.8,SNR=2.7						
NVAR	**Mina Array Bea**	**79.90**	**44**	P	P	05 34 14.1	+0.2
	0.5nm,0.6s,baz=241,slow=9.2,SNR=3.5						
ILAR	**Eielson Array**	**86.40**	**13**	P	P	05 34 45.2	+0.1
	0.4nm,0.5s,baz=224,slow=4.5,SNR=9.9						
PDAR	**Pinedale Array**	**87.83**	**43**	P	P	05 34 52.6	-0.1
	0.2nm,0.7s,baz=237,slow=6.3,SNR=2.5						

*IDC **24** 05:44:22.2±5.0, 4°.86S×153°.70E, h105km±33km, mb3.3/5, mb1 3.6/6, mb1mx3.4/37, mbtmp3.8/6, Error ellipse: s-maj=50.7km s-min=17.9km az=93.0*

ISC 24 05:44:21.1±1.4, 4°.8S±0°.1×153°.8E±0°.1, h100km, n8, σ1§11/10, mb3.3/5, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.87**	**285**	P	**Pn**	**05 44 52.2**	**+0.2**
	32nm,0.3s,baz=205,slow=1.9,SNR=15						
KRVT				S	**Sn**	**05 45 14.6**	**-1.1**
	54nm,0.3s,baz=333,slow=23,SNR=10						
PMG	**Port Moresby**	**8.05**	**235**	P	**Pn**	**05 46 16.5**	**+1.2**
	8.8nm,0.3s,baz=56,slow=7.9,SNR=9.7						
PMG				S	**Sn**	**05 47 45.4**	**+0.6**
	2.1nm,0.3s,baz=342,slow=20,SNR=2.5						
WRA	**Warramunga Arr**	**24.23**	**230**	P	**P**	**05 49 28.1**	**-0.7**
	1.8nm,0.7s,baz=55,slow=10.0,SNR=7.1						
ASAR	**Alice Springs**	**26.85**	**224**	P	**P**	**05 49 51.4**	**-1.2**
	1.0nm,1.0s,baz=46,slow=8.9,SNR=4.3						
STKA	**Stephens Creek**	**29.28**	**202**	P	**P**	**05 50 12.9**	**-1.1**
	1.2nm,0.7s,baz=23,slow=9.2,SNR=3.2						
SONM	**Songino Array**	**66.88**	**327**	P	**P**	**05 55 04.1**	**+1.4**
	0.2nm,0.5s,baz=141,slow=6.9,SNR=2.7						
MKAR	**Makanchi Array**	**81.01**	**319**	P	**P**	**05 56 25.4**	**+0.4**
	0.2nm,0.6s,baz=96,slow=6.4,SNR=2.9						
TORD	**Torodi Ar. Bea**	**151.29**	**289**	PKPbc	**PKPbc**	**06 04 03.3**	**-0.8**
	0.6nm,0.8s,baz=66,slow=3.6,SNR=3.0						

IDC 24 05:51:32.7±18.0, 28°.04S×74°.39E, h0km, mb3.9/2, mb1 4.2/2, mb1mx3.4/42, mbtmp3.9/2, Error ellipse: s-maj=917.2km s-min=57.4km az=32.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**20.36**	**355**	T	T	06 17 15.6	
	baz=176,slow=76,SNR=6.2						
H08S1	**Diego Garcia H**	**20.36**	**355**	T	T	06 17 18.8	
	baz=176,slow=76,SNR=3.7						
H08S3	**Diego Garcia H**	**20.38**	**355**	T	T	06 17 18.1	
	baz=176,slow=76,SNR=9.6						
ASAR	**Alice Springs**	**53.28**	**100**	P	P	06 00 54.0	+0.3
	1.0nm,0.7s,baz=256,slow=5.8,SNR=9.6						
WRA	**Warramunga Arr**	**54.90**	**96**	P	P	06 01 04.9	-0.6
	0.7nm,0.6s,baz=252,slow=8.0,SNR=5.1						
YKA	**Yellowknife Ar**	**145.04**	**7**	PKPbc	PKPbc	06 11 10.0	-0.7
	0.4nm,0.9s,baz=339,slow=3.8,SNR=4.1						

IDC 24 05:57:21.4±2.6, 8°.46S×115°.04E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/37, mbtmp3.3/4, Error ellipse: s-maj=134.7km s-min=22.1km az=52.0, Bali region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.89**	**123**	P	P	06 02 16.2	-0.1
	0.4nm,0.5s,baz=296,slow=12,SNR=16						
ASAR	**Alice Springs**	**23.56**	**132**	P	P	06 02 33.9	+0.1
	0.4nm,0.4s,baz=310,slow=8.9,SNR=10						
SONM	**Songino Array**	**56.57**	**353**	P	P	06 07 05.5	-0.4
	0.4nm,0.7s,baz=159,slow=8.8,SNR=3.2						
MKAR	**Makanchi Array**	**62.26**	**335**	P	P	06 07 45.4	+0.2
	0.1nm,0.4s,baz=140,slow=7.0,SNR=3.3						

NNC 24 06:26:33.1±5.3, 36°.81N×71°.24E, h119km±86km, mb3.1, mpv3.6, 2C-2D, Error ellipse: s-maj=45.1km s-min=43.7km az=104.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.31**	**355**	P	Pn	06 28 03.6	+0.1
	3.4nm,0.5s,baz=186,slow=13,SNR=33						
KK31				⇓S	Sn	06 29 15.2	+0.9
	3.0nm,0.5s,baz=184,slow=24,SNR=4.1						
AAK	**Ala-Archa**	**6.33**	**22**	⇑P	Pn	06 28 04.2	+0.1
	2.1nm,0.4s						
AAK				⇑S	Sn	06 29 15.3	+0.2
	17nm,0.9s						
AB31	**Akbulak array**	**14.90**	**330**	P	Pn	06 29 56.0	-1.5
	0.5nm,0.5s,baz=144,slow=12,SNR=21						
AKTO	**Aktyubinsk**	**16.61**	**329**	⇓P	P	06 30 19.8	+0.8
	2.7nm,1.1s						

*NIED **24** 06:37:00, 38°.10N×141°.80E, h56km, Mw3.9 Best double couple: M0 8.06000×10^14 NP1:φ§197.00000°, δ§63.00000°, λ103.00000°. NP2:φ§351.00000°, δ§30.00000°, λ67.00000°.*
*JMA **24** 06:37:17.4, 38°.14N×141°.77E, h55km±1km, M3.9*
JMA Felt I J1.
*NEIC **24** 06:37:19.7±3.0, 38°.22N±0°.08×141°.8E±0°.1, h71km±6km, mb4.4/15, Error ellipse: s-maj=16.3km s-min=9.8km az=118.0*
*IDC **24** 06:37:20.8±2.9, 38°.09N×141°.70E, h86km±26km, mb3.5/15, mb1 3.8/17, mb1mx3.6/40, mbtmp3.9/17, MS2.6/3, Ms1 2.6/3, ms1mx2.4/41, Error ellipse: s-maj=19.3km s-min=14.9km az=99.0*

ISC 24 06:37:17.4±1.0, 38°.14N±0°.04×141°.82E±0°.07, h50km±8km, n75, σ0§90/76, mb4.1/24, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.33**	**301**	P	**Pn**	**06 37 27.1**	**+0.3**
JIKH				S	**Sn**	**06 37 33.8**	**+0.4**
JIO	**Ouri**	**0.48**	**310**	P	**Pn**	**06 37 28.6**	**+0.1**
JIO				S	**Sn**	**06 37 36.4**	**0.0**
JKMT	**Kesennumamotoy**	**0.72**	**338**	P	**Pn**	**06 37 31.5**	**+0.1**
JKMT				S	**Sn**	**06 37 41.5**	**-0.1**
JMST	**Minamisoumatoc**	**0.85**	**241**	P	**Pn**	**06 37 32.8**	**-0.3**
JMST				S	**Sn**	**06 37 44.1**	**-0.4**
JMM	**Marumori**	**0.86**	**252**	P	**Pn**	**06 37 32.7**	**-0.5**
JMM				*e*S	**Sn**	**06 37 43.9**	**-0.8**
JMK	**Ichinoseki**	**0.94**	**330**	P	**Pn**	**06 37 34.5**	**+0.2**
JMK				S	**Sn**	**06 37 46.6**	**0.0**
JOU	**Okura**	**0.94**	**284**	P	**Pn**	**06 37 34.2**	**-0.1**
JOU				S	**Sn**	**06 37 46.5**	**-0.2**
JFK	**Kawauchi**	**1.08**	**224**	P	**Pn**	**06 37 35.8**	**-0.4**
JFK				S	**Sn**	**06 37 49.8**	**-0.3**
JFT	**Otama**	**1.33**	**243**	P	**Pn**	**06 37 39.9**	**+0.3**
JFT				S	**Sn**	**06 37 56.3**	**+0.1**
JYK	**Kaneyama**	**1.38**	**305**	P	**Pn**	**06 37 40.5**	**+0.2**
JYK				S	**Sn**	**06 37 57.9**	**+0.4**
JYS	**Shirataka**	**1.38**	**274**	P	**Pn**	**06 37 40.5**	**+0.2**
JYS				S	**Sn**	**06 37 57.6**	**+0.1**
JOM	**Ohasama**	**1.39**	**343**	P	**Pn**	**06 37 40.9**	**+0.5**
JOM				S	**Sn**	**06 37 58.3**	**+0.6**
JRG	**Rokugo**	**1.56**	**324**	P	**Pn**	**06 37 43.4**	**+0.7**
JYA	**Atsumi**	**1.71**	**286**	P	**Pn**	**06 37 45.0**	**+0.2**
MJAR	**Matsushiro Arr**	**3.29**	**242**	P	**Pn**	**06 38 07.7**	**+1.2**
	1.2nm,0.3s,baz=63,slow=13,SNR=19						
MJAR				LR	LR	06 39 43.5	
	comp=Z,106nm,19.6s,baz=95,slow=45						
MJAR	**Matsushiro Arr**	**3.29**	**242**		Pn	06 38 11.7	+5.3
MAJO	**Matsushiro**	**3.29**	**242**		**Pn**	**06 38 08.8**	**+2.3**
MAT	**Matsushiro**	**3.29**	**242**	P	**Pn**	**06 38 08.8**	**+2.3**
MAT				S	Sn	06 38 50.8	+6.4
MJB9	**Matsu-Tunnel**	**3.29**	**242**		**Pn**	**06 38 08.4**	**+2.0**
ERM	**Erimo**	**4.00**	**14**	Pn	**Pn**	**06 38 16.4**	**+0.2**
INU	**Inuyama**	**4.76**	**236**		**Pn**	**06 38 28.7**	**+2.2**
JHJ2	**Mitsune**	**5.28**	**199**	Pn	Pn	06 38 39.0	+5.3
USRK	**Ussuriysk Ar.**	**9.56**	**312**	P	Pn	06 39 36.2	+3.8
	baz=120,slow=14,SNR=11						
KSRS	**Korea Array**	**11.02**	**271**	LR	LR	06 43 01.7	
	comp=Z,18nm,21.7s,baz=20,slow=31						
KLR	**Kul'dur**	**13.25**	**330**	LR	LR	06 45 29.9	
	comp=Z,34nm,20.1s,baz=36,slow=37						
SEY	**Seymchan**	**25.64**	**11**	P	**P**	**06 42 43.2**	**+1.2**
	1.6nm,0.8s,baz=202,slow=7.2,SNR=5.2						
SONM	**Songino Array**	**27.45**	**302**	P	**P**	**06 42 59.7**	**+1.0**
	0.4nm,0.5s,baz=106,slow=9.2,SNR=5.1						
H11N2	**WAKE ISLAND Hy**	**28.46**	**123**	T	T	07 13 20.6	
	baz=316,slow=76,SNR=83						
H11N1	**WAKE ISLAND Hy**	**28.47**	**123**	T	T	07 13 21.6	
	baz=316,slow=76,SNR=72						
H11N3	**WAKE ISLAND Hy**	**28.48**	**123**	T	T	07 13 27.9	
	baz=316,slow=76,SNR=99						
H11S1	**WAKE ISLAND Hy**	**29.21**	**125**	T	T	07 14 22.4	
	baz=318,slow=76,SNR=52						
H11S3	**WAKE ISLAND Hy**	**29.21**	**125**	T	T	07 14 22.6	
	baz=318,slow=76,SNR=91						
H11S2	**WAKE ISLAND Hy**	**29.23**	**125**	T	T	07 14 24.5	
	baz=318,slow=76,SNR=43						
ZALV	**Zelesovo Beam**	**41.41**	**311**	P	**P**	**06 44 57.8**	**-0.9**
	1.1nm,0.3s,baz=83,slow=8.6,SNR=4.3						
MK31	**Makanchi Array**	**43.81**	**301**	P	**P**	**06 45 17.6**	**-0.6**
MKAR	**Makanchi Array**	**43.81**	**301**	P	**P**	**06 45 17.6**	**-0.7**
	0.6nm,0.8s,baz=95,slow=7.3,SNR=4.8						
MKAR	**Makanchi Array**	**43.81**	**301**	P	**P**	**06 45 17.5**	**-0.8**
KURK	**Kurchatov**	**45.51**	**307**	P	**P**	**06 45 31.1**	**-0.6**
KURK				IAmb	IAmb	06 45 44.7	
	comp=Z,4.3nm,0.8s						
IMAR	**Indian Mountai**	**45.54**	**31**	P	**P**	**06 45 33.0**	**+1.3**
KURBB	**Kurchatov Arra**	**45.58**	**307**	P	**P**	**06 45 31.6**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=82,slow=8.2,SNR=10						
RSO	**Redoubt Souh**	**45.84**	**39**	P	**P**	**06 45 34.0**	**-0.4**
ILAR	**Eielson Array**	**48.39**	**33**	P	**P**	**06 45 53.9**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=268,slow=6.5,SNR=10						
ILAR	**Eielson Array**	**48.39**	**33**	P	**P**	**06 45 54.5**	**+0.5**
BOOM	**Boomskoye usch**	**49.29**	**297**	P	**P**	**06 46 02.5**	**+1.1**
BOOM				IAmb	IAmb	06 46 15.2	
	comp=Z,3.1nm,1.1s						
SCRK	**Sand Creek**	**49.71**	**34**	P	**P**	**06 46 05.5**	**+1.2**
SCRK				IAmb	IAmb	06 46 21.2	
	comp=Z,1.1nm,0.7s						
EPYK	**Eagle Plains**	**52.41**	**30**	P	**P**	**06 46 26.2**	**+1.8**
INK	**Inuvik**	**53.26**	**28**	P	**P**	**06 46 30.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=301,slow=1.9,SNR=5.4						
INK	**Inuvik**	**53.26**	**28**	P	**P**	**06 46 30.9**	**+0.4**
CHGR	**Chuyangaron**	**55.49**	**295**	P	**P**	**06 46 48.7**	**+1.4**
CHGR				IAmb	IAmb	06 47 00.9	
	comp=Z,6.3nm,0.8s						
ABKAR	**Akbulak array**	**57.48**	**310**	P	**P**	**06 47 00.4**	**-0.7**
ABKAR				IAmb	IAmb	06 47 14.3	
	comp=Z,1.6nm,0.7s						
WB0	**Warramunga Arr**	**58.02**	**188**	P	**P**	**06 47 04.3**	**-0.8**
WB0				IAmb	IAmb	06 47 04.9	
	comp=Z,9.5nm,1.4s						
WR0	**Warramunga Arr**	**58.20**	**188**	P	**P**	**06 47 05.3**	**-1.1**
WR0				IAmb	IAmb	06 47 05.7	
	comp=Z,2.6nm,0.7s						
WB2	**Warramunga Arr**	**58.20**	**188**	P	**P**	**06 47 05.4**	**-1.0**
WB2				IAmb	IAmb	06 47 23.5	
	comp=Z,8.4nm,1.4s						
WRA	**Warramunga Arr**	**58.20**	**188**	P	**P**	**06 47 05.2**	**-1.2**
	comp=Z,1.5nm,0.5s,baz=4.7,slow=7.1,SNR=11						
WRA	**Warramunga Arr**	**58.20**	**188**	P	**P**	**06 47 05.0**	**-1.4**
ASAR	**Alice Springs**	**61.93**	**188**	P	**P**	**06 47 31.2**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=17,slow=16,SNR=10						
ASAR	**Alice Springs**	**61.93**	**188**	P	**P**	**06 47 31.6**	**-0.3**
YKA	**Yellowknife Ar**	**62.69**	**31**	P	**P**	**06 47 36.0**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=303,slow=6.7,SNR=6.1						
ARCES	**ARCESS Array B**	**63.08**	**339**	P	**P**	**06 47 38.2**	**-0.9**
	comp=Z,2.3nm,0.9s,baz=62,slow=8.3,SNR=5.2						
FINES	**FINESS Array B**	**67.99**	**332**	P	**P**	**06 48 09.7**	**-1.2**
	comp=Z,2.2nm,0.9s,baz=49,slow=8.8,SNR=5.2						
FINES	**FINESS Array B**	**67.99**	**332**	P	**P**	**06 48 09.8**	**-1.1**
KMRM	**Mail Ridge**	**69.60**	**55**	P	**P**	**06 48 20.7**	**-0.8**
FORT	**Forrest**	**69.76**	**193**	P	**P**	**06 48 21.9**	**-0.3**
AKASG	**Malin Array Be**	**73.62**	**322**	P	**P**	**06 48 44.2**	**-1.1**
	comp=Z,1.5nm,0.3s,baz=46,slow=6.3,SNR=1.4						
NVAR	**Mina Array Bea**	**74.07**	**54**	P	**P**	**06 48 49.4**	**+1.0**
	comp=Z,0.9nm,0.8s,baz=282,slow=5.2,SNR=4.8						
AHID	**Auburn Hatcher**	**75.79**	**47**	P	**P**	**06 48 59.2**	**+0.9**
R11A	**Troy Canyon, C**	**75.83**	**52**	P	**P**	**06 48 59.7**	**+1.2**
PDAR	**Pinedale Array**	**76.66**	**46**	P	**P**	**06 49 03.1**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=236,slow=0.9,SNR=8.0						
PDAR	**Pinedale Array**	**76.66**	**46**	P	**P**	**06 49 03.7**	**+0.5**
TXAR	**Lajitas Array**	**89.19**	**53**	P	**P**	**06 50 08.4**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=316,slow=6.3,SNR=3.0						
LPAZ	**La Paz**	**145.85**	**59**	PKPbc	**PKPdf**	**06 56 51.5**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=37,slow=1.2,SNR=8.7						
LPAZ	**La Paz**	**145.85**	**59**		**PKPdf**	**06 56 51.9**	**+0.1**
MNMC	**Minye Minye**	**146.78**	**64**	PKPbc	**PKPbc**	**06 56 55.3**	**+0.7**
PB11	**IPOC Station P**	**147.15**	**65**	PKPbc	**PKPbc**	**06 56 55.1**	**-0.4**
GO04	**Tololo Observa**	**151.97**	**83**	PKPbc	**PKPbc**	**06 57 06.8**	**-0.5**

*NNC **24** 06:56:59.4±2.1, 35°.78N×87°.55E, h0km, mb4.1, Error ellipse: s-maj=30.6km s-min=18.6km az=68.0*
*IDC **24** 06:57:02.0±1.6, 35°.75N×87°.23E, h0km, mb3.4/3, mb1 3.6/7, mb1mx3.4/46, mbtmp3.5/7, ML3.2/3, MS3.6/19, Ms1 3.6/19, ms1mx3.4/34, Error ellipse: s-maj=45.7km s-min=18.2km az=56.0*
*BJI **24** 06:57:15.0±0.0, 36°.66N×86°.78E, h10km, mb3.7/1, ML3.8/4, Ms3.9/6, Ms7 3.7/6*

ISC 24 06:57:03.5±1.0, 35°.87N±0°.06×87°.19E±0°.10, h10km, n29, σ1§55/14, MS3.5/15, 5C-4D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**7.00**	**150**	P	**Pg**	**06 59 17.3**	**-0.2**
LSA				S	**Sb**	**07 00 26.4**	**-2.8**
LSA				SS	**Sg**	**07 00 51.3**	**+3.1**
LSA				pmax	pmax		
	comp=Z,20nm,1.6s						
LSA				pmax	pmax		
	comp=Z,270nm,3.2s						
LSA				LR	LR		
	comp=E,3μm,7.5s						
LSA				LR	LR		
	comp=Z,1μm,7.8s						
WMQ	**Urumqi**	**7.95**	**3**	*e*Pn	**Pn**	**06 58 58.8**	**-0.4**
PDGK	**Podgornoye**	**9.53**	**324**	⇓Pn	**Pn**	**06 59 21.1**	**+0.2**
	comp=Z,4.1nm,0.7s						
PDGK				⇑Pg		06 59 57.8	
	comp=Z,7.2nm,1.0s						
PDGK				⇓Lg	Lg	07 02 10.3	
	comp=Z,28nm,1.2s						
GTA	**Gaotai**	**10.62**	**67**	⇑P	**Pn**	**06 59 37.3**	**+1.5**
GTA				pP		06 59 42.0	
GTA				sP		06 59 44.3	
GTA				S	**Sn**	**07 01 34.5**	**-0.3**
GTA				sS		07 01 41.3	
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,79nm,7.8s						
GTA				LR	LR		
	comp=N,2μm,14.6s						
GTA				LR	LR		
	comp=E,800nm,13.6s						
GTA				LR	LR		
	comp=Z,920nm,13.0s						
MK31	**Makanchi Array**	**11.52**	**343**	⇑Pn	**Pn**	**06 59 47.5**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=152,slow=14,SNR=11						
MK31				⇓Pg		07 00 32.4	
	comp=Z,1.6nm,0.8s,baz=150,slow=14,SNR=4.1						
MK31				⇓Lg	Lg	07 03 10.7	
	comp=Z,11nm,1.3s,baz=162,slow=21,SNR=3.5						
MKAR	**Makanchi Array**	**11.52**	**343**	Pn	**Pn**	**06 59 48.8**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=152,slow=14,SNR=11						
MKAR				Lg	Lg	07 03 12.7	
	comp=Z,0.0nm,0.3s,baz=165,slow=28,SNR=2.5						
MKAR				LR	LR	07 04 48.7	
	comp=Z,155nm,18.2s,baz=160,slow=40						
MAKZ	**Makanchi**	**11.61**	**342**	⇑Pg	Pn	07 00 35.1	+46
	comp=Z,4.4nm,1.1s						
MAKZ				⇑Lg	Lg	07 03 12.6	
	comp=Z,15nm,1.4s						
AAK	**Ala-Archa**	**11.93**	**308**	Pn	**Pn**	**06 59 54.8**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=106,slow=15,SNR=5.2						
AAK				Lg	Lg	07 03 26.0	
	baz=263,slow=18,SNR=2.3						
AAK				LR	LR	07 05 26.6	
	comp=Z,306nm,18.8s,baz=99,slow=42						
KURBB	**Kurchatov Arra**	**16.02**	**340**	Pn	**Pn**	**07 00 47.0**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=152,slow=11,SNR=6.5						
KURBB				Lg	Lg	07 05 40.6	
	comp=Z,0.0nm,0.3s,baz=150,slow=24,SNR=3.3						
ZALV	**Zelesovo Beam**	**18.15**	**355**	LR	LR	07 09 25.0	
	comp=Z,136nm,20.1s,baz=180,slow=41						
SONM	**Songino Array**	**18.59**	**44**	P	**Pn**	**07 01 21.1**	**0.0**
	baz=243,slow=9.8,SNR=4.5						
TLY	**Talaya**	**19.70**	**32**	LR	LR	07 08 24.8	
	comp=Z,44nm,21.1s,baz=222,slow=34						
CMAR	**Chiang Mai Arr**	**20.22**	**146**	P	**P**	**07 01 38.3**	**-0.5**
	comp=Z,0.9nm,0.4s,baz=325,slow=10,SNR=3.6						
CMAR				LR	LR	07 09 38.0	
	comp=Z,81nm,19.9s,baz=332,slow=38						
BVAR	**Borovoye Array**	**20.84**	**331**	P	Pn	07 01 46.6	-1.1
	comp=Z,0.5nm,0.4s,baz=126,slow=9.1,SNR=3.8						
GEYT	**Alibeck**	**23.30**	**284**	LR	LR	07 13 06.0	
	comp=Z,176nm,19.4s,baz=70,slow=41						
AKTO	**Aktyubinsk**	**25.58**	**314**	LR	LR	07 13 59.7	
	comp=Z,234nm,18.0s,baz=119,slow=40						
KSRS	**Korea Array**	**32.54**	**75**	LR	LR	07 17 07.7	
	comp=Z,39nm,21.6s,baz=287,slow=37						
GNI	**Garni**	**33.48**	**290**	LR	LR	07 19 41.6	
	comp=Z,65nm,19.1s,baz=68,slow=40						
KIRV	**Kirov**	**33.57**	**325**	LR	LR	07 18 36.5	
	comp=Z,150nm,18.4s,baz=196,slow=38						
KBZ	**Khabaz**	**34.59**	**297**	LR	LR	07 20 21.4	
	comp=Z,49nm,18.9s,baz=81,slow=40						
USRK	**Ussuriysk Ar.**	**34.93**	**62**	LR	LR	07 19 57.0	
	comp=Z,55nm,21.1s,baz=327,slow=39						
AKASG	**Malin Array Be**	**43.60**	**309**	LR	LR	07 25 09.9	
	comp=Z,132nm,18.9s,baz=55,slow=39						
FINES	**FINESS Array B**	**45.56**	**324**	LR	LR	07 25 50.6	
	comp=Z,116nm,18.2s,baz=87,slow=38						
MA2	**Magadan**	**46.68**	**39**	LR	LR	07 26 36.8	
	comp=Z,52nm,18.7s,baz=271,slow=38						
ARCES	**ARCESS Array B**	**47.03**	**335**	LR	LR	07 27 04.7	
	comp=Z,96nm,19.2s,baz=348,slow=38						
PETK	**Petropavlovsk-**	**51.04**	**47**	LR	LR	07 29 08.1	
	comp=Z,83nm,18.1s,baz=62,slow=38						
NOA	**NORSAR Array B**	**52.74**	**324**	LR	LR	07 29 16.5	
	comp=Z,46nm,19.3s,baz=55,slow=37						
GERES	**GERESS Array B**	**53.81**	**308**	LR	LR	07 32 13.6	
	comp=Z,118nm,18.3s,baz=54,slow=39						
WRA	**Warramunga Arr**	**71.22**	**133**	P	**P**	**07 08 22.0**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=323,slow=6.1,SNR=3.3						

JMA 24 06:57:38.7±0.3, 37°.53N×144°.46E, h42km, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.49**	**289**	P	Pn	06 58 18.1	+1.4
JIKH				*e*S	Sn	06 58 47.2	+1.3
JIO	**Ouri**	**2.62**	**292**	P	Pn	06 58 20.3	+1.7
JIO				*e*S	Sn	06 58 51.0	+1.8
JKMT	**Kesennumamotoy**	**2.68**	**299**	P	Pn	06 58 20.8	+1.5
JKMT				S	Sn	06 58 52.2	+1.7
OFUJ	**Ofunato**	**2.69**	**306**	P	Pn	06 58 21.0	+1.6
JMK	**Ichinoseki**	**2.92**	**300**	P	Pn	06 58 25.2	+2.6
JOM	**Ohasama**	**3.15**	**309**	S	Sn	06 59 04.7	+2.5
JFT	**Otama**	**3.28**	**271**	P	Pn	06 58 29.7	+2.1
JFT				S	Sn	06 59 07.7	+2.4
JYK	**Kaneyama**	**3.51**	**294**	*e*S	Sn	06 59 13.0	+1.9
BSO1	**Boso 1**	**4.02**	**226**	P	Pn	06 58 35.8	-1.5
JRY	**Ryogami san**	**4.71**	**253**	P	Pn	06 58 47.4	+0.1
JRY				*e*S	Sn	06 59 39.8	-0.8
JKB	**Kayabe**	**5.09**	**330**	P	Pn	06 58 54.6	+2.2
JCH	**Churui**	**5.15**	**351**	P	Pn	06 58 52.9	-0.3
JCH				S	Sn	06 59 49.5	-1.8
NEM2	**Nemuro 2**	**5.91**	**9**	P	Pn	06 59 00.9	-2.7
NEM2				*e*S	Sn	07 00 04.7	-5.3
JTKR	**Abashiri--Toko**	**6.45**	**356**	P	Pn	06 59 10.6	-0.4
JTKR				*e*S	Sn	07 00 21.1	-2.2
JHR	**Hokuryu**	**6.54**	**342**	P	Pn	06 59 14.8	+2.4

*IDC **24** 07:31:57.8±1.5, 19°.94S×178°.14W, h572km±17km, mb4.0/17, mb1 4.2/20, mb1mx4.1/27, mbtmp4.9/20, Error ellipse: s-maj=15.0km s-min=10.8km az=143.0*
*BJI **24** 07:31:57.7±0.0, 20°.12S×178°.07W, h604km, mB4.9/20, mb4.9/32*
*MOS **24** 07:31:58.2±0.9, 19°.80S×178°.20W, h585km, mb4.8/20, Error ellipse: s-maj=10.6km s-min=10.1km az=53.2*
*NEIC **24** 07:31:59.9±2.0, 19°.82S±0°.10×178°.2W±0°.1, h598km±5km, mb4.7/159, Error ellipse: s-maj=15.5km s-min=13.5km az=135.0*

ISC 24 07:31:57.1±0.3, 19°.94S±0°.06×178°.03W±0°.06, h569km, n442, σ1§17/409, mb4.7/116, 36C-16D, Fiji Islands region

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

FOZ Fox Glacier 25.63 201 P P 07 36 42.9 +0.7
FOZ IAmb IAmb 07 36 59.9
comp=Z,50nm,1.4s
PPT Papeete 27.03 90 P P 07 36 56.9 +2.0
comp=Z,10nm,0.4s,baz=53,slow=21,SNR=4.3
MLZ Mavora Lakes 27.82 201 P P 07 37 02.8 +1.3
MLZ IAmb IAmb 07 37 04.6
comp=Z,12nm,0.7s
DCZ Deep Cove 28.25 202 P P 07 37 05.8 +0.7
DCZ IAmb IAmb 07 37 06.9
comp=Z,33nm,0.9s
WHZ Wether Hill Ro 28.34 201 P P 07 37 07.8 +1.8
EIDS Eidsvold 28.98 253 P P 07 37 12.0 +0.2
baz=29
EIDS Eidsvold 28.98 253 P P 07 37 11.9 +0.2
EIDS IAmb IAmb 07 37 12.7
comp=Z,20nm,1.1s
ARMA Armidale 29.29 243 P P 07 37 15.7 +1.2
baz=29,SNR=6.4
ARMA Armidale 29.29 243 P P 07 37 15.1 +0.6
ARMA IAmb IAmb 07 37 16.1
comp=Z,7.2nm,0.8s
RMQ Roma 31.15 252 P P 07 37 31.8 +1.3
baz=31,SNR=3.8
CAN Canberra 32.80 235 P P 07 37 45.2 +0.8
CAN pmax pmax
comp=Z,35nm,1.3s
CAN Canberra 32.80 235 P P 07 37 45.2 +0.8
CAN IAmb IAmb 07 37 46.2
comp=Z,35nm,1.3s
CTAO Charters Tower 33.52 264 P P 07 37 51.2 +0.6
CTAO pmax pmax
comp=Z,90nm,0.9s
CMSA Cobar Meteorol 34.51 243 P P 07 37 59.4 +0.6
baz=35,SNR=12
PMG Port Moresby 35.20 282 P P 07 38 05.0 +0.3
PMG pmax pmax
comp=Z,64nm,0.9s
PMG Port Moresby 35.20 282 P P 07 38 05.0 +0.3
QLP Quilpie 35.20 252 P P 07 38 04.6 +0.1
baz=35,SNR=9.2
MTSU Mount Surprise 35.60 266 P P 07 38 07.9 0.0
baz=36,SNR=54
TOO Toolangi 36.21 233 P P 07 38 13.5 +0.8
baz=36,SNR=7.1
TOO Toolangi 36.21 233 P P 07 38 13.1 +0.4
TOO pmax pmax
comp=Z,15nm,0.9s
TOO Toolangi 36.21 233 P P 07 38 13.1 +0.4
TOO IAmb IAmb 07 38 14.3
comp=Z,15nm,0.8s
COEN Coen 37.53 273 P P 07 38 24.0 +0.2
baz=38,SNR=40
COEN Coen 37.53 273 P P 07 38 23.8 0.0
STKA Stephens Creek 38.01 244 P P 07 38 28.4 +0.9
baz=38,SNR=8.7
STKA Stephens Creek 38.01 244 P P 07 38 27.9 +0.4
STKA pmax pmax
comp=Z,5.0nm,1.1s
STKA Stephens Creek 38.01 244 P P 07 38 27.7 +0.2
comp=Z,13nm,0.9s,baz=77,slow=8.5,SNR=17
STKA Stephens Creek 38.01 244 P P 07 38 27.9 +0.4
ARPS Mount Arapiles 38.77 236 P P 07 38 34.6 +1.0
baz=39,SNR=5.0
QIS Mount Isa 39.67 262 P P 07 38 40.8 -0.3
baz=40,SNR=4.6
HTT Hallett 40.46 242 P P 07 38 47.6 +0.3
baz=41,SNR=14
BBOO Buckleboo 42.77 243 P P 07 39 05.3 -0.1
baz=43,SNR=41
BBOO Buckleboo 42.77 243 P P 07 39 05.1 -0.4
BBOO IAmb IAmb 07 39 06.3
comp=Z,33nm,0.7s
WR0 Warramunga Arr 44.47 262 P P 07 39 17.3 -1.4
WR0 IAmb IAmb 07 39 19.7
comp=Z,20nm,0.9s
AS31 Alice Springs 44.62 256 P P 07 39 19.6 -0.3
AS31 IAmb IAmb 07 39 21.1
comp=Z,15nm,0.8s
ASAR Alice Springs 44.62 256 P P 07 39 19.6 -0.4
comp=Z,48nm,0.8s,baz=91,slow=7.6,SNR=482
ASAR PcP **PcP 07 40 50.1 -0.2**
comp=Z,4.2nm,0.4s,baz=104,slow=3.8,SNR=10
ASAR ScP **ScP 07 43 49.6 +0.9**
comp=Z,1.1nm,0.7s,baz=88,slow=4.4,SNR=4.6
ASAR S **S 07 45 11.8 -3.5**
comp=Z,4.2nm,0.9s,baz=90,slow=15,SNR=18
WB0 Warramunga Arr 44.63 262 P P 07 39 18.9 -1.1
WB2 Warramunga Arr 44.64 261 P P 07 39 18.9 -1.2
WRAB Tennant Creek 44.65 262 P P 07 39 19.0 -1.1
WRAB pmax pmax
comp=Z,58nm,1.2s
WRAB Tennant Creek 44.65 262 P P 07 39 19.0 -1.1
WRAB IAmb IAmb 07 39 20.3
comp=Z,58nm,1.2s
WRA Warramunga Arr 44.66 261 P P 07 39 19.4 -0.8
comp=Z,15nm,0.5s,baz=98,slow=7.6,SNR=92
WRA PcP **PcP 07 40 49.8 -0.6**
comp=Z,4.0nm,0.8s,baz=91,slow=3.6,SNR=5.4
WRA S **S 07 45 11.3 -4.6**
comp=Z,2.0nm,0.9s,baz=98,slow=13,SNR=5.7
HMH Humu'ula Sheep 45.09 31 P P 07 39 24.6 +0.9
KDU Kakadu 47.91 271 P P 07 39 44.3 -0.5
baz=48,SNR=5.3
MTN Manton Dam 49.13 270 P P 07 39 53.3 -0.6
baz=49,SNR=5.9
FORT Forrest 49.49 246 P P 07 39 55.8 -0.5
baz=50,SNR=11
WRKA Warakurna 49.59 254 P P 07 39 56.7 -0.5
baz=50,SNR=32
KNRA Kununurra 50.67 266 P P 07 40 04.6 -0.6
baz=51,SNR=9.5
KNRA Kununurra 50.67 266 IAmb IAmb 07 40 05.2
comp=Z,22nm,0.8s
FITZ Fitzroy Crossi 53.08 262 P P 07 40 22.1 -0.2
baz=53,SNR=13
FITZ Fitzroy Crossi 53.08 262 P P 07 40 21.6 -0.7
FITZ IAmb IAmb 07 40 22.7
comp=Z,8.2nm,0.6s
SWI Sorong 53.08 285 P P 07 40 23.0 +0.5
comp=Z,98nm,0.9s
SOEI Soe 56.46 271 P P 07 40 46.3 +0.1
comp=Z,71nm,0.9s
SANI Sanana 57.45 281 P P 07 40 54.0 +1.2
comp=Z,47nm,1.2s
PSA00 Pilbara Seismi 57.77 257 IAmb IAmb 07 40 55.1
comp=Z,35nm,0.8s
SBA Scott Base 58.42 184 P P 07 41 01.8 +3.5
SBA pmax pmax
comp=Z,58nm,1.4s
SBA Scott Base 58.42 184 P P 07 41 01.8 +3.5
SBA IAmb IAmb 07 41 06.5
comp=Z,58nm,1.4s
VNDA Vanda 58.46 185 P P 07 41 00.5 +1.9
VNDA pmax pmax
comp=Z,19nm,1.4s
VNDA Vanda 58.46 185 P P 07 40 59.7 +1.2
comp=Z,3.0nm,0.8s,baz=11,slow=7.5,SNR=8.5
VNDA Vanda 58.46 185 P P 07 41 00.5 +1.9
BLDU Ballidu 59.26 246 P P 07 41 04.1 -0.7
baz=59,SNR=7.7
MORW Morawa 60.02 247 P P 07 41 09.4 -0.5
baz=60,SNR=4.0
GIRL Giralia 62.68 254 P P 07 41 27.7 +0.4
baz=63,SNR=5.8
GIRL Giralia 62.68 254 P P 07 41 27.9 +0.7
JAGI Jajag, Banyuwa 66.36 269 IAmb IAmb 07 41 50.0
comp=Z,28nm,0.8s
MJAR Matsushiro Arr 69.75 324 P P 07 42 10.4 -0.3
comp=Z,15nm,0.6s,baz=138,slow=5.6,SNR=24
MAJO Matsushiro 69.75 324 *d* *i* P **P 07 42 10.4 -0.3**
MAJO pmax pmax
comp=Z,64nm,2.5s
MAJO Matsushiro 69.75 324 P P 07 42 10.5 -0.3
MAJO IAmb IAmb 07 42 11.0
comp=Z,15nm,0.6s
MAT Matsushiro 69.75 324 P P 07 42 10.5 -0.3
UGM Wanagama 69.95 269 P P 07 42 11.6 -0.9
QSPA South Pole Qui 70.12 180 P P 07 42 13.9 +1.3
QSPA IAmb IAmb 07 42 15.1
comp=Z,21nm,0.9s
ADK Adak 71.53 1 P P 07 42 20.1 -0.7
ADK pmax pmax
comp=Z,66nm,1.3s
ADK Adak 71.53 1 P P 07 42 20.1 -0.7
YOJ Yonaguni jima 72.40 305 P P 07 42 26.3 -0.1
YOJ pmax pmax
comp=Z,79nm,1.1s
YOJ Yonaguni jima 72.40 305 P P 07 42 26.3 -0.1
SMY Shemya 72.69 355 P P 07 42 27.0 -0.5
SMY pmax pmax
comp=Z,294nm,1.5s
SMY Shemya 72.69 355 P P 07 42 27.0 -0.5
YULB Yu-li 73.17 303 P P 07 42 30.1 -0.9
YULB IAmb IAmb 07 42 39.2
comp=Z,11nm,0.9s
TPUB Ta-pu 73.66 303 P P 07 42 32.5 -1.3
UNV Unalaska Valle 74.15 7 P P 07 42 34.8 -1.0
AKUT Akutan 74.52 7 P P 07 42 37.2 -0.6
YSS Yuzh-Sakhalins 75.39 333 *eP* **P 07 42 43.3 +0.4**
YSS pmax pmax
comp=Z,40nm,1.0s
YSS Yuzh-Sakhalins 75.39 333 P P 07 42 42.6 -0.2
YSS IAmb IAmb 07 42 45.4
comp=Z,44nm,1.0s
PET Petropavlovsk 75.43 346 P P 07 42 42.6 -0.3
PET pmax pmax
comp=Z,80nm,1.5s
PET Petropavlovsk 75.43 346 P P 07 42 42.6 -0.3
PETK Petropavlovsk- 75.73 345 P P 07 42 44.7 +0.1
comp=Z,10nm,0.6s,baz=139,slow=7.0,SNR=28
KASI Kota Agung 76.38 269 P P 07 42 48.7 -0.4
comp=Z,77nm,1.0s
KSRS Korea Array 76.46 318 P P 07 42 49.1 +0.2
comp=Z,3.5nm,0.6s,baz=131,slow=6.7,SNR=9.0
MDSI Maura Dua 77.02 270 P P 07 42 51.4 -1.2
CHIR Chirikof Islan 77.82 13 P P 07 42 56.5 +0.5
MWC Mount Wilson 78.45 47 P P 07 43 01.6 +1.5
MWC pmax pmax
comp=Z,15nm,1.2s
MWC Mount Wilson 78.45 47 P P 07 43 01.6 +1.5
USRK Ussuriysk Ar. 78.49 326 P P 07 43 00.5 +0.7
comp=Z,15nm,0.8s,baz=126,slow=3.6,SNR=22
TYV Tymovskoe 78.53 336 *eP* **P 07 43 00.3 +0.5**
TYV pmax pmax
comp=Z,19nm,1.6s
BAR Barrett 78.57 49 P P 07 42 58.6 -2.0
KSI Kapahiang 78.79 270 P P 07 43 02.2 0.0
SII Sitkinak Islan 78.81 13 P P 07 43 01.7 +0.5
CMB Columbia Colle 79.07 43 P P 07 43 04.6 +1.5
CMB pmax pmax
comp=Z,10.0nm,1.2s
CMB Columbia Colle 79.07 43 P P 07 43 04.6 +1.5
PFO Pinyon Flats O 79.22 48 || *eP* **P 07 43 05.4 +1.2**
PFO pmax pmax
comp=Z,14nm,1.6s
XPFO Pion Flat 79.23 48 P P 07 43 05.9 +1.8
NJ2 Nanjing 79.51 310 *eP* **P 07 43 05.8 +0.3**
NJ2 pmax pmax
comp=Z,15nm,0.7s
YBH Yreka Blue Hor 79.87 39 P P 07 43 09.2 +1.9
YBH pmax pmax
comp=Z,7.0nm,0.7s
YBH Yreka Blue Hor 79.87 39 P P 07 43 09.2 +1.9
MDJ Mudanjiang 80.05 325 IAmb IAmb 07 43 10.1
comp=Z,26nm,0.9s
BEKR Beckworth 80.17 41 IAmb IAmb 07 43 11.8
comp=Z,19nm,1.4s
BEKR pwP 07 45 18.0 +5.9
PNTR Pine Nut 80.19 42 IAmb IAmb 07 43 12.1
comp=Z,17nm,0.8s
HUMO Hull Mountain 80.27 38 P P 07 43 11.3 +2.0
YERR Yerington 80.36 43 P P 07 43 11.2 +1.2
KRJI Kerinci 80.37 271 P P 07 43 25.0 +14
NVAR Mina Array Bea 80.64 43 P P 07 43 13.2 +1.6
comp=Z,6.6nm,0.9s,baz=226,slow=9.0,SNR=24
MOD Modoc Plateau 81.41 40 IAmb IAmb 07 43 18.0
comp=Z,23nm,1.2s
K05A Summer Lake 81.55 39 IAmb IAmb 07 43 18.7
comp=Z,17nm,0.5s
CN2 Changchun 81.85 322 *eP* **P 07 43 17.9 +0.6**
CN2 pmax pmax
comp=Z,20nm,1.2s
H04A Detroit Lake 82.00 37 IAmb IAmb 07 43 19.9
comp=Z,11nm,0.5s
KLR Kul'dur 82.04 329 *d* *i* P **P 07 43 18.5 +0.3**
KLR pmax pmax
comp=Z,14nm,1.3s
KLR Kul'dur 82.04 329 P P 07 43 18.8 +0.7
comp=Z,4.9nm,0.8s,baz=76,slow=2.8,SNR=15
PINE Pine Mountain 82.16 38 IAmb IAmb 07 43 22.3
comp=Z,33nm,1.2s
E03A Lebam 82.41 35 P P 07 43 21.9 +1.8
E03A IAmb IAmb 07 43 22.9
comp=Z,31nm,1.1s
TUC Tucson 82.66 52 P P 07 43 24.4 +2.6
TUC pmax pmax
comp=Z,10.0nm,1.2s
TUC Tucson 82.66 52 P P 07 43 24.4 +2.6
WVOR Wild Horse Val 82.72 40 IAmb IAmb 07 43 24.7
comp=Z,17nm,1.2s
IPM Ipoh 83.03 277 P P 07 43 24.0 0.0
IPM IAmb IAmb 07 43 25.3
comp=Z,30nm,0.7s
I07A Izee 83.17 38 P P 07 43 25.6 +1.4
I07A IAmb IAmb 07 43 26.9
comp=Z,16nm,1.1s
MA2 Magadan 83.25 345 *i* **P P 07 43 23.1 -0.9**
MA2 pmax pmax
comp=Z,19nm,1.0s
319A Douglas 83.34 53 IAmb IAmb 07 43 29.0
comp=Z,19nm,1.2s
GAMB Gambell 83.59 3 IAmb IAmb 07 43 27.4
comp=Z,16nm,0.8s
U15A North Rim 83.61 48 IAmb IAmb 07 43 29.8
comp=Z,12nm,1.1s
D05A Enumclaw 83.66 35 IAmb IAmb 07 43 29.5
comp=Z,34nm,1.3s
KULM Kulim 83.67 278 P P 07 43 26.8 -0.4
KULM IAmb IAmb 07 43 28.6
comp=Z,23nm,0.8s
BBB Bella Bella 83.93 28 P P 07 43 28.5 +1.0
BBB IAmb IAmb 07 43 29.8
comp=Z,39nm,1.4s
G08A Pilot Rock 84.19 37 IAmb IAmb 07 43 31.8
comp=Z,17nm,1.3s
RPSI Rantau Prapat 84.38 275 P P 07 43 30.0 -0.6
RPSI IAmb IAmb 07 43 31.1
comp=Z,20nm,1.0s
TTA Tatalina 84.40 10 IAmb IAmb 07 43 31.4
comp=Z,22nm,1.3s
PSI Prapat 84.42 275 P P 07 43 30.0 -1.0
PSI pmax pmax
comp=Z,20nm,1.0s
PMR Palmer 84.49 13 IAmb IAmb 07 43 31.1
comp=Z,46nm,1.4s
HAWA Hanford 84.52 36 IAmb IAmb 07 43 32.7
comp=Z,11nm,1.1s
SML Sawmill 84.85 14 P P 07 43 31.9 0.0
SML IAmb IAmb 07 43 32.5
comp=Z,36nm,1.5s
SCM Sheep Creek Mo 85.10 14 IAmb IAmb 07 43 34.0
comp=Z,23nm,0.8s
GSI Gunungsitoli 85.17 273 P P 07 43 36.1 +1.6
comp=Z,50nm,1.1s
BJI Beijing 85.48 315 P P 07 43 35.8 +0.4
BJI pmax pmax
comp=Z,11nm,0.8s
F10A Beach Ranch, E 85.58 38 IAmb IAmb 07 43 37.9
comp=Z,18nm,0.9s
B08A Colville Reser 85.79 35 IAmb IAmb 07 43 38.3
comp=Z,7.2nm,0.9s
SEY Seymchan 85.83 347 || *i* **P P 07 43 36.6 +0.1**
LLLB Lillooet 85.84 32 IAmb IAmb 07 43 39.1
comp=Z,13nm,1.2s
KTH Kantishna Hill 85.88 12 IAmb IAmb 07 43 36.9
comp=Z,16nm,1.0s
C09A Chrisman Ranch 86.04 36 IAmb IAmb 07 43 39.6
comp=Z,6.1nm,0.7s
TXAR Lajitas Array 86.78 57 P P 07 43 44.2 +2.3
comp=Z,5.6nm,0.9s,baz=222,slow=5.0,SNR=12
ANMO Albuquerque 87.08 51 P P 07 43 44.3 +1.0
ANMO pmax pmax
comp=Z,2.0nm,1.1s
ANMO Albuquerque 87.08 51 P P 07 43 44.3 +1.0
MLY Manley 87.26 11 IAmb IAmb 07 43 43.4
comp=Z,13nm,0.5s
MLSI Meulaboh, Aceh 87.28 275 P P 07 43 44.9 +0.4
PBKT Sadao Pong 87.42 289 P P 07 43 46.3 +1.3
PBKT IAmb IAmb 07 43 47.4
comp=Z,16nm,1.1s
DOT Dot Lake 87.44 14 IAmb IAmb 07 43 45.5
comp=Z,16nm,1.2s
MDM Murphy Dome 87.67 12 IAmb IAmb 07 43 45.6
comp=Z,22nm,1.0s
COLA College 87.67 12 P P 07 43 44.7 -0.4
COLA pmax pmax
comp=Z,32nm,0.6s
COLA College 87.67 12 P P 07 43 44.7 -0.4
XAN Xi'an 87.78 307 P P 07 43 47.3 +0.9
XAN pmax pmax
comp=Z,31nm,1.0s
XAN pmax pmax
comp=Z,130nm,3.9s
ILAR Eielson Array 87.78 13 P P 07 43 45.1 -0.5
comp=Z,6.5nm,0.4s,baz=213,slow=5.1,SNR=161
DLMT Dillon 87.98 40 IAmb IAmb 07 43 50.0
comp=Z,19nm,1.4s
REDW Red Top Meadow 88.04 42 P P 07 43 48.6 +0.9
REDW IAmb IAmb 07 43 50.3
comp=Z,14nm,1.2s
S22A 4UR Ranch, Cre 88.07 49 IAmb IAmb 07 43 52.5
comp=Z,8.8nm,1.5s
SNOW Snow King Moun 88.15 42 IAmb IAmb 07 43 50.8
comp=Z,14nm,1.1s
IMW Indian Meadow 88.25 42 IAmb IAmb 07 43 51.4
comp=Z,14nm,1.1s
BILL Bilibino 88.48 354 *i* **P P 07 43 48.2 -0.6**
BILL pmax pmax
comp=Z,8.0nm,0.9s
BILL Bilibino 88.48 354 P P 07 43 49.1 +0.2
BILL IAmb IAmb 07 43 51.2
comp=Z,6.8nm,0.8s
FLWY Flagg Ranch 88.50 42 IAmb IAmb 07 43 52.8
comp=Z,13nm,1.1s
SNAA Sanae 88.56 178 P P 07 43 52.5 +3.0
BW06 Boulder Array 88.58 43 IAmb IAmb 07 43 52.1
comp=Z,10nm,1.2s
PDAR Pinedale Array 88.58 43 P P 07 43 51.1 +1.0
comp=Z,2.6nm,0.5s,baz=192,slow=3.0,SNR=34
VNA3 Neumayer Olymp 88.69 176 P P 07 43 49.9 -0.2
PRP Porcupine Dome 88.72 13 IAmb IAmb 07 43 52.2
comp=Z,9.2nm,1.0s
H17A Grant Village 88.73 41 IAmb IAmb 07 43 54.7
comp=Z,8.2nm,1.0s
H17A pwP 07 46 02.8 +5.8
LKWY Lake 88.92 41 IAmb IAmb 07 43 55.6
comp=Z,5.6nm,0.9s
HHC Hu-ho-hao-te 88.95 314 *eP* **P 07 43 51.0 -0.8**
HHC pmax pmax
comp=Z,6.0nm,0.8s
HHC pmax pmax
comp=Z,97nm,5.6s
COLD Coldfoot 89.34 10 IAmb IAmb 07 43 54.6
comp=Z,4.0nm,0.8s
VNA1 Neumayer--Stat 89.36 177 P P 07 43 53.6 +0.5
CMAR Chiang Mai Arr 89.91 290 P P 07 43 57.5 +0.9
comp=Z,11nm,0.9s,baz=119,slow=2.9,SNR=44
CHTO Chiang Mai 90.03 290 P P 07 43 57.8 +0.6
CHTO pmax pmax
comp=Z,17nm,0.9s
CHTO Chiang Mai 90.03 290 P P 07 43 57.8 +0.6
CHTO IAmb IAmb 07 43 59.1
comp=Z,16nm,0.9s
YAK Yakutsk 91.59 338 *eP* **P 07 44 02.3 -1.0**
YAK pmax pmax
comp=Z,12nm,0.8s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.3s
LZH Lanzhou 92.41 307 *eP* **P 07 44 06.4 -1.6**
LZH pP pP 07 46 17.9 +6.3
LZH sP sP 07 47 17.4 +9.0
LZH pmax pmax
comp=E,19nm,1.3s
LZH pmax pmax
comp=E,53nm,4.2s
INK Inuvik 93.75 15 P P 07 44 12.8 -0.3
INK pmax pmax
comp=Z,11nm,1.3s
INK Inuvik 93.75 15 P P 07 44 12.8 -0.3
INK IAmb IAmb 07 44 14.0
comp=Z,10nm,1.2s
ULN Ulaanbaatar 94.93 319 || *iP* **P 07 44 18.2 -1.0**
ULN pmax pmax
comp=Z,7.0nm,1.8s
SONM Songino Array 95.32 319 P P 07 44 20.6 -0.3
comp=Z,0.5nm,0.5s,baz=123,slow=4.1,SNR=4.3
YKA Yellowknife Ar 96.02 25 P P 07 44 23.5 0.0
comp=Z,0.9nm,0.6s,baz=240,slow=4.7,SNR=20
GTA Gaotai 96.60 309 *eP* **P 07 44 27.5 +0.6**
GTA pmax pmax
comp=Z,2.0nm,0.9s
TIXI Tiksi 98.21 345 || *eP* **P 07 44 32.6 -0.5**
TIXI pmax pmax
comp=Z,3.0nm,1.2s
MKAR Makanchi Array 110.80 314 Pdiff **Pdif 07 45 30.6 +0.9**
comp=Z,0.3nm,0.7s,baz=129,slow=2.0,SNR=3.5
MKAR PKiKP **PKiKP 07 49 24.6 -1.2**
comp=Z,1.6nm,0.6s,baz=149,slow=0.2,SNR=20
KURK Kurchatov 113.57 318 *i* PKIKP **PKiKP 07 49 29.7 -1.3**
KURK Kurchatov 113.57 318 PKiKP PKiKP 07 49 29.4 -1.6
KURBB Kurchatov Arra 113.62 317 PKiKP PKiKP 07 49 29.8 -1.3
comp=Z,1.8nm,0.6s,baz=97,slow=1.8,SNR=24
KSH Kashi 114.55 305 *e* PKP PKPdf 07 49 31.1 -2.3
AAK Ala-Archa 115.94 308 *i* PKIKP **PKPdf 07 49 35.3 -0.7**
AAK Ala-Archa 115.94 308 PKPdf 07 49 33.8 -2.3
BVAR Borovoye Array 118.64 320 PKP PKPdf 07 49 39.6 -1.1
comp=Z,3.9nm,0.4s,baz=124,slow=2.3,SNR=35
BRVK Borovoye 118.70 320 PKIKP PKPdf 07 49 40.1 -0.7
BRVK Borovoye 118.70 320 PKPdf 07 49 40.1 -0.7
KKAR Karatay Array 118.88 309 PKIKP PKPdf 07 49 39.7 -1.8
KKAR Karatay Array 118.88 309 PKPdf 07 49 39.7 -1.8
GAR Garm 118.89 304 PKPdf 07 49 41.1 -0.7
ARU Arti 124.73 326 *i* PKIKP **PKPdf 07 49 51.9 -0.4**
ARU 07 51 48.4
ARU 07 56 07.4
ARU SS SS 08 08 02.2 +2.0
ARU Arti 124.73 326 PKP PKPdf 07 49 51.6 -0.6
comp=Z,2.2nm,0.3s,baz=18,slow=2.8,SNR=7.7
ARU Arti 124.73 326 PKPdf 07 49 50.7 -1.6
ABKAR Akbulak array 125.67 317 PKPdf 07 49 53.1 -1.1
AKTO Aktyubinsk 126.64 319 PKP PKPdf 07 49 55.5 -0.7
comp=Z,2.7nm,0.7s,baz=68,slow=2.5,SNR=11
ARCES ARCESS Array B 128.37 350 PKP PKPdf 07 49 58.3 -0.5
comp=Z,3.3nm,0.4s,baz=40,slow=1.5,SNR=51
GEYT Ailbeck 128.46 303 PKP PKPdf 07 49 59.9 -0.2
comp=Z,2.5nm,0.6s,baz=180,slow=0.6,SNR=5.0
KLMR Klimovskoe 131.36 337 *e* PKIKP **PKPdf 07 50 04.6 -0.1**
KLMR pmax pmax
comp=Z,12nm,1.1s
KLMR Klimovskoe 131.36 337 *e* PKPdf **PKPdf 07 50 04.7 0.0**
KLMR AMP 07 50 07.3
comp=Z,12nm,1.1s
FINES FINESS Array B 135.24 344 PKIKP PKPdf 07 50 09.9 -2.1
FINES 08 49 58.3
FINES FINESS Array B 135.24 344 PKhKP PKPpre 07 49 58.3
comp=Z,0.6nm,0.5s,baz=32,slow=3.4,SNR=6.7
FINES PKP **PKPdf 07 50 09.9 -2.1**
comp=Z,2.4nm,0.4s,baz=95,slow=2.9,SNR=10
OBN Obninsk 136.26 332 *i* PKIKP **PKiKP 07 50 15.5 -0.4**
OBN pmax pmax
comp=Z,5.0nm,0.7s
VSR Storozhevoye 137.30 326 || *e* PKIKP **PKPdf 07 50 15.2 -0.9**
GNI Garni 138.34 308 || *e* PKIKP **PKPdf 07 50 17.6 -1.0**
NB2 NORSAR Subarra 138.43 353 PKP PKPdf 07 50 08.5 -9.5
comp=Z,0.7nm,0.5s,baz=17,slow=2.6
NOA NORSAR Array B 138.43 353 PKhKP PKPpre 07 50 08.7
comp=Z,0.4nm,0.4s,baz=10,slow=2.5,SNR=4.5
NOA PKP **PKiKP 07 50 19.6 -0.7**
comp=Z,1.2nm,0.5s,baz=14,slow=4.0,SNR=5.1
KIV Kislovodsk 138.55 315 *e* PKIKP **PKPdf 07 50 16.8 -2.0**
KIV pmax pmax
comp=Z,18nm,1.1s
SUW Suwalki 142.31 340 *e* PKIKP **PKPdf 07 50 22.6 -2.5**
SUW Suwalki 142.31 340 *e* PKP **PKPdf 07 50 22.6 -2.5**
AKASG Malin Array Be 142.52 331 PKhKP PKPdf 07 50 21.6 -4.0
comp=Z,1.1nm,0.3s,baz=43,slow=4.2,SNR=9.2
MUD Monsted U'grnd 143.15 353 *i* PKIKP PKPbc 07 50 24.6 -0.2
MUD Monsted U'grnd 143.15 353 *i* P PKPbc 07 50 24.6 -0.2
EDU Dundee 143.26 5 *e* P PKPbc 07 50 24.7 -0.5
INVG Invergeldie, C 143.29 6 *e* P PKPbc 07 50 24.7 -0.6
LAWE Loch Awe, Argy 143.32 7 *e* P PKPbc 07 50 24.8 -0.5
BSD Bornholm Skovb 143.54 347 *i* PKIKP PKPbc 07 50 25.6 -0.4
BSD pmax pmax
comp=Z,6.0nm,0.4s

BSD	**Bornholm Skovb**	**143.54**	**347**	*i* P		PKPbc	07 50 25.6	-0.4
	comp=Z,5.8nm,0.4s							
SIM	**Simferopol'**	**143.55**	**321**	*e*PKIKP		**PKPdf**	**07 50 26.5**	**-1.1**
ESY	**Stoneypath**	**143.92**	**4**	*e*P		PKPab	07 50 26.8	-0.6
EBL	**Broad Law**	**144.03**	**5**	*e*P		PKPab	07 50 27.3	-0.5
ESK	**Eskdalemuir**	**144.47**	**5**	*e*P		**PKPab**	**07 50 29.6**	**+0.1**
GKP	**Gorka Klasztor**	**144.71**	**344**	*e*PKIKP		**PKPab**	**07 50 29.8**	**-0.6**
GKP	**Gorka Klasztor**	**144.71**	**344**	*e*PKP		**PKPab**	**07 50 29.8**	**-0.6**
SORM	**Soroca**	**144.72**	**329**	⇑P		PKPbc	07 50 29.3	-0.6
GAL1	**Galloway**	**144.77**	**7**	*e*P		**PKPdf**	**07 50 29.0**	**-0.3**
GAZ	**Gaziantep**	**144.86**	**307**			PKPbc	07 50 30.2	-0.6
BEL	**Belsk**	**144.93**	**340**	*e*PKIKP		**PKPab**	**07 50 30.8**	**-0.5**
BEL	**Belsk**	**144.93**	**340**	*e*PKP		**PKPab**	**07 50 30.8**	**-0.5**
EDMD	**Edmundbyers**	**145.04**	**4**	*e*P		PKPbc	07 50 30.1	-0.6
MBAR	**Mbarara**	**145.19**	**237**		PKIKP	**PKPdf**	**07 50 31.0**	**-0.6**
MBAR	**Mbarara**	**145.19**	**237**			**PKPdf**	**07 50 30.9**	**-0.6**
MILM	**Milestii Mici**	**145.31**	**327**	⇓P		**PKPbc**	**07 50 31.3**	**-0.5**
IOMK	**Kirk Michael**	**145.38**	**7**	*e*P		**PKPbc**	**07 50 30.6**	**-1.1**
LVV	**L'vov**	**145.40**	**335**	*e*PKP2		**PKPbc**	**07 50 31.7**	**-0.2**
BSEG	**Bad Segeberg**	**145.47**	**351**	*e*PKPbc		**PKPab**	**07 50 32.5**	**-0.9**
	baz=17,slow=2.5							
WIM	**Isle of Man**	**145.48**	**7**	*e*P		**PKPbc**	**07 50 31.9**	**-0.1**
ILGA	**Ilgaz**	**145.78**	**315**			**PKPab**	**07 50 33.8**	**-1.6**
HPK	**Haverah Park**	**145.93**	**4**	*e*P		**PKPbc**	**07 50 33.2**	**0.0**
VASR	**Vaslui**	**146.02**	**328**	⇑P		**PKPbc**	**07 50 33.8**	**+0.1**
KWP	**Kalwaria Pacla**	**146.07**	**336**	*e*PKP2		**PKPbc**	**07 50 33.9**	**+0.1**
KWP	**Kalwaria Pacla**	**146.07**	**336**	*e*PKP		**PKPbc**	**07 50 33.9**	**+0.1**
WME	**Mynydd Eilian**	**146.26**	**7**	*e*P		**PKPbc**	**07 50 34.0**	**-0.2**
WLF1	**Llynfaes**	**146.35**	**7**	*e*P		**PKPbc**	**07 50 34.1**	**-0.4**
BRTR	**Keskin Array B**	**146.45**	**313**		PKPbc	**PKPbc**	**07 50 34.9**	**-0.5**
	comp=Z,7.1nm,0.4s,baz=125,slow=3.1,SNR=40							
BURAR	**Bucovina Array**	**146.57**	**331**	⇑P		**PKiKP**	**07 50 36.0**	**-1.5**
GHRR		**146.61**	**327**	⇑P		**PKiKP**	**07 50 36.2**	**-1.2**
OJC	**Ojcow**	**146.63**	**339**	*e*PKP2		**PKPbc**	**07 50 35.3**	**0.0**
OJC	**Ojcow**	**146.63**	**339**	*e*PKP		**PKPbc**	**07 50 35.3**	**0.0**
OJC	**Ojcow**	**146.63**	**339**			**PKPbc**	**07 50 35.0**	**-0.3**
BIZ	**Bicaz**	**146.64**	**329**	⇓P		**PKiKP**	**07 50 36.1**	**-1.4**
TESR	**Tescani**	**146.68**	**328**	⇑P		**PKPbc**	**07 50 35.3**	**-0.3**
RETH	**Rethem/Aller,**	**146.77**	**352**	*e*PKPbc		**PKiKP**	**07 50 36.1**	**-1.4**
	baz=17,slow=2.5							
STHS	**Stebnicka Huta**	**146.80**	**337**	*e*PKP2		**PKPbc**	**07 50 35.5**	**-0.3**
STHS	**Stebnicka Huta**	**146.80**	**337**	*e*PKP		**PKPbc**	**07 50 35.5**	**-0.3**
KOLS	**Kolonicke sedl**	**146.80**	**335**	*e*PKP2		**PKPbc**	**07 50 36.3**	**+0.4**
KOLS	**Kolonicke sedl**	**146.80**	**335**	*e*PKP		**PKPbc**	**07 50 36.2**	**+0.4**
KOLS				*e*			07 50 39.4	
CFR	**Carcaliu**	**146.82**	**325**	⇓P		**PKPbc**	**07 50 35.8**	**-0.1**
FOEL	**Foel Wylfa**	**146.87**	**6**	*e*P		**PKPbc**	**07 50 35.7**	**-0.2**
TOPG	**Topolog**	**146.88**	**325**	⇑P		**PKPbc**	**07 50 36.0**	**-0.2**
ANTO	**Ankara**	**146.96**	**314**	PKP2		**PKPbc**	**07 50 35.8**	**-0.9**
ANTO	**Ankara**	**146.96**	**314**			**PKPbc**	**07 50 35.8**	**-0.9**
UZH	**Uzhgorod**	**147.03**	**335**	*e*PKIKP		**PKPdf**	**07 50 33.4**	**0.0**
UZH				*i*			07 50 36.8	
VRI	**Vrincioaia**	**147.09**	**327**	⇓P		**PKPbc**	**07 50 36.7**	**0.0**
TIRR	**Tirgusor**	**147.13**	**324**	⇑P		**PKPbc**	**07 50 36.8**	**0.0**
CRVS	**Cervenica-Dubn**	**147.14**	**336**	*e*PKP2		**PKPbc**	**07 50 37.0**	**+0.3**
CRVS	**Cervenica-Dubn**	**147.14**	**336**	*e*PKP		**PKPbc**	**07 50 37.0**	**+0.3**
CRVS				*e*			07 50 41.0	
PLOR	**Plostina**	**147.14**	**327**	⇑P		**PKPbc**	**07 50 36.7**	**-0.2**
NIE	**Niedzica**	**147.14**	**338**	*e*PKP2		**PKiKP**	**07 50 37.3**	**-1.2**
NIE	**Niedzica**	**147.14**	**338**	*e*PKP		**PKiKP**	**07 50 37.3**	**-1.2**
KSP	**Ksiaz**	**147.15**	**343**	*e*PKP2		**PKiKP**	**07 50 37.2**	**-1.2**
KSP	**Ksiaz**	**147.15**	**343**	*e*PKP		**PKiKP**	**07 50 37.2**	**-1.2**
HARR	**Harsova**	**147.24**	**325**	⇓P		**PKPbc**	**07 50 37.3**	**+0.2**
TRPA	**Tarpa**	**147.33**	**334**	⇑P		**PKPbc**	**07 50 37.0**	**-0.2**
OZUR		**147.40**	**329**	⇑P		**PKiKP**	**07 50 38.0**	**-1.2**
OSTC	**Ostas**	**147.43**	**343**	⇑*e*PKP		**PKiKP**	**07 50 37.9**	**-1.2**
CHVC	**Chvalec**	**147.45**	**343**	⇑*e*PKP		**PKiKP**	**07 50 37.9**	**-1.2**
CLZ	**Clausthal**	**147.49**	**350**	*e*PKPbc		**PKiKP**	**07 50 38.3**	**-0.8**
	baz=17,slow=2.5							
CLL	**Collm**	**147.52**	**347**	⇓*i*PKP2		**PKPbc**	**07 50 37.8**	**+0.2**
CLL				pmax	pmax			
	comp=Z,48nm,1.0s							
CLL	**Collm**	**147.52**	**347**	⇓*i*PKPbc		**PKPbc**	**07 50 37.8**	**+0.2**
	comp=Z,48nm,1.0s							
CLL				*i* PKPab		**PKPab**	**07 50 41.5**	**-0.2**
	comp=Z,26nm,1.2s							
CLL	**Collm**	**147.52**	**347**	*e*PKPbc		**PKiKP**	**07 50 38.1**	**-1.0**
	baz=17,slow=2.5							
CLL	**Collm**	**147.52**	**347**			**PKPbc**	**07 50 37.2**	**-0.4**
UPC	**Upice**	**147.53**	**343**	*e*PKP2		**PKiKP**	**07 50 38.2**	**-1.0**
UPC	**Upice**	**147.53**	**343**	⇑*e*PKP		**PKiKP**	**07 50 38.2**	**-1.0**
LANS	**Liptovska Anna**	**147.66**	**338**	*e*PKP2		**PKiKP**	**07 50 39.3**	**-0.3**
LANS	**Liptovska Anna**	**147.66**	**338**	*e*PKP		**PKiKP**	**07 50 39.3**	**-0.3**
DOPR	**Dopca**	**147.68**	**329**	⇑P		**PKiKP**	**07 50 38.7**	**-1.1**
KRLC	**Kraliky**	**147.71**	**342**	*e*PKP2		**PKPbc**	**07 50 38.2**	**0.0**
KRLC	**Kraliky**	**147.71**	**342**	⇑*e*PKP		**PKPbc**	**07 50 38.2**	**0.0**
BRG	**Berggiesshubel**	**147.72**	**346**	*e*PKP		**PKPdf**	**07 50 35.3**	**+0.9**
	comp=Z,16nm,1.5s							
BRG	**Berggiesshubel**	**147.72**	**346**	*i* PKP		**PKiKP**	**07 50 38.5**	**-1.1**
	comp=Z,20nm,0.6s							
BRG	**Berggiesshubel**	**147.72**	**346**	*i* PKP		**PKPab**	**07 50 42.5**	**0.0**
	comp=Z,20nm,1.1s							
BRG	**Berggiesshubel**	**147.72**	**346**	*e*PKIKP		**PKPdf**	**07 50 35.3**	**+0.9**
BRG				*i*			07 50 42.5	
BRG				pmax	pmax			
	comp=Z,16nm,1.5s							
BRG				pmax	pmax			
	comp=Z,20nm,1.1s							
BRG	**Berggiesshubel**	**147.72**	**346**	*e*PKPbc		**PKiKP**	**07 50 38.7**	**-0.9**
	baz=17,slow=2.5							
MDUB	**Mudurnu**	**147.73**	**316**			**PKPbc**	**07 50 38.4**	**-0.2**
MLR	**Muntele Rosu**	**147.75**	**328**		PKP2	**PKPbc**	**07 50 37.8**	**-0.8**
MLR	**Muntele Rosu**	**147.75**	**328**	⇓P		**PKPbc**	**07 50 38.1**	**-0.5**
MLR	**Muntele Rosu**	**147.75**	**328**			**PKPbc**	**07 50 37.8**	**-0.8**
MORC	**Moravsky Berou**	**147.75**	**341**		PKP2	**PKPbc**	**07 50 38.0**	**-0.3**
MORC	**Moravsky Berou**	**147.75**	**341**	⇑P		**PKPbc**	**07 50 37.8**	**-0.5**
MORC	**Moravsky Berou**	**147.75**	**341**	*e*PKP		**PKPbc**	**07 50 38.4**	**+0.1**
MORC	**Moravsky Berou**	**147.75**	**341**			**PKPbc**	**07 50 38.0**	**-0.3**
FBE	**Freiberg**	**147.81**	**346**	*e*PKPbc		**PKiKP**	**07 50 39.2**	**-0.5**
	baz=17,slow=2.5							
GTTG	**Gvttingen**	**147.84**	**351**	*e*PKPbc		**PKiKP**	**07 50 39.1**	**-0.7**
	baz=17,slow=2.5							
KECS	**Kecovo**	**147.85**	**337**	*e*PKP2		**PKiKP**	**07 50 39.2**	**-0.8**
KECS	**Kecovo**	**147.85**	**337**	*e*PKP		**PKiKP**	**07 50 39.2**	**-0.8**
NEUB	**Neuenburg**	**147.86**	**348**	*e*PKPbc		**PKiKP**	**07 50 39.1**	**-0.7**
	baz=17,slow=2.5							
PVCC	**Panska Ves**	**147.89**	**345**	*e*PKP2		**PKiKP**	**07 50 39.1**	**-0.9**
PVCC	**Panska Ves**	**147.89**	**345**	⇑*e*PKP		**PKiKP**	**07 50 39.1**	**-0.9**
MONM	**Monmouth**	**147.95**	**6**	*e*P		**PKPbc**	**07 50 38.2**	**-0.4**
SECR		**148.00**	**327**	⇑P		**PKiKP**	**07 50 39.5**	**-0.9**
VOIR		**148.23**	**328**	⇑P		**PKiKP**	**07 50 39.8**	**-1.1**
PRU	**Pruhonice**	**148.39**	**344**	*e*PKP2		**PKiKP**	**07 50 40.2**	**-0.8**
PRU	**Pruhonice**	**148.39**	**344**	⇑*e*PKP		**PKiKP**	**07 50 40.2**	**-0.8**
PRU				*e*PKPAB		**PKPab**	**07 50 45.9**	**+0.6**
GOPC	**GO Pecny, Ondr**	**148.40**	**344**	*e*PKP2		**PKiKP**	**07 50 40.2**	**-0.9**
GOPC	**GO Pecny, Ondr**	**148.40**	**344**	⇑*e*PKP		**PKiKP**	**07 50 40.2**	**-0.9**
GOPC				*e*PKPAB		**PKPab**	**07 50 46.0**	**+0.6**
MOX	**Moxa**	**148.43**	**348**	*e*PKPbc		**PKiKP**	**07 50 40.4**	**-0.6**
	baz=17,slow=2.5							
VYHS	**Vyhne**	**148.44**	**338**	*e*PKP2		**PKiKP**	**07 50 40.4**	**-0.8**
VYHS	**Vyhne**	**148.44**	**338**	*e*PKP		**PKiKP**	**07 50 40.4**	**-0.8**
VYHS				*e*			07 50 46.2	
VRAC	**Vranov**	**148.45**	**342**	⇓P		**PKiKP**	**07 50 40.2**	**-0.9**
VRAC	**Vranov**	**148.45**	**342**	*e*PKP		**PKiKP**	**07 50 40.3**	**-0.9**
PLN	**Plauen**	**148.47**	**348**	*e*PKPbc		**PKiKP**	**07 50 40.7**	**-0.5**
	baz=17,slow=2.5							
TANN	**Tannenbergstha**	**148.47**	**347**	*e*PKPbc		**PKiKP**	**07 50 40.7**	**-0.6**
	baz=17,slow=2.5							
ARR	**Arges**	**148.48**	**329**	⇑P		**PKiKP**	**07 50 41.5**	**+0.1**
JAVC	**Velka Javorina**	**148.51**	**340**	*e*PKP		**PKiKP**	**07 50 41.6**	**+0.2**
PSZ	**Piszkesteto**	**148.54**	**337**	⇑P		**PKPbc**	**07 50 40.0**	**-0.5**
PSZ	**Piszkesteto**	**148.54**	**337**			**PKPbc**	**07 50 39.9**	**-0.5**
GUNZ	**Gunzen**	**148.55**	**347**	*e*PKPbc		**PKiKP**	**07 50 41.0**	**-0.4**
	baz=17,slow=2.5							
CSS	**Mathiatis**	**148.57**	**305**			**PKPbc**	**07 50 40.5**	**-0.4**
WERN	**Wernitzgruen**	**148.61**	**347**	*e*PKPbc		**PKiKP**	**07 50 41.2**	**-0.3**
	baz=17,slow=2.5							
NKC	**Novy Kostel**	**148.65**	**347**	*e*PKP2		**PKiKP**	**07 50 41.0**	**-0.6**
NKC	**Novy Kostel**	**148.65**	**347**	⇑*e*PKP		**PKiKP**	**07 50 41.0**	**-0.6**
NKC				*e*PKPAB		**PKPab**	**07 50 46.8**	**+0.4**
KRUC	**Moravsky**	**148.73**	**342**	*e*PKP		**PKiKP**	**07 50 40.8**	**-0.9**
TREC	**Trest**	**148.78**	**343**	⇑*e*PKP		**PKPbc**	**07 50 40.8**	**-0.1**
LEF	**Lefka**	**148.85**	**305**	⇑P		**PKPbc**	**07 50 40.6**	**-0.8**
ELSH	**Elham, Standar**	**148.85**	**1**	*e*P		**PKiKP**	**07 50 41.1**	**-0.8**
SMOL	**Smolenice**	**148.89**	**340**	*e*PKP2		**PKiKP**	**07 50 42.1**	**0.0**
SMOL	**Smolenice**	**148.89**	**340**	*e*PKP		**PKiKP**	**07 50 42.1**	**0.0**
MANZ	**Manzenberg**	**148.96**	**347**	*e*PKPbc		**PKiKP**	**07 50 42.0**	**-0.2**
	baz=17,slow=2.5							
SBD	**Saint Breward**	**148.99**	**8**	*e*P		**PKPbc**	**07 50 41.0**	**-0.3**
MODS	**Modra-Piesok**	**149.06**	**340**	*e*PKHKP		**PKPbc**	**07 50 41.5**	**-0.1**
MODS	**Modra-Piesok**	**149.06**	**340**	*e*PKP		**PKPbc**	**07 50 41.5**	**-0.1**
ROTZ	**Rotzenmuhle**	**149.14**	**347**	*e*PKPbc		**PKiKP**	**07 50 42.3**	**-0.2**
	baz=17,slow=2.5							
MEM	**Membach**	**149.23**	**355**		PKiKP	**PKiKP**	**07 50 42.1**	**-0.6**
BSTI	**Sart Tilman**	**149.29**	**356**		PKiKP	**PKiKP**	**07 50 42.4**	**-0.5**
GZR	**Gura Zlata**	**149.35**	**331**	⇑P		**PKiKP**	**07 50 42.5**	**-0.7**
TNS	**Taunus Mts**	**149.35**	**352**	*e*PKPbc		**PKiKP**	**07 50 42.8**	**-0.3**
	baz=17,slow=2.5							
KHC	**Kasperske Hory**	**149.43**	**345**	⇑*e*PKP		**PKiKP**	**07 50 42.5**	**-0.8**
KHC				*e*PKPAB		**PKPab**	**07 50 49.5**	**-0.2**
KHC	**Kasperske Hory**	**149.43**	**345**			**PKiKP**	**07 50 42.4**	**-0.8**
BCLA	**Clavier**	**149.48**	**356**		PKiKP	**PKPbc**	**07 50 42.0**	**-0.5**
ELND	**Elena**	**149.52**	**324**	⇑P		**PKiKP**	**07 50 43.1**	**-0.5**
WET	**Wettzell**	**149.58**	**346**	*e*PKPbc		**PKiKP**	**07 50 43.4**	**-0.2**
	baz=17,slow=2.5							
BMRD	**Maredsous**	**149.63**	**356**		PKiKP	**PKiKP**	**07 50 43.0**	**-0.5**
GEC2	**GERESS Array S**	**149.66**	**345**	*e*PKPbc		**PKiKP**	**07 50 43.5**	**-0.3**
	baz=17,slow=2.5							
GERES	**GERESS Array B**	**149.66**	**345**		PKPbc	**PKiKP**	**07 50 43.1**	**-0.7**
	comp=Z,12nm,0.8s,baz=38,slow=2.4,SNR=58							
GERES					PKPab	**PKPab**	**07 50 50.9**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=29,slow=5.6,SNR=8.1							
BZS	**Buzias**	**149.70**	**332**	⇑P		**PKPbc**	**07 50 42.9**	**-0.2**
DOU	**Dourbes**	**149.84**	**357**		PKiKP	**PKiKP**	**07 50 43.5**	**-0.4**
PLVB	**Pleven**	**149.89**	**326**	⇑P		**PKiKP**	**07 50 43.7**	**-0.6**
CONA	**Conrad Observa**	**149.90**	**341**	*i* PKiKP		**PKiKP**	**07 50 44.2**	**-0.2**
	comp=Z,15nm,0.7s,SNR=6.0							
HERR	**Herculane**	**149.90**	**330**	⇑		**PKiKP**	**07 50 44.3**	**0.0**
WLF	**Walferdange**	**150.16**	**355**		PKiKP	**PKiKP**	**07 50 44.6**	**-0.1**
WLF	**Walferdange**	**150.16**	**355**	*e*PKPbc		**PKiKP**	**07 50 45.1**	**+0.4**
	baz=17,slow=2.5							
WLF	**Walferdange**	**150.16**	**355**		PKiKP	**PKiKP**	**07 50 44.8**	**+0.2**
WLF	**Walferdange**	**150.16**	**355**			**PKiKP**	**07 50 44.6**	**-0.1**
MOA	**Molln**	**150.43**	**343**	*i* PKiKP		**PKiKP**	**07 50 44.7**	**-0.6**
	comp=Z,4.5nm,0.5s							
ARSA	**Arzberg**	**150.61**	**341**	*i* PKiKP		**PKPbc**	**07 50 44.8**	**-0.5**
	comp=Z,3.2nm,0.5s							
VTS	**Vitosha**	**151.15**	**326**	PKIKP		**PKPbc**	**07 50 46.1**	**-0.8**
VTS							07 50 56.7	
VTS	**Vitosha**	**151.15**	**326**	⇑P		**PKiKP**	**07 50 46.6**	**-0.6**
VTS	**Vitosha**	**151.15**	**326**			**PKPbc**	**07 50 46.1**	**-0.8**
VTS					PKPab	**PKPab**	**07 50 56.7**	**-0.6**
BFO	**Black Forest**	**151.22**	**351**		PKIKP	**PKiKP**	**07 50 46.3**	**-0.6**
BFO	**Black Forest**	**151.22**	**351**	*e*PKPbc		**PKiKP**	**07 50 46.9**	**-0.1**
	baz=17,slow=2.5							
BFO	**Black Forest**	**151.22**	**351**			**PKiKP**	**07 50 46.3**	**-0.6**
SOKA	**Soboth**	**151.27**	**341**	*i* PKiKP		**PKPbc**	**07 50 46.3**	**-0.6**
	comp=Z,2.7nm,0.4s							
PERS	**Pernice**	**151.28**	**341**	*i* PKPbc		**PKPbc**	**07 50 46.0**	**-0.9**
KBA	**Koelnbreinsper**	**151.39**	**344**	*i* PKiKP		**PKPbc**	**07 50 46.4**	**-0.9**
	comp=Z,6.6nm,0.5s							
WATA	**Walderalm**	**151.58**	**346**	*i* PKiKP		**PKiKP**	**07 50 47.3**	**-0.6**
	comp=Z,8.9nm,0.4s							
RETA	**Reutte**	**151.61**	**347**	*i* PKiKP		**PKiKP**	**07 50 47.5**	**-0.4**
	comp=Z,3.3nm,0.5s							
MOTA	**Moosalm**	**151.67**	**347**	*i* PKiKP		**PKiKP**	**07 50 47.6**	**-0.5**
	comp=Z,13nm,1.0s							
MYKA	**Terra Mystica**	**151.72**	**343**	*i* PKiKP		**PKPbc**	**07 50 47.0**	**-0.9**
	comp=Z,7.7nm,0.4s							
SQTA	**Sankt Quirin**	**151.77**	**347**	*i* PKiKP		**PKiKP**	**07 50 47.8**	**-0.4**
	comp=Z,6.5nm,0.5s							
VNDS	**Vrh nad Dolski**	**151.89**	**341**	*i* PKPbc		**PKiKP**	**07 50 47.8**	**-0.6**
ABTA	**Abfaltersbach**	**151.91**	**345**	*i* PKiKP		**PKPbc**	**07 50 47.6**	**-0.7**
	comp=Z,13nm,0.5s							
DAVA	**Damuels**	**151.97**	**349**	*i* PKiKP		**PKiKP**	**07 50 49.2**	**+0.5**
	comp=Z,17nm,1.1s							
FETA	**Feichten**	**152.06**	**347**	*i* PKiKP		**PKiKP**	**07 50 48.7**	**-0.2**
	comp=Z,15nm,1.2s							
BOJS	**Bojanci**	**152.25**	**340**	*i* PKPbc		**PKiKP**	**07 50 48.9**	**-0.2**
FUORN	**Ofenpass-Fuorn**	**152.54**	**348**			**PKPbc**	**07 50 48.9**	**-1.0**
FUORN					PKPab	**PKPab**	**07 51 03.7**	**+0.6**
CTI	**Castel Tesino**	**152.77**	**345**		PKPbc	**PKPbc**	**07 50 48.7**	**-1.5**
CTI						**PKPab**	**07 51 00.9**	**-3.0**
LIT	**Litokhoron**	**153.30**	**323**		PKP2	**PKPab**	**07 51 06.0**	**-0.3**
LIT	**Litokhoron**	**153.30**	**323**			**PKPab**	**07 51 06.0**	**-0.3**
FNA	**Florina**	**153.44**	**326**		PKIKP	**PKPbc**	**07 50 50.4**	**-1.3**
FNA	**Florina**	**153.44**	**326**			**PKPbc**	**07 50 50.4**	**-1.3**
ESDC	**Sonseca Array**	**159.68**	**13**		PKP	**PKPdf**	**07 50 50.9**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=318,slow=1.7,SNR=2.8							
ESDC					PKPab	**PKPab**	**07 51 33.4**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=344,slow=4.5,SNR=9.1							
TORD	**Torodi Ar. Bea**	**173.24**	**178**		PKP	**PKPdf**	**07 51 01.0**	**-1.4**
	comp=Z,2.6nm,1.0s,baz=316,slow=5.1,SNR=7.7							

IDC 24 07:48:50.7±2.5, 53.64N×87.04E, h0km, mb 1.2/9/2, mb1mx2.8/43, mbtmp2.9/2, ML2.6/2, Error ellipse: s-maj=21.7km s-min=13.9km az=71.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.35**	**284**	*i*			08 00 26.6	
	baz=100,slow=338,SNR=6.0							
ZALV	**Zalesovo Beam**	**1.35**	**284**	Pg		Pg	07 49 14.8	-1.8
	2.0nm,0.3s,baz=103,slow=17,SNR=15							
ZALV				Lg		Lg	07 49 33.8	
	1.7nm,0.3s,baz=116,slow=30,SNR=9.6							
ZALV				Rg		Rg	07 49 41.8	
	7.1nm,0.8s,baz=96,slow=26,SNR=12							
KURBB	**Kurchatov Arra**	**6.05**	**243**	Pn		Pn	07 50 22.8	+1.5
	0.1nm,0.3s,baz=61,slow=14,SNR=3.8							
KURBB				Sn		Sn	07 51 31.5	+0.2
	0.0nm,0.3s,baz=60,slow=13,SNR=2.8							
KURBB				Lg		Lg	07 52 02.1	
	0.0nm,0.3s,baz=49,slow=23,SNR=6.9							
MKAR	**Makanchi Array**	**7.50**	**206**	Pn		Pn	07 50 43.0	+1.7
	0.2nm,0.3s,baz=28,slow=13,SNR=11							
MKAR				Sn		Sn	07 52 04.8	-2.3
	0.1nm,0.3s,baz=23,slow=29,SNR=3.9							
MKAR				Lg		Lg	07 52 48.5	
	0.0nm,0.3s,baz=25,slow=31,SNR=5.8							

ROM 24 07:49:01.5±0.1, 43.344N±0.004×12.528E±0.005, h7km, ML1.8/17, Error ellipse: s-maj=0.4km s-min=0.1km az=65.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.04**	**55**	P		Pg	07 49 03.1	0.0
ATFO					AML	AML		
	comp=N,3195μm,0.5s							
ATFO					AML	AML		
	comp=E,2500μm,0.2s							
MURB	**Monte Urbino**	**0.08**	**182**	P		Pg	07 49 04.0	+0.5
MURB					AML	AML		
	comp=E,4175μm,0.3s							
MURB					AML	AML		
	comp=E,4370μm,0.3s							
MURB					AML	AML		
	comp=N,3455μm,0.2s							
MURB					AML	AML		
	comp=N,3215μm,0.9s							
ATVO	**AVT- Monte Val**	**0.10**	**293**	P		Pg	07 49 04.0	+0.2
ATVO				S		Sg	07 49 06.0	+0.6
ATVO					AML	AML		
	comp=E,826μm,0.2s							
ATVO					AML	AML		
	comp=N,779μm,0.5s							
ATVO					AML	AML		
	comp=E,827μm,0.2s							
ATPI	**Pietralunga -**	**0.14**	**319**	P		Pg	07 49 04.9	+0.4
ATPI				S		Sg	07 49 07.8	+1.2
ATPI					AML	AML		
	comp=E,568μm,0.4s							
ATPI					AML	AML		
	comp=N,414μm,0.2s							
ATPI					AML	AML		
	comp=E,567μm,0.4s							
FOSV	**Fossato di Vic**	**0.18**	**106**	P		Pg	07 49 05.9	+0.7
FOSV					AML	AML		
	comp=E,122μm,1.5s							
FOSV					AML	AML		
	comp=N,176μm,1.4s							
FOSV					AML	AML		
	comp=E,122μm,1.5s							
FOSV					AML	AML		
	comp=N,175μm,1.4s							
ATCC	**AVT- Casa Cast**	**0.18**	**153**	P		Pg	07 49 06.0	+0.9
ATCC				S		Sg	07 49 10.0	+2.4
ATCC					AML	AML		
	comp=E,1490μm,0.2s							
ATCC					AML	AML		
	comp=E,1485μm,0.2s							
ATCC					AML	AML		
	comp=N,1405μm,0.2s							
PIEI	**Pieia**	**0.19**	**2**	P		Pg	07 49 06.0	+0.5
PIEI				S		Sg	07 49 09.9	+1.8
PIEI				AML		AML		
	comp=E,536μm,0.2s							
PIEI				AML		AML		
	comp=N,520μm,0.2s							
SSFR	**Montelago di S**	**0.21**	**64**	P		Pg	07 49 06.2	+0.5
SSFR				S		Sg	07 49 10.0	+1.5
SSFR				AML		AML		
	comp=E,636μm,1.0s							
SSFR				AML		AML		
	comp=N,528μm,0.6s							
FRON	**Frontone**	**0.23**	**40**	P		Pg	07 49 06.5	+0.5
FRON				S		Sg	07 49 10.5	+1.4
FRON				AML		AML		
	comp=N,337μm,0.4s							
FRON				AML		AML		
	comp=E,176μm,0.5s							
BADI	**Badiali**	**0.27**	**309**	P		Pg	07 49 07.4	+0.6
BADI				S		Sb	07 49 12.1	-1.2
BADI				AML		AML		
	comp=E,1090μm,0.2s							
BADI				AML		AML		
	comp=E,1086μm,0.2s							
BADI				AML		AML		
	comp=N,465μm,0.1s							
NARO	**Abbazia di Nar**	**0.27**	**8**	P		Pg	07 49 07.3	+0.4
NARO				S		Sb	07 49 12.0	-1.5
NARO				AML		AML		
	comp=E,150μm,1.1s							
NARO				AML		AML		
	comp=N,100μm,0.4s							
SNTG	**Esanatoglia**	**0.31**	**106**	P		Pg	07 49 08.5	+0.8
SNTG				S		Sb	07 49 13.9	-0.9
SNTG				AML		AML		
	comp=N,203μm,0.3s							
SNTG				AML		AML		
	comp=E,113μm,

baz=289
WFSB eS Sn 08 14 51.6 +0.6
baz=289
HATJ Hateruma jima 1.05 118 P Pn 08 14 37.1 +0.7
HATJ eS Sn 08 14 52.2 +1.0
SLBB Yuanshan 1.06 281 eP Pn 08 14 36.7 +0.1
baz=278
ENTT Nioudou 1.11 274 eP Pn 08 14 37.9 +0.8
baz=272
NACB Ninganchiao 1.15 251 eP Pn 08 14 37.3 -0.3
baz=240
NACB eS Sn 08 14 52.6 -0.7
baz=240
JKRS Kuro-shima 1.16 106 P Pn 08 14 37.8 +0.1
JKRS S Sn 08 14 54.5 +1.1
NDT Datong Townshi 1.16 272 eP Pn 08 14 38.8 +1.1
baz=270
TWD Chiawan 1.19 247 eS Sn 08 14 53.5 -0.6
baz=244
ETLH Xiulin Townshi 1.24 254 eP Pn 08 14 38.7 -0.1
baz=245
PCYT Pengchaiyu 1.25 329 eP Pn 08 14 38.4 -0.4
baz=321
YM01 YM01 1.25 298 eP Pn 08 14 38.7 -0.1
baz=296
JIJ Ishigaki jima 1.25 99 P Pn 08 14 38.4 -0.4
JIJ S Sn 08 14 55.4 -0.1
YM08 YM08 1.25 300 eP Pn 08 14 38.4 -0.5
baz=298
YM10 YM10 1.26 298 eP Pn 08 14 38.5 -0.6
baz=296
ENLB Shoufeng 1.26 239 eS Sn 08 14 54.9 -0.9
baz=231
NNSB Datong 1.29 264 eP Pn 08 14 39.5 +0.1
baz=253
NNSB eS Sn 08 14 55.8 -0.7
baz=253
NNSH Datong 1.29 264 eS Sn 08 14 56.4 -0.1
baz=254
YHNB Yeheng 1.29 275 eP Pn 08 14 39.7 +0.3
baz=267
YHNB eS Sn 08 14 57.0 +0.5
baz=267
NNS Nan Shan 1.29 265 eS Sn 08 14 56.8 +0.1
baz=254
NSK Sanguang 1.31 275 eP Pn 08 14 40.1 +0.5
baz=265
NSK eS Sn 08 14 56.8 -0.1
baz=265
JISG Ishigakijimahi 1.39 89 P Pn 08 14 40.1 -0.5
JISG S Sn 08 14 58.3 -0.3
ESL Shilin 1.44 239 eP Pn 08 14 40.9 -0.4
baz=238
WHF Hehuan Shan 1.45 254 eP Pn 08 14 41.7 -0.1
baz=251
WHF eS Sn 08 14 59.8 -0.9
baz=251
TWT Tachien 1.50 259 eS Sn 08 15 01.7 +0.2
baz=251
TDCB Techi 1.52 259 eP Pn 08 14 42.8 +0.5
baz=251
TDCB eS Sn 08 15 01.3 -0.5
baz=251
CHGB Renai 1.55 252 eP Pn 08 14 42.5 -0.4
baz=242
CHGB eS Sn 08 15 02.2 -0.5
baz=242
OWD Renai 1.59 248 eS Sn 08 15 02.8 -0.7
baz=240
LIOB Emei 1.61 273 eP Pn 08 14 44.2 +0.7
baz=271
LIOB eS Sn 08 15 04.7 +0.8
baz=271
HGSD Ruisui 1.64 230 eP Pn 08 14 43.6 -0.2
baz=224
HGSD eS Sn 08 15 03.1 -1.3
baz=224
EHY Hungye 1.70 232 eS Sn 08 15 04.6 -1.3
baz=231
WHP Taichung City 1.70 261 eP Pn 08 14 46.0 +1.3
baz=255
VWDT VWDT 1.70 242 eP Pn 08 14 45.0 +0.3
baz=240
VWDT eS Sn 08 15 05.7 -0.2
baz=240
JTJ Tarama 1.75 87 P Pn 08 14 45.3 +0.1
JTJ eS Sn 08 15 06.7 -0.2
YULB Yu-li 1.79 230 eP Pn 08 14 45.3 -0.5
baz=237
YULB eS Sn 08 15 06.3 -1.7
baz=237
TWF1 Yuli 1.82 229 eP Pn 08 14 45.9 -0.3
baz=224
SSLB Suanglung 1.84 246 eP Pn 08 14 46.8 +0.3
baz=239
SSLB eS Sn 08 15 08.8 -0.4
baz=239
TYC Yuchr 1.88 250 eP Pn 08 14 48.0 +1.0
baz=244
FULB Fuli 1.93 226 eP Pn 08 14 47.4 -0.2
baz=218
CHKT Chengkung 1.95 222 eP Pn 08 14 47.2 -0.7
baz=217
CHKT eS Sn 08 15 09.5 -2.2
baz=217
WHYT Xinyi Township 1.96 244 eP Pn 08 14 49.3 +1.1
baz=243
WHYT eS Sn 08 15 13.3 +1.1
baz=243
YUS Yu-Shan 1.99 238 eP Pn 08 14 49.4 +0.5
baz=236
YUS eS Sn 08 15 13.1 -0.3
baz=236
ALS Alishan 2.09 240 eP Pn 08 14 51.3 +1.2
baz=232
ELDTW Lidau 2.12 230 eP Pn 08 14 50.1 -0.2
baz=224
ELDTW eS Sn 08 15 15.3 -0.6
baz=224
CHN5 Tsauling 2.15 244 eP Pn 08 14 52.0 +1.3
baz=235
CHN5 eS Sn 08 15 18.6 +1.9
baz=235
JIRB Irabujima 2.19 82 eS Sn 08 15 16.5 -0.8
TWH Lutao 2.20 213 eP Pn 08 14 50.9 -0.3
baz=216
TWH eS Sn 08 15 15.8 -1.9
baz=216
JIKM Ikemajima 2.27 80 S Sn 08 15 18.8 -0.5
TWGBT Beinan 2.34 222 eP Pn 08 14 53.2 +0.1
baz=228
TWGBT eS Sn 08 15 19.8 -1.2
baz=228
TPUB Ta-pu 2.34 238 eP Pn 08 14 54.7 +1.5
baz=236
TPUB eS Sn 08 15 22.8 +1.7
baz=236
TWG Pinlang 2.34 223 eP Pn 08 14 53.1 -0.1
baz=228
TWG eS Sn 08 15 19.4 -1.6
baz=228
CHN4 Tsaushan 2.34 240 eP Pn 08 14 54.7 +1.5
baz=247
CHN4 eS Sn 08 15 23.6 +2.6
baz=247
WTP Ta-pu 2.38 237 eP Pn 08 14 55.4 +1.6
baz=235
WTP eS Sn 08 15 24.0 +1.9
baz=235
CHN1 Nanshi 2.48 237 eP Pn 08 14 57.0 +2.0
baz=235
CHN1 eS Sn 08 15 26.3 +1.8
baz=235
SLGT Liugui 2.51 232 eP Pn 08 14 57.0 +1.6
baz=230
MASBT Mashibuluo 2.77 226 eP Pn 08 15 00.1 +1.2
baz=224
MASBT eS Sn 08 15 32.5 +1.1
baz=224
EAST Anshuo 2.81 220 eP Pn 08 14 59.5 +0.1
baz=218
EAST eS Sn 08 15 30.9 -1.4
baz=218
VWUC VWUC 3.06 279 eP Pn 08 15 02.4 -0.5
baz=277
PHUB P'eng-hu 3.12 251 eS Sn 08 15 38.0 -1.9
baz=248
WDGT Dungji 3.14 246 eP Pn 08 15 04.3 +0.4
baz=243
WDGT eS Sn 08 15 39.5 -0.9
baz=243
TWKBT Hengchun 3.18 215 eS Sn 08 15 41.7 +0.3
baz=214
PTMZ Houxiangcun 3.37 279 eP Pn 08 15 06.8 -0.2
baz=277

*IDC **24** 08:47:25.0±1.0, 16°.98S×167°.15E, h0km, mb4.1/7, mb1 4.4/9, mb1mx4.0/38, mbtmp4.3/9, ML4.6/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/33, Error ellipse: s-maj=27.0km s-min=21.0km az=111.0*
*NEIC **24** 08:47:29.3±2.6, 17°.13S±0°.08×167°.13E±0°.08, h25km±6km, mb4.6/12, Error ellipse: s-maj=12.7km s-min=9.9km az=206.0*
ISC 24 08:47:29.7±0.7,**17°.13S**±0°.07×**167°.00E**±0°.09,**h25**km,**n42,** σ1s**49**/42,**mb4.4**/11,**MS3.3**/7,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.94**	**186**	*e*Pn		**Pn**	**08 48 41.8**	**-0.7**
	34nm,0.2s							
DZM				*e*Sn		**Sn**	**08 49 33.0**	**-5.9**
	75nm,0.2s							
DZM				*e*LR		LR	08 49 44.2	
	comp=Z,243nm,23.1s							
DZM	**Mont Dzumac**	**4.94**	**186**	Pn		**Pn**	**08 48 41.7**	**-0.8**
	8.1nm,0.3s,baz=8.4,slow=4.2,SNR=196							
DZM				Sn		**Sn**	**08 49 37.4**	**-1.5**
	5.7nm,0.3s,baz=135,slow=19,SNR=3.6							
DZM				LR		LR	08 50 34.8	
	comp=Z,369nm,18.5s,baz=28,slow=37							
DZM	**Mont Dzumac**	**4.94**	**186**			**Pn**	**08 48 41.5**	**-1.0**
DZM						**Sn**	**08 49 38.7**	**-0.2**
NOUC	**Port Laguerre**	**4.99**	**187**			**Pn**	**08 48 42.6**	**-0.4**
HNR	**Honiara**	**10.28**	**317**	Pn		**Pn**	**08 49 53.3**	**-2.4**
	11nm,0.3s,baz=174,slow=9.2,SNR=3.7							
HNR	**Honiara**	**10.28**	**317**			**Pn**	**08 49 56.2**	**+0.6**
MSVF	**Nonsavu**	**10.57**	**95**	Pn		**Pn**	**08 50 01.3**	**+1.6**
EIDS	**Eidsvold**	**16.94**	**238**	P		**P**	**08 51 29.1**	**+2.2**
CTA	**Charters Tower**	**19.88**	**258**	P		**P**	**08 51 59.0**	**-0.3**
	2.1nm,0.6s,baz=87,slow=7.2,SNR=4.8							
AFI	**Afiamalu**	**20.70**	**84**	LR		LR	08 58 23.4	
	comp=Z,87nm,21.0s,baz=292,slow=32							
PMG	**Port Moresby**	**20.77**	**289**	LR		LR	08 58 58.2	
	comp=Z,84nm,20.5s,baz=160,slow=33							
URZ	**Urewera**	**22.84**	**159**	P		**P**	**08 52 31.5**	**+0.5**
	5.1nm,0.7s,baz=332,slow=11,SNR=5.2							
URZ	**Urewera**	**22.84**	**159**	P		**P**	**08 52 32.1**	**+1.1**
URZ				IAmb		IAmb	08 52 44.1	
	comp=Z,45nm,1.4s							
COEN	**Coen**	**23.16**	**274**	P		**P**	**08 52 34.0**	**-0.5**
BKZ	**Black Stump Fm**	**23.46**	**161**	P		**P**	**08 52 38.4**	**+1.1**
BKZ				IAmb		IAmb	08 52 52.1	
	comp=Z,11nm,0.8s							
CAN	**Canberra**	**24.19**	**218**	P		**P**	**08 52 46.5**	**+2.1**
CAN				IAmb		IAmb	08 52 56.4	
	comp=Z,38nm,1.4s							
BFZ	**Birch Farm**	**24.79**	**163**	P		**P**	**08 52 50.6**	**+1.0**
TUWZ	**Tuamarina**	**24.94**	**168**	P		**P**	**08 52 51.5**	**+0.6**
PLWZ	**Palliser**	**25.37**	**165**	P		**P**	**08 52 54.5**	**-0.4**
STKA	**Stephens Creek**	**27.29**	**233**	P		**P**	**08 53 13.8**	**+1.5**
	comp=Z,6.8nm,0.8s,baz=52,slow=8.0,SNR=11							
STKA				LR		LR	09 02 46.2	
	comp=Z,30nm,20.3s,baz=25,slow=34							
WR0	**Warramunga Arr**	**30.88**	**260**	P		**P**	**08 53 44.9**	**+0.5**
WB0	**Warramunga Arr**	**31.02**	**260**	P		**P**	**08 53 46.2**	**+0.6**
WB2	**Warramunga Arr**	**31.05**	**260**	P		**P**	**08 53 47.0**	**+1.1**
WRAB	**Tennant Creek**	**31.05**	**260**	P		**P**	**08 53 46.6**	**+0.7**
WRA	**Warramunga Arr**	**31.07**	**260**	P		**P**	**08 53 46.7**	**+0.7**
	comp=Z,1.6nm,0.5s,baz=89,slow=8.6,SNR=12							
WRA				PcP		**PcP**	**08 56 40.7**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=92,slow=3.0,SNR=6.0							
WRA				LR		LR	09 04 59.9	
	comp=Z,63nm,20.2s,baz=65,slow=34							
WRA	**Warramunga Arr**	**31.07**	**260**	P		**P**	**08 53 45.8**	**-0.3**
ASAR	**Alice Springs**	**31.64**	**253**	P		**P**	**08 53 51.9**	**+0.8**
	comp=Z,6.2nm,0.8s,baz=78,slow=8.6,SNR=65							
ASAR				PcP		**PcP**	**08 56 42.4**	**-0.6**
	comp=Z,0.9nm,0.9s,baz=102,slow=2.7,SNR=5.1							
ASAR	**Alice Springs**	**31.64**	**253**	P		**P**	**08 53 51.6**	**+0.5**
KNRA	**Kununurra**	**36.67**	**267**	P		**P**	**08 54 35.5**	**+0.8**
FITZ	**Fitzroy Crossi**	**39.37**	**262**	P		**P**	**08 54 58.8**	**+1.3**
FITZ				IAmb		IAmb	08 54 59.6	
	comp=Z,7.8nm,1.0s							
TBI	**Tubuai**	**41.20**	**106**	*e*LR		LR	09 06 55.0	
	comp=Z,113nm,35.5s							
PPT2	**Papeete2**	**41.38**	**97**	*e*LR		LR	09 07 11.0	
	comp=Z,134nm,28.2s							
PPT	**Papeete**	**41.38**	**97**	LR		LR	09 10 36.9	
	comp=Z,58nm,18.5s,baz=282,slow=34							
NWAO	**Narrogin (SRO)**	**47.33**	**241**	P		**P**	**08 56 03.0**	**+1.4**
MORW	**Morawa**	**48.03**	**246**	P		**P**	**08 56 08.2**	**+1.1**
MORW				IAmb		IAmb	08 56 09.8	
	comp=Z,8.0nm,1.1s							
PETK	**Petropavlovsk-**	**70.41**	**354**	P		**P**	**08 58 40.8**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=129,slow=8.2,SNR=3.1							
PETK	**Petropavlovsk-**	**70.41**	**354**	P		**P**	**08 58 41.2**	**-0.2**
QSPA	**South Pole Qui**	**72.91**	**180**	P		**P**	**08 58 57.3**	**+0.7**
QSPA				IAmb		IAmb	08 58 58.2	
	comp=Z,7.0nm,1.0s							
ILAR	**Eielson Array**	**88.88**	**18**	P		**P**	**09 00 18.6**	**-2.7**
	comp=Z,0.3nm,0.6s,baz=239,slow=5.0,SNR=7.3							
ILAR	**Eielson Array**	**88.88**	**18**	P		**P**	**09 00 19.5**	**-1.9**
ARCES	**ARCESS Array B**	**122.50**	**345**	PKP		**PKiKP**	**09 06 21.6**	**-0.9**
	comp=Z,2.3nm,0.9s,baz=64,slow=2.1,SNR=5.8							
ARCES	**ARCESS Array B**	**122.50**	**345**			**PKiKP**	**09 06 21.9**	**-0.5**

*IDC **24** 08:54:27.1±0.8, 39°.04N×106°.13E, h0km, mb3.8/9, mb1 3.8/11, mb1mx3.6/54, mbtmp3.7/11, ML3.1/2, Error ellipse: s-maj=35.9km s-min=15.1km az=63.0*
*NEIC **24** 08:54:28.8±1.1, 39°.01N±0°.08×106°.1E±0°.1, h10km±1km, mb4.2/5, Error ellipse: s-maj=16.0km s-min=13.6km az=64.0*
ISC 24 08:54:32.1±0.7,**39°.04N**±0°.08×**106°.1E**±0°.2,**h35**km,**n21,** σ0s**66**/22,**mb3.9**/9,**Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
XAN	**Xi'an**	**5.47**	**155**	Pn		**Pn**	**08 55 50.5**	**-0.7**
SONM	**Songino Array**	**8.79**	**1**	Pn		**Pn**	**08 56 35.7**	**-1.0**
	0.2nm,0.3s,baz=180,slow=15,SNR=6.1							
SONM				Sn		**Sn**	**08 58 14.9**	**+0.3**
	0.1nm,0.3s,baz=183,slow=24,SNR=2.4							
SONM				Lg		Lg	08 59 06.0	
	0.3nm,0.3s,baz=189,slow=29,SNR=6.1							
SONM	**Songino Array**	**8.79**	**1**			**Pn**	**08 56 36.5**	**-0.3**
MKAR	**Makanchi Array**	**19.06**	**302**	P		**P**	**08 58 50.1**	**-1.2**
	0.0nm,0.3s,baz=101,slow=11,SNR=3.7							
MKAR	**Makanchi Array**	**19.06**	**302**	P		**P**	**08 58 50.9**	**-0.4**
YOJ	**Yonaguni jima**	**20.38**	**131**			**P**	**08 59 05.6**	**-0.2**
YOJ				IAmb		IAmb	08 59 05.9	
	comp=Z,80nm,1.1s							
ZALV	**Zalesovo Beam**	**20.80**	**323**	P		**P**	**08 59 09.8**	**-0.3**
	comp=Z,0.7nm,0.3s,baz=140,slow=11,SNR=4.1							
ZALV	**Zalesovo Beam**	**20.80**	**323**	P		**P**	**08 59 09.2**	**-0.9**
KURK	**Kurchatov**	**22.58**	**310**	P		**P**	**08 59 30.0**	**+0.7**
KURBB	**Kurchatov Arra**	**22.61**	**310**	P		**P**	**08 59 28.8**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=110,slow=10,SNR=4.5							
BOOM	**Boomskoye usch**	**23.07**	**288**	P		**P**	**08 59 34.3**	**-0.3**
BOOM				IAmb		IAmb	08 59 47.1	
	comp=Z,4.2nm,1.4s							
BVAR	**Borovoye Array**	**28.15**	**312**	P		**P**	**09 00 21.7**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=109,slow=8.3,SNR=5.3							
HFS	**Hagfors**	**58.23**	**324**	P		**P**	**09 04 22.6**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=61,slow=6.8,SNR=3.5							
NOA	**NORSAR Array B**	**58.97**	**326**	P		**P**	**09 04 27.6**	**-0.1**
	comp=Z,6.6nm,1.3s,baz=63,slow=6.9,SNR=2.9							
KONO	**Kongsberg**	**60.30**	**324**	P		**P**	**09 04 36.8**	**0.0**
WRA	**Warramunga Arr**	**64.35**	**150**	P		**P**	**09 05 04.4**	**0.0**
	comp=Z,0.8nm,0.8s,baz=352,slow=6.4,SNR=4.3							
ASAR	**Alice Springs**	**67.58**	**152**	P		**P**	**09 05 25.5**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=340,slow=6.7,SNR=16							
ASAR	**Alice Springs**	**67.58**	**152**	P		**P**	**09 05 24.7**	**-0.4**
YKA	**Yellowknife Ar**	**73.64**	**18**	P		**P**	**09 06 02.4**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=325,slow=5.4,SNR=4.4							
STKA	**Stephens Creek**	**77.88**	**150**	P		**P**	**09 06 26.5**	**+0.5**
	comp=Z,1.1nm,0.6s,baz=326,slow=7.3,SNR=3.1							
STKA	**Stephens Creek**	**77.88**	**150**	P		**P**	**09 06 26.8**	**+0.8**
STKA				IAmb		IAmb	09 06 43.4	
	comp=Z,1.4nm,1.3s							

*ISN **24** 09:08:39.3±1.4, 35°.38N×45°.51E, h0km±5km, ML3.1*
*TEH **24** 09:08:41.5, 35°.33N×45°.50E, h6km, ML3.1*
ISC 24 09:08:40.9±1.6,**35°.32N**±0°.04×**45°.47E**±0°.04,**h1**km±13km,
n20, σ1s**08**/26,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IKRK	**Kirkuk**	**0.93**	**275**	*e*Pg		**Pg**	**09 09 00.0**	**+1.3**
IKRK						AML	09 09 01.8	
	comp=Z,51nm,0.4s							
IKRK				*e*Sg		**Sn**	**09 09 15.0**	**0.0**
IDHR	**Dehrash**	**0.97**	**129**	*e*Pg		**Pg**	**09 08 59.1**	**-0.5**
IDHR				*e*			09 09 15.1	
ILIN	**Lien**	**1.29**	**108**	*e*		**Sn**	**09 09 23.8**	**-0.4**
IGHG	**Ghaleghazi**	**1.34**	**137**	*e*Sg		**Sn**	**09 09 26.7**	**+1.2**
IGHG				*e*Pg		**Pn**	**09 09 06.9**	**-0.1**
IGHG				*e*			09 09 32.4	
IVIS	**Veis**	**1.38**	**124**	*e*			09 09 32.0	
IVIS				*e*Pg		**Pn**	**09 09 07.3**	**-0.1**
MAHB	**Mahabad**	**1.46**	**8**	*e*			09 09 34.8	
MAHB				*e*Pg		**Pn**	**09 09 07.9**	**-0.6**
KCHF	**Cheshme Sefid,**	**1.66**	**128**	*e*Pn		**Pb**	**09 09 11.8**	**-0.6**
KCHF				*e*			09 09 37.9	
IKOM	**Komasi**	**2.03**	**124**	*e*Pn		**Pb**	**09 09 18.1**	**-0.6**
IKOM				*e*			09 09 51.2	
IBZA	**Bozab**	**2.14**	**113**	*e*Pn		**Pb**	**09 09 19.5**	**-1.2**
MSL	**Mosul**	**2.20**	**300**	*e*Pn		**Pn**	**09 09 18.0**	**-0.6**
MSL				*e*Sn		**Sn**	**09 09 46.0**	**-0.4**
BHD	**Baghdad**	**2.23**	**204**	*e*Pn		**Pn**	**09 09 19.0**	**0.0**
BHD						AML	09 09 21.5	
	comp=Z,4μm,0.4s							
BHD				*e*Sn		**Sn**	**09 09 48.0**	**+0.8**
IBDR	**Badra**	**2.24**	**170**	*e*Pn		**Pn**	**09 09 20.0**	**+0.9**
IBDR						AML	09 09 27.2	
	comp=Z,164nm,0.3s							
IBDR				*e*Sn		**Sn**	**09 09 47.0**	**-0.3**
HSRG	**Sareghieh**	**2.30**	**91**	*e*Pn		**Pb**	**09 09 21.7**	**-1.7**
IKFM	**Kafar-mosalman**	**2.66**	**132**	*e*Pn		**Pn**	**09 09 26.7**	**+1.8**
IKFM				*e*			09 10 10.4	
IDOB	**Doab**	**2.71**	**124**	*e*Pn		**Pn**	**09 09 26.9**	**+1.1**
IDOB				*e*			09 10 11.8	
HSAM	**Samen**	**2.81**	**112**	*e*Pn		**Pn**	**09 09 28.3**	**+1.1**
HAGD	**Aghdareh**	**3.05**	**98**	*e*Pn		**Pn**	**09 09 31.5**	**+1.0**
ISRB	**Sarab**	**3.06**	**35**	*e*Pn		**Pn**	**09 09 32.3**	**+1.6**
IRAZ	**Razeghan**	**3.65**	**87**	*e*Pn		**Pn**	**09 09 40.7**	**+2.0**
NSR	**Nassriya**	**4.33**	**172**	*e*Pn		**Pn**	**09 09 48.0**	**+0.1**
NSR				*e*Sn		**Sn**	**09 10 38.0**	**-1.0**

*MEX **24** 09:10:30.3±0.4, 15°.08N×92°.48W, h107km±4km, MD3.8*
*GCG **24** 09:10:31.2±0.5, 14°.47N×92°.67W, h14km±10km, MD3.8*
ISC 24 09:10:32.2±1.7,**15°.16N**±0°.09×**92°.54W**±0°.07,**h82**km±13km,
n7, σ0s**99**/14,**Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
THIG		**0.37**	**134**	*e*P		**Pn**	**09 10 44.2**	**-1.0**
THIG				*e*S		**Sn**	**09 10 55.0**	**+0.3**
PCIG		**0.85**	**310**	*e*P		**Pn**	**09 10 49.4**	**-0.2**
PCIG				*i* S		**Sn**	**09 11 04.6**	**+2.0**
STG3	**Santiaguito 3,**	**1.04**	**116**	*e*P		**Pn**	**09 10 51.1**	**-1.0**
STG3				*e*S		**Sn**	**09 11 07.0**	**+0.1**
CCIG	**Comitan**	**1.18**	**19**	*i* P		**Pn**	**09 10 53.2**	**-0.6**
CCIG				*i* S		**Sn**	**09 11 10.1**	**+0.3**
FUG	**Fuego 3**	**1.79**	**113**	*e*P		**Pn**	**09 11 01.9**	**+0.3**
FUG				*e*S		**Sn**	**09 11 25.3**	**+1.4**
IXG	**Ixpaco**	**2.26**	**116**	*e*P		**Pn**	**09 11 07.4**	**-0.5**
IXG				*e*S		**Sn**	**09 11 35.7**	**+0.7**
CMIG	**Matias Romero**	**2.96**	**311**	*e*P		**Pn**	**09 11 16.4**	**-0.7**
CMIG				*i* S		**Sn**	**09 11 51.3**	**-0.3**

*KRNET **24** 09:18:19.5±0.1, 41°.66N×74°.30E, h16km, mb2.2*
*SOME **24** 09:18:19.1, 41°.55N×74°.27E, h20km*
*NNC **24** 09:18:20.9±2.2, 41°.71N×74°.27E, h0km, mb2.9, mpv2.7, Error ellipse: s-maj=14.1km s-min=10.6km az=158.0*
ISC 24 09:18:19.7±1.9,**41°.66N**±0°.08×**74°.31E**±0°.03,**h9**km±12km,
n21, σ0s**90**/37,**15C-7D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ARLS	**Aral**	**0.20**	**4**	⇑*i*P		**Pg**	**09 18 23.5**	**-0.4**
	baz=6.0							
ARLS				⇑*i*S		**Sg**	**09 18 26.7**	**-0.1**
	baz=6.0							
UCH	**Uchtor**	**0.58**	**15**	⇑*i*P		**Pg**	**09 18 31.0**	**-0.2**
	baz=16							
UCH				⇑*i*S		**Sg**	**09 18 39.6**	**+0.7**
	baz=16							
AML	**Almayashu**	**0.65**	**316**	⇑*i*P		**Pg**	**09 18 32.3**	**-0.1**
	baz=16							
AML				⇑*i*S		**Sb**	**09 18 41.2**	**-1.7**
	baz=16							
KZA	**Kyzart**	**0.82**	**59**	⇑*i*P		**Pg**	**09 18 35.2**	**-0.4**
	baz=59							
KZA				⇑*i*S		**Sg**	**09 18 46.8**	**+0.5**
	baz=59							
AAK	**Ala-Archa**	**0.98**	**8**	⇑*i*P		**Pb**	**09 18 38.2**	**-0.9**
	baz=8.0							
AAK				⇑*i*S		**Sg**	**09 18 51.7**	**+0.2**
	baz=8.0							
AAK	**Ala-Archa**	**0.98**	**8**	⇓P		**Pb**	**09 18 38.1**	**-0.9**
	1.7nm,0.3s							
AAK				⇑S		**Sg**	**09 18 51.6**	**+0.1**
	3.0nm,0.4s							
KBK	**Karagaybulak**	**1.10**	**26**	⇑*i*P		**Pb**	**09 18 40.2**	**-0.9**
	baz=26							
KBK				⇑*i*S		**Sg**	**09 18 55.5**	**+0.3**
	baz=26							
MRKS	**Merke**	**1.34**	**324**	*e*P		**Pg**	**09 18 45.2**	**-0.3**
	2.7nm,0.3s							
MRKS				*e*S		**Sg**	**09 19 04.2**	**+1.2**
	2.4nm,0.3s							
MRKS	**Merke**	**1.34**	**324**	P		**Pg**	**09 18 45.3**	**-0.3**
	2.7nm,0.3s							
MRKS				S		**Sg**	**09 19 04.2**	**+1.2**
	2.4nm,0.3s							
BOOM	**Boomskoye usch**	**1.47**	**55**	⇓*i*P		**Pb**	**09 18 46.6**	**-0.8**
	baz=55							
BOOM				⇓*i*S		**Sg**	**09 19 06.8**	**-0.3**
	baz=55							
ULHL	**Ulahol**	**1.56**	**67**	⇓*i*P		**Pb**	**09 18 48.4**	**-0.5**
	baz=67							
ULHL				⇓*i*S		**Sb**	**09 19 09.2**	**+0.4**
	baz=67							
USP	**Ospenovka**	**1.61**	**5**	⇑*i*P		**Pb**	**09 18 49.2**	**-0.5**
	baz=5.0							
USP				⇑*i*S		**Sg**	**09 19 10.7**	**-0.8**
	baz=5.0							
SGDS	**Sogindy**	**1.80**	**8**	P		**Pg**	**09 18 54.4**	**+0.1**
	2.7nm,0.3s							
SGDS				S		**Sg**	**09 19 19.7**	**+2.0**
	1.9nm,0.4s							
DGS	**Degeres**	**1.91**	**34**	*e*P		**Pg**	**09 18 56.6**	**+0.2**
	1.9nm,0.3s							
DGS				*e*S		**Sg**	**09 19 23.4**	**+2.2**
	3.0nm,0.4s							
DGS	**Degeres**	**1.91**	**34**	Pg		**Pg**	**09 18 56.6**	**+0.2**
	1.9nm,0.3s							
DGS				Lg		Lg	09 19 23.5	
	3.0nm,0.4s							
IZV	**Izvestkoviy**	**2.19**	**51**	*e*P		**Pg**	**09 19 01.2**	**-0.6**
	1.6nm,0.2s							
IZV				*e*S		**Sg**	**09 19 31.4**	**+1.1**
	2.3nm,0.2s							
IZV	**Izvestkoviy**	**2.19**	**51**	Pg		**Pg**	**09 19 01.2**	**-0.6**
	2.4nm,0.2s							
IZV				Lg		Lg	09 19 31.3	
	2.3nm,0.3s							
KRBS	**Karabastau**	**2.27**	**26**	Pg		**Pb**	**09 19 01.7**	**+0.8**
	2.4nm,0.2s							
KRBS				Lg		Lg	09 19 32.1	
	1.6nm,0.2s							
KTBS	**Karatobe**	**2.69**	**40**	*e*P		**Pb**	**09 19 09.4**	**+1.2**
	1.1nm,0.3s							
KTBS				*e*S		**Sg**	**09 19 45.6**	**-0.7**
	4.4nm,0.4s							
KTBS	**Karatobe**	**2.69**	**40**	Pg		**Pb**	**09 19 09.4**	**+1.2**
	1.3nm,0.4s							
KTBS				Lg		Lg	09 19 45.6	
	4.5nm,0.5s							
KK31	**Karatay Array**	**3.16**	**298**	⇓Pg		**Pb**	**09 19 16.6**	**+0.6**
	0.4nm,0.5s,baz=130,slow=15,SNR=4.1							
KK31				⇓Lg		Lg	09 19 59.0	

0.2nm,0.3s

*ASRS **24** 09:20:17.9,54.06N×86.68E,M1.9,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 24 09:20:15.8±3.0,54.43N×86.53E,h0km,mb3.5,mpv3.4, 1C-4D,Error ellipse: s-maj=64.7km s-min=15.4km az=163.0,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ZAA0	**Zalesovo Array**	**1.12**	**245**	⇓P		Pg	09 20 36.8	-0.3
	1.7nm,0.4s							
ZAA0				⇓S		Sb	09 20 52.4	-0.5
	17nm,0.9s							
KURBB	**Kurchatov Arra**	**6.19**	**235**	⇓Pn		Pn	09 21 49.9	+1.5
	5.6nm,0.3s							
MK31	**Makanchi Array**	**8.11**	**201**	⇑Pn		Pn	09 22 14.2	-0.5
	0.4nm,0.2s,baz=26,slow=14,SNR=36							
MAKZ	**Makanchi**	**8.16**	**203**	⇓Pn		Pn	09 22 15.6	+0.2
	2.5nm,0.8s							

*NEIC **24** 09:29:12.7±1.9,53.6N±0.3×174.0W±0.1,h227km±16km, Error ellipse: s-maj=41.9km s-min=3.5km az=166.0*

AEIC 24 09:29:10.6±2.4,53.7N±0.2×174.0W±0.2,h216km±9km, mb3.3/20,mb3.9/5(NEIC),Error ellipse: s-maj=30.7km s-min=9.8km az=158.0,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
KOWE	**Korovin West**	**1.36**	**187**			Pn	09 29 47.4	+2.7
KOFP	**Korovin Flat P**	**1.44**	**182**			Pn	09 29 47.7	+2.3
ATKA	**Atka Island**	**1.52**	**185**			Pn	09 29 47.2	+1.3
ATKA				S	S	S	09 30 13.6	+0.5
ATKA	**Atka Island**	**1.52**	**185**			S	09 30 14.8	+1.7
GSTR	**Great Sitkin T**	**2.05**	**218**	Pn		Pn	09 29 53.1	+2.3
GSTR				S	S	S	09 30 25.4	+3.5
GSMY	**Great Sitkin M**	**2.09**	**218**			Pn	09 29 53.1	+1.9
GSTD	**Great Sitkin T**	**2.11**	**219**			Pn	09 29 53.5	+2.0
GSTD						S	09 30 24.1	+1.0
ADAG	**Mount Adagdak**	**2.35**	**223**			Pn	09 29 56.0	+2.2
ADK	**Adak**	**2.45**	**223**			Pn	09 29 56.7	+1.7
ADK				S		S	09 30 29.5	+0.2
KIKV	**Kanaga Island**	**2.66**	**228**			Pn	09 29 59.0	+1.6
KIWB	**Kanaga Island**	**2.67**	**227**			Pn	09 29 58.9	+1.5
KIWB				S		S	09 30 35.1	+1.5
KIMD	**Kanaga Island**	**2.77**	**227**			Pn	09 29 59.8	+1.2
TAFP	**Tanaga Falls P**	**3.03**	**235**			Pn	09 30 03.3	+1.9
TAFP						S	09 30 41.8	+1.0
TASE	**Tanaga Southea**	**3.09**	**234**			Pn	09 30 04.1	+1.9
NIKH	**Nikolski High**	**3.17**	**101**			S	09 30 45.2	+1.5
GAEA	**Gareloi East**	**3.48**	**238**			Pn	09 30 08.7	+2.1
OKTU	**Okmok Mt. Tuli**	**3.57**	**93**			Pn	09 30 10.5	+2.7
MREP	**Makushin Rep't**	**4.30**	**86**			Pn	09 30 19.7	+3.0
UNV	**Unalaska Valle**	**4.45**	**85**			Pn	09 30 21.2	+2.9
UNV				S		S	09 31 13.9	+2.4
OHAK	**Old Harbor**	**12.25**	**65**	Pn		Pn	09 31 57.9	-0.1
KDAK	**Kodiak Island**	**12.71**	**63**	Pn		Pn	09 32 04.3	+0.6
CNPM	**China Poot**	**13.77**	**56**			P	09 32 20.0	+1.3
SKT	**Skwentna**	**14.48**	**46**	Pn		P	09 32 30.8	+4.4
PPLA	**Purkeypile**	**14.62**	**42**	Pn		P	09 32 31.9	+3.8
KTH	**Kantishna Hill**	**15.44**	**41**	P		Pn	09 32 41.1	+3.9
KTH				IAmb		IAmb	09 32 53.8	
	comp=Z,6.8nm,1.0s							
RND	**Reindeer**	**16.20**	**43**	P		Pn	09 32 49.0	+2.6
MLY	**Manley**	**16.27**	**37**	P		Pn	09 32 47.8	+0.6
MLY				IAmb		IAmb	09 32 53.5	
	comp=Z,4.9nm,1.4s							
MCK	**McKinley**	**16.31**	**42**	P		Pn	09 32 48.8	+1.2
MCK				IAmb		IAmb	09 33 01.8	
	comp=Z,7.0nm,1.5s							
DOT	**Dot Lake**	**18.28**	**45**	P		Pn	09 33 11.1	+0.3

*TAP **24** 09:42:49.0,24.83N×122.15E,h6km,ML3.0,C*
*JMA **24** 09:42:49.6±0.1,24.77N×122.15E,h34km,M2.6*

ISC 24 09:42:47.8±1.0,24.83N±0.02×122.18E±0.02,h12km±8km, n73,σ0s75/98,3C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
TWB1	**Santiao Chiao**	**0.24**	**315**	⇑*i*P		**Pg**	**09 42 53.2**	**+0.3**
	baz=320							
TWB1				S		**Sg**	**09 42 56.3**	**-0.1**
	baz=320							
EOS1	**EOS1**	**0.29**	**189**	*e*P		**Pb**	**09 42 55.5**	**+0.6**
	baz=184							
EOS1				*e*S		**Sb**	**09 43 00.3**	**+0.7**
	baz=184							
NTC	**Toucheng**	**0.32**	**274**	*i* P		**Pb**	**09 42 54.8**	**-0.6**
	baz=273							
NTC				*e*S		**Sb**	**09 42 59.5**	**-1.1**
	baz=273							
TIPB	**Shuangxi**	**0.35**	**293**	⇑*i*P		**Pb**	**09 42 55.4**	**-0.6**
	baz=294							
TIPB				*e*S		**Sb**	**09 42 60.0**	**-1.6**
	baz=294							
TWC	**Suao**	**0.37**	**233**	⇑*i*P		**Pb**	**09 42 55.8**	**-0.6**
	baz=229							
TWC				*e*S		**Sg**	**09 43 00.1**	**-0.2**
	baz=229							
ILA	**Ilan**	**0.40**	**260**	*e*P		**Pb**	**09 42 55.8**	**-1.0**
	baz=259							
NWF	**Wu-fen Shan**	**0.43**	**303**	*e*P		**Pb**	**09 42 57.2**	**-0.3**
	baz=304							
WFSB	**Wu-fen Shan**	**0.43**	**303**	*e*P		**Pb**	**09 42 57.2**	**-0.2**
	baz=304							
TWE	**Neicheng**	**0.48**	**257**	P		**Pb**	**09 42 57.7**	**-0.5**
	baz=254							
TWE				*e*S		**Sb**	**09 43 04.6**	**-0.6**
	baz=254							
SLBB	**Yuanshan**	**0.50**	**261**	*e*P		**Pb**	**09 42 57.8**	**-0.8**
	baz=260							
TWA	**Mucha**	**0.56**	**285**	*e*P		**Pn**	**09 43 01.1**	**-0.5**
	baz=285							
NANB	**Nanao**	**0.56**	**224**	*i* P		**Pb**	**09 42 59.4**	**-0.2**
	baz=222							
ENA	**Nanau**	**0.57**	**225**	P		**Pb**	**09 42 59.5**	**-0.2**
	baz=222							
ENA				*e*S		**Sb**	**09 43 06.9**	**-0.9**
	baz=222							
ENTT	**Nioudou**	**0.59**	**251**	*e*P		**Pb**	**09 43 00.0**	**-0.1**
	baz=249							
ENTT				*i* S		**Sb**	**09 43 07.8**	**-0.6**
	baz=249							
NHDH	**Xindian Distri**	**0.61**	**282**	*e*P		**Pn**	**09 43 02.0**	**-0.3**
	baz=282							
NWLT	**Wulai**	**0.62**	**265**	*e*P		**Pb**	**09 43 00.5**	**-0.1**
	baz=264							
YM01	**YM01**	**0.63**	**300**	*e*P		**Pb**	**09 43 01.3**	**+0.4**
	baz=300							
YM08	**YM08**	**0.64**	**304**	P		**Pb**	**09 43 01.1**	**+0.1**
	baz=304							
YM11	**YM11**	**0.64**	**301**	*e*P		**Pb**	**09 43 01.3**	**+0.3**
	baz=302							
TATO	**Taipei**	**0.64**	**283**	*e*P		**Pn**	**09 43 02.5**	**-0.3**
	baz=283							
YM05	**YM05**	**0.65**	**301**	*e*P		**Pb**	**09 43 01.4**	**+0.3**
	baz=301							
YM10	**YM10**	**0.65**	**300**	*e*P		**Pb**	**09 43 01.5**	**+0.4**
	baz=300							
NDT	**Datong Townshi**	**0.65**	**249**	*e*P		**Pb**	**09 43 00.9**	**-0.2**
	baz=248							
YM04	**YM04**	**0.66**	**299**	*e*P		**Pb**	**09 43 01.7**	**+0.3**
	baz=299							
TWY	**Chenhua**	**0.69**	**310**	*e*P		**Pb**	**09 43 02.2**	**+0.5**
	baz=311							
ANP	**Anpu**	**0.69**	**301**	*e*P		**Pb**	**09 43 02.3**	**+0.4**
	baz=301							
TWS1	**Kuangyinshan**	**0.74**	**291**	*e*P		**Pn**	**09 43 04.6**	**+0.5**
	baz=291							
YHNB	**Yeheng**	**0.75**	**258**	*e*P		**Pb**	**09 43 02.6**	**-0.2**
	baz=256							
NSK	**Sanguang**	**0.76**	**258**	*e*P		**Pb**	**09 43 02.7**	**-0.3**
	baz=257							
JYNG	**Yonagunijimaku**	**0.80**	**118**	P		**Pb**	**09 43 04.0**	**+0.4**
JYNG				*e*S		**Sb**	**09 43 15.0**	**+0.7**
PCYT	**Pengchaiyu**	**0.80**	**353**	*e*P		**Pb**	**09 43 03.8**	**+0.1**
	baz=355							
NNSB	**Datong**	**0.83**	**241**	P		**Pb**	**09 43 04.3**	**0.0**
	baz=240							
NNSB				S		**Sb**	**09 43 15.6**	**+0.1**
	baz=240							
NNSH	**Datong**	**0.83**	**241**	P		**Pb**	**09 43 04.3**	**0.0**
	baz=240							
NNSH				*e*S		**Sb**	**09 43 15.4**	**-0.1**
	baz=240							
NNS	**Nan Shan**	**0.83**	**242**	*i* P		**Pb**	**09 43 04.3**	**0.0**
	baz=240							
NNS				S		**Sb**	**09 43 15.4**	**-0.1**
	baz=240							
YOJ	**Yonaguni jima**	**0.84**	**116**	*e*P		**Pn**	**09 43 05.0**	**-0.6**
	baz=115							
YOJ				S		**Sb**	**09 43 17.0**	**+1.3**
	baz=115							
YOJ	**Yonaguni jima**	**0.84**	**116**	P		**Pn**	**09 43 05.1**	**-0.4**
YOJ				S		**Sb**	**09 43 16.3**	**+0.6**
NACB	**Ninganchiao**	**0.84**	**219**	*e*P		**Pb**	**09 43 04.6**	**+0.1**
	baz=217							
NACB				*e*S		**Sb**	**09 43 16.0**	**+0.2**
	baz=217							
ETLH	**Xiulin Townshi**	**0.89**	**226**	*i* P		**Pn**	**09 43 05.6**	**-0.7**
	baz=224							
ETLH				*e*S		**Sb**	**09 43 17.2**	**0.0**
	baz=224							
TWD	**Chiawan**	**0.92**	**215**	*i* P		**Pn**	**09 43 06.0**	**-0.5**
	baz=213							
TWD				*e*S		**Sb**	**09 43 18.4**	**+0.5**
	baz=213							
HWA	**Hwalien**	**1.00**	**212**	*e*P		**Pn**	**09 43 07.7**	**0.0**
	baz=209							
LIOB	**Emei**	**1.07**	**260**	*e*P		**Pn**	**09 43 10.4**	**+1.7**
	baz=259							
WHF	**Hehuan Shan**	**1.08**	**231**	*e*P		**Pn**	**09 43 09.2**	**0.0**
	baz=229							
WHF				*e*S		**Sb**	**09 43 23.9**	**+1.0**
	baz=229							
TWT	**Tachien**	**1.08**	**238**	*e*P		**Pn**	**09 43 10.6**	**+1.7**
	baz=237							
TWT				*e*S		**Sn**	**09 43 23.9**	**-0.1**
	baz=237							
NSTT	**Nanjuang**	**1.09**	**260**	*e*P		**Pn**	**09 43 10.8**	**+1.9**
	baz=258							
TDCB	**Techi**	**1.09**	**238**	*e*P		**Pn**	**09 43 09.4**	**+0.3**
	baz=237							
TDCB				S		**Sb**	**09 43 23.5**	**+0.4**
	baz=237							
CHGB	**Renai**	**1.20**	**230**	*e*P		**Pn**	**09 43 11.1**	**+0.5**
	baz=229							
CHGB				*e*S		**Sn**	**09 43 27.2**	**+0.3**
	baz=229							
WHP	**Taichung City**	**1.25**	**244**	*e*P		**Pn**	**09 43 12.7**	**+1.5**
	baz=243							
OWD	**Renai**	**1.27**	**226**	*e*P		**Pn**	**09 43 12.3**	**+0.8**
	baz=225							
OWD				S		**Sn**	**09 43 28.6**	**+0.1**
	baz=225							
VWDT	**VWDT**	**1.43**	**222**	*e*P		**Pg**	**09 43 15.9**	**+0.5**
	baz=220							
IRIF	**Iriomote-Funau**	**1.50**	**109**	P		**Pg**	**09 43 15.7**	**-0.9**
SMLT	**Sun Moon Lake**	**1.50**	**231**	*e*P		**Pg**	**09 43 18.2**	**+1.6**
	baz=230							
HGSD	**Ruisui**	**1.50**	**207**	*e*P		**Pg**	**09 43 17.4**	**+0.7**
	baz=206							
TYC	**Yuchr**	**1.52**	**233**	*e*P		**Pg**	**09 43 18.1**	**+1.2**
	baz=231							
SSLB	**Suanglung**	**1.53**	**227**	*e*P		**Pg**	**09 43 17.6**	**+0.4**
	baz=226							
EHY	**Hungye**	**1.54**	**211**	*e*P		**Pg**	**09 43 16.2**	**-1.1**
	baz=209							
YULB	**Yu-li**	**1.65**	**209**	*e*P		**Pg**	**09 43 18.4**	**-1.0**
	baz=208							
YULB				*e*S		**Sg**	**09 43 40.3**	**-0.5**
	baz=208							
WHYT	**Xinyi Township**	**1.66**	**227**	*e*P		**Pg**	**09 43 20.7**	**+1.0**
	baz=226							
HATJ	**Hateruma jima**	**1.67**	**117**	P		**Pb**	**09 43 18.0**	**-0.5**
TWF1	**Yuli**	**1.68**	**209**	*e*P		**Pg**	**09 43 18.7**	**-1.4**
	baz=207							
JKRS	**Kuro-shima**	**1.77**	**109**	P		**Pn**	**09 43 18.4**	**+0.1**
JKRS				*e*S		**Sn**	**09 43 40.2**	**-0.5**
FULB	**Fuli**	**1.82**	**207**	*e*P		**Pb**	**09 43 20.7**	**-0.3**
	baz=205							
ALS	**Alishan**	**1.82**	**224**	*e*P		**Pg**	**09 43 23.4**	**+0.6**
	baz=222							
CHN5	**Tsauling**	**1.84**	**228**	*e*P		**Pg**	**09 43 23.4**	**+0.2**
	baz=227							
JIJ	**Ishigaki jima**	**1.85**	**104**	P		**Pn**	**09 43 20.3**	**+0.9**
JIJ				*e*S		**Sn**	**09 43 42.5**	**-0.2**
ELDTW	**Lidau**	**1.95**	**213**	*e*P		**Pg**	**09 43 23.6**	**-1.7**
	baz=212							
CHN4	**Tsaushan**	**2.07**	**225**	*e*P		**Pg**	**09 43 26.4**	**-1.0**
	baz=224							
TPUB	**Ta-pu**	**2.08**	**223**	*e*P		**Pb**	**09 43 25.6**	**0.0**
	baz=222							
WTP	**Ta-pu**	**2.13**	**222**	*e*P		**Pg**	**09 43 27.8**	**-0.9**
	baz=221							
TWK	**Hsinying**	**2.20**	**225**	*e*P		**Pg**	**09 43 28.1**	**-1.8**
	baz=224							
TWH	**Lutao**	**2.21**	**197**	*e*P		**Pn**	**09 43 25.6**	**+1.3**
	baz=195							
SLGT	**Liugui**	**2.31**	**218**	*e*P		**Pb**	**09 43 29.6**	**+0.1**
	baz=216							
MATB	**Ma-tsu**	**2.41**	**304**	*e*P		**Pn**	**09 43 27.2**	**+0.1**
	baz=302							
VWUC	**VWUC**	**2.48**	**274**	*e*P		**Pn**	**09 43 29.3**	**+1.2**
	baz=273							

TAP 24 09:53:17.3,24.86N×122.08E,h14km±1km,ML2.3,D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
TWB1	**Santiao Chiao**	**0.17**	**331**	P		Pg	09 53 21.2	-0.3
	baz=333							
TWB1				*i* S		Sg	09 53 24.2	0.0
	baz=333							
NTC	**Toucheng**	**0.23**	**270**	*e*P		Pg	09 53 22.4	+0.1
	baz=269							
TIPB	**Shuangxi**	**0.26**	**297**	*e*P		Pb	09 53 23.4	-0.4
	baz=296							
EOS1	**EOS1**	**0.31**	**172**	*i* P		Pg	09 53 23.5	-0.1
	baz=172							
EOS1				*e*S		Sg	09 53 28.6	+0.6
	baz=172							
ILA	**Ilan**	**0.32**	**254**	*e*P		Pg	09 53 23.7	-0.1
	baz=253							
TWC	**Suao**	**0.32**	**221**	*i* P		Pg	09 53 23.7	-0.2
	baz=219							
TWC				*e*S		Sg	09 53 28.2	-0.2
	baz=219							
TWE	**Neicheng**	**0.40**	**251**	*e*P		Pg	09 53 25.2	-0.2
	baz=249							
ENTT	**Nioudou**	**0.52**	**246**	*e*P		Pg	09 53 27.4	-0.2
	baz=244							
NANB	**Nanao**	**0.52**	**215**	*e*P		Pg	09 53 27.7	+0.1
	baz=215							
NANB				S		Sg	09 53 34.8	+0.2
	baz=215							
ENA	**Nanau**	**0.53**	**216**	*e*P		Pg	09 53 27.6	-0.1
	baz=215							
ENA				S		Sg	09 53 34.9	+0.2
	baz=215							
NDT	**Datong Townshi**	**0.57**	**244**	*e*P		Pb	09 53 30.2	+0.9
	baz=244							
YHNB	**Yeheng**	**0.67**	**254**	*e*P		Pb	09 53 31.5	+0.6
	baz=253							

JMA 24 09:53:46.7±0.2,24.90N×123.50E,h20km,M1.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
IRIF	**Iriomote-Funau**	**0.60**	**160**	P		Pb	09 53 58.1	-0.4
IRIF				*e*S		Sb	09 54 06.3	-0.3
YOJ	**Yonaguni jima**	**0.62**	**226**	P		Pb	09 53 58.6	-0.3
YOJ				S		Sb	09 54 06.8	-0.4
JIJ	**Ishigaki jima**	**0.79**	**132**	P		Pb	09 54 01.8	0.0
JIJ				*e*S		Sb	09 54 12.2	+0.1
JISG	**Ishigakijimahi**	**0.80**	**113**	S		Sb	09 54 11.5	-0.8
JKRS	**Kuro-shima**	**0.81**	**145**	P		Pb	09 54 01.9	-0.1
JKRS				*e*S		Sb	09 54 12.1	-0.4
HATJ	**Hateruma jima**	**0.88**	**162**	S		Sb	09 54 14.6	-0.1
JTJ	**Tarama**	**1.12**	**103**	*e*S		Sb	09 54 21.5	-0.1

*IDC **24** 10:06:34.1±1.4,27.84N×127.42E,h128km±27km,mb3.4/3, mb1 3.6/3,mb1mx3.0/60,mbtmp3.8/3,MS3.1/1,Ms1 3.1/1, ms1mx2.4/30,Error ellipse: s-maj=46.3km s-min=30.0km az=2.0*
*JMA **24** 10:06:35.4±0.2,27.56N×127.21E,h128km±4km,M3.9*

ISC 24 10:06:34.0±0.9,27.53N±0.10×127.15E±0.09, h140km±12km,n23,σ0s93/38,mb3.6/3,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JIH	**Iheya**	**0.88**	**124**	P		**Pn**	**10 06 57.5**	**+0.8**
JIH				S		**Sn**	**10 07 13.7**	**-0.3**
JAGN	**Aguni-jima**	**0.94**	**175**	P		**Pn**	**10 06 58.0**	**+0.7**
JAGN				*e*S		**Sn**	**10 07 15.4**	**+0.3**
JOW	**Kunigami**	**1.22**	**125**	P		**Pn**	**10 07 00.3**	**+0.4**
JOW				S		**Sn**	**10 07 18.3**	**-1.3**
JOW	**Kunigami**	**1.22**	**125**	P		**Pn**	**10 07 00.4**	**+0.5**
	25nm,0.3s,baz=330,slow=16,SNR=490							
JOW				S		**Sn**	**10 07 18.5**	**-1.1**
	49nm,0.3s,baz=24,slow=17,SNR=21							
JKE	**Kume jima 2**	**1.25**	**195**	P		**Pn**	**10 07 00.9**	**+0.7**
JKE				*e*S		**Sn**	**10 07 19.9**	**-0.2**
JYRO	**Yoronjima**	**1.26**	**113**	P		**Pn**	**10 07 00.6**	**+0.3**
JYRO				S		**Sn**	**10 07 18.6**	**-1.7**
JOKE	**Okinoerabujima**	**1.27**	**97**	P		**Pn**	**10 07 00.7**	**+0.3**
JOKE				S		**Sn**	**10 07 19.3**	**-1.2**
JNTH	**Nagotoyohara**	**1.27**	**142**	P		**Pn**	**10 07 01.3**	**+0.9**
JJT3	**Tamagusuku3**	**1.50**	**158**	P		**Pn**	**10 07 04.2**	**+1.4**
JJT3				*e*S		**Sn**	**10 07 25.3**	**+0.6**
JTK	**Tokunoshima**	**1.61**	**81**	P		**Pn**	**10 07 04.2**	**+0.2**
JTK				S		**Sn**	**10 07 25.9**	**-1.1**
JAMN	**Amaminishikomi**	**1.92**	**68**	P		**Pn**	**10 07 07.7**	**+0.1**
JAMN				S		**Sn**	**10 07 32.2**	**-1.1**
JAM	**Amami Oshima**	**2.34**	**67**	P		**Pn**	**10 07 12.5**	**-0.1**
JAM				S		**Sn**	**10 07 40.7**	**-1.5**
JTAJ	**Takarajima**	**2.42**	**48**	P		**Pn**	**10 07 14.4**	**+0.8**
JZK	**Kikaishima**	**2.61**	**72**	P		**Pn**	**10 07 16.6**	**+0.6**
JZK				S		**Sn**	**10 07 48.3**	**-0.1**
JIKM	**Ikemajima**	**3.11**	**214**	P		**Pn**	**10 07 22.4**	**0.0**
JIKM				*e*S		**Sn**	**10 07 57.3**	**-2.5**
JOGS	**Gusukube**	**3.18**	**210**	P		**Pn**	**10 07 23.3**	**0.0**
JOGS				*e*S		**Sn**	**10 08 01.7**	**+0.4**
JIRB	**Irabujima**	**3.23**	**214**	P		**Pn**	**10 07 23.7**	**-0.2**
JMJ2	**Miyako jima3**	**3.23**	**211**	P		**Pn**	**10 07 24.2**	**+0.3**
JMJ2				*e*S		**Sn**	**10 08 01.1**	**-1.4**
JNN	**Nakanoshima**	**3.32**	**45**	P		**Pn**	**10 07 26.2**	**+1.2**
SONM	**Songino Array**	**25.94**	**327**	P		**P**	**10 11 54.1**	**+0.8**
	0.7nm,0.4s,baz=141,slow=11,SNR=5.8							
MKAR	**Makanchi Array**	**39.95**	**311**	P		**P**	**10 13 54.4**	**-0.2**
	0.7nm,0.6s,baz=97,slow=9.9,SNR=4.6							
MKAR				PcP		**PcP**	**10 15 57.2**	**0.0**
	0.3nm,0.5s,baz=84,slow=3.9,SNR=4.3							
PMG	**Port Moresby**	**41.52**	**149**	LR		LR	10 28 16.7	
	comp=Z,24nm,20.2s,baz=92,slow=31							
YKA	**Yellowknife Ar**	**77.75**	**25**	P		**P**	**10 18 15.2**	**+0.1**
	0.8nm,0.8s,baz=304,slow=5.8,SNR=12							

IDC 24 10:07:22.2±2.3,7.00S×128.62E,h0km,mb3.3/1, mb1 3.7/3,mb1mx3.4/40,mbtmp3.5/3,ML3.6/2,MS3.7/1, Ms1 3.7/1,ms1mx2.6/17,Error ellipse: s-maj=173.7km s-min=32.4km az=66.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
WRA	**Warramunga Arr**	**14.01**	**157**	P		Pn	10 10 41.8	-0.4
	0.3nm,0.3s,baz=336,slow=12,SNR=11							
WRA						Sn	10 13 03.0	-16
	0.7nm,0.3s,baz=327,slow=21,SNR=9.1							
ASAR	**Alice Springs**	**17.33**	**164**	P		Pn	10 11 26.0	+0.2
	0.3nm,0.3s,baz=339,slow=11,SNR=17							
ASAR				S		Sn	10 14 23.6	-16
	0.3nm,0.3s,baz=318,slow=14,SNR=6.3							
AFI	**Afiamalu**	**58.90**	**102**	LR		LR	10 42 22.1	
	comp=Z,68nm,21.7s,baz=86,slow=36							
MKAR	**Makanchi Array**	**67.48**	**327**	P		P	10 18 20.1	0.0
	0.1nm,0.4s,baz=110,slow=8.3,SNR=4.1							

*STR **24** 10:10:39.2±0.9,48°N±2°×±°,h11km±15km,MLv1.5/7*

LDG 24 10:10:38.9±0.0,48.36N×7.80E,h18km,Md1.7/1,Ml1.6/2, Error ellipse: s-maj=0.4km s-min=0.3km az=6.0,France

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
OPP	**Oppenau**	**0.29**	**62**	Pg		Pg	10 10 45.2	-0.1
WLS	**Welschbruch**	**0.30**	**280**	Pg		Pg	10 10 45.5	0.0
CDF	**Champ du Feu**	**0.35**	**278**	*e*Pg		Pg	10 10 46.3	-0.1
CDF	**Champ du Feu**	**0.35**	**278**	*e*Pn		Pb	10 10 47.9	+1.1
CDF				*e*Sg		Sg	10 10 51.2	-0.2
	6.5nm,0.2s							
KIZ	**Kirchzarten**	**0.41**	**169**	Pg		Pg	10 10 47.4	0.0
ECH	**Echery**	**0.45**	**251**	Pg		Pg	10 10 48.0	-0.1
SUBF	**Surbourg**	**0.56**	**3**	Sg		Sg	10 10 57.4	0.0
HINF	**Hinteralfeld**	**0.84**	**230**	*e*Pg		Pg	10 10 54.9	-0.1
HINF				*e*Sg		Sb	10 11 05.8	-0.1
	3.3nm,0.2s							
HAU	**Haudompre**	**1.03**	**250**	*e*Pg		Pn	10 10 58.6	0.0
HAU				*e*Sg		Sg	10 11 12.2	-0.3
	1.5nm,0.2s							
PAGF	**Fort de Pagny**	**1.40**	**279**	*e*Pg		Pg	10 11 05.3	-0.5
PAGF				*e*Sg		Sg	10 11 23.2	-0.8
	1.2nm,0.2s							

*IDC **24** 10:18:51.5±1.1,12.03S×165.26E,h0km,mb3.9/7, mb1 4.1/8,mb1mx3.8/36,mbtmp3.9/8,ML3.5/1,Error ellipse: s-maj=40.8km s-min=24.9km az=134.0*

ISC 24 10:18:56.5±0.8,12.1S±0.1×165.3E±0.2,h35km,n8, σ0s57/8,mb3.7/7,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
DZM	**Mont Dzumac**	**9.93**	**174**	Pn		**Pn**	**10 21 16.8**	**-0.1**
	0.4nm,0.3s,baz=58,slow=19,SNR=5.2							
WRA	**Warramunga Arr**	**30.70**	**251**	P		**P**	**10 25 09.2**	**+0.8**
	1.1nm,0.9s,baz=82,slow=8.9,SNR=5.9							
ASAR	**Alice Springs**	**31.91**	**245**	P		**P**	**10 25 18.9**	**-0.1**
	1.0nm,0.9s,baz=72,slow=9.0,SNR=11							
SONM	**Songino Array**	**79.29**	**324**	P		**P**	**10 30 57.7**	**-0.9**
	0.2nm,0.3s,baz=

FAKI	**Fak Fak**	**8.64**	**137**	Pn		**Pn**	**10 55 46.0**	**+0.8**
JAY	**Jayapura**	**15.49**	**112**	LR		LR	11 02 23.2	
	comp=Z,49nm,18.9s,baz=15,slow=34							
MTN	**Manton Dam**	**16.90**	**164**	Pn		**Pn**	**10 57 35.2**	**-0.5**
KNRA	**Kununurra**	**19.19**	**173**	P		**P**	**10 58 03.5**	**-0.1**
KNRA				IAmb		IAmb	10 58 12.5	
	comp=Z,26nm,1.4s							
YULB	**Yu-li**	**20.39**	**346**	P		**P**	**10 58 12.5**	**-2.7**
YULB				IAmb		IAmb	10 58 19.6	
	comp=Z,16nm,1.2s							
FITZ	**Fitzroy Crossi**	**21.47**	**182**	P		**P**	**10 58 26.2**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=14,slow=8.3,SNR=3.7							
FITZ	**Fitzroy Crossi**	**21.47**	**182**	P		**P**	**10 58 26.5**	**-0.4**
KNMB	**Chin-men Tao**	**22.23**	**340**	P		**P**	**10 58 34.8**	**-0.2**
WRAB	**Tennant Creek**	**24.56**	**162**	P		**P**	**10 58 58.3**	**+0.6**
WRAB				IAmb		IAmb	10 59 01.8	
	comp=Z,7.4nm,0.8s							
WRA	**Warramunga Arr**	**24.56**	**162**	P		**P**	**10 58 58.1**	**+0.4**
	comp=Z,4.6nm,0.8s,baz=343,slow=10,SNR=17							
WRA				PcP		**PcP**	**11 02 36.4**	**+1.5**
	comp=Z,0.6nm,1.0s,baz=331,slow=2.3,SNR=3.0							
WRA	**Warramunga Arr**	**24.56**	**162**	P		**P**	**10 58 58.5**	**+0.8**
WB2	**Warramunga Arr**	**24.57**	**162**	P		**P**	**10 58 58.5**	**+0.7**
WB2				IAmb		IAmb	10 59 01.9	
	comp=Z,8.0nm,0.7s							
WR0	**Warramunga Arr**	**24.64**	**161**	P		**P**	**10 58 59.1**	**+0.6**
WR0				IAmb		IAmb	10 59 02.5	
	comp=Z,7.8nm,0.9s							
AS31	**Alice Springs**	**27.97**	**165**	P		**P**	**10 59 30.4**	**+1.9**
ASAR	**Alice Springs**	**27.97**	**165**	P		**P**	**10 59 29.6**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=349,slow=13,SNR=13							
ASAR				PcP		**PcP**	**11 02 44.1**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=350,slow=2.4,SNR=7.4							
ASAR	**Alice Springs**	**27.97**	**165**	P		**P**	**10 59 31.8**	**+3.3**
ASAR				PcP		**PcP**	**11 02 44.0**	**+1.2**
CMAR	**Chiang Mai Arr**	**30.71**	**301**	P		**P**	**10 59 53.5**	**+0.6**
	comp=Z,1.1nm,0.7s,baz=117,slow=6.8,SNR=7.7							
KSRS	**Korea Array**	**33.82**	**2**	P		**P**	**11 00 18.4**	**-1.4**
	comp=Z,1.7nm,0.5s,baz=177,slow=10,SNR=10							
BBOO	**Buckleboo**	**37.25**	**167**	P		**P**	**11 00 51.0**	**+1.7**
BJT	**Baijiatuau**	**37.52**	**347**	P		**P**	**11 00 52.7**	**+1.2**
STKA	**Stephens Creek**	**38.03**	**159**	P		**P**	**11 00 57.3**	**+1.4**
	comp=Z,1.8nm,0.5s,baz=345,slow=8.5,SNR=10							
STKA	**Stephens Creek**	**38.03**	**159**	P		**P**	**11 00 57.4**	**+1.4**
USRK	**Ussuriysk Ar.**	**40.83**	**6**	P		**P**	**11 01 18.9**	**-0.2**
	comp=Z,1.8nm,0.5s,baz=187,slow=7.3,SNR=6.7							
USRK	**Ussuriysk Ar.**	**40.83**	**6**	P		**P**	**11 01 18.6**	**-0.6**
SONM	**Songino Array**	**47.42**	**342**	P		**P**	**11 02 12.2**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=159,slow=7.5,SNR=5.9							
SONM				PcP		**PcP**	**11 03 41.9**	**0.0**
	comp=Z,0.4nm,0.3s,baz=132,slow=4.1,SNR=4.3							
SONM	**Songino Array**	**47.42**	**342**	P		**P**	**11 02 11.8**	**-0.1**
SONM						**PcP**	**11 03 41.8**	**0.0**
PEA0B	**Petropavlovsk-**	**55.77**	**22**	P		**P**	**11 03 14.4**	**+0.3**
PETK	**Petropavlovsk-**	**55.77**	**22**	P		**P**	**11 03 14.3**	**+0.2**
	comp=Z,2.7nm,0.5s,baz=187,slow=4.8,SNR=20							
PETK	**Petropavlovsk-**	**55.77**	**22**	P		**P**	**11 03 14.5**	**+0.5**
MK31	**Makanchi Array**	**57.56**	**325**	P		**P**	**11 03 27.1**	**+0.1**
MK31				IAmb		IAmb	11 03 36.9	
	comp=Z,1.1nm,0.6s							
MKAR	**Makanchi Array**	**57.56**	**325**	P		**P**	**11 03 27.4**	**+0.4**
	comp=Z,1.9nm,0.6s,baz=120,slow=7.1,SNR=28							
MAKZ	**Makanchi**	**57.75**	**325**	P		**P**	**11 03 29.6**	**+1.3**
MAKZ				IAmb		IAmb	11 03 32.1	
	comp=Z,1.5nm,0.6s							
ZALV	**Zalesovo Beam**	**60.65**	**333**	P		**P**	**11 03 48.1**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=130,slow=9.0,SNR=3.2							
KURK	**Kurchatov**	**61.76**	**328**	P		**P**	**11 03 56.3**	**+0.5**
KK31	**Karatay Array**	**63.18**	**317**	P		**P**	**11 04 06.9**	**+1.5**
KK31				IAmb		IAmb	11 04 08.0	
	comp=Z,2.5nm,0.8s							
KKAR	**Karatay Array**	**63.18**	**317**	P		**P**	**11 04 06.2**	**+0.8**
KKAR	**Karatay Array**	**63.18**	**317**	P		**P**	**11 04 07.0**	**+1.6**
KKAR				IAmb		IAmb	11 04 08.1	
	comp=Z,2.5nm,0.8s							
BRVK	**Borovoye**	**67.41**	**327**	P		**P**	**11 04 32.2**	**-0.3**
BRVK				IAmb		IAmb	11 04 34.9	
	comp=Z,7.2nm,1.2s							
ABKAR	**Akbulak array**	**72.13**	**321**	P		**P**	**11 05 01.7**	**0.0**
ABKAR	**Akbulak array**	**72.13**	**321**	P		**P**	**11 05 02.1**	**+0.4**
IMAR	**Indian Mountai**	**82.69**	**24**	P		**P**	**11 06 01.9**	**+1.5**
ILAR	**Eielson Array**	**85.45**	**25**	P		**P**	**11 06 13.7**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=246,slow=5.8,SNR=3.9							
BRTR	**Keskin Array B**	**89.92**	**310**	P		**P**	**11 06 36.8**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=108,slow=2.7,SNR=4.5							
ARCES	**ARCESS Array B**	**90.56**	**340**	P		**P**	**11 06 37.5**	**-1.2**
	comp=Z,3.1nm,0.9s,baz=65,slow=8,SNR=9.8							
AKASG	**Malin Array Be**	**91.87**	**321**	P		**P**	**11 06 44.7**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=75,slow=4.2,SNR=1.2							
FINES	**FINESS Array B**	**91.88**	**332**	P		**P**	**11 06 45.7**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=45,slow=2.2,SNR=3.8							

IDC 24 11:07:27.7±5.0, 4.80S×153.51E, h125km±34km, mb3.1/2, mb1 3.5/3, mb1mx3.1/23, mbtmp3.8/3, Error ellipse: s-maj=64.5km s-min=25.6km az=109.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.56**	**288**	P		Pn	11 07 55.1	-1.0
	27nm,0.3s,baz=174,slow=0.4,SNR=17							
KRVT				S		Sn	11 08 18.1	+0.3
	36nm,0.3s,baz=103,slow=7.1,SNR=5.1							
PMG	**Port Moresby**	**7.79**	**234**	P		Pn	11 09 19.4	+1.0
	5.6nm,0.3s,baz=40,slow=9.8,SNR=18							
PMG				S		Sn	11 10 44.2	-0.8
	0.8nm,0.3s,baz=24,slow=20,SNR=2.5							
WRA	**Warramunga Arr**	**23.98**	**229**	P		P	11 12 31.3	+0.4
	1.0nm,0.7s,baz=52,slow=9.6,SNR=5.7							
ASAR	**Alice Springs**	**26.63**	**223**	P		P	11 12 54.8	-0.1
	0.5nm,0.9s,baz=54,slow=9.0,SNR=9.5							
TORD	**Torodi Ar. Bea**	**150.98**	**288**	PKPbc		PKPbc	11 27 06.7	-0.3
	0.6nm,0.8s,baz=65,slow=2.6,SNR=2.6							

*TAP **24** 11:07:38.8, 24.52N×122.29E, h16km, ML2.8, B*
*JMA **24** 11:07:39.8±0.1, 24.49N×122.30E, h30km, M2.0*
ISC 24 11:07:39.2±1.0, 24.55N±0.04×122.30E±0.02, h19km±2km, n41, σ0.51/57, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS1	**EOS1**	**0.15**	**271**	*i* P		**Pg**	**11 07 43.4**	**-0.1**
	baz=280							
EOS1				*i* S		**Sg**	**11 07 46.7**	**+0.2**
	baz=280							
TWC	**Suao**	**0.41**	**279**	P		**Pg**	**11 07 47.0**	**-0.8**
	baz=282							
TWC				*e*S		**Sb**	**11 07 54.5**	**+0.6**
	baz=282							
NANB	**Nanao**	**0.51**	**257**	P		**Pg**	**11 07 49.1**	**-0.5**
	baz=259							
ENA	**Nanau**	**0.52**	**257**	P		**Pg**	**11 07 49.2**	**-0.5**
	baz=259							
NTC	**Toucheng**	**0.52**	**306**	*e*P		**Pb**	**11 07 49.7**	**0.0**
	baz=308							
NTC				S		**Sb**	**11 07 57.9**	**+1.0**
	baz=308							
TWE	**Neicheng**	**0.60**	**287**	P		**Pb**	**11 07 50.7**	**-0.3**
	baz=289							
TWE				*e*S		**Sg**	**11 07 59.8**	**+0.6**
	baz=289							
JYNG	**Yonaguni jima**	**0.60**	**99**	P		**Pb**	**11 07 51.1**	**+0.1**
JYNG				S		**Sn**	**11 08 01.2**	**-0.7**
TIPB	**Shuangxi**	**0.60**	**315**	P		**Pb**	**11 07 51.2**	**+0.1**
	baz=316							
SLBB	**Yuanshan**	**0.64**	**289**	*e*P		**Pb**	**11 07 51.0**	**-0.6**
	baz=291							
YOJ	**Yonaguni jima**	**0.66**	**97**	P		**Pg**	**11 07 52.3**	**+0.1**
YOJ				S		**Sg**	**11 08 02.2**	**+1.2**
ENTT	**Nioudou**	**0.67**	**278**	P		**Pb**	**11 07 52.3**	**0.0**
	baz=280							
NDT	**Datong Townshi**	**0.72**	**275**	*i* P		**Pb**	**11 07 52.9**	**-0.2**
	baz=276							
NDT				*e*S		**Sn**	**11 08 04.0**	**-0.8**
	baz=276							
NACB	**Ninganchiao**	**0.74**	**240**	*i* P		**Pb**	**11 07 53.1**	**-0.4**
	baz=241							
NACB				*e*S		**Sb**	**11 08 03.4**	**+0.1**
	baz=241							
NWLT	**Wulai**	**0.76**	**288**	*e*P		**Pb**	**11 07 53.3**	**-0.6**
	baz=289							
TWA	**Mucha**	**0.78**	**304**	S		**Sg**	**11 08 05.6**	**+0.7**
	baz=305							
TWD	**Chiawan**	**0.79**	**234**	*e*P		**Pb**	**11 07 53.9**	**-0.5**
	baz=234							
NHDH	**Xindian Distri**	**0.81**	**301**	*e*S		**Sg**	**11 08 06.3**	**+0.3**
	baz=302							
ETLH	**Xiulin Townshi**	**0.82**	**246**	*i* P		**Pb**	**11 07 54.5**	**-0.3**
	baz=246							
ETLH				*e*S		**Sb**	**11 08 05.4**	**-0.1**
	baz=246							
NNSB	**Datong**	**0.84**	**262**	*e*P		**Pb**	**11 07 55.4**	**+0.1**
	baz=263							
NNSH	**Datong**	**0.84**	**262**	P		**Pb**	**11 07 55.2**	**-0.1**
	baz=263							
YHNB	**Yeheng**	**0.85**	**278**	*e*P		**Pg**	**11 07 55.9**	**+0.1**
	baz=280							
YHNB				*i* S		**Sg**	**11 08 07.3**	**+0.3**
	baz=280							
NNS	**Nan Shan**	**0.85**	**263**	*e*P		**Pb**	**11 07 55.4**	**-0.1**
	baz=264							
NNS				*e*S		**Sg**	**11 08 07.5**	**+0.4**
	baz=264							
NSK	**Sanguang**	**0.86**	**279**	*e*P		**Pg**	**11 07 56.1**	**0.0**
	baz=280							
NSK				S		**Sg**	**11 08 07.8**	**+0.2**
	baz=280							
YM01	**YM01**	**0.89**	**312**	*e*P		**Pn**	**11 07 57.1**	**+0.3**
	baz=313							
YM10	**YM10**	**0.90**	**312**	*e*P		**Pn**	**11 07 57.6**	**+0.6**
	baz=313							
YM05	**YM05**	**0.90**	**313**	*e*P		**Pn**	**11 07 57.6**	**+0.6**
	baz=314							
YM04	**YM04**	**0.92**	**311**	*e*P		**Pb**	**11 07 56.6**	**+0.1**
	baz=312							
WHF	**Hehuan Shan**	**1.02**	**247**	*e*P		**Pn**	**11 07 58.9**	**-0.1**
	baz=247							
PCYT	**Pengchaiyu**	**1.10**	**349**	*e*P		**Pn**	**11 07 57.9**	**-1.7**
	baz=350							
CHGB	**Renai**	**1.13**	**245**	*e*P		**Pn**	**11 08 00.1**	**-0.2**
	baz=245							
LIOB	**Emei**	**1.17**	**275**	*e*P		**Pg**	**11 08 02.4**	**+0.5**
	baz=276							
OWD	**Renai**	**1.18**	**240**	*e*P		**Pb**	**11 08 01.3**	**+0.2**
	baz=240							
NSTT	**Nanjuang**	**1.18**	**274**	*e*P		**Pg**	**11 08 02.8**	**+0.6**
	baz=275							
WHP	**Taichung City**	**1.26**	**258**	*e*P		**Pg**	**11 08 03.6**	**0.0**
	baz=258							
VWDT	**VWDT**	**1.32**	**233**	*e*P		**Pg**	**11 08 05.0**	**+0.3**
	baz=233							
IRIF	**Iriomote-Funau**	**1.32**	**99**	P		**Pn**	**11 08 02.3**	**-0.4**
IRIF				*e*S		**Sn**	**11 08 19.7**	**-0.1**
HATJ	**Hateruma jima**	**1.46**	**109**	*e*S		**Sg**	**11 08 26.2**	**-0.3**
YULB	**Yu-li**	**1.47**	**219**	*e*P		**Pn**	**11 08 05.2**	**+0.5**
	baz=218							
YULB				*e*S		**Sb**	**11 08 24.3**	**0.0**
	baz=218							
JKRS	**Kuro-shima**	**1.59**	**101**	P		**Pn**	**11 08 06.8**	**+0.4**
JKRS				S		**Sn**	**11 08 26.3**	**-0.1**
JJJ	**Ishigaki jima**	**1.69**	**96**	S		**Sn**	**11 08 27.9**	**-1.0**
JISG	**Ishigakijimahi**	**1.83**	**88**	P		**Pn**	**11 08 09.7**	**0.0**
JISG				*e*S		**Sn**	**11 08 32.0**	**-0.4**

MAN 24 11:08:30.5, 9.98N×124.06E, h33km, mb4.3, ML3.1, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.35**	**344**	⇓*e*P		Pn	11 08 40.6	+1.4
LLP				*e*S		Sn	11 08 46.9	+2.0
MSLP	**Maasin**	**0.80**	**79**	*e*P		Pn	11 08 45.5	+0.1
MSLP				*e*S		Sb	11 08 56.9	+0.4
OCLP	**Ormoc**	**1.19**	**27**	*e*P		Pb	11 08 56.1	+3.5
OCLP				*e*S		Sb	11 09 11.8	+4.1

*IDC **24** 11:15:36.2±1.1, 39.10S×174.61E, h192km±16km, mb3.0/3, mb1 3.2/4, mb1mx3.1/22, mbtmp3.6/4, Error ellipse: s-maj=23.3km s-min=20.1km az=123.0*
*WEL **24** 11:15:37.5, 39.3S×17.5E±, h219km±3km, MLv3.5/117, Error ellipse: s-maj=0.0km s-min=0.0km az=121.0*
ISC 24 11:15:34.4±1.3, 39.26S±0.05×174.68E±0.05, h233km±7km, n142, σ1.67/158, mb3.2/3, North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VRZ	**Vera Road**	**0.15**	**24**	P		**Pn**	**11 16 05.4**	**+0.8**
VRZ				S		**S**	**11 16 26.2**	**-2.1**
LREZ	**Lake Rotokare**	**0.29**	**227**	P		**Pn**	**11 16 06.4**	**+1.6**
LREZ				S		**S**	**11 16 28.1**	**-0.5**
MHEZ	**Mangahewa**	**0.33**	**303**	P		**Pn**	**11 16 06.5**	**+1.6**
MHEZ				S		**S**	**11 16 28.0**	**-0.8**
DREZ	**Durham Road**	**0.38**	**280**	P		**Pn**	**11 16 06.4**	**+1.4**
DREZ				S		**S**	**11 16 28.8**	**-0.1**
PREZ	**Palmer Road**	**0.41**	**258**	P		**Pn**	**11 16 06.7**	**+1.6**
KHEZ	**Kahui Hut**	**0.52**	**266**	P		**Pn**	**11 16 07.0**	**+1.6**
PKVZ	**Pokaka**	**0.52**	**94**	P		**Pn**	**11 16 06.8**	**+1.3**
PKVZ				S		**S**	**11 16 27.8**	**-2.0**
PKE	**Pukeiti**	**0.54**	**277**	P		**Pn**	**11 16 07.1**	**+1.6**
WAZ	**Wanganui**	**0.55**	**155**	P		**Pn**	**11 16 07.4**	**+2.0**
WAZ				S		**S**	**11 16 28.7**	**-1.3**
TWVZ	**Taurewa**	**0.62**	**73**	P		**Pn**	**11 16 07.0**	**+1.1**
TWVZ				S		**S**	**11 16 28.2**	**-2.2**
MTVZ	**Mangateitei**	**0.62**	**102**	P		**Pn**	**11 16 07.2**	**+1.4**
MTVZ				S		**S**	**11 16 28.4**	**-2.1**
NBEZ	**Newall Road No**	**0.63**	**269**	P		**Pn**	**11 16 07.4**	**+1.6**
NMEZ	**Namu Road**	**0.64**	**256**	P		**Pn**	**11 16 07.5**	**+1.8**
TRVZ	**Turoa**	**0.67**	**94**	P		**Pn**	**11 16 07.7**	**+1.4**
TRVZ				S		**S**	**11 16 28.7**	**-2.5**
FWVZ	**Far West T-bar**	**0.68**	**90**	P		**Pn**	**11 16 07.6**	**+1.3**
DRZ	**Dome Shelter**	**0.69**	**92**	P		**Pn**	**11 16 08.0**	**+1.6**
WHVZ	**Whangaehu Hut**	**0.70**	**92**	P		**Pn**	**11 16 07.9**	**+1.5**
NGZ	**Ngauruhoe**	**0.72**	**84**	P		**Pn**	**11 16 07.7**	**+1.4**
WTVZ	**West Tongariro**	**0.72**	**79**	P		**Pn**	**11 16 07.7**	**+1.4**
TUVZ	**Tukino**	**0.76**	**91**	P		**Pn**	**11 16 08.0**	**+1.5**
HIZ	**Hauiti**	**0.76**	**10**	P		**Pn**	**11 16 07.1**	**+0.7**
HIZ				S		**S**	**11 16 29.4**	**-2.0**
KRVZ	**Karewarewa**	**0.77**	**78**	P		**Pn**	**11 16 07.9**	**+1.4**
KRVZ				S		**S**	**11 16 29.4**	**-2.2**
KATZ	**Kakaramea**	**0.84**	**71**	P		**Pn**	**11 16 08.0**	**+1.1**
KATZ				S		**S**	**11 16 30.6**	**-1.7**
MOVZ	**Moawhango**	**0.84**	**100**	P		**Pn**	**11 16 08.0**	**+1.2**
MOVZ				S		**S**	**11 16 29.0**	**-3.2**
RATZ	**Rangitukua**	**0.94**	**66**	P		**Pn**	**11 16 08.5**	**+1.1**
RITZ	**Rihia Road**	**0.96**	**73**	P		**Pn**	**11 16 08.9**	**+1.4**
WATZ	**Wairara**	**0.99**	**56**	P		**Pn**	**11 16 09.0**	**+1.4**
OHWZ	**Ohakea**	**1.06**	**153**	P		**Pn**	**11 16 10.4**	**+2.5**
OHWZ				S		**S**	**11 16 33.8**	**-0.5**
BHHZ	**Black Hill Sta**	**1.10**	**103**	P		**Pn**	**11 16 09.5**	**+1.3**
BHHZ				S		**S**	**11 16 31.9**	**-2.8**
TLZ	**Tolley Road**	**1.15**	**36**	P		**Pn**	**11 16 09.5**	**+0.9**
WHTZ	**Whakaora**	**1.16**	**60**	P		**Pn**	**11 16 10.0**	**+1.3**
HATZ	**Hinemaiaia**	**1.16**	**72**	P		**Pn**	**11 16 09.6**	**+1.0**
KUTZ	**Kaahu Road**	**1.18**	**50**	P		**Pn**	**11 16 10.1**	**+1.4**
TSZ	**Takapari Road**	**1.27**	**129**	P		**Pn**	**11 16 11.5**	**+2.1**
TSZ				S		**S**	**11 16 35.2**	**-1.6**
PNHZ	**Pukenui**	**1.34**	**120**	P		**Pn**	**11 16 11.8**	**+1.9**
KWHZ	**Kaweka Forest**	**1.36**	**98**	P		**Pn**	**11 16 12.1**	**+2.0**
KWHZ				S		**S**	**11 16 36.6**	**-1.3**
KRHZ	**Kereru**	**1.36**	**107**	P		**Pn**	**11 16 11.8**	**+1.8**
WPRZ	**Whakapapatarin**	**1.37**	**58**	P		**Pn**	**11 16 11.2**	**+1.1**
POWZ	**Post Office Ro**	**1.41**	**144**	P		**Pn**	**11 16 10.9**	**+0.6**
BKZ	**Black Stump Fm**	**1.41**	**87**	P		**Pn**	**11 16 11.7**	**+1.3**
MRHZ	**Matea Rd**	**1.42**	**73**	P		**Pn**	**11 16 11.3**	**+0.8**
GRRZ	**Galatos Road**	**1.44**	**51**	P		**Pn**	**11 16 12.0**	**+1.3**
ALRZ	**Allen Road**	**1.47**	**62**	P		**Pn**	**11 16 11.8**	**+0.9**
HRRZ	**Handcock Road**	**1.52**	**56**	P		**Pn**	**11 16 12.6**	**+1.3**
PRRZ	**Plateau Road**	**1.54**	**61**	P		**Pn**	**11 16 12.3**	**+0.9**
DVHZ	**Dannevirke**	**1.55**	**133**	P		**Pn**	**11 16 13.2**	**+1.8**
HSRZ	**Hossack Road**	**1.55**	**53**	P		**Pn**	**11 16 12.7**	**+1.2**
MCHZ	**McNeill Hill**	**1.57**	**97**	P		**Pn**	**11 16 14.1**	**+2.5**
WPHZ	**Waipukurau**	**1.58**	**121**	P		**Pn**	**11 16 13.9**	**+2.2**
OGWZ	**Otaki Gorge**	**1.60**	**167**	P		**Pn**	**11 16 14.0**	**+2.1**
UTU	**Utuhina**	**1.60**	**48**	P		**Pn**	**11 16 13.4**	**+1.4**
KIW	**Kapiti Island**	**1.61**	**174**	P		**Pn**	**11 16 13.7**	**+1.8**
DUWZ	**D'Urville Isla**	**1.65**	**200**	P		**Pn**	**11 16 14.1**	**+1.9**
HLRZ	**Highlands Stat**	**1.65**	**53**	P		**Pn**	**11 16 14.6**	**+2.2**
TOZ	**Tahuroa Road**	**1.66**	**23**	P		**Pn**	**11 16 13.5**	**+1.1**
NMHZ	**Naumai**	**1.66**	**85**	P		**Pn**	**11 16 14.9**	**+2.4**
RRRZ	**Republican Roa**	**1.70**	**58**	P		**Pn**	**11 16 13.9**	**+1.0**
KMRZ	**Kaimai**	**1.72**	**35**	P		**Pn**	**11 16 14.5**	**+1.5**
MTHZ	**Maungataniwha**	**1.73**	**77**	P		**Pn**	**11 16 14.2**	**+1.2**
KARZ	**Kaharoa**	**1.74**	**45**	P		**Pn**	**11 16 14.5**	**+1.3**
OMRZ	**Omania**	**1.75**	**50**	P		**Pn**	**11 16 14.5**	**+1.2**
TARZ	**Mount Tarawera**	**1.75**	**55**	P		**Pn**	**11 16 14.6**	**+1.2**
KAHZ	**Kahuranaki**	**1.78**	**108**	P		**Pn**	**11 16 15.9**	**+2.4**
ARHZ	**Aropaoanui**	**1.80**	**91**	P		**Pn**	**11 16 15.7**	**+2.2**
MUGZ	**Murupara**	**1.81**	**65**	P		**Pn**	**11 16 14.3**	**+0.6**
PRHZ	**Porangahau**	**1.81**	**124**	P		**Pn**	**11 16 15.9**	**+2.3**
ANWZ	**Angora Road**	**1.83**	**132**	P		**Pn**	**11 16 16.1**	**+2.3**
PXZ	**Pawanui**	**1.85**	**115**	P		**Pn**	**11 16 16.2**	**+2.2**
CAW	**Cannon Point**	**1.87**	**171**	P		**Pn**	**11 16 16.1**	**+1.9**
CKHZ	**Cape Kidnapper**	**1.90**	**103**	P		**Pn**	**11 16 16.9**	**+2.5**
RAHZ	**Arahi**	**1.90**	**80**	P		**Pn**	**11 16 16.4**	**+1.8**
RTZ	**Ruatahuna**	**1.91**	**71**	P		**Pn**	**11 16 15.7**	**+1.0**
TGRZ	**Tauranga**	**1.97**	**40**	P		**Pn**	**11 16 16.6**	**+1.4**
TCW	**Tory Channel**	**1.97**	**189**	P		**Pn**	**11 16 17.3**	**+2.1**
EDRZ	**Edgecumbe**	**1.98**	**55**	P		**Pn**	**11 16 16.4**	**+1.0**
WHHZ	**Waihua**	**1.99**	**86**	P		**Pn**	**11 16 17.4**	**+2.0**
MTW	**Mount Morrison**	**2.00**	**162**	P		**Pn**	**11 16 17.0**	**+1.7**
MARZ	**Manawahe**	**2.01**	**51**	P		**Pn**	**11 16 16.8**	**+1.2**
WEL	**Wellington**	**2.02**	**178**	P		**Pn**	**11 16 17.3**	**+1.8**
OPRZ	**Ohinepanea**	**2.04**	**47**	P		**Pn**	**11 16 17.0**	**+1.2**
TMWZ	**Te Maipa**	**2.06**	**154**	P		**Pn**	**11 16 17.9**	**+1.8**
SNGZ	**Shannon Statio**	**2.13**	**78**	P		**Pn**	**11 16 18.3**	**+1.6**
URZ	**Urewera**	**2.15**	**63**	P		**Pn**	**11 16 17.4**	**+0.6**
	baz=242,slow=5.3							
URZ				S		**S**	**11 16 45.9**	**-4.1**
	13nm,0.3s,baz=277,slow=16,SNR=5.6							
URZ	**Urewera**	**2.15**	**63**	P		**Pn**	**11 16 17.4**	**+0.6**
BHW	**Baring Head**	**2.15**	**176**	P		**Pn**	**11 16 18.4**	**+1.6**
MKAZ	**Moumakai**	**2.18**	**10**	P		**Pn**	**11 16 18.9**	**+1.6**
AWAZ	**Awhitu Peninsu**	**2.19**	**359**	P		**Pn**	**11 16 19.1**	**+1.8**
NNZ	**Nelson**	**2.19**	**207**	P		**Pn**	**11 16 19.0**	**+1.8**
PAWZ	**Paruwai Farm**	**2.20**	**165**	P		**Pn**	**11 16 19.1**	**+1.8**
MSWZ	**Moikau Station**	**2.20**	**169**	P		**Pn**	**11 16 19.0**	**+1.7**
TUWZ	**Tuamarina**	**2.24**	**194**	P		**Pn**	**11 16 19.6**	**+2.0**
RAGZ	**Rawiri**	**2.27**	**71**	P		**Pn**	**11 16 19.4**	**+1.2**
TRWZ	**Traveller**	**2.27**	**161**	P		**Pn**	**11 16 19.9**	**+1.8**
QRZ	**Quartz Range**	**2.27**	**226**	P		**Pn**	**11 16 19.1**	**+1.1**
ETAZ	**East Tamaki Re**	**2.31**	**5**	P		**Pn**	**11 16 20.3**	**+1.8**
WTAZ	**Waiatarua**	**2.32**	**358**	P		**Pn**	**11 16 20.8**	**+2.1**
KNZ	**Kokohu**	**2.34**	**85**	P		**Pn**	**11 16 20.4**	**+1.7**
PLWZ	**Palliser**	**2.35**	**169**	P		**Pn**	**11 16 20.4**	**+1.6**
MWZ	**Matawai**	**2.41**	**68**	P		**Pn**	**11 16 20.5**	**+1.0**
RIGZ	**Rimuhau**	**2.46**	**78**	P		**Pn**	**11 16 21.7**	**+1.6**
WIAZ	**Waiheke Island**	**2.49**	**8**	P		**Pn**	**11 16 22.1**	**+1.8**
MBAZ	**Motutapu North**	**2.49**	**4**	P		**Pn**	**11 16 22.2**	**+1.8**
MHGZ	**Mahia Peninsul**	**2.51**	**89**	P		**Pn**	**11 16 22.6**	**+2.1**
CMWZ	**Cape Campbell**	**2.51**	**188**	P		**Pn**	**11 16 23.0**	**+2.5**
PRGZ	**Paritu Road**	**2.52**	**83**	P		**Pn**	**11 16 22.1**	**+1.7**
BSWZ	**Blackbirch Sta**	**2.53**	**194**	P		**Pn**	**11 16 22.8**	**+2.2

	11nm,0.5s							
MDOK	**Medeo**	**3.69**	**5**	Pg	**Pb**	**11 46 44.4**	**-0.6**
	1.2nm,0.3s							
MDOK				⇑Lg	Lg	11 47 34.4		
	11nm,0.6s							
DGS	**Degeres**	**3.81**	**351**	Pg	**Pb**	**11 46 48.8**	**+1.7**
DGS				Lg	Lg	11 47 39.4		

*SOME **24** 11:46:00.0, 42˚.07N× 80˚.28E, h5km*
ISC 24 11:46:00.3±3.6, **42˚.1N**±0˚.1×**80˚.3E**±0˚.1, **h10km**, **n13,**
σ1§**39**/17, **1D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KPKS	**Kokpek**	**1.83**	**319**	*eP*	**Pg**	**11 46 34.8**	**-0.6**
	baz=19						
KPKS				*eS*	**Sg**	**11 47 00.1**	**+1.0**
	baz=19						
KPKS	**Kokpek**	**1.83**	**319**	*eP*	**Pg**	**11 46 34.8**	**-0.5**
	3.1nm,0.3s						
KPKS				*eS*	**Sg**	**11 47 00.1**	**+1.0**
	15nm,0.2s						
DJR	**Jarkent**	**2.28**	**350**	*eP*	**Pg**	**11 46 43.5**	**-0.4**
	0.5nm,0.2s						
DJR				*eS*	**Sg**	**11 47 14.9**	**+1.5**
	6.0nm,0.6s						
DJR	**Jarkent**	**2.28**	**350**	Pg	**Pb**	**11 46 41.0**	**-0.5**
	0.4nm,0.1s						
ARXS	**Arharly**	**2.80**	**320**	*eP*	**Pg**	**11 46 52.8**	**-1.1**
	3.1nm,0.3s						
ARXS				*eS*	**Sg**	**11 47 30.5**	**+0.4**
	4.8nm,0.7s						
ARXS	**Arharly**	**2.80**	**320**	Pg	**Pg**	**11 46 52.2**	**-1.7**
	3.1nm,0.3s						
ARXS				Lg	Lg	11 47 30.4		
	4.8nm,0.7s						
KTBS	**Karatobe**	**3.12**	**303**	*eP*	**Pb**	**11 46 57.5**	**+1.5**
	baz=58						
KTBS				*eS*	**Sg**	**11 47 39.2**	**-1.4**
	baz=58						
KTBS	**Karatobe**	**3.12**	**303**	*eP*	**Pb**	**11 46 57.5**	**+1.5**
	1.0nm,0.3s						
KTBS				*eS*	**Sg**	**11 47 39.2**	**-1.5**
	12nm,0.3s						
KTBS	**Karatobe**	**3.12**	**303**	Lg	Lg	11 47 39.5		
	12nm,0.3s						
KAPS	**Kapalarasan**	**3.27**	**348**	*eP*	**Pg**	**11 47 00.9**	**-2.0**
	0.7nm,0.4s						
KAPS				*eS*	**Sg**	**11 47 44.6**	**-0.7**
	1.2nm,0.3s						
KAPS	**Kapalarasan**	**3.27**	**348**	Pg	**Pb**	**11 47 00.5**	**+2.0**
	0.7nm,0.4s						
SGDS	**Segindy**	**4.40**	**290**	Pg	Pn	11 46 57.0	-10
	2.1nm,0.3s						
KK31	**Karatay Array**	**7.31**	**281**	⇓Lg	Lg	11 48 45.8	
	0.4nm,0.4s,baz=128,slow=29,SNR=4.2						

*WEL **24** 11:52:20.7, 40˚S× 4˚× 17˚E, h12km, ML4.4/27,*
MLv4.1/27, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0
*NEIC **24** 11:52:24.2± 1.0, 39˚.70S± 0˚.05× 173˚.36E± 0˚.08, h47km± 53km,*
Error ellipse: s-maj=10.2km s-min=5.9km az=118.0
ISC 24 11:52:21.6±1.3, **39˚.74S**±0˚.03× **173˚.43E**±0˚.04, **h11km**±10km, **n152,** σ1§**10**/164, **Off west coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NMEZ	**Namu Road**	**0.47**	**47**	P	**Pg**	**11 52 31.7**	**+0.8**
PREZ	**Palmer Road**	**0.69**	**55**	P	**Pg**	**11 52 34.9**	**0.0**
PKE	**Pukeiti**	**0.69**	**39**	P	**Pg**	**11 52 35.8**	**+0.8**
PKE				S	**Sb**	**11 52 45.5**	**+0.1**
LREZ	**Lake Rotokare**	**0.80**	**70**	P	**Pg**	**11 52 36.7**	**-0.4**
DREZ	**Durham Road**	**0.81**	**48**	P	**Pg**	**11 52 37.2**	**0.0**
DREZ				S	**Sg**	**11 52 48.4**	**+0.6**
MHEZ	**Mangahewa**	**0.95**	**47**	P	**Pg**	**11 52 39.8**	**-0.2**
MHEZ				S	**Sb**	**11 52 53.4**	**+0.5**
DUWZ	**D'Urville Isla**	**1.13**	**161**	P	**Pg**	**11 52 41.9**	**-1.4**
VRZ	**Vera Road**	**1.20**	**60**	P	**Pb**	**11 52 42.9**	**-1.4**
VRZ				S	**Sb**	**11 52 59.6**	**-0.2**
WAZ	**Wanganui**	**1.20**	**91**	P	**Pb**	**11 52 42.6**	**-1.7**
QRZ	**Quartz Range**	**1.29**	**212**	P	**Pn**	**11 52 45.5**	**-0.1**
QRZ	**Quartz Range**	**1.29**	**212**		**Pn**	**11 52 45.8**	**+0.1**
QRZ				Sn	**Sb**	**11 53 02.1**	**-0.4**
NNZ	**Nelson**	**1.48**	**182**	P	**Pn**	**11 52 48.3**	**+0.1**
NNZ	**Nelson**	**1.48**	**182**	Pn	**Pn**	**11 52 48.3**	**+0.1**
NNZ				Sn	**Sn**	**11 53 07.3**	**-0.3**
OHWZ	**Ohakea**	**1.52**	**109**	P	**Pn**	**11 52 48.2**	**-0.5**
OHWZ				S	**Sb**	**11 53 09.4**	**+0.3**
PKVZ	**Pokaka**	**1.55**	**74**	P	**Pn**	**11 52 48.1**	**-1.1**
KIW	**Kapiti Island**	**1.59**	**135**	P	**Pn**	**11 52 49.0**	**-0.8**
TCW	**Tory Channel**	**1.61**	**157**	P	**Pn**	**11 52 49.6**	**-0.4**
MTVZ	**Mangateitei**	**1.61**	**78**	P	**Pn**	**11 52 49.5**	**-0.7**
HIZ	**Hauiti**	**1.65**	**43**	P	**Pn**	**11 52 49.9**	**-0.6**
HIZ				S	**Sn**	**11 53 11.1**	**-0.7**
HIZ	**Hauiti**	**1.65**	**43**	Pn	**Pn**	**11 52 50.0**	**-0.6**
HIZ				Sn	**Sn**	**11 53 10.8**	**-0.9**
TWVZ	**Taurewa**	**1.69**	**67**	P	**Pn**	**11 52 50.5**	**-0.7**
TRVZ	**Turoa**	**1.69**	**76**	P	**Pn**	**11 52 50.9**	**-0.5**
FWVZ	**Far West T-bar**	**1.71**	**74**	P	**Pn**	**11 52 51.1**	**-0.5**
DRZ	**Dome Shelter**	**1.71**	**75**	P	**Pn**	**11 52 51.5**	**-0.2**
OGWZ	**Otaki Gorge**	**1.71**	**135**	P	**Pn**	**11 52 51.4**	**0.0**
WHVZ	**Whangaehu Hut**	**1.73**	**75**	P	**Pn**	**11 52 51.5**	**-0.3**
TUWZ	**Tuamarina**	**1.73**	**167**	P	**Pn**	**11 52 52.1**	**+0.4**
TUWZ	**Tuamarina**	**1.73**	**167**	Pn	**Pn**	**11 52 52.1**	**+0.4**
TUWZ				Sn	**Sn**	**11 53 13.8**	**-0.1**
NGZ	**Ngauruhoe**	**1.77**	**72**	P	**Pn**	**11 52 51.9**	**-0.5**
TUVZ	**Tukino**	**1.78**	**75**	P	**Pn**	**11 52 52.3**	**-0.2**
WTVZ	**West Tongariro**	**1.78**	**70**	P	**Pn**	**11 52 52.0**	**-0.5**
MOVZ	**Moawhango**	**1.82**	**80**	P	**Pn**	**11 52 52.6**	**-0.4**
KRVZ	**Karewarewa**	**1.83**	**70**	P	**Pn**	**11 52 52.7**	**-0.5**
SNZO	**South Karori**	**1.85**	**149**	Pn	**Pn**	**11 52 53.4**	**+0.1**
SNZO				Sn	**Sn**	**11 53 16.9**	**+0.3**
CAW	**Cannon Point**	**1.85**	**138**	P	**Pn**	**11 52 53.5**	**+0.1**
MRZ	**Mangatainoka R**	**1.89**	**120**	P	**Pn**	**11 52 54.4**	**+0.6**
POWZ	**Post Office Ro**	**1.91**	**111**	P	**Pn**	**11 52 54.8**	**+0.7**
KATZ	**Kakaramea**	**1.91**	**67**	P	**Pn**	**11 52 53.9**	**-0.4**
HOWZ	**Holdsworth Sta**	**1.97**	**127**	P	**Pn**	**11 52 55.6**	**+0.7**
TSZ	**Takapari Road**	**1.97**	**100**	P	**Pn**	**11 52 55.5**	**+0.5**
BHW	**Baring Head**	**2.00**	**147**	P	**Pn**	**11 52 56.5**	**+1.2**
BHW	**Baring Head**	**2.00**	**147**	Pn	**Pn**	**11 52 56.3**	**+1.0**
BHW				Sn	**Sn**	**11 53 21.4**	**+1.1**
BSWZ	**Blackbirch Sta**	**2.00**	**170**	P	**Pn**	**11 52 56.3**	**+0.9**
BSWZ	**Blackbirch Sta**	**2.00**	**170**	Pn	**Pn**	**11 52 56.1**	**+0.7**
RATZ	**Rangitukua**	**2.01**	**65**	P	**Pn**	**11 52 55.5**	**-0.1**
RITZ	**Rihia Road**	**2.03**	**69**	P	**Pn**	**11 52 57.0**	**+1.2**
BHHZ	**Black Hill Sta**	**2.05**	**84**	P	**Pn**	**11 52 55.9**	**-0.2**
WATZ	**Wairara**	**2.06**	**61**	P	**Pn**	**11 52 56.2**	**-0.1**
THZ	**Tophouse**	**2.06**	**191**	P	**Pn**	**11 52 57.0**	**+0.7**
THZ	**Tophouse**	**2.06**	**191**	Pn	**Pn**	**11 52 57.0**	**+0.7**
CMWZ	**Cape Campbell**	**2.10**	**164**	P	**Pb**	**11 52 59.7**	**0.0**
PRWZ	**Pori Road**	**2.11**	**114**	P	**Pb**	**11 52 59.0**	**-0.9**
MTW	**Mount Morrison**	**2.12**	**133**	P	**Pn**	**11 52 58.1**	**+1.0**
PNHZ	**Pukenui**	**2.14**	**96**	P	**Pn**	**11 52 57.9**	**+0.6**
TIWZ	**Tintock**	**2.15**	**120**	P	**Pn**	**11 52 58.9**	**+1.5**
TLZ	**Tolley Road**	**2.16**	**50**	P	**Pn**	**11 52 57.2**	**-0.4**
DVHZ	**Dannevirke**	**2.17**	**106**	P	**Pn**	**11 52 59.4**	**+1.6**
MSWZ	**Moikau Station**	**2.17**	**141**	P	**Pn**	**11 52 58.7**	**+0.9**
MSWZ	**Moikau Station**	**2.17**	**141**	Pn	**Pn**	**11 52 58.4**	**+0.6**
WHTZ	**Whakaora**	**2.23**	**62**	P	**Pn**	**11 53 00.9**	**+2.2**
PAWZ	**Paruwai Farm**	**2.24**	**138**	P	**Pn**	**11 52 59.8**	**+1.1**
KUTZ	**Kaahu Road**	**2.24**	**57**	P	**Pn**	**11 52 58.8**	**+0.1**
KRHZ	**Kereru**	**2.27**	**89**	P	**Pn**	**11 53 00.1**	**+1.0**
PLWZ	**Palliser**	**2.30**	**143**	P	**Pn**	**11 53 00.4**	**+0.9**
PLWZ	**Palliser**	**2.30**	**143**	Pn	**Pn**	**11 53 00.6**	**+1.1**
TMWZ	**Te Maipa**	**2.32**	**127**	P	**Pn**	**11 53 00.8**	**+1.0**
KWHZ	**Kaweka Forest**	**2.33**	**83**	P	**Pn**	**11 53 00.3**	**+0.3**
WPHZ	**Waipukurau**	**2.34**	**99**	P	**Pb**	**11 53 02.3**	**-1.5**
BFZ	**Birch Farm**	**2.35**	**115**	P	**Pn**	**11 53 01.7**	**+1.5**
BFZ	**Birch Farm**	**2.35**	**115**	Pn	**Pn**	**11 53 01.7**	**+1.5**
DSZ	**Denniston Nort**	**2.36**	**211**	P	**Pn**	**11 53 01.1**	**+0.7**
TRWZ	**Traveller**	**2.39**	**135**	P	**Pn**	**11 53 02.8**	**+2.1**
CPWZ	**Castlepoint**	**2.42**	**120**	P	**Pb**	**11 53 04.1**	**-1.1**
BKZ	**Black Stump Fm**	**2.44**	**77**	P	**Pn**	**11 53 01.2**	**-0.3**
BKZ	**Black Stump Fm**	**2.44**	**77**	Pn	**Pn**	**11 53 01.2**	**-0.3**
WPRZ	**Whakapataratin**	**2.45**	**61**	P	**Pn**	**11 53 02.3**	**+0.8**
MRHZ	**Matea Rd**	**2.49**	**70**	P	**Pn**	**11 53 03.3**	**+1.2**
GRRZ	**Galatos Road**	**2.50**	**57**	P	**Pn**	**11 53 02.8**	**+0.5**
PRHZ	**Porangahau**	**2.52**	**103**	P	**Pn**	**11 53 04.6**	**+2.1**
MCHZ	**McNeill Hill**	**2.54**	**84**	P	**Pn**	**11 53 04.8**	**+2.0**
TOZ	**Tahuroa Road**	**2.58**	**40**	P	**Pn**	**11 53 02.9**	**-0.3**
HRRZ	**Handcock Road**	**2.60**	**60**	P	**Pn**	**11 53 04.6**	**+1.0**
HSRZ	**Hossack Road**	**2.61**	**58**	P	**Pn**	**11 53 05.1**	**+1.3**
PRRZ	**Plateau Road**	**2.61**	**63**	P	**Pn**	**11 53 07.2**	**-1.3**
KAHZ	**Kahuranaki**	**2.66**	**92**	P	**Pn**	**11 53 06.2**	**+1.8**
PXZ	**Pawanui**	**2.66**	**97**	P	**Pn**	**11 53 08.0**	**-1.2**
UTU	**Utuhina**	**2.66**	**55**	P	**Pn**	**11 53 06.5**	**+2.0**
KHZ	**Kahutara**	**2.68**	**178**	P	**Pn**	**11 53 06.2**	**+1.5**
KHZ	**Kahutara**	**2.68**	**178**		**Pn**	**11 53 05.8**	**+1.1**
NMHZ	**Naumai**	**2.69**	**77**	P	**Pn**	**11 53 06.1**	**+1.2**
HLRZ	**Highlands Stat**	**2.72**	**58**	P	**Pb**	**11 53 09.3**	**-0.9**
KMRZ	**Kaimai**	**2.72**	**47**	P	**Pn**	**11 53 05.2**	**-0.1**
RRRZ	**Republican Roa**	**2.78**	**61**	P	**Pn**	**11 53 09.9**	**-1.4**
KARZ	**Kaharoa**	**2.79**	**53**	P	**Pn**	**11 53 08.8**	**+2.6**
MTHZ	**Maungataniwha**	**2.79**	**73**	P	**Pn**	**11 53 07.0**	**+0.7**
ARHZ	**Aropaoanui**	**2.80**	**81**	P	**Pn**	**11 53 08.8**	**+2.5**
OMRZ	**Omania**	**2.81**	**56**	P	**Pb**	**11 53 11.5**	**+0.4**
CKHZ	**Cape Kidnapper**	**2.81**	**90**	P	**Pb**	**11 53 11.4**	**-0.5**
TARZ	**Mount Tarawera**	**2.83**	**59**	P	**Pb**	**11 53 12.4**	**+0.3**
AWAZ	**Awhitu Peninsu**	**2.83**	**20**	P	**Pn**	**11 53 07.3**	**+0.5**
MUGZ	**Murupara**	**2.89**	**65**	P	**Pn**	**11 53 08.8**	**+1.2**
WTAZ	**Waiatarua**	**2.94**	**18**	P	**Pn**	**11 53 09.9**	**+1.6**
RAHZ	**Arahi**	**2.95**	**75**	P	**Pn**	**11 53 10.1**	**+1.6**
MKAZ	**Moumakai**	**2.96**	**28**	P	**Pn**	**11 53 09.0**	**+0.4**
RTZ	**Ruatahuna**	**2.98**	**69**	P	**Pn**	**11 53 09.5**	**+0.6**
TGRZ	**Tauranga**	**2.99**	**49**	P	**Pn**	**11 53 08.5**	**-0.4**
ETAZ	**East Tamaki Re**	**3.02**	**23**	P	**Pn**	**11 53 10.2**	**+0.8**
WHHZ	**Waihua**	**3.02**	**79**	P	**Pn**	**11 53 12.7**	**+3.3**
OPRZ	**Ohinepanea**	**3.09**	**53**	P	**Pn**	**11 53 09.3**	**-1.0**
LTZ	**Lake Taylor**	**3.17**	**196**	P	**Pn**	**11 53 12.8**	**+1.3**
LTZ	**Lake Taylor**	**3.17**	**196**		**Pn**	**11 53 12.6**	**+1.1**
MBAZ	**Motutapu North**	**3.18**	**22**	P	**Pn**	**11 53 12.3**	**+0.7**
SNGZ	**Shannon Statio**	**3.18**	**74**	P	**Pn**	**11 53 13.1**	**+1.4**
URZ	**Urewera**	**3.22**	**64**	P	**Pn**	**11 53 13.3**	**+1.1**
URZ	**Urewera**	**3.22**	**64**		**Pn**	**11 53 13.1**	**+0.9**
WIAZ	**Waiheke Island**	**3.23**	**25**	P	**Pn**	**11 53 13.2**	**+0.9**
GVZ	**Greta Valley S**	**3.24**	**185**	P	**Pn**	**11 53 13.7**	**+1.2**
ABAZ	**Army Bay**	**3.32**	**20**	P	**Pn**	**11 53 14.3**	**+0.8**
RAGZ	**Rawiri**	**3.34**	**69**	P	**Pn**	**11 53 16.4**	**+2.5**
INZ	**Inchbonnie**	**3.34**	**206**	P	**Pn**	**11 53 14.5**	**+0.7**
KNZ	**Kokohu**	**3.36**	**79**	P	**Pn**	**11 53 15.4**	**+1.3**
MWZ	**Matawai**	**3.48**	**68**	P	**Pn**	**11 53 16.0**	**+0.2**
AMCZ	**Amberley**	**3.49**	**189**	P	**Pn**	**11 53 17.3**	**+1.5**
KUZ	**Kuaotunu**	**3.49**	**32**	P	**Pn**	**11 53 15.6**	**-0.2**
RIGZ	**Rimuhau**	**3.52**	**74**	P	**Pn**	**11 53 17.4**	**+1.1**
PRGZ	**Paritu Road**	**3.55**	**78**	P	**Pn**	**11 53 16.7**	**0.0**
TKGZ	**Te Karaka**	**3.67**	**71**	P	**Pn**	**11 53 19.8**	**+1.4**
OXZ	**Oxford**	**3.73**	**196**	P	**Pn**	**11 53 19.9**	**+0.6**
OXZ	**Oxford**	**3.73**	**196**	Pn	**Pn**	**11 53 20.0**	**+0.8**
RUGZ	**Raukumara Rang**	**3.76**	**63**	P	**Pn**	**11 53 20.2**	**+0.6**
WCZ	**Waipu Caves**	**3.86**	**11**	P	**Pn**	**11 53 21.5**	**+0.6**
WVZ	**Waitaha Valley**	**3.90**	**210**	P	**Pn**	**11 53 22.7**	**+1.2**
CNGZ	**Carnagh Statio**	**3.92**	**73**	P	**Pn**	**11 53 26.1**	**+4.4**
HAZ	**Te Kaha**	**3.94**	**61**	P	**Pn**	**11 53 22.2**	**+0.3**
OKCZ	**Okains Bay**	**3.99**	**184**	P	**Pn**	**11 53 23.1**	**+0.3**
MQZ	**McQueen's Vall**	**4.01**	**188**	P	**Pn**	**11 53 22.1**	**-0.9**
MQZ	**McQueen's Vall**	**4.01**	**188**	Pn	**Pn**	**11 53 22.1**	**-0.9**
PUZ	**Puketiti**	**4.12**	**68**	P	**Pn**	**11 53 24.7**	**+0.3**
AKCZ	**Akaroa Harbour**	**4.15**	**185**	P	**Pn**	**11 53 25.3**	**+0.4**
WMGZ	**Waiomatatini S**	**4.34**	**65**	P	**Pn**	**11 53 28.4**	**+0.9**
RPZ	**Rata Peaks**	**4.35**	**203**	P	**Pn**	**11 53 28.6**	**+0.8**
RPZ	**Rata Peaks**	**4.35**	**203**	Pn	**Pn**	**11 53 28.1**	**+0.3**
MXZ	**Matakaoa Point**	**4.39**	**62**	Pn	**Pn**	**11 53 29.1**	**+0.9**
OUZ	**Omahuta**	**4.51**	**2**	P	**Pn**	**11 53 30.9**	**+1.0**
OUZ	**Omahuta**	**4.51**	**2**	Pn	**Pn**	**11 53 30.5**	**+0.6**
FOZ	**Fox Glacier**	**4.66**	**214**	P	**Pn**	**11 53 32.2**	**+0.3**
FOZ	**Fox Glacier**	**4.66**	**214**	Pn	**Pn**	**11 53 31.9**	**0.0**
JCZ	**Jackson Bay**	**5.55**	**217**	P	**Pn**	**11 53 45.0**	**+0.8**
ODZ	**Otahua Downs**	**5.69**	**200**	P	**Pn**	**11 53 45.9**	**-0.3**
ODZ	**Otahua Downs**	**5.69**	**200**	Pn	**Pn**	**11 53 45.8**	**-0.3**
MSZ	**Milford Sound**	**6.41**	**218**	P	**Pn**	**11 53 58.5**	**+2.6**
MLZ	**Mavora Lakes**	**6.86**	**213**	P	**Pn**	**11 54 05.4**	**+3.3**

*IDC **24** 12:07:02.4± 0.9, 61˚.61N× 151˚.82W, h0km, mb3.6/9,*
mb1 3.9/12, mb1mx3.7/44, mbtmp3.7/12, ML3.2/3, MS3.7/2,
Ms1 3.7/2, ms1mx2.9/41, Error ellipse: s-maj=18.7km
s-min=14.0km az=97.0
*NEIC **24** 12:07:03.8± 1.5, 61˚.65N± 0˚.02× 151˚.26W± 0˚.03, h3km± 5km,*
Error ellipse: s-maj=3.1km s-min=1.9km az=147.0
*AEIC **24** 12:07:04.7± 1.6, 61˚.66N± 0˚.04× 151˚.27W± 0˚.02, h5km± 4km,*
ML3.6/75, mb3.9/5(NEIC), Error ellipse: s-maj=5.1km
s-min=1.2km az=185.0
ISC 24 12:07:04.0±1.1, **61˚.66N**±0˚.02× **151˚.26W**±0˚.03, **h5km**±7km, **n101,** σ0§**94**/113, **mb3.8**/10, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUA	**Susitna One**	**0.32**	**129**		**Pg**	**12 07 10.2**	**0.0**
SUA				Sg	**Sg**	**12 07 14.5**	**+0.1**
SKT	**Skwentna**	**0.34**	**338**		**Pg**	**12 07 10.7**	**0.0**
SKT				Sg	**Sg**	**12 07 15.6**	**+0.4**
CKL	**Chakachamna La**	**0.70**	**228**		**Pg**	**12 07 16.5**	**-0.8**
FIS	**Fire Island**	**0.72**	**136**		**Pb**	**12 07 18.5**	**-0.5**
CAPN	**Captain Cook N**	**0.90**	**077**		**Pb**	**12 07 22.1**	**+0.1**
RC01	**Rabbit Creek A**	**0.93**	**127**		**Pg**	**12 07 21.5**	**-0.3**
RC01				Sg	**Sg**	**12 07 33.9**	**-0.1**
PMR	**Palmer**	**1.02**	**93**		**Pg**	**12 07 22.4**	**-1.2**
PMR				Sg	**Sg**	**12 07 36.1**	**-0.7**
GHO	**Glory Hole Cre**	**1.12**	**83**		**Pg**	**12 07 24.2**	**-1.2**
GHO				Sg	**Sb**	**12 07 40.4**	**-0.4**
SLKM	**Skilak Lake**	**1.26**	**156**		**Pg**	**12 07 26.0**	**-2.2**
PPLA	**Purkeypile**	**1.31**	**341**		**Pg**	**12 07 28.3**	**-0.8**
KNK	**Knik Glacier**	**1.36**	**99**		**Pn**	**12 07 29.0**	**-0.8**
KNK					**Sg**	**12 07 47.4**	**-0.4**
SML	**Sawmill**	**1.40**	**83**		**Pn**	**12 07 29.1**	**-1.2**
SML				Sn	**Sg**	**12 07 48.5**	**-0.5**
RSO	**Redoubt South**	**1.41**	**212**		**Pn**	**12 07 28.6**	**-1.8**
HUR	**Hurricane**	**1.52**	**29**		**Pn**	**12 07 31.1**	**-0.8**
PWL	**Port Wells**	**1.63**	**118**		**Pn**	**12 07 32.7**	**-0.7**
WAT1	**Susitna Watana**	**1.73**	**46**		**Pn**	**12 07 33.7**	**-1.1**
SEW	**Seward**	**1.79**	**150**		**Pn**	**12 07 34.7**	**-0.9**
CAST	**Castle Rocks**	**1.81**	**348**		**Pn**	**12 07 35.9**	**0.0**
WAT2	**Susitna Watana**	**1.81**	**43**		**Pn**	**12 07 35.3**	**-0.7**
ILW	**Iliamna West**	**1.85**	**211**		**Pn**	**12 07 36.1**	**-0.5**
ILW					**Sn**	**12 07 59.4**	**-1.1**
TRF	**Thorofare Moun**	**1.85**	**14**		**Pn**	**12 07 36.4**	**-0.2**
IVE	**Iliamna Volcan**	**1.86**	**208**		**Pn**	**12 07 36.0**	**-0.6**
SCM	**Sheep Creek Mo**	**1.88**	**83**		**Pn**	**12 07 37.7**	**+0.8**
WAT6	**Susitna Watana**	**1.90**	**59**		**Pn**	**12 07 36.6**	**-0.6**
KTH	**Kantishna Hill**	**1.91**	**5**		**Pn**	**12 07 37.6**	**+0.4**
BRLK	**Bradley Lake**	**1.91**	**174**		**Pn**	**12 07 37.0**	**-0.3**
ILS	**Iliamna Low So**	**1.93**	**208**		**Pn**	**12 07 37.1**	**-0.5**
BRSE	**Bradley Lake S**	**1.94**	**172**		**Pn**	**12 07 36.8**	**-0.9**
BRSE					**Sn**	**12 08 01.8**	**-0.7**
HOM	**Homer**	**2.02**	**186**		**Pn**	**12 07 38.9**	**+0.2**
RND	**Reindeer**	**2.08**	**31**		**Pn**	**12 07 39.8**	**+0.2**
CNPM	**China Poot**	**2.14**	**180**		**Pn**	**12 07 39.8**	**-0.7**
SVW2	**Sparrevohn**	**2.15**	**257**		**Pn**	**12 07 39.6**	**-1.0**
GLI	**Glacier Island**	**2.16**	**109**		**Pn**	**12 07 41.1**	**+0.4**
JPK	**Jack Peak**	**2.33**	**103**		**Pn**	**12 07 43.4**	**+0.3**
MCK	**McKinley**	**2.34**	**26**		**Pn**	**12 07 43.8**	**+0.6**
BPAW	**Bear Paw Mtn.**	**2.45**	**3**		**Pn**	**12 07 44.2**	**-0.5**
FID	**Port Fidalgo**	**2.49**	**109**		**Pn**	**12 07 45.1**	**-0.1**
AUP	**Augustine Pinn**	**2.54**	**206**		**Pn**	**12 07 46.2**	**+0.2**
TT01	**Tatalina**	**2.55**	**301**		**Pn**	**12 07 45.5**	**-0.5**
TTA	**Tatalina**	**2.56**	**302**		**Pn**	**12 07 45.9**	**-0.4**
BWN	**Browne**	**2.65**	**17**		**Pn**	**12 07 47.9**	**+0.4**
EYAK	**Cordova Ski Ar**	**2.90**	**110**		**Pn**	**12 07 51.1**	**+0.3**
WRH	**Wood River Hil**	**3.17**	**26**		**Pn**	**12 07 54.1**	**-0.4**
GOAT	**Goat Mountain**	**3.35**	**106**		**Pn**	**12 07 57.1**	**0.0**
CCB	**Clear Creek Bu**	**3.38**	**26**		**Pn**	**12 07 57.0**	**-0.5**
MLY	**Manley**	**3.39**	**4**		**Pn**	**12 07 57.1**	**-0.5**
TCOL	**CIGO, UAF Yank**	**3.57**	**24**		**Pn**	**12 07 59.9**	**-0.1**
GLB	**Gilahina Butte**	**3.57**	**90**		**Pn**	**12 08 01.2**	**+1.0**
COLA	**College**	**3.57**	**24**		**Pn**	**12 07 59.6**	**-0.4**
MDM	**Murphy Dome**	**3.58**	**21**		**Pn**	**12 08 00.3**	**0.0**
IL31		**3.70**	**30**		**Pn**	**12 08 01.3**	**-0.4**
ILAR	**Eielson Array**	**3.70**	**30**	Pn	**Pn**	**12 08 01.4**	**-0.4**
	7.8nm,0.3s,baz=218,slow=14,SNR=196						
ILAR				Sn	**Sn**	**12 08 43.5**	**-2.2**
	5.1nm,0.3s,baz=234,slow=16,SNR=5.1						
MENT	**Mentasta**	**3.75**	**67**		**Pn**	**12 08 03.9**	**+1.4**
POKR	**Poker Plat Res**	**3.87**	**25**		**Pn**	**12 08 04.1**	**-0.2**
DOT	**Dot Lake**	**3.87**	**56**		**Pn**	**12 08 06.0**	**+1.7**
PS07	**TAPS Pump Stn7**	**3.90**	**19**		**Pn**	**12 08 04.4**	**-0.2**
KELA	**Mount Kelaz**	**3.94**	**217**		**Pn**	**12 08 07.2**	**+2.1**
KDAK	**Kodiak Island**	**3.95**	**190**	Pn	**Pn**	**12 08 05.1**	**-0.1**
KDAK	3.4nm,0.3s,baz=51,slow=14,SNR=98			Sn	**Sn**	**12 08 52.1**	**+0.2**
	4.3nm,0.3s,baz=43,slow=19,SNR=3.0						
KDAK				LR	LR	12 09 50.4	
	comp=Z,234nm,18.3s,baz=63,slow=44						
KDAK	**Kodiak Island**	**3.95**	**190**		**Pn**	**12 08 05.4**	**+0.2**
MCARA	**McCarthy VSAT**	**3.96**	**90**		**Pn**	**12 08 07.3**	**+1.9**
SCRK	**Sand Creek**	**4.07**	**52**		**Pn**	**12 08 08.8**	**+1.8**
PS06	**TAPS Pump Stn6**	**4.26**	**8**		**Pn**	**12 08 09.4**	**-0.1**
BALM	**Baldy**	**4.34**	**94**		**Pn**	**12 08 11.6**	**+0.9**
KIAG	**Kiagna River**	**4.36**	**96**		**Pn**	**12 08 11.3**	**+0.3**
IM03		**4.48**	**347**		**Pn**	**12 08 12.3**	**-0.1**
IMAR	**Indian Mountai**	**4.48**	**347**		**Pn**	**12 08 12.2**	**-0.2**
OHAK	**Old Harbor**	**4.57**	**194**		**Pn**	**12 08 13.7**	**-0.1**
BCAR	**Beaver Creek A**	**4.63**	**68**		**Pn**	**12 08 15.8**	**+1.1**
PRP	**Porcupine Dome**	**4.64**	**31**		**Pn**	**12 08 15.1**	**+0.2**
YUK2	**White River**	**4.96**	**84**		**Pn**	**12 08 20.4**	**+1.2**
SII	**Sitkinak Islan**	**5.33**	**198**	Pn	**Pn**	**12 08 25.2**	**+0.9**
EGAK	**Eagle**	**5.53**	**51**		**Pn**	**12 08 28.9**	**+1.9**
BMAR	**Burnt Mountain**	**6.46**	**24**		**Pn**	**12 08 39.8**	**+0.1**
ANM	**Nome**	**7.03**	**301**		**Pn**	**12 08 48.0**	**+0.5**
GAMB	**Gambell**	**9.61**	**292**	Pn	**Pn**	**12 09 21.9**	**-0.9**
INK	**Inuvik**	**10.01**	**41**	Pn	**Pn**	**12 09 29.6**	**+1.3**
	0.1nm,0.3s,baz=224,slow=16,SNR=16						
INK				Sn	**Sn**	**12 11 19.7**	**-1.0**
	0.0nm,0.3s,baz=

	baz=85							
EIL				S		Sb	12 31 02.3	+2.4
	baz=85							
HBST	**Basata**	**0.46**	**161**	P		Pn	12 30 57.5	-1.4
	baz=154							
HBST				AMP			12 31 00.0	
	baz=154							
HRFI	**Mount Harif**	**0.56**	**47**	P		Pn	12 30 59.5	-0.9
HDHB	**Dhahab**	**0.93**	**177**	P		Pn	12 31 05.1	-0.2
	baz=173							
HSNJ	**Maan**	**1.15**	**58**	P		Pn	12 31 10.4	+1.9
HKAT	**Jabal Katrina**	**1.23**	**204**	P		Pb	12 31 09.6	-0.1
	baz=202							
HKAT				S		Sg	12 31 25.3	-0.2
	baz=202							
KZIT	**Kziot**	**1.26**	**353**	P		Pn	12 31 10.4	+0.4
RSH		**1.50**	**331**	P		Pn	12 31 12.8	-0.4
	baz=334							
ZNM	**Zenema**	**1.50**	**260**	P		Pn	12 31 12.9	-0.4
	baz=260							
ZNM				AMP			12 31 00.0	
	baz=260							
SUZ	**Suez**	**1.52**	**278**	P		Pn	12 31 13.0	-0.6
	baz=279							
LISJ	**El Lisan**	**1.77**	**26**	P		Pg	12 31 20.5	+0.6
ZAF	**Zafarana**	**1.80**	**259**	P		Pn	12 31 16.8	-0.5
	baz=259							
GHAJ	**Ghor Haditha**	**1.86**	**27**	P		Pg	12 31 21.9	+0.2
AMAZ	**Amatzia**	**1.90**	**9**	P		Pb	12 31 21.5	+0.5
HHRG	**Al Ghardaqah**	**2.58**	**200**	P		Pn	12 31 29.9	+1.9
	baz=198							
HSUJ	**Al Zarqa**	**2.82**	**29**	P		Pb	12 31 36.4	-0.3
NBNS	**Bani Suef**	**3.04**	**251**	P		Pn	12 31 34.7	+0.2
	baz=251							
ASF	**Jabal al Asfar**	**3.22**	**38**	P		Pg	12 31 45.8	-1.8
KSDI	**Kefar Szold**	**3.65**	**15**	P		Pg	12 31 54.1	-1.9

*KRSC **24** 12:33:02.5±1.0,54°.61N×163°.02E,h51km±24km,ML4.6*
*MOS **24** 12:33:05.6±1.0,54°.68N×162°.78E,h62km,mb4.3/10,Error ellipse: s-maj=6.8km s-min=4.6km az=80.1*
*NEIC **24** 12:33:06.1±1.4,54°.8N±0°.1×162°.8E±0°.1,h35km±2km, mb4.4/18,Error ellipse: s-maj=21.6km s-min=10.7km az=162.0*
*IDC **24** 12:33:08.3±2.4,54°.77N×162°.56E,h54km±22km,mb3.6/16, mb1 3.8/20,mb1mx3.6/47,mbtmp3.9/20,ML3.6/4,MS3.4/6, Ms1 3.4/6,ms1mx3.1/38,Error ellipse: s-maj=20.5km s-min=12.6km az=139.0*

ISC 24 12:33:03.7±1.0,54°.64N±0°.03×162°.93E±0°.04,h22km±9km, n154,σ1$41/191,mb4.2/26,MS3.4/6,2C-2D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.70**	**263**	PN		Pn	12 33 16.4	-1.8
MKZ	**Mys Kozlova**	**0.70**	**263**	*eP*		Pn	12 33 16.4	-1.8
TUMD	**Tumrok D**	**1.56**	**292**	*eP*		Pn	12 33 29.6	-0.5
KBTR	**Krutoberegovo**	**1.57**	**358**	PN		Pn	12 33 29.7	-0.5
KBTR	**Krutoberegovo**	**1.57**	**358**	*eP*		Pn	12 33 29.7	-0.5
KZV	**Kizimen**	**1.59**	**288**	PN		Pn	12 33 30.5	-0.2
KZV				S		Sn	12 33 51.0	+0.3
KZV	**Kizimen**	**1.59**	**288**	*eP*		Pn	12 33 30.5	-0.2
KZV				*eS*		Sn	12 33 51.0	+0.3
TUMR	**Tumrok**	**1.73**	**293**	PN		Pn	12 33 32.9	+0.4
TUMR	**Tumrok**	**1.73**	**293**	*eP*		Pn	12 33 32.9	+0.4
BZGR	**Bezymyannyi-Gr**	**1.82**	**316**	PN		Pn	12 33 34.7	+0.9
BZGR				S		Sn	12 33 58.3	+2.1
BZGR	**Bezymyannyi-Gr**	**1.82**	**316**	*eP*		Pn	12 33 34.7	+0.9
BZGR				*eS*		Sn	12 33 58.3	+2.1
ZLN	**Zelenaya**	**1.84**	**319**	PN		Pn	12 33 35.2	+1.2
ZLN	**Zelenaya**	**1.84**	**319**	*eP*		Pn	12 33 35.2	+1.2
BKI	**Bering**	**1.84**	**71**	PN		Pn	12 33 33.8	-0.1
BKI				S		Sn	12 33 56.4	-0.1
BKI	**Bering**	**1.84**	**71**	*eP*		Pn	12 33 33.8	-0.1
BKI				*eS*		Sn	12 33 56.4	-0.1
BZMR	**Bezymyannaya**	**1.90**	**314**	PN		Pn	12 33 36.0	+1.1
BZMR	**Bezymyannaya**	**1.90**	**314**	*eP*		Pn	12 33 36.0	+1.1
KMNR	**Kamenistaya**	**1.91**	**307**	PN		Pn	12 33 35.7	+0.8
KMNR				S		Sn	12 34 00.0	+1.8
KMNR	**Kamenistaya**	**1.91**	**307**	*eP*		Pn	12 33 35.7	+0.8
KMNR				*eS*		Sn	12 34 00.0	+1.8
LGNR	**Loginova**	**1.93**	**319**	PN		Pn	12 33 36.9	+1.5
LGNR				S		Sb	12 34 01.9	-0.1
LGNR	**Loginova**	**1.93**	**319**	*eP*		Pn	12 33 36.9	+1.5
LGNR				*eS*		Sb	12 34 01.9	-0.1
CIRR	**Tsirk**	**1.93**	**321**	PN		Pn	12 33 36.5	+1.2
CIRR	**Tsirk**	**1.93**	**321**	*eP*		Pn	12 33 36.5	+1.2
KIRR	**Kirishev**	**1.98**	**313**	PN		Pn	12 33 37.1	+1.1
KIRR	**Kirishev**	**1.98**	**313**	*eP*		Pn	12 33 37.1	+1.1
KPT	**Kopyto**	**2.04**	**312**	PN		Pn	12 33 37.9	+1.2
KPT	**Kopyto**	**2.04**	**312**	*eP*		Pn	12 33 37.9	+1.2
KRSR	**Krestovskiy**	**2.08**	**320**	PN		Pn	12 33 37.8	+0.6
KRSR	**Krestovskiy**	**2.08**	**320**	*eP*		Pn	12 33 37.8	+0.6
KLY	**Klyuchi**	**2.12**	**323**	PN		Pn	12 33 37.4	-0.3
KLY				S		Sn	12 34 02.9	-0.4
KLY	**Klyuchi**	**2.12**	**323**	*eP*		Pn	12 33 37.4	-0.3
KLY				*eS*		Sn	12 34 02.9	-0.4
BDR	**Baidarnaya**	**2.16**	**334**	PN		Pn	12 33 39.4	+1.0
BDR	**Baidarnaya**	**2.16**	**334**	*eP*		Pn	12 33 39.4	+1.0
KOZ	**Kozyrevsk**	**2.25**	**310**	PN		Pn	12 33 40.9	+1.4
KOZ	**Kozyrevsk**	**2.25**	**310**	*eP*		Pn	12 33 40.9	+1.4
SRKR	**Sorokina**	**2.25**	**334**	PN		Pn	12 33 40.3	+0.7
SRKR	**Sorokina**	**2.25**	**334**	*eP*		Pn	12 33 40.3	+0.7
SPN	**Mys Shipunski**	**2.31**	**229**	PN		Pn	12 33 39.9	-0.5
SPN				S		Sn	12 34 07.3	-0.8
SPN	**Mys Shipunski**	**2.31**	**229**	*eP*		Pn	12 33 39.9	-0.5
SPN				*eS*		Sn	12 34 07.3	-0.8
NLC	**Nalytchevo**	**2.58**	**237**	PN		Pn	12 33 44.3	+0.2
NLC				S		Sn	12 34 14.7	0.0
NLC	**Nalytchevo**	**2.58**	**237**	*eP*		Pn	12 33 44.3	+0.2
NLC				*eS*		Sn	12 34 14.7	0.0
ESO	**Esso**	**2.74**	**300**	PN		Pn	12 33 47.0	+0.7
ESO	**Esso**	**2.74**	**300**	*eP*		Pn	12 33 47.0	+0.7
SDLR	**Sedlovina**	**2.75**	**242**	PN		Pn	12 33 47.7	+1.1
SDLR				S		Sn	12 34 20.8	+1.6
SDLR	**Sedlovina**	**2.75**	**242**	*eP*		Pn	12 33 47.7	+1.1
SDLR				*eS*		Sn	12 34 20.8	+1.6
SMAR	**Somma**	**2.80**	**242**	PN		Pn	12 33 48.7	+1.4
SMAR				S		Sn	12 34 22.2	+1.7
SMAR	**Somma**	**2.80**	**242**	*eP*		Pn	12 33 48.7	+1.4
SMAR				*eS*		Sn	12 34 22.2	+1.7
KRER	**Koryakskii**	**2.81**	**243**	PN		Pn	12 33 48.9	+1.5
KRER				S		Sn	12 34 22.6	+1.9
KRER	**Koryakskii**	**2.81**	**243**	*eP*		Pn	12 33 48.9	+1.5
KRER				*eS*		Sn	12 34 22.6	+1.9
UGLR	**Uglovaya**	**2.82**	**241**	PN		Pn	12 33 48.8	+1.3
UGLR				S		Sn	12 34 23.0	+2.2
UGLR	**Uglovaya**	**2.82**	**241**	*eP*		Pn	12 33 48.8	+1.3
UGLR				*eS*		Sn	12 34 23.0	+2.2
AVH	**Avacha**	**2.83**	**243**	PN		Pn	12 33 49.2	+1.6
AVH				S		Sn	12 34 23.7	+2.6
AVH	**Avacha**	**2.83**	**243**	*eP*		Pn	12 33 49.2	+1.6
AVH				*eS*		Sn	12 34 23.7	+2.6
KRX	**Arik**	**2.83**	**245**	PN		Pn	12 33 49.0	+1.3
KRX				S		Sn	12 34 23.3	+2.1
KRX	**Arik**	**2.83**	**245**	*eP*		Pn	12 33 49.0	+1.3
KRX				*eS*		Sn	12 34 23.3	+2.1
KOK	**Koryaka**	**2.87**	**244**	PN		Pn	12 33 49.5	+1.3
KOK				S		Sn	12 34 23.9	+1.8
KOK	**Koryaka**	**2.87**	**244**	*eP*		Pn	12 33 49.5	+1.3
KOK				*eS*		Sn	12 34 23.9	+1.8
PET	**Petropavlovsk**	**3.01**	**239**	*ePN*		Pn	12 33 51.2	+1.3
PET				*eS*		Sn	12 34 25.7	+0.5
PET				pmax		pmax		
	comp=Z,132nm,0.5s							
PET				smax		smax		
	comp=E,510nm,0.5s							
PET				smax		smax		
	comp=N,690nm,0.6s							
PET				MLR		MLR		
	comp=Z,400nm,16.0s							
PET	**Petropavlovsk**	**3.01**	**239**	*eP*		Pn	12 33 51.0	+1.0
PET				*eS*		Sn	12 34 25.8	+0.5
PET	**Petropavlovsk**	**3.01**	**239**			Pn	12 33 50.9	+1.0
PET				Sn		Sn	12 34 26.1	+0.8
KRMR	**Karymshinskiy**	**3.38**	**239**	PN		Pn	12 33 56.0	+1.0
KRMR				S		Sn	12 34 35.0	+0.6
KRMR	**Karymshinskiy**	**3.38**	**239**	*eP*		Pn	12 33 56.0	+1.0
KRMR				*eS*		Sn	12 34 35.0	+0.6
RUS	**Russkaya**	**3.44**	**232**	PN		Pn	12 33 57.5	+1.6
RUS	**Russkaya**	**3.44**	**232**	*eP*		Pn	12 33 57.5	+1.6
PEA0B	**Petropavlovsk-**	**3.46**	**246**	PN		Pn	12 33 57.7	+1.6
PEA0B							12 34 36.4	
PEA0B	**Petropavlovsk-**	**3.46**	**246**			Pn	12 33 57.7	+1.6
PEA0B				Sn		Sn	12 34 36.4	0.0
PETK	**Petropavlovsk-**	**3.46**	**246**	P		Pn	12 33 57.8	+1.7
	comp=Z,21nm,0.3s,baz=77,slow=19,SNR=265							
PETK				S		Sn	12 34 36.7	+0.4
	comp=Z,8.2nm,0.3s,baz=71,slow=14,SNR=5.7							
PETK	**Petropavlovsk-**	**3.46**	**246**			Pn	12 33 57.4	+1.2
MTVR	**Mutnovka**	**3.56**	**235**	PN		Pn	12 33 59.1	+1.4
MTVR	**Mutnovka**	**3.56**	**235**	*eP*		Pn	12 33 59.1	+1.4
GRL	**Gorelyy**	**3.57**	**236**	PN		Pn	12 33 59.6	+1.8
GRL	**Gorelyy**	**3.57**	**236**	*eP*		Pn	12 33 59.6	+1.8
ASAK	**Asacha**	**3.76**	**235**	PN		Pn	12 34 02.5	+2.1
ASAK	**Asacha**	**3.76**	**235**	*eP*		Pn	12 34 02.5	+2.1
APC	**Apacha**	**3.83**	**246**	PN		Pn	12 34 03.3	+2.1
APC				S		Sn	12 34 47.7	+2.2
APC	**Apacha**	**3.83**	**246**	*eP*		Pn	12 34 03.3	+2.1
APC				*eS*		Sn	12 34 47.7	+2.2
KDTR	**Khodutka, Kamc**	**4.07**	**228**	PN		Pn	12 34 04.9	+0.4
KDTR				S		Sn	12 34 50.0	-1.4
KDTR	**Khodutka, Kamc**	**4.07**	**228**	*eP*		Pn	12 34 04.9	+0.4
KDTR				*eS*		Sn	12 34 50.0	-1.4
OSSR	**Ossora**	**4.62**	**1**	PN		Pn	12 34 12.1	+0.1
OSSR	**Ossora**	**4.62**	**1**	*eP*		Pn	12 34 12.1	+0.1
PAU	**Pauzhetka**	**4.87**	**232**	PN		Pn	12 34 19.6	+4.1
PAU	**Pauzhetka**	**4.87**	**232**	*eP*		Pn	12 34 19.6	+4.1
SKR	**Severo-Kuril's**	**5.74**	**229**	*ePN*		Pn	12 34 30.1	+2.7
SKR				*eS*		Sn	12 35 32.1	-0.3
SKR				pmax		pmax		
	comp=E,15nm,0.9s							
SKR				smax		smax		
	comp=N,30nm,0.8s							
SKR				smax		smax		
	comp=E,37nm,0.9s							
SKR	**Severo-Kuril's**	**5.74**	**229**	*eP*		Pn	12 34 30.0	+2.7
SMY	**Shemya**	**6.91**	**102**	PN		Pn	12 34 46.1	+2.6
SMY	**Shemya**	**6.91**	**102**	Pn		Pn	12 34 46.1	+2.6
MA2	**Magadan**	**8.26**	**312**	P		Pn	12 35 02.9	+0.9
	comp=E,0.2nm,0.3s,baz=336,slow=19,SNR=2.2							
BILL	**Bilibino**	**13.54**	**5**	*i* P		Pn	12 36 15.0	+0.9
BILL				pmax		pmax		
	comp=Z,4.0nm,1.0s							
BILL				MLR		MLR		
	comp=Z,117nm,15.0s							
JKA	**Kamikawa-asahi**	**16.85**	**240**	P		P	12 36 59.1	-0.8
ASAJ	**Asahikawa**	**16.85**	**240**	P		P	12 36 59.1	-0.8
	comp=E,0.3nm,0.3s,baz=17,slow=19,SNR=4.8							
ERM	**Erimo**	**18.15**	**234**	P		Pn	12 37 12.1	-1.9
ERM				pmax		pmax		
	comp=E,36nm,0.8s							
ERM	**Erimo**	**18.15**	**234**	P		Pn	12 37 12.1	-1.9
ERM				IAmb		IAmb	12 37 26.4	
	comp=Z,36nm,0.8s							
YAK	**Yakutsk**	**18.78**	**307**	*eP*		P	12 37 19.5	-1.5
YAK				pmax		pmax		
	comp=Z,5.0nm,0.7s							
KLR	**Kul'dur**	**19.87**	**267**	P		P	12 37 31.7	-1.4
	comp=Z,0.1nm,0.3s,baz=324,slow=19,SNR=2.5							
TIXI	**Tiksi**	**22.43**	**332**	*eP*		P	12 37 58.1	-2.4
TIXI				pmax		pmax		
	comp=Z,2.0nm,0.6s							
TIXI	**Tiksi**	**22.43**	**332**	P		P	12 37 58.9	-1.6
	comp=Z,1.7nm,0.5s,baz=126,slow=11,SNR=5.2							
TIXI	**Tiksi**	**22.43**	**332**	P		P	12 37 59.1	-1.4
TTA	**Tatalina**	**22.47**	**52**	P		P	12 38 01.6	+0.5
TTA				pmax		pmax		
	comp=Z,11nm,1.4s							
TTA	**Tatalina**	**22.47**	**52**	P		P	12 38 01.6	+0.5
TTA				IAmb		IAmb	12 38 03.7	
	comp=Z,11nm,1.4s							
USRK	**Ussuriysk Ar.**	**22.50**	**255**	LR		LR	12 47 42.2	
	comp=Z,60nm,18.6s,baz=19,slow=39							
IMAR	**Indian Mountai**	**23.72**	**44**	P		P	12 38 14.3	+0.7
KDAK	**Kodiak Island**	**24.60**	**64**	P		P	12 38 22.7	+0.9
KDAK				pmax		pmax		
	comp=Z,82nm,1.5s							
KDAK	**Kodiak Island**	**24.60**	**64**	P		P	12 38 22.7	+0.9
MJA0	**Matsu Arr-Jizo**	**24.80**	**233**	*eP*		P	12 38 28.2	+4.3
MJA0				pmax		pmax		
	comp=Z,2.0nm,0.6s							
MJB9	**Matsu-Tunnel**	**24.82**	**233**	P		P	12 38 24.3	+0.2
MJB9				IAmb		IAmb	12 38 29.3	
	comp=Z,9.7nm,0.9s							
MAJO	**Matsushiro**	**24.82**	**233**	*eP*		P	12 38 26.1	+2.0
MAJO				pmax		pmax		
	comp=Z,12nm,1.0s							
MAJO	**Matsushiro**	**24.82**	**233**	P		P	12 38 24.5	+0.4
MAJO				IAmb		IAmb	12 38 29.3	
	comp=Z,10.0nm,0.9s							
MJAR	**Matsushiro Arr**	**24.82**	**233**	P		P	12 38 24.0	-0.1
MJAR				pmax		pmax		
	comp=Z,6.0nm,1.5s							
MJAR	**Matsushiro Arr**	**24.82**	**233**	P		P	12 38 23.9	-0.2
	comp=Z,3.1nm,0.8s,baz=33,slow=8.9,SNR=5.1							
MJAR				LR		LR	12 49 12.0	
	comp=Z,38nm,18.7s,baz=270,slow=39							
MJAR	**Matsushiro Arr**	**24.82**	**233**	P		P	12 38 24.0	-0.1
MLY	**Manley**	**24.89**	**47**	P		P	12 38 25.3	+0.8
CNPM	**China Poot**	**24.97**	**60**	P		P	12 38 26.3	+1.0
CCB	**Clear Creek Bu**	**26.14**	**48**	P		P	12 38 37.2	+1.5
IL31		**26.53**	**47**	P		P	12 38 40.6	+1.4
ILAR	**Eielson Array**	**26.53**	**47**	P		P	12 38 40.3	+1.0
	comp=Z,1.1nm,0.8s,baz=264,slow=8.5,SNR=14							
ILAR	**Eielson Array**	**26.53**	**47**	P		P	12 38 40.4	+1.1
BMAR	**Burnt Mountain**	**27.47**	**42**	P		P	12 38 48.8	+1.1
BCAR	**Beaver Creek A**	**28.93**	**51**	P		P	12 39 02.4	+1.6
EGAK	**Eagle**	**28.98**	**47**	P		P	12 39 01.8	+0.7
EGAK				IAmb		IAmb	12 39 09.3	
	comp=Z,4.3nm,1.2s							
INK	**Inuvik**	**31.61**	**39**	P		P	12 39 25.4	+1.1
	comp=Z,0.4nm,0.6s,baz=298,slow=7.8,SNR=3.6							
H11N2	**WAKE ISLAND Hy**	**34.98**	**173**	T		T	13 17 16.6	
	baz=355,slow=76,SNR=61							
H11N3	**WAKE ISLAND Hy**	**35.00**	**173**	T		T	13 17 17.6	
	baz=355,slow=76,SNR=48							
H11N1	**WAKE ISLAND Hy**	**35.00**	**173**	T		T	13 17 17.9	
	baz=355,slow=76,SNR=62							
YKA	**Yellowknife Ar**	**40.88**	**45**	P		P	12 40 44.6	+1.1
	comp=Z,0.3nm,0.6s,baz=298,slow=8.2,SNR=3.5							
YKA				PcP		PcP	12 42 44.8	+1.2
	comp=Z,0.1nm,0.5s,baz=300,slow=3.1,SNR=3.5							
ZALV	**Zalesovo Beam**	**43.35**	**303**	LR		LR	13 00 31.0	
	comp=Z,68nm,18.3s,baz=52,slow=38							
WMQ	**Urumqi**	**48.03**	**290**	P		P	12 41 39.6	-1.4
WMQ				pmax		pmax		
	comp=Z,9.0nm,1.3s							
WMQ	**Urumqi**	**48.03**	**290**	P		P	12 41 39.6	-1.4
WMQ				IAmb		IAmb	12 41 44.7	
	comp=Z,8.8nm,1.3s							
KURK	**Kurchatov**	**48.34**	**302**	*eP*		P	12 41 41.5	-1.6
KURK				pmax		pmax		
	comp=Z,2.0nm,0.7s							
KURK	**Kurchatov**	**48.34**	**302**	P		P	12 41 41.2	-1.8
MKAR	**Makanchi Array**	**48.99**	**296**	*eP*		P	12 41 46.3	-1.9
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**48.99**	**296**	P		P	12 41 45.5	-2.7
	comp=Z,0.7nm,0.6s,baz=53,slow=6.1,SNR=11							
MKAR				LR		LR	13 03 30.8	
	comp=Z,70nm,20.6s,baz=26,slow=37							
AKTO	**Aktyubinsk**	**58.00**	**313**	LR		LR	13 10 43.5	
	comp=Z,36nm,19.0s,baz=6.2,slow=39							
ABKAR	**Akbulak array**	**58.05**	**311**	P		P	12 42 53.8	-0.8
ABKAR				IAmb		IAmb	12 42 54.2	
	comp=Z,1.2nm,0.5s							
BAR	**Barrett**	**58.73**	**77**	P		P	12 43 01.1	+1.5
BAR				IAmb		IAmb	12 43 02.1	
	comp=Z,3.6nm,0.7s							
FINES	**FINESS Array B**	**59.35**	**338**	P		P	12 43 02.9	-0.5
	comp=Z,4.5nm,0.8s,baz=28,slow=8.6,SNR=11							
CMAR	**Chiang Mai Arr**	**60.13**	**260**	*eP*		P	12 43 10.2	+0.8
CMAR				pmax		pmax		
	comp=Z,2.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**60.13**	**260**	P		P	12 43 09.5	+0.1
	comp=Z,1.2nm,0.6s,baz=25,slow=6.6,SNR=8.5							
CMAR				LR		LR	13 13 59.7	
	comp=Z,16nm,18.4s,baz=315,slow=41							
NOA	**NORSAR Array B**	**62.50**	**345**	*eP*		P	12 43 24.3	-0.6
NOA				pmax		pmax		
	comp=Z,2.0nm,0.9s							
NOA	**NORSAR Array B**	**62.50**	**345**	P		P	12 43 24.2	-0.7
	comp=Z,1.9nm,0.9s,baz=19,slow=6.9,SNR=3.9							
SCHQ	**Schefferville**	**63.48**	**30**	P		P	12 43 31.9	+0.4
	comp=Z,1.7nm,0.7s,baz=337,slow=7.7,SNR=4.3							
AKASG	**Malin Array Be**	**68.12**	**330**	P		P	12 43 59.7	-1.7
	comp=Z,1.4nm,0.3s,baz=26,slow=7.1,SNR=1.6							
TX32	**Lajitas Array**	**68.50**	**70**	P		P	12 44 05.9	+1.6
TXAR	**Lajitas Array**	**68.50**	**70**	P		P	12 44 06.7	+2.4
	comp=Z,0.7nm,0.5s,baz=308,slow=5.1,SNR=12							
TXAR	**Lajitas Array**	**68.50**	**70**	P		P	12 44 05.9	+1.7
KBZ	**Khabaz**	**69.54**	**318**	*deP*		P	12 44 10.6	+0.3
KBZ				pmax		pmax		
	comp=Z,8.0nm,1.0s							
KBZ	**Khabaz**	**69.54**	**318**	P		P	12 44 10.6	+0.3
	comp=Z,5.1nm,0.8s,baz=84,slow=3.8,SNR=11							
D62A	**Allapoint, All**	**69.55**	**35**	P		P	12 44 08.9	-1.4
BRTR	**Keskin Array B**	**76.46**	**322**	*eP*		P	12 44 51.7	+0.1
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
BRTR	**Keskin Array B**	**76.46**	**322**	P		P	12 44 51.5	0.0
	comp=Z,1.1nm,0.7s,baz=64,slow=3.4,SNR=6.3							
BRTR	**Keskin Array B**	**76.46**	**322**	P		P	12 44 51.1	-0.4
WRA	**Warramunga Arr**	**78.21**	**207**	P		P	12 45 00.6	-0.6
	comp=Z,0.5nm,0.9s,baz=20,slow=6.1,SNR=2.9							
ASAR	**Alice Springs**	**81.88**	**207**	P		P	12 45 21.6	+0.6
	comp=Z,0.3nm,0.8s,baz=17,slow=6.8,SNR=3.4							
ESDC	**Sonseca Array**	**85.38**	**350**	P		P	12 45 40.0	+1.0
	comp=Z,0.3nm,0.4s,baz=350,slow=6.2,SNR=3.4							
ESDC	**Sonseca Array**	**85.38**	**350**	P		P	12 45 39.0	-0.1

*IDC **24** 13:03:03.0±0.7,16°.55N×47°.36W,h0km,mb4.0/14, mb1 4.2/16,mb1mx4.0/48,mbtmp4.1/16,ML4.2/2,MS3.3/9, Ms1 3.3/9,ms1mx3.1/39,Error ellipse: s-maj=19.9km s-min=17.4km az=152.0*
*NEIC **24** 13:03:04.5±1.3,16°.48N±0°.07×47°.41W±0°.08,h10km±1km, mb4.3/11,Error ellipse: s-maj=16.3km s-min=5.3km az=228.0*

ISC 24 13:03:04.4±0.6,16°.5N±0°.1×47°.4W±0°.1,h10km,n45, σ0$73/30,mb4.2/18,MS3.3/8,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MDP	**Montagnes des**	**12.46**	**205**	Pn		Pn	13 06 01.7	-0.2
	1.9nm,0.3s,baz=13,slow=14,SNR=18							
MDP				Sn		Sn	13 08 09.7	-11
	0.4nm,0.3s,baz=151,slow=19,SNR=4.4							
MDP				LR		LR	13 09 27.9	
	comp=Z,93nm,21.2s,baz=47,slow=31							
H05S1	**Guadeloupe/Mar**	**13.14**	**263**	T		T	13 19 37.1	
	baz=8.0							
PLCV	**Puerto La Cruz**	**17.89**	**251**	P		Pn	13 07 12.3	-1.2
PCRV	**Puerto La Cruz**	**17.92**	**252**	P		Pn	13 07 12.3	-1.7
	0.6nm,0.3s,baz=24,slow=12,SNR=3.1							
ROSC	**El Rosal**	**28.85**	**249**	LR		LR	13 20 29.6	
	comp=Z,45nm,20.2s,baz=196,slow=36							
BDFB	**Brasilia**	**31.95**	**181**	LR		LR	13 21 50.1	
	comp=Z,39nm,18.8s,baz=39,slow=35							
LPAZ	**La Paz**	**38.48**	**213**	P		P	13 10 28.1	+0.5
	2.0nm,0.8s,baz=21,slow=7.5,SNR=6.2							
LPAZ				LR		LR	13 25 28.2	
	comp=Z,44nm,21.7s,baz=344,slow=35							
LPAZ	**La Paz**	**38.48**	**213**	IAmb		IAmb	13 10 32.2	
	comp=Z,2.9nm,0.9s							
H10N3	**ASCENSION HYDR**	**40.54**	**124**	T		T	13 53 42.4	
	baz=306,slow=75,SNR=19							
H10N2	**ASCENSION HYDR**	**40.55**	**124**	T		T	13 53 39.5	
	baz=306,slow=75,SNR=26							
H10N1	**ASCENSION HYDR**	**40.56**	**124**	T		T	13 53 41.8	
	baz=306,slow=75,SNR=29							
H10S3	**ASCENSION HYDR**	**41.09**	**126**	T		T	13 54 23.0	
	baz=304,slow=74,SNR=23							
H10S2	**ASCENSION HYDR**	**41.10**	**126**	T		T	13 54 24.3	
	baz=276,slow=74,SNR=28							
DBIC	**Dimbokro**	**42.71**	**98**	P		P	13 11 01.2	-0.7
	comp=Z,6.3nm,1.1s,baz=265,slow=11,SNR=2.8							
DBIC	**Dimbokro**

SECR			0.65	212	⇓	P		Pn	13 11 56.9	+0.7
SECR					⇑	S		Sn	13 12 09.2	+0.9
SECR			0.65	212	⇑	P		Pn	13 11 56.9	+0.7
OZUR			0.74	314	⇑	P		Pn	13 11 56.8	-0.2
OZUR					⇓	S		Sn	13 12 08.4	-1.4
OZUR			0.74	314	⇑	P		Pn	13 11 56.8	-0.2
PGOR	**Pogoanele**		0.75	155	⇓	P		Pn	13 11 57.5	+0.4
PGOR	**Pogoanele**		0.75	155	⇓	P		Pn	13 11 57.5	+0.4
GHRR			0.76	52	⇓	S		Sn	13 12 10.7	+0.4
GHRR			0.76	52	⇓	S		Sn	13 12 10.7	+0.4
TUDR			0.79	89	⇓	P		Pn	13 11 57.2	-0.2
TUDR					⇓	S		Sn	13 12 10.1	-0.5
TUDR			0.79	89	⇓	P		Pn	13 11 57.2	-0.2
IZVR	**Izvoarele**		0.86	93	⇓	P		Pn	13 11 57.9	-0.2
IZVR					⇓	S		Sn	13 12 10.5	-1.4
IZVR	**Izvoarele**		0.86	93	⇓	P		Pn	13 11 57.9	-0.2
SLCR	**Slobozia Conac**		0.86	89	⇓	P		Pn	13 11 57.9	-0.2
SLCR					⇓	S		Sn	13 12 11.0	-0.9
SLCR	**Slobozia Conac**		0.86	89	⇓	P		Pn	13 11 57.9	-0.2
DOPR	**Dopca**		0.90	295	⇑	P		Pn	13 11 58.6	-0.1
DOPR					⇓	S		Sn	13 12 11.9	-0.8
DOPR	**Dopca**		0.90	295	⇑	P		Pn	13 11 58.6	-0.1
BRAG	**Branistea**		0.92	99	⇓	P		Pn	13 11 58.4	-0.4
BRAG					⇓	S		Sn	13 12 11.4	-1.6
BRAG	**Branistea**		0.92	99	⇓	P		Pn	13 11 58.4	-0.4
TESR	**Tescani**		0.93	4	⇑	P		Pn	13 11 59.0	0.0
TESR					⇓	S		Sn	13 12 12.3	-1.0
TESR	**Tescani**		0.93	4	⇑	P		Pn	13 11 59.0	0.0
NEGR	**Negresti**		0.93	93	⇓	P		Pn	13 11 58.8	-0.1
NEGR					⇓	S		Sn	13 12 12.2	-1.1
NEGR	**Negresti**		0.93	93	⇓	P		Pn	13 11 58.8	-0.1
SULR			0.93	193	⇓	P		Pn	13 11 59.5	+0.5
SULR					⇓	S		Sn	13 12 14.4	+1.1
SULR			0.93	193	⇓	P		Pn	13 11 59.5	+0.5
VARL	**Varlezi**		0.96	71	⇓	P		Pn	13 11 60.0	+0.7
VARL					⇓	S		Sn	13 12 13.6	-0.3
VARL	**Varlezi**		0.96	71	⇓	P		Pn	13 11 60.0	+0.7
BIR	**Birlad**		1.01	48	⇑	P		Pn	13 12 00.3	+0.5
BIR					⇓	S		Sn	13 12 15.2	+0.3
BIR	**Birlad**		1.01	48	⇑	P		Pn	13 12 00.3	+0.5
VOIR			1.06	262	⇓	P		Pn	13 12 00.3	-0.2
VOIR					⇓	S		Sn	13 12 15.4	-0.7
VOIR			1.06	262	⇓	P		Pn	13 12 00.3	-0.2
MTUR	**Matau**		1.11	251	⇓	P		Pn	13 12 01.9	+0.8
MTUR	**Matau**		1.11	251	⇓	P		Pn	13 12 01.9	+0.8
AMRR	**Amara**		1.12	150	⇓	S		Sn	13 12 29.2	+12
LEHL	**Lehliu**		1.13	170	⇑	P		Pn	13 12 01.7	+0.5
LEHL					⇓	S		Sn	13 12 17.9	+0.6
LEHL	**Lehliu**		1.13	170	⇑	P		Pn	13 12 01.7	+0.5
GIUM	**Giurgiulesti**		1.17	94	⇓	P		Pn	13 12 02.6	+0.9
GIUM					⇓	S		Sn	13 12 18.9	+0.8
GIUM	**Giurgiulesti**		1.17	94	⇓	P		Pn	13 12 02.6	+0.9
CFR	**Carcaliu**		1.19	110	⇓	P		Pn	13 12 01.7	-0.2
CFR					⇓	S		Sn	13 12 16.8	-1.7
CFR	**Carcaliu**		1.19	110	⇓	P		Pn	13 12 01.7	-0.2
BUC1	**Bucharest**		1.29	197	⇑	P		Pn	13 12 03.4	+0.3
BUC1					⇓	S		Sn	13 12 20.6	-0.2
BUC1	**Bucharest**		1.29	197	⇑	P		Pn	13 12 03.4	+0.3
HARR	**Harsova**		1.33	132	⇓	P		Pn	13 12 03.7	+0.1
HARR	**Harsova**		1.33	132	⇓	P		Pn	13 12 03.7	+0.1
GOLR			1.35	237	⇓	P		Pn	13 12 04.5	+0.6
GOLR					⇓	S		Sn	13 12 21.7	-0.3
GOLR			1.35	237	⇓	P		Pn	13 12 04.5	+0.6
VASR	**Vaslui**		1.36	39	⇓	P		Pn	13 12 04.6	+0.5
VASR					⇓	S		Sn	13 12 21.8	-0.5
VASR	**Vaslui**		1.36	39	⇓	P		Pn	13 12 04.6	+0.5
ARR	**Arges**		1.36	261	⇓	P		Pn	13 12 04.5	+0.4
ARR					⇓	S		Sn	13 12 21.8	-0.6
ARR	**Arges**		1.36	261	⇓	P		Pn	13 12 04.5	+0.4
BIZ	**Bicaz**		1.39	347	⇓	P		Pn	13 12 05.3	+1.0
BIZ					⇓	S		Sn	13 12 24.0	+1.2
BIZ	**Bicaz**		1.39	347	⇓	P		Pn	13 12 05.3	+1.0
SGRR	**Singureni**		1.43	197	⇓	P		Pn	13 12 04.8	0.0
SGRR					⇓	S		Sn	13 12 22.7	-0.9
SGRR	**Singureni**		1.43	197	⇓	P		Pn	13 12 04.8	0.0
RASA	**Rasa**		1.44	163	⇓	P		Pn	13 12 05.0	+0.1
RASA					⇓	S		Sn	13 12 23.2	-0.7
RASA	**Rasa**		1.44	163	⇓	P		Pn	13 12 05.0	+0.1
TOPG	**Topolog**		1.48	118	⇓	P		Pn	13 12 05.3	-0.1
TOPG					⇓	S		Sn	13 12 23.7	-1.1
TOPG	**Topolog**		1.48	118	⇓	P		Pn	13 12 05.3	-0.1
LEOM	**Leova**		1.48	53	⇑	P		Pn	13 12 06.0	+0.6
LEOM					⇓	S		Sn	13 12 24.8	0.0
LEOM	**Leova**		1.48	53	⇑	P		Pn	13 12 06.0	+0.6
HUMR	**Humele**		1.54	227	⇓	S		Sn	13 12 25.3	-0.9
HUMR	**Humele**		1.54	227	⇓	S		Sn	13 12 25.3	-0.9
TLCR			1.65	103	⇓	P		Pn	13 12 08.4	+0.8
TLCR					⇓	S		Sn	13 12 28.6	0.0
TLCR			1.65	103	⇓	P		Pn	13 12 08.4	+0.8
ICOR	**Ion Corvin**		1.72	148	⇓	P		Pn	13 12 09.0	+0.5
ICOR					⇓	S		Sn	13 12 30.5	+0.2
ICOR	**Ion Corvin**		1.72	148	⇓	P		Pn	13 12 09.0	+0.5
TIRR	**Tirgusor**		1.74	130	⇓	P		Pn	13 12 08.9	+0.2
TIRR					⇓	S		Sn	13 12 28.9	-1.8
TIRR	**Tirgusor**		1.74	130	⇓	P		Pn	13 12 08.9	+0.2
IAS	**Iasi**		1.75	23	⇓	S		Sn	13 12 29.9	-1.1
IAS	**Iasi**		1.75	23	⇓	S		Sn	13 12 29.9	-1.1
JURR	**Jurilovca**		1.84	116	⇑	P		Pn	13 12 10.6	+0.6
JURR	**Jurilovca**		1.84	116	⇑	P		Pn	13 12 10.6	+0.6
MFTR	**Murfatlar**		1.94	136	⇓	P		Pn	13 12 11.5	+0.2
MFTR					⇓	S		Sn	13 12 34.9	-0.4
MFTR	**Murfatlar**		1.94	136	⇓	P		Pn	13 12 11.5	+0.2
LOTT	**Lotru**		1.96	267	⇑	P		Pn	13 12 11.9	+0.2
LOT					⇓	S		Sn	13 12 36.2	+0.2
LOT	**Lotru**		1.96	267	⇑	P		Pn	13 12 11.9	+0.2
RAZG	**Razgrad**		2.02	181	⇓	P		Pn	13 12 12.3	-0.2
RAZG	**Razgrad**		2.02	181	⇓	P		Pn	13 12 12.3	-0.2
MILM	**Milestii Mici**		2.06	49	⇑	P		Pn	13 12 13.3	+0.5
MILM					⇑	S		Sn	13 12 37.0	-1.1
MILM	**Milestii Mici**		2.06	49	⇑	P		Pn	13 12 13.3	+0.5
TSCT	**Constanta Port**		2.07	133	⇓	S		Sn	13 12 38.3	0.0
TSCT	**Constanta Port**		2.07	133	⇓	S		Sn	13 12 38.3	0.0
EFOR	**EFORIE**		2.12	135	⇓	S		Sn	13 12 39.3	-0.1
EFOR	**EFORIE**		2.12	135	⇓	S		Sn	13 12 39.3	-0.1
ARCR	**ARCALIA**		2.13	315	⇓	S		Sn	13 12 39.4	-0.5
ARCR	**ARCALIA**		2.13	315	⇓	S		Sn	13 12 39.4	-0.5
BURAR	**Bucovina Array**		2.23	336	⇑	P		Pn	13 12 16.4	+1.2
BURAR					⇓	S		Sn	13 12 42.9	+0.6
BURAR	**Bucovina Array**		2.23	336	⇑	P		Pn	13 12 16.4	+1.2
PSN	**Preselentsi**		2.23	148	⇑	P		Pn	13 12 14.8	+0.6
MANR	**Mangalia**		2.29	140	⇑	S		Sn	13 12 43.8	+0.2
MANR	**Mangalia**		2.29	140	⇑	S		Sn	13 12 43.8	+0.2
CJR	**Cluj-Napoca**		2.34	300	⇑	P		Pn	13 12 16.9	+0.2
CJR					⇓	S		Sn	13 12 46.5	+1.6
CJR	**Cluj-Napoca**		2.34	300	⇑	P		Pn	13 12 16.9	+0.2
SZH	**Strazhica**		2.36	191	P			Pn	13 12 16.4	-0.5
PRD	**Provadia**		2.46	165	P			Pn	13 12 19.2	+1.0
PURM	**Purcari**		2.50	67	⇑	P		Pn	13 12 20.0	+1.3
PVL	**Pavlikeni**		2.53	201	P			Pn	13 12 20.5	+1.4
GZR	**Gura Zlata**		2.66	267	⇑	P		Pn	13 12 21.1	+0.2
GZR	**Gura Zlata**		2.66	267	⇑	P		Pn	13 12 21.1	+0.2
ELND	**Elena**		2.70	191	⇓	P		Pn	13 12 21.4	0.0
ELND	**Elena**		2.70	191	⇓	P		Pn	13 12 21.4	0.0
SORM	**Soroca**		2.83	25	⇑	P		Pn	13 12 22.8	-0.3
SORM	**Soroca**		2.83	25	⇑	P		Pn	13 12 22.8	-0.3
DRGR			2.92	296	⇓	P		Pn	13 12 23.7	-0.7
DRGR					⇓	S		Sn	13 12 58.8	0.0
DRGR			2.92	296	⇓	P		Pn	13 12 23.7	-0.7
HERR	**Herculane**		3.00	258	⇑	P		Pn	13 12 24.8	-0.6
HERR	**Herculane**		3.00	258	⇑	P		Pn	13 12 24.8	-0.6

*KRSC **24** 13:37:27.0±1.9, 49.05N×157.06E, h30km±26km, ML4.0*
*MOS **24** 13:37:26.3±1.2, 48.85N×156.50E, h61km, mb3.6/1, Error ellipse: s-maj=15.8km s-min=4.4km az=77.7*
*SKHL **24** 13:37:27.1±0.0, 48.90N×156.50E, h64km±2km, mb4.3/3*
*IDC **24** 13:37:31.9±3.4, 49.20N×156.11E, h70km±29km, mb3.1/6, mb1 3.4/10, mb1mx3.3/58, mbtmp3.5/10, Error ellipse: s-maj=39.4km s-min=17.4km az=143.0*

ISC 24 13:37:26.3±0.9, 48°83'N±0'.08×156°50'E±0'.09, h34km, n72,
σ1°68/92, mb3.5/6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.87**	**352**	*e*PN	**Pn**	**13 37 55.4**	**-0.5**
SKR				*e*S	**Sn**	**13 38 15.9**	**-2.4**
SKR				pmax	pmax		
	comp=Z,154nm,0.5s						
SKR				smax	smax		
	comp=E,221nm,0.5s						
SKR				smax	smax		
	comp=N,248nm,0.7s						
SKR	**Severo-Kuril's**	**1.87**	**352**	*e*P	**Pn**	**13 37 55.3**	**-0.6**
SKR				*e*S	**Sn**	**13 38 16.6**	**-1.7**
SKR	**Severo-Kuril's**	**1.87**	**352**	*e*P	**Pn**	**13 37 55.3**	**-0.6**
SKR				AMB	AMB	13 37 57.8	
	comp=N,150nm,0.5s						
SKR				*e*S	**Sn**	**13 38 16.5**	**-1.7**
SKR				A	A	13 38 21.7	
	comp=N,250nm,0.5s						
SKR				A	A	13 38 21.7	
	comp=N,360nm,0.5s						
PAU	**Pauzhetka**	**2.65**	**4**	PN	**Pn**	**13 38 07.1**	**+0.6**
PAU				S	**Sn**	**13 38 36.4**	**-1.0**
PAU	**Pauzhetka**	**2.65**	**4**	*e*P	**Pn**	**13 38 07.1**	**+0.6**
PAU				*e*S	**Sn**	**13 38 36.4**	**-1.0**
PAU	**Pauzhetka**	**2.65**	**4**	*e*P	**Pn**	**13 38 07.1**	**+0.6**
PAU				*e*S	**Sn**	**13 38 36.4**	**-1.0**
KDTR	**Khodutka, Kamc**	**3.15**	**18**	PN	**Pn**	**13 38 13.5**	**+0.1**
KDTR				S	**Sn**	**13 38 48.4**	**-1.3**
KDTR	**Khodutka, Kamc**	**3.15**	**18**	*e*P	**Pn**	**13 38 13.5**	**+0.1**
KDTR				*e*S	**Sn**	**13 38 48.4**	**-1.3**
ASAK	**Asacha**	**3.67**	**14**	PN	**Pn**	**13 38 21.4**	**+0.8**
ASAK				S	**Sn**	**13 39 02.6**	**-0.1**
ASAK	**Asacha**	**3.67**	**14**	*e*P	**Pn**	**13 38 21.4**	**+0.8**
ASAK				*e*S	**Sn**	**13 39 02.6**	**-0.1**
MTVR	**Mutnovka**	**3.81**	**16**	PN	**Pn**	**13 38 23.5**	**+0.8**
MTVR	**Mutnovka**	**3.81**	**16**	*e*P	**Pn**	**13 38 23.5**	**+0.8**
RUS	**Russkaya**	**3.83**	**19**	PN	**Pn**	**13 38 22.7**	**0.0**
RUS				S	**Sn**	**13 39 04.6**	**-1.9**
RUS	**Russkaya**	**3.83**	**19**	*e*P	**Pn**	**13 38 22.7**	**0.0**
RUS				*e*S	**Sn**	**13 39 04.6**	**-1.9**
RUS	**Russkaya**	**3.83**	**19**	*e*P	**Pn**	**13 38 22.7**	**0.0**
GRL	**Gorelyy**	**3.86**	**14**	PN	**Pn**	**13 38 24.3**	**+1.0**
GRL	**Gorelyy**	**3.86**	**14**	*e*P	**Pn**	**13 38 24.3**	**+1.0**
APC	**Apacha**	**4.12**	**6**	PN	**Pn**	**13 38 29.6**	**+2.8**
APC	**Apacha**	**4.12**	**6**	*e*P	**Pn**	**13 38 29.6**	**+2.8**
KRMR	**Karymshinskiy**	**4.13**	**14**	PN	**Pn**	**13 38 27.9**	**+0.9**
KRMR	**Karymshinskiy**	**4.13**	**14**	*e*P	**Pn**	**13 38 27.9**	**+0.9**
PETK	**Petropavlovsk-**	**4.35**	**10**	P	**Pn**	**13 38 31.5**	**+1.5**
	comp=N,1.2nm,0.3s,baz=170,slow=14,SNR=50						
PET	**Petropavlovsk**	**4.41**	**17**	*e*PN	**Pn**	**13 38 33.7**	**+2.9**
PET				*e*S	**Sn**	**13 39 20.4**	**-0.5**
PET				smax	smax		
	comp=E,60nm,0.6s						
PET				smax	smax		
	comp=N,64nm,0.6s						
PET	**Petropavlovsk**	**4.41**	**17**	*e*P	**Pn**	**13 38 31.5**	**+0.8**
PET				*e*S	**Sn**	**13 39 20.5**	**-0.5**
PET	**Petropavlovsk**	**4.41**	**17**	*e*P	**Pn**	**13 38 31.6**	**+0.8**
PET				*e*S	**Sn**	**13 39 20.0**	**-0.9**
PET				A	A	13 39 29.8	
	comp=N,60nm,0.5s						
PET				A	A	13 39 29.8	
	comp=N,120nm,0.5s						
UGLR	**Uglovaya**	**4.62**	**18**	PN	**Pn**	**13 38 35.3**	**+1.5**
UGLR	**Uglovaya**	**4.62**	**18**	*e*P	**Pn**	**13 38 35.3**	**+1.5**
AVH	**Avacha**	**4.66**	**17**	PN	**Pn**	**13 38 36.7**	**+2.4**
AVH	**Avacha**	**4.66**	**17**	*e*P	**Pn**	**13 38 36.7**	**+2.4**
KOK	**Koryaka**	**4.66**	**16**	PN	**Pn**	**13 38 36.5**	**+2.1**
KOK	**Koryaka**	**4.66**	**16**	*e*P	**Pn**	**13 38 36.5**	**+2.1**
KOK	**Koryaka**	**4.66**	**16**	*e*P	**Pn**	**13 38 36.5**	**+2.1**
SMAR	**Somma**	**4.67**	**17**	PN	**Pn**	**13 38 36.5**	**+2.0**
SMAR	**Somma**	**4.67**	**17**	*e*P	**Pn**	**13 38 36.5**	**+2.0**
KRER	**Koryakskii**	**4.70**	**17**	PN	**Pn**	**13 38 36.8**	**+1.9**
KRER	**Koryakskii**	**4.70**	**17**	*e*P	**Pn**	**13 38 36.8**	**+1.9**
SDLR	**Sedlovina**	**4.70**	**18**	PN	**Pn**	**13 38 35.9**	**+1.0**
SDLR				S	**Sn**	**13 39 26.7**	**-1.5**
SDLR	**Sedlovina**	**4.70**	**18**	*e*P	**Pn**	**13 38 35.9**	**+1.0**
SDLR				*e*S	**Sn**	**13 39 26.7**	**-1.5**
KRX	**Arik**	**4.73**	**16**	PN	**Pn**	**13 38 37.3**	**+2.0**
KRX	**Arik**	**4.73**	**16**	*e*P	**Pn**	**13 38 37.3**	**+2.0**
SPN	**Mys Shipunski**	**4.82**	**26**	PN	**Pn**	**13 38 37.7**	**+1.4**
SPN				S	**Sn**	**13 39 29.3**	**-1.6**
SPN	**Mys Shipunski**	**4.82**	**26**	*e*P	**Pn**	**13 38 37.7**	**+1.4**
SPN				*e*S	**Sn**	**13 39 29.3**	**-1.6**
SPN	**Mys Shipunski**	**4.82**	**26**	*e*P	**Pn**	**13 38 37.7**	**+1.4**
MKZ	**Mys Kozlova**	**6.59**	**28**	PN	**Pn**	**13 39 00.6**	**0.0**
MKZ	**Mys Kozlova**	**6.59**	**28**	*e*P	**Pn**	**13 39 00.6**	**0.0**
MKZ	**Mys Kozlova**	**6.59**	**28**	*e*P	**Pn**	**13 39 00.6**	**0.0**
KZV	**Kizimen**	**6.71**	**19**	PN	**Pn**	**13 39 04.5**	**+2.0**
KZV	**Kizimen**	**6.71**	**19**	*e*P	**Pn**	**13 39 04.5**	**+2.0**
TUMD	**Tumrok D**	**6.82**	**19**	*e*P	**Pn**	**13 39 07.0**	**+3.1**
TUMR	**Tumrok**	**6.84**	**18**	PN	**Pn**	**13 39 07.0**	**+2.8**
KUR	**Kuril'sk**	**6.91**	**242**	*e*PN	**Pn**	**13 39 08.6**	**+3.5**
KUR				pmax	pmax		
	comp=Z,29nm,0.6s						
KUR				pmax	pmax		
	comp=Z,149nm,1.2s						
KUR				pmax	pmax		
	comp=N,13nm,0.4s						
KUR				pmax	pmax		
	comp=E,19nm,0.3s						
KUR	**Kuril'sk**	**6.91**	**242**	*e*P	**Pn**	**13 39 07.9**	**+2.8**
KUR				AMB	AMB	13 39 12.7	
	comp=E,200nm,1.2s						
KUR				AMB	AMB	13 39 12.7	
	comp=E,10.0nm,0.4s						
KUR				AMB	AMB	13 39 12.7	
	comp=E,20nm,0.4s						
KUR				AMB	AMB	13 39 17.2	
	comp=E,30nm,0.7s						
KUR				*e*S	**Sn**	**13 40 21.0**	**-1.5**
KUR				A	A	13 40 53.7	
	comp=E,90nm,1.0s						
KBTR	**Krutoberegovo**	**8.33**	**25**	PN	**Pn**	**13 39 24.8**	**+0.3**
KBTR	**Krutoberegovo**	**8.33**	**25**	*e*P	**Pn**	**13 39 24.8**	**+0.3**
SHO	**Shikotan**	**8.33**	**237**	*e*PN	**Pn**	**13 39 23.8**	**-0.8**
SHO				pmax	pmax		
	comp=Z,18nm,0.8s						
SHO				pmax	pmax		
	comp=N,11nm,0.5s						
SHO				pmax	pmax		
	comp=E,10.0nm,0.7s						
SHO				pmax	pmax		
	comp=Z,90nm,1.5s						
SHO	**Shikotan**	**8.33**	**237**	*e*P	**Pn**	**13 39 25.6**	**+1.0**
SHO				AMB	AMB	13 39 30.4	
	comp=Z,10.0nm,0.7s						
SHO				AMB	AMB	13 39 30.4	
	comp=Z,10.0nm,0.7s						
SHO				AMB	AMB	13 39 30.4	
	comp=Z,10.0nm,0.7s						
SHO				AMB	AMB	13 39 43.8	
	comp=Z,90nm,1.5s						
SHO				*e*S	**Sn**	**13 40 52.9**	**-4.5**
SHO				A	A	13 41 21.9	
	comp=Z,80nm,1.0s						
YUK	**Yuzh-Kuril'sk**	**8.77**	**241**	*e*P	**Pn**	**13 39 33.1**	**+2.4**
TYV	**Tymovskoe**	**9.18**	**288**	*e*rx	rx	13 39 38.5	
NMR	**Nemuro--Hokkai**	**9.26**	**238**	*e*PN	**Pn**	**13 39 37.2**	**-0.2**
NMR	**Nemuro--Hokkai**	**9.26**	**238**	*e*P	**Pn**	**13 39 37.2**	**-0.2**
JKA	**Kamikawa-asahi**	**10.68**	**249**	*e*P	**Pn**	**13 39 59.9**	**+3.1**
ASAJ	**Asahikawa**	**10.69**	**249**	P	**Pn**	**13 39 59.9**	**+3.1**
	comp=Z,1.8nm,0.3s,baz=60,slow=13,SNR=15						
MA2	**Magadan**	**11.27**	**345**	P	**Pn**	**13 40 04.7**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=152,slow=15,SNR=3.3						
KLR	**Kul'dur**	**16.23**	**281**	P	**P**	**13 41 13.2**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=78,slow=14,SNR=2.0						
KSRS	**Korea Array**	**23.61**	**252**	P	**P**	**13 42 34.8**	**+0.8**
	comp=Z,0.7nm,0.6s,baz=47,slow=11,SNR=3.4						
TIK	**Tiksi**	**26.18**	**341**	*e*P	**P**	**13 42 55.0**	**-2.1**
TIXI	**Tiksi**	**26.19**	**341**	P	**P**	**13 42 55.0**	**-2.3**
TIXI	**Tiksi**	**26.19**	**341**	P	**P**	**13 42 55.0**	**-2.3**
	comp=Z,1.0nm,0.5s,baz=143,slow=8.1,SNR=2.5						
YKA	**Yellowknife Ar**	**47.88**	**39**	P	**P**	**13 46 00.7**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=295,slow=7.9,SNR=3.3						
MKAR	**Makanchi Array**	**48.02**	**297**	P	**P**	**13 46 00.7**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=70,slow=8.2,SNR=3.9						
CMAR	**Chiang Mai Arr**	**55.07**	**258**	P	**P**	**13 46 55.7**	**+0.9**
	comp=Z,0.3nm,0.4s,baz=45,slow=9.0,SNR=2.5						
TXAR	**Lajitas Array**	**74.49**	**63**	P	**P**	**13 49 04.0**	**+2.6**
	comp=Z,0.1nm,0.4s,baz=297,slow=6.0,SNR=4.1						

*IDC **24** 13:37:42.5±0.9, 8.29S×124.50E, h0km, mb4.0/8, mb1 4.1/10, mb1mx3.9/43, mbtmp4.1/10, ML4.3/2, MS3.2/9, Ms1 3.2/9, ms1mx3.0/30, Error ellipse: s-maj=37.3km s-min=17.9km az=57.0*
*DJA **24** 13:37:45.9±0.4, 8°S±3'×12'5E±', h10km, M4.6/9, mb4.9/7, mB5.1/5, MLv4.5/9, Mw(mB)4.5/5*

*NEIC **24** 13:37:53.8±2.7, 8.9S±0'.1×124.7E±0'.1, h122km±10km, mb3.9/5, Error ellipse: s-maj=21.1km s-min=12.9km az=223.0*

ISC 24 13:37:46.2±0.6, 8°32S±0'.05×124°92E±0'.07, h24km, n46,
σ2°77/43, mb4.2/9, MS3.1/4, Timor region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**1.57**	**204**	P	**Pb**	**13 38 16.2**	**+1.6**
SOEI				S	**Sb**	**13 38 39.3**	**+5.3**
SOEI	**Soe**	**1.57**	**204**		**Pb**	**13 38 15.6**	**+1.0**
BBSI	**Bau Bau**	**3.65**	**320**	P	**Pn**	**13 38 40.8**	**-0.4**
WSI	**Waingapu**	**4.76**	**253**	P	**Pn**	**13 38 58.7**	**+2.3**
KDI	**Kendari**	**4.90**	**332**	P	**Pn**	**13 38 56.4**	**-2.0**
NLAI	**Namlea**	**5.49**	**23**	P	Pn	13 39 13.2	+6.7
BKSI	**Bulukumba**	**5.62**	**302**	P	**Pn**	**13 39 05.2**	**-3.0**
BNSI	**Bone**	**6.17**	**309**	P	**Pn**	**13 39 14.1**	**-1.7**
	0.4nm128nm,0.7s						
SANI	**Sanana**	**6.32**	**10**	P	**Pn**	**13 39 17.9**	**0.0**
	0.1nm30nm,0.7s						
SPSI	**Sidrap Palu**	**6.70**	**310**	P	**Pn**	**13 39 20.5**	**-2.7**
	0.2nm52nm,0.8s						
PLAI	**Plampang**	**7.08**	**265**	P	**Pn**	**13 39 29.9**	**+1.5**
	0.6nm2µm130nm,0.5s						
TTSI	**Tana Toraja**	**7.29**	**316**	P	**Pn**	**13 39 30.0**	**-1.3**
	0.1nm949nm24nm,0.8s						
MTN	**Manton Dam**	**7.58**	**127**		**Pn**	**13 39 39.3**	**+4.0**
KNRA	**Kununurra**	**8.22**	**153**		**Pn**	**13 39 46.9**	**+2.9**
SIJI	**Sorong**	**9.73**	**41**	LR	LR	13 43 48.4	
	comp=Z,150nm,20.8s,baz=132,slow=37						
FITZ	**Fitzroy Crossi**	**9.75**	**176**	Pn	**Pn**	**13 40 04.2**	**-0.7**
	2.6nm,0.3s,baz=7.9,slow=12,SNR=22						
FITZ				Sn	**Sn**	**13 41 50.7**	**-3.0**
	2.3nm,0.3s,baz=159,slow=0.7,SNR=11						
FITZ				LR	LR	13 44 44.4	
	comp=Z,101nm,18.7s,baz=0.5,slow=43						
FITZ	**Fitzroy Crossi**	**9.75**	**176**	Pn	**Pn**	**13 40 01.9**	**-3.0**
PSA00	**Pilbara Seismi**	**14.06**	**200**	Pn	**Pn**	**13 40 59.6**	**-4.3**
WB0	**Warramunga Arr**	**14.62**	**142**	P	**Pn**	**13 41 11.0**	**-0.7**
**WRA

mb4.4/8, Error ellipse: s-maj=16.9km s-min=2.6km az=50.0

ISC 24 13:48:58.6±0.7, 13°2N±0.1° 95°79E±0.0°07, h10km, n28, σ1°34/21, mb3.8/14, MS3.4/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**2.79**	**271**	*eP*	**Pn**	**13 49 43.1**	**-0.1**
DGPR				*eS*	**Pg**	**13 49 53.5**	**+1.6**
PBA	**Port Blair**	**3.33**	**244**	*eP*	Pn	13 49 52.3	+1.5
PBA				*eS*	Pg	13 50 05.9	+3.4
PBKT	**Sadao Pong**	**6.05**	**55**		**Pn**	**13 50 28.6**	**+0.5**
CMAR	**Chiang Mai Arr**	**6.08**	**30**	Pn	**Pn**	**13 50 27.4**	**-1.2**
	1.4nm,0.3s,baz=223,slow=15,SNR=14						
CMAR				LR	LR	13 53 01.0	
	comp=Z,196nm,18.5s,baz=200,slow=40						
PSI	**Prapat**	**10.75**	**163**	LR	LR	13 56 21.1	
	comp=Z,167nm,19.1s,baz=286,slow=41						
PALK	**Pallekele**	**15.96**	**250**	Pn	**Pn**	**13 52 40.7**	**-2.7**
LEM	**Lembang**	**23.07**	**149**	LR	LR	14 04 10.9	
	comp=Z,77nm,20.1s,baz=258,slow=40						
MKAR	**Makanchi Array**	**35.40**	**344**	P	**P**	**13 55 53.5**	**-1.1**
	0.6nm,0.8s,baz=139,slow=7.8,SNR=4.3						
MKAR				LR	LR	14 14 54.3	
	comp=Z,52nm,19.1s,baz=114,slow=44						
SONM	**Songino Array**	**35.68**	**12**	P	**P**	**13 55 58.3**	**+1.1**
	1.3nm,0.9s,baz=196,slow=9.5,SNR=7.5						
KSRS	**Korea Array**	**37.49**	**44**	LR	LR	14 12 46.8	
	comp=Z,72nm,19.3s,baz=194,slow=38						
KURBB	**Kurchatov Arra**	**39.92**	**343**	P	**P**	**13 56 31.5**	**-1.2**
	0.6nm,0.5s,baz=153,slow=8.6,SNR=4.9						
KURK	**Kurchatov**	**39.98**	**343**	P	**P**	**13 56 31.5**	**-1.7**
KURK	**Kurchatov**	**39.98**	**343**	IAmb	IAmb	13 56 40.1	
	comp=Z,10nm,1.5s						
GEYT	**Alibeck**	**41.57**	**313**	P	**P**	**13 56 45.7**	**-0.9**
	comp=Z,0.9nm,0.4s,baz=126,slow=7.5,SNR=5.4						
GEYT				LR	LR	14 16 33.0	
	comp=Z,39nm,18.2s,baz=320,slow=40						
GEYT	**Alibeck**	**41.57**	**313**	IAmb	IAmb	13 56 51.7	
	comp=Z,1.8nm,0.8s						
ZALV	**Zalesovo Beam**	**41.60**	**350**	P	**P**	**13 56 47.3**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=168,slow=8.0,SNR=5.1						
MJAR	**Matsushiro Arr**	**44.50**	**51**	LR	LR	14 18 12.9	
	comp=Z,39nm,18.1s,baz=235,slow=40						
ABKAR	**Akbulak array**	**46.51**	**328**	P	**P**	**13 57 25.5**	**-0.5**
ABKAR	**Akbulak array**	**46.51**	**328**	P	**P**	**13 57 25.3**	**-0.7**
ABKAR				IAmb	IAmb	13 57 41.2	
	comp=Z,2.9nm,0.9s						
NWAO	**Narrogin (SRO)**	**50.20**	**156**	P	**P**	**13 57 53.2**	**-1.5**
WRA	**Warramunga Arr**	**50.21**	**130**	P	**P**	**13 57 55.8**	**+0.7**
	comp=Z,1.1nm,0.9s,baz=311,slow=8.0,SNR=6.9						
WRAB	**Tennant Creek**	**50.21**	**130**	P	**P**	**13 57 55.1**	**0.0**
WRAB				IAmb	IAmb	13 58 02.9	
	comp=Z,11nm,1.4s						
WB2	**Warramunga Arr**	**50.22**	**130**	P	**P**	**13 57 55.0**	**-0.1**
WB2				IAmb	IAmb	13 58 06.4	
	comp=Z,4.3nm,1.0s						
WR0	**Warramunga Arr**	**50.37**	**130**	P	**P**	**13 57 58.3**	**+2.1**
WR0				IAmb	IAmb	13 58 05.0	
	comp=Z,6.8nm,1.3s						
ASAR	**Alice Springs**	**52.24**	**134**	P	**P**	**13 58 11.4**	**+1.1**
	comp=Z,0.5nm,0.5s,baz=312,slow=7.0,SNR=16						
BRTR	**Keskin Array B**	**60.33**	**308**	P	**P**	**13 59 09.3**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=117,slow=5.4,SNR=3.1						
GERES	**GERESS Array B**	**75.02**	**317**	P	**P**	**14 00 41.9**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=77,slow=5.1,SNR=2.8						
NOA	**NORSAR Array B**	**75.97**	**330**	LR	LR	14 36 59.5	
	comp=Z,29nm,20.8s,baz=290,slow=38						

MAN 24 13:49:22.4, 9°96N×124°13E, h32km, mb3.7, ML2.5, MS1.9, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.40**	**335**	*eP*	Pn	13 49 32.7	+0.7
LLP				*eS*	Sn	13 49 40.0	+1.7
MSLP	**Maasin**	**0.74**	**76**	*eP*	Pb	13 49 36.8	0.0
MSLP				*eS*	Sn	13 49 47.2	+0.4
OCLP	**Ormoc**	**1.19**	**23**	*eP*	Pb	13 49 45.2	+0.8
OCLP				*eS*	Sb	13 50 05.0	+5.6

*ANF **24** 13:53:27.9±0.3, 42°.61N×123°.96W, h9km±2km, ML3.9/24, Error ellipse: s-maj=2.7km s-min=1.5km az=75.0*
*SEA **24** 13:53:28.2±2.7, 42°.61N±0°.04×124°.0W±0°.1, h5km±3km, ML3.8/83, Error ellipse: s-maj=11.7km s-min=4.6km az=105.0*
*IDC **24** 13:53:29.1±1.7, 42°.76N×123°.58W, h0km, mb3.0/3, mb1 3.4/7, mb1mx3.3/37, mbtmp3.0/7, ML3.0/3, Error ellipse: s-maj=27.0km s-min=7.3km az=75.0*
*NEIC **24** 13:53:29.2±1.7, 42°.59N±0°.04×124°.07W±0°.09, h11km±4km, Error ellipse: s-maj=10.0km s-min=4.8km az=101.0*

ISC 24 13:53:28.5±1.2, 42°59N±0°02×123°97W±0°03, h3km±9km, n83, σ1°50/92, Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
K02D	**Willamette Mer**	**0.25**	**63**	P	**Pg**	**13 53 33.2**	**-0.1**
	baz=249,SNR=1000						
K02D				S	**Sg**	**13 53 36.2**	**-0.3**
	baz=249						
KEBM	**Edson Butte**	**0.40**	**317**		**Pg**	**13 53 36.2**	**0.0**
KBO	**Bosley Butte**	**0.42**	**207**		**Pg**	**13 53 36.9**	**+0.2**
KBO				Sg	**Sb**	**13 53 44.7**	**-0.7**
L02E	**Cave Junction**	**0.51**	**148**	P	**Pg**	**13 53 38.2**	**0.0**
	baz=330,SNR=1000						
L02E				S	**Sg**	**13 53 45.5**	**+0.8**
	baz=330						
J01E	**Myrtle Point**	**0.58**	**2**	P	**Pg**	**13 53 39.1**	**-0.5**
	baz=182,SNR=1000						
HUMO	**Hull Mountain**	**0.74**	**88**		**Pg**	**13 53 42.0**	**-0.8**
KRMB	**Red Mountain**	**1.06**	**178**		**Pg**	**13 53 48.8**	**-0.1**
KRMB					**Sn**	**13 54 05.6**	**-0.2**
I03D	**Drain, OR**	**1.20**	**22**	P	**Pg**	**13 53 49.5**	**-2.0**
	baz=202,SNR=292						
I03D				S	**Sg**	**13 54 06.8**	**-0.3**
	baz=202						
YBH	**Yreka Blue Hor**	**1.26**	**132**	Pg	**Pg**	**13 53 51.6**	**-1.1**
	30nm,0.3s,baz=323,slow=15,SNR=241						
YBH				Lg	Lg	13 54 08.1	
	35nm,0.3s,baz=81,slow=19,SNR=21						
YBH	**Yreka Blue Hor**	**1.26**	**132**		**Pg**	**13 53 51.5**	**-1.3**
L04D	**Klamath Falls**	**1.28**	**106**	P	**Pg**	**13 53 51.7**	**-1.4**
	baz=288,SNR=159						
L04D				S	**Sg**	**13 54 10.2**	**+0.4**
	baz=288						
M02C	**Callahan**	**1.45**	**145**	P	**Pn**	**13 53 54.3**	**-1.4**
	baz=326,SNR=401						
M02C				S	**Sb**	**13 54 15.2**	**0.0**
	baz=326						
J04D	**Umpqua Nationa**	**1.51**	**64**	Pg	**Pn**	**13 53 56.6**	**-0.1**
	baz=246,SNR=19						
I02D	**Swisshome**	**1.52**	**3**	P	**Pn**	**13 53 55.1**	**-1.5**
	baz=183,SNR=20						
I02D				Sb	**Sn**	**13 54 16.5**	**-0.4**
	baz=183						
K04D	**Chiloquin, OR**	**1.63**	**88**	Pb	**Pn**	**13 53 58.4**	**+0.1**
	baz=270						
K04D				Sg	**Sg**	**13 54 21.9**	**+0.9**
	baz=270						
I04A	**Tendick Farm,**	**1.66**	**43**	P	**Pn**	**13 53 57.4**	**-1.2**
	baz=224,SNR=67						
I04A				Sb	**Sn**	**13 54 20.5**	**+0.1**
	baz=224						
KHMM	**Horse Mountain**	**1.72**	**174**		**Pn**	**13 53 58.6**	**-0.9**
JCC	**Jacoby Creek,**	**1.77**	**182**		**Pn**	**13 53 58.6**	**-1.4**
M04C	**Macdoel**	**1.77**	**116**	P	**Pn**	**13 53 59.9**	**-0.3**
	baz=299,SNR=477						
N02D	**Trinity Center**	**1.87**	**149**	P	**Pn**	**13 54 01.8**	**+0.3**
	baz=331,SNR=156						
COR	**Corvallis**	**2.06**	**13**		**Pn**	**13 54 03.8**	**-0.1**
J05D	**Fort Rock, OR**	**2.12**	**70**	P	**Pn**	**13 54 04.7**	**-0.4**
	baz=252,SNR=151						
J05D				Sb	**Sb**	**13 54 35.5**	**+1.0**
	baz=252						
H04D	**Lebanon**	**2.13**	**24**	P	**Pn**	**13 54 04.6**	**-0.4**
	baz=205,SNR=69						
H04D				S	**Sn**	**13 54 31.4**	**-0.6**
	baz=205						
K05A	**Summer Lake**	**2.27**	**85**		**Pn**	**13 54 08.8**	**+1.7**
WDC	**Whiskeytown Da**	**2.27**	**151**		**Pn**	**13 54 07.6**	**+0.7**
KMRM	**Mail Ridge**	**2.37**	**175**		**Pn**	**13 54 07.9**	**-0.4**
H04A	**Detroit Lake**	**2.46**	**31**		**Pn**	**13 54 09.3**	**-0.3**
PINE	**Pine Mountain**	**2.52**	**60**		**Pn**	**13 54 11.2**	**+0.6**
O02D	**Mt. Diablo Mer**	**2.56**	**159**	P	**Pn**	**13 54 10.5**	**-0.6**
	baz=341,SNR=21						
I05D	**Terrebonne, OR**	**2.59**	**47**	P	**Pn**	**13 54 10.8**	**-0.6**
	baz=229,SNR=52						
G03D	**McMinnville, O**	**2.67**	**11**	Pb	**Pb**	**13 54 15.3**	**-1.7**
	baz=191,SNR=20						
MOD	**Modoc Plateau**	**2.80**	**103**		**Pn**	**13 54 15.7**	**+1.3**
O03E	**Paynes Creek**	**2.81**	**144**	Pb	**Pb**	**13 54 18.6**	**-0.8**
	baz=326,SNR=33						
KCPM	**Cahto Peak**	**2.91**	**174**		**Pn**	**13 54 15.3**	**-0.5**
G05D	**Wamic, OR**	**3.27**	**35**	P	**Pn**	**13 54 20.7**	**-0.1**
	baz=217,SNR=26						
G05D				Sb	**Sb**	**13 55 09.0**	**+1.5**
	baz=217						
F04A	**Amboy**	**3.53**	**18**		**Pn**	**13 54 24.1**	**-0.1**
ORV	**Oroville**	**3.56**	**148**		**Pn**	**13 54 28.5**	**+4.0**
F04D	**Rainier, OR**	**3.56**	**11**	Sg	**Sg**	**13 55 24.8**	**+1.8**
	baz=191						
G06A	**Carlson Farm,**	**3.58**	**41**		**Pn**	**13 54 25.6**	**+0.7**
I07A	**Izee**	**3.58**	**64**		**Pn**	**13 54 26.4**	**+1.3**
HOPS	**Hopland Field**	**3.65**	**169**		**Pn**	**13 54 23.3**	**-2.6**
F05D	**White Salmon**	**3.76**	**28**	Sg	**Sg**	**13 55 31.6**	**+2.4**
	baz=210						
WVOR	**Wild Horse Val**	**3.94**	**90**		**Pn**	**13 54 29.3**	**-0.7**
E04D	**Cinebar**	**4.09**	**14**	Pb	**Pb**	**13 54 39.7**	**-1.5**
	baz=195						
E04D				Sg	**Sg**	**13 55 43.6**	**+3.6**
	baz=195						
J08A	**Circle Bar Ran**	**4.10**	**77**		**Pn**	**13 54 32.2**	**0.0**
AFDM	**Forest Hills D**	**4.29**	**147**	Pn	**Pn**	**13 54 34.8**	**+0.1**
LON	**Longmire**	**4.44**	**20**		**Pn**	**13 54 38.1**	**+1.3**
PAHR	**Pah Rah Range**	**4.50**	**128**		**Pn**	**13 54 38.2**	**+0.5**
G08A	**Pilot Rock**	**4.51**	**52**		**Pn**	**13 54 38.6**	**+0.7**
D04E	**Lakebay**	**4.67**	**10**	Pb	**Pb**	**13 54 48.6**	**-2.4**
	baz=191						
HAWA	**Hanford**	**4.95**	**38**	Pn	**Pn**	**13 54 45.5**	**+1.7**
D03D	**Eldon**	**4.99**	**7**	Pb	**Pb**	**13 54 55.5**	**-1.0**
	baz=187						
D03D				Sg	**Sg**	**13 56 11.4**	**+2.8**
	baz=187						
YERR	**Yerington**	**5.08**	**134**		**Pn**	**13 54 47.8**	**+2.1**
LTV	**Liberty**	**5.22**	**25**		**Pn**	**13 54 48.8**	**+1.2**
BMO	**Blue Mountains**	**5.33**	**53**		**Pn**	**13 54 49.6**	**+0.5**
WAKR	**Walker**	**5.34**	**138**		**Pn**	**13 54 53.7**	**+4.4**
KVN	**Kaiserville**	**5.68**	**126**		**Pn**	**13 54 56.3**	**+2.3**
RYN	**Ryan**	**5.72**	**132**		**Pn**	**13 54 58.2**	**+3.7**
F10A	**Beach Ranch, E**	**5.90**	**53**		**Pn**	**13 54 59.2**	**+2.3**
NVAR	**Mina Array Bea**	**5.99**	**132**	Pn	**Pn**	**13 55 00.0**	**+1.8**
	0.8nm,0.3s,baz=307,slow=13,SNR=44						
NVAR	**Mina Array Bea**	**5.99**	**132**		**Pn**	**13 55 00.3**	**+2.1**
MFID	**Camas Ranch**	**6.03**	**79**		**Pn**	**13 55 00.7**	**+2.0**
NV11	**Mina Array Sit**	**6.07**	**131**		**Pn**	**13 54 60.0**	**+0.7**
PGC	**Sidney**	**6.08**	**3**	Pn	**Pn**	**13 54 57.7**	**-1.5**
SAO	**San Andreas Ge**	**6.13**	**161**	Pn	**Pn**	**13 55 00.7**	**+0.7**
B08A	**Colville Reser**	**6.63**	**28**	Pn	**Pn**	**13 55 07.2**	**+0.5**
ELK	**Elko**	**6.79**	**103**	Pn	**Pn**	**13 55 11.0**	**+1.8**
	0.0nm,0.3s,baz=294,slow=12,SNR=2.4						
PMPB	**Misharch Peak**	**6.82**	**158**	Pn	**Pn**	**13 55 09.6**	**+0.1**
PAGB	**Antelope Grade**	**7.43**	**156**		**Pn**	**13 55 19.4**	**+1.6**
NEW	**Newport**	**7.44**	**38**	Pn	**Pn**	**13 55 16.7**	**-1.3**
	0.2nm,0.3s,baz=276,slow=19,SNR=2.8						
NEW				Pg	Pb	13 55 31.6	-6.6
	0.2nm,0.3s,baz=223,slow=19,SNR=2.0						
NEW				Lg	Lg	13 57 21.3	
	0.3nm,0.3s,baz=293,slow=15,SNR=3.1						
NEW	**Newport**	**7.44**	**38**		**Pn**	**13 55 16.8**	**-1.2**
MSO	**Missoula**	**8.30**	**56**		**Pn**	**13 55 27.3**	**-2.5**
PDAR	**Pinedale Array**	**10.61**	**84**	Pn	**Pn**	**13 56 02.7**	**+1.1**
	baz=266,slow=13,SNR=2.3						
YKA	**Yellowknife Ar**	**20.70**	**12**	P	**P**	**13 58 08.9**	**-0.5**
	0.7nm,0.7s,baz=196,slow=12,SNR=8.7						
TXAR	**Lajitas Array**	**21.02**	**122**	P	**P**	**13 58 14.7**	**+1.2**
	0.5nm,0.8s,baz=305,slow=9.5,SNR=5.7						
TXAR	**Lajitas Array**	**21.02**	**122**	P	**P**	**13 58 10.7**	**-2.7**
ILAR	**Eielson Array**	**25.75**	**337**	P	**P**	**13 59 01.9**	**+1.8**
	0.4nm,0.8s,baz=144,slow=7.8,SNR=4.5						
H11N3	**WAKE ISLAND Hy**	**61.70**	**271**	T	T	15 10 27.8	
	baz=50,slow=75,SNR=8.8						
H11N2	**WAKE ISLAND Hy**	**61.70**	**271**	T	T	15 10 34.0	
	baz=50,slow=75,SNR=6.3						
H11N1	**WAKE ISLAND Hy**	**61.72**	**271**	T	T	15 10 35.1	
	baz=50,slow=75,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**62.61**	**270**	T	T	15 11 35.0	
	baz=46,SNR=4.1						
H11S2	**WAKE ISLAND Hy**	**62.62**	**270**	T	T	15 11 40.4	
	baz=46						
H11S3	**WAKE ISLAND Hy**	**62.63**	**270**	T	T	15 11 36.8	
	baz=46						

MAN 24 14:02:20.4, 6°14N×124°71E, h29km, mb4.3, ML3.1, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.24**	**102**	*eP*	Pn	14 02 29.6	+1.3
SKMP	**Bagumbayan, Su**	**0.41**	**336**	*eP*	Pn	14 02 30.5	+0.1
SKMP				*eS*	Sn	14 02 38.9	+1.7
DDMP	**Don Marcelino,**	**1.00**	**92**	*eP*	Pn	14 02 38.2	-0.2
DDMP				*eS*	Sn	14 02 51.6	+0.1

IDC 24 14:17:31.9±8.5, 18°68S×175°35W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.7/29, mbtmp3.9/3, Error ellipse: s-maj=370.1km s-min=39.5km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.36**	**260**	P	P	14 26 07.2	-0.9
	0.2nm,0.3s,baz=98,slow=6.7,SNR=12						
ASAR	**Alice Springs**	**47.39**	**255**	P	P	14 26 08.9	+0.5
	2.4nm,0.4s,baz=90,slow=8.5,SNR=102						
ILAR	**Eielson Array**	**86.01**	**12**	P	P	14 30 13.8	0.0
	0.9nm,1.1s,baz=190,slow=4.6,SNR=4.1						

*BJI **24** 14:31:20.2±0.0, 6°.98S×130°.87E, h65km, mB5.0/41, mb5.0/66, Ms4.6/21, Ms7 4.2/17*
*MOS **24** 14:31:22.3±0.9, 6°.66S×130°.54E, h52km, mb5.5/45, Error ellipse: s-maj=9.3km s-min=5.5km az=106.3*
*NEIC **24** 14:31:24.7±2.0, 6°.63S±0°.05×130°.59E±0°.06, h60km±4km, mb5.3/80, Error ellipse: s-maj=8.8km s-min=6.4km az=66.0*
*IDC **24** 14:31:26.2±1.8, 6°.67S×130°.54E, h71km±15km, mb4.9/30, mb1 4.9/33, mb1mx4.8/37, mbtmp5.2/33, MS3.7/15, Ms1 3.7/15, ms1mx3.5/30, Error ellipse: s-maj=13.7km s-min=8.4km az=73.0*
*GCMT **24** 14:31:26.7±0.2, 6°.79S±0°.02×130°.62E±0°.02, h79km±2km, MW4.9/74, Moment Tensor Solution. s41,c50; s74,c100; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.93±.11; Mθθ -2.48±.09; Mϕϕ 0.54±.11; Mrθ 0.93±.07; Mrϕ -1.28±.13; Mθϕ -0.67±.07; Best double couple: Mo2.80800×10^16 NP1: ϕs 221.00000°, δ46.00000°, λ45.00000°. NP2: ϕs 96.00000°, δ60.00000°, λ126.00000°. Principal axes: T 2.5780, Plg58.0000°, Azm59.0000°; N 0.4530, Plg30.0000°, Azm256.0000°; P -3.0370, Plg8.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*DJA **24** 14:31:27.2±0.2, 7°S×213°E±, h82km±2km, M5.2/45, mB5.5/30, mB5.9/3, mb5.4/3, mb5.3/45, MLv5.8/13, Mw(mB)5.0/30, Mw(mB)5.4/3, Mwp5.0/1*

ISC 24 14:31:26.1±0.4, 6.72S±0.03×130.70E±0.04, h77km±3km, n493, σ1°56/519, mb5.2/106, 20C-8D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**1.39**	**155**	P	**Pn**	**14 31 51.8**	**+1.9**
SAUI				S	**Sn**	**14 32 08.7**	**+0.9**
SAUI	**Saumlaki**	**1.39**	**155**		**Pn**	**14 31 51.9**	**+2.0**
SAUI				Sn	**Sn**	**14 32 08.6**	**+0.8**
BNDI	**Bandanaira**	**2.32**	**340**	P	**Pn**	**14 32 03.9**	**+1.7**
MSAI	**Masohi**	**3.78**	**332**	P	**Pn**	**14 32 24.7**	**+2.6**
MSAI				S	**Sn**	**14 33 08.8**	**+3.4**
AAI	**Ambon**	**3.91**	**320**	P	**Pn**	**14 32 25.4**	**+1.6**
FAKI	**Fak Fak**	**4.08**	**22**	P	**Pn**	**14 32 26.6**	**+0.6**
FAKI	**Fak Fak**	**4.08**	**22**		**Pn**	**14 32 26.7**	**+0.6**
KMPI	**Kaimana, Papua**	**4.26**	**45**	P	**Pn**	**14 32 30.2**	**+1.6**
NLAI	**Namlea**	**4.98**	**314**	P	**Pn**	**14 32 40.3**	**+2.0**
	3.1nm8μm729nm,0.7s						
SIJI	**Sorong**	**5.84**	**6**	P	**Pn**	**14 32 49.4**	**-0.7**
	70nm,0.3s,baz=70,slow=15,SNR=54						
SIJI				S	**Sn**	**14 33 50.5**	**-5.2**
	148nm,0.3s,baz=110,slow=24,SNR=16						
SWI	**Sorong**	**5.84**	**6**	P	**Pn**	**14 32 49.6**	**-0.6**
	7.1nm10μm391nm,0.5s						
MTN	**Manton Dam**	**6.10**	**176**	P	**Pn**	**14 32 52.0**	**-1.7**
	baz=6.1,SNR=835						
MTN	**Manton Dam**	**6.10**	**176**		**Pn**	**14 32 52.5**	**-1.2**
KDU	**Kakadu**	**6.18**	**164**	P	**Pn**	**14 32 53.4**	**-1.4**
	baz=6.2,SNR=1000						
RKPI	**Ransiki, Papua**	**6.23**	**34**	P	**Pn**	**14 32 56.9**	**+1.5**
	36nm18μm2μm,0.8s						
SANI	**Sanana**	**6.60**	**314**	P	**Pn**	**14 33 03.2**	**+2.7**
	1.6nm5μm495nm,1.1s						
SOEI	**Soe**	**7.04**	**244**	P	**Pn**	**14 33 06.1**	**-0.6**
	8.0nm7μm7μm587nm,0.6s,587nm,0.6s						
SOEI	**Soe**	**7.04**	**244**		**Pn**	**14 33 06.2**	**-0.5**
WAMI	**Wamena**	**8.46**	**71**	P	**Pn**	**14 33 29.6**	**+3.7**
	5μm653nm,0.8s						
KDI	**Kendari**	**8.50**	**288**	P	**Pn**	**14 33 28.8**	**+2.4**
	885nm64nm,1.0s						
KNRA	**Kununurra**	**9.10**	**192**	P	**Pn**	**14 33 31.4**	**-3.3**
	baz=9.1,SNR=1000						
KNRA	**Kununurra**	**9.10**	**192**		**Pn**	**14 33 31.4**	**-3.3**
SMPI	**Sarmi**	**9.27**	**60**	P	**Pn**	**14 33 40.0**	**+3.1**
	1μm109nm,1.1s						
LUWI	**Luwuk**	**9.71**	**305**		**Pn**	**14 33 45.6**	**+2.6**
MMPI	**Merauke**	**9.76**	**101**	P	**Pn**	**14 33 45.7**	**+2.1**
	5μm428nm,0.5s						
KMSI	**Cibinong**	**9.87**	**317**	P	**Pn**	**14 33 48.4**	**+3.2**
GENI	**Genyem**	**10.29**	**67**	P	**Pn**	**14 33 51.5**	**+0.6**
	208nm,0.8s						
BKSI	**Bulukumba**	**10.61**	**277**	P	**Pn**	**14 33 58.9**	**+3.6**
	878nm77nm,0.8s						
APSI	**Ampana**	**10.71**	**302**	P	**Pn**	**14 34 00.2**	**+3.5**
	1μm132nm,1.0s						
BNSI	**Bone**	**10.79**	**282**	P	**Pn**	**14 34 01.4**	**+3.7**
	2μm121nm,0.7s						
JAY	**Jayapura**	**10.81**	**68**	P	**Pn**	**14 33 59.3**	**+1.2**
	4.0nm,0.3s,baz=215,slow=11,SNR=16						
JAY				S	**Sn**	**14 35 56.7**	**-0.7**
	3.3nm,0.3s,baz=122,slow=22,SNR=8.7						
SPSI	**Sidrap Palu**	**11.22**	**284**	P	**Pn**	**14 34 07.3**	**+3.7**
	1μm94nm,0.5s						
MRSI	**Marisa**	**11.29**	**309**	P	**Pn**	**14 34 07.6**	**+3.1**
	2μm1μm143nm,1.0s						
PCI	**Palu**	**12.28**	**298**	P	**Pn**	**14 34 16.4**	**-1.6**
	823nm47nm,1.0s						
FITZ	**Fitzroy Crossi**	**12.34**	**203**	P	Pn	14 34 12.9	-5.9
	73nm,0.3s,baz=31,slow=9.8,SNR=359						
FITZ				S	Sn	14 36 21.9	-13
	62nm,0.3s,baz=107,slow=20,SNR=7.3						
FITZ				LR	LR	14 40 01.8	
	comp=Z,789nm,18.8s,baz=31,slow=42						
FITZ	**Fitzroy Crossi**	**12.34**	**203**		Pn	14 34 13.0	-5.8
MPSI	**Mapaga**	**12.86**	**303**	P	**P**	**14 34 30.0**	**-3.7**
	906nm35nm,0.7s						
PLAI	**Plampang**	**12.97**	**260**	P	**Pn**	**14 34 27.3**	**-0.1**
	2μm123nm,0.8s						
WB0	**Warramunga Arr**	**13.46**	**165**		Pn	14 34 28.2	-5.6
WRAB	**Tennant Creek**	**13.61**	**165**	*deP*	Pn	14 34 30.5	-5.3
WRAB				pmax	pmax		
	comp=Z,225nm,0.8s						
WRAB	**Tennant Creek**	**13.61**	**165**		Pn	14 34 30.1	-5.7
WRA	**Warramunga Arr**	**13.61**	**165**	P	**Pn**	**14 34 31.3**	**-4.6**
	comp=Z,87nm,0.3s,baz=340,slow=12,SNR=674						
WRA				S	Sn	14 36 53.9	-12
	comp=Z,53nm,0.3s,baz=328,slow=23,SNR=8.4						
WRA				LR	LR	14 40 09.9	
	comp=Z,441nm,20.3s,baz=335,slow=38						
WB2	**Warramunga Arr**	**13.62**	**165**		Pn	14 34 30.3	-5.6
WR0	**Warramunga Arr**	**13.68**	**165**		Pn	14 34 31.2	-5.6
COEN	**Coen**	**14.22**	**121**		**Pn**	**14 34 40.7**	**-3.1**
MATI	**Mati**	**14.28**	**342**	*eP*	**P**	**14 34 50.0**	**+0.5**
DAV	**Davao City (W)**	**14.62**	**339**	LR	LR	14 41 56.6	
	comp=Z,150nm,18.6s,baz=140,slow=43						
KCP	**Kidapawan**	**14.74**	**338**	*eP*	**P**	**14 34 54.7**	**0.0**
KBKI	**Kotabaru**	**14.87**	**282**	P	**P**	**14 34 56.4**	**+0.3**
	comp=Z,612nmcomp=Z,40nm,0.7s						
BUKP	**Musuan**	**15.55**	**339**	*eP*	**P**	**14 35 03.6**	**-0.1**
CGP	**Cagayan de Oro**	**16.22**	**338**	*eP*	**P**	**14 35 11.8**	**+0.8**
BUTP	**Butuan**	**16.38**	**342**	*eP*	**P**	**14 35 13.5**	**+0.6**
PMG	**Port Moresby**	**16.52**	**100**	*diP*	**P**	**14 35 15.9**	**+1.5**
PMG				pmax	pmax		
	comp=Z,358nm,0.6s						
PMG	**Port Moresby**	**16.52**	**100**	P	**P**	**14 35 14.1**	**-0.3**
	comp=Z,6.2nm,0.3s,baz=292,slow=4.9,SNR=48						
PMG				S	**Sn**	**14 38 06.6**	**-9.3**
	comp=Z,4.5nm,0.3s,baz=211,slow=22,SNR=7.6						
PMG				LR	LR	14 42 24.2	
	comp=Z,299nm,18.6s,baz=334,slow=40						
**PM

comp=Z,383nm,19.2s,baz=21,slow=38
HNR Honiara 29.08 97 P **P** **14 37 20.5 +0.9**
comp=Z,114nm,0.7s,baz=216,slow=4.6,SNR=3.6
HNR LR LR 14 49 19.9
comp=Z,152nm,21.0s,baz=270,slow=37
JRMM Jerantut 30.08 290 P P 14 38 06.0 +38
RKGY Rocky Gully 30.51 203 P **P** **14 37 33.7 +1.7**
baz=30,SNR=23
PATS Pohnpei 30.66 64 P **P** **14 37 35.6 +2.1**
baz=31
ARMA Armidale 30.70 143 P **P** **14 37 36.4 +2.6**
baz=31,SNR=6.3
ARPS Mount Arapiles 31.60 163 P **P** **14 37 43.1 +1.6**
baz=32,SNR=21
YNG Young 31.95 152 P **P** **14 37 47.1 +2.4**
baz=32,SNR=6.9
UBPT Khong Chiam 33.21 311 P **P** **14 37 55.4 -0.4**
UBPT IAmb IAmb 14 37 56.7
comp=Z,35nm,0.7s
TOO Toolangi 33.53 158 P **P** **14 38 01.3 +2.9**
baz=34,SNR=6.4
PBKT Sadao Pong 37.42 308 P **P** **14 38 31.1 -0.9**
JNU Nakatsue 39.62 0 P **P** **14 38 49.8 -0.4**
JNU IAmb IAmb 14 38 51.3
comp=Z,36nm,0.8s
CM31 Chiang Mai Arr 40.09 309 P **P** **14 38 53.9 -0.4**
CM31 IAmb IAmb 14 38 55.1
comp=Z,19nm,0.6s
CMAR Chiang Mai Arr 40.09 309 *i* P **P** **14 38 54.0 -0.3**
CMAR pmax pmax
comp=Z,13nm,0.5s
CMAR Chiang Mai Arr 40.09 309 P **P** **14 38 54.0 -0.3**
comp=Z,14nm,0.7s,baz=137,slow=7.3,SNR=102
CMAR PcP **PcP** **14 40 59.2 +1.4**
comp=Z,5.5nm,0.7s,baz=158,slow=2.4,SNR=8.1
CMAR ScP **ScP** **14 44 40.0 -0.2**
comp=Z,1.4nm,0.7s,baz=158,slow=2.8,SNR=4.3
CMAR LR LR 14 58 09.7
comp=Z,44nm,18.5s,baz=150,slow=40
NJ2 Nanjing 40.17 344 *e*P **P** **14 38 55.1 +0.3**
NJ2 pmax pmax
comp=Z,27nm,0.7s
WHN Wuhan 40.23 338 ⇓P **P** **14 38 56.1 +0.9**
WHN pmax pmax
comp=Z,100nm,1.2s
CHTO Chiang Mai 40.29 310 P **P** **14 38 56.0 0.0**
CHTO pmax pmax
comp=Z,25nm,0.8s
CHTO Chiang Mai 40.29 310 P **P** **14 38 56.0 0.0**
CHTO IAmb IAmb 14 38 57.2
comp=Z,25nm,0.8s
KMI Kunming 41.74 320 P **P** **14 39 09.3 +1.3**
KMI sP sP 14 39 33.1 -0.1
KMI pmax pmax
comp=Z,20nm,0.5s
KMI pmax pmax
comp=Z,55nm,5.4s
ENH Enshi 42.03 332 P **P** **14 39 09.9 -0.2**
TJN Taejon 42.98 356⇓ *e*P **P** **14 39 19.7 +2.1**
MJAR Matsushiro Arr 43.60 9 P **P** **14 39 21.5 -1.2**
MJAR pmax pmax
comp=Z,3.0nm,0.9s
MJAR Matsushiro Arr 43.60 9 P **P** **14 39 21.9 -0.9**
comp=Z,14nm,0.8s,baz=186,slow=9.4,SNR=25
MJAR PcP **PcP** **14 41 09.7 +0.6**
comp=Z,4.5nm,0.7s,baz=182,slow=4.7,SNR=4.1
MJAR LR LR 14 55 37.2
comp=Z,58nm,21.7s,baz=240,slow=33
MJAR Matsushiro Arr 43.60 9 P **P** **14 39 21.5 -1.2**
MAJO Matsushiro 43.60 9 P **P** **14 39 22.0 -0.7**
MAJO pmax pmax
comp=Z,26nm,1.0s
MAJO Matsushiro 43.60 9 P **P** **14 39 22.0 -0.7**
MAT Matsushiro 43.60 9 P **P** **14 39 21.7 -1.0**
MAT *e*S **S** **14 45 45.0 -1.5**
MJB9 Matsu-Tunnel 43.61 9 P **P** **14 39 22.0 -0.8**
KSAR Wonju Array Be 44.01 357 P **P** **14 39 25.7 -0.2**
KSAR 14 41 11.5
KSAR Wonju Array Be 44.01 357 P **P** **14 39 25.7 -0.2**
KSAR **PcP** **14 41 11.5 +1.2**
KSRS Korea Array 44.02 357 P **P** **14 39 26.6 +0.7**
comp=Z,6.5nm,0.6s,baz=173,slow=9.3,SNR=41
KSRS PcP **PcP** **14 41 11.2 +0.9**
comp=Z,4.9nm,0.7s,baz=192,slow=2.4,SNR=9.1
KSRS LR LR 14 57 03.3
comp=Z,28nm,19.8s,baz=168,slow=35
KS19 Wonju Array Si 44.07 357 P **P** **14 39 24.8 -1.6**
TIA Tai'an 44.56 344 P **P** **14 39 30.0 -0.4**
TIA pmax pmax
comp=Z,12nm,0.9s
CD2 Chengdu 45.44 327 P **P** **14 39 37.0 -0.5**
CD2 pmax pmax
comp=Z,20nm,0.7s
XAN Xi'an 45.48 334 P **P** **14 39 36.4 -1.4**
XAN pP pP 14 39 56.3 +1.6
XAN sP pwP 14 40 05.8 +2.3
XAN PcP **PcP** **14 41 16.5 +0.9**
XAN ScP **ScP** **14 45 00.9 -0.8**
XAN pmax pmax
comp=Z,23nm,1.2s
XAN pmax pmax
comp=Z,110nm,5.3s
MSVF Nonsavu 47.43 108 P **P** **14 39 54.3 +0.9**
MSVF pmax pmax
comp=Z,34nm,0.8s
MSVF Nonsavu 47.43 108 P **P** **14 39 54.3 +0.9**
MSVF IAmb IAmb 14 39 56.6
comp=Z,34nm,0.8s
BJT Baijiatuau 48.40 345 P **P** **14 39 59.8 -0.5**
BJT pmax pmax
comp=Z,42nm,0.6s
BJT Baijiatuau 48.40 345 P **P** **14 39 59.8 -0.5**
BJI Beijing 48.42 345⇑ *i*P **P** **14 40 00.4 0.0**
BJI sP **sP** **14 40 24.3 -1.1**
BJI PcP **PcP** **14 41 26.6 +0.9**
BJI pmax pmax
comp=Z,56nm,0.6s
SNY Shenyang 48.75 353 ⇑P **P** **14 40 00.5 -2.4**
SNY pmax pmax
comp=Z,19nm,0.7s
MSHR Mys Shultsa 49.06 0⇑ *e*P **P** **14 40 05.9 +0.6**
LZH Lanzhou 49.49 331 *e*P **P** **14 40 09.8 +0.8**
LZH pP pP 14 40 28.8 +2.7
LZH sP pwP 14 40 35.4 +0.6
LZH *e*PP **PP** **14 42 02.8 -1.1**
LZH pmax pmax
comp=Z,19nm,1.2s
LZH pmax pmax
comp=Z,59nm,4.9s
LZH LR LR
comp=Z,160nm,14.1s
LZH LR LR
comp=Z,170nm,11.9s
LZH LR LR
comp=Z,190nm,15.2s
QRZ Quartz Range 50.41 139 P **P** **14 40 18.2 +2.5**
HHC Hu-ho-hao-te 50.50 341 *e*P **P** **14 40 16.9 +0.5**
HHC pmax pmax
comp=Z,11nm,1.0s
HHC pmax pmax
comp=Z,85nm,7.5s
HHC LR LR
comp=Z,170nm,14.5s
HHC LR LR
comp=Z,140nm,13.6s
HHC LR LR
comp=Z,96nm,13.6s
CN2 Changchun 50.51 355 *e*P **P** **14 40 16.3 0.0**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
USA0B Ussuriysk Arra 50.69 1 P **P** **14 40 17.7 0.0**
USA0B pmax pmax
comp=Z,38nm,1.5s
USA0B Ussuriysk Arra 50.69 1 P **P** **14 40 17.7 0.0**
USA0B IAmb IAmb 14 40 19.1
comp=Z,38nm,1.5s
USRK Ussuriysk Ar. 50.69 1 P **P** **14 40 18.2 +0.5**
comp=Z,8.6nm,0.6s,baz=183,slow=7.0,SNR=24
RPZ Rata Peaks 51.04 143 P **P** **14 40 22.4 +2.0**
comp=Z,38nm,0.8s,baz=286,slow=2.5,SNR=22
RPZ Rata Peaks 51.04 143 P **P** **14 40 22.2 +1.7**
RPZ IAmb IAmb 14 40 23.3
comp=Z,40nm,0.9s
MDJ Mudanjiang 51.11 359 P **P** **14 40 21.5 +0.7**
THZ Tophouse 51.13 140 P **P** **14 40 22.6 +1.4**
THZ IAmb IAmb 14 40 24.6
comp=Z,31nm,0.7s
OXZ Oxford 51.42 142 P **P** **14 40 24.0 +0.8**
OXZ IAmb IAmb 14 40 27.0
comp=Z,28nm,0.6s
TUWZ Tuamarina 51.64 139 P **P** **14 40 25.9 +1.0**
BKZ Black Stump Fm 52.31 135 P **P** **14 40 31.0 +1.0**
BKZ IAmb IAmb 14 40 31.8
comp=Z,16nm,0.8s
URZ Urewera 52.36 134 P **P** **14 40 30.7 +0.4**
comp=Z,5.6nm,0.6s,baz=248,slow=8.0,SNR=6.8
URZ Urewera 52.36 134 IAmb IAmb 14 40 49.4
comp=Z,31nm,1.4s
CHLP Challavanipeta 52.38 299 *e*P **P** **14 40 30.6 -0.2**
LSA Lhasa 52.48 316 P **P** **14 40 32.3 +0.4**
LSA pmax pmax
comp=Z,110nm,0.9s
LSA Lhasa 52.48 316 P **P** **14 40 32.6 +0.7**
LSA pmax pmax
comp=Z,28nm,1.0s
LSA Lhasa 52.48 316 *i* P **P** **14 40 32.1 +0.2**
SNR=21
LSA Lhasa 52.48 316 P **P** **14 40 32.6 +0.7**
LSA IAmb IAmb 14 40 33.1
comp=Z,28nm,1.0s
ODAN Odare 53.60 310 *e*P **P** **14 40 39.1 -0.8**
comp=Z,112nm,0.7s
TAPN Taplejung 53.62 311 *e*P **P** **14 40 39.4 -0.7**
comp=Z,58nm,0.4s
PVM Polavaram 54.02 297 *e*P **P** **14 40 41.8 -1.0**
GTA Gaotai 54.06 331⇑ P **P** **14 40 43.3 +0.4**
GTA pP pP 14 40 59.6 -0.8
GTA sP sP 14 41 06.3 -2.0
GTA PcP **PcP** **14 41 48.1 +1.1**
GTA S **S** **14 48 14.9 +1.3**
GTA ScS **ScS** **14 50 22.9 -2.4**
GTA SS **SS** **14 51 57.3 +0.9**
GTA pmax pmax
comp=Z,10.0nm,0.9s
GTA pmax pmax
comp=Z,100nm,7.0s
GTA LR LR
comp=Z,120nm,16.5s
GTA LR LR
comp=Z,100nm,18.7s
RAMN Ramite 54.24 310 *e*P **P** **14 40 44.3 -0.3**
comp=Z,245nm,0.5s
YSS Yuzh-Sakhalins 54.50 10 *e*P **P** **14 40 46.2 +0.5**
YSS pmax pmax
comp=Z,20nm,1.2s
YSS Yuzh-Sakhalins 54.50 10 P **P** **14 40 45.1 -0.7**
YSS IAmb IAmb 14 40 49.4
comp=Z,24nm,1.1s
SKHT Srikalahasti 54.54 292 *e*P **P** **14 40 44.6 -2.0**
MYLAV Mylavaram 54.72 296 *e*P **P** **14 40 46.8 -1.1**
JIRN Jiri 54.93 311 *e*P **P** **14 40 49.0 -0.7**
comp=Z,159nm,0.7s
ADKI Addanki 55.00 295 *e*P **P** **14 40 48.9 -1.0**
GUN Gumba 55.29 311 *e*P **P** **14 40 51.6 -0.7**
comp=Z,187nm,0.7s
PKI Pulchoki 55.47 310 *e*P **P** **14 40 52.6 -1.0**
comp=Z,58nm,0.7s
PKIN Phulchoki 55.48 310 *e*P **P** **14 40 52.5 -1.1**
comp=Z,48nm,0.7s
GGR Gangavaram 55.49 297 *e*P **P** **14 40 52.2 -1.3**
KKN Kakani 55.68 310 *e*P **P** **14 40 54.1 -0.9**
KLR Kul'dur 55.72 1*c i*P **P** **14 40 54.8 +0.3**
KLR pmax pmax
comp=Z,17nm,1.0s
DMN Daman 55.72 310 *e*P **P** **14 40 54.6 -0.7**
comp=Z,112nm,0.9s
NJS Nagarjunasagar 55.84 295 *e*P **P** **14 40 54.3 -1.7**
SRLM Srisailam 56.06 294 *e*P **P** **14 40 55.8 -1.8**
GKN Gorkha 56.28 310 *e*P **P** **14 40 58.4 -0.8**
RPR Rampur 56.67 298 *e*P **P** **14 41 00.7 -1.2**
HYB Hyderabad 56.81 296 *i* P **P** **14 41 01.0 -2.0**
HYBB Hyderabad (bro 56.82 296 *e*P **P** **14 41 01.2 -1.7**
KOLN Koldanda 56.96 309 *e*P **P** **14 41 03.5 -0.5**
DANN Dangsing 57.12 310 *e*P **P** **14 41 04.5 -0.8**
comp=Z,115nm,0.9s
GRNR Gornyy 57.47 4⇑ *i*P **P** **14 41 07.1 +0.2**
GRNR *e*S **S** **14 49 02.4 +4.2**
GRNR pmax pmax
comp=Z,7.0nm,0.8s
GRNR smax smax
comp=E,2.0nm,0.9s
GRNR MLR MLR
comp=Z,90nm,13.0s
SRSP Sriramsagar 57.54 297 *e*P **P** **14 41 06.2 -1.8**
ULN Ulaanbaatar 58.22 341*c e*P **P** **14 41 13.2 +0.8**
ULN pmax pmax
comp=Z,41nm,0.7s
ULN Ulaanbaatar 58.22 341 P **P** **14 41 11.8 -0.6**
TYV Tymovskoe 58.27 9 *e*P **P** **14 41 13.4 +0.9**
TYV *e* 14 49 13.1
TYV pmax pmax
comp=Z,17nm,0.9s
SONM Songino Array 58.40 341 P **P** **14 41 14.6 +1.0**
SONM pmax pmax
comp=Z,23nm,1.2s
SONM Songino Array 58.40 341 P **P** **14 41 14.4 +0.8**
comp=Z,12nm,0.6s,baz=158,slow=7.0,SNR=84
SONM PcP **PcP** **14 42 04.0 +0.3**
comp=Z,6.6nm,0.7s,baz=152,slow=5.4,SNR=4.8
SONM PKP2bc 15 11 04.4
comp=Z,0.4nm,0.8s,baz=295,slow=1.5,SNR=5.1
SONM Songino Array 58.40 341 P **P** **14 41 14.6 +1.0**
KLRI Killari 58.79 296 *e*P **P** **14 41 14.8 -2.0**
ZEA Zeya 60.30 358 *e*P **P** **14 41 27.1 +0.7**
ZEA pmax pmax
comp=N,24nm,1.0s
ZEA pmax pmax
comp=Z,35nm,0.9s
POO Poona 61.40 295 *ex* **P** **14 41 31.2 -3.5**
ZAK Zakamensk 61.63 340 *e*P **P** **14 41 36.0 +0.3**
ZAK pmax pmax
comp=Z,11nm,1.1s
TLY Talaya 62.63 341 *e*P **P** **14 41 43.2 +1.0**
TLY *e*S **S** **14 50 04.0 -0.4**
TLY pmax pmax
comp=Z,37nm,0.9s
TLY MLR MLR
comp=Z,141nm,5.0s
MOY Mondy 63.49 340 *e*P **P** **14 41 49.1 +1.1**
MOY pmax pmax
comp=Z,41nm,1.4s
WMQ Urumqi 63.54 327 *e*P **P** **14 41 49.3 +0.8**
WMQ pP pP 14 42 07.0 +0.6
WMQ sP sP 14 42 14.5 +0.2
WMQ pmax pmax
comp=Z,17nm,1.1s
WMQ pmax pmax
comp=Z,200nm,5.1s
WMQ LR LR
comp=Z,420nm,28.9s
WMQ LR LR
comp=Z,1μm,28.9s
WMQ LR LR
comp=Z,590nm,29.1s
PEA0B Petropavlovsk- 63.84 18 P **P** **14 41 51.5 +1.3**
PEA0B pmax pmax
comp=Z,56nm,0.8s
PEA0B Petropavlovsk- 63.84 18 P **P** **14 41 51.5 +1.3**
PETK Petropavlovsk- 63.84 18 P **P** **14 41 51.8 +1.6**
PETK Petropavlovsk- 63.84 18 P **P** **14 41 51.5 +1.3**
comp=Z,56nm,0.8s,baz=162,slow=3.5,SNR=145
PETK Petropavlovsk- 63.84 18 P **P** **14 41 51.8 +1.6**
PET Petropavlovsk 64.06 18 *e*P **P** **14 41 52.6 +1.0**
PET pmax pmax
comp=Z,69nm,0.9s
PET Petropavlovsk 64.06 18 P **P** **14 41 52.8 +1.2**
BOD Bodaibo 65.73 350 *e*P **P** **14 42 02.9 +0.5**
BOD pmax pmax
comp=Z,22nm,1.0s
NIL Nilore 67.56 310 P **P** **14 42 14.7 +0.1**
NIL pmax pmax
comp=Z,20nm,0.7s
NIL Nilore 67.56 310 P **P** **14 42 14.7 +0.1**
NIL IAmb IAmb 14 42 15.1
comp=Z,20nm,0.7s
MA2 Magadan 67.99 11*c i*P **P** **14 42 17.4 +0.7**
MA2 pmax pmax
comp=Z,56nm,1.7s
MA2 Magadan 67.99 11 P **P** **14 42 18.0 +1.3**
comp=Z,20nm,0.8s,baz=181,slow=6.4,SNR=21
MA2 Magadan 67.99 11 P **P** **14 42 18.2 +1.5**
MA2 IAmb IAmb 14 42 18.9
comp=Z,28nm,0.9s
PDGK Podgornoye 68.00 322 P **P** **14 42 17.0 -0.3**
KSH Kashi 68.28 317 P **P** **14 42 20.1 +1.0**
KSH PcP **pwP** **14 42 46.8 +1.2**
KSH PP **PP** **14 44 57.1 +6.3**
KSH S **S** **14 51 13.8 -0.4**
KSH sS sS 14 51 47.3 +0.6
KSH SS **SS** **14 55 41.1 +2.2**
KSH pmax pmax
comp=Z,37nm,0.8s
KSH pmax pmax
comp=Z,250nm,3.7s
KSH LR LR
comp=Z,230nm,6.1s
KSH LR LR
comp=Z,210nm,7.6s
KSH LR LR
comp=Z,310nm,5.9s
MK31 Makanchi Array 68.37 326 P **P** **14 42 20.1 +0.7**
MK31 pmax pmax
comp=Z,34nm,0.7s
MK31 Makanchi Array 68.37 326 P **P** **14 42 20.1 +0.7**
MK31 IAmb IAmb 14 42 20.8
comp=Z,34nm,0.7s
MKAR Makanchi Array 68.37 326 P **P** **14 42 19.9 +0.5**
comp=Z,43nm,0.6s,baz=120,slow=8.2,SNR=524
MKAR PKP2ab 15 10 39.0
comp=Z,0.2nm,0.7s,baz=42,slow=2.3,SNR=4.1
MKAR Makanchi Array 68.37 326 P **P** **14 42 20.0 +0.6**
YAK Yakutsk 68.55 359 *e*P **P** **14 42 20.1 0.0**
YAK *e* 14 42 44.3
YAK *e*PPP PPP 14 46 36.8
YAK *e*S **S** **14 51 14.4 -1.7**
YAK *e**SS **sS** **14 51 48.4 +1.2**
YAK pmax pmax
comp=Z,86nm,0.9s
YAK pmax pmax
comp=N,7.0nm,0.6s
YAK pmax pmax
comp=E,4.0nm,0.8s
YAK smax smax
comp=N,48nm,3.8s
YAK smax smax
comp=E,65nm,4.2s
YAK Yakutsk 68.55 359 P **P** **14 42 20.7 +0.6**
MAKZ Makanchi 68.55 326 P **P** **14 42 21.1 +0.6**
MAKZ pmax pmax
comp=Z,38nm,0.7s
MAKZ Makanchi 68.55 326 P **P** **14 42 21.1 +0.6**
KDJ Kajisay 68.80 320 P **P** **14 42 23.2 +0.8**
KDJ pmax pmax
comp=Z,18nm,0.9s
KDJ Kajisay 68.80 320 P **P** **14 42 23.2 +0.8**
NRN Naryn 69.21 319 P **P** **14 42 25.0 -0.1**
NRN pmax pmax
comp=Z,16nm,0.9s
NRN Naryn 69.21 319 P **P** **14 42 25.0 -0.1**
ULHL Ulahol 69.46 320 P **P** **14 42 27.0 +0.5**
SNR=12
KZA Kyzart 70.01 319 P **P** **14 42 31.2 +1.1**
SNR=43
KBK Karagaybulak 70.49 320 P **P** **14 42 33.6 +0.8**
SNR=16
UCH Uchtor 70.56 319 P **P** **14 42 34.5 +1.0**
SNR=40
AAK Ala-Archa 70.78 320*c i*P **P** **14 42 35.1 +0.6**
AAK pmax pmax
comp=Z,23nm,0.8s
AAK Ala-Archa 70.78 320 P **P** **14 42 35.4 +1.0**
SNR=21
AAK Ala-Archa 70.78 320 *i* P **P** **14 42 35.4 +1.0**
SNR=37
AAK Ala-Archa 70.78 320 P **P** **14 42 35.5 +1.0**
AAK IAmb IAmb 14 42 36.3
comp=Z,23nm,0.9s
CHMS Chumysh 70.79 320 P **P** **14 42 34.6 +0.3**
SNR=9.2
AML Almayashu 71.05 319 P **P** **14 42 37.3 +0.9**
SNR=54
USP Ospenovka 71.08 320 P **P** **14 42 36.6 +0.4**
SNR=46
KBL Kabul 71.11 310 P **P** **14 42 36.8 +0.1**
KBL pmax pmax
comp=Z,24nm,1.1s
KBL Kabul 71.11 310 P **P** **14 42 36.8 +0.1**
EKS2 Erkin-Say 71.25 319 P **P** **14 42 38.3 +1.0**
SNR=35
SEY Seymchan 71.40 10⇑ *e*P **P** **14 42 38.9 +1.3**
SEY Seymchan 71.40 10 P **P** **14 42 38.6 +1.1**
comp=Z,51nm,0.8s,baz=188,slow=4.6,SNR=155
ZAA0 Zalesovo Array 71.64 333 P **P** **14 42 38.3 -0.9**
ZAA0 IAmb IAmb 14 42 39.5
comp=Z,29nm,1.0s
ZALV Zalesovo Beam 71.64 333 *i* P **P** **14 42 38.5 -0.7**
ZALV pmax pmax
comp=Z,15nm,0.5s
ZALV Zalesovo Beam 71.64 333 P **P** **14 42 38.6 -0.6**
comp=Z,15nm,0.5s,baz=120,slow=4.4,SNR=89
ZALV LR LR 15 16 55.5
comp=Z,45nm,18.2s,baz=88,slow=38
ZALV Zalesovo Beam 71.64 333 P **P** **14 42 38.7 -0.5**
GAR Garm 71.96 315 P **P** **14 42 41.9 +0.3**
BTK Batken 72.06 316 P **P** **14 42 42.6 +0.5**
BTK pmax pmax
comp=Z,17nm,1.0s
BTK Batken 72.06 316 P **P** **14 42 42.6 +0.5**
KURK Kurchatov 72.64 328*c i*P **P** **14 42 45.2 0.0**
KURK pmax pmax
comp=Z,30nm,0.8s
KURK Kurchatov 72.64 328 P **P** **14 42 45.6 +0.4**
KURK IAmb IAmb 14 42 46.2
comp=Z,29nm,0.8s
VNDA Vanda 72.64 173 P **P** **14 42 45.9 +1.0**
comp=Z,3.8nm,0.6s,baz=318,slow=7.5,SNR=18
VNDA LR LR 15 13 26.5
comp=Z,63nm,20.7s,baz=336,slow=35
CHGR Chuyangaron 72.64 314 P **P** **14 42 45.8 +0.1**
CHGR IAmb IAmb 14 42 46.6
comp=Z,50nm,0.8s
KK31 Karatay Array 73.59 319 *i* P **P** **14 42 51.0 -0.1**
KKAR Karatay Array 73.59 319 P **P** **14 42 51.4 +0.3**
KKAR pmax pmax
comp=Z,14nm,1.0s
KKAR Karatay Array 73.59 319 P **P** **14 42 50.9 -0.2**
KKAR Karatay Array 73.59 319 P **P** **14 42 51.4 +0.3**
KKAR IAmb IAmb 14 42 52.2
comp=Z,14nm,0.9s
MAW Mawson 75.47 202 P **P** **14 43 02.6 +1.2**
comp=Z,6.5nm,0.5s,baz=82,slow=5.0,SNR=19
MAW LR LR 15 12 49.7
comp=Z,108nm,21.9s,baz=59,slow=33
MAW Mawson 75.47 202 P **P** **14 43 02.6 +1.2**
HRA Herat 76.33 308 P **P** **14 43 07.2 -0.1**
SHAO Shalim 78.01 290 P **P** **14 43 16.5 -0.3**
TIXI Tiksi 78.22 359⇑ *e*P **P** **14 43 16.3 -0.4**
TIXI pmax pmax
comp=Z,22nm,1.0s
TIXI Tiksi 78.22 359 P **P** **14 43 16.7 0.0**
PAE Paea 78.23 107 *e*P **P** **14 43 20.7 +2.7**
comp=Z,7.8nm,1.1s
PPT2 Papeete2 78.24 107 *e*P **P** **14 43 21.2 +3.1**
comp=Z,40nm,0.9s
PPT Papeete 78.24 107 P **P** **14 43 20.5 +2.4**
comp=Z,53nm,0.8s,baz=281,slow=9.1,SNR=9.1
BRVK Borovoye 78.27 328 P **P** **14 43 17.6 +0.2**
BRVK pmax pmax
comp=Z,21nm,0.8s
BRVK Borovoye 78.27 328 P **P** **14 43 17.6 +0.2**
BRVK IAmb IAmb 14 43 18.3
comp=Z,21nm,0.8s
TIAR Tiarei 78.46 107 *e*P **P** **14 43 22.3 +3.0**
comp=Z,10nm,1.0s
SOCY Socotra 78.53 284 P **P** **14 43 18.8 -1.0**
SOCY IAmb IAmb 14 43 20.3
comp=Z,18nm,0.6s
TVO Taravao 78.53 107 *e*P **P** **14 43 22.7 +3.0**
comp=Z,10nm,1.1s
BILL Bilibino 78.68 13*c i*P **P** **14 43 19.4 0.0**
BILL *i* 14 43 28.2
BILL pmax pmax
comp=Z,7.0nm,1.0s
UOSS Minazif 78.91 297 P **P** **14 43 19.5 -2.1**
HATD Hatta, Dubai 78.95 297 P **P** **14 43 21.2 -0.6**

ASHO Ashiyiah 78.98 297 *i* P P 14 43 21.1 -0.9
SNR=6.4
MSFE Esma-Masafi 79.04 297 *i* P P 14 43 22.5 +0.1
SNR=6.8
BANOM Banah 79.05 298 *i* P P 14 43 22.7 +0.3
SNR=5.9
SHME Shamm 79.21 298 *i* P P 14 43 23.5 +0.2
SNR=9.0
ASUD Al Ashush, Dub 79.62 296 P P 14 43 25.6 +0.2
GEYT Alibeck 80.56 310 P P 14 43 30.4 +0.1
comp=Z,6.8nm,0.7s,baz=163,slow=5.7,SNR=14
GEYT Alibeck 80.56 310 P P 14 43 30.4 +0.1
GYA0B ALIBECK ARRAY 80.56 310 P P 14 43 28.8 -1.5
OPO Ambohidratompo 81.76 252 P P 14 43 37.3 0.0
comp=Z,4.4nm,0.6s,baz=20,slow=1.7,SNR=6.5
GAMB Gambell 82.39 22 P P 14 43 40.8 +1.5
GAMB IAmb IAmb 14 43 41.6
comp=Z,16nm,0.7s
AB31 Akbulak array 82.72 321 *i* P P 14 43 40.5 -0.9
ABKAR Akbulak array 82.72 321 P P 14 43 40.9 -0.4
QSPA South Pole Qui 83.26 180 P P 14 43 44.4 +0.4
comp=Z,17nm,0.6s,baz=279,slow=0.5,SNR=140
QSPA South Pole Qui 83.26 180 P P 14 43 44.6 +0.6
QSPA IAmb IAmb 14 43 45.3
comp=Z,22nm,0.8s
SYO Syowa Base 84.18 201⇓ *e*P P 14 43 47.8 -0.7
AKTO Aktyubinsk 84.28 322 P P 14 43 48.8 -0.5
SVE Sverdlovsk 84.89 329 *de*P P 14 43 51.7 -0.5
SVE pmax pmax
comp=Z,31nm,0.6s
ANM Nome 85.20 23 P P 14 43 54.7 +1.1
ANM pmax pmax
comp=Z,23nm,0.8s
ANM Nome 85.20 23 P P 14 43 54.7 +1.1
ANM IAmb IAmb 14 43 56.0
comp=Z,23nm,0.8s
ARU Arti 85.83 328 *c i*P P 14 43 56.1 -0.8
ARU *PP **pP** 14 44 09.4 -6.5
ARU 14 47 12.9
ARU S **S** 14 54 15.8 -8.0
ARU SS **SS** 15 00 02.3 -0.3
ARU pmax pmax
comp=Z,14nm,0.6s
ARU Arti 85.83 328 P P 14 43 56.1 -0.8
ARU IAmb IAmb 14 43 57.1
comp=Z,19nm,0.5s
RDOG Red Dog Mine 87.60 20 P P 14 44 04.9 -0.4
RAYN Ar Rayn 88.27 294 P P 14 44 08.9 -0.7
RAYN pmax pmax
comp=Z,19nm,0.8s
RAYN Ar Rayn 88.27 294 *i* P P 14 44 09.5 0.0
SNR=18
RAYN Ar Rayn 88.27 294 P P 14 44 08.9 -0.7
RAYN IAmb IAmb 14 44 10.4
comp=Z,19nm,0.8s
TTA Tatalina 88.43 26 P P 14 44 09.8 +0.3
TTA pmax pmax
comp=Z,15nm,0.8s
TTA Tatalina 88.43 26 P P 14 44 09.8 +0.3
TTA IAmb IAmb 14 44 11.9
comp=Z,15nm,0.8s
KDAK Kodiak Island 88.62 31 P P 14 44 10.9 +0.5
KDAK pmax pmax
comp=Z,24nm,0.8s
KDAK Kodiak Island 88.62 31 P P 14 44 11.0 +0.7
comp=Z,17nm,0.7s,baz=232,slow=1.6,SNR=5.5
KDAK Kodiak Island 88.62 31 P P 14 44 10.8 +0.5
KDAK IAmb IAmb 14 44 19.5
comp=Z,24nm,0.8s
AKT Akhty 89.16 312 *e*P P 14 44 11.4 -2.0
AKT pmax pmax
comp=Z,3.0nm,0.4s
SKT Skwentna 90.17 27 P P 14 44 17.2 -0.4
SKT IAmb IAmb 14 44 19.5
comp=Z,30nm,1.2s
IMAR Indian Mountai 90.26 23 P P 14 44 18.3 +0.4
SUA Susitna One 90.42 28 P P 14 44 19.7 +0.8
GNI Garni 91.20 310⇑ *e*P P 14 44 23.3 +0.2
GNI pmax pmax
comp=Z,35nm,1.4s
MLY Manley 91.24 25 P P 14 44 22.7 +0.2
MLY IAmb IAmb 14 44 23.7
comp=Z,13nm,0.7s
RND Reindeer 91.69 26 P P 14 44 24.1 -0.6
RND Reindeer 91.69 26 P P 14 44 24.1 -0.6
COLD Coldfoot 91.94 22 P P 14 44 26.6 +1.0
COLD IAmb IAmb 14 44 28.2
comp=Z,8.4nm,0.7s
WRH Wood River Hil 92.23 25 P P 14 44 26.7 -0.4
WRH IAmb IAmb 14 44 27.4
comp=Z,18nm,0.9s
CCB Clear Creek Bu 92.39 25 P P 14 44 26.9 -0.8
HDA Harding Lake 92.71 26 P P 14 44 29.0 -0.3
baz=260
ILAR Eielson Array 92.80 25 P P 14 44 28.7 -1.0
comp=Z,8.7nm,0.7s,baz=277,slow=4.4,SNR=57
ILAR PP **PP** 14 48 07.6 -5.1
comp=Z,0.6nm,0.8s,baz=251,slow=5.6,SNR=4.1
ILAR Eielson Array 92.80 25 P P 14 44 27.5 -2.2
KIV Kislovodsk 93.18 314 *e*P P 14 44 31.0 -1.0
KIV pmax pmax
comp=Z,14nm,1.0s
KMBO Kilima Mbogo 93.29 268 P P 14 44 33.0 -0.4
comp=Z,2.6nm,0.7s,baz=14,slow=4.5,SNR=5.6
PRGR Permogore 93.52 332 *e*P P 14 44 30.2 -2.8
PRGR pmax pmax
comp=Z,8.0nm,1.3s
RIDG Independent Ri 93.52 26 P P 14 44 32.5 -0.5
RIDG IAmb IAmb 14 44 34.7
comp=Z,22nm,1.3s
FYU Fort Yukon 93.75 23 P P 14 44 34.4 +0.4
DOT Dot Lake 93.85 26 P P 14 44 34.8 +0.2
DOT IAmb IAmb 14 44 35.6
comp=Z,9.1nm,0.9s
EGAK Eagle 95.23 25 P P 14 44 41.0 +0.1
SOC Sochi 95.29 313 *e*P P 14 44 38.2 -3.4
SOC *eS **SKSac** 14 55 08.1 -2.6
SOC *e*SS SS 15 02 31.8 +12
SOC *e*SSS SSS 15 06 01.9
SNAA Sanae 96.10 193 P P 14 44 45.4 +0.6
SNAA Sanae 96.10 193 *de*P P 14 44 45.8 +1.0
SNAA Sanae 96.10 193 P P 14 44 45.8 +1.0
SNAA IAmb IAmb 14 44 46.5
comp=Z,4.4nm,0.7s
KLMR Klimovskoe 96.39 330 *e*P P 14 44 41.8 -4.4
KLMR pmax pmax
comp=Z,17nm,1.4s
KLMR Klimovskoe 96.39 330 *e*P P 14 44 41.8 -4.4
KLMR AMP 14 44 43.1
comp=Z,17nm,1.4s
ANN Anapa 97.00 314 *e*P P 14 44 41.2 -8.1
ANN *e*PP pP 14 44 59.1 -9.3
ANN pmax pmax
comp=Z,40nm,1.0s
EPYK Eagle Plains 97.14 24 P Pdif 14 44 49.7 +0.1
EPYK IAmb IAmb 14 44 51.2
comp=Z,12nm,0.8s
EPYK Eagle Plains 97.14 24 P Pdif 14 44 49.8 +0.2
baz=270
TMCR Tamitsa 97.16 334 *e*P P 14 44 48.0 -1.6
OBN Obninsk 97.83 325 *i* P P 14 44 50.0 -2.8
OBN pmax pmax
comp=Z,6.0nm,0.5s
VNA3 Neumayer Olymp 97.90 192 P Pdif 14 44 53.2 +0.3
INK Inuvik 98.34 22 P P 14 44 54.5 -0.3
INK pmax pmax
comp=Z,23nm,1.4s
INK Inuvik 98.34 22 P P 14 44 54.2 -0.5
comp=Z,6.8nm,0.8s,baz=312,slow=6.0,SNR=11
INK PKKPbc **PKKPbc** 15 01 25.5 -3.1
comp=Z,0.7nm,0.6s,baz=56,slow=2.4,SNR=4.2
INK Inuvik 98.34 22 P P 14 44 54.5 -0.3
BRTR Keskin Array B 99.68 309 *i* P Pdif 14 45 01.5 -0.2
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 99.68 309 P Pdif 14 44 59.8 -1.9
comp=Z,0.7nm,0.8s,baz=128,slow=8.0,SNR=3.6
PUL Pulkovo 101.00 330⇑ *e*P Pdif 14 45 05.0 -1.8
PUL pmax pmax
comp=Z,62nm,0.5s
ARCES ARCESS Array B 101.56 340 P Pdif 14 45 08.2 -1.0
comp=Z,2.8nm,0.8s,baz=78,slow=6.5,SNR=12
ARCES PKKPbc **PKKPbc** 15 01 17.3 -2.2
comp=Z,4.0nm,1.2s,baz=270,slow=3.6,SNR=5.2
C36M Paulatuk 101.61 20 P Pdif 14 45 09.4 0.0
baz=282
FINES FINESS Array B 102.85 332 *i* P Pdif 14 45 13.8 -1.2
FINES pmax pmax
comp=Z,2.0nm,0.9s
FINES FINESS Array B 102.85 332 P Pdif 14 45 13.3 -1.7
comp=Z,1.6nm,0.8s,baz=108,slow=6.2,SNR=5.4
FINES PKIKP **PKiKP** 14 49 35.0 -0.1
comp=Z,1.9nm,0.5s,baz=72,slow=4.5,SNR=2.9
FINES PKKPbc **PKKPbc** 15 01 14.0 -1.4
comp=Z,0.5nm,0.4s,baz=132,slow=2.8,SNR=6.0
YKA Yellowknife Ar 107.19 26 Pdiff **Pdif** 14 45 34.7 +0.4
comp=Z,0.6nm,0.6s,baz=293,slow=5.0,SNR=6.4
YKA PKiKP **PKiKP** 14 49 43.1 +0.1
comp=Z,1.5nm,0.5s,baz=290,slow=2.1,SNR=40
YKA PKKPbc **PKKPbc** 15 00 59.0 -3.3
comp=Z,0.5nm,0.6s,baz=112,slow=3.2,SNR=9.0
J05D Fort Rock, OR 107.72 47 P **PKiKP** 14 49 46.5 +1.7
baz=278
HFS Hagfors 109.05 332 PKKPbc PKKPbc 15 00 53.8 -2.5
comp=Z,1.4nm,0.4s,baz=197,slow=4.6,SNR=11
NOA NORSAR Array B 109.84 333 PKiKP **PKiKP** 14 49 48.6 +0.5
comp=Z,1.9nm,1.0s,baz=255,slow=3.5,SNR=3.6
NVAR Mina Array Bea 110.58 52 PKiKP **PKiKP** 14 49 51.7 +1.2
comp=Z,0.8nm,0.6s,baz=253,slow=2.8,SNR=7.5
CLL Collm 112.35 323 *e*PKIKP **PKiKP** 14 49 53.0 -0.1
CLL pmax pmax
comp=Z,6.0nm,1.0s
CLL Collm 112.35 323 *e*PKiKP **PKiKP** 14 49 53.0 -0.1
comp=Z,6.0nm,1.0s
GERES GERESS Array B 112.65 320 PKiKP **PKiKP** 14 49 53.8 -0.1
comp=Z,3.2nm,0.6s,baz=66,slow=2.5,SNR=11
PFO Pinyon Flats O 112.69 56 P **PKiKP** 14 49 56.2 +1.7
baz=277
TPFO Pinon Flats 112.70 56 P **PKiKP** 14 49 56.2 +1.7
baz=277
R11A Troy Canyon, C 112.70 51 P **PKiKP** 14 49 56.2 +1.7
baz=280
BELC Belle Mtn. Jos 113.02 56 P **PKiKP** 14 49 56.9 +1.8
baz=278
IKP In-Ko-Pah, Jac 113.10 57 P **PKiKP** 14 49 57.3 +2.1
baz=277
GMRC Granite Mounta 113.19 55 P **PKiKP** 14 49 57.2 +1.8
baz=278
KBA Koelnbreinsper 113.37 319 *e*PKiKP **PKiKP** 14 49 55.0 -0.4
comp=Z,9.5nm,1.3s
BC3 Big Chuckawall 113.52 56 P **PKiKP** 14 49 57.4 +1.4
baz=278
ABTA Abfaltersbach 114.01 318 *e*PKiKP PKPdf 14 49 56.2 -0.3
comp=Z,5.2nm,0.7s
WATA Walderalm 114.45 319 *i* PKiKP PKPdf 14 49 57.4 -0.1
comp=Z,3.9nm,0.4s
DUG Dugway, Tooele 114.46 49 P **PKiKP** 14 49 59.1 +1.5
baz=283
EGMT Eagleton 114.51 40 P **PKiKP** 14 49 58.4 +0.9
baz=288
MOTA Moosalm 114.76 319 *i* PKiKP **PKiKP** 14 49 57.9 -0.2
comp=Z,16nm,1.3s
FETA Feichten 115.10 319 *e*PKiKP **PKPdf** 14 49 58.8 +0.1
comp=Z,3.0nm,0.5s
DAVA Damuels 115.56 320 *e*PKiKP **PKPdf** 14 49 59.7 +0.1
comp=Z,7.7nm,0.4s
U15A North Rim 115.63 53 **PKiKP** 14 50 02.4 +2.2
DAVOX Davos/Dischmat 115.73 319 PKiKP **PKPdf** 14 50 00.0 0.0
DAVOX Davos/Dischmat 115.73 319 PKP **PKPdf** 14 49 60.0 0.0
comp=Z,5.9nm,0.4s,baz=131,slow=1.0,SNR=7.1
214A Organ Pipe Nat 115.96 58 P **PKiKP** 14 50 02.5 +1.8
baz=279
BW06 Boulder Array 116.20 45 P **PKiKP** 14 50 01.9 +0.9
baz=286
PDAR Pinedale Array 116.20 45 PKP **PKiKP** 14 50 01.9 +0.8
comp=Z,1.8nm,0.6s,baz=216,slow=1.2,SNR=21
PDAR PKKPbc **PKKPbc** 15 00 30.9 -1.3
comp=Z,0.5nm,0.8s,baz=102,slow=6.2,SNR=3.5
WUAZ Wupatki 116.53 54 P **PKiKP** 14 50 03.1 +1.3
baz=281
TUC Tucson 117.60 57 P **PKiKP** 14 50 05.3 +1.4
baz=280
O20A White River Ci 117.87 48 P **PKiKP** 14 50 05.8 +1.5
baz=286
W18A Petrified Fore 117.92 54 P **PKiKP** 14 50 05.7 +1.1
baz=282
MVCO Mesa Verde 118.43 51 P **PKiKP** 14 50 07.3 +1.7
baz=284
KEST Kesra 119.21 307 PKP **PKiKP** 14 50 06.9 0.0
comp=Z,12nm,1.0s,baz=143,slow=13,SNR=3.6
EKA Eskdalemuir Ar 119.25 332 PKP **PKiKP** 14 50 06.3 0.0
comp=Z,2.7nm,0.5s,baz=18,slow=2.8,SNR=10
EKA PKKPbc **PKKPbc** 15 00 20.7 -0.7
comp=Z,2.0nm,0.7s,baz=237,slow=3.3,SNR=4.4
S22A 4UR Ranch, Cre 119.57 50 P **PKiKP** 14 50 09.9 +2.1
baz=286
RSSD Black Hills 119.58 43 P **PKiKP** 14 50 07.9 +0.4
baz=291
121A Cookes Peak, D 120.05 56 P **PKiKP** 14 50 10.7 +1.9
baz=282
ANMO Albuquerque 120.58 53 PKIKP **PKiKP** 14 50 11.4 +1.6
ANMO Albuquerque 120.58 53 **PKiKP** 14 50 11.4 +1.6
ANMO Albuquerque 120.58 53 P **PKiKP** 14 50 11.3 +1.6
baz=284
SDCO Great Sand Dun 120.59 50 P **PKiKP** 14 50 11.2 +1.4
baz=287
T25A Trinidad 121.59 50 P **PKiKP** 14 50 13.3 +1.6
baz=287
ULM Lac du Bonnet 121.83 33 PKIKP **PKPdf** 14 50 11.0 -0.3
ULM Lac du Bonnet 121.83 33 PKP **PKPdf** 14 50 11.0 -0.3
comp=Z,4.6nm,0.6s,baz=336,slow=2.4,SNR=10.0
MNTX Cornudas Mount 122.22 57 P **PKiKP** 14 50 14.2 +1.3
baz=283
MSTX Muleshoe 123.78 53 P **PKiKP** 14 50 16.9 +0.9
baz=286
TXAR Lajitas Array 124.19 59 PKIKP **PKiKP** 14 50 18.0 +1.1
TXAR Lajitas Array 124.19 59 PKP **PKiKP** 14 50 17.9 +1.1
comp=Z,2.6nm,0.7s,baz=221,slow=1.4,SNR=28
TXAR PKKPbc **PKKPab** 15 00 00.9 -0.2
comp=Z,0.2nm,0.5s,baz=101,slow=4.8,SNR=3.9
TXAR Lajitas Array 124.19 59 **PKiKP** 14 50 18.0 +1.1
ECSD EROS Data Cent 124.62 40 P **PKiKP** 14 50 17.5 +0.3
baz=298
WMOK Wichita Mounta 126.68 51 P **PKiKP** 14 50 22.2 +0.6
baz=290
JCT Junction City 127.16 57 P **PKiKP** 14 50 23.9 +1.2
baz=286
ESDC Sonseca Array 127.79 316 PKP **PKiKP** 14 50 24.0 +0.3
comp=Z,1.9nm,0.8s,baz=13,slow=3.8,SNR=6.5
833A Chaparral WMA, 128.07 59 P **PKiKP** 14 50 25.9 +1.4
baz=285
PLCA Paso Flores 128.90 159 PKP **PKiKP** 14 50 26.3 +0.3
comp=Z,4.2nm,0.6s,baz=308,slow=1.3,SNR=15
TOA0 Torodi Ar. Sit 129.43 281 **PKiKP** 14 50 27.8 +0.1
TORD Torodi Ar. Bea 129.43 281 PKP **PKPdf** 14 50 26.9 0.0
comp=Z,7.7nm,0.7s,baz=81,slow=2.1,SNR=29
TORD SKPbc SKPab 14 53 40.7 -0.5
comp=Z,2.4nm,0.7s,baz=66,slow=3.8,SNR=6.3
SCHQ Schefferville 130.00 13 PKP **PKPdf** 14 50 27.2 +0.4
comp=Z,2.2nm,0.4s,baz=278,slow=3.1,SNR=7.8
W39A Magazine 130.32 49 P **PKiKP** 14 50 29.4 +0.6
baz=294
D47A Chapleau 130.47 30 P **PKiKP** 14 50 29.3 +0.5
baz=314
U40A Yellville 130.52 47 P **PKiKP** 14 50 29.0 -0.3
baz=296
CCM Cathedral Cave 130.88 44 PKIKP **PKiKP** 14 50 30.4 +0.5
CCM Cathedral Cave 130.88 44 **PKiKP** 14 50 30.4 +0.5
CCM Cathedral Cave 130.88 44 P **PKPdf** 14 50 29.4 +0.4
baz=299
D48A Paudash Townsh 131.03 29 P **PKiKP** 14 50 30.1 +0.1
baz=315
MDT Midelt 131.09 308 PKP **PKiKP** 14 50 30.9 +0.3
comp=Z,3.3nm,0.6s,baz=124,slow=1.8,SNR=7.5
LSQQ Lebel-sur-Quev 131.77 24 P **PKPdf** 14 50 29.9 -0.5
baz=322
D52A ZEK Kipawa Sen 132.76 27 P **PKiKP** 14 50 33.5 +0.1
baz=319
L48A N Adams 133.11 36 P **PKiKP** 14 50 34.1 -0.2
baz=309
D54A Lac Fusel, La 133.39 26 P **PKiKP** 14 50 34.4 -0.3
baz=321
E53A Dumoine, Ponti 133.55 27 P **PKiKP** 14 50 34.9 -0.1
baz=320
ALGO Algonquin Park 133.69 28 P **PKiKP** 14 50 35.6 +0.3
baz=319
D55A Sainte-Anne-du 134.00 25 P **PKiKP** 14 50 35.4 -0.6
baz=323
G53A Haliburton 134.04 29 P **PKiKP** 14 50 36.3 +0.2
baz=318
G54A Lake Saint Pet 134.09 28 P **PKiKP** 14 50 35.9 -0.3
baz=318
Q48A North Vernon 134.11 40 P **PKiKP** 14 50 36.8 +0.4
baz=305
WCI Wyandotte Cave 134.14 41 P **PKiKP** 14 50 37.1 +0.6
baz=304
WVT Waverly 134.21 45 P **PKiKP** 14 50 36.6 -0.1
baz=301
O49A Covington 134.24 38 P **PKiKP** 14 50 36.5 -0.2
baz=308
D56A ZEC Mazanza, M 134.27 24 P **PKiKP** 14 50 36.4 -0.1
baz=324
H53A Bobcaygeon 134.46 29 P **PKiKP** 14 50 36.8 -0.1
baz=317
P50A Jamestown 134.92 38 P **PKiKP** 14 50 37.9 -0.2
baz=308
T49A Edmonton 135.26 42 P **PKPdf** 14 50 37.8 +0.5
baz=304
S50A Richmond 135.68 41 P **PKiKP** 14 50 39.7 0.0
baz=306
KIC Kosan Boka 135.74 272 *e*PKIKP **PKiKP** 14 50 40.4 0.0
comp=Z,18nm,0.7s
T50A Nancy 135.77 42 P **PKiKP** 14 50 40.0 +0.2
baz=304
W49A Belvidere 135.82 45 P **PKPdf** 14 50 39.0 +0.6
baz=301
R51A Hillsboro 135.84 40 P **PKiKP** 14 50 40.5 +0.6
baz=307
DBIC Dimbokro 135.87 273 PKP **PKiKP** 14 50 40.2 -0.4
comp=Z,7.6nm,0.5s,baz=93,slow=2.5,SNR=14
DBIC SKPbc **SKPbc** 14 54 02.7 -1.4
comp=Z,2.8nm,0.9s,baz=180,slow=1.0,SNR=3.0
LIC Lamto 136.02 272 *e*PKIKP **PKiKP** 14 50 40.9 -0.1
comp=Z,29nm,0.4s
TIC Toumodi 136.03 273 *e*PKIKP **PKiKP** 14 50 41.0 0.0
comp=Z,9.8nm,0.3s
M54A Oil Creek Stat 136.09 33 P **PKiKP** 14 50 40.4 0.0
baz=314
U50A Jamestown 136.10 43 P **PKiKP** 14 50 39.9 -0.7
baz=304
L55A Hinsdale 136.26 32 P **PKiKP** 14 50 40.4 -0.3
baz=316
F60A Warwick 136.27 23 P **PKiKP** 14 50 40.4 -0.2
baz=327
LRAL Lakeview Retre 136.32 48 P **PKPdf** 14 50 39.6 +0.2
baz=299
E61A Lac Etchemin 136.42 21 P **PKiKP** 14 50 40.4 -0.5
baz=329
W50A Signal Mountai 136.44 44 P **PKPdf** 14 50 39.9 +0.3
baz=302
P54A Burton 136.91 36 P **PKiKP** 14 50 42.0 -0.2
baz=312
J58A Remsen 136.94 28 P **PKiKP** 14 50 42.3 +0.2
baz=321
J59A Piesco 137.22 27 P **PKiKP** 14 50 42.8 +0.2
baz=322
V52A Sevierville 137.26 42 P **PKiKP** 14 50 42.2 -0.7
baz=305
SSPA Standing Stone 137.66 33 P **PKiKP** 14 50 43.2 -0.4
baz=315
X52A Dahlonega 137.74 44 P **PKPdf** 14 50 42.6 +0.6
baz=303
CFA Coronel Fontan 137.82 156 PKhKP PKPpre 14 50 34.4
comp=Z,4.6nm,0.4s,baz=258,slow=4.6,SNR=8.0
CFA PKP **PKPdf** 14 50 43.0 +0.7
comp=Z,5.0nm,0.5s,baz=187,slow=2.3,SNR=6.9
Y52A Lilburn 138.02 45 P **PKPdf** 14 50 43.4 +0.9
baz=302
Z52A Williamson 138.12 46 P **PKiKP** 14 50 43.8 -0.9
baz=301
KMSC Kings Mountain 139.17 42 P **PKPdf** 14 50 45.6 +1.0
baz=307
ACON Acoyapa 144.24 79 **PKPdf** 14 50 54.2 0.0
JTS Las Juntas de 144.58 82 PKIKP **PKPdf** 14 50 55.6 +0.8
JTS Las Juntas de 144.58 82 **PKPdf** 14 50 55.6 +0.8
LVC Limon Verde 145.10 147 PKIKP **PKiKP** 14 50 58.5 -1.4
LVC Limon Verde 145.10 147 PKPbc **PKiKP** 14 50 58.1 -1.7
comp=Z,58nm,0.7s,baz=255,slow=2.6,SNR=48
LVC Limon Verde 145.10 147 **PKiKP** 14 50 58.5 -1.4
CPUP Villa Florida 146.24 167 PKP2 **PKPab** 14 50 59.8 +0.6
CPUP Villa Florida 146.24 167 PKPbc **PKPab** 14 50 59.5 +0.3
comp=Z,27nm,0.9s,baz=196,slow=2.6,SNR=35
CPUP Villa Florida 146.24 167 **PKPab** 14 50 59.8 +0.6
NNA Nana 146.90 124 PKP2 **PKiKP** 14 51 02.9 -0.4
NNA Nana 146.90 124 PKPbc **PKPab** 14 51 02.6 +0.3
comp=Z,41nm,0.6s,baz=251,slow=3.2,SNR=17
NNA Nana 146.90 124 **PKiKP** 14 51 02.9 -0.4
PB11 IPOC Station P 146.93 143 **PKPab** 14 51 02.7 +0.4
GO01 Chusmiza 147.27 144 **PKiKP** 14 51 04.6 0.0
ATAH Atahualpa 147.88 115 PKPbc **PKPbc** 14 51 04.1 +0.1
comp=Z,56nm,0.7s,baz=165,slow=5.3,SNR=8.7
UPA Univ. de Panam 149.97 84 *e*P **PKiKP** 14 51 09.3 -0.3
LPAZ La Paz 150.51 141 PKIKP **PKPdf** 14 51 07.0 +1.7
LPAZ La Paz 150.51 141 PKP **PKPdf** 14 51 07.0 +1.7
comp=Z,2.3nm,0.7s,baz=357,slow=2.6,SNR=8.0
LPAZ PKPbc **PKiKP** 14 51 12.6 +1.1
comp=Z,31nm,0.4s,baz=29,slow=2.6,SNR=148
GR1C Gorgona, Isla 151.01 96 *e*P **PKiKP** 14 51 12.3 +0.5
PTAC Punta Ardita, 151.70 87 *e*P **PKPdf** 14 51 07.6 +1.2
BBAC Balboa, Cauca 151.76 98⇑ *i*P **PKiKP** 14 51 14.2 +0.5
MALC Bahia Malaga 151.96 94 *e*P **PKiKP** 14 51 15.8 +2.0
PIZC Pizarro, Choco 152.03 92 *e*P **PKiKP** 14 51 15.9 +2.0
POPC Popayan, Colom 152.41 97 *e*P **PKiKP** 14 51 15.5 +0.5
PCON Cinco Dias 152.65 98 *e*P **PKiKP** 14 51 17.6 +1.7
YOTC Yotoco, Valle 152.94 94 *e*P **PKiKP** 14 51 16.5 +0.6
FLOC Florencia 153.24 100⇑ *i*P **PKiKP** 14 51 17.9 +1.4
DBBC Dabeiba 153.28 88 *e*P **PKiKP** 14 51 18.2 +1.6
CBOC Ciudad Bolivar 153.44 90⇑ *i*P **PKiKP** 14 51 18.2 +1.2
PTLC Puerto Leguiza 153.75 103 *e*P **PKiKP** 14 51 18.7 +1.2
HELC Santa Helena 153.94 90 *e*P **PKiKP** 14 51 19.4 +1.1
GUY2C Guyana, Caldas 154.04 92⇑ *i*P **PKiKP** 14 51 20.0 +1.4
SJCC San Jacinto, C 154.20 81 *e*P **PKiKP** 14 51 19.5 +1.1
PRAC Prado 154.35 95 *e*P **PKiKP** 14 51 19.9 +1.1
SIV San Ignacio 154.61 153 PKP **PKPdf** 14 51 11.6 +0.9
comp=Z,3.2nm,0.8s,baz=235,slow=1.0,SNR=15
SIV PKPbc **PKiKP** 14 51 20.2 +1.1
comp=Z,2.0nm,0.8s,baz=286,slow=4.7,SNR=5.9
SIV PKPab **PKPab** 14 51 35.3 +1.4
comp=Z,7.6nm,0.8s,baz=203,slow=3.8,SNR=16
ZARC Zaragoza, Cauc 154.63 87 *e*P **PKiKP** 14 51 19.8 +0.5
PTBC PUERTO BERRIO 155.01 89 *e*P **PKPdf** 14 51 18.8 +7.6
SPBC San Pablo de B 155.35 91 *e*P **PKPdf** 14 51 12.6 +0.8
CHIC Chingaza 155.60 94 *e*P PKPdf 14 51 22.6 +10
RUSC La Rusia 156.35 91 *e*P **PKPdf** 14 51 14.5 +0.9
BDFB Brasilia 157.75 183 PKP **PKPdf** 14 51 14.6 -0.2
comp=Z,2.8nm,0.5s,baz=182,slow=7.1,SNR=5.1
RCBR Riachuelo 161.72 227 PKPab **PKPab** 14 52 04.6 -0.2
comp=Z,7.3nm,0.7s,baz=116,slow=5.0,SNR=5.9

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*DJA **24** 14:36:20.3±1.2,4°N±8°,×9°5E±°, h10km, M4.9/9, mB5.4/4, mb5.1/4, MLv4.8/9, MLv4.8/7, Mw(mB)4.8/4*
*MOS **24** 14:36:21.6±1.1, 4°.65N×95°.27E, h48km, mb5.0/47, Error ellipse: s-maj=11.2km s-min=5.5km az=117.0*
*IDC **24** 14:36:23.4±3.3, 4°.62N×95°.22E, h47km±32km, mb4.3/25, mb1 4.4/26, mb1mx4.3/49, mbtmp4.6/26, ML4.2/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/39, Error ellipse: s-maj=18.6km s-min=13.4km az=66.0*
*BJI **24** 14:36:23.5±0.0, 4°.60N×95°.20E, h55km, mB5.0/28, mb4.5/37, Ms4.5/13, Ms7 4.1/9*
*NEIC **24** 14:36:24.0±2.0, 4°.54N±0°.08×95°.22E±0°.10, h55km±6km, mb4.9/36, Error ellipse: s-maj=13.8km s-min=11.0km az=96.0*
ISC 24 14:36:23.1±0.4, **4°.54N**±0°.05×**95°.18E**±0°.06, **h48**km, **n238,** σ1**§22**/239, **mb4.8**/93, **MS3.7**/7, **15C-17D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**1.25**	**103**	P	**Pn**		**14 36 42.5**	**-1.6**
MLSI				S	**Sn**		**14 37 00.4**	**+0.6**
LHMI	**Lhok Sumawe**	**1.88**	**69**	P	**Pn**		**14 36 53.7**	**+0.9**
LHMI	**Lhok Sumawe**	**1.88**	**69**		**Pn**		**14 36 53.8**	**+0.9**
TPTI		**2.37**	**123**	P	**Pn**		**14 36 57.3**	**-2.1**
CMBY	**CAMPBELL BAY**	**2.75**	**333**	*e*S	Sn		14 37 22.9	-14
CMBY					IAML		14 37 24.9	
	comp=N,842nm,0.4s							
CMBY					IAML		14 37 38.5	
	comp=E,1μm,0.1s							
KCSI	**Kotacane, Aceh**	**2.77**	**111**	P	**Pn**		**14 37 04.2**	**-0.9**
GSI	**Gunungsitoli**	**4.01**	**143**	P	**Pn**		**14 37 19.7**	**-2.3**
GSI	**Gunungsitoli**	**4.01**	**143**		**Pn**		**14 37 20.3**	**-1.7**
PSI	**Prapat**	**4.11**	**115**	P	**Pn**		**14 37 24.5**	**+0.9**
	comp=E,14nm,0.3s,baz=301,slow=11,SNR=32							
PSI					LR	LR	14 39 28.1	
	comp=E,1μm,19.5s,baz=344,slow=44							
RPSI	**Rantau Prapat**	**4.16**	**116**			**Pn**	**14 37 25.3**	**+1.2**

RPSI Rantau Prapat 4.16 116 Pn 14 37 24.5 +0.4
PBSI Pulau Batu 5.52 146 P **Pn 14 37 42.4 -0.3**
comp=E,1.1nmcomp=E,1.1nmcomp=E,6µmcomp=E,274nm,0.7s
SISI Saibi 7.02 146 P **Pn 14 38 02.4 -0.9**
comp=E,0.2nmcomp=E,0.2nmcomp=E,826nmcomp=E,42nm,0.5s
PDSI Padang 7.56 136 P **Pn 14 38 10.6 -0.2**
PBKT Sadao Pong 13.23 25 Pn **Pn 14 39 32.2 +3.8**
CM31 Chiang Mai Arr 14.31 15 P **P 14 39 47.7 -1.3**
CMAR Chiang Mai Arr 14.31 15 P **P 14 39 47.2 -1.8**
comp=E,1.3nm,0.3s,baz=205,slow=12,SNR=14
CMAR LR LR 14 44 59.4
comp=E,124nm,20.3s,baz=189,slow=36
CHTO Chiang Mai 14.65 14 P **P 14 39 52.7 -0.1**
CHTO Chiang Mai 14.65 14 P **P 14 39 52.7 -0.1**
CHLP Challavanipeta 17.63 323 *e*P **Pn 14 40 26.1 +0.7**
PVM Polavaram 18.33 315 *e*P **P 14 40 34.0 +0.4**
MYLAV Mylavaram 18.73 311 *e*P **Pn 14 40 40.4 +1.6**
NJS Nagarjunasagar 19.63 309 *e*P **Pn 14 40 50.0 +0.5**
SRLM Srisailam 19.70 307 *e*P **Pn 14 40 50.8 +0.5**
GGR Gangavaram 19.73 313 *e*P **Pn 14 40 51.4 +0.6**
URV Uravakonda 20.45 302 *e*P **P 14 40 58.3 +1.5**
HYBB Hyderabad (bro 20.72 309 *e*P **P 14 41 00.1 +0.5**
KMI Kunming 21.71 19 P **P 14 41 13.5 +3.0**
KMI pP sP 14 41 25.3 -2.5
KMI pmax pmax
comp=E,10.0nm,0.7s
KMI pmax pmax
comp=E,130nm,4.9s
KMI LR LR
comp=E,210nm,11.4s
KMI LR LR
comp=E,230nm,11.5s
LSA Lhasa 25.31 352 P **P 14 41 44.5 -1.4**
LSA pmax pmax
comp=Z,19nm,1.3s
LSA Lhasa 25.31 352 P **P 14 41 44.5 -1.4**
H08S2 Diego Garcia H 25.68 242 T T 15 08 58.9
baz=61,slow=76,SNR=1891
H08S3 Diego Garcia H 25.68 242 T T 15 08 56.3
baz=61,slow=76,SNR=2320
H08S1 Diego Garcia H 25.69 242 T T 15 08 52.4
baz=61,slow=76,SNR=1127
CD2 Chengdu 27.44 16 P **P 14 42 06.3 +1.7**
CD2 pmax pmax
comp=Z,30nm,0.5s
XAN Xi'an 32.01 22 P **P 14 42 44.3 -0.8**
XAN pP pP 14 42 55.1 -2.5
XAN pmax pmax
comp=Z,12nm,0.7s
XAN pmax pmax
comp=Z,120nm,4.7s
XAN LR LR
comp=Z,210nm,17.4s
XAN Xi'an 32.01 22 P **P 14 42 44.2 -0.8**
XAN pmax pmax
comp=Z,9.0nm,0.5s
XAN Xi'an 32.01 22 P **P 14 42 44.2 -0.8**
XAN IAmb IAmb 14 42 47.2
comp=Z,9.2nm,0.5s
LZH Lanzhou 32.39 13 *e*P **P 14 42 49.3 +0.8**
LZH pP sP 14 43 04.9 -1.6
LZH sP pP 14 43 13.3 +12
LZH pmax pmax
comp=Z,18nm,1.1s
YOJ Yonaguni jima 33.30 51 P **P 14 42 56.6 +0.2**
YOJ pmax pmax
comp=Z,79nm,1.1s
YOJ Yonaguni jima 33.30 51 P **P 14 42 56.6 +0.2**
GTA Gaotai 34.96 6 ⇑P **P 14 43 10.0 -0.8**
GTA pP pP 14 43 21.0 -2.3
GTA PcP **PcP 14 45 43.6 +1.1**
GTA S **S 14 48 36.4 -2.9**
GTA sS sS 14 49 03.4 +3.2
GTA SS **SnSn 14 50 53.5 -4.5**
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA pmax pmax
comp=Z,46nm,7.6s
GTA LR LR
comp=Z,75nm,15.9s
GTA LR LR
comp=Z,100nm,18.1s
NJ2 Nanjing 35.23 36 *e*P **P 14 43 13.8 +0.8**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
NIL Nilore 35.43 327 P **P 14 43 13.8 -1.0**
NIL pmax pmax
comp=Z,16nm,0.7s
NIL Nilore 35.43 327 P **P 14 43 13.8 -1.0**
KBL Kabul 38.45 324 P **P 14 43 38.5 -2.2**
KBL pmax pmax
comp=Z,5.0nm,1.0s
KBL Kabul 38.45 324 P **P 14 43 38.5 -2.2**
KSH Kashi 38.92 336 P **P 14 43 43.8 -0.6**
KSH PP **PP 14 45 15.3 +1.0**
KSH S **S 14 49 39.4 -0.2**
KSH SS **SS 14 52 23.8 -8.8**
KSH pmax pmax
comp=Z,33nm,0.7s
KSH LR LR
comp=Z,490nm,6.0s
KSH LR LR
comp=Z,560nm,6.1s
KSH LR LR
comp=Z,470nm,5.7s
HHC Hu-ho-hao-te 39.03 20 *e*P **P 14 43 46.3 +1.0**
HHC pmax pmax
comp=Z,6.0nm,0.7s
HHC pmax pmax
comp=Z,58nm,6.4s
WMQ Urumqi 39.67 352 *e*P **P 14 43 52.5 +2.0**
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,130nm,6.3s
WMQ LR LR
comp=Z,300nm,28.9s
WMQ LR LR
comp=Z,1µm,28.8s
WMQ LR LR
comp=Z,550nm,28.8s
BJI Beijing 40.09 25 P **P 14 43 55.3 +1.3**
BJI pmax pmax
comp=Z,8.0nm,0.9s
NRN Naryn 40.55 338 P **P 14 43 59.4 +1.2**
NRN pmax pmax
comp=Z,18nm,0.8s
NRN Naryn 40.55 338 P **P 14 43 59.4 +1.2**
NRN IAmb IAmb 14 43 60.0
comp=Z,18nm,0.8s
KDJ Kajisay 40.73 339 P **P 14 44 01.1 +1.6**
KDJ pmax pmax
comp=Z,33nm,0.7s
KDJ Kajisay 40.73 339 P **P 14 44 01.1 +1.6**
GAR Garm 41.05 330 P **P 14 44 03.5 +1.4**
AAK Ala-Archa 42.16 337 *c i*P **P 14 44 13.0 +1.8**
AAK pmax pmax
comp=Z,21nm,0.8s
AAK Ala-Archa 42.16 337 P **P 14 44 12.0 +0.8**
AAK IAmb IAmb 14 44 14.3
comp=Z,20nm,0.8s
MK31 Makanchi Array 43.54 347 P **P 14 44 21.7 -0.5**
MK31 pmax pmax
comp=Z,6.0nm,0.9s
MK31 Makanchi Array 43.54 347 P **P 14 44 21.7 -0.5**
MKAR Makanchi Array 43.54 347 P **P 14 44 22.0 -0.2**
comp=Z,7.7nm,0.6s,baz=168,slow=8.1,SNR=5.2
MKAR PcP **PcP 14 46 09.9 +0.6**
comp=Z,2.1nm,0.8s,baz=149,slow=2.5,SNR=3.1
MKAR LR LR 15 05 13.9
comp=Z,86nm,18.4s,baz=159,slow=40
MKAR Makanchi Array 43.54 347 P **P 14 44 21.7 -0.5**
MAKZ Makanchi 43.63 347 P **P 14 44 21.9 -0.9**
MAKZ pmax pmax
comp=Z,8.0nm,0.6s
MAKZ Makanchi 43.63 347 P **P 14 44 21.9 -0.9**
KK31 Karatay Array 44.19 334 P **P 14 44 28.7 +1.3**
KK31 pmax pmax
comp=Z,15nm,1.1s
KK31 Karatay Array 44.19 334 P **P 14 44 28.7 +1.3**
KK31 IAmb IAmb 14 44 39.4
comp=Z,15nm,1.1s
KKAR Karatay Array 44.19 334 P **P 14 44 28.2 +0.8**
KKAR Karatay Array 44.19 334 P **P 14 44 28.2 +0.8**
SONM Songino Array 44.19 11 P **P 14 44 27.9 +0.4**
SONM 14 46 12.3
SONM pmax pmax
comp=Z,2.0nm,1.0s
SONM Songino Array 44.19 11 P **P 14 44 27.3 -0.1**
comp=Z,1.3nm,0.6s,baz=191,slow=9.0,SNR=4.5
SONM PcP **PcP 14 46 12.3 +0.7**
comp=Z,3.3nm,0.8s,baz=192,slow=3.3,SNR=7.3
SONM Songino Array 44.19 11 P **P 14 44 27.9 +0.4**
KSRS Korea Array 44.36 38 P **P 14 44 28.5 -0.3**
comp=Z,1.7nm,0.6s,baz=221,slow=8.5,SNR=7.2
WB0 Warramunga Arr 45.49 123 P **P 14 44 38.0 -0.1**
WRA Warramunga Arr 45.53 124 *i* P **P 14 44 37.7 -0.7**
WRA pmax pmax
comp=Z,16nm,0.6s
WRA Warramunga Arr 45.53 124 P **P 14 44 38.1 -0.3**
comp=Z,16nm,0.6s,baz=302,slow=9.1,SNR=6.9
WRA LR LR 15 03 54.2
comp=Z,70nm,22.0s,baz=45,slow=36
WRA Warramunga Arr 45.53 124 P **P 14 44 36.9 -1.5**
WRAB Tennant Creek 45.53 124 ⇓*e*P **P 14 44 37.8 -0.6**
WRAB pmax pmax
comp=Z,20nm,0.7s
WRAB Tennant Creek 45.53 124 P **P 14 44 38.1 -0.3**
WB2 Warramunga Arr 45.54 124 P **P 14 44 37.6 -0.8**
WB2 IAmb IAmb 14 44 39.3
comp=Z,16nm,0.7s
WR0 Warramunga Arr 45.70 124 P **P 14 44 40.1 +0.4**
WR0 IAmb IAmb 14 44 41.4
comp=Z,17nm,0.8s
ASAR Alice Springs 47.02 128 P **P 14 44 50.2 +0.2**
comp=Z,4.9nm,0.5s,baz=297,slow=8.0,SNR=5.5
CN2 Changchun 47.33 30 *e*P **P 14 44 51.9 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
GEYT Alibeck 47.38 320 P **P 14 44 53.9 +1.2**
comp=Z,15nm,0.7s,baz=152,slow=9.6,SNR=20
GEYT Alibeck 47.38 320 P **P 14 44 53.6 +0.9**
GYA0B ALIBECK ARRAY 47.38 320 P **P 14 44 53.5 +0.8**
KURK Kurchatov 48.07 346 P **P 14 44 57.2 -0.6**
KURK pmax pmax
comp=Z,8.0nm,0.8s
KURK Kurchatov 48.07 346 P **P 14 44 57.1 -0.6**
KURK IAmb IAmb 14 45 10.0
comp=Z,8.0nm,0.8s
HIA Hailar 49.20 21 ⇓*e*P **P 14 45 07.3 +0.8**
HIA pmax pmax
comp=Z,23nm,0.9s
ZAA0 Zalesovo Array 49.97 352 P **P 14 45 11.9 -0.4**
ZAA0 IAmb IAmb 14 45 15.0
comp=Z,13nm,1.2s
ZALV Zalesovo Beam 49.97 352 P **P 14 45 11.8 -0.4**
comp=Z,6.5nm,0.5s,baz=175,slow=7.1,SNR=9.3
ZALV PcP **PcP 14 46 30.9 -0.8**
comp=Z,2.5nm,0.7s,baz=164,slow=3.6,SNR=2.0
ZALV Zalesovo Beam 49.97 352 P **P 14 45 12.0 -0.2**
MJAR Matsushiro Arr 50.69 45 PcP **PcP 14 46 35.4 +0.6**
comp=Z,2.0nm,0.7s,baz=248,slow=6.1,SNR=4.8
COEN Coen 51.03 112 P **P 14 45 18.9 -2.0**
USRK Ussuriysk Ar. 51.04 34 P **P 14 45 21.0 +0.5**
comp=Z,1.6nm,0.6s,baz=239,slow=13,SNR=4.0
BRVK Borovoye 52.52 341 P **P 14 45 31.9 +0.5**
BRVK pmax pmax
comp=Z,11nm,0.8s
BRVK Borovoye 52.52 341 P **P 14 45 31.9 +0.5**
BRVK IAmb IAmb 14 45 32.2
comp=Z,11nm,0.8s
ABKAR Akbulak array 53.64 332 P **P 14 45 39.9 +0.3**
ABKAR Akbulak array 53.64 332 P **P 14 45 40.1 +0.5**
ABKAR IAmb IAmb 14 45 41.2
comp=Z,16nm,1.0s
KLR Kul'dur 54.25 29 ⇓*e*P **P 14 45 44.1 0.0**
KLR pmax pmax
comp=Z,8.0nm,1.0s
STKA Stephens Creek 57.08 133 LR LR 15 13 10.5
comp=Z,56nm,20.1s,baz=22,slow=39
GNI Garni 57.51 316 ⇓*e*P **P 14 46 09.9 +2.0**
GNI pmax pmax
comp=Z,38nm,1.0s
KMBO Kilima Mbogo 58.15 266 P **P 14 46 13.9 +1.0**
KMBO pmax pmax
comp=Z,5.0nm,1.1s
KMBO Kilima Mbogo 58.15 266 P **P 14 46 13.9 +1.0**
comp=Z,2.6nm,0.8s,baz=30,slow=13,SNR=5.0
KMBO Kilima Mbogo 58.15 266 IAmb IAmb 14 46 16.1
comp=Z,4.7nm,1.1s
SVE Sverdlovsk 58.86 339 ⇑*e*P **P 14 46 16.9 +0.1**
SVE pmax pmax
comp=Z,28nm,0.8s
ZEI Tsey 59.18 318 *e*P **P 14 46 18.2 -1.4**
ZEI pmax pmax
comp=Z,9.0nm,0.6s
ARU Arti 59.34 337 *d i*P **P 14 46 19.7 -0.4**
ARU 14 48 27.1
ARU S **S 14 54 26.7 +1.6**
ARU SS **SS 14 58 18.6 -1.9**
ARU pmax pmax
comp=Z,12nm,0.9s
KBZ Khabaz 60.24 319 ⇓*e*P **P 14 46 26.5 0.0**
KBZ pmax pmax
comp=Z,8.0nm,0.9s
KBZ Khabaz 60.24 319 P **P 14 46 26.6 0.0**
comp=Z,7.2nm,0.8s,baz=145,slow=7.1,SNR=13
KIV Kislovodsk 60.48 319 *e*P **P 14 46 27.9 -0.4**
KIV pmax pmax
comp=Z,32nm,1.0s
YAK Yakutsk 62.82 17 *e*P **P 14 46 42.1 -1.5**
YAK pmax pmax
comp=Z,6.0nm,0.6s
VRH Novokhopyorsk 64.24 326 *e*P **P 14 46 52.2 -1.0**
VRH pmax pmax
comp=Z,30nm,0.7s
BR131 Keskin Array S 65.39 312 P **P 14 46 59.9 -1.2**
BR131 pmax pmax
comp=Z,7.0nm,0.7s
BR131 Keskin Array S 65.39 312 P **P 14 46 59.9 -1.2**
BR131 IAmb IAmb 14 47 01.6
comp=Z,6.6nm,0.7s
BRTR Keskin Array B 65.39 312 P **P 14 47 00.8 -0.3**
comp=Z,5.4nm,0.6s,baz=132,slow=7.4,SNR=33
BRTR Keskin Array B 65.39 312 P **P 14 47 00.6 -0.5**
VORD Divnogorie 65.52 325 *e*P **P 14 47 00.1 -1.3**
VORD pmax pmax
comp=Z,10.0nm,0.7s
VSR Storozhevoye 65.69 325 *e*P **P 14 47 00.9 -1.7**
VSR pmax pmax
comp=Z,10.0nm,0.6s
BZK Bozkurt 65.74 314 ⇑P **P 14 47 03.7 +0.6**
LPSR Galich'ya Gora 66.41 326 *e*P **P 14 47 06.0 -1.2**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
PRGR Permogore 67.79 337 ⇓*i*P **P 14 47 15.4 -0.3**
PRGR pmax pmax
comp=Z,31nm,0.6s
MOS Moscow 68.45 329 *e*P **P 14 47 19.3 -0.7**
OBN Obninsk 68.73 328 *i*P **P 14 47 21.1 -0.7**
OBN *i* 14 47 49.5
OBN pmax pmax
comp=Z,14nm,1.1s
MA2 Magadan 69.24 27 ⇑*e*P **P 14 47 24.1 -0.7**
MA2 pmax pmax
comp=Z,6.0nm,1.0s
KLMR Klimovskoe 69.89 335 *e*P **P 14 47 26.6 -2.2**
KLMR pmax pmax
comp=Z,15nm,1.2s
KLMR Klimovskoe 69.89 335 *e*P **P 14 47 26.6 -2.2**
KLMR AMP 14 47 29.3
comp=Z,15nm,1.2s
TIXI Tiksi 70.28 11 ⇓*e*P **P 14 47 29.3 -1.7**
TIXI pmax pmax
comp=Z,9.0nm,1.7s
MILM Milestii Mici 70.66 318 ⇑P **P 14 47 33.8 0.0**
CFR Carcaliu 70.69 316 ⇑P **P 14 47 34.3 +0.3**
SORM Soroca 71.27 319 ⇓P **P 14 47 37.0 -0.4**
IDI Anoyia 71.32 306 P **P 14 47 37.5 -0.7**
comp=Z,6.6nm,0.5s,baz=83,slow=7.7,SNR=8.6
AKASG Malin Array Be 71.40 322 P **P 14 47 37.2 -1.0**
AKASG pmax pmax
comp=Z,7.0nm,1.5s
AKASG Malin Array Be 71.40 322 P **P 14 47 37.2 -1.0**
comp=Z,26nm,0.3s,baz=91,slow=5.4,SNR=1.7
AKASG Malin Array Be 71.40 322 IAmb IAmb 14 47 38.3
comp=Z,6.6nm,1.5s
AKBB Malin Array Si 71.40 322 P **P 14 47 37.6 -0.6**
AKBB pmax pmax
comp=Z,9.0nm,0.8s
AKBB Malin Array Si 71.40 322 P **P 14 47 37.5 -0.6**
AKBB IAmb IAmb 14 47 38.2
comp=Z,9.0nm,0.8s
SEY Seymchan 71.52 24 ⇓*e*P **P 14 47 37.7 -1.0**
VRI Vrincioaia 71.81 317 ⇑P **P 14 47 42.1 +1.2**
PLOR Plostina 71.86 317 ⇑P **P 14 47 42.4 +1.2**
TESR Tescani 72.01 317 ⇓P **P 14 47 42.4 +0.4**
TMCR Tamitsa 72.08 337 *e*P **P 14 47 41.7 -0.3**
TMCR pmax pmax
comp=Z,17nm,0.6s
MLR Muntele Rosu 72.27 316 P **P 14 47 45.5 +1.7**
MLR pmax pmax
comp=Z,27nm,1.3s
MLR Muntele Rosu 72.27 316 P **P 14 47 44.5 +0.7**
comp=Z,9.5nm,0.7s,baz=169,slow=3.4,SNR=10
MLR Muntele Rosu 72.27 316 ⇓P **P 14 47 44.6 +0.8**
MLR Muntele Rosu 72.27 316 P **P 14 47 45.5 +1.7**
MLR IAmb IAmb 14 47 46.1
comp=Z,27nm,1.3s
PLVB Pleven 72.80 314 ⇑P **P 14 47 47.3 +0.6**
VOIR 72.88 316 ⇑P **P 14 47 47.1 -0.2**
BURAR Bucovina Array 73.20 318 ⇓P **P 14 47 50.1 +0.9**
BURAR Bucovina Array 73.20 318 P **P 14 47 50.1 +0.9**
BUR08 Bucovina Ar. S 73.22 318 P **P 14 47 50.2 +0.9**
VTS Vitosha 73.67 313 ⇑P **P 14 47 52.4 +0.2**
AGG Agios Georgios 73.84 309 P **P 14 47 51.6 -1.5**
AGG pmax pmax
comp=Z,19nm,1.3s
AGG Agios Georgios 73.84 309 P **P 14 47 51.5 -1.5**
AGG IAmb IAmb 14 48 07.1
comp=Z,19nm,1.3s
JOF Joensuu 74.28 335 P **P 14 47 55.0 0.0**
JOF pmax pmax
comp=Z,10.0nm,0.8s
HERR Herculane 74.61 315 ⇓P **P 14 47 59.8 +2.5**
BOSA Boshof 74.73 239 P **P 14 47 59.4 +0.8**
BOSA pmax pmax
comp=Z,13nm,1.5s
BOSA Boshof 74.73 239 P **P 14 47 59.4 +0.8**
comp=Z,1.3nm,0.8s,baz=148,slow=1.9,SNR=4.2
BOSA Boshof 74.73 239 IAmb IAmb 14 48 15.6
comp=Z,13nm,1.5s
VSU Vasula 74.96 330 ⇓*e*P **P 14 47 59.4 +0.3**
VSU pmax pmax
comp=Z,92nm,2.5s
LVZ Lovozero 75.02 340 P **P 14 47 58.8 -0.5**
LVZ pmax pmax
comp=Z,19nm,1.6s
TRPA Tarpa 75.07 319 ⇓P **P 14 48 00.5 +0.6**
KWP Kalwaria Pacla 75.23 320 *e*P **P 14 48 01.7 +0.8**
KWP Kalwaria Pacla 75.23 320 *e*P **P 14 48 01.7 +0.8**
BZS Buzias 75.29 316 ⇑P **P 14 48 02.0 +0.8**
KOLS Kolonicke sedl 75.38 319 *e*P **P 14 48 03.0 +1.2**
KOLS pmax pmax
comp=Z,7.0nm,0.9s
KOLS Kolonicke sedl 75.38 319 *e*P **P 14 48 03.0 +1.2**
MAW Mawson 75.51 192 P **P 14 48 03.3 +1.3**
MAW pmax pmax
comp=Z,2.0nm,1.2s
MAW Mawson 75.51 192 P **P 14 48 03.3 +1.3**
comp=Z,3.1nm,0.8s,baz=311,slow=4.8,SNR=4.0
MAW Mawson 75.51 192 IAmb IAmb 14 48 06.7
comp=Z,2.2nm,1.2s
CRVS Cervenica-Dubn 75.91 319 *e*P **P 14 48 07.3 +2.5**
CRVS Cervenica-Dubn 75.91 319 *e*P **P 14 48 07.2 +2.5**
FINES FINESS Array B 76.12 332 P **P 14 48 05.7 0.0**
comp=Z,8.5nm,0.7s,baz=102,slow=8.0,SNR=25
FINES FINESS Array B 76.12 332 P **P 14 48 05.6 -0.1**
STHS Stebnicka Huta 76.13 320 *e*P **P 14 48 07.2 +1.2**
STHS pmax pmax
comp=Z,11nm,1.1s
STHS Stebnicka Huta 76.13 320 *e*P **P 14 48 07.2 +1.2**
SUF Sumiainen 76.45 334 P **P 14 48 07.2 -0.3**
SUF pmax pmax
comp=Z,15nm,2.9s
KECS Kecovo 76.48 319 *e*P **P 14 48 08.6 +0.6**
KECS pmax pmax
comp=Z,8.0nm,1.2s
KECS Kecovo 76.48 319 *e*P **P 14 48 08.6 +0.6**
OJC Ojcow 77.18 320 *e*P **P 14 48 12.9 +1.0**
OJC Ojcow 77.18 320 *e*P **P 14 48 12.9 +1.0**
VYHS Vyhne 77.57 319 *e*P **P 14 48 14.8 +0.7**
VYHS pmax pmax
comp=Z,8.0nm,1.3s
VYHS Vyhne 77.57 319 *e*P **P 14 48 14.8 +0.7**
MORC Moravsky Berou 78.57 320 ⇑P **P 14 48 20.8 +1.1**
ZST Bratislava 78.68 318 *e*P **P 14 48 20.4 +0.1**
ZST pmax pmax
comp=Z,14nm,1.1s
ZST Bratislava 78.68 318 *e*P **P 14 48 20.4 +0.1**
ARCES ARCESS Array B 78.73 340 P **P 14 48 20.1 0.0**
comp=Z,4.3nm,0.7s,baz=92,slow=5.8,SNR=21
AREO ARCESS Array S 78.73 340 *e*P **P 14 48 20.6 +0.5**
BILL Bilibino 78.79 21 ⇓*e*P **P 14 48 19.8 -0.7**
BILL pmax pmax
comp=Z,2.0nm,0.9s
KRLC Kraliky 79.09 320 *e*P **P 14 48 23.1 +0.6**
KRLC Kraliky 79.09 320 *e*P **P 14 48 23.1 +0.6**
KTK1 Kautokeino 79.36 340 *e*P **P 14 48 23.8 +0.3**
DPC Dobruska-Polom 79.41 320 *e*P **P 14 48 25.6 +1.3**
DPC Dobruska-Polom 79.41 320 *e*P **P 14 48 25.6 +1.3**
CONA Conrad Observa 79.49 318 *e*P **P 14 48 25.5 +0.7**
comp=Z,8.1nm,1.3s
CHVC Chvalec 79.60 320 *e*P **P 14 48 25.8 +0.5**
HAMF Hammerfest 79.65 341 *e*P **P 14 48 25.1 0.0**
ARSA Arzberg 79.66 317 *e*P **P 14 48 27.1 +1.4**
comp=Z,6.8nm,1.0s
SOKA Soboth 79.95 316 *e*P **P 14 48 28.5 +1.2**
comp=Z,16nm,1.2s
BRG Berggiesshubel 80.96 321 *e*P **P 14 48 33.5 +0.9**
comp=Z,11nm,1.5s
BRG Berggiesshubel 80.96 321 *e*P **P 14 48 33.5 +0.9**
BRG pmax pmax
comp=Z,11nm,1.5s
TRO Tromso 80.99 340 *e*P **P 14 48 32.2 -0.1**
GERES GERESS Array B 80.99 319 P **P 14 48 33.5 +0.6**
comp=Z,8.6nm,1.0s,baz=104,slow=5.6,SNR=30
KHC Kasperske Hory 81.09 319 ⇓*e*P **P 14 48 34.1 +0.8**
KHC pmax pmax
comp=Z,22nm,2.0s
KHC Kasperske Hory 81.09 319 *e*P **P 14 48 33.8 +0.5**
HFS Hagfors 81.84 330 P **P 14 48 37.0 0.0**
comp=Z,2.2nm,0.6s,baz=64,slow=3.4,SNR=4.5
STEI Steigen 82.03 338 *e*P **P 14 48 38.0 +0.2**
MOR8 Moi Rana 82.12 336 *e*P **P 14 48 38.1 -0.3**
WATA Walderalm 82.35 317 *e*P **P 14 48 39.9 -0.2**
comp=Z,5.9nm,0.5s
SQTA Sankt Quirin 82.59 317 *e*P **P 14 48 41.6 +0.2**
comp=Z,5.7nm,0.6s
MOTA Moosalm 82.67 317 *e*P **P 14 48 41.9 +0.1**
comp=Z,16nm,1.1s
LOF Lofoten 82.69 338 *e*P **P 14 48 41.1 -0.2**
RETA Reutte 82.90 317 *i*P **P 14 48 43.3 +0.4**
comp=Z,6.6nm,0.5s
FETA Feichten 82.92 317 *e*P **P 14 48 43.3 +0.1**
comp=Z,3.1nm,0.7s
NSS Namsos 83.00 334 *e*P **P 14 48 42.8 -0.1**
NB2 NORSAR Subarra 83.12 331 P **P 14 48 43.3 -0.5**
comp=Z,1.1nm,0.8s,baz=98,slow=5.1
NB2 NORSAR Subarra 83.12 331 P **P 14 48 43.3 -0.5**
baz=98,slow=5.1
NOA NORSAR Array B 83.12 331 P **P 14 48 43.2 -0.5**
comp=Z,2.9nm,0.9s,baz=94,slow=5.4,SNR=4.6
SPA0 Spitsbergen Ar 83.29 348 *e*P **P 14 48 45.0 +0.7**
DAVOX Davos/Dischmat 83.50 316 P **P 14 48 46.9 +0.7**
comp=Z,8.1nm,0.6s,baz=149,slow=6.2,SNR=12
DAVA Damuels 83.50 317 *e*PcP **P 14 48 46.9 +0.8**
comp=Z,16nm,1.2s
KONO Kongsberg 83.87 329 *e*P **P 14 48 47.4 -0.2**
KEST Kesra 84.00 305 P **P 14 48 49.7 +0.9**
comp=Z,5.8nm,0.8s,baz=311,slow=6.6,SNR=3.7
KEST Kesra 84.00 305 IAmb IAmb 14 48 51.5
comp=Z,11nm,1.0s
KBS Kingsbay 84.27 349 *e*P **P 14 48 49.5 +0.2**
SKAR Skarslia 84.54 330 *e*P **P 14 48 50.9 -0.1**
MOL Molde 84.91 332 *e*P **P 14 48 53.0 +0.3**
BLS5 Blasjo 85.47 329 *e*P **P 14 48 55.4 -0.3**
EKA Eskdalemuir Ar 91.03 326 P **P 14 49 22.4 +0.2**
comp=Z,2.7nm,0.7s,baz=94,slow=5.5,SNR=5.9
TORD Torodi Ar. Bea 92.37 283 P **P 14 49 30.1 +0.8**
comp=Z,1.3nm,0.8s,baz=76,slow=3.4,SNR=5.8
TORD Torodi Ar. Bea 92.37 283 IAmb IAmb 14 49 31.1
comp=Z,1.5nm,0.8s
IMAR Indian Mountai 94.29 23 P **P 14 49 37.3 +0.2**

QSPA	South Pole Qui	94.47	180	P		P		14 49 39.0	+1.0
	comp=Z,1.2nm,0.7s,baz=255,slow=8.7,SNR=4.2								
QSPA	South Pole Qui	94.47	180	IAmb		IAmb		14 49 43.5	
	comp=Z,4.4nm,1.4s								
NVAR	Mina Array Bea	127.18	33	PKP		PKiKP		14 55 23.7	+0.2
	comp=Z,0.6nm,0.9s,baz=173,slow=0.7,SNR=2.4								
PDAR	Pinedale Array	127.84	23	PKP		PKPdf		14 55 23.3	-0.8
	comp=Z,0.3nm,0.5s,baz=48,slow=1.3,SNR=3.4								
TXAR	Lajitas Array	141.76	27	PKP		PKPdf		14 55 48.8	-1.5
	comp=Z,0.3nm,0.6s,baz=344,slow=1.3,SNR=3.0								
CPUP	Villa Florida	145.93	228	PKPbc		PKPbc		14 55 58.7	+0.5
	comp=Z,10nm,0.8s,baz=155,slow=5.3,SNR=16								
SIV	San Ignacio	154.05	242	PKPbc		PKPbc		14 56 18.2	-0.4
	comp=Z,1.1nm,0.6s,baz=198,slow=3.2,SNR=3.8								
SIV				PKPab		pPKPbc		14 56 33.2	+0.5
	comp=Z,1.3nm,0.7s,baz=96,slow=9.2,SNR=3.3								
LPAZ	La Paz	159.89	233	PKPab		PKPab		14 56 58.8	+0.8
	comp=Z,1.7nm,0.6s,baz=93,slow=6.2,SNR=4.2								

*AEIC **24** 14:39:29.7±2.9,54.74N±0.04×160.06W±0.05, h9km±6km, ML3.7/12, mb3.9/3(NEIC), Error ellipse: s-maj=5.9km s-min=3.0km az=205.0*

*NEIC **24** 14:39:30.4±1.5,54.80N±0.06×159.93W±0.07, h29km±10km, Error ellipse: s-maj=8.1km s-min=5.9km az=185.0*

*IDC **24** 14:39:32.3±5.4,55.05N×160.16W,h44km±39km, mb3.5/7, mb1 3.6/9, mb1mx3.4/58, mbtmp3.7/9, ML3.2/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/33, Error ellipse: s-maj=87.8km s-min=23.2km az=165.0*

ISC 24 14:39:30.0±0.8,54.79N±0.07×159.96W±0.04, h33km, n29, σ0.995/27, mb3.9/8, South of Alaska

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
CNBA	Chernabura Isl	0.22	81		Pb		14 39 36.5	-0.3
CNBA					Sn		14 39 41.2	+1.4
SDPT	Sand Point	0.64	333		Pn		14 39 42.9	+0.1
SDPT					Sn		14 39 51.5	-0.2
PN6	Pavlof North-6	1.31	302		Pb		14 39 53.0	-1.1
PN6					Sb		14 40 11.1	+0.5
VNWF	Veniaminof 8	1.39	9		Pn		14 39 55.4	0.0
BLHA	Black Hill	1.52	308		Pn		14 39 56.1	+1.3
VNFG	Fog Glacier, M	1.52	9		Pb		14 39 57.7	0.0
BALA	Baldy Mountain	1.68	285		Pn		14 39 58.2	+1.1
FALS	False Pass	2.00	273		Pn		14 40 02.2	+0.7
FALS					Sn		14 40 26.1	+0.7
KDAK	Kodiak Island	5.09	51	P	Pn		14 40 44.1	+0.2
	1.1nm,0.3s,baz=184,slow=5.2,SNR=9.9							
KDAK				S	Sn		14 41 39.6	-1.8
	baz=288,slow=20,SNR=2.2							
KDAK				LR	LR		14 42 51.9	
	comp=Z,205nm,20.1s,baz=207,slow=40							
ANM	Nome	10.18	347		Pn		14 41 55.6	+1.9
IL31		11.95	28		Sn		14 44 29.1	-0.7
ILAR	Eielson Array	11.95	28	P	Pn		14 42 17.7	-0.2
	0.1nm,0.3s,baz=216,slow=13,SNR=4.9							
EPYK	Eagle Plains	16.15	35	P	P		14 43 17.5	+0.3
EPYK				IAmb	IAmb		14 43 26.6	
	comp=Z,32nm,1.5s							
INK	Inuvik	18.27	32	P	P		14 43 41.3	+0.8
	comp=Z,0.1nm,0.3s,baz=218,slow=9.8,SNR=5.7							
INK	Inuvik	18.27	32	IAmb	IAmb		14 43 44.9	
	comp=Z,4.5nm,1.4s							
C36M	Paulatuk	21.78	34	P	P		14 44 17.9	-0.7
C36M				IAmb	IAmb		14 44 32.1	
	comp=Z,6.8nm,1.1s							
YKA	Yellowknife Ar	24.36	53	P	P		14 44 44.8	+0.2
	comp=Z,0.3nm,0.8s,baz=272,slow=9.1,SNR=5.7							
PETK	Petropavlovsk-	24.70	284	P	P		14 44 47.8	0.0
	comp=Z,4.8nm,0.4s,baz=84,slow=12,SNR=46							
H11N2	WAKE ISLAND Hy	43.08	229	T	T		15 33 18.4	
	baz=28,slow=76,SNR=21							
H11N3	WAKE ISLAND Hy	43.08	229	T	T		15 33 19.6	
	baz=28,slow=76,SNR=15							
H11N1	WAKE ISLAND Hy	43.09	229	T	T		15 33 20.6	
	baz=28,slow=76,SNR=7.4							
H11S1	WAKE ISLAND Hy	44.24	228	T	T		15 34 46.8	
	baz=27,slow=74							
H11S2	WAKE ISLAND Hy	44.26	228	T	T		15 34 47.4	
	baz=27,slow=74							
H11S3	WAKE ISLAND Hy	44.26	228	T	T		15 34 46.4	
	baz=27							
KSRS	Korea Array	50.57	281	P	P		14 48 25.5	+0.4
	comp=Z,1.0nm,0.8s,baz=48,slow=9.9,SNR=3.6							
SONM	Songino Array	54.72	305	P	P		14 48 54.0	-2.0
	comp=Z,1.0nm,0.9s,baz=55,slow=7.1,SNR=4.3							
MKAR	Makanchi Array	65.98	318	P	P		14 50 11.6	-1.1
	comp=Z,0.2nm,0.4s,baz=38,slow=6.9,SNR=3.1							
CMAR	Chiang Mai Arr	81.33	290	P	P		14 51 42.7	-0.4
	comp=Z,0.6nm,0.6s,baz=9.7,slow=6.2,SNR=6.6							
ESDC	Sonseca Array	83.69	18	P	P		14 51 55.7	+0.5
	comp=Z,0.5nm,0.4s,baz=335,slow=4.6,SNR=4.6							

*IDC **24** 14:48:51.1±14.0,56.38S×27.11W,h198km±127km, mb3.8/3, mb1 4.0/3, mb1mx3.4/24, mbtmp4.2/3, Error ellipse: s-maj=51.3km s-min=35.0km az=171.0*

ISC 24 14:48:50.5±0.9,56.65S±0.2×27.1W±0.3, h200km, n14, σ1.968/11, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
VNA1	Neumayer--Stat	16.30	158	P	P		14 52 29.9	+2.6
VNA3	Neumayer Olymp	16.50	160	P	P		14 52 32.1	+2.7
VNA3				S	S		14 55 19.1	-12
SNAA	Sanae	18.25	156	P	P		14 52 46.9	-1.8
SNAA				S	S		14 56 04.5	-2.2
H10N1	ASCENSION HYDR	49.58	16	T	T		15 51 35.1	
	baz=190							
H10N3	ASCENSION HYDR	49.58	16	T	T		15 51 31.1	
	baz=190,slow=74							
H10N2	ASCENSION HYDR	49.59	16	T	T		15 51 32.5	
	baz=190,slow=74							
LPAZ	La Paz	50.73	305	P	P		14 57 30.1	-0.4
	1.7nm,0.4s,baz=140,slow=7.9,SNR=6.9							
TORD	Tordi Ar. Bea	73.45	29	P	P		15 00 00.9	+0.2
	1.6nm,0.5s,baz=196,slow=6.5,SNR=9.9							
ASAR	Alice Springs	98.49	162	P	Pdif		15 02 07.7	+1.6
	0.4nm,0.8s,baz=184,slow=3.8,SNR=5.4							
FINES	FINESS Array B	124.79	28	PKP	PKPdf		15 07 24.6	-0.1
	1.5nm,0.9s,baz=219,slow=1.8,SNR=4.8							
YKA	Yellowknife Ar	136.59	318	PKP	PKPdf		15 07 46.6	-0.5
	0.2nm,0.3s,baz=135,slow=2.1,SNR=7.2							
INK	Inuvik	146.24	320	PKPbc	PKPbc		15 08 05.4	-0.2
	1.2nm,0.4s,baz=84,slow=1.2,SNR=12							
ILAR	Eielson Array	150.50	311	PKPbc	PKPbc		15 08 17.2	+0.4
	1.2nm,0.7s,baz=126,slow=2.9,SNR=9.7							
SONM	Songino Array	150.68	87	PKPbc	PKPbc		15 08 18.1	+0.2
	0.3nm,0.4s,baz=223,slow=1.8,SNR=3.6							

IDC 24 15:11:22.6±9.7,11.39S×168.13E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.6/25, mbtmp3.7/4, MS3.3/2, Ms1 3.3/2, ms1mx2.7/28, Error ellipse: s-maj=271.1km s-min=51.6km az=123.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
KRVT	Keravat (AS076	17.64	294	LR	LR		15 21 52.1	
	comp=Z,57nm,18.7s,baz=108,slow=36							
PMG	Port Moresby	20.76	275	LR	LR		15 23 33.9	
	comp=Z,102nm,18.6s,baz=89,slow=35							
WRA	Warramunga Arr	33.40	252	P	P		15 18 02.7	-0.5
	0.9nm,0.9s,baz=84,slow=9.2,SNR=4.1							
ASAR	Alice Springs	34.52	246	P	P		15 18 13.2	+0.3
	0.4nm,0.7s,baz=73,slow=8.7,SNR=6.0							
CMAR	Chiang Mai Arr	74.61	293	P	P		15 23 04.2	+0.1
	0.4nm,0.8s,baz=126,slow=3.8,SNR=4.5							
MKAR	Makanchi Array	95.77	316	P	P		15 24 50.6	-0.1
	0.4nm,0.6s,baz=102,slow=5.1,SNR=5.0							

*IDC **24** 15:18:32.8±4.5, 10.28S×160.36E, h81km±19km, mb3.4/5, mb1 3.5/5, mb1mx3.4/24, mbtmp3.7/5, Error ellipse: s-maj=74.6km s-min=29.9km az=108.0*

ISC 24 15:18:25.0±1.9,10.55S±0.2×161.0E±0.3, h35km, n13, σ1.971/9, mb3.6/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
HNR	Honiara	1.47	318	P	Pn		15 18 51.3	+2.2
	264nm,0.3s,baz=192,slow=12,SNR=194							
HNR				S	Sn		15 19 05.4	-1.6
	baz=120,slow=20							
HNR	Honiara	1.47	318	*i* P	Pn		15 18 51.0	+2.0
HNR				*i* S	Sn		15 19 06.0	-1.1
WRA	Warramunga Arr	27.29	247	P	P		15 24 04.9	-1.7
	1.2nm,0.8s,baz=70,slow=9.7,SNR=5.5							
ASAR	Alice Springs	28.90	240	P	P		15 24 21.4	+0.6
	0.5nm,0.8s,baz=72,slow=8.9,SNR=2.9							
H11S2	WAKE ISLAND Hy	29.39	11	T	T		15 53 25.5	
	baz=184,slow=76							
H11S3	WAKE ISLAND Hy	29.39	11	T	T		15 53 26.6	
	baz=184,slow=76							
H11S1	WAKE ISLAND Hy	29.40	11	T	T		15 53 20.4	
	baz=184,slow=76							
H11N1	WAKE ISLAND Hy	30.61	11	T	T		15 54 46.7	
	baz=195,slow=76,SNR=6.5							
H11N3	WAKE ISLAND Hy	30.62	11	T	T		15 54 46.0	
	baz=195,slow=76,SNR=6.5							
H11N2	WAKE ISLAND Hy	30.63	11	T	T		15 54 47.2	
	baz=195,slow=76,SNR=6.8							
CMAR	Chiang Mai Arr	67.61	295	P	P		15 29 19.1	+0.4
	0.5nm,0.8s,baz=136,slow=5.0,SNR=4.8							
SONM	Songino Array	75.52	325	P	P		15 30 04.8	-1.2
	0.6nm,0.6s,baz=100,slow=3.2,SNR=2.0							
MKAR	Makanchi Array	89.95	318	P	P		15 31 20.3	-0.5
	0.3nm,0.7s,baz=103,slow=6.8,SNR=4.0							

KRSC 24 15:21:11.4±2.0,49.09N×157.12E, h30km±27km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
SKR	Severo-Kuril's	1.72	338	*e*P	Pn		15 21 39.2	-0.1
SKR				*e*S	Sn		15 22 00.7	+0.5
PAU	Pauzhetka	2.39	355	*e*P	Pb		15 21 51.3	-2.4
PAU				*e*S	Sb		15 22 20.1	-2.6
KDTR	Khodutka, Kamc	2.79	12	*e*P	Pn		15 21 57.1	+3.2
KDTR				*e*S	Sb		15 22 31.8	-2.5
ASAK	Asacha	3.34	8	*e*P	Pn		15 22 05.2	+3.7
RUS	Russkaya	3.46	14	*e*P	Pn		15 22 06.5	+3.3
RUS				*e*S	Sb		15 22 48.5	-5.1
MTVR	Mutnovka	3.47	11	*e*P	Pn		15 22 07.2	+3.9
GRL	Gorelyy	3.52	10	*e*P	Pn		15 22 08.4	+4.3
KRMR	Karymshinskiy	3.80	9	*e*P	Pn		15 22 11.5	+3.7
KRMR				*e*S	Sb		15 22 57.4	-5.8
APC	Apacha	3.84	0	*e*P	Pb		15 22 13.7	-4.7
PET	Petropavlovsk	4.06	13	*e*P	Pn		15 22 15.4	+4.1
PET				*e*S	Sn		15 23 03.7	+6.0
UGLR	Uglovaya	4.26	14	*e*P	Pn		15 22 19.5	+5.2
AVH	Avacha	4.30	13	*e*P	Pn		15 22 20.0	+5.2
SMAR	Somma	4.31	14	*e*P	Pn		15 22 20.2	+5.2
KOK	Koryaka	4.32	12	*e*P	Pn		15 22 20.4	+5.4
SDLR	Sedlovina	4.34	14	*e*P	Pn		15 22 19.5	+4.2
KRER	Koryakskii	4.34	13	*e*P	Pn		15 22 20.8	+5.3
KRX	Arik	4.38	12	*e*P	Pn		15 22 21.2	+5.2
SPN	Mys Shipunski	4.41	23	*e*P	Pn		15 22 21.0	+4.8
SPN				*e*S	Sn		15 23 11.9	+6.4
MKZ	Mys Kozlova	6.18	26	*e*P	Pn		15 22 44.1	+3.7
KZV	Kizimen	6.34	17	*e*P	Pn		15 22 48.4	+5.6
TUMR	Tumrok	6.48	16	*e*P	Pn		15 22 51.0	+6.3
KBTR	Krutoberegovo	7.93	24	*e*P	Pn		15 23 08.7	+4.3

*IDC **24** 15:38:56.9±4.8,8.33S×122.82E, h133km±48km, mb3.5/6, mb1 3.5/9, mb1mx3.4/36, mbtmp3.9/9, MS3.1/1, Ms1 3.1/1, ms1mx2.4/22, Error ellipse: s-maj=45.3km s-min=20.9km az=81.0*

*NEIC **24** 15:38:59.7±2.7,8.46S±0.09×122.8E±0.1, h171km±7km, mb4.0/9, Error ellipse: s-maj=18.0km s-min=9.6km az=53.0*

ISC 24 15:38:58.4±0.7,8.52S±0.07×122.71E±0.09, h150km, n25, σ1.980/26, mb3.9/7, Flores region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
SOEI	Soe	1.97	129		Pn		15 39 36.5	+3.1
SOEI					Sn		15 40 04.0	+3.9
JAGI	Jajag, Banyuwa	8.46	270		Pn		15 40 58.5	+0.5
SAUI	Saumlaki	8.52	87		Pn		15 40 57.5	-1.3
KNRA	Kununurra	9.26	141		Pn		15 41 08.1	-0.5
MTN	Manton Dam	9.33	118		Pn		15 41 08.5	-1.0
FITZ	Fitzroy Crossi	9.94	164	P	Pn		15 41 17.9	+0.3
	0.7nm,0.3s,baz=349,slow=11,SNR=13							
FITZ				S	Sn		15 43 04.1	-3.8
	3.6nm,0.3s,baz=15,slow=23,SNR=14							
FITZ	Fitzroy Crossi	9.94	164		Pn		15 41 17.4	-0.3
FITZ					Sn		15 43 03.9	-3.9
WRA	Warramunga Arr	15.99	136	P	Pn		15 42 34.8	-0.4
	0.5nm,0.3s,baz=316,slow=12,SNR=8.8							
WRA				S	S		15 45 19.0	-14
	0.4nm,0.3s,baz=318,slow=24,SNR=6.7							
WB2	Warramunga Arr	16.00	136	P	P		15 42 36.5	+0.7
WB2				IAmb	IAmb		15 42 41.1	
	comp=Z,3.3nm,0.9s							
WR0	Warramunga Arr	16.14	136	P	Pn		15 42 36.9	-0.1
WR0				IAmb	IAmb		15 42 39.5	
	comp=Z,8.3nm,1.4s							
AS31	Alice Springs	18.49	146	Pn	Pn		15 43 05.1	0.0
ASAR	Alice Springs	18.49	146	P	Pn		15 43 05.2	0.0
	comp=Z,0.2nm,0.3s,baz=326,slow=11,SNR=12							
ASAR				S	S		15 46 24.4	-2.0
	comp=Z,0.4nm,0.3s,baz=315,slow=22,SNR=15							
JAY	Jayapura	18.87	73	LR	LR		15 51 35.1	
	comp=Z,59nm,19.5s,baz=190,slow=40							
COEN	Coen	20.78	107	P	P		15 43 28.9	+1.0
COEN				IAmb	IAmb		15 43 33.0	
	comp=Z,19nm,1.5s							
MORW	Morawa	21.39	196	P	P		15 43 36.1	+1.9
USRK	Ussuriysk Ar.	53.14	8	P	P		15 47 59.6	-1.0
	comp=Z,1.6nm,0.4s,baz=196,slow=7.4,SNR=7.3							
SONM	Songino Array	57.94	347	P	P		15 48 34.8	-0.2
	comp=Z,0.3nm,0.4s,baz=153,slow=9.7,SNR=3.0							
SONM	Songino Array	57.94	347	IAmb	IAmb		15 48 36.7	
	comp=Z,0.6nm,1.1s							
MK31	Makanchi Array	65.76	331	P	P		15 49 27.9	+0.6
MK31				IAmb	IAmb		15 49 29.9	
	comp=Z,3.0nm,1.5s							
MKAR	Makanchi Array	65.76	331	P	P		15 49 27.4	+0.1
	comp=Z,0.6nm,0.5s,baz=137,slow=7.7,SNR=12							
MKAR	Makanchi Array	65.76	331	P	P		15 49 26.3	-1.0
PETK	Petropavlovsk-	68.21	22	P	P		15 49 41.3	-1.2
	comp=Z,1.2nm,0.6s,baz=206,slow=4.6,SNR=11							
ZALV	Zalesovo Beam	69.95	337	P	P		15 49 51.8	-1.5
	comp=Z,0.5nm,0.3s,baz=151,slow=5.2,SNR=2.8							
QSPA	South Pole Qui	81.47	180	P	P		15 51 00.1	+1.4
	comp=Z,0.6nm,0.6s,baz=288,slow=9.6,SNR=4.1							
QSPA	South Pole Qui	81.47	180	IAmb	IAmb		15 51 02.6	
	comp=Z,7.3nm,1.5s							

*IDC **24** 15:39:59.4±3.8,30.96S×180.00E, h303km±35km, mb3.4/4, mb1 3.6/6, mb1mx3.3/31, mbtmp4.1/6, Error ellipse: s-maj=33.8km s-min=23.7km az=67.0*

ISC 24 15:39:59.4±0.9,31.05S±0.09×179.8E±0.2, h300km, n41, σ2.881/40, mb3.5/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
URZ	Urewera	7.53	196	P	Pn		15 41 49.0	+2.0
	2.9nm,0.3s,baz=265,slow=3.8,SNR=22							
URZ				S	S		15 43 15.9	+1.7
	11nm,0.3s,baz=64,slow=22,SNR=14							
WPHZ	Waipukurau	9.40	196	P	S		15 43 58.6	+2.0
DVHZ	Dannevirke	9.69	197	P	S		15 44 00.7	-2.4
ANWZ	Angora Road	9.77	195	P	S		15 44 06.6	+1.8
BFZ	Birch Farm	10.04	196	P	S		15 44 06.9	-3.9
MRZ	Mangatainoka R	10.19	199	P	S		15 44 07.3	-6.9
CPWZ	Castlepoint	10.26	196	P	S		15 44 17.0	+1.1
HOWZ	Holdsworth Sta	10.42	198	P	S		15 44 17.4	-2.3
OGWZ	Otaki Gorge	10.45	200	P	S		15 44 19.1	-0.9
TMWZ	Te Maipa	10.52	196	P	S		15 44 18.4	-3.5
KIW	Kapiti Island	10.56	201	P	S		15 44 19.6	-3.2
MTW	Mount Morrison	10.67	198	P	S		15 44 19.3	-5.9
CAW	Cannon Point	10.74	200	P	S		15 44 19.3	-7.5
TRWZ	Traveller	10.85	197	P	S		15 44 25.9	-3.3
PAWZ	Paruwai Farm	10.90	198	P	S		15 44 26.1	-4.3
MSWZ	Moikau Station	10.98	198	P	S		15 44 27.5	-4.7
WEL	Wellington	10.99	200	P	S		15 44 34.0	+1.6
BHW	Baring Head	11.08	200	P	S		15 44 31.4	-3.0
TCW	Tory Channel	11.08	202	P	S		15 44 32.4	-2.0
PLWZ	Palliser	11.12	198	P	S		15 44 30.4	-5.0
TUWZ	Tuamarina	11.39	203	P	S		15 44 37.6	-3.8
NNZ	Nelson	11.40	205	P	Pn		15 42 37.0	+2.6
NNZ	Nelson	11.40	205	P	S		15 44 40.0	-1.6
BSWZ	Blackbirch Sta	11.66	203	P	P		15 42 40.4	+0.9
BSWZ	Blackbirch Sta	11.66	203	P	S		15 44 43.9	-3.8
THZ	Tophouse	12.05	206	P	Pn		15 42 44.8	+2.4
KHZ	Kahutara	12.40	202	P	Pn		15 42 47.9	+1.3
LTZ	Lake Taylor	13.16	205	P	Pn		15 42 57.4	+1.6
INZ	Inchbonnie	13.43	208	P	Pn		15 43 00.9	+2.0
OXZ	Oxford	13.72	205	P	P		15 43 03.8	+1.6
MQZ	McQueen's Vall	13.85	202	P	P		15 43 04.8	+1.3
RPZ	Rata Peaks	14.42	206	P	P		15 43 11.5	+1.6
	0.4nm,0.3s,baz=55,slow=19,SNR=3.8							
RPZ				S	S		15 45 42.9	-5.3
	1.0nm,0.3s,baz=299,slow=23,SNR=8.6							
WRA	Warramunga Arr	42.26	274	P	P		15 47 25.4	+1.3
	0.7nm,0.4s,baz=113,slow=8.0,SNR=4.2							
QSPA	South Pole Qui	59.06	180	P	P		15 49 29.0	+0.8
	1.1nm,0.5s,baz=358,slow=1.8,SNR=18							
PETK	Petropavlovsk-	86.00	347	P	P		15 52 06.0	+0.3
	3.4nm,1.1s,baz=131,slow=8.7,SNR=4.2							
NVAR	Mina Array Bea	90.00	44	P	P		15 52 24.4	-0.9
	0.2nm,0.6s,baz=220,slow=8.0,SNR=2.8							
ARCES	ARCESS Array B	138.81	347	PKPbc	PKPpre		15 58 40.5	
	1.1nm,0.8s,baz=37,slow=2.3,SNR=7.2							
FINES	FINESS Array B	145.08	338	PKPbc	PKPdf		15 58 59.1	-1.2
	4.3nm,0.5s,baz=55,slow=4.1,SNR=68							
NB2	NORSAR Subarra	149.07	349	PKP	PKPbc		15 59 09.9	-1.6
	comp=Z,0.6nm,0.5s,baz=13,slow=2.6							
NOA	NORSAR Array B	149.07	349	PKPbc	PKPbc		15 59 09.6	-1.9
	comp=Z,0.9nm,0.6s,baz=15,slow=4.2,SNR=4.3							
BRTR	Keskin Array B	151.24	297	PKPbc	PKPbc		15 59 16.2	-1.3
	comp=Z,0.5nm,0.5s,baz=136,slow=4.1,SNR=5.0							

*IDC **24** 15:51:03.6±0.9, 11.68S×165.06E, h0km, mb4.0/11, mb1 4.1/13, mb1mx4.0/29, mbtmp4.0/13, ML4.1/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/21, Error ellipse: s-maj=27.5km s-min=22.2km az=151.0*

*NEIC **24** 15:51:05.8±1.8, 11.80S±0.10×165.1E±0.1, h18km±5km, mb4.3/7, Error ellipse: s-maj=19.4km s-min=10.7km az=54.0*

ISC 24 15:51:04.8±0.6,11.78S±0.08×165.0E±0.1, h10km, n27, σ1.924/23, mb4.1/14, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op	ISC		h m s	ISC
HNR	Honiara	5.50	295	Pn	Pn		15 52 25.5	-1.3
	8.0nm,0.3s,baz=162,slow=3.2,SNR=2.7							
HNR				Sn	Sn		15 53 30.7	+0.6
	9.3nm,0.3s,baz=162,slow=22,SNR=7.0							
HNR				LR	LR		15 54 25.2	
	comp=Z,151nm,19.2s,baz=141,slow=37							
DZM	Mont Dzumac	10.33	173	Pn	Pn		15 53 35.8	+2.5
	1.0nm,0.3s,baz=137,slow=16,SNR=28							
DZM				Sn	Sn		15 55 27.2	-2.0
	0.3nm,0.3s,baz=216,slow=19,SNR=2.3							
DZM				LR	LR		15 56 34.6	
	comp=Z,139nm,21.9s,baz=38,slow=32							
EIDS	Eidsvold	18.87	222	P	P		15 55 23.0	-2.4
STKA	Stephens Creek	29.42	223	LR	LR		16 08 28.4	
	comp=Z,61nm,19.0s,baz=26,slow=35							
H11S2	WAKE ISLAND Hy	30.12	3	T	T		16 28 42.9	
	baz=184,slow=76,SNR=9.4							
H11S3	WAKE ISLAND Hy	30.12	3	T	T		16 28 42.3	
	baz=184,slow=76,SNR=7.5							
H11S1	WAKE ISLAND Hy	30.14	3	T	T		16 28 56.9	
	baz=184,slow=76,SNR=6.5							
WR0	Warramunga Arr	30.38	251	P	P		15 57 17.9	+0.6
WR0				IAmb	IAmb		15 57 21.0	
	comp=Z,6.4nm,1.1s							
WB0	Warramunga Arr	30.48	251	P	P		15 57 18.9	+0.7
WB0				IAmb	IAmb		15 57 30.5	
	comp=Z,3.9nm,0.9s							
WB2	Warramunga Arr	30.55	251	P	P		15 57 19.1	+0.3
WRA	Warramunga Arr	30.56	251	P	P		15 57 20.0	+1.1
	comp=Z,1.2nm,0.6s,baz=80,slow=9.3,SNR=4.6							
WRA				LR	LR		16 07 26.7	
	comp=Z,50nm,20.3s,baz=125,slow=32							
H11N1	WAKE ISLAND Hy	31.35	3	T	T		16 30 20.2	
	baz=182,slow=76,SNR=6.9							
H11N3	WAKE ISLAND Hy	31.35	3	T	T		16 30 16.9	
	baz=182,slow=76,SNR=5.8							
H11N2	WAKE ISLAND Hy	31.36	3	T	T		16 30 24.0	
	baz=182,slow=76,SNR=4.0							
ASAR	Alice Springs	31.82	244	P	P		15 57 30.2	+0.1
	comp=Z,0.9nm,0.9s,baz=67,slow=10,SNR=7.6							
ASAR				PcP	PcP		16 00 21.7	+0.5
	comp=Z,0.5nm,0.8s,baz=58,slow=2.8,SNR=4.5							

GZR	**Gura Zlata**	**1.54**	**137**	⇑P		Pb	16 07 22.6	-0.4
FRGS	**Fruska Gora**	**1.73**	**218**	*e*Pg		Pn	16 07 25.2	+0.4
FRGS				*e*Sg		Sn	16 07 46.8	-0.6
LOT	**Lotru**	**2.04**	**121**	⇓S		Sb	16 07 56.5	-0.9
LOT	**Lotru**	**2.04**	**121**	⇓S		Sb	16 07 56.5	-0.9
VYHS	**Vyhne**	**2.57**	**320**	*e*PG		Pn	16 07 34.2	-2.2
DIVS	**Divibare**	**2.61**	**201**	*e*Pg		Pb	16 07 40.9	-0.3
DIVS				*e*Sg		Sg	16 08 16.4	-1.1
GRUS	**Gruza**	**2.68**	**189**	*e*Pg		Pb	16 07 42.5	+0.1
GRUS				*e*Sg		Sg	16 08 19.2	-0.6
VOIR		**2.84**	**111**	⇑P		Pn	16 07 40.3	+0.2
VOIR				⇓S		Sn	16 08 15.7	+0.9
VOIR		**2.84**	**111**	⇑P		Pn	16 07 40.3	+0.2

*TEH **24** 16:13:54.3, 31.°05N×50.°15E, h10km, ML3.5*
*THR **24** 16:13:55.5±0.3, 31.°03N×50.°22E, h18km±4km, ML3.4*
ISC 24 16:13:54.2±1.1, **31.°01N**±0.°05×**50.°11E**±0.°04, **h10**km, **n38**, σ**2**§**29**/39, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KLNJ	**Kolanjah**	**1.27**	**90**	*e*Pg		**Pn**	**16 14 17.6**	**-0.7**
KLNJ				*e*			16 14 43.2	
JHBN	**Jahan bin**	**1.31**	**21**	*e*Pg		**Pb**	**16 14 18.4**	**-0.6**
JHBN				*e*			16 14 42.6	
IBRJ	**Brojen**	**1.33**	**47**	*e*Pg		**Pg**	**16 14 20.4**	**+0.7**
ROKH	**ROKH**	**1.55**	**30**	*e*Pg		**Pg**	**16 14 23.5**	**-0.4**
ROKH				*e*			16 14 28.6	
SHGR	**Shooshtar-Gavs**	**1.57**	**315**	*e*Pg		**Pg**	**16 14 25.2**	**+0.9**
SHGR	**Shooshtar-Gavs**	**1.57**	**315**	*e*Pg		**Pg**	**16 14 25.2**	**+0.9**
SHGR				IAML			16 14 50.6	
	comp=N,478nm,0.3s							
SHGR				IAML			16 14 52.7	
	comp=E,349nm,0.4s							
IPIR	**Pirpir**	**1.80**	**21**	*e*Pn		**Pg**	**16 14 27.8**	**-0.9**
IKAZ	**Kazeroun**	**1.93**	**129**	*e*Pn		**Pg**	**16 14 30.8**	**-0.4**
IKAZ				*e*			16 15 09.1	
IRAM	**Ramesheh**	**2.10**	**67**	*e*Pn		**Pb**	**16 14 32.3**	**-0.2**
IRAM				*e*			16 14 34.7	
SHI	**Shiraz**	**2.48**	**123**	*e*Pn		**Pb**	**16 14 38.1**	**-0.9**
SHI				*e*			16 15 21.7	
IKLH	**Kolahrood**	**2.62**	**28**	*e*Pn		**Pb**	**16 14 39.6**	**-1.8**
IKLH				*e*			16 14 43.5	
KHMZ	**Khomeyn**	**2.73**	**357**	*e*Pn		**Pb**	**16 14 40.4**	**-2.7**
KHMZ	**Khomeyn**	**2.73**	**357**	*e*Pn		**Pb**	**16 14 40.4**	**-2.7**
KHMZ				*e*Sg		**Sg**	**16 15 20.5**	**-1.3**
BMDN	**Meydan**	**2.87**	**338**	*e*Pn		**Pn**	**16 14 41.8**	**+1.6**
BMDN				*e*			16 14 51.0	
IKMR	**Kamar-syah**	**2.90**	**330**	*e*Pn		**Pn**	**16 14 42.4**	**+2.0**
IKMR				*e*			16 15 35.1	
QAM	**Ghamsar**	**2.97**	**22**	*e*Pn		**Pb**	**16 14 45.3**	**-1.9**
BDRS	**Dareh Seyedi**	**3.12**	**341**	*e*Pn		**Pn**	**16 14 45.9**	**+2.2**
BDRS				*e*			16 14 57.3	
IKFM	**Kafar-mosalman**	**3.16**	**323**	*e*Pn		**Pb**	**16 14 47.3**	**-3.1**
IKFM				*e*			16 15 46.6	
ISAD	**Sadrabad**	**3.19**	**73**	*e*Pn		**Pb**	**16 14 47.7**	**-3.3**
ISAD				*e*			16 15 32.6	
IDDB	**Doab**	**3.22**	**330**	*e*Pn		**Pn**	**16 14 47.5**	**+2.5**
KRSH	**Karshahi**	**3.41**	**30**	*e*Pn		**Pb**	**16 14 51.3**	**-3.5**
HSAM	**Samen**	**3.44**	**339**	*e*Pn		**Pn**	**16 14 50.0**	**+1.9**
ASAO	**Ashtian**	**3.53**	**359**	*e*Pn		**Pn**	**16 14 51.6**	**+2.3**
ASAO	**Ashtian**	**3.53**	**359**	*e*Pn		**Pn**	**16 14 51.6**	**+2.3**
ANAR	**Anarak**	**3.76**	**54**	*e*Pn		**Pn**	**16 14 55.7**	**+3.3**
IKOM	**Komasi**	**3.84**	**326**	*e*Pn		**Pn**	**16 14 56.2**	**+2.6**
IKOM				*e*			16 15 09.4	
IQOM	**Qom**	**3.91**	**12**	*e*Pn		**Pn**	**16 14 56.4**	**+1.9**
IRAZ	**Razeghan**	**4.39**	**358**	*e*Pn		**Pn**	**16 15 03.2**	**+2.1**
HSRG	**Sareghieh**	**4.49**	**340**	*e*Pn		**Pn**	**16 15 04.8**	**+2.2**
HSRG				*e*			16 15 59.5	
QABG	**Abgarm-Qazvin**	**4.71**	**355**	*e*Pn		**Pn**	**16 15 07.5**	**+2.0**
ILIN	**Lien**	**4.71**	**327**	*e*Pn		**Pn**	**16 15 07.3**	**+1.7**
ILIN				*e*			16 16 07.8	
IDHR	**Dehrash**	**4.83**	**321**	*e*Pn		**Pn**	**16 15 08.0**	**+0.8**
IFIR	**Firoozkooh**	**5.12**	**25**	*e*Pn		**Pn**	**16 15 14.0**	**+2.8**
QALM	**Alamut, Qazvin**	**5.43**	**5**	*e*Pn		**Pn**	**16 15 18.6**	**+3.2**
ISHM	**Shahmirzad**	**5.47**	**28**	*e*Pn		**Pn**	**16 15 19.8**	**+3.7**
TPRV	**Parvadeh(Tabas**	**5.94**	**68**	*e*Pn		**Pn**	**16 15 25.2**	**+3.0**
TNSJ	**Nastanj**	**6.23**	**60**	*e*Pn		**Pn**	**16 15 28.9**	**+2.6**
TKDS	**Koohdasht(Taba**	**6.48**	**65**	*e*Pn		**Pn**	**16 15 32.7**	**+3.0**

KRSC 24 16:53:24.3±2.4, **49.°13N**×**157.°05E**, **h40**km±39km, **ML3.9**, **East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.67**	**339**	*e*P		Pn	16 53 50.9	0.0
SKR				*e*S		Sn	16 54 11.6	+0.5
KDTR	**Khodutka, Kamc**	**2.76**	**13**	*e*P		Pn	16 54 09.7	+3.7
KDTR				*e*S		Sn	16 54 44.3	+6.3
ASAK	**Asacha**	**3.30**	**9**	*e*P		Pn	16 54 17.8	+4.3
MTVR	**Mutnovka**	**3.43**	**12**	*e*P		Pn	16 54 19.1	+3.8
RUS	**Russkaya**	**3.44**	**15**	*e*P		Pn	16 54 18.4	+3.2
RUS				*e*S		Sn	16 55 00.4	+5.8
GRL	**Gorelyy**	**3.49**	**10**	*e*P		Pn	16 54 20.2	+4.1
KRMR	**Karymshinskiy**	**3.77**	**10**	*e*P		Pn	16 54 23.4	+3.6
KRMR				*e*S		Sn	16 55 07.9	+5.1
PET	**Petropavlovsk**	**4.03**	**14**	*e*P		Pn	16 54 27.4	+4.1
UGLR	**Uglovaya**	**4.24**	**15**	*e*P		Pn	16 54 31.4	+5.1
AVH	**Avacha**	**4.28**	**14**	*e*P		Pn	16 54 32.4	+5.6
SMAR	**Somma**	**4.28**	**14**	*e*P		Pn	16 54 32.4	+5.3
KOK	**Koryaka**	**4.29**	**13**	*e*P		Pn	16 54 32.3	+5.3
SDLR	**Sedlovina**	**4.31**	**15**	*e*P		Pn	16 54 32.4	+5.0
KRER	**Koryakskii**	**4.32**	**14**	*e*P		Pn	16 54 32.8	+5.3
KRX	**Arik**	**4.35**	**13**	*e*P		Pn	16 54 33.0	+5.0
SPN	**Mys Shipunski**	**4.39**	**24**	*e*P		Pn	16 54 32.8	+4.4
SPN				*e*S		Sn	16 55 24.0	+5.8
MKZ	**Mys Kozlova**	**6.16**	**26**	*e*P		Pn	16 54 56.1	+3.5
KZV	**Kizimen**	**6.32**	**17**	*e*P		Pn	16 55 00.8	+5.9
TUMR	**Tumrok**	**6.45**	**16**	*e*P		Pn	16 55 02.1	+5.4
KBTR	**Krutoberegovo**	**7.91**	**24**	*e*P		Pn	16 55 19.4	+2.9

*IDC **24** 16:56:35.5±3.3, 11.°84S×165.°59E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.6/35, mbtmp3.6/5, MS2.8/2, Ms1 2.8/2, ms1mx2.6/22, Error ellipse: s-maj=113.6km s-min=32.8km az=137.0*
*NEIC **24** 16:56:39.5±2.7, 11.°9S±0.°3×165.°4E±0.°2, h22km±13km, mb4.0/3, Error ellipse: s-maj=48.7km s-min=23.5km az=148.0*
ISC 24 16:56:40.6±1.9, **12.°0S**±0.°3×**165.°4E**±0.°3, **h35**km, **n11**, σ**1**§**76**/8, **mb3.5**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.96**	**295**	LR		LR	17 00 20.1	
	comp=Z,74nm,20.8s,baz=71,slow=37							
PMG	**Port Moresby**	**18.14**	**276**	Pn		**Pn**	**17 00 48.0**	**-1.9**
PMG				IAmb		IAmb	17 01 01.3	
	comp=Z,9.0nm,1.0s							
EIDS	**Eidsvold**	**18.98**	**224**	P		**P**	**17 00 57.5**	**-1.7**
EIDS				IAmb		IAmb	17 01 05.7	
	comp=Z,11nm,1.4s							
STKA	**Stephens Creek**	**29.54**	**224**	LR		LR	17 13 57.8	
	comp=Z,23nm,20.4s,baz=25,slow=35							
WB0	**Warramunga Arr**	**30.79**	**252**	P		**P**	**17 02 54.6**	**+1.3**
WB0				IAmb		IAmb	17 02 57.7	
	comp=Z,3.5nm,0.8s							
WRA	**Warramunga Arr**	**30.87**	**251**	P		**P**	**17 02 55.8**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=81,slow=8.6,SNR=5.6							
ASAR	**Alice Springs**	**32.09**	**244**	P		**P**	**17 03 06.0**	**+1.3**
	comp=Z,0.3nm,0.8s,baz=65,slow=10,SNR=2.1							
CMAR	**Chiang Mai Arr**	**72.21**	**294**	P		**P**	**17 08 04.0**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=130,slow=4.0,SNR=4.1							
QSPA	**South Pole Qui**	**78.00**	**180**	LR		LR	17 38 13.0	
	comp=Z,207nm,21.4s,baz=68,slow=32							
SONM	**Songino Array**	**79.26**	**324**	P		**P**	**17 08 42.2**	**-0.3**
	comp=Z,0.4nm,1.0s,baz=104,slow=6.1,SNR=2.5							
ILAR	**Eielson Array**	**84.52**	**19**	P		**P**	**17 09 09.0**	**-0.7**
	comp=Z,0.3nm,0.7s,baz=237,slow=4.8,SNR=6.7							

*IDC **24** 17:04:02.3±1.3, 40.°42N×74.°31E, h0km, mb3.7/7, mb1 3.7/13, mb1mx3.6/45, mbtmp3.7/13, ML3.0/6, Error ellipse: s-maj=22.3km s-min=13.9km az=130.0*
*KRNET **24** 17:04:03.2±0.1, 40.°48N×74.°37E, h16km, mb4.1*
*SOME **24** 17:04:03.6, 40.°67N×74.°40E, h0km*
*NNC **24** 17:04:04.5±0.8, 40.°60N×74.°30E, h0km, mb4.4, mpv4.2, Error ellipse: s-maj=6.1km s-min=3.5km az=167.0*

*BJI **24** 17:04:06.4±0.0, 40.°58N×74.°23E, h15km, mb3.7/2, ML3.4/4*
*MOS **24** 17:04:10.5±1.4, 40.°68N×73.°59E, h33km, mb4.2/3, Error ellipse: s-maj=11.8km s-min=6.4km az=67.6*
ISC 24 17:04:04.9±1.3, **40.°50N**±0.°04×**74.°29E**±0.°03, **h11**km±8km, **n130**, σ**2**§**06**/196, **mb3.8**/8, **35C-23D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**1.29**	**310**	⇑*i*P		**Pn**	**17 04 28.3**	**-0.6**
	baz=9.0							
ARSB				⇑*i*S		**Sg**	**17 04 46.8**	**+0.4**
	baz=9.0							
ARLS	**Aral**	**1.36**	**1**	⇓*i*P		**Pn**	**17 04 28.1**	**-1.8**
	baz=59							
ARLS				⇓*i*P		**Sn**	**17 04 47.4**	**-0.6**
	baz=59							
ANR	**Andizhan**	**1.49**	**280**	P		**Pg**	**17 04 33.2**	**-0.3**
ANR				S		**Sg**	**17 04 55.9**	**+3.1**
NRN	**Naryn**	**1.59**	**54**	⇓*i*P		**Pn**	**17 04 30.8**	**-2.5**
	baz=52							
NRN				⇓*i*S		**Sn**	**17 04 51.1**	**-2.9**
	baz=52							
AML	**Almayashu**	**1.69**	**345**	⇑*i*P		**Pn**	**17 04 34.7**	**0.0**
	baz=43							
AML				⇑*i*S		**Sn**	**17 04 58.1**	**+1.6**
	baz=43							
AML	**Almayashu**	**1.69**	**345**	P		**Pn**	**17 04 34.9**	**+0.2**
	SNR=252							
UCH	**Uchtor**	**1.73**	**5**	⇑*i*P		**Pn**	**17 04 34.9**	**-0.4**
	baz=3.0							
UCH				⇑*i*S		**Sn**	**17 04 58.5**	**+0.9**
	baz=3.0							
UCH	**Uchtor**	**1.73**	**5**	P		**Pn**	**17 04 35.3**	**0.0**
	SNR=425							
KZA	**Kyzart**	**1.73**	**24**	⇓*i*P		**Pn**	**17 04 34.4**	**-0.9**
	baz=22							
KZA				⇓*i*S		**Sn**	**17 04 57.7**	**+0.1**
	baz=22							
KZA	**Kyzart**	**1.73**	**24**	P		**Pn**	**17 04 34.7**	**-0.5**
	SNR=169							
FRG	**Fergana**	**1.92**	**278**	P		**Pg**	**17 04 40.7**	**-1.0**
FRG				S		**Sg**	**17 05 07.4**	**+0.8**
AAK	**Ala-Archa**	**2.14**	**4**	PN		**Pn**	**17 04 42.6**	**+2.0**
AAK				SN		**Sn**	**17 05 09.6**	**+2.3**
AAK	**Ala-Archa**	**2.14**	**4**	Pn		**Pb**	**17 04 42.8**	**-0.9**
	93nm,0.3s,baz=149,slow=9.4,SNR=1084							
AAK				Lg		Lg	17 05 11.3	
	16nm,0.3s,baz=204,slow=8.9,SNR=5.0							
AAK	**Ala-Archa**	**2.14**	**4**	⇑*i*P		**Pn**	**17 04 40.7**	**+0.1**
	baz=2.0							
AAK				⇑*i*S		**Sn**	**17 05 07.7**	**+0.5**
	baz=2.0							
AAK	**Ala-Archa**	**2.14**	**4**	P		**Pb**	**17 04 42.8**	**-0.9**
	SNR=231							
AAK	**Ala-Archa**	**2.14**	**4**	⇓Pn		**Pn**	**17 04 41.3**	**+0.7**
	78nm,0.3s							
AAK				⇓Sn		**Sn**	**17 05 07.8**	**+0.5**
	217nm,0.5s							
ARK	**Arkit**	**2.18**	**307**	⇑*i*P		**Pn**	**17 04 41.3**	**+0.1**
	baz=6.0							
ARK				⇑*i*S		**Sn**	**17 05 09.4**	**+1.1**
	baz=6.0							
EKS2	**Erkin-Say**	**2.19**	**350**	⇑*e*P		**Pn**	**17 04 41.6**	**+0.3**
	baz=49							
EKS2				⇑*i*S		**Sn**	**17 05 09.7**	**+1.2**
	baz=49							
EKS2	**Erkin-Say**	**2.19**	**350**	P		**Pb**	**17 04 43.6**	**-1.0**
	SNR=100							
KBK	**Karagaybulak**	**2.21**	**13**	⇑*i*P		**Pn**	**17 04 41.4**	**-0.2**
	baz=11							
KBK				⇑*i*S		**Sn**	**17 05 09.4**	**+0.4**
	baz=11							
KBK	**Karagaybulak**	**2.21**	**13**	P		**Pn**	**17 04 43.7**	**+2.1**
	SNR=129							
ULHL	**Ulahol**	**2.28**	**39**	⇓*i*P		**Pn**	**17 04 41.7**	**-0.9**
	baz=38							
ULHL				⇓*i*S		**Sn**	**17 05 10.0**	**-0.8**
	baz=38							
ULHL	**Ulahol**	**2.28**	**39**	P		**Pn**	**17 04 44.2**	**+1.6**
	SNR=360							
FRU1	**Bishkek**	**2.32**	**6**	⇑*i*P		**Pn**	**17 04 43.0**	**0.0**
	baz=5.0							
FRU1				⇑*i*S		**Sn**	**17 05 12.3**	**+0.7**
	baz=5.0							
BOOM	**Boomskoye usch**	**2.34**	**31**	⇑*i*P		**Pn**	**17 04 42.8**	**-0.6**
	baz=30							
BOOM				⇑*i*S		**Sn**	**17 05 11.8**	**-0.5**
	baz=30							
MRKS	**Merke**	**2.38**	**341**	*e*P		**Pb**	**17 04 46.6**	**-1.1**
	239nm,0.3s							
MRKS				*e*S		**Sb**	**17 05 17.7**	**+0.6**
	321nm,0.4s							
MRKS	**Merke**	**2.38**	**341**	Pg		**Pb**	**17 04 46.6**	**-1.1**
	239nm,0.3s							
MRKS				Lg		Lg	17 05 17.7	
	321nm,0.4s							
CHMS	**Chumysh**	**2.52**	**8**	⇑*e*P		**Pn**	**17 04 45.9**	**+0.2**
	baz=6.0							
CHMS				⇑*i*S		**Sn**	**17 05 16.5**	**+0.1**
	baz=6.0							
CHMS	**Chumysh**	**2.52**	**8**	P		**Pn**	**17 04 48.4**	**+2.6**
	SNR=86							
BTK	**Batken**	**2.69**	**262**	⇑*i*P		**Pn**	**17 04 48.2**	**0.0**
	baz=62							
BTK				⇑*i*S		**Sn**	**17 05 21.2**	**+0.4**
	baz=62							
KDJ	**Kajisay**	**2.72**	**52**	⇑*e*P		**Pn**	**17 04 47.6**	**-1.0**
	baz=51							
KDJ				⇑*i*S		**Sn**	**17 05 19.7**	**-1.8**
	baz=51							
USP	**Ospenovka**	**2.77**	**3**	⇑*i*P		**Pn**	**17 04 48.9**	**-0.3**
	baz=2.0							
USP				⇑*i*S		**Sn**	**17 05 23.2**	**+0.6**
	baz=2.0							
USP	**Ospenovka**	**2.77**	**3**	P		**Pn**	**17 04 51.7**	**+2.5**
	SNR=29							
KST	**Kastek**	**2.83**	**26**	*e*P		**Pb**	**17 04 54.5**	**-1.0**
	109nm,0.3s							
KST				*e*S		**Sb**	**17 05 31.2**	**+1.1**
	485nm,0.7s							
KST	**Kastek**	**2.83**	**26**	Pg		**Pb**	**17 04 54.5**	**-1.0**
	109nm,0.3s							
KST				Lg		Lg	17 05 31.2	
	485nm,0.7s							
DGS	**Degeres**	**2.95**	**22**	*e*P		**Pb**	**17 04 57.0**	**-0.6**
	125nm,0.5s							
DGS				*e*S		**Sb**	**17 05 35.5**	**+1.8**
	304nm,0.6s							
DGS	**Degeres**	**2.95**	**22**	Pg		**Pb**	**17 04 57.0**	**-0.6**
	125nm,0.5s							
DGS				Lg		Lg	17 05 35.5	
	304nm,0.6s							
SGDS	**Sogindy**	**2.96**	**5**	Pg		**Pb**	**17 04 57.1**	**-0.5**
	122nm,0.6s							
SGDS				Lg		Lg	17 05 36.2	
	152nm,0.4s							
IZV	**Izvestkoviy**	**3.07**	**34**	*e*P		**Pb**	**17 04 59.1**	**-0.5**
	84nm,0.5s							
IZV				*e*S		**Sb**	**17 05 39.5**	**+2.3**
	298nm,0.5s							
IZV	**Izvestkoviy**	**3.07**	**34**	Pg		**Pb**	**17 04 59.1**	**-0.5**
	84nm,0.5s							
IZV				Lg		Lg	17 05 39.5	
	298nm,0.5s							
MTBS	**Maitube**	**3.07**	**31**	*e*PN		**Pb**	**17 04 59.7**	**+0.1**
MTBS				*e*S		**Sb**	**17 05 40.0**	**+2.9**
MTBS	**Maitube**	**3.07**	**31**	*e*P		**Pb**	**17 04 59.7**	**+0.1**
	96nm,0.5s							
MTBS				*e*S		**Sb**	**17 05 40.0**	**+2.9**
	568nm,0.4s							
TNSS	**Tian-Shan**	**3.22**	**37**	*e*PN		**Pb**	**17 05 02.0**	**-0.3**
TNSS				*e*S		**Sb**	**17 05 44.0**	**+2.4**
TNSS	**Tian-Shan**	**3.22**	**37**	*e*P		**Pb**	**17 05 02.0**	**-0.3**
	106nm,0.4s							
TNSS				*e*S		**Sb**	**17 05 44.0**	**+2.4**
	180nm,0.4s							
DZA	**Taraz**	**3.26**	**318**	*e*PN		**Pb**	**17 05 03.5**	**+0.8**
DZA				*e*S		**Sg**	**17 05 46.8**	**-2.7**
DZA	**Taraz**	**3.26**	**318**	*e*P		**Pb**	**17 05 03.5**	**+0.8**
	36nm,0.1s							
DZA				*e*S		**Sg**	**17 05 46.8**	**-2.7**
	179nm,0.5s							
DZA	**Taraz**	**3.26**	**318**	Pg		**Pb**	**17 05 03.5**	**+0.8**
	36nm,0.1s							
DZA				Lg		Lg	17 05 46.8	
	179nm,0.5s							
AAA	**Alma-Ata**	**3.34**	**35**	*e*PN		**Pb**	**17 05 04.2**	**+0.1**
AAA				*e*S		**Sb**	**17 05 47.8**	**+3.0**
	61nm,0.5s							
AAA	**Alma-Ata**	**3.34**	**35**	*e*P		**Pb**	**17 05 04.2**	**+0.1**
AAA				*e*S		**Sb**	**17 05 47.8**	**+3.0**
	151nm,0.6s							
AAA	**Alma-Ata**	**3.34**	**35**	Pg		**Pb**	**17 05 04.2**	**+0.1**
	84nm,0.3s							
AAA				Lg		Lg	17 05 47.8	
	133nm,0.4s							
KRBS	**Karabastau**	**3.35**	**17**	*e*P		**Pb**	**17 05 04.2**	**-0.2**
	77nm,0.3s							
KRBS				*e*S		**Sb**	**17 05 47.8**	**+2.6**
	122nm,0.6s							
KRBS	**Karabastau**	**3.35**	**17**	Pg		**Pb**	**17 05 04.2**	**-0.2**
	77nm,0.3s							
KRBS				Lg		Lg	17 05 47.8	
	122nm,0.6s							
MDOK	**Medeo**	**3.36**	**37**	*e*PN		**Pb**	**17 05 04.7**	**+0.1**
MDOK				*e*S		**Sb**	**17 05 48.5**	**+3.0**
MDOK	**Medeo**	**3.36**	**37**	*e*P		**Pb**	**17 05 04.7**	**+0.1**
	29nm,0.7s							
MDOK				*e*S		**Sb**	**17 05 48.5**	**+3.0**
	165nm,0.5s							
MDOK	**Medeo**	**3.36**	**37**	⇑Pn		**Pn**	**17 04 58.2**	**+0.7**
	52nm,0.5s							
MDOK				⇓Lg		Lg	17 05 48.7	
	88nm,0.5s							
KNDC	**Almaty**	**3.37**	**35**	⇓Pg		**Pb**	**17 05 04.0**	**-0.6**
KNDC				⇓Lg		Lg	17 05 50.2	
ANVS	**Anan'yevo**	**3.41**	**47**	⇓*i*P		**Pn**	**17 04 57.1**	**-1.0**
	baz=46							
ANVS				⇓*i*S		**Sn**	**17 05 36.4**	**-2.1**
	baz=46							
KOTS	**Kotyrbulak**	**3.45**	**37**	*e*P		**Pb**	**17 05 05.5**	**-0.6**
	203nm,0.5s							
KOTS				*e*S		**Sb**	**17 05 50.6**	**+2.6**
	618nm,0.5s							
KOTS	**Kotyrbulak**	**3.45**	**37**	Pg		**Pb**	**17 05 05.4**	**-0.6**
	203nm,0.5s							
KOTS				Lg		Lg	17 05 50.6	
	618nm,0.5s							
CHRV	**Charvak**	**3.47**	**291**	*e*P		**Pn**	**17 05 00.5**	**+1.6**
CHRV				S		**Sg**	**17 05 57.0**	**+0.6**
IUG	**Iuzhnay**	**3.60**	**299**	*e*PN		**Pb**	**17 05 10.2**	**+1.6**
IUG				*e*S		**Sg**	**17 05 58.7**	**-1.9**
IUG	**Iuzhnay**	**3.60**	**299**	*e*P		**Pb**	**17 05 10.2**	**+1.6**
	10nm,0.7s							
IUG				*e*S		**Sg**	**17 05 58.7**	**-1.9**
	453nm,0.7s							
IUG	**Iuzhnay**	**3.60**	**299**	Pg		**Pb**	**17 05 10.2**	**+1.6**
	10nm,0.7s							
IUG				Lg		Lg	17 05 58.7	
	453nm,0.7s							
KTBS	**Karatobe**	**3.67**	**28**	*e*P		**Pb**	**17 05 09.6**	**-0.1**
	60nm,0.4s							
KTBS				*e*S		**Sb**	**17 05 57.8**	**+3.6**
	292nm,0.4s							
KTBS	**Karatobe**	**3.67**	**28**	Pg		**Pb**	**17 05 09.6**	**-0.1**
	60nm,0.4s							
KTBS				Lg		Lg	17 05 57.8	
	292nm,0.4s							
KUU	**Kurty**	**3.71**	**24**	*e*PN		**Pb**	**17 05 10.3**	**-0.2**
KUU				*e*S		**Sb**	**17 05 58.3**	**+2.8**
KUU	**Kurty**	**3.71**	**24**	*e*P		**Pb**	**17 05 10.3**	**-0.2**
	18nm,0.4s							
KUU				*e*S		**Sb**	**17 05 58.3**	**+2.8**
	194nm,0.6s							
KUU	**Kurty**	**3.71**	**24**	Pg		**Pb**	**17 05 10.3**	**-0.2**
	18nm,0.4s							
KUU				Lg		Lg	17 05 58.3	
	194nm,0.6s							
KK31	**Karatay Array**	**3.84**	**314**	*i* PN		**Pn**	**17 05 05.1**	**+1.3**
KK31				*e*PG		**Pb**	**17 05 14.1**	**+1.6**
KK31				LG		Lg	17 06 05.5	
KK31	**Karatay Array**	**3.84**	**314**	⇑Pn		**Pn**	**17 05 05.2**	**+1.3**
	1.0nm,0.2s,baz=129,slow=14,SNR=32							
KK31				⇓Pg		**Pb**	**17 05 14.2**	**+1.6**
	5.9nm,0.5s,baz=135,slow=16,SNR=9.2							
KK31				⇑Lg		Lg	17 06 05.5	
	36nm,0.5s,baz=128,slow=29,SNR=10.0							
CHKK	**Chushkaly**	**3.90**	**30**	*e*PN		**Pb**	**17 05 13.2**	**-0.5**
CHKK				*e*S		**Sb**	**17 06 03.8**	**+2.9**
CHKK	**Chushkaly**	**3.90**	**30**	*e*P		**Pb**	**17 05 13.2**	**-0.5**
	26nm,0.4s							
CHKK				*e*S		**Sb**	**17 06 03.8**	**+2.9**
	163nm,0.3s							
CHKK	**Chushkaly**	**3.90**	**30**	Pg		**Pb**	**17 05 13.2**	**-0.5**
	26nm,0.4s							
CHKK				Lg		Lg	17 06 03.8	
	163nm,0.3s							
CHM	**Chimkent**	**3.96**	**299**	*e*PN		**Pg**	**17 05 17.8**	**-3.0**
CHM				*e*S		**Sg**	**17 06 11.3**	**-0.9**
CHM	**Chimkent**	**3.96**	**299**

3.0nm,0.9s
MAKZ ⇑Lg Lg 17 08 30.3
4.9nm,0.9s
MK31 Makanchi Array 8.55 40 *e*P Pn 17 06 22.1 +14
MK31 Makanchi Array 8.55 40 ⇓Pn **Pn 17 06 07.3 -1.3**
0.7nm,0.5s,baz=221,slow=14,SNR=12
MK31 ⇑Pg Pg 17 06 38.3 -10
1.3nm,0.6s,baz=220,slow=14,SNR=7.7
MK31 ⇓Lg Lg 17 08 32.5
2.7nm,0.7s,baz=222,slow=27,SNR=4.5
MKAR Makanchi Array 8.55 40 *e*P Pn 17 06 14.1 +5.5
MKAR Makanchi Array 8.55 40 Pn **Pn 17 06 08.9 +0.4**
0.0nm,0.3s,baz=218,slow=12,SNR=3.0
MKAR Lg Lg 17 08 30.9
0.5nm,0.3s,baz=224,slow=28,SNR=5.4
WMQ Urumqi 10.49 67 *e*P **Pn 17 06 35.3 +0.1**
KURBB Kurchatov Arra 10.55 15 Pn **Pn 17 06 35.1 -0.7**
0.0nm,0.3s,baz=198,slow=12,SNR=4.2
KURBB Pg 17 07 19.1
0.0nm,0.3s,baz=203,slow=17,SNR=4.1
KURBB Lg Lg 17 09 30.6
0.1nm,0.3s,baz=202,slow=29,SNR=5.6
KURBB Kurchatov Arra 10.55 15 ⇑Lg Lg 17 09 36.7
21nm,0.8s
KURK Kurchatov 10.65 15 P **Pn 17 06 35.1 -2.2**
GEYT Alibeck 12.80 264 P **Pn 17 07 04.3 -2.5**
0.3nm,0.3s,baz=70,slow=12,SNR=4.3
GEYT Sn **Sn 17 09 27.1 -2.1**
0.2nm,0.3s,baz=78,slow=9.4,SNR=2.8
BVAR Borovoye Array 12.81 349 Pn **Pn 17 07 05.5 -1.2**
0.2nm,0.3s,baz=163,slow=11,SNR=7.2
BVAR Lg Lg 17 10 49.6
0.2nm,0.3s,baz=169,slow=24,SNR=5.3
BRVK Borovoye 12.85 349 P **Pn 17 07 08.5 +1.1**
BRVK Borovoye 12.85 349 ⇑Pn **Pn 17 07 07.4 0.0**
3.1nm,0.9s
AB31 Akbulak array 13.40 316 *i* P **Pn 17 07 13.4 -1.4**
AB31 Akbulak array 13.40 316 ⇑Pn **Pn 17 07 13.2 -1.7**
1.7nm,0.6s,baz=124,slow=13,SNR=31
AKTO Aktyubinsk 15.10 317 Pn **Pn 17 07 36.1 -1.8**
0.1nm,0.3s,baz=117,slow=17,SNR=3.9
AKTO Aktyubinsk 15.10 317 ⇑Pn **Pn 17 07 38.7 +0.7**
3.1nm,1.1s
ZALV Zalesovo Beam 15.21 24 *e*P **P 17 07 44.5 +0.1**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 15.21 24 Pn **Pn 17 07 39.0 -0.4**
comp=Z,0.2nm,0.3s,baz=226,slow=18,SNR=2.0
ZALV Lg Lg 17 12 01.3
comp=Z,0.1nm,0.3s,baz=208,slow=21,SNR=2.9
ARU Arti 18.97 332 *d* /P **Pn 17 08 27.9 +1.3**
ARU pmax pmax
comp=Z,4.0nm,0.9s
ARU Arti 18.97 332 P **Pn 17 08 27.9 +1.3**
comp=Z,0.0nm,0.3s,baz=128,slow=20,SNR=4.3
SONM Songino Array 24.04 62 P **P 17 09 20.3 +0.3**
comp=Z,0.2nm,0.6s,baz=244,slow=13,SNR=2.8
BRTR Keskin Array B 30.91 282 P **P 17 10 22.0 +0.4**
comp=Z,1.0nm,0.7s,baz=91,slow=8.1,SNR=6.5
FINES FINESS Array B 35.76 322 *e*P **P 17 11 03.4 +0.1**
FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 35.76 322 P **P 17 11 03.5 +0.1**
comp=Z,1.5nm,0.5s,baz=113,slow=10,SNR=6.7
ARCES ARCESS Array B 38.53 335 P **P 17 11 26.6 -0.2**
comp=Z,1.2nm,0.6s,baz=104,slow=10,SNR=7.2
TIXI Tiksi 41.09 23 P **P 17 11 47.8 -0.3**
comp=Z,1.3nm,0.6s,baz=293,slow=7.9,SNR=6.3
NB2 NORSAR Subarra 42.84 320 P **P 17 12 01.9 -0.7**
comp=Z,0.5nm,0.6s,baz=91,slow=7.9
NOA NORSAR Array B 42.84 320 P **P 17 12 02.2 -0.4**
comp=Z,0.6nm,0.6s,baz=90,slow=7.8,SNR=3.5
TORD Torodi Ar. Bea 68.38 269 P **P 17 15 05.0 -1.7**
comp=Z,1.3nm,0.7s,baz=43,slow=5.8,SNR=7.0
YKA Yellowknife Ar 77.10 4 P **P 17 15 56.7 -1.0**
comp=Z,0.2nm,0.5s,baz=348,slow=5.6,SNR=6.5

*IDC **24** 17:09:09.3±1.3,59.°98S×47.°55W,h0km,mb4.0/5, mb1 4.1/6,mb1mx3.9/24,mbtmp4.1/6,ML3.9/1,MS3.5/8, Ms1 3.4/8,ms1mx3.3/25,Error ellipse: s-maj=41.0km s-min=28.1km az=128.0*
*NEIC **24** 17:09:10.9±2.7,60.°34S±0.°09×47.°1W±0.°2,h10km±3km, mb4.5/9, Error ellipse: s-maj=14.8km s-min=11.1km az=135.0*
ISC 24 17:09:11.4±0.6,**60.°24S**±0.°08×**47.°10W**±0.°08,**h10**km,**n38,** σ1**9**/**33**/25,**mb4.2**/6,**MS3.4**/6,**Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**8.28**	**49**	Pn	**Pn**	**17 11 10.9**	**-0.5**
HOPE				Sn	**Sn**	**17 12 43.1**	**-1.9**
PMSA	**Palmer Station**	**9.05**	**233**	Pn	**Pn**	**17 11 20.2**	**-1.7**
	1.3nm,0.3s,baz=57,slow=9.2,SNR=9.5						
PMSA				LR	LR	17 14 49.7	
	comp=Z,358nm,18.2s,baz=84,slow=38						
PMSA	**Palmer Station**	**9.05**	**233**		**Pn**	**17 11 20.0**	**-1.9**
EFI	**East Falkland**	**10.54**	**320**	Pn	**Pn**	**17 11 43.3**	**+0.9**
USHA	**Ushuaia**	**12.65**	**286**	LR	LR	17 16 04.3	
	comp=Z,312nm,18.4s,baz=160,slow=34						
VNA3	**Neumayer Olymp**	**18.52**	**142**	P	**Pn**	**17 13 28.2**	**+0.5**
VNA1	**Neumayer--Stat**	**18.80**	**140**	P	**Pn**	**17 13 33.3**	**+2.3**
SNAA	**Sanae**	**20.74**	**141**	P	Pn	17 13 56.5	+2.3
SNAA	**Sanae**	**20.74**	**141**	P	Pn	17 13 55.8	+1.6
	12nm,1.1s,baz=276,slow=9.4,SNR=9.7						
SNAA	**Sanae**	**20.74**	**141**	P	**P**	**17 13 52.0**	**+0.1**
SNAA				IAmb	IAmb	17 13 58.0	
	comp=Z,31nm,1.4s						
PLCA	**Paso Flores**	**24.34**	**313**	LR	LR	17 23 33.0	
	comp=Z,91nm,21.3s,baz=186,slow=36						
PLCA	**Paso Flores**	**24.34**	**313**	P	**P**	**17 14 28.7**	**-0.5**
QSPA	**South Pole Qui**	**30.00**	**180**	P	**P**	**17 15 21.4**	**+1.5**
	comp=Z,3.3nm,1.0s,baz=190,slow=4.0,SNR=8.6						
QSPA	**South Pole Qui**	**30.00**	**180**	P	**P**	**17 15 21.0**	**+1.1**
CPUP	**Villa Florida**	**34.62**	**344**	LR	LR	17 29 02.9	
	comp=Z,41nm,21.4s,baz=199,slow=35						
GO02	**Mina Guanaco**	**38.36**	**326**	P	**P**	**17 16 33.0**	**+0.2**
MAW	**Mawson**	**42.67**	**148**	LR	LR	17 34 21.8	
	comp=Z,73nm,18.2s,baz=239,slow=35						
PB11	**IPOC Station P**	**43.52**	**328**	P	**P**	**17 17 16.6**	**+1.5**
PB11				IAmb	IAmb	17 17 44.9	
	comp=Z,12nm,1.3s						
MNMC	**Minye Minye**	**44.10**	**329**	P	**P**	**17 17 21.3**	**+1.4**
MNMC				IAmb	IAmb	17 17 59.6	
	comp=Z,7.5nm,1.1s						
LPAZ	**La Paz**	**46.47**	**332**	LR	LR	17 39 57.4	
	comp=Z,19nm,18.1s,baz=186,slow=40						
CASY	**Casey**	**52.70**	**169**	P	**P**	**17 18 22.9**	**-2.5**
H10S2	**ASCENSION HYDR**	**56.63**	**39**	T	T	18 20 42.4	
	baz=200,slow=74,SNR=12						
H10S3	**ASCENSION HYDR**	**56.63**	**39**	T	T	18 20 43.4	
	baz=20,slow=74,SNR=11						
BOSA	**Boshof**	**56.92**	**90**	P	**P**	**17 18 56.9**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=197,slow=14,SNR=1.8						
BOSA				LR	LR	17 38 44.3	
	comp=Z,38nm,18.1s,baz=241,slow=31						
BOSA	**Boshof**	**56.92**	**90**	P	**P**	**17 18 56.6**	**0.0**
BOSA				IAmb	IAmb	17 19 09.3	
	comp=Z,8.9nm,1.4s						
H10N3	**ASCENSION HYDR**	**57.73**	**39**	T	T	18 22 05.6	
	baz=199,slow=75,SNR=21						
H10N1	**ASCENSION HYDR**	**57.73**	**39**	T	T	18 22 05.9	
	baz=199,slow=75,SNR=12						
H10N2	**ASCENSION HYDR**	**57.75**	**39**	T	T	18 22 07.0	
	baz=199,slow=75,SNR=24						
TORD	**Torodi Ar. Bea**	**82.86**	**48**	P	**P**	**17 21 36.8**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=220,slow=9.2,SNR=2.4						
TORD				LR	LR	17 52 01.2	
	comp=Z,35nm,20.4s,baz=345,slow=31						
TORD	**Torodi Ar. Bea**	**82.86**	**48**	P	**P**	**17 21 36.0**	**+0.1**
ASAR	**Alice Springs**	**96.40**	**181**	P	P	17 22 42.0	+1.4
	comp=Z,0.5nm,1.1s,baz=158,slow=4.0,SNR=3.1						
ASAR	**Alice Springs**	**96.40**	**181**	P	P	17 22 33.6	-6.9
CMAR	**Chiang Mai Arr**	**131.72**	**135**	PKP	**PKPdf**	**17 28 23.6**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=201,slow=4.8,SNR=4.0						
ARCES	**ARCESS Array B**	**139.36**	**31**	PKhKP	PKPpre	17 28 27.3	
	comp=Z,1.4nm,0.9s,baz=250,slow=2.7,SNR=3.4						
ILAR	**Eielson Array**	**145.02**	**313**	PKP	**PKPbc**	**17 28 46.0**	**-0.6**
	comp=Z,0.7nm,0.7s,baz=120,slow=2.1,SNR=7.1						
ILAR	**Eielson Array**	**145.02**	**313**		**PKPbc**	**17 28 45.9**	**-0.7**
MKAR	**Makanchi Array**	**147.91**	**92**	PKPbc	**PKPdf**	**17 28 54.1**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=220,slow=2.2,SNR=8.3						
MKAR	**Makanchi Array**	**147.91**	**92**		**PKPbc**	**17 28 54.4**	**-1.4**

*IDC **24** 17:17:33.8±4.1,21.°63S×174.°12W,h0km,mb3.9/5, mb1 4.1/5,mb1mx3.8/27,mbtmp3.9/5,Error ellipse: s-maj=153.7km s-min=33.4km az=140.0*
*NEIC **24** 17:17:35.5±2.4,22.°3S±0.°1×173.°63W±0.°10,h35km±6km, mb4.3/6,Error ellipse: s-maj=16.2km s-min=11.4km az=147.0*
ISC 24 17:17:36.0±0.8,**22.°3S**±0.°1×**173.°8W**±0.°1,**h31**km,**n15,** σ1**9**/**16**/14,**mb4.0**/6,**Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.86**	**50**	Pn	Pn	17 18 39.3	-7.7
NIUE				Sn	Pn	17 19 23.7	-1.8
MSVF	**Nonsavu**	**8.87**	**299**		**Pn**	**17 19 41.2**	**-1.0**
RAR	**Rarotonga**	**13.11**	**88**	Pn	**Pn**	**17 20 39.9**	**-0.3**
FUNA	**Funafuti**	**15.23**	**333**	Pn	**Pn**	**17 21 09.1**	**+0.1**
FUNA				IAmb	IAmb	17 21 09.5	
	comp=Z,31nm,1.0s						
OUZ	**Omahuta**	**16.93**	**218**	Pn	**P**	**17 21 31.4**	**-1.0**
OUZ				IAmb	IAmb	17 21 37.2	
	comp=Z,20nm,1.4s						
URZ	**Urewera**	**17.72**	**204**		**Pn**	**17 21 39.8**	**-0.6**
URZ				IAmb	IAmb	17 22 16.5	
	comp=Z,17nm,1.1s						
AS31	**Alice Springs**	**47.91**	**258**	P	**P**	**17 26 12.3**	**+0.5**
ASAR	**Alice Springs**	**47.91**	**258**	P	**P**	**17 26 13.2**	**+1.5**
	comp=Z,1.6nm,0.8s,baz=99,slow=7.3,SNR=18						
ASAR	**Alice Springs**	**47.91**	**258**	P	**P**	**17 26 12.1**	**+0.4**
WR0	**Warramunga Arr**	**48.02**	**263**	P	**P**	**17 26 13.0**	**+0.4**
WR0				IAmb	IAmb	17 26 24.9	
	comp=Z,8.1nm,1.4s						
WRA	**Warramunga Arr**	**48.21**	**263**	P	**P**	**17 26 14.5**	**+0.4**
	comp=Z,0.5nm,0.6s,baz=100,slow=7.8,SNR=3.7						
PETK	**Petropavlovsk-**	**79.05**	**343**	P	**P**	**17 29 35.2**	**-1.7**
	comp=Z,4.2nm,1.1s,baz=150,slow=8.2,SNR=3.0						
ILAR	**Eielson Array**	**89.25**	**11**	P	**P**	**17 30 28.9**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=188,slow=4.3,SNR=3.5						
CMAR	**Chiang Mai Arr**	**94.36**	**288**	P	**P**	**17 30 55.8**	**+2.5**
	comp=Z,0.5nm,0.8s,baz=117,slow=3.2,SNR=5.5						
BRTR	**Keskin Array B**	**150.90**	**313**	PKPbc	**PKPbc**	**17 37 25.8**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=32,slow=5.0,SNR=3.3						

IDC 24 17:35:47.3±2.1,**22.°15S**×**179.°45W,h0**km,**mb4.2**/4, **mb1 4.5**/4,**mb1mx3.9**/23,**mbtmp4.2**/4,**Error ellipse: s-maj=156.0km s-min=34.4km az=159.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.87**	**246**	P	P	17 42 49.4	+0.3
	2.7nm,0.6s,baz=97,slow=13,SNR=7.7						
ASAR	**Alice Springs**	**42.85**	**259**	P	P	17 43 47.1	-0.4
	3.8nm,0.8s,baz=93,slow=7.8,SNR=56						
WRA	**Warramunga Arr**	**43.06**	**264**	P	P	17 43 49.1	-0.2
	1.3nm,0.3s,baz=102,slow=8.2,SNR=22						
TXAR	**Lajitas Array**	**89.07**	**58**	P	P	17 48 44.8	0.0
	0.3nm,0.8s,baz=218,slow=6.8,SNR=2.5						

*DJA **24** 17:59:54.0±0.5,4.°N±5.°×12.°4E±.°,h10km,M4.8/8,mb4.7/6, mB5.0/3,MLv4.9/8,Mw(mB)4.4/3,Mwp5.1/1*
*NEIC **24** 17:59:55.1±2.4,4.°15N±0.°06×124.°77E±0.°09,h12km±5km, mb4.5/46,Error ellipse: s-maj=12.9km s-min=8.9km az=84.0*
*IDC **24** 17:59:58.3±0.8,4.°33N×124.°01E,h59km±8km,mb3.8/7, mb1 4.0/8,mb1mx3.6/54,mbtmp4.2/8,MS3.2/5,Ms1 3.2/5, ms1mx2.9/36,Error ellipse: s-maj=19.9km s-min=10.8km az=100.0*
*MAN **24** 17:59:59.0,4.°78N×124.°02E,h19km,mb5.4,ML4.4,MS4.6*
*BJI **24** 18:00:04.1±0.0,3.°62N×124.°39E,h60km,mB4.8/18, mb4.4/22,Ms4.4/4,Ms7 4.0/3*
ISC 24 17:59:55.9±0.7,**4.°37N**±0.°04×**124.°27E**±0.°06,**h24**km±5km, **h24**km:**pP-P,n101,**σ2**9**/**37**/87,**mb4.5**/32,**MS3.2**/5,**2C-2D, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**1.84**	**22**	*e*P	**Pn**	**18 00 25.8**	**-0.4**
GSPH				*i* S	**Sn**	**18 00 50.5**	**+1.7**
SKMP	**Bagumbayan, Su**	**2.16**	**7**	*e*P	**Pn**	**18 00 28.9**	**-1.5**
SKMP				*e*S	**Sn**	**18 00 52.3**	**-4.1**
DDMP	**Don Marcelino,**	**2.25**	**40**	*e*P	**Pn**	**18 00 33.0**	**+1.3**
DDMP				*e*S	**Sn**	**18 01 01.3**	**+2.6**
KCP	**Kidapawan**	**2.75**	**17**	⇑*i*P	**Pn**	**18 00 39.7**	**+1.0**
KCP				*i* S	**Sn**	**18 01 08.4**	**-2.9**
CTBH	**Cotabato--PC H**	**2.84**	**360**	⇓*i*P	**Pn**	**18 00 38.8**	**-0.9**
CTBH				*i* S	**Sn**	**18 01 08.7**	**-4.6**
DMPH	**Davao City--Mi**	**2.97**	**25**	⇑*i*P	**Pb**	**18 00 46.6**	**-1.6**
DAV	**Davao City (W)**	**2.99**	**26**	P	**Pn**	**18 00 44.8**	**+3.0**
	92nm,0.3s,baz=217,slow=2.0,SNR=15						
DAV				S	**Sb**	**18 01 22.4**	**-2.1**
	182nm,0.3s,baz=61,slow=22,SNR=7.6						
DAV				LR	LR	18 02 21.8	
	comp=Z,364nm,20.6s,baz=124,slow=46						
DAV	**Davao City (W)**	**2.99**	**26**		**Pn**	**18 00 43.8**	**+1.9**
MATI	**Mati**	**3.24**	**38**	*e*P	**Pn**	**18 00 45.2**	**-0.2**
MATI				*e*S	Sn	18 01 15.0	-8.2
PAGZ	**Pagadian**	**3.57**	**346**	*e*P	**Pn**	**18 00 47.8**	**-2.0**
PAGZ				*e*S	**Sn**	**18 01 25.1**	**-6.2**
BUKP	**Musuan**	**3.58**	**13**	*e*P	**Pn**	**18 00 49.9**	**-0.2**
BUKP				*e*S	**Sn**	**18 01 29.6**	**-2.0**
KMSI	**Cibinong**	**3.78**	**184**	P	**Pn**	**18 00 53.4**	**+0.7**
CGP	**Cagayan de Oro**	**4.08**	**6**	⇓*e*P	**Pn**	**18 00 57.3**	**+0.4**
CGP				*e*S	**Sn**	**18 01 46.2**	**+2.2**
MRSI	**Marisa**	**4.51**	**211**	P	**Pn**	**18 01 01.5**	**-1.2**
TNTI	**Ternate**	**4.73**	**139**	P	**Pn**	**18 01 09.9**	**+4.1**
TNTI	**Ternate**	**4.73**	**139**		Pn	18 00 58.8	-7.0
TNTI					Pb	18 01 09.0	-9.2
LUWI	**Luwuk**	**5.58**	**196**	P	**Pn**	**18 01 19.0**	**+1.6**
LUWI	**Luwuk**	**5.58**	**196**		**Pn**	**18 01 18.8**	**+1.4**
APSI	**Ampana**	**5.86**	**207**	P	**Pn**	**18 01 22.5**	**+1.2**
MPSI	**Mapaga**	**5.92**	**228**	P	**Pn**	**18 01 18.1**	**-4.1**
	0.4nm158nm,0.6s						
SANI	**Sanana**	**6.60**	**165**	P	**Pn**	**18 01 32.0**	**+0.5**
NLAI	**Namlea**	**8.07**	**159**	P	**Pn**	**18 01 53.7**	**+2.0**
	1μm63nm,0.6s						
KKM	**Kota Kinabalu**	**8.19**	**282**		**Pn**	**18 01 51.8**	**-1.7**
TTSI	**Tana Toraja**	**8.60**	**211**	P	**Pn**	**18 01 59.3**	**+0.3**
AAI	**Ambon**	**8.91**	**154**	P	**Pn**	**18 02 05.0**	**+1.7**
MSAI	**Masohi**	**8.96**	**149**	P	**Pn**	**18 02 07.5**	**+3.5**
	442nm39nm,0.9s						
SPSI	**Sidrap Palu**	**9.41**	**209**	P	**Pn**	**18 02 10.0**	**-0.2**
BNSI	**Bone**	**9.65**	**206**	P	**Pn**	**18 02 14.9**	**+1.5**
FAKI	**Fak Fak**	**10.77**	**132**		**Pn**	**18 02 31.0**	**+2.2**
KBKI	**Kotabaru**	**11.11**	**227**	P	**Pn**	**18 03 31.6**	**-1.8**
SOEI	**Soe**	**14.03**	**180**	Pn	**Pn**	**18 03 12.1**	**-1.4**
SAUI	**Saumlaki**	**14.13**	**150**	Pn	**Pn**	**18 03 13.8**	**-1.0**
KSM	**Kuching**	**14.23**	**259**	Pn	**P**	**18 03 23.1**	**-0.2**
MTN	**Manton Dam**	**18.41**	**158**		**P**	**18 04 08.0**	**-1.5**
YULB	**Yu-li**	**19.13**	**352**	P	**Pn**	**18 04 20.4**	**+2.0**
TPUB	**Ta-pu**	**19.15**	**350**	P	Pn	18 04 31.0	+12
TPUB				IAmb	IAmb	18 04 40.0	
	comp=Z,31nm,1.2s						
SSLB	**Suanglung**	**19.57**	**351**	P	**Pn**	**18 04 25.4**	**+1.7**
CISI	**Cisompet, Garu**	**20.24**	**234**	P	Pn	18 04 31.7	0.0
QIZ	**Qiongzhong**	**20.27**	**317**	P	Pn	18 04 35.0	+3.0
QIZ				IAmb	IAmb	18 04 56.5	
	comp=Z,32nm,1.4s						
HKPS	**Hong Kong Po S**	**20.33**	**332**	P	Pn	18 04 43.0	+10
YHNB	**Yeheng**	**20.38**	**352**	P	Pn	18 04 44.4	+11
YHNB				IAmb	IAmb	18 05 08.9	
	comp=Z,25nm,1.2s						
KNRA	**Kununurra**	**20.41**	**167**	P	**P**	**18 04 31.3**	**-0.1**
UBPT	**Khong Chiam**	**21.44**	**302**	P	**P**	**18 04 47.0**	**+4.4**
UBPT				IAmb	IAmb	18 05 08.0	
	comp=Z,22nm,1.5s						
FITZ	**Fitzroy Crossi**	**22.36**	**177**	P	**P**	**18 04 50.9**	**-1.5**
	comp=Z,32nm,0.8s,baz=8.4,slow=7.6,SNR=51						
FITZ	**Fitzroy Crossi**	**22.36**	**177**	P	**P**	**18 04 51.0**	**-1.5**
JOW	**Kunigami**	**22.67**	**9**	P	P	18 05 08.9	+13
JOW				IAmb	IAmb	18 05 10.8	
	comp=Z,19nm,1.0s						
RPSI	**Rantau Prapat**	**25.35**	**267**	P	**P**	**18 05 27.2**	**+5.9**
RPSI				IAmb	IAmb	18 05 39.7	
	comp=Z,14nm,0.8s						
PBKT	**Sadao Pong**	**25.88**	**300**	P	**P**	**18 05 29.5**	**+3.4**
WB0	**Warramunga Arr**	**25.97**	**158**	P	**P**	**18 05 25.1**	**-1.8**
WB0				IAmb	IAmb	18 05 35.5	
	comp=Z,13nm,1.1s						
WRAB	**Tennant Creek**	**26.10**	**158**	P	**P**	**18 05 26.9**	**-1.3**
WRAB				IAmb	IAmb	18 05 36.9	
	comp=Z,10.0nm,0.9s						
WRA	**Warramunga Arr**	**26.11**	**158**	P	**P**	**18 05 26.9**	**-1.2**
	comp=Z,5.2nm,0.8s,baz=335,slow=10.0,SNR=16						
WRA	**Warramunga Arr**	**26.11**	**158**	P	**P**	**18 05 27.8**	**-0.3**
WB2	**Warramunga Arr**	**26.11**	**158**	P	**P**	**18 05 26.8**	**-1.4**
WB2				IAmb	IAmb	18 05 36.9	
	comp=Z,12nm,1.0s						
PSA00	**Pilbara Seismi**	**26.14**	**189**	P	**P**	**18 05 26.7**	**-1.8**
PSA00				IAmb	IAmb	18 05 31.2	
	comp=Z,21nm,1.4s						
COEN	**Coen**	**26.14**	**134**	P	**P**	**18 05 28.0**	**-0.5**
COEN				IAmb	IAmb	18 05 28.8	
	comp=Z,12nm,1.4s						
WR0	**Warramunga Arr**	**26.20**	**158**	P	**P**	**18 05 28.2**	**-0.8**
WR0				IAmb	IAmb	18 05 38.0	
	comp=Z,7.1nm,0.8s						
PMG	**Port Moresby**	**26.60**	**121**	P	**P**	**18 05 28.3**	**-4.4**
PMG				IAmb	IAmb	18 05 33.5	
	comp=Z,25nm,1.4s						
SSE	**Sheshan**	**26.75**	**354**	P	**P**	**18 05 37.2**	**+3.4**
SSE				IAmb	IAmb	18 05 50.6	
	comp=Z,30nm,1.5s						
GSI	**Gunungsitoli**	**26.83**	**264**	P	**P**	**18 05 37.8**	**+3.0**
GSI				IAmb	IAmb	18 05 44.2	
	comp=Z,21nm,1.2s						
LHMI	**Lhok Sumawe**	**27.24**	**273**	P	**P**	**18 05 43.3**	**+4.9**
NJ2	**Nanjing**	**28.01**	**350**	*e*P	P	18 05 57.3	+12
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**28.44**	**302**	LR	LR	18 16 46.0	
	comp=Z,21nm,19.5s,baz=130,slow=36						
ENH	**Enshi**	**29.31**	**333**	P	P	18 06 01.6	+4.8
ENH				pwP	pwP	18 06 09.7	+0.7
AS31	**Alice Springs**	**29.40**	**162**	P	**P**	**18 05 56.5**	**-1.2**
ASAR	**Alice Springs**	**29.40**	**162**	P	**P**	**18 05 57.0**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=342,slow=6.9,SNR=22						
ASAR	**Alice Springs**	**29.40**	**162**	P	**P**	**18 05 56.2**	**-1.5**
PBA	**Port Blair**	**32.02**	**285**	P	P	18 06 26.6	+5.7
XAN	**Xi'an**	**32.79**	**336**	P	P	18 06 40.3	+13
XAN				pP	pwP	18 06 58.6	+19
XAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,120nm,5.5s						
XAN	**Xi'an**	**32.79**	**336**	P	P	18 06 32.0	+4.6
XAN				IAmb	IAmb	18 06 40.9	
	comp=Z,5.1nm,0.8s						
KSRS	**Korea Array**	**33.10**	**5**	LR	LR	18 21 28.0	
	comp=Z,41nm,19.2s,baz=140,slow=39						
PATS	**Pohnpei**	**33.97**	**84**	P	P	18 06 32.8	-5.1
MORW	**Morawa**	**34.17**	**193**	P	**P**	**18 06 37.9**	**-1.6**
MORW				IAmb	IAmb	18 07 04.0	
	comp=Z,12nm,1.1s						
FORT	**Forrest**	**35.13**	**174**	P	**P**	**18 06 46.9**	**-0.8**
LZH	**Lanzhou**	**36.75**	**332**	*e*P	P	18 07 16.6	+15
LZH				pP	pwP	18 07 31.5	+17
LZH				sP	sP	18 07 38.8	+29
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
HHC	**Hu-ho-hao-te**	**38.08**	**344**	*e*P	P	18 07 24.3	+11
HHC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,57nm,6.3s						
BBOO	**Buckleboo**	**38.63**	**164**	P	**P**	**18 07 15.7**	**-1.8**
EIDS	**Eidsvold**	**39.39**	**140**	P	**P**	**18 07 22.0**	**-2.0**
STKA	**Stephens Creek**	**39.64**	**157**	P	**P**	**18 07 25.6**	**-0.4**
	comp=Z,5.3nm,0.8s,baz=336,slow=8.9,SNR=10						
STKA	**Stephens Creek**	**39.64**	**157**	P	P	**18 07 24.7**	**-1.2**
GTA	**Gaotai**	**41.32**	**331**	*e*P	P	18 07 53.9	+14
GTA				pP	pwP	18 08 07.5	+15
GTA				sP	sP	18 08 11.8	+24
CAN	**Canberra**	**45.80**	**151**	P	**P**	**18 08 17.0**	**+0.9**
SONM	**Songino Array**	**45.95**	**343**	P	**P**	**18 08 16.6**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=142,slow=4.9,SNR=2.9						
SONM				pP	**pwP**	**18 08 30.0**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=159,slow=9.4,SNR=5.2						
TOO	**Toolangi**	**46.16**	**156**	P	**P**	**18 08 19.4**	**+0.7**
TOO				IAmb	IAmb	18 08 42.9	
	comp=Z,8.9nm,1.1s						
TLY	**Talaya**	**50.19**	**343**	LR	LR	18 30 31.1	
	comp=Z,22nm,19.2s,baz=54,slow=36						
WMQ	**Urumqi**	**50.81**	**326**	*e*P	P	18 09 05.4	+11
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,5.3s						
WMQ				LR	LR		
	comp=Z,570nm,29.1s						
WMQ				LR	LR		
	comp=Z,1μm,28.9s						
MKAR	**Makanchi Array**	**55.65**	**326**	P	**P**	**18 09 28.6**	**-1.6**
	comp=Z,0.3nm,0.4s,baz=118,slow=7.6,SNR=13						
MKAR				pP	**pwP**	**18 09 44.1**	**+1.5**
	comp=Z,1.6nm,0.6s,baz=130,slow=8.6,SNR=11						
MKAR				LR	LR	18 33 02.8	
	comp=Z,33nm,20.7s,baz=29,slow=36						
PETK	**

DZM LR LR 18 16 37.8
comp=Z,384nm,19.7s,baz=196,slow=34
DZM Mont Dzumac 18.29 264 P **Pn** **18 10 47.1 -2.5**
NOUC Port Laguerre 18.42 264 P **P** **18 10 50.5 -0.5**
URZ Urewera 18.55 203 P **Pn** **18 10 52.8 +0.2**
1.3nm,0.3s,baz=334,slow=0.9,SNR=7.7
URZ S Sn 18 14 02.9 -17
0.3nm,0.3s,baz=234,slow=19,SNR=3.2
URZ Urewera 18.55 203 P **Pn** **18 10 52.3 -0.3**
BKZ Black Stump Fm 18.58 203 P **Pn** **18 11 04.9 -0.1**
SNZO South Karori 22.11 203 P **P** **18 11 31.1 +0.1**
SNZO IAmb IAmb 18 12 12.5
comp=Z,72nm,1.1s
BHW Baring Head 22.14 203 P **P** **18 11 29.6 -1.7**
TBI Tubuai 22.68 100 *e*LR LR 18 17 03.5
comp=Z,330nm,23.5s
PPT2 Papeete2 23.22 85 *e*LR LR 18 17 26.4
comp=Z,314nm,21.8s
PPT Papeete 23.23 85 LR LR 18 19 44.6
comp=Z,275nm,18.4s,baz=244,slow=34
KHZ Kahutara 23.50 204 P **P** **18 11 46.5 +1.0**
KHZ IAmb IAmb 18 11 54.1
comp=Z,131nm,1.7s
LTZ Lake Taylor 24.31 205 P **P** **18 11 53.4 +0.2**
LTZ IAmb IAmb 18 12 03.5
comp=Z,34nm,1.0s
RPZ Rata Peaks 25.57 206 P **P** **18 12 04.6 -0.1**
comp=Z,8.9nm,0.9s,baz=315,slow=8.6,SNR=4.0
RPZ LR LR 18 22 54.1
comp=Z,244nm,18.2s,baz=9.5,slow=39
RPZ Rata Peaks 25.57 206 P **P** **18 12 03.0 -1.7**
FOZ Fox Glacier 25.95 208 P **P** **18 12 08.5 +0.5**
FOZ IAmb IAmb 18 12 14.1
comp=Z,40nm,0.9s
LHI Lord Howe Isla 26.18 242 P **P** **18 12 08.0 -2.4**
ARMA Armidale 32.20 247 P **P** **18 13 03.0 -1.0**
EIDS Eidsvold 32.34 256 P **P** **18 13 04.4 -0.8**
EIDS IAmb IAmb 18 13 31.0
comp=Z,27nm,1.8s
CTA Charters Tower 37.23 265 P **P** **18 13 46.2 -1.3**
comp=Z,2.2nm,0.4s,baz=84,slow=9.2,SNR=8.8
TOO Toolangi 38.55 236 P **P** **18 13 57.7 -0.8**
TOO IAmb IAmb 18 15 22.8
comp=Z,80nm,1.9s
TAU Tasmania Unive 38.79 227 P **P** **18 14 00.4 0.0**
PMG Port Moresby 39.27 282 P **P** **18 14 03.2 -1.6**
comp=Z,11nm,0.9s,baz=64,slow=5.2,SNR=4.9
PMG Port Moresby 39.27 282 P **P** **18 14 03.6 -1.1**
STKA Stephens Creek 40.91 246 P **P** **18 14 16.9 -1.3**
comp=Z,2.2nm,0.5s,baz=95,slow=12,SNR=8.7
STKA LR LR 18 29 15.1
comp=Z,91nm,18.5s,baz=28,slow=34
STKA Stephens Creek 40.91 246 **P** **18 14 17.3 -0.9**
COEN Coen 41.46 273 P **P** **18 14 21.9 -1.0**
COEN IAmb IAmb 18 14 42.5
comp=Z,48nm,2.0s
MANU Manus Island 42.31 292 P **P** **18 14 28.0 -1.9**
MANU IAmb IAmb 18 15 45.8
comp=Z,81nm,1.5s
HLK Haleakala 45.27 24 P **P** **18 14 53.5 -0.3**
BBOO Buckleboo 45.63 245 P **P** **18 14 54.6 -1.7**
BBOO IAmb IAmb 18 14 57.5
comp=Z,18nm,1.1s
AS31 Alice Springs 48.06 257 P **P** **18 15 13.9 -1.7**
ASAR Alice Springs 48.06 257 P **P** **18 15 14.1 -1.5**
comp=Z,7.3nm,0.8s,baz=100,slow=7.0,SNR=60
ASAR PcP **PcP** **18 16 45.4 +1.9**
comp=Z,1.5nm,0.8s,baz=106,slow=4.0,SNR=4.3
ASAR LR LR 18 34 46.1
comp=Z,88nm,18.6s,baz=101,slow=35
WR0 Warramunga Arr 48.09 262 P **P** **18 15 13.9 -1.9**
WR0 PcP **PcP** **18 16 43.2 -0.4**
WB0 Warramunga Arr 48.27 262 P **P** **18 15 15.3 -1.9**
WB0 IAmb IAmb 18 15 18.4
comp=Z,23nm,1.5s
WB0 PcP **PcP** **18 16 45.2 +1.0**
WB2 Warramunga Arr 48.27 262 P **P** **18 15 15.2 -2.0**
WB2 IAmb IAmb 18 15 16.7
comp=Z,11nm,1.0s
WB2 PcP **PcP** **18 16 44.3 +0.1**
WRAB Tennant Creek 48.27 262 P **P** **18 15 15.0 -2.2**
WRAB IAmb IAmb 18 15 16.6
comp=Z,10nm,1.0s
WRA Warramunga Arr 48.28 262 P **P** **18 15 15.2 -2.1**
comp=Z,5.6nm,0.9s,baz=91,slow=5.6,SNR=22
WRA PcP **PcP** **18 16 46.4 +2.2**
comp=Z,1.8nm,0.7s,baz=93,slow=3.7,SNR=4.8
WRA Warramunga Arr 48.28 262 IAmb IAmb 18 15 16.1
comp=Z,0.7nm,1.1s
FORT Forrest 52.49 247 P **P** **18 15 48.7 -0.2**
FORT IAmb IAmb 18 15 51.8
comp=Z,23nm,0.8s
MTN Manton Dam 53.00 270 P **P** **18 15 50.5 -2.4**
MTN IAmb IAmb 18 17 46.1
comp=Z,24nm,1.2s
KNRA Kununurra 54.43 266 P **P** **18 16 02.2 -1.1**
KNRA IAmb IAmb 18 17 21.4
comp=Z,31nm,1.4s
FITZ Fitzroy Crossi 56.71 262 P **P** **18 16 19.3 -0.5**
comp=Z,2.3nm,0.8s,baz=141,slow=6.5,SNR=4.8
FITZ Fitzroy Crossi 56.71 262 P **P** **18 16 18.0 -1.8**
FITZ IAmb IAmb 18 17 30.9
comp=Z,36nm,1.9s
VNDA Vanda 57.44 186 LR LR 18 40 04.9
comp=Z,58nm,18.3s,baz=356,slow=35
VNDA Vanda 57.44 186 P **P** **18 16 24.3 +0.3**
VNDA IAmb IAmb 18 17 06.2
comp=Z,53nm,1.8s
SOEI Soe 60.36 271 P **P** **18 16 44.8 -0.6**
PSA00 Pilbara Seismi 61.21 256 P **P** **18 16 48.8 -2.2**
PSA00 IAmb IAmb 18 18 05.0
comp=Z,21nm,1.2s
TNTI Ternate 61.39 283 P **P** **18 16 52.5 +0.2**
NWAO Narrogin (SRO) 61.42 243 P **P** **18 16 49.6 -2.6**
MORW Morawa 63.05 247 P **P** **18 17 02.2 -1.1**
LUWI Luwuk 64.86 279 P **P** **18 17 13.9 -1.4**
GIRL Giralia 66.01 254 P **P** **18 17 23.0 +0.3**
QSPA South Pole Qui 68.72 180 P **P** **18 17 38.1 -1.2**
comp=Z,1.7nm,1.1s,baz=90,slow=2.0,SNR=3.2
QSPA South Pole Qui 68.72 180 P **P** **18 17 38.0 -1.4**
QSPA IAmb IAmb 18 17 59.2
comp=Z,8.8nm,1.0s
ADK Adak 72.96 358 P **P** **18 18 04.7 -0.2**
MJAR Matsushiro Arr 73.22 321 P **P** **18 18 08.2 +1.3**
comp=Z,3.4nm,0.6s,baz=132,slow=5.8,SNR=6.0
MJAR Matsushiro Arr 73.22 321 P **P** **18 18 07.9 +1.1**
UGM Wanagama 73.78 268 P **P** **18 18 09.9 -0.8**
YULB Yu-li 77.19 302 P **P** **18 18 29.8 -0.3**
YULB IAmb IAmb 18 19 12.7
comp=Z,34nm,1.5s
SSLB Suanglung 77.67 302 P **P** **18 18 31.9 -0.8**
SSLB IAmb IAmb 18 18 41.1
comp=Z,35nm,1.7s
TPUB Ta-pu 77.68 301 P **P** **18 18 31.9 -0.9**
MDPB Devils Postpil 78.09 42 P **P** **18 18 32.1 -2.9**
GSC Goldstone, Bar 78.11 45 P **P** **18 18 32.8 -2.2**
GSC IAmb IAmb 18 19 02.6
comp=Z,22nm,1.9s
PEA0B Petropavlovsk- 78.14 343 P **P** **18 18 34.1 -0.5**
PETK Petropavlovsk- 78.14 343 P **P** **18 18 36.9 +2.3**
comp=Z,3.5nm,0.8s,baz=121,slow=7.8,SNR=4.9
PETK Petropavlovsk- 78.14 343 P **P** **18 18 36.2 +1.6**
WAKR Walker 78.42 41 P **P** **18 18 37.0 +0.2**
WAKR IAmb IAmb 18 19 04.1
comp=Z,14nm,1.3s
YBH Yreka Blue Hor 78.62 37 P **P** **18 18 41.4 +3.7**
comp=Z,3.2nm,0.9s,baz=201,slow=10,SNR=5.8
YBH Yreka Blue Hor 78.62 37 P **P** **18 18 35.5 -2.1**
YBH IAmb IAmb 18 19 36.5
comp=Z,30nm,1.8s
PNTR Pine Nut 78.69 40 P **P** **18 18 37.0 -1.3**
PNTR IAmb IAmb 18 19 00.2
comp=Z,8.9nm,0.8s
BEKR Beckworth 78.74 39 P **P** **18 18 36.3 -2.2**
BEKR IAmb IAmb 18 18 48.9
comp=Z,12nm,1.1s
YERR Yerington 78.84 40 P **P** **18 18 37.8 -1.3**
214A Organ Pipe Nat 78.90 49 P **P** **18 18 38.5 -0.8**
RYN Ryan 79.06 41 P **P** **18 18 40.5 +0.2**
NVAR Mina Array Bea 79.07 41 P **P** **18 18 42.2 +1.9**
comp=Z,0.8nm,0.7s,baz=230,slow=7.0,SNR=5.6
NVAR LR LR 18 47 01.2
comp=Z,111nm,19.5s,baz=203,slow=30
NVAR Mina Array Bea 79.07 41 P **P** **18 18 41.4 +1.0**
NV11 Mina Array Sit 79.16 41 P **P** **18 18 41.0 +0.2**

PAHR Pah Rah Range 79.21 40 P **P** **18 18 41.8 +0.7**
KVN Kaiserville 79.58 41 P **P** **18 18 43.4 +0.3**
MOD Modoc Plateau 80.09 38 P **P** **18 18 45.9 +0.1**
KSRS Korea Array 80.10 317 P **P** **18 18 48.1 +2.5**
comp=Z,3.2nm,1.0s,baz=131,slow=5.9,SNR=7.7
D05A Enumclaw 82.67 33 P **P** **18 18 58.4 -0.7**
D05A IAmb IAmb 18 19 18.1
comp=Z,25nm,1.1s
MTPU Mount Pierson 82.72 44 P **P** **18 18 59.4 -0.7**
G08A Pilot Rock 83.01 36 P **P** **18 19 01.1 0.0**
NJ2 Nanjing 83.40 308 *e*P **P** **18 19 03.5 +0.2**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
TXAR Lajitas Array 84.32 56 P P 18 19 12.9 +4.7
comp=Z,0.6nm,1.0s,baz=193,slow=3.7,SNR=4.0
TXAR Lajitas Array 84.32 56 P **P** **18 19 07.9 -0.3**
F10A Beach Ranch, E 84.39 36 P **P** **18 19 08.4 +0.3**
F10A IAmb IAmb 18 19 15.2
comp=Z,6.9nm,0.9s
GAMB Gambell 84.86 1 P **P** **18 19 10.7 +0.8**
GAMB IAmb IAmb 18 19 16.7
comp=Z,10.0nm,0.9s
TTA Tatalina 85.18 8 P **P** **18 19 13.7 +2.0**
TTA IAmb IAmb 18 19 18.3
comp=Z,13nm,1.1s
CN2 Changchun 85.35 321 *e*P **P** **18 19 15.8 +2.9**
CN2 pmax pmax
comp=Z,10.0nm,1.3s
PLCA Paso Flores 85.88 132 LR LR 18 49 50.9
comp=Z,66nm,19.6s,baz=250,slow=30
TRF Thorofare Moun 86.53 10 P **P** **18 19 20.1 +1.7**
TRF IAmb IAmb 18 19 23.9
comp=Z,15nm,0.9s
RND Reindeer 86.74 11 P **P** **18 19 18.8 -0.6**
PDAR Pinedale Array 87.00 42 P **P** **18 19 23.5 +2.2**
comp=Z,0.2nm,0.5s,baz=277,slow=8.1,SNR=4.2
PDAR Pinedale Array 87.00 42 P **P** **18 19 22.4 +1.0**
MCK McKinley 87.03 11 P **P** **18 19 21.6 +0.9**
MCK IAmb IAmb 18 19 39.5
comp=Z,23nm,1.2s
WRH Wood River Hil 87.86 11 P **P** **18 19 26.5 +1.8**
SEY Seymchan 88.12 345 P **P** **18 19 27.8 +1.9**
comp=Z,4.6nm,0.9s,baz=148,slow=6.7,SNR=15
ILAR Eielson Array 88.34 11 P **P** **18 19 29.3 +2.3**
comp=Z,1.4nm,0.8s,baz=209,slow=5.1,SNR=9.3
ILAR Eielson Array 88.34 11 P P 18 19 28.7 +1.7
GSI Gunungsitoli 89.10 272 P **P** **18 19 32.1 +0.4**
ENH Enshi 89.71 303 P **P** **18 19 35.2 +0.9**
ENH IAmb IAmb 18 19 37.7
comp=Z,18nm,1.1s
BILL Bilibino 90.32 353 P **P** **18 19 37.4 +1.3**
PBKT Sadao Pong 91.54 287 P **P** **18 19 41.8 -1.2**
PBKT IAmb IAmb 18 19 47.0
comp=Z,8.6nm,1.1s
XAN Xi'an 91.72 306 P **P** **18 19 45.9 +2.3**
XAN pmax pmax
comp=Z,8.0nm,1.2s
XAN Xi'an 91.72 306 P **P** **18 19 41.8 -1.8**
XAN IAmb IAmb 18 19 50.3
comp=Z,16nm,1.3s
HHC Hu-ho-hao-te 92.72 313 *e*P **P** **18 19 48.3 +0.2**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,75nm,6.1s
CM31 Chiang Mai Arr 94.02 288 P **P** **18 19 55.0 +0.5**
CM31 IAmb IAmb 18 19 58.3
comp=Z,5.6nm,1.0s
CMAR Chiang Mai Arr 94.02 288 P **P** **18 19 57.5 +3.0**
comp=Z,3.1nm,0.9s,baz=119,slow=2.7,SNR=22
CMAR LR LR 19 01 18.1
comp=Z,9.4nm,19.0s,baz=25,slow=35
CHTO Chiang Mai 94.15 288 P **P** **18 19 54.0 -1.1**
CHTO IAmb IAmb 18 19 58.6
comp=Z,4.7nm,0.8s
YKA Yellowknife Ar 95.72 24 P **P** **18 20 04.3 +3.1**
comp=Z,2.2nm,0.7s,baz=235,slow=4.4,SNR=4.1
LZH Lanzhou 96.35 306 *e*P **P** **18 20 03.6 -1.4**
LZH pP pwP 18 20 08.3 -7.9
LZH sP PcP 18 20 12.4 +7.3
LZH pmax pmax
comp=Z,16nm,1.2s
WMQ Urumqi 110.39 310 *e*PKP **PKiKP** **18 25 07.9 -0.2**
WMQ LR LR
comp=Z,790nm,29.2s
WMQ LR LR
comp=Z,190nm,28.9s
MKAR Makanchi Array 114.58 313 PKP **PKiKP** **18 25 17.6 +1.6**
comp=Z,0.2nm,0.5s,baz=54,slow=0.8,SNR=5.1
KURBB Kurchatov Arra 117.28 317 PKP **PKiKP** **18 25 22.5 +1.5**
comp=Z,0.6nm,0.9s,baz=99,slow=1.9,SNR=4.7
KSH Kashi 118.53 304 PKP **PKiKP** **18 25 25.1 +1.1**
KSH PP **PP** **18 26 47.3 +6.0**
KSH SKS **SKSdf** **18 32 35.8 -0.5**
KSH SKKS **SKKSac** **18 33 37.8 -4.0**
KSH SS **SS** **18 43 02.6 +3.4**
KSH LR LR
comp=Z,270nm,6.7s
FINES FINESS Array B 137.60 346 PKP **PKiKP** **18 26 03.1 +1.9**
comp=Z,3.8nm,1.2s,baz=307,slow=5.1,SNR=3.3
FINES FINESS Array B 137.60 346 **PKiKP** **18 26 00.0 -1.2**
AKASG Malin Array Be 145.54 334 PKPbc **PKPab** **18 26 15.3 +1.1**
comp=Z,4.8nm,0.6s,baz=39,slow=4.0,SNR=2.4
AKASG Malin Array Be 145.54 334 **PKPab** **18 26 14.8 +0.6**
AKBB Malin Array Si 145.54 334 **PKPdf** **18 26 13.4 -0.5**
KWP Kalwaria Pacla 148.86 339 **PKPdf** **18 26 20.2 +0.8**
BUR08 Bucovina Ar. S 149.58 334 **PKPdf** **18 26 18.8 -2.0**
CLL Collm 149.62 351 *e*PKPbc **PKPab** **18 26 31.0 +0.8**
comp=Z,17nm,1.4s
CLL Collm 149.62 351 **PKPdf** **18 26 22.2 +1.6**
OSTC Ostas 149.79 347 *e*PKP **PKPab** **18 26 29.3 -1.7**
BRG Berggiesshubel 149.90 350 *e*PKP **PKPab** **18 26 38.0 +6.6**
comp=Z,26nm,1.9s
DPC Dobruska-Polom 149.96 347 *e*PKP **PKPab** **18 26 29.1 -2.6**
DPC *ep*PKP **pPKPab** **18 26 34.3 +1.7**
KRLC Kraliky 150.12 346 *e*P **PKPab** **18 26 31.3 -1.1**
BR131 Keskin Array S 150.22 314 **PKPbc** **18 26 25.9 -1.3**
BRTR Keskin Array B 150.22 314 PKPbc **PKiKP** **18 26 29.3 +1.2**
comp=Z,2.1nm,1.0s,baz=108,slow=2.7,SNR=7.7
BRTR Keskin Array B 150.22 314 **PKiKP** **18 26 27.9 -0.2**
VYHS Vyhne 151.06 342 *e*PKP **PKiKP** **18 26 32.2 +2.9**
MMAI Mount Meron Ar 151.56 300 PKPbc **PKiKP** **18 26 32.1 +1.2**
comp=Z,1.3nm,0.5s,baz=70,slow=7.3,SNR=5.8
KHC Kasperske Hory 151.65 350 *e*PKP **PKiKP** **18 26 32.5 +1.9**
KHC *ex* x 18 26 37.5
KHC Kasperske Hory 151.65 350 PKPdf **PKPdf** **18 26 24.5 +0.7**
KHC **PKPab** **18 26 39.7 +1.0**
GERES GERESS Array B 151.90 349 PKPbc **PKiKP** **18 26 33.3 +2.1**
comp=Z,1.0nm,0.9s,baz=333,slow=1.5,SNR=5.0
GERES GERESS Array B 151.90 349 **PKiKP** **18 26 31.9 +0.7**
TORD Torodi Ar. Bea 170.82 152 PKP **PKPdf** **18 26 46.7 +1.8**
comp=Z,0.7nm,1.0s,baz=310,slow=3.2,SNR=3.2
TORD PKPab **PKPab** **18 28 04.4 +1.5**
comp=Z,1.1nm,1.1s,baz=185,slow=2.1,SNR=3.2

*NEIC **24** 18:07:33.1±2.7, 60°.76N±0°.08×177°.7W±0°.2, h14km±5km, mb4.4/10, Error ellipse: s-maj=12.1km s-min=10.4km az=134.0*
*IDC **24** 18:07:33.1±2.6, 60°.93N×177°.90W, h0km, mb3.6/5, mb1 3.7/8, mb1mx3.5/53, mbtmp3.7/8, ML3.4/3, MS3.2/7, Ms1 3.2/7, ms1mx3.0/43, Error ellipse: s-maj=70.0km s-min=21.3km az=173.0*
ISC 24 18:07:32.9±0.6, 60°.78N±0°.09×177°.68W±0°.06, h10km, n43, σ1§24/39, mb4.1/8, MS3.3/4, Bering Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
GAMB	**Gambell**	**4.11**	**40**		**Pn**	**18 08 34.6**	**-1.0**
ANM	**Nome**	**6.82**	**51**	Pn	**Pn**	**18 09 11.2**	**-1.6**
ATKA	**Atka Island**	**8.81**	**166**	Pn	**Pn**	**18 09 39.4**	**-0.7**
ADK	**Adak**	**8.93**	**176**	Pn	**Pn**	**18 09 40.9**	**-0.9**
UNV	**Unalaska Valle**	**9.20**	**134**	Pn	**Pn**	**18 09 44.5**	**-0.9**
SMY	**Shemya**	**9.24**	**213**	Pn	**Pn**	**18 09 44.3**	**-1.6**
TTA	**Tatalina**	**10.45**	**69**	Pn	**Pn**	**18 10 01.2**	**-1.4**
CNBA	**Chernabura Isl**	**11.32**	**114**	Pn	**Pn**	**18 10 16.5**	**+2.0**
IMAR	**Indian Mountai**	**11.88**	**54**	Pn	**Pn**	**18 10 21.7**	**-0.4**
PPLA	**Purkeypile**	**12.20**	**69**	Pn	**Pn**	**18 10 26.1**	**-0.5**
RSO	**Redoubt South**	**12.22**	**81**	Pn	**Pn**	**18 10 26.4**	**-0.5**
CHIR	**Chirikof Islan**	**12.58**	**103**	Pn	**Pn**	**18 10 32.5**	**+0.8**
BPAW	**Bear Paw Mtn.**	**12.75**	**63**	Pn	**Pn**	**18 10 33.4**	**-0.7**
MLY	**Manley**	**12.94**	**59**	Pn	**Pn**	**18 10 35.3**	**-1.3**
SUA	**Susitna One**	**13.00**	**75**	Pn	**Pn**	**18 10 40.8**	**+3.3**
KDAK	**Kodiak Island**	**13.14**	**92**	LR	LR	18 15 20.9	
	comp=Z,241nm,18.0s,baz=350,slow=35						
NEA	**Nenana**	**13.61**	**61**		**Pn**	**18 10 47.2**	**+1.6**
SEY	**Seymchan**	**14.23**	**292**	Pn	**Pn**	**18 10 54.6**	**+0.5**
	0.1nm,0.3s,baz=82,slow=12,SNR=5.5						
ILAR	**Eielson Array**	**14.56**	**61**	Pn	**Pn**	**18 10 58.1**	**-0.5**
	0.0nm,0.3s,baz=278,slow=13,SNR=3.3						
ILAR	**Eielson Array**	**14.56**	**61**	P	**P**	**18 11 04.3**	**-1.0**
PET	**Petropavlovsk**	**15.01**	**249**	Pn	**Pn**	**18 11 05.8**	**+0.9**
PET				IAmb	IAmb	18 11 33.3	
	comp=Z,27nm,1.4s						
PEA0B	**Petropavlovsk-**	**15.40**	**251**	Pn	**Pn**	**18 11 10.4**	**+0.5**
PEA0B				IAmb	IAmb	18 11 25.4	
	comp=Z,52nm,1.6s						
PETK	**Petropavlovsk-**	**15.40**	**251**	Pn	**Pn**	**18 11 11.6**	**+1.7**
	comp=Z,0.6nm,0.3s,baz=77,slow=16,SNR=6.9						
PETK				LR	LR	18 17 27.4	
	comp=Z,26nm,19.5s,baz=60,slow=39						
PETK	**Petropavlovsk-**	**15.40**	**251**		**Pn**	**18 11 11.4**	**+1.4**
MA2	**Magadan**	**15.67**	**279**	LR	LR	18 17 12.0	
	comp=Z,38nm,18.5s,baz=76,slow=37						
BCAR	**Beaver Creek A**	**16.91**	**67**		**P**	**18 11 31.4**	**0.0**
DHAK	**Deception Hill**	**19.64**	**77**	P	**P**	**18 12 01.6**	**+0.2**
INK	**Inuvik**	**19.99**	**49**	P	**P**	**18 12 06.2**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=272,slow=6.0,SNR=5.5						
INK	**Inuvik**	**19.99**	**49**	P	**P**	**18 12 06.3**	**+1.2**
TIXI	**Tiksi**	**23.22**	**320**	P	**P**	**18 12 39.9**	**+0.3**
	comp=Z,1.6nm,0.3s,baz=115,slow=11,SNR=6.8						
TIXI				LR	LR	18 21 10.9	
	comp=Z,68nm,19.2s,baz=206,slow=36						
TIXI	**Tiksi**	**23.22**	**320**	P	**P**	**18 12 40.5**	**+1.0**
YAK	**Yakutsk**	**24.66**	**296**	P	**P**	**18 12 53.1**	**-0.2**
	comp=Z,8.0nm,0.8s,baz=267,slow=14,SNR=11						
YAK	**Yakutsk**	**24.66**	**296**	P	**P**	**18 12 51.4**	**-1.9**
YAK				IAmb	IAmb	18 12 55.6	
	comp=Z,19nm,1.1s						
ASAJ	**Asahikawa**	**28.80**	**253**	LR	LR	18 24 10.6	
	comp=Z,59nm,20.9s,baz=118,slow=35						
YKA	**Yellowknife Ar**	**28.97**	**59**	P	**P**	**18 13 34.3**	**+2.3**
	comp=Z,0.1nm,0.4s,baz=296,slow=7.5,SNR=3.4						
SONM	**Songino Array**	**43.59**	**289**	P	**P**	**18 15 37.6**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=47,slow=6.3,SNR=2.7						
SONM				LR	LR	18 34 02.0	
	comp=Z,50nm,19.6s,baz=4.5,slow=37						
SONM	**Songino Array**	**43.59**	**289**	P	**P**	**18 15 36.8**	**-0.1**
NRS	**Narsarsuaq**	**52.98**	**27**	P	**P**	**18 16 47.3**	**-1.7**
KURK	**Kurchatov**	**53.22**	**310**	P	**P**	**18 16 50.9**	**-0.1**
KURK				IAmb	IAmb	18 16 53.1	
	comp=Z,2.9nm,1.1s						
MK31	**Makanchi Array**	**54.95**	**304**	P	**P**	**18 17 02.6**	**-1.0**
MK31				IAmb	IAmb	18 17 11.5	
	comp=Z,3.9nm,1.6s						
MKAR	**Makanchi Array**	**54.95**	**304**	P	**P**	**18 17 03.4**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=41,slow=6.4,SNR=10						
MAKZ	**Makanchi**	**55.06**	**304**	P	**P**	**18 17 03.8**	**-0.7**
MAKZ				IAmb	IAmb	18 17 34.3	
	comp=Z,3.1nm,1.4s						
NOA	**NORSAR Array B**	**58.32**	**355**	LR	LR	18 43 47.5	
	comp=Z,32nm,18.6s,baz=15,slow=37						

*MOS **24** 18:22:42.0±0.9, 36°.56N×71°.27E, h228km, mb4.3/17, Error ellipse: s-maj=7.5km s-min=4.7km az=89.7*
*NEIC **24** 18:22:42.8±2.6, 36°.52N±0°.06×71°.27E±0°.09, h224km±7km, mb4.5/50, Error ellipse: s-maj=10.0km s-min=8.1km az=81.0*
*BJI **24** 18:22:42.1±0.0, 36°.67N×71°.22E, h229km, mB4.6/13, mb4.1/23*
*IDC **24** 18:22:43.8±0.9, 36°.53N×71°.26E, h232km±8km, mb3.6/16, mb1 3.7/24, mb1mx3.5/52, mbtmp4.2/24, Error ellipse: s-maj=10.2km s-min=9.5km az=7.0*
*NNC **24** 18:22:44.1±1.8, 36°.78N×71°.09E, h209km±17km, mb3.5, mpv4.6, Error ellipse: s-maj=17.5km s-min=10.4km az=165.0*
ISC 24 18:22:42.3±0.5, 36°.53N±0°.04×71°.27E±0°.04, h216km±5km, h216km:pP-P, n210, σ1§57/239, mb4.3/50, 12C-12D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
GAR	**Garm**	**2.58**	**343**		**Pn**	**18 23 28.9**	**+0.8**
GAR				S	**S**	**18 24 02.4**	**-1.4**
KBL	**Kabul**	**2.69**	**223**	PN	**Pn**	**18 23 30.5**	**+0.9**
KBL	**Kabul**	**2.69**	**223**		**Pn**	**18 23 30.5**	**+0.9**
KBL				S	**S**	**18 24 05.0**	**-1.2**
CHGR	**Chuyangaron**	**2.70**	**322**		**Pn**	**18 23 30.0**	**+0.5**
CHGR				S	**S**	**18 24 04.2**	**-2.0**
CEP	**Cherat**	**2.75**	**169**	⇑P	**Pn**	**18 23 31.5**	**+1.3**
CEP				S	**S**	**18 24 07.0**	**-0.4**
CHCP	**Chirah Chowk**	**3.30**	**150**	⇑P	**Pn**	**18 23 37.9**	**+1.5**
NIL	**Nilore**	**3.30**	**150**	PN	**Pn**	**18 23 37.8**	**+1.4**
NIL	**Nilore**	**3.30**	**150**		**Pn**	**18 23 37.8**	**+1.4**
NIL				S	**S**	**18 24 13.6**	**-4.9**
BTK	**Batken**	**3.54**	**354**	PN	**Pn**	**18 23 40.5**	**+1.4**
BTK	**Batken**	**3.54**	**354**		**Pn**	**18 23 40.5**	**+1.4**
BTK				S	**S**	**18 24 20.8**	**-2.8**
THW	**Thamme Wali**	**3.75**	**174**	P	**Pn**	**18 23 42.5**	**+0.7**
FRG	**Fergana**	**4.21**	**5**	P	**Pn**	**18 23 43.8**	**-3.5**
FRG				S	**S**	**18 24 29.5**	**-8.8**
ANR	**Andizhan**	**4.30**	**11**	P	**Pn**	**18 23 49.0**	**+0.7**
ANR				S	**S**	**18 24 39.2**	**-1.1**
SAM	**Samarkand**	**4.61**	**314**	*i* P	**Pn**	**18 23 51.6**	**-0.5**
SAM				*i* S	**S**	**18 24 44.9**	**-2.2**
KSH	**Kashi**	**4.76**	**50**	P	**Pn**	**18 23 49.8**	**-4.4**
KSH				S	S	18 24 38.4	-12
KSH				smax	smax		
	comp=N,1μm,0.7s						
KSH				smax	smax		
	comp=E,470nm,0.3s						
YNGY	**Yangiyul**	**4.89**	**340**	*e*P	**Pn**	**18 23 56.4**	**+0.8**
YNGY				*e*S	**S**	**18 24 51.0**	**-2.5**
ARSB	**Arslanbob**	**4.97**	**15**		**Pn**	**18 23 56.6**	**-0.1**
CHRV	**Charvak**	**5.20**	**349**	P	**Pn**	**18 23 59.9**	**+0.3**
CHRV				S	**S**	**18 24 57.9**	**-2.8**
THN	**Thein Dam**	**5.50**	**137**	*e*P	**Pn**	**18 24 05.0**	**+1.6**
THN				*e*S	**S**	**18 25 06.5**	**-0.9**
AML	**Almayashu**	**5.90**	**18**	P	**Pn**	**18 24 08.9**	**+0.1**
	SNR=766						
DHRM	**DHARAMSHALA**	**5.96**	**134**	*e*P	**Pn**	**18 24 10.8**	**+1.3**
DHRM				*e*S	**S**	**18 25 16.3**	**-2.3**
DHRM				IAML		18 25 18.3	
	comp=E,1μm,0.5s						
DHRM				IAML		18 25 18.4	
	comp=N,512nm,0.1s						
NRN	**Naryn**	**6.12**	**36**	PN	**Pn**	**18 24 10.2**	**-1.4**
NRN	**Naryn**	**6.12**	**36**		**Pn**	**18 24 10.2**	**-1.4**
UCH	**Uchtor**	**6.22**	**23**	P	**Pn**	**18 24 13.1**	**+0.2**
	SNR=81						
KZA	**Kyzart**	**6.34**	**28**	P	**Pn**	**18 24 14.0**	**-0.4**
	SNR=26						
EKS2	**Erkin-Say**	**6.42**	**17**	P	**Pn**	**18 24 15.5**	**+0.3**
	SNR=109						
AAK	**Ala-Archa**	**6.58**	**21**	P	**Pn**	**18 24 17.8**	**+0.4**
	comp=N,14nm,0.3s,baz=177,slow=5.9,SNR=354						
AAK				S	**S**	**18 25 31.7**	**-1.2**
	comp=N,4.4nm,0.3s,baz=306,slow=22,SNR=19						
AAK	**Ala-Archa**	**6.58**	**21**	P	**Pn**	**18 24 17.9**	**+0.6**
	SNR=79						
AAK	**Ala-Archa**	**6.58**	**21**	⇓P	**Pn**	**18 24 17.5**	**+0.2**
	comp=N,41nm,0.5s						
AAK				⇓S	**S**	**18 25 31.1**	**-1.8**
	comp=N,96nm,0.8s						
AAK	**Ala-Archa**	**6.58**	**21**		**Pn**	**18 24 17.6**	**+0.2**
AAK					**S**	**18 25 31.2**	**-1.7**
KK31	**Karatay Array**	**6.59**	**355**	PN	**Pn**	**18 24 16.8**	**-0.4**
KK31	**Karatay Array**	**6.59**	**355**	P	**Pn**	**18 24 16.8**	**-0.4**
	comp=N,12nm,0.3s,baz=173,slow=11,SNR=356						
KK31				⇑S	**S**	**18 25 28.3**	**-4.4**
	comp=N,32nm,0.3s,baz=179,slow=18,SNR=16						
KK31	**Karatay Array**	**6.59**	**355**		**Pn**	**18 24 17.1**	**-0.2**
KKAR	**Karatay Array**	**6.59**	**355**	PN	**Pn**	**18 24 17.0**	**-0.3**
KKAR	**Karatay Array**	**

SNR=8.2
KDJ Kajisay 7.22 38 PN Pn 18 24 24.8 -0.8
KDJ Kajisay 7.22 38 Pn 18 24 24.8 -0.8
SMLA Simla 7.29 136 *eP* **Pn 18 24 26.4 0.0**
SMLA *eS* **S 18 25 44.1 -5.2**
SMLA IAML 18 25 49.2
comp=N,257nm,0.8s
SMLA IAML 18 25 49.4
comp=E,217nm,0.5s
HRA Herat 7.67 256 Pn 18 24 30.4 -1.1
MDOK Medeo 7.97 32 ⇓P **Pn 18 24 35.1 -0.2**
comp=E,20nm,0.6s
KNDC Almaty 7.98 32 ⇑P **Pn 18 24 35.6 +0.3**
PRZ Przheval'sk 8.10 41 PN **Pn 18 24 37.4 +0.5**
PRZ Przheval'sk 8.10 41 Pn 18 24 37.4 +0.5
JOSI Joshimath 9.13 128 *eP* **Pn 18 24 50.9 +0.5**
JOSI *eS* **S 18 26 26.7 -6.5**
PDGK Podgornoye 9.27 40 P **Pn 18 24 52.0 +0.1**
PDGK S **S 18 26 36.0 -0.1**
NDI New Delhi 9.29 146 *eS* S 18 26 27.5 -9.3
KUDL Kundal 9.46 151 *eP* Pn 18 24 45.8 -8.5
KUDL *eS* S 18 26 24.6 -16
ASHT Ashkhabad 10.37 282 P **Pn 18 25 06.4 +0.4**
ASHT Ashkhabad 10.37 282 Pn **Pn 18 25 06.4 +0.4**
GEYT Alibeck 10.58 282 P **Pn 18 25 10.0 +1.3**
comp=E,0.5nm,0.3s,baz=108,slow=16,SNR=6.3
GEYT S **S 18 27 00.5 -6.8**
comp=E,0.7nm,0.3s,baz=101,slow=13,SNR=3.0
GYA0B ALIBECK ARRAY 10.58 282 ⇓P **Pn 18 25 09.7 +1.0**
GYA0B ⇓S **S 18 27 01.8 -5.5**
GYA0B ALIBECK ARRAY 10.58 282 Pn **Pn 18 25 08.4 -0.3**
MAKZ Makanchi 13.00 35 P **Pn 18 25 38.4 -0.7**
MAKZ Makanchi 13.00 35 ⇑P **Pn 18 25 38.5 -0.6**
comp=E,18nm,0.6s
MAKZ Makanchi 13.00 35 Pn 18 25 38.4 -0.7
MK31 Makanchi Array 13.14 35 P **Pn 18 25 40.4 -0.5**
MK31 Makanchi Array 13.14 35 P **Pn 18 25 40.9 +0.1**
comp=E,3.8nm,0.5s,baz=202,slow=6.2,SNR=76
MK31 Makanchi Array 13.14 35 Pn 18 25 40.4 -0.5
MKAR Makanchi Array 13.14 35 P **Pn 18 25 41.1 +0.3**
comp=E,1.1nm,0.3s,baz=217,slow=9.2,SNR=56
MKAR S **S 18 28 08.9 +2.7**
baz=214,slow=10,SNR=3.0
DANN Dangsing 13.33 124 *eP* **Pn 18 25 41.9 -1.7**
KOLN Koldanda 13.61 126 *eP* **Pn 18 25 45.4 -1.6**
comp=E,28nm,0.3s
GKN Gorkha 14.14 123 *eP* **Pn 18 25 52.8 -0.7**
BHPL Bhopal 14.28 156 *eP* **P 18 25 58.4 +2.2**
BHPL *ex* x 18 28 28.5
WMQ Urumqi 14.50 55 *eP* **P 18 25 58.5 -0.1**
WMQ pmax pmax
comp=E,7.0nm,0.6s
WMQ pmax pmax
comp=E,140nm,5.7s
WMQ LR LR
comp=E,570nm,28.8s
WMQ LR LR
comp=E,940nm,29.0s
WMQ LR LR
comp=E,110nm,28.9s
DMN Daman 14.71 123 *eP* **Pn 18 26 00.0 -0.6**
KKN Kakani 14.71 122 *eP* **Pn 18 25 59.7 -0.9**
comp=E,91nm,0.6s
PKIN Phulchoki 14.93 123 *eP* **Pn 18 26 02.3 -1.0**
comp=E,17nm,0.2s
PKI Pulchoki 14.94 123 *eP* **Pn 18 26 02.7 -0.8**
comp=E,20nm,0.2s
KURBB Kurchatov Arra 15.02 18 P **Pn 18 26 03.0 -0.8**
comp=E,0.3nm,0.3s,baz=213,slow=8.6,SNR=31
KURBB S **S 18 28 51.8 +1.9**
baz=190,slow=22,SNR=4.1
KURBB Kurchatov Arra 15.02 18 ⇓P **Pn 18 26 03.7 -0.1**
comp=E,6.6nm,0.8s
GUN Gumba 15.05 121 *eP* **Pn 18 26 03.9 -0.9**
comp=E,49nm,0.6s
KURK Kurchatov 15.13 18 P **Pn 18 26 03.1 -2.1**
KURK S **S 18 28 51.8 -0.6**
KURK Kurchatov 15.13 18 P **Pn 18 26 05.1 -0.1**
AB31 Akbulak array 15.16 331 P **P 18 26 06.2 +0.5**
AB31 S **S 18 28 50.9 -2.2**
AB31 Akbulak array 15.16 331 ⇑P **P 18 26 06.2 +0.5**
comp=E,9.0nm,0.6s,baz=138,slow=12,SNR=120
AB31 ⇓S **S 18 28 51.0 -2.2**
comp=E,6.4nm,0.7s,baz=150,slow=22,SNR=8.4
ABKAR Akbulak array 15.16 331 P **Pn 18 26 04.9 -0.7**
ABKAR IAmb IAmb 18 26 09.5
comp=Z,13nm,0.7s
JIRN Jiri 15.42 121 *eP* **P 18 26 08.7 -0.5**
comp=Z,68nm,0.5s
RAMN Ramite 16.15 122 *eP* **P 18 26 17.4 +0.3**
BVAR Borovoye Array 16.50 358 P **Pn 18 26 21.4 -0.2**
comp=Z,1.5nm,0.3s,baz=154,slow=10,SNR=24
BVAR S **S 18 29 18.6 -3.4**
comp=Z,0.4nm,0.3s,baz=161,slow=22,SNR=6.2
BRVK Borovoye 16.54 358 P **P 18 26 20.6 -0.2**
BRVK pmax pmax
comp=Z,5.0nm,0.9s
BRVK Borovoye 16.54 358 ⇑P **Pn 18 26 21.4 -0.6**
comp=Z,4.7nm,0.8s
BRVK Borovoye 16.54 358 P **P 18 26 20.6 -0.2**
TAPN Taplejung 16.67 119 *eP* **Pn 18 26 23.9 -0.3**
ODAN Odare 16.75 121 *eP* **Pn 18 26 25.1 0.0**
comp=Z,37nm,0.7s
NGP Nagpur 16.76 154 *ex* **Pn 18 26 24.3 -0.7**
NGP IAmb IAmb 18 26 27.1
comp=Z,6.3nm,0.8s
AKTO Aktyubinsk 16.86 330 P **Pn 18 26 25.6 -0.2**
comp=Z,4.6nm,0.3s,baz=136,slow=10,SNR=65
AKTO S **S 18 29 27.3 -1.7**
comp=Z,0.2nm,0.3s,baz=311,slow=19,SNR=5.0
AKTO Aktyubinsk 16.86 330 ⇓P **Pn 18 26 25.1 -0.7**
comp=Z,13nm,0.5s
AKTO ⇓S **S 18 29 27.4 -1.6**
comp=Z,17nm,1.1s
WSAR Wadi Sarin 17.17 223 P **Pn 18 26 30.4 +0.6**
comp=Z,0.5nm,0.3s,baz=78,slow=5.7,SNR=7.1
UOSS Minazif 17.33 232 P **P 18 26 28.6 -1.1**
LSA Lhasa 17.98 107 P **Pn 18 26 40.6 +0.9**
LSA pmax pmax
comp=Z,32nm,0.9s
LSA Lhasa 17.98 107 P **Pn 18 26 39.9 +0.2**
LSA pmax pmax
comp=Z,7.0nm,0.8s
LSA Lhasa 17.98 107 P **Pn 18 26 39.9 +0.2**
ZAA0 Zalesovo Array 19.80 24 ⇑P **P 18 26 55.5 -0.6**
comp=Z,1.4nm,0.8s
ZAA0 Zalesovo Array 19.80 24 P **P 18 26 55.5 -0.6**
ZAA0 IAmb IAmb 18 26 56.8
comp=Z,8.6nm,0.8s
ZALV Zalesovo Beam 19.80 24 *i* P **P 18 26 55.9 -0.2**
ZALV pmax pmax
comp=Z,10.0nm,0.3s
ZALV Zalesovo Beam 19.80 24 P **P 18 26 55.9 -0.2**
comp=Z,3.9nm,0.3s,baz=211,slow=12,SNR=47
ZALV S **S 18 30 26.1 -0.9**
comp=Z,0.1nm,0.3s,baz=205,slow=20,SNR=3.2
HYB Hyderabad 20.10 159 *i* P Pn 18 27 02.5 -2.1
SHL Shillong 20.73 116 P **P 18 27 08.1 +1.5**
SHL pmax pmax
comp=Z,12nm,0.7s
SHL Shillong 20.73 116 P **P 18 27 08.1 +1.5**
SHL IAmb IAmb 18 27 08.9
comp=Z,12nm,0.7s
ARU Arti 21.67 341 *c i* P **P 18 27 16.3 +0.7**
ARU 18 28 24.5
ARU S **S 18 31 03.3 +3.0**
ARU pmax pmax
comp=Z,13nm,0.8s
ARU Arti 21.67 341 P **P 18 27 15.9 +0.3**
comp=Z,3.5nm,0.5s,baz=153,slow=7.9,SNR=13
ARU Arti 21.67 341 P **P 18 27 15.7 +0.1**
ARU IAmb IAmb 18 27 18.6
comp=Z,12nm,0.8s
GTA Gaotai 22.65 74 *eP* **P 18 27 27.8 +2.7**
GTA sP sP 18 28 38.0 +5.9
GTA pmax pmax
comp=Z,5.0nm,0.9s
KBZ Khabaz 22.78 297 P **P 18 27 25.1 -0.9**
comp=Z,1.7nm,0.8s,baz=112,slow=10,SNR=4.7
KIV Kislovodsk 22.96 298 *eP* **P 18 27 26.3 -1.6**
KIV pmax pmax
comp=Z,14nm,1.0s
RAYN Ar Rayn 25.71 247 P **P 18 27 53.0 +0.1**
RAYN pmax pmax
comp=Z,16nm,1.8s
RAYN Ar Rayn 25.71 247 P **P 18 27 53.0 +0.1**
RAYN IAmb IAmb 18 28 15.7
comp=Z,16nm,1.8s
KIRV Kirov 26.30 334 P **P 18 27 58.7 +1.0**
comp=Z,15nm,0.5s,baz=50,slow=2.4,SNR=5.5
SONM Songino Array 28.14 55 P **P 18 28 15.9 +1.5**
comp=Z,1.0nm,0.6s,baz=263,slow=9.4,SNR=9.7
SONM Songino Array 28.14 55 IAmb IAmb 18 28 16.6
comp=Z,0.9nm,1.0s
BR131 Keskin Array S 29.63 288 P **P 18 28 27.8 +0.2**
BR131 pmax pmax
comp=Z,6.0nm,1.6s
BR131 Keskin Array S 29.63 288 P **P 18 28 27.8 +0.2**
BRTR Keskin Array B 29.63 288 P **P 18 28 29.1 +1.5**
comp=Z,0.6nm,0.7s,baz=90,slow=7.9,SNR=3.2
PRGR Permogore 29.83 335 *eP* **P 18 28 28.8 -0.1**
PRGR pmax pmax
comp=Z,11nm,0.6s
CHTO Chiang Mai 30.05 119 P **P 18 28 30.2 -1.1**
CHTO pmax pmax
comp=Z,3.0nm,1.3s
CHTO Chiang Mai 30.05 119 P **P 18 28 30.2 -1.1**
OBN Obninsk 30.05 319 *i* P **P 18 28 31.3 +0.4**
OBN *i* *PP **pP 18 29 19.9 +5.0**
OBN pmax pmax
comp=Z,11nm,1.3s
OBN Obninsk 30.05 319 P **P 18 28 31.1 +0.2**
OBN IAmb IAmb 18 28 32.5
comp=Z,42nm,1.7s
CMAR Chiang Mai Arr 30.28 119 *ce* **P 18 28 35.0 +1.6**
CMAR pmax pmax
comp=Z,1.0nm,0.8s
CMAR Chiang Mai Arr 30.28 119 P **P 18 28 34.3 +0.9**
comp=Z,1.3nm,0.8s,baz=304,slow=8.4,SNR=13
CMAR pP **pP 18 29 19.5 +1.2**
comp=Z,0.5nm,0.7s,baz=308,slow=7.8,SNR=2.1
PALK Pallekele 30.37 161 *eP* **P 18 28 33.4 -0.9**
PALK Pallekele 30.37 161 P **P 18 28 33.4 -0.9**
PBA Port Blair 31.43 137 P **P** 18 28 41.7 -1.8
HHC Hu-ho-hao-te 31.55 70 *eP* **P 18 28 45.6 +1.2**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,47nm,6.7s
KLMR Klimovskoe 31.56 331 *eP* **P 18 28 43.5 -0.5**
KLMR pmax pmax
comp=Z,10.0nm,1.0s
KLMR Klimovskoe 31.56 331 *eP* **P 18 28 43.6 -0.5**
KLMR AMP 18 28 45.8
comp=Z,10.0nm,1.0s
PBKT Sadao Pong 32.98 119 P **P 18 28 58.1 +1.2**
ELL Elmali 33.00 283 P **P 18 28 57.9 +0.8**
ELL pmax pmax
comp=Z,85nm,1.7s
ELL Elmali 33.00 283 P **P 18 28 57.9 +0.8**
AKASG Malin Array Be 33.09 309 P **P 18 28 58.3 +0.7**
comp=Z,3.0nm,0.5s,baz=79,slow=7.3,SNR=1.4
AKASG Malin Array Be 33.09 309 IAmb IAmb 18 28 58.6
comp=Z,0.9nm,0.9s
AKBB Malin Array Si 33.09 309 P **P 18 28 58.1 +0.6**
AKBB pmax pmax
comp=Z,13nm,1.8s
AKBB Malin Array Si 33.09 309 P **P 18 28 58.1 +0.6**
AKBB IAmb IAmb 18 28 60.0
comp=Z,13nm,1.8s
TMCR Tamitsa 34.11 335 *eP* **P 18 29 06.7 +0.6**
TMCR pmax pmax
comp=Z,13nm,0.7s
JOF Joensuu 35.95 330 P **P 18 29 22.0 +0.2**
JOF pmax pmax
comp=Z,7.0nm,1.6s
HIA Hailar 37.10 54 ⇓ *eP* **P 18 29 33.2 +1.4**
HIA pmax pmax
comp=Z,13nm,0.6s
LVZ Lovozero 37.51 338 ⇓ *eP* **P 18 29 35.1 +0.1**
LVZ pmax pmax
comp=Z,4.0nm,0.7s
LVZ Lovozero 37.51 338 P **P 18 29 34.8 -0.2**
LVZ IAmb IAmb 18 29 49.1
comp=Z,38nm,1.7s
FIA1 FINESS Array S 37.58 326 P **P 18 29 36.2 +0.6**
FIA1 IAmb IAmb 18 29 37.4
comp=Z,9.4nm,1.0s
FINES FINESS Array B 37.58 326 *i* P **P 18 29 36.0 +0.4**
FINES pmax pmax
comp=Z,9.0nm,0.9s
FINES FINESS Array B 37.58 326 P **P 18 29 36.1 +0.6**
comp=Z,8.5nm,0.9s,baz=119,slow=9.1,SNR=25
SUF Sumiainen 38.01 328 P **P 18 29 39.6 +0.4**
SUF pmax pmax
comp=Z,20nm,1.7s
NJ2 Nanjing 39.26 82 *eP* **P 18 29 49.8 -0.1**
NJ2 pmax pmax
comp=Z,5.0nm,0.6s
ARCES ARCESS Array B 41.20 338 P **P 18 30 06.1 +0.8**
comp=Z,4.2nm,0.6s,baz=113,slow=8.2,SNR=38
ARCES pP **pP 18 30 54.1 +2.2**
comp=Z,3.6nm,1.1s,baz=120,slow=8.4,SNR=1.5
ARE0 ARCESS Array S 41.20 338 *eP* **P 18 30 06.4 +1.0**
ARE0 ARCESS Array S 41.20 338 P **P 18 30 06.2 +0.8**
KTK1 Kautokeino 41.67 336 *eP* **P 18 30 09.3 +0.1**
HAMF Hammerfest 42.27 339 *eP* **P 18 30 14.8 +0.8**
GSI Gunungsitoli 42.67 139 P **P 18 30 18.9 +1.0**
GSI IAmb IAmb 18 30 20.0
comp=Z,22nm,0.7s
TRO Tromso 43.33 336 *eP* **P 18 30 22.2 -0.2**
MOR8 Moi Rana 43.89 331 *eP* **P 18 30 26.9 -0.2**
NC40 NORSAR Array S 44.25 323 P **P 18 30 29.8 -0.2**
NC303 NORSAR Array S 44.43 323 P **P 18 30 31.8 +0.4**
NB201 NORSAR Array S 44.45 323 P **P 18 30 31.7 +0.2**
NB2 NORSAR Subarra 44.48 323 P **P 18 30 31.6 -0.2**
comp=Z,2.1nm,0.6s,baz=94,slow=7.9
NB2 NORSAR Subarra 44.48 323 P **P 18 30 31.6 -0.2**
baz=94,slow=7.9
NOA NORSAR Array B 44.48 323 P **P 18 30 31.7 -0.2**
comp=Z,3.2nm,0.7s,baz=96,slow=7.7,SNR=14
NOA pP **pP 18 31 19.7 +1.3**
comp=Z,0.9nm,0.9s,baz=103,slow=7.4,SNR=1.3
KSRS Korea Array 44.66 71 P **P 18 30 34.1 +0.6**
comp=Z,0.9nm,0.8s,baz=274,slow=6.8,SNR=5.9
NBO00 NORSAR Array S 44.70 323 P **P 18 30 33.6 +0.1**
NBO00 IAmb IAmb 18 30 42.0
comp=Z,35nm,1.3s
KLR Kul'dur 44.95 54 ⇑ *eP* **P 18 30 36.1 +0.4**
KLR pmax pmax
comp=Z,2.0nm,0.6s
KONO Kongsberg 45.20 321 *eP* **P 18 30 38.0 +0.6**
KONO Kongsberg 45.20 321 P **P 18 30 38.0 +0.6**
TIXI Tiksi 45.66 22 ⇑ *eP* **P 18 30 40.9 0.0**
TIXI pmax pmax
comp=Z,5.0nm,0.8s
TIXI Tiksi 45.66 22 P **P 18 30 40.9 0.0**
SPA0 Spitsbergen Ar 47.51 347 *eP* **P 18 30 56.6 +1.5**
SPA0 Spitsbergen Ar 47.51 347 P **P 18 30 56.7 +1.5**
SPA0 IAmb IAmb 18 31 04.4
comp=Z,62nm,1.8s
SENIN Lac Senin/Sane 47.75 303 P **P 18 30 58.4 +0.7**
SENIN IAmb IAmb 18 31 18.9
comp=Z,23nm,1.4s
KBS Kingsbay 48.63 347 P **P 18 31 05.4 +1.8**
KBS pmax pmax
comp=Z,41nm,1.5s
KBS Kingsbay 48.63 347 P **P 18 31 05.4 +1.8**
KBS IAmb IAmb 18 31 13.6
comp=Z,41nm,1.4s
SEY Seymchan 54.27 34 ⇓ *eP* **P 18 31 46.6 +1.0**
DAG Danmarks Havn 54.76 344 *i* P **P 18 31 49.3 +0.4**
DAG pmax pmax
comp=Z,5.0nm,0.7s
DAG Danmarks Havn 54.76 344 *i* P **P 18 31 49.3 +0.4**
comp=Z,4.6nm,0.7s
BILL Bilibino 58.48 26 *i* P **P 18 32 14.2 -1.0**
BILL *i* *PP **pP 18 33 04.7 -0.6**
BILL pmax pmax
comp=Z,5.0nm,1.3s
SUMG Summit 61.10 341 P **P 18 32 34.2 +0.7**
SUMG pmax pmax
comp=Z,9.0nm,1.0s
SUMG Summit 61.10 341 *i* P **P 18 32 34.5 +1.0**
SUMG Summit 61.10 341 P **P 18 32 34.2 +0.7**
SUMG IAmb IAmb 18 32 35.6
comp=Z,8.8nm,1.0s
TOA0 Torodi Ar. Sit 65.94 269 P **P 18 33 03.9 -1.6**
TOA0 IAmb IAmb 18 33 05.2
comp=Z,3.4nm,0.7s
TORD Torodi Ar. Bea 65.94 269 P **P 18 33 03.6 -1.9**
comp=Z,3.5nm,0.6s,baz=48,slow=5.6,SNR=23
TORD Torodi Ar. Bea 65.94 269 IAmb IAmb 18 33 05.2
comp=Z,3.0nm,0.6s
ILAR Eielson Array 74.69 16 P **P 18 33 57.0 -0.7**
comp=Z,1.1nm,0.9s,baz=318,slow=6.2,SNR=5.8
KTH Kantishna Hill 74.77 18 P **P 18 33 58.5 +0.3**
DBIC Dimbokro 74.92 267 P **P 18 33 59.3 -0.5**
DBIC pmax pmax
comp=Z,22nm,1.7s
DBIC Dimbokro 74.92 267 P **P 18 33 59.2 -0.5**
comp=Z,1.3nm,0.6s,baz=11,slow=9.4,SNR=4.3
DBIC Dimbokro 74.92 267 P **P 18 33 59.3 -0.5**
DBIC IAmb IAmb 18 34 06.1
comp=Z,22nm,1.6s
PPLA Purkeypile 74.98 19 P **P 18 33 59.8 +0.2**
TRF Thorofare Moun 75.01 18 P **P 18 34 00.7 +1.0**
KNRA Kununurra 75.06 123 P **P 18 34 00.3 -0.2**
KNRA IAmb IAmb 18 34 15.8
comp=Z,25nm,1.1s
RND Reindeer 75.40 17 P **P 18 34 01.5 -0.4**
RND pmax pmax
comp=Z,14nm,1.5s
RND Reindeer 75.40 17 P **P 18 34 01.5 -0.4**
RND IAmb IAmb 18 34 19.2
comp=Z,14nm,1.5s
SCRK Sand Creek 76.01 15 P **P 18 34 05.9 +0.6**
SML Sawmill 76.89 18 P **P 18 34 08.4 -1.8**
SCM Sheep Creek Mo 77.11 18 P **P 18 34 09.6 -1.9**
SCM Sheep Creek Mo 77.11 18 P **P 18 34 09.6 -1.9**
YKA Yellowknife Ar 81.20 3 P **P 18 34 33.8 +0.3**
comp=Z,1.7nm,0.5s,baz=347,slow=5.3,SNR=32
WB0 Warramunga Arr 81.74 122 P **P 18 34 35.5 -1.4**
WB0 IAmb IAmb 18 34 48.4
comp=Z,14nm,1.4s
WRA Warramunga Arr 81.83 122 P **P 18 34 36.2 -1.1**
comp=Z,0.7nm,0.4s,baz=323,slow=4.9,SNR=6.9
WRA Warramunga Arr 81.83 122 IAmb IAmb 18 34 38.2
comp=Z,0.1nm,0.8s
WRAB Tennant Creek 81.83 122 P **P 18 34 36.3 -1.1**
WRAB pmax pmax
comp=Z,24nm,2.0s
WRAB Tennant Creek 81.83 122 P **P 18 34 36.3 -1.1**
WRAB IAmb IAmb 18 34 56.9
comp=Z,24nm,1.9s
WB2 Warramunga Arr 81.83 122 P **P 18 34 36.3 -1.2**
WB2 IAmb IAmb 18 34 40.2
comp=Z,30nm,1.9s
WR0 Warramunga Arr 81.97 122 P **P 18 34 36.8 -1.4**
WR0 IAmb IAmb 18 34 37.4
comp=Z,16nm,1.7s
AS31 Alice Springs 84.10 125 P **P 18 34 48.1 -0.9**
ASAR Alice Springs 84.10 125 P **P 18 34 47.9 -1.1**
comp=Z,0.8nm,0.6s,baz=313,slow=4.9,SNR=26

ISK ***24*** *18:26:03.3, 40.32N×25.79E, h7km, ML2.5/23*
ATH ***24*** *18:26:03.9, 40.32N×25.80E, h15km±6km, ML2.2/7, Error ellipse: s-maj=6.6km s-min=0.9km az=324.0*
THE ***24*** *18:26:04.0, 40.32N×25.79E, h8km±1km, ML2.2/7, Error ellipse: s-maj=1.9km s-min=0.6km az=80.0*
DDA ***24*** *18:26:04.9, 40.28N×25.92E, h6km±3km, ML2.3*

ISC 24 18:26:04.0±0.8, 40.32N±0.02×25.80E±0.02, h11km±6km, n59, σ0°47/89, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GADA	**Gvkgeada**	**0.15**	**148**	P	P		**Pg**	**18 26 06.4**	**-1.0**
GADA				S	S		**Sg**	**18 26 09.9**	**+0.1**
GADA	**Gvkgeada**	**0.15**	**148**	PG	P		**Pg**	**18 26 07.5**	**+0.1**
GADA				SG	S		**Sg**	**18 26 09.9**	**+0.1**
SMTH	**Samothraki Isl**	**0.26**	**308**	P	P		**Pg**	**18 26 08.6**	**-0.7**
SMTH				S	S		**Sg**	**18 26 13.5**	**+0.6**
950nm,0.2s									
SMTH	**Samothraki Isl**	**0.26**	**308**	P	P		**Pg**	**18 26 09.4**	**+0.1**
SMTH				S	S		**Sg**	**18 26 13.5**	**+0.6**
SMTH				AML	AML			18 26 13.8	
comp=N,2338μm,0.3s									
SMTH				AML	AML			18 26 14.4	
comp=E,1404μm,0.2s									
ENZZ	**Sultanice-Enez**	**0.39**	**42**	PG	**Pg**		**Pg**	**18 26 11.8**	**0.0**
ENEZ	**Enez**	**0.50**	**33**	PG	**Pg**		**Pg**	**18 26 13.9**	**+0.1**
ENEZ				SG	**Sg**		**Sg**	**18 26 20.9**	**+0.4**
BOZC	**Bozcaada**	**0.51**	**157**	PG	**Pg**		**Pg**	**18 26 13.8**	**-0.2**
BOZC				SG	**Sg**		**Sg**	**18 26 21.0**	**+0.2**
BOZC	**Bozcaada**	**0.51**	**157**	*i* P	**Pg**		**Pg**	**18 26 13.8**	**-0.2**
BOZC				*i* S	**Sg**		**Sg**	**18 26 20.7**	**0.0**
BOZC				IAML				18 26 28.0	
comp=E,166nm,0.2s									
GELI	**Tayfur-Gelibol**	**0.52**	**81**	PG	**Pg**		**Pg**	**18 26 14.1**	**-0.2**
ALN	**Alexandroupoli**	**0.61**	**18**	P	**Pg**		**Pg**	**18 26 14.9**	**-1.0**
ALN				S	**Sb**		**Sb**	**18 26 25.0**	**-0.4**
comp=E,145nm,0.3s									
ALN	**Alexandroupoli**	**0.61**	**18**	P	**Pg**		**Pg**	**18 26 15.6**	**-0.3**
ALN				S	**Sg**		**Sg**	**18 26 24.4**	**+0.3**
ALN				AML	AML			18 26 25.0	
comp=N,316μm,0.4s									
ALN				AML	AML			18 26 29.1	
comp=E,247μm,0.3s									
ALN	**Alexandroupoli**	**0.61**	**18**	PG	**Pg**		**Pg**	**18 26 15.8**	**-0.1**
ALN				SG	**Sg**		**Sg**	**18 26 24.5**	**+0.5**
EZN	**Ezine**	**0.63**	**140**	P	**Pg**		**Pg**	**18 26 15.9**	**-0.4**
EZN	**Ezine**	**0.63**	**140**	PG	**Pg**		**Pg**	**18 26 15.8**	**-0.5**
ERIK	**Erikli-Kesan**	**0.65**	**57**	PG	**Pg**		**Pg**	**18 26 16.1**	**-0.6**
LPK	**Lapseki**	**0.74**	**85**	PG	**Pg**		**Pg**	**18 26 18.1**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**0.81**	**135**	*i* P	**Pg**		**Pg**	**18 26 19.2**	**-0.5**
BAYC				*i* S	**Sg**		**Sg**	**18 26 30.1**	**-0.2**
BAYC				IAML				18 26 35.0	
comp=E,79nm,0.3s									
BAYC				IAML				18 26 37.0	
comp=N,86nm,0.2s									
KESN	**Edirne-Kesan**	**0.84**	**52**	*i* P	**Pg**		**Pg**	**18 26 20.6**	**+0.3**
KESN				*i* S	**Sg**		**Sg**	**18 26 31.3**	**-0.2**
KESN				IAML				18 26 34.0	
comp=N,217nm,0.6s									
KESN				IAML				18 26 34.0	
comp=E,329nm,0.4s									
RDO	**Rodhopi**	**0.85**	**347**	P	**Pg**		**Pg**	**18 26 20.1**	**-0.4**
RDO				S	**Sb**		**Sb**	**18 26 32.2**	**-0.1**
comp=E,218nm,0.3s									
RDO	**Rodhopi**	**0.85**	**347**	P	**Pg**		**Pg**	**18 26 20.2**	**-0.4**
RDO				S	**Sg**		**Sg**	**18 26 31.8**	**+0.2**
RDO				AML	AML			18 26 34.3	
comp=E,432μm,0.4s									
RDO				AML	AML			18 26 35.1	
comp=N,429μm,0.3s									
RDO	**Rodhopi**	**0.85**	**347**	PG	**Pg**		**Pg**	**18 26 20.0**	**-0.4**
THAS	**Thassos island**	**0.87**	**290**	P	**Pg**		**Pg**	**18 26 20.4**	**-0.5**
THAS				S	**Sb**		**Sb**	**18 26 32.9**	**+0.1**
comp=N,95nm,0.2s									
THAS	**Thassos island**	**0.87**	**290**	P	**Pg**		**Pg**	**18 26 20.5**	**-0.3**
THAS				S	**Sb**		**Sb**	**18 26 32.6**	**-0.2**
THAS				AML	AML			18 26 35.5	
comp=N,139μm,0.2s									
THAS				AML	AML			18 26 36.8	
comp=E,232μm,0.4s									
EFSA	**Agios Efstrati**	**0.99**	**219**	P	P		**Pb**	**18 26 23.3**	**+0.1**
EFSA				S	**Sg**		**Sg**	**18 26 36.1**	**+0.1**
UKOP	**Uzunkopru-Edir**	**1.03**	**38**	PG	**Pg**		**Pg**	**18 26 23.4**	**-0.5**
SIGR	**SIGRI**	**1.10**	**178**	P	**Pg**		**Pg**	**18 26 24.9**	**-0.3**
SIGR				S	**Sb**		**Sb**	**18 26 40.2**	**+0.8**
comp=E,358nm,0.5s									
SIGR	**SIGRI**	**1.10**	**178**	P	**Pg**		**Pg**	**18 26 24.4**	**-0.8**
SIGR				S	**Sg**		**Sg**	**18 26 39.6**	**+0.1**
SIGR				AML	AML			18 26 41.0	
comp=N,993μm,0.7s									
SIGR				AML	AML			18 26 41.5	
comp=E,444μm,0.4s									
SIGR	**SIGRI**	**1.10**	**178**	PN	**Pg**		**Pg**	**18 26 24.7**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.12**	**70**	PN	**Pg**		**Pg**	**18 26 24.7**	**-0.8**
SART	**Tekirdag**	**1.12**	**70**	*i* P	**Pg**		**Pg**	**18 26 25.1**	**-0.5**
SART				*i* S	**Sg**		**Sg**	**18 26 39.9**	**-0.2**
PRK	**Paraskevi**	**1.13**	**161**	P	**Pb**		**Pb**	**18 26 25.8**	**+0.3**
PRK				S	**Sn**		**Sn**	**18 26 41.4**	**+0.2**
comp=E,242nm,0.3s									
PRK	**Paraskevi**	**1.13**	**161**	P	**Pb**		**Pb**	**18 26 25.8**	**+0.3**
PRK				S	**Sg**		**Sg**	**18 26 40.3**	**0.0**
PRK				AML	AML			18 26 44.0	
comp=E,632μm,0.3s									
PRK				AML	AML			18 26 46.3	
comp=N,412μm,0.5s									
KRBG	**Karabiga-Canak**	**1.15**	**86**	PN	**Pg**		**Pg**	**18 26 25.2**	**-0.9**
KAVA	**Kavala**	**1.19**	**305**	P	**Pb**		**Pb**	**18 26 26.1**	**-0.5**
KAVA				S	**Sg**		**Sg**	**18 26 42.3**	**-0.1**

comp=N,78nm,0.4s
KAVA Kavala 1.19 305 P Pb 18 26 26.1 -0.5
KAVA S Sg 18 26 42.2 -0.1
KAVA AML AML 18 26 44.3
comp=E,146µm,0.4s
KAVA AML AML 18 26 46.0
comp=N,176µm,0.4s
AYVA Ayvalik 1.22 145 *i* P Pb 18 26 27.3 +0.2
AYVA *i* S Sg 18 26 43.5 +0.3
AYVA IAML 18 26 45.0
comp=N,200nm,0.7s
AYVA IAML 18 26 46.0
comp=E,99nm,0.6s
KNL Balıkesir 1.32 91 *i* P Pn 18 26 27.8 -0.6
KNL *i* S Sb 18 26 46.2 +0.4
KNL IAML 18 27 03.0
comp=E,373nm,0.9s
KNL IAML 18 27 03.0
comp=N,220nm,0.7s
KDZ Kurdzhali 1.36 348 PN Pn 18 26 28.9 -0.1
MRMT Marmara Adasi 1.40 78 PN Pn 18 26 28.8 -0.8
GONE Gonen-Balikesi 1.47 100 PN Pn 18 26 31.0 +0.5
TKR Tekirdag 1.48 62 PN Pn 18 26 31.0 +0.4
DKL Dikili 1.51 145 PN Pn 18 26 31.1 +0.2
BALY Balya 1.51 112 *i* P Pn 18 26 30.8 -0.3
BALY *i* S Sn 18 26 50.5 -0.3
BALY IAML 18 27 00.0
comp=E,26nm,0.5s
BALY IAML 18 27 02.0
comp=N,30nm,0.5s
EDC Edincik 1.58 88 PN Pn 18 26 32.5 +0.5
ZEDA zmir-Bergama 1.67 143 *i* P Pb 18 26 34.6 -0.2
ZEDA *i* S Sb 18 26 50.6 +0.2
ZEDA IAML 18 26 58.0
comp=N,37nm,0.3s
ZEDA IAML 18 26 58.0
comp=E,37nm,0.4s
CRLT Corlu 1.68 60 PN Pn 18 26 33.8 +0.4
EDRB Edirne 1.69 25 PN Pn 18 26 33.9 +0.4
BALB Balikesir 1.74 112 PN Pn 18 26 34.4 +0.3
STEP BALIKESIR_Sava 1.75 122 *i* P Pn 18 26 35.1 +0.7
STEP *i* S Sn 18 26 56.1 -0.6
STEP IAML 18 27 04.0
comp=E,28nm,0.3s
STEP IAML 18 27 06.0
comp=N,25nm,0.6s
PHSR Pinarhisar 1.85 44 PN Pn 18 26 36.3 +0.6
CHOS Chios island 1.94 174 P Pn 18 26 36.8 -0.1
CHOS Chios island 1.94 174 PN Pn 18 26 36.8 -0.1
KCTX Karacabey (Bur 1.96 91 PN Pn 18 26 37.6 +0.4
PLD Plovdiv 1.97 336 PN Pn 18 26 38.1 +0.8
SLVT Silivri 2.05 63 PN Pn 18 26 38.8 +0.4
HORT Hortiatis 2.08 279 PN Pn 18 26 39.7 +0.8
SB02 Marmara Sea 2.12 71 PN Pn 18 26 40.1 +0.8
DURS Dursunbey 2.18 108 *i* P Pn 18 26 41.6 +1.3
DURS *i* S Sn 18 27 07.5 +0.2
DURS IAML 18 27 15.0
comp=E,19nm,0.4s
DURS IAML 18 27 18.0
comp=N,21nm,0.5s
CTKS Kestanelik-??a 2.25 65 PN Pn 18 26 41.4 +0.2

IDC 24 18:37:24.4±8.7, 5°17′S×146°50′E, h75km±121km, mb3.4/3, mb1 3.6/5, mb1mx3.2/21, mbtmp3.7/5, ML1.2/1, Error ellipse: s-maj=133.6km s-min=36.6km az=116.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.26**	**171**	P	Pn	18 38 27.9	+1.0
	0.9nm,0.3s,baz=346,slow=17,SNR=3.0						
PMG				S	Sn	18 39 11.6	-3.8
	1.3nm,0.3s,baz=150,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**18.86**	**218**	P	Pn	18 41 39.6	-0.4
	0.5nm,0.3s,baz=46,slow=11,SNR=14						
ASAR	**Alice Springs**	**22.04**	**212**	P	P	18 42 12.2	-0.8
	1.4nm,0.4s,baz=34,slow=12,SNR=53						
FITZ	**Fitzroy Crossi**	**24.10**	**236**	P	P	18 42 33.0	-0.2
	2.5nm,0.5s,baz=54,slow=9.3,SNR=9.9						
SONM	**Songino Array**	**63.44**	**331**	P	P	18 47 46.4	0.0
	0.2nm,0.6s,baz=150,slow=6.1,SNR=1.7						

*SJA **24** 18:42:34.9±0.8, 22°.94S×70°.44W, h17km±4km, ML2.1, MW2.8*
*GUC **24** 18:42:35.9±0.6, 22°.94S×70°.47W, h31km±3km, ML2.4*
ISC 24 18:42:34.8±1.2, 22°.91S±0°.03×70°.53W±0°.06, h32km±10km, n16, σ0°.99/25, 4C-3D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB05	**IPOC Station P**	**0.30**	**80**	*ieP*	**Pn**	**18 42 42.8**	**-0.3**
PB05				*eS*	**Sb**	**18 42 47.9**	**+0.1**
PB05				IAML		18 42 48.1	
	comp=N,2µm,0.1s						
PB10	**IPOC Station P**	**0.61**	**182**	⇑*iP*	**Pb**	**18 42 46.9**	**-0.1**
PB10				*eS*	**Sb**	**18 42 55.0**	**-0.4**
PB10	**IPOC Station P**	**0.61**	**182**	*iP*	**Pb**	**18 42 46.8**	**-0.2**
PB10				*eS*	**Sb**	**18 42 55.0**	**-0.4**
PB10				IAML		18 42 55.2	
	comp=Z,57nm,0.4s						
PB04	**IPOC Station P**	**0.67**	**32**	⇑*iP*	**Pb**	**18 42 48.3**	**+0.1**
PB04				*eS*	**Sb**	**18 42 58.0**	**+0.8**
PB04				IAML		18 43 00.4	
	comp=N,620nm,0.0s						
PB04	**IPOC Station P**	**0.67**	**32**	*iP*	**Pb**	**18 42 48.4**	**+0.3**
PB04				*eS*	**Sb**	**18 42 58.1**	**+0.9**
PB04				IAML		18 43 02.0	
	comp=Z,96nm,0.1s						
PB06	**IPOC Station P**	**0.90**	**77**	*ieP*	**Pb**	**18 42 51.6**	**-0.5**
PB06				*eS*	**Sb**	**18 43 03.0**	**-0.9**
PB06				IAML		18 43 03.6	
	comp=N,134nm,0.2s						
PB06	**IPOC Station P**	**0.90**	**77**	*iP*	**Pb**	**18 42 51.5**	**-0.5**
PB06				IAML		18 43 05.7	
	comp=Z,68nm,0.3s						
PB15	**IPOC Station P**	**1.02**	**107**	*ieP*	**Pn**	**18 42 53.3**	**+0.3**
PB15				*eS*	**Sn**	**18 43 06.2**	**-0.2**
PB15	**IPOC Station P**	**1.02**	**107**	*iP*	**Pb**	**18 42 53.2**	**-0.8**
PB03	**IPOC Station P**	**1.11**	**40**	⇑*iP*	**Pn**	**18 42 55.4**	**+1.1**
PB03				*eS*	**Sn**	**18 43 10.0**	**+1.3**
PB03				IAML		18 43 10.9	
	comp=N,118nm,0.7s						
PB03	**IPOC Station P**	**1.11**	**40**	*iP*	**Pn**	**18 42 55.5**	**+1.1**
PB03				IAML		18 43 13.1	
	comp=Z,63nm,0.2s						
PB09	**IPOC Station P**	**1.62**	**47**	⇑*iP*	**Pb**	**18 43 03.9**	**-0.2**
PB09				*eS*	**Sb**	**18 43 24.9**	**+0.5**
PB09	**IPOC Station P**	**1.62**	**47**	*iP*	**Pb**	**18 43 04.0**	**-0.2**
PB09				IAML		18 43 28.0	
	comp=Z,22nm,0.4s						
PB14	**IPOC Station P**	**1.72**	**176**	*iP*	**Pb**	**18 43 06.1**	**+0.2**
PB14				IAML		18 43 30.8	
	comp=Z,16nm,0.6s						
PB08	**IPOC Station P**	**3.03**	**25**	*iP*	**Pb**	**18 43 25.7**	**-2.6**
PB08				IAML		18 44 11.8	
	comp=Z,6.1nm,2.7s						
PSGCX	**Pisagua**	**3.31**	**7**	*iP*	**Pb**	**18 43 30.7**	**-2.2**
PSGCX				IAML		18 44 56.9	
	comp=Z,6.6nm,1.1s						

*IDC **24** 18:54:49.7±1.6, 2°.82S×139°.04E, h0km, mb3.4/2, mb1 3.8/3, mb1mx3.5/27, mbtmp3.6/3, ML3.2/1, Error ellipse: s-maj=33.2km s-min=14.8km az=166.0*
*DJA **24** 18:54:54.8±0.6, 3°.5S×13°.9E±°, h10km, M3.5/3, MLv3.5/3*
ISC 24 18:54:54.7±1.2, 2°.9S±0°.1×139°.05E±0°.08, h37km, n7, σ0°.77/7, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.92**	**338**	P	**Pn**	**18 55 10.6**	**-0.5**
WAMI	**Wamena**	**1.08**	**198**	P	Pn	18 55 20.3	+7.1
GENI	**Genyem**	**1.15**	**77**	P	**Pn**	**18 55 14.4**	**+0.2**
GENI				S	**Sn**	**18 55 29.2**	**+0.5**
JAY	**Jayapura**	**1.69**	**79**	Pg	**Pn**	**18 55 20.4**	**-1.2**
	4.4nm,0.3s,baz=234,slow=11,SNR=20						
JAY				Lg	Lg	18 55 43.1	
	7.7nm,0.3s,baz=217,slow=12,SNR=8.2						
WRA	**Warramunga Arr**	**17.60**	**195**	P	**P**	**18 58 57.9**	**0.0**
	0.1nm,0.3s,baz=14,slow=14,SNR=2.3						
ASAR	**Alice Springs**	**21.28**	**193**	P	**P**	**18 59 38.0**	**-0.1**
	1.8nm,0.8s,baz=19,slow=9.7,SNR=3.5						
MKAR	**Makanchi Array**	**70.11**	**322**	P	**P**	**19 06 03.8**	**+0.5**
	0.2nm,0.6s,baz=97,slow=7.1,SNR=4.6						

WEL 24 19:01:08.4, 35°S±13°×177°9E±1°5, h198km±12km, M3.7/23, MLv3.7/23, Error ellipse: s-maj=0.0km s-min=0.0km az=126.2, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.31**	**191**	P	Pn	19 01 50.1	+0.1
MXZ				S	Sn	19 02 20.5	-2.1
WMGZ	**Waiomatatini S**	**2.55**	**188**	P	Pn	19 01 53.1	+0.5
WMGZ				S	Sn	19 02 26.8	-0.6
HAZ	**Te Kaha**	**2.61**	**199**	P	Pn	19 01 53.4	0.0
HAZ				S	Sn	19 02 29.9	+1.3
PKGZ	**Pakihiroa**	**2.67**	**194**	P	Pn	19 01 54.3	+0.2
PKGZ				S	Sn	19 02 29.7	-0.2
PUZ	**Puketiti**	**2.82**	**190**	P	Pn	19 01 55.7	0.0
PUZ				S	Sn	19 02 32.7	-0.3
RUGZ	**Raukumara Rang**	**2.83**	**200**	P	Pn	19 01 56.3	+0.2
KUZ	**Kuaotunu**	**2.94**	**240**	P	Pn	19 01 56.9	-0.3
MWZ	**Matawai**	**3.22**	**199**	P	Pn	19 02 00.8	+0.2
MWZ				S	Sn	19 02 42.7	+1.1
CNGZ	**Carnagh Statio**	**3.23**	**189**	P	Pn	19 02 01.2	+0.6
TKGZ	**Te Karaka**	**3.25**	**194**	P	Pn	19 01 58.6	-2.2
URZ	**Urewera**	**3.28**	**205**	P	Pn	19 02 01.4	+0.2
URZ				S	Sn	19 02 44.0	+1.3
RAGZ	**Rawiri**	**3.40**	**200**	P	Pn	19 02 03.4	+0.6
RIGZ	**Rimuhau**	**3.52**	**194**	P	Pn	19 02 04.2	0.0
MUGZ	**Murupara**	**3.60**	**207**	P	Pn	19 02 05.3	+0.2
RTZ	**Ruatahuna**	**3.65**	**204**	P	Pn	19 01 57.9	-7.9
TOZ	**Tahuroa Road**	**3.65**	**227**	P	Pn	19 02 08.5	+2.8
SNGZ	**Shannon Statio**	**3.69**	**199**	P	Pn	19 02 06.7	+0.5
KNZ	**Kokohu**	**3.84**	**194**	P	Pn	19 02 07.7	-0.4
RAHZ	**Arahi**	**3.89**	**201**	P	Pn	19 02 08.6	-0.1
MTHZ	**Maungataniwha**	**3.91**	**204**	P	Pn	19 02 08.9	0.0
MHGZ	**Mahia Peninsul**	**3.93**	**191**	P	Pn	19 02 09.2	0.0
NMHZ	**Naumai**	**4.14**	**203**	P	Pn	19 02 12.3	+0.4
ARHZ	**Aropaunui**	**4.24**	**200**	P	Pn	19 02 12.9	-0.1
BKZ	**Black Stump Fm**	**4.31**	**206**	P	Pn	19 02 13.4	-0.5
MCHZ	**McNeill Hill**	**4.49**	**202**	P	Pn	19 02 15.9	-0.4
HIZ	**Hauiti**	**4.55**	**224**	P	Pn	19 02 19.8	+2.8
KWHZ	**Kaweka Forest**	**4.56**	**205**	P	Pn	19 02 16.6	-0.6
BHHZ	**Black Hill Sta**	**4.75**	**207**	P	Pn	19 02 19.1	-0.5
KAHZ	**Kahuranaki**	**4.76**	**199**	P	Pn	19 02 19.1	-0.7
KRHZ	**Kereru**	**4.78**	**204**	P	Pn	19 02 18.5	-1.3
PNHZ	**Pukenui**	**5.08**	**204**	P	Pn	19 02 22.2	-1.5
PRHZ	**Porangahau**	**5.27**	**199**	P	Pn	19 02 22.7	-3.5
TIWZ	**Tintock**	**5.96**	**202**	P	Pn	19 02 33.4	-1.7

*NEIC **24** 19:03:28.9±1.5, 43°.80N±0°.04×105°.29W±0°.08, h0km±1km, ML3.5/72, Error ellipse: s-maj=10.4km s-min=7.6km az=96.0*
*IDC **24** 19:03:29.3±0.8, 44°.06N×105°.79W, h0km, mb3.9/3, mb1 3.7/9, mb1mx3.5/47, mbtmp3.5/9, ML3.0/5, Error ellipse: s-maj=22.8km s-min=7.7km az=145.0*
ISC 24 19:03:28.3±0.7, 43°.78N±0°.06×105°.31W±0°.07, h0km, n79, σ1s00/78, mb4.1/4, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	**Black Hills**	**0.98**	**69**		**Pg**	**19 03 47.7**	**+0.6**
K22A	**Casper**	**1.44**	**219**		**Pn**	**19 03 54.8**	**-1.0**
K22A				IAML		19 04 18.5	
	comp=N,607nm,0.9s						
K22A				IAML		19 04 21.1	
	comp=E,499nm,0.6s						
RWWY	**Rawlins**	**2.52**	**214**		**Pn**	**19 04 12.5**	**+1.8**
RWWY				IAML		19 04 48.4	
	comp=E,369nm,0.8s						
RWWY				IAML		19 04 48.5	
	comp=E,369nm,0.8s						
N23A	**Red Feather La**	**2.92**	**189**		**Pn**	**19 04 17.5**	**+1.2**
N23A				IAML		19 05 00.5	
	comp=N,211nm,0.6s						
N23A				IAML		19 05 02.6	
	comp=E,153nm,0.8s						
LAO	**LASA Array**	**2.98**	**348**		**Pn**	**19 04 17.8**	**+1.0**
RLMT	**Red Lodge**	**3.13**	**297**		**Pn**	**19 04 20.1**	**+0.9**
RLMT				IAML		19 05 18.8	
	comp=E,101nm,0.9s						
BW06	**Boulder Array**	**3.27**	**253**		**Pn**	**19 04 22.1**	**+1.2**
BW06				IAML		19 05 20.5	
	comp=N,80nm,0.8s						
PD31	**Pinedale Array**	**3.27**	**253**		**Pn**	**19 04 22.0**	**+1.0**
PDAR	**Pinedale Array**	**3.27**	**253**	Pn	**Pn**	**19 04 21.9**	**+1.0**
	comp=N,5.5nm,0.3s,baz=68,slow=16,SNR=92						
PDAR				Lg	Lg	19 05 04.0	
	comp=N,9.0nm,0.3s,baz=71,slow=27,SNR=12						
YNE	**Yellowstone No**	**3.58**	**292**		**Pn**	**19 04 26.0**	**+0.7**
YMP	**Mirror Lake Pl**	**3.61**	**287**		**Pn**	**19 04 26.6**	**+0.8**
OGNE	**Ogallala**	**3.73**	**138**		**Pn**	**19 04 27.9**	**+0.7**
LKWY	**Lake**	**3.75**	**284**		**Pn**	**19 04 28.6**	**+1.0**
LKWY				IAML		19 05 50.4	
	comp=N,62nm,0.9s						
H17A	**Grant Village**	**3.84**	**281**		**Pn**	**19 04 30.4**	**+1.5**
YUF	**Upper Falls**	**3.85**	**286**		**Pn**	**19 04 30.9**	**+1.9**
FLWY	**Flagg Ranch**	**3.91**	**276**		**Pn**	**19 04 30.8**	**+1.0**
FLWY				IAML		19 05 39.2	
	comp=N,104nm,0.9s						
FLWY				IAML		19 06 20.6	
	comp=N,70nm,1.1s						
MOOW	**Moose Ponds**	**3.94**	**271**		**Pn**	**19 04 32.3**	**+2.1**
SNOW	**Snow King Moun**	**3.97**	**267**		**Pn**	**19 04 31.1**	**+0.4**
SNOW				IAML		19 05 54.8	
	comp=N,82nm,0.9s						
SNOW				IAML		19 05 58.8	
	comp=N,77nm,1.0s						
YNR	**Norris Junctio**	**3.97**	**285**		**Pn**	**19 04 30.5**	**-0.1**
ISCO	**Idaho Springs**	**3.99**	**183**		**Pn**	**19 04 32.2**	**+1.3**
YPP	**Pitchstone Pla**	**3.99**	**279**		**Pn**	**19 04 32.2**	**+1.2**
REDW	**Red Top Meadow**	**4.05**	**266**		**Pn**	**19 04 33.3**	**+1.5**
REDW				IAML		19 05 45.1	
	comp=N,83nm,0.9s						
REDW				IAML		19 05 49.5	
	comp=N,68nm,0.8s						
IMW	**Indian Meadow**	**4.07**	**274**		**Pn**	**19 04 33.5**	**+1.4**
IMW				IAML		19 05 44.1	
	comp=N,46nm,0.8s						
IMW				IAML		19 05 52.8	
	comp=N,40nm,1.1s						
YHH	**Holmes Hill**	**4.10**	**286**		**Pn**	**19 04 32.9**	**+0.4**
TPAW	**Teton Pass**	**4.11**	**268**		**Pn**	**19 04 33.6**	**+1.1**
TPAW				IAML		19 05 50.7	
	comp=N,101nm,1.0s						
TPAW				IAML		19 05 51.2	
	comp=N,51nm,0.9s						
YMR	**Madison River**	**4.16**	**284**		**Pn**	**19 04 33.8**	**+0.6**
O20A	**White River Ci**	**4.25**	**212**		**Pn**	**19 04 35.7**	**+1.2**
O20A				IAML		19 05 46.1	
	comp=E,67nm,0.7s						
O20A				IAML		19 05 58.8	
	comp=N,84nm,0.9s						
YHB	**Horse Butte**	**4.34**	**285**		**Pn**	**19 04 36.5**	**+0.9**
YHL	**Hebgen Lake**	**4.35**	**286**		**Pn**	**19 04 35.8**	**-0.1**
AHID	**Auburn Hatcher**	**4.35**	**258**		**Pn**	**19 04 37.3**	**+1.5**
AHID				IAML		19 05 56.3	
	comp=N,61nm,1.1s						
AHID				IAML		19 05 57.5	
	comp=E,58nm,1.1s						
RDMU	**Red Mountain**	**4.51**	**226**		**Pn**	**19 04 38.0**	**0.0**
QLMT	**Earthquake Lak**	**4.52**	**286**		**Pn**	**19 04 38.2**	**+0.1**
DGMT	**Dagmar**	**4.75**	**9**		**Pn**	**19 04 43.2**	**+2.0**
SMCO	**Snowmass**	**4.77**	**196**		**Pn**	**19 04 42.7**	**+0.9**
SMCO				IAML		19 06 03.9	
	comp=E,27nm,1.0s						
SMCO				IAML		19 06 37.8	
	comp=E,42nm,1.1s						
Q24A	**Divide**	**4.82**	**179**		**Pn**	**19 04 41.2**	**-1.2**
Q24A				IAML		19 06 12.7	
	comp=E,35nm,0.8s						
HWUT	**Hardware Ranch**	**5.10**	**247**		**Pn**	**19 04 46.5**	**+0.4**
KSCO	**Kaye Shedlock'**	**5.18**	**156**		**Pn**	**19 04 47.2**	**+0.1**
TCUT	**Toone Canyon**	**5.24**	**242**		**Pn**	**19 04 49.3**	**+1.2**
EGMT	**Eagleton**	**5.25**	**325**		**Pn**	**19 04 48.8**	**+0.7**
DLMT	**Dillon**	**5.44**	**289**		**Pn**	**19 04 51.0**	**+0.3**
LRM	**Limekiln Ridge**	**5.47**	**294**		**Pn**	**19 04 53.8**	**+2.5**
MCMT	**McKenzie Canyo**	**5.51**	**284**		**Pn**	**19 04 51.3**	**-0.5**
JLU	**Jordanelle**	**5.56**	**237**		**Pn**	**19 04 50.9**	**-1.6**
CTU	**Camp Tracy**	**5.69**	**239**		**Pn**	**19 04 54.2**	**0.0**
MDND	**Maddock**	**5.69**	**42**		**Pn**	**19 04 54.1**	**0.0**
SPUT	**South Promonto**	**5.82**	**247**		**Pn**	**19 04 55.9**	**-0.2**
P17A	**Butcher Ranch,**	**5.92**	**225**		**Pn**	**19 04 59.6**	**+2.2**
SDCO	**Great Sand Dun**	**6.03**	**181**		**Pn**	**19 04 58.6**	**-0.5**
MPU	**Maple Canyon**	**6.04**	**234**		**Pn**	**19 04 58.7**	**-0.2**
SRU	**San Rafael Swe**	**6.09**	**222**		**Pn**	**19 04 59.9**	**+0.1**
S22A	**4UR Ranch, Cre**	**6.14**	**191**		**Pn**	**19 05 01.1**	**+0.6**
ECSD	**EROS Data Cent**	**6.30**	**87**		**Pn**	**19 05 03.0**	**+0.6**
TMUT	**Trail Mountain**	**6.30**	**227**		**Pn**	**19 05 03.4**	**+0.7**
NLU	**North Lily Min**	**6.33**	**235**	Pn	**Pn**	**19 05 03.8**	**+0.7**
BGU	**Big Grassy Mou**	**6.39**	**246**		**Pn**	**19 05 04.1**	**+0.3**
CBKS	**Cedar Bluff**	**6.50**	**138**		**Pn**	**19 05 05.6**	**+0.4**
Q16A	**Castle Valley**	**6.56**	**224**		**Pn**	**19 05 07.0**	**+0.8**
DUG	**Dugway, Tooele**	**6.64**	**240**		**Pn**	**19 05 07.5**	**+0.2**
T25A	**Trinidad**	**6.67**	**174**		**Pn**	**19 05 08.2**	**+0.4**
MSO	**Missoula**	**6.80**	**300**		**Pn**	**19 05 10.2**	**+0.7**
MVCO	**Mesa Verde**	**7.00**	**201**		**Pn**	**19 05 13.1**	**+0.8**
MSU	**Marysvale**	**7.39**	**227**		**Pn**	**19 05 18.5**	**+0.9**
JTMT	**Jette**	**7.42**	**305**		**Pn**	**19 05 18.9**	**+1.0**
MTPU	**Mount Pierson**	**7.74**	**225**		**Pn**	**19 05 22.4**	**-0.2**
ELK	**Elko**	**7.96**	**251**	Pn	**Pn**	**19 05 25.9**	**+0.4**
	comp=E,0.3nm,0.3s,baz=81,slow=2.8,SNR=5.1						
ELK				Lg	Lg	19 07 32.2	
	comp=E,0.1nm,0.3s,baz=134,slow=18,SNR=1.8						
ELK	**Elko**	**7.96**	**251**		**Pn**	**19 05 25.6**	**+0.1**
AGMN	**Agassiz Nation**	**7.97**	**52**		**Pn**	**19 05 25.5**	**+0.1**
PSUT	**Pine Spring**	**8.31**	**234**	Pn	**Pn**	**19 05 32.0**	**+1.8**
SPMN	**Marine on St.**	**9.05**	**77**	Pn	**Pn**	**19 05 41.0**	**+0.8**
ULM	**Lac du Bonnet**	**9.13**	**42**	Pn	**Pn**	**19 05 41.0**	**-0.2**
	comp=E,0.8nm,0.3s,baz=240,slow=11,SNR=6.4						
ULM				Pg		19 06 10.7	
	comp=E,0.6nm,0.3s,baz=244,slow=18,SNR=3.0						
ULM				Lg	Lg	19 08 06.7	
	comp=E,0.3nm,0.3s,baz=319,slow=20,SNR=3.0						
ULM	**Lac du Bonnet**	**9.13**	**42**	Pn	**Pn**	**19 05 41.5**	**+0.3**
NEW	**Newport**	**9.36**	**303**	Lg	Lg	19 08 06.0	
	comp=E,0.1nm,0.3s,baz=108,slow=17,SNR=2.2						
NVAR	**Mina Array Bea**	**11.16**	**246**	Pn	**Pn**	**19 06 09.8**	**+0.5**
	comp=E,0.1nm,0.3s,baz=56,slow=14,SNR=3.3						
TXAR	**Lajitas Array**	**14.48**	**174**	Pn	**P**	**19 07 01.6**	**0.0**
	comp=E,0.0nm,0.3s,baz=350,slow=13,SNR=3.2						
TXAR				Lg	Lg	19 11 08.1	
	comp=E,0.0nm,0.3s,baz=354,slow=26,SNR=4.4						
YKA	**Yellowknife Ar**	**19.52**	**347**	P	**P**	**19 07 55.2**	**-1.7**
	comp=E,0.1nm,0.3s,baz=161,slow=13,SNR=6.2						
ARCES	**ARCESS Array B**	**61.38**	**18**	P	**P**	**19 13 44.6**	**-0.9**
	comp=E,1.2nm,0.9s,baz=332,slow=6.8,SNR=5.6						
AKASG	**Malin Array Se**	**77.93**	**28**	P	**P**	**19 15 27.6**	**-0.2**
	comp=E,1.2nm,0.3s,baz=329,slow=5.4,SNR=1.3						
ZALV	**Zalesovo Beam**	**82.26**	**354**	P	**P**	**19 15 50.5**	**-0.7**
	comp=E,0.8nm,0.6s,baz=356,slow=4.8,SNR=4.6						
MKAR	**Makanchi Array**	**89.56**	**355**	P	**P**	**19 16 27.4**	**-0.1**
	comp=E,0.5nm,0.7s,baz=22,slow=3.9,SNR=6.5						

*IDC **24** 19:04:12.1±1.4, 2°.09N×126°.46E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/38, mbtmp3.6/5, Error ellipse: s-maj=65.8km s-min=14.4km az=81.0*
*DJA **24** 19:04:16.2±0.5, 2°.1N±5°×12°.7E±°, h10km, M3.6/5, MLv3.6/5*
ISC 24 19:04:18.1±1.1, 2°.1N±0°.1×126°.6E±0°.3, h47km, n6, σ0s55/7, mb3.6/4, Northern Moluccan Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.51**	**150**	P	**Pn**	**19 04 42.7**	**0.0**
FITZ	**Fitzroy Crossi**	**20.08**	**183**	P	**P**	**19 08 47.2**	**-0.6**
	1.0nm,0.3s,baz=11,slow=14,SNR=4.7						
FITZ				S	**Sn**	**19 12 35.3**	**+0.1**
	1.8nm,1.0s,baz=291,slow=14,SNR=2.5						
WRA	**Warramunga Arr**	**23.17**	**161**	P	**P**	**19 09 20.3**	**-0.5**
	1.3nm,0.4s,baz=338,slow=11,SNR=6.9						
ASAR	**Alice Springs**	**26.57**	**165**	P	**P**	**19 09 52.7**	**+0.8**
	0.4nm,0.3s,baz=346,slow=7.9,SNR=8.4						
SONM	**Songino Array**	**48.81**	**342**	P	**P**	**19 12 58.7**	**0.0**
	0.2nm,0.5s,baz=147,slow=7.7,SNR=2.2						
MKAR	**Makanchi Array**	**58.83**	**326**	P	**P**	**19 14 11.9**	**0.0**
	0.3nm,0.5s,baz=121,slow=7.9,SNR=8.0						

*NEIC **24** 19:24:12.8±0.8, 17°.4S±0°.1×174°.6W±0°.07, h264km±17km, mb4.1/10, Error ellipse: s-maj=19.7km s-min=10.0km az=186.0*
*IDC **24** 19:24:14.3±3.9, 17°.16S×173°.79W, h364km±271km, mb3.3/4, mb1 3.5/5, mb1mx3.1/26, mbtmp4.1/5, Error ellipse: s-maj=360.8km s-min=39.6km az=69.0*
ISC 24 19:24:13.7±0.7, 17°.3S±0°.1×174°.6W±0°.1, h300km, n19, σ1s01/21, mb3.9/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.28**	**39**	P	**Pn**	**19 25 24.0**	**+0.9**
	8.7nm,0.3s,baz=173,slow=1.9,SNR=9.7						
AFI				S	**S**	**19 26 15.9**	**-3.0**
	5.2nm,0.3s,baz=262,slow=15,SNR=3.5						
AFI	**Afiamalu**	**4.28**	**39**		**Pn**	**19 25 24.1**	**+0.9**
AFI					**S**	**19 26 19.7**	**+0.9**
NIUE	**Niue**	**4.74**	**113**	Pn	**Pn**	**19 25 28.7**	**+0.5**
URZ	**Urewera**	**22.15**	**198**	P	**P**	**19 28 43.5**	**-1.5**
	2.3nm,0.4s,baz=322,slow=19,SNR=3.7						
URZ	**Urewera**	**22.15**	**198**	P	**P**	**19 28 44.0**	**-1.0**
URZ				IAmb	IAmb	19 28 45.2	
	comp=Z,14nm,1.2s						
TUWZ	**Tuamarina**	**26.03**	**200**	P	**P**	**19 29 20.1**	**+0.1**
CMWZ	**Cape Campbell**	**26.23**	**199**	P	**P**	**19 29 20.6**	**-1.1**
STKA	**Stephens Creek**	**42.16**	**241**	P	**P**	**19 31 37.9**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=73,slow=12,SNR=3.9						
STKA	**Stephens Creek**	**42.16**	**241**	P	**P**	**19 31 37.6**	**-0.1**
BBOO	**Buckleboo**	**46.94**	**241**	P	**P**	**19 32 14.8**	**-0.3**
BBOO				IAmb	IAmb	19 32 28.3	
	comp=Z,30nm,1.6s	

MOR8					AMSG			19 36 54.2	
	comp=Z,524nm,0.5s								
STEI	**Steigen**	**1.44**	**29**		Pg		**Pn**	**19 36 58.6**	**+0.1**
STEI					Lg		Lg	19 37 18.0	
STEI	**Steigen**	**1.44**	**29**	*eP*			**Pn**	**19 36 58.4**	**-0.1**
STEI					*eSg*		**Sb**	**19 37 19.0**	**+1.3**
STEI					IAML			19 37 21.5	
	comp=Z,57nm,0.4s								
LOF	**Lofoten**	**1.45**	**2**		Pg		**Pn**	**19 36 57.4**	**-1.3**
LOF					Lg		Lg	19 37 15.5	
LOF	**Lofoten**	**1.45**	**2**	*eP*			**Pn**	**19 36 57.2**	**-1.5**
LOF					*eS*		**Sg**	**19 37 15.8**	**-2.8**
LOF					IAML			19 37 20.9	
	comp=Z,39nm,0.3s								
NSS	**Namsos**	**2.25**	**196**	*eP*			**Pn**	**19 37 09.6**	**-0.1**
NSS					*eS*		**Sn**	**19 37 36.8**	**-0.8**
NSS					IAML			19 37 48.4	
	comp=Z,21nm,0.6s								
DUNU	**Dundret**	**2.87**	**78**	*eP*			**Pn**	**19 37 18.9**	**+0.7**
DUNU					*eS*		**Sn**	**19 37 54.6**	**+1.7**
DUNU	**Dundret**	**2.87**	**78**	P			**Pn**	**19 37 18.9**	**+0.7**
DUNU					S		**Sn**	**19 37 54.6**	**+1.7**
LILU	**Lilltraesk**	**3.00**	**115**	*eP*			**Pn**	**19 37 20.5**	**+0.6**
LILU					*eS*		**Sn**	**19 37 57.1**	**+1.0**
LILU	**Lilltraesk**	**3.00**	**115**	P			**Pn**	**19 37 20.5**	**+0.6**
LILU					S		**Sn**	**19 37 57.1**	**+1.0**
HARU	**Harads**	**3.10**	**96**	*eP*			**Pn**	**19 37 21.7**	**+0.4**
HARU	**Harads**	**3.10**	**96**	P			**Pn**	**19 37 21.7**	**+0.4**
NOD	**Norderasen**	**3.32**	**168**	*eP*			**Pn**	**19 37 25.8**	**+1.4**
SVAU	**Svanoeiden**	**3.39**	**128**	*eP*			**Pn**	**19 37 25.4**	**0.0**
SVAU					*eS*		**Sn**	**19 38 05.5**	**-0.1**
SVAU	**Svanoeiden**	**3.39**	**128**	P			**Pn**	**19 37 25.4**	**0.0**
SVAU					S		**Sn**	**19 38 05.5**	**-0.1**
MASU	**Masugnsbyn**	**3.46**	**73**	*eS*			**Sn**	**19 38 07.4**	**-0.1**
MASU	**Masugnsbyn**	**3.46**	**73**	S			**Sn**	**19 38 07.4**	**-0.1**
SJUU	**Sjulsmark**	**3.55**	**106**	*eP*			**Pn**	**19 37 27.9**	**+0.4**
SJUU					*eS*		**Sn**	**19 38 09.9**	**+0.2**
SJUU	**Sjulsmark**	**3.55**	**106**	P			**Pn**	**19 37 27.9**	**+0.4**
SJUU					S		**Sn**	**19 38 09.9**	**+0.2**
LANU	**Lannavaara**	**3.59**	**64**	*eP*			**Pn**	**19 37 30.2**	**+2.0**
LANU					*eS*		**Sn**	**19 38 11.1**	**+0.2**
LANU	**Lannavaara**	**3.59**	**64**	*eP*			**Pn**	**19 37 30.2**	**+2.0**
LANU					*eS*		**Sn**	**19 38 11.1**	**+0.2**
TRO	**Tromso**	**3.61**	**33**	*eP*			**Pn**	**19 37 29.8**	**+1.5**
TRO					*eS*		**Sn**	**19 38 08.1**	**-3.0**
TRO					IAML			19 38 33.3	
	comp=Z,4.5nm,0.5s								
KIF	**Kilpisjarvi**	**3.65**	**47**		Pn		**Pn**	**19 37 29.5**	**+0.6**
KIF					Sn		**Sn**	**19 38 15.0**	**+3.0**
KIF					Lg		Lg	19 38 27.4	
KIF	**Kilpisjarvi**	**3.65**	**47**	*eS*			**Sn**	**19 38 12.9**	**+0.9**
KIF					MSG			19 38 32.5	
	comp=Z,6.7nm,0.2s								
KIF	**Kilpisjarvi**	**3.65**	**47**	*eP*			**Pn**	**19 37 29.7**	**+0.9**
KIF					*eS*		**Sn**	**19 38 12.9**	**+0.9**
KIF					MSG			19 38 32.5	
	comp=Z,6.7nm,0.2s								
ODEU	**Stanfors**	**3.81**	**124**	*eP*			**Pn**	**19 37 32.2**	**+1.1**
ODEU	**Stanfors**	**3.81**	**124**	P			**Pn**	**19 37 32.2**	**+1.1**
PAJU	**Pajala**	**3.86**	**81**	*eP*			**Pn**	**19 37 32.5**	**+0.7**
PAJU	**Pajala**	**3.86**	**81**	P			**Pn**	**19 37 32.5**	**+0.7**
BURU	**Burvik**	**3.93**	**119**	*eP*			**Pn**	**19 37 33.5**	**+0.7**
BURU					*eS*		**Sn**	**19 38 18.6**	**-0.5**
BURU	**Burvik**	**3.93**	**119**	*eP*			**Pn**	**19 37 33.5**	**+0.7**
BURU					*eS*		**Sn**	**19 38 18.6**	**-0.5**
BURU	**Burvik**	**3.93**	**119**	P			**Pn**	**19 37 33.5**	**+0.7**
KALU	**Kalix**	**4.12**	**97**	*eP*			**Pn**	**19 37 35.3**	**0.0**
KALU	**Kalix**	**4.12**	**97**	P			**Pn**	**19 37 35.3**	**0.0**
UMAU	**Umeaa**	**4.16**	**129**	*eP*			**Pn**	**19 37 36.4**	**+0.5**
UMAU					*eS*		**Sn**	**19 38 23.9**	**-0.9**
UMAU	**Umeaa**	**4.16**	**129**	*eP*			**Pn**	**19 37 36.4**	**+0.5**
UMAU					*eS*		**Sn**	**19 38 23.9**	**-0.9**
HUSU	**Husum**	**4.17**	**141**	*eS*			**Sn**	**19 38 25.4**	**+0.4**
HUSU	**Husum**	**4.17**	**141**	*eS*			**Sn**	**19 38 25.4**	**+0.4**
KTK1	**Kautokeino**	**4.40**	**54**	*eP*			**Pn**	**19 37 39.6**	**+0.4**
KTK1					*eS*		**Sn**	**19 38 28.0**	**-2.6**
KTK1					IAML			19 38 50.4	
	comp=Z,7.5nm,0.5s								
TOF	**Tornio**	**4.45**	**93**	*eP*			**Pn**	**19 37 40.2**	**+0.4**
TOF					MSG			19 38 51.3	
	comp=Z,7.9nm,0.5s								
TOF	**Tornio**	**4.45**	**93**	*eP*			**Pn**	**19 37 40.2**	**+0.4**
TOF					MSG			19 38 51.3	
	comp=Z,7.9nm,0.5s								
HEMU	**Hemsoen**	**4.50**	**151**	*eP*			**Pn**	**19 37 41.9**	**+1.3**
HEMU					*eS*		**Sn**	**19 38 33.1**	**0.0**
OBF0	**Syolatti, Pyha**	**5.01**	**111**	*eP*			**Pn**	**19 37 47.6**	**0.0**
OBF0					*eS*		**Sn**	**19 38 42.5**	**-3.1**
OBF0	**Syolatti, Pyha**	**5.01**	**111**	*eP*			**Pn**	**19 37 47.6**	**0.0**
OBF0					*eS*		**Sn**	**19 38 42.5**	**-3.1**
OUF	**Merijarvi**	**5.26**	**111**	MSG				19 39 16.9	
	comp=Z,2.8nm,0.3s								
OUF	**Merijarvi**	**5.26**	**111**	MSG				19 39 16.9	
	comp=Z,2.8nm,0.3s								
AKN	**Aaknes**	**5.31**	**214**		Pn		**Pn**	**19 37 53.2**	**+1.5**
AKN	**Aaknes**	**5.31**	**214**		Pn		**Pn**	**19 37 53.2**	**+1.5**
AKN					*eS*		**Sn**	**19 38 53.4**	**+0.5**
ARA0	**ARCESS Array S**	**5.36**	**52**		Pn		**Pn**	**19 37 51.4**	**-0.9**
	baz=234,slow=14								
ARA0					Sn		**Sn**	**19 38 50.1**	**-4.1**
	baz=238,slow=22								
ARA0					Lg		Lg	19 39 17.2	
	baz=241,slow=28								
ARA0	**ARCESS Array S**	**5.36**	**52**		Pn		**Pn**	**19 37 51.4**	**-0.9**
	baz=234,slow=14								
ARA0					Sn		**Sn**	**19 38 50.1**	**-4.1**
	baz=238,slow=22								
ARA0					Sg		**Sb**	**19 39 17.2**	**+6.9**
	baz=241,slow=28								
ARCES	**ARCESS Array B**	**5.36**	**52**		Pn		**Pn**	**19 37 51.6**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=238,slow=13,SNR=16								
ARCES					Sn		**Sn**	**19 38 50.0**	**-4.2**
	comp=Z,0.9nm,0.3s,baz=238,slow=22,SNR=7.4								
ARCES					Lg		Lg	19 39 14.0	
	comp=Z,0.9nm,0.3s,baz=242,slow=27,SNR=7.4								
ARE0	**ARCESS Array S**	**5.36**	**52**	*eS*			**Sn**	**19 38 50.6**	**-3.5**
VAF	**Ylistaro**	**5.39**	**128**	*eS*			**Sn**	**19 38 53.5**	**-1.5**
VAF					MSG			19 39 20.4	
	comp=Z,5.2nm,0.4s								
VAF	**Ylistaro**	**5.39**	**128**	*eS*			**Sn**	**19 38 53.5**	**-1.5**
VAF					MSG			19 39 20.4	
	comp=Z,5.2nm,0.4s								
NB2	**NORSAR Subarra**	**5.75**	**191**		Pn		**Pn**	**19 37 57.6**	**-0.3**
	baz=6.5,slow=14								
NB2					Lg		Lg	19 39 30.6	
NB2	**NORSAR Subarra**	**5.75**	**191**		Pn		**Pn**	**19 37 57.6**	**-0.3**
	baz=6.5,slow=14								
NB2					Sg		**Sg**	**19 39 30.6**	**-6.0**
NOA	**NORSAR Array B**	**5.75**	**191**		Pn		**Pn**	**19 37 59.0**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=1.8,slow=13,SNR=3.1								
NOA					Lg		Lg	19 39 30.4	
	comp=Z,0.1nm,0.3s,baz=44,slow=21,SNR=5.5								
KEV	**Kevo**	**5.92**	**53**		Pn		**Pn**	**19 37 59.4**	**-0.7**
KEV					Sn		**Sn**	**19 39 04.2**	**-3.9**
KEV					Lg		Lg	19 39 33.9	
KEV	**Kevo**	**5.92**	**53**	*eP*			**Pn**	**19 37 59.4**	**-0.7**
KEV					*eS*		**Sn**	**19 39 03.0**	**-5.1**
NRA0	**NORESS Array S**	**6.04**	**189**		Pn		**Pn**	**19 38 02.7**	**+1.0**
	baz=4.1,slow=14								
NRA0					Sn		**Sn**	**19 39 10.1**	**-0.8**
	baz=7.6,slow=22								
NRA0					Lg		Lg	19 39 38.7	
	baz=15,slow=28								
NRA0	**NORESS Array S**	**6.04**	**189**		Pn		**Pn**	**19 38 02.7**	**+1.0**
	baz=4.1,slow=14								
NRA0					Sn		**Sn**	**19 39 10.1**	**-0.8**
	baz=7.6,slow=22								
NRA0					Sg		**Sg**	**19 39 38.7**	**-7.0**
	baz=15,slow=28								
HFS	**Hagfors**	**6.58**	**179**		Pn		**Pn**	**19 38 09.7**	**+0.5**
	baz=15,slow=9.3								
HFS					Sn		**Sn**	**19 39 22.2**	**-2.2**
	baz=2.8,slow=22								
HFS					Lg		Lg	19 39 56.8	
	baz=352,slow=28								
HFS	**Hagfors**	**6.58**	**179**		Pn		**Pn**	**19 38 09.6**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=359,slow=13,SNR=4.9								
HFS					Sn		**Sn**	**19 39 21.5**	**-2.9**
	comp=Z,0.4nm,0.3s,baz=356,slow=17,SNR=5.2								
HFS					Lg		Lg	19 39 54.8	
	comp=Z,0.3nm,0.3s,baz=9.0,slow=30,SNR=3.2								
HFS	**Hagfors**	**6.58**	**179**		Pn		**Pn**	**19 38 09.7**	**+0.5**
	baz=15,slow=9.3								
HFS					Sn		**Sn**	**19 39 22.2**	**-2.2**
	baz=2.8,slow=22								
HFS					Sg		**Sg**	**19 39 56.8**	**-6.6**
	baz=352,slow=28								
RAF	**Rauma**	**6.78**	**143**	*eP*			**Pn**	**19 38 12.5**	**+0.6**
RAF					*eS*		**Sn**	**19 39 27.1**	**-2.1**
RAF	**Rauma**	**6.78**	**143**	*eP*			**Pn**	**19 38 12.5**	**+0.6**
RAF					*eS*		**Sn**	**19 39 27.1**	**-2.1**
FIA0	**FINESS Array S**	**7.65**	**128**		Pn		**Pn**	**19 38 23.1**	**-0.7**
	baz=321,slow=14								
FIA0					Sn		**Sn**	**19 39 46.2**	**-4.3**
	baz=320,slow=28								
FIA0					Lg		Lg	19 40 25.1	
	baz=322,slow=28								
FIA0	**FINESS Array S**	**7.65**	**128**		Pn		**Pn**	**19 38 23.1**	**-0.7**
	baz=321,slow=14								
FIA0					Sn		**Sn**	**19 39 46.2**	**-4.3**
	baz=320,slow=28								
FIA0					Sg		**Sb**	**19 40 25.1**	**+8.9**
	baz=322,slow=28								
FINES	**FINESS Array B**	**7.65**	**128**		Pn		**Pn**	**19 38 23.1**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=326,slow=12,SNR=5.6								
FINES					Sn		**Sn**	**19 39 47.1**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=324,slow=23,SNR=3.8								
FINES					Lg		Lg	19 40 25.0	
	comp=Z,0.5nm,0.3s,baz=326,slow=24,SNR=3.4								
APA0	**Apatity Array**	**7.68**	**74**		Pn		**Pn**	**19 38 23.1**	**-1.1**
	baz=259,slow=16								
APA0	**Apatity Array**	**7.68**	**74**		Pn		**Pn**	**19 38 23.1**	**-1.1**
	baz=259,slow=16								

*IDC **24** 19:56:03.0±12.0, 51.96N×178.47E, h87km±117km, mb3.0/8, mb1 3.4/9, mb1mx3.2/39, mbtmp3.5/9, ML3.7/1, Error ellipse: s-maj=49.9km s-min=21.3km az=5.0*
*NEIC **24** 19:56:07.2±1.4, 52.1N±0.2×178.5E±0.0, h128km±8km, Error ellipse: s-maj=28.2km s-min=5.4km az=182.0*
*AEIC **24** 19:56:08±2.1, 52.2N±0.2×178.6E±0.1, h130km±6km, ML3.1, Error ellipse: s-maj=28.1km s-min=9.5km az=185.0*

ISC 24 19:56:06.4±0.9, 52.1N±0.2×178.47E±0.0, h113km, n28, σ1§36/28, mb3.4/8, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
TASE	**Tanaga Southea**	**2.17**	**96**			**Pn**	**19**	**56**	**43.0**	**+1.3**
TASE						**Sn**	**19**	**57**	**10.0**	**+1.2**
TAFP	**Tanaga Falls P**	**2.20**	**94**			**Pn**	**19**	**56**	**43.2**	**+1.2**
TAFP						**Sn**	**19**	**57**	**10.7**	**+1.4**
KIMD	**Kanaga Island**	**2.68**	**96**			**Pn**	**19**	**56**	**49.1**	**+0.9**
KIKV	**Kanaga Island**	**2.70**	**93**			**Pn**	**19**	**56**	**50.1**	**+1.7**
KIWB	**Kanaga Island**	**2.72**	**93**	Pn		**Pn**	**19**	**56**	**51.0**	**+2.4**
SMY	**Shemya**	**2.75**	**285**	Pn		**Pn**	**19**	**56**	**50.8**	**+1.7**
ADK	**Adak**	**3.00**	**92**			**Pn**	**19**	**56**	**52.7**	**+0.3**
ADK	**Adak**	**3.00**	**92**			**Pn**	**19**	**56**	**53.6**	**+1.2**
OHAK	**Old Harbor**	**17.05**	**61**	P		**P**	**19**	**59**	**56.1**	**-1.4**
KDAK	**Kodiak Island**	**17.49**	**60**	P		**P**	**20**	**00**	**01.0**	**-1.3**
	0.3nm,0.3s,baz=270,slow=2.0,SNR=4.3									
KDAK	**Kodiak Island**	**17.49**	**60**	P		**P**	**20**	**00**	**00.8**	**-1.5**
CNPM	**China Poot**	**18.44**	**54**	P		**P**	**20**	**00**	**10.8**	**-2.0**
BRLK	**Bradley Lake**	**18.66**	**54**	P		**P**	**20**	**00**	**12.1**	**-3.1**
SUA	**Susitna One**	**19.11**	**49**	P		**P**	**20**	**00**	**19.0**	**-1.2**
RC01	**Rabbit Creek A**	**19.50**	**50**	P		**P**	**20**	**00**	**24.1**	**-0.2**
KTH	**Kantishna Hill**	**19.70**	**43**	P		**P**	**20**	**00**	**26.4**	**-0.1**
BPAW	**Bear Paw Mtn.**	**19.88**	**41**	P		**P**	**20**	**00**	**29.0**	**+0.6**
TRF	**Thorofare Moun**	**19.93**	**43**	P		**P**	**20**	**00**	**28.9**	**-0.2**
GHO	**Glory Hole Cre**	**20.04**	**48**	P		Pn	20	00	31.4	-1.5
ILAR	**Eielson Array**	**21.78**	**41**	P		**P**	**20**	**00**	**48.1**	**-0.6**
	0.2nm,0.3s,baz=252,slow=8.3,SNR=4.7									
RAGM	**Ragged Mountai**	**21.83**	**53**			pP	20	01	11.0	+0.6
YKA	**Yellowknife Ar**	**35.97**	**47**	P		**P**	**20**	**02**	**56.0**	**+0.4**
	0.3nm,0.6s,baz=283,slow=8.0,SNR=4.8									
SONM	**Songino Array**	**44.81**	**295**	P		**P**	**20**	**04**	**09.3**	**+0.6**
	0.4nm,0.6s,baz=65,slow=9.3,SNR=3.0									
NVAR	**Mina Array Bea**	**45.13**	**82**	P		**P**	**20**	**04**	**12.1**	**+0.5**
	0.1nm,0.3s,baz=263,slow=10,SNR=2.2									
PDAR	**Pinedale Array**	**47.69**	**71**	P		**P**	**20**	**04**	**30.5**	**-1.0**
	0.4nm,0.7s,baz=339,slow=4.8,SNR=3.5									
MKAR	**Makanchi Array**	**58.25**	**307**	P		**P**	**20**	**05**	**48.2**	**-0.5**
	0.2nm,0.3s,baz=49,slow=5.9,SNR=9.1									
TXAR	**Lajitas Array**	**60.21**	**80**	P		**P**	**20**	**06**	**01.6**	**-0.8**
	0.2nm,0.5s,baz=318,slow=5.3,SNR=3.3									
WRA	**Warramunga Arr**	**81.39**	**221**	P		**P**	**20**	**08**	**09.5**	**-1.0**
	0.7nm,1.0s,baz=28,slow=5.8,SNR=2.6									

KRSC 24 19:58:38.6±2.0, 49.12N×157.11E, h16km±43km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
SKR	**Severo-Kuril's**	**1.69**	**338**	*eP*		**Pn**	19	59	07.3	-0.2
SKR					*eS*	Sn	19	59	28.4	-0.4
KDTR	**Khodutka, Kamc**	**2.76**	**13**	*eP*		**Pn**	19	59	25.0	-2.5
KDTR					*eS*	Sb	19	59	59.4	-1.7
ASAK	**Asacha**	**3.30**	**8**	*eP*		Pn	19	59	32.6	+2.9
RUS	**Russkaya**	**3.43**	**14**	*eP*		Pn	19	59	34.3	+2.9
RUS					*eS*	Sb	20	00	16.3	-4.2
MTVR	**Mutnovka**	**3.43**	**11**	*eP*		Pn	19	59	35.0	+3.4
GRL	**Gorelyy**	**3.49**	**10**	*eP*		Pn	19	59	36.0	+3.7
KRMR	**Karymshinskiy**	**3.77**	**9**	*eP*		Pn	19	59	39.3	+3.3
KRMR					*eS*	Sn	20	00	24.4	+4.4
UGLR	**Uglovaya**	**4.23**	**14**	*eP*		Pn	19	59	47.6	+5.1
AVH	**Avacha**	**4.27**	**13**	*eP*		Pn	19	59	47.8	+4.8
SMAR	**Somma**	**4.28**	**14**	*eP*		Pb	19	59	48.8	-4.8
KOK	**Koryaka**	**4.29**	**12**	*eP*		Pn	19	59	48.1	+4.9
SDLR	**Sedlovina**	**4.31**	**14**	*eP*		Pn	19	59	46.7	+3.1
KRER	**Koryakskii**	**4.31**	**13**	*eP*		Pn	19	59	48.2	+4.5
KRX	**Arik**	**4.35**	**12**	*eP*		Pn	19	59	49.4	+5.2
SPN	**Mys Shipunski**	**4.38**	**24**	*eP*		Pn	19	59	48.7	+4.2
SPN					*eS*	Sn	20	00	40.8	+5.6
MKZ	**Mys Kozlova**	**6.15**	**26**	*eP*		Pn	20	00	12.1	+3.4
KZV	**Kizimen**	**6.31**	**17**	*eP*		Pn	20	00	16.4	+5.3
KBTR	**Krutoberegovo**	**7.90**	**24**	*eP*		Pn	20	00	36.5	+3.8

*IDC **24** 20:00:03.5±1.6, 43.17N×135.98E, h338km±14km, mb2.8/5, mb1 2.7/9, mb1mx2.7/43, mbtmp3.3/9, Error ellipse: s-maj=35.4km s-min=17.6km az=162.0*
*JMA **24** 20:00:05.0±0.5, 43.01N×136.52E, h343km, M3.2*

ISC 24 20:00:02.3±0.8, 43.03N±0.1×136.31E±0.0, h341km, n24, σ2§08/28, mb3.0/6, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
JHST	**Hiyamasetana**	**2.70**	**102**	P		**Pn**	**20**	**01**	**00.0**	**+1.8**
JOMM	**Oshimamatsumae**	**3.13**	**117**	P		**Pn**	**20**	**01**	**04.1**	**+2.0**
JYM2	**Yakumo 2**	**3.14**	**106**	P		**Pn**	**20**	**01**	**04.3**	**+2.1**
USRK	**Ussuriysk Ar.**	**3.34**	**292**	P		**Pn**	**20**	**01**	**03.1**	**-0.9**
	baz=108,slow=9.4,SNR=7.5									
JNB	**Noboribetsu**	**3.53**	**98**	P		**Pn**	**20**	**01**	**07.6**	**+1.7**
JKB	**Kayabe**	**3.68**	**106**	P		**Pn**	**20**	**01**	**09.2**	**+1.8**
JOT	**Ohata**	**3.89**	**113**	P		**Pn**	**20**	**01**	**11.1**	**+1.5**
JBT2	**Biratori 2**	**4.46**	**91**	P		**Pn**	**20**	**01**	**17.2**	**+1.7**
JBT2					*eS*	**S**	**20**	**02**	**14.1**	**-0.5**
JWK2	**Keihoku**	**4.63**	**58**	P		**Pn**	**20**	**01**	**19.6**	**+2.4**
ASAJ	**Asahikawa**	**4.70**	**74**	P		**Pn**	**20**	**01**	**20.1**	**+2.1**
	0.8nm,0.3s,baz=225,slow=10.0,SNR=7.7									
JKK2	**Kamakawa 2**	**4.76**	**78**	P		**Pn**	**20**	**01**	**20.6**	**+1.8**
JKK2					*eS*	**S**	**20**	**02**	**20.7**	**+0.1**
JSE	**Soyaes**	**4.92**	**65**	P		**Pn**	**20**	**01**	**22.4**	**+1.9**
JCH	**Churui**	**5.21**	**92**	P		**Pn**	**20**	**01**	**23.7**	**0.0**
JCH					*eS*	**S**	**20**	**02**	**26.0**	**-3.5**
JMK	**Ichinoseki**	**5.52**	**136**	P		**Pn**	**20**	**01**	**28.3**	**+1.0**
JTKR	**Abashiri--Toko**	**5.61**	**78**	P		**Pn**	**20**	**01**	**29.3**	**+1.1**
NEM2	**Nemuro 2**	**6.91**	**84**	P		**Pn**	**20**	**01**	**44.1**	**+0.9**
NEM2					*eS*	**S**	**20**	**02**	**59.0**	**-6.2**
KLR	**Kul'dur**	**6.96**	**335**	P		**Pn**	**20**	**01**	**42.4**	**-1.4**
	0.1nm,0.3s,baz=143,slow=11,SNR=5.9									
KSRS	**Korea Array**	**8.49**	**232**	P		**Pn**	**20**	**02**	**03.2**	**+1.1**
	0.1nm,0.3s,baz=48,slow=13,SNR=5.6									
SONM	**Songino Array**	**21.46**	**293**	P		**P**	**20**	**04**	**22.7**	**-1.4**
	0.4nm,0.7s,baz=105,slow=9.4,SNR=3.7									
SEY	**Seymchan**	**22.04**	**20**	P		**P**	**20**	**04**	**30.1**	**+1.0**
	0.4nm,0.4s,baz=252,slow=20,SNR=4.2									
MKAR	**Makanchi Array**	**37.81**	**295**	P		**P**	**20**	**06**	**45.7**	**-1.2**
	0.4nm,0.6s,baz=83,slow=8.8,SNR=6.3									
ILAR	**Eielson Array**	**46.68**	**35**	P		**P**	**20**	**07**	**59.6**	**+2.2**
	0.3nm,0.6s,baz=282,slow=8.8,SNR=3.8									
FINES	**FINESS Array B**	**61.67**	**329**	P		**P**	**20**	**09**	**44.2**	**-0.3**
	1.0nm,0.6s,baz=38,slow=9.6,SNR=5.3									
AKASG	**Malin Array Be**	**67.18**	**319**	P		**P**	**20**	**10**	**19.8**	**-0.2**
	24nm,0.3s,baz=41,slow=6.3,SNR=2.1									

*IDC **24** 20:07:45.4±0.6, 59.77S×25.85W, h0km, mb4.4/11, mb1 4.4/12, mb1mx4.2/26, mbtmp4.4/12, ML3.7/1, MS3.8/16, Ms1 3.8/16, ms1mx3.7/23, Error ellipse: s-maj=23.8km s-min=16.2km az=4.0*
*NEIC **24** 20:07:53.9±1.4, 59.9S±0.1×25.8W±0.3, h65km±6km, mb4.9/19, Error ellipse: s-maj=22.3km s-min=17.0km az=211.0*

ISC 24 20:07:48.6±0.5, 60.08S±0.08×25.67W±0.09, h26km, n58, σ1§56/50, mb4.6/17, MS3.8/14, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time			Res
				Op		ISC	h	m	s	ISC
HOPE	**Hope Point**	**8.26**	**310**		Pn	Pn	20	09	54.4	+7.8
VNA1	**Neumayer--Stat**	**12.78**	**153**		P	**Pn**	**20**	**10**	**49.0**	**+0.8**
VNA1					S	**Sn**	**20**	**13**	**06.3**	**-3.0**
VNA3	**Neumayer Olymp**	**12.93**	**157**		P	**Pn**	**20**	**10**	**50.7**	**+0.3**
VNA3					S	Sn	20	13	02.8	-10
SNAA	**Sanae**	**14.76**	**151**		P	**Pn**	**20**	**11**	**15.5**	**+0.2**
SNAA					S	**Sn**	**20**	**13**	**52.3**	**-5.5**
SNAA	**Sanae**	**14.76**	**151**		Pn	**Pn**	**20**	**11**	**15.4**	**+0.2**
	7.0nm,0.3s,baz=312,slow=14,SNR=86									
SNAA					Sn	Sn	20	13	47.1	-11
	0.3nm,0.3s,baz=322,slow=19,SNR=3.2									
SNAA					LR	LR	20	15	52.0	
	comp=Z,218nm,21.6s,baz=350,slow=32									
PMSA	**Palmer Station**	**18.16**	**239**	P		**Pn**	**20**	**11**	**57.8**	**-0.6**
	0.2nm,0.3s,baz=141,slow=13,SNR=3.4									
PMSA					LR	LR	20	18	19.2	
	comp=Z,294nm,19.7s,baz=53,slow=35									
PMSA	**Palmer Station**	**18.16**	**239**	P		**Pn**	**20**	**11**	**57.7**	**-0.7**
PMSA					IAmb	IAmb	20	12	56.9	
	comp=Z,68nm,1.2s									
EFI	**East Falkland**	**19.84**	**281**	P		**Pn**	**20**	**12**	**18.4**	**-0.4**
EFI					IAmb	IAmb	20	12	36.2	
	comp=Z,201nm,1.7s									
USHA	**Ushuaia**	**23.26**	**264**	P		**P**	**20**	**12**	**55.2**	**+1.5**
	comp=Z,33nm,0.8s,baz=125,slow=7.9,SNR=11									
USHA					LR	LR	20	20	15.6	
	comp=Z,461nm,18.3s,baz=114,slow=32									
QSPA	**South Pole Qui**	**30.15**	**180**	P		**P**	**20**	**14**	**00.5**	**+4.4**
	comp=Z,2.8nm,0.9s,baz=238,slow=1.9,SNR=6.4									
QSPA	**South Pole Qui**	**30.15**	**180**	P		**P**	**20**	**14**	**00.6**	**+4.4**
PLCA	**Paso Flores**	**33.66**	**285**	P		**P**	**20**	**14**	**26.3**	**-0.7**
	comp=Z,2.4n

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.92**	**318**	*i* P	**Pn**	**20 23 02.2**	**-0.4**
LVC				*e*S	**Sn**	**20 23 19.5**	**-0.4**
LVC				IAML		20 23 24.2	
	comp=Z,209nm,0.7s						
PB15	**IPOC Station P**	**1.13**	**275**⇑	*i* P	**Pn**	**20 23 04.0**	**-0.4**
PB15				*e*S	**Sn**	**20 23 23.3**	**+0.3**
PB15	**IPOC Station P**	**1.13**	**275**	*i* P	**Pn**	**20 23 04.5**	**+0.2**
PB15				*e*S	**Sn**	**20 23 23.1**	**+0.1**
PB06	**IPOC Station P**	**1.36**	**296**⇑	*i* P	**Pn**	**20 23 06.3**	**-0.3**
PB06				*e*S	**Sn**	**20 23 27.0**	**-0.1**
PB06				IAML		20 23 29.4	
	comp=N,798nm,0.2s						
PB06	**IPOC Station P**	**1.36**	**296**	*i* P	**Pn**	**20 23 06.8**	**+0.2**
PB09	**IPOC Station P**	**1.76**	**328**⇑	*i* P	**Pn**	**20 23 11.6**	**+0.4**
PB09				*e*S	**Sn**	**20 23 35.7**	**+0.5**
PB09				IAML		20 23 38.7	
	comp=N,190nm,0.2s						
PB09	**IPOC Station P**	**1.76**	**328**	*i* P	**Pn**	**20 23 11.8**	**+0.7**
PB09				IAML		20 23 39.4	
	comp=Z,239nm,0.7s						
PB05	**IPOC Station P**	**1.86**	**284**⇑	*i* P	**Pn**	**20 23 11.9**	**-0.3**
PB05				*e*S	**Sn**	**20 23 37.3**	**+0.3**
PB05	**IPOC Station P**	**1.86**	**284**	*i* P	**Pn**	**20 23 12.0**	**-0.2**
PB03	**IPOC Station P**	**1.87**	**312**⇑	*i* P	**Pn**	**20 23 12.3**	**-0.1**
PB03				*e*S	**Sn**	**20 23 37.2**	**-0.3**
PB03				IAML		20 23 38.5	
	comp=E,278nm,0.2s						
PB03	**IPOC Station P**	**1.87**	**312**	*i* P	**Pn**	**20 23 12.5**	**+0.1**
PB04	**IPOC Station P**	**2.00**	**298**⇑	*i* P	**Pn**	**20 23 14.0**	**0.0**
PB04				*e*S	**Sn**	**20 23 40.4**	**0.0**
PB04				IAML		20 23 45.8	
	comp=N,229nm,0.2s						
PB04	**IPOC Station P**	**2.00**	**298**	*i* P	**Pn**	**20 23 14.0**	**0.0**
PB04				IAML		20 23 44.7	
	comp=Z,192nm,0.1s						
PB10	**IPOC Station P**	**2.13**	**264**⇑	*i* P	**Pn**	**20 23 15.7**	**+0.3**
PB10				*e*S	**Sn**	**20 23 42.8**	**0.0**
PB10	**IPOC Station P**	**2.13**	**264**	*i* P	**Pn**	**20 23 15.6**	**+0.2**
GO02	**Mina Guanaco**	**2.22**	**213**⇑	*i* P	**Pn**	**20 23 17.0**	**+0.2**
GO02				*e*S	**Sn**	**20 23 45.9**	**+0.6**
GO02				IAML		20 23 47.8	
	comp=N,323nm,0.1s						
PB14	**IPOC Station P**	**2.37**	**236**	*i* P	**Pn**	**20 23 18.5**	**-0.2**
HJA	**Humahuaca**	**2.61**	**88**	*i* P	**Pn**	**20 23 21.8**	**0.0**
YJA	**Yavi**	**2.76**	**67**	*i* P	**Pn**	**20 23 23.8**	**+0.1**
PATCX	**Punta Patache**	**3.04**	**324**	*i* P	**Pn**	**20 23 26.7**	**-0.3**
PB08	**IPOC Station P**	**3.26**	**345**⇑	*i* P	**Pn**	**20 23 30.5**	**+0.3**
PB08				*e*S	**Sn**	**20 24 09.9**	**+0.8**
PB08				IAML		20 24 13.1	
	comp=E,39nm,0.5s						
PB08	**IPOC Station P**	**3.26**	**345**	*i* P	**Pn**	**20 23 30.7**	**+0.6**
AGUA	**GUANDACOL**	**6.16**	**182**	*i* P	**Pn**	**20 24 08.2**	**-0.3**
LPAZ	**La Paz**	**6.98**	**1**	Pn	**Pn**	**20 24 19.2**	**-0.8**
	comp=E,0.1nm,0.3s,baz=180,slow=8.1,SNR=2.3						
TXAR	**Lajitas Array**	**62.45**	**325**	P	P	20 32 50.6	+1.6
	comp=E,0.1nm,0.5s,baz=145,slow=6.5,SNR=3.2						
DBIC	**Dimbokro**	**68.67**	**72**	P	**P**	**20 33 28.6**	**-0.6**
	comp=E,0.6nm,0.3s,baz=244,slow=4.9,SNR=2.9						
TORD	**Torodi Ar. Bea**	**77.39**	**70**	P	**P**	**20 34 20.9**	**+0.4**
	comp=E,1.1nm,0.6s,baz=255,slow=5.7,SNR=10						
YKA	**Yellowknife Ar**	**93.08**	**340**	P	P	20 35 39.0	+1.2
	comp=E,0.1nm,0.3s,baz=138,slow=4.7,SNR=3.9						

*IDC **24** 20:24:34.5±1.2,21°.05N×122°.59E,h0km,mb3.5/7,*
mb1 3.7/7,mb1mx3.4/33,mbtmp3.5/7,Error ellipse:
s-maj=49.4km s-min=18.0km az=61.0
*TAP **24** 20:24:53.8,21°.16N×122°.06E,h165km,ML4.2,D*
ISC 24 20:24:53.0±1.0,21°.10N±0'.07×122°.08E±0'.08,h166km±7km,
n92,σ1s35/168,mb3.3/7,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**1.05**	**332**	P	**Pn**	**20 25 19.7**	**0.0**
LAY	baz=332			S	**Sn**	**20 25 38.8**	**-1.6**
TSEB	**Hengchuen, Pin**	**1.35**	**306**	P	**Pn**	**20 25 23.6**	**+1.4**
TSEB	baz=298			S	**Sn**	**20 25 46.1**	**+1.2**
TWKBT	**Hengchun**	**1.44**	**305**	P	**Pn**	**20 25 24.0**	**+0.8**
TWKBT	baz=300			S	**Sn**	**20 25 45.1**	**-1.4**
TWK1	**Hengchun**	**1.45**	**305**	*e*P	**Pn**	**20 25 24.3**	**+1.1**
TWK1	baz=300			*e*S	**Sn**	**20 25 46.2**	**-0.4**
HEN	**Hengchun**	**1.54**	**306**	*e*P	**Pn**	**20 25 25.1**	**+1.0**
HEN	baz=305			S	**Sn**	**20 25 48.4**	**+0.3**
TAW	**Tawu**	**1.66**	**319**	P	**Pn**	**20 25 25.5**	**+0.1**
TAW	baz=321			S	**Sn**	**20 25 48.6**	**-1.9**
TWH	**Lutao**	**1.69**	**341**	*e*P	**Pn**	**20 25 25.2**	**-0.5**
TWH	baz=345			S	**Sn**	**20 25 49.5**	**-1.6**
EAST	**Anshuo**	**1.71**	**318**	P	**Pn**	**20 25 26.1**	**+0.2**
EAST	baz=317			*e*S	**Sn**	**20 25 50.2**	**-1.2**
ECL	**Taimali**	**1.82**	**325**	P	**Pn**	**20 25 26.1**	**-0.9**
ECL	baz=320			S	**Sn**	**20 25 50.9**	**-2.5**
SCZT	**Fangliau**	**1.85**	**313**	P	**Pn**	**20 25 27.8**	**+0.3**
SCZT	baz=312			S	**Sn**	**20 25 52.5**	**-1.6**
TTN	**Taitung**	**1.86**	**332**	*e*P	**Pn**	**20 25 28.2**	**+0.8**
TTN	baz=327			*e*S	**Sn**	**20 25 54.0**	**-0.2**
TWGBT	**Beinan**	**1.94**	**332**	*i* P	**Pn**	**20 25 28.3**	**-0.1**
TWGBT	baz=325			S	**Sn**	**20 25 53.6**	**-2.3**
TWG	**Pinlang**	**1.95**	**332**	P	**Pn**	**20 25 28.4**	**-0.1**
TWG	baz=325			S	**Sn**	**20 25 54.2**	**-1.8**
SSPT	**Xinbi**	**1.96**	**315**	P	**Pn**	**20 25 29.4**	**+0.8**
SSPT	baz=317			*e*S	**Sn**	**20 25 55.5**	**-0.7**
WLCH	**Liuqiu**	**2.01**	**308**	P	**Pn**	**20 25 31.0**	**+1.9**
WLCH	baz=307			*e*S	**Sn**	**20 25 58.2**	**+1.1**
MASBT	**Mashibuluo**	**2.02**	**318**	*e*P	**Pn**	**20 25 29.7**	**+0.4**
MASBT	baz=318			S	**Sn**	**20 25 55.6**	**-1.7**
CHKT	**Chengkung**	**2.09**	**342**	P	**Pn**	**20 25 30.4**	**+0.3**
CHKT	baz=345			*e*S	**Sn**	**20 25 57.5**	**-1.5**
SSD	**Sandimen**	**2.12**	**321**	*e*P	**Pn**	**20 25 30.7**	**+0.3**
SSD	baz=320			S	**Sn**	**20 25 57.4**	**-2.0**
SGLT	**Jiouru**	**2.19**	**318**	*e*P	**Pn**	**20 25 32.5**	**+1.3**
SGLT	baz=322			*e*S	**Sn**	**20 26 00.6**	**-0.2**
KAU	**Kaohsiung**	**2.20**	**312**	P	**Pn**	**20 25 33.0**	**+1.7**
KAU	baz=304			S	**Sn**	**20 26 01.7**	**+0.7**
FULB	**Fuli**	**2.21**	**341**	P	**Pn**	**20 25 32.1**	**+0.7**
FULB	baz=343			*e*S	**Sn**	**20 26 01.2**	**-0.2**
ELDTW	**Lidau**	**2.30**	**335**	P	**Pn**	**20 25 32.3**	**-0.3**
ELDTW	baz=336			S	**Sn**	**20 26 01.4**	**-2.0**
TWM1	**Shoushan**	**2.30**	**318**	P	**Pn**	**20 25 34.0**	**+1.5**
TWM1	baz=324			S	**Sn**	**20 26 03.9**	**+0.6**
SLGT	**Liugui**	**2.30**	**325**	P	**Pn**	**20 25 32.9**	**+0.4**
SLGT	baz=324			S	**Sn**	**20 26 02.3**	**-1.0**
TWF1	**Yuli**	**2.35**	**342**	P	**Pn**	**20 25 33.6**	**+0.4**
TWF1	baz=346			*e*S	**Sn**	**20 26 04.8**	**+0.5**
STYT	**Tauyuan**	**2.39**	**329**	*e*P	**Pn**	**20 25 35.2**	**+1.6**
STYT	baz=322			S	**Sn**	**20 26 03.3**	**-1.9**
YULB	**Yu-li**	**2.39**	**343**	P	**Pn**	**20 25 33.9**	**+0.3**
YULB	baz=334			S	**Sn**	**20 26 03.9**	**-1.3**
SGST	**Jiashian**	**2.41**	**325**	P	**Pn**	**20 25 33.5**	**-0.3**
SGST	baz=325			S	**Sn**	**20 26 03.3**	**-2.2**
HGSD	**Ruisui**	**2.45**	**346**	*e*P	**Pn**	**20 25 34.6**	**+0.3**
HGSD	baz=348			*e*S	**Sn**	**20 26 06.4**	**-0.1**
EHY	**Hungye**	**2.49**	**344**	P	**Pn**	**20 25 34.8**	**0.0**
EHY	baz=336			S	**Sn**	**20 26 05.8**	**-1.5**
CHN1	**Nanshi**	**2.52**	**326**	*e*P	**Pn**	**20 25 35.4**	**+0.3**
CHN1	baz=325			S	**Sn**	**20 26 06.2**	**-1.7**
CHN3	**Shinhua**	**2.53**	**321**	*e*P	**Pn**	**20 25 36.8**	**+1.6**
CHN3	baz=327			*e*S	**Sn**	**20 26 08.7**	**+0.8**
WTP	**Ta-pu**	**2.53**	**328**	*e*P	**Pn**	**20 25 35.5**	**+0.2**
WTP	baz=321			S	**Sn**	**20 26 07.0**	**-1.1**
SNST	**Tainan City**	**2.57**	**325**	P	**Pn**	**20 25 35.6**	**-0.1**
SNST	baz=325			S	**Sn**	**20 26 07.7**	**-1.1**
TPUB	**Ta-pu**	**2.57**	**329**	*e*P	**Pn**	**20 25 35.8**	**+0.1**
TPUB	baz=322			S	**Sn**	**20 26 07.2**	**-1.7**
TAI1	**Yung-k'ang**	**2.58**	**319**	*e*S	**Sn**	**20 26 08.3**	**-0.7**
YUS	**Yu-Shan**	**2.59**	**336**	P	**Pn**	**20 25 37.1**	**+0.6**
YUS	baz=336			S	**Sn**	**20 26 09.7**	**-0.6**
TWK	**Hsinying**	**2.61**	**326**	P	**Pn**	**20 25 36.8**	**+0.5**
TWK	baz=325			S	**Sn**	**20 26 08.1**	**-1.7**
EGFH	**Guangfu**	**2.62**	**347**	*e*P	**Pn**	**20 25 36.0**	**-0.4**
EGFH	baz=353			*e*S	**Sn**	**20 26 09.9**	**-0.2**
CHN4	**Tsaushan**	**2.63**	**329**	*e*P	**Pn**	**20 25 36.5**	**+0.1**
CHN4	baz=322			*e*S	**Sn**	**20 26 08.1**	**-2.0**
ALS	**Alishan**	**2.67**	**334**	P	**Pn**	**20 25 37.6**	**+0.3**
ALS	baz=326			*e*S	**Sn**	**20 26 10.4**	**-1.1**
SCLT	**Jiali**	**2.70**	**320**	P	**Pn**	**20 25 38.0**	**+0.7**
SCLT	baz=325			S	**Sn**	**20 26 10.8**	**-0.9**
ESL	**Shilin**	**2.76**	**348**	*e*P	**Pn**	**20 25 38.7**	**+0.6**
ESL	baz=341			*e*S	**Sn**	**20 26 11.8**	**-1.3**
VWDT	**VWDT**	**2.78**	**342**	*e*P	**Pn**	**20 25 38.9**	**+0.7**
VWDT	baz=345			*e*S	**Sn**	**20 26 11.6**	**-1.8**
CHN5	**Tsauling**	**2.80**	**333**	P	**Pn**	**20 25 38.9**	**+0.3**
CHN5	baz=332			S	**Sn**	**20 26 12.2**	**-1.9**
CHN8	**Yiju**	**2.82**	**323**	P	**Pn**	**20 25 38.3**	**-0.5**
CHN8	baz=328			S	**Sn**	**20 26 13.2**	**-1.2**
CHY	**Chiayi**	**2.83**	**328**	*e*P	**Pn**	**20 25 38.7**	**-0.2**
CHY	baz=322			S	**Sn**	**20 26 11.6**	**-3.0**
CHN2	**Minshiung**	**2.84**	**329**	*e*S	**Sn**	**20 26 13.2**	**-1.5**
SSLB	**Suanglung**	**2.87**	**339**	*e*P	**Pn**	**20 25 39.5**	**+0.2**
SSLB	baz=330			S	**Sn**	**20 26 13.9**	**-1.5**
WLGB	**Puzi**	**2.88**	**325**	*e*P	**Pn**	**20 25 39.7**	**+0.2**
WLGB	baz=325			S	**Sn**	**20 26 13.9**	**-1.7**
WGK	**Gukeng**	**2.93**	**332**	*e*P	**Pn**	**20 25 40.3**	**+0.2**
WGK	baz=331			S	**Sn**	**20 26 14.9**	**-1.8**
WDLH	**Douliu**	**2.94**	**331**	*e*P	**Pn**	**20 25 39.7**	**-0.6**
WDLH	baz=331			*e*S	**Sn**	**20 26 14.9**	**-2.1**
OWD	**Renai**	**2.96**	**344**	*e*P	**Pn**	**20 25 41.4**	**+0.8**
OWD	baz=346			*e*S	**Sn**	**20 26 16.1**	**-1.6**
SMLT	**Sun Moon Lake**	**2.97**	**339**	*e*P	**Pn**	**20 25 41.2**	**+0.4**
SMLT	baz=331			S	**Sn**	**20 26 17.2**	**-0.7**
WJS	**Zhushan**	**2.98**	**335**	*e*P	**Pn**	**20 25 40.6**	**-0.1**
WJS	baz=335			S	**Sn**	**20 26 15.9**	**-2.0**
WNT	**Mingjian**	**3.05**	**335**	*e*P	**Pn**	**20 25 41.8**	**+0.3**
WNT	baz=335			*e*S	**Sn**	**20 26 17.2**	**-2.2**
WSF	**Szhu**	**3.05**	**326**	*e*P	**Pn**	**20 25 41.6**	**0.0**
WSF	baz=326			S	**Sn**	**20 26 17.2**	**-2.2**
CHGB	**Renai**	**3.06**	**344**	*e*P	**Pn**	**20 25 42.5**	**+0.6**
CHGB	baz=344			*e*S	**Sn**	**20 26 20.1**	**+0.1**
NACB	**Ninganchiao**	**3.09**	**352**	*e*P	**Pn**	**20 25 43.4**	**+1.3**
NACB	baz=358			*e*S	**Sn**	**20 26 17.6**	**-2.7**
WDGT	**Dungji**	**3.10**	**314**	P	**Pn**	**20 25 41.4**	**-0.8**
WDGT	baz=313			*e*S	**Sn**	**20 26 17.0**	**-3.6**
DPDB	**Guoxing**	**3.10**	**340**	P	**Pn**	**20 25 42.8**	**+0.4**
DPDB	baz=332			*e*S	**Sn**	**20 26 19.0**	**-1.8**
WHF	**Hehuan Shan**	**3.12**	**346**	P	**Pn**	**20 25 43.5**	**+0.7**
WHF	baz=352			S	**Sn**	**20 26 20.7**	**-1.0**
ETLH	**Xiulin Townshi**	**3.14**	**350**	*e*P	**Pn**	**20 25 43.9**	**+1.2**
ETLH	baz=344			*e*S	**Sn**	**20 26 20.5**	**-1.1**
RLNB	**Erlin**	**3.20**	**331**	*e*P	**Pn**	**20 25 41.8**	**-1.6**
RLNB	baz=335			*e*S	**Sn**	**20 26 20.9**	**-1.8**
WTCT	**Ta-ch'eng**	**3.21**	**329**	*e*S	**Sn**	**20 26 20.1**	**-2.9**
VCHM	**Qimei**	**3.23**	**311**	*e*P	**Pn**	**20 25 43.4**	**-0.4**
VCHM	baz=310			*e*S	**Sn**	**20 26 20.7**	**-2.7**
TWT	**Tachien**	**3.24**	**345**	P	**Pn**	**20 25 45.9**	**+1.7**
TWT	baz=337			S	**Sn**	**20 26 24.4**	**+0.3**
TDCB	**Techi**	**3.25**	**345**	P	**Pn**	**20 25 45.6**	**+1.4**
TDCB	baz=337			*e*S	**Sn**	**20 26 23.2**	**-0.9**
WCHH	**Zhanghua**	**3.28**	**335**	*e*P	**Pn**	**20 25 44.7**	**+0.2**
WCHH	baz=334			S	**Sn**	**20 26 23.2**	**-1.3**
TCU	**Taichung**	**3.30**	**337**	*e*S	**Sn**	**20 26 23.0**	**-1.9**
NANB	**Nanao**	**3.32**	**355**	*e*P	**Pn**	**20 25 45.1**	**+0.1**
ENA	**Nanau**	**3.32**	**355**	*e*P	**Pn**	**20 25 45.1**	**+0.1**
WHP	**Taichung City**	**3.33**	**342**	P	**Pn**	**20 25 45.5**	**+0.3**
WHP	baz=334			S	**Sn**	**20 26 25.4**	**-0.5**
PHUB	**P'eng-hu**	**3.34**	**316**	*e*P	**Pn**	**20 25 44.7**	**-0.5**
PHUB	baz=321			*e*S	**Sn**	**20 26 23.2**	**-2.6**
NNSH	**Datong**	**3.37**	**349**	*e*P	**Pn**	**20 25 47.0**	**+1.3**
NNSH	baz=355			*e*S	**Sn**	**20 26 25.1**	**-1.7**
NNSB	**Datong**	**3.37**	**349**	*e*P	**Pn**	**20 25 46.8**	**+1.1**
NNSB	baz=355			*e*S	**Sn**	**20 26 26.7**	**-0.2**
NNS	**Nan Shan**	**3.38**	**349**	*e*P	**Pn**	**20 25 47.0**	**+1.1**
NNS	baz=355			*e*S	**Sn**	**20 26 25.1**	**-2.0**
PNG	**Penghu**	**3.39**	**317**	P	**Pn**	**20 25 45.5**	**-0.3**
PNG	baz=322			S	**Sn**	**20 26 23.6**	**-3.3**
EOS1	**EOS1**	**3.43**	**1**	*e*P	**Pn**	**20 25 48.6**	**+2.3**
NDT	**Datong Townshi**	**3.52**	**352**	*e*P	**Pn**	**20 25 47.6**	**+0.1**
NDT	baz=351			*e*S	**Sn**	**20 26 28.4**	**-1.7**
ENTT	**Nioudou**	**3.55**	**352**	*e*P	**Pn**	**20 25 49.1**	**+1.2**
YHNB	**Yeheng**	**3.61**	**350**	*e*P	**Pn**	**20 25 50.3**	**+1.6**
YHNB	baz=355			*e*S	**Sn**	**20 26 30.2**	**-2.0**
NSK	**Sanguang**	**3.62**	**350**	P	**Pn**	**20 25 50.3**	**+1.5**
NSK	baz=355			*e*S	**Sn**	**20 26 30.8**	**-1.6**
LIOB	**Emei**	**3.66**	**345**	*e*P	**Pn**	**20 25 49.7**	**+0.4**
NWLT	**Wulai**	**3.69**	**352**	*e*P	**Pn**	**20 25 50.7**	**+1.0**
NWLT	baz=357			*e*S	**Sn**	**20 26 32.1**	**-2.0**
CMAR	**Chiang Mai Arr**	**21.93**	**267**	P	**P**	**20 29 35.1**	**+1.7**
	0.7nm,0.6s,baz=78,slow=8.5,SNR=10						
SONM	**Songino Array**	**29.52**	**338**	P	**P**	**20 30 43.9**	**+2.1**
	0.1nm,0.3s,baz=142,slow=7.3,SNR=1.8						
MKAR	**Makanchi Array**	**41.15**	**318**	P	**P**	**20 32 22.1**	**+1.2**
	0.3nm,0.6s,baz=102,slow=9.7,SNR=4.1						
WRA	**Warramunga Arr**	**42.52**	**163**	P	**P**	**20 32 30.3**	**-2.0**
	0.5nm,0.4s,baz=344,slow=9.0,SNR=12						
ZALV	**Zalesovo Beam**	**43.28**	**329**	P	**P**	**20 32 39.9**	**+1.9**
	0.4nm,0.4s,baz=132,slow=5.4,SNR=2.8						
ASAR	**Alice Springs**	**45.97**	**165**	P	**P**	**20 32 58.6**	**-1.0**
	0.2nm,0.4s,baz=343,slow=7.6,SNR=10						
STKA	**Stephens Creek**	**55.90**	**160**	P	**P**	**20 34 11.5**	**-2.1**
	0.7nm,0.5s,baz=348,slow=9.3,SNR=2.9						

MAN 24 20:27:24.6,5°.88N×125°.28E,h5km,mb3.8,ML2.5,MS2.0,
Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.38**	**302**	*e*P	Pg	20 27 29.5	-2.5
GSPH				*e*S	Sb	20 27 41.8	+1.6
DDMP	**Don Marcelino,**	**0.48**	**63**	*e*P	Pb	20 27 35.1	-0.5
DDMP				*e*S	Sb	20 27 46.6	+3.5
SKMP	**Bagumbayan, Su**	**0.96**	**311**	*e*P	Pg	20 27 43.0	0.0
SKMP				*e*S	Sn	20 27 59.1	+0.2

*IDC **24** 20:29:35.3±0.8,25°.76N×125°.15E,h0km,mb3.7/11,*
mb1 3.9/11,mb1mx3.7/33,mbtmp3.7/11,ML2.0/1,MS2.6/2,
Ms1 2.7/2,ms1mx2.5/38,Error ellipse: s-maj=23.5km
s-min=18.8km az=44.0
*JMA **24** 20:29:36.3±0.1,24°.83N×125°.38E,h48km±1km,M3.4*
JMA Felt I J1.
ISC 24 20:29:36.8±0.8,24°.9N±0°.1×125°.36E±0°.07,h44km±6km,
n23,σ0s87/29,mb3.7/11,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKM	**Ikemajima**	**0.10**	**277**	P	**Pn**	**20 29 44.1**	**+0.2**
JIKM				S	**Sn**	**20 29 49.5**	**+0.7**
JOGS	**Gusukube**	**0.16**	**163**	P	**Pn**	**20 29 43.8**	**-0.4**
JOGS				S	**Sn**	**20 29 49.3**	**-0.1**
JMJ2	**Miyako jima3**	**0.17**	**189**	P	**Pn**	**20 29 43.8**	**-0.5**
JMJ2				S	**Sn**	**20 29 49.4**	**-0.1**
JIRB	**Irabujima**	**0.19**	**244**	P	**Pn**	**20 29 44.2**	**-0.2**
JIRB				S	**Sn**	**20 29 49.9**	**+0.2**
JTJ	**Tarama**	**0.65**	**246**	P	**Pn**	**20 29 49.5**	**-0.2**
JTJ				S	**Sn**	**20 29 59.1**	**+0.2**
JISG	**Ishigakijimahi**	**1.00**	**251**	P	**Pn**	**20 29 53.8**	**-0.6**
JISG				S	**Sn**	**20 30 07.1**	**-0.3**
JIJ	**Ishigaki jima**	**1.23**	**244**	P	**Pn**	**20 29 57.4**	**-0.1**
JIJ				*e*S	**Sn**	**20 30 12.8**	**-0.2**
JKRS	**Kuro-shima**	**1.40**	**242**	P	**Pn**	**20 30 00.1**	**+0.3**
JKRS				*e*S	**Sn**	**20 30 17.1**	**+0.1**
IRIF	**Iriomote-Funau**	**1.59**	**249**	P	**Pn**	**20 30 02.3**	**-0.1**
JOW	**Kunigami**	**3.25**	**53**	Pn	**Pn**	**20 30 25.1**	**-0.2**
	0.3nm,0.3s,baz=193,slow=14,SNR=9.5						
JOW				Sn	**Sn**	**20 31 02.6**	**-0.2**
	0.7nm,0.3s,baz=200,slow=15,SNR=2.7						
KSRS	**Korea Array**	**12.70**	**9**	LR	LR	20 36 59.5	
	comp=Z,37nm,19.2s,baz=71,slow=37						
CMAR	**Chiang Mai Arr**	**25.34**	**261**	LR	LR	20 44 25.1	
	comp=Z,111nm,18.3s,baz=175,slow=35						
SONM	**Songino Array**	**27.36**	**332**	P	**P**	**20 35 16.6**	**-1.2**
	0.2nm,0.4s,baz=156,slow=9.2,SNR=3.4						
MKAR	**Makanchi Array**	**40.52**	**314**	P	**P**	**20 37 11.3**	**-0.3**
	0.6nm,0.6s,baz=98,slow=10,SNR=12						
MKAR				PcP	**PcP**	**20 39 16.9**	**+3.6**
	0.2nm,0.7s,baz=88,slow=3.6,SNR=2.8						
ZALV	**Zalesovo Beam**	**41.77**	**325**	P	**P**	**20 37 21.1**	**-0.6**
	0.7nm,0.5s,baz=122,slow=8.6,SNR=4.9						
WRA	**Warramunga Arr**	**45.43**	**168**	P	P	20 38 03.2	+12
	1.5nm,0.9s,baz=351,slow=8.6,SNR=5.0						
ASAR	**Alice Springs**	**48.99**	**170**	P	P	20 38 31.1	+12
	0.6nm,0.6s,baz=356,slow=15,SNR=5.4						
GEYT	**Alibeck**	**57.71**	**300**	P	**P**	**20 39 23.4**	**+0.2**
	1.0nm,0.6s,baz=111,slow=3.2,SNR=3.1						
ILAR	**Eielson Array**	**66.81**	**28**	P	**P**	**20 40 24.6**	**+1.0**
	0.2nm,0.5s,baz=295,slow=9.5,SNR=6.9						
KBZ	**Khabaz**	**67.98**	**309**	P	**P**	**20 40 31.4**	**+0.1**
	1.3nm,0.9s,baz=80,slow=12,SNR=3.1						
FINES	**FINESS Array B**	**72.72**	**330**	P	**P**	**20 40 59.0**	**-1.0**
	3.4nm,1.0s,baz=57,slow=7.0,SNR=3.5						
BRTR	**Keskin Array B**	**75.78**	**307**	P	**P**	**20 41 17.7**	**-0.7**
	0.7nm,0.8s,baz=70,slow=7.1,SNR=4.3						
YKA	**Yellowknife Ar**	**80.80**	**24**	P	**P**	**20 41 44.9**	**-0.5**
	0.2nm,0.6s,baz=306,slow=5.3,SNR=5.2						

MAN 24 20:34:13.8,9°.87N×123°.79E,h7km,mb4.3,ML3.1,MS2.9,
1C-1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.48**	**22**⇑	*e*P	Pg	20 34 23.4	+0.4
LLP				*i* S	Sb	20 34 30.8	-1.1
SNPH	**Sibulan**	**0.75**	**226**⇓	*i* P	Pb	20 34 28.8	-0.4
SNPH				*i* S	Sb	20 34 39.9	+0.2
MSLP	**Maasin**	**1.09**	**76**	*e*P	Pg	20 34 34.4	-0.3
MSLP				*e*S	Sn	20 34 50.6	-0.2
GUIM	**Jordan**	**1.40**	**303**	*e*P	Pn	20 34 39.2	-0.5
GUIM				*e*S	Sb	20 34 58.3	0.0

OCLP	**Ormoc**	**1.43**	**35**	*e*P	Pn	20 34 39.9	-0.2
OCLP				*e*S	Sb	20 34 57.2	-1.9

MOS ***24*** *20:46:01.3±1.2,48°.85N×155°.12E,h64km,mb4.0/6,Error ellipse: s-maj=11.3km s-min=3.9km az=68.4*
KRSC ***24*** *20:46:01.6±2.8,48°.81N×156°.74E,h16km±38km,ML4.6*
SKHL ***24*** *20:46:02.6±0.1,48°.80N×155°.20E,h80km±4km,mb4.6/6, mbv5.2/2,msha5.5/3*
NEIC ***24*** *20:46:03.1±2.0,48°.90N±0°.09×155°.2E±0°.1,h64km±7km, mb4.2/6,Error ellipse: s-maj=16.5km s-min=10.3km az=130.0*
IDC ***24*** *20:46:05.7±2.2,48°.99N×154°.91E,h80km±19km,mb3.4/11, mb1 3.6/15,mb1mx3.5/32,mbtmp3.8/15,MS2.8/2, Ms1 2.8/2,ms1mx2.5/43,Error ellipse: s-maj=23.7km s-min=12.0km az=129.0*

ISC 24 20:46:01.9±0.7,48°.75N±0°.07×155°.32E±0°.08,h64km,n123, σ1§63/137,mb3.8/19,4C-6D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.01**	**15**	PN	**Pn**	**20 46 32.7**	**-0.7**
SKR				S	**Sn**	**20 46 56.2**	**-1.3**
SKR	**Severo-Kuril's**	**2.01**	**15**	*e*P	**Pn**	**20 46 32.7**	**-0.7**
SKR				*e*S	**Sn**	**20 46 56.2**	**-1.3**
SKR	**Severo-Kuril's**	**2.01**	**15**	*e*P	**Pn**	**20 46 33.0**	**-0.4**
SKR				AMB	AMB	20 46 37.0	
	500nm,0.3s						
SKR				*e*S	**Sn**	**20 46 56.2**	**-1.3**
SKR				A	A	20 47 02.5	
	530nm,0.4s						
SKR				A	A	20 47 02.5	
	550nm,0.4s						
PAU	**Pauzhetka**	**2.89**	**19**	PN	**Pn**	**20 46 46.2**	**+0.8**
PAU				S	**Sn**	**20 47 19.3**	**+0.3**
PAU	**Pauzhetka**	**2.89**	**19**	*e*P	**Pn**	**20 46 46.2**	**+0.8**
PAU				*e*S	**Sn**	**20 47 19.3**	**+0.3**
PAU	**Pauzhetka**	**2.89**	**19**	*e*P	**Pn**	**20 46 47.0**	**+1.6**
PAU				*e*S	**Sn**	**20 47 18.3**	**-0.7**
KDTR	**Khodutka, Kamc**	**3.54**	**29**	PN	**Pn**	**20 46 54.1**	**-0.2**
KDTR				S	**Sn**	**20 47 32.6**	**-2.3**
KDTR	**Khodutka, Kamc**	**3.54**	**29**	*e*P	**Pn**	**20 46 54.1**	**-0.2**
KDTR				*e*S	**Sn**	**20 47 32.6**	**-2.3**
ASAK	**Asacha**	**4.00**	**23**	PN	**Pn**	**20 47 01.8**	**+1.2**
ASAK	**Asacha**	**4.00**	**23**	*e*P	**Pn**	**20 47 01.8**	**+1.2**
MTVR	**Mutnovka**	**4.16**	**25**	PN	**Pn**	**20 47 03.9**	**+0.9**
MTVR	**Mutnovka**	**4.16**	**25**	*e*P	**Pn**	**20 47 03.9**	**+0.9**
GRL	**Gorelyy**	**4.19**	**24**	PN	**Pn**	**20 47 04.9**	**+1.5**
GRL				S	**Sn**	**20 47 50.4**	**-0.7**
GRL	**Gorelyy**	**4.19**	**24**	*e*P	**Pn**	**20 47 04.9**	**+1.5**
GRL				*e*S	**Sn**	**20 47 50.4**	**-0.7**
RUS	**Russkaya**	**4.21**	**28**	PN	**Pn**	**20 47 03.4**	**-0.1**
RUS				S	**Sn**	**20 47 49.1**	**-2.3**
RUS	**Russkaya**	**4.21**	**28**	*e*P	**Pn**	**20 47 03.4**	**-0.1**
RUS				*e*S	**Sn**	**20 47 49.1**	**-2.3**
APC	**Apacha**	**4.34**	**15**	PN	**Pn**	**20 47 07.8**	**+2.5**
APC	**Apacha**	**4.34**	**15**	*e*P	**Pn**	**20 47 07.8**	**+2.5**
KRMR	**Karymshinskiy**	**4.46**	**23**	PN	**Pn**	**20 47 07.5**	**+0.6**
KRMR	**Karymshinskiy**	**4.46**	**23**	*e*P	**Pn**	**20 47 07.5**	**+0.6**
PEA0B	**Petropavlovsk-**	**4.62**	**18**	*d* iPN	**Pn**	**20 47 10.9**	**+1.8**
PEA0B	**Petropavlovsk-**	**4.62**	**18**	P	**Pn**	**20 47 10.9**	**+1.8**
PETK	**Petropavlovsk-**	**4.62**	**18**	P	**Pn**	**20 47 11.0**	**+1.9**
	4.0nm,0.3s,baz=189,slow=12,SNR=25						
PETK				S	**Sn**	**20 48 01.9**	**+0.6**
	baz=213,slow=24,SNR=1.9						
PETK				LR	LR	20 49 09.1	
	comp=Z,62nm,21.3s,baz=239,slow=41						
PET	**Petropavlovsk**	**4.78**	**25**	*e*PN	**Pn**	**20 47 11.9**	**+0.8**
PET				*e*S	**Sn**	**20 48 05.0**	**-0.1**
PET				smax	smax		
	comp=N,149nm,0.5s						
PET	**Petropavlovsk**	**4.78**	**25**	*e*P	**Pn**	**20 47 12.0**	**+0.8**
PET				*e*S	**Sn**	**20 48 05.2**	**+0.1**
PET	**Petropavlovsk**	**4.78**	**25**	*e*P	**Pn**	**20 47 11.9**	**+0.8**
PET				AMB	AMB	20 47 13.3	
	comp=N,30nm,0.5s						
PET				*e*S	**Sn**	**20 48 04.0**	**-1.1**
PET				A	A	20 48 16.5	
	comp=N,150nm,0.5s						
PET				A	A	20 48 16.5	
	comp=N,80nm,0.5s						
PET	**Petropavlovsk**	**4.78**	**25**		**Pn**	**20 47 11.3**	**+0.2**
UGLR	**Uglovaya**	**4.99**	**25**	PN	**Pn**	**20 47 15.5**	**+1.3**
UGLR	**Uglovaya**	**4.99**	**25**	*e*P	**Pn**	**20 47 15.5**	**+1.3**
KOK	**Koryaka**	**5.01**	**23**	PN	**Pn**	**20 47 16.6**	**+2.1**
KOK	**Koryaka**	**5.01**	**23**	*e*P	**Pn**	**20 47 16.6**	**+2.1**
AVH	**Avacha**	**5.01**	**24**	PN	**Pn**	**20 47 16.4**	**+1.9**
AVH	**Avacha**	**5.01**	**24**	*e*P	**Pn**	**20 47 16.4**	**+1.9**
SMAR	**Somma**	**5.03**	**25**	PN	**Pn**	**20 47 16.2**	**+1.3**
SMAR	**Somma**	**5.03**	**25**	*e*P	**Pn**	**20 47 16.2**	**+1.3**
KRER	**Koryakskii**	**5.05**	**24**	PN	**Pn**	**20 47 16.9**	**+1.7**
KRER	**Koryakskii**	**5.05**	**24**	*e*P	**Pn**	**20 47 16.9**	**+1.7**
SDLR	**Sedlovina**	**5.07**	**25**	PN	**Pn**	**20 47 15.9**	**+0.6**
SDLR	**Sedlovina**	**5.07**	**25**	*e*P	**Pn**	**20 47 15.9**	**+0.6**
KRX	**Arik**	**5.07**	**23**	PN	**Pn**	**20 47 17.3**	**+1.9**
KRX	**Arik**	**5.07**	**23**	*e*P	**Pn**	**20 47 17.3**	**+1.9**
NLC	**Nalytchevo**	**5.11**	**28**	PN	**Pn**	**20 47 15.0**	**-0.7**
NLC	**Nalytchevo**	**5.11**	**28**	*e*P	**Pn**	**20 47 15.0**	**-0.7**
SPN	**Mys Shipunski**	**5.28**	**33**	PN	**Pn**	**20 47 17.1**	**-0.9**
SPN	**Mys Shipunski**	**5.28**	**33**	*e*P	**Pn**	**20 47 17.1**	**-0.9**
SPN	**Mys Shipunski**	**5.28**	**33**	*e*P	**Pn**	**20 47 17.1**	**-0.9**
KUR	**Kuril'sk**	**6.19**	**238**	*e*PN	**Pn**	**20 47 32.9**	**+2.3**
KUR				*e*S	**Sn**	**20 48 42.5**	**+2.6**
KUR				pmax	pmax		
	comp=Z,42nm,0.5s						
KUR				pmax	pmax		
	comp=N,11nm,0.4s						
KUR				pmax	pmax		
	comp=E,20nm,0.3s						
KUR				smax	smax		
	comp=E,49nm,0.6s						
KUR	**Kuril'sk**	**6.19**	**238**	ǁ*e*P	**Pn**	**20 47 32.0**	**+1.4**
KUR				AMB	AMB	20 47 34.0	
	comp=E,40nm,0.6s						
KUR				AMB	AMB	20 47 43.0	
	comp=E,200nm,2.0s						
KUR				*e*S	**Sn**	**20 48 39.0**	**-0.9**
KUR				A	A	20 48 49.0	
	comp=E,80nm,0.5s						
KUR				A	A	20 48 49.0	
	comp=E,40nm,0.5s						
MKZ	**Mys Kozlova**	**7.05**	**32**	PN	**Pn**	**20 47 41.0**	**-1.3**
MKZ	**Mys Kozlova**	**7.05**	**32**	*e*P	**Pn**	**20 47 41.0**	**-1.3**
KZV	**Kizimen**	**7.08**	**24**	PN	**Pn**	**20 47 45.7**	**+2.9**
KZV	**Kizimen**	**7.08**	**24**	*e*P	**Pn**	**20 47 45.7**	**+2.9**
TUMD	**Tumrok D**	**7.19**	**24**	*e*P	**Pn**	**20 47 45.1**	**+0.9**
TUMR	**Tumrok**	**7.19**	**23**	PN	**Pn**	**20 47 45.1**	**+0.8**
TUMR	**Tumrok**	**7.19**	**23**	*e*P	**Pn**	**20 47 47.4**	**+3.1**
SHO	**Shikotan**	**7.63**	**233**	*e*PN	**Pn**	**20 47 48.8**	**-1.5**
SHO				pmax	pmax		
	comp=Z,114nm,1.6s						
SHO				pmax	pmax		
	comp=N,10.0nm,0.3s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.2s						
SHO				pmax	pmax		
	comp=Z,16nm,0.8s						
SHO	**Shikotan**	**7.63**	**233**	*e*P	**Pn**	**20 47 49.7**	**-0.6**
SHO				AMB	AMB	20 47 59.0	
	comp=Z,100nm,2.0s						
SHO				AMB	AMB	20 48 07.0	
	comp=Z,20nm,0.8s						
SHO				*e*S	**Sn**	**20 49 11.0**	**-4.3**
SHO				A	A	20 49 18.0	
	comp=Z,100nm,2.0s						
SHO				A	A	20 49 18.0	
	comp=Z,100nm,2.0s						
YUK	**Yuzh-Kuril'sk**	**8.06**	**238**	ǁ*e*PN	**Pn**	**20 47 57.1**	**+1.0**
YUK	**Yuzh-Kuril'sk**	**8.06**	**238**	ǁ*e*P	**Pn**	**20 47 57.0**	**+1.0**
GRPR	**Tuman**	**8.13**	**238**	*e*PN	**Pn**	**20 47 57.8**	**+0.6**
GRPR	**Tuman**	**8.13**	**238**	*e*P	**Pn**	**20 47 57.0**	**-0.2**
GLVR	**Golovnino**	**8.44**	**237**	*e*PN	**Pn**	**20 48 00.6**	**-0.7**
GLVR				pmax	pmax		
	comp=Z,99nm,0.6s						
GLVR				pmax	pmax		
	comp=N,55nm,0.5s						
GLVR				pmax	pmax		
	comp=Z,279nm,1.4s						
GLVR	**Golovnino**	**8.44**	**237**	*e*P	**Pn**	**20 48 01.6**	**+0.3**
GLVR				AMB	AMB	20 48 05.5	
	comp=Z,30nm,0.8s						
GLVR				*i* S	**Sn**	**20 49 31.7**	**-3.2**
TYV	**Tymovskoe**	**8.46**	**289**	ǁ*e*P	**Pn**	**20 48 02.8**	**+1.2**
TYV				AMB	AMB	20 48 06.8	
	comp=Z,30nm,0.6s						
NMR	**Nemuro--Hokkai**	**8.56**	**235**	*c i* PN	**Pn**	**20 48 01.0**	**-2.0**
NMR	**Nemuro--Hokkai**	**8.56**	**235**	*i* P	**Pn**	**20 48 03.0**	**0.0**
NMR				*i* S	**Sn**	**20 49 34.0**	**-4.0**
YSS	**Yuzh-Sakhalins**	**8.64**	**263**	PN	**Pn**	**20 48 05.3**	**+1.3**
YSS	**Yuzh-Sakhalins**	**8.64**	**263**	*e*rx	rx	20 48 05.3	
YSS	**Yuzh-Sakhalins**	**8.64**	**263**	Pn	**Pn**	**20 48 05.3**	**+1.3**
KBTR	**Krutoberegovo**	**8.76**	**29**	PN	**Pn**	**20 48 05.0**	**-0.6**
KBTR	**Krutoberegovo**	**8.76**	**29**	*e*P	**Pn**	**20 48 05.0**	**-0.6**
JKA	**Kamikawa-asahi**	**9.92**	**247**	*e*P	**Pn**	**20 48 24.6**	**+3.0**
JKA	**Kamikawa-asahi**	**9.92**	**247**		**Pn**	**20 48 24.6**	**+3.0**
ASAJ	**Asahikawa**	**9.93**	**247**	P	**Pn**	**20 48 24.6**	**+3.0**
	comp=Z,6.7nm,0.3s,baz=73,slow=14,SNR=67						
ERM	**Erimo**	**10.88**	**236**	ǁ*e*PN	**Pn**	**20 48 35.9**	**+1.3**
ERM	**Erimo**	**10.88**	**236**	Pn	**Pn**	**20 48 33.7**	**-0.9**
SMY	**Shemya**	**12.54**	**64**	PN	**Pn**	**20 48 57.6**	**+0.3**
SMY	**Shemya**	**12.54**	**64**	Pn	**Pn**	**20 48 57.6**	**+0.3**
EKMR	**Ekimchan**	**14.74**	**295**	*e*P	**Pn**	**20 49 24.0**	**-2.6**
EKMR				AMB	AMB	20 49 35.8	
	comp=Z,10.0nm,0.6s						
KLR	**Kul'dur**	**15.47**	**281**	P	**P**	**20 49 39.5**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=83,slow=10,SNR=10						
USRK	**Ussuriysk Ar.**	**16.68**	**263**	P	**P**	**20 49 52.4**	**-0.3**
	baz=74,slow=14,SNR=3.6						
BMKR	**Bomnak**	**17.39**	**300**	*e*P	**Pn**	**20 49 55.0**	**-5.0**
MJAR	**Matsushiro Arr**	**17.48**	**232**	P	**P**	**20 50 03.4**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=89,slow=11,SNR=4.1						
KROS	**Kirovskiy**	**18.43**	**299**	*e*P	**Pn**	**20 50 11.8**	**-0.9**
YAK	**Yakutsk**	**19.54**	**322**	*e*P	**P**	**20 50 23.6**	**-0.3**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BILL	**Bilibino**	**20.12**	**12**	ǁ*e*P	**P**	**20 50 30.9**	**+0.7**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KSRS	**Korea Array**	**22.84**	**251**	P	**P**	**20 50 59.6**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=48,slow=10.0,SNR=9.4						
KSRS				LR	LR	20 59 34.8	
	comp=Z,43nm,18.1s,baz=26,slow=36						
TIK	**Tiksi**	**26.00**	**341**	ǁ*e*P	**P**	**20 51 26.9**	**-1.4**
TIXI	**Tiksi**	**26.01**	**341**	ǁ*e*P	**P**	**20 51 26.9**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.8s						
H11N2	**WAKE ISLAND Hy**	**30.41**	**158**	T	T	21 24 33.2	
	baz=345,slow=76,SNR=20						
H11N1	**WAKE ISLAND Hy**	**30.43**	**158**	T	T	21 24 36.8	
	baz=345,slow=76,SNR=25						
H11N3	**WAKE ISLAND Hy**	**30.43**	**158**	T	T	21 24 32.2	
	baz=345,slow=76,SNR=19						
RSO	**Redoubt South**	**31.42**	**48**	P	**P**	**20 52 13.7**	**-3.2**
H11S1	**WAKE ISLAND Hy**	**31.54**	**159**	T	T	21 25 55.6	
	baz=346,slow=76,SNR=519						
H11S3	**WAKE ISLAND Hy**	**31.55**	**159**	T	T	21 25 55.6	
	baz=346,slow=76,SNR=762						
H11S2	**WAKE ISLAND Hy**	**31.58**	**159**	T	T	21 25 55.0	
	baz=346,slow=76,SNR=376						
SONM	**Songino Array**	**32.12**	**287**	P	**P**	**20 52 22.3**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=107,slow=7.7,SNR=2.6						
MK31	**Makanchi Array**	**47.36**	**297**	P	**P**	**20 54 28.7**	**-0.5**
MK31				pmax	pmax		
	comp=Z,1.0nm,1.3s						
MK31	**Makanchi Array**	**47.36**	**297**	P	**P**	**20 54 28.7**	**-0.5**
MKAR	**Makanchi Array**	**47.36**	**297**	P	**P**	**20 54 28.7**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=74,slow=9.6,SNR=6.4						
KURK	**Kurchatov**	**47.51**	**303**	P	**P**	**20 54 30.6**	**+0.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
KURK	**Kurchatov**	**47.51**	**303**	*e*P	**P**	**20 54 30.6**	**+0.3**
KURK	**Kurchatov**	**47.51**	**303**	P	**P**	**20 54 30.6**	**+0.3**
KURK				IAmb	IAmb	20 54 32.1	
	comp=Z,4.8nm,1.6s						
MAKZ	**Makanchi**	**47.54**	**297**	P	**P**	**20 54 30.0**	**-0.6**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.4s						
MAKZ	**Makanchi**	**47.54**	**297**	P	**P**	**20 54 30.0**	**-0.6**
MAKZ				IAmb	IAmb	20 54 36.8	
	comp=Z,2.1nm,1.4s						
YKA	**Yellowknife Ar**	**48.43**	**38**	P	**P**	**20 54 40.4**	**+3.2**
	comp=Z,0.2nm,0.7s,baz=296,slow=7.6,SNR=5.1						
CHTO	**Chiang Mai**	**54.02**	**257**	P	**P**	**20 55 20.4**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHTO	**Chiang Mai**	**54.02**	**257**	P	**P**	**20 55 20.4**	**+0.8**
CHTO				IAmb	IAmb	20 55 22.2	
	comp=Z,2.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**54.28**	**257**	*e*P	**P**	**20 55 23.7**	**+2.2**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**54.28**	**257**	P	**P**	**20 55 23.2**	**+1.7**
	comp=Z,1.7nm,0.7s,baz=34,slow=7.2,SNR=19						
ARU	**Arti**	**54.55**	**317**	P	**P**	**20 55 22.4**	**-0.6**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.6s						
ARU	**Arti**	**54.55**	**317**	*e*P	**P**	**20 55 22.4**	**-0.6**
ARU	**Arti**	**54.55**	**317**	P	**P**	**20 55 22.4**	**-0.6**
FINES	**FINESS Array B**	**62.86**	**335**	*i* P	**P**	**20 56 20.7**	**+0.2**
FINES	**FINESS Array B**	**62.86**	**335**	P	**P**	**20 56 19.7**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=17,slow=8.0,SNR=5.3						
NOA	**NORSAR Array B**	**66.80**	**342**	P	**P**	**20 56 46.8**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=40,slow=7.5,SNR=2.8						
AKASG	**Malin Array Be**	**70.70**	**327**	P	**P**	**20 57 09.2**	**-1.4**
	comp=Z,25nm,0.3s,baz=33,slow=6.8,SNR=1.3						
WB0	**Warramunga Arr**	**70.72**	**201**	P	**P**	**20 57 12.6**	**+1.6**
WB0				IAmb	IAmb	20 57 30.2	
	comp=Z,6.7nm,1.4s						
WRA	**Warramunga Arr**	**70.90**	**201**	*i* P	**P**	**20 57 15.8**	**+3.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**70.90**	**201**	P	**P**	**20 57 13.6**	**+1.6**
	comp=Z,0.5nm,0.4s,baz=14,slow=6.4,SNR=4.7						
ASAR	**Alice Springs**	**74.59**	**200**	P	**P**	**20 57 36.4**	**+2.5**
	comp=Z,0.6nm,0.5s,baz=14,slow=5.6,SNR=12						
TXAR	**Lajitas Array**	**75.23**	**62**	P	**P**	**20 57 41.0**	**+3.1**
	comp=Z,0.2nm,0.5s,baz=308,slow=4.9,SNR=4.7						
GERES	**GERESS Array B**	**77.29**	**335**	P	**P**	**20 57 49.9**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=60,slow=5.8,SNR=2.6						

IDC ***24*** *20:58:57.0±1.0,6°.64N×127°.11E,h0km,mb3.3/5, mb1 3.5/5,mb1mx3.4/30,mbtmp3.3/5,Error ellipse: s-maj=75.1km s-min=21.5km az=72.0*
MAN ***24*** *20:58:59.6,6°.36N×127°.11E,h1km,mb5.1,ML4.0,MS4.1*

ISC 24 20:58:58.6±1.0,6°.32N±0°.09×127°.17E±0°.08,h10km,n13, σ1§92/19,mb3.2/5,1C-2D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.10**	**305**	*e*P	**Pb**	**20 59 19.7**	**-0.1**
MATI				*e*S	**Sb**	**20 59 33.0**	**-1.2**
DDMP	**Don Marcelino,**	**1.47**	**262**	*e*P	**Pn**	**20 59 25.7**	**+0.5**
DDMP				*e*S	**Sn**	**20 59 43.5**	**-1.0**
DMPH	**Davao City--Mi**	**1.82**	**295**	ǁ*i* P	**Pg**	**20 59 35.0**	**+1.4**
KCP	**Kidapawan**	**2.18**	**288**	ǁ*e*P	**Pn**	**20 59 36.3**	**+1.3**
KCP				*e*S	**Sb**	**21 00 04.0**	**-1.3**
GSPH	**General Santos**	**2.22**	**264**	*i* P	**Pn**	**20 59 34.6**	**-1.0**
SKMP	**Bagumbayan, Su**	**2.62**	**275**	*e*P	**Pn**	**20 59 42.0**	**+0.9**
SKMP				*e*S	**Sn**	**21 00 14.7**	**+1.7**
CTBH	**Cotabato--PC H**	**3.04**	**287**	*e*P	**Pn**	**20 59 47.4**	**+0.6**
CTBH				*i* S	Sn	21 00 12.2	-11
CGP	**Cagayan de Oro**	**3.25**	**311**	ǁ*e*P	**Pn**	**20 59 52.3**	**+2.6**
CGP				*e*S	**Sn**	**21 00 30.6**	**+2.2**
WRA	**Warramunga Arr**	**27.03**	**165**	P	**P**	**21 04 45.1**	**+3.9**
	0.2nm,0.6s,baz=344,slow=10,SNR=4.5						
ASAR	**Alice Springs**	**30.52**	**168**	P	**P**	**21 05 14.8**	**+2.5**
	0.2nm,0.5s,baz=348,slow=7.6,SNR=3.0						
ASAR				PcP	**PcP**	**21 08 10.6**	**-0.9**
	0.5nm,1.1s,baz=342,slow=1.5,SNR=4.5						
SONM	**Songino Array**	**45.01**	**340**	P	**P**	**21 07 11.8**	**-2.7**
	0.1nm,0.5s,baz=152,slow=6.5,SNR=2.6						
MKAR	**Makanchi Array**	**55.71**	**324**	P	**P**	**21 08 33.5**	**-1.9**
	0.5nm,0.5s,baz=117,slow=7.7,SNR=17						
ILAR	**Eielson Array**	**82.59**	**26**	P	**P**	**21 11 20.7**	**-1.1**
	0.2nm,0.5s,baz=241,slow=6.5,SNR=4.3						

IDC ***24*** *21:13:30.7±3.4,19°.13S×174°.90W,h74km±35km,mb3.9/6, mb1 4.1/8,mb1mx3.6/53,mbtmp4.3/8,ML3.8/2,MS3.2/1, Ms1 3.2/1,ms1mx2.6/31,Error ellipse: s-maj=39.1km s-min=21.1km az=148.0*
NEIC ***24*** *21:13:30.6±1.7,19°.1S±0°.1×174°.89W±0°.03,h76km±11km, mb4.4/15,Error ellipse: s-maj=15.3km s-min=3.0km az=169.0*

ISC 24 21:13:30.6±0.6,19°.02S±0°.08×174°.83W±0°.07,h76km,n26, σ1§66/26,mb4.3/12,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**4.64**	**92**		**Pn**	**21 14 39.1**	**+0.9**
AFI	**Afiamalu**	**5.86**	**30**	P	**Pn**	**21 14 56.8**	**+1.8**
	3.1nm,0.3s,baz=202,slow=17,SNR=2.8						
AFI				S	**Sn**	**21 15 58.0**	**-2.9**
	13nm,0.3s,baz=28,slow=21,SNR=3.5						
MSVF	**Nonsavu**	**6.88**	**280**	Pn	**Pn**	**21 15 09.2**	**+0.3**
RAO	**Raoul Island**	**10.57**	**195**	Pn	**Pn**	**21 15 58.5**	**-0.6**
RAR	**Rarotonga**	**14.31**	**101**	P	**Pn**	**21 16 49.9**	**+0.4**
	3.1nm,0.3s,baz=261,slow=3.1,SNR=5.9						
DZM	**Mont Dzumac**	**17.80**	**257**	P		**21 17 38.9**	**+5.5**
	1.3nm,0.3s,baz=71,slow=21,SNR=10						
DZM	**Mont Dzumac**	**17.80**	**257**	P	**Pn**	**21 17 32.9**	**-0.5**
DZM				IAmb	IAmb	21 17 40.5	
	comp=Z,9.4nm,0.6s						
URZ	**Urewera**	**20.42**	**198**	P	**P**	**21 18 00.6**	**-0.9**
	comp=Z,1.7nm,0.4s,baz=3.6,slow=14,SNR=2.6						
URZ				LR	LR	21 25 00.2	
	comp=Z,58nm,19.0s,baz=0.5,slow=34						
THZ	**Tophouse**	**24.96**	**202**	P	**P**	**21 18 47.2**	**+0.2**
THZ				IAmb	IAmb	21 18 51.4	
	comp=Z,14nm,1.0s						
LHI	**Lord Howe Isla**	**26.61**	**237**	P	**P**	**21 18 59.1**	**-2.8**
KWAJ	**Kwajalein Atol**	**32.62**	**326**	P	**P**	**21 19 53.9**	**-1.4**
CTA	**Charters Tower**	**36.63**	**262**	P	**P**	**21 20 30.1**	**+0.1**
	comp=Z,5.7nm,0.5s,baz=72,slow=7.2,SNR=11						
COEN	**Coen**	**40.51**	**271**	P	**P**	**21 21 02.6**	**+0.1**
WR0	**Warramunga Arr**	**47.59**	**260**	P	**P**	**21 21 58.6**	**-0.6**
WR0				IAmb	IAmb	21 22 07.2	
	comp=Z,5.2nm,1.1s						
WB0	**Warramunga Arr**	**47.75**	**260**	P	**P**	**21 22 00.2**	**-0.1**
WB0				IAmb	IAmb	21 22 01.2	
	comp=Z,4.3nm,0.6s						
WB2	**Warramunga Arr**	**47.77**	**260**	P	**P**	**21 21 59.8**	**-0.7**
WB2				IAmb	IAmb	21 22 17.2	
	comp=Z,3.5nm,1.1s						
WRAB	**Tennant Creek**	**47.77**	**260**	P	**P**	**21 21 59.8**	**-0.8**
WRAB				IAmb	IAmb	21 22 01.0	
	comp=Z,3.2nm,0.7s						
AS31	**Alice Springs**	**47.77**	**255**	P	**P**	**21 22 00.9**	**+0.4**
AS31				IAmb	IAmb	21 22 03.1	
	comp=Z,2.0nm,0.7s						
ASAR	**Alice Springs**	**47.77**	**255**	P	**P**	**21 22 00.1**	**-0.4**
	comp=Z,6.4nm,0.5s,baz=92,slow=8.1,SNR=96						
ASAR				PcP	**PcP**	**21 23 29.1**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=100,slow=4.6,SNR=3.1						
WRA	**Warramunga Arr**	**47.78**	**260**	P	**P**	**21 21 59.8**	**-0.8**
	comp=Z,2.4nm,0.5s,baz=97,slow=8.5,SNR=20						
WRA	**Warramunga Arr**	**47.78**	**260**	IAmb	IAmb	21 22 02.3	
	comp=Z,0.2nm,0.6s						
KNRA	**Kununurra**	**53.76**	**264**	P	**P**	**21 22 46.8**	**+1.2**
KNRA				IAmb	IAmb	21 22 59.3	
	comp=Z,13nm,1.1s						
FITZ	**Fitzroy Crossi**	**56.20**	**261**	P	**P**	**21 23 02.4**	**-0.8**
	comp=Z,0.8nm,0.4s,baz=104,slow=8.3,SNR=4.0						
FITZ	**Fitzroy Crossi**	**56.20**	**261**	IAmb	IAmb	21 23 02.5	
	comp=Z,1.3nm,0.9s						
NVAR	**Mina Array Bea**	**77.92**	**42**	P	**P**	**21 25 22.3**	**+1.7**
	comp=Z,0.2nm,0.3s,baz=224,slow=6.3,SNR=2.6						
GERES	**GERESS Array B**	**149.46**	**349**	PKPbc	**PKPbc**	**21 33 10.2**	**-0.9**
	comp=Z,0.3nm,0.6s,baz=14,slow=4.5,SNR=2.1						

IDC ***24*** *21:18:27.0±0.5,11°.98N×125°.83E,h0km,mb4.1/18, mb1 4.3/19,mb1mx4.1/46,mbtmp4.2/19,ML4.6/1,MS3.3/9, Ms1 3.4/9,ms1mx3.1/52,Error ellipse: s-maj=25.2km s-min=11.4km az=76.0*
BJI ***24*** *21:18:27.3±0.0,12°.01N×125°.92E,h12km,mB4.9/16, mb4.3/25,Ms4.2/9,Ms7 4.0/10*
NEIC ***24*** *21:18:28.8±1.4,11°.92N±0°.06×125°.8E±0°.1,h13km±4km, mb4.5/41,Error ellipse:

comp=Z,9.5nm,0.9s
GSI Gunungsitoli 30.06 251 P P 21 24 36.4 -1.7
GSI IAmb IAmb 21 24 45.9
comp=Z,9.1nm,1.1s
KRVT Keravat (AS076 30.62 121 LR LR 21 34 25.5
comp=Z,45nm,20.4s,baz=326,slow=31
WRAB Tennant Creek 32.83 165 P P 21 25 01.1 -1.3
WRA Warramunga Arr 32.84 165 P P 21 25 01.4 -1.1
comp=Z,3.5nm,0.9s,baz=343,slow=10,SNR=9.0
WRA PcP **PcP 21 27 47.7 +0.3**
comp=Z,0.6nm,0.7s,baz=336,slow=3.0,SNR=2.9
WRA Warramunga Arr 32.84 165 IAmb IAmb 21 25 06.2
comp=Z,0.3nm,1.1s
WB2 Warramunga Arr 32.84 165 P P 21 25 01.6 -1.0
WB2 IAmb IAmb 21 25 04.8
comp=Z,8.3nm,1.1s
WR0 Warramunga Arr 32.91 165 P P 21 25 02.1 -0.9
WR0 IAmb IAmb 21 25 05.4
comp=Z,7.0nm,1.1s
PSA00 Pilbara Seismi 33.93 190 P P 21 25 10.8 -1.2
PSA00 IAmb IAmb 21 25 15.4
comp=Z,7.5nm,1.0s
GTA Gaotai 35.75 324 *eP* **P 21 25 28.6 +0.9**
GTA pP sP 21 25 34.1 +2.6
GTA sP pwP 21 25 37.5 +1.8
GTA pmax pmax
comp=Z,87nm,7.0s
GTA LR LR
comp=Z,120nm,15.6s
GTA LR LR
comp=Z,180nm,15.9s
GTA LR LR
comp=Z,160nm,15.9s
AS31 Alice Springs 36.33 168 P P 21 25 34.0 +1.3
ASAR Alice Springs 36.33 168 P P 21 25 32.5 -0.2
comp=Z,2.5nm,0.7s,baz=352,slow=6.3,SNR=18
ASAR PcP **PcP 21 27 57.5 +0.1**
comp=Z,0.7nm,0.8s,baz=349,slow=3.5,SNR=3.7
LSA Lhasa 36.74 304 P P 21 25 37.1 +0.4
KLR Kul'dur 37.40 6 P P 21 25 41.6 +0.2
comp=Z,1.2nm,0.9s,baz=78,slow=7.2,SNR=3.8
TAPN Taplejung 38.88 299 *eP* **P 21 25 54.6 -0.1**
ODAN Odare 39.03 298 *eP* **P 21 25 55.7 -0.2**
comp=Z,26nm,0.8s
SONM Songino Array 39.26 339 P P 21 25 57.2 -0.1
comp=Z,1.9nm,1.1s,baz=151,slow=8.1,SNR=6.4
SONM Songino Array 39.26 339 P P 21 25 57.5 +0.2
RAMN Ramite 39.74 298 *eP* **P 21 26 01.7 -0.1**
H11N1 WAKE ISLAND Hy 40.06 74 T T 22 09 24.8
baz=266,slow=74,SNR=12
H11N2 WAKE ISLAND Hy 40.07 74 T T 22 09 21.5
baz=266,slow=74,SNR=9.0
H11N3 WAKE ISLAND Hy 40.08 74 T T 22 09 26.0
baz=266,slow=74,SNR=9.2
JIRN Jiri 40.27 299 *eP* **P 21 26 06.3 0.0**
GUN Gumba 40.60 299 *eP* **P 21 26 08.8 -0.2**
comp=Z,30nm,0.9s
PKI Pulchoki 40.92 298 *eP* **P 21 26 10.8 -0.9**
PKIN Phulchoki 40.93 298 *eP* **P 21 26 10.9 -0.8**
comp=Z,8.5nm,0.8s
KKN Kakani 41.08 299 *eP* **P 21 26 12.2 -0.7**
DMN Daman 41.19 298 *eP* **P 21 26 13.3 -0.5**
comp=Z,50nm,1.3s
GKN Gorkha 41.69 299 *eP* **P 21 26 17.1 -0.7**
MORW Morawa 41.96 193 P P 21 26 18.7 -1.0
MORW IAmb IAmb 21 26 29.7
comp=Z,14nm,1.1s
DANN Dangsing 42.52 299 *eP* **P 21 26 24.0 -0.7**
KOLN Koldanda 42.52 298 *eP* **P 21 26 24.4 -0.3**
FORT Forrest 42.62 177 P P 21 26 24.8 -0.2
FORT IAmb IAmb 21 26 35.9
comp=Z,17nm,0.9s
NWAO Narrogin (SRO) 45.47 190 P P 21 26 47.3 -0.6
BBOO Buckleboo 45.63 168 P P 21 26 49.0 -0.2
STKA Stephens Creek 46.17 161 P P 21 26 54.0 +0.5
comp=Z,6.5nm,0.8s,baz=346,slow=6.5,SNR=8.3
PETK Petropavlovsk- 48.19 25 P P 21 27 10.1 +1.2
comp=Z,3.3nm,0.9s,baz=255,slow=5.7,SNR=5.5
PETK LR LR 21 47 39.6
comp=Z,152nm,18.1s,baz=62,slow=36
MKAR Makanchi Array 50.43 322 P P 21 27 27.2 +1.0
comp=Z,4.3nm,0.7s,baz=115,slow=8.4,SNR=52
MAKZ Makanchi 50.62 322 P P 21 27 28.7 +1.0
MAKZ IAmb IAmb 21 27 38.9
comp=Z,7.8nm,1.1s
KDJ Kajisay 51.80 315 P P 21 27 36.9 0.0
KSH Kashi 51.81 311 P P 21 27 41.4 +4.5
NRN Naryn 52.40 313 IAmb IAmb 21 27 51.8
comp=Z,7.2nm,1.1s
ZAA0 Zalesovo Array 52.92 331 P P 21 27 44.4 -0.3
ZALV Zalesovo Beam 52.92 331 P P 21 27 44.4 -0.3
comp=Z,1.1nm,0.8s,baz=114,slow=3.6,SNR=4.4
FRU1 Bishkek 53.81 315 P P 21 27 50.8 -0.8
FRU1 IAmb IAmb 21 27 53.4
comp=Z,5.4nm,0.9s
KURK Kurchatov 54.43 325 P P 21 27 56.6 +0.8
ARSB Arslanbob 54.52 312 P P 21 27 57.1 +0.2
ARSB IAmb IAmb 21 28 06.5
comp=Z,4.9nm,0.9s
BTK Batken 55.78 310 P P 21 28 05.6 -0.3
BTK IAmb IAmb 21 28 07.7
comp=Z,5.9nm,1.0s
KBL Kabul 56.07 304 P P 21 28 06.7 -1.5
KBL IAmb IAmb 21 28 17.0
comp=Z,3.8nm,0.9s
CHGR Chuyangaon 56.72 308 P P 21 28 12.7 +0.1
KKAR Karatay Array 56.78 314 P P 21 28 13.3 +0.4
KKAR IAmb IAmb 21 28 22.8
comp=Z,8.0nm,1.1s
TIXI Tiksi 59.60 1 P P 21 28 33.4 +1.3
BRVK Borovoye 60.10 325 P P 21 28 35.5 -0.4
GEYT Alibeck 65.22 306 P P 21 29 10.9 +0.5
comp=Z,1.6nm,0.7s,baz=151,slow=6.4,SNR=5.0
GYA0B ALIBECK ARRAY 65.22 306 P P 21 29 11.7 +1.3
ABKAR Akbulak array 65.33 319 P P 21 29 10.8 0.0
ABKAR Akbulak array 65.33 319 IAmb IAmb 21 29 20.6
comp=Z,6.3nm,1.1s
ARU Arti 67.57 326 P P 21 29 23.7 -1.3
ARU IAmb IAmb 21 29 25.2
comp=Z,2.4nm,0.7s
BHW Baring Head 69.71 143 P P 21 29 37.9 -0.7
BPAW Bear Paw Mtn. 76.24 27 P P 21 30 21.0 +4.0
RAYN Ar Rayn 76.60 292 P P 21 30 19.6 -0.2
RAYN IAmb IAmb 21 30 28.7
comp=Z,5.2nm,1.1s
ILAR Eielson Array 78.01 26 P P 21 30 27.8 +0.9
comp=Z,0.6nm,0.8s,baz=242,slow=6.2,SNR=4.5
ARCES ARCESS Array B 82.43 340 P P 21 30 50.5 -0.1
comp=Z,6.6nm,1.0s,baz=64,slow=5.5,SNR=8.1
INK Inuvik 82.78 22 P P 21 30 53.0 +0.6
comp=Z,2.6nm,1.0s,baz=269,slow=8.9,SNR=3.7
INK Inuvik 82.78 22 IAmb IAmb 21 30 57.5
comp=Z,3.5nm,1.1s
BRTR Keskin Array B 84.15 309 P P 21 30 59.7 -0.7
comp=Z,0.6nm,0.7s,baz=105,slow=8.1,SNR=4.7
FINES FINESS Array B 84.18 332 P P 21 30 59.8 0.0
comp=Z,6.6nm,1.0s,baz=46,slow=5.5,SNR=6.9
AKASG Malin Array Be 84.99 321 P P 21 31 03.0 -1.1
comp=Z,25nm,0.3s,baz=65,slow=4.8,SNR=1.7
C36M Paulatuk 85.70 20 IAmb IAmb 21 31 22.6
comp=Z,3.6nm,0.9s
TORD Torodi Ar. Bea 119.29 293 PKP **PKPdf 21 37 18.2 -0.8**
comp=Z,0.5nm,0.8s,baz=72,slow=4.7,SNR=2.8
PLCA Paso Flores 147.95 156 PKPbc **PKPbc 21 38 15.3 +0.9**
comp=Z,1.6nm,0.7s,baz=297,slow=3.6,SNR=5.5

IDC 24 21:21:44.9±1.6, 5.80S×150.56E, h0km, mb3.6/2, mb1 3.9/3, mb1mx3.4/37, mbtmp3.7/3, ML3.2/1, Error ellipse: s-maj=133.1km s-min=21.5km az=134.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**2.08**	**45**	Pn	Pn	21 22 21.8	+0.7
	8.1nm,0.3s,baz=121,slow=5.9,SNR=1.6						
KRVT				Sn	Sn	21 22 47.8	+0.1
	21nm,0.3s,baz=334,slow=23,SNR=1.7						
WRA	**Warramunga Arr**	**21.13**	**227**	P	P	21 26 31.9	+0.3
	1.3nm,0.8s,baz=51,slow=10,SNR=3.2						
ASAR	**Alice Springs**	**23.93**	**220**	P	P	21 27 00.6	-0.4
	3.0nm,0.8s,baz=57,slow=8.8,SNR=10						
TORD	**Torodi Ar. Bea**	**148.46**	**286**	PKPbc	PKPbc	21 41 34.0	-0.7
	0.5nm,0.8s,baz=70,slow=1.7,SNR=2.2						

*JMA **24** 21:22:57.9±0.3, 35.91N×141.68E, h20km±4km, M3.3*
*IDC **24** 21:22:57.2±1.6, 36.07N×141.76E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/47, mbtmp3.4/7, ML2.9/2, Error ellipse: s-maj=32.8km s-min=30.5km az=93.0*

ISC 24 21:22:58.4±1.1, 35.98N±0.07×141.63E±0.07, h10km, n25, σ0s97/23, mb3.4/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.69**	**246**	P	**Pg**	**21 23 11.0**	**-0.7**
CHOJ				S	**Sg**	**21 23 20.5**	**-0.2**
JIHU	**Itakohorinouch**	**0.90**	**269**	P	**Pb**	**21 23 16.2**	**+0.1**
JIHU				S	**Sb**	**21 23 29.1**	**+1.0**
JHYU	**Hitachinakayam**	**0.92**	**293**	P	**Pg**	**21 23 16.3**	**+0.2**
JSMT	**Sammumatsuo**	**1.02**	**251**	P	**Pb**	**21 23 17.9**	**-0.2**
JHO	**Hitachi**	**1.06**	**306**	P	**Pb**	**21 23 18.2**	**-0.7**
JYT	**Yasato**	**1.19**	**282**	P	**Pn**	**21 23 19.7**	**-1.4**
JFK	**Kawauchi**	**1.51**	**336**	P	**Pn**	**21 23 25.8**	**+0.2**
JAG	**Ashikaga**	**1.82**	**285**	P	**Pn**	**21 23 28.7**	**-1.0**
JFT	**Otama**	**1.85**	**326**	P	**Pn**	**21 23 31.1**	**+0.8**
JMM	**Marumori**	**2.00**	**341**	P	**Pn**	**21 23 32.6**	**+0.4**
JKT	**Katashina**	**2.08**	**293**	P	**Pn**	**21 23 33.2**	**-0.2**
MJAR	**Matsushiro Arr**	**2.82**	**282**	Pn	**Pn**	**21 23 44.0**	**+0.4**
	0.8nm,0.3s,baz=88,slow=10,SNR=42						
MJAR				Sn	**Sn**	**21 24 17.2**	**-0.5**
	0.3nm,0.3s,baz=99,slow=15,SNR=5.5						
MAT	**Matsushiro**	**2.82**	**282**	P	**Pn**	**21 23 44.3**	**+0.7**
MAT				S	**Sn**	**21 24 15.6**	**-2.1**
ASAJ	**Asahikawa**	**8.16**	**5**	Pn	**Pn**	**21 24 55.0**	**-1.8**
	0.2nm,0.3s,baz=180,slow=20,SNR=1.3						
H11N2	**WAKE ISLAND Hy**	**27.47**	**119**	T	T	21 57 25.8	
	baz=311,slow=75,SNR=8.0						
H11N1	**WAKE ISLAND Hy**	**27.48**	**119**	T	T	21 57 19.1	
	baz=311,slow=75,SNR=5.9						
H11N3	**WAKE ISLAND Hy**	**27.48**	**119**	T	T	21 57 22.3	
	baz=311,slow=75,SNR=6.7						
H11S1	**WAKE ISLAND Hy**	**28.15**	**122**	T	T	21 58 15.7	
	baz=315,slow=74						
H11S3	**WAKE ISLAND Hy**	**28.15**	**122**	T	T	21 58 09.4	
	baz=315,slow=74						
H11S2	**WAKE ISLAND Hy**	**28.17**	**122**	T	T	21 58 10.4	
	baz=315						
SONM	**Songino Array**	**28.53**	**306**	P	**P**	**21 28 55.3**	**+1.1**
	0.2nm,0.5s,baz=108,slow=8.1,SNR=1.4						
ZALV	**Zalesovo Beam**	**42.76**	**313**	P	**P**	**21 30 55.5**	**-0.2**
	0.3nm,0.4s,baz=81,slow=7.3,SNR=2.1						
MKAR	**Makanchi Array**	**44.83**	**303**	P	**P**	**21 31 13.7**	**+1.2**
	0.5nm,1.0s,baz=83,slow=8.6,SNR=2.2						
ILAR	**Eielson Array**	**50.29**	**32**	P	**P**	**21 31 54.1**	**-0.6**
	0.6nm,1.0s,baz=251,slow=5.6,SNR=2.1						
WRA	**Warramunga Arr**	**56.05**	**188**	P	**P**	**21 32 38.4**	**+0.9**
	0.4nm,0.8s,baz=2.1,slow=7.8,SNR=1.5						

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*IDC **24** 21:24:17.0±1.8, 10.52S×109.90E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/38, mbtmp3.6/6, ML3.1/1, Error ellipse: s-maj=89.9km s-min=22.8km az=43.0*
*DJA **24** 21:24:21.8±1.1, 10.5S±10.1×11.0E±.1, h10km, M4.1/8, MLv4.1/8*

ISC 24 21:24:21.4±1.1, 10.6S±0.1×109.74E±0.08, h35km, n16, σ0s94/17, mb3.5/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCJI	**Pacitan**	**2.81**	**31**	P	**Pn**	**21 25 03.0**	**-0.9**
PCJI				S	**Sn**	**21 25 35.0**	**-1.6**
UGM	**Wanagama**	**2.81**	**16**	P	**Pn**	**21 25 04.1**	**+0.1**
UGM	**Wanagama**	**2.81**	**16**		**Pn**	**21 25 04.2**	**+0.2**
WOJI	**Wonogiri, Jawa**	**3.02**	**23**	P	**Pn**	**21 25 06.8**	**0.0**
CMJI	**Cimerak**	**3.10**	**336**	P	**Pn**	**21 25 07.4**	**-0.5**
KPJI	**Karang Pucung**	**3.38**	**346**	P	**Pn**	**21 25 13.1**	**+1.4**
CISI	**Cisompet, Garu**	**3.60**	**328**	P	**Pn**	**21 25 13.9**	**-0.9**
NGJI	**Ngawi**	**3.67**	**28**	P	**Pn**	**21 25 16.0**	**+0.3**
CNJI	**Cibinong**	**4.19**	**322**	P	**Pn**	**21 25 21.4**	**-1.5**
JAGI	**Jajag, Banyuwa**	**4.86**	**64**	P	**Pn**	**21 25 32.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**17.09**	**118**	Pn	**Pn**	**21 28 16.7**	**-1.0**
	0.1nm,0.3s,baz=298,slow=9.0,SNR=3.3						
FITZ				Sn	Sn	21 31 08.7	-18
	0.1nm,0.3s,baz=286,slow=13,SNR=2.0						
WRA	**Warramunga Arr**	**25.44**	**114**	P	**P**	**21 29 45.8**	**-0.4**
	1.2nm,0.9s,baz=287,slow=11,SNR=3.5						
ASAR	**Alice Springs**	**26.43**	**122**	P	**P**	**21 29 55.0**	**-0.2**
	0.4nm,0.8s,baz=298,slow=8.8,SNR=4.7						
SONM	**Songino Array**	**58.28**	**357**	P	**P**	**21 34 13.3**	**+0.6**
	0.2nm,0.5s,baz=194,slow=7.4,SNR=2.5						
MKAR	**Makanchi Array**	**62.21**	**339**	P	**P**	**21 34 39.9**	**+0.4**
	0.5nm,0.5s,baz=145,slow=7.8,SNR=3.7						
BRTR	**Keskin Array B**	**86.25**	**311**	P	**P**	**21 37 01.2**	**+1.3**
	0.2nm,0.5s,baz=123,slow=5.3,SNR=2.4						

MAN 24 21:25:59.5, 10.12N×124.09E, h36km, mb3.8, ML2.5, MS2.0, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.23**	**328**	*e*P	Pn	21 26 08.4	+0.5
LLP				*i* S	Sn	21 26 13.9	-1.7
MSLP	**Maasin**	**0.76**	**89**	*e*P	Pn	21 26 14.6	+0.9
MSLP				*e*S	Sn	21 26 25.5	+1.5
OCLP	**Ormoc**	**1.05**	**29**	*e*P	Pn	21 26 17.8	+0.1
OCLP				*e*S	Sn	21 26 45.6	+14

MAN 24 21:30:55.2, 5.75N×125.64E, h12km, mb4.5, ML3.3, MS3.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.36**	**12**	*e*P	Pg	21 31 02.7	+0.3
DDMP				*e*S	Sg	21 31 07.2	-0.1
GSPH	**General Santos**	**0.76**	**296**	*e*P	Pg	21 31 07.1	-2.9
GSPH				*i* S	Sg	21 31 18.3	-1.7
DMPH	**Davao City--Mi**	**1.33**	**355**	*i*P	Sn	21 31 37.2	0.0
SKMP	**Bagumbayan, Su**	**1.33**	**305**	*e*P	Pn	21 31 18.6	-1.0
SKMP				*e*S	Sn	21 31 37.3	+0.1
KCP	**Kidapawan**	**1.36**	**337**	*e*P	Pn	21 31 19.3	-0.7
KCP				*i* S	Sg	21 31 39.0	-0.1

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*NIED **24** 21:41:00.46.60N×153.60E, h8km, Mw4.2 Best double couple: M₀2.50000×10¹⁵ NP1:φs332.00000°, δ81.00000°, λ25.00000°. NP2:φs238.00000°, δ66.00000°, λ170.00000°.*
*IDC **24** 21:41:54.6±0.6, 46.55N×153.30E, h0km, mb4.2/23, mb1 4.4/28, mb1mx4.3/49, mbtmp4.2/28, ML2.9/4, MS3.8/15, Ms1 3.8/15, ms1mx3.5/50, Error ellipse: s-maj=16.5km s-min=12.3km az=145.0*
*SKHL **24** 21:41:58.2±0.1, 46.20N×153.70E, h60km±5km, mb5.0/13, mbv5.3/2, ms4.2/10, msh5.2/1*
*MOS **24** 21:41:58.0±1.2, 46.50N×153.44E, h36km, mb4.9/17, MS3.5/9, Error ellipse: s-maj=6.8km s-min=5.2km az=73.1*
*BJI **24** 21:41:59.0±0.0, 46.78N×153.42E, h46km, mB4.9/42, mb4.6/55, Ms4.4/27, Ms7 4.1/27*
*NEIC **24** 21:42:01.9±2.3, 46.58N±0.09×153.4E±0.1, h50km±7km, mb4.6/76, Error ellipse: s-maj=15.3km s-min=9.0km az=145.0*

ISC 24 21:41:57.8±0.4, 46.35N±0.05×153.48E±0.05, h24km, n314, σ2s04/321, mb4.6/105, MS4.0/22, 21C-16D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.08**	**256**	*i* PN	**Pn**	**21 43 01.7**	**+3.0**
KUR				*i* S	**Sn**	**21 43 50.4**	**+4.7**
KUR				pmax	pmax		
	comp=N,72μm,0.4s						
KUR				pmax	pmax		
	comp=E,134μm,0.4s						
KUR				pmax	pmax		
	comp=Z,291μm,0.4s						
KUR				smax	smax		
	comp=N,361nm,0.6s						
KUR				smax	smax		
	comp=E,317nm,0.5s						
KUR				MLR	MLR		
	comp=N,993nm,12.0s						
KUR				MLR	MLR		
	comp=Z,853nm,12.0s						
KUR	**Kuril'sk**	**4.08**	**256**	*i*P	**Pn**	**21 43 00.7**	**+2.0**
KUR				AMB	AMB	21 43 09.9	
	comp=Z,70nm,0.5s						
KUR				AMB	AMB	21 43 09.9	
	comp=Z,130nm,0.5s						
KUR				AMB	AMB	21 43 09.9	
	comp=Z,290nm,0.5s						
KUR				*i* S	**Sn**	**21 43 46.3**	**+0.6**
KUR				A	A	21 43 58.0	
	comp=Z,320nm,0.6s						
KUR				A	A	21 43 58.0	
	comp=Z,230nm,0.6s						
KUR				A	A	21 43 58.6	
	comp=Z,2μm,2.0s						
KUR				A	A	21 43 58.6	
	comp=Z,800nm,2.0s						
KUR				AMS	AMS	21 44 41.0	
	comp=Z,2μm,12.0s						
KUR				AMS	AMS	21 44 41.0	
	comp=Z,1μm,12.0s						
KUR				AMS	AMS	21 44 41.0	
	comp=Z,2μm,12.0s						
SKR	**Severo-Kuril's**	**4.67**	**21**	*e*PN	**Pn**	**21 43 05.9**	**-0.9**
SKR				*e*S	**Sn**	**21 44 02.2**	**+2.0**
SKR				pmax	pmax		
	comp=E,116nm,0.9s						
SKR				smax	smax		
	comp=E,176nm,0.6s						
SKR				smax	smax		
	comp=N,313nm,0.9s						
SKR	**Severo-Kuril's**	**4.67**	**21**	*e*P	**Pn**	**21 43 05.9**	**-0.9**
SKR				AMB	AMB	21 43 17.0	
	comp=N,120nm,0.9s						
SKR				*i* S	**Sn**	**21 43 57.5**	**-2.7**
SKR				A	A	21 44 11.4	
	comp=N,310nm,0.6s						
SKR				A	A	21 44 11.4	
	comp=N,180nm,0.6s						
SKR				AMS	AMS	21 45 12.5	
	comp=N,600nm,12.0s						
SKR				AMS	AMS	21 45 12.5	
	comp=N,800nm,12.0s						
SKR				AMS	AMS	21 45 12.5	
	comp=N,700nm,12.0s						
SHO	**Shikotan**	**5.32**	**245**	*c i*PN	**Pn**	**21 43 15.7**	**+0.1**
SHO				pmax	pmax		
	comp=N,17μm,0.3s						
SHO				pmax	pmax		
	comp=Z,77μm,0.3s						
SHO				pmax	pmax		
	comp=E,40μm,0.6s						
SHO				MLR	MLR		
	comp=Z,262nm,13.0s						
SHO	**Shikotan**	**5.32**	**245**	*i*P	**Pn**	**21 43 15.8**	**+0.1**
SHO				AMB	AMB	21 43 18.0	
	comp=Z,20nm,0.5s						
SHO				AMB	AMB	21 43 18.0	
	comp=Z,40nm,0.5s						
SHO				AMB	AMB	21 43 18.0	
	comp=Z,110nm,0.5s						
SHO				*i* S	**Sn**	**21 44 14.0**	**-2.2**
SHO				A	A	21 44 22.0	
	comp=Z,230nm,0.5s						
SHO				A	A	21 44 22.0	
	comp=Z,140nm,0.5s						
SHO				AMS	AMS	21 45 28.0	
	comp=Z,500nm,12.0s						
SHO				AMS	AMS	21 45 28.0	
	comp=Z,800nm,12.0s						
SHO				AMS	AMS	21 45 28.0	
	comp=Z,600nm,12.0s						
PAU	**Pauzhetka**	**5.57**	**22**	*e*P	**Pn**	**21 43 21.7**	**+2.6**
YUK	**Yuzh-Kuril'sk**	**5.86**	**249**	*e*PN	**Pn**	**21 43 25.2**	**+2.2**
YUK				pmax	pmax		
	comp=Z,350nm,1.0s						
YUK				pmax	pmax		
	comp=N,138μm,0.5s						
YUK				pmax	pmax		
	comp=E,187μm,0.5s						
YUK				pmax	pmax		
	comp=Z,194μm,0.5s						
YUK				MLR	MLR		
	comp=Z,437nm,13.0s						
YUK				MLR	MLR		
	comp=N,541nm,10.0s						
YUK				MLR	MLR		
	comp=E,419nm,10.0s						
YUK	**Yuzh-Kuril'sk**	**5.86**	**249**	*e*P	**Pn**	**21 43 25.3**	**+2.2**
YUK				AMB	AMB	21 43 31.0	
	comp=E,400nm,2.0s						
YUK				AMB	AMB	21 43 32.0	
	comp=E,130nm,0.6s						
YUK				AMB	AMB	21 43 32.0	
	comp=E,180nm,0.6s						
YUK				AMB	AMB	21 43 32.0	
	comp=E,190nm,0.6s						
YUK				*i* S	**Sn**	**21 44 30.0**	**+0.5**
YUK				A	A	21 44 41.3	
	comp=E,320nm,0.7s						
YUK				A	A	21 44 41.3	
	comp=E,230nm,0.7s						
YUK				AMS	AMS	21 46 06.0	
	comp=E,600nm,10.0s						
YUK				AMS	AMS	21 46 06.0	
	comp=E,500nm,10.0s						
YUK				AMS	AMS	21 46 06.0	
	comp=E,500nm,10.0s						
GRPR	**Tuman**	**5.94**	**249**	*e*PN	**Pn**	**21 43 26.5**	**+2.3**
GRPR				pmax	pmax		
	comp=Z,173nm,0.5s						
GRPR				pmax	pmax		
	comp=E,53nm,0.2s						
GRPR				pmax	pmax		
	comp=N,73nm,0.5s						
GRPR	**Tuman**	**5.94**	**249**	*e*P	**Pn**	**21 43 26.0**	**+1.8**
GRPR				AMB	AMB	21 43 30.0	
	comp=N,700nm,0.5s						
GRPR				AMB	AMB	21 43 30.0	
	comp=N,50nm,0.5s						
GRPR				AMB	AMB	21 43 30.0	
	comp=N,170nm,0.5s						
GRPR				*e*S	**Sn**	**21 44 31.0**	**-0.4**
GRPR				A	A	21 44 44.0	
	comp=N,160nm,0.6s						
GRPR				A	A	21 44 44.0	
	comp=N,190nm,0.6s						
GLVR	**Golovnino**	**6.22**	**248**	*e*PN	**Pn**	**21 43 29.3**	**+1.3**
GLVR				pmax	pmax		
	comp=E,44nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,163nm,0.4s						
GLVR				pmax	pmax		
	comp=N,27nm,0.3s						
GLVR	**Golovnino**	**6.22**	**248**	*e*P	**Pn**	**21 43 29.0**	**+1.0**
GLVR				AMB	AMB	21 43 31.0	
	comp=N,30nm,0.4s						
GLVR				AMB	AMB	21 43 31.0	
	comp=N,50nm,0.4s						
GLVR				AMB	AMB	21 43 31.0	
	comp=N,160nm,0.4s						
GLVR				*i* S	**Sn**	**21 44 38.6**	**+0.4**
GLVR				A	A	21 44 52.0	
	comp=N,200nm,0.6s						
GLVR				A	A	21 44 52.0	
	comp=N,190nm,0.6s						
NEM2	**Nemuro 2**	**6.26**	**244**	P	**Pn**	**21 43 28.5**	**0.0**
NEM2				*e*S	**Sn**	**21 44 35.6**	**-3.6**
NMR	**Nemuro--Hokkai**	**6.26**	**244**	*e*PN	**Pn**	**21 43 28.4**	**-0.2**
NMR	**Nemuro--Hokkai**	**6.26**	**244**	*e*P	**Pn**	**21 43 28.0**	**-0.6**
JRA	**Rausu**	**6.38**	**251**	P	**Pn**	**21 43 32.0**	**+1.7**
JNK	**Nakash**	**6.80**	**249**	P	**Pn**	**21 43 37.8**	**+1.8**
JNK				*e*S	**Sn**	**21 44 51.9**	**-0.8**
JAK	**Akkeshi**	**7.10**	**245**	P	**Pn**	**21 43 40.0**	**-0.1**
JAK				*e*S	**Sn**	**21 44 56.6**	**-3.4**
JTKR	**Abashiri--Toko**	**7.17**	**254**	P	**Pn**	**21 43 43.5**	**+2.4**
PEA0B	**Petropavlovsk-**	**7.29**	**20**	PN	**Pn**	**21 43 42.8**	**+0.1**
PEA0B	**Petropavlovsk-**	**7.29**	**20**		**Pn**	**21 43 42.8**	**+0.1**
PETK	**Petropavlovsk-**	**7.29**	**20**	Pn	**Pn**	**21 43 41.5**	**-1.3**
	comp=N,1.1nm,0.3s,baz=183,slow=15,SNR=12						
PETK				Sn	**Sn**	**21 45 09.0**	**+4.2**
	comp=N,0.2nm,0.3s,baz=202,slow=34,SNR=2.0						
YSS	**Yuzh-Sakhalins**	**7.41**	**279**	*e*PN	**Pn**	**21 43 47.8**	**+3.5**
YSS				*e*S	**Sn**	**21 45 11.6**	**+4.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				smax	smax		
	comp=N,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,900nm,14.0s						
YSS				MLR	MLR		
	comp=N,300nm,17.0s						
YSS				MLR	MLR		
	comp=E,700nm,15.0s						

YSS	**Yuzh-Sakhalins**	**7.41 279**	*e*P		**Pn**	**21 43 47.6 +3.3**		
YSS			AMB		AMB	21 43 48.8		
	comp=E,20nm,0.9s							
YSS			*e*S		**Sn**	**21 45 08.7 +1.2**		
YSS			A		A	21 45 15.7		
	comp=E,30nm,1.0s							
YSS			AMS		AMS	21 46 29.0		
	comp=E,300nm,16.0s							
YSS			AMS		AMS	21 46 29.0		
	comp=E,700nm,16.0s							
YSS			AMS		AMS	21 46 29.0		
	comp=E,900nm,16.0s							
YSS	**Yuzh-Sakhalins**	**7.41 279**			**Pn**	**21 43 44.5 +0.2**		
PET	**Petropavlovsk**	**7.47 25**	*e*PN		**Pn**	**21 43 45.6 +0.5**		
PET			pmax		pmax			
	comp=Z,34nm,0.8s							
PET			MLR		MLR			
	comp=Z,400nm,18.0s							
PET	**Petropavlovsk**	**7.47 25**	*e*P		**Pn**	**21 43 45.8 +0.6**		
PET			AMB		AMB	21 43 54.9		
	comp=Z,30nm,0.8s							
PET			*e*S		**Sn**	**21 45 06.0 -3.0**		
PET			A		A	21 45 33.6		
	comp=E,80nm,1.0s							
PET			A		A	21 45 33.6		
	comp=E,70nm,1.0s							
PET			AMS		AMS	21 46 17.0		
	comp=E,800nm,15.0s							
PET			AMS		AMS	21 46 17.0		
	comp=E,600nm,15.0s							
PET	**Petropavlovsk**	**7.47 25**			**Pn**	**21 43 45.6 +0.5**		
JMP	**Maruseppu**	**7.53 255**	P		**Pn**	**21 43 48.8 +2.8**		
JAR	**Ashorobuto**	**7.55 250**	P		**Pn**	**21 43 48.0 +1.7**		
JAR			*e*S		**Sn**	**21 45 10.7 -0.3**		
JOB	**Onbets**	**7.70 247**	P		**Pn**	**21 43 49.2 +0.9**		
JOB			*e*S		**Sn**	**21 45 11.8 -2.8**		
JSE	**Soyaes**	**7.76 264**	P		**Pn**	**21 43 53.9 +4.7**		
JKK2	**Kamakawa 2**	**7.99 256**	P		**Pn**	**21 43 55.0 +2.7**		
JKA	**Kamikawa-asahi**	**8.00 258**			**Pn**	**21 43 55.4 +3.0**		
JKA					**Sn**	**21 45 31.0 +8.9**		
ASAJ	**Asahikawa**	**8.00 258**	P		**Pn**	**21 43 55.9 +3.4**		
ASAJ	**Asahikawa**	**8.00 258**	Pn		**Pn**	**21 43 55.4 +2.9**		
	comp=Z,1.6nm,0.3s,baz=98,slow=16,SNR=19							
ASAJ			Sn		**Sn**	**21 45 31.0 +8.8**		
	baz=230,slow=23,SNR=1.1							
ASAJ			LR		LR	21 46 51.3		
	comp=Z,389nm,19.5s,baz=84,slow=37							
JCH	**Churui**	**8.14 246**	P		**Pn**	**21 43 54.9 +0.5**		
JCH			*e*S		**Sn**	**21 45 21.9 -3.7**		
UGL	**Uglegorsk**	**8.17 294**⇓	*i*PN		**Pn**	**21 43 58.4 +3.7**		
UGL			S		**Sn**	**21 45 30.0 +3.8**		
UGL			pmax		pmax			
	comp=Z,130nm,1.1s							
UGL			MLR		MLR			
	comp=E,1μm,13.0s							
UGL			MLR		MLR			
	comp=Z,1μm,13.0s							
UGL	**Uglegorsk**	**8.17 294**⇓	*i*P		**Pn**	**21 43 58.4 +3.7**		
UGL			AMB		AMB	21 44 01.0		
	comp=Z,130nm,1.0s							
UGL			*e*S		**Sn**	**21 45 28.9 +2.7**		
UGL			AMS		AMS	21 49 12.0		
	comp=Z,1μm,13.0s							
UGL			AMS		AMS	21 49 12.0		
	comp=Z,1μm,13.0s							
TYV	**Tymovskoe**	**8.47 306**	*e*PN		**Pn**	**21 44 02.3 +3.4**		
TYV			pmax		pmax			
	comp=Z,100nm,2.4s							
TYV			pmax		pmax			
	comp=Z,24nm,1.0s							
TYV	**Tymovskoe**	**8.47 306**	*e*P		**Pn**	**21 44 02.3 +3.4**		
TYV			AMB		AMB	21 44 04.1		
	comp=Z,20nm,1.0s							
TYV			AMB		AMB	21 44 04.1		
	comp=Z,100nm,2.0s							
JAB	**Ashibetsu**	**8.48 254**	P		**Pn**	**21 44 01.9 +2.9**		
ERM	**Erimo**	**8.59 243**⇑	*e*PN		**Pn**	**21 44 04.6 +4.1**		
ERM	**Erimo**	**8.59 243**	Pn		**Pn**	**21 44 02.3 +1.8**		
JNBK	**Urakawa-nobuka**	**8.70 246**	P		**Pn**	**21 44 02.1 0.0**		
JNBK			*e*S		**Sn**	**21 45 35.5 -3.8**		
OKH	**Okha**	**9.90 321**	*e*P		Pn	21 44 22.8 +4.4		
OKH			AMB		AMB	21 44 23.8		
	comp=Z,90nm,0.7s							
OKH			AMS		AMS	21 48 51.5		
	comp=Z,600nm,15.0s							
OKH			AMS		AMS	21 48 51.5		
	comp=Z,800nm,15.0s							
OKH			AMS		AMS	21 48 51.5		
	comp=Z,700nm,15.0s							
JKB	**Kayabe**	**10.00 248**	P		**Pn**	**21 44 19.4 -0.4**		
JKB			*e*S		**Sn**	**21 46 04.9 -6.3**		
NKL	**Nikolayevsk**	**10.71 314**	*e*P		**Pn**	**21 44 32.0 +2.5**		
NKL			AMB		AMB	21 44 34.3		
	comp=Z,150nm,1.0s							
NKL			AMS		AMS	21 49 43.7		
	comp=Z,500nm,15.0s							
NKL			AMS		AMS	21 49 43.7		
	comp=Z,900nm,15.0s							
NKL			AMS		AMS	21 49 43.7		
	comp=Z,800nm,15.0s							
GRNR	**Gornyy**	**12.13 298**	*e*P		Pn	21 44 38.2 -11		
GRNR			AMS		AMS	21 49 39.0		
	comp=Z,600nm,18.0s							
GRNR			AMS		AMS	21 49 39.0		
	comp=Z,700nm,18.0s							
GRNR			AMS		AMS	21 49 39.0		
	comp=Z,600nm,18.0s							
MA2	**Magadan**	**13.35 354**	Pn		**Pn**	**21 45 04.7 -0.8**		
	comp=Z,0.7nm,0.3s,baz=180,slow=19,SNR=3.0							
MA2			LR		LR	21 50 17.8		
	comp=Z,224nm,18.6s,baz=131,slow=38							
SMY	**Shemya**	**14.80 57**	P		**Pn**	**21 45 22.9 -2.4**		
SMY	**Shemya**	**14.80 57**	Pn		**Pn**	**21 45 22.9 -2.4**		
EKMR	**Ekimchan**	**14.86 304**	*e*P		**Pn**	**21 45 27.1 +0.9**		
EKMR			AMB		AMB	21 45 37.9		
	comp=Z,10.0nm,0.8s							
KLR	**Kul'dur**	**14.88 289**⇓	*e*P		**Pn**	**21 45 28.0 +1.5**		
KLR			pmax		pmax			
	comp=Z,16nm,1.3s							
KLR			MLR		MLR			
	comp=Z,460nm,16.0s							
KLR	**Kul'dur**	**14.88 289**	Pn		**Pn**	**21 45 24.3 -2.2**		
	comp=Z,0.1nm,0.3s,baz=62,slow=12,SNR=1.8							
KLR			LR		LR	21 51 20.5		
	comp=Z,427nm,18.5s,baz=96,slow=38							
KLR	**Kul'dur**	**14.88 289**⇓	*e*P		**Pn**	**21 45 28.0 +1.5**		
MAJO	**Matsushiro**	**15.05 235**	P		**Pn**	**21 45 30.6 +1.8**		
MAJO			pmax		pmax			
	comp=Z,17nm,0.7s							
MAJO	**Matsushiro**	**15.05 235**			**Pn**	**21 45 30.6 +1.8**		
MAJO			IAmb		IAmb	21 45 37.5		
	comp=Z,17nm,0.7s							
MAT	**Matsushiro**	**15.05 235**	P		**Pn**	**21 45 27.0 -1.8**		
MJAR	**Matsushiro Arr**	**15.05 235**	P		**Pn**	**21 45 29.8 +1.0**		
MJAR			pmax		pmax			
	comp=Z,4.0nm,0.9s							
MJAR	**Matsushiro Arr**	**15.05 235**	Pn		**Pn**	**21 45 26.9 -1.9**		
	comp=Z,0.0nm,0.3s,baz=31,slow=10,SNR=6.9							
MJAR	**Matsushiro Arr**	**15.05 235**			**Pn**	**21 45 29.8 +1.0**		
MJB9	**Matsu-Tunnel**	**15.05 235**			**Pn**	**21 45 31.0 +2.2**		
MJB9			IAmb		IAmb	21 45 37.5		
	comp=Z,18nm,0.6s							
USA0B	**Ussuriysk Arra**	**15.28 270**⇑	*e*P		**Pn**	**21 45 32.6 +0.8**		
USA0B	**Ussuriysk Arra**	**15.28 270**			**Pn**	**21 45 31.6 -0.2**		
USRK	**Ussuriysk Ar.**	**15.28 270**	P		**Pn**	**21 45 31.7 -0.1**		
USRK	**Ussuriysk Ar.**	**15.28 270**	Pn		**Pn**	**21 45 30.7 -1.1**		
	baz=83,slow=12,SNR=22							
USRK			LR		LR	21 51 08.0		
	comp=Z,181nm,21.7s,baz=57,slow=36							
USRK	**Ussuriysk Ar.**	**15.28 270**			**Pn**	**21 45 31.7 -0.1**		
BMKR	**Bomnak**	**17.68 307**	*e*P		**Pn**	**21 46 02.0 -0.2**		
BMKR			AMB		AMB	21 46 09.5		
	comp=Z,10.0nm,1.0s							
ZEA	**Zeya**	**18.32 303**	*e*P		**P**	**21 46 13.9 +3.9**		
ZEA			pmax		pmax			
	comp=Z,12nm,1.0s							
ZEA			MLR		MLR			
	comp=E,500nm,16.0s							
ZEA			MLR		MLR			
	comp=Z,500nm,16.0s							
ZEA	**Zeya**	**18.32 303**	*e*P		**P**	**21 46 13.0 +3.0**		
ZEA			AMB		AMB	21 46 20.1		
	comp=Z,10.0nm,1.0s							
ZEA			AMS		AMS	21 53 34.0		
	comp=Z,600nm,16.0s							
ZEA			AMS		AMS	21 53 34.0		
	comp=Z,500nm,16.0s							
KROS	**Kirovskiy**	**18.65 305**⇓	*e*P		**P**	**21 46 13.3 -0.4**		
KROS			AMB		AMB	21 46 19.0		
	comp=Z,10.0nm,1.0s							
CN2	**Changchun**	**19.92 273**	*e*P		**P**	**21 46 27.4 -0.2**		
CN2			*e*S		**S**	**21 50 05.3 -5.2**		
CN2			pmax		pmax			
	comp=Z,10.0nm,1.0s							
CN2			pmax		pmax			
	comp=Z,200nm,5.0s							
CN2			LR		LR			
	comp=Z,300nm,15.0s							
CN2			LR		LR			
	comp=Z,200nm,15.0s							
CN2			LR		LR			
	comp=Z,300nm,18.0s							
ADK	**Adak**	**20.21 63**	P		Pn	21 46 33.0 +0.3		
ADK			pmax		pmax			
	comp=Z,45nm,1.1s							
ADK	**Adak**	**20.21 63**	P		Pn	21 46 33.0 +0.3		
ADK			IAmb		IAmb	21 46 42.0		
	comp=Z,45nm,1.1s							
YAK	**Yakutsk**	**20.79 328**	*e*P		**P**	**21 46 36.2 -0.7**		
YAK			*e**PP		**pwP**	**21 46 50.0 +1.9**		
YAK			*e*S		**S**	**21 50 17.8 -10**		
YAK			pmax		pmax			
	comp=Z,9.0nm,0.9s							
YAK			pmax		pmax			
	comp=N,3.0nm,1.0s							
YAK			pmax		pmax			
	comp=E,2.0nm,1.1s							
YAK			smax		smax			
	comp=N,93nm,4.2s							
YAK			smax		smax			
	comp=E,91nm,3.8s							
YAK			MLR		MLR			
	comp=Z,118nm,15.0s							
YAK			MLR		MLR			
	comp=N,219nm,15.0s							
YAK			MLR		MLR			
	comp=E,99nm,15.0s							
YAK	**Yakutsk**	**20.79 328**	*e*P		**P**	**21 46 36.2 -0.7**		
KSRS	**Korea Array**	**20.93 254**	P		**P**	**21 46 37.8 -0.8**		
	comp=E,4.8nm,0.6s,baz=56,slow=10,SNR=19							
KSRS			LR		LR	21 53 29.5		
	comp=E,113nm,21.0s,baz=61,slow=33							
KS19	**Wonju Array Si**	**20.94 254**	P		**P**	**21 46 41.0 +2.3**		
JNU	**Nakatsue**	**21.74 241**	P		**P**	**21 46 49.3 +1.9**		
INCN	**Inchon**	**21.77 256**	P		**P**	**21 46 46.9 -0.8**		
INCN			pmax		pmax			
	comp=Z,38nm,0.9s							
INCN	**Inchon**	**21.77 256**	P		**P**	**21 46 46.9 -0.8**		
TJN	**Taejon**	**21.90 252**⇓	*e*P		**P**	**21 46 51.3 +2.3**		
BILL	**Bilibino**	**22.73 12**	*i*P		**P**	**21 46 55.4 -2.2**		
BILL			*i*			21 47 08.0		
BILL			*i*			21 47 21.3		
BILL			pmax		pmax			
	comp=Z,5.0nm,0.8s							
BILL			MLR		MLR			
	comp=Z,181nm,15.0s							
BILL	**Bilibino**	**22.73 12**	*i*P		**P**	**21 46 55.4 -2.2**		
BILL	**Bilibino**	**22.73 12**	P		**P**	**21 46 58.4 +0.8**		
BOD	**Bodaibo**	**26.44 310**	*e*P		**P**	**21 47 29.4 -3.0**		
BOD			pmax		pmax			
	comp=Z,6.0nm,1.8s							
BJI	**Beijing**	**27.73 270**	P		**P**	**21 47 45.6 +1.4**		
BJI			pP		**sP**	**21 47 52.5 +0.2**		
BJI			pmax		pmax			
	comp=Z,5.0nm,1.0s							
TIXI	**Tiksi**	**27.92 344**⇑	*e*P		**P**	**21 47 43.5 -2.1**		
TIXI			pmax		pmax			
	comp=Z,7.0nm,2.5s							
TIXI			MLR		MLR			
	comp=Z,164nm,15.0s							
TIXI	**Tiksi**	**27.92 344**	P		**P**	**21 47 43.8 -1.8**		
	comp=Z,0.8nm,0.5s,baz=180,slow=24,SNR=5.6							
TIXI			LR		LR	22 00 00.5		
	comp=Z,168nm,18.7s,baz=136,slow=39							
H11N2	**WAKE ISLAND Hy**	**28.75 153**	T		T	22 19 33.6		
	baz=340,slow=76,SNR=51							
H11N1	**WAKE ISLAND Hy**	**28.76 153**	T		T	22 19 32.7		
	baz=340,slow=76,SNR=67							
H11N3	**WAKE ISLAND Hy**	**28.77 153**	T		T	22 19 36.3		
	baz=340,slow=76,SNR=33							
ANM	**Nome**	**28.86 36**	P		**P**	**21 47 55.6 +1.5**		
ANM			pmax		pmax			
	comp=Z,3.0nm,0.9s							
ANM	**Nome**	**28.86 36**	P		**P**	**21 47 55.5 +1.5**		
H11S1	**WAKE ISLAND Hy**	**29.84 154**	T		T	22 20 54.8		
	baz=340,slow=76,SNR=109							
H11S3	**WAKE ISLAND Hy**	**29.85 154**	T		T	22 21 06.9		
	baz=340,slow=76,SNR=85							
H11S2	**WAKE ISLAND Hy**	**29.86 154**	T		T	22 20 56.0		
	baz=340,slow=76,SNR=92							
NJ2	**Nanjing**	**30.13 254**	*e*P		**P**	**21 48 05.8 +0.2**		
NJ2			pmax		pmax			
	comp=Z,6.0nm,0.5s							
HHC	**Hu-ho-hao-te**	**30.58 275**	*e*P		**P**	**21 48 11.0 +1.4**		
HHC			pmax		pmax			
	comp=Z,13nm,0.9s							
HHC			pmax		pmax			
	comp=Z,64nm,7.4s							
HHC			LR		LR			
	comp=Z,370nm,13.6s							
HHC			LR		LR			
	comp=Z,120nm,13.6s							
HHC			LR		LR			
	comp=Z,160nm,15.3s							
SONM	**Songino Array**	**31.71 290**	P		**P**	**21 48 18.7 -0.9**		
	comp=Z,0.8nm,0.6s,baz=80,slow=7.7,SNR=6.8							
SONM			LR		LR	22 02 05.2		
	comp=Z,279nm,18.6s,baz=98,slow=38							
SONM	**Songino Array**	**31.71 290**	IAmb		IAmb	21 48 25.7		
	comp=Z,1.7nm,1.0s							
TTA	**Tatalina**	**32.55 41**	P		**P**	**21 48 27.4 +0.7**		
TTA			pmax		pmax			
	comp=Z,3.0nm,0.9s							
TTA	**Tatalina**	**32.55 41**	P		**P**	**21 48 27.4 +0.7**		
TLY	**Talaya**	**32.59 298**⇓	*e*P		**P**	**21 48 26.1 -1.0**		
TLY			pmax		pmax			
	comp=Z,2.0nm,0.8s							
TLY			MLR		MLR			
	comp=Z,330nm,15.0s							
TLY	**Talaya**	**32.59 298**	*e*P		**P**	**21 48 26.1 -1.0**		
IMAR	**Indian Mountai**	**33.94 36**	P		**P**	**21 48 39.0 +0.2**		
WHN	**Wuhan**	**34.08 256**	P		**P**	**21 48 41.6 +1.4**		
KDAK	**Kodiak Island**	**34.16 50**	P		**P**	**21 48 41.3 +0.7**		
KDAK			pmax		pmax			
	comp=Z,12nm,1.0s							
KDAK	**Kodiak Island**	**34.16 50**	P		**P**	**21 48 41.3 +0.7**		
KTH	**Kantishna Hill**	**34.90 40**	P		**P**	**21 48 47.5 +0.4**		
KTH			IAmb		IAmb	21 49 01.8		
	comp=Z,11nm,1.2s							
BPAW	**Bear Paw Mtn.**	**34.90 39**	P		**P**	**21 48 48.9 +1.9**		
SUA	**Susitna One**	**34.94 44**	P		**P**	**21 48 48.7 +1.1**		
TPUB	**Ta-pu**	**35.05 240**	P		**P**	**21 48 49.7 +1.0**		
TPUB			IAmb		IAmb	21 48 51.4		
	comp=Z,9.1nm,1.0s							
TRF	**Thorofare Moun**	**35.18 40**	P		**P**	**21 48 49.3 -0.4**		
XAN	**Xi'an**	**35.74 266**	P		**P**	**21 48 55.3 +0.7**		
XAN			pP		pwP	21 49 09.3 +3.6		
XAN			sP		sP	21 49 15.8 +13		
XAN			pmax		pmax			
	comp=Z,7.0nm,1.5s							
XAN			pmax		pmax			
	comp=Z,140nm,5.9s							
XAN			LR		LR			
	comp=Z,160nm,14.1s							
XAN			LR		LR			
	comp=Z,180nm,15.2s							
XAN			LR		LR			
	comp=Z,170nm,18.4s							
RND	**Reindeer**	**35.82 41**	P		**P**	**21 48 56.3 +1.2**		
RND			pmax		pmax			
	comp=Z,7.0nm,1.1s							
RND	**Reindeer**	**35.82 41**	P		**P**	**21 48 56.3 +1.2**		
RND			IAmb		IAmb	21 49 06.0		
	comp=Z,6.7nm,1.1s							
SML	**Sawmill**	**36.09 43**	P		**P**	**21 48 57.8 +0.5**		
ILAR	**Eielson Array**	**36.70 38**	P		**P**	**21 49 01.5 -0.9**		
	comp=Z,0.6nm,0.8s,baz=247,slow=7.3,SNR=4.7							
ENH	**Enshi**	**37.55 260**	P		**P**	**21 49 10.3 +0.2**		
ENH			IAmb		IAmb	21 49 11.8		
	comp=Z,5.6nm,0.9s							
RAGM	**Ragged Mountai**	**37.97 45**			pP	21 49 24.3 +5.4		
LZH	**Lanzhou**	**38.16 273**	*e*P		**P**	**21 49 16.8 +1.5**		
LZH			pP		pwP	21 49 32.1 +5.6		
LZH			*e*PP		**PP**	**21 50 50.3 +7.7**		
LZH			pmax		pmax			
	comp=Z,31nm,1.1s							
LZH			pmax		pmax			
	comp=Z,140nm,4.3s							
LZH			LR		LR			
	comp=Z,190nm,13.6s							
LZH			LR		LR			
	comp=Z,190nm,13.6s							
LZH			LR		LR			
	comp=Z,280nm,14.7s							
GTA	**Gaotai**	**39.28 280**	⇑P		**P**	**21 49 25.5 +0.8**		
GTA			pP		pwP	21 49 36.8 +0.9		
GTA			sP		sP	21 49 41.4 +8.5		
GTA			PcP		**PcP**	**21 51 34.8 +1.7**		
GTA			sS		sS	21 55 43.4 +9.2		
GTA			SS		**SS**	**21 58 08.9 -8.7**		
GTA			pmax		pmax			
	comp=Z,5.0nm,1.2s							
GTA			pmax		pmax			
	comp=Z,160nm,7.9s							
GTA			LR		LR			
	comp=Z,150nm,16.5s							
GTA			LR		LR			
	comp=Z,120nm,15.2s							
GTA			LR		LR			
	comp=Z,190nm,14.0s							
INK	**Inuvik**	**41.85 32**	P		**P**	**21 49 44.8 -0.6**		
	comp=Z,0.6nm,0.3s,baz=273,slow=4.7,SNR=3.5							
GYA	**Guiyang**	**41.88 258**⇑	*i*P		**P**	**21 49 47.6 +1.4**		
GYA			S		**S**	**21 56 01.8 -1.2**		
GYA			sS		sS	21 56 25.9 +13		
GYA			SS		**SS**	**21 59 06.8 -2.8**		
GYA			pmax		pmax			
	comp=Z,20nm,1.0s							
GYA			pmax		pmax			
	comp=Z,90nm,4.9s							
GYA			LR		LR			
	comp=Z,110nm,17.9s							
GYA			LR		LR			
	comp=Z,140nm,17.7s							
GYA			LR		LR			
	comp=Z,120nm,17.5s							
ZALV	**Zalesovo Beam**	**43.05 306**	*i*P		**P**	**21 49 53.2 -2.1**		
ZALV			pmax		pmax			
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**43.05 306**	P		**P**	**21 49 52.7 -2.5**		
	comp=Z,0.7nm,0.5s,baz=56,slow=6.5,SNR=5.1							
ZALV			PcP		**PcP**	**21 51 43.9 -1.0**		
	comp=Z,0.8nm,0.6s,baz=61,slow=4.1,SNR=5.5							
ZALV			LR		LR	22 09 03.4		
	comp=Z,372nm,18.2s,baz=82,slow=38							
WMQ	**Urumqi**	**45.31 292**	*e*P		**P**	**21 50 14.8 +1.2**		
WMQ			pmax		pmax			
	comp=Z,8.0nm,0.7s							
WMQ			pmax		pmax			
	comp=Z,69nm,4.9s							
WMQ			LR		LR			
	comp=Z,280nm,29.2s							
WMQ			LR		LR			
	comp=Z,520nm,29.1s							
WMQ			LR		LR			
	comp=Z,340nm,29.2s							
MK31	**Makanchi Array**	**47.35 298**	IAmb		IAmb	21 50 29.9		
	comp=Z,8.3nm,1.1s							
MKAR	**Makanchi Array**	**47.35 298**	P		**P**	**21 50 28.6 -0.9**		
	comp=Z,5.4nm,0.8s,baz=77,slow=13,SNR=52							
MKAR			PcP		**PcP**	**21 51 57.1 -3.0**		
	comp=Z,0.8nm,0.7s,baz=66,slow=5.2,SNR=2.0							
MKAR			LR		LR	22 11 29.9		
	comp=Z,320nm,18.6s,baz=62,slow=38							
MAKZ	**Makanchi**	**47.54 298**	P		**P**	**21 50 30.1 -0.9**		
MAKZ			pmax		pmax			
	comp=Z,5.0nm,1.0s							
MAKZ	**Makanchi**	**47.54 298**	P		**P**	**21 50 30.1 -0.9**		
MAKZ			IAmb		IAmb	21 50 31.4		
	comp=Z,5.0nm,0.9s							
KURK	**Kurchatov**	**47.80 304***c*	*e*P		**P**	**21 50 31.0 -1.9**		
KURK			pmax		pmax			
	comp=Z,11nm,1.3s							
KURK	**Kurchatov**	**47.80 304**	P		**P**	**21 50 31.6 -1.3**		
KURK			IAmb		IAmb	21 50 32.1		
	comp=Z,6.9nm,0.8s							
JAY	**Jayapura**	**49.95 197**	LR		LR	22 07 17.2		
	comp=Z,48nm,20.9s,baz=246,slow=30							
LSA	**Lhasa**	**50.55 274**	P		**P**	**21 50 57.3 +2.5**		
LSA			pmax		pmax			
	comp=Z,42nm,1.1s							
YKA	**Yellowknife Ar**	**51.09 37**	P		**P**	**21 50 58.2 +0.4**		
	comp=Z,2.9nm,0.7s,baz=296,slow=7.2,SNR=27							
RES	**Resolute Bay**	**51.13 18**	P		**P**	**21 50 58.0 0.0**		
	comp=Z,1.8nm,0.8s,baz=329,slow=9.5,SNR=6.9							
RES	**Resolute Bay**	**51.13 18**	IAmb		IAmb	21 50 59.2		
	comp=Z,4.8nm,1.1s							
BRVK	**Borovoye**	**51.35 310**	P		**P**	**21 50 59.0 -0.9**		
BRVK			pmax		pmax			
	comp=Z,5.0nm,0.8s							
BRVK	**Borovoye**	**51.35 310**	P		**P**	**21 50 59.0 -0.9**		
BRVK			IAmb		IAmb	21 50 59.5		
	comp=Z,4.9nm,0.8s							
CHTO	**Chiang Mai**	**52.28 257**	P		**P**	**21 51 09.2 +1.9**		
CHTO			pmax		pmax			
	comp=Z,15nm,1.0s							
CHTO	**Chiang Mai**	**52.28 257**	P		**P**	**21 51 09.2 +1.9**		
PBKT	**Sadao Pong**	**52.50 254**	P		**P**	**21 51 10.8 +1.9**		
PBKT			IAmb		IAmb	21 51 11.5		
	comp=Z,4.5nm,0.7s							
CM31	**Chiang Mai Arr**	**52.52 257**	P		**P**	**21 51 10.9 +1.7**		
CMAR	**Chiang Mai Arr**	**52.52 257**	*i*P		**P**	**21 51 11.5 +2.4**		
CMAR			pmax		pmax			
	comp=Z,6.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**52.52 257**	P		**P**	**21 51 10.6 +1.5**		
	comp=Z,5.4nm,0.8s,baz=36,slow=7.5,SNR=50							
CMAR			LR		LR	22 14 18.7		
	comp=Z,32nm,18.5s,baz=60,slow=37							
KDJ	**Kajisay**	**52.84 295**	IAmb		IAmb	21 51 12.3		
	comp=Z,6.0nm,0.8s							
KBS	**Kingsbay**	**52.93 351**⇓	*e*P		**P**	**21 51 11.3 0.0**		
KBS			pmax		pmax			
	comp=Z,137nm,1.7s							
SPA0	**Spitsbergen Ar**	**53.05 350**	P		**P**	**21 51 11.4 -0.9**		
ULHL	**Ulahol**	**53.36 296**	P		**P**	**21 51 15.4 +0.1**		
	SNR=6.1							
USP	**Ospenovka**	**53.89 297**	P		**P**	**21 51 19.2 +0.2**		
	SNR=9.3							
KZA	**Kyzart**	**54.07 296**	P		**P**	**21 51 21.7 +0.9**		
	SNR=5.2							
AAK	**Ala-Archa**	**54.24 297**⇑	*i*P		**P**	**21 51 20.9 -0.8**		
AAK			pmax		pmax			
	comp=Z,7.0nm,1.3s							
AAK	**Ala-Archa**	**54.24 297**	P		**P**	**21 51 21.7 +0.1**		
	SNR=5.5							
AAK	**Ala-Archa**	**54.24 297**⇑	*i*P		**P**	**21 51 20.9 -0.8**		
AAK	**Ala-Archa**	**54.24 297**	P		**P**	**21 51 21.5 -0.1**		
AAK			IAmb		IAmb	21 51 22.8		
	comp=Z,5.9nm,1.1s							
**

ARU pmax pmax
comp=Z,6.0nm,0.8s
ARU Arti 55.48 318 LR LR 22 16 57.3
comp=Z,151nm,18.7s,baz=27,slow=38
ARU Arti 55.48 318 P **P** **21 51 28.4 -1.8**
ARU IAmb IAmb 21 51 29.4
comp=Z,5.2nm,0.7s
KKN Kakani 55.78 276 *eP* **P** **21 51 34.9 +1.9**
comp=Z,26nm,0.6s
KKN Kakani 55.78 276 *eP* **P** **21 51 35.0 +1.9**
comp=Z,26nm,0.6s
PKI Pulchoki 55.83 276 *eP* **P** **21 51 34.6 +1.1**
comp=Z,18nm,0.8s
PKI Pulchoki 55.83 276 *eP* **P** **21 51 34.7 +1.2**
comp=Z,18nm,0.8s
PKIN Phulchoki 55.83 276 *eP* **P** **21 51 34.5 +1.0**
comp=Z,14nm,0.7s
PKIN Phulchoki 55.83 276 *eP* **P** **21 51 34.5 +1.0**
comp=Z,14nm,0.7s
ARSB Arslanbob 55.91 296 IAmb IAmb 21 51 35.4
comp=Z,4.9nm,0.8s
DMN Daman 56.01 276 *eP* **P** **21 51 36.3 +1.5**
comp=Z,31nm,0.8s
DMN Daman 56.01 276 *eP* **P** **21 51 36.4 +1.6**
comp=Z,31nm,0.8s
GKN Gorkha 56.09 276 *eP* **P** **21 51 36.5 +1.4**
comp=Z,30nm,0.7s
GKN Gorkha 56.09 276 *eP* **P** **21 51 36.6 +1.4**
comp=Z,30nm,0.7s
DANN Dangsing 56.47 277 *eP* **P** **21 51 39.7 +1.6**
comp=Z,39nm,0.6s
DANN Dangsing 56.47 277 *eP* **P** **21 51 39.9 +1.8**
comp=Z,39nm,0.6s
KOLN Koldanda 56.95 277 *eP* **P** **21 51 42.7 +1.3**
KOLN Koldanda 56.95 277 *eP* **P** **21 51 42.7 +1.3**
comp=Z,59nm,1.2s
PRGR Permogore 57.84 328 *eP* **P** **21 51 44.0 -2.9**
PRGR pmax pmax
comp=Z,6.0nm,0.6s
BTK Batken 57.98 296 P **P** **21 51 48.2 -0.1**
BTK pmax pmax
comp=Z,8.0nm,0.9s
BTK Batken 57.98 296 P **P** **21 51 48.2 -0.1**
ARCES ARCESS Array B 58.31 341 P **P** **21 51 49.2 -0.9**
comp=Z,2.0nm,0.8s,baz=28,slow=5.5,SNR=4.8
ARE0 ARCESS Array S 58.31 341 P **P** **21 51 49.7 -0.4**
ABKAR Akbulak array 58.88 310 IAmb IAmb 21 51 53.7
comp=Z,3.3nm,0.7s
AKTO Aktyubinsk 59.18 312 LR LR 22 19 49.8
comp=Z,201nm,19.6s,baz=37,slow=39
NIL Nilore 60.27 289 P **P** **21 52 05.5 +1.3**
NIL pmax pmax
comp=Z,41nm,0.9s
KLMR Klimovskoe 60.58 329 *eP* **P** **21 52 03.8 -2.0**
KLMR pmax pmax
comp=Z,11nm,1.5s
KLMR Klimovskoe 60.58 329 *eP* **P** **21 52 03.9 -1.9**
KLMR AMP 21 52 08.1
comp=Z,11nm,1.5s
FFC Flin Flon 60.88 40 P **P** **21 52 08.9 +0.9**
FFC pmax pmax
comp=Z,6.0nm,1.1s
FFC Flin Flon 60.88 40 P **P** **21 52 08.9 +0.9**
FFC IAmb IAmb 21 52 20.9
comp=Z,6.4nm,1.1s
SUMG Summit 61.08 4 P **P** **21 52 09.8 +0.2**
SUMG pmax pmax
comp=Z,12nm,0.9s
SUMG Summit 61.08 4 P **P** **21 52 09.8 +0.2**
NVAR Mina Array Bea 62.39 62 P **P** **21 52 20.5 +1.7**
comp=Z,1.7nm,0.8s,baz=287,slow=6.5,SNR=5.0
KBL Kabul 62.45 292 P **P** **21 52 18.1 -1.1**
KBL pmax pmax
comp=Z,12nm,1.0s
SUF Sumiainen 63.48 336 P **P** **21 52 23.8 -1.4**
SUF pmax pmax
comp=Z,11nm,1.6s
FIA1 FINESS Array S 64.51 335 P **P** **21 52 31.3 -0.8**
FINES FINESS Array B 64.51 335 P **P** **21 52 31.2 -0.8**
comp=Z,4.7nm,0.5s,baz=34,slow=8.1,SNR=34
PD31 Pinedale Array 64.78 54 P **P** **21 52 37.2 +2.7**
PDAR Pinedale Array 64.78 54 P **P** **21 52 34.5 +0.1**
comp=Z,1.4nm,0.8s,baz=270,slow=3.6,SNR=4.7
KNRA Kununurra 65.64 206 P **P** **21 52 40.7 +0.8**
OBN Obninsk 65.78 326 *i* P **P** **21 52 38.6 -1.8**
OBN *i* 21 53 12.0
OBN pmax pmax
comp=Z,8.0nm,0.7s
OBN MLR MLR
comp=Z,160nm,17.0s
OBN Obninsk 65.78 326 *i* P **P** **21 52 38.6 -1.8**
RDMU Red Mountain 66.21 56 P **P** **21 52 45.1 +1.3**
SRU San Rafael Swe 66.62 57 P **P** **21 52 48.4 +2.1**
SRU pmax pmax
comp=Z,5.0nm,0.9s
SRU San Rafael Swe 66.62 57 P **P** **21 52 48.4 +2.1**
ULM Lac du Bonnet 66.66 41 P **P** **21 52 45.9 -0.2**
comp=Z,1.2nm,0.6s,baz=304,slow=7.3,SNR=3.6
HRA Herat 66.85 296 P **P** **21 52 48.3 +0.4**
HRA IAmb IAmb 21 52 49.8
comp=Z,7.1nm,1.1s
GEYT Alibeck 67.03 301 P **P** **21 52 48.9 +0.1**
comp=Z,2.6nm,0.6s,baz=62,slow=3.5,SNR=8.3
GEYT LR LR 22 24 09.7
comp=Z,146nm,18.1s,baz=10.0,slow=38
GEYT Alibeck 67.03 301 IAmb IAmb 21 52 50.2
comp=Z,2.4nm,0.7s
GYA0B ALIBECK ARRAY 67.03 301 P **P** **21 52 49.4 +0.6**
GYA0B IAmb IAmb 21 52 50.1
comp=Z,4.4nm,0.7s
WB0 Warramunga Arr 68.04 199 P **P** **21 52 55.7 +0.6**
WB0 IAmb IAmb 21 52 57.3
comp=Z,5.6nm,1.1s
WR0 Warramunga Arr 68.19 199 P **P** **21 52 57.3 +1.3**
WR0 IAmb IAmb 21 52 58.3
comp=Z,5.2nm,1.1s
WRAB Tennant Creek 68.21 199 ‖ *eP* **P** **21 52 56.2 0.0**
WRAB pmax pmax
comp=Z,9.0nm,1.3s
WB2 Warramunga Arr 68.22 199 P **P** **21 52 57.2 +1.0**
WB2 IAmb IAmb 21 53 12.0
comp=Z,5.7nm,1.1s
WRA Warramunga Arr 68.22 199 *i* P **P** **21 52 56.7 +0.5**
WRA pmax pmax
comp=Z,3.0nm,0.8s
WRA Warramunga Arr 68.22 199 P **P** **21 52 57.1 +0.9**
comp=Z,2.8nm,0.8s,baz=16,slow=6.7,SNR=8.1
WRA Warramunga Arr 68.22 199 IAmb IAmb 21 52 57.7
comp=Z,0.4nm,1.1s
NC303 NORSAR Array S 68.49 341 P **P** **21 52 57.9 +0.3**
NC405 NORSAR Array S 68.51 341 P **P** **21 52 57.5 -0.2**
NC405 IAmb IAmb 21 53 05.1
comp=Z,7.2nm,0.8s
NC204 NORSAR Array S 68.58 342 P **P** **21 52 57.7 -0.4**
NB201 NORSAR Array S 68.66 341 P **P** **21 52 58.5 -0.1**
NB2 NORSAR Subarra 68.69 341 P **P** **21 52 57.8 -1.0**
comp=Z,2.8nm,0.6s,baz=27,slow=6.5
NOA NORSAR Array B 68.69 341 P **P** **21 52 58.3 -0.5**
comp=Z,3.0nm,0.7s,baz=30,slow=6.9,SNR=16
NBO00 NORSAR Array S 68.79 342 P **P** **21 53 00.7 +1.3**
NC602 NORSAR Array S 68.89 341 P **P** **21 53 00.1 +0.1**
FITZ Fitzroy Crossi 68.91 208 P **P** **21 53 02.2 +1.7**
NAO01 NORSAR Array S 68.93 341 P **P** **21 52 60.0 -0.3**
KIV Kislovodsk 71.26 315 *eP* **P** **21 53 15.6 +0.6**
KIV pmax pmax
comp=Z,15nm,1.1s
KIV MLR MLR
comp=Z,535nm,18.0s
KIV Kislovodsk 71.26 315 *eP* **P** **21 53 15.6 +0.6**
KBZ Khabaz 71.32 314 P **P** **21 53 15.2 0.0**
comp=Z,3.0nm,0.8s,baz=227,slow=0.7,SNR=7.4
ASAR Alice Springs 71.91 199 P **P** **21 53 20.8 +1.9**
comp=Z,3.4nm,0.9s,baz=11,slow=5.5,SNR=26
AKASG Malin Array Be 72.02 326 P **P** **21 53 18.5 -0.7**
comp=Z,25nm,0.3s,baz=32,slow=6.1,SNR=3.7
AKASG Malin Array Be 72.02 326 IAmb IAmb 21 53 19.0
comp=Z,1.5nm,0.8s
AKBB Malin Array Si 72.02 326 P **P** **21 53 18.6 -0.7**
AKBB pmax pmax
comp=Z,13nm,1.0s
AKBB Malin Array Si 72.02 326 P **P** **21 53 18.6 -0.7**
AKH Akhalkalaki 72.71 312 IAmb IAmb 21 53 27.0
comp=Z,4.3nm,0.8s
SORM Soroca 74.42 325 ‖ P **P** **21 53 33.1 -0.4**
LEOM Leova 75.81 324 ⇑P **P** **21 53 42.0 +0.5**
KOLS Kolonicke sedl 76.04 329 *eP* **P** **21 53 43.3 +0.5**
KOLS Kolonicke sedl 76.04 329 *eP* **P** **21 53 43.3 +0.5**
BUR08 Bucovina Ar. S 76.04 327 IAmb IAmb 21 53 46.6
comp=Z,6.7nm,1.1s
BURAR Bucovina Array 76.06 327 ⇑P **P** **21 53 43.2 +0.1**
BIZ Bicaz 76.28 326 ⇑P **P** **21 53 45.3 +1.1**
TESR Tescani 76.42 325 ‖ P **P** **21 53 45.1 0.0**
TRPA Tarpa 76.62 329 ‖ P **P** **21 53 46.6 +0.5**
CHVC Chvalec 76.67 334 *eP* **P** **21 53 46.5 +0.1**
DPC Dobruska-Polom 76.79 333 *eP* **P** **21 53 47.5 +0.4**
DPC Dobruska-Polom 76.79 333 *eP* **P** **21 53 47.5 +0.4**
LANS Liptovska Anna 76.82 331 *eP* **P** **21 53 48.2 +0.9**
LANS pmax pmax
comp=Z,3.0nm,0.8s
LANS Liptovska Anna 76.82 331 *eP* **P** **21 53 48.2 +0.9**
ODBI Odobesti 76.87 325 ⇑P **P** **21 53 48.3 +0.8**
MORC Moravsky Berou 76.91 332 ‖ P **P** **21 53 48.1 +0.3**
MORC Moravsky Berou 76.91 332 IAmb IAmb 21 53 49.9
comp=Z,7.6nm,1.1s
VRI Vrincioaia 76.92 325 ⇑P **P** **21 53 47.7 -0.1**
CLL Collm 76.93 336 *eP* **P** **21 53 47.0 -0.8**
CLL *e* 21 53 53.0
CLL pmax pmax
comp=Z,7.0nm,0.6s
CLL Collm 76.93 336 *eP* **P** **21 53 47.0 -0.8**
comp=Z,7.0nm,0.6s
CLL Collm 76.93 336 P **P** **21 53 48.0 +0.2**
OZUR 77.10 326 ⇑P **P** **21 53 49.5 +0.6**
UOSS Minazif 77.12 293 P **P** **21 53 49.9 +0.6**
TX31 Lajitas Ar. Si 77.47 61 IAmb IAmb 21 53 56.3
comp=Z,3.6nm,0.8s
TX32 Lajitas Array 77.47 61 IAmb IAmb 21 53 56.2
comp=Z,3.7nm,0.8s
TXAR Lajitas Array 77.47 61 P **P** **21 53 52.0 +0.6**
TXAR Lajitas Array 77.47 61 P **P** **21 53 52.0 +0.6**
comp=Z,3.5nm,0.7s,baz=304,slow=4.4,SNR=24
MLR Muntele Rosu 77.54 325 ⇑P **P** **21 53 51.3 -0.2**
MLR Muntele Rosu 77.54 325 IAmb IAmb 21 53 53.5
comp=Z,5.3nm,0.6s
VYHS Vyhne 77.60 331 *eP* **P** **21 53 52.3 +0.7**
VYHS pmax pmax
comp=Z,20nm,1.9s
VYHS Vyhne 77.60 331 *eP* **P** **21 53 52.3 +0.7**
GOPC GO Pecny, Ondr 77.65 334 *eP* **P** **21 53 51.8 -0.1**
GOPC GO Pecny, Ondr 77.65 334 *eP* **P** **21 53 51.8 -0.1**
PRU Pruhonice 77.66 334 *eP* **P** **21 53 52.3 +0.4**
PRU Pruhonice 77.66 334 *eP* **P** **21 53 52.3 +0.4**
VOIR 77.93 326 ‖ P **P** **21 53 54.3 +0.6**
PBCC Pribram 78.09 334 *eP* **P** **21 53 54.2 -0.1**
ARR Arges 78.15 326 ⇑P **P** **21 53 55.3 +0.5**
MODS Modra-Piesok 78.22 332 *eP* **P** **21 53 55.4 +0.3**
MODS Modra-Piesok 78.22 332 *eP* **P** **21 53 55.4 +0.3**
KHC Kasperske Hory 78.71 334 P **P** **21 53 57.9 +0.1**
KHC pmax pmax
comp=Z,2.0nm,1.0s
KHC Kasperske Hory 78.71 334 *eP* **P** **21 53 57.6 -0.2**
KHC Kasperske Hory 78.71 334 P **P** **21 53 57.9 +0.1**
GZR Gura Zlata 78.84 327 ⇑P **P** **21 53 58.3 -0.4**
BR131 Keskin Array S 78.85 317 P **P** **21 53 59.4 +0.5**
BR131 pmax pmax
comp=Z,6.0nm,1.2s
BR131 Keskin Array S 78.85 317 P **P** **21 53 59.4 +0.5**
BR131 IAmb IAmb 21 54 00.6
comp=Z,5.8nm,1.1s
BRTR Keskin Array B 78.85 317 *i* P **P** **21 53 59.2 +0.3**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 78.85 317 P **P** **21 53 57.9 -1.0**
comp=Z,1.9nm,0.9s,baz=56,slow=2.3,SNR=8.0
GERES GERESS Array B 78.92 334 P **P** **21 53 58.2 -0.9**
comp=Z,1.0nm,0.6s,baz=31,slow=5.4,SNR=9.9
CONA Conrad Observa 79.07 333 *eP* **P** **21 54 00.5 +0.6**
comp=Z,5.3nm,1.0s
BZS Buzias 79.09 328 ⇑P **P** **21 54 00.1 +0.2**
MOA Molln 79.64 333 *ePcP* **P** **21 54 04.0 +1.1**
comp=Z,6.0nm,1.0s
SOKA Soboth 80.44 332 *eP* **P** **21 54 07.3 0.0**
comp=Z,16nm,1.7s
KBA Koelnbreinsper 80.61 334 *ePcP* **P** **21 54 09.0 +0.7**
comp=Z,13nm,1.2s
VTS Vitosha 81.01 325 P **P** **21 54 10.5 0.0**
VTS pmax pmax
comp=Z,8.0nm,0.8s
VTS Vitosha 81.01 325 ⇑P **P** **21 54 10.8 +0.3**
VTS Vitosha 81.01 325 P **P** **21 54 10.5 0.0**
VTS IAmb IAmb 21 54 12.6
comp=Z,7.7nm,0.8s
MOTA Moosalm 81.04 335 *ePcP* **P** **21 54 10.9 +0.3**
comp=Z,10nm,0.9s
SQTA Sankt Quirin 81.12 335 *ePcP* **P** **21 54 11.9 +0.9**
comp=Z,7.2nm,1.1s
FETA Feichten 81.44 335 *ePcP* **P** **21 54 13.5 +0.7**
comp=Z,6.7nm,1.1s
DAVA Danuels 81.44 336 *ePcP* **P** **21 54 13.2 +0.4**
comp=Z,10nm,1.3s
PPT Papeete 81.72 126 LR LR 22 25 07.4
comp=Z,49nm,18.5s,baz=58,slow=32
CSS Mathiatis 82.78 314 P **P** **21 54 20.3 +0.5**
CSS IAmb IAmb 21 54 21.8
comp=Z,4.7nm,0.8s
NRCA Norcia 84.48 332 P **P** **21 54 28.3 -0.1**
PLCA Paso Flores 147.92 96 PKPbc **PKPbc** **22 01 41.4 +0.9**
comp=Z,1.3nm,0.8s,baz=341,slow=23,SNR=3.8
VNA1 Neumayer--Stat 154.06 194 PKPdf **PKPdf** **22 01 46.1 +0.3**

*NEIC **24** 21:52:15.8±2.8, 14.˚53S±0.˚07×167.˚65E±0.˚09, h154km±8km, mb4.3/12, Error ellipse: s-maj=14.5km s-min=8.9km az=57.0*

*IDC **24** 21:52:18.9±4.0, 14.˚60S×167.˚38E, h170km±34km, mb3.6/10, mb1 3.7/11, mb1mx3.5/36, mbtmp4.0/11, Error ellipse: s-maj=26.3km s-min=22.8km az=63.0*

ISC 24 21:52:17.2±0.6, **14.˚59S**±0.˚08×**167.˚64E**±0.˚08, **h170**km, **n30, σ1$34/29, mb3.9/13, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.53**	**189**	P	**Pn**	**21 54 06.1**	**+1.7**
DZM	2.1nm,0.3s,baz=303,slow=22,SNR=19			S	**Sn**	**21 55 29.8**	**+0.8**
	0.4nm,0.3s,baz=118,slow=18,SNR=1.3						
DZM	**Mont Dzumac**	**7.53**	**189**		**Pn**	**21 54 04.6**	**+0.2**
NOUC	**Port Laguerre**	**7.58**	**189**	Pn	**Pn**	**21 54 05.2**	**+0.2**
HNR	**Honiara**	**9.11**	**303**	Pn	**Pn**	**21 54 23.7**	**-1.5**
MSVF	**Nonsavu**	**10.48**	**109**	Pn	**Pn**	**21 54 42.2**	**-1.0**
EIDS	**Eidsvold**	**18.88**	**233**	P	**P**	**21 56 24.6**	**-0.1**
OUZ	**Omahuta**	**21.23**	**166**	P	**P**	**21 56 45.7**	**-4.1**
OUZ				IAmb	IAmb	21 56 51.7	
	comp=Z,10nm,1.1s						
KNTN	**Kanton**	**23.50**	**62**	P	**P**	**21 57 11.4**	**-0.6**
STKA	**Stephens Creek**	**29.36**	**230**	P	**P**	**21 58 05.0**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=44,slow=8.9,SNR=11						
STKA	**Stephens Creek**	**29.36**	**230**	IAmb	IAmb	21 58 05.6	
	comp=Z,1.5nm,1.1s						
WRA	**Warramunga Arr**	**32.21**	**256**	P	**P**	**21 58 28.1**	**-1.4**
	comp=Z,0.3nm,0.5s,baz=87,slow=9.2,SNR=6.2						
WRA				PcP	**PcP**	**22 01 15.1**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=80,slow=3.5,SNR=2.9						
ASAR	**Alice Springs**	**33.06**	**249**	P	**P**	**21 58 35.7**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=78,slow=8.9,SNR=20						
ASAR				PcP	**PcP**	**22 01 17.7**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=322,slow=31,SNR=3.5						
KNRA	**Kununurra**	**37.51**	**263**	P	**P**	**21 59 14.4**	**-0.6**
KNRA				IAmb	IAmb	21 59 18.1	
	comp=Z,10.0nm,1.1s						
FORT	**Forrest**	**39.68**	**239**	P	**P**	**21 59 32.3**	**-0.6**
FITZ	**Fitzroy Crossi**	**40.40**	**259**	P	**P**	**21 59 37.8**	**-1.1**
FITZ				IAmb	IAmb	21 59 46.8	
	comp=Z,2.4nm,0.9s						
NWAO	**Narrogin (SRO)**	**49.13**	**239**	P	**P**	**22 00 47.2**	**-0.6**
NWAO				IAmb	IAmb	22 01 05.8	
	comp=Z,17nm,1.1s						
NWAO	**Narrogin (SRO)**	**49.13**	**239**	P	**P**	**22 00 47.1**	**-0.7**
NWAO				IAmb	IAmb	22 01 05.8	
	comp=Z,14nm,1.1s						
AIN	**Ainahou**	**49.58**	**48**	P	**P**	**22 00 50.3**	**-1.2**
MORW	**Morawa**	**49.65**	**244**	P	**P**	**22 00 50.8**	**-1.1**
MORW				IAmb	IAmb	22 01 08.2	
	comp=Z,7.5nm,1.1s						
VNDA	**Vanda**	**63.01**	**181**	P	**P**	**22 02 27.0**	**+1.5**
	comp=Z,5.2nm,1.1s,baz=13,slow=7.8,SNR=4.7						
CMAR	**Chiang Mai Arr**	**75.22**	**294**	P	**P**	**22 03 42.4**	**+0.7**
	comp=Z,0.3nm,0.4s,baz=137,slow=5.2,SNR=4.5						
QSPA	**South Pole Qui**	**75.44**	**180**	P	**P**	**22 03 43.7**	**+1.4**
	comp=Z,1.3nm,0.5s,baz=310,slow=1.2,SNR=6.8						
SONM	**Songino Array**	**82.60**	**323**	P	**P**	**22 04 23.2**	**+1.8**
	comp=Z,0.3nm,0.5s,baz=105,slow=4.9,SNR=3.6						
SONM	**Songino Array**	**82.60**	**323**	IAmb	IAmb	22 04 23.8	
	comp=Z,1.1nm,1.2s						
ILAR	**Eielson Array**	**86.28**	**18**	P	**P**	**22 04 40.5**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=236,slow=4.9,SNR=6.9						
QLMT	**Earthquake Lak**	**93.85**	**45**	P	**P**	**22 05 16.0**	**+0.4**
MKAR	**Makanchi Array**	**97.35**	**316**	P	Pdif	22 05 32.4	+1.2
	comp=Z,0.6nm,0.7s,baz=93,slow=6.1,SNR=7.7						
ZALV	**Zalesovo Beam**	**97.49**	**324**	P	Pdif	22 05 32.6	+1.0
	comp=Z,0.4nm,0.6s,baz=92,slow=3.5,SNR=2.5						
ARCES	**ARCESS Array B 120.20 346**			PKP	**PKiKP**	**22 10 48.9**	**+1.4**
	comp=Z,2.5nm,1.0s,baz=19,slow=4.1,SNR=5.0						
TORD	**Torodi Ar. Bea 166.28 266**			PKPab	**PKPab**	**22 13 05.4**	**+0.2**
	comp=Z,0.9nm,0.9s,baz=72,slow=4.8,SNR=4.0						

*IDC **24** 22:08:47.8±0.7, 38.˚41N×22.˚02E, h0km, mb4.0/18, mb1 4.1/26, mb1mx3.9/45, mbtmp3.9/26, ML3.2/8, MS3.4/8, Ms1 3.4/8, ms1mx3.0/47, Error ellipse: s-maj=15.4km s-min=12.3km az=148.0*

*ISK **24** 22:08:47.3, 38.˚33N×22.˚10E, h7km, ML3.7/15*

*MOS **24** 22:08:47.9±1.1, 38.˚34N×22.˚03E, h12km, mb4.4/5, Error ellipse: s-maj=7.0km s-min=4.8km az=84.7*

*MED_RC **24** 22:08:48.0±1.2, 38.˚30N×22.˚01E, h10km, MW4.2/8, Moment Tensor Solution. Mantle waves: s8,c9; Duration: 1s0 Moment tensor: Scale 10^{15}Nm; M_{rr}-2.37±.25; $M_{\theta\theta}$1.89±.23; $M_{\phi\phi}$0.48±.33; $M_{r\theta}$0.48±.98; $M_{r\phi}$-1.12±.22; $M_{\theta\phi}$-1.61±.86; Best double couple: M_o2.95000×10^{15} NP1:ϕ_s100.00000°,δ35.00000°,λ-125.00000°. NP2: ϕ_s321.00000°,δ62.00000°,λ-68.00000°. Principal axes: T 2.8100, Plg14.0000°, Azm35.0000°; N 0.2800, Plg19.0000°, Azm130.0000°; P -3.0900, Plg66.0000°, Azm271.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*

*ATH **24** 22:08:48.4, 38.˚33N×22.˚01E, h11km±1km, ML3.9/18 Error ellipse: s-maj=1.2km s-min=0.5km az=327.0*

*THE **24** 22:08:48.8, 38.˚33N×21.˚99E, h3km, ML3.8/27, Error ellipse: s-maj=0.7km s-min=0.3km az=302.0*

*NEIC **24** 22:08:48.6±1.9, 38.˚27N±0.˚05×22.˚06E±0.˚07, h5km±4km, Error ellipse: s-maj=8.8km s-min=6.8km az=48.0*

ISC 24 22:08:48.8±0.7, **38.˚33N**±0.˚01×**22.˚00E**±0.˚01, **h7**km±4km, **n361, σ1$10/421, mb4.4/39, MS3.5/5, 12C-13D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TRIZ	**Trizonia**	**0.07**	**58**	P	**Pg**	**22 08 50.5**	**-0.1**
TRIZ				S	**Sg**	**22 08 51.9**	**0.0**
	346μm,0.4s						
TRIZ	**Trizonia**	**0.07**	**58**	P	**Pg**	**22 08 50.5**	**-0.1**
TRIZ				S	**Sg**	**22 08 51.9**	**0.0**
LAKA	**Lakka**	**0.09**	**191**	P	**Pg**	**22 08 51.0**	**+0.1**
LAKA				S	**Sg**	**22 08 52.3**	**-0.2**
	37μm,0.6s						
LAKA	**Lakka**	**0.09**	**191**	P	**Pg**	**22 08 51.1**	**+0.1**
LAKA				S	**Sg**	**22 08 52.9**	**+0.4**
LAKA				AML	AML	22 08 57.5	
	comp=E,72721μm,0.6s						
LAKA				AML	AML	22 08 59.6	
	comp=N,80889μm,0.6s						
SERG	**Sergoula**	**0.09**	**28**	P	**Pg**	**22 08 50.9**	**-0.2**
SERG				S	**Sg**	**22 08 52.7**	**+0.1**
	comp=N,191μm,0.3s						
SERG	**Sergoula**	**0.09**	**28**	P	**Pg**	**22 08 50.9**	**-0.2**
SERG				S	**Sg**	**22 08 52.6**	**+0.1**
SERG				AML	AML	22 08 52.9	
SERG				AML	AML	22 08 53.0	
ALIK	**Aliki, Aigiali**	**0.11**	**128**	P	**Pg**	**22 08 51.7**	**+0.4**
EFP	**Efpalio**	**0.12**	**322**	P	**Pg**	**22 08 51.3**	**-0.2**
EFP				S	**Sg**	**22 08 53.4**	**+0.1**
	comp=N,212μm,0.3s						
EFP	**Efpalio**	**0.12**	**322**	P	**Pg**	**22 08 51.3**	**-0.2**
EFP				S	**Sg**	**22 08 53.4**	**+0.1**
EFP				AML	AML	22 08 53.9	
EFP				AML	AML	22 08 54.5	
KALE	**Kalithea**	**0.12**	**61**	P	**Pg**	**22 08 51.4**	**-0.1**
KALE				S	**Sg**	**22 08 53.9**	**+0.4**
	comp=N,91μm,0.6s						
KALE	**Kalithea**	**0.12**	**61**	P	**Pg**	**22 08 51.5**	**-0.1**
KALE				S	**Sg**	**22 08 53.4**	**0.0**
KALE				AML	AML	22 08 54.5	
KALE				AML	AML	22 08 55.7	
UPR	**University Cam**	**0.17**	**255**	P	**Pg**	**22 08 52.5**	**+0.1**
UPR				S	**Sg**	**22 08 55.0**	**+0.2**
ANX	**Ano Chora**	**0.27**	**347**	P	**Pg**	**22 08 53.8**	**-0.4**
ANX				S	**Sg**	**22 08 58.1**	**+0.3**
	comp=N,117μm,0.5s						
ANX	**Ano Chora**	**0.27**	**347**	P	**Pg**	**22 08 53.9**	**-0.4**
ANX				S	**Sg**	**22 08 58.1**	**+0.3**
ANX				AML	AML	22 08 58.5	
ANX				AML	AML	22 08 58.8	
KLV	**Kalavryta, Ach**	**0.31**	**157**	P	**Pg**	**22 08 54.0**	**-0.1**
KLV				S	**Sg**	**22 08 59.5**	**+0.6**
	comp=N,6μm,0.7s						
KLV	**Kalavryta, Ach**	**0.31**	**157**	P	**Pg**	**22 08 54.8**	**-0.1**
KLV				S	**Sg**	**22 08 59.6**	**+0.6**
KLV				AML	AML	22 09 05.0	
	comp=E,11980μm,0.5s						
KLV				AML	AML	22 09 06.7	
	comp=N,11932μm,0.7s						
DLFA	**Delphi**	**0.42**	**69**	P	**Pg**	**22 08 56.2**	**-0.7**
DLFA				S	**Sg**	**22 09 02.6**	**+0.2**
DRO	**Drossia**	**0.44**	**211**	P	**Pg**	**22 08 57.1**	**-0.2**
DRO				S	**Sg**	**22 09 03.3**	**+0.2**
	comp=N,32μm,0.4s						
DRO	**Drossia**	**0.44**	**211**	P	**Pg**	**22 08 57.2**	**-0.1**
DRO				S	**Sg**	**22 09 04.0**	**+0.9**
DRO				AML	AML	22 09 13.4	
	comp=E,77087μm,0.6s						
DRO				AML	AML	22 09 14.0	
	comp=N,52532μm,0.4s						
PVO	**Paravola**	**0.47**	**308**	P	**Pg**	**22 08 57.6**	**-0.3**
PVO				S	**Sg**	**22 09 04.3**	**+0.2**
	comp=N,17μm,0.4s						
PVO	**Paravola**	**0.47**	**308**	P	**Pg**	**22 08 58.1**	**+0.2**
PVO				S	**Sg**	**22 09 04.3**	**+0.2**
PVO				AML	AML	22 09 09.7	
	comp=E,40379μm,0.4s						
PVO				AML	AML	22 09 12.3	
	comp=N,29476μm,0.7s						
RLS	**Riolos of Patr**	**0.50**	**237**	P	**Pg**	**22 08 58.2**	**-0.3**
RLS				S	**Sg**	**22 09 05.4**	**+0.4**
	comp=N,17μm,0.3s						
RLS	**Riolos of Patr**	**0.50**	**237**	P	**Pg**	**22 08 58.5**	**0.0**
RLS				S	**Sg**	**22 09 05.5**	**+0.5**
RLS				AML	AML	22 09 08.2	
	comp=E,29562μm,0.2s						
RLS				AML	AML	22 09 08.6	
	comp=N,40223μm,0.3s						
EVR	**Evrytania**	**0.60**	**346**	P	**Pg**	**22 08 59.9**	**-0.5**
EVR				S	**Sg**	**22 09 08.8**	**+0.4**
	comp=N,18μm,0.5s						
EVR	**Evrytania**	**0.60**	**346**	P	**Pg**	**22 08 60.0**	**-0.5**
EVR				S	**Sg**	**22 09 09.4**	**+0.9**
EVR				AML	AML	22 09 12.2	
	comp=E,47074μm,0.5s						
EVR				AML	AML	22 09 12.8	
	comp=N,25496μm,0.5s						
AXAR	**Agios Charalam**	**0.68**	**50**	P	**Pg**	**22 09 01.3**	**-0.6**
AXAR				S	**Sg**	**22 09 10.4**	**-0.3**
AXAR				AML	AML	22 09 14.9	
	comp=E,40135μm,0.3s						
AXAR				AML	AML	22 09 17.6	
	comp=N,52528μm,0.8s						
MAKR	**Makrakomi, Fth**	**0.69**	**9**	P	**Pg**	**22 09 01.6**	**-0.5**
MAKR				S	**Sg**	**22 09 12.0**	**+0.9**
	comp=N,21μm,0.5s						
MAKR	**Makrakomi, Fth**	**0.69**	**9**	P	**Pg**	**22 09 01.8**	**-0.3**
MAKR				S	**Sg**	**22 09 11.9**	**+0.9**
MAKR				AML	AML	22 09 15.1	
	comp=N,43708μm,0.7s						
MAKR				AML	AML	22 09 15.1	
	comp=E,40937μm,0.4s						
PROD	**Prodromos**	**0.71**	**95**	P	**Pg**	**22 09 02.1**	**-0.3**
AGG	**Agios Georgios**	**0.74**	**20**	P	**Pg**	**22 09 01.8**	**-1.3**
AGG				S	**Sg**	**22 09 13.1**	**+0.5**
	comp=E,5μm,0.6s						
AGG	**Agios Georgios**	**0.74**	**20**	P	**Pg**	**22 09 01.7**	**-1.3**
AGG	**Agios Georgios**	**0.74**	**20**	P	**Pg**	**22 09 01.9**	**-1.1**
AGG				AML	AML	22 09 14.6	
	comp=E,9

AGG				AML	AML	22 09 15.8	
	comp=N,8996µm,0.3s						
AGG	**Agios Georgios**	**0.74**	**20**	PG	**Pg**	**22 09 01.6**	**-1.4**
AGG				SG	**Sg**	**22 09 12.0**	**-0.6**
AGG	**Agios Georgios**	**0.74**	**20**		**Pg**	**22 09 01.7**	**-1.4**
LTK	**Loutraki**	**0.82**	**112**	P	**Pb**	**22 09 04.2**	**-1.2**
LTK	**Loutraki**	**0.82**	**112**	P	**Pb**	**22 09 04.2**	**-1.2**
AMT	**Artemida-Makis**	**0.83**	**196**	P	Pb	22 09 03.8	-1.7
AMT				S	**Sb**	**22 09 16.1**	**-0.8**
	comp=N,10µm,0.5s						
AMT	**Artemida-Makis**	**0.83**	**196**	P	**Pb**	**22 09 04.6**	**-1.0**
AMT				AML	AML	22 09 22.8	
	comp=N,20432µm,0.6s						
AMT				AML	AML	22 09 26.7	
	comp=E,16782µm,0.5s						
LOUT	**Loutraki**	**0.84**	**114**	P	**Pb**	**22 09 04.6**	**-1.1**
LOUT	**Loutraki**	**0.84**	**114**	P	**Pb**	**22 09 04.5**	**-1.1**
LKR	**Lokris**	**0.85**	**67**	P	**Pb**	**22 09 04.7**	**-1.1**
LKR				S	**Sb**	**22 09 17.6**	**+0.2**
	comp=E,3µm,0.6s						
LKR	**Lokris**	**0.85**	**67**	P	**Pb**	**22 09 04.4**	**-1.4**
KFL	**Anninata**	**0.98**	**257**	P	**Pb**	**22 09 07.0**	**-1.1**
KFL				S	**Sb**	**22 09 20.8**	**-0.4**
	comp=E,11µm,0.7s						
KFL	**Anninata**	**0.98**	**257**	P	**Pb**	**22 09 07.3**	**-0.8**
MGNA	**Meganis**	**1.00**	**289**	P	**Pb**	**22 09 07.2**	**-1.3**
VLX	**Vlachokerasia**	**1.00**	**163**	P	**Pb**	**22 09 07.1**	**-1.4**
VLX				S	**Sb**	**22 09 21.9**	**-0.1**
	comp=E,5µm,0.7s						
VLX	**Vlachokerasia**	**1.00**	**163**	P	**Pb**	**22 09 07.1**	**-1.4**
VIL2	**Platees**	**1.00**	**96**	P	**Pb**	**22 09 08.4**	**-0.1**
VILL	**Villia**	**1.05**	**99**	P	**Pb**	**22 09 08.3**	**-0.9**
VILL				S	**Sb**	**22 09 24.0**	**+0.8**
	comp=E,6µm,0.8s						
EVGI	**Lefkada island**	**1.09**	**286**	P	**Pb**	**22 09 08.4**	**-1.6**
EVGI	**Lefkada island**	**1.09**	**286**	P	**Pb**	**22 09 08.7**	**-1.4**
VLS	**Valsamata**	**1.12**	**263**	P	**Pb**	**22 09 09.1**	**-1.4**
VLS				S	**Sb**	**22 09 26.0**	**+0.7**
	comp=E,5µm,0.3s						
VLS	**Valsamata**	**1.12**	**263**	P	**Pb**	**22 09 09.2**	**-1.4**
VLS				S	**Sb**	**22 09 24.5**	**-0.8**
VLS				AML	AML	22 09 27.0	
	comp=N,10800µm,0.5s						
VLS				AML	AML	22 09 27.6	
	comp=E,11700µm,0.3s						
LKD2	**Lefkada island**	**1.15**	**294**	P	**Pn**	**22 09 09.9**	**-1.4**
LKD2	**Lefkada island**	**1.15**	**294**	P	**Pn**	**22 09 10.0**	**-1.3**
VLMS	**Volimes, Zakyn**	**1.15**	**247**	P	**Pn**	**22 09 10.0**	**-1.3**
ITM	**Ithomi**	**1.15**	**183**	P	**Pn**	**22 09 09.6**	**-1.7**
ITM	**Ithomi**	**1.15**	**183**	P	**Pn**	**22 09 09.8**	**-1.5**
ITM	**Ithomi**	**1.15**	**183**	PN	**Pn**	**22 09 09.6**	**-1.7**
ITM	**Ithomi**	**1.15**	**183**		**Pn**	**22 09 09.6**	**-1.7**
TSLK	**Tsoukalades, L**	**1.16**	**296**	P	**Pn**	**22 09 10.8**	**-0.7**
TSLK				S	**Sg**	**22 09 28.0**	**+1.7**
	comp=E,5µm,0.7s						
TSLK	**Tsoukalades, L**	**1.16**	**296**	P	**Pn**	**22 09 10.8**	**-0.7**
THL	**Klokotos Trika**	**1.23**	**1**	P	**Pn**	**22 09 11.2**	**-1.2**
THL				S	**Sg**	**22 09 30.1**	**+1.6**
	comp=E,2µm,0.6s						
THL	**Klokotos Trika**	**1.23**	**1**	P	**Pn**	**22 09 11.2**	**-1.2**
THL				S	**Sb**	**22 09 28.2**	**-0.3**
THL				AML	AML	22 09 32.2	
	comp=N,3849µm,0.5s						
THL				AML	AML	22 09 32.6	
	comp=E,5300µm,0.5s						
KLMT	**Kalamata**	**1.27**	**178**	P	**Pn**	**22 09 12.3**	**-0.6**
KLMT				S	**Sg**	**22 09 31.1**	**+1.6**
	comp=E,2µm,0.9s						
DID	**Didima**	**1.28**	**130**	P	**Pn**	**22 09 11.8**	**-1.3**
DID				S	**Sg**	**22 09 31.6**	**+1.7**
	comp=E,2µm,0.6s						
DID	**Didima**	**1.28**	**130**	P	**Pn**	**22 09 13.2**	**+0.1**
MRKA	**Markates**	**1.30**	**73**	P	**Pn**	**22 09 12.4**	**-1.0**
MRKA	**Markates**	**1.30**	**73**	P	**Pn**	**22 09 12.6**	**-0.8**
NEO	**Neokhori**	**1.36**	**44**	P	**Pn**	**22 09 13.4**	**-0.9**
NEO				S	**Sg**	**22 09 33.5**	**+0.8**
	comp=E,2µm,0.4s						
NEO	**Neokhori**	**1.36**	**44**	P	**Pn**	**22 09 14.0**	**-0.3**
LRSO	**Larissa Observ**	**1.37**	**13**	P	**Pn**	**22 09 14.6**	**+0.2**
LRSO	**Larissa Observ**	**1.37**	**13**	P	**Pn**	**22 09 14.7**	**+0.4**
XOR	**Xorichti**	**1.39**	**42**	P	**Pn**	**22 09 13.7**	**-0.9**
XOR	**Xorichti**	**1.39**	**42**	P	**Pn**	**22 09 14.2**	**-0.5**
ATH	**Athens Observa**	**1.40**	**104**	P	**Pn**	**22 09 14.7**	**0.0**
ATH				S	**Sn**	**22 09 32.9**	**-0.5**
ATH				AML	AML	22 09 38.6	
	comp=E,4742µm,0.8s						
ATH				AML	AML	22 09 47.2	
	comp=N,3412µm,0.5s						
SKIA	**Skiathos**	**1.42**	**53**	P	**Pn**	**22 09 14.7**	**-0.3**
SKIA	**Skiathos**	**1.42**	**53**	P	**Pn**	**22 09 14.7**	**-0.3**
PYL	**PYLOS**	**1.45**	**188**	P	**Pn**	**22 09 14.6**	**-0.8**
PYL				S	**Sn**	**22 09 34.8**	**+0.2**
	comp=N,2µm,0.9s						
PYL	**PYLOS**	**1.45**	**188**	P	**Pn**	**22 09 14.9**	**-0.5**
ATHU	**Athens Univers**	**1.45**	**104**	P	**Pn**	**22 09 15.4**	**-0.1**
ATHU				S	**Sb**	**22 09 35.4**	**+0.6**
ATHU	**Athens Univers**	**1.45**	**104**	P	**Pn**	**22 09 15.3**	**-0.2**
VLY	**Voula,Athens**	**1.49**	**108**	P	**Pn**	**22 09 15.8**	**-0.2**
VLY	**Voula,Athens**	**1.49**	**108**	P	**Pn**	**22 09 16.1**	**+0.1**
PTL	**Penteli**	**1.50**	**100**	P	**Pn**	**22 09 16.0**	**-0.1**
PTL				S	**Sb**	**22 09 36.9**	**+0.8**
	comp=N,1µm,0.9s						
PTL	**Penteli**	**1.50**	**100**	P	**Pn**	**22 09 15.9**	**-0.1**
PTL				S	**Sn**	**22 09 35.8**	**0.0**
PTL				AML	AML	22 09 40.0	
	comp=E,2277µm,0.9s						
PTL				AML	AML	22 09 51.7	
	comp=N,2252µm,0.8s						
YDRA	**Hydra**	**1.52**	**130**	P	**Pn**	**22 09 16.9**	**+0.5**
EREA	**Eretria**	**1.52**	**86**	P	**Pn**	**22 09 16.4**	**0.0**
EREA	**Eretria**	**1.52**	**86**	P	**Pn**	**22 09 17.1**	**+0.7**
DYR	**Agios Nikonas**	**1.59**	**170**	P	**Pn**	**22 09 17.1**	**-0.2**
DYR	**Agios Nikonas**	**1.59**	**170**	P	**Pn**	**22 09 17.1**	**-0.2**
JAN	**Janina**	**1.60**	**326**	P	**Pb**	**22 09 19.3**	**+0.6**
JAN	**Janina**	**1.60**	**326**	P	**Pb**	**22 09 19.3**	**+0.6**
AOS	**Alonnisos**	**1.69**	**60**	PN	**Pn**	**22 09 17.2**	**-1.5**
KPRO	**Kipourio**	**1.70**	**343**	P	**Pn**	**22 09 20.1**	**+1.2**
KPRO	**Kipourio**	**1.70**	**343**	P	**Pb**	**22 09 20.6**	**+0.3**
IGT	**Igoumenitsa**	**1.77**	**313**	P	**Pb**	**22 09 22.4**	**+0.8**
IGT	**Igoumenitsa**	**1.77**	**313**	P	**Pb**	**22 09 21.7**	**+0.2**
VLI	**Veliai**	**1.77**	**155**	P	**Pn**	**22 09 20.3**	**+0.4**
LIT	**Litokhoron**	**1.81**	**12**	P	**Pn**	**22 09 19.9**	**-0.5**
LIT				S	**Sn**	**22 09 44.0**	**+0.4**
	comp=N,2µm,0.8s						
LIT	**Litokhoron**	**1.81**	**12**	P	**Pn**	**22 09 20.2**	**-0.2**
LIT	**Litokhoron**	**1.81**	**12**	P	**Pn**	**22 09 20.2**	**-0.2**
LIT	**Litokhoron**	**1.81**	**12**		**Pn**	**22 09 20.2**	**-0.2**
KARY	**Karystos**	**1.94**	**98**	P	**Pn**	**22 09 23.4**	**+1.2**
KZN	**Kozani**	**1.98**	**355**	P	**Pn**	**22 09 23.4**	**+0.6**
KZN	**Kozani**	**1.98**	**355**	P	**Pn**	**22 09 23.7**	**+0.9**
KTI	**Kastanea**	**2.06**	**2**	P	**Pn**	**22 09 24.9**	**+0.9**
NEST	**Nestorio**	**2.21**	**341**	P	**Pb**	**22 09 29.8**	**+0.7**
KTHR	**Kythira**	**2.21**	**159**	P	**Pn**	**22 09 28.0**	**+2.1**
KTHA	**Kythira Island**	**2.24**	**157**	P	**Pn**	**22 09 28.1**	**+1.9**
KTHA	**Kythira Island**	**2.24**	**157**	PN	**Pn**	**22 09 25.8**	**-0.4**
HORT	**Hortiatis**	**2.42**	**20**	PN	**Pn**	**22 09 28.3**	**-0.5**
TPE	**Tepelena**	**2.50**	**322**	P	**Pn**	**22 09 32.1**	**+2.3**
FNA	**Florina**	**2.50**	**349**	P	**Pn**	**22 09 30.7**	**+0.8**
FNA	**Florina**	**2.50**	**349**	P	**Pn**	**22 09 31.2**	**+1.3**
FNA	**Florina**	**2.50**	**349**	P	**Pn**	**22 09 31.1**	**+1.2**
FNA	**Florina**	**2.50**	**349**	PN	**Pn**	**22 09 29.7**	**-0.2**
FNA	**Florina**	**2.50**	**349**		**Pn**	**22 09 31.2**	**+1.3**
GRG	**Griva**	**2.64**	**7**	P	**Pn**	**22 09 33.1**	**+1.3**
GRG	**Griva**	**2.64**	**7**	PN	**Pn**	**22 09 31.4**	**-0.4**
SOH	**Sokhos**	**2.70**	**22**	P	**Pn**	**22 09 32.9**	**+0.2**
KNT	**Kendrikon**	**2.91**	**13**	P	**Pn**	**22 09 35.8**	**+0.3**
KNT	**Kendrikon**	**2.91**	**13**	PN	**Pn**	**22 09 35.6**	**+0.1**
OHR	**Ohrid**	**2.93**	**342**	*i* Pn	**Pb**	**22 09 39.2**	**-2.1**
VAY	**Valandovo**	**3.02**	**8**	*i* Pn	**Pn**	**22 09 37.4**	**+0.4**
SRS	**Serrai**	**3.04**	**23**	P	**Pn**	**22 09 37.0**	**-0.3**
APE	**Apeiranthos**	**3.07**	**113**	⇑*e*P	**Pn**	**22 09 38.6**	**+0.9**
APE	**Apeiranthos**	**3.07**	**113**	P	**Pn**	**22 09 38.3**	**+0.6**
APE	**Apeiranthos**	**3.07**	**113**	⇓P	**Pn**	**22 09 38.9**	**+1.2**
APE	**Apeiranthos**	**3.07**	**113**	PN	**Pn**	**22 09 37.0**	**-0.7**
RODP	**Rodopos**	**3.10**	**152**	PN	**Pn**	**22 09 37.7**	**-0.4**
SIGR	**SIGRI**	**3.14**	**73**	PN	**Pn**	**22 09 37.7**	**-0.9**
CHOS	**Chios island**	**3.19**	**88**	PN	**Pn**	**22 09 38.6**	**-0.8**
SCTE	**Santa Cesarea**	**3.25**	**303**	Pn	**Pn**	**22 09 41.3**	**+1.2**
IMMV	**Iera Moni Meta**	**3.27**	**150**	PN	**Pn**	**22 09 40.4**	**-0.1**
STIP	**Stip**	**3.36**	**2**	*i* Pn	**Pn**	**22 09 43.7**	**+2.0**
KNDR	**Palaiochora Ch**	**3.37**	**156**	PN	**Pn**	**22 09 41.5**	**-0.3**
SANT	**Santorini**	**3.38**	**124**	Pn	**Pn**	**22 09 42.2**	**+0.2**
TIR	**Tirane**	**3.43**	**332**	P	**Pn**	**22 09 44.9**	**+2.2**
TIR	**Tirane**	**3.43**	**332**	⇓P	**Pn**	**22 09 44.9**	**+2.2**
TIR	**Tirane**	**3.43**	**332**		**Pn**	**22 09 44.9**	**+2.2**
BOZC	**Bozcaada**	**3.50**	**63**	PN	**Pn**	**22 09 42.8**	**-0.7**
GADA	**Gvkgeada**	**3.55**	**57**	PN	**Pn**	**22 09 43.5**	**-0.8**
PHP	**Peshkopia**	**3.56**	**341**	P	**Pn**	**22 09 47.0**	**+2.5**
SKO	**Skopje**	**3.66**	**353**	*i* Pn	**Pn**	**22 09 49.0**	**+3.1**
EZN	**Ezine**	**3.68**	**65**	PN	**Pn**	**22 09 45.4**	**-0.7**
IDI	**Anoyia**	**3.82**	**142**	Pn	**Pn**	**22 09 48.5**	**+0.4**
	comp=N,2.6nm,0.3s,baz=318,slow=15,SNR=13						
IDI				Sn	**Sn**	**22 10 32.0**	**-1.3**
	comp=N,6.0nm,0.3s,baz=113,slow=22,SNR=2.7						
IDI	**Anoyia**	**3.82**	**142**	PN	**Pn**	**22 09 47.7**	**-0.4**
HRKL	**Herakleio**	**3.91**	**140**	PN	**Pn**	**22 09 48.9**	**-0.3**
DKL	**Dikili**	**3.91**	**78**	PN	**Pn**	**22 09 48.4**	**-0.8**
RDO	**Rodhopi**	**3.92**	**43**	PN	**Pn**	**22 09 48.1**	**-1.2**
BLCB	**Balcova**	**3.96**	**88**	PN	**Pn**	**22 09 48.9**	**-1.1**
ENEZ	**Enez**	**4.01**	**52**	PN	**Pn**	**22 09 50.3**	**-0.3**
GELI	**Tayfur-Gelibol**	**4.04**	**58**	PN	**Pn**	**22 09 50.4**	**-0.6**
ALN	**Alexandroupoli**	**4.04**	**49**	P	**Pn**	**22 09 50.9**	**-0.1**
ALN	**Alexandroupoli**	**4.04**	**49**	PN	**Pn**	**22 09 50.9**	**-0.1**
ALN	**Alexandroupoli**	**4.04**	**49**	Pn	**Pn**	**22 09 50.9**	**-0.1**
GCAM	**G?zelcaml?**	**4.18**	**97**	PN	**Pn**	**22 09 52.8**	**-0.1**
TIP	**Timpagrande**	**4.18**	**283**	⇓P	**Pn**	**22 09 54.3**	**+1.2**
TIP	**Timpagrande**	**4.18**	**283**	⇓S	**Sn**	**22 10 44.3**	**+2.1**
TIP	**Timpagrande**	**4.18**	**283**		**Pn**	**22 09 54.1**	**+1.0**
ERIK	**Erikli-Kesan**	**4.20**	**55**	PN	**Pn**	**22 09 52.9**	**-0.3**
LPK	**Lapseki**	**4.22**	**60**	PN	**Pn**	**22 09 53.3**	**-0.1**
KDZ	**Kurdzhali**	**4.23**	**37**	PN	**Pn**	**22 09 52.2**	**-1.4**
PLD	**Plovdiv**	**4.30**	**28**	PN	**Pn**	**22 09 54.8**	**+0.2**
VTS	**Vitosha**	**4.39**	**12**	P	**Pn**	**22 09 56.8**	**+0.9**
VTS	**Vitosha**	**4.39**	**12**	⇓P	**Pn**	**22 09 57.2**	**+1.3**
VTS	**Vitosha**	**4.39**	**12**	⇓S	**Sn**	**22 10 47.2**	**-0.1**
VTS	**Vitosha**	**4.39**	**12**		**Pn**	**22 09 56.8**	**+0.9**
MASS	**Massafra**	**4.41**	**303**	*e*Pn	**Pn**	**22 09 56.6**	**+0.6**
DRME	**Dracevica, Mon**	**4.41**	**332**	*e*Pn	**Pn**	**22 09 57.2**	**+1.0**
UKOP	**Uzunkopru-Edir**	**4.54**	**50**	PN	**Pn**	**22 09 57.5**	**-0.3**
KRBG	**Karabiga-Canak**	**4.59**	**62**	PN	**Pn**	**22 09 58.5**	**-0.1**
PDG	**Podgorica**	**4.60**	**334**	⇓P	**Pn**	**22 10 00.2**	**+1.5**
PDG	**Podgorica**	**4.60**	**334**	⇑S	**Sn**	**22 10 53.6**	**+1.2**
PDG	**Podgorica**	**4.60**	**334**	*e*Pn	**Pn**	**22 09 59.7**	**+1.0**
PDG	**Podgorica**	**4.60**	**334**	Pn	**Pn**	**22 10 00.1**	**+1.4**
RKY	**Sarkoy-Tekirda**	**4.64**	**58**	PN	**Pn**	**22 09 58.7**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**4.66**	**93**	PN	**Pn**	**22 09 59.5**	**-0.2**
BALB	**Balikesir**	**4.76**	**72**	PN	**Pn**	**22 10 00.2**	**-0.8**
CEL	**Celeste**	**4.80**	**271**	Pn	**Pn**	**22 10 01.8**	**+0.2**
SG1	**Sgolgore (BA)**	**4.81**	**303**	*e*Pn	**Pn**	**22 10 02.3**	**+0.6**
BAI	**Bari**	**4.83**	**307**	*e*Pn	**Pn**	**22 10 02.6**	**+0.8**
KARP	**Karpathos**	**4.98**	**122**	Pn	**Pn**	**22 10 05.9**	**+1.9**
EDRB	**Edirne**	**5.06**	**45**	PN	**Pn**	**22 10 04.8**	**-0.2**
TREB	**Trebinje**	**5.19**	**329**	*e*Pn	**Pn**	**22 10 06.9**	**+0.1**
DBRK	**Dubrovnik**	**5.24**	**327**	*i* Pn	**Pn**	**22 10 07.5**	**+0.1**
DBRK				Sn	**Sn**	**22 11 08.2**	**+0.2**
BRY	**Bratogost**	**5.27**	**331**	*e*Pn	**Pn**	**22 10 06.5**	**-1.6**
ACER	**Acerenza**	**5.29**	**300**		**Pn**	**22 10 09.4**	**+1.2**
BLKB	**Belogradchik**	**5.31**	**5**	⇑S	**Sn**	**22 11 10.0**	**0.0**
UPM	**Unac-Piva**	**5.41**	**335**	*e*Pn	**Pn**	**22 10 12.3**	**+2.3**
PLVB	**Pleven**	**5.43**	**21**	⇑P	**Pn**	**22 10 10.5**	**+0.4**
ELND	**Elena**	**5.46**	**31**	⇑P	**Pn**	**22 10 11.4**	**+0.9**
STON	**Ston**	**5.59**	**326**	*e*Pn	**Pn**	**22 10 12.1**	**-0.2**
STON				Sn	**Sn**	**22 11 16.0**	**-0.8**
STON	**Ston**	**5.59**	**326**	*e*Pn	**Pn**	**22 10 11.6**	**-0.7**
RUDO	**Rudo**	**5.64**	**340**	*e*Pn	**Pn**	**22 10 12.7**	**-0.4**
BBLS	**Lazići**	**5.87**	**341**	*e*Pn	**Pn**	**22 10 16.5**	**+0.3**
SGRT	**San Giovanni R**	**5.89**	**307**	Pn	**Pn**	**22 10 17.0**	**+0.5**
DIVS	**Divibare**	**5.96**	**346**	*e*Pn	**Pn**	**22 10 18.7**	**+1.2**
VAE	**Valguarnera**	**6.06**	**264**	Pn	**Pn**	**22 10 19.6**	**+0.8**
	comp=N,0.3nm,0.3s,baz=90,slow=20,SNR=2.0						
VAE				Sn	**Sn**	**22 11 28.2**	**-0.3**
	comp=N,1.6nm,0.3s,baz=7.4,slow=21,SNR=1.7						
HAPS	**Han Pijesak,BI**	**6.19**	**339**	*e*Pn	**Pn**	**22 10 20.1**	**-0.6**
MAKA	**Makarska**	**6.23**	**324**	*e*Pn	**Pn**	**22 10 21.1**	**+0.1**
ELL	**Elmali**	**6.48**	**102**	P	**Pn**	**22 10 26.1**	**+1.4**
ELL	**Elmali**	**6.48**	**102**	Pn	**Pn**	**22 10 26.1**	**+1.4**
HERR	**Herculane**	**6.55**	**3**	⇓P	**Pn**	**22 10 26.1**	**+0.6**
ISP	**Isparta**	**6.74**	**92**	P	**Pn**	**22 10 28.2**	**0.0**
ISP	**Isparta**	**6.74**	**92**	Pn	**Pn**	**22 10 28.2**	**0.0**
CORL	**Corleone**	**6.87**	**269**	Pn	**Pn**	**22 10 31.0**	**+1.0**
CLTB	**Caltabellotta**	**6.98**	**267**	Pn	**Pn**	**22 10 32.2**	**+0.7**
FRGS	**Fruska Gora**	**7.02**	**347**	*e*Pn	**Pn**	**22 10 32.1**	**+0.2**
KIJV	**Kijevo**	**7.07**	**325**	*e*Pn	**Pn**	**22 10 33.4**	**+0.8**
MGRS	**Mrkonjic Grad**	**7.12**	**330**	*e*Pn	**Pn**	**22 10 32.8**	**-0.5**
ZIRJ	**Zirje**	**7.17**	**320**	*e*Pn	**Pn**	**22 10 33.6**	**-0.3**
BZS	**Buzias**	**7.29**	**358**	⇓P	**Pn**	**22 10 36.7**	**+1.1**
MORI	**Morici**	**7.29**	**321**	*i* Pn	**Pn**	**22 10 37.2**	**+1.6**
ARR	**Arges**	**7.30**	**15**	⇑P	**Pn**	**22 10 37.0**	**+1.1**
BLY	**Banja Luka**	**7.36**	**332**	⇑P	**Pn**	**22 10 37.6**	**+1.0**
BLY	**Banja Luka**	**7.36**	**332**	*e*Pn	**Pn**	**22 10 36.2**	**-0.4**
BLY	**Banja Luka**	**7.36**	**332**	Pn	**Pn**	**22 10 37.0**	**+0.4**
MDUB	**Mudurnu**	**7.44**	**70**	Pn	**Pn**	**22 10 40.3**	**+2.5**
VOIR		**7.46**	**17**	⇓P	**Pn**	**22 10 39.1**	**+1.1**
AQU	**L'Aquila**	**7.70**	**304**	P	**Pn**	**22 10 43.3**	**+2.0**
AQU	**L'Aquila**	**7.70**	**304**	*e*Pn	**Pn**	**22 10 41.8**	**+0.5**
AQU	**L'Aquila**	**7.70**	**304**	Pn	**Pn**	**22 10 43.3**	**+2.0**
DUGI	**Dugi Otok**	**7.71**	**319**	*e*Pn	**Pn**	**22 10 42.0**	**+0.7**
MLR	**Muntele Rosu**	**7.74**	**21**	P	**Pn**	**22 10 43.9**	**+2.0**
MLR	**Muntele Rosu**	**7.74**	**21**	Pn	**Pn**	**22 10 41.9**	**0.0**
	comp=N,0.1nm,0.3s,baz=194,slow=15,SNR=2.7						
MLR				LR	LR	22 14 15.5	
	comp=N,155nm,21.2s,baz=117,slow=43						
MLR	**Muntele Rosu**	**7.74**	**21**	⇑P	**Pn**	**22 10 42.8**	**+1.0**
MLR	**Muntele Rosu**	**7.74**	**21**		**Pn**	**22 10 43.9**	**+2.0**
UDBI	**Udbina**	**7.76**	**325**	*e*Pn	**Pn**	**22 10 43.1**	**+1.0**
TIRR	**Tirgusor**	**7.79**	**36**	P	**Pn**	**22 10 41.7**	**-0.8**
TIRR	**Tirgusor**	**7.79**	**36**	Pn	**Pn**	**22 10 41.7**	**-0.8**
NRCA	**Norcia**	**8.12**	**306**		**Pn**	**22 10 48.8**	**+1.7**
NVLJ	**Novalja**	**8.21**	**322**	*i* Pn	**Pn**	**22 10 47.9**	**-0.4**
MORH	**Mrgy, Hungar**	**8.26**	**344**	*e*Pn	**Pn**	**22 10 46.3**	**-2.7**
MORH	**Mrgy, Hungar**	**8.26**	**344**	*e*Pn	**Pn**	**22 10 46.9**	**-2.1**
PLOR	**Plostina**	**8.27**	**23**	⇓P	**Pn**	**22 10 51.0**	**+1.9**
VRI	**Vrincioaia**	**8.31**	**23**	⇑P	**Pn**	**22 10 50.8**	**+1.2**
ANTO	**Ankara**	**8.53**	**76**	P	**Pn**	**22 10 52.5**	**-0.3**
ANTO	**Ankara**	**8.53**	**76**	Pn	**Pn**	**22 10 52.5**	**-0.3**
CRES	**Cresnjev**	**8.93**	**329**	*e*Pn	**Pn**	**22 10 57.5**	**-0.6**
BR131	**Keskin Array S**	**9.16**	**78**	P	**Pn**	**22 11 03.0**	**+1.5**
BR131	**Keskin Array S**	**9.16**	**78**		**Pn**	**22 11 03.0**	**+1.5**
BRTR	**Keskin Array B**	**9.16**	**78**	Pn	**Pn**	**22 11 03.3**	**+1.8**
	comp=N,0.5nm,0.3s,baz=257,slow=13,SNR=11						
BRTR				LR	LR	22 14 41.7	
	comp=N,58nm,21.0s,baz=135,slow=39						
CEY	**Cerknica**	**9.30**	**325**	*e*Pn	**Pn**	**22 11 02.4**	**-0.8**
BURAR	**Bucovina Array**	**9.57**	**13**	⇑P	**Pn**	**22 11 08.3**	**+1.3**
BURAR	**Bucovina Array**	**9.57**	**13**	Pn	**Pn**	**22 11 08.7**	**+1.7**
OSSC	**Osservatorio P**	**9.65**	**306**	Pn	**Pn**	**22 11 09.5**	**+1.5**
CSS	**Mathiatis**	**9.70**	**107**	Pn	**Pn**	**22 11 08.6**	**-0.2**
PSZ	**Piszkesteto**	**9.71**	**352**	P	**Pn**	**22 11 11.1**	**+2.3**
PSZ	**Piszkesteto**	**9.71**	**352**	⇑P	**Pn**	**22 11 11.1**	**+2.3**
PSZ	**Piszkesteto**	**9.71**	**352**	Pn	**Pn**	**22 11 11.1**	**+2.3**
SOKA	**Soboth**	**9.80**	**331**	*e*Pn	**Pn**	**22 11 10.4**	**+0.3**
	comp=N,3.2nm,0.6s						
SOKA				*e*Sn	**Sn**	**22 12 57.2**	**-3.2**
	comp=N,3.3nm,0.7s						
OBKA	**Obir**	**9.85**	**328**	*e*Pn	**Pn**	**22 11 12.2**	**+1.3**
	comp=N,2.4nm,0.5s						
OBKA				*e*Sn	**Sn**	**22 13 00.8**	**-0.9**
	comp=N,6.6nm,0.7s						
ZCCA	**Zocca**	**10.24**	**309**	Pn	**Pn**	**22 11 16.5**	**+0.4**
VYHS	**Vyhne**	**10.42**	**348**	*e*P	**Pn**	**22 11 21.4**	**+2.9**
VYHS				*e*		22 13 19.4	
VYHS	**Vyhne**	**10.42**	**348**	*e*PN	**Pn**	**22 11 21.4**	**+2.9**
VYHS				*e*SN	**Sn**	**22 13 19.4**	**+4.0**
TEOL	**Teolo**	**10.42**	**316**	Pn	**Pn**	**22 11 18.4**	**-0.2**
TEOL					**Sn**	**22 13 19.0**	**+3.4**
KEST	**Kesra**	**10.44**	**259**	Pn	**Pn**	**22 11 19.7**	**+0.7**
KBA	**Koelnbreinsper**	**10.81**	**327**	*e*Pn	**Pn**	**22 11 24.8**	**+0.7**
	comp=N,1.8nm,0.5s						
KBA				*e*Sn	**Sn**	**22 13 21.8**	**-3.5**
	comp=N,3.4nm,0.8s						
CTI	**Castel Tesino**	**10.88**	**318**	P	**Pn**	**22 11 25.3**	**+0.4**
CTI	**Castel Tesino**	**10.88**	**318**		**Pn**	**22 11 25.3**	**+0.4**
ABTA	**Abfaltersbach**	**10.94**	**323**	*e*Pn	**Pn**	**22 11 25.9**	**+0.2**
	comp=N,4.6nm,0.5s,SNR=6.8						
ABTA				*e*Sn	**Sn**	**22 13 25.0**	**-3.3**
	comp=N,5.9nm,0.8s						
MOA	**Molln**	**11.06**	**332**	*e*Pn	**Pn**	**22 11 28.3**	**+0.9**
	comp=N,1.0nm,0.3s						
MOA				*e*Sn	**Sn**	**22 13 31.8**	**+0.6**
	comp=N,1.0nm,0.4s						
SALO	**Salr**	**11.22**	**314**	Pn	**Pn**	**22 11 29.6**	**+0.1**
VRAC	**Vranov**	**11.64**	**342**	LR	LR	22 16 48.6	
	comp=N,85nm,21.6s,baz=161,slow=42						
WATA	**Walderalm**	**11.80**	**323**	*e*Pn	**Pn**	**22 11 37.6**	**0.0**
	comp=N,7.9nm,0.5s,SNR=9.5						
WATA				*e*Sn	**Sn**	**22 13 47.3**	**-2.3**
	comp=N,7.3nm,0.8s						
SQTA	**Sankt Quirin**	**11.90**	**322**	*e*Pn	**Pn**	**22 11 39.3**	**+0.5**
	comp=N,3.8nm,0.4s						
SQTA				*e*Sn	**Sn**	**22 13 50.4**	**-1.5**
	comp=N,1.7nm,0.4s						
FUORN	**Ofenpass-Fuorn**	**11.98**	**317**	Pn	**Pn**	**22 11 41.1**	**+1.0**
OJC	**Ojcow**	**11.99**	**353**	P	**Pn**	**22 11 41.4**	**+1.4**
OJC	**Ojcow**	**11.99**	**353**	Pn	**Pn**	**22 11 41.4**	**+1.4**
FETA	**Feichten**	**12.00**	**320**	*i* Pn	**Pn**	**22 11 40.6**	**+0.3**
	comp=N,2.4nm,0.7s						
FETA				Sn	**Sn**	**22 13 52.6**	**-1.8**
	comp=N,1.4nm,0.7s						
MOTA	**Moosalm**	**12.04**	**322**	*e*Pn	**Pn**	**22 11 40.6**	**-0.2**
	comp=N,4.6nm,0.7s,SNR=5.1						
MOTA				*e*Sn	**Sn**	**22 13 53.9**	**-1.4**
	comp=N,5.6nm,0.6s						
GEC2	**GERESS Array S**	**12.10**	**333**	Pn	**Pn**	**22 11 43.0**	**+1.3**
GERES	**GERESS Array B**	**12.10**	**333**	Pn	**Pn**	**22 11 38.8**	**-2.8**
	comp=N,0.1nm,0.3s,baz=147,slow=16,SNR=2.9						
GERES				Sn	**Sn**	**22 13 52.2**	**-4.7**
	comp=N,0.1nm,0.3s,baz=148,slow=28,SNR=2.7						
GERES				LR	LR	22 17 40.3	
	comp=N,167nm,19.1s,baz=134,slow=44						
MMAI	**Mount Meron Ar**	**12.12**	**112**	Pn	**Pn**	**22 11 41.9**	**+0.1**
	comp=N,0.3nm,0.3s,baz=297,slow=9.9,SNR=6.3						
DAVOX	**Davos/Dischmat**	**12.28**	**317**	Pn	**Pn**	**22 11 43.3**	**-0.9**
	comp=N,0.1nm,0.3s,baz=128,slow=17,SNR=2.1						
KHC	**Kasperske Hory**	**12.39**	**333**	P	**Pn**	**22 11 46.2**	**+0.7**
KHC	**Kasperske Hory**	**12.39**	**333**	Pn	**Pn**	**22 11 46.2**	**+0.7**
AKASG	**Malin Array Be**	**13.39**	**20**	Pn	**Pn**	**22 11 58.0**	**-1.0**
	comp=N,0.7nm,0.3s,baz=210,slow=13,SNR=2.1						
SENIN	**Lac Senin/Sane**	**13.50**	**311**	Pn	**Pn**	**22 12 01.9**	**+1.1**
SOC	**Sochi**	**14.37**	**63**	*e*P	**Pn**	**22 12 11.5**	**-1.1**
SOC				*e*		22 14 53.0	
SOC				pmax	pmax		
	comp=Z,15nm,0.9s						
SOC				MLR	MLR		
	comp=Z,120nm,7.0s						
CLL	**Collm**	**14.45**	**337**	*e*P	**P**	**22 12 22.0**	**+1.6**
CLL	**Collm**	**14.45**	**337**	*e*PP	**P**	**22 12 22.0**	**+1.6**
SSF	**Saint Saulge**	**16.13**	**309**	*e*P	**P**	**22 12 40.4**	**+1.3**
KIV	**Kislovodsk**	**16.55**	**64**	*e*P	**Pn**	**22 12 42.0**	**+0.7**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBZ	**Khabaz**	**16.65**	**64**	P	**Pn**	**22 12 44.0**	**+1.5**
KBZ	**Khabaz**	**16.65**	**64**	Pn	**Pn**	**22 12 44.0**	**+1.5**
	comp=Z,0.0nm,0.3s,baz=265,slow=11,SNR=2.7						
GNI	**Garni**	**17.70**	**77**	P	**P**	**22 12 57.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=294,slow=20,SNR=3.0						
GNI	**Garni**	**17.70**	**77**	IAmb	IAmb	22 13 06.5	
	comp=Z,6.1nm,1.1s						
ESBB	**Sonseca Array**	**20.20**	**282**	P	**P**	**22 13 25.1**	**+1.0**
ESDC	**Sonseca Array**	**20.20**	**282**	P	**P**	**22 13 24.8**	**+0.6**
	comp=Z,2.1nm,0.6s,baz=78,slow=11,SNR=15						
ESDC	**Sonseca Array**	**20.20**	**282**	IAmb	IAmb	22 13 28.7	
	comp=Z,2.3nm,1.1s						
VSU	**Vasula**	**20.38**	**7**	⇑*e*P	**P**	**22 13 25.3**	**-0.5**
VSU				pmax	pmax		
	comp=Z,35nm,0.7s						
PAB	**San Pablo**	**20.51**	**282**	P	**P**	**22 13 28.8**	**+1.2**
PAB				pmax	pmax		
	comp=Z,11nm,1.1s						
PAB	**San Pablo**	**20.51**	**282**	P	**P**	**22 13 28.8**	**+1.2**
MDT	**Midelt**	**22.29**	**264**	P	**P**	**22 13 47.1**	**+0.3**
	comp=Z,1.8nm,0.8s,baz=207,slow=4.5,SNR=4.4						
HFS	**Hagfors**	**22.45**	**349**	P	**P**	**22 13 46.9**	**-1.2**
	comp=Z,4.0nm,0.6s,baz=158,slow=12,SNR=11						
HFS				LR	LR	22 23 21.0	
	comp=Z,176nm,18.3s,baz=8.0,slow=39						
KONO	**Kongsberg**	**22.76**	**344**	P	**P**	**22 13 52.3**	**+0.9**
KONO				pmax	pmax		
	comp=Z,20nm,1.0s						
KONO	**Kongsberg**	**22.76**	**344**	P	**P**	**22 13 52.3**	**+0.9**
KONO				IAmb	IAmb	22 13 55.8	
	comp=Z,20nm,1.0s						
FINES	**FINESS Array B**	**23.28**	**5**	P	**P**	**22 13 55.0**	**-1.7**
FINES	**FINESS Array B**	**23.28**	**5**	P	**P**	**22 13 55.0**	**-1.7**
	comp=Z,0.6nm,0.4s,baz=186,slow=10,SNR=5.1						
NC602	**NORSAR Array S**	**23.37**	**347**	P	**P**	**22 13 57.3**	**-0.4**
NAO01	**NORSAR Array S**	**23.59**	**346**	P	**P**	**22 13 58.4**	**-1.5**
NAO01				IAmb	IAmb	22 14 02.8	
	comp=Z,15nm,0.8s						
NC405	**NORSAR Array S**	**23.70**	**348**	P	**P**	**22 14 01.6**	**+0.6**
NC405				IAmb	IAmb	22 14 03.0	
	comp=Z,29nm,1.1s						
NB201	**NORSAR Array S**	**23.71**	**347**	P	**P**	**22 14 01.4**	**+0.3**
NB201				IAmb	IAmb	22 14 17.5	
	comp=Z,11nm,0.9s						
NB2	**NORSAR Subarra**	**23.72**	**347**	P	**P**	**22 14 00.4**	**-0.7**
	comp=Z,5.5nm,0.8s,baz=154,slow=9.3						
NOA	**NORSAR Array B**	**23.72**	**347**	P	**P**	**22 14 00.1**	**-1.0**
	comp=Z,3.8nm,0.7s,baz=167,slow=10,SNR=15						
NBO00	**NORSAR Array S**	**23.79**	**346**	P	**P**	**22 14 02.0**	**+0.2**
NC303	**NORSAR Array S**	**23.86**	**347**	P	**P**	**22 14 03.3**	**+0.8**
NC303				IAmb	IAmb	22 14 19.7	
	comp=Z,9.8nm,0.9s						
EKA	**Eskdalemuir Ar**	**23.99**	**323**	P	**P**	**22 14 03.5**	**-0.3**
	comp=Z,13nm,0.8s,baz=124,slow=11,SNR=23						
ESK	**Eskdalemuir**	**24.00**	**323**	P	**P**	**22 14 03.5**	**-0.4**
ESK				pmax	pmax		
	comp=Z,16nm,0.8s						
ESK	**Eskdalemuir**	**24.00**	**323**	P	**P**	**22 14 03.5**	**-0.4**
ESK				IAmb	IAmb	22 14 05.0	
	comp=Z,16nm,0.8s						
NC204	**NORSAR Array S**	**24.02**	**347**	P	**P**	**22 14 04.3**	**+0.3**
NC204				IAmb	IAmb	22 14 11.4	
	comp=Z,16nm,0.9s						
DSB	**Dublin**	**24.56**	**317**	P	**P**	**22 14 08.3**	**-0.8**
DSB				IAmb	IAmb	22 14 12.0	
	comp=Z,10nm,0.9s						
KLMR	**Klimovskoe**	**25.08**	**20**	*e*P	**P**	**22 14 13.5**	**-0.1**
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KLMR	**Klimovskoe**	**25.08**	**20**	*e*P	**P**	**22 14 13.6**	**-0.1**
KLMR				AMP		22 14 21.1	
	comp=Z,9.0nm,1.2s						
TOA0	**Torodi Ar. Sit**	**30.90**	**221**	P	**P**	**22 15 06.9**	**+0.9**
TOA0				IAmb	IAmb	22 15 07.5	
	comp=Z,4.2nm,0.6s						
TORD	**Torodi Ar. Bea**	**30.90**	**221**	P	**P**	**22 15 06.8**	**+0.8**
	comp=Z,4.2nm,0.6s,baz=29,slow=9.4,SNR=29						
TORD	**Torodi Ar. Bea**	**30.90**	**221**	IAmb	IAmb	22 15 07.4	
	comp=Z,2.4nm,0.7s						
ARCES	**ARCESS Array B**	**31.32**	**2**	P	**P**	**22 15 08.6**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=193,slow=9.9,SNR=5.8						
KKAR	**Karatay Array**	**36.67**	**67**	P	**P**	**22 15 56.5**	**+0.4**
KKAR	**Karatay Array**	**36.67**	**67**	P	**P**	**22 15 56.5**	**+0.4**
AAK	**Ala-Archa**	**39.63**	**67**	⇓*e*P	**P**	**22 16 21.6**	**+0.4**
AAK				pmax	pmax		
	comp=Z,6.0nm,2.1s						
DBIC	**Dimbokro**	**39.81**	**225**	P	**P**	**22 16 22.9**	**+0.2**
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBIC	**Dimbokro**	**39.81**	**225**	P	**P**	**22 16 23.1**	**+0.4**
	comp=Z,3.5nm,0.6s,baz=7.8,slow=9.8,SNR=6.1						
DBIC				LR	LR	22 34 47.0	
	comp=Z,56nm,18.2s,baz=5.0,slow=39						
DBIC	**Dimbokro**	**39.81**	**225**	P	**P**	**22 16 22.9**	**+0.2**
DBIC				IAmb	IAmb	22 16 23.7	
	comp=Z,5.6nm,0.8s						
SPITS	**Spitsbergen Ar**	**40.03**	**358**	P	**P**	**22 16 24.1**	**+0.2**
	comp=Z,11nm,1.1s,baz=165,slow=12,SNR=4.5						
KURK	**Kurchatov**	**41.25**	**54**	⇓*e*P	**P**	**22 16 31.6**	**-2.7**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
KSH	**Kashi**	**41.48**	**71**	P	**P**	**22 16 37.3**	**+0.9**
KSH				PP	**PP**	**22 18 12.6**	**+0.5**
KSH				pmax	pmax		
	comp=Z,330nm,6.4s						
MAKZ	**Makanchi**	**44.01**	**59**	P	**P**	**22 16 57.3**	**+0.5**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MAKZ	**Makanchi**	**44.01**	**59**	P	**P**	**22 16 57.3**	**+0.5**
MK31	**Makanchi Array**	**44.23**	**59**	P	**P**	**22 16 58.9**	**+0.3**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	**Makanchi Array**	**44.23**	**59**	P	**P**	**22 16 58.9**	**+0.3**
MKAR	**Makanchi Array**	**44.23**	**59**	P	**P**	**22 16 58.4**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=276,slow=7.4,SNR=38						
MKAR				PcP	**PcP**	**22 18 43.0**	**0.0**
	comp=Z,0.5nm,1.0s,baz=286,slow=5.2,SNR=2.2						
MKAR	**Makanchi Array**	**44.23**	**59**	P	**P**	**22 16 58.8**	**+0.3**
ZAA0	**Zalesovo Array**	**44.72**	**48**	P	**P**	**22 17 02.3**	**-0.1**

ZAA0					IAmb	IAmb	22 17 09.6	
	comp=Z,2.2nm,0.7s							
ZALV	**Zalesovo Beam**	**44.72**	**48**	P		**P**	**22 17 01.8**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=280,slow=9.6,SNR=7.3							
ZALV				LR		LR	22 39 18.6	
	comp=Z,27nm,20.6s,baz=330,slow=41							
WMQ	**Urumqi**	**48.66**	**61**	*eP*		**P**	**22 17 35.8**	**+2.3**
WMQ				pmax		pmax		
	comp=Z,5.0nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,44nm,9.7s							
WMQ				LR		LR		
	comp=N,760nm,29.0s							
WMQ				LR		LR		
	comp=E,1μm,29.0s							
WMQ				LR		LR		
	comp=Z,150nm,28.8s							
SONM	**Songino Array**	**59.46**	**51**	P		**P**	**22 18 51.4**	**-1.0**
	comp=Z,1.3nm,1.1s,baz=287,slow=10,SNR=6.7							
ABPO	**Ambohimpanom**	**61.77**	**153**	P		**P**	**22 19 07.4**	**-0.9**
ABPO				pmax		pmax		
	comp=Z,10.0nm,1.2s							
ABPO	**Ambohimpanom**	**61.77**	**153**	P		**P**	**22 19 07.4**	**-0.9**
LMN	**Caledonia Moun**	**61.81**	**308**	P		**P**	**22 19 08.0**	**-0.3**
LMN				IAmb		IAmb	22 19 13.3	
	comp=Z,3.2nm,0.9s							
PQI	**Presque Isle**	**63.40**	**310**	P		**P**	**22 19 18.6**	**-0.2**
PQI				IAmb		IAmb	22 19 35.5	
	comp=Z,6.2nm,1.1s							
E63A	**Oxbow**	**63.77**	**310**	P		**P**	**22 19 21.8**	**+0.5**
D62A	**Allapoint, All**	**63.83**	**310**	P		**P**	**22 19 22.2**	**+0.5**
D62A				IAmb		IAmb	22 19 23.2	
	comp=Z,5.4nm,1.0s							
HHC	**Hu-ho-hao-te**	**65.99**	**56**	*eP*		**P**	**22 19 38.0**	**+2.1**
HHC				pmax		pmax		
	comp=Z,3.0nm,0.7s							
HHC				pmax		pmax		
	comp=Z,100nm,4.3s							
ACCN	**Adirondack Com**	**68.53**	**309**	P		**P**	**22 19 52.8**	**+0.9**
J59A	**Piesco**	**68.99**	**309**	P		**P**	**22 19 56.1**	**+1.3**
J58A	**Remsen**	**69.53**	**309**	P		**P**	**22 19 58.9**	**+0.8**
SUR	**Sutherland**	**70.36**	**181**	P		**P**	**22 20 02.8**	**-0.5**
INK	**Inuvik**	**72.11**	**351**	P		**P**	**22 20 12.8**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=90,slow=6.1,SNR=3.5							
YKA	**Yellowknife Ar**	**73.64**	**341**	P		**P**	**22 20 22.2**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=35,slow=5.3,SNR=3.6							
Q56A	**Snyder Ridge,**	**74.42**	**308**	P		**P**	**22 20 27.2**	**-0.3**
NJ2	**Nanjing**	**75.73**	**60**	*eP*		**P**	**22 20 34.6**	**-0.6**
NJ2				pmax		pmax		
	comp=Z,5.0nm,0.5s							
ULM	**Lac du Bonnet**	**76.26**	**324**	P		**P**	**22 20 37.9**	**0.0**
ULM				pmax		pmax		
	comp=Z,6.0nm,1.1s							
ULM	**Lac du Bonnet**	**76.26**	**324**	P		**P**	**22 20 37.7**	**-0.2**
	comp=Z,2.3nm,0.6s,baz=37,slow=7.2,SNR=5.4							
ULM	**Lac du Bonnet**	**76.26**	**324**	P		**P**	**22 20 37.9**	**0.0**
ULM				IAmb		IAmb	22 20 41.3	
	comp=Z,5.6nm,1.1s							
PDAR	**Pinedale Array**	**88.07**	**327**	P		**P**	**22 21 39.3**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=82,slow=6.5,SNR=2.8							
NVAR	**Mina Array Bea**	**95.33**	**330**	LR		LR	23 06 43.7	
	comp=Z,96nm,19.0s,baz=207,slow=36							
TXAR	**Lajitas Array**	**95.70**	**315**	P		**P**	**22 22 16.6**	**+0.9**
	comp=Z,0.3nm,0.8s,baz=74,slow=3.2,SNR=2.9							

*IDC **24** 22:21:37.9±1.1,29°26S×179°09W,h314km±10km, mb3.8/11,mb1 4.0/11,mb1mx3.8/22,mbtmp4.5/11,Error ellipse: s-maj=17.5km s-min=14.1km az=90.0*
*NEIC **24** 22:21:37.1±2.9,29°50S±0°07×179°02W±0°08, h315km±5km,mb4.2/36,Error ellipse: s-maj=13.2km s-min=4.8km az=221.0*

ISC 24 22:21:37.6±0.5,29°52S±0°05×179°07W±0°09,h315km, n134,σ1§51/154,mb4.2/18,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RIZ	**Raoul Island**	**1.03**	**75**	P		**Pn**	**22 22 19.7**	**0.0**
GLKZ	**Green Lake**	**1.03**	**76**	P		**Pn**	**22 22 19.3**	**-0.4**
GLKZ				S		**S**	**22 22 55.9**	**+2.6**
RAO	**Raoul Island**	**1.04**	**75**	P		**Pn**	**22 22 20.0**	**+0.3**
	1μm,0.3s,baz=93,slow=8.8,SNR=35							
RAO				S		**S**	**22 22 51.1**	**-2.2**
	283nm,0.3s,baz=270,slow=23,SNR=5.4							
RAO	**Raoul Island**	**1.04**	**75**	Pn		**Pn**	**22 22 20.0**	**+0.3**
MXZ	**Matakaoa Point**	**8.32**	**195**	P		**Pn**	**22 22 33.8**	**-1.1**
MXZ				S		**S**	**22 25 04.6**	**-5.9**
MXZ	**Matakaoa Point**	**8.32**	**195**	Pn		**Pn**	**22 22 36.8**	**+1.8**
MXZ				S		**S**	**22 25 09.0**	**-1.5**
OUZ	**Omahuta**	**8.41**	**226**	P		**P**	**22 22 43.5**	**+2.0**
OUZ	**Omahuta**	**8.41**	**226**	Pn		**Pn**	**22 22 37.6**	**+1.5**
WMGZ	**Waiomatatini S**	**8.54**	**194**	P		**Pn**	**22 22 38.1**	**+0.4**
WMGZ				S		**S**	**22 25 15.4**	**-0.1**
HAZ	**Te Kaha**	**8.62**	**197**	P		**Pn**	**22 22 37.6**	**-1.1**
HAZ				S		**S**	**22 25 14.9**	**-2.5**
PKGZ	**Pakihiroa**	**8.68**	**195**	P		**Pn**	**22 22 37.5**	**-1.9**
PUZ	**Puketiti**	**8.82**	**194**	P		**Pn**	**22 23 40.6**	**-0.5**
PUZ				S		**S**	**22 25 18.7**	**-3.0**
RUGZ	**Raukumara Rang**	**8.85**	**197**	P		**Pn**	**22 23 41.7**	**+0.1**
RUGZ				S		**S**	**22 25 19.9**	**-2.8**
OPRZ	**Ohinepanea**	**9.07**	**203**	P		**P**	**22 23 48.0**	**0.0**
MARZ	**Manawahe**	**9.16**	**202**	P		**P**	**22 23 48.9**	**-0.2**
CNGZ	**Carnagh Statio**	**9.22**	**193**	P		**Pn**	**22 23 47.1**	**+1.0**
MWZ	**Matawai**	**9.24**	**197**	P		**P**	**22 23 48.5**	**-1.4**
MWZ				S		**S**	**22 25 29.3**	**-1.9**
EDRZ	**Edgecumbe**	**9.25**	**201**	P		**P**	**22 23 50.5**	**+0.4**
TKGZ	**Te Karaka**	**9.26**	**195**	P		**Pn**	**22 23 43.8**	**-2.7**
TKGZ				S		**S**	**22 25 29.3**	**-2.3**
URZ	**Urewera**	**9.28**	**199**	P		**Pn**	**22 23 46.6**	**0.0**
	15nm,0.3s,baz=315,slow=2.3,SNR=27							
URZ				S		**S**	**22 25 28.2**	**-3.8**
	11nm,0.3s,baz=87,slow=21,SNR=14							
URZ	**Urewera**	**9.28**	**199**	P		**Pn**	**22 23 47.1**	**+0.5**
URZ				S		**S**	**22 25 30.1**	**-2.0**
URZ	**Urewera**	**9.28**	**199**			**Pn**	**22 23 47.8**	**+1.1**
TOZ	**Tahuroa Road**	**9.36**	**207**	P		**P**	**22 23 52.9**	**+1.7**
RAGZ	**Rawiri**	**9.42**	**197**	P		**Pn**	**22 23 46.7**	**-1.8**
TARZ	**Mount Tarawera**	**9.44**	**202**	P		**P**	**22 23 53.8**	**+1.5**
RIGZ	**Rimuhau**	**9.53**	**195**	P		**Pn**	**22 23 49.4**	**-0.5**
MUGZ	**Murupara**	**9.58**	**200**	P		**Pn**	**22 23 51.0**	**+0.7**
GRRZ	**Galatos Road**	**9.68**	**203**	P		**P**	**22 23 55.2**	**+0.3**
SNGZ	**Shannon Statio**	**9.71**	**197**	P		**Pn**	**22 23 49.3**	**-2.7**
PRGZ	**Paritu Road**	**9.71**	**194**	P		**Pn**	**22 23 54.0**	**+2.0**
KNZ	**Kokohu**	**9.86**	**195**	P		**Pn**	**22 23 53.7**	**0.0**
TLZ	**Tolley Road**	**9.86**	**206**	P		**P**	**22 23 59.2**	**+2.2**
RAHZ	**Arahi**	**9.90**	**198**	P		**Pn**	**22 23 53.5**	**-0.8**
KUTZ	**Kaahu Road**	**9.90**	**204**	P		**P**	**22 23 58.0**	**+0.7**
MTHZ	**Maungataniwha**	**9.91**	**199**	P		**Pn**	**22 23 55.5**	**+1.1**
MHGZ	**Mahia Peninsul**	**9.93**	**194**	P		**P**	**22 23 57.4**	**-0.2**
WHHZ	**Waihua**	**10.01**	**197**	P		**Pn**	**22 23 55.6**	**0.0**
MRHZ	**Matea Rd**	**10.02**	**201**	P		**Pn**	**22 23 56.9**	**+1.2**
NMHZ	**Naumai**	**10.14**	**199**	P		**Pn**	**22 23 58.0**	**+0.7**
ARHZ	**Aropaoanui**	**10.25**	**197**	P		**Pn**	**22 23 58.7**	**+0.2**
HIZ	**Hauiti**	**10.29**	**208**			**Pn**	**22 24 00.3**	**+1.3**
BKZ	**Black Stump Fm**	**10.30**	**200**	P		**Pn**	**22 23 59.4**	**+0.3**
BKZ	**Black Stump Fm**	**10.30**	**200**	P		**Pn**	**22 23 59.9**	**+0.7**
MCHZ	**McNeill Hill**	**10.50**	**198**	P		**Pn**	**22 24 02.0**	**+0.5**
WTVZ	**West Tongariro**	**10.54**	**203**	P		**P**	**22 24 04.8**	**+0.3**
TWVZ	**Taurewa**	**10.55**	**204**	P		**P**	**22 24 04.8**	**+0.1**
KWHZ	**Kaweka Forest**	**10.56**	**199**	P		**Pn**	**22 24 02.0**	**-0.3**
CKHZ	**Cape Kidnapper**	**10.60**	**196**	P		**Pn**	**22 24 03.9**	**+1.1**
MOVZ	**Moawhango**	**10.75**	**202**	P		**Pn**	**22 24 05.0**	**+0.4**
KRHZ	**Kereru**	**10.78**	**199**	P		**Pn**	**22 24 02.7**	**-2.3**
KAHZ	**Kahuranaki**	**10.78**	**197**	P		**Pn**	**22 24 04.1**	**-0.8**
MTVZ	**Mangateitei**	**10.82**	**203**	P		**P**	**22 24 07.2**	**-0.5**
PNHZ	**Pukenui**	**11.07**	**199**	P		**Pn**	**22 24 07.5**	**-1.1**
MSVF	**Nonsavu**	**12.02**	**347**	P		**P**	**22 24 20.0**	**-1.2**
MSWZ	**Moikau Station**	**12.74**	**200**			**Pn**	**22 24 27.0**	**-1.6**
SNZO	**South Karori**	**12.81**	**202**			**Pn**	**22 24 28.4**	**-0.9**
SNZO						**S**	**22 26 48.1**	**-2.9**
BHW	**Baring Head**	**12.85**	**201**			**Pn**	**22 24 29.0**	**-0.8**
PLWZ	**Palliser**	**12.88**	**199**			**Pn**	**22 24 29.5**	**-0.8**
TUWZ	**Tuamarina**	**13.17**	**204**	P		**P**	**22 24 32.7**	**-0.8**
NNZ	**Nelson**	**13.19**	**206**	P		**P**	**22 24 33.4**	**-0.4**
QRZ	**Quartz Range**	**13.20**	**209**	P		**P**	**22 24 33.3**	**-0.6**
CMWZ	**Cape Campbell**	**13.37**	**202**			**S**	**22 27 00.5**	**-2.6**
BSWZ	**Blackbirch Sta**	**13.45**	**203**	P		**P**	**22 24 36.6**	**0.0**
BSWZ						**S**	**22 27 03.3**	**-1.6**
THZ	**Tophouse**	**13.84**	**206**	P		**P**	**22 24 41.2**	**+0.2**
KHZ	**Kahutara**	**14.19**	**203**	P		**P**	**22 24 45.2**	**+0.4**
KHZ						**S**	**22 27 15.3**	**-4.9**
LTZ	**Lake Taylor**	**14.96**	**205**	P		**P**	**22 24 53.4**	**+0.1**
DZM	**Mont Dzumac**	**15.00**	**296**	P		**Pn**	**22 24 56.2**	**+0.5**
	1.5nm,0.3s,baz=147,slow=12,SNR=13							
DZM	**Mont Dzumac**	**15.00**	**296**			**Pn**	**22 24 56.5**	**+0.8**
DZM					IAmb	IAmb	22 24 57.0	
	comp=Z,19nm,0.8s							
NOUC	**Port Laguerre**	**15.10**	**296**	P		**Pn**	**22 24 56.6**	**-0.1**
NOUC					IAmb	IAmb	22 24 57.6	
	comp=Z,18nm,0.6s							
OXZ	**Oxford**	**15.51**	**205**	P		**P**	**22 24 58.0**	**-1.3**
OXZ					IAmb	IAmb	22 25 03.9	
	comp=Z,24nm,1.2s							
MQZ	**McQueen's Vall**	**15.63**	**203**	P		**P**	**22 24 59.1**	**-1.5**
MQZ					IAmb	IAmb	22 25 04.2	
	comp=Z,23nm,1.2s							
RPZ	**Rata Peaks**	**16.22**	**206**	P		**P**	**22 25 05.8**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=45,slow=10.0,SNR=5.9							
RPZ				S		**S**	**22 27 56.3**	**-4.6**
	comp=Z,1.9nm,0.3s,baz=310,slow=22,SNR=9.3							
RPZ	**Rata Peaks**	**16.22**	**206**	P		**Pn**	**22 25 08.5**	**-1.1**
RPZ					IAmb	IAmb	22 25 24.2	
	comp=Z,13nm,1.1s							
FOZ	**Fox Glacier**	**16.57**	**209**	P		**P**	**22 25 11.3**	**+0.5**
LBZ	**Lake Benmore**	**17.12**	**207**			**P**	**22 25 18.1**	**+1.3**
LBZ					IAmb	IAmb	22 25 31.5	
	comp=Z,12nm,1.1s							
ODZ	**Otahua Downs**	**17.50**	**205**	P		**P**	**22 25 21.8**	**+1.0**
ODZ					IAmb	IAmb	22 25 25.2	
	comp=Z,12nm,1.2s							
DCZ	**Deep Cove**	**19.27**	**211**	P		**P**	**22 25 38.7**	**-1.0**
DCZ					IAmb	IAmb	22 25 44.8	
	comp=Z,15nm,1.1s							
ARMA	**Armidale**	**25.37**	**261**	P		**P**	**22 26 38.3**	**+1.3**
ARMA					IAmb	IAmb	22 26 45.7	
	comp=Z,9.1nm,1.1s							
EIDS	**Eidsvold**	**26.77**	**272**	P		**P**	**22 26 50.8**	**+1.3**
CAN	**Canberra**	**27.50**	**250**	P		**P**	**22 26 58.0**	**+2.2**
CAN					IAmb	IAmb	22 27 14.9	
	comp=Z,12nm,1.1s							
STKA	**Stephens Creek**	**33.78**	**256**	P		**P**	**22 27 51.7**	**+1.0**
	comp=Z,8.6nm,0.4s,baz=97,slow=11,SNR=36							
STKA	**Stephens Creek**	**33.78**	**256**	P		**P**	**22 27 52.2**	**+1.6**
STKA					IAmb	IAmb	22 27 53.4	
	comp=Z,2.3nm,0.5s							
COEN	**Coen**	**38.14**	**286**	P		**P**	**22 28 27.3**	**-0.2**
BBOO	**Buckleboo**	**38.32**	**253**	P		**P**	**22 28 29.1**	**+0.2**
BBOO					IAmb	IAmb	22 28 33.0	
	comp=Z,12nm,1.1s							
AS31	**Alice Springs**	**42.23**	**266**	P		**P**	**22 29 01.4**	**+0.6**
ASAR	**Alice Springs**	**42.23**	**266**	P		**P**	**22 29 00.9**	**0.0**
	comp=Z,6.2nm,0.5s,baz=102,slow=6.9,SNR=64							
ASAR				PcP		**PcP**	**22 30 47.7**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=120,slow=3.6,SNR=5.3							
ASAR				ScP		**ScP**	**22 34 09.3**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=111,slow=5.1,SNR=4.9							
WR0	**Warramunga Arr**	**42.96**	**272**	P		**P**	**22 29 06.1**	**-0.6**
WB2	**Warramunga Arr**	**43.13**	**272**	P		**P**	**22 29 07.8**	**-0.2**
WRAB	**Tennant Creek**	**43.13**	**272**	P		**P**	**22 29 07.7**	**-0.4**
WRA	**Warramunga Arr**	**43.14**	**272**	P		**P**	**22 29 07.5**	**-0.6**
	comp=Z,3.6nm,0.5s,baz=111,slow=7.4,SNR=16							
WRA				PcP		**PcP**	**22 30 51.3**	**-0.1**
	comp=Z,2.1nm,0.8s,baz=116,slow=3.2,SNR=4.6							
WRA				ScP		**ScP**	**22 34 13.2**	**+1.1**
	comp=Z,0.9nm,0.8s,baz=100,slow=3.8,SNR=4.8							
WRA	**Warramunga Arr**	**43.14**	**272**	P		**P**	**22 29 07.8**	**-0.3**
WB0	**Warramunga Arr**	**43.16**	**272**	P		**P**	**22 29 07.9**	**-0.3**
FORT	**Forrest**	**45.38**	**255**	P		**P**	**22 29 25.5**	**0.0**
VNDA	**Vanda**	**48.88**	**185**	P		**P**	**22 29 54.3**	**+2.7**
	comp=Z,1.2nm,0.6s,baz=352,slow=7.1,SNR=3.6							
VNDA	**Vanda**	**48.88**	**185**	P		**P**	**22 29 53.8**	**+2.1**
KNRA	**Kununurra**	**49.72**	**274**	P		**P**	**22 29 59.0**	**+0.3**
KNRA					IAmb	IAmb	22 30 06.5	
	comp=Z,17nm,1.1s							
FITZ	**Fitzroy Crossi**	**51.44**	**270**	P		**P**	**22 30 12.4**	**+0.8**
PSA00	**Pilbara Seismi**	**55.15**	**263**	P		**P**	**22 30 37.5**	**-0.8**
PSA00					IAmb	IAmb	22 30 40.5	
	comp=Z,7.4nm,1.0s							
CASY	**Casey**	**55.49**	**208**	P		**P**	**22 30 40.5**	**+0.5**
MORW	**Morawa**	**55.90**	**253**	P		**P**	**22 30 43.3**	**-0.2**
MORW					IAmb	IAmb	22 30 47.6	
	comp=Z,8.4nm,1.0s							
GIRL	**Giralia**	**59.59**	**260**	P		**P**	**22 31 09.9**	**+0.8**
QSPA	**South Pole Qui**	**60.59**	**180**	P		**P**	**22 31 18.2**	**+2.8**
	comp=Z,7.3nm,0.7s,baz=341,slow=0.5,SNR=41							
QSPA	**South Pole Qui**	**60.59**	**180**	P		**P**	**22 31 18.2**	**+2.8**
QSPA					IAmb	IAmb	22 31 19.1	
	comp=Z,7.3nm,0.8s							
KKM	**Kota Kinabalu**	**71.40**	**288**	P		**P**	**22 32 24.0**	**-0.5**
CISI	**Cisompet, Garu**	**71.64**	**272**	P		**P**	**22 32 24.1**	**-1.8**
MAW	**Mawson**	**72.80**	**201**	P		**P**	**22 32 32.6**	**+0.9**
	comp=Z,4.0nm,0.6s,baz=126,slow=6.7,SNR=4.4							
INU	**Inuyama**	**76.65**	**324**	P		**P**	**22 32 51.8**	**-2.2**
MJAR	**Matsushiro Arr**	**76.99**	**326**	P		**P**	**22 32 54.7**	**-1.3**
	comp=Z,1.8nm,0.6s,baz=137,slow=5.0,SNR=5.5							
SNAA	**Sanae**	**79.06**	**179**	P		**P**	**22 33 08.0**	**+1.1**
SNAA	**Sanae**	**79.06**	**179**	P		**P**	**22 33 08.3**	**+1.4**
SNAA					IAmb	IAmb	22 33 09.0	
	comp=Z,3.1nm,0.8s							
VNA3	**Neumayer Olymp**	**79.24**	**177**	P		**P**	**22 33 09.1**	**+1.3**
VNA1	**Neumayer--Stat**	**79.90**	**177**	P		**P**	**22 33 12.8**	**+1.5**
KSRS	**Korea Array**	**83.08**	**320**	P		**P**	**22 33 29.1**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=142,slow=6.2,SNR=5.2							
PETK	**Petropavlovsk-**	**84.73**	**346**	P		**P**	**22 33 35.8**	**-0.4**
	comp=Z,4.5nm,0.6s,baz=136,slow=7.3,SNR=11							
USRK	**Ussuriysk Ar.**	**85.92**	**327**	P		**P**	**22 33 42.5**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=129,slow=5.1,SNR=7.7							
RUBR	**Rubicon Trail**	**87.54**	**42**	P		**P**	**22 33 47.7**	**-2.7**
LCMT	**Little Creek M**	**90.46**	**47**	P		**P**	**22 34 07.2**	**+3.2**
RSO	**Redoubt South**	**92.21**	**13**			pP	22 35 22.8	-2.7
CMAR	**Chiang Mai Arr**	**92.23**	**290**	P		**P**	**22 34 13.4**	**+0.9**
	comp=Z,2.4nm,0.4s,baz=118,slow=3.5,SNR=3.9							
MKAR	**Makanchi Array**	**116.50**	**311**	PKP		**PKPdf**	**22 39 42.8**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=226,slow=1.6,SNR=12							
BOSA	**Boshof**	**117.70**	**204**	PKP		**PKiKP**	**22 39 47.5**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=142,slow=12,SNR=3.1							
SPITS	**Spitsbergen Ar**	**130.76**	**356**	PKP		**PKPdf**	**22 40 09.8**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=34,slow=5.7,SNR=4.2							
ARCES	**ARCESS Array B**	**137.53**	**347**	PKhKP		PKPpre	22 40 13.3	
	comp=Z,1.2nm,0.8s,baz=78,slow=4.4,SNR=5.6							
ARCES				PKP		**PKiKP**	**22 40 24.2**	**-0.9**
	comp=Z,1.5nm,0.8s,baz=43,slow=1.8,SNR=5.1							
ARCES	**ARCESS Array B**	**137.53**	**347**	PKPdf		**PKiKP**	**22 40 24.0**	**-1.2**
KBZ	**Khabaz**	**143.85**	**305**	PKP		PKPbc	22 40 33.6	-0.3
	comp=Z,2.0nm,0.8s,baz=145,slow=3.7,SNR=10							
FINES	**FINESS Array B**	**144.00**	**340**	PKP		PKPab	22 40 32.5	-0.8
	comp=Z,9.6nm,0.4s,baz=56,slow=4.0,SNR=165							
NB2	**NORSAR Subarra**	**147.74**	**351**	PKP		**PKPbc**	**22 40 44.0**	**-0.7**
	comp=Z,1.8nm,0.5s,baz=12,slow=2.8							
NOA	**NORSAR Array B**	**147.74**	**351**	PKPbc		**PKPbc**	**22 40 43.6**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=65,slow=1.4,SNR=11							
HFS	**Hagfors**	**148.19**	**348**	PKPbc		**PKPbc**	**22 40 44.8**	**-1.0**
	comp=Z,3.6nm,0.4s,baz=44,slow=3.8,SNR=25							
HFS				PKPab		**PKPab**	**22 40 48.8**	**-1.0**
	comp=Z,3.6nm,0.4s,baz=68,slow=3.9,SNR=18							
AKASG	**Malin Array Be**	**150.04**	**323**	PKPbc		**PKPbc**	**22 40 49.9**	**-0.7**
	comp=Z,2.7nm,0.4s,baz=47,slow=3.0,SNR=2.9							
AKASG				PKPab		**PKPab**	**22 40 56.4**	**-1.3**
	comp=Z,2.2nm,0.5s,baz=50,slow=5.0,SNR=2.3							
BRTR	**Keskin Array B**	**151.36**	**300**	PKPbc		**PKPbc**	**22 40 53.8**	**-0.5**
	comp=Z,1.3nm,0.5s,baz=143,slow=4.5,SNR=16							
BRTR				PKPab		**PKPab**	**22 41 04.0**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=116,slow=5.6,SNR=4.8							
GERES	**GERESS Array B**	**158.37**	**337**	PKPab		**PKPab**	**22 41 32.3**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=12,slow=5.4,SNR=4.7							
DAVOX	**Davos/Dischmat**	**161.41**	**340**	PKPab		**PKPab**	**22 41 46.2**	**-0.6**
	comp=Z,1.7nm,0.4s,baz=92,slow=2.7,SNR=5.3							
TORD	**Torodi Ar. Bea**	**163.69**	**183**	PKPab		**PKPab**	**22 41 58.1**	**+0.8**
	comp=Z,2.0nm,0.5s,baz=179,slow=3.8,SNR=25							

*GUC **24** 22:48:18.8±0.8,20°24S×69°18W,h112km±3km,ML3.5*
*SJA **24** 22:48:18.7±0.9,20°27S×69°22W,h115km±5km,ML3.1, MW3.3*

ISC 24 22:48:19.4±1.7,20°26S±0°04×69°22W±0°08, h116km±10km,n26,σ0§61/38,7C-3D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.14**	**27**	*iP*		**Pn**	**22 48 35.5**	**-0.3**
PB08				*eS*		**Sn**	**22 48 47.6**	**-0.5**
PB08				IAML			22 48 49.0	
	comp=E,4μm,0.2s							
PB08	**IPOC Station P**	**0.14**	**27**	*i* P		**Pn**	**22 48 35.6**	**-0.2**
PB08				*eS*		**Sn**	**22 48 47.8**	**-0.3**
GO01	**Chusmiza**	**0.59**	**2**	⇑*iP*		**Pn**	**22 48 37.5**	**-0.5**
GO01				*eS*		**Sn**	**22 48 51.5**	**-0.6**
GO01				IAML			22 48 53.5	
	comp=N,4μm,0.1s							
PB11	**IPOC Station P**	**0.65**	**321**	⇑*iP*		**Pn**	**22 48 37.8**	**-0.2**
PB11				*eS*		**Sn**	**22 48 52.4**	**+0.2**
PB11				IAML			22 48 53.2	
	comp=E,3μm,0.3s							
PB11	**IPOC Station P**	**0.65**	**321**	*i* P		**Pn**	**22 48 37.9**	**-0.2**
PB11				*eS*		**Sn**	**22 48 52.3**	**+0.2**
TA01	**Diego Aracena**	**0.95**	**251**	⇑*iP*		**Pn**	**22 48 40.6**	**+0.1**
TA01				*eS*		**Sn**	**22 48 56.9**	**+0.4**
PATCX	**Punta Patache**	**1.03**	**237**	⇑*iP*		**Pn**	**22 48 41.9**	**+0.4**
PATCX				*eS*		**Sn**	**22 48 58.8**	**+0.6**
PATCX				IAML			22 48 59.7	
	comp=N,611nm,0.2s							
PATCX	**Punta Patache**	**1.03**	**237**	*i* P		**Pn**	**22 48 41.9**	**+0.4**
PSGC	**Pisagua**	**1.08**	**308**	⇑*iP*		**Pn**	**22 48 41.4**	**-0.6**
PSGC				*eS*		**Sn**	**22 48 59.0**	**+0.1**
PSGCX	**Pisagua**	**1.08**	**308**	*i* P		**Pn**	**22 48 41.9**	**0.0**
MNMC	**Minye Minye**	**1.18**	**342**	‖*eP*		**Pn**	**22 48 43.4**	**+0.2**
MNMC				*eS*		**Sn**	**22 49 01.7**	**+0.5**
MNMC				IAML			22 49 03.0	
	comp=E,2μm,0.3s							
MNMCX	**Minye Minye**	**1.18**	**342**	*i* P		**Pn**	**22 48 43.5**	**+0.2**
PB09	**IPOC Station P**	**1.52**	**181**	‖*eP*		**Pn**	**22 48 47.6**	**+0.6**
PB09				*eS*		**Sn**	**22 49 08.9**	**+0.9**
PB09	**IPOC Station P**	**1.52**	**181**	*i* P		**Pn**	**22 48 47.6**	**+0.6**
PB09				IAML			22 49 10.0	
	comp=Z,106nm,0.3s							
PB03	**IPOC Station P**	**1.84**	**196**	⇑*iP*		**Pn**	**22 48 51.3**	**+0.5**
PB03				*eS*		**Sn**	**22 49 15.0**	**+0.2**
PB03				IAML			22 49 17.4	
	comp=E,139nm,0.1s							
PB03	**IPOC Station P**	**1.84**	**196**	*i* P		**Pn**	**22 48 51.6**	**+0.8**
PB16	**IPOC Station P**	**1.94**	**352**	*eS*		**Sn**	**22 49 18.4**	**+0.8**
PB16	**IPOC Station P**	**1.94**	**352**	*i* P		**Pn**	**22 48 52.8**	**+0.4**
PB04	**IPOC Station P**	**2.23**	**203**	⇑*iP*		**Pn**	**22 48 56.0**	**+0.3**
PB04				*eS*		**Sn**	**22 49 22.7**	**-0.9**
PB04				IAML			22 49 26.2	
	comp=N,188nm,0.2s							
PB04	**IPOC Station P**	**2.23**	**203**	*i* P		**Pn**	**22 48 56

WR0	**Warramunga Arr**	**43.55**	**275**	P	**P**	**23 31 57.9**	**-0.2**
WR0				IAmb	IAmb	23 31 58.7	
	comp=Z,8.6nm,1.1s						
WB2	**Warramunga Arr**	**43.72**	**275**	P	**P**	**23 31 59.3**	**-0.1**
WB2				IAmb	IAmb	23 31 60.0	
	comp=Z,8.1nm,0.6s						
WRAB	**Tennant Creek**	**43.72**	**275**	P	**P**	**23 31 59.5**	**0.0**
WRAB				IAmb	IAmb	23 31 59.9	
	comp=Z,6.3nm,0.7s						
WRA	**Warramunga Arr**	**43.73**	**274**	P	**P**	**23 31 59.0**	**-0.5**
	comp=Z,6.2nm,0.5s,baz=115,slow=7.7,SNR=11						
WRA	**Warramunga Arr**	**43.73**	**274**	IAmb	IAmb	23 32 00.0	
	comp=Z,0.4nm,0.8s						
WB0	**Warramunga Arr**	**43.76**	**275**	P	**P**	**23 31 59.5**	**-0.3**
FORT	**Forrest**	**45.11**	**257**	P	**P**	**23 32 08.3**	**-2.1**
MTN	**Manton Dam**	**49.84**	**281**	P	**P**	**23 32 46.5**	**-0.8**
KNRA	**Kununurra**	**50.40**	**276**	P	**P**	**23 32 52.4**	**+0.8**
KNRA				IAmb	IAmb	23 32 57.1	
	comp=Z,11nm,1.1s						
NVAR	**Mina Array Bea**	**90.00**	**43**	P	**P**	**23 36 54.9**	**+1.4**
	comp=Z,0.2nm,0.4s,baz=216,slow=8.9,SNR=3.1						
NNA	**Nana**	**93.34**	**106**	LR	LR	00 10 08.5	
	comp=Z,14nm,20.9s,baz=292,slow=30						
LVC	**Limon Verde**	**93.41**	**119**	LR	LR	00 11 14.7	
	comp=Z,17nm,22.0s,baz=245,slow=30						
MKAR	**Makanchi Array**	**118.65**	**309**	PKP	**PKPdf**	**23 42 40.4**	**-1.0**
	comp=Z,0.3nm,0.9s,baz=90,slow=4.1,SNR=2.3						
FINES	**FINESS Array B**	**146.80**	**339**	PKPbc	**PKPbc**	**23 43 34.2**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=64,slow=4.4,SNR=12						
NB2	**NORSAR Subarra**	**150.61**	**350**	PKP	**PKPbc**	**23 43 44.6**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.61**	**350**	PKPbc	**PKPbc**	**23 43 44.8**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=13,slow=4.0,SNR=4.0						
AKASG	**Malin Array Be**	**152.53**	**320**	PKPbc	**PKiKP**	**23 43 50.0**	**+0.2**
	comp=Z,2.4nm,0.3s,baz=44,slow=2.8,SNR=2.0						
TORD	**Torodi Ar. Bea**	**160.87**	**181**	PKPab	**PKPab**	**23 44 37.8**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=165,slow=3.8,SNR=2.8						

*IDC **24** 23:25:21.6±1.1,22.˚70N×95.˚79E, h0km, mb3.8/9, mb1 4.0/10,mb1mx3.6/61,mbtmp3.8/10, ML4.2/1,MS3.1/1, Ms1 3.3/1,ms1mx2.6/48, Error ellipse: s-maj=43.2km s-min=14.4km az=57.0*

*NDI **24** 23:25:24.7±2.1,22.˚65N×95.˚81E, h10km, ML3.1*

*BJI **24** 23:25:25.9±0.0,22.˚93N×95.˚59E, h8km, mB4.6/19, mb4.1/26, ML4.1/2, Ms4.0/10, Ms7 3.7/3*

*NEIC **24** 23:25:25.9±2.3,22.˚62N±0.˚08×95.˚74E±0.˚10, h25km±5km, mb4.1/27, Error ellipse: s-maj=15.0km s-min=8.5km az=53.0*

*BKK **24** 23:25:30.2±1.2,22˚N±8˚×9˚6E±1˚0, h0km, M5.1/5, mB5.5/1, mb5.5/1, MLv4.8/5, Mw(mB)5.0/1*

ISC 24 23:25:23.7±0.5, 22.˚55N±0.˚05×95.˚62E±0.˚05, h10km, n59, σ1ᵗ93/66, mb4.1/21, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**4.55**	**312**	*eP*	**Pn**	**23 26 34.6**	**+1.8**
SHL				*eS*	**Sn**	**23 27 25.3**	**-0.5**
SHL				IAML		23 27 35.8	
	comp=E,48nm,0.6s						
SHL				IAML		23 27 36.4	
	comp=N,40nm,0.2s						
SHL	**Shillong**	**4.55**	**312**		**Pn**	**23 26 34.6**	**+1.8**
TEZP	**TEZPUR**	**4.80**	**328**	*eP*	**Pn**	**23 26 35.6**	**-0.4**
TEZP				*eS*	**Sn**	**23 27 30.7**	**-1.0**
TEZP				IAML		23 27 32.6	
	comp=N,39nm,0.3s						
TEZP				IAML		23 27 34.1	
	comp=E,35nm,0.2s						
CHTO	**Chiang Mai**	**4.85**	**139**		**Pn**	**23 26 37.2**	**+0.5**
CMMT	**Chiang Mai**	**4.85**	**139**	P	**Pn**	**23 26 37.4**	**+0.6**
MHMT	**Maesarieng**	**4.86**	**153**	Pg	**Pg**	**23 26 56.7**	**-0.1**
MHMT				Pn	**Pn**	**23 26 39.2**	**+2.3**
CM31	**Chiang Mai Arr**	**5.12**	**142**		**Pn**	**23 26 41.4**	**+0.8**
CMAR	**Chiang Mai Arr**	**5.12**	**142**	Pn	**Pn**	**23 26 41.2**	**+0.7**
	comp=E,2.1nm,0.3s,baz=324,slow=14,SNR=54						
CMAR				Pg	**Pb**	**23 26 58.1**	**+4.6**
	comp=E,9.7nm,0.3s,baz=320,slow=18,SNR=38						
CMAR				Lg	Lg	23 28 05.3	
	comp=E,5.4nm,0.3s,baz=334,slow=17,SNR=5.8						
CMAR				LR	LR	23 28 58.5	
	comp=E,187nm,18.9s,baz=14,slow=42						
LAMP	**Lampang**	**5.49**	**136**	Pg	**Pg**	**23 27 06.2**	**-2.7**
LAMP				Pn	**Pn**	**23 26 45.7**	**+0.1**
NANT	**Nan**	**6.04**	**127**	Pg	**Pb**	**23 27 11.0**	**+1.9**
NANT				Pn	**Pn**	**23 26 50.3**	**-2.9**
KMI	**Kunming**	**7.00**	**67**	Pg	Pb	23 27 28.3	+2.7
KMI				Sg	**Sb**	**23 28 51.3**	**+2.0**
KMI				smax	smax		
	comp=N,89nm,1.0s						
KMI				smax	smax		
	comp=E,47nm,0.9s						
KMI				LR	LR		
	comp=N,710nm,6.0s						
KMI				LR	LR		
	comp=E,460nm,7.0s						
KMI				LR	LR		
	comp=Z,450nm,7.3s						
KMI	**Kunming**	**7.00**	**67**	Pn	**Pn**	**23 27 08.9**	**+2.4**
KMI				Pg	Pb	23 27 28.3	+2.7
KMI				Sn	**Sn**	**23 28 27.6**	**+1.2**
KMI				Sg	**Sb**	**23 28 52.9**	**+3.6**
KMI				smax	smax		
	comp=Z,89nm,1.0s						
KMI				smax	smax		
	comp=Z,47nm,0.9s						
KMI				LR	LR		
	comp=Z,710nm,6.0s						
KMI				LR	LR		
	comp=Z,460nm,5.6s						
KMI				LR	LR		
	comp=Z,450nm,8.4s						
SLVN	**Son La**	**7.78**	**97**		**Pn**	**23 27 17.3**	**+0.1**
PBKT	**Sadao Pong**	**7.80**	**139**		**Pn**	**23 27 18.5**	**+1.2**
GTK	**Tadong**	**7.95**	**308**	*eP*	**Pn**	**23 27 22.4**	**+3.0**
GTK				*eS*	**Sn**	**23 28 45.4**	**-4.1**
GTK				IAML		23 28 47.8	
	comp=N,9.5nm,0.1s						
GTK				IAML		23 28 56.8	
	comp=E,14nm,0.1s						
LSA	**Lhasa**	**8.18**	**331**		**Pn**	**23 27 23.8**	**+0.9**
LZH	**Lanzhou**	**15.27**	**26**	*eP*	**P**	**23 29 04.0**	**-0.4**
LZH				pmax	pmax		
	comp=E,22nm,1.0s						
XAN	**Xi'an**	**16.36**	**43**	P	**P**	**23 29 13.8**	**-2.6**
XAN				pP	sP	23 29 22.8	+2.2
XAN				pmax	pmax		
	comp=E,6.0nm,1.1s						
XAN				LR	LR		
	comp=E,210nm,13.0s						
XAN				LR	LR		
	comp=E,190nm,16.3s						
PALK	**Pallekele**	**20.91**	**226**	P	**P**	**23 30 06.8**	**+0.3**
PALK				IAmb	IAmb	23 30 22.5	
	comp=Z,9.6nm,1.1s						
GSI	**Gunungsitoli**	**21.20**	**175**	P	**P**	**23 30 09.0**	**-0.6**
GSI				IAmb	IAmb	23 30 17.5	
	comp=Z,7.1nm,0.8s						
WMQ	**Urumqi**	**22.20**	**345**	*eP*	**P**	**23 30 20.0**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.9s						
WMQ				LR	LR		
	comp=Z,190nm,29.3s						
WMQ				LR	LR		
	comp=Z,1μm,29.0s						
WMQ	**Urumqi**	**22.20**	**345**	P	**P**	**23 30 19.4**	**-0.9**
WMQ				IAmb	IAmb	23 30 23.8	
	comp=Z,4.9nm,0.8s						
NIL	**Nilore**	**22.57**	**304**	P	**P**	**23 30 24.8**	**+0.5**
NIL				IAmb	IAmb	23 30 27.9	
	comp=Z,9.2nm,0.6s						
HHC	**Hu-ho-hao-te**	**22.67**	**33**	*eP*	**P**	**23 30 27.0**	**+1.7**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,61nm,5.7s						
KSH	**Kashi**	**23.78**	**320**	P	**P**	**23 30 37.3**	**+0.7**
KSH				sP	sP	23 30 49.1	+8.1
KSH				PP	**PnPn**	**23 31 12.5**	**+8.2**
KSH				pmax	pmax		
	comp=Z,17nm,0.6s						
KSH				pmax	pmax		
	comp=Z,470nm,6.7s						
PRZ	**Przheval'sk**	**24.53**	**328**	P	**P**	**23 30 44.6**	**+1.0**
PRZ				IAmb	IAmb	23 30 46.7	
	comp=Z,6.8nm,0.6s						
KDJ	**Kajisay**	**24.88**	**326**	P	**P**	**23 30 48.2**	**+1.4**
KDJ				IAmb	IAmb	23 30 48.8	
	comp=Z,4.6nm,0.8s						
NRN	**Naryn**	**25.03**	**323**	P	**P**	**23 30 48.7**	**+0.4**
NRN				IAmb	IAmb	23 30 55.9	
	comp=Z,2.4nm,0.8s						
KBL	**Kabul**	**26.14**	**303**	P	**P**	**23 30 59.0**	**+0.6**
KBL				IAmb	IAmb	23 31 02.3	
	comp=Z,2.9nm,0.6s						
MK31	**Makanchi Array**	**26.48**	**339**	P	**P**	**23 31 01.4**	**+0.3**
MKAR	**Makanchi Array**	**26.48**	**339**	P	**P**	**23 30 59.6**	**-1.4**
	comp=Z,1.1nm,0.6s,baz=140,slow=12,SNR=20						
MKAR	**Makanchi Array**	**26.48**	**339**	P	**P**	**23 31 00.7**	**-0.4**
MAKZ	**Makanchi**	**26.60**	**339**	P	**P**	**23 31 03.5**	**+1.4**
AAK	**Ala-Archa**	**26.66**	**324**	P	**P**	**23 31 02.7**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=137,slow=6.4,SNR=13						
AAK	**Ala-Archa**	**26.66**	**324**	P	**P**	**23 31 04.2**	**+1.2**
AAK				IAmb	IAmb	23 31 06.5	
	comp=Z,3.3nm,0.8s						
SONM	**Songino Array**	**26.67**	**16**	P	**P**	**23 31 01.2**	**-1.7**
	comp=Z,0.7nm,0.7s,baz=194,slow=9.3,SNR=8.1						
SONM	**Songino Array**	**26.67**	**16**	IAmb	IAmb	23 31 04.6	
	comp=Z,0.9nm,1.0s						
ARSB	**Arslanbob**	**26.69**	**320**	P	**P**	**23 31 01.4**	**-1.8**
ARSB				IAmb	IAmb	23 31 05.6	
	comp=Z,2.6nm,0.9s						
BTK	**Batken**	**27.32**	**315**	IAmb	IAmb	23 31 15.4	
	comp=Z,3.6nm,0.7s						
MNAI	**Manna**	**27.69**	**164**	P	**P**	**23 31 12.3**	**+0.1**
KURBB	**Kurchatov Arra**	**31.04**	**339**	P	**P**	**23 31 39.7**	**-1.9**
	comp=Z,0.4nm,0.5s,baz=149,slow=8.9,SNR=5.7						
KURK	**Kurchatov**	**31.09**	**339**	P	**P**	**23 31 40.3**	**-1.7**
BVAR	**Borovoye Array**	**36.00**	**334**	P	**P**	**23 32 22.7**	**-2.0**
	comp=Z,0.6nm,0.6s,baz=128,slow=12,SNR=6.4						
BRVK	**Borovoye**	**36.07**	**334**	P	**P**	**23 32 25.3**	**-0.1**
ABKAR	**Akbulak array**	**38.73**	**322**		**P**	**23 32 48.3**	**+0.3**
ABKAR	**Akbulak array**	**38.73**	**322**	IAmb	IAmb	23 32 49.9	
	comp=Z,2.1nm,1.1s						
MJAR	**Matsushiro Arr**	**39.27**	**59**	P	**P**	**23 32 49.6**	**-3.0**
	comp=Z,1.5nm,0.7s,baz=276,slow=8.8,SNR=3.6						
KNRA	**Kununurra**	**49.97**	**137**	P	**P**	**23 34 17.5**	**-0.7**
WB0	**Warramunga Arr**	**56.59**	**135**	P	**P**	**23 35 07.6**	**+0.7**
WB0				IAmb	IAmb	23 35 07.8	
	comp=Z,4.3nm,1.1s						
WRA	**Warramunga Arr**	**56.68**	**135**	P	**P**	**23 35 06.8**	**-0.8**
	comp=Z,1.5nm,0.9s,baz=325,slow=7.5,SNR=4.9						
WR0	**Warramunga Arr**	**56.83**	**135**	P	**P**	**23 35 06.1**	**-2.5**
NWAO	**Narrogin (SRO)**	**58.90**	**159**	P	**P**	**23 35 22.0**	**-0.9**
ASAR	**Alice Springs**	**59.12**	**139**	P	**P**	**23 35 23.9**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=332,slow=7.0,SNR=4.3						
BBOO	**Buckleboo**	**67.24**	**144**	P	**P**	**23 36 16.8**	**-1.6**
OSSC	**Osservatorio P**	**70.88**	**310**	P	**P**	**23 36 40.6**	**-0.4**
TTA	**Tatalina**	**78.12**	**26**	P	**P**	**23 37 23.0**	**+0.1**
PAX	**Paxson**	**82.24**	**24**	P	**P**	**23 37 45.5**	**+0.4**
INK	**Inuvik**	**82.58**	**16**	P	**P**	**23 37 46.5**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=337,slow=7.3,SNR=4.0						
INK	**Inuvik**	**82.58**	**16**	P	**P**	**23 37 46.4**	**-0.1**
INK				IAmb	IAmb	23 37 46.9	
	comp=Z,1.5nm,0.8s						

*BJI **24** 23:48:52.0±0.0,39.˚31N×72.˚97E, h5km, mb3.8/4, ML3.5/5*

*IDC **24** 23:48:56.8±1.1,39.˚29N×73.˚47E, h0km, mb3.5/10, mb1 3.6/17,mb1mx3.6/42,mbtmp3.5/17, ML2.7/6, MS3.9/2, Ms1 3.9/2, ms1mx2.8/41, Error ellipse: s-maj=20.1km s-min=13.8km az=138.0*

*KRNET **24** 23:48:58.0±0.1,39.˚36N×73.˚47E, mb3.8*

*SOME **24** 23:49:01.0,39.˚55N×73.˚45E, h5km*

*MOS **24** 23:49:02.4±1.6,39.˚42N×73.˚40E, h33km, mb4.1/2, Error ellipse: s-maj=9.9km s-min=5.6km az=82.4*

*NNC **24** 23:49:04.4±1.2,39.˚74N×73.˚42E, h0km, mb4.1, mpv3.8, Error ellipse: s-maj=10.6km s-min=6.2km az=175.0*

*NEIC **24** 23:49:05.4±2.3,39.˚49N±0.˚07×73.˚43E±0.˚09, h66km±7km, mb4.1/15, Error ellipse: s-maj=10.4km s-min=9.1km az=137.0*

ISC 24 23:48:59.2±0.5, 39.˚47N±0.˚04×73.˚48E±0.˚02, h10km, n154, σ2ᵗ52/187, mb3.7/17, 35C-24D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**1.81**	**315**	P	**Pn**	**23 49 30.1**	**-0.5**
FRG				S	**Sn**	**23 49 50.2**	**-3.5**
ARSB	**Arslanbob**	**1.89**	**348**	⇑*iP*	**Pb**	**23 49 34.9**	**+1.0**
	baz=49						
ARSB				⇑*iS*	**Sg**	**23 50 02.4**	**+2.4**
	baz=49						
ARSB	**Arslanbob**	**1.89**	**348**		**Pb**	**23 49 34.3**	**+0.4**
KSH	**Kashi**	**1.93**	**88**	Pg	Pn	23 49 28.9	-3.3
KSH				Sg	**Sn**	**23 49 54.5**	**-2.1**
KSH				smax	smax		
	comp=N,1μm,0.7s						
KSH				smax	smax		
	comp=E,620nm,0.7s						
BTK	**Batken**	**2.14**	**287**	PN	**Pn**	**23 49 37.6**	**+2.5**
BTK	**Batken**	**2.14**	**287**	⇓*iP*	**Pn**	**23 49 37.5**	**+2.5**
	baz=90						
BTK				⇓*iS*	**Sg**	**23 50 07.1**	**-0.8**
	baz=90						
BTK	**Batken**	**2.14**	**287**		**Pn**	**23 49 37.5**	**+2.5**
ARLS	**Aral**	**2.47**	**15**	⇓*eP*	**Pb**	**23 49 43.1**	**-0.7**
	baz=14						
ARLS				⇓*iS*	**Sb**	**23 50 16.1**	**+1.7**
	baz=14						
ARK	**Arkit**	**2.60**	**334**	⇓*iP*	**Pb**	**23 49 44.5**	**-1.4**
	baz=35						
ARK				⇓*iS*	**Sg**	**23 50 19.8**	**-2.9**
	baz=35						
AML	**Almayashu**	**2.66**	**3**	⇓*iP*	**Pb**	**23 49 45.6**	**-1.6**
	baz=4.0						
AML				⇓*iS*	**Sb**	**23 50 20.8**	**+0.7**
	baz=4.0						
AML	**Almayashu**	**2.66**	**3**	P	**Pb**	**23 49 46.0**	**-1.2**
	SNR=296						
NRN	**Naryn**	**2.74**	**44**	PN	**Pn**	**23 49 46.5**	**+2.9**
NRN	**Naryn**	**2.74**	**44**	⇑*iP*	**Pn**	**23 49 45.5**	**+1.9**
	baz=42						
NRN				⇑*iS*	**Sb**	**23 50 20.5**	**-1.9**
	baz=42						
NRN	**Naryn**	**2.74**	**44**		**Pn**	**23 49 46.5**	**+2.9**
UCH	**Uchtor**	**2.86**	**16**	⇑*iP*	**Pn**	**23 49 48.3**	**+2.9**
	baz=15						
UCH				⇑*iS*	**Sb**	**23 50 25.2**	**-0.7**
	baz=15						
UCH	**Uchtor**	**2.86**	**16**	P	**Pb**	**23 49 49.1**	**-1.6**
	SNR=58						
KZA	**Kyzart**	**2.93**	**27**	⇓*eP*	**Pn**	**23 49 48.8**	**+2.6**
	baz=26						
KZA				⇓*iS*	**Sb**	**23 50 26.5**	**-1.3**
	baz=26						
KZA	**Kyzart**	**2.93**	**27**	P	**Pb**	**23 49 50.4**	**-1.4**
	SNR=15						
EKS2	**Erkin-Say**	**3.20**		4⇑*eP*	**Pn**	**23 49 53.0**	**+3.4**
	baz=4.0						
EKS2				⇑*iS*	**Sb**	**23 50 33.4**	**-1.8**
	baz=4.0						
EKS2	**Erkin-Say**	**3.20**	**4**	P	**Pb**	**23 49 53.6**	**-2.5**
	SNR=22						
AAK	**Ala-Archa**	**3.25**	**13**	Pn	**Pb**	**23 49 55.0**	**-2.2**
	18nm,0.3s,baz=160,slow=5.8,SNR=355						
AAK				Sn	**Sb**	**23 50 36.8**	**-0.1**
	7.3nm,0.3s,baz=323,slow=18,SNR=8.8						
AAK				LR	LR	23 50 41.7	
	comp=Z,23nm,20.9s,baz=156,slow=30						
AAK	**Ala-Archa**	**3.25**	**13**	⇑*iP*	**Pn**	**23 49 53.7**	**+3.2**
	baz=13						
AAK				⇑*iS*	**Sb**	**23 50 34.4**	**-2.5**
	baz=13						
AAK	**Ala-Archa**	**3.25**	**13**	P	**Pb**	**23 49 54.7**	**-2.5**
	SNR=77						
AAK	**Ala-Archa**	**3.25**	**13**	⇓Pn	**Pb**	**23 49 54.6**	**-2.6**
	44nm,0.5s						
AAK				⇓Lg	Lg	23 50 38.9	
	110nm,0.7s						
AAK	**Ala-Archa**	**3.25**	**13**		**Pb**	**23 49 54.7**	**-2.5**
MRKS	**Merke**	**3.28**	**357**	*eP*	**Pb**	**23 49 59.7**	**+2.2**
	35nm,0.5s						
MRKS				*eS*	**Sg**	**23 50 42.0**	**-2.4**
	98nm,0.4s						
MRKS	**Merke**	**3.28**	**357**	Pg	**Pb**	**23 49 58.5**	**+1.0**
	35nm,0.3s						
MRKS				Lg	Lg	23 50 42.4	
	70nm,0.4s						
KBK	**Karagaybulak**	**3.37**	**19**	⇓⇑*iP*	**Pn**	**23 49 55.3**	**+3.2**
	baz=18						
KBK				⇓*iS*	**Sb**	**23 50 37.0**	**-3.3**
	baz=18						
KBK	**Karagaybulak**	**3.37**	**19**	P	**Pb**	**23 49 56.9**	**-2.3**
	SNR=29						
FRU1	**Bishkek**	**3.45**	**14**	PN	**Pb**	**23 49 57.6**	**-2.8**
FRU1	**Bishkek**	**3.45**	**14**	⇑*eP*	**Pn**	**23 49 56.1**	**+3.1**
	baz=14						
FRU1				⇑*iS*	**Sb**	**23 50 39.1**	**-3.3**
	baz=14						
FRU1	**Bishkek**	**3.45**	**14**		**Pb**	**23 49 57.6**	**-2.8**
CHRV	**Charvak**	**3.46**	**310**	*eP*	**Pg**	**23 50 04.2**	**-1.2**
CHRV				*eS*	**Sg**	**23 50 48.8**	**-1.4**
CHGR	**Chuyangaron**	**3.46**	**258**	Pn	**Pn**	**23 49 55.5**	**+2.2**
ULHL	**Ulahol**	**3.47**	**36**	⇓*iP*	**Pn**	**23 49 56.3**	**+2.8**
	baz=35						
ULHL				⇓*iS*	**Sn**	**23 50 39.1**	**+4.3**
	baz=35						
ULHL	**Ulahol**	**3.47**	**36**	P	**Pn**	**23 49 58.2**	**+4.7**
	SNR=12						
BOOM	**Boomskoye usch**	**3.54**	**31**	⇑*eP*	**Pn**	**23 49 56.9**	**+2.4**
	baz=30						
BOOM				⇑*iS*	**Sn**	**23 50 40.5**	**+4.0**
	baz=30						
CHMS	**Chumysh**	**3.65**	**15**	⇑*iP*	**Pn**	**23 49 59.1**	**+3.3**
	baz=15						
CHMS				⇑*iS*	**Sb**	**23 50 43.8**	**-4.4**
	baz=15						
CHMS	**Chumysh**	**3.65**	**15**	P	**Pn**	**23 50 00.1**	**+4.3**
	SNR=7.5						
IUG	**luzhnay**	**3.74**	**317**	*ePN*	**Pg**	**23 50 08.9**	**-2.0**
IUG				*eS*	**Sg**	**23 50 57.4**	**-2.0**
IUG	**luzhnay**	**3.74**	**317**	*eP*	**Pg**	**23 50 08.9**	**-2.0**
	3.5nm,0.4s						
IUG				*eS*	**Sg**	**23 50 57.4**	**-2.0**
	312nm,1.0s						
IUG	**luzhnay**	**3.74**	**317**	Pg	**Pb**	**23 50 06.8**	**+1.3**
	3.6nm,0.2s						
IUG				Lg	Lg	23 50 56.3	
	281nm,0.4s						
KDJ	**Kajisay**	**3.86**	**45**	PN	**Pn**	**23 50 02.9**	**+4.0**
KDJ	**Kajisay**	**3.86**	**45**	⇑*iP*	**Pn**	**23 50 01.3**	**+2.4**
	baz=45						
KDJ				⇑*iS*	**Sn**	**23 50 47.8**	**+3.4**
	baz=45						
KDJ	**Kajisay**	**3.86**	**45**		**Pn**	**23 50 02.9**	**+4.0**
USP	**Ospenovka**	**3.87**	**11**	⇑*eP*	**Pn**	**23 50 02.2**	**+3.4**
	baz=11						
USP				⇑*iS*	**Sn**	**23 50 49.2**	**+4.8**
	baz=11						
USP	**Ospenovka**	**3.87**	**11**	P	**Pn**	**23 50 03.5**	**+4.7**
	SNR=8.2						
KST	**Kastek**	**4.03**	**27**	*eP*	**Pg**	**23 50 14.4**	**-1.9**
	17nm,0.4s						
KST				*eS*	**Sg**	**23 51 07.2**	**-1.3**
	120nm,0.7s						
KST	**Kastek**	**4.03**	**27**	Pg	**Pb**	**23 50 11.8**	**+1.5**
	26nm,0.5s						
KST				Lg	Lg	23 51 05.9	
	121nm,0.7s						
SGDS	**Sogindy**	**4.07**	**12**	Pg	**Pb**	**23 50 11.5**	**+0.5**
	9.2nm,0.5s						
SGDS				Lg	Lg	23 51 05.0	
	54nm,0.6s						
CHM	**Chimkent**	**4.09**	**315**	*ePN*	**Pg**	**23 50 16.3**	**-1.3**
CHM				*eS*	**Sg**	**23 51 10.0**	**-0.6**
CHM	**Chimkent**	**4.09**	**315**	*eP*	**Pg**	**23 50 16.3**	**-1.3**
	48nm,0.3s						
CHM				*eS*	**Sg**	**23 51 10.0**	**-0.6**
	437nm,0.7s						
DGS	**Degeres**	**4.14**	**24**	*eP*	**Pg**	**23 50 17.1**	**-1.5**
	5.9nm,0.6s						
DGS				*eS*	**Sg**	**23 51 11.5**	**-0.7**
	146nm,0.6s						
DGS	**Degeres**	**4.14**	**24**	Pg	**Pb**	**23 50 15.0**	**+2.8**
	19nm,0.6s						
DGS				Lg	Lg	23 51 11.6	
	97nm,0.7s						
KK31	**Karatay Array**	**4.26**	**329**	PN	**Pn**	**23 50 07.8**	**+3.6**
KK31				PG	**Pb**	**23 50 17.7**	**+3.4**
KK31				SN	**Sn**	**23 50 56.9**	**+2.8**
KK31				LG	Lg	23 51 14.2	
KK31	**Karatay Array**	**4.26**	**329**	⇑Pn	**Pn**	**23 50 07.8**	**+3.6**
	1.6nm,0.3s,baz=130,slow=12,SNR=45						
KK31				⇓Pg	**Pb**	**23 50 17.7**	**+3.4**
	3.6nm,0.3s,baz=144,slow=14,SNR=9.8						
KK31				⇑Sn	**Sn**	**23 50 56.9**	**+2.8**
	21nm,0.3s,baz=136,slow=24,SNR=5.0						
KK31				⇑Lg	Lg	23 51 14.2	
	25nm,0.5s,baz=143,slow=28,SNR=4.0						
KK31	**Karatay Array**	**4.26**	**329**		**Pn**	**23 50 08.2**	**+3.9**
KKAR	**Karatay Array**	**4.26**	**329**	PN	**Pn**	**23 50 08.2**	**+4.0**
KKAR	**Karatay Array**	**4.26**	**329**		**Pn**	**23 50 08.2**	**+4.0**
KKAR	**Karatay Array**	**4.26**	**329**	Pn	**Pn**	**23 50 07.5**	**+3.2**
MTBS	**Maitube**	**4.28**	**30**	Pg	**Pb**	**23 50 16.2**	**+1.6**
	14nm,0.3s						
MTBS				Lg	Lg	23 51 12.8	
	35nm,0.4s						
TNSS	**Tian-Shan**	**4.42**	**35**	*ePN*	**Pg**	**23 50 22.0**	**-1.8**
TNSS				*eS*	**Sg**	**23 51 19.9**	**-1.2**
TNSS	**Tian-Shan**	**4.42**	**35**	*eP*	**Pg**	**23 50 22.0**	**-1.8**
	12nm,0.6s						
TNSS				*eS*	**Sg**	**23 51 19.9**	**-1.2**
	92nm,0.7s						
TNSS	**Tian-Shan**	**4.42**	**35**	Pg	**Pb**	**23 50 20.2**	**+3.0**
	15nm,0.3s						
TNSS				Lg	Lg	23 51 20.4	
	93nm,0.7s						
MDOK	**Medeo**	**4.56**	**35**	⇑Pn	**Pn**	**23 50 12.6**	**+4.1**
	4.9nm,0.6s						
MDOK				⇑Pg	**Pg**	**23 50 26.0**	**-0.6**
	14nm,1.0s						
MDOK				⇑Lg	Lg	23 51

MAKZ	**Makanchi**	**9.60**	**37**	Pn		**Pn**	**23 51 21.3**	**+3.8**
MK31	**Makanchi Array**	**9.74**	**38**	P		**Pn**	**23 51 22.2**	**+2.8**
MK31	**Makanchi Array**	**9.74**	**38**	⇑Pn		**Pn**	**23 51 24.1**	**+4.7**
	comp=N,1.4nm,0.9s,baz=218,slow=13,SNR=3.8							
MK31				⇓Pg			23 52 00.4	
	comp=N,0.9nm,0.7s,baz=220,slow=15,SNR=8.4							
MK31				⇑Lg		Lg	23 54 09.9	
	comp=N,3.0nm,0.9s,baz=217,slow=28,SNR=5.2							
MK31	**Makanchi Array**	**9.74**	**38**	Pn		**Pn**	**23 51 22.1**	**+2.8**
MKAR	**Makanchi Array**	**9.74**	**38**	*i* P		Pn	23 51 24.7	+5.3
MKAR	**Makanchi Array**	**9.74**	**38**	Pn		**Pn**	**23 51 22.4**	**+3.0**
	comp=N,0.0nm,0.3s,baz=221,slow=13,SNR=4.6							
MKAR				Lg		Lg	23 54 00.9	
	comp=N,0.0nm,0.3s,baz=224,slow=29,SNR=2.5							
JOSI	**Joshimath**	**10.19**	**149**	*e*P		**Pn**	**23 51 28.1**	**+2.3**
JOSI				*e*S		**Sn**	**23 53 15.2**	**-4.9**
HRA	**Herat**	**10.33**	**244**	Pn		**Pn**	**23 51 28.9**	**+1.3**
WMQ	**Urumqi**	**11.48**	**63**	*e*P		**Pn**	**23 51 45.5**	**+2.2**
WMQ				pmax		pmax		
	comp=N,6.0nm,0.7s							
KUDL	**Kundal**	**11.57**	**167**	*e*P		Pn	23 51 38.0	-6.5
KUDL				*e*S		Sn	23 53 41.1	-13
KURBB	**Kurchatov Arra**	**11.71**	**16**	Pn		**Pn**	**23 51 46.6**	**+0.4**
	comp=N,0.0nm,0.3s,baz=208,slow=12,SNR=4.3							
KURBB				Lg		Lg	23 55 05.5	
	comp=N,0.0nm,0.3s,baz=205,slow=28,SNR=7.3							
KURBB	**Kurchatov Arra**	**11.71**	**16**	⇑Pn		Pn	23 51 52.1	+5.9
	comp=N,1.3nm,0.8s							
KURBB				⇓Lg		Lg	23 55 06.1	
	comp=N,13nm,0.8s							
KURK	**Kurchatov**	**11.81**	**16**	P		**Pn**	**23 51 46.6**	**-1.0**
KURK	**Kurchatov**	**11.81**	**16**			**Pn**	**23 51 46.6**	**-1.0**
GEYT	**Alibeck**	**12.11**	**268**	Pn		**Pn**	**23 51 55.1**	**+3.3**
	comp=N,0.2nm,0.3s,baz=83,slow=12,SNR=2.9							
GEYT				Sn		**Sn**	**23 54 03.7**	**-3.1**
	comp=N,0.1nm,0.3s,baz=93,slow=25,SNR=2.8							
GEYT	**Alibeck**	**12.11**	**268**			**Pn**	**23 51 54.0**	**+2.2**
GYA0B	**ALIBECK ARRAY**	**12.11**	**268**	Pn		**Pn**	**23 51 55.3**	**+3.5**
BVAR	**Borovoye Array**	**13.72**	**352**	Pn		**Pn**	**23 52 13.3**	**-0.5**
	comp=N,0.1nm,0.3s,baz=166,slow=13,SNR=6.4							
BVAR				Lg		Lg	23 56 13.4	
	baz=163,slow=26,SNR=5.6							
AB31	**Akbulak array**	**13.74**	**320**	P		**Pn**	**23 52 17.7**	**+3.6**
AB31	**Akbulak array**	**13.74**	**320**	Pn		**Pn**	**23 52 17.1**	**+3.0**
	comp=N,0.7nm,0.5s,baz=129,slow=12,SNR=7.8							
ABKAR	**Akbulak array**	**13.74**	**320**			**Pn**	**23 52 14.0**	**-0.1**
ABKAR	**Akbulak array**	**13.74**	**320**	Pn		**Pn**	**23 52 13.4**	**-0.6**
BRVK	**Borovoye**	**13.77**	**352**	P		**Pn**	**23 52 14.8**	**+0.5**
BRVK	**Borovoye**	**13.77**	**352**			**Pn**	**23 52 14.8**	**+0.5**
AKTO	**Aktyubinsk**	**15.46**	**320**	P		**P**	**23 52 41.7**	**-0.1**
AKTO	**Aktyubinsk**	**15.46**	**320**	Pn		**Pn**	**23 52 36.2**	**-1.0**
	comp=N,0.1nm,0.3s,baz=108,slow=13,SNR=2.9							
AKTO	**Aktyubinsk**	**15.46**	**320**	⇑Pn		**P**	**23 52 41.7**	**-0.1**
	comp=N,4.8nm,0.8s							
ZAA0	**Zalesovo Array**	**16.40**	**24**			**Pn**	**23 52 48.5**	**-0.9**
ZALV	**Zalesovo Beam**	**16.40**	**24**	*e*P		**P**	**23 52 52.9**	**+0.7**
ZALV	**Zalesovo Beam**	**16.40**	**24**	Pn		**Pn**	**23 52 51.1**	**+1.7**
	comp=N,0.2nm,0.3s,baz=221,slow=10,SNR=7.0							
ZALV	**Zalesovo Beam**	**16.40**	**24**			**Pn**	**23 52 50.3**	**+0.9**
ARU	**Arti**	**19.62**	**335**	*d i* P		**Pn**	**23 53 30.6**	**+1.7**
ARU				S		**Sn**	**23 57 07.7**	**-1.3**
ARU				pmax		pmax		
	comp=Z,9.0nm,2.0s							
ARU	**Arti**	**19.62**	**335**	P		**P**	**23 53 27.8**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=144,slow=8.8,SNR=6.8							
ARU	**Arti**	**19.62**	**335**	P		**P**	**23 53 28.7**	**+1.2**
ARU				IAmb		IAmb	23 53 31.9	
	comp=Z,3.0nm,0.8s							
GTA	**Gaotai**	**20.32**	**82**	*e*P		**P**	**23 53 37.3**	**+1.8**
GTA				pP		pP	23 53 40.5	+0.8
GTA				sP		sP	23 53 43.8	+2.1
GTA				pmax		pmax		
	comp=Z,2.0nm,1.2s							
KBZ	**Khabaz**	**23.20**	**291**	P		**P**	**23 54 07.3**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=135,slow=1.4,SNR=2.2							
SONM	**Songino Array**	**25.09**	**60**	*e*P		**P**	**23 54 26.2**	**+2.2**
SONM	**Songino Array**	**25.09**	**60**	P		**P**	**23 54 24.5**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=262,slow=7.3,SNR=4.8							
SONM	**Songino Array**	**25.09**	**60**	P		**P**	**23 54 24.3**	**+0.3**
HHC	**Hu-ho-hao-te**	**28.99**	**75**	*e*P		**P**	**23 55 00.9**	**+1.8**
BRTR	**Keskin Array B**	**30.53**	**283**	*e*P		**P**	**23 55 13.4**	**+0.6**
BRTR				pmax		pmax		
	comp=Z,1.0nm,0.7s							
BRTR	**Keskin Array B**	**30.53**	**283**	P		**P**	**23 55 12.0**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=72,slow=4.0,SNR=4.5							
AKASG	**Malin Array Be**	**32.74**	**305**	P		**P**	**23 55 31.6**	**-0.3**
	comp=Z,25nm,0.3s,baz=79,slow=7.2,SNR=2.8							
LVZ	**Lovozero**	**35.49**	**336**	P		**P**	**23 55 53.4**	**-2.3**
LVZ	**Lovozero**	**35.49**	**336**	P		**P**	**23 55 53.4**	**-2.3**
LVZ				IAmb		IAmb	23 55 53.8	
	comp=Z,8.2nm,0.9s							
ALN	**Alexandroupoli**	**35.92**	**288**	P		**P**	**23 55 56.3**	**-3.3**
ALN	**Alexandroupoli**	**35.92**	**288**	P		**P**	**23 55 56.3**	**-3.3**
ALN				IAmb		IAmb	23 56 14.8	
	comp=Z,10nm,1.1s							
FINES	**FINESS Array B**	**36.20**	**323**	P		**P**	**23 56 02.0**	**+0.3**
FINES	**FINESS Array B**	**36.20**	**323**	P		**P**	**23 56 02.0**	**+0.3**
	comp=Z,1.5nm,0.9s,baz=165,slow=31,SNR=4.4							
ARCES	**ARCESS Array B**	**39.20**	**336**	*e*P		**P**	**23 56 27.7**	**+0.6**
ARCES				pmax		pmax		
	comp=Z,1.0nm,0.6s							
ARCES	**ARCESS Array B**	**39.20**	**336**	P		**P**	**23 56 27.6**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=106,slow=9.1,SNR=7.1							
ARCES	**ARCESS Array B**	**39.20**	**336**	P		**P**	**23 56 27.1**	**0.0**
ARE0	**ARCESS Array S**	**39.20**	**336**	P		P	23 56 22.9	-4.2
GERES	**GERESS Array B**	**42.89**	**303**	P		**P**	**23 56 58.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=76,slow=4.1,SNR=3.0							
GERES	**GERESS Array B**	**42.89**	**303**	P		**P**	**23 56 57.8**	**0.0**
NC602	**NORSAR Array S**	**43.09**	**321**	P		**P**	**23 56 58.8**	**-0.3**
NC303	**NORSAR Array S**	**43.18**	**321**	P		**P**	**23 56 58.7**	**-1.2**
NB2	**NORSAR Subarra**	**43.25**	**321**	P		**P**	**23 57 00.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=91,slow=8.6							
NOA	**NORSAR Array B**	**43.25**	**321**	P		**P**	**23 57 00.2**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=91,slow=7.8,SNR=3.5							
NC204	**NORSAR Array S**	**43.47**	**321**	P		**P**	**23 57 01.4**	**-0.8**
ASAJ	**Asahikawa**	**50.36**	**61**	LR		LR	00 19 01.9	
	comp=Z,262nm,21.4s,baz=126,slow=36							
TORD	**Torodi Ar. Bea**	**67.74**	**269**	P		**P**	**23 59 55.8**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=44,slow=5.7,SNR=7.5							
INK	**Inuvik**	**70.65**	**10**	P		**P**	**00 00 14.7**	**+0.3**
INK	**Inuvik**	**70.65**	**10**	P		**P**	**00 00 14.7**	**+0.3**
INK				IAmb		IAmb	00 00 19.7	
	comp=Z,0.3nm,0.5s							
C36M	**Paulatuk**	**70.72**	**7**	P		**P**	**00 00 14.3**	**-0.5**
C36M				IAmb		IAmb	00 00 20.4	
	comp=Z,0.9nm,0.5s							
KNK	**Knik Glacier**	**73.85**	**20**	P		**P**	**00 00 30.9**	**-2.8**
YKA	**Yellowknife Ar**	**78.17**	**4**	P		**P**	**00 00 57.9**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=348,slow=5.8,SNR=9.5							
WRA	**Warramunga Arr**	**81.95**	**124**	P		**P**	**00 01 18.1**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=329,slow=4.9,SNR=3.3							
WRA	**Warramunga Arr**	**81.95**	**124**	IAmb		IAmb	00 01 18.5	
	comp=Z,1.1nm,1.0s							
WB2	**Warramunga Arr**	**81.96**	**124**	P		**P**	**00 01 18.4**	**-1.0**
WB2				IAmb		IAmb	00 01 31.9	
	comp=Z,4.5nm,1.1s							
WR0	**Warramunga Arr**	**82.10**	**124**	P		**P**	**00 01 19.3**	**-0.7**
WR0				IAmb		IAmb	00 01 36.1	
	comp=Z,1.1nm,0.9s							
F63A	**Nahmakanta, Br**	**88.81**	**335**	P		**P**	**00 01 50.9**	**-2.4**
CTA	**Charters Tower**	**90.04**	**116**	LR		LR	00 45 06.0	
	comp=Z,29nm,21.4s,baz=97,slow=37							

NEIC ***25*** *00:06:04.5±1.2,2°.73N±0°.07×128°.68E±0°.06,h220km±7km, mb4.3/26, Error ellipse: s-maj=13.6km s-min=3.6km az=140.0*

DJA ***25*** *00:06:06.1±1.7,3°.N±8°×12°.9E±1°.8,h216km±7km,M4.7/6, mB5.4/2, mb4.9/2, MLv4.6/6, Mw(mB)4.9/2*

IDC ***25*** *00:06:10.2±2.4,2°.63N×128°.58E,h275km±25km, mb3.5/9, mb1 3.7/10, mb1mx3.4/35, mbtmp4.2/10, Error ellipse: s-maj=32.4km s-min=10.2km az=66.0*

ISC 25 00:06:07.3±0.6,2°.59N±0°.07×128°.59E±0°.10,h250km,n64, σ1§31/64,mb4.2/31,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.18**	**214**	P		**Pn**	**00 06 49.0**	**-2.5**
TNTI	**Ternate**	**2.18**	**214**			**Pn**	**00 06 47.6**	**-3.9**
SANI	**Sanana**	**5.29**	**209**	P		**Pn**	**00 07 24.1**	**-2.7**
	1.6nm9µm261nm,0.8s							
LUWI	**Luwuk**	**6.84**	**238**	P		**Pn**	**00 07 45.2**	**-0.9**
LUWI	**Luwuk**	**6.84**	**238**			**Pn**	**00 07 45.2**	**-0.9**
APSI	**Ampana**	**7.76**	**243**	P		**Pn**	**00 08 00.1**	**+2.4**
TTSI	**Tana Toraja**	**10.40**	**237**	P		**Pn**	**00 08 30.4**	**-0.7**
BKB	**Balikpapan**	**12.30**	**252**	Pn		**Pn**	**00 08 54.4**	**-0.4**
SOEI	**Soe**	**13.00**	**199**	Pn		**Pn**	**00 09 02.1**	**-1.3**
JAY	**Jayapura**	**13.13**	**113**	P		P	00 09 09.1	+2.4
	0.9nm,0.3s,baz=297,slow=5.9,SNR=8.7							
SBUM	**Sibu**	**16.36**	**270**	P		**Pn**	**00 09 43.2**	**-0.6**
SBUM				IAmb		IAmb	00 09 46.2	
	comp=Z,15nm,1.1s							
JAGI	**Jajag, Banyuwa**	**18.11**	**233**	P		**Pn**	**00 10 02.1**	**-2.3**
KSM	**Kuching**	**18.30**	**267**	P		**P**	**00 10 03.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**20.76**	**188**	P		**P**	**00 10 30.6**	**+1.0**
	comp=Z,1.4nm,0.2s,baz=20,slow=8.7,SNR=17							
TPUB	**Ta-pu**	**21.98**	**340**	P		**P**	**00 10 39.1**	**-2.2**
TPUB				IAmb		IAmb	00 10 47.1	
	comp=Z,12nm,1.0s							
WB0	**Warramunga Arr**	**22.94**	**166**	P		**P**	**00 10 51.4**	**+1.3**
WB0				IAmb		IAmb	00 10 52.9	
	comp=Z,9.7nm,0.8s							
YHNB	**Yeheng**	**23.03**	**343**	P		**P**	**00 10 49.9**	**-1.0**
YHNB				IAmb		IAmb	00 11 03.3	
	comp=Z,14nm,1.1s							
WRAB	**Tennant Creek**	**23.09**	**166**	P		**P**	**00 10 52.6**	**+1.3**
WRAB				IAmb		IAmb	00 10 53.9	
	comp=Z,7.2nm,0.8s							
WRA	**Warramunga Arr**	**23.09**	**166**	P		**P**	**00 10 51.9**	**+0.5**
	comp=Z,1.3nm,0.3s,baz=345,slow=10,SNR=38							
WRA	**Warramunga Arr**	**23.09**	**166**	IAmb		IAmb	00 10 54.8	
	comp=Z,0.3nm,0.9s							
WB2	**Warramunga Arr**	**23.10**	**166**	P		**P**	**00 10 52.3**	**+0.8**
WB2				IAmb		IAmb	00 10 55.4	
	comp=Z,6.8nm,0.8s							
WR0	**Warramunga Arr**	**23.16**	**166**	P		**P**	**00 10 53.5**	**+1.5**
WR0				IAmb		IAmb	00 10 55.8	
	comp=Z,4.6nm,0.7s							
AS31	**Alice Springs**	**26.61**	**169**	P		**P**	**00 11 23.2**	**+0.1**
ASAR	**Alice Springs**	**26.61**	**169**	P		**P**	**00 11 24.2**	**+1.1**
	comp=Z,2.8nm,0.6s,baz=354,slow=8.0,SNR=30							
ASAR				PcP		**PcP**	**00 14 41.9**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=0.1,slow=3.0,SNR=4.2							
ASAR				ScP		**ScP**	**00 17 53.2**	**-3.4**
	comp=Z,0.5nm,0.5s,baz=336,slow=10,SNR=7.3							
ASAR	**Alice Springs**	**26.61**	**169**	P		**P**	**00 11 22.5**	**-0.6**
RPSI	**Rantau Prapat**	**29.63**	**271**	P		**P**	**00 11 50.4**	**+0.4**
RPSI				IAmb		IAmb	00 11 51.7	
	comp=Z,14nm,1.1s							
RPSI						**S**	**00 16 31.0**	**+4.0**
PBKT	**Sadao Pong**	**30.51**	**299**	P		**P**	**00 11 57.5**	**-0.1**
PBKT				IAmb		IAmb	00 11 59.3	
	comp=Z,3.7nm,0.8s							
CMAR	**Chiang Mai Arr**	**33.05**	**301**	P		**P**	**00 12 20.9**	**+1.1**
	comp=Z,2.8nm,0.3s,baz=118,slow=7.4,SNR=16							
FORT	**Forrest**	**33.19**	**181**	P		**P**	**00 12 21.1**	**+0.3**
CHTO	**Chiang Mai**	**33.20**	**301**	P		**P**	**00 12 21.0**	**-0.1**
CHTO				IAmb		IAmb	00 12 22.7	
	comp=Z,6.8nm,0.8s							
BBOO	**Buckleboo**	**35.91**	**169**	P		**P**	**00 12 45.5**	**+1.4**
BBOO				IAmb		IAmb	00 12 50.9	
	comp=Z,12nm,1.1s							
STKA	**Stephens Creek**	**36.44**	**161**	P		**P**	**00 12 49.9**	**+1.4**
	comp=Z,1.9nm,0.3s,baz=333,slow=11,SNR=12							
STKA	**Stephens Creek**	**36.44**	**161**	P		**P**	**00 12 49.5**	**+1.0**
ARMA	**Armidale**	**39.51**	**148**	P		**P**	**00 13 14.8**	**+0.5**
HHC	**Hu-ho-hao-te**	**41.07**	**340**	*e*P		**P**	**00 13 27.5**	**+0.6**
HHC				pmax		pmax		
	comp=Z,3.0nm,0.8s							
HHC				pmax		pmax		
	comp=Z,89nm,6.6s							
SHL	**Shillong**	**42.04**	**306**	P		**P**	**00 13 34.6**	**-0.5**
GTA	**Gaotai**	**45.03**	**328**	*e*P		**P**	**00 13 58.3**	**-0.3**
GTA				pP		pP	00 14 57.0	+5.9
GTA				sP		PcP	00 15 24.5	-10
GTA				pmax		pmax		
	comp=Z,3.0nm,1.1s							
TAPN	**Taplejung**	**46.18**	**306**	*e*P		**P**	**00 14 08.3**	**+0.3**
	comp=Z,20nm,1.0s							
ODAN	**Odare**	**46.24**	**305**	*e*P		**P**	**00 14 08.8**	**+0.4**
	comp=Z,19nm,0.7s							
RAMN	**Ramite**	**46.92**	**305**	*e*P		**P**	**00 14 14.3**	**+0.6**
	comp=Z,26nm,0.6s							
JIRN	**Jiri**	**47.54**	**306**	*e*P		**P**	**00 14 18.9**	**+0.3**
	comp=Z,33nm,0.6s							
GUN	**Gumba**	**47.89**	**306**	*e*P		**P**	**00 14 21.3**	**+0.1**
	comp=Z,20nm,0.6s							
PKI	**Pulchoki**	**48.14**	**305**	*e*P		**P**	**00 14 22.8**	**-0.3**
	comp=Z,7.2nm,0.6s							
PKIN	**Phulchoki**	**48.15**	**305**	*e*P		**P**	**00 14 22.8**	**-0.3**
	comp=Z,3.6nm,0.4s							
KKN	**Kakani**	**48.33**	**306**	*e*P		**P**	**00 14 24.2**	**-0.2**
	comp=Z,10nm,0.6s							
DMN	**Daman**	**48.40**	**305**	*e*P		**P**	**00 14 25.3**	**+0.3**
SONM	**Songino Array**	**48.98**	**340**	P		**P**	**00 14 28.6**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=155,slow=8.7,SNR=7.6							
SONM	**Songino Array**	**48.98**	**340**	IAmb		IAmb	00 14 29.1	
	comp=Z,0.8nm,0.8s							
KOLN	**Koldanda**	**49.70**	**305**	*e*P		**P**	**00 14 35.1**	**+0.4**
DANN	**Dangsing**	**49.78**	**306**	*e*P		**P**	**00 14 35.5**	**0.0**
	comp=Z,32nm,0.6s							
WMQ	**Urumqi**	**54.72**	**325**	*e*P		**P**	**00 15 12.1**	**+0.9**
MK31	**Makanchi Array**	**59.55**	**325**	P		**P**	**00 15 44.5**	**-0.3**
MKAR	**Makanchi Array**	**59.55**	**325**	P		**P**	**00 15 44.6**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=118,slow=8.4,SNR=27							
MKAR				PcP		**PcP**	**00 16 29.7**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=126,slow=6.2,SNR=3.6							
MKAR	**Makanchi Array**	**59.55**	**325**	P		**P**	**00 15 44.5**	**-0.3**
MAKZ	**Makanchi**	**59.74**	**325**	P		**P**	**00 15 45.9**	**-0.1**
KSH	**Kashi**	**60.16**	**315**	P		P	00 15 56.1	+6.9
KSH				pP		pP	00 16 41.4	-2.8
KSH				PP		PP	00 18 12.8	+7.7
KSH				pmax		pmax		
	comp=Z,690nm,7.9s							
BKZ	**Black Stump Fm**	**60.50**	**138**	P		**P**	**00 15 52.7**	**+1.3**
BKZ				IAmb		IAmb	00 15 53.8	
	comp=Z,5.6nm,0.9s							
ZALV	**Zalesovo Beam**	**62.44**	**333**	P		**P**	**00 16 02.7**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=133,slow=7.3,SNR=4.7							
ZALV	**Zalesovo Beam**	**62.44**	**333**	P		**P**	**00 16 03.3**	**-0.7**
BRVK	**Borovoye**	**69.36**	**327**	P		**P**	**00 16 47.6**	**-0.3**
BRVK				IAmb		IAmb	00 16 48.4	
	comp=Z,4.6nm,1.0s							
CASY	**Casey**	**69.93**	**188**	P		**P**	**00 16 51.9**	**+0.7**
GEYT	**Alibeck**	**73.05**	**309**	P		**P**	**00 17 11.1**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=152,slow=6.4,SNR=4.0							
GEYT	**Alibeck**	**73.05**	**309**	P		**P**	**00 17 10.4**	**-0.1**
ABKAR	**Akbulak array**	**74.20**	**321**			**P**	**00 17 15.8**	**-1.0**

MAN 25 00:08:05.7,10°.21N×123°.34E,h40km,mb3.9,ML2.7, MS2.3,2C,Cebu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.62**	**80**	⇑*e*P		Pn	00 08 19.5	+1.3
LLP				*i* S		Sn	00 08 29.4	+2.3
GUIM	**Jordan**	**0.85**	**299**	*e*P		Pn	00 08 22.1	+0.9
GUIM				*e*S		Sn	00 08 33.8	+1.4
SNPH	**Sibulan**	**0.87**	**187**	⇑*i*P		Pn	00 08 22.4	+0.8
SNPH				*i* S		Sn	00 08 33.8	+0.8
MSLP	**Maasin**	**1.50**	**93**	*e*P		Pn	00 08 30.9	+0.8
MSLP				*e*S		Sn	00 08 48.9	+0.5

NEIC ***25*** *00:11:09.3±6.4,24°.5N±0°.2×64°.6W±0°.3,h14km±10km, Error ellipse: s-maj=39.4km s-min=23.2km az=106.0*

RSPR 25 00:12:27.0,19°.16N×66°.47W,h17km±3km,MD2.9/11, 7C-5D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EMPR	**Esperanza - Ma**	**0.68**	**185**	⇓*e*P		Pg	00 12 39.0	-1.5
EMPR	**Esperanza - Ma**	**0.68**	**185**	*e*S		Sg	00 12 48.1	-1.5
EMPR	**Esperanza - Ma**	**0.68**	**185**			Pg	00 12 40.1	-0.4
EMPR						Sg	00 12 48.1	-1.5
AOPR	**Arecibo Observ**	**0.85**	**198**	⇓*e*P		Pb	00 12 41.1	-2.4
AOPR	**Arecibo Observ**	**0.85**	**198**	*e*S		Sb	00 12 52.1	-2.5
AOPR	**Arecibo Observ**	**0.85**	**198**			Pb	00 12 41.0	-2.5
AOPR						Sb	00 12 52.0	-2.7
AGPR	**Aguadilla, PR**	**0.92**	**221**	⇑*e*P		Pb	00 12 41.0	-3.5
AGPR	**Aguadilla, PR**	**0.92**	**221**	*e*S		Sb	00 12 54.0	-2.5
AGPR	**Aguadilla, PR**	**0.92**	**221**			Pb	00 12 43.0	-1.5
CBYP	**Canovanas**	**1.06**	**147**	⇓*e*P		Pb	00 12 44.2	-2.8
CBYP	**Canovanas**	**1.06**	**147**	*e*S		Sb	00 12 57.8	-2.8
CBYP	**Canovanas**	**1.06**	**147**			Pb	00 12 44.5	-2.5
CELP	**Cerrillos**	**1.09**	**185**	⇑*e*P		Pb	00 12 44.4	-3.0
SJG	**San Juan**	**1.09**	**164**			Pb	00 12 44.7	-2.7
OBIP	**Obispado Ponce**	**1.12**	**187**	⇑*e*P		Pn	00 12 45.0	-2.9
OBIP	**Obispado Ponce**	**1.12**	**187**	*e*S		Sb	00 12 58.5	-3.7
OBIP	**Obispado Ponce**	**1.12**	**187**			Pn	00 12 45.1	-2.8
MPR	**Mayaguez**	**1.14**	**214**			Pn	00 12 47.0	-1.2
LSP	**Las Mesas**	**1.14**	**211**	⇓*e*P		Pn	00 12 45.4	-2.9
LSP	**Las Mesas**	**1.14**	**211**	*e*S		Sb	00 12 59.9	-3.0
IGPR	**InterUniversit**	**1.24**	**164**	⇑*e*P		Pn	00 12 47.0	-2.6
IGPR	**InterUniversit**	**1.24**	**164**	*e*S		Sb	00 13 02.2	-3.5
IGPR	**InterUniversit**	**1.24**	**164**			Pn	00 12 47.8	-1.8
GBPR	**Guanica, Bosqu**	**1.24**	**198**	⇑*e*P		Pn	00 12 47.0	-2.6
GBPR	**Guanica, Bosqu**	**1.24**	**198**	*e*S		Sb	00 13 02.3	-3.5
CRPR	**Cabo Rojo, PR**	**1.30**	**208**	⇑*e*P		Pn	00 12 47.5	-2.9
CRPR	**Cabo Rojo, PR**	**1.30**	**208**	*e*S		Sn	00 13 03.7	-3.6
CRPR	**Cabo Rojo, PR**	**1.30**	**208**	Pn		Pn	00 12 48.1	-2.3
MLPR	**Magueyes Islan**	**1.30**	**205**	Pn		Pn	00 12 47.0	-3.5
MTP	**Monte Pirata**	**1.37**	**140**	⇓*e*P		Pn	00 12 48.6	-2.8
MTP	**Monte Pirata**	**1.37**	**140**	*e*S		Sn	00 13 05.5	-3.7
MTP	**Monte Pirata**	**1.37**	**140**	Pn		Pn	00 12 48.6	-2.8
CUPR	**Culebra, Puert**	**1.41**	**127**	⇑*e*P		Pn	00 12 49.2	-2.8
CUPR	**Culebra, Puert**	**1.41**	**127**	*e*S		Sn	00 13 06.4	-3.8
CUPR	**Culebra, Puert**	**1.41**	**127**	Pn		Pn	00 12 50.1	-1.8
CDVI	**St. Croix**	**2.14**	**131**	Pn		Pn	00 13 02.5	+0.5
DR12	**Loma Pena Alta**	**2.78**	**263**	Pn		Pn	00 13 11.4	+0.6
BANI	**BANI**	**3.76**	**259**	Pn		Pn	00 13 23.5	-0.9

IDC ***25*** *00:18:40.4±5.2,38°.56N×97°.77E,h36km±42km,mb3.4/8, mb1 3.6/12,mb1mx3.4/46,mbtmp3.6/12,ML3.2/4,MS2.9/2, Ms1 2.9/2,ms1mx2.5/31, Error ellipse: s-maj=33.1km s-min=20.1km az=44.0*

ISC 25 00:18:40.7±0.8,38°.6N±0°.1×97°.6E±0°.1,h35km,n14, σ1§20/13,mb3.6/8,Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**11.23**	**32**	Pn		**Pn**	**00 21 19.2**	**+0.5**
	0.5nm,0.3s,baz=213,slow=15,SNR=16							
SONM				Lg		Lg	00 24 27.1	
	0.5nm,0.3s,baz=223,slow=29,SNR=5.1							
SONM				LR		LR	00 25 50.8	
	comp=Z,65nm,18.0s,baz=142,slow=38							
TLY	**Talaya**	**13.74**	**16**	LR		LR	00 27 27.3	
	comp=Z,42nm,18.8s,baz=114,slow=38							
MKAR	**Makanchi Array**	**13.88**	**311**	Pn		**Pn**	**00 21 52.6**	**-2.2**
	0.2nm,0.3s,baz=121,slow=15,SNR=13							
ZALV	**Zalesovo Beam**	**17.64**	**334**	P		**Pn**	**00 22 43.6**	**+0.1**
	0.1nm,0.3s,baz=148,slow=9.4,

PCVE	**Castro Verde**	**3.74**	**313**	P		**Pn**	**00 31 14.2**	**+1.2**
PCVE				S		**Sn**	**00 31 55.4**	**-0.6**
EMUR	**La Murta**	**3.82**	**44**	S		**Sn**	**00 31 55.4**	**-2.6**
	3.9nm,4.3s,SNR=7.9							
PBEJ	**Beja**	**3.91**	**319**	*e*Pn		**Pn**	**00 31 17.1**	**+1.7**
PBEJ				*e*Sn		**Sn**	**00 31 59.0**	**-1.3**
PBEJ	**Beja**	**3.91**	**319**	P		**Pn**	**00 31 17.1**	**+1.7**
PBEJ				S		**Sn**	**00 31 59.0**	**-1.3**
PFVI	**Vila Bisbo**	**3.97**	**301**	P		**Pn**	**00 31 16.5**	**+0.3**
	0.9nm,0.3s,SNR=7.9							
EBAD	**Badajoz**	**4.11**	**332**	P		**Pn**	**00 31 18.9**	**+0.8**
	1.3nm,0.2s,SNR=7.9							
EBAD				S		**Sn**	**00 32 03.5**	**-1.6**
	4.8nm,0.2s,SNR=7.9							
PTEO	**Sao Teotonio**	**4.12**	**307**	*e*Pn		**Pn**	**00 31 19.6**	**+1.4**
PTEO				*e*Sn		**Sn**	**00 32 04.5**	**-0.9**
PTEO	**Sao Teotonio**	**4.12**	**307**	P		**Pn**	**00 31 19.6**	**+1.4**
PTEO				S		**Sn**	**00 32 04.5**	**-0.9**
PNCL	**Nicolau / Gran**	**4.35**	**314**	*e*Pn		**Pn**	**00 31 22.5**	**+1.2**
PNCL				*e*Sn		**Sn**	**00 32 09.5**	**-1.5**
PNCL	**Nicolau / Gran**	**4.35**	**314**	P		**Pn**	**00 31 22.5**	**+1.2**
PNCL				S		**Sn**	**00 32 09.5**	**-1.5**
EVO	**Evora**	**4.37**	**322**	*e*Sn		**Sn**	**00 32 11.1**	**-0.4**
EVO	**Evora**	**4.37**	**322**	S		**Sn**	**00 32 11.1**	**-0.4**
PESTR	**Estremoz**	**4.44**	**328**	*e*Pn		**Pn**	**00 31 24.1**	**+1.5**
PESTR				*e*Sn		**Sn**	**00 32 12.4**	**-0.8**
PMRV	**Marv??o**	**4.84**	**333**	*e*Pn		**Pn**	**00 31 29.2**	**+1.1**
PMRV				*e*Sn		**Sn**	**00 32 20.8**	**-2.3**
PMRV	**Marv??o**	**4.84**	**333**	P		**Pn**	**00 31 29.2**	**+1.1**
PMRV				S		**Sn**	**00 32 20.8**	**-2.3**
PMTG	**Montargil**	**4.89**	**325**	*e*Pn		**Pn**	**00 31 29.6**	**+0.8**
PMTG				*e*Sn		**Sn**	**00 32 23.2**	**-1.2**
PMTG	**Montargil**	**4.89**	**325**	P		**Pn**	**00 31 29.6**	**+0.8**
PMTG				S		**Sn**	**00 32 23.2**	**-1.2**

SJA 25 00:41:32.0±1.1, 21°52S×65°44W, h332km±9km, ML3.9, MW4.1, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YJA	**Yavi**	**0.66**	**186**	*i* P	Pn	00 42 15.8	+0.6
YJA				*i* S	S	00 42 47.4	-2.2
LVC	**Limon Verde**	**3.40**	**251**	*i* P	Pn	00 42 34.7	+0.4
LVC				*i* S	S	00 43 21.6	-2.6
PB09	**IPOC Station P**	**3.55**	**265**	*i* P	Pn	00 42 36.3	+0.8
PB06	**IPOC Station P**	**4.01**	**252**	*i* P	Pn	00 42 40.7	+0.4
PB06				IAML		00 42 42.0	
	comp=Z,57nm,0.2s						
PB06				*i* S	S	00 43 32.0	-3.2
PB15	**IPOC Station P**	**4.10**	**245**	*i* P	Pn	00 42 42.2	+1.0
PB04	**IPOC Station P**	**4.45**	**259**	*i* P	Pn	00 42 44.8	-0.1
PB04				IAML		00 42 47.5	
	comp=Z,76nm,0.2s						
PB04				*i* S	S	00 43 39.8	-3.9
PB05	**IPOC Station P**	**4.61**	**252**	*i* P	Pn	00 42 46.3	-0.4
PB05				*i* S	S	00 43 42.2	-4.6
LPAZ	**La Paz**	**5.79**	**333**	*i* P	Pn	00 43 01.6	+1.0
VCA	**Vinchina**	**7.61**	**199**	*i* P	Pn	00 43 23.0	+1.6

*PRU **25** 00:51:26.5±0.0, 51°56N×16°02E, h0km*
*IPEC **25** 00:51:26.0±0.3, 51°58N×16°16E, h0km, ML2.2/3, Error ellipse: s-maj=3.0km s-min=1.4km az=50.0*
*VIE **25** 00:51:27.1±0.7, 51°45N×16°01E, h0km, mb2.1/2, ml2.7/5, Error ellipse: s-maj=7.4km s-min=3.8km az=51.0 80 km WNW of Wroclaw Suspected Mining induced.*
ISC 25 00:51:25.0±0.9, 51°62N±0°04×16°02E±0°02, h0km, n32, σ0s65/65, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.80**	**167**	*e*Pg	**Pg**	**00 51 40.5**	**+0.1**
KSP				*e*Sg	**Sg**	**00 51 50.3**	**-0.4**
CHVC	**Chvalec**	**1.04**	**179**	*e*PG	**Pg**	**00 51 44.9**	**0.0**
CHVC				*e*SG	**Sg**	**00 51 58.0**	**-0.3**
	comp=Z,46nm,0.5s						
OSTC	**Ostas**	**1.08**	**173**	*e*PG	**Pb**	**00 51 46.0**	**-0.5**
OSTC				*e*SG	**Sg**	**00 51 59.0**	**-0.6**
	comp=Z,65nm,0.4s						
UPC	**Upice**	**1.12**	**180**	*e*PG	**Pg**	**00 51 45.9**	**-0.5**
UPC				*e*SG	**Sg**	**00 52 00.1**	**-0.8**
	comp=Z,57nm,0.4s						
DPC	**Dobruska-Polom**	**1.29**	**171**	*e*PG	**Pg**	**00 51 49.3**	**-0.4**
DPC				*e*SG	**Sg**	**00 52 05.0**	**-1.4**
	comp=Z,42nm,0.4s						
PVCC	**Panska Ves**	**1.43**	**220**	*e*PG	**Pn**	**00 51 52.1**	**-0.1**
PVCC				*e*SG	**Sg**	**00 52 10.7**	**-0.2**
	comp=Z,67nm,0.3s						
BRG	**Berggiesshubel**	**1.50**	**241**	PN	**Pn**	**00 51 52.7**	**-0.6**
BRG				PG	**Pg**	**00 51 54.3**	**+0.5**
BRG				SG	**Sn**	**00 52 13.9**	**+0.3**
	62nm,0.4s						
KRLC	**Kraliky**	**1.62**	**162**	*e*PG	**Pn**	**00 51 54.6**	**-0.3**
PRA	**Prague**	**1.85**	**213**	*e*PN	**Pn**	**00 51 57.9**	**-0.1**
PRA				*e*PG	**Pb**	**00 51 59.4**	**-0.3**
PRA				*e*SG	**Sb**	**00 52 23.2**	**-0.2**
GOPC	**GO Pecny, Ondr**	**1.88**	**205**	*e*PN	**Pn**	**00 51 58.4**	**-0.1**
GOPC				*e*PG	**Pb**	**00 52 00.1**	**-0.2**
PRU	**Pruhonice**	**1.89**	**210**	*e*PN	**Pn**	**00 51 57.8**	**-0.7**
PRU				*e*PG	**Pb**	**00 51 59.8**	**-0.5**
PRU				*e*SG	**Sb**	**00 52 24.0**	**-0.4**
	comp=Z,20nm,0.3s						
CLL	**Collm**	**1.91**	**262**	*e*Pn	**Pn**	**00 51 59.0**	**+0.2**
CLL				*e*Pg	**Pb**	**00 52 01.0**	**+0.2**
CLL				*i*		00 52 05.5	
CLL				*e*Sg	**Sg**	**00 52 27.0**	**+0.6**
	comp=Z,18nm,0.8s						
MORC	**Moravsky Berou**	**2.09**	**152**	*e*PN	**Pn**	**00 52 01.1**	**-0.3**
MORC				*e*SG	**Sn**	**00 52 28.8**	**+0.8**
MORC	**Moravsky Berou**	**2.09**	**152**	*e*Pn	**Pn**	**00 52 01.0**	**-0.3**
	baz=334						
MORC				*e*Sg	**Sn**	**00 52 28.8**	**+0.8**
	comp=Z,14nm,0.3s,baz=334						
OKC	**Ostrava-Krasne**	**2.24**	**142**	*e*PG	**Pb**	**00 52 07.0**	**+0.6**
OKC				*e*SG	**Sb**	**00 52 35.0**	**+0.3**
	comp=Z,22nm,0.5s						
VRAC	**Vranov**	**2.35**	**171**	*e*PN	**Pn**	**00 52 05.2**	**+0.4**
VRAC				*e*SG	**Sb**	**00 52 37.9**	**+0.2**
VRAC	**Vranov**	**2.35**	**171**	*e*Pn	**Pn**	**00 52 05.2**	**+0.4**
	baz=353						
VRAC				*e*Sg	**Sb**	**00 52 37.8**	**+0.1**
	comp=Z,12nm,0.4s,baz=353						
KRUC	**Moravsky**	**2.58**	**174**	*e*PN	**Pn**	**00 52 08.5**	**+0.5**
KRUC				*e*SG	**Sb**	**00 52 45.1**	**+0.8**
KRUC	**Moravsky**	**2.58**	**174**	*e*Pn	**Pn**	**00 52 08.5**	**+0.5**
	baz=357						
KRUC				*e*Sg	**Sb**	**00 52 45.0**	**+0.8**
	comp=Z,10nm,0.5s,baz=357						
NKC	**Novy Kostel**	**2.65**	**240**	*e*PN	**Pn**	**00 52 09.5**	**+0.4**
NKC				*e*PG	**Pg**	**00 52 15.9**	**0.0**
NKC				*e*SG	**Sg**	**00 52 51.4**	**+1.2**
	comp=Z,29nm,0.3s						
OJC	**Ojcow**	**2.77**	**119**	*e*Pg	**Pg**	**00 52 18.8**	**+0.6**
OJC				*e*Sg	**Sg**	**00 52 53.9**	**-0.3**
KHC	**Kasperske Hory**	**2.94**	**213**	*e*PN	**Pn**	**00 52 13.1**	**0.0**
KHC				*e*PG	**Pb**	**00 52 17.5**	**-0.9**
KHC				*e*SN	**Sn**	**00 52 48.2**	**-0.9**
KHC				*e*SG	**Sg**	**00 52 59.6**	**0.0**
	comp=Z,8.2nm,0.4s						
JAVC	**Velka Javorina**	**2.96**	**158**	*e*PN	**Pn**	**00 52 13.5**	**+0.1**
JAVC	**Velka Javorina**	**2.96**	**158**	*e*Pn	**Pn**	**00 52 13.4**	**+0.1**
	baz=341						
LANS	**Liptovska Anna**	**3.32**	**137**	*e*PN	**Pn**	**00 52 19.2**	**+1.0**
LANS				*e*SG	**Sg**	**00 53 11.0**	**-0.5**
MODS	**Modra-Piesok**	**3.35**	**165**	*e*SG	**Sg**	**00 53 13.7**	**+1.0**
BSD	**Bornholm Skovb**	**3.56**	**350**	*i* P	**Pn**	**00 52 22.0**	**+0.6**
BSD				*i* S	**Sn**	**00 53 02.1**	**-2.0**
VYHS	**Vyhne**	**3.62**	**149**	*e*SG	**Sg**	**00 53 22.5**	**+1.2**
CONA	**Conrad Observa**	**3.70**	**182**	*e*Pn	**Pn**	**00 52 24.4**	**+0.9**
	comp=Z,0.9nm,0.4s						
CONA				Sg	**Sg**	**00 53 23.2**	**-0.7**
	comp=Z,8.5nm,0.3s						
MOA	**Molln**	**3.95**	**197**	*i* Pn	**Pn**	**00 52 27.1**	**+0.3**
	comp=Z,1.2nm,0.3s						
MOA				Sg	**Sg**	**00 53 31.7**	**0.0**
	comp=Z,5.1nm,0.3s						
STHS	**Stebnicka Huta**	**4.00**	**121**	*e*PN	**Pn**	**00 52 27.2**	**-0.4**
STHS				*e*SG	**Sg**	**00 53 32.0**	**-1.5**
ARSA	**Arzberg**	**4.39**	**184**	Sg	**Sg**	**00 53 46.8**	**+0.9**
	comp=Z,4.7nm,0.5s						

*PAS **25** 00:55:55.3±0.9, 34°29N±0°01×118°48W±0°01, h9km±2km, ML2.0/75, Error ellipse: s-maj=2.1km s-min=1.5km az=174.0*
NEIC 25 00:55:55.0±1.1, 34°30N±0°01×118°464W±0°009, h13km±3km, Error ellipse: s-maj=2.1km s-min=0.7km az=155.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IR2C	**Iron Canyon**	**0.11**	**30**		Pg	00 55 58.1	0.0
DECC	**Green Verdugo**	**0.12**	**111**		Pb	00 56 00.4	+1.3
OAT	**Oat Mountain**	**0.13**	**291**		Pg	00 55 58.7	+0.2
HLLC	**North Hollywoo**	**0.15**	**144**		Pg	00 55 58.5	-0.2
DJJ	**Donna J Jenkin**	**0.19**	**178**		Pb	00 56 01.7	+1.4
DJJ	**Donna J Jenkin**	**0.19**	**178**		Pg	00 55 58.8	-0.5
GR2C	**Griffith Obs.**	**0.22**	**143**		Pg	00 55 59.4	-0.4
GR2C	**Griffith Obs.**	**0.22**	**143**		Sg	00 56 02.7	-0.4
PASC	**Pasadena Art C**	**0.26**	**118**	Pg	Pg	00 56 00.3	-0.3
PASC					Pb	00 56 00.5	-1.1
PASC				Sg	Sg	00 56 04.3	+0.1
PASC	**Pasadena Art C**	**0.26**	**118**		Sg	00 56 04.2	-0.1
MWC	**Mount Wilson**	**0.34**	**102**	Pg	Pg	00 56 02.1	0.0
MWC				Sg	Sg	00 56 06.3	-0.5
LEOC	**Leona Valley**	**0.36**	**21**		Pg	00 56 02.3	0.0
LEOC					Sg	00 56 07.8	+0.5
CHFC	**Chilao Flat St**	**0.36**	**84**		Sg	00 56 02.7	+0.2
GVRC	**Garvey Reservo**	**0.38**	**131**		Pg	00 56 02.9	+0.3
OSI	**Osito Audit: C**	**0.38**	**326**	Pg	Pg	00 56 02.1	-0.7
ALPC	**Antelope**	**0.41**	**19**		Pg	00 56 03.4	+0.1
LRRC	**Littlerock Res**	**0.43**	**57**		Pg	00 56 03.5	0.0
LRRC					Sg	00 56 09.4	+0.2
FOXC	**Fox Airport**	**0.49**	**23**		Pg	00 56 04.8	+0.2
BLG	**Laguna Peak, P**	**0.53**	**250**		Pg	00 56 04.9	-0.6
BLG					Sg	00 56 11.8	-0.8
PSRC	**Puddingstone R**	**0.58**	**110**		Pg	00 56 06.2	-0.2
PSRC					Sg	00 56 14.2	+0.1
SBB	**Saddle Back Bu**	**0.66**	**53**		Pg	00 56 07.5	-0.3
SBB					Sg	00 56 16.3	-0.3
BFSC	**Mount Baldy Ra**	**0.67**	**95**		Pg	00 56 07.5	-0.5
EDW2	**Edwards Air Fo**	**0.70**	**33**		Pg	00 56 08.2	-0.4
EDW2					Sg	00 56 17.6	-0.4
SS2	**San Sevaine**	**0.80**	**96**		Pg	00 56 10.1	-0.5
CIAC	**Catalina I. Ai**	**0.89**	**177**		Pg	00 56 11.7	-0.5
CSP	**Cedar Springs**	**0.92**	**90**		Pg	00 56 12.1	-0.6
HYS	**Haystack Butte**	**0.93**	**52**		Pg	00 56 12.5	-0.5
SME	**Santa Rosa Min**	**1.03**	**117**		Pb	00 56 13.8	-1.0
DTP	**Desert Tortois**	**1.09**	**28**		Pb	00 56 15.4	-0.4
PEC	**Perris**	**1.15**	**110**		Pb	00 56 15.8	-1.1
ISA	**Isabella, Lake**	**1.36**	**360**	Pn	Pb	00 56 20.6	+0.2
GSC	**Goldstone, Bar**	**1.69**	**53**		Pb	00 56 26.1	0.0
PAGB	**Antelope Grade**	**2.05**	**315**	Pn	Pn	00 56 29.2	+0.1
TPNV	**Topopah Spring**	**3.20**	**34**	Pn	Pn	00 56 46.0	+0.8
TPNV				Pg	Pg	00 56 56.5	+0.1
OMMB	**Old Mammoth Mi**	**3.34**	**353**	Pn	Pn	00 56 47.8	+0.6
SHPR	**Sheep Range**	**3.48**	**50**	Pn	Pn	00 56 51.0	+2.0
W13A	**Hualapai Mount**	**3.86**	**77**	Pn	Pn	00 56 54.6	+0.4

*BJI **25** 01:15:35.1±0.0, 6°72S×130°84E, h150km, mB4.9/31, mb4.7/43*
*DJA **25** 01:15:40.3±0.3, 6°S±4°×13°0E±°, h143km±10km, M5.1/9, mb4.9/8, mB5.5/5, mb5.0/1, MLv5.2/9, Mw(mB)5.0/5*
*NEIC **25** 01:15:41.2±1.7, 6°15S±0°06×130°36E±0°03, h145km±5km, mb4.6/46, Error ellipse: s-maj=9.0km s-min=4.1km az=173.0*
*IDC **25** 01:15:42.4±2.1, 6°14S×130°46E, h151km±19km, mb4.1/14, mb1 4.2/17, mb1mx4.1/34, mbtmp4.6/17, MS3.4/2, Ms1 3.3/2, ms1mx2.6/27, Error ellipse: s-maj=20.8km s-min=10.2km az=65.0*
ISC 25 01:15:40.9±0.3, 6°29S±0°04×130°41E±0°06, h150km, n127, σ1s91/131, mb4.6/47, 1C-1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**1.83**	**344**	P	**Pn**	**01 16 14.5**	**+0.4**
BNDI				S	**Sn**	**01 16 38.7**	**-0.9**
SAUI	**Saumlaki**	**1.90**	**152**		**Pn**	**01 16 16.5**	**+1.6**
MSAI	**Masohi**	**3.28**	**333**	P	**Pn**	**01 16 31.6**	**-0.3**
AAI	**Ambon**	**3.40**	**319**	P	**Pn**	**01 16 35.1**	**+1.6**
FAKI	**Fak Fak**	**3.82**	**29**	P	**Pn**	**01 16 37.0**	**-1.9**
FAKI	**Fak Fak**	**3.82**	**29**		**Pn**	**01 16 36.7**	**-2.2**
KMPI	**Kaimana, Papua**	**4.20**	**52**	P	**Pn**	**01 16 42.7**	**-1.1**
NLAI	**Namlea**	**4.48**	**312**	P	**Pn**	**01 16 50.2**	**+2.7**
SIJI	**Sorong**	**5.46**	**9**	P	**Pn**	**01 16 58.9**	**-1.6**
	16nm,0.3s,baz=242,slow=23,SNR=31						
SIJI				S	**Sn**	**01 17 54.7**	**-7.9**
	32nm,0.3s,baz=237,slow=13,SNR=7.0						
SWI	**Sorong**	**5.46**	**9**	P	**Pn**	**01 16 59.0**	**-1.5**
	3.5nm14µm79nm,0.6s						
RKPI	**Ransiki, Papua**	**6.06**	**38**	P	**Pn**	**01 17 08.1**	**-0.4**
	5.4nm9µm640nm,0.5s						
SANI	**Sanana**	**6.10**	**314**	P	**Pn**	**01 17 09.6**	**+0.6**
	0.3nm88nm,0.7s						
MTN	**Manton Dam**	**6.55**	**174**		**Pn**	**01 17 16.5**	**+1.6**
SOEI	**Soe**	**6.99**	**240**	P	**Pn**	**01 17 21.5**	**+0.6**
	1.7nm118nm,0.8s						
SOEI	**Soe**	**6.99**	**240**		**Pn**	**01 17 20.8**	**-0.1**
KNRA	**Kununurra**	**9.46**	**190**		**Pn**	**01 17 54.6**	**+0.7**
BNSI	**Bone**	**10.43**	**280**	P	**Pn**	**01 18 10.3**	**+3.6**
MRSI	**Marisa**	**10.80**	**308**	P	**Pn**	**01 18 13.4**	**+1.8**
	950nm36nm,0.8s						
SPSI	**Sidrap Palu**	**10.85**	**282**	P	Pn	01 18 25.0	+13
FITZ	**Fitzroy Crossi**	**12.62**	**201**	P	**Pn**	**01 18 34.2**	**-1.1**
	1.0nm,0.3s,baz=24,slow=9.2,SNR=39						
FITZ				S	**Sn**	**01 20 46.0**	**-8.9**
	4.1nm,0.3s,baz=109,slow=9.5,SNR=14						
FITZ	**Fitzroy Crossi**	**12.62**	**201**	P	**Pn**	**01 18 35.1**	**-0.2**
PLAI	**Plampang**	**12.77**	**258**	P	**Pn**	**01 18 36.6**	**-0.7**
	61nm,0.7s,61nm,0.7s						
WB0	**Warramunga Arr**	**13.94**	**164**	P	**Pn**	**01 18 50.3**	**-1.8**
WRAB	**Tennant Creek**	**14.09**	**165**	P	**Pn**	**01 18 52.3**	**-1.7**
WRA	**Warramunga Arr**	**14.09**	**165**	P	**Pn**	**01 18 53.0**	**-1.1**
	1.1nm,0.3s,baz=346,slow=12,SNR=24						
WRA				S	Sn	01 21 20.0	-10
	4.3nm,0.3s,baz=349,slow=22,SNR=10						
WB2	**Warramunga Arr**	**14.10**	**165**	P	**Pn**	**01 18 53.4**	**-0.8**
WR0	**Warramunga Arr**	**14.16**	**164**	P	**Pn**	**01 18 53.3**	**-1.7**
COEN	**Coen**	**14.69**	**122**		**P**	**01 19 02.7**	**-1.0**
JAGI	**Jajag, Banyuwa**	**16.27**	**261**	Pn	**Pn**	**01 19 18.1**	**-3.0**
JAGI				IAmb	IAmb	01 19 28.0	
	comp=Z,20nm,0.6s						
PMG	**Port Moresby**	**16.88**	**102**	P	**Pn**	**01 19 30.3**	**+1.9**
	comp=Z,8.3nm,0.3s,baz=293,slow=4.6,SNR=52						
PMG	**Port Moresby**	**16.88**	**102**	P	**Pn**	**01 19 30.2**	**+1.8**
AS31	**Alice Springs**	**17.60**	**169**	P	**Pn**	**01 19 38.9**	**+1.8**
ASAR	**Alice Springs**	**17.60**	**169**	P	**Pn**	**01 19 38.5**	**+1.5**
	comp=Z,2.2nm,0.3s,baz=349,slow=10.0,SNR=105						
ASAR				S	**S**	**01 22 45.2**	**-6.0**
	comp=Z,0.9nm,0.3s,baz=345,slow=25,SNR=8.6						
ASAR				ScP	**ScP**	**01 27 28.9**	**-0.3**
	baz=323,slow=1.6,SNR=4.7						
PSA00	**Pilbara Seismi**	**18.31**	**213**	P	**Pn**	**01 19 45.6**	**+0.2**
KKM	**Kota Kinabalu**	**18.73**	**311**		**P**	**01 19 49.7**	**+1.2**
KKM				IAmb	IAmb	01 19 57.4	
	comp=Z,34nm,1.0s						
SBUM	**Sibu**	**20.13**	**295**	P	**P**	**01 20 01.6**	**-1.8**
CTA	**Charters Tower**	**20.61**	**133**	P	Pn	01 20 11.1	-1.5
	comp=Z,8.6nm,0.5s,baz=308,slow=12,SNR=22						
CISI	**Cisompet, Garu**	**22.46**	**265**	P	**P**	**01 20 27.7**	**-0.3**
STKA	**Stephens Creek**	**27.52**	**159**	P	**P**	**01 21 15.3**	**+1.8**
	comp=Z,2.9nm,0.6s,baz=333,slow=9.2,SNR=9.4						
STKA				LR	LR	01 34 10.9	
	comp=Z,62nm,18.0s,baz=19,slow=40						
RPSI	**Rantau Prapat**	**32.68**	**285**	P	**P**	**01 21 57.6**	**-1.6**
GSI	**Gunungsitoli**	**33.64**	**282**	P	**P**	**01 22 05.3**	**-2.2**
DZM	**Mont Dzumac**	**38.16**	**118**	P	**P**	**01 22 47.6**	**+1.6**
	comp=Z,9.5nm,0.7s,baz=292,slow=16,SNR=7.4						
DZM	**Mont Dzumac**	**38.16**	**118**	IAmb	IAmb	01 22 48.6	
	comp=Z,9.7nm,0.6s						
CM31	**Chiang Mai Arr**	**39.60**	**309**	P	**P**	**01 22 58.0**	**0.0**
CM31				IAmb	IAmb	01 22 59.9	
	comp=Z,13nm,1.0s						
CMAR	**Chiang Mai Arr**	**39.60**	**309**	P	**P**	**01 22 58.7**	**+0.7**
	comp=Z,6.3nm,0.6s,baz=142,slow=7.6,SNR=39						
CMAR				PcP	**PcP**	**01 25 04.5**	**+2.2**
	comp=Z,1.3nm,0.4s,baz=178,slow=3.1,SNR=6.6						
NJ2	**Nanjing**	**39.69**	**345**	*e*P	**P**	**01 22 59.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	**Wuhan**	**39.73**	**338**	⇓P	**P**	**01 23 00.1**	**+1.2**
WHN				pmax	pmax		
	comp=Z,32nm,0.7s						

Code	Station Name			Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHTO	**Chiang Mai**	**39.81**	**309**	P	**P**	**01 22 59.2**	**-0.5**
CHTO				IAmb	IAmb	01 23 01.4	
	comp=Z,12nm,0.7s						
MJAR	**Matsushiro Arr**	**43.23**	**9**	P	**P**	**01 23 26.6**	**-0.7**
	comp=Z,1.3nm,0.3s,baz=202,slow=11,SNR=4.9						
MJAR	**Matsushiro Arr**	**43.23**	**9**	IAmb	IAmb	01 23 32.2	
	comp=Z,1.9nm,1.1s						
KSRS	**Korea Array**	**43.58**	**357**	P	**P**	**01 23 30.5**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=178,slow=9.7,SNR=4.2						
XAN	**Xi'an**	**44.98**	**335**	P	**P**	**01 23 40.6**	**-0.7**
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,160nm,6.1s						
XAN	**Xi'an**	**44.98**	**335**	P	**P**	**01 23 40.3**	**-1.0**
XAN				IAmb	IAmb	01 23 41.7	
	comp=Z,9.1nm,0.8s						
BJT	**Baijiatuan**	**47.92**	**345**	P	**P**	**01 24 04.0**	**-0.1**
BJT				IAmb	IAmb	01 24 05.2	
	comp=Z,12nm,0.6s						
BJI	**Beijing**	**47.94**	**345**	P	**P**	**01 24 04.8**	**+0.6**
BJI				pmax	pmax		
	comp=Z,17nm,0.7s						
LZH	**Lanzhou**	**48.98**	**331**	*e*P	**P**	**01 24 13.8**	**+1.3**
LZH				pP	pwP	01 24 48.8	-1.6
LZH				sP	sP	01 25 03.3	+1.7
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
LZH				pmax	pmax		
	comp=Z,58nm,4.6s						
SHL	**Shillong**	**49.03**	**312**	P	**P**	**01 24 12.1**	**-1.0**
SHL				IAmb	IAmb	01 24 14.1	
	comp=Z,18nm,1.2s						
HHC	**Hu-ho-hao-te**	**50.01**	**341**	*e*P	**P**	**01 24 22.9**	**+2.8**
HHC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,45nm,6.6s						
USRK	**Ussuriysk Ar.**	**50.28**	**1**	P	**P**	**01 24 21.8**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=194,slow=7.3,SNR=7.1						
LSA	**Lhasa**	**51.98**	**316**	P	**P**	**01 24 36.6**	**+1.1**
LSA				pmax	pmax		
	comp=Z,33nm,1.1s						
LSA	**Lhasa**	**51.98**	**316**	P	**P**	**01 24 36.1**	**+0.6**
LSA				IAmb	IAmb	01 24 37.1	
	comp=Z,6.3nm,0.6s						
ODAN	**Odare**	**53.11**	**310**	*e*P	**P**	**01 24 44.1**	**+0.5**
	comp=Z,30nm,0.6s						
TAPN	**Taplejung**	**53.13**	**311**	*e*P	**P**	**01 24 44.2**	**+0.4**
	comp=Z,37nm,0.4s						
GTA	**Gaotai**	**53.56**	**331**	⇑P	**P**	**01 24 47.4**	**+0.9**
GTA				pP	pP	01 25 21.0	+0.9
GTA				sP	sP	01 25 36.5	+0.2
GTA				PcP	**PcP**	**01 25 50.8**	**-0.5**
GTA				S	**S**	**01 32 07.3**	**-0.9**
GTA				sS	sS	01 33 07.5	+2.0
GTA				SS	**SS**	**01 35 49.4**	**-1.6**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,120nm,6.7s						
GTA				LR	LR		
	comp=Z,120nm,19.0s						
GTA				LR	LR		
	comp=Z,93nm,17.5s						
GTA				LR	LR		
	comp=Z,130nm,16.5s						
RAMN	**Ramite**	**53.76**	**310**	*e*P	**P**	**01 24 49.1**	**+0.8**
	comp=Z,90nm,0.4s						
JIRN	**Jiri**	**54.44**	**310**	*e*P	**P**	**01 24 53.8**	**+0.4**
	comp=Z,42nm,0.5s						
GUN	**Gumba**	**54.80**	**311**	*e*P	**P**	**01 24 56.4**	**+0.4**
	comp=Z,89nm,0.7s						
PKI	**Pulchoki**	**54.98**	**310**	*e*P	**P**	**01 24 57.3**	**0.0**
PKIN	**Phulchoki**	**55.00**	**310**	*e*P	**P**	**01 24 57.2**	**-0.1**
	comp=Z,7.5nm,0.4s						
KKN	**Kakani**	**55.19**	**310**	*e*P	**P**	**01 24 58.9**	**+0.2**
	comp=Z,26nm,0.6s						
DMN	**Daman**	**55.23**	**310**	*e*P	**P**	**01 24 59.4**	**+0.4**
	comp=Z,15n

MAW	**Mawson**	**75.75**	**201**	P	**P**	**01 27 11.9**	**+2.2**
	comp=Z,3.4nm,0.5s,baz=84,slow=7.8,SNR=9.6						
MAW	**Mawson**	**75.75**	**201**	P	**P**	**01 27 11.8**	**+2.0**
BRVK	**Borovoye**	**77.76**	**328**	P	**P**	**01 27 21.6**	**+0.3**
BRVK				IAmb	IAmb	01 27 22.8	
	comp=Z,6.2nm,0.7s						
TIXI	**Tiksi**	**77.79**	**360**	P	**P**	**01 27 20.5**	**-0.6**
GEYT	**Alibeck**	**80.07**	**310**	P	**P**	**01 27 35.5**	**+1.3**
	comp=Z,4.3nm,0.8s,baz=155,slow=4.2,SNR=14						
GEYT	**Alibeck**	**80.07**	**310**	IAmb	IAmb	01 27 36.5	
	comp=Z,3.1nm,0.8s						
ABKAR	**Akbulak array**	**82.21**	**321**	P	**P**	**01 27 45.2**	**0.0**
QSPA	**South Pole Qui**	**83.68**	**180**	P	**P**	**01 27 54.0**	**+1.4**
AKTO	**Aktyubinsk**	**83.77**	**322**	LR	LR	02 07 59.7	
	comp=Z,17nm,18.6s,baz=337,slow=38						
ARU	**Arti**	**85.33**	**328**	P	**P**	**01 28 01.1**	**+0.2**
ARU				IAmb	IAmb	01 28 01.9	
	comp=Z,12nm,1.1s						
RAYN	**Ar Rayn**	**87.83**	**294**	P	**P**	**01 28 14.7**	**+0.8**
KNK	**Knik Glacier**	**91.25**	**28**	P	**P**	**01 28 30.0**	**+1.0**
ILAR	**Eielson Array**	**92.54**	**25**	P	**P**	**01 28 33.5**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=271,slow=3.8,SNR=3.5						
ARCES	**ARCESS Array B**	**101.06**	**340**	P	**Pdif**	**01 29 11.7**	**-1.6**
	comp=Z,0.9nm,0.5s,baz=80,slow=5.6,SNR=9.1						
FINES	**FINESS Array B**	**102.34**	**332**	P	**Pdif**	**01 29 17.8**	**-1.3**
	comp=Z,0.8nm,0.8s,baz=116,slow=4.4,SNR=3.6						
CLL	**Collm**	**111.84**	**323**	*e*PKiKP	**PKiKP**	**01 33 57.0**	**-1.0**
GERES	**GERESS Array B**	**112.14**	**320**	PKiKP	**PKiKP**	**01 33 59.3**	**+0.5**
	comp=Z,0.5nm,0.5s,baz=29,slow=3.0,SNR=5.4						
TORD	**Torodi Ar. Bea**	**129.07**	**282**	PKP	**PKiKP**	**01 34 32.9**	**+0.1**
	comp=Z,1.3nm,0.6s,baz=99,slow=2.3,SNR=15						
TORD				SKPbc	SKPbc	01 37 39.1	-0.7
	comp=Z,1.3nm,0.7s,baz=60,slow=3.1,SNR=7.9						
LONY	**Lake Ozonia**	**136.03**	**26**		**PKiKP**	**01 34 44.8**	**-1.4**
CPUP	**Villa Florida**	**146.71**	**167**	PKPbc	**PKiKP**	**01 35 07.2**	**-1.3**
	comp=Z,3.5nm,0.9s,baz=268,slow=4.1,SNR=4.3						
MNMC	**Minye Minye**	**147.96**	**142**		**PKPab**	**01 35 11.9**	**-0.9**
LPAZ	**La Paz**	**151.02**	**141**	PKPbc	**PKiKP**	**01 35 19.9**	**+1.5**
	comp=Z,3.7nm,0.4s,baz=243,slow=4.5,SNR=31						
LPAZ	**La Paz**	**151.02**	**141**		**PKiKP**	**01 35 19.7**	**+1.2**

IDC 25 01:22:13.1±13.0, 20.13S×177.10W, h457km±120km, mb3.4/5, mb1 3.7/5, mb1mx3.3/24, mbtmp4.2/5, Error ellipse: s-maj=103.7km s-min=41.6km az=127.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**45.42**	**256**	P	P	01 29 50.2	+0.2
	4.9nm,0.8s,baz=84,slow=8.7,SNR=20						
ASAR				PcP	PcP	01 31 19.7	-0.3
	0.9nm,0.8s,baz=94,slow=6.6,SNR=4.5						
WRA	**Warramunga Arr**	**45.49**	**261**	P	P	01 29 49.8	-0.6
	1.9nm,0.6s,baz=97,slow=7.5,SNR=10						
USRK	**Ussuriysk Ar.**	**79.13**	**325**	P	P	01 33 29.5	+0.4
	2.6nm,0.9s,baz=98,slow=5.8,SNR=4.6						
ILAR	**Eielson Array**	**87.77**	**12**	P	P	01 34 11.6	-0.3
	0.4nm,0.6s,baz=220,slow=5.8,SNR=6.5						
CMAR	**Chiang Mai Arr**	**90.78**	**289**	P	P	01 34 26.9	-0.1
	0.9nm,0.4s,baz=116,slow=3.1,SNR=7.1						
ARCES	**ARCESS Array B**	**128.70**	**350**	PKP	PKPdf	01 40 26.8	0.0
	1.4nm,0.9s,baz=62,slow=2.1,SNR=4.6						
BRTR	**Keskin Array B**	**147.20**	**313**	PKPbc	PKPbc	01 41 03.4	-1.1
	1.1nm,0.6s,baz=134,slow=6.3,SNR=6.2						
GERES	**GERESS Array B**	**150.06**	**346**	PKPbc	PKPbc	01 41 11.1	-0.2
	1.7nm,0.8s,baz=33,slow=3.2,SNR=12						

*ISN **25** 01:48:48.4±1.1, 36.65N×42.36E, h0km±7km, ML3.2*
*TEH **25** 01:48:49.5, 36.61N×42.26E, h12km, ML3.7*
*ISK **25** 01:48:49.3, 36.59N×42.25E, h4km, ML3.7/27*
*DDA **25** 01:48:50.8, 36.64N×42.27E, h26km±1km, MW3.8*
ISC 25 01:48:49.1±1.2, 36.61N±0.03×42.27E±0.02, h0km±11km, n100, σ1$39/129, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSL	**Mosul**	**0.71**	**107**	*e*Pg	**Pg**	**01 49 02.0**	**-0.7**
MSL				*e*Sg	**Sg**	**01 49 11.0**	**-0.9**
MSL				AML	AML	01 49 20.4	
	comp=Z,1μm,0.2s						
SIRN	**Sirnak**	**0.89**	**7**	*e*Pg	**Pb**	**01 49 07.6**	**+0.1**
SIRN	**Sirnak**	**0.89**	**7**	*i* P	**Pb**	**01 49 07.7**	**+0.1**
SIRN				*i* S	**Sb**	**01 49 19.6**	**-0.4**
SIRN				IAML		01 49 21.0	
	comp=N,3μm,0.4s						
SIRN				IAML		01 49 22.0	
	comp=E,5μm,0.4s						
SIRT	**Sirnak**	**0.90**	**9**	*e*Pg	**Pb**	**01 49 07.6**	**-0.1**
SIRT	**Sirnak**	**0.90**	**9**	PG	**Pb**	**01 49 07.7**	**0.0**
SIRT				SG	**Sn**	**01 49 20.9**	**-2.0**
CUKT	**Cukurca**	**1.25**	**59**	*e*Pg	**Pn**	**01 49 12.9**	**-1.0**
CUKT	**Cukurca**	**1.25**	**59**	PN	**Pg**	**01 49 13.7**	**+0.7**
MARD	**Mardin**	**1.39**	**301**	*i* P	**Pg**	**01 49 16.4**	**+0.7**
MARD				*i* S	**Sg**	**01 49 35.4**	**+1.8**
MARD				IAML		01 49 38.0	
	comp=N,1μm,0.6s						
MARD				IAML		01 49 42.0	
	comp=E,1μm,0.4s						
SRTM	**Siirt_Merkez**	**1.41**	**349**	*e*Pg	**Pg**	**01 49 16.9**	**+0.8**
SRTM	**Siirt_Merkez**	**1.41**	**349**	*i* P	**Pg**	**01 49 16.9**	**+0.8**
SRTM				*i* S	**Sg**	**01 49 34.7**	**+0.3**
SRTM				IAML		01 49 41.0	
	comp=N,2μm,0.5s						
SRTM				IAML		01 49 48.0	
	comp=E,1μm,0.5s						
BTMN	**Batman**	**1.51**	**328**	*e*Pn	**Pg**	**01 49 18.4**	**+0.4**
BTMN	**Batman**	**1.51**	**328**	*i* P	**Pg**	**01 49 18.5**	**+0.4**
BTMN				*i* S	**Sg**	**01 49 39.4**	**+1.8**
BTMN				IAML		01 49 44.0	
	comp=E,594nm,0.5s						
BTMN				IAML		01 49 45.0	
	comp=N,1μm,0.7s						
MAZI	**Mazidag**	**1.69**	**301**	*e*Pn	**Pb**	**01 49 20.0**	**-1.1**
MAZI	**Mazidag**	**1.69**	**301**	PN	**Pb**	**01 49 20.3**	**-0.8**
SVAN	**Silvan-Diyarba**	**1.76**	**331**	*e*Pn	**Pb**	**01 49 21.3**	**-1.0**
SVAN	**Silvan-Diyarba**	**1.76**	**331**	PN	**Pb**	**01 49 21.5**	**-0.8**
SVAN	**Silvan-Diyarba**	**1.76**	**331**	*i* P	**Pb**	**01 49 21.4**	**-0.8**
SVAN				*i* S	**Sg**	**01 49 45.9**	**+0.3**
SVAN				IAML		01 49 48.0	
	comp=N,297nm,0.4s						
SVAN				IAML		01 49 51.0	
	comp=E,344nm,0.7s						
AKDM	**Akdamar-Van**	**1.81**	**18**	*e*Pn	**Pb**	**01 49 22.2**	**-1.0**
AKDM	**Akdamar-Van**	**1.81**	**18**	PN	**Pb**	**01 49 23.0**	**-0.2**
BLIS	**Bitlis-Merkez**	**1.81**	**356**	*e*Pn	**Pb**	**01 49 22.4**	**-0.7**
BLIS	**Bitlis-Merkez**	**1.81**	**356**	*i* P	**Pb**	**01 49 22.4**	**-0.7**
BLIS				*i* S	**Sg**	**01 49 46.5**	**-0.6**
BLIS				IAML		01 49 52.0	
	comp=N,411nm,0.8s						
BLIS				IAML		01 49 52.0	
	comp=E,436nm,0.5s						
GEVA	**Gevas**	**1.81**	**20**	*e*Pn	**Pg**	**01 49 23.8**	**-0.1**
GEVA	**Gevas**	**1.81**	**20**	*i* P	**Pg**	**01 49 23.8**	**-0.1**
GEVA				*i* S	**Sg**	**01 49 47.2**	**-0.2**
GEVA				IAML		01 49 56.0	
	comp=E,254nm,0.6s						
YOVA	**Hakkari_Yksek**	**1.89**	**58**	*e*Pn	**Pb**	**01 49 23.8**	**-0.8**
YOVA	**Hakkari_Yksek**	**1.89**	**58**	*i* P	**Pb**	**01 49 23.5**	**-1.1**
YOVA				*i* S	**Sb**	**01 49 48.1**	**-0.6**
YOVA				IAML		01 49 53.0	
	comp=E,214nm,0.4s						
GURO	**Guroymak-BITLI**	**1.95**	**354**	*e*Pn	**Pb**	**01 49 24.2**	**-1.3**
GURO	**Guroymak-BITLI**	**1.95**	**354**	PN	**Pb**	**01 49 24.3**	**-1.3**
IKRK	**Kirkuk**	**2.07**	**125**	*e*Pn	**Pb**	**01 49 26.0**	**-1.5**
IKRK				*e*Sn	**Sb**	**01 49 54.0**	**+0.2**
IKRK				AML	AML	01 50 07.2	
	comp=Z,190nm,0.7s						
TVAN	**Van**	**2.12**	**25**	*e*Pn	**Pg**	**01 49 29.5**	**-0.2**
TVAN	**Van**	**2.12**	**25**	*i* P	**Pg**	**01 49 29.6**	**-0.2**
TVAN				*i* S	**Sg**	**01 49 58.2**	**+1.1**
DIYA	**Diyarbakir**	**2.16**	**308**	*i* P	**Pn**	**01 49 27.1**	**+0.6**
DIYA				*i* S	**Sb**	**01 49 55.8**	**-0.6**
DIYA				IAML		01 50 05.0	
	comp=E,393nm,0.3s						
DIYA				IAML		01 50 10.0	
	comp=N,444nm,0.5s						
DYBB	**Diyarbakir**	**2.16**	**309**	PN	**Pb**	**01 49 27.4**	**-1.8**
VANB	**Van**	**2.17**	**24**	*e*Pn	**Pn**	**01 49 26.2**	**-0.4**
VANB	**Van**	**2.17**	**24**	PN	**Pn**	**01 49 26.8**	**+0.2**
MUSM	**Mu-Merkez**	**2.19**	**344**	*e*Pn	**Pn**	**01 49 27.1**	**+0.2**
MUSM	**Mu-Merkez**	**2.19**	**344**	*i* P	**Pn**	**01 49 27.2**	**+0.2**
MUSM				*i* S	**Sb**	**01 49 56.2**	**-1.3**
MUSM				IAML		01 50 01.0	
	comp=N,226nm,0.4s						
MUSM				IAML		01 50 01.0	
	comp=E,162nm,0.4s						
ADCV	**BITLIS_Adilcev**	**2.22**	**9**	*e*Pn	**Pb**	**01 49 29.9**	**-0.4**
ADCV	**BITLIS_Adilcev**	**2.22**	**9**	*i* P	**Pb**	**01 49 29.9**	**-0.4**
ADCV				*i* S	**Sg**	**01 50 00.5**	**-0.1**
ADCV				IAML		01 50 05.0	
	comp=N,282nm,0.5s						
ADCV				IAML		01 50 06.0	
	comp=E,269nm,0.5s						
HANI	**Diyarbakir_Han**	**2.34**	**321**	*i* P	**Pn**	**01 49 29.6**	**+0.7**
HANI				*i* S	**Sg**	**01 50 02.5**	**-1.7**
HANI				IAML		01 50 09.0	
	comp=E,458nm,0.5s						
HANI				IAML		01 50 14.0	
	comp=N,288nm,0.7s						
BNGL	**BINGOL**	**2.50**	**340**	*e*Pn	**Pb**	**01 49 33.0**	**-2.0**
BNGL	**BINGOL**	**2.50**	**340**	*i* P	**Pb**	**01 49 33.0**	**-2.0**
BNGL				*i* S	**Sg**	**01 50 08.8**	**-0.7**
MLAZ	**Malazgirt-MUS**	**2.54**	**5**	*e*Pn	**Pn**	**01 49 32.4**	**+0.7**
MLAZ	**Malazgirt-MUS**	**2.54**	**5**	PN	**Pn**	**01 49 33.6**	**-2.0**
VMUR	**Van-Muradiye**	**2.59**	**23**	*i* P	**Pg**	**01 49 39.4**	**+0.7**
VMUR				*i* S	**Sg**	**01 50 17.6**	**+5.3**
VRTB	**Varto-Mus**	**2.63**	**346**	*e*Pn	**Pn**	**01 49 34.0**	**+1.0**
VRTB	**Varto-Mus**	**2.63**	**346**	PN	**Pn**	**01 49 33.9**	**+1.0**
VRTB	**Varto-Mus**	**2.63**	**346**	*i* P	**Pb**	**01 49 34.6**	**-2.5**
VRTB				*i* S	**Sg**	**01 50 13.4**	**-0.1**
VRTB				IAML		01 50 24.0	
	comp=E,145nm,0.5s						
VRTB				IAML		01 50 34.0	
	comp=N,174nm,1.4s						
BINT	**Bingol**	**2.67**	**329**	*e*Pn	**Pn**	**01 49 34.8**	**+1.4**
SANL	**SANLIURFA_Merk**	**2.69**	**283**	*i* P	**Pb**	**01 49 39.0**	**+0.8**
SANL				*i* S	**Sg**	**01 50 14.6**	**-1.0**
SANL				IAML		01 50 22.0	
	comp=N,356nm,0.6s						
SANL				IAML		01 50 28.0	
	comp=E,305nm,0.5s						
BNGB	**Bingl**	**2.69**	**333**	PN	**Pn**	**01 49 34.8**	**+1.0**
MAHB	**Mahabad**	**2.77**	**86**	*e*Pn	**Pb**	**01 49 36.7**	**-2.8**
MAHB				*e*		01 50 22.2	
TUTA	**Tutak**	**2.82**	**9**	*e*Pn	**Pb**	**01 49 37.7**	**-2.8**
TUTA	**Tutak**	**2.82**	**9**	*i* P	**Pb**	**01 49 37.8**	**-2.8**
TUTA				*i* S	**Sb**	**01 50 16.1**	**+0.4**
CLDR	**Caldiran**	**2.84**	**27**	*e*Pn	**Pn**	**01 49 36.6**	**+0.6**
CLDR	**Caldiran**	**2.84**	**27**	PN	**Pn**	**01 49 37.4**	**+1.4**
CLDR	**Caldiran**	**2.84**	**27**	*i* P	**Pg**	**01 49 42.6**	**-1.1**
CLDR				*i* S	**Sg**	**01 50 23.3**	**+2.7**
KARO	**Karliova-Bingo**	**2.86**	**341**	PN	**Pn**	**01 49 37.4**	**+1.2**
URFA	**Urfa**	**2.88**	**288**	PN	**Pn**	**01 49 37.2**	**+0.8**
AGRB	**Hanur-Agry**	**3.01**	**11**	*e*Pn	**Pn**	**01 49 39.2**	**+0.9**
AGRB	**Hanur-Agry**	**3.01**	**11**	PN	**Pn**	**01 49 39.5**	**+1.2**
YEDI	**Yedisu-Bingol**	**3.13**	**335**	PN	**Pn**	**01 49 41.1**	**+1.2**
ELZG	**Elazig**	**3.22**	**307**	*i* P	**Pn**	**01 49 41.9**	**+0.8**
ELZG				*i* S	**Sg**	**01 50 33.4**	**+0.8**
ELZG				IAML		01 50 44.0	
	comp=N,104nm,0.4s						
ELZG				IAML		01 50 54.0	
	comp=E,155nm,0.5s						
TNCL	**Tunceli-Merkez**	**3.30**	**320**	*i* P	**Pn**	**01 49 43.0**	**+0.8**
TNCL				*i* S	**Sg**	**01 50 32.5**	**-2.8**
TNCL				IAML		01 50 42.0	
	comp=N,127nm,0.8s						
TNCL				IAML		01 50 43.0	
	comp=E,142nm,0.7s						
KOPR	**Koprukoy-ERZUR**	**3.39**	**355**	PN	**Pn**	**01 49 45.0**	**+1.5**
IMRD	**Marand**	**3.44**	**51**	*e*Pn	**Pn**	**01 49 45.4**	**+1.3**
IMRD				*e*		01 49 57.0	
ITBZ	**Tabriz**	**3.48**	**61**	*e*Pn	**Pn**	**01 49 45.5**	**+0.8**
ERZN	**Erzincan**	**3.59**	**327**	PN	**Pn**	**01 49 47.5**	**+1.4**
EUZM	**Uzumlu**	**3.70**	**328**	*i* P	**Pg**	**01 49 58.4**	**-1.6**
EUZM				*i* S	**Sg**	**01 50 47.7**	**-0.2**
TASB	**TASBURUN-IGDIR**	**3.71**	**24**	PN	**Pn**	**01 49 49.5**	**+1.8**
BHD	**Baghdad**	**3.76**	**152**	*e*Pn	**Pn**	**01 49 49.0**	**+0.7**
BHD				*e*Sn	**Sn**	**01 50 34.5**	**+1.3**
AKCD	**Akcadag**	**3.85**	**297**	*i* P	**Pn**	**01 49 50.7**	**+1.1**
AKCD				*i* S	**Sg**	**01 50 53.0**	**+0.2**
AKCD				IAML		01 51 09.0	
	comp=N,118nm,0.6s						
AKCD				IAML		01 51 13.0	
	comp=E,67nm,0.5s						
IDHR	**Dehrash**	**3.86**	**118**	*e*Pn	**Pn**	**01 49 51.4**	**+1.5**
IDHR				*e*		01 50 45.1	
SENK	**Senkaya-Erzuru**	**3.94**	**1**	PN	**Pn**	**01 49 52.8**	**+1.7**
ARPR	**Arapgir-MALATY**	**3.98**	**310**	PN	**Pn**	**01 49 52.9**	**+1.4**
GNI	**Garni**	**4.03**	**28**	PN	**Pn**	**01 49 54.2**	**+2.0**
GAZ	**Gaziantep**	**4.09**	**279**	PN	**Pn**	**01 49 54.2**	**+1.2**
BAYT	**Aydintepe-Bayb**	**4.13**	**337**	PN	**Pn**	**01 49 55.1**	**+1.5**
IHRS	**Heris**	**4.16**	**64**	*e*Pn	**Pn**	**01 49 55.3**	**+1.2**
IGHG	**Ghaleghazi**	**4.18**	**122**	*e*Pn	**Pn**	**01 49 56.1**	**+1.7**
IGHG				*e*		01 50 16.8	
IVIS	**Veis**	**4.27**	**118**	*e*Pn	**Pn**	**01 49 57.6**	**+2.1**
IVIS				*e*		01 51 14.1	
DARE	**Darende-Malaty**	**4.28**	**299**	PN	**Pn**	**01 49 57.0**	**+1.5**
KMRS	**Kahramanmaras**	**4.39**	**283**	PN	**Pn**	**01 49 58.6**	**+1.6**
KCHF	**Cheshme Sefid,**	**4.54**	**120**	*e*Pn	**Pn**	**01 50 00.3**	**+1.1**
KCHF				*e*		01 50 59.5	
IBDR	**Badra**	**4.61**	**138**	*e*Pn	**Pn**	**01 50 01.0**	**+1.0**
IBDR				*e*Sn	**Sn**	**01 50 54.0**	**-0.2**
TAHT	**Tahtakopru-Hat**	**4.91**	**269**	PN	**Pn**	**01 50 05.8**	**+1.7**
IKOM	**Komasi**	**4.92**	**118**	*e*Pn	**Pn**	**01 50 05.5**	**+1.0**
IKOM				*e*		01 51 12.7	
SARI	**SarD1z-Kayseri**	**4.99**	**293**	PN	**Pn**	**01 50 07.3**	**+1.9**
HSRG	**Sareghieh**	**5.06**	**104**	*e*Pn	**Pn**	**01 50 08.2**	**+1.6**
KOZT	**Kozan**	**5.23**	**281**	PN	**Pn**	**01 50 10.5**	**+2.0**
SVSK	**Karacayir**	**5.30**	**310**	PN	**Pn**	**01 50 11.9**	**+2.4**
IKFM	**Kafar-mosalman**	**5.51**	**122**	*e*Pn	**Pn**	**01 50 12.8**	**+0.4**
IKFM				*e*		01 50 17.2	
BNN	**Bunyan**	**5.56**	**296**	PN	**Pn**	**01 50 15.5**	**+2.3**
KARA	**Karaisali**	**5.82**	**279**	PN	**Pn**	**01 50 19.0**	**+2.4**
IKMR	**Kamar-syah**	**5.88**	**120**	*e*Pn	**Pn**	**01 50 20.1**	**+2.6**
CMRD	**Camardi-Nigde**	**5.91**	**282**	PN	**Pn**	**01 50 20.4**	**+2.4**
BMDN	**Meydan**	**6.12**	**117**	*e*Pn	**Pn**	**01 50 22.0**	**+1.1**
NSR	**Nassriya**	**6.45**	**149**	*e*Pn	**Pn**	**01 50 27.0**	**+1.7**
NSR				*e*Sn	**Sn**	**01 51 39.0**	**-0.5**
QAM	**Ghamsar**	**8.03**	**108**	*e*Pn	**Pn**	**01 50 47.5**	**+0.3**
IPIR	**Pirpir**	**8.11**	**116**	*e*Pn	**Pn**	**01 50 48.8**	**+0.4**
IPIR				*e*		01 52 28.2	
IKLH	**Kolahrood**	**8.32**	**111**	*e*Pn	**Pn**	**01 50 52.8**	**+1.6**
IKLH				*e*		01 50 58.7	

*KRNET **25** 01:54:09.6±0.1, 40.67N×72.07E, h27km, mb2.8*
*SOME **25** 01:54:09.4, 40.67N×72.18E, h10km*
*NNC **25** 01:54:11.9±1.3, 40.86N×72.11E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=10.5km s-min=4.0km az=0.0
ISC 25 01:54:10.5±1.1, 40.67N±0.05×72.08E±0.03, h10km±7km, n39, σ2$28/62, 24C-2D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FRG	**Fergana**	**0.23**	**286**	P	**Pb**	**01 54 16.9**	**+1.6**
FRG				S	**Sb**	**01 54 20.7**	**+2.2**
ARSB	**Arslanbob**	**0.94**	**46**	⇑*i*P	**Pg**	**01 54 27.2**	**-1.5**
	baz=46						
ARSB				⇑*i*S	**Sg**	**01 54 40.5**	**-0.5**
	baz=46						
ARK	**Arkit**	**1.13**	**356**	⇑*i*P	**Pb**	**01 54 30.7**	**-1.5**
	baz=57						
ARK				⇑*i*S	**Sb**	**01 54 45.0**	**-2.0**
	baz=57						
BTK	**Batken**	**1.14**	**238**	⇑*i*P	**Pb**	**01 54 30.5**	**-1.9**
	baz=38						
BTK				⇑*i*S	**Sg**	**01 54 46.2**	**-1.1**
	baz=38						
AML	**Almayashu**	**1.90**	**39**	⇑*i*P	**Pn**	**01 54 43.4**	**+0.1**
	baz=39						
AML				⇑*i*S	**Sn**	**01 55 08.0**	**+0.5**
	baz=39						
ARLS	**Aral**	**2.07**	**54**	⇑*i*P	**Pn**	**01 54 45.6**	**+0.1**
	baz=54						
ARLS				⇑*i*S	**Sn**	**01 55 11.9**	**+0.5**
	baz=54						
JBG	**Jabagly**	**2.09**	**327**	Pg	**Pb**	**01 54 48.5**	**-0.2**
	15nm,0.4s						
JBG				Lg	Lg	01 55 15.4	
	49nm,0.2s						
IUG	**luzhnay**	**2.13**	**314**	*e*P	**Pb**	**01 54 49.3**	**+0.1**
	1.5nm,0.1s						
IUG				*e*S	**Sg**	**01 55 18.6**	**-0.4**
	50nm,0.2s						
IUG	**luzhnay**	**2.13**	**314**	Pg	**Pb**	**01 54 49.7**	**+0.4**
	4.4nm,0.2s						
IUG				Lg	Lg	01 55 17.2	
	39nm,0.3s						
TAS	**Tashkent**	**2.20**	**288**	⇑*i*P	**Pn**	**01 54 47.1**	**-0.1**
	baz=88						
TAS				⇑*i*S	**Sn**	**01 55 14.5**	**0.0**
	baz=88						
MRKS	**Merke**	**2.24**	**22**	*e*P	**Pb**	**01 54 50.4**	**-0.8**
	13nm,0.3s						
MRKS				*e*S	**Sb**	**01 55 20.4**	**+1.4**
	15nm,0.2s						
MRKS	**Merke**	**2.24**	**22**	Pg	Pn	**01 54 49.4**	**+1.6**
	14nm,0.5s						
MRKS				Lg	Lg	01 55 16.5	
	12nm,0.5s						
EKS2	**Erkin-Say**	**2.36**	**32**	⇑*i*P	**Pn**	**01 54 49.7**	**+0.2**
	baz=32						
EKS2				⇑*i*S	**Sn**	**01 55 19.4**	**+0.8**
	baz=32						
UCH	**Uchtor**	**2.40**	**49**	⇑*i*P	**Pn**	**01 54 50.0**	**-0.3**
	baz=49						
UCH				⇑*i*S	**Sn**	**01 55 19.5**	**-0.5**
	baz=49						
AAK	**Ala-Archa**	**2.67**	**42**	⇓Pg	**Pb**	**01 54 56.8**	**-1.7**
	5.3nm,0.8s						
AAK				⇓Lg	Lg	01 55 32.8	
	12nm,0.7s						
KK31	**Karatay Array**	**2.69**	**335**	⇑Pg	**Pn**	**01 54 55.9**	**+1.9**
	1.8nm,0.3s,baz=152,slow=17,SNR=25						
KK31				⇑Lg	Lg	01 55 33.7	
	3.7nm,0.3s,baz=153,slow=31,SNR=8.6						
KZA	**Kyzart**	**2.77**	**59**	⇑*i*P	**Pn**	**01 54 55.3**	**0.0**
	baz=58						
KZA				⇑*i*S	**Sn**	**01 55 28.4**	**-0.7**
	baz=58						
KBK	**Karagaybulak**	**2.92**	**46**	⇑*i*P	**Pn**	**01 54 57.7**	**+0.4**
	baz=46						
KBK				⇑*i*S	**Sn**	**01 55 32.4**	**-0.2**
	baz=46						
NRN	**Naryn**	**3.06**	**74**	⇑*i*P	**Pn**	**01 54 59.0**	**-0.3**
	baz=74						
NRN				⇑*i*S	**Sn**	**01 55 35.1**	**-1.1**
	baz=74						
SGDS	**Sogindy**	**3.37**	**34**	Pg	**Pb**	**01 55 10.9**	**+0.6**
	2.6nm,0.4s						
SGDS				Lg	Lg	01 55 53.3	
	5.0nm,0.5s						
KST	**Kastek**	**3.75**	**50**	*e*P	**Pb**	**01 55 17.4**	**+0.6**
	2.9nm,0.2s						
KST				*e*S	**Sb**	**01 56 06.3**	**+4.0**
	10nm,0.4s						
KST	**Kastek**	**3.75**	**50**	Pg	**Pb**	**01 55 19.0**	**+2.2**
	3.5nm,0.4s						
KST				Lg	Lg	01 56 07.1	
	9.5nm,0.4s						
DGS	**Degeres**	**3.77**	**46**	*e*P	**Pb**	**01 55 18.1**	**+0.9**
	1.4nm,0.2s						
DGS				*e*S	**Sg**	**01 56 07.1**	**-4.3**
	13nm,0.6s						
DGS	**Degeres**	**3.77**	**46**	Pg	**Pb**	**01 55 18.3**	**+1.2**
	2.7nm,0.4s						
DGS				Lg	Lg	01 56 06.8	
	14nm,0.6s						
IZV	**Izvestkoviy**	**4.13**	**54**	*e*P	**Pb**	**01 55 25.2**	**+1.8**
	1.0nm,0.2s						
IZV				*e*S	**Sg**	**01 56 19.3**	**-3.8**
	7.5nm,0.3s						
IZV	**Izvestkoviy**	**4.13**	**54**	Pg	**Pb**	**01 55 24.8**	**+1.4**
	2.3nm,0.5s						
IZV				Lg	Lg	01 56 17.9	
	7.7nm,0.4s						
TNSS	**Tian-Shan**	**4.34**	**55**	*e*P	**Pb**	**01 55 29.1**	**+2.0**
	0.5nm,0.1s						
TNSS				*e*S	**Sg**	**01 56 26.1**	**-3.7**
	6.9nm,0.2s						
TNSS	**Tian-Shan**	**4.34**	**55**	Pg	**Pb**	**01 55 30.0**	**+3.0**
	2.0nm,0.3s						
TNSS				Lg	Lg	01 56 26.1	
	6.4nm,0.4s						
MDOK	**Medeo**	**4.47**	**55**	*e*P	**Pb**	**01 55 31.3**	**+2.2**
	1.9nm,0.3s						
MDOK				*e*S	**Sg**	**01 56 29.9**	**-4.0**
	5.4nm,0.3s						
MDOK	**Medeo**	**4.47**	**55

IXG				*e*S	**Sn**	**01 58 07.1**	**+0.7**
FAGO	**Alcalda de S**	**1.50**	**69**	*e*P	**Pn**	**01 57 50.0**	**-0.5**
FAGO				AML	AML	01 58 19.1	
	comp=Z,54nm,0.5s						
PCG	**Pacaya**	**1.60**	**320**	*e*P	**Pn**	**01 57 53.1**	**+1.0**
PCG				*e*S	**Sb**	**01 58 14.4**	**+0.8**
NBG	**Las Nubes**	**1.61**	**331**	*e*P	**Pb**	**01 57 53.8**	**+0.5**
NBG				*e*S	**Sb**	**01 58 14.2**	**+0.1**
LCND	**La Caada**	**1.62**	**85**	*e*P	**Pn**	**01 57 52.2**	**+0.1**
LCND				*e*S	**Sg**	**01 58 13.9**	**-1.0**
LCND				AML	AML	01 58 15.3	
	comp=Z,548nm,0.6s						
CNCH	**Conchagua**	**1.67**	**86**	*e*P	**Pn**	**01 57 53.2**	**+0.3**
CNCH				*e*S	**Sg**	**01 58 15.9**	**-0.6**
FUG	**Fuego 3**	**1.79**	**315**	*e*P	**Pn**	**01 57 54.7**	**+0.1**
FUG				*e*S	**Sn**	**01 58 16.8**	**-1.1**
STG3	**Santiaguito 3,**	**2.50**	**308**	*e*P	**Pn**	**01 58 04.3**	**0.0**
STG3				*e*S	**Sn**	**01 58 33.4**	**-1.9**

KRNET ***25*** *01:59:14.1±0.1,40.27N×77.65E,mb2.6*
SOME ***25*** *01:59:15.2,40.37N×77.75E,h0km*
NNC ***25*** *01:59:16.0±1.0,40.35N×77.72E,h0km,mb3.5,mpv3.2,*
Error ellipse: s-maj=6.4km s-min=4.9km az=165.0

ISC 25 01:59:15.3±2.1,40.34N±0.09×77.66E±0.04,h10km,n47,
σ1s54/71,9C-7D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
NRN	**Naryn**	**1.67**	**312**	⇑*i*	*i*P	**Pb**	**01 59 46.2**	**-0.1**
	baz=13							
NRN				⇑*i*	*i*S	**Sg**	**02 00 09.8**	**+0.8**
	baz=13							
KDJ	**Kajisay**	**1.83**	**349**	⇓*i*	*i*P	**Pb**	**01 59 49.3**	**+0.3**
	baz=50							
KDJ				⇓*i*	*i*S	**Sg**	**02 00 15.3**	**+1.2**
	baz=50							
ULHL	**Ulahol**	**2.19**	**331**	⇓*i*	*i*P	**Pb**	**01 59 55.2**	**+0.1**
	baz=32							
ULHL				⇓*i*	*i*S	**Sg**	**02 00 24.5**	**-1.0**
	baz=32							
ANVS	**Anan'yevo**	**2.44**	**0**	⇑*i*	*i*P	**Pb**	**01 59 58.7**	**-0.8**
	baz=0.0							
ANVS				⇑*i*	*i*S	**Sb**	**02 00 30.6**	**+0.9**
	baz=0.0							
BOOM	**Boomskoye usch**	**2.51**	**330**	⇑*i*	*i*P	**Pb**	**01 59 59.2**	**-1.4**
	baz=30							
BOOM				⇑*i*	*i*S	**Sb**	**02 00 32.2**	**+0.6**
	baz=30							
KZA	**Kyzart**	**2.52**	**315**	⇑*i*	*i*P	**Pb**	**01 59 59.6**	**-1.2**
	baz=16							
KZA				⇑*i*	*i*S	**Sb**	**02 00 32.5**	**+0.5**
	baz=16							
TNSS	**Tian-Shan**	**2.75**	**349**	*e*P		**Pg**	**02 00 06.8**	**-1.2**
	5.5nm,0.1s							
TNSS				*e*S		**Sg**	**02 00 44.2**	**+0.6**
	22nm,0.2s							
TNSS	**Tian-Shan**	**2.75**	**349**	Pg		**Pg**	**02 00 06.4**	**-1.7**
	5.3nm,0.3s							
TNSS				Lg		Lg	02 00 43.6	
	22nm,0.3s							
SATY	**Saty**	**2.78**	**11**	*e*P		**Pb**	**02 00 06.5**	**+1.4**
	6.5nm,0.2s							
SATY				*e*S		**Sg**	**02 00 43.8**	**-0.7**
	12nm,0.2s							
SATY	**Saty**	**2.78**	**11**	Pg		**Pg**	**02 00 07.2**	**-1.3**
	9.1nm,0.5s							
SATY				Lg		Lg	02 00 45.3	
	12nm,0.3s							
IZV	**Izvestkoviy**	**2.81**	**344**	*e*P		**Pg**	**02 00 07.8**	**-1.3**
	8.2nm,0.2s							
IZV				*e*S		**Sg**	**02 00 46.1**	**+0.6**
	17nm,0.2s							
IZV	**Izvestkoviy**	**2.81**	**344**	Pg		**Pg**	**02 00 07.7**	**-1.5**
	8.7nm,0.2s							
IZV				Lg		Lg	02 00 46.0	
	18nm,0.5s							
MDOK	**Medeo**	**2.86**	**351**	*e*P		**Pg**	**02 00 09.3**	**-0.8**
	4.3nm,0.2s							
MDOK				*e*S		**Sg**	**02 00 47.8**	**+0.6**
	27nm,0.4s							
MDOK	**Medeo**	**2.86**	**351**	Pg		**Pb**	**02 00 08.2**	**+1.6**
	4.3nm,0.6s							
MDOK				Lg		Lg	02 00 47.1	
	26nm,0.6s							
MDOK	**Medeo**	**2.86**	**351**	Pg		**Pg**	**02 00 09.0**	**-1.1**
	4.3nm,0.2s							
MDOK				Lg		Lg	02 00 47.3	
	27nm,0.5s							
ZHN	**Zhinishke**	**2.89**	**11**	*e*P		**Pg**	**02 00 09.8**	**-0.9**
	2.6nm,0.0s							
ZHN				*e*S		**Sg**	**02 00 48.5**	**+0.4**
	4.0nm,0.1s							
ZHN	**Zhinishke**	**2.89**	**11**	Pg		**Pg**	**02 00 08.9**	**-1.7**
	4.7nm,0.2s							
ZHN				Lg		Lg	02 00 48.0	
	4.0nm,0.2s							
KOTS	**Kotyrbulak**	**2.92**	**352**	*e*P		**Pg**	**02 00 10.3**	**-1.1**
	12nm,0.1s							
KOTS				*e*S		**Sg**	**02 00 49.7**	**+0.5**
	46nm,0.3s							
KOTS	**Kotyrbulak**	**2.92**	**352**	Pg		**Pg**	**02 00 09.9**	**-1.4**
	12nm,0.2s							
KOTS				Lg		Lg	02 00 49.2	
	41nm,0.4s							
MTBS	**Maitube**	**2.94**	**342**	*e*P		**Pg**	**02 00 10.7**	**-1.0**
	4.0nm,0.1s							
MTBS				*e*S		**Sg**	**02 00 50.0**	**+0.3**
	8.3nm,0.1s							
MTBS	**Maitube**	**2.94**	**342**	Pg		**Pg**	**02 00 09.9**	**-1.7**
	7.3nm,0.2s							
MTBS				Lg		Lg	02 00 49.2	
	11nm,0.3s							
ARLS	**Aral**	**2.94**	**302**	⇓*i*	*i*P	**Pn**	**02 00 04.4**	**+2.1**
	baz=4.0							
ARLS				⇓*i*	*i*S	**Sb**	**02 00 42.1**	**-2.0**
	baz=4.0							
KST	**Kastek**	**2.99**	**335**	*e*P		**Pg**	**02 00 11.5**	**-1.0**
	1.9nm,0.1s							
KST				*e*S		**Sg**	**02 00 51.7**	**+0.4**
	7.7nm,0.2s							
KST	**Kastek**	**2.99**	**335**	Pg		**Pg**	**02 00 11.1**	**-1.4**
	3.0nm,0.3s							
KST				Lg		Lg	02 00 51.4	
	7.7nm,0.4s							
UZB	**Uzynbulak**	**2.99**	**20**	*e*P		**Pg**	**02 00 11.5**	**-1.0**
	1.5nm,0.1s							
UZB				*e*S		**Sg**	**02 00 51.5**	**+0.2**
	4.0nm,0.2s							
UZB	**Uzynbulak**	**2.99**	**20**	Pg		**Pb**	**02 00 09.7**	**+1.0**
	2.0nm,0.3s							
UZB				Lg		Lg	02 00 48.5	
	3.7nm,0.4s							
KURS	**Kuram**	**3.17**	**7**	*e*P		**Pg**	**02 00 14.8**	**-1.3**
	1.4nm,0.2s							
KURS				*e*S		**Sg**	**02 00 57.1**	**-0.1**
	4.4nm,0.3s							
KURS	**Kuram**	**3.17**	**7**	Pg		**Pg**	**02 00 14.0**	**-2.1**
	2.5nm,0.5s							
KURS				Lg		Lg	02 00 55.9	
	3.1nm,0.6s							
KPKS	**Kokpek**	**3.22**	**13**	*e*P		**Pg**	**02 00 14.6**	**-2.4**
	7.5nm,0.2s							
KPKS				*e*S		**Sg**	**02 00 56.9**	**-1.8**
	15nm,0.4s							
DGS	**Degeres**	**3.23**	**335**	*e*P		**Pg**	**02 00 15.8**	**-1.4**
	1.5nm,0.2s							
DGS				*e*S		**Sg**	**02 00 59.1**	**+0.1**
	9.1nm,0.3s							
DGS	**Degeres**	**3.23**	**335**	Pg		**Pb**	**02 00 15.0**	**+2.2**
	2.5nm,0.4s							
DGS				Lg		Lg	02 00 58.1	
	4.9nm,0.3s							
PDGK	**Podgornoye**	**3.29**	**24**	Pg		**Pb**	**02 00 15.3**	**+1.5**
	2.0nm,0.4s							
PDGK				Lg		Lg	02 00 58.1	
	3.6nm,0.6s							
PDGK	**Podgornoye**	**3.29**	**24**	⇑Pg		**Pb**	**02 00 12.7**	**-1.1**
	2.2nm,0.5s							
PDGK				⇓Lg		Lg	02 00 59.5	
	6.4nm,0.6s							
AAK	**Ala-Archa**	**3.31**	**315**	Pg		**Pb**	**02 00 15.1**	**+1.0**
	1.9nm,0.7s							
AAK				Lg		Lg	02 01 00.5	
	6.0nm,0.6s							
KTBS	**Karatobe**	**3.45**	**348**	*e*P		**Pg**	**02 00 19.4**	**-2.0**
	1.7nm,0.1s							
KTBS				*e*S		**Sg**	**02 01 05.5**	**-0.6**
	17nm,0.3s							
KTBS	**Karatobe**	**3.45**	**348**	Pg		**Pg**	**02 00 19.2**	**-2.2**
	2.9nm,0.6s							
KTBS				Lg		Lg	02 01 05.2	
	19nm,0.5s							
CHKK	**Chushkaly**	**3.55**	**352**	*e*P		**Pg**	**02 00 21.4**	**-1.9**
	1.6nm,0.0s							
CHKK				*e*S		**Sg**	**02 01 08.7**	**-0.6**
	9.3nm,0.2s							
CHKK	**Chushkaly**	**3.55**	**352**	Pg		**Pg**	**02 00 21.5**	**-1.8**
	3.5nm,0.2s							
CHKK				Lg		Lg	02 01 09.0	
	10.0nm,0.3s							
KUU	**Kurty**	**3.69**	**345**	*e*P		**Pb**	**02 00 23.2**	**+2.7**
	0.8nm,0.1s							
KUU				*e*S		**Sg**	**02 01 11.6**	**-2.0**
	5.2nm,0.2s							
KUU	**Kurty**	**3.69**	**345**	Pg		**Pb**	**02 00 23.1**	**+2.6**
	1.6nm,0.3s							
KUU				Lg		Lg	02 01 11.6	
	5.9nm,0.5s							
SGDS	**Sogindy**	**3.85**	**325**	Pg		**Pg**	**02 00 26.4**	**-2.6**
	3.0nm,0.5s							
SGDS				Lg		Lg	02 01 17.9	
ARXS	**Arharly**	**3.88**	**2**	*e*P		**Pg**	**02 00 27.0**	**-2.5**
	0.9nm,0.2s							
ARXS				*e*S		**Sg**	**02 01 18.3**	**-1.4**
	6.7nm,0.3s							
ARXS	**Arharly**	**3.88**	**2**	Pg		**Pg**	**02 00 27.2**	**-2.3**
	1.0nm,0.4s							
ARXS				Lg		Lg	02 01 18.5	
	7.9nm,0.5s							
MRKS	**Merke**	**4.10**	**307**	*e*P		**Pg**	**02 00 32.6**	**-1.4**
	0.6nm,0.1s							
MRKS				*e*S		**Sg**	**02 01 27.6**	**+0.5**
	2.4nm,0.2s							
MRKS	**Merke**	**4.10**	**307**	Pg		**Pg**	**02 00 32.0**	**-1.9**
	1.3nm,0.3s							
MRKS				Lg		Lg	02 01 26.8	
	2.7nm,0.3s							
DJR	**Jarkent**	**4.29**	**21**	Pg		**Pb**	**02 00 33.5**	**+2.6**
	0.4nm,0.2s							
DJR				Lg		Lg	02 01 29.5	
	2.2nm,0.5s							
KAPS	**Kapalarasan**	**5.10**	**14**	Pg		**Pg**	**02 00 48.9**	**-4.1**
	0.6nm,0.4s							
KAPS				Lg		Lg	02 01 56.3	
	0.6nm,0.4s							

TAP 25 02:08:56.4,23.60N×120.84E,h15km,ML1.5,3C,A,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WHYT	**Xinyi Township**	**0.10**	**7**	⇑*i*	*i*P	Pg	02 08 59.5	-0.2
	baz=7.0							
WHYT					*i* S	Sg	02 09 02.0	+0.1
	baz=7.0							
ALS	**Alishan**	**0.10**	**200**	⇑*i*	*i*P	Pg	02 08 59.3	-0.7
	baz=194							
ALS					S	Sg	02 09 01.8	-0.5
	baz=194							
CHN5	**Tsauling**	**0.15**	**268**	⇑*i*	*i*P	Pg	02 08 59.9	-0.5
	baz=268							
CHN5					*e*S	Sg	02 09 03.4	+0.4
	baz=268							
SSLB	**Suanglung**	**0.21**	**29**	*e*P		Pg	02 09 01.3	0.0
	baz=29							
SSLB					*e*S	Sg	02 09 04.6	0.0
	baz=29							
WNT	**Mingjian**	**0.31**	**333**	*e*P		Pg	02 09 02.4	-0.5
	baz=333							
VWDT	**VWDT**	**0.32**	**61**	*e*P		Pb	02 09 03.5	-0.1
	baz=61							
VWDT					*e*S	Sg	02 09 07.1	-0.3
	baz=61							
CHN4	**Tsaushan**	**0.34**	**222**	*e*P		Pb	02 09 03.9	-0.2
	baz=222							
TPUB	**Ta-pu**	**0.36**	**213**	*e*P		Pg	02 09 03.6	0.0
	baz=212							
TPUB					*e*S	Sg	02 09 08.7	0.0
	baz=212							
ELDTW	**Lidau**	**0.44**	**158**	*e*P		Pg	02 09 04.7	-0.6
	baz=157							
EHY	**Hungye**	**0.45**	**102**	*e*P		Pg	02 09 05.5	+0.1
	baz=102							
EHY					*e*S	Sg	02 09 11.9	+0.4
	baz=102							
YULB	**Yu-li**	**0.47**	**116**	*e*P		Pg	02 09 05.6	-0.1
	baz=116							
YULB					*e*S	Sg	02 09 12.3	+0.3
	baz=116							
TWF1	**Yuli**	**0.49**	**120**	*e*P		Pg	02 09 06.2	+0.2
	baz=120							
TWF1					*e*S	Sg	02 09 12.8	+0.2
	baz=120							
CHN1	**Nanshi**	**0.50**	**215**	*e*P		Pb	02 09 06.7	-0.3
	baz=214							
CHN1					*e*S	Sg	02 09 13.3	+0.2
	baz=214							
HGSD	**Ruisui**	**0.55**	**101**	*e*P		Pg	02 09 06.7	-0.5
	baz=101							
HGSD					*e*S	Sb	02 09 15.3	0.0
	baz=101							
FULB	**Fuli**	**0.58**	**134**	*e*P		Pg	02 09 06.4	-1.4
	baz=133							
FULB					*e*S	Sg	02 09 15.4	0.0
	baz=133							

TAP 25 02:09:00.7,23.99N×120.99E,h8km,ML1.2,1D,B,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
DPDB	**Guoxing**	**0.08**	**309**	⇓*i*	*i*P	Pg	02 09 03.4	+0.6
	baz=308							
DPDB					*e*S	Sg	02 09 04.9	+0.6
	baz=308							
SMLT	**Sun Moon Lake**	**0.13**	**220**	*e*S		Sg	02 09 06.8	+1.2
	baz=12							
SMLT	**Sun Moon Lake**	**0.13**	**220**	P		Pg	02 09 04.3	+0.7
	baz=216							
SMLT					*e*S	Sg	02 09 06.6	+0.9
	baz=216							
TYC	**Yuchr**	**0.15**	**237**	*e*S		Sg	02 09 06.5	+0.6
	baz=5.0							
TYC	**Yuchr**	**0.15**	**237**	P		Pg	02 09 04.3	+0.5
	baz=234							
TYC					*e*S	Sg	02 09 06.5	+0.6
	baz=234							
OWD	**Renai**	**0.17**	**100**	*e*P		Pg	02 09 05.4	+1.1
	baz=100							
OWD					S	Sg	02 09 08.3	+1.6
	baz=100							
CHGB	**Renai**	**0.18**	**66**	*e*P		Pg	02 09 05.5	+0.9
	baz=65							
CHGB					*e*S	Sg	02 09 08.4	+1.3
	baz=65							
SSLB	**Suanglung**	**0.20**	**190**	*e*P		Pg	02 09 05.7	+0.9
	baz=189							
SSLB					*e*S	Sg	02 09 09.4	+1.9
	baz=189							
WHP	**Taichung City**	**0.29**	**352**	*e*P		Pb	02 09 08.1	-0.2
	baz=351							
WHP					*e*S	Sb	02 09 12.5	-0.9
	baz=351							
WHF	**Hehuan Shan**	**0.30**	**57**	*e*P		Pb	02 09 08.1	-0.4
	baz=58							
TDCB	**Techi**	**0.31**	**30**	*e*P		Pg	02 09 07.2	+0.3
	baz=29							
TWT	**Tachien**	**0.32**	**32**	*e*P		Pg	02 09 07.4	+0.4
	baz=30							
TWT					*e*S	Sb	02 09 12.8	-1.2
	baz=30							

IDC 25 02:36:30.9±18.0,5.46S×128.06E,h184km±207km,
mb3.0/1,mb1 2.9/3,mb1mx2.8/28,mbtmp3.4/3,ML3.4/2,
Error ellipse: s-maj=147.1km s-min=67.3km az=69.0,
Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.63**	**158**	P		Pn	02 40 01.4	-0.3
	0.1nm,0.3s,baz=336,slow=12,SNR=12							
WRA					S	Sn	02 42 56.8	+0.1
	0.1nm,0.3s,baz=336,slow=24,SNR=4.2							
ASAR	**Alice Springs**	**18.95**	**163**	P		P	02 40 38.2	0.0
	0.1nm,0.3s,baz=344,slow=12,SNR=5.6							
MKAR	**Makanchi Array**	**65.90**	**327**	P		P	02 46 57.0	0.0
	0.2nm,0.4s,baz=120,slow=8.1,SNR=5.6							

UCR 25 02:59:55.7±1.4,9.92N×84.97W,h13km±5km,MD4.0,2C,
Costa Rica

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
JTS	**Las Juntas de**	**0.37**	**2**	*e*P		Pg	03 00 03.5	+0.2
JTS				*e*S		Sg	03 00 08.8	+0.5
SRA1	**San Ramn**	**0.51**	**71**	*e*P		Pg	03 00 05.9	+0.1
SRA1				*e*S		Sb	03 00 13.3	-0.6
ARE1	**Arenal 1**	**0.59**	**24**	*e*P		Pg	03 00 07.6	+0.3
ARE1				*e*S		Sb	03 00 16.4	+0.1
FORC	**Fortuna**	**0.62**	**28**	*i* P		Pg	03 00 07.8	-0.1
AMAS	**Alto Masis**	**0.69**	**358**	*i* P		Pg	03 00 08.8	-0.5
AMAS				*i* S		Sg	03 00 18.0	-0.3
ACAL	**Aguas Claras**	**0.72**	**355**	*i* P		Pg	03 00 09.2	-0.4
ACAL				*i* S		Sg	03 00 19.0	-0.1
CUI	**Cuipilapa**	**0.76**	**345**	*e*P		Pg	03 00 09.8	-0.8
CUI				*i* S		Sg	03 00 20.0	-0.5
PTEN	**Parque Tenorio**	**0.79**	**359**	*i* P		Pg	03 00 10.7	-0.5
PTEN				*i* S		Sg	03 00 20.8	-0.7
LIM1	**Limonal**	**0.82**	**340**	⇑*i*	*i*P	Pg	03 00 10.8	-0.9
HDC	**Heredia**	**0.84**	**84**	*e*P		Pg	03 00 11.5	-0.6
SJS	**Escuela Geolog**	**0.90**	**89**	*e*P		Pg	03 00 12.5	-0.7
LAPC	**Finca la Perla**	**0.96**	**332**	⇑*i*	*i*P	Pb	03 00 13.0	-1.3
BUEV	**Buena Vista**	**0.98**	**334**	*e*P		Pb	03 00 13.2	-1.3
GB1A	**Borinquen Arri**	**0.99**	**335**	*e*P		Pb	03 00 13.5	-1.2
BUAI	**Buenos Aires**	**1.02**	**339**	*i* P		Pb	03 00 13.9	-1.3
CVTR	**Volcan Turrial**	**1.20**	**85**	*e*P		Pb	03 00 17.2	-1.2
EDDO	**Dominical**	**1.27**	**121**	*e*P		Pn	03 00 17.8	-1.4
EDDO				*e*S		Sb	03 00 35.7	-0.1
EDLM	**Las Mercedes**	**1.50**	**115**	*e*P		Pn	03 00 21.9	-0.4
EDPN	**Palmar Norte**	**1.77**	**122**	*e*P		Pn	03 00 25.2	-0.8
DRK0	**Durika**	**1.82**	**111**	*e*P		Pn	03 00 26.8	0.0
EDBA	**Buenos Aires**	**1.83**	**114**	*e*P		Pn	03 00 26.6	-0.2
EDBA				*e*S		Sn	03 00 50.1	+0.2
ACON	**Acoyapa**	**2.05**	**354**	*e*P		Pn	03 00 30.1	+0.2

IDC 25 03:00:51.9±2.2,0.66S×127.60E,h0km,mb3.3/3,
mb1 3.5/3,mb1mx3.2/38,mbtmp3.3/3,Error ellipse:
s-maj=168.2km s-min=27.0km az=67.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.27**	**161**	P		P	03 05 28.8	-0.5
	0.4nm,0.3s,baz=340,slow=11,SNR=13							
ASAR	**Alice Springs**	**23.68**	**165**	P		P	03 06 05.8	+0.4
	0.6nm,0.7s,baz=344,slow=11,SNR=5.5							
MKAR	**Makanchi Array**	**61.65**	**326**	P		P	03 11 11.6	-0.1
	0.2nm,0.3s,baz=119,slow=7.2,SNR=5.1							

NIED ***25*** *03:05:00,22.70N×123.50E,h5km,Mw4.3 Best double couple: M0 2.88000×10^15 NP1:φ=121.00000°,δ=63.00000°, λ=-50.00000°. NP2:φ=240.00000°,δ=46.00000°, λ=-142.00000°.*
BJI ***25*** *03:05:19.9±0.0,22.58N×123.49E,h11km,mB4.5/4, mb4.3/7,Ms4.4/4,Ms7 4.1/3*
IDC ***25*** *03:05:20.5±0.8,22.74N×123.64E,h0km,mb4.1/16, mb1 4.2/17,mb1mx4.0/43,mbtmp4.1/17,ML3.2/2,MS3.5/6, Ms1 3.5/6,ms1mx3.1/38,Error ellipse: s-maj=22.1km s-min=16.9km az=72.0*
JMA ***25*** *03:05:22.8±0.3,22.74N×123.52E,h67km,M4.3*
NEIC ***25*** *03:05:24.1±1.8,22.77N±0.07×123.51E±0.08,h21km±5km, mb4.4/22,Error ellipse: s-maj=11.9km s-min=8.6km az=135.0*

ISC 25 03:05:20.6±2.1,22.68N±0.04×123.58E±0.04,h5km±13km,
n83,σ2s16/99,mb4.3/24,MS3.3/6,1C,Southeast of
Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**1.39**	**9**	P		**Pn**	**03 05 46.1**	**-0.6**
HATJ				S		**Sg**	**03 06 01.9**	**-3.4**
JKRS	**Kuro-shima**	**1.60**	**14**	P		**Pn**	**03 05 49.3**	**-0.3**
JKRS				S		**Sn**	**03 06 08.0**	**-2.7**
IRIF	**Iriomote-Funau**	**1.66**	**5**	P		**Pn**	**03 05 49.8**	**-0.5**
IRIF				S		**Sn**	**03 06 08.6**	**-3.4**
JIJ	**Ishigaki jima**	**1.76**	**17**	P		**Pn**	**03 05 50.8**	**-0.9**
JIJ				S		**Sn**	**03 06 10.8**	**-3.7**
YOJ	**Yonaguni jima**	**1.85**	**344**	P		**Pn**	**03 05 52.4**	**-0.6**
YOJ				*e*S		**Sn**	**03 06 13.4**	**-3.4**
YOJ	**Yonaguni jima**	**1.85**	**344**			**Pn**	**03 05 52.4**	**-0.6**
JYNG	**Yonagunijimaku**	**1.86**	**342**	P		**Pn**	**03 05 52.3**	**-0.8**
JYNG				S		**Sn**	**03 06 13.6**	**-3.4**
JISG	**Ishigakijimahi**	**2.02**	**19**	P		**Pn**	**03 05 54.3**	**-1.0**
JISG				S		**Sn**	**03 06 17.3**	**-3.6**
JTJ	**Tarama**	**2.21**	**28**	P		**Pn**	**03 05 57.4**	**-0.6**
JTJ				S		**Sn**	**03 06 23.1**	**-2.6**
YULB	**Yu-li**	**2.22**	**289**			**Pn**	**03 05 55.7**	**-2.3**
TWG	**Pinlang**	**2.31**	**274**			**Pn**	**03 05 57.6**	**-1.8**
NACB	**Ninganchiao**	**2.35**	**310**			**Pn**	**03 05 57.6**	**-2.3**
JIRB	**Irabujima**	**2.59**	**34**	P		**Pn**	**03 06 02.2**	**-1.0**
JIRB				S		**Sn**	**03 06 31.9**	**-3.3**
JMJ2	**Miyako jima3**	**2.61**	**38**	P		**Pn**	**03 06 02.7**	**-0.7**
JMJ2				S		**Sn**	**03 06 33.3**	**-2.2**
SSLB	**Suanglung**	**2.65**	**295**			**Pn**	**03 06 02.6**	**-1.4**
JOGS	**Gusukube**	**2.67**	**39**	P		**Pn**	**03 06 03.8**	**-0.5**
JOGS				S		**Sn**	**03 06 34.7**	**-2.3**
BBP	**Basco**	**2.68**	**214**	*e*P		**Pn**	**03 06 03.6**	**-0.8**
BBP				*e*S		**Sn**	**03 06 31.6**	**-5.8**
JIKM	**Ikemajima**	**2.71**	**34**	P		**Pn**	**03 06 03.9**	**-0.9**
JIKM				S		**Sn**	**03 06 35.3**	**-2.7**
TPUB	**Ta-pu**	**2.78**	**283**			**Pn**	**03 06 05.7**	**-0.2**
YHNB	**Yeheng**	**2.83**	**315**			**Pn**	**03 06 06.0**	**-0.6**
TATO	**Taipei**	**2.98**	**321**			**Pn**	**03 06 08.2**	**-0.3**
SGCP	**Mt. Cagua**	**4.64**	**198**	*e*P		**Pn**	**03 06 31.6**	**+0.2**
SGCP				*e*S		**Sn**	**03 07 20.6**	**-5.0**
KNMB	**Chin-men Tao**	**5.08**	**292**			**Pn**	**03 06 37.2**	**-0.2**
QZH	**Quanzhou**	**5.09**	**297**	Pn		**Pn**	**03 06 37.5**	**-0.1**
APYP	**Conner**	**5.27**	**205**	*e*P		**Pn**	**03 06 40.6**	**+0.6**
APYP				*e*S		**Sn**	**03 07 36.3**	**-4.8**
PALP	**Palanan**	**5.69**	**191**	*e*P		**Pn**	**03 06 46.5**	**+0.7**
PALP				*e*S		**Sn**	**03 07 46.5**	**-5.0**
JOW	**Kunigami**	**5.95**	**45**	Pn		**Pn**	**03 06 47.6**	**-1.7**
	1.0nm,0.3s,baz=197,slow=16,SNR=15							
JOW					Sn	**Sn**	**03 07 52.9**	**-5.0**
	1.4nm,0.3s,baz=86,slow=20,SNR=12							
BALP	**Baler**	**7.15**	**196**	*e*P		**Pn**	**03 07 06.9**	**+1.0**
**

	comp=Z,25nm,1.0s								
GTA	**Gaotai**	**26.20**	**315**	*e*P		**P**	**03 11 01.8**	**+5.4**
GTA				pP		pP	03 11 05.8	+10
GTA				sP		sP	03 11 08.9	+13
ASAJ	**Asahikawa**	**26.51**	**32**	LR		LR	03 21 22.9	
	comp=Z,96nm,19.1s,baz=98,slow=36							
KLR	**Kul'dur**	**27.28**	**12**	P		**P**	**03 11 06.2**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=252,slow=5.8,SNR=7.1							
KLR				LR		LR	03 21 07.1	
	comp=Z,89nm,21.7s,baz=230,slow=35							
ULN	**Ulaanbaatar**	**28.40**	**336**	P		**P**	**03 11 16.4**	**+0.3**
SONM	**Songino Array**	**28.62**	**335**	P		**P**	**03 11 18.4**	**+0.3**
	comp=Z,4.5nm,0.9s,baz=145,slow=9.1,SNR=17							
SONM	**Songino Array**	**28.62**	**335**	IAmb		IAmb	03 11 22.6	
	comp=Z,3.7nm,0.9s							
PETK	**Petropavlovsk-**	**39.93**	**32**	P		**P**	**03 12 56.4**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=198,slow=9.1,SNR=4.3							
MK31	**Makanchi Array**	**40.94**	**316**	P		**P**	**03 13 04.3**	**+0.1**
MK31				IAmb		IAmb	03 13 17.2	
	comp=Z,4.0nm,0.8s							
MKAR	**Makanchi Array**	**40.94**	**316**	P		**P**	**03 13 04.9**	**+0.8**
	comp=Z,4.2nm,0.9s,baz=108,slow=9.3,SNR=20							
MAKZ	**Makanchi**	**41.15**	**316**	P		**P**	**03 13 06.3**	**+0.5**
MAKZ				IAmb		IAmb	03 13 19.0	
	comp=Z,6.0nm,0.8s							
ZAA0	**Zalesovo Array**	**42.70**	**327**	P		**P**	**03 13 18.6**	**+0.2**
ZAA0				IAmb		IAmb	03 13 19.7	
	comp=Z,5.9nm,0.8s							
ZALV	**Zalesovo Beam**	**42.70**	**327**	P		**P**	**03 13 18.3**	**-0.1**
	comp=Z,5.5nm,0.7s,baz=117,slow=7.3,SNR=22							
KSH	**Kashi**	**43.56**	**304**	*e*P		**P**	**03 13 27.0**	**+1.3**
KSH				*e*sP		sP	03 13 37.5	+12
KSH				*e*PP		**PcP**	**03 15 11.8**	**-1.7**
KSH				*e*S		**S**	**03 19 56.3**	**+0.8**
KSH				*e*sS		ScP	03 20 05.5	+60
KSH				LR		LR		
	comp=Z,260nm,5.3s							
KSH				LR		LR		
	comp=Z,260nm,5.5s							
KSH				LR		LR		
	comp=Z,440nm,6.7s							
WRA	**Warramunga Arr**	**43.64**	**165**	P		**P**	**03 13 26.7**	**+0.4**
	comp=Z,2.0nm,1.0s,baz=346,slow=8.8,SNR=5.8							
NRN	**Naryn**	**43.84**	**307**	P		**P**	**03 13 28.6**	**+0.3**
NRN				IAmb		IAmb	03 13 41.6	
	comp=Z,6.7nm,0.9s							
KURK	**Kurchatov**	**44.65**	**320**	P		**P**	**03 13 34.9**	**+0.8**
KURK				IAmb		IAmb	03 13 46.4	
	comp=Z,3.6nm,0.8s							
KURBB	**Kurchatov Arra**	**44.67**	**320**	P		**P**	**03 13 34.6**	**+0.3**
	comp=Z,2.1nm,0.7s,baz=113,slow=8.3,SNR=11							
AS31	**Alice Springs**	**47.15**	**167**	P		**P**	**03 13 55.6**	**+1.5**
ASAR	**Alice Springs**	**47.15**	**167**	P		**P**	**03 13 55.2**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=358,slow=10,SNR=8.0							
KK31	**Karatay Array**	**48.12**	**308**	P		**P**	**03 14 02.9**	**+1.2**
KKAR	**Karatay Array**	**48.12**	**308**	P		**P**	**03 14 02.1**	**+0.5**
KBL	**Kabul**	**48.79**	**297**	P		**P**	**03 14 08.3**	**+1.1**
TIXI	**Tiksi**	**49.09**	**2**	P		**P**	**03 14 08.2**	**-0.4**
	comp=Z,1.9nm,0.3s,baz=182,slow=3.4,SNR=7.7							
TIXI	**Tiksi**	**49.09**	**2**	P		**P**	**03 14 08.1**	**-0.4**
TIXI				IAmb		IAmb	03 14 20.6	
	comp=Z,5.7nm,0.9s							
BVAR	**Borovoye Array**	**50.22**	**321**	P		**P**	**03 14 18.2**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=128,slow=9.3,SNR=3.8							
ABKAR	**Akbulak array**	**56.06**	**315**	P		**P**	**03 15 00.7**	**+0.1**
GEYT	**Alibeck**	**57.45**	**301**	P		**P**	**03 15 11.4**	**+0.7**
IMAR	**Indian Mountai**	**66.55**	**26**	P		**P**	**03 16 12.7**	**+1.4**
KBZ	**Khabaz**	**68.13**	**310**	P		**P**	**03 16 23.1**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=124,slow=8.4,SNR=4.6							
NEA	**Nenana**	**68.64**	**28**	P		**P**	**03 16 24.7**	**+0.1**
IL31		**69.54**	**27**	P		**P**	**03 16 30.4**	**+0.3**
ILAR	**Eielson Array**	**69.54**	**27**	P		**P**	**03 16 30.1**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=277,slow=4.6,SNR=14							
BMAR	**Burnt Mountain**	**69.99**	**24**	P		**P**	**03 16 34.4**	**+1.5**
BCAR	**Beaver Creek A**	**72.11**	**28**	P		**P**	**03 16 47.1**	**+1.2**
INK	**Inuvik**	**73.79**	**22**	P		**P**	**03 16 56.3**	**+0.6**
	comp=Z,2.8nm,0.9s,baz=291,slow=6.0,SNR=12							
INK	**Inuvik**	**73.79**	**22**	P		**P**	**03 16 56.5**	**+0.8**
FINES	**FINESS Array B**	**73.84**	**330**	P		**P**	**03 16 56.6**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=38,slow=9.9,SNR=6.6							
BR131	**Keskin Array S**	**75.83**	**307**	P		**P**	**03 17 06.3**	**-2.0**
BRTR	**Keskin Array B**	**75.83**	**307**	P		**P**	**03 17 08.8**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=87,slow=2.7,SNR=3.9							
C36M	**Paulatuk**	**76.48**	**20**	IAmb		IAmb	03 17 12.0	
	comp=Z,4.0nm,0.7s							
YKA	**Yellowknife Ar**	**83.49**	**23**	P		**P**	**03 17 49.8**	**+0.6**
	comp=Z,2.4nm,0.7s,baz=308,slow=5.0,SNR=47							
GERES	**GERESS Array B**	**85.39**	**321**	LR		LR	03 59 46.0	
	comp=Z,93nm,20.4s,baz=342,slow=38							

NIED ***25*** *03:16:00.23˝.80N×121˚.50E,h35km,Mw4.4 Best double couple: M₀5.25000×10¹⁵ NP1:φ₈79.00000°,δ84.00000°, λ118.00000°. NP2:φ₈180.00000°,δ29.00000°,λ12.00000°.*
IDC ***25*** *03:16:09.0±0.7,23˚.68N×121˚.68E,h0km,mb4.1/18, mb1 4.2/19,mb1mx4.1/34,mbtmp4.1/19,ML3.2/1,MS3.5/12, Ms1 3.5/12,ms1mx3.3/40,Error ellipse: s-maj=19.4km s-min=14.7km az=68.0*
JMA ***25*** *03:16:10.6±0.1,23˚.77N×121˚.54E,h7km±3km,M4.2*
NEIC ***25*** *03:16:10.7±2.5,23˚.71N±0˚.04×121˚.54E±0˚.03,h10km±4km, mb4.5/44,ML4.5(TAP),Error ellipse: s-maj=6.3km s-min=4.1km az=157.0*
BJI ***25*** *03:16:11.0±0.0,23˚.85N×121˚.53E,h7km,mB4.7/28, mb4.3/43,ML4.5/8,Ms4.4/35,Ms7 4.2/35*
ASIES ***25*** *03:16:11.4,23˚.81N×121˚.47E,h24km,MW4.0*
TAP ***25*** *03:16:11.2,23˚.79N×121˚.48E,h12km,ML4.7,B*
ISC 25 03:16:11.7±0.6,23˚.79N±0˚.01×121˚.54E±0˚.01,h13km±3km, n240,σ1°24/334,mb4.3/38,MS3.8/13,25C-29D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
ESL	**Shilin**	**0.10**	**283**	⇑*i*P	**Pg**	**03 16 13.7**	**-1.0**
	baz=294						
ESL				S	**Sg**	**03 16 15.0**	**-1.9**
	baz=294						
ENLB	**Shoufeng**	**0.12**	**27**	⇑P	**Pg**	**03 16 14.8**	**-0.2**
	baz=35						
ENLB				*e*S	**Sg**	**03 16 17.6**	**+0.2**
	baz=35						
EGFH	**Guangfu**	**0.16**	**220**	⇑*i*P	**Pg**	**03 16 14.8**	**-0.7**
	baz=212						
EGFH				S	**Sg**	**03 16 17.0**	**-1.1**
	baz=212						
HWA	**Hwalien**	**0.19**	**18**	⇓*e*P	**Pg**	**03 16 16.9**	**+0.8**
	baz=24						
HWA				*e*S	**Sg**	**03 16 20.3**	**+1.2**
	baz=24						
TWD	**Chiawan**	**0.29**	**10**	⇓*i*P	**Pb**	**03 16 17.9**	**-0.8**
	baz=9.0						
TWD				S	**Sb**	**03 16 22.0**	**-1.5**
	baz=9.0						
HGSD	**Ruisui**	**0.32**	**200**	⇑P	**Pb**	**03 16 18.2**	**-0.9**
	baz=201						
HGSD				*e*S	**Sb**	**03 16 24.1**	**-0.1**
	baz=201						
EHY	**Hungye**	**0.35**	**215**	⇑*i*P	**Pg**	**03 16 17.8**	**-0.9**
	baz=213						
EHY				S	**Sg**	**03 16 22.0**	**-1.5**
	baz=213						
VWDT	**VWDT**	**0.37**	**264**	⇑P	**Pg**	**03 16 18.3**	**-0.8**
	baz=262						
VWDT				S	**Sg**	**03 16 22.3**	**-1.8**
	baz=262						
OWD	**Renai**	**0.37**	**296**	⇓P	**Pg**	**03 16 18.2**	**-1.0**
	baz=299						
OWD				*e*S	**Sg**	**03 16 22.6**	**-1.7**
	baz=299						
NACB	**Ninganchiao**	**0.38**	**8**	⇓P	**Pb**	**03 16 19.2**	**-1.1**
	baz=11						
NACB				*e*S	**Sg**	**03 16 23.5**	**-1.2**
	baz=11						
NACB	**Ninganchiao**	**0.38**	**8**		**Pb**	**03 16 18.8**	**-1.5**
ETLH	**Xiulin Townshi**	**0.42**	**353**	⇓P	**Pb**	**03 16 19.7**	**-1.3**
	baz=357						
ETLH				*e*S	**Sg**	**03 16 24.9**	**-0.8**
	baz=357						
CHGB	**Renai**	**0.43**	**309**	⇓P	**Pg**	**03 16 19.5**	**-0.8**
	baz=319						
CHGB				S	**Sg**	**03 16 24.8**	**-1.3**
	baz=319						
WHF	**Hehuan Shan**	**0.43**	**325**	⇓*i*P	**Pg**	**03 16 19.6**	**-0.9**
	baz=330						
WHF				S	**Sg**	**03 16 25.0**	**-1.4**
	baz=330						
YULB	**Yu-li**	**0.46**	**209**	⇑P	**Pg**	**03 16 19.8**	**-0.9**
	baz=212						
YULB				*e*S	**Sg**	**03 16 25.5**	**-1.3**
	baz=212						
YULB	**Yu-li**	**0.46**	**209**		**Pg**	**03 16 19.6**	**-1.1**
TWF1	**Yuli**	**0.49**	**207**	⇓*i*P	**Pg**	**03 16 20.4**	**-1.0**
	baz=212						
TWF1				S	**Sg**	**03 16 27.0**	**-0.9**
	baz=212						
SSLB	**Suanglung**	**0.54**	**270**	⇓P	**Pg**	**03 16 21.2**	**-1.1**
	baz=269						
SSLB				S	**Sg**	**03 16 27.0**	**-2.4**
	baz=269						
SSLB	**Suanglung**	**0.54**	**270**		**Pg**	**03 16 20.8**	**-1.4**
TDCB	**Techi**	**0.58**	**323**	⇓P	**Pb**	**03 16 22.5**	**-1.2**
	baz=325						
TDCB				*e*S	**Sg**	**03 16 28.5**	**-2.2**
	baz=325						
SMLT	**Sun Moon Lake**	**0.59**	**279**	⇓*i*P	**Pg**	**03 16 22.4**	**-0.9**
	baz=279						
SMLT				S	**Sg**	**03 16 29.4**	**-1.8**
	baz=279						
DPDB	**Guoxing**	**0.61**	**293**	⇓*i*P	**Pg**	**03 16 22.9**	**-0.7**
	baz=294						
DPDB				S	**Sg**	**03 16 30.0**	**-1.8**
	baz=294						
YUS	**Yu-Shan**	**0.62**	**241**	⇑*i*P	**Pg**	**03 16 23.1**	**-0.8**
	baz=238						
FULB	**Fuli**	**0.63**	**201**	*e*P	**Pb**	**03 16 23.6**	**-0.9**
	baz=211						
FULB				*e*S	**Sg**	**03 16 31.6**	**-0.8**
	baz=211						
TYC	**Yuchr**	**0.64**	**280**	⇓*i*P	**Pg**	**03 16 23.0**	**-1.1**
	baz=281						
TYC				S	**Sg**	**03 16 30.4**	**-2.1**
	baz=281						
WHYT	**Xinyi Township**	**0.64**	**262**	*e*P	**Pg**	**03 16 23.3**	**-0.8**
	baz=260						
WHYT				*e*S	**Sg**	**03 16 30.9**	**-1.7**
	baz=260						
NNSB	**Datong**	**0.65**	**347**	⇓P	**Pb**	**03 16 24.1**	**-0.9**
	baz=350						
NNSB				S	**Sg**	**03 16 32.0**	**-1.0**
	baz=350						
NNSH	**Datong**	**0.65**	**347**	⇓*i*P	**Pb**	**03 16 24.0**	**-0.9**
	baz=349						
NNSH				*e*S	**Sg**	**03 16 32.2**	**-0.9**
	baz=349						
ENA	**Nanau**	**0.66**	**16**	⇓*i*P	**Pb**	**03 16 24.5**	**-0.6**
	baz=6.0						
ENA				*e*S	**Sb**	**03 16 33.7**	**-0.4**
	baz=6.0						
NANB	**Nanao**	**0.66**	**17**	⇑P	**Pb**	**03 16 24.4**	**-0.7**
	baz=6.0						
NANB				S	**Sb**	**03 16 33.1**	**-1.1**
	baz=6.0						
NNS	**Nan Shan**	**0.66**	**347**	⇓*i*P	**Pb**	**03 16 24.3**	**-0.8**
	baz=350						
NNS				S	**Sg**	**03 16 32.8**	**-0.7**
	baz=350						
CHKT	**Chengkung**	**0.71**	**193**	*e*P	**Pb**	**03 16 25.5**	**-0.3**
	baz=192						
CHKT				*e*S	**Sb**	**03 16 36.1**	**+0.6**
	baz=192						
WHP	**Taichung City**	**0.73**	**312**	⇓*i*P	**Pb**	**03 16 25.2**	**-1.0**
	baz=313						
WHP				S	**Sg**	**03 16 34.4**	**-1.0**
	baz=313						
ALS	**Alishan**	**0.73**	**248**	⇑P	**Pg**	**03 16 25.3**	**-0.6**
	baz=245						
ALS				S	**Sg**	**03 16 33.9**	**-1.7**
	baz=245						
WJS	**Zhushan**	**0.74**	**272**	*e*P	**Pb**	**03 16 26.0**	**-0.5**
	baz=276						
WJS				*e*S	**Sb**	**03 16 36.3**	**-0.2**
	baz=276						
ELDTW	**Lidau**	**0.77**	**219**	P	**Pg**	**03 16 24.9**	**-1.7**
	baz=209						
ELDTW				S	**Sg**	**03 16 34.6**	**-2.1**
	baz=209						
WNT	**Mingjian**	**0.79**	**276**	*e*P	**Pb**	**03 16 26.9**	**-0.3**
	baz=280						
WNT				*e*S	**Sb**	**03 16 37.4**	**-0.3**
	baz=280						
NDT	**Datong Townshi**	**0.81**	**358**	⇓*i*P	**Pb**	**03 16 27.3**	**-0.3**
	baz=351						
NDT				*e*S	**Sg**	**03 16 37.0**	**-1.0**
	baz=351						
CHN5	**Tsauling**	**0.81**	**256**	⇑P	**Pb**	**03 16 27.3**	**-0.4**
	baz=246						
CHN5				S	**Sg**	**03 16 37.5**	**-0.7**
	baz=246						
ENTT	**Nioudou**	**0.84**	**2**	⇓*i*P	**Pb**	**03 16 27.8**	**-0.4**
	baz=1.0						
ENTT				*e*S	**Sb**	**03 16 38.4**	**-1.1**
	baz=1.0						
TWC	**Suao**	**0.86**	**19**	*e*P	**Pb**	**03 16 27.9**	**-0.6**
	baz=9.0						
TWC				*e*S	**Sb**	**03 16 39.9**	**0.0**
	baz=9.0						
TCU	**Taichung**	**0.87**	**294**	⇓P	**Pb**	**03 16 28.4**	**-0.1**
	baz=295						
TCU				*e*S	**Sb**	**03 16 40.5**	**+0.5**
	baz=295						
YHNB	**Yeheng**	**0.89**	**350**	⇑P	**Pb**	**03 16 28.4**	**-0.6**
	baz=351						
YHNB				S	**Sg**	**03 16 39.3**	**-1.2**
	baz=351						
YHNB	**Yeheng**	**0.89**	**350**		**Pb**	**03 16 28.4**	**-0.6**
NSK	**Sanguang**	**0.90**	**349**	⇓*i*P	**Pn**	**03 16 28.8**	**-1.2**
	baz=351						
NSK				S	**Sg**	**03 16 39.6**	**-1.2**
	baz=351						
WGK	**Gukeng**	**0.90**	**264**	*e*P	**Pb**	**03 16 29.0**	**-0.1**
	baz=262						
WGK				*e*S	**Sb**	**03 16 41.4**	**+0.4**
	baz=262						
WDLH	**Douliu**	**0.92**	**264**	*e*P	**Pb**	**03 16 29.2**	**-0.3**
	baz=262						
WDLH				*e*S	**Sn**	**03 16 42.8**	**-0.6**
	baz=262						
EOS1	**EOS1**	**0.93**	**35**	*e*P	**Pn**	**03 16 30.9**	**+0.7**
	baz=49						
EOS1				S	**Sn**	**03 16 45.8**	**+2.4**
	baz=49						
TWE	**Neicheng**	**0.93**	**7**	*e*P	**Pb**	**03 16 29.1**	**-0.6**
	baz=6.0						
TWE				*e*S	**Sb**	**03 16 41.5**	**-0.4**
	baz=6.0						
WCHH	**Zhanghua**	**0.94**	**288**	*e*P	**Pb**	**03 16 29.6**	**-0.2**
	baz=287						
WCHH				*e*S	**Sn**	**03 16 43.1**	**-0.8**
	baz=287						
NSY	**Sanyi**	**0.94**	**311**	*e*P	**Pn**	**03 16 30.0**	**-0.6**
	baz=312						
NSY				*e*S	**Sn**	**03 16 42.9**	**-1.0**
	baz=312						
STYT	**Tauyuan**	**0.95**	**229**	P	**Pg**	**03 16 29.1**	**-1.0**
	baz=227						
STYT				S	**Sg**	**03 16 41.1**	**-1.4**
	baz=227						
SLBB	**Yuanshan**	**0.96**	**5**	*e*P	**Pg**	**03 16 28.7**	**-1.5**
	baz=3.0						
SLBB				*e*S	**Sg**	**03 16 41.2**	**-1.6**
	baz=3.0						
TPUB	**Ta-pu**	**0.97**	**240**	⇑P	**Pb**	**03 16 29.9**	**-0.4**
	baz=238						
TPUB				S	**Sg**	**03 16 41.8**	**-1.3**
	baz=238						
TPUB	**Ta-pu**	**0.97**	**240**		**Pg**	**03 16 29.4**	**-0.9**
NSTT	**Nanjuang**	**0.97**	**330**	⇓P	**Pn**	**03 16 30.1**	**-0.9**
	baz=331						
NSTT				S	**Sb**	**03 16 42.4**	**-0.6**
	baz=331						
CHN4	**Tsaushan**	**0.97**	**243**	⇑*i*P	**Pn**	**03 16 30.2**	**-0.7**
	baz=235						
CHN4				S	**Sb**	**03 16 43.5**	**+0.4**
	baz=235						
LIOB	**Emei**	**0.98**	**331**	⇓*i*P	**Pn**	**03 16 30.3**	**-0.7**
	baz=332						
LIOB				*e*S	**Sb**	**03 16 42.9**	**-0.3**
	baz=332						
NWLT	**Wulai**	**0.98**	**358**	⇑*e*P	**Pb**	**03 16 29.7**	**-0.8**
	baz=354						
NWLT				S	**Sg**	**03 16 42.1**	**-1.4**
	baz=354						
ILA	**Ilan**	**0.99**	**11**	*e*P	**Pn**	**03 16 30.2**	**-1.0**
	baz=8.0						
ILA				*e*S	**Sb**	**03 16 43.2**	**-0.3**
	baz=8.0						
WDJ	**Dajia District**	**0.99**	**304**	⇓P	**Pn**	**03 16 30.9**	**-0.4**
	baz=305						
WDJ				*e*S	**Sn**	**03 16 45.0**	**-0.1**
	baz=305						
PTSB	**Yuanli**	**1.00**	**311**	P	**Pn**	**03 16 31.4**	**0.0**
	baz=311						
PTSB				*e*S	**Sn**	**03 16 44.4**	**-1.0**
	baz=311						
NMLH	**Miaoli**	**1.01**	**317**	⇓*e*P	**Pn**	**03 16 31.5**	**0.0**
	baz=326						
NMLH				*e*S	**Sn**	**03 16 44.8**	**-0.8**
	baz=326						
WTP	**Ta-pu**	**1.01**	**238**	⇑*e*P	**Pb**	**03 16 30.6**	**-0.4**
	baz=241						
WTP				*e*S	**Sg**	**03 16 43.3**	**-1.0**
	baz=241						
CHN2	**Minshiung**	**1.01**	**255**	*e*P	**Pn**	**03 16 31.0**	**-0.5**
	baz=254						
CHN2				*e*S	**Sb**	**03 16 44.4**	**+0.3**
	baz=254						
TWG	**Pinlang**	**1.06**	**204**	*e*P	**Pg**	**03 16 30.5**	**-1.6**
	baz=189						
TWG	**Pinlang**	**1.06**	**204**		**Pg**	**03 16 30.2**	**-1.9**
TWGBT	**Beinan**	**1.06**	**204**	*e*P	**Pg**	**03 16 29.8**	**-2.3**
	baz=190						
CHY	**Chiayi**	**1.06**	**254**	*e*P	**Pb**	**03 16 31.4**	**-0.5**
	baz=252						
CHY				S	**Sb**	**03 16 46.1**	**+0.4**
	baz=252						
TWH	**Lutao**	**1.08**	**183**	⇓P	**Pg**	**03 16 30.6**	**-1.8**
	baz=174						
TWH				*e*S	**Sg**	**03 16 44.7**	**-1.8**
	baz=174						
RLNB	**Erlin**	**1.08**	**275**	P	**Pb**	**03 16 31.7**	**-0.6**
	baz=275						
RLNB				S	**Sn**	**03 16 46.8**	**-0.6**
	baz=275						
WLTB	**Daxi**	**1.09**	**346**	*e*P	**Pn**	**03 16 32.4**	**-0.2**
	baz=354						
WLTB				*e*S	**Sn**	**03 16 46.5**	**-1.0**
	baz=354						
NTC	**Toucheng**	**1.09**	**14**	*e*P	**Pn**	**03 16 32.5**	**-0.1**
	baz=15						
TTN	**Taitung**	**1.09**	**199**	*e*P	**Pg**	**03 16 31.8**	**-1.0**
	baz=201						
TTN				*e*S	**Sg**	**03 16 45.8**	**-1.3**
	baz=201						
TWK	**Hsinying**	**1.10**	**242**	⇑P	**Pb**	**03 16 32.0**	**-0.5**
	baz=239						
TWK				S	**Sb**	**03 16 47.0**	**+0.2**
	baz=239						
CHN1	**Nanshi**	**1.11**	**237**	⇑*i*P	**Pn**	**03 16 32.3**	**-0.5**
	baz=235						
CHN1				*e*S	**Sb**	**03 16 47.0**	**0.0**
	baz=235						
SNST	**Tainan City**	**1.11**	**239**	P	**Pn**	**03 16 32.7**	**-0.2**
	baz=237						
SNST				S	**Sb**	**03 16 47.4**	**+0.3**
	baz=237						
SBCB	**Hsinchu**	**1.12**	**333**	⇓P	**Pn**	**03 16 33.5**	**+0.5**
	baz=334						
SBCB				S	**Sn**	**03 16 48.8**	**+0.6**
	baz=334						
SGST	**Jiashian**	**1.13**	**231**	⇑P	**Pb**	**03 16 32.1**	**-0.9**
	baz=240						
SGST				*e*S	**Sg**	**03 16 46.9**	**-1.2**
	baz=240						
HSN	**Hsinchu**	**1.13**	**333**	*e*P	**Pn**	**03 16 34.0**	**+0.8**
	baz=336						
HSN				*e*S	**Sb**	**03 16 47.5**	**-0.2**
	baz=336						
SLGT	**Liugui**	**1.14**	**226**	*e*P	**Pn**	**03 16 32.9**	**-0.5**
	baz=220						
SLGT				*e*S	**Sb**	**03 16 47.8**	**-0.2**
	baz=220						
WTCT	**Ta-ch'eng**	**1.16**	**274**	*e*P	**Pb**	**03 16 32.8**	**-0.7**
	baz=273						
WTCT				*e*S	**Sg**	**03 16 48.6**	**-0.4**
	baz=273						
NHDH	**Xindian Distri**	**1.17**	**359**	*e*P	**Pn**	**03 16 33.3**	**-0.4**
	baz=10.0						
TATO	**Taipei**	**1.18**	**358**	⇑P	**Pg**	**03 16 33.4**	**-1.0**
	baz=8.0						
TATO				*e*S	**Sn**	**03 16 48.8**	**-0.9**
	baz=8.0						
TATO	**Taipei**	**1.18**	**358**		**Pg**	**03 16 33.4**	**-1.0**
WLGB	**Puzi**	**1.18**	**255**	*e*P	**Pg**	**03 16 34.1**	**-0.2**
	baz=253						
WLGB				*e*S	**Sn**	**03 16 49.8**	**+0.1**
	baz=253						
TWA	**Mucha**	**1.18**	**2**	*e*P	**Pg**	**03 16 33.3**	**-1.2**
	baz=354						
TWA				*e*S	**Sn**	**03 16 49.2**	**-0.7**
	baz=354						
TIPB	**Shuangxi**	**1.20**	**12**	*e*P	**Pg**	**03 16 33.8**	**-1.1**
	baz=6.0						
TIPB				*e*S	**Sb**	**03 16 48.3**	**-1.5**
	baz=6.0						
WMLT	**Mailiao**	**1.21**	**271**	*e*P	**Pn**	**03 16 33.5**	**-0.7**
	baz=270						
WMLT				*e*S	**Sn**	**03 16 50.7**	**+0.3**
	baz=270						
NCUH	**Zhongli**	**1.22**	**345**	*e*P	**Pg**	**03 16 35.2**	**+0.1**
	baz=345						
NCUH				*e*S	**Sn**	**03 16 51.6**	**+1.0**
	baz=345						
NCU	**National Centr**	**1.22**	**345**	*e*P	**Pg**	**03 16 34.6**	**-0.5**
	baz=346						
NCU				*e*S	**Sn**	**03 16 51.4**	**+0.8**
	baz=346						
WSF	**Szhu**	**1.22**	**263**	*e*P	**Pb**	**03 16 34.0**	**-0.5**
	baz=262						
WSF				*e*S	**Sg**	**03 16 50.4**	**-0.6**
	baz=262						
TAP1	**Taipei**	**1.24**	**359**	*e*P	**Pg**	**03 16 35.1**	**-0.5**
	baz=358						
TAP1				S	**Sn**	**03 16 50.6**	**-0.6**
	baz=358						
TAP	**Taipei**	**1.24**	**359**	*e*P	**Pg**	**03 16 35.4**	**-0.2**
	baz=358						
TAP				*e*S	**Sn**	**03 16 50.6**	**-0.6**
	baz=358						
TWB1	**Santiao Chiao**	**1.28**	**19**	*e*P	**Pg**	**03 16 35.6**	**-0.7**
	baz=360						
TWB1				*e*S	**Sn**	**03 16 51.4**	**-0.7**
	baz=360						
CHN3	**Shinhua**	**1.29**	**237**	*e*P	**Pg**	**03 16 36.8**	**+0.2**
	baz=234						
WFSB	**Wu-fen Shan**	**1.29**	**10**	*e*P	**Pb**	**03 16 34.8**	**-1.0**
	baz=5.0						
WFSB				*e*S	**Sn**	**03 16 52.3**	**-0.3**
	baz=5.0						
CHN8	**Yiju**	**1.30**	**250**	*e*P	**Pn**	**03 16 35.0**	**-0.5**
	baz=249						
CHN8				*e*S	**Sg**	**03 16 53.0**	**-0.5**
	baz=249						
ECL	**Taimali**	**1.31**	**204**	*e*P	**Pn**	**03 16 34.5**	**-1.1**
	baz=190						
TWS1	**Kuangyinshan**	**1.31**	**355**	*e*P	**Pg**	**03 16 36.1**	**-0

TWM1	**Shoushan**	**1.41**	**227**	*e*P		**Pg**	**03 16 38.4**	**-0.3**
	baz=213								
SGLT	**Jiouru**	**1.43**	**222**	*e*P		**Pg**	**03 16 38.5**	**-0.8**
	baz=210								
MASBT	**Mashibuluo**	**1.44**	**216**	⇑P		**Pn**	**03 16 37.1**	**-0.3**
	baz=208								
JYNG	**Yonaguni jima**	**1.44**	**63**	P		**Pg**	**03 16 37.7**	**-1.7**
JYNG				*e*S		**Sg**	**03 16 56.6**	**-1.6**
TWY	**Chenhua**	**1.48**	**2**	*e*P		**Pg**	**03 16 39.0**	**-1.1**
	baz=2.0								
YOJ	**Yonaguni jima**	**1.50**	**63**	⇑P		**Pb**	**03 16 38.6**	**-0.8**
	baz=58								
YOJ				*e*S		**Sg**	**03 16 58.1**	**-1.9**
	baz=58								
YOJ	**Yonaguni jima**	**1.50**	**63**	P		**Pb**	**03 16 38.4**	**-0.9**
YOJ	**Yonaguni jima**	**1.50**	**63**			**Pb**	**03 16 37.9**	**-1.5**
EAST	**Anshuo**	**1.54**	**205**	*e*P		**Pn**	**03 16 38.3**	**-0.5**
	baz=193								
SSPT	**Xinbi**	**1.58**	**215**	*e*P		**Pb**	**03 16 40.1**	**-0.6**
	baz=206								
SCZT	**Fangliau**	**1.65**	**211**	*e*P		**Pb**	**03 16 41.2**	**-0.6**
	baz=204								
LAY	**Lan-yu**	**1.75**	**180**	*e*P		**Pn**	**03 16 39.5**	**-2.1**
	baz=169								
WLCH	**Liuqiu**	**1.79**	**217**	*e*P		**Pg**	**03 16 46.4**	**+0.4**
	baz=214								
WDGT	**Dungji**	**1.81**	**253**	⇓*e*P		**Pn**	**03 16 41.8**	**-0.6**
	baz=250								
PHUB	**P'eng-hu**	**1.83**	**262**	*e*P		**Pn**	**03 16 42.5**	**-0.2**
	baz=242								
PHUB				*e*S		**Sn**	**03 17 04.9**	**-0.8**
	baz=242								
PNG	**Penghu**	**1.83**	**263**	*e*P		**Pn**	**03 16 42.1**	**-0.7**
	baz=261								
PNG				*e*S		**Sn**	**03 17 05.2**	**-0.7**
	baz=261								
PCYT	**Pengchaiyu**	**1.89**	**15**	*e*P		**Pb**	**03 16 44.6**	**-1.4**
	baz=15								
HEN	**Hengchun**	**1.93**	**203**	*e*P		**Pb**	**03 16 45.8**	**-0.8**
	baz=195								
TWK1	**Hengchun**	**1.96**	**200**	*e*P		**Pn**	**03 16 44.8**	**+0.3**
	baz=191								
TWKBT	**Hengchun**	**1.96**	**200**	*e*P		**Pn**	**03 16 45.0**	**+0.5**
	baz=191								
TSEB	**Hengchuen, Pin**	**1.97**	**198**	*e*P		**Pn**	**03 16 44.5**	**-0.3**
	baz=188								
VCHM	**Qimei**	**2.02**	**254**	*e*P		**Pn**	**03 16 45.0**	**-0.4**
	baz=251								
IRIF	**Iriomote-Funau**	**2.07**	**74**	P		**Pn**	**03 16 46.5**	**+0.4**
IRIF				*e*S		**Sb**	**03 17 12.9**	**-1.9**
HATJ	**Hateruma jima**	**2.09**	**82**	P		**Pn**	**03 16 46.5**	**+0.2**
HATJ				S		**Sn**	**03 17 12.7**	**+0.5**
VWUC	**VWUC**	**2.25**	**302**	*e*P		**Pn**	**03 16 47.1**	**-1.4**
	baz=301								
JKRS	**Kuro-shima**	**2.30**	**78**	P		**Pn**	**03 16 50.1**	**+0.9**
JKRS				S		**Sb**	**03 17 19.1**	**-2.2**
PTTC	**Pingtan**	**2.34**	**317**	*e*P		**Pn**	**03 16 48.5**	**-1.3**
	baz=316								
JIJ	**Ishigaki jima**	**2.45**	**76**	P		**Pn**	**03 16 51.3**	**+0.1**
JIJ				*e*S		**Sn**	**03 17 21.7**	**+0.7**
PTMZ	**Houxiangcun**	**2.53**	**300**	*e*P		**Pn**	**03 16 51.1**	**-1.3**
	baz=298								
JISG	**Ishigakijimahi**	**2.65**	**72**	P		**Pn**	**03 16 54.1**	**0.0**
JISG				*e*S		**Sn**	**03 17 27.3**	**+1.2**
MATB	**Ma-tsu**	**2.76**	**329**	*e*P		**Pn**	**03 16 55.0**	**-0.6**
	baz=328								
KNM	**Kinmen**	**2.91**	**283**	*e*P		**Pn**	**03 16 58.6**	**+1.1**
	baz=267								
QZH	**Quanzhou**	**2.92**	**294**	⇑*i*Pn		**Pn**	**03 16 57.4**	**-0.4**
QZH				Sn		**Sn**	**03 17 30.3**	**-2.4**
QZH				smax	smax				
	comp=N,840nm,1.2s								
QZH				smax	smax				
	comp=E,510nm,0.7s								
KNMB	**Chin-men Tao**	**2.96**	**284**	*e*P		**Pn**	**03 16 57.3**	**-0.9**
	baz=268								
KNMB	**Chin-men Tao**	**2.96**	**284**			**Pn**	**03 16 57.5**	**-0.8**
JTJ	**Tarama**	**3.01**	**73**	P		**Pn**	**03 16 59.6**	**+0.6**
JTJ				*e*S		**Sn**	**03 17 35.8**	**+0.9**
LYJJ	**Jianjiangzhen**	**3.19**	**330**	*e*P		**Pn**	**03 17 00.6**	**-0.8**
	baz=330								
MHZQ	**Yesham**	**3.24**	**316**	*e*P		**Pn**	**03 17 02.2**	**+0.1**
	baz=315								
XPSS	**Dashiqiu**	**3.35**	**339**	*e*P		**Pn**	**03 17 02.9**	**-0.8**
	baz=326								
AXDP	**Jialang**	**3.44**	**289**	*e*P		**Pn**	**03 17 04.3**	**-0.5**
	baz=286								
JIRB	**Irabujima**	**3.47**	**72**	P		**Pn**	**03 17 06.0**	**+0.7**
JIRB				*e*S		**Sn**	**03 17 47.3**	**+1.0**
ZPLA	**Ao Xicun**	**3.47**	**273**	*e*P		**Pn**	**03 17 04.4**	**-1.0**
	baz=270								
JIKM	**Ikemajima**	**3.56**	**71**	P		**Pn**	**03 17 07.7**	**+1.1**
JIKM				S		**Sn**	**03 17 48.5**	**-0.1**
JMJ	**Miyako jima 2**	**3.57**	**73**	*e*P		**Pn**	**03 17 07.5**	**+0.8**
	baz=75								
JMJ2	**Miyako jima3**	**3.58**	**74**	P		**Pn**	**03 17 07.8**	**+0.9**
JMJ2				*e*S		**Sn**	**03 17 50.6**	**+1.5**
ZZJH	**Jiuhuzhen**	**3.63**	**281**	*e*P		**Pn**	**03 17 06.8**	**-0.8**
	baz=266								
JOGS	**Gusukube**	**3.66**	**74**	S		**Sn**	**03 17 52.0**	**+1.1**
JOW	**Kunigami**	**6.80**	**62**	*e*P		**Pn**	**03 17 50.7**	**-0.5**
	baz=70								
JOW	**Kunigami**	**6.80**	**62**	Pn		**Pn**	**03 17 50.5**	**-0.7**
	1.0nm,0.3s,baz=174,slow=14,SNR=9.8								
JOW	**Kunigami**	**6.80**	**62**	Pn		**Pn**	**03 17 50.3**	**-0.9**
SSE	**Sheshan**	**7.28**	**358**			**Pn**	**03 18 00.3**	**+2.6**
SSE						LR	03 20 06.7		
WHN	**Wuhan**	**9.28**	**318**	⇑P		Pn	03 18 18.5	-6.7
WHN				S		**Sn**	**03 20 01.0**	**-8.4**
WHN				LR	LR				
	comp=N,2μm,10.0s								
WHN				LR	LR				
	comp=E,5μm,19.6s								
WHN				LR	LR				
	comp=Z,3μm,12.4s								
QIZ	**Qiongzhong**	**11.88**	**249**	P		**Pn**	**03 19 01.8**	**+1.0**
QIZ				S		**Sn**	**03 21 18.3**	**+5.0**
QIZ				LR	LR				
	comp=Z,360nm,15.9s								
QIZ				LR	LR				
	comp=Z,390nm,18.7s								
QIZ				LR	LR				
	comp=Z,360nm,19.6s								
GYA	**Guiyang**	**13.73**	**284**	*e*P		**Pn**	**03 19 27.3**	**+1.1**
GYA				pmax	pmax				
	comp=Z,10.0nm,0.7s								
KSRS	**Korea Array**	**14.68**	**20**	Pn		**P**	**03 19 41.8**	**-3.3**
	comp=Z,0.6nm,0.3s,baz=203,slow=12,SNR=23								
KSRS				LR	LR		03 25 28.6		
	comp=Z,27nm,20.4s,baz=194,slow=38								
XAN	**Xi'an**	**15.03**	**316**	P		**P**	**03 19 50.4**	**+1.2**
XAN				pmax	pmax				
	comp=Z,15nm,1.0s								
XAN				LR	LR				
	comp=Z,610nm,10.4s								
XAN				LR	LR				
	comp=Z,650nm,11.6s								
XAN	**Xi'an**	**15.03**	**316**	P		**P**	**03 19 51.1**	**+1.9**
XAN				IAmb	IAmb		03 19 51.8		
	comp=Z,14nm,1.0s								
BJI	**Beijing**	**16.82**	**346**	P		**P**	**03 20 07.8**	**-1.1**
BJI				pmax	pmax				
	comp=Z,10.0nm,1.9s								
DAV	**Davao City (W)**	**17.07**	**166**	LR		LR	03 26 06.1		
	comp=Z,93nm,21.2s,baz=356,slow=35								
KMI	**Kunming**	**17.17**	**278**	P		**Pn**	**03 20 09.5**	**-2.1**
KMI				pP		P	03 20 13.9	+0.7
KMI				pmax	pmax				
	comp=Z,8.0nm,0.6s								
KMI				pmax	pmax				
	comp=Z,190nm,5.0s								
KMI				LR	LR				
	comp=Z,290nm,8.5s								
KMI				LR	LR				
	comp=Z,660nm,9.8s								
KMI				LR	LR				
	comp=Z,730nm,9.6s								
HHC	**Hu-ho-hao-te**	**18.96**	**336**	*e*P		**Pn**	**03 20 38.1**	**+4.8**
HHC				pmax	pmax				
	comp=Z,6.0nm,1.0s								
HHC				pmax	pmax				
	comp=Z,88nm,5.7s								
HHC				LR	LR				
	comp=Z,210nm,11.4s								
HHC				LR	LR				
	comp=Z,140nm,12.3s								
HHC				LR	LR				
	comp=Z,240nm,11.6s								
MJAR	**Matsushiro Arr**	**19.18**	**45**	P		**Pn**	**03 20 36.7**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=224,slow=9.2,SNR=5.3								
MJAR				LR	LR		03 28 41.0		
	comp=Z,94nm,19.1s,baz=215,slow=39								
CN2	**Changchun**	**20.22**	**8**	*e*P		Pn	03 20 48.0	-0.2
CN2				*es*P		sP	03 20 55.0	+3.1
CN2				*eS*		**S**	**03 24 29.1**	**-3.6**
CN2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
CN2				pmax	pmax				
	comp=Z,200nm,3.0s								
CN2				LR	LR				
	comp=Z,460nm,14.0s								
CN2				LR	LR				
	comp=Z,200nm,14.0s								
CN2				LR	LR				
	comp=Z,580nm,17.0s								
PBKT	**Sadao Pong**	**20.59**	**253**	P		**P**	**03 20 48.6**	**-1.8**
CHTO	**Chiang Mai**	**21.62**	**261**	P		**P**	**03 21 02.0**	**+0.4**
CHTO				IAmb	IAmb		03 21 10.0		
	comp=Z,14nm,1.2s								
CM31	**Chiang Mai Arr**	**21.73**	**260**	P		**P**	**03 21 02.5**	**-0.2**
CMAR	**Chiang Mai Arr**	**21.73**	**260**	P		**P**	**03 21 04.4**	**+1.6**
	comp=Z,1.8nm,0.4s,baz=60,slow=8.7,SNR=14								
CMAR				LR	LR		03 29 46.8		
	comp=Z,66nm,19.4s,baz=77,slow=38								
USRK	**Ussuriysk Ar.**	**22.09**	**20**	P		**P**	**03 21 08.3**	**+1.9**
	comp=Z,2.6nm,0.6s,baz=205,slow=8.9,SNR=7.0								
USRK				LR	LR		03 29 09.6		
	comp=Z,74nm,18.4s,baz=175,slow=35								
SBUM	**Sibu**	**23.05**	**204**	P		**P**	**03 21 15.6**	**-1.3**
GTA	**Gaotai**	**24.09**	**315**	⇑P		**P**	**03 21 28.8**	**+1.7**
GTA				pP		sP	03 21 32.9	+0.1
GTA				sP		pP	03 21 35.8	+4.2
GTA				S		**S**	**03 25 45.4**	**+1.0**
GTA				sS		sS	03 25 51.0	-0.4
GTA				pmax	pmax				
	comp=Z,5.0nm,1.3s								
GTA				pmax	pmax				
	comp=Z,180nm,6.3s								
GTA				LR	LR				
	comp=Z,250nm,15.2s								
GTA				LR	LR				
	comp=Z,350nm,17.5s								
GTA				LR	LR				
	comp=Z,500nm,14.3s								
KLR	**Kul'dur**	**26.63**	**15**	P		**P**	**03 21 50.0**	**+0.2**
	comp=Z,3.8nm,0.8s,baz=229,slow=10,SNR=8.9								
ULN	**Ulaanbaatar**	**26.65**	**338**	P		**P**	**03 21 50.5**	**+0.3**
ULN				IAmb	IAmb		03 21 55.8		
	comp=Z,7.5nm,1.1s								
SONM	**Songino Array**	**26.85**	**337**	P		**P**	**03 21 53.4**	**+1.4**
	comp=Z,2.9nm,0.9s,baz=156,slow=9.7,SNR=11								
SONM				LR	LR		03 33 27.7		
	comp=Z,164nm,20.1s,baz=196,slow=38								
SONM	**Songino Array**	**26.85**	**337**	IAmb	IAmb		03 21 56.9		
	comp=Z,2.3nm,0.9s								
SHL	**Shillong**	**26.98**	**280**	P		**P**	**03 21 53.4**	**-0.1**
SHL				IAmb	IAmb		03 21 56.9		
	comp=Z,15nm,1.0s								
LSA	**Lhasa**	**27.72**	**289**	P		**P**	**03 22 03.1**	**+2.7**
LSA				pP		**sP**	**03 22 07.4**	**+1.3**
LSA				pmax	pmax				
	comp=Z,9.0nm,0.8s								
LSA				pmax	pmax				
	comp=Z,260nm,3.2s								
LSA				LR	LR				
	comp=Z,470nm,7.8s								
LSA				LR	LR				
	comp=Z,530nm,13.2s								
LSA				LR	LR				
	comp=Z,800nm,12.5s								
WMQ	**Urumqi**	**34.16**	**314**	*e*P		**P**	**03 22 58.8**	**+2.2**
WMQ				pP		sP	03 23 02.0	-0.3
WMQ				pmax	pmax				
	comp=Z,7.0nm,0.6s								
WMQ				pmax	pmax				
	comp=Z,74nm,7.5s								
WMQ				LR	LR				
	comp=Z,430nm,29.2s								
WMQ				LR	LR				
	comp=Z,620nm,29.3s								
MK31	**Makanchi Array**	**38.84**	**316**	P		**P**	**03 23 36.7**	**+0.2**
MKAR	**Makanchi Array**	**38.84**	**316**	P		**P**	**03 23 36.4**	**0.0**
	comp=Z,3.2nm,0.8s,baz=105,slow=7.6,SNR=26								
MKAR				LR	LR		03 41 04.2		
	comp=Z,124nm,18.8s,baz=58,slow=38								
MAKZ	**Makanchi**	**39.05**	**316**	P		**P**	**03 23 36.8**	**-1.3**
PETK	**Petropavlovsk-**	**40.01**	**34**	LR		LR	03 41 58.2		
	comp=Z,57nm,18.1s,baz=240,slow=39								
ZAA0	**Zalesovo Array**	**40.75**	**327**	P		**P**	**03 23 52.5**	**+0.4**
ZALV	**Zalesovo Beam**	**40.75**	**327**	P		**P**	**03 23 51.2**	**-0.9**
	comp=Z,4.4nm,0.8s,baz=111,slow=8.1,SNR=10								
ZALV				LR	LR		03 41 47.5		
	comp=Z,80nm,18.9s,baz=122,slow=38								
KDJ	**Kajisay**	**40.95**	**307**	P		**P**	**03 23 54.6**	**+0.4**
KDJ				IAmb	IAmb		03 23 59.4		
	comp=Z,6.4nm,1.1s								
KSH	**Kashi**	**41.38**	**303**	P		**P**	**03 23 55.3**	**-2.5**
KSH				PP		**PnPn**	**03 25 39.4**	**+1.5**
KSH				pmax	pmax				
	comp=Z,590nm,6.2s								
KSH	**Kashi**	**41.38**	**303**	*e*P		**P**	**03 23 59.3**	**+1.5**
KSH				*es*P		sP	03 24 08.4	+4.8
KSH				*e*PP		**PnPn**	**03 25 36.3**	**-1.6**
H11N1	**WAKE ISLAND Hy**	**42.19**	**86**	T		T	04 09 04.1		
	baz=283,slow=75,SNR=91								
H11N2	**WAKE ISLAND Hy**	**42.19**	**86**	T		T	04 09 04.2		
	baz=283,slow=75,SNR=98								
H11N3	**WAKE ISLAND Hy**	**42.20**	**86**	T		T	04 09 09.0		
	baz=283,slow=75,SNR=69								
H11S3	**WAKE ISLAND Hy**	**42.30**	**88**	T		T	04 09 17.2		
	baz=284,slow=74,SNR=265								
H11S1	**WAKE ISLAND Hy**	**42.31**	**88**	T		T	04 09 15.8		
	baz=284,slow=74,SNR=146								
H11S2	**WAKE ISLAND Hy**	**42.32**	**88**	T		T	04 09 15.8		
	baz=284,slow=74,SNR=144								
KURK	**Kurchatov**	**42.60**	**320**	P		**P**	**03 24 08.8**	**+1.5**
KURK				IAmb	IAmb		03 24 12.1		
	comp=Z,13nm,1.5s								
NIL	**Nilore**	**43.14**	**294**	P		**P**	**03 24 12.1**	**0.0**
NIL				IAmb	IAmb		03 24 18.7		
	comp=Z,6.2nm,0.9s								
WRA	**Warramunga Arr**	**45.23**	**163**	P		**P**	**03 24 26.2**	**-2.5**
	comp=Z,2.6nm,0.6s,baz=344,slow=8.7,SNR=7.6								
WB2	**Warramunga Arr**	**45.23**	**163**	P		**P**	**03 24 27.4**	**-1.4**
WB2				IAmb	IAmb		03 24 31.0		
	comp=Z,14nm,1.6s								
KK31	**Karatay Array**	**45.97**	**308**	P		**P**	**03 24 34.6**	**+0.1**
KK31				IAmb	IAmb		03 24 40.3		
	comp=Z,6.1nm,1.5s								
KKAR	**Karatay Array**	**45.97**	**308**	P		**P**	**03 24 34.5**	**0.0**
KKAR				IAmb	IAmb		03 24 40.3		
	comp=Z,6.1nm,1.5s								
CHGR	**Chuyangaron**	**46.58**	**301**	P		**P**	**03 24 39.1**	**-0.3**
KBL	**Kabul**	**46.62**	**296**	P		**P**	**03 24 40.5**	**+0.5**
KBL				IAmb	IAmb		03 24 46.6		
	comp=Z,6.8nm,0.9s								
TIXI	**Tiksi**	**48.07**	**3**	P		**P**	**03 24 49.0**	**-1.4**
BVAR	**Borovoye Array**	**48.18**	**321**	P		**P**	**03 24 51.5**	**0.0**
	comp=Z,1.0nm,0.5s,baz=105,slow=9.0,SNR=7.6								
BRVK	**Borovoye**	**48.25**	**321**	P		**P**	**03 24 51.4**	**-0.7**
BRVK				IAmb	IAmb		03 25 07.2		
	comp=Z,5.0nm,0.9s								
ASAR	**Alice Springs**	**48.68**	**165**	P		**P**	**03 24 53.8**	**-1.9**
	comp=Z,2.7nm,1.0s,baz=349,slow=6.5,SNR=15								
ABKAR	**Akbulak array**	**53.95**	**315**	P		**P**	**03 25 35.0**	**0.0**
ABKAR				IAmb	IAmb		03 25 43.5		
	comp=Z,7.8nm,1.1s								
GEYT	**Alibeck**	**55.28**	**301**	P		**P**	**03 25 46.9**	**+2.0**
	comp=Z,1.0nm,0.4s,baz=76,slow=6.3,SNR=7.8								
GEYT	**Alibeck**	**55.28**	**301**	IAmb	IAmb		03 25 53.3		
	comp=Z,4.5nm,1.1s								
AKTO	**Aktyubinsk**	**55.28**	**316**	P		**P**	**03 25 45.0**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=76,slow=17,SNR=3.2								
ARU	**Arti**	**55.62**	**323**	P		**P**	**03 25 47.7**	**+0.8**
ARU				IAmb	IAmb		03 25 53.2		
	comp=Z,4.9nm,0.7s								
STKA	**Stephens Creek**	**58.58**	**160**	P		**P**	**03 26 07.0**	**-1.2**
	comp=Z,2.1nm,0.6s,baz=340,slow=9.6,SNR=5.0								
ANM	**Nome**	**61.52**	**28**	P		**P**	**03 26 29.0**	**+1.1**
KLMR	**Klimovskoe**	**65.67**	**328**	*e*P		**P**	**03 26 55.6**	**+0.2**
KLMR				AMP			03 26 58.7		
	comp=Z,13nm,1.5s								
KIV	**Kislovodsk**	**66.09**	**309**	P		**P**	**03 26 58.0**	**-0.6**
KIV				IAmb	IAmb		03 27 10.4		
	comp=Z,5.5nm,0.8s								
MLY	**Manley**	**67.75**	**27**	P		**P**	**03 27 08.6**	**-0.1**
MDM	**Murphy Dome**	**68.81**	**27**	P		**P**	**03 27 14.8**	**-0.5**
RND	**Reindeer**	**68.83**	**29**	P		**P**	**03 27 15.2**	**-0.4**
COLA	**College**	**68.99**	**27**	P		**P**	**03 27 16.7**	**+0.3**
ILAR	**Eielson Array**	**69.41**	**27**	P		**P**	**03 27 18.1**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=297,slow=7.7,SNR=14								
SCRK	**Sand Creek**	**70.82**	**28**	P		**P**	**03 27 28.3**	**+0.4**
EGAK	**Eagle**	**71.79**	**27**	IAmb	IAmb		03 27 37.9		
	comp=Z,6.8nm,0.8s								
FINES	**FINESS Array B**	**71.95**	**330**	P		**P**	**03 27 35.5**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=57,slow=5.1,SNR=3.7								
BRTR	**Keskin Array B**	**73.67**	**307**	P		**P**	**03 27 47.1**	**+1.8**
	comp=Z,0.7nm,0.6s,baz=78,slow=3.4,SNR=6.1								
C36M	**Paulatuk**	**76.06**	**19**	IAmb	IAmb		03 28 00.3		
	comp=Z,5.9nm,1.1s								
NOA	**NORSAR Array B**	**78.72**	**332**	LR		LR	04 06 25.2		
	comp=Z,141nm,18.6s,baz=355,slow=38								
VYHS	**Vyhne**	**80.47**	**319**	*e*P		**P**	**03 28 23.1**	**-0.2**
URZ	**Urewera**	**80.77**	**139**	LR		LR	03 59 10.0		
	comp=Z,32nm,20.6s,baz=40,slow=32								
YKA	**Yellowknife Ar**	**83.20**	**23**	P		**P**	**03 28 36.2**	**-1.2**
	comp=Z,2.9nm,0.7s,baz=312,slow=5.0,SNR=32								
GERES	**GERESS Array B**	**83.35**	**321**	P		**P**	**03 28 37.4**	**-1.2**
	comp=Z,0.8nm,0.9s,baz=46,slow=7.1,SNR=3.8								
B08A	**Colville Reser**	**89.91**	**36**	P		**P**	**03 29 10.8**	**+0.2**
B08A				IAmb	IAmb		03 29 13.8		
	comp=Z,4.4nm,1.1s								
YBH	**Yreka Blue Hor**	**91.83**	**42**	LR		LR	04 09 29.9		
	comp=Z,47nm,21.0s,baz=107,slow=35								
BEKR	**Beckworth**	**94.36**	**43**	P		**P**	**03 29 34.3**	**+2.8**
NVAR	**Mina Array Bea**	**96.50**	**43**	P		**P**	**03 29 42.6**	**+1.3**
	comp=Z,0.4nm,0.8s,baz=284,slow=4.5,SNR=4.1								

SOF ***25*** *03:37:11.3, 43.28N×21.30E, h5km, MD3.0*
PDG ***25*** *03:37:11.9±0.3, 42.87N×21.03E, h7km, ML2.8/12, Error ellipse: s-maj=1.1km s-min=1.0km az=90.0*
SKO ***25*** *03:37:12.0, 42.90N×21.07E, h2km*
BEO ***25*** *03:37:12.6±0.4, 42.86N×21.00E, h0km, ML2.8/15*

ISC 25 03:37:11.9±1.1, 42.90N±0.02×21.03E±0.02, h3km±10km, n74, σ0.93/109, 10C-14D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SELS	**Selova**	**0.33**	**11**	*e*Pg	**Pg**	**03 37 18.8**	**+0.6**
SELS				*e*Sg	**Sg**	**03 37 23.7**	**+1.2**
BARS	**Barje**	**0.58**	**98**	*e*Pg	**Pg**	**03 37 23.6**	**+0.6**
BARS				*e*Sg	**Sg**	**03 37 31.5**	**+0.9**
IVA	**Berane**	**0.84**	**269**	⇓*i*Pg	**Pg**	**03 37 27.4**	**-0.6**
IVA				*e*Sg	**Sb**	**03 37 40.3**	**-0.6**
PVY	**Plav**	**0.85**	**249**	*e*Pg	**Pg**	**03 37 26.7**	**-1.5**
PVY				*e*Sg	**Sb**	**03 37 40.6**	**-0.6**
SJES	**Sjenica**	**0.86**	**295**	*e*Pg	**Pg**	**03 37 27.6**	**-0.7**
SJES				*e*Sg	**Sg**	**03 37 38.5**	**-1.0**
BOVS	**Bovan**	**0.89**	**33**	*e*Sg	**Sb**	**03 37 42.4**	**+0.2**
IVAS	**Ivanjica**	**0.94**	**317**	*e*Pg	**Pg**	**03 37 29.3**	**-0.5**
IVAS				*e*Sg	**Sb**	**03 37 43.2**	**-0.5**
SKO	**Skopje**	**0.97**	**162**	*i* Pg	**Pg**	**03 37 29.2**	**-1.4**
SKO				⇓*i*Pg	**Pg**	**03 37 29.2**	**-1.4**
SKO				*i* Sg	**Sg**	**03 37 42.8**	**-0.4**
SKO				*e*Lg	Lg	03 37 44.1	
	comp=N,21nm,0.2s						
GRUS	**Gruza**	**1.02**	**347**	*e*Pg	**Pb**	**03 37 31.9**	**-0.3**
GRUS				*e*Sg	**Sb**	**03 37 46.5**	**+0.5**
BOSS	**Bosilegrad**	**1.14**	**110**	*e*Pg	**Pg**	**03 37 33.0**	**-0.7**
BOSS				*e*Sg	**Sg**	**03 37 48.3**	**-0.2**
ZAPS	**Zavoj**	**1.23**	**72**	*e*Pg	**Pn**	**03 37 36.0**	**-0.1**
ZAPS				*e*Sg	**Sn**	**03 37 53.5**	**+0.2**
ZAGS	**Zajecar**	**1.27**	**43**	*e*Pg	**Pb**	**03 37 36.3**	**-0.1**
ZAGS				*e*Sg	**Sn**	**03 37 54.3**	**+0.3**
PLE	**Pljevlja**	**1.28**	**290**	*e*Pg	**Pg**	**03 37 35.1**	**-1.3**
PLE				*e*Sg	**Sn**	**03 37 55.3**	**+0.7**
SVIS	**Svilajnac**	**1.37**	**5**	*e*Pg	**Pb**	**03 37 38.3**	**+0.1**
SVIS				*e*Sg	**Sn**	**03 37 57.6**	**+0.9**
PDG	**Podgorica**	**1.39**	**251**	⇓P	**Pn**	**03 37 37.3**	**-0.9**
PDG	**Podgorica**	**1.39**	**251**	⇑S	**Sn**	**03 37 57.8**	**+0.7**
PDG	**Podgorica**	**1.39**	**251**	*e*Pn	**Pn**	**03 37 37.4**	**-0.9**
TTG	**Podgorica**	**1.39**	**251**	*e*Pg	**Pn**	**03 37 37.4**	**-0.8**
TTG				*e*Sg	**Sn**	**03 37 59.1**	**+1.9**
BLKB	**Belogradchik**	**1.40**	**58**	⇑S	**Sn**	**03 37 57.6**	**+0.1**
TRUS	**Trudelj**	**1.40**	**341**	*e*Pg	**Pn**	**03 37 37.9**	**-0.5**
TRUS				*e*Sg	**Sn**	**03 37 58.2**	**+0.8**
RUDO	**Rudo**	**1.41**	**301**	*e*Pn	**Pn**	**03 37 36.7**	**-1.9**
DIVS	**Divibare**	**1.42**	**328**	*e*Pg	**Pn**	**03 37 37.8**	**-0.9**
DIVS				*e*Sg	**Sn**	**03 37 59.0**	**+1.0**
DIVS	**Divibare**	**1.42**	**328**	*e*Pn	**Pn**	**03 37 37.5**	**-1.2**
STIP	**Stip**	**1.48**	**144**	*i* Pg	**Pn**	**03 37 39.1**	**-0.3**
STIP				*i* Sg	**Sn**	**03 38 01.4**	**+2.2**
STIP				*e*Lg	Lg	03 38 03.6	
	comp=E,20nm,0.3s						
NKY	**Niksic**	**1.50**	**267**	*e*Pg	**Pn**	**03 37 39.9**	**0.0**

DRGR		**4.07**	**16**	⇓P	**Pn**	**03 38 15.7**	**+0.5**
VYHS	**Vyhne**	**5.80**	**345**	*e*PN	**Pn**	**03 38 39.1**	**+0.2**
VYHS				*e*SN	**Sn**	**03 39 45.6**	**-0.4**
MODS	**Modra-Piesok**	**6.08**	**336**	*e*SN	**Sn**	**03 39 51.0**	**-1.7**

IDC ***25*** *04:00:45.0±1.1,27.92S×66.71W,h154km±11km,mb3.4/4, mb1 3.5/9,mb1mx3.3/27,mbtmp3.8/9,MS2.5/1,Ms1 2.5/1, ms1mx2.3/13,Error ellipse: s-maj=20.1km s-min=10.4km az=90.0*

SJA ***25*** *04:00:44.4±0.7,27.92S×66.64W,h183km±5km,ML3.9, MW3.7*

ISC 25 04:00:45.9±0.6,27.92S±0.05×66.76W±0.07,h167km,n26, σ1s02/37,mb3.5/4,Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CYA	**Choya**	**0.99**	**122**	*e*P	**Pn**	**04 01 13.4**	**+1.1**
CYA				*i* S	**Sn**	**04 01 32.5**	**-0.1**
AGUA	**GUANDACOL**	**2.19**	**224**	*e*P	**Pn**	**04 01 25.5**	**+1.2**
AGUA				*i* S	**Sn**	**04 01 55.6**	**+1.6**
AMOG	**MOGNA**	**3.37**	**206**	*e*P	**Pn**	**04 01 38.8**	**+0.2**
AMOG				*i* S	**Sn**	**04 02 20.0**	**+0.3**
RTLL	**Cerro Villicun**	**3.72**	**203**	*e*P	**Pn**	**04 01 43.2**	**+0.2**
RTLL				*i* S	**Sn**	**04 02 26.4**	**-1.2**
RTLL				IAML		04 02 31.1	
	comp=Z,218nm,0.3s						
CFA	**Coronel Fontan**	**3.90**	**199**	P	**Pn**	**04 01 45.3**	**+0.1**
	comp=Z,21nm,0.3s,baz=32,slow=12,SNR=526						
CFA				S	**Sn**	**04 02 29.8**	**-1.8**
	comp=Z,23nm,0.3s,baz=11,slow=15,SNR=12						
CFA	**Coronel Fontan**	**3.90**	**199**	*e*P	**Pn**	**04 01 45.4**	**+0.1**
CFA				*i* S	**Sn**	**04 02 29.9**	**-1.8**
ZON	**Zonda**	**3.99**	**204**	*e*P	**Pn**	**04 01 46.7**	**+0.3**
ZON				*i* S	**Sn**	**04 02 33.0**	**-0.7**
ZON				IAML		04 02 42.9	
	comp=Z,44nm,0.4s						
GO04	**Tololo Observa**	**4.19**	**237**	*e*P	**Pn**	**04 01 48.9**	**-0.4**
ACAN	**Cantantal**	**4.36**	**185**	*e*P	**Pn**	**04 01 51.4**	**+0.2**
ACAN				*i* S	**Sn**	**04 02 40.4**	**-2.0**
MRA	**San Martin**	**4.58**	**169**	*e*P	**Pn**	**04 01 54.0**	**-0.1**
ASAL	**Salagasta**	**5.00**	**201**	*e*P	**Pn**	**04 01 59.5**	**0.0**
ARCO	**CERRO ARCO**	**5.26**	**200**	*e*P	**Pn**	**04 02 02.9**	**-0.2**
ARCO				IAML		04 03 05.1	
	comp=Z,78nm,0.3s						
AAGR	**Agrelo**	**5.46**	**199**	*e*P	**Pn**	**04 02 05.7**	**+0.1**
AAGR				*i* S	**Sn**	**04 03 07.0**	**-1.2**
LVC	**Limon Verde**	**5.63**	**339**	P	**Pn**	**04 02 08.8**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=144,slow=11,SNR=15						
LVC				S	**Sn**	**04 03 10.1**	**-2.7**
	comp=Z,2.9nm,0.3s,baz=275,slow=21,SNR=17						
LVC				LR	LR	04 04 51.3	
	comp=Z,48nm,18.9s,baz=322,slow=44						
ROC1	**El Roble**	**6.24**	**215**	*e*P	**Pn**	**04 02 14.5**	**-1.6**
CPUP	**Villa Florida**	**8.55**	**82**	P	**Pn**	**04 02 45.2**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=270,slow=10,SNR=7.5						
LPAZ	**La Paz**	**11.64**	**353**	P	**Pn**	**04 03 28.8**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=164,slow=7.4,SNR=5.4						
SIV	**San Ignacio**	**12.98**	**25**	P	**Pn**	**04 03 43.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=236,slow=9.7,SNR=4.1						
TXAR	**Lajitas Array**	**66.99**	**325**	P	**P**	**04 11 21.6**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=147,slow=8.6,SNR=3.9						
TORD	**Torodi Ar. Bea**	**77.80**	**68**	P	**P**	**04 12 24.4**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=275,slow=5.3,SNR=9.6						
BOSA	**Boshof**	**78.78**	**116**	P	**P**	**04 12 30.7**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=256,slow=4.2,SNR=4.4						
PDAR	**Pinedale Array**	**80.62**	**330**	P	**P**	**04 12 40.5**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=114,slow=6.0,SNR=4.6						
ASAR	**Alice Springs**	**124.98**	**203**	PKP	**PKPdf**	**04 19 26.8**	**0.0**
	comp=Z,0.5nm,0.6s,baz=122,slow=1.7,SNR=4.9						
WRA	**Warramunga Arr**	**128.23**	**206**	PKP	**PKPdf**	**04 19 33.2**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=155,slow=2.0,SNR=4.8						
ZALV	**Zalesovo Beam**	**146.69**	**31**	PKPbc	**PKPbc**	**04 20 08.3**	**+0.8**
	comp=Z,2.4nm,0.4s,baz=294,slow=3.6,SNR=10						
MKAR	**Makanchi Array**	**149.29**	**44**	PKPbc	**PKPbc**	**04 20 15.2**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=300,slow=2.7,SNR=17						
MKAR				PKPab	**PKPab**	**04 20 20.5**	**+0.7**
	comp=Z,1.0nm,0.7s,baz=312,slow=3.4,SNR=8.6						

IDC ***25*** *04:22:04.0±22.0,36.90N×71.29E,h92km±149km,mb3.3/4, mb1 3.4/6,mb1mx3.1/28,mbtmp3.6/6,ML3.2/2,Error ellipse: s-maj=171.9km s-min=32.5km az=22.0*

ISC 25 04:22:02.7±1.7,36.8N±0.1×71.2E±0.2,h88km,n8, σ0s71/10,1C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.31**	**355**	⇓Pn	**Pn**	**04 23 33.3**	**+0.3**
	0.7nm,0.4s,baz=181,slow=12,SNR=16						
KK31				⇓Sn	**Sn**	**04 24 42.6**	**-0.9**
	4.1nm,0.6s,baz=181,slow=23,SNR=5.3						
AAK	**Ala-Archa**	**6.35**	**23**	⇑Pn	**Pn**	**04 23 33.9**	**+0.2**
	3.2nm,0.6s						
AAK				⇓Sn	**Sn**	**04 24 45.8**	**+0.9**
	3.6nm,0.5s						
MKAR	**Makanchi Array**	**12.95**	**36**	P	**Pn**	**04 25 02.7**	**-0.4**
	0.1nm,0.3s,baz=227,slow=14,SNR=5.4						
ZALV	**Zalesovo Beam**	**19.57**	**25**	P	**P**	**04 26 22.6**	**-0.6**
	0.6nm,0.3s,baz=222,slow=12,SNR=7.0						
SONM	**Songino Array**	**28.03**	**56**	P	**P**	**04 27 46.1**	**+0.6**
	0.2nm,0.4s,baz=264,slow=5.8,SNR=2.6						
ARCES	**ARCESS Array B**	**40.92**	**337**	P	**P**	**04 29 36.6**	**+0.7**
	4.3nm,1.2s,baz=113,slow=9.2,SNR=3.4						
KSRS	**Korea Array**	**44.63**	**71**	P	**P**	**04 30 05.7**	**-0.5**
	0.7nm,0.4s,baz=311,slow=7.8,SNR=4.0						
YKA	**Yellowknife Ar**	**80.93**	**3**	P	**P**	**04 34 06.9**	**+0.1**
	0.1nm,0.5s,baz=349,slow=5.1,SNR=4.4						

NCEDC ***25*** *04:22:10±0.9,38.749N±0.005×122.71W±0.01,h2km±6km, Md2.3/63,Error ellipse: s-maj=1.6km s-min=0.7km az=71.0*

NEIC 25 04:22:10.8±1.2,38.74N±0.01×122.72W±0.01,h10km±2km, Error ellipse: s-maj=1.9km s-min=1.5km az=218.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAXM	**Alexander Vall**	**0.04**	**225**		Pg	04 22 11.3	-1.4
NHSM	**Mount Saint He**	**0.12**	**134**		Pg	04 22 12.6	-1.1
GSGM	**Seigler Mounta**	**0.13**	**4**		Pg	04 22 13.1	-0.7
GACM	**Adobe Creek**	**0.17**	**321**		Pg	04 22 13.9	-0.6
MAC	**Mark West Spri**	**0.19**	**180**		Pg	04 22 14.4	-0.3
GPMM	**Pine Mountain**	**0.21**	**302**		Pg	04 22 14.7	-0.4
NMCNC	**Mill Creek, So**	**0.21**	**226**		Pg	04 22 14.9	-0.2
GCVM	**Cloverdale**	**0.23**	**278**		Pg	04 22 15.3	-0.2
NSHM	**Saint Helena R**	**0.23**	**157**		Pg	04 22 15.0	-0.6
GMKM	**Mount Konoctai**	**0.24**	**348**		Pg	04 22 15.1	-0.6
MNRC	**McLaughlin Min**	**0.26**	**57**		Pg	04 22 15.4	-0.7
NTYM	**Taylor**	**0.35**	**172**		Pg	04 22 17.9	+0.2
GWKM	**Walker Ridge**	**0.36**	**30**		Pg	04 22 17.6	-0.3
HOPS	**Hopland Field**	**0.38**	**313**		Sg	04 22 18.1	-5.1
HOPS	**Hopland Field**	**0.38**	**313**	Pg	Pg	04 22 17.8	-0.4
GHLM	**Highland Sprin**	**0.38**	**323**		Pg	04 22 18.0	-0.4
GHCM	**House Creek**	**0.39**	**251**		Pg	04 22 18.6	+0.1
FTR	**Fort Ross**	**0.41**	**238**		Pg	04 22 19.1	+0.4
GDCM	**Dry Creek**	**0.41**	**274**		Pg	04 22 18.9	+0.1
GSNM	**Snow Mountain**	**0.42**	**299**		Pg	04 22 19.1	+0.1
NBPM	**Berryessa Peak**	**0.42**	**99**		Pg	04 22 19.3	+0.3
CVS	**Carmenet Viney**	**0.44**	**152**		Pg	04 22 19.3	-0.1
GBMM	**Baldy Mountain**	**0.44**	**24**		Pg	04 22 19.9	+0.4
NAPC	**Atlas Peak**	**0.47**	**129**		Pg	04 22 19.5	-0.5
GTSM	**Trough Springs**	**0.58**	**9**		Pb	04 22 23.2	0.0
SNT	**Sears Point**	**0.59**	**159**		Pg	04 22 21.9	-0.4
MCCM	**Marconi Confer**	**0.60**	**192**	Pg	Pg	04 22 22.8	+0.4
MCCM					Sg	04 22 23.0	-7.4
GGUM	**Gualala**	**0.62**	**281**		Pg	04 22 22.9	+0.1
NDHM	**Dunnigan Hills**	**0.63**	**87**		Pb	04 22 23.9	-0.1
NADM	**Allendale**	**0.65**	**115**		Pb	04 22 24.5	+0.3
GFC	**Funks Creek**	**0.68**	**30**		Pb	04 22 25.4	+0.6
NOLM	**Olema**	**0.70**	**185**		Pg	04 22 24.6	+0.3
GHOM	**Hamilton Openi**	**0.71**	**296**		Pg	04 22 24.6	+0.2
NLHM	**Lake Herman**	**0.76**	**144**		Pg	04 22 25.1	-0.3
GCK	**Clark Valley**	**0.84**	**15**		Pb	04 22 28.0	+0.6
SUTB	**Sutter Butte**	**0.88**	**56**		Pg	04 22 26.5	-1.2
KRKM	**Rackout Spring**	**0.90**	**337**		Pn	04 22 29.1	-0.5
GASB	**Alder Springs**	**0.92**	**0**		Pb	04 22 29.2	+0.3
BRIB	**Briones**	**0.93**	**151**		Pg	04 22 27.9	-0.8
CVPM	**Vollmer Peak**	**0.94**	**155**		Pg	04 22 28.5	-0.3
BKS	**Berkeley--Byer**	**0.94**	**156**		Pg	04 22 28.6	-0.3
ORV	**Oroville**	**1.25**	**49**	Pg	Pn	04 22 32.4	-2.0
AFDM	**Forest Hills D**	**1.38**	**81**	Pn	Pn	04 22 33.9	-2.3
CMB	**Columbia Colle**	**1.96**	**110**		Pn	04 22 43.5	-0.7
RUBR	**Rubicon Trail**	**2.03**	**80**	Pn	Pn	04 22 45.1	-0.1
TAHR	**Tahoe**	**2.04**	**77**		Pn	04 22 43.2	-2.2
EMB	**Emerald Bay**	**2.06**	**83**		Pn	04 22 44.5	-1.2
KBF	**Kyburz Flat**	**2.10**	**68**		Pn	04 22 46.6	+0.3
BEKR	**Beckworth**	**2.15**	**58**		Pn	04 22 47.1	+0.2
MPK	**Martis Peak**	**2.17**	**74**		Pn	04 22 47.6	+0.3
GNO	**Genoa**	**2.25**	**84**		Pn	04 22 49.2	+1.0
PEAR	**Peavine Mounta**	**2.31**	**67**		Pn	04 22 49.4	+0.2
VCNR	**Virginia City**	**2.46**	**76**		Pn	04 22 51.3	+0.2
PNTR	**Pine Nut**	**2.46**	**81**		Pn	04 22 51.8	+0.6
WAKR	**Walker**	**2.58**	**94**		Pn	04 22 53.0	+0.1
YERR	**Yerington**	**2.73**	**84**	Pn	Pn	04 22 55.4	+0.5
MDPB	**Devils Postpil**	**3.08**	**110**	Pn	Pn	04 23 00.2	+0.6
OMMB	**Old Mammoth Mi**	**3.14**	**110**		Pn	04 23 00.8	+0.2
RYN	**Ryan**	**3.29**	**91**	Pn	Pn	04 23 03.6	+1.1
NVAR	**Mina Array Bea**	**3.48**	**94**	Pn	Pn	04 23 04.3	-0.9

IDC ***25*** *04:31:02.3±1.7,41.87N×65.52E,h0km,mb3.4/2, mb1 3.4/4,mb1mx3.2/29,mbtmp3.3/4,ML3.3/2,MS2.9/1, Ms1 2.9/1,ms1mx2.4/29,Error ellipse: s-maj=62.7km s-min=15.2km az=172.0*

ISC 25 04:31:04.9±1.5,42.5N±0.3×65.58E±0.10,h10km,n7, σ2s76/7,2C-2D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**3.68**	**79**	⇓Pn	**Sn**	**04 32 42.6**	**-2.8**
	0.2nm,0.3s,baz=172,slow=12,SNR=6.1						
KK31				⇑Lg	Lg	04 33 56.5	
	1.0nm,0.5s,baz=163,slow=23,SNR=4.8						
AAK	**Ala-Archa**	**6.59**	**86**	Pn	**Pn**	**04 32 43.7**	**+1.8**
	0.3nm,0.3s,baz=185,slow=7.4,SNR=5.6						
AAK				Sn	**Sn**	**04 33 57.4**	**+0.2**
	0.2nm,0.3s,baz=167,slow=11,SNR=3.7						
AAK	**Ala-Archa**	**6.59**	**86**	⇑Pn	**Pn**	**04 32 43.0**	**+1.0**
	2.7nm,0.8s						
AAK				⇓Lg	Lg	04 33 57.0	
	1.7nm,0.6s						
MKAR	**Makanchi Array**	**12.65**	**64**	Pn	**Pn**	**04 34 03.5**	**-1.4**
	0.4nm,0.3s,baz=212,slow=12,SNR=9.2						
GNI	**Garni**	**15.82**	**268**	LR	LR	04 41 49.7	
	comp=Z,47nm,20.2s,baz=330,slow=41						
TORD	**Torodi Ar. Bea**	**62.01**	**262**	P	**P**	**04 41 23.1**	**-2.5**
	0.4nm,0.5s,baz=50,slow=6.1,SNR=5.8						
YKA	**Yellowknife Ar**	**75.35**	**0**	P	**P**	**04 42 51.2**	**+3.2**
	0.1nm,0.5s,baz=349,slow=5.1,SNR=4.4						

GUC ***25*** *04:45:09.8±0.9,35.40S×71.00W,h149km±8km,ML3.5*

SJA ***25*** *04:45:09.7±1.0,35.48S×70.71W,h116km±8km,ML3.0, MW3.4*

ISC 25 04:45:11.0±1.8,35.49S±0.05×70.74W±0.05, h113km±17km,n18,σ0s85/29,4C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUMA	**Malargue**	**1.05**	**91**	*e*P	**Pn**	**04 45 32.1**	**-0.9**
PUMA				*i* S	**Sn**	**04 45 49.4**	**-0.3**
GO05	**Huala**	**1.08**	**296**	*e*P	**Pn**	**04 45 32.7**	**-0.6**
GO05				*i* S	**Sn**	**04 45 50.8**	**+0.5**
GO05				IAML		04 45 53.1	
	comp=N,298nm,0.3s						
GO05	**Huala**	**1.08**	**296**	*i* P	**Pn**	**04 45 32.8**	**-0.6**
GO05				*i* S	**Sn**	**04 45 51.2**	**+1.0**
CCHI	**Chillan**	**1.55**	**224**	⇑*i* P	**Pn**	**04 45 39.1**	**+0.5**
MT01	**Popeta**	**1.68**	**345**	*e*P	**Pn**	**04 45 39.5**	**-0.6**
MT01				*i* S	**Sn**	**04 46 01.7**	**-0.5**
MT01				IAML		04 46 04.5	
	comp=E,379nm,0.2s						
LMEL	**Las Melosas**	**1.70**	**15**	⇑*i* P	**Pn**	**04 45 41.1**	**+0.6**
LMEL				*e*S	**Sn**	**04 46 05.6**	**+2.6**
LMEL				IAML		04 46 12.5	
	comp=N,3μm,0.0s						
COCH	**Cobquecura**	**1.78**	**248**	*e*P	**Pn**	**04 45 41.4**	**0.0**
COCH				*i* S	**Sn**	**04 46 03.7**	**-0.8**
COCH				IAML		04 46 09.1	
	comp=N,153nm,0.3s						
MT03	**Universidad Ad**	**2.00**	**6**	*e*P	**Pn**	**04 45 44.1**	**-0.1**
MT03				*i* S	**Sn**	**04 46 10.8**	**+1.2**
MT03				IAML		04 46 14.2	
	comp=N,420nm,0.3s						
MT05	**Renca**	**2.09**	**0**	⇑*i* P	**Pn**	**04 45 45.5**	**+0.1**
MT05				*e*S	**Sn**	**04 46 11.7**	**+0.1**
MT05				IAML		04 46 16.1	
	comp=N,313nm,0.4s						
FCH	**Farellones**	**2.19**	**10**	⇑*i* P	**Pn**	**04 45 46.7**	**-0.1**
FCH				*e*S	**Sn**	**04 46 14.8**	**+0.6**
FCH				IAML		04 46 19.3	
	comp=E,156nm,0.1s						
BI03	**Tigo**	**2.29**	**233**	IAML		04 46 21.8	
	comp=N,400nm,0.4s						
ROC1	**El Roble**	**2.52**	**355**	*i* P	**Pn**	**04 45 50.5**	**-0.5**
ROC1				*i* S	**Sn**	**04 46 22.1**	**+0.4**
ROCH	**El Roble**	**2.52**	**355**	⇓*i* P	**Pn**	**04 45 50.5**	**-0.5**
ROCH				*i* S	**Sn**	**04 46 21.1**	**-0.6**
ROCH				IAML		04 46 24.5	
	comp=E,217nm,0.2s						
VA01	**Torpederas**	**2.57**	**343**	*e*P	**Pn**	**04 45 51.3**	**-0.2**
VA01				*i* S	**Sn**	**04 46 22.0**	**-0.5**
VA01				IAML		04 46 23.8	
	comp=E,359nm,0.1s						
AAGR	**Agrelo**	**2.87**	**34**	*i* P	**Pn**	**04 45 55.9**	**+0.4**
ACAN	**Cantantal**	**4.36**	**44**	*i* P	**Pn**	**04 46 14.9**	**-0.3**
PLCA	**Paso Flores**	**5.24**	**178**	*i* P	**Pn**	**04 46 27.4**	**+0.4**
TCA	**Tanti**	**6.60**	**53**	*i* P	**Pn**	**04 46 43.9**	**-1.7**
TCA				IAML		04 46 45.1	
	comp=Z,3.2nm,0.5s						

JMA 25 05:04:29.9±0.1,28.12N×140.43E,h502km,M3.7,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.86**	**123**	P	P	05 05 35.0	+0.4
CBIJ				*e*S	S	05 06 26.2	-0.8
TTO1	**TONANKAI O.B.S**	**6.32**	**331**	P	P	05 06 10.8	+1.9
BSO1	**Boso 1**	**6.53**	**4**	P	P	05 06 13.4	+2.7
JIE	**Ise**	**7.02**	**334**	P	P	05 06 17.5	+1.3
JKN2	**Miekihoku**	**7.06**	**331**	P	P	05 06 17.4	+0.8
JRY	**Ryogami san**	**7.98**	**351**	P	P	05 06 26.8	+0.8
JYT	**Yasato**	**8.09**	**359**	P	P	05 06 28.5	+1.5
JAG	**Ashikaga**	**8.32**	**355**	P	P	05 06 29.8	+0.3
JHO	**Hitachi**	**8.47**	**1**	P	P	05 06 33.2	+2.2

MOS ***25*** *05:14:15.2±1.1,7.79S×109.27E,h46km,mb6.3/67, MS5.4/22,Error ellipse: s-maj=6.9km s-min=4.4km az=114.5*

BJI ***25*** *05:14:17.3±0.0,8.10S×109.15E,h80km,mB6.0/72, mb5.5/85,Ms5.9/92,Ms7.5:7/84*

NEIC ***25*** *05:14:18.5±2.9,7.99S±0.07×109.27E±0.04,h66km±1km, mb6.2/204,Mwb6.2/54,Mwc6.1/32,Mww6.1, Mwc6.2(GCMT),Error ellipse: s-maj=12.5km s-min=6.0km az=188.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-1.84; Mθθ0.99; Mϕϕ0.85; Mrθ-1.30; Mθϕ-0.46; Mrϕ0.40; Fault plane solution: M₀2.15000×10¹⁸ NP1:φs315.05000°, δ26.06000°,λ-73.30000°. NP2: φs116.58000°,δ65.12000°,λ-98.00000°. Principal axes: T 1.8337, Plg20.0000°, Azm213.0000°; N 0.5262, Plg7.0000°, Azm120.0000°; P -2.3599, Plg69.0000°, Azm11.0000°;*

IDC ***25*** *05:14:19.4±1.1,7.86S×109.30E,h70km±8km,mb5.4/40, mb1 5.5/42,mb1mx5.4/44,mbtmp5.7/42,MS5.3/28, Ms1 5.3/28,ms1mx5.2/35 Error ellipse: s-maj=9.7km s-min=7.8km az=55.0*

DJA ***25*** *05:14:21.1±0.1,8.3S±2.0×10.9E±.1°,h79km±1km,M6.1/125, mB6.5/115,mb6.0/125,MLv6.6/28,Mw(mB)6.2/115, Mwp6.0/96*

KLM ***25*** *05:14:22.0,8.29S×109.27E,h93km,mb6.1*

GCMT ***25*** *05:14:22.5±0.1,8.36S×109.27E,h76km,MW6.2/163, Moment Tensor Solution. s163,c395; s158,c550; Duration: 29 Moment tensor: Scale 10¹⁸Nm; Mrr-1.28±.01; Mθθ1.18±.01; Mϕϕ0.09±.01; Mrθ-1.56±.01; Mθϕ-0.34±.01; Mrϕ0.58±.01; Best double couple: M₀2.09900×10¹⁸ NP1:φs282.00000°,δ19.00000°, λ-97.00000°. NP2:φs110.00000°,δ71.00000°, λ-88.00000°. Principal axes: T 2.0950, Plg26.0000°, Azm198.0000°; N 0.0050, Plg2.0000°, Azm289.0000°; P -2.1030, Plg64.0000°, Azm23.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s. Triangular moment-rate function*

NEIC ***25*** *05:14:23,8.300S×109.34E,h100km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-0.91; Mθθ0.79; Mϕϕ0.12; Mrθ-1.61; Mθϕ-0.39; Mrϕ0.46; Fault plane solution: M₀1.91000×10¹⁸ NP1:φs303.00000°, δ15.00000°,λ-74.00000°. NP2:φs107.00000°,δ75.00000°, λ-94.00000°. Principal axes: T 1.9346, Plg30.0000°, Azm200.0000°; N -0.0410, Plg4.0000°, Azm108.0000°; P -1.8936, Plg59.0000°, Azm11.0000°;*

NEIC ***25*** *05:14:24, 8.37S×109.28E,h85km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-1.21; Mθθ1.10; Mϕϕ0.11; Mrθ-1.52; Mθϕ-0.43; Mrϕ0.58; Fault plane solution: M₀2.04000×10¹⁸ NP1:φs290.00000°, δ19.00000°,λ-90.00000°. NP2:φs111.00000°,δ71.00000°, λ-90.00000°. Principal axes: T 2.0686, Plg26.0000°, Azm201.0000°; N -0.0521, Plg0.0000°, Azm291.0000°; P -2.0165, Plg64.0000°, Azm21.0000°;*

NEIC ***25*** *05:14:33.4,8.51S×108.89E,h83km,Moment Tensor Solution. Moment tensor: Scale 10¹⁸Nm; Mrr-1.09; Mθθ1.05; Mϕϕ0.04; Mrθ-1.29; Mθϕ-0.26; Mrϕ0.51; Fault plane solution: M₀1.77000×10¹⁸ NP1:φs277.03000°, δ19.64000°,λ-102.27000°. NP2:φs110.04000°, δ70.82000°,λ-85.66000°. Principal axes: T 1.7763, Plg26.0000°, Azm197.0000°; N -0.0099, Plg4.0000°, Azm289.0000°; P -1.7664, Plg64.0000°, Azm27.0000°;*

ISC 25 05:14:20.5±0.3,8.05S±0.03×109.22E±0.02,h88km±1km, h88km:pP-P,n1633,σ1s84/1771,mb6.0/229,43C-99D, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KPJI	**Karang Pucung**	**0.76**	**338**	P	**Pn**	**05 14 40.1**	**+2.6**
KPJI				S	**Sn**	**05 14 53.8**	**+3.7**
CMJI	**Cimerak**	**0.81**	**289**	P	**Pn**	**05 14 37.8**	**-0.1**
CMJI				S	**Sn**	**05 14 50.7**	**-0.3**
UGM	**Wanagama**	**1.29**	**84**	P	**Pn**	**05 14 43.2**	**-0.2**
UGM	**Wanagama**	**1.29**	**84**		**Pn**	**05 14 43.2**	**-0.4**
UGM				Sn	**Sn**	**05 14 59.0**	**-2.1**
CISI	**Cisompet, Garu**	**1.48**	**289**	P	**Pn**	**05 14 46.3**	**+0.4**
CISI				S	**Sn**	**05 15 06.8**	**+1.6**
CISI	**Cisompet, Garu**	**1.48**	**289**		**Pn**	**05 14 46.9**	**+1.0**
CISI				Sn	**Sn**	**05 15 06.0**	**+0.9**
SMRI	**Semarang**	**1.56**	**51**	P	**Pn**	**05 14 50.3**	**+3.3**
SMRI				S	**Sn**	**05 15 13.6**	**+6.6**
WOJI	**Wonogiri, Jawa**	**1.70**	**83**	P	**Pn**	**05 14 47.9**	**-0.8**
WOJI				S	**Sn**	**05 15 08.7**	**-1.4**
PCJI	**Pacitan**	**1.94**	**95**	P	**Pn**	**05 14 51.3**	**-0.6**
PCJI				S	**Sn**	**05 15 14.4**	**-1.4**
LEM	**Lembang**	**2.00**	**307**	P	**Pn**	**05 14 56.2**	**+3.4**
LEM	**Lembang**	**2.00**	**307**	P	**Pn**	**05 14 56.0**	**+3.2**
	1μm,0.3s,baz=124,slow=9.0,SNR=332						
LEM				LR	LR	05 15 43.2	
	comp=Z,128μm,21.3s,baz=73,slow=43						
LEM	**Lembang**	**2.00**	**307**	P	**Pn**	**05 14 56.1**	**+3.3**
LEM				S	**Sn**	**05 15 22.3**	**+4.9**
CNJI	**Cibinong**	**2.20**	**289**	P	**Pn**	**05 14 56.6**	**+1.3**
CNJI				S	**Sn**	**05 15 23.6**	**+1.7**
NGJI	**Ngawi**	**2.32**	**73**	P	**Pn**	**05 14 59.9**	**+3.0**
NGJI				S	**Sn**	**05 15 28.3**	**+3.6**
UWJI	**Ujung Watu**	**2.35**	**47**	P	**Pn**	**05 14 58.9**	**+1.5**
UWJI				S	**Sn**	**05 15 29.6**	**+4.0**
SKJI	**Sukabumi**	**2.84**	**291**	P	**Pn**	**05 15 05.7**	**+1.9**
SKJI				S	**Sn**	**05 15 40.0**	**+2.8**
DBJI	**Dramaga**	**2.87**	**301**	P	**Pn**	**05 15 07.3**	**+3.1**
GRJI	**Gresik**	**3.42**	**71**	P	**Pn**	**05 15 13.1**	**+1.4**
GRJI				S	**Sn**	**05 15 53.2**	**+2.0**
GMJI	**Gumukmas**	**4.19**	**93**	P	**Pn**	**05 15 21.9**	**-0.2**
GMJI				S	**Sn**	**05 16 10.5**	**+0.6**
KMMI	**Kalianget**	**4.81**	**78**	P	**Pn**	**05 15 31.3**	**+0.8**
KMMI				S	**Sn**	**05 16 27.3**	**+2.3**
JAGI	**Jajag, Banyuwa**	**4.90**	**95**	P	**Pn**	**05 15 31.7**	**-0.1**
JAGI				S	**Sn**	**05 16 26.5**	**-0.7**
JAGI	**Jajag, Banyuwa**	**4.90**	**95**		**Pn**	**05 15 32.7**	**+0.9**
JAGI				Sn	**Sn**	**05 16 25.6**	**-1.6**
KASI	**Kota Agung**	**5.32**	**298**	P	**Pn**	**05 15 39.6**	**+2.1**
	38nm110μm71μm7μm,1.2s						
KASI				S	**Sn**	**05 16 41.5**	**+4.0**
	38nm110μm71μm7μm,1.2s						
TPI	**Tanjungpandan**	**5.48**	**343**	P	**Pn**	**05 15 43.6**	**+3.

PSI Prapat 14.89 316 P **Pn** **05 17 42.7 -3.9**
9.9nm,0.3s,baz=166,slow=24,SNR=19
PSI LR LR 05 23 51.5
comp=Z,19µm,19.5s,baz=134,slow=39
IPM Ipoh 14.89 326 P **P** **05 17 49.3 -0.7**
IPM Ipoh 14.89 326 P **P** **05 17 49.0 -1.0**
SOEI Soe 14.96 98 P **Pn** **05 17 44.2 -3.4**
36µm40µm5µm,1.0s
SOEI Soe 14.96 98 **Pn** **05 17 44.1 -3.4**
LUWI Luwuk 15.19 63 P **P** **05 17 53.8 +0.5**
55µm35µm2µm,1.3s
LUWI Luwuk 15.19 63 P **P** **05 17 52.6 -0.8**
LUWI IAmb IAmb 05 17 57.3
comp=Z,3µm,1.3s
MRSI Marisa 15.24 57 P **P** **05 17 53.5 -0.5**
comp=Z,56µmcomp=Z,18µmcomp=Z,2µm,1.3s
GIRL Giralia 15.29 162 P **Pn** **05 17 45.6 -5.9**
baz=15,SNR=593
KKM Kota Kinabalu 15.64 27 IAmb IAmb 05 18 05.7
comp=Z,3µm,1.6s
KULM Kulim 15.77 327 P **Pn** **05 17 57.7 +0.1**
SNSI Sinabang, Aceh 16.53 308 P **Pn** **05 18 07.4 +0.3**
comp=Z,6µmcomp=Z,491nm,0.7s
PSA00 Pilbara Seismi 16.91 144 IAmb IAmb 05 18 14.2
comp=Z,2µm,1.5s
KMSI Cibinong 17.02 60 P **P** **05 18 16.9 +3.2**
comp=Z,2µmcomp=Z,17µmcomp=Z,797nm,1.2s
MLSI Meulaboh, Aceh 17.69 313 P **P** **05 18 18.4 -2.7**
comp=Z,22µmcomp=Z,5µmcomp=Z,307nm,0.6s
SANI Sanana 17.72 71 P **Pn** **05 18 22.3 +0.5**
comp=Z,56µmcomp=Z,34µmcomp=Z,1µm,1.2s
LHMI Lhok Sumawe 17.99 317 P **Pn** **05 18 30.8 +5.8**
comp=Z,40µmcomp=Z,13µmcomp=Z,246nm,1.3s
LHMI Lhok Sumawe 17.99 317 P **P** **05 18 22.6 -1.7**
NLAI Namlea 18.41 76 P **Pn** **05 18 31.6 +1.5**
comp=Z,79µmcomp=Z,41µmcomp=Z,2µm,1.2s
BATP Bataraza 18.79 27 *eP* **Pn** **05 18 35.9 +1.4**
FITZ Fitzroy Crossi 18.84 124 P **P** **05 18 33.9 +0.3**
baz=19,SNR=239
FITZ Fitzroy Crossi 18.84 124 P **P** **05 18 34.0 +0.3**
comp=Z,20nm,0.3s,baz=292,slow=6.5,SNR=430
FITZ S S 05 21 47.1 -16
comp=Z,4.6nm,0.3s,baz=199,slow=20,SNR=2.9
FITZ Fitzroy Crossi 18.84 124 P **P** **05 18 34.2 +0.6**
AAI Ambon 19.36 78 P **P** **05 18 39.9 +0.5**
comp=Z,57µmcomp=Z,82µmcomp=Z,8µm,1.2s
LBMI Labuha 19.64 69 P **Pn** **05 18 44.3 -0.3**
comp=Z,45µmcomp=Z,4µm,1.3s
DLV T Lat 19.87 358 IAmb IAmb 05 18 58.4
comp=Z,967nm,1.2s
TNTI Ternate 20.10 65 P Pn 05 18 48.8 -1.2
comp=Z,29µmcomp=Z,33µmcomp=Z,2µm,1.3s
TNTI Ternate 20.10 65 P **P** **05 18 48.4 +1.0**
TNTI IAmb IAmb 05 18 54.7
comp=Z,2µm,0.9s
MSAI Masohi 20.15 78 P **P** **05 18 48.1 +0.1**
comp=Z,5µmcomp=Z,380nm,1.9s
KNRA Kununurra 20.56 113 P **P** **05 18 52.4 0.0**
baz=20,SNR=323
KNRA Kununurra 20.56 113 IAmb IAmb 05 18 53.5
comp=Z,809nm,0.7s
BNDI Bandanaira 20.85 82 P **P** **05 18 56.1 +0.6**
comp=Z,59µmcomp=Z,3µm,1.6s
SKMP Bagumbayan, Su 21.04 47 *eP* **P** **05 18 59.4 +1.9**
GSPH General Santos 21.05 49 *eP* **P** **05 19 04.0 +6.3**
PAGZ Pagadian 21.18 42 *eP* **P** **05 19 01.9 +3.0**
CMBY CAMPBELL BAY 21.36 314 *ex* **P** **05 19 05.2 +4.3**
DDMP Don Marcelino, 21.63 50 *eP* **P** **05 19 03.5 -0.4**
ENPP El Nido 21.65 28 *eP* **P** **05 19 05.5 +1.5**
SAUI Saumlaki 21.86 91 P **P** **05 19 04.4 -1.9**
comp=Z,26µmcomp=Z,22µmcomp=Z,2µm,1.0s
MORW Morawa 21.88 164 P **P** **05 19 05.9 -0.4**
baz=22,SNR=383
MTN Manton Dam 22.06 104 P **P** **05 19 08.7 +0.3**
baz=22,SNR=452
MTN Manton Dam 22.06 104 IAmb IAmb 05 19 25.9
comp=Z,1µm,1.1s
DAV Davao City (W) 22.17 48 P **P** **05 19 10.0 +0.4**
comp=Z,460nm,0.6s,baz=219,slow=1.5,SNR=25
DAV Davao City (W) 22.17 48⇓ *eP* **P** **05 19 04.9 -4.6**
DAV Davao City (W) 22.17 48 P **P** **05 19 12.4 +2.8**
SNPH Sibulan 22.21 39 *eP* **P** **05 19 13.4 +3.4**
BUKP Musuan 22.35 45 *eP* **P** **05 19 13.9 +2.3**
CGP Cagayan de Oro 22.50 44⇓ *eP* **P** **05 19 15.1 +2.0**
MATI Mati 22.59 49 *eP* **P** **05 19 12.2 -1.8**
GUIM Jordan 22.83 36 *eP* **P** **05 19 18.1 +1.7**
SWI Sorong 23.09 73 P **P** **05 19 17.8 -1.2**
comp=Z,32µmcomp=Z,15µmcomp=Z,927nm,1.1s
SIJI Sorong 23.09 73 P **P** **05 19 17.8 -1.3**
comp=Z,478nm,0.7s,baz=269,slow=6.7,SNR=52
SIJI S **S** **05 23 20.5 -3.0**
comp=Z,25nm,0.8s,baz=106,slow=21,SNR=6.1
KDU Kakadu 23.32 103 P **P** **05 19 20.6 -0.6**
baz=23,SNR=196
UBPT Khong Chiam 23.47 351 IAmb IAmb 05 19 53.6
comp=Z,1µm,1.9s
FAKI Fak Fak 23.47 79 P **P** **05 19 20.1 -2.5**
comp=Z,22µmcomp=Z,16µmcomp=Z,858nm,0.7s
FAKI Fak Fak 23.47 79 P **P** **05 19 19.1 -3.5**
FAKI IAmb IAmb 05 19 28.3
comp=Z,584nm,0.7s
BUTP Butuan 23.51 44 *eP* **P** **05 19 25.1 +2.3**
BLDU Ballidu 23.52 164 P **P** **05 19 22.2 -0.7**
baz=24,SNR=226
RCP Roxas 23.67 35⇑ *eP* **P** **05 19 26.3 +2.0**
MSLP Maasin 23.84 41 *eP* **P** **05 19 26.4 +0.5**
LUBP Lubang 24.25 27 *eP* **P** **05 19 30.8 +1.3**
MUN Mundaring 24.69 166 P **P** **05 19 32.9 -0.4**
baz=25,SNR=34
KMPI Kaimana, Papua 24.73 81 P **P** **05 19 33.8 -0.2**
comp=Z,50µmcomp=Z,4µm,1.5s
WRKA Warakurna 24.84 135 P **P** **05 19 34.5 -0.4**
baz=25,SNR=238
TGY Tagaytay City 24.89 28 P **P** **05 19 37.1 +1.8**
comp=Z,197nm,0.3s,baz=28,slow=4.7,SNR=7.4
TGY LR LR 05 31 27.2
comp=Z,5µm,18.5s,baz=202,slow=42
RKPI Ransiki, Papua 25.69 77 P **P** **05 19 42.9 +0.2**
comp=Z,40µmcomp=Z,2µm,1.1s
NWAO Narrogin (SRO) 25.85 164 P **P** **05 19 43.1 -0.8**
baz=26,SNR=38
NWAO Narrogin (SRO) 25.85 164 P **P** **05 19 42.9 -1.0**
NWAO pmax pmax
comp=Z,2µm,1.8s
NWAO Narrogin (SRO) 25.85 164 P **P** **05 19 42.8 -1.1**
comp=Z,247nm,0.9s,baz=338,slow=9.9,SNR=36
NWAO LR LR 05 29 21.3
comp=Z,14µm,21.5s,baz=339,slow=35
NWAO Narrogin (SRO) 25.85 164 P **P** **05 19 42.9 -1.0**
NWAO IAmb IAmb 05 19 48.8
comp=Z,2µm,1.8s
NWAO Narrogin (SRO) 25.85 164 IAmb IAmb 05 19 48.8
comp=Z,2µm,1.7s
KMBL Kambalda 26.04 155 P **P** **05 19 44.6 -1.1**
baz=26,SNR=54
PCPH Palayan 26.24 27⇑ *eP* **P** **05 19 47.2 -0.3**
DGPR DIGLIPUR 26.58 322 *ex* **P** **05 19 44.5 -6.2**
SMPP San Manuel, Pa 26.58 25 *eP* **P** **05 19 50.9 +0.2**
BALP Baler 26.61 27 *eP* **P** **05 19 50.6 -0.3**
QIZ Qiongzhong 26.91 1 P **P** **05 19 55.0 +1.4**
QIZ pP **pP** **05 20 15.0 +1.5**
QIZ sS **sS** **05 25 00.3 +1.5**
QIZ pmax pmax
comp=Z,3µm,6.9s
QIZ LR LR
comp=Z,14µm,20.1s
QIZ LR LR
comp=Z,5µm,19.1s
QIZ LR LR
comp=Z,22µm,31.4s
WRA Warramunga Arr 27.04 119 P **P** **05 19 54.7 -0.2**
WRA Warramunga Arr 27.04 119 P **P** **05 19 54.9 +0.1**
comp=Z,128nm,0.9s,baz=289,slow=11,SNR=395
WRA LR LR 05 31 27.3
comp=Z,5µm,20.7s,baz=295,slow=38
WRA P3KPbc 05 52 34.1
comp=Z,1.6nm,0.7s,baz=106,slow=4.4,SNR=6.7
WRA Warramunga Arr 27.04 119 P **P** **05 19 54.7 -0.2**
WRAB Tennant Creek 27.05 119 *d* iP **P** **05 19 55.3 +0.4**
WRAB pmax pmax
comp=Z,409nm,1.3s
WRAB Tennant Creek 27.05 119 P **P** **05 19 54.5 -0.4**
WRAB IAmb IAmb 05 20 17.0
comp=Z,519nm,1.1s
WB2 Warramunga Arr 27.05 119 IAmb IAmb 05 20 16.9
comp=Z,498nm,1.1s

H01W3 Cape Leeuwin H 27.09 171 P **P** **05 19 55.7 +0.9**
H01W3 T T 05 47 54.7
baz=341,slow=76,SNR=8.8
H01W1 Cape Leeuwin H 27.10 171 P **P** **05 19 55.8 +0.9**
H01W1 T T 05 47 58.1
baz=341,slow=76,SNR=9.0
H01W2 Cape Leeuwin H 27.11 171 P **P** **05 19 55.8 +0.9**
H01W2 T T 05 47 57.6
baz=341,slow=76,SNR=7.5
WR0 Warramunga Arr 27.22 118 IAmb IAmb 05 20 29.5
comp=Z,368nm,0.8s
RKGY Rocky Gully 27.38 166 P **P** **05 19 58.2 +0.5**
baz=27,SNR=18
BAKI Biak 27.63 77 P **P** **05 20 06.7 +6.5**
comp=Z,20µmcomp=Z,674nm,1.1s
CM31 Chiang Mai Arr 28.22 339 P **P** **05 20 05.7 +0.4**
SNR=26
CMAR Chiang Mai Arr 28.22 339 P **P** **05 20 05.2 0.0**
comp=Z,22nm,0.5s,baz=173,slow=8.9,SNR=39
CMAR PcP **PcP** **05 23 18.8 +1.8**
comp=Z,28nm,0.7s,baz=192,slow=3.0,SNR=7.8
CMAR LR LR 05 33 01.7
comp=Z,16µm,18.3s,baz=167,slow=40
CMAR P3KPbc 05 52 27.6
comp=Z,0.9nm,0.3s,baz=322,slow=5.4,SNR=7.3
ASAR Alice Springs 28.30 126 P **P** **05 20 05.8 -0.2**
comp=Z,192nm,0.6s,baz=304,slow=9.2,SNR=1171
ASAR PcP **PcP** **05 23 18.1 +0.9**
comp=Z,35nm,0.6s,baz=322,slow=2.1,SNR=7.2
ASAR ScP **ScP** **05 26 51.7 +1.0**
comp=Z,25nm,0.8s,baz=325,slow=1.5,SNR=5.4
ASAR LR LR 05 31 34.5
comp=Z,5µm,21.3s,baz=298,slow=36
ASAR P3KPbc 05 52 28.1
comp=Z,1.6nm,0.9s,baz=128,slow=5.3,SNR=6.3
ASAR P3KP 05 53 28.2
comp=Z,1.2nm,0.7s,baz=55,slow=3.2,SNR=4.6
ASAR Alice Springs 28.30 126 P **P** **05 20 06.2 +0.2**
APYP Conner 28.35 25 *eP* **P** **05 20 06.4 0.0**
CHTO Chiang Mai 28.55 339 P **P** **05 20 07.8 -0.4**
CHTO pmax pmax
comp=Z,115nm,1.3s
CHTO Chiang Mai 28.55 339 P **P** **05 20 07.8 -0.4**
FORT Forrest 28.66 145 P **P** **05 20 08.9 -0.3**
baz=29,SNR=51
FORT Forrest 28.66 145 IAmb IAmb 05 20 59.3
comp=Z,378nm,0.8s
WAMI Wamena 29.61 84 P **P** **05 20 19.8 +2.1**
comp=Z,11µmcomp=Z,580nm,1.2s
SLVN Son La 29.66 350 P **P** **05 20 18.7 +0.7**
SMPI Sarmi 29.97 80 P **P** **05 20 21.5 +0.6**
comp=Z,9µmcomp=Z,275nm,1.3s
GZH Guangzhou 31.20 7 P P 05 20 37.1 +5.5
GZH S S 05 25 46.3 +15
GZH pmax pmax
comp=Z,3µm,6.7s
GZH LR LR
comp=Z,10µm,18.8s
GZH LR LR
comp=Z,4µm,18.0s
GENI Genyem 31.27 82 P **P** **05 20 32.1 -0.3**
comp=Z,14µmcomp=Z,10µmcomp=Z,702nm,1.5s
QIS Mount Isa 31.89 116 P **P** **05 20 38.2 +0.4**
baz=32,SNR=113
PALK Pallekele 32.25 297 P **P** **05 20 43.7 +2.7**
PALK pmax pmax
comp=Z,145nm,0.9s
PALK Pallekele 32.25 297 *i* P **P** **05 20 42.8 +1.8**
SNR=10
PALK Pallekele 32.25 297 P **P** **05 20 43.7 +2.7**
KMI Kunming 33.57 349 P **P** **05 20 54.9 +2.4**
KMI pP pP 05 21 12.9 0.0
KMI sP sP 05 21 18.6 -4.4
KMI S **S** **05 26 10.3 +1.5**
KMI sS sS 05 26 46.8 +3.1
KMI pmax pmax
comp=Z,75nm,1.8s
KMI pmax pmax
comp=Z,2µm,5.1s
KMI LR LR
comp=Z,23µm,17.0s
KMI LR LR
comp=Z,11µm,13.8s
KMI LR LR
comp=Z,26µm,17.7s
KMI Kunming 33.57 349 IAmb IAmb 05 21 23.9
comp=Z,364nm,1.6s
COEN Coen 33.82 103 P **P** **05 20 54.6 0.0**
baz=34,SNR=316
QZH Quanzhou 34.04 15⇓ *i* P **P** **05 20 56.8 +0.5**
QZH pP **pP** **05 21 18.1 +1.5**
QZH S **S** **05 26 19.3 +3.8**
QZH pmax pmax
comp=Z,2µm,6.0s
QZH LR LR
comp=Z,7µm,18.5s
QZH LR LR
comp=Z,5µm,19.2s
QZH LR LR
comp=Z,10µm,21.4s
SAIH SAIHA 34.26 333 *eP* **P** **05 20 56.7 -1.8**
GYA Guiyang 34.39 356⇓ *i* P **P** **05 21 00.9 +1.4**
GYA pP pP 05 21 22.5 +2.6
GYA PP **PnPn** **05 22 18.0 +0.7**
GYA S **S** **05 26 17.3 -3.9**
GYA sS sS 05 26 57.6 +1.4
GYA pmax pmax
comp=Z,50nm,1.1s
GYA pmax pmax
comp=Z,2µm,6.7s
GYA LR LR
comp=Z,8µm,19.1s
GYA LR LR
comp=Z,9µm,15.7s
GYA LR LR
comp=Z,9µm,19.7s
YHNB Yeheng 34.61 20 IAmb IAmb 05 21 28.9
comp=Z,462nm,1.8s
TATO Taipei 34.93 20 P **P** **05 21 04.8 +0.7**
YOJ Yonaguni jima 35.00 22 P **P** **05 21 05.1 +0.5**
YOJ pmax pmax
comp=Z,1µm,2.0s
YOJ Yonaguni jima 35.00 22 P **P** **05 21 05.1 +0.5**
BBOO Buckleboo 35.01 138 P **P** **05 21 04.3 -0.4**
baz=35,SNR=1000
MTSU Mount Surprise 35.56 110 P **P** **05 21 10.9 +1.3**
baz=36,SNR=573
MDRS Chennai 35.62 306 *eP* **P** **05 21 09.2 -0.9**
BELO BELONIA 35.63 331 *eP* **P** **05 21 08.9 -1.2**
TRD Trivandrum 36.11 296 *ex* **P** **05 21 17.1 +2.7**
TRD *i* x **S** **05 26 52.5 +4.7**
CHLP Challavanipeta 36.23 317 *eP* **P** **05 21 14.5 -0.7**
AGT Agartala 36.27 331⇓ *iP* **P** **05 21 12.5 -3.0**
H08S2 Diego Garcia H 36.38 268 P **P** **05 21 19.9 +3.5**
baz=58,slow=8.9,SNR=4.0
H08S2 T T 05 59 27.1
baz=93,slow=76,SNR=419
BWNR Bhubaneshwar 36.38 321 *eP* **P** **05 21 14.2 -2.3**
BWNR IAmb IAmb 05 21 18.6
comp=Z,44nm,0.3s
BWNR *i* x x 05 23 32.8
BWNR *ex* x 05 26 45.0
H08S3 Diego Garcia H 36.39 268 P **P** **05 21 19.8 +3.3**
baz=58,slow=8.9,SNR=34
H08S3 T T 05 59 41.5
baz=93,slow=76,SNR=314
H08S1 Diego Garcia H 36.40 268 P **P** **05 21 20.3 +3.7**
baz=58,slow=8.9,SNR=3.5
H08S1 T T 05 59 28.3
baz=93,slow=76,SNR=249
I52GB DIEGO GARCIA I 36.41 268 *i* 08 59 20.0
baz=97,slow=311,SNR=1.4
SKHT Srikalahasti 36.42 306 *eP* **P** **05 21 16.6 -0.4**
DGAR Diego Garcia 36.43 268 P **P** **05 21 19.9 +2.8**
DGAR pmax pmax
comp=Z,539nm,1.3s
DGAR Diego Garcia 36.43 268 P **P** **05 21 19.9 +2.8**
DGAR IAmb IAmb 05 22 02.0
comp=Z,539nm,1.2s
PVM Polavaram 37.09 313 *eP* **P** **05 21 21.9 -0.8**
KAAM Kaadhehdhoo 37.10 282 IAmb IAmb 05 21 26.7
comp=Z,520nm,1.6s
HTT Hallett 37.29 137 P **P** **05 21 24.5 +0.2**
baz=37,SNR=173
SHL Shillong 37.43 334 *eP* **P** **05 21 25.4 -0.2**
SHL Shillong 37.43 334 IAmb IAmb 05 22 17.4
comp=Z,229nm,1.2s
SHL Shillong 37.43 334 P **P** **05 21 24.3 -1.3**
SNR=33
ADKI Addanki 37.45 309 *eP* **P** **05 21 25.0 -0.7**
MYLAV Mylavaram 37.50 311 *eP* **P** **05 21 25.2 -1.0**
PMG Port Moresby 37.51 95 P **P** **05 21 26.5 +0.2**
PMG pmax pmax
comp=Z,843nm,1.4s
PMG Port Moresby 37.51 95 P **P** **05 21 26.2 0.0**
comp=Z,180nm,0.8s,baz=291,slow=5.7,SNR=54
PMG Port Moresby 37.51 95 P **P** **05 21 26.4 +0.2**
CTA Charters Tower 37.77 112 P **P** **05 21 30.2 +1.8**
comp=Z,191nm,1.1s,baz=280,slow=11,SNR=167
CTA S **S** **05 27 13.3 +0.4**
comp=Z,34nm,1.3s,baz=68,slow=18,SNR=7.3
CTA LR LR 05 38 13.4
comp=Z,3µm,21.5s,baz=282,slow=38
H08N1 Diego Garcia H 37.94 270 P **P** **05 21 30.9 +1.4**
baz=118,slow=5.5,SNR=17
H08N1 T T 06 02 08.9
baz=102,slow=71,SNR=224
H08N2 Diego Garcia H 37.95 270 P **P** **05 21 31.1 +1.4**
baz=118,slow=5.5,SNR=21
H08N2 T T 06 01 45.3
baz=102,slow=71,SNR=182
H08N3 Diego Garcia H 37.96 270 P **P** **05 21 31.8 +2.1**
baz=118,slow=5.5,SNR=23
H08N3 T T 06 01 45.9
baz=102,slow=71,SNR=297
TEZP TEZPUR 37.96 336 *eP* **P** **05 21 29.7 -0.1**
QLP Quilpie 37.98 123 P **P** **05 21 31.5 +1.4**
baz=38,SNR=134
GUWA GUWAHATI 38.06 334 *eP* **P** **05 21 30.7 +0.1**
ITAN ITANAGAR 38.07 337 IAmb IAmb 05 21 34.3
comp=Z,160nm,0.3s
STKA Stephens Creek 38.31 133 P **P** **05 21 33.3 +0.4**
baz=38,SNR=625
STKA Stephens Creek 38.31 133 P **P** **05 21 33.2 +0.4**
STKA pmax pmax
comp=Z,83nm,0.9s
STKA Stephens Creek 38.31 133 P **P** **05 21 33.3 +0.4**
comp=Z,221nm,0.6s,baz=308,slow=8.6,SNR=709
STKA S **S** **05 27 18.9 -2.0**
comp=Z,15nm,0.8s,baz=180,slow=21,SNR=2.6
STKA LR LR 05 39 32.9
comp=Z,8µm,20.4s,baz=309,slow=39
STKA Stephens Creek 38.31 133 P **P** **05 21 33.2 +0.4**
NJS Nagarjunasagar 38.39 310 *eP* **P** **05 21 32.7 -0.8**
SRLM Srisailam 38.43 309 *eP* **P** **05 21 33.2 -0.8**
MANU Manus Island 38.44 83 IAmb IAmb 05 21 36.6
comp=Z,827nm,1.4s
GGR Gangavaram 38.50 312 *eP* **P** **05 21 33.5 -1.0**
WHN Wuhan 38.68 7⇓ *iP* **P** **05 21 36.3 +0.5**
WHN PP **PnPn** **05 23 12.9 +3.8**
WHN PcP **PcP** **05 23 47.9 +1.7**
WHN ScP **ScP** **05 27 27.9 +1.3**
WHN PcS **PcS** **05 27 37.1 +1.4**
WHN pmax pmax
comp=Z,260nm,1.4s
WHN pmax pmax
comp=Z,4µm,5.8s
WHN LR LR
comp=Z,10µm,14.0s
WHN LR LR
comp=Z,7µm,13.2s
WHN LR LR
comp=Z,34µm,25.9s
BOK Bokaro 39.00 325 *i* P **P** **05 21 37.4 -1.2**
BOK *i* x x 05 23 32.2
BOK *ex* x 05 27 28.1
URV Uravakonda 39.06 306 *eP* **P** **05 21 39.0 -0.3**
CD2 Chengdu 39.09 353 P **P** **05 21 40.3 +1.0**
CD2 pP pP 05 22 00.0 +0.1
CD2 sP sP 05 22 05.0 -5.0
CD2 PP **PnPn** **05 23 15.4 +1.4**
CD2 S **S** **05 27 30.3 -2.2**
CD2 sS sS 05 28 07.8 -0.1
CD2 pmax pmax
comp=Z,150nm,1.0s
CD2 pmax pmax
comp=Z,3µm,12.2s
CD2 LR LR
comp=Z,16µm,15.7s
CD2 LR LR
comp=Z,14µm,15.5s
CD2 LR LR
comp=Z,20µm,15.7s
JOW Kunigami 39.29 27 P **P** **05 21 41.6 +0.7**
comp=Z,9.5nm,1.0s,baz=186,slow=14,SNR=15
JOW Kunigami 39.29 27 P **P** **05 21 41.4 +0.4**
JOW IAmb IAmb 05 21 44.0
comp=Z,426nm,1.7s
HYB Hyderabad 39.48 310 *i* P **P** **05 21 42.0 -0.8**
comp=Z,100nm,1.0s
HYB *eS* **S** **05 27 36.0 -2.7**
HYB Hyderabad 39.48 310 *eP* **P** **05 21 42.9 +0.1**
HYBB Hyderabad (bro 39.48 310 *eP* **P** **05 21 41.8 -1.0**
MNCI Minicoy 39.52 293 P **P** **05 21 45.7 +2.6**
MNCY Minicoy 39.54 293 *eP* **P** **05 21 46.1 +2.8**
RPR Rampur 39.82 312 *eP* **P** **05 21 46.2 +0.7**
SRSP Sriramsagar 40.56 312 *eP* **P** **05 21 50.9 -0.8**
SSE Sheshan 40.57 16 P **P** **05 21 53.0 +1.5**
SSE sP **sP** **05 22 18.0 -4.4**
SSE S **S** **05 27 58.1 +3.6**
SSE pmax pmax
comp=Z,56nm,1.7s
SSE pmax pmax
comp=Z,2µm,6.5s
SSE LR LR
comp=Z,3µm,20.0s
SSE Sheshan 40.57 16 IAmb IAmb 05 21 54.8
comp=Z,632nm,2.0s
ODAN Odare 40.65 329 *eP* **P** **05 21 51.6 -0.9**
comp=Z,82nm,0.4s
TAPN Taplejung 40.89 330 *eP* **P** **05 21 54.0 -0.6**
comp=Z,84nm,0.6s
NJ2 Nanjing 40.92 13⇓ *iP* **P** **05 21 56.0 +1.7**
NJ2 pP **pP** **05 22 14.4 -0.8**
NJ2 sP **sP** **05 22 18.6 -6.7**
NJ2 PP **PnPn** **05 23 37.5 +2.1**
NJ2 PcP **PcP** **05 23 52.8 -0.5**
NJ2 ScP **ScP** **05 27 37.4 +2.1**
NJ2 PcS **PcS** **05 27 46.4 +2.0**
NJ2 S **S** **05 28 06.5 +6.8**
NJ2 sS **sS** **05 28 38.9 +3.6**
NJ2 pmax pmax
comp=Z,140nm,1.7s
NJ2 pmax pmax
comp=Z,4µm,4.7s
NJ2 LR LR
comp=Z,6µm,19.0s
NJ2 LR LR
comp=Z,7µm,17.1s
NJ2 LR LR
comp=Z,12µm,24.2s
RAMN Ramite 41.12 329 *eP* **P** **05 21 55.7 -0.8**
comp=Z,82nm,0.5s
ARPS Mount Arapiles 41.18 139 P **P** **05 21 57.2 +0.6**
baz=41,SNR=96
CMSA Cobar Meteorol 41.21 130 P **P** **05 21 58.0 +1.2**
baz=41,SNR=330
LSA Lhasa 41.36 336 P **P** **05 21 59.0 +0.4**
LSA sP **pP** **05 22 22.8 +3.4**
LSA PP **PP** **05 23 37.4 +1.6**
LSA pmax pmax
comp=Z,79nm,0.6s
LSA LR LR
comp=Z,10µm,19.9s
LSA LR LR
comp=Z,9µm,18.5s
LSA LR LR
comp=Z,21µm,29.9s
LSA Lhasa 41.36 336 P **P** **05 21 58.2 -0.4**
KLRI Killari 41.36 309 *eP* **P** **05 21 57.5 -0.8**
GUMO Guam 41.41 59 P **P** **05 21 57.0 -1.6**
GUMO pmax pmax
comp=Z,3µm,1.9s
GUMO Guam 41.41 59 P **P** **05 21 57.5 -1.1**
comp=Z,213nm,0.5s,baz=176,slow=5.9,SNR=12
GUMO LR LR 05 38 10.0
comp=Z,2µm,21.3s,baz=234,slow=35
GUMO Guam 41.41 59 P **P** **05 21 57.0 -1.6**
NGP Nagpur 41.47 315 *ex* **P** **05 22 00.7 +1.6**
NGP *ex* **S** **05 28 03.5 -4.8**
RMQ Roma 41.74 121 P **P** **05 22 03.3 +2.0**

baz=42,SNR=43
XAN Xi'an 41.85 360 P **P** **05 22 01.8 -0.2**
XAN PP **PP** **05 23 43.3 +2.7**
XAN PcP **PcP** **05 23 57.6 +1.1**
XAN PcS **PcS** **05 27 48.4 +0.2**
XAN S **S** **05 28 08.9 -4.7**
XAN sS sS 05 28 45.8 -3.5
XAN SS **SS** **05 31 21.8 -1.5**
XAN ScS **ScS** **05 31 54.0 -2.4**
XAN pmax pmax
comp=Z,98nm,2.1s
XAN pmax pmax
comp=Z,3μm,8.5s
XAN LR LR
comp=Z,8μm,24.5s
XAN LR LR
comp=Z,5μm,14.7s
XAN LR LR
comp=Z,14μm,31.4s
JIRN Jiri 41.91 329 *e*P **P** **05 22 01.8 -1.2**
comp=Z,121nm,0.3s
GOA Goa 42.15 304 *e*P **P** **05 22 04.7 0.0**
PKI Pulchoki 42.25 328 *e*P **P** **05 22 04.4 -1.3**
comp=Z,54nm,0.6s
PKIN Phulchoki 42.26 328 *e*P **P** **05 22 04.0 -1.7**
comp=Z,14nm,0.3s
GUN Gumba 42.28 329 *e*P **P** **05 22 04.7 -1.3**
DMN Daman 42.44 327 *e*P **P** **05 22 05.5 -1.7**
KKN Kakani 42.49 328 *e*P **P** **05 22 05.8 -1.8**
GKN Gorkha 43.00 327 *e*P **P** **05 22 10.2 -1.4**
comp=Z,76nm,0.2s
KOLN Koldanda 43.38 326 *e*P **P** **05 22 12.5 -2.2**
comp=Z,88nm,0.4s
EIDS Eidsvold 43.41 119 P **P** **05 22 16.5 +1.7**
baz=43,SNR=12
EIDS Eidsvold 43.41 119 P **P** **05 22 15.8 +1.0**
EIDS IAmb IAmb 05 22 18.4
comp=Z,581nm,1.6s
SARN Sarigan 43.73 56 IAmb IAmb 05 22 18.5
comp=Z,481nm,1.0s
DANN Dangsing 43.75 327 *e*P **P** **05 22 15.9 -1.9**
comp=Z,220nm,0.5s
POO Poona 43.76 307 *e*P **P** **05 22 16.8 -0.9**
POO IAmb IAmb 05 22 21.6
comp=Z,73nm,0.8s
BHPL Bhopal 43.98 316 *e*P **P** **05 22 18.7 -0.6**
BHPL IAmb IAmb 05 22 21.2
comp=Z,48nm,0.6s
BHPL *i* x x 05 36 02.2
TOO Toolangi 44.04 137 P **P** **05 22 21.6 +1.9**
baz=44,SNR=57
LZH Lanzhou 44.19 354 ⇓P **P** **05 22 21.8 +0.8**
LZH pP pP 05 22 39.3 -2.7
LZH sP sP 05 22 46.4 -5.6
LZH PcP **PP** **05 24 06.8 +1.1**
LZH ScP **ScP** **05 27 51.0 +2.4**
LZH PcS **PcS** **05 28 00.0 +2.2**
LZH S **S** **05 28 47.9 0.0**
LZH sS sS 05 29 20.4 -3.5
LZH ScS **SS** **05 32 09.6 +0.6**
LZH pmax pmax
comp=Z,140nm,1.2s
LZH pmax pmax
comp=Z,3μm,6.0s
LZH LR LR
comp=Z,7μm,15.7s
LZH LR LR
comp=Z,5μm,16.0s
LZH LR LR
comp=Z,7μm,17.9s
YNG Young 44.48 132 P **P** **05 22 24.3 +1.0**
baz=44,SNR=90
TIA Tai'an 44.64 9 P **P** **05 22 24.3 -0.1**
TIA sP **pP** **05 22 49.3 +3.8**
TIA PP **PcP** **05 24 07.6 +1.8**
TIA S **S** **05 28 55.4 +1.2**
TIA pmax pmax
comp=Z,50nm,1.2s
TIA pmax pmax
comp=Z,2μm,10.9s
TIA LR LR
comp=Z,5μm,21.8s
TIA LR LR
comp=Z,3μm,10.2s
TIA LR LR
comp=Z,10μm,20.7s
ARMA Armidale 45.44 125 P **P** **05 22 33.4 +2.3**
baz=45,SNR=99
ARMA Armidale 45.44 125 IAmb IAmb 05 22 36.7
comp=Z,472nm,1.8s
TIY Taiyuan 45.62 4 *e*P **P** **05 22 32.3 +0.1**
TIY PP **PP** **05 24 21.8 +1.0**
TIY S **S** **05 29 08.8 +0.4**
TIY sS **sS** **05 29 45.3 +0.8**
TIY SS **ScS** **05 32 22.3 +2.3**
TIY pmax pmax
comp=Z,120nm,1.5s
TIY pmax pmax
comp=Z,2μm,5.5s
TIY LR LR
comp=Z,5μm,13.0s
TIY LR LR
comp=Z,2μm,11.7s
TIY LR LR
comp=Z,7μm,19.1s
CNB Canberra Magne 45.64 132 P **P** **05 22 33.6 +1.1**
baz=46,SNR=40
JNU Nakatsue 45.83 26 IAmb IAmb 05 22 35.7
comp=Z,1μm,2.0s
MGCD Mangrove Creek 46.06 129 P **P** **05 22 37.7 +1.9**
baz=46,SNR=18
MILA Mila 46.30 135 P **P** **05 22 40.4 +2.8**
baz=46,SNR=5.2
RIV Riverview 46.35 130 P **P** **05 22 40.8 +2.8**
baz=46,SNR=7.1
JCJ Chichijima 47.33 41 P **P** **05 22 43.8 -1.9**
comp=Z,152nm,0.4s,baz=218,slow=2.8,SNR=23
TJN Taejon 47.36 20*d* *i*P **P** **05 22 45.9 +0.1**
MOO Moorlands 47.83 142 P **P** **05 22 50.9 +1.5**
baz=48,SNR=8.5
GTA Gaotai 48.01 350 ⇓P **P** **05 22 51.6 +0.7**
GTA pP pP 05 23 11.1 -1.2
GTA sP sP 05 23 19.8 -2.4
GTA PcP **PcP** **05 24 19.9 +2.2**
GTA PP **PP** **05 24 43.6 -0.3**
GTA ScP **ScP** **05 28 06.5 +2.1**
GTA PcS **PcS** **05 28 13.3 -0.3**
GTA S **S** **05 29 43.8 +1.2**
GTA sS sS 05 30 16.5 -2.5
GTA ScS **ScS** **05 32 33.8 -2.0**
GTA SS **SS** **05 33 08.8 -4.1**
GTA pmax pmax
comp=Z,70nm,2.0s
GTA pmax pmax
comp=Z,3μm,9.4s
GTA LR LR
comp=Z,4μm,18.1s
GTA LR LR
comp=Z,7μm,20.9s
GTA LR LR
comp=Z,5μm,19.0s
DL2 Dalian 48.11 13 ⇓*i*P **P** **05 22 51.4 -0.1**
DL2 sP **sP** **05 23 18.4 -4.4**
DL2 PcP **PcP** **05 24 20.8 +2.9**
DL2 PP **PP** **05 24 46.0 +1.4**
DL2 *e*S **S** **05 29 45.8 +2.1**
DL2 sS **sS** **05 30 20.8 +0.7**
DL2 pmax pmax
comp=Z,97nm,0.8s
DL2 pmax pmax
comp=Z,2μm,5.5s
DL2 LR LR
comp=Z,5μm,19.0s
DL2 LR LR
comp=Z,3μm,16.7s
DL2 LR LR
comp=Z,8μm,26.5s
INCN Inchon 48.13 19 P **P** **05 22 51.6 -0.1**
INCN pmax pmax
comp=Z,69nm,0.8s
INCN Inchon 48.13 19 P **P** **05 22 51.6 -0.1**
TAU Tasmania Unive 48.17 143 P **P** **05 22 53.1 +1.1**
TAU pmax pmax
comp=Z,135nm,0.9s
TAU Tasmania Unive 48.17 143 P **P** **05 22 53.1 +1.1**
TAU IAmb IAmb 05 22 55.1
comp=Z,135nm,0.8s
BJT Baijiatuau 48.25 7 IAmb IAmb 05 22 54.9
comp=Z,440nm,1.7s
BJI Beijing 48.27 7 ⇓*i*P **P** **05 22 53.1 +0.4**
BJI pP **pP** **05 23 12.8 -1.3**
BJI sP **sP** **05 23 22.4 -1.6**
BJI PcP **PcP** **05 24 18.4 0.0**
BJI ScP **ScP** **05 28 06.8 +1.5**
BJI S **S** **05 29 49.9 +4.0**
BJI sS **sS** **05 30 23.6 +1.3**
BJI ScS **ScS** **05 32 37.4 +0.3**
BJI pmax pmax
comp=Z,120nm,1.8s
BJI LR LR
comp=Z,4μm,30.2s
BJI LR LR
comp=Z,2μm,15.7s
BJI LR LR
comp=Z,11μm,30.4s
BTO Baotou 48.41 1 *e*P **P** **05 22 55.0 +1.0**
BTO S S 05 29 38.4 -10
DDI Dehra Dun 48.48 323 ⇓*i*x P 05 22 49.0 -5.6
KSRS Korea Array 48.52 20 P **P** **05 22 54.4 -0.3**
comp=Z,33nm,0.8s,baz=190,slow=9.3,SNR=39
KSRS PcP **PcP** **05 24 21.3 +1.9**
comp=Z,40nm,0.8s,baz=195,slow=2.9,SNR=12
KSRS ScP **ScP** **05 28 07.8 +1.3**
comp=Z,8.0nm,1.0s,baz=220,slow=2.9,SNR=5.1
KSRS LR LR 05 44 30.0
comp=Z,2μm,21.2s,baz=187,slow=38
HHC Hu-ho-hao-te 48.70 2 *e*P **P** **05 22 56.6 +0.4**
HHC PP **PP** **05 24 51.8 +1.7**
HHC S **S** **05 29 54.6 +2.4**
HHC sS sS 05 30 30.5 +1.9
HHC pmax pmax
comp=Z,49nm,1.6s
HHC pmax pmax
comp=Z,930nm,5.7s
HHC LR LR
comp=Z,4μm,18.4s
HHC LR LR
comp=Z,3μm,17.1s
HHC LR LR
comp=Z,5μm,18.1s
SMLA Simla 49.59 323 *e*P **P** **05 23 01.9 -1.1**
SMLA IAmb IAmb 05 23 05.1
comp=Z,204nm,0.5s
HNR Honiara 50.12 96 P **P** **05 23 07.9 +0.6**
HNR Honiara 50.12 96 P **P** **05 23 07.6 +0.3**
comp=Z,601nm,1.0s,baz=164,slow=7.7,SNR=12
HNR Honiara 50.12 96 *e*P **P** **05 23 08.0 +0.6**
HNR Honiara 50.12 96 P **P** **05 23 07.9 +0.6**
INU Inuyama 50.50 30 IAmb IAmb 05 24 30.2
comp=Z,671nm,2.0s
DHRM DHARAMSHALA 50.91 324 *e*P **P** **05 23 11.8 -1.4**
DHRM IAmb IAmb 05 23 23.0
comp=Z,78nm,0.5s
PATS Pohnpei 51.13 75 P **P** **05 23 15.8 +0.9**
baz=51,SNR=5.2
SNY Shenyang 51.34 14 ⇓P **P** **05 23 12.4 -3.6**
SNY pP **pP** **05 23 38.1 +0.6**
SNY sP **sP** **05 23 48.1 +0.7**
SNY S S 05 30 19.3 -9.4
SNY sS **sS** **05 31 08.5 +3.1**
SNY pmax pmax
comp=Z,120nm,1.8s
SNY LR LR
comp=Z,4μm,17.1s
SNY LR LR
comp=Z,4μm,23.1s
SNY LR LR
comp=Z,7μm,20.3s
MAJO Matsushiro 52.03 30 *i*P **P** **05 23 19.9 -1.4**
MAJO pmax pmax
comp=Z,362nm,1.7s
MAJO Matsushiro 52.03 30 P **P** **05 23 19.5 -1.8**
MAJO IAmb IAmb 05 24 36.5
comp=Z,260nm,1.1s
MAT Matsushiro 52.03 30 P **P** **05 23 19.6 -1.7**
MAT S **S** **05 30 39.2 +0.8**
MJAR Matsushiro Arr 52.03 30 P **P** **05 23 19.3 -2.0**
MJAR pmax pmax
comp=Z,91nm,1.0s
MJAR Matsushiro Arr 52.03 30 P **P** **05 23 19.7 -1.6**
comp=Z,51nm,0.7s,baz=208,slow=7.2,SNR=87
MJAR PcP **PcP** **05 24 34.4 +1.9**
comp=Z,72nm,0.8s,baz=210,slow=4.5,SNR=8.0
MJAR ScP **ScP** **05 28 22.7 +1.0**
comp=Z,18nm,1.1s,baz=204,slow=4.3,SNR=6.8
MJAR LR LR 05 44 39.7
comp=Z,2μm,21.8s,baz=215,slow=35
MJAR Matsushiro Arr 52.03 30 P **P** **05 23 19.3 -2.0**
MJB9 Matsu-Tunnel 52.03 30 IAmb IAmb 05 24 36.5
comp=Z,253nm,1.1s
RER Riviere de l'E 53.13 250 P **P** **05 23 32.1 +2.3**
RER IAmb IAmb 05 23 36.0
comp=Z,247nm,0.9s
RER Riviere de l'E 53.13 250 P **P** **05 23 33.9 +4.1**
SNR=5.2
CN2 Changchun 53.66 15 *e*P **P** **05 23 32.3 -0.8**
CN2 *e*PP **PP** **05 25 36.4 +1.5**
CN2 *e*S **S** **05 30 56.6 -3.6**
CN2 *e*SS **SKiKP** **05 34 38.5 -0.8**
CN2 pmax pmax
comp=Z,50nm,0.6s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=Z,3μm,19.0s
CN2 LR LR
comp=Z,2μm,19.0s
CN2 LR LR
comp=Z,4μm,21.0s
NIL Nilore 53.71 323 P **P** **05 23 31.4 -2.3**
NIL pmax pmax
comp=Z,245nm,1.0s
NIL Nilore 53.71 323 P **P** **05 23 31.4 -2.3**
NIL IAmb IAmb 05 24 23.0
comp=Z,244nm,1.0s
MSHR Mys Shultsa 54.22 20*d* *i*P **P** **05 23 36.9 -0.2**
VLA Vladivostok 54.94 20*d* *i*P **P** **05 23 42.3 -0.1**
VLA pmax pmax
comp=Z,309nm,2.3s
WMQ Urumqi 55.19 341 P **P** **05 23 46.1 +1.8**
MDJ Mudanjiang 55.55 18 P **P** **05 23 46.4 -0.3**
MDJ pP pP 05 24 08.8 +0.2
MDJ sP sP 05 24 19.0 +0.6
MDJ S **S** **05 31 30.3 +4.8**
MDJ ScS **ScS** **05 33 26.8 -0.8**
MDJ pmax pmax
comp=Z,58nm,0.8s
MDJ pmax pmax
comp=Z,370nm,5.2s
MDJ LR LR
comp=Z,3μm,19.9s
MDJ LR LR
comp=Z,4μm,19.0s
MDJ LR LR
comp=Z,6μm,39.9s
MDJ Mudanjiang 55.55 18 IAmb IAmb 05 23 48.3
comp=Z,349nm,2.0s
SONM Songino Array 55.69 358 P **P** **05 23 48.1 +0.3**
SONM pmax pmax
comp=Z,159nm,1.4s
SONM Songino Array 55.69 358 P **P** **05 23 47.8 0.0**
comp=Z,27nm,0.6s,baz=177,slow=8.3,SNR=97
SONM PcP **PcP** **05 24 47.2 +0.9**
comp=Z,31nm,0.6s,baz=181,slow=3.6,SNR=11
SONM ScP **ScP** **05 28 39.2 +1.7**
comp=Z,9.9nm,0.6s,baz=172,slow=3.5,SNR=6.7
SONM LR LR 05 50 59.9
comp=Z,4μm,19.3s,baz=176,slow=40
SONM PKPPKP **P'P'df** **05 53 48.2 +0.5**
comp=Z,1.9nm,0.9s,baz=313,slow=1.7,SNR=5.8
SONM Songino Array 55.69 358 P **P** **05 23 48.1 +0.3**
ULN Ulaanbaatar 55.70 358*d* *i*P **P** **05 23 48.2 +0.2**
ULN pmax pmax
comp=Z,127nm,1.7s
ULN Ulaanbaatar 55.70 358 P **P** **05 23 47.3 -0.7**
ULN IAmb IAmb 05 24 49.8
comp=Z,222nm,1.4s
USA0B Ussuriysk Arra 55.93 20 IAmb IAmb 05 24 38.8
comp=Z,273nm,1.5s
USRK Ussuriysk Ar. 55.93 20 P **P** **05 23 48.6 -0.9**
comp=Z,43nm,0.7s,baz=191,slow=8.9,SNR=64
USRK Ussuriysk Ar. 55.93 20 P **P** **05 23 48.1 -1.3**
KSH Kashi 56.46 329 ⇓*i*P **P** **05 23 50.9 -2.6**
KSH pP pP 05 24 12.8 -2.6
KSH PcP **PcP** **05 24 51.5 +2.0**
KSH S **S** **05 31 29.8 -8.3**
KSH sS sS 05 32 10.8 -4.7
KSH pmax pmax
comp=Z,44nm,0.8s
KSH pmax pmax
comp=Z,3μm,5.1s
KSH LR LR
comp=Z,9μm,15.7s
KSH LR LR
comp=Z,5μm,16.0s
KSH LR LR
comp=Z,2μm,10.4s
NOUC Port Laguerre 56.56 111 IAmb IAmb 05 23 57.6
comp=Z,482nm,1.7s
DZM Mont Dzumac 56.68 111 *e*P **P** **05 23 56.8 +1.4**
comp=Z,368nm,1.6s
DZM *e*S **S** **05 31 46.4 +4.7**
comp=Z,1μm,23.2s
DZM *e*LR LR 05 40 33.5
comp=Z,10μm,27.1s
DZM Mont Dzumac 56.68 111 P **P** **05 23 57.2 +1.8**
comp=Z,33nm,0.9s,baz=285,slow=7.1,SNR=18
DZM Mont Dzumac 56.68 111 IAmb IAmb 05 23 59.0
comp=Z,432nm,1.7s
KBL Kabul 56.90 321 P **P** **05 23 55.2 -1.7**
KBL pmax pmax
comp=Z,158nm,1.3s
KBL Kabul 56.90 321 P **P** **05 23 55.2 -1.7**
KBL IAmb IAmb 05 25 25.2
comp=Z,158nm,1.3s
KBL Kabul 56.90 321 P **P** **05 23 55.0 -1.8**
KBL P **P** **05 23 55.0 -1.8**
KBL S **S** **05 31 38.0 -6.3**
KBL S **S** **05 31 38.0 -6.3**
JLN Jalan Bani Buh 57.30 303 P **P** **05 24 03.1 +3.6**
SNR=6.3
PRZ Przheval'sk 57.62 333 IAmb IAmb 05 24 59.2
comp=Z,277nm,1.3s
HIA Hailar 57.81 8 IAmb IAmb 05 24 57.1
comp=Z,297nm,1.9s
PDGK Podgornoye 57.83 335 P **P** **05 24 01.7 -1.4**
WBK Wadi Bani Khal 57.86 303 P **P** **05 24 05.0 +1.4**
SNR=54
WBK P **P** **05 24 05.0 +1.4**
SNR=54
WBK S **S** **05 31 58.5 +1.6**
WBK S **S** **05 31 58.5 +1.6**
UZB Uzynbulak 57.88 334 *i*P **P** **05 24 02.1 -1.4**
UZB *e*S **S** **05 31 53.7 -3.0**
UZB pmax pmax
comp=Z,193nm,1.9s
UZB Uzynbulak 57.88 334 *i*P **P** **05 24 02.1 -1.4**
comp=Z,193nm,1.9s
UZB *e*S **S** **05 31 53.7 -3.0**
KDJ Kajisay 57.89 332 IAmb IAmb 05 24 44.1
comp=Z,150nm,1.1s
NRN Naryn 57.91 331 IAmb IAmb 05 24 59.7
comp=Z,194nm,1.2s
DQM DQM 57.96 299 P **P** **05 24 06.0 +1.8**
SNR=25
DQM P **P** **05 24 06.0 +1.8**
SNR=25
DQM S **S** **05 31 59.4 +1.2**
DQM S **S** **05 31 59.4 +1.2**
MHTO MHTO 58.02 301 P **P** **05 24 05.2 +0.5**
SNR=51
MHTO P **P** **05 24 05.2 +0.5**
SNR=51
MHTO S **S** **05 31 58.3 -0.6**
MHTO S **S** **05 31 58.3 -0.6**
SATY Saty 58.08 334 *e*P **P** **05 24 03.7 -1.2**
SATY *e*S **S** **05 31 56.3 -2.9**
SATY pmax pmax
comp=Z,302nm,2.4s
SATY Saty 58.08 334 *e*P **P** **05 24 03.7 -1.2**
comp=Z,302nm,2.4s
SATY *e*S **S** **05 31 56.4 -2.9**
CASY Casey 58.15 179 P **P** **05 24 04.6 -0.3**
CASY IAmb IAmb 05 24 06.9
comp=Z,356nm,1.4s
ZHN Zhinishke 58.15 334 *e*P **P** **05 24 04.3 -1.0**
ZHN pmax pmax
comp=Z,295nm,4.3s
ZHN Zhinishke 58.15 334 *e*P **P** **05 24 04.3 -1.0**
comp=Z,295nm,4.3s
KPKS Kokpek 58.28 334*d* *i*P **P** **05 24 05.2 -1.0**
KPKS *e*S **S** **05 31 59.1 -2.7**
KPKS pmax pmax
comp=Z,260nm,2.1s
KPKS Kokpek 58.28 334 ⇓*i*P **P** **05 24 05.2 -1.0**
comp=Z,260nm,2.1s
KPKS *e*S **S** **05 31 59.2 -2.7**
TEY Ternei 58.30 23 ⇓*e*P **P** **05 24 05.8 -0.3**
TEY pmax pmax
comp=N,50nm,0.7s
TEY pmax pmax
comp=E,40nm,0.7s
TEY pmax pmax
comp=Z,160nm,0.7s
SBV Sambava 58.40 259 P **P** **05 24 10.8 +3.3**
SNR=7.6
ZAK Zakamensk 58.41 356 *e*P **P** **05 24 07.1 +0.1**
ZAK pmax pmax
comp=Z,30nm,1.7s
WSAR Wadi Sarin 58.42 303 P **P** **05 24 08.3 +0.9**
comp=Z,66nm,0.8s,baz=147,slow=7.3,SNR=60
WSAR S **S** **05 32 04.4 +0.3**
comp=Z,4.1nm,0.9s,baz=258,slow=20,SNR=7.4
WSAR Wadi Sarin 58.42 303 P **P** **05 24 08.6 +1.2**
SNR=62
SOCY Socotra 58.47 290 P **P** **05 24 08.8 +0.7**
SOCY Socotra 58.47 290 P **P** **05 24 09.4 +1.3**
SNR=9.4
JMDO Jabal Madar 58.48 302 P **P** **05 24 09.0 +1.1**
SNR=59
JMDO P **P** **05 24 09.0 +1.1**
SNR=59
JMDO P **P** **05 24 09.0 +1.1**
SNR=59
JMDO S **S** **05 32 05.6 +0.6**
JMDO S **S** **05 32 05.6 +0.6**
JMDO S **S** **05 32 05.6 +0.6**
ERM Erimo 58.70 29 P **P** **05 24 08.4 -0.6**
ERM pmax pmax
comp=Z,92nm,0.9s
ERM Erimo 58.70 29 P **P** **05 24 08.4 -0.6**
ERM IAmb IAmb 05 24 38.3
comp=Z,92nm,0.8s
KZA Kyzart 58.76 331 P **P** **05 24 11.3 +1.3**
SNR=23
MDOK Medeo 58.77 333 *i*P **P** **05 24 08.5 -1.1**
MDOK *e*S **S** **05 32 05.3 -2.9**
MDOK Medeo 58.77 333 *i*P **P** **05 24 08.5 -1.1**
MDOK *e*S **S** **05 32 05.4 -2.9**
MDOK *e*LR LR 05 51 35.0
SMDO Samad 58.82 303 P **P** **05 24 12.0 +1.6**
SNR=85
SMDO P **P** **05 24 12.0 +1.6**
SNR=85
SMDO P **P** **05 24 12.0 +1.6**
SNR=85
AAA Alma-Ata 58.86 333 *e*P **P** **05 24 07.2 -3.0**
AAA pmax pmax
comp=Z,1μm,8.2s
AAA MLR MLR
comp=Z,2μm,16.0s
AAA Alma-Ata 58.86 333 *e*P **P** **05 24 09.2 -1.0**
comp=Z,1μm,4.0s
SHAO Shalim 58.91 297 *i*P **P** **05 24 11.1 +0.2**
SNR=9.5
SHAO Shalim 58.91 297 P **P** **05 24 15.0 +4.1**
SNR=6.4
SHAO P **P** **05 24 15.0 +4.1**
SNR=6.4
BIDO Bidbid 58.96 304 P **P** **05 24 13.0 +1.8**
SNR=72
BIDO P **P** **05 24 13.0 +1.8**
SNR=72
MTBS Maitube 59.02 332 *e*P **P** **05 24 10.8 -0.5**
MTBS Maitube 59.02 332 *e*P **P** **05 24 10.9 -0.5**
UCH Uchtor 59.23 331 P **P** **05 24 12.9 -0.3**
SNR=21

ZSN	**Zaisan**	**59.32**	**341**	*d*	iP		**P**	**05 24 12.7**	**-0.5**
ZSN					eS		**S**	**05 32 15.5**	**+0.5**
ZSN					pmax		pmax		
	comp=Z,664nm,4.3s								
ZSN	**Zaisan**	**59.32**	**341**	⇓	iP		**P**	**05 24 12.8**	**-0.5**
	comp=Z,664nm,4.3s								
ZSN					eS		**S**	**05 32 15.5**	**+0.5**
CHKK	**Chushkaly**	**59.34**	**333**		eP		**P**	**05 24 11.9**	**-1.5**
CHKK	**Chushkaly**	**59.34**	**333**		eP		**P**	**05 24 11.9**	**-1.5**
KBK	**Karagaybulak**	**59.35**	**331**		P		**P**	**05 24 13.6**	**-0.2**
	SNR=29								
BSY	**Bisya**	**59.40**	**302**		P		**P**	**05 24 16.0**	**+1.7**
	SNR=100								
BSY					P		**P**	**05 24 16.0**	**+1.7**
	SNR=100								
DMTO	**DMTO**	**59.40**	**296**		P		**P**	**05 24 17.0**	**+2.7**
	SNR=8.4								
DMTO					P		**P**	**05 24 17.0**	**+2.7**
	SNR=8.4								
AAK	**Ala-Archa**	**59.55**	**331**		P		**P**	**05 24 14.3**	**-0.8**
AAK					pmax		pmax		
	comp=Z,194nm,1.4s								
AAK	**Ala-Archa**	**59.55**	**331**		P		**P**	**05 24 14.5**	**-0.6**
	comp=Z,9.0nm,0.6s,baz=123,slow=7.1,SNR=16								
AAK					PcP		**PcP**	**05 25 03.6**	**+1.9**
	comp=Z,37nm,0.8s,baz=163,slow=3.7,SNR=12								
AAK	**Ala-Archa**	**59.55**	**331**		P		**P**	**05 24 16.3**	**+1.1**
	SNR=15								
AAK	**Ala-Archa**	**59.55**	**331**	*i*	P		**P**	**05 24 14.2**	**-0.9**
	SNR=17								
AAK	**Ala-Archa**	**59.55**	**331**		P		**P**	**05 24 14.3**	**-0.8**
AAK					IAmb		IAmb	05 25 06.3	
	comp=Z,194nm,1.4s								
AML	**Almayashu**	**59.56**	**330**		P		**P**	**05 24 15.5**	**0.0**
	SNR=7.7								
BTK	**Batken**	**59.57**	**326**		IAmb		IAmb	05 24 59.5	
	comp=Z,124nm,0.9s								
MK31	**Makanchi Array**	**59.63**	**339**		eP		**P**	**05 24 14.5**	**-0.9**
MKAR	**Makanchi Array**	**59.63**	**339**		P		**P**	**05 24 14.6**	**-0.8**
	comp=Z,25nm,0.4s,baz=152,slow=7.6,SNR=482								
MKAR					ScS		**ScS**	**05 33 58.7**	**+1.3**
	comp=Z,2.8nm,0.9s,baz=134,slow=8.7,SNR=3.6								
MKAR					LR		LR	05 52 47.3	
	comp=Z,4μm,21.8s,baz=144,slow=39								
MKAR					PKPPKP		**P'P'df**	**05 53 44.4**	**+2.2**
	comp=Z,0.8nm,0.8s,baz=270,slow=0.4,SNR=4.1								
MKAR					P4KPbc			06 01 21.4	
	comp=Z,1.5nm,0.7s,baz=142,slow=6.1,SNR=14								
MKAR	**Makanchi Array**	**59.63**	**339**		P		**P**	**05 24 14.2**	**-1.2**
TDK	**Taldyqorghan**	**59.64**	**335**	*c*	iP		**P**	**05 24 13.8**	**-1.7**
TDK					pmax		pmax		
	comp=Z,582nm,2.7s								
TDK	**Taldyqorghan**	**59.64**	**335**	⇑	iP		**P**	**05 24 13.8**	**-1.7**
	comp=Z,582nm,2.7s								
KUU	**Kurty**	**59.66**	**333**	*d*	iP		**P**	**05 24 14.1**	**-1.5**
KUU					eS		**S**	**05 32 15.5**	**-3.9**
KUU					pmax		pmax		
	comp=Z,351nm,1.6s								
KUU	**Kurty**	**59.66**	**333**	⇓	iP		**P**	**05 24 14.2**	**-1.5**
	comp=Z,351nm,1.6s								
KUU					eS		**S**	**05 32 15.5**	**-3.9**
HOQ	**Hoqain**	**59.66**	**303**		P		**P**	**05 24 18.0**	**+2.0**
	SNR=74								
HOQ					P		**P**	**05 24 18.0**	**+2.0**
	SNR=74								
TLY	**Talaya**	**59.68**	**356**	*d*	iP		**P**	**05 24 15.8**	**+0.2**
TLY					*e*			05 25 02.5	
TLY					*e*			05 26 23.1	
TLY					*e*PPP		PPP	05 27 55.2	
TLY					eS		**S**	**05 32 19.2**	**-0.2**
TLY					*e*			05 34 02.7	
TLY					pmax		pmax		
	comp=Z,217nm,1.9s								
TLY					MLR		MLR		
	comp=Z,17μm,18.0s								
TLY	**Talaya**	**59.68**	**356**		P		**P**	**05 24 15.4**	**-0.2**
	comp=Z,5.6nm,0.4s,baz=187,slow=6.5,SNR=9.0								
TLY					PcP		**PcP**	**05 25 03.7**	**+1.9**
	comp=Z,7.7nm,0.5s,baz=217,slow=6.1,SNR=5.1								
TLY	**Talaya**	**59.68**	**356**		P		**P**	**05 24 16.1**	**+0.5**
CHMS	**Chumysh**	**59.70**	**331**		P		**P**	**05 24 15.2**	**-0.8**
	SNR=11								
MAKZ	**Makanchi**	**59.75**	**339**		P		**P**	**05 24 15.1**	**-1.1**
MAKZ					pmax		pmax		
	comp=Z,159nm,1.3s								
MAKZ	**Makanchi**	**59.75**	**339**		P		**P**	**05 24 15.1**	**-1.1**
MAKZ					IAmb		IAmb	05 25 05.8	
	comp=Z,159nm,1.3s								
MOY	**Mondy**	**59.89**	**354**		eP		**P**	**05 24 17.2**	**0.0**
MOY					*e*			05 25 04.2	
MOY					pmax		pmax		
	comp=Z,304nm,2.3s								
EKS2	**Erkin-Say**	**59.92**	**330**		P		**P**	**05 24 17.2**	**-0.4**
	SNR=34								
CIT	**Chita**	**59.94**	**3**		eP		**P**	**05 24 18.1**	**+0.7**
CIT					*e*			05 25 04.7	
RBK	**Rabkut**	**59.98**	**295**		P		**P**	**05 24 21.0**	**+2.6**
	SNR=32								
RBK					P		**P**	**05 24 21.0**	**+2.6**
	SNR=32								
USP	**Ospenovka**	**60.03**	**331**		P		**P**	**05 24 20.5**	**+2.3**
	SNR=17								
ASAJ	**Asahikawa**	**60.05**	**27**		P		**P**	**05 24 17.8**	**-0.5**
	comp=Z,62nm,0.6s,baz=241,slow=8.0,SNR=36								
ASAJ					LR		LR	05 50 21.3	
	comp=Z,2μm,21.8s,baz=214,slow=36								
SGDS	**Sogindy**	**60.10**	**332**	⇓	iP		**P**	**05 24 17.2**	**-1.6**
	comp=Z,203nm,2.2s								
SGDS					eS		**S**	**05 32 20.2**	**-5.1**
IRK	**Irkutsk**	**60.20**	**356**		eP		**P**	**05 24 19.8**	**+0.7**
IRK					*e*			05 34 00.3	
IRK					pmax		pmax		
	comp=Z,243nm,3.4s								
ARQ	**Aragi**	**60.21**	**303**		P		**P**	**05 24 21.0**	**+1.2**
	SNR=42								
ARQ					P		**P**	**05 24 21.0**	**+1.2**
	SNR=42								
ARQ					P		**P**	**05 24 21.0**	**+1.2**
	SNR=42								
KLR	**Kul'dur**	**60.35**	**17**	*d*	iP		**P**	**05 24 19.6**	**-0.6**
KLR					pmax		pmax		
	comp=Z,277nm,1.6s								
KLR					MLR		MLR		
	comp=Z,4μm,20.0s								
KLR	**Kul'dur**	**60.35**	**17**		P		**P**	**05 24 19.1**	**-1.2**
	comp=Z,100nm,0.6s,baz=217,slow=5.4,SNR=245								
KLR					PcP		**PcP**	**05 25 05.2**	**+0.7**
	comp=Z,23nm,0.6s,baz=201,slow=7.9,SNR=5.1								
WHFO	**Wadi Hawf**	**60.52**	**296**		P		**P**	**05 24 23.0**	**+1.0**
	SNR=23								
WHFO					P		**P**	**05 24 23.0**	**+1.0**
	SNR=23								
KWAJ	**Kwajalein Atol**	**60.54**	**75**		P		**P**	**05 24 23.2**	**+1.1**
KWAJ					pmax		pmax		
	comp=Z,2μm,1.6s								
KWAJ	**Kwajalein Atol**	**60.54**	**75**		P		**P**	**05 24 23.2**	**+1.1**
ABTO	**Aybut**	**60.75**	**295**		P		**P**	**05 24 25.0**	**+1.4**
	SNR=32								
ABTO					P		**P**	**05 24 25.0**	**+1.4**
	SNR=32								
MCQ	**Macquarie Isla**	**60.90**	**149**		P		**P**	**05 24 25.9**	**+2.0**
	baz=61,SNR=3.5								
ABPO	**Ambohimpanom**	**60.99**	**253**		P		**P**	**05 24 27.5**	**+2.1**
ABPO					pmax		pmax		
	comp=Z,205nm,1.3s								
ABPO	**Ambohimpanom**	**60.99**	**253**		P		**P**	**05 24 27.5**	**+2.1**
ABPO					IAmb		IAmb	05 24 29.3	
	comp=Z,205nm,1.3s								
OPO	**Ambohidratompo**	**61.02**	**253**		P		**P**	**05 24 28.2**	**+2.5**
	comp=Z,57nm,0.8s,baz=87,slow=7.1,SNR=41								
ALNE	**Al Ain**	**61.15**	**303**	*i*	P		**P**	**05 24 26.6**	**+0.4**
	SNR=81								
UOSS	**Minazif**	**61.15**	**304**	*i*	P		**P**	**05 24 25.6**	**-0.6**
	SNR=32								
UOSS	**Minazif**	**61.15**	**304**		P		**P**	**05 24 26.0**	**-0.2**
UOSS					IAmb		IAmb	05 24 46.7	
	comp=Z,334nm,1.4s								
ASHO	**Ashiyiah**	**61.16**	**304**	*i*	P		**P**	**05 24 26.2**	**-0.1**
	SNR=76								
ASHO	**Ashiyiah**	**61.16**	**304**		P		**P**	**05 24 28.0**	**+1.7**
	SNR=56								
HATD	**Hatta, Dubai**	**61.16**	**304**	*i*	P		**P**	**05 24 26.4**	**+0.1**
	SNR=50								
HATD	**Hatta, Dubai**	**61.16**	**304**		P		**P**	**05 24 28.0**	**+1.8**
	SNR=65								
HATD					P		**P**	**05 24 28.0**	**+1.8**
	SNR=65								
MDH	**Madha**	**61.23**	**305**	*i*	P		**P**	**05 24 25.9**	**-0.8**
	SNR=18								
MDH	**Madha**	**61.23**	**305**		P		**P**	**05 24 27.2**	**+0.5**
	SNR=14								
MDH					P		**P**	**05 24 27.2**	**+0.5**
	SNR=14								
MDH					P		**P**	**05 24 27.2**	**+0.5**
	SNR=14								
MSFE	**Esma-Masafi**	**61.37**	**305**	*i*	P		**P**	**05 24 27.7**	**+0.1**
	SNR=19								
JBG	**Jabagly**	**61.38**	**328**	*d*	eP		**P**	**05 24 26.1**	**-1.5**
JBG					eS		**S**	**05 32 39.1**	**-2.7**
JBG					pmax		pmax		
	comp=Z,357nm,4.5s								
IUG	**Iuzhnay**	**61.46**	**328**	*i*	P		**P**	**05 24 26.4**	**-1.6**
IUG	**Iuzhnay**	**61.46**	**328**	*i*	P		**P**	**05 24 26.5**	**-1.6**
BANOM	**Banah**	**61.50**	**305**	*i*	P		**P**	**05 24 28.9**	**+0.4**
	SNR=23								
BANOM	**Banah**	**61.50**	**305**		P		**P**	**05 24 31.0**	**+2.5**
	SNR=11								
BANOM					P		**P**	**05 24 31.0**	**+2.5**
	SNR=11								
YUK	**Yuzh-Kuril'sk**	**61.52**	**29**		eP		P	05 24 22.3	-5.9
YUK					*i* S		**S**	**05 32 37.9**	**-5.2**
YUK					pmax		pmax		
	comp=Z,576nm,1.5s								
YUK					pmax		pmax		
	comp=N,274nm,1.1s								
YUK					pmax		pmax		
	comp=E,249nm,1.3s								
YUK					pmax		pmax		
	comp=Z,837nm,1.9s								
FAQ	**Al Faqa, Dubai**	**61.57**	**304**	*i*	P		**P**	**05 24 29.4**	**+0.4**
	SNR=17								
FAQ	**Al Faqa, Dubai**	**61.57**	**304**		P		**P**	**05 24 30.0**	**+1.0**
	SNR=37								
FAQ					P		**P**	**05 24 30.0**	**+1.0**
	SNR=37								
VOI	**Vohitsoka**	**61.58**	**249**		P		**P**	**05 24 31.8**	**+2.5**
	SNR=20								
BTLS	**Baital**	**61.59**	**332**		eP		**P**	**05 24 25.5**	**-3.2**
BTLS	**Baital**	**61.59**	**332**		eP		**P**	**05 24 25.6**	**-3.2**
NAZ	**Nazwa, Dubai**	**61.62**	**304**	*i*	P		**P**	**05 24 29.6**	**+0.4**
	SNR=13								
NAZ	**Nazwa, Dubai**	**61.62**	**304**		P		**P**	**05 24 31.0**	**+1.7**
	SNR=46								
NAZ					P		**P**	**05 24 31.0**	**+1.7**
	SNR=46								
SHME	**Shamm**	**61.68**	**305**	*i*	P		**P**	**05 24 30.0**	**+0.2**
	SNR=32								
ASUD	**Al Ashush, Dub**	**61.74**	**303**	*i*	P		**P**	**05 24 30.5**	**+0.4**
	SNR=35								
ASUD	**Al Ashush, Dub**	**61.74**	**303**		P		**P**	**05 24 32.0**	**+1.9**
	SNR=46								
ASUD					P		**P**	**05 24 32.0**	**+1.9**
	SNR=46								
UMQ	**Umm Al-Quwin**	**61.84**	**304**	*i*	P		**P**	**05 24 31.9**	**+1.1**
	SNR=28								
UMQ	**Umm Al-Quwin**	**61.84**	**304**		P		**P**	**05 24 32.5**	**+1.7**
	SNR=22								
UMQ					P		**P**	**05 24 32.5**	**+1.7**
	SNR=22								
UMQ					P		**P**	**05 24 32.5**	**+1.7**
	SNR=22								
KK31	**Karatay Array**	**61.88**	**329**		eP		**P**	**05 24 28.9**	**-1.8**
CRZF	**Crozet Islands**	**61.98**	**221**		P		**P**	**05 24 32.1**	**+0.7**
CRZF					IAmb		IAmb	05 24 33.2	
	comp=Z,372nm,1.6s								
AJN	**Ajban**	**62.00**	**303**	*i*	P		**P**	**05 24 31.7**	**-0.1**
	SNR=49								
AJN	**Ajban**	**62.00**	**303**		P		**P**	**05 24 32.7**	**+0.8**
	SNR=39								
AJN					P		**P**	**05 24 32.7**	**+0.8**
	SNR=39								
YSS	**Yuzh-Sakhalins**	**62.34**	**25**		eP		**P**	**05 24 33.1**	**-0.6**
YSS					*e**PP		**pP**	**05 24 52.5**	**-3.4**
YSS					*e**			05 25 10.5	
YSS					*e**			05 26 45.8	
YSS					eS		**S**	**05 32 51.6**	**-1.7**
YSS					ePS		**PnS**	**05 33 13.6**	**-8.0**
YSS					eSS		**SS**	**05 37 00.7**	**+2.1**
YSS					pmax		pmax		
	comp=Z,250nm,1.4s								
YSS					MLR		MLR		
	comp=N,1μm,17.0s								
YSS	**Yuzh-Sakhalins**	**62.34**	**25**		P		**P**	**05 24 32.6**	**-1.1**
YSS					IAmb		IAmb	05 24 36.1	
	comp=Z,234nm,0.9s								
H11S3	**WAKE ISLAND Hy**	**62.51**	**64**		P		**P**	**05 24 35.5**	**+0.4**
	baz=238,slow=4.3,SNR=3.0								
H11S2	**WAKE ISLAND Hy**	**62.52**	**64**		P		**P**	**05 24 35.6**	**+0.4**
	baz=238,slow=4.3,SNR=3.9								
H11S1	**WAKE ISLAND Hy**	**62.53**	**64**		P		**P**	**05 24 35.6**	**+0.4**
	baz=238,slow=4.3,SNR=2.9								
MZR	**Muzera**	**62.64**	**301**	*i*	P		**P**	**05 24 38.5**	**+2.3**
	SNR=21								
MZR	**Muzera**	**62.64**	**301**		P		**P**	**05 24 38.7**	**+2.5**
	SNR=17								
MZR					P		**P**	**05 24 38.7**	**+2.5**
	SNR=17								
WAKE	**Wake Island**	**62.75**	**64**		P		**P**	**05 24 36.3**	**-0.6**
H11N1	**WAKE ISLAND Hy**	**63.11**	**63**		P		**P**	**05 24 39.9**	**+0.8**
	baz=282,slow=8.7,SNR=5.5								
H11N2	**WAKE ISLAND Hy**	**63.12**	**63**		P		**P**	**05 24 41.0**	**+1.9**
	baz=282,slow=8.7,SNR=5.6								
H11N3	**WAKE ISLAND Hy**	**63.12**	**63**		P		**P**	**05 24 41.2**	**+2.1**
	baz=282,slow=8.7,SNR=8.3								
GRNR	**Gornyy**	**63.13**	**19**	⇓	iP		**P**	**05 24 38.6**	**-0.3**
GRNR					*e*			05 26 58.4	
GRNR					eS		**S**	**05 33 05.4**	**+2.2**
GRNR					pmax		pmax		
	comp=Z,40nm,1.1s								
GRNR					smax		smax		
	comp=E,4.0nm,1.1s								
GRNR					MLR		MLR		
	comp=Z,1μm,16.0s								
KUR	**Kuril'sk**	**63.38**	**30**	*c*	iP		**P**	**05 24 39.5**	**-1.1**
KUR					*e*			05 26 58.3	
KUR					eS		**S**	**05 33 07.1**	**+0.8**
KUR					pmax		pmax		
	comp=Z,3μm,4.1s								
KUR					pmax		pmax		
	comp=Z,374nm,1.4s								
KUR					pmax		pmax		
	comp=E,289nm,1.5s								
KUR					pmax		pmax		
	comp=N,283nm,1.4s								
KUR					MLR		MLR		
	comp=Z,1μm,18.0s								
ZEA	**Zeya**	**63.41**	**12**	⇓	eP		**P**	**05 24 40.8**	**+0.2**
ZEA					*e*			05 27 02.0	
ZEA					*e*			05 33 04.0	
ZEA					*e*			05 34 20.0	
ZEA					pmax		pmax		
	comp=N,340nm,1.8s								
ZEA					pmax		pmax		
	comp=E,190nm,1.8s								
ZEA					pmax		pmax		
	comp=Z,680nm,1.8s								
ZEA					pmax		pmax		
	comp=N,2μm,7.0s								
ZEA					pmax		pmax		
	comp=Z,2μm,7.0s								
ZEA					pmax		pmax		
	comp=Z,1μm,8.0s								
ZEA					MLR		MLR		
	comp=Z,4μm,18.0s								
ZEA					MLR		MLR		
	comp=E,2μm,14.0s								
ZEA					MLR		MLR		
	comp=N,4μm,17.0s								
SEM	**Semipalatinsk**	**63.42**	**340**		eP		**P**	**05 24 40.0**	**-1.0**
SEM					eS		**S**	**05 33 04.9**	**-2.2**
SEM					pmax		pmax		
	comp=Z,93nm,1.5s								
SEM	**Semipalatinsk**	**63.42**	**340**		eP		**P**	**05 24 40.1**	**-1.0**
	comp=Z,93nm,1.5s								
SEM					eS		**S**	**05 33 04.9**	**-2.2**
LBZ	**Lake Benmore**	**63.80**	**136**		IAmb		IAmb	05 25 31.2	
	comp=Z,303nm,1.6s								
TARA	**Tarawa**	**64.19**	**85**		P		**P**	**05 24 48.1**	**+1.5**
KURBB	**Kurchatov Arra**	**64.20**	**339**		P		**P**	**05 24 45.1**	**-0.7**
	comp=Z,42nm,0.6s,baz=151,slow=5.6,SNR=102								
KURBB					PcP		**PcP**	**05 25 20.8**	**+0.7**
	comp=Z,57nm,0.6s,baz=148,slow=3.9,SNR=17								
RPZ	**Rata Peaks**	**64.23**	**135**		LR		LR	05 51 41.1	
	comp=Z,8μm,21.5s,baz=286,slow=35								
RPZ	**Rata Peaks**	**64.23**	**135**		IAmb		IAmb	05 25 28.8	
	comp=Z,228nm,1.2s								
KURK	**Kurchatov**	**64.24**	**339**	*d*	iP		**P**	**05 24 45.4**	**-0.8**
KURK					pmax		pmax		
	comp=Z,132nm,1.0s								
KURK	**Kurchatov**	**64.24**	**339**		P		**P**	**05 24 45.3**	**-0.9**
KURK					IAmb		IAmb	05 25 23.9	
	comp=Z,176nm,1.1s								
QRZ	**Quartz Range**	**64.65**	**131**		IAmb		IAmb	05 24 52.9	
	comp=Z,339nm,1.3s								
ZAA0	**Zalesovo Array**	**65.11**	**344**		IAmb		IAmb	05 25 42.3	
	comp=Z,343nm,1.9s								
ZALV	**Zalesovo Beam**	**65.11**	**344**	*i*	P		**P**	**05 24 50.7**	**-1.0**
ZALV					pmax		pmax		
	comp=Z,32nm,0.4s								
ZALV	**Zalesovo Beam**	**65.11**	**344**		P		**P**	**05 24 50.5**	**-1.2**
	comp=Z,32nm,0.4s,baz=170,slow=4.7,SNR=123								
ZALV					ScS		**ScS**	**05 34 32.8**	**-5.7**
	comp=Z,0.9nm,0.5s,baz=116,slow=44,SNR=3.2								
ZALV					PKP2bc			05 53 39.0	
	comp=Z,4.1nm,0.9s,baz=336,slow=3.3,SNR=11								
ZALV					LR		LR	05 55 30.1	
	comp=Z,3μm,18.9s,baz=146,slow=38								
ZALV	**Zalesovo Beam**	**65.11**	**344**		P		**P**	**05 24 50.2**	**-1.6**
THZ	**Tophouse**	**65.12**	**132**		IAmb		IAmb	05 24 55.3	
	comp=Z,168nm,0.7s								
MQZ	**McQueen's Vall**	**65.36**	**134**		IAmb		IAmb	05 25 46.5	
	comp=Z,230nm,1.3s								
TYV	**Tymovskoe**	**65.41**	**23**	*e*	P		**P**	**05 24 53.9**	**+0.2**
TYV					*e*			05 33 37.9	
TYV					pmax		pmax		
	comp=Z,74nm,2.1s								
TYV					pmax		pmax		
	comp=Z,2μm,4.9s								
KHZ	**Kahutara**	**65.72**	**133**		IAmb		IAmb	05 25 59.9	
	comp=Z,219nm,1.3s								
BOD	**Bodaibo**	**65.75**	**3**	⇑	iP		**P**	**05 24 54.8**	**-1.0**
BOD					eS		**SKSac**	**05 34 38.7**	**-4.4**
BOD					pmax		pmax		
	comp=Z,234nm,1.8s								
BRZS	**Berezniki**	**65.96**	**335**	*i*	P		**P**	**05 24 56.8**	**-0.5**
BRZS					eS		**S**	**05 33 35.9**	**-2.1**
BRZS					pmax		pmax		
	comp=Z,586nm,2.8s								
BRZS	**Berezniki**	**65.96**	**335**	*i*	P		**P**	**05 24 56.9**	**-0.5**
	comp=Z,586nm,2.8s								
BRZS					eS		**S**	**05 33 36.0**	**-2.1**
HIZ	**Hauiti**	**66.00**	**129**		IAmb		IAmb	05 25 02.3	
	comp=Z,404nm,1.3s								
GEYT	**Alibeck**	**66.01**	**318**		P		**P**	**05 24 57.6**	**-0.3**
	comp=Z,26nm,0.4s,baz=149,slow=5.6,SNR=66								
GEYT					PKP2bc			05 53 37.4	
	comp=Z,2.2nm,0.7s,baz=223,slow=3.7,SNR=7.9								
GEYT	**Alibeck**	**66.01**	**318**		P		**P**	**05 24 58.5**	**+0.5**
SNZO	**South Karori**	**66.36**	**132**		P		**P**	**05 24 59.4**	**-0.7**
NKL	**Nikolayevsk**	**66.56**	**20**	*e*	P		**P**	**05 24 59.6**	**-1.4**
NKL					*e*			05 25 25.3	
NKL					*e*			05 27 26.6	
NKL					eS		**PnS**	**05 34 17.6**	**-1.2**
NKL					pmax		pmax		
	comp=Z,160nm,0.9s								
NKL					pmax		pmax		
	comp=E,12nm,1.0s								
NKL					pmax		pmax		
	comp=Z,131nm,1.7s								
MAW	**Mawson**	**67.02**	**198**		P		**P**	**05 25 04.9**	**+1.1**
	baz=67,SNR=108								
MAW	**Mawson**	**67.02**	**198**		P		**P**	**05 25 04.9**	**+1.1**
	comp=Z,88nm,0.6s,baz=56,slow=6.1,SNR=186								
MAW					LR		LR	05 49 40.5	
	comp=Z,3μm,19.9s,baz=48,slow=32								
MAW					PKPPKP			05 53 30.1	
	comp=Z,12nm,1.0s,baz=242,slow=2.6,SNR=9.3								
BKZ	**Black Stump Fm**	**67.36**	**129**		IAmb		IAmb	05 25 09.5	
	comp=Z,164nm,0.8s								
MSVF	**Nonsavu**	**67.48**	**106**		P		**P**	**05 25 08.8**	**+1.0**
MSVF					pmax		pmax		
	comp=Z,518nm,1.7s								
MSVF	**Nonsavu**	**67.48**	**106**		P		**P**	**05 25 08.8**	**+1.0**
MSVF					IAmb		IAmb	05 25 11.2	
	comp=Z,518nm,1.6s								
DAMY	**Dhamar**	**68.10**	**289**		IAmb		IAmb	05 25 16.6	
	comp=Z,854nm,1.8s								
DAMY	**Dhamar**	**68.10**	**289**		P		**P**	**05 25 15.3**	**+3.4**
	SNR=28								
MXZ	**Matakaoa Point**	**68.57**	**127**		IAmb		IAmb	05 25 18.1	
	comp=Z,728nm,1.8s								
ATD	**Arta Tunnel**	**68.82**	**286**		IAmb		IAmb	05 25 20.7	
	comp=Z,319nm,1.8s								
FUNA	**Funafuti**	**69.15**	**96**		P		**P**	**05 25 19.4**	**+1.2**
BVAR	**Borovoye Array**	**69.20**	**336**		P		**P**	**05 25 16.8**	**-0.8**
	comp=Z,58nm,0.6s,baz=148,slow=8.7,SNR=84								
BRVK	**Borovoye**	**69.26**	**336**		P		**P**	**05 25 17.0**	**-1.1**
BRVK					pmax		pmax		
	comp=Z,149nm,1.3s								
BRVK	**Borovoye**	**69.26**	**336**		P		**P**	**05 25 16.9**	**-1.1**
RAYN	**Ar Rayn**	**69.68**	**299**		P		**P**	**05 25 21.4**	**+0.1**
RAYN					pmax		pmax		
	comp=Z,321nm,1.4s								
RAYN	**Ar Rayn**	**69.68**	**299**	*i*	P		**P**	**05 25 21.6**	**+0.3**
	SNR=65								
RAYN	**Ar Rayn**	**69.68**	**299**		P		**P**	**05 25 21.4**	**+0.1**
RAYN					IAmb		IAmb	05 25 24.0	
	comp=Z,321nm,1.4s								
KIBK	**Kibwezi**	**71.04**	**270**		P		**P**	**05 25 32.6**	**+2.7**
	SNR=22								
SKR	**Severo-Kuril's**	**71.14**	**29**	*e*	P		**P**	**05 25 26.7**	**-2.8**
SKR					eS		**S**	**05 34 43.1**	**+3.8**
SKR					pmax		pmax		
	comp=Z,900nm,7.3s								
SKR					pmax		pmax		
	comp=Z,2μm,3.4s								
SKR					pmax		pmax		
	comp=Z,170nm,1.6s								
SKR					MLR		MLR		
	comp=Z,

comp=Z,504nm,1.6s
PETK Petropavlovsk- 73.45 28 P **P** **05 25 43.2 -0.1**
comp=Z,38nm,0.7s,baz=201,slow=2.7,SNR=34
PETK LR LR 05 59 16.6
comp=Z,1μm,20.7s,baz=220,slow=37
PETK Petropavlovsk- 73.45 28 P **P**
PET Petropavlovsk 73.84 29K *i*P **P** **05 25 45.7 +0.2**
PET *e* 05 28 24.4
PET *e*S **S** **05 35 09.3 -0.7**
PET *e* 05 35 44.0
PET *e*SS **SS** **05 39 56.7 +0.7**
PET pmax pmax
comp=Z,295nm,2.4s
PET pmax pmax
comp=Z,3μm,6.1s
PET pmax pmax
comp=Z,2μm,17.1s
PET pmax pmax
comp=Z,1μm,14.3s
PET MLR MLR
comp=Z,1μm,22.0s
PET MLR MLR
comp=Z,2μm,16.0s
PET Petropavlovsk 73.84 29 P **P** **05 25 45.1 -0.4**
LODK Lodwar 74.54 276 P **P** **05 25 53.5 +2.9**
SNR=40
VNDA Vanda 74.55 170 P **P** **05 25 50.1 +0.8**
comp=Z,79nm,0.9s,baz=317,slow=6.2,SNR=188
VNDA LR LR 05 57 50.4
comp=Z,3μm,19.2s,baz=323,slow=35
VNDA Vanda 74.55 170 IAmb IAmb 05 25 52.8
comp=Z,214nm,1.2s
AKT Akhty 74.73 317 *e*P **P** **05 25 51.5 +0.4**
AKT *e* 05 26 04.4
AKT *e**PP **pP** **05 26 11.2 -2.8**
AKT *e*S **S** **05 35 18.0 -2.7**
AKT pmax pmax
comp=Z,346nm,1.4s
MA2 Magadan 75.08 20*d* *i*P **P** **05 25 52.7 +0.1**
MA2 pmax pmax
comp=Z,410nm,2.5s
MA2 Magadan 75.08 20 P **P** **05 25 52.6 0.0**
MA2 IAmb IAmb 05 25 54.8
comp=Z,675nm,1.9s
SYO Syowa Base 75.29 200⇓ *i*P **P** **05 25 57.0 +3.3**
MAK Makhachkala 75.52 318 *e*P **P** **05 25 54.6 -0.9**
MAK *e**PP **pP** **05 26 14.1 -4.2**
MAK *e* 05 28 41.8
MAK *e*PPP PPP 05 30 27.4
MAK *e*S **S** **05 35 27.3 -1.8**
MAK *e**SS **ScS** **05 36 01.9 +0.6**
MAK *e*SS **SS** **05 40 20.9 -1.0**
MAK pmax pmax
comp=Z,682nm,1.7s
MAK MLR MLR
comp=Z,2μm,19.0s
SBA Scott Base 75.61 169 P **P** **05 25 57.5 +2.1**
SBA pmax pmax
comp=Z,597nm,1.8s
SBA Scott Base 75.61 169 P **P** **05 25 57.5 +2.1**
SBA IAmb IAmb 05 26 10.5
comp=Z,597nm,1.8s
SVE Sverdlovsk 75.88 335*c* *i*P **P** **05 25 57.5 +0.3**
SVE *e*S **S** **05 35 30.5 -2.0**
SVE *e* 05 36 01.9
SVE pmax pmax
comp=Z,265nm,1.9s
SVE MLR MLR
comp=Z,3μm,20.0s
GNI Garni 76.25 315*d* *i*P **P** **05 26 00.2 +0.3**
GNI pmax pmax
comp=Z,2μm,2.5s
GNI Garni 76.25 315 *i* P **P** **05 26 00.3 +0.3**
SNR=35
GNI Garni 76.25 315 P **P** **05 26 00.3 +0.3**
GNI IAmb IAmb 05 26 03.6
comp=Z,381nm,1.4s
ARU Arti 76.52 334*d* *i*P **P** **05 26 00.3 -0.5**
ARU 05 28 49.4
ARU PPP PPP 05 30 41.3
ARU S **S** **05 35 41.1 +1.5**
ARU *SS **sS** **05 36 20.3 +1.2**
ARU SSS SSS 05 44 01.1
ARU pmax pmax
comp=Z,268nm,1.8s
ARU MLR MLR
comp=Z,4μm,22.0s
ARU Arti 76.52 334 P **P** **05 25 59.7 -1.1**
GROC Groznyy 76.76 318 *e*P **P** **05 26 01.1 -1.4**
GROC *e* 05 26 12.5
GROC *e*S **S** **05 35 40.1 -2.6**
GROC *e**SS **sS** **05 36 25.1 +3.1**
GROC pmax pmax
comp=Z,591nm,1.5s
MSNA Messina 77.03 249 *i* P **P** **05 26 06.8 +2.2**
MSNA Messina 77.03 249 *i* P **P** **05 26 06.9 +2.2**
AFI Afiamalu 77.48 102 P **P** **05 26 08.9 +1.6**
AFI pmax pmax
comp=Z,458nm,1.5s
AFI Afiamalu 77.48 102 P **P** **05 26 08.9 +1.6**
AFI IAmb IAmb 05 26 10.7
comp=Z,458nm,1.4s
AKH Akhalkalaki 77.61 315⇑P **P** **05 26 09.1 +1.5**
AKH Akhalkalaki 77.61 315 IAmb IAmb 05 26 11.8
comp=Z,661nm,1.6s
ZEI Tsey 77.86 317 *e*P **P** **05 26 06.3 -2.7**
ZEI pmax pmax
comp=Z,283nm,1.5s
SEY Seymchan 78.06 19*d* *i*P **P** **05 26 09.6 +0.3**
MBAR Mbarara 78.51 271 P **P** **05 26 15.7 +2.5**
MBAR pmax pmax
comp=Z,173nm,1.2s
MBAR Mbarara 78.51 271 P **P** **05 26 15.7 +2.5**
MATP Matopo 78.58 251 *i* P **P** **05 26 13.8 +0.5**
MATP Matopo 78.58 251 *i* P **P** **05 26 15.3 +1.9**
KNTN Kanton 78.79 91 P **P** **05 26 16.1 +1.7**
KNTN IAmb IAmb 05 26 17.9
comp=Z,662nm,1.7s
NEY Neytrino 78.84 317*d* *i*P **P** **05 26 16.0 +1.7**
NEY pmax pmax
comp=Z,60nm,1.0s
KBZ Khabaz 78.90 317 P **P** **05 26 15.0 +0.7**
comp=Z,132nm,1.0s,baz=107,slow=4.6,SNR=87
KBZ S **S** **05 36 03.6 -2.1**
comp=Z,6.9nm,1.1s,baz=16,slow=24,SNR=16
KBZ PKKPbc **PKKPbc** **05 45 09.2 -0.1**
comp=Z,4.3nm,0.9s,baz=19,slow=3.2,SNR=8.1
KBZ LR LR 06 07 04.2
comp=Z,626nm,18.7s,baz=100,slow=40
BATM Batumi 78.94 315⇓ *i*P **P** **05 26 15.5 +0.8**
KIV Kislovodsk 79.13 318 *e*P **P** **05 26 16.0 +0.2**
KIV *e**PP **pP** **05 26 36.1 -2.7**
KIV *e*S **S** **05 36 07.4 -1.0**
KIV *e*SS **SS** **05 41 18.2 +1.6**
KIV pmax pmax
comp=Z,314nm,1.0s
KIV pmax pmax
comp=Z,2μm,3.7s
KIV MLR MLR
comp=Z,2μm,19.0s
KIV Kislovodsk 79.13 318⇓ *i*P **P** **05 26 16.5 +0.8**
KIV Kislovodsk 79.13 318 *i* P **P** **05 26 16.3 +0.6**
SNR=66
KIV Kislovodsk 79.13 318 P **P** **05 26 15.9 +0.2**
KIV IAmb IAmb 05 26 19.6
comp=Z,513nm,1.6s
GOF Gofitskoye 79.32 319⇓ *i*P **P** **05 26 17.4 +0.8**
GOF *e*S **S** **05 36 07.7 -2.5**
GOF pmax pmax
comp=Z,515nm,1.7s
GOF smax smax
comp=E,216nm,1.7s
GOF smax smax
comp=N,342nm,2.0s
LSZ Lusaka 79.32 256 *i* P **P** **05 26 18.3 +0.8**
LSZ Lusaka 79.32 256 P **P** **05 26 18.7 +1.3**
LSZ pmax pmax
comp=Z,65nm,0.6s
LSZ Lusaka 79.32 256 *i* P **P** **05 26 19.6 +2.2**
LSZ Lusaka 79.32 256 P **P** **05 26 18.7 +1.3**
TIXI Tiksi 80.59 6*d* *i*P **P** **05 26 21.7 -1.2**
TIXI pmax pmax
comp=Z,383nm,1.8s
TIXI Tiksi 80.59 6 P **P** **05 26 21.8 -1.2**
comp=Z,113nm,0.6s,baz=180,slow=24,SNR=194
TIXI Tiksi 80.59 6 P **P** **05 26 21.1 -1.8**
TIXI IAmb IAmb 05 26 24.6
comp=Z,134nm,0.7s
GAZ Gaziantep 80.76 310 IAmb IAmb 05 26 28.9
comp=Z,515nm,1.4s
RCY Rachaya 80.78 306 *e*P **P** **05 26 26.9 +1.9**
HWQ Hawqa 80.91 307 *e*P **P** **05 26 27.1 +1.5**
BOSA Boshof 80.92 242 *i* P **P** **05 26 27.2 +1.3**
BOSA Boshof 80.92 242 P **P** **05 26 27.5 +1.6**
comp=Z,43nm,0.5s,baz=108,slow=4.1,SNR=155
BOSA PKKPbc **PKKPbc** **05 45 04.7 +1.1**
comp=Z,2.0nm,0.6s,baz=265,slow=3.2,SNR=4.5
BOSA LR LR 05 56 01.7
comp=Z,5μm,20.7s,baz=100,slow=31
BOSA Boshof 80.92 242 *i* P **P** **05 26 27.7 +1.8**
BOSA Boshof 80.92 242 IAmb IAmb 05 26 29.9
comp=Z,363nm,1.5s
SOC Sochi 81.00 316*d* *i*P **P** **05 26 25.6 -0.1**
SOC *e**PP **pP** **05 26 44.8 -4.1**
SOC *e* 05 29 28.0
SOC *e*PPP PPP 05 31 16.4
SOC *i*S **S** **05 36 23.2 -4.7**
SOC *e*SS **SS** **05 41 42.3 -2.0**
SOC pmax pmax
comp=Z,452nm,1.3s
SOC pmax pmax
comp=Z,3μm,2.5s
SOC MLR MLR
comp=Z,1μm,21.0s
BHL Bhannes 81.04 306 *e*P **P** **05 26 27.9 +1.6**
ITZ Itezhi-Tezhi 81.36 255 *i* P **P** **05 26 29.7 +1.3**
ITZ 05 36 33.7
ITZ Itezhi-Tezhi 81.36 255 *i* P **P**
ITZ 05 36 33.7
QSPA South Pole Qui 81.95 180 P **P** **05 26 31.1 +0.6**
comp=Z,74nm,0.6s,baz=303,slow=1.2,SNR=460
QSPA PKPPKP **P'P'df** **05 53 02.1 -3.0**
comp=Z,8.6nm,1.1s,baz=59,slow=0.1,SNR=8.2
QSPA South Pole Qui 81.95 180 P **P** **05 26 31.1 +0.6**
QSPA IAmb IAmb 05 26 33.2
comp=Z,561nm,1.4s
VRH Novokhopyorsk 82.51 324 *e*P **P** **05 26 33.7 +0.2**
VRH *e*S **S** **05 36 38.0 -5.1**
VRH pmax pmax
comp=Z,450nm,0.8s
VRH smax smax
comp=E,5μm,7.8s
ANN Anapa 82.95 317*d* *i*P **P** **05 26 35.1 -0.8**
ANN *e**PP **pP** **05 26 57.4 -1.7**
ANN *e* 05 29 54.5
ANN *e*PPP PPP 05 31 39.8
ANN *e*S **S** **05 36 44.4 -3.4**
ANN pmax pmax
comp=Z,444nm,1.6s
ANN pmax pmax
comp=N,94nm,1.5s
ANN pmax pmax
comp=E,77nm,1.5s
ANN pmax pmax
comp=Z,2μm,5.9s
ANN pmax pmax
comp=E,717nm,5.9s
ANN pmax pmax
comp=N,318nm,5.5s
DIKM Dikmen 83.51 314 ⇑P **P** **05 26 40.5 +1.6**
LEF Lefka 83.56 307 ⇓P **P** **05 26 40.6 +1.3**
VORD Divnogorie 83.85 323 *e*P **P** **05 26 40.0 -0.3**
VORD *e*S **S** **05 36 54.8 -1.8**
VORD pmax pmax
comp=Z,410nm,1.5s
VORD smax smax
comp=N,130nm,1.6s
JOHN Johnston Islan 84.00 72 P **P** **05 26 43.0 +1.2**
VSR Storozhevoye 84.01 324 *e*P **P** **05 26 40.3 -0.9**
VSR *e*S **SKSac** **05 36 50.4 -6.0**
VSR pmax pmax
comp=Z,500nm,0.8s
VSR smax smax
comp=N,1μm,2.7s
VORR Voronezh 84.15 324 *e*P **P** **05 26 41.0 -0.8**
VORR pmax pmax
comp=Z,1μm,2.0s
BR131 Keskin Array S 84.17 311 P **P** **05 26 43.3 +0.8**
SNR=85
BR131 P **P** **05 26 43.3 +0.8**
SNR=85
BRTR Keskin Array B 84.17 311 P **P** **05 26 43.0 +0.5**
BRTR Keskin Array B 84.17 311 P **P** **05 26 43.0 +0.5**
comp=Z,73nm,0.6s,baz=141,slow=7.1,SNR=275
BRTR S **S** **05 36 56.2 -4.5**
comp=Z,0.8nm,1.0s,baz=49,slow=32,SNR=3.2
BRTR PKKPbc **PKKPbc** **05 44 58.3 +1.2**
comp=Z,0.7nm,0.9s,baz=38,slow=2.2,SNR=3.8
BRTR LR LR 06 07 48.5
comp=Z,787nm,19.3s,baz=82,slow=38
BRTR Keskin Array B 84.17 311 P **P** **05 26 42.8 +0.3**
SUR Sutherland 84.41 238 P **P** **05 26 46.3 +2.3**
SUR IAmb IAmb 05 26 49.1
comp=Z,385nm,1.6s
BZK Bozkurt 84.50 314⇓ *i*P **P** **05 26 45.5 +1.6**
LPSR Galich'ya Gora 84.64 325 *e*P **P** **05 26 44.3 0.0**
LPSR pmax pmax
comp=Z,340nm,0.9s
ANTO Ankara 84.83 311 P **P** **05 26 46.6 +0.9**
ANTO pmax pmax
comp=Z,1μm,1.8s
ANTO Ankara 84.83 311⇓ P **P** **05 26 47.0 +1.3**
ANTO Ankara 84.83 311 *i* P **P** **05 26 46.6 +0.9**
NVL N'lazarevskaya 84.90 199⇓ *i*P **P** **05 26 46.3 +1.0**
NVL pmax pmax
comp=Z,146nm,1.4s
NVL MLR MLR
comp=Z,2μm,17.0s
PRGR Permogore 84.94 335⇓ *i*P **P** **05 26 45.4 -0.2**
PRGR *e* 05 29 56.5
PRGR *i*S **S** **05 37 01.0 -6.0**
PRGR pmax pmax
comp=Z,237nm,0.8s
SIM Simferopol' 85.25 316*d* *i*P **P** **05 26 49.0 +1.4**
SIM *e**PP **pP** **05 27 08.0 -2.9**
SIM *e* 05 37 03.0
SIM *e*S **S** **05 37 06.0 -4.8**
SIM pmax pmax
comp=Z,219nm,1.4s
SIM pmax pmax
comp=Z,790nm,8.6s
BILL Bilibino 85.77 18*d* *i*P **P** **05 26 48.8 -0.8**
BILL pmax pmax
comp=Z,48nm,1.1s
BILL MLR MLR
comp=Z,2μm,20.0s
BILL Bilibino 85.77 18 P **P** **05 26 48.9 -0.8**
BILL IAmb IAmb 05 26 51.4
comp=Z,188nm,1.4s
KDZE Karadeniz Ereo 86.19 312 ⇑P **P** **05 26 53.5 +1.1**
MOS Moscow 86.44 327 *e*P **P** **05 26 51.0 -2.2**
MOS *e**PP **pP** **05 27 12.5 -4.0**
MOS *e* 05 30 09.5
MOS *e* 05 37 08.9
MOS *e*S **S** **05 37 19.2 -2.7**
MOS pmax pmax
comp=Z,4μm,2.5s
MOS pmax pmax
comp=E,1μm,2.7s
MOS pmax pmax
comp=N,800nm,2.5s
MOS pmax pmax
comp=Z,1μm,1.6s
MOS smax smax
comp=N,6μm,4.2s
MOS MLR MLR
comp=Z,3μm,23.0s
ADK Adak 86.61 37 P **P** **05 26 53.6 -0.5**
ADK pmax pmax
comp=Z,2μm,1.9s
ADK Adak 86.61 37 P **P** **05 26 53.6 -0.5**
OBN Obninsk 86.80 327*d* *i*P **P** **05 26 54.7 -0.2**
OBN *i* 05 27 09.6
OBN pmax pmax
comp=Z,540nm,1.1s
OBN Obninsk 86.80 327⇓ P **P** **05 26 55.5 +0.6**
OBN Obninsk 86.80 327 P **P** **05 26 55.0 0.0**
KLMR Klimovskoe 87.31 333 *e*P **P** **05 26 54.8 -2.5**
KLMR *e*S **SKSac** **05 37 14.5 -2.2**
KLMR pmax pmax
comp=Z,1μm,1.4s
KLMR Klimovskoe 87.31 333 *e*P **P** **05 26 54.9 -2.4**
KLMR AMP 05 27 01.2
comp=Z,1μm,1.4s
KLMR *e*S **SKSac** **05 37 14.5 -2.2**
KLMR *e*S **SKSac** **05 37 14.5 -2.2**
KLMR LQ LQ 06 00 10.8
KLMR LQ LQ 06 00 10.8
KLMR LR LR 06 07 23.2
PURM Purcari 88.52 317⇓ *i*P **P** **05 27 05.0 +1.6**
JURR Jurilovca 88.81 315⇑ *i*P **P** **05 27 06.3 +1.6**
TSUM Tsumeb 88.93 251 *i* P **P** **05 27 05.0 -1.2**
TSUM Tsumeb 88.93 251 *i* P **P** **05 27 08.6 +2.5**
TSUM Tsumeb 88.93 251 P **P** **05 27 08.0 +1.8**
TSUM IAmb IAmb 05 27 10.5
comp=Z,158nm,1.6s
TLCR 88.94 316⇑P **P** **05 27 06.9 +1.5**
PSN Preselentsi 89.07 314 *i* P **P** **05 27 07.2 +1.2**
TIRR Tirgusor 89.07 315⇑P **P** **05 27 07.1 +1.1**
TMCR Tamitsa 89.14 335 *e*P **P** **05 27 06.3 +0.4**
TMCR *e*S **SKSac** **05 37 28.9 +1.4**
TMCR pmax pmax
comp=Z,141nm,0.7s
TOPG Topolog 89.18 315⇑P **P** **05 27 08.3 +1.7**
SNAA Sanae 89.19 197 P **P** **05 27 07.8 +1.6**
SNAA Sanae 89.19 197 PKKP 05 44 42.5
SNAA Sanae 89.19 197 IAmb IAmb 05 27 09.7
comp=Z,148nm,0.9s
MILM Milestii Mici 89.32 317⇓ *i*P **P** **05 27 07.5 +0.4**
KIS Kishinev 89.33 318⇑ *i*P **P** **05 27 08.0 +0.8**
comp=Z,970nm,2.0s
KIS Kishinev 89.33 318 *e*PPS PPS 05 39 11.0
KIS *e*L L 05 51 08.0
KIS LRM MLR 06 11 28.0
comp=Z,2μm,22.0s
KIS Kishinev 89.33 318⇑ *i*P **P** **05 27 08.0 +0.8**
KIS *i* 05 27 29.0
KIS *i* 05 37 52.0
KIS *i*PS **PnS** **05 38 56.0 -10**
KIS *e*PPS PPS 05 39 11.0
KIS pmax pmax
comp=Z,970nm,2.0s
CFR Carcaliu 89.41 316⇑P **P** **05 27 08.6 +1.0**
ICOR Ion Corvin 89.43 315⇓P **P** **05 27 08.5 +0.8**
HARR Harsova 89.45 315⇑P **P** **05 27 09.1 +1.2**
LEOM Leova 89.61 317⇑P **P** **05 27 09.5 +1.0**
APE Apeiranthos 89.79 307⇑P **P** **05 27 10.0 +0.3**
AKASG Malin Array Be 89.88 321 *i* P **P** **05 27 09.8 +0.1**
AKASG pmax pmax
comp=Z,35nm,0.5s
AKASG Malin Array Be 89.88 321 P **P** **05 27 09.3 -0.4**
comp=Z,26nm,0.3s,baz=88,slow=4.4,SNR=20
AKASG LR LR 06 13 25.1
comp=Z,409nm,18.4s,baz=90,slow=40
AKASG Malin Array Be 89.88 321 P **P** **05 27 08.9 -0.8**
AKBB Malin Array Si 89.88 321 IAmb IAmb 05 27 12.4
comp=Z,462nm,1.8s
SORM Soroca 89.88 319⇑P **P** **05 27 09.9 +0.2**
VASR Vaslui 89.95 317⇓ *i*P **P** **05 27 11.7 +1.6**
JMB Yambol 89.98 313 *i* P **P** **05 27 11.1 +0.8**
ALN Alexandroupoli 90.08 311 IAmb IAmb 05 27 13.9
comp=Z,272nm,1.7s
GHRR 90.09 316⇓ *i*P **P** **05 27 12.7 +2.0**
PETR Petresti 90.15 316⇓ *i*P **P** **05 27 11.9 +0.9**
IAS Iasi 90.21 318⇓ *i*P **P** **05 27 12.3 +1.0**
ODBI Odobesti 90.28 316⇓ *i*P **P** **05 27 12.4 +0.7**
VRI Vrincioaia 90.52 316⇑ *i*P **P** **05 27 14.2 +1.4**
PLOR Plostina 90.57 316⇓ *i*P **P** **05 27 14.3 +1.2**
ELND Elena 90.58 313⇑ *i*P **P** **05 27 14.5 +1.4**
KDZ Kurdzhali 90.69 312 *i* P **P** **05 27 14.1 +0.4**
TESR Tescani 90.70 317⇓ *i*P **P** **05 27 14.6 +1.0**
MLR Muntele Rosu 90.99 316⇓ *i*P **P** **05 27 16.4 +1.2**
PVL Pavlikeni 91.02 313 *i* P **P** **05 27 17.1 +2.0**
PRAR RASCA 91.14 318⇓ *i*P **P** **05 27 16.2 +0.5**
BIZ Bicaz 91.14 317⇑ *i*P **P** **05 27 16.8 +1.1**
RZN Rozhen 91.21 312 *i* P **P** **05 27 17.5 +1.2**
VNA1 Neumayer--Stat 91.22 197 P **P** **05 27 17.7 +2.2**
PLD Plovdiv 91.29 312 *i* P **P** **05 27 17.5 +1.1**
VNA3 Neumayer Olymp 91.33 196 P **P** **05 27 17.4 +1.3**
PUL Pulkovo 91.34 330*d* *i*P **P** **05 27 17.4 +1.2**
PUL pmax pmax
comp=Z,245nm,1.0s
MICGM Minsk 91.49 325⇑ *i*P **P** **05 27 18.0 +1.0**
MICGM PM 05 27 19.0
comp=Z,1.5nm,1.0s
MICGM PM 05 27 20.0
comp=E,0.1nm,1.0s
MICGM PM 05 27 21.0
comp=N,0.2nm,1.0s
MICGM *e*pP **pP** **05 27 39.0 -1.5**
MICGM *e*sP sP 05 28 03.0 +13
MICGM *e*PP **PP** **05 30 55.0 -1.1**
MICGM *e*PPP PPP 05 32 39.0
MICGM *e*SKS **SKSac** **05 37 40.0 -1.5**
MICGM *e*S **S** **05 38 10.0 +0.7**
MICGM *e*sS **pS** **05 38 40.0 +0.5**
MICGM *e*SS **SS** **05 44 20.0 +2.6**
MICGM *e*SSS SSS 05 48 20.0
MICGM *e*LQ LQ 06 05 20.0
MICGM *e*LR LR 06 07 44.0
MICGM LRM MLR 06 11 14.0
comp=Z,2.9nm,20.0s
MICGM LRM MLR 06 11 20.0
comp=Z,4.9nm,20.0s
MNK Minsk 91.49 325⇑ *i*P **P** **05 27 18.0 +1.0**
MNK *e**PP **pP** **05 27 39.0 -1.5**
MNK *e* 05 30 55.0
MNK *e* 05 37 40.0
MNK *e*S **S** **05 38 10.0 +0.7**
MNK *e*SS **SS** **05 44 20.0 +2.6**
MNK pmax pmax
comp=E,110nm,1.0s
MNK pmax pmax
comp=N,180nm,1.0s
MNK MLR MLR
comp=Z,5μm,20.0s
PLVB Pleven 91.56 313⇑P **P** **05 27 18.5 +0.8**
VOIR 91.60 316⇓ *i*P **P** **05 27 18.3 +0.3**
LVZ Lovozero 91.66 339*d* *i*P **P** **05 27 16.6 -1.0**
LVZ pmax pmax
comp=Z,137nm,1.2s
LVZ Lovozero 91.66 339 P **P** **05 27 16.7 -1.0**
LVZ IAmb IAmb 05 27 19.6
comp=Z,185nm,1.3s
PGB Panagyurishte 91.75 313 *i* P **P** **05 27 19.3 +0.6**
BURAR Bucovina Array 91.86 318⇓ *i*P **P** **05 27 20.3 +1.2**
BUR08 Bucovina Ar. S 91.87 318 IAmb IAmb 05 27 31.1
comp=Z,70nm,1.2s
ARR Arges 91.88 315⇓ *i*P **P** **05 27 19.8 +0.6**
MMB Musomiste 91.92 312 *i* P **P** **05 27 19.3 -0.2**
APA Apatity 92.02 338⇓ *i*P **P** **05 27 18.3 -0.9**
APA *i* 05 31 07.0
APA *i* 05 37 44.0
APA *i*S **S** **05 38 09.0 -4.6**
APA pmax pmax
comp=Z,27nm,0.6s
MPEP Malo Peshtene 92.19 313 *i* P **P** **05 27 21.4 +0.8**
NACGM Naroch 92.19 325 *e*P **P** **05 27 20.0 -0.3**
NACGM PM 05 27 23.0
comp=Z,0.4nm,1.0s
NACGM *e*LQ LQ 06 04 11.0
NACGM *e*LR LR 06 08 32.0
KKB Krupnik 92.44 312 *i* P **P** **05 27 21.0 -0.8**
VTS Vitosha 92.44 313⇑ *i*P **P** **05 27 22.9 +0.9**
VTS Vitosha 92.44 313 *i* P **P** **05 27 21.8 -0.2**
VTS Vitosha 92.44 313 IAmb IAmb 05 27 24.8
comp=Z,112nm,1.2s
LOT Lotru 92.49 315⇑ *i*P **P** **05 27 23.3 +1.2**
IIGN Ignalina 92.59 325 *e*P **P** **05 27 23.0 +0.9**
IIGN IAmb IAmb 05 27 26.0
comp=Z,70nm,0.9s
AGG Agios Georgios 92.60 309 IAmb IAmb 05 27 24.8
comp=Z,183nm,1.4s
LIT Litokhoron 92.63 310 IAmb IAmb 05 27 25.7
comp=Z,125nm,1.0s
IZAR Zarasai 92.65 326 *e*P **P** **05 27 22.8 +0.4**
ISAL Salakas 92.68 326 *e*P **P** **05 27 22.6 +0.1**
ISAL IAmb IAmb 05 27 26.3
comp=Z,63nm,1.1s
VAY Valandovo 92.75 311 *i* P **P** **05 27 23.5 +0.4**
SRE Strehaia 92.77 315⇓ *i*P **P** **05 27 24.3 +1.1**
CJR Cluj-Napoca 92.80 317⇑ *i*P **P** **05 27 24.8 +1.4**
VSU Vasula 92.88 329*de*P **P** **05 27 23.7 +0.3**

VSU pmax pmax
comp=Z,1µm,1.6s
VSU Vasula 92.88 329 *e*P **P 05 27 24.0 +0.6**
VSU IAmb IAmb 05 27 26.4
comp=Z,574nm,0.9s
LVV L'vov 92.99 320 *e*P **P 05 27 24.6 +0.5**
LVV *e**PP **pP 05 27 42.0 -5.6**
LVV *e* 05 37 50.0
LVV *e*S **S 05 38 20.0 -3.0**
LVV pmax pmax
comp=Z,300nm,1.6s
BMR Baia Mare 93.02 318 ⇓P **P 05 27 25.3 +1.0**
STIP Stip 93.08 311 *i* P **P 05 27 24.3 -0.5**
DEV Deva 93.16 316 ⇑P **P 05 27 26.4 +1.5**
GZR Gura Zlata 93.17 315 ⇓P **P 05 27 26.3 +1.1**
HERR Herculane 93.36 315 ⇑P **P 05 27 26.8 +0.8**
DRGR 93.42 317 P **P 05 27 27.1 +0.8**
DRGR pmax pmax
comp=Z,38nm,2.2s
DRGR 93.42 317 ⇓P **P 05 27 27.1 +0.8**
SKO Skopje 93.67 312 *i* P **P 05 27 27.7 +0.2**
TRPA Tarpa 93.72 318 *e*P **P 05 27 28.5 +1.0**
TRPA Tarpa 93.72 318 ⇓P **P 05 27 28.2 +0.7**
FINES FINESS Array B 93.73 331 P **P 05 27 27.4 +0.2**
comp=Z,56nm,0.8s,baz=99,slow=6.2,SNR=64
FINES PKiKP **PKiKP 05 32 13.4 +1.4**
comp=Z,2.5nm,0.5s,baz=108,slow=3.5,SNR=6.3
FINES PKKPbc **PKKPbc 05 44 33.9 -0.3**
comp=Z,4.2nm,1.1s,baz=54,slow=3.3,SNR=4.2
FINES LR LR 06 14 42.5
comp=Z,3µm,19.0s,baz=101,slow=39
FINES FINESS Array B 93.73 331 P **P 05 27 27.8 +0.5**
KWP Kalwaria Pacla 93.81 319 ⇓*e*P **P 05 27 28.4 +0.5**
KWP Kalwaria Pacla 93.81 319 *e*P **P 05 27 28.4 +0.5**
MDVR Moldovita 93.84 315 ⇓P **P 05 27 29.1 +0.9**
PABE Paberze 93.88 325 *e*P **P 05 27 28.4 +0.4**
UZH Uzhgorod 93.95 318 *d* iP **P 05 27 29.0 +0.5**
UZH *e* 05 27 50.1
UZH *e* 05 31 17.0
UZH *e* 05 37 56.7
UZH *e*S **S 05 38 27.6 -3.8**
UZH *e*PS **PS 05 39 56.3 -1.0**
UZH *e*SS **SS 05 44 52.9 0.0**
KOLS Kolonicke sedl 94.00 319 *e*P **P 05 27 29.9 +1.1**
KOLS pmax pmax
comp=Z,171nm,1.5s
KOLS Kolonicke sedl 94.00 319 *e*P **P 05 27 29.9 +1.1**
BZS Buzias 94.01 315 ⇓P **P 05 27 29.2 +0.3**
OHR Ohrid 94.04 311 *i* P **P 05 27 29.4 +0.1**
LTVH Ltavrtes, Hu 94.05 317 ⇓*e*P **P 05 27 28.8 -0.2**
SIRR Siria 94.07 316 ⇑P **P 05 27 29.9 +0.7**
SUW Suwalki 94.12 324 ⇓*e*P **P 05 27 29.0 -0.2**
SUW *e*S **S 05 38 31.7 -1.0**
SUW Suwalki 94.12 324 *e*P **P 05 27 29.0 -0.2**
SUW *e*S **S 05 38 31.7 -1.0**
STHS Stebnicka Huta 94.73 319 *e*P **P 05 27 32.7 +0.5**
STHS pmax pmax
comp=Z,34nm,0.9s
STHS Stebnicka Huta 94.73 319 *e*P **P 05 27 32.6 +0.4**
TIR Tirane 94.77 311 IAmb IAmb 05 29 20.2
comp=Z,155nm,1.5s
DIVS Divibare 94.98 314 ⇓ *i* P **P 05 27 33.8 +0.3**
PBUR Paburg 95.09 326 *e*P **P 05 27 33.9 +0.2**
KECS Kecovo 95.12 318 *e*P **P 05 27 34.9 +0.9**
KECS pmax pmax
comp=Z,29nm,1.5s
KECS Kecovo 95.12 318 *e*P **P 05 27 34.9 +0.9**
FRGS Fruska Gora 95.22 315 ⇓ *i* P **P 05 27 33.4 -1.1**
ANM Nome 95.23 26 IAmb IAmb 05 27 37.5
comp=Z,273nm,1.8s
ARCES ARCESS Array B 95.28 339 P **P 05 27 33.5 -0.7**
comp=Z,11nm,0.6s,baz=97,slow=5.5,SNR=86
ARCES LR LR 06 16 10.1
comp=Z,2µm,19.8s,baz=103,slow=39
ARCES ARCESS Array B 95.28 339 P **P 05 27 33.2 -1.1**
ARE0 ARCESS Array S 95.28 339 *e*P **P 05 27 33.8 -0.4**
ARE0 IVmB_BB 05 27 36.0
comp=Z,2µm,2.5s
ARE0 *e*SKSac **SKSac 05 38 01.4 -0.4**
BEL Belsk 95.29 321 ⇓*e*P **P 05 27 35.4 +0.8**
BEL Belsk 95.29 321 *e*P **P 05 27 35.4 +0.8**
PDG Podgorica 95.34 312 ⇑P **P 05 27 35.5 +0.4**
PDG Podgorica 95.34 312 ⇓ *i* P **P 05 27 35.3 +0.2**
NIE Niedzica 95.34 319 *e*P **P 05 27 35.6 +0.6**
NIE Niedzica 95.34 319 *e*P **P 05 27 35.6 +0.6**
TEKS Tekeris 95.36 314 *e*P **P 05 27 36.5 +1.3**
DRME Dracevica, Mon 95.36 312 *e*P **P 05 27 35.3 +0.1**
RUDO Rudo 95.38 313 *e*P **P 05 27 36.5 +1.2**
BBLS Lazići 95.38 313 ⇓ *i* P **P 05 27 35.7 +0.4**
PSZ Piszkesteto 95.45 317 ⇑P **P 05 27 36.5 +1.0**
HAPS Han Pijesak,BI 95.73 314 ⇑P **P 05 27 36.4 -0.6**
OJC Ojcow 95.75 320 *e*P **P 05 27 37.3 +0.5**
OJC *e*S **S 05 38 38.5 -8.6**
OJC Ojcow 95.75 320 *e*Pdiff **P 05 27 37.9 +1.2**
OJC Ojcow 95.75 320 *e*P **P 05 27 37.3 +0.5**
OJC *e*S **S 05 38 38.5 -8.6**
OJC Ojcow 95.75 320 IAmb IAmb 05 27 39.2
comp=Z,269nm,2.0s
LANS Liptovska Anna 95.86 319 *e*P **P 05 27 38.5 +1.1**
LANS Liptovska Anna 95.86 319 *e*P **P 05 27 38.5 +1.1**
HCY Herceg Novi 95.90 312 *e*P **P 05 27 38.1 +0.4**
BUD Budapest 96.00 317 *e*P **P 05 27 37.9 0.0**
KTK1 Kautokeino 96.01 339 *e*P **P 05 27 36.9 -0.6**
KTK1 IVmB_BB 05 27 39.1
comp=Z,748nm,2.3s
KTK1 *e*PP **PP 05 31 28.2 -2.8**
TREB Trebinje 96.03 312 *e*P **P 05 27 37.1 -1.1**
HAMF Hammerfest 96.05 340 *e*P **P 05 27 37.2 -0.4**
HAMF IVmB_BB 05 27 39.2
comp=Z,2µm,2.5s
HAMF *e*PP **PP 05 31 32.5 +1.3**
HAMF *e*SKSac **SKSac 05 38 05.8 0.0**
HAMF *e*SS **SS 05 45 18.0 -3.6**
MORH Mrgy, Hungar 96.14 316 ⇓*e*P **P 05 27 37.2 -1.4**
MORH Mrgy, Hungar 96.14 316 ⇓ *i* P **P 05 27 38.6 0.0**
VYHS Vyhne 96.21 318 *e*P **P 05 27 39.4 +0.4**
VYHS pmax pmax
comp=Z,138nm,1.9s
VYHS Vyhne 96.21 318 *e*P **P 05 27 39.4 +0.4**
HOPEN Hopen 96.41 346 *e*P **P 05 27 38.7 -0.5**
HOPEN IVmB_BB 05 27 40.8
comp=Z,1µm,2.8s
HOPEN *e*PP **PP 05 31 33.9 -0.1**
HOPEN *e*SKSac **SKSac 05 38 07.9 +0.4**
CSKK Cskako 96.50 317 *e*P **P 05 27 39.9 -0.4**
TIH Tihany 96.72 316 *e*P **P 05 27 40.9 -0.3**
OKC Ostrava-Krasne 96.78 319 *e*P **P 05 27 42.1 +0.7**
OKC Ostrava-Krasne 96.78 319 *e*Pdiff **P 05 27 42.8 +1.4**
OKC Ostrava-Krasne 96.78 319 *e*P **P 05 27 42.1 +0.7**
OKC *ex* x 05 38 44.9
MPLH Magyarpolny 96.98 317 ⇓*e*P **P 05 27 41.9 -0.5**
MPLH Magyarpolny 96.98 317 ⇓ *i* P P 05 27 34.6 -7.8
JAVC Velka Javorina 97.01 318 *e*P Pdif 05 27 43.4 +0.7
BLY Banja Luka 97.05 314 ⇓P Pdif 05 27 43.4 +0.5
BLY Banja Luka 97.05 314 ⇓ *i* P Pdif 05 27 43.3 +0.4
MGRS Mrkonjic Grad 97.09 314 *e*P Pdif 05 27 43.3 +0.2
MORC Moravsky Berou 97.16 319 *e*Pdiff Pdif 05 27 44.6 +1.3
MORC Moravsky Berou 97.16 319 ⇓P Pdif 05 27 44.1 +0.7
MORC Moravsky Berou 97.16 319 *e*P Pdif 05 27 43.7 +0.4
MORC *e*SKS **SKSac 05 38 13.7 +1.1**
MORC Moravsky Berou 97.16 319 IAmb IAmb 05 27 48.1
comp=Z,109nm,1.6s
MODS Modra-Piesok 97.24 318 *e*P **P 05 27 43.4 -0.2**
MODS pmax pmax
comp=Z,123nm,1.8s
MODS Modra-Piesok 97.24 318 *e*P **P 05 27 43.4 -0.2**
ZST Bratislava 97.34 318 *e*P **P 05 27 43.5 -0.5**
ZST pmax pmax
comp=Z,130nm,1.9s
ZST Bratislava 97.34 318 *e*P **P 05 27 43.5 -0.5**
BEHE Becsehely 97.45 316 *e*P Pdif 05 27 45.9 +1.3
GKP Gorka Klasztor 97.57 323 *e*P **P 05 27 44.1 -0.8**
GKP Gorka Klasztor 97.57 323 *e*P **P 05 27 44.1 -0.8**
TRO Tromso 97.59 339 *e*P **P 05 27 44.4 -0.2**
TRO IVmB_BB 05 27 45.7
comp=Z,925nm,2.2s
TRO *e*SKSac **SKSac 05 38 15.8 +2.0**
KRLC Kraliky 97.67 319 *e*P Pdif 05 27 46.1 +0.5
KRLC Kraliky 97.67 319 *e*P Pdif 05 27 46.1 +0.5
KRLC *ex* x 05 38 51.4
VRAC Vranov 97.75 319 ⇑P Pdif 05 27 46.4 +0.4
VRAC Vranov 97.75 319 *e*P **P 05 27 45.9 0.0**

BJO1 Bjornoya 97.75 344 *e*P **P 05 27 45.2 -0.1**
BJO1 *e*PP **PP 05 31 43.0 -1.2**
BJO1 *e*SKSac **SKSac 05 38 08.3 -6.2**
KOGS Kog 97.81 316 *i* Pdiff Pdif 05 27 47.0 +0.8
KRUC Moravsky 97.86 318 *e*P Pdif 05 27 46.6 +0.2
KRUC *e*SKS **SKSac 05 38 16.8 +0.7**
DPC Dobruska-Polom 97.98 320 *e*P Pdif 05 27 48.4 +1.4
DPC MLR MLR
comp=Z,2µm,23.2s
DPC Dobruska-Polom 97.98 320 *e*Pdiff Pdif 05 27 48.5 +1.5
DPC Dobruska-Polom 97.98 320 *e*P Pdif 05 27 48.4 +1.4
DPC *ex* x 05 38 44.2
DPC AMS AMS 06 17 40.0
comp=Z,2µm,23.2s
KSP Ksiaz 98.03 320 *e*P Pdif 05 27 47.2 +0.1
KSP Ksiaz 98.03 320 *e*Pdiff Pdif 05 27 48.3 +1.2
KSP Ksiaz 98.03 320 *e*P Pdif 05 27 47.2 +0.2
KSP *e*S S 05 38 54.3 -12
OSTC Ostas 98.06 320 *e*P Pdif 05 27 48.5 +1.2
OSTC *ex* x 05 38 51.4
PPT2 Papeete2 98.15 109 *e*PP **PP 05 31 41.9 -6.9**
comp=Z,513nm,29.0s
PPT2 *e*S **S 05 39 10.4 +1.3**
comp=Z,3µm,22.6s
PPT2 Papeete2 98.15 109 *e*LR LR 05 59 54.8
comp=Z,4µm,25.0s
PPT Papeete 98.15 109 LR LR 06 09 05.7
comp=Z,825nm,20.9s,baz=251,slow=34
CONA Conrad Observa 98.16 317 *e*PcP Pdif 05 27 48.2 +0.3
comp=Z,11nm,1.1s
CONA *e*SKSac **SKSac 05 38 15.4 -2.4**
comp=Z,8.5nm,1.5s
CHVC Chvalec 98.16 320 *e*P Pdif 05 27 48.7 +1.0
CHVC *ex* x 05 28 10.0
UPC Upice 98.19 320 AMS AMS 06 17 20.0
comp=Z,2µm,22.8s
ARSA Arzberg 98.36 317 *e*Pdiff Pdif 05 27 49.7 +1.0
comp=Z,21nm,1.2s
SPA0 Spitsbergen Ar 98.41 348 *e*Pdif **P 05 27 47.6 -0.6**
SPA0 IVmB_BB 05 27 49.5
comp=Z,2µm,2.6s
SPA0 *e*SKSac **SKSac 05 38 17.7 0.0**
TREC Trest 98.47 319 *e*P Pdif 05 27 49.7 +0.6
TREC Trest 98.47 319 *e*P Pdif 05 27 49.7 +0.6
HSPB Hornsund (broa 98.62 347 *e*Pdif **P 05 27 48.5 -0.6**
HSPB IVmB_BB 05 28 01.0
comp=Z,774nm,4.8s
HSPB *e*SKSac **SKSac 05 38 18.0 -0.8**
HSPB *e*SKSac **SKSac 05 38 18.0 -0.8**
HSPB *e*SS **SS 05 45 55.8 -1.7**
SOKA Soboth 98.66 316 *e*Pdiff Pdif 05 27 51.3 +1.2
comp=Z,39nm,1.6s,SNR=5.4
SOKA SKSac **SKSac 05 38 19.3 -1.1**
comp=Z,11nm,1.4s
STEI Steigen 98.90 338 *e*Pdif **P 05 27 50.1 -0.4**
STEI IVmB_BB 05 27 55.9
comp=Z,1µm,2.5s
STEI *e*SKSac **SKSac 05 38 18.5 -1.9**
GOPC GO Pecny, Ondr 98.95 319 *e*P Pdif 05 27 53.4 +2.1
GOPC MLR MLR
comp=Z,2µm,24.0s
GOPC GO Pecny, Ondr 98.95 319 *e*P Pdif 05 27 53.4 +2.1
GOPC AMS AMS 06 18 00.0
comp=Z,2µm,24.0s
LJU Ljubljana 98.99 315 *i* Pdiff Pdif 05 27 52.4 +0.9
LJU Ljubljana 98.99 315 ⇓ *i* P Pdif 05 27 52.2 +0.7
OBKA Obir 98.99 316 *e*Pdiff Pdif 05 27 52.0 +0.4
comp=Z,30nm,1.6s
OBKA *e*SKSac **SKSac 05 38 19.8 -2.2**
comp=Z,18nm,1.6s
PRU Pruhonice 99.11 319 *e*P **Pdif 05 27 53.1 +1.2**
PRU MLR MLR
comp=Z,2µm,23.0s
PRU Pruhonice 99.11 319 *e*P **Pdif 05 27 53.1 +1.2**
PRU *ex* x 05 28 00.0
PRU *ex* x 05 38 54.6
PRU AMS AMS 06 18 20.0
comp=Z,2µm,23.0s
MOA Molln 99.23 317 *e*Pdiff **Pdif 05 27 53.2 +0.6**
comp=Z,13nm,1.2s
MOA *e*SKSac **SKSac 05 38 21.7 -1.3**
comp=Z,7.3nm,1.3s
MOR8 Moi Rana 99.24 336 IVmBBB 05 27 49.6
comp=Z,3µm,4.6s
MOR8 *e*Pdif **Pdif 05 27 50.8 -1.4**
MOR8 *e*SKSac **SKSac 05 38 15.8 -6.5**
MOR8 *e*SS **SS 05 46 06.1 -0.6**
KBS Kingsbay 99.25 349 P **Pdif 05 27 50.6 -1.3**
KBS pmax pmax
comp=Z,22nm,0.8s
KBS Kingsbay 99.25 349 *e*Pdif **Pdif 05 27 51.0 -0.9**
KBS *e*P **PP 05 31 56.7 +1.1**
KBS *e*SKSac **SKSac 05 38 18.0 -3.8**
KBS *e*SS **SS 05 46 11.5 +5.3**
KBS Kingsbay 99.25 349 P **Pdif 05 27 50.6 -1.3**
TTA Tatalina 99.28 28 IAmb IAmb 05 27 55.5
comp=Z,212nm,2.0s
SVW2 Sparrevohn 99.50 29 IAmb IAmb 05 27 56.4
comp=Z,116nm,1.6s
BRG Berggiesshubel 99.51 320 *e*P **Pdif 05 27 54.0 +0.3**
comp=Z,207nm,2.1s
BRG PP **PP 05 31 54.0 -4.4**
BRG SKS **SKSac 05 38 23.8 -0.5**
comp=Z,85nm,2.8s
BRG S **SKKSac 05 38 58.0 +1.3**
BRG SS **SS 05 46 04.0 -7.3**
comp=N,2µm,20.3s
comp=E,2µm,20.4s
comp=Z,2µm,22.0s
BRG Berggiesshubel 99.51 320 *e*P **Pdif 05 27 54.0 +0.3**
BRG 05 31 54.0
BRG 05 38 23.8
BRG pmax pmax
comp=Z,207nm,2.2s
BRG pmax pmax
comp=N,85nm,2.8s
BRG MLR MLR
comp=N,2µm,20.3s
BRG MLR MLR
comp=E,2µm,20.4s
BRG MLR MLR
comp=Z,2µm,22.0s
BRG Berggiesshubel 99.51 320 *e*Pdiff **Pdif 05 27 55.0 +1.3**
LOF Lofoten 99.53 338 *e*Pdif **Pdif 05 27 53.9 +0.5**
LOF *e*PP **PP 05 31 58.5 +0.6**
LOF *e*SKSac **SKSac 05 38 24.1 +0.5**
MYKA Terra Mystica 99.62 316 *e*SKSac **SKSac 05 38 26.9 +1.7**
comp=Z,10nm,1.0s
GEC2 GERESS Array S 99.63 318 *e*Pdiff **Pdif 05 27 55.4 +1.0**
GEC2 GERESS Array S 99.63 318 IAmb IAmb 05 27 56.8
comp=Z,120nm,1.9s
GERES GERESS Array B 99.63 318 P **Pdif 05 27 54.6 +0.2**
GERES GERESS Array B 99.63 318 P **Pdif 05 27 54.2 -0.2**
comp=Z,2.1nm,0.6s,baz=72,slow=4.3,SNR=19
GERES PKKPbc **PKKPbc 05 44 17.6 -0.1**
comp=Z,0.6nm,0.7s,baz=256,slow=2.2,SNR=3.7
GERES LR LR 06 19 45.9
comp=Z,1µm,20.9s,baz=71,slow=39
GERES GERESS Array B 99.63 318 **Pdif 05 27 54.6 +0.2**
RUE Ruedersdorf 99.64 322 *e*Pdiff **Pdif 05 27 55.4 +1.2**
RUE Ruedersdorf 99.64 322 *e*P **Pdif 05 27 54.6 +0.5**
KHC Kasperske Hory 99.72 318 ⇓ *e*P **Pdif 05 27 55.4 +0.7**
KHC pmax pmax
comp=Z,28nm,1.1s
KHC Kasperske Hory 99.72 318 *e*P **Pdif 05 27 55.1 +0.4**
KHC *e*pP pP 05 28 10.0 -8.3
KHC *ex* x 05 38 53.8
KONS Konsvik 99.76 336 *e*P **Pdif 05 27 54.3 -0.1**
KONS *e*SKSac **SKSac 05 38 26.5 +1.8**
FBE Freiberg 99.89 320 *e*Pdiff **Pdif 05 27 56.7 +1.4**
CLL Collm 100.11 321 *e*P **Pdif 05 27 56.0 -0.3**
CLL *e*S **Sdif 05 39 20.0 -4.0**
CLL pmax pmax
comp=Z,75nm,1.8s
CLL Collm 100.11 321 *e*Pdif **Pdif 05 27 56.0 -0.3**
comp=Z,75nm,1.8s
CLL *e* 05 28 05.0
CLL *e*PP **PP 05 31 59.0 -3.9**
CLL *e*PKiKP **PKiKP 05 32 21.0 -2.6**
CLL *es*PKiKP **sPKiKP 05 32 47.0 -10**
CLL *e*PPP PPP 05 34 06.0
CLL *e*SKKSac SKKSac 05 38 54.0 -7.0
CLL *e*Sdif **Sdif 05 39 20.0 -4.0**
CLL *es*Sdiff **sS 05 40 06.0 +1.1**

CLL *e*PS **PS 05 41 00.0 -4.1**
CLL *e*PPS PPS 05 41 42.0
CLL *e* 05 45 48.0
CLL *e*SS **SS 05 46 18.0 -1.6**
CLL Lm MLR 06 21 00.0
comp=N,1µm,21.5s
CLL Lm MLR 06 21 00.0
comp=E,2µm,20.4s
CLL Collm 100.11 321 *e*Pdiff **Pdif 05 27 57.1 +0.7**
WET Wettzell 100.18 318 *e*Pdiff **Pdif 05 27 56.1 +1.3**
RJOB Jochberg 100.22 317 *e*Pdiff **Pdif 05 27 57.4 +0.4**
NSS Namsos 100.34 334 *e*Pdif **Pdif 05 27 57.9 +0.9**
NSS *e*SKSac **SKSac 05 38 28.5 +0.8**
ABTA Abfaltersbach 100.40 316 *e*Pdiff **Pdif 05 27 59.0 +1.2**
comp=E,14nm,1.3s
ABTA *e*SKSac **SKSac 05 38 27.3 -1.7**
comp=E,14nm,1.5s
TANN Tannenbergstha 100.45 320 *e*Pdiff **Pdif 05 27 59.2 +1.2**
WERN Wernitzgruen 100.51 320 *e*Pdiff **Pdif 05 27 59.5 +1.3**
GUNZ Gunzen 100.54 320 *e*Pdiff **Pdif 05 27 59.2 +0.9**
ROTZ Rotzenmuhle 100.62 319 *e*Pdiff **Pdif 05 27 59.7 +1.0**
PLN Plauen 100.65 320 *e*Pdiff **Pdif 05 27 59.7 +1.0**
MANZ Manzenberg 100.68 319 *e*Pdiff **Pdif 05 28 00.7 +1.7**
NC602 NORSAR Array S 100.73 330 *e*Pdif **Pdif 05 27 58.9 0.0**
NC602 *e*SKSac **SKSac 05 38 30.2 +0.5**
NB2 NORSAR Subarra 100.87 331 P **Pdif 05 27 59.3 -0.3**
comp=Z,351nm,2.5s,baz=90,slow=5.3
NB2 NORSAR Subarra 100.87 331 P **Pdif 05 27 59.3 -0.3**
baz=90,slow=5.3
NOA NORSAR Array B 100.87 331 P **Pdif 05 27 59.3 -0.3**
comp=Z,17nm,0.9s,baz=89,slow=4.5,SNR=21
NEUB Neuenburg 100.88 321 *e*Pdiff **Pdif 05 28 00.7 +0.9**
CTI Castel Tesino 100.99 315 P **Pdif 05 28 01.4 +0.8**
CTI Castel Tesino 100.99 315 **Pdif 05 28 01.4 +0.8**
MOX Moxa 100.99 320 *e*Pdiff **Pdif 05 28 01.5 +1.2**
WATA Walderalm 101.04 317 *e*Pdiff **Pdif 05 28 01.0 +0.3**
comp=Z,24nm,1.3s
WATA SKSac **SKSac 05 38 31.8 -0.4**
comp=Z,17nm,1.6s
KDAK Kodiak Island 101.13 33 P **Pdif 05 28 01.4 +0.7**
KDAK Kodiak Island 101.13 33 **Pdif 05 28 01.4 +0.7**
OSL Oslo 101.17 329 *e*P **Pdif 05 28 01.3 +0.4**
GRF Grafenberg Arr 101.26 319 *e*Pdiff **Pdif 05 28 03.0 +1.5**
SQTA Sankt Quirin 101.29 317 *e*Pdiff **Pdif 05 28 02.2 +0.3**
comp=Z,17nm,1.2s
SQTA *e*SKSac **SKSac 05 38 32.4 -1.0**
comp=Z,19nm,1.3s
MOTA Moosalm 101.36 317 *e*Pdiff **Pdif 05 28 02.6 +0.3**
comp=Z,22nm,1.2s,SNR=5.5
MOTA *e*SKSac **SKSac 05 38 34.6 +0.8**
comp=Z,11nm,1.6s
ASSE Asse, Remlinge 101.55 322 *e*Pdiff **Pdif 05 28 03.7 +1.1**
RETA Reutte 101.59 317 *e*Pdiff **Pdif 05 28 03.8 +0.6**
comp=Z,23nm,1.4s
RETA SKSac **SKSac 05 38 34.7 0.0**
comp=Z,20nm,1.6s
FETA Feichten 101.62 316 *e*Pdiff **Pdif 05 28 04.2 +0.8**
comp=Z,20nm,1.7s
FETA *e*SKSac **SKSac 05 38 34.5 -0.6**
comp=Z,10nm,1.5s
BSEG Bad Segeberg 101.70 323 *e*Pdiff **Pdif 05 28 04.7 +1.4**
CLZ Clausthal 101.75 321 *e*Pdiff **Pdif 05 28 04.9 +1.2**
KONO Kongsberg 101.76 329 *e*Pdif **Pdif 05 28 04.1 +0.7**
DOMB Dombas 101.83 332 *e*Pdif **Pdif 05 28 04.3 +0.5**
DOMB *e*SS SS 05 46 46.1 +3.2
NRDL Niedersach Rie 101.88 322 *e*Pdiff **Pdif 05 28 05.7 +1.6**
FUORN Ofenpass-Fuorn 101.95 316 **Pdif 05 28 05.6 +0.6**
UBBA Unterbreizbach 102.01 320 *e*Pdiff **Pdif 05 28 05.8 +1.1**
DAVA Damuels 102.20 317 *e*Pdiff **Pdif 05 28 06.6 +0.7**
comp=Z,23nm,1.1s,SNR=7.5
DAVA *e*SKSac **SKSac 05 38 39.1 +1.3**
comp=Z,14nm,1.2s
SKAR Skarslia 102.32 330 *e*Pdif **Pdif 05 28 06.3 +0.3**
SKAR *e*SKSac **SKSac 05 38 34.3 -3.2**
RETH Rethem/Aller, 102.33 322 *e*Pdiff **Pdif 05 28 07.5 +1.4**
HOMB Homborsund 102.44 328 *e*SKSac **SKSac 05 38 36.6 -1.4**
STU Stuttgart 102.61 318 *e*Pdiff **Pdif 05 28 08.5 +1.0**
WRH Wood River Hil 102.68 26 **Pdif 05 28 07.8 +0.3**
NOR Nord 102.88 353 *i* P **Pdif 05 28 07.6 -0.5**
TNS Taunus Mts 103.03 320 *e*Pdiff **Pdif 05 28 10.7 +1.3**
ILAR Eielson Array 103.15 25 P **Pdif 05 28 08.7 -0.9**
ILAR 05 32 23.9
ILAR Eielson Array 103.15 25 P **Pdif 05 28 09.1 -0.5**
comp=Z,1.2nm,0.9s,baz=247,slow=3.7,SNR=16
ILAR PP **PP 05 32 23.9 -1.4**
comp=Z,1.4nm,0.9s,baz=289,slow=8.3,SNR=4.0
ILAR PKKPbc **PKKPbc 05 44 07.3 -0.6**
comp=Z,1.5nm,0.8s,baz=104,slow=2.2,SNR=6.1
ILAR PKKPab PKKPab 05 44 26.7
comp=Z,3.5nm,0.9s,baz=115,slow=2.0,SNR=7.5
ILAR Eielson Array 103.15 25 **Pdif 05 28 08.7 -0.9**
HDA Harding Lake 103.18 26 Pdiff **Pdif 05 28 10.4 +0.7**
baz=279
IBBN Ibbenburen 103.33 322 *e*Pdiff **Pdif 05 28 11.6 +0.9**
DAG Danmarks Havn 105.98 349 *i* P **Pdif 05 28 21.3 -0.6**
DAG pmax pmax
comp=Z,25nm,1.2s
DAG Danmarks Havn 105.98 349 *i* P **Pdif 05 28 21.3 -0.6**
comp=Z,25nm,1.2s
EPYK Eagle Plains 106.86 23 PKiKP **PKiKP 05 32 36.7 +1.2**
baz=289
TORD Torodi Ar. Bea 108.78 281 PKiKP **PKiKP 05 32 41.0 +0.4**
comp=Z,4.2nm,0.6s,baz=82,slow=1.4,SNR=22
TORD PKKPbc **PKKPbc 05 43 48.4 -0.6**
comp=Z,1.9nm,0.8s,baz=302,slow=3.7,SNR=7.5
TAOE Nuku Hiva Isla 108.88 102 *e*PP **PP 05 33 01.9 -7.1**
comp=Z,517nm,29.5s
TAOE *e*S **Sdif 05 40 24.2 -15**
comp=Z,5µm,31.8s
TAOE Nuku Hiva Isla 108.88 102 *e*LR LR 06 04 51.2
comp=Z,2µm,25.9s
C36M Paulatuk 109.88 18 PKiKP **PKiKP 05 32 43.5 +2.5**
baz=302
SUMG Summit 112.62 350 *i* PKiKP **PKiKP 05 32 46.6 -0.1**
SUMG Summit 112.62 350 *i* P **PKiKP 05 32 46.6 -0.1**
ESDC Sonseca Array 112.91 310 PKiKP **PKiKP 05 32 49.5 +1.7**
comp=Z,1.4nm,0.6s,baz=44,slow=2.0,SNR=8.4
ESDC PKKPab **PKKPab 05 43 44.6 +1.6**
comp=Z,1.9nm,0.6s,baz=274,slow=4.2,SNR=9.5
KIC Kosan Boka 114.52 273 *e*PKIKP **PKiKP 05 32 52.2 +0.7**
comp=Z,3.5nm,0.4s
KIC Kosan Boka 114.52 273 *e*PKP1 **PKKPab 05 43 36.6 0.0**
comp=Z,182nm,2.1s
PBRG Braganca 114.61 312 *e*P **PKKPbc 05 43 29.8 -0.8**
DBIC Dimbokro 114.67 274 PKP **PKiKP 05 32 52.2 +0.4**
comp=Z,7.5nm,0.5s,baz=58,slow=1.4,SNR=14
DBIC PKKPab **PKKPab 05 43 37.3 +1.4**
comp=Z,11nm,1.2s,baz=266,slow=5.6,SNR=5.3
LIC Lamto 114.79 273 *e*PKIKP **PKiKP 05 32 52.1 +0.1**
comp=Z,22nm,0.6s
LIC Lamto 114.79 273 *e*PKP1 **PKKPab 05 43 35.6 +0.2**
comp=Z,20nm,0.9s
TIC Toumodi 114.83 274 *e*PKIKP **PKiKP 05 32 52.7 +0.6**
TIC Toumodi 114.83 274 *e*PKP1 **PKKPab 05 43 36.3 +1.0**
MVO Moncorvo 114.95 312 *e*PP PP 05 34 00.0 +8.3
MVO *e*P **PKKPab 05 43 27.4 -6.6**
MVO Moncorvo 114.95 312 *e*LQ LQ 06 01 27.2
MVO Moncorvo 114.95 312 *e*LR LR 06 11 47.8
comp=Z,856nm,20.0s
PVRL Vila Real 115.44 312 *e*PKPdf **PKPdf 05 32 55.0 +2.4**
POLO Lamas de Olo 115.47 312 *e*P **PKKPdf 05 43 58.0 +6.0**
MTE Manteigas 115.49 311 *e*PKPdf **PKPdf 05 32 55.1 +2.4**
MTE Manteigas 115.49 311 *e*PP PP 05 33 53.9 -1.6
MTE *e*P PKKPdf 05 43 39.1 -13
MTE Manteigas 115.49 311 *e*LQ LQ 05 58 57.1
MTE Manteigas 115.49 311 *e*LR LR 06 11 44.0
comp=Z,1µm,20.0s
PCBR Castelo Branco 115.55 310 *e*PKPdf **PKPdf 05 32 55.1 +2.4**
PMRV Marv??o 115.56 310 *e*PP PP 05 33 59.5 +3.5
PMRV *e*P **PKKPdf 05 43 55.2 +3.5**
PMRV Marv??o 115.56 310 *e*LQ LQ 06 06 48.3
PMRV *e*LR LR 06 12 17.1
comp=Z,578nm,20.0s
PESTR Estremoz 115.82 309 *e*PP PP 05 34 00.6 +2.8
PESTR *e*P **PKKPdf 05 43 43.9 -7.3**
PESTR *e*SS SS 05 50 05.0 +13
PVAQ Vaqueiros 116.19 308 *e*PP PP 05 34 03.5 +3.1
PVAQ *e*P **PKKPdf 05 43 50.5 0.0**
PVAQ *e*SS SS 05 50 05.4 +8.1
PVAQ Vaqueiros 116.19 308 *e*LQ LQ 06 03 54.0
PVAQ *e*LR LR 06 12 05.8
comp=Z,766nm,18.0s
PBEJ Beja 116.19 308 *e*PKPdf **PKiKP 05 32 56.4 +2.3**
PMTG Montargil 116.27 310 *e*PP PP 05 33 57.2 -3.7

PMTG Montargil 116.27 310 eP PKKPdf 05 44 00.2 +10
PCAS Casmilo, Conde 116.28 311 ePKPdf PKiKP 05 32 56.5 +2.3
PCAS Casmilo, Conde 116.28 311 eP PKKPdf 05 43 38.8 -12
PTOM Tomar 116.30 310 ePKPdf PKiKP 05 32 57.0 +2.8
PBDV Barranco-do-Ve 116.39 308 ePP PP 05 33 54.5 -7.4
PCVE Castro Verde 116.40 308 ePP PP 05 34 04.6 +2.7
PCVE eP PKKPdf 05 43 42.4 -7.7
PNCL Nicolau / Gran 116.69 309 ePP PP 05 34 04.6 +0.7
PNCL eP PKKPdf 05 44 03.6 +14
MORF Marmelete 116.94 308 ePP PP 05 34 09.8 +4.1
YKA Yellowknife Ar 117.05 21 PKiKP PKiKP 05 32 55.0 0.0
YKA Yellowknife Ar 117.05 21 PKP PKiKP 05 32 55.0 0.0
comp=Z,23nm,0.8s,baz=314,slow=1.0,SNR=113
YKA pPKP pPKPdf 05 33 16.1 -3.3
comp=Z,14nm,0.6s,baz=327,slow=1.8,SNR=9.0
YKA PKKPbc PKKPbc 05 43 21.3 -1.4
comp=Z,1.1nm,0.6s,baz=122,slow=3.9,SNR=12
YKA SKKP 05 47 21.3
comp=Z,0.8nm,0.8s,baz=120,slow=5.4,SNR=4.7
PMAFR Mafra 117.10 310 eP PKKPdf 05 43 58.5 +10
PFVI Vila Bisbo 117.11 308 ePP PP 05 34 08.5 +1.6
PFVI eP PKKPdf 05 43 44.8 -3.9
SFJD Kangerlussuaq 119.55 351 i PKiKP PKiKP 05 32 59.7 0.0
SFJD Kangerlussuaq 119.55 351 iP PKiKP 05 32 59.7 0.0
SFJD Kangerlussuaq 119.55 351 iP PKPdf 05 33 00.0 +0.4
SFJD Kangerlussuaq 119.55 351 PKPdf 05 32 59.5 -0.1
D03D Eldon 120.83 39 P PKiKP 05 33 04.8 +2.0
baz=294
B05A Bryant 121.13 38 P PKiKP 05 33 04.8 +1.4
baz=296
D04E Lakebay 121.17 39 P PKiKP 05 33 06.5 +3.1
baz=294
F04D Rainier, OR 121.46 40 P PKiKP 05 33 07.1 +3.0
baz=294
E04D Cinebar 121.56 40 P PKiKP 05 33 05.1 +0.9
baz=294,SNR=10
G03D McMinnville, O 121.64 41 P PKiKP 05 33 07.2 +2.7
baz=293
D05A Enumclaw 121.65 39 PKiKP 05 33 05.1 +0.7
J01E Myrtle Point 121.96 44 P PKiKP 05 33 07.7 +2.6
baz=291
C06D Leavenworth 122.00 37 P PKiKP 05 33 06.3 +1.1
baz=296
I03D Drain, OR 122.16 43 P PKiKP 05 33 07.1 +1.6
baz=292
H04D Lebanon 122.25 42 P PKiKP 05 33 07.7 +2.0
baz=293,SNR=15
K02D Willamette Mer 122.31 44 P PKiKP 05 33 07.6 +1.6
baz=291,SNR=10
F05D White Salmon 122.53 40 P PKiKP 05 33 08.1 +1.8
baz=295
L02E Cave Junction 122.54 45 P PKiKP 05 33 08.2 +1.9
baz=291,SNR=9.4
H04A Detroit Lake 122.55 41 PKPdf 05 33 06.0 -0.1
I04A Tendick Farm, 122.75 42 P PKiKP 05 33 07.9 +1.1
baz=293,SNR=13
G05D Wamic, OR 122.89 41 P PKiKP 05 33 10.1 +3.1
baz=294
J04D Umpqua Nationa 123.17 43 P PKiKP 05 33 09.2 +1.4
baz=293,SNR=36
I05D Terrebonne, OR 123.25 42 P PKiKP 05 33 09.3 +1.6
baz=294,SNR=13
M02C Callahan 123.33 45 P PKiKP 05 33 09.8 +1.8
baz=291,SNR=24
L04D Klamath Falls 123.42 44 P PKiKP 05 33 09.3 +1.1
baz=292,SNR=20
N02D Trinity Center 123.59 46 P PKiKP 05 33 10.3 +1.8
baz=291,SNR=21
K04D Chiloquin, OR 123.64 44 P PKiKP 05 33 09.8 +1.2
baz=293,SNR=6.8
J05D Fort Rock, OR 123.74 43 P PKiKP 05 33 10.6 +1.7
baz=293,SNR=16
NRS Narsarsuaq 123.74 346 i PKiKP PKiKP 05 33 09.0 +0.9
NRS pmax pmax
comp=Z,89nm,0.8s
NRS Narsarsuaq 123.74 346 i P PKiKP 05 33 09.0 +0.9
comp=Z,89nm,0.8s
O02D Mt. Diablo Mer 123.80 47 P PKiKP 05 33 10.9 +1.9
baz=290,SNR=17
WDC Whiskeytown Da 123.84 46 PKiKP PKiKP 05 33 09.3 +0.4
WDC Whiskeytown Da 123.84 46 PKiKP 05 33 09.3 +0.4
M04C Macdoel 123.90 44 P PKiKP 05 33 10.6 +1.4
baz=292,SNR=11
NEW Newport 124.07 36 P PKiKP 05 33 10.5 +1.2
baz=300
O03E Paynes Creek 124.47 46 P PKiKP 05 33 11.1 +0.8
baz=291,SNR=17
PMOZ Porto Moniz, M 124.75 304 ePP PP 05 35 01.0 +1.8
ORV Oroville 124.95 47 PKiKP PKiKP 05 33 11.6 +0.4
ORV Oroville 124.95 47 PKiKP 05 33 11.6 +0.4
BEKR Beckworth 125.66 46 PKiKP 05 33 14.1 +1.3
MSO Missoula 126.66 36 PKiKP 05 33 15.0 +0.4
MSO Missoula 126.66 36 P PKiKP 05 33 15.2 +0.6
baz=302
FFC Flin Flon 127.20 22 PKiKP PKiKP 05 33 15.3 +0.1
FFC Flin Flon 127.20 22 PKiKP 05 33 15.3 +0.1
SMMC Simmler 127.52 51 P PKiKP 05 33 18.5 +2.1
baz=289,SNR=8.1
MLAC Mammoth, Mammot 127.59 48 P PKiKP 05 33 18.3 +1.5
baz=292
VOG Valley Oaks Go 127.65 50 P PKiKP 05 33 18.2 +1.5
baz=290
NVAR Mina Array Bea 127.68 47 PKhKP PKPpre 05 33 05.7
comp=Z,1.3nm,0.7s,baz=251,slow=1.6,SNR=7.7
NVAR PKP PKiKP 05 33 17.8 +0.8
comp=Z,13nm,0.7s,baz=251,slow=2.4,SNR=43
NVAR PP PP 05 35 14.5 -4.0
comp=Z,8.3nm,1.0s,baz=274,slow=6.3,SNR=4.3
NVAR SKKPbc SKKPbc 05 46 22.9 -3.7
comp=Z,1.0nm,0.7s,baz=98,slow=4.4,SNR=4.6
NVAR Mina Array Bea 127.68 47 PKPpre 05 33 05.0
NVAR PKiKP 05 33 17.6 +0.6
NV11 Mina Array Sit 127.79 47 PKiKP 05 33 18.1 +1.0
PKM Mcpherson Peak 127.80 52 P PKiKP 05 33 19.4 +2.1
baz=289,SNR=16
SBC Santa Barbara 128.02 52 P PKiKP 05 33 19.4 +2.0
baz=289
VES Vestal, Richgr 128.04 50 P PKiKP 05 33 18.5 +1.0
baz=290,SNR=12
SCZ2 Santa Cruz Isl 128.22 53 P PKiKP 05 33 19.4 +1.5
baz=288
TIN Tinemaha, Big 128.25 49 P PKiKP 05 33 20.2 +2.2
baz=292,SNR=6.1
EGMT Eagleton 128.31 33 P PKiKP 05 33 18.4 +0.7
baz=308
ARVC Arvin 128.48 51 P PKiKP 05 33 19.5 +1.2
baz=290,SNR=7.5
SNCC San Nicolas Is 128.54 54 P PKiKP 05 33 19.9 +1.3
baz=288
ISA Isabella, Lake 128.57 50 P PKiKP 05 33 20.5 +1.9
baz=291,SNR=10
CWC Cottonwood Cre 128.59 49 P PKiKP 05 33 20.1 +1.3
baz=292
BLG Laguna Peak, P 128.63 52 P PKiKP 05 33 19.8 +1.1
baz=289
GRAC Grapevine Rang 128.91 48 P PKiKP 05 33 20.8 +1.6
baz=292,SNR=13
DECC Green Verdugo 129.16 52 P PKiKP 05 33 21.6 +1.8
baz=290
MPMC Manual Prospec 129.17 50 P PKiKP 05 33 21.6 +1.6
baz=292,SNR=28
EDW2 Edwards Air Fo 129.21 51 P PKiKP 05 33 21.2 +1.3
baz=290,SNR=22
LRMC Laurel Mtn Rad 129.24 50 P PKiKP 05 33 21.6 +1.6
baz=291,SNR=12
CIS Catalina Islan 129.37 53 P PKiKP 05 33 21.4 +1.2
baz=289
SCI2 San Clemente I 129.40 54 P PKiKP 05 33 22.0 +1.7
baz=288
FURC Furnace Creek, 129.49 49 P PKiKP 05 33 22.2 +1.8
baz=292,SNR=13
R11A Troy Canyon, C 129.67 46 PKiKP 05 33 22.5 +1.6
R11A Troy Canyon, C 129.67 46 P PKiKP 05 33 22.5 +1.6
baz=295,SNR=45
BFSC Mount Baldy Ra 129.69 52 P PKiKP 05 33 21.7 +0.7
baz=290,SNR=12
TPNV Topopah Spring 129.76 48 P PKiKP 05 33 22.1 +1.0
baz=293,SNR=19
H17A Grant Village 129.97 37 P PKiKP 05 33 23.6 +2.2
baz=304
GSC Goldstone, Bar 129.97 50 P PKiKP 05 33 23.0 +1.6
baz=292,SNR=21
RRX Edison Barstow 129.98 51 P PKiKP 05 33 22.9 +1.5
baz=291
SHOC Shoshone, Teco 130.15 49 P PKiKP 05 33 23.5 +1.8
baz=293,SNR=18

BGU Big Grassy Mou 130.25 42 PKPdf 05 33 20.6 -0.6
BBRC Big Bear Solar 130.25 51 P PKiKP 05 33 23.4 +1.1
baz=291
MURC Murrieta 130.27 52 P PKiKP 05 33 23.1 +1.0
baz=290
RLMT Red Lodge 130.31 35 P PKiKP 05 33 23.1 +1.0
baz=306
HEC Hector,Ludlow 130.50 51 P PKiKP 05 33 24.0 +1.4
baz=292
AHID Auburn Hatcher 130.54 39 PKiKP 05 33 23.5 +0.9
109C Camp Elliot, M 130.58 53 P PKiKP 05 33 24.0 +1.3
baz=290
TUQ Turquoise Moun 130.59 50 P PKiKP 05 33 23.9 +1.1
baz=292,SNR=7.0
DUG Dugway, Tooele 130.75 43 P PKiKP 05 33 23.8 +0.9
baz=299
DGMT Dagmar 130.83 29 P PKiKP 05 33 23.1 +0.3
baz=314
PFO Pinyon Flats O 130.84 52 PKIKP PKPdf 05 33 22.7 +0.3
PFO Pinyon Flats O 130.84 52 PKPdf 05 33 22.7 +0.3
PFO Pinyon Flats O 130.84 52 P PKiKP 05 33 24.6 +1.3
baz=291,SNR=12
XPFO Pion Flat 130.84 52 PKiKP 05 33 23.8 +0.5
TPFO Pinon Flats 130.85 52 P PKiKP 05 33 24.8 +1.4
baz=291,SNR=11
LAO LASA Array 131.01 32 PKiKP 05 33 23.7 +0.5
LAO LASA Array 131.01 32 P PKiKP 05 33 24.4 +1.2
baz=310
GMRC Granite Mounta 131.03 50 P PKiKP 05 33 25.4 +1.7
baz=292,SNR=30
BELC Belle Mtn. Jos 131.06 51 P PKiKP 05 33 24.9 +1.1
baz=291,SNR=14
MONP2 Monument Peak 131.12 53 P PKiKP 05 33 25.1 +1.1
baz=290
IKP In-Ko-Pah, Jac 131.45 53 P PKiKP 05 33 26.0 +1.5
baz=290
PLCA Paso Flores 131.47 180 PKhKP PKPpre 05 33 10.7
comp=Z,1.0nm,0.9s,baz=282,slow=1.0,SNR=3.0
PLCA PKP PKiKP 05 33 25.1 +0.7
comp=Z,30nm,1.3s,baz=318,slow=1.2,SNR=14
PLCA SKPbc SKPab 05 36 42.9 +1.5
comp=Z,17nm,1.1s,baz=184,slow=3.5,SNR=12
PLCA Paso Flores 131.47 180 eP PKiKP 05 33 25.7 +1.4
BW06 Boulder Array 131.49 38 P PKiKP 05 33 24.5 0.0
baz=304
PDAR Pinedale Array 131.49 38 PKhKP PKPpre 05 33 09.1
comp=Z,0.7nm,0.7s,baz=122,slow=1.1,SNR=6.3
PDAR PKP PKPdf 05 33 21.9 -1.7
comp=Z,2.8nm,0.5s,baz=102,slow=1.3,SNR=15
PDAR SKPbc SKPab 05 36 41.6 -0.1
comp=Z,9.7nm,0.7s,baz=209,slow=0.3,SNR=18
BC3 Big Chuckawall 131.61 52 P PKiKP 05 33 25.7 +0.8
baz=292,SNR=8.2
MPU Maple Canyon 131.63 42 PKiKP 05 33 25.2 +0.4
IRM Iron Mountain 131.66 51 P PKiKP 05 33 26.4 +1.5
baz=292,SNR=17
NEE2 Needles Airpor 131.83 50 P PKiKP 05 33 26.0 +0.9
baz=293,SNR=6.6
W13A Hualapai Mount 132.25 49 PKPpre 05 33 14.9
W13A PKiKP 05 33 27.5 +1.2
Y12C Blythe 132.29 51 P PKiKP 05 33 26.9 +0.9
baz=292,SNR=10.0
GLA Glamis 132.32 52 PKHKP PKPpre 05 33 14.1
GLA Glamis 132.32 52 PKPpre 05 33 14.1
PDMCI Parker Dam,Lak 132.38 50 P PKiKP 05 33 27.3 +1.1
baz=293,SNR=9.3
RDMU Red Mountain 132.69 40 PKiKP 05 33 26.6 -0.4
ULM Lac du Bonnet 133.03 22 PKhKP PKPpre 05 33 09.9
comp=Z,1.7nm,0.6s,baz=36,slow=6.4,SNR=4.2
ULM PKP PKiKP 05 33 26.8 -0.2
comp=Z,23nm,0.8s,baz=338,slow=2.3,SNR=20
ULM SKPbc SKPab 05 36 46.8 -0.9
comp=Z,32nm,0.8s,baz=335,slow=4.2,SNR=15
ULM Lac du Bonnet 133.03 22 PKPpre 05 33 13.5
ULM PKPdf 05 33 26.0 +0.1
SCHQ Schefferville 133.23 357 PKhKP PKPpre 05 33 12.7
comp=Z,3.1nm,0.9s,baz=333,slow=3.4,SNR=3.8
SCHQ PKP PKiKP 05 33 27.3 -0.1
comp=Z,34nm,0.8s,baz=19,slow=1.4,SNR=39
SCHQ SKPbc SKPab 05 36 47.7 -0.7
comp=Z,18nm,0.6s,baz=23,slow=3.3,SNR=10
SCHQ Schefferville 133.23 357 PKPdf 05 33 26.7 +0.5
K22A Casper 133.38 36 P PKiKP 05 33 27.7 -0.5
baz=307
MDND Maddock 133.40 27 P PKiKP 05 33 27.5 -0.5
baz=319
O20A White River Ci 133.78 40 PKPdf PKiKP 05 33 28.7 -0.4
O20A White River Ci 133.78 40 P PKiKP 05 33 28.9 -0.2
baz=304,SNR=22
RSSD Black Hills 133.85 33 PKHKP PKPpre 05 33 15.2
RSSD 05 33 28.9
RSSD Black Hills 133.85 33 PKPpre 05 33 15.2
RSSD PKiKP 05 33 28.9 -0.4
RSSD Black Hills 133.85 33 P PKPdf 05 33 28.6 +0.6
baz=311
WUAZ Wupatki 133.93 47 P PKiKP 05 33 30.1 +0.5
baz=297,SNR=7.0
214A Organ Pipe Nat 134.30 53 P PKiKP 05 33 30.8 +0.6
baz=292
N23A Red Feather La 134.78 38 P PKiKP 05 33 30.9 -0.4
baz=307
MVCO Mesa Verde 135.16 44 P PKiKP 05 33 32.7 +0.6
baz=301
OGAUY Aigu 135.19 199 eP PKiKP 05 33 31.5 -0.5
W18A Petrified Fore 135.31 47 PKPpre 05 33 21.3
W18A PKPdf PKiKP 05 33 35.2 +2.7
W18A Petrified Fore 135.31 47 P PKiKP 05 33 32.8 +0.4
baz=298,SNR=5.9
LPA La Plata 135.59 195 PKIKP PKPdf 05 33 22.7 -8.5
LPA PP PP 05 36 04.0 -3.8
LPA pPP 05 36 22.3
LPA SKP 05 36 55.3
LPA PPP PPP 05 39 09.8
LPA SDIFF 05 44 17.8
LPA PS PS 05 46 28.0 -4.4
LPA SS SS 05 53 58.6 +1.3
ISCO Idaho Springs 135.63 39 P PKiKP 05 33 32.6 -0.5
baz=306
TUC Tucson 135.75 51 PKHKP PKPpre 05 33 21.0
TUC 05 33 33.9
TUC Tucson 135.75 51 PKPpre 05 33 21.0
TUC PKPdf PKiKP 05 33 33.9 +0.6
TUC Tucson 135.75 51 P PKiKP 05 33 33.5 +0.2
baz=294
S22A 4UR Ranch, Cre 136.01 42 P PKiKP 05 33 34.3 +0.4
baz=303
SUSD Miller 136.24 29 PKPpre PKPpre 05 33 20.0
SUSD PKiKP 05 33 33.1 -0.7
Q24A Divide 136.41 40 P PKiKP 05 33 34.3 -0.4
baz=306
EYMN Ely 136.52 20 P PKPdf 05 33 33.2 +0.7
baz=329
SDCO Great Sand Dun 136.88 41 P PKiKP 05 33 35.4 -0.3
baz=304
OGNE Ogallala 137.06 35 P PKPdf 05 33 34.5 +0.7
baz=311
PLTB Pedras Altas 137.15 202 eP PKPdf 05 33 34.9 +0.7
ANMO Albuquerque 137.74 45 PKHKP PKPpre 05 33 26.1
ANMO Albuquerque 137.74 45 PKPpre 05 33 26.1
ANMO Albuquerque 137.74 45 P PKiKP 05 33 37.2 -0.2
baz=301
ECSD EROS Data Cent 137.89 28 PKPpre 05 33 25.3
ECSD PKPdf 05 33 33.1 -2.1
ECSD EROS Data Cent 137.89 28 P PKPdf 05 33 36.1 +0.9
baz=320
121A Cookes Peak, D 137.94 49 PKPpre 05 33 26.6
121A Cookes Peak, D 137.94 49 P PKiKP 05 33 37.8 0.0
baz=297,SNR=6.5
T25A Trinidad 137.94 41 P PKiKP 05 33 37.2 -0.6
baz=305
KSCO Kaye Shedlock' 137.95 38 P PKiKP 05 33 36.9 -0.7
baz=309
MATQ Matagami 138.03 7 P PKPdf 05 33 35.7 +0.5
baz=350
SPMN Marine on St. 138.34 24 P PKiKP 05 33 37.4 -0.6
baz=326
LSQQ Lebel-sur-Quev 138.79 6 P PKiKP 05 33 39.0 +0.2
baz=351
BGNE Belgrade 138.86 32 P PKPdf 05 33 37.6 +0.6
baz=316
PEL Peldehue 139.04 180 PKIKP PKPdf 05 33 38.2 +0.5
PEL Peldehue 139.04 180 PKPdf 05 33 38.1 +0.5
G40A Rib Lake 139.28 21 PKPpre 05 33 28.5
G40A PKPdf PKiKP 05 33 39.0 -1.0
E44A Grand Marais A 139.43 16 P PKiKP 05 33 39.3 -0.9
baz=337

D46A Sault St. Mari 139.66 14 P PKPdf 05 33 39.3 +1.0
baz=340
D47A Chapleau 139.72 13 P PKiKP 05 33 40.2 -0.6
baz=341
ESAR Angra dos Reis 139.78 219 eP PKPdf 05 33 40.1 +0.9
CBKS Cedar Bluff 139.79 36 P PKiKP 05 33 40.8 -0.5
baz=312
D48A Paudash Townsh 139.89 12 P PKPdf 05 33 39.8 +1.1
baz=343
MNTX Cornudas Mount 140.13 49 PKPpre 05 33 32.2
MNTX Cornudas Mount 140.13 49 P PKiKP 05 33 41.9 -0.2
baz=299
E47A Iron Bridge 140.25 14 P PKiKP 05 33 40.9 -1.0
baz=340
D50A G1974 Best Tow 140.25 10 P PKiKP 05 33 41.4 -0.5
baz=346
PARB Paraibuna 140.28 218 eP PKPdf 05 33 41.3 +1.1
F45A CMU Biological 140.40 16 P PKiKP 05 33 42.1 -0.1
baz=337
D51A Lot 18 Range I 140.41 9 P PKiKP 05 33 41.3 -0.9
baz=347
E48A Lockeyer 140.47 12 P PKiKP 05 33 41.4 -0.9
baz=342
SJMB Sao Joao De Ma 140.52 227 eP PKPdf 05 33 41.3 +0.6
ITAB Concordia 140.55 207 eP PKPdf 05 33 39.7 -0.9
D52A ZEK Kipawa Sen 140.66 8 P PKiKP 05 33 41.8 -0.9
baz=348
D54A Lac Fusel, La 140.71 6 P PKiKP 05 33 41.9 -0.9
baz=351
LATQ La Tuque 140.76 2 P PKiKP 05 33 42.7 -0.2
baz=357,SNR=9.7
MSTX Muleshoe 140.83 44 P PKiKP 05 33 43.2 -0.4
baz=304,SNR=10
SCIA State Center 140.87 27 P PKPdf 05 33 41.8 +1.1
baz=323
D55A Sainte-Anne-du 140.96 5 P PKiKP 05 33 43.1 -0.2
baz=353,SNR=11
D61A St Aubert, Com 140.98 359 P PKiKP 05 33 42.2 -1.1
baz=0.9,SNR=8.8
D56A ZEC Mazanza, M 140.99 4 P PKiKP 05 33 43.1 -0.3
baz=354,SNR=7.8
F48A Evansville 141.00 13 P PKiKP 05 33 43.2 -0.2
baz=341
D58A Chemin du LacG 141.05 2 P PKPdf 05 33 42.0 +1.2
baz=357,SNR=10.0
AMTX Amarillo 141.05 42 P PKiKP 05 33 44.1 0.0
baz=306
D62A Allapoint, All 141.07 358 P PKiKP 05 33 43.3 -0.2
baz=2.6,SNR=8.8
D57A Chemin Vers le 141.07 3 P PKiKP 05 33 43.2 -0.4
baz=355
D63A Stockholm 141.08 357 P PKiKP 05 33 43.0 -0.5
baz=4.1
SPB Sao Paulo 141.15 215 eP PKPdf 05 33 42.2 +0.5
D59A Saint-Raymond 141.17 1 P PKiKP 05 33 43.6 -0.2
baz=358
F49A Sandfield 141.18 13 P PKiKP 05 33 43.7 -0.1
baz=342
D60A Saint Jean D'O 141.27 0 P PKiKP 05 33 43.4 -0.5
baz=360
JFWS Jewell Farm 141.28 23 P PKiKP 05 33 43.3 -0.8
baz=328
G47A Hillman 141.31 15 P PKiKP 05 33 44.4 +0.3
baz=339
VAO Valinhos 141.33 217 eP PKPdf 05 33 43.1 +0.9
E53A Dumoine, Ponti 141.35 8 P PKiKP 05 33 44.0 -0.1
baz=349
E54A Lac Daplat, Po 141.35 7 P PKiKP 05 33 43.4 -0.7
baz=350
NBAN Anadia - AL 141.39 244 eP PKPdf 05 33 43.1 +0.7
GLMI Grayling 141.44 16 P PKiKP 05 33 44.4 0.0
baz=338
PQI Presque Isle 141.44 357 PKPpre 05 33 35.4
PQI PKPdf 05 33 42.6 +1.1
F51A Arnstein 141.44 10 P PKiKP 05 33 44.1 -0.3
baz=345
NBIT Itapeh - BA 141.44 234 eP PKiKP 05 33 44.1 -1.1
BSCB Bom Sucesso 141.46 221 eP PKPdf 05 33 43.1 +0.6
E55A Montcerf-Lytto 141.46 6 P PKiKP 05 33 44.1 -0.3
baz=352
E56A St. Veronique 141.47 5 P PKiKP 05 33 44.0 -0.3
baz=353,SNR=15
H46A Fife Lake 141.54 17 P PKiKP 05 33 44.1 -0.5
baz=337
E57A Chemin Saint G 141.66 4 P PKiKP 05 33 44.0 -0.8
baz=355,SNR=9.4
F52A Sundridge 141.67 10 P PKiKP 05 33 43.8 -1.1
baz=346
E59A St. Maurice 141.67 2 P PKiKP 05 33 44.0 -0.8
baz=357
E64A Bridgewater 141.68 357 P PKiKP 05 33 44.5 -0.3
baz=4.6
E63A Oxbow 141.71 357 P PKiKP 05 33 44.3 -0.5
baz=3.7
ALGO Algonquin Park 141.71 8 P PKiKP 05 33 44.2 -0.7
baz=348
E58A La Victoria 141.75 3 P PKiKP 05 33 44.6 -0.3
baz=356
E61A Lac Etchemin 141.75 360 P PKiKP 05 33 45.1 +0.1
baz=0.4
H47A Mio 141.76 16 P PKiKP 05 33 45.0 0.0
baz=338
NBPV Pedro Velho 141.81 249 eP PKPdf 05 33 44.1 +1.0
E60A Ste Agathe de 141.81 1 P PKPdf 05 33 43.3 +1.2
baz=359
I46A Reed City 142.02 17 P PKiKP 05 33 38.3 -4.3
baz=336
F55A Otter Lake 142.04 6 P PKPdf 05 33 38.2 -4.4
baz=351
NBLA Lagarto - SE 142.12 241 eP PKPdf 05 33 44.1 +0.5
F60A Warwick 142.20 1 P PKPdf 05 33 38.8 -4.1
baz=358,SNR=15
F61A St Evariste 142.21 0 P PKPdf 05 33 39.4 -3.5
baz=360,SNR=12
I47A Gladwin 142.21 16 P PKPdf 05 33 39.6 -3.4
baz=338
F57A Harrington 142.22 4 P PKPdf 05 33 39.3 -3.7
baz=354
F58A St-Lin Laurent 142.23 3 P PKPdf 05 33 39.4 -3.5
baz=355
G54A Lake Saint Pet 142.25 8 P PKPdf 05 33 38.9 -4.1
baz=348
F64A Sherman 142.26 357 P PKPdf 05 33 38.9 -4.1
baz=3.8,SNR=11
I48A Sherman Twp 142.27 15 P PKPdf 05 33 39.8 -3.3
baz=339
L42A Oliver, Polo 142.28 23 PKPpre 05 33 38.2
F59A Saint Guilaume 142.29 2 P PKPdf 05 33 39.7 -3.3
baz=357
G53A Haliburton 142.44 9 P PKPdf 05 33 39.7 -3.6
baz=347
F63A Nahmakanta, Br 142.45 358 P PKPdf 05 33 40.3 -3.1
baz=2.6,SNR=9.9
J46A Howard City 142.50 18 P PKPdf 05 33 40.5 -3.0
baz=335
FRTB Fartura 142.53 213 eP PKPdf 05 33 45.3 +1.1
TXAR Lajitas Array 142.55 51 PKhKP PKPpre 05 33 40.4
comp=Z,16nm,0.6s,baz=216,slow=2.4,SNR=88
TXAR PKP PKPdf 05 33 42.9 -1.2
comp=Z,16nm,0.6s,baz=245,slow=1.9,SNR=92
TXAR SKPbc SKiKP 05 37 16.6 +0.8
comp=Z,6.4nm,0.6s,baz=328,slow=1.4,SNR=4.5
G55A Calabogie 142.57 7 P PKPdf 05 33 40.4 -3.1
RCBR Riachuelo 142.59 249 PKIKP PKPdf 05 33 41.5 -3.1
RCBR Riachuelo 142.59 249 eP PKPdf 05 33 45.6 +1.0
RCBR Riachuelo 142.59 249 PKPdf 05 33 41.5 -3.1
PTGB Pitanga 142.68 209 eP PKPdf 05 33 44.7 +0.2
H52A Wyevale 142.69 11 P PKPdf 05 33 40.6 -3.2
baz=345
I49A Point Hope 142.73 14 P PKPdf 05 33 41.3 -2.6
baz=340
L44A Lake County Fo 142.79 21 P PKPdf 05 33 41.4 -2.6
baz=331
J47A Sumner 142.84 17 P PKPdf 05 33 41.7 -2.4
baz=337
G65A Princeton 142.88 356 P PKPdf 05 33 41.2 -2.9
baz=5.2
G64A Maxfield 142.89 358 P PKPdf 05 33 41.2 -2.9
baz=3.2,SNR=22
G61A St-Isidore-de- 142.90 1 P PKPdf 05 33 40.7 -3.4
baz=359,SNR=17
PKME Peaks-Kenny Pk 142.90 358 P PKPdf 05 33 41.3 -2.9
baz=2.4,SNR=18
G57A Newington 142.90 5 P PKPdf 05 33 41.1 -3.0
baz=353,SNR=12
G58A Ormstown 142.93 4 P PKPdf 05 33 41.4 -2.8

baz=355,SNR=9.3
NBLI Livramento-PB 142.96 246 eP PKPdf 05 33 46.3 +1.1
G62A West of Eustis 142.97 360 P PKPdf 05 33 41.8 -2.5
baz=0.3,SNR=15
H53A Bobcaygeon 142.98 9 P PKPdf 05 33 41.5 -2.8
baz=347
WMOK Wichita Mounta 143.03 40 P PKPbc 05 33 42.3 +0.5
baz=310,SNR=121
G59A Clarenceville 143.04 3 P PKPbc 05 33 42.1 +0.7
baz=356
K46A Dorr 143.05 19 P PKPbc 05 33 41.9 +0.4
baz=335
G63A Kingsbury 143.06 359 P PKPbc 05 33 42.0 +0.5
baz=1.8,SNR=13
G60A Masonville 143.06 2 P PKPbc 05 33 41.1 -0.4
baz=357,SNR=6.8
J48A Bridge Port 143.08 16 P PKPbc 05 33 42.3 +0.8
baz=338
I52A Shelburne 143.19 11 P PKPbc 05 33 42.5 +0.7
baz=344
J49A Marlette 143.19 15 P PKPbc 05 33 42.4 +0.6
baz=339
H55A Tweed 143.21 8 P PKPbc 05 33 42.2 +0.4
baz=349,SNR=11
NBTA Tacaratu-PE 143.22 243 eP PKPdf 05 33 45.7 +0.1
I51A Listowel 143.27 12 P PKPbc 05 33 42.5 +0.5
baz=343
H66A Whiting 143.27 356 P PKPbc 05 33 42.3 +0.3
baz=5.7
H56A Elgin 143.28 7 P PKPbc 05 33 41.8 -0.2
baz=351,SNR=9.6
K47A Vermontville 143.31 18 P PKPbc 05 33 42.3 +0.1
baz=336
LONY Lake Ozonia 143.41 5 P PKPbc 05 33 42.5 +0.1
baz=354,SNR=7.8
CPUP Villa Florida 143.42 200 PKhKP PKPpre 05 33 43.2
comp=Z,14nm,0.5s,baz=157,slow=2.0,SNR=43
CPUP Villa Florida 143.42 200 eP PKPdf 05 33 46.2 +0.5
H65A Eastbrook 143.42 357 P PKPbc 05 33 42.9 +0.4
baz=4.1
K48A Perry 143.44 17 P PKPbc 05 33 43.5 +0.9
baz=338,SNR=22
H59A Cadyville 143.45 3 P PKPbc 05 33 42.6 0.0
baz=355,SNR=21
I55A Frankford 143.47 8 P PKPbc 05 33 43.0 +0.4
baz=348,SNR=5.2
L46A Eue Claire 143.49 20 P PKPbc 05 33 43.2 +0.5
baz=334,SNR=5.5
H57A Richville 143.50 6 P PKPbc 05 33 42.6 -0.1
baz=352,SNR=14
H63A New Sharon 143.52 359 P PKPbc 05 33 42.8 +0.2
baz=1.2,SNR=28
H64A Troy 143.52 358 P PKPbc 05 33 42.6 -0.1
baz=2.5,SNR=10
I53A Kortright Cn E 143.54 11 P PKPbc 05 33 42.9 +0.1
baz=345
FNO Franklin 143.55 38 PKPdf 05 33 44.5 -1.2
H60A Morristown 143.59 2 P PKPbc 05 33 43.5 +0.6
baz=357,SNR=21
H62A Milan 143.61 0 P PKPbc 05 33 43.4 +0.4
baz=359,SNR=17
H61A Lyndonville 143.64 1 P PKPbc 05 33 43.8 +0.7
baz=358,SNR=29
H58A Gabriels 143.65 4 P PKPbc 05 33 42.9 -0.2
baz=354,SNR=29
K49A Clarkson 143.65 16 P PKPbc 05 33 43.3 +0.2
baz=338,SNR=19
HDIL Hopedale 143.66 24 P PKPbc 05 33 43.5 +0.3
baz=328,SNR=19
NBPA Parau_RN 143.73 249 eP PKPdf 05 33 47.5 +1.0
BB19B Bebedouro 143.74 217 eP PKPdf 05 33 46.5 +0.1
ABTX Abilene, Hawle 143.75 44 P PKPbc 05 33 44.8 +0.9
baz=306,SNR=46
K50A Casco 143.87 15 P PKPbc 05 33 44.2 +0.4
baz=340,SNR=21
L47A Sherwood 143.88 18 P PKPbc 05 33 44.1 +0.2
baz=335,SNR=17
J52A Paris 143.92 12 P PKPbc 05 33 44.3 +0.3
baz=344,SNR=16
LBNH Lisbon 143.93 1 PKIKP PKPdf 05 33 45.1 -0.9
LBNH Lisbon 143.93 1 PKPdf 05 33 45.1 -0.9
LBNH Lisbon 143.93 1 P PKPbc 05 33 44.5 +0.5
baz=358,SNR=22
I57A Carthage 143.99 6 P PKPbc 05 33 44.2 0.0
baz=352,SNR=15
TUL1 Leonard 144.07 36 P PKPbc 05 33 45.3 +0.7
baz=315,SNR=68
I63A Otisfield 144.13 360 P PKPbc 05 33 45.1 +0.6
baz=0.3,SNR=43
L48A N Adams 144.14 17 P PKPbc 05 33 45.2 +0.5
baz=336,SNR=73
L49A Milan 144.18 17 P PKPbc 05 33 45.6 +0.8
baz=338,SNR=88
K51A Iona Station 144.19 14 P PKPbc 05 33 45.5 +0.7
baz=342,SNR=43
I61A Oroboro, Fairl 144.23 2 P PKPdf 05 33 45.9 -0.7
baz=358,SNR=25
J54A Appleton 144.24 10 P PKPbc 05 33 45.3 +0.4
baz=347,SNR=17
NBPN Ponto Novo - B 144.25 239 eP PKPdf 05 33 48.4 +1.0
I64A Boothbay 144.25 359 P PKPbc 05 33 45.2 +0.4
baz=1.9,SNR=21
I60A Shoreham 144.27 3 P PKPdf 05 33 45.8 -0.7
baz=356,SNR=51
M47A Cromwell 144.30 19 P PKPdf 05 33 46.1 -0.7
baz=334,SNR=26
PMNB Patos De Minas 144.30 222 eP PKPdf 05 33 48.1 +0.6
I62A Tamworth 144.31 1 PKPbc 05 33 45.6 +0.5
I62A Tamworth 144.31 1 P PKPbc 05 33 45.6 +0.5
baz=359,SNR=35
K52A Tillsonburg 144.31 13 P PKPdf 05 33 46.1 -0.6
baz=343,SNR=42
J55A Hilton 144.38 9 P PKPbc 05 33 45.9 +0.6
baz=348,SNR=15
M48A Edgerton 144.48 18 P PKPdf 05 33 46.4 -0.6
baz=336,SNR=34
J57A Williamstown 144.48 7 P PKPdf 05 33 46.3 -0.6
baz=351,SNR=41
J56A Wolcott 144.50 8 PKPbc 05 33 46.1 +0.4
J56A Wolcott 144.50 8 P PKPbc 05 33 46.0 +0.3
baz=350,SNR=15
L50A Kingsville 144.51 16 P PKPbc 05 33 46.3 +0.5
baz=339,SNR=100
J59A Piesco 144.57 5 P PKPdf 05 33 46.8 -0.4
baz=354,SNR=62
TRCB Terra Rica 144.57 210 eP PKPbc 05 33 46.6 0.0
J58A Remsen 144.60 6 P PKPbc 05 33 46.6 +0.5
baz=352,SNR=49
NBMA Muriti-CE 144.60 245 eP PKPab 05 33 46.6 -0.2
SFIN Lafayette 144.66 22 P PKPdf 05 33 47.1 -0.3
baz=331,SNR=30
N47A Urbana 144.71 20 PKPbc 05 33 46.8 +0.3
N47A Urbana 144.71 20 P PKPbc 05 33 46.9 +0.4
baz=334,SNR=104
M49A Liberty Center 144.71 17 P PKPdf 05 33 47.0 -0.5
baz=337,SNR=64
J61A Chester 144.80 2 P PKPdf 05 33 47.7 +0.2
baz=357,SNR=93
PCMB Pacaembu 144.85 213 eP PKPab 05 33 46.8 -0.7
JCT Junction City 144.86 47 P PKPdf 05 33 48.8 +0.7
baz=304
CCM Cathedral Cave 144.86 29 PKIKP PKPab 05 33 46.9 -0.1
CCM Cathedral Cave 144.86 29 PKPab 05 33 46.9 -0.1
CCM Cathedral Cave 144.86 29 P PKPdf 05 33 47.6 -0.2
baz=323
J60A Lant Hill Farm 144.86 3 P PKPdf 05 33 47.5 -0.1
baz=355,SNR=71
K55A Perry 144.86 9 P PKPbc 05 33 47.3 +0.4
baz=347,SNR=70
K54A Basiliko Farm, 144.87 10 P PKPdf 05 33 47.4 -0.4
baz=346,SNR=96
J63A Strafford 144.90 0 P PKPdf 05 33 47.8 +0.1
baz=359,SNR=26
J62A Henniker 144.94 1 P PKPdf 05 33 47.9 +0.1
baz=358,SNR=41
N48A Decatur 144.95 19 P PKPdf 05 33 47.7 -0.2
baz=335,SNR=139
ANIG Ahuacatlan 144.97 65 PKPbc 05 33 46.5 -1.5
K56A Middlesex 145.01 8 P PKPab 05 33 47.6 +0.2
baz=349,SNR=57
M50A Fremont 145.04 16 P PKPdf 05 33 47.9 -0.1
baz=338,SNR=73
MGMO Mountain Grove 145.06 31 PKPab 05 33 48.0 +0.2
K57A Scipio Center 145.08 7 P PKPdf 05 33 48.2 +0.1
baz=350,SNR=79
ERPA Erie 145.10 12 P PKPdf 05 33 48.2 +0.1
baz=344
L54A Sinclairville 145.12 11 P PKPdf 05 33 48.3 +0.2
baz=345,SNR=151
JANB Januaria 145.14 229 eP PKPdf 05 33 49.6 +0.6
N49A Columbus Grove 145.15 18 P PKPdf 05 33 48.5 +0.3
baz=336,SNR=202
K58A Earlville 145.16 6 P PKPdf 05 33 48.5 +0.3
baz=352,SNR=81
L53A Girard 145.20 12 P PKPdf 05 33 48.8 +0.5
baz=343,SNR=122
K59A Cooperstown 145.22 5 P PKPdf 05 33 48.4 +0.1
baz=353,SNR=41
P46A Rosedale 145.28 23 PKPdf 05 33 48.4 0.0
L55A Hinsdale 145.33 10 P PKPab 05 33 49.0 +0.3
baz=347,SNR=128
M51A Elyria 145.34 15 P PKPab 05 33 48.8 +0.1
baz=340,SNR=106
M52A Chesterland 145.35 14 P PKPab 05 33 49.2 +0.5
baz=341,SNR=145
U40A Yellville 145.37 32 P PKPab 05 33 49.2 +0.2
baz=319,SNR=628
NBCL Cascavel-CE 145.38 251 eP PKPab 05 33 50.3 +0.7
K61A Williamstown 145.44 3 P PKPab 05 33 49.6 +0.6
baz=356,SNR=56
O48A Farmland 145.45 20 P PKPab 05 33 49.2 +0.1
baz=334,SNR=264
K60A Five Rivers En 145.46 4 P PKPab 05 33 49.8 +0.7
baz=354,SNR=107
K63A Dunstable 145.49 1 P PKPab 05 33 49.6 +0.4
baz=359,SNR=67
K62A Royalston 145.49 2 PKPab 05 33 49.4 +0.2
K62A Royalston 145.49 2 P PKPab 05 33 49.9 +0.7
baz=357,SNR=88
L56A Greenwood 145.52 9 P PKPab 05 33 49.4 0.0
baz=348,SNR=133
N50A Nevada 145.60 17 P PKPab 05 33 50.0 +0.4
baz=338,SNR=179
M53A Wl Miller and 145.60 13 P PKPab 05 33 49.8 +0.2
baz=347,SNR=180
WHTX Lake Whitney, 145.61 42 P PKPab 05 33 50.9 +0.9
baz=308,SNR=366
HRV Adam Dziewonsk 145.67 1 PKIKP PKPab 05 33 49.7 -0.2
HRV Adam Dziewonsk 145.67 1 PKPab 05 33 49.6 -0.2
HRV Adam Dziewonsk 145.67 1 P PKPab 05 33 50.1 +0.3
baz=359
BINY Binghamton 145.67 7 P PKPab 05 33 50.3 +0.4
baz=351,SNR=166
N51A Ashland 145.67 16 P PKPbc 05 33 49.7 +0.2
baz=339,SNR=123
L61B Northampton 145.69 2 P PKPab 05 33 50.0 +0.1
baz=357,SNR=64
W39A Magazine 145.72 35 P PKPab 05 33 50.3 0.0
baz=317,SNR=228
M54A Oil Creek Stat 145.75 12 P PKPab 05 33 50.1 -0.1
baz=344,SNR=197
L57A Andrews Acres 145.76 8 P PKPab 05 33 50.2 0.0
baz=349,SNR=174
O49A Covington 145.78 19 PKPbc 05 33 50.0 +0.1
O49A Covington 145.78 19 P PKPab 05 33 50.4 0.0
baz=336
L59A Walton 145.78 6 P PKPab 05 33 50.5 +0.1
baz=352,SNR=141
L58A Harry Jones Me 145.84 7 P PKPab 05 33 50.8 +0.2
baz=351,SNR=189
IPMB Ipameri, GO 145.86 221 eP PKPbc 05 33 51.0 +0.1
ITRB Iturama 145.87 216 eP PKPab 05 33 52.4 +1.1
L61A Hillsdale 1, H 145.90 4 P PKPab 05 33 50.9 +0.2
baz=355,SNR=95
N52A McGinn's Farm, 145.95 15 P PKPab 05 33 51.0 0.0
baz=340,SNR=77
M55A Ridgway 145.97 11 PKPbc 05 33 50.8 +0.3
M55A Ridgway 145.97 11 P PKPab 05 33 51.0 -0.1
baz=346,SNR=124
O50A Cable 146.03 18 P PKPab 05 33 51.4 0.0
baz=337
L60A Shokan 146.06 5 P PKPab 05 33 51.3 -0.1
baz=354,SNR=51
M56A Emporium 146.06 10 P PKPab 05 33 51.1 -0.2
baz=347,SNR=142
P48A Milroy 146.07 21 P PKPab 05 33 51.5 +0.1
baz=333
NBPB Pedra_Branca-C 146.09 248 eP PKPdf 05 33 50.6 0.0
L62A Suffield 146.11 3 P PKPab 05 33 51.5 0.0
baz=357,SNR=43
ACSO Alum Creek Sta 146.14 17 PKPbc 05 33 51.2 +0.2
ACSO Alum Creek Sta 146.14 17 P PKPab 05 33 51.7 0.0
baz=338
L65A Cape Cod Natio 146.15 359 P PKPab 05 33 51.8 +0.2
baz=1.2
N53A Lisbon 146.17 14 P PKPab 05 33 51.5 -0.3
baz=342,SNR=167
N54A Moraine State 146.21 13 P PKPbc 05 33 51.4 +0.2
baz=343,SNR=173
P49A Miami Univ. Ec 146.25 20 P PKPab 05 33 51.8 -0.3
baz=335
L64A Middleborough 146.25 0 P PKPbc 05 33 51.5 +0.3
baz=360,SNR=39
435B Jarell 146.25 44 P PKPbc 05 33 51.9 +0.3
baz=307
833A Chaparral WMA, 146.31 50 P PKPbc 05 33 52.2 +0.4
baz=301
MIAR Mount Ida 146.31 35 P PKPbc 05 33 51.6 -0.1
baz=316,SNR=564
L63A North Scituate 146.31 1 P PKPab 05 33 52.4 +0.1
baz=358,SNR=33
M57A Sunshine Farm, 146.37 9 P PKPbc 05 33 51.3 -0.3
baz=339,SNR=153
M59A Waymart 146.39 6 P PKPab 05 33 52.5 -0.1
baz=352,SNR=153
M58A Price's Panora 146.43 8 P PKPab 05 33 52.6 -0.3
baz=350,SNR=169
Q48A North Vernon 146.43 21 P PKPab 05 33 52.8 -0.1
baz=332
P50A Jamestown 146.47 18 P PKPbc 05 33 52.4 +0.4
baz=336
W41B Gary Mavity, V 146.59 33 P PKPab 05 33 53.1 -0.5
baz=319,SNR=68
N56A West Decatur 146.59 10 P PKPbc 05 33 52.8 +0.4
baz=346,SNR=135
N55A Marion Center 146.59 11 P PKPab 05 33 52.9 -0.5
baz=345,SNR=127
O53A New Philadelph 146.60 15 P PKPab 05 33 53.1 -0.4
baz=341,SNR=84
M65A Busby, Falmout 146.62 360 P PKPab 05 33 53.3 -0.1
baz=0.2
M64A Tiverton 146.63 1 P PKPab 05 33 53.3 -0.2
baz=359,SNR=16
Q49A Aurora 146.66 20 P PKPab 05 33 53.4 -0.4
baz=334,SNR=96
M60A Port Jervis 146.68 5 P PKPab 05 33 53.2 -0.5
baz=353,SNR=106
M62A Hamden 146.69 3 P PKPbc 05 33 52.7 +0.2
baz=356,SNR=18
MMIG Aquila 146.75 69 PKPab 05 33 54.8 0.0
M63A Gales Ferry 146.76 2 P PKPbc 05 33 53.3 +0.6
baz=358,SNR=12
M61A Granite Spring 146.76 4 P PKPbc 05 33 53.4 +0.6
baz=354,SNR=51
X40A Basin Creek Fa 146.77 34 P PKPbc 05 33 53.1 +0.2
baz=317,SNR=146
P51A Williamsport 146.81 18 P PKPbc 05 33 52.7 -0.2
baz=337,SNR=52
WCI Wyandotte Cave 146.84 23 PKPbc 05 33 52.5 -0.6
WCI Wyandotte Cave 146.84 23 PKPbc 05 33 52.5 -0.6
WCI Wyandotte Cave 146.84 23 P PKPbc 05 33 53.4 +0.3
baz=331
O54A Avella 146.87 14 P PKPbc 05 33 53.3 +0.2
baz=342,SNR=140
N57A Milroy 146.87 9 P PKPbc 05 33 53.4 +0.3
baz=348,SNR=125
N58A Sunbury 146.92 8 P PKPbc 05 33 53.9 +0.7
baz=349,SNR=147
M66A Nantucket 146.92 359 P PKPab 05 33 54.0 -0.7
baz=1.1
SSPA Standing Stone 146.93 10 PKPbc 05 33 53.1 -0.1
SSPA Standing Stone 146.93 10 P PKPab 05 33 54.0 -0.7
baz=347
P52A Corning 146.94 16 P PKPbc 05 33 52.7 -0.6
baz=339,SNR=114
N59A State Game Lan 146.97 7 P PKPbc 05 33 53.8 +0.4
baz=351,SNR=204
PAL Palisades 147.06 4 P PKPbc 05 33 53.8 +0.2
baz=354,SNR=76
O55A Ligonier 147.08 12 P PKPbc 05 33 53.9 +0.1
baz=344,SNR=50
N60A Cedar Hill Far 147.09 6 P PKPbc 05 33 53.7 0.0
baz=352,SNR=117
Q50A Georgetown 147.11 19 P PKPbc 05 33 53.2 -0.6
baz=335,SNR=55
Q51A Peebles 147.15 18 P PKPbc 05 33 53.2 -0.7
baz=337,SNR=133
N63A Mattituck 147.16 2 P PKPbc 05 33 53.2 -0.6
baz=357
N62A Caumsett State 147.16 4 P PKPbc 05 33 54.6 +0.8
baz=355,SNR=6.4
O56A Blue Knob Stat 147.17 11 P PKPbc 05 33 54.1 +0.1
baz=345,SNR=117
R49A Shelbyville 147.20 21 P PKPbc 05 33 53.6 -0.5
baz=333,SNR=131
P53A Whipple 147.28 15 P PKPdf 05 33 53.1 +1.2
baz=340,SNR=159
N61A South Mountain 147.28 5 P PKPbc 05 33 54.5 +0.3
baz=354,SNR=53
NBMO Morrinhos-CE 147.33 251 eP PKPdf 05 33 53.6 +0.9
O57A Amberson 147.39 10 P PKPbc 05 33 53.4 -1.2
baz=347,SNR=93
P54A Burton 147.40 14 P PKPdf 05 33 53.2 +1.1
baz=342,SNR=121
BDFB Brasilia 147.41 224 PKP PKPbc 05 33 54.2 -1.2
comp=Z,59nm,0.6s,baz=119,slow=2.9,SNR=107
BDFB PKPbc PKPab 05 33 57.5 0.0
comp=Z,59nm,0.6s,baz=104,slow=2.6,SNR=108
BDFB Brasilia 147.41 224 PKPbc 05 33 54.7 -0.7
MCWV Mont Chateau 147.49 13 P PKPbc 05 33 53.6 -1.3
baz=343,SNR=100
R50A Paris 147.50 20 P PKPdf 05 33 52.8 +0.5
baz=334,SNR=87
O59A Robesonia 147.51 8 P PKPdf 05 33 53.4 +1.2
baz=350,SNR=87
Q52A Bidwell 147.53 17 P PKPdf 05 33 53.0 +0.7
baz=338,SNR=93
NATX Nacogdoches 147.58 40 P PKPbc 05 33 54.1 -1.2
baz=312,SNR=40
O58A Lewisberry 147.59 9 P PKPdf 05 33 53.6 +1.2
baz=349,SNR=102
O60A Telford 147.60 7 P PKPdf 05 33 53.6 +1.3
baz=351,SNR=77
S49A Springfield 147.61 22 P PKPdf 05 33 53.1 +0.6
baz=332,SNR=137
P55A Reedsville 147.64 13 P PKPdf 05 33 53.5 +1.0
baz=343,SNR=104
Z41A Richland Creek 147.68 36 P PKPbc 05 33 54.9 -0.6
baz=316,SNR=78
R51A Hillsboro 147.73 19 P PKPdf 05 33 53.5 +0.8
baz=336,SNR=41
MVL Millersville 147.79 8 PKPbc 05 33 54.4 -1.3
X43A Marvell 147.81 32 P PKPbc 05 33 54.6 -1.3
baz=320,SNR=38
Q53A Leroy 147.83 16 P PKPdf 05 33 54.0 +1.2
baz=340,SNR=75
P56A Dayton Farm, R 147.85 12 P PKPdf 05 33 54.2 +1.4
baz=345,SNR=159
Q54A Coxs Mills 147.89 15 P PKPdf 05 33 54.1 +1.2
baz=341,SNR=148
O61A Allentown 147.91 5 P PKPdf 05 33 54.2 +1.3
baz=353,SNR=44
HKT Hockley 147.96 44 PKP2 PKPbc 05 33 55.6 -0.7
HKT Hockley 147.96 44 PKPbc 05 33 55.6 -0.7
R52A Catlettsburg 148.00 18 P PKPdf 05 33 54.1 +1.0
baz=337,SNR=47
WVT Waverly 148.00 27 PKIKP PKPdf 05 33 54.0 +0.8
WVT 05 33 57.2
WVT Waverly 148.00 27 PKPdf 05 33 54.0 +0.8
WVT PKPbc PKPbc 05 33 57.2 +0.8
WVT Waverly 148.00 27 P PKPdf 05 33 54.1 +1.0
baz=327
AQDB Aquidauana 148.01 207 eP PKPbc 05 33 55.8 -1.0
C2SB Chapadao do Su 148.02 213 eP PKPdf 05 33 54.3 +0.7
S50A Richmond 148.02 21 P PKPdf 05 33 53.7 +0.5
baz=334,SNR=122
P57A Homestead Farm 148.03 11 P PKPdf 05 33 54.5 +1.4
baz=346,SNR=127
Q55A Buckhannon 148.07 14 P PKPdf 05 33 54.3 +1.1
baz=342,SNR=171
P60A Greenville 148.07 7 P PKPdf 05 33 54.1 +0.9
baz=351,SNR=75
T49A Edmonton 148.12 23 P PKPdf 05 33 54.1 +0.8
baz=332,SNR=111
P58A Pank, Wackersv 148.15 10 P PKPdf 05 33 54.5 +1.2
baz=348,SNR=93
P59A Jarrettsville 148.16 8 P PKPdf 05 33 54.5 +1.2
baz=349,SNR=51
R53A Hurricane 148.20 17 P PKPdf 05 33 54.5 +1.0
baz=339,SNR=86
Q56A Snyder Ridge, 148.22 12 P PKPdf 05 33 54.5 +1.0
baz=344,SNR=90
NBPS Pedro II - PI 148.24 248 eP PKPdf 05 33 55.0 +0.7
P61A Hammonton 148.30 6 P PKPdf 05 33 54.6 +1.1
baz=352,SNR=18
S51A Beattyville 148.33 20 P PKPdf 05 33 54.4 +0.7
baz=335,SNR=110
Q57A Strasburg 148.39 11 P PKPdf 05 33 55.0 +1.3
baz=346,SNR=118
T50A Nancy 148.45 22 P PKPdf 05 33 54.8 +0.9
baz=333,SNR=135
S52A Salyersville 148.46 19 P PKPdf 05 33 54.8 +0.9
baz=336,SNR=9.6
U49A Red Boiling Sp 148.54 24 P PKPdf 05 33 54.9 +0.9
baz=331,SNR=199
OXF Oxford 148.57 30 P PKPdf 05 33 54.4 +0.3
baz=323,SNR=87
R54A Victor 148.61 16 P PKPdf 05 33 54.5 +0.4
baz=340,SNR=62
Q58A Fox Den Farm, 148.62 10 P PKPdf 05 33 55.1 +1.0
baz=347,SNR=114
S53A Williamson 148.75 18 P PKPdf 05 33 55.4 +0.9
baz=338,SNR=27
R56A Bull Pasture M 148.78 13 P PKPdf 05 33 55.3 +0.8
baz=343,SNR=110
T51A Gray 148.82 21 P PKPdf 05 33 55.3 +0.8
baz=334,SNR=137
Q60A Greensboro 148.84 8 P PKPdf 05 33 56.0 +1.6
baz=350,SNR=27
Q59A Harwood 148.86 9 P PKPdf 05 33 55.5 +1.1
baz=349
S54A Dingess, Beckl 148.88 16 P PKPdf 05 33 55.3 +0.7
baz=340,SNR=72
U50A Jamestown 148.98 22 P PKPdf 05 33 55.7 +0.9
baz=332,SNR=721
T52A Hallie 149.01 19 P PKPdf 05 33 55.8 +1.0
baz=336,SNR=86
Q61A Milford 149.03 7 P PKPbc 05 33 56.8 -2.0
baz=351
R57A Stanardsville 149.08 12 P PKPdf 05 33 56.5 +1.6
baz=345,SNR=127
S55A Lewisburg 149.12 15 P PKPdf 05 33 56.1 +1.1
baz=341,SNR=64
V49A McMinnville 149.13 24 P PKPdf 05 33 55.3 +0.3
baz=330,SNR=134
R58A Rapidan 149.18 11 P PKPdf 05 33 56.1 +1.1
baz=346,SNR=141
T53A Wise 149.27 19 P PKPdf 05 33 56.3 +1.0
baz=337,SNR=76
U51A La Follette 149.32 21 P PKPdf 05 33 56.2 +0.8
baz=334,SNR=36
TZTN Tazewell 149.34 20 P PKPdf 05 33 56.5 +1.1
baz=335,SNR=107
CBN Corbin Frederi 149.39 10 P PKPdf 05 33 56.6 +1.3
baz=347,SNR=11
R59A King George, V 149.44 10 P PKPdf 05 33 56.5 +1.1
baz=348,SNR=13
S56A Natural Bridge 149.44 14 P PKPdf 05 33 56.3 +0.8
baz=343,SNR=32
R60A Leonardtown, M 149.46 9 P PKPdf 05 33 57.0 +1.6
baz=349,SNR=8.0
LVC Limon Verde 149.48 183 PKHKP PKPpre 05 33 59.5
LVC Limon Verde 149.48 183 eP PKPdf 05 33 56.2 -0.2
LVC Limon Verde 149.48 183 PKPbc 05 33 59.5 -1.4
T54A Tazewell 149.49 17 P PKPdf 05 33 56.3 +0.6
baz=339,SNR=130
S57A Dark Hollow, R 149.50 13 P PKPdf 05 33 56.7 +1.1
baz=344,SNR=58
R58B Mineral 149.53 11 P PKPdf 05 33 56.7 +1.1
baz=346,SNR=64
U52A Thorn Hill 149.54 20 P PKPdf 05 33 56.5 +0.8
baz=335
W49A Belvidere 149.54 26 P PKPdf 05 33 56.0 +0.3
baz=329,SNR=134
V50A Pikeville 149.54 23 P PKPdf 05 33 56.3 +0.6
baz=331,SNR=100
R61A Willards 149.57 7 P PKPdf 05 33 56.4 +0.8
baz=351,SNR=6.1
T55A Pulaski 149.66 16 P PKPdf 05 33 56.4 +0.5
baz=340,SNR=98
BLA Blacksburg 149.67 15 P PKPdf 05 33 56.7 +0.8
baz=341,SNR=46
V51A Loudon 149.71 22 P PKPdf 05 33 57.0 +1.1

baz=333,SNR=121
VBMS Vicksburg 149.75 35 P PKPdf 05 33 57.2 +1.1
baz=318,SNR=19
U53A Fall Branch 149.83 19 P PKPdf 05 33 56.9 +0.7
baz=336,SNR=78
S59A Mechanicsville 149.83 10 P PKPdf 05 33 57.2 +1.1
baz=347,SNR=29
S58A Poland Farm, P 149.84 12 P PKPdf 05 33 57.1 +1.1
baz=346,SNR=104
ARAG Araguaiana, MT 149.84 219 eP PKPdf 05 33 56.2 -0.4
W50A Signal Mountai 149.86 24 P PKPdf 05 33 57.0 +0.7
baz=330,SNR=118
U54A Nelsons Funny 149.92 18 P PKPdf 05 33 57.0 +0.6
baz=338,SNR=32
T56A Rocky Mt 149.95 15 P PKPdf 05 33 56.8 +0.5
baz=342,SNR=118
V52A Sevierville 149.95 21 P PKPdf 05 33 57.5 +1.1
baz=334,SNR=259
S60A Water View 150.00 9 P PKPdf 05 33 57.8 +1.5
baz=348,SNR=20
PP1B Ponte de Pedra 150.07 212 eP PKPdf 05 33 58.6 +1.6
W51A Cleveland 150.12 23 P PKPdf 05 33 57.7 +1.0
baz=331,SNR=76
T57A Hurt 150.16 14 P PKPdf 05 33 57.4 +0.8
baz=343,SNR=76
U55A TA2, Sparta 150.17 17 P PKPdf 05 33 57.6 +0.8
baz=339,SNR=141
T58A Grand View Acr 150.38 13 P PKPdf 05 33 58.0 +1.1
baz=344,SNR=112
V53A Saluda 150.38 20 P PKPdf 05 33 58.3 +1.2
baz=335,SNR=139
U56A King 150.50 16 P PKPdf 05 33 58.2 +1.0
baz=340,SNR=29
W52A Murphy 150.50 22 P PKPdf 05 33 58.6 +1.3
baz=333,SNR=144
T60A Surry 150.53 10 P PKPdf 05 33 58.5 +1.3
baz=348,SNR=20
T59A Double "B" Far 150.55 11 P PKPdf 05 33 58.6 +1.4
baz=346
V54A Nebo 150.57 19 P PKPdf 05 33 58.4 +1.1
baz=337,SNR=80
X51A Calhoun 150.60 24 P PKPdf 05 33 58.5 +1.2
baz=331,SNR=66
U57A Blanch 150.69 14 P PKPdf 05 33 58.5 +1.1
baz=342,SNR=85
W53A Cullowhee 150.71 21 P PKPdf 05 33 59.0 +1.3
baz=334,SNR=104
V55A Taylorsville 150.72 18 P PKPdf 05 33 58.6 +1.1
baz=338,SNR=89
U58A Oxford 150.90 13 P PKPdf 05 33 58.8 +1.0
baz=344,SNR=106
X52A Dahlonega 150.94 23 P PKPdf 05 33 59.2 +1.2
baz=332,SNR=92
LRAL Lakeview Retre 150.95 29 P PKPdf 05 33 59.0 +1.1
baz=325,SNR=35
V56A Mocksville 150.97 16 P PKPdf 05 33 58.9 +1.0
baz=340,SNR=74
Y51A Rockmart 151.09 25 P PKPdf 05 33 59.0 +0.8
baz=330,SNR=41
V57A Coltrane Farms 151.09 15 P PKPdf 05 33 59.1 +1.0
baz=341,SNR=104
U59A Littleton 151.10 12 P PKPdf 05 33 59.1 +1.1
baz=346,SNR=22
U60A Pendleton 151.11 11 P PKPdf 05 33 59.0 +1.0
baz=347
W54A Cherokee Point 151.12 20 P PKPdf 05 33 59.2 +1.0
baz=336,SNR=48
X53A Estanollee 151.26 22 P PKPdf 05 33 59.5 +1.1
baz=334,SNR=56
Z50A Ashland 151.26 27 P PKPdf 05 33 59.0 +0.6
baz=328
KMSC Kings Mountain 151.34 18 P PKPdf 05 33 59.4 +0.9
baz=338,SNR=56
V58A Windy Hill, Pi 151.35 14 P PKPdf 05 33 59.3 +0.8
baz=343,SNR=18
U61A Possum Corner 151.37 10 P PKPdf 05 33 59.6 +1.1
baz=348
SMTB Santa Maria do 151.44 234 eP PKPdf 05 34 00.7 +1.4
Y52A Lilburn 151.53 24 P PKPdf 05 34 00.2 +1.4
baz=332,SNR=40
X54A Belton 151.55 20 P PKPdf 05 33 59.8 +1.0
baz=335
W56A Indian Trail 151.58 17 P PKPdf 05 33 59.7 +0.9
baz=339
V59A Middlesex 151.58 13 P PKPdf 05 33 59.9 +1.1
baz=344
W57A Gilead 151.72 16 P PKPdf 05 34 00.1 +1.0
baz=340
Y53A Monroe 151.72 23 P PKPdf 05 34 00.5 +1.4
baz=332
V60A Jim Taylor Roa 151.78 11 P PKPdf 05 34 00.1 +1.0
baz=346
X55A Gracelyn & Ava 151.87 19 P PKPdf 05 34 00.6 +1.3
baz=337
V61A Roper 151.88 10 P PKPdf 05 34 00.8 +1.6
baz=348
SALV Santo Antonio 151.91 212 eP PKPdf 05 33 58.5 -1.4
Z52A Williamson 151.97 25 P PKPdf 05 34 01.0 +1.5
baz=330
X56A White Oak 152.04 18 P PKPdf 05 34 00.6 +1.0
baz=338
W58A Raeford 152.05 15 P PKPdf 05 34 00.5 +0.9
baz=342
Y54A Tignall 152.05 21 P PKPdf 05 34 00.9 +1.3
baz=334
W59A Clinton 152.10 14 P PKPdf 05 34 01.0 +1.4
baz=344
CNNC Cliffs of the 152.16 13 P PKPdf 05 34 00.8 +1.1
baz=345
JSC Jenkinsville 152.16 19 PKIKP PKPdf 05 34 00.4 +0.7
JSC Jenkinsville 152.16 19 PKPdf 05 34 00.4 +0.7
GOGA Godfrey 152.16 23 P PKPdf 05 34 01.1 +1.4
baz=332
V62A Hyde County Ai 152.20 9 P PKPdf 05 34 01.3 +1.6
baz=349
Z53A Monticello 152.24 23 P PKPdf 05 34 00.9 +1.1
baz=332
Y55A Saluda 152.28 20 P PKPdf 05 34 01.1 +1.1
baz=336
152A Waverly Hall 152.29 26 P PKPdf 05 34 01.3 +1.3
baz=329
X57A Johnson Farm, 152.34 17 P PKPdf 05 34 01.2 +1.2
baz=340
W60A Pink Hill 152.38 12 P PKPdf 05 34 01.1 +1.1
baz=345
W61A Ground Anchor 152.40 11 P PKPdf 05 34 01.3 +1.2
baz=347
BRAL Brewton 152.43 31 P PKPdf 05 34 02.1 +1.8
baz=323
X58A Rowland 152.47 15 P PKPdf 05 34 01.1 +1.0
baz=341
Z54A Sparta 152.56 22 P PKPdf 05 34 01.9 +1.5
baz=333
Y56A Pelion 152.59 19 P PKPdf 05 34 01.9 +1.5
baz=337
X59A McDuffie Farm, 152.63 14 P PKPdf 05 34 01.6 +1.2
baz=343
Y57A Sumter 152.67 18 P PKPdf 05 34 01.6 +1.2
baz=339
153A Fort Valley 152.68 25 P PKPdf 05 34 01.5 +0.9
baz=331
X60A Albert Glenn T 152.78 13 P PKPdf 05 34 01.6 +1.0
baz=344
Z55A Blythe 152.83 21 P PKPdf 05 34 02.3 +1.5
baz=335
252A Lumpkin 152.86 27 P PKPdf 05 34 02.1 +1.2
baz=328
Y58A Scranton 152.99 16 P PKPdf 05 34 02.1 +1.1
baz=340
Z56A Williston 153.00 20 P PKPdf 05 34 02.4 +1.4
baz=336
154A Montrose 153.01 23 P PKPdf 05 34 02.4 +1.4
baz=332
253A Americus 153.07 26 P PKPdf 05 34 02.5 +1.4
baz=330
Y59A Loris 153.12 15 P PKPdf 05 34 02.0 +0.9
baz=342
352A Blakely 153.21 28 P PKPdf 05 34 02.4 +1.0
baz=328
Z57A Bowman 153.25 19 P PKPdf 05 34 02.4 +1.0
baz=338
155A Kite 153.25 22 P PKPdf 05 34 02.5 +1.1
baz=334
Y60A Bolivia 153.27 14 P PKPdf 05 34 02.0 +0.7
baz=343
Z58A St. Stephen 153.48 17 P PKPdf 05 34 02.3 +0.6
baz=340
254A Abbeville 153.52 24 P PKPdf 05 34 02.9 +1.1
baz=331
156A Sylvania 153.57 21 P PKPdf 05 34 03.3 +1.5
baz=336
NHSC New Hope 153.59 18 P PKPdf 05 34 02.7 +0.9
baz=339
353A Camilla 153.64 27 P PKPdf 05 34 03.4 +1.4
baz=329
157A Early Branch 153.72 20 P PKPdf 05 34 03.1 +1.0
baz=337
Z59A Georgetown, SC 153.72 16 P PKPdf 05 34 02.9 +0.9
baz=341
TIGA Tifton 153.84 25 P PKPdf 05 34 03.8 +1.5
baz=330,SNR=5.1
255A Hazlehurst 153.86 23 P PKPdf 05 34 03.6 +1.4
baz=333
158A Hollywood 153.92 18 P PKPdf 05 34 03.0 +0.7
baz=338
456A Hilliard 155.10 24 PKPdf 05 34 14.1 +10
456A PKPab 05 34 30.0 +1.2
LPAZ La Paz 155.68 186 PKP PKPdf 05 34 07.7 +1.7
comp=Z,8.5nm,0.9s,baz=91,slow=0.6,SNR=24
LPAZ PKPab PKPab 05 34 34.8 +2.5
comp=Z,39nm,0.8s,baz=106,slow=1.4,SNR=22
CLDB Colider 156.01 219 eP PKPdf 05 34 07.2 +1.5
DWPF Disney Wildern 157.65 25 PKPab 05 34 41.5 +1.7
NNA Nana 159.21 163 PKIKP PKPdf 05 34 11.7 +1.9
NNA 05 34 49.1
NNA Nana 159.21 163 PKPdf 05 34 11.7 +1.9
NNA PKPab 05 34 49.1 +2.2
SAML Samuel 161.50 204 PKIKP PKPdf 05 34 12.7 +0.5
SAML Samuel 161.50 204 eP PKPdf 05 34 14.2 +1.9
SAML Samuel 161.50 204 PKPdf 05 34 12.7 +0.5
TGUH Tegucigalpa,Un 162.75 68 PKPdf 05 34 14.0 +0.4
TGUH PKPab PKPab 05 35 03.8 +1.1
ATAH Atahualpa 163.12 153 PKP PKPdf 05 34 16.8 +2.4
comp=Z,17nm,0.9s,baz=171,slow=2.7
JTS Las Juntas de 165.83 80 PKIKP PKPdf 05 34 15.8 -0.4
JTS 05 35 16.6
JTS Las Juntas de 165.83 80 PKPdf PKPdf 05 34 15.8 -0.4
JTS PKPab 05 35 16.6 +0.3
AOPR Arecibo Observ 169.04 339 PKPdf PKPdf 05 34 18.4 0.0
AOPR PKPab 05 35 29.6 -0.4
OTAV Otavalo 169.11 135 PKIKP PKPdf 05 34 19.6 +0.3
OTAV Otavalo 169.11 135 eP PKPdf 05 34 19.5 +0.3
OTAV Otavalo 169.11 135 PKPdf 05 34 19.6 +0.3
OBIP Obispado Ponce 169.26 338 PKPdf PKPdf 05 34 18.6 0.0
OBIP PKPab 05 35 30.1 -0.8
MLPR Magueyes Islan 169.49 340 PKPab 05 35 30.2 -1.6
TUMC Tumaco 169.96 128 eP PKPdf 05 34 20.5 +1.3
CRUC La Cruz 171.10 136 eP PKPdf 05 34 21.1 +0.9
GR1C Gorgona, Isla 171.10 124 eP PKPdf 05 34 20.5 +0.7
BBAC Balboa, Cauca 171.21 133 eP PKPdf 05 34 19.8 -0.3
PTLC Puerto Leguiza 171.21 153 eP PKPdf 05 34 19.1 -0.7
SOTA Rioblanco 171.74 135 eP PKPdf 05 34 20.5 -0.2
FLOC Florencia 171.95 143 eP PKPdf 05 34 20.5 +0.2
FLOC Florencia 171.95 143 PKPdf 05 34 20.4 +0.2
PCON Cinco Dias 172.03 135 eP PKPdf 05 34 21.8 +0.9
BETC Betania 172.93 139⍰ eP PKPdf 05 34 21.8 +1.1
PTAC Punta Ardita, 172.97 97 eP PKPdf 05 34 19.1 -1.4
PTAC eP PKPdf 05 34 19.8 -0.8
YOTC Yotoco, Valle 173.15 126 eP PKPdf 05 34 19.1 -1.7
YOTC eP PKPdf 05 34 22.5 +1.6
SOLC Bahia Solano 173.18 105 eP PKPdf 05 34 21.1 +0.5
MACC Macarena, Meta 173.39 152 eP PKPdf 05 34 19.8 -1.0
PLMC San Jos del P 173.70 119 eP PKPdf 05 34 20.5 -0.5
ORTC Ortega, Tolima 173.95 132 eP PKPdf 05 34 20.5 -0.6
PRAC Prado 174.07 136 eP PKPdf 05 34 19.8 -1.3
GUVC San Jose del G 174.23 161 eP PKPdf 05 34 20.5 -0.6
CBOC Ciudad Bolivar 174.37 112⍰ eP PKPdf 05 34 19.1 -2.2
LCBC Los crdobas, 174.41 81 eP PKPdf 05 34 19.8 -1.3
DBBC Dabeiba 174.52 100 eP PKPdf 05 34 20.5 -0.8
GUY2C Guyana, Caldas 174.65 121 eP PKPdf 05 34 20.5 -1.3
HELC Santa Helena 174.94 111 eP PKPdf 05 34 19.8 -1.9
VILC Villavicencio, 175.13 143⍰ eP PKPdf 05 34 20.5 -1.1
VILC eP PKPdf 05 34 22.5 +0.9
NORC Norcasia 175.25 121 eP PKPdf 05 34 20.5 -1.0
ROSC El Rosal 175.25 132 PKP PKPdf 05 34 22.6 +0.8
comp=Z,22nm,0.9s,baz=62,slow=0.8,SNR=28
ROSC PKPab PKPab 05 36 01.4 +3.1
comp=Z,48nm,1.2s,baz=238,slow=4.8,SNR=5.7
ROSC PP PP 05 39 51.8 +1.5
comp=Z,4.3nm,0.5s,baz=279,slow=0.4,SNR=8.3
ROSC El Rosal 175.25 132 eP PKPdf 05 34 21.1 -0.7
SJCC San Jacinto, C 175.28 67⍰ eP PKPdf 05 34 21.1 -0.3
SMRC Santa Marta, M 175.40 47 eP PKPdf 05 34 21.1 -0.2
CHIC Chingaza 175.51 139 eP PKPdf 05 34 20.5 -1.5
PTGC Puerto Gaitan, 175.95 160 eP PKPdf 05 34 19.8 -1.8
SPBC San Pablo de B 175.96 126 eP PKPdf 05 34 20.5 -1.2
PTBC PUERTO BERRIO 176.06 112 eP PKPdf 05 34 20.5 -1.1
ARGC Ariguani, Magd 176.13 62 eP PKPdf 05 34 20.5 -1.1
URIC Uribia, Colomb 176.17 18 eP PKPdf 05 34 19.1 -2.4
SMLC San Martn de 176.66 77 eP PKPdf 05 34 20.5 -1.2
CODC Agustn Codazz 176.76 54 eP PKPdf 05 34 21.1 -0.5
RUSC La Rusia 176.87 133 eP PKPdf 05 34 19.8 -2.6
RUSC La Rusia 176.87 133 PKPdf 05 34 21.1 -1.3
BARC Barichara 177.21 121 eP PKPdf 05 34 20.5 -1.6
OCAC Ocana 177.48 85 eP PKPdf 05 34 20.5 -1.5
PAMC Pamplona, Colo 177.97 110 eP PKPdf 05 34 20.5 -2.0
TAMC Tame, Arauca 178.11 148 eP PKPdf 05 34 21.1 -0.8
ELOV Elorza 178.35 231 eP PKPdf 05 34 21.1 -0.8
SDV Santo Domingo 179.15 350 PP PP 05 40 07.4 +0.4
comp=Z,1.7nm,0.3s,baz=189,slow=17,SNR=13
SDV Santo Domingo 179.15 350 eP PKPdf 05 34 22.2 -0.1
SDV Santo Domingo 179.15 350 PKPdf 05 34 21.4 -0.8

IDC ***25*** *05:25:13.7±13.0, 7.°90S×109.°35E, h65km±118km, mb4.3/7, mb1 4.4/7, mb1mx3.9/36, mbtmp4.6/7, Error ellipse: s-maj=54.2km s-min=22.2km az=58.0*
DJA ***25*** *05:25:15.2±0.4, 8.°5S×6.°10°9E±.°, h76km±7km, M4.9/16, mb4.8/7, MLv5.0/16*
NEIC ***25*** *05:25:16±1.0, 8.°00S±0.°10×109.°30E±0.°04, h85km±2km, mb5.2/28, Error ellipse: s-maj=14.8km s-min=5.3km az=195.0*
ISC 25 05:25:15.2±0.8, 8.°24S±0.°07×109.°26E±0.°03, h80km±7km, n139, σ1°18/147, mb5.1/15, 1C, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.92**	**299**	P		**Pn**	**05 25 33.6**	**+0.3**
CMJI				S		**Sn**	**05 25 47.1**	**+0.3**
KPJI	**Karang Pucung**	**0.95**	**340**	P		**Pn**	**05 25 33.6**	**-0.1**
UGM	**Wanagama**	**1.29**	**76**	P		**Pn**	**05 25 38.5**	**+0.6**
UGM				S		**Sn**	**05 25 55.5**	**+0.5**
UGM	**Wanagama**	**1.29**	**76**			**Pn**	**05 25 38.2**	**+0.3**
UGM				Sn		**Sn**	**05 25 54.7**	**-0.3**
CISI	**Cisompet, Garu**	**1.58**	**295**	P		**Pn**	**05 25 42.3**	**+0.7**
CISI				S		**Sn**	**05 26 02.7**	**+1.1**
CISI	**Cisompet, Garu**	**1.58**	**295**			**Pn**	**05 25 42.7**	**+1.0**
CISI				Sn		**Sn**	**05 26 01.7**	**+0.1**
SMRI	**Semarang**	**1.66**	**45**	P		**Pn**	**05 25 44.0**	**+1.3**
WOJI	**Wonogiri, Jawa**	**1.70**	**77**	P		**Pn**	**05 25 43.9**	**+0.8**
PCJI	**Pacitan**	**1.90**	**89**	P		**Pn**	**05 25 46.7**	**+0.9**
PCJI				S		**Sn**	**05 26 09.5**	**+0.4**
LEM	**Lembang**	**2.15**	**311**	P		**Pn**	**05 25 52.5**	**+3.2**
	160nm,0.3s,baz=31,slow=23,SNR=12							
LEM				S		**Sn**	**05 26 20.6**	**+5.4**
	460nm,0.3s,baz=336,slow=18,SNR=13							
LEM	**Lembang**	**2.15**	**311**	P		**Pn**	**05 25 50.7**	**+1.5**
CNJI	**Cibinong**	**2.30**	**293**	P		**Pn**	**05 25 51.2**	**+0.1**
CNJI				S		**Sn**	**05 26 18.8**	**+0.2**
NGJI	**Ngawi**	**2.35**	**69**	P		Pn	05 25 57.0	+5.2
UWJI	**Ujung Watu**	**2.46**	**43**	P		**Pn**	**05 25 54.9**	**+1.6**
UWJI				S		**Sn**	**05 26 24.5**	**+2.0**
PWJI	**Pagerwojo**	**2.53**	**85**	P		**Pn**	**05 25 54.0**	**-0.2**
SKJI	**Sukabumi**	**2.94**	**294**	P		**Pn**	**05 26 01.6**	**+1.8**
GRJI	**Gresik**	**3.45**	**68**	P		**Pn**	**05 26 08.6**	**+1.9**
GRJI				S		**Sn**	**05 26 48.9**	**+2.4**
JAGI	**Jajag, Banyuwa**	**4.85**	**93**	Pn		**Pn**	**05 26 28.6**	**+2.8**
JAGI				Sn		**Sn**	**05 27 20.1**	**-0.6**
KASI	**Kota Agung**	**5.44**	**299**	P		**Pn**	**05 26 34.4**	**+0.6**
	1.3nm121nm,0.8s							
KLSI		**5.71**	**308**	P		**Pn**	**05 26 37.2**	**-0.4**
	0.3nm38nm,1.1s							
MDSI	**Maura Dua**	**6.27**	**306**	P		**Pn**	**05 26 45.6**	**+0.4**
	0.5nm79nm,1.0s							
MNAI	**Manna**	**7.35**	**301**	Pn		**Pn**	**05 27 01.6**	**+1.6**
MNAI				Sn		**Sn**	**05 28 19.9**	**-2.0**
KSI	**Kapahiang**	**8.04**	**304**	P		**Pn**	**05 27 09.3**	**-0.1**
	133nm,0.8s							
BKSI	**Bulukumba**	**11.17**	**76**	P		**Pn**	**05 27 50.2**	**-1.9**

SOEI Soe 14.90 97 P P 05 28 44.0 -1.6
GSI Gunungsitoli 15.02 309 Pn Pn 05 28 41.4 -1.8
GIRL Giralia 15.10 162 Pn Pn 05 28 41.8 -2.5
GIRL IAmb IAmb 05 28 55.7
comp=Z,222nm,1.4s
KNRA Kununurra 20.45 113 P P 05 29 47.6 +1.1
KNRA IAmb IAmb 05 30 17.1
comp=Z,303nm,2.0s
MTN Manton Dam 21.98 104 P P 05 30 03.8 +0.9
FAKI Fak Fak 23.48 78 P P 05 30 18.4 +0.3
FAKI IAmb IAmb 05 31 03.0
comp=Z,137nm,1.5s
WB0 Warramunga Arr 26.90 118 P P 05 30 50.4 +1.4
WB0 IAmb IAmb 05 30 55.2
comp=Z,94nm,1.4s
WRA Warramunga Arr 26.92 118 P P 05 30 50.0 +0.7
comp=Z,16nm,0.9s,baz=288,slow=9.9,SNR=9.1
WRA Warramunga Arr 26.92 118 P P 05 30 49.9 +0.7
WRAB Tennant Creek 26.93 118 P P 05 30 50.3 +1.0
WRAB IAmb IAmb 05 31 17.8
comp=Z,164nm,1.8s
WB2 Warramunga Arr 26.93 118 P P 05 30 50.3 +0.9
WB2 IAmb IAmb 05 30 50.5
comp=Z,90nm,1.2s
WR0 Warramunga Arr 27.10 118 P P 05 30 51.8 +0.9
WR0 IAmb IAmb 05 31 03.8
comp=Z,143nm,1.6s
ASAR Alice Springs 28.16 126 P P 05 31 01.1 +0.8
comp=Z,14nm,0.8s,baz=303,slow=9.2,SNR=8.9
ASAR PcP PcP 05 34 13.0 +0.4
comp=Z,2.1nm,0.7s,baz=292,slow=0.7,SNR=4.6
ASAR Alice Springs 28.16 126 P P 05 31 01.2 +0.9
AS31 Alice Springs 28.16 126 P P 05 31 01.6 +1.3
COEN Coen 33.74 103 P P 05 31 49.5 +0.1
H08S2 Diego Garcia H 36.41 268 T T 06 10 41.2
baz=93,slow=76,SNR=14
H08S3 Diego Garcia H 36.42 268 T T 06 10 42.0
baz=93,slow=76,SNR=14
H08S1 Diego Garcia H 36.43 268 T T 06 10 35.0
baz=93,slow=76,SNR=12
STKA Stephens Creek 38.16 133 P P 05 32 28.2 +1.2
comp=Z,18nm,0.7s,baz=310,slow=9.4,SNR=9.4
STKA Stephens Creek 38.16 133 P P 05 32 28.2 +1.2
STKA IAmb IAmb 05 32 53.2
comp=Z,39nm,1.5s
ARMA Armidale 45.30 125 P P 05 33 28.5 +3.0
SONM Songino Array 55.88 358 P P 05 34 44.6 -0.2
NOUC Port Laguerre 56.46 111 P P 05 34 51.0 +1.8
SOCY Socotra 58.57 290 P P 05 35 04.5 +0.2
MK31 Makanchi Array 59.82 339 P P 05 35 10.0 -2.3
MK31 IAmb IAmb 05 35 12.6
comp=Z,26nm,1.8s
MKAR Makanchi Array 59.82 339 P P 05 35 10.3 -2.0
comp=Z,1.4nm,0.5s,baz=154,slow=7.1,SNR=8.3
MKAR Makanchi Array 59.82 339 P P 05 35 09.9 -2.3
KURK Kurchatov 64.43 339 P P 05 35 41.7 -1.3
THZ Tophouse 64.97 132 P P 05 35 48.6 +1.8
GEYT Alibeck 66.17 318 P P 05 35 55.0 +0.4
BKZ Black Stump Fm 67.22 129 P P 05 36 01.9 +0.6
BKZ IAmb IAmb 05 37 39.9
comp=Z,58nm,1.6s
MSVF Nonsavu 67.40 106 P P 05 35 59.3 -3.5
MSVF IAmb IAmb 05 36 30.8
comp=Z,52nm,1.9s
URZ Urewera 67.57 128 P P 05 36 03.8 +0.3
ABKAR Akbulak array 71.62 328 P P 05 36 26.9 -1.2
PETK Petropavlovsk- 73.60 28 P P 05 36 38.4 -1.4
VNDA Vanda 74.36 170 P P 05 36 45.3 +1.4
comp=Z,2.3nm,0.7s,baz=324,slow=5.6,SNR=6.4
VNDA Vanda 74.36 170 P P 05 36 45.2 +1.4
VNDA IAmb IAmb 05 37 53.1
comp=Z,51nm,1.8s
SYO Syowa Base 75.13 200⍰ eP P 05 36 48.9 +0.5
BOSA Boshof 80.87 242 P P 05 37 22.6 +1.4
comp=Z,1.7nm,0.5s,baz=108,slow=7.6,SNR=4.1
BOSA Boshof 80.87 242 P P 05 37 22.5 +1.4
QSPA South Pole Qui 81.76 180 P P 05 37 26.6 +1.5
BR131 Keskin Array S 84.32 311 P P 05 37 38.4 -0.5
BR131 IAmb IAmb 05 37 59.8
comp=Z,49nm,1.9s
BRTR Keskin Array B 84.32 311 P P 05 37 38.1 -0.8
comp=Z,2.9nm,0.6s,baz=142,slow=9.2,SNR=13
TXAR Lajitas Array 142.64 51 PKP PKPdf 05 44 36.8 -3.3
comp=Z,0.5nm,0.6s,baz=190,slow=0.9,SNR=5.8
TXAR Lajitas Array 142.64 51 PKPdf 05 44 37.0 -3.0
JCT Junction City 144.96 47 PKPdf 05 44 43.9 -0.1
JCT Junction City 144.96 47 P PKPdf 05 44 43.7 -0.2
baz=304
CCM Cathedral Cave 145.01 29 P PKPbc 05 44 43.0 -0.2
baz=323
K54A Basiliko Farm, 145.05 10 P PKPbc 05 44 42.7 -0.5
baz=346
N48A Decatur 145.11 19 P PKPbc 05 44 43.3 -0.2
baz=335
L54A Sinclairville 145.30 11 P PKPbc 05 44 43.8 -0.2
baz=345
N49A Columbus Grove 145.32 18 P PKPbc 05 44 43.8 -0.3
baz=336
L55A Hinsdale 145.51 10 P PKPdf 05 44 44.3 -0.3
baz=346
U40A Yellville 145.51 32 P PKPdf 05 44 44.4 -0.3
baz=319
L56A Greenwood 145.70 9 P PKPdf 05 44 44.8 -0.1
baz=348
WHTX Lake Whitney, 145.72 43 P PKPab 05 44 46.1 +0.1
baz=308
N50A Nevada 145.77 17 P PKPdf 05 44 45.1 +0.2
baz=338
M53A WI Miller and 145.78 13 P PKPdf 05 44 44.9 -0.1
baz=342
N51A Ashland 145.85 16 PKPdf 05 44 45.1 -0.1
OLIL Olney 145.85 25 PKPdf 05 44 45.4 +0.2
O49A Covington 145.94 19 PKPdf 05 44 44.3 -1.0
O49A Covington 145.94 19 P PKPbc 05 44 46.2 +0.1
baz=336
L58A Harry Jones Me 146.03 7 P PKPbc 05 44 46.0 -0.3
baz=351
P48A Milroy 146.23 21 P PKPbc 05 44 46.4 -0.6
baz=333
P49A Miami Univ. Ec 146.41 20 P PKPbc 05 44 47.1 -0.4
baz=335
MIAR Mount Ida 146.44 35 P PKPbc 05 44 47.8 0.0
baz=316
M57A Sunshine Farm, 146.55 9 P PKPbc 05 44 47.6 -0.2
baz=348
M58A Price's Panora 146.61 8 P PKPbc 05 44 47.9 -0.2
baz=350
LCAR Lake Charles 146.61 31 PKPbc 05 44 47.8 -0.4
WCI Wyandotte Cave 147.00 23 PKPbc 05 44 48.5 -0.7
WCI Wyandotte Cave 147.00 23 P PKPbc 05 44 48.4 -0.8
baz=331
O54A Avella 147.04 14 P PKPbc 05 44 49.1 -0.2
baz=342
N57A Milroy 147.05 10 P PKPbc 05 44 49.0 -0.3
baz=348
N58A Sunbury 147.10 8 P PKPbc 05 44 49.0 -0.4
baz=349
ODNJ Oqdensburg 147.11 5 PKPbc 05 44 48.6 -0.8
SSPA Standing Stone 147.11 10 P PKPbc 05 44 49.2 -0.2
baz=347
N59A State Game Lan 147.15 7 PKPbc 05 44 49.3 -0.2
N59A State Game Lan 147.15 7 P PKPbc 05 44 49.7 +0.1
baz=351
N60A Cedar Hill Far 147.27 6 P PKPbc 05 44 49.1 -0.8
baz=352
BDFB Brasilia 147.29 224 PKPbc PKPab 05 44 52.0 -0.7
comp=Z,2.8nm,0.6s,baz=108,slow=6.0,SNR=4.9
BDFB Brasilia 147.29 224 PKPbc 05 44 51.6 +0.8
O59A Robesonia 147.69 8 P PKPbc 05 44 50.6 -0.4
baz=350
Q53A Leroy 148.00 16 P PKPbc 05 44 51.9 0.0
baz=340
Q54A Coxs Mills 148.07 15 P PKPbc 05 44 52.0 -0.1
baz=341
WVT Waverly 148.16 27 PKPbc 05 44 52.4 0.0
WVT Waverly 148.16 27 P PKPbc 05 44 52.5 +0.1
baz=327
P57A Homestead Farm 148.21 11 P PKPbc 05 44 52.4 0.0
baz=346
Q55A Buckhannon 148.24 14 P PKPbc 05 44 52.5 -0.1
baz=342
P59A Jarrettsville 148.34 8 P PKPbc 05 44 52.6 -0.2
baz=349
R53A Hurricane 148.38 17 P PKPbc 05 44 52.8 -0.1
baz=339
S51A Beattyville 148.50 20 P PKPbc 05 44 52.9 -0.4

baz=335
T51A Gray 148.98 21 P PKPbc 05 44 54.6 +0.1
baz=334
U50A Jamestown 149.15 23 P PKPbc 05 44 54.6 -0.4
baz=332
R58A Rapidan 149.36 11 P PKPbc 05 44 55.5 0.0
baz=346
W49A Belvidere 149.69 26 P PKPbc 05 44 55.8 -0.6
baz=329
T55A Pulaski 149.84 16 P PKPbc 05 44 56.3 -0.4
baz=340
V52A Sevierville 150.12 21 PKPbc 05 44 57.0 -0.3
V52A Sevierville 150.12 21 P PKPbc 05 44 57.3 -0.1
baz=334
T56A Rocky Mt 150.12 15 P PKPbc 05 44 57.2 -0.2
baz=341
U55A TA2, Sparta 150.34 17 P PKPbc 05 44 57.8 -0.2
baz=339
V53A Saluda 150.54 20 P PKPbc 05 44 58.6 +0.1
baz=335
W52A Murphy 150.66 22 P PKPbc 05 44 58.6 -0.1
baz=333
T59A Double "B" Far 150.73 11 P PKiKP 05 44 59.1 -0.3
baz=346
U57A Blanch 150.86 14 P PKPbc 05 44 58.9 -0.2
baz=342
W53A Cullowhee 150.87 21 P PKPbc 05 44 59.5 +0.1
baz=334
U58A Oxford 151.08 13 P PKPbc 05 44 59.6 0.0
baz=344
V57A Coltrane Farms 151.26 15 P PKPbc 05 44 59.7 -0.3
baz=341
Y52A Lilburn 151.69 24 P PKiKP 05 45 01.7 +0.2
baz=332
X54A Belton 151.71 21 P PKPbc 05 45 01.2 +0.1
baz=335
W56A Indian Trail 151.75 17 P PKPbc 05 45 01.3 +0.1
baz=339
V59A Middlesex 151.75 13 P PKiKP 05 45 01.3 -0.2
baz=344
X55A Gracelyn & Ava 152.03 19 P PKPbc 05 45 01.8 -0.1
baz=337
Y54A Tignall 152.22 22 P PKiKP 05 45 02.6 0.0
baz=334
Z54A Sparta 152.72 23 P PKiKP 05 45 03.8 +0.2
baz=333

MAN 25 05:37:25.6, 17°.81N×120°.90E, h18km, mb3.5, ML2.2, MS1.7, Luzon

*DJA **25** 05:41:35.6±0.2,2°.N±3°×12°.5E±°, h234km±2km, M4.5/17, mB5.9/3, mb4.5/17, MLv4.5/11, Mw(mB)5.4/3*
*NEIC **25** 05:41:36.0±2.3,2°.00N±0°.10×124°.62E±0°.09, h239km±7km, mb4.5/37, Error ellipse: s-maj=14.5km s-min=12.5km az=161.0*
*IDC **25** 05:41:37.0±3.6, 1°.94N×124°.50E, h246km±37km, mb3.9/14, mb1 3.9/15, mb1mx3.7/42, mbtmp4.4/15, Error ellipse: s-maj=19.8km s-min=10.6km az=63.0*
ISC 25 05:41:36.7±0.4, 1°.91N±0°.06×124°.63E±0°.05, h250km, n98, σ1§50/106, mb4.3/43, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.48**	**206**	P	**Pn**	**05 42 13.0**	**-1.9**
KMSI				S	**S**	**05 42 40.7**	**-4.3**
TNTI	**Ternate**	**2.96**	**112**	P	**Pn**	**05 42 27.4**	**-1.4**
TNTI	**Ternate**	**2.96**	**112**		**Pn**	**05 42 27.4**	**-1.4**
TNTI				S	**S**	**05 43 06.9**	**-3.1**
MRSI	**Marisa**	**3.04**	**242**	P	**Pn**	**05 42 28.3**	**-1.4**
LUWI	**Luwuk**	**3.47**	**212**	Pn	**Pn**	**05 42 35.2**	**+0.8**
LUWI				S	**S**	**05 43 16.9**	**-3.4**
LBMI	**Labuha**	**3.83**	**131**	P	**Pn**	**05 42 37.2**	**-1.4**
LBMI				S	**S**	**05 43 23.8**	**-3.9**
SANI	**Sanana**	**4.17**	**161**	P	**Pn**	**05 42 39.3**	**-3.2**
MPSI	**Mapaga**	**4.98**	**252**	P	**Pn**	**05 42 49.5**	**-2.8**
TTSI	**Tana Toraja**	**6.88**	**224**	P	**Pn**	**05 43 15.1**	**-0.9**
	0.2nm33nm,0.6s						
SBUM	**Sibu**	**12.41**	**273**	P	**P**	**05 44 30.6**	**+2.7**
MTN	**Manton Dam**	**16.02**	**156**	P	**Pn**	**05 45 09.2**	**0.0**
MTN				IAmb	IAmb	05 45 12.1	
	comp=Z,15nm,0.6s						
KNRA	**Kununurra**	**17.95**	**167**	P	**P**	**05 45 30.1**	**+1.2**
DLV	**T Lat**	**18.85**	**303**	P	**Pn**	**05 45 40.1**	**-2.6**
FITZ	**Fitzroy Crossi**	**19.91**	**177**	P	**P**	**05 45 50.0**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=4.9,SNR=14						
FITZ	**Fitzroy Crossi**	**19.91**	**177**	P	**P**	**05 45 50.4**	**+0.5**
KLSI		**20.93**	**252**	P	**P**	**05 46 02.5**	**+1.7**
	comp=Z,18nm,0.9s						
MDSI	**Maura Dua**	**21.40**	**253**	P	**P**	**05 46 06.4**	**+1.0**
	comp=Z,25nm,1.2s						
TPUB	**Ta-pu**	**21.61**	**350**	P	**P**	**05 46 07.6**	**+0.4**
WB0	**Warramunga Arr**	**23.58**	**156**	P	**P**	**05 46 25.9**	**+0.7**
WRAB	**Tennant Creek**	**23.72**	**157**	P	**P**	**05 46 27.5**	**+1.0**
WRA	**Warramunga Arr**	**23.72**	**157**	P	**P**	**05 46 27.3**	**+0.8**
	comp=Z,15nm,0.7s,baz=334,slow=10,SNR=38						
WRA	**Warramunga Arr**	**23.72**	**157**	P	**P**	**05 46 26.2**	**-0.3**
WB2	**Warramunga Arr**	**23.73**	**157**	P	**P**	**05 46 27.5**	**+0.9**
WR0	**Warramunga Arr**	**23.82**	**156**	P	**P**	**05 46 27.6**	**+0.2**
WR0				IAmb	IAmb	05 46 30.8	
	comp=Z,14nm,0.8s						
RPSI	**Rantau Prapat**	**25.69**	**272**	P	**P**	**05 46 44.2**	**-0.2**
RPSI				IAmb	IAmb	05 46 45.8	
	comp=Z,16nm,0.8s						
RPSI	**Rantau Prapat**	**25.69**	**272**	P	**P**	**05 46 44.5**	**+0.1**
PSI	**Prapat**	**25.70**	**272**	P	**P**	**05 46 44.6**	**0.0**
	comp=Z,17nm,0.9s,baz=73,slow=4.8,SNR=14						
ASAR	**Alice Springs**	**26.98**	**161**	P	**P**	**05 46 57.1**	**+1.3**
	comp=Z,1.1nm,0.4s,baz=331,slow=6.6,SNR=14						
ASAR	**Alice Springs**	**26.98**	**161**	P	**P**	**05 46 56.9**	**+1.0**
GSI	**Gunungsitoli**	**27.05**	**269**	P	**P**	**05 46 56.2**	**-0.3**
CMAR	**Chiang Mai Arr**	**30.07**	**305**	P	**P**	**05 47 24.2**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=125,slow=6.9,SNR=10.0						
CMAR				PcP	**PcP**	**05 50 20.0**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=122,slow=3.3,SNR=4.2						
CHTO	**Chiang Mai**	**30.25**	**305**	P	**P**	**05 47 24.8**	**0.0**
CHTO				IAmb	IAmb	05 47 26.7	
	comp=Z,11nm,1.3s						
NJ2	**Nanjing**	**30.47**	**350**	*eP*	**P**	**05 47 27.6**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ENH	**Enshi**	**31.65**	**334**	P	**P**	**05 47 37.6**	**+0.7**
ENH				IAmb	IAmb	05 47 38.8	
	comp=Z,5.8nm,0.6s						
CD2	**Chengdu**	**34.95**	**328**	P	**P**	**05 48 06.3**	**+0.9**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
XAN	**Xi'an**	**35.17**	**337**	P	**P**	**05 48 06.9**	**-0.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN	**Xi'an**	**35.17**	**337**	P	**P**	**05 48 06.7**	**-0.5**
XAN				IAmb	IAmb	05 48 08.4	
	comp=Z,8.9nm,1.0s						
BBOO	**Buckleboo**	**36.19**	**164**	P	**P**	**05 48 18.5**	**+2.7**
BBOO				IAmb	IAmb	05 48 21.2	
	comp=Z,32nm,1.4s						
STKA	**Stephens Creek**	**37.26**	**156**	P	**P**	**05 48 26.6**	**+1.8**
	comp=Z,6.4nm,0.7s,baz=337,slow=8.3,SNR=11						
STKA	**Stephens Creek**	**37.26**	**156**	P	**P**	**05 48 26.8**	**+2.0**
LZH	**Lanzhou**	**39.07**	**333**	*eP*	**P**	**05 48 42.3**	**+2.2**
LZH				pP	pwP	05 49 33.8	-2.6
LZH				sP	sP	05 50 03.8	+6.0
LZH				pmax	pmax		
	comp=Z,22nm,1.0s						
LZH				pmax	pmax		
	comp=Z,98nm,4.3s						
SHL	**Shillong**	**39.33**	**310**	P	**P**	**05 48 43.4**	**+1.0**
SHL				IAmb	IAmb	05 48 43.6	
	comp=Z,21nm,0.8s						
HHC	**Hu-ho-hao-te**	**40.52**	**345**	*eP*	**P**	**05 48 54.4**	**+2.6**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,340nm,5.7s						
USRK	**Ussuriysk Ar.**	**42.61**	**8**	P	**P**	**05 49 09.5**	**+1.0**
	comp=Z,2.3nm,0.6s,baz=201,slow=9.0,SNR=4.8						
USRK	**Ussuriysk Ar.**	**42.61**	**8**	P	**P**	**05 49 09.1**	**+0.6**
TAPN	**Taplejung**	**43.46**	**309**	*eP*	**P**	**05 49 16.7**	**+0.8**
	comp=Z,17nm,0.5s						
ODAN	**Odare**	**43.47**	**308**	*eP*	**P**	**05 49 17.0**	**+1.0**
CAN	**Canberra**	**43.50**	**151**	P	**P**	**05 49 19.7**	**+3.9**
CAN				IAmb	IAmb	05 49 20.2	
	comp=Z,18nm,0.9s						
GTA	**Gaotai**	**43.63**	**332**	P	**P**	**05 49 18.0**	**+1.1**
GTA				pP	pP	05 50 04.3	-3.5
GTA				sP	sP	05 50 30.0	-5.6
GTA				PcP	**PP**	**05 51 01.0**	**-3.1**
GTA				pmax	pmax		
	comp=Z,14nm,0.8s						
RAMN	**Ramite**	**44.13**	**308**	*eP*	**P**	**05 49 21.8**	**+0.5**
	comp=Z,45nm,0.9s						
JIRN	**Jiri**	**44.79**	**308**	*eP*	**P**	**05 49 26.8**	**+0.2**
GUN	**Gumba**	**45.15**	**309**	*eP*	**P**	**05 49 29.3**	**-0.1**
	comp=Z,67nm,0.8s						
PKI	**Pulchoki**	**45.36**	**308**	*eP*	**P**	**05 49 31.2**	**+0.2**
PKIN	**Phulchoki**	**45.37**	**308**	*eP*	**P**	**05 49 30.8**	**-0.2**
KKN	**Kakani**	**45.56**	**308**	*eP*	**P**	**05 49 32.9**	**+0.5**
DMN	**Daman**	**45.62**	**308**	*eP*	**P**	**05 49 33.1**	**+0.2**
GKN	**Gorkha**	**46.17**	**308**	*eP*	**P**	**05 49 37.2**	**+0.1**
KOLN	**Koldanda**	**46.88**	**307**	*eP*	**P**	**05 49 42.7**	**0.0**
	comp=Z,75nm,0.9s						
DANN	**Dangsing**	**47.01**	**308**	*eP*	**P**	**05 49 43.7**	**-0.1**
	comp=Z,78nm,0.7s						
ULN	**Ulaanbaatar**	**48.23**	**344**	P	**P**	**05 49 53.9**	**+1.2**
SONM	**Songino Array**	**48.39**	**344**	P	**P**	**05 49 53.4**	**-0.4**
	comp=Z,2.7nm,1.0s,baz=166,slow=8.9,SNR=10						
SONM	**Songino Array**	**48.39**	**344**	P	**P**	**05 49 53.1**	**-0.6**
WMQ	**Urumqi**	**53.05**	**327**	*eP*	**P**	**05 50 29.4**	**+0.9**
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,2μm,11.8s						
WMQ				LR	LR		
	comp=N,880nm,29.7s						
WMQ				LR	LR		
	comp=E,280nm,29.1s						
WMQ				LR	LR		
	comp=Z,290nm,29.1s						
KSH	**Kashi**	**57.88**	**317**	P	**P**	**05 51 02.8**	**-0.1**
KSH				pP	pP	05 51 55.9	-1.0
KSH				S	**S**	**05 58 39.1**	**-3.7**
KSH				sS	sS	06 00 17.8	-1.3
KSH	**Kashi**	**57.88**	**317**	SS	SS	06 02 42.1	+4.0
KSH				pmax	pmax		
	comp=Z,860nm,6.9s						
KSH				LR	LR		
	comp=N,400nm,6.5s						
KSH				LR	LR		
	comp=E,380nm,5.4s						
MK31	**Makanchi Array**	**57.88**	**327**	P	**P**	**05 51 02.5**	**-0.1**
MK31				IAmb	IAmb	05 51 03.9	
	comp=Z,3.7nm,0.6s						
MKAR	**Makanchi Array**	**57.88**	**327**	P	**P**	**05 51 02.1**	**-0.5**
	comp=Z,3.4nm,0.4s,baz=116,slow=9.4,SNR=74						
MKAR				PcP	**PcP**	**05 51 52.2**	**+0.1**
	comp=Z,3.6nm,0.7s,baz=124,slow=4.7,SNR=16						
MKAR	**Makanchi Array**	**57.88**	**327**	P	**P**	**05 51 01.5**	**-1.2**
MKAR				PcP	**PcP**	**05 51 51.9**	**-0.2**
PEA0B	**Petropavlovsk-**	**57.90**	**23**	P	**P**	**05 51 04.5**	**+1.9**
PETK	**Petropavlovsk-**	**57.90**	**23**	P	**P**	**05 51 04.4**	**+1.8**
	comp=Z,2.0nm,0.6s,baz=204,slow=3.3,SNR=9.9						
PETK	**Petropavlovsk-**	**57.90**	**23**	P	**P**	**05 51 04.1**	**+1.4**
MAKZ	**Makanchi**	**58.06**	**327**	P	**P**	**05 51 03.4**	**-0.6**
MAKZ				IAmb	IAmb	05 51 05.1	
	comp=Z,4.4nm,0.7s						
MA2	**Magadan**	**60.98**	**15**	P	**P**	**05 51 25.6**	**+2.2**
MA2				IAmb	IAmb	05 51 32.0	
	comp=Z,9.1nm,1.1s						
KBL	**Kabul**	**60.98**	**309**	P	**P**	**05 51 24.4**	**+0.1**
KBL				IAmb	IAmb	05 51 25.9	
	comp=Z,6.7nm,0.8s						
ZAA0	**Zalesovo Array**	**61.28**	**334**	P	**P**	**05 51 24.6**	**-0.9**
ZALV	**Zalesovo Beam**	**61.28**	**334**	P	**P**	**05 51 25.0**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=127,slow=5.1,SNR=13						
ZALV	**Zalesovo Beam**	**61.28**	**334**	P	**P**	**05 51 23.5**	**-2.1**
GAR	**Garm**	**61.63**	**314**	P	**P**	**05 51 28.1**	**-0.3**
GAR				IAmb	IAmb	05 51 29.7	
	comp=Z,11nm,0.7s						
KURK	**Kurchatov**	**62.17**	**329**	P	**P**	**05 51 31.2**	**-0.4**
KURK				IAmb	IAmb	05 51 32.7	
	comp=Z,11nm,0.7s						
CHGR	**Chuyangaron**	**62.34**	**313**	P	**P**	**05 51 32.2**	**-0.9**
CHGR				IAmb	IAmb	05 51 35.5	
	comp=Z,11nm,0.8s						
KK31	**Karatay Array**	**63.15**	**318**	P	**P**	**05 51 37.2**	**-1.1**
KKAR	**Karatay Array**	**63.15**	**318**	P	**P**	**05 51 37.5**	**-0.8**
BRVK	**Borovoye**	**67.78**	**328**	P	**P**	**05 52 08.6**	**+0.9**
BRVK				IAmb	IAmb	05 52 08.7	
	comp=Z,4.8nm,0.9s						
TIXI	**Tiksi**	**69.69**	**1**	P	**P**	**05 52 18.8**	**-0.1**
TIXI				IAmb	IAmb	05 52 20.3	
	comp=Z,12nm,1.2s						
GEYT	**Alibeck**	**70.41**	**310**	P	**P**	**05 52 24.0**	**-0.1**
	comp=Z,2.8nm,0.6s,baz=113,slow=3.4,SNR=4.8						
GEYT	**Alibeck**	**70.41**	**310**	P	**P**	**05 52 23.5**	**-0.6**
ABKAR	**Akbulak array**	**72.24**	**322**	P	**P**	**05 52 33.5**	**-1.2**
KMBO	**Kilima Mbogo**	**87.41**	**269**	P	**P**	**05 53 57.9**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=41,slow=6.1,SNR=4.9						
KMBO	**Kilima Mbogo**	**87.41**	**269**	P	**P**	**05 53 57.5**	**+0.6**
ARCES	**ARCESS Array B**	**91.41**	**340**	P	**P**	**05 54 13.2**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=104,slow=1.5,SNR=5.1						
ARCES	**ARCESS Array B**	**91.41**	**340**	P	**P**	**05 54 12.2**	**-1.9**
FINES	**FINESS Array B**	**92.42**	**332**	P	**P**	**05 54 18.0**	**-0.9**
	comp=Z,1.6nm,0.7s,baz=84,slow=5.9,SNR=4.7						
FINES	**FINESS Array B**	**92.42**	**332**	P	**P**	**05 54 17.3**	**-1.6**
TORD	**Torodi Ar. Bea**	**121.45**	**287**	PKP	**PKiKP**	**06 00 01.4**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=71,slow=1.3,SNR=2.6						
TORD	**Torodi Ar. Bea**	**121.45**	**287**		**PKPdf**	**05 59 60.0**	**-1.4**
SCHQ	**Schefferville**	**122.66**	**8**	PKP	**PKiKP**	**06 00 03.7**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=211,slow=0.5,SNR=4.9						
SCHQ	**Schefferville**	**122.66**	**8**		**PKiKP**	**06 00 02.8**	**-0.1**
T49A	**Edmonton**	**132.14**	**33**	PKPdf	**PKiKP**	**06 00 21.0**	**-1.3**

*DJA **25** 05:48:57.9±0.7, 8°.S±12°.×10°.9E±°, h73km±24km, M4.3/11, MLv4.3/11*
*NEIC **25** 05:48:57.9±2.2, 8°.1S±0°.1×109°.33E±0°.06, h77km±5km, mb4.3/20, Error ellipse: s-maj=18.2km s-min=7.3km az=194.0*
*IDC **25** 05:49:00.4±2.7, 7°.68S×109°.65E, h104km±33km, mb3.7/5, mb1 3.9/7, mb1mx3.5/36, mbtmp4.1/7, Error ellipse: s-maj=85.4km s-min=14.2km az=40.0*
ISC 25 05:48:57.9±0.9, 8°.26S±0°.10×109°.29E±0°.04, h85km±8km, n51, σ1§37/53, mb4.1/13, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**0.96**	**299**	P	**Pn**	**05 49 16.1**	**-0.6**
CMJI				S	**Sn**	**05 49 29.2**	**-1.6**
KPJI	**Karang Pucung**	**0.98**	**339**	P	**Pn**	**05 49 17.8**	**+0.7**
UGM	**Wanagama**	**1.27**	**74**	P	**Pn**	**05 49 20.7**	**+0.2**
UGM				S	**Sn**	**05 49 36.8**	**-0.7**
UGM	**Wanagama**	**1.27**	**74**	Pn	**Pn**	**05 49 20.2**	**-0.3**
CISI	**Cisompet, Garu**	**1.62**	**295**	P	**Pn**	**05 49 25.4**	**+0.4**
CISI				S	**Sn**	**05 49 45.1**	**-0.5**
CISI	**Cisompet, Garu**	**1.62**	**295**	Pn	**Pn**	**05 49 25.3**	**+0.3**
CISI				Sn	**Sn**	**05 49 44.7**	**-0.9**
SMRI	**Semarang**	**1.66**	**44**	Pn	**Pn**	**05 49 27.0**	**+1.6**
WOJI	**Wonogiri, Jawa**	**1.67**	**76**	P	**Pn**	**05 49 25.3**	**-0.3**
PCJI	**Pacitan**	**1.87**	**88**	P	**Pn**	**05 49 28.0**	**-0.2**
PCJI				S	**Sn**	**05 49 51.0**	**-0.3**
LEM	**Lembang**	**2.18**	**310**	P	**Pn**	**05 49 34.7**	**+2.1**
	29nm,0.3s,baz=6.6,slow=20,SNR=7.7						
LEM				S	**Sn**	**05 50 03.6**	**+4.6**
	74nm,0.3s,baz=95,slow=23,SNR=15						
LEM	**Lembang**	**2.18**	**310**	P	**Pn**	**05 49 32.6**	**0.0**
NGJI	**Ngawi**	**2.33**	**68**	P	Pn	05 49 38.2	+3.9
CNJI	**Cibinong**	**2.34**	**294**	P	**Pn**	**05 49 33.9**	**-0.6**
PWJI	**Pagerwojo**	**2.50**	**85**	P	**Pn**	**05 49 36.7**	**+0.1**
JAGI	**Jajag, Banyuwa**	**4.81**	**93**	P	**Pn**	**05 50 08.7**	**+0.7**
JAGI	**Jajag, Banyuwa**	**4.81**	**93**	Pn	**Pn**	**05 50 09.5**	**+1.5**
MNAI	**Manna**	**7.39**	**301**	Pn	**Pn**	**05 50 45.2**	**+2.0**
LUWI	**Luwuk**	**15.22**	**63**	P	**P**	**05 52 32.2**	**+0.8**
LUWI				IAmb	IAmb	05 52 35.1	
	comp=Z,31nm,0.6s						
FITZ	**Fitzroy Crossi**	**18.67**	**123**	P	**Pn**	**05 53 11.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=318,slow=6.8,SNR=5.4						
FITZ	**Fitzroy Crossi**	**18.67**	**123**	P	**Pn**	**05 53 11.2**	**+0.5**
KNRA	**Kununurra**	**20.41**	**113**	P	**P**	**05 53 29.6**	**+1.1**
KNRA				IAmb	IAmb	05 53 42.0	
	comp=Z,10nm,1.0s						
SAUI	**Saumlaki**	**21.79**	**91**	P	**P**	**05 53 40.3**	**-2.9**
MTN	**Manton Dam**	**21.95**	**104**	P	**P**	**05 53 45.2**	**+0.4**
MTN				IAmb	IAmb	05 53 55.0	
	comp=Z,21nm,1.3s						
FAKI	**Fak Fak**	**23.45**	**78**	P	**P**	**05 54 00.4**	**+0.3**
NWAO	**Narrogin (SRO)**	**25.63**	**164**	P	**P**	**05 54 22.5**	**+2.9**
NWAO				IAmb	IAmb	05 54 33.6	
	comp=Z,16nm,1.2s						
WB0	**Warramunga Arr**	**26.86**	**118**	P	**P**	**05 54 31.9**	**+0.9**
WB0				IAmb	IAmb	05 54 35.2	
	comp=Z,8.8nm,1.3s						
WRA	**Warramunga Arr**	**26.88**	**118**	P	**P**	**05 54 32.0**	**+0.9**
	comp=Z,2.1nm,1.0s,baz=288,slow=10.0,SNR=5.6						
WRA	**Warramunga Arr**	**26.88**	**118**	P	**P**	**05 54 31.8**	**+0.7**
WRAB	**Tennant Creek**	**26.89**	**118**	P	**P**	**05 54 31.8**	**+0.6**
WRAB				IAmb	IAmb	05 54 32.3	
	comp=Z,5.1nm,0.8s						
WB2	**Warramunga Arr**	**26.89**	**118**	P	**P**	**05 54 31.9**	**+0.7**
WR0	**Warramunga Arr**	**27.06**	**118**	P	**P**	**05 54 33.9**	**+1.1**
ASAR	**Alice Springs**	**28.12**	**126**	P	**P**	**05 54 42.8**	**+0.6**
	comp=Z,4.6nm,1.0s,baz=303,slow=8.8,SNR=12						
ASAR	**Alice Springs**	**28.12**	**126**	P	**P**	**05 54 43.5**	**+1.3**
COEN	**Coen**	**33.70**	**103**	P	**P**	**05 55 31.1**	**-0.3**
COEN				IAmb	IAmb	05 55 35.1	
	comp=Z,7.0nm,1.2s						
BBOO	**Buckleboo**	**34.80**	**138**	P	**P**	**05 55 41.4**	**+0.7**
BBOO				IAmb	IAmb	05 55 41.7	
	comp=Z,6.5nm,0.5s						
H08S2	**Diego Garcia H**	**36.44**	**268**	T	T	06 34 23.1	
	baz=97						
H08S3	**Diego Garcia H**	**36.45**	**268**	T	T	06 34 24.3	
	baz=97						
H08S1	**Diego Garcia H**	**36.46**	**268**	T	T	06 34 24.9	
	baz=97						
STKA	**Stephens Creek**	**38.12**	**133**	P	**P**	**05 56 10.4**	**+1.4**
	comp=Z,1.6nm,0.3s,baz=320,slow=9.4,SNR=9.0						
STKA	**Stephens Creek**	**38.12**	**133**	P	**P**	**05 56 10.3**	**+1.4**
MK31	**Makanchi Array**	**59.85**	**339**	P	**P**	**05 58 54.9**	**+0.3**
MK31				IAmb	IAmb	05 59 03.9	
	comp=Z,2.0nm,1.3s						
MKAR	**Makanchi Array**	**59.85**	**339**	P	**P**	**05 58 52.1**	**-2.6**
	comp=Z,0.5nm,0.6s,baz=144,slow=8.1,SNR=6.3						
MKAR	**Makanchi Array**	**59.85**	**339**	P	**P**	**05 58 51.7**	**-2.9**
MCQ	**Macquarie Isla**	**60.69**	**149**	P	**P**	**05 58 60.0**	**-0.2**
ABKAR	**Akbulak array**	**71.66**	**328**	P	**P**	**06 00 09.7**	**-0.8**
ABKAR				IAmb	IAmb	06 00 10.0	
	comp=Z,1.9nm,0.8s						
ABKAR	**Akbulak array**	**71.66**	**328**	P	**P**	**06 00 09.5**	**-0.9**
YAK	**Yakutsk**	**71.85**	**10**	P	**P**	**06 00 09.7**	**-1.6**
BR131	**Keskin Array S**	**84.36**	**311**	P	**P**	**06 01 21.1**	**-0.1**
BR131				IAmb	IAmb	06 01 35.8	
	comp=Z,3.4nm,1.3s						
BRTR	**Keskin Array B**	**84.36**	**311**	P	**P**	**06 01 20.4**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=127,slow=6.7,SNR=6.4						
BRTR	**Keskin Array B**	**84.36**	**311**	P	**P**	**06 01 20.9**	**-0.3**
YKA	**Yellowknife Ar**	**117.23**	**21**	PKP	**PKPdf**	**06 07 33.0**	**-0.1**
	comp=Z,0.2nm,0.9s,baz=302,slow=0.8,SNR=4.2						

*IDC **25** 06:03:11.4±3.5, 7°.59S×109°.62E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/33, mbtmp3.5/4, Error ellipse: s-maj=215.8km s-min=24.9km az=50.0*
*DJA **25** 06:03:20.3±0.8, 8°.S±11°.×10°.9E±°, h64km±19km, M4.0/9, MLv4.0/9*
ISC 25 06:03:20.8±1.1, 8°.3S±0°.1×109°.24E±0°.05, h84km±12km, n13, σ1§10/18, mb3.3/4, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**0.92**	**301**	P	**Pn**	**06 03 38.7**	**-0.5**
CMJI				S	**Sn**	**06 03 52.4**	**-0.5**
KPJI	**Karang Pucung**	**0.97**	**341**	P	**Pn**	**06 03 39.9**	**+0.1**
KPJI				S	**Sn**	**06 03 56.0**	**+2.1**
UGM	**Wanagama**	**1.31**	**75**	P	**Pn**	**06 03 43.3**	**-0.7**
UGM				S	**Sn**	**06 04 00.1**	**-1.3**
CISI	**Cisompet, Garu**	**1.58**	**296**	P	**Pn**	**06 03 47.0**	**-0.4**
CISI				S	**Sn**	**06 04 07.8**	**+0.4**
PCJI	**Pacitan**	**1.92**	**88**	P	**Pn**	**06 03 51.2**	**-0.5**
CNJI	**Cibinong**	**2.29**	**294**	P	**Pn**	**06 03 56.3**	**-0.5**
CNJI				S	**Sn**	**06 04 24.3**	**0.0**
PWJI	**Pagerwojo**	**2.55**	**85**	P	**Pn**	**06 03 59.6**	**-0.5**
GRJI	**Gresik**	**3.48**	**68**	P	**Pn**	**06 04 13.3**	**+0.6**
GMJI	**Gumukmas**	**4.16**	**91**	P	**Pn**	**06 04 21.9**	**-0.1**
WRA	**Warramunga Arr**	**26.92**	**118**	P	**P**	**06 08 55.1**	**+0.7**
	0.3nm,0.5s,baz=302,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**28.16**	**126**	P	**P**	**06 09 06.2**	**+0.8**
	0.3nm,0.4s,baz=304,slow=9.4,SNR=8.7						
STKA	**Stephens Creek**	**38.16**	**133**	P	**P**	**06 10 33.8**	**+1.6**
	0.6nm,0.3s,baz=320,slow=7.9,SNR=2.9						
MKAR	**Makanchi Array**	**59.83**	**339**	P	**P**	**06 13 15.3**	**-2.2**
	0.1nm,0.3s,baz=152,slow=7.8,SNR=4.0						

*JMA **25** 06:06:27.6, 29°.01N×141°.83E, h52km, M3.9*
*IDC **25** 06:06:29.3±6.9, 28°.97N×142°.56E, h31km±53km, mb3.6/5, mb1 3.8/6, mb1mx3.4/47, mbtmp3.8/6, ML2.9/1, Error ellipse: s-maj=41.6km s-min=19.0km az=83.0*
*NEIC **25** 06:06:28.6±1.1, 28°.95N±0°.07×142°.6E±0°.2, h37km±8km, mb4.2/12, Error ellipse: s-maj=19.2km s-min=9.6km az=85.0*
ISC 25 06:06:28.2±0.9, 29°.05N±0°.05×142°.6E±0°.2, h27km, n27, σ1§87/31, mb4.1/12, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chiji jima**	**1.98**	**190**	P	**Pn**	**06 06 58.8**	**-1.2**
CBIJ				*eS*	**Sn**	**06 07 21.7**	**-2.2**
JCJ	**Ch

σ1$38/30, mb3.9/12, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.77**	**199**	Pn	**Pn**	**06 10 41.9**	**-1.9**
MTN	**Manton Dam**	**15.52**	**168**	P	**P**	**06 13 28.7**	**-0.3**
MTN				IAmb	IAmb	06 13 38.0	
	comp=Z,13nm,1.1s						
KNRA	**Kununurra**	**18.03**	**177**	P	**Pn**	**06 13 58.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**20.55**	**186**	P	**P**	**06 14 25.7**	**+2.4**
	comp=Z,1.4nm,0.6s,baz=5.1,slow=11,SNR=3.2						
FITZ	**Fitzroy Crossi**	**20.55**	**186**	P	**P**	**06 14 24.9**	**+1.6**
FITZ				IAmb	IAmb	06 14 30.9	
	comp=Z,16nm,1.5s						
YOJ	**Yonaguni jima**	**22.39**	**348**	P	**P**	**06 14 40.1**	**-0.8**
WB0	**Warramunga Arr**	**22.97**	**164**	P	**P**	**06 14 47.2**	**+1.0**
WB0				IAmb	IAmb	06 14 48.4	
	comp=Z,3.1nm,0.7s						
WRA	**Warramunga Arr**	**23.12**	**165**	P	**P**	**06 14 49.0**	**+1.4**
	comp=Z,1.9nm,0.4s,baz=343,slow=10,SNR=7.8						
WRA	**Warramunga Arr**	**23.12**	**165**	P	**P**	**06 14 48.9**	**+1.2**
WB2	**Warramunga Arr**	**23.13**	**165**	P	**P**	**06 14 48.9**	**+1.2**
WB2				IAmb	IAmb	06 14 50.8	
	comp=Z,8.4nm,1.3s						
WR0	**Warramunga Arr**	**23.20**	**164**	P	**P**	**06 14 49.8**	**+1.5**
WR0				IAmb	IAmb	06 14 50.7	
	comp=Z,3.7nm,0.9s						
AS31	**Alice Springs**	**26.60**	**168**	P	**P**	**06 15 19.3**	**+0.3**
ASAR	**Alice Springs**	**26.60**	**168**	P	**P**	**06 15 19.8**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=353,slow=7.7,SNR=16						
BBOO	**Buckleboo**	**35.90**	**168**	P	**P**	**06 16 41.2**	**+1.2**
BBOO				IAmb	IAmb	06 16 56.3	
	comp=Z,26nm,1.5s						
BBOO	**Buckleboo**	**35.90**	**168**	P	**P**	**06 16 41.2**	**+1.2**
STKA	**Stephens Creek**	**36.52**	**160**	P	**P**	**06 16 45.3**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=332,slow=10,SNR=4.0						
STKA	**Stephens Creek**	**36.52**	**160**		**P**	**06 16 45.0**	**-0.2**
MK31	**Makanchi Array**	**59.29**	**325**	P	**P**	**06 19 39.4**	**+0.4**
MKAR	**Makanchi Array**	**59.29**	**325**	P	**P**	**06 19 40.9**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=108,slow=7.5,SNR=3.6						
MKAR	**Makanchi Array**	**59.29**	**325**	P	**P**	**06 19 37.9**	**-1.1**
KURBB	**Kurchatov Arra**	**63.46**	**327**	P	**P**	**06 20 08.4**	**+1.8**
	comp=Z,1.1nm,0.5s,baz=124,slow=6.0,SNR=6.0						
KURK	**Kurchatov**	**63.46**	**327**	P	**P**	**06 20 08.8**	**+2.1**
KURK				IAmb	IAmb	06 20 08.9	
	comp=Z,2.1nm,0.7s						
KK31	**Karatay Array**	**64.99**	**317**	P	**P**	**06 20 16.2**	**-0.5**
KK31				IAmb	IAmb	06 20 17.8	
	comp=Z,2.3nm,1.3s						
KKAR	**Karatay Array**	**64.99**	**317**	P	**P**	**06 20 16.1**	**-0.7**
BVAR	**Borovoye Array**	**69.05**	**327**	P	**P**	**06 20 43.9**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=97,slow=7.8,SNR=3.7						
ABKAR	**Akbulak array**	**73.90**	**321**	P	**P**	**06 21 12.5**	**+1.4**
ARCES	**ARCESS Array B**	**92.06**	**340**	P	**P**	**06 22 43.2**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=87,slow=7.3,SNR=2.7						
L42A	**Oliver, Polo**	**124.16**	**33**	PKPdf	**PKiKP**	**06 28 31.9**	**-0.9**
TORD	**Torodi Ar. Bea**	**124.47**	**288**	PKPdf	**PKPdf**	**06 28 31.3**	**-2.4**
BLO	**Bloomington**	**127.85**	**34**	PKPdf	**PKiKP**	**06 28 40.8**	**+0.6**

*KRSC **25** 06:27:44.1±1.1,54.58N×163.07E,h47km±23km, ML4.2*
*MOS **25** 06:27:45.4±0.5,54.63N×163.10E,h64km, mb3.8/1, Error ellipse: s-maj=7.5km s-min=5.5km az=86.4*
*IDC **25** 06:27:55.0±2.8,53.99N×162.27E,h121km±36km, mb2.9/4, mb1 3.2/5, mb1mx3.0/31, mbtmp3.2/5, Error ellipse: s-maj=69.6km s-min=24.9km az=171.0*

ISC 25 06:27:44.3±1.6, 54°63N±0.03×163°01E±0.03, h4km±10km, n88, σ1$24/125, mb3.2/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.75**	**265**	PN	**Pg**	**06 27 58.2**	**-0.4**
MKZ				S	**Sg**	**06 28 08.9**	**+0.7**
MKZ	**Mys Kozlova**	**0.75**	**265**	*eP*	**Pg**	**06 27 58.2**	**-0.4**
MKZ				*eS*	**Sg**	**06 28 08.9**	**+0.7**
KBTR	**Krutoberegovo**	**1.59**	**356**	PN	**Pn**	**06 28 11.7**	**-1.4**
KBTR	**Krutoberegovo**	**1.59**	**356**	*eP*	**Pn**	**06 28 11.7**	**-1.4**
TUMD	**Tumrok D**	**1.61**	**292**	*eP*	**Pn**	**06 28 11.7**	**-1.8**
KBG	**Krutoberegovo**	**1.64**	**354**	PN	**Pn**	**06 28 12.5**	**-1.3**
KBG				S	**Sn**	**06 28 34.4**	**-0.9**
KBG	**Krutoberegovo**	**1.64**	**354**	*eP*	**Pn**	**06 28 12.5**	**-1.3**
KBG				*eS*	**Sn**	**06 28 34.4**	**-0.9**
KZV	**Kizimen**	**1.64**	**288**	PN	**Pn**	**06 28 12.4**	**-1.6**
KZV				S	**Sn**	**06 28 34.0**	**-1.6**
KZV	**Kizimen**	**1.64**	**288**	*eP*	**Pn**	**06 28 12.4**	**-1.6**
KZV				*eS*	**Sn**	**06 28 34.0**	**-1.6**
TUMR	**Tumrok**	**1.78**	**293**	PN	**Pn**	**06 28 14.7**	**-1.1**
TUMR	**Tumrok**	**1.78**	**293**	*eP*	**Pn**	**06 28 14.7**	**-1.1**
BKI	**Bering**	**1.81**	**70**	PN	**Pn**	**06 28 15.6**	**-0.5**
BKI				S	**Sb**	**06 28 38.5**	**-2.3**
BKI	**Bering**	**1.81**	**70**	*eP*	**Pn**	**06 28 15.6**	**-0.5**
BKI				*eS*	**Sb**	**06 28 38.5**	**-2.3**
BZGR	**Bezymyannyi-Gr**	**1.86**	**316**	PN	**Pn**	**06 28 16.7**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**1.86**	**316**	*eP*	**Pn**	**06 28 16.7**	**-0.3**
ZLN	**Zelenaya**	**1.88**	**319**	PN	**Pn**	**06 28 17.1**	**-0.1**
ZLN				S	**Sb**	**06 28 42.3**	**-0.7**
ZLN	**Zelenaya**	**1.88**	**319**	*eP*	**Pn**	**06 28 17.1**	**-0.1**
ZLN				*eS*	**Sb**	**06 28 42.3**	**-0.7**
BZMR	**Bezymyannaya**	**1.95**	**313**	PN	**Pn**	**06 28 18.0**	**-0.2**
BZMR	**Bezymyannaya**	**1.95**	**313**	*eP*	**Pn**	**06 28 18.0**	**-0.2**
KMNR	**Kamenistaya**	**1.95**	**307**	PN	**Pn**	**06 28 17.5**	**-0.7**
KMNR				S	**Sn**	**06 28 42.6**	**-0.5**
KMNR	**Kamenistaya**	**1.95**	**307**	*eP*	**Pn**	**06 28 17.5**	**-0.7**
KMNR				*eS*	**Sn**	**06 28 42.6**	**-0.5**
LGNR	**Loginova**	**1.97**	**319**	PN	**Pn**	**06 28 18.8**	**+0.2**
LGNR				S	**Sb**	**06 28 44.5**	**-1.3**
LGNR	**Loginova**	**1.97**	**319**	*eP*	**Pn**	**06 28 18.8**	**+0.2**
LGNR				*eS*	**Sb**	**06 28 44.5**	**-1.3**
CIRR	**Tsirk**	**1.97**	**320**	PN	**Pn**	**06 28 19.0**	**+0.5**
CIRR	**Tsirk**	**1.97**	**320**	*eP*	**Pn**	**06 28 19.0**	**+0.5**
KIRR	**Kirishev**	**2.02**	**312**	PN	**Pn**	**06 28 19.2**	**0.0**
KIRR	**Kirishev**	**2.02**	**312**	*eP*	**Pn**	**06 28 19.2**	**0.0**
KPT	**Kopyto**	**2.08**	**311**	PN	**Pn**	**06 28 20.0**	**0.0**
KPT	**Kopyto**	**2.08**	**311**	*eP*	**Pn**	**06 28 20.0**	**0.0**
KRSR	**Krestovskiy**	**2.12**	**320**	PN	**Pn**	**06 28 20.0**	**-0.5**
KRSR	**Krestovskiy**	**2.12**	**320**	*eP*	**Pn**	**06 28 20.0**	**-0.5**
KLY	**Klyuchi**	**2.16**	**323**	PN	**Pn**	**06 28 19.5**	**-1.4**
KLY	**Klyuchi**	**2.16**	**323**	*eP*	**Pn**	**06 28 19.5**	**-1.4**
KII	**Karymskiy**	**2.17**	**256**	PN	**Pn**	**06 28 20.7**	**-0.4**
KII	**Karymskiy**	**2.17**	**256**	*eP*	**Pn**	**06 28 20.7**	**-0.4**
BDR	**Baidarnaya**	**2.20**	**333**	PN	**Pn**	**06 28 21.4**	**-0.2**
BDR	**Baidarnaya**	**2.20**	**333**	*eP*	**Pn**	**06 28 21.4**	**-0.2**
SRKR	**Sorokina**	**2.28**	**334**	PN	**Pn**	**06 28 22.5**	**-0.2**
SRKR	**Sorokina**	**2.28**	**334**	*eP*	**Pn**	**06 28 22.5**	**-0.2**
KOZ	**Kozyrevsk**	**2.29**	**310**	PN	**Pn**	**06 28 22.9**	**+0.1**
KOZ	**Kozyrevsk**	**2.29**	**310**	*eP*	**Pn**	**06 28 22.9**	**+0.1**
SPN	**Mys Shipunski**	**2.34**	**230**	PN	**Pn**	**06 28 22.0**	**-1.4**
SPN				S	**Sn**	**06 28 49.6**	**-2.9**
SPN	**Mys Shipunski**	**2.34**	**230**	*eP*	**Pn**	**06 28 22.0**	**-1.4**
SPN				*eS*	**Sn**	**06 28 49.6**	**-2.9**
NLC	**Nalytchevo**	**2.61**	**238**	PN	**Pn**	**06 28 26.6**	**-0.5**
NLC				S	**Sn**	**06 28 58.0**	**-1.2**
NLC	**Nalytchevo**	**2.61**	**238**	*eP*	**Pn**	**06 28 26.6**	**-0.5**
NLC				*eS*	**Sn**	**06 28 58.0**	**-1.2**
SDLR	**Sedlovina**	**2.79**	**243**	PN	**Pn**	**06 28 29.5**	**-0.2**
SDLR				S	**Sn**	**06 29 03.1**	**-0.6**
SDLR	**Sedlovina**	**2.79**	**243**	*eP*	**Pn**	**06 28 29.5**	**-0.2**
SDLR				*eS*	**Sn**	**06 29 03.1**	**-0.6**
ESO	**Esso**	**2.79**	**300**	PN	**Pn**	**06 28 29.0**	**-0.6**
ESO	**Esso**	**2.79**	**300**	*eP*	**Pn**	**06 28 29.0**	**-0.6**
SMAR	**Somma**	**2.84**	**243**	PN	**Pn**	**06 28 30.6**	**+0.2**
SMAR				S	**Sn**	**06 29 04.4**	**-0.7**
SMAR	**Somma**	**2.84**	**243**	*eP*	**Pn**	**06 28 30.6**	**+0.2**
SMAR				*eS*	**Sn**	**06 29 04.4**	**-0.7**
KRER	**Koryakskii**	**2.84**	**244**	PN	**Pn**	**06 28 31.1**	**+0.6**
KRER				S	**Sn**	**06 29 04.5**	**-0.7**
KRER	**Koryakskii**	**2.84**	**244**	*eP*	**Pn**	**06 28 31.1**	**+0.6**
KRER				*eS*	**Sn**	**06 29 04.5**	**-0.7**
UGLR	**Uglovaya**	**2.85**	**242**	PN	**Pn**	**06 28 30.8**	**+0.2**
UGLR				S	**Sn**	**06 29 05.6**	**+0.2**
UGLR	**Uglovaya**	**2.85**	**242**	*eP*	**Pn**	**06 28 30.8**	**+0.2**
UGLR				*eS*	**Sn**	**06 29 05.6**	**+0.2**
AVH	**Avacha**	**2.87**	**243**	PN	**Pn**	**06 28 31.2**	**+0.4**
AVH				S	**Sn**	**06 29 05.9**	**+0.2**
AVH	**Avacha**	**2.87**	**243**	*eP*	**Pn**	**06 28 31.2**	**+0.4**
AVH				*eS*	**Sn**	**06 29 05.9**	**+0.2**
KRX	**Arik**	**2.87**	**245**	PN	**Pn**	**06 28 31.2**	**+0.4**
KRX				S	**Sn**	**06 29 04.6**	**-1.2**
KRX	**Arik**	**2.87**	**245**	*eP*	**Pn**	**06 28 31.2**	**+0.4**
KRX				*eS*	**Sn**	**06 29 04.6**	**-1.2**
KOK	**Koryaka**	**2.91**	**244**	PN	**Pn**	**06 28 31.7**	**+0.4**
KOK	**Koryaka**	**2.91**	**244**	*eP*	**Pn**	**06 28 31.7**	**+0.4**
PET	**Petropavlovsk**	**3.04**	**240**	*e*PN	**Pn**	**06 28 33.3**	**+0.3**
PET				*eS*	**Sn**	**06 29 08.0**	**-1.8**
PET				pmax	pmax		
	comp=Z,33nm,0.6s						
PET				smax	smax		
	comp=N,227nm,0.7s						
PET				smax	smax		
	comp=E,156nm,0.5s						
PET	**Petropavlovsk**	**3.04**	**240**	*eP*	**Pn**	**06 28 32.6**	**-0.4**
PET				*eS*	**Sn**	**06 29 08.2**	**-1.6**
KRMR	**Karymshinskiy**	**3.41**	**240**	PN	**Pn**	**06 28 38.7**	**+0.6**
KRMR				S	**Sn**	**06 29 19.2**	**+0.3**
KRMR	**Karymshinskiy**	**3.41**	**240**	*eP*	**Pn**	**06 28 38.7**	**+0.6**
KRMR				*eS*	**Sn**	**06 29 19.2**	**+0.3**
RUS	**Russkaya**	**3.47**	**232**	PN	**Pn**	**06 28 38.5**	**-0.4**
RUS				S	**Sn**	**06 29 18.3**	**-2.0**
RUS	**Russkaya**	**3.47**	**232**	*eP*	**Pn**	**06 28 38.5**	**-0.4**
RUS				*eS*	**Sn**	**06 29 18.3**	**-2.0**
PETK	**Petropavlovsk-**	**3.49**	**246**	P	**Pn**	**06 28 39.7**	**+0.4**
	comp=E,5.8nm,0.3s,baz=77,slow=18,SNR=129						
PETK				S	**Sn**	**06 29 22.3**	**+1.3**
	comp=E,5.9nm,0.3s,baz=91,slow=22,SNR=7.5						
MTVR	**Mutnovka**	**3.59**	**235**	PN	**Pn**	**06 28 41.0**	**+0.3**
MTVR	**Mutnovka**	**3.59**	**235**	*eP*	**Pn**	**06 28 41.0**	**+0.3**
GRL	**Gorelyy**	**3.60**	**237**	PN	**Pn**	**06 28 41.4**	**+0.5**
GRL	**Gorelyy**	**3.60**	**237**	*eP*	**Pn**	**06 28 41.4**	**+0.5**
ASAK	**Asacha**	**3.79**	**236**	PN	**Pn**	**06 28 44.3**	**+0.9**
ASAK	**Asacha**	**3.79**	**236**	*eP*	**Pn**	**06 28 44.3**	**+0.9**
APC	**Apacha**	**3.87**	**246**	PN	**Pn**	**06 28 45.3**	**+0.9**
APC				S	**Sn**	**06 29 31.7**	**+1.6**
APC	**Apacha**	**3.87**	**246**	*eP*	**Pn**	**06 28 45.3**	**+0.9**
APC				*eS*	**Sn**	**06 29 31.7**	**+1.6**
KDTR	**Khodutka, Kamc**	**4.09**	**228**	PN	**Pn**	**06 28 47.2**	**-0.3**
KDTR				S	**Sn**	**06 29 32.1**	**-3.6**
KDTR	**Khodutka, Kamc**	**4.09**	**228**	*eP*	**Pn**	**06 28 47.2**	**-0.3**
KDTR				*eS*	**Sn**	**06 29 32.1**	**-3.6**
OSSR	**Ossora**	**4.64**	**0**	PN	**Pn**	**06 28 54.0**	**-0.9**
OSSR	**Ossora**	**4.64**	**0**	*eP*	**Pn**	**06 28 54.0**	**-0.9**
ILAR	**Nelson Array**	**26.51**	**47**	P	**P**	**06 33 26.9**	**+4.6**
	comp=E,0.4nm,0.8s,baz=261,slow=8.8,SNR=5.2						
H11N2	**WAKE ISLAND Hy**	**34.96**	**174**	T	T	07 11 52.4	
	baz=355,slow=76,SNR=52						
H11N3	**WAKE ISLAND Hy**	**34.98**	**174**	T	T	07 12 00.1	
	baz=355,slow=76,SNR=32						
H11N1	**WAKE ISLAND Hy**	**34.98**	**174**	T	T	07 11 59.3	
	baz=355,slow=76,SNR=26						
YKA	**Yellowknife Ar**	**40.86**	**45**	P	**P**	**06 35 30.2**	**+3.5**
	comp=E,0.2nm,0.8s,baz=297,slow=8.2,SNR=2.7						
MKAR	**Makanchi Array**	**49.04**	**296**	P	**P**	**06 36 28.1**	**-3.8**
	comp=E,0.2nm,0.5s,baz=60,slow=7.2,SNR=3.7						
TXAR	**Lajitas Array**	**68.47**	**70**	P	**P**	**06 38 48.8**	**+1.3**
	comp=E,0.1nm,0.5s,baz=300,slow=5.4,SNR=4.2						
POO	**Poona**	**74.63**	**280**	*ex*	x	06 39 48.0	

WEL 25 06:57:53.1,40°S±2°×17°E±°, h181km±5km, M3.5/66, ML3.6/5, MLv3.5/66, Error ellipse: s-maj=0.0km s-min=0.0km az=70.9, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.68**	**148**	P	Pn	06 58 19.3	+0.5
DUWZ				S	Sn	06 58 37.7	-1.1
NMEZ	**Namu Road**	**0.88**	**22**	P	Pn	06 58 20.1	+0.1
NMEZ				S	Sn	06 58 40.6	-0.1
QRZ	**Quartz Range**	**0.92**	**229**	P	Pn	06 58 20.9	+0.6
QRZ				S	Sn	06 58 40.3	-1.1
NNZ	**Nelson**	**0.99**	**183**	P	Pn	06 58 21.2	+0.5
NNZ				S	Sn	06 58 41.4	-0.9
PREZ	**Palmer Road**	**1.04**	**32**	P	Pn	06 58 21.2	0.0
LREZ	**Lake Rotokare**	**1.06**	**44**	P	Pn	06 58 21.4	+0.1
LREZ				S	Sn	06 58 42.5	-0.5
PKE	**Pukeiti**	**1.11**	**22**	P	Pn	06 58 21.7	0.0
TCW	**Tory Channel**	**1.17**	**148**	P	Pn	06 58 23.1	+1.0
TCW				S	Sn	06 58 43.5	-1.3
DREZ	**Durham Road**	**1.19**	**29**	P	Pn	06 58 22.4	+0.1
DREZ				S	Sn	06 58 44.1	-0.8
TUWZ	**Tuamarina**	**1.26**	**163**	P	Pn	06 58 23.5	+0.6
WAZ	**Wanganui**	**1.27**	**69**	P	Pn	06 58 23.5	+0.5
WAZ				S	Sn	06 58 46.3	+0.2
KIW	**Kapiti Island**	**1.28**	**120**	P	Pn	06 58 23.3	+0.2
MHEZ	**Mangahewa**	**1.33**	**31**	P	Pn	06 58 23.8	+0.2
OHWZ	**Ohakea**	**1.43**	**90**	P	Pn	06 58 25.1	+0.7
OGWZ	**Otaki Gorge**	**1.44**	**115**	P	Pn	06 58 25.0	+0.5
VRZ	**Vera Road**	**1.49**	**43**	P	Pn	06 58 24.7	-0.4
CAW	**Cannon Point**	**1.51**	**126**	P	Pn	06 58 24.3	-0.8
THZ	**Tophouse**	**1.59**	**195**	P	Pn	06 58 26.5	+0.5
BHW	**Baring Head**	**1.60**	**138**	P	Pn	06 58 26.2	+0.2
CMWZ	**Cape Campbell**	**1.63**	**159**	P	Pn	06 58 27.7	+1.4
MTVZ	**Mangateitei**	**1.77**	**62**	P	Pn	06 58 27.7	-0.1
MSWZ	**Moikau Station**	**1.81**	**132**	P	Pn	06 58 28.4	+0.3
MTW	**Mount Morrison**	**1.82**	**122**	P	Pn	06 58 28.5	+0.3
TRVZ	**Turoa**	**1.86**	**61**	P	Pn	06 58 28.7	-0.3
FWVZ	**Far West T-bar**	**1.89**	**60**	P	Pn	06 58 28.7	-0.5
PAWZ	**Paruwai Farm**	**1.89**	**128**	P	Pn	06 58 29.2	+0.2
PLWZ	**Palliser**	**1.92**	**135**	P	Pn	06 58 29.4	+0.1
TSZ	**Takapari Road**	**1.93**	**86**	P	Pn	06 58 29.4	-0.1
TUVZ	**Tukino**	**1.95**	**61**	P	Pn	06 58 29.5	-0.4
MOVZ	**Moawhango**	**1.95**	**66**	P	Pn	06 58 28.9	-0.8
NGZ	**Ngauruhoe**	**1.96**	**58**	P	Pn	06 58 29.3	-0.7
DSZ	**Denniston Nort**	**1.96**	**219**	P	Pn	06 58 30.4	+0.6
WTVZ	**West Tongariro**	**1.99**	**57**	P	Pn	06 58 29.6	-0.6
HIZ	**Hauiti**	**2.03**	**33**	P	Pn	06 58 29.7	-0.8
KRVZ	**Karewarewa**	**2.03**	**57**	P	Pn	06 58 29.9	-0.8
TRWZ	**Traveller**	**2.06**	**125**	P	Pn	06 58 31.0	+0.2
PNHZ	**Pukenui**	**2.13**	**82**	P	Pn	06 58 31.3	-0.3
BHHZ	**Black Hill Sta**	**2.13**	**71**	P	Pn	06 58 30.9	-0.9
KHZ	**Kahutara**	**2.19**	**178**	P	Pn	06 58 32.7	+0.6
RITZ	**Rihia Road**	**2.24**	**57**	P	Pn	06 58 32.7	-0.2
KRHZ	**Kereru**	**2.32**	**76**	P	Pn	06 58 33.0	-0.7
WATZ	**Wairara**	**2.33**	**50**	P	Pn	06 58 33.5	-0.3
KWHZ	**Kaweka Forest**	**2.42**	**72**	P	Pn	06 58 34.7	-0.3
PRHZ	**Porangahau**	**2.44**	**92**	P	Pn	06 58 34.9	-0.1
TLZ	**Tolley Road**	**2.49**	**41**	P	Pn	06 58 34.6	-1.2
BKZ	**Black Stump Fm**	**2.58**	**67**	P	Pn	06 58 35.5	-1.2
MCHZ	**McNeill Hill**	**2.62**	**74**	P	Pn	06 58 36.9	-0.3
KAHZ	**Kahuranaki**	**2.67**	**82**	P	Pn	06 58 37.4	-0.4
MRHZ	**Matea Rd**	**2.68**	**60**	P	Pn	06 58 36.3	-1.7
LTZ	**Lake Taylor**	**2.70**	**199**	P	Pn	06 58 38.2	+0.1
GVZ	**Greta Valley S**	**2.76**	**186**	P	Pn	06 58 38.8	0.0
NMHZ	**Naumai**	**2.83**	**68**	P	Pn	06 58 39.7	0.0
ARHZ	**Aropaoanui**	**2.90**	**72**	P	Pn	06 58 40.4	0.0
INZ	**Inchbonnie**	**2.92**	**210**	P	Pn	06 58 40.5	-0.1
MTHZ	**Maungataniwha**	**2.96**	**63**	P	Pn	06 58 39.9	-1.4
TOZ	**Tahuroa Road**	**2.96**	**33**	P	Pn	06 58 40.0	-1.3
AMCZ	**Amberley**	**3.01**	**191**	P	Pn	06 58 41.8	+0.1
RAHZ	**Arahi**	**3.10**	**66**	P	Pn	06 58 42.0	-1.0
MUGZ	**Murupara**	**3.11**	**57**	P	Pn	06 58 41.5	-1.6
RTZ	**Ruatahuna**	**3.17**	**61**	P	Pn	06 58 42.0	-1.9
OXZ	**Oxford**	**3.27**	**198**	P	Pn	06 58 42.4	-2.6
SNGZ	**Shannon Statio**	**3.34**	**66**	P	Pn	06 58 45.2	-0.7
MKAZ	**Moumakai**	**3.39**	**24**	P	Pn	06 58 46.4	-0.2
URZ	**Urewera**	**3.45**	**57**	P	Pn	06 58 45.0	-2.3
KNZ	**Kokohu**	**3.48**	**71**	P	Pn	06 58 45.9	-1.7
WVZ	**Waitaha Valley**	**3.50**	**215**	P	Pn	06 58 47.4	-0.4
OKCZ	**Okains Bay**	**3.51**	**185**	P	Pn	06 58 47.1	-0.8
RAGZ	**Rawiri**	**3.53**	**62**	P	Pn	06 58 48.0	-0.3
MQZ	**McQueen's Vall**	**3.53**	**189**	P	Pn	06 58 46.9	-1.3
PRGZ	**Paritu Road**	**3.66**	**71**	P	Pn	06 58 48.6	-1.4
AKCZ	**Akaroa Harbour**	**3.67**	**186**	P	Pn	06 58 49.0	-0.9
RIGZ	**Rimuhau**	**3.67**	**67**	P	Pn	06 58 48.6	-1.4
WIAZ	**Waiheke Island**	**3.67**	**22**	P	Pn	06 58 50.3	+0.3
MWZ	**Matawai**	**3.69**	**60**	P	Pn	06 58 48.2	-2.1
TKGZ	**Te Karaka**	**3.85**	**64**	P	Pn	06 58 49.3	-2.9
RPZ	**Rata Peaks**	**3.92**	**206**	P	Pn	06 58 52.5	-0.6
RUGZ	**Raukumara Rang**	**3.99**	**57**	P	Pn	06 58 51.2	-3.0
TWGZ	**Tauwhareparae**	**4.07**	**61**	P	Pn	06 58 53.4	-1.8
CNGZ	**Carnagh Statio**	**4.08**	**66**	P	Pn	06 58 54.5	-0.7
HAZ	**Te Kaha**	**4.18**	**55**	P	Pn	06 58 53.3	-3.1
FOZ	**Fox Glacier**	**4.28**	**218**	P	Pn	06 58 56.6	-1.0
PUZ	**Puketiti**	**4.31**	**62**	P	Pn	06 58 55.6	-2.6
WMGZ	**Waiomatatini S**	**4.55**	**60**	P	Pn	06 58 58.5	-2.7
MXZ	**Matakaoa Point**	**4.63**	**56**	P	Pn	06 58 59.9	-2.3
LBZ	**Lake Benmore**	**4.81**	**209**	P	Pn	06 59 03.3	-1.2
JCZ	**Jackson Bay**	**5.18**	**221**	P	Pn	06 59 08.4	-0.9
ODZ	**Otahua Downs**	**5.24**	**202**	P	Pn	06 59 09.2	-0.8
WKZ	**Wanaka**	**5.64**	**214**	P	Pn	06 59 13.4	-1.9
WHZ	**Wether Hill Ro**	**6.95**	**214**	P	Pn	06 59 30.3	-2.1
APZ	**The Paps**	**7.70**	**209**	P	Pn	06 59 40.5	-1.8

*DJA **25** 06:58:37.9±1.1,8°S±5°×107°E±°, h30km±13km, M4.2/13, MLv4.2/13*
*IDC **25** 06:58:41.5±2.4,7.76S×109.53E, h111km±28km, mb3.4/5, mb1 3.5/6, mb1mx3.2/32, mbtmp3.7/6, Error ellipse: s-maj=87.5km s-min=15.5km az=41.0*

ISC 25 06:58:37.7±1.1, 8°3S±0.1×109°21E±0.04, h78km±10km, n20, σ1$65/27, mb3.7/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.93**	**306**	P	**Pn**	**06 58 55.5**	**-0.3**
CMJI				S	**Sn**	**06 59 08.4**	**-0.9**
KPJI	**Karang Pucung**	**1.03**	**345**	P	**Pn**	**06 58 57.5**	**+0.4**
KPJI				S	**Sn**	**06 59 09.6**	**-1.9**
UGM	**Wanagama**	**1.37**	**72**	P	**Pn**	**06 59 01.1**	**-0.2**
UGM				S	**Sn**	**06 59 17.9**	**-1.2**
CISI	**Cisompet, Garu**	**1.58**	**299**	P	**Pn**	**06 59 04.7**	**+0.6**
CISI				S	**Sn**	**06 59 24.3**	**+0.3**
SMRI	**Semarang**	**1.77**	**44**	P	**Pn**	**06 59 07.4**	**+0.9**
SMRI				S	**Sn**	**06 59 30.3**	**+1.9**
PCJI	**Pacitan**	**1.96**	**86**	P	**Pn**	**06 59 09.6**	**+0.6**
PCJI				S	**Sn**	**06 59 32.3**	**-0.5**
LEM	**Lembang**	**2.17**	**314**	P	**Pn**	**06 59 15.0**	**+2.9**
	15nm,0.3s,baz=284,slow=22,SNR=4.1						
LEM				S	**Sn**	**06 59 43.3**	**+5.0**
	36nm,0.3s,baz=0.1,slow=18,SNR=7.3						
LEM	**Lembang**	**2.17**	**314**	P	**Pn**	**06 59 12.1**	**0.0**
CNJI	**Cibinong**	**2.30**	**296**	P	**Pn**	**06 59 13.6**	**+0.1**
NGJI	**Ngawi**	**2.43**	**67**	P	Pn	06 59 25.1	+10
UWJI	**Ujung Watu**	**2.57**	**42**	P	**Pn**	**06 59 17.4**	**+0.1**
PWJI	**Pagerwojo**	**2.59**	**83**	P	**Pn**	**06 59 18.3**	**+0.8**
SKJI	**Sukabumi**	**2.94**	**297**	P	**Pn**	**06 59 21.5**	**-0.7**
GRJI	**Gresik**	**3.54**	**67**	P	**Pn**	**06 59 31.2**	**+0.8**
WRA	**Warramunga Arr**	**26.92**	**118**	P	**P**	**07 04 12.7**	**+0.9**
	0.4nm,0.5s,baz=295,slow=12,SNR=2.5						

MORW	**Morawa**	**21.86**	**164**	P	**P**	**07 33 48.0**	**+2.0**
MORW				IAmb	IAmb	07 33 58.8		
	comp=Z,20nm,1.5s							
MTN	**Manton Dam**	**22.01**	**104**	P	**P**	**07 33 48.3**	**+0.5**
MTN				IAmb	IAmb	07 34 03.5		
	comp=Z,17nm,1.1s							
FAKI	**Fak Fak**	**23.42**	**79**	P	**P**	**07 34 01.4**	**-0.6**
WRA	**Warramunga Arr**	**27.00**	**119**	P	**P**	**07 34 35.0**	**+0.7**
	comp=Z,2.0nm,0.8s,baz=290,slow=11,SNR=7.3							
WRA	**Warramunga Arr**	**27.00**	**119**	P	**P**	**07 34 34.9**	**+0.6**
WR0	**Warramunga Arr**	**27.18**	**118**	P	**P**	**07 34 36.7**	**+0.8**
WR0				IAmb	IAmb	07 34 38.5		
	comp=Z,9.9nm,1.4s							
ASAR	**Alice Springs**	**28.25**	**126**	P	**P**	**07 34 45.8**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=306,slow=9.3,SNR=21							
ASAR				PcP	**PcP**	**07 37 57.4**	**+0.4**
	comp=Z,1.1nm,0.9s,baz=327,slow=3.4,SNR=6.0							
ASAR	**Alice Springs**	**28.25**	**126**	P	**P**	**07 34 46.2**	**+0.8**
AS31	**Alice Springs**	**28.25**	**126**	P	**P**	**07 34 46.3**	**+0.8**
COEN	**Coen**	**33.77**	**103**	P	**P**	**07 35 34.5**	**+0.5**
COEN				IAmb	IAmb	07 35 35.7		
	comp=Z,6.6nm,1.0s							
BBOO	**Buckleboo**	**34.97**	**139**	P	**P**	**07 35 44.4**	**+0.1**
H08S2	**Diego Garcia H**	**36.43**	**268**	T	T	08 14 25.0		
	baz=93,slow=76,SNR=17							
H08S3	**Diego Garcia H**	**36.44**	**268**	T	T	08 13 56.9		
	baz=93,slow=76,SNR=38							
H08S1	**Diego Garcia H**	**36.45**	**268**	T	T	08 14 19.5		
	baz=93,slow=76,SNR=13							
STKA	**Stephens Creek**	**38.28**	**133**	P	**P**	**07 36 13.6**	**+1.2**
	comp=Z,2.1nm,0.6s,baz=310,slow=8.5,SNR=6.0							
STKA	**Stephens Creek**	**38.28**	**133**	P	**P**	**07 36 13.4**	**+1.0**
ANA2	**Anatahan**	**43.44**	**56**	P	**P**	**07 36 50.9**	**-4.1**
KSAR	**Wonju Array Be**	**48.48**	**20**	P	**P**	**07 37 31.9**	**-2.3**
MJAR	**Matsushiro Arr**	**52.01**	**30**	P	**P**	**07 37 59.6**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=217,slow=9.1,SNR=5.2							
MJAR	**Matsushiro Arr**	**52.01**	**30**	P	**P**	**07 37 59.9**	**-1.0**
SONM	**Songino Array**	**55.69**	**358**	P	**P**	**07 38 28.0**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=178,slow=8.5,SNR=4.7							
SONM	**Songino Array**	**55.69**	**358**	P	**P**	**07 38 27.0**	**-0.7**
MK31	**Makanchi Array**	**59.65**	**339**	P	**P**	**07 38 54.0**	**-1.4**
MKAR	**Makanchi Array**	**59.65**	**339**	P	**P**	**07 38 54.4**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=158,slow=7.3,SNR=7.7							
MKAR				PcP	**PcP**	**07 39 42.2**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=153,slow=6.0,SNR=3.7							
MKAR	**Makanchi Array**	**59.65**	**339**	P	**P**	**07 38 53.9**	**-1.4**
KLR	**Kul'dur**	**60.34**	**17**	P	**P**	**07 38 59.2**	**-0.8**
	comp=Z,2.0nm,0.7s,baz=212,slow=5.9,SNR=6.9							
ZALV	**Zalesovo Beam**	**65.12**	**344**	P	**P**	**07 39 30.6**	**-1.0**
	comp=Z,0.8nm,0.4s,baz=159,slow=8.9,SNR=3.9							
MAW	**Mawson**	**67.04**	**198**	P	**P**	**07 39 46.2**	**+2.4**
	comp=Z,2.0nm,0.7s,baz=49,slow=9.1,SNR=4.2							
BVAR	**Borovoye Array**	**69.22**	**336**	P	**P**	**07 39 56.5**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=138,slow=9.1,SNR=5.9							
ABKAR	**Akbulak array**	**71.47**	**328**	P	**P**	**07 40 11.1**	**-0.3**
VNDA	**Vanda**	**74.54**	**170**	P	**P**	**07 40 29.8**	**+0.7**
KBZ	**Khabaz**	**78.94**	**317**	P	**P**	**07 40 55.0**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=76,slow=4.8,SNR=5.1							
TIXI	**Tiksi**	**80.58**	**6**	P	**P**	**07 41 01.3**	**-1.4**
	comp=Z,1.3nm,0.3s,baz=185,slow=3.2,SNR=8.3							
TIXI	**Tiksi**	**80.58**	**6**	P	**P**	**07 41 02.2**	**-0.5**
TIXI				IAmb	IAmb	07 41 02.7		
	comp=Z,3.3nm,0.8s							
QSPA	**South Pole Qui**	**81.95**	**180**	P	**P**	**07 41 11.5**	**+1.2**
QSPA				IAmb	IAmb	07 41 24.8		
	comp=Z,5.1nm,1.5s							
BR131	**Keskin Array S**	**84.20**	**311**	P	**P**	**07 41 22.5**	**0.0**
BR131				IAmb	IAmb	07 41 24.0		
	comp=Z,5.0nm,1.1s							
BRTR	**Keskin Array B**	**84.20**	**311**	P	**P**	**07 41 22.6**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=126,slow=6.0,SNR=9.2							
BRTR	**Keskin Array B**	**84.20**	**311**	P	**P**	**07 41 23.0**	**+0.5**
YKA	**Yellowknife Ar**	**117.03**	**21**	PKP	**PKPdf**	**07 47 34.5**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=331,slow=1.9,SNR=5.6							
YKA				pPKP	**pPKPdf**	**07 47 56.4**	**-3.0**
	comp=Z,0.1nm,0.6s,baz=325,slow=1.9,SNR=2.7							
G08A	**Pilot Rock**	**124.34**	**40**	PKPdf	**PKiKP**	**07 47 49.9**	**+0.1**
REDW	**Red Top Meadow**	**130.34**	**38**	PKPdf	**PKPdf**	**07 48 00.9**	**-0.3**
GO05	**Huala**	**137.16**	**179**	PKPdf	**PKiKP**	**07 48 15.5**	**-0.4**
TXAR	**Lajitas Array**	**142.51**	**51**	PKhKP	PKPpre	07 48 20.3		
	comp=Z,0.2nm,0.5s,baz=187,slow=1.6,SNR=3.8							
NCB	**Newcomb**	**144.08**	**4**	PKPdf	**PKPdf**	**07 48 25.7**	**-0.4**
HHAR	**Hobbs**	**144.81**	**34**		**PKPdf**	**07 48 27.4**	**-0.3**
JCT	**Junction City**	**144.82**	**47**		**PKPdf**	**07 48 28.5**	**+0.7**
CCM	**Cathedral Cave**	**144.83**	**29**		PKPbc	07 48 27.2	+0.4
MMNY	**Mt. Morris Dam**	**144.88**	**9**	PKPdf	PKPbc	07 48 27.1	+0.3
MGMO	**Mountain Grove**	**145.04**	**31**		**PKPdf**	**07 48 27.9**	**-0.1**
WVNY	**West Valley, N**	**145.08**	**10**		**PKPdf**	**07 48 28.0**	**+0.1**
N49A	**Columbus Grove**	**145.14**	**18**		**PKPdf**	**07 48 28.3**	**+0.3**
U40A	**Yellville**	**145.34**	**32**		**PKPab**	**07 48 29.2**	**+0.5**
L56A	**Greenwood**	**145.51**	**9**	PKPdf	**PKPab**	**07 48 29.3**	**+0.1**
MIAR	**Mount Ida**	**146.28**	**35**		**PKPab**	**07 48 32.6**	**+0.4**
KSCT	**Kent School, K**	**146.37**	**4**	PKPbc	**PKPab**	**07 48 32.0**	**-0.3**
N58A	**Sunbury**	**146.91**	**8**		**PKPab**	**07 48 33.8**	**-0.6**
N59A	**State Game Lan**	**146.96**	**7**		**PKPab**	**07 48 34.1**	**-0.6**
MVL	**Millersville**	**147.78**	**8**	PKPbc	**PKPbc**	**07 48 36.0**	**+0.6**
Q54A	**Coxs Mills**	**147.88**	**15**	PKPbc	**PKPbc**	**07 48 36.2**	**+0.5**
WVT	**Waverly**	**147.98**	**27**		**PKPbc**	**07 48 37.0**	**+0.9**
TZTN	**Tazewell**	**149.32**	**21**	PKPbc	**PKiKP**	**07 48 40.3**	**-0.4**
V52A	**Sevierville**	**149.93**	**21**		**PKiKP**	**07 48 41.9**	**0.0**
V55A	**Taylorsville**	**150.71**	**18**	PKPbc	**PKiKP**	**07 48 43.5**	**0.0**
JSC	**Jenkinsville**	**152.14**	**19**	PKPbc	**PKiKP**	**07 48 47.3**	**+0.8**

*SOME **25** 07:36:37.2, 39˚.23N×73˚.35E, h0km*
*NNC **25** 07:36:45.0±2.7, 39˚.48N×73˚.36E, h0km, mb4.0, mpv3.6, Error ellipse: s-maj=21.3km s-min=12.2km az=172.0*
*KRNET **25** 07:36:47.8±0.1, 39˚.45N×73˚.47E, mb3.4*

ISC 25 07:36:48.8±1.7, 39˚.50N±0˚.08×73˚.59E±0˚.04, h10km, n46, σ1§70/67, 12C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANR	**Andizhan**	**1.57**	**324**	P	**Pg**	**07 37 18.6**	**-0.3**
ANR				S	**Sg**	**07 37 40.0**	**+0.7**
ARSB	**Arslanbob**	**1.88**	**346**	⇑*i*P	**Pb**	**07 37 23.6**	**+0.2**
	baz=49						
ARSB				⇑*i*S	**Sg**	**07 37 49.6**	**+0.3**
	baz=49						
BTK	**Batken**	**2.21**	**286**	⇓*i*P	**Pb**	**07 37 26.9**	**-1.9**
	baz=87						
BTK				⇓*i*S	**Sb**	**07 37 55.6**	**-0.6**
	baz=87						
ARLS	**Aral**	**2.43**	**13**	⇓*e*P	**Pb**	**07 37 32.2**	**-0.5**
	baz=15						
ARLS				⇓*i*S	**Sb**	**07 38 04.6**	**+1.9**
	baz=15						
ARK	**Arkit**	**2.61**	**332**	⇓*e*P	**Pn**	**07 37 33.2**	**+2.0**
	baz=35						
ARK				⇓*i*S	**Sb**	**07 38 06.5**	**-1.4**
	baz=35						
AML	**Almayashu**	**2.63**	**2**	⇑*i*P	**Pb**	**07 37 34.7**	**-1.6**
	baz=4.0						
AML				⇑*i*S	**Sb**	**07 38 08.6**	**-0.3**
	baz=4.0						
AML	**Almayashu**	**2.63**	**2**	P	**Pb**	**07 37 34.5**	**-1.9**
	SNR=182						
NRN	**Naryn**	**2.67**	**43**	⇑*i*P	**Pb**	**07 37 35.7**	**-1.2**
	baz=43						
NRN				⇑*i*S	**Sb**	**07 38 10.1**	**+0.2**
	baz=43						
UCH	**Uchtor**	**2.82**	**14**	⇓*i*P	**Pb**	**07 37 37.4**	**-2.1**
	baz=16						
UCH				⇓*i*S	**Sb**	**07 38 13.9**	**-0.3**
	baz=16						
UCH	**Uchtor**	**2.82**	**14**	P	**Pb**	**07 37 37.4**	**-2.1**
	SNR=59						
KZA	**Kyzart**	**2.87**	**26**	⇑*i*P	**Pb**	**07 37 38.6**	**-1.8**
	baz=27						
KZA				⇑*i*S	**Sb**	**07 38 15.6**	**-0.1**
	baz=27						
KZA	**Kyzart**	**2.87**	**26**	P	**Pb**	**07 37 38.5**	**-1.8**
	SNR=18						
EKS2	**Erkin-Say**	**3.17**	**3**	P	**Pb**	**07 37 42.5**	**-2.7**
	SNR=31						
AAK	**Ala-Archa**	**3.21**	**12**	P	**Pb**	**07 37 43.4**	**-2.6**
	SNR=32						
AAK	**Ala-Archa**	**3.21**	**12**	⇑Pn	**Pn**	**07 37 39.9**	**+0.4**
	17nm,0.5s						
AAK				⇑Lg	Lg	07 38 30.9	
	53nm,0.7s						
MRKS	**Merke**	**3.26**	**355**	*e*P	**Pn**	**07 37 43.0**	**+3.0**
	7.7nm,0.2s						
MRKS				*e*S	**Sb**	**07 38 30.8**	**+4.2**
	42nm,0.3s						
MRKS	**Merke**	**3.26**	**355**	Pg	**Pn**	**07 37 42.7**	**+2.7**
	13nm,0.3s						
MRKS				Lg	Lg	07 38 30.7	
	29nm,0.4s						
KBK	**Karagaybulak**	**3.32**	**18**	P	**Pb**	**07 37 45.5**	**-2.3**
	SNR=12						
ULHL	**Ulahol**	**3.41**	**35**	P	**Pb**	**07 37 47.9**	**-1.5**
	SNR=6.8						
BOOM	**Boomskoye usch**	**3.48**	**30**	⇑*e*P	**Pb**	**07 37 46.6**	**-4.0**
	baz=31						
BOOM				⇑*i*S	**Sb**	**07 38 30.0**	**-3.0**
	baz=31						
CHMS	**Chumysh**	**3.61**	**14**	P	**Pb**	**07 37 48.7**	**-4.0**
	SNR=16						
JBG	**Jabagly**	**3.72**	**323**	Pg	**Pn**	**07 37 48.8**	**+2.4**
	12nm,0.3s						
JBG				Lg	Lg	07 38 40.7	
	28nm,0.4s						
IUG	**Iuzhnay**	**3.78**	**316**	*e*P	**Pn**	**07 37 49.6**	**+2.3**
	1.9nm,0.1s						
IUG				*e*S	**Sb**	**07 38 41.3**	**-0.2**
	64nm,0.6s						
IUG	**Iuzhnay**	**3.78**	**316**	Pg	**Pn**	**07 37 48.3**	**+1.1**
	6.1nm,0.6s						
IUG				Lg	Lg	07 38 40.2	
	43nm,0.5s						
USP	**Ospenovka**	**3.83**	**10**	P	**Pn**	**07 37 51.2**	**+3.4**
	SNR=13						
KST	**Kastek**	**3.97**	**26**	*e*P	**Pb**	**07 37 57.7**	**-1.2**
	6.1nm,0.4s						
KST				*e*S	**Sg**	**07 38 55.5**	**-0.8**
	42nm,0.8s						
KST	**Kastek**	**3.97**	**26**	Pg	**Pb**	**07 37 57.7**	**-1.2**
	6.1nm,0.4s						
KST				Lg	Lg	07 38 55.5	
	42nm,0.8s						
DGS	**Degeres**	**4.09**	**23**	*e*P	**Pb**	**07 38 00.1**	**-0.8**
	4.1nm,0.4s						
DGS				*e*S	**Sg**	**07 39 00.1**	**+0.1**
	68nm,0.6s						
DGS	**Degeres**	**4.09**	**23**	Pg	**Pb**	**07 38 00.1**	**-0.8**
	10nm,0.6s						
DGS				Lg	Lg	07 39 00.1	
	68nm,0.6s						
IZV	**Izvestkoviy**	**4.21**	**32**	*e*P	**Pb**	**07 38 02.2**	**-0.9**
	5.9nm,0.4s						
IZV				*e*S	**Sg**	**07 39 03.6**	**-0.3**
	58nm,0.7s						
IZV	**Izvestkoviy**	**4.21**	**32**	Pg	**Pb**	**07 38 02.2**	**-0.9**
	5.9nm,0.4s						
IZV				Lg	Lg	07 39 03.6	
	58nm,0.7s						
KK31	**Karatay Array**	**4.28**	**328**	⇓Pn	**Pn**	**07 37 54.3**	**+0.2**
	2.6nm,0.5s,baz=139,slow=13,SNR=38						
KK31				⇓Lg	Lg	07 39 02.8	
	11nm,0.5s,baz=144,slow=30,SNR=3.6						
TNSS	**Tian-Shan**	**4.35**	**35**	*e*P	**Pb**	**07 38 05.4**	**-0.2**
	7.1nm,0.5s						
TNSS				*e*S	**Sg**	**07 39 08.7**	**+0.1**
	44nm,0.5s						
TNSS	**Tian-Shan**	**4.35**	**35**	Pg	**Pb**	**07 38 05.4**	**-0.2**
	7.1nm,0.5s						
TNSS				Lg	Lg	07 39 08.7	
	44nm,0.5s						
MDOK	**Medeo**	**4.50**	**34**	*e*P	**Pb**	**07 38 07.7**	**-0.2**
	6.7nm,0.5s						
MDOK				*e*S	**Sg**	**07 39 12.7**	**-0.4**
	16nm,0.5s						
MDOK	**Medeo**	**4.50**	**34**	Pg	**Pb**	**07 38 07.7**	**-0.2**
	6.7nm,0.5s						
MDOK				Lg	Lg	07 39 12.7	
	16nm,0.5s						
KOTS	**Kotyrbulak**	**4.58**	**34**	*e*P	**Pb**	**07 38 09.1**	**-0.2**
	17nm,0.5s						
KOTS				*e*S	**Sg**	**07 39 15.5**	**-0.3**
	90nm,0.6s						
KOTS	**Kotyrbulak**	**4.58**	**34**	Pg	**Pb**	**07 38 09.1**	**-0.2**
	17nm,0.5s						
KOTS				Lg	Lg	07 39 15.5	
	90nm,0.6s						
KTBS	**Karatobe**	**4.81**	**28**	*e*P	**Pb**	**07 38 12.6**	**-0.6**
	3.5nm,0.6s						
KTBS				*e*S	**Sg**	**07 39 21.5**	**-1.7**
	26nm,0.5s						
KTBS	**Karatobe**	**4.81**	**28**	Pg	**Pb**	**07 38 12.6**	**-0.6**
	3.5nm,0.6s						
KTBS				Lg	Lg	07 39 21.5	
	26nm,0.5s						
KUU	**Kurty**	**4.85**	**24**	*e*P	**Pb**	**07 38 13.4**	**-0.5**
	3.1nm,0.5s						
KUU				*e*S	**Sg**	**07 39 22.4**	**-2.1**
	19nm,0.4s						
KUU	**Kurty**	**4.85**	**24**	Pg	**Pb**	**07 38 13.4**	**-0.5**
	3.1nm,0.5s						
KUU				Lg	Lg	07 39 22.4	
	19nm,0.4s						
CHKK	**Chushkaly**	**5.04**	**29**	*e*P	**Pb**	**07 38 16.6**	**-0.6**
	1.6nm,0.3s						
CHKK				*e*S	**Sg**	**07 39 28.4**	**-2.3**
	19nm,0.5s						
CHKK	**Chushkaly**	**5.04**	**29**	Pg	**Pb**	**07 38 16.6**	**-0.6**
	1.6nm,0.3s						
CHKK				Lg	Lg	07 39 28.4	
	19nm,0.5s						
ARXS	**Arharly**	**5.68**	**33**	Pg	**Pb**	**07 38 27.9**	**-0.1**
	4.9nm,0.5s						
ARXS				Lg	Lg	07 39 47.8	
	14nm,0.6s						
PDGK	**Podgornoye**	**5.86**	**47**	⇓Pn	**Pn**	**07 38 17.9**	**+2.1**
	5.6nm,1.4s						
PDGK				⇓Lg	Lg	07 39 54.8	
	6.2nm,0.7s						

*GCG **25** 07:38:05.6±1.9, 15˚.98N×92˚.76W, h50km±97km, MD3.9*
*MEX **25** 07:38:06.0±0.7, 15˚.04N×93˚.19W, h86km±8km, MD3.8*

ISC 25 07:38:07.6±2.8, 15˚.2N±0˚.1×93˚.2W±0˚.1, h70km±19km, n8, σ1§50/16, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.53**	**356**	*e*P	**Pn**	**07 38 20.7**	**0.0**
PCIG				*e*S	**Sn**	**07 38 31.9**	**+1.5**
THIG		**0.92**	**106**	*e*P	**Pn**	**07 38 23.2**	**-1.9**
THIG				*e*S	**Sn**	**07 38 36.7**	**-1.3**
CCIG	**Comitan**	**1.49**	**42**	*e*P	**Pn**	**07 38 32.2**	**-0.5**
CCIG				*i* S	**Sn**	**07 38 52.2**	**+0.8**
TGIG		**1.60**	**2**	*e*P	**Pn**	**07 38 32.9**	**-1.1**
TGIG				*i* S	**Sn**	**07 38 53.8**	**-0.1**
STG3	**Santiaguito 3,**	**1.62**	**106**	*e*P	**Pn**	**07 38 33.3**	**-1.0**
STG3				*e*S	**Sn**	**07 38 56.4**	**+1.8**
ERG	**Entre ros, C**	**1.72**	**115**	*e*P	**Pn**	**07 38 34.5**	**-0.9**
ERG				*e*S	**Sn**	**07 38 59.8**	**+3.2**
FUG	**Fuego 3**	**2.37**	**107**	*e*P	**Pn**	**07 38 45.4**	**+0.9**
FUG				*e*S	**Sn**	**07 39 11.7**	**-0.9**
IXG	**Ixpaco**	**2.83**	**110**	*e*P	**Pn**	**07 38 50.6**	**-0.1**
IXG				*e*S	**Sn**	**07 39 24.1**	**+0.4**

*IDC **25** 07:59:18.1±1.9, 8˚.73S×109˚.36E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.5/47, mbtmp3.9/4, ML3.8/1, Error ellipse: s-maj=107.0km s-min=27.1km az=43.0*
*DJA **25** 07:59:22.5±0.6, 8˚.5±.7×10˚.9E±˚, h76km±13km, M4.1/9, MLv4.1/9*
*NEIC **25** 07:59:23.4±2.5, 8˚.39S±0˚.10×109˚.24E±0˚.05, h78km±7km, mb4.3/8, Error ellipse: s-maj=14.2km s-min=6.2km az=189.0*

ISC 25 07:59:23.1±0.9, 8˚.41S±0˚.08×109˚.21E±0˚.04, h70km±10km, n36, σ1§46/43, mb3.8/5, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.98**	**310**	P	**Pn**	**07 59 41.6**	**+0.3**
CMJI				S	**Sn**	**07 59 54.4**	**-0.5**
KPJI	**Karang Pucung**	**1.11**	**346**	P	**Pn**	**07 59 43.5**	**+0.5**
KPJI				S	**Sn**	**07 59 59.1**	**+1.3**
UGM	**Wanagama**	**1.39**	**69**	P	**Pn**	**07 59 46.7**	**0.0**
UGM				S	**Sn**	**08 00 03.5**	**-0.9**
UGM	**Wanagama**	**1.39**	**69**		**Sn**	**07 59 46.6**	**0.0**
UGM				Sn	**Sn**	**08 00 03.8**	**-0.6**
CISI	**Cisompet, Garu**	**1.62**	**302**	P	**Pn**	**07 59 46.6**	**-3.2**
CISI				S	**Sn**	**08 00 09.5**	**-0.4**
CISI	**Cisompet, Garu**	**1.62**	**302**		**Pn**	**07 59 50.6**	**+0.8**
CISI				Sn	**Sn**	**08 00 10.3**	**+0.3**
SMRI	**Semarang**	**1.82**	**42**		**Pn**	**07 59 52.6**	**+0.2**
PCJI	**Pacitan**	**1.96**	**84**	P	**Pn**	**07 59 55.1**	**+0.9**
PCJI				S	**Sn**	**08 00 17.4**	**-0.5**
LEM	**Lembang**	**2.23**	**315**	Pn	**Pn**	**08 00 00.9**	**+2.9**
	20nm,0.3s,baz=140,slow=17,SNR=5.1						
LEM				Sn	**Sn**	**08 00 28.6**	**+3.8**
	28nm,0.3s,baz=286,slow=22,SNR=4.9						
CNJI	**Cibinong**	**2.34**	**298**	P	**Pn**	**07 59 58.4**	**-0.9**
PWJI	**Pagerwojo**	**2.60**	**82**	P	**Pn**	**08 00 04.1**	**+1.3**
PWJI				S	**Sn**	**08 00 33.4**	**+0.1**
UWJI	**Ujung Watu**	**2.63**	**41**	P	**Pn**	**08 00 03.0**	**-0.3**
JAGI	**Jajag, Banyuwa**	**4.89**	**91**	P	**Pn**	**08 00 36.1**	**+2.0**
JAGI	**Jajag, Banyuwa**	**4.89**	**91**	Pn	**Pn**	**08 00 36.2**	**+2.0**
JAGI				Sn	**Sn**	**08 01 28.8**	**-0.7**
APSI	**Ampana**	**14.46**	**60**	P	**P**	**08 02 48.2**	**-0.9**
GIRL	**Giralia**	**14.95**	**162**	Pn	**Pn**	**08 02 50.2**	**-0.3**
LUWI	**Luwuk**	**15.36**	**62**	P	**P**	**08 02 58.7**	**-0.5**
LUWI				IAmb	IAmb	08 02 59.4	
	comp=Z,44nm,0.5s						
KNRA	**Kununurra**	**20.43**	**113**	P	**P**	**08 03 55.8**	**+0.9**
KNRA				IAmb	IAmb	08 04 14.9	
	comp=Z,30nm,1.3s						
WRA	**Warramunga Arr**	**26.88**	**118**	P	**P**	**08 04 58.1**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=285,slow=12,SNR=2.7						
WRA	**Warramunga Arr**	**26.88**	**118**	P	**P**	**08 04 57.8**	**+0.2**
ASAR	**Alice Springs**	**28.09**	**126**	P	**P**	**08 05 08.7**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=308,slow=9.2,SNR=13						
ASAR	**Alice Springs**	**28.09**	**126**	P	**P**	**08 05 07.6**	**-0.8**
AS31	**Alice Springs**	**28.09**	**126**	P	**P**	**08 05 06.1**	**-2.4**
BBOO	**Buckleboo**	**34.74**	**138**	P	**P**	**08 06 07.1**	**+0.3**
H08S2	**Diego Garcia H**	**36.36**	**269**	T	T	08 44 48.5		
	baz=94,slow=74,SNR=5.6							
H08S3	**Diego Garcia H**	**36.37**	**269**	T	T	08 45 00.0		
	baz=94,slow=74,SNR=21							
H08S1	**Diego Carcia H**	**36.38**	**269**	T	T	08 44 48.9		
	baz=94							
STKA	**Stephens Creek**	**38.07**	**132**	P	**P**	**08 06 36.7**	**+1.5**
	comp=Z,1.4nm,0.5s,baz=312,slow=7.6,SNR=6.7							
STKA	**Stephens Creek**	**38.07**	**132**	P	**P**	**08 06 36.5**	**+1.3**
STKA				IAmb	IAmb	08 06 36.9		
	comp=Z,2.2nm,1.4s							
CHGR	**Chuyangaron**	**59.83**	**324**	P	**P**	**08 09 22.5**	**+1.0**
CHGR				IAmb	IAmb	08 09 25.9		
	comp=Z,4.6nm,1.2s							
ABKAR	**Akbulak array**	**71.75**	**328**	P	**P**	**08 10 35.2**	**-2.7**
QSPA	**South Pole Qui**	**81.58**	**180**	P	**P**	**08 11 34.6**	**+1.4**
QSPA				IAmb	IAmb	08 11 52.5		
	comp=Z,1.6nm,1.2s							
MGMO	**Mountain Grove**	**145.39**	**31**		**PKPbc**	**08 18 51.4**	**-2.2**
N59A	**State Game Lan**	**147.33**	**7**	PKPbc	**PKPdf**	**08 18 57.8**	**+1.0**
Z41A	**Richland Creek**	**147.99**	**36**	PKPdf	**PKPdf**	**08 18 56.4**	**-1.6**
WVT	**Waverly**	**148.34**	**27**	PKPbc	**PKPdf**	**08 19 00.2**	**+1.7**

*IDC **25** 08:02:23.7±3.4, 6˚.64S×155˚.04E, h82km±28km, mb3.9/12, mb1 4.1/15, mb1mx3.9/37, mbtmp4.3/15, MS3.6/5, Ms1 3.6/5, ms1mx3.2/30, Error ellipse: s-maj=28.0km s-min=15.8km az=115.0*
*NEIC **25** 08:02:23.6±1.6, 6˚.6S±0˚.1×155˚.0E±0˚.1, h80km±5km, mb4.5/31, Error ellipse: s-maj=15.9km s-min=13.8km az=135.0*

ISC 25 08:02:20.9±0.5, 6˚.65S±0˚.07×155˚.19E±0˚.07, h56km, n75, σ1§02/77, mb4.4/29, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.92**	**306**	P	**Pn**	**08 03 20.4**	**+1.8**
	8.8nm,0.3s,baz=36,slow=2.0,SNR=4.7						
KRVT				LR	LR	08 05 05.3	
	comp=Z,462nm,19.6s,baz=88,slow=43						
HNR	**Honiara**	**5.46**	**121**	LR	LR	08 05 53.4	
	comp=Z,628nm,18.9s,baz=300,slow=38						
PMG	**Port Moresby**	**8.41**	**250**	P	**Pn**	**08 04 20.1**	**-0.1**
	6.1nm,0.3s,baz=84,slow=3.0,SNR=17						
PMG				S	**Sn**	**08 05 55.2**	**+1.4**
	2.1nm,0.3s,baz=78,slow=24,SNR=4.5						
PMG				LR	LR	08 07 23.6	
	comp=Z,324nm,21.2s,baz=340,slow=36						
PMG	**Port Moresby**	**8.41**	**250**		**Pn**	**08 04 19.7**	**-0.5**
PMG				Sn	**Sn**	**08 05 55.5**	**+1.7**
PATS	**Pohnpei**	**13.76**	**13**		**Pn**	**08 05 33.1**	**-0.1**
COEN	**Coen**	**13.87**	**237**	P	**P**	**08 05 42.2**	**+0.8**
JAY	**Jayapura**	**15.01**	**285**	LR	LR	08 11 50.5	
	comp=Z,262nm,20.0s,baz=326,slow=38						
CTA	**Charters Tower**	**15.92**	**212**	P	**Pn**	**08 06 01.6**	**+0.1**
	0.2nm,0.3s,baz=40,slow=16,SNR=4.0						
DZM	**Mont Dzumac**	**18.79**	**146**	P	**Pn**	**08 06 38.4**	**+1.5**
DZM				IAmb	IAmb	08 06 49.9	
	com

WMQ				LR	LR				
	comp=N,190nm,26.3s								
WMQ				LR	LR				
	comp=E,790nm,29.1s								
WMQ				LR	LR				
	comp=Z,180nm,29.2s								
RC01	**Rabbit Creek A**	**79.88**	**24**	P	**P**		**08 14 24.1**	**+0.7**	
RC01				IAmb	IAmb		08 14 35.1		
	comp=Z,19nm,1.2s								
PMR	**Palmer**	**80.40**	**24**	P	**P**		**08 14 26.5**	**+0.4**	
PMR				IAmb	IAmb		08 14 36.7		
	comp=Z,15nm,1.3s								
SML	**Sawmill**	**80.84**	**24**	P	**P**		**08 14 29.1**	**+0.5**	
TRF	**Thorofare Moun**	**81.01**	**22**	P	**P**		**08 14 30.1**	**+0.5**	
TRF				IAmb	IAmb		08 14 38.5		
	comp=Z,6.1nm,1.1s								
MLY	**Manley**	**81.77**	**20**	P	**P**		**08 14 33.4**	**0.0**	
GLB	**Gilahina Butte**	**82.50**	**25**	P	**P**		**08 14 38.1**	**+0.8**	
GLB				IAmb	IAmb		08 14 38.3		
	comp=Z,4.8nm,0.9s								
ILAR	**Eielson Array**	**82.99**	**21**	P	**P**		**08 14 38.9**	**-0.8**	
	comp=Z,1.0nm,0.8s,baz=263,slow=4.9,SNR=7.4								
ILAR	**Eielson Array**	**82.99**	**21**	P	**P**		**08 14 38.3**	**-1.5**	
MK31	**Makanchi Array**	**83.28**	**319**	P	**P**		**08 14 40.5**	**-1.2**	
MKAR	**Makanchi Array**	**83.28**	**319**	P	**P**		**08 14 40.4**	**-1.3**	
	comp=Z,1.7nm,1.0s,baz=104,slow=5.1,SNR=9.6								
MKAR	**Makanchi Array**	**83.28**	**319**	P	**P**		**08 14 39.8**	**-1.9**	
QSPA	**South Pole Qui**	**83.32**	**180**	P	**P**		**08 14 41.9**	**+0.2**	
QSPA				IAmb	IAmb		08 14 43.1		
	comp=Z,8.4nm,1.1s								
MAKZ	**Makanchi**	**83.49**	**319**	P	**P**		**08 14 41.4**	**-1.3**	
SCRK	**Sand Creek**	**83.67**	**23**	P	**P**		**08 14 44.0**	**+0.5**	
SCRK				IAmb	IAmb		08 14 54.2		
	comp=Z,5.9nm,1.4s								
DHAK	**Deception Hill**	**83.97**	**28**	P	**P**		**08 14 44.9**	**-0.1**	
EGAK	**Eagle**	**85.13**	**23**	P	**P**		**08 14 51.2**	**+0.6**	
KSH	**Kashi**	**85.94**	**310**	P	**P**		**08 14 56.8**	**+1.4**	
KSH				pP	pP		08 15 10.5	-0.9	
KSH				PP	**PP**		**08 18 18.8**	**+2.8**	
KSH	**Kashi**	**85.94**	**310**	S	**S**		**08 25 24.5**	**-0.6**	
KSH	**Kashi**	**85.94**	**310**	sS	sS		08 25 48.8	-3.2	
KSH	**Kashi**	**85.94**	**310**	SS	SS		08 31 09.5	+5.6	
KSH				pmax	pmax				
	comp=Z,470nm,5.6s								
KSH				LR	LR				
	comp=N,250nm,5.0s								
KSH				LR	LR				
	comp=E,210nm,5.2s								
KSH				LR	LR				
	comp=Z,370nm,6.0s								
EPYK	**Eagle Plains**	**87.47**	**22**	P	**P**		**08 15 03.2**	**+1.0**	
EPYK				IAmb	IAmb		08 15 06.1		
	comp=Z,5.0nm,0.7s								
INK	**Inuvik**	**89.33**	**21**	P	**P**		**08 15 10.9**	**+0.1**	
	comp=Z,0.5nm,0.6s,baz=238,slow=4.8,SNR=3.8								
INK				LR	LR		08 55 17.8		
	comp=Z,37nm,18.7s,baz=84,slow=36								
INK	**Inuvik**	**89.33**	**21**	P	**P**		**08 15 10.1**	**-0.7**	
INK				IAmb	IAmb		08 15 11.1		
	comp=Z,2.1nm,1.1s								
NVAR	**Mina Array Bea**	**91.36**	**52**	P	**P**		**08 15 22.3**	**+1.0**	
	comp=Z,1.2nm,0.8s,baz=251,slow=6.6,SNR=11								
NVAR	**Mina Array Bea**	**91.36**	**52**	P	**P**		**08 15 21.6**	**+0.3**	
YKA	**Yellowknife Ar**	**95.95**	**28**	P	**P**		**08 15 41.6**	**+0.1**	
	comp=Z,2.3nm,0.8s,baz=267,slow=4.7,SNR=26								
MVL	**Millersville**	**123.25**	**46**	PKPdf	**PKPdf**		**08 21 11.4**	**-0.4**	
BDFB	**Brasilia**	**148.08**	**134**	PKPbc	**PKPbc**		**08 22 01.3**	**-0.2**	
	comp=Z,2.7nm,0.6s,baz=200,slow=3.3,SNR=3.0								
BDFB	**Brasilia**	**148.08**	**134**		**PKPbc**		**08 22 00.9**	**-0.6**	
SHEL	**Horse Pasture**	**150.66**	**220**	PKPdf	**PKPdf**		**08 22 02.1**	**-0.3**	
TOA0	**Torodi Ar. Sit**	**153.12**	**286**	PKPbc	**PKPbc**		**08 22 11.8**	**-1.6**	
TORD	**Torodi Ar. Bea**	**153.12**	**286**	PKPbc	**PKPbc**		**08 22 12.2**	**-1.2**	
	comp=Z,2.4nm,0.7s,baz=61,slow=2.5,SNR=12								
TORD				PKPab	**pPKPdf**		**08 22 22.7**	**0.0**	
	comp=Z,2.6nm,0.8s,baz=60,slow=3.0,SNR=9.0								
TORD	**Torodi Ar. Bea**	**153.12**	**286**		**PKPbc**		**08 22 11.8**	**-1.6**	
TORD					**pPKPdf**		**08 22 22.0**	**-0.7**	

*IDC **25** 08:03:59.3±1.9,21˚64N×143˚09E,h314km±17km, mb3.2/13,mb1 3.4/14,mb1mx3.3/40,mbtmp4.0/14,Error ellipse: s-maj=20.6km s-min=13.4km az=94.0*
*NEIC **25** 08:03:59.4±1.2,21˚6N±0˚1×143˚0E±0˚2,h313km±7km, mb4.0/21,Error ellipse: s-maj=24.7km s-min=14.8km az=82.0*

ISC 25 08:03:59.1±0.6,21˚61N±0˚08×143˚0E±0˚1,h311km,n47, σ0s63/49,mb3.9/23,Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.51**	**352**	P	**Pn**	**08 05 23.2**	**+0.2**
	13nm,0.3s,baz=94,slow=22,SNR=15						
JCJ				S	**S**	**08 06 30.3**	**-0.3**
	14nm,0.3s,baz=241,slow=22,SNR=6.7						
KSRS	**Korea Array**	**20.48**	**324**	P	**P**	**08 08 14.7**	**+0.5**
	1.9nm,0.6s,baz=152,slow=9.0,SNR=7.6						
KLR	**Kul'dur**	**28.98**	**345**	P	**P**	**08 09 30.9**	**+0.3**
	2.4nm,0.6s,baz=180,slow=8.1,SNR=8.3						
COEN	**Coen**	**35.34**	**180**	P	**P**	**08 10 26.1**	**+0.1**
COEN				IAmb	IAmb	08 10 43.4	
	comp=Z,6.0nm,1.4s						
SONM	**Songino Array**	**39.30**	**321**	P	**P**	**08 10 59.7**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=128,slow=5.9,SNR=4.5						
SONM	**Songino Array**	**39.30**	**321**	P	**P**	**08 10 59.6**	**+0.8**
WRA	**Warramunga Arr**	**42.16**	**192**	P	**P**	**08 11 22.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=15,slow=9.4,SNR=4.8						
WRA	**Warramunga Arr**	**42.16**	**192**	P	**P**	**08 11 22.3**	**+0.2**
ASAR	**Alice Springs**	**45.86**	**192**	P	**P**	**08 11 51.4**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=14,slow=7.0,SNR=5.7						
UNV	**Unalaska Valle**	**49.78**	**37**	P	**P**	**08 12 21.3**	**+0.5**
ZALV	**Zalesovo Beam**	**54.17**	**322**	P	**P**	**08 12 52.4**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=121,slow=6.9,SNR=3.9						
ZALV	**Zalesovo Beam**	**54.17**	**322**	P	**P**	**08 12 52.8**	**-0.1**
MK31	**Makanchi Array**	**54.63**	**313**	P	**P**	**08 12 56.6**	**+0.2**
MKAR	**Makanchi Array**	**54.63**	**313**	P	**P**	**08 12 56.4**	**0.0**
	comp=Z,0.3nm,0.4s,baz=88,slow=8.5,SNR=8.6						
MKAR				PcP	**PcP**	**08 13 54.6**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=71,slow=4.7,SNR=5.5						
MAKZ	**Makanchi**	**54.85**	**313**	P	**P**	**08 12 57.4**	**-0.5**
KURK	**Kurchatov**	**57.42**	**317**	P	**P**	**08 13 15.7**	**-0.1**
SVW2	**Sparrevohn**	**57.57**	**30**	P	**P**	**08 13 17.6**	**+0.9**
SVW2				IAmb	IAmb	08 13 17.6	
	comp=Z,11nm,1.5s						
PPLA	**Purkeypile**	**59.55**	**29**	P	**P**	**08 13 30.9**	**+0.5**
PPLA				IAmb	IAmb	08 13 43.4	
	comp=Z,9.4nm,1.4s						
IMAR	**Indian Mountai**	**59.64**	**25**	P	**P**	**08 13 31.2**	**+0.5**
BPAW	**Bear Paw Mtn.**	**60.33**	**28**	P	**P**	**08 13 36.1**	**+0.6**
BPAW				IAmb	IAmb	08 13 36.6	
	comp=Z,3.5nm,0.8s						
PMR	**Palmer**	**60.71**	**31**	P	**P**	**08 13 37.6**	**-0.4**
PMR				IAmb	IAmb	08 13 52.9	
	comp=Z,13nm,1.4s						
GHO	**Glory Hole Cre**	**60.84**	**30**	P	**P**	**08 13 38.9**	**-0.1**
GHO				IAmb	IAmb	08 13 53.8	
	comp=Z,11nm,1.4s						
SCM	**Sheep Creek Mo**	**61.60**	**30**	P	**P**	**08 13 43.7**	**-0.4**
CCB	**Clear Creek Bu**	**61.79**	**27**	P	**P**	**08 13 44.8**	**-0.4**
HDA	**Harding Lake**	**62.12**	**28**	P	**P**	**08 13 46.5**	**-0.9**
HDA				IAmb	IAmb	08 13 58.5	
	comp=Z,4.2nm,1.3s						
ILAR	**Eielson Array**	**62.20**	**27**	P	**P**	**08 13 46.8**	**-1.2**
	comp=Z,0.7nm,0.6s,baz=261,slow=5.4,SNR=13						
ILAR	**Eielson Array**	**62.20**	**27**	P	**P**	**08 13 46.4**	**-1.5**
KKAR	**Karatay Array**	**62.98**	**308**	P	**P**	**08 13 53.9**	**+0.4**
SCRK	**Sand Creek**	**63.35**	**28**	P	**P**	**08 13 55.8**	**+0.1**
SCRK				IAmb	IAmb	08 13 56.3	
	comp=Z,2.0nm,1.0s						
EPYK	**Eagle Plains**	**66.52**	**26**	P	**P**	**08 14 16.5**	**+0.7**
EPYK				IAmb	IAmb	08 14 21.6	
	comp=Z,9.7nm,1.4s						
INK	**Inuvik**	**67.72**	**24**	P	**P**	**08 14 23.1**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=292,slow=10.0,SNR=5.8						
INK	**Inuvik**	**67.72**	**24**	P	**P**	**08 14 22.7**	**-0.4**
ARU	**Arti**	**69.23**	**324**	P	**P**	**08 14 32.3**	**-0.4**
ARU				IAmb	IAmb	08 14 43.5	
	comp=Z,3.2nm,0.9s						
ABKAR	**Akbulak array**	**69.49**	**316**	P	**P**	**08 14 34.2**	**-0.3**
C36M	**Paulatuk**	**71.01**	**22**	P	**P**	**08 14 42.6**	**-0.6**
C36M				IAmb	IAmb	08 14 47.7	
	comp=Z,2.3nm,1.2s						
YKA	**Yellowknife Ar**	**76.61**	**28**	P	**P**	**08 15 15.2**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=290,slow=5.9,SNR=26						
ARCES	**ARCESS Array B**	**78.95**	**341**	P	**P**	**08 15 28.1**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=74,slow=8.9,SNR=8.5						
ARCES	**ARCESS Array B**	**78.95**	**341**	P	**P**	**08 15 27.7**	**-0.6**
FIA1	**FINESS Array S**	**83.19**	**334**	P	**P**	**08 15 49.5**	**-1.1**
FINES	**FINESS Array B**	**83.19**	**334**	P	**P**	**08 15 49.4**	**-1.3**
	comp=Z,1.2nm,0.3s,baz=73,slow=5.0,SNR=19						
FINES	**FINESS Array B**	**83.19**	**334**	P	**P**	**08 15 48.7**	**-1.9**
NVAR	**Mina Array Bea**	**83.33**	**51**	P	**P**	**08 15 52.3**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=270,slow=6.6,SNR=5.9						
NVAR	**Mina Array Bea**	**83.33**	**51**	P	**P**	**08 15 52.2**	**0.0**
LRM	**Limekiln Ridge**	**84.36**	**43**	P	**P**	**08 15 57.4**	**+0.2**
MNMC	**Minye Minye**	**149.37**	**91**	PKPbc	**PKPbc**	**08 23 12.9**	**+0.2**
PB11	**IPOC Station P**	**149.42**	**93**	PKPbc	**PKPbc**	**08 23 12.8**	**+0.2**
LPAZ	**La Paz**	**150.12**	**85**	PKPbc	**PKiKP**	**08 23 15.5**	**-0.1**

*IDC **25** 08:27:39.1±3.1,7˚70S×109˚48E,h0km,mb3.9/4, mb1 4.1/4,mb1mx3.6/34,mbtmp3.9/4,Error ellipse: s-maj=189.1km s-min=25.2km az=51.0*
*NEIC **25** 08:27:49.2±2.0,8˚37S±0˚08×109˚24E±0˚03,h72km±8km, mb4.1/13,Error ellipse: s-maj=12.0km s-min=3.4km az=173.0*

ISC 25 08:27:48.4±0.8,8˚49S±0˚08×109˚24E±0˚05,h55km,n30, σ0s85/29,mb3.9/7,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.40**	**66**		**Pn**	**08 28 11.8**	**+0.2**
UGM				Sn	**Sn**	**08 28 28.7**	**-0.3**
CISI	**Cisompet, Garu**	**1.68**	**303**		**Pn**	**08 28 15.8**	**+0.2**
CISI				Sn	**Sn**	**08 28 35.5**	**-0.5**
SMRI	**Semarang**	**1.86**	**40**		**Pn**	**08 28 18.1**	**+0.2**
SMRI					**Sn**	**08 28 41.2**	**+0.9**
JAGI	**Jajag, Banyuwa**	**4.86**	**90**		**Pn**	**08 29 00.6**	**+1.5**
JAGI				Sn	**Sn**	**08 29 54.3**	**+0.2**
MNAI	**Manna**	**7.47**	**303**	Pn	**Pn**	**08 29 36.3**	**+1.6**
GIRL	**Giralia**	**14.87**	**162**	Pn	**Pn**	**08 31 16.7**	**+1.3**
LUWI	**Luwuk**	**15.38**	**62**		**S**	**08 34 24.9**	**-0.1**
PSA00	**Pilbara Seismi**	**16.55**	**143**	Pn	**Pn**	**08 31 37.1**	**+0.2**
PSA00				IAmb	IAmb	08 31 53.8	
	comp=Z,12nm,1.5s						
FITZ	**Fitzroy Crossi**	**18.59**	**123**	P	**P**	**08 32 00.6**	**-0.6**
FITZ				IAmb	IAmb	08 32 12.3	
	comp=Z,14nm,1.4s						
KNRA	**Kununurra**	**20.38**	**112**	P	**P**	**08 32 21.0**	**+0.3**
KNRA				IAmb	IAmb	08 32 25.4	
	comp=Z,16nm,1.1s						
MTN	**Manton Dam**	**21.94**	**103**	P	**P**	**08 32 37.8**	**+0.3**
MTN				IAmb	IAmb	08 32 46.1	
	comp=Z,6.2nm,0.7s						
WB0	**Warramunga Arr**	**26.80**	**117**	P	**P**	**08 33 23.6**	**0.0**
WRA	**Warramunga Arr**	**26.82**	**118**	P	**P**	**08 33 23.4**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=289,slow=12,SNR=11						
WRA	**Warramunga Arr**	**26.82**	**118**	P	**P**	**08 33 23.4**	**-0.4**
WB2	**Warramunga Arr**	**26.83**	**118**	P	**P**	**08 33 23.8**	**-0.1**
WR0	**Warramunga Arr**	**27.00**	**118**	P	**P**	**08 33 23.3**	**-2.2**
ASAR	**Alice Springs**	**28.03**	**125**	P	**P**	**08 33 34.4**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=306,slow=9.0,SNR=25						
ASAR	**Alice Springs**	**28.03**	**125**	P	**P**	**08 33 34.5**	**-0.1**
AS31	**Alice Springs**	**28.03**	**125**	P	**P**	**08 33 34.8**	**+0.2**
AS31				IAmb	IAmb	08 33 35.1	
	comp=Z,1.1nm,0.3s						
COEN	**Coen**	**33.71**	**102**	P	**P**	**08 34 22.9**	**-1.8**
BBOO	**Buckleboo**	**34.67**	**138**	P	**P**	**08 34 32.8**	**-0.1**
H08S2	**Diego Garcia H**	**36.38**	**269**	T	T	09 13 05.4	
	baz=93,slow=76,SNR=19						
H08S3	**Diego Garcia H**	**36.39**	**269**	T	T	09 13 22.2	
	baz=93,slow=76,SNR=41						
H08S1	**Diego Garcia H**	**36.40**	**269**	T	T	09 13 15.5	
	baz=93,slow=76,SNR=10						
STKA	**Stephens Creek**	**38.01**	**132**	P	**P**	**08 35 01.9**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=318,slow=7.9,SNR=16						
STKA	**Stephens Creek**	**38.01**	**132**	P	**P**	**08 35 01.9**	**+0.6**
MKAR	**Makanchi Array**	**60.04**	**339**	P	P	08 37 43.3	-6.3
	comp=Z,0.2nm,0.4s,baz=146,slow=8.0,SNR=5.9						
ABKAR	**Akbulak array**	**71.82**	**328**	P	P	08 38 59.6	-5.6
QSPA	**South Pole Qui**	**81.51**	**180**	P	**P**	**08 49 00.2**	**+0.4**
QSPA				IAmb	IAmb	08 40 03.2	
	comp=Z,4.2nm,1.4s						
MIAR	**Mount Ida**	**146.66**	**36**	PKPbc	**PKPdf**	**08 47 21.8**	**-1.1**

*DJA **25** 08:39:49.0±0.7,8˚S±10˚×10˚9E±˚,h51km±19km,M4.1/10, MLv4.1/10*
*NEIC **25** 08:39:49.4±2.3,8˚26S±0˚10×109˚28E±0˚05,h85km±6km, mb4.3/9,Error ellipse: s-maj=14.1km s-min=6.1km az=190.0*
*IDC **25** 08:39:50.9±3.0,7˚78S×109˚60E,h94km±34km,mb3.6/3, mb1 3.8/4,mb1mx3.2/48,mbtmp3.9/4,Error ellipse: s-maj=123.8km s-min=21.4km az=36.0*

ISC 25 08:39:48.5±0.9,8˚33S±0˚09×109˚23E±0˚04,h76km±9km, n45,σ1s24/50,mb4.2/7,Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.94**	**305**	P	**Pn**	**08 40 06.4**	**-0.2**
CMJI				S	**Sn**	**08 40 19.3**	**-0.9**
KPJI	**Karang Pucung**	**1.03**	**343**	P	**Pn**	**08 40 08.3**	**+0.6**
UGM	**Wanagama**	**1.35**	**72**	P	**Pn**	**08 40 11.6**	**-0.1**
UGM	**Wanagama**	**1.35**	**72**		**Pn**	**08 40 11.8**	**+0.1**
UGM				Sn	**Sn**	**08 40 27.0**	**-2.2**
CISI	**Cisompet, Garu**	**1.60**	**299**	P	**Pn**	**08 40 15.1**	**+0.1**
CISI	**Cisompet, Garu**	**1.60**	**299**		**Pn**	**08 40 15.4**	**+0.4**
CISI				Sn	**Sn**	**08 40 34.8**	**-0.3**
SMRI	**Semarang**	**1.75**	**43**	P	**Pn**	**08 40 17.9**	**+1.0**
SMRI	**Semarang**	**1.75**	**43**		**Pn**	**08 40 17.5**	**+0.5**
PCJI	**Pacitan**	**1.93**	**86**	P	**Pn**	**08 40 19.9**	**+0.6**
LEM	**Lembang**	**2.19**	**313**	P	**Pn**	**08 40 25.1**	**+2.1**
	24nm,0.3s,baz=73,slow=23,SNR=6.2						
LEM				S	**Sn**	**08 40 53.3**	**+4.1**
	33nm,0.3s,baz=36,slow=22,SNR=7.8						
LEM	**Lembang**	**2.19**	**313**	P	**Pn**	**08 40 24.0**	**+1.1**
CNJI	**Cibinong**	**2.31**	**296**	P	**Pn**	**08 40 24.5**	**0.0**
CNJI				S	**Sn**	**08 40 50.8**	**-1.3**
NGJI	**Ngawi**	**2.41**	**67**	P	**Pn**	**08 40 27.9**	**+2.2**
PWJI	**Pagerwojo**	**2.57**	**83**	P	**Pn**	**08 40 28.6**	**+0.7**
JAGI	**Jajag, Banyuwa**	**4.87**	**92**	Pn	**Pn**	**08 41 00.9**	**+1.6**
JAGI				Sn	**Sn**	**08 41 54.0**	**-0.5**
GIRL	**Giralia**	**15.02**	**162**	Pn	**Pn**	**08 43 16.6**	**0.0**
KNRA	**Kununurra**	**20.44**	**113**	P	**P**	**08 44 20.6**	**+0.7**
KNRA				IAmb	IAmb	08 44 38.4	
	comp=Z,12nm,1.1s						
WB0	**Warramunga Arr**	**26.88**	**118**	P	**P**	**08 45 23.4**	**+1.0**
WB0				IAmb	IAmb	08 45 27.1	
	comp=Z,9.8nm,1.5s						
WRA	**Warramunga Arr**	**26.90**	**118**	P	**P**	**08 45 23.3**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=286,slow=9.9,SNR=5.0						
WB2	**Warramunga Arr**	**26.91**	**118**	P	**P**	**08 45 23.2**	**+0.5**
WR0	**Warramunga Arr**	**27.08**	**118**	P	**P**	**08 45 25.0**	**+0.8**
WR0				IAmb	IAmb	08 45 38.8	
	comp=Z,8.2nm,0.6s						
ASAR	**Alice Springs**	**28.12**	**126**	P	**P**	**08 45 34.2**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=303,slow=9.2,SNR=19						
ASAR				PcP	**PcP**	**08 48 46.0**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=309,slow=2.0,SNR=5.7						
ASAR	**Alice Springs**	**28.12**	**126**	P	**P**	**08 45 34.7**	**+1.2**
COEN	**Coen**	**33.75**	**103**	P	**P**	**08 46 23.0**	**-0.1**
COEN				IAmb	IAmb	08 46 37.5	
	comp=Z,9.1nm,1.5s						
BBOO	**Buckleboo**	**34.79**	**138**	P	**P**	**08 46 32.7**	**+0.8**
H08S2	**Diego Garcia H**	**36.38**	**268**	T	T	09 25 14.1	
	baz=94,slow=74,SNR=10						
H08S3	**Diego Garcia H**	**36.39**	**268**	T	T	09 25 15.2	
	baz=94,slow=74,SNR=19						
H08S1	**Diego Garcia H**	**36.40**	**268**	T	T	09 25 17.1	
	baz=94						
STKA	**Stephens Creek**	**38.12**	**132**	P	**P**	**08 47 01.8**	**+1.6**
	comp=Z,1.6nm,0.5s,baz=317,slow=9.0,SNR=12						
STKA				PcP	**PcP**	**08 49 14.3**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=320,slow=7.9,SNR=3.4						
STKA	**Stephens Creek**	**38.12**	**132**	P	**P**	**08 47 00.4**	**+0.2**
KKAR	**Karatay Array**	**62.13**	**329**	P	**P**	**08 50 03.1**	**+1.5**
ABKAR	**Akbulak array**	**71.69**	**328**	P	**P**	**08 50 59.2**	**-2.9**
QSPA	**South Pole Qui**	**81.67**	**180**	P	**P**	**08 51 59.1**	**+0.9**
QSPA				IAmb	IAmb	08 52 02.2	
	comp=Z,7.3nm,1.5s						
YKA	**Yellowknife Ar**	**117.31**	**21**	PKP	**PKPdf**	**08 58 23.6**	**-1.2**
	comp=Z,0.1nm,0.4s,baz=324,slow=1.4,SNR=4.3						
JCT	**Junction City**	**145.04**	**47**		**PKPbc**	**08 59 17.1**	**-0.2**
CCM	**Cathedral Cave**	**145.10**	**29**		**PKPbc**	**08 59 15.1**	**-2.1**
MGMO	**Mountain Grove**	**145.30**	**31**		**PKPbc**	**08 59 16.4**	**-1.4**
U40A	**Yellville**	**145.61**	**32**	PKPdf	**PKPdf**	**08 59 18.2**	**-0.3**
L56A	**Greenwood**	**145.80**	**9**	PKPdf	**PKPdf**	**08 59 17.6**	**-1.0**
ACSO	**Alum Creek Sta**	**146.41**	**17**	PKPbc	**PKPdf**	**08 59 19.6**	**-0.1**
MIAR	**Mount Ida**	**146.53**	**35**	PKPbc	**PKPbc**	**08 59 21.9**	**+0.2**
LCAR	**Lake Charles**	**146.71**	**31**	PKPbc	**PKPbc**	**08 59 21.3**	**-0.8**
N59A	**State Game Lan**	**147.24**	**7**	PKPbc	**PKPbc**	**08 59 22.6**	**-0.8**
WVT	**Waverly**	**148.25**	**27**	PKPbc	**PKPbc**	**08 59 25.5**	**-0.8**
V52A	**Sevierville**	**150.21**	**21**	PKPbc	**PKPbc**	**08 59 30.5**	**-0.7**

*NEIC **25** 08:40:01.9±2.5,53˚14N±0˚07×167˚19W±0˚06, h45km±10km,Error ellipse: s-maj=12.0km s-min=1.6km az=153.0*
*AEIC **25** 08:40:01.1±3.1,53˚11N±0˚05×167˚10W±0˚06,h26km±6km, ML3.3/30,mb3.9/13(NEIC),Error ellipse: s-maj=9.1km s-min=2.1km az=146.0*
*IDC **25** 08:40:04.7±4.9,53˚47N×166˚82W,h59km±42km,mb3.4/6, mb1 3.6/7,mb1mx3.2/55,mbtmp3.7/7,ML3.2/1,Error ellipse: s-maj=51.0km s-min=23.6km az=178.0*

ISC 25 08:40:02.4±1.4,53˚1N±0˚1×167˚13W±0˚07,h50km±12km, n64,σ1s52/63,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKFG	**Magazine Ridge**	**0.55**	**301**		**Pn**	**08 40 13.0**	**-1.2**
OKFG					**Sn**	**08 40 22.3**	**-0.3**
MGOD	**Makushin Gods**	**0.68**	**13**		**Pn**	**08 40 14.9**	**-1.0**
MGOD					**Sn**	**08 40 25.0**	**-0.8**
OKSP	**Okmok Steeple**	**0.71**	**280**		**Pn**	**08 40 14.8**	**-1.5**
OKSP					**Sn**	**08 40 25.0**	**-1.2**
MREP	**Makushin Rep't**	**0.72**	**19**		**Pn**	**08 40 15.3**	**-1.1**
MNAT	**Makushin Natee**	**0.80**	**19**		**Pn**	**08 40 16.5**	**-1.0**
UNV	**Unalaska Valle**	**0.81**	**27**		**Pn**	**08 40 15.7**	**-1.8**
UNV	**Unalaska Valle**	**0.81**	**27**		**Sn**	**08 40 27.2**	**-1.3**
MSW	**Makushin Switc**	**0.81**	**15**		**Pn**	**08 40 16.6**	**-1.0**
MSW					**Sn**	**08 40 28.7**	**0.0**
MCIR	**Makushin Cirqu**	**0.83**	**10**		**Pn**	**08 40 17.6**	**-0.3**
MTBL	**Makushin Table**	**0.88**	**18**		**Pn**	**08 40 17.9**	**-0.6**
NIKH	**Nikolski High**	**1.05**	**262**		**Pn**	**08 40 18.9**	**-1.8**
NIKH	**Nikolski High**	**1.05**	**262**		**Sn**	**08 40 32.8**	**-1.5**
AKMO	**Akutan Morgan**	**1.17**	**34**		**Pn**	**08 40 21.4**	**-1.0**
AKMO					**Sn**	**08 40 37.1**	**-0.2**
AKRB	**Akutan Reef Bi**	**1.18**	**32**		**Pn**	**08 40 22.2**	**-0.4**
AKRB					**Sn**	**08 40 38.4**	**+0.8**
AKBBA	**Akutan Broad B**	**1.20**	**36**		**Pn**	**08 40 22.0**	**-0.8**
LVA	**Lava Point**	**1.22**	**32**		**Pn**	**08 40 22.6**	**-0.5**
AKLV	**Akutan Long Va**	**1.25**	**34**		**Pn**	**08 40 22.4**	**-1.1**
AKGG	**Akutan Green G**	**1.27**	**32**		**Pn**	**08 40 23.4**	**-0.2**
AKUT	**Akutan**	**1.29**	**38**		**Pn**	**08 40 22.6**	**-1.4**
AKUT					**Sn**	**08 40 40.1**	**0.0**
WESP	**Westdahl Peak**	**1.98**	**45**		**Pn**	**08 40 33.4**	**0.0**
WEBT	**Westdahl Beart**	**2.03**	**43**		**Pn**	**08 40 34.7**	**+0.6**
FALS	**False Pass**	**2.79**	**50**		**Pn**	**08 40 45.6**	**+1.1**
ATKA	**Atka Island**	**4.40**	**261**		**Pn**	**08 41 07.9**	**+1.4**
SDPT	**Sand Point**	**4.49**	**58**	Pn	**Pn**	**08 41 10.2**	**+2.5**
ADK	**Adak**	**5.97**	**262**	Pn	**Pn**	**08 41 30.8**	**+2.8**
KDAK	**Kodiak Island**	**9.48**	**55**	P	**Pn**	**08 42 13.8**	**-2.3**
	0.2nm,0.3s,baz=228,slow=12,SNR=3.9						
KDAK	**Kodiak Island**	**9.48**	**55**		**Pn**	**08 42 15.5**	**-0.6**
RSO	**Redoubt South**	**10.76**	**41**	Pn	**Pn**	**08 42 37.0**	**+3.3**
GAMB	**Gambell**	**10.94**	**349**	Pn

JKE	**Kume jima 2**	**1.59**	**287**	P		**Pn**	**08 42 18.1**	**+0.1**
JKE				S		**Sb**	**08 42 38.1**	**-2.5**
JTK	**Tokunoshima**	**1.96**	**12**	P		**Pn**	**08 42 21.9**	**-1.3**
JTK				S		**Sn**	**08 42 44.6**	**-2.1**
JMZ	**Minamidaito 2**	**2.47**	**90**	P		Pn	08 42 25.5	-4.7
JMZ				S		Sn	08 42 51.1	-8.2
JKDJ	**Kitadaitoujima**	**2.54**	**87**	P		Pn	08 42 26.6	-4.5
JKDJ				S		Sn	08 42 53.1	-7.9
YOJ	**Yonaguni jima**	**5.15**	**255**			**Pn**	**08 43 05.1**	**-1.9**
NACB	**Ninganchiao**	**6.47**	**256**			**Pn**	**08 43 23.0**	**-2.2**
YHNB	**Yeheng**	**6.54**	**261**			**Pn**	**08 43 26.4**	**+0.2**
YULB	**Yu-li**	**6.98**	**251**			**Pn**	**08 43 28.2**	**-4.0**
SSLB	**Suanglung**	**7.14**	**255**			**Pn**	**08 43 31.5**	**-2.9**
TWG	**Pinlang**	**7.40**	**247**			**Pn**	**08 43 33.8**	**-4.2**
JNU	**Nakatsue**	**7.53**	**16**			**Pn**	**08 43 39.1**	**-0.7**
TPUB	**Ta-pu**	**7.58**	**252**			**Pn**	**08 43 38.3**	**-2.2**
KNMB	**Chin-men Tao**	**9.25**	**264**	Pn		**Pn**	**08 44 01.4**	**-1.9**
KSRS	**Korea Array**	**11.57**	**358**	Pn		**Pn**	**08 44 35.5**	**+0.5**
	0.2nm,0.3s,baz=181,slow=13,SNR=5.0							
MAJO	**Matsushiro**	**13.51**	**36**	Pn		**Pn**	**08 45 01.4**	**-0.1**
MJAR	**Matsushiro Arr**	**13.51**	**36**	Pn		**Pn**	**08 45 01.5**	**0.0**
USRK	**Ussuriysk Ar.**	**18.52**	**8**	P		**Pn**	**08 46 07.0**	**+0.9**
	baz=190,slow=8.3,SNR=4.0							
USRK	**Ussuriysk Ar.**	**18.52**	**8**	P		**P**	**08 46 04.7**	**-1.0**
KMI	**Kunming**	**23.24**	**274**			**P**	**08 46 56.5**	**-0.5**
KMI					IAmb	IAmb	08 47 01.0	
	comp=Z,13nm,0.8s							
KLR	**Kul'dur**	**23.47**	**5**	P		**P**	**08 46 60.0**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=210,slow=5.5,SNR=4.0							
KLR					sP	**sP**	**08 47 12.5**	**+2.2**
	comp=Z,2.5nm,1.0s,baz=222,slow=10,SNR=4.8							
CMAR	**Chiang Mai Arr**	**28.28**	**261**	P		**P**	**08 47 44.6**	**+1.7**
	comp=Z,1.1nm,0.4s,baz=71,slow=8.8,SNR=4.1							
CMAR					LR	LR	09 00 29.4	
	comp=Z,43nm,18.0s,baz=300,slow=39							
KNRA	**Kununurra**	**41.29**	**180**	P		**P**	**08 49 34.4**	**-0.3**
MK31	**Makanchi Array**	**41.95**	**312**	P		**P**	**08 49 39.6**	**-0.4**
MKAR	**Makanchi Array**	**41.95**	**312**	P		**P**	**08 49 39.8**	**-0.1**
	comp=Z,0.6nm,0.6s,baz=100,slow=10.0,SNR=12							
MKAR					pP	**pwP**	**08 49 50.8**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=93,slow=9.2,SNR=7.5							
MKAR	**Makanchi Array**	**41.95**	**312**	P		**P**	**08 49 40.1**	**+0.2**
KURK	**Kurchatov**	**45.24**	**317**	P		**P**	**08 50 06.8**	**+0.5**
KURBB	**Kurchatov Arra**	**45.27**	**317**	P		**P**	**08 50 06.6**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=104,slow=8.9,SNR=4.2							
KURBB					pP	**pwP**	**08 50 17.4**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=103,slow=9.2,SNR=5.0							
WRA	**Warramunga Arr**	**45.88**	**172**	P		**P**	**08 50 11.0**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=354,slow=8.3,SNR=6.7							
WRA	**Warramunga Ar**	**45.88**	**172**	P		**P**	**08 50 10.6**	**-1.1**
ASAR	**Alice Springs**	**49.52**	**173**	P		**P**	**08 50 40.6**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=4.2,slow=13,SNR=9.8							
ASAR	**Alice Springs**	**49.52**	**173**	P		**P**	**08 50 39.5**	**-0.4**
KK31	**Karatay Array**	**49.80**	**306**	P		**P**	**08 50 41.8**	**-0.2**
KK31					IAmb	IAmb	08 50 58.3	
	comp=Z,4.4nm,1.4s							
KKAR	**Karatay Array**	**49.80**	**306**	P		**P**	**08 50 42.3**	**+0.3**
KKAR					IAmb	IAmb	08 50 58.3	
	comp=Z,4.4nm,1.4s							
KBL	**Kabul**	**51.46**	**295**	P		**P**	**08 50 56.6**	**+1.8**
KBL					IAmb	IAmb	08 50 56.9	
	comp=Z,4.2nm,0.8s							
ABKAR	**Akbulak array**	**57.06**	**313**	P		**P**	**08 51 35.3**	**+0.2**
ABKAR					IAmb	IAmb	08 51 37.9	
	comp=Z,2.6nm,1.1s							
RND	**Reindeer**	**63.95**	**30**	P		**P**	**08 52 22.4**	**+0.4**
RIDG	**Independent Ri**	**65.68**	**29**	P		**P**	**08 52 34.6**	**+1.3**
RIDG					IAmb	IAmb	08 52 53.5	
	comp=Z,5.9nm,1.4s							
KBZ	**Khabaz**	**69.56**	**310**	P		**P**	**08 52 59.8**	**+1.8**
	comp=Z,4.9nm,0.8s,baz=117,slow=2.3,SNR=8.8							
KBZ					pP	**sP**	**08 53 10.0**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=104,slow=5.3,SNR=3.3							
FINES	**FINESS Array B**	**73.29**	**331**	P		**P**	**08 53 20.5**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=68,slow=7.0,SNR=5.6							
BRTR	**Keskin Array B**	**77.44**	**308**	P		**P**	**08 53 44.1**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=104,slow=5.2,SNR=3.7							
BRTR					pP	**sP**	**08 53 56.2**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=89,slow=5.3,SNR=4.9							
YKA	**Yellowknife Ar**	**78.76**	**25**	P		**P**	**08 53 51.7**	**+0.4**
	comp=Z,0.4nm,1.0s,baz=299,slow=5.5,SNR=4.2							
YKA					pP	**pP**	**08 54 02.0**	**+1.7**
	comp=Z,0.8nm,0.8s,baz=297,slow=5.7,SNR=8.9							

*NIED **25** 08:48:00.4, 41°.90N×142°.50E, h56km, Mw3.9 Best double couple: M₀6.81000×10¹⁴ NP1:φ=20.00000°, δ=61.00000°, λ=84.00000°. NP2:φ=212.00000°, δ=29.00000°, λ=101.00000°.*
*JMA **25** 08:48:18.9±0.2, 41°.93N×142°.46E, h62km±3km, M3.8*
JMA Felt I J1.
*NEIC **25** 08:48:18.7±0.8, 42°.3N±0°.2×142°.4E±0°.1, h43km±14km, mb4.1/10, Error ellipse: s-maj=27.4km s-min=11.7km az=168.0*
*MOS **25** 08:48:19.0±0.8, 41°.98N×142°.55E, h78km, mb4.3/7, Error ellipse: s-maj=11.4km s-min=7.7km az=64.4*
*IDC **25** 08:48:22.8±2.1, 42°.06N×142°.39E, h88km±14km, mb3.4/9, mb1 3.6/13, mb1mx3.4/48, mbtmp3.7/13, Error ellipse: s-maj=23.5km s-min=12.9km az=133.0*

ISC 25 08:48:19.6±0.8, 41°.92N±0°.05×142°.49E±0°.03, h64km±6km, n79, σ1§35/88, mb4.0/16, 5C-9D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.41**	**29**	⇑P		**Pn**	**08 48 29.9**		**-1.2**
JNBK				*e*S		**Sn**	**08 48 38.6**		**-0.8**
JSHD	**Hidakashinhida**	**0.49**	**358**	⇓P		**Pn**	**08 48 31.0**		**-0.8**
ERM	**Erimo**	**0.51**	**79**	P		**Pn**	**08 48 31.4**		**-0.6**
ERM	**Erimo**	**0.51**	**79**			**Pn**	**08 48 31.4**		**-0.6**
JEM	**Erimo**	**0.51**	**79**	⇑P		**Pn**	**08 48 31.4**		**-0.6**
JTHR	**Tokachihiroo**	**0.71**	**58**	⇑P		**Pn**	**08 48 33.7**		**-0.5**
JTHR				*e*S		**Sn**	**08 48 44.5**		**-0.4**
JIAM	**Iburiatsuma**	**0.82**	**329**	⇓P		**Pn**	**08 48 35.4**		**-0.2**
JIAM				*e*S		**Sn**	**08 48 47.9**		**+0.6**
JBT2	**Biratori 2**	**0.86**	**354**	⇓P		**Pn**	**08 48 34.9**		**-1.2**
JBT2				*e*S		**Sn**	**08 48 47.1**		**-1.2**
JCH	**Churui**	**0.95**	**43**	⇑P		**Pn**	**08 48 36.7**		**-0.5**
JKB	**Kayabe**	**1.09**	**269**	⇓P		**Pn**	**08 48 37.7**		**-1.2**
JKB				*e*S		**Sn**	**08 48 51.9**		**-1.4**
JEW	**Eniwo**	**1.20**	**321**	⇓P		**Pn**	**08 48 39.7**		**-0.7**
JOT	**Ohata**	**1.20**	**244**	⇓P		**Pn**	**08 48 39.6**		**-0.9**
JOT				*e*S		**Sn**	**08 48 54.7**		**-1.3**
JNB	**Noboribetsu**	**1.21**	**298**	⇓P		**Pn**	**08 48 39.0**		**-1.5**
JFR	**Furan**	**1.25**	**4**	⇓P		**Pn**	**08 48 40.1**		**-1.0**
JOB	**Onbets**	**1.40**	**45**	P		**Pn**	**08 48 43.5**		**+0.4**
JOB				*e*S		**Sn**	**08 49 02.4**		**+1.7**
JISS	**Ishikarishitsu**	**1.57**	**330**	P		**Pn**	**08 48 44.7**		**-0.6**
JISS				*e*S		**Sn**	**08 49 04.2**		**-0.5**
JYM2	**Yakumo 2**	**1.59**	**278**	P		**Pn**	**08 48 44.5**		**-1.1**
JAB	**Ashibetsu**	**1.60**	**353**	P		**Pn**	**08 48 45.5**		**-0.2**
JAB				*e*S		**Sn**	**08 49 05.9**		**+0.5**
JSR	**Shiriuchi**	**1.60**	**257**	P		**Pn**	**08 48 45.0**		**-0.7**
JSR				*e*S		**Sn**	**08 49 05.1**		**-0.3**
JAR	**Ashorobuto**	**1.67**	**34**	P		**Pn**	**08 48 47.1**		**+0.4**
JANG	**Nango**	**1.71**	**206**	⇑P		Pn	08 48 46.9		-0.3
ASAJ	**Asahikawa**	**2.20**	**2**	P		**Pn**	**08 48 54.1**		**+0.3**
	24nm,0.3s,baz=206,slow=10,SNR=147								
ASAJ				S		**Sn**	**08 49 21.7**		**+1.7**
	16nm,0.3s,baz=325,slow=25,SNR=12								
NMR	**Nemuro--Hokkai**	**2.80**	**58**	*e*P		**Pn**	**08 49 00.9**		**-1.0**
NMR				*i* S		**Sn**	**08 49 31.5**		**-3.0**
GLVR	**Golovnino**	**2.88**	**50**	*e*P		**Pn**	**08 49 03.0**		**-0.1**
GLVR				*i* S		**Sn**	**08 49 35.7**		**-0.8**
GLVR					pmax	pmax			
	comp=Z,110nm,0.3s								
GLVR					pmax	pmax			
	comp=E,42nm,0.1s								
GLVR					pmax	pmax			
	comp=N,73nm,0.4s								
GLVR					smax	smax			
	comp=E,549nm,0.4s								
GLVR					smax	smax			
	comp=N,628nm,0.3s								
GRPR	**Tuman**	**3.18**	**48**	*e*P		**Pn**	**08 49 07.6**		**+0.4**
GRPR				*i* S		**Sn**	**08 49 43.3**		**-0.6**
GRPR					pmax	pmax			
	comp=Z,125nm,0.4s								
GRPR					pmax	pmax			
	comp=E,68nm,0.3s								
GRPR					smax	smax			
	comp=E,363nm,0.3s								
GRPR					smax	smax			
	comp=N,286nm,0.4s								

YUK	**Yuzh-Kuril'sk**	**3.26**	**48**	*d*P		**Pn**	**08 49 08.8**		**+0.6**
YUK				*i* S		**Sn**	**08 49 45.3**		**-0.4**
YUK					pmax	pmax			
	comp=N,70nm,0.3s								
YUK					pmax	pmax			
	comp=Z,118nm,0.3s								
YUK					smax	smax			
	comp=E,100nm,0.7s								
YUK					smax	smax			
	comp=N,297nm,0.5s								
SHO	**Shikotan**	**3.74**	**57**	*e*P		**Pn**	**08 49 13.7**		**-1.1**
SHO				*i* S		**Sn**	**08 49 54.3**		**-3.3**
SHO					pmax	pmax			
	comp=Z,74nm,0.2s								
SHO					smax	smax			
	comp=N,114nm,0.3s								
SHO					smax	smax			
	comp=E,112nm,0.2s								
YSS	**Yuzh-Sakhalins**	**5.04**	**2**	*e*P		**Pn**	**08 49 34.1**		**+1.5**
YSS				*e*S		Sn	08 50 34.8		+5.4
YSS					pmax	pmax			
	comp=Z,10.0nm,0.8s								
YSS					MLR	MLR			
	comp=Z,100nm,11.0s								
KUR	**Kuril'sk**	**5.12**	**48**	*e*P		**Pn**	**08 49 34.8**		**+1.1**
KUR				*i* S		**Sn**	**08 50 32.2**		**+0.7**
KUR					pmax	pmax			
	comp=Z,36nm,0.4s								
KUR					pmax	pmax			
	comp=N,16nm,0.1s								
KUR					pmax	pmax			
	comp=E,12nm,0.3s								
KUR					smax	smax			
	comp=N,27nm,0.3s								
KUR					smax	smax			
	comp=E,42nm,0.4s								
MJB9	**Matsu-Tunnel**	**6.31**	**213**	Pn		**Pn**	**08 49 53.6**		**+3.5**
MAJO	**Matsushiro**	**6.31**	**213**	P		**Pn**	**08 49 53.5**		**+3.4**
MAJO	**Matsushiro**	**6.31**	**213**	Pn		**Pn**	**08 49 53.5**		**+3.4**
MJAR	**Matsushiro Arr**	**6.31**	**213**	P		**Pn**	**08 49 53.4**		**+3.3**
	comp=E,0.1nm,0.3s,baz=221,slow=8.6,SNR=5.8								
USRK	**Ussuriysk Ar.**	**8.02**	**290**	P		**Pn**	**08 50 15.8**		**+2.5**
	baz=92,slow=14,SNR=5.6								
KLR	**Kul'dur**	**10.49**	**318**	P		Pn	08 50 50.8		+3.8
	comp=E,0.1nm,0.3s,baz=144,slow=13,SNR=5.3								
KSRS	**Korea Array**	**12.07**	**253**	P		**Pn**	**08 51 13.3**		**+4.6**
	comp=E,0.3nm,0.3s,baz=62,slow=15,SNR=3.6								
SONM	**Songino Array**	**26.08**	**295**	P		**P**	**08 53 47.0**		**-0.3**
SONM	**Songino Array**	**26.08**	**295**	P		**P**	**08 53 47.0**		**-0.3**
	comp=E,0.5nm,0.4s,baz=76,slow=8.6,SNR=4.9								
H11N2	**WAKE ISLAND Hy**	**30.28**	**129**	T		T	09 26 00.0		
	baz=323,slow=75,SNR=30								
H11N1	**WAKE ISLAND Hy**	**30.29**	**129**	T		T	09 26 00.8		
	baz=323,slow=75,SNR=22								
H11N3	**WAKE ISLAND Hy**	**30.30**	**129**	T		T	09 26 06.3		
	baz=323,slow=75,SNR=19								
H11S1	**WAKE ISLAND Hy**	**31.14**	**131**	T		T	09 27 03.0		
	baz=320								
H11S3	**WAKE ISLAND Hy**	**31.14**	**131**	T		T	09 27 07.9		
	baz=320,slow=74,SNR=31								
H11S2	**WAKE ISLAND Hy**	**31.16**	**131**	T		T	09 27 13.4		
	baz=320,slow=74,SNR=26								
ZALV	**Zalesovo Beam**	**39.40**	**308**	P		**P**	**08 55 42.2**		**-0.6**
ZALV	**Zalesovo Beam**	**39.40**	**308**	P		**P**	**08 55 42.1**		**-0.8**
	comp=E,1.7nm,0.7s,baz=82,slow=11,SNR=6.1								
ZALV	**Zalesovo Beam**	**39.40**	**308**	P		**P**	**08 55 42.2**		**-0.6**
IMAR	**Indian Mountai**	**42.07**	**33**	P		**P**	**08 56 04.3**		**-0.4**
MK31	**Makanchi Array**	**42.40**	**298**	P		**P**	**08 56 06.8**		**-0.9**
MK31					pmax	pmax			
	comp=Z,2.0nm,0.9s								
MK31	**Makanchi Array**	**42.40**	**298**	P		**P**	**08 56 06.8**		**-0.9**
MKAR	**Makanchi Array**	**42.40**	**298**	P		**P**	**08 56 07.2**		**-0.5**
	comp=Z,1.4nm,0.8s,baz=81,slow=9.3,SNR=14								
MKAR	**Makanchi Array**	**42.40**	**298**	P		**P**	**08 56 07.0**		**-0.6**
MAKZ	**Makanchi**	**42.60**	**298**	P		**P**	**08 56 08.6**		**-0.7**
MAKZ					pmax	pmax			
	comp=Z,3.0nm,1.0s								
MAKZ	**Makanchi**	**42.60**	**298**	P		**P**	**08 56 08.6**		**-0.7**
MAKZ					IAmb	IAmb	08 56 10.0		
	comp=Z,2.8nm,0.9s								
KURK	**Kurchatov**	**43.72**	**304**	P		**P**	**08 56 17.2**		**-1.0**
KURK					pmax	pmax			
	comp=Z,3.0nm,0.9s								
KURK	**Kurchatov**	**43.72**	**304**	P		**P**	**08 56 17.2**		**-1.0**
KURK					IAmb	IAmb	08 56 20.9		
	comp=Z,3.2nm,0.8s								
ILAR	**Eielson Array**	**44.97**	**35**	P		**P**	**08 56 28.1**		**0.0**
	comp=Z,0.3nm,0.6s,baz=263,slow=5.0,SNR=7.4								
BOOM	**Boomskoye usch**	**48.12**	**294**	P		**P**	**08 56 53.4**		**+0.2**
BOOM					pmax	pmax			
	comp=Z,4.0nm,0.8s								
BOOM	**Boomskoye usch**	**48.12**	**294**	P		**P**	**08 56 53.4**		**+0.2**
AAK	**Ala-Archa**	**49.04**	**295**	P		**P**	**08 56 59.7**		**-0.6**
AAK					pmax	pmax			
	comp=Z,2.0nm,0.5s								
AAK	**Ala-Archa**	**49.04**	**295**	P		**P**	**08 56 59.7**		**-0.6**
AAK					IAmb	IAmb	08 56 60.0		
	comp=Z,1.6nm,0.5s								
INK	**Inuvik**	**49.69**	**29**	P		**P**	**08 57 04.4**		**-0.1**
INK					pmax	pmax			
	comp=Z,2.0nm,1.2s								
INK	**Inuvik**	**49.69**	**29**	P		**P**	**08 57 04.5**		**0.0**
	comp=Z,0.7nm,0.4s,baz=296,slow=6.5,SNR=11								
INK	**Inuvik**	**49.69**	**29**	P		**P**	**08 57 04.4**		**-0.1**
INK					IAmb	IAmb	08 57 15.1		
	comp=Z,1.8nm,1.1s								
KK31	**Karatay Array**	**51.52**	**297**	P		**P**	**08 57 17.6**		**-1.2**
KK31					pmax	pmax			
	comp=Z,2.0nm,0.6s								
KK31	**Karatay Array**	**51.52**	**297**	P		**P**	**08 57 17.6**		**-1.2**
KK31					IAmb	IAmb	08 57 18.6		
	comp=Z,1.6nm,0.6s								
KKAR	**Karatay Array**	**51.52**	**297**	P		**P**	**08 57 17.2**		**-1.6**
KKAR					pmax	pmax			
	comp=Z,2.0nm,0.6s								
KKAR	**Karatay Array**	**51.52**	**297**	P		**P**	**08 57 17.2**		**-1.6**
KKAR					IAmb	IAmb	08 57 18.5		
	comp=Z,1.6nm,0.6s								
ABKAR	**Akbulak array**	**55.51**	**308**	P		**P**	**08 57 47.0**		**-0.8**
YKA	**Yellowknife Ar**	**59.20**	**32**	P		**P**	**08 58 13.4**		**-0.2**
	comp=Z,0.7nm,0.8s,baz=306,slow=6.6,SNR=9.8								
FIA1	**FINESS Array S**	**64.90**	**332**	P		**P**	**08 58 50.2**		**-1.6**
FINES	**FINESS Array B**	**64.90**	**332**	P		**P**	**08 58 51.0**		**-0.8**
	comp=Z,1.3nm,0.5s,baz=59,slow=7.7,SNR=13								
FINES	**FINESS Array B**	**64.90**	**332**	P		**P**	**08 58 50.5**		**-1.3**
FCC	**Fort Churchill**	**69.28**	**28**	P		**P**	**08 59 19.2**		**-0.4**
FCC	**Fort Churchill**	**69.28**	**28**	P		**P**	**08 59 19.2**		**-0.4**
NOA	**NORSAR Array B**	**70.01**	**337**	P		**P**	**08 59 23.5**		**-0.6**
	comp=Z,0.5nm,0.5s,baz=35,slow=6.3,SNR=2.8								
BURAR	**Bucovina Array**	**75.00**	**321**	P		**P**	**08 59 54.1**		**-0.1**
TXAR	**Lajitas Array**	**86.51**	**53**	P		**P**	**09 00 57.0**		**+1.2**
TXAR	**Lajitas Array**	**86.51**	**53**	P		**P**	**09 00 57.0**		**+1.2**
	comp=Z,0.2nm,0.8s,baz=297,slow=4.0,SNR=2.7								

*IDC **25** 09:14:26.4±7.5, 35°.54N×54°.18E, h0km, mb3.4/4, mb1 3.6/7, mb1mx3.4/45, mbtmp3.7/7, ML3.8/3, Error ellipse: s-maj=107.0km s-min=44.6km az=43.0*
*TEH **25** 09:14:34.9, 36°.27N×54°.63E, h10km, ML4.0*
*THR **25** 09:14:35.2±0.4, 36°.20N×54°.68E, h7km±4km, ML3.8*
*NEIC **25** 09:14:38.5±4.8, 36°.28N±0°.06×54°.58E±0°.05, h42km±5km, Error ellipse: s-maj=9.4km s-min=5.5km az=153.0*
*NNC **25** 09:14:40.9±3.7, 37°.08N×54°.57E, h0km, mb3.9, Error ellipse: s-maj=34.3km s-min=22.6km az=31.0*

ISC 25 09:14:35.1±0.6, 36°.28N±0°.04×54°.66E±0°.03, h10km, n114, σ1§96/116, mb3.3/4, 5C-3D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IGLO	**Ghaloghah**	**0.70**	**289**	*e*Pg		**Pg**	**09 14 48.7**		**0.0**
IGLO				*e*			09 15 02.0		
IGLO	**Ghaloghah**	**0.70**	**289**	Pg		**Pg**	**09 14 48.8**		**0.0**
IGLO				Sg		**Sg**	**09 15 00.0**		**+2.0**
IANJ	**Anjilo**	**1.01**	**217**	*e*Pg		**Pg**	**09 14 54.1**		**-0.4**
IANJ				*e*			09 15 14.3		
IANJ	**Anjilo**	**1.01**	**217**	Pg		**Pg**	**09 14 54.0**		**-0.4**
SHRO	**Shahrood**	**1.13**	**104**	*e*Pg		**Pb**	**09 14 56.5**		**-0.3**
SHRO	**Shahrood**	**1.13**	**104**	*e*Pg		**Pb**	**09 14 56.5**		**-0.3**
IMND	**Minoodasht**	**1.15**	**31**	*e*Pg		**Pb**	**09 14 55.8**		**-1.3**
IMND	**Minoodasht**	**1.15**	**31**			**Pb**	**09 14 55.7**		**-1.3**
ISHM	**Shahmirzad**	**1.20**	**248**	*e*Pg		**Pb**	**09 14 57.3**		**-0.8**
ISHM				*e*			09 15 19.3		
IALA	**Alasht**	**1.51**	**263**	*e*Pg		**Pn**	**09 15 02.9**		**+0.5**
IALA	**Alasht**	**1.51**	**263**	Pn		**Pn**	**09 15 03.0**		**+0.5**

ILAS	**Lasjerd**	**1.64**	**238**	*e*				09 15 07.8		
ILAS					*e*Pn	**Pn**		**09 15 05.3**		**+1.0**
IFIR	**Firoozkooh**	**1.67**	**248**	*e*Pn		**Pn**		**09 15 05.4**		**+0.8**
IFIR	**Firoozkooh**	**1.67**	**248**	Pn		**Pn**		**09 15 05.5**		**+0.8**
IPRN	**Peran**	**1.88**	**270**	*e*Pn		**Pn**		**09 15 09.2**		**+1.9**
IPRN	**Peran**	**1.88**	**270**	Pn		**Pn**		**09 15 08.9**		**+1.6**
IDMV	**Damavand**	**2.24**	**253**	*e*Pn		**Pn**		**09 15 15.0**		**+2.5**
IDMV				*e*				09 15 17.3		
BJRD	**Bojnurd**	**2.62**	**56**	*e*Pn		**Pn**		**09 15 20.3**		**+2.7**
BJRD	**Bojnurd**	**2.62**	**56**	*e*Pn		**Pn**		**09 15 20.3**		**+2.7**
IVRN	**Varamin**	**2.71**	**243**	*e*Pn		**Pn**		**09 15 20.5**		**+1.8**
IVRN				*e*				09 16 02.9		
ISFR	**Sfrayin**	**2.80**	**73**	*e*Pn		**Pn**		**09 15 22.5**		**+2.3**
ISFR				*e*				09 16 11.1		
TNSJ	**Nastanj**	**2.81**	**145**	*e*Pn		**Pn**		**09 15 21.7**		**+1.6**
TNSJ				*e*				09 16 06.6		
IHSB	**Hasanabad**	**2.87**	**254**	*e*Pn		**Pn**		**09 15 22.5**		**+1.5**
IHSB				*e*				09 15 29.9		
CHTH	**Charan**	**2.88**	**264**	*e*Pn		**Pn**		**09 15 23.9**		**+2.6**
CHTH	**Charan**	**2.88**	**264**	*e*Pn		**Pn**		**09 15 23.9**		**+2.6**
KRSH	**Karshahi**	**3.09**	**223**	*e*Pn		**Pn**		**09 15 25.0**		**+0.9**
IKRD	**Kardeh**	**3.15**	**80**	*e*Pn		**Pg**		**09 15 38.3**		**+2.9**
IKRD				*e*				09 16 52.9		
ANAR	**Anarak**	**3.17**	**194**	*e*Pn		**Pn**		**09 15 26.3**		**+1.1**
ANAR				*e*				09 16 26.5		
GEYT	**Alibeck**	**3.22**	**58**	Pn		**Pn**		**09 15 28.9**		**+3.1**
	18nm,0.3s,baz=246,slow=17,SNR=109									
GEYT					Sn	**Sb**		**09 16 10.4**		**-1.3**
	14nm,0.3s,baz=249,slow=23,SNR=5.5									
GYA0B	**ALIBECK ARRAY**	**3.22**	**58**	⇑Pn		**Pn**		**09 15 29.2**		**+3.4**
GYA0B				⇑Lg		Lg		09 16 15.8		
GYA0B	**ALIBECK ARRAY**	**3.22**	**58**			**Pn**		**09 15 29.0**		**+3.3**
QALM	**Alamut, Qazvin**	**3.24**	**274**	*e*Pn		**Pn**		**09 15 29.0**		**+2.8**
QALM	**Alamut, Qazvin**	**3.24**	**274**	Pn		**Pn**		**09 15 28.5**		**+2.3**
IQOM	**Qom**	**3.26**	**245**	*e*Pn		**Pn**		**09 15 27.7**		**+1.3**
IQOM				*e*				09 16 29.1		
GHVR	**GHOM**	**3.28**	**238**	*e*Pn		**Pn**		**09 15 29.3**		**+2.7**
GHVR	**GHOM**	**3.28**	**238**	*e*Pn		**Pn**		**09 15 29.2**		**+2.7**
GHVR				IAML				09 16 34.1		
	comp=E,204nm,0.3s									
TABS	**Tabas**	**3.31**	**142**	*e*Pn		**Pn**		**09 15 28.7**		**+1.7**
TABS	**Tabas**	**3.31**	**142**	*e*Pn		**Pn**		**09 15 28.7**		**+1.7**
IAKL	**Akhelmad**	**3.32**	**83**	*e*Pn		**Pn**		**09 15 28.8**		**+1.4**
IAKL				*e*				09 16 36.4		
TKDS	**Koohdasht(Taba**	**3.34**	**142**	*e*Pn		**Pn**		**09 15 29.4**		**+1.9**
TKDS				*e*				09 15 42.4		
IEMG	**Emamgholi**	**3.40**	**69**	*e*Pn		**Pn**		**09 15 31.1**		**+2.6**
IEMG				*e*				09 15 45.8		
IEMG	**Emamgholi**	**3.40**	**69**	Pn		**Pn**		**09 15 30.8**		**+2.3**
IPAY	**Payeh**	**3.51**	**86**	*e*Pn		**Pn**		**09 15 32.6**		**+2.7**
IPAY				*e*				09 16 38.9

STG3	**Santiaguito 3,**	**0.82**	**19**	*eP*		**Pn**	**09 30 19.1**	**-0.6**
THIG		**1.05**	**337**	*eP*		**Pn**	**09 30 22.2**	**-0.5**
THIG				*eS*		**Sn**	**09 30 36.0**	**-0.2**
THIG		**1.05**	**337**			**Pn**	**09 30 22.2**	**-0.5**
THIG						**Sn**	**09 30 36.0**	**-0.2**
FUG	**Fuego 3**	**1.10**	**62**	*eP*		**Pn**	**09 30 23.4**	**-0.1**
PCG	**Pacaya**	**1.29**	**69**	*eP*		**Pn**	**09 30 26.4**	**+0.3**
IXG	**Ixpaco**	**1.38**	**80**	*eP*		**Pn**	**09 30 27.2**	**-0.1**
NBG	**Las Nubes**	**1.59**	**66**	*eP*		**Pn**	**09 30 31.8**	**+1.5**
NBG				*eS*		**Sn**	**09 30 53.5**	**+3.6**
APG	**El Apazote**	**1.71**	**51**	P		**Pn**	**09 30 32.0**	**+0.1**
	18nm,0.3s,baz=237,slow=8.5,SNR=223							
APG				S		**Sn**	**09 30 53.6**	**+0.9**
	63nm,0.3s,baz=314,slow=20,SNR=24							
APG				LR		LR	09 31 19.8	
	comp=Z,143nm,21.2s,baz=357,slow=43							
RTR	**El Retiro**	**2.14**	**91**	*eP*		**Pn**	**09 30 38.0**	**+0.4**
RTR	**El Retiro**	**2.14**	**91**	*eP*		**Pn**	**09 30 38.0**	**+0.4**
CEVE	**Cerro Verde**	**2.16**	**92**	*eP*		**Pn**	**09 30 38.1**	**+0.1**
CEVE				*eS*		**Sn**	**09 31 01.7**	**-2.1**
CEVE				IAML			09 31 11.5	
	comp=Z,2μm,0.5s							
CEVE	**Cerro Verde**	**2.16**	**92**	*eP*		**Pn**	**09 30 38.1**	**+0.1**
CEVE				*eS*		**Sn**	**09 31 01.7**	**-2.1**
CEVE				IAML			09 31 11.5	
	comp=Z,2μm,0.5s							
SBLS	**San Blas**	**2.16**	**92**	*eP*		**Pn**	**09 30 37.8**	**-0.2**
SBLS				*eS*		**Sn**	**09 31 01.6**	**-2.2**
SBLS	**San Blas**	**2.16**	**92**	*eP*		**Pn**	**09 30 37.8**	**-0.2**
SBLS				*eS*		**Sn**	**09 31 01.6**	**-2.2**
SNJE	**San Jose**	**2.18**	**91**	*eP*		**Pn**	**09 30 38.5**	**+0.3**
SNJE				*eS*		**Sn**	**09 31 02.9**	**-1.1**
SNJE	**San Jose**	**2.18**	**91**	*eP*		**Pn**	**09 30 38.5**	**+0.3**
SNJE				*eS*		**Sn**	**09 31 02.9**	**-1.1**
PCIG		**2.21**	**323**	*eP*		**Pn**	**09 30 38.4**	**-0.1**
PCIG				*eS*		**Sn**	**09 31 03.0**	**-1.6**
PCIG		**2.21**	**323**			**Pn**	**09 30 38.4**	**-0.1**
PCIG						**Sn**	**09 31 03.0**	**-1.6**
UNIC	**Universidad Ca**	**2.23**	**88**	*eP*		**Pn**	**09 30 39.0**	**+0.1**
UNIC	**Universidad Ca**	**2.23**	**88**	*eP*		**Pn**	**09 30 39.0**	**+0.1**
CCIG	**Comitan**	**2.36**	**353**	*eP*		**Pn**	**09 30 40.1**	**-0.5**
CCIG				*i S*		**Sn**	**09 31 05.4**	**-3.1**
CCIG	**Comitan**	**2.36**	**353**			**Pn**	**09 30 42.6**	**+1.9**
CCIG				Sn		**Sn**	**09 31 12.7**	**+4.2**
CCIG	**Comitan**	**2.36**	**353**			**Pn**	**09 30 43.1**	**+2.4**
CCIG						**Sn**	**09 31 11.8**	**+3.3**
MTO3	**Montecristo**	**2.46**	**79**	*eP*		**Pn**	**09 30 41.8**	**-0.2**
MTO3	**Montecristo**	**2.46**	**79**	*eP*		**Pn**	**09 30 41.8**	**-0.2**
BOQS	**Boqueron**	**2.50**	**94**	*eP*		**Pn**	**09 30 43.1**	**+0.5**
BOQS				*eS*		**Sn**	**09 31 11.5**	**-0.6**
SNET	**Serv Nac Est T**	**2.55**	**95**	*eP*		**Pn**	**09 30 43.9**	**+0.7**
SNET				*eS*		**Sn**	**09 31 12.2**	**-0.9**
SNET				IAML			09 31 24.7	
	comp=Z,312nm,0.3s							
SNET	**Serv Nac Est T**	**2.55**	**95**	*eP*		**Pn**	**09 30 43.9**	**+0.7**
SNET				*eS*		**Sn**	**09 31 12.2**	**-0.9**
SNET				IAML			09 31 24.7	
	comp=Z,312nm,0.3s							
SNET	**Serv Nac Est T**	**2.55**	**95**			**Pn**	**09 30 44.0**	**+0.7**
SNET				Sn		**Sn**	**09 31 13.1**	**0.0**
LFU	**La Fuente**	**2.66**	**94**	*eP*		**Pn**	**09 30 45.3**	**+0.6**
LFU	**La Fuente**	**2.66**	**94**	*eP*		**Pn**	**09 30 45.3**	**+0.6**
LFRS	**El Faro**	**2.72**	**96**	*eP*		**Pn**	**09 30 46.4**	**+0.7**
PAVA	**Las Pavas**	**2.83**	**94**	*eP*		**Pn**	**09 30 47.6**	**+0.4**
PAVA	**Las Pavas**	**2.83**	**94**	*eP*		**Pn**	**09 30 47.6**	**+0.4**
COEG	**Centro de Oper**	**2.90**	**96**	*eP*		**Pn**	**09 30 49.0**	**+1.0**
COEG				IAML			09 31 38.8	
	comp=Z,289nm,0.4s							
TGIG		**3.09**	**337**	*i P*		**Pn**	**09 30 50.2**	**-0.4**
TGIG				*i S*		**Sn**	**09 31 23.5**	**-2.9**
TGIG		**3.09**	**337**			**Pn**	**09 30 52.9**	**+2.3**
TGIG						**Sn**	**09 31 28.7**	**+2.3**
ALJI	**Alcalda de J**	**3.24**	**100**	*eP*		**Pn**	**09 30 53.1**	**+0.5**
COEB	**Comit de Eme**	**3.25**	**97**	*eP*		**Pn**	**09 30 53.7**	**+0.8**
TECA	**Tecapa**	**3.28**	**97**	*eP*		**Pn**	**09 30 54.2**	**+0.9**
TECA	**Tecapa**	**3.28**	**97**	*eP*		**Pn**	**09 30 54.2**	**+0.9**
CMIG	**Matias Romero**	**4.30**	**317**	P		**Pn**	**09 31 07.6**	**+0.4**
	comp=Z,1.7nm,0.3s,baz=151,slow=13,SNR=47							
CMIG				S		**Sn**	**09 31 55.2**	**-0.9**
	comp=Z,6.0nm,0.3s,baz=39,slow=20,SNR=9.1							
TGUH	**Tegucigalpa,Un**	**4.44**	**88**			**Pn**	**09 31 10.4**	**+1.1**
ESTN	**Estel**	**5.39**	**98**			**Pn**	**09 31 22.9**	**+0.6**
ACON	**Acoyapa**	**6.79**	**106**	Pn		**Pn**	**09 31 41.5**	**+0.1**
TEIG	**Tepich**	**7.13**	**28**	P		**Pn**	**09 31 45.9**	**-0.2**
	comp=Z,2.6nm,0.3s,baz=319,slow=2.6,SNR=25							
TEIG				S		**Sn**	**09 33 00.5**	**-5.4**
	baz=319,slow=22,SNR=3.1							
TEIG	**Tepich**	**7.13**	**28**	Pn		**Pn**	**09 31 45.0**	**-1.1**
TLIG	**Tlapa**	**7.41**	**300**			**Pn**	**09 31 51.4**	**+1.3**
JTS	**Las Juntas de**	**7.65**	**117**	P		**Pn**	**09 31 56.0**	**+2.8**
	comp=Z,0.5nm,0.3s,baz=353,slow=16,SNR=5.1							
TXAR	**Lajitas Array**	**18.84**	**326**	P		**Pn**	**09 34 22.6**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=157,slow=12,SNR=2.8							
NVAR	**Mina Array Bea**	**33.82**	**321**	P		**P**	**09 36 44.7**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=125,slow=7.8,SNR=3.3							
NVAR				pP		**sP**	**09 36 59.2**	**-0.7**
	comp=Z,2.2nm,0.7s,baz=136,slow=8.5,SNR=17							
YKA	**Yellowknife Ar**	**51.13**	**347**	P		**P**	**09 39 00.8**	**-1.6**
	comp=Z,0.1nm,0.5s,baz=150,slow=7.9,SNR=2.1							
YKA				pP		**pP**	**09 39 14.9**	**0.0**
	comp=Z,0.3nm,0.6s,baz=150,slow=7.5,SNR=4.9							
ILAR	**Eielson Array**	**62.96**	**337**	P		**P**	**09 40 25.3**	**-0.8**
	comp=Z,0.4nm,0.8s,baz=123,slow=7.3,SNR=4.6							

IDC 25 09:43:23.1±10.0, 15°.03N×104°.04W, h0km, mb3.3/2, mb1 3.8/3, mb1mx3.5/37, mbtmp3.4/3, ML3.2/1, MS3.5/1, Ms1 3.5/1, ms1mx2.8/16, Error ellipse: s-maj=297.5km s-min=111.0km az=116.0, Off coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H06E1	**SOCORRO T-PHAS**	**7.57**	**300**	T	T	09 51 29.4	
	SNR=30						
TXAR	**Lajitas Array**	**14.24**	**1**	Pn	Pn	09 46 48.7	+2.5
	0.0nm,0.3s,baz=183,slow=14,SNR=7.3						
PFO	**Pinyon Flats O**	**21.65**	**331**	LR	LR	09 55 14.5	
	comp=Z,121nm,20.7s,baz=206,slow=33						
YKA	**Yellowknife Ar**	**47.99**	**353**	P	P	09 52 02.4	-1.1
	0.2nm,0.8s,baz=171,slow=7.2,SNR=4.5						
ILAR	**Eielson Array**	**57.56**	**340**	P	P	09 53 15.1	+0.7
	0.5nm,0.9s,baz=149,slow=4.9,SNR=6.5						

*NEIC **25** 09:43:23.2±1.3, 55°.9S±0°.1×27°.7W±0°.2, h103km±6km, mb4.3/5, Error ellipse: s-maj=21.5km s-min=15.5km az=217.0*
*IDC **25** 09:43:34.7±14.0, 56°.05S×27°.27W, h202km±130km, mb3.5/3, mb1 3.7/3, mb1mx3.3/25, mbtmp3.9/3, Error ellipse: s-maj=63.2km s-min=30.1km az=108.0*
ISC 25 09:43:24.1±0.7, 55°.9S±0°.1×27°.8W±0°.1, h112km, n18, σ1§41/18, mb4.0/4, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.26**	**284**	Pn	**Pn**	**09 44 40.2**	**-0.1**
VNA1	**Neumayer--Stat**	**17.07**	**158**	P	**Pn**	**09 47 19.0**	**+3.6**
VNA3	**Neumayer Olymp**	**17.25**	**160**	P	**P**	**09 47 15.5**	**-2.0**
SNAA	**Sanae**	**19.02**	**156**	P	**P**	**09 47 35.3**	**-1.6**
SNAA	**Sanae**	**19.02**	**156**	P	**P**	**09 47 35.4**	**-1.5**
SNAA				IAmb	IAmb	09 47 35.9	
	comp=Z,7.1nm,0.5s						
QSPA	**South Pole Qui**	**34.36**	**180**	P	**P**	**09 50 00.0**	**+0.1**
VNDA	**Vanda**	**46.71**	**183**	P	**P**	**09 51 41.5**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=170,slow=8.4,SNR=4.9						
VNDA	**Vanda**	**46.71**	**183**	P	**P**	**09 51 40.6**	**-0.4**
MNMC	**Minye Minye**	**48.24**	**302**	P	**P**	**09 51 54.5**	**+0.8**
MNMC				IAmb	IAmb	09 52 01.6	
	comp=Z,8.7nm,1.2s						
TSUM	**Tsumeb**	**49.89**	**62**	P	**P**	**09 52 06.0**	**-0.2**
TSUM				IAmb	IAmb	09 52 14.4	
	comp=Z,3.6nm,1.2s						
TORD	**Torodi Ar. Bea**	**73.08**	**30**	P	**P**	**09 54 42.5**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=194,slow=6.7,SNR=7.0						
PLWZ	**Palliser**	**80.96**	**197**	P	**P**	**09 55 25.3**	**-0.6**
ASAR	**Alice Springs**	**99.24**	**163**	P	**Pdif**	**09 56 50.8**	**-2.4**
	comp=Z,0.1nm,0.6s,baz=189,slow=3.6,SNR=3.3						
YKA	**Yellowknife Ar**	**135.83**	**318**	PKP	**PKiKP**	**10 02 31.5**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=128,slow=2.7,SNR=4.5						
INK	**Inuvik**	**145.47**	**321**	PKPbc	**PKPbc**	**10 02 47.5**	**0.0**
	comp=Z,0.9nm,1.0s,baz=135,slow=1.4,SNR=3.5						
INK	**Inuvik**	**145.47**	**321**		**PKPab**	**10 02 47.9**	**0.0**
ILAR	**Eielson Array**	**149.76**	**312**	PKPbc	**PKPbc**	**10 02 59.2**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=130,slow=2.4,SNR=9.6						
SONM	**Songino Array**	**151.05**	**87**	PKPbc	**PKPbc**	**10 03 02.4**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=213,slow=2.7,SNR=5.3						

MAN 25 09:44:14.6, 10°.00N×124°.03E, h35km, mb3.7, ML2.4, MS2.0, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.32**	**349**	*i P*	Pn	09 44 24.6	+1.8
LLP				*i S*	Sn	09 44 30.6	+2.2
MSLP	**Maasin**	**0.83**	**81**	*eP*	Pn	09 44 30.8	+1.0
MSLP				*eS*	Sn	09 44 41.8	+1.0

IDC 25 09:58:50.9±4.5, 7°.46S×109°.74E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.4/42, mbtmp3.6/3, Error ellipse: s-maj=335.7km s-min=26.3km az=53.0, Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**28.24**	**127**	P	P	10 04 46.2	+0.3
	0.4nm,0.5s,baz=305,slow=9.3,SNR=12						
STKA	**Stephens Creek**	**38.34**	**134**	P	P	10 06 13.3	-0.4
	0.8nm,0.4s,baz=318,slow=8.6,SNR=7.0						
MKAR	**Makanchi Array**	**59.27**	**338**	P	P	10 08 54.2	-0.1
	0.2nm,0.4s,baz=148,slow=7.8,SNR=7.1						

*BKK **25** 10:03:47.5±10.0, 24°.N±6.6°×9°.5E±5°.4, h64km±215km, M4.5/6, mb4.6/6, mB4.8/6, MLv4.7/5, Mw(mB)4.0/6*
*IDC **25** 10:03:55.5±1.1, 22°.85N×96°.10E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/46, mbtmp3.6/6, ML3.9/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/35, Error ellipse: s-maj=33.0km s-min=15.4km az=64.0*
ISC 25 10:03:56.4±1.2, 22°.7N±0°.1×96°.0E±0°.3, h10km, n13, σ1§58/13, mb3.7/5, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMMT	**Chiang Mai**	**4.74**	**144**	P	**Pn**	**10 05 09.3**	**+1.3**
MHMT	**Maesariang**	**4.85**	**158**	P	**Pn**	**10 05 11.0**	**+1.5**
CMAR	**Chiang Mai Arr**	**5.03**	**147**	Pn	**Pn**	**10 05 13.6**	**+1.5**
	1.0nm,0.3s,baz=325,slow=14,SNR=19						
CMAR				Pg	**Pg**	**10 05 30.5**	**-2.3**
	4.4nm,0.3s,baz=327,slow=18,SNR=29						
CMAR				Lg	Lg	10 06 38.2	
	4.3nm,0.3s,baz=323,slow=29,SNR=9.9						
LAMP	**Lampang**	**5.36**	**140**	P	**Pn**	**10 05 18.6**	**+2.1**
PHRA	**Phrae**	**5.74**	**136**	P	**Pn**	**10 05 23.8**	**+2.1**
UTTA	**Uttaradit**	**6.51**	**139**	P	**Pn**	**10 05 33.2**	**+0.9**
PBKT	**Sadao Pong**	**7.67**	**142**	P	**Pn**	**10 05 50.0**	**+1.7**
SONM	**Songino Array**	**26.41**	**16**	P	**P**	**10 09 33.1**	**-0.1**
	0.2nm,0.3s,baz=195,slow=4.5,SNR=3.3						
MKAR	**Makanchi Array**	**26.47**	**339**	P	**P**	**10 09 33.4**	**-0.3**
	0.9nm,0.5s,baz=146,slow=10,SNR=14						
AAK	**Ala-Archa**	**26.77**	**323**	P	**P**	**10 09 36.5**	**-0.1**
	1.2nm,0.6s,baz=145,slow=6.8,SNR=4.9						
KSRS	**Korea Array**	**31.09**	**55**	LR	LR	10 25 34.7	
	comp=Z,31nm,18.0s,baz=315,slow=42						
ASAR	**Alice Springs**	**58.99**	**139**	P	**P**	**10 13 57.2**	**+0.7**
	1.1nm,1.2s,baz=314,slow=5.8,SNR=4.4						
ILAR	**Eielson Array**	**80.41**	**23**	P	**P**	**10 16 07.3**	**-0.6**
	0.3nm,0.6s,baz=293,slow=5.4,SNR=5.0						

*IDC **25** 10:18:18.2±0.9, 13°.85N×92°.46W, h0km, mb3.9/8, mb1 4.2/13, mb1mx4.0/40, mbtmp4.0/13, ML4.0/5, MS3.5/7, Ms1 3.5/7, ms1mx3.2/38, Error ellipse: s-maj=24.4km s-min=15.1km az=48.0*
*MEX **25** 10:18:19.0±0.4, 13°.63N×92°.57W, h19km±19km, MD4.1*
*UCR **25** 10:18:22.2±1.3, 13°.90N×92°.34W, h77km±21km, ML3.8, mb4.3(NEIC)*
*SNET **25** 10:18:22.3±1.2, 13°.90N×92°.32W, h78km±20km, ML4.0*
*NEIC **25** 10:18:22.7±2.1, 13°.82N±0°.06×92°.48W±0°.05, h35km±4km, Error ellipse: s-maj=9.2km s-min=7.3km az=192.0*
*GCG **25** 10:18:33.1±0.3, 14°.56N×91°.73W, h50km, MD4.4*
ISC 25 10:18:18.1±1.9, 13°.84N±0°.05×92°.47W±0°.05, h2km±12km, n130, σ1§42/138, mb4.2/35, MS3.5/5, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERG	**Entre ros, C**	**1.06**	**55**	*eP*	**Pn**	**10 18 41.3**	**+1.4**
THIG		**1.08**	**11**	*eP*	**Pn**	**10 18 39.0**	**-1.2**
THIG				*eS*	**Sn**	**10 18 54.6**	**-1.2**
THIG		**1.08**	**11**		**Pn**	**10 18 39.3**	**-0.9**
THIG					**Sn**	**10 18 54.6**	**-1.2**
STG3	**Santiaguito 3,**	**1.23**	**45**	*eP*	**Pg**	**10 18 42.2**	**+0.5**
FUG	**Fuego 3**	**1.69**	**69**	*eP*	**Pb**	**10 18 49.5**	**-0.5**
PCG	**Pacaya**	**1.89**	**73**	*eP*	**Pg**	**10 18 54.5**	**+0.2**
PCIG		**1.99**	**339**	*eP*	**Pn**	**10 18 51.3**	**-1.4**
PCIG				*eS*	**Sn**	**10 19 15.9**	**-2.4**
PCIG		**1.99**	**339**		**Pn**	**10 18 51.3**	**-1.4**
PCIG					**Sn**	**10 19 15.9**	**-2.4**
IXG	**Ixpaco**	**2.00**	**80**	*eP*	**Pb**	**10 18 53.2**	**-2.0**
APG	**El Apazote**	**2.26**	**59**	Pn	**Pb**	**10 18 58.0**	**-1.8**
	26nm,0.3s,baz=247,slow=6.2,SNR=138						
APG				Sn	**Sb**	**10 19 28.2**	**-0.2**
	95nm,0.3s,baz=318,slow=19,SNR=14						
CCIG	**Comitan**	**2.45**	**7**	*i P*	**Pn**	**10 18 58.9**	**-0.4**
CCIG				*eS*	**Sn**	**10 19 29.4**	**-0.5**
CCIG	**Comitan**	**2.45**	**7**		**Pb**	**10 19 01.8**	**-1.2**
CCIG	**Comitan**	**2.45**	**7**		**Pb**	**10 19 08.8**	**-2.2**
CCIG					**Sn**	**10 19 29.4**	**-0.5**
CCIG					Lg	10 19 34.7	
RTR	**El Retiro**	**2.74**	**88**	*eP*	**Pn**	**10 19 03.8**	**+0.6**
RTR				*eS*	**Sn**	**10 19 34.2**	**-2.9**
RTR	**El Retiro**	**2.74**	**88**	*eP*	**Pn**	**10 19 03.8**	**+0.6**
RTR				*eS*	**Sn**	**10 19 34.2**	**-2.9**
CEVE	**Cerro Verde**	**2.76**	**90**	*eP*	**Pn**	**10 19 03.0**	**-0.6**
CEVE				*eS*	**Sn**	**10 19 36.2**	**-1.5**
CEVE				IAML		10 19 49.4	
	comp=Z,1μm,0.4s						
CEVE	**Cerro Verde**	**2.76**	**90**	*eP*	**Pn**	**10 19 03.0**	**-0.6**
CEVE				*eS*	**Sn**	**10 19 36.2**	**-1.5**
CEVE				IAML		10 19 49.4	
	comp=Z,1μm,0.4s						
SNJE	**San Jose**	**2.78**	**89**	*eP*	**Pn**	**10 19 03.9**	**+0.1**
SNJE	**San Jose**	**2.78**	**89**	*eP*	**Pn**	**10 19 03.9**	**+0.1**
TGIG		**2.99**	**348**	*eP*	**Pn**	**10 19 04.9**	**-1.7**
TGIG				*eS*	**Sn**	**10 19 42.1**	**-0.9**
TGIG		**2.99**	**348**		**Pn**	**10 19 07.2**	**+0.6**
TGIG					**Sn**	**10 19 42.1**	**-0.9**
MTO3	**Montecristo**	**3.07**	**79**	*eP*	**Pn**	**10 19 07.1**	**-0.6**
MTO3	**Montecristo**	**3.07**	**79**	*eP*	**Pn**	**10 19 07.1**	**-0.6**
LBRS	**Las Brisas**	**3.33**	**91**	*eP*	**Pn**	**10 19 10.9**	**-0.4**
PAVA	**Las Pavas**	**3.43**	**92**	*eP*	**Pn**	**10 19 12.6**	**-0.1**
PAVA				IAML		10 20 01.5	
	comp=Z,129nm,0.7s						
PAVA	**Las Pavas**	**3.43**	**92**	*eP*	**Pn**	**10 19 12.6**	**-0.1**
PAVA				IAML		10 20 01.5	
	comp=Z,129nm,0.7s						
COEG	**Centro de Oper**	**3.50**	**93**	*eP*	**Pn**	**10 19 12.5**	**-1.0**
COEB	**Comit de Eme**	**3.84**	**95**	*eP*	**Pn**	**10 19 18.7**	**+0.4**
CMIG	**Matias Romero**	**3.99**	**325**	Pn	**Pn**	**10 19 19.9**	**-0.3**
	comp=Z,7.9nm,0.3s,baz=155,slow=13,SNR=72						
CMIG				Sn	**Sn**	**10 20 05.8**	**-1.7**
	comp=Z,19nm,0.3s,baz=66,slow=20,SNR=3.5						
CMIG				LR	LR	10 20 45.0	
	comp=Z,114nm,20.9s,baz=176,slow=37						
LCND	**La Caada**	**4.48**	**96**	*eP*	**Pn**	**10 19 26.9**	**-0.2**
LCND	**La Caada**	**4.48**	**96**	*eP*	**Pn**	**10 19 26.9**	**-0.2**
TGUH	**Tegucigalpa,Un**	**5.05**	**87**		**Pn**	**10 19 35.2**	**+0.3**
ESTN	**Estel**	**5.98**	**96**		**Pn**	**10 19 48.5**	**+0.8**
TLIG	**Tlapa**	**6.94**	**303**		**Pn**	**10 20 03.1**	**+2.1**
TEIG	**Tepich**	**7.51**	**32**	Pn	**Pn**	**10 20 09.3**	**+0.6**
	comp=Z,14nm,0.3s,baz=138,slow=0.8,SNR=74						
TEIG				Sn	**Sn**	**10 21 32.0**	**-2.5**
	comp=Z,1.4nm,0.3s,baz=319,slow=21,SNR=6.0						
TEIG				LR	LR	10 23 27.3	
	comp=Z,473nm,18.8s,baz=227,slow=41						
TEIG	**Tepich**	**7.51**	**32**		**Pn**	**10 20 10.5**	**+1.8**
JTS	**Las Juntas de**	**8.15**	**115**	Pn	**Pn**	**10 20 19.0**	**+1.5**
	comp=Z,1.7nm,0.3s,baz=356,slow=22,SNR=8.3						
JTS				Sn	**Sn**	**10 21 47.4**	**-2.9**
	baz=322,slow=19,SNR=1.3						
JTS	**Las Juntas de**	**8.15**	**115**		**Pn**	**10 20 16.9**	**-0.6**
833A	**Chaparral WMA,**	**15.79**	**337**	Pn	**Pn**	**10 21 59.4**	**-2.2**
JCT	**Junction City**	**17.89**	**339**	P	**P**	**10 22 28.0**	**-0.9**
HPIG		**17.95**	**319**		**Pn**	**10 22 24.7**	**-4.3**
NATX	**Nacogdoches**	**17.95**	**354**	P	**P**	**10 22 30.3**	**+0.8**
NATX				IAmb	IAmb	10 22 32.6	
	comp=Z,30nm,1.3s						
BRAL	**Brewton**	**17.96**	**15**	P	**P**	**10 22 28.6**	**-1.0**
ETX02	**Prairie Street**	**18.08**	**355**	P	**P**	**10 22 32.6**	**+1.8**
TX31	**Lajitas Ar. Si**	**18.59**	**328**	P	**P**	**10 22 35.5**	**-1.1**
TX32	**Lajitas Array**	**18.59**	**328**	P	**P**	**10 22 35.6**	**-1.0**
TXAR	**Lajitas Array**	**18.59**	**328**	P	**Pn**	**10 22 38.3**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=13						
GUY2C	**Guyana, Caldas**	**18.90**	**115**	*eP*	**Pn**	**10 22 42.3**	**+1.2**
BBAC	**Balboa, Cauca**	**19.09**	**127**	*eP*	**Pn**	**10 22 42.9**	**-0.2**
Z41A	**Richland Creek**	**19.34**	**359**	P	**Pn**	**10 22 46.3**	**+0.6**
Z41A				IAmb	IAmb	10 22 51.0	
	comp=Z,14nm,0.8s						
ORTC	**Ortega, Tolima**	**19.65**	**119**	*eP*	**Pn**	**10 22 50.1**	**+0.4**
LRAL	**Lakeview Retre**	**19.75**	**14**	P	**Pn**	**10 22 52.6**	**+1.9**
LRAL				IAmb	IAmb	10 22 54.7	
	comp=Z,20nm,1.2s						
WLAR	**White Oak Lake**	**19.77**	**358**	P	**P**	**10 22 48.8**	**-0.6**
ABTX	**Abilene, Hawle**	**19.82**	**342**	P	**Pn**	**10 22 50.9**	**-0.7**
ROSC	**El Rosal**	**20.00**	**115**	P	**Pn**	**10 22 55.6**	**+1.4**
	comp=Z,2.2nm,0.3s,baz=230,slow=18,SNR=5.4						
ROSC	**El Rosal**	**20.00**	**115**	P	**Pn**	**10 22 53.1**	**-1.1**
CCAR	**Cane Creek**	**20.00**	**2**	P	**Pn**	**10 22 53.1**	**-0.5**
Z50A	**Ashland**	**20.23**	**16**	P	Pn	10 22 54.3	-2.1
Z50A				IAmb	IAmb	10 23 01.6	
	comp=Z,26nm,1.4s						
FLOC	**Florencia**	**20.61**	**125**	*eP*	Pn	10 23 00.3	-0.7
FLOC	**Florencia**	**20.61**	**125**	P	**P**	**10 22 58.1**	**-0.8**
CHIC	**Chingaza**	**20.62**	**115**	*eP*	Pn	10 23 00.9	-0.6
MIAR	**Mount Ida**	**20.64**	**357**	P	Pn	10 22 59.8	-1.4
RUSC	**La Rusia**	**20.65**	**111**	*eP*	Pn	10 23 00.9	-1.1
RUSC	**La Rusia**	**20.65**	**111**	P	**P**	**10 22 59.2**	**-0.6**
UALR	**University of**	**20.85**	**0**	P	Pn	10 23 02.7	-0.9
UALR				IAmb	IAmb	10 23 14.6	
	comp=Z,24nm,1.2s						
VILC	**Villavicencio,**	**20.89**	**116**	*eP*	Pn	10 23 02.6	-1.8
X48A	**Hartselle**	**21.11**	**13**	P	**P**	**10 23 04.4**	**+0.4**
X48A				IAmb	IAmb	10 23 11.8	
	comp=Z,14nm,0.8s						
GOGA	**Godfrey**	**21.14**	**21**	P	**P**	**10 23 04.7**	**+0.4**
GOGA				IAmb	IAmb	10 23 11.8	
	comp=Z,11nm,0.9s						
X34A	**Smith Ranch, M**	**21.24**	**348**	P	**P**	**10 23 06.2**	**+0.8**
X34A				IAmb	IAmb	10 23 13.6	
	comp=Z,7.9nm,0.8s						
W41B	**Gary Mavity, V**	**21.25**	**1**	P	**P**	**10 23 06.2**	**+0.8**
W41B				IAmb	IAmb	10 23 21.4	
	comp=Z,16nm,1.3s						
Y52A	**Lilburn**	**21.35**	**20**	P	**P**	**10 23 06.7**	**+0.1**
Y52A				IAmb	IAmb	10 23 19.2	
	comp=Z,7.9nm,0.8s						
MNTX	**Cornudas Mount**	**21.36**	**328**	P	**P**	**10 23 06.9**	**+0.2**
WHAR	**Wooly Hollow**	**21.36**	**0**	P	**P**	**10 23 06.1**	**-0.6**
WHAR				IAmb	IAmb	10 23 21.6	
	comp=Z,11nm,1.1s						
PLAL	**Pickwick Lake**	**21.43**	**10**	P	**P**	**10 23 08.1**	**+0.7**
PLAL				IAmb	IAmb	10 23 14.7	
	comp=Z,9.9nm,1.1s						
FPAL	**Fort Paine**	**21.53**	**16**	P	**P**	**10 23 08.9**	**+0.3**
WMOK	**

RIDG	**Independent Ri**	**61.54**	**336**	P	**P**	**10 28 37.0**	**+0.6**
RIDG				IAmb	IAmb	10 28 48.4	
	comp=Z,3.0nm,1.1s						
ILAR	**Eielson Array**	**62.81**	**337**	P	**P**	**10 28 44.7**	**-0.2**
	comp=Z,1.0nm,1.0s,baz=135,slow=6.5,SNR=7.0						
MLY	**Manley**	**64.41**	**336**	P	**P**	**10 28 55.2**	**-0.2**
TTA	**Tatalina**	**65.84**	**333**	P	**P**	**10 29 04.4**	**-0.4**
KSH	**Kashi**	**125.84**	**11**	PKP	**PKiKP**	**10 37 24.8**	**+2.3**
KSH				PP	PP	10 39 20.5	+7.4
KSH				AMB	AMB		
	comp=Z,450nm,6.9s						
ASAR	**Alice Springs**	**135.18**	**250**	PKP	**PKiKP**	**10 37 39.6**	**-1.9**
	comp=Z,0.5nm,0.8s,baz=117,slow=3.1,SNR=3.5						
CMAR	**Chiang Mai Arr**	**146.00**	**340**	PKPbc	**PKPab**	**10 38 00.3**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=343,slow=3.2,SNR=10						

*NEIC **25** 10:19:45.7±0.8,5.4S±0.2×154.28E±0.10,h180km±13km, mb4.4/18, Error ellipse: s-maj=30.3km s-min=8.8km az=201.0*
*IDC **25** 10:19:47.5±4.6,5.36S×154.07E,h189km±27km,mb3.4/4, mb1 3.6/6,mb1mx3.3/35,mbtmp4.0/6, Error ellipse: s-maj=63.0km s-min=22.5km az=91.0*

ISC 25 10:19:45.1±1.7,5.4S±0.2×154.3E±0.2,h180km,n25, σ0§62/27,mb4.3/14,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.46**	**298**	Pn	**Pn**	**10 20 27.6**	**+0.3**
RABL				Sn	**Sn**	**10 21 00.2**	**0.0**
KRVT	**Keravat (AS076**	**2.53**	**294**	P	**Pn**	**10 20 28.7**	**+0.5**
	33nm,0.3s,baz=145,slow=16,SNR=72						
KRVT				S	**Sn**	**10 21 00.4**	**-1.2**
	66nm,0.3s,baz=344,slow=20,SNR=8.1						
CTA	**Charters Tower**	**16.62**	**208**	P	**Pn**	**10 23 29.6**	**+1.6**
	0.7nm,0.3s,baz=29,slow=13,SNR=4.3						
WR0	**Warramunga Arr**	**24.11**	**231**	P	**P**	**10 24 44.6**	**+0.1**
WB0	**Warramunga Ar**	**24.12**	**232**	P	**P**	**10 24 45.2**	**+0.6**
WB0				IAmb	IAmb	10 24 45.5	
	comp=Z,6.3nm,0.6s						
WRAB	**Tennant Creek**	**24.25**	**232**	P	**P**	**10 24 46.4**	**+0.6**
WRAB				IAmb	IAmb	10 24 48.3	
	comp=Z,7.0nm,0.6s						
WB2	**Warramunga Arr**	**24.25**	**232**	P	**P**	**10 24 46.5**	**+0.7**
WB2				IAmb	IAmb	10 24 46.7	
	comp=Z,8.1nm,0.5s						
WRA	**Warramunga Arr**	**24.26**	**232**	P	**P**	**10 24 46.2**	**+0.3**
	comp=Z,5.4nm,0.5s,baz=56,slow=10.0,SNR=25						
AS31	**Alice Springs**	**26.80**	**225**	P	**P**	**10 25 08.7**	**-0.1**
ASAR	**Alice Springs**	**26.81**	**225**	P	**P**	**10 25 08.5**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=56,slow=9.1,SNR=36						
KNRA	**Kununurra**	**27.12**	**246**	P	**P**	**10 25 11.6**	**0.0**
STKA	**Stephens Creek**	**28.95**	**203**	P	**P**	**10 25 27.4**	**-0.4**
	comp=Z,1.2nm,0.7s,baz=44,slow=11,SNR=4.7						
STKA	**Stephens Creek**	**28.95**	**203**	P	**P**	**10 25 27.8**	**0.0**
FITZ	**Fitzroy Crossi**	**30.75**	**243**	P	**P**	**10 25 43.5**	**-0.3**
FITZ				IAmb	IAmb	10 25 44.8	
	comp=Z,8.3nm,1.3s						
BBOO	**Buckleboo**	**32.20**	**210**	P	**P**	**10 25 56.2**	**-0.1**
TOO	**Toolangi**	**33.06**	**193**	P	**P**	**10 26 02.5**	**-1.3**
TOO				IAmb	IAmb	10 26 02.6	
	comp=Z,15nm,1.1s						
FORT	**Forrest**	**35.35**	**221**	P	**P**	**10 26 23.6**	**+0.2**
PSA00	**Pilbara Seismi**	**37.08**	**241**	P	**P**	**10 26 37.8**	**-0.5**
PSA00				IAmb	IAmb	10 26 46.7	
	comp=Z,12nm,1.4s						
PSAA1	**Pilbara Seismi**	**37.09**	**241**	P	**P**	**10 26 37.9**	**-0.5**
PSAA1				IAmb	IAmb	10 26 51.3	
	comp=Z,5.9nm,0.9s						
PSAB1	**Pilbara Seismi**	**37.10**	**241**	P	**P**	**10 26 38.2**	**-0.3**
PSAC3	**Pilbara Seismi**	**37.11**	**241**	P	**P**	**10 26 38.4**	**-0.2**
PSAC3				IAmb	IAmb	10 26 38.5	
	comp=Z,5.2nm,0.8s						
PSAD3	**Pilbara Seismi**	**37.16**	**241**	P	**P**	**10 26 38.4**	**-0.6**
PSAD3				IAmb	IAmb	10 26 47.9	
	comp=Z,12nm,1.2s						
KHZ	**Kahutara**	**40.66**	**158**	P	**P**	**10 27 07.3**	**-0.3**
MORW	**Morawa**	**43.20**	**232**	P	**P**	**10 27 28.3**	**-0.3**
MORW				IAmb	IAmb	10 27 40.9	
	comp=Z,10nm,1.4s						
MKAR	**Makanchi Array**	**81.75**	**319**	P	**P**	**10 31 44.4**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=111,slow=5.3,SNR=2.8						

IDC 25 10:19:50.9±1.8,1.53S×134.20E,h0km,mb3.2/2, mb1 3.4/4,mb1mx3.3/34,mbtmp3.3/4,ML3.1/2,Error ellipse: s-maj=35.7km s-min=20.3km az=40.0,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**3.00**	**282**	Pn	Pn	10 20 39.4	-0.4
	1.6nm,0.3s,baz=22,slow=14,SNR=12						
SIJI				Sn	Sn	10 21 14.3	-2.2
	2.9nm,0.3s,baz=127,slow=20,SNR=3.9						
SIJI				Lg	Lg	10 21 26.7	
	16nm,0.3s,baz=185,slow=24,SNR=12						
WRA	**Warramunga Arr**	**18.31**	**180**	P	P	10 24 07.1	+0.4
	0.1nm,0.3s,baz=357,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**22.01**	**181**	P	P	10 24 46.6	-0.4
	0.5nm,0.7s,baz=6.2,slow=12,SNR=9.1						
MKAR	**Makanchi Array**	**66.14**	**324**	P	P	10 30 40.3	+0.1
	0.2nm,0.5s,baz=109,slow=7.9,SNR=2.8						

*IDC **25** 10:26:10.1±1.2,13.15N×121.32E,h0km,mb3.3/5, mb1 3.6/5,mb1mx3.4/37,mbtmp3.4/5,Error ellipse: s-maj=58.8km s-min=10.9km az=69.0*
*MAN **25** 10:26:10.7,13.08N×121.19E,h29km,mb4.7,ML3.5, MS3.5*

ISC 25 10:26:09.2±1.4,13.10N±0.03×121.21E±0.04,h1km±11km, n17,σ1§46/24,mb3.3/5,4C,Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BOAC	**Boac**	**0.71**	**60**	*eP*	**Pn**	**10 26 24.8**	**-1.6**
BOAC				*eS*	**Sn**	**10 26 35.3**	**-2.6**
TGY	**Tagaytay City**	**1.03**	**345**	Pg	**Pg**	**10 26 29.5**	**+0.5**
	386nm,0.3s,baz=168,slow=3.4,SNR=40						
TGY				Lg	Lg	10 26 43.9	
	639nm,0.3s,baz=221,slow=22,SNR=16						
TGY	**Tagaytay City**	**1.03**	**345**	*eP*	**Pg**	**10 26 28.9**	**-0.1**
TGY				*i* S	**Sb**	**10 26 43.3**	**-0.6**
LQP	**Lukban**	**1.05**	**18**	⇑*iP*	**Pn**	**10 26 30.0**	**-1.3**
LQP				*i* S	**Sn**	**10 26 44.3**	**-2.4**
OTRP	**Odiongan**	**1.08**	**133**	*eP*	**Pg**	**10 26 30.0**	**0.0**
OTRP				*eS*	**Sb**	**10 26 44.1**	**-1.2**
LUBP	**Lubang**	**1.13**	**304**	*eP*	**Pb**	**10 26 29.9**	**-1.6**
LUBP				*eS*	**Sb**	**10 26 44.5**	**-2.2**
GQP	**Guinayangan**	**1.44**	**56**	⇑*eP*	**Pg**	**10 26 37.7**	**+0.8**
GQP				*eS*	**Sg**	**10 26 55.5**	**0.0**
POLP	**Polilio Island**	**1.76**	**24**	*eP*	**Pb**	**10 26 41.1**	**-1.2**
POLP				*eS*	**Sg**	**10 27 06.2**	**+0.3**
RCP	**Roxas**	**2.14**	**136**	⇑*eP*	**Pb**	**10 26 48.8**	**-0.1**
PCPH	**Palayan**	**2.45**	**357**	⇑*eP*	**Pn**	**10 26 51.5**	**+1.2**
ENPP	**El Nido**	**2.57**	**223**	*eP*	**Pn**	**10 26 50.4**	**-1.6**
BALP	**Baler**	**2.65**	**8**	*eP*	**Pb**	**10 26 57.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**22.07**	**287**	P	**P**	**10 31 07.8**	**+1.9**
	0.3nm,0.3s,baz=95,slow=10.0,SNR=2.8						
WRA	**Warramunga Arr**	**35.29**	**158**	P	**P**	**10 33 06.5**	**+0.6**
	0.9nm,0.7s,baz=335,slow=9.8,SNR=4.7						
SONM	**Songino Array**	**36.77**	**343**	P	**P**	**10 33 19.4**	**+1.0**
	0.2nm,0.5s,baz=160,slow=9.2,SNR=2.4						
ASAR	**Alice Springs**	**38.59**	**161**	P		**10 33 35.3**	**+1.3**
	0.3nm,0.4s,baz=344,slow=7.6,SNR=7.7						
MKAR	**Makanchi Array**	**46.81**	**324**	P	**P**	**10 34 42.2**	**+1.6**
	0.2nm,0.5s,baz=127,slow=6.0,SNR=2.0						

*NNC **25** 10:49:43.9±1.2,42.11N×70.53E,h11km±7km, mb2.9, mpv2.3,Error ellipse: s-maj=7.5km s-min=5.5km az=177.0*
*SOME **25** 10:49:44.5,42.08N×70.57E,h10km*
*KRNET **25** 10:49:47.6±0.1,41.91N×70.76E,mb2.1*

ISC 25 10:49:44.4±1.2,42.07N±0.04×70.60E±0.03,h3km±18km, n12,σ0§81/23,9C-4D,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JBG	**Jabagly**	**0.35**	**353**	P	**Pg**	**10 49 51.9**	**+0.6**
	3.7nm,0.1s						
JBG				S	**Sg**	**10 49 56.7**	**+0.8**
	2μm,0.1s						

IUG	**Iuzhnay**	**0.43**	**280**	*eP*	**Pg**	**10 49 52.4**	**-0.3**
	1.9nm,0.1s						
IUG				*eS*	**Sg**	**10 49 58.5**	**+0.1**
	49nm,0.1s						
IUG	**Iuzhnay**	**0.43**	**280**	P	**Pg**	**10 49 52.9**	**+0.2**
IUG				S	**Sg**	**10 49 58.5**	**+0.1**
KK31	**Karatay Array**	**1.03**	**356**	P	**Pg**	**10 50 03.4**	**-0.8**
	0.2nm,0.4s,baz=181,slow=17,SNR=8.4			⇑S			
KK31					**Sg**	**10 50 16.7**	**-0.9**
	1.0nm,0.3s,baz=181,slow=29,SNR=20						
ARK	**Arkit**	**1.05**	**105**	⇑*iP*	**Pg**	**10 50 04.7**	**+0.2**
	baz=98						
ARK				⇑*iS*	**Sg**	**10 50 18.4**	**+0.3**
	baz=98						
BTK	**Batken**	**2.02**	**175**	⇑*iP*	**Pg**	**10 50 22.7**	**-0.3**
	baz=79						
BTK				⇑*iS*	**Sb**	**10 50 47.6**	**+0.3**
	baz=79						
MRKS	**Merke**	**2.06**	**70**	*eP*	**Pb**	**10 50 22.3**	**0.0**
	0.4nm,0.1s						
MRKS				*eS*	**Sb**	**10 50 49.5**	**+1.1**
	5.4nm,0.1s						
MRKS	**Merke**	**2.06**	**70**	Pg	**Pb**	**10 50 22.5**	**+0.1**
	1.0nm,0.3s						
MRKS				Pg	**Pg**	**10 50 23.2**	**-0.6**
	1.7nm,0.3s						
MRKS				Lg	Lg	10 50 49.4	
	6.5nm,0.3s						
MRKS				Lg	Lg	10 50 49.4	
	6.1nm,0.3s						
AML	**Almayashu**	**2.30**	**87**	⇑*iP*	**Pb**	**10 50 27.3**	**+0.6**
	baz=83						
AML				⇑*iS*	**Sg**	**10 50 58.7**	**+0.4**
	baz=83						
EKS2	**Erkin-Say**	**2.42**	**75**	⇓*iP*	**Pb**	**10 50 29.7**	**+1.0**
	baz=71						
EKS2				⇓*iS*	**Sg**	**10 51 01.6**	**-0.6**
	baz=71						
UCH	**Uchtor**	**2.91**	**86**	⇓*iP*	**Pb**	**10 50 36.5**	**-0.7**
	baz=82						
UCH				⇓*iS*	**Sb**	**10 51 13.8**	**+0.5**
	baz=82						
AAK	**Ala-Archa**	**2.94**	**78**	⇑Pg	**Pb**	**10 50 35.2**	**-2.2**
	0.9nm,0.7s						
AAK				⇑Lg	Lg	10 51 17.9	
	1.5nm,0.9s						

IDC 25 10:55:06.7±24.0,19.27N×145.07E,h413km±278km, mb2.7/5,mb1 3.0/5,mb1mx2.7/39,mbtmp3.5/5,Error ellipse: s-maj=69.7km s-min=37.7km az=57.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**40.37**	**196**	P	P	11 02 06.7	-0.1
	0.2nm,0.3s,baz=15,slow=8.6,SNR=3.3						
ASAR	**Alice Springs**	**44.05**	**195**	P	P	11 02 35.9	-0.2
	0.2nm,0.5s,baz=16,slow=6.6,SNR=6.4						
MKAR	**Makanchi Array**	**57.64**	**314**	P	P	11 04 15.7	0.0
	0.1nm,0.5s,baz=89,slow=7.6,SNR=4.0						
YKA	**Yellowknife Ar**	**77.76**	**28**	P	P	11 06 19.4	+0.1
	0.2nm,0.5s,baz=290,slow=5.8,SNR=4.8						
FINES	**FINESS Array B**	**86.12**	**335**	P	P	11 07 02.2	-0.1
	2.1nm,0.9s,baz=46,slow=8.2,SNR=5.0						

*DJA **25** 11:14:52.3±2.6,8°S±7°×10°9E±°,h30km±41km, M4.0/12, MLv4.0/12*
*IDC **25** 11:14:54.3±4.1,7.59S×109.79E,h90km±50km,mb3.4/4, mb1 3.5/5,mb1mx3.3/34,mbtmp3.6/5,Error ellipse: s-maj=92.9km s-min=20.0km az=42.0*

ISC 25 11:14:52.4±1.4,8.5S±0.1×109.29E±0.05,h60km±18km, n20,σ1§04/22,mb3.4/4,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**1.07**	**309**	P	**Pn**	**11 15 11.0**	**-0.4**
CMJI				S	**Sn**	**11 15 24.4**	**-1.1**
KPJI	**Karang Pucung**	**1.18**	**343**	P	**Pn**	**11 15 13.1**	**+0.2**
KPJI				S	**Sn**	**11 15 28.6**	**+0.5**
UGM	**Wanagama**	**1.35**	**66**	P	**Pn**	**11 15 15.1**	**+0.1**
UGM				S	**Sn**	**11 15 31.1**	**-0.9**
CISI	**Cisompet, Garu**	**1.72**	**302**	P	**Pn**	**11 15 19.9**	**-0.1**
CISI				S	**Sn**	**11 15 40.6**	**-0.4**
WOJI	**Wonogiri, Jawa**	**1.74**	**69**	P	**Pn**	**11 15 19.9**	**-0.4**
SMRI	**Semarang**	**1.82**	**39**	P	**Pn**	**11 15 21.8**	**+0.4**
PCJI	**Pacitan**	**1.89**	**82**	P	**Pn**	**11 15 23.3**	**+0.9**
LEM	**Lembang**	**2.32**	**315**	P	**Pn**	**11 15 29.8**	**+1.4**
	7.2nm,0.3s,baz=126,slow=17,SNR=3.5						
LEM				S	**Sn**	**11 15 58.7**	**+2.7**
	19nm,0.3s,baz=9.2,slow=18,SNR=8.4						
CNJI	**Cibinong**	**2.43**	**298**	P	**Pn**	**11 15 29.2**	**-0.5**
PWJI	**Pagerwojo**	**2.53**	**80**	P	**Pn**	**11 15 31.7**	**+0.6**
UWJI	**Ujung Watu**	**2.62**	**39**	P	**Pn**	**11 15 31.9**	**-0.4**
GRJI	**Gresik**	**3.52**	**64**	P	**Pn**	**11 15 44.4**	**-0.3**
JAGI	**Jagaq, Banyuwa**	**4.81**	**90**	P	**Pn**	**11 16 03.8**	**+1.4**
WRA	**Warramunga Arr**	**26.79**	**118**	P	**P**	**11 20 26.8**	**-0.2**
	0.5nm,0.6s,baz=294,slow=12,SNR=5.7						
ASAR	**Alice Springs**	**28.00**	**126**	P	**P**	**11 20 37.8**	**0.0**
	0.9nm,0.6s,baz=305,slow=9.1,SNR=18						
ASAR				PcP	**PcP**	**11 23 50.0**	**-1.8**
	0.3nm,0.7s,baz=299,slow=2.7,SNR=3.3						
H08S2	**Diego Garcia H**	**36.43**	**269**	T	T	12 00 08.8	
	baz=93						
H08S3	**Diego Garcia H**	**36.44**	**269**	T	T	12 00 13.7	
	baz=93						
H08S1	**Diego Carcia H**	**36.45**	**269**	T	T	12 00 11.8	
	baz=93						
STKA	**Stephens Creek**	**37.98**	**132**	P	**P**	**11 22 05.1**	**+0.5**
	0.8nm,0.4s,baz=322,slow=8.8,SNR=4.6						
MKAR	**Makanchi Array**	**60.05**	**339**	P	P	11 24 47.3	-5.7
	0.1nm,0.4s,baz=159,slow=7.5,SNR=4.1						

*RSPR **25** 11:16:42.8,19.60N×64.78W,h54km±20km,MD3.4/4*
*NEIC **25** 11:16:45.1±1.9,19.45N±0.10×64.87W±0.05,h37km±54km, Error ellipse: s-maj=14.6km s-min=6.2km az=195.0*

ISC 25 11:16:41.9±2.1,19.5N±0.1×64.82W±0.06,h23km,n21, σ1§11/25,4C,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CUPR	**Culebra, Puert**	**1.25**	**200**	*eS*	**Sb**	**11 17 21.8**	**+1.2**
CUPR	**Culebra, Puert**	**1.25**	**200**	⇑*eP*	**Pb**	**11 17 04.3**	**-0.6**
CUPR	**Culebra, Puert**	**1.25**	**200**		**Pn**	**11 17 03.7**	**-0.3**
CUPR					**Sn**	**11 17 20.6**	**+0.4**
MTP	**Monte Pirata**	**1.55**	**207**	*eS*	**Sb**	**11 17 28.8**	**-0.3**
MTP	**Monte Pirata**	**1.55**	**207**	⇑*eP*	**Pb**	**11 17 08.9**	**-1.1**
MTP	**Monte Pirata**	**1.55**	**207**		**Pn**	**11 17 08.8**	**-1.1**
MTP					**Sn**	**11 17 28.4**	**+0.9**
CBYP	**Canovanas**	**1.56**	**219**	*eS*	**Sb**	**11 17 29.7**	**+0.3**
CBYP	**Canovanas**	**1.56**	**219**	⇑*eP*	**Pn**	**11 17 08.6**	**+0.3**
CBYP	**Canovanas**	**1.56**	**219**		**Pb**	**11 17 09.0**	**-1.1**
CDVI	**St. Croix**	**1.73**	**178**	⇑*eP*	**Pb**	**11 17 11.7**	**-1.3**
CDVI	**St. Croix**	**1.73**	**178**	*eS*	**Sb**	**11 17 33.3**	**-1.1**
CDVI	**St. Croix**	**1.73**	**178**		**Pn**	**11 17 11.3**	**+0.7**
CDVI					**Sn**	**11 17 33.0**	**+1.1**
SJG	**San Juan**	**1.86**	**223**	Pn	**Pn**	**11 17 12.6**	**+0.2**
SJG					**Sn**	**11 17 34.7**	**-0.5**
IGPR	**InterUniversit**	**1.94**	**219**		**Pb**	**11 17 15.5**	**-1.2**
AOPR	**Arecibo Observ**	**2.15**	**238**	Pn	**Pb**	**11 17 18.3**	**-1.9**
SMRT	**St. Maarten**	**2.19**	**131**	Pn	**Pn**	**11 17 17.8**	**+0.8**
OBIP	**Obispado Ponce**	**2.22**	**230**	Pn	**Pn**	**11 17 18.8**	**+1.5**
ICMP	**Isla Caja de M**	**2.27**	**226**	Pn	**Pn**	**11 17 19.5**	**+1.5**
MLPR	**Magueyes Islan**	**2.59**	**235**	Pn	**Pn**	**11 17 24.3**	**+1.9**
CRPR	**Cabo Rojo, PR**	**2.62**	**236**	Pn	**Pn**	**11 17 24.3**	**+1.4**
SDDR	**Presa de Saban**	**6.13**	**266**	Pn	**Pn**	**11 18 11.6**	**+0.4**

*TAP **25** 11:25:11.6,24.65N×122.27E,h9km,ML3.6,B*
*JMA **25** 11:25:11.3,24.58N×122.25E,h27km,M3.0*

ISC 25 11:25:11.1±0.9,24.62N±0.02×122.27E±0.02,h16km±6km, n95,σ0§66/147,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.14**	**242**	*i* P	**Pg**	**11 25 15.1**	**0.0**
	baz=231						
EOS1				*i* S	**Sg**	**11 25 18.4**	**+0.7**
	baz=231						
TWC	**Suao**	**0.38**	**269**	P	**Pg**	**11 25 18.0**	**-0.9**
	baz=263						
TWC				*eS*	**Sb**	**11 25 25.3**	**+0.1**
	baz=263						

NTC	**Toucheng**	**0.46**	**301**	*eP*	**Pg**	**11 25 19.9**	**-0.5**
	baz=296						
NTC				*eS*	**Sg**	**11 25 27.2**	**+0.4**
	baz=296						
TWB1	**Santiao Chiao**	**0.47**	**327**	P	**Pg**	**11 25 19.9**	**-0.5**
	baz=325						
TWB1				*eS*	**Sg**	**11 25 26.2**	**-0.7**
	baz=325						
ILA	**Ilan**	**0.50**	**287**	*eP*	**Pg**	**11 25 20.5**	**-0.6**
	baz=283						
ILA				*eS*	**Sb**	**11 25 29.6**	**+1.1**
	baz=283						
NANB	**Nanao**	**0.51**	**248**	P	**Pg**	**11 25 20.8**	**-0.5**
	baz=244						
NANB				S	**Sb**	**11 25 29.0**	**+0.1**
	baz=244						
ENA	**Nanau**	**0.52**	**249**	P	**Pg**	**11 25 20.9**	**-0.6**
	baz=244						
ENA				S	**Sb**	**11 25 29.4**	**+0.3**
	baz=244						
TIPB	**Shuangxi**	**0.54**	**311**	P	**Pg**	**11 25 21.7**	**-0.1**
	baz=308						
TIPB				S	**Sg**	**11 25 28.1**	**-0.9**
	baz=308						
TWE	**Neicheng**	**0.56**	**281**	P	**Pg**	**11 25 21.4**	**-0.8**
	baz=277						
TWE				S	**Sb**	**11 25 30.0**	**-0.2**
	baz=277						
SLBB	**Yuanshan**	**0.59**	**283**	P	**Pb**	**11 25 21.4**	**-1.7**
	baz=280						
SLBB				*eS*	**Sg**	**11 25 30.8**	**0.0**
	baz=280						
WFSB	**Wu-fen Shan**	**0.63**	**316**	P	**Pg**	**11 25 24.4**	**+0.8**
	baz=313						
WFSB				*eS*	**Sg**	**11 25 33.1**	**+1.1**
	baz=313						
JYNG	**Yonagunijimaku**	**0.64**	**105**	P	**Pb**	**11 25 23.6**	**-0.2**
JYNG				S	**Sg**	**11 25 33.2**	**+1.0**
ENTT	**Nioudou**	**0.64**	**272**	P	**Pb**	**11 25 23.0**	**-0.9**
	baz=268						
ENTT				S	**Sb**	**11 25 32.4**	**-0.2**
	baz=268						
NDT	**Datong Townshi**	**0.69**	**269**	P	**Pb**	**11 25 24.1**	**-0.6**
	baz=265						
NDT				*eS*	**Sg**	**11 25 34.3**	**+0.5**
	baz=265						
YOJ	**Yonaguni jima**	**0.69**	**103**	P	**Pb**	**11 25 24.6**	**-0.2**
	baz=105						
YOJ				S	**Sg**	**11 25 34.7**	**+0.8**
	baz=105						
YOJ	**Yonaguni jima**	**0.69**	**103**	P	**Pb**	**11 25 24.6**	**-0.2**
YOJ				S	**Sg**	**11 25 35.0**	**+1.1**
NWLT	**Wulai**	**0.71**	**283**	*eP*	**Pb**	**11 25 24.9**	**-0.3**
	baz=280						
NWLT				*eS*	**Sb**	**11 25 34.6**	**-0.2**
	baz=280						
TWA	**Mucha**	**0.72**	**300**	*eP*	**Pg**	**11 25 25.6**	**+0.3**
	baz=297						
TWA				*eS*	**Sb**	**11 25 34.0**	**-0.9**
	baz=297						
NACB	**Ninganchiao**	**0.76**	**234**	*eP*	**Pb**	**11 25 25.2**	**-0.7**
	baz=232						
NACB				*eS*	**Sb**	**11 25 35.0**	**-1.0**
	baz=232						
NHDH	**Xindian Distri**	**0.76**	**297**	*eP*	**Pb**	**11 25 25.9**	**-0.1**
	baz=294						
NHDH				*eS*	**Sg**	**11 25 36.5**	**+0.4**
	baz=294						
TATO	**Taipei**	**0.79**	**297**	*eP*	**Pb**	**11 25 26.3**	**-0.2**
	baz=294						
TATO				*eS*	**Sb**	**11 25 36.4**	**-0.6**
	baz=294						
TAP	**Taipei**	**0.81**	**301**	*eP*	**Pn**	**11 25 27.9**	**0.0**
	baz=299						
TAP				*eS*	**Sb**	**11 25 37.4**	**-0.1**
	baz=299						
TWD	**Chiawan**	**0.81**	**229**	*eP*	**Pg**	**11 25 27.2**	**+0.2**
	baz=226						
TWD				*eS*	**Sn**	**11 25 39.2**	**-0.4**
	baz=226						
YHNB	**Yeheng**	**0.81**	**274**	*eP*	**Pb**	**11 25 26.6**	**-0.3**
	baz=271						
YHNB				*eS*	**Sb**	**11 25 37.4**	**-0.3**
	baz=271						
YM01	**YM01**	**0.82**	**310**	*eP*	**Pb**	**11 25 27.2**	**+0.1**
	baz=307						
YM01				*eS*	**Sg**	**11 25 38.4**	**+0.3**
	baz=307						
ETLH	**Xiulin Townshi**	**0.83**	**240**	*eP*	**Pb**	**11 25 26.9**	**-0.3**
	baz=238						
ETLH				*eS*	**Sn**	**11 25 39.4**	**-0.6**
	baz=238						
NNSB	**Datong**	**0.83**	**257**	*eP*	**Pb**	**11 25 26.5**	**-0.7**
	baz=254						
NNSB				*eS*	**Sb**	**11 25 38.2**	**0.0**
	baz=254						
NNSH	**Datong**	**0.83**	**257**	*eP*	**Pb**	**11 25 26.8**	**-0.4**
	baz=254						
NNSH				*eS*	**Sg**	**11 25 38.6**	**+0.3**
	baz=254						
NSK	**Sanguang**	**0.83**	**274**	*eP*	**Pb**	**11 25 26.9**	**-0.4**
	baz=271						
NSK				*eS*	**Sb**	**11 25 38.1**	**0.0**
	baz=271						
YM11	**YM11**	**0.83**	**311**	*eP*	**Pb**	**11 25 27.4**	**+0.1**
	baz=309						
YM11				*eS*	**Sb**	**11 25 38.1**	**-0.2**
	baz=309						
NNS	**Nan Shan**	**0.83**	**258**	*eP*	**Pb**	**11 25 26.7**	**-0.7**
	baz=255						
NNS				*eS*	**Sg**	**11 25 38.8**	**+0.3**
	baz=255						
YM10	**YM10**	**0.84**	**310**	*eP*	**Pb**	**11 25 27.4**	**+0.1**
	baz=307						
YM10				*eS*	**Sb**	**11 25 37.6**	**-0.7**
	baz=307						
YM05	**YM05**	**0.84**	**311**	*eP*	**Pb**	**11 25 27.4**	**0.0**
	baz=308						
YM08	**YM08**	**0.84**	**313**	*eP*	**Pb**	**11 25 27.2**	**-0.1**
	baz=310						
YM08

OWD				*e*S		**Sg**	**11 25 50.0**	**+0.1**
	baz=235							
EGFH	**Guangfu**	**1.22 219**	*e*P			**Pb**	**11 25 34.0**	**+0.2**
	baz=218							
EGFH				*e*S		**Sg**	**11 25 51.8**	**+1.3**
	baz=218							
WHP	**Taichung City**	**1.25 255**	*e*P			**Pg**	**11 25 35.2**	**-0.1**
	baz=252							
WHP				*e*S		**Sn**	**11 25 50.9**	**+0.3**
	baz=252							
VWDT	**VWDT**	**1.34 230**	*e*P			**Pg**	**11 25 36.6**	**-0.4**
	baz=229							
NMLH	**Miaoli**	**1.35 267**	*e*P			**Pg**	**11 25 38.0**	**+0.9**
	baz=265							
DPDB	**Guoxing**	**1.36 245**	*e*P			**Pg**	**11 25 37.2**	**-0.1**
	baz=243							
IRIF	**Iriomote-Funau**	**1.36 102**	P			**Pn**	**11 25 34.8**	**-0.6**
IRIF			S			**Sn**	**11 25 51.4**	**-1.7**
HGSD	**Ruisui**	**1.36 215**	*e*P			**Pn**	**11 25 35.7**	**+0.3**
	baz=213							
HGSD				*e*S		**Sg**	**11 25 54.7**	**-0.4**
	baz=213							
NSY	**Sanyi**	**1.39 262**	*e*P			**Pg**	**11 25 38.5**	**+0.6**
	baz=260							
TWQ1	**Liyutan**	**1.39 259**	*e*P			**Pg**	**11 25 38.4**	**+0.5**
	baz=257							
EHY	**Hungye**	**1.41 218**	*e*P			**Pn**	**11 25 36.3**	**+0.3**
	baz=216							
EHY				*e*S		**Sg**	**11 25 55.7**	**-0.8**
	baz=216							
SSLB	**Suanglung**	**1.46 236**	*e*P			**Pb**	**11 25 38.2**	**+0.3**
	baz=234							
TYC	**Yuchr**	**1.47 241**	*e*P			**Pg**	**11 25 39.5**	**0.0**
	baz=239							
HATJ	**Hateruma jima**	**1.51 111**	P			**Pn**	**11 25 37.7**	**+0.3**
HATJ			*e*S			**Sn**	**11 25 56.7**	**0.0**
YULB	**Yu-li**	**1.51 216**	*e*P			**Pn**	**11 25 37.8**	**+0.3**
	baz=215							
TWF1	**Yuli**	**1.54 215**	*e*P			**Pn**	**11 25 38.3**	**+0.4**
	baz=214							
WHYT	**Xinyi Township**	**1.59 235**	*e*P			**Pg**	**11 25 41.2**	**-0.4**
	baz=233							
WJS	**Zhushan**	**1.61 241**	*e*P			**Pb**	**11 25 40.4**	**-0.2**
	baz=239							
JKRS	**Kuro-shima**	**1.63 103**	P			**Pn**	**11 25 38.9**	**-0.2**
JKRS			S			**Sn**	**11 25 59.3**	**-0.4**
YUS	**Yu-Shan**	**1.65 227**	*e*P			**Pb**	**11 25 41.5**	**+0.2**
	baz=226							
FULB	**Fuli**	**1.67 212**	*e*P			**Pn**	**11 25 40.0**	**+0.3**
	baz=211							
JIJ	**Ishigaki jima**	**1.73 98**	P			**Pn**	**11 25 40.0**	**-0.4**
JIJ			S			**Sn**	**11 26 00.4**	**-1.7**
ALS	**Alishan**	**1.73 231**	*e*P			**Pb**	**11 25 43.5**	**+0.7**
	baz=229							
ELDTW	**Lidau**	**1.83 219**	*e*P			**Pn**	**11 25 42.5**	**+0.6**
	baz=218							
JISG	**Ishigakijimahi**	**1.86 91**	P			**Pn**	**11 25 41.5**	**-0.8**
JISG			*e*S			**Sn**	**11 26 05.5**	**+0.1**
TPUB	**Ta-pu**	**1.99 229**	*e*P			**Pb**	**11 25 47.1**	**+0.1**
	baz=228							
TWH	**Lutao**	**2.03 201**	*e*P			**Pn**	**11 25 44.5**	**-0.2**
	baz=200							
WTP	**Ta-pu**	**2.04 228**	*e*P			**Pb**	**11 25 47.6**	**-0.2**
	baz=227							
CHN1	**Nanshi**	**2.14 229**	*e*P			**Pb**	**11 25 49.1**	**-0.4**
	baz=227							
SGST	**Jiashian**	**2.17 226**	*e*P			**Pb**	**11 25 48.4**	**-1.7**
	baz=224							
SLGT	**Liugui**	**2.20 223**	*e*P			**Pb**	**11 25 49.4**	**-1.1**
	baz=222							
JTJ	**Tarama**	**2.21 89**	P			**Pn**	**11 25 47.5**	**+0.4**
JTJ			*e*S			**Sn**	**11 26 14.2**	**0.0**
SSD	**Sandimen**	**2.39 219**	*e*P			**Pb**	**11 25 52.3**	**-1.5**
	baz=218							
PTTC	**Pingtan**	**2.43 292**	*e*P			**Pn**	**11 25 50.3**	**+0.2**
	baz=290							
MASBT	**Mashibuluo**	**2.50 217**	*e*P			**Pn**	**11 25 52.3**	**+1.2**
	baz=216							
EAST	**Anshuo**	**2.58 211**	*e*P			**Pn**	**11 25 53.3**	**+1.1**
	baz=209							
VWUC	**VWUC**	**2.59 279**	*e*P			**Pn**	**11 25 52.4**	**+0.1**
	baz=277							
JIRB	**Irabujima**	**2.65 85**	P			**Pn**	**11 25 54.4**	**+1.3**
LAY	**Lan-yu**	**2.65 195**	*e*P			**Pn**	**11 25 53.1**	**-0.1**
	baz=194							
JIKM	**Ikemajima**	**2.73 83**	P			**Pn**	**11 25 55.7**	**+1.5**
WDGT	**Dungji**	**2.74 241**	*e*P			**Pn**	**11 25 56.5**	**+2.1**
	baz=239							
JMJ2	**Miyako jima3**	**2.79 87**	P			**Pn**	**11 25 56.9**	**+1.9**
PTMZ	**Houxiangcun**	**2.89 279**	*e*P			**Pn**	**11 25 57.0**	**+0.5**
	baz=277							
XPSS	**Dashiqiu**	**2.97 321**	*e*P			**Pn**	**11 25 57.3**	**-0.2**
	baz=320							
LYJJ	**Jianjiangzhen**	**2.97 311**	*e*P			**Pn**	**11 25 57.5**	**-0.1**
	baz=309							
KNMB	**Chin-men Tao**	**3.54 268**	*e*P			**Pn**	**11 26 05.9**	**+0.6**
	baz=266							
AXDP	**Jialang**	**3.92 275**	*e*P			**Pn**	**11 26 11.1**	**+0.5**
	baz=273							

MAN 25 11:49:19.6, 10°02'N×124°13'E, **h9**km, **mb4.0, ML2.8, MS2.5, 1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.33**	**331**	*i*P	Pb	11 49 27.0	-0.7
LLP				*i*S	Sb	11 49 33.0	-0.2
MSLP	**Maasin**	**0.73**	**81**	*e*P	Pg	11 49 33.5	-0.2
MSLP				*e*S	Sn	11 49 47.4	+0.1
OCLP	**Ormoc**	**1.12**	**25**	*e*P	Pg	11 49 40.7	-0.5
OCLP				*e*S	Sn	11 49 56.8	-0.4
GUIM	**Jordan**	**1.63**	**292**	*e*P	Pb	11 49 49.5	-0.3
GUIM				*e*S	Sg	11 50 12.6	+0.6

DDA ***25*** *12:10:48.7, 37.41N×42.81E, h8km±2km, ML2.5*
ISK ***25*** *12:10:48.7, 37.40N×42.82E, h6km, ML2.6/10*
ISN ***25*** *12:10:49.9±1.1, 37.42N×42.82E, h15km, ML2.2*
ISC 25 12:10:49.0±1.1, **37.41N**±0.03×**42.83E**±0.03, **h12**km±9km, **n23**, σ0°77/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	**Sirnak**	**0.32**	**287**	PG	**Pg**	**12 10 55.4**	**-0.3**
SIRT				SG	**Sg**	**12 11 00.5**	**+0.4**
SIRN	**Sırnak**	**0.34**	**285**	*i*P	**Pb**	**12 10 56.2**	**-1.0**
SIRN				*i*S	**Sg**	**12 11 00.7**	**0.0**
CUKT	**Cukurca**	**0.64**	**104**	PG	**Pg**	**12 11 01.5**	**0.0**
CUKT				SG	**Sb**	**12 11 11.3**	**+0.1**
CUKT	**Cukurca**	**0.64**	**104**	*i*P	**Pg**	**12 11 01.4**	**-0.2**
CUKT				*i*S	**Sb**	**12 11 11.1**	**-0.1**
CUKT				IAML		12 11 21.0	
	comp=N,226nm,0.5s						
GEVA	**Gevas**	**0.92**	**11**	*i*P	**Pg**	**12 11 06.1**	**-0.7**
SRTM	**Siirt_Merkez**	**0.93**	**309**	*i*P	**Pg**	**12 11 06.4**	**-0.5**
AKDM	**Akdamar-Van**	**0.93**	**7**	PG	**Pg**	**12 11 06.4**	**-0.6**
AKDM				SG	**Sn**	**12 11 20.9**	**-0.5**
MSL	**Mosul**	**1.03**	**167**	*e*Pg	**Pg**	**12 11 08.5**	**-0.4**
	baz=347						
MSL				AML	AML	12 11 14.6	
	comp=Z,67nm,0.3s						
MSL				*e*Sg	**Sn**	**12 11 24.0**	**+0.3**
BLIS	**Bitlis-Merkez**	**1.15**	**331**	*i*P	**Pg**	**12 11 10.8**	**-0.5**
VANB	**Van**	**1.27**	**20**	PN	**Pn**	**12 11 12.1**	**-0.6**
GURO	**Guroymak-BITLI**	**1.30**	**331**	PN	**Pg**	**12 11 13.8**	**-0.3**
ADCV	**BITLIS_Adilcev**	**1.40**	**357**	*i*P	**Pg**	**12 11 15.8**	**-0.2**
SVAN	**Silvan-Diyarba**	**1.49**	**300**	PN	**Pb**	**12 11 16.8**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.49**	**300**	*i*P	**Pg**	**12 11 16.9**	**-0.8**
SVAN				*i*S	**Sg**	**12 11 39.2**	**+2.2**
MARD	**Mardin**	**1.64**	**267**	*i*P	**Pb**	**12 11 19.4**	**+0.1**
MARD				*i*S	**Sn**	**12 11 38.1**	**-0.8**
MARD				IAML		12 11 48.0	
	comp=E,64nm,0.4s						
MUSM	**Mu-Merkez**	**1.68**	**322**	*i*P	**Pb**	**12 11 19.6**	**-0.3**
VMUR	**Van-Muradiye**	**1.68**	**20**	*i*P	**Pg**	**12 11 21.7**	**+0.3**
MAZI	**Mazidag**	**1.90**	**272**	PN	**Pb**	**12 11 22.5**	**-1.2**
CLDR	**Caldiran**	**1.93**	**26**	PN	**Pb**	**12 11 23.3**	**-1.1**
BNGL	**BINGOL**	**2.03**	**320**	*i*P	**Pb**	**12 11 26.0**	**0.0**
BNGL				*i*S	**Sg**	**12 11 54.4**	**0.0**
VRTB	**Varto-Mus**	**2.06**	**329**	PN	**Pn**	**12 11 24.9**	**+1.3**
AGRB	**Hanur-Agry**	**2.17**	**3**	PN	**Pn**	**12 11 26.8**	**+1.6**
HANI	**Diyarbakir_Han**	**2.17**	**298**	*i*P	**Pn**	**12 11 25.4**	**+0.3**

IDC ***25*** *12:14:47.8±1.3, 67.47N×142.28E, h0km, mb3.5/6, mb1 3.6/8, mb1mx3.4/59, mbtmp3.5/8, ML2.9/1, Error ellipse: s-maj=36.6km s-min=18.9km az=0.0*
YARS ***25*** *12:14:47.3±0.0, 67.63N×142.94E, h14km, mb5.5/3, ML2.2/4*
ISC 25 12:14:48.8±0.7, **67.55N**±0.03×**142.53E**±0.05, **h10**km, **n16, s23**, σ2°15/41, **mb3.5/6, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOMR	**Moma**	**1.12**	**166**	*e*Pg	**Pb**	**12 15 08.6**	**-1.6**
	101nm,0.3s						
MOMR				*e*Sg	**Sb**	**12 15 24.1**	**-0.7**
	441nm,0.2s						
DEPR	**Deputatskiy**	**2.09**	**334**	*i*Pn	**Pn**	**12 15 22.5**	**-1.3**
DEPR				*i*Pg	**Pb**	**12 15 25.2**	**-1.5**
	8.5nm,0.2s						
DEPR				*e*Sn	**Sn**	**12 15 48.7**	**-1.1**
DEPR				*e*Sn	**Sn**	**12 15 48.7**	**-1.1**
DEPR				*e*Sg	**Sb**	**12 15 52.8**	**+0.2**
	218nm,0.5s						
UNR	**Ust'-Nera**	**3.01**	**174**	*i*Pn	**Pn**	**12 15 36.1**	**-0.3**
UNR				*i*Pg	**Pb**	**12 15 42.9**	**+0.5**
	0.8nm,0.9s						
UNR				*e*Sn	**Sn**	**12 16 12.8**	**+0.3**
UNR				*e*Sn	**Sn**	**12 16 12.8**	**+0.3**
UNR				*e*Sg	**Sg**	**12 16 23.6**	**-1.6**
	1.0nm,0.6s						
SEY	**Seymchan**	**6.21**	**134**	Pn	**Pn**	**12 16 19.7**	**-0.7**
	0.3nm,0.3s,baz=330,slow=13,SNR=6.8						
SEY				Sn	**Sn**	**12 17 26.3**	**-4.9**
	0.8nm,0.3s,baz=335,slow=19,SNR=4.5						
SEY				Lg	Lg	12 18 01.9	
	1.0nm,0.3s,baz=29,slow=19,SNR=4.3						
TIXI	**Tiksi**	**6.29**	**317**	Pn	**Pn**	**12 16 22.6**	**+1.1**
	1.1nm,0.3s,baz=180,slow=24,SNR=5.3						
TIXI				Sn	**Sn**	**12 17 28.6**	**-4.7**
	2.4nm,0.3s,baz=360,slow=23,SNR=5.2						
TIXI				Lg	Lg	12 18 00.8	
	1.8nm,0.3s,baz=60,slow=18,SNR=5.1						
TIXI	**Tiksi**	**6.29**	**317**	*i*Pn	**Pn**	**12 16 21.7**	**+0.3**
TIXI				*i*Pg	**Pb**	**12 16 42.0**	**+3.8**
	2.6nm,0.2s						
TIXI				*e*Sn	**Sn**	**12 17 32.7**	**-0.5**
TIXI				*e*Sn	**Sn**	**12 17 32.7**	**-0.5**
TIXI				*e*Sg	**Sg**	**12 18 05.8**	**-4.6**
	24nm,1.1s						
YAK	**Yakutsk**	**7.78**	**231**	Sn	**Sn**	**12 18 07.3**	**-2.6**
	0.2nm,0.3s,baz=34,slow=18,SNR=10						
YAK				Lg	Lg	12 18 52.3	
	0.1nm,0.3s,baz=198,slow=20,SNR=2.1						
YAK	**Yakutsk**	**7.78**	**231**	*i*Pn	**Pn**	**12 16 43.9**	**+2.0**
YAK				*i*Pg	Pg	12 17 11.1	-6.5
YAK				*e*Sn	**Sn**	**12 18 12.2**	**+2.3**
YAK				*e*Sn	**Sn**	**12 18 12.2**	**+2.3**
YAK				*e*Sg	**Sg**	**12 18 56.2**	**-2.0**
	29nm,1.0s						
YAK				*e*Sg	**Sg**	**12 18 56.2**	**-2.0**
	23nm,1.1s						
TBGR	**Tabaga**	**7.96**	**230**	*i*Pn	**Pn**	**12 16 46.4**	**+2.1**
TBGR				*i*Pg	Pg	12 17 14.3	-6.7
	3.7nm,0.2s						
TBGR				*e*Sn	**Sn**	**12 18 16.5**	**+2.2**
TBGR				*e*Sn	**Sn**	**12 18 16.5**	**+2.2**
TBGR				*e*Sg	**Sg**	**12 19 01.7**	**-2.2**
	34nm,0.5s						
BLSR	**Buluus**	**8.51**	**230**	*i*Pn	**Pn**	**12 16 54.0**	**+2.3**
BLSR				*i*Pg	Pg	12 17 23.9	-7.4
	7.9nm,0.1s						
BLSR				*e*Sn	**Sn**	**12 18 29.7**	**+2.1**
BLSR				*e*Sn	**Sn**	**12 18 29.7**	**+2.1**
BLSR				*e*Sg	**Sg**	**12 19 18.6**	**-2.8**
	12nm,0.1s						
ILAR	**Eielson Array**	**27.26**	**62**	P	**P**	**12 20 33.5**	**+0.9**
	0.7nm,0.8s,baz=303,slow=9.0,SNR=8.1						
BVAR	**Borovoye Array**	**36.20**	**283**	P	**P**	**12 21 51.0**	**-0.1**
	0.5nm,0.7s,baz=37,slow=9.9,SNR=3.7						
MKAR	**Makanchi Array**	**36.69**	**267**	P	**P**	**12 21 55.3**	**-0.1**
	0.8nm,0.8s,baz=35,slow=6.6,SNR=6.6						
YKA	**Yellowknife Ar**	**38.92**	**46**	P	**P**	**12 22 16.1**	**+2.2**
	0.1nm,0.4s,baz=320,slow=8.0,SNR=5.0						
FINES	**FINESS Array B**	**43.32**	**321**	P	**P**	**12 22 49.7**	**-0.4**
	0.8nm,0.6s,baz=38,slow=9.6,SNR=5.9						
PDAR	**Pinedale Array**	**57.47**	**56**	P	**P**	**12 24 39.8**	**+2.1**
	0.2nm,0.6s,baz=339,slow=2.3,SNR=3.1						

NIED ***25*** *12:27:00, 35.60N×140.10E, h71km, Mw3.8 Best double couple: M0 5.84000×10^14 NP1:φs338.00000°, δ80.00000°, λ99.00000°. NP2:φs114.00000°, δ13.00000°, λ47.00000°.*
NEIC ***25*** *12:27:25.7±1.1, 35.59N±0.05×140.28E±0.09, h59km±8km, mb4.2/15, Error ellipse: s-maj=10.5km s-min=7.5km az=83.0*
JMA ***25*** *12:27:26.4±0.2, 35.62N×140.10E, h72km±2km, M3.6 Broadband fault plane solution: P waves. NP1: φs90.00000°, δ4.00000°, λ30.00000°. NP2:φs330.00000°, δ88.00000°, λ93.00000°. Principal axes: T Plg47.0000°, Azm244.0000°; N Plg3.0000°, Azm150.0000°; P Plg43.0000°, Azm57.0000°;*
JMA Felt II J1.
IDC ***25*** *12:27:26.8±2.0, 35.49N×140.10E, h66km±18km, mb3.4/12, mb1 3.7/13, mb1mx3.5/38, mbtmp3.8/13 Error ellipse: s-maj=17.9km s-min=12.9km az=80.0*
ISC 25 12:27:26.8±0.7, **35.58N**±0.04×**140.19E**±0.04, **h67**km±6km, **n66**, σ1°31/81, **mb4.0**/17, **2C-8D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	**Nagara**	**0.16**	**176**	⇓P	**Pn**	**12 27 37.8**	**+1.0**
JCN				S	**Sn**	**12 27 46.2**	**+2.1**
JSMT	**Sammumatsuo**	**0.22**	**73**	⇑P	**Pn**	**12 27 38.3**	**+1.2**
JSMT				*e*S	**Sn**	**12 27 46.8**	**+2.2**
TOK	**Tokyo**	**0.37**	**288**	⇓P	**Pn**	**12 27 38.6**	**+0.6**
TOK				*e*S	**Sn**	**12 27 47.6**	**+1.3**
BSO3	**Boso 3**	**0.82**	**161**	⇓P	**Pn**	**12 27 43.2**	**+0.7**
JOD2	**Odawara 2**	**0.95**	**251**	⇓P	**Pn**	**12 27 43.7**	**-0.8**
JOD2				S	**Sn**	**12 27 55.8**	**-1.9**
JAG	**Ashikaga**	**1.04**	**325**	⇑P	**Pn**	**12 27 44.8**	**-0.8**
JAG				S	**Sn**	**12 27 58.0**	**-1.5**
JIM2	**Oshima 3**	**1.06**	**216**	P	**Pn**	**12 27 44.9**	**-1.0**
JIM2				*e*S	**Sn**	**12 27 58.7**	**-1.4**
BSO1	**Boso 1**	**1.12**	**145**	P	**Pn**	**12 27 47.0**	**+0.8**
JRY	**Ryogami san**	**1.14**	**293**	⇓P	**Pn**	**12 27 46.5**	**-0.3**
JRY				*e*S	**Sn**	**12 28 01.2**	**-0.6**
JFNN	**Fujinakano**	**1.29**	**253**	⇓P	**Pn**	**12 27 48.2**	**-0.6**
JFNN				S	**Sn**	**12 28 04.2**	**-1.1**
JYN	**Shimob**	**1.34**	**267**	⇓P	**Pn**	**12 27 48.9**	**-0.7**
JYN				S	**Sn**	**12 28 05.6**	**-1.1**
JIZS	**Izushimoda**	**1.37**	**232**	⇓P	**Pn**	**12 27 49.3**	**-0.6**
JIZS				S	**Sn**	**12 28 05.9**	**-1.4**
MJAR	**Matsushiro Arr**	**1.87**	**302**	P	**Pn**	**12 27 56.5**	**-0.1**
	4.8nm,0.3s,baz=139,slow=14,SNR=187						
MJAR				S	**Sn**	**12 28 18.7**	**-0.6**
	10.0nm,0.3s,baz=132,slow=23,SNR=16						
MJAR	**Matsushiro Arr**	**1.87**	**302**		**Pn**	**12 27 55.6**	**-1.0**
MAJO	**Matsushiro**	**1.87**	**302**		**Pn**	**12 27 56.3**	**-0.3**
MAJO				Sn	**Sn**	**12 28 19.4**	**+0.1**
MAT	**Matsushiro**	**1.87**	**302**	P	**Pn**	**12 27 56.6**	**0.0**
MAT				S	**Sn**	**12 28 19.6**	**+0.3**
MJB9	**Matsu-Tunnel**	**1.88**	**302**		**Pn**	**12 27 56.4**	**-0.3**
MJB9				Sn	**Sn**	**12 28 20.4**	**+0.9**
JHJ2	**Mitsune**	**2.48**	**187**		**Pn**	**12 28 04.3**	**-0.5**
JHJ2				Sn	**Sn**	**12 28 33.4**	**-0.5**
INU	**Inuyama**	**2.60**	**266**		**Pn**	**12 28 06.3**	**-0.1**
INU				Sn	**Sn**	**12 28 36.0**	**-0.9**
ERM	**Erimo**	**6.83**	**19**	Pn	**Pn**	**12 29 02.7**	**-1.5**
ERM				Sn	**Sn**	**12 30 18.3**	**-2.2**
JNU	**Nakatsue**	**8.08**	**255**	Pn	**Pn**	**12 29 21.4**	**0.0**
JCJ	**Chichijima**	**8.62**	**168**	P	**Pn**	**12 29 27.5**	**-1.4**
	5.2nm,0.3s,baz=343,slow=24,SNR=5.6						
JCJ				S	**Sn**	**12 30 58.1**	**-6.5**
	2.8nm,0.3s,baz=286,slow=23,SNR=2.8						
ASAJ	**Asahikawa**	**8.73**	**12**	P	**Pn**	**12 29 27.8**	**-2.4**
	1.3nm,0.3s,baz=206,slow=14,SNR=33						
ASAJ				S	**Sn**	**12 31 04.9**	**-2.0**
	0.3nm,0.3s,baz=108,slow=27,SNR=2.7						
JKA	**Kamikawa-asahi**	**8.73**	**12**		**Pn**	**12 29 27.8**	**-2.4**
JKA					**Sn**	**12 31 05.0**	**-2.0**
KSRS	**Korea Array**	**10.05**	**284**	P	**Pn**	**12 29 51.2**	**+2.9**
	0.1nm,0.3s,baz=95,slow=15,SNR=3.5						
TPUB	**Ta-pu**	**20.93**	**240**	P	**P**	**12 32 03.6**	**-0.4**
TPUB				IAmb	IAmb	12 32 22.5	
	comp=Z,11nm,1.1s						
PEA0B	**Petropavlovsk-**	**21.44**	**30**	P	**P**	**12 32 08.5**	**-0.7**
PEA0B				IAmb	IAmb	12 32 24.4	
	comp=Z,31nm,1.2s						
PETK	**Petropavlovsk-**	**21.44**	**30**	P	**P**	**12 32 08.6**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=233,slow=12,SNR=4.6						
PETK	**Petropavlovsk-**	**21.44**	**30**	P	**P**	**12 32 08.3**	**-0.9**
XAN	**Xi'an**	**25.67**	**276**	P	**P**	**12 32 51.4**	**+1.0**
SONM	**Songino Array**	**27.82**	**307**	P	**P**	**12 33 09.1**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=105,slow=9.6,SNR=3.7						
SONM	**Songino Array**	**27.82**	**307**	P	**P**	**12 33 08.8**	**-0.9**
H11N2	**WAKE ISLAND Hy**	**28.31**	**117**	T	T	13 02 59.8	
	baz=308,slow=75,SNR=24						
H11N1	**WAKE ISLAND Hy**	**28.32**	**117**	T	T	13 02 56.1	
	baz=308,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**28.33**	**117**	T	T	13 02 59.9	
	baz=308,slow=75,SNR=20						
H11S1	**WAKE ISLAND Hy**	**28.96**	**119**	T	T	13 03 30.9	
	baz=311,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**28.96**	**119**	T	T	13 03 29.9	
	baz=311,slow=76,SNR=10.0						
H11S2	**WAKE ISLAND Hy**	**28.98**	**119**	T	T	13 03 29.9	
	baz=311,slow=76,SNR=10						
TLY	**Talaya**	**30.57**	**313**	P	**P**	**12 33 34.3**	**+0.4**
TLY				IAmb	IAmb	12 33 47.4	
	comp=Z,4.2nm,1.2s						
TIXI	**Tiksi**	**36.62**	**354**	P	**P**	**12 34 26.4**	**+0.3**
TIXI				IAmb	IAmb	12 34 40.4	
	comp=Z,2.3nm,1.1s						
ZALV	**Zalesovo Beam**	**42.18**	**314**	P	**P**	**12 35 12.3**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=90,slow=8.9,SNR=4.0						
ZALV	**Zalesovo Beam**	**42.18**	**314**	P	**P**	**12 35 12.7**	**+0.1**
MK31	**Makanchi Array**	**44.07**	**303**	P	**P**	**12 35 27.9**	**-0.2**
MKAR	**Makanchi Array**	**44.07**	**303**	P	**P**	**12 35 28.0**	**0.0**
	comp=Z,0.7nm,0.5s,baz=85,slow=9.0,SNR=15						
MKAR				PcP	**PcP**	**12 37 12.4**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=90,slow=4.3,SNR=2.1						
MKAR	**Makanchi Array**	**44.07**	**303**	P	**P**	**12 35 27.5**	**-0.5**
MAKZ	**Makanchi**	**44.28**	**303**	P	**P**	**12 35 28.8**	**-1.0**
MAKZ				IAmb	IAmb	12 35 30.6	
	comp=Z,4.0nm,1.4s						
KDAK	**Kodiak Island**	**48.84**	**41**	P	**P**	**12 36 05.1**	**0.0**
ILAR	**Eielson Array**	**51.25**	**32**	P	**P**	**12 36 24.6**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=258,slow=6.0,SNR=5.5						
ILAR	**Eielson Array**	**51.25**	**32**	P	**P**	**12 36 23.2**	**-0.1**
FITZ	**Fitzroy Crossi**	**55.13**	**197**	P	**P**	**12 36 52.5**	**+0.2**
	baz=354,slow=9.2						
FITZ	**Fitzroy Crossi**	**55.13**	**197**	P	**P**	**12 36 52.1**	**-0.2**
WB0	**Warramunga Arr**	**55.31**	**187**	P	**P**	**12 36 52.9**	**-0.6**
WR0	**Warramunga Arr**	**55.49**	**186**	P	**P**	**12 36 54.0**	**-0.8**
WR0				IAmb	IAmb	12 37 00.5	
	comp=Z,4.2nm,1.1s						
WRA	**Warramunga Arr**	**55.49**	**187**	P	**P**	**12 36 53.9**	**-0.9**
	comp=Z,1.8nm,0.5s,baz=1.2,slow=7.5,SNR=15						
WRA	**Warramunga Arr**	**55.49**	**187**	P	**P**	**12 36 54.5**	**-0.3**
INK	**Inuvik**	**56.13**	**27**	P	**P**	**12 37 00.2**	**+1.4**
	comp=Z,1.4nm,1.0s,baz=289,slow=4.7,SNR=3.9						
INK	**Inuvik**	**56.13**	**27**	P	**P**	**12 36 59.4**	**+0.5**
INK				IAmb	IAmb	12 37 05.2	
	comp=Z,5.9nm,1.4s						
AS31	**Alice Springs**	**59.22**	**187**	P	**P**	**12 37 21.0**	**-0.1**
ASAR	**Alice Springs**	**59.22**	**187**	P	**P**	**12 37 20.0**	**-1.1**
	comp=Z,0.3nm,0.6s,baz=18,slow=11,SNR=9.9						
ASAR	**Alice Springs**	**59.22**	**187**	P	**P**	**12 37 20.5**	**-0.6**
YKA	**Yellowknife Ar**	**65.56**	**29**	P	**P**	**12 38 03.6**	**+0.7**
	comp=Z,0.2nm,0.9s,baz=300,slow=6.6,SNR=5.1						
FINES	**FINESS Array B**	**69.64**	**332**	P	**P**	**12 38 28.7**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=18,slow=8.0,SNR=4.2						
NVAR	**Mina Array Bea**	**76.66**	**52**	P	**P**	**12 39 12.8**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=312,slow=5.8,SNR=4.8						
PDAR	**Pinedale Array**	**79.39**	**45**	P	**P**	**12 39 27.0**	**+1.1**
	comp=Z,0.2nm,0.5s,baz=252,slow=0.9,SNR=3.8						
PDAR	**Pinedale Array**	**79.39**	**45**	P	**P**	**12 39 25.8**	**-0.1**
CLL	**Collm**	**81.86**	**330**	*e*P	**P**	**12 39 39.0**	**+0.5**

IDC ***25*** *12:43:00.0±2.4, 21.65N×143.26E, h312km±23km, mb2.9/10, mb1 3.1/11, mb1mx3.0/37, mbtmp3.7/11, Error ellipse: s-maj=26.4km s-min=13.9km az=87.0*
ISC 25 12:42:58.7±1.0, **21.6N**±0.1×**143.3E**±0.2, **h300**km, **n11, s76**, σ0°76/13, **mb3.1/9, Mariana Islands region**

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

JHU	**Hanno**	**3.32**	**323**	*eS*		**Sn**	**14 28 30.7**	**+0.2**
MJAR	**Matsushiro Arr**	**4.41**	**320**	Pn		**Pn**	**14 28 09.0**	**+1.8**
	0.1nm,0.3s,baz=135,slow=13,SNR=6.1							
MJAR				Sn		**Sn**	**14 28 58.0**	**+0.7**
	0.1nm,0.3s,baz=44,slow=20,SNR=4.2							
ASAJ	**Asahikawa**	**10.91**	**3**	Pn		**Pn**	**14 29 35.2**	**-1.1**
	0.2nm,0.3s,baz=237,slow=2.9,SNR=4.9							
ASAJ				Sn		**Sn**	**14 31 32.9**	**-4.1**
	0.1nm,0.3s,baz=284,slow=18,SNR=2.3							
MKAR	**Makanchi Array**	**46.45**	**305**	P		**P**	**14 35 26.8**	**+1.1**
	0.1nm,0.5s,baz=92,slow=9.6,SNR=2.8							
ASAR	**Alice Springs**	**57.05**	**189**	P		**P**	**14 36 45.9**	**+1.0**
	0.3nm,0.8s,baz=13,slow=8.6,SNR=3.0							

MAN 25 14:48:38.3, 10.17N×124.11E, h32km, mb3.6, ML2.3, MS1.8, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.20**	**315**	*eP*	Pn	14 48 46.4	+1.2
LLP				*eS*	Sn	14 48 51.6	+2.1
MSLP	**Maasin**	**0.73**	**93**	*eP*	Pb	14 48 52.6	-0.1
MSLP				*eS*	Sn	14 49 02.9	+0.3

*IDC **25** 15:20:44.5±3.1, 20.45S×172.74E, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.8/26, mbtmp3.7/6, ML2.8/1, MS3.4/10, Ms1 3.4/10, ms1mx3.2/34, Error ellipse: s-maj=159.7km s-min=24.5km az=155.0*

ISC 25 15:20:49.9±2.7, 20.6S±0.9×172.7E±0.4, h35km, n16, σ1.9 16/8, mb3.7/5, MS3.4/6, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.04**	**255**	*e*LR	LR	15 23 38.5	
	comp=Z,189nm,25.0s						
DZM	**Mont Dzumac**	**6.04**	**255**	Pn	**Pn**	**15 22 16.7**	**-0.2**
	0.2nm,0.3s,baz=307,slow=20,SNR=4.1						
DZM				LR	LR	15 24 19.8	
	comp=Z,157nm,21.7s,baz=187,slow=35						
RAO	**Raoul Island**	**12.10**	**137**	LR	LR	15 27 26.3	
	comp=Z,368nm,18.9s,baz=140,slow=33						
HNR	**Honiara**	**16.58**	**310**	LR	LR	15 29 59.7	
	comp=Z,81nm,18.4s,baz=156,slow=34						
URZ	**Urewera**	**18.01**	**169**	LR	LR	15 30 09.1	
	comp=Z,132nm,21.8s,baz=2.0,slow=31						
STKA	**Stephens Creek**	**30.00**	**242**	LR	LR	15 38 53.4	
	comp=Z,53nm,18.6s,baz=37,slow=36						
PPT	**Papeete**	**35.71**	**92**	LR	LR	15 42 14.8	
	comp=Z,27nm,18.0s,baz=240,slow=36						
WRA	**Warramunga Arr**	**35.96**	**264**	P	**P**	**15 27 47.5**	**0.0**
	1.7nm,1.2s,baz=95,slow=8.5,SNR=3.2						
ASAR	**Alice Springs**	**36.02**	**258**	P	**P**	**15 27 47.2**	**-0.9**
	0.8nm,0.8s,baz=88,slow=8.8,SNR=9.2						
ASAR				LR	LR	15 41 25.2	
	comp=Z,61nm,21.0s,baz=78,slow=34						
KLR	**Kul'dur**	**78.48**	**334**	LR	LR	16 02 57.8	
	comp=Z,43nm,21.3s,baz=336,slow=32						
CMAR	**Chiang Mai Arr**	**82.05**	**293**	P	**P**	**15 33 08.4**	**+1.3**
	0.4nm,0.5s,baz=132,slow=5.0,SNR=4.4						
CMAR				LR	LR	16 09 40.8	
	comp=Z,20nm,19.8s,baz=335,slow=36						
NVAR	**Mina Array Bea**	**87.27**	**47**	P	**P**	**15 33 33.8**	**+0.5**
	0.2nm,0.6s,baz=252,slow=4.6,SNR=2.8						
ILAR	**Eielson Array**	**90.58**	**16**	P	**P**	**15 33 46.3**	**-1.7**
	0.4nm,0.9s,baz=226,slow=4.9,SNR=2.9						
TLY	**Talaya**	**92.74**	**324**	LR		16 13 48.9	
	comp=Z,54nm,18.9s,baz=340,slow=34						
BRG	**Berggiesshubel**	**145.47**	**336**	*e*PKP	**PKPbc**	**15 40 24.3**	**+0.1**
	4.8nm,0.9s						
GERES	**GERESS Array B**	**147.18**	**334**	PKPbc	**PKPdf**	**15 40 28.3**	**+1.1**
	1.0nm,0.8s,baz=48,slow=3.2,SNR=6.2						

IDC 25 15:33:12.3±2.7, 2.37N×127.89E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/37, mbtmp3.3/3, MS3.8/1, Ms1 3.8/1, ms1mx2.9/16, Error ellipse: s-maj=224.1km s-min=25.2km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.06**	**164**	P	P	15 38 20.0	+0.4
	0.6nm,0.4s,baz=344,slow=10,SNR=14						
ASAR	**Alice Springs**	**26.53**	**168**	P	P	15 38 51.4	-0.6
	0.2nm,0.6s,baz=348,slow=7.4,SNR=5.5						
CTA	**Charters Tower**	**28.68**	**142**	LR	LR	15 51 47.0	
	comp=Z,173nm,20.8s,baz=150,slow=39						
MKAR	**Makanchi Array**	**59.33**	**325**	P	P	15 43 16.4	+0.2
	0.3nm,0.7s,baz=125,slow=7.6,SNR=3.6						

*IDC **25** 15:42:28.4±1.1, 57.72N×153.27E, h0km, mb3.5/5, mb1 3.7/8, mb1mx3.5/41, mbtmp3.5/8, ML4.2/2, MS2.4/1, Ms1 2.4/1, ms1mx2.2/45, Error ellipse: s-maj=29.1km s-min=13.5km az=66.0*

*NERS **25** 15:42:32.7±0.0, 58.07N×153.26E, h6km*

ISC 25 15:42:30.9±1.1, 58.01N±0.07×153.24E±0.08, h10km, n15, σ1.9 35/22, mb3.6/5, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NMA2	**New Magadan St**	**2.00**	**322**	*eP*	**Pb**	**15 43 07.8**	**+0.5**
NMA2				*e*Pg	**Pg**	**15 43 08.8**	**-0.4**
NMA2				Pgmax		15 43 27.4	
	20nm,0.2s						
NMA2				*e*Sg	**Sg**	**15 43 36.2**	**+1.0**
NMA2				Sgmax		15 43 39.4	
	400nm,0.2s						
MA2	**Magadan**	**2.03**	**322**	Pn	**Pb**	**15 43 08.3**	**+0.4**
	18nm,0.3s,baz=167,slow=6.3,SNR=78						
MA2				Sn	**Sg**	**15 43 36.4**	**+0.3**
	84nm,0.3s,baz=127,slow=12,SNR=4.4						
MA2				LR	LR	15 44 11.8	
	comp=Z,79nm,19.2s,baz=120,slow=45						
MGD	**Magadan 1**	**2.42**	**329**	*eP*	**Pb**	**15 43 14.1**	**-0.4**
MGD				Pmax		15 43 27.4	
	70nm,0.3s						
MGD				*e*Sg	**Sg**	**15 43 47.6**	**-1.0**
MGD				Sgmax		15 43 49.1	
	920nm,0.4s						
MGD				Sgmax		15 43 49.1	
	760nm,0.4s						
TLAR	**Talaya**	**3.16**	**353**	*eP*	**Pn**	**15 43 22.7**	**+2.0**
TLAR				*e*Pg	**Pg**	**15 43 30.2**	**-1.2**
TLAR				Pgmax		15 43 32.8	
	70nm,0.4s						
TLAR				*e*		15 44 03.0	
TLAR				*e*Sg	**Sg**	**15 44 11.6**	**-0.8**
TLAR				Sgmax		15 44 18.0	
	370nm,0.2s						
TLAR				Sgmax		15 44 18.0	
	250nm,0.2s						
SNGR	**Sinegor'e**	**4.31**	**342**	*e*Pg	**Pg**	**15 43 50.9**	**-2.5**
SNGR				Pgmax		15 43 54.3	
	90nm,0.3s						
SNGR				*e*Sg	**Sg**	**15 44 47.3**	**-1.9**
SNGR				Sgmax		15 44 56.8	
	570nm,0.4s						
OCHR	**Omchak**	**4.56**	**326**	*e*	**Pb**	**15 43 51.6**	**+0.6**
OCHR				*e*Sg	**Sg**	**15 44 56.7**	**-0.5**
OCHR				Sgmax		15 45 02.0	
	40nm,0.4s						
OMS	**Omsukchan**	**4.70**	**15**	*e*Sg	**Sg**	**15 45 01.5**	**0.0**
OMS				Sgmax		15 45 06.8	
	70nm,0.6s						
SEY	**Seymchan**	**4.96**	**355**	Pn	**Pn**	**15 43 48.2**	**+2.9**
	0.9nm,0.3s,baz=179,slow=13,SNR=29						
SEY				Lg	Lg	15 45 10.4	
	8.3nm,0.3s,baz=274,slow=16,SNR=9.6						
SUUS	**Susuman**	**5.41**	**334**	*eP*	**Pn**	**15 43 53.3**	**+1.8**
SUUS				*e*		15 44 02.5	
SUUS				*e*Sg	**Sg**	**15 45 24.6**	**+0.3**
SUUS				Sgmax		15 45 38.4	
	60nm,0.6s						
SUUS				Sgmax		15 45 38.4	
	90nm,0.6s						
PETK	**Petropavlovsk-**	**5.52**	**151**	Pn	Pn	15 43 48.9	-4.1
	0.5nm,0.3s,baz=321,slow=10,SNR=45						
PETK				Sn	Sn	15 44 47.1	-9.4
	0.9nm,0.3s,baz=283,slow=20,SNR=3.6						
YKA	**Yellowknife Ar**	**42.23**	**44**	P	**P**	**15 50 24.1**	**+0.6**
	0.3nm,0.7s,baz=302,slow=7.6,SNR=5.2						
MKAR	**Makanchi Array**	**42.74**	**287**	P	**P**	**15 50 26.9**	**-1.0**
	0.2nm,0.6s,baz=50,slow=7.8,SNR=3.1						
FINES	**FINESS Array B**	**54.00**	**332**	P	**P**	**15 51 54.8**	**+0.4**
	3.2nm,1.0s,baz=26,slow=11,SNR=3.0						
WRA	**Warramunga Arr**	**79.23**	**198**	P	**P**	**15 54 34.6**	**-1.3**
	0.5nm,0.8s,baz=14,slow=5.5,SNR=3.1						
ASAR	**Alice Springs**	**82.95**	**198**	P	P	15 54 52.9	-2.8
	0.2nm,0.5s,baz=12,slow=4.8,SNR=4.8						

*NIED **25** 15:58:00, 40.30N×144.20E, h5km, Mw3.8 Best double couple: M0 6.03000×10^14 NP1:ϕ 161.00000°, δ 72.00000°, λ -97.00000°. NP2:ϕ 2.00000°, δ 19.00000°, λ -70.00000°.*

*IDC **25** 15:58:21.8±0.7, 40.27N×144.30E, h0km, mb3.6/15, mb1 3.8/18, mb1mx3.7/57, mbtmp3.6/18, ML2.9/3, MS2.9/3, Ms1 3.0/3, ms1mx2.6/37, Error ellipse: s-maj=18.9km s-min=15.6km az=131.0*

*JMA **25** 15:58:24.7±0.2, 40.34N×144.17E, h42km, M4.0*

*NEIC **25** 15:58:25.3±1.6, 40.33N±0.06×144.3E±0.1, h23km±6km, mb4.2/7, Error ellipse: s-maj=14.2km s-min=9.2km az=95.0*

ISC 25 15:58:23.7±4.7, 40.31N±0.04×144.31E±0.06, h15km±29km, n63, σ1.8 74/85, mb3.8/21, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	**Tanohata**	**1.91**	**260**	P	**Pn**	**15 58 54.2**	**-1.6**
JTH				*e*S	**Sn**	**15 59 15.8**	**-3.8**
ERM	**Erimo**	**1.92**	**333**		**Pn**	**15 58 55.2**	**-0.6**
ERM				Sn	**Sn**	**15 59 17.8**	**-1.9**
JEM	**Erimo**	**1.92**	**333**	P	**Pn**	**15 58 55.0**	**-0.8**
JEM				*e*S	**Sn**	**15 59 17.6**	**-2.1**
JKEN	**Kujiedanarisaw**	**1.99**	**268**	P	**Pn**	**15 58 55.3**	**-1.6**
JKEN				S	**Sn**	**15 59 18.0**	**-3.6**
MIYJ	**Miyakonagasawa**	**2.05**	**250**	P	**Pn**	**15 58 56.7**	**-1.0**
MIYJ				*e*S	**Sn**	**15 59 19.7**	**-3.3**
JANG	**Nango**	**2.14**	**273**	P	**Pn**	**15 58 57.5**	**-1.4**
JNBK	**Urakawa-nobuka**	**2.29**	**330**	P	**Pn**	**15 59 00.5**	**-0.5**
JNBK				*e*S	**Sn**	**15 59 27.1**	**-1.9**
JCH	**Churui**	**2.41**	**343**	P	**Pn**	**15 59 01.9**	**-0.8**
JCH				S	**Sn**	**15 59 29.2**	**-2.8**
JOM	**Ohasama**	**2.47**	**251**	P	**Pn**	**15 59 03.0**	**-0.4**
JOM				S	**Sn**	**15 59 30.8**	**-2.5**
JTM	**Tenmabayashi**	**2.52**	**282**	P	**Pn**	**15 59 03.5**	**-0.6**
JTM				*e*S	**Sn**	**15 59 31.4**	**-3.1**
JOT	**Ohata**	**2.70**	**295**	P	**Pn**	**15 59 05.9**	**-0.7**
JAK	**Akkeshi**	**2.70**	**6**	P	**Pn**	**15 59 05.7**	**-0.9**
JAK				S	**Sn**	**15 59 36.2**	**-2.9**
JMK	**Ichinoseki**	**2.74**	**241**	P	**Pn**	**15 59 06.6**	**-0.6**
JMK				*e*S	**Sn**	**15 59 37.1**	**-3.0**
JAH	**Hinai**	**2.81**	**269**	P	**Pn**	**15 59 08.0**	**-0.2**
JAH				S	**Sn**	**15 59 39.9**	**-2.0**
JKB	**Kayabe**	**2.94**	**304**	P	**Pn**	**15 59 09.3**	**-0.6**
JRG	**Rokugo**	**2.97**	**253**	P	**Pn**	**15 59 10.3**	**-0.1**
JRG				S	**Sn**	**15 59 44.3**	**-1.5**
JAR	**Ashorobuto**	**3.02**	**352**	P	**Pn**	**15 59 09.6**	**-1.3**
JAR				S	**Sn**	**15 59 42.8**	**-4.0**
JFR	**Furan**	**3.13**	**336**	P	**Pn**	**15 59 11.7**	**-0.8**
JFR				*e*S	**Sn**	**15 59 46.0**	**-3.7**
NEM2	**Nemuro 2**	**3.24**	**19**	P	**Pn**	**15 59 12.6**	**-1.4**
NEM2				S	**Sn**	**15 59 47.7**	**-4.6**
JEW	**Eniwo**	**3.32**	**321**	P	**Pn**	**15 59 15.4**	**+0.3**
JEW				S	**Sn**	**15 59 53.2**	**-1.1**
JYK	**Kaneyama**	**3.35**	**247**	P	**Pn**	**15 59 15.5**	**-0.1**
JOU	**Okura**	**3.43**	**237**	P	**Pn**	**15 59 15.9**	**-0.7**
JOMM	**Oshimamatsumae**	**3.48**	**292**	P	**Pn**	**15 59 18.0**	**+0.7**
JTKR	**Abashiri--Toko**	**3.67**	**355**	P	**Pn**	**15 59 19.4**	**-0.6**
JTKR				S	**Sn**	**15 59 59.8**	**-3.2**
JRA	**Rausu**	**3.68**	**9**	P	**Pn**	**15 59 19.1**	**-0.9**
JRA				S	**Sn**	**15 59 58.5**	**-4.6**
JKK2	**Kamakawa 2**	**3.75**	**342**	P	**Pn**	**15 59 21.1**	**+0.1**
JHR	**Hokuryu**	**3.94**	**332**	P	**Pn**	**15 59 25.0**	**+1.4**
JHR				*e*S	**Sn**	**16 00 09.5**	**0.0**
JKA	**Kamikawa-asahi**	**4.01**	**342**		**Pn**	**15 59 25.1**	**+0.4**
JKA					**Sn**	**16 00 10.7**	**-0.8**
ASAJ	**Asahikawa**	**4.01**	**342**	Pn	**Pn**	**15 59 25.1**	**+0.4**
	1.7nm,0.3s,baz=185,slow=13,SNR=44						
ASAJ				Sn	**Sn**	**16 00 10.7**	**-0.8**
	3.0nm,0.3s,baz=68,slow=19,SNR=5.6						
JOSM	**Oshuriri--Mats**	**4.06**	**298**	P	**Pn**	**15 59 24.8**	**-0.4**
JFT	**Otama**	**4.17**	**229**	P	**Pn**	**15 59 26.2**	**-0.6**
JFT				*e*S	**Sn**	**16 00 12.0**	**-3.2**
MJAR	**Matsushiro Arr**	**6.09**	**234**	Pn	**Pn**	**15 59 53.5**	**+0.3**
	0.2nm,0.3s,baz=48,slow=13,SNR=21						
MJAR				LR	LR	16 02 21.3	
	comp=Z,67nm,18.2s,baz=10.0,slow=40						
MAJO	**Matsushiro**	**6.09**	**234**		**Pn**	**15 59 53.9**	**+0.7**
MAT	**Matsushiro**	**6.09**	**234**	P	**Pn**	**15 59 53.6**	**+0.4**
MAT				*e*S	**Sn**	**16 01 01.2**	**-1.4**
MJB9	**Matsu-Tunnel**	**6.09**	**234**		**Pn**	**15 59 53.5**	**+0.2**
YSS	**Yuzh-Sakhalins**	**6.74**	**351**	Pn	**Pn**	**16 00 01.7**	**-0.3**
INU	**Inuyama**	**7.60**	**232**	Pn	**Pn**	**16 00 15.4**	**+1.5**
USRK	**Ussuriysk Ar.**	**9.93**	**297**	Pn	**Pn**	**16 00 47.0**	**+1.2**
	baz=92,slow=15,SNR=4.3						
JNU	**Nakatsue**	**12.94**	**241**	Pn	**Pn**	**16 01 24.0**	**-3.0**
KSRS	**Korea Array**	**13.08**	**263**	Pn	Pn	16 01 34.0	+5.0
	0.2nm,0.3s,baz=70,slow=14,SNR=3.8						
KSRS				LR	LR	16 06 06.2	
	comp=Z,54nm,19.1s,baz=45,slow=35						
SEY	**Seymchan**	**23.17**	**9**	P	**P**	**16 03 29.4**	**0.0**
	1.6nm,0.6s,baz=74,slow=14,SNR=6.2						
SONM	**Songino Array**	**28.04**	**298**	P	**P**	**16 04 15.3**	**+0.9**
	0.6nm,0.6s,baz=94,slow=8.6,SNR=2.3						
BILL	**Bilibino**	**30.25**	**16**	P	**P**	**16 04 34.1**	**+0.4**
BILL				IAmb	IAmb	16 04 35.4	
	comp=Z,3.8nm,0.9s						
MKAR	**Makanchi Array**	**44.38**	**300**	P	**P**	**16 06 33.9**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=86,slow=8.9,SNR=2.3						
CMAR	**Chiang Mai Arr**	**44.54**	**254**	P	**P**	**16 06 36.3**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=42,slow=9.8,SNR=2.9						
CMAR				LR	LR	16 26 36.6	
	comp=Z,19nm,18.1s,baz=200,slow=38						
ILAR	**Eielson Array**	**45.52**	**34**	P	**P**	**16 06 43.0**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=256,slow=7.0,SNR=13						
KURK	**Kurchatov**	**45.77**	**306**	P	**P**	**16 06 46.3**	**+1.9**
KURK	**Kurchatov**	**45.77**	**306**	IAmb	IAmb	16 07 00.9	
	comp=Z,2.4nm,0.8s						
KURBB	**Kurchatov Arra**	**45.85**	**306**	P	**P**	**16 06 46.3**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=75,slow=8.4,SNR=3.6						
SCRK	**Sand Creek**	**46.83**	**35**	P	**P**	**16 06 53.0**	**+0.3**
SCRK				IAmb	IAmb	16 06 54.0	
	comp=Z,2.9nm,1.2s						
BVAR	**Borovoye Array**	**50.10**	**311**	P	**P**	**16 07 17.1**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=91,slow=7.7,SNR=3.3						
INK	**Inuvik**	**50.44**	**29**	P	**P**	**16 07 21.6**	**+1.4**
	comp=Z,0.9nm,0.6s,baz=291,slow=6.4,SNR=6.6						
AAK	**Ala-Archa**	**50.98**	**297**	P	**P**	**16 07 24.8**	**-0.2**
AAK				IAmb	IAmb	16 07 28.9	
	comp=Z,2.7nm,1.0s						
COEN	**Coen**	**53.99**	**181**	P	**P**	**16 07 47.5**	**+0.3**
COEN				IAmb	IAmb	16 07 59.7	
	comp=Z,5.3nm,1.1s						
YKA	**Yellowknife Ar**	**59.84**	**32**	P	**P**	**16 08 29.0**	**+0.8**
	comp=Z,0.4nm,0.6s,baz=301,slow=6.7,SNR=6.2						
WB0	**Warramunga Arr**	**60.47**	**191**	P	**P**	**16 08 31.9**	**-1.1**
WRA	**Warramunga Arr**	**60.65**	**191**	P	**P**	**16 08 33.5**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=7.5,slow=6.8,SNR=4.5						
ASAR	**Alice Springs**	**64.38**	**191**	P	**P**	**16 08 59.0**	**0.0**
	comp=Z,0.3nm,0.7s,baz=4.0,slow=5.4,SNR=4.8						
FINES	**FINESS Array B**	**66.97**	**333**	P	**P**	**16 09 15.4**	**0.0**
	comp=Z,1.7nm,0.7s,baz=44,slow=5.8,SNR=11						
NVAR	**Mina Array Bea**	**71.24**	**55**	P	**P**	**16 09 44.1**	**+1.5**
	comp=Z,0.5nm,0.7s,baz=296,slow=6.8,SNR=5.6						
NOA	**NORSAR Array B**	**72.03**	**338**	P	**P**	**16 09 47.1**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=36,slow=6.0,SNR=2.5						
AKASG	**Malin Array Be**	**73.08**	**323**	P	**P**	**16 09 53.2**	**+0.2**
	comp=Z,2.1nm,0.3s,baz=48,slow=6.4,SNR=1.8						
TXAR	**Lajitas Array**	**86.35**	**54**	P	**P**	**16 11 06.1**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=300,slow=4.1,SNR=4.8						

*IDC **25** 16:02:44.6±5.2, 36.97N×71.82E, h76km±36km, mb3.4/1, mb1 3.5/8, mb1mx3.1/56, mbtmp3.8/8, ML3.6/7, Error ellipse: s-maj=65.0km s-min=24.5km az=144.0*

*NNC **25** 16:02:50.6±2.9, 37.43N×71.31E, h118km±65km, mb3.4, mpv3.8, Error ellipse: s-maj=26.6km s-min=17.4km az=147.0*

ISC 25 16:02:46.1±0.8, 37.17N±0.06×71.59E±0.06, h106km, n36, σ3.9 10/41, 5C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.35**	**175**	P	Pn	16 03 41.4	+4.6
CEP				S	**Sn**	**16 04 20.0**	**+4.1**
CHCP	**Chirah Chowk**	**3.76**	**158**	P	Pn	16 03 46.4	+4.2
THW	**Thamme Wali**	**4.37**	**178**	P	Pn	16 03 54.1	+3.7
AML	**Almayashu**	**5.22**	**17**	P	**Pn**	**16 04 04.6**	**+2.4**
	SNR=64						
UCH	**Uchtor**	**5.53**	**23**	P	**Pn**	**16 04 08.8**	**+2.3**
	SNR=15						
KZA	**Kyzart**	**5.66**	**29**	P	**Pn**	**16 04 10.2**	**+2.0**
	SNR=9.4						
EKS2	**Erkin-Say**	**5.74**	**16**	P	**Pn**	**16 04 12.0**	**+3.1**
	SNR=12						
AAK	**Ala-Archa**	**5.90**	**21**	P	**Pn**	**16 04 13.2**	**+2.0**
	3.7nm,0.3s,baz=170,slow=6.4,SNR=46						
AAK				S	**Sn**	**16 05 18.1**	**+0.6**
	1.2nm,0.3s,baz=311,slow=19,SNR=8.7						
AAK	**Ala-Archa**	**5.90**	**21**	P	**Pn**	**16 04 13.9**	**+2.7**
	SNR=12						
AAK	**Ala-Archa**	**5.90**	**21**	P	**Pn**	**16 04 13.2**	**+2.0**
	4.2nm,0.5s						
AAK				⇓S	**Sn**	**16 05 17.7**	**+0.2**
	17nm,0.9s						
KK31	**Karatay Array**	**5.99**	**352**	⇓P	**Pn**	**16 04 14.8**	**+2.6**
	4.9nm,0.4s,baz=175,slow=13,SNR=80						
KK31				⇓S	**Sn**	**16 05 18.3**	**-1.0**
	6.1nm,0.3s,baz=171,slow=21,SNR=12						
KBK	**Karagaybulak**	**6.06**	**24**	P	**Pn**	**16 04 15.9**	**+2.6**
	SNR=7.0						
CHMS	**Chumysh**	**6.31**	**22**	P	**Pn**	**16 04 19.1**	**+2.5**
	SNR=12						
USP	**Ospenovka**	**6.49**	**19**	P	**Pn**	**16 04 21.1**	**+2.1**
	SNR=8.0						
GEYT	**Alibeck**	**10.72**	**278**	P	**Pn**	**16 05 18.5**	**+1.9**
	1.1nm,0.3s,baz=109,slow=11,SNR=8.0						
GEYT				S	**Sn**	**16 07 13.3**	**-1.3**
	0.9nm,0.3s,baz=100,slow=15,SNR=4.9						
GYA0B	**ALIBECK ARRAY**	**10.72**	**278**	⇓P	**Pn**	**16 05 16.7**	**+0.1**
GYA0B				⇑S	**Sn**	**16 07 12.1**	**-2.5**
MKAR	**Makanchi Array**	**12.47**	**36**	P	**Pn**	**16 05 40.3**	**+0.5**
	0.2nm,0.3s,baz=223,slow=15,SNR=14						
DANN	**Dangsing**	**13.49**	**127**	*e*P	**Pn**	**16 05 50.4**	**-3.1**
	18nm,0.3s						
KOLN	**Koldanda**	**13.79**	**129**	*e*P	**Pn**	**16 05 53.8**	**-3.6**
	5.7nm,0.3s						
GKN	**Gorkha**	**14.29**	**126**	*e*P	**Pn**	**16 06 00.1**	**-3.6**
	13nm,0.3s						
KURBB	**Kurchatov Arra**	**14.34**	**18**	P	**Pn**	**16 06 05.1**	**+1.1**
	0.0nm,0.3s,baz=202,slow=12,SNR=3.6						
AB31	**Akbulak array**	**14.74**	**329**	⇑P	**Pn**	**16 06 09.6**	**+0.5**
	0.9nm,0.4s,baz=136,slow=13,SNR=43						
AB31				⇑S	**Sn**	**16 08 45.9**	**-5.8**
	1.4nm,0.6s,baz=152,slow=23,SNR=4.3						
KKN	**Kakani**	**14.85**	**125**	*e*P	**Pn**	**16 06 06.5**	**-4.4**
DMN	**Daman**	**14.86**	**126**	*e*P	**Pn**	**16 06 06.6**	**-4.5**
	5.3nm,0.3s						
PKIN	**Phulchoki**	**15.07**	**125**	*e*P	**Pn**	**16 06 10.1**	**-3.6**
	10nm,0.5s						
PKI	**Pulchoki**	**15.08**	**125**	*e*P	**Pn**	**16 06 09.6**	**-4.3**
	11nm,0.4s						
GUN	**Gumba**	**15.17**	**123**	*e*P	**Pn**	**16 06 10.6**	**-4.4**
	12nm,0.3s						
JIRN	**Jiri**	**15.54**	**123**	*e*P	**Pn**	**16 06 15.9**	**-3.8**
	35nm,0.3s						
BVAR	**Borovoye Array**	**15.88**	**357**	P	**P**	**16 06 25.4**	**+0.4**
	0.2nm,0.3s,baz=166,slow=9.1,SNR=3.1						
RAMN	**Ramite**	**16.28**	**124**	*e*P	**Pn**	**16 06 24.5**	**-4.3**
	14nm,0.4s						
AKTO	**Aktyubinsk**	**16.45**	**328**	P	**P**	**16 06 32.9**	**+1.5**
	1.3nm,0.3s,baz=133,slow=12,SNR=22						
AKTO	**Aktyubinsk**	**16.45**	**328**	⇑P	**P**	**16 06 31.5**	**+0.2**
	4.0nm,0.5s						
AKTO				⇑S	**Sn**	**16 09 28.5**	**-4.4**
	1.6nm,0.8s						
TAPN	**Taplejung**	**16.77**	**121**	*e*P	**Pn**	**16 06 30.9**	**-3.9**
	4.6nm,0.3s						
ODAN	**Odare**	**16.87**	**123**	*e*P	**Pn**	**16 06 30.9**	**-5.1**
	5.8nm,0.3s						
ZALV	**Zalesovo Beam**	**19.11**	**24**	P	**Pn**	**16 07 02.2**	**-0.2**
	0.4nm,0.3s,baz=222,slow=12,SNR=10						
ARCES	**ARCESS Array B**	**40.71**	**337**	P	**P**	**16 10 19.6**	**+3.7**
	1.1nm,0.9s,baz=115,slow=8.0,SNR=3.9						

*IDC **25** 16:05:31.9±2.9, 17.77S×178.58W, h550km±31km, mb3.0/10, mb1 3.3/10, mb1mx3.2/28, mbtmp3.9/10, Error ellipse: s-maj=26.6km s-min=16.7km az=143.0*

*NEIC **25** 16:05:34.6±1.4, 17.9S±0.2×178.6W±0.1, h581km±6km, mb4.2/7, Error ellipse: s-maj=22.0km s-min=17.3km az=176.0*

**ISC 25 16:05:34.3±0.6, 17.9S±0.2×178.

QSPA	**South Pole Qui**	**35.03**	**180**	P	**P**	**16 17 33.1**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=184,slow=3.5,SNR=7.6						
QSPA	**South Pole Qui**	**35.03**	**180**	P	**P**	**16 17 30.4**	**-0.9**
QSPA				IAmb	IAmb	16 17 31.9	
	comp=Z,2.2nm,1.0s						
SUR	**Sutherland**	**40.35**	**76**	P	**P**	**16 18 17.7**	**+1.0**
MAW	**Mawson**	**40.77**	**144**	P	**P**	**16 18 18.8**	**-0.7**
BDFB	**Brasilia**	**42.69**	**329**	P	**P**	**16 18 35.0**	**-0.8**
BDFB				IAmb	IAmb	16 18 50.3	
	comp=Z,2.0nm,1.0s						
GO02	**Mina Guanaco**	**43.19**	**296**	P	**P**	**16 18 40.4**	**+0.3**
LVC	**Limon Verde**	**44.96**	**299**	P	**P**	**16 18 55.2**	**+0.8**
LVC				IAmb	IAmb	16 19 11.2	
	comp=Z,3.5nm,1.1s						
GO01	**Chusmiza**	**47.58**	**301**	P	**P**	**16 19 16.5**	**+1.3**
GO01				IAmb	IAmb	16 19 30.6	
	comp=Z,9.4nm,1.4s						
LPAZ	**La Paz**	**49.97**	**304**	P	**P**	**16 19 33.9**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=90,slow=9.1,SNR=3.4						
LPAZ	**La Paz**	**49.97**	**304**	IAmb	IAmb	16 19 50.9	
	comp=Z,1.6nm,0.7s						
SAML	**Samuel**	**54.28**	**314**	P	**P**	**16 20 05.3**	**+0.3**
SAML				IAmb	IAmb	16 20 09.6	
	comp=Z,3.7nm,1.4s						
TORD	**Torodi Ar. Bea**	**72.29**	**29**	P	**P**	**16 22 04.4**	**0.0**
	comp=Z,0.7nm,0.8s,baz=194,slow=6.7,SNR=2.6						
CMAR	**Chiang Mai Arr**	**125.28**	**110**	PKP	**PKPdf**	**16 29 38.6**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=197,slow=2.7,SNR=4.4						
YKA	**Yellowknife Ar**	**135.61**	**318**	PKP	**PKPdf**	**16 29 56.1**	**-1.7**
	comp=Z,0.1nm,0.5s,baz=132,slow=1.7,SNR=3.0						
INK	**Inuvik**	**145.21**	**321**		**PKPdf**	**16 30 15.2**	**+0.3**
ILAR	**Eielson Array**	**149.62**	**313**	PKPbc	**PKPbc**	**16 30 27.0**	**0.0**
	comp=Z,1.4nm,0.8s,baz=135,slow=2.8,SNR=12						
SONM	**Songino Array**	**150.59**	**85**	PKPbc	**PKPbc**	**16 30 29.9**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=229,slow=2.0,SNR=8.0						

*TEH **25** 16:10:52.5, 34.50N×45.50E, h12km, ML2.7*
*ISN **25** 16:10:52.0±0.9, 34.52N×45.50E, h14km±22km, ML2.6*
ISC 25 16:10:52.4±1.2, 34.53N±0.05×45.51E±0.04, h9km±12km, n10, σ1§10/16, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGHG	**Ghaleghazi**	**0.89**	**103**	*e*		16 11 10.5	
IGHG				*e*Pg	**Pg**	**16 11 09.7**	**+0.1**
IGHG				*e*Sg	**Sn**	**16 11 23.1**	**-1.4**
IVIS	**Veis**	**1.10**	**90**	*e*Pg	**Pg**	**16 11 13.8**	**+0.2**
IVIS				*e*Sg	**Sn**	**16 11 29.9**	**+0.4**
IVIS				*e*		16 11 32.1	
KCHF	**Cheshme Sefid,**	**1.29**	**101**	*e*Pg	**Pg**	**16 11 18.1**	**+1.0**
KCHF				*e*		16 11 18.3	
IKRK	**Kirkuk**	**1.30**	**312**	*e*Pg	**Pg**	**16 11 17.0**	**-0.3**
IKRK				AML	AML	16 11 19.1	
	comp=Z,29nm,0.2s						
IKRK				*e*Sg	**Sg**	**16 11 35.0**	**+0.8**
IBDR	**Badra**	**1.46**	**166**	*e*Pn	**Pb**	**16 11 19.0**	**-0.7**
IBDR				AML	AML	16 11 20.1	
	comp=Z,36nm,0.3s						
IBDR				*e*Sn	**Sg**	**16 11 39.5**	**+0.2**
BHD	**Baghdad**	**1.57**	**217**	*e*Pn	**Pb**	**16 11 21.0**	**-0.6**
BHD				*e*Sn	**Sg**	**16 11 42.0**	**-0.9**
IKOM	**Komasi**	**1.69**	**102**	*e*Pn	**Pb**	**16 11 24.0**	**+0.3**
IKOM				*e*		16 11 55.4	
IKFM	**Kafar-mosalman**	**2.18**	**117**	*e*Pn	**Pb**	**16 11 30.6**	**-1.4**
IDOB	**Doab**	**2.33**	**108**	*e*Pn	**Pb**	**16 11 32.5**	**-2.2**
NSR	**Nassriya**	**3.55**	**171**	*e*Pn	**Pb**	**16 11 49.0**	**+1.4**
NSR				AML	AML	16 11 57.6	
	comp=Z,118nm,0.0s						
NSR				*e*Sn	**Sn**	**16 12 30.0**	**+0.3**

MAN 25 16:13:57.5, 6.40N×126.03E, h59km, mb4.9, ML3.9, MS3.9, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.43**	**227**	*e*P	Pn	16 14 10.7	+1.9
DDMP				*e*S	Sn	16 14 21.2	+4.4
MATI	**Mati**	**0.59**	**23**	*e*P	Pn	16 14 12.0	+1.6
MATI				*e*S	Sn	16 14 22.6	+2.9
DMPH	**Davao City--Mi**	**0.85**	**323**	*i*P	Pn	16 14 20.0	+6.3
KCP	**Kidapawan**	**1.11**	**303**	*i*P	Pn	16 14 18.1	+1.0
KCP				*i* S	Sn	16 14 33.9	+2.3
GSPH	**General Santos**	**1.12**	**254**	*e*P	Pn	16 14 17.9	+0.6
GSPH				*e*S	Sn	16 14 31.9	0.0
SKMP	**Bagumbayan, Su**	**1.48**	**275**	*e*P	Pn	16 14 22.4	+0.4
SKMP				*e*S	Sn	16 14 41.0	+0.6
BUKP	**Musuan**	**1.75**	**327**	*e*P	Pn	16 14 25.8	+0.1
BUKP				*e*S	Sn	16 14 47.5	+0.4
BUTP	**Butuan**	**2.58**	**351**	*e*P	Pn	16 14 38.2	+1.2
BUTP				*e*S	Sn	16 15 10.2	+3.0

*DJA **25** 16:23:17.1±0.6, 8.7S±9.7×10.7E±.7, h41km±46km, M4.0/13, mb3.3/1, MLv4.4/13*
*NEIC **25** 16:23:17.2±2.6, 8.29S±0.07×109.27E±0.05, h85km±7km, mb4.2/14, Error ellipse: s-maj=11.0km s-min=6.4km az=193.0*
*IDC **25** 16:23:20.2±1.2, 8.13S×109.14E, h124km±16km, mb3.5/8, mb1 3.6/9, mb1mx3.4/40, mbtmp3.9/9, MS3.6/1, Ms1 3.6/1, ms1mx2.7/33, Error ellipse: s-maj=52.8km s-min=12.1km az=49.0*
ISC 25 16:23:16.0±0.8, 8.36S±0.08×109.25E±0.04, h86km±8km, n49, σ2§09/50, mb4.0/13, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**0.98**	**306**	P	**Pn**	**16 23 34.7**	**-0.5**
CMJI				S	**Sn**	**16 23 47.7**	**-1.8**
KPJI	**Karang Pucung**	**1.06**	**343**	P	**Pn**	**16 23 36.5**	**+0.3**
UGM	**Wanagama**	**1.34**	**71**	P	**Pn**	**16 23 39.6**	**+0.1**
UGM				S	**Sn**	**16 23 56.5**	**-0.9**
UGM	**Wanagama**	**1.34**	**71**		**Pn**	**16 23 39.4**	**-0.1**
UGM				Sn	**Sn**	**16 23 56.4**	**-0.9**
CISI	**Cisompet, Garu**	**1.63**	**299**	P	**Pn**	**16 23 43.3**	**0.0**
CISI				S	**Sn**	**16 24 03.6**	**-0.4**
CISI	**Cisompet, Garu**	**1.63**	**299**		**Pn**	**16 23 43.9**	**+0.6**
CISI				Sn	**Sn**	**16 24 03.0**	**-1.0**
WOJI	**Wonogiri, Jawa**	**1.74**	**73**	P	**Pn**	**16 23 45.0**	**+0.4**
SMRI	**Semarang**	**1.76**	**42**	P	**Pn**	**16 23 45.8**	**+0.9**
SMRI	**Semarang**	**1.76**	**42**		**Pn**	**16 23 45.8**	**+0.9**
PCJI	**Pacitan**	**1.92**	**85**	P	**Pn**	**16 23 47.6**	**+0.6**
PCJI				S	**Sn**	**16 24 10.7**	**+0.1**
LEM	**Lembang**	**2.22**	**313**	P	**Pn**	**16 23 53.2**	**+2.1**
	40nm,0.3s,baz=59,slow=24,SNR=14						
LEM				S	**Sn**	**16 24 20.2**	**+2.2**
	53nm,0.3s,baz=344,slow=20,SNR=8.3						
LEM				LR	LR	16 25 01.4	
	comp=Z,64nm,21.1s,baz=64,slow=51						
LEM	**Lembang**	**2.22**	**313**	P	**Pn**	**16 23 53.5**	**+2.3**
CNJI	**Cibinong**	**2.34**	**296**	P	**Pn**	**16 23 52.6**	**0.0**
NGJI	**Ngawi**	**2.40**	**66**	P	**Pn**	**16 23 53.5**	**+0.1**
PWJI	**Pagerwojo**	**2.55**	**83**	P	**Pn**	**16 23 55.9**	**+0.5**
UWJI	**Ujung Watu**	**2.56**	**41**	P	**Pn**	**16 23 56.0**	**+0.5**
GRJI	**Gresik**	**3.51**	**66**	P	**Pn**	**16 24 09.7**	**+1.4**
GMJI	**Gumukmas**	**4.15**	**89**	P	**Pn**	**16 24 18.4**	**+1.3**
JAGI	**Jajag, Banyuwa**	**4.85**	**92**	P	**Pn**	**16 24 27.6**	**+1.0**
JAGI	**Jajag, Banyuwa**	**4.85**	**92**		**Pn**	**16 24 27.9**	**+1.3**
KLSI		**5.78**	**309**	P	**Pn**	**16 24 40.2**	**+0.9**
GIRL	**Giralia**	**14.99**	**162**	Pn	**Pn**	**16 26 42.9**	**-0.4**
PSA00	**Pilbara Seismi**	**16.64**	**143**	Pn	**Pn**	**16 27 03.4**	**-0.6**
PSA00				IAmb	IAmb	16 27 14.7	
	comp=Z,35nm,1.3s						
FITZ	**Fitzroy Crossi**	**18.65**	**123**	P	**Pn**	**16 27 32.1**	**+3.7**
	comp=Z,0.1nm,0.3s,baz=296,slow=9.5,SNR=4.9						
FITZ				S	**S**	**16 30 45.5**	**-9.5**
	comp=Z,0.2nm,0.3s,baz=165,slow=20,SNR=3.0						
FITZ	**Fitzroy Crossi**	**18.65**	**123**	P	**P**	**16 27 26.0**	**-1.1**
FITZ				IAmb	IAmb	16 27 35.5	
	comp=Z,13nm,1.5s						
KNRA	**Kununurra**	**20.41**	**113**	P	Pn	16 27 48.6	-0.6
KNRA				IAmb	IAmb	16 27 52.0	
	comp=Z,30nm,1.4s						
SAUI	**Saumlaki**	**21.83**	**91**		P	16 27 54.6	-6.9
MTN	**Manton Dam**	**21.96**	**104**	P	**P**	**16 28 03.1**	**+0.2**
MTN				IAmb	IAmb	16 28 18.4	
	comp=Z,20nm,1.4s						
SIJI	**Sorong**	**23.16**	**72**	LR	LR	16 39 14.5	
	comp=Z,148nm,19.3s,baz=49,slow=41						
WB0	**Warramunga Arr**	**26.85**	**118**	P	**P**	**16 28 51.0**	**+2.2**
WB0				IAmb	IAmb	16 28 53.7	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**26.87**	**118**	P	**P**	**16 28 51.0**	**+2.1**
	comp=Z,1.0nm,0.8s,baz=291,slow=11,SNR=5.9						
WRAB	**Tennant Creek**	**26.88**	**118**	P	**P**	**16 28 49.7**	**+0.7**
WRAB				IAmb	IAmb	16 28 51.8	
	comp=Z,4.6nm,0.9s						
WB2	**Warramunga Arr**	**26.88**	**118**	P	**P**	**16 28 51.0**	**+1.9**
WB2				IAmb	IAmb	16 28 54.9	
	comp=Z,4.0nm,1.1s						
WR0	**Warramunga Arr**	**27.05**	**118**	P	**P**	**16 28 52.9**	**+2.3**
ASAR	**Alice Springs**	**28.09**	**126**	P	**P**	**16 29 01.9**	**+2.0**
	comp=Z,1.5nm,0.8s,baz=306,slow=9.4,SNR=21						
AS31	**Alice Springs**	**28.09**	**126**	P	**P**	**16 29 02.2**	**+2.4**
COEN	**Coen**	**33.72**	**103**	P	**P**	**16 29 50.8**	**+1.3**
COEN				IAmb	IAmb	16 29 52.9	
	comp=Z,7.3nm,1.1s						
BBOO	**Buckleboo**	**34.76**	**138**	P	**P**	**16 30 00.8**	**+2.6**
H08S2	**Diego Garcia H**	**36.40**	**268**	T	T	17 08 47.7	
	baz=93,slow=76,SNR=36						
H08S3	**Diego Garcia H**	**36.41**	**268**	T	T	17 08 48.5	
	baz=93,slow=76,SNR=26						
H08S1	**Diego Carcia H**	**36.41**	**268**	T	T	17 08 45.0	
	baz=93,slow=76,SNR=3.7						
STKA	**Stephens Creek**	**38.08**	**132**	P	**P**	**16 30 29.4**	**+2.8**
	comp=Z,1.6nm,0.7s,baz=311,slow=11,SNR=6.1						
STKA	**Stephens Creek**	**38.08**	**132**	IAmb	IAmb	16 30 34.7	
	comp=Z,0.9nm,1.1s						
SONM	**Songino Array**	**56.00**	**358**	P	**P**	**16 32 45.9**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=191,slow=7.2,SNR=3.7						
MKAR	**Makanchi Array**	**59.93**	**339**	P	**P**	**16 33 10.6**	**-2.4**
	comp=Z,0.4nm,0.6s,baz=151,slow=7.9,SNR=9.4						
ZALV	**Zalesovo Beam**	**65.41**	**344**	P	**P**	**16 33 46.9**	**-2.4**
	comp=Z,0.5nm,0.3s,baz=152,slow=6.5,SNR=3.9						
PETK	**Petropavlovsk-**	**73.71**	**28**	P	**P**	**16 34 39.4**	**-1.0**
	comp=Z,3.0nm,1.0s,baz=224,slow=4.0,SNR=3.6						
BRTR	**Keskin Array B**	**84.39**	**311**	P	**P**	**16 35 38.9**	**-0.3**
	comp=Z,1.9nm,0.9s,baz=125,slow=7.8,SNR=6.0						
TXAR	**Lajitas Array**	**142.72**	**52**	PKP	**PKPdf**	**16 42 37.4**	**-2.7**
	comp=Z,0.2nm,0.6s,baz=266,slow=2.4,SNR=2.9						

*KLM **25** 16:58:00.0, 8.40S×109.22E, h10km, mb4.8*
*BJI **25** 16:58:01.6±0.0, 8.27S×109.86E, h102km, mB5.1/14, mb4.5/22*
*GCMT **25** 16:58:01.8±0.4, 8.28S±0.03×109.58E±0.04, h102km±3km, MW4.9/63, Moment Tensor Solution. s25,c31; s63,c89; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 1.58±.12; Mθθ-2.60±.15; Mϕϕ 1.03±.17; Mrθ-0.95±.10; Mrϕ 1.48±.13; Mθϕ-0.66±.10; Best double couple: M◎2.88500×10^16 NP1:ϕs146.00000°, δ52.00000°, λ149.00000°. NP2: ϕs256.00000°, δ66.00000°, λ42.00000°. Principal axes: T 2.5440, Plg46.0000°, Azm117.0000°; N 0.6900, Plg42.0000°, Azm280.0000°; P -3.2250, Plg8.0000°, Azm18.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*NEIC **25** 16:58:01.8±3.0, 8.23S±0.02×109.26E±0.04, h86km±6km, mb4.7/32 Error ellipse: s-maj=6.5km s-min=2.5km az=69.0*
*DJA **25** 16:58:02.3±0.2, 8.7S±3.7×10.9E±.7, h73km±4km, M4.8/25, mb4.9/25, mB5.3/14, MLv5.2/24, Mw(mB)4.7/14, Mwp5.3/1*
*IDC **25** 16:58:04.2±1.1, 7.94S×109.40E, h108km±9km, mb4.1/22, mb1 4.2/25, mb1mx4.1/45, mbtmp4.4/25, MS3.7/5, Ms1 3.7/5, ms1mx3.5/26, Error ellipse: s-maj=13.4km s-min=9.1km az=46.0*
ISC 25 16:58:02.6±0.7, 8.20S±0.05×109.26E±0.04, h93km±6km, n222, σ1§45/221, mb4.5/42, 1D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**0.91**	**297**	P	**Pn**	**16 58 19.5**	**-1.9**
CMJI				S	**Sn**	**16 58 33.0**	**-2.6**
KPJI	**Karang Pucung**	**0.92**	**339**	P	**Pn**	**16 58 21.3**	**-0.4**
UGM	**Wanagama**	**1.28**	**77**	P	**Pn**	**16 58 24.6**	**-1.2**
UGM				S	**Sn**	**16 58 42.1**	**-1.3**
UGM	**Wanagama**	**1.28**	**77**		**Pn**	**16 58 25.0**	**-0.8**
UGM				Sn	**Sn**	**16 58 41.9**	**-1.5**
CISI	**Cisompet, Garu**	**1.57**	**294**	P	**Pn**	**16 58 28.2**	**-1.2**
CISI				S	**Sn**	**16 58 48.5**	**-1.3**
CISI	**Cisompet, Garu**	**1.57**	**294**		**Pn**	**16 58 28.6**	**-0.8**
CISI				Sn	**Sn**	**16 58 48.9**	**-0.8**
SMRI	**Semarang**	**1.64**	**46**	P	**Pn**	**16 58 31.0**	**+0.8**
SMRI	**Semarang**	**1.64**	**46**		**Pn**	**16 58 31.1**	**+0.9**
SMRI				Sn	**Sn**	**16 58 52.2**	**+1.0**
WOJI	**Wonogiri, Jawa**	**1.69**	**78**	P	**Pn**	**16 58 30.5**	**-0.3**
PCJI	**Pacitan**	**1.90**	**90**	P	**Pn**	**16 58 32.6**	**-0.9**
LEM	**Lembang**	**2.13**	**310**	P	**Pn**	**16 58 37.8**	**+1.1**
	262nm,0.3s,baz=7.9,slow=7.4,SNR=231						
LEM				S	**Sn**	**16 59 05.4**	**+2.6**
	438nm,0.3s,baz=310,slow=20,SNR=13						
LEM				LR	LR	16 59 11.2	
	comp=Z,552nm,20.6s,baz=99,slow=32						
LEM	**Lembang**	**2.13**	**310**	P	**Pn**	**16 58 37.3**	**+0.6**
CNJI	**Cibinong**	**2.29**	**293**	P	**Pn**	**16 58 37.5**	**-1.2**
NGJI	**Ngawi**	**2.33**	**69**	P	**Pn**	**16 58 40.7**	**+1.4**
UWJI	**Ujung Watu**	**2.44**	**43**	P	**Pn**	**16 58 41.1**	**+0.4**
PWJI	**Pagerwojo**	**2.52**	**86**	P	**Pn**	**16 58 41.1**	**-0.7**
SKJI	**Sukabumi**	**2.93**	**294**	P	**Pn**	**16 58 46.6**	**-0.7**
DBJI	**Dramaga**	**2.98**	**303**	P	**Pn**	**16 58 48.9**	**+1.0**
GRJI	**Gresik**	**3.44**	**68**	P	**Pn**	**16 58 54.8**	**+0.7**
SBJI	**Serang**	**3.73**	**303**	P	Pn	16 59 04.0	+6.0
GMJI	**Gumukmas**	**4.14**	**91**	P	**Pn**	**16 59 04.2**	**+0.6**
JAGI	**Jajag, Banyuwa**	**4.85**	**94**	P	**Pn**	**16 59 13.4**	**+0.2**
JAGI	**Jajag, Banyuwa**	**4.85**	**94**		**Pn**	**16 59 12.2**	**-0.9**
KASI	**Kota Agung**	**5.43**	**299**	P	**Pn**	**16 59 22.0**	**+0.9**
	1.5nm3µm295nm,1.0s						
TPI	**Tanjungpandan**	**5.64**	**343**	P	**Pn**	**16 59 26.8**	**+2.8**
	1.2nm1µm121nm,0.8s						
KLSI		**5.70**	**308**	P	**Pn**	**16 59 25.2**	**+0.5**
	0.3nm837nm77nm,0.8s						
SRBI	**Singaraja**	**5.89**	**89**	P	Pn	16 59 37.2	+10
LWLI	**Liwa**	**6.06**	**301**	P	Pn	16 59 34.6	+4.8
MDSI	**Maura Dua**	**6.26**	**306**	P	**Pn**	**16 59 33.4**	**+1.1**
	0.5nm1µm146nm,1.0s						
MNAI	**Manna**	**7.34**	**301**		**Pn**	**16 59 46.9**	**-0.2**
KSI	**Kapahiang**	**8.03**	**304**	P	**Pn**	**16 59 57.3**	**+0.8**
	0.9nm3µm220nm,0.9s						
KBKI	**Kotabaru**	**8.42**	**55**	P	**Pn**	**17 00 05.1**	**+3.3**
	0.1nm344nm42nm,0.9s						
PLAI	**Plampang**	**8.45**	**95**	P	**Pn**	**17 00 02.9**	**+0.7**
	0.8nm1µm107nm,1.0s						
STKI	**Sintang**	**8.51**	**15**	P	**Pn**	**17 00 05.8**	**+2.8**
	0.9nm5µm56nm,0.8s						
KSM	**Kuching**	**9.67**	**6**		**Pn**	**17 00 20.3**	**+1.5**
KSM	**Kuching**	**9.67**	**6**	P	**Pn**	**17 00 21.0**	**+2.1**
KRJI	**Kerinci**	**9.86**	**308**	P	**Pn**	**17 00 24.2**	**+2.7**
	9µm250nm,0.8s						
SDSI	**Sungai Dareh**	**10.63**	**312**	P	**Pn**	**17 00 34.7**	**+2.7**
	3µm14nm,0.8s						
SBUM	**Sibu**	**10.98**	**16**		**Pn**	**17 00 38.5**	**+1.7**
SBUM	**Sibu**	**10.98**	**16**	P	**Pn**	**17 00 41.0**	**+4.2**
BKSI	**Bulukumba**	**11.16**	**76**	P	Pn	17 00 45.4	+6.3
SPSI	**Sidrap Palu**	**11.26**	**69**	P	Pn	17 00 45.3	+4.7
MYKOM	**Kota Tinggi**	**11.30**	**331**		**Pn**	**17 00 41.7**	**+0.7**
MYKOM	**Kota Tinggi**	**11.30**	**331**	P	**Pn**	**17 00 44.0**	**+3.0**
PDSI	**Padang**	**11.37**	**309**	P	**Pn**	**17 00 44.0**	**+2.0**
	508nm21nn,0.6s						
BNSI	**Bone**	**11.42**	**71**	P	Pn	17 00 49.2	+6.5
TTSI	**Tana Toraja**	**11.69**	**65**	P	Pn	17 00 53.2	+6.9
SISI	**Saibi**	**12.22**	**303**	P	**Pn**	**17 00 52.0**	**-1.4**
	33nm,0.8s						
MPSI	**Mapaga**	**13.58**	**52**	P	**P**	**17 01 16.0**	**-1.1**
	775nm42nm,1.7s						
APSI	**Ampana**	**14.31**	**60**	P	**P**	**17 01 29.2**	**+4.0**
SOEI	**Soe**	**14.90**	**97**	P	**P**	**17 01 34.8**	**+2.9**
SOEI	**Soe**	**14.90**	**97**		**Pn**	**17 01 27.2**	**-1.4**
RPSI	**Rantau Prapat**	**14.95**	**316**		**Pn**	**17 01 28.8**	**-0.3**
GSI	**Gunungsitoli**	**15.00**	**309**	P	**Pn**	**17 01 27.6**	**-2.1**
	32nm,0.8s						
GSI	**Gunungsitoli**	**15.00**	**309**		Pn	17 01 23.9	-5.8
PSI	**Prapat**	**15.03**	**316**	P	**Pn**	**17 01 28.8**	**-1.4**
	0.6nm,0.3s,baz=152,slow=12,SNR=2.3						
PSI				LR	LR	17 07 56.2	
	comp=Z,481nm,18.8s,baz=134,slow=40						
IPM	**Ipoh**	**15.04**	**327**	Pn	**Pn**	**17 01 28.0**	**-2.2**
IPM				IAmb	IAmb	17 01 56.7	
	comp=Z,28nm,0.8s						
GIRL	**Giralia**	**15.13**	**162**	Pn	**Pn**	**17 01 27.5**	**-3.8**
MRSI	**Marisa**	**15.30**	**56**	P	**P**	**17 01 36.2**	**0.0**
	comp=Z,53nm,0.8s						
KKM	**Kota Kinabalu**	**15.76**	**26**		**P**	**17 01 40.4**	**-1.0**
KKM				IAmb	IAmb	17 01 47.4	
	comp=Z,52nm,1.1s						
KULM	**Kulim**	**15.92**	**327**	Pn	**Pn**	**17 01 39.6**	**-1.6**
KULM	**Kulim**	**15.92**	**327**	P	**P**	**17 01 49.0**	**+5.9**
PSA00	**Pilbara Seismi**	**16.76**	**144**	Pn	**Pn**	**17 01 50.1**	**-1.5**
SANI	**Sanana**	**17.74**	**71**	P	**P**	**17 02 01.8**	**-1.4**
	comp=Z,24nm,1.0s						
NLAI	**Namlea**	**18.42**	**75**	P	**Pn**	**17 02 11.2**	**-0.6**
	comp=Z,90nm,0.7s						
FITZ	**Fitzroy Crossi**	**18.72**	**123**	P	**Pn**	**17 02 14.8**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=287,slow=6.8,SNR=17						
FITZ				S	S	17 05 30.0	-12
	comp=Z,1.1nm,0.3s,baz=203,slow=22,SNR=6.4						
FITZ	**Fitzroy Crossi**	**18.72**	**123**	P	**P**	**17 02 14.4**	**+0.4**
AAI	**Ambon**	**19.35**	**78**	P	**Pn**	**17 02 23.8**	**+0.9**
	comp=Z,2µmcomp=Z,138nm,0.9s						
LBMI	**Labuha**	**19.66**	**68**	P	**Pn**	**17 02 25.9**	**-0.7**
	comp=Z,3µmcomp=Z,140nm,1.0s						
KNRA	**Kununurra**	**20.46**	**113**	P	**P**	**17 02 33.6**	**+0.7**
KNRA				IAmb	IAmb	17 02 38.0	
	comp=Z,43nm,0.9s						
MORW	**Morawa**	**21.71**	**164**	P	**P**	**17 02 45.7**	**-0.5**
MORW				IAmb	IAmb	17 02 48.3	
	comp=Z,36nm,1.1s						
KCP	**Kidapawan**	**21.85**	**47**	*i*eP	**P**	**17 02 51.5**	**+3.6**
MTN	**Manton Dam**	**21.99**	**104**	P	**P**	**17 02 49.5**	**+0.3**
MTN				IAmb	IAmb	17 03 19.7	
	comp=Z,32nm,0.9s						
SWI	**Sorong**	**23.10**	**73**	P	**P**	**17 02 58.2**	**-2.4**
	comp=Z,33nm,0.8s						
SIJI	**Sorong**	**23.10**	**73**	P	**P**	**17 02 59.5**	**-1.2**
	comp=Z,16nm,0.7s,baz=239,slow=5.6,SNR=7.6						
FAKI	**Fak Fak**	**23.47**	**78**	P	**P**	**17 03 01.8**	**-2.3**
FAKI				IAmb	IAmb	17 03 59.0	
	comp=Z,52nm,1.2s						
UBPT	**Khong Chiam**	**23.63**	**351**	P	**P**	**17 03 02.8**	**-2.6**
UBPT				IAmb	IAmb	17 03 34.8	
	comp=Z,30nm,1.3s						
TGY	**Tagaytay City**	**25.01**	**28**	LR	LR	17 14 44.3	
	comp=Z,188nm,18.6s,baz=168,slow=40						
NWAO	**Narrogin (SRO)**	**25.69**	**164**	LR	LR	17 13 08.5	
	comp=Z,145nm,22.0s,baz=242,slow=35						
PBKT	**Sadao Pong**	**25.94**	**342**	P	**P**	**17 03 24.8**	**-1.6**
WB0	**Warramunga Arr**	**26.91**	**118**	P	**P**	**17 03 35.6**	**+0.4**
WB0				IAmb	IAmb	17 04 02.2	
	comp=Z,13nm,0.8s						
WRA	**Warramunga Arr**	**26.93**	**118**	P	**P**	**17 03 35.9**	**+0.5**
	comp=Z,11nm,0.9s,baz=289,slow=12,SNR=30						
WRAB	**Tennant Creek**	**26.94**	**118**	P	**P**	**17 03 34.8**	**-0.6**
WRAB				IAmb	IAmb	17 04 00.5	
	comp=Z,19nm,0.8s						
WB2	**Warramunga Arr**	**26.94**	**118**	P	**P**	**17 03 36.0**	**+0.6**
WB2				IAmb	IAmb	17 04 00.4	
	comp=Z,20nm,0.9s						
WR0	**Warramunga Arr**	**27.11**	**118**	P	**P**	**17 03 37.8**	**+0.8**
WR0				IAmb	IAmb	17 03 39.5	
	comp=Z,18nm,0.9s						
AS31	**Alice Springs**	**28.17**	**126**	P	**P**	**17 03 47.0**	**+0.5**
ASAR	**Alice Springs**	**28.17**	**126**	P	**P**	**17 03 47.0**	**+0.6**
	comp=Z,15nm,0.7s,baz=306,slow=9.4,SNR=147						
ASAR				PcP	**PcP**	**17 06 59.8**	**+1.5**
	comp=Z,1.6nm,0.4s,baz=302,slow=1.9,SNR=3.2						
CMAR	**Chiang Mai Arr**	**28.38**	**339**	P	**P**	**17 03 47.2**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=175,slow=8.5,SNR=15						
CMAR				LR	LR	17 16 16.2	
	comp=Z,188nm,18.1s,baz=192,slow=39						
KMI	**Kunming**	**33.73**	**349**	P	**P**	**17 04 37.5**	**+2.1**
KMI				pP	pP	17 04 56.5	-0.3
KMI				sP	sP	17 05 08.8	+1.2
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,93nm,5.8s						
BBOO	**Buckleboo**	**34.86**	**138**	P	**P**	**17 04 45.5**	**+0.5**
**H

MAW	**Mawson**	**66.89**	**198**	P		**P**		**17 08 45.1**	**+0.8**
ABKAR	**Akbulak array**	**71.60**	**328**	P		**P**		**17 09 12.3**	**-1.4**
ABKAR				IAmb		IAmb		17 09 51.1	
	comp=Z,28nm,1.7s								
KMBO	**Kilima Mbogo**	**72.03**	**271**	P		**P**		**17 09 18.5**	**+1.1**
	comp=Z,2.3nm,0.7s,baz=78,slow=6.8,SNR=4.0								
PETK	**Petropavlovsk-**	**73.57**	**28**	P		**P**		**17 09 23.3**	**-2.1**
	comp=Z,1.3nm,0.6s,baz=185,slow=4.9,SNR=9.8								
PETK	**Petropavlovsk-**	**73.57**	**28**	P		**P**		**17 09 22.8**	**-2.6**
VNDA	**Vanda**	**74.39**	**170**	P		**P**		**17 09 29.9**	**+0.1**
	comp=Z,8.1nm,1.1s,baz=312,slow=5.6,SNR=9.1								
KBZ	**Khabaz**	**79.04**	**317**	P		**P**		**17 09 57.1**	**+0.6**
	comp=Z,2.4nm,0.8s,baz=167,slow=4.8,SNR=6.6								
TIXI	**Tiksi**	**80.74**	**6**	P		**P**		**17 10 02.9**	**-2.2**
BOSA	**Boshof**	**80.89**	**242**	P		**P**		**17 10 08.5**	**+1.5**
	comp=Z,3.7nm,0.8s,baz=119,slow=9.9,SNR=4.4								
QSPA	**South Pole Qui**	**81.79**	**180**	P		**P**		**17 10 12.4**	**+1.3**
BR131	**Keskin Array S**	**84.30**	**311**	P		**P**		**17 10 23.6**	**-0.9**
BR131				IAmb		IAmb		17 10 45.7	
	comp=Z,9.3nm,1.1s								
BRTR	**Keskin Array B**	**84.30**	**311**	P		**P**		**17 10 23.8**	**-0.8**
	comp=Z,3.2nm,0.8s,baz=139,slow=6.8,SNR=14								
BRTR	**Keskin Array B**	**84.30**	**311**	P		**P**		**17 10 24.3**	**-0.2**
KLMR	**Klimovskoe**	**87.47**	**333**	*e*P		**P**		**17 10 38.0**	**-1.4**
KLMR				AMP				17 10 39.4	
	comp=Z,16nm,1.3s								
SNAA	**Sanae**	**89.05**	**197**	P		**P**		**17 10 48.7**	**+1.8**
SNAA	**Sanae**	**89.05**	**197**	P		**P**		**17 10 47.5**	**+0.6**
AKASG	**Malin Array Be**	**90.03**	**321**	P		**P**		**17 10 50.5**	**-1.2**
	comp=Z,25nm,0.3s,baz=89,slow=4.6,SNR=1.5								
FINES	**FINESS Array B**	**90.89**	**331**	P		**P**		**17 11 09.4**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=116,slow=4.4,SNR=4.1								
KOLS	**Kolonicke sedl**	**94.14**	**319**	*e*P		**P**		**17 11 14.8**	**+4.0**
YKA	**Yellowknife Ar**	**117.19**	**21**	PKP		**PKiKP**		**17 16 37.1**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=317,slow=1.8,SNR=6.1								
NVAR	**Mina Array Bea**	**127.76**	**47**	PKP		**PKiKP**		**17 16 58.7**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=38,slow=1.6,SNR=4.3								
TXAR	**Lajitas Array**	**142.62**	**51**	PKP		**PKPdf**		**17 17 22.4**	**-3.2**
	comp=Z,0.5nm,0.6s,baz=209,slow=2.4,SNR=10								
TXAR				SKPbc		**SKPbc**		**17 20 53.2**	**-2.1**
	comp=Z,1.0nm,0.9s,baz=264,slow=1.6,SNR=5.8								
JCT	**Junction City**	**144.94**	**47**			**PKPdf**		**17 17 29.9**	**+0.4**
JCT	**Junction City**	**144.94**	**47**	P		**PKPdf**		**17 17 29.8**	**+0.3**
	baz=303								
CCM	**Cathedral Cave**	**144.98**	**29**			**PKPdf**		**17 17 29.2**	**-0.2**
CCM	**Cathedral Cave**	**144.98**	**29**	P		**PKPab**		**17 17 28.8**	**0.0**
	baz=323								
N48A	**Decatur**	**145.08**	**19**	P		**PKPab**		**17 17 29.2**	**+0.1**
	baz=335								
MGMO	**Mountain Grove**	**145.18**	**31**			**PKPdf**		**17 17 30.2**	**+0.4**
L54A	**Sinclairville**	**145.27**	**11**	P		**PKPdf**		**17 17 30.7**	**+0.9**
	baz=345								
N49A	**Columbus Grove**	**145.29**	**18**			**PKPab**		**17 17 30.6**	**+0.7**
N49A	**Columbus Grove**	**145.29**	**18**	P		**PKPab**		**17 17 30.0**	**+0.1**
	baz=336								
X37A	**Clayton**	**145.33**	**37**			**PKPab**		**17 17 30.8**	**+0.6**
L55A	**Hinsdale**	**145.48**	**10**	P		**PKPbc**		**17 17 30.3**	**0.0**
	baz=347								
U40A	**Yellville**	**145.48**	**32**	P		**PKPab**		**17 17 31.3**	**+0.6**
	baz=319,SNR=14								
O48A	**Farmland**	**145.58**	**20**	P		**PKPab**		**17 17 30.9**	**-0.1**
	baz=334								
WHTX	**Lake Whitney,**	**145.70**	**43**	P		**PKPab**		**17 17 32.7**	**+1.0**
	baz=308								
N50A	**Nevada**	**145.74**	**17**	P		**PKPab**		**17 17 32.4**	**+0.9**
	baz=338								
M53A	**WI Miller and**	**145.75**	**13**	P		**PKPab**		**17 17 32.2**	**+0.6**
	baz=342								
W39A	**Magazine**	**145.83**	**35**			**PKPab**		**17 17 32.5**	**+0.4**
W39A	**Magazine**	**145.83**	**35**	P		**PKPab**		**17 17 32.7**	**+0.6**
	baz=317								
M54A	**Oil Creek Stat**	**145.90**	**12**	P		**PKPbc**		**17 17 32.6**	**+0.4**
	baz=344								
O49A	**Covington**	**145.91**	**19**	P		**PKPbc**		**17 17 31.8**	**+0.1**
	baz=336								
L58A	**Harry Jones Me**	**145.99**	**7**	P		**PKPab**		**17 17 32.6**	**+0.2**
	baz=351								
O50A	**Cable**	**146.17**	**18**	P		**PKPab**		**17 17 33.3**	**+0.1**
	baz=337								
ACSO	**Alum Creek Sta**	**146.28**	**17**	P		**PKPab**		**17 17 33.2**	**-0.4**
	baz=338								
P49A	**Miami Univ. Ec**	**146.38**	**20**	P		**PKPbc**		**17 17 33.2**	**+0.1**
	baz=335								
MIAR	**Mount Ida**	**146.41**	**35**	P		**PKPab**		**17 17 34.5**	**+0.1**
	baz=316,SNR=12								
O51A	**Pataskala**	**146.47**	**17**	P		**PKPab**		**17 17 33.8**	**-0.6**
	baz=338								
M59A	**Waymart**	**146.54**	**6**	P		**PKPab**		**17 17 34.8**	**+0.2**
	baz=352								
Q48A	**North Vernon**	**146.57**	**21**	P		**PKPab**		**17 17 34.9**	**+0.2**
	baz=332								
M58A	**Price's Panora**	**146.58**	**8**	P		**PKPab**		**17 17 35.0**	**+0.3**
	baz=350								
P51A	**Williamsport**	**146.95**	**18**	P		**PKPab**		**17 17 35.5**	**-0.7**
	baz=337								
WCI	**Wyandotte Cave**	**146.97**	**23**	P		**PKPab**		**17 17 36.2**	**-0.1**
	baz=331								
O54A	**Avella**	**147.01**	**14**	P		**PKPab**		**17 17 36.3**	**-0.2**
	baz=342								
P52A	**Corning**	**147.08**	**16**	P		**PKPab**		**17 17 35.9**	**-0.8**
	baz=339								
N59A	**State Game Lan**	**147.12**	**7**	P		**PKPbc**		**17 17 35.7**	**+0.5**
	baz=351								
Q51A	**Peebles**	**147.28**	**18**	P		**PKPab**		**17 17 36.6**	**-0.9**
	baz=337								
BDFB	**Brasilia**	**147.32**	**224**	PKPbc		**PKPbc**		**17 17 36.9**	**+0.3**
	comp=Z,11nm,1.0s,baz=154,slow=7.9,SNR=7.3								
R49A	**Shelbyville**	**147.33**	**21**	P		**PKPab**		**17 17 37.0**	**-0.7**
	baz=333								
P53A	**Whipple**	**147.42**	**15**	P		**PKPab**		**17 17 37.3**	**-0.8**
	baz=340								
P54A	**Burton**	**147.54**	**14**	P		**PKiKP**		**17 17 37.7**	**-0.8**
	baz=342								
MCWV	**Mont Chateau**	**147.63**	**13**	P		**PKiKP**		**17 17 38.1**	**-0.5**
	baz=343								
O59A	**Robesonia**	**147.66**	**8**	P		**PKiKP**		**17 17 37.6**	**-1.0**
	baz=350								
Q52A	**Bidwell**	**147.67**	**17**	P		**PKiKP**		**17 17 38.0**	**-0.7**
	baz=338								
S49A	**Springfield**	**147.74**	**22**	P		**PKPbc**		**17 17 37.8**	**+0.9**
	baz=332								
Z41A	**Richland Creek**	**147.78**	**36**	P		**PKiKP**		**17 17 38.2**	**-0.9**
	baz=316								
P56A	**Dayton Farm, R**	**148.00**	**12**	P		**PKPbc**		**17 17 38.1**	**+0.5**
	baz=345								
Q54A	**Coxs Mills**	**148.03**	**15**	P		**PKPbc**		**17 17 38.1**	**+0.4**
	baz=341								
WVT	**Waverly**	**148.12**	**27**	P		**PKPbc**		**17 17 38.5**	**+0.5**
	baz=327								
S50A	**Richmond**	**148.15**	**21**	P		**PKPbc**		**17 17 37.6**	**-0.4**
	baz=334								
P57A	**Homestead Farm**	**148.18**	**11**	P		**PKPbc**		**17 17 38.3**	**+0.2**
	baz=346								
Q55A	**Buckhannon**	**148.21**	**14**	P		**PKPbc**		**17 17 38.4**	**+0.2**
	baz=342								
T49A	**Edmonton**	**148.25**	**23**	P		**PKiKP**		**17 17 39.3**	**-0.6**
	baz=331								
R53A	**Hurricane**	**148.34**	**17**	P		**PKiKP**		**17 17 39.7**	**-0.4**
	baz=339								
Q56A	**Snyder Ridge,**	**148.37**	**13**	P		**PKPbc**		**17 17 38.6**	**+0.1**
	baz=344								
S51A	**Beattyville**	**148.47**	**20**	P		**PKPbc**		**17 17 39.4**	**+0.6**
	baz=335								
T50A	**Nancy**	**148.58**	**22**	P		**PKPbc**		**17 17 39.4**	**+0.3**
	baz=333								
S52A	**Salyersville**	**148.60**	**19**	P		**PKPbc**		**17 17 39.2**	**0.0**
	baz=336								
U49A	**Red Boiling Sp**	**148.66**	**24**	P		**PKiKP**		**17 17 40.7**	**-0.2**
	baz=331								
U50A	**Jamestown**	**149.11**	**23**	P		**PKPbc**		**17 17 41.0**	**+0.4**
	baz=332								
R57A	**Stanardsville**	**149.22**	**12**	P		**PKiKP**		**17 17 42.4**	**+0.5**
	baz=345								
V49A	**McMinnville**	**149.26**	**25**	P		**PKPbc**		**17 17 41.1**	**+0.2**
	baz=330								
LVC	**Limon Verde**	**149.33**	**183**	PKPbc		**PKPbc**		**17 17 41.9**	**0.0**
	comp=Z,7.6nm,1.0s,baz=140,slow=3.0,SNR=4.5								
R58A	**Rapidan**	**149.33**	**11**	P		**PKPbc**		**17 17 41.4**	**+0.4**
	baz=346								
T54A	**Tazewell**	**149.63**	**17**	P		**PKPbc**		**17 17 41.9**	**0.0**
	baz=338								
W49A	**Belvidere**	**149.66**	**26**	P		**PKPbc**		**17 17 42.0**	**+0.1**
	baz=328								
V51A	**Loudon**	**149.84**	**22**	P		**PKPbc**		**17 17 42.7**	**+0.4**
	baz=332								
W50A	**Signal Mountai**	**149.99**	**24**	P		**PKPbc**		**17 17 42.9**	**+0.1**
	baz=330								
V52A	**Sevierville**	**150.08**	**21**	P		**PKiKP**		**17 17 43.6**	**-0.2**
	baz=334								
U55A	**TA2, Sparta**	**150.31**	**17**	P		**PKPbc**		**17 17 43.7**	**+0.1**
	baz=339								
V53A	**Saluda**	**150.51**	**20**	P		**PKiKP**		**17 17 44.5**	**-0.2**
	baz=335								
W52A	**Murphy**	**150.63**	**22**	P		**PKiKP**		**17 17 45.4**	**+0.4**
	baz=333								
T59A	**Double "B" Far**	**150.70**	**11**	P		**PKiKP**		**17 17 45.3**	**+0.3**
	baz=346								
V54A	**Nebo**	**150.70**	**19**	P		**PKiKP**		**17 17 44.9**	**-0.1**
	baz=337								
W53A	**Cullowhee**	**150.84**	**21**	P		**PKiKP**		**17 17 45.6**	**0.0**
	baz=334								
LRAL	**Lakeview Retre**	**151.06**	**29**	P		**PKiKP**		**17 17 45.8**	**0.0**
	baz=325								
X52A	**Dahlonega**	**151.07**	**23**	P		**PKiKP**		**17 17 47.0**	**+1.1**
	baz=332								
V57A	**Coltrane Farms**	**151.23**	**15**	P		**PKPbc**		**17 17 45.7**	**+0.1**
	baz=341								
Z50A	**Ashland**	**151.39**	**27**	P		**PKiKP**		**17 17 46.4**	**-0.1**
	baz=327								
Y52A	**Lilburn**	**151.66**	**24**	P		**PKiKP**		**17 17 47.7**	**+0.6**
	baz=332								
X54A	**Belton**	**151.68**	**21**	P		**PKiKP**		**17 17 47.8**	**+0.7**
	baz=335								
V59A	**Middlesex**	**151.72**	**13**	P		**PKiKP**		**17 17 48.3**	**+1.1**
	baz=344								
X55A	**Gracelyn & Ava**	**152.00**	**19**	P		**PKiKP**		**17 17 48.7**	**+0.9**
	baz=337								
Z53A	**Monticello**	**152.37**	**24**	P		**PKiKP**		**17 17 49.8**	**+1.2**
	baz=332								
LPAZ	**La Paz**	**155.53**	**186**	PKPab		**PKPab**		**17 18 14.7**	**+1.7**
	comp=Z,2.2nm,0.8s,baz=214,slow=3.6,SNR=5.6								

NEIC ***25*** *17:00:06.0±1.5, 7.°92S±0.°07×155.°92E±0.°06, h9km±3km, mb5.5/180, Ms_20 4.8/64, Mwc5.4(GCMT), Error ellipse: s-maj=10.6km s-min=8.4km az=177.0*

IDC ***25*** *17:00:05.4±0.4, 7.°85S×155.°90E, h0km, mb5.1/31, mb1 5.1/37, mb1mx5.1/48, mbtmp5.1/37, ML4.3/5, MS4.4/20, Ms1 4.4/20, ms1mx4.4/22, Error ellipse: s-maj=12.4km s-min=11.3km az=96.0*

NEIC ***25*** *17:00:09, 8.°02S×155.°91E, h20km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}0.65; $M_{\theta\theta}$0.66; $M_{\phi\phi}$-1.31; $M_{r\theta}$0.25; $M_{\theta\phi}$0.84; $M_{r\phi}$0.15; Fault plane solution: $M_0$1.44000×10^{17} NP1:$\varnothing_s$119.00000°, δ68.00000°, λ21.00000°. NP2:$\varnothing_s$20.00000°, δ70.00000°, λ157.00000°. Principal axes: T 1.1365, Plg30.0000°, Azm339.0000°; N 0.4854, Plg60.0000°, Azm162.0000°; P -1.6219, Plg1.0000°, Azm70.0000°;*

MOS ***25*** *17:00:09.4±1.2, 7.°78S×155.°81E, h33km, mb5.6/21, MS4.8/10 Error ellipse: s-maj=7.0km s-min=5.6km az=102.8*

GCMT ***25*** *17:00:09.0±0.1, 8.°02S±0.°01×155.°89E±0.°01, h19km, MW5.3/130, Moment Tensor Solution. s107,c161; s130,c228; Duration: 1$\hat{}$1 Moment tensor: Scale 10^{17} Nm; M_{rr}0.64±.02; $M_{\theta\theta}$0.59±.02; $M_{\phi\phi}$-1.22±.02; $M_{r\theta}$0.33±.04; $M_{\theta\phi}$0.79±.02; $M_{r\phi}$0.01±.03; Best double couple: $M_0$1.30600×10^{17} NP1:$\varnothing_s$19.00000°, δ64.00000°, λ156.00000°. NP2:$\varnothing_s$120.00000°, δ69.00000°, λ28.00000°. Principal axes: T 1.0940, Plg35.0000°, Azm341.0000°; N 0.4290, Plg55.0000°, Azm155.0000°; P -1.5190, Plg3.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

BJI ***25*** *17:00:12.1±0.0, 7.°43S×155.°87E, h49km, mB5.5/49, mb5.3/69, Ms5.0/49, Ms7 4.8/53*

DJA ***25*** *17:00:14.6±0.5, 8.°S±3.°×15.°6E±.°, h64km±4km, M5.3/73, mB5.8/46, mb5.4/73, MLv4.8/1, Mw(mB)5.3/46, Mwp5.5/7*

ISC 25 17:00:10.3±0.3, 7.°88S±0.°04×155.°96E±0.°04, h36km±2km, h37km:pP-P, n768, σ1$\hat{}$30/795, mb5.4/212, MS4.8/66, 38C-2D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**4.23**	**112**	Pn	**Pn**	**17 01 11.0**	**-1.3**
	75nm,0.3s,baz=226,slow=7.1,SNR=11						
HNR				LR	LR	17 02 45.5	
	comp=Z,8μm,19.4s,baz=282,slow=37						
HNR	**Honiara**	**4.23**	**112**	*i* P	**Pn**	**17 01 11.0**	**-1.3**
HNR	**Honiara**	**4.23**	**112**		**Pn**	**17 01 10.8**	**-1.4**
KRVT	**Keravat (AS076**	**5.29**	**312**	Pn	**Pn**	**17 01 26.1**	**-0.7**
	4.2nm,0.3s,baz=173,slow=1.6,SNR=7.7						
KRVT				Sn	**Sn**	**17 02 25.6**	**-0.9**
	26nm,0.3s,baz=227,slow=19,SNR=2.7						
PMG	**Port Moresby**	**8.83**	**260**	*d* P	**Pn**	**17 02 15.4**	**-0.1**
PMG	**Port Moresby**	**8.83**	**260**	Pn	**Pn**	**17 02 14.3**	**-1.2**
	8.5nm,0.3s,baz=67,slow=6.7,SNR=25						
PMG				Sn	**Sn**	**17 03 59.9**	**+6.1**
	1.9nm,0.3s,baz=72,slow=20,SNR=3.3						
PMG				LR	LR	17 05 40.4	
	comp=Z,5μm,18.3s,baz=42,slow=38						
PMG	**Port Moresby**	**8.83**	**260**		**Pn**	**17 02 13.1**	**-2.4**
MANU	**Manus Island**	**10.34**	**304**		**Pn**	**17 02 36.0**	**-0.3**
COEN	**Coen**	**13.93**	**243**	P	**Pn**	**17 03 27.0**	**+1.7**
	baz=14,SNR=18						
COEN	**Coen**	**13.93**	**243**		**Pn**	**17 03 22.5**	**-2.8**
PATS	**Pohnpei**	**14.81**	**9**	P	**Pn**	**17 03 37.5**	**+0.2**
	baz=15,SNR=12						
PATS	**Pohnpei**	**14.81**	**9**		**Pn**	**17 03 37.0**	**-0.2**
MTSU	**Mount Surprise**	**15.24**	**227**	P	**Pn**	**17 03 44.1**	**+1.1**
	baz=15,SNR=50						
CTA	**Charters Tower**	**15.35**	**217**	Pn	**Pn**	**17 03 44.6**	**+0.3**
	0.5nm,0.3s,baz=40,slow=15,SNR=35						
CTA				LR	LR	17 09 08.5	
	comp=Z,1μm,19.4s,baz=36,slow=35						
CTAO	**Charters Tower**	**15.35**	**217**	P	**Pn**	**17 03 44.5**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,29nm,1.1s						
CTAO	**Charters Tower**	**15.35**	**217**	Pn	**Pn**	**17 03 44.5**	**+0.2**
JAY	**Jayapura**	**16.10**	**289**	Pn	**Pn**	**17 03 54.1**	**0.0**
	comp=Z,2.6nm,0.3s,baz=119,slow=6.2,SNR=5.7						
JAY				LR	LR	17 10 33.1	
	comp=Z,2μm,19.4s,baz=87,slow=39						
JAY	**Jayapura**	**16.10**	**289**	P	**P**	**17 03 57.1**	**0.0**
	2.58nm,1.3s						
GENI	**Genyem**	**16.58**	**288**	P	**P**	**17 04 07.7**	**+5.4**
NOUC	**Port Laguerre**	**17.29**	**146**	P	**Pn**	**17 04 08.8**	**-0.2**
NOUC				IAmb	IAmb	17 04 15.1	
	comp=Z,404nm,1.4s						
DZM	**Mont Dzumac**	**17.35**	**146**	*e*Pn	**P**	**17 04 12.2**	**+1.3**
	comp=Z,400nm,1.4s						
DZM				*e*S	**Sn**	**17 07 21.0**	**-1.0**
	comp=Z,1μm,28.8s						
DZM				*e*LQ	LQ	17 07 27.2	
	comp=Z,5μm,28.5s						
DZM				*e*LR	LR	17 08 14.4	
	comp=Z,5μm,27.6s						
DZM	**Mont Dzumac**	**17.35**	**146**	P	**P**	**17 04 11.6**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=334,slow=11,SNR=23						
DZM				LR	LR	17 09 50.8	
	comp=Z,2μm,21.2s,baz=326,slow=34						
DZM	**Mont Dzumac**	**17.35**	**146**	P	**P**	**17 04 10.5**	**-0.4**
EIDS	**Eidsvold**	**18.00**	**194**	P	**P**	**17 04 20.8**	**+2.8**
	baz=18,SNR=7.8						
EIDS	**Eidsvold**	**18.00**	**194**	P	**P**	**17 04 18.5**	**+0.5**
SMPI	**Sarmi**	**18.15**	**288**	P	**P**	**17 04 20.9**	**+1.2**
	comp=Z,4μmcomp=Z,175nm,0.6s						
TARA	**Tarawa**	**19.25**	**62**	P	**Pn**	**17 04 33.8**	**+0.8**
RMQ	**Roma**	**19.73**	**199**	P	**Pn**	**17 04 38.3**	**-0.3**
	baz=20,SNR=71						
QIS	**Mount Isa**	**20.22**	**230**	P	**P**	**17 04 43.2**	**+0.8**
	baz=20,SNR=6.0						
KWAJ	**Kwajalein Atol**	**20.24**	**35**	P	**P**	**17 04 43.4**	**+0.8**
KWAJ				pmax	pmax		
	comp=Z,655nm,1.2s						
KWAJ	**Kwajalein Atol**	**20.24**	**35**		**P**	**17 04 43.4**	**+0.8**
BAKI	**Biak**	**20.87**	**288**	P	**P**	**17 04 50.7**	**+1.3**
	comp=Z,448nm,1.3s						
QLP	**Quilpie**	**21.68**	**210**	P	**P**	**17 04 59.8**	**+1.8**
	baz=22,SNR=22						
KMPI	**Kaimana, Papua**	**22.53**	**279**	P	P	17 05 20.9	+14
ARMA	**Armidale**	**22.78**	**190**	P	**P**	**17 05 11.4**	**+1.5**
	baz=23,SNR=6.3						
ARMA	**Armidale**	**22.78**	**190**	P	**P**	**17 05 10.7**	**+0.8**
ARMA				IAmb	IAmb	17 05 26.3	
	comp=Z,219nm,1.4s						
ARMA				IAMs_20	IAMs_20	17 12 51.8	
	comp=Z,2μm,19.0s						
FUNA	**Funafuti**	**23.01**	**93**	P	**P**	**17 05 12.1**	**-0.2**
FUNA				IAmb	IAmb	17 06 03.1	
	comp=Z,282nm,1.4s						
KDU	**Kakadu**	**23.59**	**256**	P	**P**	**17 05 18.1**	**+0.1**
	baz=24,SNR=8.5						
MSVF	**Nonsavu**	**23.63**	**117**	*i* P	**P**	**17 05 19.1**	**+0.6**
MSVF	**Nonsavu**	**23.63**	**117**	P	**P**	**17 05 17.3**	**-1.2**
MSVF				IAmb	IAmb	17 05 46.1	
	comp=Z,161nm,1.4s						
LHI	**Lord Howe Isla**	**23.69**	**173**	P	**P**	**17 05 17.9**	**-1.0**
LHI				IAmb	IAmb	17 05 21.8	
	comp=Z,197nm,1.3s						
WR0	**Warramunga Arr**	**23.97**	**238**	P	**P**	**17 05 20.6**	**-1.0**
WR0				IAmb	IAmb	17 05 33.3	
	comp=Z,156nm,1.1s						
WB0	**Warramunga Arr**	**24.01**	**238**		**P**	**17 05 21.2**	**-0.8**
WB0				IAmb	IAmb	17 05 45.5	
	comp=Z,271nm,1.4s						
GUMO	**Guam**	**24.01**	**333**	P	**P**	**17 05 21.0**	**-0.9**
GUMO				pmax	pmax		
	comp=Z,1μm,1.7s						
GUMO	**Guam**	**24.01**	**333**	P	**P**	**17 05 21.3**	**-0.7**
	comp=Z,80nm,0.4s,baz=106,slow=8.9,SNR=4.3						
GUMO				LR	LR	17 13 21.2	
	comp=Z,1μm,21.5s,baz=154,slow=33						
GUMO	**Guam**	**24.01**	**333**	P	**P**	**17 05 21.0**	**-0.9**
FAKI	**Fak Fak**	**24.11**	**281**	P	**P**	**17 05 23.2**	**+0.3**
	comp=Z,3μmcomp=Z,267nm,1.4s						
FAKI	**Fak Fak**	**24.11**	**281**	P	**P**	**17 05 21.9**	**-1.1**
WRAB	**Tennant Creek**	**24.12**	**238**	*c* P	**P**	**17 05 22.5**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,149nm,1.6s						
WRAB	**Tennant Creek**	**24.12**	**238**	P	**P**	**17 05 22.1**	**-0.8**
WB2	**Warramunga Arr**	**24.12**	**238**	P	**P**	**17 05 22.4**	**-0.6**
WRA	**Warramunga Arr**	**24.13**	**238**	P	**P**	**17 05 22.9**	**-0.2**
	comp=Z,42nm,1.0s,baz=64,slow=10.0,SNR=34						
WRA				PcP	**PcP**	**17 09 05.2**	**+1.5**
	comp=Z,13nm,1.0s,baz=64,slow=1.9,SNR=6.3						
WRA				S	**S**	**17 09 36.8**	**-2.0**
	comp=Z,4.4nm,1.2s,baz=64,slow=19,SNR=3.3						
WRA	**Warramunga Arr**	**24.13**	**238**	IAmb	IAmb	17 05 23.5	
	comp=Z,3.1nm,1.1s						
SAUI	**Saumlaki**	**24.42**	**268**	P	**P**	**17 05 28.4**	**+2.6**
	comp=Z,8μmcomp=Z,13μmcomp=Z,912nm,1.5s						
SAUI	**Saumlaki**	**24.42**	**268**	P	**P**	**17 05 24.5**	**-1.3**
MTN	**Manton Dam**	**24.91**	**257**	P	**P**	**17 05 32.6**	**+2.4**
	baz=25,SNR=6.7						
MTN	**Manton Dam**	**24.91**	**257**	P	**P**	**17 05 29.7**	**-0.4**
MTN				IAmb	IAmb	17 05 40.6	
	comp=Z,138nm,1.1s						
CMSA	**Cobar Meteorol**	**25.41**	**201**	P	**P**	**17 05 34.2**	**-0.4**
	baz=26,SNR=43						
SIJI	**Sorong**	**25.57**	**285**	P	**P**	**17 05 35.8**	**-0.5**
	comp=Z,86nm,1.1s,baz=91,slow=7.0,SNR=15						
SWI	**Sorong**	**25.58**	**285**	P	**P**	**17 05 36.7**	**+0.4**
	comp=Z,117nm,1.1s						
AS31	**Alice Springs**	**26.33**	**231**	P	**P**	**17 05 41.7**	**-1.4**
ASAR	**Alice Springs**	**26.33**	**231**	P	**P**	**17 05 42.0**	**-1.1**
	comp=Z,2.6nm,0.6s,baz=63,slow=9.0,SNR=11						
ASAR				PcP	**PcP**	**17 09 10.0**	**+1.3**
	comp=Z,2.9nm,0.8s,baz=56,slow=2.3,SNR=3.8						
SARN	**Sarigan**	**26.42**	**338**	P	**P**	**17 05 42.6**	**-1.2**
SARN				IAmb	IAmb	17 06 21.6	
	comp=Z,195nm,1.2s						
YNG	**Young**	**27.20**	**194**	P	**P**	**17 05 53.3**	**+2.6**
	baz=27,SNR=6.2						
MSAI	**Masohi**	**27.27**	**278**	P	P	17 06 02.8	+11
STKA	**Stephens Creek**	**27.36**	**207**	P	**P**	**17 05 54.7**	**+2.4**
	baz=28,SNR=8.1						
STKA	**Stephens Creek**	**27.36**	**207**	P	**P**	**17 05 51.9**	**-0.4**
STKA				pmax	pmax		
	comp=Z,18nm,1.0s						
STKA				MLR	MLR		
	comp=Z,300nm,22.0s						
STKA	**Stephens Creek**	**27.36**	**207**	P	**P**	**17 05 52.6**	**+0.4**
	comp=Z,19nm,0.8s,baz=338,slow=7.3,SNR=5.1						
STKA				LR	LR	17 17 02.6	
	comp=Z,1μm,18.1s,baz=23,slow=37						
STKA	**Stephens Creek**	**27.36**	**207**	P	**P**	**17 05 51.9**	**-0.4**
KNRA	**Kununurra**	**27.70**	**251**	P	**P**	**17 05 55.9**	**+0.5**
	baz=28,SNR=4.0						
**

comp=Z,94nm,1.1s
SPSI Sidrap Palu 36.20 274 P **P** **17 07 09.0 -1.0**
comp=Z,725nmcomp=Z,63nm,1.1s
BKZ Black Stump Fm 36.20 153 P **P** **17 07 11.9 +2.2**
BKZ IAmb IAmb 17 07 21.6
comp=Z,84nm,1.5s
BKZ IAMs_20 IAMs_20 17 21 06.1
comp=Z,2µm,19.0s
TTSI Tana Toraja 36.28 276 P **P** **17 07 10.9 +0.2**
comp=Z,908nmcomp=Z,72nm,1.2s
MPSI Mapaga 36.87 281 P **P** **17 07 15.0 -0.7**
comp=Z,2µmcomp=Z,187nm,1.4s
THZ Tophouse 36.93 159 P **P** **17 07 15.2 -0.7**
THZ IAmb IAmb 17 07 20.2
comp=Z,60nm,1.0s
TUWZ Tuamarina 37.02 157 P **P** **17 07 16.1 -0.5**
BSWZ Blackbirch Sta 37.24 158 P **P** **17 07 16.8 -1.7**
JCJ Chichijima 37.25 339 P **P** **17 07 16.7 -2.0**
comp=Z,98nm,0.4s,baz=237,slow=4.7,SNR=26
PSAD2 Pilbara Seismi 37.28 245 IAMs_20 IAMs_20 17 23 29.1
comp=Z,2µm,22.0s
PSAD1 Pilbara Seismi 37.35 245 IAMs_20 IAMs_20 17 23 14.1
comp=Z,1µm,19.0s
PSAA2 Pilbara Seismi 37.37 245 IAMs_20 IAMs_20 17 25 28.4
comp=Z,1µm,21.0s
PSA00 Pilbara Seismi 37.37 245 P **P** **17 07 19.1 -0.8**
PSA00 IAmb IAmb 17 07 30.5
comp=Z,62nm,0.9s
PSAC3 Pilbara Seismi 37.40 245 IAMs_20 IAMs_20 17 23 01.3
comp=Z,1µm,19.0s
MSWZ Moikau Station 37.52 156 P **P** **17 07 18.9 -2.0**
LTZ Lake Taylor 37.61 160 P **P** **17 07 20.4 -1.3**
LTZ IAmb IAmb 17 07 26.5
comp=Z,163nm,1.5s
PLAI Plampang 37.78 266 P **P** **17 07 22.3 -1.1**
comp=Z,831nmcomp=Z,87nm,0.9s
OTRP Odiongan 39.26 300 *eP* **P** **17 07 34.7 -1.3**
SMKI Samarinda 39.32 279 P **P** **17 07 38.2 +1.8**
comp=Z,3µmcomp=Z,184nm,1.4s
JAGI Jajag, Banyuwa 41.37 266 P **P** **17 07 51.9 -1.5**
comp=Z,84nm,1.2s
JAGI Jajag, Banyuwa 41.37 266 P **P** **17 07 49.7 -3.7**
JAGI IAmb IAmb 17 07 52.5
comp=Z,80nm,1.0s
PALP Palanan 41.40 307 *eP* **P** **17 07 53.8 +0.3**
BATP Bataraza 41.48 293 *eP* **P** **17 07 52.9 -1.4**
CAUP Cauayan 41.81 306 *eP* **P** **17 07 59.9 +3.1**
KKM Kota Kinabalu 41.99 288 P **P** **17 07 57.9 -0.6**
KKM IAmb IAmb 17 08 00.1
comp=Z,210nm,1.6s
SMPP San Manuel, Pa 42.31 304 *eP* **P** **17 07 59.9 -1.0**
APYP Conner 42.78 307 *eP* P 17 07 56.4 -8.3
MORW Morawa 43.03 235 IAMs_20 IAMs_20 17 25 09.6
comp=Z,1µm,20.0s
NWAO Narrogin (SRO) 43.64 230 P **P** **17 08 11.4 -0.2**
baz=44,SNR=3.6
NWAO Narrogin (SRO) 43.64 230 P **P** **17 08 10.6 -1.0**
NWAO pmax pmax
comp=Z,41nm,1.2s
NWAO MLR MLR
comp=Z,900nm,19.0s
NWAO Narrogin (SRO) 43.64 230 P **P** **17 08 11.1 -0.5**
comp=Z,13nm,0.8s,baz=52,slow=5.7,SNR=5.1
NWAO Narrogin (SRO) 43.64 230 P **P** **17 08 10.2 -1.4**
NWAO Narrogin (SRO) 43.64 230 P **P** **17 08 10.6 -1.0**
NWAO IAmb IAmb 17 08 22.1
comp=Z,41nm,1.2s
NWAO IAMs_20 IAMs_20 17 25 24.8
comp=Z,934nm,19.0s
PWJI Pagerwojo 43.72 267 P **P** **17 08 12.2 -0.2**
comp=Z,48nm,1.2s
JOW Kunigami 43.72 323 P **P** **17 08 12.4 +0.1**
JOW IAmb IAmb 17 08 14.9
comp=Z,62nm,1.2s
NGJI Ngawi 44.09 268 P **P** **17 08 14.0 -1.5**
PCJI Pacitan 44.33 266 P **P** **17 08 16.4 -0.9**
comp=Z,2µmcomp=Z,151nm,1.5s
RAR Rarotonga 44.69 112 LR LR 17 23 24.5
comp=Z,915nm,20.4s,baz=268,slow=31
SBUM Sibu 44.82 281 P **P** **17 08 20.3 -1.0**
SBUM Sibu 44.82 281 P **P** **17 08 23.0 +1.7**
STKI Sintang 45.04 278 P **P** **17 08 24.2 +1.2**
comp=Z,20µmcomp=Z,66nm,1.3s
YOJ Yonaguni jima 45.46 316 IAMs_20 IAMs_20 17 23 49.8
comp=Z,986nm,20.0s
YULB Yu-li 45.98 313 P **P** **17 08 29.9 -0.5**
YULB IAmb IAmb 17 09 06.2
comp=Z,106nm,1.6s
YULB IAMs_20 IAMs_20 17 24 02.0
comp=Z,793nm,21.0s
NACB Ninganchiao 46.26 314 P **P** **17 08 32.3 -0.1**
NACB IAmb IAmb 17 08 35.5
comp=Z,38nm,0.7s
TPUB Ta-pu 46.41 313 P **P** **17 08 33.2 -0.5**
TPUB IAMs_20 IAMs_20 17 24 26.5
comp=Z,781nm,21.0s
KSM Kuching 46.47 280 P **P** **17 08 33.6 -0.7**
KSM IAmb IAmb 17 08 35.8
comp=Z,61nm,1.0s
KSM Kuching 46.47 280 P **P** **17 08 35.0 +0.7**
SSLB Suanglung 46.48 314 P **P** **17 08 33.9 -0.3**
SSLB IAmb IAmb 17 08 36.5
comp=Z,24nm,0.6s
SSLB IAMs_20 IAMs_20 17 23 55.1
comp=Z,1µm,22.0s
INU Inuyama 46.57 339 P **P** **17 08 34.5 -0.2**
INU IAMs_20 IAMs_20 17 24 29.4
comp=Z,842nm,22.0s
YHNB Yeheng 46.73 315 P **P** **17 08 36.2 -0.1**
YHNB IAMs_20 IAMs_20 17 24 48.4
comp=Z,1µm,21.0s
TATO Taipei 46.84 315 P **P** **17 08 36.2 -0.9**
TATO Taipei 46.84 315 IAMs_20 IAMs_20 17 25 15.3
comp=Z,1µm,21.0s
MJAR Matsushiro Arr 47.23 340 P **P** **17 08 39.3 -0.6**
comp=Z,56nm,0.6s,baz=164,slow=7.0,SNR=210
MJAR PcP **PcP** **17 10 12.2 +1.3**
comp=Z,9.6nm,1.0s,baz=164,slow=4.8,SNR=2.6
MAJO Matsushiro 47.23 340 *i* P **P** **17 08 39.5 -0.4**
MAJO pmax pmax
comp=Z,123nm,0.7s
MAJO Matsushiro 47.23 340 P **P** **17 08 38.6 -1.3**
MAT Matsushiro 47.23 340 P **P** **17 08 39.5 -0.4**
MAT S **S** **17 15 30.6 0.0**
MJB9 Matsu-Tunnel 47.24 340 P **P** **17 08 39.5 -0.5**
JNU Nakatsue 47.25 331 P **P** **17 08 39.9 -0.2**
CISI Cisompet, Garu 47.69 267 P **P** **17 08 43.5 -0.4**
comp=Z,2µmcomp=Z,157nm,1.5s
CISI Cisompet, Garu 47.69 267 P **P** **17 08 42.3 -1.7**
LEM Lembang 47.94 268 P **P** **17 08 45.3 -0.7**
comp=Z,31nm,0.8s,baz=86,slow=7.1,SNR=10
LEM Lembang 47.94 268 P **P** **17 08 46.5 +0.5**
comp=Z,37nm,1.1s
TPI Tanjungpandan 48.34 273 P **P** **17 08 50.1 +1.2**
comp=Z,724nmcomp=Z,49nm,1.4s
CBJI Citeko 48.73 268 P **P** **17 08 51.4 -0.5**
comp=Z,118nm,0.8s
KNMB Chin-men Tao 48.74 312 P **P** **17 08 51.3 -0.5**
KNMB IAmb IAmb 17 08 53.8
comp=Z,65nm,1.5s
DBJI Dramaga 48.82 268 P **P** **17 08 51.5 -1.1**
comp=Z,78nm,1.1s
QZH Quanzhou 48.88 313⇑ *i* P **P** **17 08 53.3 +0.5**
QZH pmax pmax
comp=Z,410nm,5.6s
SSE Sheshan 51.09 321 P **P** **17 09 09.3 -0.2**
SSE IAmb IAmb 17 09 11.3
comp=Z,61nm,1.3s
KASI Kota Agung 51.14 269 P **P** **17 09 09.5 -0.7**
comp=Z,61nm,1.2s
DLV T Lat 51.15 292 P **P** **17 09 10.0 -0.5**
MDSI Maura Dua 51.56 271 P **P** **17 09 12.4 -1.0**
comp=Z,586nmcomp=Z,45nm,1.3s
TJN Taejon 51.57 330 *i* P **P** **17 09 12.5 -0.5**
KSRS Korea Array 52.17 332 P **P** **17 09 17.6 +0.2**
comp=Z,13nm,0.5s,baz=146,slow=7.6,SNR=68
KSRS PcP **PcP** **17 10 30.7 +1.8**
comp=Z,2.8nm,0.7s,baz=142,slow=4.7,SNR=3.1
KSRS LR LR 17 29 58.0
comp=Z,151nm,20.5s,baz=146,slow=34
KS19 Wonju Array Si 52.23 332 P **P** **17 09 17.7 -0.2**
KS19 IAmb IAmb 17 09 24.7
comp=Z,114nm,1.4s
YUK Yuzh-Kuril'sk 52.48 351 P **P** **17 09 16.9 -2.7**
YUK *e* 17 10 25.8
YUK pmax pmax
comp=Z,186nm,1.0s
QIZ Qiongzhong 52.74 301 P **P** **17 09 23.0 +1.0**
QIZ S **S** **17 16 43.5 -4.4**
QIZ pmax pmax
comp=Z,37nm,1.0s
QIZ LR LR
comp=Z,330nm,22.6s
QIZ LR LR
comp=Z,450nm,21.6s
QIZ LR LR
comp=Z,840nm,21.6s
QIZ Qiongzhong 52.74 301 P **P** **17 09 22.1 +0.1**
QIZ IAmb IAmb 17 09 24.5
comp=Z,60nm,1.2s
QIZ Qiongzhong 52.74 301 IAMs_20 IAMs_20 17 28 01.3
comp=Z,1µm,22.0s
INCN Inchon 52.81 331 P **P** **17 09 21.5 -0.7**
INCN pmax pmax
comp=Z,139nm,1.3s
INCN Inchon 52.81 331 P **P** **17 09 21.5 -0.7**
INCN IAmb IAmb 17 09 24.3
comp=Z,139nm,1.3s
MYKOM Kota Tinggi 52.85 278 P **P** **17 09 22.3 -0.7**
MYKOM IAmb IAmb 17 09 24.2
comp=Z,74nm,1.3s
MYKOM Kota Tinggi 52.85 278 P **P** **17 09 23.0 +0.1**
NJ2 Nanjing 53.21 320 *eP* **P** **17 09 26.8 +1.6**
NJ2 pmax pmax
comp=Z,25nm,0.5s
NJ2 LR LR
comp=Z,1µm,22.7s
NJ2 LR LR
comp=Z,660nm,24.6s
NJ2 LR LR
comp=Z,950nm,18.0s
KUR Kuril'sk 53.37 353 *i* P **P** **17 09 26.0 -0.2**
PPT Papeete 53.83 106 LR LR 17 27 30.3
comp=Z,342nm,21.6s,baz=274,slow=30
PPT2 Papeete2 53.83 106 *eS* **S** **17 17 01.0 -2.1**
comp=Z,284nm,26.2s
PPT2 *e*LQ LQ 17 22 42.0
comp=Z,2µm,23.8s
PPT2 *e*LR LR 17 25 02.0
comp=Z,891nm,23.5s
TBI Tubuai 54.45 113 *e*LQ LQ 17 23 02.8
comp=Z,4µm,33.0s
TBI *e*LR LR 17 25 19.6
comp=Z,2µm,29.8s
KRJI Kerinci 54.56 273 P **P** **17 09 35.4 -0.2**
comp=Z,2µmcomp=Z,104nm,1.1s
JRMM Jerantut 54.62 280 P **P** **17 09 37.0 +1.1**
KKH Kailua Kona 54.63 59 P **P** **17 09 35.5 -0.3**
KKH Kailua Kona 54.63 59 P **P** **17 09 35.5 -0.3**
SDSI Sungai Dareh 54.76 274 P **P** **17 09 36.2 -0.8**
comp=Z,3µmcomp=Z,89nm,1.1s
UBPT Khong Chiam 55.07 295 P **P** **17 09 39.5 +0.4**
UBPT IAmb IAmb 17 09 41.0
comp=Z,36nm,1.0s
WHN Wuhan 55.24 316⇓ P **P** **17 09 41.0 +0.9**
WHN S S 17 17 10.5 -11
WHN pmax pmax
comp=Z,380nm,2.2s
WHN LR LR
comp=Z,2µm,26.2s
VLA Vladivostok 55.29 339 *c i* P **P** **17 09 41.0 +0.9**
VLA pmax pmax
comp=Z,288nm,1.4s
BKNI Bangkinang 55.35 276 P **P** **17 09 40.4 -0.9**
TEY Ternei 55.48 343‖ *eP* **P** **17 09 42.1 +0.6**
TEY pmax pmax
comp=Z,40nm,1.4s
TEY pmax pmax
comp=N,20nm,1.5s
TEY pmax pmax
comp=E,10.0nm,2.0s
PDSI Padang 55.72 274 P **P** **17 09 42.5 -1.4**
comp=E,546nmcomp=E,27nm,1.6s
YSS Yuzh-Sakhalins 55.85 349 *eP* **P** **17 09 45.0 +0.9**
YSS *e* 17 09 55.7
YSS *e* 17 11 51.3
YSS *eS* **S** **17 17 30.1 +1.2**
YSS pmax pmax
comp=Z,40nm,1.0s
YSS pmax pmax
comp=Z,400nm,4.9s
YSS pmax pmax
comp=N,200nm,3.8s
YSS smax smax
comp=E,200nm,11.2s
YSS MLR MLR
comp=Z,800nm,17.0s
YSS MLR MLR
comp=N,400nm,16.0s
YSS MLR MLR
comp=E,300nm,18.0s
YSS Yuzh-Sakhalins 55.85 349 P **P** **17 09 44.3 +0.2**
YSS IAMs_20 IAMs_20 17 29 15.4
comp=Z,928nm,22.0s
IPM Ipoh 56.16 281 P **P** **17 09 45.2 -1.8**
IPM IAmb IAmb 17 09 47.9
comp=Z,43nm,1.1s
IPM PcP **PcP** **17 10 45.9 +1.2**
IPM Ipoh 56.16 281 P **P** **17 09 47.0 0.0**
USA0B Ussuriysk Arra 56.19 339 P **P** **17 09 46.6 0.0**
USA0B pmax pmax
comp=Z,207nm,1.3s
USA0B Ussuriysk Arra 56.19 339 P **P** **17 09 46.6 0.0**
USRK Ussuriysk Ar. 56.19 339 P **P** **17 09 47.4 +0.7**
comp=Z,103nm,1.1s,baz=162,slow=5.7,SNR=55
DL2 Dalian 56.42 328 P **P** **17 09 50.5 +2.1**
DL2 sP pwP 17 10 10.5 +7.2
DL2 *eS* **S** **17 17 39.0 +2.1**
DL2 pmax pmax
comp=Z,42nm,1.0s
DL2 LR LR
comp=Z,530nm,14.4s
DL2 LR LR
comp=Z,480nm,16.2s
DL2 LR LR
comp=Z,770nm,19.4s
KULM Kulim 56.70 282 P **P** **17 09 49.8 -1.1**
KULM IAmb IAmb 17 09 51.6
comp=Z,47nm,1.1s
KULM Kulim 56.70 282 P **P** **17 09 51.0 +0.1**
SISI Saibi 57.01 274 P **P** **17 09 52.7 -0.4**
comp=Z,566nmcomp=Z,24nm,1.1s
MDJ Mudanjiang 57.42 338 P **P** **17 09 56.0 +0.7**
MDJ pP sP 17 10 10.3 +0.6
MDJ sP pwP 17 10 16.5 +7.8
MDJ S **S** **17 17 50.5 +0.7**
MDJ pmax pmax
comp=Z,79nm,1.2s
MDJ pmax pmax
comp=Z,320nm,5.0s
MDJ LR LR
comp=Z,660nm,17.1s
MDJ LR LR
comp=Z,530nm,25.6s
MDJ LR LR
comp=Z,560nm,19.9s
MDJ Mudanjiang 57.42 338 P **P** **17 09 55.5 +0.2**
MDJ IAmb IAmb 17 09 57.7
comp=Z,99nm,1.2s
SNY Shenyang 57.67 332⇑ P **P** **17 09 55.3 -1.9**
SNY S S 17 17 41.0 -12
SNY pmax pmax
comp=Z,27nm,1.3s
SNY LR LR
comp=Z,450nm,17.8s
SNY LR LR
comp=Z,650nm,21.0s
SNY LR LR
comp=Z,890nm,16.4s
RPSI Rantau Prapat 57.85 278 P **P** **17 09 57.5 -1.5**
PSI Prapat 57.87 278 P **P** **17 09 57.5 -1.8**
PSI pmax pmax
comp=Z,40nm,1.5s
PSI Prapat 57.87 278 P **P** **17 09 58.0 -1.3**
comp=Z,5.6nm,0.8s,baz=134,slow=6.2,SNR=9.6
COCO West Island 58.29 261 P **P** **17 10 00.4 -1.6**
COCO pmax pmax
comp=Z,288nm,1.3s
COCO West Island 58.29 261 P **P** **17 10 00.4 -1.6**
CN2 Changchun 58.40 334 *eP* **P** **17 10 03.0 +0.8**
CN2 *es*P pwP 17 10 26.0 +8.6
CN2 *eS* **S** **17 18 00.8 -1.9**
CN2 pmax pmax
comp=Z,50nm,1.3s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=Z,230nm,18.0s
CN2 LR LR
comp=Z,420nm,18.0s
CN2 LR LR
comp=Z,450nm,18.0s
ENH Enshi 58.54 313 P **P** **17 10 01.6 -2.0**
ENH IAmb IAmb 17 10 05.8
comp=Z,116nm,1.6s
ENH IAMs_20 IAMs_20 17 33 03.5
comp=Z,778nm,21.0s
GYA Guiyang 58.75 307⇑ *i* P **P** **17 10 05.8 +0.6**
GYA pP sP 17 10 17.5 -0.7
GYA S **S** **17 18 09.0 +0.8**
GYA SS **SS** **17 22 00.8 -1.2**
GYA pmax pmax
comp=Z,20nm,0.6s
GYA pmax pmax
comp=Z,360nm,5.8s
GYA LR LR
comp=Z,420nm,19.1s
GYA LR LR
comp=Z,440nm,19.1s
GYA LR LR
comp=Z,670nm,20.4s
SLVN Son La 58.76 301 P **P** **17 10 04.5 -0.7**
SLVN IAmb IAmb 17 10 07.8
comp=Z,53nm,1.1s
SLVN IAMs_20 IAMs_20 17 31 59.7
comp=Z,760nm,22.0s
GSI Gunungsitoli 58.93 276 P **P** **17 10 05.7 -0.8**
comp=Z,1µmcomp=Z,129nm,1.0s
GSI Gunungsitoli 58.93 276 P **P** **17 10 04.3 -2.2**
PBKT Sadao Pong 59.57 294 P **P** **17 10 09.8 -1.1**
PBKT IAmb IAmb 17 10 13.1
comp=Z,28nm,0.7s
TYV Tymovskoe 59.63 350 *eP* **P** **17 10 12.4 +1.8**
TYV pmax pmax
comp=Z,33nm,1.4s
TPTI 59.67 278 P **P** **17 10 10.5 -1.1**
comp=Z,6.7nm,1.0s
BJT Baijiatuau 60.18 325 P **P** **17 10 14.4 -0.2**
BJT pmax pmax
comp=Z,13nm,1.1s
BJT MLR MLR
comp=Z,400nm,20.0s
BJT Baijiatuau 60.18 325 P **P** **17 10 14.4 -0.2**
BJI Beijing 60.19 326 P **P** **17 10 14.5 -0.2**
BJI pP **sP** **17 10 28.8 -0.4**
BJI sP **pwP** **17 10 34.8 +5.2**
MLSI Meulaboh, Aceh 60.62 279 P **P** **17 10 17.2 -1.0**
comp=Z,83nm,1.0s
KLR Kul'dur 60.70 342 *c i* P **P** **17 10 18.3 +0.3**
KLR pmax pmax
comp=Z,187nm,1.5s
PET Petropavlovsk 60.72 2 *eP* **P** **17 10 18.9 +0.9**
PET *eS* **S** **17 18 33.5 +1.3**
PET pmax pmax
comp=Z,68nm,1.1s
PET Petropavlovsk 60.72 2 P **P** **17 10 17.6 -0.4**
PEA0B Petropavlovsk- 60.77 1 P **P** **17 10 19.1 +0.7**
PEA0B pmax pmax
comp=Z,120nm,1.0s
PEA0B Petropavlovsk- 60.77 1 P **P** **17 10 19.1 +0.7**
PETK Petropavlovsk- 60.77 1 P **P** **17 10 19.6 +1.1**
comp=Z,54nm,0.6s,baz=146,slow=6.8,SNR=157
PETK LR LR 17 34 11.3
comp=Z,876nm,20.5s,baz=190,slow=34
GRNR Gornyy 60.82 346⇑ *i* P **P** **17 10 19.7 +0.9**
GRNR *e* 17 12 33.5
GRNR *eS* **S** **17 18 36.5 +2.8**
GRNR pmax pmax
comp=Z,40nm,1.3s
GRNR smax smax
comp=E,2.0nm,1.1s
XAN Xi'an 61.01 316 P **P** **17 10 20.0 -0.5**
XAN pP pwP 17 10 36.5 +1.4
XAN pmax pmax
comp=E,17nm,1.6s
XAN pmax pmax
comp=E,380nm,5.3s
XAN LR LR
comp=E,530nm,19.5s
XAN LR LR
comp=E,600nm,19.5s
XAN Xi'an 61.01 316 P **P** **17 10 20.0 -0.5**
XAN pmax pmax
comp=Z,27nm,1.3s
XAN MLR MLR
comp=Z,700nm,20.0s
XAN Xi'an 61.01 316 P **P** **17 10 19.9 -0.5**
XAN Xi'an 61.01 316 IAMs_20 IAMs_20 17 34 23.4
comp=Z,685nm,20.0s
KMI Kunming 61.30 304 P **P** **17 10 24.0 +1.1**
KMI pP pwP 17 10 39.5 +2.3
KMI sP sP 17 10 45.5 +9.4
KMI PP **PP** **17 12 38.3 0.0**
KMI S **S** **17 18 37.5 -3.8**
KMI sS sS 17 19 02.5 +6.0
KMI SS **SS** **17 22 35.5 -6.8**
KMI pmax pmax
comp=Z,62nm,1.1s
KMI pmax pmax
comp=Z,420nm,4.0s
KMI LR LR
comp=Z,430nm,18.5s
KMI LR LR
comp=Z,560nm,21.1s
KMI LR LR
comp=Z,810nm,23.5s
KMI Kunming 61.30 304 P **P** **17 10 23.2 +0.3**
KMI pmax pmax
comp=Z,73nm,1.1s
KMI MLR MLR
comp=Z,700nm,22.0s
KMI Kunming 61.30 304 P **P** **17 10 23.2 +0.3**
KMI Kunming 61.30 304 IAMs_20 IAMs_20 17 33 08.0
comp=Z,737nm,22.0s
CM31 Chiang Mai Arr 62.03 296 P **P** **17 10 27.7 +0.1**
CMAR Chiang Mai Arr 62.03 296 P **P** **17 10 28.4 +0.8**
comp=Z,12nm,0.7s,baz=114,slow=4.7,SNR=97
CMAR LR LR 17 37 15.5
comp=Z,125nm,19.0s,baz=103,slow=36
CMAR PKP2bc 17 39 47.2
comp=Z,0.9nm,0.9s,baz=286,slow=3.9,SNR=4.5
CHTO Chiang Mai 62.15 296 P **P** **17 10 28.5 +0.1**
CHTO pmax pmax
comp=Z,110nm,1.4s
CHTO Chiang Mai 62.15 296 P **P** **17 10 28.5 +0.1**
CD2 Chengdu 63.12 310 P **P** **17 10 35.0 +0.3**
CD2 sP pwP 17 10 54.8 +5.5
CD2 S **S** **17 19 02.5 -1.1**
CD2 SS **SS** **17 23 09.5 -0.7**
CD2 pmax pmax
comp=Z,70nm,0.5s
CD2 pmax pmax
comp=Z,730nm,7.5s
CD2 LR LR
comp=Z,670nm,19.9s
CD2 LR LR
comp=Z,890nm,17.8s
CD2 LR LR
comp=Z,1µm,17.8s
TAOE Nuku Hiva Isla 63.15 96 *e*LR LR 17 29 11.6
comp=Z,806nm,25.4s
HHC Hu-ho-hao-te 63.37 324 *eP* **P** **17 10 37.3 +1.0**
HHC pmax pmax
comp=Z,5.0nm,0.7s
HHC pmax pmax
comp=Z,210nm,7.3s
HHC LR LR
comp=Z,280nm,20.8s
HHC LR LR
comp=Z,200nm,18.0s
HHC LR LR
comp=Z,340nm,19.9s
KIWB Kanaga Island 63.82 18 P **P** **17 10 38.2 -0.7**
BTO Baotou 64.14 323 *eP* **P** **17 10 39.5 -1.8**
HIA Hailar 65.13 335 P **P** **17 10 47.8 +0.3**
HIA pmax pmax
comp=Z,58nm,1.3s
HIA Hailar 65.13 335 P **P** **17 10 47.8 +0.3**

HIA IAmb IAmb 17 10 50.5
comp=Z,58nm,1.3s
LZH Lanzhou 65.62 315 *e*P **P** **17 10 52.0 +0.9**
LZH pP sP 17 11 04.5 -0.8
LZH sP pwP 17 11 10.5 +4.6
LZH pmax pmax
comp=Z,37nm,1.1s
LZH pmax pmax
comp=Z,370nm,5.4s
LZH LR LR
comp=Z,370nm,13.7s
LZH LR LR
comp=Z,440nm,11.9s
LZH LR LR
comp=Z,550nm,14.6s
ZEA Zeya 66.01 342 *c e*P **P** **17 10 54.2 +1.1**
ZEA *e* 17 20 48.0
ZEA pmax pmax
comp=N,240nm,1.2s
ZEA pmax pmax
comp=E,58nm,1.2s
ZEA pmax pmax
comp=Z,380nm,1.2s
ZEA pmax pmax
comp=N,600nm,2.0s
ZEA pmax pmax
comp=Z,700nm,2.0s
MA2 Magadan 67.37 357 *i* P **P** **17 11 01.8 +0.2**
MA2 pmax pmax
comp=Z,74nm,0.8s
MA2 Magadan 67.37 357 P **P** **17 11 01.3 -0.3**
MA2 Magadan 67.37 357 IAMs_20 IAMs_20 17 38 04.2
comp=Z,584nm,21.0s
VNDA Vanda 69.67 179 P **P** **17 11 17.9 +2.0**
comp=Z,4.9nm,1.0s,baz=353,slow=2.7,SNR=2.7
VNDA LR LR 17 36 08.4
comp=Z,341nm,21.0s,baz=0.5,slow=31
CIT Chita 69.83 334 *e*P **P** **17 11 18.4 +1.2**
CIT *e* 17 11 28.1
CIT *e* 17 11 45.6
GTA Gaotai 70.04 317 ⇑P **P** **17 11 19.8 +0.9**
GTA pP pP 17 11 30.8 +2.1
GTA sP pwP 17 11 36.5 +2.8
GTA S **S** **17 20 25.0 -2.3**
GTA pmax pmax
comp=Z,21nm,1.3s
GTA pmax pmax
comp=Z,450nm,8.4s
GTA LR LR
comp=Z,390nm,21.6s
GTA LR LR
comp=Z,500nm,22.5s
GTA LR LR
comp=Z,640nm,17.8s
TEZP TEZPUR 70.14 302 *e*P **P** **17 11 19.6 0.0**
TEZP IAmb IAmb 17 11 24.0
comp=Z,36nm,0.7s
ULN Ulaanbaatar 70.26 327 *i* P **P** **17 11 19.6 -0.5**
ULN pmax pmax
comp=Z,57nm,1.5s
ULN Ulaanbaatar 70.26 327 P **P** **17 11 21.0 +0.9**
ULN IAmb IAmb 17 11 25.1
comp=Z,73nm,1.4s
SHL Shillong 70.57 301 P **P** **17 11 22.3 -0.1**
SHL pmax pmax
comp=Z,112nm,0.9s
SHL Shillong 70.57 301 *e*P **P** **17 11 23.2 +0.7**
SHL IAmb IAmb 17 11 27.1
comp=Z,62nm,1.0s
SHL Shillong 70.57 301 P **P** **17 11 22.3 -0.1**
SONM Songino Array 70.60 327 P **P** **17 11 23.1 +1.0**
SONM pmax pmax
comp=Z,46nm,1.4s
SONM Songino Array 70.60 327 P **P** **17 11 23.1 +1.0**
comp=Z,13nm,0.5s,baz=145,slow=6.8,SNR=70
SONM PKPPKP 17 39 22.0
comp=Z,0.6nm,0.9s,baz=270,slow=2.9,SNR=4.1
SONM LR LR 17 44 20.7
comp=Z,296nm,18.1s,baz=135,slow=38
SONM Songino Array 70.60 327 IAmb IAmb 17 11 26.7
comp=Z,46nm,1.4s
SEY Seymchan 70.66 358 *i* P **P** **17 11 22.2 +0.2**
LSA Lhasa 72.56 304 P **P** **17 11 35.8 +1.1**
LSA pmax pmax
comp=Z,28nm,0.5s
LSA Lhasa 72.56 304 P **P** **17 11 35.4 +0.7**
LSA pmax pmax
comp=Z,24nm,0.7s
LSA MLR MLR
comp=Z,500nm,22.0s
LSA Lhasa 72.56 304 P **P** **17 11 35.4 +0.7**
LSA IAmb IAmb 17 11 36.8
comp=Z,24nm,0.7s
LSA IAMs_20 IAMs_20 17 41 00.6
comp=Z,492nm,22.0s
YAK Yakutsk 72.63 347 *c i*P **P** **17 11 34.5 +0.7**
YAK *e**PP **pP** **17 11 45.4 +1.7**
YAK *e* 17 11 49.0
YAK *e* 17 14 12.6
YAK *e*S **SKiKP** **17 21 02.2 -3.4**
YAK *e**SS **SKSac** **17 21 27.6 -8.2**
YAK *e* 17 21 41.0
YAK pmax pmax
comp=Z,179nm,1.1s
YAK pmax pmax
comp=E,30nm,1.3s
YAK pmax pmax
comp=N,64nm,1.3s
YAK pmax pmax
comp=N,69nm,1.9s
YAK pmax pmax
comp=Z,75nm,2.8s
YAK pmax pmax
comp=E,51nm,2.5s
YAK smax smax
comp=N,233nm,3.9s
YAK smax smax
comp=E,130nm,3.9s
YAK Yakutsk 72.63 347 P **P** **17 11 34.4 +0.7**
ZAK Zakamensk 73.75 328 *e*P **P** **17 11 41.1 +0.2**
ZAK pmax pmax
comp=Z,19nm,1.3s
BOD Bodaibo 73.79 338 *e*P **P** **17 11 40.8 0.0**
BOD pmax pmax
comp=Z,56nm,1.6s
GTK Tadong 73.91 301 *e*P **P** **17 11 43.4 +1.1**
GTK IAmb IAmb 17 11 47.8
comp=Z,190nm,1.7s
TLY Talaya 74.31 329 *e*P **P** **17 11 44.5 +0.5**
TLY pmax pmax
comp=Z,44nm,1.4s
TLY MLR MLR
comp=Z,848nm,12.0s
TLY Talaya 74.31 329 P **P** **17 11 44.4 +0.4**
IRK Irkutsk 74.33 330 *e*P **P** **17 11 43.5 -0.6**
IRK pmax pmax
comp=Z,61nm,2.2s
TAPN Taplejung 74.68 301 *e*P **P** **17 11 47.5 +0.5**
comp=Z,300nm,1.2s
ODAN Odare 74.81 300 *e*P **P** **17 11 48.3 +0.6**
comp=Z,306nm,1.1s
BOK Bokaro 75.25 297 *e*P **P** **17 11 50.7 +0.7**
BOK IAmb IAmb 17 11 55.7
comp=Z,38nm,1.2s
RAMN Ramite 75.51 300 *e*P **P** **17 11 52.0 +0.3**
comp=Z,138nm,1.4s
CHLP Challavanipeta 75.58 291 *e*P **P** **17 11 52.8 +0.8**
CHLP IAmb IAmb 17 11 54.1
comp=Z,54nm,1.3s
MOY Mondy 75.67 328 *e*P **P** **17 11 53.0 +1.0**
MOY pmax pmax
comp=Z,81nm,2.9s
JIRN Jiri 76.06 301 *e*P **P** **17 11 55.5 +0.5**
comp=Z,401nm,1.5s
BILL Bilibino 76.09 4 *c i*P **P** **17 11 54.8 +0.9**
BILL *i* 17 12 04.5
BILL *i* 17 14 50.2
BILL pmax pmax
comp=Z,118nm,1.2s
BILL MLR MLR
comp=Z,424nm,18.0s
BILL Bilibino 76.09 4 P **P** **17 11 54.2 +0.4**
BILL PcP **PcP** **17 12 05.8 -0.1**
GUN Gumba 76.39 301 *e*P **P** **17 11 57.3 +0.4**
comp=Z,136nm,0.8s
PALK Pallekele 76.53 279 *i* P **P** **17 11 56.4 -1.2**
PALK pmax pmax
comp=Z,40nm,1.2s
PKI Pulchoki 76.70 301 *e*P **P** **17 11 58.6 0.0**
comp=Z,304nm,1.4s
PKIN Phulchoki 76.71 301 *e*P **P** **17 11 58.7 +0.1**
KKN Kakani 76.87 301 *e*P **P** **17 11 59.9 +0.5**
comp=Z,110nm,1.0s
DMN Daman 76.97 301 *e*P **P** **17 12 00.5 +0.5**
comp=Z,296nm,1.1s
GKN Gorkha 77.47 301 *e*P **P** **17 12 02.9 +0.1**
comp=Z,406nm,1.3s
KDAK Kodiak Island 77.55 25 P **P** **17 12 02.8 +0.5**
KDAK Kodiak Island 77.55 25 P **P** **17 12 03.6 +1.3**
comp=Z,13nm,0.8s,baz=258,slow=14,SNR=3.9
KDAK Kodiak Island 77.55 25 P **P** **17 12 02.8 +0.5**
PVM Polavaram 77.56 290 *e*P **P** **17 12 03.2 0.0**
PVM IAmb IAmb 17 12 04.4
comp=Z,19nm,1.1s
ANM Nome 77.81 16 P **P** **17 12 04.5 +0.9**
ANM pmax pmax
comp=Z,28nm,1.2s
ANM Nome 77.81 16 P **P** **17 12 04.5 +0.9**
KOLN Koldanda 78.30 300 *e*P **P** **17 12 07.5 +0.1**
comp=Z,407nm,1.3s
DANN Dangsing 78.31 301 *e*P **P** **17 12 07.4 -0.2**
MYLAV Mylavaram 78.38 289 *e*P **P** **17 12 08.1 +0.3**
MYLAV IAmb IAmb 17 12 09.2
comp=Z,34nm,1.4s
SKHT Srikalahasti 78.66 286 *e*P **P** **17 12 09.4 0.0**
SKHT IAmb IAmb 17 12 10.8
comp=Z,20nm,1.2s
ADKI Addanki 78.82 288 *e*P **P** **17 12 10.3 +0.1**
ADKI IAmb IAmb 17 12 12.1
comp=Z,9,4nm,1.0s
GGR Gangavaram 79.01 290 *e*P **P** **17 12 11.0 -0.3**
GGR IAmb IAmb 17 12 12.8
comp=Z,28nm,1.3s
CNPM China Poot 79.16 24 P **P** **17 12 12.2 +1.0**
CNPM IAmb IAmb 17 12 32.1
comp=Z,71nm,1.1s
TTA Tatalina 79.52 20 P **P** **17 12 14.2 +1.1**
TTA pmax pmax
comp=Z,21nm,1.2s
TTA Tatalina 79.52 20 P **P** **17 12 14.2 +1.1**
NJS Nagarjunasagar 79.59 288 *e*P **P** **17 12 13.7 -0.7**
NJS IAmb IAmb 17 12 15.4
comp=Z,26nm,1.2s
SRLM Srisailam 79.89 288 *e*P **P** **17 12 15.9 -0.2**
SRLM IAmb IAmb 17 12 17.1
comp=Z,21nm,1.0s
RPR Rampur 80.06 291 *e*P **P** **17 12 16.8 -0.2**
RPR IAmb IAmb 17 12 17.9
comp=Z,22nm,1.2s
WMQ Urumqi 80.12 317 *e*P **P** **17 12 16.5 -0.4**
WMQ pP sP 17 12 31.3 +0.3
WMQ PP **PP** **17 15 20.5 +1.0**
WMQ pmax pmax
comp=Z,20nm,1.3s
WMQ pmax pmax
comp=Z,360nm,4.7s
WMQ LR LR
comp=Z,340nm,24.3s
WMQ LR LR
comp=Z,1μm,27.7s
WMQ LR LR
comp=Z,450nm,21.9s
WMQ Urumqi 80.12 317 P **P** **17 12 17.3 +0.4**
WMQ pmax pmax
comp=Z,43nm,1.1s
WMQ Urumqi 80.12 317 P **P** **17 12 17.3 +0.4**
WMQ IAmb IAmb 17 12 19.2
comp=Z,43nm,1.1s
HYB Hyderabad 80.46 289 *i* P **P** **17 12 19.0 -0.2**
HYBB Hyderabad (bro 80.47 289 *e*P **P** **17 12 18.8 -0.4**
HYBB IAmb IAmb 17 12 19.9
comp=Z,25nm,1.2s
SRSP Sriramsagar 80.96 291 *e*P **P** **17 12 21.3 -0.5**
SRSP IAmb IAmb 17 12 22.5
comp=Z,21nm,1.0s
RDOG Red Dog Mine 81.13 14 P **P** **17 12 22.5 +0.9**
RDOG PcP **pP** **17 12 33.8 +2.0**
RDOG IAmb IAmb 17 12 34.3
comp=Z,48nm,0.8s
URV Uravakonda 81.22 286 *e*P **P** **17 12 23.4 +0.2**
URV IAmb IAmb 17 12 24.6
comp=Z,68nm,1.2s
PMR Palmer 81.22 23 P **P** **17 12 22.7 +0.5**
PMR pmax pmax
comp=Z,20nm,0.8s
PMR Palmer 81.22 23 P **P** **17 12 22.7 +0.5**
TIXI Tiksi 81.37 352 *c i*P **P** **17 12 23.1 +0.3**
TIXI pmax pmax
comp=Z,50nm,1.9s
TIXI Tiksi 81.37 352 P **P** **17 12 22.2 -0.6**
TIXI IAmb IAmb 17 12 25.7
comp=Z,84nm,1.8s
KNK Knik Glacier 81.38 24 P **P** **17 12 23.6 +0.4**
KNK IAmb IAmb 17 12 35.2
comp=Z,47nm,1.2s
SML Sawmill 81.65 23 P **P** **17 12 24.9 +0.3**
SML IAmb IAmb 17 12 37.2
comp=Z,36nm,0.8s
KTH Kantishna Hill 81.70 21 P **P** **17 12 24.1 -0.7**
TRF Thorofare Moun 81.86 21 P **P** **17 12 25.0 -0.8**
TRF IAmb IAmb 17 12 39.3
comp=Z,26nm,1.0s
QSPA South Pole Qui 82.10 180 P **P** **17 12 26.8 -0.2**
QSPA IAmb IAmb 17 12 31.5
comp=Z,111nm,1.7s
RND Reindeer 82.36 22 P **P** **17 12 28.1 -0.3**
RND pmax pmax
comp=Z,29nm,0.9s
RND Reindeer 82.36 22 P **P** **17 12 28.1 -0.3**
RND IAmb IAmb 17 12 39.6
comp=Z,29nm,0.9s
KLRI Killari 82.42 289 *e*P **P** **17 12 28.9 -0.7**
KLRI IAmb IAmb 17 12 29.6
comp=Z,8.8nm,0.8s
MCK McKinley 82.52 22 P **P** **17 12 28.9 -0.2**
MCK pmax pmax
comp=Z,68nm,0.9s
MCK McKinley 82.52 22 P **P** **17 12 28.9 -0.2**
BWN Browne 82.59 21 P **P** **17 12 29.1 -0.2**
MLY Manley 82.65 20 P **P** **17 12 29.9 +0.2**
BHPL Bhopal 82.67 295 *e*P **P** **17 12 29.7 -1.0**
BHPL IAmb IAmb 17 12 33.1
comp=Z,20nm,0.9s
DHY Denali Highway 82.73 23 P **P** **17 12 30.8 +0.4**
CRQM Cirque 83.23 26 P **P** **17 12 33.6 +0.6**
CRQM IAmb IAmb 17 13 04.3
comp=Z,44nm,0.8s
WRH Wood River Hil 83.25 21 P **P** **17 12 32.9 +0.1**
WRH IAmb IAmb 17 12 43.8
comp=Z,21nm,0.9s
GLB Gilahina Butte 83.29 25 P **P** **17 12 33.8 +0.7**
GLB IAmb IAmb 17 12 45.9
comp=Z,34nm,0.9s
VRDI Verde Repeater 83.33 25 P **P** **17 12 34.2 +0.6**
VRDI IAmb IAmb 17 12 46.2
comp=Z,22nm,0.9s
TGL Tana Glacier 83.36 26 P **P** **17 12 34.6 +1.0**
TGL IAmb IAmb 17 13 01.2
comp=Z,36nm,0.7s
CCB Clear Creek Bu 83.45 21 P **P** **17 12 33.0 -0.8**
TCOL CIGO, UAF Yank 83.56 21 P **P** **17 12 34.7 +0.4**
baz=236
COLA College 83.56 21 P **P** **17 12 33.8 -0.5**
COLA pmax pmax
comp=Z,43nm,0.9s
COLA College 83.56 21 P **P** **17 12 33.8 -0.5**
COLA IAmb IAmb 17 12 45.8
comp=Z,43nm,0.8s
MCARA McCarthy VSAT 83.59 25 P **P** **17 12 36.3 +1.7**
MCARA IAmb IAmb 17 13 02.2
comp=Z,36nm,1.1s
HDA Harding Lake 83.63 22 P **P** **17 12 34.3 -0.4**
HDA IAmb IAmb 17 12 46.7
comp=Z,23nm,1.0s
HDA Harding Lake 83.63 22 P **P** **17 12 34.8 +0.1**
baz=237
POKR Poker Plat Res 83.84 21 P **P** **17 12 36.0 +0.1**
baz=236
IL31 83.85 21 P **P** **17 12 35.0 -0.8**
ILAR Eielson Array 83.85 21 P **P** **17 12 35.5 -0.3**
comp=Z,4.0nm,0.4s,baz=238,slow=5.0,SNR=94
MAW Mawson 83.95 203 P **P** **17 12 37.1 +0.8**
baz=84,SNR=8.6
MAW Mawson 83.95 203 P **P** **17 12 36.3 -0.1**
MAW pmax pmax
comp=Z,10.0nm,1.5s
MAW Mawson 83.95 203 P **P** **17 12 35.9 -0.5**
comp=Z,8.3nm,1.0s,baz=84,slow=5.6,SNR=9.7
MAW LR LR 17 46 02.2
comp=Z,86nm,21.4s,baz=65,slow=33
MAW Mawson 83.95 203 P **P** **17 12 36.3 -0.1**
RIDG Independent Ri 84.05 23 P **P** **17 12 37.5 +0.5**
RIDG IAmb IAmb 17 12 49.0
comp=Z,37nm,1.1s
MENT Mentasta 84.08 24 P **P** **17 12 37.5 +0.3**
COLD Coldfoot 84.14 18 P **P** **17 12 38.0 +0.7**
PCA Pinnacle 84.18 27 P **P** **17 12 38.4 +0.7**
PCA IAmb IAmb 17 12 50.6
comp=Z,44nm,1.1s
DOT Dot Lake 84.30 23 P **P** **17 12 38.7 +0.5**
DOT IAmb IAmb 17 12 50.3
comp=Z,26nm,0.9s
SCRK Sand Creek 84.50 23 P **P** **17 12 39.5 +0.1**
SCRK IAmb IAmb 17 12 51.5
comp=Z,22nm,1.0s
SMLA Simla 84.55 302 *e*P **P** **17 12 40.1 0.0**
MK31 Makanchi Array 84.70 319 P **P** **17 12 40.5 -0.1**
MK31 pmax pmax
comp=Z,51nm,1.1s
MK31 Makanchi Array 84.70 319 P **P** **17 12 40.5 -0.1**
MK31 IAmb IAmb 17 12 42.6
comp=Z,51nm,1.1s
MKAR Makanchi Array 84.70 319 *i* P **P** **17 12 41.0 +0.4**
MKAR pmax pmax
comp=Z,35nm,0.9s
MKAR Makanchi Array 84.70 319 P **P** **17 12 41.1 +0.5**
comp=Z,35nm,0.9s,baz=100,slow=6.3,SNR=118
MKAR LR LR 17 52 09.6
comp=Z,198nm,18.8s,baz=88,slow=37
PRP Porcupine Dome 84.74 21 P **P** **17 12 39.3 -1.3**
MAKZ Makanchi 84.91 318 P **P** **17 12 41.7 0.0**
MAKZ pmax pmax
comp=Z,99nm,1.2s
MAKZ Makanchi 84.91 318 P **P** **17 12 41.7 0.0**
POO Poona 85.07 289 *e*P P 17 12 53.0 +10
FYU Fort Yukon 85.39 20 P **P** **17 12 44.3 +0.7**
FYU IAmb IAmb 17 12 56.1
comp=Z,16nm,0.8s
ZAA0 Zalesovo Array 85.45 326 P **P** **17 12 43.1 -1.1**
ZAA0 IAmb IAmb 17 12 45.0
comp=Z,41nm,1.1s
ZALV Zalesovo Beam 85.45 326 P **P** **17 12 43.6 -0.6**
comp=Z,9.8nm,0.4s,baz=110,slow=4.9,SNR=55
ZALV LR LR 17 52 05.2
comp=Z,181nm,19.6s,baz=110,slow=36
DHRM DHARAMSHALA 85.51 303 *e*P **P** **17 12 44.4 -0.9**
EGAK Eagle 85.97 22 P **P** **17 12 47.5 +1.0**
BESE Bessie Mountai 86.08 29 P **P** **17 12 48.5 +1.2**
BESE IAmb IAmb 17 13 00.3
comp=Z,56nm,1.2s
SKAG Skagway 86.19 28 P **P** **17 12 48.3 +0.7**
SKAG IAmb IAmb 17 13 02.2
comp=Z,42nm,1.2s
WHY Whitehorse 86.85 27 P **P** **17 12 51.8 +0.7**
WHY IAmb IAmb 17 13 03.7
comp=Z,50nm,1.9s
KSH Kashi 87.31 310 ⇑*i*P **P** **17 12 56.3 +2.4**
KSH pP sP 17 13 07.0 -0.7
KSH PP **PP** **17 16 22.0 +3.5**
KSH S **S** **17 23 30.8 -1.1**
KSH sS sS 17 23 54.0 +4.5
KSH SS **SS** **17 29 20.8 +3.7**
KSH pmax pmax
comp=Z,120nm,1.3s
KSH pmax pmax
comp=Z,790nm,4.2s
KSH LR LR
comp=Z,260nm,5.4s
KSH LR LR
comp=Z,340nm,6.8s
KSH LR LR
comp=Z,990nm,6.9s
NRN Naryn 87.71 312 P **P** **17 12 55.1 -0.8**
NRN pmax pmax
comp=Z,73nm,1.6s
NRN Naryn 87.71 312 P **P** **17 12 55.1 -0.8**
NRN IAmb IAmb 17 12 58.5
comp=Z,73nm,1.6s
BOOM Boomskoye usch 87.98 313 P **P** **17 12 57.3 +0.3**
BOOM Boomskoye usch 87.98 313 P **P** **17 12 57.3 +0.3**
KURK Kurchatov 88.12 322 P **P** **17 12 56.1 -1.1**
KURK pmax pmax
comp=Z,36nm,1.6s
KURK Kurchatov 88.12 322 P **P** **17 12 56.1 -1.1**
KURK IAmb IAmb 17 12 58.4
comp=Z,36nm,1.6s
NIL Nilore 88.30 304 P **P** **17 12 57.9 -0.7**
NIL pmax pmax
comp=Z,38nm,0.7s
NIL Nilore 88.30 304 P **P** **17 12 57.9 -0.7**
EPYK Eagle Plains 88.32 22 P **P** **17 12 57.8 -0.2**
EPYK Eagle Plains 88.32 22 P **P** **17 12 58.2 +0.2**
baz=246
KZA Kyzart 88.39 313 P **P** **17 13 01.1 +1.8**
SNR=20
O02D Mt. Diablo Mer 88.40 49 P **P** **17 13 02.4 +3.4**
baz=258
M02C Callahan 88.60 48 P **P** **17 13 01.2 +1.4**
baz=258
YBH Yreka Blue Hor 88.77 48 P **P** **17 13 01.4 +0.7**
YBH pmax pmax
comp=Z,13nm,1.3s
YBH Yreka Blue Hor 88.77 48 P **P** **17 13 01.7 +1.0**
comp=Z,11nm,1.4s,baz=212,slow=9.3,SNR=5.0
YBH Yreka Blue Hor 88.77 48 P **P** **17 13 01.4 +0.7**
CHMS Chumysh 88.94 314 P **P** **17 13 02.1 +0.7**
SNR=6.7
UCH Uchtor 88.96 313 P **P** **17 13 03.0 +1.0**
SNR=16
AAK Ala-Archa 89.05 313 *i* P **P** **17 13 01.3 -0.8**
AAK pmax pmax
comp=Z,24nm,1.8s
AAK Ala-Archa 89.05 313 P **P** **17 13 02.6 +0.5**
comp=Z,5.1nm,0.7s,baz=120,slow=5.5,SNR=15
AAK Ala-Archa 89.05 313 P **P** **17 13 03.2 +1.1**
SNR=5.8
AAK Ala-Archa 89.05 313 P **P** **17 13 01.9 -0.2**
AAK IAmb IAmb 17 13 04.5
comp=Z,49nm,1.9s
NLWA Neilton Lookou 89.14 42 IAMs_20 IAMs_20 17 48 49.8
comp=Z,404nm,19.0s
USP Ospenovka 89.17 314 P **P** **17 13 02.8 +0.3**
SNR=6.1
AML Almayashu 89.54 313 P **P** **17 13 05.4 +0.7**
SNR=18
EKS2 Erkin-Say 89.58 313 P **P** **17 13 05.7 +1.2**
SNR=9.6
PKM Mcpherson Peak 89.75 55 P **P** **17 13 08.9 +3.3**
baz=260
J05D Fort Rock, OR 90.14 46 P **P** **17 13 09.6 +2.5**
baz=259
INK Inuvik 90.21 21 P **P** **17 13 06.7 +0.1**
INK pmax pmax
comp=Z,38nm,1.3s
INK Inuvik 90.21 21 P **P** **17 13 06.8 +0.1**
comp=Z,6.8nm,0.4s,baz=268,slow=4.4,SNR=100
INK Inuvik 90.21 21 P **P** **17 13 06.7 +0.1**
INK IAmb IAmb 17 13 18.7
comp=Z,38nm,1.2s
K05A Summer Lake 90.29 47 P **P** **17 13 08.3 +0.4**
K05A IAmb IAmb 17 16 12.4
comp=Z,90nm,1.8s
MOD Modoc Plateau 90.57 48 P **P** **17 13 08.3 -0.9**
CIS Catalina Islan 90.66 57 P **P** **17 13 11.7 +2.0**
baz=261
MDPB Devils Postpil 90.79 52 P **P** **17 13 11.4 +0.9**
OMMB Old Mammoth Mi 90.85 52 P **P** **17 13 11.5 +0.7**
PAHR Pah Rah Range 90.89 50 P **P** **17 13 11.7 +1.0**
ISA Isabella, Lake 90.96 54 P **P** **17 13 11.8 +0.7**
ISA pmax pmax
comp=Z,11nm,1.0s
ISA Isabella, Lake 90.96 54 P **P** **17 13 11.8 +0.7**
ISA Isabella, Lake 90.96 54 P **P** **17 13 13.5 +2.4**
baz=261
MWC Mount Wilson 91.08 56 P **P** **17 13 11.6 -0.2**
MWC pmax pmax

comp=Z,60nm,1.1s
MWC Mount Wilson 91.08 56 P P 17 13 11.6 -0.2
EDW2 Edwards Air Fo 91.23 55 P P 17 13 15.0 +2.7
baz=261,SNR=6.9
BTK Batken 91.32 310 P P 17 13 12.1 -0.5
BTK pmax pmax
comp=Z,39nm,1.4s
BTK Batken 91.32 310 P P 17 13 12.1 -0.5
BTK IAmb IAmb 17 13 14.2
comp=Z,38nm,1.4s
RYN Ryan 91.38 51 P P 17 13 13.3 +0.2
CWC Cottonwood Cre 91.39 54 P P 17 13 15.7 +2.6
baz=261
BFSC Mount Baldy Ra 91.41 56 P P 17 13 14.3 +1.0
baz=261
I07A Izee 91.52 46 P P 17 13 13.4 -0.1
NVAR Mina Array Bea 91.52 52 P P 17 13 15.6 +1.8
comp=Z,2.8nm,0.8s,baz=255,slow=5.6,SNR=18
NVAR LR LR 17 48 43.2
comp=Z,375nm,19.7s,baz=293,slow=32
GAR Garm 91.53 309 P P 17 13 13.4 -0.3
GAR IAmb IAmb 17 13 18.8
comp=Z,44nm,1.5s
LRMC Laurel Mtn Rad 91.57 55 P P 17 13 16.6 +2.6
baz=262,SNR=8.0
NV11 Mina Array Sit 91.63 52 P P 17 13 14.3 +0.1
NV11 IAmb IAmb 17 13 27.9
comp=Z,15nm,1.1s
KVN Kaiserville 91.77 51 P P 17 13 14.5 -0.4
KVN pmax pmax
comp=Z,12nm,1.2s
KVN Kaiserville 91.77 51 P P 17 13 14.5 -0.4
SYO Syowa Base 91.80 199 e P P 17 13 12.4 -1.7
MPMC Manual Prospec 91.81 54 P P 17 13 17.8 +2.6
baz=262,SNR=7.5
WVOR Wild Horse Val 91.88 48 P P 17 13 14.5 -0.7
WVOR Wild Horse Val 91.88 48 P P 17 13 14.5 -0.7
KBL Kabul 91.89 304 P P 17 13 14.1 -1.5
KBL pmax pmax
comp=Z,14nm,1.0s
KBL Kabul 91.89 304 P P 17 13 14.1 -1.5
KBL IAmb IAmb 17 13 15.9
comp=Z,14nm,0.9s
KK31 Karatay Array 92.02 313 P P 17 13 14.0 -1.7
KK31 pmax pmax
comp=Z,37nm,1.6s
KK31 Karatay Array 92.02 313 P P 17 13 14.0 -1.7
KK31 IAmb IAmb 17 13 17.3
comp=Z,37nm,1.6s
KKAR Karatay Array 92.02 313 P P 17 13 14.2 -1.5
KKAR pmax pmax
comp=Z,37nm,1.6s
KKAR Karatay Array 92.02 313 P P 17 13 14.2 -1.5
KKAR IAmb IAmb 17 13 17.4
comp=Z,37nm,1.6s
G08A Pilot Rock 92.09 45 P P 17 13 15.9 -0.2
MONP2 Monument Peak 92.24 57 P P 17 13 19.9 +2.8
baz=262
GSC Goldstone, Bar 92.25 55 P P 17 13 17.2 +0.1
GSC pmax pmax
comp=Z,9.0nm,1.0s
GSC Goldstone, Bar 92.25 55 P P 17 13 17.2 +0.1
GSC Goldstone, Bar 92.25 55 P P 17 13 19.5 +2.5
baz=262
PFO Pinyon Flats O 92.30 57 ce P P 17 13 18.1 +0.7
PFO pmax pmax
comp=Z,13nm,1.1s
PFO Pinyon Flats O 92.30 57 P P 17 13 20.1 +2.7
baz=262
B08A Colville Reser 92.33 42 P P 17 13 16.8 -0.2
FURC Furnace Creek, 92.37 54 P P 17 13 20.3 +2.9
baz=262
CHGR Chuyangaron 92.38 309 P P 17 13 17.2 -0.4
CHGR IAmb IAmb 17 13 24.4
comp=Z,44nm,1.5s
HEC Hector,Ludlow 92.57 55 P P 17 13 21.0 +2.5
baz=262
BELC Belle Mtn. Jos 92.74 56 P P 17 13 22.3 +2.9
baz=262,SNR=6.4
SHOC Shoshone, Teco 92.76 54 P P 17 13 22.1 +2.8
baz=262
TPNV Topopah Spring 92.92 53 P P 17 13 21.1 +0.9
TPNV pmax pmax
comp=Z,14nm,1.0s
TPNV Topopah Spring 92.92 53 P P 17 13 21.1 +0.9
TPNV IAmb IAmb 17 13 33.7
comp=Z,14nm,0.9s
TPNV Topopah Spring 92.92 53 P P 17 13 22.8 +2.5
baz=262
TUQ Turquoise Moun 92.98 55 P P 17 13 23.1 +2.6
baz=262
GMRC Granite Mounta 93.11 55 P P 17 13 23.8 +2.7
baz=263,SNR=6.1
BC3 Big Chuckawall 93.14 57 P P 17 13 24.3 +3.0
baz=263
BMO Blue Mountains 93.19 45 P P 17 13 21.2 0.0
BMO pmax pmax
comp=Z,4.0nm,1.0s
BMO Blue Mountains 93.19 45 P P 17 13 21.2 0.0
IRM Iron Mountain 93.46 56 P P 17 13 25.5 +2.9
baz=263
R11A Troy Canyon, C 93.62 52 P P 17 13 23.1 -0.3
R11A Troy Canyon, C 93.62 52 P P 17 13 25.1 +1.7
baz=263
BRVK Borovoye 93.64 323 P P 17 13 22.1 -0.8
BRVK pmax pmax
comp=Z,25nm,1.5s
BRVK Borovoye 93.64 323 P P 17 13 22.1 -0.8
BRVK IAmb IAmb 17 13 23.5
comp=Z,25nm,1.4s
SHPR Sheep Range 93.73 54 P P 17 13 22.8 -1.2
NEW Newport 93.77 42 P P 17 13 22.8 -0.9
NEW pmax pmax
comp=Z,8.0nm,1.1s
NEW Newport 93.77 42 P P 17 13 24.4 +0.7
comp=Z,1.8nm,0.8s,baz=258,slow=8.5,SNR=3.2
NEW Newport 93.77 42 P P 17 13 22.8 -0.9
NEW Newport 93.77 42 P P 17 13 25.0 +1.3
baz=262
C36M Paulatuk 93.80 20 P P 17 13 23.2 0.0
C36M Paulatuk 93.80 20 P P 17 13 23.8 +0.6
baz=258
ELK Elko 94.18 50 P P 17 13 26.6 +0.6
ELK pmax pmax
comp=Z,19nm,1.5s
ELK Elko 94.18 50 P P 17 13 26.6 +0.6
W13A Hualapai Mount 94.60 55 P P 17 13 28.1 +0.1
LCMT Little Creek M 95.32 53 P P 17 13 30.1 -1.1
KNB Kanab 95.66 54 P P 17 13 32.4 -0.4
KNB pmax pmax
comp=Z,14nm,1.3s
KNB Kanab 95.66 54 P P 17 13 32.4 -0.4
YKA Yellowknife Ar 96.67 28 P P 17 13 37.0 +0.5
comp=Z,5.4nm,0.5s,baz=265,slow=4.8,SNR=112
YKA PKiKP **PKiKP 17 18 14.5 +1.2**
comp=Z,0.3nm,0.5s,baz=263,slow=1.3,SNR=4.6
YKA PKKPbc **PKKPbc 17 30 19.1 -3.2**
comp=Z,0.2nm,0.6s,baz=80,slow=2.8,SNR=3.6
YKA LR LR 17 57 34.9
comp=Z,38nm,18.0s,baz=0.0,slow=36
HRA Herat 97.45 304 P P 17 13 38.2 -2.9
HRA IAmb IAmb 17 13 41.7
comp=Z,22nm,1.5s
BW06 Boulder Array 98.58 48 Pdiff Pdif 17 13 46.2 +0.2
baz=267
PDAR Pinedale Array 98.58 48 P Pdif 17 13 46.7 +0.7
comp=Z,1.0nm,0.8s,baz=231,slow=2.6,SNR=9.3
PDAR LR LR 17 53 43.6
comp=Z,165nm,19.6s,baz=318,slow=33
EGMT Eagleton 98.67 43 P P 17 13 45.2 -0.8
SNAA Sanae 99.38 187 IAMs_20 IAMs_20 18 04 03.7
comp=Z,358nm,19.0s
WSAR Wadi Sarin 99.77 292 P Pdif 17 13 51.1 -0.3
comp=Z,4.4nm,1.0s,baz=144,slow=3.0,SNR=4.9
ARU Arti 100.61 326 P Pdif 17 13 53.0 -1.3
ARU 17 17 59.2
ARU S **SKSac 17 24 27.2 -3.3**
ARU SP **SP 17 26 52.1 -5.9**
GEYT Alibeck 100.97 307 P Pdif 17 13 55.8 -0.7
comp=Z,7.4nm,1.3s,baz=90,slow=1.4,SNR=7.3
ABPO Ambohimpanom 104.88 248 IAMs_20 IAMs_20 17 55 37.1
comp=Z,339nm,20.0s
KLMR Klimovskoe 109.56 332 e P Pdif 17 14 27.5 -6.5
KLMR pmax pmax
comp=Z,15nm,1.5s
KLMR Klimovskoe 109.56 332 e Pdif Pdif 17 14 27.6 -6.5
comp=Z,15nm,1.5s
KLMR AMP 17 14 34.7
KLMR e PP PP 17 18 59.1 -8.6
ARCES ARCESS Array B 110.71 343 PKiKP PKiKP 17 18 39.6 +0.8
comp=Z,1.7nm,0.4s,baz=77,slow=2.5,SNR=22
KIV Kislovodsk 112.14 314 i PKiKP PKiKP 17 18 39.9 -2.5
KIV pmax pmax
comp=Z,12nm,1.0s
KIV MLR MLR
comp=Z,604nm,21.0s
FINES FINESS Array B 115.13 336 PKP PKPdf 17 18 47.5 0.0
comp=Z,3.5nm,0.8s,baz=8.5,slow=3.1,SNR=11
PLCA Paso Flores 115.44 142 PKiKP PKPdf 17 18 49.5 +0.6
PLCA 17 29 22.9
PLCA Paso Flores 115.44 142 PKP PKPdf 17 18 49.6 +0.6
comp=Z,1.0nm,0.5s,baz=270,slow=3.1,SNR=7.5
PLCA PKKPbc **PKKPbc 17 29 23.4 -0.3**
comp=Z,1.6nm,0.9s,baz=358,slow=5.5,SNR=4.8
PLCA Paso Flores 115.44 142 PKPdf 17 18 49.5 +0.6
PLCA PKKPbc 17 29 22.9 -0.9
ANN Anapa 115.63 316 i PKiKP PKiKP 17 18 36.5 -12
FRB Frobisher Bay 115.87 20 PKP PKiKP 17 18 48.6 -0.2
comp=Z,2.8nm,0.5s,baz=290,slow=0.5,SNR=10
LRAL Lakeview Retre 116.89 57 P PKiKP 17 18 52.2 +0.5
baz=278
L48A N Adams 117.12 47 P PKiKP 17 18 52.5 +0.5
baz=285
D48A Paudash Townsh 117.39 41 P PKPdf 17 18 52.2 -0.1
baz=289
N49A Columbus Grove 117.56 48 P PKiKP 17 18 53.6 +0.8
baz=284
W50A Signal Mountai 117.92 54 P PKiKP 17 18 54.2 +0.4
baz=281
T50A Nancy 117.94 52 P PKPdf 17 18 53.1 -0.5
baz=282
V50A Pikevile 118.00 54 P PKiKP 17 18 53.9 +0.1
baz=281
R50A Paris 118.07 51 P PKPdf 17 18 53.8 -0.1
baz=283
S50A Richmond 118.14 51 P PKiKP 17 18 54.3 +0.3
baz=282
KMBO Kilima Mbogo 118.24 264 PKiKP PKiKP 17 18 55.4 +0.2
KMBO Kilima Mbogo 118.24 264 PKP PKiKP 17 18 56.4 +1.2
comp=Z,1.7nm,0.7s,baz=52,slow=19,SNR=4.7
KMBO Kilima Mbogo 118.24 264 PKiKP 17 18 55.4 +0.2
AKASG Malin Array Be 118.81 324 PKP PKPdf 17 18 54.6 -0.3
comp=Z,2.6nm,0.4s,baz=49,slow=2.8,SNR=2.3
N51A Ashland 118.88 47 P PKiKP 17 18 55.6 +0.2
baz=286
X52A Dahlonega 119.17 55 P PKiKP 17 18 56.8 +0.6
baz=281
W53A Cullowhee 119.65 54 P PKiKP 17 18 58.3 +1.1
baz=282
BR131 Keskin Array S 119.69 311 i PKiKP PKPdf 17 18 56.0 -1.1
BRTR Keskin Array B 119.69 311 PKP PKiKP 17 18 57.3 +0.1
comp=Z,1.6nm,0.6s,baz=146,slow=5.0,SNR=10
LSQQ Lebel-sur-Quev 119.69 37 P PKiKP 17 18 56.9 +0.2
baz=295
U53A Fall Branch 119.86 53 P PKiKP 17 18 58.4 +0.9
baz=283,SNR=5.0
N53A Lisbon 120.03 47 P PKiKP 17 18 58.3 +0.6
baz=287
254A Abbeville 120.16 58 P PKiKP 17 18 58.8 +0.7
baz=280
BOSA Boshof 120.21 230 PKiKP PKiKP 17 18 59.1 +0.5
BOSA Boshof 120.21 230 PKP PKiKP 17 18 58.8 +0.2
comp=Z,1.9nm,0.6s,baz=51,slow=2.5,SNR=4.9
BOSA Boshof 120.21 230 PKiKP 17 18 59.1 +0.5
ALGO Algonquin Park 120.25 41 P PKiKP 17 18 57.8 -0.1
baz=292
ANTO Ankara 120.27 312 PKiKP PKPdf 17 18 56.8 -1.3
ANTO Ankara 120.27 312 PKPdf 17 18 56.8 -1.3
E53A Dumoine, Ponti 120.34 40 P PKiKP 17 18 58.4 +0.3
baz=292
SORM Soroca 120.41 322 ⇑PKiKP PKiKP 17 18 58.8 +0.7
SORM Soroca 120.41 322 ⇑P PKiKP 17 18 58.8 +0.7
W54A Cherokee Point 120.45 54 P PKiKP 17 18 59.6 +1.0
baz=283
SUW Suwalki 120.47 330 e PKP PKiKP 17 19 10.6 +13
V54A Nebo 120.48 53 P PKiKP 17 18 59.6 +0.9
baz=283
Q54A Coxs Mills 120.55 49 P PKiKP 17 18 59.1 +0.4
baz=286
R54A Victor 120.64 50 P PKiKP 17 18 59.3 +0.4
baz=285
M54A Oil Creek Stat 120.67 46 P PKiKP 17 18 59.6 +0.7
baz=288
L54A Sinclairville 120.69 45 P PKiKP 17 18 59.4 +0.5
baz=289
NB2 NORSAR Subarra 120.85 341 PKPdf PKPdf 17 18 58.2 -0.4
comp=Z,3.1nm,0.8s,baz=39,slow=1.9
NOA NORSAR Array B 120.85 341 PKP PKiKP 17 18 58.9 +0.2
comp=Z,2.0nm,0.5s,baz=31,slow=1.7,SNR=12
X55A Gracelyn & Ava 121.03 54 P PKiKP 17 19 00.9 +1.2
baz=283
KMSC Kings Mountain 121.12 54 P PKiKP 17 19 01.2 +1.3
baz=283
L55A Hinsdale 121.32 45 P PKiKP 17 19 00.8 +0.6
baz=290
O55A Ligonier 121.33 47 P PKiKP 17 19 00.9 +0.7
baz=288
BLA Blacksburg 121.33 51 P PKiKP 17 19 00.9 +0.5
baz=285
G55A Calabogie 121.38 41 P PKiKP 17 19 00.7 +0.6
baz=293
D55A Sainte-Anne-du 121.46 39 P PKiKP 17 19 00.5 +0.2
baz=295
T56A Rocky Mt 121.68 51 P PKiKP 17 19 01.2 +0.2
baz=285
W56A Indian Trail 121.72 53 P PKiKP 17 19 02.1 +1.0
baz=284
M56A Emporium 121.73 46 P PKiKP 17 19 02.0 +1.0
baz=289
O56A Blue Knob Stat 121.85 47 P PKiKP 17 19 01.7 +0.4
baz=288
D56A ZEC Mazanza, M 121.89 39 P PKiKP 17 19 01.1 0.0
baz=296
SCHQ Schefferville 122.12 28 PKP PKiKP 17 19 01.9 +0.6
comp=Z,2.3nm,0.5s,baz=278,slow=2.4,SNR=5.9
SCHQ Schefferville 122.12 28 PKPdf 17 19 01.0 -0.1
W57A Gilead 122.18 53 P PKiKP 17 19 02.8 +0.9
baz=284
SSPA Standing Stone 122.22 47 P PKiKP 17 19 02.4 +0.5
baz=289
BIZ Bicaz 122.30 322 ⇑P PKiKP 17 19 03.7 +1.8
N57A Milroy 122.42 46 P PKiKP 17 19 03.0 +0.7
baz=289
D57A Chemin Vers le 122.44 38 P PKiKP 17 19 02.5 +0.3
baz=296
BURAR Bucovina Array 122.53 323 ⇑PKiKP PKiKP 17 19 05.0 +2.5
BURAR Bucovina Array 122.53 323 ⇑P PKiKP 17 19 05.0 +2.5
O57A Amberson 122.54 47 P PKiKP 17 19 03.3 +0.7
baz=289
E57A Chemin Saint G 122.55 39 P PKiKP 17 19 02.7 +0.3
baz=296
H57A Richville 122.56 42 P PKiKP 17 19 03.0 +0.5
baz=294
W58A Beeford 122.82 53 P PKiKP 17 19 03.1 -0.1
baz=285
N58A Sunbury 122.99 46 P PKiKP 17 19 03.7 +0.2
baz=290
KWP Kalwaria Pacla 123.02 326 e PKiKP PKiKP 17 19 04.8 +1.5
KWP Kalwaria Pacla 123.02 326 e PKP PKiKP 17 19 04.8 +1.5
KWP Kalwaria Pacla 123.02 326 PKiKP 17 19 03.8 +0.5
D58A Chemin du LacG 123.02 38 P PKiKP 17 19 03.3 0.0
baz=297
O58A Lewisberry 123.08 47 P PKiKP 17 19 04.4 +0.8
baz=290
E58A La Victoria 123.11 39 P PKiKP 17 19 03.7 +0.2
baz=296
L58A Harry Jones Me 123.17 44 P PKiKP 17 19 04.1 +0.3
baz=292
LSZ Lusaka 123.36 246 PKiKP PKiKP 17 19 05.0 0.0
LSZ Lusaka 123.36 246 PKiKP 17 19 05.0 0.0
H58A Gabriels 123.37 41 P PKiKP 17 19 04.2 0.0
baz=294
J59A Piesco 123.54 42 P PKiKP 17 19 04.4 -0.1
baz=294
KOLS Kolonicke sedl 123.62 325 e PKiKP PKiKP 17 19 06.3 +1.8
KOLS Kolonicke sedl 123.62 325 e PKP PKiKP 17 19 06.3 +1.8
M59A Waymart 123.65 45 P PKiKP 17 19 05.4 +0.6
baz=292
ARR Arges 123.91 320 ⇑P PKiKP 17 19 06.8 +1.6
CRVS Cervenica-Dubn 124.09 325 e PKiKP PKiKP 17 19 06.9 +1.5
CRVS Cervenica-Dubn 124.09 325 e PKP PKiKP 17 19 06.9 +1.5
O60A Telford 124.11 46 P PKiKP 17 19 06.8 +1.1
baz=291
F60A Warwick 124.11 39 P PKiKP 17 19 05.8 +0.3
baz=298
N60A Cedar Hill Far 124.13 45 P PKiKP 17 19 06.3 +0.6
baz=292
I60A Shoreham 124.19 42 P PKiKP 17 19 06.8 +1.1
baz=295
E60A Ste Agathe de 124.23 38 P PKiKP 17 19 05.8 +0.1
baz=298
D60A Saint Jean D'O 124.29 37 P PKiKP 17 19 05.7 -0.1
baz=299
OJC Ojcow 124.30 327 e PKiKP PKiKP 17 19 07.3 +1.5
OJC Ojcow 124.30 327 e PKP PKiKP 17 19 07.3 +1.5
DRGR 124.43 323 ⇑PKiKP PKiKP 17 19 07.3 +1.1
DRGR 124.43 323 ⇑P PKiKP 17 19 07.3 +1.1
NIE Niedzica 124.47 326 e PKiKP PKiKP 17 19 07.9 +1.7
NIE Niedzica 124.47 326 e PKP PKiKP 17 19 07.9 +1.7
D61A St Aubert, Com 124.59 37 P PKiKP 17 19 06.7 +0.4
baz=300
MBAR Mbarara 124.74 264 PKiKP PKPdf 17 19 07.4 -0.2
MBAR Mbarara 124.74 264 PKPdf 17 19 07.4 -0.2
E61A Lac Etchemin 124.79 38 P PKiKP 17 19 07.7 +0.9
baz=299
GZR Gura Zlata 125.06 321 ⇑PKiKP PKiKP 17 19 08.4 +0.9
GZR Gura Zlata 125.06 321 ⇑P PKiKP 17 19 08.4 +0.9
LANS Liptovska Anna 125.07 326 e PKiKP PKiKP 17 19 09.6 +2.2
LANS Liptovska Anna 125.07 326 e PKP PKiKP 17 19 09.6 +2.2
D62A Allapoint, All 125.32 36 PKPdf 17 19 07.2 -0.3
D62A Allapoint, All 125.32 36 P PKiKP 17 19 07.6 -0.2
baz=301
SIRR Siria 125.32 323 ⇑P PKiKP 17 19 09.2 +1.2
PSZ Piszkesteto 125.50 325 PKiKP PKPdf 17 19 08.0 +0.1
PSZ Piszkesteto 125.50 325 ⇑P PKiKP 17 19 09.3 +1.0
PSZ Piszkesteto 125.50 325 PKPdf 17 19 08.0 +0.1
HERR Herculane 125.52 321 ⇑P PKiKP 17 19 09.1 +0.8
BZS Buzias 125.67 322 ⇑PKiKP PKiKP 17 19 08.5 -0.1
BZS Buzias 125.67 322 ⇑P PKiKP 17 19 08.5 -0.1
MORC Moravsky Berou 125.74 328 ⇑PKiKP PKiKP 17 19 10.0 +1.3
MORC Moravsky Berou 125.74 328 ⇑P PKiKP 17 19 10.0 +1.3
MORC Moravsky Berou 125.74 328 e PKP PKiKP 17 19 09.7 +1.0
VYHS Vyhne 125.78 326 e PKiKP PKiKP 17 19 09.1 +0.3
VYHS Vyhne 125.78 326 e PKP PKiKP 17 19 09.1 +0.3
OSTC Ostas 125.96 329 e PKP PKiKP 17 19 10.0 +0.9
KRLC Kraliky 125.96 329 e PKiKP PKiKP 17 19 10.6 +1.5
KRLC Kraliky 125.96 329 e PKP PKiKP 17 19 10.6 +1.5
MDVR Moldovita 126.01 321 ⇑P PKiKP 17 19 10.1 +0.7
CHVC Chvalec 126.02 329 e PKP PKiKP 17 19 10.0 +0.8
VTS Vitosha 126.02 318 ⇑PKiKP PKiKP 17 19 10.4 +0.8
VTS Vitosha 126.02 318 ⇑P PKiKP 17 19 10.4 +0.8
VTS Vitosha 126.02 318 PKiKP 17 19 09.3 -0.3
PQI Presque Isle 126.14 36 PKPdf 17 19 09.2 +0.1
JAVC Velka Javorina 126.21 327 e PKP PKiKP 17 19 11.8 +2.1
BSEG Bad Segeberg 126.40 336 e PKPdf PKiKP 17 19 11.7 +1.9
baz=48,slow=1.9
VRAC Vranov 126.52 328 e PKP PKiKP 17 19 11.2 +1.0
LVC Limon Verde 126.63 126 PKP PKiKP 17 19 13.0 +1.3
comp=Z,1.9nm,0.5s,baz=233,slow=10,SNR=2.1
MODS Modra-Piesok 126.70 327 e PKiKP PKiKP 17 19 11.4 +0.8
MODS Modra-Piesok 126.70 327 e PKP PKiKP 17 19 11.4 +0.8
KRUC Moravsky 126.77 328 e PKP PKiKP 17 19 11.4 +0.7
BRG Berggiesshubel 126.88 331 e PKP PKiKP 17 19 11.5 +0.6
comp=Z,21nm,1.0s
BRG Berggiesshubel 126.88 331 e PKiKP PKiKP 17 19 11.5 +0.6
BRG pmax pmax
comp=Z,21nm,1.0s
BRG Berggiesshubel 126.88 331 e PKPdf PKiKP 17 19 12.5 +1.7
baz=48,slow=1.9
BRG ep PKPdf **sPKPdf 17 19 22.9 -1.3**
baz=49,slow=2.0
CLL Collm 127.04 332 i PKiKP PKiKP 17 19 11.4 +0.2
CLL e 17 19 22.0
CLL pmax pmax
comp=Z,14nm,0.8s
CLL Collm 127.04 332 i PKPdf PKiKP 17 19 11.4 +0.2
comp=Z,14nm,0.8s
CLL e 17 19 22.0
CLL Collm 127.04 332 e PKPdf PKiKP 17 19 12.6 +1.5
baz=48,slow=1.9
CLL ep PKPdf **sPKPdf 17 19 23.0 -1.4**
baz=49,slow=2.0
CLL Collm 127.04 332 PKPdf 17 19 10.5 -0.1
GOPC GO Pecny, Ondr 127.08 329 e PKiKP PKiKP 17 19 12.4 +1.1
GOPC GO Pecny, Ondr 127.08 329 e PKP PKiKP 17 19 12.4 +1.1
TREC Trest 127.10 329 e PKiKP PKiKP 17 19 12.4 +1.0
TREC Trest 127.10 329 e PKP PKiKP 17 19 12.4 +1.0
FBE Freiberg 127.13 331 e PKPdf PKiKP 17 19 13.3 +1.9
baz=48,slow=1.9
FBE ep PKPdf **sPKPdf 17 19 23.7 -1.0**
baz=49,slow=2.0
PRU Pruhonice 127.15 330 e PKiKP PKiKP 17 19 12.2 +0.8
PRU Pruhonice 127.15 330 e PKP PKiKP 17 19 12.2 +0.8
PRA Prague 127.16 330 PKiKP PKiKP 17 19 15.4 +4.0
NRDL Niedersach Rie 127.53 334 e PKPdf PKiKP 17 19 13.9 +2.0
baz=48,slow=1.9
NRDL ep PKPdf **sPKPdf 17 19 24.5 -0.8**
baz=49,slow=2.0
ASSE Asse, Remlinge 127.54 334 e PKPdf PKiKP 17 19 13.7 +1.7
baz=48,slow=1.9
PCON Cinco Dias 127.59 93 e P PKiKP 17 19 15.4 +1.3
PBCC Pribram 127.62 330 e PKP PKiKP 17 19 13.6 +1.2
NEUB Neuenburg 127.68 332 e PKPdf PKiKP 17 19 13.8 +1.4
baz=48,slow=1.9
NEUB ep PKPdf **sPKPdf 17 19 24.4 -1.3**
baz=49,slow=2.0
CONA Conrad Observa 127.73 327 ep PKPdf PKiKP 17 19 13.5 +0.7
comp=Z,17nm,1.5s,SNR=6.0
CLZ Clausthal 127.87 334 e PKPdf PKiKP 17 19 14.8 +1.9
baz=48,slow=1.9
CLZ ep PKPdf **sPKPdf 17 19 25.2 -1.0**
baz=49,slow=2.0
TANN Tannenbergstha 127.89 331 e PKPdf PKiKP 17 19 14.4 +1.4
baz=48,slow=1.9
TANN ep PKPdf **sPKPdf 17 19 25.0 -1.3**
baz=49,slow=2.0
GUNZ Gunzen 127.99 331 e PKPdf PKiKP 17 19 14.7 +1.6
baz=48,slow=1.9
GUNZ ep PKPdf **sPKPdf 17 19 25.2 -1.2**
baz=49,slow=2.0
PLN Plauen 127.99 331 e PKPdf PKiKP 17 19 14.6 +1.5
baz=48,slow=1.9
NKC Novy Kostel 128.02 331 e PKiKP PKiKP 17 19 13.7 +0.5
NKC Novy Kostel 128.02 331 e PKP PKiKP 17 19 13.7 +0.5
FNA Florina 128.08 317 PKiKP PKPdf 17 19 11.4 -1.7
FNA MLR MLR
comp=Z,1μm,20.0s
FNA Florina 128.08 317 PKPdf 17 19 11.3 -1.7
MOX Moxa 128.14 332 e PKPdf PKiKP 17 19 14.8 +1.4
baz=48,slow=1.9
MOX ep PKPdf **sPKPdf 17 19 25.4 -1.2**
baz=49,slow=2.0
KHC Kasperske Hory 128.18 329 e PKiKP PKiKP 17 19 14.7 +1.1
KHC e 17 19 24.5
KHC Kasperske Hory 128.18 329 e PKP PKiKP 17 19 14.7 +1.1
KHC ep PKP **pPKPdf 17 19 24.5 +1.2**
KHC Kasperske Hory 128.18 329 PKiKP 17 19 13.2 -0.4
GTTG Gvttingen 128.26 334 e PKPdf PKiKP 17 19 15.5 +1.9
baz=48,slow=1.9
GTTG ep PKPdf **sPKPdf 17 19 25.9 -0.9**
baz=49,slow=2.0
GEC2 GERESS Array S 128.30 329 e PKPdf PKiKP 17 19 15.1 +1.2
baz=48,slow=1.9
GEC2 GERESS Array S 128.30 329 PKPdf 17 19 13.4 +0.2
GERES GERESS Array B 128.30 329 PKP PKiKP 17 19 14.4 +0.5
comp=Z,4.3nm,0.6s,baz=64,slow=1.8,SNR=39
MANZ Manzenberg 128.35 331 e PKPdf PKiKP 17 19 15.4 +1.5
baz=48,slow=1.9
MANZ ep PKPdf **sPKPdf 17 19 25.9 -1.2**
baz=49,slow=2.0
ROTZ Rotzenmuhle 128.45 331 e PKPdf PKiKP 17 19 15.4 +1.3
baz=48,slow=1.9
WET Wettzell 128.53 330 e PKPdf PKiKP 17 19 15.7 +1.5
baz=48,slow=1.9
BETC Betania 128.59 93 e P PKiKP 17 19 25.2 +10
MOA Molln 128.63 328 ep PKPdf PKiKP 17 19 14.6 +0.1
comp=Z,6.6nm,1.2s
IBBN Ibbenburen 128.65 336 e PKPdf PKiKP 17 19 16.1 +1.8
baz=48,slow=1.9
UBBA Unterbreizbach 128.76 333 e PKPdf PKiKP 17 19 16.2 +1.7
baz=48,slow=1.9
SOKA Soboth 128.93 326 ep PKPdf PKiKP 17 19 15.4 +0.2
comp=Z,15nm,1.2s
ORTC Ortega, Tolima 128.94 91 e P PKiKP 17 19 26.1 +10
GUY2C Guyana, Caldas 128.97 90 e P PKiKP 17 19 16.4 -0.4
GRF Grafenberg Arr 128.97 331 e PKPdf PKiKP 17 19 16.5 +1.4
baz=48,slow=1.9
PRAC Prado 129.27 92 e P PKiKP 17 19 17.2 +0.4

BUG	**Bochum--Univer**	**129.50**	**335**	*e*PKPdf		**PKiKP**	**17**	**19**	**17.4 +1.4**
	baz=48,slow=1.9								
TNS	**Taunus Mts**	**129.88**	**333**	*e*PKPdf		**PKiKP**	**17**	**19**	**18.6 +1.6**
	baz=48,slow=1.9								
FUR	**Furstenfeldbru**	**129.97**	**330**	*e*PKPdf		**PKiKP**	**17**	**19**	**18.4 +1.2**
	baz=48,slow=1.9								
LPAZ	**La Paz**	**130.19**	**119**	PKiKP		**PKPdf**	**17**	**19**	**17.1 -1.4**
LPAZ	**La Paz**	**130.19**	**119**	PKP		**PKPdf**	**17**	**19**	**17.9 -0.5**
	comp=Z,4.8nm,1.0s,baz=313,slow=1.8,SNR=8.7								
LPAZ	**La Paz**	**130.19**	**119**			**PKPdf**	**17**	**19**	**17.1 -1.4**
AHRW	**Bad Neuenahr-A**	**130.25**	**334**	*e*PKPdf		**PKiKP**	**17**	**19**	**18.9 +1.3**
	baz=48,slow=1.9								
ABTA	**Abfaltersbach**	**130.25**	**328**	*ep*PKPdf		**PKiKP**	**17**	**19**	**17.9 0.0**
	comp=Z,21nm,1.5s								
WATA	**Walderalm**	**130.37**	**329**	*ep*PKPdf		**PKiKP**	**17**	**19**	**18.6 +0.4**
	comp=Z,9.3nm,0.8s								
WTTA	**Wattenberg**	**130.38**	**329**	*ep*PKPdf		**PKiKP**	**17**	**19**	**18.5 +0.2**
	comp=Z,39nm,1.4s								
STU	**Stuttgart**	**130.57**	**331**	*e*PKPdf		**PKiKP**	**17**	**19**	**19.6 +1.2**
	baz=48,slow=1.9								
MOTA	**Moosalm**	**130.60**	**329**	*ep*PKPdf		**PKiKP**	**17**	**19**	**19.1 +0.5**
	comp=Z,9.1nm,1.0s								
SQTA	**Sankt Quirin**	**130.63**	**329**	*ep*PKPdf		**PKiKP**	**17**	**19**	**19.1 +0.4**
	comp=Z,20nm,1.5s								
UBR	**Ueberruh**	**130.88**	**330**	*e*PKPdf		**PKiKP**	**17**	**19**	**19.7 +0.6**
	baz=48,slow=1.9								
TSUM	**Tsumeb**	**130.94**	**236**			**PKiKP**	**17**	**19**	**19.8 -0.4**
FETA	**Feichten**	**131.01**	**329**	*ep*PKPdf		**PKiKP**	**17**	**19**	**19.8 +0.3**
	comp=Z,10nm,1.1s,SNR=4.3								
DAVA	**Damuels**	**131.26**	**330**	*ep*PKPdf		**PKiKP**	**17**	**19**	**20.5 +0.6**
	comp=Z,4.6nm,0.7s								
RUSC	**La Rusia**	**131.29**	**89**	*e*P		**PKiKP**	**17**	**19**	**21.9 +0.5**
RUSC	**La Rusia**	**131.29**	**89**			**PKPdf**	**17**	**19**	**19.6 -0.9**
WLF	**Walferdange**	**131.30**	**334**	*e*PKPdf		**PKiKP**	**17**	**19**	**21.4 +1.7**
	baz=48,slow=1.9								
CPUP	**Villa Florida**	**133.08**	**138**	PKiKP		**PKPdf**	**17**	**19**	**23.2 +0.3**
CPUP	**Villa Florida**	**133.08**	**138**	PKP		**PKiKP**	**17**	**19**	**23.5 -0.6**
	comp=Z,5.3nm,1.0s,baz=173,slow=0.6,SNR=4.2								
CPUP	**Villa Florida**	**133.08**	**138**			**PKPdf**	**17**	**19**	**23.2 +0.3**
SDV	**Santo Domingo**	**133.92**	**85**			**PKPdf**	**17**	**19**	**24.8 -0.2**
SIV	**San Ignacio**	**136.33**	**123**	PKP		**PKiKP**	**17**	**19**	**30.2 -0.7**
	comp=Z,2.3nm,0.8s,baz=240,slow=5.5,SNR=4.2								
MVO	**Moncorvo**	**143.57**	**338**	*e*PKP	PKPbc		17	19	40.3 +1.2
ESDC	**Sonseca Array**	**143.59**	**333**	PKP		**PKPdf**	**17**	**19**	**40.5 -1.3**
	comp=Z,6.2nm,0.9s,baz=28,slow=2.7,SNR=15								
ESDC				PP		**PP**	**17**	**22**	**55.1 +2.0**
	comp=Z,1.9nm,0.8s,baz=22,slow=6.2,SNR=5.0								
PVIS	**Viseu**	**144.28**	**339**	*e*PKP	PKPbc		17	19	41.1 -0.1
MTE	**Manteigas**	**144.43**	**338**	*e*PKP		**PKPdf**	**17**	**19**	**43.8 +0.5**
MTE	**Manteigas**	**144.43**	**338**			**PKPdf**	**17**	**19**	**42.7 -0.6**
PCBR	**Castelo Branco**	**144.89**	**338**	*e*PKP		**PKPdf**	**17**	**19**	**44.4 +0.4**
PCAS	**Casmilo, Conde**	**145.08**	**339**	*e*PKP		**PKPdf**	**17**	**19**	**45.1 +0.8**
PMRV	**Marv??o**	**145.22**	**337**	*e*PKP		**PKPdf**	**17**	**19**	**45.3 +0.7**
PTOM	**Tomar**	**145.43**	**338**	*e*PKP		**PKPab**	**17**	**19**	**46.6 +1.5**
PESTR	**Estremoz**	**145.78**	**337**	P		**PKPab**	**17**	**19**	**47.6 +1.2**
	SNR=8.6								
PESTR	**Estremoz**	**145.78**	**337**			**PKPbc**	**17**	**19**	**46.1 +0.1**
PMTG	**Montargil**	**145.85**	**338**	*e*PKP		**PKPab**	**17**	**19**	**47.0 +0.4**
EVO	**Evora**	**146.24**	**337**	*e*PKP		**PKPab**	**17**	**19**	**48.7 +0.6**
PMAFR	**Mafra**	**146.33**	**339**	*e*PKP		**PKPab**	**17**	**19**	**49.3 +0.8**
PBEJ	**Beja**	**146.62**	**336**	*e*PKP		**PKiKP**	**17**	**19**	**50.8 -0.6**
BDFB	**Brasilia**	**146.68**	**135**	PKP2		**PKPbc**	**17**	**19**	**49.6 +0.1**
BDFB	**Brasilia**	**146.68**	**135**	PKPbc		**PKPdf**	**17**	**19**	**48.0 +0.2**
	comp=Z,36nm,0.9s,baz=293,slow=0.6,SNR=21								
BDFB	**Brasilia**	**146.68**	**135**			**PKPbc**	**17**	**19**	**49.6 +0.1**
PNCL	**Nicolau / Gran**	**146.80**	**337**	*e*PKP		**PKPab**	**17**	**19**	**50.3 0.0**
PCVE	**Castro Verde**	**147.02**	**336**	*e*PKP		**PKPab**	**17**	**19**	**51.6 +0.4**
PVAQ	**Vaqueiros**	**147.09**	**336**	*e*PKP		**PKPab**	**17**	**19**	**51.2 -0.3**
PVAQ	**Vaqueiros**	**147.09**	**336**	P		**PKPab**	**17**	**19**	**51.8 +0.4**
	SNR=6.9								
PVAQ	**Vaqueiros**	**147.09**	**336**			**PKPab**	**17**	**19**	**50.8 -0.7**
PBDV	**Barranco-do-Ve**	**147.32**	**336**	*e*PKP		**PKPab**	**17**	**19**	**52.2 -0.2**
PTEO	**Sao Teotonio**	**147.37**	**337**	*e*PKP		**PKPbc**	**17**	**19**	**49.7 -1.0**
MORF	**Marmelete**	**147.55**	**337**	*e*PKP		**PKPab**	**17**	**19**	**52.4 -0.9**
PFVI	**Vila Bisbo**	**147.77**	**337**	*e*PKP		**PKPbc**	**17**	**19**	**51.6 -0.2**
TAM	**Tamanrasset**	**147.96**	**301**	PKiKP		**PKPdf**	**17**	**19**	**50.7 +0.8**
TAM	**Tamanrasset**	**147.96**	**301**			**PKPdf**	**17**	**19**	**50.7 +0.8**
MDT	**Midelt**	**149.34**	**327**	P		**PKiKP**	**17**	**19**	**58.6 +1.3**
	SNR=12								
ZHG	**ZHG**	**149.90**	**330**	P		**PKiKP**	**17**	**19**	**59.0 +0.6**
	SNR=23								
GOLM	**Goulmima**	**150.37**	**326**	P		**PKiKP**	**17**	**20**	**02.0 +2.5**
	SNR=6.2								
TZRR	**Tazzarine**	**151.41**	**325**	P		**PKiKP**	**17**	**20**	**03.0 +1.4**
	SNR=14								
TOA0	**Torodi Ar. Sit**	**154.17**	**284**			**PKPdf**	**17**	**19**	**59.5 +0.1**
TOA0				PKPbc		**PKPbc**	**17**	**20**	**07.3 -0.3**
TOA0				PKPab		**PKPab**	**17**	**20**	**21.1 -0.3**
TORD	**Torodi Ar. Bea**	**154.17**	**284**	PKP		**PKPdf**	**17**	**19**	**59.7 +0.3**
	comp=Z,4.0nm,1.1s,baz=359,slow=2.2,SNR=7.3								
TORD				PKPbc		**PKiKP**	**17**	**20**	**08.2 +0.5**
	comp=Z,10nm,0.9s,baz=83,slow=2.3,SNR=18								
TORD				PKPab		**sPKPbc**	**17**	**20**	**22.1 +0.5**
	comp=Z,3.3nm,0.4s,baz=72,slow=4.6,SNR=8.8								
TORD				PP		**PP**	**17**	**23**	**56.7 +0.2**
	comp=Z,4.5nm,1.2s,baz=54,slow=7.5,SNR=4.6								
KIC	**Kosan Boka**	**160.79**	**267**	*e*P		**PKPab**	**17**	**20**	**50.1 +0.1**
	comp=Z,33nm,0.7s								
DBIC	**Dimbokro**	**160.93**	**268**	PKP2		**PKPab**	**17**	**20**	**50.9 +0.3**
DBIC							18	20	06.0
DBIC	**Dimbokro**	**160.93**	**268**	PKP		**PKPdf**	**17**	**20**	**08.1 +0.2**
	comp=Z,4.5nm,1.0s,baz=117,slow=6.8,SNR=2.5								
DBIC				PKPab		**PKPab**	**17**	**20**	**51.1 +0.5**
	comp=Z,11nm,0.8s,baz=72,slow=4.6,SNR=8.8								
DBIC	**Dimbokro**	**160.93**	**268**	PKPdf		**PKPdf**	**17**	**20**	**06.0 -1.8**
DBIC						**PKPab**	**17**	**20**	**50.9 +0.3**
LIC	**Lamto**	**161.06**	**266**	*e*P		**PKPab**	**17**	**20**	**51.7 +0.5**
	comp=Z,51nm,0.9s								
TIC	**Toumodi**	**161.09**	**268**	*e*P		**PKPab**	**17**	**20**	**51.4 0.0**

PGC 25 17:12:17.4±2.1, 61°.49N×140°.46W, h10km, ML2.0/10, 177km Wnw of Haines Jct., Yt Southern Yukon Territory, Canada, Southern Yukon Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK3	**Moose Creek**	**0.29**	**0**	P	Pg	17 12 22.7	-0.6
YUK3				S	Sg	17 12 26.8	-0.4
YUK2	**White River**	**0.35**	**329**	P	Pg	17 12 22.7	-0.7
YUK2				S	Sg	17 12 28.9	-0.2
YUK1	**Sand Pete Hill**	**0.67**	**357**	P	Pg	17 12 29.4	-0.9
YUK1				S	Sg	17 12 38.5	-0.6
CTGM	**Chitina Glacie**	**0.67**	**219**	P	Pg	17 12 29.0	-1.4
CTGM				S	Sg	17 12 38.6	-0.6
YUK4	**Talbot Arm**	**0.89**	**99**	P	Pg	17 12 34.0	-0.4
YUK4				S	Sg	17 12 46.3	+0.3
BVCY	**Beaver Creek**	**0.95**	**349**	P	Pg	17 12 34.3	-1.3
BVCY				S	Sg	17 12 47.2	-0.8
GRNC	**Granite Creek**	**0.98**	**220**	P	Pg	17 12 34.7	-1.6
GRNC				S	Sg	17 12 48.0	-1.1
BALM	**Baldy**	**1.02**	**244**	P	Pg	17 12 34.9	-1.9
BALM				S	Sg	17 12 49.3	-0.8
BALM	**Baldy**	**1.02**	**244**	P	Pg	17 12 35.0	-1.9
BALM				IAmb	IAmb	17 12 48.0	
	comp=Z,22nm,0.8s						
KIAG	**Kiagna River**	**1.08**	**239**	P	Pg	17 12 36.0	-2.1
KIAG				S	Sg	17 12 50.1	-2.0
YUK6	**Outpost Mounta**	**1.15**	**117**	P	Pg	17 12 37.5	-2.0
YUK6				S	Sb	17 12 54.8	+0.1
RKAV	**Rock Avalanche**	**1.27**	**200**	S	Sb	17 12 56.8	-1.0
YUK5	**Granite Creek**	**1.31**	**105**	P	Pn	17 12 40.4	-1.5
YUK5				S	Sb	17 12 58.2	-0.7
PCA	**Pinnacle**	**1.40**	**176**	Pn	Pn	17 12 43.2	+0.2
PCA				Sn	Sb	17 13 01.2	-0.3
YUK7	**Dusty Glacier**	**1.48**	**129**	Pn	Pn	17 12 44.1	-0.2
YUK7				Sn	Sg	17 13 04.9	-0.1
MESA	**MESA**	**1.50**	**210**	Pn	Pn	17 12 44.8	+0.2
MESA				Sn	Sb	17 13 05.0	+0.4
HYT	**Haines Junctio**	**1.58**	**114**	Pn	Pn	17 12 45.5	-0.1
HYT				Sg	Sn	17 13 06.3	+0.2
PNL	**Peninsula**	**1.90**	**163**	Pn	Pn	17 12 50.6	+0.7
DOT	**Dot Lake**	**2.73**	**324**	Sg	Sb	17 13 41.5	+1.6
WHY	**Whitehorse**	**2.84**	**105**	Pn	Pn	17 13 02.9	+0.1
WHY				Sg	Sg	17 13 46.4	-2.0

*IDC **25** 17:14:23.1±0.9, 35°.35S×108°.93W, h0km, mb4.0/6, mb1 4.4/6, mb1mx3.9/28, mbtmp4.0/6, MS3.6/5, Ms1 3.6/5, ms1mx3.5/17, Error ellipse: s-maj=63.2km s-min=25.0km az=100.0*

*NEIC **25** 17:14:24.1±1.3, 35°.4S±0°.3×108°.5W±0°.5, h10km±4km, mb4.4/18, Error ellipse: s-maj=56.9km s-min=37.5km az=91.0*

ISC 25 17:14:24.7±0.8, 35°.4S±0°.2×108°.5W±0°.4, h10km, n39, σ1s90/36, mb4.3/13, MS3.9/4, 5C, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	**8.23**	**355**	LR	LR	17 17 58.0	
	comp=Z,56nm,19.2s,baz=44,slow=26						
PLCA	**Paso Flores**	**30.18**	**112**	LR	LR	17 30 31.5	
	comp=Z,85nm,20.0s,baz=260,slow=32						
CPUP	**Villa Florida**	**44.41**	**93**	LR	LR	17 39 53.7	
	comp=Z,129nm,18.3s,baz=237,slow=34						
VNDA	**Vanda**	**55.72**	**195**	P	**P**	**17 24 00.4**	**-0.4**
	2.2nm,1.0s,baz=77,slow=14,SNR=3.4						
BDFB	**Brasilia**	**57.14**	**86**	LR	LR	17 48 02.0	
	comp=Z,112nm,18.4s,baz=188,slow=35						
TXAR	**Lajitas Array**	**64.50**	**5**	P	**P**	**17 25 03.3**	**+1.6**
	0.3nm,0.9s,baz=182,slow=8.1,SNR=3.2						
GSC	**Goldstone, Bar**	**70.72**	**353**	P	**P**	**17 25 40.0**	**-0.8**
U15A	**North Rim**	**71.50**	**357**	P	**P**	**17 25 45.5**	**-0.3**
U15A				IAmb	IAmb	17 25 46.4	
	comp=Z,2.4nm,0.9s						
SHPR	**Sheep Range**	**71.76**	**354**	P	**P**	**17 25 46.6**	**-0.6**
DAC	**Darwin (Calif)**	**71.77**	**352**	P	**P**	**17 25 48.9**	**+1.7**
DAC				IAmb	IAmb	17 25 49.8	
	comp=Z,4.5nm,1.3s						
TPNV	**Topopah Spring**	**72.30**	**353**	P	**P**	**17 25 49.9**	**-0.5**
CCUT	**Cedar City**	**72.68**	**356**	P	**P**	**17 25 52.3**	**-0.4**
SZCU	**Shurtz Canyon**	**72.71**	**356**	P	**P**	**17 25 52.2**	**-0.7**
NV11	**Mina Array Sit**	**73.96**	**352**	P	**P**	**17 25 59.2**	**-1.0**
NV11				IAmb	IAmb	17 26 00.3	
	comp=Z,2.8nm,0.9s						
NVAR	**Mina Array Bea**	**73.97**	**352**	P	**P**	**17 25 59.5**	**-0.9**
	comp=Z,0.8nm,0.4s,baz=186,slow=7.2,SNR=5.0						
SRU	**San Rafael Swe**	**74.12**	**358**	P	**P**	**17 26 00.0**	**-1.1**
TMUT	**Trail Mountain**	**74.32**	**358**	P	**P**	**17 26 02.0**	**-0.5**
BW06	**Boulder Array**	**77.75**	**359**	P	**P**	**17 26 20.7**	**-1.1**
BW06				IAmb	IAmb	17 26 21.8	
	comp=Z,2.9nm,0.9s						
PD31	**Pinedale Array**	**77.75**	**359**	P	**P**	**17 26 20.6**	**-1.3**
PD31				IAmb	IAmb	17 26 21.9	
	comp=Z,2.7nm,0.8s						
PDAR	**Pinedale Array**	**77.75**	**359**	P	**P**	**17 26 20.6**	**-1.3**
	comp=Z,2.4nm,0.9s,baz=157,slow=5.7,SNR=16						
TPAW	**Teton Pass**	**78.50**	**358**	P	**P**	**17 26 25.6**	**-0.5**
TPAW				IAmb	IAmb	17 26 26.4	
	comp=Z,4.3nm,1.0s						
IMW	**Indian Meadow**	**78.91**	**358**	P	**P**	**17 26 27.5**	**-0.8**
IMW				IAmb	IAmb	17 26 44.4	
	comp=Z,7.5nm,1.6s						
PINE	**Pine Mountain**	**79.58**	**351**	P	**P**	**17 26 30.5**	**-1.4**
I07A	**Izee**	**79.69**	**352**	P	**P**	**17 26 31.0**	**-1.4**
I07A				IAmb	IAmb	17 26 32.3	
	comp=Z,3.6nm,1.0s						
MCMT	**McKenzie Canyo**	**79.90**	**357**	P	**P**	**17 26 33.2**	**-0.4**
G08A	**Pilot Rock**	**80.83**	**353**	P	**P**	**17 26 37.1**	**-1.3**
JTMT	**Jette**	**82.89**	**356**	P	**P**	**17 26 48.8**	**-0.5**
NEW	**Newport**	**83.60**	**354**	P	**P**	**17 26 51.7**	**-1.1**
	comp=Z,1.6nm,0.7s,baz=135,slow=1.4,SNR=3.3						
STKA	**Stephens Creek**	**86.24**	**233**	LR	LR	18 00 19.2	
	comp=Z,70nm,18.2s,baz=27,slow=32						
YKA	**Yellowknife Ar**	**97.63**	**357**	P	**P**	**17 27 58.5**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=161,slow=5.9,SNR=3.3						
ARCR	**ARCALIA**	**143.16**	**57**	⇑P	**PKiKP**	**17 34 01.8**	**0.0**
ARR	**Arges**	**143.35**	**60**	⇑P	**PKiKP**	**17 34 02.7**	**+0.3**
BURAR	**Bucovina Array**	**143.73**	**56**	⇑P	**PKiKP**	**17 34 03.5**	**+0.4**
MLR	**Muntele Rosu**	**144.28**	**59**	⇑P	**PKPab**	**17 33 58.6**	**-0.2**
SORM	**Soroca**	**145.79**	**55**	⇑P	**PKiKP**	**17 34 08.7**	**+1.5**
AKASG	**Malin Array Be**	**146.00**	**50**	PKPbc	**PKiKP**	**17 34 06.7**	**-0.9**
	comp=Z,1.9nm,0.4s,baz=281,slow=3.6,SNR=2.1						
BRTR	**Keskin Array B**	**149.79**	**70**	PKPbc	**PKPbc**	**17 34 13.8**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=248,slow=0.8,SNR=2.8						
CMAR	**Chiang Mai Arr**	**150.46**	**242**	PKPbc	**PKPdf**	**17 34 13.8**	**+2.1**
	comp=Z,1.9nm,1.0s,baz=176,slow=2.4,SNR=12						
SONM	**Songino Array**	**151.34**	**307**	PKP	**PKPdf**	**17 34 12.8**	**+0.4**
	comp=Z,0.8nm,1.1s,baz=117,slow=1.9,SNR=3.4						
SONM				PKPbc	**PKiKP**	**17 34 19.2**	**+0.4**
	comp=Z,1.6nm,0.9s,baz=123,slow=1.5,SNR=9.2						
SONM				PKPab	**PKPab**	**17 34 26.1**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=157,slow=1.1,SNR=4.1						

*BJI **25** 17:43:59.7±0.0, 18°.57N×120°.88E, h45km, mB4.7/19, mb4.3/34, ML4.4/3, Ms4.4/8, Ms7 4.1/5*

*MAN **25** 17:44:00.2, 18°.57N×120°.93E, h29km, mb5.4, ML4.3, MS4.6*

*NEIC **25** 17:44:00.1±3.0, 18°.48N±0°.06×121°.05E±0°.09, h70km±6km, mb4.5/62, Error ellipse: s-maj=12.9km s-min=8.0km az=102.0*

*IDC **25** 17:44:01.8±2.4, 18°.40N×121°.23E, h88km±22km, mb3.8/17, mb1 3.9/19, mb1mx3.8/35, mbtmp4.1/19, Error ellipse: s-maj=17.7km s-min=11.8km az=77.0*

ISC 25 17:44:00.3±0.6, 18°.53N±0°.03×120°.99E±0°.04, h67km±6km, n129, σ1s94/142, mb4.4/47, 2C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.70**	**160**	*e*P	**Pn**	**17 44 14.9**	**-0.2**
APYP				*e*S	**Sn**	**17 44 25.9**	**0.0**
SIPP	**Brgy, Tapao**	**0.79**	**220**	⇓*e*P	**Pn**	**17 44 15.9**	**-0.2**
SIPP				*e*S	**Sn**	**17 44 28.9**	**+1.3**
SGCP	**Mt. Cagua**	**1.04**	**106**	*e*P	**Pn**	**17 44 19.8**	**+0.7**
SGCP				*e*S	**Sn**	**17 44 34.5**	**+1.3**
SZP	**Santa**	**1.10**	**208**		**Pn**	**17 44 20.6**	**+0.6**
CAUP	**Cauayan**	**1.76**	**153**	*e*P	**Pn**	**17 44 31.1**	**+2.4**
CAUP				*e*S	**Sn**	**17 44 55.2**	**+5.0**
PALP	**Palanan**	**2.00**	**137**	*e*P	**Pn**	**17 44 33.2**	**+1.3**
PALP				*e*S	**Sn**	**17 45 00.1**	**+4.2**
BBP	**Basco**	**2.11**	**26**	*e*P	**Pn**	**17 44 34.3**	**+0.8**
BBP				*e*S	**Sn**	**17 44 59.0**	**+0.3**
SMPP	**San Manuel, Pa**	**2.38**	**187**	*e*P	**Pn**	**17 44 37.8**	**+0.7**
SMPP				*e*S	**Sn**	**17 45 07.5**	**+2.2**
BALP	**Baler**	**2.83**	**169**	*e*P	**Pn**	**17 44 44.3**	**+1.1**
BALP				*e*S	**Sn**	**17 45 18.0**	**+1.9**
SCZP	**Santa Cruz**	**2.92**	**201**	*e*P	**Pn**	**17 44 45.6**	**+1.2**
SCZP				*e*S	**Sn**	**17 45 26.0**	**+7.6**
PCPH	**Palayan**	**2.95**	**178**	⇑*e*P	**Pn**	**17 44 45.9**	**+1.1**
PCPH				*e*S	**Sn**	**17 45 23.3**	**+4.2**
POLP	**Polilio Island**	**3.88**	**166**	*e*P	Pn	17 44 52.0	-5.6
POLP				*e*S	**Sn**	**17 45 40.0**	**-2.0**
TWG	**Pinlang**	**4.27**	**1**		**Pn**	**17 45 02.9**	**0.0**
TGY	**Tagaytay City**	**4.40**	**181**	P	**Pn**	**17 45 06.5**	**+1.7**
	36nm,0.3s,baz=84,slow=9.2,SNR=6.9						
TGY				S	**Sn**	**17 45 59.2**	**+4.4**
	49nm,0.3s,baz=343,slow=20,SNR=2.1						
TGY	**Tagaytay City**	**4.40**	**181**	*e*P	**Pn**	**17 45 05.6**	**+0.9**
LQP	**Lukban**	**4.42**	**173**	⇑*e*P	**Pn**	**17 45 05.9**	**+0.8**
TPUB	**Ta-pu**	**4.76**	**356**		**Pn**	**17 45 10.1**	**+0.5**
LUBP	**Lubang**	**4.82**	**189**	*e*P	**Pn**	**17 45 13.1**	**+2.7**
LUBP				*e*S	**Sn**	**17 46 08.0**	**+3.1**
YULB	**Yu-li**	**4.85**	**3**		**Pn**	**17 45 10.6**	**-0.2**
SSLB	**Suanglung**	**5.24**	**360**		**Pn**	**17 45 16.7**	**+0.6**
NACB	**Ninganchiao**	**5.65**	**6**		**Pn**	**17 45 22.2**	**+0.5**
YHNB	**Yeheng**	**6.12**	**3**		**Pn**	**17 45 29.9**	**+1.6**
YOJ	**Yonaguni jima**	**6.20**	**17**		**Pn**	**17 45 29.6**	**+0.4**
KNMB	**Chin-men Tao**	**6.38**	**338**		**Pn**	**17 45 31.1**	**-0.7**
TATO	**Taipei**	**6.43**	**4**		**Pn**	**17 45 35.0**	**+2.5**
QZH	**Quanzhou**	**6.76**	**341**	P	**Pn**	**17 45 37.8**	**+0.9**
HKPS	**Hong Kong Po S**	**7.43**	**301**		**Pn**	**17 45 45.2**	**-0.9**
HKPS					**Sn**	**17 47 03.9**	**-5.0**
QIZ	**Qiongzhong**	**10.57**	**274**	P	**Pn**	**17 46 28.0**	**-1.1**
QIZ				S	**Sn**	**17 48 24.0**	**-1.9**
QIZ				pmax	pmax		
	comp=Z,30nm,0.7s						
QIZ	**Qiongzhong**	**10.57**	**274**		**Pn**	**17 46 27.0**	**-2.1**
QIZ					**Sn**	**17 48 22.5**	**-3.4**
JOW	**Kunigami**	**10.65**	**38**	P	**Pn**	**17 46 29.4**	**-0.7**
	0.2nm,0.3s,baz=144,slow=15,SNR=8.7						
JOW	**Kunigami**	**10.65**	**38**	Pn	**Pn**	**17 46 28.1**	**-2.0**
KKM	**Kota Kinabalu**	**13.25**	**201**	Pn	**Pn**	**17 47 04.2**	**-1.5**
NJ2	**Nanjing**	**13.61**	**352**	*e*P	**Pn**	**17 47 11.0**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
UBPT	**Khong Chiam**	**15.20**	**260**	P	**P**	**17 47 33.2**	**-1.5**
ENH	**Enshi**	**15.69**	**320**	P	**P**	**17 47 39.8**	**-0.3**
SLVN	**Son La**	**16.31**	**283**	P	**P**	**17 47 47.2**	**+0.1**
JNU	**Nakatsue**	**17.03**	**29**	P	**Pn**	**17 47 53.6**	**-0.4**
JNU				IAmb	IAmb	17 47 55.2	
	comp=Z,116nm,1.8s						
MRSI	**Marisa**	**17.96**	**177**	P	**Pn**	**17 48 07.3**	**+1.7**
	comp=Z,795nmcomp=Z,13nm,0.5s						
SBUM	**Sibu**	**18.14**	**209**	P	**P**	**17 48 07.4**	**+0.1**

KMI	**Kunming**	**18.16**	**294**		P	**Pn**	**17**	**48**	**09.5 +1.3**
KMI					pP	pP	17	48	19.5 -1.3
KMI					sP	pwP	17	48	25.3 +0.3
KMI					pmax	pmax			
	comp=Z,4.0nm,0.5s								
KMI					pmax	pmax			
	comp=Z,190nm,5.0s								
KMI					LR	LR			
	comp=Z,180nm,11.6s								
KMI					LR	LR			
	comp=Z,160nm,10.6s								
KMI					LR	LR			
	comp=Z,250nm,11.4s								
TNTI	**Ternate**	**18.72**	**160**		P	**P**	**17**	**48**	**11.1 -2.5**
XAN	**Xi'an**	**18.84**	**327**		P	**Pn**	**17**	**48**	**17.8 +1.8**
XAN					pP	pP	17	48	27.3 -0.6
XAN					sP	pwP	17	48	33.3 +1.0
XAN					pmax	pmax			
	comp=Z,5.0nm,0.9s								
XAN					LR	LR			
	comp=Z,310nm,11.9s								
XAN	**Xi'an**	**18.84**	**327**		P	**Pn**	**17**	**48**	**17.3 +1.3**
PBKT	**Sadao Pong**	**19.19**	**267**		P	**Pn**	**17**	**48**	**20.3 0.0**
LUWI	**Luwuk**	**19.52**	**175**		P	**P**	**17**	**48**	**21.8 -0.6**
	comp=Z,1μmcomp=Z,57nm,1.1s								
LUWI	**Luwuk**	**19.52**	**175**		P	**P**	**17**	**48**	**20.6 -1.8**
LUWI					IAmb	IAmb	17	48	43.7
	comp=Z,62nm,1.1s								
KSRS	**Korea Array**	**19.81**	**16**		P	**P**	**17**	**48**	**26.2 +0.9**
	comp=Z,0.1nm,0.3s,baz=199,slow=11,SNR=6.9								
KS19	**Wonju Array Si**	**19.84**	**16**		P	**Pn**	**17**	**48**	**27.6 -0.2**
KS19					IAmb	IAmb	17	48	41.2
	comp=Z,37nm,1.3s								
KSM	**Kuching**	**19.93**	**213**		P	**P**	**17**	**48**	**26.1 -0.7**
KSM					IAmb	IAmb	17	48	35.9
	comp=Z,25nm,1.3s								
BKB	**Balikpapan**	**20.07**	**192**		P	**P**	**17**	**48**	**26.9 -1.5**
CHTO	**Chiang Mai**	**20.89**	**274**		P	**P**	**17**	**48**	**38.4 +1.2**
CM31	**Chiang Mai Arr**	**20.91**	**273**		P	**P**	**17**	**48**	**38.7 +1.2**
CMAR	**Chiang Mai Arr**	**20.91**	**273**		P	Pn	17	48	40.0 -0.7
	comp=Z,4.8nm,0.8s,baz=83,slow=8.8,SNR=45								
BJT	**Baijiatuan**	**21.82**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,2.6nm,0.7s						
KK31	**Karatay Array**	**48.91**	**311**	P	**P**	**17 52 40.8**	**+1.1**
KK31				IAmb	IAmb	17 52 42.1	
	comp=Z,2.6nm,0.8s						
KK31				PcP	**PcP**	**17 54 02.6**	**-0.4**
KKAR	**Karatay Array**	**48.91**	**311**	P	**P**	**17 52 40.6**	**+1.0**
KKAR				PcP	**PcP**	**17 54 02.8**	**-0.3**
CHGR	**Chuyangaron**	**49.04**	**305**	P	**P**	**17 52 41.4**	**+0.7**
CHGR				IAmb	IAmb	17 52 42.7	
	comp=Z,6.1nm,0.7s						
BRVK	**Borovoye**	**52.09**	**324**	P	**P**	**17 53 04.1**	**+0.8**
BRVK				IAmb	IAmb	17 53 06.0	
	comp=Z,3.8nm,0.9s						
BBOO	**Buckleboo**	**53.04**	**164**	P	**P**	**17 53 08.5**	**-2.1**
TIXI	**Tiksi**	**53.33**	**3**	P	**P**	**17 53 12.4**	**+0.2**
TIXI				IAmb	IAmb	17 53 29.4	
	comp=Z,3.6nm,0.8s						
STKA	**Stephens Creek**	**53.87**	**158**	P	**P**	**17 53 14.2**	**-2.4**
	comp=Z,2.1nm,0.8s,baz=332,slow=11,SNR=4.8						
STKA	**Stephens Creek**	**53.87**	**158**	P	**P**	**17 53 15.5**	**-1.2**
ABKAR	**Akbulak array**	**57.35**	**317**	P	**P**	**17 53 42.7**	**+1.2**
ABKAR				IAmb	IAmb	17 53 43.4	
	comp=Z,4.1nm,0.8s						
GEYT	**Alibeck**	**57.63**	**304**	P	**P**	**17 53 45.5**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=80,slow=7.9,SNR=4.8						
GEYT	**Alibeck**	**57.63**	**304**	IAmb	IAmb	17 53 46.4	
	comp=Z,1.6nm,0.8s						
KBZ	**Khabaz**	**68.93**	**311**	P	**P**	**17 54 58.4**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=158,slow=5.9,SNR=4.2						
RAYN	**Ar Rayn**	**69.91**	**289**	P	**P**	**17 55 05.2**	**+0.5**
RAYN				IAmb	IAmb	17 55 06.3	
	comp=Z,9.6nm,0.8s						
TTA	**Tatalina**	**70.50**	**29**	P	**P**	**17 55 08.8**	**+1.1**
MLY	**Manley**	**72.65**	**26**	P	**P**	**17 55 22.2**	**+1.6**
MLY				IAmb	IAmb	17 55 45.6	
	comp=Z,4.2nm,1.0s						
RND	**Reindeer**	**73.69**	**28**	P	**P**	**17 55 25.5**	**-1.3**
RND				IAmb	IAmb	17 55 51.6	
	comp=Z,18nm,1.5s						
WRH	**Wood River Hil**	**73.86**	**27**	P	**P**	**17 55 28.4**	**+0.8**
WRH				IAmb	IAmb	17 55 34.9	
	comp=Z,18nm,1.8s						
ILAR	**Eielson Array**	**74.32**	**26**	P	**P**	**17 55 29.6**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=267,slow=4.7,SNR=4.9						
FINES	**FINESS Array B**	**76.24**	**330**	P	**P**	**17 55 40.4**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=64,slow=4.4,SNR=6.9						
BRTR	**Keskin Array B**	**76.42**	**308**	P	**P**	**17 55 42.6**	**-0.4**
	comp=Z,1.0nm,1.0s,baz=92,slow=7.2,SNR=3.3						
AKASG	**Malin Array Be**	**76.99**	**319**	P	**P**	**17 55 45.5**	**-0.3**
	comp=Z,21nm,0.3s,baz=65,slow=5.0,SNR=1.7						
NB2	**NORSAR Subarra**	**83.13**	**333**	P	**P**	**17 56 18.7**	**-0.1**
	comp=Z,1.8nm,1.0s,baz=61,slow=5.3						
NOA	**NORSAR Array B**	**83.13**	**333**	P	**P**	**17 56 18.4**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=60,slow=5.4,SNR=5.7						
VYHS	**Vyhne**	**84.09**	**319**	*e*P	**P**	**17 56 25.4**	**+1.5**
GERES	**GERESS Array B**	**87.09**	**321**	P	**P**	**17 56 38.8**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=90,slow=4.0,SNR=6.0						
YKA	**Yellowknife Ar**	**88.23**	**23**	P	**P**	**17 56 44.2**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=309,slow=4.6,SNR=12						

*KRSC **25** 18:12:56.7±2.1,53.08N×162.99E,h80km±26km,ML4.3*
*IDC **25** 18:12:57.2±0.8,53.36N×162.78E,h0km,mb3.5/12,*
mb1 3.8/14,mb1mx3.7/32,mbtmp3.6/14,ML3.2/2,MS2.4/1,
Ms1 2.4/1,ms1mx2.3/34,Error ellipse: s-maj=27.4km
s-min=14.1km az=159.0
*MOS **25** 18:13:00.9±0.9,53.23N×162.76E,h50km,mb4.1/1,Error*
ellipse: s-maj=6.9km s-min=4.6km az=100.0
*NEIC **25** 18:13:00.9±2.8,53.0N±0.1×163.0E±0.1,h39km±8km,*
mb4.1/6,Error ellipse: s-maj=20.3km s-min=3.6km
az=151.0

ISC 25 18:12:58.4±3.3,53.06N±0.04×163.02E±0.04,h17km±21km,
n114,σ1§93/180,mb3.6/16,Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**1.69**	**334**	PN	**Pn**	**18 13 25.4**	**-1.7**
MKZ				S	**Sn**	**18 13 44.7**	**-3.5**
MKZ	**Mys Kozlova**	**1.69**	**334**	*e*P	**Pn**	**18 13 25.4**	**-1.7**
MKZ				*e*S	**Sn**	**18 13 44.7**	**-3.5**
SPN	**Mys Shipunski**	**1.81**	**273**	PN	**Pn**	**18 13 27.5**	**-1.2**
SPN				S	**Sn**	**18 13 47.5**	**-3.8**
SPN	**Mys Shipunski**	**1.81**	**273**	*e*P	**Pn**	**18 13 27.5**	**-1.2**
SPN				*e*S	**Sn**	**18 13 47.5**	**-3.8**
NLC	**Nalytchevo**	**2.22**	**274**	PN	**Pn**	**18 13 33.3**	**-1.1**
NLC				S	**Sn**	**18 13 58.1**	**-3.2**
NLC	**Nalytchevo**	**2.22**	**274**	*e*P	**Pn**	**18 13 33.3**	**-1.1**
NLC				*e*S	**Sn**	**18 13 58.1**	**-3.2**
KII	**Karymskiy**	**2.35**	**296**	PN	**Pn**	**18 13 34.9**	**-1.3**
KII				S	**Sn**	**18 14 01.4**	**-3.2**
KII	**Karymskiy**	**2.35**	**296**	*e*P	**Pn**	**18 13 34.9**	**-1.3**
KII				*e*S	**Sn**	**18 14 01.4**	**-3.2**
SDLR	**Sedlovina**	**2.50**	**277**	PN	**Pn**	**18 13 37.8**	**-0.6**
SDLR				S	**Sn**	**18 14 06.2**	**-2.3**
SDLR	**Sedlovina**	**2.50**	**277**	*e*P	**Pn**	**18 13 37.8**	**-0.6**
SDLR				*e*S	**Sn**	**18 14 06.2**	**-2.3**
UGLR	**Uglovaya**	**2.53**	**275**	PN	**Pn**	**18 13 38.4**	**-0.4**
UGLR				S	**Sn**	**18 14 07.2**	**-2.1**
UGLR	**Uglovaya**	**2.53**	**275**	*e*P	**Pn**	**18 13 38.4**	**-0.4**
UGLR				*e*S	**Sn**	**18 14 07.2**	**-2.1**
SMAR	**Somma**	**2.55**	**276**	PN	**Pn**	**18 13 38.4**	**-0.7**
SMAR				S	**Sn**	**18 14 06.2**	**-3.6**
SMAR	**Somma**	**2.55**	**276**	*e*P	**Pn**	**18 13 38.4**	**-0.7**
SMAR				*e*S	**Sn**	**18 14 06.2**	**-3.6**
KRER	**Koryakskii**	**2.58**	**277**	PN	**Pn**	**18 13 39.4**	**-0.2**
KRER				S	**Sn**	**18 14 09.0**	**-1.6**
KRER	**Koryakskii**	**2.58**	**277**	*e*P	**Pn**	**18 13 39.4**	**-0.2**
KRER				*e*S	**Sn**	**18 14 09.0**	**-1.6**
AVH	**Avacha**	**2.59**	**276**	PN	**Pn**	**18 13 39.2**	**-0.3**
AVH				S	**Sn**	**18 14 08.7**	**-1.9**
AVH	**Avacha**	**2.59**	**276**	*e*P	**Pn**	**18 13 39.2**	**-0.3**
AVH				*e*S	**Sn**	**18 14 08.7**	**-1.9**
KZV	**Kizimen**	**2.61**	**323**	PN	**Pn**	**18 13 39.1**	**-0.9**
KZV				S	**Sn**	**18 14 08.5**	**-2.8**
KZV	**Kizimen**	**2.61**	**323**	*e*P	**Pn**	**18 13 39.1**	**-0.9**
KZV				*e*S	**Sn**	**18 14 08.5**	**-2.8**
PET	**Petropavlovsk**	**2.64**	**271**	PN	**Pn**	**18 13 39.5**	**-0.7**
PET						18 14 09.0	
PET	**Petropavlovsk**	**2.64**	**271**	*e*P	**Pn**	**18 13 39.4**	**-0.7**
PET				*e*S	**Sn**	**18 14 08.8**	**-2.9**
PET	**Petropavlovsk**	**2.64**	**271**		**Pn**	**18 13 39.5**	**-0.7**
PET				Sn	**Sn**	**18 14 09.0**	**-2.6**
KRX	**Arik**	**2.65**	**278**	PN	**Pn**	**18 13 39.9**	**-0.5**
KRX				S	**Sn**	**18 14 09.1**	**-3.0**
KRX	**Arik**	**2.65**	**278**	*e*P	**Pn**	**18 13 39.9**	**-0.5**
KRX				*e*S	**Sn**	**18 14 09.1**	**-3.0**
TUMD	**Tumrok D**	**2.65**	**325**	*e*P	**Pn**	**18 13 39.1**	**-1.2**
TUMD				*e*S	**Sn**	**18 14 08.5**	**-3.5**
KOK	**Koryaka**	**2.65**	**277**	PN	**Pn**	**18 13 40.0**	**-0.4**
KOK	**Koryaka**	**2.65**	**277**	*e*P	**Pn**	**18 13 40.0**	**-0.4**
BKI	**Bering**	**2.77**	**38**	PN	**Pn**	**18 13 40.3**	**-1.6**
BKI	**Bering**	**2.77**	**38**	*e*P	**Pn**	**18 13 40.3**	**-1.6**
BKI				*e*S	**Sn**	**18 14 09.9**	**-4.9**
TUMR	**Tumrok**	**2.80**	**324**	PN	Pn	18 13 39.1	-3.4
TUMR				S	Sn	18 14 08.5	-7.4
TUMR	**Tumrok**	**2.80**	**324**	*e*P	**Pn**	**18 13 42.0**	**-0.5**
TUMR				*e*S	**Sn**	**18 14 13.9**	**-2.0**
RUS	**Russkaya**	**2.81**	**259**	PN	**Pn**	**18 13 41.9**	**-0.6**
RUS	**Russkaya**	**2.81**	**259**	*e*P	**Pn**	**18 13 41.9**	**-0.6**
KRMR	**Karymshinskiy**	**2.97**	**268**	PN	**Pn**	**18 13 43.6**	**-1.1**
KRMR				S	**Sn**	**18 14 16.5**	**-3.3**
KRMR	**Karymshinskiy**	**2.97**	**268**	*e*P	**Pn**	**18 13 43.5**	**-1.1**
KRMR				*e*S	**Sn**	**18 14 16.5**	**-3.3**
MTVR	**Mutnovka**	**3.00**	**261**	PN	**Pn**	**18 13 44.6**	**-0.6**
MTVR	**Mutnovka**	**3.00**	**261**	*e*P	**Pn**	**18 13 44.6**	**-0.6**
GRL	**Gorelyy**	**3.04**	**262**	PN	**Pn**	**18 13 45.6**	**-0.3**
GRL				S	**Sn**	**18 14 19.8**	**-2.1**
GRL	**Gorelyy**	**3.04**	**262**	*e*P	**Pn**	**18 13 45.6**	**-0.3**
GRL				*e*S	**Sn**	**18 14 19.8**	**-2.1**
KMNR	**Kamenistaya**	**3.16**	**330**	PN	**Pn**	**18 13 47.4**	**0.0**
KMNR				S	**Sn**	**18 14 25.1**	**+0.4**
KMNR	**Kamenistaya**	**3.16**	**330**	*e*P	**Pn**	**18 13 47.4**	**0.0**
KMNR				*e*S	**Sn**	**18 14 25.1**	**+0.4**
KBTR	**Krutoberegovo**	**3.16**	**358**	PN	**Pn**	**18 13 45.5**	**-1.8**
KBTR				S	**Sn**	**18 14 21.2**	**-3.4**
KBTR	**Krutoberegovo**	**3.16**	**358**	*e*P	**Pn**	**18 13 45.5**	**-1.8**
KBTR				*e*S	**Sn**	**18 14 21.2**	**-3.4**
ASAK	**Asacha**	**3.19**	**260**	PN	**Pn**	**18 13 47.9**	**+0.1**
ASAK				S	**Sn**	**18 14 23.5**	**-1.9**
ASAK	**Asacha**	**3.19**	**260**	*e*P	**Pn**	**18 13 47.9**	**+0.1**
ASAK				*e*S	**Sn**	**18 14 23.5**	**-1.9**
BZGR	**Bezymyannyi-Gr**	**3.19**	**336**	PN	**Pn**	**18 13 47.5**	**-0.4**
BZGR				S	**Sn**	**18 14 24.9**	**-0.6**
BZGR	**Bezymyannyi-Gr**	**3.19**	**336**	*e*P	**Pn**	**18 13 47.5**	**-0.4**
BZGR				*e*S	**Sn**	**18 14 24.9**	**-0.6**
PEA0B	**Petropavlovsk-**	**3.21**	**273**	PN	**Pn**	**18 13 48.3**	**+0.3**
PEA0B						18 14 23.1	
PEA0B	**Petropavlovsk-**	**3.21**	**273**		**Pn**	**18 13 48.3**	**+0.3**
PEA0B				Sn	**Sn**	**18 14 23.1**	**-2.7**
PETK	**Petropavlovsk-**	**3.21**	**273**	Pn	**Pn**	**18 13 48.2**	**+0.1**
	11nm,0.3s,baz=82,slow=19,SNR=866						
PETK				Sn	**Sn**	**18 14 24.4**	**-1.4**
	18nm,0.3s,baz=94,slow=39,SNR=14						
PETK				LR	LR	18 14 57.0	
	comp=Z,65nm,21.4s,baz=243,slow=39						
KBG	**Krutoberegovo**	**3.21**	**357**	PN	**Pn**	**18 13 45.8**	**-2.2**
KBG				S	**Sn**	**18 14 23.3**	**-2.5**
KBG	**Krutoberegovo**	**3.21**	**357**	*e*P	**Pn**	**18 13 45.8**	**-2.2**
KBG				*e*S	**Sn**	**18 14 23.3**	**-2.5**
ZLN	**Zelenaya**	**3.24**	**337**	PN	**Pn**	**18 13 48.4**	**-0.1**
ZLN				S	**Sn**	**18 14 26.1**	**-0.5**
ZLN	**Zelenaya**	**3.24**	**337**	*e*P	**Pn**	**18 13 48.4**	**-0.1**
ZLN				*e*S	**Sn**	**18 14 26.1**	**-0.5**
KDTR	**Khodutka, Kamc**	**3.27**	**250**	PN	**Pn**	**18 13 47.7**	**-1.2**
KDTR				S	**Sn**	**18 14 22.9**	**-4.4**
KDTR	**Khodutka, Kamc**	**3.27**	**250**	*e*P	**Pn**	**18 13 47.7**	**-1.2**
KDTR				*e*S	**Sn**	**18 14 22.9**	**-4.4**
KIRR	**Kirishev**	**3.30**	**333**	PN	**Pn**	**18 13 49.2**	**-0.1**
KIRR				S	**Sn**	**18 14 27.1**	**-1.1**
KIRR	**Kirishev**	**3.30**	**333**	*e*P	**Pn**	**18 13 49.2**	**-0.1**
KIRR				*e*S	**Sn**	**18 14 27.1**	**-1.1**
LGNR	**Loginova**	**3.32**	**337**	PN	**Pn**	**18 13 50.1**	**+0.3**
LGNR				S	**Sn**	**18 14 28.0**	**-1.0**
LGNR	**Loginova**	**3.32**	**337**	*e*P	**Pn**	**18 13 50.1**	**+0.3**
LGNR				*e*S	**Sn**	**18 14 28.0**	**-1.0**
CIRR	**Tsirk**	**3.34**	**338**	PN	**Pn**	**18 13 48.6**	**-1.3**
CIRR	**Tsirk**	**3.34**	**338**	*e*P	**Pn**	**18 13 48.6**	**-1.3**
KPT	**Kopyto**	**3.34**	**332**	PN	**Pn**	**18 13 50.1**	**+0.2**
KPT				S	**Sn**	**18 14 28.4**	**-0.8**
KPT	**Kopyto**	**3.34**	**332**	*e*P	**Pn**	**18 13 50.1**	**+0.2**
KPT				*e*S	**Sn**	**18 14 28.4**	**-0.8**
KRSR	**Krestovskiy**	**3.47**	**337**	PN	**Pn**	**18 13 51.1**	**-0.6**
KRSR				S	**Sn**	**18 14 29.7**	**-2.8**
KRSR	**Krestovskiy**	**3.47**	**337**	*e*P	**Pn**	**18 13 51.1**	**-0.6**
KRSR				*e*S	**Sn**	**18 14 29.7**	**-2.8**
KOZ	**Kozyrevsk**	**3.52**	**330**	PN	**Pn**	**18 13 52.3**	**0.0**
KOZ				S	**Sn**	**18 14 31.8**	**-1.7**
KOZ	**Kozyrevsk**	**3.52**	**330**	*e*P	**Pn**	**18 13 52.3**	**0.0**
KOZ				*e*S	**Sn**	**18 14 31.8**	**-1.7**
KLY	**Klyuchi**	**3.54**	**338**	PN	**Pn**	**18 13 51.1**	**-1.4**
KLY				S	**Sn**	**18 14 31.0**	**-2.9**
KLY	**Klyuchi**	**3.54**	**338**	*e*P	**Pn**	**18 13 51.1**	**-1.4**
KLY				*e*S	**Sn**	**18 14 31.0**	**-2.9**
APC	**Apacha**	**3.55**	**270**	PN	**Pn**	**18 13 53.9**	**+1.3**
APC				S	**Sn**	**18 14 33.5**	**-0.6**
APC	**Apacha**	**3.55**	**270**	*e*P	**Pn**	**18 13 53.9**	**+1.3**
APC				*e*S	**Sn**	**18 14 33.5**	**-0.6**
BDR	**Baidarnaya**	**3.67**	**344**	PN	**Pn**	**18 13 54.5**	**+0.1**
BDR				S	**Sn**	**18 14 36.3**	**-1.0**
BDR	**Baidarnaya**	**3.67**	**344**	*e*P	**Pn**	**18 13 54.5**	**+0.1**
BDR				*e*S	**Sn**	**18 14 36.3**	**-1.0**
SRKR	**Sorokina**	**3.76**	**344**	PN	**Pn**	**18 13 55.0**	**-0.6**
SRKR	**Sorokina**	**3.76**	**344**	*e*P	**Pn**	**18 13 55.0**	**-0.6**
SRDR	**Sredinnyy**	**3.79**	**331**	PN	**Pn**	**18 13 55.4**	**-0.6**
SRDR	**Sredinnyy**	**3.79**	**331**	*e*P	**Pn**	**18 13 55.4**	**-0.6**
ESO	**Esso**	**3.82**	**320**	PN	**Pn**	**18 13 56.2**	**-0.2**
ESO				S	**Sn**	**18 14 38.1**	**-2.8**
ESO	**Esso**	**3.82**	**320**	*e*P	**Pn**	**18 13 56.2**	**-0.2**
ESO				*e*S	**Sn**	**18 14 38.1**	**-2.8**
PAU	**Pauzhetka**	**4.13**	**250**	PN	**Pn**	**18 14 01.3**	**+0.6**
PAU	**Pauzhetka**	**4.13**	**250**	*e*P	**Pn**	**18 14 01.3**	**+0.6**
SKR	**Severo-Kuril's**	**4.89**	**244**	*e*PN	**Pb**	**18 14 21.8**	**-1.8**
SKR	**Severo-Kuril's**	**4.89**	**244**	*e*S	**Sn**	**18 15 02.7**	**-4.6**
OSSR	**Ossora**	**6.21**	**0**	PN	**Pn**	**18 14 27.7**	**-1.4**
OSSR	**Ossora**	**6.21**	**0**	*e*P	**Pn**	**18 14 27.7**	**-1.4**
OSSR				*e*S	**Sn**	**18 15 33.8**	**-5.8**
SMY	**Shemya**	**6.71**	**88**	Pn	**Pn**	**18 14 36.7**	**+0.6**
SMY				Sn	**Sn**	**18 15 47.2**	**-4.9**
TILK	**Tilichiki**	**7.61**	**12**	PN	**Pn**	**18 14 48.9**	**+0.6**
TILK	**Tilichiki**	**7.61**	**12**	*e*P	**Pn**	**18 14 48.9**	**+0.6**
JKA	**Kamikawa-asahi**	**16.16**	**245**	P	**Pn**	**18 16 45.8**	**+1.3**
ASAJ	**Asahikawa**	**16.16**	**245**	Pn	**Pn**	**18 16 45.8**	**+1.3**
	0.2nm,0.3s,baz=40,slow=7.9,SNR=3.8						
ANM	**Nome**	**19.76**	**42**	P	**Pn**	**18 17 30.0**	**+1.3**
ANM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ANM	**Nome**	**19.76**	**42**	P	**Pn**	**18 17 30.0**	**+1.3**
TTA	**Tatalina**	**23.44**	**49**	P	**P**	**18 18 08.0**	**+1.5**
TTA				pmax	pmax		
	comp=Z,7.0nm,1.4s						
TTA	**Tatalina**	**23.44**	**49**	P	**P**	**18 18 08.0**	**+1.5**
TTA				IAmb	IAmb	18 18 19.0	
	comp=Z,6.6nm,1.4s						
MJAR	**Matsushiro Arr**	**23.95**	**236**	P	**P**	**18 18 12.6**	**+1.0**
	comp=Z,2.2nm,1.1s,baz=1.3,slow=17,SNR=3.1						
BPAW	**Bear Paw Mtn.**	**25.78**	**47**	P	**P**	**18 18 31.3**	**+3.3**
BPAW				IAmb	IAmb	18 18 38.8	
	comp=Z,9.4nm,1.5s						
GHO	**Glory Hole Cre**	**26.72**	**52**	P	**P**	**18 18 36.4**	**-0.2**
CCB	**Clear Creek Bu**	**27.19**	**45**	P	**P**	**18 18 41.2**	**+0.6**
CCB				IAmb	IAmb	18 19 08.0	
	comp=Z,7.9nm,1.6s						
SCM	**Sheep Creek Mo**	**27.47**	**52**	P	**P**	**18 18 39.9**	**-3.4**
SCM	**Sheep Creek Mo**	**27.47**	**52**	P	**P**	**18 18 39.9**	**-3.4**
INK	**Inuvik**	**32.81**	**38**	P	**P**	**18 19 31.2**	**+0.8**
	comp=Z,0.5nm,0.5s,baz=280,slow=4.7,SNR=3.2						
SONM	**Songino Array**	**35.62**	**285**	P	**P**	**18 19 55.8**	**+0.7**
	comp=Z,0.2nm,0.4s,baz=72,slow=6.2,SNR=2.4						
YKA	**Yellowknife Ar**	**41.98**	**43**	P	**P**	**18 20 48.6**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=296,slow=7.5,SNR=4.3						
MKAR	**Makanchi Array**	**49.75**	**297**	P	**P**	**18 21 48.4**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=50,slow=6.6,SNR=5.6						
NVAR	**Mina Array Bea**	**54.08**	**72**	P	**P**	**18 22 24.4**	**+2.2**
	comp=Z,0.4nm,0.8s,baz=288,slow=7.5,SNR=3.6						
PDAR	**Pinedale Array**	**55.99**	**63**	P	**P**	**18 22 37.2**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=322,slow=4.5,SNR=4.0						
CMAR	**Chiang Mai Arr**	**59.91**	**261**	P	**P**	**18 23 03.5**	**+0.1**
	comp=Z,0.3nm,0.9s,baz=38,slow=4.6,SNR=3.1						
FINES	**FINESS Array B**	**60.84**	**338**	P	**P**	**18 23 08.5**	**-0.6**
	comp=Z,3.0nm,0.9s,baz=18,slow=6.8,SNR=4.4						
NOA	**NORSAR Array B**	**64.05**	**345**	P	**P**	**18 23 29.8**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=20,slow=6.8,SNR=2.3						
TXAR	**Lajitas Array**	**69.01**	**69**	P	**P**	**18 24 03.9**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=290,slow=4.4,SNR=5.8						
AKASG	**Malin Array Be**	**69.53**	**331**	P	**P**	**18 24 04.7**	**-1.0**
	comp=Z,5.3nm,0.6s,baz=29,slow=7.0,SNR=1.8						
ASAR	**Alice Springs**	**80.49**	**207**	P	**P**	**18 25 12.8**	**+3.7**
	comp=Z,0.2nm,0.8s,baz=22,slow=4.9,SNR=4.2						

*GCG **25** 18:15:47.9±0.7, 14.39N×91.88W, h75km±16km, MD3.8*
*MEX **25** 18:15:49.3±0.5, 14.42N×91.70W, h75km±8km, MD3.8*
ISC 25 18:15:50.1±2.1,14.5N±0.1×91.84W±0.08,h67km±14km,
n10,σ1§30/17,Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERG	**Entre ros, C**	**0.27**	**95**	*e*P	**Pn**	**18 15 59.8**	**-1.0**
STG3	**Santiaguito 3,**	**0.36**	**47**	*e*P	**Pn**	**18 16 01.2**	**-0.5**
THIG		**0.60**	**317**	*e*P	**Pn**	**18 16 03.1**	**-0.7**
THIG				*e*S	**Sn**	**18 16 14.6**	**+0.8**
FUG	**Fuego 3**	**0.97**	**91**	*e*P	**Pn**	**18 16 07.2**	**-1.1**
FUG				*e*S	**Sn**	**18 16 24.8**	**+3.1**
PCG	**Pacaya**	**1.20**	**93**	*e*P	**Pn**	**18 16 10.6**	**-0.7**
PCG				*e*S	**Sn**	**18 16 26.2**	**-0.8**
IXG	**Ixpaco**	**1.39**	**102**	*e*P	**Pn**	**18 16 12.4**	**-1.3**
NBG	**Las Nubes**	**1.45**	**85**	*e*P	**Pn**	**18 16 14.8**	**+0.2**
NBG				*e*S	**Sn**	**18 16 34.4**	**+1.4**
PCIG		**1.82**	**313**	*e*P	**Pn**	**18 16 19.5**	**+0.3**
PCIG				*e*S	**Sn**	**18 16 42.2**	**+0.8**
CCIG	**Comitan**	**1.83**	**351**	*i* P	**Pn**	**18 16 19.4**	**-0.3**
CCIG				*e*S	**Sn**	**18 16 40.6**	**-1.4**
TGIG		**2.61**	**332**	*e*P	**Pn**	**18 16 29.3**	**-0.8**
TGIG				*i* S	**Sn**	**18 17 01.6**	**+0.9**

*JMA **25** 18:42:38.9±0.3, 44.02N×148.11E, h0km, M3.5*
*SKHL **25** 18:42:39.8±0.9, 44.50N×148.30E, h30km±4km, mb4.1/3*
ISC 25 18:42:36.3±3.2,44.33N±0.10×148.3E±0.2,h4km±15km,
n14,σ1§40/23,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.95**	**341**	*i*P	**Pg**	**18 42 54.4**	**-0.3**
KUR				AMB	AMB	18 42 55.2	
	70nm,0.3s						
KUR				AMB	AMB	18 42 55.2	
	30nm,0.3s						
KUR				AMB	AMB	18 42 55.2	
	160nm,0.3s						
KUR				*i* S	**Sg**	**18 43 06.1**	**-1.0**
KUR				A	A	18 43 07.4	
	490nm,0.2s						
KUR				A	A	18 43 07.4	
	140nm,0.2s						
SHO	**Shikotan**	**1.15**	**247**	*e*P	**Pn**	**18 42 59.2**	**0.0**
SHO				AMB	AMB	18 43 01.0	
	10.0nm,0.2s						
SHO				AMB	AMB	18 43 01.0	
	20nm,0.2s						
SHO				*i* S	**Sg**	**18 43 13.3**	**0.0**
SHO				A	A	18 43 18.5	
	200nm,0.2s						
SHO				A	A	18 43 18.5	
	50nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.78**	**261**	*e*P	**Pn**	**18 43 08.5**	**+0.7**
YUK				AMB	AMB	18 43 09.4	
	10.0nm,0.3s						
YUK				AMB	AMB	18 43 09.4	
	20nm,0.3s						
YUK				AMB	AMB	18 43 09.4	
	70nm,0.3s						
YUK				*e*S	**Sn**	**18 43 29.7**	**-1.1**
YUK				A	A	18 43 36.8	
	150nm,0.4s						
YUK				A	A	18 43 36.8	
	160nm,0.4s						
NEM2	**Nemuro 2**	**2.08**	**243**	P	**Pn**	**18 43 12.1**	**+0.1**
NEM2				*e*S	**Sn**	**18 43 36.2**	**-2.1**
JRA	**Rausu**	**2.32**	**261**	P	**Pn**	**18 43 16.7**	**+1.5**
JRA				*e*S	**Sn**	**18 43 44.5**	**+0.4**
JNSB	**Nemuroshibetsu**	**2.44**	**258**	P	**Pn**	**18 43 18.5**	**+1.6**
JKHN	**Kushirohamanak**	**2.59**	**242**	P	**Pn**	**18 43 19.7**	**+0.7**
JNK	**Nakash**	**2.69**	**255**	P	**Pn**	**18 43 21.5**	**+1.2**
JNK				*e*S	**Sn**	**18 43 52.8**	**-0.5**
JAK	**Akkeshi**	**2.93**	**244**	P	**Pn**	**18 43 24.2**	**+0.5**
JAK				*e*S	**Sn**	**18 43 57.4**	**-1.9**
JAR	**Ashorobuto**	**3.44**	**254**	P	**Pn**	**18 43 32.8**	**+2.2**
JAR				*e*S	**Sn**	**18 44 12.9**	**+1.2**
JCH	**Churui**	**3.98**	**246**	P	**Pn**	**18 43 39.6**	**+1.5**
JCH				*e*S	**Sn**	**18 44 24.1**	**-1.0**
JNBK	**Urakawa-nobuka**	**4.53**	**245**	P	**Pn**	**18 43 47.4**	**+1.7**
JKB	**Kayabe**	**5.85**	**248**	P	**Pn**	**18 44 05.3**	**+1.6**
JKB				*e*S	**Sn**	**18 45 09.2**	**-2.0**
JANG	**Nango**	**6.39**	**234**	*e*S	Sn	18 45 19.3	-5.3

MAN 25 18:54:22.6,18.47N×121.03E,h28km,mb4.5,ML3.3,
MS3.2,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APYP	**Conner**	**0.64**	**161**	*e*P	Pb	18 54 35.5	+0.3
APYP				*e*S	Sn	18 54 46.8	+1.8
SIPP	**Brgy, Tapao**	**0.77**	**225**	*e*

CHKK				*e*S	**Sg**	**20 06 30.8**	**+0.7**
	7.8nm,0.1s							
KTBS	**Karatobe**	**1.97**	**298**	*e*P	**Pb**	**20 06 07.1**	**+0.2**
	baz=98							
KTBS				*e*S	**Sg**	**20 06 34.4**	**+0.5**
	baz=98							
KTBS	**Karatobe**	**1.97**	**298**	*e*P	**Pb**	**20 06 07.1**	**+0.2**
	0.5nm,0.1s							
KTBS				*e*S	**Sg**	**20 06 34.5**	**+0.5**
	15nm,0.2s							
ULHL	**Ulahol**	**2.18**	**256**	⇑*i*P	**Pn**	**20 06 08.4**	**+0.8**
	baz=58							
ULHL				⇑*i*S	**Sb**	**20 06 37.2**	**-0.7**
	baz=58							
NRN	**Naryn**	**2.68**	**240**	⇓*e*P	**Pn**	**20 06 15.5**	**+0.9**
	baz=42							
NRN				⇓*e*S	**Sn**	**20 06 48.5**	**+1.0**
	baz=42							
KZA	**Kyzart**	**2.94**	**257**	⇑*i*P	**Pn**	**20 06 18.6**	**+0.4**
	baz=58							
KZA				⇑*i*S	**Sn**	**20 06 54.8**	**+0.9**
	baz=58							

IDC ***25*** *20:14:03.5±1.4, 41°53.N×50°42.E, h0km, mb3.5/2, mb1 3.4/8, mb1mx3.2/44, mbtmp3.3/8, ML2.8/4, Error ellipse: s-maj=20.1km s-min=10.4km az=168.0*
DRS ***25*** *20:14:03.2±0.0, 41°60.N×51°26.E, h24km*
AZER ***25*** *20:14:08.6, 41°61.N×50°24.E, h28km, ML3.1*
MOS ***25*** *20:14:08.4±1.8, 41°86.N×50°37.E, h36km, mb4.0/1, Error ellipse: s-maj=16.0km s-min=9.9km az=158.4*

ISC 25 20:14:06.5±1.3**, 41°64.N**±0°03×**50°41.E**±0°04**, h18**km±8km**, n49**, σ1°48/82**, 3C-1D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
NDR	**Nardaran**	**1.11**	**197**	P		**Pg**	**20 14 28.3**		**+0.4**
NDR				S		**Sg**	**20 14 41.9**		**-0.5**
GALA	**Gala**	**1.25**	**189**	P		**Pb**	**20 14 29.7**		**+0.3**
GALA				S		**Sn**	**20 14 48.6**		**+3.2**
SIZA	**Siyzn**	**1.27**	**244**	P		**Pb**	**20 14 30.1**		**+0.2**
	SNR=32								
SIZA				S		**Sn**	**20 14 46.4**		**+0.4**
GOBA	**Gobu**	**1.34**	**203**	Pn		**Pn**	**20 14 31.4**		**+1.1**
GOBA				Sn		**Sg**	**20 14 49.1**		**-0.7**
ATGJ	**Altiaghaj**	**1.36**	**235**	P		**Pn**	**20 14 30.0**		**-0.6**
	SNR=13								
ATGJ				S		**Sn**	**20 14 48.7**		**+0.5**
QUBA	**Quba, Azerbaij**	**1.47**	**259**	Pn		**Pn**	**20 14 32.7**		**+0.6**
	SNR=21								
QUBA				Sn		**Sg**	**20 14 52.8**		**-1.1**
GBS	**Qobustan**	**1.57**	**225**	Pn		**Pn**	**20 14 34.8**		**+1.3**
	SNR=9.8								
GBS				Sn		**Sg**	**20 14 56.0**		**-1.0**
DRN	**Derbent**	**1.60**	**285**	*e*P		**Pn**	**20 14 35.3**		**+1.5**
DRN				*e*S		**Sg**	**20 14 57.2**		**-0.8**
DRN				pmax		pmax			
	comp=Z,139nm,0.6s								
DRN	**Derbent**	**1.60**	**285**	*e*Pg		**Pn**	**20 14 35.4**		**+1.5**
	comp=Z,139nm,0.6s								
DRN				*e*Sg		**Sg**	**20 14 57.2**		**-0.8**
	comp=Z,373nm,0.3s								
PQL	**Pirkuli**	**1.61**	**239**	Pn		**Pn**	**20 14 35.3**		**+1.1**
	SNR=5.0								
PQL				Sn		**Sg**	**20 14 56.9**		**-1.7**
QSAR	**Qusar**	**1.61**	**266**	Pn		**Pn**	**20 14 35.1**		**+1.0**
	SNR=14								
QSAR				Sn		**Sg**	**20 14 57.4**		**-1.2**
KSMR	**Kasumkent**	**1.71**	**269**	*e*P		**Pn**	**20 14 37.0**		**+1.5**
KSMR				*e*S		**Sg**	**20 15 02.0**		**+0.4**
KSMR				pmax		pmax			
	comp=Z,60nm,0.2s								
KSMR	**Kasumkent**	**1.71**	**269**	*e*Pn		**Pn**	**20 14 37.0**		**+1.5**
	comp=Z,60nm,0.2s								
KSMR				*e*Sn		**Sg**	**20 15 02.0**		**+0.4**
	comp=Z,1μm,0.4s								
XNQ	**Khinaliq**	**1.77**	**255**	Pn		**Pn**	**20 14 37.2**		**+0.8**
	SNR=70								
XNQ				Sn		**Sg**	**20 15 01.1**		**-2.4**
IML	**Ismayilli**	**1.88**	**244**	Pn		**Pb**	**20 14 40.0**		**-0.4**
	SNR=9.6								
IML				Sn		**Sb**	**20 15 03.9**		**+0.4**
AKT	**Akhty**	**2.02**	**266**	*e*P		**Pn**	**20 14 41.3**		**+1.6**
AKT				*e*S		**Sb**	**20 15 07.9**		**+0.4**
AKT				pmax		pmax			
	comp=Z,91nm,0.5s								
AKT	**Akhty**	**2.02**	**266**	*e*Pn		**Pn**	**20 14 41.3**		**+1.6**
	comp=Z,91nm,0.5s								
AKT				*e*Sn		**Sb**	**20 15 07.9**		**+0.4**
	comp=Z,500nm,0.3s								
QBL	**Gabala**	**2.06**	**251**	Pn		**Pn**	**20 14 42.2**		**+2.0**
	SNR=13								
QBL				Sn		**Sb**	**20 15 08.1**		**-0.5**
KDMR	**Kurdemir**	**2.11**	**234**	Pn		**Pb**	**20 14 43.8**		**-0.3**
KDMR				Sn		**Sb**	**20 15 08.8**		**-1.1**
SEKA	**Sheki**	**2.45**	**261**	P		**Pn**	**20 14 47.8**		**+2.1**
SEKA	**Sheki**	**2.45**	**261**	Pg		**Pn**	**20 14 47.7**		**+2.0**
	SNR=6.6								
SEKA				Sg		**Sb**	**20 15 19.4**		**-0.6**
ZRD	**Zardab**	**2.47**	**237**	Pn		**Pn**	**20 14 48.5**		**+2.7**
ZRD				Sn		**Sn**	**20 15 17.9**		**+2.3**
BRDA	**Brd**	**2.81**	**242**	Pn		**Pn**	**20 14 52.2**		**+1.8**
BRDA				Sn		**Sn**	**20 15 26.7**		**+2.9**
ZKTA	**Zakatala**	**2.84**	**271**	P		**Pn**	**20 14 53.1**		**+2.2**
ZKTA	**Zakatala**	**2.84**	**271**	Pn		**Pn**	**20 14 53.4**		**+2.5**
	SNR=5.5								
ZKTA				Sn		**Sb**	**20 15 29.7**		**-1.3**
BLQ	**Beylaqan**	**2.90**	**229**	Sn		**Sn**	**20 15 24.2**		**-1.9**
AGDM	**Agdam**	**2.93**	**240**	Pn		**Pn**	**20 14 51.6**		**-0.7**
	SNR=5.0								
AGDM				Sn		**Sn**	**20 15 27.5**		**+0.4**
LKRN	**Lenkeran, Azer**	**3.19**	**204**	Pn		**Pn**	**20 14 57.0**		**+1.3**
LKRN				Sn		**Sn**	**20 15 31.4**		**-1.8**
YRD	**Yardimli**	**3.19**	**212**	Pn		**Pn**	**20 14 57.8**		**+1.9**
	SNR=3.7								
YRD				Sn		**Sn**	**20 15 32.8**		**-0.8**
QRD	**Qoradiz**	**3.21**	**228**	Sn		**Sn**	**20 15 31.7**		**-2.1**
GANJ	**Ganja**	**3.24**	**253**	P		**Pn**	**20 14 55.8**		**-0.7**
GANJ	**Ganja**	**3.24**	**253**	Pn		**Pn**	**20 14 58.5**		**+2.0**
	SNR=5.3								
GANJ				Sn		**Sn**	**20 15 33.9**		**-0.8**
LRK	**Lerik**	**3.39**	**209**	Pn		**Pn**	**20 15 00.7**		**+2.1**
LRK				Sn		**Sn**	**20 15 35.6**		**-3.0**
GDB	**GEDABAY**	**3.63**	**257**	Pn		**Pn**	**20 15 01.9**		**-0.1**
	SNR=12								
GDB				Sn		**Sn**	**20 15 43.4**		**-1.1**
GROC	**Groznyy**	**3.75**	**296**	*e*P		**Pn**	**20 15 02.2**		**-1.3**
GROC				*e*			20 15 44.2		
GROC				pmax		pmax			
	comp=Z,5.0nm,0.3s								
GROC				smax		smax			
	comp=E,15nm,1.1s								
GROC				smax		smax			
	comp=N,6.0nm,0.6s								
GROC				smax		smax			
	comp=E,14nm,0.4s								
QZX	**Qazax, Azerbai**	**3.83**	**263**	Pn		**Pn**	**20 15 04.5**		**-0.1**
	SNR=6.7								
QZX				Sn		**Sn**	**20 15 49.1**		**-0.2**
SBZ	**Shahbuz**	**4.33**	**240**	Pn		**Pn**	**20 15 13.2**		**+1.7**
SBZ				Sn		**Sn**	**20 16 02.0**		**+0.5**
ORD	**Ordubad**	**4.33**	**233**	Pn		**Pn**	**20 15 13.3**		**+1.8**
ORD				Sn		**Sn**	**20 15 59.8**		**-1.7**
GNI	**Garni**	**4.55**	**253**	Pn		**Pn**	**20 15 16.9**		**+2.4**
	comp=E,0.2nm,0.3s,baz=128,slow=19,SNR=1.8								
KBZ	**Khabaz**	**5.91**	**293**	Pn		**Pn**	**20 15 34.5**		**+1.3**
	comp=E,0.1nm,0.3s,baz=112,slow=11,SNR=4.4								
KBZ				Sn		**Sn**	**20 16 40.8**		**+0.4**
	comp=E,0.2nm,0.3s,baz=90,slow=17,SNR=2.6								
KVAR	**Kislovodsk Arr**	**6.12**	**295**	Pn		**Pn**	**20 15 38.5**		**+2.4**
	baz=84,slow=19,SNR=3.2								
KVAR				Sn		**Sn**	**20 16 47.0**		**+1.1**
	baz=126,slow=17,SNR=4.6								
GEYT	**Alibeck**	**7.00**	**119**	Pn		Pn	20 15 44.6		-3.5
	comp=E,0.2nm,0.3s,baz=298,slow=16,SNR=2.7								
AB31	**Akbulak array**	**10.13**	**38**	P		**Pn**	**20 16 30.9**		**-0.1**
AB31				SN		**Sn**	**20 18 21.9**		**-2.2**
AB31	**Akbulak array**	**10.13**	**38**	⇑Pn		**Pn**	**20 16 30.9**		**-0.1**
	comp=E,0.8nm,0.8s,baz=221,slow=13,SNR=13								
AB31				⇑Sn		**Sn**	**20 18 21.9**		**-2.2**
	comp=E,0.7nm,0.6s,baz=230,slow=24								
AKTO	**Aktyubinsk**	**10.25**	**28**	Pn		Pn	20 16 31.6		-1.1
	comp=E,0.3nm,0.3s,baz=206,slow=10.0,SNR=5.7								
AKTO				Sn		Sn	20 18 23.3		-3.8
	comp=E,0.2nm,0.3s,baz=99,slow=5.7,SNR=3.9								
AKTO	**Aktyubinsk**	**10.25**	**28**	⇓Pn		Pn	20 16 30.9		-1.8
	comp=E,3.0nm,1.2s								
AKTO				⇑Sn		Sn	20 18 21.8		-5.3
	comp=E,3.3nm,1.1s								
BVAR	**Borovoye Array**	**17.62**	**43**	P		**Pn**	**20 18 11.1**		**+0.2**
	comp=E,0.2nm,0.3s,baz=206,slow=10,SNR=3.6								
MKAR	**Makanchi Array**	**23.32**	**66**	P		**P**	**20 19 13.5**		**0.0**
	comp=E,0.6nm,0.7s,baz=262,slow=11,SNR=8.3								
FINES	**FINESS Array B**	**24.67**	**332**	P		**P**	**20 19 27.1**		**+1.1**
	comp=E,2.5nm,1.0s,baz=124,slow=12,SNR=3.5								

LDG ***25*** *20:28:51.4±0.2, 51°39.N×16°33.E, h1km, Ml3.0/4, Error ellipse: s-maj=5.6km s-min=4.6km az=147.0, Suspected Mining induced.*
IDC ***25*** *20:28:52.3±0.7, 51°46.N×16°05.E, h0km, mb1 3.5/7, mb1mx3.2/44, mbtmp3.3/7, ML3.0/7, Error ellipse: s-maj=11.0km s-min=7.1km az=108.0*
PRU ***25*** *20:28:52.4±0.0, 51°44.N×16°18.E, h0km*
BGR ***25*** *20:28:52.8±0.4, 51°41.N×16°21.E, h1km, ML3.0/13, Error ellipse: s-maj=4.4km s-min=2.2km az=21.0*
IPEC ***25*** *20:28:52.0±0.3, 51°43.N×16°35.E, h0km, ML2.3/4, Error ellipse: s-maj=2.8km s-min=1.2km az=52.0*
VIE ***25*** *20:28:54.1±1.0, 51°27.N×16°17.E, h0km, mb2.5/7, ml2.8/8, Error ellipse: s-maj=7.7km s-min=4.8km az=38.0 62 km WNW of Wroclaw Suspected Mining induced.*

ISC 25 20:28:50.4±0.7**, 51°48.N**±0°03×**16°19.E**±0°02**, h0km, n76, σ1°53/154, 13D, Poland**

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
KSP	**Ksiaz**	**0.64**	**174**	*e*Pg		**Pg**	**20 29 03.9**		**+1.1**
KSP				*e*Sg		**Sg**	**20 29 11.4**		**+0.3**
KSP	**Ksiaz**	**0.64**	**174**	*i* Pg		**Pg**	**20 29 03.8**		**+1.1**
KSP				*i* Sg		**Sg**	**20 29 11.4**		**+0.3**
CHVC	**Chvalec**	**0.90**	**185**	⇓*i*PG		**Pb**	**20 29 08.8**		**-0.1**
CHVC				*e*SG		**Sg**	**20 29 20.0**		**+0.7**
OSTC	**Ostas**	**0.93**	**179**	⇓*i*PG		**Pb**	**20 29 09.4**		**0.0**
OSTC				*e*SG		**Sg**	**20 29 20.1**		**-0.1**
	comp=Z,58nm,0.2s								
UPC	**Upice**	**0.98**	**187**	⇓*i*PG		**Pg**	**20 29 10.0**		**+0.8**
UPC				*e*SG		**Sg**	**20 29 22.6**		**+0.7**
	comp=Z,204nm,0.4s								
DPC	**Dobruska-Polom**	**1.14**	**176**	*e*Pg		**Pg**	**20 29 12.8**		**+0.6**
DPC				*e*Sg		**Sg**	**20 29 27.0**		**0.0**
DPC	**Dobruska-Polom**	**1.14**	**176**	⇓*e*PG		**Pg**	**20 29 12.7**		**+0.5**
DPC				*e*SG		**Sg**	**20 29 26.9**		**0.0**
	comp=Z,83nm,0.5s								
PVCC	**Panska Ves**	**1.40**	**228**	⇓*e*PG		**Pg**	**20 29 17.9**		**+0.7**
PVCC				*e*SG		**Sb**	**20 29 36.8**		**+1.0**
	comp=Z,254nm,0.3s								
KRLC	**Kraliky**	**1.46**	**165**	⇓*e*PG		**Pn**	**20 29 18.3**		**+0.2**
BRG	**Berggiesshubel**	**1.54**	**248**	PN		**Pn**	**20 29 19.3**		**+0.2**
BRG				PG		**Pg**	**20 29 21.1**		**+1.2**
BRG				SG		**Sg**	**20 29 41.2**		**+1.4**
	88nm,0.4s								
BRG	**Berggiesshubel**	**1.54**	**248**	*e*Pn		**Pn**	**20 29 19.5**		**+0.3**
BRG				*e*Pg		**Pg**	**20 29 21.1**		**+1.2**
BRG				*e*Sg		**Sn**	**20 29 40.4**		**+0.6**
PRA	**Prague**	**1.80**	**219**	⇓*e*PN		**Pn**	**20 29 23.2**		**+0.5**
PRA				*e*PG		**Pb**	**20 29 24.9**		**+0.7**
PRA				*e*SG		**Sb**	**20 29 48.3**		**+1.0**
	comp=Z,28nm,0.6s								
GOPC	**GO Pecny, Ondr**	**1.81**	**210**	⇓*e*PN		**Pn**	**20 29 23.8**		**+1.0**
GOPC				*e*PG		**Pb**	**20 29 25.2**		**+0.8**
GOPC				*e*SG		**Sb**	**20 29 48.3**		**+0.8**
	comp=Z,35nm,0.3s								
PRU	**Pruhonice**	**1.82**	**216**	⇓*e*PG		**Pb**	**20 29 25.4**		**+0.7**
PRU				*e*SG		**Sb**	**20 29 48.9**		**+0.8**
	comp=Z,46nm,0.6s								
FBE	**Freiberg**	**1.87**	**254**	*e*Pg		**Pg**	**20 29 27.4**		**+1.2**
FBE				*e*Sg		**Sg**	**20 29 51.3**		**+0.9**
MORC	**Moravsky Berou**	**1.91**	**153**	*e*Pn		**Pn**	**20 29 24.7**		**+0.4**
MORC				*e*Sg		**Sn**	**20 29 49.6**		**+0.5**
MORC	**Moravsky Berou**	**1.91**	**153**	*e*PN		**Pn**	**20 29 24.5**		**+0.2**
MORC				*e*SG		**Sn**	**20 29 48.8**		**-0.3**
MORC	**Moravsky Berou**	**1.91**	**153**	*e*Pn		**Pn**	**20 29 24.5**		**+0.2**
	baz=336								
MORC				*e*Sg		**Sn**	**20 29 48.8**		**-0.3**
	20nm,0.3s,baz=336								
CLL	**Collm**	**2.00**	**266**	*e*Pn		**Pn**	**20 29 26.0**		**+0.5**
CLL				*e*Pg		**Pb**	**20 29 29.0**		**+1.3**
CLL				*e*Sg		**Sb**	**20 29 55.0**		**+1.8**
	comp=Z,27nm,0.6s								
CLL	**Collm**	**2.00**	**266**	*e*Pn		**Pn**	**20 29 25.9**		**+0.5**
CLL				*e*Pg		**Pb**	**20 29 29.2**		**+1.5**
CLL				*e*Sg		**Sg**	**20 29 56.5**		**+1.7**
OKC	**Ostrava-Krasne**	**2.07**	**142**	*e*Pn		**Pn**	**20 29 26.5**		**+0.1**
OKC				*e*Pg		**Pg**	**20 29 30.3**		**+0.3**
OKC				*e*Sg		**Sg**	**20 29 56.3**		**-0.5**
VRAC	**Vranov**	**2.19**	**173**	Pn		**Pn**	**20 29 28.8**		**+0.7**
	comp=Z,3.8nm,0.3s,baz=346,slow=17,SNR=21								
VRAC				Sn		**Sn**	**20 29 52.9**		**-3.0**
	comp=Z,2.6nm,0.3s,baz=78,slow=20,SNR=3.9								
VRAC				Lg		Lg	20 30 00.5		
	comp=Z,9.0nm,0.3s,baz=56,slow=16,SNR=9.9								
VRAC	**Vranov**	**2.19**	**173**	*e*PN		**Pn**	**20 29 28.9**		**+0.7**
VRAC				*e*SG		**Sb**	**20 29 58.7**		**+0.1**
VRAC	**Vranov**	**2.19**	**173**	*e*Pn		**Pn**	**20 29 28.8**		**+0.7**
	baz=356								
VRAC				*e*Sg		**Sb**	**20 29 58.7**		**+0.1**
	comp=Z,14nm,0.2s,baz=356								
TREC	**Trest**	**2.23**	**192**	⇓*e*PG		**Pb**	**20 29 32.6**		**+0.9**
PBCC	**Pribram**	**2.28**	**219**	⇓*e*PG		**Pb**	**20 29 33.8**		**+1.4**
PBCC				*e*SG		**Sg**	**20 30 03.3**		**-0.2**
KRUC	**Moravsky**	**2.43**	**177**	*e*PN		**Pn**	**20 29 32.4**		**+1.1**
KRUC				*e*SG		**Sb**	**20 30 06.4**		**+1.0**
KRUC	**Moravsky**	**2.43**	**177**	*e*Pn		**Pn**	**20 29 32.4**		**+1.1**
	baz=359								
KRUC				*e*Sg		**Sb**	**20 30 06.3**		**+0.9**
	comp=Z,13nm,0.4s,baz=359								
TANN	**Tannenbergstha**	**2.59**	**247**	*e*Pn		**Pn**	**20 29 34.9**		**+1.3**
TANN				*e*Pg		**Pg**	**20 29 41.2**		**+1.2**
TANN				*e*Sg		**Sg**	**20 30 15.3**		**+1.8**
OJC	**Ojcow**	**2.62**	**118**	*e*Pn		**Pn**	**20 29 32.8**		**-1.1**
OJC				*e*Pg		**Pg**	**20 29 41.1**		**+0.5**
OJC				*e*Sg		**Sg**	**20 30 16.1**		**+1.7**
NKC	**Novy Kostel**	**2.68**	**244**	⇓*e*PN		**Pn**	**20 29 35.8**		**+1.0**
NKC				*e*PG		**Pg**	**20 29 42.3**		**+0.5**
NKC				*e*SG		**Sg**	**20 30 18.1**		**+1.6**
	comp=Z,35nm,0.3s								
JAVC	**Velka Javorina**	**2.79**	**159**	*e*PN		**Pn**	**20 29 37.0**		**+0.5**
JAVC				*e*SG		**Sb**	**20 30 16.7**		**+0.7**
JAVC	**Velka Javorina**	**2.79**	**159**	*e*Pn		**Pn**	**20 29 36.9**		**+0.5**
	baz=342								
JAVC				*e*Sg		**Sb**	**20 30 16.6**		**+0.6**
	comp=Z,13nm,0.5s,baz=342								
KHC	**Kasperske Hory**	**2.89**	**216**	⇓*e*PN		**Pn**	**20 29 38.3**		**+0.6**
KHC				*e*PG		**Pb**	**20 29 44.6**		**+1.8**
KHC				*e*SN		**Sn**	**20 30 12.6**		**-0.5**
KHC				*e*SG		**Sg**	**20 30 21.6**		**-1.5**
	comp=Z,22nm,0.3s								
MANZ	**Manzenberg**	**2.99**	**242**	*e*Pn		**Pn**	**20 29 40.4**		**+1.2**
MANZ				*e*Pg		**Pg**	**20 29 48.9**		**+1.2**
MANZ				*e*Sg		**Sg**	**20 30 27.2**		**+0.6**
MOX	**Moxa**	**3.00**	**256**	*e*Pn		**Pn**	**20 29 40.4**		**+1.1**
MOX				*e*Pg		**Pg**	**20 29 49.0**		**+1.0**
MOX				*e*Sg		**Sg**	**20 30 28.9**		**+2.0**
ROTZ	**Rotzenmuhle**	**3.06**	**237**	*e*Pn		**Pn**	**20 29 41.5**		**+1.5**
ROTZ				*e*Sg		**Sg**	**20 30 28.8**		**+0.1**
SMOL	**Smolenice**	**3.08**	**164**	*e*SG		**Sg**	**20 30 31.7**		**+2.4**
GEC2	**GERESS Array S**	**3.09**	**212**	*e*Pn		**Pn**	**20 29 41.9**		**+1.5**
GEC2				*e*Sg		**Sg**	**20 30 28.4**		**-1.1**
GERES	**GERESS Array B**	**3.09**	**212**	Pn		**Pn**	**20 29 41.6**		**+1.1**
	comp=Z,0.9nm,0.3s,baz=32,slow=14,SNR=28								
GERES				Pg		**Pb**	**20 29 48.0**		**+1.8**
	comp=Z,8.8nm,0.3s,baz=27,slow=22,SNR=86								
GERES				Lg		Lg	20 30 27.8		
	comp=Z,7.3nm,0.3s,baz=29,slow=30,SNR=13								
LANS	**Liptovska Anna**	**3.14**	**137**	*e*PN		**Pn**	**20 29 42.3**		**+1.1**
LANS				*e*PG		**Pg**	**20 29 51.4**		**+0.8**
LANS				*e*SG		**Sg**	**20 30 33.4**		**+2.1**
LANS				*e*LG		Lg	20 30 41.7		
WET	**Wettzell**	**3.16**	**223**	*e*Pn		**Pn**	**20 29 42.7**		**+1.3**
WET				*e*Sg		**Sg**	**20 30 31.0**		**-0.9**
MODS	**Modra-Piesok**	**3.19**	**167**	*e*PG		**Pg**	**20 29 50.9**		**-0.7**
MODS				*e*SG		**Sg**	**20 30 33.0**		**+0.1**
NIE	**Niedzica**	**3.34**	**127**	*e*P		**Pg**	**20 29 53.0**		**-1.5**
NIE				*e*S		**Sg**	**20 30 38.0**		**+0.3**
VYHS	**Vyhne**	**3.44**	**149**	*e*PN		**Pn**	**20 29 45.7**		**+0.4**
VYHS				*e*PG		**Pg**	**20 29 56.8**		**+0.4**
VYHS				*e*SG		**Sg**	**20 30 40.7**		**-0.4**
CONA	**Conrad Observa**	**3.56**	**184**	*e*Pn		**Pn**	**20 29 48.5**		**+1.5**
	SNR=5.3								
CONA				Sg		**Sg**	**20 30 45.2**		**+0.3**
	comp=Z,4.7nm,0.3s								
GRF	**Grafenberg Arr**	**3.64**	**242**	*e*Pn		**Pn**	**20 29 49.5**		**+1.5**
GRF				*e*Pg		**Pg**	**20 30 01.5**		**+1.4**
GRF				*e*Sg		**Sg**	**20 30 48.3**		**+1.1**
BSD	**Bornholm Skovb**	**3.72**	**349**	*i* P		**Pn**	**20 29 49.2**		**+0.2**
BSD				*i* S		**Sn**	**20 30 30.7**		**-2.8**
STHS	**Stebnicka Huta**	**3.84**	**121**	*e*PN		**Pn**	**20 29 51.0**		**+0.3**
STHS				*e*PG		**Pg**	**20 30 05.3**		**+1.4**
STHS				*e*SG		**Sg**	**20 30 59.0**		**+5.4**
STHS				*e*LG		Lg	20 31 02.3		
MOA	**Molln**	**3.84**	**200**	*e*Pn		**Pn**	**20 29 51.8**		**+0.9**
	comp=Z,2.2nm,0.2s,SNR=13								
MOA				Sg		**Sg**	**20 30 54.5**		**+0.6**
	comp=Z,12nm,0.5s								
ARSA	**Arzberg**	**4.26**	**186**	Pn		**Pn**	**20 29 57.5**		**+1.0**
	comp=Z,1.4nm,0.3s								
ARSA				Sg		**Sg**	**20 31 07.8**		**+0.7**
	comp=Z,9.9nm,0.5s								
KOLS	**Kolonicke sedl**	**4.67**	**121**	*e*PN		**Pn**	**20 30 02.5**		**+0.4**
KOLS				*e*PG		**Pg**	**20 30 24.2**		**+4.4**
KOLS				*e*SG		**Sg**	**20 31 27.9**		**+7.6**
KBA	**Koelnbreinsper**	**4.78**	**204**	*e*Pn		**Pn**	**20 30 05.5**		**+1.6**
	comp=Z,0.7nm,0.2s								
KBA				Sg		**Sg**	**20 31 26.2**		**+2.2**
	comp=Z,9.2nm,0.5s								
WATA	**Walderalm**	**5.13**	**218**	*i* Pn		**Pn**	**20 30 10.6**		**+2.0**
	comp=Z,1.4nm,0.2s								
WATA				*i* Sn		**Sn**	**20 31 08.5**		**0.0**
	comp=Z,1.2nm,0.2s								
MOTA	**Moosalm**	**5.30**	**221**	*i* Pn		**Pn**	**20 30 12.5**		**+1.5**
	comp=Z,0.6nm,0.2s								
ABTA	**Abfaltersbach**	**5.32**	**208**	*e*Pn		**Pn**	**20 30 13.2**		**+2.1**
	comp=Z,1.2nm,0.5s								
ABTA				Sg		**Sg**	**20 31 42.3**		**+1.1**
	comp=Z,7.9nm,0.6s								
RETA	**Reutte**	**5.34**	**224**	*i* Pn		**Pn**	**20 30 12.2**		**+0.8**
	comp=Z,1.0nm,0.2s								
RETA				*e*Sn		**Sn**	**20 31 13.5**		**-0.1**
	comp=Z,1.8nm,0.2s								
SQTA	**Sankt Quirin**	**5.36**	**219**	*i* Pn		**Pn**	**20 30 14.1**		**+2.3**
	comp=Z,2.4nm,0.2s,SNR=8.2								
DAVOX	**Davos/Dischmat**	**6.26**	**224**	Pn		**Pn**	**20 30 24.8**		**+0.6**
DAVOX				Lg		Lg	20 32 09.4		
CDF	**Champ du Feu**	**6.52**	**245**	*e*Pn		**Pn**	**20 30 27.4**		**-0.2**
CDF				*e*Sn		**Sn**	**20 31 38.4**		**-4.3**
CDF				*e*Sg		**Sg**	**20 32 18.1**		**-1.6**
	comp=Z,8.3nm,0.8s								
HINF	**Hinteralfeld**	**7.08**	**242**	*e*Pn		**Pn**	**20 30 35.0**		**-0.3**
HINF	**Hinteralfeld**	**7.08**	**242**	*e*Pg		**Pg**	**20 31 03.3**		**-2.8**
HINF				*e*Sg		**Sg**	**20 32 35.9**		**-1.9**
	comp=Z,1.8nm,0.4s								
HAU	**Haudompre**	**7.26**	**245**	*e*Pn		**Pn**	**20 30 37.6**		**-0.2**
HAU				*e*Sg		**Sg**	**20 32 40.9**		**-2.6**
	comp=Z,1.3nm,0.3s								
MEZF	**Maizieres J'vi**	**7.77**	**252**	*e*Pn		**Pn**	**20 30 44.4**		**-0.3**
CABF	**La Chapelle**	**8.23**	**238**	*e*Pg		**Pg**	**20 31 25.2**		**-2.8**
CABF				*e*Sg		**Sg**	**20 33 10.1**		**-4.5**
	comp=

LASF	**Ste Croix**	**1.02**	**119**	*e*Pg	**Pb**	**21 16 45.3 -0.2**
LASF				*e*Sg	**Sb**	**21 16 58.1 -0.9**
	110nm,0.2s					
LASF				*e*Sn	**Sb**	**21 16 59.8 +0.8**
	802nm,0.3s					
LASF	**Ste Croix**	**1.02**	**119**	Pg	**Pb**	**21 16 45.3 -0.2**
LASF				Lg	Lg	21 16 58.1
	55nm,0.2s					
LASF				Sn	**Sb**	**21 16 59.8 +0.8**
	401nm,0.3s					
MONQ	**Montcuq**	**1.04**	**259**	Pg	**Pb**	**21 16 46.9 +1.1**
MONQ				Sg	**Sn**	**21 17 00.7 -0.3**
RJF	**Les Rejaudoux**	**1.07**	**314**	*e*Pg	**Pb**	**21 16 47.2 +0.8**
RJF	**Les Rejaudoux**	**1.07**	**314**	*e*Pn	**Pb**	**21 16 47.4 +1.0**
RJF				*e*Sg	**Sb**	**21 17 01.3 +0.8**
	988nm,0.2s					
RJF	**Les Rejaudoux**	**1.07**	**314**	Pg	**Pb**	**21 16 47.2 +0.8**
RJF				Lg	Lg	21 17 01.3
	494nm,0.2s					
PYM	**Petit Puy Mans**	**1.21**	**13**	Pg	**Pn**	**21 16 49.4 +0.6**
PYM				Sg	**Sb**	**21 17 05.3 +0.8**
MTLF	**Montolieu**	**1.26**	**193**	*e*Pn	**Pn**	**21 16 49.3 -0.2**
MTLF	**Montolieu**	**1.26**	**193**	*e*Pg	**Pn**	**21 16 50.3 +0.8**
MTLF				*e*Sg	**Sn**	**21 17 06.7 +0.1**
	469nm,0.2s					
MTLF	**Montolieu**	**1.26**	**193**	Sn	**Sn**	**21 17 06.6 +0.1**
MTLF	**Montolieu**	**1.26**	**193**	Pn	**Pn**	**21 16 49.3 -0.2**
MTLF				Pg	**Pn**	**21 16 50.3 +0.8**
MTLF				Lg	Lg	21 17 06.7
	235nm,0.2s					
LFF	**La Frestale**	**1.39**	**286**	*e*Pn	**Pn**	**21 16 52.0 +0.8**
LFF	**La Frestale**	**1.39**	**286**	*e*Pg	**Pb**	**21 16 53.2 +1.5**
LFF				*e*Sg	**Sg**	**21 17 11.8 +1.6**
	875nm,0.2s					
LFF	**La Frestale**	**1.39**	**286**	Pn	**Pn**	**21 16 52.0 +0.8**
LFF				Pg	**Pb**	**21 16 53.2 +1.5**
LFF				Lg	Lg	21 17 11.8
	437nm,0.2s					
VIVF	**Saint-Julien-l**	**1.49**	**78**	*e*Pn	**Pn**	**21 16 52.5 -0.2**
VIVF	**Saint-Julien-l**	**1.49**	**78**	*e*Pg	**Pn**	**21 16 54.0 +1.3**
VIVF				*e*Sn	**Sn**	**21 17 10.7 -1.6**
VIVF				*e*Sg	**Sb**	**21 17 12.9 +0.2**
	282nm,0.2s					
VIVF	**Saint-Julien-l**	**1.49**	**78**	Pn	**Pn**	**21 16 52.5 -0.2**
VIVF				Pg	**Pn**	**21 16 54.0 +1.3**
VIVF				Sn	**Sn**	**21 17 10.7 -1.6**
VIVF				Lg	Lg	21 17 12.9
	141nm,0.2s					
AGO	**Saint Agoulin**	**1.52**	**14**	Pn	**Pn**	**21 16 53.5 +0.4**
AGO				Sg	**Sb**	**21 17 15.2 +1.7**
TCF	**Toulx Ste Croi**	**1.74**	**351**	*e*Pn	**Pn**	**21 16 56.3 +0.2**
TCF	**Toulx Ste Croi**	**1.74**	**351**	*e*P	**Pn**	**21 16 58.0 +1.9**
TCF	**Toulx Ste Croi**	**1.74**	**351**	*e*Pg	**Pb**	**21 16 59.7 +1.9**
TCF				*e*Sg	**Sb**	**21 17 22.2 +2.5**
	267nm,0.2s					
TCF	**Toulx Ste Croi**	**1.74**	**351**	Pn	**Pn**	**21 16 56.3 +0.2**
TCF				Pg	**Pb**	**21 16 59.7 +1.9**
TCF				Lg	Lg	21 17 22.2
	134nm,0.2s					
MLS	**Moulis**	**1.96**	**215**	Pn	**Pn**	**21 16 59.1 +0.1**
MLS				Pg	**Pb**	**21 17 03.3 +1.9**
MLS				Sn	**Sn**	**21 17 22.3 -1.3**
BGF	**Bois d'Agland**	**1.99**	**5**	*e*Pn	**Pn**	**21 16 59.5 0.0**
BGF	**Bois d'Agland**	**1.99**	**5**	*e*Pg	**Pb**	**21 17 04.2 +2.1**
BGF				*e*Sg	**Sb**	**21 17 28.9 +1.9**
	627nm,0.3s					
BGF	**Bois d'Agland**	**1.99**	**5**	Pn	**Pn**	**21 16 59.5 0.0**
BGF				Pg	**Pb**	**21 17 04.2 +2.1**
SJAF	**Saint Jean de**	**2.10**	**175**	Pn	**Pn**	**21 17 00.5 -0.5**
	0.0nm,0.1s,SNR=7.9					
SJAF				Pg	**Pb**	**21 17 05.3 +1.5**
	3.4nm,0.1s,SNR=7.9					
SJAF				Lg	Lg	21 17 32.3
	111nm,0.2s,SNR=7.9					
EJON	**La Jonquera**	**2.13**	**175**	Pn	**Pn**	**21 17 01.0 -0.5**
	0.3nm,0.2s,SNR=4.6					
EJON				Pg	**Pb**	**21 17 05.8 +1.3**
	11nm,0.1s,SNR=81					
EJON				Lg	Lg	21 17 33.8
	98nm,0.2s,SNR=23					
CLLI	**Llivia**	**2.14**	**193**	Pn	**Pn**	**21 17 02.4 +0.7**
	0.2nm,0.1s					
CLLI				Pg	**Pb**	**21 17 06.5 +1.7**
	34nm,0.2s,SNR=207					
CLLI				Lg	Lg	21 17 34.3
	107nm,0.2s,SNR=16					
RUSF	**Rustrel**	**2.15**	**106**	Pn	**Pn**	**21 17 02.0 +0.2**
SMRF	**Simiane la Rot**	**2.21**	**105**	*e*Pn	**Pn**	**21 17 01.5 -1.0**
SMRF	**Simiane la Rot**	**2.21**	**105**	*e*P	**Pn**	**21 17 03.6 +1.1**
SMRF	**Simiane la Rot**	**2.21**	**105**	*e*Pg	**Pb**	**21 17 06.9 +1.1**
SMRF				*e*Sn	**Sn**	**21 17 27.7 -2.2**
	24nm,0.3s					
SMRF				*e*Sg	**Sb**	**21 17 35.4 +2.2**
	78nm,0.3s					
SMRF	**Simiane la Rot**	**2.21**	**105**	Pn	**Pn**	**21 17 01.5 -1.0**
SMRF				Pg	**Pb**	**21 17 06.9 +1.1**
SMRF				Sn	**Sn**	**21 17 27.7 -2.2**
	24nm,0.3s					
SMRF				Lg	Lg	21 17 35.4
	78nm,0.3s					
SMF	**Signal de Mont**	**2.24**	**22**	*e*Pn	**Pn**	**21 17 03.0 0.0**
SMF	**Signal de Mont**	**2.24**	**22**	*e*Pg	**Pb**	**21 17 08.6 +2.2**
SMF				*e*Sg	**Sb**	**21 17 36.3 +2.1**
	223nm,0.2s					
SMF	**Signal de Mont**	**2.24**	**22**	Pn	**Pn**	**21 17 03.0 0.0**
SMF				Pg	**Pb**	**21 17 08.6 +2.2**
EPF	**Esparros**	**2.26**	**228**	*e*Pn	**Pn**	**21 17 02.3 -0.9**
EPF	**Esparros**	**2.26**	**228**	*e*Pg	**Pb**	**21 17 08.9 +2.3**
EPF				*e*Sn	**Sn**	**21 17 30.6 -0.6**
EPF				*e*Sg	**Sg**	**21 17 38.6 +0.5**
	108nm,0.2s					
EPF	**Esparros**	**2.26**	**228**	Pn	**Pn**	**21 17 02.3 -0.9**
EPF				Pg	**Pb**	**21 17 08.9 +2.3**
EPF				Sn	**Sn**	**21 17 30.6 -0.6**
EPF				Lg	Lg	21 17 38.6
	54nm,0.2s					
AVF	**Avril sur Loir**	**2.28**	**13**	*e*Pn	**Pn**	**21 17 03.3 -0.1**
AVF	**Avril sur Loir**	**2.28**	**13**	*e*P	**Pn**	**21 17 06.2 +2.8**
AVF	**Avril sur Loir**	**2.28**	**13**	*e*Pg	**Pb**	**21 17 08.7 +1.8**
AVF				*e*Sg	**Sb**	**21 17 37.5 +2.3**
	166nm,0.2s					
AVF	**Avril sur Loir**	**2.28**	**13**	Pn	**Pn**	**21 17 03.3 -0.1**
AVF				Pg	**Pb**	**21 17 08.7 +1.8**
ORIF	**Oris-en-Rattie**	**2.35**	**80**	*e*Pn	**Pn**	**21 17 04.8 +0.3**
ORIF	**Oris-en-Rattie**	**2.35**	**80**	*e*Pg	**Pb**	**21 17 09.6 +1.4**
ORIF				*e*Sn	**Sn**	**21 17 31.0 -2.6**
	138nm,0.5s					
ORIF				*e*Sg	**Sb**	**21 17 39.1 +1.7**
	94nm,0.4s					
ORIF	**Oris-en-Rattie**	**2.35**	**80**	Pn	**Pn**	**21 17 04.8 +0.3**
ORIF				Pg	**Pb**	**21 17 09.6 +1.4**
ORIF				Sn	**Sn**	**21 17 31.0 -2.6**
	69nm,0.5s					
PYLO	**Lourdes**	**2.43**	**234**	P	**Pn**	**21 17 04.8 -0.7**
PYLO				Pn	Pb	21 17 05.7 -3.8
PYLO				Pg	Pg	21 17 10.9 -1.2
CSOR	**Sort**	**2.45**	**207**	Pn	**Pn**	**21 17 06.0 +0.1**
	17nm,0.2s,SNR=7.9					
CSOR				Pg	**Pb**	**21 17 12.2 +2.3**
	21nm,0.2s,SNR=32					
CSOR				Sn	**Sn**	**21 17 35.6 -0.3**
	22nm,0.2s,SNR=7.9					
CSOR				Lg	Lg	21 17 45.1
	107nm,0.2s,SNR=5.0					
ARTF	**Artigues**	**2.50**	**112**	Pn	**Pn**	**21 17 06.8 +0.3**
OG35	**Corcelles**	**2.55**	**54**	Pn	**Pn**	**21 17 07.2 -0.1**
OG35				Sg	**Sb**	**21 17 44.5 +1.4**
SSF	**Saint Saulge**	**2.57**	**14**	*e*Pn	**Pn**	**21 17 08.2 +0.8**
SSF	**Saint Saulge**	**2.57**	**14**	*e*Pg	**Pb**	**21 17 14.0 +2.2**
SSF				*e*Sg	**Sb**	**21 17 47.1 +3.6**
	330nm,0.3s					
SSF	**Saint Saulge**	**2.57**	**14**	Pn	**Pn**	**21 17 08.2 +0.8**
SSF				Pg	**Pb**	**21 17 14.0 +2.2**
SSF				Lg	Lg	21 17 47.1
	165nm,0.3s					
ECHI	**Chisagues Biel**	**2.59**	**224**	P	**Pn**	**21 17 07.4 -0.5**
ECHI				Pn	Pb	21 17 07.7 -4.7
ECHI	**Chisagues Biel**	**2.59**	**224**	Pg	**Pb**	**21 17 14.8 +2.4**
	22nm,0.1s,SNR=7.9					
ECHI				Sn	**Sn**	**21 17 39.5 -0.1**
	17nm,0.1s,SNR=7.9					
ECHI				Lg	Lg	21 17 49.9
	107nm,0.2s,SNR=7.9					
HYF	**Humbligny**	**2.70**	**0**	*e*Pg	**Pb**	**21 17 16.4 +2.3**
HYF				*e*Sn	**Sn**	**21 17 40.6 -1.4**
HYF				*e*Sg	**Sb**	**21 17 50.9 +3.6**
HYF	**Humbligny**	**2.70**	**0**	Pg	**Pb**	**21 17 16.4 +2.3**
HYF				Sn	**Sn**	**21 17 40.6 -1.4**
EMIR	**Miracle**	**2.77**	**197**	Pn	**Pn**	**21 17 10.7 +0.4**
	1.0nm,0.2s,SNR=8.1					
EMIR				Pg	**Pb**	**21 17 17.9 +2.5**
	37nm,0.3s,SNR=33					
EMIR				Sn	**Sn**	**21 17 42.2 -1.8**
	18nm,0.2s,SNR=5.0					
EMIR				Lg	Lg	21 17 55.4
	111nm,0.3s,SNR=7.4					
MFF	**Saint Martin d**	**2.81**	**317**	*e*Pn	**Pn**	**21 17 10.8 +0.1**
MFF	**Saint Martin d**	**2.81**	**317**	*e*P	**Pn**	**21 17 13.8 +3.1**
MFF	**Saint Martin d**	**2.81**	**317**	*e*Pg	**Pb**	**21 17 19.3 +3.3**
MFF				*e*Sg	**Sg**	**21 17 55.3 -0.5**
	161nm,0.3s					
MFF	**Saint Martin d**	**2.81**	**317**	Pn	**Pn**	**21 17 11.2 +0.4**
MFF				Sn	**Sn**	**21 17 43.1 -1.5**
MFF	**Saint Martin d**	**2.81**	**317**	Pn	**Pn**	**21 17 10.8 +0.1**
MFF				Pg	**Pb**	**21 17 19.3 +3.3**
CFON	**Fontmartina**	**2.81**	**183**	Pn	**Pn**	**21 17 11.3 +0.4**
	0.8nm,0.1s,SNR=12					
CFON				Pg	**Pb**	**21 17 18.4 +2.3**
	20nm,0.2s,SNR=28					
CFON				Sn	**Sn**	**21 17 43.5 -1.4**
	70nm,0.3s,SNR=5.0					
CFON				Lg	Lg	21 17 56.8
	144nm,0.2s,SNR=7.9					
ATE	**Arette**	**2.82**	**239**	P	**Pn**	**21 17 10.0 -1.0**
ATE				Pn	Pb	21 17 11.2 -5.0
ATE	**Arette**	**2.82**	**239**	Pn	**Pn**	**21 17 11.5 +0.5**
	5.9nm,0.1s,SNR=7.9					
ATE				Pg	**Pb**	**21 17 19.5 +3.3**
	34nm,0.2s,SNR=7.9					
ATE				Lg	Lg	21 17 58.1
	36nm,0.1s,SNR=7.9					
LOR	**Lormes**	**2.83**	**17**	*e*Pn	**Pn**	**21 17 11.3 +0.2**
	baz=196					
LOR	**Lormes**	**2.83**	**17**	*e*Pg	**Pb**	**21 17 19.3 +2.9**
LOR				*e*Sn	**Sn**	**21 17 42.1 -3.2**
	130nm,0.3s					
LOR				*e*Sg	**Sb**	**21 17 55.0 +3.8**
	118nm,0.3s					
LOR	**Lormes**	**2.83**	**17**	Pn	**Pn**	**21 17 11.3 +0.2**
LOR				Pg	**Pb**	**21 17 19.3 +2.9**
LOR				Sn	**Sn**	**21 17 42.1 -3.2**
	65nm,0.3s					
ETSF	**Etsaut**	**2.84**	**235**	*e*Pn	**Pn**	**21 17 11.2 -0.1**
ETSF	**Etsaut**	**2.84**	**235**	*e*P	**Pn**	**21 17 14.5 +3.2**
ETSF	**Etsaut**	**2.84**	**235**	*e*Pg	**Pg**	**21 17 20.1 -0.1**
ETSF				*e*Sn	**Sn**	**21 17 44.8 -0.9**
	66nm,0.3s					
ETSF				*e*Sg	**Sg**	**21 17 57.2 +0.2**
	72nm,0.3s					
ETSF	**Etsaut**	**2.84**	**235**	Pn	**Pn**	**21 17 11.2 -0.1**
ETSF				Pg	**Pg**	**21 17 20.1 -0.1**
ETSF				Sn	**Sn**	**21 17 44.8 -0.9**
	33nm,0.3s					
ETSF				Lg	Lg	21 17 57.2
	36nm,0.3s					
MBDF	**Montbardon**	**2.97**	**86**	*e*Pn	**Pn**	**21 17 12.4 -0.7**
MBDF	**Montbardon**	**2.97**	**86**	*e*P	**Pn**	**21 17 15.1 +2.0**
MBDF	**Montbardon**	**2.97**	**86**	*e*Pg	**Pg**	**21 17 22.9 +0.3**
MBDF				*e*Sn	**Sn**	**21 17 46.0 -2.9**
	15nm,0.3s					
MBDF				*e*Sg	**Sb**	**21 17 58.9 +3.7**
	51nm,0.6s					
MBDF	**Montbardon**	**2.97**	**86**	Pn	**Pn**	**21 17 12.4 -0.7**
MBDF				Sn	**Sn**	**21 17 46.0 -2.9**
	7.4nm,0.3s					
MBDF				Lg	Lg	21 17 58.9
	26nm,0.6s					
OG02	**Monnetier-Morn**	**2.99**	**57**	Pn	**Pn**	**21 17 13.5 +0.2**
RSL	**Roselend**	**3.05**	**67**	Pn	**Pn**	**21 17 15.0 +0.8**
RSL				Sn	**Sn**	**21 17 47.8 -3.1**
LPL	**La Plagne**	**3.07**	**71**	*e*Pn	**Pn**	**21 17 15.6 +1.1**
LPL	**La Plagne**	**3.07**	**71**	*e*Pg	**Pb**	**21 17 22.5 +2.0**
LPL				*e*Sg	**Sb**	**21 18 01.4 +3.3**
	104nm,0.6s					
LPL	**La Plagne**	**3.07**	**71**	Pn	**Pn**	**21 17 15.6 +1.1**
LPL				Pg	**Pb**	**21 17 22.5 +2.0**
LMR	**La Mourre**	**3.07**	**112**	*e*Pn	**Pn**	**21 17 13.9 -0.4**
LMR	**La Mourre**	**3.07**	**112**	*e*Pg	**Pb**	**21 17 22.5 +2.0**
LMR				*e*Sn	**Sn**	**21 17 48.3 -2.9**
	9.1nm,0.3s					
LMR				*e*Sg	**Sb**	**21 18 01.6 +3.6**
	17nm,0.2s					
LMR	**La Mourre**	**3.07**	**112**	Pn	**Pn**	**21 17 13.9 -0.4**
LMR				Pg	**Pb**	**21 17 22.5 +2.0**
LMR				Sn	**Sn**	**21 17 48.3 -2.9**
	4.6nm,0.3s					
LPG	**La Plagne**	**3.07**	**71**	*e*Pn	**Pn**	**21 17 16.1 +1.4**
LPG	**La Plagne**	**3.07**	**71**	*e*Pg	**Pg**	**21 17 24.8 +0.2**
LPG				*e*Sn	**Sn**	**21 17 48.4 -3.3**
	101nm,0.5s					
LPG				*e*Sg	**Sb**	**21 18 01.8 +3.4**
	118nm,0.5s					
LPG	**La Plagne**	**3.07**	**71**	Pn	**Pn**	**21 17 16.1 +1.4**
LPG				Sn	**Sn**	**21 17 48.4 -3.3**
	51nm,0.5s					
FRF	**La Foret Royal**	**3.08**	**108**	*e*Pn	**Pn**	**21 17 14.0 -0.4**
FRF	**La Foret Royal**	**3.08**	**108**	*e*Pg	**Pb**	**21 17 22.6 +2.1**
FRF				*e*Sn	**Sn**	**21 17 48.5 -2.8**
FRF				*e*Sg	**Sb**	**21 18 01.9 +3.7**
	25nm,0.3s					
FRF	**La Foret Royal**	**3.08**	**108**	Pn	**Pn**	**21 17 14.0 -0.4**
FRF				Pg	**Pb**	**21 17 22.6 +2.1**
FRF				Sn	**Sn**	**21 17 48.5 -2.8**
SJPF	**Ste Jean**	**3.14**	**244**	*e*Pn	**Pn**	**21 17 14.4 -0.9**
SJPF	**Ste Jean**	**3.14**	**244**	*e*Pg	**Pg**	**21 17 25.4 -0.4**
SJPF				*e*Sn	**Sn**	**21 17 51.7 -1.2**
	51nm,0.4s					
SJPF	**Ste Jean**	**3.14**	**244**	Pn	**Pn**	**21 17 14.4 -0.9**
SJPF				Pg	**Pg**	**21 17 25.4 -0.4**
SJPF				Sn	**Sn**	**21 17 51.7 -1.2**
	25nm,0.4s					
CABF	**La Chapelle**	**3.18**	**49**	*e*Pn	**Pn**	**21 17 15.5 -0.4**
CABF	**La Chapelle**	**3.18**	**49**	*e*Pg	**Pb**	**21 17 26.2 +3.9**
CABF				*e*Sg	**Sb**	**21 18 04.6 +3.4**
	181nm,0.6s					
CABF	**La Chapelle**	**3.18**	**49**	Pn	**Pn**	**21 17 15.5 -0.4**
CABF				Pg	**Pb**	**21 17 26.2 +3.9**
ISO	**Isola**	**3.20**	**95**	Pn	**Pn**	**21 17 16.9 +0.7**
CALF	**Calern**	**3.21**	**103**	Pn	**Pn**	**21 17 16.3 0.0**
EALK	**Alkurruntz**	**3.27**	**247**	P	**Pn**	**21 17 17.6 -0.6**
EALK				Pn	Pb	21 17 17.3 -6.7
EALK	**Alkurruntz**	**3.27**	**247**	Pn	**Pn**	**21 17 17.1 -0.1**
	2.2nm,0.1s,SNR=8.6					
EALK				Pg	**Pb**	**21 17 27.3 +3.4**
	7.1nm,0.2s,SNR=14					
EALK				Sn	**Sn**	**21 17 55.0 -1.3**
	21nm,1.4s,SNR=7.9					
EALK				Lg	Lg	21 18 12.6
	6.5nm,1.5s,SNR=7.9					
EORO	**Oroz-Betelu**	**3.30**	**241**	Pn	**Pn**	**21 17 17.5 -0.1**
	2.0nm,0.1s,SNR=17					
EORO				Sn	**Sn**	**21 17 55.9 -1.2**
	13nm,0.2s,SNR=5.0					
EPOB	**Poblet**	**3.41**	**200**	Pn	**Pn**	**21 17 19.6 +0.5**
	0.0nm,0.0s,SNR=7.8					
EPOB				Pg	**Pb**	**21 17 29.4 +3.1**
	12nm,0.3s,SNR=18					
EPOB				Sn	**Sn**	**21 17 58.2 -1.4**
	11nm,0.2s,SNR=5.0					
EPOB				Lg	Lg	21 18 15.3
	33nm,0.2s,SNR=13					
TURF	**col de Turini**	**3.48**	**98**	Pn	**Pn**	**21 17 20.5 +0.4**
ESCA	**l'Escarene**	**3.50**	**101**	Pn	**Pn**	**21 17 21.0 +0.7**
EARA	**Aranguren**	**3.54**	**241**	Pn	**Pn**	**21 17 21.7 +1.0**
	17nm,0.2s,SNR=7.9					
EARA				Sn	**Sn**	**21 18 01.7 -1.0**
	4.8nm,1.5s,SNR=7.9					
SBF	**Sospel**	**3.54**	**100**	*e*Pn	**Pn**	**21 17 20.5 -0.3**
SBF	**Sospel**	**3.54**	**100**	*e*Pg	**Pb**	**21 17 29.6 +1.2**
SBF				*e*Sn	**Sn**	**21 17 59.7 -3.0**
	22nm,0.3s					
SBF				*e*Sg	**Sb**	**21 18 16.9 +5.4**
	46nm,0.4s					
SBF	**Sospel**	**3.54**	**100**	Pn	**Pn**	**21 17 20.5 -0.3**
SBF				Pg	**Pb**	**21 17 29.6 +1.2**
SBF				Sn	**Sn**	**21 17 59.7 -3.0**
	11nm,0.3s					
SAOF	**Saorge**	**3.59**	**98**	Pn	**Pn**	**21 17 22.3 +0.7**
SAOF				Sn	**Sn**	**21 18 01.8 -2.4**
ESAC	**San Caprasio**	**3.63**	**219**	Pn	**Pn**	**21 17 23.2 +1.0**
	8.9nm,0.1s,SNR=7.9					
ESAC				Pg	**Pb**	**21 17 34.1 +4.0**
	75nm,0.3s,SNR=12					
ESAC				Sn	**Sn**	**21 18 03.6 -1.6**
	131nm,2.1s,SNR=7.9					
ESAC				Lg	Lg	21 18 23.8
	200nm,0.4s,SNR=5.0					
ERTA	**Horta de San J**	**3.98**	**206**	Pn	**Pn**	**21 17 27.5 +0.6**
	2.6nm,0.2s,SNR=5.7					
ERTA				Pg	**Pb**	**21 17 40.1 +4.1**
	0.7nm,0.1s,SNR=7.7					
ERTA				Sn	**Sn**	**21 18 11.9 -1.9**
	1.0nm,1.5s,SNR=7.9					
ERTA				Lg	Lg	21 18 34.7
	48nm,0.5s,SNR=6.1					
SFTF	**Sexfontaines**	**4.00**	**24**	*e*Pn	**Pn**	**21 17 27.2 +0.1**
SFTF	**Sexfontaines**	**4.00**	**24**	*e*Pg	**Pb**	**21 17 40.4 +4.1**
SFTF				*e*Sg	**Sb**	**21 18 31.2 +6.4**
	110nm,0.5s					
SFTF	**Sexfontaines**	**4.00**	**24**	Pn	**Pn**	**21 17 27.2 +0.1**
SFTF				Pg	**Pb**	**21 17 40.4 +4.1**
MEZF	**Maizieres J'vi**	**4.28**	**22**	*e*Pn	**Pn**	**21 17 30.1 -0.8**
	baz=202					
MEZF	**Maizieres J'vi**	**4.28**	**22**	*e*P	**Pn**	**21 17 33.8 +2.9**
MEZF	**Maizieres J'vi**	**4.28**	**22**	*e*Pg	**Pg**	**21 17 46.9 -0.6**
MEZF				*e*Sg	**Sb**	**21 18 39.5 +6.9**
	156nm,0.5s					
MEZF	**Maizieres J'vi**	**4.28**	**22**	Pn	**Pn**	**21 17 30.1 -0.8**
HAU	**Haudompre**	**4.30**	**36**	*e*Pn	**Pn**	**21 17 29.7 -1.5**
HAU	**Haudompre**	**4.30**	**36**	*e*Pg	**Pg**	**21 17 46.8 -1.2**
HAU				*e*Sg	**Sb**	**21 18 39.7 +6.4**
	63nm,0.3s					
HAU	**Haudompre**	**4.30**	**36**	Pn	**Pn**	**21 17 29.7 -1.5**
HAU				Pg	**Pg**	**21 17 46.8 -1.2**
HINF	**Hinteralfeld**	**4.38**	**41**	*e*Pn	**Pn**	**21 17 30.9 -1.5**
HINF	**Hinteralfeld**	**4.38**	**41**	*e*Pg	**Pb**	**21 17 47.0 +4.2**
HINF				*e*Sn	**Sn**	**21 18 19.3 -4.2**
	33nm,0.3s					
HINF				*e*Sg	**Sb**	**21 18 42.4 +6.7**
	33nm,0.3s					
HINF	**Hinteralfeld**	**4.38**	**41**	Pn	**Pn**	**21 17 30.9 -1.5**
HINF				Pg	**Pb**	**21 17 47.0 +4.2**
HINF				Sn	**Sn**	**21 18 19.3 -4.2**
	17nm,0.3s					
LDF	**La Druitiere**	**4.44**	**336**	*e*Pn	**Pn**	**21 17 32.2 -1.0**
LDF	**La Druitiere**	**4.44**	**336**	*e*Pg	Pb	21 17 49.1 +5.3
LDF				*e*Sn	**Sn**	**21 18 22.2 -2.8**
LDF				*e*Sg	**Sg**	**21 18 45.9 -2.4**
	45nm,0.4s					
BALST	**Balsthal**	**4.49**	**50**	*e*Pn	**Pn**	**21 17 32.9 -1.1**
BALST				*e*Pg	**Pg**	**21 17 51.0 -0.7**
BALST				*e*Sg	**Sb**	**21 18 45.2 +6.2**
GRR	**Gorron**	**4.51**	**329**	*e*Pn	**Pn**	**21 17 33.4 -0.7**
GRR	**Gorron**	**4.51**	**329**	*e*P	**Pn**	**21 17 37.3 +3.2**
GRR	**Gorron**	**4.51**	**329**	*e*Pg	Pb	21 17 50.3 +5.4
GRR				*e*Sn	**Sn**	**21 18 24.2 -2.4**
	32nm,0.2s					
GRR				*e*Sg	**Sg**	**21 18 48.1 -2.3**
GRR	**Gorron**	**4.51**	**329**	Pn	**Pn**	**21 17 33.4 -0.7**
GRR				Pg	Pb	21 17 50.3 +5.4
GRR				Sn	**Sn**	**21 18 24.2 -2.4**
	16nm,0.2s					
PAGF	**Fort de Pagny**	**4.52**	**27**	*e*Pn	**Pn**	**21 17 33.8 -0.5**
PAGF	**Fort de Pagny**	**4.52**	**27**	*e*Pg	**Pg**	**21 17 51.9 -0.4**
PAGF				*e*Sn	**Sn**	**21 18 25.3 -1.7**
PAGF				*e*Sg	**Sb**	**21 18 47.2 +7.4**
	41nm,0.4s					
ELAN	**Lanestosa**	**4.57**	**255**	Pn	**Pn**	**21 17 35.4 +0.4**
	10.0nm,0.3s,SNR=15					
ELAN				Pg	**Pg**	**21 17 51.6 -1.6**
	3.4nm,0.2s,SNR=7.9					
ELAN				Sn	**Sn**	**21 18 25.9 -2.4**
	2.9nm,0.2s,SNR=8.2					
ELAN				Lg	Lg	21 18 54.3
	13nm,0.4s,SNR=7.9					
FLN	**La Foliniere**	**4.70**	**334**	*e*Pn	**Pn**	**21 17 37.2 +0.5**
	baz=154					
FLN	**La Foliniere**	**4.70**	**334**	*e*Pg	**Pg**	**21 17 54.5 -1.2**
FLN				*e*Sn	**Sn**	**21 18 27.8 -3.6**
	105nm,0.6s					
FLN				*e*Sg	**Sg**	**21 18 53.4 -3.2**
	43nm,0.3s					
FLN	**La Foliniere**	**4.70**	**334**	Pn	**Pn**	**21 17 37.2 +0.5**
FLN				Pg	**Pg**	**21 17 54.5 -1.2**
FLN				Sn	**Sn**	**21 18 27.8 -3.6**
	52nm,0.6s					
EMOS	**Mosqueruela**	**4.79**	**210**	Pn	**Pn**	**21 17 38.4 +0.3**
	0.9nm,0.1s,SNR=9.8					
EMOS				Pg	**Pb**	**21 17 54.1 +4.3**
	5.9nm,0.4s,SNR=7.9					
EMOS				Sn	**Sn**	**21 18 31.2 -2.5**
	3.0nm,0.3s,SNR=5.9					
EMOS				Lg	Lg	21 19 00.5
	16nm,0.5s,SNR=7.9					
ETOS	**Mallorca**	**4.80**	**178**	Pn	**Pn**	**21 17 38.9 +0.7**
	1.7nm,0.3s,SNR=7.9					
ETOS				Sn	**Sn**	**21 18 30.5 -3.4**
	0.4nm,0.3s,SNR=4.0					
ECH	**Echery**	**4.81**	**39**	*e

ROSF	**Rostrenen**	**5.54**	**315**	*e*Pg		**Pg**	**21 18 09.2**	**-2.6**
ROSF				*e*Sn		**Sn**	**21 18 48.4**	**-3.7**
	105nm,0.7s							
ROSF				*e*Sg		**Sg**	**21 19 21.3**	**-2.2**
	61nm,0.5s							
ROSF	**Rostrenen**	**5.54**	**315**	Pn		**Pn**	**21 17 48.2**	**-0.1**
ROSF				Pg		**Pg**	**21 18 09.2**	**-2.6**
ROSF				Sn		**Sn**	**21 18 48.4**	**-3.7**
	53nm,0.7s							
BAIF	**Baives**	**5.59**	**11**	*e*Pn		**Pn**	**21 17 49.9**	**+0.9**
BAIF	**Baives**	**5.59**	**11**	*e*P		**Pn**	**21 17 52.4**	**+3.4**
BAIF				*e*Sg		**Sg**	**21 19 20.7**	**-4.5**
	30nm,0.8s							
BAIF	**Baives**	**5.59**	**11**	Pn		**Pn**	**21 17 49.9**	**+0.9**
WLF	**Walferdange**	**5.64**	**24**	*e*Sg		**Sg**	**21 19 23.5**	**-3.0**
GIVF	**Givet**	**5.73**	**14**	*e*Pn		**Pn**	**21 17 50.7**	**-0.2**
GIVF				*e*Sg		**Sg**	**21 19 25.4**	**-4.2**
	82nm,0.9s							
GIVF	**Givet**	**5.73**	**14**	Pn		**Pn**	**21 17 50.7**	**-0.2**
DAVA	**Damuels**	**5.75**	**59**	*e*Pg		**Pg**	**21 18 14.1**	**-1.6**
	3.9nm,0.3s							
DAVA				Sg		**Sg**	**21 19 30.1**	**0.0**
	3.6nm,0.3s							
EARI	**Arriondas**	**5.79**	**260**	Pn		**Pn**	**21 17 52.1**	**+0.4**
	3.9nm,0.1s,SNR=57							
EARI				Sn		**Sn**	**21 18 55.4**	**-2.9**
	2.5nm,0.1s,SNR=5.9							
UCM	**Universidad Co**	**6.08**	**228**	*e*P		**Pn**	**21 17 56.1**	**+0.4**
UCM				*e*S		**Sn**	**21 19 02.8**	**-2.6**
UCM	**Universidad Co**	**6.08**	**228**	Sn		**Sn**	**21 19 02.8**	**-2.6**
FETA	**Feichten**	**6.18**	**64**	*i* Pn		**Pn**	**21 17 59.6**	**+2.5**
	1.1nm,0.2s,SNR=5.9							
FETA				*e*Sn		**Sn**	**21 19 08.4**	**+0.4**
	0.6nm,0.2s							
GUD	**Guadarrama**	**6.35**	**234**	Pn		**Pn**	**21 17 59.9**	**+0.4**
	2.8nm,0.3s,SNR=16							
GUD				Sn		**Sn**	**21 19 08.3**	**-4.0**
	2.4nm,0.3s,SNR=5.0							
RETA	**Reutte**	**6.38**	**60**	*i* Pn		**Pn**	**21 18 01.2**	**+1.4**
	0.4nm,0.1s							
RETA				*e*Sn		**Sn**	**21 19 09.8**	**-2.9**
	2.6nm,0.2s							
MOTA	**Moosalm**	**6.53**	**62**	*e*Pn		**Pn**	**21 18 03.5**	**+1.5**
	1.2nm,0.2s,SNR=6.0							
MOTA				*e*Sn		**Sn**	**21 19 15.0**	**-1.8**
	4.5nm,0.4s							
SQTA	**Sankt Quirin**	**6.55**	**63**	*i* Pn		**Pn**	**21 18 04.3**	**+2.0**
	1.3nm,0.1s,SNR=9.0							
SQTA				*e*Sn		**Sn**	**21 19 15.3**	**-1.9**
	3.4nm,0.2s							
WATA	**Walderalm**	**6.83**	**63**	*i* Pn		**Pn**	**21 18 08.3**	**+2.3**
	0.5nm,0.1s							
WATA				*i* Sn		**Sn**	**21 19 24.1**	**+0.2**
	1.5nm,0.2s							
WTTA	**Wattenberg**	**6.84**	**64**	*i* Pn		**Pn**	**21 18 08.1**	**+1.8**
	0.8nm,0.2s							
WTTA				*e*Sn		**Sn**	**21 19 24.3**	**-0.1**
	2.5nm,0.3s							
TNS	**Taunus Mts**	**6.90**	**33**	*e*Sg		**Sg**	**21 20 04.7**	**-2.2**
ESDC	**Sonseca Array**	**6.92**	**227**	Pn		**Pn**	**21 18 07.2**	**0.0**
	0.6nm,0.3s,baz=43,slow=14,SNR=16							
ESDC				Sn		**Sn**	**21 19 21.6**	**-4.5**
	baz=45,slow=24,SNR=7.9							
PAB	**San Pablo**	**7.21**	**228**	Pn		**Pn**	**21 18 11.2**	**-0.1**
	1.5nm,0.6s,SNR=7.9							
PAB				Sn		**Sn**	**21 19 28.4**	**-5.0**
	0.0nm,0.5s,SNR=7.9							
ECAL	**Calabor**	**7.32**	**252**	Pn		**Pn**	**21 18 12.6**	**-0.1**
	5.0nm,0.2s,SNR=7.9							
ECAL				Sn		**Sn**	**21 19 31.0**	**-4.9**
	3.2nm,0.3s,SNR=18							
PBRG	**Braganca**	**7.38**	**251**	*e*Pn		**Pn**	**21 18 13.3**	**-0.2**
PBRG				*e*Sn		**Sn**	**21 19 32.3**	**-5.0**
PBRG				A		A	21 19 34.8	
	2.5nm,0.3s							
PBRG	**Braganca**	**7.38**	**251**	Pn		**Pn**	**21 18 13.3**	**-0.2**
PBRG				Sn		**Sn**	**21 19 32.3**	**-5.0**
	1.2nm,0.3s							
GRF	**Grafenberg Arr**	**7.79**	**46**	*e*Sg		Sb	21 20 31.4	+18
MVO	**Moncorvo**	**7.86**	**248**	*e*Pn		**Pn**	**21 18 20.3**	**+0.1**
MVO				*e*Sn		**Sn**	**21 19 44.1**	**-5.2**
MVO	**Moncorvo**	**7.86**	**248**	Pn		**Pn**	**21 18 20.2**	**+0.1**
	1.8nm,0.2s,SNR=8.6							
MVO				Sn		**Sn**	**21 19 43.9**	**-5.4**
	1.3nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**7.86**	**238**	Pn		**Pn**	**21 18 20.9**	**+0.7**
	0.1nm,1.0s,SNR=7.9							
EAGO	**Agolada(Pontev**	**7.96**	**261**	Pn		**Pn**	**21 18 21.4**	**0.0**
	5.2nm,0.2s,SNR=7.9							
EAGO				Sn		**Sn**	**21 19 46.6**	**-5.0**
	0.4nm,0.1s,SNR=7.9							
ELOB	**Lobios**	**8.25**	**255**	Pn		**Pn**	**21 18 25.1**	**-0.5**
	1.5nm,0.2s,SNR=7.9							
PVRL	**Vila Real**	**8.27**	**250**	*e*Pn		**Pn**	**21 18 25.4**	**-0.3**
PVRL	**Vila Real**	**8.27**	**250**	Pn		**Pn**	**21 18 25.4**	**-0.3**
PCAB	**Cabril**	**8.29**	**254**	*e*Pn		**Pn**	**21 18 25.5**	**-0.6**
PCAB	**Cabril**	**8.29**	**254**	Pn		**Pn**	**21 18 25.5**	**-0.6**
EADA	**Adamuz**	**8.38**	**223**	Pn		**Pn**	**21 18 27.4**	**+0.1**
	1.2nm,0.2s,SNR=7.9							
PVIS	**Viseu**	**8.65**	**247**	*e*Pn		**Pn**	**21 18 30.6**	**-0.4**
PVIS	**Viseu**	**8.65**	**247**	Pn		**Pn**	**21 18 30.6**	**-0.4**
ECAB	**El Cabril**	**8.87**	**226**	Pn		**Pn**	**21 18 34.3**	**+0.3**
	0.0nm,0.1s,SNR=6.6							
PMRV	**Marv??o**	**9.05**	**239**	*e*Pn		**Pn**	**21 18 35.5**	**-0.9**
PMRV				*e*Sn		**Sn**	**21 20 13.5**	**-4.9**
PMRV	**Marv??o**	**9.05**	**239**	Pn		**Pn**	**21 18 35.5**	**-0.9**
PMRV				Sn		**Sn**	**21 20 13.5**	**-4.9**
EBAD	**Badajoz**	**9.25**	**234**	Pn		**Pn**	**21 18 39.5**	**+0.3**
	0.2nm,3.6s,SNR=7.9							
PESTR	**Estremoz**	**9.52**	**237**	*e*Pn		**Pn**	**21 18 42.2**	**-0.7**

NIED ***25*** *21:17:00,37.˚70N×144.˚00E,h11km,Mw3.8 Best double couple: M₀5.26000×10¹⁴ NP1:φ₈14.00000°,δ68.00000°, λ-103.00000°. NP2:φ₈227.00000°,δ25.00000°, λ-60.00000°.*

IDC ***25*** *21:17:15.4±0.7,37.˚58N×144.˚30E,h0km,mb3.6/11, mb1 3.8/17,mb1mx3.7/59,mbtmp3.8/17,ML3.9/5,MS3.1/3, Ms1 3.1/3,ms1mx2.7/35,Error ellipse: s-maj=18.0km s-min=15.8km az=93.0*

JMA ***25*** *21:17:20.8±0.2,37.˚74N×144.˚00E,h52km,M4.3*

NEIC ***25*** *21:17:59.4±1.6,38.˚65N±0.˚08×138.˚5E±0.˚1,h67km±8km, mb4.2/10,Error ellipse: s-maj=14.9km s-min=10.0km az=113.0*

ISC 25 21:17:21.6±0.7,37.˚80N±0.˚05×144.˚16E±0.˚06,h35km,n64, σ2ˢ14/75,mb3.9/19,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.19**	**284**	P	**Pn**	**21 17 54.4**	**-1.0**
JIKH				S	**Sn**	**21 18 18.5**	**-2.8**
JIO	**Ouri**	**2.31**	**287**	P	**Pn**	**21 17 56.2**	**-0.9**
JIO				S	**Sn**	**21 18 22.2**	**-2.2**
OFUJ	**Ofunato**	**2.34**	**304**	P	**Pn**	**21 17 56.7**	**-0.8**
OFUJ				S	**Sn**	**21 18 23.4**	**-1.6**
JKMT	**Kesennumamotoy**	**2.34**	**296**	P	**Pn**	**21 17 56.8**	**-0.8**
JKMT				S	**Sn**	**21 18 23.3**	**-1.8**
JMK	**Ichinoseki**	**2.58**	**297**	P	**Pn**	**21 18 00.3**	**-0.6**
JMK				*e*S	**Sn**	**21 18 29.7**	**-1.3**
JOM	**Ohasama**	**2.80**	**308**	P	**Pn**	**21 18 03.7**	**-0.2**
JOM				S	**Sn**	**21 18 35.4**	**-1.0**
JFT	**Otama**	**3.05**	**266**	P	**Pn**	**21 18 06.5**	**-0.8**
JFT				*e*S	**Sn**	**21 18 40.2**	**-2.4**
JYK	**Kaneyama**	**3.19**	**292**	P	**Pn**	**21 18 09.1**	**-0.1**
JYK				S	**Sn**	**21 18 45.4**	**-0.7**
JANG	**Nango**	**3.29**	**322**	P	**Pn**	**21 18 10.1**	**-0.6**
JANG				*e*S	**Sn**	**21 18 46.6**	**-2.0**
JNS	**Sasagawa**	**3.84**	**272**	P	**Pn**	**21 18 18.0**	**-0.1**
BSO1	**Boso 1**	**4.06**	**220**	P	**Pn**	**21 18 18.3**	**-2.4**
BSO1				*e*S	**Sn**	**21 19 02.7**	**-4.0**
ERM	**Erimo**	**4.28**	**350**		**Sn**	**21 19 09.9**	**-3.0**
JOT	**Ohata**	**4.31**	**327**	P	**Pn**	**21 18 24.9**	**+0.3**
JOT				*e*S	**Sn**	**21 19 11.7**	**-1.9**
JRY	**Ryogami san**	**4.58**	**249**	P	**Pn**	**21 18 26.4**	**-1.9**
JRY				S	**Sn**	**21 19 15.0**	**-5.3**
JKB	**Kayabe**	**4.74**	**330**	P	**Pn**	**21 18 31.2**	**+0.7**
JKB				*e*S	**Sn**	**21 19 21.8**	**-2.4**
JOD2	**Odawara 2**	**4.81**	**240**	P	**Pn**	**21 18 29.0**	**-2.5**
JOD2				S	**Sn**	**21 19 19.3**	**-6.6**
JCH	**Churui**	**4.85**	**353**	P	**Pn**	**21 18 31.4**	**-0.6**
JCH				S	**Sn**	**21 19 24.2**	**-2.7**
MJAR	**Matsushiro Arr**	**4.92**	**257**	Pn	**Pn**	**21 18 32.6**	**-0.4**
	1.0nm,0.3s,baz=77,slow=16,SNR=94						
MJAR				Sn	**Sn**	**21 19 27.5**	**-1.2**
	0.5nm,0.3s,baz=241,slow=16,SNR=4.2						
MJAR				LR	LR	21 20 38.9	
	comp=Z,89nm,19.4s,baz=50,slow=41						
MJAR	**Matsushiro Arr**	**4.92**	**257**		**Pn**	**21 18 32.6**	**-0.4**
MAJO	**Matsushiro**	**4.92**	**257**		**Pn**	**21 18 33.1**	**+0.1**
MAT	**Matsushiro**	**4.92**	**257**	P	**Pn**	**21 18 32.8**	**-0.2**
MAT				S	**Sn**	**21 19 28.0**	**-0.7**
MJB9	**Matsu-Tunnel**	**4.92**	**257**		**Pn**	**21 18 33.2**	**+0.2**
JOSM	**Okushiri--Mats**	**5.59**	**321**	P	**Pn**	**21 18 42.0**	**-0.2**
NEM2	**Nemuro 2**	**5.69**	**12**	P	**Pn**	**21 18 41.6**	**-1.9**
NEM2				*e*S	**Sn**	**21 19 41.2**	**-6.3**
JTKR	**Abashiri--Toko**	**6.17**	**358**	P	**Pn**	**21 18 49.5**	**-0.6**
JTKR				*e*S	**Sn**	**21 19 55.0**	**-4.3**
JHR	**Hokuryu**	**6.22**	**343**	P	**Pn**	**21 18 52.0**	**+1.2**
JHR				*e*S	**Sn**	**21 19 59.3**	**-1.3**
INU	**Inuyama**	**6.25**	**249**	Pn	**Pn**	**21 18 51.5**	**+0.2**
ASAJ	**Asahikawa**	**6.42**	**350**	Pn	**Pn**	**21 18 54.1**	**+0.6**
	7.5nm,0.3s,baz=176,slow=8.6,SNR=51						
ASAJ				Sn	**Sn**	**21 20 03.6**	**-2.0**
	1.5nm,0.3s,baz=127,slow=20,SNR=3.8						
JCJ	**Chichijima**	**10.80**	**189**	Pn	Pn	21 19 47.4	-6.4
	2.2nm,0.3s,baz=69,slow=14,SNR=4.5						
JCJ				Sn	Sn	21 21 38.3	-15
	6.1nm,0.3s,baz=280,slow=22,SNR=6.6						
USA0B	**Ussuriysk Arra**	**11.20**	**309**	Pn	Pn	21 19 44.8	-14
USRK	**Ussuriysk Ar.**	**11.20**	**309**	Pn	**Pn**	**21 19 59.7**	**+0.7**
	baz=110,slow=14,SNR=5.7						
JNU	**Nakatsue**	**11.79**	**251**	Pn	Pn	21 19 56.4	-11
KSRS	**Korea Array**	**12.88**	**273**	Pn	**Pn**	**21 20 23.0**	**+0.9**
	0.2nm,0.3s,baz=87,slow=14,SNR=3.6						
KSRS				LR	LR	21 25 25.2	
	comp=Z,60nm,19.1s,baz=350,slow=38						
KLR	**Kul'dur**	**14.52**	**326**	Pn	**Pn**	**21 20 45.8**	**+1.4**
	0.1nm,0.3s,baz=118,slow=15,SNR=3.6						
SSLB	**Suanglung**	**24.26**	**241**	P	**P**	**21 22 37.3**	**+1.9**
YULB	**Yu-li**	**24.28**	**240**	P	**P**	**21 22 38.0**	**+2.4**
YULB				IAmb	IAmb	21 22 41.3	
	comp=Z,6.5nm,0.9s						
TPUB	**Ta-pu**	**24.80**	**241**	P	**P**	**21 22 45.4**	**+5.0**
TPUB				IAmb	IAmb	21 22 48.9	
	comp=Z,8.3nm,1.1s						
TWG	**Pinlang**	**24.81**	**240**	P	**P**	**21 22 44.9**	**+4.5**
HHC	**Hu-ho-hao-te**	**25.32**	**287**	*e*P	P	21 22 36.0	-9.1
HHC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,79nm,6.6s						
KNMB	**Chin-men Tao**	**25.66**	**246**	P	**P**	**21 22 49.9**	**+1.8**
KNMB				IAmb	IAmb	21 22 60.0	
	comp=Z,19nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**26.74**	**126**	T	T	21 50 07.3	
	baz=316,slow=75,SNR=12						
H11N1	**WAKE ISLAND Hy**	**26.75**	**126**	T	T	21 50 08.6	
	baz=316,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	**26.76**	**126**	T	T	21 50 13.1	
	baz=316,slow=75,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**27.52**	**128**	T	T	21 51 01.0	
	baz=318,slow=76,SNR=5.1						
H11S3	**WAKE ISLAND Hy**	**27.52**	**128**	T	T	21 50 58.5	
	baz=318,slow=76,SNR=4.2						
H11S2	**WAKE ISLAND Hy**	**27.54**	**128**	T	T	21 50 59.6	
	baz=318,slow=76,SNR=3.8						
SONM	**Songino Array**	**29.20**	**302**	P	**P**	**21 23 21.3**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=92,slow=9.7,SNR=3.4						
TLY	**Talaya**	**31.51**	**309**	LR	LR	21 38 15.2	
	comp=Z,75nm,18.3s,baz=335,slow=40						
GTA	**Gaotai**	**34.43**	**287**	*e*P	**P**	**21 24 04.8**	**-1.1**
GTA				pP	sP	21 24 19.0	+1.9
GTA				sP	pwP	21 24 27.0	+3.8
GTA				pmax	pmax		
	comp=Z,1.0nm,1.3s						
WMQ	**Urumqi**	**42.45**	**297**	*e*P	**P**	**21 25 13.0**	**-0.1**
WMQ				pmax	pmax		
	comp=Z,280nm,6.3s						
WMQ				LR	LR		
	comp=N,200nm,29.0s						
WMQ				LR	LR		
	comp=E,1μm,29.3s						
WMQ				LR	LR		
	comp=Z,42nm,29.2s						
ZALV	**Zalesovo Beam**	**43.03**	**312**	P	**P**	**21 25 19.4**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=89,slow=7.6,SNR=2.4						
ZALV				PcP	**PcP**	**21 27 06.5**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=68,slow=3.9,SNR=3.5						
CMAR	**Chiang Mai Arr**	**43.80**	**257**	P	**P**	**21 25 24.4**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=49,slow=7.6,SNR=5.0						
MKAR	**Makanchi Array**	**45.57**	**302**	P	**P**	**21 25 38.4**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=86,slow=9.5,SNR=5.2						
KURBB	**Kurchatov Arra**	**47.26**	**308**	P	**P**	**21 25 51.4**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=81,slow=7.8,SNR=9.6						
ILAR	**Eielson Array**	**47.67**	**33**	P	**P**	**21 25 54.6**	**+0.4**
	comp=Z,0.9nm,0.8s,baz=258,slow=6.8,SNR=9.9						
BVAR	**Borovoye Array**	**51.57**	**312**	P	**P**	**21 26 25.2**	**+0.4**
	comp=Z,0.3nm,0.5s,baz=86,slow=7.7,SNR=3.2						
KSH	**Kashi**	**52.09**	**294**	*e*P	**P**	**21 26 31.0**	**+2.8**
KSH				pmax	pmax		
	comp=Z,580nm,6.4s						
ARSB	**Arslanbob**	**53.56**	**298**	P	**P**	**21 26 40.7**	**+1.6**
ARSB				IAmb	IAmb	21 26 56.6	
	comp=Z,2.4nm,0.8s						
ARU	**Arti**	**57.23**	**319**	P	**P**	**21 27 05.2**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=358,slow=11,SNR=3.1						
WRA	**Warramunga Arr**	**58.17**	**191**	P	**P**	**21 27 09.7**	**-2.3**
	comp=Z,5.2nm,0.7s,baz=12,slow=7.3,SNR=23						
ASAR	**Alice Springs**	**61.90**	**191**	P	**P**	**21 27 35.5**	**-2.0**
	comp=Z,1.1nm,0.8s,baz=4.4,slow=7.3,SNR=12						
YKA	**Yellowknife Ar**	**62.04**	**31**	P	**P**	**21 27 38.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=302,slow=6.7,SNR=2.7						
NVAR	**Mina Array Bea**	**72.77**	**55**	P	**P**	**21 28 46.6**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=289,slow=4.5,SNR=3.6						
AKASG	**Malin Array Be**	**75.01**	**323**	P	**P**	**21 28 58.0**	**-1.2**
	comp=Z,25nm,0.3s,baz=45,slow=5.7,SNR=1.4						

MAN ***25*** *22:11:23.6,11.˚19N×124.˚62E,h4km,mb5.0,ML3.9,MS4.0*

IDC ***25*** *22:11:23.4±0.8,11.˚12N×124.˚78E,h0km,mb3.9/11, mb1 4.1/11,mb1mx3.8/43,mbtmp3.9/11,MS3.4/4, Ms1 3.3/4,ms1mx3.0/31,Error ellipse: s-maj=47.3km s-min=17.7km az=65.0*

NEIC ***25*** *22:11:30.9±1.1,11.˚04N±0.˚09×124.˚6E±0.˚1,h54km±9km, mb4.2/14,Error ellipse: s-maj=19.2km s-min=11.2km az=69.0*

ISC 25 22:11:25.2±1.2,11.˚13N±0.˚03×124.˚62E±0.˚05,h9km±7km, n51,σ1ˢ78/55,mb4.1/19,MS3.3/4,3C-1D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.08**	**191**	*e*P	**Pg**	**22 11 26.9**	**-0.4**
MSLP	**Maasin**	**1.01**	**167**	*e*P	**Pg**	**22 11 44.5**	**-0.3**
MSLP				*e*S	**Sn**	**22 12 02.2**	**+2.2**
LLP	**Lapu-Lapu**	**1.03**	**219‖**	*e*P	**Pb**	**22 11 43.1**	**-2.2**
LLP				*e*S	**Sb**	**22 11 58.9**	**-0.1**
CNP	**Catarman**	**1.38**	**2**	*e*P	**Pn**	**22 11 47.4**	**-3.3**
CNP				*e*S	**Sn**	**22 12 06.5**	**-2.6**
RCP	**Roxas**	**1.89**	**283‖**	*e*P	**Pn**	**22 11 57.5**	**-0.3**
GUIM	**Jordan**	**2.06**	**256**	*e*P	**Pn**	**22 11 58.9**	**-1.2**
GUIM				*e*S	**Sb**	**22 12 26.9**	**-1.7**
SNPH	**Sibulan**	**2.24**	**218**	*e*P	**Pn**	**22 12 02.8**	**+0.2**
SNPH				*i* S	**Sg**	**22 12 37.8**	**+0.6**
BUTP	**Butuan**	**2.36**	**155**	*e*P	**Pn**	**22 12 04.7**	**+0.5**
BUTP				*e*S	**Sb**	**22 12 35.1**	**-2.1**
PVCP	**Virac**	**2.50**	**349**	*e*P	**Pn**	**22 12 05.1**	**-1.0**
PVCP				*e*S	**Sn**	**22 12 35.7**	**-1.1**
CGP	**Cagayan de Oro**	**2.66**	**179‖**	*e*P	**Sn**	**22 12 33.6**	**-7.0**
OTRP	**Odiongan**	**2.83**	**296**	*e*P	**Pn**	**22 12 10.1**	**-0.6**
OTRP				*e*S	**Sn**	**22 12 43.8**	**-1.2**
BUKP	**Musuan**	**3.25**	**172**	*e*P	**Pn**	**22 12 17.8**	**+1.2**
BUKP				*e*S	**Sn**	**22 12 57.6**	**+2.1**
KCP	**Kidapawan**	**4.12**	**174**	*i* P	**Pn**	**22 12 31.7**	**+3.2**
DAV	**Davao City (W)**	**4.14**	**167**	Pn	**Pn**	**22 12 30.2**	**+1.5**
SZP	**Santa**	**7.56**	**328**	Pn	**Pn**	**22 13 18.2**	**+2.5**
KKM	**Kota Kinabalu**	**9.73**	**239**	Pn	**Pn**	**22 13 48.2**	**+2.6**
TNTI	**Ternate**	**10.64**	**165**	Pn	**Pn**	**22 13 58.4**	**+0.3**
YHNB	**Yeheng**	**13.82**	**348**	Pn	**Pn**	**22 14 45.2**	**+3.7**
KNMB	**Chin-men Tao**	**14.53**	**337**	Pn	**Pn**	**22 14 54.7**	**+3.5**
SBUM	**Sibu**	**15.02**	**236**	P	**Pn**	**22 14 57.3**	**-0.7**
IPM	**Ipoh**	**24.28**	**256**	P	**P**	**22 16 43.1**	**-0.2**
IPM				IAmb	IAmb	22 16 45.2	
	comp=Z,7.4nm,0.9s						
KULM	**Kulim**	**24.42**	**258**	P	**P**	**22 16 44.0**	**-0.5**
KULM				IAmb	IAmb	22 16 45.6	
	comp=Z,7.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**25.86**	**289**	P	**P**	**22 16 57.8**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=102,slow=7.6,SNR=7.6						
KSRS	**Korea Array**	**26.38**	**6**	LR	LR	22 26 54.9	
	comp=Z,47nm,21.3s,baz=175,slow=35						
MJAR	**Matsushiro Arr**	**28.12**	**24**	LR	LR	22 27 29.5	
	comp=Z,55nm,19.0s,baz=195,slow=34						
WRA	**Warramunga Arr**	**32.32**	**163**	P	**P**	**22 17 54.8**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=346,slow=9.2,SNR=5.3						
SHL	**Shillong**	**34.12**	**299**	P	**P**	**22 18 10.3**	**-0.5**
SHL				IAmb	IAmb	22 18 11.8	
	comp=Z,3.4nm,0.8s						
ASAR	**Alice Springs**	**35.75**	**165**	P	**P**	**22 18 23.6**	**-1.2**
	comp=Z,1.7nm,0.8s,baz=346,slow=7.9,SNR=19						
LSA	**Lhasa**	**36.22**	**306**	P	**P**	**22 18 30.2**	**+0.9**
SONM	**Songino Array**	**39.67**	**341**	P	**P**	**22 18 58.6**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=166,slow=9.2,SNR=5.9						
SONM				LR	LR	22 34 31.2	
	comp=Z,75nm,19.2s,baz=316,slow=35						
SONM	**Songino Array**	**39.67**	**341**	IAmb	IAmb	22 19 00.8	
	comp=Z,0.9nm,0.9s						
STKA	**Stephens Creek**	**45.74**	**160**	LR	LR	22 42 45.4	
	comp=Z,49nm,19.1s,baz=17,slow=41						
MKAR	**Makanchi Array**	**50.37**	**323**	P	**P**	**22 20 23.4**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=130,slow=8.2,SNR=7.6						
MAKZ	**Makanchi**	**50.57**	**323**	P	**P**	**22 20 24.6**	**+0.3**
NIL	**Nilore**	**51.92**	**304**	P	**P**	**22 20 35.5**	**+0.8**
KURK	**Kurchatov**	**54.45**	**326**	P	**P**	**22 20 54.2**	**+1.1**
KURK				IAmb	IAmb	22 21 12.2	
	comp=Z,3.0nm,1.1s						
KURBB	**Kurchatov Arra**	**54.46**	**326**	P	**P**	**22 20 53.6**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=127,slow=6.7,SNR=6.4						
BTK	**Batken**	**55.41**	**311**	P	**P**	**22 21 01.0**	**+0.7**
BTK				IAmb	IAmb	22 21 09.0	
	comp=Z,1.4nm,0.7s						
GAR	**Garm**	**55.50**	**310**	P	**P**	**22 21 00.8**	**-0.2**
CHGR	**Chuyangaron**	**56.30**	**309**	P	**P**	**22 21 07.1**	**+0.4**
KK31	**Karatay Array**	**56.50**	**315**	P	**P**	**22 21 07.8**	**-0.2**
KK31				IAmb	IAmb	22 21 10.5	
	comp=Z,2.0nm,0.9s						
KKAR	**Karatay Array**	**56.50**	**315**	P	**P**	**22 21 07.7**	**-0.3**
KKAR				IAmb	IAmb	22 21 10.5	
	comp=Z,2.0nm,0.9s						
KKAR	**Karatay Array**	**56.50**	**315**	P	**P**	**22 21 07.5**	**-0.4**
ABKAR	**Akbulak array**	**65.18**	**319**	P	**P**	**22 22 07.5**	**+0.6**
AKTO	**Aktyubinsk**	**66.64**	**320**	P	**P**	**22 22 17.4**	**+1.1**
	comp=Z,1.3nm,0.9s,baz=90,slow=8.1,SNR=4.2						
NEA	**Nenana**	**78.45**	**26**		pP	22 23 41.3	+12
ARCES	**ARCESS Array B**	**82.83**	**340**	P	**P**	**22 23 49.8**	**0.0**
	comp=Z,4.0nm,0.8s,baz=72,slow=8.0,SNR=8.0						
FINES	**FINESS Array B**	**84.37**	**331**	P	**P**	**22 23 57.5**	**-0.3**
	comp=Z,9.9nm,1.1s,baz=93,slow=7.0,SNR=6.2						
AKASG	**Malin Array Be**	**84.88**	**321**	P	**P**	**22 23 59.4**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=70,slow=4.6,SNR=1.8						
YKA	**Yellowknife Ar**	**93.63**	**24**	P	**P**	**22 24 40.4**	**-1.5**
	comp=Z,0.2nm,0.6s,baz=305,slow=4.7,SNR=3.3						
GERES	**GERESS Array B**	**95.03**	**322**	P	**P**	**22 24 48.9**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=31,slow=8.0,SNR=4.3						

MAN 25 22:16:25.2,11.˚18N×124.˚58E,h6km,mb4.4,ML3.2,MS3.1, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.13**	**168**	*e

SMCO	**Snowmass**	**4.79**	**194**		**Pn**	22 52 45.8	**+2.8**
SMCO				IAML		22 54 17.7	
	comp=N,21nm,1.0s						
SMCO				IAML		22 54 21.9	
	comp=N,21nm,1.0s						
Q24A	**Divide**	**4.89**	**177**	Pn	**Pn**	22 52 48.2	**+3.9**
Q24A				IAML		22 54 10.7	
	comp=E,21nm,0.8s						
HWUT	**Hardware Ranch**	**4.99**	**245**		Pn	22 52 50.3	+4.8
HWUT				IAML		22 54 24.1	
	comp=E,24nm,1.2s						
EGMT	**Eagleton**	**5.11**	**326**	Pn	**Pg**	22 53 06.8	**-0.4**
TCUT	**Toone Canyon**	**5.14**	**240**	Pn	Pn	22 52 53.9	+6.2
DLMT	**Dillon**	**5.28**	**289**		**Pb**	22 53 03.5	**+1.2**
KSCO	**Kaye Shedlock'**	**5.30**	**155**	Pn	Pn	22 52 55.2	+5.4
KSCO					**Pg**	22 53 09.7	**-1.1**
LRM	**Limekiln Ridge**	**5.31**	**294**	Pn	**Pg**	22 53 12.1	**+1.2**
MCMT	**McKenzie Canyo**	**5.35**	**283**	Pn	**Pb**	22 53 01.9	**-1.8**
JLU	**Jordanelle**	**5.47**	**236**	Pn	Pn	22 52 57.3	+5.1
SPUT	**South Promonto**	**5.71**	**246**	Pn	Pn	22 53 02.0	+6.6
MDND	**Maddock**	**5.75**	**44**		**Pg**	22 53 15.8	**-3.6**
P17A	**Butcher Ranch,**	**5.87**	**224**	Pn	**Pn**	22 53 01.2	**+3.6**
P17A					**Pg**	22 53 18.6	**-3.0**
MPU	**Maple Canyon**	**5.96**	**232**	Pn	Pn	22 53 03.8	+5.0
BGNE	**Belgrade**	**5.96**	**112**	Pn	**Pb**	22 53 12.1	**-1.8**
SRU	**San Rafael Swe**	**6.04**	**220**	Pn	**Pn**	22 53 03.4	**+3.3**
SDCO	**Great Sand Dun**	**6.10**	**180**	Pn	**Pn**	22 53 03.8	**+2.9**
S22A	**4UR Ranch, Cre**	**6.18**	**190**	Pn	**Pn**	22 53 05.7	**+3.8**
S22A					**Pg**	22 53 23.9	**-3.6**
TMUT	**Trail Mountain**	**6.24**	**225**	Pn	**Pn**	22 53 06.7	**+3.9**
NLU	**North Lily Min**	**6.25**	**234**	Pn	**Pn**	22 53 06.1	**+3.2**
NLU				Pg	**Pg**	22 53 31.5	**+2.6**
ECSD	**EROS Data Cent**	**6.45**	**88**		**Pb**	22 53 22.7	**+0.5**
Q16A	**Castle Valley**	**6.51**	**223**	Pn	**Pn**	22 53 09.9	**+3.5**
DUG	**Dugway, Tooele**	**6.54**	**239**	Pn	**Pn**	22 53 10.6	**+3.7**
CBKS	**Cedar Bluff**	**6.65**	**137**		**Pg**	22 53 33.7	**-2.9**
T25A	**Trinidad**	**6.76**	**172**	Pn	**Pn**	22 53 13.1	**+3.2**
MVCO	**Mesa Verde**	**7.01**	**200**	Pn	**Pn**	22 53 15.0	**+1.7**
JTMT	**Jette**	**7.26**	**306**	Pn	**Pb**	22 53 33.7	**-2.4**
MSU	**Marysvale**	**7.32**	**226**	Pn	**Pn**	22 53 21.2	**+3.6**
MFID	**Camas Ranch**	**7.49**	**270**	Pn	Pb	22 53 31.1	-9.0
MTPU	**Mount Pierson**	**7.69**	**223**	Pn	**Pn**	22 53 25.9	**+3.1**
ELK	**Elko**	**7.84**	**250**	Pn	**Pn**	22 53 27.6	**+2.8**
	comp=E,0.1nm,0.3s,baz=198,slow=20,SNR=2.2						
ELK	**Elko**	**7.84**	**250**		Pn	22 53 29.9	+5.2
PKCU	**Pink Cliffs**	**8.22**	**221**	Pn	**Pn**	22 53 32.6	**+2.6**
PSUT	**Pine Spring**	**8.23**	**233**	Pn	Pn	22 53 34.6	+4.6
NVAR	**Mina Array Bea**	**11.05**	**245**	Pn	**Pn**	22 54 11.9	**+3.2**
	comp=E,0.1nm,0.3s,baz=62,slow=9.7,SNR=5.8						
YKA	**Yellowknife Ar**	**19.42**	**347**	P	**Pn**	22 55 57.4	**-0.4**
	comp=E,0.0nm,0.3s,baz=155,slow=12,SNR=4.0						
FRB	**Frobisher Bay**	**28.91**	**34**	LR	LR	23 09 50.7	
	comp=E,200nm,18.8s,baz=37,slow=38						
MKAR	**Makanchi Array**	**89.48**	**355**	P	**P**	**23 04 29.2**	**+1.2**
	comp=E,0.4nm,0.7s,baz=2.0,slow=5.2,SNR=5.7						

*IDC **25** 23:01:50.5±1.4, 49.02S×124.83E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.7/22, mbtmp3.7/4, MS3.2/5, Ms1 3.2/5, ms1mx3.1/15, Error ellipse: s-maj=119.4km s-min=25.2km az=113.0*
*NEIC **25** 23:01:50.9±0.8, 48.88S±0.05×125.1E±0.2, h10km±1km, mb4.0/7, Error ellipse: s-maj=21.3km s-min=7.8km az=262.0*

ISC 25 23:01:51.1±1.1, 49.0S±0.1×125.1E±0.2, h10km, n18, σ1§49/13, mb3.6/5, MS3.1/5, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**16.21**	**326**	T	T	23 22 20.4	
	baz=153,slow=74,SNR=8.5						
H01W2	**Cape Leeuwin H**	**16.21**	**326**	T	T	23 22 14.5	
	baz=153,slow=74,SNR=8.7						
H01W3	**Cape Leeuwin H**	**16.22**	**326**	T	T	23 22 15.4	
	baz=153,slow=74,SNR=7.4						
TAU	**Tasmania Unive**	**16.59**	**77**	Pn	**Pn**	**23 05 42.7**	**-0.9**
TAU				IAmb	IAmb	23 05 48.9	
	comp=Z,12nm,0.9s						
NWAO	**Narrogin (SRO)**	**17.06**	**337**	Pn	**Pn**	**23 05 48.5**	**-1.1**
NWAO				IAmb	IAmb	23 05 53.2	
	comp=Z,13nm,0.9s						
NWAO	**Narrogin (SRO)**	**17.06**	**337**	Pn	**Pn**	**23 05 48.7**	**-0.9**
NWAO				IAmb	IAmb	23 05 53.2	
	comp=Z,11nm,0.9s						
STKA	**Stephens Creek**	**21.12**	**42**	P	**P**	**23 06 37.6**	**+1.7**
	comp=Z,1.9nm,0.8s,baz=216,slow=14,SNR=2.7						
STKA				LR	LR	23 13 28.3	
	comp=Z,43nm,20.6s,baz=204,slow=33						
ASAR	**Alice Springs**	**26.19**	**19**	P	**P**	**23 07 27.7**	**+1.9**
	comp=Z,1.1nm,0.7s,baz=198,slow=9.0,SNR=11						
ASAR				LR	LR	23 16 59.7	
	comp=Z,87nm,20.6s,baz=156,slow=35						
ASAR	**Alice Springs**	**26.19**	**19**	P	**P**	**23 07 26.4**	**+0.6**
WRA	**Warramunga Arr**	**29.89**	**18**	P	**P**	**23 08 00.5**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=200,slow=7.9,SNR=2.8						
WRA				LR	LR	23 19 52.1	
	comp=Z,48nm,19.8s,baz=300,slow=36						
WR0	**Warramunga Arr**	**29.92**	**18**	P	**P**	**23 07 56.6**	**-2.5**
WR0				IAmb	IAmb	23 08 13.0	
	comp=Z,1.5nm,1.0s						
FITZ	**Fitzroy Crossi**	**30.79**	**1**	LR	LR	23 19 18.9	
	comp=Z,37nm,20.2s,baz=152,slow=34						
NNZ	**Nelson**	**34.48**	**96**	P	**P**	**23 08 37.7**	**-1.2**
MSWZ	**Moikau Station**	**35.60**	**97**	P	**P**	**23 08 48.7**	**0.0**
MAW	**Mawson**	**35.66**	**216**	LR	LR	23 19 55.8	
	comp=Z,52nm,19.1s,baz=56,slow=31						
SNAA	**Sanae**	**54.17**	**198**	P	**P**	**23 11 15.8**	**-0.2**
	comp=Z,3.3nm,1.0s,baz=152,slow=10,SNR=5.2						
SNAA	**Sanae**	**54.17**	**198**	P	**P**	**23 11 16.4**	**+0.4**
SNAA				IAmb	IAmb	23 11 19.5	
	comp=Z,4.4nm,1.1s						
YKA	**Yellowknife Ar**	**145.15**	**45**	PKPbc	**PKPdf**	**23 21 28.8**	**+1.4**
	comp=Z,0.8nm,0.7s,baz=267,slow=3.8,SNR=12						

SSNC 25 23:08:49.5±2.7, 19.21N×81.09W, h25km±27km, MW3.7, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MGV	**Manicaragua**	**3.07**	**20**	*eP*	Pn	23 09 35.6	-0.7
MGV				*eS*	Sn	23 10 15.0	+2.7
LMGC	**Las Mercedes**	**3.94**	**77**	*eP*	Pn	23 09 47.5	-1.0
LMGC				*eS*	Sn	23 10 34.1	+0.2
SOR	**Soroa**	**3.99**	**334**	*eP*	Pn	23 09 48.2	-0.9
SOR				*eS*	Sn	23 10 35.1	0.0
RCC	**Rio Carpintero**	**5.14**	**80**	*eP*	Pn	23 10 04.4	-0.6
RCC				*eS*	Sn	23 11 04.3	+0.7
GTMO	**Guantanamo**	**5.67**	**80**	*eP*	Pn	23 10 13.1	+0.9
GTMO				*eS*	Sn	23 11 18.4	+1.8

*DJA **25** 23:16:54.4±0.7, 8.5S±14.×10.9E±., h45km±70km, M4.0/7, MLv4.0/7*
*IDC **25** 23:16:57.7±2.3, 8.37S×108.73E, h145km±18km, mb3.2/4, mb1 3.4/4, mb1mx3.1/27, mbtmp3.7/4, Error ellipse: s-maj=140.9km s-min=19.5km az=50.0*

ISC 25 23:16:53.9±1.1, 8.3S±0.1×109.25E±0.05, h83km±12km, n18, σ1§63/20, mb3.4/4, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.96**	**304**	P	**Pn**	**23 17 12.1**	**-0.5**
CMJI				S	**Sn**	**23 17 25.1**	**-1.5**
KPJI	**Karang Pucung**	**1.03**	**342**	P	**Pn**	**23 17 13.9**	**+0.4**
UGM	**Wanagama**	**1.33**	**72**	P	**Pn**	**23 17 17.2**	**0.0**
UGM				S	**Sn**	**23 17 34.4**	**-0.3**
CISI	**Cisompet, Garu**	**1.61**	**298**	P	**Pn**	**23 17 20.8**	**0.0**
CISI				S	**Sn**	**23 17 41.4**	**+0.2**
WOJI	**Wonogiri, Jawa**	**1.73**	**74**	P	**Pn**	**23 17 22.2**	**-0.1**
SMRI	**Semarang**	**1.73**	**43**	P	**Pn**	**23 17 23.5**	**+1.1**
PCJI	**Pacitan**	**1.91**	**86**	P	**Pn**	**23 17 25.8**	**+1.1**
PCJI				S	**Sn**	**23 17 48.6**	**+0.4**
LEM	**Lembang**	**2.20**	**313**	P	**Pn**	**23 17 31.4**	**+2.7**
	10nm,0.3s,baz=190,slow=12,SNR=4.7						
LEM				S	**Sn**	**23 17 57.5**	**+2.3**
	15nm,0.3s,baz=196,slow=20,SNR=8.1						
LEM	**Lembang**	**2.20**	**313**	P	**Pn**	**23 17 30.3**	**+1.6**
CNJI	**Cibinong**	**2.33**	**296**	P	**Pn**	**23 17 30.7**	**+0.5**
JAGI	**Jajag, Banyuwa**	**4.86**	**92**	P	**Pn**	**23 18 04.5**	**0.0**
WRA	**Warramunga Arr**	**26.89**	**118**	P	**P**	**23 22 29.1**	**+1.9**
	0.6nm,0.6s,baz=287,slow=12,SNR=12						
ASAR	**Alice Springs**	**28.11**	**126**	P	**P**	**23 22 39.7**	**+1.6**
	0.4nm,0.5s,baz=304,slow=9.5,SNR=12						
H08S2	**Diego Garcia H**	**36.40**	**268**	T	T	00 02 00.0	
	baz=90						
H08S3	**Diego Garcia H**	**36.41**	**268**	T	T	00 02 01.2	
	baz=90						
H08S1	**Diego Garcia H**	**36.41**	**268**	T	T	00 02 15.1	
	baz=90						
STKA	**Stephens Creek**	**38.11**	**132**	P	**P**	**23 24 05.5**	**+0.6**
	1.5nm,0.7s,baz=311,slow=9.3,SNR=4.7						
MKAR	**Makanchi Array**	**59.90**	**339**	P	**P**	**23 26 47.2**	**-3.9**
	0.2nm,0.5s,baz=156,slow=7.7,SNR=5.4						

IDC 25 23:37:31.2±1.6, 2.14S×139.26E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.6/17, mbtmp3.5/4, ML3.1/1, MS3.4/2, Ms1 3.4/2, ms1mx3.0/18, Error ellipse: s-maj=79.2km s-min=27.1km az=95.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.33**	**195**	P	P	23 41 47.6	+0.3
	0.1nm,0.3s,baz=14,slow=13,SNR=3.3						
ASAR	**Alice Springs**	**22.02**	**193**	P	P	23 42 27.1	-0.3
	0.5nm,0.7s,baz=23,slow=9.4,SNR=4.5						
STKA	**Stephens Creek**	**29.66**	**176**	LR	LR	23 57 15.0	
	comp=Z,35nm,18.4s,baz=24,slow=40						
MKAR	**Makanchi Array**	**59.68**	**322**	P	P	23 48 42.9	0.0
	1.1nm,1.0s,baz=119,slow=7.6,SNR=5.7						
VNDA	**Vanda**	**76.29**	**175**	LR	LR	00 21 12.9	
	comp=Z,42nm,18.3s,baz=192,slow=34						
ILAR	**Eielson Array**	**85.09**	**24**	P	P	23 50 08.7	-0.1
	0.7nm,0.9s,baz=251,slow=4.4,SNR=4.1						

*FUNV **25** 23:47:08.6, 10.61N×61.48W, h26km, MW3.5*
*TRN **25** 23:47:15.0, 10.42N×61.91W, h12km, MD3.5*

ISC 25 23:47:13.5±1.0, 10.26N±0.03×61.90W±0.02, h31km±9km, n27, σ1§70/53, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALNG	**Atlantic LNG**	**0.22**	**111**	*eP*	**Pn**	**23 47 21.5**	**+0.8**
ALNG				*eS*	**Sb**	**23 47 26.6**	**+2.1**
BUAY	**Buenos Aires**	**0.26**	**127**	*eP*	**Pn**	**23 47 22.2**	**+1.0**
BUAY				*eS*	**Sn**	**23 47 28.3**	**+2.2**
TPP	**Pointe-a-Pierr**	**0.44**	**83**	*eP*	**Pn**	**23 47 23.7**	**-0.1**
TPP				*eS*	**Sn**	**23 47 30.7**	**0.0**
TRN	**Trinidad (W)**	**0.62**	**52**	*eP*	**Pb**	**23 47 25.0**	**-0.9**
TRN				*eS*	**Sb**	**23 47 33.5**	**-0.9**
TBH	**Brigand Hill**	**0.84**	**75**	*eP*	**Pn**	**23 47 31.1**	**+1.7**
TBH				*eS*	**Sn**	**23 47 43.5**	**+2.8**
GUNV	**Guanoco**	**1.04**	**265**	*iP*	**Pb**	**23 47 32.6**	**-0.3**
GUNV				*eP*	**Pn**	**23 47 33.7**	**+1.7**
GUNV				*eS*	**Sn**	**23 47 50.1**	**+4.7**
CRUV	**Carupano**	**1.38**	**287**	*eP*	**Pn**	**23 47 36.6**	**-0.1**
CRUV				*eS*	**Sb**	**23 47 55.8**	**-0.2**
TOSP	**Speyside**	**1.69**	**52**	*eP*	**Pb**	**23 47 43.0**	**-0.9**
TOSP				*eS*	**Sb**	**23 48 03.9**	**-0.9**
GRGR	**Grenville**	**1.87**	**7**	*eP*	**Pn**	**23 47 44.6**	**+1.1**
GRGR				*eS*	**Sb**	**23 48 08.0**	**-2.2**
ORIV	**Oritupano**	**1.91**	**232**	*eP*	**Pb**	**23 47 45.6**	**-2.1**
ORIV				*eS*	**Sb**	**23 48 13.8**	**+2.7**
GRHS	**Sauteurs**	**1.97**	**7**	*eP*	**Pb**	**23 47 46.5**	**-2.2**
GRHS				*eS*	**Sn**	**23 48 09.6**	**+1.2**
GRSS	**Sisters**	**2.04**	**8**	*eP*	**Pb**	**23 47 48.0**	**-2.0**
GRSS				*eS*	**Sn**	**23 48 11.0**	**+0.7**
RIOV	**Rio Grande**	**2.18**	**178**	*eP*	**Pn**	**23 47 47.5**	**-0.3**
RIOV				*eS*	**Sn**	**23 48 16.3**	**+2.5**
PCRV	**Puerto La Cruz**	**2.70**	**268**	*eP*	**Pn**	**23 47 55.2**	**+0.3**
PCRV				*eS*	**Sn**	**23 48 29.1**	**+2.5**
FCV	**Fort Charlotte**	**2.95**	**12**	*eS*	**Sb**	**23 48 40.8**	**-0.3**
SVB	**Belmont**	**3.06**	**12**	*eP*	**Pn**	**23 48 02.0**	**+2.2**
SVB				*eS*	**Sn**	**23 48 36.5**	**+1.1**
SVCV	**St. Vincent, C**	**3.08**	**14**	*eP*	**Pn**	**23 48 02.4**	**+2.3**
SVCV				*eS*	**Sn**	**23 48 36.0**	**0.0**
PRGV	**PARIAGUAN**	**3.10**	**241**	*eP*	**Pn**	**23 48 01.6**	**+1.3**
PRGV				*eS*	**Sb**	**23 48 42.6**	**-2.7**
SVV	**Soufriere Volc**	**3.11**	**12**	*eP*	**Pn**	**23 48 02.4**	**+1.9**
SVV				*eS*	**Sn**	**23 48 36.5**	**-0.2**
SLB	**Belfond**	**3.64**	**13**	*eP*	**Pn**	**23 48 10.5**	**+2.6**
SLB				*eS*	**Sn**	**23 48 50.6**	**+0.8**
CUPV	**Cpira**	**3.84**	**267**	*eP*	**Pn**	**23 48 10.7**	**+0.1**
CUPV				*eS*	**Sn**	**23 48 56.9**	**+2.2**
SLBI	**Saint Lucia, B**	**3.84**	**13**	*eP*	**Pn**	**23 48 13.3**	**+2.7**
SLBI				*eS*	**Sn**	**23 48 54.9**	**+0.1**
BIRV	**Birongo**	**4.31**	**273**	*eP*	**Pn**	**23 48 16.4**	**-0.6**
BIRV				*eS*	**Sn**	**23 49 06.8**	**+0.5**
LUEV	**Luepa**	**4.41**	**174**	*eP*	**Pn**	**23 48 17.4**	**-1.2**
LUEV				*eS*	**Sn**	**23 49 07.4**	**-1.6**
PCM	**Pelee Case Pet**	**4.58**	**8**	*eP*	**Pn**	**23 48 21.6**	**+0.9**
BAUV	**El Baul**	**6.20**	**258**	*eP*	**Pn**	**23 48 42.1**	**-0.9**
BAUV				*eS*	**Sn**	**23 49 52.2**	**-0.7**
PAYV	**Puerto Ayacuch**	**7.46**	**230**	*eP*	**Pn**	**23 49 00.6**	**+0.2**
PAYV				*eS*	**Sn**	**23 50 23.9**	**-0.1**

*ANF **26** 00:03:12.0±0.2, 37.20N×115.58W, h1km, ML3.3/18, Error ellipse: s-maj=2.5km s-min=1.9km az=89.0*
*NEIC **26** 00:03:13.0±1.7, 37.18N±0.02×115.61W±0.04, h7km±10km, Error ellipse: s-maj=4.7km s-min=3.1km az=80.0*
*REN **26** 00:03:13.0±1.9, 37.16N±0.03×115.59W±0.05, h9km±7km, ML3.2, Error ellipse: s-maj=5.4km s-min=3.8km az=73.0*

ISC 26 00:03:12.3±1.1, 37.18N±0.02×115.57W±0.02, h2km±12km, n68, σ1§06/98, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPNV	**Topopah Spring**	**0.59**	**247**	Pg	**Pg**	**00 03 23.8**	**+0.1**
TPNV	**Topopah Spring**	**0.59**	**247**	P	**Pg**	**00 03 23.7**	**+0.1**
	baz=68,SNR=158						
SHPR	**Sheep Range**	**0.75**	**154**		**Pg**	**00 03 26.8**	**0.0**
SHPR					**Sg**	**00 03 37.7**	**+1.2**
R11A	**Troy Canyon, C**	**1.16**	**360**		**Pg**	**00 03 35.4**	**+0.7**
R11A					**Sg**	**00 03 50.2**	**+0.4**
R11A	**Troy Canyon, C**	**1.16**	**360**	P	**Pg**	**00 03 34.2**	**-0.5**
	baz=180,SNR=128						
R11A				S	**Sg**	**00 03 50.2**	**+0.4**
	baz=180						
FURC	**Furnace Creek,**	**1.26**	**236**	P	**Pb**	**00 03 36.6**	**-0.2**
	baz=56,SNR=105						
FURC				S	**Sn**	**00 03 53.7**	**-0.8**
	baz=56						
SHOC	**Shoshone, Teco**	**1.40**	**204**	P	**Pn**	**00 03 39.0**	**0.0**
	baz=23						
SHOC				S	**Sg**	**00 03 58.0**	**+0.7**
	baz=23						
GRAC	**Grapevine Rang**	**1.45**	**263**	Pg	**Pg**	**00 03 40.3**	**+0.3**
	baz=83,SNR=84						
GRAC				S	**Sg**	**00 03 60.0**	**+1.1**
	baz=83						
TUQ	**Turquoise Moun**	**1.77**	**189**	Pb	**Pb**	**00 03 45.5**	**-0.1**
	baz=8.8,SNR=80						
TUQ				S	**Sb**	**00 04 08.6**	**+0.3**
	baz=8.8						
CCUT	**Cedar City**	**1.80**	**78**		**Pb**	**00 03 46.2**	**0.0**
DAC	**Darwin (Calif)**	**1.86**	**241**		**Pn**	**00 03 44.5**	**-0.9**
DAC				Pg	**Pg**	**00 03 49.8**	**+1.8**
LCMT	**Little Creek M**	**1.87**	**95**		**Pn**	**00 03 46.3**	**+0.7**
MPMC	**Manual Prospec**	**1.91**	**234**	P	**Pn**	**00 03 46.1**	**0.0**
	baz=54,SNR=81						
PSUT	**Pine Spring**	**1.91**	**45**		**Pn**	**00 03 46.5**	**+0.3**
SZCU	**Shurtz Canyon**	**2.02**	**78**		**Pn**	**00 03 48.8**	**+1.0**
GSC	**Goldstone, Bar**	**2.13**	**208**		**Pn**	**00 03 49.1**	**+0.1**
GSC	**Goldstone, Bar**	**2.13**	**208**	P	**Pn**	**00 03 49.2**	**+0.1**
	baz=28,SNR=38						
GSC				S	**Sb**	**00 04 17.6**	**-1.0**
	baz=28						
KNB	**Kanab**	**2.21**	**94**		**Pn**	**00 03 51.1**	**+0.9**
NV11	**Mina Array Sit**	**2.40**	**302**	Pn	**Pn**	**00 03 52.8**	**0.0**
HEC	**Hector, Ludlow**	**2.43**	**195**	Pn	**Pn**	**00 03 52.0**	**-1.2**
	baz=14,SNR=25						
HEC				Pg	**Pb**	**00 03 58.0**	**+1.2**
	baz=14						
HEC				Sb	**Sg**	**00 04 29.6**	**-0.8**
	baz=14						
W13A	**Hualapai Mount**	**2.49**	**146**		**Pn**	**00 03 54.1**	**0.0**
NEE2	**Needles Airpor**	**2.53**	**162**	Pg	**Pg**	**00 04 00.6**	**-0.3**
	baz=342						
NEE2				Sb	**Sg**	**00 04 33.1**	**-0.6**
	baz=342						
PKCU	**Pink Cliffs**	**2.61**	**83**		**Pn**	**00 03 55.5**	**-0.5**
MLAC	**Mammoth, Mammo**	**2.64**	**281**	Sg	**Sg**	**00 04 39.6**	**+2.5**
	baz=99						
KVN	**Kaiserville**	**2.73**	**314**		**Pn**	**00 03 57.8**	**+0.3**
U15A	**North Rim**	**2.74**	**105**		**Pn**	**00 03 59.1**	**+1.5**
RYN	**Ryan**	**2.74**	**303**		**Pn**	**00 03 57.6**	**0.0**
OMMB	**Old Mammoth Mi**	**2.76**	**280**	Pn	**Pn**	**00 03 57.1**	**-0.9**
ISA	**Isabella, Lake**	**2.79**	**238**		**Pn**	**00 03 57.9**	**-0.2**
MTPU	**Mount Pierson**	**2.82**	**71**	Pn	**Pn**	**00 03 59.6**	**+0.8**
MTPU				Pg	**Pg**	**00 04 07.9**	**+1.4**
MDPB	**Devils Postpil**	**2.83**	**280**	Pn	**Pn**	**00 03 58.4**	**-0.5**
MDPB					**Pg**	**00 04 07.3**	**+0.7**
TCRU	**Three Creeks R**	**2.85**	**59**	Pn	**Pn**	**00 04 00.0**	**+0.9**
TCRU				Pg	**Pg**	**00 04 06.7**	**-0.4**
MSU	**Marysvale**	**3.00**	**63**	Pn	**Pn**	**00 04 02.5**	**+1.4**
IRM	**Iron Mountain**	**3.04**	**173**	Pn	**Pn**	**00 04 02.6**	**+1.0**
	baz=353						
IRM				Pg	**Pg**	**00 04 10.5**	**-0.1**
	baz=353,SNR=24						
IRM				Sb	**Sg**	**00 04 49.1**	**-0.9**
	baz=353						
BELC	**Belle Mtn. Jos**	**3.19**	**186**	P	**Pn**	**00 04 04.3**	**+0.5**
	baz=5.9,SNR=6.0						
BELC				Sb	**Sg**	**00 04 53.9**	**-1.1**
	baz=5.9						
WAKR	**Walker**	**3.33**	**294**	Pn	**Pn**	**00 04 06.6**	**+0.9**
YERR	**Yerington**	**3.41**	**303**		**Pn**	**00 04 06.1**	**-0.7**
BC3	**Big Chuckawall**	**3.52**	**178**	Pn	**Pn**	**00 04 08.8**	**+0.5**
	baz=358						
BC3				Pg	**Pg**	**00 04 20.1**	**+0.2**
	baz=358,SNR=5.9						
Y12C	**Blythe**	**3.53**	**166**	Pn	**Pn**	**00 04 07.2**	**-1.1**
ELK	**Elko**	**3.56**	**4**	Pn	**Pn**	**00 04 08.8**	**-0.1**
ELK					**Pg**	**00 04 19.5**	**-1.2**
MWC	**Mount Wilson**	**3.58**	**215**	Pn	**Pn**	**00 04 08.3**	**-0.8**
MWC					**Pg**	**00 04 23.8**	**+2.9**
PFO	**Pinyon Flats O**	**3.64**	**192**	Pn	**Pn**	**00 04 09.7**	**-0.2**
PFO	**Pinyon Flats O**	**3.64**	**192**	P	**Pn**	**00 04 10.4**	**+0.6**
	baz=11						
PFO				Sb	**Sg**	**00 05 07.0**	**-2.2**
	baz=11						
XPFO	**Pion Flat**	**3.64**	**192**		**Pn**	**00 04 09.1**	**-0.8**
DUG	**Dugway, Tooele**	**3.70**	**35**	Pn	**Pn**	**00 04 10.8**	**0.0**
DUG					**Pg**	**00 04 21.7**	**-1.6**
DUG	**Dugway, Tooele**	**3.70**	**35**	Pg	**Pg**	**00 04 21.9**	**-1.4**
	baz=216						
DUG				Sb	**Sg**	**00 05 09.0**	**-2.2**
	baz=216						
PNTR	**Pine Nut**	**3.70**	**302**	Pn	**Pn**	**00 04 11.3**	**+0.5**
WUAZ	**Wupatki**	**3.77**	**115**	Pn	**Pn**	**00 04 11.8**	**0.0**
WUAZ					**Pg**	**00 04 24.8**	**+0.1**
WUAZ	**Wupatki**	**3.77**	**115**	Pg	**Pg**	**00 04 24.7**	**-0.1**
	baz=297,SNR=9.5						
WUAZ				Sb	**Sb**	**00 05 09.6**	**+3.5**
	baz=297						
Y14A	**Wickenburg**	**3.86**	**146**	Pn	**Pn**	**00 04 12.2**	**-0.5**
Q16A	**Castle Valley**	**3.88**	**62**	Pn	**Pn**	**00 04 13.2**	**-0.1**
NLU	**North Lily Min**	**3.89**	**44**	Pn	**Pn**	**00 04 13.5**	**0.0**
NLU					**Pg**	**00 04 27.7**	**+0.8**
PAHR	**Pah Rah Range**	**3.91**	**311**		**Pn**	**00 04 12.9**	**-0.7**
CMB	**Columbia Colle**	**3.92**	**284**	Pn	**Pn**	**00 04 13.2**	**-0.4**
TMUT	**Trail Mountain**	**4.03**	**57**	Pn	**Pn**	**00 04 15.1**	**-0.3**
PAGB	**Antelope Grade**	**4.04**	**250**	Pn	**Pn**	**00 04 13.9**	**-1.4**
PAGB					**Pg**	**00 04 27.7**	**-2.1**
RUBR	**Rubicon Trail**	**4.07**	**299**	Pn	**Pn**	**00 04 15.2**	**-0.6**
GLA	**Glamis**	**4.17**	**171**	Pn	**Pn**	**00 04 16.9**	**-0.2**
GLA	**Glamis**	**4.17**	**171**	Sb	**Sg**	**00 05 22.8**	**-3.5**
	baz=352						
MPU	**Maple Canyon**	**4.18**	**46**	Pn	**Pn**	**00 04 17.9**	**+0.5**
BGU	**Big Grassy Mou**	**4.23**	**27**	Pn	**Pn**	**00 04 18.8**	**+0.8**
BGU					**Pg**	**00 04 31.8**	**-1.6**
PMPB	**Monarch Peak**	**4.31**	**259**	Pn	**Pn**	**00 04 20.6**	**+1.5**
X16A	**Lo Mia Camp, P**	**4.35**	**128**	Pn	**Pn**	**00 04 19.4**	**-0.2**
X16A					**Pg**	**00 04 35.1**	**-0.5**
P17A	**Butcher Ranch,**	**4.43**	**58**	Pn	**Pn**	**00 04 20.8**	**-0.1**
BAR	**Barrett**	**4.58**	**192**	Pn	**Pn**	**00 04 22.9**	**+0.2**
JLU

ISC 26 00:15:40.1±1.3, 24°44N±0°03×122°12E±0°03, h65km±7km, n51, σ0s68/99, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=17	**0.11**	**4**	P	**Pn**	**00 15 50.3**	**+0.6**
EOS1	baz=17			S	**Sn**	**00 15 58.2**	**+1.4**
TWC	**Suao** baz=312	**0.30**	**304**	P	**Pn**	**00 15 51.0**	**+0.2**
TWC	baz=312			eS	**Sn**	**00 15 58.6**	**0.0**
NANB	**Nanao** baz=271	**0.34**	**267**	P	**Pn**	**00 15 51.1**	**+0.1**
NANB	baz=271			S	**Sn**	**00 15 59.2**	**+0.1**
ENA	**Nanau** baz=271	**0.35**	**268**	P	**Pn**	**00 15 51.2**	**+0.1**
ENA	baz=271			S	**Sn**	**00 15 59.4**	**+0.3**
ILA	**Ilan** baz=319	**0.47**	**314**	eP	**Pn**	**00 15 52.6**	**+0.5**
NTC	**Toucheng** baz=332	**0.49**	**327**	eP	**Pn**	**00 15 52.1**	**-0.3**
NTC	baz=332			eS	**Sn**	**00 16 00.6**	**-0.8**
TWE	**Neicheng** baz=309	**0.50**	**304**	P	**Pn**	**00 15 53.0**	**+0.5**
TWE	baz=309			S	**Sn**	**00 16 01.7**	**+0.2**
SLBB	**Yuanshan** baz=309	**0.54**	**305**	eP	**Pn**	**00 15 52.6**	**-0.3**
SLBB	baz=309			eS	**Sn**	**00 16 02.4**	**0.0**
ENTT	**Nioudou** baz=295	**0.54**	**291**	P	**Pn**	**00 15 53.2**	**+0.3**
ENTT	baz=295			eS	**Sn**	**00 16 02.2**	**-0.1**
NACB	**Ninganchiao** baz=241	**0.55**	**241**	P	**Pn**	**00 15 52.6**	**-0.4**
NACB	baz=241			S	**Sn**	**00 16 01.9**	**-0.6**
NDT	**Datong Townshi** baz=289	**0.58**	**286**	P	**Pn**	**00 15 53.8**	**+0.4**
NDT	baz=289			eS	**Sn**	**00 16 03.0**	**0.0**
TWB1	**Santiao Chiao** baz=352	**0.58**	**348**	eP	**Pn**	**00 15 54.4**	**+1.0**
TWB1	baz=352			eS	**Sn**	**00 16 02.0**	**-1.0**
TIPB	**Shuangxi** baz=336	**0.59**	**333**	eP	**Pn**	**00 15 53.2**	**-0.3**
TIPB	baz=336			eS	**Sn**	**00 16 02.2**	**-1.1**
TWD	**Chiawan** baz=232	**0.60**	**233**	P	**Pn**	**00 15 53.3**	**-0.2**
TWD	baz=232			eS	**Sn**	**00 16 03.5**	**+0.2**
ETLH	**Xiulin Townshi** baz=248	**0.63**	**248**	eP	**Pn**	**00 15 53.8**	**-0.2**
ETLH	baz=248			eS	**Sn**	**00 16 03.5**	**-0.7**
NWLT	**Wulai** baz=303	**0.65**	**301**	P	**Pn**	**00 15 54.6**	**+0.4**
NWLT	baz=303			S	**Sn**	**00 16 05.0**	**+0.4**
NNSB	**Datong** baz=270	**0.67**	**269**	eP	**Pn**	**00 15 54.6**	**+0.1**
NNSB	baz=270			S	**Sn**	**00 16 04.3**	**-0.7**
NNSH	**Datong** baz=270	**0.67**	**269**	eP	**Pn**	**00 15 54.5**	**0.0**
NNSH	baz=270			eS	**Sn**	**00 16 04.6**	**-0.5**
NNS	**Nan Shan** baz=271	**0.68**	**270**	eP	**Pn**	**00 15 55.0**	**+0.4**
NNS	baz=271			S	**Sn**	**00 16 05.0**	**-0.2**
YHNB	**Yeheng** baz=291	**0.71**	**289**	P	**Pn**	**00 15 55.0**	**+0.1**
YHNB	baz=291			eS	**Sn**	**00 16 05.5**	**-0.4**
ENLB	**Shoufeng** baz=220	**0.72**	**222**	eP	**Pn**	**00 15 54.0**	**-0.9**
ENLB	baz=220			eS	**Sn**	**00 16 05.6**	**-0.1**
TWA	**Mucha** baz=321	**0.72**	**318**	eP	**Pn**	**00 15 54.9**	**-0.1**
TWA	baz=321			eS	**Sn**	**00 16 06.3**	**+0.3**
NSK	**Sanguang** baz=291	**0.73**	**289**	P	**Pn**	**00 15 55.1**	**0.0**
NSK	baz=291			S	**Sn**	**00 16 05.9**	**-0.3**
JYNG	**Yonagunijimaku**	**0.75**	**89**	P	**Pn**	**00 15 54.8**	**-0.5**
JYNG				S	**Sn**	**00 16 07.0**	**+0.5**
WHF	**Hehuan Shan** baz=249	**0.83**	**249**	eP	**Pn**	**00 15 56.7**	**-0.1**
WHF	baz=249			eS	**Sn**	**00 16 08.3**	**-0.7**
YM01	**YM01** baz=327	**0.86**	**325**	eP	**Pn**	**00 15 56.4**	**-0.3**
YM01	baz=327			eS	**Sn**	**00 16 08.1**	**-0.8**
YM10	**YM10** baz=327	**0.87**	**324**	eP	**Pn**	**00 15 56.5**	**-0.4**
YM10	baz=327			eS	**Sn**	**00 16 08.1**	**-1.1**
YM05	**YM05** baz=327	**0.88**	**325**	eP	**Pn**	**00 15 56.3**	**-0.6**
YM05	baz=327			eS	**Sn**	**00 16 07.9**	**-1.4**
TWT	**Tachien** baz=258	**0.88**	**258**	eP	**Pn**	**00 15 58.5**	**+1.4**
TWT	baz=258			eS	**Sn**	**00 16 09.9**	**+0.3**
YM04	**YM04** baz=325	**0.89**	**323**	eP	**Pn**	**00 15 57.0**	**0.0**
YM04	baz=325			eS	**Sn**	**00 16 08.4**	**-1.0**
ESL	**Shilin** baz=224	**0.89**	**225**	P	**Pn**	**00 15 56.7**	**-0.3**
ESL	baz=224			S	**Sn**	**00 16 08.6**	**-0.9**
TDCB	**Techi** baz=258	**0.90**	**258**	eP	**Pn**	**00 15 57.6**	**+0.4**
TDCB	baz=258			S	**Sn**	**00 16 09.6**	**-0.3**
TWS1	**Kuangyinshan** baz=318	**0.92**	**316**	eP	**Pn**	**00 15 57.4**	**+0.1**
TWS1	baz=318			eS	**Sn**	**00 16 11.0**	**+1.0**
CHGB	**Renai** baz=246	**0.94**	**246**	eP	**Pn**	**00 15 58.3**	**+0.4**
CHGB	baz=246			eS	**Sn**	**00 16 10.4**	**-0.6**
OWD	**Renai** baz=240	**0.99**	**241**	eP	**Pn**	**00 15 58.4**	**0.0**
OWD	baz=240			S	**Sn**	**00 16 11.1**	**-0.8**
EGFH	**Guangfu** baz=218	**1.00**	**220**	eP	**Pn**	**00 15 58.4**	**0.0**
EGFH	baz=218			eS	**Sn**	**00 16 10.5**	**-1.3**
LIOB	**Emei** baz=283	**1.03**	**282**	eP	**Pn**	**00 15 58.8**	**0.0**
LIOB	baz=283			eS	**Sn**	**00 16 13.3**	**+0.7**
NSTT	**Nanjuang** baz=282	**1.04**	**281**	eP	**Pn**	**00 15 57.5**	**-1.4**
NSTT	baz=282			eS	**Sn**	**00 16 13.5**	**+0.7**
WHP	**Taichung City** baz=262	**1.08**	**262**	P	**Pn**	**00 16 00.8**	**+1.3**
WHP	baz=262			S	**Sn**	**00 16 14.8**	**+0.8**
VWDT	**VWDT** baz=232	**1.13**	**233**	eP	**Pn**	**00 16 00.6**	**+0.6**
VWDT	baz=232			eS	**Sn**	**00 16 14.5**	**-0.4**
HGSD	**Ruisui** baz=213	**1.14**	**214**	eS	**Sn**	**00 16 14.9**	**-0.3**
SMLT	**Sun Moon Lake** baz=243	**1.25**	**244**	eP	**Pn**	**00 16 02.3**	**+0.6**
SSLB	**Suanglung** baz=238	**1.25**	**239**	eP	**Pn**	**00 16 03.5**	**+1.8**
SSLB	baz=238			eS	**Sn**	**00 16 18.7**	**+0.9**
YULB	**Yu-li** baz=215	**1.29**	**216**	eP	**Pn**	**00 16 01.4**	**-0.8**
YULB	baz=215			eS	**Sn**	**00 16 16.8**	**-1.8**
TWF1	**Yuli** baz=213	**1.32**	**215**	eP	**Pn**	**00 16 01.9**	**-0.7**
TWF1	baz=213			eS	**Sn**	**00 16 18.9**	**-0.5**
YUS	**Yu-Shan** baz=228	**1.43**	**229**	eP	**Pn**	**00 16 05.1**	**+0.6**
YUS	baz=228			eS	**Sn**	**00 16 22.5**	**-0.2**
IRIF	**Iriomote-Funau**	**1.47**	**94**	P	**Pn**	**00 16 04.1**	**-0.4**
IRIF				S	**Sn**	**00 16 22.8**	**-0.1**
JKRS	**Kuro-shima**	**1.73**	**96**	P	**Pn**	**00 16 08.9**	**+0.8**
JKRS				S	**Sn**	**00 16 29.9**	**+0.6**
TPUB	**Ta-pu** baz=230	**1.78**	**231**	eP	**Pn**	**00 16 09.7**	**+1.0**
TPUB	baz=230			eS	**Sn**	**00 16 31.6**	**+1.3**
JIJ	**Ishigaki jima**	**1.84**	**92**	P	**Pn**	**00 16 09.7**	**+0.1**
JIJ				S	**Sn**	**00 16 31.9**	**0.0**
JISG	**Ishigakijimahi**	**2.00**	**85**	P	**Pn**	**00 16 11.9**	**+0.2**
JISG				S	**Sn**	**00 16 35.2**	**-0.5**

*IDC **26** 00:17:42.9±1.0, 2°.16S×139°.00E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/27, mbtmp3.8/5, ML3.5/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/30, Error ellipse: s-maj=25.9km s-min=13.1km az=16.0*
*DJA **26** 00:17:46.0±1.4, 2°.S16°×13°.9E±1°.0, h38km±19km, M3.7/3, MLv3.7/3*

ISC 26 00:17:46.9±0.9, 2°.2S±0°.1×138°.96E±0°.09, h29km, n10, σ0s83/11, mb4.1/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMPI	**Sarmi**	**0.32**	**309**	P	**Pn**	**00 17 54.7**	**-0.9**
SMPI				S	**Sn**	**00 18 01.4**	**+0.1**
GENI	**Genyem**	**1.27**	**108**	P	**Pn**	**00 18 08.4**	**-0.4**
GENI				S	**Sb**	**00 18 26.2**	**-0.1**
JAY	**Jayapura** 19nm,0.3s,baz=282,slow=9.6,SNR=33	**1.77**	**100**	Pg	**Pn**	**00 18 15.2**	**-0.6**
JAY	29nm,0.3s,baz=94,slow=16,SNR=7.3			Lg	Lg	00 18 37.9	
JAY	**Jayapura**	**1.77**	**100**	P	**Pn**	**00 18 15.4**	**-0.4**
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=17,slow=12,SNR=3.5	**18.21**	**194**	P	**P**	**00 21 56.6**	**-1.3**
FITZ	**Fitzroy Crossi** comp=Z,49nm,20.6s,baz=40,slow=39	**20.51**	**219**	LR	LR	00 31 10.8	
ASAR	**Alice Springs** 0.7nm,0.6s,baz=21,slow=10.0,SNR=8.9	**21.90**	**193**	P	**P**	**00 22 38.6**	**+0.7**
CMAR	**Chiang Mai Arr** 1.4nm,0.3s,baz=131,slow=7.7,SNR=3.8	**44.40**	**299**	P	**P**	**00 25 56.7**	**+1.3**
MKAR	**Makanchi Array** 1.6nm,1.0s,baz=111,slow=7.9,SNR=10	**69.53**	**322**	P	**P**	**00 28 53.4**	**+0.3**
ILAR	**Eielson Array** 1.2nm,0.9s,baz=262,slow=4.9,SNR=7.5	**85.26**	**24**	P	**P**	**00 30 20.3**	**-0.4**

*IDC **26** 00:22:40.5±1.6, 25°.18N×121°.81E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/40, mbtmp3.7/5, Error ellipse: s-maj=49.7km s-min=24.7km az=68.0*
*TAP **26** 00:23:06.2, 25°.50N×122°.45E, h262km, ML3.9, D*
*JMA **26** 00:23:07.9±0.3, 25°.37N×122°.44E, h237km±3km, M3.6*

ISC 26 00:23:05.6±1.4, 25°.42N±0°.06×122°.46E±0°.04, h255km±9km, n70, σ1s11/111, mb3.2/5, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCYT	**Pengchaiyu** baz=291	**0.41**	**301**	eP	**Pn**	**00 23 40.4**	**+1.6**
TWB1	**Santiao Chiao** baz=219	**0.59**	**226**	eP	**Pn**	**00 23 40.0**	**+0.6**
TWB1	baz=219			eS	**S**	**00 24 05.8**	**-0.1**
WFSB	**Wu-fen Shan** baz=245	**0.70**	**241**	eP	**Pn**	**00 23 41.1**	**+1.3**
WFSB	baz=245			eS	**S**	**00 24 06.5**	**-0.1**
TIPB	**Shuangxi** baz=235	**0.72**	**232**	eP	**Pn**	**00 23 40.4**	**+0.5**
TIPB	baz=235			eS	**S**	**00 24 06.0**	**-0.9**
NTC	**Toucheng** baz=229	**0.80**	**226**	eS	**S**	**00 24 06.8**	**-0.5**
YM05	**YM05** baz=247	**0.85**	**253**	eS	**S**	**00 24 08.2**	**+0.3**
TWA	**Mucha** baz=244	**0.90**	**241**	eS	**S**	**00 24 08.2**	**-0.1**
EOS1	**EOS1** baz=202	**0.91**	**199**	P	**Pn**	**00 23 42.1**	**+1.4**
EOS1	baz=202			S	**S**	**00 24 07.8**	**-0.6**
NHDH	**Xindian Distri** baz=244	**0.96**	**242**	eS	**S**	**00 24 09.8**	**+1.1**
TWC	**Suao** baz=206	**0.97**	**215**	eP	**Pn**	**00 23 40.9**	**-0.1**
TWC	baz=206			eS	**S**	**00 24 08.3**	**-0.7**
SLBB	**Yuanshan** baz=226	**1.00**	**229**	eS	**S**	**00 24 08.0**	**-1.2**
TWE	**Neicheng** baz=224	**1.00**	**226**	eP	**Pn**	**00 23 42.6**	**+1.4**
TWE	baz=224			eS	**S**	**00 24 08.2**	**-0.9**
NWLT	**Wulai** baz=230	**1.07**	**234**	eP	**Pn**	**00 23 42.8**	**+1.2**
NWLT	baz=230			eS	**S**	**00 24 08.9**	**-1.1**
YOJ	**Yonaguni jima**	**1.07**	**152**	P	**Pn**	**00 23 41.2**	**-0.4**
YOJ				eS	**S**	**00 24 07.9**	**-2.1**
ENTT	**Nioudou** baz=223	**1.12**	**226**	eS	**S**	**00 24 09.3**	**-1.1**
NANB	**Nanao** baz=206	**1.18**	**213**	eP	**Pn**	**00 23 43.1**	**+0.8**
NANB	baz=206			eS	**S**	**00 24 11.1**	**0.0**
ENA	**Nanau** baz=206	**1.18**	**214**	eP	**Pn**	**00 23 43.1**	**+0.8**
ENA	baz=206			eS	**S**	**00 24 11.0**	**-0.1**
NDT	**Datong Townshi** baz=232	**1.18**	**227**	eP	**Pn**	**00 23 43.4**	**+1.2**
NDT	baz=232			eS	**S**	**00 24 10.9**	**-0.2**
YHNB	**Yeheng** baz=230	**1.23**	**233**	eP	**Pn**	**00 23 43.5**	**+0.8**
YHNB	baz=230			eS	**S**	**00 24 10.7**	**-1.2**
NSK	**Sanguang** baz=230	**1.24**	**234**	eP	**Pn**	**00 23 43.3**	**+0.6**
NSK	baz=230			eS	**S**	**00 24 11.0**	**-0.9**
NNS	**Nan Shan** baz=226	**1.38**	**226**	eP	**Pn**	**00 23 44.9**	**+1.1**
NNS	baz=226			eS	**S**	**00 24 13.4**	**-0.4**
NNSB	**Datong** baz=222	**1.39**	**225**	eP	**Pn**	**00 23 45.0**	**+1.3**
NNSB	baz=222			eS	**S**	**00 24 12.6**	**-1.2**
NNSH	**Datong** baz=222	**1.39**	**225**	eP	**Pn**	**00 23 44.9**	**+1.1**
NNSH	baz=222			eS	**S**	**00 24 13.0**	**-0.8**
NACB	**Ninganchiao** baz=204	**1.47**	**213**	eP	**Pn**	**00 23 44.7**	**+0.5**
NACB	baz=204			eS	**S**	**00 24 13.3**	**-1.3**
ETLH	**Xiulin Townshi** baz=222	**1.50**	**217**	eP	**Pn**	**00 23 45.3**	**+0.8**
ETLH	baz=222			eS	**S**	**00 24 14.9**	**-0.2**
LIOB	**Emei** baz=232	**1.52**	**240**	eP	**Pn**	**00 23 45.2**	**+0.6**
LIOB	baz=232			eS	**S**	**00 24 14.6**	**-0.7**
TWD	**Chiawan** baz=216	**1.54**	**211**	eP	**Pn**	**00 23 45.5**	**+0.7**
TWD	baz=216			eS	**S**	**00 24 13.9**	**-1.7**
IRIF	**Iriomote-Funau**	**1.58**	**133**	P	**Pn**	**00 23 45.7**	**+0.7**
IRIF				S	**S**	**00 24 14.6**	**-1.5**
TWT	**Tachien** baz=227	**1.64**	**225**	eP	**Pn**	**00 23 47.6**	**+1.9**
TWT	baz=227			eS	**S**	**00 24 17.6**	**+0.3**
TDCB	**Techi** baz=227	**1.65**	**226**	eP	**Pn**	**00 23 47.3**	**+1.5**
TDCB	baz=227			eS	**S**	**00 24 15.9**	**-1.6**
WHF	**Hehuan Shan** baz=222	**1.67**	**221**	eP	**Pn**	**00 23 47.6**	**+1.3**
WHF	baz=222			eS	**S**	**00 24 17.3**	**-0.9**
ENLB	**Shoufeng** baz=203	**1.70**	**208**	eP	**Pn**	**00 23 46.2**	**+0.2**
ENLB	baz=203			eS	**S**	**00 24 17.1**	**-0.7**
WHP	**Taichung City** baz=228	**1.78**	**231**	eP	**Pn**	**00 23 48.1**	**+1.3**
WHP	baz=228			eS	**S**	**00 24 18.7**	**-0.5**
CHGB	**Renai** baz=219	**1.79**	**221**	eP	**Pn**	**00 23 48.5**	**+1.5**
CHGB	baz=219			eS	**S**	**00 24 19.1**	**-0.4**
HATJ	**Hateruma jima**	**1.83**	**138**	P	**Pn**	**00 23 48.4**	**+1.4**
HATJ				S	**S**	**00 24 19.3**	**-0.4**
JKRS	**Kuro-shima**	**1.83**	**129**	P	**Pn**	**00 23 48.2**	**+1.1**
JKRS				S	**S**	**00 24 19.1**	**-0.7**
ESL	**Shilin** baz=205	**1.85**	**211**	eP	**Pn**	**00 23 47.6**	**+0.4**
ESL	baz=205			eS	**S**	**00 24 19.0**	**-1.1**
JIJ	**Ishigaki jima**	**1.85**	**124**	P	**Pn**	**00 23 47.9**	**+0.7**
JIJ				S	**S**	**00 24 18.1**	**-2.0**
OWD	**Renai** baz=221	**1.86**	**219**	eP	**Pn**	**00 23 49.1**	**+1.6**
OWD	baz=221			eS	**S**	**00 24 19.7**	**-0.9**
JISG	**Ishigakijimahi**	**1.87**	**116**	P	**Pn**	**00 23 48.4**	**+1.0**
JISG				S	**S**	**00 24 18.8**	**-1.5**
DPDB	**Guoxing** baz=229	**1.96**	**226**	eP	**Pn**	**00 23 49.2**	**+0.9**
DPDB	baz=229			eS	**S**	**00 24 20.4**	**-1.4**
EGFH	**Guangfu** baz=213	**1.98**	**209**	eS	**S**	**00 24 21.2**	**-0.9**
VWDT	**VWDT** baz=218	**2.04**	**216**	eP	**Pn**	**00 23 50.7**	**+1.8**
VWDT	baz=218			eS	**S**	**00 24 21.5**	**-1.6**
TYC	**Yuchr** baz=228	**2.10**	**224**	eP	**Pn**	**00 23 50.6**	**+1.3**
TYC	baz=228			eS	**S**	**00 24 23.9**	**0.0**
SSLB	**Suanglung** baz=226	**2.12**	**220**	eP	**Pn**	**00 23 51.0**	**+1.4**
SSLB	baz=226			eS	**S**	**00 24 23.9**	**-0.6**
HGSD	**Ruisui** baz=209	**2.13**	**206**	eP	**Pn**	**00 23 51.5**	**+1.7**
EHY	**Hungye** baz=204	**2.17**	**209**	eP	**Pn**	**00 23 50.5**	**+0.4**
JTJ	**Tarama**	**2.18**	**110**	P	**Pn**	**00 23 51.5**	**+1.4**
WJS	**Zhushan** baz=223	**2.24**	**225**	eS	**S**	**00 24 24.9**	**-1.4**
YULB	**Yu-li** baz=211	**2.28**	**208**	eP	**Pn**	**00 23 51.4**	**+0.3**
YULB	baz=211			eS	**S**	**00 24 24.5**	**-2.6**
TWF1	**Yuli** baz=211	**2.31**	**207**	eP	**Pn**	**00 23 51.4**	**0.0**
TWF1	baz=211			eS	**S**	**00 24 27.1**	**-0.6**
ALS	**Alishan** baz=223	**2.42**	**219**	eP	**Pn**	**00 23 54.3**	**+1.5**
ALS	baz=223			eS	**S**	**00 24 28.1**	**-2.0**
CHN5	**Tsauling** baz=226	**2.43**	**222**	eP	**Pn**	**00 23 54.0**	**+1.3**
CHN5	baz=226			eS	**S**	**00 24 30.2**	**+0.4**
JIRB	**Irabujima**	**2.53**	**103**	P	**Pn**	**00 23 54.6**	**+1.1**
JIRB				S	**S**	**00 24 29.6**	**-1.8**
XPSS	**Dashiqiu** baz=305	**2.54**	**307**	eP	**Pn**	**00 23 53.6**	**+0.1**
JIKM	**Ikemajima**	**2.58**	**100**	P	**Pn**	**00 23 55.3**	**+1.4**
JIKM				S	**S**	**00 24 31.8**	**-0.4**
LYJJ	**Jianjiangzhen** baz=293	**2.68**	**296**	eP	**Pn**	**00 23 55.3**	**+0.3**
TPUB	**Ta-pu** baz=224	**2.69**	**219**	eP	**Pn**	**00 23 56.5**	**+1.4**
TPUB	baz=224			eS	**S**	**00 24 33.7**	**-0.7**
JMJ2	**Miyako jima3**	**2.69**	**104**	P	**Pn**	**00 23 56.8**	**+1.7**
WTP	**Ta-pu** baz=223	**2.74**	**218**	eP	**Pn**	**00 23 56.9**	**+1.2**
TWK	**Hsinying** baz=224	**2.79**	**220**	eP	**Pn**	**00 23 57.2**	**+0.9**
CHN1	**Nanshi** baz=223	**2.83**	**219**	eP	**Pn**	**00 23 57.9**	**+1.2**
SLGT	**Liugui** baz=209	**2.92**	**215**	eP	**Pn**	**00 23 59.0**	**+1.4**
MHZQ	**Yeshan** baz=281	**3.17**	**283**	eP	**Pn**	**00 23 59.7**	**-0.5**
EAST	**Anshuo** baz=210	**3.36**	**206**	eP	**Pn**	**00 24 03.7**	**+1.3**
EAST	baz=210			eS	**S**	**00 24 46.5**	**-1.0**
CMAR	**Chiang Mai Arr** 0.8nm,0.3s,baz=90,slow=11,SNR=3.4	**22.86**	**257**	P	P	00 27 38.8	-8.4
SONM	**Songino Array** 0.2nm,0.3s,baz=153,slow=8.8,SNR=4.4	**25.72**	**335**	P	**P**	**00 28 12.6**	**-0.2**
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=100,slow=9.8,SNR=12	**38.28**	**314**	P	P	00 30 01.2	-0.4
ZALV	**Zalesovo Beam** 0.7nm,0.5s,baz=126,slow=7.5,SNR=3.9	**39.86**	**326**	P	P	00 30 13.2	-1.3
ASAR	**Alice Springs** 0.2nm,0.4s,baz=350,slow=8.5,SNR=4.4	**50.04**	**166**	P	P	00 31 36.3	+1.6

*IDC **26** 00:25:12.6±1.7, 2°.96S×131°.22E, h0km, mb3.6/2, mb1 3.8/5, mb1mx3.5/36, mbtmp3.6/5, ML3.4/3, Error ellipse: s-maj=88.5km s-min=22.0km az=84.0*
*DJA **26** 00:25:19.0±0.9, 3°.S14°×13°.2E±°, h10km±13km, M3.3/5, MLv3.3/5*

ISC 26 00:25:16.7±1.0, 2°.91S±0°.07×131°.32E±0°.08, h35km, n8, σ1s39/12, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**0.93**	**91**	P	**Pn**	**00 25 34.4**	**+1.2**
FAKI				S	**Sn**	**00 25 45.1**	**-0.2**
SIJI	**Sorong** 5.6nm,0.3s,baz=177,slow=18,SNR=9.1	**2.03**	**358**	Pn	**Pn**	**00 25 48.5**	**+0.2**
SIJI	12nm,0.3s,baz=5.9,slow=24,SNR=4.9			Sn	**Sn**	**00 26 10.9**	**-1.6**
SWI	**Sorong**	**2.03**	**358**	P	**Pn**	**00 25 49.3**	**+0.9**
SWI				S	**Sn**	**00 26 12.4**	**-0.2**
RKPI	**Ransiki, Papua**	**3.18**	**64**	P	**Pn**	**00 26 04.2**	**0.0**
RKPI				S	**Sn**	**00 26 39.1**	**-1.8**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=27,slow=11,SNR=4.4	**16.09**	**200**	Pn	**Pn**	**00 28 57.8**	**-2.6**
FITZ	0.1nm,0.3s,baz=54,slow=18,SNR=2.3			Sn	Sn	00 31 46.5	-11
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=353,slow=11,SNR=8.9	**17.18**	**170**	P	**Pn**	**00 29 13.5**	**-0.7**
WRA	0.2nm,0.3s,baz=356,slow=13,SNR=6.6			S	Sn	00 32 10.9	-13
ASAR	**Alice Springs** 1.9nm,0.5s,baz=350,slow=10,SNR=29	**20.79**	**173**	P	**P**	**00 29 55.6**	**+0.7**
ASAR	0.6nm,0.9s,baz=358,slow=28,SNR=3.2			S	S	00 33 35.4	-10
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=111,slow=7.9,SNR=3.7	**65.59**	**325**	P	**P**	**00 35 58.5**	**+1.5**

TAP 26 00:30:08.6, 24°.25N×122°.14E, h47km, ML2.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1** baz=358	**0.29**	**359**	P	Pn	00 30 17.9	+0.5
EOS1	baz=358			S	Sn	00 30 25.1	+1.5
NANB	**Nanao** baz=296	**0.39**	**296**	*i* P	Pn	00 30 18.9	+0.5
NANB	baz=296			*i* S	Sn	00 30 26.7	+1.3

ENA	**Nanau** baz=295	**0.40 296**	P	Pn	00 30 19.1	+0.6
ENA	baz=295		S	Sn	00 30 26.8	+1.2
TWC	**Suao** baz=324	**0.44 324**	*i* P	Pn	00 30 19.1	+0.1
TWC	baz=324		*i* S	Sn	00 30 26.7	+0.3
NACB	**Ninganchiao** baz=260	**0.50 261**	P	Pn	00 30 19.9	+0.2
NACB	baz=260		S	Sn	00 30 28.5	+0.8
TWD	**Chiawan** baz=250	**0.52 251**	P	Pn	00 30 20.3	+0.3
TWD	baz=250		*i* S	Sn	00 30 29.1	+1.0
HWA	**Hwalien** baz=239	**0.56 240**	*e*P	Pn	00 30 21.0	+0.6
ETLH	**Xiulin Townshi** baz=265	**0.60 266**	P	Pn	00 30 21.5	+0.4
ETLH	baz=265		S	Sn	00 30 30.8	+0.8
ENLB	**Shoufeng** baz=234	**0.60 235**	*e*P	Pn	00 30 21.7	+0.8
ENLB	baz=234		S	Sn	00 30 30.7	+0.9
EGS	baz=343	**0.62 343**	*e*P	Pn	00 30 21.5	+0.3
EGS	baz=343		*e*S	Sn	00 30 31.2	+1.0
ILA	**Ilan** baz=325	**0.62 325**	*e*P	Pn	00 30 21.6	+0.3
ILA	baz=325		*e*S	Sn	00 30 31.3	+1.0
ENTT	**Nioudou** baz=306	**0.65 307**	*e*P	Pn	00 30 22.1	+0.5
ENTT	baz=306		*e*S	Sn	00 30 31.7	+0.8
NTC	**Toucheng** baz=335	**0.66 335**	*e*S	Sn	00 30 32.1	+0.9
NDT	**Datong Townshi** baz=301	**0.67 302**	*e*P	Pn	00 30 22.4	+0.5
NDT	baz=301		S	Sn	00 30 32.5	+1.2
SLBB	**Yuanshan** baz=317	**0.68 318**	*e*P	Pn	00 30 22.3	+0.3
NNSB	**Datong** baz=284	**0.71 284**	P	Pn	00 30 23.1	+0.6
NNSB	baz=284		S	Sn	00 30 33.4	+0.9
NNSH	**Datong** baz=284	**0.71 284**	*e*P	Pn	00 30 22.8	+0.3
NNSH	baz=284		*e*S	Sn	00 30 33.7	+1.2
NNS	**Nan Shan** baz=284	**0.72 285**	S	Sn	00 30 33.7	+0.9
TWB1	**Santiao Chiao** baz=350	**0.76 350**	*e*S	Sn	00 30 34.8	+1.2
TIPB	**Shuangxi** baz=338	**0.77 338**	*e*P	Pn	00 30 21.9	-1.3
TIPB	baz=338		S	Sn	00 30 33.7	-0.1
NWLT	**Wulai** baz=312	**0.78 312**	*e*P	Pn	00 30 24.3	+1.0
NWLT	baz=312		*e*S	Sn	00 30 35.0	+1.0
ESL	**Shilin** baz=235	**0.78 236**	P	Pn	00 30 23.3	0.0
ESL	baz=235		S	Sn	00 30 34.8	+0.8
WHF	**Hehuan Shan** baz=262	**0.80 262**	S	Sn	00 30 35.9	+0.7
YHNB	**Yeheng** baz=300	**0.81 301**	P	Pn	00 30 24.3	+0.5
YHNB	baz=300		S	Sn	00 30 35.8	+1.0
NSK	**Sanguang** baz=300	**0.82 301**	*e*S	Sn	00 30 35.7	+0.5
EGFH	**Guangfu** baz=228	**0.87 228**	*e*P	Pn	00 30 24.7	+0.2
EGFH	baz=228		*e*S	Sn	00 30 36.9	+0.7
TWT	**Tachien** baz=269	**0.88 270**	P	Pn	00 30 26.0	+1.2
TWT	baz=269		S	Sn	00 30 38.1	+1.5
TWA	**Mucha** baz=325	**0.88 325**	*e*P	Pn	00 30 25.2	+0.5
TWA	baz=325		*e*S	Sn	00 30 37.2	+0.7
TDCB	**Techi** baz=269	**0.89 270**	P	Pn	00 30 26.0	+1.0
TDCB	baz=269		S	Sn	00 30 37.6	+0.7
NHDH	**Xindian Distri** baz=321	**0.90 322**	*e*S	Sn	00 30 38.0	+1.1
CHGB	**Renai** baz=257	**0.90 258**	P	Pn	00 30 25.9	+0.8
CHGB	baz=257		S	Sn	00 30 38.3	+1.1
OWD	**Renai** baz=251	**0.93 251**	*e*P	Pn	00 30 26.0	+0.6
OWD	baz=251		*e*S	Sn	00 30 38.1	+0.3
TAP	**Taipei** baz=324	**0.97 324**	*e*P	Pn	00 30 26.7	+0.8
TAP	baz=324		*e*S	Sn	00 30 39.9	+1.4
HGSD	**Ruisui** baz=220	**1.00 221**	*e*P	Pn	00 30 27.7	+1.4
HGSD	baz=220		*e*S	Sn	00 30 40.4	+1.1
WLTB	**Daxi** baz=306	**1.00 307**	*e*P	Pn	00 30 27.3	+1.0
YM01	**YM01** baz=329	**1.03 330**	*e*P	Pn	00 30 27.3	+0.6
YM01	baz=329		*e*S	Sn	00 30 39.9	-0.1
VWDT	**VWDT** baz=241	**1.04 242**	*e*P	Pn	00 30 27.2	+0.4
VWDT	baz=241		*e*S	Sn	00 30 40.8	+0.6
YM10	**YM10** baz=329	**1.04 330**	*e*P	Pn	00 30 28.0	+1.1
YM10	baz=329		*e*S	Sn	00 30 41.4	+1.1
YM11	**YM11** baz=330	**1.04 331**	*e*P	Pn	00 30 27.9	+0.9
YM05	**YM05** baz=330	**1.04 330**	*e*S	Sn	00 30 41.9	+1.4
YM04	**YM04** baz=328	**1.05 329**	*e*P	Pn	00 30 28.0	+1.0
YM04	baz=328		*e*S	Sn	00 30 40.1	-0.4
EHY	**Hungye** baz=224	**1.05 225**	*e*P	Pn	00 30 26.8	-0.2
EHY	baz=224		*e*S	Sn	00 30 40.1	-0.5
WHP	**Taichung City** baz=271	**1.09 271**	*e*P	Pn	00 30 28.5	+1.0
WHP	baz=271		*e*S	Sn	00 30 43.2	+1.6
LIOB	**Emei** baz=290	**1.09 291**	*e*P	Pn	00 30 28.5	+0.9
LIOB	baz=290		*e*S	Sn	00 30 43.4	+1.8
NSTT	**Nanjuang** baz=290	**1.10 290**	*e*S	Sn	00 30 42.8	+1.1
NTST	**Danshui** baz=325	**1.10 326**	*e*S	Sn	00 30 42.5	+0.8
NCU	**National Centr** baz=309	**1.12 310**	*e*P	Pn	00 30 28.6	+0.7
NCU	baz=309		*e*S	Sn	00 30 43.3	+1.1
TWY	**Chenhua** baz=334	**1.13 334**	*e*P	Pn	00 30 28.2	+0.2
TWY	baz=334		*e*S	Sn	00 30 43.1	+0.6
YULB	**Yu-li** baz=221	**1.15 222**	*e*P	Pn	00 30 27.3	-1.0
YULB	baz=221		*e*S	Sn	00 30 42.8	-0.2
SSLB	**Suanglung** baz=246	**1.18 247**	*e*P	Pn	00 30 29.2	+0.4
SSLB	baz=246		*e*S	Sn	00 30 44.4	+0.7
TWF1	**Yuli** baz=220	**1.18 221**	*e*P	Pn	00 30 29.5	+0.7
SMLT	**Sun Moon Lake** baz=251	**1.19 252**	*e*P	Pn	00 30 29.8	+0.9
SMLT	baz=251		S	Sn	00 30 45.1	+1.0
HSN	**Hsinchu** baz=299	**1.19 297**	*e*S	Sn	00 30 44.2	+0.2
WHYT	**Xinyi Township** baz=244	**1.30 245**	*e*P	Pn	00 30 31.7	+1.3
WHYT	baz=244		*e*S	Sn	00 30 47.1	+0.4
YUS	**Yu-Shan** baz=234	**1.32 235**	*e*P	Pn	00 30 31.8	+0.6
YUS	baz=234		*e*S	Sn	00 30 48.5	+0.6
WJS	**Zhushan** baz=251	**1.36 252**	*e*P	Pn	00 30 32.4	+1.3
WJS	baz=251		*e*S	Sn	00 30 49.0	+1.0
ALS	**Alishan** baz=238	**1.43 239**	*e*P	Pn	00 30 34.2	+1.8
ELDTW	**Lidau** baz=223	**1.48 224**	*e*P	Pn	00 30 33.2	+0.3
ELDTW	baz=223		*e*S	Sn	00 30 51.9	+0.9
CHN5	**Tsauling** baz=243	**1.49 244**	*e*P	Pn	00 30 33.7	+0.7
TPUB	**Ta-pu** baz=235	**1.68 236**	*e*P	Pn	00 30 36.5	+1.0

TAP 26 00:30:29.0, 22.85N×120.65E, h14km, ML2.1, 3C-2D, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SSD	**Sandimen** baz=182	**0.10**	**187**	⇑*i*P	Pb	00 30 32.8	0.0
SSD	baz=182			S	Sb	00 30 35.4	+0.2
SLGT	**Liugui**	**0.15**	**0**	⇑*i*P	Pg	00 30 33.2	+0.4
SLGT				S	Sb	00 30 36.5	-0.1
SGLT	**Jiouru** baz=228	**0.19**	**230**	P	Pb	00 30 34.2	0.0
SGLT	baz=228			*e*S	Sb	00 30 37.8	+0.1
TWM1	**Shoushan** baz=262	**0.21**	**264**	P	Pb	00 30 34.5	-0.1
TWM1	baz=262			S	Sb	00 30 38.0	-0.3
MASBT	**Mashibuluo** baz=182	**0.23**	**183**	⇑P	Pg	00 30 34.6	+0.4
MASBT	baz=182			S	Sb	00 30 38.6	-0.4
SGST	**Jiashian** baz=347	**0.24**	**346**	*e*P	Pg	00 30 34.6	+0.3
SGST	baz=347			S	Sb	00 30 38.7	-0.6
STYT	**Tauyuan** baz=229	**0.33**	**18**	*e*P	Pb	00 30 36.5	-0.3
STYT	**Tauyuan** baz=19	**0.33**	**18**	P	Pb	00 30 36.5	-0.3
STYT	baz=19			S	Sb	00 30 42.3	+0.3
CHN1	**Nanshi** baz=342	**0.35**	**342**	P	Pb	00 30 37.0	-0.2
CHN1	baz=342			S	Sb	00 30 43.0	+0.4
SSPT	**Xinbi** baz=191	**0.37**	**191**	*e*S	Sb	00 30 43.9	+1.0
ECL	**Taimali** baz=130	**0.38**	**131**	*i* P	Pb	00 30 37.3	-0.2
ECL	baz=130			*i* S	Sb	00 30 43.8	+0.6
TWG	**Pinlang** baz=94	**0.39**	**94**	⇓*i*P	Pb	00 30 37.9	+0.1
TWG	baz=94			*i* S	Sb	00 30 44.5	+0.8
SNST	**Tainan City** baz=339	**0.40**	**340**	P	Pb	00 30 37.7	-0.1
SNST	baz=339			S	Sb	00 30 44.4	+0.6
WTP	**Ta-pu** baz=356	**0.40**	**356**	*i* P	Pb	00 30 37.7	-0.2
WTP	baz=356			S	Sb	00 30 44.3	+0.4
TWGBT	**Beinan** baz=94	**0.40**	**94**	⇓P	Pb	00 30 37.9	0.0
TWGBT	baz=94			S	Sb	00 30 44.6	+0.8
KAU	**Kaohsiung** baz=227	**0.42**	**228**	*e*P	Pb	00 30 38.3	+0.1
KAU	baz=227			*e*S	Sb	00 30 44.8	+0.5
TWK	**Hsinying** baz=342	**0.44**	**341**	P	Pb	00 30 38.7	+0.1
TWK	baz=342			S	Sb	00 30 45.2	+0.1
TPUB	**Ta-pu** baz=358	**0.45**	**358**	P	Pg	00 30 38.3	+0.2
TPUB	baz=358			S	Sb	00 30 46.1	+0.7
TTN	**Taitung** baz=101	**0.47**	**101**	*e*P	Pb	00 30 39.0	0.0
TTN	baz=101			*e*S	Sb	00 30 47.0	+1.1
SCZT	**Fangliau** baz=181	**0.47**	**183**	*e*P	Pg	00 30 38.7	+0.3
SCZT	baz=181			S	Sb	00 30 45.7	-0.3
ELDTW	**Lidau** baz=45	**0.48**	**45**	P	Pb	00 30 39.1	-0.2
ELDTW	baz=45			S	Sb	00 30 46.9	+0.5
EAST	**Anshuo** baz=157	**0.50**	**158**	*i* P	Pb	00 30 39.6	0.0
EAST	baz=157			S	Sb	00 30 47.7	+1.0
CHN4	**Tsaushan** baz=354	**0.51**	**354**	*e*P	Pb	00 30 39.9	+0.2
CHN4	baz=354			*e*S	Sb	00 30 48.0	+1.1
SCLT	**Jiali** baz=308	**0.53**	**308**	*e*P	Pb	00 30 40.2	+0.2
SCLT	baz=308			*e*S	Sb	00 30 48.1	+0.6
TAW	**Tawu** baz=153	**0.54**	**155**	*e*P	Pb	00 30 40.8	+0.6
TAW	baz=153			S	Sb	00 30 48.6	+0.8
ALS	**Alishan** baz=13	**0.68**	**12**	*e*P	Pb	00 30 43.0	+0.2
ALS	baz=13			*e*S	Sb	00 30 52.5	+0.3
CHY	**Chiayi** baz=343	**0.68**	**343**	*e*P	Pg	00 30 42.4	+0.1
CHY	baz=343			*e*S	Sb	00 30 53.0	+1.1
FULB	**Fuli** baz=59	**0.69**	**59**	*e*P	Pb	00 30 43.4	+0.5
YUS	**Yu-Shan** baz=23	**0.70**	**24**	*e*P	Pb	00 30 43.1	-0.2
YUS	baz=23			*e*S	Sb	00 30 53.2	+0.3
WLGB	**Puzi** baz=333	**0.70**	**333**	*e*S	Sb	00 30 53.4	+0.7
CHN5	**Tsauling** baz=2.0	**0.75**	**2**	*e*P	Pb	00 30 44.4	+0.5
CHN5	baz=2.0			S	Sb	00 30 55.2	+1.2
TWH	**Lutao** baz=102	**0.78**	**100**	*e*P	Pb	00 30 44.5	+0.1
TWF1	**Yuli** baz=50	**0.78**	**50**	*e*P	Pb	00 30 44.5	0.0
TWF1	baz=50			*e*S	Sb	00 30 55.3	+0.4
TWF1	**Yuli** baz=220	**0.78**	**50**	*e*S	Pb	00 30 44.2	-0.2
YULB	**Yu-li** baz=47	**0.81**	**48**	*e*P	Pb	00 30 45.1	+0.2
YULB	baz=47			*e*S	Sb	00 30 55.7	+0.1
HEN	**Hengchun** baz=173	**0.84**	**174**	*e*S	Sn	00 30 57.7	-0.9

IDC 26 00:32:34.5±2.9, 9.60S×154.56E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.7/25, mbtmp3.7/5, MS3.0/4, Ms1 3.0/4, ms1mx2.8/27, Error ellipse: s-maj=87.5km s-min=27.2km az=106.0, D'Entrecasteaux Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076** comp=Z,39nm,20.7s,baz=177,slow=28	**5.83**	**334**	LR	LR	00 35 15.7	
PMG	**Port Moresby** comp=Z,66nm,18.8s,baz=349,slow=34	**7.30**	**271**	LR	LR	00 36 46.5	
DZM	**Mont Dzumac** comp=Z,217nm,18.5s,baz=238,slow=32	**16.85**	**139**	LR	LR	00 41 40.4	
WRA	**Warramunga Arr** 1.3nm,0.9s,baz=64,slow=10,SNR=4.7	**22.06**	**240**	P	P	00 37 31.2	-0.1
ASAR	**Alice Springs** 1.6nm,0.9s,baz=66,slow=9.3,SNR=12	**24.19**	**232**	P	P	00 37 52.7	-0.2
GUMO	**Guam** comp=Z,46nm,19.2s,baz=158,slow=33	**24.96**	**337**	LR	LR	00 46 14.2	
STKA	**Stephens Creek** 3.0nm,0.6s,baz=46,slow=13,SNR=10	**25.22**	**207**	P	P	00 38 02.3	+0.2
SONM	**Songino Array** 0.8nm,0.8s,baz=134,slow=5.5,SNR=4.7	**71.29**	**328**	P	P	00 43 56.4	+0.3
MKAR	**Makanchi Array** 0.3nm,0.8s,baz=101,slow=4.3,SNR=2.5	**85.06**	**319**	P	P	00 45 12.0	-0.3

*SOME **26** 01:01:19.8, 39.17N×71.43E, h5km*
*KRNET **26** 01:01:24.3±0.1, 39.43N×69.86E, mb2.8*
ISC 26 01:01:40.8±2.7, 39.7N±0.1×71.11E±0.05, h30km, n14, σ2§49/27, 19C-4D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken** baz=49	**0.41**	**327**	⇑*i*P	Pb	01 01 42.5	-7.4
BTK	baz=49			⇑*i*S	**Sb**	**01 01 55.7**	**-0.5**
CHRV	**Charvak**	**2.12**	**336**	*e*P	**Pn**	**01 02 13.4**	**-0.8**
CHRV				S	**Sb**	**01 02 50.2**	**+5.8**
ARSB	**Arslanbob** baz=51	**2.15**	**41**	⇑*i*P	**Pn**	**01 02 14.0**	**-0.7**
ARSB	baz=51			⇑*i*S	**Sb**	**01 02 51.6**	**+6.2**
ARK	**Arkit** baz=34	**2.18**	**17**	⇑*e*P	**Pn**	**01 02 12.1**	**-3.0**
ARK	baz=34			⇑*i*S	**Sb**	**01 02 46.5**	**+0.3**
IUG	**Iuzhnay** 1.3nm,0.3s	**2.56**	**342**	*e*P	**Pn**	**01 02 18.5**	**-1.9**
IUG	42nm,0.5s			*e*S	**Sb**	**01 03 01.4**	**+4.1**
AML	**Almayashu** baz=46	**3.11**	**38**	⇑*e*P	**Pn**	**01 02 27.1**	**-1.0**
AML	baz=46			⇑*i*S	**Sb**	**01 03 14.3**	**+1.1**
ARLS	**Aral** baz=53	**3.25**	**48**	⇓*i*P	**Pn**	**01 02 30.4**	**+0.6**
ARLS	baz=53			⇓*e*S	**Sb**	**01 03 19.0**	**+2.1**
KK31	**Karatay Array** 0.5nm,0.3s,baz=179,slow=12,SNR=4.4	**3.42**	**353**	⇑Pn	**Pn**	**01 02 30.4**	**-1.7**
KK31	0.6nm,0.3s,baz=180,slow=29,SNR=3.8			⇑Sn	**Sb**	**01 03 18.7**	**-3.0**
KK31	1.5nm,0.5s,baz=185,slow=30,SNR=4.7			⇓Lg	Lg	01 03 33.2	
MRKS	**Merke** 2.9nm,0.3s	**3.42**	**27**	*e*P	**Pn**	**01 02 31.4**	**-0.8**
MRKS	2.8nm,0.9s			*e*S	**Sb**	**01 03 23.7**	**+1.8**
EKS2	**Erkin-Say** baz=41	**3.56**	**33**	⇑*e*P	**Pn**	**01 02 33.2**	**-1.0**
EKS2	baz=41			⇑*e*S	**Sb**	**01 03 23.8**	**-2.3**
UCH	**Uchtor** baz=50	**3.59**	**45**	⇑*i*P	**Pn**	**01 02 35.0**	**+0.1**
UCH	baz=50			⇑*i*S	**Sb**	**01 03 26.9**	**-0.4**
AAK	**Ala-Archa** 1.9nm,0.5s	**3.88**	**40**	⇑Pn	**Pn**	**01 02 38.7**	**+0.2**
AAK	2.5nm,0.7s			⇓Sn	**Sb**	**01 03 36.7**	**+1.6**
NRN	**Naryn** baz=65	**4.10**	**64**	⇑*i*P	**Pn**	**01 02 42.5**	**+0.8**
NRN	baz=65			⇑*e*S	**Sb**	**01 03 39.9**	**-1.7**
KBK	**Karagaybulak** baz=48	**4.12**	**43**	⇑*i*P	**Pn**	**01 02 41.8**	**-0.1**
KBK	baz=48			⇑*i*S	**Sb**	**01 03 38.8**	**-3.4**

*IDC **26** 01:01:49.5±1.8, 68.26N×157.12W, h0km, mb3.1/2, mb1 3.4/5, mb1mx3.3/36, mbtmp3.2/5, ML3.1/3, Error ellipse: s-maj=56.3km s-min=22.0km az=32.0*
*AEIC **26** 01:01:51.9±2.1, 68.05N±0.07×156.70W±0.08, h5km±5km, ML3.1/37, Error ellipse: s-maj=10.4km s-min=2.8km az=198.0*
*NEIC **26** 01:01:52.8±1.8, 68.19N±0.06×156.54W±0.10, h18km±3km, Error ellipse: s-maj=9.0km s-min=4.5km az=198.0*
ISC 26 01:01:51.7±1.3, 68.16N±0.06×156.54W±0.07, h10km, n41, σ1§46/45, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDOG	**Red Dog Mine**	**2.39**	**270**		**Pn**	**01 02 31.8**	**+0.9**
RDOG					Lg	01 03 01.7	
IM03		**2.45**	**152**		**Pn**	**01 02 31.7**	**+0.1**
IMAR	**Indian Mountai**	**2.45**	**152**	Pn	**Pn**	**01 02 31.4**	**-0.2**
COLD	**Coldfoot**	**2.59**	**108**		**Pn**	**01 02 34.3**	**+0.6**
COLD					LR	01 03 10.3	
PS05	**TAPS Pump Stn5**	**2.64**	**118**		**Pn**	**01 02 35.6**	**+1.3**
PS05					LR	01 03 10.1	
PS01	**TAPS Pump Stn**	**3.52**	**50**		**Sn**	**01 03 32.6**	**+4.5**
PS06	**TAPS Pump Stn6**	**3.54**	**128**		**Sn**	**01 03 30.5**	**+2.1**
MLY	**Manley**	**3.90**	**141**		**Pn**	**01 02 52.5**	**+0.8**
MLY					**Sn**	**01 03 40.7**	**+3.2**
PS07	**TAPS Pump Stn7**	**4.35**	**127**		**Pn**	**01 02 57.5**	**-0.2**
BM03	**Burnt Mountain**	**4.59**	**94**		**Pn**	**01 03 00.9**	**-0.3**
BMAR	**Burnt Mountain**	**4.60**	**94**	Pn	**Pn**	**01 03 03.8**	**+2.5**
MDM	**Murphy Dome**	**4.62**	**130**		**Pn**	**01 03 02.2**	**+0.6**
CHUM	**Lake Minchumin**	**4.63**	**156**		**Pn**	**01 03 01.9**	**+0.3**
CHUM					**Sn**	**01 03 56.4**	**+1.1**
FYU	**Fort Yukon**	**4.65**	**105**		**Pn**	**01 03 02.3**	**+0.4**
BPAW	**Bear Paw Mtn.**	**4.66**	**148**		**Pn**	**01 03 02.5**	**+0.4**
BPAW					**Sn**	**01 03 59.3**	**+3.1**
POKR	**Poker Plat Res**	**4.74**	**126**		**Pn**	**01 03 03.8**	**+0.7**
COLA	**College**	**4.79**	**129**		**Pn**	**01 03 04.3**	**+0.5**
COLA	**College**	**4.79**	**129**	Pn	**Pn**	**01 03 03.0**	**-0.8**
BWN	**Browne**	**4.93**	**141**		**Pn**	**01 03 07.0**	**+1.3**
CCB	**Clear Creek Bu**	**4.97**	**131**		**Pn**	**01 03 06.5**	**+0.2**
WRH	**Wood River Hil**	**5.03**	**133**		**Pn**	**01 03 08.0**	**+0.9**
ANM	**Nome**	**5.07**	**229**		**Pn**	**01 03 06.7**	**-0.9**
PRP	**Porcupine Dome**	**5.09**	**116**		**Pn**	**01 03 08.3**	**+0.2**
IL31		**5.15**	**127**		**Pn**	**01 03 09.4**	**+0.6**
ILAR	**Eielson Array** 0.7nm,0.3s,baz=312,slow=13,SNR=30	**5.15**	**127**	Pn	**Pn**	**01 03 09.1**	**+0.3**
ILAR	0.6nm,0.3s,baz=316,slow=24,SNR=5.4			Sn	**Sn**	**01 04 07.2**	**-1.0**
ILAR	0.8nm,0.3s,baz=321,slow=31,SNR=5.6			Lg	Lg	01 04 33.2	
KTH	**Kantishna Hill**	**5.17**	**151**		**Pn**	**01 03 09.6**	**+0.4**
TTA	**Tatalina**	**5.26**	**177**	Pn	**Pn**	**01 03 10.3**	**0.0**
TT01	**Tatalina**	**5.28**	**177**		**Pn**	**01 03 10.6**	**0.0**
TRF	**Thorofare Moun**	**5.38**	**149**		**Pn**	**01 03 12.5**	**+0.4**
MCK	**McKinley**	**5.42**	**141**		**Pn**	**01 03 13.3**	**+0.7**
PPLA	**Purkeypile**	**5.59**	**159**		**Pn**	**01 03 15.9**	**+1.0**
RND	**Reindeer**	**5.72**	**143**		**Pn**	**01 03 17.6**	**+0.8**
WAT2	**Susitna Watana**	**6.17**	**144**		**Pn**	**01 03 24.1**	**+1.2**
DHY	**Denali Highway**	**6.36**	**139**		**Pn**	**01 03 26.0**	**+0.5**
SCRK	**Sand Creek**	**6.61**	**124**		**Pn**	**01 03 29.7**	**+0.8**
WAT6	**Susitna Watana**	**6.70**	**143**		**Pn**	**01 03 30.6**	**+0.5**
PAX	**Paxson**	**6.94**	**133**		**Pn**	**01 03 32.9**	**-0.5**
INK	**Inuvik** 0.3nm,0.3s,baz=280,slow=11,SNR=3.2	**8.54**	**78**	Pn	**Pn**	**01 03 55.4**	**+0.3**
INK	0.3nm,0.3s,baz=144,slow=27,SNR=3.9			Sn	**Sn**	**01 05 28.5**	**-2.8**
YKA	**Yellowknife Ar** 0.0nm,0.3s,baz=306,slow=11,SNR=2.7	**18.09**	**88**	Pn	**Pn**	**01 05 59.0**	**-3.7**
TXAR	**Lajitas Array** 0.1nm,0.5s,baz=354,slow=6.3,SNR=2.8	**49.52**	**114**	P	**P**	**01 10 42.1**	**-0.2**
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=40,slow=5.2,SNR=5.4	**57.26**	**316**	P	P	01 11 36.9	-2.0

*PRE **26** 01:06:43.2±1.1, 27.13S×27.00E, h2km, ML2.6*

*EAF **26** 01:06:46.6±2.0,26°.97S×27°.11E,h10km,MD3.5*
ISC 26 01:06:43.9±1.7,**26°.92S**±0°.07×**26°.90E**±0°.07,**h6**km±14km,
n15,σ2**s31**/22,**South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRYS	**Parys**	**0.41**	**92**	*eP*	**Pg**	**01 06 50.3**	**-1.7**
PRYS				*eS*	**Sg**	**01 06 55.6**	**-1.8**
PRYS				AML	AML	01 07 03.0	
	comp=Z,225nm,0.2s						
WDLM	**Western Deep L**	**0.68**	**44**	*eP*	**Pb**	**01 06 59.4**	**+1.1**
WDLM				*eS*	**Sb**	**01 07 09.4**	**+1.5**
WDLM				AML	AML	01 07 11.9	
	comp=Z,314nm,0.2s						
KLOF	**Kloof**	**0.85**	**49**	*eP*	**Pb**	**01 07 02.3**	**+1.1**
KLOF				*eS*	**Sn**	**01 07 14.7**	**-0.7**
KLOF				AML	AML	01 07 22.5	
	comp=Z,699nm,0.2s						
ERPM	**east rand prop**	**1.33**	**65**	*eP*	**Pg**	**01 07 10.6**	**+1.1**
ERPM				*eS*	**Sn**	**01 07 29.4**	**+2.1**
ERPM				AML	AML	01 07 37.0	
	comp=Z,62nm,0.4s						
BOSA	**Boshof**	**2.23**	**220**	*i* P	Pn	01 07 15.5	-6.1
BOSA	**Boshof**	**2.23**	**220**	*eP*	**Pn**	**01 07 20.6**	**-1.0**
BOSA				*eS*	**Sn**	**01 07 47.9**	**-1.6**
BOSA				AML	AML	01 08 03.7	
	comp=Z,30nm,0.7s						
BOSA	**Boshof**	**2.23**	**220**	*i* P	**Pn**	**01 07 26.1**	**+4.6**
BOSA				*i* S	**Sn**	**01 07 50.8**	**+1.3**
MSNA	**Messina**	**5.37**	**33**	*i* P	Pn	01 08 09.9	+5.4
MSNA	**Messina**	**5.37**	**33**	*i* P	**Pn**	**01 08 05.8**	**+1.3**
MSNA				*i* S	**Sn**	**01 09 01.7**	**-5.0**
KEIM	**Keimoes**	**5.55**	**250**	*eP*	**Pn**	**01 08 08.4**	**+1.3**
KEIM				*eS*	**Sn**	**01 09 09.2**	**-2.0**
KEIM				AML	AML	01 09 44.9	
	comp=Z,12nm,0.5s						
MATP	**Matopo**	**6.62**	**13**	*i* P	**Pn**	**01 08 22.2**	**+0.2**
MATP	**Matopo**	**6.62**	**13**	*i* P	**Pn**	**01 08 24.0**	**+2.1**
MATP				*i* S	**Sn**	**01 09 34.4**	**-3.5**
BUFB	**Buffelsbos**	**7.45**	**194**	*eP*	**Pn**	**01 08 31.4**	**-1.6**
BUFB				*eS*	Sn	01 09 50.3	-7.6
BUFB				AML	AML	01 10 15.4	
	comp=Z,4.4nm,0.7s						
CVNA	**Calvinia**	**7.72**	**232**	*eP*	**Pn**	**01 08 37.5**	**+0.6**
CVNA				*eS*	Sn	01 09 59.8	-5.0
CVNA				AML	AML	01 10 45.3	
	comp=Z,9.9nm,0.8s						
KOMG	**Komaggas**	**8.78**	**249**	*eP*	**Pn**	**01 08 51.7**	**+0.4**
KOMG				*eS*	Sn	01 10 26.6	-4.0
KOMG				AML	AML	01 11 27.8	
	comp=Z,5.3nm,1.0s						

*NCEDC **26** 01:14:18.6±0.6,37°.55N±0°.02×118°.407W±0°.008,
h6km±5km,Md2.5/35,Error ellipse: s-maj=2.4km
s-min=1.0km az=178.0*
*REN **26** 01:14:18.9±0.9,37°.55N±0°.01×118°.40W±0°.01,h0km±6km,
Error ellipse: s-maj=2.3km s-min=0.9km az=47.0*
NEIC 26 01:14:18.7±0.6,**37°.552N**±0°.005×**118°.39W**±0°.02,
h7km±5km,**Error ellipse: s-maj=2.5km s-min=0.7km
az=93.0,California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCDM	**Chidago Canyon**	**0.04**	**265**		Pg	01 14 20.1	-0.1
MLNR	**Milner Canyon**	**0.06**	**42**		Pg	01 14 20.5	0.0
MFBM	**Five Bridges**	**0.13**	**194**		Pg	01 14 21.7	+0.3
CASR	**Casa Diablo Mo**	**0.13**	**280**		Pg	01 14 21.5	-0.1
BCKR	**Birch Creek**	**0.15**	**6**		Pg	01 14 22.1	+0.3
MRCM	**Red Rock Canyo**	**0.15**	**323**		Pg	01 14 21.9	0.0
POCCA	**Poleta Canyon**	**0.21**	**155**		Pg	01 14 23.1	+0.2
BENR	**Benton**	**0.22**	**319**		Pg	01 14 23.0	-0.1
ORC	**Owens River**	**0.23**	**292**		Pg	01 14 23.1	-0.1
WMD		**0.23**	**241**		Pg	01 14 23.2	0.0
MTUM	**Tungsten Hills**	**0.24**	**215**		Pg	01 14 23.6	+0.1
RCCR	**Rock Creek Can**	**0.27**	**256**		Pg	01 14 24.0	-0.1
SCHCA	**Scheelite**	**0.30**	**231**		Pg	01 14 24.6	-0.1
MCVM	**Convict Lake**	**0.35**	**276**		Pg	01 14 25.4	-0.2
MGNR	**McGee Canyon**	**0.36**	**317**		Pg	01 14 25.8	+0.1
MLHM	**Little Hot Cre**	**0.36**	**291**		Pg	01 14 25.9	+0.2
MLAC	**Mammoth, Mammo**	**0.36**	**283**		Pg	01 14 25.8	0.0
MLAC					Sg	01 14 31.3	+0.7
MDRNC	**Doe Ridge**	**0.36**	**284**		Pg	01 14 25.9	+0.1
MCMM	**Convict Lake**	**0.39**	**279**		Pg	01 14 26.1	-0.1
ANTCA	**Antelope Range**	**0.39**	**339**		Pg	01 14 26.3	-0.1
MCBM	**Casa Benchmark**	**0.41**	**283**		Pg	01 14 26.8	+0.1
MCBM					Sg	01 14 33.0	+0.8
MGPM	**Gravel Pit**	**0.41**	**281**		Pg	01 14 26.7	0.0
MLCM	**Laurel Creek C**	**0.42**	**278**		Pg	01 14 26.7	-0.2
MCSM	**Casa Diablo Ho**	**0.42**	**284**		Pg	01 14 26.9	0.0
MEMM	**East Mammoth H**	**0.45**	**285**		Pg	01 14 27.5	+0.1
MMLB	**Mammoth Lakes**	**0.48**	**283**		Pg	01 14 28.0	0.0
OMMB	**Old Mammoth Mi**	**0.49**	**277**		Pg	01 14 27.8	-0.3
OMMB					Sg	01 14 34.3	-0.2
MDYB	**Dry Creek**	**0.50**	**282**		Pg	01 14 28.0	0.0
MLIM	**Lincoln Peak**	**0.51**	**280**		Pg	01 14 28.6	+0.1
MMPM	**Mammoth Pass**	**0.51**	**277**		Pg	01 14 28.3	-0.3
TIN	**Tinemaha, Big**	**0.51**	**165**		Pg	01 14 29.0	+0.4
MMSM	**Mammoth Summit**	**0.52**	**279**		Pg	01 14 28.6	-0.1
MRDM	**Red Cones**	**0.53**	**275**		Pg	01 14 28.7	-0.3
MDCM	**Deadman Creek**	**0.54**	**287**		Pg	01 14 29.0	-0.1
MINS	**Minaret Summit**	**0.54**	**281**		Pg	01 14 28.9	-0.3
MINS					Sg	01 14 36.1	-0.2
LHV	**Little Huntoon**	**0.70**	**353**		Pg	01 14 32.4	+0.2
KCC	**Kaiser Creek**	**0.77**	**253**		Pg	01 14 32.9	-0.6
LUL	**Lundy Lake**	**0.80**	**309**		Pg	01 14 33.8	-0.3
NVAR	**Mina Array Bea**	**0.88**	**5**	Pg	Pg	01 14 34.4	-1.2
NV11	**Mina Array Sit**	**0.90**	**12**		Pg	01 14 35.5	-0.5
HELL	**Mitchell Peak,**	**1.01**	**210**		Pg	01 14 37.4	-0.6
RYN	**Ryan**	**1.08**	**355**		Pg	01 14 39.2	-0.2
MMIM	**Miami Mountain**	**1.08**	**263**		Pg	01 14 38.6	-0.9
CWC	**Cottonwood Cre**	**1.14**	**167**		Pg	01 14 40.2	-0.3
WAKR	**Walker**	**1.26**	**319**		Pg	01 14 42.8	-0.1
MHDM	**Hidden Dam**	**1.27**	**251**		Pn	01 14 42.0	-0.9
DAC	**Darwin (Calif)**	**1.42**	**153**		Pb	01 14 45.6	-0.1
KVN	**Kaiserville**	**1.51**	**9**		Pn	01 14 46.5	+0.1
YERR	**Yerington**	**1.58**	**335**		Pb	01 14 47.9	-0.5
MYLM	**Yosemite Lake**	**1.62**	**265**		Pn	01 14 48.3	+0.6
CMB	**Columbia Colle**	**1.65**	**288**		Pn	01 14 48.6	+0.4
PNTR	**Pine Nut**	**1.81**	**329**		Pn	01 14 50.5	0.0
TPNV	**Topopah Spring**	**1.81**	**109**		Pn	01 14 50.8	+0.4
ISA	**Isabella, Lake**	**1.89**	**182**		Pn	01 14 51.6	+0.1
VCNR	**Virginia City**	**2.00**	**331**	Pn	Pn	01 14 53.3	+0.2
VCNR					Sg	01 15 24.2	+1.2
RUBR	**Rubicon Trail**	**2.04**	**318**	Pn	Pn	01 14 53.2	-0.5
RUBR					Lg	01 15 25.6	
PAHR	**Pah Rah Range**	**2.29**	**340**	Pn	Pn	01 14 56.6	-0.5
PMPB	**Monarch Peak**	**2.35**	**236**	Pn	Pn	01 14 57.9	+0.2
PAGB	**Antelope Grade**	**2.35**	**220**	Pn	Pn	01 14 57.1	-0.7
PAGB					Lg	01 15 36.1	
R11A	**Troy Canyon, C**	**2.36**	**69**		Pb	01 15 02.4	+0.8
AFDM	**Forest Hills D**	**2.46**	**305**	Pn	Pn	01 14 58.5	-0.8
SAO	**San Andreas Ge**	**2.56**	**253**	Pn	Pn	01 15 00.6	-0.1
GSC	**Goldstone, Bar**	**2.58**	**150**		Pg	01 15 07.7	-0.5
SHPR	**Sheep Range**	**2.79**	**111**		Pb	01 15 10.0	+1.1
MWC	**Mount Wilson**	**3.33**	**175**	Pn	Pn	01 15 11.9	+0.5
PSUT	**Pine Spring**	**3.71**	**73**		Sg	01 16 17.8	-0.1
CCUT	**Cedar City**	**4.00**	**88**		Lg	01 16 28.1	
ELK	**Elko**	**4.02**	**37**	Pn	Pn	01 15 21.3	+0.4

*MEX **26** 01:15:18.6±0.7, 17°.70N×94°.70W,h49km±15km,MD4.1*
*NEIC **26** 01:15:18.6±1.2, 17°.6N±0°.2×94°.73W±0°.05,h55km±23km,
Error ellipse: s-maj=27.8km s-min=6.1km az=177.0*
ISC 26 01:15:19.2±1.5,**17°.6N**±0°.1×**94°.77W**±0°.06,**h50**km,**n10**,
σ0**s77**/17,**Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.48**	**193**	*eP*	**Pn**	**01 15 30.3**	**+0.1**
CMIG				*eS*	**Sn**	**01 15 38.6**	**+0.4**
CMIG	**Matias Romero**	**0.48**	**193**		**Pn**	**01 15 30.3**	**+0.1**
CMIG					**Sn**	**01 15 38.6**	**+0.4**
VHO	**Vista Hermosa**	**1.94**	**256**	*eP*	**Pn**	**01 15 49.7**	**-0.2**
VHO				*i* S	**Sn**	**01 16 13.7**	**+0.5**
CCIG	**Comitan**	**2.82**	**116**	Pn	**Pn**	**01 16 02.7**	**+0.7**
PNIG	**Pinotepa**	**3.42**	**251**	*eP*	**Pn**	**01 16 09.1**	**-0.9**
PNIG				*eS*	**Sn**	**01 16 50.0**	**+0.7**
PNIG	**Pinotepa**	**3.42**	**251**		**Pn**	**01 16 08.9**	**-1.1**
PNIG					**Sn**	**01 16 50.0**	**+0.7**
TLIG	**Tlapa**	**3.62**	**271**	*eP*	**Pn**	**01 16 13.1**	**+0.2**
TLIG				*eS*	**Sn**	**01 16 54.5**	**-0.1**
TLIG	**Tlapa**	**3.62**	**271**		**Pn**	**01 16 13.6**	**+0.7**
TLIG					**Sn**	**01 16 54.5**	**-0.1**
TLIG	**Tlapa**	**3.62**	**271**	Pn	**Pn**	**01 16 13.2**	**+0.2**
TEIG	**Tepich**	**6.69**	**66**	Pn	**Pn**	**01 16 53.1**	**-1.9**

*MOS **26** 01:15:37.6±0.9,29°.81N×138°.94E,h417km,mb4.1/25,
Error ellipse: s-maj=12.0km s-min=6.4km az=115.7
JMA **26** 01:15:38.5±0.2,29°.96N×139°.53E,h455km,M4.1
IDC **26** 01:15:40.1±1.1,29°.87N×138°.96E,h430km±11km,
mb3.4/23,mb1 3.6/27,mb1mx3.5/45,mbtmp4.2/27,Error
ellipse: s-maj=12.9km s-min=8.9km az=83.0
NEIC **26** 01:15:40.5±1.1,29°.9N±0°.1×139°.0E±0°.1,h435km±7km,
mb4.1/45,Error ellipse: s-maj=15.5km s-min=14.9km
az=109.0*
ISC 26 01:15:39.3±0.4,**29°.89N**±0°.05×**139°.03E**±0°.07,**h421**km,
n151,σ1**s20**/161,**mb4.0**/64,**2C-4D**,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**3.29**	**12**	P	**P**	**01 16 48.4**	**+2.1**
CBIJ	**Chichi jima**	**3.93**	**134**	P	**P**	**01 16 51.8**	**-0.2**
CBIJ				*eS*	**S**	**01 17 48.9**	**-2.3**
JCJ	**Chichijima**	**3.93**	**134**	P	**P**	**01 16 52.0**	**-0.1**
	26nm,0.3s,baz=292,slow=20,SNR=37						
JCJ				S	**S**	**01 17 49.0**	**-2.1**
	32nm,0.3s,baz=100,slow=22,SNR=12						
JTNC	**Tanabenakahech**	**4.88**	**324**	P	**P**	**01 17 04.5**	**+3.6**
JIE	**Ise**	**4.91**	**337**	P	**P**	**01 17 04.8**	**+3.7**
BSO1	**Boso 1**	**5.03**	**19**	P	**P**	**01 17 02.9**	**+1.1**
BSO3	**Boso 3**	**5.06**	**14**	P	**P**	**01 17 03.5**	**+1.1**
BSO3				S	**S**	**01 18 10.9**	**+0.5**
HMMJ	**Hamamatsu 2**	**5.08**	**348**	P	**P**	**01 17 05.9**	**+3.1**
JOD2	**Odawara 2**	**5.36**	**1**	P	**P**	**01 17 06.8**	**+1.0**
JNY	**Yasuok**	**5.55**	**350**	P	**P**	**01 17 09.7**	**+2.6**
INU	**Inuyama**	**5.71**	**343**	P	**P**	**01 17 11.9**	**+2.6**
JRY	**Ryogami san**	**6.12**	**359**	P	**P**	**01 17 14.2**	**+0.6**
JRY				*eS*	**S**	**01 18 29.2**	**-1.8**
JAG	**Ashikaga**	**6.53**	**3**	P	**P**	**01 17 17.4**	**-1.1**
MJAR	**Matsushiro Arr**	**6.67**	**354**	*d* P	**P**	**01 17 19.8**	**-0.2**
	0.9nm,0.3s,baz=131,slow=22,SNR=33						
MAJO	**Matsushiro**	**6.67**	**354**	*d* P	**P**	**01 17 21.0**	**+0.9**
MAJO	**Matsushiro**	**6.67**	**354**	P	**P**	**01 17 20.6**	**+0.6**
MAT	**Matsushiro**	**6.67**	**354**	P	**P**	**01 17 20.5**	**+0.4**
MAT				S	**S**	**01 18 38.9**	**-3.1**
MJB9	**Matsu-Tunnel**	**6.68**	**354**	P	**P**	**01 17 20.9**	**+0.8**
JHS	**Saijyo**	**7.14**	**317**	P	**P**	**01 17 28.0**	**+2.9**
JFK	**Kawauchi**	**7.62**	**11**	P	**P**	**01 17 29.9**	**-0.5**
JFK				*eS*	**S**	**01 18 57.4**	**-3.6**
KSRS	**Korea Array**	**11.93**	**312**	P	**P**	**01 18 19.6**	**+1.9**
	0.5nm,0.3s,baz=127,slow=10,SNR=11						
USA0B	**Ussuriysk Arra**	**15.34**	**341**	P	**P**	**01 18 55.5**	**+0.9**
USA0B				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**15.34**	**341**	P	**P**	**01 18 55.5**	**+0.9**
USRK	**Ussuriysk Ar.**	**15.34**	**341**	P	**P**	**01 18 56.1**	**+1.5**
	baz=143,slow=8.7,SNR=38						
GUMO	**Guam**	**17.09**	**160**	P	**P**	**01 19 16.8**	**+3.2**
YSS	**Yuzh-Sakhalins**	**17.29**	**9**	*i* P	**P**	**01 19 16.6**	**+1.3**
KLR	**Kul'dur**	**20.10**	**346**	*i* P	**P**	**01 19 43.9**	**+0.8**
KLR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KLR	**Kul'dur**	**20.10**	**346**	P	**P**	**01 19 44.0**	**+1.0**
	comp=Z,2.1nm,0.4s,baz=178,slow=5.3,SNR=14						
WHN	**Wuhan**	**21.33**	**278**	P	**P**	**01 19 52.8**	**-1.7**
HIA	**Hailar**	**24.28**	**328**	P	**P**	**01 20 20.1**	**-0.8**
HIA				pmax	pmax		
	comp=Z,33nm,1.8s						
HIA	**Hailar**	**24.28**	**328**	P	**P**	**01 20 20.1**	**-0.8**
HHC	**Hu-ho-hao-te**	**24.82**	**304**	*eP*	**P**	**01 20 26.5**	**+0.5**
HHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,80nm,4.3s						
ENH	**Enshi**	**25.53**	**278**	P	**P**	**01 20 32.2**	**-0.2**
ENH				lAmb	lAmb	01 20 33.0	
	comp=Z,10nm,0.8s						
XAN	**Xi'an**	**25.83**	**287**	P	**P**	**01 20 34.8**	**-0.2**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN	**Xi'an**	**25.83**	**287**	P	**P**	**01 20 34.0**	**-1.0**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN	**Xi'an**	**25.83**	**287**	P	**P**	**01 20 34.0**	**-1.0**
XAN				lAmb	lAmb	01 20 35.8	
	comp=Z,9.1nm,0.9s						
LZH	**Lanzhou**	**30.04**	**291**	||P	**P**	**01 21 11.0**	**-1.1**
LZH				pP	PP	01 22 29.0	-1.4
LZH				PP	**pwP**	**01 22 35.3**	**+3.1**
LZH				sP	sP	01 23 19.8	+4.8
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				pmax	pmax		
	comp=Z,52nm,4.9s						
ULN	**Ulaanbaatar**	**30.39**	**315**	*i* P	**P**	**01 21 15.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ULN	**Ulaanbaatar**	**30.39**	**315**	P	**P**	**01 21 14.8**	**-0.2**
MA2	**Magadan**	**30.74**	**12**	P	**P**	**01 21 18.8**	**+1.1**
MA2				pmax	pmax		
	comp=Z,33nm,1.6s						
SONM	**Songino Array**	**30.78**	**315**	P	**P**	**01 21 18.7**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=116,slow=7.4,SNR=10						
SONM				PcP	**PcP**	**01 24 03.8**	**+0.2**
	comp=Z,0.4nm,0.9s,baz=122,slow=3.0,SNR=3.5						
SONM				ScP	**ScP**	**01 27 03.5**	**-2.0**
	comp=Z,0.7nm,0.7s,baz=130,slow=1.7,SNR=5.4						
SONM	**Songino Array**	**30.78**	**315**	lAmb	lAmb	01 21 22.1	
	comp=Z,1.1nm,0.6s						
GTA	**Gaotai**	**33.41**	**297**	*eP*	**P**	**01 21 40.8**	**-0.3**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TLY	**Talaya**	**34.02**	**320**	*i* P	**P**	**01 21 46.2**	**+0.2**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TLY	**Talaya**	**34.02**	**320**	P	**P**	**01 21 46.0**	**0.0**
TLY				lAmb	lAmb	01 22 44.3	
	comp=Z,6.2nm,0.9s						
SEY	**Seymchan**	**34.17**	**11**	*i* P	**P**	**01 21 48.7**	**+1.7**
SEY	**Seymchan**	**34.17**	**11**	P	**P**	**01 21 48.1**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=124,slow=4.0,SNR=5.0						
PBKT	**Sadao Pong**	**37.22**	**258**	P	**P**	**01 22 12.9**	**-0.3**
PBKT				lAmb	lAmb	01 22 14.9	
	comp=Z,5.4nm,0.8s						
CHTO	**Chiang Mai**	**37.97**	**262**	P	**P**	**01 22 19.5**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CHTO	**Chiang Mai**	**37.97**	**262**	P	**P**	**01 22 19.5**	**+0.1**
CHTO				lAmb	lAmb	01 22 20.6	
	comp=Z,7.3nm,0.9s						
CMAR	**Chiang Mai Arr**	**38.12**	**262**	*i* P	**P**	**01 22 20.6**	**0.0**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CMAR	**Chiang Mai Arr**	**38.12**	**262**	P	**P**	**01 22 21.2**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=49,slow=7.3,SNR=6.5						
BILL	**Bilibino**	**41.43**	**15**	*eP*	**P**	**01 22 46.5**	**-0.2**
BILL				*PP	**pP**	**01 24 11.0**	**+4.3**
BILL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BILL	**Bilibino**	**41.43**	**15**	P	**P**	**01 22 47.6**	**+0.8**
BILL				lAmb	lAmb	01 24 17.9	
	comp=Z,20nm,1.9s						
SHL	**Shillong**	**41.73**	**276**	P	**P**	**01 22 49.5**	**-0.5**
SHL				pmax	pmax		
	comp=Z,24nm,1.9s						
SHL	**Shillong**	**41.73**	**276**	P	**P**	**01 22 49.5**	**-0.5**
SHL				lAmb	lAmb	01 23 18.5	
	comp=Z,24nm,1.9s						
TIXI	**Tiksi**	**42.18**	**355**	*i* P	**P**	**01 22 52.7**	**0.0**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TIXI	**Tiksi**	**42.18**	**355**	P	**P**	**01 22 52.4**	**-0.3**
	comp=Z,1.6nm,0.3s,baz=164,slow=4.4,SNR=3.6						
WMQ	**Urumqi**	**42.71**	**304**	*eP*	**P**	**01 22 58.3**	**+0.9**
WMQ	**Urumqi**	**42.71**	**304**	P	**P**	**01 22 57.6**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WMQ	**Urumqi**	**42.71**	**304**	P	**P**	**01 22 57.5**	**+0.2**
WMQ				lAmb	lAmb	01 22 58.9	
	comp=Z,4.2nm,0.6s						
MTN	**Manton Dam**	**43.16**	**191**	P	**P**	**01 23 00.5**	**-0.6**
TAPN	**Taplejung**	**44.81**	**280**	*eP*	**P**	**01 23 14.7**	**+0.3**
	comp=Z,4.5nm,0.4s						
ODAN	**Odare**	**45.23**	**279**	*eP*	**P**	**01 23 17.8**	**+0.3**
	comp=Z,6.3nm,0.3s						
ZAA0	**Zalesovo Array**	**45.56**	**318**	P	**P**	**01 23 19.3**	**-0.1**
ZALV	**Zalesovo Beam**	**45.56**	**318**	P	**P**	**01 23 18.9**	**-0.4**
	comp=Z,2.2nm,0.6s,baz=99,slow=8.0,SNR=13						
ZALV				PcP	**PcP**	**01 24 48.9**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=130,slow=5.3,SNR=7.2						
RAMN	**Ramite**	**45.88**	**280**	*eP*	**P**	**01 23 22.9**	**+0.3**
	comp=Z,18nm,0.8s						
JIRN	**Jiri**	**46.03**	**281**	*eP*	**P**	**01 23 24.6**	**+0.7**
	comp=Z,28nm,0.5s						
GUN	**Gumba**	**46.23**	**281**	*eP*	**P**	**01 23 26.0**	**+0.7**
	comp=Z,6.9nm,0.3s						
MK31	**Makanchi Array**	**46.57**	**308**	P	**P**	**01 23 27.1**	**-0.2**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**46.57**	**308**	P	**P**	**01 23 27.1**	**-0.2**
MKAR	**Makanchi Array**	**46.57**	**308**	*i* P	**P**	**01 23 27.2**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**46.57**	**308**	P	**P**	**01 23 26.9**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=85,slow=9.7,SNR=39						
MKAR				PcP	**PcP**	**01 24 52.9**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=75,slow=6.4,SNR=7.7						
MKAR				ScP	**ScP**	**01 28 03.2**	**-2.8**
	comp=Z,0.6nm,0.7s,baz=80,slow=4.5,SNR=7.1						
PKI	**Pulchoki**	**46.72**	**281**	*eP*	**P**	**01 23 29.1**	**0.0**
PKIN	**Phulchoki**	**46.73**	**281**	*eP*	**P**	**01 23 29.0**	**-0.1**
KKN	**Kakani**	**46.77**	**281**	*eP*	**P**	**01 23 29.5**	**+0.2**
MAKZ	**Makanchi**	**46.78**	**308**	P	**P**	**01 23 28.4**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MAKZ	**Makanchi**	**46.78**	**308**	P	**P**	**01 23 28.4**	**-0.5**
DMN	**Daman**	**46.97**	**281**	*eP*	**P**	**01 23 30.8**	**-0.1**
GKN	**Gorkha**	**47.26**	**282**	*eP*	**P**	**01 23 33.3**	**+0.3**
DANN	**Dangsing**	**47.91**	**283**	*eP*	**P**	**01 23 38.7**	**+0.6**
	comp=Z,19nm,0.6s						
KOLN	**Koldanda**	**48.20**	**282**	*eP*	**P**	**01 23 40.6**	**+0.4**
GSI	**Gunungsitoli**	**48.55**	**242**	P	**P**	**01 23 42.6**	**0.0**
KURK	**Kurchatov**	**49.05**	**313**	*i* P	**P**	**01 23 45.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KURK	**Kurchatov**	**49.05**	**313**	P	**P**	**01 23 45.7**	**-0.3**
KURK				lAmb	lAmb	01 23 46.6	
	comp=Z,8.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**49.42**	**197**	P	**P**	**01 23 49.1**	**+0.2**
WB0	**Warramunga Arr**	**49.56**	**186**	P	**P**	**01 23 50.2**	**+0.2**
WB0				lAmb	lAmb	01 24 05.8	
	comp=Z,20nm,1.6s						
WB2	**Warramunga Ar**	**49.74**	**186**	P	**P**	**01 23 51.5**	**+0.1**
WB2				lAmb	lAmb	01 23 55.0	
	comp=Z,32nm,1.9s						
WR0	**Warramunga Arr**	**49.74**	**186**	P	**P**	**01 23 51.5**	**+0.1**
WRA	**Warramunga Arr**	**49.74**	**186**	P	**P**	**01 23 51.2**	**-0.3**
	comp=Z,1.5nm,0.3s,baz=3.9,slow=7.9,SNR=15						
WRA	**Warramunga Arr**	**49.74**	**186**	lAmb	lAmb	01 23 53.5	
	comp=Z,0.2nm,0.8s						
KSH	**Kashi**	**51.78**	**299**	P	**P**	**01 24 11.0**	**+4.6**
KSH				pmax	pmax		
	comp=Z,510nm,6.7s						
AAK	**Ala-Archa**	**52.40**	**303**	P	**P**	**01 24 10.6**	**-0.3**
AAK				pmax	pmax		
	comp=Z,12nm,1.9s						
AAK	**Ala-Archa**	**52.40**	**303**	P	**P**	**01 24 10.6**	**-0.3**
AAK				lAmb	lAmb	01 25 42.6	
	comp=Z,12nm,1.9s						
AS31	**Alice Springs**	**53.47**	**186**	P	**P**	**01 24 18.7**	**+0.1**
ASAR	**Alice Springs**	**53.47**	**186**	P	**P**	**01 24 18.6**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=23,slow=10,SNR=46						
BRVK	**Borovoye**	**54.17**	**316**	P	**P**	**01 24 23.0**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BRVK	**Borovoye**	**54.17**	**316**	P	**P**	**01 24 22.9**	**-0.2**
BRVK				lAmb	lAmb	01 24 24.1	
	comp=Z,4.8nm,0.7s						
NIL	**Nilore**	**55.20**	**292**	P	**P**	**01 24 30.6**	**-0.3**
NIL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NIL	**Nilore**

BR131	**Keskin Array S**	**82.08**	**311**	P	**P**	**01 27 14.2**	**-0.4**
BR131				pmax	pmax		
	comp=Z,18nm,1.7s						
BR131	**Keskin Array S**	**82.08**	**311**	P	**P**	**01 27 14.2**	**-0.4**
BRTR	**Keskin Array B**	**82.08**	**311**	P	**P**	**01 27 14.3**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=93,slow=4.2,SNR=13						
BUR08	**Bucovina Ar. S**	**82.65**	**321**	P	**P**	**01 27 17.3**	**0.0**
KOLS	**Kolonicke sedl**	**83.40**	**324**	*eP*	**P**	**01 27 21.1**	**+0.2**
KOLS	**Kolonicke sedl**	**83.40**	**324**	*eP*	**P**	**01 27 21.1**	**+0.2**
HWUT	**Hardware Ranch**	**83.60**	**45**	P	**P**	**01 27 24.1**	**+1.7**
HWUT				IAmb	IAmb	01 27 24.5	
	comp=Z,3.7nm,0.9s						
PDAR	**Pinedale Array**	**84.15**	**44**	P	**P**	**01 27 25.7**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=34,slow=5.6,SNR=4.0						
PFO	**Pinyon Flats O**	**84.75**	**54**	*ceP*	**P**	**01 27 29.0**	**+0.9**
PFO				pmax	pmax		
	comp=Z,22nm,3.3s						
VYHS	**Vyhne**	**85.43**	**325**	*eP*	**P**	**01 27 31.3**	**+0.3**
VYHS	**Vyhne**	**85.43**	**325**	*eP*	**P**	**01 27 31.3**	**+0.3**
GERES	**GERESS Array B**	**87.68**	**327**	P	**P**	**01 27 40.4**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=50,slow=5.2,SNR=6.6						
TXAR	**Lajitas Array**	**96.10**	**51**	P	**P**	**01 28 22.0**	**+1.1**
	comp=Z,0.6nm,0.9s,baz=305,slow=3.2,SNR=5.0						
KMBO	**Kilima Mbogo**	**100.77**	**275**	*i* P	**Pdif**	**01 28 41.5**	**-0.7**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TORD	**Torodi Ar. Bea**	**120.66**	**310**	PKP	**PKPdf**	**01 33 42.0**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=33,slow=1.9,SNR=4.7						

TAP ***26*** *01:17:26.2,24.˚50N×121.˚96E,h13km,ML3.6,B*
JMA ***26*** *01:17:26.3±0.1,24.˚46N×121.˚97E,h15km,M3.0*
ISC 26 01:17:25.9±0.8,24.˚48N±0.˚01×121.˚99E±0.˚02,h13km±6km, n110,σ0.957/179,13C-22D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.14**	**60**	⇓	P		**Pg**	**01 17 30.3**	**+0.9**
	baz=70								
EOS1					S		**Sb**	**01 17 33.7**	**+0.2**
TWC	**Suao**	**0.18**	**315**	⇑	*i* P		**Pg**	**01 17 30.1**	**-0.1**
	baz=319								
TWC					*i* S		**Sg**	**01 17 32.2**	**-0.8**
	baz=319								
NANB	**Nanao**	**0.23**	**257**	⇓	*i* P		**Pg**	**01 17 30.9**	**+0.1**
	baz=251								
NANB					*e*S		**Sg**	**01 17 33.9**	**-0.2**
	baz=251								
ENA	**Nanau**	**0.23**	**258**	⇓	*i* P		**Pg**	**01 17 30.9**	**0.0**
	baz=250								
ENA					S		**Sg**	**01 17 34.2**	**-0.1**
	baz=250								
ILA	**Ilan**	**0.36**	**322**		P		**Pg**	**01 17 33.6**	**+0.4**
	baz=324								
ILA					S		**Sg**	**01 17 38.1**	**0.0**
	baz=324								
EGS		**0.37**	**351**	⇑	*i* P		**Pg**	**01 17 33.7**	**+0.3**
	baz=351								
EGS					*e*S		**Sg**	**01 17 38.2**	**-0.2**
	baz=351								
TWE	**Neicheng**	**0.38**	**309**	⇑	*i* P		**Pg**	**01 17 33.7**	**0.0**
	baz=310								
TWE					S		**Sg**	**01 17 38.3**	**-0.5**
	baz=310								
NTC	**Toucheng**	**0.40**	**338**		P		**Pg**	**01 17 34.2**	**+0.2**
	baz=340								
NTC					S		**Sb**	**01 17 40.5**	**-0.6**
	baz=340								
ENTT	**Nioudou**	**0.42**	**293**		*e*P		**Pg**	**01 17 34.4**	**+0.1**
	baz=291								
ENTT					*e*S		**Sg**	**01 17 39.6**	**-0.3**
	baz=291								
SLBB	**Yuanshan**	**0.43**	**310**		*e*P		**Pg**	**01 17 33.9**	**-0.6**
	baz=313								
SLBB					*e*S		**Sg**	**01 17 39.3**	**-0.8**
	baz=313								
NDT	**Datong Townshi**	**0.46**	**286**	⇓	*i* P		**Pg**	**01 17 35.2**	**+0.2**
	baz=284								
NDT					S		**Sg**	**01 17 40.7**	**-0.3**
	baz=284								
NACB	**Ninganchiao**	**0.47**	**230**	⇓	P		**Pg**	**01 17 35.2**	**0.0**
	baz=228								
NACB					S		**Sg**	**01 17 41.5**	**0.0**
	baz=228								
TIPB	**Shuangxi**	**0.52**	**343**	⇑	P		**Pg**	**01 17 36.2**	**+0.1**
	baz=351								
TIPB					*e*S		**Sg**	**01 17 43.2**	**+0.2**
	baz=351								
TWB1	**Santiao Chiao**	**0.53**	**360**	⇑	P		**Pg**	**01 17 36.4**	**+0.1**
	baz=353								
TWB1					*e*S		**Sg**	**01 17 44.0**	**+0.6**
	baz=353								
TWD	**Chiawan**	**0.54**	**223**	⇓	P		**Pg**	**01 17 36.4**	**-0.1**
	baz=220								
TWD					S		**Sg**	**01 17 43.5**	**-0.1**
	baz=220								
NWLT	**Wulai**	**0.54**	**304**		*e*P		**Pg**	**01 17 36.7**	**+0.2**
	baz=298								
NWLT					*e*S		**Sg**	**01 17 43.1**	**-0.5**
	baz=298								
ETLH	**Xiulin Townshi**	**0.54**	**240**	⇓	*e*P		**Pg**	**01 17 36.4**	**-0.1**
	baz=238								
ETLH					*e*S		**Sg**	**01 17 43.9**	**+0.2**
	baz=238								
NNSB	**Datong**	**0.56**	**265**	⇓	P		**Pg**	**01 17 36.8**	**-0.1**
	baz=263								
NNSB					S		**Sg**	**01 17 43.8**	**-0.5**
	baz=263								
NNSH	**Datong**	**0.56**	**265**	⇓	*i* P		**Pg**	**01 17 36.8**	**-0.1**
	baz=264								
NNSH					*e*S		**Sg**	**01 17 43.7**	**-0.6**
	baz=264								
NNS	**Nan Shan**	**0.57**	**266**	⇓	*i* P		**Pg**	**01 17 36.9**	**-0.1**
	baz=264								
NNS					S		**Sg**	**01 17 44.0**	**-0.6**
	baz=264								
YHNB	**Yeheng**	**0.59**	**289**	⇓	P		**Pb**	**01 17 37.9**	**-0.4**
	baz=293								
YHNB					S		**Sg**	**01 17 44.5**	**-1.0**
	baz=293								
HWA	**Hwalien**	**0.61**	**215**		*e*P		**Pb**	**01 17 38.8**	**+0.3**
	baz=222								
HWA					*e*S		**Sb**	**01 17 47.8**	**+0.7**
	baz=222								
NSK	**Sanguang**	**0.61**	**289**		*e*P		**Pg**	**01 17 38.0**	**+0.1**
	baz=293								
NSK					S		**Sg**	**01 17 45.2**	**-0.8**
	baz=293								
WFSB	**Wu-fen Shan**	**0.62**	**342**	⇑	P		**Pb**	**01 17 38.6**	**-0.2**
	baz=331								
WFSB					S		**Sb**	**01 17 47.0**	**-0.4**
	baz=331								
NHDH	**Xindian Distri**	**0.64**	**319**	⇑	*e*P		**Pb**	**01 17 39.3**	**+0.2**
	baz=309								
NHDH					*e*S		**Sg**	**01 17 47.0**	**0.0**
	baz=309								
ENLB	**Shoufeng**	**0.67**	**212**		*e*P		**Pb**	**01 17 39.5**	**0.0**
	baz=217								
ENLB					*e*S		**Sn**	**01 17 50.8**	**-0.9**
	baz=217								
TATO	**Taipei**	**0.68**	**317**	⇑	P		**Pb**	**01 17 39.6**	**0.0**
	baz=308								
TATO					S		**Sg**	**01 17 47.5**	**-0.6**
	baz=308								
TAP	**Taipei**	**0.71**	**322**		*e*P		**Pb**	**01 17 40.7**	**+0.4**
	baz=322								
TAP					*e*S		**Sb**	**01 17 49.6**	**-0.4**
	baz=322								
WHF	**Hehuan Shan**	**0.74**	**244**	⇓	*i* P		**Pg**	**01 17 40.3**	**-0.1**
	baz=242								
WHF					S		**Sb**	**01 17 50.5**	**-0.7**
	baz=242								
YM01	**YM01**	**0.77**	**330**	⇑	*e*P		**Pb**	**01 17 41.6**	**+0.3**
	baz=330								
YM01					*e*S		**Sg**	**01 17 50.8**	**-0.2**
	baz=330								
WLTB	**Daxi**	**0.77**	**299**		*e*P		**Pn**	**01 17 41.9**	**-0.6**
	baz=298								
WLTB					*e*S		**Sb**	**01 17 51.5**	**-0.1**
	baz=298								
YM10	**YM10**	**0.78**	**330**		*e*P		**Pb**	**01 17 41.9**	**+0.4**
	baz=329								
YM10					*e*S		**Sb**	**01 17 51.7**	**-0.3**
	baz=329								
YM11	**YM11**	**0.78**	**331**	⇑	P		**Pb**	**01 17 42.0**	**+0.4**
	baz=331								
YM11					*e*S		**Sb**	**01 17 51.9**	**-0.3**
	baz=331								
TDCB	**Techi**	**0.79**	**254**	⇓	P		**Pg**	**01 17 41.3**	**0.0**
	baz=247								
TDCB					S		**Sg**	**01 17 51.6**	**-0.2**
	baz=247								
YM08	**YM08**	**0.80**	**333**	⇑	P		**Pb**	**01 17 41.8**	**+0.1**
	baz=332								
YM08					*e*S		**Sg**	**01 17 51.0**	**-0.9**
	baz=332								
YM03	**YM03**	**0.81**	**330**	⇑	P		**Pb**	**01 17 42.3**	**+0.3**
	baz=329								
YM03					*e*S		**Sg**	**01 17 51.7**	**-0.6**
	baz=329								
TWS1	**Kuangyinshan**	**0.81**	**320**		P		**Pn**	**01 17 42.9**	**-0.3**
	baz=312								
TWS1					S		**Sb**	**01 17 53.2**	**+0.3**
	baz=312								
ANP	**Anpu**	**0.83**	**329**		*e*P		**Pb**	**01 17 42.5**	**+0.3**
	baz=315								
ESL	**Shilin**	**0.83**	**218**		*e*P		**Pg**	**01 17 41.9**	**-0.2**
	baz=224								
ESL					*e*S		**Sg**	**01 17 53.1**	**0.0**
	baz=224								
NTST	**Danshui**	**0.84**	**324**		*e*P		**Pn**	**01 17 43.6**	**+0.1**
	baz=324								
CHGB	**Renai**	**0.85**	**241**	⇓	P		**Pg**	**01 17 42.5**	**0.0**
	baz=240								
CHGB					S		**Sb**	**01 17 53.7**	**-0.6**
	baz=240								
JYNG	**Yonagunijimaku**	**0.87**	**92**		P		**Pb**	**01 17 43.0**	**+0.1**
JYNG					S		**Sb**	**01 17 54.3**	**-0.2**
TWY	**Chenhua**	**0.87**	**336**		*e*P		**Pn**	**01 17 43.5**	**-0.4**
	baz=335								
TWY					*e*S		**Sg**	**01 17 53.9**	**-0.3**
	baz=335								
NCU	**National Centr**	**0.88**	**304**		*e*P		**Pn**	**01 17 44.2**	**+0.1**
	baz=303								
NCU					*e*S		**Sn**	**01 17 55.9**	**-0.9**
	baz=303								
NCUH	**Zhongli**	**0.88**	**304**		*e*P		**Pn**	**01 17 44.5**	**+0.4**
	baz=303								
NCUH					*e*S		**Sn**	**01 17 56.2**	**-0.6**
	baz=303								
LIOB	**Emei**	**0.91**	**281**	⇓	P		**Pn**	**01 17 44.2**	**-0.3**
	baz=280								
LIOB					*e*S		**Sb**	**01 17 55.4**	**-0.2**
	baz=280								
OWD	**Renai**	**0.91**	**235**	⇓	*e*P		**Pg**	**01 17 43.4**	**-0.2**
	baz=243								
OWD					*e*S		**Sg**	**01 17 55.1**	**-0.3**
	baz=243								
NSTT	**Nanjuang**	**0.92**	**280**	⇓	*i* P		**Pn**	**01 17 44.2**	**-0.4**
	baz=279								
NSTT					*e*S		**Sg**	**01 17 55.2**	**-0.4**
	baz=279								
YOJ	**Yonaguni jima**	**0.93**	**91**		P		**Pb**	**01 17 43.9**	**0.0**
	baz=92								
YOJ					S		**Sb**	**01 17 56.7**	**+0.5**
	baz=92								
YOJ	**Yonaguni jima**	**0.93**	**91**		P		**Pb**	**01 17 43.7**	**-0.2**
YOJ					S		**Sb**	**01 17 55.8**	**-0.4**
EGFH	**Guangfu**	**0.96**	**213**		*e*P		**Pg**	**01 17 44.5**	**+0.1**
	baz=228								
SBCB	**Hsinchu**	**0.97**	**289**		*e*P		**Pn**	**01 17 46.1**	**+0.8**
	baz=282								
SBCB					*e*S		**Sn**	**01 17 59.5**	**+0.5**
	baz=282								
WHP	**Taichung City**	**0.97**	**258**	⇓	*i* P		**Pn**	**01 17 45.1**	**-0.3**
	baz=258								
WHP					*e*S		**Sg**	**01 17 57.3**	**-0.3**
	baz=258								
HSN	**Hsinchu**	**0.99**	**289**		*e*P		**Pn**	**01 17 45.8**	**+0.3**
	baz=286								
HSN					*e*S		**Sn**	**01 17 58.6**	**-0.8**
	baz=286								
VWDT	**VWDT**	**1.06**	**227**	⇓	P		**Pb**	**01 17 46.1**	**-0.1**
	baz=227								
VWDT					S		**Sn**	**01 18 00.4**	**-0.8**
	baz=227								
DPDB	**Guoxing**	**1.07**	**246**	⇓	*i* P		**Pn**	**01 17 47.0**	**+0.2**
	baz=238								
DPDB					S		**Sg**	**01 18 00.3**	**-0.2**
	baz=238								
NMLH	**Miaoli**	**1.10**	**273**		*e*P		**Pg**	**01 17 48.4**	**+1.3**
	baz=273								
NMLH					*e*S		**Sn**	**01 18 02.8**	**+0.7**
	baz=273								
HGSD	**Ruisui**	**1.11**	**208**		*e*P		**Pg**	**01 17 48.2**	**+0.9**
	baz=224								
TWQ1	**Liyutan**	**1.12**	**264**		*e*P		**Pg**	**01 17 48.1**	**+0.6**
	baz=263								
TWQ1					*e*S		**Sn**	**01 18 02.8**	**+0.1**
	baz=263								
NSY	**Sanyi**	**1.12**	**267**		*e*P		**Pg**	**01 17 48.6**	**+1.0**
	baz=266								
EHY	**Hungye**	**1.15**	**213**		*e*P		**Pb**	**01 17 47.6**	**0.0**
	baz=223								
PCYT	**Pengchaiyu**	**1.15**	**4**		*e*P		**Pg**	**01 17 49.3**	**+1.2**
	baz=5.0								
SMLT	**Sun Moon Lake**	**1.16**	**240**	⇑	*i* P		**Pg**	**01 17 48.4**	**+0.1**
	baz=239								
SMLT					S		**Sb**	**01 18 02.8**	**-0.2**
	baz=239								
SSLB	**Suanglung**	**1.17**	**234**	⇓	P		**Pn**	**01 17 48.1**	**0.0**
	baz=241								
SSLB					S		**Sb**	**01 18 02.4**	**-0.9**
	baz=241								
PTSB	**Yuanli**	**1.17**	**269**		*e*P		**Pg**	**01 17 49.5**	**+1.0**
	baz=267								
TYC	**Yuchr**	**1.18**	**241**	⇓	P		**Pg**	**01 17 48.6**	**-0.2**
	baz=241								
TYC					S		**Sn**	**01 18 03.6**	**-0.6**
	baz=241								
WDJ	**Dajia District**	**1.24**	**264**		*e*P		**Pg**	**01 17 50.6**	**+0.8**
	baz=264								
WDJ					*e*S		**Sg**	**01 18 07.4**	**+1.5**
	baz=264								
TCU	**Taichung**	**1.25**	**255**		*e*P		**Pg**	**01 17 50.2**	**+0.3**
	baz=254								
TCU					*e*S		**Sg**	**01 18 06.8**	**+0.6**
	baz=254								
YULB	**Yu-li**	**1.25**	**211**		*e*P		**Pn**	**01 17 49.0**	**-0.2**
	baz=221								
YULB					*e*S		**Sg**	**01 18 06.5**	**+0.1**
	baz=221								
TWF1	**Yuli**	**1.29**	**210**		*e*P		**Pb**	**01 17 50.0**	**-0.1**
	baz=228								
TWF1					*e*S		**Sg**	**01 18 07.9**	**+0.4**
	baz=228								
WHYT	**Xinyi Township**	**1.30**	**233**		*e*P		**Pg**	**01 17 50.7**	**-0.2**
	baz=240								
WHYT					*e*S		**Sg**	**01 18 08.0**	**+0.1**
	baz=240								
WJS	**Zhushan**	**1.33**	**241**		*e*P		**Pg**	**01 17 52.1**	**+0.6**
	baz=234								
WNT	**Mingjian**	**1.34**	**244**		*e*P		**Pg**	**01 17 52.7**	**+1.0**
	baz=257								
WCHH	**Zhanghua**	**1.37**	**253**		*e*P		**Pg**	**01 17 52.8**	**+0.6**
	baz=252								
YUS	**Yu-Shan**	**1.37**	**224**		*e*P		**Pg**	**01 17 52.0**	**-0.3**
	baz=225								
YUS					*e*S		**Sg**	**01 18 10.4**	**+0.3**
	baz=225								
FULB	**Fuli**	**1.43**	**207**		*e*P		**Pb**	**01 17 52.3**	**-0.2**
	baz=222								
ALS	**Alishan**	**1.45**	**229**		*e*P		**Pg**	**01 17 54.0**	**+0.1**
	baz=214								
CHN5	**Tsauling**	**1.49**	**234**		*e*P		**Pg**	**01 17 54.8**	**+0.3**
	baz=236								
CHN5					S		**Sg**	**01 18 15.4**	**+1.6**
	baz=236								
WDLH	**Douliu**	**1.54**	**240**		*e*P		**Pg**	**01 17 56.1**	**+0.5**
	baz=239								
RLNB	**Erlin**	**1.60**	**249**		*e*P		**Pb**	**01 17 55.0**	**-0.4**
	baz=260								
CHN4	**Tsaushan**	**1.70**	**229**		*e*P		**Pg**	**01 17 58.6**	**0.0**
	baz=229								
HATJ	**Hateruma jima**	**1.71**	**104**		P		**Pn**	**01 17 55.7**	**+0.3**
TPUB	**Ta-pu**	**1.71**	**227**		*e*P		**Pg**	**01 17 58.3**	**-0.5**
	baz=227								
STYT	**Tauyuan**	**1.73**	**221**		*e*P		**Pb**	**01 17 58.1**	**+0.4**
	baz=221								
CHY	**Chiayi**	**1.73**	**236**		*e*P		**Pg**	**01 17 58.7**	**-0.5**
	baz=222								
WTP	**Ta-pu**	**1.76**	**226**		*e*P		**Pg**	**01 17 59.1**	**-0.6**
	baz=226								
TWH	**Lutao**	**1.82**	**195**		*e*P		**Pn**	**01 17 56.4**	**-0.6**
	baz=182								
TWK	**Hsinying**	**1.83**	**229**		*e*P		**Pb**	**01 17 59.9**	**+0.6**
	baz=229								
TWGBT	**Beinan**	**1.85**	**207**		*e*P		**Pn**	**01 17 58.2**	**+0.8**
	baz=208								
TWG	**Pinlang**	**1.85**	**207**		*e*P		**Pn**	**01 17 58.2**	**+0.7**
	baz=208								
JKRS	**Kuro-shima**	**1.85**	**97**		P		**Pn**	**01 17 57.4**	**-0.1**
JKRS					*e*S		**Sn**	**01 18 20.3**	**-0.5**
SNST	**Tainan City**	**1.85**	**228**		*e*P		**Pb**	**01 18 00.5**	**+0.7**
	baz=228								
CHN1	**Nanshi**	**1.86**	**226**		*e*P		**Pb**	**01 18 00.2**	**+0.4**
	baz=227								
SGST	**Jiashian**	**1.90**	**223**		*e*P		**Pb**	**01 18 01.2**	**+0.7**
	baz=223								
SLGT	**Liugui**	**1.93**	**220**		*e*P		**Pb**	**01 18 01.6**	**+0.7**
	baz=221								
JIJ	**Ishigaki jima**	**1.96**	**93**		P		**Pn**	**01 17 58.6**	**-0.4**
JIJ					S		**Sn**	**01 18 21.7**	**-1.8**
JISG	**Ishigakijimahi**	**2.11**	**87**		P		**Pn**	**01 18 00.5**	**-0.5**
JISG					*e*S		**Sn**	**01 18 27.3**	**+0.1**
SSD	**Sandimen**	**2.13**	**216**		*e*P		**Pb**	**01 18 04.3**	**-0.1**
	baz=217								
MASBT	**Mashibuluo**	**2.24**	**214**		*e*P		**Pb**	**01 18 04.8**	**-1.5**
	baz=215								
PTTC	**Pingtan**	**2.26**	**297**		*e*P		**Pn**	**01 18 03.8**	**+0.8**
	baz=296								
EAST	**Anshuo**	**2.33**	**207**		*e*P		**Pn**	**01 18 05.2**	**+1.1**
	baz=197								
VWUC	**VWUC**	**2.37**	**283**		*e*P		**Pn**	**01 18 05.1**	**+0.5**
	baz=282								
VWUC					*e*S		**Sn**	**01 18 33.5**	**0.0**
	baz=282								
PHUB	**P'eng-hu**	**2.41**	**247**		*e*P		**Pn**	**01 18 06.4**	**+1.2**
	baz=246								
MATB	**Ma-tsu**	**2.49**	**312**		*e*P		**Pn**	**01 18 06.8**	**+0.5**
	baz=310								
VCHM	**Qimei**	**2.67**	**242**		*e*P		**Pn**	**01 18 10.5**	**+1.9**
	baz=242								
PTMZ	**Houxiangcun**	**2.67**	**283**		*e*P		**Pn**	**01 18 10.1**	**+1.4**
	baz=281								
LYJJ	**Jianjiangzhen**	**2.89**	**316**		*e*P		**Pn**	**01 18 12.6**	**+1.0**
	baz=315								
XPSS	**Dashiqiu**	**2.93**	**327**		*e*P		**Pn**	**01 18 12.3**	**0.0**
	baz=325								
KNMB	**Chin-men Tao**	**3.28**	**271**		*e*P		**Pn**	**01 18 17.9**	**+0.7**
	baz=268								
AXDP	**Jialang**	**3.68**	**277**		*e*P		**Pn**	**01 18 23.2**	**+0.5**
	baz=275								

IDC ***26*** *01:22:39.1±1.0,10.˚75S×163.˚90E,h0km,mb4.0/8, mb1 4.2/11,mb1mx4.1/33,mbtmp4.1/11,ML4.0/3,MS3.6/8, Ms1 3.5/8,ms1mx3.2/40,Error ellipse: s-maj=30.0km s-min=19.8km az=138.0*
NEIC ***26*** *01:22:43.5±1.6,10.˚8S±0.˚1×163.˚9E±0.˚1,h32km±7km, mb4.2/4,Error ellipse: s-maj=20.5km s-min=14.9km az=215.0*
ISC 26 01:22:43.2±0.8,10.˚8S±0.˚1×163.˚92E±0.˚10,h29km,n26, σ1.900/16,mb4.0/9,MS3.5/6,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.15**	**289**			Pn	**Pn**	**01 23 43.4**	**-1.3**
	11nm,0.3s,baz=117,slow=4.5,SNR=2.4								
HNR						Sn	**Sn**	**01 24 34.1**	**+1.8**
	14nm,0.3s,baz=192,slow=20,SNR=2.4								
DZM	**Mont Dzumac**	**11.44**	**168**			Pn	**Pn**	**01 25 24.8**	**0.0**
	0.9nm,0.3s,baz=315,slow=17,SNR=9.0								
DZM						LR	LR	01 29 01.4	
	comp=Z,278nm,20.6s,baz=33,slow=33								
NOUC	**Port Laguerre**	**11.44**	**169**			Pn	**Pn**	**01 25 24.9**	**+0.2**
PMG	**Port Moresby**	**16.56**	**273**			LR	LR	01 32 51.8	
	comp=Z,187nm,19.5s,baz=116,slow=37								
CTA	**Charters Tower**	**19.34**	**239**			P	**Pn**	**01 27 08.2**	**+0.5**
	0.3nm,0.3s,baz=73,slow=12,SNR=12								
AFI	**Afiamalu**	**23.93**	**100**			LR	LR	01 35 59.3	
	comp=Z,186nm,18.0s,baz=24,slow=33								
H11S2	**WAKE ISLAND Hy**	**29.26**	**5**			T	T	01 59 28.4	
	baz=183,SNR=4.5								
H11S3	**WAKE ISLAND Hy**	**29.27**	**5**			T	T	01 59 26.7	
	baz=183,SNR=5.3								
H11S1	**WAKE ISLAND Hy**	**29.28**	**5**			T	T	01 59 24.3	
	baz=183,SNR=4.9								
STKA	**Stephens Creek**	**29.39**	**221**			P	**P**	**01 28 45.2**	**+1.1**
	3.6nm,0.8s,baz=31,slow=11,SNR=6.9								
STKA						LR	LR	01 39 52.5	
	comp=Z,126nm,18.6s,baz=26,slow=35								
STKA	**Stephens Creek**	**29.39**	**221**			P	**P**	**01 28 44.0**	**-0.2**
STKA						IAmb	IAmb	01 29 01.3	
	comp=Z,4.0nm,1.6s								
WB0	**Warramunga Arr**	**29.79**	**249**			P	**P**	**01 28 47.2**	**-0.7**
WB0						IAmb	IAmb	01 29 02.8	
	comp=Z,6.3nm,0.7s								
WRA	**Warramunga Ar**	**29.88**	**249**			P	**P**	**01 28 47.9**	**-0.7**
	comp=Z,2.2nm,0.6s,baz=80,slow=9.0,SNR=9.1								
WRA						LR	LR	01 40 19.6	
	comp=Z,81nm,20.1s,baz=80,slow=36								
H11N1	**WAKE ISLAND Hy**	**30.49**	**6**			T	T	02 00 56.0	
	baz=182,slow=76,SNR=4.5								
H11N3	**WAKE ISLAND Hy**	**30.50**	**6**			T	T	02 00 51.0	
	baz=182,slow=76,SNR=4.0								
H11N2	**WAKE ISLAND Hy**	**30.51**	**6**			T	T	02 00 52.1	
	baz=182,slow=76,SNR=4.9								
GUMO	**Guam**	**30.75**	**322**			LR	LR	01 41 09.7	
	comp=Z,42nm,19.1s,baz=110,slow=36								
ASAR	**Alice Springs**	**31.30**	**242**			P	**P**	**01 29 00.6**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=62,slow=10,SNR=25								
ASAR						LR	LR	01 41 22.8	
	comp=Z,80nm,20.1s,baz=76,slow=36								
RPZ	**Rata Peaks**	**33.34**	**171**			LR	LR	01 41 53.6	
	comp=Z,125nm,18.3s,baz=340,slow=34								
SONM	**Songino Array**	**77.44**	**324**			P	**P**	**01 34 36.6**	**+0.6**
	comp=Z,1.2nm,1.2s,baz=134,slow=4.2,SNR=3.5								
SONM	**Songino Array**	**77.44**	**324**			IAmb	IAmb	01 34 38.1	
	comp=Z,2.9nm,1.7s								
ILAR	**Eielson Array**	**83.89**	**19**			P

MBDF	**Montbardon**	**8.02**	**312**	*e*P	**Pn**	**01 27 30.0**	**+0.7**
SMRF	**Simiane la Rot**	**8.35**	**304**	*e*P	**Pn**	**01 27 34.6**	**+1.4**
LPG	**La Plagne**	**8.50**	**316**	*e*P	**Pn**	**01 27 35.5**	**+0.1**
LPG				*e*Sn	**S**	**01 29 11.5**	**-1.2**
	comp=E,0.2nm,0.2s						
LPL	**La Plagne**	**8.53**	**316**	*e*P	**Pn**	**01 27 36.1**	**+0.5**
CABF	**La Chapelle**	**9.59**	**319**	*e*P	**Pn**	**01 27 48.6**	**0.0**
HINF	**Hinteralfeld**	**10.12**	**326**	*e*P	**Pn**	**01 27 55.7**	**+0.8**
CDF	**Champ du Feu**	**10.41**	**330**	*e*P	**Pn**	**01 27 59.2**	**+0.6**
HAU	**Haudompre**	**10.48**	**326**	*e*P	**Pn**	**01 28 00.5**	**+1.1**
SMF	**Signal de Mont**	**10.81**	**314**	*e*P	**P**	**01 28 05.8**	**-0.3**
AVF	**Avril sur Loir**	**11.16**	**313**	*e*P	**P**	**01 28 09.6**	**-0.4**
SFTF	**Sexfontaines**	**11.22**	**325**	*e*P	**P**	**01 28 09.3**	**-1.3**
SSF	**Saint Saulge**	**11.24**	**315**	*e*P	**P**	**01 28 10.8**	**-0.1**

NNC ***26*** *01:29:21.9±5.4, 44°.22N×85°.28E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=39.8km s-min=19.5km az=124.0*
SOME ***26*** *01:29:28.6, 43°.70N×84°.65E, h5km*
ISC 26 01:29:30.6±2.8, 43°.7N±0°.1×84°.9E±0°.1, h10km, n8, σ2s08/13, 1C-5D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.60**	**331**	⇓Pg	**Pn**	**01 30 23.3**	**-3.2**
	0.3nm,0.2s,baz=137,slow=17,SNR=30						
MK31				⇓Lg	Lg	01 31 06.0	
	2.3nm,0.3s,baz=139,slow=29,SNR=15						
MAKZ	**Makanchi**	**3.73**	**328**	⇑Pg	**Pn**	**01 30 26.3**	**-2.0**
	1.3nm,0.7s						
MAKZ				⇓Lg	Lg	01 31 11.9	
	2.7nm,0.5s						
ZSN	**Zaisan**	**3.77**	**360**	*e*P	**Pb**	**01 30 37.6**	**+0.4**
	3.9nm,0.3s						
ZSN				*e*S	**Sb**	**01 31 26.4**	**+3.6**
	7.0nm,0.9s						
PDGK	**Podgornoye**	**3.93**	**267**	⇓Pg	**Pb**	**01 30 39.2**	**-0.9**
	3.0nm,0.9s						
PDGK				⇓Lg	Lg	01 31 35.4	
	2.8nm,0.6s						
SHLS	**Shalkode**	**3.98**	**264**	*e*P	**Pn**	**01 30 32.9**	**+1.2**
	5.3nm,0.2s						
SHLS				*e*S	**Sn**	**01 31 18.6**	**+0.2**
	6.9nm,0.5s						
KAPS	**Kapalarasan**	**4.26**	**294**	*e*P	**Pb**	**01 30 44.3**	**-1.3**
	1.6nm,0.3s						
KAPS				*e*S	**Sb**	**01 31 38.8**	**+1.7**
	3.0nm,0.4s						
KPKS	**Kokpek**	**4.50**	**269**	*e*P	**Pb**	**01 30 48.7**	**-1.0**
	2.6nm,0.5s						
KPKS				*e*S	**Sb**	**01 31 45.7**	**+1.7**
	4.2nm,0.5s						
ARXS	**Arharly**	**5.11**	**278**	*e*P	**Pb**	**01 30 59.2**	**-1.0**
	0.8nm,0.2s						
ARXS				*e*S	**Sb**	**01 32 03.7**	**+2.0**
	2.4nm,0.4s						

MAN ***26*** *01:36:44.8, 11°.15N×124°.70E, h5km, mb5.0, ML3.9, MS4.1*
IDC ***26*** *01:36:45.3±1.1, 11°.07N×124°.50E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.8/60, mbtmp3.9/8, MS3.6/7, Ms1 3.6/7, ms1mx3.3/34, Error ellipse: s-maj=71.6km s-min=22.7km az=74.0*
NEIC ***26*** *01:36:50.9±2.3, 11°.2N±0°.1×124°.6E±0°.2, h36km±5km, mb4.4/6, Error ellipse: s-maj=34.7km s-min=14.5km az=78.0*
ISC 26 01:36:46.2±0.6, 11°.18N±0°.03×124°.63E±0°.05, h10km, n35, σ1s72/38, mb4.0/10, MS3.4/7, 1C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.13**	**189**	*e*P	**Pg**	**01 36 48.0**	**-1.2**
MSLP	**Maasin**	**1.06**	**168**	*e*P	**Pg**	**01 37 04.7**	**-1.9**
MSLP				*e*S	**Sn**	**01 37 21.3**	**-0.7**
LLP	**Lapu-Lapu**	**1.08**	**217**	*e*P	**Pg**	**01 37 05.2**	**-1.8**
LLP				*e*S	**Sn**	**01 37 21.6**	**-0.8**
CNP	**Catarman**	**1.32**	**1**	*e*P	**Pn**	**01 37 08.6**	**-2.2**
CNP				*e*S	**Sg**	**01 37 28.3**	**-0.6**
RCP	**Roxas**	**1.89**	**282**	⇓*e*P	**Pb**	**01 37 19.6**	**-1.2**
GUIM	**Jordan**	**2.08**	**255**	*e*P	**Pn**	**01 37 19.8**	**-1.3**
GUIM				*e*S	**Sg**	**01 37 54.0**	**+0.9**
SNPH	**Sibulan**	**2.28**	**217**	*i* P	**Pn**	**01 37 21.8**	**-2.2**
BUTP	**Butuan**	**2.40**	**156**	*e*P	**Pn**	**01 37 25.1**	**-0.5**
BUTP				*e*S	**Sg**	**01 38 05.3**	**+1.9**
PVCP	**Virac**	**2.45**	**349**	*e*P	**Pb**	**01 37 27.4**	**-2.9**
PVCP				*e*S	**Sb**	**01 38 01.6**	**+1.0**
CGP	**Cagayan de Oro**	**2.71**	**179**	*e*P	**Pb**	**01 37 31.4**	**-3.3**
CGP				*i* S	**Sg**	**01 38 12.8**	**-0.4**
BUKP	**Musuan**	**3.31**	**173**	*e*P	**Pn**	**01 37 37.1**	**-1.0**
BUKP				*e*S	**Sb**	**01 38 24.1**	**-1.2**
KCP	**Kidapawan**	**4.17**	**174**	⇑*i* P	**Pn**	**01 37 52.0**	**+2.0**
KCP				*i* S	**Sb**	**01 38 52.8**	**+2.6**
DAV	**Davao City (W)**	**4.19**	**167**	Pn	**Pb**	**01 37 56.6**	**-3.4**
	14nm,0.3s,baz=269,slow=14,SNR=3.8						
LQP	**Lukban**	**4.20**	**314**	⇓*e*P	**Pg**	**01 38 04.6**	**-2.1**
SBUM	**Sibu**	**15.06**	**236**	P	**P**	**01 40 26.4**	**+1.8**
SBUM				IAmb	IAmb	01 40 33.7	
	comp=Z,35nm,1.5s						
ENH	**Enshi**	**23.65**	**326**	P	**P**	**01 41 58.9**	**+1.1**
ENH				IAmb	IAmb	01 42 00.3	
	comp=Z,27nm,1.7s						
CMAR	**Chiang Mai Arr**	**25.84**	**289**	LR	LR	01 53 31.4	
	comp=Z,53nm,18.1s,baz=135,slow=39						
KSRS	**Korea Array**	**26.33**	**6**	LR	LR	01 51 55.5	
	comp=Z,127nm,21.0s,baz=199,slow=34						
MJAR	**Matsushiro Arr**	**28.07**	**24**	LR	LR	01 52 33.4	
	comp=Z,98nm,20.2s,baz=250,slow=34						
FITZ	**Fitzroy Crossi**	**29.11**	**178**	LR	LR	01 57 25.6	
	comp=Z,32nm,18.3s,baz=38,slow=43						
USRK	**Ussuriysk Ar.**	**33.51**	**10**	P	**P**	**01 43 28.3**	**+2.4**
	comp=Z,3.7nm,0.9s,baz=209,slow=8.9,SNR=5.7						
ASAR	**Alice Springs**	**35.80**	**165**	P	**P**	**01 43 45.9**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=344,slow=8.0,SNR=14						
HIA	**Hailar**	**38.19**	**355**	P	**P**	**01 44 05.2**	**-0.8**
SONM	**Songino Array**	**39.62**	**341**	P	**P**	**01 44 17.8**	**-0.4**
SONM				LR	LR	02 00 10.6	
	comp=Z,170nm,18.9s,baz=192,slow=35						
SONM	**Songino Array**	**39.62**	**341**	IAmb	IAmb	01 44 24.2	
	comp=Z,1.2nm,1.0s						
MK31	**Makanchi Array**	**50.34**	**323**	P	**P**	**01 45 45.9**	**+2.6**
MK31				IAmb	IAmb	01 47 00.8	
	comp=Z,3.5nm,1.5s						
MKAR	**Makanchi Array**	**50.34**	**323**	P	**P**	**01 45 45.1**	**+1.8**
	comp=Z,0.7nm,0.8s,baz=119,slow=5.6,SNR=6.5						
ZALV	**Zalesovo Beam**	**53.06**	**332**	P	**P**	**01 46 04.5**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=94,slow=4.3,SNR=3.0						
ZALV				LR	LR	02 10 56.5	
	comp=Z,150nm,18.6s,baz=321,slow=39						
KURK	**Kurchatov**	**54.41**	**326**	P	**P**	**01 46 15.0**	**+1.6**
KKAR	**Karatay Array**	**56.47**	**315**	P	**P**	**01 46 28.7**	**+0.2**
ARCES	**ARCESS Array B**	**82.79**	**340**	P	**P**	**01 49 11.0**	**+0.7**
	comp=Z,4.6nm,1.1s,baz=72,slow=5.9,SNR=4.8						
ARCES	**ARCESS Array B**	**82.79**	**340**	P	**P**	**01 49 11.0**	**+0.7**
BRTR	**Keskin Array B**	**83.71**	**309**	LR	LR	02 28 51.0	
	comp=Z,66nm,19.9s,baz=314,slow=37						
FINES	**FINESS Array B**	**84.33**	**331**	P	**P**	**01 49 19.6**	**+1.2**
	comp=Z,2.8nm,0.9s,baz=95,slow=4.9,SNR=5.9						
GERES	**GERESS Array B**	**94.99**	**322**	P	**P**	**01 50 09.6**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=45,slow=5.8,SNR=3.6						

IDC ***26*** *01:41:00.8±1.2, 7°.15S×154°.57E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/39, mbtmp3.8/8, ML4.0/1, Error ellipse: s-maj=36.7km s-min=24.3km az=115.0*
NEIC ***26*** *01:41:07.3±0.5, 7°.3S±0°.4×154°.6E±0°.4, h47km±14km, mb4.1/4, Error ellipse: s-maj=72.8km s-min=29.5km az=129.0*
ISC 26 01:41:06.8±1.0, 7°.1S±0°.1×154°.5E±0°.2, h39km, n15, σ0s82/13, mb3.9/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.73**	**319**	Pn	**Pn**	**01 42 00.4**	**-1.6**
	12nm,0.3s,baz=58,slow=18,SNR=6.5						
KRVT				Sn	**Sn**	**01 42 45.6**	**+0.9**
	10nm,0.3s,baz=132,slow=20,SNR=5.5						
WRA	**Warramunga Arr**	**23.32**	**235**	P	**P**	**01 46 12.0**	**+0.3**
	0.7nm,0.8s,baz=67,slow=11,SNR=8.3						
ASAR	**Alice Springs**	**25.70**	**228**	P	**P**	**01 46 33.0**	**-0.6**
	0.4nm,0.5s,baz=60,slow=9.1,SNR=7.3						
H11S3	**WAKE ISLAND Hy**	**28.17**	**25**	T	T	02 15 29.8	
	baz=206,slow=74,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	**28.18**	**25**	T	T	02 15 17.9	
	baz=206,slow=74,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**28.19**	**25**	T	T	02 15 36.7	
	baz=206						
SONM	**Songino Array**	**69.19**	**328**	P	**P**	**01 52 10.7**	**+1.2**
	0.7nm,0.8s,baz=144,slow=6.0,SNR=5.1						
MK31	**Makanchi Array**	**83.18**	**319**	P	**P**	**01 53 29.8**	**+0.8**
MK31				IAmb	IAmb	01 53 30.9	
	comp=Z,1.5nm,0.9s						
MKAR	**Makanchi Array**	**83.18**	**319**	P	**P**	**01 53 29.6**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=99,slow=6.8,SNR=14						
MAKZ	**Makanchi**	**83.39**	**319**	P	**P**	**01 53 30.7**	**+0.6**
MAKZ				IAmb	IAmb	01 53 31.9	
	comp=Z,2.1nm,0.8s						
ILAR	**Eielson Array**	**83.69**	**22**	P	**P**	**01 53 30.9**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=245,slow=4.9,SNR=5.6						
ZALV	**Zalesovo Beam**	**84.02**	**326**	P	**P**	**01 53 32.7**	**-0.4**
	comp=Z,1.1nm,0.4s,baz=122,slow=3.9,SNR=6.9						
YKA	**Yellowknife Ar**	**96.70**	**28**	P	**P**	**01 54 32.9**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=270,slow=4.9,SNR=4.9						
GERES	**GERESS Array B**	**126.91**	**329**	PKP	**PKPdf**	**02 00 06.7**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=57,slow=3.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**152.58**	**285**	PKPbc	**PKPbc**	**02 01 00.1**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=40,slow=2.3,SNR=8.7						

IDC 26 01:43:29.9±3.5, 7°.69S×147°.47E, h120km±41km, mb2.8/2, mb1 2.9/3, mb1mx2.8/35, mbtmp3.2/3, MS3.1/1, Ms1 3.1/1, ms1mx2.6/9, Error ellipse: s-maj=108.3km s-min=40.1km az=112.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**1.73**	**190**	P	Pn	01 44 00.6	+0.5
	25nm,0.3s,baz=16,slow=7.4,SNR=32						
PMG				S	Sn	01 44 23.3	+0.2
	16nm,0.3s,baz=5.4,slow=2.7,SNR=12						
WRA	**Warramunga Arr**	**17.61**	**225**	P	P	01 47 27.2	+0.1
	0.1nm,0.3s,baz=52,slow=10,SNR=4.4						
ASAR	**Alice Springs**	**20.53**	**218**	P	P	01 47 58.8	-0.2
	0.4nm,0.3s,baz=49,slow=9.2,SNR=6.5						
GUMO	**Guam**	**21.30**	**353**	LR	LR	01 56 45.3	
	comp=Z,49nm,18.3s,baz=282,slow=37						
MKAR	**Makanchi Array**	**79.09**	**321**	P	P	01 55 20.3	-0.8
	0.1nm,0.6s,baz=109,slow=7.8,SNR=2.9						
TORD	**Torodi Ar. Bea**	**145.93**	**282**	PKPbc	PKPbc	02 02 56.6	+0.1
	0.2nm,0.4s,baz=58,slow=5.4,SNR=4.2						

IDC 26 02:20:30.2±56.0, 19°.30S×176°.37W, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.6/22, mbtmp3.8/3, Error ellipse: s-maj=1049.0km s-min=185.6km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.69**	**243**	P	P	02 28 04.8	+0.4
	1.4nm,0.9s,baz=97,slow=8.1,SNR=3.0						
ASAR	**Alice Springs**	**46.29**	**255**	P	P	02 28 56.9	-1.1
	1.0nm,0.6s,baz=91,slow=8.3,SNR=23						
WRA	**Warramunga Arr**	**46.30**	**261**	P	P	02 28 58.8	+0.7
	0.7nm,0.9s,baz=96,slow=8.2,SNR=5.8						

NCEDC ***26*** *02:22:56.2±0.8, 38°.80N±0°.01×122°.74W±0°.01, h3km±4km, Md2.1/10, Error ellipse: s-maj=1.8km s-min=1.6km az=204.0*
NEIC 26 02:22:56.8±0.9, 38°.79N±0°.01×122°.739W±0°.009, h2km±5km, Error ellipse: s-maj=1.7km s-min=1.0km az=192.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.05**	**294**		Pg	02 22 57.3	-0.6
GBGM	**Boggs Mountain**	**0.05**	**61**		Pg	02 22 57.4	-0.5
GAXM	**Alexander Vall**	**0.08**	**189**		Pg	02 22 58.0	-0.3
GSGM	**Seigler Mounta**	**0.08**	**16**		Pg	02 22 58.1	-0.3
GACM	**Adobe Creek**	**0.13**	**311**		Pg	02 22 59.0	-0.3
NHSM	**Mount Saint He**	**0.16**	**143**		Pg	02 22 59.8	-0.2
GPMM	**Pine Mountain**	**0.17**	**290**		Pg	02 23 00.0	-0.1
GMKM	**Mount Konoctai**	**0.18**	**348**		Pg	02 23 00.1	-0.3
GCVM	**Cloverdale**	**0.21**	**265**		Pg	02 23 01.0	+0.1
NMTM	**Middletown**	**0.23**	**86**		Pg	02 23 00.8	-0.4
MAC	**Mark West Spri**	**0.24**	**177**		Pg	02 23 01.4	+0.1
NMCNC	**Mill Creek, So**	**0.24**	**215**		Pg	02 23 01.5	+0.1
MNRC	**McLaughlin Min**	**0.25**	**69**		Pg	02 23 01.8	+0.2
NSHM	**Saint Helena R**	**0.29**	**159**		Pg	02 23 02.3	0.0
GWKM	**Walker Ridge**	**0.33**	**36**		Pg	02 23 03.8	+0.7
HOPS	**Hopland Field**	**0.33**	**308**		Sg	02 23 03.1	-4.4
HOPS	**Hopland Field**	**0.33**	**308**	Pg	Pg	02 23 02.5	-0.7
GHLM	**Highland Sprin**	**0.33**	**319**		Pg	02 23 02.9	-0.3
GSNM	**Snow Mountain**	**0.39**	**293**		Pg	02 23 04.3	+0.1
GDCM	**Dry Creek**	**0.39**	**267**		Pg	02 23 04.5	+0.2
GHCM	**House Creek**	**0.40**	**243**		Pg	02 23 04.8	+0.3
NTYM	**Taylor**	**0.40**	**171**		Pg	02 23 04.7	+0.2
FTR	**Fort Ross**	**0.42**	**231**		Pg	02 23 05.7	+0.8
NBPM	**Berryessa Peak**	**0.44**	**106**		Pb	02 23 06.6	-0.7
CVS	**Carmenet Viney**	**0.49**	**153**		Pg	02 23 06.1	-0.2
NAPC	**Atlas Peak**	**0.52**	**132**		Pg	02 23 06.6	-0.1
GGUM	**Gualala**	**0.60**	**277**		Pg	02 23 08.4	+0.2
SNT	**Sears Point**	**0.65**	**160**		Pg	02 23 08.7	-0.4
MCCM	**Marconi Confer**	**0.65**	**190**		Sg	02 23 09.7	-8.0
MCCM	**Marconi Confer**	**0.65**	**190**	Pg	Pg	02 23 09.3	0.0
GHOM	**Hamilton Openi**	**0.68**	**293**		Pg	02 23 10.1	+0.4
NADM	**Allendale**	**0.69**	**118**		Pb	02 23 11.2	-0.2
NOLM	**Olema**	**0.75**	**183**		Pg	02 23 11.4	+0.3
GNAM	**Navarro Ridge**	**0.81**	**301**		Pb	02 23 12.9	-0.6
ORV	**Oroville**	**1.23**	**51**	Pg	Pb	02 23 20.8	+0.1
AFDM	**Forest Hills D**	**1.39**	**83**	Pn	Pn	02 23 20.3	-2.9
RUBR	**Rubicon Trail**	**2.03**	**82**	Pn	Pn	02 23 31.6	-0.6
BEKR	**Beckworth**	**2.14**	**59**		Pn	02 23 32.7	-0.9
BEKR					Sn	02 24 01.3	+0.5
WAKR	**Walker**	**2.60**	**95**	Pn	Pn	02 23 39.8	-0.2

IDC ***26*** *02:32:42.2±1.4, 11°.06N×124°.49E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/40, mbtmp3.7/5, Error ellipse: s-maj=170.7km s-min=20.7km az=69.0*
MAN ***26*** *02:32:44.0, 11°.09N×124°.59E, h0km, mb4.7, ML3.6, MS3.5*
ISC 26 02:32:43.8±0.9, 11°.10N±0°.07×124°.57E±0°.07, h11km, n10, σ1s58/13, mb3.8/5, 1C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.06**	**144**	*e*P	Pg	02 32 40.7	-5.4
OCLP				*e*S	**Sg**	**02 32 46.6**	**-1.1**
LLP	**Lapu-Lapu**	**0.98**	**217**	⇑*e*P	**Pn**	**02 33 03.5**	**0.0**
LLP				*i* S	**Sn**	**02 33 18.9**	**+1.5**
MSLP	**Maasin**	**1.00**	**164**	*e*P	**Pb**	**02 33 03.2**	**0.0**
MSLP				*e*S	**Sn**	**02 33 21.3**	**+3.4**
RCP	**Roxas**	**1.85**	**284**	⇓*e*P	**Pb**	**02 33 17.2**	**-0.4**
RCP				*e*S	**Sg**	**02 33 42.6**	**-0.7**
KCP	**Kidapawan**	**4.10**	**173**	⇓*e*P	**Pb**	**02 33 53.3**	**-2.8**
WRA	**Warramunga Arr**	**32.31**	**163**	P	**P**	**02 39 13.7**	**+0.6**
	1.0nm,0.9s,baz=342,slow=10.0,SNR=2.9						
ASAR	**Alice Springs**	**35.74**	**165**	P	**P**	**02 39 42.2**	**-0.7**
	1.7nm,0.9s,baz=346,slow=8.3,SNR=11						
SONM	**Songino Array**	**39.68**	**341**	P	**P**	**02 40 15.6**	**-0.4**
	0.4nm,0.8s,baz=154,slow=10,SNR=3.3						
MKAR	**Makanchi Array**	**50.36**	**323**	P	**P**	**02 41 41.0**	**0.0**
	0.3nm,0.9s,baz=113,slow=5.5,SNR=2.3						
ARCES	**ARCESS Array B**	**82.84**	**340**	P	**P**	**02 45 08.8**	**+0.8**
	3.4nm,1.0s,baz=88,slow=7.6,SNR=4.4						

IDC ***26*** *02:33:15.1±1.0, 11°.17N×124°.73E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.8/39, mbtmp3.9/8, Error ellipse: s-maj=49.8km s-min=19.7km az=66.0*
NEIC ***26*** *02:33:20.1±1.1, 11°.2N±0°.1×124°.8E±0°.2, h35km±2km, mb4.2/6, Error ellipse: s-maj=27.0km s-min=14.6km az=69.0*
ISC 26 02:33:18.0±0.8, 11°.18N±0°.08×124°.7E±0°.1, h17km, n17, σ1s29/17, mb4.0/9, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**1.13**	**220**	*e*P	**Pn**	**02 33 36.6**	**-2.4**
LLP				*e*S	**Sb**	**02 33 51.3**	**-2.1**
SNPH	**Sibulan**	**2.33**	**218**	*i* P	**Pn**	**02 33 56.4**	**+0.7**
SNPH				*i* S	**Sb**	**02 34 30.7**	**+2.5**
DAV	**Davao City (W)**	**4.18**	**168**	Pn	**Pn**	**02 34 21.0**	**-0.1**
SBUM	**Sibu**	**15.12**	**236**	Pn	**Pn**	**02 36 52.7**	**+1.7**
SBUM				IAmb	IAmb	02 37 02.8	
	comp=Z,15nm,1.4s						
CMAR	**Chiang Mai Arr**	**25.91**	**289**	P	**P**	**02 38 49.2**	**-0.3**
	comp=Z,1.0nm,0.3s,baz=86,slow=5.5,SNR=6.1						
WRA	**Warramunga Arr**	**32.35**	**163**	P	**P**	**02 39 46.3**	**-0.5**
	comp=Z,0.9nm,0.9s,baz=344,slow=9.7,SNR=5.5						
WRA	**Warramunga Arr**	**32.35**	**163**	IAmb	IAmb	02 39 48.6	
	comp=Z,0.4nm,1.3s						
ASAR	**Alice Springs**	**35.78**	**165**	P	**P**	**02 40 16.0**	**-0.5**
	comp=Z,1.7nm,0.8s,baz=345,slow=7.3,SNR=9.2						
SONM	**Songino Array**	**39.64**	**341**	P	**P**	**02 40 48.7**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=163,slow=6.4,SNR=4.1						
SONM	**Songino Array**	**39.64**	**341**	IAmb	IAmb	02 40 52.2	
	comp=Z,1.4nm,1.2s						
MKAR	**Makanchi Array**	**50.38**	**323**	P	**P**	**02 42 15.5**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=120,slow=8.8,SNR=4.8						
KURK	**Kurchatov**	**54.45**	**326**	P	**P**	**02 42 44.9**	**+0.5**
KK31	**Karatay Array**	**56.52**	**315**	P	**P**	**02 42 59.4**	**-0.2**
KKAR	**Karatay Array**	**56.52**	**315**	P	**P**	**02 42 59.7**	**+0.1**
KKAR				IAmb	IAmb	02 43 02.1	
	comp=Z,6.6nm,1.5s						
ARCES	**ARCESS Array B**	**82.81**	**340**	P	**P**	**02 45 40.2**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=78,slow=6.5,SNR=8.6						
FINES	**FINESS Array B**	**84.36**	**331**	P	**P**	**02 45 48.9**	**-0.3**
	comp=Z,5.2nm,1.1s,baz=84,slow=4.3,SNR=5.2						
YKA	**Yellowknife Ar**	**93.55**	**24**	P	**P**	**02 46 33.3**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=298,slow=4.6,SNR=3.3						

IDC 26 02:38:38.0±1.3, 12°.45N×142°.99E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/39, mbtmp3.9/6, Error ellipse: s-maj=56.0km s-min=19.5km az=87.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy**	**23.60**	**72**	T	T	03 08 17.5	
	baz=258						
H11S1	**WAKE ISLAND Hy**	**23.62**	**72**	T	T	03 08 18.5	
	baz=259						
H11S2	**WAKE ISLAND Hy**	**23.62**	**72**	T	T	03 08 21.4	
	baz=258						
H11N1	**WAKE ISLAND Hy**	**24.06**	**69**	T	T	03 08 48.6	
	baz=255						
H11N2	**WAKE ISLAND Hy**	**24.07**	**69**	T	T	03 08 53.7	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**24.07**	**69**	T	T	03 08 53.1	
	baz=255						
WRA	**Warramunga Arr**	**33.29**	**195**	P	P	02 45 17.0	-0.5
	1.9nm,0.6s,baz=17,slow=9.6,SNR=6.5						
FITZ	**Fitzroy Crossi**	**34.85**	**210**	P	P	02 45 31.8	+0.8
	1.8nm,0.6s,baz=0.0,slow=1.0,SNR=3.8						
ASAR	**Alice Springs**	**36.97**	**194**	P	P	02 45 49.2	-0.1
	1.0nm,0.7s,baz=26,slow=12,SNR=24						
KLR	**Kul'dur**	**37.84**	**348**	P	P	02 45 57.0	+0.6
	2.4nm,0.8s,baz=180,slow=8.1,SNR=7.3						
SONM	**Songino Array**	**46.64**	**326**	P	P	02 47 07.8	-0.5
	0.3nm,0.6s,baz=147,slow=8.1,SNR=2.9						
MKAR	**Makanchi Array**	**61.05**	**317**	P	P	02 48 53.1	-0.6
	1.0nm,1.0s,baz=95,slow=8.7,SNR=5.0						
LPAZ	**La Paz**	**149.63**	**101**	PKPbc	PKPbc	02 58 31.0	-0.4
	2.0nm,0.9s,baz=293,slow=3.0,SNR=5.8						

NCEDC ***26*** *02:39:47.3±2.3, 38°.81N±0°.01×122°.79W±0°.02, h1km±5km, Md2.9/147, Error ellipse: s-maj=2.1km s-min=1.6km az=221.0*
NEIC 26 02:39:47.8±2.0, 38°.79N±0°.01×122°.79W±0°.01, h11km±3km, Error ellipse: s-maj=2.1km s-min=1.1km az=219.0, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GDXM	**Geysers**	**0.02**	**338**		Sg	02 39 47.9	-3.3
GDXM	**Geysers**	**0.02**	**338**	Pg	Pg	02 39 47.8	-2.1
GSGM	**Seigler Mounta**	**0.10**	**38**		Pg	02 39 49.8	-0.6
GACM	**Adobe Creek**	**0.10**	**324**		Pg	02 39 49.4	-1.2
GPMM	**Pine Mountain**	**0.14**	**295**		Pg	02 39 50.4	-0.7
GMKM	**Mount Konoctai**	**0.18**	**360**		Pg	02 39 51.3	-0.4
GCVM	**Cloverdale**	**0.18**	**264**		Pg	02 39 51.4	-0.2
NHSM	**Mount Saint He**	**0.19**	**135**		Pg	02 39 51.5	-0.4
NMCNC	**Mill Creek, So**	**0.22**	**207**		Pg	02 39 52.4	0.0
MAC	**Mark West Spri**	**0.24**	**168**		Pg	02 39 53.0	+0.2
NMTM	**Middletown**	**0.27**	**87**		Pg	02 39 53.0	-0.2
MNRC	**McLaughlin Min**	**0.28**	**72

MNHB	**New Hogan Dam**	**1.68**	**112**			Pn	02 40 16.1	-1.0
O03E	**Paynes Creek**	**1.68**	**27**			Pn	02 40 17.3	+0.1
MHC	**Mount Hamilton**	**1.70**	**148**			Pn	02 40 16.9	-0.7
ARN	**Arnold Ranch**	**1.75**	**145**			Pn	02 40 17.9	-0.2
JSTM	**Santa Teresa H**	**1.76**	**153**			Pn	02 40 17.2	-1.0
JUMM	**Mount Umunhum**	**1.77**	**156**			Pn	02 40 17.7	-0.8
WDC	**Whiskeytown Da**	**1.80**	**6**			Pb	02 40 20.6	-0.1
WDC	**Whiskeytown Da**	**1.80**	**6**		Pn	Pn	02 40 19.2	+0.5
JLAB	**Laurel Hill**	**1.83**	**153**			Pn	02 40 18.2	-1.0
MCUB	**Copperopolis B**	**1.89**	**115**			Pn	02 40 19.7	-0.2
HSPM	**Sheep**	**1.95**	**149**			Pn	02 40 20.5	-0.4
DONR	**Donner Summit**	**2.00**	**73**			Pn	02 40 22.7	+1.0
CMB	**Columbia Colle**	**2.03**	**111**			Pn	02 40 22.3	+0.3
CMB	**Columbia Colle**	**2.03**	**111**		Pn	Pn	02 40 22.0	0.0
IND	**Independence**	**2.04**	**71**			Pb	02 40 23.9	-1.1
RUBR	**Rubicon Trail**	**2.07**	**82**			Pn	02 40 24.0	+1.3
TAHR	**Tahoe**	**2.08**	**79**			Pn	02 40 24.1	+1.3
HPCM	**Pacheco Lake**	**2.10**	**145**			Pn	02 40 22.5	-0.4
EMB	**Emerald Bay**	**2.10**	**84**			Pn	02 40 24.5	+1.4
SLD	**San Luis Dam**	**2.11**	**144**			Pn	02 40 22.7	-0.4
KBF	**Kyburz Flat**	**2.12**	**70**			Pb	02 40 25.1	-1.3
SFJWR	**San Luis Fatjo**	**2.16**	**143**			Pn	02 40 23.4	-0.2
LOY	**Loyalton**	**2.16**	**66**			Pb	02 40 25.8	-1.2
BEKR	**Beckworth**	**2.17**	**59**			Pn	02 40 24.4	+0.5
MPK	**Martis Peak**	**2.20**	**76**			Pb	02 40 26.2	-1.6
HJGM	**San Juan Grade**	**2.21**	**154**			Pn	02 40 23.6	-0.8
SAO	**San Andreas Ge**	**2.28**	**152**			Pn	02 40 24.5	-0.9
SAO	**San Andreas Ge**	**2.28**	**152**			Pn	02 40 25.1	-0.3
GNO	**Genoa**	**2.29**	**86**			Pn	02 40 27.4	+1.6
MYLM	**Yosemite Lake**	**2.33**	**126**			Pn	02 40 25.7	-0.4
BMRR	**Black Mountain**	**2.34**	**55**			Pb	02 40 28.3	-1.8
PEAR	**Peavine Mounta**	**2.34**	**69**			Pn	02 40 27.3	+0.8
BCGM	**Cienega Road**	**2.37**	**151**			Pn	02 40 25.9	-0.8
BPCNC	**Pine Canyon**	**2.40**	**157**			Pn	02 40 25.4	-1.6
BLRM	**Lewis Ranch**	**2.44**	**150**			Pn	02 40 26.6	-0.9
SCZ	**Santa Cruz**	**2.45**	**153**			Pn	02 40 26.1	-1.5
BFC	**Buffalo Canyon**	**2.48**	**87**			Pb	02 40 30.5	-2.0
VCNR	**Virginia City**	**2.49**	**77**			Pn	02 40 29.0	+0.5
BJCM	**Johnson Can.**	**2.50**	**153**			Pn	02 40 26.8	-1.5
PNTR	**Pine Nut**	**2.50**	**82**			Pn	02 40 30.6	+2.0
BEMM	**Emmet**	**2.51**	**147**			Pn	02 40 27.6	-1.0
HAST	**Hastings Reser**	**2.59**	**157**			Pn	02 40 28.3	-1.3
BSMM	**Soledad Missio**	**2.63**	**155**			Pn	02 40 29.9	-0.4
WAKR	**Walker**	**2.64**	**95**			Pn	02 40 32.6	+2.1
BBNM	**San Benito**	**2.65**	**149**			Pn	02 40 30.0	-0.5
BMSM	**Mercy Hot Spri**	**2.65**	**143**			Pn	02 40 30.5	0.0
YERR	**Yerington**	**2.77**	**85**			Pn	02 40 33.3	+1.0
PAHR	**Pah Rah Range**	**2.79**	**70**		Pn	Pn	02 40 33.6	+1.0
YBH	**Yreka Blue Hor**	**2.94**	**1**			Pg	02 40 42.6	-1.5
PMPB	**Monarch Peak**	**3.02**	**148**			Pn	02 40 37.1	+1.6
MDPB	**Devils Postpil**	**3.14**	**110**		Pn	Pn	02 40 38.5	+1.0
OMMB	**Old Mammoth Mi**	**3.21**	**110**			Pn	02 40 39.7	+1.3
RYN	**Ryan**	**3.34**	**91**		Pn	Pn	02 40 40.0	0.0
NVAR	**Mina Array Bea**	**3.53**	**94**		Pn	Pn	02 40 42.8	+0.1
NV11	**Mina Array Sit**	**3.65**	**94**		Pn	Pn	02 40 44.6	+0.3
KVN	**Kaiserville**	**3.66**	**84**			Pn	02 40 45.3	+0.7
HUMO	**Hull Mountain**	**3.81**	**358**			Pg	02 40 59.1	-1.7
TPNV	**Topopah Spring**	**5.49**	**108**			Pg	02 41 28.6	-4.3

IDC ***26*** *02:41:37.9±0.4, 11°.18N×124°.66E, h0km, mb4.4/26, mb1 4.6/26, mb1mx4.5/39, mbtmp4.4/26, MS4.3/14, Ms1 4.4/14, ms1mx4.0/38, Error ellipse: s-maj=18.6km s-min=11.4km az=77.0*

MAN ***26*** *02:41:38.0, 11°.25N×124°.70E, h1km, mb5.6, ML4.6, MS5.0*
MAN Intensity IV - Carigara Leyte; Intensity III - Pastrana and Isabel Leyte.

GCMT ***26*** *02:41:38.9±0.2, 11°.20N±0°.01×124°.65E±0°.02, h12km, MW5.0/110, Moment Tensor Solution. s44,c54; s110,c181; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.66±.11; Mθθ4.27±.08; Mϕϕ-1.61±.11; Mrθ0.95±.29; Mθϕ1.26±.08; Mϕr0.49±.35; Best double couple: M○3.77900×10¹⁶ NP1:ϕs96.00000°, δ39.00000°, λ-65.00000°. NP2:ϕs244.00000°, δ55.00000°, λ-109.00000°. Principal axes: T 4.6730, Plg8.0000°, Azm348.0000°; N -1.7880, Plg16.0000°, Azm256.0000°; P -2.8850, Plg72.0000°, Azm104.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

DJA ***26*** *02:41:43.6±2.1, 11°N±5°×12°5E±°, h23km±14km, M5.0/30, mb4.8/30, mB5.4/9, MLv5.3/1, Mw(mB)4.9/9*

BJI ***26*** *02:41:44.8±0.0, 11°.10N×124°.68E, h67km, mB5.1/57, mb4.8/69, Ms4.8/64, Ms7 4.6/59*

MOS ***26*** *02:41:44.5±1.1, 11°.23N×124°.65E, h58km, mb5.2/42, MS4.7/5, Error ellipse: s-maj=11.0km s-min=5.5km az=116.5*

NEIC ***26*** *02:41:45.9±1.9, 11°.21N±0°.07×124°.62E±0°.10, h55km±5km, mb4.9/76, Error ellipse: s-maj=14.4km s-min=8.2km az=66.0*

ISC 26 02:41:40.6±1.0**, 11°.21N**±0°.02×**124°.65E**±0°.04**, h13**km±6km**, n260**, σt²86**/269**, mb4.9**/118**, MS4.4**/29**, 17C-8D, Leyte**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
MSLP	**Maasin**	**1.08**	**169**	*eP*		**Pb 02 42 00.1**	**-1.2**
LLP	**Lapu-Lapu**	**1.11**	**217**	*eP*		**Pg 02 41 57.8**	**-4.2**
LLP				*i* S		**Sg 02 42 14.4**	**-2.0**
CNP	**Catarmen**	**1.30**	**1**	*eP*		**Pg 02 42 01.8**	**-3.9**
CNP				*eS*		**Sn 02 42 20.6**	**-1.0**
RCP	**Roxas**	**1.90**	**281**⇑	*eP*		**Pn 02 42 12.4**	**-0.3**
RCP				*eS*		**Sg 02 42 41.1**	**-0.6**
GUIM	**Jordan**	**2.10**	**254**	*eP*		**Pn 02 42 15.6**	**+0.1**
GUIM				*eS*		**Sn 02 42 43.9**	**+2.4**
SNPH	**Sibulan**	**2.31**	**217**	*eP*		**Pn 02 42 18.8**	**+0.3**
BUTP	**Butuan**	**2.42**	**157**	*eP*		**Pn 02 42 19.4**	**-0.5**
BUTP				*eS*		**Sg 02 42 58.4**	**-0.1**
PVCP	**Virac**	**2.42**	**349**	*eP*		**Pn 02 42 18.4**	**-1.5**
PVCP				*eS*		**Sg 02 42 56.7**	**-1.9**
CGP	**Cagayan de Oro**	**2.73**	**179**⇓	*eP*		**Pn 02 42 24.9**	**+0.7**
CGP				*eS*		**Sb 02 43 04.7**	**+1.9**
DCPH	**Dipolog City**	**2.90**	**206**⇓	*eP*		**Pn 02 42 27.4**	**+0.9**
BUKP	**Musuan**	**3.33**	**173**	*eP*		**Pn 02 42 33.4**	**+0.9**
BUKP				*eS*		**Sb 02 43 16.3**	**-3.8**
PAGZ	**Pagadian**	**3.56**	**201**	*eP*		**Pn 02 42 35.5**	**-0.1**
PAGZ				*eS*		**Sn 02 43 13.3**	**-4.3**
KCP	**Kidapawan**	**4.19**	**174**⇓	*eP*		**Pn 02 42 47.1**	**+2.7**
KCP				*i* S		Sn 02 43 22.8	-10
DAV	**Davao City (W)**	**4.21**	**167**	Pn		**Pn 02 42 47.6**	**+3.0**
	56nm,0.3s,baz=351,slow=3.1,SNR=5.6						
DAV				LR		LR 02 44 42.8	
	comp=Z,10μm,18.5s,baz=336,slow=44						
DAV	**Davao City (W)**	**4.21**	**167**	⇓*i* P		**Pn 02 42 48.3**	**+3.7**
DAV	**Davao City (W)**	**4.21**	**167**			**Pn 02 42 48.1**	**+3.5**
MATI	**Mati**	**4.52**	**159**	*eP*		**Pn 02 42 52.4**	**+3.6**
TGY	**Tagaytay City**	**4.63**	**309**	Pn		**Pn 02 42 53.3**	**+3.0**
	82nm,0.3s,baz=154,slow=17,SNR=3.7						
TGY				LR		LR 02 44 50.5	
	comp=Z,4μm,20.5s,baz=113,slow=41						
I39PW	**PALAU INFRASON**	**10.43**	**110**	*i*			03 46 20.0
	baz=290,slow=313,SNR=1.5						
TNTI	**Ternate**	**10.71**	**165**	Pn		**Pn 02 44 14.0**	**+0.1**
LBMI	**Labuha**	**12.10**	**166**	P		**Pn 02 44 35.7**	**+2.8**
	2μm57nm,1.4s						
LUWI	**Luwuk**	**12.31**	**189**	P		**Pn 02 44 38.5**	**+2.8**
	3μm98nm,0.8s						
LUWI	**Luwuk**	**12.31**	**189**	Pn		Pn 02 44 42.6	+6.9
APSI	**Ampana**	**12.40**	**194**	P		**Pn 02 44 37.8**	**+0.8**
	719nm42nm,1.3s						
SANI	**Sanana**	**13.23**	**174**	P		**Pn 02 44 48.6**	**+0.2**
	60nm,0.9s						
SIJI	**Sorong**	**13.68**	**151**	LR		LR 02 50 53.9	
	comp=Z,809nm,21.4s,baz=340,slow=41						
TTSI	**Tana Toraja**	**14.95**	**199**	P		**P 02 45 20.4**	**+3.1**
MSAI	**Masohi**	**15.07**	**163**	P		**P 02 45 24.0**	**+5.3**
SBUM	**Sibu**	**15.09**	**236**			**P 02 45 17.0**	**-1.9**
SBUM				IAmb		IAmb 02 45 26.3	
	comp=Z,133nm,1.3s						
SPSI	**Sidrap Palu**	**15.83**	**198**	P		P 02 45 34.7	+7.6
JOW	**Kunigami**	**15.92**	**12**			**P 02 45 27.5**	**-0.5**
BNSI	**Bone**	**16.15**	**196**	P		**P 02 45 33.0**	**+2.4**
	comp=Z,1μmcomp=Z,38nm,0.9s						
QIZ	**Qiongzhong**	**16.26**	**300**	P		**P 02 45 30.0**	**-1.9**
QIZ				S		**Sn 02 48 31.8**	**+2.5**
QIZ				LR		LR	
	comp=Z,1μm,16.5s						
QIZ				LR		LR	
	comp=Z,770nm,14.3s						
QIZ				LR		LR	

	comp=Z,950nm,18.6s							
KAPI	**Kappang**	**16.83**	**197**	P		**P**	**02 45 39.8**	**+1.5**
KAPI				pmax		pmax		
	comp=Z,68nm,1.3s							
KAPI	**Kappang**	**16.83**	**197**	P		**P**	**02 45 39.8**	**+1.5**
KSM	**Kuching**	**17.21**	**237**	P		**P**	**02 45 42.2**	**-0.3**
UBPT	**Khong Chiam**	**19.10**	**284**	P		**Pn**	**02 46 05.2**	**+1.1**
UBPT				IAmb		IAmb	02 46 06.7	
	comp=Z,80nm,1.3s							
SMPI	**Sarmi**	**19.17**	**132**	P		**Pn**	**02 46 06.9**	**+1.9**
	comp=Z,106nm,1.1s							
SSE	**Sheshan**	**20.05**	**351**			Pn	02 46 17.7	+2.4
SSE				IAmb		IAmb	02 46 19.9	
	comp=Z,96nm,1.4s							
SOEI	**Soe**	**20.83**	**181**	P		Pn	02 46 38.7	+14
JAY	**Jayapura**	**21.00**	**130**	LR		LR	02 53 33.4	
	comp=Z,1μm,20.8s,baz=336,slow=34							
NJ2	**Nanjing**	**21.43**	**346**	*eP*		**P**	**02 46 30.5**	**+2.1**
NJ2				pmax		pmax		
	comp=Z,29nm,1.1s							
NJ2				LR		LR		
	comp=Z,1μm,15.8s							
NJ2				LR		LR		
	comp=Z,1μm,15.2s							
NJ2				LR		LR		
	comp=Z,940nm,17.1s							
WHN	**Wuhan**	**21.49**	**335**	⇑P		**P**	**02 46 31.3**	**+2.2**
WHN				pP		sP	02 46 46.0	+11
WHN				S		**S**	**02 50 26.3**	**-0.9**
WHN				pmax		pmax		
	comp=Z,58nm,1.2s							
WHN				LR		LR		
	comp=Z,4μm,14.2s							
WHN				LR		LR		
	comp=Z,2μm,13.0s							
WHN				LR		LR		
	comp=Z,6μm,17.7s							
JAGI	**Jajag, Banyuwa**	**22.16**	**209**	P		**P**	**02 46 41.2**	**+4.7**
	comp=Z,54nm,1.2s							
JAGI	**Jajag, Banyuwa**	**22.16**	**209**	P		**P**	**02 46 36.2**	**-0.2**
SLVN	**Son La**	**22.29**	**299**	P		**P**	**02 46 39.2**	**+1.3**
JNU	**Nakatsue**	**22.55**	**14**	LR		LR	02 54 53.4	
	comp=Z,413nm,21.9s,baz=192,slow=35							
GYA	**Guiyang**	**22.75**	**314**⇑	*i* P		**P**	**02 46 45.3**	**+2.4**
GYA				PP		PnPn	02 47 20.3	+13
GYA				S		**S**	**02 50 52.3**	**+0.7**
GYA				sS		Sn	02 51 14.0	+7.9
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
GYA				pmax		pmax		
	comp=Z,140nm,4.8s							
GYA				LR		LR		
	comp=Z,1μm,16.9s							
GYA				LR		LR		
	comp=Z,440nm,11.3s							
GYA				LR		LR		
	comp=Z,930nm,16.0s							
PBKT	**Sadao Pong**	**23.58**	**286**	P		**P**	**02 46 50.9**	**-0.4**
ENH	**Enshi**	**23.63**	**326**	P		**P**	**02 46 53.0**	**+1.4**
KPJI	**Karang Pucung**	**24.16**	**221**	P		**P**	**02 46 58.7**	**+2.0**
	comp=Z,35nm,0.8s							
IPM	**Ipoh**	**24.32**	**256**	P		**P**	**02 46 58.0**	**-0.3**
IPM				IAmb		IAmb	02 47 11.3	
	comp=Z,80nm,1.6s							
KULM	**Kulim**	**24.45**	**258**	P		**P**	**02 46 58.0**	**-1.5**
KULM				IAmb		IAmb	02 47 10.1	
	comp=Z,82nm,1.8s							
MTN	**Manton Dam**	**24.74**	**165**	P		**P**	**02 47 01.7**	**-0.3**
MTN				IAmb		IAmb	02 47 19.4	
	comp=Z,23nm,0.7s							
KMI	**Kunming**	**24.94**	**307**	P		**P**	**02 47 05.5**	**+1.4**
KMI				pP		sP	02 47 20.0	+10
KMI				PP		**PnPn**	**02 47 44.8**	**+7.8**
KMI				pmax		pmax		
	comp=Z,36nm,1.0s							
KMI				pmax		pmax		
	comp=Z,360nm,5.0s							
KMI				LR		LR		
	comp=Z,740nm,15.0s							
KMI				LR		LR		
	comp=Z,460nm,15.2s							
KMI				LR		LR		
	comp=Z,600nm,14.3s							
KMI	**Kunming**	**24.94**	**307**	P		**P**	**02 47 06.8**	**+2.7**
KMI				pmax		pmax		
	comp=Z,42nm,1.1s							
KMI	**Kunming**	**24.94**	**307**	P		**P**	**02 47 06.8**	**+2.7**
KMI				IAmb		IAmb	02 47 07.5	
	comp=Z,42nm,1.1s							
CISI	**Cisompet, Garu**	**25.06**	**223**	P		**P**	**02 47 03.3**	**-1.6**
MDSI	**Maura Dua**	**25.65**	**234**	P		**P**	**02 47 12.7**	**+2.4**
	comp=Z,5.7nm,1.3s							
TIA	**Tai'an**	**25.81**	**346**	P		**P**	**02 47 12.3**	**+0.7**
TIA				pmax		pmax		
	comp=Z,11nm,0.8s							
TIA				pmax		pmax		
	comp=Z,220nm,5.3s							
TIA				LR		LR		
	comp=Z,470nm,15.1s							
TIA				LR		LR		
	comp=Z,1μm,17.8s							
TIA				LR		LR		
	comp=Z,800nm,17.1s							
BKNI	**Bangkinang**	**25.82**	**247**	P		**P**	**02 47 10.6**	**-1.2**
CM31	**Chiang Mai Arr**	**25.85**	**289**	P		**P**	**02 47 12.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**25.85**	**289**	*i* P		**P**	**02 47 13.3**	**+1.2**
CMAR				pmax		pmax		
	comp=Z,3.0nm,0.8s							
CMAR	**Chiang Mai Arr**	**25.85**	**289**	P		**P**	**02 47 11.8**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=104,slow=7.7,SNR=13							
CMAR				LR		LR	02 57 19.1	
	comp=Z,278nm,20.4s,baz=102,slow=36							
CHTO	**Chiang Mai**	**25.93**	**290**	P		**P**	**02 47 13.3**	**+0.4**
CHTO				pmax		pmax		
	comp=Z,13nm,1.6s							
CHTO	**Chiang Mai**	**25.93**	**290**	P		**P**	**02 47 13.3**	**+0.4**
PSI	**Prapat**	**26.84**	**254**	P		**P**	**02 47 21.7**	**+0.5**
PSI				pmax		pmax		
	comp=Z,20nm,1.2s							
PSI	**Prapat**	**26.84**	**254**	P		**P**	**02 47 21.7**	**+0.5**
	comp=Z,2.3nm,0.3s,baz=96,slow=7.3,SNR=3.4							
RPSI	**Rantau Prapat**	**26.87**	**254**	P		**P**	**02 47 20.7**	**-0.7**
RPSI	**Rantau Prapat**	**26.87**	**254**	P		**P**	**02 47 21.7**	**+0.3**
XAN	**Xi'an**	**26.89**	**330**	P		**P**	**02 47 22.3**	**+0.8**
XAN				pP		sP	02 47 38.5	+11
XAN				PP		**PnPn**	**02 48 09.8**	**+6.3**
XAN				S		**S**	**02 52 02.8**	**+4.8**
XAN				SS		**SnSn**	**02 53 12.3**	**+9.1**
XAN				pmax		pmax		
	comp=Z,29nm,1.3s							
XAN				pmax		pmax		
	comp=Z,290nm,3.0s							
XAN				LR		LR		
	comp=Z,1μm,20.6s							
XAN				LR		LR		
	comp=Z,470nm,23.9s							
XAN				LR		LR		
	comp=Z,1μm,17.6s							
XAN	**Xi'an**	**26.89**	**330**	P		**P**	**02 47 20.8**	**-0.7**
XAN				pmax		pmax		
	comp=Z,41nm,1.2s							
XAN	**Xi'an**	**26.89**	**330**	P		**P**	**02 47 20.8**	**-0.7**
XAN				IAmb		IAmb	02 47 23.6	
	comp=Z,41nm,1.2s							
KNRA	**Kununurra**	**27.02**	**171**	P		**P**	**02 47 23.0**	**+0.4**
KNRA				IAmb		IAmb	02 47 31.8	
	comp=Z,26nm,0.8s							
CD2	**Chengdu**	**27.55**	**319**	P		**P**	**02 47 27.5**	**+0.1**
CD2				sP		sP	02 47 48.0	+15
CD2				S		**S**	**02 52 02.0**	**-6.5**
CD2				sS		sS	02 52 33.5	+18
CD2				pmax		pmax		
	comp=Z,40nm,0.6s							
CD2				pmax		pmax		
	comp=Z,270nm,6.5s							
CD2				LR		LR		
	comp=Z,2μm,15.3s							
CD2				LR		LR		
	comp=Z,2μm,14.5s							
CD2				LR		LR		
	comp=Z,1μm,16.7s							
MJAR	**Matsushiro Arr**	**28.04**	**24**	P		**P**	**02 47 30.4**	**-1.3**
MJAR				pmax		pmax		
	comp=Z,4.0nm,1.3s							
MJAR	**Matsushiro Arr**	**28.04**	**24**	P		**P**	**02 47 30.3**	**-1.3**
	comp=Z,1.2nm,0.7s,baz=168,slow=7.2,SNR=3.4							

MJAR					LR	LR	02 56 54.1	
	comp=Z,517nm,21.4s,baz=200,slow=33							
TIY	**Taiyuan**	**28.58**	**339**	*eP*	**P**		**02 47 38.5**	**+2.0**
TIY				pP	sP		02 47 51.5	+9.1
TIY				sP	pP		02 48 00.3	+20
TIY				S	**S**		**02 52 25.3**	**+0.7**
TIY				sS	sS		02 52 45.0	+14
TIY				pmax	pmax			
	comp=Z,13nm,0.4s							
TIY				pmax	pmax			
	comp=Z,170nm,5.0s							
TIY				LR	LR			
	comp=Z,770nm,14.5s							
TIY				LR	LR			
	comp=Z,870nm,16.6s							
TIY				LR	LR			
	comp=Z,760nm,17.1s							
GSI	**Gunungsitoli**	**28.62**	**252**	P	**P**		**02 47 38.0**	**+1.0**
FITZ	**Fitzroy Crossi**	**29.13**	**178**	P	**P**		**02 47 40.1**	**-1.4**
	comp=Z,7.8nm,0.7s,baz=5.8,slow=10,SNR=8.4							
FITZ	**Fitzroy Crossi**	**29.13**	**178**	P	**P**		**02 47 41.7**	**+0.2**
BJI	**Beijing**	**29.68**	**347**	P	**P**		**02 47 49.5**	**+3.3**
BJI				pP	sP		02 48 00.5	+8.5
BJI				sP	pP		02 48 07.5	+17
BJI				S	**S**		**02 52 43.5**	**+1.9**
BJI				pmax	pmax			
	comp=Z,10.0nm,1.4s							
BJI				LR	LR			
	comp=Z,380nm,15.9s							
BJI				LR	LR			
	comp=Z,590nm,19.2s							
LZH	**Lanzhou**	**31.11**	**326**	⇑P	**P**		**02 48 01.5**	**+2.4**
LZH				pP	sP		02 48 15.3	+10
LZH				S	**S**		**02 53 04.8**	**+0.3**
LZH				sS	sS		02 53 28.0	+17
LZH				pmax	pmax			
	comp=Z,27nm,1.3s							
LZH				pmax	pmax			
	comp=Z,120nm,5.7s							
LZH				LR	LR			
	comp=Z,2μm,14.6s							
LZH				LR	LR			
	comp=Z,2μm,14.6s							
LZH				LR	LR			
	comp=Z,3μm,16.8s							
HHC	**Hu-ho-hao-te**	**31.70**	**341**	*eP*	**P**		**02 48 05.0**	**+0.8**
HHC				pP	sP		02 48 22.3	+12
HHC				sP	pP		02 48 27.5	+19
HHC				S	**S**		**02 53 16.0**	**+2.5**
HHC				sS	sS		02 53 36.3	+16
HHC				pmax	pmax			
	comp=Z,6.0nm,1.2s							
HHC				pmax	pmax			
	comp=Z,77nm,4.3s							
HHC				LR	LR			
	comp=Z,800nm,15.3s							
HHC				LR	LR			
	comp=Z,450nm,14.9s							
HHC				LR	LR			
	comp=Z,910nm,16.9s							
WB0	**Warramunga Arr**	**32.24**	**163**	P	**P**		**02 48 08.6**	**-0.4**
WB0				IAmb	IAmb		02 48 36.8	
	comp=Z,13nm,1.1s							
WRA	**Warramunga Arr**	**32.39**	**163**	*i* P	**P**		**02 48 10.8**	**+0.5**
WRA				pmax	pmax			
	comp=Z,3.0nm,0.8s							
WRA	**Warramunga Arr**	**32.39**	**163**	P	**P**		**02 48 07.3**	**-2.9**
	comp=Z,2.7nm,0.8s,baz=341,slow=9.3,SNR=9.0							
WRA				PcP	**PcP**		**02 50 57.0**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=344,slow=2.8,SNR=3.7							
USRK	**Ussuriysk Ar.**	**33.48**	**10**	P	**P**		**02 48 18.4**	**-1.1**
	comp=Z,6.3nm,0.8s,baz=190,slow=7.2,SNR=9.0							
USRK				LR	LR		03 01 44.0	
	comp=Z,374nm,20.6s,baz=171,slow=36							
MDJ	**Mudanjiang**	**33.56**	**6**	P	**P**		**02 48 23.3**	**+3.0**
MDJ				S	**S**		**02 53 43.5**	**+1.3**
MDJ				PcS	**PcS**		**02 54 49.8**	**+3.4**
MDJ				SS	**SnSn**		**02 55 45.0**	**-0.2**
MDJ				pmax	pmax			
	comp=Z,17nm,1.9s							
MDJ				pmax	pmax			
	comp=Z,160nm,3.5s							
MDJ				LR	LR			
	comp=Z,660nm,10.3s							
MDJ				LR	LR			
	comp=Z,970nm,16.0s							
MDJ				LR	LR			
	comp=Z,560nm,16.5s							
SHL	**Shillong**	**34.10**	**299**	P	**P**		**02 48 25.0**	**-0.4**
SHL				pmax	pmax			
	comp=Z,38nm,1.4s							
SHL	**Shillong**	**34.10**	**299**	P	**P**		**02 48 25.0**	**-0.4**
GTA	**Gaotai**	**35.72**	**326**	*eP*	**P**		**02 48 39.8**	**+0.7**
GTA				pP	sP		02 48 55.0	+10
GTA				sP	pP		02 49 01.8	+19
GTA				S	**S**		**02 54 14.5**	**-1.3**
GTA				sS	ScP		02 54 39.3	-14
GTA				pmax	pmax			
	comp=Z,8.0nm,1.6s							
GTA				pmax	pmax			
	comp=Z,190nm,6.7s							
GTA				LR	LR			
	comp=Z,720nm,15.9s							
GTA				LR	LR			
	comp=Z,980nm,18.7s							
GTA				LR	LR			
	comp=Z,2μm,16.5s							
AS31	**Alice Springs**	**35.82**	**165**	P	**P**		**02 48 40.4**	**+0.3**
ASAR	**Alice Springs**	**35.82**	**165**	P	**P**		**02 48 38.6**	**-1.4**
	comp=Z,7.6nm,0.7s,baz=348,slow=7.2,SNR=67							
ASAR				PcP	**PcP**		**02 51 07.8**	**+0.1**
	comp=Z,1.1nm,0.6s,baz=348,slow=2.9,SNR=5.3							
ASAR				LR	LR		03 04 45.9	
	comp=Z,306nm,19.5s,baz=352,slow=39							
LSA	**Lhasa**	**36.19**	**306**	P	**P**		**02 48 45.3**	**+1.6**
LSA				pmax	pmax			
	comp=Z,77nm,1.2s							
LSA	**Lhasa**	**36.19**	**306**	P	**P**		**02 48 44.0**	**+0.2**
LSA				pmax	pmax			
	comp=Z,38nm,1.4s							
LSA	**Lhasa**	**36.19**	**306**	P	**P**

GKN	**Gorkha**	**41.00**	**300**	*e*P		**P**	**02 49 23.4**	**-0.4**
	comp=Z,84nm,1.2s								
H11N1	**WAKE ISLAND Hy**	**41.49**	**73**	T		T	03 32 57.6		
	baz=265,slow=74,SNR=24								
H11N2	**WAKE ISLAND Hy**	**41.50**	**73**	T		T	03 32 58.2		
	baz=265,slow=74,SNR=17								
H11N3	**WAKE ISLAND Hy**	**41.51**	**73**	T		T	03 32 59.1		
	baz=265,slow=74,SNR=22								
KOLN	**Koldanda**	**41.82**	**299**	*e*P		**P**	**02 49 30.6**	**-0.1**
	comp=Z,117nm,1.2s								
DANN	**Dangsing**	**41.84**	**300**	*e*P		**P**	**02 49 30.6**	**-0.3**
	comp=Z,113nm,1.0s								
FORT	**Forrest**	**41.87**	**176**	P		**P**	**02 49 30.8**	**+0.1**
ZEA	**Zeya**	**42.47**	**2**	*e*P		**P**	**02 49 36.8**	**+1.5**
ZEA				pmax	pmax				
	comp=Z,21nm,1.2s								
ZEA				MLR	MLR				
	comp=Z,900nm,15.0s								
ZEA				MLR	MLR				
	comp=E,400nm,12.0s								
ZEA				MLR	MLR				
	comp=N,600nm,16.0s								
ZAK	**Zakamensk**	**42.84**	**340**	*e*P		**P**	**02 49 38.4**	**0.0**
ZAK				pmax	pmax				
	comp=Z,5.0nm,1.2s								
ZAK				pmax	pmax				
	comp=Z,4.0nm,1.0s								
TLY	**Talaya**	**43.83**	**341**	*e*P		**P**	**02 49 47.8**	**+1.4**
TLY				*e*S		**S**	**02 56 13.2**	**-3.7**
TLY				pmax	pmax				
	comp=Z,36nm,0.9s								
TLY				MLR	MLR				
	comp=Z,2μm,17.0s								
TLY	**Talaya**	**43.83**	**341**	P		P	**02 49 46.5**	**+0.2**
TLY				IAmb	IAmb		02 49 49.4		
	comp=Z,30nm,1.4s								
MOY	**Mondy**	**44.70**	**339**	*e*P		**P**	**02 49 54.9**	**+1.5**
MOY				pmax	pmax				
	comp=Z,71nm,2.4s								
HYB	**Hyderabad**	**45.00**	**283**	*i* P		**P**	**02 49 57.5**	**+1.2**
BBOO	**Buckleboo**	**45.10**	**166**	P		**P**	**02 49 56.8**	**+0.1**
WMQ	**Urumqi**	**45.51**	**322**	*e*P		**P**	**02 50 02.5**	**+2.5**
WMQ				pP		sP	02 50 12.3	+6.4
WMQ				sP		pP	02 50 22.8	+19
WMQ				pmax	pmax				
	comp=Z,15nm,1.3s								
WMQ				pmax	pmax				
	comp=Z,180nm,5.9s								
STKA	**Stephens Creek**	**45.81**	**160**	P		**P**	**02 50 02.7**	**+0.4**
STKA				pmax	pmax				
	comp=Z,8.0nm,1.8s								
STKA	**Stephens Creek**	**45.81**	**160**	P		**P**	**02 50 01.2**	**-1.1**
	comp=Z,6.0nm,0.7s,baz=330,slow=8.4,SNR=16								
STKA	**Stephens Creek**	**45.81**	**160**	P		**P**	**02 50 02.7**	**+0.4**
BOD	**Bodaibo**	**47.22**	**352**	*e*P		**P**	**02 50 13.4**	**+0.3**
BOD				pmax	pmax				
	comp=Z,23nm,1.8s								
PETK	**Petropavlovsk-**	**49.47**	**26**	P		**P**	**02 50 29.9**	**-0.6**
	comp=Z,2.6nm,0.7s,baz=187,slow=6.4,SNR=4.9								
PETK				LR		LR	03 08 55.4		
	comp=Z,316nm,21.9s,baz=239,slow=33								
MK31	**Makanchi Array**	**50.32**	**323**	P		**P**	**02 50 37.4**	**+0.2**
MK31				pmax	pmax				
	comp=Z,21nm,1.6s								
MK31	**Makanchi Array**	**50.32**	**323**	P		**P**	**02 50 37.4**	**+0.2**
MK31				IAmb	IAmb		02 50 43.2		
	comp=Z,21nm,1.6s								
MKAR	**Makanchi Array**	**50.32**	**323**	*i* P		**P**	**02 50 39.2**	**+2.0**
MKAR				pmax	pmax				
	comp=Z,4.0nm,0.9s								
MKAR	**Makanchi Array**	**50.32**	**323**	P		**P**	**02 50 38.1**	**+1.0**
	comp=Z,3.8nm,0.8s,baz=125,slow=8.5,SNR=27								
MKAR				PcP		**PcP**	**02 51 56.3**	**+0.4**
	comp=Z,0.9nm,0.6s,baz=114,slow=4.4,SNR=4.0								
MKAR				LR		LR	03 13 29.6		
	comp=Z,486nm,19.3s,baz=111,slow=38								
MAKZ	**Makanchi**	**50.52**	**323**	P		**P**	**02 50 38.7**	**+0.1**
MAKZ				pmax	pmax				
	comp=Z,23nm,1.5s								
MAKZ	**Makanchi**	**50.52**	**323**	P		**P**	**02 50 38.7**	**+0.1**
MAKZ				IAmb	IAmb		02 50 46.2		
	comp=Z,23nm,1.5s								
YAK	**Yakutsk**	**50.87**	**3**	*e*P		**P**	**02 50 40.0**	**-0.9**
YAK				*e**PP	sP		02 50 54.4	+7.5
YAK				*e*			02 51 50.8		
YAK				*e*			02 52 36.3		
YAK				*e*PPP	PPP		02 53 36.1		
YAK				*e*S		**S**	**02 57 52.4**	**-4.3**
YAK				*e***SS	sS		02 58 20.0	+16
YAK				*e*			03 00 26.6		
YAK				*e*SS		**SS**	**03 01 31.5**	**+0.1**
YAK				*e*SSS	SSS		03 03 06.9		
YAK				pmax	pmax				
	comp=Z,19nm,1.0s								
YAK				pmax	pmax				
	comp=N,11nm,1.1s								
YAK				pmax	pmax				
	comp=E,5.0nm,1.3s								
YAK				pmax	pmax				
	comp=Z,82nm,2.8s								
YAK				pmax	pmax				
	comp=N,33nm,2.4s								
YAK				pmax	pmax				
	comp=E,63nm,2.8s								
YAK				smax	smax				
	comp=N,73nm,3.2s								
YAK				smax	smax				
	comp=E,75nm,3.3s								
YAK	**Yakutsk**	**50.87**	**3**	P		**P**	**02 50 39.9**	**-1.1**
KSH	**Kashi**	**51.42**	**312**	P		**P**	**02 50 49.3**	**+3.6**
KSH				pP		sP	02 51 02.0	+10
KSH				PP		**PP**	**02 52 45.5**	**+2.6**
KSH				S		**S**	**02 58 02.5**	**-2.9**
KSH				sS		sS	02 58 29.0	+17
KSH				SS		**SS**	**03 01 36.3**	**-5.0**
KSH				pmax	pmax				
	comp=E,61nm,1.4s								
KSH				LR		LR			
	comp=E,300nm,4.7s								
KSH				LR		LR			
	comp=E,210nm,5.3s								
KSH				LR		LR			
	comp=E,580nm,8.4s								
NIL	**Nilore**	**51.89**	**304**	P		**P**	**02 50 48.7**	**-0.5**
NIL				pmax	pmax				
	comp=Z,27nm,1.0s								
NIL	**Nilore**	**51.89**	**304**	P		**P**	**02 50 48.7**	**-0.5**
NRN	**Naryn**	**52.07**	**314**	P		**P**	**02 50 50.0**	**-0.7**
NRN				pmax	pmax				
	comp=Z,13nm,1.3s								
NRN	**Naryn**	**52.07**	**314**	P		**P**	**02 50 50.0**	**-0.7**
NRN				IAmb	IAmb		02 50 53.1		
	comp=Z,13nm,1.2s								
TOO	**Toolangi**	**52.31**	**159**	P		**P**	**02 50 53.1**	**+1.0**
TOO				pmax	pmax				
	comp=Z,26nm,1.5s								
TOO	**Toolangi**	**52.31**	**159**	P		**P**	**02 50 53.0**	**+1.0**
ZALV	**Zalesovo Beam**	**53.05**	**332**	*i* P		**P**	**02 50 57.7**	**+0.4**
ZALV				pmax	pmax				
	comp=Z,3.0nm,0.7s								
ZALV	**Zalesovo Beam**	**53.05**	**332**	P		**P**	**02 50 56.2**	**-1.1**
	comp=Z,3.3nm,0.7s,baz=116,slow=6.8,SNR=14								
AAK	**Ala-Archa**	**53.54**	**315**	*ce*P		**P**	**02 51 02.2**	**+0.8**
AAK				pmax	pmax				
	comp=Z,11nm,2.3s								
AAK	**Ala-Archa**	**53.54**	**315**	P		P	**02 51 01.8**	**+0.4**
ARSB	**Arslanbob**	**54.17**	**313**	IAmb		IAmb	02 51 08.3		
	comp=Z,15nm,1.4s								
KURK	**Kurchatov**	**54.40**	**326**	P		**P**	**02 51 07.0**	**-0.3**
KURK				pmax	pmax				
	comp=Z,36nm,1.2s								
KURK	**Kurchatov**	**54.40**	**326**	P		**P**	**02 51 07.0**	**-0.3**
SEY	**Seymchan**	**55.32**	**15**	P		**P**	**02 51 14.4**	**+0.6**
	comp=Z,3.1nm,0.6s,baz=211,slow=4.9,SNR=20								
BTK	**Batken**	**55.37**	**311**	IAmb		IAmb	02 51 17.5		
	comp=Z,12nm,1.1s								
KBL	**Kabul**	**55.49**	**304**	P		**P**	**02 51 14.9**	**-0.9**
KBL				pmax	pmax				
	comp=Z,32nm,1.6s								
KBL	**Kabul**	**55.49**	**304**	P		**P**	**02 51 14.9**	**-0.9**
KK31	**Karatay Array**	**56.46**	**315**	P		**P**	**02 51 21.6**	**-0.7**
KK31				pmax	pmax				
	comp=Z,23nm,1.4s								
KK31	**Karatay Array**	**56.46**	**315**	P		**P**	**02 51 21.6**	**-0.7**
KKAR	**Karatay Array**	**56.46**	**315**	P		**P**	**02 51 22.1**	**-0.3**
KKAR				pmax	pmax				
	comp=Z,23nm,1.4s								
KKAR	**Karatay Array**	**56.46**	**315**	P		**P**	**02 51 22.1**	**-0.3**
KKAR				IAmb	IAmb		02 51 24.8		
	comp=Z,23nm,1.4s								
BRVK	**Borovoye**	**60.07**	**326**	P		**P**	**02 51 46.7**	**-0.6**
BRVK				pmax	pmax				
	comp=Z,13nm,1.2s								
BRVK	**Borovoye**	**60.07**	**326**	P		**P**	**02 51 46.7**	**-0.6**
BRVK				IAmb	IAmb		02 51 49.0		
	comp=Z,13nm,1.1s								
TIXI	**Tiksi**	**60.46**	**2**	*ce*P		**P**	**02 51 50.0**	**+0.3**
TIXI				pmax	pmax				
	comp=Z,18nm,1.0s								
TIXI	**Tiksi**	**60.46**	**2**	P		**P**	**02 51 49.9**	**+0.3**
HRA	**Herat**	**61.02**	**303**	P		**P**	**02 51 54.1**	**-0.4**
HRA				IAmb	IAmb		02 52 13.1		
	comp=Z,8.6nm,1.4s								
BILL	**Bilibino**	**62.95**	**16**	*e*P		**P**	**02 52 06.8**	**+0.2**
BILL				*PP	PcP		02 52 30.0	-15
BILL							02 52 43.0		
BILL				S	S		03 00 49.0	+13
BILL				pmax	pmax				
	comp=Z,12nm,1.3s								
BILL				MLR	MLR				
	comp=Z,244nm,19.0s								
BILL	**Bilibino**	**62.95**	**16**	P		**P**	**02 52 06.6**	**0.0**
BILL				IAmb	IAmb		02 52 11.1		
	comp=Z,8.4nm,1.0s								
GEYT	**Alibeck**	**64.71**	**307**	P		**P**	**02 52 18.2**	**-0.6**
	comp=Z,3.5nm,0.9s,baz=88,slow=4.9,SNR=11								
GEYT				LR		LR	03 24 45.2		
	comp=Z,316nm,18.4s,baz=120,slow=40								
GEYT	**Alibeck**	**64.71**	**307**	IAmb		IAmb	02 52 21.0		
	comp=Z,4.4nm,1.1s								
GYA0B	**ALIBECK ARRAY**	**64.71**	**307**	P		**P**	**02 52 18.0**	**-0.8**
GYA0B				IAmb	IAmb		02 52 21.0		
	comp=Z,9.3nm,1.2s								
ABKAR	**Akbulak array**	**65.13**	**319**	P		**P**	**02 52 20.4**	**-0.9**
ABKAR				IAmb	IAmb		02 52 22.6		
	comp=Z,9.0nm,1.1s								
SVE	**Sverdlovsk**	**66.57**	**327**	*e*P		**P**	**02 52 29.6**	**-0.7**
SVE				pmax	pmax				
	comp=Z,20nm,1.1s								
ARU	**Arti**	**67.57**	**327**	*d i*P		**P**	**02 52 36.2**	**-0.5**
ARU							02 55 06.4		
ARU				S		**S**	**03 01 31.5**	**-1.6**
ARU				pmax	pmax				
	comp=Z,26nm,2.5s								
ARU	**Arti**	**67.57**	**327**	P		**P**	**02 52 35.6**	**-1.2**
ARU				IAmb	IAmb		02 52 49.3		
	comp=Z,8.4nm,0.8s								
PRGR	**Permogore**	**75.00**	**331**	*e*P		**P**	**02 53 17.7**	**-3.8**
PRGR				pmax	pmax				
	comp=Z,17nm,0.9s								
ZEI	**Tsey**	**75.71**	**311**	*e*P		**P**	**02 53 22.3**	**-4.0**
ZEI				pmax	pmax				
	comp=Z,10.0nm,1.0s								
RAYN	**Ar Rayn**	**75.74**	**292**	P		**P**	**02 53 26.6**	**-0.1**
RAYN				pmax	pmax				
	comp=Z,8.0nm,1.2s								
RAYN	**Ar Rayn**	**75.74**	**292**	P		**P**	**02 53 26.6**	**-0.1**
AKH	**Akhalkalaki**	**76.07**	**310**	P		**P**	**02 53 29.2**	**+0.8**
AKH	**Akhalkalaki**	**76.07**	**310**	IAmb		IAmb	02 53 32.9		
	comp=Z,25nm,1.4s								
KBZ	**Khabaz**	**76.40**	**312**	*i* P		**P**	**02 53 29.9**	**0.0**
KBZ				pmax	pmax				
	comp=Z,14nm,1.3s								
KBZ	**Khabaz**	**76.40**	**312**	P		**P**	**02 53 29.5**	**-0.4**
	comp=Z,8.0nm,1.1s,baz=165,slow=2.8,SNR=6.5								
KIV	**Kislovodsk**	**76.55**	**313**	*e*P		**P**	**02 53 30.5**	**-0.4**
KIV				pmax	pmax				
	comp=Z,51nm,1.1s								
KIV				MLR	MLR				
	comp=Z,809nm,18.0s								
KIV	**Kislovodsk**	**76.55**	**313**	P		**P**	**02 53 32.4**	**+1.4**
KIV	**Kislovodsk**	**76.55**	**313**	P		**P**	**02 53 30.6**	**-0.3**
KIV				IAmb	IAmb		02 53 34.5		
	comp=Z,17nm,1.0s								
VRH	**Novokhopyorsk**	**76.93**	**320**	*e*P		**P**	**02 53 31.7**	**-1.1**
VRH				pmax	pmax				
	comp=Z,20nm,0.8s								
BPAW	**Bear Paw Mtn.**	**77.54**	**27**	IAmb		IAmb	02 53 39.6		
	comp=Z,9.9nm,1.0s								
MLY	**Manley**	**77.65**	**26**	IAmb		IAmb	02 53 40.4		
	comp=Z,8.6nm,1.1s								
KLMR	**Klimovskoe**	**77.93**	**330**	*e*P		**P**	**02 53 35.7**	**-2.5**
KLMR				pmax	pmax				
	comp=Z,52nm,1.2s								
KLMR	**Klimovskoe**	**77.93**	**330**	*e*P		**P**	**02 53 35.7**	**-2.5**
KLMR				AMP			02 53 39.0		
	comp=Z,52nm,1.2s								
MCK	**McKinley**	**78.45**	**27**	P		**P**	**02 53 41.5**	**+0.4**
MCK				pmax	pmax				
	comp=Z,52nm,1.8s								
MCK	**McKinley**	**78.45**	**27**	P		**P**	**02 53 41.5**	**+0.4**
TMCR	**Tamitsa**	**78.52**	**333**	*e*P		**P**	**02 53 40.8**	**-0.6**
TMCR				pmax	pmax				
	comp=Z,30nm,1.1s								
VSR	**Storozhevoye**	**78.54**	**320**	*e*P		**P**	**02 53 39.5**	**-2.2**
VSR				pmax	pmax				
	comp=Z,40nm,1.6s								
LPSR	**Galich'ya Gora**	**78.60**	**322**	*e*P		**P**	**02 53 40.4**	**-1.6**
LPSR				pmax	pmax				
	comp=Z,20nm,0.8s								
MOS	**Moscow**	**79.16**	**325**	*e*P		**P**	**02 53 41.9**	**-3.2**
MOS				pmax	pmax				
	comp=Z,32nm,1.0s								
ILAR	**Eielson Array**	**79.30**	**26**	P		**P**	**02 53 43.8**	**-1.9**
	comp=Z,0.7nm,0.7s,baz=248,slow=4.3,SNR=11								
OBN	**Obninsk**	**79.81**	**324**	*i* P		**P**	**02 53 47.5**	**-1.1**
OBN							02 53 57.0		
OBN				*PP	PcP		02 54 12.0	+16
OBN							02 56 54.0		
OBN				S	S		03 03 42.0	-9.2
OBN				*SS	ScS		03 04 48.0	+35
OBN				pmax	pmax				
	comp=Z,33nm,1.3s								
OBN	**Obninsk**	**79.81**	**324**	P		**P**	**02 53 47.7**	**-0.9**
OBN	**Obninsk**	**79.81**	**324**	P		**P**	**02 53 48.3**	**-0.3**
JOF	**Joensuu**	**81.63**	**332**	P		**P**	**02 53 59.2**	**+1.0**
BARN	**Barnard Glacie**	**82.07**	**29**	IAmb		IAmb	02 54 05.5		
	comp=Z,7.1nm,0.7s								
CTGM	**Chitina Glacie**	**82.24**	**29**	IAmb		IAmb	02 54 06.4		
	comp=Z,9.1nm,0.7s								
ARCES	**ARCESS Array B**	**82.77**	**340**	P		**P**	**02 54 02.5**	**-1.6**
	comp=Z,5.4nm,0.7s,baz=81,slow=7.5,SNR=20								
BRTR	**Keskin Array B**	**83.71**	**309**	*i* P		**P**	**02 54 10.8**	**+1.1**
BRTR				pmax	pmax				
	comp=Z,1.0nm,0.7s								
BRTR	**Keskin Array B**	**83.71**	**309**	P		**P**	**02 54 10.3**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=110,slow=3.3,SNR=4.9								
SUF	**Sumiainen**	**84.00**	**333**	P		**P**	**02 54 09.1**	**-1.4**
SUF				pmax	pmax				
	comp=Z,58nm,2.5s								
INK	**Inuvik**	**84.00**	**21**	P		**P**	**02 54 10.8**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=281,slow=3.5,SNR=7.2								
FINES	**FINESS Array B**	**84.31**	**331**	*i* P		**P**	**02 54 11.1**	**-1.0**
FINES				pmax	pmax				
	comp=Z,30nm,1.1s								
FINES	**FINESS Array B**	**84.31**	**331**	P		**P**	**02 54 10.8**	**-1.4**
	comp=Z,30nm,1.1s,baz=86,slow=3.7,SNR=24								
VSU	**Vasula**	**84.65**	**328**	*ce*P		**P**	**02 54 12.9**	**-1.0**
VSU				pmax	pmax				
	comp=Z,162nm,1.3s								
AKASG	**Malin Array Be**	**84.83**	**321**	P		**P**	**02 54 12.9**	**-2.1**
AKASG				pmax	pmax				
	comp=Z,11nm,1.1s								
AKASG	**Malin Array Be**	**84.83**	**321**	P		**P**	**02 54 12.8**	**-2.1**
	comp=Z,24nm,0.3s,baz=71,slow=4.2,SNR=7.2								
AKASG	**Malin Array Be**	**84.83**	**321**	IAmb		IAmb	02 54 17.2		
	comp=Z,11nm,1.1s								
AKBB	**Malin Array Si**	**84.83**	**321**	*i* P		**P**	**02 54 13.9**	**-1.1**
AKBB				pmax	pmax				
	comp=Z,22nm,1.0s								
MICGM	**Minsk**	**84.87**	**324**	*e*		**P**	**02 54 15.0**	**-0.1**
MNK	**Minsk**	**84.87**	**324**	*e*P		**P**	**02 54 15.0**	**-0.1**
WHY	**Whitehorse**	**85.40**	**29**	IAmb		IAmb	02 54 21.2		
	comp=Z,7.6nm,0.7s								
SKAG	**Skagway**	**85.48**	**30**	IAmb		IAmb	02 54 22.3		
	comp=Z,10nm,1.0s								
SORM	**Soroca**	**85.91**	**318**	P		**P**	**02 54 20.0**	**-0.4**
TESR	**Tescani**	**87.40**	**317**	P		**P**	**02 54 28.3**	**+0.5**
KMBO	**Kilima Mbogo**	**87.66**	**268**	P		**P**	**02 54 30.2**	**+0.2**
KMBO				pmax	pmax				
	comp=Z,7.0nm,1.3s								
KMBO	**Kilima Mbogo**	**87.66**	**268**	P		**P**	**02 54 28.9**	**-1.1**
	comp=Z,3.3nm,1.0s,baz=42,slow=11,SNR=6.9								
KMBO	**Kilima Mbogo**	**87.66**	**268**	P		**P**	**02 54 30.2**	**+0.2**
KMBO				IAmb	IAmb		02 54 38.8		
	comp=Z,7.5nm,1.3s								
BURAR	**Bucovina Array**	**88.08**	**318**	P		**P**	**02 54 32.0**	**+0.8**
LVV	**L'vov**	**88.28**	**320**	*e*P		**P**	**02 54 31.3**	**-0.6**
DOPR	**Dopca**	**88.38**	**316**	P		P	**02 54 39.0**	**+6.4**
UZH	**Uzhgorod**	**89.70**	**320**	*e*P		**P**	**02 54 37.3**	**-1.3**
UZH				*e*			02 54 49.0		
DRGR		**89.95**	**318**	P		**P**	**02 54 38.2**	**-1.7**
CRVS	**Cervenica-Dubn**	**90.15**	**320**	*e*P		**P**	**02 54 40.1**	**-0.6**
CRVS				pmax	pmax				
	comp=Z,49nm,1.5s								
CRVS	**Cervenica-Dubn**	**90.15**	**320**	*e*P		**P**	**02 54 40.1**	**-0.6**
VNDA	**Vanda**	**91.06**	**172**	P		**P**	**02 54 44.0**	**-0.2**
VNDA	**Vanda**	**91.06**	**172**	P		**P**	**02 54 44.0**	**-0.2**
	comp=Z,1.5nm,0.6s,baz=315,slow=5.5,SNR=5.9								
NOA	**NORSAR Array B**	**91.22**	**333**	P		**P**	**02 54 44.8**	**-0.7**
	comp=Z,2.4nm,0.9s,baz=66,slow=4.7,SNR=3.4								
NOA				LR		LR	03 39 07.8		
	comp=Z,705nm,20.0s,baz=65,slow=38								
VRAC	**Vranov**	**93.04**	**321**	P		**P**	**02 54 50.7**	**-3.4**
YKA	**Yellowknife Ar**	**93.55**	**24**	P		**P**	**02 54 55.4**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=299,slow=4.7,SNR=18								
CONA	**Conrad Observa**	**93.99**	**320**	PcP		**PcP**	**02 54 58.7**	**-0.4**
	comp=Z,6.0nm,1.3s								
CLL	**Collm**	**94.41**	**324**	*e*P		P	**02 55 00.0**	**-0.3**
CLL	**Collm**	**94.41**	**324**	*e*P		P	**02 55 00.0**	**-0.3**
CLL				*e*PP		**PP**	**02 58 51.0**	**+3.7**
ARSA	**Arzberg**	**94.45**	**320**	PcP		**PcP**	**02 55 00.6**	**-0.5**
	comp=Z,4.3nm,1.1s								
GERES	**GERESS Array B**	**94.98**	**322**	P		P	**02 55 02.1**	**-1.0**
	comp=Z,1.4nm,0.7s,baz=65,slow=4.2,SNR=12								
SOKA	**Soboth**	**94.98**	**319**	PcP		**PcP**	**02 55 04.0**	**+0.5**
	comp=Z,6.7nm,1.2s								
MOA	**Molin**	**95.02**	**321**	PcP		**PcP**	**02 55 03.4**	**-0.2**
	comp=Z,7.2nm,1.0s								
LLLB	**Lillooet**	**95.75**	**36**	IAmb		IAmb	02 55 09.8		
	comp=Z,2.8nm,0.7s								
WATA	**Walderalm**	**96.89**	**321**	PcP		P	**02 55 11.0**	**-1.0**
	comp=Z,6.1nm,1.3s								
SQTA	**Sankt Quirin**	**97.17**	**321**	*e*PcP		P	**02 55 12.1**	**-1.1**
	comp=Z,7.1nm,1.0s								
FETA	**Feichten**	**97.55**	**321**	*e*PcP		Pdif	02 55 15.4	+0.4
	comp=Z,7.8nm,1.3s								
TXAR	**Lajitas Array**	**118.41**	**48**	PKP		**PKiKP**	**03 00 28.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=262,slow=0.6,SNR=8.9								
TORD	**Torodi Ar. Bea**	**118.44**	**292**	PKP		**PKPdf**	**03 00 28.3**	**-0.8**
	comp=Z,0.5nm,0.9s,baz=111,slow=3.0,SNR=2.9								
U40A	**Yellville**	**120.96**	**35**			**PKiKP**	**03 00 34.3**	**+0.8**
WVT	**Waverly**	**123.83**	**32**	PKIKP		**PKiKP**	**03 00 40.0**	**+0.8**
WVT	**Waverly**	**123.83**	**32**			**PKiKP**	**03 00 40.0**	**+0.8**
PLCA	**Paso Flores**	**147.68**	**158**	PKPbc		**PKiKP**	**03 01 26.4**	**-1.0**
	comp=Z,2.7nm,0.9s,baz=239,slow=5.9,SNR=4.7								
SDV	**Santo Domingo**	**154.91**	**38**			**PKPdf**	**03 01 36.0**	**+1.4**
LPAZ	**La Paz**	**166.60**	**114**	PKPab		**PKPab**	**03 02 50.9**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=310,slow=3.8,SNR=3.6								

IDC ***26*** *02:47:48.4±0.9, 12°.38N×142°.58E, h0km, mb3.9/9, mb1 4.0/9, mb1mx3.9/35, mbtmp3.9/9, MS4.4/1, Ms1 4.4/1, ms1mx3.2/49, Error ellipse: s-maj=41.3km s-min=18.2km az=82.0*

ISC 26 02:47:53.5±1.0, 12°.4N±0°.1×142°.3E±0°.3, h27km, n11, σ1ş10/10, mb3.8/9, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JNU	**Nakatsue**	**23.14**	**335**	P		**P**	**02 52 58.4**	**+0.6**
	19nm,1.0s,baz=154,slow=5.9,SNR=4.6							
MJAR	**Matsushiro Arr**	**24.33**	**352**	P		**P**	**02 53 07.0**	**-2.1**
	2.5nm,0.9s,baz=162,slow=8.3,SNR=4.5							
USRK	**Ussuriysk Ar.**	**32.92**	**346**	P		**P**	**02 54 25.4**	**-0.2**
	3.3nm,0.6s,baz=200,slow=12,SNR=4.3							
WRA	**Warramunga Arr**	**33.07**	**194**	P		**P**	**02 54 26.6**	**-0.6**
	0.9nm,0.8s,baz=17,slow=9.5,SNR=4.9							
ASAR	**Alice Springs**	**36.77**	**193**	P		**P**	**02 54 58.7**	**-0.4**
	1.0nm,0.7s,baz=10,slow=11,SNR=8.4							
KLR	**Kul'dur**	**37.76**	**349**	LR		LR	03 08 20.5	
	comp=Z,519nm,18.2s,baz=190,slow=33							
SONM	**Songino Array**	**46.32**	**327**	P		**P**	**02 56 17.8**	**+0.6**
	0.7nm,0.6s,baz=135,slow=7.5,SNR=5.9							
MKAR	**Makanchi Array**	**60.64**	**317**	P		P	**02 58 02.3**	**0.0**
	0.9nm,1.0s,baz=104,slow=6.7,SNR=4.8							
ZALV	**Zalesovo Beam**	**61.17**	**325**	P		**P**	**02 58 05.3**	**-0.3**
	0.5nm,0.4s,baz=89,slow=9.2,SNR=3.8							
NVAR	**Mina Array Bea**	**89.60**	**51**	P		**P**	**03 00 49.6**	**+0.2**
	0.1nm,0.4s,baz=316,slow=3.8,SNR=2.0							
LPAZ	**La Paz**	**150.26**	**101**	PKPbc		**PKPdf**	**03 07 40.5**	**+1.7**
	0.9nm,0.8s,baz=326,slow=6.0,SNR=3.3							

IDC ***26*** *02:56:38.0±7.6, 11°.74S×165°.47E, h58km±79km, mb3.7/6, mb1 3.9/7, mb1mx3.6/37, mbtmp3.9/7,

comp=Z,3µm,19.7s,baz=94,slow=39
HNR Honiara 4.27 291 Pn **Pn** 03 08 28.1 -4.0
DZM Mont Dzumac 11.25 168 *e*P **Pn** 03 10 08.5 +0.6
109nm,1.3s
DZM *e*LR LR 03 12 38.2
comp=Z,3µm,24.8s
DZM Mont Dzumac 11.25 168 Pn **Pn** 03 10 09.6 +1.7
1.1nm,0.3s,baz=5.8,slow=9.9,SNR=24
DZM LR LR 03 13 54.8
comp=Z,2µm,20.3s,baz=36,slow=34
DZM Mont Dzumac 11.25 168 Pn 03 10 09.1 +1.2
NOUC Port Laguerre 11.26 169 Pn 03 10 08.1 +0.2
KRVT Keravat (AS076 13.59 298 LR LR 03 16 26.3
comp=Z,715nm,18.4s,baz=122,slow=40
PMG Port Moresby 16.64 274 LR LR 03 17 56.8
comp=Z,2µm,19.5s,baz=132,slow=38
EIDS Eidsvold 18.80 219 P **P** 03 11 45.0 -1.2
EIDS IAmb IAmb 03 11 50.4
comp=Z,57nm,1.1s
CTA Charters Tower 19.31 240 P **Pn** 03 11 53.1 +0.1
comp=Z,0.7nm,0.3s,baz=67,slow=12,SNR=17
COEN Coen 20.53 260 P **P** 03 12 03.6 -1.6
COEN IAmb IAmb 03 12 10.0
comp=Z,37nm,1.1s
AFI Afiamalu 23.84 99 LR LR 03 20 32.7
comp=Z,838nm,18.1s,baz=288,slow=33
JAY Jayapura 24.59 288 LR LR 03 22 24.9
comp=Z,303nm,20.9s,baz=23,slow=37
RAO Raoul Island 24.80 140 LR LR 03 21 47.8
comp=Z,395nm,18.7s,baz=77,slow=35
STKA Stephens Creek 29.31 221 P **P** 03 13 29.9 +0.9
comp=Z,7.8nm,0.8s,baz=34,slow=11,SNR=18
STKA LR LR 03 24 27.5
comp=Z,1µm,18.6s,baz=34,slow=35
STKA Stephens Creek 29.31 221 P **P** 03 13 28.8 -0.2
H11S2 WAKE ISLAND Hy 29.43 5 T T 03 44 07.9
baz=188
H11S3 WAKE ISLAND Hy 29.43 5 T T 03 44 09.1
baz=188,slow=74,SNR=12
H11S1 WAKE ISLAND Hy 29.45 5 T T 03 44 06.7
baz=188,slow=74,SNR=14
WR0 Warramunga Arr 29.70 249 P **P** 03 13 31.9 -0.8
WB0 Warramunga Arr 29.79 249 P **P** 03 13 32.2 -1.2
WRAB Tennant Creek 29.87 249 P **P** 03 13 32.9 -1.2
WRAB IAmb IAmb 03 13 36.9
comp=Z,17nm,1.1s
WB2 Warramunga Arr 29.87 249 P **P** 03 13 32.7 -1.5
WB2 IAmb IAmb 03 13 36.9
comp=Z,24nm,1.1s
WRA Warramunga Arr 29.88 249 P **P** 03 13 33.0 -1.3
comp=Z,4.2nm,0.6s,baz=79,slow=9.0,SNR=12
WRA LR LR 03 25 04.6
comp=Z,749nm,19.9s,baz=75,slow=35
WRA Warramunga Arr 29.88 249 IAmb IAmb 03 13 35.7
comp=Z,0.5nm,1.1s
H11N1 WAKE ISLAND Hy 30.66 5 T T 03 45 40.3
baz=184,slow=76,SNR=8.5
H11N3 WAKE ISLAND Hy 30.66 5 T T 03 45 38.3
baz=184,slow=76,SNR=14
H11N2 WAKE ISLAND Hy 30.68 5 T T 03 45 42.4
baz=184,slow=76,SNR=11
AS31 Alice Springs 31.27 242 P **P** 03 13 45.2 -1.3
ASAR Alice Springs 31.28 242 P **P** 03 13 45.4 -1.2
comp=Z,2.0nm,0.6s,baz=63,slow=10,SNR=28
ASAR LR LR 03 25 56.9
comp=Z,386nm,19.2s,baz=72,slow=36
RPZ Rata Peaks 33.16 171 LR LR 03 26 15.8
comp=Z,593nm,20.6s,baz=353,slow=34
BBOO Buckleboo 33.61 225 P **P** 03 14 06.8 -0.1
FITZ Fitzroy Crossi 37.73 255 LR LR 03 30 00.5
comp=Z,468nm,19.2s,baz=84,slow=36
FITZ Fitzroy Crossi 37.73 255 P **P** 03 14 40.0 -2.3
PPT2 Papeete2 45.38 104 *e*LR LR 03 28 21.3
comp=Z,326nm,27.0s
TBI Tubuai 45.95 112 *e*LR LR 03 28 40.8
comp=Z,295nm,28.8s
MJAR Matsushiro Arr 53.16 334 P **P** 03 16 43.6 -0.7
comp=Z,2.2nm,0.8s,baz=153,slow=8.2,SNR=3.8
MJAR Matsushiro Arr 53.16 334 IAmb IAmb 03 16 47.2
comp=Z,4.5nm,1.1s
NJ2 Nanjing 60.79 316 *e*P **P** 03 17 39.8 +1.4
NJ2 pmax pmax
comp=Z,20nm,0.5s
USRK Ussuriysk Ar. 62.15 334 P **P** 03 17 49.1 +1.7
comp=Z,3.1nm,0.7s,baz=100,slow=14,SNR=3.8
WHN Wuhan 63.09 313 P **P** 03 17 57.0 +3.1
PETK Petropavlovsk- 64.08 356 P **P** 03 17 59.7 -0.3
comp=Z,7.8nm,1.1s,baz=156,slow=11,SNR=2.4
CN2 Changchun 64.83 330 *e*P **P** 03 18 05.3 +0.2
KMI Kunming 69.63 302 P **P** 03 18 39.0 +2.7
KMI pP pP 03 18 43.8 +0.4
KMI pmax pmax
comp=Z,21nm,0.6s
KMI pmax pmax
comp=Z,150nm,6.0s
KMI LR LR
comp=Z,400nm,11.6s
KMI LR LR
comp=Z,200nm,11.4s
CMAR Chiang Mai Arr 70.52 294 P **P** 03 18 43.6 +2.1
comp=Z,1.3nm,0.3s,baz=120,slow=4.7,SNR=8.3
HHC Hu-ho-hao-te 70.69 320 *e*P **P** 03 18 43.5 +1.2
HHC pmax pmax
comp=Z,4.0nm,0.9s
HHC pmax pmax
comp=Z,36nm,4.0s
HHC LR LR
comp=Z,270nm,17.0s
HHC LR LR
comp=Z,200nm,14.5s
CD2 Chengdu 71.21 308 *e*P **P** 03 18 44.5 -1.1
LZH Lanzhou 73.46 313 *e*P **P** 03 18 59.5 +0.4
LZH pP sP 03 19 07.5 -1.1
LZH sP PcP 03 19 11.0 -4.1
LZH *e*PP **PP** 03 21 45.8 +2.6
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,140nm,7.4s
LZH LR LR
comp=Z,220nm,14.7s
LZH LR LR
comp=Z,250nm,15.1s
LZH LR LR
comp=Z,400nm,18.2s
ULN Ulaanbaatar 77.26 325 P **P** 03 19 20.7 +0.1
YAK Yakutsk 77.58 344 P **P** 03 19 20.9 -1.0
SONM Songino Array 77.62 324 P **P** 03 19 23.0 +0.4
comp=Z,2.3nm,0.9s,baz=145,slow=5.8,SNR=12
SONM Songino Array 77.62 324 IAmb IAmb 03 19 25.6
comp=Z,4.3nm,1.2s
GTA Gaotai 77.79 314 *e*P **P** 03 19 24.3 +0.5
GTA pP pP 03 19 28.8 -1.9
GTA pmax pmax
comp=Z,2.0nm,1.0s
BILL Bilibino 78.85 1 P **P** 03 19 28.7 -0.2
SHL Shillong 78.98 299 P **P** 03 19 29.7 -1.0
QSPA South Pole Qui 79.00 180 LR LR 03 49 26.9
comp=Z,158nm,21.5s,baz=2.0,slow=32
QSPA South Pole Qui 79.00 180 P **P** 03 19 31.1 +1.2
QSPA IAmb IAmb 03 19 34.7
comp=Z,7.9nm,1.1s
TLY Talaya 81.14 327 P **P** 03 19 41.2 -0.4
MCK McKinley 82.66 19 P **P** 03 19 49.1 -0.2
BARN Barnard Glacie 83.53 23 P **P** 03 19 54.8 +0.7
CTGM Chitina Glacie 83.61 24 P **P** 03 19 54.4 0.0
HDA Harding Lake 83.77 19 P **P** 03 19 55.1 +0.2
COLA College 83.79 19 P **P** 03 19 54.2 -0.8
IL31 84.03 19 P **P** 03 19 55.3 -1.0
IL31 IAmb IAmb 03 20 01.3
comp=Z,8.3nm,1.1s
ILAR Eielson Array 84.03 19 P **P** 03 19 55.5 -0.9
comp=Z,3.5nm,1.0s,baz=243,slow=5.8,SNR=14
MAW Mawson 84.11 202 P **P** 03 19 59.1 +2.4
comp=Z,5.6nm,0.9s,baz=109,slow=3.7,SNR=5.5
MAW Mawson 84.11 202 P **P** 03 19 56.4 -0.4
WDC Whiskeytown Da 84.84 47 P **P** 03 20 01.2 +0.2
WDC IAmb IAmb 03 20 02.6
comp=Z,5.1nm,1.1s
YBH Yreka Blue Hor 85.10 46 P **P** 03 20 02.7 +0.3
YBH IAmb IAmb 03 20 04.8
comp=Z,8.1nm,1.1s
HUMO Hull Mountain 85.22 45 P **P** 03 20 03.3 +0.4
HUMO IAmb IAmb 03 20 05.2
comp=Z,5.4nm,0.9s
ORV Oroville 85.27 48 P **P** 03 20 03.2 0.0
ORV IAmb IAmb 03 20 04.3
comp=Z,6.5nm,1.1s
AFDM Forest Hills D 85.47 49 P **P** 03 20 04.4 +0.2
AFDM IAmb IAmb 03 20 06.0
comp=Z,8.1nm,1.0s
CMB Columbia Colle 85.63 50 P **P** 03 20 04.6 -0.5
CMB IAmb IAmb 03 20 06.3
comp=Z,5.0nm,1.1s
TIXI Tiksi 85.73 349 P **P** 03 20 03.9 -0.8
comp=Z,5.7nm,1.0s,baz=169,slow=4.5,SNR=6.3
TIXI Tiksi 85.73 349 P **P** 03 20 04.0 -0.7
TIXI IAmb IAmb 03 20 08.0
comp=Z,6.0nm,1.1s
EGAK Eagle 85.94 21 P **P** 03 20 06.5 +0.6
E03A Lebam 86.15 41 P **P** 03 20 08.3 +1.0
BEKR Beckworth 86.20 48 P **P** 03 20 08.4 +0.4
BEKR IAmb IAmb 03 20 09.2
comp=Z,5.6nm,1.0s
MWC Mount Wilson 86.35 54 P **P** 03 20 09.4 +0.5
MWC IAmb IAmb 03 20 11.5
comp=Z,7.3nm,1.1s
WAKR Walker 86.49 50 P **P** 03 20 09.9 +0.5
WAKR IAmb IAmb 03 20 12.3
comp=Z,6.4nm,1.2s
MDPB Devils Postpil 86.51 51 P **P** 03 20 10.1 +0.4
MDPB IAmb IAmb 03 20 11.6
comp=Z,8.0nm,1.1s
PNTR Pine Nut 86.54 49 P **P** 03 20 10.3 +0.6
PNTR IAmb IAmb 03 20 11.3
comp=Z,8.5nm,1.0s
F04A Amboy 86.69 42 P **P** 03 20 10.0 0.0
F04A IAmb IAmb 03 20 12.0
comp=Z,9.5nm,1.1s
MOD Modoc Plateau 86.86 46 IAmb IAmb 03 20 12.5
comp=Z,6.1nm,1.0s
PAHR Pah Rah Range 86.88 49 IAmb IAmb 03 20 13.8
comp=Z,9.0nm,1.2s
RYN Ryan 87.21 50 P **P** 03 20 13.7 +0.7
RYN IAmb IAmb 03 20 14.9
comp=Z,4.8nm,1.0s
DAC Darwin (Calif) 87.27 52 P **P** 03 20 15.1 +1.7
NVAR Mina Array Bea 87.32 50 P **P** 03 20 14.2 +0.7
comp=Z,5.8nm,1.0s,baz=236,slow=7.0,SNR=22
LON Longmire 87.36 41 IAmb IAmb 03 20 17.3
comp=Z,4.1nm,1.1s
NV11 Mina Array Sit 87.43 50 P **P** 03 20 13.8 -0.2
NV11 IAmb IAmb 03 20 15.4
comp=Z,9.3nm,1.1s
KVN Kaiserville 87.64 50 IAmb IAmb 03 20 16.4
comp=Z,4.7nm,1.1s
WMQ Urumqi 87.85 315 *e*P **P** 03 20 15.5 -0.3
WMQ pmax pmax
comp=Z,8.0nm,1.1s
WMQ pmax pmax
comp=Z,83nm,7.3s
WVOR Wild Horse Val 88.20 46 IAmb IAmb 03 20 19.2
comp=Z,8.2nm,1.1s
LTY Liberty 88.26 41 IAmb IAmb 03 20 18.7
comp=Z,4.8nm,1.0s
GLA Glamis 88.66 56 P **P** 03 20 21.2 +1.4
GLA IAmb IAmb 03 20 22.7
comp=Z,8.7nm,1.1s
HAWA Hanford 88.74 42 IAmb IAmb 03 20 22.0
comp=Z,5.9nm,1.1s
Y12C Blythe 89.07 55 P **P** 03 20 21.9 +0.2
Y12C IAmb IAmb 03 20 24.2
comp=Z,5.3nm,1.1s
SHPR Sheep Range 89.23 53 IAmb IAmb 03 20 24.5
comp=Z,4.7nm,1.1s
R11A Troy Canyon, C 89.36 51 P **P** 03 20 23.4 +0.3
ELK Elko 90.21 49 P **P** 03 20 27.8 +0.6
ELK IAmb IAmb 03 20 28.8
comp=Z,6.0nm,1.1s
INK Inuvik 90.42 19 P **P** 03 20 25.9 -1.3
comp=Z,1.9nm,1.1s,baz=279,slow=13,SNR=3.6
MFID Camas Ranch 90.45 46 IAmb IAmb 03 20 29.8
comp=Z,8.0nm,1.1s
NEW Newport 90.84 41 IAmb IAmb 03 20 30.7
comp=Z,7.1nm,1.1s
KNB Kanab 91.17 53 P **P** 03 20 32.6 +0.9
SYO Syowa Base 91.31 197 *e*P **P** 03 20 30.0 -1.5
U15A North Rim 91.46 53 IAmb IAmb 03 20 36.5
comp=Z,4.9nm,1.1s
HVU Hansel Valley 92.26 48 P **P** 03 20 37.2 +0.7
MK31 Makanchi Array 92.31 317 P **P** 03 20 35.6 -1.0
MKAR Makanchi Array 92.31 317 P **P** 03 20 36.2 -0.3
comp=Z,1.6nm,0.8s,baz=96,slow=6.2,SNR=15
ZAA0 Zalesovo Array 92.52 324 P **P** 03 20 36.0 -1.2
ZALV Zalesovo Beam 92.52 324 P **P** 03 20 35.5 -1.8
comp=Z,2.0nm,0.9s,baz=108,slow=3.3,SNR=7.1
MAKZ Makanchi 92.53 317 P **P** 03 20 36.7 -0.8
MAKZ IAmb IAmb 03 20 38.4
comp=Z,2.5nm,0.9s
H17A Grant Village 94.37 46 IAmb IAmb 03 20 50.1
comp=Z,3.6nm,1.0s
PD31 Pinedale Array 94.79 48 P **P** 03 20 48.5 +0.2
PDAR Pinedale Array 94.79 48 P **P** 03 20 48.9 +0.5
comp=Z,1.9nm,1.0s,baz=242,slow=3.2,SNR=8.7
KURK Kurchatov 95.51 320 P **P** 03 20 50.2 -0.8
KURK Kurchatov 95.51 320 IAmb IAmb 03 20 54.7
comp=Z,2.7nm,0.6s
KURBB Kurchatov Arra 95.55 320 P **P** 03 20 50.2 -1.0
comp=Z,0.5nm,0.9s,baz=111,slow=3.0,SNR=3.6
YKA Yellowknife Ar 95.73 27 P **P** 03 20 50.4 -1.4
comp=Z,3.8nm,0.9s,baz=254,slow=4.8,SNR=29
KLMR Klimovskoe 115.94 333 *e*PKPdf **PKiKP** 03 26 05.0 -3.6
KLMR AMP 03 26 20.6
comp=Z,19nm,1.2s
KEST Kesra 146.32 321 PKPbc **PKPdf** 03 27 06.6 +0.3
comp=Z,7.2nm,1.0s,baz=328,slow=19,SNR=3.2
ESDC Sonseca Array 149.51 341 PKPbc **PKPbc** 03 27 15.8 0.0
comp=Z,1.3nm,0.8s,baz=6.0,slow=3.4,SNR=7.7
TORD Torodi Ar. Bea 162.55 279 PKPab **PKPab** 03 28 19.1 +1.9
comp=Z,0.9nm,1.0s,baz=53,slow=6.1,SNR=3.1

*IDC **26** 03:09:50.9±2.8, 11°.17S×164°.18E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.8/33, mbtmp3.8/6, Error ellipse: s-maj=112.1km s-min=29.3km az=138.0*
ISC 26 03:09:55.4±1.3, 11°.2S±0°.2×164°.1E±0°.1, h29km, n13, σ0s66/7, mb3.9/6, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.47**	**292**			Sn	**Sn**	**03 11 52.4**	**-0.1**
26nm,0.3s,baz=180,slow=11,SNR=3.0									
H11S2	**WAKE ISLAND Hy**	**29.58**	**5**	T		T		03 46 37.1	
baz=189									
H11S3	**WAKE ISLAND Hy**	**29.58**	**5**	T		T		03 46 35.4	
baz=189									
H11S1	**WAKE ISLAND Hy**	**29.60**	**5**	T		T		03 46 34.9	
baz=189									
WRA	**Warramunga Arr**	**29.96**	**249**	P		P		**03 16 01.3**	**-0.3**
1.5nm,0.8s,baz=80,slow=9.0,SNR=5.0									
H11N1	**WAKE ISLAND Hy**	**30.81**	**5**	T		T		03 48 07.7	
baz=192,slow=75									
H11N3	**WAKE ISLAND Hy**	**30.82**	**5**	T		T		03 48 10.3	
baz=192									
H11N2	**WAKE ISLAND Hy**	**30.83**	**5**	T		T		03 48 11.0	
baz=192,slow=75									
ASAR	**Alice Springs**	**31.33**	**243**	P		P		**03 16 13.9**	**+0.3**
0.6nm,0.7s,baz=63,slow=10,SNR=4.9									
SONM	**Songino Array**	**77.84**	**324**	P		P		**03 21 50.5**	**+0.1**
0.4nm,0.8s,baz=120,slow=5.2,SNR=2.8									
ILAR	**Eielson Array**	**84.14**	**19**	P		P		**03 22 24.2**	**+0.8**
0.8nm,1.0s,baz=234,slow=4.6,SNR=4.0									
MKAR	**Makanchi Array**	**92.54**	**317**	P		P		**03 23 04.3**	**+0.2**
0.4nm,0.8s,baz=108,slow=6.8,SNR=3.4									
YKA	**Yellowknife Ar**	**95.81**	**27**	P		P		**03 23 17.7**	**-1.0**
0.4nm,0.7s,baz=252,slow=4.7,SNR=4.4									

MAN 26 03:19:37.7, 11°.17N×124°.64E, h7km, mb4.8, ML3.7, MS3.7, 2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.12**	**194**	*e*P		Pg		03 19 41.2	+0.8
OCLP				*e*S		Sg		03 19 45.0	+2.9
MSLP	**Maasin**	**1.05**	**168**	*e*P		Pb		03 19 58.2	-0.1
MSLP				*e*S		Sn		03 20 14.6	+0.8
LLP	**Lapu-Lapu**	**1.08**	**218**	*e*P		Pg		03 19 57.6	-0.8
LLP				*e*S		Sn		03 20 18.4	+4.0
CNP	**Catarman**	**1.33**	**1**	*e*P		Pn		03 20 02.1	-0.7
CNP				*e*S		Sn		03 20 20.8	+0.1
RCP	**Roxas**	**1.90**	**282**	*e*P		Pb		03 20 12.2	-0.5
GUIM	**Jordan**	**2.09**	**255**	*e*P		Pn		03 20 12.4	-0.7
GUIM				*e*S		Sn		03 20 40.0	+0.6
PVCP	**Virac**	**2.46**	**349**	*e*P		Pn		03 20 17.9	-0.3
BUKP	**Musuan**	**3.30**	**173**	*e*P		Pn		03 20 31.4	+1.6
BUKP				*e*S		Sn		03 21 05.1	-4.2
PAGZ	**Pagadian**	**3.53**	**201**	*e*P		Pn		03 20 33.3	+0.4
LQP	**Lukban**	**4.21**	**314**	*e*P		Pn		03 20 35.0	-7.5

*IDC **26** 03:21:21.7±1.0, 10°.92S×163°.91E, h0km, mb4.2/11, mb1 4.4/13, mb1mx4.2/36, mbtmp4.2/13, ML4.0/2, Error ellipse: s-maj=34.7km s-min=18.7km az=133.0*
*NEIC **26** 03:21:26.9±2.3, 10°.97S±0°.09×163°.91E±0°.09, h35km±3km, mb4.6/11, Error ellipse: s-maj=14.8km s-min=10.3km az=133.0*
ISC 26 03:21:26.1±0.7, 11°.0S±0°.1×163°.98E±0°.1, h29km, n31, σ1s27/23, mb4.2/13, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.25**	**291**			Sn	**Sn**	**03 23 20.3**	**+2.6**
36nm,0.3s,baz=72,slow=20,SNR=4.2									
HNR	**Honiara**	**4.25**	**291**	Pn		Pn	**Pn**	**03 22 27.1**	**-1.9**
DZM	**Mont Dzumac**	**11.29**	**168**	Pn		Pn	**Pn**	**03 24 06.6**	**+1.0**
0.6nm,0.3s,baz=306,slow=23,SNR=8.8									
CTA	**Charters Tower**	**19.32**	**240**	P			**Pn**	**03 25 50.3**	**-0.1**
0.4nm,0.3s,baz=62,slow=11,SNR=5.3									
STKA	**Stephens Creek**	**29.33**	**221**	P			**P**	**03 27 26.9**	**+0.5**
4.1nm,0.9s,baz=30,slow=12,SNR=7.1									
STKA	**Stephens Creek**	**29.33**	**221**	IAmb		IAmb		03 27 38.5	
comp=Z,6.8nm,1.9s									
H11S2	**WAKE ISLAND Hy**	**29.40**	**5**	T		T		03 58 09.3	
baz=181,slow=74,SNR=67									
H11S3	**WAKE ISLAND Hy**	**29.40**	**5**	T		T		03 58 03.9	
baz=181,slow=74,SNR=3.0									
H11S1	**WAKE ISLAND Hy**	**29.41**	**5**	T		T		03 58 06.8	
baz=181,slow=74,SNR=3.9									
WB0	**Warramunga Arr**	**29.80**	**249**	P		P		**03 27 29.6**	**-1.2**
WRAB	**Tennant Creek**	**29.87**	**249**	P		P		**03 27 30.0**	**-1.4**
WRA	**Warramunga Arr**	**29.89**	**249**	P		P		**03 27 30.1**	**-1.4**
comp=Z,3.7nm,0.8s,baz=81,slow=8.8,SNR=9.2									
H11N1	**WAKE ISLAND Hy**	**30.63**	**5**	T		T		03 59 39.6	
baz=184,slow=76,SNR=3.4									
H11N3	**WAKE ISLAND Hy**	**30.63**	**5**	T		T		03 59 36.7	
baz=184,slow=76,SNR=5.0									
H11N2	**WAKE ISLAND Hy**	**30.64**	**5**	T		T		03 59 41.1	
baz=184,slow=76,SNR=4.0									
ASAR	**Alice Springs**	**31.28**	**242**	P		P		**03 27 42.1**	**-1.8**
comp=Z,1.3nm,0.5s,baz=64,slow=9.9,SNR=18									
KNRA	**Kununurra**	**34.56**	**258**	P		P		**03 28 11.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**37.73**	**255**	P		P		**03 28 37.8**	**-1.8**
comp=Z,3.5nm,0.5s,baz=51,slow=6.9,SNR=12									
BJT	**Baijiatuau**	**67.33**	**322**	P		P		**03 32 19.7**	**+1.1**
BJT				IAmb		IAmb		03 33 03.6	
comp=Z,6.0nm,0.9s									
CMAR	**Chiang Mai Arr**	**70.50**	**294**	P		P		**03 32 39.9**	**+1.3**
comp=Z,1.1nm,0.3s,baz=114,slow=3.7,SNR=5.1									
SONM	**Songino Array**	**77.59**	**324**	P		P		**03 33 20.0**	**+0.3**
comp=Z,1.2nm,1.0s,baz=130,slow=4.2,SNR=5.4									
SONM	**Songino Array**	**77.59**	**324**	IAmb		IAmb		03 33 23.4	
comp=Z,1.4nm,1.0s									
BILL	**Bilibino**	**78.82**	**1**	P		P		**03 33 25.7**	**-0.2**
BILL				IAmb		IAmb		03 34 38.6	
comp=Z,12nm,1.5s									
IL31		**84.00**	**19**	P		P		**03 33 51.6**	**-1.7**
ILAR	**Eielson Array**	**84.00**	**19**	P		P		**03 33 52.9**	**-0.6**
comp=Z,0.9nm,1.0s,baz=261,slow=5.5,SNR=5.7									
BCAR	**Beaver Creek A**	**84.66**	**22**	P		P		**03 33 57.3**	**+0.4**
EGAK	**Eagle**	**85.91**	**21**	P		P		**03 34 03.5**	**+0.5**
NVAR	**Mina Array Bea**	**87.31**	**50**	P		P		**03 34 11.2**	**+0.4**
comp=Z,1.6nm,1.0s,baz=247,slow=7.3,SNR=5.4									
MKAR	**Makanchi Array**	**92.28**	**317**	P		P		**03 34 33.0**	**-0.6**
comp=Z,0.7nm,0.9s,baz=102,slow=6.1,SNR=4.1									
ZALV	**Zalesovo Beam**	**92.48**	**324**	P		P		**03 34 34.9**	**+0.5**
comp=Z,0.4nm,0.3s,baz=83,slow=3.5,SNR=3.5									
YKA	**Yellowknife Ar**	**95.71**	**27**	P		P		**03 34 47.9**	**-1.0**
comp=Z,1.0nm,1.0s,baz=261,slow=5.3,SNR=7.5									

*IDC **26** 03:24:31.1±2.5, 6°.60S×129°.95E, h156km±30km, mb3.4/2, mb1 3.3/6, mb1mx3.1/39, mbtmp3.8/6, MS4.2/1, Ms1 4.2/1, ms1mx3.1/29, Error ellipse: s-maj=49.5km s-min=17.4km az=82.0*
ISC 26 03:24:30.0±1.0, 6°.57S±0°.08×129°.8E±0°.2, h146km, n7, σ1s83/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.83**	**14**	P		P	**Pn**	**03 25 56.4**	**+1.9**
1.4nm,0.3s,baz=217,slow=23,SNR=13									
SIJI				S			**Sn**	**03 26 57.6**	**-3.0**
3.1nm,0.3s,baz=251,slow=23,SNR=9.2									
FITZ	**Fitzroy Crossi**	**12.17**	**199**	P		P	**Pn**	**03 27 17.9**	**-0.8**
0.2nm,0.3s,baz=26,slow=11,SNR=9.1									
FITZ				S			Sn	03 29 24.5	-8.8
0.4nm,0.3s,baz=255,slow=20,SNR=4.1									
WRA	**Warramunga Arr**	**13.99**	**162**	P		P	**Pn**	**03 27 42.0**	**-0.1**
0.3nm,0.3s,baz=346,slow=10,SNR=8.8									
WRA				S			Sn	03 30 07.8	-9.3
0.4nm,0.3s,baz=336,slow=22,SNR=5.0									
ASAR	**Alice Springs**	**17.45**	**167**	P		P	**Pn**	**03 28 24.6**	**+0.1**
0.3nm,0.3s,baz=340,slow=9.3,SNR=15									
STKA	**Stephens Creek**	**27.47**	**158**	P		P	**P**	**03 30 02.2**	**-0.3**
0.6nm,0.3s,baz=331,slow=12,SNR=3.8									
AFI	**Afiamalu**	**57.79**	**102**	LR		LR		03 59 17.9	
comp=Z,208nm,19.1s,baz=313,slow=36									
MKAR	**Makanchi Array**	**67.78**	**327**	P		P	**Pn**	**03 35 12.5**	**+0.5**
0.5nm,0.4s,baz=118,slow=8.1,SNR=9.4									

*IDC **26** 03:25:25.9±0.4, 10°.91S×163°.88E, h0km, mb4.8/28, mb1 4.9/31, mb1mx4.8/45, mbtmp4.8/31, ML4.8/3, MS4.7/34, Ms1 4.7/34, ms1mx4.6/38, Error ellipse: s-maj=14.3km s-min=12.5km az=100.0*
*BJI **26** 03:25:26.8±0.0, 11°.04S×164°.24E, h28km, mB5.4/44, mb4.8/56, Ms5.2/35, Ms7 4.9/37*
*MOS **26** 03:25:29.6±0.8, 10°.91S×163°.85E, h36km, mb5.3/38, Error ellipse: s-maj=8.9km s-min=7.2km az=123.2*
*NEIC **26** 03:25:30.3±1.4, 10°.94S±0°.08×163°.91E±0°.07, h31km±4km, mb5.2/201, Error ellipse: s-maj=11.8km s-min=9.8km az=214.0*
*GCMT **26** 03:25:31.3±0.1, 10°.90S±0°.01×163°.85E±0°.01, h19km, MW5.4/132, Moment Tensor Solution. s110,c212; s132,c244; Duration: 1s3 Moment tensor: Scale 10^17 Nm; Mrr1.27±.03; Mtt0.-1.84±.02; Mpp0.56±.02; Mrt0.65±.04; Mrp0.23±.02; Mtp0.-0.35±.05; Best double couple: M0 1.75100×10^17 NP1:φs256.00000°, δ36.00000°, λ61.00000°. NP2:φs111.00000°, δ59.00000°, λ109.00000°. Principal axes: T 1.4980, Plg69.0000°, Azm63.0000°; N 0.5040, Plg16.0000°, Azm280.0000°; P -2.0040, Plg12.0000°, Azm187.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 26 03:25:30.2±0.5, 11°.03S±0°.04×163°.98E±0°.05, h30km±3km, h28km:pP-P, n365, σ1s56/314, mb5.2/138, MS4.8/45, 6C-4D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.27**	**291**			Pn	**Pn**	**03 26 32.5**	**-0.8**
108nm,0.3s,baz=4.1,slow=4.3,SNR=13									
HNR						Sn	**Sn**	**03 27 25.0**	**+2.8**
295nm,0.3s,baz=336,slow=24,SNR=9.3									
HNR						LR	LR	03 28 11.8	
comp=Z,12µm,20.3s,baz=120,slow=40									
HNR	**Honiara**	**4.27**	**291**			**Pn**	**Pn**	**03 26 32.1**	**-1.2**
DZM	**Mont Dzumac**	**11.23**	**168**	*e*P		**Pn**	**Pn**	**03 28 09.6**	**+0.6**
520nm,1.5s									
DZM				*e*LR		LR		03 30 39.1	
comp=Z,19µm,25.1s									
DZM	**Mont Dzumac**	**11.23**	**168**	Pn			**Pn**	**03 28 09.8**	**+0.9**
5.0nm,0.3s,baz=322,slow=15,SNR=32									
DZM						Sn	**Sn**	**03 30 09.2**	**-4.4**
0.8nm,0.3s,baz=165,slow=20,SNR=1.5									
DZM						LR	LR	03 31 55.1	
comp=Z,9µm,20.4s,baz=7.0,slow=34									
DZM	**Mont Dzumac**	**11.23**	**168**				**Pn**	**03 28 09.9**	**+1.0**
NOUC	**Port Laguerre**	**11.24**	**169**				**Pn**	**03 28 09.2**	**+0.2**
KRVT	**Keravat (AS076**	**13.59**	**299**	LR		LR		03 34 07.9	
comp=Z,3µm,19.9s,baz=122,slow=39									
MSVF	**Nonsavu**	**15.17**	**118**	P			**Pn**	**03 29 04.2**	**+1.6**

MSVF pmax pmax
comp=Z,28nm,1.1s
MSVF Nonsavu 15.17 118 Pn Pn 03 29 04.2 +1.6
TARA Tarawa 15.18 36 Pn Pn 03 29 01.6 -1.1
FUNA Funafuti 15.20 82 Pn Pn 03 29 02.2 -0.8
PMG Port Moresby 16.63 274 P Pn 03 29 20.0 -1.4
PMG Port Moresby 16.63 274 Pn P 03 29 25.3 +1.8
comp=Z,0.9nm,0.3s,baz=248,slow=19,SNR=2.6
PMG LR LR 03 35 27.7
comp=Z,7µm,20.3s,baz=132,slow=36
PMG Port Moresby 16.63 274 Pn Pn 03 29 19.9 -1.4
PATS Pohnpei 18.62 342 P P 03 29 42.8 -2.7
MANU Manus Island 18.75 297 P P 03 29 46.5 -0.4
MANU IAmb IAmb 03 29 57.9
comp=Z,266nm,1.2s
EIDS Eidsvold 18.78 219 P Pn 03 29 50.0 +2.2
baz=19,SNR=10.0
EIDS Eidsvold 18.78 219 P Pn 03 29 48.2 +0.4
EIDS IAmb IAmb 03 29 53.4
comp=Z,217nm,1.5s
CTA Charters Tower 19.29 240 P Pn 03 29 54.0 0.0
comp=Z,1.1nm,0.3s,baz=63,slow=12,SNR=15
CTA LR LR 03 37 10.2
comp=Z,3µm,18.2s,baz=60,slow=37
KWAJ Kwajalein Atol 20.03 11 P P 03 30 00.3 -0.6
KWAJ pmax pmax
comp=Z,489nm,1.2s
KWAJ Kwajalein Atol 20.03 11 P P 03 30 00.3 -0.6
MTSU Mount Surprise 20.28 247 P Pn 03 30 04.8 -1.0
baz=20,SNR=24
COEN Coen 20.52 260 P P 03 30 07.1 +0.9
baz=20,SNR=13
COEN Coen 20.52 260 P P 03 30 06.3 0.0
COEN IAmb IAmb 03 30 21.4
comp=Z,120nm,1.4s
RMQ Roma 21.04 221 P P 03 30 14.4 +2.5
baz=21,SNR=14
ARMA Armidale 22.45 209 P P 03 30 30.4 +3.3
baz=23,SNR=5.1
ARMA Armidale 22.45 209 P P 03 30 28.2 +1.1
AFI Afiamalu 23.84 99 P P 03 30 41.9 +0.6
AFI pmax pmax
comp=Z,68nm,1.0s
AFI Afiamalu 23.84 99 P P 03 30 42.4 +1.1
comp=Z,43nm,1.0s,baz=140,slow=24,SNR=4.8
AFI LR LR 03 38 24.2
comp=Z,3µm,18.9s,baz=276,slow=32
AFI Afiamalu 23.84 99 P P 03 30 41.9 +0.6
AFI IAmb IAmb 03 30 43.9
comp=Z,68nm,1.0s
JAY Jayapura 24.59 288 LR LR 03 40 25.2
comp=Z,1µm,22.0s,baz=32,slow=37
RAO Raoul Island 24.79 140 LR LR 03 39 48.6
comp=Z,1µm,18.4s,baz=333,slow=35
QIS Mount Isa 25.26 245 P P 03 30 53.7 -0.4
baz=25,SNR=17
CMSA Cobar Meteorol 26.51 217 P P 03 31 07.0 +1.8
baz=27,SNR=8.9
SMPI Sarmi 26.63 288 P P 03 31 08.9 +2.3
comp=Z,83nm,0.4s
CAN Canberra 27.75 207 P P 03 31 16.9 +0.4
CAN pmax pmax
comp=Z,51nm,1.5s
CAN Canberra 27.75 207 P P 03 31 16.9 +0.4
STKA Stephens Creek 29.28 221 P P 03 31 30.2 +0.1
baz=29,SNR=7.1
STKA Stephens Creek 29.28 221 P P 03 31 29.8 -0.3
STKA pmax pmax
comp=Z,7.0nm,1.1s
STKA Stephens Creek 29.28 221 P P 03 31 30.6 +0.5
comp=Z,20nm,0.9s,baz=34,slow=12,SNR=26
STKA LR LR 03 42 19.7
comp=Z,4µm,19.8s,baz=37,slow=35
STKA Stephens Creek 29.28 221 P P 03 31 29.8 -0.3
H11S2 WAKE ISLAND Hy 29.45 5 T T 04 02 19.7
baz=190,slow=76,SNR=12
H11S3 WAKE ISLAND Hy 29.45 5 T T 04 02 43.6
baz=190,slow=76,SNR=14
H11S1 WAKE ISLAND Hy 29.47 5 T T 04 02 09.6
baz=190,SNR=10.0
URZ Urewera 29.56 159 LR LR 03 41 28.9
comp=Z,1µm,18.6s,baz=348,slow=32
WR0 Warramunga Arr 29.68 249 P P 03 31 33.9 +0.1
WR0 IAmb IAmb 03 31 47.3
comp=Z,51nm,1.2s
WB0 Warramunga Arr 29.77 249 P P 03 31 33.3 -1.3
WB2 Warramunga Arr 29.85 249 P P 03 31 33.8 -1.5
baz=30
WRA Warramunga Arr 29.86 249 P P 03 31 33.7 -1.7
comp=Z,11nm,0.6s,baz=77,slow=9.1,SNR=16
WRA S S **03 36 27.0 -3.8**
comp=Z,14nm,1.2s,baz=76,slow=14,SNR=7.3
WRA LR LR 03 43 06.7
comp=Z,3µm,19.4s,baz=80,slow=36
WRA Warramunga Arr 29.86 249 IAmb IAmb 03 31 37.8
comp=Z,1.0nm,0.8s
H11N1 WAKE ISLAND Hy 30.68 5 T T 04 03 40.7
baz=184,slow=76,SNR=7.7
H11N3 WAKE ISLAND Hy 30.69 5 T T 04 03 40.5
baz=184,slow=76,SNR=11
H11N2 WAKE ISLAND Hy 30.70 5 T T 04 03 42.0
baz=184,slow=76,SNR=9.9
KDU Kakadu 30.87 264 P P 03 31 41.8 -2.5
baz=31,SNR=5.1
GUMO Guam 30.94 322 LR LR 03 44 15.3
comp=Z,987nm,18.1s,baz=142,slow=37
TOO Toolangi 31.22 209 P P 03 31 49.8 +2.7
baz=31,SNR=5.1
TOO Toolangi 31.22 209 P P 03 31 48.3 +1.2
TOO pmax pmax
comp=Z,21nm,1.1s
TOO Toolangi 31.22 209 P P 03 31 48.3 +1.2
AS31 Alice Springs 31.25 242 P P 03 31 46.6 -1.0
ASAR Alice Springs 31.26 242 P P 03 31 46.0 -1.7
ASAR Alice Springs 31.26 242 P P 03 31 45.9 -1.7
comp=Z,7.3nm,0.8s,baz=68,slow=9.9,SNR=34
ASAR S S **03 36 48.3 -4.3**
comp=Z,1.8nm,1.1s,baz=65,slow=15,SNR=3.6
ASAR LR LR 03 44 50.5
comp=Z,1µm,18.1s,baz=72,slow=37
HTT Hallett 32.01 222 P P 03 31 54.6 +0.4
baz=32,SNR=12
ARPS Mount Arapiles 32.49 214 P P 03 32 00.6 +2.3
baz=33,SNR=5.6
RPZ Rata Peaks 33.14 171 P P 03 32 05.5 +1.6
comp=Z,13nm,0.8s,baz=348,slow=20,SNR=3.4
RPZ LR LR 03 44 05.2
comp=Z,3µm,20.8s,baz=348,slow=34
RPZ Rata Peaks 33.14 171 IAmb IAmb 03 32 11.2
comp=Z,143nm,1.5s
BBOO Buckleboo 33.59 225 P P 03 32 07.9 -0.1
baz=34,SNR=12
BBOO Buckleboo 33.59 225 P P 03 32 07.9 -0.1
BBOO IAmb IAmb 03 32 10.0
comp=Z,35nm,0.9s
KNRA Kununurra 34.54 258 P P 03 32 14.2 -2.2
baz=35,SNR=10
KNRA Kununurra 34.54 258 P P 03 32 14.8 -1.6
RAR Rarotonga 36.19 111 LR LR 03 44 17.5
comp=Z,563nm,21.0s,baz=266,slow=31
WRKA Warakurna 36.55 243 P P 03 32 32.5 -1.1
baz=37,SNR=18
FITZ Fitzroy Crossi 37.71 255 P P 03 32 41.2 -2.3
baz=38,SNR=15
FITZ Fitzroy Crossi 37.71 255 P P 03 32 41.4 -2.1
comp=Z,14nm,0.6s,baz=69,slow=7.5,SNR=36
FITZ Fitzroy Crossi 37.71 255 P P 03 32 41.7 -1.8
FITZ IAmb IAmb 03 32 56.8
comp=Z,52nm,1.4s
JOHN Johnston Islan 38.04 44 P P 03 32 46.0 -0.3
FORT Forrest 38.64 234 P P 03 32 51.1 -0.1
FORT IAmb IAmb 03 32 55.3
comp=Z,53nm,1.0s
SANI Sanana 38.73 281 P P 03 32 57.4 +5.2
DAV Davao City (W) 42.23 293 LR LR 03 50 28.8
comp=Z,454nm,18.1s,baz=64,slow=36
KCP Kidapawan 42.65 293⇓ *e*P P 03 33 33.2 +8.6
JCJ Chichijima 43.40 331 LR LR 03 51 32.1
comp=Z,459nm,19.8s,baz=142,slow=36
PSA00 Pilbara Seismi 43.50 250 P P 03 33 30.5 -0.8
PSA00 IAmb IAmb 03 33 45.6
comp=Z,75nm,1.3s
PAE Paea 45.39 104 *e*P **P 03 33 45.3 -1.2**
comp=Z,18nm,1.2s
PPT Papeete 45.39 104 P P 03 33 47.9 +1.4
comp=Z,53nm,0.8s,baz=332,slow=17,SNR=5.7
PPT LR LR 03 49 50.1
comp=Z,1µm,18.2s,baz=259,slow=32
PPT2 Papeete2 45.39 104 *e*P **P 03 33 45.9 -0.7**
comp=Z,141nm,1.4s
PPT2 Papeete2 45.39 104 *e*LR LR 03 46 25.2
comp=Z,2µm,28.0s,baz=288
TIAR Tiarei 45.61 104 *e*P **P 03 33 47.5 -0.7**
comp=Z,65nm,1.3s
TVO Taravao 45.70 104 *e*P **P 03 33 48.3 -0.8**
comp=Z,40nm,1.0s
TBI Tubuai 45.95 112 *e*LQ LQ 03 44 49.4
comp=Z,5µm,27.0s
TBI *e*LR LR 03 46 37.4
comp=Z,2µm,27.0s
MEH Mehetia 46.84 104 *e*P **P 03 33 57.2 -0.7**
comp=Z,63nm,1.2s
MJAR Matsushiro Arr 53.17 334 P P 03 34 44.6 -1.1
comp=Z,6.9nm,0.9s,baz=159,slow=8.7,SNR=9.2
MJAR LR LR 03 55 38.2
comp=Z,302nm,21.7s,baz=145,slow=34
MJAR Matsushiro Arr 53.17 334 IAmb IAmb 03 34 46.6
comp=Z,4.8nm,0.9s
MAJO Matsushiro 53.17 334 P P 03 34 45.1 -0.6
MAJO pmax pmax
comp=Z,46nm,1.4s
MAJO Matsushiro 53.17 334 P P 03 34 45.1 -0.6
MAJO IAmb IAmb 03 34 46.7
comp=Z,46nm,1.4s
MAT Matsushiro 53.17 334 P P 03 34 43.7 -2.0
MAT S S **03 42 19.0 +4.3**
JNU Nakatsue 54.06 326 P P 03 34 51.0 -1.3
comp=Z,12nm,0.9s,baz=90,slow=6.1
TAOE Nuku Hiva Isla 55.02 93 *e*LR LR 03 50 54.2
comp=Z,1µm,25.5s
ASAJ Asahikawa 58.22 342 P P 03 35 22.1 +0.4
comp=Z,12nm,0.8s,baz=205,slow=5.9,SNR=9.4
KSRS Korea Array 58.90 327 P P 03 35 26.5 0.0
comp=Z,3.0nm,0.9s,baz=141,slow=7.4,SNR=6.5
KSRS LR LR 03 57 16.7
comp=Z,395nm,20.8s,baz=134,slow=32
DSRI Dabo 59.91 276 P P 03 35 47.3 +13
YSS Yuzh-Sakhalins 60.76 343 *e*P **P 03 35 38.9 -0.2**
YSS *e*S **S 03 43 53.3 -1.0**
YSS pmax pmax
comp=Z,600nm,6.5s
NJ2 Nanjing 60.80 316 *e*P **P 03 35 42.0 +2.3**
NJ2 pmax pmax
comp=Z,22nm,0.5s
QIZ Qiongzhong 61.15 299 P P 03 35 43.0 +0.6
QIZ S **S 03 44 02.0 +1.7**
QIZ sS **sS 03 44 11.0 -2.5**
QIZ ScS **ScS 03 45 32.8 +0.7**
QIZ LR LR
comp=Z,340nm,18.6s
QIZ LR LR
comp=Z,370nm,25.5s
QIZ LR LR
comp=Z,730nm,23.5s
USA0B Ussuriysk Arra 62.17 334 P P 03 35 48.2 -0.6
USA0B pmax pmax
comp=Z,55nm,1.4s
USA0B Ussuriysk Arra 62.17 334 P P 03 35 48.2 -0.6
USRK Ussuriysk Ar. 62.17 334 P P 03 35 49.2 +0.5
comp=Z,7.3nm,0.9s,baz=150,slow=4.2,SNR=10
USRK LR LR 04 00 30.7
comp=Z,386nm,20.6s,baz=137,slow=34
WHN Wuhan 63.09 313 P P 03 36 00.3 +5.1
WHN S **S 03 44 29.5 +5.1**
WHN LR LR
comp=Z,1µm,20.7s
PET Petropavlovsk 63.96 356 *e*P P 03 36 08.7 +8.3
PETK Petropavlovsk- 64.10 356 P P 03 36 01.1 -0.4
comp=Z,6.4nm,0.8s,baz=142,slow=8.5,SNR=5.4
PETK LR LR 03 58 19.6
comp=Z,936nm,21.6s,baz=202,slow=31
CN2 Changchun 64.85 330 *e*P **P 03 36 06.0 -0.5**
CN2 *e*S **S 03 44 41.5 -4.2**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,450nm,6.0s
CN2 LR LR
comp=Z,660nm,15.0s
CN2 LR LR
comp=Z,440nm,15.0s
CN2 LR LR
comp=Z,770nm,17.0s
GRNR Gornyy 66.05 341⇓ *i*P **P 03 36 14.7 +0.5**
GRNR *e*S **S 03 45 03.9 +3.7**
GRNR pmax pmax
comp=Z,10.0nm,1.3s
GRNR smax smax
comp=N,6.0nm,1.3s
KLR Kul'dur 66.36 338 *i* P **P 03 36 15.2 -1.0**
KLR pmax pmax
comp=Z,37nm,2.0s
KLR Kul'dur 66.36 338 P P 03 36 16.0 -0.2
comp=Z,4.1nm,0.9s,baz=131,slow=4.3,SNR=9.3
VNDA Vanda 66.49 181 P P 03 36 19.2 +2.5
comp=Z,3.6nm,1.0s,baz=3.3,slow=5.6,SNR=5.7
VNDA LR LR 04 00 57.5
comp=Z,818nm,21.1s,baz=8.0,slow=32
ENH Enshi 66.54 310 P P 03 36 16.1 -1.7
NKL Nikolayevsk 66.96 345 P P 03 36 19.9 +0.1
NKL *e* 03 36 47.1
NKL pmax pmax
comp=Z,20nm,1.6s
NKL pmax pmax
comp=E,2.0nm,0.8s
NKL pmax pmax
comp=N,6.0nm,1.4s
NKL pmax pmax
comp=Z,62nm,5.9s
GYA Guiyang 66.98 305⇑ *i*P **P 03 36 20.5 -0.2**
GYA PP **PP 03 38 46.3 -2.4**
GYA S **S 03 45 06.0 -6.6**
GYA SS **SS 03 49 31.8 -0.1**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,180nm,5.2s
GYA LR LR
comp=Z,330nm,16.0s
GYA LR LR
comp=Z,480nm,15.0s
GYA LR LR
comp=Z,600nm,17.6s
SLVN Son La 67.17 299 P P 03 36 21.5 -0.5
SLVN IAmb IAmb 03 36 33.4
comp=Z,27nm,1.4s
BJT Baijiatuan 67.38 322 P P 03 36 21.5 -1.3
BJT pmax pmax
comp=Z,6.0nm,0.6s
BJT Baijiatuan 67.38 322 P P 03 36 21.5 -1.3
BJI Beijing 67.39 322 P P 03 36 22.8 -0.1
BJI pP **pP 03 36 28.5 -1.6**
BJI S **S 03 45 19.0 +2.3**
BJI pmax pmax
comp=Z,8.0nm,1.9s
BJI LR LR
comp=Z,610nm,19.6s
BJI LR LR
comp=Z,370nm,20.6s
PBKT Sadao Pong 68.07 293 P P 03 36 26.3 -1.3
TIY Taiyuan 68.38 318 *e*P P 03 36 36.0 +6.7
TIY PP **PP 03 39 01.5 +0.9**
TIY S **S 03 45 30.8 +1.9**
TIY sS sS 03 45 40.0 -2.1
TIY pmax pmax
comp=Z,10.0nm,0.4s
TIY pmax pmax
comp=Z,320nm,5.8s
TIY LR LR
comp=N,610nm,16.2s
TIY LR LR
comp=E,160nm,8.1s
TIY LR LR
comp=Z,540nm,19.8s
XAN Xi'an 68.83 313 P P 03 36 31.8 -0.4
XAN pP sP 03 36 43.8 +1.5
XAN S **S 03 45 31.0 -3.4**
XAN ScS **SKiKP 03 46 22.3 -0.1**
XAN pmax pmax
comp=Z,12nm,1.1s
XAN pmax pmax
comp=Z,400nm,8.3s
XAN LR LR
comp=Z,280nm,21.7s
XAN LR LR
comp=Z,440nm,21.1s
XAN LR LR
comp=Z,380nm,26.0s
XAN Xi'an 68.83 313 P P 03 36 30.9 -1.3
XAN pmax pmax
comp=Z,14nm,1.1s
XAN Xi'an 68.83 313 P P 03 36 30.9 -1.3
KMI Kunming 69.63 302 P P 03 36 38.5 +1.0
KMI pP pP 03 36 44.5 -0.4
KMI sP sP 03 36 49.3 +1.6
KMI pmax pmax
comp=Z,26nm,0.9s
KMI pmax pmax
comp=Z,480nm,6.3s
KMI LR LR
comp=Z,240nm,13.3s
KMI LR LR
comp=Z,510nm,17.9s
KMI LR LR
comp=Z,680nm,17.5s
KMI Kunming 69.63 302 P P 03 36 37.0 -0.5
KMI pmax pmax
comp=Z,45nm,1.3s
KMI Kunming 69.63 302 P P 03 36 37.0 -0.5
CM31 Chiang Mai Arr 70.52 294 P P 03 36 42.7 -0.1
CMAR Chiang Mai Arr 70.52 294 *ce*P **P 03 36 43.0 +0.2**
CMAR pmax pmax
comp=Z,2.0nm,0.3s
CMAR Chiang Mai Arr 70.52 294 P P 03 36 43.1 +0.2
comp=Z,3.1nm,0.3s,baz=120,slow=4.8,SNR=4.4
CMAR LR LR 04 09 33.2
comp=Z,93nm,18.2s,baz=105,slow=38
CHTO Chiang Mai 70.63 294 P P 03 36 42.5 -1.0
CHTO pmax pmax
comp=Z,12nm,1.2s
CHTO Chiang Mai 70.63 294 P P 03 36 42.5 -1.0
HHC Hu-ho-hao-te 70.70 320 *eP* **P 03 36 44.0 +0.4**
HHC pP pP 03 36 50.5 -0.4
HHC sP pwP 03 36 57.0 -2.1
HHC pmax pmax
comp=Z,5.0nm,0.9s
HHC pmax pmax
comp=Z,81nm,4.5s
HHC LR LR
comp=Z,250nm,17.9s
HHC LR LR
comp=Z,170nm,14.5s
HHC LR LR
comp=Z,330nm,14.5s
CD2 Chengdu 71.22 308 P P 03 36 47.0 +0.1
CD2 pP sP 03 36 55.8 -1.2
CD2 S **S 03 46 08.5 +6.0**
CD2 sS sS 03 46 18.0 +1.9
CD2 SS **SS 03 50 37.3 +0.3**
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,580nm,7.6s
CD2 LR LR
comp=Z,700nm,13.5s
CD2 LR LR
comp=Z,590nm,17.2s
CD2 LR LR
comp=Z,670nm,17.2s
HIA Hailar 71.50 331 P P 03 36 47.5 -0.7
HIA pmax pmax
comp=Z,16nm,1.1s
HIA Hailar 71.50 331 P P 03 36 47.5 -0.7
ZEA Zeya 71.66 338 *eP* **P 03 36 48.7 -0.3**
ZEA *eS* **S 03 46 12.0 +5.4**
ZEA *e* 03 46 48.0
ZEA pmax pmax
comp=N,29nm,1.2s
ZEA pmax pmax
comp=Z,55nm,1.4s
ZEA pmax pmax
comp=Z,300nm,7.0s
ZEA smax smax
comp=E,400nm,11.0s
LZH Lanzhou 73.47 313 ⇓P P 03 37 01.5 +1.1
LZH pP sP 03 37 09.3 -1.2
LZH sP pwP 03 37 14.0 -1.6
LZH *eS* **S 03 46 28.5 +0.2**
LZH SS **SS 03 51 13.5 +2.0**
LZH pmax pmax
comp=E,25nm,1.3s
LZH pmax pmax
comp=E,410nm,6.6s
LZH LR LR
comp=E,450nm,15.4s
LZH LR LR
comp=E,480nm,16.0s
LZH LR LR
comp=E,540nm,18.0s
SEY Seymchan 74.28 355 *i* P **P 03 37 03.7 -0.6**
SEY Seymchan 74.28 355 P P 03 37 03.5 -0.7
comp=E,4.5nm,0.9s,baz=180,slow=6.1
ULN Ulaanbaatar 77.27 325 *ce*P **P 03 37 21.9 -0.1**
ULN pmax pmax
comp=Z,35nm,1.7s
ULN Ulaanbaatar 77.27 325 P P 03 37 21.4 -0.6
ULN IAmb IAmb 03 37 23.4
comp=Z,21nm,1.1s
YAK Yakutsk 77.59 344 *e*P **P 03 37 21.2 -2.0**
YAK *e* 03 37 28.1
YAK *e**PP **sP 03 37 32.7 -0.3**
YAK *e* 03 40 12.7
YAK *e*PPP PPP 03 42 02.8
YAK *e*S **S 03 47 09.3 -3.2**
YAK *e**SS **sS 03 47 27.8 +3.0**
YAK *e* 03 47 36.6
YAK *e*SS **SS 03 52 10.6 -2.1**
YAK *e*SSS SSS 03 55 28.7
YAK pmax pmax
comp=Z,21nm,0.8s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=Z,35nm,1.8s
YAK pmax pmax
comp=N,37nm,1.8s
YAK pmax pmax
comp=E,29nm,1.8s
YAK smax smax
comp=N,42nm,2.9s
YAK smax smax
comp=E,48nm,2.7s
YAK Yakutsk 77.59 344 P P 03 37 22.8 -0.4
comp=E,6.6nm,0.4s,baz=96,slow=1.3,SNR=8.0
YAK Yakutsk 77.59 344 P P 03 37 22.6 -0.6
YAK IAmb IAmb 03 37 23.7
comp=Z,21nm,0.8s
SONM Songino Array 77.63 324 P P 03 37 24.2 +0.3
comp=Z,6.4nm,0.9s,baz=145,slow=6.7,SNR=41
SONM LR LR 04 09 17.8
comp=Z,222nm,21.8s,baz=126,slow=34
SONM Songino Array 77.63 324 IAmb IAmb 03 37 25.2
comp=Z,7.6nm,0.9s
GTA Gaotai 77.80 314 P P 03 37 25.8 +0.7
GTA pP pP 03 37 30.3 -2.2
GTA sP sP 03 37 33.3 -2.0
GTA pmax pmax
comp=Z,10.0nm,1.1s
SVW2 Sparrevohn 78.64 19 P P 03 37 29.1 -0.1
BILL Bilibino 78.88 1 *c i*P **P 03 37 29.4 -0.8**
BILL *PP **PcP 03 37 39.0 +0.2**
BILL *i* *SP **sP 03 37 41.7 +1.7**
BILL *e* 03 40 22.9
BILL *e*S S 03 47 37.5 +11
BILL *e* 03 48 19.7
BILL pmax pmax
comp=Z,49nm,1.2s
BILL Bilibino 78.88 1 P P 03 37 29.8 -0.5
BILL IAmb IAmb 03 37 31.1
comp=Z,42nm,1.1s
QSPA South Pole Qui 78.98 180 P P 03 37 31.6 +0.4
QSPA IAmb IAmb 03 37 34.1
comp=Z,44nm,1.5s
SHL Shillong 78.98 299 P P 03 37 30.8 -1.2
SHL pmax pmax
comp=Z,27nm,1.1s

SHL	**Shillong**	**78.98**	**299**	P	**P**	**03 37 30.8**	**-1.2**
SHL				IAmb	IAmb	03 37 45.1	
	comp=Z,27nm,1.1s						
BOD	**Bodaibo**	**79.78**	**335**	*e*P	**P**	**03 37 33.6**	**-1.7**
BOD				pmax	pmax		
	comp=Z,14nm,2.2s						
TTA	**Tatalina**	**79.92**	**17**	P	**P**	**03 37 35.7**	**-0.4**
TTA				pmax	pmax		
	comp=Z,25nm,1.4s						
TTA	**Tatalina**	**79.92**	**17**	P	**P**	**03 37 35.7**	**-0.4**
TTA				IAmb	IAmb	03 37 38.5	
	comp=Z,25nm,1.4s						
ZAK	**Zakamensk**	**80.70**	**326**	*e*P	**P**	**03 37 39.9**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LSA	**Lhasa**	**80.88**	**303**	P	**P**	**03 37 40.8**	**-1.7**
LSA				pmax	pmax		
	comp=Z,14nm,1.3s						
LSA	**Lhasa**	**80.88**	**303**	P	**P**	**03 37 40.8**	**-1.7**
PMR	**Palmer**	**81.14**	**21**	IAmb	IAmb	03 37 46.3	
	comp=Z,23nm,1.2s						
TLY	**Talaya**	**81.15**	**327**	*e*P	**P**	**03 37 42.6**	**-0.3**
TLY				pmax	pmax		
	comp=Z,38nm,1.5s						
TLY	**Talaya**	**81.15**	**327**	P	**P**	**03 37 42.7**	**-0.1**
	comp=Z,4.2nm,0.7s,baz=112,slow=3.6,SNR=5.9						
TLY	**Talaya**	**81.15**	**327**	P	**P**	**03 37 42.3**	**-0.6**
KNK	**Knik Glacier**	**81.26**	**21**	IAmb	IAmb	03 38 02.2	
	comp=Z,39nm,1.4s						
GHO	**Glory Hole Cre**	**81.34**	**21**	IAmb	IAmb	03 37 47.1	
	comp=Z,33nm,1.4s						
GLI	**Glacier Island**	**81.39**	**22**	P	**P**	**03 37 44.1**	**+0.2**
GLI				IAmb	IAmb	03 37 46.5	
	comp=Z,46nm,1.4s						
FID	**Port Fidalgo**	**81.53**	**22**	IAmb	IAmb	03 37 46.9	
	comp=Z,49nm,1.4s						
SML	**Sawmill**	**81.57**	**21**	IAmb	IAmb	03 38 04.8	
	comp=Z,22nm,1.1s						
KTH	**Kantishna Hill**	**81.93**	**19**	IAmb	IAmb	03 37 48.4	
	comp=Z,25nm,1.3s						
BPAW	**Bear Paw Mtn.**	**82.30**	**18**	IAmb	IAmb	03 37 50.5	
	comp=Z,23nm,1.4s						
RND	**Reindeer**	**82.49**	**19**	IAmb	IAmb	03 37 52.5	
	comp=Z,46nm,1.4s						
MCK	**McKinley**	**82.69**	**19**	P	**P**	**03 37 50.2**	**-0.5**
MCK				pmax	pmax		
	comp=Z,60nm,1.5s						
MCK	**McKinley**	**82.69**	**19**	P	**P**	**03 37 50.2**	**-0.5**
DHY	**Denali Highway**	**82.75**	**20**	IAmb	IAmb	03 37 53.6	
	comp=Z,25nm,1.4s						
CRQM	**Cirque**	**82.80**	**23**	IAmb	IAmb	03 38 08.8	
	comp=Z,37nm,1.2s						
GLB	**Gilahina Butte**	**82.97**	**22**	IAmb	IAmb	03 37 52.7	
	comp=Z,27nm,1.3s						
VRDI	**Verde Repeater**	**82.97**	**23**	IAmb	IAmb	03 37 58.0	
	comp=Z,37nm,1.5s						
WRH	**Wood River Hil**	**83.47**	**19**	IAmb	IAmb	03 37 58.0	
	comp=Z,14nm,1.0s						
BARN	**Barnard Glacie**	**83.56**	**23**	P	**P**	**03 37 55.7**	**+0.2**
HDA	**Harding Lake**	**83.79**	**19**	IAmb	IAmb	03 37 57.2	
	comp=Z,28nm,1.2s						
HDA	**Harding Lake**	**83.79**	**19**	P	**P**	**03 37 56.5**	**+0.1**
	baz=228						
TCOL	**CIGO, UAF Yank**	**83.81**	**19**	P	**P**	**03 37 56.0**	**-0.4**
	baz=227						
COLA	**College**	**83.82**	**19**	P	**P**	**03 37 55.8**	**-0.6**
COLA				pmax	pmax		
	comp=Z,36nm,1.4s						
COLA	**College**	**83.82**	**19**	P	**P**	**03 37 55.8**	**-0.6**
COLA				IAmb	IAmb	03 37 56.8	
	comp=Z,36nm,1.4s						
MENT	**Mentasta**	**83.94**	**21**	IAmb	IAmb	03 38 11.4	
	comp=Z,19nm,1.2s						
IL31		**84.05**	**19**	IAmb	IAmb	03 38 15.9	
	comp=Z,19nm,1.4s						
ILAR	**Eielson Array**	**84.05**	**19**	P	**P**	**03 37 56.8**	**-0.9**
	comp=Z,3.8nm,0.7s,baz=248,slow=5.0,SNR=33						
ILAR				LR	LR	04 12 57.8	
	comp=Z,469nm,18.5s,baz=250,slow=34						
RIDG	**Independent Ri**	**84.05**	**20**	IAmb	IAmb	03 38 00.2	
	comp=Z,18nm,1.0s						
MAW	**Mawson**	**84.08**	**202**	P	**P**	**03 37 59.4**	**+1.5**
	baz=84,SNR=13						
MAW	**Mawson**	**84.08**	**202**	P	**P**	**03 37 58.8**	**+0.9**
MAW				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MAW	**Mawson**	**84.08**	**202**	P	**P**	**03 37 59.7**	**+1.8**
	comp=Z,22nm,1.1s,baz=89,slow=5.8,SNR=17						
MAW				LR	LR	04 13 28.6	
	comp=Z,414nm,18.2s,baz=68,slow=34						
MAW	**Mawson**	**84.08**	**202**	P	**P**	**03 37 58.8**	**+0.9**
GDXM	**Geysers**	**84.10**	**49**	IAmb	IAmb	03 38 00.4	
	comp=Z,20nm,1.1s						
POKR	**Poker Plat Res**	**84.11**	**19**	P	**P**	**03 37 58.2**	**+0.2**
	baz=228						
SAO	**San Andreas Ge**	**84.47**	**51**	IAmb	IAmb	03 38 01.9	
	comp=Z,19nm,1.2s						
O02D	**Mt. Diablo Mer**	**84.56**	**47**	P	**P**	**03 38 01.9**	**+1.0**
	baz=251,SNR=12						
L02E	**Cave Junction**	**84.64**	**45**	P	**P**	**03 38 02.1**	**+0.8**
	baz=250						
K02D	**Willamette Mer**	**84.78**	**45**	P	**P**	**03 38 02.6**	**+0.6**
	baz=250						
WDC	**Whiskeytown Da**	**84.87**	**47**	P	**P**	**03 38 02.1**	**-0.3**
WDC				pmax	pmax		
	comp=Z,36nm,1.5s						
WDC	**Whiskeytown Da**	**84.87**	**47**	P	**P**	**03 38 02.1**	**-0.3**
WDC				IAmb	IAmb	03 38 03.9	
	comp=Z,36nm,1.5s						
N02D	**Trinity Center**	**84.88**	**47**	P	**P**	**03 38 03.5**	**+1.0**
	baz=251,SNR=11						
M02C	**Callahan**	**84.91**	**46**	P	**P**	**03 38 03.5**	**+0.8**
	baz=251,SNR=11						
PAGB	**Antelope Grade**	**85.08**	**52**	IAmb	IAmb	03 38 05.4	
	comp=Z,35nm,1.5s						
PKM	**Mcpherson Peak**	**85.17**	**53**	P	**P**	**03 38 04.4**	**+0.1**
	baz=253						
HUMO	**Hull Mountain**	**85.24**	**45**	IAmb	IAmb	03 38 06.0	
	comp=Z,24nm,1.1s						
ORV	**Oroville**	**85.30**	**48**	IAmb	IAmb	03 38 05.6	
	comp=Z,16nm,1.1s						
SKAG	**Skagway**	**85.30**	**27**	P	**P**	**03 38 04.2**	**+0.2**
O03E	**Paynes Creek**	**85.31**	**48**	P	**P**	**03 38 05.2**	**+0.5**
	baz=252,SNR=20						
I03D	**Drain, OR**	**85.34**	**44**	P	**P**	**03 38 05.6**	**+1.0**
	baz=250						
AFDM	**Forest Hills D**	**85.50**	**49**	IAmb	IAmb	03 38 06.8	
	comp=Z,24nm,1.1s						
L04D	**Klamath Falls**	**85.57**	**46**	P	**P**	**03 38 06.5**	**+0.4**
	baz=251,SNR=8.5						
CMB	**Columbia Colle**	**85.66**	**50**	IAmb	IAmb	03 38 07.5	
	comp=Z,12nm,1.1s						
TIXI	**Tiksi**	**85.75**	**349**	*e*P	**P**	**03 38 04.8**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,27nm,1.4s						
FYU	**Fort Yukon**	**85.75**	**18**	IAmb	IAmb	03 38 09.6	
	comp=Z,16nm,1.4s						
M04C	**Macdoel**	**85.76**	**46**	P	**P**	**03 38 07.5**	**+0.5**
	baz=251,SNR=12						
G03D	**McMinnville, O**	**85.91**	**43**	P	**P**	**03 38 08.3**	**+0.9**
	baz=250						
ARVC	**Arvin**	**86.01**	**53**	P	**P**	**03 38 08.9**	**+0.7**
	baz=254						
I04A	**Tendick Farm,**	**86.01**	**44**	P	**P**	**03 38 08.3**	**+0.2**
	baz=251						
VES	**Vestal, Richgr**	**86.02**	**53**	P	**P**	**03 38 08.5**	**+0.3**
	baz=254,SNR=5.8						
H04D	**Lebanon**	**86.03**	**43**	P	**P**	**03 38 08.7**	**+0.6**
	baz=250						
J04D	**Umpqua Nationa**	**86.04**	**45**	P	**P**	**03 38 09.0**	**+0.6**
	baz=251,SNR=5.8						
BEKR	**Beckworth**	**86.23**	**48**	IAmb	IAmb	03 38 10.6	
	comp=Z,21nm,1.2s						
MWC	**Mount Wilson**	**86.38**	**54**	P	**P**	**03 38 10.1**	**-0.2**
MWC				pmax	pmax		
	comp=Z,42nm,1.4s						
MWC	**Mount Wilson**	**86.38**	**54**	P	**P**	**03 38 10.1**	**-0.2**
ISA	**Isabella, Lake**	**86.44**	**53**	IAmb	IAmb	03 38 11.8	
	comp=Z,16nm,1.2s						
ISA	**Isabella, Lake**	**86.44**	**53**	P	**P**	**03 38 10.9**	**+0.5**
	baz=254,SNR=9.1						
H04A	**Detroit Lake**	**86.46**	**43**	IAmb	IAmb	03 38 11.2	
	comp=Z,21nm,1.3s						
WAKR	**Walker**	**86.51**	**50**	IAmb	IAmb	03 38 12.5	
	comp=Z,31nm,1.3s						
PNTR	**Pine Nut**	**86.56**	**49**	IAmb	IAmb	03 38 12.6	
	comp=Z,19nm,1.1s						

OMMB	**Old Mammoth Mi**	**86.58**	**51**	IAmb	IAmb	03 38 12.8	
	comp=Z,19nm,1.3s						
EDW2	**Edwards Air Fo**	**86.61**	**54**	P	**P**	**03 38 11.8**	**+0.5**
	baz=254,SNR=15						
J05D	**Fort Rock, OR**	**86.66**	**45**	P	**P**	**03 38 12.0**	**+0.6**
	baz=252,SNR=17						
BFSC	**Mount Baldy Ra**	**86.70**	**54**	P	**P**	**03 38 11.8**	**+0.1**
	baz=254,SNR=10						
MLAC	**Mammoth, Mammo**	**86.71**	**51**	P	**P**	**03 38 13.2**	**+1.2**
	baz=254						
D03D	**Eldon**	**86.82**	**40**	P	**P**	**03 38 12.5**	**+0.6**
	baz=250						
E04D	**Cinebar**	**86.83**	**41**	P	**P**	**03 38 12.6**	**+0.7**
	baz=250						
MOD	**Modoc Plateau**	**86.89**	**46**	P	**P**	**03 38 12.3**	**-0.3**
MOD				IAmb	IAmb	03 38 13.8	
	comp=Z,21nm,1.2s						
MURC	**Murrieta**	**86.90**	**55**	P	**P**	**03 38 13.4**	**+0.8**
	baz=255						
PAHR	**Pah Rah Range**	**86.90**	**49**	IAmb	IAmb	03 38 14.0	
	comp=Z,20nm,1.2s						
D04E	**Lakebay**	**86.90**	**41**	P	**P**	**03 38 13.5**	**+1.3**
	baz=250						
I05D	**Terrebonne, OR**	**86.92**	**44**	P	**P**	**03 38 13.0**	**+0.5**
	baz=252						
CWC	**Cottonwood Cre**	**86.96**	**52**	P	**P**	**03 38 13.2**	**+0.2**
	baz=254						
LRMC	**Laurel Mtn Rad**	**87.01**	**53**	P	**P**	**03 38 13.8**	**+0.5**
	baz=254,SNR=11						
TIN	**Tinemaha, Big**	**87.02**	**52**	P	**P**	**03 38 14.0**	**+0.7**
	baz=254						
PINE	**Pine Mountain**	**87.02**	**44**	IAmb	IAmb	03 38 14.8	
	comp=Z,27nm,1.1s						
BAR	**Barrett**	**87.08**	**56**	IAmb	IAmb	03 38 14.9	
	comp=Z,19nm,1.4s						
G05D	**Wamic, OR**	**87.22**	**43**	P	**P**	**03 38 14.4**	**+0.5**
	baz=252						
RYN	**Ryan**	**87.23**	**50**	IAmb	IAmb	03 38 15.6	
	comp=Z,14nm,1.1s						
DAC	**Darwin (Calif)**	**87.30**	**52**	IAmb	IAmb	03 38 19.0	
	comp=Z,24nm,1.5s						
MPMC	**Manual Prospec**	**87.32**	**53**	P	**P**	**03 38 15.2**	**+0.4**
	baz=254,SNR=8.1						
F05D	**White Salmon**	**87.33**	**42**	P	**P**	**03 38 15.0**	**+0.5**
	baz=251						
MONP2	**Monument Peak**	**87.34**	**56**	P	**P**	**03 38 15.6**	**+0.5**
	baz=255,SNR=9.6						
NVAR	**Mina Array Bea**	**87.34**	**50**	P	**P**	**03 38 15.2**	**+0.3**
	comp=Z,10nm,1.0s,baz=237,slow=7.2,SNR=44						
NVAR				PP	**PP**	**03 41 36.8**	**-2.8**
	comp=Z,0.4nm,0.8s,baz=261,slow=5.9,SNR=4.2						
NVAR				LR	LR	04 11 23.5	
	comp=Z,651nm,19.1s,baz=280,slow=32						
NV11	**Mina Array Sit**	**87.45**	**50**	IAmb	IAmb	03 38 16.8	
	comp=Z,19nm,1.1s						
A04D	**Lummi Island**	**87.46**	**39**	P	**P**	**03 38 16.3**	**+1.3**
	baz=250						
PFO	**Pinyon Flats O**	**87.50**	**55**	*i* P	**P**	**03 38 14.5**	**-1.2**
PFO				pmax	pmax		
	comp=Z,14nm,1.4s						
PFO	**Pinyon Flats O**	**87.50**	**55**	P	**P**	**03 38 15.6**	**-0.1**
PFO	**Pinyon Flats O**	**87.50**	**55**	P	**P**	**03 38 15.9**	**+0.2**
	baz=255,SNR=5.5						
XPFO	**Pion Flat**	**87.50**	**55**	P	**P**	**03 38 15.2**	**-0.5**
IKP	**In-Ko-Pah, Jac**	**87.53**	**56**	P	**P**	**03 38 15.8**	**0.0**
	baz=255,SNR=5.6						
GSC	**Goldstone, Bar**	**87.66**	**54**	P	**P**	**03 38 16.2**	**-0.1**
	baz=255,SNR=5.7						
GRAC	**Grapevine Rang**	**87.67**	**52**	P	**P**	**03 38 17.0**	**+0.7**
	baz=254,SNR=7.1						
KVN	**Kaiserville**	**87.67**	**50**	IAmb	IAmb	03 38 17.6	
	comp=Z,13nm,1.1s						
B05A	**Bryant**	**87.69**	**40**	P	**P**	**03 38 16.6**	**+0.6**
	baz=251						
WMQ	**Urumqi**	**87.86**	**315**	*e*P	**P**	**03 38 17.0**	**-0.1**
WMQ				pP	sP	03 38 27.0	0.0
WMQ				pmax	pmax		
	comp=Z,11nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,150nm,4.9s						
WMQ				LR	LR		
	comp=Z,600nm,23.9s						
WMQ				LR	LR		
	comp=Z,520nm,24.5s						
SWSC	**Sam W. Stewart**	**87.86**	**56**	P	**P**	**03 38 17.7**	**+0.5**
	baz=256,SNR=7.0						
HEC	**Hector,Ludlow**	**87.91**	**54**	P	**P**	**03 38 17.8**	**+0.3**
	baz=255,SNR=9.4						
FURC	**Furnace Creek,**	**87.92**	**52**	P	**P**	**03 38 18.1**	**+0.7**
	baz=255						
BELC	**Belle Mtn. Jos**	**87.97**	**55**	P	**P**	**03 38 18.4**	**+0.5**
	baz=255,SNR=15						
I07A	**Izee**	**88.10**	**45**	IAmb	IAmb	03 38 19.9	
	comp=Z,22nm,1.2s						
SHOC	**Shoshone, Teco**	**88.23**	**53**	P	**P**	**03 38 19.7**	**+0.7**
	baz=255						
BC3	**Big Chuckawall**	**88.32**	**55**	P	**P**	**03 38 20.3**	**+0.7**
	baz=256,SNR=11						
TUQ	**Turquoise Moun**	**88.39**	**54**	P	**P**	**03 38 20.1**	**+0.2**
	baz=255,SNR=6.7						
EPYK	**Eagle Plains**	**88.39**	**20**	P	**P**	**03 38 19.5**	**+0.5**
	baz=238						
TPNV	**Topopah Spring**	**88.52**	**52**	IAmb	IAmb	03 38 21.2	
	comp=Z,17nm,1.4s						
TPNV	**Topopah Spring**	**88.52**	**52**	P	**P**	**03 38 20.7**	**+0.2**
	baz=255,SNR=9.4						
LLLB	**Lillooet**	**88.60**	**38**	P	**P**	**03 38 19.9**	**-0.5**
GLA	**Glamis**	**88.68**	**56**	P	**P**	**03 38 22.5**	**+1.3**
	baz=256,SNR=6.0						
IRM	**Iron Mountain**	**88.69**	**55**	P	**P**	**03 38 21.9**	**+0.7**
	baz=256,SNR=18						
HAWA	**Hanford**	**88.76**	**42**	IAmb	IAmb	03 38 22.7	
	comp=Z,16nm,1.1s						
G08A	**Pilot Rock**	**88.82**	**43**	IAmb	IAmb	03 38 23.0	
	comp=Z,20nm,1.2s						
Y12C	**Blythe**	**89.09**	**56**	IAmb	IAmb	03 38 24.9	
	comp=Z,17nm,1.1s						
Y12C	**Blythe**	**89.09**	**56**	P	**P**	**03 38 23.9**	**+0.9**
	baz=256						
SHPR	**Sheep Range**	**89.25**	**53**	IAmb	IAmb	03 38 25.8	
	comp=Z,25nm,1.4s						
R11A	**Troy Canyon, C**	**89.38**	**51**	IAmb	IAmb	03 38 25.9	
	comp=Z,22nm,1.4s						
R11A	**Troy Canyon, C**	**89.38**	**51**	P	**P**	**03 38 24.8**	**+0.2**
	baz=256,SNR=16						
B08A	**Colville Reser**	**89.47**	**40**	IAmb	IAmb	03 38 25.6	
	comp=Z,16nm,1.2s						
PDMCI	**Parker Dam,Lak**	**89.53**	**55**	P	**P**	**03 38 25.8**	**+0.7**
	baz=256,SNR=8.6						
W13A	**Hualapai Mount**	**89.92**	**54**	P	**P**	**03 38 27.4**	**+0.2**
W13A				IAmb	IAmb	03 38 28.1	
	comp=Z,18nm,1.5s						
214A	**Organ Pipe Nat**	**90.08**	**58**	IAmb	IAmb	03 38 43.4	
	comp=Z,12nm,1.2s						
214A	**Organ Pipe Nat**	**90.08**	**58**	P	**P**	**03 38 29.0**	**+1.2**
	baz=257						
F10A	**Beach Ranch, E**	**90.18**	**43**	IAmb	IAmb	03 38 28.5	
	comp=Z,14nm,1.0s						
ELK	**Elko**	**90.23**	**49**	IAmb	IAmb	03 38 30.1	
	comp=Z,21nm,1.3s						
MFID	**Camas Ranch**	**90.48**	**46**	IAmb	IAmb	03 38 31.0	
	comp=Z,20nm,1.1s						
NEW	**Newport**	**90.86**	**41**	IAmb	IAmb	03 38 32.0	
	comp=Z,23nm,1.4s						
NEW	**Newport**	**90.86**	**41**	P	**P**	**03 38 31.0**	**-0.1**
	baz=254						
DUG	**Dugway, Tooele**	**91.91**	**50**	IAmb	IAmb	03 38 37.8	
	comp=Z,18nm,1.4s						
DUG	**Dugway, Tooele**	**91.91**	**50**	P	**P**	**03 38 36.6**	**+0.4**
	baz=257						
BGU	**Big Grassy Mou**	**91.91**	**49**	P	**P**	**03 38 35.8**	**-0.4**
WUAZ	**Wupatki**	**92.02**	**54**	IAmb	IAmb	03 38 52.7	
	comp=Z,12nm,1.5s						
WUAZ	**Wupatki**	**92.02**	**54**	P	**P**	**03 38 38.0**	**+1.1**
	baz=258						
MK31	**Makanchi Array**	**92.32**	**317**	P	**P**	**03 38 36.9**	**-0.9**
MK31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MK31	**Makanchi Array**	**92.32**	**317**	P	**P**	**03 38 36.9**	**-0.9**
MK31				IAmb	IAmb	03 38 38.4	
	comp=Z,7.9nm,1.0s						
MKAR	**Makanchi Array**	**92.32**	**317**	*ce*P	**P**	**03 38 37.2**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MKAR	**Makanchi Array**	**92.32**	**317**	P	**P**	**03 38 37.3**	**-0.6**
	comp=Z,5.4nm,0.8s,baz=100,slow=5.8,SNR=50						
MKAR				LR	LR	04 21 09.8	
	comp=Z,97nm,19.5s,baz=77,slow=36						

ZAA0	**Zalesovo Array**	**92.53**	**324**	P	**P**	**03 38 36.4**	**-2.1**
ZAA0				IAmb	IAmb	03 38 38.0	
	comp=Z,15nm,1.2s						
ZALV	**Zalesovo Beam**	**92.53**	**324**	P	**P**	**03 38 37.2**	**-1.4**
	comp=Z,4.8nm,0.9s,baz=108,slow=4.8,SNR=21						
ZALV				LR	LR	04 21 41.7	
	comp=Z,190nm,18.7s,baz=96,slow=36						
MAKZ	**Makanchi**	**92.53**	**317**	P	**P**	**03 38 37.9**	**-0.9**
MAKZ				pmax	pmax		
	comp=Z,15nm,1.2s						
MAKZ	**Makanchi**	**92.53**	**317**	P	**P**	**03 38 37.9**	**-0.9**
MAKZ				IAmb	IAmb	03 38 39.3	
	comp=Z,15nm,1.1s						
MSO	**Missoula**	**92.60**	**43**	P	**P**	**03 38 39.9**	**+0.7**
	baz=257						
TCUT	**Toone Canyon**	**93.15**	**49**	P	**P**	**03 38 42.7**	**+0.7**
TPAW	**Teton Pass**	**93.95**	**47**	IAmb	IAmb	03 38 58.2	
	comp=Z,9.2nm,1.2s						
REDW	**Red Top Meadow**	**94.00**	**47**	IAmb	IAmb	03 38 47.5	
	comp=Z,16nm,1.4s						
IMW	**Indian Meadow**	**94.04**	**46**	IAmb	IAmb	03 38 47.7	
	comp=Z,8.5nm,1.1s						
SNOW	**Snow King Moun**	**94.09**	**47**	IAmb	IAmb	03 38 48.7	
	comp=Z,7.3nm,0.9s						
MOOW	**Moose Ponds**	**94.15**	**46**	P	**P**	**03 38 46.4**	**-0.2**
FLWY	**Flagg Ranch**	**94.25**	**46**	IAmb	IAmb	03 38 54.6	
	comp=Z,11nm,1.5s						
H17A	**Grant Village**	**94.39**	**46**	P	**P**	**03 38 49.7**	**+2.0**
	baz=259						
BW06	**Boulder Array**	**94.82**	**48**	P	**P**	**03 38 49.9**	**+0.2**
	baz=260						
PDAR	**Pinedale Array**	**94.82**	**48**	P	**P**	**03 38 49.9**	**+0.2**
	comp=Z,3.4nm,1.0s,baz=260,slow=2.6,SNR=17						
PDAR				LR	LR	04 16 01.7	
	comp=Z,306nm,19.5s,baz=278,slow=32						
KSH	**Kashi**	**95.39**	**309**	P	**P**	**03 38 54.8**	**+2.5**
KSH				pP	pwP	03 39 06.8	-1.6
KSH				PP	**PP**	**03 42 46.5**	**+3.3**
KSH				S	**S**	**03 50 07.0**	**+0.3**
KSH				sS	sS	03 50 19.3	+0.3
KSH				SS	**SS**	**03 56 37.3**	**+2.5**
KSH				LR	LR		
	comp=Z,330nm,5.4s						
KSH				LR	LR		
	comp=Z,210nm,5.4s						
KSH				LR	LR		
	comp=Z,960nm,7.8s						
KURK	**Kurchatov**	**95.52**	**320**	P	**P**	**03 38 50.9**	**-1.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KURK	**Kurchatov**	**95.52**	**320**	P	**P**	**03 38 50.9**	**-1.4**
EGMT	**Eagleton**	**95.62**	**42**	P	**P**	**03 38 53.3**	**+0.2**
	baz=260						
YKA	**Yellowknife Ar**	**95.75**	**27**	P	**P**	**03 38 52.0**	**-1.1**
	comp=Z,7.9nm,0.9s,baz=255,slow=4.7,SNR=55						
YKA				LR	LR	04 15 02.9	
	comp=Z,696nm,21.0s,baz=0.0,slow=31						
ANMO	**Albuquerque**	**95.87**	**56**	*ce*P	**P**	**03 38 53.0**	**-1.6**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NVL	**N'lazarevskaya**	**96.22**	**189**	*e*P	**P**	**03 38 55.4**	**+0.2**
NVL				pmax	pmax		
	comp=Z,11nm,0.7s						
AAK	**Ala-Archa**	**96.99**	**312**	LR	LR	04 24 53.4	
	comp=Z,114nm,18.3s,baz=72,slow=37						
SNAA	**Sanae**	**97.02**	**184**	P	**P**	**03 38 58.8**	**-0.2**
SNAA	**Sanae**	**97.02**	**184**	*i* P	**P**	**03 38 58.5**	**-0.5**
TXAR	**Lajitas Array**	**97.35**	**62**	P	Pdif	03 39 01.4	0.0
	comp=Z,0.2nm,0.7s,baz=205,slow=4.0,SNR=3.5						
TXAR				LR	LR	04 15 15.4	
	comp=Z,209nm,20.0s,baz=0.0,slow=31						
ARCES	**ARCESS Array B**	**115.87**	**345**	PKP	**PKiKP**	**03 44 08.5**	**-1.1**
	comp=Z,2.7nm,0.6s,baz=90,slow=0.9,SNR=11						
OBN	**Obninsk**	**119.88**	**328**	*i* PKIKP	**PKiKP**	**03 44 18.0**	**+0.4**
OBN						03 44 25.0	
OBN						03 44 33.3	
OBN				*e*		03 51 27.8	
OBN				SS	SS	04 02 08.0	+3.4
OBN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
OBN				MLR	MLR		
	comp=Z,322nm,15.0s						
KIV	**Kislovodsk**	**119.98**	**315**	*i* PKIKP	**PKPdf**	**03 44 16.8**	**-1.5**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s						
FINES	**FINESS Array B**	**121.11**	**338**	PKP	**PKPdf**	**03 44 18.6**	**-1.1**
	comp=Z,2.1nm,0.9s,baz=143,slow=3.5,SNR=4.4						
LPAZ	**La Paz**	**121.75**	**117**	PKP	**PKPdf**	**03 44 23.2**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=341,slow=5.2,SNR=3.5						
AKASG	**Malin Array Be**	**125.89**	**326**	PKP	**PKPdf**	**03 44 28.7**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=69,slow=1.9,SNR=1.4						
NB2	**NORSAR Subarra**	**126.22**	**344**	PKPdf	**PKPdf**	**03 44 28.1**	**-1.6**
	comp=Z,1.7nm,1.0s,baz=39,slow=1.9						
NOA	**NORSAR Array B**	**126.22**	**344**	PKP	**PKPdf**	**03 44 28.9**	**-0.8**
	comp=Z,3.0nm,1.0s,baz=38,slow=2.0,SNR=3.8						
CRVS	**Cervenica-Dubn**	**131.06**	**328**	*e*PKIKP	**PKiKP**	**03 44 45.6**	**+5.5**
CRVS	**Cervenica-Dubn**	**131.06**	**328**	*e*PKP	**PKiKP**	**03 44 45.6**	**+5.5**
VYHS	**Vyhne**	**132.67**	**329**	*e*PKIKP	**PKiKP**	**03 44 49.7**	**+6.3**
VYHS	**Vyhne**	**132.67**	**329**	*e*PKP	**PKiKP**	**03 44 49.6**	**+6.2**
KHC	**Kasperske Hory**	**134.75**	**333**	*e*PKIKP	**PKPdf**	**03 44 46.8**	**+0.6**
KHC	**Kasperske Hory**	**134.75**	**333**	*e*PKPDF	**PKPdf**	**03 44 46.8**	**+0.6**
GERES	**GERESS Array B**	**134.90**	**332**	PKP	**PKPdf**

KURBB	**Kurchatov Arra**	**54.46**	**326**	P	**P**	**03 44 07.2**	**+1.7**
	baz=122,slow=6.7							
ARCES	**ARCESS Array B**	**82.82**	**340**	P	**P**	**03 47 01.6**	**-0.6**
	2.0nm,0.7s,baz=72,slow=6.0,SNR=7.7							
FINES	**FINESS Array B**	**84.37**	**331**	P	**P**	**03 47 10.2**	**0.0**
	2.8nm,1.0s,baz=64,slow=3.2,SNR=6.7							

*IDC **26** 03:41:04.7±0.6,34˚.44N×141˚.75E,h0km,mb4.1/19, mb1 4.3/24,mb1mx4.1/47,mbtmp4.1/24,ML4.0/4,MS3.6/1, Ms1 3.6/1,ms1mx3.0/35,Error ellipse: s-maj=16.3km s-min=14.8km az=87.0*

*JMA **26** 03:41:05.4±0.3,34˚.42N×141˚.99E,h41km±4km,M4.2*

ISC 26 03:41:06.4±3.4,34˚.42N±0˚.05×141˚.87E±0˚.06,h15km±21km, n57,σ1§46/60,mb4.1/22,4C,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.77**	**288**	⇑P	**Pb**	**03 41 21.3**	**+0.1**
BSO3	**Boso 3**	**1.19**	**289**	P	**Pn**	**03 41 27.8**	**-0.3**
BSO4	**Boso 4**	**1.39**	**295**	⇑P	**Pn**	**03 41 31.1**	**+0.1**
KTR	**Katsuura**	**1.47**	**300**	P	**Pn**	**03 41 32.1**	**-0.2**
CHOJ	**Chosi**	**1.53**	**327**	P	**Pn**	**03 41 31.6**	**-1.5**
CHOJ				*e*S	**Sn**	**03 41 51.1**	**-1.6**
JKUC	**kamogawauchiur**	**1.56**	**299**	⇑P	**Pn**	**03 41 33.0**	**-0.6**
JKUC				*e*S	**Sn**	**03 41 52.9**	**-0.6**
JMKN	**Mikurajimanish**	**1.96**	**255**	P	**Pn**	**03 41 38.4**	**-0.7**
JMKN				*e*S	**Sn**	**03 42 02.6**	**-0.8**
JIM2	**Oshima 3**	**2.04**	**279**	P	**Pn**	**03 41 39.1**	**-1.0**
JHJ2	**Mitsune**	**2.15**	**233**	*e*S	**Sn**	**03 42 07.6**	**-0.5**
JOD2	**Odawara 2**	**2.44**	**291**	⇑P	**Pn**	**03 41 44.5**	**-1.2**
JOD2				*e*S	**Sn**	**03 42 12.5**	**-2.7**
JIZS	**Izushimoda**	**2.49**	**278**	P	**Pn**	**03 41 45.7**	**-0.6**
JIZS				*e*S	**Sn**	**03 42 15.0**	**-1.4**
JFNN	**Fujinakano**	**2.73**	**287**	P	**Pn**	**03 41 49.6**	**-0.1**
JFNN				*e*S	**Sn**	**03 42 22.7**	**+0.2**
JYN	**Shimob**	**2.94**	**292**	P	**Pn**	**03 41 51.8**	**-0.8**
JYN				*e*S	**Sn**	**03 42 25.6**	**-2.0**
JFT	**Otama**	**3.33**	**339**	*e*S	**Sn**	**03 42 33.3**	**-4.0**
MJAR	**Matsushiro Arr**	**3.66**	**306**	Pn	**Pn**	**03 42 02.3**	**-0.2**
	3.6nm,0.3s,baz=148,slow=15,SNR=47						
MJAR				LR	LR	03 43 46.9	
	comp=Z,761nm,18.3s,baz=130,slow=46						
JCJ	**Chichijima**	**7.30**	**178**	Pn	**Pn**	**03 42 53.0**	**+0.5**
	11nm,0.3s,baz=258,slow=21,SNR=9.7						
JCJ				Sn	**Sn**	**03 44 10.0**	**-5.2**
	9.2nm,0.3s,baz=288,slow=19,SNR=3.1						
JNU	**Nakatsue**	**9.24**	**265**	Pn	**Pn**	**03 43 20.2**	**+1.0**
	1.9nm,0.3s,baz=87,slow=3.1,SNR=15						
JNU	**Nakatsue**	**9.24**	**265**		**Pn**	**03 43 20.2**	**+1.0**
USRK	**Ussuriysk Ar.**	**12.40**	**325**	Pn	**Pn**	**03 44 01.1**	**-1.1**
	baz=134,slow=16,SNR=4.9						
KLR	**Kul'dur**	**16.59**	**336**	Pn	**Pn**	**03 44 56.4**	**-1.8**
	0.3nm,0.3s,baz=124,slow=9.7,SNR=8.1						
MA2	**Magadan**	**25.84**	**10**	P	**P**	**03 46 37.7**	**+0.8**
	8.1nm,0.8s,baz=190,slow=11,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**26.56**	**117**	T	T	04 14 38.5	
	baz=308,slow=74						
H11N1	**WAKE ISLAND Hy**	**26.57**	**117**	T	T	04 14 40.6	
	baz=308						
H11N3	**WAKE ISLAND Hy**	**26.58**	**117**	T	T	04 14 42.2	
	baz=308,slow=74						
XAN	**Xi'an**	**27.18**	**279**	P	**P**	**03 46 49.8**	**+0.4**
XAN				pP	pwP	03 47 09.3	+8.2
XAN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
XAN				LR	LR		
	comp=N,190nm,11.8s						
XAN				LR	LR		
	comp=E,340nm,13.2s						
XAN				LR	LR		
	comp=Z,430nm,17.4s						
H11S3	**WAKE ISLAND Hy**	**27.19**	**119**	T	T	04 15 30.3	
	baz=301						
H11S1	**WAKE ISLAND Hy**	**27.19**	**119**	T	T	04 15 30.8	
	baz=301						
H11S2	**WAKE ISLAND Hy**	**27.21**	**119**	T	T	04 15 36.8	
	baz=301						
SONM	**Songino Array**	**29.61**	**308**	P	**P**	**03 47 12.0**	**+0.9**
	comp=Z,3.0nm,0.8s,baz=110,slow=9.4,SNR=11						
SONM				PcP	**PcP**	**03 50 16.0**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=141,slow=3.3,SNR=4.3						
PBKT	**Sadao Pong**	**40.65**	**255**	P	**P**	**03 48 45.3**	**-0.8**
CHTO	**Chiang Mai**	**41.09**	**259**	P	**P**	**03 48 45.7**	**-4.0**
CM31	**Chiang Mai Arr**	**41.27**	**259**	P	**P**	**03 48 49.0**	**-2.2**
CM31				IAmb	IAmb	03 49 33.3	
	comp=Z,6.1nm,0.4s						
CMAR	**Chiang Mai Arr**	**41.27**	**259**	P	**P**	**03 48 50.4**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=52,slow=7.9,SNR=12						
ZALV	**Zalesovo Beam**	**43.98**	**314**	P	**P**	**03 49 12.8**	**+0.1**
	comp=Z,3.3nm,0.5s,baz=99,slow=6.4,SNR=14						
ZALV				PcP	**PcP**	**03 50 58.4**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=101,slow=3.3,SNR=8.8						
MKAR	**Makanchi Array**	**45.86**	**304**	P	**P**	**03 49 28.0**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=87,slow=8.4,SNR=13						
KURBB	**Kurchatov Arra**	**47.93**	**310**	P	**P**	**03 49 43.7**	**-0.3**
	comp=Z,5.6nm,0.6s,baz=85,slow=7.6,SNR=6.4						
ILAR	**Eielson Array**	**51.52**	**31**	P	**P**	**03 50 12.3**	**+1.2**
	comp=Z,1.0nm,0.8s,baz=266,slow=6.1,SNR=7.6						
GSI	**Gunungsitoli**	**52.82**	**241**	P	**P**	**03 50 21.1**	**-0.4**
WRA	**Warramunga Arr**	**54.53**	**189**	P	**P**	**03 50 34.0**	**+0.3**
	comp=Z,2.7nm,0.6s,baz=6.6,slow=7.6,SNR=17						
WRA	**Warramunga Arr**	**54.53**	**189**	P	**P**	**03 50 34.0**	**+0.3**
WRA	**Warramunga Arr**	**54.53**	**189**	IAmb	IAmb	03 50 38.1	
	comp=Z,1.1nm,1.4s						
INK	**Inuvik**	**56.55**	**26**	P	**P**	**03 50 49.3**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=243,slow=2.3,SNR=3.0						
AS31	**Alice Springs**	**58.26**	**189**	P	**P**	**03 51 01.9**	**+1.6**
ASAR	**Alice Springs**	**58.26**	**189**	P	**P**	**03 51 01.1**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=2.7,slow=6.9,SNR=23						
ASAR	**Alice Springs**	**58.26**	**189**	P	**P**	**03 51 01.1**	**+0.8**
YKA	**Yellowknife Ar**	**65.89**	**30**	P	**P**	**03 51 50.4**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=303,slow=6.6,SNR=4.5						
ARCES	**ARCESS Array B**	**66.57**	**340**	P	**P**	**03 51 55.7**	**+0.3**
	comp=Z,6.9nm,1.1s,baz=66,slow=9.2,SNR=5.0						
FINES	**FINESS Array B**	**71.30**	**333**	P	**P**	**03 52 24.6**	**-0.2**
	comp=Z,1.7nm,0.6s,baz=75,slow=4.9,SNR=6.8						
NVAR	**Mina Array Bea**	**76.26**	**53**	P	**P**	**03 52 57.0**	**+2.2**
	comp=Z,1.0nm,0.8s,baz=285,slow=5.5,SNR=7.5						
AKASG	**Malin Array Be**	**76.60**	**323**	P	**P**	**03 52 55.3**	**-0.8**
	comp=Z,26nm,0.3s,baz=49,slow=6.1,SNR=1.8						
NOA	**NORSAR Array B**	**76.74**	**338**	P	**P**	**03 52 56.8**	**0.0**
	comp=Z,0.7nm,0.6s,baz=55,slow=7.0,SNR=5.5						
PDAR	**Pinedale Array**	**79.23**	**45**	P	**P**	**03 53 12.9**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=54,slow=2.6,SNR=3.9						
BRTR	**Keskin Array B**	**80.87**	**312**	P	**P**	**03 53 21.5**	**+1.5**
	comp=Z,1.0nm,0.8s,baz=133,slow=2.1,SNR=5.9						
GERES	**GERESS Array B**	**85.13**	**329**	P	**P**	**03 53 41.7**	**-0.1**
	comp=Z,0.4nm,0.4s,baz=42,slow=8.1,SNR=4.9						
TXAR	**Lajitas Array**	**91.41**	**53**	P	**P**	**03 54 13.8**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=311,slow=3.5,SNR=5.4						
TORD	**Torodi Ar. Bea**	**119.43**	**314**	PKP	**PKPdf**	**03 59 55.9**	**0.0**
	comp=Z,0.3nm,0.5s,baz=337,slow=1.8,SNR=3.9						
LPAZ	**La Paz**	**147.60**	**64**	PKPbc	**PKiKP**	**04 00 52.7**	**-0.8**
	comp=Z,1.1nm,0.4s,baz=211,slow=2.3,SNR=6.1						

*NEIC **26** 03:40:55.6±1.4,36˚.36N±0˚.06×143˚.0E±0˚.1,h32km±5km, mb4.4/25,Error ellipse: s-maj=17.3km s-min=7.8km az=106.0*

*JMA **26** 03:41:11.1±0.1,37˚.51N×141˚.37E,h50km±1km,M4.0*

JMA Felt I J1.

*IDC **26** 03:41:13.0±2.8,37˚.50N×141˚.29E,h68km±21km,mb3.7/13, mb1 3.8/17,mb1mx3.7/45,mbtmp4.0/17,Error ellipse: s-maj=32.0km s-min=18.2km az=166.0*

ISC 26 03:41:09.5±1.2,37˚.41N±0˚.05×141˚.51E±0˚.07,h45km±9km, n83,σ1§60/78,mb4.3/30,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.51**	**266**	P	**Pn**	**03 41 21.4**	**+0.9**
JFK				S	**Sn**	**03 41 28.6**	**+0.2**
JMST	**Minamisoumatoc**	**0.58**	**303**	P	**Pn**	**03 41 21.6**	**+0.1**
JMST				S	**Sn**	**03 41 29.0**	**-1.1**
ONAJ	**Iwakimizuishiy**	**0.64**	**242**	P	**Pn**	**03 41 23.6**	**+1.3**
ONAJ				*i* S	**Sn**	**03 41 32.3**	**+0.8**
JMM	**Marumori**	**0.73**	**309**	P	**Pn**	**03 41 23.4**	**0.0**
JMM				S	**Sn**	**03 41 32.2**	**-1.3**
JFFD	**Fukushimafurud**	**0.82**	**248**	P	**Pn**	**03 41 25.7**	**+1.1**
JFFD				S	**Sn**	**03 41 35.9**	**+0.2**
JFT	**Otama**	**0.94**	**277**	P	**Pn**	**03 41 27.1**	**+0.9**
JFT				S	**Sn**	**03 41 38.3**	**-0.2**
JIO	**Ouri**	**1.05**	**353**	P	**Pn**	**03 41 27.9**	**+0.1**
JIO				S	**Sn**	**03 41 39.7**	**-1.6**
JOU	**Okura**	**1.17**	**325**	P	**Pn**	**03 41 29.1**	**-0.3**
JYS	**Shirataka**	**1.40**	**306**	P	**Pn**	**03 41 32.8**	**+0.2**
JFY	**Yanaizu**	**1.43**	**271**	P	**Pn**	**03 41 33.6**	**+0.6**
JFY				*e*S	**Sn**	**03 41 49.9**	**-0.8**
JMK	**Ichinoseki**	**1.56**	**352**	P	**Pn**	**03 41 34.9**	**+0.2**
MJAR	**Matsushiro Arr**	**2.78**	**253**	P	**Pn**	**03 41 53.0**	**+1.5**
	1.0nm,0.3s,baz=44,slow=14,SNR=34						
MJAR	**Matsushiro Arr**	**2.78**	**253**		**Pn**	**03 41 53.0**	**+1.5**
MAJO	**Matsushiro**	**2.78**	**253**		**Pn**	**03 41 53.1**	**+1.7**
MAT	**Matsushiro**	**2.78**	**253**	P	**Pn**	**03 41 53.5**	**+2.0**
MAT				S	**Sn**	**03 42 25.6**	**+1.8**
MJB9	**Matsu-Tunnel**	**2.78**	**253**		**Pn**	**03 41 52.7**	**+1.2**
INU	**Inuyama**	**4.16**	**242**		**Pn**	**03 42 09.0**	**-1.5**
JKA	**Kamikawa-asahi**	**6.75**	**7**		**Pn**	**03 42 46.6**	**+0.6**
ASAJ	**Asahikawa**	**6.75**	**7**	P	**Pn**	**03 42 46.6**	**+0.6**
	0.5nm,0.3s,baz=324,slow=19,SNR=2.5						
USRK	**Ussuriysk Ar.**	**9.90**	**316**	P	**Pn**	**03 43 30.7**	**+1.6**
	baz=125,slow=15,SNR=6.0						
JCJ	**Chichijima**	**10.30**	**177**	S	**Sn**	**03 45 22.8**	**-5.9**
	3.9nm,0.3s,baz=283,slow=19,SNR=1.8						
KSRS	**Korea Array**	**10.80**	**274**	P	Pn	03 43 45.6	+4.2
	0.1nm,0.3s,baz=97,slow=12,SNR=6.3						
KSRS	**Korea Array**	**10.80**	**274**		Pn	03 43 45.6	+4.2
KLR	**Kul'dur**	**13.77**	**332**	P	**Pn**	**03 44 24.6**	**+2.7**
	0.1nm,0.3s,baz=114,slow=13,SNR=4.9						
KLR	**Kul'dur**	**13.77**	**332**		**Pn**	**03 44 24.6**	**+2.7**
HHC	**Hu-ho-hao-te**	**23.43**	**288**	*e*P	**P**	**03 46 16.5**	**+1.9**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,4.3s						
WHN	**Wuhan**	**23.49**	**261**	P	**P**	**03 46 13.0**	**-2.2**
SEY	**Seymchan**	**26.41**	**11**	P	**P**	**03 46 42.3**	**+0.8**
	comp=Z,7.4nm,0.3s,baz=236,slow=9.6,SNR=4.9						
ULN	**Ulaanbaatar**	**27.21**	**304**	P	**P**	**03 46 51.4**	**+2.3**
ENH	**Enshi**	**27.44**	**264**	P	**P**	**03 46 50.9**	**-0.2**
ENH				IAmb	IAmb	03 46 52.8	
	comp=Z,11nm,0.6s						
SONM	**Songino Array**	**27.64**	**303**	P	**P**	**03 46 52.3**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=101,slow=8.5,SNR=16						
SONM	**Songino Array**	**27.64**	**303**	P	**P**	**03 46 52.3**	**-0.6**
H11N2	**WAKE ISLAND Hy**	**28.28**	**122**	T	T	04 17 09.9	
	baz=316						
H11N1	**WAKE ISLAND Hy**	**28.29**	**122**	T	T	04 17 01.4	
	baz=316						
H11N3	**WAKE ISLAND Hy**	**28.30**	**122**	T	T	04 17 15.9	
	baz=316						
H11S1	**WAKE ISLAND Hy**	**29.00**	**124**	T	T	04 18 09.3	
	baz=319,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.00**	**124**	T	T	04 18 06.4	
	baz=319,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.02**	**124**	T	T	04 18 07.6	
	baz=319,slow=76						
LZH	**Lanzhou**	**30.08**	**279**	*e*P	**P**	**03 47 13.0**	**-1.7**
LZH				pP	pP	03 47 23.8	-2.9
LZH				sP	sP	03 47 28.5	-3.5
LZH				*e*PP	**PP**	**03 48 17.3**	**-5.7**
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,62nm,5.2s						
LZH				LR	LR		
	comp=N,170nm,13.0s						
LZH				LR	LR		
	comp=E,180nm,13.1s						
LZH				LR	LR		
	comp=Z,230nm,16.5s						
TLY	**Talaya**	**30.14**	**310**	P	**P**	**03 47 15.8**	**+0.9**
TLY				IAmb	IAmb	03 47 50.3	
	comp=Z,3.7nm,0.9s						
WMQ	**Urumqi**	**40.74**	**296**	*e*P	**P**	**03 48 47.8**	**+1.9**
WMQ				sP	sP	03 49 03.0	-0.5
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,93nm,5.9s						
WMQ				LR	LR		
	comp=N,340nm,21.9s						
WMQ				LR	LR		
	comp=Z,390nm,20.9s						
ZAA0	**Zalesovo Array**	**41.72**	**312**	P	**P**	**03 48 53.9**	**+0.2**
ZAA0				IAmb	IAmb	03 49 16.2	
	comp=Z,3.4nm,0.7s						
ZALV	**Zalesovo Beam**	**41.72**	**312**	P	**P**	**03 48 53.8**	**+0.1**
	comp=Z,9nm,0.7s,baz=90,slow=6.3,SNR=13						
ZALV	**Zalesovo Beam**	**41.72**	**312**	P	**P**	**03 48 53.8**	**+0.1**
MK31	**Makanchi Array**	**43.98**	**302**	P	**P**	**03 49 11.9**	**-0.4**
MK31				IAmb	IAmb	03 49 13.3	
	comp=Z,3.2nm,0.9s						
MKAR	**Makanchi Array**	**43.98**	**302**	P	**P**	**03 49 12.0**	**-0.2**
	comp=Z,3.1nm,0.8s,baz=88,slow=9.5,SNR=36						
MKAR	**Makanchi Array**	**43.98**	**302**	P	**P**	**03 49 12.0**	**-0.2**
MAKZ	**Makanchi**	**44.19**	**302**	P	**P**	**03 49 14.0**	**+0.1**
MAKZ				IAmb	IAmb	03 49 15.1	
	comp=Z,3.5nm,0.9s						
KURK	**Kurchatov**	**45.76**	**308**	P	**P**	**03 49 25.7**	**-0.5**
KURBB	**Kurchatov Arra**	**45.83**	**308**	P	**P**	**03 49 26.4**	**-0.4**
	comp=Z,3.9nm,0.7s,baz=84,slow=8.2,SNR=26						
TAPN	**Taplejung**	**45.99**	**274**	*e*P	P	03 49 33.8	+5.1
RAMN	**Ramite**	**47.05**	**274**	*e*P	P	03 49 41.7	+4.7
JIRN	**Jiri**	**47.06**	**275**	*e*P	P	03 49 42.8	+5.6
	comp=Z,34nm,0.6s						
GUN	**Gumba**	**47.19**	**275**	*e*P	P	03 49 43.5	+5.3
	comp=Z,22nm,0.8s						
PKI	**Pulchoki**	**47.72**	**275**	*e*P	P	03 49 47.1	+4.8
	comp=Z,9.1nm,0.6s						
PKIN	**Phulchoki**	**47.72**	**275**	*e*P	P	03 49 47.1	+4.8
DANN	**Dangsing**	**48.68**	**277**	*e*P	**P**	**03 49 50.1**	**+0.5**
	comp=Z,26nm,0.7s						
KOLN	**Koldanda**	**49.06**	**276**	*e*P	**P**	**03 49 56.5**	**+4.0**
ILAR	**Eielson Array**	**49.14**	**33**	P	**P**	**03 49 53.8**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=271,slow=5.8,SNR=7.1						
KSH	**Kashi**	**50.32**	**294**	P	**P**	**03 50 03.0**	**+1.2**
KSH				pP	sP	03 50 17.0	-2.6
KSH				pmax	pmax		
	comp=Z,210nm,6.9s						
AAK	**Ala-Archa**	**50.38**	**298**	P	**P**	**03 50 01.5**	**-0.7**
AAK				IAmb	IAmb	03 50 34.3	
	comp=Z,2.4nm,0.8s						
BRVK	**Borovoye**	**50.43**	**312**	P	**P**	**03 50 02.3**	**0.0**
BRVK				IAmb	IAmb	03 50 41.8	
	comp=Z,5.0nm,1.1s						
KK31	**Karatay Array**	**53.00**	**300**	P	**P**	**03 50 20.9**	**-0.8**
KKAR	**Karatay Array**	**53.00**	**300**	P	**P**	**03 50 20.9**	**-0.8**
KKAR				IAmb	IAmb	03 50 41.9	
	comp=Z,11nm,1.2s						
NIL	**Nilore**	**54.57**	**288**	P	**P**	**03 50 29.6**	**-3.6**
CHGR	**Chuyangaron**	**55.57**	**295**	P	**P**	**03 50 39.9**	**-0.6**
ARU	**Arti**	**56.13**	**318**	P	**P**	**03 50 43.5**	**-0.5**
ARU				IAmb	IAmb	03 50 44.5	
	comp=Z,8.4nm,1.1s						
KBL	**Kabul**	**57.35**	**291**	P	**P**	**03 50 51.3**	**-2.0**
ABKAR	**Akbulak array**	**57.76**	**310**	P	**P**	**03 50 54.4**	**-1.3**
YKA	**Yellowknife Ar**	**63.45**	**30**	P	**P**	**03 51 35.0**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=301,slow=6.6,SNR=4.1						
ARCES	**ARCESS Array B**	**63.67**	**339**	P	**P**	**03 51 35.0**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=66,slow=9.0,SNR=3.8						
ARCES	**ARCESS Array B**	**63.67**	**339**	P	**P**	**03 51 35.0**	**-0.7**
GEYT	**Alibeck**	**63.72**	**299**	P	**P**	**03 51 35.2**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=57,slow=5.5,SNR=4.5						
GEYT	**Alibeck**	**63.72**	**299**	P	**P**	**03 51 35.2**	**-1.3**
GEYT	**Alibeck**	**63.72**	**299**	IAmb	IAmb	03 51 37.4	
	comp=Z,2.0nm,0.8s						
FINES	**FINESS Array B**	**68.52**	**332**	P	**P**	**03 52 06.6**	**-0.2**
	comp=Z,2.1nm,0.6s,baz=32,slow=9.0,SNR=14						
FINES	**FINESS Array B**	**68.52**	**332**	P	**P**	**03 52 06.6**	**-0.2**
NB2	**NORSAR Subarra**	**73.87**	**337**	P	**P**	**03 52 39.0**	**-0.2**
	comp=Z,1.6nm,0.7s,baz=39,slow=6.2						
NOA	**NORSAR Array B**	**73.87**	**337**	P	**P**	**03 52 39.4**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=40,slow=6.0,SNR=3.4						
AKASG	**Malin Array Be**	**74.05**	**322**	P	**P**	**03 52 40.1**	**-0.3**
	comp=Z,2.8nm,0.5s,baz=47,slow=6.1,SNR=1.7						
PDAR	**Pinedale Array**	**77.35**	**46**	P	**P**	**03 53 01.4**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=216,slow=2.9,SNR=4.1						
TXAR	**Lajitas Array**	**89.83**	**52**	P	**P**	**03 54 05.6**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=293,slow=3.3,SNR=6.2						
LPAZ	**La Paz**	**146.44**	**59**	PKPbc	**PKPbc**	**04 00 46.6**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=271,slow=1.1,SNR=3.8						

JMA 26 03:41:13.6,37˚.48N×140˚.26E,h12km±1km,M0.7,Eastern Honshu

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

JFT	**Otama**	**0.07**	**58**	P	Pg	03 41 16.2	0.0
JFT				*e*S	Sg	03 41 18.1	+0.1

*IDC **26** 03:45:46.3±3.6,12˚.19N×87˚.07W,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.5/27,mbtmp3.6/3,Error ellipse: s-maj=84.5km s-min=57.6km az=19.0*

*UCR **26** 03:45:49.6±1.0,11˚.88N×87˚.75W,h2km±19km,ML3.5*

*SNET **26** 03:45:49.7±1.1,11˚.83N×87˚.65W,h15km±12km,ML3.5*

ISC 26 03:45:48.8±1.9,11.7N±0˚.1×87.5W±0˚.1,h48km,n16, σ0§75/22,mb3.4/3,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.64**	**349**	*e*P	**Pn**	**03 46 15.5**	**+0.2**
CNCH				*e*S	**Sn**	**03 46 35.2**	**-0.1**
CNCH				IAML		03 46 42.7	
	comp=Z,738nm,0.3s						
CNCH	**Conchagua**	**1.64**	**349**	*e*P	**Pn**	**03 46 15.5**	**+0.2**
CNCH				*e*S	**Sn**	**03 46 35.2**	**-0.1**
CNCH				IAML		03 46 42.7	
	comp=Z,738nm,0.3s						
LCND	**La Caada**	**1.68**	**348**	*e*P	**Pn**	**03 46 15.8**	**0.0**
LCND	**La Caada**	**1.68**	**348**	*e*P	**Pn**	**03 46 15.8**	**0.0**
JUCU	**Jucuarįn**	**1.74**	**336**	*e*P	**Pn**	**03 46 15.7**	**-1.0**
PACA	**Pacayal**	**1.96**	**336**	*e*P	**Pn**	**03 46 19.8**	**-0.1**
PACA				*e*S	**Sn**	**03 46 42.8**	**-0.6**
PACA	**Pacayal**	**1.96**	**336**	*e*P	**Pn**	**03 46 19.8**	**-0.1**
PACA				*e*S	**Sn**	**03 46 42.8**	**-0.6**
TECA	**Tecapa**	**2.06**	**332**	*e*P	**Pn**	**03 46 20.7**	**-0.5**
TECA	**Tecapa**	**2.06**	**332**	*e*P	**Pn**	**03 46 20.7**	**-0.5**
FAGO	**Alcalda de S**	**2.10**	**344**	*e*P	**Pn**	**03 46 22.0**	**+0.4**
LFU	**La Fuente**	**2.60**	**323**	*e*P	**Pn**	**03 46 28.3**	**-0.2**
LFU				*e*S	**Sn**	**03 46 58.8**	**-0.1**
LFU	**La Fuente**	**2.60**	**323**	*e*P	**Pn**	**03 46 28.3**	**-0.2**
LFU				*e*S	**Sn**	**03 46 58.8**	**-0.1**
TXAR	**Lajitas Array**	**23.15**	**322**	P	**P**	**03 50 53.6**	**+2.4**
	comp=Z,0.5nm,0.5s,baz=135,slow=9.7,SNR=10.0						
SCHQ	**Schefferville**	**46.05**	**16**	P	**P**	**03 54 07.2**	**-0.6**
	comp=Z,1.7nm,0.9s,baz=226,slow=9.6,SNR=5.4						
YKA	**Yellowknife Ar**	**54.35**	**345**	P	**P**	**03 55 10.8**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=141,slow=7.5,SNR=4.1						
CMAR	**Chiang Mai Arr**	**149.41**	**348**	PKPbc	**PKPab**	**04 05 36.8**	**-1.5**
	comp=Z,0.7nm,0.3s,baz=347,slow=3.7,SNR=4.1						

*IDC **26** 03:47:52.0±3.6,12˚.15N×87˚.15W,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.4/25,mbtmp3.5/3,Error ellipse: s-maj=82.7km s-min=56.8km az=17.0*

*SNET **26** 03:48:00.0±1.0,11˚.95N×87˚.88W,h35km±999km,ML2.6*

ISC 26 03:47:56.8±1.8,11.8N±0.2×87.6W±0.2,h48km,n10, σ1§27/13,mb3.1/3,Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.47**	**351**	*e*P	**Pn**	**03 48 21.6**	**+0.7**
CNCH				*e*S	**Sn**	**03 48 40.0**	**+0.9**
LCND	**La Caada**	**1.51**	**349**	*e*P	**Pn**	**03 48 22.2**	**+0.8**
LCND				IAML		03 48 56.3	
	comp=Z,123nm,0.4s						
JUCU	**Jucuarįn**	**1.56**	**336**	*e*P	**Pn**	**03 48 22.4**	**+0.2**
JUCU				*e*S	**Sn**	**03 48 40.3**	**-1.0**
JUCU				IAML		03 48 55.1	
	comp=Z,82nm,0.4s						
PACA	**Pacayal**	**1.79**	**336**	*e*P	**Pn**	**03 48 25.9**	**+0.6**
PACA				*e*S	**Sn**	**03 48 45.3**	**-1.6**
TECA	**Tecapa**	**1.89**	**332**	*e*P	**Pn**	**03 48 27.4**	**+0.6**
FAGO	**Alcalda de S**	**1.93**	**345**	*e*P	**Pn**	**03 48 28.3**	**+1.1**
TXAR	**Lajitas Array**	**22.98**	**322**	P	**P**	**03 52 59.

MAKZ	**Makanchi**	**6.95**	**213**	⇓Pn		Pn	05 02	22.1	+0.3
	2.3nm,0.3s								
MAKZ				⇓Sn		Sn	05 03	42.6	+1.2
	2.2nm,0.5s								
MAKZ				⇓Lg		Lg	05 04	18.8	
	4.4nm,1.1s								

IDC ***26*** *05:04:26.3±0.5, 12°.06N×87°.01W, h0km, mb4.2/16, mb1 4.5/18, mb1mx4.3/38, mbtmp4.2/18, ML3.6/2, MS4.0/3, Ms1 4.0/3, ms1mx3.5/35, Error ellipse: s-maj=27.5km s-min=10.3km az=57.0*

INET ***26*** *05:04:28.7, 11°.58N×87°.65W, h16km, ML4.4*

NEIC ***26*** *05:04:30.8±1.8, 11°.71N±0°.06×87°.47W±0°.06, h35km±2km, mb4.9/253, Error ellipse: s-maj=10.0km s-min=6.7km az=47.0*

UCR ***26*** *05:04:30.9±1.8, 11°.75N×87°.57W, h38km±448km, MD4.5, ML4.0, mb4.9(NEIC)*

SNET ***26*** *05:04:32.3±0.8, 11°.90N×87°.77W, h11km±13km, ML4.1*

BJI ***26*** *05:04:34.0±0.0, 11°.80N×87°.40W, h53km, Ms5.1/2, Ms7 4.8/3*

UPA ***26*** *05:05:14.7±1.8, 10°.17N×84°.74W, h118km±44km, MW4.3*

ISC 26 05:04:29.0±0.6, 11°.77N±0°.05×87°.44W±0°.05, h20km±5km, n685, σ1836/698, mb4.9/123, 8C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h	m s	ISC
LCND	**La Caada**	**1.59**	**344**	⇑	*eP*	**Pn**	**05**	**04 57.3**	**+1.2**
LCND					*eS*	**Sn**	**05**	**05 16.3**	**+0.2**
LCND					IAML		05	05 23.4	
	comp=Z,3µm,0.4s								
LCND	**La Caada**	**1.59**	**344**	⇑	*eP*	**Pn**	**05**	**04 57.3**	**+1.2**
LCND					*eS*	**Sn**	**05**	**05 16.3**	**+0.2**
LCND					IAML		05	05 23.4	
	comp=Z,3µm,0.4s								
JUCU	**Jucuarįn**	**1.67**	**332**	⇑	*eP*	**Pn**	**05**	**04 57.2**	**0.0**
JUCU					*eS*	**Sn**	**05**	**05 17.2**	**-1.0**
JUCU					IAML		05	05 21.7	
	comp=Z,3µm,0.3s								
ESTN	**Estel**	**1.68**	**38**			**Pb**	**05**	**05 00.2**	**+0.8**
LCY	**Lacayo**	**1.84**	**333**		*eP*	**Pn**	**05**	**05 00.1**	**+0.5**
LCY	**Lacayo**	**1.84**	**333**		*eP*	**Pn**	**05**	**05 00.1**	**+0.5**
PACA	**Pacayal**	**1.90**	**333**	⇑	*eP*	**Pn**	**05**	**05 00.8**	**+0.5**
PACA	**Pacayal**	**1.90**	**333**	⇑	*eP*	**Pn**	**05**	**05 00.8**	**+0.5**
ALJI	**Alcalda de J**	**1.90**	**324**	⇑	*eP*	**Pn**	**05**	**05 00.3**	**0.0**
TECA	**Tecapa**	**2.00**	**329**		*eP*	**Pn**	**05**	**05 02.2**	**+0.3**
TECA	**Tecapa**	**2.00**	**329**		*eP*	**Pn**	**05**	**05 02.2**	**+0.3**
FAGO	**Alcalda de S**	**2.02**	**341**	⇑	*iP*	**Pn**	**05**	**05 03.4**	**+1.4**
COEB	**Comit de Eme**	**2.02**	**328**	⇑	*eP*	**Pn**	**05**	**05 02.2**	**+0.1**
COEB					*eS*	**Sn**	**05**	**05 26.2**	**-0.7**
COEB					IAML		05	05 41.2	
	comp=Z,1µm,0.5s								
NY14	**Universidad de**	**2.17**	**121**		*iP*	**Pn**	**05**	**05 05.0**	**+0.9**
LAPC	**Finca la Perla**	**2.20**	**117**		*iP*	**Pn**	**05**	**05 05.7**	**+1.2**
ACON	**Acoyapa**	**2.22**	**85**			**Pn**	**05**	**05 05.9**	**+1.1**
TGUH	**Tegucigalpa,Un**	**2.28**	**4**			**Pb**	**05**	**05 08.4**	**-1.1**
COEG	**Centro de Oper**	**2.32**	**323**		*eP*	**Pn**	**05**	**05 06.1**	**0.0**
COEG					IAML		05	05 47.1	
	comp=Z,1µm,0.4s								
LIM1	**Limonal**	**2.39**	**116**		*iP*	**Pn**	**05**	**05 08.3**	**+1.2**
PAVA	**Las Pavas**	**2.42**	**323**		*eP*	**Pn**	**05**	**05 08.1**	**+0.4**
PAVA	**Las Pavas**	**2.42**	**323**		*eP*	**Pn**	**05**	**05 08.1**	**+0.4**
MESS	**Mesas**	**2.43**	**115**		*iP*	**Pn**	**05**	**05 09.0**	**+1.4**
LFRS	**El Faro**	**2.43**	**319**		*eP*	**Pn**	**05**	**05 07.4**	**-0.3**
HORNC	**Hornillas**	**2.45**	**115**		*iP*	**Pn**	**05**	**05 09.1**	**+1.1**
HORNC					*iS*	**Sb**	**05**	**05 41.0**	**-1.4**
CUI	**Cuipilapa**	**2.49**	**116**		*iP*	**Pn**	**05**	**05 09.8**	**+1.3**
LBRS	**Las Brisas**	**2.51**	**321**		*eP*	**Pn**	**05**	**05 09.6**	**+0.9**
LFU	**La Fuente**	**2.56**	**320**		*eP*	**Pn**	**05**	**05 09.7**	**+0.2**
LFU	**La Fuente**	**2.56**	**320**		*eP*	**Pn**	**05**	**05 09.7**	**+0.2**
SNET	**Serv Nac Est T**	**2.59**	**318**			**Pn**	**05**	**05 09.9**	**0.0**
BOQS	**Boqueron**	**2.65**	**318**		*eP*	**Pn**	**05**	**05 11.3**	**+0.4**
JTS	**Las Juntas de**	**2.85**	**121**	Pn		**Pn**	**05**	**05 13.7**	**+0.4**
	comp=Z,7.4nm,0.3s,baz=172,slow=21,SNR=18								
JTS				Sn		**Sn**	**05**	**05 48.0**	**+0.9**
	comp=Z,32nm,0.3s,baz=2.6,slow=22,SNR=8.6								
JTS	**Las Juntas de**	**2.85**	**121**		*eP*	**Pn**	**05**	**05 14.8**	**+1.4**
JTS					*iS*	**Sn**	**05**	**05 48.2**	**+1.1**
JTS	**Las Juntas de**	**2.85**	**121**			**Pn**	**05**	**05 14.4**	**+1.0**
SBLS	**San Blas**	**2.96**	**314**		*eP*	**Pn**	**05**	**05 15.2**	**+0.1**
SBLS	**San Blas**	**2.96**	**314**		*eP*	**Pn**	**05**	**05 15.2**	**+0.1**
HDC	**Heredia**	**3.71**	**118**		*eP*	**Pn**	**05**	**05 29.2**	**+3.9**
HDC	**Heredia**	**3.71**	**118**		*iP*	**Pn**	**05**	**05 28.6**	**+3.4**
HDC					*iS*	**Sb**	**05**	**06 17.1**	**-1.4**
HDC	**Heredia**	**3.71**	**118**			**Pn**	**05**	**06 17.1**	**+0.8**
LCR2	**La Lucha 2**	**3.93**	**121**		*eP*	**Pn**	**05**	**05 30.7**	**+2.2**
EDDO	**Dominical**	**4.31**	**125**		*eP*	**Pn**	**05**	**05 34.9**	**+1.4**
APG	**El Apazote**	**4.36**	**318**	Pn		**Pn**	**05**	**05 35.7**	**+1.4**
	comp=Z,1.5nm,0.3s,baz=112,slow=14,SNR=9.4								
APG				Sn		**Sn**	**05**	**06 29.1**	**+4.4**
	comp=Z,5.1nm,0.3s,baz=115,slow=18,SNR=3.2								
EDLM	**Las Mercedes**	**4.52**	**123**		*eP*	**Pn**	**05**	**05 38.8**	**+2.4**
EDPN	**Palmar Norte**	**4.81**	**125**		*eP*	**Pn**	**05**	**05 42.1**	**+1.8**
EDBA	**Buenos Aires**	**4.84**	**122**		*eP*	**Pn**	**05**	**05 42.6**	**+1.8**
EDSV	**San Vito**	**5.28**	**123**		*eP*	**Pn**	**05**	**05 50.0**	**+3.1**
CNI2	**El Empalme, Bo**	**5.41**	**115**		*eP*	**Pn**	**05**	**05 51.4**	**+2.8**
CNI2					*eS*	Sn	05	06 19.0	-31
BRU2	**Volcan**	**5.53**	**122**		*eP*	**Pn**	**05**	**05 53.2**	**+2.9**
BRU2	**Volcan**	**5.53**	**122**		*iP*	**Pn**	**05**	**05 53.2**	**+2.9**
BRU2					*iS*	Sn	05	06 29.4	-24
SBAR3	**San Bartolo, C**	**5.65**	**127**		*eP*	**Pn**	**05**	**05 54.5**	**+2.7**
BCO2	**Palmira**	**5.70**	**122**		*iP*	**Pn**	**05**	**05 55.0**	**+2.2**
BCO2					*eS*	Sn	05	06 27.4	-30
PTAR3	**Potrerillos Ar**	**5.74**	**122**		*eP*	**Pn**	**05**	**05 56.1**	**+2.8**
CHGR2	**Aguacate**	**5.92**	**118**		*eP*	**Pn**	**05**	**05 58.1**	**+2.5**
CHGR2					*iS*	Sn	05	06 33.9	-29
DVD	**David**	**5.92**	**124**		*iP*	**Pn**	**05**	**05 58.7**	**+3.0**
DVD					*iS*	Sn	05	06 33.2	-30
LOCO3	**Loma Colorada,**	**5.96**	**124**		*eP*	**Pn**	**05**	**05 58.2**	**+2.0**
LOMA3	**Las Lomas, Chi**	**5.97**	**123**		*iP*	**Pn**	**05**	**05 59.9**	**+3.5**
PEDE3	**Pedregal, Chir**	**5.97**	**124**		*eP*	**Pn**	**05**	**05 59.2**	**+2.8**
CHIR3	**Chiriqui UPA,**	**6.04**	**123**		*iP*	**Pn**	**05**	**06 00.2**	**+2.9**
CCIG	**Comitan**	**6.40**	**315**			**Pn**	**05**	**06 04.8**	**+2.5**
SFRA3	**San Francisco,**	**7.26**	**118**		*eP*	**Pn**	**05**	**06 18.3**	**+4.2**
GMAL	**Guarumal, Vera**	**7.30**	**123**		*eP*	**Pn**	**05**	**06 16.4**	**+1.9**
GMAL					*eS*	Sn	05	07 01.7	-35
CACAO	**El Cacao, Vera**	**7.83**	**124**		*eP*	**Pn**	**05**	**06 23.1**	**+1.2**
VTON	**El Valle, Cocl**	**7.86**	**113**		*eP*	**Pn**	**05**	**06 23.7**	**+1.4**
BCIP	**Isla Barro Col**	**7.91**	**108**		*eP*	**Pn**	**05**	**06 26.2**	**+3.2**
BCIP					*eS*	Sn	05	07 17.6	-34
BCIP	**Isla Barro Col**	**7.91**	**108**	Pn		**Pn**	**05**	**06 26.5**	**+3.6**
ZANG	**Zanguenga, Cho**	**7.95**	**110**		*eP*	**Pn**	**05**	**06 27.1**	**+3.5**
FRIJ	**El Hiral**	**7.99**	**108**		*eP*	**Pn**	**05**	**06 26.5**	**+2.4**
CHOR3	**La Chorrera**	**8.07**	**110**		*eP*	**Pn**	**05**	**06 27.8**	**+2.7**
UPA	**Univ. de Panam**	**8.25**	**109**		*eP*	**Pn**	**05**	**06 30.4**	**+2.8**
TEIG	**Tepich**	**8.45**	**355**	Pn		**Pn**	**05**	**06 31.3**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=139,slow=18,SNR=2.0								
TEIG				LR		LR	05	10 23.7	
	comp=Z,977nm,18.6s,baz=136,slow=44								
TEIG	**Tepich**	**8.45**	**355**			**Pn**	**05**	**06 32.0**	**+1.7**
CMIG	**Matias Romero**	**8.94**	**307**	Pn		**Pn**	**05**	**06 38.0**	**+0.8**
	comp=Z,1.5nm,0.3s,baz=27,slow=2.3,SNR=18								
CMIG				Sn		**Sn**	**05**	**08 14.3**	**-3.0**
	comp=Z,0.7nm,0.3s,baz=312,slow=12,SNR=2.3								
MTDJ	**Mount Denham**	**11.52**	**55**	Pn		**Pn**	**05**	**07 11.5**	**-1.0**
DBBC	**Dabeiba**	**12.04**	**112**		*eP*	**Pn**	**05**	**07 21.9**	**+2.2**
TLIG	**Tlapa**	**12.21**	**299**			**Pn**	**05**	**07 24.4**	**+2.4**
UREC	**San Jos de Ur**	**12.39**	**108**		*eP*	**Pn**	**05**	**07 26.5**	**+2.1**
YOTC	**Yotoco, Valle**	**13.43**	**124**		*eP*	**P**	**05**	**07 51.8**	**+3.8**
SMLC	**San Martn de**	**13.48**	**101**		*eP*	**P**	**05**	**07 48.4**	**+0.1**
BBAC	**Balboa, Cauca**	**14.00**	**133**		*eP*	**P**	**05**	**07 57.7**	**+3.4**
POPC	**Popayan, Colom**	**14.07**	**130**	⇓	*eP*	P	05	08 05.0	+10
BRRC	**Barranca, Sant**	**14.31**	**108**		*eP*	**P**	**05**	**07 57.1**	**-0.5**
OCAC	**Ocana**	**14.34**	**103**		*eP*	**P**	**05**	**07 58.4**	**+0.3**
ORTC	**Ortega, Tolima**	**14.38**	**122**		*eP*	**P**	**05**	**08 01.1**	**+2.6**
SOTA	**Rioblanco**	**14.38**	**131**		*eP*	**P**	**05**	**08 01.1**	**+2.1**
OTAV	**Otavalo**	**14.52**	**141**	Pn		**Pn**	**05**	**07 52.5**	**-1.4**
SPBC	**San Pablo de B**	**14.54**	**114**		*eP*	**P**	**05**	**08 01.1**	**+0.8**
ROSC	**El Rosal**	**14.69**	**117**	Pn		**P**	**05**	**07 59.5**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=180,slow=20,SNR=4.9								
ROSC	**El Rosal**	**14.69**	**117**	Pn		**Pn**	**05**	**07 55.8**	**-0.4**
BARC	**Barichara**	**14.98**	**109**		*eP*	**P**	**05**	**08 03.1**	**-2.3**
PAMC	**Pamplona, Colo**	**15.18**	**106**		*eP*	**Pn**	**05**	**08 01.1**	**-1.8**
CHIC	**Chingaza**	**15.30**	**117**		*eP*	**P**	**05**	**08 08.4**	**-0.7**
RUSC	**La Rusia**	**15.33**	**111**		*eP*	**P**	**05**	**08 09.0**	**-0.5**
RUSC	**La Rusia**	**15.33**	**111**			**Pn**	**05**	**08 06.3**	**+1.4**
MOIG	**Morelia**	**15.39**	**302**	P		**P**	**05**	**08 08.0**	**-1.9**
MOIG					IAmb	IAmb	05	08 09.2	
	comp=Z,106nm,1.1s								
FLOC	**Florencia**	**15.46**	**130**		*eP*	**P**	**05**	**08 11.0**	**+0.5**
FLOC	**Florencia**	**15.46**	**130**		P	**P**	**05**	**08 09.9**	**-0.6**
VILC	**Villavicencio,**	**15.59**	**118**		*eP*	**P**	**05**	**08 16.4**	**+4.4**
TAMC	**Tame, Arauca**	**16.33**	**108**		*eP*	**Pn**	**05**	**08 18.3**	**+1.0**
SDV	**Santo Domingo**	**16.78**	**98**	Pn		**Pn**	**05**	**08 23.0**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=281,slow=6.5,SNR=11								
SDV	**Santo Domingo**	**16.78**	**98**			**Pn**	**05**	**08 22.2**	**-1.0**
PTGC	**Puerto Gaitan,**	**16.91**	**115**		*eP*	**P**	**05**	**08 27.6**	**+1.1**
ZAIG	**Zacatecas**	**18.10**	**309**		P	**P**	**05**	**08 41.0**	**+1.0**
KVTX	**Kingsville**	**18.51**	**329**		P	**Pn**	**05**	**08 46.6**	**+2.3**
KVTX					IAmb	IAmb	05	08 47.3	
	comp=Z,89nm,0.9s								
BRAL	**Brewton**	**19.31**	**1**		P	**Pn**	**05**	**08 55.6**	**+1.6**
	baz=181								
HKT	**Hockley**	**19.70**	**338**		P	**Pn**	**05**	**08 58.2**	**-0.4**
352A	**Blakely**	**19.75**	**6**		P	**Pn**	**05**	**09 00.6**	**+1.4**
	baz=187,SNR=15								
TIGA	**Tifton**	**19.89**	**10**		P	**P**	**05**	**08 59.5**	**+0.2**
TIGA	**Tifton**	**19.89**	**10**		P	**Pn**	**05**	**09 01.8**	**+0.8**
	baz=191,SNR=9.3								
833A	**Chaparral WMA,**	**19.91**	**328**		P	**P**	**05**	**09 00.1**	**+0.7**
833A	**Chaparral WMA,**	**19.91**	**328**		P	**P**	**05**	**09 00.1**	**+0.7**
	baz=144,SNR=56								
250A	**Grady**	**20.14**	**3**		P	**P**	**05**	**09 03.0**	**+1.1**
250A					IAmb	IAmb	05	09 05.4	
	comp=Z,42nm,1.1s								
252A	**Lumpkin**	**20.28**	**7**		P	Pn	05	09 06.0	+0.5
	baz=188								
253A	**Americus**	**20.42**	**8**		P	Pn	05	09 07.2	+0.1
	baz=189,SNR=9.7								
254A	**Abbeville**	**20.44**	**10**		P	Pn	05	09 07.3	-0.1
	baz=192								
VBMS	**Vicksburg**	**20.55**	**353**		P	Pn	05	09 08.3	-0.3
VBMS					IAmb	IAmb	05	09 12.0	
	comp=Z,47nm,0.8s								
VBMS	**Vicksburg**	**20.55**	**353**		P	Pn	05	09 11.3	+2.7
	baz=171								
255A	**Hazlehurst**	**20.57**	**12**		P	Pn	05	09 08.5	-0.4
	baz=194								
ATAH	**Atahualpa**	**20.82**	**154**		P	Pn	05	09 11.9	-0.5
	comp=Z,6.6nm,0.8s,baz=328,slow=12,SNR=3.2								
152A	**Waverly Hall**	**20.95**	**6**		P	Pn	05	09 13.0	-0.3
	baz=187,SNR=20								
NATX	**Nacogdoches**	**20.98**	**343**		P	**P**	**05**	**09 11.2**	**+0.1**
NATX					IAmb	IAmb	05	09 17.9	
	comp=Z,52nm,0.8s								
NATX	**Nacogdoches**	**20.98**	**343**		P	Pn	05	09 13.1	-0.5
	baz=160								
AOPR	**Arecibo Observ**	**21.00**	**69**		P	**P**	**05**	**09 11.1**	**-0.4**
AOPR					IAmb	IAmb	05	09 29.5	
	comp=Z,44nm,1.4s								
153A	**Fort Valley**	**21.04**	**8**		P	**P**	**05**	**09 14.2**	**+2.5**
	baz=190,SNR=5.4								
154A	**Montrose**	**21.12**	**10**		P	**P**	**05**	**09 14.8**	**+2.3**
	baz=192								
435B	**Jarrell**	**21.13**	**335**		P	**P**	**05**	**09 13.1**	**+0.4**
435B					IAmb	IAmb	05	09 21.8	
	comp=Z,33nm,0.8s								
435B	**Jarrell**	**21.13**	**335**		P	**P**	**05**	**09 13.3**	**+0.7**
	baz=151								
LRAL	**Lakeview Retre**	**21.17**	**1**		P	**P**	**05**	**09 14.6**	**+1.5**
LRAL					IAmb	IAmb	05	09 18.0	
	comp=Z,57nm,0.9s								
LRAL	**Lakeview Retre**	**21.17**	**1**		P	**P**	**05**	**09 15.2**	**+2.1**
	baz=181,SNR=16								
155A	**Kite**	**21.25**	**12**		P	**P**	**05**	**09 16.1**	**+2.1**
	baz=193								
Z50A	**Ashland**	**21.43**	**3**		P	**P**	**05**	**09 17.0**	**+1.2**
Z50A					IAmb	IAmb	05	09 20.8	
	comp=Z,39nm,0.8s								
Z50A	**Ashland**	**21.43**	**3**		P	**P**	**05**	**09 17.9**	**+2.1**
	baz=184,SNR=11								
Z52A	**Williamson**	**21.50**	**7**		P	**P**	**05**	**09 18.7**	**+2.1**
	baz=188,SNR=8.0								
Z51A	**Franklin**	**21.55**	**5**		P	**P**	**05**	**09 18.3**	**+1.2**
Z51A					IAmb	IAmb	05	09 21.7	
	comp=Z,54nm,0.8s								
Z53A	**Monticello**	**21.70**	**9**		P	**P**	**05**	**09 20.9**	**+2.2**
	baz=190,SNR=22								
Z54A	**Sparta**	**21.78**	**10**		P	**P**	**05**	**09 21.3**	**+1.8**
	baz=192								
GOGA	**Godfrey**	**21.84**	**9**		P	**P**	**05**	**09 22.1**	**+1.9**
GOGA	**Godfrey**	**21.84**	**9**		P	**P**	**05**	**09 22.2**	**+1.9**
	baz=190,SNR=17								
JCT	**Junction City**	**21.86**	**330**		P	**P**	**05**	**09 20.8**	**+0.1**
JCT	**Junction City**	**21.86**	**330**		P	**P**	**05**	**09 21.3**	**+0.7**
	baz=146,SNR=11								
Z55A	**Blythe**	**21.90**	**12**		P	**P**	**05**	**09 24.9**	**+4.0**
	baz=194								
Z41A	**Richland Creek**	**21.95**	**348**		P	**P**	**05**	**09 21.9**	**+0.5**
Z41A	**Richland Creek**	**21.95**	**348**		P	**P**	**05**	**09 22.7**	**+1.3**
	baz=166,SNR=13								
Y49A	**Blount Mountai**	**22.00**	**2**		P	**P**	**05**	**09 22.7**	**+0.6**
Y51A	**Rockmart**	**22.13**	**5**		P	**P**	**05**	**09 25.2**	**+1.7**
	baz=186,SNR=28								
WHTX	**Lake Whitney,**	**22.14**	**337**		P	**P**	**05**	**09 24.3**	**+0.8**
Z56A	**Williston**	**22.16**	**14**		P	**P**	**05**	**09 24.3**	**+0.5**
Z56A					IAmb	IAmb	05	09 29.1	
	comp=Z,52nm,0.9s								
Z56A	**Williston**	**22.16**	**14**		P	**P**	**05**	**09 26.3**	**+2.6**
	baz=196								
Y52A	**Lilburn**	**22.21**	**7**		P	**P**	**05**	**09 26.1**	**+2.0**
Y52A	**Lilburn**	**22.21**	**7**		P	**P**	**05**	**09 26.2**	**+2.0**
	baz=189,SNR=16								
Y53A	**Monroe**	**22.26**	**8**		P	**P**	**05**	**09 26.4**	**+1.6**
	baz=190,SNR=30								
CCAR	**Cane Creek**	**22.40**	**351**		P	**P**	**05**	**09 28.7**	**+2.5**
CCAR					IAmb	IAmb	05	09 30.0	
	comp=Z,27nm,0.7s								
Y54A	**Tignall**	**22.41**	**10**		P	**P**	**05**	**09 29.1**	**+2.7**
	baz=192,SNR=12								
WLAR	**White Oak Lake**	**22.43**	**348**		P	**P**	**05**	**09 28.2**	**+1.7**
PCRV	**Puerto La Cruz**	**22.44**	**92**		P	**P**	**05**	**09 26.9**	**0.0**
	comp=Z,13nm,0.7s,baz=229,slow=6.4,SNR=9.9								
PLCV	**Puerto La Cruz**	**22.48**	**92**		P	**P**	**05**	**09 26.9**	**-0.5**
X48A	**Hartselle**	**22.58**	**1**		P	**P**	**05**	**09 29.2**	**+1.0**
Y55A	**Saluda**	**22.64**	**12**		P	**P**	**05**	**09 30.9**	**+2.0**
	baz=194,SNR=5.5								
OXF	**Oxford**	**22.71**	**356**		P	**P**	**05**	**09 30.2**	**+0.6**
OXF					IAmb	IAmb	05	09 31.4	
	comp=Z,66nm,1.0s								
OXF	**Oxford**	**22.71**	**356**		P	**P**	**05**	**09 29.9**	**+0.3**
	baz=175								
X51A	**Calhoun**	**22.81**	**5**		P	**P**	**05**	**09 32.3**	**+1.6**
X51A					IAmb	IAmb	05	09 33.0	
	comp=Z,41nm,1.1s								
X51A	**Calhoun**	**22.81**	**5**		P	**P**	**05**	**09 32.5**	**+1.9**
	baz=186								
HODGE	**Hodges**	**22.85**	**11**		P	**P**	**05**	**09 32.5**	**+1.5**
HODGE					IAmb	IAmb	05	09 33.8	
	comp=Z,36nm,0.8s								
X43A	**Marvell**	**22.86**	**353**		P	**P**	**05**	**09 33.6**	**+2.4**
	baz=171								
X53A	**Estanollee**	**22.94**	**9**		P	**P**	**05**	**09 33.6**	**+1.6**
	baz=190,SNR=6.9								
X52A	**Dahlonega**	**22.96**	**8**		P	**P**	**05**	**09 33.7**	**+1.5**
	baz=189,SNR=7.7								
Y57A	**Sumter**	**23.06**	**15**		P	**P**	**05**	**09 35.4**	**+2.2**
	baz=198								
TX32	**Lajitas Array**	**23.11**	**322**		P	**P**	**05**	**09 35.0**	**+1.2**
TX32					IAmb	IAmb	05	09 46.0	
	comp=Z,28nm,0.8s								
TXAR	**Lajitas Array**	**23.11**	**322**		P	**P**	**05**	**09 34.8**	**+0.9**
	comp=Z,9.1nm,0.6s,baz=137,slow=9.7,SNR=151								
TXAR					PcP	**PcP**	05	13 23.8	+1.1
	comp=Z,1.6nm,0.8s,baz=137,slow=4.3,SNR=5.8								
TXAR					ScP	**ScP**	05	17 06.1	+6.4
	comp=Z,0.5nm,0.6s,baz=139,slow=5.6,SNR=7.0								
TX31	**Lajitas Ar. Si**	**23.11**	**322**		P	**P**	**05**	**09 35.2**	**+1.3**
TX31					IAmb	IAmb	05	09 46.0	
	comp=Z,28nm,0.8s								
PLAL	**Pickwick Lake**	**23.11**	**359**		P	**P**	**05**	**09 34.1**	**+0.4**
X54A	**Belton**	**23.14**	**11**		P	**P**	**05**	**09 35.5**	**+1.5**
	baz=192								
X40A	**Basin Creek Fa**	**23.14**	**349**		P	**P**	**05**	**09 36.4**	**+2.3**
X40A	**Basin Creek Fa**	**23.14**	**349**		P	**P**	**05**	**09 35.0**	**+0.9**
	baz=166,SNR=8.6								
Y58A	**Scranton**	**23.15**	**17**		P	**P**	**05**	**09 36.1**	**+2.0**
Y58A	**Scranton**	**23.15**	**17**		P	**P**	**05**	**09 36.0**	**+2.0**
	baz=200								
X55A	**Gracelyn & Ava**	**23.21**	**12**		P	**P**	**05**	**09 36.5**	**+1.9**
	baz=194								
W49A	**Belvidere**	**23.27**	**2**		P	**P**	**05**	**09 36.6**	**+1.3**
	baz=183,SNR=16								
UALR	**University of**	**23.33**	**350**		P	**P**	**05**	**09 36.7**	**+0.8**
UALR					IAmb	IAmb	05	09 37.1	
	comp=Z,40nm,0.9s								
MIAR	**Mount Ida**	**23.35**	**347**		P	**P**	**05**	**09 36.8**	**+0.6**
MIAR					IAmb	IAmb	05	09 37.4	
	comp=Z,45nm,0.8s								
MIAR	**Mount Ida**	**23.35**	**347**		P	**P**	**05**	**09 36.7**	**+0.5**
	baz=165,SNR=22								
X56A	**White Oak**	**23.36**	**13**		P	**P**	**05**	**09 37.9**	**+1.7**
	baz=196								
SWET	**Sewanee**	**23.38**	**3**		P	**P**	**05**	**09 37.2**	**+0.7**
SWET					IAmb	IAmb	05	09 38.2	
	comp=Z,48nm,1.3s								
W50A	**Signal Mountai**	**23.40**	**4**		P	**P**	**05**	**09 37.8**	**+1.1**
W50A	**Signal Mountai**	**23.40**	**4**		P	**P**	**05**	**09 38.2**	**+1.5**
	baz=185,SNR=17								
W51A	**Cleveland**	**23.41**	**6**		P	**P**	**05**	**09 38.6**	**+1.9**
	baz=186,SNR=12								
W52A	**Murphy**	**23.44**	**7**		P	**P**	**05**	**09 38.8**	**+1.7**
W52A					IAmb	IAmb	05	09 39.3	
	comp=Z,39nm,0.7s								
W52A	**Murphy**	**23.44**	**7**		P	**P**	**05**	**09 38.6**	**+1.6**
	baz=188,SNR=9.6								
BG3	**Lake Jocassee**	**23.48**	**9**		P	**P**	**05**	**09 39.7**	**+2.3**
BG3					IAmb	IAmb	05	09 39.9	
	comp=Z,34nm,0.7s								
PAULI	**Pauline**	**23.51**	**12**		IAmb	IAmb	05	09 39.6	
	comp=Z,31nm,0.9s								
PAULI					P	**P**	**05**	**09 40.0**	**+2.3**
X57A	**Johnson Farm,**	**23.56**	**15**		P	**P**	**05**	**09 39.4**	**+1.2**
	baz=198,SNR=6.2								
ABTX	**Abilene, Hawle**	**23.59**	**334**		P	**P**	**05**	**09 38.7**	**+0.1**
ABTX	**Abilene, Hawle**	**23.59**	**334**		P	**P**	**05**	**09 37.9**	**-0.7**
	baz=149,SNR=9.8								
W53A	**Cullowhee**	**23.61**	**9**		P	**P**	**05**	**09 40.5**	**+1.6**
	baz=190,SNR=5.3								
BIRD	**Birdtown, Kers**	**23.64**	**14**		P	**P**	**05**	**09 39.9**	**+1.0**
BIRD					IAmb	IAmb	05	09 40.8	
	comp=Z,37nm,0.7s								
H06E1	**SOCORRO T-PHAS**	**23.69**	**290**		T	T	05	34 02.2	
	SNR=12								
W54A

HHAR **Hobbs** 25.10 348 P P 05 09 51.8 -0.7
HHAR IAmb IAmb 05 09 52.9
comp=Z,17nm,0.8s
T47A Sharon Grove 25.11 1 P P 05 09 52.4 -0.1
U54A Nelsons Funny 25.16 11 P P 05 09 53.8 +0.7
U54A IAmb IAmb 05 09 56.8
comp=Z,29nm,0.7s
U54A Nelsons Funny 25.16 11 P P 05 09 54.1 +1.1
baz=193
TUL1 Leonard 25.19 344 P P 05 09 53.2 -0.1
TUL1 Leonard 25.19 344 P P 05 09 53.2 -0.1
baz=160,SNR=43
OKCSW **OKLAHOMA CITY** 25.22 341 P P 05 09 53.4 -0.1
OKCFA **Oklahoma City** 25.23 341 P P 05 09 53.4 -0.3
T50A Nancy 25.25 5 P P 05 09 54.0 +0.2
baz=186,SNR=6.4
T51A Gray 25.28 7 P P 05 09 54.9 +0.8
baz=188,SNR=7.3
T49A Edmonton 25.28 4 P P 05 09 54.0 -0.1
T49A IAmb IAmb 05 09 55.0
comp=Z,22nm,0.8s
T49A Edmonton 25.28 4 P P 05 09 54.3 +0.2
baz=184,SNR=9.5
U56A King 25.28 13 P P 05 09 55.8 +1.7
baz=196
U55A TA2, Sparta 25.29 12 P P 05 09 55.4 +1.2
baz=195
V59A Middlesex 25.30 18 P P 05 09 54.8 +0.6
baz=201
ADOK Arcadia Dam 25.42 341 P P 05 09 55.5 +0.1
T53A Wise 25.49 9 P P 05 09 56.5 +0.5
baz=191
V60A Jim Taylor Roa 25.60 19 P P 05 09 58.1 +1.2
baz=203
U57A Blanch 25.62 15 P P 05 09 58.2 +1.1
baz=198,SNR=7.9
MGMO **Mountain Grove** 25.64 351 P P 05 09 57.1 -0.3
MGMO IAmb IAmb 05 09 57.8
comp=Z,22nm,0.9s
T54A Tazewell 25.73 11 P P 05 09 59.0 +0.8
baz=193
U58A Oxford 25.79 17 P P 05 09 59.6 +0.9
baz=200
MNTX Cornudas Mount 25.83 323 P P 05 09 58.9 -0.3
MNTX Cornudas Mount 25.83 323 P P 05 10 01.4 +2.2
baz=136,SNR=12
S44A Carbondale 25.86 357 P P 05 09 58.9 -0.4
S44A IAmb IAmb 05 09 59.8
comp=Z,33nm,0.8s
T55A Pulaski 25.94 12 P P 05 10 01.3 +1.2
baz=195,SNR=5.3
S50A Richmond 25.94 6 P P 05 10 00.5 +0.4
baz=187
S49A Springfield 25.98 4 P P 05 10 00.2 -0.1
baz=185
U59A Littleton 25.98 18 P P 05 10 01.1 +0.7
U59A Littleton 25.98 18 P P 05 10 01.3 +0.9
baz=202
S51A Beattyville 25.99 7 P P 05 09 59.8 -0.6
S51A IAmb IAmb 05 10 02.3
comp=Z,26nm,0.7s
S51A Beattyville 25.99 7 P P 05 10 01.1 +0.7
baz=188,SNR=6.9
USIN University of 26.09 360 P P 05 10 00.5 -0.9
USIN IAmb IAmb 05 10 01.6
comp=Z,26nm,0.7s
S52A Salyersville 26.09 8 P P 05 10 02.0 +0.6
baz=190,SNR=7.3
BLA Blacksburg 26.10 13 P P 05 10 03.2 +1.6
baz=196
MSTX Muleshoe 26.16 330 P P 05 10 02.0 -0.2
MSTX Muleshoe 26.16 330 P P 05 10 02.0 -0.2
baz=144,SNR=28
T57A Hurt 26.18 15 P P 05 10 03.5 +1.4
T57A Hurt 26.18 15 P P 05 10 02.8 +0.6
baz=198
S53A Williamson 26.24 10 P P 05 10 03.5 +0.7
baz=192
U60A Pendleton 26.28 19 P P 05 10 04.1 +0.9
baz=203
T58A Grand View Acr 26.32 16 P P 05 10 04.0 +0.6
baz=200
WCI Wyandotte Cave 26.37 2 P P 05 10 03.8 -0.1
WCI IAmb IAmb 05 10 04.3
comp=Z,29nm,0.8s
WCI Wyandotte Cave 26.37 2 P P 05 10 03.8 -0.1
baz=182
CCM Cathedral Cave 26.39 353 P P 05 10 03.8 -0.3
CCM IAmb IAmb 05 10 04.2
comp=Z,33nm,0.9s
CCM Cathedral Cave 26.39 353 P P 05 10 03.5 -0.6
baz=172
AMTX Amarillo 26.40 333 P P 05 10 05.1 +0.7
AMTX Amarillo 26.40 333 P P 05 10 06.2 +1.8
baz=147
R49A Shelbyville 26.49 4 P P 05 10 04.3 -0.6
R49A Shelbyville 26.49 4 P P 05 10 04.7 -0.3
baz=185
S54A Dingess, Beckl 26.49 11 P P 05 10 05.8 +0.7
baz=193
R50A Paris 26.55 5 P P 05 10 05.6 +0.1
baz=187
T59A Double "B" Far 26.62 18 P P 05 10 07.1 +0.9
baz=202
S55A Lewisburg 26.63 12 P P 05 10 07.4 +1.1
baz=195
U32A Winter Ranch, 26.63 339 P P 05 10 06.2 -0.2
U32A IAmb IAmb 05 10 09.3
comp=Z,43nm,0.9s
R51A Hillsboro 26.64 7 P P 05 10 07.0 +0.6
baz=188,SNR=7.2
R52A Catlettsburg 26.80 8 P P 05 10 08.1 +0.3
baz=190
OLIL Olney 26.86 359 P P 05 10 07.8 -0.5
OLIL IAmb IAmb 05 10 08.8
comp=Z,26nm,0.8s
R53A Hurricane 26.90 10 P P 05 10 08.9 +0.2
R53A IAmb IAmb 05 10 10.2
comp=Z,21nm,0.8s
R53A Hurricane 26.90 10 P P 05 10 09.5 +0.8
baz=192
R54A Victor 26.92 11 P P 05 10 09.5 +0.6
baz=194
Q48A North Vernon 27.09 3 P P 05 10 10.0 -0.4
baz=184,SNR=5.1
Q49A Aurora 27.22 4 P P 05 10 11.4 -0.1
baz=185,SNR=6.4
BLO Bloomington 27.30 2 P P 05 10 11.3 -1.0
BLO IAmb IAmb 05 10 12.5
comp=Z,16nm,0.8s
Q51A Peebles 27.39 7 P P 05 10 13.4 +0.3
Q51A Peebles 27.39 7 P P 05 10 13.4 +0.3
baz=189,SNR=23
Q52A Bidwell 27.47 9 P P 05 10 14.4 +0.6
baz=191,SNR=9.5
R56A Bull Pasture M 27.48 14 P P 05 10 14.4 +0.4
baz=197
Q53A Leroy 27.48 10 P P 05 10 14.8 +0.8
baz=192
P48A Milroy 27.64 3 P P 05 10 14.1 -1.2
P48A IAmb IAmb 05 10 15.2
comp=Z,21nm,0.7s
P48A Milroy 27.64 3 P P 05 10 14.6 -0.7
baz=184,SNR=6.0
Q54A Coxs Mills 27.73 11 P P 05 10 16.2 0.0
Q54A IAmb IAmb 05 10 18.2
comp=Z,25nm,0.7s
Q54A Coxs Mills 27.73 11 P P 05 10 17.0 +0.8
baz=194,SNR=6.5
P46A Rosedale 27.73 0 P P 05 10 15.6 -0.6
P46A IAmb IAmb 05 10 16.3
comp=Z,15nm,0.7s
P49A Miami Univ. Ec 27.76 5 P P 05 10 15.8 -0.6
baz=186
121A Cookes Peak, D 27.87 321 P P 05 10 17.3 -0.3
P51A Williamsport 27.87 7 P P 05 10 16.8 -0.6
P51A Williamsport 27.87 7 P P 05 10 17.7 +0.4
baz=189,SNR=10
R59A King George, V 27.89 18 P P 05 10 19.4 +1.9
baz=202
Q55A Buckhannon 27.89 12 P P 05 10 18.3 +0.7
baz=195
SRIG Santa Rosalia 27.95 307 P P 05 10 15.4 -2.8
SRIG IAmb IAmb 05 10 29.0
comp=Z,17nm,0.7s
P53A Whipple 28.12 10 P P 05 10 19.9 +0.3
P53A Whipple 28.12 10 P P 05 10 20.6 +0.9
baz=192,SNR=8.6
Q56A Snyder Ridge, 28.13 14 P P 05 10 21.4 +1.6
Q56A IAmb IAmb 05 10 24.0
comp=Z,17nm,0.8s
Q56A Snyder Ridge, 28.13 14 P P 05 10 21.3 +1.5
baz=197
P52A Corning 28.15 9 P P 05 10 20.3 +0.4
baz=191,SNR=14
O44A Mansfield 28.28 358 P P 05 10 19.9 -1.1
O44A IAmb IAmb 05 10 21.1
comp=Z,27nm,0.7s
KSU1 Kansas State U 28.41 345 P P 05 10 21.9 -0.3
baz=161,SNR=5.2
Q58A Fox Den Farm, 28.42 16 P P 05 10 23.6 +1.3
baz=200
O49A Covington 28.44 5 P P 05 10 21.6 -0.8
O49A IAmb IAmb 05 10 22.9
comp=Z,23nm,0.8s
O49A Covington 28.44 5 P P 05 10 22.1 -0.3
baz=186
O48A Farmland 28.44 4 P P 05 10 21.9 -0.6
baz=185
O50A Cable 28.46 6 P P 05 10 22.9 +0.2
baz=188,SNR=21
SFIN Lafayette 28.50 1 P P 05 10 22.6 -0.4
SFIN IAmb IAmb 05 10 22.8
comp=Z,14nm,0.7s
SFIN Lafayette 28.50 1 P P 05 10 22.0 -0.9
baz=181
MCWV Mont Chateau 28.58 12 P P 05 10 24.8 +1.1
MCWV IAmb IAmb 05 10 29.2
comp=Z,24nm,1.5s
MCWV Mont Chateau 28.58 12 P P 05 10 24.5 +0.8
baz=196
O51A Pataskala 28.58 8 P P 05 10 24.0 +0.3
baz=190,SNR=6.8
ACSO Alum Creek Sta 28.62 7 P P 05 10 24.5 +0.4
ACSO Alum Creek Sta 28.62 7 P P 05 10 24.4 +0.4
baz=189,SNR=9.5
P56A Dayton Farm, R 28.66 14 P P 05 10 25.7 +1.3
baz=198
O52A Adamsville 28.66 9 P P 05 10 25.1 +0.7
O52A IAmb IAmb 05 10 25.4
comp=Z,27nm,0.7s
O52A Adamsville 28.66 9 P P 05 10 25.0 +0.5
baz=191,SNR=6.0
HDIL Hopedale 28.72 357 IAmb IAmb 05 10 25.1
comp=Z,26nm,0.8s
HDIL P P 05 10 25.2 +0.3
HDIL Hopedale 28.72 357 P P 05 10 24.6 -0.3
baz=176
ANMO Albuquerque 28.82 326 P P 05 10 28.0 +1.8
comp=Z,1.2nm,0.6s,baz=152,slow=7.2,SNR=3.6
P57A Homestead Farm 28.84 15 P P 05 10 27.9 +1.9
P57A IAmb IAmb 05 10 37.5
comp=Z,16nm,0.9s
P57A Homestead Farm 28.84 15 P P 05 10 27.6 +1.6
baz=199
O53A New Philadelph 28.89 10 P P 05 10 27.1 +0.6
baz=193,SNR=7.9
O54A Avella 28.98 11 P P 05 10 28.1 +0.8
O54A IAmb IAmb 05 10 28.9
comp=Z,13nm,0.7s
O54A Avella 28.98 11 P P 05 10 27.7 +0.4
baz=194
N41A Harden Midland 28.98 355 P P 05 10 26.8 -0.5
N41A IAmb IAmb 05 10 26.9
comp=Z,20nm,0.8s
P58A Pank, Wackersv 29.03 16 P P 05 10 29.3 +1.5
baz=201
N47A Urbana 29.04 3 P P 05 10 27.6 -0.1
N47A IAmb IAmb 05 10 27.9
comp=Z,13nm,0.7s
N47A Urbana 29.04 3 P P 05 10 26.3 -1.4
baz=183
N48A Decatur 29.05 4 P P 05 10 27.3 -0.6
baz=185
SDMD Soldier's Deli 29.09 17 P P 05 10 29.7 +1.5
SDMD IAmb IAmb 05 10 30.9
comp=Z,12nm,0.7s
N50A Nevada 29.13 7 P P 05 10 28.6 0.0
baz=188,SNR=5.5
N49A Columbus Grove 29.18 5 P P 05 10 29.0 0.0
N49A Columbus Grove 29.18 5 P P 05 10 28.9 -0.1
baz=186,SNR=8.4
N52A McGinn's Farm, 29.37 9 P P 05 10 31.1 +0.3
baz=191
N51A Ashland 29.37 8 P P 05 10 30.8 0.0
baz=190
P59A Jarrettsville 29.39 17 P P 05 10 32.4 +1.5
baz=202
N53A Lisbon 29.50 10 IAmb IAmb 05 10 32.4
comp=Z,26nm,1.1s
N53A P P 05 10 32.5 +0.6
N53A Lisbon 29.50 10 P P 05 10 32.3 +0.4
baz=193
T25A Trinidad 29.51 332 P P 05 10 34.6 +2.4
T25A Trinidad 29.51 332 P P 05 10 33.7 +1.4
baz=145
M48A Edgerton 29.70 4 P P 05 10 33.2 -0.4
M48A IAmb IAmb 05 10 39.0
comp=Z,18nm,1.2s
M49A Liberty Center 29.74 5 P P 05 10 33.7 -0.3
baz=187
M50A Fremont 29.77 7 P P 05 10 34.5 +0.3
M50A Fremont 29.77 7 P P 05 10 34.2 0.0
baz=189,SNR=7.0
MVL Millersville 29.78 17 P P 05 10 36.8 +2.4
MVL IAmb IAmb 05 10 37.3
comp=Z,16nm,0.7s
N54A Moraine State 29.81 11 P P 05 10 35.4 +0.8
N54A IAmb IAmb 05 10 41.4
comp=Z,30nm,1.3s
N54A Moraine State 29.81 11 P P 05 10 34.9 +0.3
baz=195
P60A Greenville 29.82 18 P P 05 10 35.9 +1.2
baz=204
PAGS Pennsylvania G 29.88 17 P P 05 10 36.9 +1.6
PAGS IAmb IAmb 05 10 37.9
comp=Z,17nm,0.7s
SSPA Standing Stone 29.96 15 P P 05 10 37.0 +1.1
SSPA IAmb IAmb 05 10 38.0
comp=Z,16nm,0.8s
SSPA Standing Stone 29.96 15 P P 05 10 36.7 +0.8
baz=199
O59A Robesonia 30.11 17 P P 05 10 38.7 +1.4
baz=202
N56A West Decatur 30.13 14 P P 05 10 38.4 +0.9
baz=198
M52A Chesterland 30.13 9 P P 05 10 38.0 +0.5
L46A Eue Claire 30.14 2 P P 05 10 36.4 -1.2
L46A Eue Claire 30.14 2 P P 05 10 36.1 -1.4
baz=182
M53A WI Miller and 30.14 10 P P 05 10 38.2 +0.6
baz=193
L47A Sherwood 30.15 3 P P 05 10 37.3 -0.4
baz=184
N57A Milroy 30.16 15 P P 05 10 38.6 +1.0
baz=199
L48A N Adams 30.17 4 P P 05 10 37.0 -0.9
baz=186
L42A Oliver, Polo 30.18 357 P P 05 10 36.8 -1.1
L42A IAmb IAmb 05 10 38.1
comp=Z,25nm,0.8s
L44A Lake County Fo 30.30 359 P P 05 10 38.1 -0.8
O60A Telford 30.35 18 P P 05 10 40.4 +1.0
baz=204
L40A Anamosa 30.36 354 P P 05 10 39.1 -0.4
L40A IAmb IAmb 05 10 39.7
comp=Z,25nm,0.9s
L49A Milan 30.39 5 P P 05 10 39.7 -0.1
baz=187,SNR=5.5
M54A Oil Creek Stat 30.40 12 IAmb IAmb 05 10 40.4
comp=Z,14nm,0.8s
M54A P P 05 10 40.6 +0.8
M54A Oil Creek Stat 30.40 12 P P 05 10 40.4 +0.6
baz=195
N58A Sunbury 30.45 16 P P 05 10 41.2 +0.9
N58A IAmb IAmb 05 10 42.7
comp=Z,18nm,0.8s
N58A Sunbury 30.45 16 P P 05 10 41.5 +1.2
baz=201
SDCO Great Sand Dun 30.51 331 P P 05 10 42.9 +1.7
SDCO Great Sand Dun 30.51 331 P P 05 10 42.6 +1.4
baz=143,SNR=7.4
M55A Ridgway 30.55 13 P P 05 10 41.6 +0.5
M55A Ridgway 30.55 13 P P 05 10 41.2 0.0
baz=197
M56A Emporium 30.69 14 P P 05 10 42.9 +0.5
M56A IAmb IAmb 05 10 57.3
comp=Z,18nm,1.1s
M56A Emporium 30.69 14 P P 05 10 42.6 +0.2
baz=198
L53A Girard 30.72 11 P P 05 10 43.1 +0.5
baz=194
N59A State Game Lan 30.79 17 P P 05 10 44.8 +1.4
N59A State Game Lan 30.79 17 P P 05 10 44.5 +1.2
baz=203,SNR=5.9
M57A Sunshine Farm, 30.81 15 P P 05 10 44.8 +1.3
M57A IAmb IAmb 05 10 45.1
comp=Z,21nm,0.9s
M57A Sunshine Farm, 30.81 15 P P 05 10 44.3 +0.8
baz=200
214A Organ Pipe Nat 30.81 315 P P 05 10 46.5 +2.8
baz=125
K47A Vermontville 30.86 4 P P 05 10 42.7 -1.2
baz=185
ERPA Erie 30.92 11 P P 05 10 45.1 +0.7
ERPA IAmb IAmb 05 10 46.5
comp=Z,21nm,0.7s
ERPA Erie 30.92 11 P P 05 10 44.6 +0.2
baz=194
BRNJ Basking Ridge 30.95 19 P P 05 10 46.1 +1.5
N60A Cedar Hill Far 30.95 18 P P 05 10 46.1 +1.3
baz=204
M58A Price's Panora 31.02 16 P P 05 10 46.1 +0.7
baz=201
K48A Perry 31.05 5 P P 05 10 44.1 -1.5
baz=186
K49A Clarkson 31.09 6 P P 05 10 46.1 +0.1
baz=188,SNR=7.0
N61A South Mountain 31.10 20 P P 05 10 47.1 +1.1
baz=205
JFWS Jewell Farm 31.12 356 P P 05 10 45.3 -0.9
JFWS IAmb IAmb 05 10 46.0
comp=Z,20nm,1.1s
JFWS Jewell Farm 31.12 356 P P 05 10 45.1 -1.1
baz=175
S22A 4UR Ranch, Cre 31.15 329 P P 05 10 48.4 +1.4
S22A 4UR Ranch, Cre 31.15 329 P P 05 10 47.9 +1.0
baz=141
L54A Sinclairville 31.16 12 P P 05 10 47.0 +0.4
baz=195
ODNJ Ogdensburg 31.30 19 P P 05 10 47.7 0.0
ODNJ IAmb IAmb 05 10 49.9
comp=Z,20nm,0.8s
J47A Sunmer 31.43 4 P P 05 10 47.6 -1.3
J47A IAmb IAmb 05 10 48.4
comp=Z,13nm,0.7s
L56A Greenwood 31.46 14 P P 05 10 50.9 +1.7
L56A IAmb IAmb 05 11 07.1
comp=Z,25nm,1.2s
PAL Palisades 31.46 20 P P 05 10 50.3 +1.2
PAL IAmb IAmb 05 10 58.7
comp=Z,29nm,1.1s
M59A Waymart 31.47 17 P P 05 10 50.8 +1.5
baz=203
WVNY West Valley, N 31.48 13 P P 05 10 49.9 +0.5
WVNY IAmb IAmb 05 10 52.3
comp=Z,20nm,0.9s
M60A Port Jervis 31.52 19 P P 05 10 50.8 +1.1
baz=204
MVCO Mesa Verde 31.61 327 P P 05 10 50.1 -0.8
MVCO Mesa Verde 31.61 327 P P 05 10 52.0 +1.1
baz=138
J49A Marlette 31.69 6 P P 05 10 51.2 0.0
baz=188
SAML Samuel 31.70 129 P P 05 10 51.5 -0.1
M61A Granite Spring 31.78 20 P P 05 10 53.0 +1.0
baz=206
L58A Harry Jones Me 31.81 16 P P 05 10 53.5 +1.2
baz=202
BINY Binghamton 31.92 16 P P 05 10 53.5 +0.2
BINY Binghamton 31.92 16 P P 05 10 55.1 +1.8
baz=201
I42A Draeger Farm, 32.03 358 P P 05 10 53.1 -1.1
I46A Reed City 32.10 3 P P 05 10 53.5 -1.3
baz=184
L59A Walton 32.18 17 P P 05 10 56.1 +0.6
L59A Walton 32.18 17 P P 05 10 57.1 +1.6
baz=203
L60A Shokan 32.24 19 P P 05 10 57.9 +1.8
baz=205
KSCT Kent School, K 32.24 20 P P 05 10 57.2 +1.2
SMCO Snowmass 32.35 331 P P 05 10 58.3 +0.8
SMCO IAmb IAmb 05 11 12.8
comp=Z,18nm,1.5s
K58A Earlville 32.53 16 P P 05 10 59.9 +1.2
baz=202
H46A Fife Lake 32.71 3 P P 05 10 58.6 -1.5
baz=184
K59A Cooperstown 32.77 17 P P 05 11 01.8 +1.0
baz=203
ECSD EROS Data Cent 32.82 348 P P 05 11 00.2 -0.9
ECSD EROS Data Cent 32.82 348 P P 05 11 00.0 -1.1
baz=163,SNR=19
GLA Glamis 32.84 315 P P 05 10 58.0 -3.5
H48A Harrisville 33.00 5 P P 05 11 01.5 -1.2
H48A Harrisville 33.00 5 P P 05 11 01.9 -0.8
baz=187
GLMI Grayling 33.03 4 P P 05 11 01.8 -1.1
GLMI Grayling 33.03 4 P P 05 11 01.9 -1.0
baz=185
J57A Williamstown 33.04 15 P P 05 11 03.2 +0.1
baz=201
PDMCI Parker Dam,Lak 33.08 317 P P 05 11 06.8 +3.2
baz=126
TRY Troy 33.09 19 P P 05 11 05.2 +1.8
QUA2 Belchertown 33.12 21 P P 05 11 06.1 +2.4
K61A Williamstown 33.16 19 P P 05 11 05.6 +1.5
baz=206
J58A Remsen 33.19 16 P P 05 11 05.0 +0.7
baz=202
H52A Wyevale 33.39 10 P P 05 11 06.7 +0.7
baz=193
G40A Rib Lake 33.47 356 P P 05 11 05.7 -1.1
G40A IAmb IAmb 05 11 06.3
comp=Z,21nm,0.9s
J59A Piesco 33.50 17 P P 05 11 07.2 +0.1
J59A IAmb IAmb 05 11 09.2
comp=Z,21nm,0.9s
J59A Piesco 33.50 17 P P 05 11 06.8 -0.3
baz=203
H53A Bobcaygeon 33.56 11 P P 05 11 08.0 +0.4
baz=196,SNR=6.1
HRV Adam Dziewonsk 33.60 21 P P 05 11 08.8 +0.9
BC3 Big Chuckawall 33.60 315 P P 05 11 09.3 +1.0
baz=124
J60A Lant Hill Farm 33.63 19 P P 05 11 08.3 +0.2
baz=205
SADO Sadowa 33.64 11 P P 05 11 08.8 +0.5
SADO IAmb IAmb 05 11 09.1
comp=Z,13nm,0.7s
SPMN Marine on St. 33.65 353 P P 05 11 07.3 -1.1
SPMN Marine on St. 33.65 353 P P 05 11 07.0 -1.3
baz=170,SNR=14
O20A White River Ci 33.70 331 P P 05 11 10.8 +1.7
O20A IAmb IAmb 05 11 23.1
comp=Z,12nm,0.8s
O20A White River Ci 33.70 331 P P 05 11 10.5 +1.4
baz=141,SNR=7.8
DELO Deloro Mine 33.70 13 P P 05 11 09.5 +0.7
DELO IAmb IAmb 05 11 12.9
comp=Z,20nm,1.1s
LPAZ La Paz 33.79 145 P P 05 11 10.3 -0.2
comp=Z,0.5nm,0.5s,baz=14,slow=14,SNR=3.2
I59A Olmsteadville 33.99 18 P P 05 11 11.5 +0.2
baz=204
J61A Chester 34.00 20 P P 05 11 12.0 +0.6
baz=207
NCB Newcomb 34.05 17 P P 05 11 12.8 +0.9
NCB IAmb IAmb 05 11 15.5
comp=Z,20nm,1.2s
G53A Haliburton 34.08 11 P P 05 11 12.1 0.0
baz=195
H56A Elgin 34.09 14 P P 05 11 12.7 +0.6
baz=200
SRU San Rafael Swe 34.09 327 P P 05 11 13.9 +1.4
J62A Henniker 34.14 21 P P 05 11 13.9 +1.2
baz=208
H57A Richville 34.18 15 P P 05 11 13.5 +0.5
baz=201
COWI Conover 34.24 358 P P 05 11 12.3 -1.2

MTPU	Mount Pierson	34.25	324	P		P	05 11 17.9	+3.8
PFO	Pinyon Flats O	34.28	314	P		P	05 11 16.3	+2.1
	baz=123							
Q16A	Castle Valley	34.30	326	P		P	05 11 17.1	+2.8
G54A	Lake Saint Pet	34.45	12	P		P	05 11 15.5	+0.2
	baz=196							
P17A	Butcher Ranch,	34.47	327	P		P	05 11 16.9	+1.2
H58A	Gabriels	34.47	17	P		P	05 11 15.4	-0.1
	baz=203,SNR=6.2							
E43A	Lone Tree Farm	34.49	1	P		P	05 11 14.7	-0.9
LONY	Lake Ozonia	34.55	16	P		P	05 11 16.8	+0.6
LONY	Lake Ozonia	34.55	16	P		P	05 11 16.4	+0.2
	baz=202,SNR=5.8							
MSU	Marysvale	34.57	325	P		P	05 11 19.3	+2.6
G55A	Calabogie	34.60	13	P		P	05 11 16.5	-0.1
	baz=199							
F52A	Sundridge	34.61	10	P		P	05 11 16.1	-0.5
	baz=194							
E47A	Iron Bridge	34.75	5	P		P	05 11 17.2	-0.7
	baz=187							
H59A	Cadyville	34.82	17	P		P	05 11 18.8	+0.3
	baz=204							
I62A	Tamworth	34.88	21	P		P	05 11 20.8	+1.8
I62A	Tamworth	34.88	21	P		P	05 11 20.0	+1.0
	baz=208							
E48A	Lockeyer	34.88	6	P		P	05 11 18.6	-0.4
	baz=189							
G57A	Newington	34.88	15	P		P	05 11 18.9	-0.1
	baz=202							
E38A	The Farm, Brul	34.89	355	P		P	05 11 18.0	-1.1
ALGO	Algonquin Park	34.99	11	P		P	05 11 19.5	-0.4
	baz=196,SNR=5.4							
LBNH	Lisbon	35.00	20	P		P	05 11 21.2	+1.2
LBNH				IAmb		IAmb	05 11 39.8	
	comp=Z,13nm,1.1s							
G58A	Ormstown	35.18	17	P		P	05 11 21.8	+0.2
	baz=203							
E52A	Mattawa	35.20	11	P		P	05 11 21.5	-0.2
	baz=195							
F55A	Otter Lake	35.24	13	P		P	05 11 22.0	-0.1
	baz=199							
H61A	Lyndonville	35.26	19	P		P	05 11 22.9	+0.6
	baz=207							
I63A	Otisfield	35.29	21	P		P	05 11 24.1	+1.6
G59A	Clarenceville	35.37	18	P		P	05 11 22.8	-0.3
	baz=204,SNR=10							
E53A	Dumoine, Ponti	35.47	12	P		P	05 11 23.6	-0.5
	baz=196							
D48A	Paudash Townsh	35.61	7	P		P	05 11 24.3	-1.0
	baz=189							
E54A	Lac Daplat, Po	35.62	12	P		P	05 11 24.9	-0.4
	baz=197							
JLU	Jordanelle	35.66	328	P		P	05 11 26.5	+0.4
D49A	Beulah Townshi	35.76	7	P		P	05 11 25.8	-0.7
	baz=190,SNR=8.4							
D51A	Lot 18 Range I	35.86	9	P		P	05 11 26.7	-0.6
	baz=193							
D50A	G1974 Best Tow	35.86	9	P		P	05 11 27.0	-0.4
	baz=193							
CTU	Camp Tracy	35.88	328	P		P	05 11 28.3	+0.3
E55A	Montcerf-Lytto	35.89	13	P		P	05 11 27.2	-0.5
	baz=199							
D52A	ZEK Kipawa Sen	35.91	11	P		P	05 11 28.1	+0.3
	baz=195							
EDW2	Edwards Air Fo	36.04	315	P		P	05 11 31.1	+1.9
	baz=122							
G61A	St-Isidore-de-	36.06	19	P		P	05 11 29.9	+0.7
	baz=207							
D32A	Dogwood Acres,	36.16	349	P		P	05 11 28.7	-1.3
E56A	St. Veronique	36.22	15	P		P	05 11 30.1	-0.4
	baz=201							
EYMN	Ely	36.22	355	P		P	05 11 28.7	-1.8
EYMN				IAmb		IAmb	05 11 29.5	
	comp=Z,14nm,0.8s							
EYMN	Ely	36.22	355	P		P	05 11 28.6	-1.9
	baz=173							
E57A	Chemin Saint G	36.32	16	P		P	05 11 31.4	0.0
	baz=202							
G62A	West of Eustis	36.33	20	P		P	05 11 32.4	+0.9
G62A	West of Eustis	36.33	20	P		P	05 11 32.8	+1.3
	baz=209,SNR=7.7							
BW06	Boulder Array	36.38	332	P		P	05 11 31.3	-0.8
BW06	Boulder Array	36.38	332	P		P	05 11 32.3	+0.2
	baz=142							
PD31	Pinedale Array	36.38	332	P		P	05 11 31.9	-0.3
PDAR	Pinedale Array	36.38	332	P		P	05 11 31.9	-0.3
	comp=Z,2.0nm,0.7s,baz=127,slow=9.8,SNR=26							
PDAR				PcP		PcP	05 13 56.2	-0.2
	comp=Z,1.2nm,0.8s,baz=142,slow=4.6,SNR=5.1							
D54A	Lac Fusel, La	36.42	12	P		P	05 11 31.9	-0.3
	baz=198,SNR=6.3							
HWUT	Hardware Ranch	36.46	329	P		P	05 11 32.8	-0.1
HWUT				IAmb		IAmb	05 11 40.8	
	comp=Z,13nm,0.7s							
E58A	La Victoria	36.52	17	P		P	05 11 33.1	+0.1
	baz=204,SNR=8.5							
F60A	Warwick	36.54	18	P		P	05 11 33.3	0.0
	baz=206							
D55A	Sainte-Anne-du	36.56	14	P		P	05 11 33.3	-0.1
	baz=200,SNR=12							
G63A	Kingsbury	36.56	21	P		P	05 11 34.3	+0.8
	baz=210							
SPUT	South Promonto	36.70	328	P		P	05 11 34.6	-0.2
D56A	ZEC Mazanza, M	36.76	15	P		P	05 11 34.6	-0.5
	baz=201							
D57A	Chemin Vers le	36.95	15	P		P	05 11 36.5	-0.2
	baz=202							
E60A	Ste Agathe de	37.05	18	P		P	05 11 37.4	-0.2
	baz=206							
AGMN	Agassiz Nation	37.09	351	P		P	05 11 36.5	-1.3
AHID	Auburn Hatcher	37.10	331	P		P	05 11 38.7	+0.4
D58A	Chemin du LacG	37.29	16	P		P	05 11 39.7	+0.1
	baz=204,SNR=14							
PKM	Mcpherson Peak	37.32	313	P		P	05 11 42.7	+2.4
	baz=120,SNR=5.2							
MDND	Maddock	37.38	346	P		P	05 11 40.1	-0.3
MDND	Maddock	37.38	346	P		P	05 11 40.5	+0.1
	baz=160							
E61A	Lac Etchemin	37.41	19	P		P	05 11 42.0	+1.3
	baz=208							
REDW	Red Top Meadow	37.44	332	P		P	05 11 40.6	-0.6
SNOW	Snow King Moun	37.47	332	P		P	05 11 42.0	+0.5
TPAW	Teton Pass	37.58	332	P		P	05 11 41.8	-0.6
TPAW				IAmb		IAmb	05 11 55.5	
	comp=Z,14nm,0.8s							
LATQ	La Tuque	37.58	16	P		P	05 11 41.7	-0.3
LATQ				IAmb		IAmb	05 11 43.1	
	comp=Z,18nm,0.7s							
LATQ	La Tuque	37.58	16	P		P	05 11 42.1	0.0
	baz=204,SNR=16							
F64A	Sherman	37.66	22	P		P	05 11 43.7	+0.9
	baz=212							
MOOW	Moose Ponds	37.68	332	P		P	05 11 42.7	-0.6
MOOW				IAmb		IAmb	05 11 52.2	
	comp=Z,9.0nm,0.8s							
D60A	Saint Jean D'O	37.70	19	P		P	05 11 43.1	0.0
	baz=207,SNR=5.1							
ELK	Elko	37.82	325	P		P	05 11 44.5	-0.1
IMW	Indian Meadow	37.89	332	P		P	05 11 44.7	-0.4
IMW				IAmb		IAmb	05 11 56.4	
	comp=Z,7.2nm,0.6s							
FLWY	Flagg Ranch	37.92	332	P		P	05 11 45.7	+0.4
SIV	San Ignacio	37.97	136	P		P	05 11 45.9	+0.2
	comp=Z,38nm,0.7s,baz=321,slow=9.1,SNR=102							
SIV				PcP		PcP	05 14 03.9	+2.4
	comp=Z,4.1nm,0.6s,baz=266,slow=2.1,SNR=7.7							
PAGB	Antelope Grade	38.05	314	P		P	05 11 46.4	+0.2
PAGB				IAmb		IAmb	05 12 02.4	
	comp=Z,17nm,1.3s							
H17A	Grant Village	38.11	333	P		P	05 11 46.7	-0.2
H17A	Grant Village	38.11	333	P		P	05 11 47.8	+0.9
	baz=142							
RLMT	Red Lodge	38.12	335	P		P	05 11 46.8	-0.1
RLMT	Red Lodge	38.12	335	P		P	05 11 46.6	-0.4
	baz=144							
LSQQ	Lebel-sur-Quev	38.18	11	P		P	05 11 46.4	-0.6
	baz=197							
D61A	St Aubert, Com	38.19	19	P		P	05 11 47.6	+0.4
	baz=208,SNR=6.5							
YMP	Mirror Lake Pl	38.20	334	P		P	05 11 47.9	+0.2
OMMB	Old Mammoth Mi	38.21	318	P		P	05 11 48.1	+0.2
NVAR	Mina Array Bea	38.22	319	P		P	05 11 49.4	+1.5
	comp=Z,1.5nm,0.7s,baz=136,slow=8.4,SNR=8.9							
NVAR				PcP		PcP	05 14 03.3	+1.1
	comp=Z,1.7nm,0.7s,baz=138,slow=4.1,SNR=8.0							
MDPB	Devils Postpil	38.27	318	P		P	05 11 49.1	+0.7
E64A	Bridgewater	38.32	22	P		P	05 11 48.8	+0.5
	baz=212							
YNE	Yellowstone No	38.34	334	P		P	05 11 48.4	-0.4
KVN	Kaiserville	38.46	320	P		P	05 11 49.1	-0.7
D62A	Allapoint, All	38.46	20	P		P	05 11 49.7	+0.2
D62A	Allapoint, All	38.46	20	P		P	05 11 49.9	+0.4
	baz=210,SNR=6.6							
YMR	Madison River	38.50	333	P		P	05 11 50.5	+0.4
YHH	Holmes Hill	38.54	333	P		P	05 11 50.5	-0.1
YHB	Horse Butte	38.66	333	P		P	05 11 51.9	+0.4
MATQ	Matagami	38.73	10	P		P	05 11 51.1	-0.6
	baz=195,SNR=19							
YHL	Hebgen Lake	38.74	333	P		P	05 11 52.5	+0.3
D63A	Stockholm	38.75	21	P		P	05 11 51.8	-0.1
	baz=211							
QLMT	Earthquake Lak	38.83	333	P		P	05 11 52.3	-0.6
ULM	Lac du Bonnet	38.99	351	P		P	05 11 52.1	-1.7
	comp=Z,24nm,0.8s,baz=168,slow=8.3,SNR=55							
ULM	Lac du Bonnet	38.99	351	P		P	05 11 52.2	-1.7
ULM				IAmb		IAmb	05 11 52.9	
	comp=Z,26nm,0.8s							
DGMT	Dagmar	39.17	342	P		P	05 11 54.9	-0.5
DGMT	Dagmar	39.17	342	P		P	05 11 56.0	+0.5
	baz=153,SNR=7.1							
MCMT	McKenzie Canyo	39.48	331	P		P	05 11 59.2	+0.8
DLMT	Dillon	39.77	332	P		P	05 12 00.8	+0.1
MFID	Camas Ranch	39.95	327	P		P	05 12 02.8	+0.6
LRM	Limekiln Ridge	40.05	333	P		P	05 12 03.3	+0.1
BEKR	Beckworth	40.35	320	P		P	05 12 06.0	+0.3
EGMT	Eagleton	40.68	337	P		P	05 12 07.3	-0.8
WVOR	Wild Horse Val	40.86	324	P		P	05 12 09.4	-0.3
ORV	Oroville	40.91	319	P		P	05 12 09.6	-0.4
J08A	Circle Bar Ran	41.35	325	P		P	05 12 13.3	-0.5
MSO	Missoula	41.49	332	P		P	05 12 14.0	-0.8
MSO	Missoula	41.49	332	P		P	05 12 14.8	-0.1
	baz=139,SNR=5.5							
BMO	Blue Mountains	41.71	328	P		P	05 12 14.7	-2.0
JTMT	Jette	42.34	333	P		P	05 12 21.6	-0.2
I07A	Izee	42.39	325	P		P	05 12 22.6	+0.3
F10A	Beach Ranch, E	42.44	329	P		P	05 12 21.4	-1.3
PINE	Pine Mountain	43.02	324	P		P	05 12 27.5	0.0
HAWA	Hanford	43.91	328	P		P	05 12 33.8	-0.5
NEW	Newport	44.01	332	P		P	05 12 34.4	-0.8
NEW	Newport	44.01	332	P		P	05 12 35.1	-0.1
	baz=136							
H04A	Detroit Lake	44.27	324	P		P	05 12 37.0	-0.3
FFC	Flin Flon	44.36	348	P		P	05 12 37.5	-0.3
DRLN	Deer Lake	44.83	28	P		P	05 12 41.8	+0.1
LTY	Liberty	45.06	328	P		P	05 12 43.3	-0.3
B08A	Colville Reser	45.13	330	P		P	05 12 44.0	-0.1
G03D	McMinnville, O	45.20	324	P		P	05 12 44.2	-0.5
	baz=126							
LON	Longmire	45.34	327	P		P	05 12 45.7	-0.1
SCHQ	Schefferville	45.92	16	P		P	05 12 48.9	-1.3
	comp=Z,22nm,0.7s,baz=218,slow=6.3,SNR=72							
SCHQ				PcP		PcP	05 14 25.7	-1.3
	comp=Z,3.5nm,0.8s,baz=274,slow=3.7,SNR=4.0							
SCHQ	Schefferville	45.92	16	P		P	05 12 49.2	-1.1
B06A	Marblemount	46.30	329	P		P	05 12 53.0	-0.3
B06A				IAmb		IAmb	05 13 04.0	
	comp=Z,13nm,0.7s							
D03D	Eldon	46.51	327	P		P	05 12 54.5	-0.4
	baz=128							
CFA	Coronel Fontan	46.89	157	P		P	05 12 59.5	+1.4
	comp=Z,1.7nm,0.8s,baz=315,slow=8.0,SNR=3.5							
FCC	Fort Churchill	47.16	355	P		P	05 12 58.7	-1.2
FCC				IAmb		IAmb	05 12 59.6	
	comp=Z,9.2nm,0.9s							
BDFB	Brasilia	47.59	124	P		P	05 13 02.8	-1.1
	comp=Z,19nm,0.8s,baz=276,slow=8.9,SNR=27							
BDFB	Brasilia	47.59	124	P		P	05 13 03.5	-0.4
CPUP	Vila Florida	47.87	143	P		P	05 13 04.1	-1.7
	comp=Z,2.7nm,0.8s,baz=212,slow=13,SNR=3.1							
CPUP				PcP		PcP	05 14 35.2	+0.9
	comp=Z,2.7nm,0.9s,baz=13,slow=8.8,SNR=3.7							
CPUP	Vila Florida	47.87	143	P		P	05 13 05.0	-0.8
LLLB	Lillooet	47.88	331	P		P	05 13 05.4	-0.2
LLLB				IAmb		IAmb	05 13 16.9	
	comp=Z,12nm,0.8s							
RCBR	Riachuelo	54.16	106	P		P	05 13 52.4	-1.1
RCBR				IAmb		IAmb	05 14 07.3	
	comp=Z,15nm,1.2s							
YKA	Yellowknife Ar	54.27	345	P		P	05 13 52.0	-1.3
	comp=Z,5.3nm,0.8s,baz=139,slow=7.5,SNR=76							
YKA				PcP		PcP	05 14 57.5	+0.1
	comp=Z,2.3nm,0.6s,baz=148,slow=3.9,SNR=26							
YKA				ScP		ScP	05 18 57.4	+2.7
	comp=Z,0.3nm,0.7s,baz=146,slow=4.5,SNR=6.9							
PLCA	Paso Flores	54.53	164	P		P	05 13 57.5	+1.8
	comp=Z,3.5nm,0.9s,baz=333,slow=6.5,SNR=5.3							
PLCA	Paso Flores	54.53	164	P		P	05 13 54.2	-1.5
PLCA				IAmb		IAmb	05 13 59.2	
	comp=Z,7.8nm,1.1s							
INK	Inuvik	63.85	343	P		P	05 14 59.2	-0.5
	baz=116,slow=6.9							
INK	Inuvik	63.85	343	P		P	05 14 59.4	-0.3
INK				IAmb		IAmb	05 15 00.1	
	comp=Z,6.5nm,1.1s							
EYAK	Cordova Ski Ar	64.51	332	P		P	05 15 05.4	+1.2
HDA	Harding Lake	66.53	336	P		P	05 15 17.0	-0.2
HDA				IAmb		IAmb	05 15 17.5	
	comp=Z,6.4nm,0.9s							
HDA	Harding Lake	66.53	336	P		P	05 15 16.7	-0.5
	baz=113							
IL31		66.64	336	P		P	05 15 17.6	-0.2
ILAR	Eielson Array	66.64	336	P		P	05 15 17.1	-0.9
	comp=Z,3.0nm,1.0s,baz=156,slow=4.5,SNR=29							
RND	Reindeer	66.93	335	P		P	05 15 19.9	0.0
RND				IAmb		IAmb	05 15 30.9	
	comp=Z,15nm,1.1s							
CCB	Clear Creek Bu	66.96	336	P		P	05 15 19.1	-0.8
BPAW	Bear Paw Mtn.	68.06	335	P		P	05 15 27.1	+0.2
MLY	Manley	68.27	336	P		P	05 15 27.6	-0.6
ESDC	Sonseca Array	77.60	52	P		P	05 16 21.0	-3.1
	comp=Z,1.0nm,0.8s,baz=284,slow=5.5,SNR=6.7							
SPITS	Spitsbergen Ar	81.36	12	LR		LR	05 53 41.6	
	comp=Z,230nm,18.2s,baz=180,slow=36							
TORD	Torodi Ar. Bea	86.54	77	P		P	05 17 08.6	-2.9
	comp=Z,0.4nm,0.8s,baz=284,slow=6.7,SNR=2.5							
ZALV	Zalesovo Beam	114.21	5	PP		PP	05 23 57.9	-3.2
	comp=Z,11nm,1.4s,baz=357,slow=6.4,SNR=3.5							
BOSA	Boshof	115.39	116	PKP		PKiKP	05 23 10.9	+0.7
	comp=Z,1.4nm,0.6s,baz=215,slow=3.3,SNR=4.5							
BOSA	Boshof	115.39	116			PKiKP	05 23 11.9	+1.7
SONM	Songino Array	119.40	349	PKP		PKPdf	05 23 17.2	-0.2
	comp=Z,0.8nm,0.8s,baz=285,slow=2.3,SNR=6.7							
GEYT	Alibeck	120.96	31	PKP		PKPdf	05 23 20.4	-0.2
	comp=Z,3.2nm,0.6s,baz=257,slow=5.9,SNR=8.3							
MKAR	Makanchi Array	120.98	8	PKP		PKPdf	05 23 19.3	-1.1
	comp=Z,0.5nm,0.7s,baz=300,slow=3.0,SNR=6.9							
WMQ	Urumqi	124.50	4	*e*PKP		PKPdf	05 23 26.5	-0.7
HHC	Hu-ho-hao-te	124.77	343	*e*PKP		PKiKP	05 23 29.0	+0.8
HHC				LR		LR		
	comp=Z,150nm,19.6s							
HHC				LR		LR		
	comp=Z,140nm,16.2s							
HHC				LR		LR		
	comp=Z,85nm,14.5s							
NRN	Naryn	124.90	15			PKPdf	05 23 27.7	-0.7
CHGR	Chuyangaron	125.28	22			PKPdf	05 23 28.4	-0.5
KSH	Kashi	126.69	16	PKP		PKiKP	05 23 33.0	+0.9
KSH				PP		PP	05 25 33.8	+6.9
KSH				SKS		SKSdf	05 30 40.3	-2.4
KSH				SKKS		SKKSac	05 32 17.5	-7.8
KSH				SS		SS	05 42 35.8	+4.7
GTA	Gaotai	128.64	353	PKP		PKiKP	05 23 35.8	-0.2
UOSS	Minazif	129.11	44			PKPdf	05 23 35.7	-0.8
NJ2	Nanjing	129.68	331	*e*PKP		PKPdf	05 23 36.8	-0.6
LZH	Lanzhou	131.22	348	*e*PKP		PKPdf	05 23 39.0	-1.4
LZH				sPKP			05 24 01.0	
LZH				LR		LR		
	comp=Z,130nm,17.8s							
LZH				LR		LR		
	comp=Z,130nm,18.1s							
LZH				LR		LR		
	comp=Z,200nm,20.3s							
CD2	Chengdu	136.22	346	PKP		PKPdf	05 23 47.5	-2.3
ASAR	Alice Springs	139.03	247	PKP		PKPdf	05 23 54.2	-0.9
	comp=Z,1.2nm,0.8s,baz=108,slow=3.1,SNR=8.9							
WRA	Warramunga Arr	139.09	253	PKP		PKPdf	05 23 55.2	0.0
	comp=Z,1.6nm,0.8s,baz=91,slow=2.7,SNR=6.5							
SLVN	Son La	145.27	341			PKPdf	05 24 06.7	+0.3
FITZ	Fitzroy Crossi	147.46	255	PKPbc		PKPbc	05 24 12.3	-0.2
	comp=Z,5.8nm,1.0s,baz=76,slow=6.9,SNR=7.4							
CHTO	Chiang Mai	148.96	348	PKPdf		PKPdf	05 24 11.0	-1.5
CHTO						PKPbc	05 24 15.8	-0.7
NWAO	Narrogin (SRO)	149.10	223	PKPbc		PKPab	05 24 20.9	+0.3
	comp=Z,13nm,0.7s,baz=117,slow=3.5,SNR=6.6							
CM31	Chiang Mai Arr	149.31	348			PKPbc	05 24 17.9	+0.6
CMAR	Chiang Mai Arr	149.31	348	PKP		PKPdf	05 24 13.0	-0.1
	comp=Z,10nm,1.0s,baz=318,slow=1.7,SNR=13							
CMAR				PKPbc		PKPbc	05 24 17.6	+0.3
	comp=Z,16nm,0.7s,baz=346,slow=3.9,SNR=77							
PBKT	Sadao Pong	150.64	343			PKiKP	05 24 21.6	+0.3

*ARE **26** 05:10:24±8.1, 3.77S±0.06×81.39W±0.09, h37km±3km, Error ellipse: s-maj=0.0km s-min=0.0km az=163.0*

*NEIC **26** 05:10:27.2±2.0, 3.85S±0.06×80.86W±0.05, h11km±1km, mb5.5/489,Ms_20 5.1/117,Mwb5.3/19,ML5.4(ARE), Mwc5.4(GCMT), Error ellipse: s-maj=10.8km s-min=6.2km az=215.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.08; $M_{\theta\theta}$-0.27; $M_{\phi\phi}$-0.82; $M_{r\theta}$-0.17; $M_{\theta\phi}$0.62; $M_{r\phi}$0.32; Fault plane solution: $M_0$1.21000×10^{17} NP1:ϕ_s145.14000°, δ36.30000°, λ87.32000°. NP2: ϕ_s328.46000°, δ53.74000°, λ91.96000°. Principal axes: T 1.1392, Plg81.0000°, Azm247.0000°; N 0.1378, Plg2.0000°, Azm147.0000°; P -1.2769, Plg9.0000°, Azm57.0000°;*

*BJI **26** 05:10:27.0±0.0, 3.80S×80.80W, h8km, mB5.5/27, Ms5.8/30,Ms7 5.5/32*

*MOS **26** 05:10:28.5±0.9, 3.87S×80.95W, h27km, mb5.7/81, MS5.0/8, Error ellipse: s-maj=8.5km s-min=4.3km az=106.2*

*NEIC **26** 05:10:29, 4.05S×81.07W, h21km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}1.31; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-0.52; $M_{r\theta}$-0.35; $M_{\theta\phi}$0.64; $M_{r\phi}$-0.01; Fault plane solution: $M_0$1.36000×10^{17} NP1:ϕ_s138.00000°, δ40.00000°, λ104.00000°. NP2:ϕ_s300.00000°, δ52.00000°, λ78.00000°. Principal axes: T 1.3727, Plg79.0000°, Azm160.0000°; N -0.0355, Plg9.0000°, Azm307.0000°; P -1.3372, Plg6.0000°, Azm38.0000°;*

*GCMT **26** 05:10:29.2±0.1, 4.05S±0.01×81.01W±0.01, h22km, MW5.3/126, Moment Tensor Solution. s115,c180; s126,c225; Duration: 1§1 Moment tensor: Scale 10^{17} Nm; M_{rr}1.17±.02; $M_{\theta\theta}$-0.73±.02; $M_{\phi\phi}$-0.43±.02; $M_{r\theta}$-0.52±.03; $M_{\theta\phi}$0.59±.01; $M_{r\phi}$0.19±.03; Best double couple: $M_0$1.30600×10^{17} NP1:ϕ_s135.00000°, δ33.00000°, λ103.00000°. NP2:ϕ_s300.00000°, δ58.00000°, λ82.00000°. Principal axes: T 1.3050, Plg76.0000°, Azm186.0000°; N 0.0040, Plg7.0000°, Azm305.0000°; P -1.3070, Plg12.0000°, Azm36.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*VAO **26** 05:10:32.0±1.4, 3.79S×80.71W, h40km±11km, mb5.5*

*IDC **26** 05:10:33.4±1.6, 3.86S×80.86W, h56km±14km, mb4.9/30, mb1 5.0/36,mb1mx4.9/42, mbtmp5.1/36, MS4.8/16, Ms1 4.8/16, ms1mx4.6/28, Error ellipse: s-maj=14.9km s-min=7.5km az=65.0*

ISC 26 05:10:28.3±0.5, 3.84S±0.04×80.86W±0.05, h19km±2km, h20km:pP-P, n1443, σ1§22/1454, mb5.5/330, MS5.1/82, 15C-4D, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	Atahualpa	4.10	143	P	Pn	05 11 33.7	+3.4
	45nm,0.3s,baz=347,slow=7.1,SNR=150						
ATAH				S	Sn	05 12 21.3	+3.4
	217nm,0.3s,baz=339,slow=15,SNR=4.8						
ATAH				LR	LR	05 13 25.3	
	comp=Z,24μm,21.2s,baz=322,slow=42						
OTAV	Otavalo	4.71	31	P	Pn	05 11 41.3	+2.5
OTAV	Otavalo	4.71	31	*e*P	Pn	05 11 38.8	0.0
OTAV	Otavalo	4.71	31		Pn	05 11 41.3	+2.5
CMBC	Cumbal	5.63	33	*e*P	Pg	05 12 13.6	-2.7
CPAS1	Pasto	6.12	35	*e*P	Pn	05 12 00.9	+2.8
BBAC	Balboa, Cauca	6.85	32	*e*P	Pn	05 12 11.6	+3.6
PTLC	Puerto Leguiza	7.25	57	*e*P	Pb	05 12 34.1	+0.5
SOTA	Rioblanco	7.30	36	*e*P	Pn	05 12 21.5	+7.1
GR1C	Gorgona, Isla	7.31	22	*e*P	Pn	05 12 18.2	+4.1
FLOC	Florencia	7.49	44		Pn	05 12 17.4	+0.8
PCON	Cinco Dias	7.58	36	*e*P	Pb	05 12 32.2	-7.3
BETC	Betania	8.44	40	*e*P	Pb	05 12 50.1	-3.8
MALC	Bahia Malaga	8.55	24	*e*P	Pn	05 12 37.5	+6.3
YOTC	Yotoco, Valle	8.98	30	*e*P	Pn	05 12 37.5	+0.3
NNA	Nana	9.02	154	P	Pn	05 12 39.3	+1.6
	6.3nm,0.3s,baz=309,slow=10,SNR=18						
NNA				S	Sn	05 14 21.7	+2.8
	16nm,0.3s,baz=229,slow=19,SNR=2.4						
NNA				LR	LR	05 16 45.5	
	comp=Z,4μm,19.9s,baz=304,slow=41						
NNA	Nana	9.02	154		Pn	05 12 38.4	+0.7
NNA					Sn	05 14 18.5	-0.4
ORTC	Ortega, Tolima	9.52	36	*e*P	Pn	05 12 46.8	+2.2
PLMC	San Jos del P	9.81	28	*e*P	Pn	05 12 49.4	+0.

SAML Samuel 18.28 107 *e*P P 05 14 41.4 +0.2
SAML Samuel 18.28 107 P Pn 05 14 38.0 -3.1
MNMC Minye Minye 18.77 145 ⇑*i*P P 05 14 45.5 -1.2
MNMC Minye Minye 18.77 145 P P 05 14 46.1 -0.7
PSGC Pisagua 18.85 147 ⇑*i*P P 05 14 47.4 -0.1
TGUH Tegucigalpa,Un 18.88 340 *e*P Pn 05 14 49.7 +1.2
TGUH Tegucigalpa,Un 18.88 340 P Pn 05 14 48.2 -0.2
PB11 IPOC Station P 19.24 146 *e*P P 05 14 46.8 -5.0
PB11 IPOC Station P 19.24 146 P 05 14 51.8 0.0
SNET Serv Nac Est T 19.29 335 P Pn 05 14 53.0 -0.3
SNET IAmb IAmb 05 15 33.3
comp=Z,224nm,1.2s
GO01 Chusmiza 19.42 145 P Pn 05 14 55.3 -0.1
TA01 Diego Aracena 19.61 149 *e*P Pn 05 14 57.0 -0.2
PB08 IPOC Station P 19.82 146 *e*P P 05 14 58.1 -0.3
PATCX Punta Patache 19.84 149 ⇑*i*P Pn 05 14 59.6 -0.3
APG El Apazote 21.00 333 P Pn 05 15 14.1 +0.4
comp=Z,78nm,0.8s,baz=153,slow=8.2,SNR=33
PB03 IPOC Station P 21.07 150 ⇑*i*P P 05 15 12.9 +1.2
PB04 IPOC Station P 21.12 151 *e*P P 05 15 13.0 +0.7
PB04 IPOC Station P 21.12 151 P P 05 15 12.1 -0.1
PB04 IAmb IAmb 05 15 17.7
comp=Z,389nm,1.3s
PCRV Puerto La Cruz 21.33 49 P P 05 15 17.9 +3.4
comp=Z,182nm,0.8s,baz=208,slow=5.0,SNR=34
PLCV Puerto La Cruz 21.36 49 P P 05 15 17.9 +3.2
PB05 IPOC Station P 21.54 152 *e*P P 05 15 17.2 +0.5
PCJ Portland Cotta 21.75 10 ⇓*i*P P 05 15 22.7 +3.9
PB10 IPOC Station P 21.95 154 P P 05 15 21.1 +0.1
PB10 IAmb IAmb 05 15 25.4
comp=Z,139nm,0.9s
LVC Limon Verde 21.96 149 P P 05 15 21.0 -0.5
LVC pmax pmax
comp=Z,225nm,1.1s
LVC MLR MLR
comp=Z,3µm,19.0s
LVC Limon Verde 21.96 149 P P 05 15 23.7 +2.2
comp=Z,181nm,1.1s,baz=321,slow=8.3,SNR=64
LVC Limon Verde 21.96 149 *e*P P 05 15 22.9 +1.4
LVC Limon Verde 21.96 149 P P 05 15 21.0 -0.5
LVC IAmb IAmb 05 15 26.6
comp=Z,225nm,1.1s
STH Stony Hill 22.14 10 ⇓*i*P P 05 15 28.2 +5.2
MTDJ Mount Denham 22.16 8 P P 05 15 26.1 +2.7
BBJ Bamboo Saint A 22.36 9 *i*P P 05 15 30.0 +4.6
CCIG Comitan 22.89 331 P P 05 15 31.4 +0.2
SIV San Ignacio 22.90 123 P P 05 15 31.5 +0.2
comp=Z,54nm,0.8s,baz=309,slow=9.5,SNR=90
FSCY Frank Sound, G 23.00 359 P P 05 15 31.1 -1.0
CBCY The Bluff, Cay 23.45 3 P P 05 15 36.4 -0.2
LGNH Logne 23.65 20 P P 05 15 39.4 +0.8
LGNH IAmb IAmb 05 16 10.2
comp=Z,111nm,0.9s
GO02 Mina Guanaco 23.82 154 P P 05 15 40.5 0.0
GO02 IAmb IAmb 05 15 43.9
comp=Z,115nm,0.7s
GTBY Guantanamo Bay 24.28 13 P P 05 15 42.8 -1.8
GTBY IAmb IAmb 05 15 49.1
comp=Z,90nm,0.8s
BANI BANI 24.39 25 P P 05 15 45.0 -0.7
SDDR Presa de Saban 24.55 22 P P 05 15 46.7 -0.5
GRGR Grenville 24.82 50 *e*P P 05 15 48.3 -1.3
GRGR Grenville 24.82 50 P P 05 15 47.9 -1.7
GRHS Sauteurs 24.89 50 *e*P P 05 15 59.8 +10
CMIG Matias Romero 24.98 327 P P 05 15 52.5 +1.5
comp=Z,34nm,0.9s,baz=134,slow=5.9,SNR=17
CMIG PcP PcP 05 19 25.7 -0.4
comp=Z,8.3nm,0.9s,baz=43,slow=5.2,SNR=4.4
TEIG Tepich 25.00 343 P P 05 15 53.0 +1.9
comp=Z,83nm,0.7s,baz=139,slow=3.7,SNR=60
TEIG Tepich 25.00 343 P P 05 15 50.0 -1.0
TEIG IAmb IAmb 05 15 54.7
comp=Z,101nm,0.8s
DR12 Loma Pena Alta 25.16 26 P P 05 15 52.1 -0.5
SC01 Santiago de lo 25.17 23 P P 05 15 54.3 +1.6
SC01 IAmb IAmb 05 16 09.2
comp=Z,116nm,0.8s
TOSP Speyside 25.20 53 *e*P P 05 15 54.3 +1.3
TOSP Speyside 25.20 53 P P 05 15 52.6 -0.4
SLA San Lorenzo 25.49 146 *e*P P 05 15 57.7 +1.9
CRPR Cabo Rojo, PR 25.59 32 P P 05 15 55.1 -1.3
CRPR IAmb IAmb 05 16 01.5
comp=Z,104nm,0.8s
MLPR Magueyes Islan 25.59 32 P P 05 15 56.1 -0.4
MLPR IAmb IAmb 05 16 00.6
comp=Z,86nm,0.9s
GO03 Copiap 25.71 158 P P 05 15 57.6 0.0
MPR Mayaguez 25.75 31 P P 05 15 57.8 -0.1
ICMP Isla Caja de M 25.80 33 P P 05 15 56.9 -1.5
CLDB Colider 25.81 107 *e*P P 05 15 58.2 -0.3
OBIP Obispado Ponce 25.89 32 P P 05 15 59.6 +0.4
OBIP IAmb IAmb 05 16 19.1
comp=Z,148nm,1.3s
AGPR Aguadilla, PR 25.98 31 P P 05 15 59.8 -0.1
AOPR Arecibo Observ 26.06 32 P P 05 16 00.7 0.0
IGPR InterUniversit 26.09 33 P P 05 16 00.3 -0.7
SJG San Juan 26.19 33 P P 05 16 01.9 0.0
SJG pmax pmax
comp=Z,611nm,1.9s
SJG San Juan 26.19 33 P P 05 16 04.1 +2.2
comp=Z,104nm,0.8s,baz=204,slow=7.2,SNR=32
SJG San Juan 26.19 33 P P 05 16 01.9 0.0
EMPR Esperanza - Ma 26.29 32 P P 05 16 03.9 +1.2
CBYP Canovanas 26.48 33 P P 05 16 04.6 0.0
MTP Monte Pirata 26.51 34 P P 05 16 05.0 +0.2
MTP IAmb IAmb 05 16 12.2
comp=Z,100nm,0.9s
CDVI St. Croix 26.69 36 P P 05 16 06.3 -0.1
CUPR Culebra, Puert 26.83 34 P P 05 16 07.0 -0.7
CUPR IAmb IAmb 05 16 23.4
comp=Z,76nm,0.9s
FDF Fort de France 26.87 46 P P 05 16 07.1 -1.1
FDF pmax pmax
comp=Z,130nm,1.1s
FDF Fort de France 26.87 46 P P 05 16 07.1 -1.1
FDF IAmb IAmb 05 16 28.3
comp=Z,130nm,1.1s
BCHC Barbados, Cave 26.99 51 *e* P 05 16 03.2 -6.0
DBCT Belle View Cho 27.09 45 *e*P P 05 16 11.1 +1.0
DBCT Belle View Cho 27.09 45 P P 05 16 11.1 +1.0
BBL Barber's Block 27.18 44 *e*P P 05 16 12.6 +1.7
BBL Barber's Block 27.18 44 P P 05 16 12.6 +1.7
MDPO Dominica; Chan 27.22 44 *e* P 05 16 14.0 +2.8
SALV Santo Antonio 27.50 118 *e*P P 05 16 14.0 +0.3
TLIG Tlapa 27.52 321 P P 05 16 13.2 -0.9
TLIG IAmb IAmb 05 16 17.9
comp=Z,112nm,2.0s
TLIG IAMs_20 IAMs_20 05 24 26.8
comp=Z,3µm,20.0s
MLYT Lee's Yard 27.52 42 *e* P 05 16 16.6 +2.6
VCA Vinchina 27.53 155 *e*P P 05 16 16.2 +2.1
SKI Saint Kitts 27.61 40 P P 05 16 13.4 -1.4
SKI pmax pmax
comp=Z,101nm,0.7s
SKI Saint Kitts 27.61 40 P P 05 16 13.4 -1.4
GO04 Tololo Observa 27.87 161 P P 05 16 16.5 -0.7
GO04 IAmb IAmb 05 16 19.2
comp=Z,107nm,1.3s
GO04 IAMs_20 IAMs_20 05 25 32.3
comp=Z,3µm,19.0s
BPA Boggy Peak 27.98 42 *e*P P 05 16 25.0 +7.0
AGUA GUANDACOL 28.08 157 *e*P P 05 16 20.5 +1.6
CYA Choya 28.36 151 *e*P P 05 16 22.5 +1.2
ANWB Willy Bob 28.47 41 *e*P P 05 16 23.8 +1.4
ANWB Willy Bob 28.47 41 P P 05 16 22.8 +0.4
ANWB IAMs_20 IAMs_20 05 29 01.5
comp=Z,3µm,20.0s
ACLC CERRO LA CRUZ 28.67 154 *e*P P 05 16 25.5 +1.2
PP1B Ponte de Pedra 28.90 120 *e*P P 05 16 26.5 +0.2
AMOG MOGNA 29.38 158 *e*P P 05 16 31.2 +0.8
061Z Ochoppi 29.52 360 P P 05 16 31.7 +0.1
061Z Ochoppi 29.52 360 P P 05 16 33.6 +2.0
baz=180,SNR=5.0
MDP Montagnes des 29.55 73 P P 05 16 33.6 +1.5
comp=Z,30nm,0.8s,baz=255,slow=7.4,SNR=5.7
AQDB Aquidauana 29.56 126 *e*P P 05 16 32.6 +0.5
APLL PUNTA DE LOS L 29.69 154 *e*P P 05 16 33.9 +0.7
RTLS Leoncito 29.87 160 *e*P P 05 16 36.6 +1.6
CFA Coronel Fontan 30.07 158 P P 05 16 37.4 +0.9
comp=Z,42nm,1.1s,baz=336,slow=8.6,SNR=40
RTCV Cerro Valdivia 30.19 159 *e*P P 05 16 38.6 +1.0
ROC1 El Roble 30.42 164 P P 05 16 40.2 +0.4
PEL Peldehue 30.67 163 P P 05 16 41.7 -0.2
PEL pmax pmax
comp=Z,129nm,1.5s
PEL Peldehue 30.67 163 P P 05 16 41.7 -0.2
PEL IAmb IAmb 05 16 44.0
comp=Z,129nm,1.5s
PEL IAMs_20 IAMs_20 05 26 42.5
comp=Z,3µm,20.0s
060A Indiantown 30.69 1 P P 05 16 40.3 -1.7
060A Indiantown 30.69 1 P P 05 16 44.2 +2.2
baz=181
MOIG Morelia 30.75 320 P P 05 16 43.3 +0.5
MOIG IAmb IAmb 05 17 02.8
comp=Z,28nm,0.5s
ASAL Salagasta 30.75 160 *e*P P 05 16 44.2 +1.7
ARAG Araguaiana, MT 30.91 114 *e*P P 05 16 44.2 +0.2
ARCO CERRO ARCO 30.94 160 *e*P P 05 16 46.0 +1.6
ACAN Cantantal 31.06 157 *e*P P 05 16 46.6 +1.3
C2SB Chapadao do Su 31.15 121 *e*P P 05 16 46.5 +0.3
AAGR Agrelo 31.20 160 *e*P P 05 16 48.2 +1.6
TCA Tanti 31.35 153 *e*P P 05 16 48.5 +0.6
CPUP Villa Florida 31.76 137 P P 05 16 52.0 +0.5
comp=Z,17nm,0.8s,baz=321,slow=9.5,SNR=36
CPUP PcP PcP 05 19 42.8 +0.1
comp=Z,10nm,0.8s,baz=334,slow=2.2,SNR=5.4
CPUP Villa Florida 31.76 137 *e*P P 05 16 52.0 +0.5
CPUP Villa Florida 31.76 137 P P 05 16 51.5 0.0
DWPF Disney Wildern 31.76 359 P P 05 16 52.1 +0.7
DWPF IAmb IAmb 05 16 53.2
comp=Z,49nm,0.8s
DWPF Disney Wildern 31.76 359 P P 05 16 53.0 +1.6
baz=179
MRA San Martin 31.78 155 *e*P P 05 16 52.3 +0.6
GO05 Huala 32.11 166 P P 05 16 52.8 -1.6
GO05 IAmb IAmb 05 16 55.8
comp=Z,111nm,1.5s
GO05 IAMs_20 IAMs_20 05 26 58.4
comp=Z,3µm,21.0s
TRCB Terra Rica 33.19 127 *e*P P 05 17 04.3 +0.2
PEXB Peixe 33.24 106 *e*P P 05 17 04.5 -0.1
ITRB Iturama 33.67 120 *e*P P 05 17 08.6 +0.2
PCMB Pacaembu 33.73 124 *e*P P 05 17 08.7 -0.2
ZAIG Zacatecas 33.89 322 P P 05 17 10.4 0.0
ZAIG IAMs_20 IAMs_20 05 29 13.6
comp=Z,2µm,18.0s
BDFB Brasilia 34.37 112 P P 05 17 15.3 +0.8
comp=Z,22nm,0.8s,baz=278,slow=10,SNR=29
BDFB PcP PcP 05 19 50.4 0.0
comp=Z,5.3nm,0.6s,baz=260,slow=2.8,SNR=3.2
BDFB Brasilia 34.37 112 P P 05 17 13.4 -1.1
ITQB Itaqui 34.46 141 *e*P P 05 17 15.4 +0.4
PTGB Pitanga 34.63 130 *e*P P 05 17 16.9 +0.3
IPMB Ipameri, GO 34.92 116 *e*P P 05 17 19.1 -0.1
TIGA Tifton 35.17 356 P P 05 17 21.2 +0.1
TIGA IAmb IAmb 05 17 22.8
comp=Z,43nm,0.8s
TIGA Tifton 35.17 356 P P 05 17 21.8 +0.8
baz=175
KVTX Kingsville 35.26 333 P P 05 17 24.8 +2.9
BRAL Brewton 35.30 351 P P 05 17 23.6 +1.4
BRAL Brewton 35.30 351 P P 05 17 24.0 +1.8
baz=169,SNR=5.0
352A Blakely 35.33 354 P P 05 17 23.6 +1.1
baz=173
255A Hazlehurst 35.60 358 P P 05 17 26.9 +2.2
baz=177
254A Abbeville 35.66 356 P P 05 17 26.4 +1.1
baz=176
RPN Rapa Nui 35.73 227 P P 05 17 26.1 +0.2
RPN pmax pmax
comp=Z,350nm,2.0s
RPN Rapa Nui 35.73 227 P P 05 17 26.1 +0.2
BB19B Bebedouro 35.79 121 *e*P P 05 17 26.4 -0.3
252A Lumpkin 35.82 354 P P 05 17 27.6 +0.9
baz=173
253A Americus 35.83 355 P P 05 17 26.7 0.0
253A IAmb IAmb 05 17 40.9
comp=Z,122nm,1.2s
253A Americus 35.83 355 P P 05 17 27.4 +0.6
baz=174,SNR=5.1
FRTB Fartura 35.92 126 *e*P P 05 17 27.9 +0.1
ITAB Concordia 35.97 133 *e*P P 05 17 28.2 +0.2
250A Grady 35.98 352 P P 05 17 27.9 -0.2
250A IAmb IAmb 05 17 30.1
comp=Z,88nm,0.9s
155A Kite 36.29 358 P P 05 17 31.5 +0.8
baz=177
156A Sylvania 36.29 359 P P 05 17 31.8 +1.1
baz=179
154A Montrose 36.31 357 P P 05 17 31.8 +0.9
154A Montrose 36.31 357 P P 05 17 31.6 +0.8
baz=176,SNR=7.8
157A Early Branch 36.31 360 P P 05 17 32.7 +1.9
baz=180
153A Fort Valley 36.39 356 P P 05 17 32.2 +0.7
baz=175,SNR=8.5
152A Waverly Hall 36.49 355 P P 05 17 32.2 -0.2
152A IAmb IAmb 05 17 33.5
comp=Z,34nm,0.7s
152A Waverly Hall 36.49 355 P P 05 17 33.0 +0.6
baz=174,SNR=9.5
HKT Hockley 36.53 338 P P 05 17 34.0 +1.4
HKT 05 19 57.5
HKT pmax pmax
comp=Z,74nm,1.3s
HKT Hockley 36.53 338 P P 05 17 34.0 +1.4
HKT IAmb IAmb 05 17 36.0
comp=Z,74nm,1.2s
HKT PcP 05 19 57.5 +1.3
RGRS Roger Stewart 36.55 1 P P 05 17 33.5 +0.6
833A Chaparral WMA, 36.61 332 P P 05 17 34.3 +0.8
833A IAmb IAmb 05 17 50.4
comp=Z,140nm,2.0s
833A Chaparral WMA, 36.61 332 P P 05 17 35.3 +1.8
baz=148,SNR=7.9
CSU Charleston Sou 36.63 1 P P 05 17 34.0 +0.5
PMNB Patos De Minas 36.69 116 *e*P P 05 17 34.4 0.0
NHSC New Hope 36.75 1 P P 05 17 35.7 +1.2
NHSC New Hope 36.75 1 P P 05 17 36.0 +1.4
baz=181
Z55A Blythe 36.87 358 P P 05 17 36.5 +0.9
baz=178
Z54A Sparta 36.92 357 P P 05 17 36.7 +0.7
baz=177,SNR=6.8
Z57A Bowman 36.93 0 P P 05 17 36.7 +0.6
baz=180
Z56A Williston 36.96 359 P P 05 17 36.7 +0.4
Z56A Williston 36.96 359 P P 05 17 37.3 +0.9
baz=179,SNR=8.9
Z52A Williamson 36.98 355 P P 05 17 37.2 +0.7
baz=174,SNR=15
Z58A St. Stephen 36.98 1 P P 05 17 37.8 +1.2
baz=182
CPSB Cacapava Do Su 37.00 139 *e*P P 05 17 37.2 +0.4
Z53A Monticello 37.00 356 P P 05 17 37.2 +0.5
baz=175,SNR=8.0
VBMS Vicksburg 37.01 346 P P 05 17 38.0 +1.2
VBMS IAmb IAmb 05 17 39.3
comp=Z,56nm,0.8s
VBMS Vicksburg 37.01 346 P P 05 17 38.7 +1.9
baz=164
GOGA Godfrey 37.13 356 P P 05 17 38.2 +0.4
GOGA pmax pmax
comp=Z,21nm,0.8s
GOGA MLR MLR
comp=Z,2µm,18.0s
GOGA Godfrey 37.13 356 P P 05 17 38.2 +0.4
GOGA Godfrey 37.13 356 IAMs_20 IAMs_20 05 32 59.7
comp=Z,2µm,18.0s
GOGA Godfrey 37.13 356 P P 05 17 38.3 +0.4
baz=176,SNR=9.1
LRAL Lakeview Retre 37.13 351 P P 05 17 38.2 +0.4
LRAL IAmb IAmb 05 17 39.5
comp=Z,74nm,0.7s
LRAL pP sP 05 17 48.6 +2.3
LRAL Lakeview Retre 37.13 351 P P 05 17 38.6 +0.8
baz=170,SNR=36
Z51A Franklin 37.17 354 P P 05 17 38.6 +0.4
RCLB Rio Claro- Sao 37.19 123 *e*P P 05 17 38.6 0.0
Z50A Ashland 37.20 353 P P 05 17 38.8 +0.4
Z50A IAmb IAmb 05 17 40.1
comp=Z,59nm,0.8s
Z50A pP sP 05 17 49.1 +2.3
Z50A Ashland 37.20 353 P P 05 17 39.0 +0.6
baz=172,SNR=18
Y56A Pelion 37.43 359 P P 05 17 40.9 +0.6
baz=179
Y54A Tignall 37.53 358 P P 05 17 41.6 +0.4
baz=177,SNR=7.0
Y58A Scranton 37.55 2 P P 05 17 41.5 +0.1
Y58A IAmb IAmb 05 19 03.6
comp=Z,110nm,1.1s
Y58A Scranton 37.55 2 P P 05 17 42.0 +0.7
baz=182
Y53A Monroe 37.58 356 P P 05 17 42.2 +0.6
baz=176,SNR=6.9
Y55A Saluda 37.58 359 P P 05 17 42.4 +0.7
baz=178,SNR=9.9
Y52A Lilburn 37.62 356 P P 05 17 42.2 +0.2
Y52A IAmb IAmb 05 17 54.1
comp=Z,89nm,1.7s
Y52A Lilburn 37.62 356 P P 05 17 42.5 +0.6
baz=175
Y57A Sumter 37.65 1 P P 05 17 42.6 +0.4
Y57A IAmb IAmb 05 17 43.7
comp=Z,45nm,0.8s
Y57A Sumter 37.65 1 P P 05 17 42.8 +0.6
baz=181
Y59A Loris 37.67 3 P P 05 17 42.3 -0.1
Y59A Loris 37.67 3 P P 05 17 43.3 +1.0
baz=183
Y51A Rockmart 37.74 354 P P 05 17 43.4 +0.4
baz=173,SNR=12
NATX Nacogdoches 37.76 341 P P 05 17 43.5 +0.4
NATX IAmb IAmb 05 17 46.1
comp=Z,44nm,0.8s
NATX Nacogdoches 37.76 341 P P 05 17 45.5 +2.3
baz=157
SPB Sao Paulo 37.78 124 *e*P P 05 17 43.4 -0.2
SPB Sao Paulo 37.78 124 P P 05 17 42.9 -0.6
SPB IAmb IAmb 05 17 44.4
comp=Z,121nm,1.2s
SPB IAMs_20 IAMs_20 05 35 20.4
comp=Z,3µm,20.0s
PLTB Pedras Altas 37.78 140 *e*P P 05 17 43.9 +0.5
Y49A Blount Mountai 37.85 352 P P 05 17 43.9 -0.1
HODGE Hodges 37.88 358 P P 05 17 44.6 +0.5
PLCA Paso Flores 37.89 167 P P 05 17 44.2 -0.1
PLCA 05 20 00.6
PLCA pmax pmax
comp=Z,180nm,1.7s
PLCA Paso Flores 37.89 167 P P 05 17 44.3 -0.1
comp=Z,33nm,1.0s,baz=360,slow=10,SNR=36
PLCA PcP PcP 05 20 00.6 +0.2
comp=Z,12nm,0.8s,baz=352,slow=3.3,SNR=7.5
PLCA LR LR 05 30 27.0
comp=Z,2µm,20.9s,baz=25,slow=32
PLCA Paso Flores 37.89 167 *e*P P 05 17 44.7 +0.4
PLCA Paso Flores 37.89 167 P P 05 17 44.2 -0.1
PLCA IAmb IAmb 05 17 46.1
comp=Z,180nm,1.6s
VAO Valinhos 37.91 123 *e*P P 05 17 44.2 -0.6
JSC Jenkinsville 37.91 359 P P 05 17 44.9 +0.5
JSC pmax pmax
comp=Z,32nm,1.2s
JSC Jenkinsville 37.91 359 P P 05 17 44.9 +0.5
435B Jarrell 37.95 336 P P 05 17 46.1 +1.3
435B IAmb IAmb 05 17 47.9
comp=Z,194nm,1.6s
435B Jarrell 37.95 336 P P 05 17 46.8 +2.0
baz=152,SNR=11
CNLB Canela 38.10 135 *e*P P 05 17 46.3 +0.1
X55A Gracelyn & Ava 38.11 359 P P 05 17 46.7 +0.7
baz=179,SNR=9.5
X56A White Oak 38.12 360 P P 05 17 46.6 +0.4
baz=180,SNR=9.8
X53A Estanollee 38.20 357 P P 05 17 47.3 +0.4
baz=176
X54A Belton 38.20 358 P P 05 17 47.6 +0.7
baz=178
X58A Rowland 38.21 2 P P 05 17 47.3 +0.3
X59A McDuffie Farm, 38.26 3 P P 05 17 48.2 +0.8
baz=184
BIRD Birdtown, Kers 38.28 1 P P 05 17 48.1 +0.6
BIRD IAmb IAmb 05 18 00.4
comp=Z,151nm,1.9s
X52A Dahlonega 38.34 356 P P 05 17 48.6 +0.5
baz=175,SNR=8.2
X51A Calhoun 38.38 355 P P 05 17 48.8 +0.4
X51A IAmb IAmb 05 17 50.1
comp=Z,131nm,1.7s
X51A Calhoun 38.38 355 P P 05 17 48.9 +0.6
baz=174
FPAL Fort Paine 38.43 354 P P 05 17 48.8 -0.1
PAULI Pauline 38.46 359 P P 05 17 49.5 +0.5
X48A Hartselle 38.52 352 P P 05 17 49.4 -0.2
Z41A Richland Creek 38.58 344 P P 05 17 50.4 +0.3
Z41A IAmb IAmb 05 17 52.7
comp=Z,170nm,1.4s
Z41A pP sP 05 18 01.6 +3.1
Z41A Richland Creek 38.58 344 P P 05 17 51.7 +1.6
baz=161,SNR=12
JCT Junction City 38.63 333 P P 05 17 52.4 +1.8
JCT pmax pmax
comp=Z,55nm,0.8s
JCT Junction City 38.63 333 P P 05 17 52.4 +1.8
JCT IAmb IAmb 05 17 53.2
comp=Z,55nm,0.8s
JCT Junction City 38.63 333 P P 05 17 52.6 +2.0
baz=149,SNR=35
BG3 Lake Jocassee 38.67 357 P P 05 17 50.9 0.0
BG3 pP sP 05 18 01.1 +1.8
W58A Raeford 38.68 2 P P 05 17 51.1 +0.2
baz=182
W54A Cherokee Point 38.73 358 P P 05 17 52.3 +1.0
baz=178
W56A Indian Trail 38.76 0 P P 05 17 51.9 +0.3
baz=180,SNR=6.9
KMSC Kings Mountain 38.77 359 P P 05 17 52.4 +0.7
KMSC IAmb IAmb 05 17 53.3
comp=Z,56nm,0.8s
KMSC pP sP 05 18 01.4 +1.3
KMSC Kings Mountain 38.77 359 P P 05 17 52.3 +0.6
baz=179,SNR=10
W57A Gilead 38.79 1 P P 05 17 52.0 +0.2
W57A Gilead 38.79 1 P P 05 17 52.1 +0.2
baz=181,SNR=6.5
W52A Murphy 38.83 356 P P 05 17 52.6 +0.4
W52A IAmb IAmb 05 17 53.8
comp=Z,175nm,1.9s
W52A pP sP 05 18 02.2 +1.5
W52A Murphy 38.83 356 P P 05 17 52.8 +0.7
baz=175,SNR=9.3
W53A Cullowhee 38.86 357 P P 05 17 53.4 +0.8
baz=176,SNR=12
HPIG 38.86 323 P P 05 17 54.4 +1.6
CCAR Cane Creek 38.94 345 P P 05 17 54.5 +1.4
CCAR IAmb IAmb 05 17 55.8
comp=Z,114nm,0.9s
W51A Cleveland 38.96 355 P P 05 17 54.0 +0.7
baz=174,SNR=9.1
CNNC Cliffs of the 38.97 4 P P 05 17 53.0 -0.2
CNNC IAmb IAmb 05 19 05.5
comp=Z,121nm,1.8s
WHTX Lake Whitney, 38.97 337 P P 05 17 55.1 +1.7
WHTX IAmb IAmb 05 17 56.3
comp=Z,276nm,1.8s
WHTX PcP 05 20 04.7 +0.9
WHTX Lake Whitney, 38.97 337 P P 05 17 54.9 +1.6
baz=153,SNR=22
OXF Oxford 38.98 349 P P 05 17 53.9 +0.5
OXF pmax pmax
comp=Z,44nm,1.1s
OXF Oxford 38.98 349 P P 05 17 53.9 +0.5
OXF Oxford 38.98 349 P P 05 17 54.1 +0.7
baz=166
BSCB Bom Sucesso 39.00 119 *e*P P 05 17 53.8 -0.2
W50A Signal Mountai 39.05 354 P P 05 17 54.0 -0.1
W50A Signal Mountai 39.05 354 P P 05 17 54.4 +0.3
baz=173,SNR=12
WLAR White Oak Lake 39.08 344 P P 05 17 56.3 +2.1
WLAR IAmb IAmb 05 17 58.0
comp=Z,128nm,0.8s
W49A Belvidere 39.08 353 P P 05 17 54.3 0.0
baz=171
SWET Sewanee 39.13 353 P P 05 17 54.1 -0.6
PARB Paraibuna 39.17 123 *e*P P 05 17 55.0 -0.4
PLAL Pickwick Lake 39.20 351 P P 05 17 55.3 0.0
PLAL pP sP 05 18 05.2 +1.5
CPCT Cooper Cave 39.23 355 P P 05 17 55.9 +0.4
CPCT pP sP 05 18 05.8 +1.8

X43A	Marvell	39.30	347	P	P	05 17 56.9	+0.9	T59A	Double "B" Far	40.71	4
X43A				IAmb	IAmb	05 17 58.7			baz=185		
	comp=Z,79nm,0.7s							NBMO	Morrinhos-CE	40.74	91
X43A	Marvell	39.30	347	P	P	05 17 57.2	+1.2	T55A	Pulaski	40.74	0
	baz=164,SNR=11								baz=180		
V53A	Saluda	39.34	357	P	P	05 17 56.1	-0.4	T52A	Hallie	40.78	357
V53A				IAMs_20	IAMs_20	05 34 27.0					
	comp=Z,2µm,18.0s								comp=Z,2µm,18.0s		
V53A	Saluda	39.34	357	P	P	05 17 56.9	+0.4	T52A	Hallie	40.78	357
	baz=177,SNR=7.4								baz=177,SNR=7.5		
TKL	Tuckaleechee C	39.38	356	P	P	05 17 56.8	0.0	T50A	Nancy	40.81	355
TKL				pmax	pmax				baz=174,SNR=7.0		
	comp=Z,73nm,1.3s							BLA	Blacksburg	40.84	1
TKL				MLR	MLR			BLA			
	comp=Z,1µm,19.0s								comp=Z,33nm,0.9s		
TKL	Tuckaleechee C	39.38	356	P	P	05 17 57.1	+0.3	BLA	Blacksburg	40.84	1
	comp=Z,22nm,0.8s,baz=169,slow=12,SNR=14							BLA	Blacksburg	40.84	1
TKL	Tuckaleechee C	39.38	356	P	P	05 17 56.8	0.0		baz=181		
V54A	Nebo	39.42	359	P	P	05 17 57.8	+0.7	LCAR	Lake Charles	40.85	347
	baz=178,SNR=14							LCAR			
V56A	Mocksville	39.44	0	P	P	05 17 57.7	+0.4		comp=Z,109nm,0.9s		
	baz=180							LCAR			
V58A	Windy Hill, Pi	39.45	2	P	P	05 17 57.4	0.0	PVMO	Portageville	40.88	349
V58A	Windy Hill, Pi	39.45	2	P	P	05 17 57.9	+0.5	PVMO			
	baz=183							PENMO	Penman	40.91	349
V59A	Middlesex	39.47	3	P	P	05 17 58.3	+0.9	PENMO			
	baz=184							HICK	Hickman	40.92	350
V55A	Taylorsville	39.48	360	P	P	05 17 57.6	0.0	HICK			
V55A	Taylorsville	39.48	360	P	P	05 17 58.2	+0.6		comp=Z,88nm,0.9s		
	baz=179,SNR=6.5							T49A	Edmonton	40.96	354
V50A	Pikevile	39.50	355	P	P	05 17 58.2	+0.5	T49A	Edmonton	40.96	354
	baz=173,SNR=13								baz=173,SNR=16		
V57A	Coltrane Farms	39.53	1	P	P	05 17 58.3	+0.3	T47A	Sharon Grove	41.03	352
	baz=182							T47A			
V60A	Jim Taylor Roa	39.54	5	P	P	05 17 58.9	+0.8	HENM	Henderson Moun	41.13	349
	baz=186							HENM			
V52A	Sevierville	39.55	357	P	P	05 17 58.5	+0.4		comp=Z,58nm,0.8s		
V52A				IAmb	IAmb	05 17 59.6		PARMO	Parma	41.13	349
	comp=Z,61nm,0.8s							S53A	Williamson	41.32	358
V52A	Sevierville	39.55	357	P	P	05 17 58.6	+0.4		baz=178		
	baz=176,SNR=19							S51A	Beattyville	41.34	357
V51A	Loudon	39.56	356	P	P	05 17 58.2	-0.1	S51A			
V51A				IAmb	IAmb	05 17 59.7			comp=Z,45nm,0.8s		
	comp=Z,272nm,1.9s							S51A			
V51A	Loudon	39.56	356	P	P	05 17 58.7	+0.4		comp=Z,2µm,18.0s		
	baz=174,SNR=8.3							S51A	Beattyville	41.34	357
TX32	Lajitas Array	39.58	328	P	P	05 18 00.1	+1.4		baz=176,SNR=9.5		
TXAR	Lajitas Array	39.58	328	P	P	05 17 60.0	+1.3	S52A	Salyersville	41.35	357
	comp=Z,3.8nm,0.7s,baz=148,slow=9.4,SNR=43								baz=177,SNR=10		
TXAR				PcP	PcP	05 20 06.9	+1.0	PBMO	Poplar Bluff	41.38	348
	comp=Z,11nm,0.7s,baz=162,slow=6.5,SNR=17							PBMO			
TX31	Lajitas Ar. Si	39.58	328	P	P	05 18 00.1	+1.4	S55A	Lewisburg	41.40	0
V49A	McMinnville	39.68	354	P	P	05 17 59.3	0.0		baz=180,SNR=5.2		
	baz=172,SNR=13							S57A	Dark Hollow, R	41.42	2
MET	Memphis--Engin	39.68	348	P	P	05 17 59.7	+0.4	S57A	Dark Hollow, R	41.42	2
MET				pP	sP	05 18 09.8	+2.1		baz=183		
MET				IAmb	IAmb	05 18 13.5		S54A	Dingess, Beckl	41.42	359
	comp=Z,242nm,1.4s							S54A			
X40A	Basin Creek Fa	39.75	344	P	P	05 18 00.6	+0.7		comp=Z,94nm,1.2s		
X40A	Basin Creek Fa	39.75	344	P	P	05 18 00.8	+1.0	S54A	Dingess, Beckl	41.42	359
	baz=161,SNR=16								baz=179,SNR=7.9		
V48A	Smith Brothers	39.76	352	P	P	05 17 59.9	0.0	S50A	Richmond	41.43	356
V48A				IAmb	IAmb	05 18 01.2			baz=175,SNR=17		
	comp=Z,202nm,1.8s							X34A	Smith Ranch, M	41.44	339
V48A				pP	sP	05 18 10.3	+1.9	SJMB	Sao Joao De Ma	41.49	114
UALR	University of	39.90	345	P	P	05 18 02.0	+1.0	S59A	Mechanicsville	41.52	4
UALR				IAmb	IAmb	05 18 03.3			baz=185		
	comp=Z,73nm,0.8s							U40A	Yellville	41.52	345
LPIG	La Paz	39.91	316	P	P	05 18 02.5	+1.1	U40A	Yellville	41.52	345
	comp=Z,10nm,0.4s,baz=329,slow=1.5,SNR=4.0								baz=162,SNR=152		
U56A	King	39.98	1	P	P	05 18 01.6	-0.1	W35A	Tecumseh	41.60	340
U56A	King	39.98	1	P	P	05 18 02.5	+0.8	S49A	Springfield	41.61	355
	baz=181,SNR=5.6								baz=173,SNR=20		
MIAR	Mount Ida	40.01	344	P	P	05 18 02.9	+0.9	R58B	Mineral	41.68	4
MIAR				pmax	pmax			R58B	Mineral	41.68	4
	comp=Z,59nm,1.0s								baz=184		
MIAR	Mount Ida	40.01	344	P	P	05 18 02.9	+0.9	HHAR	Hobbs	41.74	344
MIAR	Mount Ida	40.01	344	P	P	05 18 03.4	+1.4	R54A	Victor	41.80	360
	baz=160,SNR=20								baz=180,SNR=9.3		
U53A	Fall Branch	40.02	358	P	P	05 18 02.4	+0.3	BSFB	Barra de Sao F	41.83	114
	baz=177,SNR=10							FNO	Franklin	41.87	340
ESAR	Angra dos Reis	40.04	122	eP	P	05 18 02.5	0.0	WMOK	Wichita Mounta	41.91	338
CLTN	Cedars of Leba	40.05	353	P	P	05 18 01.9	-0.4	WMOK			
U58A	Oxford	40.08	3	P	P	05 18 03.4	+0.9		comp=Z,44nm,1.1s		
	baz=184							WMOK	Wichita Mounta	41.91	338
U59A	Littleton	40.08	4	P	P	05 18 03.5	+1.0	WMOK	Wichita Mounta	41.91	338
	baz=185								baz=153,SNR=32		
U57A	Blanch	40.08	2	P	P	05 18 02.9	+0.3	TUL1	Leonard	41.94	342
	baz=182,SNR=6.9							TUL1	Leonard	41.94	342
U52A	Thorn Hill	40.09	357	P	P	05 18 02.8	+0.1		baz=157,SNR=71		
	baz=176,SNR=9.8							CBN	Corbin Frederi	41.95	4
U51A	La Follette	40.11	356	P	P	05 18 02.9	+0.1	CBN	Corbin Frederi	41.95	4
	baz=175,SNR=5.6								baz=185		
U55A	TA2, Sparta	40.13	360	P	P	05 18 03.6	+0.5	R53A	Hurricane	41.97	359
	baz=180,SNR=14							R53A	Hurricane	41.97	359
U54A	Nelsons Funny	40.16	359	P	P	05 18 03.1	-0.2		baz=178,SNR=5.4		
U54A				IAmb	IAmb	05 18 04.7		R59A	King George, V	41.97	4
	comp=Z,54nm,0.8s								baz=186		
U54A	Nelsons Funny	40.16	359	P	P	05 18 03.7	+0.5	R57A	Stanardsville	41.98	3
	baz=178,SNR=8.0								baz=183		
U50A	Jamestown	40.21	355	P	P	05 18 03.8	+0.1	R52A	Catlettsburg	41.99	358
	baz=174,SNR=14								baz=177		
LPAR	Lepanto	40.22	348	P	P	05 18 04.3	+0.6	R51A	Hillsboro	42.00	357
LPAR				IAmb	IAmb	05 18 05.5			baz=176,SNR=22		
	comp=Z,100nm,1.0s							R58A	Rapidan	42.01	3
HBAR	Harrisburg	40.25	348	P	P	05 18 04.1	+0.2		baz=184		
HBAR				IAmb	IAmb	05 18 24.5		OKCSW	OKLAHOMA CITY	42.02	340
	comp=Z,88nm,0.6s							R50A	Paris	42.03	356
TZTN	Tazewell	40.25	357	P	P	05 18 03.9	-0.1	R50A	Paris	42.03	356
TZTN				pP	sP	05 18 13.9	+1.4		baz=175,SNR=10		
TZTN	Tazewell	40.25	357	P	P	05 18 04.2	+0.2	OKCFA	Oklahoma City	42.03	340
	baz=176,SNR=7.6							S44A	Carbondale	42.05	350
W41B	Gary Mavity, V	40.25	346	P	P	05 18 04.8	+0.9	S44A			
W41B				IAmb	IAmb	05 18 06.2			comp=Z,54nm,0.8s		
	comp=Z,73nm,0.7s							R56A	Bull Pasture M	42.05	2
W41B	Gary Mavity, V	40.25	346	P	P	05 18 05.2	+1.2		baz=182		
	baz=162,SNR=36							USIN	University of	42.06	352
WVT	Waverly	40.29	351	P	P	05 18 03.7	-0.5	USIN			
WVT				pP	sP	05 18 14.1	+1.4		comp=Z,231nm,1.6s		
WVT	Waverly	40.29	351	P	P	05 18 03.8	-0.5	R49A	Shelbyville	42.10	355
	baz=169							R49A	Shelbyville	42.10	355
HALT	Halls	40.33	349	P	P	05 18 04.4	-0.2		baz=174,SNR=13		
HALT				IAmb	IAmb	05 18 18.3		MGMO	Mountain Grove	42.14	346
	comp=Z,147nm,1.5s							MGMO			
WHAR	Wooly Hollow	40.37	346	P	P	05 18 05.7	+0.7		comp=Z,103nm,1.0s		
WHAR				IAmb	IAmb	05 18 07.1		WCI	Wyandotte Cave	42.15	354
	comp=Z,97nm,0.8s							WCI			
U49A	Red Boiling Sp	40.40	354	P	P	05 18 05.2	0.0		comp=Z,39nm,0.9s		
	baz=172,SNR=14							WCI	Wyandotte Cave	42.15	354
ABTX	Abilene, Hawle	40.40	335	P	P	05 18 06.7	+1.4	WCI	Wyandotte Cave	42.15	354
ABTX				IAmb	IAmb	05 18 08.2			baz=172		
	comp=Z,180nm,1.4s							MNTX	Cornudas Mount	42.35	328
ABTX	Abilene, Hawle	40.40	335	P	P	05 18 07.0	+1.7	MNTX			
	baz=150,SNR=38								comp=Z,123nm,1.6s		
GNAR	Gosnell	40.51	349	P	P	05 18 06.8	+0.7	MNTX	Cornudas Mount	42.35	328
GNAR				IAmb	IAmb	05 18 20.4			baz=142,SNR=44		
	comp=Z,233nm,1.6s							Q53A	Leroy	42.48	359
PEBM	Pemiscott Bayo	40.62	349	P	P	05 18 07.3	+0.3		baz=179,SNR=9.2		
PEBM					sP	05 18 17.5	+1.9	FVM	French Village	42.54	349
PEBM				IAmb	IAmb	05 18 21.3		FVM			
	comp=Z,94nm,0.9s								comp=Z,43nm,0.7s		
T58A	Grand View Acr	40.63	3	P	P	05 18 07.5	+0.5	FVM	French Village	42.54	349
	baz=184							FVM			
T53A	Wise	40.64	358	P	P	05 18 07.5	+0.3		comp=Z,43nm,0.7s		
	baz=177,SNR=11							Q50A	Georgetown	42.56	356
T57A	Hurt	40.65	2	P	P	05 18 07.3	0.0		baz=175		
T57A				IAmb	IAmb	05 18 08.6		Q52A	Bidwell	42.60	358
	comp=Z,42nm,0.7s								baz=178,SNR=6.1		
T57A				pP	sP	05 18 17.7	+1.9	Q54A	Coxs Mills	42.60	0
T57A	Hurt	40.65	2	P	P	05 18 07.6	+0.3	Q54A			
	baz=182,SNR=8.4								comp=Z,44nm,0.8s		
T56A	Rocky Mt	40.66	1	P	P	05 18 08.0	+0.7	Q54A	Coxs Mills	42.60	0
	baz=181,SNR=6.3								baz=180		
UTMT	University of	40.66	350	P	P	05 18 06.4	-1.0	Q55A	Buckhannon	42.62	1
GLAT	Glass	40.67	350	P	P	05 18 08.1	+0.7		baz=181,SNR=10		
GLAT					sP	05 18 18.0	+2.1	Q58A	Fox Den Farm,	42.66	4
GLAT				IAmb	IAmb	05 18 21.3			baz=185		
	comp=Z,134nm,1.2s							Q56A	Snyder Ridge,	42.69	2
W39A	Magazine	40.68	344	P	P	05 18 09.6	+2.0	Q56A	Snyder Ridge,	42.69	2
W39A	Magazine	40.68	344	P	P	05 18 09.5	+2.0		baz=182		
	baz=160,SNR=76							Q51A	Peebles	42.71	357
T54A	Tazewell	40.69	359	P	P	05 18 07.9	+0.2	Q51A			
	baz=179,SNR=6.0								comp=Z,60nm,0.8s		
T51A	Gray	40.69	356	P	P	05 18 07.8	+0.2	Q51A			
	baz=175,SNR=8.0								comp=Z,2µm,19.0s		
T59A	Double "B" Far	40.71	4	P	P	05 18 08.0	+0.2	Q51A	Peebles	42.71	357

	baz=176,SNR=15						
Q57A	Strasburg	42.72	3	P	P	05 18 24.9	+0.7
	baz=184						
CCM	Cathedral Cave	42.78	348	P	P	05 18 24.9	+0.2
CCM				pmax	pmax		
	comp=Z,35nm,0.7s						
CCM	Cathedral Cave	42.78	348	P	P	05 18 24.9	+0.2
CCM	Cathedral Cave	42.78	348	P	P	05 18 25.1	+0.4
	baz=165						
Q48A	North Vernon	42.79	354	P	P	05 18 24.3	-0.4
	baz=173,SNR=12						
Q49A	Aurora	42.79	355	P	P	05 18 24.3	-0.4
	baz=174,SNR=9.4						
OLIL	Olney	42.88	352	P	P	05 18 25.3	-0.2
OLIL				IAmb	IAmb	05 18 38.9	
	comp=Z,66nm,0.8s						
MSTX	Muleshoe	42.91	333	P	P	05 18 27.1	+1.1
MSTX				IAmb	IAmb	05 18 28.5	
	comp=Z,106nm,1.0s						
MSTX	Muleshoe	42.91	333	P	P	05 18 27.4	+1.3
	baz=147,SNR=48						
P53A	Whipple	43.11	359	P	P	05 18 27.7	+0.3
P53A				IAmb	IAmb	05 18 28.5	
	comp=Z,101nm,1.5s						
P53A					PcP	05 20 17.1	0.0
P53A	Whipple	43.11	359	P	P	05 18 27.4	+0.1
	baz=179,SNR=5.1						
BLO	Bloomington	43.11	354	P	P	05 18 27.0	-0.4
BLO				pmax	pmax		
	comp=Z,31nm,0.7s						
BLO	Bloomington	43.11	354	P	P	05 18 27.0	-0.4
SLM	Saint Louis	43.14	349	P	P	05 18 27.8	+0.2
SLM					sP	05 18 37.8	+1.7
SLM				IAmb	IAmb	05 18 41.1	
	comp=Z,43nm,0.8s						
P51A	Williamsport	43.15	358	P	P	05 18 27.3	-0.4
P51A				IAMs_20	IAMs_20	05 37 27.9	
	comp=Z,1µm,20.0s						
P51A	Williamsport	43.15	358	P	P	05 18 27.2	-0.4
	baz=177,SNR=6.5						
P56A	Dayton Farm, R	43.16	2	P	P	05 18 28.7	+0.9
	baz=183,SNR=7.0						
P57A	Homestead Farm	43.18	3	P	P	05 18 29.8	+1.9
	baz=184						
AMTX	Amarillo	43.20	335	P	P	05 18 28.3	-0.1
AMTX				IAmb	IAmb	05 18 30.8	
	comp=Z,73nm,0.9s						
AMTX	Amarillo	43.20	335	P	P	05 18 29.6	+1.3
	baz=149						
P58A	Pank, Wackersv	43.23	4	P	P	05 18 28.9	+0.6
	baz=185						
P52A	Corning	43.27	359	P	P	05 18 28.3	-0.3
	baz=178,SNR=5.4						
P48A	Milroy	43.29	355	P	P	05 18 28.1	-0.6
P48A				IAmb	IAmb	05 18 28.8	
	comp=Z,46nm,0.7s						
P48A	Milroy	43.29	355	P	P	05 18 27.8	-1.0
	baz=173,SNR=16						
P49A	Miami Univ. Ec	43.30	356	P	P	05 18 28.0	-0.9
	baz=174,SNR=7.5						
P50A	Jamestown	43.31	357	P	P	05 18 28.5	-0.5
	baz=176,SNR=9.3						
U32A	Winter Ranch,	43.45	339	P	P	05 18 31.9	+1.6
HSIG		43.61	320	P	P	05 18 32.6	+1.1
HSIG					sP	05 18 41.7	+1.5
P46A	Rosedale	43.63	353	P	P	05 18 30.5	-1.0
O52A	Adamsville	43.74	359	P	P	05 18 32.1	-0.4
O52A	Adamsville	43.74	359	P	P	05 18 32.1	-0.4
	baz=178,SNR=6.7						
O51A	Pataskala	43.80	358	P	P	05 18 32.6	-0.3
	baz=177,SNR=13						
O54A	Avella	43.80	1	P	P	05 18 33.2	+0.2
	baz=181						
O50A	Cable	43.84	357	P	P	05 18 32.8	-0.5
	baz=176,SNR=10						
O55A	Ligonier	43.85	2	P	P	05 18 33.6	+0.3
	baz=182						
O53A	New Philadelph	43.87	360	P	P	05 18 33.3	-0.2
	baz=179,SNR=6.4						
O58A	Lewisberry	43.89	4	P	P	05 18 34.4	+0.8
	baz=186						
ACSO	Alum Creek Sta	43.90	358	P	P	05 18 33.6	-0.1
ACSO				pP	sP	05 18 43.4	+1.2
ACSO				IAmb	IAmb	05 18 47.2	
	comp=Z,66nm,0.8s						
ACSO				IAMs_20	IAMs_20	05 37 09.6	
	comp=Z,2µm,19.0s						
ACSO	Alum Creek Sta	43.90	358	P	P	05 18 33.4	-0.2
	baz=177,SNR=16						
Q49A	Covington	43.92	356	P	P	05 18 32.9	-1.1
O49A					PcP	05 20 19.7	-0.1
Q49A	Covington	43.92	356	P	P	05 18 33.1	-0.8
	baz=175,SNR=5.3						
O57A	Amberson	43.93	4	P	P	05 18 34.4	+0.5
	baz=185						
O56A	Blue Knob Stat	43.94	3	P	P	05 18 34.7	+0.6
O56A				pP	sP	05 18 43.8	+1.1
O56A	Blue Knob Stat	43.94	3	P	P	05 18 34.9	+0.8
	baz=183						
P43A	Skaggs, Pawnee	43.99	350	P	P	05 18 34.5	+0.1
P43A				IAmb	IAmb	05 18 47.7	
	comp=Z,49nm,0.9s						
PAGS	Pennsylvania G	44.01	5	P	P	05 18 35.0	+0.4
O48A	Farmland	44.05	355	P	P	05 18 34.1	-0.9
	baz=174,SNR=15						
O59A	Robesonia	44.14	5	P	P	05 18 36.7	+1.0
	baz=187						
O60A	Telford	44.22	6	P	P	05 18 37.6	+1.3
	baz=188						
319A	Douglas	44.26	324	P	P	05 18 39.0	+2.0
319A				IAmb	IAmb	05 18 39.6	
	comp=Z,67nm,0.8s						
319A				IAMs_20	IAMs_20	05 35 17.3	
	comp=Z,3µm,19.0s						
121A	Cookes Peak, D	44.28	327	P	P	05 18 38.9	+1.7
121A				IAmb	IAmb	05 18 40.7	
	comp=Z,141nm,1.6s						
121A				IAMs_20	IAMs_20	05 36 03.7	
	comp=Z,2µm,18.0s						
121A	Cookes Peak, D	44.28	327	P	P	05 18 39.4	+2.2
	baz=140,SNR=20						
O44A	Mansfield	44.33	352	P	P	05 18 36.7	-0.4
O44A				pP	sP	05 18 46.8	+1.2
O44A					PcP	05 20 21.8	+0.6
SSPA	Standing Stone	44.34	3	P	P	05 18 37.6	+0.3
SSPA	Standing Stone	44.34	3	P	P	05 18 37.5	+0.3
	baz=184						
SFIN	Lafayette	44.37	353	P	P	05 18 36.6	-0.8
SFIN	Lafayette	44.37	353	P	P	05 18 36.9	-0.6
	baz=171,SNR=5.3						
N53A	Lisbon	44.42	0	P	P	05 18 37.8	-0.2
N53A	Lisbon	44.42	0	P	P	05 18 37.5	-0.4
	baz=180						
N55A	Marion Center	44.43	2	P	P	05 18 38.6	+0.5
	baz=183						
N52A	McGinn's Farm,	44.44	359	P	P	05 18 37.5	-0.5
	baz=179,SNR=5.7						
N50A	Nevada	44.44	358	P	P	05 18 37.5	-0.5
	baz=177,SNR=9.7						
N57A	Milroy	44.48	4	P	P	05 18 38.7	+0.4
	baz=185						
N51A	Ashland	44.56	358	P	P	05 18 38.2	-0.8
N51A				IAmb	IAmb	05 18 39.5	
	comp=Z,50nm,0.8s						
N51A	Ashland	44.56	358	P	P	05 18 38.5	-0.5
	baz=178,SNR=8.3						
N54A	Moraine State	44.59	1	P	P	05 18 39.2	0.0
N54A				IAmb	IAmb	05 19 06.4	
	comp=Z,136nm,1.8s						
N54A	Moraine State	44.59	1	P	P	05 18 39.2	0.0
	baz=181						
N56A	West Decatur	44.60	3	P	P	05 18 39.5	+0.2
	baz=184						
N58A	Sunbury	44.62	4	P	P	05 18 39.7	+0.2
N58A	Sunbury	44.62	4	P	P	05 18 39.9	+0.4
	baz=186						
N48A	Decatur	44.64	356	P	P	05 18 38.9	-0.8
	baz=174						
N49A	Columbus Grove	44.64	356	P	P	05 18 39.3	-0.4
N49A				IAmb	IAmb	05 18 40.1	
	comp=Z,139nm,1.6s						
N49A				IAMs_20	IAMs_20	05 36 56.5	
	comp=Z,2µm,20.0s						
N49A	Columbus Grove	44.64	356	P	P	05 18 39.1	-0.5
	baz=175,SNR=12						
N47A	Urbana	44.72	355	P	P	05 18 39.2	-1.0

N47A IAmb IAmb 05 18 40.1
comp=Z,124nm,1.6s
N47A Urbana 44.72 355 P **P** **05 18 39.2 -1.0**
baz=173,SNR=5.8
N59A State Game Lan 44.78 5 P **P** **05 18 41.2 +0.4**
N59A State Game Lan 44.78 5 P **P** **05 18 41.7 +0.9**
baz=187
N60A Cedar Hill Far 44.80 6 P **P** **05 18 41.6 +0.7**
baz=188
RCBR RCBR **Riachuelo 44.84 94** P **P** **05 18 40.0 -1.7**
pmax pmax
comp=Z,26nm,1.1s
RCBR MLR MLR
comp=Z,4µm,18.0s
RCBR Riachuelo 44.84 94 *e*P **P** **05 18 41.4 -0.3**
RCBR Riachuelo 44.84 94 P **P** **05 18 40.0 -1.7**
HDIL Hopedale 44.85 351 P **P** **05 18 41.4 +0.1**
HDIL IAmb IAmb 05 18 41.7
comp=Z,53nm,0.8s
HDIL Hopedale 44.85 351 P **P** **05 18 40.8 -0.5**
baz=168,SNR=11
M51A Elyria 44.97 359 P **P** **05 18 41.8 -0.4**
baz=178,SNR=7.5
M53A WI Miller and 45.06 0 P **P** **05 18 42.6 -0.4**
baz=180
M50A Fremont 45.07 358 P **P** **05 18 43.2 +0.2**
M50A IAMs_20 IAMs_20 05 37 55.8
comp=Z,2µm,19.0s
M50A Fremont 45.07 358 P **P** **05 18 42.8 -0.2**
baz=177,SNR=17
M57A Sunshine Farm, 45.09 4 P **P** **05 18 44.0 +0.7**
M57A IAmb IAmb 05 18 58.8
comp=Z,55nm,1.1s
M57A Sunshine Farm, 45.09 4 P **P** **05 18 43.9 +0.7**
baz=185,SNR=5.7
M55A Ridgway 45.13 2 P **P** **05 18 43.6 0.0**
M55A IAmb IAmb 05 19 22.5
comp=Z,164nm,2.0s
M55A Ridgway 45.13 2 P **P** **05 18 43.5 0.0**
baz=183
KSU1 Kansas State U 45.13 343 P **P** **05 18 44.8 +1.2**
baz=158,SNR=76
M54A Oil Creek Stat 45.14 1 P **P** **05 18 43.6 0.0**
M54A Oil Creek Stat 45.14 1 P **P** **05 18 43.4 -0.3**
baz=182
M52A Chesterland 45.16 359 P **P** **05 18 43.3 -0.5**
baz=179
M56A Emporium 45.17 3 P **P** **05 18 44.0 +0.1**
M56A IAmb IAmb 05 18 44.9
comp=Z,35nm,0.8s
M56A Emporium 45.17 3 P **P** **05 18 44.0 +0.1**
baz=184,SNR=5.2
M58A Price's Panora 45.17 5 P **P** **05 18 44.8 +0.9**
baz=186
M49A Liberty Center 45.18 357 P **P** **05 18 43.5 -0.5**
baz=176,SNR=6.1
M47A Cromwell 45.19 355 P **P** **05 18 43.3 -0.7**
baz=173
M48A Edgerton 45.24 356 P **P** **05 18 43.9 -0.5**
M48A IAmb IAmb 05 18 48.0
comp=Z,29nm,0.8s
M48A Edgerton 45.24 356 P **P** **05 18 43.6 -0.8**
baz=174
N41A Harden Midland 45.26 349 P **P** **05 18 44.7 +0.1**
N41A IAmb IAmb 05 18 58.2
comp=Z,67nm,1.0s
ANMO Albuquerque 45.46 330 P **P** **05 18 48.5 +1.9**
ANMO pmax pmax
comp=Z,66nm,1.0s
ANMO Albuquerque 45.46 330 P **P** **05 18 48.4 +1.9**
comp=Z,42nm,0.8s,baz=153,slow=10,SNR=146
ANMO Albuquerque 45.46 330 P **P** **05 18 48.5 +1.9**
ANMO IAmb IAmb 05 18 49.6
comp=Z,66nm,1.0s
ANMO Albuquerque 45.46 330 P **P** **05 18 48.4 +1.9**
baz=143
L53A Girard 45.58 1 P **P** **05 18 46.9 -0.2**
baz=181
L48A N Adams 45.68 356 P **P** **05 18 47.0 -0.9**
baz=175,SNR=8.4
L50A Kingsville 45.70 358 P **P** **05 18 47.5 -0.5**
baz=177,SNR=6.9
M63A Gales Ferry 45.74 9 P **P** **05 18 49.9 +1.6**
baz=192
ERPA Erie 45.74 1 P **P** **05 18 48.5 +0.1**
ERPA Erie 45.74 1 P **P** **05 18 47.9 -0.5**
baz=181
L47A Sherwood 45.76 355 P **P** **05 18 47.8 -0.8**
baz=174,SNR=8.5
L57A Andrews Acres 45.76 4 P **P** **05 18 48.9 +0.3**
baz=186,SNR=5.7
L49A Milan 45.80 357 P **P** **05 18 48.8 -0.1**
baz=176,SNR=15
TUC Tucson 45.82 324 P **P** **05 18 50.5 +1.2**
TUC pmax pmax
comp=Z,21nm,0.8s
TUC Tucson 45.82 324 P **P** **05 18 50.5 +1.2**
TUC Tucson 45.82 324 P **P** **05 18 50.8 +1.5**
baz=136
L56A Greenwood 45.85 3 P **P** **05 18 49.1 -0.2**
L56A IAmb IAmb 05 19 06.5
comp=Z,132nm,1.7s
L56A Greenwood 45.85 3 P **P** **05 18 49.5 +0.2**
baz=184
L55A Hinsdale 45.85 3 P **P** **05 18 49.1 -0.2**
baz=183,SNR=5.6
L54A Sinclairville 45.87 2 P **P** **05 18 49.5 +0.1**
baz=182
CBKS Cedar Bluff 45.88 339 P **P** **05 18 50.6 +1.0**
CBKS pmax pmax
comp=Z,116nm,0.8s
CBKS Cedar Bluff 45.88 339 P **P** **05 18 50.6 +1.0**
CBKS Cedar Bluff 45.88 339 P **P** **05 18 51.3 +1.7**
baz=153,SNR=20
L58A Harry Jones Me 45.89 5 P **P** **05 18 50.5 +1.0**
baz=187
L46A Eue Claire 45.90 354 P **P** **05 18 48.4 -1.2**
L46A IAmb IAmb 05 18 49.3
comp=Z,47nm,0.8s
L46A Eue Claire 45.90 354 P **P** **05 18 48.7 -0.9**
baz=172
BINY Binghamton 46.03 5 P **P** **05 18 51.0 +0.3**
BINY IAmb IAmb 05 19 06.6
comp=Z,36nm,0.8s
BINY Binghamton 46.03 5 P **P** **05 18 51.3 +0.6**
baz=187
WVNY West Valley, N 46.07 2 P **P** **05 18 50.9 0.0**
WVNY **PcP** **05 20 27.8 +0.6**
WVNY IAmb IAmb 05 20 28.5
comp=Z,35nm,0.8s
L44A Lake County Fo 46.24 353 P **P** **05 18 52.1 -0.2**
L44A IAmb IAmb 05 19 04.6
comp=Z,65nm,1.1s
K54A Basiliko Farm, 46.27 2 P **P** **05 18 52.7 +0.2**
baz=183
L61A Hillsdale 1, H 46.29 8 P **P** **05 18 53.8 +1.1**
baz=190
T25A Trinidad 46.29 334 P **P** **05 18 55.2 +2.1**
T25A Trinidad 46.29 334 P **P** **05 18 55.1 +2.1**
baz=147,SNR=52
L42A Oliver, Polo 46.32 351 P **P** **05 18 52.3 -0.7**
K51A Iona Station 46.34 359 P **P** **05 18 52.7 -0.4**
baz=179
K52A Tillsonburg 46.40 0 P **P** **05 18 53.2 -0.3**
baz=180
K55A Perry 46.41 3 P **P** **05 18 53.3 -0.4**
baz=184
K50A Casco 46.42 358 P **P** **05 18 53.0 -0.7**
K50A IAMs_20 IAMs_20 05 38 45.5
comp=Z,2µm,19.0s
K50A Casco 46.42 358 P **P** **05 18 53.1 -0.6**
baz=178,SNR=8.3
K56A Middlesex 46.43 4 P **P** **05 18 53.4 -0.4**
baz=185
K47A Vermontville 46.44 356 P **P** **05 18 53.1 -0.8**
baz=174,SNR=13
K49A Clarkson 46.46 357 P **P** **05 18 53.4 -0.6**
baz=176,SNR=8.0
K48A Perry 46.51 357 P **P** **05 18 54.0 -0.5**
baz=176,SNR=7.5
K57A Scipio Center 46.52 4 P **P** **05 18 54.6 +0.1**
baz=186
K46A Dorr 46.52 355 P **P** **05 18 53.3 -1.2**
baz=173,SNR=6.4
K58A Earlville 46.62 5 P **P** **05 18 55.5 +0.1**
baz=187
L40A Anamosa 46.64 349 P **P** **05 18 55.5 +0.1**

214A Organ Pipe Nat 46.79 322 P **P** **05 18 58.1 +1.2**
214A IAmb IAmb 05 18 59.9
comp=Z,70nm,1.2s
214A Organ Pipe Nat 46.79 322 P **P** **05 18 58.6 +1.7**
baz=134,SNR=45
K43A Burlington 46.81 352 P **P** **05 18 56.0 -0.8**
HRV Adam Dziewonsk 46.89 9 P **P** **05 18 58.5 +1.1**
baz=193
SCIA State Center 46.89 347 P **P** **05 18 57.8 +0.3**
SCIA State Center 46.89 347 P **P** **05 18 58.1 +0.6**
baz=163,SNR=11
X18A Snowflake 46.97 327 P **P** **05 19 00.6 +2.1**
X18A IAmb IAmb 05 19 01.4
comp=Z,54nm,0.8s
X18A IAMs_20 IAMs_20 05 37 24.9
comp=Z,1µm,18.0s
J48A Bridge Port 46.99 357 P **P** **05 18 57.5 -0.7**
J48A IAMs_20 IAMs_20 05 38 55.8
comp=Z,2µm,19.0s
J48A Bridge Port 46.99 357 P **P** **05 18 57.7 -0.4**
baz=176,SNR=9.2
J47A Sunmer 46.99 356 P **P** **05 18 58.1 -0.1**
J47A Sunmer 46.99 356 P **P** **05 18 57.6 -0.6**
baz=174,SNR=20
J49A Marlette 47.02 358 P **P** **05 18 57.6 -0.8**
baz=177
KSCO Kaye Shedlock' 47.13 337 P **P** **05 19 01.4 +1.8**
KSCO Kaye Shedlock' 47.13 337 P **P** **05 19 01.2 +1.6**
baz=150,SNR=22
J46A Howell City 47.16 355 P **P** **05 18 58.8 -0.7**
baz=173,SNR=11
SDCO Great Sand Dun 47.28 333 P **P** **05 19 02.2 +1.3**
SDCO Great Sand Dun 47.28 333 P **P** **05 19 02.6 +1.7**
baz=146,SNR=115
W18A Petrified Fore 47.29 327 P **P** **05 19 02.9 +2.0**
baz=139,SNR=6.1
JFWS Jewell Farm 47.30 351 P **P** **05 18 59.8 -0.8**
JFWS pmax pmax
comp=Z,38nm,0.7s
JFWS Jewell Farm 47.30 351 P **P** **05 18 59.8 -0.8**
JFWS IAmb IAmb 05 19 01.2
comp=Z,38nm,0.7s
JFWS Jewell Farm 47.30 351 P **P** **05 19 00.3 -0.3**
baz=167,SNR=9.5
J60A Lant Hill Farm 47.34 7 P **P** **05 19 02.3 +1.4**
baz=190
I51A Listowel 47.42 360 P **P** **05 19 00.8 -0.7**
baz=180
J59A Piesco 47.43 6 P **P** **05 19 02.1 +0.4**
baz=188
I49A Point Hope 47.59 358 P **P** **05 19 02.3 -0.5**
I49A Point Hope 47.59 358 P **P** **05 19 02.1 -0.7**
baz=177
I52A Shelburne 47.69 1 P **P** **05 19 02.9 -0.8**
baz=181
BGNE Belgrade 47.71 342 P **P** **05 19 03.5 -0.4**
BGNE Belgrade 47.71 342 P **P** **05 19 04.8 +0.9**
baz=156,SNR=6.1
X16A Lo Mia Camp, P 47.72 325 P **P** **05 19 06.1 +1.9**
X16A IAmb IAmb 05 19 06.8
comp=Z,25nm,0.8s
X16A IAMs_20 IAMs_20 05 38 06.8
comp=Z,2µm,18.0s
I46A Reed City 47.74 356 P **P** **05 19 03.0 -0.9**
baz=174,SNR=11
I47A Gladwin 47.75 356 P **P** **05 19 03.4 -0.6**
I47A Gladwin 47.75 356 P **P** **05 19 03.4 -0.6**
baz=175,SNR=6.9
I57A Carthage 47.78 5 P **P** **05 19 04.5 +0.2**
baz=187
GO09 Cerro Castillo 47.81 173 P **P** **05 19 05.6 +1.1**
I59A Olmsteadville 47.83 7 P **P** **05 19 05.4 +0.7**
baz=189
I48A Sherman Twp 47.87 357 P **P** **05 19 04.6 -0.4**
baz=176,SNR=7.4
S22A 4UR Ranch, Cre 47.89 332 P **P** **05 19 07.1 +1.5**
S22A IAmb IAmb 05 19 08.8
comp=Z,34nm,1.1s
S22A 4UR Ranch, Cre 47.89 332 P **P** **05 19 07.2 +1.6**
baz=144,SNR=39
113A Mohawk Valley, 47.93 322 P **P** **05 19 07.1 +1.4**
113A IAmb IAmb 05 19 08.5
comp=Z,102nm,1.8s
I60A Shoreham 47.95 7 P **P** **05 19 06.3 +0.7**
baz=190
I42A Draeger Farm, 48.06 352 P **P** **05 19 06.0 -0.5**
I42A IAmb IAmb 05 19 28.8
comp=Z,33nm,0.8s
Q24A Divide 48.13 334 P **P** **05 19 09.0 +1.5**
Q24A Divide 48.13 334 P **P** **05 19 09.0 +1.5**
baz=147
MVCO Mesa Verde 48.26 330 P **P** **05 19 09.9 +1.4**
MVCO IAmb IAmb 05 19 10.6
comp=Z,32nm,0.8s
MVCO IAMs_20 IAMs_20 05 38 39.2
comp=Z,1µm,19.0s
MVCO Mesa Verde 48.26 330 P **P** **05 19 09.9 +1.4**
baz=142,SNR=26
Y14A Wickenburg 48.28 324 P **P** **05 19 09.8 +1.3**
Y14A IAmb IAmb 05 19 11.2
comp=Z,34nm,1.0s
H47A Mio 48.31 357 P **P** **05 19 07.6 -0.8**
baz=176,SNR=5.6
H46A Fife Lake 48.31 356 P **P** **05 19 07.5 -0.9**
baz=174,SNR=5.2
I40A Norwalk 48.31 351 P **P** **05 19 08.0 -0.5**
I40A IAmb IAmb 05 19 22.1
comp=Z,47nm,1.1s
H57A Richville 48.33 5 P **P** **05 19 08.5 -0.1**
baz=187
H48A Harrisville 48.37 358 IAMs_20 IAMs_20 05 39 55.2
comp=Z,2µm,19.0s
H56A Elgin 48.39 4 P **P** **05 19 09.2 +0.2**
baz=186
WUAZ Wupatki 48.48 326 P **P** **05 19 12.2 +2.0**
WUAZ IAMs_20 IAMs_20 05 38 36.0
comp=Z,2µm,18.0s
WUAZ Wupatki 48.48 326 P **P** **05 19 12.1 +2.0**
baz=138,SNR=50
H43A Windswept, Lux 48.48 353 P **P** **05 19 09.7 -0.1**
LBNH Lisbon 48.53 9 P **P** **05 19 11.5 +1.4**
baz=192
OGNE Ogallala 48.59 339 P **P** **05 19 11.9 +1.2**
OGNE Ogallala 48.59 339 P **P** **05 19 12.1 +1.3**
baz=151,SNR=16
GLA Glamis 48.78 321 P **P** **05 19 13.6 +1.3**
GLA pmax pmax
comp=Z,148nm,1.9s
GLA Glamis 48.78 321 P **P** **05 19 13.6 +1.3**
GLA Glamis 48.78 321 P **P** **05 19 13.8 +1.5**
baz=132,SNR=6.5
G45A Suttons Bay 48.85 355 P **P** **05 19 12.4 -0.1**
G45A PcP **PcP** **05 20 38.0 +1.1**
G45A Suttons Bay 48.85 355 P **P** **05 19 12.3 -0.2**
baz=174
G47A Hillman 48.86 357 P **P** **05 19 12.7 0.0**
baz=176
H62A Milan 48.97 9 P **P** **05 19 15.0 +1.5**
baz=193
G57A Newington 49.00 6 P **P** **05 19 13.7 +0.1**
baz=188
G55A Calabogie 49.01 4 P **P** **05 19 13.6 -0.2**
baz=185
ISCO Idaho Springs 49.03 335 P **P** **05 19 15.9 +1.5**
ISCO pmax pmax
comp=Z,40nm,0.9s
ISCO Idaho Springs 49.03 335 P **P** **05 19 15.9 +1.5**
ISCO IAmb IAmb 05 19 17.1
comp=Z,40nm,0.8s
ISCO Idaho Springs 49.03 335 P **P** **05 19 16.0 +1.5**
baz=146,SNR=39
Y12C Blythe 49.06 322 P **P** **05 19 15.9 +1.5**
Y12C IAmb IAmb 05 19 17.3
comp=Z,61nm,1.1s
Y12C Blythe 49.06 322 P **P** **05 19 16.1 +1.7**
baz=133,SNR=19
SMCO Snowmass 49.11 333 P **P** **05 19 16.8 +1.6**
SMCO IAmb IAmb 05 19 28.1
comp=Z,54nm,1.1s
PDMCI Parker Dam,Lak 49.21 323 P **P** **05 19 17.2 +1.7**
baz=134,SNR=12
H63A New Sharon 49.24 10 P **P** **05 19 17.5 +2.0**
baz=194
G60A Masonville 49.31 8 P **P** **05 19 17.0 +1.0**
baz=191
SWSC Sam W. Stewart 49.32 321 P **P** **05 19 18.0 +1.6**
baz=131,SNR=9.4

IKP In-Ko-Pah, Jac 49.33 320 P **P** **05 19 18.3 +1.8**
baz=131,SNR=17
F52A Sundridge 49.43 1 P **P** **05 19 19.5 +2.5**
baz=182
ECSD EROS Data Cent 49.43 345 P **P** **05 19 17.0 -0.1**
ECSD IAmb IAmb 05 19 18.2
comp=Z,31nm,0.7s
ECSD EROS Data Cent 49.43 345 P **P** **05 19 17.2 +0.1**
baz=155,SNR=32
BC3 Big Chuckawall 49.57 322 P **P** **05 19 20.0 +1.6**
baz=132,SNR=38
G40A Rib Lake 49.59 351 P **P** **05 19 18.3 0.0**
G61A St-Isidore-de- 49.60 9 P **P** **05 19 19.7 +1.4**
baz=192,SNR=5.3
W13A Hualapai Mount 49.61 324 P **P** **05 19 20.6 +1.8**
W13A IAmb IAmb 05 19 21.4
comp=Z,27nm,0.8s
ALGO Algonquin Park 49.63 3 P **P** **05 19 17.4 -1.1**
baz=184
U15A North Rim 49.66 327 P **P** **05 19 20.1 +0.9**
U15A IAmb IAmb 05 19 22.6
comp=Z,50nm,1.2s
U15A IAMs_20 IAMs_20 05 39 07.1
comp=Z,2µm,18.0s
MONP2 Monument Peak 49.68 320 P **P** **05 19 20.8 +1.4**
baz=131,SNR=12
G62A West of Eustis 49.70 10 P **P** **05 19 20.1 +1.0**
G62A IAmb IAmb 05 19 21.6
comp=Z,56nm,0.8s
G62A West of Eustis 49.70 10 P **P** **05 19 20.4 +1.4**
baz=193,SNR=6.1
BAR Barrett 49.71 320 P **P** **05 19 20.3 +0.9**
IRM Iron Mountain 49.72 322 P **P** **05 19 21.0 +1.6**
baz=133,SNR=51
G63A Kingsbury 49.76 10 P **P** **05 19 20.6 +1.1**
baz=195
F42A Maple Grove Fa 49.80 353 P **P** **05 19 19.7 -0.1**
F42A IAmb IAmb 05 19 20.7
comp=Z,117nm,1.5s
NEE2 Needles Airpor 49.82 323 P **P** **05 19 22.2 +2.0**
baz=134
SPMN Marine on St. 49.99 349 P **P** **05 19 20.5 -0.7**
SPMN IAmb IAmb 05 19 35.1
comp=Z,53nm,1.1s
SPMN Marine on St. 49.99 349 P **P** **05 19 21.0 -0.3**
baz=164,SNR=10
E46A Sault Ste Mari 50.08 357 IAMs_20 IAMs_20 05 40 49.2
comp=Z,2µm,20.0s
N23A Red Feather La 50.08 335 P **P** **05 19 23.4 +1.0**
N23A IAmb IAmb 05 19 24.8
comp=Z,39nm,0.8s
N23A Red Feather La 50.08 335 P **P** **05 19 23.7 +1.3**
baz=147,SNR=28
E48A Lockeyer 50.11 359 P **P** **05 19 21.5 -0.6**
baz=178
E47A Iron Bridge 50.12 358 P **P** **05 19 21.6 -0.6**
baz=177
109C Camp Elliot, M 50.12 320 P **P** **05 19 22.7 +0.2**
109C IAmb IAmb 05 19 25.0
comp=Z,70nm,1.2s
109C Camp Elliot, M 50.12 320 P **P** **05 19 23.7 +1.3**
baz=130,SNR=10
BELC Belle Mtn. Jos 50.14 321 P **P** **05 19 24.3 +1.5**
baz=132,SNR=34
TRQ Mont Tremblant 50.15 6 P **P** **05 19 22.3 -0.2**
E54A Lac Daplat, Po 50.16 3 P **P** **05 19 21.8 -0.7**
baz=185
TPFO Pinon Flats 50.17 321 P **P** **05 19 24.4 +1.4**
baz=131,SNR=25
XPFO Pion Flat 50.17 321 P **P** **05 19 24.1 +1.0**
XPFO IAmb IAmb 05 19 25.9
comp=Z,37nm,1.1s
PFO Pinyon Flats O 50.17 321 *ce*P **P** **05 19 24.4 +1.4**
PFO pmax pmax
comp=Z,65nm,1.2s
PFO Pinyon Flats O 50.17 321 P **P** **05 19 24.1 +1.0**
PFO IAmb IAmb 05 19 25.9
comp=Z,41nm,1.1s
PFO Pinyon Flats O 50.17 321 P **P** **05 19 24.5 +1.5**
baz=131,SNR=26
PHWY Pilot Hill 50.22 336 P **P** **05 19 23.9 +0.4**
E43A Lone Tree Farm 50.29 354 P **P** **05 19 23.4 -0.1**
E43A IAmb IAmb 05 19 24.1
comp=Z,53nm,0.7s
KNB Kanab 50.38 327 P **P** **05 19 26.7 +2.1**
KNB pmax pmax
comp=Z,41nm,1.0s
KNB Kanab 50.38 327 P **P** **05 19 26.7 +2.1**
E57A Chemin Saint G 50.38 6 P **P** **05 19 24.0 -0.3**
baz=189
PKCU Pink Cliffs 50.41 327 P **P** **05 19 26.2 +1.2**
E56A St. Veronique 50.42 5 P **P** **05 19 24.2 -0.3**
baz=188
E58A La Victoria 50.44 7 P **P** **05 19 25.0 +0.4**
baz=190
O20A White River Ci 50.46 333 P **P** **05 19 26.4 +1.2**
O20A IAmb IAmb 05 19 29.6
comp=Z,78nm,1.1s
O20A White River Ci 50.46 333 P **P** **05 19 26.8 +1.6**
baz=144,SNR=40
D46A Sault St. Mari 50.59 357 P **P** **05 19 24.8 -0.9**
baz=176
LCMT Little Creek M 50.60 326 P **P** **05 19 27.6 +1.3**
MURC Murrieta 50.63 320 P **P** **05 19 28.1 +1.7**
baz=130,SNR=12
D52A ZEK Kipawa Sen 50.64 2 P **P** **05 19 25.6 -0.6**
baz=183
E60A Ste Agathe de 50.68 8 P **P** **05 19 27.0 +0.6**
baz=192
D47A Chapleau 50.71 358 P **P** **05 19 25.2 -1.5**
baz=177
F64A Sherman 50.72 11 P **P** **05 19 27.8 +1.1**
F64A IAmb IAmb 05 19 29.1
comp=Z,42nm,1.0s
F64A Sherman 50.72 11 P **P** **05 19 28.3 +1.6**
baz=196
SUSD Miller 50.73 343 P **P** **05 19 27.2 +0.3**
SRU San Rafael Swe 50.74 330 P **P** **05 19 28.4 +1.1**
SRU pmax pmax
comp=Z,165nm,1.7s
SRU San Rafael Swe 50.74 330 P **P** **05 19 28.4 +1.1**
MTPU Mount Pierson 50.78 328 P **P** **05 19 28.9 +1.1**
D48A Paudash Townsh 50.80 359 P **P** **05 19 26.3 -1.1**
baz=179
D55A Sainte-Anne-du 50.86 5 P **P** **05 19 27.2 -0.6**
baz=187
BBRC Big Bear Solar 50.89 321 P **P** **05 19 30.5 +2.0**
baz=131,SNR=11
HEC Hector,Ludlow 50.90 322 P **P** **05 19 30.3 +1.9**
baz=132,SNR=25
D54A Lac Fusel, La 50.91 4 P **P** **05 19 27.3 -0.8**
baz=185
Q16A Castle Valley 50.92 330 P **P** **05 19 29.5 +0.8**
SZCU Shurtz Canyon 50.94 327 P **P** **05 19 30.9 +2.0**
D56A ZEC Mazanza, M 50.95 5 P **P** **05 19 28.1 -0.4**
baz=188
D57A Chemin Vers le 51.01 6 P **P** **05 19 29.1 +0.2**
baz=189
TUQ Turquoise Moun 51.05 323 P **P** **05 19 31.2 +1.5**
baz=133,SNR=63
CCUT Cedar City 51.06 327 P **P** **05 19 32.1 +2.3**
E38A The Farm, Brul 51.11 351 P **P** **05 19 29.2 -0.5**
SCI2 San Clemente I 51.12 319 P **P** **05 19 31.7 +1.6**
baz=128
P17A Butcher Ranch, 51.13 330 P **P** **05 19 31.3 +1.1**
MSU Marysvale 51.13 328 P **P** **05 19 32.2 +1.9**
MSU Marysvale 51.13 328 P **P** **05 19 32.2 +1.9**
D58A Chemin du LacG 51.20 7 P **P** **05 19 30.6 +0.3**
baz=190,SNR=6.6
TMUT Trail Mountain 51.23 330 P **P** **05 19 31.9 +0.8**
E63A Oxbow 51.24 11 P **P** **05 19 32.0 +1.3**
E63A IAmb IAmb 05 19 32.9
comp=Z,45nm,0.8s
E63A Oxbow 51.24 11 P **P** **05 19 31.9 +1.2**
baz=196
RWWY Rawlins 51.27 335 P **P** **05 19 32.8 +1.4**
D60A Saint Jean D'O 51.29 9 P **P** **05 19 31.6 +0.6**
baz=193,SNR=5.9
CIS Catalina Islan 51.30 319 P **P** **05 19 32.6 +1.2**
baz=129,SNR=9.9
SHPR Sheep Range 51.33 324 P **P** **05 19 33.2 +1.4**
EFI East Falkland 51.34 162 IAMs_20 IAMs_20 05 40 00.3
comp=Z,2µm,20.0s
RRX Edison Barstow 51.34 322 P **P** **05 19 33.5 +1.8**
baz=131,SNR=5.4
BFSC Mount Baldy Ra 51.34 321 P **P** **05 19 33.2 +1.4**

baz=130,SNR=22
TCRU Three Creeks R 51.34 328 P P 05 19 33.0 +1.0
E64A Bridgewater 51.35 12 P P 05 19 32.9 +1.4
baz=197
RDMU Red Mountain 51.42 332 P P 05 19 33.4 +0.9
LATQ La Tuque 51.49 7 P P 05 19 32.3 -0.2
LATQ PcP 05 20 46.9 +0.2
LATQ La Tuque 51.49 7 P P 05 19 32.6 +0.1
baz=190,SNR=10.0
GSC Goldstone, Bar 51.50 322 P P 05 19 34.3 +1.3
GSC pmax pmax
comp=Z,56nm,1.1s
GSC Goldstone, Bar 51.50 322 P P 05 19 34.3 +1.3
GSC IAmb IAmb 05 19 35.9
comp=Z,56nm,1.1s
GSC Goldstone, Bar 51.50 322 P P 05 19 34.7 +1.7
baz=132,SNR=49
SHOC Shoshone, Teco 51.58 323 P P 05 19 35.2 +1.7
baz=132,SNR=16
MWC Mount Wilson 51.58 320 P P 05 19 35.0 +1.3
MWC pmax pmax
comp=Z,30nm,0.9s
MWC Mount Wilson 51.58 320 P P 05 19 35.0 +1.3
MWC IAmb IAmb 05 19 35.8
comp=Z,30nm,0.8s
PASC Pasadena Art C 51.63 320 P 05 19 34.9 +1.0
PASC Pasadena Art C 51.63 320 P P 05 19 34.8 +0.9
PASC IAmb IAmb 05 19 36.7
comp=Z,55nm,1.2s
D61A St Aubert, Com 51.68 9 P P 05 19 35.0 +1.1
baz=194,SNR=11
D62A Allapoint, All 51.76 10 P P 05 19 35.4 +0.8
D62A IAmb IAmb 05 19 36.7
comp=Z,58nm,0.8s
D62A Allapoint, All 51.76 10 P P 05 19 35.7 +1.2
baz=195,SNR=12
DECC Green Verdugo 51.78 320 P P 05 19 36.6 +1.6
baz=130,SNR=6.9
K22A Casper 51.78 336 P P 05 19 35.9 +0.9
K22A IAmb IAmb 05 19 36.8
comp=Z,35nm,0.8s
K22A Casper 51.78 336 P P 05 19 36.2 +1.2
baz=147,SNR=23
VLDQ Val d'Or 51.82 3 P P 05 19 33.6 -1.3
D63A Stockholm 51.89 11 P P 05 19 36.7 +1.2
baz=196
EDW2 Edwards Air Fo 51.96 321 P P 05 19 37.6 +1.2
baz=130,SNR=49
MPU Maple Canyon 51.99 330 P P 05 19 37.6 +1.0
MPU PcP PcP 05 20 49.3 +0.3
PSUT Pine Spring 52.04 327 P P 05 19 38.6 +1.5
RSSD Black Hills 52.08 339 P P 05 19 38.2 +0.9
RSSD pmax pmax
comp=Z,59nm,0.7s
RSSD Black Hills 52.08 339 P P 05 19 38.2 +0.9
RSSD IAmb IAmb 05 19 39.8
comp=Z,59nm,0.7s
RSSD Black Hills 52.08 339 P P 05 19 38.9 +1.6
baz=150
LRMC Laurel Mtn Rad 52.16 322 P P 05 19 39.5 +1.6
baz=131,SNR=31
BLG Laguna Peak, P 52.16 319 P P 05 19 39.2 +1.4
baz=129
NLU North Lily Min 52.16 330 P P 05 19 39.2 +1.2
OSI Osito Audit: C 52.26 320 P P 05 19 39.7 +1.1
OSI Osito Audit: C 52.26 320 P P 05 19 40.7 +2.2
baz=129
TPNV Topopah Spring 52.27 324 P P 05 19 40.6 +1.8
TPNV Topopah Spring 52.27 324 P P 05 19 40.6 +1.8
TPNV Topopah Spring 52.27 324 P P 05 19 40.8 +2.0
baz=133,SNR=29
FURC Furnace Creek, 52.31 323 P P 05 19 40.6 +1.8
baz=132,SNR=39
JLU Jordanelle 52.34 331 P P 05 19 40.5 +1.2
EYMN Ely 52.40 351 P P 05 19 39.5 +0.2
EYMN Ely 52.40 351 P P 05 19 39.2 -0.2
baz=166,SNR=6.9
MPMC Manual Prospec 52.42 322 P P 05 19 41.2 +1.3
baz=131,SNR=34
SCZ2 Santa Cruz Isl 52.46 319 P P 05 19 41.1 +1.1
baz=128,SNR=6.3
CTU Camp Tracy 52.56 331 P P 05 19 42.1 +1.3
DAC Darwin (Calif) 52.62 323 P P 05 19 42.5 +1.1
DAC pmax pmax
comp=Z,23nm,0.9s
DAC Darwin (Calif) 52.62 323 P P 05 19 42.5 +1.1
ARVC Arvin 52.65 321 P P 05 19 42.9 +1.5
baz=130,SNR=8.9
DUG Dugway, Tooele 52.71 329 P P 05 19 43.6 +1.6
DUG pmax pmax
comp=Z,231nm,1.9s
DUG Dugway, Tooele 52.71 329 P P 05 19 43.5 +1.6
DUG Dugway, Tooele 52.71 329 P P 05 19 43.7 +1.7
baz=138,SNR=39
D32A Dogwood Acres, 52.72 346 P P 05 19 41.4 -0.3
D32A IAmb IAmb 05 20 04.6
comp=Z,41nm,0.9s
TCUT Toone Canyon 52.72 331 P P 05 19 43.4 +1.3
ISA Isabella, Lake 52.77 321 P P 05 19 43.9 +1.6
ISA pmax pmax
comp=Z,120nm,2.0s
ISA Isabella, Lake 52.77 321 P P 05 19 43.9 +1.6
ISA IAmb IAmb 05 19 45.2
comp=Z,120nm,1.9s
ISA Isabella, Lake 52.77 321 P P 05 19 44.0 +1.6
baz=130,SNR=19
LSQQ Lebel-sur-Quev 52.78 3 P P 05 19 41.2 -0.9
baz=185
R11A Troy Canyon, C 52.86 326 P P 05 19 44.7 +1.5
R11A Troy Canyon, C 52.86 326 P P 05 19 45.0 +1.9
baz=135,SNR=52
GRAC Grapevine Rang 52.97 323 P P 05 19 45.8 +2.0
baz=132,SNR=25
CWC Cottonwood Cre 53.03 322 P P 05 19 45.9 +1.6
baz=131
PKM Mcpherson Peak 53.13 320 P P 05 19 46.5 +1.3
baz=128,SNR=19
BW06 Boulder Array 53.16 334 P P 05 19 46.1 +0.8
BW06 IAmb IAmb 05 19 47.1
comp=Z,42nm,0.8s
BW06 Boulder Array 53.16 334 P P 05 19 46.0 +0.7
baz=143,SNR=62
PD31 Pinedale Array 53.16 334 P P 05 19 46.0 +0.6
PD31 IAmb IAmb 05 19 47.1
comp=Z,40nm,0.8s
PDAR Pinedale Array 53.16 334 P P 05 19 45.9 +0.6
comp=Z,34nm,0.7s,baz=127,slow=8.4,SNR=288
PDAR PcP PcP 05 20 52.8 -0.6
comp=Z,4.8nm,0.7s,baz=135,slow=5.2,SNR=4.2
PDAR LR LR 05 42 23.6
comp=Z,550nm,18.3s,baz=144,slow=36
HWUT Hardware Ranch 53.17 331 P P 05 19 46.5 +1.1
VES Vestal, Richgr 53.26 321 P P 05 19 47.4 +1.6
baz=130,SNR=14
BGU Big Grassy Mou 53.37 330 P P 05 19 47.8 +1.0
SPUT South Prenmonto 53.37 331 P P 05 19 48.1 +1.3
MATQ Matagami 53.45 3 P P 05 19 45.7 -1.3
baz=184,SNR=5.9
SMMC Simmler 53.51 320 P P 05 19 49.4 +1.6
baz=128,SNR=15
TIN Tinemaha, Big 53.52 323 P P 05 19 49.7 +1.7
baz=131,SNR=13
VOG Valley Oaks Go 53.75 321 P P 05 19 50.2 +0.8
baz=130
AHID Auburn Hatcher 53.85 333 P P 05 19 51.2 +0.8
AHID IAmb IAmb 05 19 52.2
comp=Z,36nm,0.8s
HVU Hansel Valley 53.89 331 P P 05 19 51.6 +1.0
HVU pmax pmax
comp=Z,41nm,0.8s
HVU Hansel Valley 53.89 331 P P 05 19 51.6 +1.0
PAGB Antelope Grade 53.93 320 P P 05 19 52.0 +1.2
PAGB IAmb IAmb 05 19 52.8
comp=Z,27nm,0.9s
MDND Maddock 54.03 344 P P 05 19 52.0 +0.6
MDND Maddock 54.03 344 P P 05 19 52.4 +1.0
baz=157
REDW Red Top Meadow 54.21 333 P P 05 19 53.8 +0.8
REDW IAMs_20 IAMs_20 05 42 33.6
comp=Z,1μm,18.0s
SNOW Snow King Moun 54.24 333 P P 05 19 54.2 +0.9
MLAC Mammoth, Mammo 54.26 323 P P 05 19 55.2 +1.6
baz=131,SNR=17
OMMB Old Mammoth Mi 54.35 323 P P 05 19 55.7 +1.5
OMMB IAmb IAmb 05 19 56.8
comp=Z,59nm,1.0s
TPAW Teton Pass 54.35 333 P P 05 19 54.1 0.0
TPAW IAmb IAmb 05 19 59.9
comp=Z,61nm,1.2s
ELK Elko 54.37 328 P P 05 19 55.8 +1.5
ELK pmax pmax
comp=Z,49nm,0.9s
ELK Elko 54.37 328 P P 05 19 55.8 +1.5
ELK IAmb IAmb 05 19 57.0
comp=Z,49nm,0.9s
ELK IAMs_20 IAMs_20 05 42 30.9
comp=Z,1μm,18.0s
NV11 Mina Array Sit 54.39 324 P P 05 19 55.9 +1.6
NV11 IAmb IAmb 05 19 56.6
comp=Z,45nm,0.8s
MDPB Devils Postpil 54.41 323 P P 05 19 56.0 +1.3
MOOW Moose Ponds 54.47 334 P P 05 19 55.5 +0.6
MOOW IAmb IAmb 05 19 56.9
comp=Z,56nm,1.6s
NVAR Mina Array Bea 54.47 324 P P 05 19 56.6 +1.6
comp=Z,30nm,0.7s,baz=132,slow=7.2,SNR=332
NVAR PcP PcP 05 20 59.0 +0.6
comp=Z,2.3nm,0.5s,baz=115,slow=4.1,SNR=6.9
NVAR LR LR 05 42 16.5
comp=Z,394nm,19.8s,baz=159,slow=35
PMPB Monarch Peak 54.58 320 P P 05 19 56.6 +1.0
PMPB IAmb IAmb 05 19 58.1
comp=Z,58nm,0.9s
IMW Indian Meadow 54.67 334 P P 05 19 57.2 +0.7
IMW PcP PcP 05 20 59.5 +0.4
FLWY Flagg Ranch 54.71 334 P P 05 19 57.5 +0.8
FLWY IAmb IAmb 05 19 59.3
comp=Z,40nm,0.8s
RYN Ryan 54.73 324 P P 05 19 58.1 +1.3
RYN IAmb IAmb 05 19 59.5
comp=Z,139nm,1.9s
KVN Kaiserville 54.77 325 P P 05 19 58.1 +1.0
KVN pmax pmax
comp=Z,34nm,1.0s
KVN Kaiserville 54.77 325 P P 05 19 58.1 +1.0
KVN IAmb IAmb 05 19 59.4
comp=Z,34nm,1.0s
H17A Grant Village 54.91 334 P P 05 19 59.4 +1.3
H17A IAmb IAmb 05 20 02.9
comp=Z,92nm,1.6s
H17A Grant Village 54.91 334 P P 05 19 59.6 +1.5
baz=143,SNR=22
YPP Pitchstone Pla 54.91 334 P P 05 19 59.4 +1.3
RLMT Red Lodge 54.94 336 P P 05 19 58.8 +0.6
RLMT IAmb IAmb 05 20 00.2
comp=Z,110nm,1.6s
RLMT Red Lodge 54.94 336 P P 05 19 59.0 +0.8
baz=145,SNR=26
LKWY Lake 54.97 335 P P 05 19 59.5 +1.0
LKWY pmax pmax
comp=Z,36nm,1.0s
LKWY MLR MLR
comp=Z,1μm,18.0s
LKWY Lake 54.97 335 P P 05 19 59.5 +1.0
LKWY IAmb IAmb 05 20 01.8
comp=Z,36nm,1.0s
LKWY IAMs_20 IAMs_20 05 44 06.6
comp=Z,1μm,18.0s
YMP Mirror Lake Pl 55.00 335 P P 05 20 00.7 +1.8
LAO LASA Array 55.08 339 P P 05 19 58.5 -0.5
LAO IAmb IAmb 05 20 00.8
comp=Z,100nm,1.4s
LAO LASA Array 55.08 339 P P 05 19 59.8 +0.7
baz=149
YUF Upper Falls 55.13 335 P P 05 20 00.2 +0.5
YNE Yellowstone No 55.15 335 P P 05 20 00.8 +0.9
WAKR Walker 55.19 323 P P 05 20 02.1 +1.9
WAKR IAmb IAmb 05 20 03.1
comp=Z,32nm,0.8s
YNR Norris Junctio 55.21 334 P P 05 20 01.2 +0.9
YMR Madison River 55.29 334 P P 05 20 02.1 +1.2
SAO San Andreas Ge 55.33 321 P P 05 20 02.0 +1.1
SAO pmax pmax
comp=Z,70nm,1.7s
SAO San Andreas Ge 55.33 321 P P 05 20 02.0 +1.1
SAO IAmb IAmb 05 20 04.5
comp=Z,70nm,1.7s
YHH Holmes Hill 55.34 334 P P 05 20 02.7 +1.4
YERR Yerington 55.39 324 P P 05 20 03.1 +1.5
YERR IAmb IAmb 05 20 03.7
comp=Z,34nm,0.8s
ULM Lac du Bonnet 55.41 348 P P 05 20 01.4 +0.1
ULM pmax pmax
comp=Z,77nm,0.8s
ULM Lac du Bonnet 55.41 348 P P 05 20 01.3 +0.1
comp=Z,55nm,0.8s,baz=162,slow=7.4,SNR=109
ULM Lac du Bonnet 55.41 348 P P 05 20 01.4 +0.1
YHB Horse Butte 55.46 334 P P 05 20 02.0 0.0
CMB Columbia Colle 55.46 322 P P 05 20 02.6 +0.6
CMB pmax pmax
comp=Z,66nm,2.0s
CMB Columbia Colle 55.46 322 P P 05 20 02.6 +0.6
CMB IAmb IAmb 05 20 13.2
comp=Z,66nm,1.9s
YHL Hebgen Lake 55.53 334 P P 05 20 04.3 +1.7
QLMT Earthquake Lak 55.62 334 P P 05 20 05.1 +1.9
GCMT Greycliff 55.65 336 P P 05 20 04.3 +1.0
PNTR Pine Nut 55.67 324 P P 05 20 05.3 +1.6
PNTR IAmb IAmb 05 20 06.5
comp=Z,38nm,0.8s
VCNR Virginia City 55.83 324 P P 05 20 06.3 +1.5
VCNR IAmb IAmb 05 20 07.5
comp=Z,45nm,0.8s
DGMT Dagmar 55.94 341 P P 05 20 06.2 +1.0
DGMT IAmb IAmb 05 20 07.4
comp=Z,38nm,1.1s
DGMT Dagmar 55.94 341 P P 05 20 06.2 +1.0
baz=152,SNR=5.4
PAHR Pah Rah Range 55.95 325 P P 05 20 07.0 +1.5
RUBR Rubicon Trail 55.97 323 P P 05 20 06.8 +0.9
RUBR IAmb IAmb 05 20 11.2
comp=Z,43nm,1.0s
MCMT McKenzie Canyo 56.25 333 P P 05 20 09.4 +1.6
AFDM Forest Hills D 56.40 323 P P 05 20 09.5 +0.9
AFDM IAmb IAmb 05 20 10.8
comp=Z,99nm,1.8s
DLMT Dillon 56.55 334 P P 05 20 11.0 +1.2
DLMT IAmb IAmb 05 20 12.1
comp=Z,29nm,0.8s
MFID Camas Ranch 56.61 330 P P 05 20 11.6 +1.5
BEKR Beckworth 56.62 324 P P 05 20 11.9 +1.5
BEKR IAmb IAmb 05 20 12.5
comp=Z,40nm,0.8s
DRLN Deer Lake 56.63 18 P P 05 20 10.1 0.0
MCCM Marconi Confer 57.07 321 P P 05 20 14.5 +1.2
MCCM IAmb IAmb 05 20 16.2
comp=Z,53nm,0.9s
ORV Oroville 57.10 323 P P 05 20 15.1 +1.5
ORV pmax pmax
comp=Z,342nm,1.9s
ORV Oroville 57.10 323 P P 05 20 15.1 +1.5
WVOR Wild Horse Val 57.37 327 P P 05 20 16.5 +0.9
WVOR pmax pmax
comp=Z,104nm,1.1s
WVOR Wild Horse Val 57.37 327 P P 05 20 16.5 +0.9
EGMT Eagleton 57.51 337 P P 05 20 17.3 +0.9
EGMT IAmb IAmb 05 20 18.3
comp=Z,36nm,0.9s
EGMT Eagleton 57.51 337 P P 05 20 17.2 +0.9
baz=145,SNR=8.0
O03E Paynes Creek 57.74 324 P P 05 20 18.4 +0.2
baz=129,SNR=27
J08A Circle Bar Ran 57.92 328 P P 05 20 20.3 +0.9
J08A IAmb IAmb 05 20 21.3
comp=Z,44nm,0.7s
MOD Modoc Plateau 57.92 326 P P 05 20 20.6 +1.1
O02D Mt. Diablo Mer 58.26 323 P P 05 20 21.9 +0.1
baz=128,SNR=12
MSO Missoula 58.28 334 P P 05 20 23.1 +1.3
MSO Missoula 58.28 334 P P 05 20 23.2 +1.3
baz=140,SNR=67
WDC Whiskeytown Da 58.36 323 P P 05 20 21.5 -0.9
WDC pmax pmax
comp=Z,19nm,0.8s
WDC Whiskeytown Da 58.36 323 P P 05 20 21.5 -0.9
BMO Blue Mountains 58.38 330 P P 05 20 22.8 +0.2
BMO pmax pmax
comp=Z,43nm,1.2s
BMO Blue Mountains 58.38 330 P P 05 20 22.8 +0.2
BMO IAmb IAmb 05 20 24.1
comp=Z,43nm,1.2s
KCPM Cahto Peak 58.44 322 P P 05 20 24.7 +1.5
N02D Trinity Center 58.71 324 P P 05 20 24.4 -0.5
baz=129,SNR=11
M04C Macdoel 58.72 325 P P 05 20 26.1 +1.1
baz=130,SNR=79
KMRM Mail Ridge 58.84 323 P P 05 20 26.8 +1.0
KMRM IAmb IAmb 05 20 28.5
comp=Z,54nm,0.9s
I07A Izee 58.96 328 P P 05 20 27.9 +1.2
M02C Callahan 59.05 324 P P 05 20 27.5 +0.2
baz=129,SNR=17
TAOE Nuku Hiva Isla 59.09 262 *e*T T 06 23 40.3
comp=Z,50nm,0.2s
JTMT Jette 59.13 334 P P 05 20 28.9 +1.1
JTMT IAmb IAmb 05 20 30.3
comp=Z,35nm,0.8s
JTMT IAMs_20 IAMs_20 05 45 08.9
comp=Z,1μm,20.0s
F10A Beach Ranch, E 59.15 331 P P 05 20 29.1 +1.1
YBH Yreka Blue Hor 59.19 324 P P 05 20 27.9 -0.3
YBH pmax pmax
comp=Z,45nm,0.9s
YBH Yreka Blue Hor 59.19 324 P P 05 20 27.9 -0.3
YBH IAmb IAmb 05 20 29.1
comp=Z,45nm,0.8s
K04D Chiloquin, OR 59.21 326 P P 05 20 29.8 +1.3
baz=131,SNR=17
KHMM Horse Mountain 59.25 323 P P 05 20 29.2 +0.4
KHMM IAmb IAmb 05 20 30.8
comp=Z,43nm,0.9s
L04D Klamath Falls 59.26 325 P P 05 20 29.5 +0.7
baz=130,SNR=35
J05D Fort Rock, OR 59.35 327 P P 05 20 31.0 +1.5
baz=131,SNR=46
JCC Jacoby Creek, 59.40 323 P P 05 20 29.4 -0.2
G08A Pilot Rock 59.52 330 P P 05 20 31.8 +1.2
G08A IAMs_20 IAMs_20 05 45 32.3
comp=Z,903nm,20.0s
PINE Pine Mountain 59.53 327 P P 05 20 32.4 +1.6
SCHQ Schefferville 59.61 9 P P 05 20 30.4 -0.5
comp=Z,16nm,0.8s,baz=218,slow=5.0,SNR=29
SCHQ LR LR 05 49 10.9
comp=Z,431nm,18.3s,baz=203,slow=39
SCHQ Schefferville 59.61 9 P P 05 20 29.8 -1.0
SCHQ IAmb IAmb 05 20 44.5
comp=Z,27nm,0.9s
KRMB Red Mountain 59.76 324 P P 05 20 33.6 +1.4
J04D Umpqua Nationa 59.81 326 P P 05 20 33.9 +1.2
baz=130,SNR=58
HUMO Hull Mountain 59.88 325 P P 05 20 32.7 -0.2
L02E Cave Junction 59.97 324 P P 05 20 34.6 +1.1
baz=129,SNR=18
I05D Terrebonne, OR 60.11 328 P P 05 20 36.2 +1.6
baz=132,SNR=62
I04A Tendick Farm, 60.34 326 P P 05 20 36.5 +0.4
baz=130,SNR=18
K02D Willamette Mer 60.34 325 P P 05 20 37.5 +1.4
baz=129,SNR=52
KBO Bosley Butte 60.37 324 P P 05 20 38.6 +2.2
E08A Dider Farm, El 60.41 331 P P 05 20 36.6 +0.2
E08A IAmb IAmb 05 20 37.6
comp=Z,19nm,0.8s
HAWA Hanford 60.58 330 P P 05 20 38.5 +0.8
HAWA IAmb IAmb 05 20 39.3
comp=Z,20nm,0.8s
G05D Wamic, OR 60.70 328 P P 05 20 40.5 +2.0
baz=132,SNR=26
NEW Newport 60.78 333 P P 05 20 39.2 +0.2
NEW pmax pmax
comp=Z,77nm,1.4s
NEW Newport 60.78 333 LR LR 05 47 39.7
comp=Z,450nm,19.5s,baz=135,slow=37
NEW Newport 60.78 333 P P 05 20 39.1 +0.2
NEW IAmb IAmb 05 20 41.0
comp=Z,77nm,1.4s
NEW Newport 60.78 333 P P 05 20 39.9 +0.9
baz=138,SNR=29
J01E Myrtle Point 60.79 325 P P 05 20 40.8 +1.7
baz=129,SNR=13
H04A Detroit Lake 60.79 327 P P 05 20 39.9 +0.7
H04A IAmb IAmb 05 20 41.0
comp=Z,50nm,1.0s
I03D Drain, OR 60.79 326 P P 05 20 40.3 +1.1
baz=130
KEBM Edson Butte 60.84 325 P P 05 20 40.4 +0.9
FFC Flin Flon 60.93 346 P P 05 20 39.8 -0.1
FFC pmax pmax
comp=Z,10.0nm,0.9s
FFC Flin Flon 60.93 346 P P 05 20 39.8 -0.1
H04D Lebanon 60.99 327 P P 05 20 40.8 +0.4
baz=130,SNR=9.8
F05D White Salmon 61.21 329 P P 05 20 43.6 +1.7
baz=132,SNR=14
I02D Swisshome 61.33 326 P P 05 20 44.5 +1.8
baz=129,SNR=10
COR Corvallis 61.34 327 P P 05 20 44.5 +1.7
COR pmax pmax
comp=Z,177nm,1.3s
COR Corvallis 61.34 327 P P 05 20 44.5 +1.7
G03D McMinnville, O 61.72 327 P P 05 20 46.5 +1.2
baz=130,SNR=9.0
F04A Amboy 61.74 328 P P 05 20 46.3 +0.8
LTY Liberty 61.74 330 P P 05 20 46.7 +1.1
LTY IAmb IAmb 05 20 47.4
comp=Z,30nm,0.8s
HOPE Hope Point 61.84 152 P P 05 20 46.3 +0.3
HOPE pmax pmax
comp=Z,174nm,1.2s
HOPE MLR MLR
comp=Z,2μm,20.0s
HOPE Hope Point 61.84 152 P P 05 20 46.3 +0.3
HOPE Hope Point 61.84 152 IAMs_20 IAMs_20 05 49 27.2
comp=Z,2μm,20.0s
B08A Colville Reser 61.87 332 P P 05 20 47.1 +0.8
LON Longmire 61.97 329 P P 05 20 47.9 +0.8
LON pmax pmax
comp=Z,40nm,0.9s
LON Longmire 61.97 329 P P 05 20 47.9 +0.8
LON IAmb IAmb 05 20 49.0
comp=Z,40nm,0.8s
PMSA Palmer Station 62.01 172 *e*P P 05 20 47.8 +0.9
F04D Rainier, OR 62.15 328 P P 05 20 50.1 +1.8
baz=131,SNR=6.9
E04D Cinebar 62.23 329 P P 05 20 49.8 +1.0
baz=131,SNR=23
C06D Leavenworth 62.31 331 P P 05 20 50.5 +1.1
baz=134
F03A Seaside 62.34 328 P P 05 20 51.6 +2.0
D05A Enumclaw 62.35 330 P P 05 20 50.8 +1.2
E03A Lebam 62.74 328 P P 05 20 53.8 +1.7
D04E Lakebay 62.74 329 P P 05 20 53.7 +1.5
baz=132,SNR=8.0
B06A Marblemount 63.01 331 P P 05 20 54.4 +0.5
B06A IAmb IAmb 05 20 55.7
comp=Z,36nm,0.7s
B05A Bryant 63.13 330 P P 05 20 55.2 +0.5
baz=133,SNR=25
D03D Eldon 63.14 329 P P 05 20 56.0 +1.2
baz=131,SNR=30
FCC Fort Churchill 63.29 352 P P 05 20 55.1 -0.4
FCC pP 05 20 55.4 -6.4
A04D Lummi Island 63.74 330 P P 05 21 00.2 +1.5
baz=132,SNR=26
PGC Sidney 64.06 330 P P 05 21 01.7 +0.9
LLLB Lillooet 64.63 332 P P 05 21 05.2 +0.6
ASCN Ascension 66.22 97 P P 05 21 15.8 +0.1
PPT2 Papeete2 68.57 253 *e*S S 05 30 21.8 -11
comp=Z,302nm,24.2s
BBB Bella Bella 68.61 331 LR LR 05 53 05.2
comp=Z,507nm,18.2s,baz=162,slow=37
BBB Bella Bella 68.61 331 P P 05 21 30.5 +0.5
TBI Tubuai 68.85 247 *e*S S 05 30 24.0 -12
comp=Z,278nm,25.8s
TBI Tubuai 68.85 247 *e*T T 06 35 54.9
comp=Z,6.4nm,0.3s
YKA Yellowknife Ar 70.95 344 P P 05 21 43.9 -0.3
comp=Z,12nm,0.7s,baz=142,slow=5.6,SNR=172
YKA PcP PcP 05 22 04.5 0.0
comp=Z,4.5nm,0.6s,baz=149,slow=4.6,SNR=17
DIB Dawson Inlet, 71.36 330 P P 05 21 46.5 -0.3
DIB IAmb IAmb 05 21 49.1
comp=Z,46nm,0.9s
DLBC Dease Lake 73.34 335 P P 05 21 58.8 +0.1
DLBC IAmb IAmb 05 22 01.0
comp=Z,36nm,0.8s
SFJD Kangerlussuaq 73.88 12 P P 05 22 01.3 -0.2

SFJD pmax pmax
comp=Z,17nm,0.9s
SFJD Kangerlussuaq 73.88 12 P **P** **05 22 01.3 -0.2**
JIS Juneau Island 75.11 334 P **P** **05 22 09.1 +0.3**
JIS IAmb IAmb 05 22 11.4
comp=Z,38nm,1.4s
BESE Bessie Mountai 75.48 334 P **P** **05 22 10.9 -0.2**
BESE IAmb IAmb 05 22 13.1
comp=Z,38nm,1.0s
ILULI Ilulissat 75.69 11 P **P** **05 22 12.4 +0.4**
ILULI pmax pmax
comp=Z,233nm,1.8s
ILULI Ilulissat 75.69 11 P **P** **05 22 12.4 +0.4**
ANGG Ammassalik, Gr 76.03 17 P **P** **05 22 13.3 -0.7**
ANGG IAmb IAmb 05 22 14.8
comp=Z,32nm,0.8s
SKAG Skagway 76.17 335 P **P** **05 22 15.6 +0.6**
SKAG IAmb IAmb 05 22 17.4
comp=Z,61nm,2.0s
LIC Lamto 76.37 83 *eP* **P** **05 22 17.9 +0.9**
comp=Z,170nm,1.2s
LIC Lamto 76.37 83 P **P** **05 22 17.9 +0.9**
TIC Toumodi 76.42 82 *eP* **P** **05 22 18.3 +1.0**
TIC Toumodi 76.42 82 P **P** **05 22 18.3 +1.0**
TIC Toumodi 76.42 82 P **P** **05 22 18.3 +1.0**
PUH Pauahi 76.58 291 P **P** **05 22 17.9 -0.4**
DBIC Dimbokro 76.58 82 P **P** **05 22 19.4 +1.2**
comp=Z,36nm,0.8s,baz=244,slow=5.3,SNR=46
DBIC LR LR 05 55 45.2
comp=Z,558nm,18.1s,baz=228,slow=35
DBIC Dimbokro 76.58 82 P **P** **05 22 19.4 +1.2**
WHY Whitehorse 76.65 336 P **P** **05 22 18.0 +0.2**
SDHHI Sand Hill 76.65 291 P **P** **05 22 18.6 -0.1**
KIC Kosan Boka 76.67 83 *eP* **P** **05 22 19.8 +1.1**
comp=Z,199nm,1.1s
KIC Kosan Boka 76.67 83 P **P** **05 22 19.8 +1.1**
KHU Kahuku 76.93 291 P **P** **05 22 19.0 -1.4**
KHU pmax pmax
comp=Z,156nm,1.2s
KHU Kahuku 76.93 291 P **P** **05 22 19.0 -1.4**
MORF Marmelete 78.29 51 *eP* **P** **05 22 27.5 +0.1**
MORF AMb AMB 05 22 33.7
comp=Z,77nm,1.7s
MORF Marmelete 78.29 51 *eP* **P** **05 22 28.0 +0.6**
comp=Z,80nm,1.6s
MORF Marmelete 78.29 51 *eP* **P** **05 22 27.5 +0.1**
PTEO Sao Teotonio 78.29 51 *eP* **P** **05 22 27.4 +0.1**
AVE Averroes 78.36 55 P **P** **05 22 30.2 +2.4**
SNR=7.1
PNCL Nicolau / Gran 78.58 50 *eP* **P** **05 22 30.7 +1.8**
comp=Z,47nm,1.4s
PBDV Barranco-do-Ve 78.83 51 *eP* **P** **05 22 32.7 +2.3**
PCVE Castro Verde 78.84 51 *eP* **P** **05 22 32.5 +2.1**
RES Resolute Bay 78.86 356 P **P** **05 22 29.1 -0.6**
RES pmax pmax
comp=Z,11nm,1.0s
RES Resolute Bay 78.86 356 LR LR 05 57 54.9
comp=Z,563nm,19.6s,baz=151,slow=36
RES Resolute Bay 78.86 356 P **P** **05 22 29.1 -0.6**
PTOM Tomar 79.04 49 *eP* **P** **05 22 32.7 +1.3**
comp=Z,67nm,1.7s
PMTG Montargil 79.04 49 *eP* **P** **05 22 32.4 +1.0**
comp=Z,41nm,1.8s
PBEJ Beja 79.06 50 *eP* **P** **05 22 33.0 +1.4**
comp=Z,32nm,1.5s
PCAS Casmilo, Conde 79.08 48 *eP* **P** **05 22 33.1 +1.5**
comp=Z,72nm,1.7s
COI Coimbra 79.18 48 *eP* **P** **05 22 33.8 +1.6**
comp=Z,133nm,1.1s
COI Coimbra 79.18 48 P **P** **05 22 32.7 +0.5**
COI pmax pmax
comp=Z,105nm,1.0s
COI Coimbra 79.18 48 P **P** **05 22 32.7 +0.5**
ZGR Zagora 79.22 59 P **P** **05 22 35.1 +2.4**
SNR=7.1
TZRR Tazzarine 79.39 58 P **P** **05 22 36.3 +2.6**
SNR=11
PESTR Estremoz 79.47 50 P **P** **05 22 35.7 +1.9**
SNR=8.0
PESTR Estremoz 79.47 50 P **P** **05 22 34.6 +0.8**
CTGM Chitina Glacie 79.52 334 P **P** **05 22 34.9 +1.1**
PVIS Viseu 79.69 48 *eP* **P** **05 22 35.9 +0.9**
comp=Z,63nm,2.0s
BARN Barnard Glacie 79.70 334 P **P** **05 22 35.5 +0.6**
PMRV Marv??o 79.75 49 *eP* **P** **05 22 35.7 +0.3**
comp=Z,36nm,1.7s
PCBR Castelo Branco 79.79 49 *eP* **P** **05 22 36.3 +0.8**
comp=Z,39nm,1.5s
PCAB Cabril 79.84 47 *eP* **P** **05 22 36.8 +1.0**
comp=Z,58nm,2.1s
MTE Manteigas 79.87 48 *eP* **P** **05 22 37.0 +1.0**
comp=Z,45nm,1.7s
MTE Manteigas 79.87 48 P **P** **05 22 35.1 -0.9**
PVRL Vila Real 79.96 47 *eP* **P** **05 22 37.7 +1.3**
comp=Z,63nm,1.7s
BALM Baldy 79.99 334 P **P** **05 22 36.2 -0.1**
TGL Tana Glacier 80.07 334 P **P** **05 22 37.2 +0.5**
TGL IAmb IAmb 05 22 38.7
comp=Z,38nm,1.1s
CRQM Cirque 80.21 334 P **P** **05 22 38.4 +0.8**
VNA3 Neumayer Olymp 80.39 162 P **P** **05 22 38.2 0.0**
MVO Moncorvo 80.43 47 *eP* **P** **05 22 40.1 +1.1**
comp=Z,84nm,1.2s
MCARA McCarthy VSAT 80.44 334 P **P** **05 22 39.7 +1.1**
MCARA IAmb IAmb 05 22 40.9
comp=Z,64nm,1.1s
EPYK Eagle Plains 80.51 340 P **P** **05 22 38.7 -0.1**
EPYK IAmb IAmb 05 22 40.5
comp=Z,143nm,1.9s
EPYK Eagle Plains 80.51 340 P **P** **05 22 39.3 +0.5**
baz=123,SNR=16
VRDI Verde Repeater 80.56 334 P **P** **05 22 40.1 +0.7**
VRDI IAmb IAmb 05 22 41.3
comp=Z,45nm,1.1s
TULEG Thule 80.56 3 P **P** **05 22 38.4 -0.5**
MDT Midelt 80.57 56 P **P** **05 22 42.5 +2.5**
SNR=10
INK Inuvik 80.60 343 P **P** **05 22 39.1 -0.1**
INK pmax pmax
comp=Z,122nm,1.6s
INK Inuvik 80.60 343 P **P** **05 22 39.1 -0.1**
INK IAmb IAmb 05 22 41.0
comp=Z,122nm,1.6s
VNA1 Neumayer--Stat 80.67 161 P **P** **05 22 40.1 +0.5**
PBRG Braganca 80.79 47 *eP* **P** **05 22 42.2 +1.3**
comp=Z,59nm,1.8s
GLB Gilahina Butte 80.81 334 P **P** **05 22 40.8 +0.2**
GLB IAmb IAmb 05 22 42.4
comp=Z,42nm,1.1s
SUMG Summit 80.87 12 P **P** **05 22 40.8 -0.4**
SUMG pmax pmax
comp=Z,76nm,1.0s
SUMG Summit 80.87 12 *i* P **P** **05 22 42.1 +1.0**
comp=Z,138nm,0.9s
SUMG Summit 80.87 12 P **P** **05 22 40.8 -0.4**
SUMG IAmb IAmb 05 22 43.1
comp=Z,76nm,1.0s
EGAK Eagle 81.27 338 P **P** **05 22 43.1 +0.2**
EGAK IAmb IAmb 05 22 44.5
comp=Z,38nm,0.9s
MENT Mentasta 81.42 336 P **P** **05 22 44.2 +0.4**
DOT Dot Lake 81.88 336 P **P** **05 22 46.2 0.0**
DOT IAmb IAmb 05 22 47.5
comp=Z,25nm,0.8s
SCRK Sand Creek 81.99 337 P **P** **05 22 46.9 0.0**
PAB San Pablo 82.08 49 P **P** **05 22 47.7 -0.1**
PAB pmax pmax
comp=Z,17nm,1.0s
PAB San Pablo 82.08 49 P **P** **05 22 47.7 -0.1**
PAX Paxson 82.16 335 P **P** **05 22 47.4 -0.4**
PAX pmax pmax
comp=Z,36nm,0.9s
PAX Paxson 82.16 335 P **P** **05 22 47.4 -0.4**
PAX IAmb IAmb 05 22 48.8
comp=Z,36nm,0.9s
RIDG Independent Ri 82.23 336 P **P** **05 22 48.3 +0.2**
RIDG IAmb IAmb 05 22 49.5
comp=Z,42nm,1.0s
ESDC Sonseca Array 82.40 49 P **P** **05 22 50.8 +1.3**
comp=Z,3.9nm,0.6s,baz=268,slow=4.4,SNR=34
ESDC Sonseca Array 82.40 49 IAmb IAmb 05 22 52.5
comp=Z,38nm,1.7s
ESBB Sonseca Array 82.40 49 P **P** **05 22 49.4 -0.1**
ESBB IAmb IAmb 05 22 52.5
comp=Z,76nm,1.8s

SCM Sheep Creek Mo 82.50 334 P **P** **05 22 49.9 +0.4**
SCM pmax pmax
comp=Z,35nm,0.8s
SCM Sheep Creek Mo 82.50 334 P **P** **05 22 49.9 +0.4**
SCM IAmb IAmb 05 22 50.3
comp=Z,35nm,0.8s
SNAA Sanae 82.61 162 P **P** **05 22 49.8 -0.1**
SNAA Sanae 82.61 162 P **P** **05 22 49.9 -0.1**
SNAA pmax pmax
comp=Z,184nm,1.4s
SNAA Sanae 82.61 162 LR LR 05 55 02.7
comp=Z,297nm,21.8s,baz=328,slow=32
SNAA Sanae 82.61 162 P **P** **05 22 49.9 -0.1**
SNAA IAMs_20 IAMs_20 05 53 31.1
comp=Z,665nm,21.0s
KNK Knik Glacier 82.84 333 P **P** **05 22 51.2 0.0**
KNK IAmb IAmb 05 22 52.8
comp=Z,22nm,1.0s
KNK IAMs_20 IAMs_20 06 05 39.8
comp=Z,912nm,19.0s
SML Sawmill 82.93 334 P **P** **05 22 51.4 -0.3**
DHY Denali Highway 83.00 335 P **P** **05 22 51.8 -0.4**
GHO Glory Hole Cre 83.18 334 P **P** **05 22 52.4 -0.7**
GHO IAmb IAmb 05 22 53.6
comp=Z,30nm,0.8s
GHO IAMs_20 IAMs_20 06 07 27.7
comp=Z,972nm,19.0s
SESP Santiago Espad 83.19 51 P **P** **05 22 56.0 +2.2**
SNR=20
FIGM Figuig 83.24 57 P **P** **05 22 57.0 +2.8**
SNR=28
PRP Porcupine Dome 83.25 338 P **P** **05 22 53.5 0.0**
PRP IAmb IAmb 05 22 54.8
comp=Z,80nm,2.0s
RC01 Rabbit Creek A 83.30 333 P **P** **05 22 53.3 -0.3**
RC01 IAmb IAmb 05 22 55.3
comp=Z,32nm,0.7s
HDA Harding Lake 83.35 336 P **P** **05 22 53.4 -0.5**
HDA IAmb IAmb 05 22 54.7
comp=Z,37nm,1.2s
HDA Harding Lake 83.35 336 P **P** **05 22 53.6 -0.2**
baz=113
BRLK Bradley Lake 83.38 331 P **P** **05 22 53.0 -1.2**
IL31 83.47 337 P **P** **05 22 53.9 -0.4**
IL31 IAmb IAmb 05 22 55.3
comp=Z,23nm,1.1s
ILAR Eielson Array 83.47 337 P **P** **05 22 54.0 -0.4**
comp=Z,9.3nm,0.9s,baz=140,slow=3.5,SNR=63
ILAR PP **PP** **05 26 03.3 -3.3**
comp=Z,0.9nm,0.8s,baz=102,slow=4.8,SNR=4.3
FYU Fort Yukon 83.58 339 P **P** **05 22 55.4 +0.4**
TOC5 Torodi Ar. Sit 83.61 76 IAMs_20 IAMs_20 05 59 51.6
comp=Z,1µm,19.0s
TOC7 Torodi Ar. Sit 83.62 76 IAMs_20 IAMs_20 06 00 02.8
comp=Z,927nm,19.0s
TOB5 Torodi Ar. Sit 83.62 76 IAMs_20 IAMs_20 06 00 01.8
comp=Z,919nm,19.0s
TOB4 Torodi Ar. Sit 83.62 76 IAMs_20 IAMs_20 05 59 52.9
comp=Z,894nm,19.0s
TOA3 Torodi Ar. Sit 83.63 76 IAMs_20 IAMs_20 06 00 03.1
comp=Z,887nm,19.0s
TOA0 Torodi Ar. Sit 83.63 76 P **P** **05 22 56.8 +0.5**
TOA0 IAmb IAmb 05 22 58.2
comp=Z,64nm,1.6s
TOA0 IAMs_20 IAMs_20 06 00 03.2
comp=Z,898nm,19.0s
TORD Torodi Ar. Bea 83.63 76 P **P** **05 22 56.6 +0.3**
comp=Z,9.5nm,0.8s,baz=314,slow=4.2,SNR=48
TORD LR LR 06 00 04.1
comp=Z,805nm,19.0s,baz=295,slow=36
TOC4 Torodi Ar. Sit 83.63 76 IAMs_20 IAMs_20 05 59 52.2
comp=Z,936nm,19.0s
TOA2 Torodi Ar. Sit 83.64 76 IAMs_20 IAMs_20 05 59 52.3
comp=Z,950nm,19.0s
TOB3 Torodi Ar. Sit 83.64 76 IAMs_20 IAMs_20 06 00 02.4
comp=Z,882nm,19.0s
TOC3 Torodi Ar. Sit 83.66 76 IAMs_20 IAMs_20 06 00 02.8
comp=Z,969nm,19.0s
TOC2 Torodi Ar. Sit 83.66 76 IAMs_20 IAMs_20 06 00 02.9
comp=Z,962nm,19.0s
RND Reindeer 83.74 335 P **P** **05 22 56.3 +0.3**
RND pmax pmax
comp=Z,112nm,1.6s
RND Reindeer 83.74 335 P **P** **05 22 56.3 +0.3**
CCB Clear Creek Bu 83.78 337 P **P** **05 22 55.4 -0.6**
POKR Poker Plat Res 83.82 337 P **P** **05 22 56.3 +0.1**
baz=113
WRH Wood River Hil 83.83 336 P **P** **05 22 56.2 -0.1**
COLA College 83.89 337 P **P** **05 22 54.9 -1.6**
COLA pmax pmax
comp=Z,53nm,1.8s
COLA College 83.89 337 P **P** **05 22 54.9 -1.6**
COLA IAmb IAmb 05 23 09.8
comp=Z,53nm,1.8s
TCOL CIGO, UAF Yank 83.89 337 P **P** **05 22 56.9 +0.4**
baz=112
MCK McKinley 83.90 335 P **P** **05 22 56.4 -0.3**
MCK pmax pmax
comp=Z,19nm,1.1s
MCK McKinley 83.90 335 P **P** **05 22 56.4 -0.3**
MDM Murphy Dome 84.07 337 P **P** **05 22 57.4 -0.1**
MDM IAmb IAmb 05 22 58.8
comp=Z,30nm,1.0s
BWN Browne 84.28 336 P **P** **05 22 58.5 0.0**
TRF Thorofare Moun 84.36 335 P **P** **05 22 58.8 -0.5**
RSO Redoubt South 84.49 332 P **P** **05 23 00.2 +0.3**
KTH Kantishna Hill 84.67 335 P **P** **05 23 00.0 -0.6**
KTH IAmb IAmb 05 23 01.5
comp=Z,25nm,0.9s
BPAW Bear Paw Mtn. 84.88 336 P **P** **05 23 01.4 -0.2**
PPLA Purkeypile 84.99 334 P **P** **05 23 01.6 -0.7**
MLY Manley 85.09 336 P **P** **05 23 02.5 -0.2**
COLD Coldfoot 85.65 339 P **P** **05 23 05.6 +0.2**
QSPA South Pole Qui 86.24 180 P **P** **05 23 08.7 +0.2**
QSPA South Pole Qui 86.24 180 IAMs_20 IAMs_20 06 00 44.4
comp=Z,1µm,19.0s
LFF La Frestale 86.75 45 *eP* **P** **05 23 11.1 -0.2**
LFF pmax pmax
comp=Z,12nm,0.7s
NVL N'lazarevskaya 87.30 161 ⇓*iP* **P** **05 23 13.1 -0.3**
NVL pmax pmax
comp=Z,91nm,1.3s
DAG Danmarks Havn 87.56 12 *i* P **P** **05 23 14.7 +0.1**
DAG pmax pmax
comp=Z,56nm,1.2s
DAG Danmarks Havn 87.56 12 *i* P **P** **05 23 14.7 +0.1**
comp=Z,56nm,1.2s
TAM Tamanrasset 88.14 67 P **P** **05 23 18.6 -0.1**
TAM pmax pmax
comp=Z,10.0nm,0.9s
TAM Tamanrasset 88.14 67 P **P** **05 23 18.6 -0.1**
CLF Chambon-Foret 88.22 42 P **P** **05 23 19.7 +1.4**
CLF IAmb IAmb 05 23 20.0
comp=Z,41nm,1.1s
SSB Saint Sauveur 89.46 45 P **P** **05 23 24.0 -0.3**
SSB Saint Sauveur 89.46 45 P **P** **05 23 24.0 -0.3**
SSB IAmb IAmb 05 23 25.9
comp=Z,15nm,0.9s
DOU Dourbes 90.00 40 PcP **P** **05 23 27.9 +1.3**
comp=Z,10nm,1.0s
NOR Nord 90.10 8 *i* P **P** **05 23 27.0 +0.5**
comp=Z,13nm,1.0s
BGES Gesves 90.34 40 PcP **P** **05 23 29.5 +1.3**
BCLA Clavier 90.48 40 P **P** **05 23 28.4 -0.4**
BCLA PcP **P** **05 23 29.4 +0.5**
BCLA pP **pP** **05 23 34.7 -0.6**
RDOG Red Dog Mine 90.55 338 P **P** **05 23 29.7 +0.9**
RDOG IAmb IAmb 05 23 30.6
comp=Z,27nm,0.7s
BSTI Sart Tilman 90.66 40 PcP **PcP** **05 23 30.4 -0.3**
MEM Membach 90.94 40 P **P** **05 23 30.4 -0.6**
MEM PcP **PcP** **05 23 31.7 -0.3**
MEM pP **pP** **05 23 36.5 -1.0**
BNI Bardonecchia 90.94 45 P **P** **05 23 32.0 +0.7**
BNI pmax pmax
comp=Z,13nm,0.9s
BNI Bardonecchia 90.94 45 P **P** **05 23 32.0 +0.7**
WLF Walferdange 90.96 40 P **P** **05 23 31.9 +0.8**
WLF pmax pmax
comp=Z,33nm,1.0s
WLF Walferdange 90.96 40 *eP* **P** **05 23 32.4 +1.3**
comp=Z,36nm,1.0s,baz=269,slow=4.7
WLF Walferdange 90.96 40 PcP **P** **05 23 32.2 +1.1**
comp=Z,27nm,1.2s
WLF Walferdange 90.96 40 P **P** **05 23 31.9 +0.8**

WLF IAmb IAmb 05 23 33.3
comp=Z,33nm,1.0s
LPL La Plagne 91.02 45 *eP* **P** **05 23 33.3 +1.5**
LPL pmax pmax
comp=Z,20nm,1.2s
ANM Nome 91.07 335 P **P** **05 23 31.9 +0.6**
ANM pmax pmax
comp=Z,14nm,1.0s
ANM Nome 91.07 335 P **P** **05 23 31.9 +0.6**
ANM IAmb IAmb 05 23 32.7
comp=Z,14nm,1.0s
ECH Echery 91.51 42 P **P** **05 23 33.1 -0.6**
ECH pmax pmax
comp=Z,40nm,1.4s
ECH Echery 91.51 42 P **P** **05 23 33.1 -0.6**
ECH IAmb IAmb 05 23 35.7
comp=Z,40nm,1.4s
AHRW Bad Neuenahr-A 91.62 40 *eP* **P** **05 23 35.5 +1.4**
comp=Z,105nm,1.7s,baz=269,slow=4.7
VNDA Vanda 91.99 191 P **P** **05 23 37.0 +1.6**
VNDA Vanda 91.99 191 P **P** **05 23 37.0 +1.6**
comp=Z,2.1nm,0.5s,baz=99,slow=13,SNR=8.2
BFO Black Forest 92.30 42 *ceP* **P** **05 23 38.7 +1.3**
BFO pmax pmax
comp=Z,5.0nm,2.5s
BFO Black Forest 92.30 42 *eP* **P** **05 23 37.8 +0.4**
comp=Z,39nm,1.8s,baz=269,slow=4.7
KEST Kesra 92.38 55 P **P** **05 23 38.8 +0.7**
comp=Z,4.6nm,0.8s,baz=248,slow=5.4,SNR=3.5
KEST Kesra 92.38 55 IAmb IAmb 05 23 42.7
comp=Z,120nm,1.9s
TNS Taunus Mts 92.47 40 *eP* **P** **05 23 38.9 +0.7**
comp=Z,48nm,1.4s,baz=269,slow=4.7
DAVA Damuels 93.29 43 *eP* **P** **05 23 43.2 +1.1**
comp=Z,13nm,0.9s,baz=269,slow=4.7
DAVA Damuels 93.29 43 *ePcP* **P** **05 23 43.4 +1.2**
comp=Z,8.0nm,0.7s
UBR Ueberruh 93.46 43 *eP* **P** **05 23 43.9 +1.1**
comp=Z,25nm,1.1s,baz=269,slow=4.7
GTTG Gvttingen 93.49 39 *eP* **P** **05 23 44.0 +1.3**
comp=Z,27nm,1.1s,baz=269,slow=4.7
NRDL Niedersach Rie 93.61 38 *eP* **P** **05 23 45.0 +1.9**
comp=Z,579nm,4.0s,baz=269,slow=4.7
CLZ Clausthal 93.75 38 *eP* **P** **05 23 45.6 +1.6**
comp=Z,29nm,0.9s,baz=269,slow=4.7
BSEG Bad Segeberg 93.77 36 *eP* **P** **05 23 45.5 +1.6**
comp=Z,147nm,2.1s,baz=269,slow=4.7
GAMB Gambell 93.79 334 P **P** **05 23 44.4 +0.6**
GAMB IAmb IAmb 05 23 45.8
comp=Z,18nm,0.9s
GAMB IAMs_20 IAMs_20 06 07 40.1
comp=Z,566nm,21.0s
FETA Feichten 93.86 43 *ePcP* **PcP** **05 23 45.8 +0.5**
comp=Z,15nm,0.9s
RETA Reutte 93.90 43 PcP **PcP** **05 23 45.5 +0.1**
comp=Z,7.0nm,1.1s
ASSE Asse, Remlinge 93.94 38 *eP* **P** **05 23 46.0 +1.3**
comp=Z,72nm,1.6s,baz=269,slow=4.7
MOTA Moosalm 94.13 43 *ePcP* **P** **05 23 46.9 +0.9**
comp=Z,10nm,0.9s,SNR=9.7
SQTA Sankt Quirin 94.20 43 *ePcP* **P** **05 23 47.5 +1.2**
comp=Z,15nm,0.7s,SNR=5.5
GRF Grafenberg Arr 94.25 41 *eP* **P** **05 23 47.7 +1.3**
comp=Z,41nm,1.6s,baz=269,slow=4.7
FUR Furstenfeldbru 94.26 42 *eP* **P** **05 23 47.5 +1.0**
comp=Z,19nm,1.0s,baz=269,slow=4.7
NB2 NORSAR Subarra 94.34 29 P **P** **05 23 47.2 +0.7**
comp=Z,1.1nm,0.8s,baz=270,slow=4.6
NOA NORSAR Array B 94.34 29 P **P** **05 23 47.1 +0.6**
comp=Z,2.3nm,0.8s,baz=269,slow=4.6,SNR=4.9
NOA LR LR 06 07 01.0
comp=Z,319nm,18.5s,baz=45,slow=36
WATA Walderalm 94.45 43 *ePcP* **P** **05 23 48.1 +0.7**
comp=Z,6.1nm,0.9s
CTI Castel Tesino 94.48 44 P **P** **05 23 47.9 +0.3**
CTI pmax pmax
comp=Z,14nm,0.8s
CTI Castel Tesino 94.48 44 P **P** **05 23 47.9 +0.3**
CTI IAmb IAmb 05 23 48.8
comp=Z,14nm,0.8s
TEOL Teolo 94.48 45 P **P** **05 23 47.4 -0.1**
TEOL IAmb IAmb 05 23 49.0
comp=Z,22nm,0.9s
WTTA Wattenberg 94.49 43 *eP* **P** **05 23 48.9 +1.2**
comp=Z,16nm,1.1s,baz=269,slow=4.7
WTTA Wattenberg 94.49 43 *ePcP* **P** **05 23 48.9 +1.2**
comp=Z,7.4nm,0.8s
MOX Moxa 94.51 40 *eP* **P** **05 23 48.7 +1.2**
comp=Z,26nm,1.4s,baz=269,slow=4.7
NEUB Neuenburg 94.62 39 *eP* **P** **05 23 49.4 +1.4**
comp=Z,33nm,1.3s,baz=269,slow=4.7
MANZ Manzenberg 94.82 40 *eP* **P** **05 23 50.4 +1.5**
comp=Z,15nm,1.1s,baz=269,slow=4.7
PLN Plauen 94.86 40 *eP* **P** **05 23 50.6 +1.5**
comp=Z,19nm,1.1s,baz=269,slow=4.7
ROTZ Rotzenmuhle 94.89 41 *eP* **P** **05 23 50.7 +1.4**
comp=Z,55nm,1.9s,baz=269,slow=4.7
GUNZ Gunzen 94.97 40 *eP* **P** **05 23 51.3 +1.6**
comp=Z,21nm,1.5s,baz=269,slow=4.7
WERN Wernitzgruen 95.00 40 *eP* **P** **05 23 51.4 +1.6**
comp=Z,57nm,1.5s,baz=269,slow=4.7
NKC Novy Kostel 95.04 40 *eP* **P** **05 23 51.6 +1.6**
NKC Novy Kostel 95.04 40 *eP* **P** **05 23 51.6 +1.6**
TANN Tannenbergstha 95.05 40 *eP* **P** **05 23 51.8 +1.8**
comp=Z,78nm,1.2s,baz=269,slow=4.7
ABTA Abfaltersbach 95.08 44 *ePcP* **P** **05 23 51.4 +1.1**
comp=Z,14nm,0.9s
WET Wettzell 95.33 41 *eP* **P** **05 23 52.2 +0.9**
comp=Z,22nm,1.5s,baz=269,slow=4.7
CLL Collm 95.39 39 ⇑*iP* **P** **05 23 52.8 +1.3**
CLL pmax pmax
comp=Z,25nm,1.1s
CLL Collm 95.39 39 ⇑*iP* **P** **05 23 52.8 +1.3**
comp=Z,25nm,1.1s
CLL Collm 95.39 39 *eP* **P** **05 23 52.9 +1.4**
comp=Z,24nm,1.1s,baz=269,slow=4.7
CLL Collm 95.39 39 P **P** **05 23 51.6 +0.1**
CLL IAmb IAmb 05 23 54.1
comp=Z,23nm,1.1s
CLTB Caltabellotta 95.55 53 IAMs_20 IAMs_20 06 11 46.9
comp=Z,955nm,21.0s
FBE Freiberg 95.61 39 *eP* **P** **05 23 54.3 +1.8**
comp=Z,36nm,1.3s,baz=269,slow=4.7
CORL Corleone 95.62 52 IAMs_20 IAMs_20 06 08 36.8
comp=Z,795nm,21.0s
KBA Koelnbreinsper 95.65 43 *eP* **P** **05 23 54.0 +1.0**
comp=Z,27nm,1.5s,baz=269,slow=4.7
KBA Koelnbreinsper 95.65 43 *epP* **P** **05 23 54.7 +1.6**
comp=Z,14nm,1.1s
KHC Kasperske Hory 95.79 41 *eP* **P** **05 23 54.3 +0.9**
KHC Kasperske Hory 95.79 41 *eP* **P** **05 23 54.3 +0.9**
RUE Ruedersdorf 95.85 38 *eP* **P** **05 23 55.0 +1.5**
comp=Z,65nm,1.3s,baz=269,slow=4.7
MYKA Terra Mystica 95.86 44 *ePcP* **P** **05 23 54.9 +1.1**
comp=Z,9.3nm,0.7s,SNR=9.0
GERES GERESS Array B 95.87 41 P **P** **05 23 54.8 +0.9**
comp=Z,1.5nm,0.8s,baz=270,slow=2.7,SNR=9.9
GERES PKKPbc **PKKPbc** **05 40 43.0 -1.6**
comp=Z,0.9nm,0.8s,baz=72,slow=3.2,SNR=5.2
BRG Berggiesshubel 95.99 39 *eP* **P** **05 23 55.6 +1.4**
comp=Z,31nm,1.2s
BRG *e* 05 24 27.6
comp=Z,19nm,1.7s
BRG Berggiesshubel 95.99 39 *eP* **P** **05 23 55.6 +1.4**
BRG pmax pmax
comp=Z,31nm,1.2s
BRG Berggiesshubel 95.99 39 *eP* **P** **05 23 55.6 +1.4**
comp=Z,31nm,1.2s,baz=269,slow=4.7
INTR Introdacqua 96.09 48 IAMs_20 IAMs_20 05 53 12.6
comp=Z,379nm,18.0s
MOA Molln 96.27 42 *eP* **P** **05 23 56.4 +0.8**
comp=Z,12nm,1.2s,baz=269,slow=4.7
MOA Molln 96.27 42 *epP* **P** **05 23 57.4 +1.8**
comp=Z,12nm,1.3s
CRNS Crni Vrh 96.30 44 *eP* **P** **05 23 56.7 +0.9**
PRU Pruhonice 96.39 40 *eP* **P** **05 23 57.4 +1.3**
PRU *e* 05 24 05.5
PRU Pruhonice 96.39 40 *eP* **P** **05 23 57.4 +1.3**
PRU *ex* x 05 24 05.5
LJU Ljubljana 96.48 44 *eP* **P** **05 23 57.7 +1.1**
TSUM Tsumeb 96.70 110 P **P** **05 23 57.9 -0.5**
TSUM Tsumeb 96.70 110 IAMs_20 IAMs_20 06 08 39.8
comp=Z,680nm,19.0s
SOKA Soboth 96.82 44 *ePcP* **PcP** **05 23 58.6 +0.3**
comp=Z,3.0nm,0.8s
SYO Syowa Base 96.91 162 ⇑*eP* **P** **05 23 55.7 -2.3**
TREC Trest 97.03 41 *eP* Pdif 05 24 00.4 +1.3

TREC	Trest	97.03	41	*e*P		Pdif	05 24 00.4	+1.3	
ARSA	Arzberg	97.14	43	*e*PcP		Pdif	05 24 00.2	+0.6	
	comp=Z,7.1nm,0.8s								
CONA	Conrad Observa	97.34	42	*e*PcP		Pdif	05 24 01.4	+0.7	
	comp=Z,5.9nm,0.9s,SNR=4.4								
CHVC	Chvalec	97.34	40	*e*P		Pdif	05 24 02.5	+2.0	
OSTC	Ostas	97.44	40	*e*P		Pdif	05 24 02.7	+1.8	
DPC	Dobruska-Polom	97.52	40	*e*P		Pdif	05 24 03.9	+2.6	
DPC	Dobruska-Polom	97.52	40	*e*P		Pdif	05 24 03.9	+2.6	
ACER	Acerenza	97.64	50	IAMs_20		IAMs_20	06 14 45.0		
	comp=Z,778nm,20.0s								
KRLC	Kraliky	97.83	40	*e*P		Pdif	05 24 04.5	+1.8	
KRLC	Kraliky	97.83	40	*e*P		Pdif	05 24 04.5	+1.8	
ZST	Bratislava	98.16	42	*e*P		Pdif	05 24 04.5	+0.4	
ZST	Bratislava	98.16	42	*e*PDIFF		Pdif	05 24 04.4	+0.3	
MODS	Modra-Piesok	98.26	42	*e*P		Pdif	05 24 04.9	+0.3	
MODS	Modra-Piesok	98.26	42	*e*PDIFF		Pdif	05 24 04.9	+0.3	
ARCES	ARCESS Array B	99.27	20	P		Pdif	05 24 08.6	-0.1	
	comp=Z,4.8nm,1.0s,baz=269,slow=4.1,SNR=3.8								
ARCES				PKKPbc		PKKPbc	05 40 32.2	-3.6	
	comp=Z,15nm,1.3s,baz=123,slow=3.3,SNR=7.3								
VYHS	Vyhne	99.29	42	*e*P		Pdif	05 24 10.5	+1.3	
VYHS	Vyhne	99.29	42	*e*PDIFF		Pdif	05 24 10.5	+1.3	
MSVF	Nonsavu	99.37	251	*i* P		Pdif	05 24 08.9	-1.4	
LANS	Liptovska Anna	99.65	41	*e*P		Pdif	05 24 13.5	+2.7	
LANS	Liptovska Anna	99.65	41	*e*PDIFF		Pdif	05 24 13.5	+2.7	
FINES	FINESS Array B	101.42	28	P		Pdif	05 24 17.3	-1.0	
	comp=Z,2.3nm,0.7s,baz=289,slow=5.8,SNR=5.9								
FINES				PKKPbc		PKKPbc	05 40 26.6	-2.7	
	comp=Z,1.9nm,0.6s,baz=96,slow=3.8,SNR=9.6								
BILL	Bilibino	101.97	339	*e*P		Pdif	05 24 20.8	+0.2	
BILL				*e*			05 28 32.4		
BILL				*e*			05 38 28.0		
BILL				SSS		SSS	05 47 04.0		
BILL				pmax		pmax			
	comp=Z,11nm,1.8s								
BOSA	Boshof	102.23	120	PKKPbc		PKKPbc	05 40 25.5	-0.5	
	comp=Z,2.0nm,0.6s,baz=62,slow=1.7,SNR=10.0								
MAW	Mawson	104.30	166	P		Pdif	05 24 30.7	-0.3	
MAW	Mawson	104.30	166	Pdiff		Pdif	05 24 30.4	-0.6	
	comp=Z,4.1nm,0.4s,baz=159,slow=8.6,SNR=15								
MAW	Mawson	104.30	166			Pdif	05 24 30.7	-0.3	
DZM	Mont Dzumac	109.41	245	*e*LR		LR	06 00 49.8		
	comp=Z,278nm,21.2s								
BRTR	Keskin Array B	111.19	49	PKiKP		PKiKP	05 29 01.1	-0.2	
	comp=Z,1.3nm,0.8s,baz=52,slow=1.9,SNR=5.4								
BRTR				PKKPbc		PKKPbc	05 39 57.5	-1.2	
	comp=Z,0.9nm,0.7s,baz=97,slow=4.0,SNR=4.7								
MBAR	Mbarara	111.50	92	IAMs_20		IAMs_20	06 17 46.5		
	comp=Z,488nm,18.0s								
KIV	Kislovodsk	116.37	42	*i* PKiKP		PKiKP	05 29 14.1	+3.0	
KIV				pmax		pmax			
	comp=Z,15nm,1.0s								
KIV				MLR		MLR			
	comp=Z,906nm,22.0s								
KBZ	Khabaz	116.60	42	*i* PKiKP		PKPdf	05 29 10.4	-1.0	
KBZ	Khabaz	116.60	42	PKP		PKiKP	05 29 11.9	+0.6	
	comp=Z,6.4nm,0.8s,baz=240,slow=1.0,SNR=12								
YAK	Yakutsk	117.63	344	*e*PKiKP		PKPdf	05 29 12.1	-0.7	
YAK				pmax		pmax			
	comp=Z,12nm,0.6s								
ARU	Arti	118.44	24	*i* PKiKP		PKiKP	05 29 14.7	+0.1	
ARU							05 30 33.3		
ARU							05 36 25.4		
ARU	Arti	118.44	24			PKiKP	05 29 14.7	+0.1	
YSS	Yuzh-Sakhalins	122.91	326	*e*PKiKP		PKPdf	05 29 22.4	-1.0	
YSS				*e*			05 29 27.2		
YSS				*e*			05 29 32.4		
YSS				pmax		pmax			
	comp=Z,20nm,0.7s								
YSS				MLR		MLR			
	comp=Z,300nm,16.0s								
ATD	Arta Tunnel	123.77	79	IAMs_20		IAMs_20	06 25 21.0		
	comp=Z,441nm,19.0s								
AB31	Akbulak array	123.84	30	*i* PKiKP		PKiKP	05 29 25.4	0.0	
ABKAR	Akbulak array	123.84	30			PKiKP	05 29 25.9	+0.5	
RAYN	Ar Rayn	124.71	64	PKiKP		PKPdf	05 29 27.4	-0.2	
RAYN	Ar Rayn	124.71	64			PKPdf	05 29 27.4	-0.2	
RAYN				IAMs_20		IAMs_20	06 29 23.9		
	comp=Z,399nm,18.0s								
BOD	Bodaibo	124.91	350	*e*PKiKP		PKPdf	05 29 24.9	-2.0	
BOD				pmax		pmax			
	comp=Z,44nm,1.1s								
ZEA	Zeya	125.19	340	*e*PKiKP		PKPdf	05 29 26.8	-0.8	
ZEA				pmax		pmax			
	comp=Z,12nm,1.0s								
BRVK	Borovoye	125.48	21	PKiKP		PKPdf	05 29 28.2	0.0	
BRVK	Borovoye	125.48	21			PKPdf	05 29 28.2	0.0	
STKA	Stephens Creek	126.26	225	PKiKP		PKPdf	05 29 30.1	-0.3	
STKA	Stephens Creek	126.26	225	PKP		PKPdf	05 29 29.8	-0.5	
	comp=Z,15nm,0.7s,baz=99,slow=3.6,SNR=12								
STKA	Stephens Creek	126.26	225			PKPdf	05 29 30.1	-0.3	
CTA	Charters Tower	127.39	241	PKP		PKPdf	05 29 33.6	-0.4	
	comp=Z,7.6nm,0.7s,baz=230,slow=1.2,SNR=3.8								
ZAA0	Zalesovo Array	128.69	11			PKPdf	05 29 33.8	-0.5	
ZALV	Zalesovo Beam	128.69	11	PKP		PKPdf	05 29 33.9	-0.4	
	comp=Z,29nm,0.6s,baz=269,slow=2.7,SNR=106								
GEYT	Alibeck	129.49	42	PKP		PKPdf	05 29 36.4	0.0	
	comp=Z,13nm,0.8s,baz=264,slow=5.7,SNR=30								
GYA0B	ALIBECK ARRAY	129.49	42			PKPdf	05 29 36.7	+0.3	
KURK	Kurchatov	130.19	17	PKiKP		PKPdf	05 29 37.4	+0.2	
KURK	Kurchatov	130.19	17			PKPdf	05 29 37.4	+0.2	
USA0B	Ussuriysk Arra	130.47	329	PKiKP		PKPdf	05 29 38.0	0.0	
USA0B	Ussuriysk Arra	130.47	329			PKPdf	05 29 38.0	0.0	
USRK	Ussuriysk Ar.	130.47	329	PKP		PKPdf	05 29 37.8	-0.2	
	comp=Z,8.9nm,0.8s,baz=163,slow=0.8,SNR=11								
MJAR	Matsushiro Arr	131.55	317	PKP		PKPdf	05 29 39.7	-0.6	
	comp=Z,4.8nm,0.7s,baz=89,slow=1.1,SNR=11								
MAT	Matsushiro	131.55	317	PKP		PKPdf	05 29 39.3	-1.0	
IRK	Irkutsk	131.56	356	*e*PKiKP		PKPdf	05 29 39.3	-0.5	
IRK				pmax		pmax			
	comp=Z,49nm,1.9s								
TLY	Talaya	132.17	356	*e*PKiKP		PKPdf	05 29 40.4	-0.6	
TLY				pmax		pmax			
	comp=Z,53nm,2.0s								
MOY	Mondy	132.31	358	*e*PKiKP		PKiKP	05 29 42.0	-0.5	
MOY				pmax		pmax			
	comp=Z,41nm,2.5s								
KK31	Karatay Array	133.37	29	PKiKP		PKPdf	05 29 43.7	+0.2	
KK31	Karatay Array	133.37	29			PKPdf	05 29 43.7	+0.2	
KKAR	Karatay Array	133.37	29	PKiKP		PKPdf	05 29 44.0	+0.4	
KKAR	Karatay Array	133.37	29			PKPdf	05 29 44.0	+0.4	
UOSS	Minazif	133.71	59			PKPdf	05 29 44.0	-0.7	
UOSS				IAMs_20		IAMs_20	06 32 52.9		
	comp=Z,485nm,20.0s								
MAKZ	Makanchi	134.68	17	PKiKP		PKPdf	05 29 45.1	-0.8	
MAKZ	Makanchi	134.68	17			PKPdf	05 29 45.1	-0.8	
MK31	Makanchi Array	134.78	16	*i* PKiKP		PKPdf	05 29 45.4	-0.7	
MK31	Makanchi Array	134.78	16			PKPdf	05 29 44.5	-1.6	
MKAR	Makanchi Array	134.78	16	PKhKP		PKPpre	05 29 31.4		
	comp=Z,0.4nm,0.6s,baz=333,slow=2.6,SNR=4.3								
MKAR				PKP		PKPdf	05 29 45.8	-0.3	
	comp=Z,10nm,0.7s,baz=3.1,slow=2.2,SNR=83								
USP	Ospenovka	135.06	26	P		PKiKP	05 29 47.9	-0.4	
	SNR=19								
EKS2	Erkin-Say	135.23	27	P		PKiKP	05 29 48.5	-0.2	
	SNR=19								
CHMS	Chumysh	135.39	26	P		PKPdf	05 29 48.1	+0.8	
	SNR=6.1								
AAK	Ala-Archa	135.57	26	PKiKP		PKPdf	05 29 47.3	-0.6	
AAK	Ala-Archa	135.57	26	P		PKiKP	05 29 49.1	-0.3	
	SNR=11								
ULN	Ulaanbaatar	135.61	352	PKiKP		PKPdf	05 29 47.1	-0.7	
ULN	Ulaanbaatar	135.61	352			PKPdf	05 29 47.1	-0.7	
AML	Almayashu	135.61	27	P		PKiKP	05 29 49.6	-0.2	
	SNR=13								
SONM	Songino Array	135.72	353	PKhKP		PKPpre	05 29 32.6		
	comp=Z,0.6nm,0.7s,baz=336,slow=4.4,SNR=4.2								
SONM				PKP		PKPdf	05 29 47.6	-0.4	
	comp=Z,9.2nm,0.9s,baz=308,slow=1.0,SNR=25								
KBK	Karagaybulak	135.75	26	P		PKiKP	05 29 49.3	-0.5	
	SNR=6.3								
BTK	Batken	135.79	31	PKiKP		PKPdf	05 29 48.4	+0.1	
BTK	Batken	135.79	31			PKPdf	05 29 48.4	+0.1	
CHGR	Chuyangaron	135.89	34			PKPdf	05 29 47.9	-0.6	
UCH	Uchtor	135.90	26	P		PKiKP	05 29 50.5	0.0	
	SNR=26								
GAR	Garm	136.29	33			PKPdf	05 29 49.6	+0.3	
KZA	Kyzart	136.35	26	P		PKiKP	05 29 50.9	-0.4	
	SNR=10								
ASAR	Alice Springs	136.47	229	PKhKP		PKPpre	05 29 42.6		
	comp=Z,2.5nm,0.6s,baz=132,slow=2.9,SNR=9.9								
ASAR				PKP		PKPdf	05 29 49.2	-0.7	
	comp=Z,14nm,0.9s,baz=124,slow=2.1,SNR=14								
ASAR				PKKP		PKKPdf	05 39 26.5	-1.7	
	comp=Z,0.6nm,0.7s,baz=310,slow=1.5,SNR=7.8								
ULHL	Ulahol	136.63	25	P		PKiKP	05 29 51.8	+0.1	
	SNR=7.6								
KDJ	Kajisay	137.12	24	PKiKP		PKPdf	05 29 51.0	+0.2	
KDJ	Kajisay	137.12	24			PKPdf	05 29 51.0	+0.2	
NRN	Naryn	137.20	26	PKiKP		PKPdf	05 29 51.6	+0.4	
NRN	Naryn	137.20	26			PKPdf	05 29 51.6	+0.4	
PRZ	Przheval'sk	137.31	23	PKiKP		PKiKP	05 29 52.7	-0.3	
PRZ	Przheval'sk	137.31	23			PKiKP	05 29 52.7	-0.3	
KS19	Wonju Array Si	137.40	326			PKPdf	05 29 50.7	-0.5	
WR0	Warramunga Arr	137.95	234			PKPdf	05 29 51.5	-1.2	
WB2	Warramunga Arr	138.11	234			PKPdf	05 29 50.7	-2.3	
WRAB	Tennant Creek	138.11	234	PKiKP		PKPdf	05 29 52.1	-0.9	
WRAB	Tennant Creek	138.11	234			PKPdf	05 29 52.1	-0.9	
WRA	Warramunga Arr	138.12	234	PKP		PKPdf	05 29 52.2	-0.8	
	comp=Z,17nm,0.9s,baz=120,slow=1.9,SNR=16								
WB0	Warramunga Arr	138.16	235			PKPdf	05 29 52.1	-1.0	
KBL	Kabul	138.60	39	PKiKP		PKPdf	05 29 53.8	0.0	
KBL	Kabul	138.60	39			PKPdf	05 29 53.8	0.0	
KSH	Kashi	138.74	27	PKP		PKiKP	05 29 55.0	-0.9	
KSH				PP		PP	05 32 45.0	+1.0	
KSH				AMB		AMB			
	comp=Z,360nm,6.9s								
KSH				LR		LR			
	comp=Z,220nm,5.0s								
KSH				LR		LR			
	comp=Z,290nm,5.3s								
KSH				LR		LR			
	comp=Z,810nm,6.4s								
WMQ	Urumqi	138.91	13	*e*PKP		PKPdf	05 29 54.3	+0.4	
WMQ				LR		LR			
	comp=Z,1μm,23.3s								
WMQ				LR		LR			
	comp=Z,640nm,23.3s								
WMQ	Urumqi	138.91	13	PKiKP		PKPdf	05 29 54.1	+0.2	
WMQ	Urumqi	138.91	13			PKPdf	05 29 54.0	+0.2	
NWAO	Narrogin (SRO)	139.62	204	PKiKP		PKiKP	05 29 57.0	-0.8	
NWAO	Narrogin (SRO)	139.62	204	PKP		PKiKP	05 29 57.0	-0.8	
	comp=Z,13nm,0.8s,baz=153,slow=5.5,SNR=4.2								
NWAO	Narrogin (SRO)	139.62	204			PKPdf	05 29 54.2	-1.2	
HHC	Hu-ho-hao-te	141.49	345	*e*PKP		PKPdf	05 29 58.8	+0.1	
HHC				AMB		AMB			
	comp=Z,59nm,8.2s								
HHC				LR		LR			
	comp=Z,470nm,14.5s								
HHC				LR		LR			
	comp=Z,270nm,13.6s								
HHC				LR		LR			
	comp=Z,730nm,14.9s								
BTO	Baotou	142.10	346	*e*PKP		PKPdf	05 29 54.0	-5.8	
TIA	Tai'an	143.76	335	PKP		PKPab	05 29 59.0	-0.6	
MTN	Manton Dam	144.16	242			PKPbc	05 30 01.9	-0.1	
DHRM	DHARAMSHALA	144.53	35	*ex*		PKPbc	05 30 03.6	+0.6	
GTA	Gaotai	144.58	359	PKP		PKPab	05 30 02.0	-0.7	
GTA				PP		PP	05 33 24.3	+5.3	
GTA				SS		SS	05 52 08.8	+4.1	
GTA				AMB		AMB			
	comp=Z,210nm,7.3s								
GTA				LR		LR			
	comp=Z,200nm,12.1s								
GTA				LR		LR			
	comp=Z,310nm,10.5s								
GTA				LR		LR			
	comp=Z,230nm,11.1s								
KNRA	Kununurra	144.85	236			PKPab	05 30 02.5	-1.6	
BHUJ	Bhuj	145.58	53	*ex*		PKPab	05 30 07.8	+1.2	
SMLA	Simla	145.86	35	*ex*		PKPdf	05 30 06.9	+0.4	
FITZ	Fitzroy Crossi	145.98	229	PKPbc		PKPbc	05 30 07.5	-0.2	
	comp=Z,52nm,0.9s,baz=112,slow=3.6,SNR=19								
FITZ	Fitzroy Crossi	145.98	229			PKPdf	05 30 06.8	-0.2	
NJ2	Nanjing	146.38	329	*e*PKPbc		PKPdf	05 30 07.5	+0.2	
SIJI	Sorong	147.56	262	PKPbc		PKPbc	05 30 12.1	-0.4	
	comp=Z,36nm,0.6s,baz=29,slow=9.5,SNR=13								
LZH	Lanzhou	147.61	353	*e*PKPbc		PKPdf	05 30 09.0	-0.5	
LZH				PKPab		PKPbc	05 30 13.0	+0.8	
LZH				sPKP			05 30 17.5		
LZH				LR		LR			
	comp=Z,500nm,18.4s								
LZH				LR		LR			
	comp=Z,540nm,18.4s								
LZH				LR		LR			
	comp=Z,760nm,20.1s								
PSA00	Pilbara Seismi	147.61	218			PKPdf	05 30 08.6	-1.1	
PSA00				PKPbc		PKPbc	05 30 12.0	-0.4	
XAN	Xi'an	148.60	344	PKPbc		PKPdf	05 30 10.8	-0.3	
XAN				LR		LR			
	comp=Z,800nm,16.7s								
XAN				LR		LR			
	comp=Z,590nm,18.6s								
XAN				LR		LR			
	comp=Z,790nm,18.4s								
XAN	Xi'an	148.60	344	PKiKP		PKPdf	05 30 10.8	-0.3	
XAN							05 30 14.5		
XAN	Xi'an	148.60	344			PKPdf	05 30 10.8	-0.3	
XAN				PKPbc		PKPbc	05 30 14.5	-0.2	
WHN	Wuhan	149.80	333	*i* PKPbc		PKPbc	05 30 17.3	-0.4	
GIRL	Giralia	149.83	209			PKPbc	05 30 18.2	+0.2	
SSLB	Suanglung	151.07	315			PKPbc	05 30 19.2	-1.8	
DGAR	Diego Garcia	151.12	113	PKiKP		PKiKP	05 30 22.2	+0.3	
DGAR	Diego Garcia	151.12	113	PKPdf		PKPdf	05 30 14.5	-1.0	
DGAR						PKiKP	05 30 22.2	+0.3	
POO	Poona	151.28	58	*i* P		PKPab	05 30 31.2	+1.6	
	comp=Z,80nm,8.0s								
BHPL	Bhopal	151.49	45	*ex*		PKPbc	05 30 22.5	+0.5	
SOEI	Soe	151.56	242			PKPbc	05 30 22.1	-0.4	
DANN	Dangsing	151.56	29	*e*P		PKPdf	05 30 16.5	+0.3	
	comp=Z,456nm,0.8s								
ENH	Enshi	151.94	341			PKPdf	05 30 15.7	-0.7	
ENH				PKPbc		PKPbc	05 30 22.7	-0.2	
KOLN	Koldanda	151.96	30	*e*P		PKPdf	05 30 16.5	-0.2	
	comp=Z,133nm,0.9s								
GKN	Gorkha	152.28	28	*e*P		PKPdf	05 30 17.1	0.0	
	comp=Z,235nm,0.6s								
CD2	Chengdu	152.72	351	PKPbc		PKPdf	05 30 15.5	-2.0	
CD2				PP		PP	05 34 06.5	+0.1	
CD2				AMB		AMB			
	comp=Z,260nm,6.9s								
CD2				LR		LR			
	comp=Z,2μm,14.9s								
CD2				LR		LR			
	comp=Z,880nm,16.5s								
CD2				LR		LR			
	comp=Z,980nm,19.2s								
KKN	Kakani	152.76	28	*e*P		PKPdf	05 30 17.7	-0.2	
	comp=Z,108nm,0.6s								
DMN	Daman	152.83	28	*e*P		PKPdf	05 30 17.8	-0.3	
	comp=Z,75nm,0.7s								
GUN	Gumba	152.93	26	*e*P		PKPdf	05 30 18.1	-0.2	
	comp=Z,164nm,1.1s								
PKIN	Phulchoki	152.99	28	*e*P		PKPdf	05 30 17.8	-0.5	
	comp=Z,69nm,0.9s								
PKI	Pulchoki	153.00	28	*e*P		PKPdf	05 30 17.6	-0.8	
	comp=Z,137nm,1.1s								
LSA	Lhasa	153.18	16	PKPbc		PKPdf	05 30 19.3	+0.5	
LSA	Lhasa	153.18	16	PKiKP		PKPdf	05 30 18.9	+0.1	
LSA							05 30 26.9		
LSA	Lhasa	153.18	16			PKPdf	05 30 18.9	+0.1	
LSA				PKPbc		PKiKP	05 30 26.9	+0.5	
JIRN	Jiri	153.28	26	*e*P		PKPdf	05 30 18.6	-0.3	
	comp=Z,61nm,0.8s								
RAMN	Ramite	154.07	26	*e*P		PKPdf	05 30 19.7	-0.2	
	comp=Z,77nm,0.6s								
TAPN	Taplejung	154.19	24	*e*P		PKPdf	05 30 19.9	-0.2	
	comp=Z,29nm,0.5s								
ODAN	Odare	154.49	25	*e*P		PKPdf	05 30 20.2	-0.2	
HYB	Hyderabad	155.72	55	*i* PKP		PKPdf	05 30 21.5	-0.6	
GYA	Guiyang	156.38	343	PKP		PKPdf	05 30 22.0	-0.8	
GYA				PKPab		PKPab	05 30 51.0	+0.1	
GYA				SKKS			05 41 20.8		
GYA				AMB		AMB			
	comp=Z,140nm,8.8s								
GYA				LR		LR			
	comp=Z,200nm,21.3s								
GYA				LR		LR			
	comp=Z,180nm,20.6s								
GYA				LR		LR			
	comp=Z,130nm,20.1s								
BOK	Bokaro	156.39	32	*ex*		PKPdf	05 30 23.3	+0.5	
BOK				*i* x		x	05 30 51.7		
BKSI	Bulukumba	157.15	247	P		PKPab	05 30 55.2	+0.6	
SHL	Shillong	157.29	17	PKiKP		PKPdf	05 30 22.5	-1.6	
SHL							05 30 53.4		
SHL	Shillong	157.29	17	PKPdf		PKPdf	05 30 22.5	-1.6	
SHL								PKPab	05 30 53.4 -1.6
SPSI	Sidrap Palu	157.98	250	P		PKPab	05 30 59.1	+0.9	
KMI	Kunming	158.55	351	PKP		PKPdf	05 30 24.0	-1.7	
KMI				LR		LR			
	comp=Z,260nm,16.1s								
KMI				LR		LR			
	comp=Z,220nm,17.9s								
KMI				LR		LR			
	comp=Z,310nm,18.9s								
QIZ	Qiongzhong	161.63	326	PKP		PKPdf	05 30 27.5	-1.5	
QIZ				PP		PP	05 34 56.8	+0.6	
QIZ				SS		SS	05 55 15.8	+3.2	
QIZ				LR		LR			
	comp=Z,670nm,15.7s								
QIZ				LR		LR			
	comp=Z,650nm,14.2s								
QIZ				LR		LR			
	comp=Z,670nm,14.7s								
SLVN	Son La	162.00	345	PKPdf		PKPdf	05 30 28.5	-0.9	
SLVN						PKPab	05 31 15.6	+0.3	
CHTO	Chiang Mai	165.11	1			PKPdf	05 30 30.7	-1.6	
CHTO				PKPab		PKPab	05 31 27.8	-1.1	
CMAR	Chiang Mai Arr	165.47	1	PKP		PKPdf	05 30 32.3	-0.3	
	comp=Z,11nm,0.8s,baz=290,slow=1.8,SNR=60								
CMAR				PKPab		PKPab	05 31 29.9	-0.5	
	comp=Z,7.5nm,0.9s,baz=339,slow=5.1,SNR=13								
LEM	Lembang	166.44	219	PKP		PKPdf	05 30 32.6	-1.1	
	comp=Z,16nm,0.4s,baz=325,slow=6.7,SNR=3.6								
UBPT	Khong Chiam	167.03	332			PKPdf	05 30 32.9	-0.9	
UBPT				PKPab		PKPab	05 31 36.8	-0.7	
PBKT	Sadao Pong	167.22	352			PKPdf	05 30 32.8	-1.2	
PBKT						PKPab	05 31 37.6	-0.5	
IPM	Ipoh	178.01	289				05 32 26.4		
RPSI	Rantau Prapat	178.85	169			PKPdf	05 30 36.6	-2.3	
RPSI	Rantau Prapat	178.85	169			PKPdf	05 30 36.5	-2.3	
PSI	Prapat	178.95	168	PKP		PKPdf	05 30 36.6	-2.4	
	comp=Z,9.8nm,1.0s,baz=273,slow=2.6								

IDC ***26*** *05:21:57.5±0.5, 17.07S×168.50E, h0km, mb4.8/24, mb1 4.9/26, mb1mx4.7/35, mbtmp4.8/26, ML4.5/2, MS4.6/26, Ms1 4.6/26, ms1mx4.5/33, Error ellipse: s-maj=15.9km s-min=13.8km az=130.0*

BJI ***26*** *05:21:59.0±0.0, 17.30S×168.30E, h10km, mB5.3/27, mb4.9/41, Ms5.2/24, Ms7 4.9/25*

MOS ***26*** *05:22:00.3±1.0, 17.10S×168.32E, h24km, mb5.1/28, Error ellipse: s-maj=11.1km s-min=8.7km az=160.6*

GCMT ***26*** *05:22:02.0±0.1, 16.99S±0.01×168.45E±0.01, h12km, MW5.3/133, Moment Tension Solution. s75,c114; s133,c224; Duration: 1s1 Moment tensor: Scale 1017 Nm; Mrr0.03±.02; Mθθ0.25±.02; Mϕϕ-0.27±.02; Mrθ0.48±.04; Mθϕ-0.89±.01; Mϕr0.13±.04; Best double couple: M01.04800×1017 NP1:ϕs171.00000°, δ62.00000°, λ-1.00000°. NP2:ϕs262.00000°, δ89.00000°, λ-152.00000°. Principal axes: T 1.0140, Plg19.0000°, Azm33.0000°; N 0.0670, Plg62.0000°, Azm264.0000°; P -1.0810, Plg20.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *05:22:03.0±1.3, 17.18S±0.06×168.36E±0.09, h35km±3km, mb5.0/96 Error ellipse: s-maj=12.1km s-min=8.1km az=104.0*

ISC 26 05:22:03.5±0.3, 17.22S±0.05×168.46E±0.06, h35km, n302, σ1s51/283, mb5.0/93, MS4.8/35, 3C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.18	201	*e*Pn	Pn	05 23 17.4	-1.3
DZM	75nm,0.3s						
DZM	62nm,0.3s			*e*Sn	Sn	05 24 13.6	-3.7
DZM				*e*LR	LR	05 24 29.3	
	comp=Z,23μm,25.8s						
DZM	Mont Dzumac	5.18	201	Pn	Pn	05 23 17.3	-1.4
	26nm,0.3s,baz=40,slow=16,SNR=72						
DZM				Sn	Sn	05 24 19.3	+1.9
	19nm,0.3s,baz=105,slow=20,SNR=5.9						
DZM				LR	LR	05 24 47.7	
	comp=Z,4μm,20.9s,baz=52,slow=32						
DZM	Mont Dzumac	5.18	201	

	comp=Z,30nm,1.2s								
WRA	**Warramunga Arr**	**32.42**	**260**	P	**P**	**05 28 30.0**	**-0.5**		
	comp=Z,18nm,1.2s,baz=88,slow=8.3,SNR=10								
WRA				LR	LR	05 39 59.3			
	comp=Z,630nm,18.2s,baz=90,slow=33								
AS31	**Alice Springs**	**32.95**	**253**	P	**P**	**05 28 34.6**	**-0.5**		
ASAR	**Alice Springs**	**32.95**	**253**	P	**P**	**05 28 33.2**	**-1.8**		
	comp=Z,13nm,0.7s,baz=81,slow=8.4,SNR=50								
ASAR				LR	LR	05 41 06.3			
	comp=Z,2µm,18.6s,baz=88,slow=35								
BBOO	**Buckleboo**	**33.04**	**236**	P	**P**	**05 28 35.1**	**-0.7**		
BBOO				IAmb	IAmb	05 28 43.4			
	comp=Z,20nm,1.0s								
H11S2	**WAKE ISLAND Hy**	**35.53**	**357**	T	T	06 06 19.2			
	baz=181,slow=77,SNR=13								
H11S3	**WAKE ISLAND Hy**	**35.54**	**357**	T	T	06 06 18.7			
	baz=181,slow=77,SNR=12								
H11S1	**WAKE ISLAND Hy**	**35.55**	**357**	T	T	06 06 28.8			
	baz=181,slow=77,SNR=9.6								
H11N1	**WAKE ISLAND Hy**	**36.74**	**358**	T	T	06 07 51.1			
	baz=172,slow=76,SNR=15								
H11N3	**WAKE ISLAND Hy**	**36.74**	**358**	T	T	06 07 56.6			
	baz=172,slow=76,SNR=11								
H11N2	**WAKE ISLAND Hy**	**36.76**	**358**	T	T	06 07 52.5			
	baz=172,slow=76,SNR=11								
KNRA	**Kununurra**	**38.06**	**266**	P	**P**	**05 29 17.1**	**-1.8**		
FORT	**Forrest**	**39.08**	**242**	P	**P**	**05 29 26.9**	**-0.5**		
TBI	**Tubuai**	**39.84**	**106**	*e*S	S	05 35 22.5	-14		
	comp=Z,329nm,28.2s								
TBI				*e*LQ	LQ	05 38 32.1			
	comp=Z,4µm,24.8s								
TBI				*e*LR	LR	05 40 12.7			
	comp=Z,2µm,28.2s								
PPT2	**Papeete2**	**39.99**	**97**	*e*S	S	05 35 26.7	-12		
	comp=Z,316nm,28.2s								
PPT2				*e*LQ	LQ	05 38 37.5			
	comp=Z,3µm,28.0s								
PPT2				*e*LR	LR	05 40 17.5			
	comp=Z,2µm,25.8s								
SIJI	**Sorong**	**40.03**	**290**	P	**P**	**05 29 33.8**	**-1.7**		
	comp=Z,7.1nm,0.3s,baz=89,slow=24,SNR=5.1								
SWI	**Sorong**	**40.04**	**290**	P	**P**	**05 29 38.0**	**+2.4**		
	comp=Z,27nm,0.9s								
FITZ	**Fitzroy Crossi**	**40.74**	**262**	P	**P**	**05 29 41.3**	**-0.1**		
	comp=Z,54nm,1.0s,baz=86,slow=5.8,SNR=16								
SOEI	**Soe**	**43.53**	**274**	P	P	05 30 07.8	+3.5		
	comp=Z,1µmcomp=Z,76nm,1.4s								
NWAO	**Narrogin (SRO)**	**48.50**	**241**	P	**P**	**05 30 42.3**	**-0.8**		
NWAO				pmax	pmax				
	comp=Z,35nm,0.9s								
NWAO	**Narrogin (SRO)**	**48.50**	**241**	P	**P**	**05 30 43.6**	**+0.5**		
	comp=Z,27nm,0.7s,baz=84,slow=5.9,SNR=10								
NWAO	**Narrogin (SRO)**	**48.50**	**241**	P	**P**	**05 30 42.3**	**-0.8**		
NWAO	**Narrogin (SRO)**	**48.50**	**241**	P	**P**	**05 30 41.7**	**-1.5**		
NWAO				IAmb	IAmb	05 30 44.9			
	comp=Z,28nm,0.8s								
BNSI	**Bone**	**49.02**	**279**	P	P	05 30 53.7	+6.3		
KAPI	**Kappang**	**49.16**	**278**	P	**P**	**05 30 47.0**	**-1.5**		
KAPI				pmax	pmax				
	comp=Z,56nm,1.2s								
KAPI	**Kappang**	**49.16**	**278**	P	**P**	**05 30 47.0**	**-1.5**		
TAOE	**Nuku Hiva Isla**	**50.63**	**87**	*e*LR	LR	05 45 21.3			
	comp=Z,822nm,23.7s								
TAOE	**Nuku Hiva Isla**	**50.63**	**87**	*e*T	T	06 23 35.9			
	comp=Z,50nm,0.2s								
MPSI	**Mapaga**	**50.89**	**285**	P	**P**	**05 31 02.9**	**+1.4**		
	comp=Z,34nm,0.8s								
PCJI	**Pacitan**	**56.42**	**272**	P	**P**	**05 31 44.2**	**+2.1**		
	comp=Z,1µmcomp=Z,89nm,1.2s								
SBUM	**Sibu**	**58.79**	**284**	P	**P**	**05 31 57.6**	**-1.2**		
KPJI	**Karang Pucung**	**58.80**	**272**	P	**P**	**05 32 01.2**	**+2.4**		
	comp=Z,55nm,1.0s								
CISI	**Cisompet, Garu**	**59.80**	**271**	P	**P**	**05 32 04.3**	**-1.6**		
LEM	**Lembang**	**60.19**	**272**	P	**P**	**05 32 08.1**	**-0.6**		
	comp=Z,62nm,0.7s,baz=177,slow=19,SNR=3.3								
INU	**Inuyama**	**60.19**	**331**	P	**P**	**05 32 07.0**	**-0.9**		
KSM	**Kuching**	**60.22**	**282**	P	**P**	**05 32 07.1**	**-1.5**		
VNDA	**Vanda**	**60.41**	**182**	LR	LR	05 55 05.6			
	comp=Z,597nm,20.2s,baz=26,slow=33								
MJAR	**Matsushiro Arr**	**60.63**	**332**	P	**P**	**05 32 07.6**	**-3.4**		
	comp=Z,8.9nm,0.9s,baz=165,slow=5.0,SNR=11								
MJAR				LR	LR	05 56 48.9			
	comp=Z,216nm,20.6s,baz=25,slow=35								
MAJO	**Matsushiro**	**60.63**	**332**	P	**P**	**05 32 08.8**	**-2.2**		
MAJO				pmax	pmax				
	comp=Z,24nm,1.1s								
MAJO	**Matsushiro**	**60.63**	**332**	P	**P**	**05 32 08.8**	**-2.2**		
MAT	**Matsushiro**	**60.63**	**332**	P	**P**	**05 32 09.1**	**-1.9**		
MJB9	**Matsu-Tunnel**	**60.64**	**332**	P	**P**	**05 32 09.0**	**-2.0**		
DBJI	**Dramaga**	**61.09**	**272**	P	**P**	**05 32 16.5**	**+1.9**		
	comp=Z,17µmcomp=Z,88nm,1.3s								
TPI	**Tanjungpandan**	**61.33**	**276**	P	**P**	**05 32 19.4**	**+3.2**		
	comp=Z,27nm,1.2s								
PMBI	**Palembang**	**64.02**	**275**	P	P	05 32 42.8	+8.6		
DSRI	**Dabo**	**64.96**	**278**	P	P	05 32 46.7	+6.4		
ASAJ	**Asahikawa**	**65.46**	**340**	LR	LR	05 55 53.7			
	comp=Z,727nm,20.9s,baz=174,slow=31								
KSRS	**Korea Array**	**66.43**	**326**	LR	LR	05 58 32.5			
	comp=Z,228nm,21.5s,baz=136,slow=33								
YSS	**Yuzh-Sakhalins**	**67.94**	**341**	*e*P	**P**	**05 32 58.6**	**0.0**		
YSS				*e*		05 33 05.3			
YSS				*e*		05 33 10.3			
YSS				*e*		05 42 03.0			
YSS				pmax	pmax				
	comp=Z,20nm,1.0s								
YSS				pmax	pmax				
	comp=Z,200nm,4.7s								
YSS				MLR	MLR				
	comp=Z,400nm,13.0s								
YSS				MLR	MLR				
	comp=N,300nm,16.0s								
YSS	**Yuzh-Sakhalins**	**67.94**	**341**	P	**P**	**05 33 01.5**	**+2.9**		
QIZ	**Qiongzhong**	**67.94**	**299**	P	**P**	**05 33 00.0**	**+0.7**		
QIZ				S	**S**	**05 41 58.3**	**+2.2**		
QIZ				sS	**sS**	**05 42 10.0**	**-3.5**		
QIZ				SS	**SS**	**05 46 24.5**	**+5.7**		
QIZ				LR	LR				
	comp=N,340nm,13.5s								
QIZ				LR	LR				
	comp=N,330nm,25.3s								
QIZ				LR	LR				
	comp=N,450nm,36.3s								
NJ2	**Nanjing**	**68.25**	**316**	*e*P	**P**	**05 33 04.0**	**+3.1**		
NJ2				pmax	pmax				
	comp=N,10.0nm,0.5s								
USA0B	**Ussuriysk Arra**	**69.61**	**333**	P	**P**	**05 33 09.2**	**+0.1**		
USA0B				pmax	pmax				
	comp=Z,20nm,1.2s								
USA0B	**Ussuriysk Arra**	**69.61**	**333**	P	**P**	**05 33 09.2**	**+0.1**		
USA0B				IAmb	IAmb	05 33 10.4			
	comp=Z,20nm,1.1s								
USRK	**Ussuriysk Ar.**	**69.61**	**333**	P	**P**	**05 33 08.5**	**-0.6**		
	comp=Z,4.6nm,0.9s,baz=104,slow=8.0,SNR=7.0								
USRK				LR	LR	05 59 34.3			
	comp=Z,349nm,21.7s,baz=132,slow=32								
IPM	**Ipoh**	**69.95**	**281**	P	**P**	**05 33 11.0**	**-0.9**		
WHN	**Wuhan**	**70.45**	**312**	P	**P**	**05 33 17.8**	**+3.3**		
PETK	**Petropavlovsk-**	**70.65**	**353**	P	**P**	**05 33 13.8**	**-1.5**		
	comp=Z,3.8nm,1.0s,baz=116,slow=16,SNR=3.6								
ATKA	**Atka Island**	**70.76**	**11**	P	**P**	**05 33 15.0**	**-0.9**		
MDJ	**Mudanjiang**	**71.00**	**332**	P	**P**	**05 33 21.3**	**+3.7**		
MDJ				pP	sP	05 33 30.3	-2.1		
MDJ				S	**S**	**05 42 36.3**	**+5.1**		
MDJ				ScS	**ScS**	**05 43 20.0**	**+1.0**		
MDJ				pmax	pmax				
	comp=Z,23nm,0.9s								
MDJ				pmax	pmax				
	comp=Z,230nm,5.3s								
MDJ				LR	LR				
	comp=Z,350nm,5.1s								
MDJ				LR	LR				
	comp=Z,310nm,6.3s								
MDJ				LR	LR				
	comp=Z,650nm,19.8s								
MDJ	**Mudanjiang**	**71.00**	**332**	P	**P**	**05 33 16.2**	**-1.4**		
TIA	**Tai'an**	**71.95**	**318**	P	P	05 33 29.0	+5.5		
TIA				pmax	pmax				
	comp=Z,11nm,0.8s								
CN2	**Changchun**	**72.36**	**329**	*e*P	**P**	**05 33 24.5**	**-1.3**		
CN2				pmax	pmax				
	comp=Z,10.0nm,0.6s								
QSPA	**South Pole Qui**	**72.82**	**180**	P	**P**	**05 33 28.1**	**-0.3**		
	comp=Z,9.4nm,0.9s,baz=284,slow=0.7,SNR=18								
QSPA				LR	LR	06 00 56.7			
	comp=Z,729nm,20.2s,baz=56,slow=32								
QSPA	**South Pole Qui**	**72.82**	**180**	P	**P**	**05 33 27.9**	**-0.6**		
QSPA				IAmb	IAmb	05 33 36.1			
	comp=Z,18nm,1.1s								
BJI	**Beijing**	**74.91**	**321**	P	**P**	**05 33 41.0**	**+0.2**		
BJI				pmax	pmax				
	comp=Z,7.0nm,1.3s								
XAN	**Xi'an**	**76.21**	**313**	P	P	05 33 55.8	+7.3		
XAN				pP	sP	05 34 03.5	+0.1		
XAN				PP	PP	05 36 49.0	+8.8		
XAN				S	**S**	**05 43 29.8**	**-0.7**		
XAN	**Xi'an**	**76.21**	**313**	SS	SS	05 48 23.0	-2.1		
XAN				pmax	pmax				
	comp=Z,6.0nm,1.2s								
XAN				LR	LR				
	comp=N,470nm,21.7s								
XAN				LR	LR				
	comp=E,430nm,22.1s								
XAN				LR	LR				
	comp=Z,540nm,26.5s								
KMI	**Kunming**	**76.58**	**302**	P	**P**	**05 33 53.5**	**+2.4**		
KMI				pP	pP	05 34 00.8	-1.0		
KMI				pmax	pmax				
	comp=Z,8.0nm,0.5s								
KMI				pmax	pmax				
	comp=Z,120nm,4.1s								
KMI				LR	LR				
	comp=Z,340nm,19.5s								
KMI				LR	LR				
	comp=Z,290nm,18.7s								
KMI				LR	LR				
	comp=Z,480nm,26.0s								
CMAR	**Chiang Mai Arr**	**77.00**	**294**	P	**P**	**05 33 53.1**	**-0.2**		
	comp=Z,0.9nm,0.4s,baz=126,slow=4.6,SNR=4.1								
CMAR				LR	LR	06 07 14.8			
	comp=Z,101nm,20.5s,baz=100,slow=35								
HHC	**Hu-ho-hao-te**	**78.21**	**320**	*e*P	**P**	**05 34 00.0**	**+0.3**		
HHC				pmax	pmax				
	comp=Z,3.0nm,0.9s								
HHC				pmax	pmax				
	comp=Z,69nm,4.3s								
HHC				LR	LR				
	comp=Z,140nm,13.6s								
HHC				LR	LR				
	comp=Z,140nm,11.9s								
HHC				LR	LR				
	comp=Z,270nm,14.5s								
CD2	**Chengdu**	**78.42**	**308**	*e*P	**P**	**05 34 02.0**	**+1.0**		
MAW	**Mawson**	**80.01**	**202**	P	**P**	**05 34 08.5**	**-0.5**		
MAW				pmax	pmax				
	comp=Z,2.0nm,1.2s								
MAW	**Mawson**	**80.01**	**202**	P	**P**	**05 34 09.1**	**+0.1**		
	comp=Z,2.3nm,0.9s,baz=27,slow=12,SNR=2.2								
MAW				LR	LR	06 04 27.7			
	comp=Z,823nm,21.3s,baz=193,slow=32								
MAW	**Mawson**	**80.01**	**202**	P	**P**	**05 34 08.5**	**-0.5**		
LZH	**Lanzhou**	**80.83**	**312**	*e*P	**P**	**05 34 15.5**	**+1.4**		
LZH				pP	pP	05 34 22.0	-3.1		
LZH				sP	sP	05 34 25.3	-3.8		
LZH				PP	**PP**	**05 37 22.8**	**+3.8**		
LZH				pmax	pmax				
	comp=Z,17nm,1.4s								
LZH				pmax	pmax				
	comp=Z,81nm,6.5s								
LZH				LR	LR				
	comp=Z,410nm,15.2s								
LZH				LR	LR				
	comp=Z,390nm,15.7s								
LZH				LR	LR				
	comp=Z,680nm,18.4s								
TTA	**Tatalina**	**84.60**	**15**	P	**P**	**05 34 32.5**	**-0.5**		
TTA				pmax	pmax				
	comp=Z,12nm,1.1s								
TTA	**Tatalina**	**84.60**	**15**	P	**P**	**05 34 32.5**	**-0.5**		
TTA				IAmb	IAmb	05 34 36.2			
	comp=Z,12nm,1.1s								
YAK	**Yakutsk**	**84.73**	**343**	*e*P	**P**	**05 34 32.8**	**-0.7**		
YAK				pmax	pmax				
	comp=Z,14nm,1.4s								
YAK				pmax	pmax				
	comp=N,6.0nm,1.5s								
YAK				pmax	pmax				
	comp=E,7.0nm,1.5s								
YAK	**Yakutsk**	**84.73**	**343**	P	**P**	**05 34 32.6**	**-0.9**		
ULN	**Ulaanbaatar**	**84.81**	**324**	P	**P**	**05 34 33.4**	**-1.1**		
ULN				pmax	pmax				
	comp=Z,24nm,1.2s								
ULN	**Ulaanbaatar**	**84.81**	**324**	P	**P**	**05 34 33.4**	**-1.1**		
KCPM	**Cahto Peak**	**84.86**	**46**	P	**P**	**05 34 36.1**	**+1.2**		
HOPS	**Hopland Field**	**84.90**	**47**	P	**P**	**05 34 37.5**	**+2.5**		
BILL	**Bilibino**	**85.03**	**359**	*e*P	**P**	**05 34 35.3**	**+0.3**		
BILL				*e*		05 34 39.0			
BILL				*e*		05 34 46.4			
BILL				pmax	pmax				
	comp=Z,4.0nm,1.4s								
BILL	**Bilibino**	**85.03**	**359**	P	**P**	**05 34 35.2**	**+0.3**		
BILL				IAmb	IAmb	05 34 49.7			
	comp=Z,14nm,1.5s								
SAO	**San Andreas Ge**	**85.07**	**49**	P	**P**	**05 34 35.7**	**-0.2**		
SAO				pmax	pmax				
	comp=Z,11nm,1.2s								
SAO	**San Andreas Ge**	**85.07**	**49**	P	**P**	**05 34 35.7**	**-0.2**		
SAO				IAmb	IAmb	05 34 38.7			
	comp=Z,11nm,1.1s								
SONM	**Songino Array**	**85.17**	**323**	P	**P**	**05 34 35.1**	**-1.1**		
	comp=Z,14nm,1.2s,baz=138,slow=2.8,SNR=21								
GTA	**Gaotai**	**85.21**	**314**	*e*P	**P**	**05 34 37.5**	**+0.8**		
GTA				pP	PcP	05 34 41.5	+1.7		
GTA				sP	pP	05 34 45.0	-2.7		
GTA				pmax	pmax				
	comp=Z,13nm,1.3s								
GTA				pmax	pmax				
	comp=Z,130nm,5.4s								
GTA				LR	LR				
	comp=Z,310nm,20.3s								
GTA				LR	LR				
	comp=Z,340nm,19.7s								
GTA				LR	LR				
	comp=Z,500nm,21.9s								
PKM	**Mcpherson Peak**	**85.48**	**52**	P	**P**	**05 34 39.2**	**+1.0**		
	baz=245								
O02D	**Mt. Diablo Mer**	**85.63**	**46**	P	**P**	**05 34 38.8**	**+0.2**		
	baz=243,SNR=8.1								
WDC	**Whiskeytown Da**	**85.98**	**45**	P	**P**	**05 34 40.1**	**-0.2**		
WDC				pmax	pmax				
	comp=Z,12nm,1.2s								
WDC	**Whiskeytown Da**	**85.98**	**45**	P	**P**	**05 34 40.1**	**-0.2**		
WDC				IAmb	IAmb	05 34 44.6			
	comp=Z,12nm,1.1s								
N02D	**Trinity Center**	**86.04**	**45**	P	**P**	**05 34 42.8**	**+2.1**		
	baz=243,SNR=7.2								
M02C	**Callahan**	**86.13**	**45**	P	**P**	**05 34 43.3**	**+2.2**		
	baz=243,SNR=5.9								
HMT	**Hamilton**	**86.15**	**21**	P	**P**	**05 34 39.7**	**-1.0**		
ORV	**Oroville**	**86.24**	**47**	P	**P**	**05 34 41.4**	**-0.2**		
ORV				pmax	pmax				
	comp=Z,9.0nm,1.1s								
ORV	**Oroville**	**86.24**	**47**	P	**P**	**05 34 41.4**	**-0.2**		
ORV				IAmb	IAmb	05 34 44.1			
	comp=Z,9.1nm,1.1s								
AFDM	**Forest Hills D**	**86.35**	**47**	P	**P**	**05 34 41.7**	**-0.5**		
AFDM				IAmb	IAmb	05 34 44.8			
	comp=Z,14nm,1.2s								
O03E	**Paynes Creek**	**86.36**	**46**	P	**P**	**05 34 44.2**	**+1.9**		
	baz=244,SNR=8.4								
CMB	**Columbia Colle**	**86.38**	**48**	P	**P**	**05 34 41.4**	**-1.0**		
CMB				pmax	pmax				
	comp=Z,8.0nm,1.1s								
CMB	**Columbia Colle**	**86.38**	**48**	P	**P**	**05 34 41.4**	**-1.0**		
CMB				IAmb	IAmb	05 34 44.9			
	comp=Z,8.5nm,1.1s								
YBH	**Yreka Blue Hor**	**86.38**	**44**	P	**P**	**05 34 41.2**	**-1.1**		
YBH				pmax	pmax				
	comp=Z,19nm,1.3s								
YBH	**Yreka Blue Hor**	**86.38**	**44**	P	**P**	**05 34 42.0**	**-0.3**		
	baz=221,slow=5.3								
YBH	**Yreka Blue Hor**	**86.38**	**44**	P	**P**	**05 34 41.2**	**-1.1**		
H02S1	**DAWSON INLET T**	**86.53**	**31**	T	T	07 10 03.3			
	SNR=15								
MWC	**Mount Wilson**	**86.54**	**53**	P	**P**	**05 34 44.2**	**+0.8**		
MWC				pmax	pmax				
	comp=Z,14nm,1.1s								
MWC	**Mount Wilson**	**86.54**	**53**	P	**P**	**05 34 44.2**	**+0.8**		
MWC				IAmb	IAmb	05 34 46.8			
	comp=Z,14nm,1.1s								
HUMO	**Hull Mountain**	**86.61**	**44**	P	**P**	**05 34 43.3**	**-0.1**		
SYO	**Syowa Base**	**86.65**	**196**	*e*P	**P**	**05 34 41.0**	**-2.1**		
SYO	**Syowa Base**	**86.65**	**196**	*e*pPKiKP	PKiKP	05 40 03.0	+14		
ISA	**Isabella, Lake**	**86.80**	**51**	P	**P**	**05 34 45.5**	**+0.9**		
ISA				pmax	pmax				
	comp=Z,10.0nm,1.2s								
ISA	**Isabella, Lake**	**86.80**	**51**	P	**P**	**05 34 45.5**	**+0.9**		
ISA				IAmb	IAmb	05 34 48.4			
	comp=Z,9.9nm,1.1s								
ISA	**Isabella, Lake**	**86.80**	**51**	P	**P**	**05 34 46.6**	**+2.1**		
	baz=246,SNR=6.9								
EDW2	**Edwards Air Fo**	**86.85**	**52**	P	**P**	**05 34 46.7**	**+1.9**		
	baz=246,SNR=6.6								
BFSC	**Mount Baldy Ra**	**86.85**	**53**	P	**P**	**05 34 46.6**	**+1.7**		
	baz=247,SNR=6.5								
L04D	**Klamath Falls**	**86.87**	**44**	P	**P**	**05 34 45.1**	**+0.3**		
	baz=243								
M04C	**Macdoel**	**86.98**	**45**	P	**P**	**05 34 45.8**	**+0.4**		
	baz=244								
MDPB	**Devils Postpil**	**87.15**	**49**	P	**P**	**05 34 45.5**	**-1.0**		
MDPB				IAmb	IAmb	05 34 50.7			
	comp=Z,13nm,1.2s								
BEKR	**Beckworth**	**87.17**	**47**	P	**P**	**05 34 46.4**	**0.0**		
BEKR				IAmb	IAmb	05 34 49.0			
	comp=Z,12nm,1.2s								
OMMB	**Old Mammoth Mi**	**87.20**	**49**	P	**P**	**05 34 47.4**	**+0.6**		
OMMB				IAmb	IAmb	05 34 50.4			
	comp=Z,16nm,1.4s								
WAKR	**Walker**	**87.25**	**48**	P	**P**	**05 34 46.4**	**-0.5**		
WAKR				IAmb	IAmb	05 34 50.0			
	comp=Z,14nm,1.2s								
MONP2	**Monument Peak**	**87.28**	**54**	P	**P**	**05 34 48.4**	**+1.2**		
	baz=248,SNR=5.7								
LRMC	**Laurel Mtn Rad**	**87.32**	**52**	P	**P**	**05 34 48.2**	**+1.0**		
	baz=247,SNR=8.4								
PNTR	**Pine Nut**	**87.38**	**48**	P	**P**	**05 34 46.7**	**-0.8**		
PNTR				IAmb	IAmb	05 34 49.7			
	comp=Z,12nm,1.2s								
CWC	**Cottonwood Cre**	**87.40**	**51**	P	**P**	**05 34 48.2**	**+0.6**		
	baz=246								
VCNR	**Virginia City**	**87.43**	**48**	P	**P**	**05 34 47.0**	**-0.7**		
PFO	**Pinyon Flats O**	**87.53**	**54**	P	**P**	**05 34 50.5**	**+2.3**		
	baz=247								
TPFO	**Pinon Flats**	**87.53**	**54**	P	**P**	**05 34 50.0**	**+1.8**		
	baz=248								
YERR	**Yerington**	**87.59**	**48**	P	**P**	**05 34 49.1**	**+0.6**		
YERR				IAmb	IAmb	05 34 52.7			
	comp=Z,11nm,1.3s								
MPMC	**Manual Prospec**	**87.69**	**51**	P	**P**	**05 34 50.5**	**+1.5**		
	baz=247								
PAHR	**Pah Rah Range**	**87.79**	**47**	P	**P**	**05 34 48.4**	**-0.9**		
PAHR				IAmb	IAmb	05 34 52.1			
	comp=Z,7.4nm,1.0s								
SWSC	**Sam W. Stewart**	**87.79**	**55**	P	**P**	**05 34 51.5**	**+2.2**		
	baz=248								
GSC	**Goldstone, Bar**	**87.91**	**52**	P	**P**	**05 34 51.1**	**+1.2**		
GSC				pmax	pmax				
	comp=Z,4.0nm,1.1s								
GSC	**Goldstone, Bar**	**87.91**	**52**	P	**P**	**05 34 51.1**	**+1.2**		
GSC	**Goldstone, Bar**	**87.91**	**52**	P	**P**	**05 34 51.8**	**+1.9**		
	baz=247								
RYN	**Ryan**	**87.96**	**49**	P	**P**	**05 34 50.2**	**0.0**		
BELC	**Belle Mtn. Jos**	**88.03**	**54**	P	**P**	**05 34 51.1**	**+0.5**		
	baz=248,SNR=7.4								
NVAR	**Mina Array Bea**	**88.03**	**49**	P	**P**	**05 34 50.0**	**-0.6**		
	comp=Z,2.6nm,0.8s,baz=226,slow=8.0,SNR=22								
NVAR				LR	LR	06 05 33.5			
	comp=Z,522nm,21.7s,baz=222,slow=30								
J05D	**Fort Rock, OR**	**88.04**	**43**	P	**P**	**05 34 51.6**	**+1.1**		
	baz=244								
MOD	**Modoc Plateau**	**88.07**	**45**	P	**P**	**05 34 49.3**	**-1.3**		
MOD				IAmb	IAmb	05 35 04.8			
	comp=Z,8.0nm,1.2s								
NV11	**Mina Array Sit**	**88.14**	**49**	P	**P**	**05 34 50.6**	**-0.4**		
NV11				IAmb	IAmb	05 34 53.8			
	comp=Z,7.9nm,1.0s								
ZAK	**Zakamensk**	**88.23**	**324**	*e*P	**P**	**05 34 49.7**	**-1.4**		
ZAK				pmax	pmax				
	comp=Z,5.0nm,1.3s								
HDA	**Harding Lake**	**88.25**	**18**	P	**P**	**05 34 49.7**	**-1.1**		
HDA				IAmb	IAmb	05 34 51.3			
	comp=Z,7.8nm,1.0s								
HDA	**Harding Lake**	**88.25**	**18**	P	**P**	**05 34 50.0**	**-0.8**		
	baz=222								
FURC	**Furnace Creek,**	**88.31**	**51**	P	**P**	**05 34 55.2**	**+3.5**		
	baz=247								
BC3	**Big Chuckawall**	**88.32**	**54**	P	**P**	**05 34 52.9**	**+0.9**		
	baz=248								
COLA	**College**	**88.34**	**17**	P	**P**	**05 34 50.2**	**-0.9**		
COLA				pmax	pmax				
	comp=Z,6.0nm,1.0s								
COLA	**College**	**88.34**	**17**	P	**P**	**05 34 50.2**	**-0.9**		
COLA				IAmb	IAmb	05 34 57.0			
	comp=Z,6.1nm,0.9s								
KVN	**Kaiserville**	**88.43**	**48**	P	**P**	**05 34 52.8**	**+0.4**		
KVN				pmax	pmax				
	comp=Z,6.0nm,0.9s								
KVN	**Kaiserville**	**88.43**	**48**	P	**P**	**05 34 52.8**	**+0.4**		
KVN				IAmb	IAmb	05 34 55.1			
	comp=Z,6.1nm,0.9s								
I05D	**Terrebonne, OR**	**88.44**	**42**	P	**P**	**05 34 53.4**	**+1.2**		
	baz=244								
F04A	**Amboy**	**88.46**	**41**	P	**P**	**05 34 52.7**	**+0.6**		
F04A				IAmb	IAmb	05 35 00.2			
	comp=Z,13nm,1.3s								
PINE	**Pine Mountain**	**88.46**	**43**	P	**P**	**05 34 51.1**	**-1.4**		
PINE				IAmb	IAmb	05 34 55.3			
	comp=Z,15nm,1.4s								
SHOC	**Shoshone, Teco**	**88.54**	**52**	P	**P

LLLB	**Lilooet**	**90.87**	**37**	P	**P**		**05 35 03.5**	**+0.2**
LLLB				IAmb	IAmb		05 35 13.4	
	comp=Z,8.5nm,1.1s							
SNAA	**Sanae**	**91.13**	**183**	P	**P**		**05 35 04.7**	**+0.3**
SNAA	**Sanae**	**91.13**	**183**	P	**P**		**05 35 03.6**	**-0.8**
SNAA				pmax	pmax			
	comp=Z,15nm,1.2s							
SNAA	**Sanae**	**91.13**	**183**	P	**P**		**05 35 03.6**	**-0.8**
LCMT	**Little Creek M**	**91.22**	**52**	P	**P**		**05 35 04.8**	**-0.6**
CCUT	**Cedar City**	**91.32**	**51**	P	**P**		**05 35 06.7**	**+0.6**
B08A	**Colville Reser**	**91.40**	**39**	P	**P**		**05 35 04.7**	**-1.3**
B08A				IAmb	IAmb		05 35 15.4	
	comp=Z,6.9nm,1.1s							
TUC	**Tucson**	**91.52**	**57**	P	**P**		**05 35 10.0**	**+3.1**
	baz=251							
KNB	**Kanab**	**91.53**	**52**	P	**P**		**05 35 06.2**	**-0.8**
KNB				pmax	pmax			
	comp=Z,6.0nm,1.2s							
KNB	**Kanab**	**91.53**	**52**	P	**P**		**05 35 06.2**	**-0.8**
MFID	**Camas Ranch**	**91.70**	**45**	P	**P**		**05 35 06.1**	**-1.5**
X16A	**Lo Mia Camp, P**	**91.70**	**55**	P	**P**		**05 35 07.1**	**-0.7**
X16A				IAmb	IAmb		05 35 12.2	
	comp=Z,5.2nm,0.9s							
U15A	**North Rim**	**91.73**	**52**	P	**P**		**05 35 07.4**	**-0.7**
U15A				IAmb	IAmb		05 35 12.3	
	comp=Z,6.0nm,1.0s							
VNA3	**Neumayer Olymp**	**91.75**	**181**	P	**P**		**05 35 04.9**	**-2.3**
F10A	**Beach Ranch, E**	**91.76**	**42**	P	**P**		**05 35 06.9**	**-0.8**
F10A				IAmb	IAmb		05 35 21.6	
	comp=Z,12nm,1.5s							
WUAZ	**Wupatki**	**92.12**	**54**	P	**P**		**05 35 09.7**	**0.0**
WUAZ	**Wupatki**	**92.12**	**54**	P	**P**		**05 35 12.6**	**+2.9**
	baz=250							
VNA1	**Neumayer--Stat**	**92.33**	**181**	P	**P**		**05 35 09.6**	**-0.3**
INK	**Inuvik**	**94.88**	**18**	LR	LR		06 11 22.3	
	comp=Z,379nm,20.8s,baz=188,slow=31							
WMQ	**Urumqi**	**95.28**	**314**	*e*P	**P**		**05 35 24.8**	**+0.9**
WMQ				pP	pP		05 35 32.0	-3.1
WMQ				sP	sP		05 35 38.0	-1.0
WMQ				pmax	pmax			
	comp=Z,11nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,210nm,6.3s							
WMQ				LR	LR			
	comp=Z,660nm,26.1s							
WMQ				LR	LR			
	comp=Z,570nm,24.5s							
PDAR	**Pinedale Array**	**95.80**	**47**	LR	LR		06 11 19.7	
	comp=Z,283nm,20.1s,baz=256,slow=31							
TXAR	**Lajitas Array**	**96.46**	**61**	P	**P**		**05 35 32.1**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=201,slow=4.8,SNR=3.6							
TXAR				LR	LR		06 13 22.3	
	comp=Z,174nm,18.9s,baz=0.0,slow=32							
YKA	**Yellowknife Ar**	**99.23**	**27**	P	**Pdif**		**05 35 40.7**	**-0.5**
	comp=Z,1.4nm,1.0s,baz=255,slow=4.6,SNR=9.6							
YKA				LR	LR		06 17 43.6	
	comp=Z,343nm,18.1s,baz=0.0,slow=34							
MKAR	**Makanchi Array**	**99.78**	**316**	P	**Pdif**		**05 35 43.2**	**-0.9**
	comp=Z,1.4nm,1.0s,baz=108,slow=4.0,SNR=6.6							
MKAR				LR	LR		06 18 56.2	
	comp=Z,151nm,21.6s,baz=74,slow=34							
ZAA0	**Zalesovo Array**	**100.06**	**323**		**Pdif**		**05 35 44.2**	**-0.9**
ZAA0				IAmb	IAmb		05 35 46.2	
	comp=Z,8.5nm,1.4s							
ZALV	**Zalesovo Beam**	**100.06**	**323**	P	**Pdif**		**05 35 43.7**	**-1.4**
	comp=Z,2.1nm,0.9s,baz=111,slow=3.2,SNR=6.5							
KSH	**Kashi**	**102.62**	**308**	P	**Pdif**		**05 36 03.0**	**+5.9**
KSH				SKS			05 46 41.0	
KSH				S	SKKSac		05 47 45.0	+31
KSH				LR	LR			
	comp=Z,390nm,6.3s							
KSH				LR	LR			
	comp=Z,340nm,5.0s							
KSH				LR	LR			
	comp=Z,940nm,8.4s							
ARCES	**ARCESS Array B**	**122.94**	**345**	PKP	**PKPdf**		**05 40 54.2**	**-1.2**
	comp=Z,3.9nm,0.9s,baz=48,slow=1.8,SNR=5.3							
KLMR	**Klimovskoe**	**123.41**	**333**	*e*PKIKP	**PKPdf**		**05 40 55.3**	**-1.2**
KLMR				pmax	pmax			
	comp=Z,23nm,1.5s							
KLMR	**Klimovskoe**	**123.41**	**333**	*e*PKPdf	**PKPdf**		**05 40 55.4**	**-1.1**
KLMR				AMP			05 41 08.4	
	comp=Z,23nm,1.5s							
FINES	**FINESS Array B**	**128.45**	**338**	PKP	**PKPdf**		**05 41 05.7**	**-0.4**
	comp=Z,3.0nm,0.9s,baz=52,slow=2.3,SNR=4.6							
AKASG	**Malin Array Be**	**133.42**	**325**	PKhKP	PKPpre		05 41 16.3	
	comp=Z,1.1nm,0.3s,baz=62,slow=2.2,SNR=1.5							
BRTR	**Keskin Array B**	**134.98**	**309**	PKP	**PKiKP**		**05 41 20.6**	**-0.3**
	comp=Z,1.2nm,1.1s,baz=124,slow=1.5,SNR=2.7							
KOLS	**Kolonicke sedl**	**138.15**	**327**	*e*PKIKP	**PKiKP**		**05 41 26.4**	**-0.5**
KOLS	**Kolonicke sedl**	**138.15**	**327**	*e*PKP	**PKiKP**		**05 41 26.4**	**-0.5**
LANS	**Liptovska Anna**	**139.44**	**329**	*e*PKIKP	**PKiKP**		**05 41 29.7**	**+0.2**
LANS	**Liptovska Anna**	**139.44**	**329**	*e*PKP	**PKiKP**		**05 41 29.7**	**+0.2**
VYHS	**Vyhne**	**140.19**	**328**	*e*PKIKP	**PKiKP**		**05 41 31.1**	**+0.1**
VYHS	**Vyhne**	**140.19**	**328**	*e*PKP	**PKiKP**		**05 41 31.1**	**+0.1**
CLL	**Collm**	**140.78**	**336**	*e*PKIKP	**PKiKP**		**05 41 31.0**	**-1.1**
CLL	**Collm**	**140.78**	**336**	*e*PKPdf	**PKiKP**		**05 41 31.0**	**-1.1**
MODS	**Modra-Piesok**	**141.04**	**329**	*e*PKIKP	**PKiKP**		**05 41 32.1**	**-0.7**
MODS	**Modra-Piesok**	**141.04**	**329**	*e*PKP	**PKiKP**		**05 41 32.1**	**-0.7**
CONA	**Conrad Observa**	**142.04**	**330**	*e*PKiKP	**PKPdf**		**05 41 31.2**	**-0.8**
	comp=Z,4.2nm,1.2s							
KHC	**Kasperske Hory**	**142.21**	**333**	*e*PKIKP	**PKiKP**		**05 41 34.0**	**-1.2**
KHC	**Kasperske Hory**	**142.21**	**333**	*e*PKP	**PKiKP**		**05 41 34.0**	**-1.2**
GERES	**GERESS Array B**	**142.37**	**333**	PKP	**PKPdf**		**05 41 29.2**	**-3.3**
	comp=Z,1.3nm,0.8s,baz=58,slow=3.3,SNR=7.7							
ARSA	**Arzberg**	**142.67**	**329**	*e*PKPdf	**PKPdf**		**05 41 31.4**	**-1.6**
	comp=Z,5.5nm,1.1s							
MOA	**Molln**	**142.85**	**331**	*e*PKPdf	**PKPdf**		**05 41 30.8**	**-2.6**
	comp=Z,4.9nm,1.2s							
SOKA	**Soboth**	**143.31**	**329**	PKPdf	**PKPdf**		**05 41 32.9**	**-1.4**
	comp=Z,8.0nm,1.2s							
KBA	**Koelnbreinsper**	**143.84**	**331**	*e*PKPdf	PKPbc		05 41 33.3	+0.2
	comp=Z,12nm,1.2s							
MYKA	**Terra Mystica**	**144.02**	**330**	*e*PKPdf	PKPbc		05 41 33.4	-0.1
	comp=Z,22nm,1.6s							
STU	**Stuttgart**	**144.29**	**336**	PKIKP	**PKPdf**		**05 41 34.8**	**-1.0**
STU	**Stuttgart**	**144.29**	**336**		**PKPdf**		**05 41 34.8**	**-1.0**
WATA	**Walderalm**	**144.44**	**333**	*e*PKPdf	**PKPdf**		**05 41 35.1**	**-1.2**
	comp=Z,11nm,1.1s							
ABTA	**Abfaltersbach**	**144.47**	**331**	*e*PKPdf	PKPbc		05 41 34.2	-0.6
	comp=Z,18nm,0.9s,SNR=6.8							
WTTA	**Wattenberg**	**144.47**	**333**	*e*PKiKP	**PKPdf**		**05 41 35.9**	**-0.6**
	comp=Z,13nm,1.1s							
WLF	**Walferdange**	**144.62**	**340**	PKIKP	**PKPdf**		**05 41 35.8**	**-0.6**
WLF	**Walferdange**	**144.62**	**340**		**PKPdf**		**05 41 35.8**	**-0.6**
MOTA	**Moosalm**	**144.64**	**333**	*e*PKiKP	**PKPdf**		**05 41 36.3**	**-0.4**
	comp=Z,22nm,1.4s							
RETA	**Reutte**	**144.68**	**334**	*e*PKiKP	**PKPdf**		**05 41 36.2**	**-0.5**
	comp=Z,16nm,1.3s							
SQTA	**Sankt Quirin**	**144.69**	**333**	*e*PKiKP	**PKPdf**		**05 41 36.5**	**-0.2**
	comp=Z,24nm,0.9s,SNR=5.4							
BFO	**Black Forest**	**144.98**	**337**	PKIKP	**PKPdf**		**05 41 36.4**	**-0.7**
BFO	**Black Forest**	**144.98**	**337**		**PKPdf**		**05 41 36.4**	**-0.7**
FETA	**Feichten**	**145.06**	**333**	*e*PKiKP	**PKPdf**		**05 41 37.0**	**-0.4**
	comp=Z,41nm,1.4s,SNR=10							
DAVA	**Damuels**	**145.21**	**334**	*e*PKiKP	**PKPdf**		**05 41 37.5**	**-0.2**
	comp=Z,24nm,1.1s,SNR=9.3							
CTI	**Castel Tesino**	**145.39**	**331**	PKIKP	**PKPdf**		**05 41 38.0**	**+0.1**
CTI	**Castel Tesino**	**145.39**	**331**		**PKPdf**		**05 41 38.0**	**+0.1**
ECH	**Echery**	**145.51**	**338**	PKIKP	**PKPbc**		**05 41 36.8**	**-1.3**
ECH	**Echery**	**145.51**	**338**		**PKPbc**		**05 41 36.8**	**-1.3**
FUORN	**Ofenpass-Fuorn**	**145.57**	**333**		**PKPdf**		**05 41 37.3**	**-1.2**
TEOL	**Teolo**	**145.89**	**330**		**PKPdf**		**05 41 37.9**	**-0.8**
NRCA	**Norcia**	**146.96**	**326**		**PKPdf**		**05 41 40.4**	**-0.3**
ZCCA	**Zocca**	**146.97**	**330**		**PKPdf**		**05 41 40.2**	**-0.4**
MURB	**Monte Urbino**	**146.97**	**327**		**PKPdf**		**05 41 40.2**	**-0.5**
TIP	**Timpagrande**	**147.06**	**317**	PKPdf	**PKPdf**		**05 41 39.2**	**-1.7**
LATE	**Laterza**	**147.81**	**327**		**PKPab**		**05 41 46.7**	**-0.7**
KEST	**Kesra**	**153.84**	**319**	PKPab	**PKPab**		**05 42 11.9**	**-0.7**
	comp=Z,12nm,1.1s,baz=45,slow=20,SNR=2.6							
ESDC	**Sonseca Array**	**156.68**	**345**	PKPab	**PKPab**		**05 42 22.7**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=3.3,slow=3.5,SNR=4.1							
TORD	**Torodi Ar. Bea**	**166.60**	**254**	PKP	**PKPdf**		**05 42 05.5**	**-0.7**
	comp=Z,2.3nm,1.0s,baz=200,slow=3.2,SNR=5.0							
TORD				PKPab	**PKPab**		**05 43 08.2**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=144,slow=5.2,SNR=3.0							

DJA 26 05:50:14.2±0.4, 9°S±3°×11°9E±°, h82km±5km, M4.2/6, mb3.9/1, MLv4.3/6, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.83**	**283**	P	Pn	05 50 32.2	+0.8
PLAI				S	Sn	05 50 45.3	+1.1
WSI	**Waingapu**	**1.80**	**111**	P	Pn	05 50 43.0	-0.6
WSI				S	Sn	05 51 06.5	+0.6
DNP	**Denpasar**	**3.36**	**276**	P	Pn	05 51 03.5	-0.9
DNP				S	Sn	05 51 45.1	+1.8
SRBI	**Singaraja**	**3.47**	**285**	P	Pn	05 51 07.1	+1.2
SRBI				S	Sn	05 51 45.3	-0.6
BKSI	**Bulukumba**	**3.98**	**23**	P	Pn	05 51 14.4	+1.5
BKSI				S	Sn	05 51 58.3	0.0
JAGI	**Jajag, Banyuwa**	**4.42**	**277**	P	Pn	05 51 19.0	+0.1
JAGI				S	Sn	05 52 08.7	-0.5
BNSI	**Bone**	**4.83**	**18**	P	Pn	05 51 24.8	+0.3
BNSI				S	Sn	05 52 23.6	+4.4
GMJI	**Gumukmas**	**5.14**	**278**	P	Pn	05 51 28.6	-0.1
GMJI				S	Sn	05 52 26.8	0.0

*SOME **26** 06:02:20.8, 40°.87N×70°.92E, h5km*
*KRNET **26** 06:02:24.6±0.1, 41°.06N×70°.53E, h35km, mb2.4*
*NNC **26** 06:02:24.9±3.0, 41°.07N×70°.92E, h0km, mb3.0, mpv2.7, Error ellipse: s-maj=24.5km s-min=10.6km az=12.0*

ISC 26 06:02:24.3±1.4, 41°.07N±0°.04×70°.84E±0°.04, h5km±12km, n16, σ2s06/28, 14C-5D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.01**	**181**	⇑*e*P	**Pg**	**06 02 43.8**	**+0.2**
	baz=67						
BTK				⇑*e*S	**Sb**	**06 02 57.8**	**0.0**
	baz=67						
ARK	**Arkit**	**1.12**	**49**	⇑*i*P	**Pn**	**06 02 48.5**	**+1.8**
	baz=56						
ARK				⇑*i*S	**Sn**	**06 03 05.8**	**+3.3**
	baz=56						
IUG	**Iuzhnay**	**1.24**	**331**	*e*P	**Pg**	**06 02 48.4**	**+0.2**
	4.1nm,0.2s						
IUG				*e*S	**Sn**	**06 03 07.8**	**+2.3**
	49nm,0.3s						
IUG	**Iuzhnay**	**1.24**	**331**	P	**Pg**	**06 02 48.4**	**+0.2**
	4.1nm,0.2s						
IUG				S	**Sn**	**06 03 07.9**	**+2.3**
	46nm,0.2s						
ARSB	**Arslanbob**	**1.64**	**80**	⇑*i*P	**Pg**	**06 02 56.6**	**+0.9**
	baz=81						
ARSB				⇑*i*S	**Sg**	**06 03 20.4**	**+3.5**
	baz=81						
KK31	**Karatay Array**	**2.05**	**353**	⇓Pn	**Pb**	**06 03 01.8**	**-0.3**
	0.8nm,0.2s,baz=168,slow=15,SNR=11						
KK31				⇑Lg	Lg	06 03 28.6	
	2.2nm,0.3s,baz=173,slow=30,SNR=9.2						
BRLS	**Boroldav**	**2.10**	**339**	*e*P	**Pn**	**06 02 59.8**	**-0.4**
	0.3nm,0.1s						
BRLS				*e*S	**Sn**	**06 03 27.1**	**+0.4**
	5.6nm,0.2s						
BRLS	**Boroldav**	**2.10**	**339**	Pg	**Pn**	**06 02 58.4**	**-1.8**
	0.7nm,0.4s						
BRLS				Lg	Lg	06 03 25.0	
	3.9nm,0.3s						
AML	**Almayashu**	**2.39**	**63**	⇑*e*P	**Pb**	**06 03 07.3**	**-0.8**
	baz=65						
AML				⇑*i*S	**Sb**	**06 03 38.3**	**+0.3**
	baz=65						
MRKS	**Merke**	**2.45**	**46**	*e*P	**Pb**	**06 03 08.3**	**-0.5**
	3.4nm,0.3s						
MRKS				*e*S	**Sg**	**06 03 42.4**	**-0.6**
	2.4nm,0.2s						
MRKS	**Merke**	**2.45**	**46**	Pg	**Pb**	**06 03 08.1**	**-0.8**
	3.4nm,0.3s						
MRKS				Lg	Lg	06 03 42.0	
	2.4nm,0.2s						
EKS2	**Erkin-Say**	**2.71**	**53**	⇑*e*P	**Pb**	**06 03 11.0**	**-2.4**
	baz=56						
EKS2				⇑*i*S	**Sb**	**06 03 45.3**	**-1.7**
	baz=56						
ARLS	**Aral**	**2.73**	**72**	⇓*i*P	**Pb**	**06 03 12.0**	**-1.8**
	baz=73						
ARLS				⇓*i*S	**Sb**	**06 03 46.7**	**-1.0**
	baz=73						
UCH	**Uchtor**	**2.99**	**66**	⇓*i*P	**Pb**	**06 03 15.5**	**-2.8**
	baz=67						
UCH				⇓*e*S	**Sb**	**06 03 52.9**	**-2.3**
	baz=67						
AAK	**Ala-Archa**	**3.15**	**59**	⇑Pg	**Pb**	**06 03 21.6**	**+0.7**
	2.5nm,0.8s						
AAK				Lg	Lg	06 04 03.1	
	2.1nm,0.8s						
KZA	**Kyzart**	**3.46**	**72**	⇑*e*P	**Pb**	**06 03 22.4**	**-3.9**
	baz=72						
KZA				⇑*i*S	**Sb**	**06 04 04.5**	**-4.2**
	baz=72						

*IDC **26** 06:12:01.1±0.6, 11°.17N×124°.57E, h0km, mb4.4/22, mb1 4.6/23, mb1mx4.5/38, mbtmp4.4/23, ML4.8/1, MS4.3/28, Ms1 4.3/28, ms1mx4.2/40, Error ellipse: s-maj=23.0km s-min=13.5km az=70.0*
*MAN **26** 06:12:02.1, 11°.14N×124°.69E, h9km, mb5.5, ML4.5, MS4.9*
MAN Intensity IV - Carigara and Alang-alang Leyte; Intensity III - Pastrana Leyte.
*GCMT **26** 06:12:03.2±0.3, 11°.17N±0°.02×124°.57E±0°.03, h18km±1km, MW5.0/92, Moment Tensor Solution. s22,c23; s92,c135; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.67±.24; Mθθ3.62±.16; Mθθ-0.95±.15; Mrθ-0.29±.31; Mrθ0.72±.08; Mrr0.89±.41; Best double couple: M03.41400×10¹⁶ NP1:ϕs239.00000°, δ49.00000°, λ-123.00000°. NP2: ϕs104.00000°, δ51.00000°, λ-58.00000°. Principal axes: T 3.7360, Plg1.0000°, Azm171.0000°; N -0.6450, Plg24.0000°, Azm262.0000°; P -3.0930, Plg66.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*BJI **26** 06:12:03.6±0.0, 10°.71N×124°.89E, h52km, mB5.1/47, mb4.6/63, Ms4.7/48, Ms7 4.5/46*
*DJA **26** 06:12:05.2±0.3, 11°.N±4°×12°5E±°, h10km, M4.8/18, mB5.4/6, mb4.8/18, Mw(mB)4.8/6*
*MOS **26** 06:12:05.2±1.0, 11°.22N×124°.65E, h39km, mb5.1/42, Error ellipse: s-maj=10.8km s-min=5.0km az=116.1*
*NEIC **26** 06:12:07.2±1.9, 11°.24N±0°.06×124°.59E±0°.09, h41km±5km, mb4.8/82, Error ellipse: s-maj=12.3km s-min=8.0km az=79.0*

ISC 26 06:12:03.4±0.9, 11°.18N±0°.02×124°.63E±0°.04, h15km±5km, n247, σ1s82/255, mb4.8/100, MS4.4/37, 11C-4D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.13**	**188**	*e*P	**Pg**	**06 12 05.6**	**-1.4**
OCLP				*e*S	**Sb**	**06 12 08.4**	**-1.9**
MSLP	**Maasin**	**1.06**	**168**	*e*P	**Pb**	**06 12 22.0**	**-1.5**
MSLP				*e*S	**Sn**	**06 12 38.2**	**-0.1**
LLP	**Lapu-Lapu**	**1.07**	**217**	⇑*e*P	**Pb**	**06 12 22.3**	**-1.4**
LLP				*e*S	**Sn**	**06 12 37.8**	**-0.7**
CNP	**Catarman**	**1.33**	**2**	*e*P	**Pn**	**06 12 26.1**	**-1.3**
CNP				*e*S	**Sn**	**06 12 44.8**	**-0.1**
MMPH	**Masbate**	**1.53**	**320**	⇓*e*P	**Pn**	**06 12 30.4**	**+0.2**
MMPH				*i* S	**Sg**	**06 12 52.0**	**-0.8**
RCP	**Roxas**	**1.88**	**282**	⇑*e*P	**Pn**	**06 12 35.6**	**+0.5**
RCP				*e*S	**Sb**	**06 13 01.5**	**+0.6**
GUIM	**Jordan**	**2.07**	**255**	*e*P	**Pn**	**06 12 37.9**	**+0.2**
GUIM				*e*S	**Sb**	**06 13 07.4**	**+1.0**
SNPH	**Sibulan**	**2.28**	**217**	⇓*i*P	**Pn**	**06 12 40.6**	**0.0**
PVCP	**Virac**	**2.45**	**349**	*e*P	**Pn**	**06 12 43.1**	**+0.3**
PVCP				*e*S	**Sb**	**06 13 15.6**	**-1.5**
CGP	**Cagayan de Oro**	**2.71**	**179**	⇑*e*P	**Pb**	**06 12 49.2**	**-2.4**
CGP				*i* S	**Sg**	**06 13 30.4**	**0.0**
OTRP	**Odiongan**	**2.81**	**295**	*e*P	**Pn**	**06 12 49.4**	**+1.6**
OTRP				*e*S	**Sb**	**06 13 24.3**	**-3.3**
DCPH	**Dipolog City**	**2.87**	**206**	⇑*e*P	**Pn**	**06 12 48.9**	**+0.3**
BUKP	**Musuan**	**3.31**	**172**	*e*P	**Pn**	**06 12 55.1**	**+0.4**
BUKP				*e*S	**Sn**	**06 13 33.8**	**0.0**
PAGZ	**Pagadian**	**3.53**	**200**	*e*P	**Pn**	**06 12 57.8**	**+0.1**
PAGZ				*e*S	**Sn**	**06 13 40.6**	**+1.4**
KCP	**Kidapawan**	**4.17**	**174**	⇑*e*P	**Pn**	**06 13 11.2**	**+4.6**
KCP				*e*S	**Sn**	**06 13 59.2**	**+4.1**
DAV	**Davao City (W)**	**4.19**	**167**	Pn	Pn	06 13 11.9	+5.1
	51nm,0.3s,baz=324,slow=5.5,SNR=5.1						
DAV				LR	LR	06 15 06.1	
	comp=Z,7μm,18.6s,baz=336,slow=44						
DAV	**Davao City (W)**	**4.19**	**167**	⇑*e*P	**Pb**	**06 13 14.0**	**-2.8**
DAV	**Davao City (W)**	**4.19**	**167**		**Pn**	**06 13 11.5**	**+4.7**
DAV				Sn	**Sn**	**06 13 59.4**	**+3.8**
LQP	**Lukban**	**4.19**	**314**	⇑*e*P	**Pn**	**06 13 08.9**	**+1.9**
TGY	**Tagaytay City**	**4.63**	**309**	Pn	**Pn**	**06 13 13.9**	**+1.0**
	46nm,0.3s,baz=291,slow=7.0,SNR=3.2						
TGY				LR	LR	06 15 13.4	
	comp=Z,3μm,20.6s,baz=98,slow=42						
LUWI	**Luwuk**	**12.28**	**189**	Pn	**Pn**	**06 14 59.0**	**+1.2**
SSLB	**Suanglung**	**13.02**	**345**	Pn	**Pn**	**06 15 09.3**	**+1.4**
SANI	**Sanana**	**13.21**	**174**	P	**Pn**	**06 15 11.2**	**+0.6**
	1μm70nm,0.9s						
NACB	**Ninganchiao**	**13.24**	**348**	Pn	**Pn**	**06 15 13.1**	**+2.1**
YOJ	**Yonaguni jima**	**13.30**	**354**	P	**Pn**	**06 15 11.4**	**-0.4**
YOJ	**Yonaguni jima**	**13.30**	**354**	Pn	**Pn**	**06 15 11.4**	**-0.4**
SIJI	**Sorong**	**13.67**	**151**	LR	LR	06 21 36.5	
	comp=Z,498nm,18.9s,baz=67,slow=42						
TATO	**Taipei**	**14.04**	**348**	Pn	**Pn**	**06 15 21.4**	**-0.5**
NLAI	**Namlea**	**14.53**	**170**	P	**P**	**06 15 33.7**	**-1.5**
	47nm,1.1s						
BKB	**Balikpapan**	**14.55**	**212**	Pn	**Pn**	**06 15 25.4**	**-3.5**
TTSI	**Tana Toraja**	**14.92**	**199**	P	P	06 15 45.9	+6.4
MSAI	**Masohi**	**15.05**	**163**	P	**P**	**06 15 46.8**	**+5.8**
SBUM	**Sibu**	**15.05**	**236**		**P**	**06 15 38.6**	**-2.5**
SBUM				IAmb	IAmb	06 15 49.5	
	comp=Z,102nm,1.1s						
SPSI	**Sidrap Palu**	**15.80**	**198**	P	P	06 16 01.7	+12
FAKI	**Fak Fak**	**15.93**	**151**		**Pn**	**06 15 48.7**	**+1.5**
JOW	**Kunigami**	**15.95**	**12**	Pn	**Pn**	**06 15 46.9**	**-0.5**
BNSI	**Bone**	**16.11**	**196**	P	P	06 16 07.0	+14
QIZ	**Qiongzhong**	**16.26**	**300**	P	**Pn**	**06 15 52.3**	**+0.9**
QIZ				S	**Sn**	**06 18 52.3**	**+0.6**
QIZ				LR	LR		
	comp=Z,670nm,16.7s						
QIZ				LR	LR		
	comp=Z,650nm,15.7s						
QIZ				LR	LR		
	comp=Z,580nm,15.2s						
KAPI	**Kappang**	**16.80**	**197**	P	**Pn**	**06 15 55.4**	**-2.9**
KAPI				pmax	pmax		
	comp=Z,24nm,0.8s						
KAPI	**Kappang**	**16.80**	**197**		**Pn**	**06 15 55.4**	**-2.9**
STKI	**Sintang**	**17.10**	**231**	P	P	06 16 17.7	+14
KSM	**Kuching**	**17.18**	**237**	P	**Pn**	**06 16 03.4**	**+0.4**
UBPT	**Khong Chiam**	**19.09**	**284**	P	**P**	**06 16 25.6**	**0.0**
UBPT				IAmb	IAmb	06 16 32.2	
	comp=Z,50nm,1.1s						
GUMO	**Guam**	**19.92**	**81**	LR	LR	06 23 56.5	
	comp=Z,309nm,18.5s,baz=281,slow=36						
SSE	**Sheshan**	**20.08**	**351**	P	**P**	**06 16 36.6**	**+0.3**
SOEI	**Soe**	**20.80**	**181**	P	Pn	06 17 01.6	+15
SOEI	**Soe**	**20.80**	**181**	P	**P**	**06 16 44.5**	**0.0**
SOEI				IAmb	IAmb	06 17 02.3	
	comp=Z,56nm,0.9s						
JAY	**Jayapura**	**21.00**	**129**	LR	LR	06 23 46.4	
	comp=Z,774nm,20.1s,baz=358,slow=34						
ANA2	**Anatahan**	**21.11**	**74**	P	**P**	**06 16 48.0**	**+0.3**
SARN	**Sarigan**	**21.24**	**73**	P	**P**	**06 16 47.0**	**-2.2**
NJ2	**Nanjing**	**21.45**	**346**	*e*P	**P**	**06 16 54.5**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WHN	**Wuhan**	**21.50**	**335**	⇑P	**P**	**06 16 58.3**	**+6.5**
WHN				S	**S**	**06 20 53.8**	**+3.9**
WHN				pmax	pmax		
	comp=Z,210nm,1.8s						
WHN				LR	LR		
	comp=Z,6μm,19.2s						
WHN				LR	LR		
	comp=Z,1μm,12.4s						
WHN				LR	LR		
	comp=Z,5μm,15.7s						
JAGI	**Jajag, Banyuwa**	**22.12**	**209**	P	**P**	**06 16 52.9**	**-5.7**
SLVN	**Son La**	**22.28**	**300**	P	**P**	**06 17 01.9**	**+1.5**
JNU	**Nakatsue**	**22.58**	**14**	LR	LR	06 27 02.3	
	comp=Z,136nm,19.0s,baz=156,slow=40						
MYKOM	**Kota Tinggi**	**22.63**	**247**	P	**P**	**06 17 04.5**	**+0.5**
GYA	**Guiyang**	**22.76**	**314**	*e*P	**P**	**06 17 08.5**	**+3.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PBKT	**Sadao Pong**	**23.57**	**286**	P	**P**	**06 17 13.4**	**-0.2**
ENH	**Enshi**	**23.64**	**326**	P	**P**	**06 17 15.1**	**+0.8**
ENH				IAmb	IAmb	06 17 18.0	
	comp=Z,50nm,1.3s						
KPJI	**Karang Pucung**	**24.13**	**221**	P	**P**	**06 17 24.8**	**+5.

KNRA Kununurra 26.99 171 P **P** 06 17 46.2 +1.4
KNRA IAmb IAmb 06 17 51.3
comp=Z,25nm,0.9s
CD2 Chengdu 27.56 319 ⇑P **P** **06 17 51.0 +1.0**
CD2 pP sP 06 18 05.0 +8.6
CD2 S **S** **06 22 33.5 +2.5**
CD2 sS sS 06 22 55.5 +17
CD2 pmax pmax
comp=Z,40nm,0.7s
CD2 pmax pmax
comp=Z,340nm,5.3s
CD2 LR LR
comp=Z,1μm,17.7s
CD2 LR LR
comp=Z,880nm,17.2s
CD2 LR LR
comp=Z,980nm,18.1s
MAJO Matsushiro 28.08 24 *e*P **P** **06 17 53.1 -1.4**
MAJO pmax pmax
comp=Z,10.0nm,1.3s
MJAR Matsushiro Arr 28.08 24 LR LR 06 27 17.7
comp=Z,406nm,21.6s,baz=235,slow=33
GSI Gunungsitoli 28.59 252 P **P** **06 17 57.8 -1.5**
GSI IAmb IAmb 06 18 04.9
comp=Z,24nm,1.1s
FITZ Fitzroy Crossi 29.11 178 P **P** **06 18 05.2 +1.4**
FITZ IAmb IAmb 06 18 08.2
comp=Z,24nm,1.3s
BJT Baijiatuau 29.69 347 P **P** **06 18 08.7 0.0**
BJT pmax pmax
comp=Z,7.0nm,0.8s
BJT Baijiatuau 29.69 347 P **P** **06 18 08.7 0.0**
BJI Beijing 29.71 347 P **P** **06 18 10.0 +1.1**
BJI pmax pmax
comp=Z,9.0nm,0.9s
PMG Port Moresby 30.34 132 P **P** **06 18 15.1 +0.4**
PMG pmax pmax
comp=Z,47nm,1.2s
PMG Port Moresby 30.34 132 P **P** **06 18 15.1 +0.4**
COEN Coen 31.02 143 P **P** **06 18 21.6 +0.8**
COEN IAmb IAmb 06 18 30.1
comp=Z,18nm,1.1s
LZH Lanzhou 31.12 326 *e*P **P** **06 18 23.5 +1.8**
LZH sP sP 06 18 47.8 +19
LZH *e*S **S** **06 23 30.3 +3.3**
LZH sS sS 06 23 50.3 +16
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,220nm,5.4s
LZH LR LR
comp=Z,1μm,13.4s
LZH LR LR
comp=Z,1μm,13.3s
LZH LR LR
comp=Z,2μm,16.2s
HHC Hu-ho-hao-te 31.72 341 *e*P **P** **06 18 28.5 +1.7**
HHC *e*S **S** **06 23 37.3 +1.1**
HHC sS sS 06 24 04.5 +21
HHC ScS **ScS** **06 28 53.5 -6.0**
HHC pmax pmax
comp=Z,3.0nm,0.9s
HHC pmax pmax
comp=Z,82nm,4.5s
HHC LR LR
comp=Z,420nm,13.6s
HHC LR LR
comp=Z,320nm,13.6s
HHC LR LR
comp=Z,690nm,16.9s
WB0 Warramunga Arr 32.22 163 P **P** **06 18 31.3 0.0**
WB0 IAmb IAmb 06 18 34.8
comp=Z,18nm,1.4s
WRA Warramunga Arr 32.37 163 P **P** **06 18 32.5 -0.1**
comp=Z,2.1nm,0.7s,baz=338,slow=9.2,SNR=5.3
WRA Warramunga Arr 32.37 163 IAmb IAmb 06 18 38.5
comp=Z,0.3nm,1.1s
WB2 Warramunga Ar 32.37 163 P **P** **06 18 33.2 +0.6**
WB2 IAmb IAmb 06 18 36.4
comp=Z,18nm,1.4s
WR0 Warramunga Arr 32.44 162 P **P** **06 18 33.3 0.0**
USRK Ussuriysk Ar. 33.51 10 P **P** **06 18 42.7 +0.3**
comp=Z,9.0nm,0.7s,baz=197,slow=9.5,SNR=11
USRK LR LR 06 32 06.5
comp=Z,254nm,21.1s,baz=155,slow=36
USA0B Ussuriysk Arra 33.51 10 *e*P **P** **06 18 41.9 -0.4**
MDJ Mudanjiang 33.59 6 P **P** **06 18 44.5 +1.5**
MDJ pP sP 06 18 53.0 +3.4
MDJ S **S** **06 24 00.0 -5.0**
MDJ pmax pmax
comp=Z,12nm,1.3s
MDJ pmax pmax
comp=Z,160nm,4.0s
MDJ LR LR
comp=Z,540nm,10.4s
MDJ LR LR
comp=Z,310nm,12.7s
MDJ LR LR
comp=Z,530nm,14.2s
SHL Shillong 34.09 299 P **P** **06 18 48.3 +0.4**
SHL pmax pmax
comp=Z,32nm,1.4s
SHL Shillong 34.09 299 P **P** **06 18 48.3 +0.4**
SHL IAmb IAmb 06 18 51.1
comp=Z,32nm,1.4s
GTA Gaotai 35.73 326 *e*P **P** **06 19 02.8 +1.1**
GTA pP sP 06 19 18.0 +10
GTA sP pP 06 19 25.0 +19
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,140nm,6.7s
GTA LR LR
comp=Z,600nm,18.1s
GTA LR LR
comp=Z,670nm,16.8s
GTA LR LR
comp=Z,1μm,17.8s
AS31 Alice Springs 35.80 165 P **P** **06 19 03.0 +0.7**
ASAR Alice Springs 35.80 165 P **P** **06 19 02.5 +0.1**
comp=Z,9.7nm,0.9s,baz=347,slow=6.9,SNR=43
ASAR LR LR 06 34 22.9
comp=Z,289nm,19.1s,baz=16,slow=38
LSA Lhasa 36.19 306 P **P** **06 19 08.3 +2.1**
LSA Lhasa 36.19 306 P **P** **06 19 08.6 +2.4**
LSA pmax pmax
comp=Z,17nm,1.1s
LSA Lhasa 36.19 306 P **P** **06 19 08.6 +2.4**
LSA IAmb IAmb 06 19 10.4
comp=Z,16nm,1.1s
KLR Kul'dur 38.40 8 *e*P **P** **06 19 23.7 -0.4**
KLR pmax pmax
comp=Z,3.0nm,1.0s
YSS Yuzh-Sakhalins 38.82 20 *e*P P 06 19 33.5 +5.8
YSS *e* 06 19 46.2
YSS MLR MLR
comp=Z,400nm,18.0s
ULN Ulaanbaatar 39.44 341 *e*P **P** **06 19 33.8 +0.7**
ULN pmax pmax
comp=Z,10.0nm,0.7s
ULN Ulaanbaatar 39.44 341 P **P** **06 19 33.6 +0.5**
ULN IAmb IAmb 06 19 38.0
comp=Z,9.5nm,0.8s
SONM Songino Array 39.62 341 P **P** **06 19 35.3 +0.7**
comp=Z,4.7nm,0.8s,baz=163,slow=7.4,SNR=18
SONM LR LR 06 37 32.6
comp=Z,536nm,18.7s,baz=144,slow=39
SONM Songino Array 39.62 341 IAmb IAmb 06 19 39.4
comp=Z,5.3nm,0.9s
H11N1 WAKE ISLAND Hy 41.52 73 T T 07 03 22.0
baz=265,slow=74,SNR=24
H11N2 WAKE ISLAND Hy 41.53 73 T T 07 03 22.5
baz=265,slow=74,SNR=17
H11N3 WAKE ISLAND Hy 41.54 73 T T 07 03 22.0
baz=265,slow=74,SNR=17
FORT Forrest 41.84 176 P **P** **06 19 53.8 +0.9**
ZEA Zeya 42.50 2 *e*P **P** **06 19 59.8 +1.8**
ZEA pmax pmax
comp=Z,14nm,1.2s
ZAK Zakamensk 42.85 340 *e*P **P** **06 20 00.9 -0.2**
ZAK pmax pmax
comp=Z,3.0nm,1.2s
TLY Talaya 43.85 341 *e*P **P** **06 20 10.1 +1.1**
TLY pmax pmax
comp=Z,28nm,0.8s
TLY MLR MLR
comp=Z,2μm,19.0s
TLY Talaya 43.85 341 P **P** **06 20 08.4 -0.7**
TLY IAmb IAmb 06 20 13.5
comp=Z,11nm,0.8s
MOY Mondy 44.72 339 *e*P **P** **06 20 17.2 +1.1**
MOY pmax pmax
comp=Z,25nm,1.7s
BBOO Buckleboo 45.08 166 P **P** **06 20 19.2 +0.2**
WMQ Urumqi 45.52 322 *e*P **P** **06 20 24.0 +1.5**
WMQ pP sP 06 20 39.5 +10
WMQ sP pP 06 20 46.8 +19
WMQ pmax pmax
comp=Z,9.0nm,1.3s
WMQ pmax pmax
comp=Z,120nm,6.5s
WMQ LR LR
comp=Z,620nm,22.9s
WMQ LR LR
comp=Z,500nm,15.9s
WMQ LR LR
comp=Z,620nm,17.5s
STKA Stephens Creek 45.79 160 P **P** **06 20 26.2 +1.6**
STKA pmax pmax
comp=Z,1.0nm,0.8s
STKA Stephens Creek 45.79 160 P **P** **06 20 26.3 +1.6**
comp=Z,5.4nm,0.7s,baz=338,slow=6.7,SNR=13
STKA PP **PP** **06 22 13.6 +1.4**
comp=Z,3.8nm,0.8s,baz=331,slow=12,SNR=5.1
STKA LR LR 06 42 24.2
comp=Z,258nm,18.2s,baz=343,slow=40
STKA Stephens Creek 45.79 160 P **P** **06 20 26.2 +1.6**
BOD Bodaibo 47.25 352 *e*P **P** **06 20 35.8 0.0**
BOD pmax pmax
comp=Z,15nm,1.4s
PEA0B Petropavlovsk- 49.50 26 *e*P **P** **06 20 50.4 -2.9**
PETK Petropavlovsk- 49.50 26 P **P** **06 20 54.9 +1.6**
comp=Z,2.3nm,0.6s,baz=184,slow=5.5,SNR=5.7
PETK LR LR 06 39 18.9
comp=Z,248nm,21.6s,baz=238,slow=33
MK31 Makanchi Array 50.33 323 P **P** **06 21 00.9 +1.2**
MK31 pmax pmax
comp=Z,3.0nm,0.9s
MK31 Makanchi Array 50.33 323 P **P** **06 21 00.9 +1.2**
MKAR Makanchi Array 50.33 323 *i*P **P** **06 21 01.5 +1.8**
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 50.33 323 P **P** **06 21 01.2 +1.5**
comp=Z,3.1nm,0.7s,baz=125,slow=8.5,SNR=23
MKAR LR LR 06 44 01.9
comp=Z,390nm,18.3s,baz=68,slow=38
MAKZ Makanchi 50.53 323 P **P** **06 21 03.3 +2.1**
MAKZ pmax pmax
comp=Z,9.0nm,1.2s
MAKZ Makanchi 50.53 323 P **P** **06 21 03.3 +2.1**
MAKZ IAmb IAmb 06 21 07.8
comp=Z,8.9nm,1.2s
YAK Yakutsk 50.90 3 *e*P **P** **06 21 03.4 -0.3**
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,19nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.3s
KSH Kashi 51.43 312 P **P** **06 21 11.3 +3.1**
KSH pP sP 06 21 23.0 +8.1
KSH PP **PP** **06 23 09.0 +3.6**
KSH S **S** **06 28 27.0 -0.8**
KSH sS sS 06 28 49.5 +14
KSH SS **SS** **06 32 03.5 -0.2**
KSH pmax pmax
comp=E,47nm,1.3s
KSH pmax pmax
comp=E,590nm,5.6s
KSH LR LR
comp=E,350nm,5.6s
KSH LR LR
comp=E,310nm,5.6s
KSH LR LR
comp=E,970nm,7.8s
CAN Canberra 51.68 155 P **P** **06 21 12.2 +2.2**
CAN pmax pmax
comp=Z,19nm,1.3s
CAN Canberra 51.68 155 P **P** **06 21 12.2 +2.2**
CAN IAmb IAmb 06 21 24.1
comp=Z,19nm,1.3s
NIL Nilore 51.89 304 P **P** **06 21 12.9 +1.3**
NIL pmax pmax
comp=Z,22nm,1.0s
NIL Nilore 51.89 304 P **P** **06 21 12.9 +1.3**
NRN Naryn 52.07 314 P **P** **06 21 14.1 +0.8**
NRN pmax pmax
comp=Z,8.0nm,1.2s
NRN Naryn 52.07 314 P **P** **06 21 14.1 +0.8**
ZAA0 Zalesovo Array 53.06 332 P **P** **06 21 19.7 -0.2**
ZAA0 IAmb IAmb 06 21 22.5
comp=Z,8.8nm,1.2s
ZALV Zalesovo Beam 53.06 332 P **P** **06 21 19.8 -0.2**
comp=Z,2.2nm,0.7s,baz=123,slow=7.5,SNR=10
ZALV LR LR 06 44 58.2
comp=Z,510nm,18.8s,baz=136,slow=37
AAK Ala-Archa 53.55 315 *e*P **P** **06 21 24.7 +0.8**
AAK pmax pmax
comp=Z,2.0nm,1.1s
AAK Ala-Archa 53.55 315 P **P** **06 21 24.3 +0.4**
AAK IAmb IAmb 06 21 42.8
comp=Z,9.4nm,1.4s
ARSB Arslanbob 54.17 313 P **P** **06 21 27.2 -1.3**
ARSB IAmb IAmb 06 21 32.9
comp=Z,12nm,1.2s
KURK Kurchatov 54.41 326⇑ *e*P **P** **06 21 30.5 +0.6**
KURK pmax pmax
comp=Z,23nm,1.1s
KURK Kurchatov 54.41 326 P **P** **06 21 30.2 +0.3**
BTK Batken 55.38 311 P **P** **06 21 37.9 +0.7**
BTK pmax pmax
comp=Z,19nm,1.3s
BTK Batken 55.38 311 P **P** **06 21 37.9 +0.7**
BTK IAmb IAmb 06 21 41.4
comp=Z,19nm,1.3s
GAR Garm 55.47 310 P **P** **06 21 38.4 +0.4**
KBL Kabul 55.49 304 P **P** **06 21 38.4 +0.1**
KBL pmax pmax
comp=Z,6.0nm,0.7s
KBL Kabul 55.49 304 P **P** **06 21 38.4 +0.1**
KBL IAmb IAmb 06 21 43.0
comp=Z,6.4nm,0.7s
CHGR Chuyangaron 56.27 309 P **P** **06 21 44.4 +0.8**
KK31 Karatay Array 56.47 315 P **P** **06 21 45.2 +0.3**
KK31 pmax pmax
comp=Z,17nm,1.3s
KK31 Karatay Array 56.47 315 P **P** **06 21 45.2 +0.3**
KK31 IAmb IAmb 06 21 48.7
comp=Z,17nm,1.2s
KKAR Karatay Array 56.47 315 P **P** **06 21 45.3 +0.4**
KKAR pmax pmax
comp=Z,17nm,1.3s
KKAR Karatay Array 56.47 315 P **P** **06 21 45.3 +0.4**
KKAR IAmb IAmb 06 21 48.7
comp=Z,17nm,1.2s
BRVK Borovoye 60.08 326 P **P** **06 22 10.7 +0.8**
BRVK pmax pmax
comp=Z,18nm,1.3s
BRVK Borovoye 60.08 326 P **P** **06 22 10.7 +0.8**
BRVK IAmb IAmb 06 22 13.6
comp=Z,18nm,1.3s
TIXI Tiksi 60.49 2 P **P** **06 22 11.6 -0.7**
TIXI pmax pmax
comp=Z,32nm,1.4s
TIXI Tiksi 60.49 2 P **P** **06 22 11.6 -0.7**
BILL Bilibino 62.98 16⇓ *e*P **P** **06 22 29.9 +0.6**
BILL 06 23 07.0
BILL SSS SSS 06 37 50.0
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL MLR MLR
comp=Z,145nm,19.0s
BILL Bilibino 62.98 16 P **P** **06 22 31.1 +1.9**
BILL IAmb IAmb 06 22 32.7
comp=Z,7.8nm,1.1s
GEYT Alibeck 64.71 307 P **P** **06 22 41.0 -0.2**
comp=Z,4.8nm,1.0s,baz=90,slow=4.4,SNR=8.0
GEYT LR LR 06 53 39.5
comp=Z,377nm,18.9s,baz=105,slow=39
GEYT Alibeck 64.71 307 IAmb IAmb 06 22 46.1
comp=Z,3.7nm,0.9s
GYA0B ALIBECK ARRAY 64.71 307 P **P** **06 22 41.4 +0.1**
GYA0B IAmb IAmb 06 22 45.5
comp=Z,7.2nm,1.0s
ABKAR Akbulak array 65.14 319 P **P** **06 22 43.8 0.0**
ABKAR IAmb IAmb 06 22 47.1
comp=Z,12nm,1.2s
SVE Sverdlovsk 66.58 327 *e*P **P** **06 22 55.2 +2.3**
ARU Arti 67.59 327 *d i*P **P** **06 23 00.4 +1.1**
ARU 06 25 23.4
ARU S **S** **06 31 56.2 +0.6**
ARU SS **SS** **06 36 17.4 +1.3**
ARU pmax pmax
comp=Z,7.0nm,0.7s
ARU Arti 67.59 327 P **P** **06 22 59.8 +0.5**
ARU IAmb IAmb 06 23 05.6
comp=Z,13nm,1.2s
PRGR Permogore 75.01 331 *e*P **P** **06 23 43.3 -0.8**
PRGR pmax pmax
comp=Z,12nm,0.8s
SVW2 Sparrevohn 75.36 30 P **P** **06 23 45.6 -0.5**
SVW2 IAmb IAmb 06 24 01.0
comp=Z,16nm,0.8s
ZEI Tsey 75.71 311 *e*P **P** **06 23 47.8 -1.0**
ZEI pmax pmax
comp=Z,5.0nm,0.7s
RAYN Ar Rayn 75.74 292 P **P** **06 23 48.2 -0.9**
RAYN **PcP** **06 24 00.3 -1.5**
AKH Akhalkalaki 76.07 310 P **P** **06 23 50.8 -0.1**
AKH pmax pmax
comp=Z,16nm,1.2s
AKH Akhalkalaki 76.07 310 P **P** **06 23 50.8 -0.1**
AKH IAmb IAmb 06 23 55.0
comp=Z,16nm,1.2s
KBZ Khabaz 76.41 312 *e*P **P** **06 23 52.6 +0.2**
KBZ pmax pmax
comp=Z,10.0nm,1.4s
KBZ Khabaz 76.41 312 P **P** **06 23 52.2 -0.2**
comp=Z,8.4nm,1.2s,baz=89,slow=9.0,SNR=5.4
KIV Kislovodsk 76.55 313 *e*P **P** **06 23 54.3 +0.9**
KIV pmax pmax
comp=Z,37nm,1.0s
KIV Kislovodsk 76.55 313 P **P** **06 23 53.7 +0.2**
KIV IAmb IAmb 06 23 56.7
comp=Z,24nm,1.3s
VRH Novokhopyorsk 76.94 320 *e*P **P** **06 23 53.5 -1.8**
VRH pmax pmax
comp=Z,20nm,1.0s
BPAW Bear Paw Mtn. 77.57 27 P **P** **06 23 58.8 +0.1**
BPAW IAmb IAmb 06 24 02.6
comp=Z,9.8nm,1.0s
MLY Manley 77.68 26 P **P** **06 23 59.7 +0.4**
KLMR Klimovskoe 77.94 330 *e*P **P** **06 23 59.3 -1.4**
KLMR pmax pmax
comp=Z,58nm,1.3s
KLMR Klimovskoe 77.94 330 *e*P **P** **06 23 59.3 -1.4**
KLMR AMP 06 24 03.4
comp=Z,58nm,1.3s
BWN Browne 78.24 27 P **P** **06 24 02.3 -0.1**
NEA Nenana 78.40 26 P **P** **06 24 03.7 +0.5**
VORD Divnogorie 78.48 320 *e*P **P** **06 24 03.0 -0.9**
VORD pmax pmax
comp=Z,20nm,1.5s
MCK McKinley 78.49 27 P **P** **06 24 03.4 -0.4**
MCK pmax pmax
comp=Z,25nm,1.4s
MCK McKinley 78.49 27 P **P** **06 24 03.4 -0.4**
MCK IAmb IAmb 06 24 14.5
comp=Z,25nm,1.4s
TMCR Tamitsa 78.54 333 *e*P **P** **06 24 04.3 +0.4**
TMCR pmax pmax
comp=Z,18nm,0.7s
VSR Storozhevoye 78.55 320 *e*P **P** **06 24 03.0 -1.3**
VSR pmax pmax
comp=Z,10.0nm,0.7s
LPSR Galich'ya Gora 78.61 322 *e*P **P** **06 24 04.0 -0.6**
LPSR pmax pmax
comp=Z,30nm,1.4s
MOS Moscow 79.17 325 *e*P **P** **06 24 05.7 -1.9**
ILAR Eielson Array 79.33 26 P **P** **06 24 07.7 -0.7**
comp=Z,0.5nm,0.8s,baz=263,slow=4.2,SNR=5.9
ILAR LR LR 06 59 21.3
comp=Z,53nm,20.6s,baz=317,slow=36
OBN Obninsk 79.82 324⇑ *e*P **P** **06 24 10.8 -0.3**
OBN 06 24 21.0
OBN pmax pmax
comp=Z,21nm,1.2s
RAGM Ragged Mountai 80.72 30 P **P** **06 24 14.7 -1.3**
ARCES ARCESS Array B 82.79 340 P **P** **06 24 26.6 -0.1**
comp=Z,4.8nm,0.6s,baz=87,slow=7.4,SNR=16
ARCES LR LR 07 04 20.2
comp=Z,427nm,18.4s,baz=259,slow=38
SPA0 Spitsbergen Ar 82.82 349 P **P** **06 24 24.8 -1.9**
KBS Kingsbay 83.35 350 P **P** **06 24 29.6 +0.2**
KBS pmax pmax
comp=Z,49nm,1.2s
KBS Kingsbay 83.35 350 P **P** **06 24 29.6 +0.2**
BRTR Keskin Array B 83.71 309 P **P** **06 24 30.4 -1.8**
comp=Z,0.8nm,0.8s,baz=64,slow=6.6,SNR=4.0
BRTR LR LR 07 04 22.8
comp=Z,70nm,21.1s,baz=319,slow=38
FINES FINESS Array B 84.33 331 *i*P **P** **06 24 33.9 -0.8**
FINES pmax pmax
comp=Z,20nm,1.1s
FINES FINESS Array B 84.33 331 P **P** **06 24 34.4 -0.3**
comp=Z,20nm,1.1s,baz=88,slow=3.1,SNR=16
FINES LR LR 07 03 54.0
comp=Z,366nm,18.6s,baz=292,slow=37
VSU Vasula 84.66 328 *e*P **P** **06 24 35.7 -0.7**
AKASG Malin Array Be 84.84 321 P **P** **06 24 36.7 -0.8**
comp=Z,2.7nm,0.4s,baz=66,slow=5.0,SNR=2.9
AKASG LR LR 07 04 37.5
comp=Z,200nm,19.7s,baz=295,slow=37
AKBB Malin Array Si 84.84 321 *e*P **P** **06 24 36.6 -0.9**
AKBB pmax pmax
comp=Z,18nm,1.1s
JIS Juneau Island 86.29 31 P **P** **06 24 44.1 -0.4**
KMBO Kilima Mbogo 87.64 268 P **P** **06 24 52.3 -0.1**
comp=Z,3.3nm,0.9s,baz=26,slow=5.7,SNR=7.0
SUW Suwalki 87.68 325 P **P** **06 24 50.2 -1.2**
SUW pmax pmax
comp=Z,46nm,1.1s
SUW Suwalki 87.68 325 P **P** **06 24 50.2 -1.2**
BUR08 Bucovina Ar. S 88.10 318 P **P** **06 24 52.6 -1.1**
BUR08 IAmb IAmb 06 24 54.3
comp=Z,8.9nm,1.2s
KOLS Kolonicke sedl 89.64 320 *e*P **P** **06 25 03.0 +2.2**
KOLS Kolonicke sedl 89.64 320 *e*P **P** **06 25 03.0 +2.2**
UZH Uzhgorod 89.71 320 *e*P **P** **06 25 01.3 +0.2**
UZH *e* 06 25 10.1
UZH *e* 06 25 16.3
MAW Mawson 90.00 200 LR LR 07 04 09.2
comp=Z,45nm,18.3s,baz=57,slow=35
CRVS Cervenica-Dubn 90.16 320 *e*P **P** **06 25 03.3 0.0**
CRVS pmax pmax
comp=Z,39nm,1.3s
CRVS Cervenica-Dubn 90.16 320 *e*P **P** **06 25 03.3 0.0**
HFS Hagfors 90.50 332 LR LR 07 07 02.8
comp=Z,527nm,18.9s,baz=354,slow=36
VNDA Vanda 91.03 172 P **P** **06 25 05.8 -0.8**
comp=Z,2.2nm,0.9s,baz=18,slow=3.2,SNR=2.6
VNDA LR LR 07 07 22.8
comp=Z,56nm,19.8s,baz=334,slow=36
NOA NORSAR Array B 91.23 333 P **P** **06 25 07.0 -1.0**
comp=Z,2.1nm,0.9s,baz=64,slow=4.5,SNR=3.7
NOA LR LR 07 09 31.3
comp=Z,481nm,20.1s,baz=65,slow=38
VYHS Vyhne 91.94 320 *e*P **P** **06 25 12.0 +0.5**
VYHS Vyhne 91.94 320 *e*P **P** **06 25 12.0 +0.5**
VRAC Vranov 93.05 321 LR LR 07 10 20.5
comp=Z,438nm,18.3s,baz=38,slow=38
YKA Yellowknife Ar 93.58 24 P **P** **06 25 18.3 -0.4**
comp=Z,1.6nm,0.9s,baz=299,slow=4.9,SNR=15
GERES GERESS Array B 94.99 322 P **P** **06 25 25.1 -0.6**
comp=Z,0.9nm,0.7s,baz=57,slow=4.9,SNR=6.6
GERES LR LR 07 11 32.0
comp=Z,261nm,18.2s,baz=359,slow=38
DAVOX Davos/Dischmat 98.19 321 P **P** **06 25 40.3 -0.1**
comp=Z,3.4nm,0.9s,baz=353,slow=8.1,SNR=3.3
TOA0 Torodi Ar. Sit 118.43 292 **PKPdf** **06 30 49.2 -2.3**
TXAR Lajitas Array 118.44 48 PKP **PKPdf** **06 30 50.1 -1.2**
comp=Z,0.3nm,0.6s,baz=236,slow=1.1,SNR=5.1
JCT Junction City 120.52 45 PKIKP **PKPdf** **06 30 53.8 -1.4**
JCT Junction City 120.52 45 **PKPdf** **06 30 53.8 -1.4**
U40A Yellville 120.99 35 **PKPdf** **06 30 54.2 -1.7**
HBAR Harrisburg 122.80 34 **PKPdf** **06 30 58.8 -0.5**

PAGS	**Pennsylvania G**	**125.16**	**20**		**PKPdf**	**06 31 00.1**	**-3.6**
SDV	**Santo Domingo**	**154.95**	**38**	PKP	**PKPdf**	**06 31 57.3**	**+0.2**
	comp=Z,4.5nm,0.8s,baz=303,slow=3.1,SNR=8.3						
SDV	**Santo Domingo**	**154.95**	**38**		**PKPdf**	**06 31 55.0**	**-2.1**

MAN 26 06:17:20.7, 11°05'N × 124°31'E, h1 km, mb4.0, ML2.8, MS2.5, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.80**	**205**	*e*P	Pg	06 17 36.5	+0.4
LLP				*e*S	Sn	06 17 51.4	-0.4
RCP	**Roxas**	**1.62**	**288** ⇓	*e*P	Pn	06 17 50.2	-0.1

IDC ***26*** *06:20:20.2± 0.7, 2°.36N × 18°.80E, h0 km, mb3.9/15, mb1 4.0/16, mb1mx3.9/44, mbtmp3.9/16, ML4.8/2, Error ellipse: s-maj=21.7km s-min=13.9km az=79.0*
NEIC ***26*** *06:20:21.3± 2.2, 2°.3N± 0°.1 × 18°.87E± 0°.05, h10 km± 3km, mb4.2/10, Error ellipse: s-maj=16.1km s-min=6.6km az=173.0*

ISC 26 06:20:21.2± 0.6, 2°.27N± 0°.08 × 18°.94E± 0°.07, h10 km, n39, σ1§62/40, mb4.1/20, Zaire

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBAR	**Mbarara**	**12.13**	**103**	Pn	**Pn**	**06 23 15.5**	**+1.1**
	9.1nm,0.3s,baz=115,slow=18,SNR=18						
MBAR				Sn	**Sn**	**06 25 27.8**	**-2.2**
	8.3nm,0.3s,baz=22,slow=22,SNR=3.8						
MBAR				Lg	Lg	06 26 46.7	
	3.2nm,0.3s,baz=343,slow=23,SNR=8.1						
MBAR	**Mbarara**	**12.13**	**103**		**Pn**	**06 23 15.6**	**+1.1**
MBAR					**Sn**	**06 25 26.9**	**-3.1**
KMBO	**Kilima Mbogo**	**18.61**	**100**	Lg	Lg	06 30 07.3	
	0.1nm,0.3s,baz=19,slow=18,SNR=2.5						
KMBO	**Kilima Mbogo**	**18.61**	**100**	P	**P**	**06 24 35.9**	**-3.4**
KMBO				IAmb	IAmb	06 24 54.0	
	comp=Z,5.6nm,1.1s						
LSZ	**Lusaka**	**19.69**	**153**	P	**Pn**	**06 24 53.3**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=351,slow=13,SNR=2.8						
LSZ	**Lusaka**	**19.69**	**153**	P	**P**	**06 24 50.1**	**-0.8**
TOA0	**Torodi Ar. Sit**	**20.20**	**303**	P	**P**	**06 24 54.5**	**-1.9**
TORD	**Torodi Ar. Bea**	**20.20**	**303**	P	**P**	**06 24 55.3**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=119,slow=10,SNR=8.6						
TORD				Lg	Lg	06 30 50.6	
	comp=Z,4.1nm,0.9s,baz=128,slow=30,SNR=4.1						
TSUM	**Tsumeb**	**21.38**	**184**	P	**P**	**06 25 10.6**	**+1.4**
	comp=Z,3.1nm,0.4s,baz=358,slow=13,SNR=11						
TSUM	**Tsumeb**	**21.38**	**184**	P	**P**	**06 25 09.5**	**+0.3**
TSUM				IAmb	IAmb	06 25 11.4	
	comp=Z,3.9nm,0.5s						
KIC	**Kosan Boka**	**23.96**	**281**	*e*P	**P**	**06 25 33.7**	**-2.3**
	comp=Z,2.2nm,0.4s						
KIC	**Kosan Boka**	**23.96**	**281**	P	**P**	**06 25 33.7**	**-2.3**
DBIC	**Dimbokro**	**24.12**	**281**	P	**P**	**06 25 35.1**	**-2.4**
	comp=Z,1.9nm,0.4s,baz=80,slow=6.7,SNR=13						
DBIC	**Dimbokro**	**24.12**	**281**	P	**P**	**06 25 35.5**	**-2.0**
LIC	**Lamto**	**24.22**	**280**	*e*P	**P**	**06 25 36.3**	**-2.2**
	comp=Z,3.0nm,0.4s						
LIC	**Lamto**	**24.22**	**280**	P	**P**	**06 25 36.3**	**-2.2**
TIC	**Toumodi**	**24.28**	**281**	*e*P	**P**	**06 25 36.9**	**-2.1**
TIC	**Toumodi**	**24.28**	**281**	P	**P**	**06 25 36.9**	**-2.1**
MATP	**Matopo**	**24.42**	**158**	P	**P**	**06 25 42.1**	**+1.8**
	comp=Z,7.0nm,0.4s,baz=328,slow=7.7,SNR=41						
BOSA	**Boshof**	**31.30**	**169**	P	**P**	**06 26 43.5**	**+1.7**
	comp=Z,1.9nm,0.7s,baz=331,slow=8.8,SNR=7.7						
BOSA	**Boshof**	**31.30**	**169**	P	**P**	**06 26 42.0**	**+0.1**
BRTR	**Keskin Array B**	**39.61**	**18**	P	**P**	**06 27 53.4**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=182,slow=12,SNR=6.5						
ESDC	**Sonseca Array**	**42.66**	**334**	P	**P**	**06 28 18.2**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=148,slow=7.6,SNR=4.2						
DAVOX	**Davos/Dischmat**	**45.03**	**351**	P	**P**	**06 28 37.8**	**+0.5**
	comp=Z,2.3nm,0.4s,baz=172,slow=11,SNR=3.7						
GERES	**GERESS Array B**	**46.62**	**355**	P	**P**	**06 28 49.4**	**-0.3**
	comp=Z,0.4nm,0.3s,baz=169,slow=7.5,SNR=4.8						
ABKAR	**Akbulak array**	**58.41**	**30**	P	**P**	**06 30 18.4**	**+1.4**
ABKAR				IAmb	IAmb	06 30 18.9	
	comp=Z,4.9nm,1.4s						
NC602	**NORSAR Array S**	**58.59**	**356**	P	**P**	**06 30 17.5**	**-0.6**
NOA	**NORSAR Array B**	**58.92**	**356**	P	**P**	**06 30 19.9**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=165,slow=6.4,SNR=4.0						
NC405	**NORSAR Array S**	**58.95**	**356**	P	**P**	**06 30 20.8**	**+0.2**
NC303	**NORSAR Array S**	**59.09**	**356**	P	**P**	**06 30 22.0**	**+0.5**
NC204	**NORSAR Array S**	**59.19**	**355**	P	**P**	**06 30 21.9**	**-0.4**
FINES	**FINESS Array B**	**59.28**	**4**	P	**P**	**06 30 22.3**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=201,slow=5.5,SNR=5.9						
KK31	**Karatay Array**	**61.21**	**41**	P	**P**	**06 30 38.0**	**+1.6**
KK31				IAmb	IAmb	06 30 39.3	
	comp=Z,3.3nm,1.1s						
KKAR	**Karatay Array**	**61.21**	**41**	P	**P**	**06 30 38.0**	**+1.6**
KKAR				IAmb	IAmb	06 30 39.3	
	comp=Z,3.3nm,1.1s						
ARCES	**ARCESS Array B**	**67.30**	**2**	P	**P**	**06 31 15.7**	**-0.2**
	comp=Z,2.1nm,0.8s,baz=191,slow=7.9,SNR=14						
MK31	**Makanchi Array**	**70.33**	**41**	P	**P**	**06 31 37.0**	**+1.7**
MK31				IAmb	IAmb	06 31 37.5	
	comp=Z,1.6nm,1.4s						
MKAR	**Makanchi Array**	**70.33**	**41**	P	**P**	**06 31 36.6**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=246,slow=6.2,SNR=12						
ZALV	**Zalesovo Beam**	**74.15**	**34**	P	**P**	**06 31 57.7**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=252,slow=8.2,SNR=3.0						
SIV	**San Ignacio**	**81.03**	**254**	P	**P**	**06 32 38.2**	**+1.1**
	comp=Z,0.9nm,0.5s,baz=127,slow=7.9,SNR=4.5						

IDC ***26*** *06:27:35.0± 1.1, 23°.90S × 66°.51W, h195 km± 16km, mb3.2/1, mb1 3.1/7, mb1mx3.0/34, mbtmp3.5/7, Error ellipse: s-maj=21.6km s-min=16.2km az=78.0*
SJA ***26*** *06:27:35.6± 0.9, 23°.96S × 66°.74W, h209 km± 9km, ML3.7, MW3.6*
GUC ***26*** *06:27:37.0± 0.6, 23°.91S × 67°.23W, h242 km± 10km, ML4.0*

ISC 26 06:27:35.0± 0.9, 23°.99S± 0°.05 × 66°.73W± 0°.05, h214 km± 9km, n25, σ1§53/45, 8C, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLA	**San Lorenzo**	**1.33**	**124**	*i* P	**Pn**	**06 28 09.8**	**+1.0**
SLA				*i* S	**S**	**06 28 35.0**	**0.0**
HJA	**Humahuaca**	**1.44**	**58**	*i* P	**Pn**	**06 28 10.3**	**+0.4**
HJA				*i* S	**S**	**06 28 36.8**	**0.0**
LVC	**Limon Verde**	**2.43**	**304**	*e*P	**Pn**	**06 28 20.7**	**+1.3**
LVC				*i* S	**S**	**06 28 54.3**	**+0.6**
LVC	**Limon Verde**	**2.43**	**304**	P	**Pn**	**06 28 20.8**	**+1.3**
	10nm,0.3s,baz=118,slow=14,SNR=54						
LVC				S	**S**	**06 28 54.4**	**+0.6**
	23nm,0.3s,baz=124,slow=7.4,SNR=53						
PB15	**IPOC Station P**	**2.63**	**287** ⇑	*i*P	**Pn**	**06 28 22.8**	**+1.3**
PB15				*i* S	**S**	**06 28 57.3**	**-0.1**
GO02	**Mina Guanaco**	**2.86**	**245** ⇑	*i*P	**Pn**	**06 28 25.5**	**+1.4**
GO02				*i* S	**S**	**06 29 03.2**	**+1.1**
GO02				IAML		06 29 03.6	
	comp=N,365nm,0.3s						
PB06	**IPOC Station P**	**2.91**	**295** ⇑	*i*P	**Pn**	**06 28 25.7**	**+1.1**
PB06				*i* S	**S**	**06 29 02.1**	**-0.7**
PB06				IAML		06 29 03.8	
	comp=N,457nm,0.4s						
PB06	**IPOC Station P**	**2.91**	**295**	*i* P	**Pn**	**06 28 25.6**	**+1.1**
PB06				*i* S	**S**	**06 29 02.1**	**-0.7**
PB06				IAML		06 29 05.0	
	comp=Z,208nm,0.3s						
PB09	**IPOC Station P**	**3.18**	**313** ⇑	*i*P	**Pn**	**06 28 29.2**	**+1.5**
PB09				*e*S	**S**	**06 29 08.4**	**-0.2**
PB09				IAML		06 29 16.5	
	comp=N,157nm,0.3s						
PB05	**IPOC Station P**	**3.38**	**289** ⇑	*i*P	**Pn**	**06 28 30.9**	**+0.9**
PB05				*i* S	**S**	**06 29 11.0**	**-1.8**
PB05				IAML		06 29 13.3	
	comp=N,134nm,0.4s						
PB05	**IPOC Station P**	**3.38**	**289**	*i* P	**Pn**	**06 28 30.9**	**+0.9**
PB05				*i* S	**S**	**06 29 11.0**	**-1.8**
PB03	**IPOC Station P**	**3.39**	**304** ⇑	*i*P	**Pn**	**06 28 30.9**	**+0.7**
PB03				*i* S	**S**	**06 29 11.4**	**-1.6**
PB03				IAML		06 29 13.0	
	comp=N,336nm,0.4s						
PB14	**IPOC Station P**	**3.41**	**258**	*e*P	**Pn**	**06 28 31.2**	**+0.7**
PB14				*i* S	**S**	**06 29 12.1**	**-1.6**
PB14				IAML		06 29 15.4	
	comp=E,58nm,0.4s						
PB14	**IPOC Station P**	**3.41**	**258**	*i* P	**Pn**	**06 28 31.3**	**+0.7**
PB14				IAML		06 28 32.3	
	comp=Z,106nm,0.3s						
PB14				*i* S	**S**	**06 29 12.3**	**-1.4**
PB10	**IPOC Station P**	**3.54**	**277** ⇑	*i*P	**Pn**	**06 28 32.6**	**+0.9**
PB10				*i* S	**S**	**06 29 14.0**	**-1.9**
PB10				IAML		06 29 18.9	
	comp=E,120nm,0.4s						
PB10	**IPOC Station P**	**3.54**	**277**	*i* P	**Pn**	**06 28 32.0**	**+0.3**
PB10				IAML		06 28 33.1	
	comp=Z,79nm,0.4s						
PB10				*e*S	**S**	**06 29 14.8**	**-1.1**
PB04	**IPOC Station P**	**3.55**	**297** ⇑	*i*P	**Pn**	**06 28 32.7**	**+0.6**
PB04				*i* S	**S**	**06 29 14.8**	**-1.7**
PB04				IAML		06 29 21.6	
	comp=N,255nm,0.4s						
PB04	**IPOC Station P**	**3.55**	**297**	*i* P	**Pn**	**06 28 32.9**	**+0.8**
PB04				*i* S	**S**	**06 29 14.8**	**-1.7**
PB04				IAML		06 29 17.0	
	comp=Z,147nm,0.3s						
CFA	**Coronel Fontan**	**7.71**	**190**	P	**Pn**	**06 29 24.2**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=6.8,slow=17,SNR=16						
CFA				S	**S**	**06 30 46.2**	**-5.7**
	comp=Z,1.3nm,0.3s,baz=249,slow=21,SNR=8.2						
LPAZ	**La Paz**	**7.77**	**350**	P	**Pn**	**06 29 25.6**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=151,slow=4.4,SNR=13						
LPAZ				S	**S**	**06 30 51.9**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=36,slow=24,SNR=4.3						
CPUP	**Villa Florida**	**8.83**	**107**	P	**Pn**	**06 29 37.6**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=294,slow=12,SNR=7.1						
SIV	**San Ignacio**	**9.56**	**35**	P	**Pn**	**06 29 46.5**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=227,slow=13,SNR=3.0						
PLCA	**Paso Flores**	**17.01**	**190**	P	**Pn**	**06 31 22.4**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=31,slow=8.5,SNR=3.3						
TORD	**Torodi Ar. Bea**	**76.33**	**69**	P	**P**	**06 39 01.1**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=251,slow=4.4,SNR=5.4						
MKAR	**Makanchi Array**	**146.35**	**40**	PKPbc	**PKPbc**	**06 46 52.0**	**+1.4**
	comp=Z,0.8nm,0.6s,baz=308,slow=3.3,SNR=10						

IDC ***26*** *06:28:42.3± 0.8, 12°.04N × 87°.14W, h0 km, mb3.9/10, mb1 4.1/13, mb1mx3.9/37, mbtmp3.9/13, ML2.9/4, MS3.5/5, Ms1 3.5/5, ms1mx3.1/41, Error ellipse: s-maj=36.9km s-min=12.9km az=49.0*
INET ***26*** *06:28:45.1, 11°.65N × 87°.58W, h15 km, ML4.0*
NEIC ***26*** *06:28:47.7± 1.8, 11°.73N± 0°.07 × 87°.38W± 0°.07, h45 km± 8km, mb4.3/45, Error ellipse: s-maj=11.8km s-min=7.1km az=220.0*
UCR ***26*** *06:28:47.6± 1.8, 11°.69N × 87°.45W, h35 km± 69km, MD4.2, mb4.3(NEIC)*

ISC 26 06:28:47.8± 0.5, 11°.78N± 0°.06 × 87°.36W± 0°.07, h48 km, n94, σ1§12/96, mb4.3/29, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	**0.97**	**18**	*e*P	**Pn**	**06 29 06.6**	**+1.4**
ESTN	**Estel**	**1.64**	**36**	*e*P	**Pn**	**06 29 15.6**	**+1.3**
ESTN	**Estel**	**1.64**	**36**		**Pn**	**06 29 15.6**	**+1.3**
MATN	**Matagalpa**	**1.81**	**51**	*e*P	**Pn**	**06 29 17.7**	**+1.0**
NY14	**Universidad de**	**2.12**	**122**	*i* P	**Pn**	**06 29 19.5**	**-1.3**
GB1A	**Borinquen Arri**	**2.15**	**116**	*e*P	**Pn**	**06 29 21.8**	**+0.4**
ACON	**Acoyapa**	**2.15**	**85**	*e*P	**Pn**	**06 29 21.2**	**-0.1**
ACON	**Acoyapa**	**2.15**	**85**		**Pn**	**06 29 20.2**	**-1.1**
BUEV	**Buena Vista**	**2.15**	**117**	*e*P	**Pn**	**06 29 21.6**	**+0.2**
TGUH	**Tegucigalpa,Un**	**2.27**	**2**		**Pn**	**06 29 23.5**	**+0.5**
MESS	**Mesas**	**2.36**	**116**	*i* P	**Pn**	**06 29 24.2**	**-0.1**
CUI	**Cuipilapa**	**2.43**	**117**	*i* P	**Pn**	**06 29 25.3**	**+0.2**
SNET	**Serv Nac Est T**	**2.63**	**316**	Pn	**Pn**	**06 29 29.7**	**+1.8**
SNET				Sn	**Sn**	**06 29 56.7**	**-2.1**
JTS	**Las Juntas de**	**2.79**	**122**	Pn	**Pn**	**06 29 29.5**	**-0.6**
	3.3nm,0.3s,baz=18,slow=16,SNR=22						
JTS				LR	LR	06 30 01.9	
	comp=Z,141nm,20.8s,baz=356,slow=29						
JTS				Sn	**Sn**	**06 30 03.6**	**+1.1**
	20nm,0.3s,baz=352,slow=21,SNR=7.6						
JTS	**Las Juntas de**	**2.79**	**122**	*e*P	**Pn**	**06 29 30.7**	**+0.7**
JTS	**Las Juntas de**	**2.79**	**122**		**Pn**	**06 29 29.1**	**-0.9**
ARE1	**Arenal 1**	**2.91**	**116**	*e*P	**Pn**	**06 29 32.1**	**+0.5**
HDC	**Heredia**	**3.65**	**119**		**Pn**	**06 29 41.7**	**-0.2**
HDC				Sn	**Sn**	**06 30 22.8**	**-1.0**
LCR2	**La Lucha 2**	**3.87**	**121**	*e*P	**Pn**	**06 29 45.9**	**+0.8**
CVTR	**Volcan Turrial**	**3.95**	**116**	*e*P	**Pn**	**06 29 49.3**	**+3.0**
APG	**El Apazote**	**4.41**	**317**	Pn	**Pn**	**06 29 51.6**	**-0.8**
	0.3nm,0.3s,baz=128,slow=12,SNR=2.4						
EDLM	**Las Mercedes**	**4.46**	**123**	*e*P	**Pn**	**06 29 54.0**	**+0.9**
CCIG	**Comitan**	**6.44**	**315**	Pn	**Pn**	**06 30 20.4**	**0.0**
BCIP	**Isla Barro Col**	**7.84**	**109**	Pn	**Pn**	**06 30 38.3**	**-1.1**
TEIG	**Tepich**	**8.45**	**354**	LR	LR	06 33 56.6	
	comp=Z,152nm,19.6s,baz=49,slow=38						
TEIG	**Tepich**	**8.45**	**354**	Pn	**Pn**	**06 30 46.9**	**-0.7**
CMIG	**Matias Romero**	**9.00**	**307**	Pn	**Pn**	**06 30 54.5**	**-0.7**
	0.4nm,0.3s,baz=158,slow=10,SNR=8.6						
TLIG	**Tlapa**	**12.27**	**299**		**Pn**	**06 31 40.8**	**+0.7**
PAYG	**Puerto Ayora**	**12.71**	**193**	Pn	**Pn**	**06 31 46.8**	**+0.8**
ROSC	**El Rosal**	**14.62**	**117**		**Pn**	**06 32 10.3**	**-2.0**
RUSC	**La Rusia**	**15.27**	**111**	Pn	**Pn**	**06 32 18.9**	**-2.0**
FLOC	**Florencia**	**15.41**	**130**		**Pn**	**06 32 21.7**	**-0.6**
SDV	**Santo Domingo**	**16.71**	**98**	Pn	**Pn**	**06 32 37.6**	**-1.3**
	0.2nm,0.3s,baz=274,slow=13,SNR=3.1						
HKT	**Hockley**	**19.72**	**338**	P	**P**	**06 33 13.4**	**0.0**
833A	**Chaparral WMA,**	**19.94**	**327**	P	**P**	**06 33 15.9**	**0.0**
833A				IAmb	IAmb	06 33 16.6	
	comp=Z,17nm,0.8s						
ATAH	**Atahualpa**	**20.80**	**154**	LR	LR	06 40 39.3	
	comp=Z,76nm,22.0s,baz=333,slow=34						
LRAL	**Lakeview Retre**	**21.16**	**1**	P	**P**	**06 33 30.2**	**+1.2**
LRAL				IAmb	IAmb	06 33 33.8	
	comp=Z,10.0nm,0.9s						
Y49A	**Blount Mountai**	**22.00**	**2**	P	**P**	**06 33 39.6**	**+1.6**
Y49A				IAmb	IAmb	06 33 39.8	
	comp=Z,9.0nm,0.8s						
TX32	**Lajitas Array**	**23.15**	**321**	P	**P**	**06 33 50.7**	**+0.5**
TXAR	**Lajitas Array**	**23.15**	**321**	P	**P**	**06 33 50.5**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=138,slow=9.4,SNR=15						
TXAR				PcP	**PcP**	**06 37 39.9**	**+2.3**
	comp=Z,0.3nm,0.8s,baz=106,slow=2.0,SNR=4.4						
TX31	**Lajitas Ar. Si**	**23.15**	**321**	P	**P**	**06 33 50.6**	**+0.3**
MIAR	**Mount Ida**	**23.36**	**347**	P	**P**	**06 33 52.8**	**+0.7**
MIAR				IAmb	IAmb	06 33 59.8	
	comp=Z,5.8nm,0.7s						
W50A	**Signal Mountai**	**23.39**	**4**	P	**P**	**06 33 54.3**	**+1.8**
W50A				IAmb	IAmb	06 33 54.5	
	comp=Z,8.1nm,0.8s						
BG3	**Lake Jocassee**	**23.46**	**9**	P	**P**	**06 33 53.8**	**+0.6**
BG3				IAmb	IAmb	06 33 55.1	
	comp=Z,12nm,1.0s						
BIRD	**Birdtown, Kers**	**23.62**	**14**	P	**P**	**06 33 56.3**	**+1.7**
CPCT	**Cooper Cave**	**23.71**	**6**	P	**P**	**06 33 56.8**	**+1.3**
CPCT				IAmb	IAmb	06 33 58.2	
	comp=Z,7.5nm,0.8s						
H06E1	**SOCORRO T-PHAS**	**23.76**	**290**	T	T	06 58 27.5	
	SNR=3.4						
WHAR	**Wooly Hollow**	**23.83**	**350**	P	**P**	**06 33 57.1**	**+0.6**
V48A	**Smith Brothers**	**23.86**	**1**	P	**P**	**06 33 57.3**	**+0.4**
TKL	**Tuckaleechee C**	**24.00**	**7**	P	**P**	**06 33 57.2**	**-0.9**
	comp=Z,6.9nm,0.7s,baz=171,slow=7.9,SNR=6.3						
TKL	**Tuckaleechee C**	**24.00**	**7**	P	**P**	**06 33 58.7**	**+0.6**
TKL				IAmb	IAmb	06 34 00.1	
	comp=Z,16nm,1.1s						
W39A	**Magazine**	**24.03**	**347**	P	**P**	**06 33 59.1**	**+0.7**
HALT	**Halls**	**24.09**	**356**	P	**P**	**06 33 59.2**	**+0.3**
W57A	**Gilead**	**24.22**	**15**	P	**P**	**06 34 01.5**	**+1.4**
W57A				IAmb	IAmb	06 34 18.6	
	comp=Z,18nm,1.1s						
CLTN	**Cedars of Leba**	**24.23**	**2**	P	**P**	**06 34 00.6**	**+0.4**
LCAR	**Lake Charles**	**24.43**	**353**	P	**P**	**06 34 01.9**	**-0.1**
X34A	**Smith Ranch, M**	**24.64**	**339**	P	**P**	**06 34 04.2**	**+0.2**
X34A				IAmb	IAmb	06 34 19.4	
	comp=Z,9.5nm,0.8s						
TZTN	**Tazewell**	**24.90**	**7**	P	**P**	**06 34 07.4**	**+1.1**
U40A	**Yellville**	**24.97**	**349**	P	**P**	**06 34 06.7**	**-0.3**
U40A				IAmb	IAmb	06 34 07.4	
	comp=Z,6.2nm,0.9s						
PBMO	**Poplar Bluff**	**25.05**	**354**	P	**P**	**06 34 07.2**	**-0.4**
PBMO				IAmb	IAmb	06 34 08.5	
	comp=Z,8.2nm,1.0s						
V58A	**Windy Hill, Pi**	**25.05**	**16**	P	**P**	**06 34 09.2**	**+1.6**
FNO	**Franklin**	**25.09**	**340**	P	**P**	**06 34 09.9**	**+1.9**
T47A	**Sharon Grove**	**25.11**	**0**	P	**P**	**06 34 08.7**	**+0.5**
T47A				IAmb	IAmb	06 34 09.6	
	comp=Z,9.5nm,0.7s						
TUL1	**Leonard**	**25.21**	**344**	P	**P**	**06 34 11.0**	**+1.9**
TUL1				IAmb	IAmb	06 34 11.4	
	comp=Z,12nm,0.8s						
T49A	**Edmonton**	**25.27**	**3**	P	**P**	**06 34 10.8**	**+1.1**
S51A	**Beattyville**	**25.98**	**7**	P	**P**	**06 34 17.2**	**+1.2**
S51A				IAmb	IAmb	06 34 21.5	
	comp=Z,18nm,1.3s						
MSTX	**Muleshoe**	**26.19**	**330**	P	**P**	**06 34 18.4**	**+0.3**
MSTX				IAmb	IAmb	06 34 25.2	
	comp=Z,8.5nm,0.8s						
CCM	**Cathedral Cave**	**26.40**	**353**	P	**P**	**06 34 19.9**	**+0.1**
P46A	**Rosedale**	**27.73**	**0**	P	**P**	**06 34 31.2**	**-0.6**
P46A				IAmb	IAmb	06 34 35.9	
	comp=Z,16nm,1.5s						
P53A	**Whipple**	**28.10**	**10**	P	**P**	**06 34 36.2**	**+1.1**
SAML	**Samuel**	**31.65**	**130**	P	**P**	**06 35 07.0**	**+0.2**
SAML				IAmb	IAmb	06 35 11.9	
	comp=Z,6.7nm,1.3s						
E43A	**Lone Tree Farm**	**34.48**	**0**	P	**P**	**06 35 31.0**	**-0.1**
LONY	**Lake Ozonia**	**34.52**	**16**	P	**P**	**06 35 32.6**	**+1.1**
PDAR	**Pinedale Array**	**36.40**	**332**	P	**P**	**06 35 46.4**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=134,slow=5.1,SNR=3.5						
PDAR				PcP	**PcP**	**06 38 12.2**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=128,slow=3.9,SNR=3.5						
HWUT	**Hardware Ranch**	**36.49**	**329**	P	**P**	**06 35 48.5**	**-0.2**
HWUT				IAmb	IAmb	06 36 01.9	
	comp=Z,4.1nm,0.8s						
REDW	**Red Top Meadow**	**37.47**	**331**	P	**P**	**06 35 57.7**	**+0.7**
LATQ	**La Tuque**	**37.56**	**16**	P	**P**	**06 35 58.0**	**+0.6**
LATQ				IAmb	IAmb	06 35 58.5	
	comp=Z,3.7nm,0.8s						
TPAW	**Teton Pass**	**37.61**	**331**	P	**P**	**06 35 58.0**	**-0.3**
TPAW				IAmb	IAmb	06 36 09.4	
	comp=Z,3.9nm,0.8s						
SIV	**San Ignacio**	**37.92**	**136**	P	**P**	**06 36 01.0**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=318,slow=8.8,SNR=42						
SIV				PcP	**PcP**	**06 38 19.1**	**+2.8**
	comp=Z,1.0nm,0.8s,baz=275,slow=3.9,SNR=3.6						
NVAR	**Mina Array Bea**	**38.27**	**319**	P	**P**	**06 36 05.0**	**+1.2**
	comp=Z,0.5nm,0.8s,baz=135,slow=9.0,SNR=3.0						
ULM	**Lac du Bonnet**	**39.00**	**351**	P	**P**	**06 36 07.5**	**-2.0**
	comp=Z,3.6nm,0.8s,baz=157,slow=7.9,SNR=8.3						
ULM	**Lac du Bonnet**	**39.00**	**351**	P	**P**	**06 36 07.2**	**-2.3**
ULM				IAmb	IAmb	06 36 08.7	
	comp=Z,5.2nm,1.0s						
MCMT	**McKenzie Canyo**	**39.51**	**331**	P	**P**	**06 36 15.1**	**+0.9**
SCHQ	**Schefferville**	**45.90**	**16**	P	**P**	**06 37 04.2**	**-1.3**
	comp=Z,4.9nm,0.8s,baz=218,slow=5.7,SNR=9.3						
SCHQ	**Schefferville**	**45.90**	**16**	P	**P**	**06 37 03.9**	**-1.6**
BDFB	**Brasilia**	**47.53**	**124**	P	**P**	**06 37 19.0**	**+0.1**
	comp=Z,4.9nm,0.8s,baz=298,slow=11,SNR=9.6						
BDFB	**Brasilia**	**47.53**	**124**	P	**P**	**06 37 18.4**	**-0.5**
YKA	**Yellowknife Ar**	**54.28**	**345**	P	**P**	**06 38 07.7**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=138,slow=7.6,SNR=14						
YKA				PcP	**PcP**	**06 39 12.6**	**0.0**
	comp=Z,0.4nm,0.7s,baz=146,slow=3.8,SNR=7.4						
ILAR	**Eielson Array**	**66.67**	**336**	P	**P**	**06 39 33.1**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=145,slow=3.6,SNR=4.7						
BORG	**Borgarnes**	**69.28**	**25**	LR	LR	07 11 54.1	
	comp=Z,195nm,18.1s,baz=78,slow=38						
NRCA	**Norcia**	**89.63**	**46**	P	**P**	**06 41 40.5**	**-0.4**
PETK	**Petropavlovsk-**	**95.00**	**327**	LR	LR	07 30 14.2	
	comp=Z,47nm,18.1s,baz=239,slow=39						
KSH	**Kashi**	**126.67**	**16**	*e*PKP	**PKPdf**	**06 47 46.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**149.32**	**348**	PKPbc	**PKiKP**	**06 48 33.3**	**-0.2**
	comp=Z,2.0nm,0.4s,baz=344,slow=3.9,SNR=17						

ANF ***26*** *06:38:17.6± 0.3, 35°.09N × 96°.22

I42A	Draeger Farm,	10.41	30	Pn	Pn	06 40 48.5	0.0
G40A	Rib Lake	11.13	22	Pn	Pn	06 41 00.3	+2.0

JMA ***26*** *06:55:04.8±0.1,24.°08N×121.°67E,h31km±1km,M3.0*
TAP ***26*** *06:55:06.0,24.°14N×121.°68E,h29km,ML3.8,C*
ISC 26 06:55:05.8±0.9,24.°11N±0.°02×121.°70E±0.°02,h29km±4km, n123,σ0.°82/206,5C-18D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.10**	**250**	⇑*i*P	**Pb**	**06 55 11.2**	**+0.2**
	baz=238						
TWD				S	**Sb**	**06 55 15.0**	**+0.4**
	baz=238						
NACB	**Ninganchiao**	**0.11**	**302**	⇑P	**Pb**	**06 55 11.1**	**-0.1**
	baz=281						
NACB				S	**Sb**	**06 55 14.7**	**-0.1**
	baz=281						
HWA	**Hwalien**	**0.16**	**212**	P	**Pn**	**06 55 12.2**	**-0.2**
	baz=207						
HWA				S	**Sb**	**06 55 17.0**	**+1.6**
	baz=207						
ETLH	**Xiulin Townshi**	**0.22**	**295**	⇓P	**Pn**	**06 55 12.1**	**-1.1**
	baz=283						
ETLH				S	**Sb**	**06 55 16.5**	**-0.2**
	baz=283						
ENLB	**Shoufeng**	**0.23**	**203**	*e*P	**Pb**	**06 55 12.0**	**-0.3**
	baz=193						
ENLB				*e*S	**Sb**	**06 55 17.5**	**+0.9**
	baz=193						
ENA	**Nanau**	**0.32**	**7**	⇑*i*P	**Pb**	**06 55 13.1**	**-0.3**
	baz=8.0						
ENA				*e*S	**Sb**	**06 55 18.4**	**-0.2**
	baz=8.0						
NANB	**Nanao**	**0.32**	**9**	⇑*i*P	**Pb**	**06 55 13.2**	**-0.3**
	baz=8.0						
NANB				S	**Sb**	**06 55 18.4**	**-0.3**
	baz=8.0						
ESL	**Shilin**	**0.39**	**219**	*e*P	**Pb**	**06 55 14.1**	**-0.3**
	baz=224						
ESL				*e*S	**Sn**	**06 55 20.6**	**-1.2**
	baz=224						
WHF	**Hehuan Shan**	**0.40**	**275**	⇓*i*P	**Pb**	**06 55 14.7**	**-0.3**
	baz=270						
WHF				S	**Sn**	**06 55 21.0**	**-1.7**
	baz=270						
NNSB	**Datong**	**0.43**	**317**	⇓P	**Pb**	**06 55 14.8**	**-0.3**
	baz=312						
NNSB				S	**Sb**	**06 55 20.8**	**-0.7**
	baz=312						
NNSH	**Datong**	**0.43**	**317**	⇓P	**Pb**	**06 55 14.8**	**-0.3**
	baz=315						
NNSH				*e*S	**Sb**	**06 55 21.0**	**-0.5**
	baz=315						
NNS	**Nan Shan**	**0.44**	**318**	⇓*i*P	**Pb**	**06 55 15.0**	**-0.4**
	baz=316						
NNS				*e*S	**Sb**	**06 55 21.2**	**-0.7**
	baz=316						
CHGB	**Renai**	**0.48**	**264**	⇓P	**Pn**	**06 55 16.0**	**-0.9**
	baz=255						
CHGB				S	**Sn**	**06 55 23.0**	**-1.5**
	baz=255						
OWD	**Renai**	**0.50**	**252**	⇓*i*P	**Pn**	**06 55 16.2**	**-1.0**
	baz=248						
OWD				*e*S	**Sb**	**06 55 23.0**	**-0.5**
	baz=248						
EGFH	**Guangfu**	**0.51**	**209**	*e*P	**Pb**	**06 55 16.0**	**-0.3**
	baz=217						
EGFH				*e*S	**Sn**	**06 55 23.6**	**-1.2**
	baz=217						
TWC	**Suao**	**0.51**	**16**	⇑*i*P	**Pb**	**06 55 16.3**	**-0.2**
	baz=14						
TWC				S	**Sb**	**06 55 23.6**	**0.0**
	baz=14						
TDCB	**Techi**	**0.51**	**286**	⇓P	**Pn**	**06 55 16.4**	**-0.9**
	baz=280						
TDCB				S	**Sn**	**06 55 23.5**	**-1.7**
	baz=280						
NDT	**Datong Townshi**	**0.52**	**341**	⇓P	**Pb**	**06 55 16.1**	**-0.4**
	baz=340						
NDT				*e*S	**Sb**	**06 55 22.9**	**-0.9**
	baz=340						
ENTT	**Nioudou**	**0.54**	**347**	P	**Pb**	**06 55 16.5**	**-0.4**
	baz=347						
ENTT				S	**Sb**	**06 55 24.2**	**-0.2**
	baz=347						
EOS1	**EOS1**	**0.58**	**42**	*e*P	**Pn**	**06 55 17.9**	**-0.3**
	baz=45						
EOS1				*e*S	**Sn**	**06 55 28.1**	**+1.4**
	baz=45						
TWE	**Neicheng**	**0.61**	**357**	P	**Pb**	**06 55 17.7**	**-0.3**
	baz=354						
TWE				S	**Sb**	**06 55 26.3**	**0.0**
	baz=354						
VWDT	**VWDT**	**0.62**	**235**	⇓P	**Pn**	**06 55 18.1**	**-0.5**
	baz=228						
VWDT				S	**Sn**	**06 55 26.4**	**-1.3**
	baz=228						
YHNB	**Yeheng**	**0.63**	**332**	⇓P	**Pb**	**06 55 18.0**	**-0.4**
	baz=322						
YHNB				S	**Sb**	**06 55 25.8**	**-1.2**
	baz=322						
NSK	**Sanguang**	**0.64**	**331**	⇓*i*P	**Pb**	**06 55 18.1**	**-0.5**
	baz=322						
NSK				S	**Sb**	**06 55 26.3**	**-1.0**
	baz=322						
SLBB	**Yuanshan**	**0.64**	**355**	*e*P	**Pb**	**06 55 17.3**	**-1.3**
	baz=356						
ILA	**Ilan**	**0.65**	**4**	*e*P	**Pn**	**06 55 18.7**	**-0.4**
	baz=358						
ILA				*e*S	**Sb**	**06 55 27.5**	**0.0**
	baz=358						
HGSD	**Ruisui**	**0.67**	**202**	*e*P	**Pn**	**06 55 18.9**	**-0.5**
	baz=215						
HGSD				*e*S	**Sn**	**06 55 29.8**	**+1.0**
	baz=215						
NWLT	**Wulai**	**0.69**	**345**	*e*P	**Pb**	**06 55 18.5**	**-0.8**
	baz=338						
NWLT				*e*S	**Sb**	**06 55 28.0**	**-0.5**
	baz=338						
EHY	**Hungye**	**0.70**	**210**	*e*P	**Pb**	**06 55 18.9**	**-0.6**
	baz=207						
WHP	**Taichung City**	**0.71**	**284**	P	**Pn**	**06 55 19.7**	**-0.3**
	baz=281						
WHP				S	**Sn**	**06 55 29.4**	**-0.5**
	baz=281						
DPDB	**Guoxing**	**0.71**	**264**	⇓P	**Pn**	**06 55 19.6**	**-0.3**
	baz=257						
DPDB				*e*S	**Sn**	**06 55 29.0**	**-0.9**
	baz=257						
NTC	**Toucheng**	**0.75**	**9**	*e*P	**Pn**	**06 55 20.2**	**-0.2**
	baz=9.0						
NTC				*e*S	**Sn**	**06 55 30.3**	**-0.5**
	baz=9.0						
SSLB	**Suanglung**	**0.75**	**245**	P	**Pn**	**06 55 20.0**	**-0.5**
	baz=243						
SSLB				*e*S	**Sn**	**06 55 29.8**	**-1.2**
	baz=243						
EGS		**0.76**	**16**	*e*P	**Pb**	**06 55 20.7**	**+0.1**
	baz=18						
SMLT	**Sun Moon Lake**	**0.77**	**253**	P	**Pn**	**06 55 20.5**	**-0.3**
	baz=247						
SMLT				S	**Sn**	**06 55 30.7**	**-0.7**
	baz=247						
TYC	**Yuchr**	**0.80**	**255**	⇓P	**Pb**	**06 55 20.8**	**-0.4**
	baz=249						
TYC				*e*S	**Sb**	**06 55 30.5**	**-1.1**
	baz=249						
YULB	**Yu-li**	**0.81**	**207**	*e*P	**Pn**	**06 55 19.4**	**-1.8**
	baz=206						
LIOB	**Emei**	**0.82**	**311**	⇓*i*P	**Pb**	**06 55 21.8**	**+0.3**
	baz=309						
LIOB				*e*S	**Sn**	**06 55 32.2**	**-0.4**
	baz=309						
NSTT	**Nanjuang**	**0.82**	**309**	⇓*i*P	**Pb**	**06 55 21.7**	**+0.1**
	baz=308						
NSTT				S	**Sn**	**06 55 31.6**	**-1.0**
	baz=308						
WLTB	**Daxi**	**0.84**	**331**	*e*P	**Pb**	**06 55 21.9**	**0.0**
	baz=340						
WLTB				*e*S	**Sn**	**06 55 33.2**	**+0.1**
	baz=340						
TWF1	**Yuli**	**0.84**	**206**	*e*P	**Pn**	**06 55 21.0**	**-0.8**
	baz=214						
NHDH	**Xindian Distri**	**0.86**	**349**	*e*P	**Pb**	**06 55 21.7**	**-0.6**
	baz=348						
NHDH				*e*S	**Sb**	**06 55 32.8**	**-0.6**
	baz=348						
TIPB	**Shuangxi**	**0.86**	**8**	*e*P	**Pb**	**06 55 22.1**	**-0.2**
	baz=357						
TIPB				*e*S	**Sb**	**06 55 33.0**	**-0.5**
	baz=357						
TWA	**Mucha**	**0.87**	**353**	P	**Pb**	**06 55 22.2**	**-0.2**
	baz=353						
TWA				*e*S	**Sb**	**06 55 33.0**	**-0.7**
	baz=353						
TWQ1	**Liyutan**	**0.88**	**286**	P	**Pb**	**06 55 23.1**	**+0.6**
	baz=284						
TWQ1				*e*S	**Sn**	**06 55 34.8**	**+0.7**
	baz=284						
WHYT	**Xinyi Township**	**0.88**	**242**	*e*P	**Pb**	**06 55 22.8**	**+0.2**
	baz=243						
WHYT				*e*S	**Sn**	**06 55 34.7**	**+0.6**
	baz=243						
TATO	**Taipei**	**0.88**	**347**	⇓P	**Pb**	**06 55 22.3**	**-0.3**
	baz=346						
TATO				*e*S	**Sn**	**06 55 33.2**	**-0.8**
	baz=346						
NSY	**Sanyi**	**0.91**	**290**	⇓*e*P	**Pb**	**06 55 24.1**	**+1.1**
	baz=288						
NSY				*e*S	**Sb**	**06 55 36.4**	**+1.6**
	baz=288						
YUS	**Yu-Shan**	**0.92**	**228**	P	**Pb**	**06 55 23.2**	**-0.4**
	baz=219						
YUS				*e*S	**Sn**	**06 55 35.0**	**-0.8**
	baz=219						
TWB1	**Santiao Chiao**	**0.93**	**16**	*e*P	**Pb**	**06 55 23.5**	**+0.1**
	baz=16						
TWB1				*e*S	**Sb**	**06 55 35.5**	**+0.1**
	baz=16						
WJS	**Zhushan**	**0.93**	**252**	*e*P	**Pb**	**06 55 24.1**	**+0.6**
	baz=251						
WJS				*e*S	**Sb**	**06 55 37.5**	**+2.0**
	baz=251						
TCU	**Taichung**	**0.94**	**272**	*e*P	**Pb**	**06 55 23.7**	**+0.2**
	baz=271						
TCU				*e*S	**Sb**	**06 55 37.6**	**+2.0**
	baz=271						
SBCB	**Hsinchu**	**0.94**	**316**	*e*P	**Pb**	**06 55 23.9**	**+0.4**
	baz=314						
SBCB				*e*S	**Sb**	**06 55 36.6**	**+1.0**
	baz=314						
HSN	**Hsinchu**	**0.95**	**316**	*e*P	**Pb**	**06 55 24.0**	**+0.2**
	baz=316						
HSN				*e*S	**Sb**	**06 55 37.6**	**+1.5**
	baz=316						
WFSB	**Wu-fen Shan**	**0.96**	**4**	*e*P	**Pb**	**06 55 23.7**	**-0.1**
	baz=350						
WFSB				*e*S	**Sb**	**06 55 36.5**	**+0.3**
	baz=350						
WNT	**Mingjian**	**0.96**	**256**	*e*P	**Pb**	**06 55 24.5**	**+0.7**
	baz=255						
WNT				*e*S	**Sb**	**06 55 38.1**	**+1.9**
	baz=255						
PTSB	**Yuanli**	**0.97**	**290**	*e*P	**Pb**	**06 55 24.7**	**+0.7**
	baz=288						
PTSB				*e*S	**Sb**	**06 55 37.8**	**+1.4**
	baz=288						
NCUH	**Zhongli**	**0.97**	**331**	*e*P	**Pb**	**06 55 23.9**	**-0.2**
	baz=328						
NCUH				*e*S	**Sb**	**06 55 38.1**	**+1.5**
	baz=328						
NCU	**National Centr**	**0.97**	**331**	*e*P	**Pb**	**06 55 24.2**	**+0.1**
	baz=329						
NCU				*e*S	**Sb**	**06 55 37.9**	**+1.3**
	baz=329						
FULB	**Fuli**	**0.98**	**202**	*e*P	**Pb**	**06 55 23.5**	**-0.8**
	baz=217						
FULB				*e*S	**Sb**	**06 55 37.6**	**+0.7**
	baz=217						
WDJ	**Dajia District**	**0.99**	**284**	*e*P	**Pb**	**06 55 25.3**	**+0.8**
	baz=282						
WDJ				*e*S	**Sb**	**06 55 38.8**	**+1.6**
	baz=282						
ALS	**Alishan**	**1.01**	**234**	P	**Pb**	**06 55 24.8**	**-0.2**
	baz=225						
ALS				*e*S	**Sb**	**06 55 38.3**	**+0.2**
	baz=225						
TWS1	**Kuangyinshan**	**1.02**	**345**	*e*P	**Pb**	**06 55 24.7**	**-0.1**
	baz=354						
TWS1				*e*S	**Sb**	**06 55 38.6**	**+0.7**
	baz=354						
YM01	**YM01**	**1.03**	**354**	*e*P	**Pb**	**06 55 24.5**	**-0.7**
	baz=341						
YM01				*e*S	**Sb**	**06 55 38.4**	**0.0**
	baz=341						
WCHH	**Zhanghua**	**1.04**	**268**	*e*P	**Pb**	**06 55 25.7**	**+0.4**
	baz=267						
WCHH				*e*S	**Sb**	**06 55 40.5**	**+1.9**
	baz=267						
YM10	**YM10**	**1.04**	**353**	*e*P	**Pb**	**06 55 25.3**	**-0.1**
	baz=351						
YM10				*e*S	**Sb**	**06 55 38.3**	**-0.4**
	baz=351						
CHKT	**Chengkung**	**1.05**	**197**	*e*P	**Pb**	**06 55 25.2**	**-0.3**
	baz=212						
CHKT				*e*S	**Sb**	**06 55 38.7**	**-0.3**
	baz=212						
CHN5	**Tsauling**	**1.07**	**241**	*e*P	**Pb**	**06 55 26.0**	**+0.2**
	baz=230						
CHN5				*e*S	**Sb**	**06 55 40.7**	**+1.4**
	baz=230						
NTST	**Danshui**	**1.07**	**348**	*e*P	**Pb**	**06 55 26.1**	**+0.3**
	baz=347						
YM08	**YM08**	**1.07**	**355**	*e*P	**Pb**	**06 55 25.0**	**-0.8**
	baz=340						
ELDTW	**Lidau**	**1.11**	**214**	*e*P	**Pb**	**06 55 25.4**	**-1.1**
	baz=203						
WGK	**Gukeng**	**1.12**	**248**	*e*P	**Pb**	**06 55 26.7**	**0.0**
	baz=233						
WDLH	**Douliu**	**1.14**	**249**	*e*P	**Pb**	**06 55 27.6**	**+0.7**
	baz=234						
TWY	**Chenhua**	**1.16**	**356**	*e*P	**Pb**	**06 55 26.5**	**-0.8**
	baz=341						
JYNG	**Yonagunijimaku**	**1.19**	**73**	P	**Pn**	**06 55 26.3**	**-0.1**
JYNG				S	**Sb**	**06 55 43.5**	**+0.8**
RLNB	**Erlin**	**1.25**	**260**	*e*P	**Pb**	**06 55 28.6**	**-0.1**
	baz=259						
RLNB				*e*S	**Sb**	**06 55 45.6**	**+1.3**
	baz=259						
YOJ	**Yonaguni jima**	**1.25**	**74**	P	**Pn**	**06 55 27.5**	**+0.2**
YOJ				S	**Sb**	**06 55 44.2**	**-0.2**
CHN2	**Minshiung**	**1.26**	**243**	*e*P	**Pb**	**06 55 29.0**	**0.0**
	baz=231						
CHN4	**Tsaushan**	**1.27**	**233**	*e*P	**Pb**	**06 55 29.0**	**0.0**
	baz=235						
CHN4				*e*S	**Sb**	**06 55 46.2**	**+1.3**
	baz=235						
TPUB	**Ta-pu**	**1.27**	**231**	*e*P	**Pb**	**06 55 28.9**	**-0.2**
	baz=231						
TPUB				*e*S	**Sb**	**06 55 45.6**	**+0.4**
	baz=231						
STYT	**Tauyuan**	**1.28**	**223**	*e*P	**Pb**	**06 55 28.9**	**-0.5**
	baz=222						
WTP	**Ta-pu**	**1.32**	**229**	*e*P	**Pb**	**06 55 29.8**	**-0.2**
	baz=231						
WTP				*e*S	**Sb**	**06 55 47.6**	**+1.1**
	baz=231						
CHY	**Chiayi**	**1.32**	**243**	*e*P	**Pb**	**06 55 30.0**	**0.0**
	baz=231						
WTCT	**Ta-ch'eng**	**1.32**	**259**	*e*P	**Pb**	**06 55 29.4**	**-0.5**
	baz=259						
WTCT				*e*S	**Sb**	**06 55 46.7**	**+0.2**
	baz=259						
TWK	**Hsinying**	**1.39**	**233**	P	**Pb**	**06 55 30.9**	**-0.4**
	baz=235						
TWK				S	**Sb**	**06 55 49.4**	**+0.7**
	baz=235						
TWGBT	**Beinan**	**1.41**	**204**	*e*P	**Pb**	**06 55 29.9**	**-1.6**
	baz=190						
TWG	**Pinlang**	**1.41**	**204**	*e*P	**Pb**	**06 55 30.1**	**-1.5**
	baz=197						
TWG				*e*S	**Sn**	**06 55 47.0**	**-0.1**
	baz=197						
TWH	**Lutao**	**1.41**	**188**	*e*P	**Pn**	**06 55 29.8**	**+0.3**
	baz=187						
CHN1	**Nanshi**	**1.42**	**230**	*e*P	**Pb**	**06 55 31.6**	**-0.1**
	baz=232						
CHN1				*e*S	**Sb**	**06 55 50.2**	**+0.9**
	baz=232						
SNST	**Tainan City**	**1.42**	**231**	*e*P	**Pb**	**06 55 31.3**	**-0.3**
	baz=232						
SNST				*e*S	**Sb**	**06 55 50.4**	**+1.2**
	baz=232						
WLGB	**Puzi**	**1.43**	**244**	*e*P	**Pb**	**06 55 30.7**	**-1.1**
	baz=244						
WSF	**Szhu**	**1.43**	**251**	*e*P	**Pn**	**06 55 30.0**	**+0.2**
	baz=251						
WSF				*e*S	**Sb**	**06 55 50.9**	**+1.2**
	baz=251						
SLGT	**Liugui**	**1.48**	**221**	*e*P	**Pb**	**06 55 32.2**	**-0.4**
	baz=222						
PCYT	**Pengchaiyu**	**1.55**	**13**	*e*P	**Pn**	**06 55 32.1**	**+0.6**
	baz=12						
CHN8	**Yiju**	**1.56**	**241**	*e*P	**Pb**	**06 55 33.2**	**-0.9**
	baz=241						
ECL	**Taimali**	**1.66**	**205**	*e*P	**Pb**	**06 55 34.2**	**-1.5**
	baz=194						
SSD	**Sandimen**	**1.68**	**216**	*e*P	**Pb**	**06 55 34.8**	**-1.2**
	baz=209						
SSD				*e*S	**Sb**	**06 55 56.6**	**-0.2**
	baz=209						
MASBT	**Mashibuluo**	**1.79**	**213**	*e*P	**Pb**	**06 55 36.3**	**-1.7**
	baz=216						
EAST	**Anshuo**	**1.89**	**205**	*e*P	**Pb**	**06 55 37.9**	**-1.9**
	baz=198						
HATJ	**Hateruma jima**	**1.93**	**91**	P	**Pn**	**06 55 37.2**	**+0.6**
HATJ				S	**Sn**	**06 56 00.5**	**+0.6**
SSPT	**Xinbi**	**1.93**	**213**	*e*P	**Pb**	**06 55 40.0**	**-0.3**
	baz=201						
SCZT	**Fangliau**	**2.00**	**210**	*e*P	**Pb**	**06 55 39.2**	**-2.3**
	baz=198						
PHUB	**P'eng-hu**	**2.04**	**253**	*e*P	**Pn**	**06 55 38.5**	**+0.3**
	baz=255						
PHUB				*e*S	**Sn**	**06 56 03.0**	**+0.4**
	baz=255						
PNG	**Penghu**	**2.04**	**255**	*e*P	**Pn**	**06 55 38.4**	**+0.3**
	baz=254						
WDGT	**Dungji**	**2.05**	**246**	*e*P	**Pn**	**06 55 39.2**	**+0.9**
	baz=246						
JKRS	**Kuro-shima**	**2.11**	**86**	P	**Pn**	**06 55 40.5**	**+1.3**
JKRS				*e*S	**Sn**	**06 56 05.6**	**+1.1**
VWUC	**VWUC**	**2.23**	**294**	*e*P	**Pn**	**06 55 40.3**	**-0.4**
	baz=291						
PTTC	**Pingtan**	**2.23**	**309**	*e*P	**Pn**	**06 55 40.4**	**-0.4**
	baz=306						
JIJ	**Ishigaki jima**	**2.25**	**83**	P	**Pn**	**06 55 41.2**	**+0.2**
JIJ				S	**Sn**	**06 56 07.2**	**-0.6**
VCHM	**Qimei**	**2.27**	**247**	*e*P	**Pn**	**06 55 42.0**	**+0.6**
	baz=239						
VCHM				*e*S	**Sn**	**06 56 09.2**	**+0.9**
	baz=239						
TWK1	**Hengchun**	**2.31**	**201**	*e*P	**Pn**	**06 55 43.5**	**+1.6**
	baz=194						
TWKBT	**Hengchun**	**2.31**	**201**	*e*P	**Pn**	**06 55 41.4**	**-0.5**
	baz=194						
JISG	**Ishigakijimahi**	**2.43**	**78**	P	**Pn**	**06 55 43.8**	**+0.3**
JISG				*e*S	**Sn**	**06 56 11.8**	**-0.5**
PTMZ	**Houxiangcun**	**2.52**	**292**	*e*P	**Pn**	**06 55 44.5**	**-0.3**
	baz=290						
MATB	**Ma-tsu**	**2.58**	**322**	*e*P	**Pn**	**06 55 46.5**	**+0.9**
	baz=319						
JTJ	**Tarama**	**2.79**	**79**	P	**Pn**	**06 55 49.2**	**+0.7**
JTJ				S	**Sn**	**06 56 22.0**	**+0.8**
LYJJ	**Jianjiangzhen**	**2.99**	**325**	*e*P	**Pn**	**06 55 51.6**	**+0.2**
	baz=322						
KNM	**Kinmen**	**3.00**	**276**	*e*P	**Pn**	**06 55 52.9**	**+1.6**
	baz=274						
KNMB	**Chin-men Tao**	**3.04**	**277**	*e*P	**Pn**	**06 55 51.9**	**0.0**
	baz=275						
MHZQ	**Yeshan**	**3.12**	**310**	*e*P	**Pn**	**06 55 53.2**	**0.0**
	baz=308						
AXDP	**Jialang**	**3.48**	**284**	*e*P	**Pn**	**06 55 58.1**	**+0.1**
	baz=282						
ZPLA	**Ao Xicun**	**3.62**	**268**	*e*P	**Pn**	**06 56 00.0**	**+0.2**
	baz=266						
ZZJH	**Jiuhuzhen**	**3.73**	**276**	*e*P	**Pn**	**06 56 01.4**	**-0.1**
	baz=273						

MEX 26 07:01:07.0±0.6,16.°25N×99.°02W,h12km±12km,MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACP2	**Acapulco**	**1.04**	**307**	*e*P	Pb	07 01 23.7	-3.3
ACP2				*e*S	Sg	07 01 36.2	-4.4
ACP2	**Acapulco**	**1.04**	**307**		Pb	07 01 23.7	-3.3
ACP2					Sg	07 01 35.5	-5.1
TLIG	**Tlapa**	**1.38**	**18**	*e*P	Pn	07 01 28.3	-4.0
TLIG				*e*S	Sb	07 01 44.8	-5.6
TLIG	**Tlapa**	**1.38**	**18**		Pn	07 01 28.2	-4.1
TLIG					Sg	07 01 43.6	-7.8
TLIG	**Tlapa**	**1.38**	**18**		Pn	07 01 28.3	-4.0
TLIG					Sg	07 01 42.7	-8.7
CAIG	**El Cayaco**	**1.44**	**304**	*e*P	Pn	07 01 29.1	-3.8
CAIG				*e*S	Sn	07 01 47.3	-4.5
CAIG	**El Cayaco**	**1.44**	**304**		Pn	07 01 29.1	-3.8
CAIG					Sn	07 01 47.3	-4.5
MEIG	**Mezcala**	**1.77**	**341**	*e*P	Pn	07 01 33.7	-3.8
MEIG				*i* S	Sn	07 01 55.0	-5.0
MEIG	**Mezcala**	**1.77**	**341**		Pn	07 01 33.7	-3.8
MEIG					Sn	07 01 53.4	-6.6
PLIG	**Platanillo**	**2.18**	**348**	*e*P	Pn	07 01 40.1	-3.2
PLIG				*e*S	Sn	07 02 06.5	-3.8
PLIG	**Platanillo**	**2.18**	**348**		Pn	07 01 40.1	-3.2
PLIG					Sn	07 02 06.5	-3.8
ARIG	**Puente Sto Nin**	**2.39**	**328**	*e*P	Pn	07 01 43.6	-2.4
ARIG				*i* S	Sn	07 02 11.2	-4.1
ARIG	**Puente Sto Nin**	**2.39**	**328**		Pn	07 01 43.6	-2.4
ARIG					Sn	07 02 12.7	-2.6
YAIG	**Yautepec**	**2.60**	**359**	*e*P	Pn	07 01 46.4	-2.7
YAIG				*e*S	Sn	07 02 17.5	-3.2
YAIG	**Yautepec**	**2.60**	**359**		Pn	07 01 46.4	-2.7
YAIG					Sn	07 02 17.5	-3.2
ZIIG	**Zihuatanejo**	**2.70**	**300**	*e*P	Pn	07 01 47.5	-2.9
ZIIG				*e*S	Sn	07 02 18.9	-4.2
ZIIG	**Zihuatanejo**	**2.70**	**300**		Pn	07 01 47.5	-2.9
ZIIG					Sn	07 02 18.9	-4.2

LJU 26 07:15:01.3,46.°30N×13.°78E,h17km,ML0.5,1C-1D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CADS	**Cadrg**	**0.08**	**201**	⇓*i*Pg	Pg	07 15 04.7	+0.1
CADS				*i* Sg	Sg	07 15 07.1	+0.2
	comp=Z,3.0nm,0.1s						
CADS	**Cadrg**	**0.08**	**201**	*i* Sg	Sg	07 15 08.9	+2.0
GORS	**Gorjuse**	**0.15**	**83**	⇑*i*Pg	Pb	07 15 05.8	0.0
GORS	**Gorjuse**	**0.15**	**83**	*i* Pg	Pb	07 15 07.5	+1.8
ROBS	**Robic**	**0.19**	**254**	*e*Sg	Sb	07 15 09.6	-0.2
VOJS	**Vojsko**	**0.28**	**164**	*i* Pg	Pg	07 15 07.6	0.0
VOJS				*i* Sg	Sb	07 15 12.2	-0.1
VOJS	**Vojsko**	**0.28**	**164**	*i* Pg	Pb	07 15 09.2	+1.3

JMA ***26*** *07:50:46.2±0.1,22.°84N×120.°95E,h27km±2km,M3.6*
TAP ***26*** *07:50:49.7,22.°91N×121.°09E,h12km,ML3.7,B*
ISC 26 07:50:49.2±1.0,22.°85N±0.°02×121.°11E±0.°02,h20km±4km, n115,σ1.°23/175,15C-11D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWGBT	**Beinan**	**0.04**	**224**	⇑P	**Pb**	**07 50 52.7**	**-0.1**
	baz=184						
TWGBT				S	**Sb**	**07 50 54.8**	**-0.4**
	baz=184						
TWG	**Pinlang**	**0.04**	**234**	⇑*i*P	**Pb**	**07 50 52.7**	**-0.1**
	baz=184						
TWG				*i* S	**Sb**	**07 50 54.8**	**-0.5**
	baz=184						
TTN	**Taitung**	**0.10**	**160**	P	**Pb**	**07 50 54.8**	**+1.6**
	baz=165						
ECL	**Taimali**	**0.29**	**210**	⇑*i*P	**Pn**	**07 50 56.4**	**-1.9**
	baz=200						
ECL				S	**Sb**	**07 51 00.8**	**+0.7**
	baz=200						
CHKT	**Chengkung**	**0.34**	**43**	⇑*i*P	**Pb**	**07 50 57.0**	**+0.4**
	baz=54			

FULB	**Fuli**	**0.39**	**26**	⇑*i*	*e*P	**Pb**	**07 50 57.3**	**-0.1**
	baz=25							
FULB					*e*S	**Sb**	**07 51 03.5**	**+0.6**
	baz=25							
SLGT	**Liugui**	**0.45**	**289**	⇑	*e*P	**Pn**	**07 50 58.3**	**-2.2**
	baz=282							
SLGT					*e*S	**Sb**	**07 51 03.7**	**-1.1**
	baz=282							
SSD	**Sandimen**	**0.45**	**257**	⇑*i*	*e*P	**Pn**	**07 50 58.5**	**-2.0**
	baz=248							
SSD					*e*S	**Sb**	**07 51 03.9**	**-0.9**
	baz=248							
STYT	**Tauyuan**	**0.45**	**314**	⇓*i*	*e*P	**Pb**	**07 50 58.0**	**-0.5**
	baz=311							
STYT					S	**Sb**	**07 51 03.5**	**-1.3**
	baz=311							
MASBT	**Mashibuluo**	**0.50**	**242**	⇑	P	**Pn**	**07 50 59.8**	**-1.4**
	baz=232							
MASBT					S	**Sn**	**07 51 06.3**	**-2.8**
	baz=232							
EAST	**Anshuo**	**0.52**	**208**	⇓	P	**Pn**	**07 51 00.5**	**-1.0**
	baz=191							
EAST					S	**Sn**	**07 51 08.4**	**-1.4**
	baz=191							
TAW	**Tawu**	**0.53**	**202**		*e*P	**Pn**	**07 51 00.5**	**-1.1**
	baz=197							
TAW					*e*S	**Sn**	**07 51 08.5**	**-1.3**
	baz=197							
TWF1	**Yuli**	**0.53**	**19**	⇑	*e*P	**Pb**	**07 50 58.6**	**-1.3**
	baz=15							
TWF1					S	**Sb**	**07 51 05.8**	**-1.4**
	baz=15							
SGST	**Jiashian**	**0.54**	**296**		*e*P	**Pn**	**07 50 59.5**	**-2.2**
	baz=291							
SGST					*e*S	**Sb**	**07 51 06.7**	**-0.7**
	baz=291							
YULB	**Yu-li**	**0.57**	**18**	⇑	P	**Pb**	**07 50 59.1**	**-1.5**
	baz=13							
YULB					*e*S	**Sb**	**07 51 06.6**	**-1.8**
	baz=13							
SGLT	**Jiouru**	**0.58**	**258**		*e*P	**Pn**	**07 51 02.0**	**-0.4**
	baz=254							
WTP	**Ta-pu**	**0.61**	**311**	⇓*i*	P	**Pn**	**07 51 01.5**	**-1.2**
	baz=308							
WTP					S	**Sn**	**07 51 09.6**	**-2.3**
	baz=308							
SSPT	**Xinbi**	**0.62**	**234**	⇑*i*	P	**Pn**	**07 51 02.8**	**0.0**
	baz=223							
SSPT					*e*S	**Sn**	**07 51 11.4**	**-0.7**
	baz=223							
CHN1	**Nanshi**	**0.63**	**302**		*e*P	**Pn**	**07 51 02.4**	**-0.7**
	baz=301							
CHN1					*e*S	**Sn**	**07 51 11.3**	**-1.3**
	baz=301							
TPUB	**Ta-pu**	**0.63**	**316**	⇓	P	**Pn**	**07 51 01.9**	**-1.2**
	baz=313							
TPUB					S	**Sn**	**07 51 10.1**	**-2.5**
	baz=313							
TWM1	**Shoushan**	**0.64**	**268**	⇑	*e*P	**Pn**	**07 51 03.4**	**+0.3**
	baz=259							
SCZT	**Fangliau**	**0.65**	**224**	⇑	P	**Pn**	**07 51 03.0**	**-0.3**
	baz=223							
SCZT					S	**Sn**	**07 51 12.4**	**-0.6**
	baz=223							
YUS	**Yu-Shan**	**0.66**	**347**	⇓*i*	P	**Pb**	**07 51 01.4**	**-0.9**
	baz=358							
YUS					*e*S	**Sb**	**07 51 08.9**	**-2.3**
	baz=358							
SNST	**Tainan City**	**0.68**	**303**		*e*P	**Pn**	**07 51 03.3**	**-0.3**
	baz=312							
SNST					*e*S	**Sn**	**07 51 13.1**	**-0.5**
	baz=312							
EHY	**Hungye**	**0.69**	**16**		*e*P	**Pb**	**07 51 01.8**	**-0.7**
	baz=13							
EHY					*e*S	**Sb**	**07 51 10.0**	**-1.6**
	baz=13							
CHN4	**Tsaushan**	**0.69**	**317**	⇓	P	**Pn**	**07 51 03.1**	**-0.7**
	baz=315							
CHN4					*e*S	**Sn**	**07 51 12.3**	**-1.7**
	baz=315							
HGSD	**Ruisui**	**0.70**	**24**		*e*P	**Pb**	**07 51 02.3**	**-0.5**
	baz=17							
HGSD					*e*S	**Sn**	**07 51 13.7**	**-0.6**
	baz=17							
TWK	**Hsinying**	**0.71**	**306**	⇓*i*	P	**Pn**	**07 51 03.5**	**-0.6**
	baz=304							
TWK					S	**Sn**	**07 51 13.7**	**-0.9**
	baz=304							
ALS	**Alishan**	**0.72**	**337**	⇓	*e*P	**Pn**	**07 51 02.9**	**-1.6**
	baz=337							
ALS					*e*S	**Sb**	**07 51 11.8**	**-1.0**
	baz=337							
CHN3	**Shinhua**	**0.72**	**289**		*e*P	**Pn**	**07 51 05.7**	**+1.4**
	baz=284							
KAU	**Kaohsiung**	**0.79**	**250**		*e*P	Pn	07 51 09.1	+4.0
	baz=237							
TAI1	**Yung-k'ang**	**0.84**	**284**		*e*P	**Pn**	**07 51 06.6**	**+0.8**
	baz=279							
WLCH	**Liuqiu**	**0.84**	**234**		*e*P	Pn	07 51 09.1	+3.3
	baz=223							
CHN5	**Tsauling**	**0.85**	**332**	⇓*i*	P	**Pn**	**07 51 05.5**	**-0.5**
	baz=331							
CHN5					*e*S	**Sn**	**07 51 16.3**	**-1.7**
	baz=331							
EGFH	**Guangfu**	**0.87**	**20**		*e*P	**Pb**	**07 51 05.2**	**-0.4**
	baz=23							
WHYT	**Xinyi Township**	**0.88**	**344**	⇓	P	**Pn**	**07 51 06.0**	**-0.5**
	baz=350							
WHYT					*e*S	**Sb**	**07 51 16.4**	**-0.7**
	baz=350							
CHN2	**Minshiung**	**0.90**	**320**		*e*P	**Pn**	**07 51 07.0**	**+0.4**
	baz=318							
CHN2					*e*S	**Sn**	**07 51 19.7**	**+0.6**
	baz=318							
VWDT	**VWDT**	**0.90**	**2**		*e*P	**Pb**	**07 51 05.6**	**-0.6**
	baz=9.0							
CHY	**Chiayi**	**0.91**	**316**		*e*P	**Pn**	**07 51 07.0**	**+0.2**
	baz=315							
CHY					*e*S	**Sn**	**07 51 19.7**	**+0.4**
	baz=315							
HEN	**Hengchun**	**0.91**	**202**		*e*P	**Pn**	**07 51 08.7**	**+2.0**
	baz=188							
SCLT	**Jiali**	**0.91**	**291**		*e*P	**Pn**	**07 51 08.0**	**+1.3**
	baz=299							
SCLT					*e*S	**Sn**	**07 51 21.6**	**+2.4**
	baz=299							
TWK1	**Hengchun**	**0.94**	**197**		*e*P	**Pn**	**07 51 08.9**	**+1.6**
	baz=183							
TWKBT	**Hengchun**	**0.94**	**197**		*e*P	**Pn**	**07 51 09.2**	**+1.9**
	baz=184							
SSLB	**Suanglung**	**0.95**	**351**		*e*P	**Pn**	**07 51 06.5**	**-0.9**
	baz=353							
SSLB					*e*S	**Sb**	**07 51 18.4**	**-0.7**
	baz=353							
TSEB	**Hengchuen, Pin**	**0.96**	**192**		*e*P	**Pn**	**07 51 09.6**	**+2.0**
	baz=179							
WLGB	**Puzi**	**0.97**	**310**		*e*P	**Pn**	**07 51 08.5**	**+0.7**
	baz=309							
WLGB					*e*S	**Sn**	**07 51 22.5**	**+1.6**
	baz=309							
WGK	**Gukeng**	**0.98**	**329**		*e*P	**Pn**	**07 51 08.3**	**+0.5**
	baz=329							
WGK					*e*S	**Sn**	**07 51 22.2**	**+1.3**
	baz=329							
WDLH	**Douliu**	**0.99**	**328**		*e*P	**Pn**	**07 51 08.9**	**+1.0**
	baz=327							
WDLH					*e*S	**Sn**	**07 51 23.0**	**+1.6**
	baz=327							
ESL	**Shilin**	**1.01**	**17**		*e*P	**Pn**	**07 51 07.7**	**-0.5**
	baz=27							
ESL					*e*S	**Sb**	**07 51 19.3**	**-1.5**
	baz=27							
WJS	**Zhushan**	**1.03**	**340**		*e*P	**Pn**	**07 51 09.4**	**+0.9**
	baz=340							
WJS					*e*S	**Sn**	**07 51 23.8**	**+1.4**
	baz=340							
SMLT	**Sun Moon Lake**	**1.05**	**349**		*e*P	**Pn**	**07 51 09.1**	**+0.2**
	baz=356							
SMLT					*e*S	**Sn**	**07 51 23.0**	**0.0**
	baz=356							
TYC	**Yuchr**	**1.08**	**348**		*e*P	**Pn**	**07 51 09.7**	**+0.5**
	baz=354							
TYC					*e*S	**Sn**	**07 51 24.2**	**+0.7**
	baz=354							
WNT	**Mingjian**	**1.10**	**339**	⇑	*e*P	**Pn**	**07 51 10.8**	**+1.4**
	baz=340							
WNT					*e*S	**Sn**	**07 51 25.9**	**+1.9**
	baz=340							
OWD	**Renai**	**1.10**	**3**		*e*P	**Pn**	**07 51 09.2**	**-0.5**
	baz=4.0							
OWD					*e*S	**Sn**	**07 51 23.2**	**-1.2**
	baz=4.0							
WSF	**Szhu**	**1.14**	**314**		*e*P	**Pb**	**07 51 10.7**	**+0.5**
	baz=313							
WSF					*e*S	**Sn**	**07 51 26.8**	**+1.8**
	baz=313							
ENLB	**Shoufeng**	**1.15**	**23**		*e*P	**Pb**	**07 51 09.7**	**-0.6**
	baz=39							
DPDB	**Guoxing**	**1.19**	**352**		*e*P	**Pb**	**07 51 12.1**	**+1.0**
	baz=356							
DPDB					*e*S	**Sn**	**07 51 26.9**	**+0.5**
	baz=356							
CHGB	**Renai**	**1.21**	**3**		*e*P	**Pb**	**07 51 11.0**	**-0.5**
	baz=3.0							
CHGB					*e*S	**Sn**	**07 51 27.1**	**0.0**
	baz=3.0							
HWA	**Hwalien**	**1.21**	**22**		*e*P	**Pb**	**07 51 11.6**	**+0.1**
	baz=46							
RLNB	**Erlin**	**1.25**	**327**		*e*P	**Pb**	**07 51 12.7**	**+0.7**
	baz=326							
RLNB					*e*S	**Sn**	**07 51 29.4**	**+1.7**
	baz=326							
WHF	**Hehuan Shan**	**1.30**	**6**		*e*P	**Pb**	**07 51 12.4**	**-0.8**
	baz=18							
TWD	**Chiawan**	**1.31**	**20**		*e*P	**Pb**	**07 51 12.9**	**-0.1**
	baz=36							
TWD					*e*S	**Sn**	**07 51 27.8**	**-1.4**
	baz=36							
WCHH	**Zhanghua**	**1.33**	**338**		*e*P	**Pb**	**07 51 14.3**	**+0.9**
	baz=338							
WCHH					*e*S	**Sb**	**07 51 32.8**	**+2.8**
	baz=338							
TCU	**Taichung**	**1.35**	**343**		*e*P	**Pb**	**07 51 15.1**	**+1.2**
	baz=344							
TCU					*e*S	**Sb**	**07 51 33.8**	**+3.0**
	baz=344							
NACB	**Ninganchiao**	**1.39**	**19**		*e*P	**Pn**	**07 51 11.6**	**-2.0**
	baz=33							
NACB					*e*S	**Sb**	**07 51 32.1**	**+0.1**
	baz=33							
ETLH	**Xiulin Townshi**	**1.40**	**14**		*e*P	**Pb**	**07 51 14.4**	**-0.2**
	baz=33							
WDGT	**Dungji**	**1.40**	**287**		*e*P	**Pb**	**07 51 14.3**	**-0.3**
	baz=285							
WDGT					*e*S	**Sb**	**07 51 32.4**	**+0.4**
	baz=285							
TDCB	**Techi**	**1.40**	**2**		*e*P	**Pb**	**07 51 14.9**	**+0.1**
	baz=11							
TDCB					*e*S	**Sb**	**07 51 32.5**	**+0.2**
	baz=11							
TWT	**Tachien**	**1.40**	**2**		*e*P	**Pb**	**07 51 14.9**	**+0.1**
	baz=4.0							
WHP	**Taichung City**	**1.43**	**354**		*e*P	**Pb**	**07 51 16.5**	**+1.2**
	baz=5.0							
WDJ	**Dajia District**	**1.56**	**344**		*e*P	**Pb**	**07 51 18.2**	**+0.9**
	baz=345							
WDJ					*e*S	**Sb**	**07 51 40.0**	**+3.4**
	baz=345							
PHUB	**P'eng-hu**	**1.56**	**295**		*e*P	**Pb**	**07 51 16.5**	**-0.9**
	baz=294							
PHUB					*e*S	**Sb**	**07 51 35.5**	**-1.3**
	baz=294							
VCHM	**Qimei**	**1.59**	**283**		*e*P	**Pb**	**07 51 17.1**	**-0.8**
	baz=294							
VCHM					*e*S	**Sb**	**07 51 37.0**	**-0.6**
	baz=294							
NNSB	**Datong**	**1.59**	**9**		*e*P	**Pn**	**07 51 16.0**	**-0.4**
	baz=11							
NNSH	**Datong**	**1.59**	**9**		*e*P	**Pb**	**07 51 18.1**	**+0.1**
	baz=10.0							
NSY	**Sanyi**	**1.59**	**348**		*e*P	**Pb**	**07 51 19.1**	**+1.1**
	baz=350							
NSY					*e*S	**Sb**	**07 51 40.5**	**+2.7**
	baz=350							
PNG	**Penghu**	**1.60**	**297**		*e*P	**Pb**	**07 51 17.3**	**-0.8**
	baz=296							
PNG					*e*S	**Sb**	**07 51 36.7**	**-1.2**
	baz=296							
NNS	**Nan Shan**	**1.60**	**9**		*e*P	**Pb**	**07 51 18.5**	**+0.2**
	baz=11							
PTSB	**Yuanli**	**1.64**	**347**		*e*P	**Pb**	**07 51 19.3**	**+0.6**
	baz=332							
ENA	**Nanau**	**1.68**	**20**		*e*P	**Pb**	**07 51 18.1**	**-1.3**
	baz=23							
NANB	**Nanao**	**1.68**	**20**		*e*P	**Pn**	**07 51 17.6**	**+0.2**
	baz=23							
NSTT	**Nanjuang**	**1.78**	**357**		*e*P	**Pb**	**07 51 21.1**	**0.0**
NDT	**Datong Townshi**	**1.79**	**12**		*e*P	**Pb**	**07 51 21.8**	**+0.5**
	baz=26							
LIOB	**Emei**	**1.79**	**357**		*e*P	**Pb**	**07 51 21.1**	**-0.3**
	baz=1.0							
YHNB	**Yeheng**	**1.83**	**8**		*e*P	**Pb**	**07 51 20.1**	**-2.0**
	baz=9.0							
ENTT	**Nioudou**	**1.83**	**13**		*e*P	**Pb**	**07 51 21.8**	**-0.3**
	baz=31							
NSK	**Sanguang**	**1.84**	**7**		*e*P	**Pb**	**07 51 20.3**	**-1.8**
	baz=9.0							
TWC	**Suao**	**1.88**	**21**		*e*P	**Pb**	**07 51 21.8**	**-1.0**
	baz=38							
EOS1	**EOS1**	**1.94**	**29**		*e*P	**Pn**	**07 51 21.7**	**+0.8**
	baz=48							
TWE	**Neicheng**	**1.94**	**15**		*e*P	**Pb**	**07 51 23.2**	**-0.6**
	baz=33							
NWLT	**Wulai**	**1.96**	**11**		*e*P	**Pb**	**07 51 22.5**	**-1.7**
	baz=28							
SLBB	**Yuanshan**	**1.96**	**14**		*e*P	**Pb**	**07 51 22.8**	**-1.4**
	baz=34							
WLTB	**Daxi**	**2.00**	**4**		*e*P	**Pb**	**07 51 25.4**	**+0.5**
	baz=7.0							
NTC	**Toucheng**	**2.10**	**18**		*e*P	**Pb**	**07 51 24.9**	**-1.7**
	baz=20							
TWA	**Mucha**	**2.17**	**11**		*e*P	**Pb**	**07 51 26.7**	**-1.0**
	baz=356							
TIPB	**Shuangxi**	**2.21**	**17**		*e*P	**Pn**	**07 51 25.4**	**+0.5**
	baz=32							
YM10	**YM10**	**2.34**	**10**		*e*P	**Pb**	**07 51 27.9**	**-2.7**
	baz=356							
YM03	**YM03**	**2.36**	**10**		*e*P	**Pb**	**07 51 29.7**	**-1.3**
	baz=31							
HATJ	**Hateruma jima**	**2.75**	**64**		P	**Pn**	**07 51 31.8**	**-0.4**
HATJ					*e*S	**Sn**	**07 52 04.4**	**-0.4**
IRIF	**Iriomote-Funau**	**2.82**	**58**		P	**Pn**	**07 51 33.6**	**+0.4**
PTMZ	**Houxiangcun**	**2.84**	**321**		*e*P	**Pn**	**07 51 34.3**	**+0.9**
	baz=323							
PTTC	**Pingtan**	**2.91**	**335**		*e*P	**Pn**	**07 51 35.1**	**+0.8**
	baz=338							
KNMB	**Chin-men Tao**	**2.97**	**303**		*e*P	**Pn**	**07 51 36.3**	**+1.1**
	baz=305							
JKRS	**Kuro-shima**	**3.00**	**62**		P	**Pn**	**07 51 36.1**	**+0.5**
JKRS					*e*S	**Sn**	**07 52 12.4**	**+1.5**
JIJ	**Ishigaki jima**	**3.17**	**61**		P	**Pn**	**07 51 38.0**	**+0.1**
ZPLA	**Ao Xicun**	**3.27**	**290**		*e*P	**Pn**	**07 51 41.4**	**+2.1**
	baz=290							
JISG	**Ishigakijimahi**	**3.41**	**59**		P	**Pn**	**07 51 41.2**	**0.0**
JISG					*e*S	**Sn**	**07 52 21.5**	**+0.5**
MATB	**Ma-tsu**	**3.46**	**342**		*e*P	**Pn**	**07 51 42.6**	**+0.7**
	baz=345							
AXDP	**Jialang**	**3.53**	**306**		*e*P	**Pn**	**07 51 44.4**	**+1.6**
	baz=308							
ZZJH	**Jiuhuzhen**	**3.58**	**298**		*e*P	**Pn**	**07 51 44.8**	**+1.3**
	baz=299							
JTJ	**Tarama**	**3.75**	**61**		P	**Pn**	**07 51 45.8**	**0.0**
JTJ					*e*S	**Sn**	**07 52 29.7**	**+0.4**
MHZQ	**Yeshan**	**3.75**	**330**		*e*P	**Pn**	**07 51 47.0**	**+1.1**
	baz=333							
LYJJ	**Jianjiangzhen**	**3.89**	**342**		*e*P	**Pn**	**07 51 48.6**	**+0.8**
	baz=346							

IDC ***26*** *08:14:20.4±0.7, 10°.92S×163°.97E, h0km, mb4.5/16, mb1 4.7/19, mb1mx4.6/33, mbtmp4.5/19, ML4.6/3, MS4.3/30, Ms1 4.3/30, ms1mx4.3/41, Error ellipse: s-maj=22.4km s-min=15.1km az=133.0*

BJI ***26*** *08:14:21.5±0.0, 10°.93S×164°.43E, h30km, mB5.3/30, mb4.6/38, Ms5.0/15, Ms7 4.7/14*

MOS ***26*** *08:14:24.5±0.8, 10°.94S×163°.87E, h39km, mb5.0/39, Error ellipse: s-maj=8.8km s-min=8.7km az=122.5*

NEIC ***26*** *08:14:25.6±1.1, 10°.98S±0°.09×163°.91E±0°.07, h35km±2km, mb4.9/105, Error ellipse: s-maj=13.0km s-min=9.1km az=204.0*

GCMT ***26*** *08:14:29.6±0.2, 10°.90S±0°.01×163°.88E±0°.01, h18km, MW5.2/110, Moment Tensor Solution. s73,c112; s110,c172; Duration: 1ŝ0 Moment tensor: Scale 10*^{17} *Nm; Mrr0.58±.02; Mθθ-0.72±.01; Mφφ0.14±.01; Mrθ0.39±.03; Mrφ0.04±.01; Mθφ-0.17±.04; Best double couple: M₀0.78300×10*^{17} *NP1:ϕ257.00000°, δ31.00000°, λ65.00000°. NP2:ϕ106.00000°, δ62.00000°, λ104.00000°. Principal axes: T 0.7270, Plg69.0000°, Azm46.0000°; N 0.1120, Plg13.0000°, Azm279.0000°; P -0.8390, Plg16.0000°, Azm185.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 08:14:24.7±0.4, 11°.10S±0°.05×164°.02E±0°.06, h29km, n219, σ1ŝ37/209, mb4.9/85, MS4.3/37, 1C-3D, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.33**	**292**	Pn		**Pn**	**08 15 28.0**	**-0.7**
	43nm,0.3s,baz=190,slow=17,SNR=4.5							
HNR				Sn		**Sn**	**08 16 19.4**	**+1.1**
	122nm,0.3s,baz=129,slow=21,SNR=6.1							
HNR				LR		LR	08 17 07.8	
	comp=Z,2μm,18.5s,baz=123,slow=40							
HNR	**Honiara**	**4.33**	**292**	*e*P		Pb	08 15 32.0	-8.2
HNR	**Honiara**	**4.33**	**292**			**Pn**	**08 15 27.4**	**-1.3**
HNR					Sn	**Sn**	**08 16 19.3**	**+1.0**
DZM	**Mont Dzumac**	**11.16**	**168**	*e*Pn		**Pn**	**08 17 05.5**	**+3.0**
	12nm,0.3s							
DZM				*e*Sn		**Sn**	**08 19 02.9**	**-3.4**
	2.3nm,0.3s							
DZM				*e*LR		LR	08 19 35.0	
	comp=Z,5μm,23.8s							
DZM	**Mont Dzumac**	**11.16**	**168**	Pn		**Pn**	**08 17 05.5**	**+3.0**
	4.1nm,0.3s,baz=34,slow=8.5,SNR=27							
DZM				LR		LR	08 20 49.6	
	comp=Z,3μm,20.4s,baz=14,slow=34							
DZM	**Mont Dzumac**	**11.16**	**168**			**Pn**	**08 17 05.8**	**+3.3**
NOUC	**Port Laguerre**	**11.16**	**169**			**Pn**	**08 17 04.8**	**+2.4**
MSVF	**Nonsavu**	**15.10**	**118**	*e*P		**Pn**	**08 17 59.6**	**+3.3**
MSVF				pmax		pmax		
	comp=Z,11nm,1.2s							
TARA	**Tarawa**	**15.21**	**36**	Pn		**Pn**	**08 17 58.0**	**+0.3**
TARA				IAmb		IAmb	08 18 07.7	
	comp=Z,128nm,1.1s							
PMG	**Port Moresby**	**16.68**	**274**	P		**Pn**	**08 18 15.1**	**-1.4**
PMG				pmax		pmax		
	comp=Z,53nm,1.2s							
PMG	**Port Moresby**	**16.68**	**274**	LR		LR	08 24 33.3	
	comp=Z,3μm,20.4s,baz=136,slow=37							
PMG	**Port Moresby**	**16.68**	**274**	Pn		**Pn**	**08 18 15.1**	**-1.4**
EIDS	**Eidsvold**	**18.75**	**219**	P		**Pn**	**08 18 42.3**	**+0.2**
CTA	**Charters Tower**	**19.29**	**240**	P		**Pn**	**08 18 49.1**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=65,slow=13,SNR=14							
COEN	**Coen**	**20.54**	**260**	P		**P**	**08 19 00.5**	**-0.6**
COEN				IAmb		IAmb	08 19 16.6	
	comp=Z,59nm,1.2s							
AFI	**Afiamalu**	**23.79**	**99**	LR		LR	08 27 27.7	
	comp=Z,1μm,18.1s,baz=282,slow=33							
JAY	**Jayapura**	**24.65**	**289**	LR		LR	08 29 31.3	
	comp=Z,497nm,20.3s,baz=1.0,slow=37							
NIUE	**Niue**	**26.35**	**111**	P		**P**	**08 19 59.6**	**+1.0**
CAN	**Canberra**	**27.71**	**207**	P		**P**	**08 20 11.3**	**+0.6**
CAN				pmax		pmax		
	comp=Z,22nm,1.4s							
CAN	**Canberra**	**27.71**	**207**	P		**P**	**08 20 11.2**	**+0.6**
STKA	**Stephens Creek**	**29.26**	**222**	P		**P**	**08 20 24.6**	**+0.2**
STKA				pmax		pmax		
	comp=Z,3.0nm,1.2s							
STKA	**Stephens Creek**	**29.26**	**222**	P		**P**	**08 20 26.6**	**+2.2**
	comp=Z,4.8nm,0.9s,baz=44,slow=13,SNR=7.2							
STKA				LR		LR	08 31 24.3	
	comp=Z,2μm,18.1s,baz=34,slow=35							
STKA	**Stephens Creek**	**29.26**	**222**	P		**P**	**08 20 24.6**	**+0.2**
URZ	**Urewera**	**29.48**	**159**	LR		LR	08 31 55.0	
	comp=Z,677nm,18.0s,baz=340,slow=36							
H11S2	**WAKE ISLAND Hy**	**29.52**	**5**	T		T	08 51 08.2	
	baz=188,slow=72							
H11S3	**WAKE ISLAND Hy**	**29.52**	**5**	T		T	08 51 03.8	
	baz=188,slow=72							
H11S1	**WAKE ISLAND Hy**	**29.54**	**5**	T		T	08 51 02.8	
	baz=188,slow=72							
WR0	**Warramunga Arr**	**29.69**	**249**	P		**P**	**08 20 27.6**	**-0.9**
WB0	**Warramunga Arr**	**29.79**	**250**	P		**P**	**08 20 28.3**	**-1.0**
WB2	**Warramunga Arr**	**29.86**	**249**	P		**P**	**08 20 29.0**	**-1.0**
WRA	**Warramunga Arr**	**29.88**	**249**	P		**P**	**08 20 29.4**	**-0.7**
	comp=Z,5.2nm,0.4s,baz=80,slow=9.0,SNR=17							
H11N1	**WAKE ISLAND Hy**	**30.75**	**5**	T		T	08 52 38.7	
	baz=184,slow=76							
H11N3	**WAKE ISLAND Hy**	**30.75**	**5**	T		T	08 52 34.7	
	baz=184,slow=76							
H11N2	**WAKE ISLAND Hy**	**30.77**	**5**	T		T	08 52 34.0	
	baz=184,slow=76							
GUMO	**Guam**	**31.02**	**322**	LR		LR	08 31 36.4	
	comp=Z,592nm,22.0s,baz=144,slow=34							
AS31	**Alice Springs**	**31.26**	**242**	P		**P**	**08 20 41.2**	**-1.1**
ASAR	**Alice Springs**	**31.26**	**242**	P		**P**	**08 20 41.3**	**-1.0**
	comp=Z,2.2nm,0.5s,baz=62,slow=10.0,SNR=42							
ASAR				LR		LR	08 33 24.5	
	comp=Z,546nm,19.5s,baz=72,slow=37							
MTN	**Manton Dam**	**32.20**	**264**	P		**P**	**08 20 49.1**	**-1.5**
MTN				IAmb		IAmb	08 20 57.7	
	comp=Z,26nm,1.3s							
RPZ	**Rata Peaks**	**33.06**	**171**	LR		LR	08 33 00.1	
	comp=Z,1μm,21.4s,baz=330,slow=34							
BBOO	**Buckleboo**	**33.57**	**226**	P		**P**	**08 21 02.8**	**+0.4**
BBOO				IAmb		IAmb	08 21 08.5	
	comp=Z,22nm,1.2s							
KNRA	**Kununurra**	**34.57**	**258**	P		**P**	**08 21 10.3**	**-0.9**
KNRA				IAmb		IAmb	08 21 19.1	
	comp=Z,36nm,1.4s							
FITZ	**Fitzroy Crossi**	**37.73**	**255**	P		**P**	**08 21 36.5**	**-1.7**
	comp=Z,7.1nm,0.5s,baz=64,slow=7.6,SNR=28							
FITZ	**Fitzroy Crossi**	**37.73**	**255**	P		**P**	**08 21 36.9**	**-1.4**
FITZ				IAmb		IAmb	08 21 38.0	
	comp=Z,9.1nm,0.7s							
DAV	**Davao City (W)**	**42.30**	**294**	LR		LR	08 39 23.2	
	comp=Z,207nm,18.4s,baz=135,slow=36							
JCJ	**Chichijima**	**43.48**	**331**	LR		LR	08 36 53.7	
	comp=Z,290nm,21.9s,baz=150,slow=31							
PPT	**Papeete**	**45.33**	**104**	LR		LR	08 39 21.4	
	comp=Z,344nm,19.6s,baz=308,slow=33							
PPT2	**Papeete2**	**45.33**	**104**	*e*LR		LR	08 35 13.9	
	comp=Z,271nm,21.5s							
TBI	**Tubuai**	**45.89**	**112**	*e*LR		LR	08 35 29.0	
	com

MDJ pmax pmax
comp=Z,260nm,3.6s
MDJ LR LR
comp=Z,280nm,5.7s
MDJ LR LR
comp=Z,310nm,4.0s
MDJ LR LR
comp=Z,430nm,5.0s
PET Petropavlovsk 64.03 356 *e*P P 08 25 04.0 +8.5
PET *e*S S 08 33 41.2 +11
PETK Petropavlovsk- 64.18 356 P **P** **08 24 55.8 -0.7**
comp=Z,3.3nm,1.1s,baz=274,slow=19,SNR=4.1
PETK LR LR 08 47 12.7
comp=Z,387nm,21.6s,baz=225,slow=31
CN2 Changchun 64.93 330 *e*P **P** **08 25 02.5 +0.9**
CN2 *e*S **S** **08 33 39.5 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 LR LR
comp=Z,330nm,16.0s
CN2 LR LR
comp=Z,480nm,18.0s
GRNR Gornyy 66.13 341 *e*P P 08 25 04.3 -5.0
GRNR MLR MLR
comp=Z,110nm,12.0s
VNDA Vanda 66.42 181 LR LR 08 50 13.1
comp=Z,316nm,20.5s,baz=7.0,slow=32
KLR Kul'dur 66.44 338⇓ *e*P **P** **08 25 09.5 -1.8**
KLR pmax pmax
comp=Z,15nm,1.8s
PBKT Sadao Pong 68.13 293 P **P** **08 25 21.5 -1.1**
CMAR Chiang Mai Arr 70.58 294 P **P** **08 25 38.2 +0.4**
comp=Z,1.0nm,0.3s,baz=120,slow=4.6,SNR=9.6
CMAR LR LR 08 57 50.3
comp=Z,41nm,18.7s,baz=82,slow=37
HHC Hu-ho-hao-te 70.78 320 *e*P **P** **08 25 38.5 -0.2**
HHC pmax pmax
comp=Z,5.0nm,0.9s
HHC pmax pmax
comp=Z,75nm,4.5s
HHC LR LR
comp=Z,160nm,15.3s
HHC LR LR
comp=Z,160nm,12.8s
HHC LR LR
comp=Z,150nm,13.6s
MA2 Magadan 71.24 353⇓ *e*P **P** **08 25 39.0 -1.9**
MA2 pmax pmax
comp=Z,6.0nm,1.0s
CD2 Chengdu 71.29 308 *e*P **P** **08 25 42.0 +0.1**
HIA Hailar 71.59 331 *e*P **P** **08 25 42.9 -0.4**
HIA pmax pmax
comp=Z,82nm,1.4s
ZEA Zeya 71.74 338 *e*P **P** **08 25 43.6 -0.5**
ZEA pmax pmax
comp=Z,37nm,1.4s
LZH Lanzhou 73.54 313 *e*P **P** **08 25 56.0 +0.6**
LZH pP pwP 08 26 07.5 -3.9
LZH sP PcP 08 26 11.8 +0.5
LZH *e*PP **PP** **08 28 40.3 +0.5**
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,89nm,7.6s
LZH LR LR
comp=Z,250nm,15.4s
LZH LR LR
comp=Z,260nm,15.2s
LZH LR LR
comp=Z,380nm,18.1s
SEY Seymchan 74.35 355 *e*P **P** **08 25 58.4 -0.9**
GAMB Gambell 76.93 11 P **P** **08 26 13.9 -0.1**
GAMB IAmb IAmb 08 26 22.8
comp=Z,19nm,1.4s
ULN Ulaanbaatar 77.35 325 P **P** **08 26 16.7 -0.3**
ULN pmax pmax
comp=Z,13nm,1.2s
ULN Ulaanbaatar 77.35 325 P **P** **08 26 16.6 -0.3**
ULN IAmb IAmb 08 26 17.8
comp=Z,12nm,1.2s
YAK Yakutsk 77.67 344 *e*P **P** **08 26 15.4 -2.8**
YAK *e* 08 26 23.5
YAK *e**PP **pwP** **08 26 31.6 -3.0**
YAK *e* 08 29 09.0
YAK *e*PPP PPP 08 30 58.1
YAK *e*S **S** **08 36 04.1 -3.9**
YAK *e**SS **sS** **08 36 22.9 +3.3**
YAK *e* 08 36 30.9
YAK pmax pmax
comp=Z,15nm,1.4s
YAK pmax pmax
comp=N,7.0nm,1.5s
YAK pmax pmax
comp=E,6.0nm,1.5s
YAK pmax pmax
comp=Z,39nm,2.3s
YAK pmax pmax
comp=N,62nm,2.4s
YAK pmax pmax
comp=E,22nm,2.3s
YAK smax smax
comp=N,37nm,3.2s
YAK smax smax
comp=E,40nm,3.2s
YAK Yakutsk 77.67 344 P **P** **08 26 17.6 -0.6**
YAK IAmb IAmb 08 26 21.4
comp=Z,8.9nm,0.7s
SONM Songino Array 77.71 324 P **P** **08 26 19.0 0.0**
SONM pmax pmax
comp=Z,7.0nm,1.3s
SONM Songino Array 77.71 324 P **P** **08 26 19.0 0.0**
comp=Z,3.7nm,1.1s,baz=135,slow=6.2,SNR=13
SONM LR LR 08 58 45.1
comp=Z,160nm,21.4s,baz=122,slow=34
SONM Songino Array 77.71 324 IAmb IAmb 08 26 20.3
comp=Z,6.8nm,1.3s
GTA Gaotai 77.88 314 *e*P **P** **08 26 20.5 +0.4**
GTA pP sP 08 26 30.5 +0.9
GTA sP pwP 08 26 35.3 -0.9
GTA pmax pmax
comp=Z,7.0nm,1.3s
GTA pmax pmax
comp=Z,89nm,6.7s
GTA LR LR
comp=Z,220nm,8.3s
GTA LR LR
comp=Z,320nm,10.5s
GTA LR LR
comp=Z,310nm,14.6s
QSPA South Pole Qui 78.91 180 P **P** **08 26 26.9 +1.5**
BILL Bilibino 78.95 1*c i*P **P** **08 26 24.8 -0.4**
BILL *PP **PcP** **08 26 33.0 -0.7**
BILL *SP **pwP** **08 26 40.0 -0.4**
BILL *e*S **S** **08 36 28.1 +6.6**
BILL *e*SS **SS** **08 41 31.6 +4.1**
BILL *e*SSS SSS 08 44 45.4
BILL pmax pmax
comp=Z,14nm,1.1s
BILL MLR MLR
comp=Z,94nm,18.0s
BILL Bilibino 78.95 1 P **P** **08 26 24.4 -0.7**
BILL IAmb IAmb 08 26 29.8
comp=Z,28nm,1.3s
SHL Shillong 79.05 299 P **P** **08 26 26.0 -0.9**
SHL pmax pmax
comp=Z,11nm,1.2s
SHL Shillong 79.05 299 P **P** **08 26 26.0 -0.9**
BOD Bodaibo 79.86 335 *e*P **P** **08 26 29.3 -1.1**
BOD pmax pmax
comp=Z,12nm,1.9s
ZAK Zakamensk 80.78 326 *e*P **P** **08 26 34.9 -0.7**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
TLY Talaya 81.23 327 *e*P **P** **08 26 38.2 +0.3**
TLY pmax pmax
comp=Z,17nm,1.1s
TLY MLR MLR
comp=Z,455nm,9.0s
TLY Talaya 81.23 327 P **P** **08 26 38.0 +0.1**
RND Reindeer 82.54 19 P **P** **08 26 43.5 -1.1**
RND pmax pmax
comp=Z,17nm,1.4s
RND Reindeer 82.54 19 P **P** **08 26 43.5 -1.1**
RND IAmb IAmb 08 26 49.2
comp=Z,16nm,1.4s
MCK McKinley 82.74 19 P **P** **08 26 46.1 +0.5**
MCK pmax pmax
comp=Z,29nm,1.4s
MCK McKinley 82.74 19 P **P** **08 26 46.1 +0.5**
MLY Manley 83.10 18 P **P** **08 26 47.3 -0.1**
BARN Barnard Glacie 83.61 23 P **P** **08 26 50.5 +0.2**
CTGM Chitina Glacie 83.68 24 P **P** **08 26 50.9 +0.2**
HDA Harding Lake 83.84 19 P **P** **08 26 50.6 -0.7**
HDA IAmb IAmb 08 27 05.5
comp=Z,14nm,1.1s
MAW Mawson 84.03 202 P **P** **08 26 52.4 +0.2**
MAW pmax pmax
comp=Z,6.0nm,1.4s
MAW Mawson 84.03 202 P **P** **08 26 53.8 +1.6**
comp=Z,5.2nm,1.0s,baz=97,slow=6.6,SNR=6.9
MAW LR LR 09 02 23.9
comp=Z,166nm,18.1s,baz=59,slow=34
MAW Mawson 84.03 202 P **P** **08 26 52.4 +0.2**
ILAR Eielson Array 84.11 19 P **P** **08 26 52.0 -0.5**
comp=Z,5.1nm,1.1s,baz=234,slow=3.5,SNR=16
ILAR LR LR 09 01 52.7
comp=Z,210nm,18.5s,baz=266,slow=34
SAO San Andreas Ge 84.48 51 P **P** **08 26 54.5 -0.6**
SAO pmax pmax
comp=Z,14nm,1.3s
SAO San Andreas Ge 84.48 51 P **P** **08 26 54.5 -0.6**
SAO IAmb IAmb 08 26 56.9
comp=Z,14nm,1.2s
SCRK Sand Creek 84.55 20 P **P** **08 26 54.2 -0.8**
WDC Whiskeytown Da 84.89 47 P **P** **08 26 57.0 0.0**
WDC pmax pmax
comp=Z,15nm,1.4s
WDC Whiskeytown Da 84.89 47 P **P** **08 26 57.0 0.0**
WDC IAmb IAmb 08 26 59.0
comp=Z,15nm,1.4s
YBH Yreka Blue Hor 85.14 46 P **P** **08 26 58.0 -0.4**
YBH pmax pmax
comp=Z,13nm,1.3s
YBH Yreka Blue Hor 85.14 46 P **P** **08 26 58.0 -0.4**
YBH IAmb IAmb 08 27 00.5
comp=Z,13nm,1.2s
HUMO Hull Mountain 85.26 45 P **P** **08 26 58.3 -0.6**
HUMO IAmb IAmb 08 27 01.1
comp=Z,8.2nm,1.1s
ORV Oroville 85.31 48 P **P** **08 26 59.2 0.0**
ORV pmax pmax
comp=Z,13nm,1.3s
ORV Oroville 85.31 48 P **P** **08 26 59.2 0.0**
ORV IAmb IAmb 08 27 00.7
comp=Z,12nm,1.3s
SKAG Skagway 85.34 27 P **P** **08 27 00.0 +1.2**
AFDM Forest Hills D 85.51 49 P **P** **08 27 00.2 0.0**
AFDM IAmb IAmb 08 27 01.8
comp=Z,13nm,1.1s
BBB Bella Bella 85.59 35 LR LR 08 59 07.5
comp=Z,142nm,18.4s,baz=228,slow=31
CMB Columbia Colle 85.67 50 P **P** **08 27 00.8 -0.3**
CMB pmax pmax
comp=Z,7.0nm,1.3s
CMB Columbia Colle 85.67 50 P **P** **08 27 00.8 -0.3**
TIXI Tiksi 85.82 349 *e*P **P** **08 26 59.8 -1.2**
TIXI pmax pmax
comp=Z,6.0nm,1.1s
TIXI Tiksi 85.82 349 P **P** **08 26 60.0 -1.0**
TIXI IAmb IAmb 08 27 01.6
comp=Z,8.9nm,1.1s
OSI Osito Audit: C 85.96 54 P **P** **08 27 01.2 -1.4**
OSI IAmb IAmb 08 27 18.8
comp=Z,15nm,1.4s
EGAK Eagle 86.02 21 P **P** **08 27 02.4 +0.3**
E03A Lebam 86.20 41 P **P** **08 27 04.2 +0.7**
BEKR Beckworth 86.25 48 P **P** **08 27 03.6 -0.4**
BEKR IAmb IAmb 08 27 05.7
comp=Z,11nm,1.3s
MWC Mount Wilson 86.38 54 P **P** **08 27 05.2 +0.3**
MWC pmax pmax
comp=Z,10.0nm,1.1s
MWC Mount Wilson 86.38 54 P **P** **08 27 05.2 +0.3**
MWC IAmb IAmb 08 27 06.7
comp=Z,10nm,1.1s
ISA Isabella, Lake 86.45 53 P **P** **08 27 05.6 +0.5**
ISA pmax pmax
comp=Z,7.0nm,1.2s
ISA Isabella, Lake 86.45 53 P **P** **08 27 05.5 +0.5**
H04A Detroit Lake 86.48 43 P **P** **08 27 04.5 -0.5**
H04A IAmb IAmb 08 27 06.2
comp=Z,10nm,1.2s
WAKR Walker 86.53 50 P **P** **08 27 05.6 +0.1**
MDPB Devils Postpil 86.54 51 P **P** **08 27 06.0 +0.3**
MDPB IAmb IAmb 08 27 07.4
comp=Z,10.0nm,1.2s
PNTR Pine Nut 86.58 49 P **P** **08 27 05.8 0.0**
PNTR IAmb IAmb 08 27 07.6
comp=Z,14nm,1.3s
OMMB Old Mammoth Mi 86.60 51 P **P** **08 27 05.7 -0.4**
OMMB IAmb IAmb 08 27 07.8
comp=Z,11nm,1.4s
VCNR Virginia City 86.60 49 P **P** **08 27 05.5 -0.3**
F04A Amboy 86.74 42 P **P** **08 27 06.1 0.0**
F04A IAmb IAmb 08 27 07.7
comp=Z,13nm,1.1s
K05A Summer Lake 86.74 45 P **P** **08 27 06.9 +0.4**
YERR Yerington 86.81 49 P **P** **08 27 05.8 -1.1**
YERR IAmb IAmb 08 27 07.8
comp=Z,9.8nm,1.4s
MOD Modoc Plateau 86.91 46 P **P** **08 27 07.3 0.0**
MOD IAmb IAmb 08 27 08.8
comp=Z,8.4nm,1.1s
PAHR Pah Rah Range 86.92 49 P **P** **08 27 07.3 0.0**
PAHR IAmb IAmb 08 27 08.4
comp=Z,12nm,1.4s
PGC Sidney 87.00 39 P **P** **08 27 05.6 -1.7**
PINE Pine Mountain 87.04 44 P **P** **08 27 08.2 +0.3**
RYN Ryan 87.25 50 P **P** **08 27 09.0 0.0**
DAC Darwin (Calif) 87.31 52 P **P** **08 27 08.5 -0.9**
DAC pmax pmax
comp=Z,12nm,1.5s
DAC Darwin (Calif) 87.31 52 P **P** **08 27 08.5 -0.9**
DAC IAmb IAmb 08 27 13.9
comp=Z,12nm,1.5s
NVAR Mina Array Bea 87.36 50 P **P** **08 27 10.3 +0.7**
comp=Z,5.3nm,1.0s,baz=235,slow=7.3,SNR=24
NVAR LR LR 08 59 49.0
comp=Z,276nm,19.1s,baz=250,slow=31
D05A Enumclaw 87.44 41 P **P** **08 27 09.5 0.0**
NV11 Mina Array Sit 87.47 50 P **P** **08 27 10.2 +0.1**
NV11 IAmb IAmb 08 27 11.8
comp=Z,9.1nm,1.1s
PFO Pinyon Flats O 87.50 55 P **P** **08 27 08.9 -1.4**
PFO pmax pmax
comp=Z,7.0nm,1.4s
PFO Pinyon Flats O 87.50 55 P **P** **08 27 08.9 -1.4**
XPFO Pion Flat 87.50 55 P **P** **08 27 08.7 -1.6**
GSC Goldstone, Bar 87.67 54 P **P** **08 27 09.8 -1.2**
GSC pmax pmax
comp=Z,2.0nm,1.1s
GSC Goldstone, Bar 87.67 54 P **P** **08 27 09.8 -1.2**
KVN Kaiserville 87.68 50 P **P** **08 27 10.6 -0.5**
KVN pmax pmax
comp=Z,5.0nm,1.1s
KVN Kaiserville 87.68 50 P **P** **08 27 10.6 -0.5**
WMQ Urumqi 87.93 315 *e*P **P** **08 27 12.5 +0.5**
WMQ pP pwP 08 27 23.8 -4.5
WMQ pmax pmax
comp=Z,8.0nm,0.9s
WMQ pmax pmax
comp=Z,210nm,8.9s
I07A Izee 88.12 45 P **P** **08 27 12.8 -0.2**
WVOR Wild Horse Val 88.25 46 P **P** **08 27 13.4 -0.2**
WVOR pmax pmax
comp=Z,11nm,1.2s
WVOR Wild Horse Val 88.25 46 P **P** **08 27 13.4 -0.2**
WVOR IAmb IAmb 08 27 15.6
comp=Z,11nm,1.2s
LTY Liberty 88.31 41 P **P** **08 27 12.3 -1.4**
LTY IAmb IAmb 08 27 14.4
comp=Z,6.4nm,1.2s
EPYK Eagle Plains 88.44 20 P **P** **08 27 13.5 -0.4**
J08A Circle Bar Ran 88.62 45 P **P** **08 27 15.8 +0.4**
GLA Glamis 88.69 56 P **P** **08 27 16.3 +0.5**
GLA pmax pmax
comp=Z,21nm,1.4s
GLA Glamis 88.69 56 P **P** **08 27 16.2 +0.5**
HAWA Hanford 88.79 42 P **P** **08 27 16.1 +0.2**
G08A Pilot Rock 88.85 43 P **P** **08 27 16.3 -0.1**
Y12C Blythe 89.10 55 P **P** **08 27 17.1 -0.6**
Y12C IAmb IAmb 08 27 19.1
comp=Z,13nm,1.4s
E08A Dider Farm, El 89.13 42 P **P** **08 27 17.7 +0.2**
E08A IAmb IAmb 08 27 19.6
comp=Z,9.7nm,1.2s
SHPR Sheep Range 89.26 53 P **P** **08 27 19.2 +0.6**
SHPR IAmb IAmb 08 27 20.8
comp=Z,15nm,1.5s
R11A Troy Canyon, C 89.39 51 P **P** **08 27 19.5 +0.3**
R11A IAmb IAmb 08 27 21.1
comp=Z,8.6nm,1.4s
113A Mohawk Valley, 89.48 57 P **P** **08 27 18.2 -1.3**
B08A Colville Reser 89.50 40 P **P** **08 27 19.2 -0.1**
BMO Blue Mountains 89.85 44 P **P** **08 27 21.0 -0.1**
BMO pmax pmax
comp=Z,11nm,1.4s
BMO Blue Mountains 89.85 44 P **P** **08 27 21.0 -0.1**
BMO IAmb IAmb 08 27 22.8
comp=Z,11nm,1.4s
W13A Hualapai Mount 89.93 54 P **P** **08 27 22.0 +0.1**
F10A Beach Ranch, E 90.20 43 P **P** **08 27 22.5 -0.2**
ELK Elko 90.25 49 P **P** **08 27 23.2 0.0**
ELK pmax pmax
comp=Z,6.0nm,1.1s
ELK Elko 90.25 49 P **P** **08 27 23.2 0.0**
ELK IAmb IAmb 08 27 25.2
comp=Z,6.4nm,1.1s
MFID Camas Ranch 90.50 46 P **P** **08 27 24.6 +0.4**
MFID IAmb IAmb 08 27 26.1
comp=Z,12nm,1.2s
INK Inuvik 90.50 19 LR LR 09 01 28.4
comp=Z,219nm,21.8s,baz=262,slow=31
PSUT Pine Spring 90.76 51 P **P** **08 27 26.0 +0.4**
LCMT Little Creek M 90.88 53 P **P** **08 27 25.8 -0.3**
NEW Newport 90.89 41 P **P** **08 27 25.1 -0.7**
NEW pmax pmax
comp=Z,6.0nm,1.2s
NEW Newport 90.89 41 P **P** **08 27 25.1 -0.7**
NEW IAmb IAmb 08 27 26.5
comp=Z,5.8nm,1.1s
CCUT Cedar City 90.91 52 P **P** **08 27 26.3 0.0**
SZCU Shurtz Canyon 91.13 52 P **P** **08 27 26.5 -0.9**
KNB Kanab 91.21 53 P **P** **08 27 27.3 -0.4**
KNB pmax pmax
comp=Z,16nm,1.4s
KNB Kanab 91.21 53 P **P** **08 27 27.3 -0.4**
U15A North Rim 91.49 53 P **P** **08 27 29.6 +0.5**
BGU Big Grassy Meau 91.92 49 P **P** **08 27 30.4 -0.5**
MTPU Mount Pierson 91.93 52 P **P** **08 27 30.5 -0.8**
MSU Marysvale 92.03 51 P **P** **08 27 31.2 -0.3**
MSU Marysvale 92.03 51 P **P** **08 27 31.2 -0.3**
MK31 Makanchi Array 92.40 317 P **P** **08 27 31.5 -1.3**
MK31 pmax pmax
comp=Z,7.0nm,1.3s
MK31 Makanchi Array 92.40 317 P **P** **08 27 31.5 -1.3**
MK31 IAmb IAmb 08 27 33.5
comp=Z,6.8nm,1.3s
MKAR Makanchi Array 92.40 317 *i* P **P** **08 27 32.2 -0.6**
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 92.40 317 P **P** **08 27 32.0 -0.7**
comp=Z,2.3nm,0.9s,baz=91,slow=5.7,SNR=17
MKAR LR LR 09 10 11.8
comp=Z,108nm,19.1s,baz=318,slow=36
ZAA0 Zalesovo Array 92.61 324 P **P** **08 27 31.7 -1.8**
ZAA0 IAmb IAmb 08 27 33.1
comp=Z,6.1nm,1.1s
ZALV Zalesovo Beam 92.61 324 P **P** **08 27 31.6 -1.9**
comp=Z,2.7nm,0.9s,baz=123,slow=5.5,SNR=9.3
ZALV LR LR 09 08 43.0
comp=Z,122nm,19.4s,baz=352,slow=35
MAKZ Makanchi 92.61 317 P **P** **08 27 32.9 -0.8**
MAKZ pmax pmax
comp=Z,7.0nm,1.2s
MAKZ Makanchi 92.61 317 P **P** **08 27 32.9 -0.8**
MAKZ IAmb IAmb 08 27 34.4
comp=Z,7.4nm,1.1s
MPU Maple Canyon 92.77 50 P **P** **08 27 34.2 -0.7**
MCMT McKenzie Canyo 92.92 45 P **P** **08 27 35.4 -0.1**
DLMT Dillon 93.21 45 P **P** **08 27 36.7 0.0**
YHB Horse Butte 94.05 45 P **P** **08 27 39.6 -1.1**
IMW Indian Meadow 94.06 46 P **P** **08 27 40.4 -0.4**
IMW IAmb IAmb 08 27 45.3
comp=Z,4.8nm,1.2s
YHL Hebgen Lake 94.08 45 P **P** **08 27 41.0 +0.1**
PDAR Pinedale Array 94.84 48 P **P** **08 27 44.0 -0.3**
comp=Z,1.9nm,1.1s,baz=247,slow=3.1,SNR=7.8
PDAR LR LR 09 04 35.4
comp=Z,141nm,20.0s,baz=340,slow=32
KSH Kashi 95.47 309 P **P** **08 27 49.8 +2.6**
KSH PP **PP** **08 31 43.5 +5.2**
KSH S **S** **08 39 03.5 +1.5**
KSH sS sS 08 39 18.0 +4.0
KSH SS **SS** **08 45 36.8 +6.2**
KURK Kurchatov 95.60 320 *e*P **P** **08 27 46.3 -1.0**
KURK pmax pmax
comp=Z,3.0nm,0.9s
YKA Yellowknife Ar 95.80 27 P **P** **08 27 46.5 -1.4**
comp=Z,3.7nm,1.0s,baz=256,slow=4.9,SNR=22
YKA LR LR 09 04 07.5
comp=Z,323nm,20.8s,baz=0.0,slow=31
TXAR Lajitas Array 97.34 62 LR LR 09 04 09.8
comp=Z,111nm,19.8s,baz=0.0,slow=31
BVAR Borovoye Array 100.95 322 P **Pdif** **08 28 10.2 -1.1**
comp=Z,0.5nm,0.5s,baz=56,slow=3.7,SNR=5.2
ARCES ARCESS Array B 115.95 345 PKP **PKiKP** **08 33 03.1 -1.2**
comp=Z,1.3nm,0.7s,baz=94,slow=1.3,SNR=6.5
OBN Obninsk 119.96 328 *e*PKiKP **PKiKP** **08 33 12.2 -0.2**
NOA NORSAR Array B 126.30 344 PKP **PKPdf** **08 33 23.2 -1.2**
comp=Z,1.0nm,0.8s,baz=34,slow=2.0,SNR=2.8
GERES GERESS Array B 134.98 332 PKP **PKiKP** **08 33 41.8 -1.0**
comp=Z,0.2nm,0.3s,baz=86,slow=3.0,SNR=4.0
ESDC Sonseca Array 149.60 341 PKPbc **PKiKP** **08 34 11.8 -1.2**
comp=Z,3.0nm,0.8s,baz=26,slow=2.6,SNR=9.0
TORD Torodi Ar. Bea 162.60 279 PKPab **PKPab** **08 35 12.6 -0.6**
comp=Z,1.5nm,1.0s,baz=64,slow=2.7,SNR=4.1

SOME ***26*** *08:28:11.4, 39.˚48N×76.˚82E, h0km*
IDC ***26*** *08:28:11.1±2.4, 39.˚36N×76.˚87E, h0km, mb3.3/2, mb1 3.4/7, mb1mx3.2/50, mbtmp3.3/7, ML3.0/3, MS3.2/1, Ms1 3.2/1, ms1mx2.8/29, Error ellipse: s-maj=32.0km s-min=20.2km az=43.0*
KRNET ***26*** *08:28:12.6±0.1, 39.˚38N×76.˚96E, h17km, mb4.1*
BJI ***26*** *08:28:13.1±0.0, 39.˚37N×76.˚96E, h6km, ML3.9/7*
NNC ***26*** *08:28:14.7±0.7, 39.˚56N×76.˚83E, h0km, mb4.5, mpv4.1, Error ellipse: s-maj=5.3km s-min=4.0km az=156.0*
NEIC ***26*** *08:28:15.3±1.0, 39.˚38N±0.˚06×77.˚0E±0.˚1, h10km±1km, mb4.3/2, Error ellipse: s-maj=15.6km s-min=5.0km az=304.0*

ISC 26 08:28:13.0±1.5, 39.˚50N±0.˚04×76.˚88E±0.˚03, h2km±10km, n105, σ2ϟ28/154, 32C-17D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.70**	**271**	⇑*i*	P*g*	**Pn**	**08 28 34.0**	**+3.8**
KSH					Sg	**Sn**	**08 28 48.5**	**+6.8**
KSH					smax	smax		
	comp=N,4μm,1.1s							
KSH					smax	smax		
	comp=E,1μm,0.4s							
NRN	**Naryn**	**2.04**	**341**	⇓*i*	P	**Pb**	**08 28 51.2**	**+0.1**
	baz=40							
NRN				⇓*i*	S	**Sg**	**08 29 19.8**	**+1.2**
	baz=40							
NRN	**Naryn**	**2.04**	**341**			**Pb**	**08 28 51.9**	**+0.8**
KDJ	**Kajisay**	**2.63**	**5**	⇑*i*	P	**Pb**	**08 29 02.1**	**+1.0**
	baz=4.0							
KDJ				⇑*i*	S	**Sg**	**08 29 38.5**	**+0.9**
	baz=4.0							
KDJ	**Kajisay**	**2.63**	**5**			**Pb**	**08 29 01.2**	**+0.2**
ULHL	**Ulahol**	**2.78**	**350**	⇓*i*	P	**Pb**	**08 29 02.2**	**-1.4**
	baz=50							
ULHL				⇓*i*	S	**Sb**	**08 29 39.0**	**+0.7**
	baz=50							
KZA	**Kyzart**	**2.85**	**335**	⇑*i*	P	**Pn**	**08 29 02.0**	**+2.0**
	baz=35							
KZA				⇑*i*	S	**Sb**	**08 29 38.5**	**-2.0**
	baz=35							
ARLS	**Aral**	**3.06**	**321**	⇓*i*	P	**Pn**	**08 29 02.6**	**+0.1**
	baz=22							
ARLS				⇓*i*	S	**Sn**	**08 29 39.4**	**-0.4**
	baz=22							

BOOM	**Boomskoye usch**	**3.07**	**347**	⇑*i*	P	**Pb**	**08 29 06.2**	**-2.3**
	baz=46							
BOOM				⇑*i*	S	**Sb**	**08 29 45.3**	**-1.1**
	baz=46							
BOOM	**Boomskoye usch**	**3.07**	**347**			**Pb**	**08 29 06.5**	**-1.9**
PRZ	**Przheval'sk**	**3.19**	**21**	⇑*i*	P	**Pb**	**08 29 10.5**	**-0.1**
	baz=19							
PRZ				⇑*i*	S	**Sg**	**08 29 53.5**	**-2.0**
	baz=19							
PRZ	**Przheval'sk**	**3.19**	**21**			**Pn**	**08 29 06.3**	**+1.8**
UCH	**Uchtor**	**3.26**	**327**	⇑*i*	P	**Pn**	**08 29 06.6**	**+1.0**
	baz=28							
UCH				⇑*i*	S	**Sn**	**08 29 46.5**	**+1.2**
	baz=28							
ANVS	**Anan'yevo**	**3.33**	**10**	⇓*i*	P	**Pb**	**08 29 11.9**	**-1.0**
	baz=9.0							
ANVS				⇓*i*	S	**Sb**	**08 29 55.4**	**+1.4**
	baz=9.0							
KBK	**Karagaybulak**	**3.47**	**336**	⇑*i*	P	**Pn**	**08 29 10.0**	**+1.7**
	baz=36							
KBK				⇑*i*	S	**Sn**	**08 29 52.5**	**+2.4**
	baz=36							
ARSB	**Arslanbob**	**3.49**	**303**	⇓*i*	P	**Pn**	**08 29 07.2**	**-1.3**
	baz=4.0							
ARSB				⇓*i*	S	**Sn**	**08 29 47.1**	**-3.4**
	baz=4.0							
ARSB	**Arslanbob**	**3.49**	**303**		Pn	**Pn**	**08 29 11.2**	**+2.7**
TNSS	**Tian-Shan**	**3.53**	**1**	*e*P		**Pb**	**08 29 17.9**	**+1.5**
	133nm,0.5s							
TNSS				*e*S		**Sg**	**08 30 06.3**	**-0.1**
	164nm,0.4s							
TNSS	**Tian-Shan**	**3.53**	**1**	Pg		**Pb**	**08 29 17.9**	**+1.5**
	133nm,0.5s							
TNSS				Lg		Lg	08 30 06.4	
	164nm,0.4s							
IZV	**Izvestkoviy**	**3.54**	**357**	*e*P		**Pb**	**08 29 17.9**	**+1.5**
	58nm,0.5s							
IZV				*e*S		**Sg**	**08 30 05.8**	**-0.8**
	178nm,0.6s							
IZV	**Izvestkoviy**	**3.54**	**357**	Pg		**Pb**	**08 29 17.6**	**+1.2**
	58nm,0.5s							
IZV				Lg		Lg	08 30 05.8	
	178nm,0.6s							
AML	**Almayashu**	**3.57**	**318**	⇓*e*P		**Pn**	**08 29 10.1**	**+0.3**
	baz=19							
AML				⇓*e*S		**Sn**	**08 29 51.5**	**-1.3**
	baz=19							
KST	**Kastek**	**3.60**	**349**	*e*P		**Pb**	**08 29 19.7**	**+2.2**
	31nm,0.3s							
KST				*e*S		**Sg**	**08 30 09.1**	**+0.3**
	105nm,0.4s							
KST	**Kastek**	**3.60**	**349**	Pg		**Pb**	**08 29 19.7**	**+2.2**
	31nm,0.3s							
KST				Lg		Lg	08 30 09.1	
	105nm,0.4s							
AAK	**Ala-Archa**	**3.61**	**331**	Pn		**Pn**	**08 29 13.5**	**+3.3**
	3.0nm,0.3s,baz=132,slow=8.3,SNR=10							
AAK				Pg		**Pb**	**08 29 20.0**	**+2.2**
	12nm,0.3s,baz=127,slow=9.1,SNR=46							
AAK				Lg		Lg	08 30 08.6	
	33nm,0.3s,baz=24,slow=23,SNR=15							
AAK	**Ala-Archa**	**3.61**	**331**	⇑*i*	P	**Pn**	**08 29 11.7**	**+1.5**
	baz=31							
AAK				⇑*i*	S	**Sn**	**08 29 55.2**	**+1.6**
	baz=31							
AAK	**Ala-Archa**	**3.61**	**331**	⇑Pg		**Pb**	**08 29 19.7**	**+2.0**
	20nm,0.4s							
AAK				⇑Lg		Lg	08 30 07.6	
	196nm,0.6s							
AAK	**Ala-Archa**	**3.61**	**331**			**Pn**	**08 29 13.4**	**+3.2**
MTBS	**Maitube**	**3.64**	**355**	*e*P		**Pb**	**08 29 19.3**	**+1.2**
	38nm,0.4s							
MTBS				*e*S		**Sg**	**08 30 08.3**	**-1.6**
	120nm,0.4s							
MTBS	**Maitube**	**3.64**	**355**	Pg		**Pb**	**08 29 19.3**	**+1.2**
	38nm,0.4s							
MTBS				Lg		Lg	08 30 08.3	
	120nm,0.4s							
MDOK	**Medeo**	**3.66**	**2**	*e*P		**Pb**	**08 29 20.1**	**+1.6**
	39nm,0.4s							
MDOK				*e*S		**Sg**	**08 30 09.8**	**-0.8**
	124nm,0.6s							
MDOK	**Medeo**	**3.66**	**2**	⇓Pg		**Pb**	**08 29 20.0**	**+1.5**
	34nm,0.5s							
MDOK				⇑Lg		Lg	08 30 10.2	
	337nm,0.6s							
MDOK	**Medeo**	**3.66**	**2**	Pg		**Pb**	**08 29 20.1**	**+1.6**
	39nm,0.4s							
MDOK				Lg		Lg	08 30 09.8	
	124nm,0.6s							
ANR	**Andizhan**	**3.69**	**291**	P		**Pb**	**08 29 21.1**	**+2.2**
ANR				S		**Sb**	**08 30 06.4**	**+2.3**
AAA	**Alma-Ata**	**3.70**	**0**	*e*P		**Pb**	**08 29 21.2**	**+2.0**
	66nm,0.4s							
AAA				*e*S		**Sg**	**08 30 11.6**	**-0.4**
	182nm,0.5s							
AAA	**Alma-Ata**	**3.70**	**0**	Pg		**Pb**	**08 29 21.2**	**+2.0**
	66nm,0.4s							
AAA				Lg		Lg	08 30 11.6	
	182nm,0.5s							
KNDC	**Almaty**	**3.71**	**1**	⇑Pg		**Pb**	**08 29 20.5**	**+1.2**
	67nm,0.6s							
KNDC				⇑Lg		Lg	08 30 12.6	
	536nm,0.6s							
FRU1	**Bishkek**	**3.72**	**333**	⇑*e*P		**Pn**	**08 29 13.6**	**+2.1**
	baz=34							
FRU1				⇑*i*	S	**Sn**	**08 29 58.0**	**+2.1**
	baz=34							
FRU1	**Bishkek**	**3.72**	**333**			**Pn**	**08 29 14.4**	**+2.8**
KOTS	**Kotyrbulak**	**3.73**	**3**	*e*P		**Pb**	**08 29 22.0**	**+2.3**
	166nm,0.4s							
KOTS				*e*S		**Sg**	**08 30 13.0**	**+0.1**
	246nm,0.3s							
KOTS	**Kotyrbulak**	**3.73**	**3**	Pg		**Pb**	**08 29 22.0**	**+2.3**
	166nm,0.4s							
KOTS				Lg		Lg	08 30 13.0	
	246nm,0.3s							
SATY	**Saty**	**3.73**	**17**	*e*P		**Pb**	**08 29 22.0**	**+2.3**
	114nm,0.4s							
SATY				*e*S		**Sg**	**08 30 13.0**	**+0.1**
	73nm,0.5s							
SATY	**Saty**	**3.73**	**17**	Pg		**Pb**	**08 29 22.0**	**+2.3**
	114nm,0.4s							
SATY				Lg		Lg	08 30 13.0	
	73nm,0.5s							
ZHN	**Zhinishke**	**3.84**	**17**	*e*P		**Pb**	**08 29 23.5**	**+1.9**
	23nm,0.3s							
ZHN				*e*S		**Sg**	**08 30 15.5**	**-0.9**
	28nm,0.3s							
ZHN	**Zhinishke**	**3.84**	**17**	Pg		**Pb**	**08 29 23.5**	**+1.9**
	23nm,0.3s							
ZHN				Lg		Lg	08 30 15.5	
	28nm,0.3s							
CHMS	**Chumysh**	**3.84**	**336**	⇑*i*	P	**Pn**	**08 29 15.3**	**+2.0**
	baz=36							
CHMS				⇑*e*	S	**Sn**	**08 30 01.5**	**+2.4**
	baz=36							
EKS2	**Erkin-Say**	**3.93**	**324**	⇑*i*	P	**Pn**	**08 29 15.4**	**+0.8**
	baz=25							
EKS2				⇑*i*	S	**Sn**	**08 30 01.5**	**+0.1**
	baz=25							
UZB	**Uzynbulak**	**3.98**	**23**	*e*P		**Pb**	**08 29 25.8**	**+1.8**
	44nm,0.6s							
UZB				*e*S		**Sg**	**08 30 19.5**	**-1.4**
	32nm,0.4s							
UZB	**Uzynbulak**	**3.98**	**23**	Pg		**Pb**	**08 29 25.8**	**+1.8**
	44nm,0.6s							
UZB				Lg		Lg	08 30 19.5	
	32nm,0.4s							
KURS	**Kuram**	**4.10**	**13**	*e*P		**Pb**	**08 29 28.3**	**+2.4**
	28nm,0.7s							
KURS				*e*S		**Sg**	**08 30 23.8**	**-0.8**
	48nm,0.6s							
KURS	**Kuram**	**4.10**	**13**	Pg		**Pb**	**08 29 28.3**	**+2.4**
	28nm,0.7s							
KURS				Lg		Lg	08 30 23.8	
	48nm,0.6s							
SHLS	**Shalkode**	**4.13**	**27**	*e*P		**Pb**	**08 29 32.3**	**+0.1**
	58nm,0.4s							
SHLS				*e*S		**Sg**	**08 30 30.6**	**+4.9**
	137nm,0.4s							
USP	**Ospenovka**	**4.17**	**335**	⇓*i*	P	**Pn**	**08 29 19.6**	**+1.9**
	baz=35							
USP				⇓*i*	S	**Sn**	**08 30 08.9**	**+1.9**
	baz=35							
KPKS	**Kokpek**	**4.18**	**18**	*e*P		**Pb**	**08 29 29.6**	**+2.2**
	50nm,0.4s							
KPKS				*e*S		**Sg**	**08 30 26.0**	**-1.4**
	116nm,0.5s							
KTBS	**Karatobe**	**4.21**	**358**	*e*P		**Pb**	**08 29 30.2**	**+2.4**
	41nm,0.5s							
KTBS				*e*S		**Sg**	**08 30 27.1**	**-1.1**
	271nm,0.5s							
KTBS	**Karatobe**	**4.21**	**358**	Pg		**Pb**	**08 29 30.2**	**+2.4**
	41nm,0.5s							
KTBS				Lg		Lg	08 30 27.0	
	271nm,0.5s							
MRKS	**Merke**	**4.26**	**321**	*e*P		**Pb**	**08 29 30.0**	**+1.4**
	33nm,0.3s							
MRKS				*e*S		**Sg**	**08 30 26.7**	**-3.0**
	79nm,0.5s							
MRKS	**Merke**	**4.26**	**321**	Pg		**Pb**	**08 29 30.0**	**+1.4**
	33nm,0.3s							
MRKS				Lg		Lg	08 30 26.7	
	79nm,0.5s							
KRBS	**Karabastau**	**4.29**	**348**	*e*P		**Pb**	**08 29 31.7**	**+2.5**
	23nm,0.6s							
KRBS				*e*S		**Sg**	**08 30 29.6**	**-1.1**
	78nm,0.6s							
KRBS	**Karabastau**	**4.29**	**348**	Pg		**Pb**	**08 29 31.7**	**+2.5**
	23nm,0.6s							
KRBS				Lg		Lg	08 30 29.6	
	78nm,0.6s							
SGDS	**Sogindy**	**4.29**	**338**	Pg		**Pb**	**08 29 30.9**	**+1.6**
	25nm,0.5s							
SGDS				Lg		Lg	08 30 28.1	
	69nm,0.4s							
PDGK	**Podgornoye**	**4.29**	**26**	Pg		**Pb**	**08 29 31.1**	**+1.7**
	16nm,0.5s							
PDGK				Lg		Lg	08 30 28.5	
	36nm,0.8s							
PDGK	**Podgornoye**	**4.29**	**26**	⇑Pn		**Pn**	**08 29 21.8**	**+2.3**
	3.2nm,0.6s							
PDGK				⇑Pg		**Pb**	**08 29 31.6**	**+2.2**
	25nm,0.5s							
PDGK				⇓Lg		Lg	08 30 29.3	
	89nm,0.7s							
CHKK	**Chushkaly**	**4.35**	**1**	*e*P		**Pb**	**08 29 32.7**	**+2.6**
	29nm,0.3s							
CHKK				*e*S		**Sg**	**08 30 31.4**	**-1.3**
	57nm,0.2s							
CHKK	**Chushkaly**	**4.35**	**1**	Pg		**Pb**	**08 29 32.7**	**+2.6**
	29nm,0.3s							
CHKK				Lg		Lg	08 30 31.4	
	57nm,0.2s							
KUU	**Kurty**	**4.41**	**355**	*e*P		**Pb**	**08 29 33.0**	**+1.8**
	37nm,0.5s							
KUU				*e*S		**Sg**	**08 30 31.7**	**-2.8**
	66nm,0.6s							
KUU	**Kurty**	**4.41**	**355**	Pg		**Pb**	**08 29 33.0**	**+1.8**
	37nm,0.5s							
KUU				Lg		Lg	08 30 31.7	
	66nm,0.6s							
BTK	**Batken**	**4.71**	**279**			**Pn**	**08 29 27.7**	**+2.5**
ARXS	**Arharly**	**4.76**	**8**	*e*P		**Pb**	**08 29 40.1**	**+2.9**
	41nm,0.7s							
ARXS				*e*S		**Sg**	**08 30 44.0**	**-1.9**
	71nm,0.5s							
DJR	**Jarkent**	**5.29**	**23**	*e*P		**Pb**	**08 29 50.0**	**+3.8**
	4.0nm,0.4s							
DJR				*e*S		**Sg**	**08 31 00.5**	**-2.3**
	26nm,0.3s							
DJR	**Jarkent**	**5.29**	**23**	Pg		**Pb**	**08 29 50.0**	**+3.8**
	4.0nm,0.4s							
DJR				Lg		Lg	08 31 00.5	
	26nm,0.3s							
TDK	**Taldyqorghan**	**5.61**	**11**	*e*P		**Pb**	**08 29 55.6**	**+4.0**
	47nm,0.3s							
TDK				*e*S		**Sg**	**08 31 10.6**	**-2.5**
	79nm,0.6s							
IUG	**Iuzhnay**	**5.83**	**299**	*e*P		Pg	08 30 00.7	-4.0
	4.4nm,0.7s							
IUG				*e*S		**Sg**	**08 31 18.9**	**-1.4**
	37nm,0.7s							
IUG	**Iuzhnay**	**5.83**	**299**	Pg		Pg	08 30 00.7	-4.0
	4.4nm,0.7s							
IUG				Lg		Lg	08 31 18.9	
	37nm,0.7s							
BTLS	**Baital**	**5.92**	**340**	*e*P		**Pb**	**08 30 00.5**	**+3.5**
	3.2nm,0.5s							
BTLS				*e*S		**Sg**	**08 31 18.9**	**-4.2**
	37nm,0.6s							
BTLS	**Baital**	**5.92**	**340**	Pg		**Pb**	**08 30 00.5**	**+3.5**
	3.2nm,0.5s							
BTLS				Lg		Lg	08 31 18.9	
	37nm,0.6s							
KK31	**Karatay Array**	**6.00**	**309**	⇑Pn		**Pn**	**08 29 45.3**	**+2.5**
	0.4nm,0.3s,baz=130,slow=13,SNR=16							
KK31				⇓Pg		**Pb**	**08 30 02.9**	**+4.7**
	2.8nm,0.5s,baz=131,slow=19,SNR=22							
KK31				⇑Lg		Lg	08 31 23.4	
	21nm,0.7s,baz=130,slow=29,SNR=6.2							
KK31	**Karatay Array**	**6.00**	**309**			**Pn**	**08 29 46.2**	**+3.4**
KKAR	**Karatay Array**	**6.00**	**309**			**Pn**	**08 29 45.9**	**+3.1**
KAPS	**Kapalarasan**	**6.06**	**17**	*e*P		**Pg**	**08 30 05.5**	**-3.6**
	7.1nm,0.7s							
KAPS				*e*S		**Sg**	**08 31 27.5**	**-0.1**
	15nm,0.5s							
KAPS	**Kapalarasan**	**6.06**	**17**	Pg		**Pg**	**08 30 05.5**	**-3.6**
	7.1nm,0.7s							
KAPS				Lg		Lg	08 31 27.5	
	15nm,0.5s							
BRLS	**Boroldoy**	**6.37**	**306**	*e*P		**Pb**	**08 30 08.8**	**+4.2**
	0.8nm,0.2s							
BRLS				*e*S		**Sg**	**08 31 33.3**	**-4.3**
	3.0nm,0.9s							
BRLS	**Boroldoy**	**6.37**	**306**	Pg		**Pb**	**08 30 08.9**	**+4.2**
	0.8nm,0.2s							
BRLS				Lg		Lg	08 31 33.3	
	3.0nm,0.9s							
CHCP	**Chirah Chowk**	**6.52**	**208**	P		**Pn**	**08 29 52.2**	**+2.2**
NIL	**Nilore**	**6.53**	**208**			**Pn**	**08 29 51.7**	**+1.5**
NIL					Sn	**Sn**	**08 31 03.9**	**-1.4**
CEP	**Cherat**	**6.94**	**217**	P		**Pn**	**08 29 57.9**	**+2.1**
CEP				S		**Sn**	**08 31 14.0**	**-1.4**
DHRM	**DHARAMSHALA**	**7.25**	**184**	*e*P		**Pn**	**08 30 01.9**	**+1.6**
DHRM				*e*S		**Sn**	**08 31 21.4**	**-2.0**
THW	**Thamme Wali**	**7.88**	**213**	P		**Pn**	**08 30 09.5**	**+0.8**
KBL	**Kabul**	**7.99**	**234**	Pn		**Pn**	**08 30 11.3**	**+0.9**
MK31	**Makanchi Array**	**8.29**	**27**	⇑Pn		**Pn**	**08 30 17.9**	**+3.7**
	0.2nm,0.3s,baz=205,slow=15,SNR=4.3							
MK31				⇑Lg		Lg	08 32 35.5	
	3.5nm,0.5s							
MK31	**Makanchi Array**	**8.29**	**27**			**Pn**	**08 30 15.3**	**+1.1**
MKAR	**Makanchi Array**	**8.29**	**27**	Pn		**Pn**	**08 30 15.1**	**+0.9**
	0.1nm,0.3s,baz=204,slow=14,SNR=4.1							
MKAR				Lg		Lg	08 32 38.1	
	0.5nm,0.3s,baz=204,slow=30,SNR=3.7							
SMLA	**Simla**	**8.36**	**178**	*ex*		**Pn**	**08 30 18.3**	**+3.0**
SMLA				*ex*		**Sn**	**08 31 43.7**	**-6.5**
WMQ	**Urumqi**	**9.17**	**58**	*e*P		**Pn**	**08 30 28.0**	**+1.6**
WMQ				S		**Sn**	**08 32 11.3**	**+1.1**
WMQ				smax		smax		
	comp=N,14nm,1.1s							
WMQ				smax		smax		
	comp=E,16nm,1.3s							
WMQ	**Urumqi**	**9.17**	**58**	Pn		**Pn**	**08 30 27.8**	**+1.5**
KURBB	**Kurchatov Arra**	**11.18**	**5**	Pn		**Pn**	**08 30 54.7**	**+0.9**
	0.0nm,0.3s,baz=189,slow=11,SNR=3.7							
KURBB				Lg		Lg	08 34 07.7	
	0.1nm,0.3s,baz=203,slow=32,SNR=5.2							
KURK	**Kurchatov**	**11.28**	**6**	Pn		**Pn**	**08 30 58.3**	**+3.1**
BVAR	**Borovoye Array**	**14.24**	**344**	Pn		**Pn**	**08 31 35.1**	**-0.6**
	baz=156,slow=16,SNR=3.2							
BVAR				Lg		Lg	08 35 43.9	
	0.2nm,0.3s,baz=160,slow=26,SNR=6.0							
BRVK	**Borovoye**	**14.29**	**344**			**Pn**	**08 31 35.8**	**-0.6**
ZAA0	**Zalesovo Array**	**15.42**	**18**			**P**	**08 31 55.0**	**-1.3**
ZAA0				IAmb		IAmb	08 31 57.2	
	comp=Z,3.4nm,0.8s							
ZALV	**Zalesovo Beam**	**15.42**	**18**	Pn		**Pn**	**08 31 52.9**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=199,slow=13,SNR=12							
WSAR	**Wadi Sarin**	**22.42**	**229**	LR		LR	08 44 12.4	
	comp=Z,62nm,18.4s,baz=317,slow=43							
SONM	**Songino Array**	**22.81**	**59**	P		**P**	**08 33 16.9**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=253,slow=9.3,SNR=3.1							
BJT	**Baijiatuan**	**30.04**	**76**	P		**P**	**08 34 21.8**	**-1.6**
BJT				IAmb		IAmb	08 34 28.1	
	comp=Z,11nm,0.5s							
YKA	**Yellowknife Ar**	**77.93**	**5**	P		**P**	**08 40 10.0**	**-2.2**
	comp=Z,0.3nm,0.7s,baz=346,slow=5.5,SNR=6.1							

IDC 26 08:28:56.3±1.6, 10°90S×163°85E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/33, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=49.7km s-min=33.1km az=103.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**11.38**	**168**	Pn	Pn	08 31 41.0	+0.7
	0.6nm,0.3s,baz=319,slow=19,SNR=7.9						
ASAR	**Alice Springs**	**31.20**	**242**	P	P	08 35 17.2	-0.4
	0.4nm,0.6s,baz=61,slow=10,SNR=10						
SONM	**Songino Array**	**77.46**	**324**	P	P	08 40 54.8	+1.1
	0.6nm,0.9s,baz=140,slow=7.5,SNR=3.4						
MKAR	**Makanchi Array**	**92.15**	**317**	P	P	08 42 07.2	-0.7
	0.7nm,0.9s,baz=96,slow=7.4,SNR=4.6						
YKA	**Yellowknife Ar**	**95.70**	**27**	P	P	08 42 22.8	-0.9
	0.4nm,0.9s,baz=260,slow=5.5,SNR=4.3						

*UCR **26** 08:33:32.8±1.8, 9°44N×84°18W, h34km±2km, MD4.0*
*UPA **26** 08:33:32.5±1.1, 9°43N×84°17W, h19km±7km, MW4.1*
ISC 26 08:33:32.9±1.2, 9°45N±0°05×84°14W±0°05, h32km±10km, n44, σ0°68/59, 1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCR2	**La Lucha 2**	**0.32**	**26**	*e*P	**Pb**	**08 33 41.1**	**+0.1**
LCR2				*e*S	**Sn**	**08 33 47.6**	**+0.3**
EDDO	**Dominical**	**0.34**	**126**	*e*P	**Pb**	**08 33 41.4**	**+0.3**
EDDO				*e*S	**Sn**	**08 33 48.6**	**+1.1**
SJS	**Escuela Geolog**	**0.49**	**10**	*e*P	**Pb**	**08 33 43.3**	**-0.1**
SJS				*e*S	**Sn**	**08 33 51.8**	**+0.3**
HDC	**Heredia**	**0.55**	**3**	*e*P	**Pb**	**08 33 44.0**	**-0.3**
HDC				*e*S	**Sn**	**08 33 53.2**	**+0.4**
HDC	**Heredia**	**0.55**	**3**	*i* P	**Pb**	**08 33 44.1**	**-0.2**
HDC				*i* S	**Sn**	**08 33 52.7**	**-0.1**
EDLM	**Las Mercedes**	**0.57**	**107**	*e*P	**Pb**	**08 33 44.8**	**+0.1**
EDLM				*e*S	**Sn**	**08 33 54.5**	**+1.1**
CVTR	**Volcan Turrial**	**0.68**	**34**	*e*P	**Pn**	**08 33 46.2**	**-0.5**
SRA1	**San Ramn**	**0.71**	**332**	*e*P	**Pn**	**08 33 46.4**	**-0.5**
EDPN	**Palmar Norte**	**0.83**	**126**	*e*P	**Pn**	**08 33 48.3**	**-0.2**
EDBA	**Buenos Aires**	**0.91**	**108**	*e*P	**Pn**	**08 33 49.0**	**-0.5**
FORC	**Fortuna**	**1.13**	**333**	*i* P	**Pn**	**08 33 52.9**	**+0.3**
CASO	**Castillo**	**1.14**	**329**	*i* P	**Pn**	**08 33 52.7**	**0.0**
CASO				*i* S	**Sb**	**08 34 08.7**	**+0.2**
ARE1	**Arenal 1**	**1.15**	**331**	*e*P	**Pn**	**08 33 53.1**	**+0.2**
JTS	**Las Juntas de**	**1.15**	**316**	*e*P	**Pn**	**08 33 52.5**	**-0.4**
JTS	**Las Juntas de**	**1.15**	**316**	⇓*i*P	**Pn**	**08 33 52.5**	**-0.4**
JTS				*i* S	**Sn**	**08 34 07.7**	**0.0**
EDSV	**San Vito**	**1.32**	**118**	*e*P	**Pn**	**08 33 55.7**	**+0.5**
AMAS	**Alto Masis**	**1.42**	**324**	*i* P	**Pn**	**08 33 56.6**	**-0.1**
AMAS				*i* S	**Sn**	**08 34 15.1**	**+0.6**
ACAL	**Aguas Claras**	**1.47**	**323**	*i* P	**Pn**	**08 33 57.2**	**-0.1**
ACAL				*i* S	**Sn**	**08 34 16.4**	**+0.9**
CUI	**Cuipilapa**	**1.56**	**320**	*i* P	**Pn**	**08 33 58.4**	**-0.2**
BRU2	**Volcan**	**1.58**	**114**	*e*P	**Pn**	**08 33 58.8**	**-0.1**
BRU2	**Volcan**	**1.58**	**114**	*i* P	**Pn**	**08 33 58.8**	**-0.1**
BRU2				*i* S	**Sb**	**08 34 20.0**	**-1.2**
CNI2	**El Empalme, Bo**	**1.65**	**91**	*i* P	**Pn**	**08 33 59.9**	**+0.2**
CNI2				*i* S	**Sn**	**08 34 20.1**	**+0.2**
SBAR3	**San Bartolo, C**	**1.68**	**132**	*e*P	**Pn**	**08 34 00.5**	**+0.4**
BCO2	**Palmira**	**1.75**	**114**	*i* P	**Pn**	**08 34 01.3**	**0.0**
BCO2				*i* S	**Sn**	**08 34 23.3**	**+0.6**
PTAR3	**Potrerillos Ar**	**1.79**	**115**	*i* P	**Pn**	**08 34 02.1**	**+0.2**
NY14	**Universidad de**	**1.81**	**311**	*i* P	**Pn**	**08 34 02.4**	**+0.4**
BUEV	**Buena Vista**	**1.83**	**317**	*e*P	**Pn**	**08 34 02.1**	**-0.1**
DVD	**David**	**1.95**	**121**	*i* P	**Pn**	**08 34 04.2**	**+0.2**
DVD				*i* S	**Sn**	**08 34 25.8**	**-1.6**
LOCO3	**Loma Colorada,**	**2.00**	**121**	*e*P	**Pn**	**08 34 04.7**	**+0.2**
PEDE3	**Pedregal, Chir**	**2.01**	**122**	*e*P	**Pn**	**08 34 04.9**	**+0.3**
LOMA3	**Las Lomas, Chi**	**2.01**	**120**	*i* P	**Pb**	**08 34 07.9**	**-0.9**
CHGR2	**Aguacate**	**2.04**	**104**	*e*P	**Pn**	**08 34 05.9**	**+0.8**
CHGR2				*i* S	**Sn**	**08 34 29.8**	**+0.3**
GUAL3	**Gualaca, Chiri**	**2.04**	**116**	*i* P	**Pn**	**08 34 05.4**	**+0.3**
CHIR3	**Chiriqui UPA,**	**2.08**	**120**	*e*P	**Pn**	**08 34 05.7**	**+0.1**
NANC3	**Nancito, Chiri**	**2.67**	**117**	*e*P	**Pn**	**08 34 12.1**	**-1.7**
ACON	**Acoyapa**	**2.70**	**338**	*e*P	**Pn**	**08 34 14.1**	**-0.1**
CNAZ3	**Canazas, Verag**	**3.10**	**110**	*e*P	**Pn**	**08 34 17.9**	**-1.8**
RSUS3	**Rio de Jesus,**	**3.29**	**116**	*e*P	**Pn**	**08 34 22.6**	**+0.3**
GMAL	**Guarumal, Vera**	**3.33**	**120**	*i* P	**Pn**	**08 34 23.3**	**+0.4**
OCU3	**Ocu, Herrera**	**3.65**	**114**	*e*P	**Pn**	**08 34 29.3**	**+2.0**
VTON	**El Valle, Cocl**	**4.07**	**102**	*e*P	**Pn**	**08 34 33.7**	**+0.7**
ZANG	**Zanguenga, Cho**	**4.25**	**96**	*e*P	**Pn**	**08 34 36.1**	**+0.6**
CHOR3	**La Chorrera**	**4.36**	**97**	*e*P	**Pn**	**08 34 37.9**	**+0.9**
FRIJ	**El Hiral**	**4.37**	**93**	*i* P	**Pn**	**08 34 37.9**	**+0.8**

*SJA **26** 08:57:49.1±0.6, 20°24S×69°30W, h101km±20km, ML3.2, MW3.4*
*GUC **26** 08:57:50.1±0.6, 20°30S×69°22W, h93km±2km, ML3.1*
ISC 26 08:57:52.1±1.5, 20°30S±0°03×69°28W±0°06, h84km±11km, n19, σ0°76/31, 4C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**0.20**	**36**	⇓*i*P	**Pn**	**08 58 04.3**	**-0.6**
PB08				*i* S

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**1.12**	**167**	⇑*eP*	**Pn**	**09 01 47.9**	**-2.5**
SZP	**Santa**	**1.48**	**170**		**Pb**	**09 01 57.8**	**+0.4**
APYP	**Conner**	**1.53**	**139**	*eP*	**Pn**	**09 01 54.5**	**-1.5**
APYP				*eS*	**Sb**	**09 02 22.6**	**+5.4**
BBP	**Basco**	**2.19**	**50**	*eP*	Pn	09 01 57.8	-7.3
BBP				*eS*	**Sn**	**09 02 24.9**	**-6.5**
CAUP	**Cauayan**	**2.59**	**143**	*eP*	**Pn**	**09 02 11.0**	**+0.4**
SMPP	**San Manuel, Pa**	**2.89**	**171**	*eP*	**Pn**	**09 02 13.6**	**-1.2**
BALP	**Baler**	**3.52**	**158**	*eP*	**Pn**	**09 02 26.5**	**+3.1**
BALP				*eS*	**Sn**	**09 03 01.1**	**-3.1**
YULB	**Yu-li**	**4.47**	**13**	Pn	**Pn**	**09 02 35.4**	**-1.2**
NACB	**Ninganchiao**	**5.29**	**14**	Pn	**Pn**	**09 02 48.5**	**+0.7**
KNMB	**Chin-men Tao**	**5.67**	**343**	Pn	**Pn**	**09 02 55.1**	**+2.2**
YHNB	**Yeheng**	**5.73**	**11**	Pn	**Pn**	**09 02 55.0**	**+1.1**
QIZ	**Qiongzhong**	**9.78**	**272**		**Sn**	**09 05 35.6**	**-2.9**
KSRS	**Korea Array**	**19.57**	**19**	P	**P**	**09 05 56.0**	**-0.3**
	0.1nm,0.3s,baz=197,slow=12,SNR=7.5						
CMAR	**Chiang Mai Arr**	**20.12**	**272**	P	Pn	09 06 03.9	-0.6
	1.5nm,0.8s,baz=83,slow=8.0,SNR=11						
CMAR				PcP	**PcP**	**09 10 16.8**	**-0.4**
	0.8nm,0.3s,baz=34,slow=0.3,SNR=5.3						
BJT	**Baijiatuan**	**21.21**	**351**	P	**P**	**09 06 14.4**	**+0.3**
BJT				IAmb	IAmb	09 06 18.4	
	comp=Z,13nm,0.9s						
SHL	**Shillong**	**26.95**	**289**		**P**	**09 07 10.9**	**+0.8**
SHL				IAmb	IAmb	09 07 12.2	
	comp=Z,5.9nm,1.0s						
LSA	**Lhasa**	**28.43**	**298**	P	**P**	**09 07 24.9**	**+1.3**
LSA				IAmb	IAmb	09 07 26.4	
	comp=Z,7.6nm,1.3s						
ULN	**Ulaanbaatar**	**30.70**	**343**	P	**P**	**09 07 42.4**	**-0.7**
ULN				IAmb	IAmb	09 07 43.8	
	comp=Z,5.9nm,1.4s						
SONM	**Songino Array**	**30.86**	**342**	P	**P**	**09 07 44.0**	**-0.4**
	comp=Z,0.9nm,0.8s,baz=159,slow=10,SNR=5.6						
SONM	**Songino Array**	**30.86**	**342**	P	**P**	**09 07 44.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**37.27**	**171**	P	**P**	**09 08 39.7**	**-0.5**
FITZ				IAmb	IAmb	09 08 55.1	
	comp=Z,3.6nm,0.9s						
WRA	**Warramunga Arr**	**41.13**	**160**	P	**P**	**09 09 10.1**	**-2.4**
	comp=Z,0.3nm,0.2s,baz=340,slow=9.1,SNR=3.2						
WB2	**Warramunga Arr**	**41.14**	**160**	P	**P**	**09 09 14.7**	**+2.1**
WB2				IAmb	IAmb	09 09 17.9	
	comp=Z,11nm,1.4s						
MK31	**Makanchi Array**	**41.55**	**320**	P	**P**	**09 09 16.3**	**+0.6**
MKAR	**Makanchi Array**	**41.55**	**320**	P	**P**	**09 09 16.6**	**+0.9**
	comp=Z,2.0nm,0.9s,baz=117,slow=9.1,SNR=13						
MKAR				PcP	**PcP**	**09 11 12.3**	**-0.5**
	comp=Z,0.5nm,0.8s,baz=100,slow=5.1,SNR=3.0						
MKAR	**Makanchi Array**	**41.55**	**320**	P	**P**	**09 09 16.2**	**+0.4**
NIL	**Nilore**	**44.15**	**299**	P	**P**	**09 09 37.0**	**+0.1**
NIL				IAmb	IAmb	09 09 47.0	
	comp=Z,4.3nm,0.7s						
ZAA0	**Zalesovo Array**	**44.16**	**331**	P	**P**	**09 09 36.6**	**-0.1**
ZALV	**Zalesovo Beam**	**44.16**	**331**	P	**P**	**09 09 36.5**	**-0.2**
	comp=Z,3.0nm,0.8s,baz=122,slow=7.2,SNR=11						
ZALV	**Zalesovo Beam**	**44.16**	**331**	P	**P**	**09 09 36.2**	**-0.5**
ASAR	**Alice Springs**	**44.49**	**162**	P	**P**	**09 09 38.9**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=341,slow=7.9,SNR=12						
ASAR	**Alice Springs**	**44.49**	**162**	P	**P**	**09 09 38.3**	**-1.4**
KURK	**Kurchatov**	**45.57**	**324**	P	**P**	**09 09 48.4**	**+0.4**
KURK				IAmb	IAmb	09 09 53.4	
	comp=Z,7.6nm,1.5s						
KK31	**Karatay Array**	**48.01**	**311**	P	**P**	**09 10 07.8**	**+0.6**
KKAR	**Karatay Array**	**48.01**	**311**	P	**P**	**09 10 08.4**	**+1.1**
STKA	**Stephens Creek**	**54.61**	**158**	P	**P**	**09 10 56.5**	**-0.3**
	comp=Z,2.1nm,0.7s,baz=355,slow=5.3,SNR=5.7						
STKA	**Stephens Creek**	**54.61**	**158**	P	**P**	**09 10 56.0**	**-0.8**
ABKAR	**Akbulak array**	**56.47**	**317**	P	**P**	**09 11 10.6**	**+0.6**
GEYT	**Alibeck**	**56.72**	**303**	P	**P**	**09 11 13.3**	**+1.3**
	comp=Z,6.0nm,1.1s,baz=174,slow=1.4,SNR=6.3						
GEYT	**Alibeck**	**56.72**	**303**	P	**P**	**09 11 13.1**	**+1.1**
ILAR	**Eielson Array**	**74.22**	**26**	P	**P**	**09 13 05.0**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=301,slow=7.7,SNR=4.1						
YKA	**Yellowknife Ar**	**88.07**	**22**	P	**P**	**09 14 18.1**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=315,slow=4.6,SNR=22						

*JMA **26** 09:36:02.3±0.1,37.70N×141.74E,h37km±2km,M3.8*
JMA Felt II J1.
*IDC **26** 09:36:03.0±3.6,37.66N×141.78E,h36km±31km,mb3.3/6, mb1 3.5/10,mb1mx3.4/48,mbtmp3.6/10,ML2.7/3,Error ellipse: s-maj=28.8km s-min=18.0km az=90.0*
ISC 26 09:35:59.6±1.6,37.71N±0.04×141.82E±0.06,h13km±9km, n30,σ1°04/40,mb3.5/6,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**0.66**	**335**	P	**Pn**	**09 36 14.9**	**+0.1**
JIKH				S	**Sn**	**09 36 23.3**	**-1.8**
JMST	**Minamisoumatoc**	**0.74**	**272**	P	**Pn**	**09 36 15.3**	**-0.5**
JMST				S	**Sb**	**09 36 24.1**	**-0.3**
JFK	**Kawauchi**	**0.82**	**246**	P	**Pn**	**09 36 16.5**	**-0.5**
JFK				S	**Sb**	**09 36 26.3**	**-0.6**
JMM	**Marumori**	**0.83**	**281**	P	**Pn**	**09 36 16.8**	**-0.2**
JMM				S	**Sg**	**09 36 26.6**	**+0.1**
JIO	**Ouri**	**0.83**	**334**	P	**Pn**	**09 36 17.3**	**+0.2**
JIO				S	**Sg**	**09 36 27.3**	**+0.6**
ONAJ	**Iwakimizuishiy**	**1.01**	**234**	P	**Pn**	**09 36 19.2**	**-0.4**
ONAJ				S	**Sb**	**09 36 31.0**	**-1.4**
JOU	**Okura**	**1.12**	**306**	P	**Pg**	**09 36 21.5**	**+0.2**
JOU				S	**Sb**	**09 36 35.3**	**-0.2**
JKMT	**Kesennumamotoy**	**1.14**	**346**	P	**Pg**	**09 36 21.8**	**+0.3**
JKMT				S	**Sb**	**09 36 35.3**	**-0.5**
JFT	**Otama**	**1.19**	**261**	P	**Pg**	**09 36 22.7**	**+0.1**
JFT				S	**Sb**	**09 36 36.9**	**-0.6**
JMK	**Ichinoseki**	**1.33**	**339**	P	**Pg**	**09 36 24.7**	**-0.5**
JMK				S	**Sb**	**09 36 41.2**	**-0.2**
JYS	**Shirataka**	**1.48**	**291**	P	**Pb**	**09 36 27.0**	**0.0**
JYS				S	**Sb**	**09 36 45.0**	**-0.7**
JYK	**Kaneyama**	**1.67**	**317**	P	**Pb**	**09 36 29.3**	**-0.9**
JYK				*eS*	**Sn**	**09 36 49.3**	**-0.6**
JFY	**Yanaizu**	**1.71**	**261**	P	**Pb**	**09 36 29.7**	**-1.2**
JFY				S	**Sn**	**09 36 49.9**	**-1.0**
MJAR	**Matsushiro Arr**	**3.11**	**249**	Pn	**Pn**	**09 36 50.1**	**+1.6**
	0.8nm,0.3s,baz=67,slow=9.6,SNR=41						
MJAR				Sn	**Sn**	**09 37 27.9**	**+2.4**
	0.6nm,0.3s,baz=75,slow=15,SNR=4.3						
MAT	**Matsushiro**	**3.11**	**249**	P	**Pn**	**09 36 50.0**	**+1.5**
MAT				S	**Sn**	**09 37 28.2**	**+2.6**
ASAJ	**Asahikawa**	**6.43**	**5**	Pn	**Pn**	**09 37 34.6**	**+0.6**
	0.5nm,0.3s,baz=215,slow=19,SNR=8.3						
ASAJ				Sn	**Sn**	**09 38 47.6**	**+0.3**
	0.3nm,0.3s,baz=158,slow=19,SNR=2.4						
USRK	**Ussuriysk Ar.**	**9.86**	**314**	Pn	**Pn**	**09 38 23.6**	**+2.5**
	baz=101,slow=15,SNR=2.6						
JCJ	**Chichijima**	**10.59**	**178**	Pn	**Pn**	**09 38 30.4**	**-0.7**
	1.5nm,0.3s,baz=197,slow=17,SNR=4.3						
JCJ				Sn	Sn	09 40 19.0	-11
	1.4nm,0.3s,baz=252,slow=19,SNR=3.0						
SONM	**Songino Array**	**27.68**	**303**	P	**P**	**09 41 47.3**	**-0.2**
	0.4nm,0.5s,baz=102,slow=9.8,SNR=3.7						
H11N2	**WAKE ISLAND Hy**	**28.23**	**122**	T	T	10 12 06.3	
	baz=315,slow=75,SNR=58						
H11N1	**WAKE ISLAND Hy**	**28.23**	**122**	T	T	10 12 11.9	
	baz=315,slow=75,SNR=42						
H11N3	**WAKE ISLAND Hy**	**28.24**	**122**	T	T	10 12 07.9	
	baz=315,slow=75,SNR=38						
H11S1	**WAKE ISLAND Hy**	**28.96**	**124**	T	T	10 13 08.5	
	baz=317,slow=76,SNR=46						
H11S3	**WAKE ISLAND Hy**	**28.96**	**125**	T	T	10 13 09.9	
	baz=317,slow=76,SNR=52						
H11S2	**WAKE ISLAND Hy**	**28.98**	**124**	T	T	10 13 03.4	
	baz=317,slow=76,SNR=41						
ZALV	**Zalesovo Beam**	**41.70**	**312**	P	**P**	**09 43 47.9**	**-0.1**
	0.5nm,0.3s,baz=88,slow=8.8,SNR=2.7						
MKAR	**Makanchi Array**	**44.04**	**302**	P	**P**	**09 44 06.5**	**-0.6**
	0.3nm,0.6s,baz=84,slow=9.3,SNR=6.0						
WRA	**Warramunga Arr**	**57.77**	**188**	P	**P**	**09 45 49.7**	**-0.9**
	0.5nm,0.5s,baz=5.8,slow=7.4,SNR=4.1						
ASAR	**Alice Springs**	**61.50**	**188**	P	**P**	**09 46 16.0**	**-0.2**
	0.2nm,0.5s,baz=16,slow=11,SNR=4.8						
YKA	**Yellowknife Ar**	**63.06**	**30**	P	**P**	**09 46 27.3**	**+1.0**
	0.1nm,0.6s,baz=287,slow=6.1,SNR=2.6						

IDC 26 09:41:17.2±8.0,22.22S×177.68E,h66km±61km,mb3.6/5, mb1 3.8/6,mb1mx3.6/30,mbtmp3.9/6,ML3.5/1,MS3.5/3, Ms1 3.5/3,ms1mx3.1/24,Error ellipse: s-maj=75.6km s-min=31.7km az=143.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.41**	**269**	P	Pn	09 43 44.5	+0.7
	0.4nm,0.3s,baz=92,slow=18,SNR=6.2						
DZM				S	Sn	09 45 36.9	-2.1
	0.2nm,0.3s,baz=323,slow=20,SNR=3.2						
AFI	**Afiamalu**	**12.99**	**52**	LR	LR	09 48 06.1	
	comp=Z,191nm,18.7s,baz=344,slow=32						
PPT	**Papeete**	**31.10**	**87**	LR	LR	09 59 12.4	
	comp=Z,132nm,18.5s,baz=160,slow=35						
STKA	**Stephens Creek**	**33.41**	**245**	P	P	09 47 49.0	-0.7
	1.8nm,0.7s,baz=85,slow=11,SNR=6.9						
STKA				LR	LR	10 00 21.1	
	comp=Z,53nm,18.2s,baz=23,slow=34						
ASAR	**Alice Springs**	**40.22**	**259**	P	P	09 48 48.1	+0.4
	2.0nm,0.8s,baz=95,slow=8.7,SNR=19						
ASAR				PcP	PcP	09 50 49.9	-0.8
	0.5nm,0.6s,baz=101,slow=3.6,SNR=7.9						
WRA	**Warramunga Arr**	**40.40**	**265**	P	P	09 48 49.8	+0.6
	0.5nm,0.4s,baz=99,slow=7.1,SNR=4.2						
PETK	**Petropavlovsk-**	**77.00**	**348**	P	P	09 53 03.0	+0.4
	2.2nm,0.9s,baz=152,slow=6.5,SNR=2.5						
NVAR	**Mina Array Bea**	**85.06**	**45**	P	P	09 53 45.7	-0.5
	0.1nm,0.4s,baz=224,slow=7.6,SNR=2.6						

*IDC **26** 09:46:06.1±1.1,29.64N×81.76E,h0km,mb3.5/6, mb1 3.6/8,mb1mx3.4/45,mbtmp3.5/8,ML4.0/2,Error ellipse: s-maj=31.4km s-min=21.9km az=56.0*
ISC 26 09:46:10.9±1.1,29.7N±0.2×81.8E±0.2,h31km,n8,σ0.92/8, mb3.4/6,Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**17.07**	**1**	P	**P**	**09 50 08.3**	**-0.4**
	0.1nm,0.3s,baz=182,slow=11,SNR=5.0						
CMAR	**Chiang Mai Arr**	**19.19**	**122**	P	**Pn**	**09 50 33.8**	**+0.5**
	0.5nm,0.3s,baz=315,slow=11,SNR=4.6						
ZALV	**Zalesovo Beam**	**24.33**	**4**	P	**P**	**09 51 26.1**	**+0.4**
	0.3nm,0.3s,baz=183,slow=9.1,SNR=2.1						
BVAR	**Borovoye Array**	**24.77**	**343**	P	**P**	**09 51 29.0**	**-0.8**
	0.3nm,0.5s,baz=144,slow=8.2,SNR=2.1						
SONM	**Songino Array**	**26.18**	**39**	P	**P**	**09 51 42.2**	**-0.5**
	0.2nm,0.3s,baz=232,slow=11,SNR=2.2						
FINES	**FINESS Array B**	**48.12**	**328**	P	**P**	**09 54 49.1**	**+1.5**
	1.9nm,0.7s,baz=103,slow=8.6,SNR=5.3						
ASAR	**Alice Springs**	**72.93**	**131**	P	**P**	**09 57 37.2**	**-0.3**
	0.3nm,0.5s,baz=315,slow=6.0,SNR=7.1						
TORD	**Torodi Ar. Bea**	**75.13**	**277**	P	**P**	**09 57 49.9**	**-0.7**
	0.4nm,0.7s,baz=77,slow=6.2,SNR=2.7						

IDC 26 09:54:29.0±2.1,15.34S×175.17W,h320km±48km, mb3.4/3,mb1 3.6/4,mb1mx3.1/32,mbtmp4.1/4,Error ellipse: s-maj=158.3km s-min=29.6km az=140.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.58**	**67**	P	Pn	09 55 31.7	-0.4
	16nm,0.3s,baz=274,slow=13,SNR=24						
AFI				S	S	09 56 27.3	+4.6
	baz=3.7,slow=19,SNR=1.5						
STKA	**Stephens Creek**	**42.59**	**239**	P	P	10 01 55.3	+0.7
	0.9nm,0.4s,baz=72,slow=9.0,SNR=9.2						
WRA	**Warramunga Arr**	**48.19**	**257**	P	P	10 02 37.5	-0.9
	0.3nm,0.3s,baz=97,slow=6.3,SNR=4.6						
ASAR	**Alice Springs**	**48.50**	**252**	P	P	10 02 40.1	-0.7
	4.8nm,0.4s,baz=88,slow=7.8,SNR=148						
BRTR	**Keskin Array B**	**145.02**	**320**	PKPbc	PKPdf	10 13 28.5	-0.4
	0.8nm,0.7s,baz=36,slow=5.4,SNR=3.9						

*TRN **26** 09:59:53.9,10.39N×60.81W,h26km,MD2.8*
*FUNV **26** 09:59:53.2,10.33N×60.86W,h27km,MW2.6*
ISC 26 09:59:53.7±2.4,10.26N±0.03×60.91W±0.05,h35km±2km, n20,σ2°11/39,1C,Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.27**	**326**	*eP*	**Pn**	**10 00 01.1**	**-0.3**
TBH				*eS*	**Sn**	**10 00 05.9**	**-0.6**
TPP	**Pointe-a-Pierr**	**0.53**	**277**	*eP*	**Pn**	**10 00 07.3**	**+2.4**
TPP				*eS*	**Sn**	**10 00 15.5**	**+2.8**
TRN	**Trinidad (W)**	**0.62**	**309**	⇑*iP*	**Pn**	**10 00 05.8**	**-0.3**
TRN				*eS*	**Sn**	**10 00 15.4**	**+0.5**
TRN	**Trinidad (W)**	**0.62**	**309**	*eP*	**Pn**	**10 00 05.1**	**-1.0**
TRN				*eS*	**Sn**	**10 00 14.5**	**-0.4**
TOSP	**Speyside**	**1.10**	**20**	*eP*	**Pn**	**10 00 11.3**	**-1.4**
TOSP				*eS*	**Sn**	**10 00 24.7**	**-1.9**
GUNV	**Guanoco**	**2.00**	**268**	*eP*	**Pn**	**10 00 25.4**	**+0.3**
GUNV				*eS*	**Sn**	**10 00 48.4**	**-0.6**
GRGR	**Grenville**	**2.00**	**339**	*eP*	**Pn**	**10 00 25.0**	**-0.2**
GRGR				*eS*	**Sn**	**10 00 48.7**	**-0.3**
GRHS	**Sauteurs**	**2.08**	**340**	*eP*	**Pn**	**10 00 26.0**	**-0.2**
GRHS				*eS*	**Sn**	**10 00 50.4**	**-0.5**
GRSS	**Sisters**	**2.14**	**341**	*eP*	**Pn**	**10 00 27.6**	**+0.6**
GRSS				*eS*	**Sn**	**10 00 52.0**	**-0.4**
RIOV	**Rio Grande**	**2.35**	**202**	*eP*	**Pn**	**10 00 31.0**	**+1.1**
RIOV				*eS*	**Sn**	**10 00 58.6**	**+1.1**
ORIV	**Oritupano**	**2.73**	**245**	*eP*	**Pn**	**10 00 35.1**	**0.0**
ORIV				*eS*	**Sn**	**10 01 07.1**	**+0.2**
SVB	**Belmont**	**3.02**	**354**	*eP*	**Pn**	**10 00 38.8**	**-0.3**
SVB				*eS*	**Sn**	**10 01 12.2**	**-1.8**
PCRV	**Puerto La Cruz**	**3.67**	**269**	*eP*	**Pn**	**10 00 47.5**	**-0.6**
PCRV				*eS*	**Sn**	**10 01 27.0**	**-3.1**
PRGV	**PARIAGUAN**	**3.97**	**248**	*eP*	**Pn**	**10 00 52.4**	**+0.2**
PRGV				*eS*	**Sn**	**10 01 35.7**	**-1.9**
LUEV	**Luepa**	**4.42**	**187**	*eP*	**Pn**	**10 00 57.8**	**-0.7**
LUEV				*eS*	**Sn**	**10 01 46.3**	**-2.5**
CUPV	**Cpira**	**4.80**	**268**	*eP*	**Pn**	**10 01 03.5**	**-0.2**
CUPV				*eS*	**Sn**	**10 01 54.2**	**-4.1**
MERV	**Las Mercedes**	**5.40**	**260**	*eP*	**Pn**	**10 01 10.6**	**-1.2**
MERV				*eS*	**Sn**	**10 02 08.8**	**-4.1**
TURV	**Turiamo**	**6.82**	**272**	*eP*	**Pn**	**10 01 30.2**	**-1.2**
TURV				*eS*	**Sn**	**10 02 42.0**	**-5.8**
BAUV	**El Baul**	**7.15**	**260**	*eP*	**Pn**	**10 01 34.3**	**-1.6**
BAUV				*eS*	**Sn**	**10 02 50.2**	**-5.8**
PAYV	**Puerto Ayacuch**	**8.23**	**235**	*eP*	**Pn**	**10 01 49.7**	**-1.0**

*IDC **26** 10:17:25.4±2.3,16.99S×168.64E,h0km,mb3.8/5, mb1 4.0/6,mb1mx3.8/36,mbtmp3.9/6,ML3.8/1,MS3.1/4, Ms1 3.1/4,ms1mx2.9/37,Error ellipse: s-maj=45.0km s-min=29.8km az=52.0*
*NEIC **26** 10:17:32.7±3.0,17.32S±0.10×168.52E±0.06,h34km±12km, mb4.5/6,Error ellipse: s-maj=15.6km s-min=5.7km az=208.0*
ISC 26 10:17:31.6±1.3,17.17S±0.10×168.6E±0.2,h35km,n18, σ1°27/18,mb4.2/8,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.26**	**202**	Pn	**Pn**	**10 18 46.8**	**-1.1**
	3.3nm,0.3s,baz=78,slow=5.9,SNR=58						
DZM				Sn	**Sn**	**10 19 46.2**	**-1.2**
	0.7nm,0.3s,baz=345,slow=18,SNR=2.3						
DZM				LR	LR	10 20 15.6	
	comp=Z,96nm,19.9s,baz=24,slow=31						
DZM	**Mont Dzumac**	**5.26**	**202**		**Pn**	**10 18 45.9**	**-2.0**
DZM				Sn	**Sn**	**10 19 49.1**	**+1.7**
NOUC	**Port Laguerre**	**5.34**	**203**		**Pn**	**10 18 48.0**	**-0.9**
NOUC				Sn	**Sn**	**10 19 49.9**	**+0.6**
HNR	**Honiara**	**11.36**	**312**	LR	LR	10 23 32.8	
	comp=Z,110nm,21.4s,baz=96,slow=32						
CTA	**Charters Tower**	**21.32**	**259**	P	**P**	**10 22 15.8**	**+0.1**
	3.2nm,0.8s,baz=88,slow=16,SNR=2.0						
PMG	**Port Moresby**	**22.18**	**288**	LR	LR	10 29 47.1	
	comp=Z,80nm,18.6s,baz=34,slow=33						
URZ	**Urewera**	**22.31**	**162**	P	**P**	**10 22 26.2**	**0.0**
	9.6nm,0.9s,baz=324,slow=17,SNR=2.9						
URZ	**Urewera**	**22.31**	**162**	P	**P**	**10 22 26.7**	**+0.5**
URZ				IAmb	IAmb	10 22 31.6	
	comp=Z,20nm,1.0s						
STKA	**Stephens Creek**	**28.46**	**234**	LR	LR	10 34 26.9	
	comp=Z,52nm,18.8s,baz=26,slow=36						
WRA	**Warramunga Arr**	**32.52**	**260**	P	**P**	**10 23 59.5**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=89,slow=8.6,SNR=3.1						
AS31	**Alice Springs**	**33.04**	**253**	P	**P**	**10 24 04.2**	**+0.1**
ASAR	**Alice Springs**	**33.05**	**253**	P	**P**	**10 24 03.9**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=79,slow=8.6,SNR=28						
ASAR	**Alice Springs**	**33.05**	**253**	P	**P**	**10 24 04.4**	**+0.4**
KNRA	**Kununurra**	**38.15**	**266**	P	**P**	**10 24 47.6**	**-0.3**
KNRA				IAmb	IAmb	10 25 00.3	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**40.83**	**262**		**P**	**10 25 13.5**	**+3.2**
FITZ				IAmb	IAmb	10 25 22.1	
	comp=Z,7.6nm,1.1s						
NWAO	**Narrogin (SRO)**	**48.60**	**241**	P	**P**	**10 26 11.7**	**-0.4**
QSPA	**South Pole Qui**	**72.87**	**180**	P	**P**	**10 28 57.9**	**+1.0**
QSPA				IAmb	IAmb	10 29 06.3	
	comp=Z,5.1nm,1.3s						
SONM	**Songino Array**	**85.18**	**323**	P	**P**	**10 30 03.4**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=131,slow=4.0,SNR=2.4						

*TAP **26** 10:17:56.4,24.86N×122.15E,h12km,ML2.9,D*
*JMA **26** 10:17:57.2±0.1,24.73N×122.15E,h0km,M2.6*
ISC 26 10:17:57.2±0.9,24.82N±0.02×122.15E±0.02,h11km±7km, n66,σ0.60/114,4C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGS		**0.20**	**277**	P	**Pg**	**10 18 01.0**	**-0.5**
	baz=258						
EGS				*i* S	**Sg**	**10 18 05.1**	**+0.6**
	baz=258						
TWB1	**Santiao Chiao**	**0.24**	**322**	⇑*iP*	**Pg**	**10 18 01.4**	**-0.8**
	baz=315						
TWB1				*i* S	**Sg**	**10 18 04.3**	**-1.2**
	baz=315						
EOS1	**EOS1**	**0.27**	**184**	⇑P	**Pg**	**10 18 03.6**	**+0.9**
	baz=193						
EOS1				S	**Sg**	**10 18 08.8**	**+2.3**
	baz=193						
NTC	**Toucheng**	**0.29**	**277**	P	**Pg**	**10 18 03.2**	**0.0**
	baz=277						
NTC				*eS*	**Sg**	**10 18 07.2**	**0.0**
	baz=277						
TIPB	**Shuangxi**	**0.33**	**297**	⇑*iP*	**Pg**	**10 18 03.5**	**-0.3**
	baz=290						
TIPB				*eS*	**Sg**	**10 18 08.3**	**0.0**
	baz=290						
TWC	**Suao**	**0.34**	**233**	⇑*iP*	**Pg**	**10 18 03.8**	**-0.3**
	baz=220						
TWC				*i* S	**Sg**	**10 18 08.2**	**-0.5**
	baz=220						
WFSB	**Wu-fen Shan**	**0.42**	**307**	P	**Pg**	**10 18 05.3**	**-0.1**
	baz=302						
TWE	**Neicheng**	**0.45**	**258**	*i* P	**Pg**	**10 18 05.8**	**-0.3**
	baz=245						
TWE				*i* S	**Sb**	**10 18 12.7**	**-1.1**
	baz=245						
SLBB	**Yuanshan**	**0.47**	**262**	*eP*	**Pg**	**10 18 06.6**	**+0.1**
	baz=249						
SLBB				S	**Sb**	**10 18 14.3**	**-0.2**
	baz=249						
NANB	**Nanao**	**0.53**	**223**	*i* P	**Pg**	**10 18 07.5**	**-0.1**
	baz=213						
NANB				S	**Sb**	**10 18 15.0**	**-1.2**
	baz=213						
TWA	**Mucha**	**0.54**	**287**	P	**Pb**	**10 18 08.2**	**-0.4**
	baz=280						
TWA				S	**Sg**	**10 18 15.3**	**+0.4**
	baz=280						
ENA	**Nanau**	**0.54**	**224**	P	**Pb**	**10 18 07.7**	**-0.9**
	baz=213						
ENA				*i* S	**Sb**	**10 18 15.1**	**-1.3**
	baz=213						
ENTT	**Nioudou**	**0.56**	**252**	*i* P	**Pg**	**10 18 08.1**	**0.0**
	baz=248						
ENTT				S	**Sg**	**10 18 15.8**	**+0.3**
	baz=248						
NHDH	**Xindian Distri**	**0.58**	**284**	*eP*	**Pb**	**10 18 10.3**	**+0.9**
	baz=280						
NHDH				*eS*	**Sb**	**10 18 18.8**	**+1.0**
	baz=280						
NWLT	**Wulai**	**0.59**	**266**	*eP*	**Pg**	**10 18 08.7**	**0.0**
	baz=262						
NWLT				*eS*	**Sb**	**10 18 17.4**	**-0.5**
	baz=262						
NDT	**Datong Townshi**	**0.62**	**250**	P	**Pb**	**10 18 09.3**	**-0.7**
	baz=247						
NDT				*eS*	**Sb**	**10 18 19.3**	**+0.6**
	baz=247						
YM01	**YM01**	**0.62**	**302**	P	**Pg**	**10 18 09.3**	**0.0**
	baz=298						
YM01				S	**Sb**	**10 18 18.9**	**+0.2**
	baz=298						
TATO	**Taipei**	**0.62**	**285**	P	**Pb**	**10 18 10.6**	**+0.6**
	baz=281						
TATO				S	**Sg**	**10 18 17.9**	**+0.4**
	baz=281						
YM11	**YM11**	**0.63**	**304**	P	**Pg**	**10 18 09.4**	**0.0**
	baz=303						
YM08	**YM08**	**0.63**	**306**	P	**Pg**	**10 18 08.9**	**-0.5**
	baz=300						
YM10

baz=213
ESL S Sn 10 18 35.8 -0.2
baz=213
WHP Taichung City 1.22 244 P Pb 10 18 20.3 -0.1
baz=241
WHP eS Sn 10 18 37.3 +0.5
baz=241
OWD Renai 1.24 226 eP Pn 10 18 20.8 +0.3
baz=225
OWD eS Sb 10 18 36.8 +0.1
baz=225
EGFH Guangfu 1.32 210 eP Pg 10 18 22.0 -0.6
baz=225
EGFH eS Sn 10 18 41.1 +2.0
baz=225
TWQ1 Liyutan 1.34 250 eP Pn 10 18 21.8 0.0
baz=238
TWQ1 eS Sn 10 18 40.6 +1.0
baz=238
VWDT VWDT 1.40 221 eP Pg 10 18 23.7 -0.5
baz=228
VWDT eS Sg 10 18 42.8 +0.4
baz=228
SMLT Sun Moon Lake 1.47 231 eP Pb 10 18 24.4 -0.2
baz=228
SMLT eS Sb 10 18 43.2 -0.2
baz=228
HGSD Ruisui 1.48 207 eP Pg 10 18 25.8 +0.2
baz=187
TYC Yuchr 1.49 233 P Pg 10 18 26.1 +0.3
baz=223
TYC S Sg 10 18 44.7 -0.4
baz=223
SSLB Suanglung 1.50 227 P Pg 10 18 25.2 -0.8
baz=225
SSLB S Sg 10 18 44.9 -0.5
baz=225
IRIF Iriomote-Funau 1.52 108 P Pb 10 18 25.3 0.0
IRIF eS Sg 10 18 45.3 -0.8
YULB Yu-li 1.62 209 eP Pn 10 18 25.8 +0.1
baz=205
WHYT Xinyi Township 1.63 227 eP Pg 10 18 28.4 0.0
baz=223
TWF1 Yuli 1.66 208 eP Pb 10 18 26.9 -0.8
baz=204
HATJ Hateruma jima 1.69 116 eS Sb 10 18 50.0 +0.5
ALS Alishan 1.79 224 eP Pg 10 18 30.7 -0.9
baz=204
CHN5 Tsauling 1.81 228 eP Pg 10 18 31.3 -0.7
baz=225
CHN5 eS Sg 10 18 55.5 0.0
baz=225
JIJ Ishigaki jima 1.87 104 P Pb 10 18 30.6 -0.8
JIJ eS Sb 10 18 54.8 +0.1
ELDTW Lidau 1.93 213 eP Pn 10 18 30.9 +0.9
baz=193
JISG Ishigakijimahi 1.98 96 P Pb 10 18 33.0 -0.2
JISG eS Sb 10 18 58.7 +0.8
CHN4 Tsaushan 2.04 225 eP Pn 10 18 32.2 +0.8
baz=218
TPUB Ta-pu 2.05 223 eP Pb 10 18 34.3 -0.2
baz=200
WTP Ta-pu 2.10 222 eP Pb 10 18 35.4 +0.1
baz=202
WTP eS Sg 10 19 04.7 -0.2
baz=202
TWK Hsinying 2.17 225 eP Pb 10 18 35.6 -0.8
baz=218
SLGT Liugui 2.28 217 eP Pb 10 18 37.9 -0.4
baz=211

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*BJI **26** 10:39:31.6±0.0, 15°.40S×173°.68W, h10km, mB5.4/10, mb4.8/17, Ms5.1/6, Ms7 4.8/5*
*NEIC **26** 10:39:32.4±2.7, 15°.13S±0°.03×173°.51W±0°.10, h10km±1km, mb5.2/184, Error ellipse: s-maj=15.9km s-min=4.0km az=259.0*
*MOS **26** 10:39:33.8±1.4, 15°.17S×173°.79W, h23km, mb5.3/17, Error ellipse: s-maj=13.6km s-min=9.6km az=135.2*
*BGR **26** 10:39:34.8±0.0, 15°.95S×173°.88W, h33km*
*IDC **26** 10:39:38.3±0.6, 15°.22S×173°.61W, h53km±4km, mb4.3/19, mb1 4.5/19, mb1mx4.3/40, mbtmp4.6/19, MS4.4/28, Ms1 4.4/28, ms1mx4.3/37, Error ellipse: s-maj=21.4km s-min=10.8km az=132.0*
*GCMT **26** 10:39:42.4±0.1, 15°.00S±0°.01×173°.36W±0°.01, h12km, MW5.5/136, Moment Tensor Solution. s60,c73; s136,c192; Duration: 1s4 Moment tensor: Scale 10^17 Nm; Mrr=0.15±.01; Mθθ=0.36±.02; Mφφ=-0.20±.01; Mrθ=-2.13±.04; Mrφ=0.11±.01; Mθφ=0.82±.03; Best double couple: M=2.30600×10^17 NP1:φ=220.00000°, δ7.00000°, λ=-161.00000°. NP2:φ=111.00000°, δ88.00000°, λ=-83.00000°. Principal axes: T 2.3380, Plg42.0000°, Azm195.0000°; N -0.0640, Plg7.0000°, Azm291.0000°; P -2.2730, Plg47.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 26 10:39:36.7±0.3, 15°.41S±0°.06×173°.47W±0°.06, h42km, n450, σ1s27/367, mb5.1/111, MS4.5/34, 16C-3D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.21**	**48**	P		Pn	10 40 05.9	-5.2
	761nm,0.3s,baz=195,slow=1.6,SNR=853							
AFI				S		Sn	10 40 25.8	-11
	3μm,0.3s,baz=219,slow=15,SNR=18							
AFI				LR		LR	10 40 48.8	
	comp=Z,11μm,20.6s,baz=153,slow=32							
AFI	**Afiamalu**	**2.21**	**48**			Pn	10 40 05.9	-5.2
AFI				Sn		Sn	10 40 25.2	-12
NIUE	**Niue**	**4.98**	**138**	P		**Pn**	**10 40 49.6**	**+0.7**
	baz=5.1,SNR=357							
NIUE				S		**Sn**	**10 41 41.2**	**-4.0**
	baz=5.1							
NIUE	**Niue**	**4.98**	**138**			**Pn**	**10 40 49.7**	**+0.7**
NIUE				Sn		**Sn**	**10 41 40.9**	**-4.3**
MSVF	**Nonsavu**	**8.46**	**253**	eP		**Pn**	**10 41 32.8**	**-4.0**
MSVF				pmax		pmax		
	comp=Z,9.0nm,1.0s							
KNTN	**Kanton**	**12.67**	**8**			Pn	10 42 28.6	-5.9
RAR	**Rarotonga**	**14.22**	**116**	P		**Pn**	**10 42 54.9**	**-0.7**
RAR	**Rarotonga**	**14.22**	**116**	P		**Pn**	**10 42 53.7**	**-1.9**
	comp=Z,2.8nm,0.3s,baz=260,slow=8.8,SNR=12							
RAR				S		Sn	10 45 16.4	-16
	comp=Z,0.4nm,0.3s,baz=219,slow=1.4,SNR=3.1							
RAR				LR		LR	10 48 02.9	
	comp=Z,283nm,18.5s,baz=282,slow=35							
RAR	**Rarotonga**	**14.22**	**116**			**Pn**	**10 42 54.9**	**-0.7**
DZM	**Mont Dzumac**	**20.13**	**248**	eP		Pn	10 44 13.4	+3.8
	comp=Z,114nm,1.6s							
DZM				eS		Sn	10 47 53.0	-2.5
	comp=Z,359nm,25.4s							
DZM				eLQ		LQ	10 48 20.0	
	comp=Z,2μm,27.7s							
DZM				eLR		LR	10 49 10.3	
	comp=Z,5μm,26.6s							
DZM	**Mont Dzumac**	**20.13**	**248**	P		Pn	10 44 09.0	-0.6
	comp=Z,12nm,1.0s,baz=57,slow=8.8,SNR=3.7							
DZM				LR		LR	10 50 56.3	
	comp=Z,2μm,20.5s,baz=84,slow=34							
DZM	**Mont Dzumac**	**20.13**	**248**	P		Pn	10 44 11.6	+2.0
DZM				IAmb		IAmb	10 44 34.6	
	comp=Z,205nm,1.9s							
NOUC	**Port Laguerre**	**20.27**	**248**	P		Pn	10 44 13.1	+2.0
OUZ	**Omahuta**	**22.89**	**208**			**P**	**10 44 39.2**	**+2.4**
PAE	**Paea**	**23.01**	**99**	eT		T	11 08 08.2	
	comp=Z,12nm,0.3s							
PPT	**Papeete**	**23.01**	**99**	LR		LR	10 52 21.2	
	comp=Z,99nm,19.1s,baz=251,slow=33							
PPT2	**Papeete2**	**23.01**	**99**	eLQ		LQ	10 49 13.2	
	comp=Z,1μm,27.8s							
PPT2				eLR		LR	10 50 00.4	
	comp=Z,696nm,26.2s							
PPT2	**Papeete2**	**23.01**	**99**	eT		T	11 08 08.3	
	comp=Z,16nm,0.4s							
TIAR	**Tiarei**	**23.23**	**99**	eT		T	11 08 23.2	
	comp=Z,7.4nm,0.4s							
MXZ	**Matakaoa Point**	**23.24**	**197**	P		**P**	**10 44 45.7**	**+5.4**
TVO	**Taravao**	**23.32**	**99**	eT		T	11 08 24.7	
	comp=Z,4.4nm,0.3s							
KUZ	**Kuaotunu**	**23.33**	**202**	P		**P**	**10 44 44.3**	**+3.1**
WMGZ	**Waiomatatini S**	**23.45**	**196**	P		**P**	**10 44 47.2**	**+4.9**
HAZ	**Te Kaha**	**23.57**	**198**	P		**P**	**10 44 46.0**	**+2.5**
TBI	**Tubuai**	**23.96**	**113**	eLQ		LQ	10 49 38.0	
	comp=Z,2μm,24.5s							
TBI				eLR		LR	10 50 42.5	
	comp=Z,352nm,26.8s							
TBI	**Tubuai**	**23.96**	**113**	eT		T	11 09 17.2	
	comp=Z,25nm,0.3s							
MWZ	**Matawai**	**24.18**	**197**	P		**P**	**10 44 52.9**	**+3.6**
TKGZ	**Te Karaka**	**24.19**	**197**	P		**P**	**10 44 52.2**	**+3.0**
URZ	**Urewera**	**24.23**	**198**	P		**P**	**10 44 50.5**	**+0.9**
	comp=Z,12nm,0.5s,baz=11,slow=5.3,SNR=20							
URZ				LR		LR	10 53 37.8	
	comp=Z,1μm,19.0s,baz=31,slow=34							
URZ	**Urewera**	**24.23**	**198**	P		**P**	**10 44 51.5**	**+1.8**
URZ	**Urewera**	**24.23**	**198**	P		**P**	**10 44 51.2**	**+1.6**
TOZ	**Tahuroa Road**	**24.29**	**202**	P		**P**	**10 44 53.5**	**+3.4**
MUGZ	**Murupara**	**24.54**	**199**	P		**P**	**10 44 55.0**	**+2.5**
PRRZ	**Plateau Road**	**24.68**	**199**	P		**P**	**10 44 56.7**	**+3.0**
HIZ	**Hauiti**	**25.21**	**202**	P		**P**	**10 45 01.7**	**+3.1**
BKZ	**Black Stump Fm**	**25.26**	**199**	P		**P**	**10 45 01.1**	**+2.0**
BKZ				IAmb		IAmb	10 45 56.4	
	comp=Z,66nm,1.5s							
HNR	**Honiara**	**26.62**	**280**	P		**P**	**10 45 08.3**	**-3.3**
HNR				pmax		pmax		
	comp=Z,330nm,1.1s							
HNR	**Honiara**	**26.62**	**280**	P		**P**	**10 45 09.4**	**-2.1**
	comp=Z,136nm,0.8s,baz=48,slow=14,SNR=6.2							
HNR				LR		LR	10 54 20.1	
	comp=Z,317nm,22.0s,baz=127,slow=33							
HNR	**Honiara**	**26.62**	**280**	P		**P**	**10 45 08.2**	**-3.3**
BFZ	**Birch Farm**	**26.73**	**198**	P		**P**	**10 45 13.4**	**+1.1**
SNZO	**South Karori**	**27.77**	**199**	P		**P**	**10 45 21.1**	**-0.5**
BHW	**Baring Head**	**27.81**	**199**	P		**P**	**10 45 24.5**	**+2.6**
QRZ	**Quartz Range**	**28.10**	**203**	P		**P**	**10 45 25.9**	**+1.3**
NNZ	**Nelson**	**28.13**	**201**	P		**P**	**10 45 26.5**	**+1.7**
THZ	**Tophouse**	**28.78**	**201**	P		**P**	**10 45 31.8**	**+1.1**
LTZ	**Lake Taylor**	**29.90**	**201**	P		**P**	**10 45 39.9**	**-0.7**
OXZ	**Oxford**	**30.46**	**201**	P		**P**	**10 45 45.9**	**+0.5**
RPZ	**Rata Peaks**	**31.15**	**202**	P		**P**	**10 45 52.1**	**+0.6**
	comp=Z,15nm,0.8s,baz=16,slow=5.2,SNR=5.9							
RPZ	**Rata Peaks**	**31.15**	**202**	P		**P**	**10 45 52.0**	**+0.5**
FOZ	**Fox Glacier**	**31.45**	**204**	P		**P**	**10 45 55.0**	**+0.8**
LBZ	**Lake Benmore**	**32.04**	**202**	P		**P**	**10 45 59.4**	**-0.1**
TAOE	**Nuku Hiva Isla**	**33.19**	**83**	eLR		LR	10 54 32.2	
	comp=Z,2μm,28.1s							
TAOE	**Nuku Hiva Isla**	**33.19**	**83**	eT		T	11 20 39.6	
	comp=Z,84nm,0.2s							
MLZ	**Mara Lakes**	**33.66**	**204**	P		**P**	**10 46 15.1**	**+1.6**
DCZ	**Deep Cove**	**34.12**	**205**	P		**P**	**10 46 18.3**	**+0.8**
DCZ				IAmb		IAmb	10 46 26.0	
	comp=Z,40nm,1.2s							
WHZ	**Wether Hill Ro**	**34.16**	**203**	P		**P**	**10 46 18.9**	**+1.0**
CNB	**Canberra Magne**	**38.69**	**232**	P		**P**	**10 46 56.8**	**+0.1**
	baz=39,SNR=6.0							
PMG	**Port Moresby**	**38.87**	**274**	eP		P	10 46 53.2	-5.2
PMG				pmax		pmax		
	comp=Z,89nm,1.2s							
H11S2	**WAKE ISLAND Hy**	**38.94**	**329**	T		T	11 27 41.6	
	baz=146,slow=76,SNR=80							
H11S3	**WAKE ISLAND Hy**	**38.95**	**329**	T		T	11 27 40.5	
	baz=146,slow=76,SNR=11							
H11S1	**WAKE ISLAND Hy**	**38.95**	**329**	T		T	11 27 43.0	
	baz=146,slow=76,SNR=17							
CAN	**Canberra**	**38.97**	**232**	P		**P**	**10 46 58.8**	**-0.3**
CAN				pmax		pmax		
	comp=Z,120nm,1.9s							
CAN	**Canberra**	**38.97**	**232**	P		**P**	**10 46 58.8**	**-0.3**
CAN				IAmb		IAmb	10 47 12.7	
	comp=Z,120nm,1.9s							
H11N3	**WAKE ISLAND Hy**	**39.88**	**330**	T		T	11 29 24.5	
	baz=148,slow=76,SNR=22							
H11N1	**WAKE ISLAND Hy**	**39.89**	**330**	T		T	11 29 27.9	
	baz=148,slow=76,SNR=23							
H11N2	**WAKE ISLAND Hy**	**39.90**	**330**	T		T	11 29 27.9	
	baz=148,slow=76,SNR=27							
TOO	**Toolangi**	**42.41**	**231**	P		**P**	**10 47 26.4**	**-1.1**
	baz=43,SNR=4.5							
TOO	**Toolangi**	**42.41**	**231**	P		**P**	**10 47 27.4**	**0.0**
TOO				pmax		pmax		
	comp=Z,34nm,1.4s							
TOO	**Toolangi**	**42.41**	**231**	P		**P**	**10 47 27.4**	**0.0**
STKA	**Stephens Creek**	**43.98**	**240**	P		**P**	**10 47 40.0**	**-0.1**
	baz=44,SNR=7.8							
STKA	**Stephens Creek**	**43.98**	**240**	P		**P**	**10 47 39.7**	**-0.4**
STKA				pmax		pmax		
	comp=Z,4.0nm,1.0s							
STKA	**Stephens Creek**	**43.98**	**240**	P		**P**	**10 47 39.4**	**-0.8**
	comp=Z,14nm,1.1s,baz=84,slow=7.4,SNR=12							
STKA				LR		LR	11 03 44.1	
	comp=Z,456nm,21.5s,baz=71,slow=33							
STKA	**Stephens Creek**	**43.98**	**240**	P		**P**	**10 47 39.7**	**-0.4**
ARPS	**Mount Arapiles**	**44.93**	**233**	P		**P**	**10 47 48.1**	**+0.4**
	baz=45							
HTT	**Hallett**	**46.48**	**238**	P		**P**	**10 48 00.3**	**+0.2**
	baz=47,SNR=5.5							
BBOO	**Buckleboo**	**48.75**	**240**	P		**P**	**10 48 17.2**	**-0.4**
	baz=49,SNR=5.0							
BBOO	**Buckleboo**	**48.75**	**240**	P		**P**	**10 48 17.1**	**-0.6**
WR0	**Warramunga Arr**	**49.59**	**257**	P		**P**	**10 48 23.1**	**-1.1**
WB0	**Warramunga Arr**	**49.74**	**257**	P		**P**	**10 48 24.3**	**-1.0**
WB0				IAmb		IAmb	10 48 43.3	
	comp=Z,80nm,1.9s							
WB2	**Warramunga Arr**	**49.77**	**257**	P		**P**	**10 48 23.9**	**-1.7**
WB2				IAmb		IAmb	10 48 43.6	
	comp=Z,76nm,1.8s							
WRA	**Warramunga Arr**	**49.78**	**257**	P		**P**	**10 48 25.2**	**-0.4**
WRA	**Warramunga Arr**	**49.78**	**257**	P		**P**	**10 48 24.6**	**-1.0**
	comp=Z,8.0nm,1.1s,baz=91,slow=6.9,SNR=11							
WRA				pP		**pwP**	**10 48 39.6**	**+2.3**
	comp=Z,3.6nm,0.6s,baz=91,slow=8.3,SNR=6.8							
WRA				LR		LR	11 07 38.6	
	comp=Z,368nm,22.0s,baz=100,slow=34							
WRA	**Warramunga Arr**	**49.78**	**257**	P		**P**	**10 48 25.2**	**-0.4**
AS31	**Alice Springs**	**50.04**	**252**	P		**P**	**10 48 26.6**	**-1.1**
ASAR	**Alice Springs**	**50.05**	**252**	P		**P**	**10 48 26.1**	**-1.6**
ASAR	**Alice Springs**	**50.05**	**252**	P		**P**	**10 48 26.6**	**-1.1**
	comp=Z,7.3nm,0.7s,baz=87,slow=7.9,SNR=76							
ASAR				pP		**sP**	**10 48 41.9**	**-2.2**
	comp=Z,25nm,0.7s,baz=85,slow=8.3,SNR=18							
ASAR				LR		LR	11 08 10.7	
	comp=Z,839nm,21.4s,baz=94,slow=34							
ASAR	**Alice Springs**	**50.05**	**252**	P		**P**	**10 48 26.1**	**-1.6**
WRKA	**Warakurna**	**55.13**	**250**	P		**P**	**10 49 04.5**	**-0.8**
	baz=55,SNR=16							
FORT	**Forrest**	**55.35**	**243**	P		**P**	**10 49 05.4**	**-1.3**
KNRA	**Kununurra**	**55.50**	**261**	P		**P**	**10 49 10.2**	**+2.2**
	baz=56,SNR=3.4							
JCJ	**Chichijima**	**60.31**	**314**	LR		LR	11 10 27.8	
	comp=Z,267nm,21.1s,baz=124,slow=31							
VNDA	**Vanda**	**63.36**	**186**	P		**P**	**10 50 03.9**	**+2.6**
VNDA				pmax		pmax		
	comp=Z,13nm,1.2s							
VNDA	**Vanda**	**63.36**	**186**	P		**P**	**10 50 03.5**	**+2.2**
	comp=Z,8.9nm,1.2s,baz=359,slow=6.6,SNR=7.2							
VNDA				LR		LR	11 12 39.2	
	comp=Z,125nm,21.7s,baz=22,slow=31							
VNDA	**Vanda**	**63.36**	**186**	P		**P**	**10 50 03.9**	**+2.6**
NWAO	**Narrogin (SRO)**	**64.56**	**241**	P		**P**	**10 50 08.6**	**-1.3**
NWAO				pmax		pmax		
	comp=Z,46nm,1.5s							
NWAO	**Narrogin (SRO)**	**64.56**	**241**	P		**P**	**10 50 08.4**	**-1.5**
	comp=Z,8.8nm,0.9s,baz=145,slow=9.7,SNR=2.4							
NWAO	**Narrogin (SRO)**	**64.56**	**241**	P		**P**	**10 50 08.6**	**-1.3**
MJAR	**Matsushiro Arr**	**68.90**	**320**	pP		**pP**	**10 50 51.7**	**+2.5**
	comp=Z,1.4nm,0.9s,baz=141,slow=7.2,SNR=2.2							
MJAR				LR		LR	11 15 19.9	
	comp=Z,256nm,21.6s,baz=135,slow=31							
ERM	**Erimo**	**69.73**	**327**	eP		**P**	**10 50 42.0**	**-0.4**
ERM				pmax		pmax		
	comp=Z,122nm,1.4s							
SKR	**Severo-Kuril's**	**71.01**	**340**	eP		P	10 50 58.1	+8.2
SKR				eS		S	11 00 11.1	+8.3
SKR				pmax		pmax		
	comp=Z,100nm,3.0s							
SKR				MLR		MLR		
	comp=Z,200nm,17.0s							
PKM	**Mcpherson Peak**	**71.36**	**44**	P		**P**	**10 50 53.2**	**+0.4**
	baz=235,SNR=5.4							
SAO	**San Andreas Ge**	**71.38**	**42**	P		**P**	**10 50 52.8**	**+0.2**
SAO				pmax		pmax		
	comp=Z,17nm,1.1s							
SAO	**San Andreas Ge**	**71.38**	**42**	P		**P**	**10 50 52.8**	**+0.2**
SAO				IAmb		IAmb	10 50 54.1	
	comp=Z,17nm,1.1s							
PMPB	**Monarch Peak**	**71.48**	**43**	P		**P**	**10 50 53.8**	**+0.6**
PMPB				IAmb		IAmb	10 50 54.5	
	comp=Z,18nm,1.1s							
ASAJ	**Asahikawa**	**71.51**	**328**	LR		LR	11 19 56.9	
	comp=Z,56nm,18.1s,baz=174,slow=34							
PAGB	**Antelope Grade**	**71.56**	**43**	P		**P**	**10 50 54.3**	**+0.6**
PAGB				IAmb		IAmb	10 51 32.4	
	comp=Z,35nm,1.7s							
HOPS	**Hopland Field**	**71.72**	**39**	P		**P**	**10 50 54.1**	**-0.4**
HOPS				IAmb		IAmb	10 50 56.3	
	comp=Z,36nm,1.2s							
GDXM	**Geysers**	**71.77**	**40**	P		**P**	**10 50 55.7**	**+0.7**
KMRM	**Mail Ridge**	**72.11**	**38**	P		**P**	**10 50 57.4**	**+0.5**
MWC	**Mount Wilson**	**72.19**	**46**	P		**P**	**10 50 57.5**	**-0.3**
MWC				pmax		pmax		
	comp=Z,24nm,1.3s							
MWC	**Mount Wilson**	**72.19**	**46**	P		**P**	**10 50 57.5**	**-0.3**
MWC				IAmb		IAmb	10 50 58.9	
	comp=Z,24nm,1.2s							
PET	**Petropavlovsk**	**72.27**	**343**	eP		**P**	**10 50 58.0**	**+0.5**
PET				eS		**S**	**11 00 17.5**	**+0.3**
VES	**Vestal, Richgr**	**72.39**	**44**	P		**P**	**10 50 58.2**	**-0.4**
	baz=236,SNR=9.1							
MURC	**Murrieta**	**72.45**	**47**	P		**P**	**10 50 59.1**	**0.0**
	baz=237,SNR=6.6							
VOG	**Valley Oaks Go**	**72.47**	**43**	P		**P**	**10 50 59.5**	**+0.4**
	baz=235							
BFSC	**Mount Baldy Ra**	**72.47**	**46**	P		**P**	**10 50 59.1**	**-0.2**
	baz=237,SNR=5.5							
KHMM	**Horse Mountain**	**72.51**	**37**	P		**P**	**10 51 00.3**	**+0.9**
KHMM				IAmb		IAmb	10 51 01.4	
	comp=Z,23nm,1.1s							
EDW2	**Edwards Air Fo**	**72.59**	**45**	P		**P**	**10 51 00.2**	**+0.2**
	baz=236,SNR=14							
PETK	**Petropavlovsk-**	**72.62**	**342**	P		**P**	**10 50 59.5**	**-0.1**
	comp=Z,4.7nm,0.8s,baz=155,slow=11,SNR=4.5							
PETK				pP		**pwP**	**10 51 13.0**	**+1.4**
	comp=Z,5.2nm,0.9s,baz=120,slow=8.5,SNR=2.9							
PETK				LR		LR	11 15 39.9	
	comp=Z,136nm,21.9s,baz=68,slow=30							
MONP2	**Monument Peak**	**72.62**	**48**	P		**P**	**10 51 00.6**	**+0.3**
	baz=238,SNR=9.8							
O02D	**Mt. Diablo Mer**	**72.63**	**38**	P		**P**	**10 51 01.1**	**+1.0**
	baz=232							
ISA	**Isabella, Lake**	**72.70**	**44**	IAmb		IAmb	10 51 02.3	
	comp=Z,39nm,1.6s							
ISA	**Isabella, Lake**	**72.70**	**44**	P		**P**	**10 51 01.4**	**+0.8**
	baz=236,SNR=9.3							
IKP	**In-Ko-Pah, Jac**	**72.72**	**48**	P		**P**	**10 51 01.2**	**+0.4**
	baz=238,SNR=5.8							
PFO	**Pinyon Flats O**	**72.97**	**47**	eP		**P**	**10 51 02.3**	**0.0**
PFO				pmax		pmax		
	comp=Z,27nm,1.4s							
PFO	**Pinyon Flats O**	**72.97**	**47**	P		**P**	**10 51 02.1**	**-0.3**
	comp=Z,5.6nm,1.0s,baz=233,slow=6.5,SNR=11							
PFO	**Pinyon Flats O**	**72.97**	**47**	P		**P**	**10 51 02.0**	**-0.3**
PFO	**Pinyon Flats O**	**72.97**	**47**	P		**P**	**10 51 02.6**	**+0.2**
	baz=238,SNR=10							
TPFO	**Pinon Flats**	**72.97**	**47**	P		**P**	**10 51 02.6**	**+0.2**
	baz=238,SNR=9.0							
XPFO	**Pion Flat**	**72.98**	**47**	P		**P**	**10 51 02.3**	**-0.1**
WDC	**Whiskeytown Da**	**73.03**	**38**	IAmb		IAmb	10 51 04.1	
	comp=Z,48nm,1.4s							
SWSC	**Sam W. Stewart**	**73.09**	**48**	P		**P**	**10 51 03.4**	**+0.5**
	baz=238,SNR=6.4							
LRMC	**Laurel Mtn Rad**	**73.14**	**45**	P		**P**	**10 51 03.4**	**+0.1**
	baz=237,SNR=12							
N02D	**Trinity Center**	**73.17**	**38**	P		**P**	**10 51 04.1**	**+0.8**
	baz=231,SNR=8.8							
O03E	**Paynes Creek**	**73.29**	**39**	P		**P**	**10 51 04.4**	**+0.4**
	baz=232							
M02C	**Callahan**	**73.35**	**37**	P		**P**	**10 51 04.8**	**+0.5**
	baz=231,SNR=8.8							
L02E	**Cave Junction**	**73.40**	**36**	P		**P**	**10 51 05.5**	**+0.9**
	baz=230							
CWC	**Cottonwood Cre**	**73.40**	**44**	P		**P**	**10 51 04.8**	**-0.1**
	baz=236							
YSS	**Yuzh-Sakhalins**	**73.46**	**330**	eP		**P**	**10 51 04.6**	**-0.1**
YSS				e			10 51 10.5	
YSS				e			10 51 21.8	
YSS				pmax		pmax		
	comp=Z,10.0nm,1.0s							
BELC	**Belle Mtn. Jos**	**73.51**	**47**	P		**P**	**10 51 05.8**	**+0.3**
	baz=238,SNR=10							
MLAC	**Mammoth, Mammo**	**73.58**	**42**	P		**P**	**10 51 06.3**	**+0.3**
	baz=235,SNR=6.5							
MPMC	**Manual Prospec**	**73.59**	**44**	P		**P**	**10 51 06.1**	**+0.1**
	baz=237,SNR=21							
DAC	**Darwin (Calif)**	**73.64**	**44**	P		**P**	**10 51 08.9**	**+2.6**
DAC				pmax		pmax		
	comp=Z,40nm,1.9s							
DAC	**Darwin (Calif)**	**73.64**	**44**	P		**P**	**10 51 08.9**	**+2.6**
DAC				IAmb		IAmb	10 51 10.6	
	comp=Z,40nm,1.9s							
GSC	**Goldstone, Bar**	**73.64**	**45**	P		**P**	**10 51 06.4**	**+0.2**
	baz=237,SNR=10.0							
YBH	**Yreka Blue Hor**	**73.64**	**37**	IAmb		IAmb	10 51 07.9	
	comp=Z,31nm,1.1s							
TIN	**Tinemaha, Big**	**73.65**	**43**	P		**P**	**10 51 06.9**	**+0.7**
	baz=236							
K02D	**Willamette Mer**	**73.71**	**36**	P		**P**	**10 51 07.1**	**+0.7**
	baz=230,SNR=7.0							
BC3	**Big Chuckawall**	**73.71**	**47**	P		**P**	**10 51 06.7**	**+0.1**
	baz=239,SNR=9.2							
HEC	**Hector,Ludlow**	**73.71**	**46**	P		**P**	**10 51 06.7**	**+0.1**
	baz=238,SNR=10							
GLA	**Glamis**	**73.85**	**48**	IAmb		IAmb	10 51 09.2	
	comp=Z,28nm,1.1s							
GLA	**Glamis**	**73.85**	**48**	P		**P**	**10 51 08.5**	**+1.1**
	baz=239,SNR=6.4							
J01E	**Myrtle Point**	**73.86**	**35**	P		**P**	**10 51 07.9**	**+0.8**
	baz=230							
BEKR	**Beckworth**	**73.92**	**40**	IAmb		IAmb	10 51 09.2	
	comp=Z,26nm,1.2s							
PNTR	**Pine Nut**	**73.93**	**41**	IAmb		IAmb	10 51 09.5	
	comp=Z,34nm,1.1s							
VCNR	**Virginia City**	**74.02**	**41**	IAmb		IAmb	10 51 09.9	
	comp=Z,27nm,1.2s							
HUMO	**Hull Mountain**	**74.05**	**36**	IAmb		IAmb	10 51 10.4	
	comp=Z,37nm,1.4s							
YERR	**Yerington**	**74.10**	**41**	IAmb		IAmb	10 51 10.3	
	comp=Z,32nm,1.3s							
L04D	**Klamath Falls**	**74.18**	**37**	P		**P**	**10 51 09.9**	**+0.6**
	baz=231,SNR=11							
M04C	**Macdoel**	**74.19**	**38**	P		**P**	**10 51 10.0**	**+0.7**
	baz=232,SNR=11							
IRM	**Iron Mountain**	**74.19**	**47**	P		**P**	**10 51 09.8**	**+0.4**
	baz=239,SN

I04A Tendick Farm, 75.11 36 P P 10 51 14.6 +0.1
baz=239,SNR=13
baz=231,SNR=11
MOD Modoc Plateau 75.17 38 IAmb IAmb 10 51 16.5
comp=Z,48nn,1.2s
H04D Lebanon 75.39 35 P P 10 51 17.0 +1.0
baz=231,SNR=8.4
SHPR Sheep Range 75.41 45 IAmb IAmb 10 51 18.3
comp=Z,40nn,1.5s
J05D Fort Rock, OR 75.46 37 P P 10 51 17.0 +0.3
baz=232,SNR=37
G03D McMinnville, O 75.55 34 P P 10 51 17.7 +0.8
baz=230,SNR=7.3
H04A Detroit Lake 75.80 35 IAmb IAmb 10 51 19.5
comp=Z,36nn,1.2s
I05D Terrebonne, OR 76.06 36 P P 10 51 20.7 +0.8
baz=232,SNR=9.9
R11A Troy Canyon, C 76.11 43 P P 10 51 20.8 +0.3
baz=237,SNR=15
KSRS Korea Array 76.12 316 LR LR 11 18 33.8
comp=Z,140nn,21.6s,baz=66,slow=31
F04D Rainier, OR 76.24 34 P P 10 51 22.1 +1.2
baz=230
TUC Tucson 76.45 51 P P 10 51 22.9 +0.5
TUC pmax pmax
comp=Z,37nn,1.3s
TUC Tucson 76.45 51 P P 10 51 22.9 +0.5
TUC IAmb IAmb 10 51 24.4
comp=Z,37nn,1.3s
TUC Tucson 76.45 51 P P 10 51 22.9 +0.5
baz=242
F04A Amboy 76.46 34 IAmb IAmb 10 51 23.4
comp=Z,45nn,1.4s
WVOR Wild Horse Val 76.48 38 IAmb IAmb 10 51 24.0
comp=Z,40nn,1.2s
G05D Wamic, OR 76.63 35 P P 10 51 23.8 +0.7
baz=232,SNR=7.0
E04D Cinebar 76.78 33 P P 10 51 25.4 +1.6
baz=230,SNR=5.7
I07A Izee 76.94 37 IAmb IAmb 10 51 26.7
comp=Z,35nn,1.2s
F05D White Salmon 76.95 34 P P 10 51 25.2 +0.4
baz=231,SNR=5.2
X16A Lo Mia Camp, P 76.97 49 IAmb IAmb 10 51 27.6
comp=Z,23nn,1.1s
D04E Lakebay 77.07 33 P P 10 51 27.6 +2.1
baz=230
D03D Eldon 77.14 32 P P 10 51 27.3 +1.4
baz=230,SNR=6.4
USRK Ussuriysk Ar. 77.35 323 LR LR 11 18 59.5
comp=Z,310nn,21.9s,baz=127,slow=31
WUAZ Wupatki 77.55 48 P P 10 51 29.9 +1.3
baz=241
ELK Elko 77.63 41 IAmb IAmb 10 51 30.4
comp=Z,22nn,1.2s
BBB Bella Bella 77.92 27 LR LR 11 19 35.1
comp=Z,336nn,18.4s,baz=206,slow=31
G08A Pilot Rock 77.98 36 IAmb IAmb 10 51 32.3
comp=Z,40nn,1.3s
HPIG 78.09 58 IAmb IAmb 10 51 33.5
comp=Z,38nn,1.5s
X18A Snowflake 78.11 49 IAmb IAmb 10 51 33.8
comp=Z,28nn,1.4s
B05A Bryant 78.12 32 P P 10 51 31.8 +0.5
baz=230,SNR=5.2
LTY Liberty 78.23 34 IAmb IAmb 10 51 33.1
comp=Z,45nn,1.9s
HAWA Hanford 78.32 35 IAmb IAmb 10 51 34.8
comp=Z,43nn,1.6s
MSU Marysvale 78.48 45 P P 10 51 34.7 +0.9
MSU Marysvale 78.48 45 P P 10 51 34.7 +0.9
BMO Blue Mountains 78.67 37 IAmb IAmb 10 51 35.8
comp=Z,36nn,1.5s
MFID Camas Ranch 78.73 39 IAmb IAmb 10 51 36.2
comp=Z,27nn,1.2s
121A Cookes Peak, D 78.80 52 IAmb IAmb 10 51 37.8
comp=Z,26nn,1.1s
121A Cookes Peak, D 78.80 52 P P 10 51 36.8 +1.1
baz=244,SNR=11
DUG Dugway, Tooele 78.91 43 P P 10 51 36.7 +0.7
baz=239
F10A Beach Ranch, E 79.36 36 IAmb IAmb 10 51 39.3
comp=Z,40nn,1.5s
SPUT South Promonto 79.72 42 P P 10 51 40.7 +0.2
NJ2 Nanjing 80.12 307 eP P 10 51 44.8 +2.2
NJ2 pmax pmax
comp=Z,5.0nn,0.5s
Y22D IRIS PASSCAL I 80.13 51 IAmb IAmb 10 51 48.1
comp=Z,35nn,1.1s
Y22D IRIS PASSCAL I 80.13 51 P P 10 51 44.6 +1.8
baz=244
MNTX Cornudas Mount 80.28 53 IAmb IAmb 10 51 45.4
comp=Z,31nn,1.4s
MNTX Cornudas Mount 80.28 53 P P 10 51 44.3 +0.8
baz=245,SNR=16
MVCO Mesa Verde 80.40 47 P P 10 51 45.1 +0.8
baz=243
KLR Kul'dur 80.49 327 eP P 10 51 44.0 -0.2
TX31 Lajitas Ar. Si 80.67 56 IAmb IAmb 10 51 48.0
comp=Z,40nn,1.4s
TX32 Lajitas Array 80.67 56 IAmb IAmb 10 51 48.0
comp=Z,41nn,1.4s
TXAR Lajitas Array 80.67 56 P P 10 51 46.1 +0.3
TXAR Lajitas Array 80.67 56 P P 10 51 46.6 +0.8
comp=Z,9.9nm,1.1s,baz=235,slow=4.4,SNR=35
TXAR LR LR 11 19 21.2
comp=Z,181nn,21.8s,baz=0.0,slow=30
TXAR Lajitas Array 80.67 56 P P 10 51 46.1 +0.3
NEW Newport 80.75 34 LR LR 11 19 23.7
comp=Z,270nn,20.9s,baz=221,slow=30
NEW Newport 80.75 34 P P 10 51 45.4 -0.4
baz=234
ANMO Albuquerque 80.86 50 P P 10 51 47.2 +0.4
ANMO pmax pmax
comp=Z,48nn,1.7s
ANMO Albuquerque 80.86 50 P P 10 51 47.2 +0.4
ANMO IAmb IAmb 10 51 48.9
comp=Z,48nn,1.6s
ANMO Albuquerque 80.86 50 P P 10 51 47.6 +0.8
baz=244
MCK McKinley 81.14 11 IAmb IAmb 10 52 15.0
comp=Z,24nn,1.1s
MSO Missoula 81.73 37 IAmb IAmb 10 51 51.7
comp=Z,36nn,1.6s
MSO Missoula 81.73 37 P P 10 51 50.5 -0.5
baz=237,SNR=8.6
DLMT Dillon 81.73 38 IAmb IAmb 10 51 52.8
comp=Z,33nn,1.5s
REDW Red Top Meadow 81.78 41 IAmb IAmb 10 51 53.1
comp=Z,46nn,1.4s
TPAW Teton Pass 81.79 41 IAmb IAmb 10 51 52.3
comp=Z,36nn,1.2s
S22A 4UR Ranch, Cre 81.82 47 IAmb IAmb 10 51 54.3
comp=Z,40nn,1.4s
S22A 4UR Ranch, Cre 81.82 47 P P 10 51 53.4 +1.4
baz=244,SNR=22
SNOW Snow King Moun 81.89 41 P P 10 51 52.4 +0.2
SNOW IAmb IAmb 10 51 53.9
comp=Z,32nn,1.2s
O20A White River Ci 81.93 45 IAmb IAmb 10 51 54.1
comp=Z,42nn,1.6s
O20A White River Ci 81.93 45 P P 10 51 52.2 -0.2
baz=242,SNR=5.1
WRH Wood River Hil 81.97 11 IAmb IAmb 10 51 53.6
comp=Z,25nn,1.1s
IMW Indian Meadow 82.00 40 IAmb IAmb 10 51 54.5
comp=Z,31nn,1.3s
DOT Dot Lake 82.03 13 IAmb IAmb 10 51 54.1
comp=Z,35nn,1.5s
MOOW Moose Ponds 82.05 41 IAmb IAmb 10 51 54.5
comp=Z,26nn,1.4s
HDA Harding Lake 82.13 11 P P 10 51 52.0 -0.6
baz=206
BW06 Boulder Array 82.31 42 IAmb IAmb 10 51 55.5
comp=Z,62nn,2.0s
BW06 Boulder Array 82.31 42 P P 10 51 54.3 -0.1
baz=241,SNR=9.4
PD31 Pinedale Array 82.31 42 IAmb IAmb 10 51 55.4
comp=Z,57nn,2.0s
PDAR Pinedale Array 82.31 42 P P 10 51 53.9 -0.5
comp=Z,3.9nm,0.9s,baz=215,slow=3.7,SNR=24
PDAR LR LR 11 21 58.2
comp=Z,375nn,20.1s,baz=266,slow=31
PDAR Pinedale Array 82.31 42 P P 10 51 54.5 +0.1
YHL Hebgen Lake 82.33 39 P P 10 51 55.3 +0.8
TCOL CIGÖ, UAF Yank 82.38 11 P P 10 51 53.2 -0.6
baz=205
COLA College 82.38 11 P P 10 51 52.9 -0.9

COLA pmax pmax
comp=Z,27nn,1.1s
COLA College 82.38 11 P P 10 51 52.9 -0.9
COLA IAmb IAmb 10 51 55.0
comp=Z,27nn,1.1s
IL31 82.47 11 IAmb IAmb 10 51 56.2
comp=Z,45nn,1.9s
ILAR Eielson Array 82.47 11 P P 10 51 53.1 -1.2
ILAR Eielson Array 82.47 11 P P 10 51 52.8 -1.5
comp=Z,1.9nm,0.8s,baz=228,slow=6.6,SNR=18
ILAR LR LR 11 21 15.9
comp=Z,278nn,21.2s,baz=218,slow=30
ILAR Eielson Array 82.47 11 P P 10 51 53.1 -1.2
H17A Grant Village 82.47 40 IAmb IAmb 10 51 57.9
comp=Z,32nn,1.6s
H17A Grant Village 82.47 40 P P 10 51 57.1 +1.9
baz=240
SEY Seymchan 82.51 345 eP P 10 51 52.5 -2.1
SEY Seymchan 82.51 345 P P 10 51 53.9 -0.7
comp=Z,7.2nm,1.1s,baz=141,slow=5.7,SNR=8.4
SEY pP pwP 10 52 07.6 +0.9
comp=Z,3.1nm,0.8s,baz=137,slow=6.9,SNR=3.4
POKR Poker Flat Res 82.68 11 P P 10 51 54.5 -0.9
baz=205
SDCO Great Sand Dun 82.77 48 IAmb IAmb 10 51 58.6
comp=Z,46nn,1.9s
SDCO Great Sand Dun 82.77 48 P P 10 51 57.3 +0.4
baz=244,SNR=9.6
QIZ Qiongzhong 82.85 292 P P 10 51 57.8 +0.4
QIZ S S 11 02 11.5 -1.7
QIZ LR LR
comp=Z,160nn,12.7s
QIZ LR LR
comp=Z,250nn,12.9s
QIZ LR LR
comp=Z,230nn,13.7s
WHN Wuhan 83.04 304 P P 10 52 03.0 +4.9
MSTX Muleshoe 83.22 52 P P 10 51 59.2 +0.1
baz=247
T25A Trinidad 83.29 49 P P 10 51 59.6 +0.1
baz=245
PRP Porcupine Dome 83.39 11 IAmb IAmb 10 52 01.7
comp=Z,26nn,1.2s
Q24A Divide 83.54 47 IAmb IAmb 10 52 03.7
comp=Z,33nn,1.3s
Q24A Divide 83.54 47 P P 10 52 01.9 +0.9
baz=245,SNR=6.3
ISCO Idaho Springs 83.58 46 IAmb IAmb 10 52 03.0
comp=Z,22nn,1.6s
ISCO Idaho Springs 83.58 46 P P 10 52 01.7 +0.6
baz=244,SNR=7.2
EGAK Eagle 83.64 13 IAmb IAmb 10 52 14.8
comp=Z,30nn,1.8s
RLMT Red Lodge 83.64 40 IAmb IAmb 10 52 03.9
comp=Z,26nn,1.5s
RLMT Red Lodge 83.64 40 P P 10 52 01.8 +0.6
baz=241,SNR=9.0
833A Chaparral WMA, 83.76 59 P P 10 52 02.7 +0.9
baz=249
N23A Red Feather La 83.84 45 P P 10 52 03.1 +0.7
baz=244,SNR=6.1
JCT Junction City 84.21 56 P P 10 52 04.0 -0.2
baz=249
K22A Casper 84.23 43 IAmb IAmb 10 52 06.4
comp=Z,35nn,1.6s
K22A Casper 84.23 43 P P 10 52 04.4 +0.2
baz=243
PHWY Pilot Hill 84.35 45 IAmb IAmb 10 52 06.4
comp=Z,35nn,1.6s
AMTX Amarillo 84.40 52 P P 10 52 05.6 +0.4
baz=247
BILL Bilibino 84.51 352 deP P 10 52 04.4 -0.4
BILL e 10 52 12.6
BILL e 10 52 17.0
BILL 10 55 19.0
BILL S S 11 02 22.0 -5.9
BILL e 11 03 43.7
BILL pmax pmax
comp=Z,7.0nm,1.2s
BILL Bilibino 84.51 352 P P 10 52 04.5 -0.2
ABTX Abilene, Hawle 85.12 54 P P 10 52 09.2 +0.5
baz=249
KSCO Kaye Shedlock' 85.35 48 P P 10 52 11.2 +1.4
baz=246
BJI Beijing 85.43 314 P P 10 52 11.5 +1.5
BJI pmax pmax
comp=Z,6.0nm,1.9s
EPYK Eagle Plains 85.99 14 IAmb IAmb 10 52 15.7
comp=Z,32nn,1.6s
EPYK Eagle Plains 85.99 14 P P 10 52 14.1 +1.9
baz=215
435B Jarrell 86.10 57 P P 10 52 14.1 +0.5
baz=250
LAO LASA Array 86.25 40 P P 10 52 15.9 +1.8
baz=243
RSSD Black Hills 86.51 42 P P 10 52 16.1 +0.5
RSSD pmax pmax
comp=Z,24nn,1.3s
RSSD Black Hills 86.51 42 P P 10 52 16.1 +0.5
RSSD IAmb IAmb 10 52 17.4
comp=Z,24nn,1.3s
RSSD Black Hills 86.51 42 P P 10 52 16.5 +0.9
baz=245
WHTX Lake Whitney, 86.62 56 P P 10 52 16.9 +0.8
baz=250
HKT Hockley 87.24 58 P P 10 52 20.0 +0.9
HKT pmax pmax
comp=Z,53nn,2.0s
HKT Hockley 87.24 58 P P 10 52 19.9 +0.9
MAW Mawson 87.76 199 P P 10 52 22.2 +1.2
baz=88,SNR=5.4
MAW Mawson 87.76 199 P P 10 52 21.9 +0.9
MAW pmax pmax
comp=Z,2.0nm,1.1s
MAW Mawson 87.76 199 P P 10 52 22.2 +1.2
comp=Z,8.4nm,1.1s,baz=115,slow=12,SNR=6.8
MAW LR LR 11 29 14.6
comp=Z,490nm,20.3s,baz=64,slow=34
MAW Mawson 87.76 199 P P 10 52 21.9 +0.9
INK Inuvik 88.29 14 P P 10 52 22.2 -1.1
INK pmax pmax
comp=Z,20nn,1.7s
INK Inuvik 88.29 14 P P 10 52 22.9 -0.4
comp=Z,3.4nm,1.0s,baz=197,slow=6.3,SNR=7.1
INK Inuvik 88.29 14 P P 10 52 22.2 -1.1
INK IAmb IAmb 10 52 44.8
comp=Z,20nn,1.7s
XAN Xi'an 88.58 306 P P 10 52 31.5 +6.0
XAN pP sP 10 52 47.3 +4.9
XAN pmax pmax
comp=Z,5.0nm,2.6s
NATX Nacogdoches 88.79 57 P P 10 52 28.8 +2.4
baz=251
HHC Hu-ho-hao-te 88.98 313 eP P 10 52 27.0 -0.4
HHC pmax pmax
comp=Z,4.0nm,0.9s
HHC pmax pmax
comp=Z,95nm,4.2s
HHC LR LR
comp=Z,190nm,17.9s
HHC LR LR
comp=Z,180nm,14.5s
PLCA Paso Flores 89.56 132 LR LR 11 25 04.6
comp=Z,179nm,20.8s,slow=30
YKA Yellowknife Ar 90.13 23 P P 10 52 31.0 -1.0
comp=Z,2.2nm,0.9s,baz=237,slow=4.5,SNR=28
YKA pP pwP 10 52 45.5 -1.3
comp=Z,2.1nm,0.9s,baz=235,slow=4.7,SNR=7.4
KMI Kunming 90.97 296 P P 10 52 37.0 -0.1
KMI pP PcP 10 52 40.5 +2.4
KMI pmax pmax
comp=Z,5.0nm,0.8s
KMI pmax pmax
comp=Z,160nn,5.1s
CD2 Chengdu 91.76 301 eP P 10 52 39.5 -0.9
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CMAR Chiang Mai Arr 92.56 288 P P 10 52 45.3 +0.9
comp=Z,0.3nm,0.4s,baz=125,slow=5.6,SNR=3.3
CMAR LR LR 11 28 27.5
comp=Z,62nn,20.6s,baz=86,slow=32
SYO Syowa Base 92.58 191 ⇑eX P 10 52 41.2 -2.2
VNA3 Neumayer Olymp 92.85 175 P P 10 52 45.5 +0.7
SNAA Sanae 92.90 177 P P 10 52 46.8 +1.7
SNAA Sanae 92.90 177 eP P 10 52 46.7 +1.7
LZH Lanzhou 93.18 306 eP P 10 52 46.3 -0.7

LZH pP PcP 10 52 49.5 +1.9
LZH sP pP 10 52 52.0 -7.3
LZH PP PP 10 56 32.5 +1.4
LZH pmax pmax
comp=Z,23nn,1.4s
LZH pmax pmax
comp=Z,120nn,6.2s
LZH LR LR
comp=Z,220nn,16.7s
LZH LR LR
comp=Z,370nn,19.8s
VNA1 Neumayer--Stat 93.55 175 P P 10 52 49.9 +2.1
ULM Lac du Bonnet 93.98 39 LR LR 11 29 36.1
comp=Z,523nn,20.0s,baz=267,slow=32
ULN Ulaanbaatar 94.39 318 eP P 10 52 50.1 -2.2
ULN pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 94.81 318 LR LR 11 30 04.1
comp=Z,141nn,21.6s,baz=102,slow=32
TIXI Tiksi 94.99 344 eP P 10 52 53.4 -0.9
TIXI pmax pmax
comp=Z,2.0nn,1.2s
KURK Kurchatov 113.10 319 i PKiKP PKiKP 10 58 08.3 -1.1
KSH Kashi 115.42 307 PKP PKiKP 10 58 17.8 +3.3
KSH PP PP 10 59 20.8 +4.4
KSH SKS SKSdf 11 05 25.8 +2.3
KSH SKKS SKKSac 11 06 15.0 +0.6
KSH SS SS 11 15 15.5 +3.0
KSH AMB AMB
comp=Z,540nm,6.8s
ARCES ARCESS Array B 124.61 352 PKiKP PKPdf 10 58 30.1 -1.0
ARCES ARCESS Array B 124.61 352 PKP PKPdf 10 58 30.8 -0.3
comp=Z,3.2nm,0.8s,baz=0.0,slow=1.0,SNR=3.7
ARCES ARCESS Array B 124.61 352 PKPdf 10 58 30.1 -1.0
FINES FINESS Array B 131.94 348 PKiKP PKPdf 10 58 44.7 -0.5
FINES FINESS Array B 131.94 348 PKP PKPdf 10 58 45.3 +0.1
comp=Z,1.5nm,0.8s,baz=321,slow=1.8,SNR=2.4
FINES FINESS Array B 131.94 348 PKPdf 10 58 44.7 -0.5
OBN Obninsk 134.09 336 ⇓i PKiKP PKiKP 10 58 51.7 +1.0
OBN 11 06 03.0
OBN pmax pmax
comp=Z,10.0nm,1.2s
OBN MLR MLR
comp=Z,354nm,18.0s
AKASG Malin Array Be 140.32 337 PKiKP PKPdf 10 59 00.1 -1.0
AKASG Malin Array Be 140.32 337 PKP PKPdf 10 59 00.4 -0.7
comp=Z,25nn,0.3s,baz=40,slow=3.9,SNR=3.0
AKASG Malin Array Be 140.32 337 PKPdf 10 59 00.1 -1.0
CLL Collm 143.81 353 ePKiKP PKPdf 10 59 06.0 -1.3
CLL Collm 143.81 353 ePKPdf PKPdf 10 59 06.0 -1.3
OSTC Ostas 144.08 349 ePKP PKPdf 10 59 07.0 -0.8
DPC Dobruska-Polom 144.26 349 ePKiKP PKPdf 10 59 07.9 -0.3
DPC Dobruska-Polom 144.26 349 ePKP PKPdf 10 59 07.9 -0.3
CRVS Cervenica-Dubn 144.42 343 ePKiKP PKPdf 10 59 09.3 +0.8
CRVS Cervenica-Dubn 144.42 343 ePKP PKPdf 10 59 09.3 +0.8
UZH Uzhgorod 144.43 342 ePKHKP PKPpre 10 59 04.3
UZH e 10 59 07.3
KRLC Kraliky 144.44 349 ePKiKP PKPbc 10 59 07.3 +0.3
KRLC Kraliky 144.44 349 ePKP PKPbc 10 59 07.3 +0.3
MORC Moravsky Berou 144.57 348 PKiKP PKPdf 10 59 08.2 -0.6
MORC Moravsky Berou 144.57 348 ePKP PKPdf 10 59 08.4 -0.4
MORC Moravsky Berou 144.57 348 PKPdf 10 59 08.2 -0.6
LANS Liptovska Anna 144.72 345 ePKiKP PKPdf 10 59 09.6 +0.5
LANS Liptovska Anna 144.72 345 ePKP PKPdf 10 59 09.5 +0.5
TRPA Tarpa 144.80 341 ⇑P PKPdf 10 59 08.5 -0.6
WERN Wernitzgruen 144.89 353 ePKPbc PKPdf 10 59 08.8 -0.5
baz=8.8,slm=3.1
PRU Pruhonice 144.90 351 ePKiKP PKPdf 10 59 08.6 -0.7
PRU Pruhonice 144.90 351 ePKP PKPdf 10 59 08.6 -0.7
AHRW Bad Neuenahr-A 144.95 359 ePKPbc PKPdf 10 59 08.8 -0.5
baz=8.8,slm=3.1
KECS Kecovo 145.07 344 ePKiKP PKPdf 10 59 10.2 +0.6
KECS Kecovo 145.07 344 ePKP PKPdf 10 59 10.2 +0.6
ARCR ARCALIA 145.11 339 ⇑P PKPdf 10 59 09.2 -0.5
VRAC Vranov 145.20 348 ⇑PKiKP PKPbc 10 59 08.9 -0.6
VRAC Vranov 145.20 348 ⇑P PKPbc 10 59 08.9 -0.6
VRAC Vranov 145.20 348 ePKP PKPdf 10 59 09.8 0.0
MANZ Manzenberg 145.22 354 ePKPbc PKPdf 10 59 09.6 -0.3
baz=8.8,slm=3.1
GAZ Gaziantep 145.23 314 PKPdf 10 59 10.7 +0.3
TNS Taunus Mts 145.24 358 ePKPbc PKPab 10 59 09.5 -0.2
baz=8.8,slm=3.1
JAVC Velka Javorina 145.41 347 ePKP PKPdf 10 59 11.8 +1.5
TREC Trest 145.42 350 ePKiKP PKiKP 10 59 12.1 -2.1
TREC Trest 145.42 350 ePKP PKiKP 10 59 12.1 -2.1
ROTZ Rotzenmuhle 145.42 354 ePKPbc PKPdf 10 59 10.6 +0.5
baz=8.8,slm=3.1
KMBO Kilima Mbogo 145.47 244 PKiKP PKPab 10 59 12.5 +0.6
KMBO Kilima Mbogo 145.47 244 PKPbc PKPab 10 59 12.9 +1.0
comp=Z,4.4nm,1.1s,baz=161,slow=9.0,SNR=6.0
KMBO pPKPbc sPKPab 10 59 28.5 -0.5
comp=Z,1.9nm,0.5s,baz=100,slow=2.4,SNR=4.5
KMBO Kilima Mbogo 145.47 244 PKPab 10 59 12.5 +0.6
KRUC Moravsky 145.48 349 ePKP PKPab 10 59 10.7 +0.1
VYHS Vyhne 145.49 346 ePKiKP PKPab 10 59 10.9 +0.3
VYHS Vyhne 145.49 346 ePKP PKPab 10 59 10.9 +0.3
GRF Grafenberg Arr 145.59 355 ePKPbc PKPab 10 59 10.6 -0.4
baz=8.8,slm=3.1
PSZ Piszkesteto 145.75 344 ⇑PKiKP PKPab 10 59 12.1 +0.4
PSZ Piszkesteto 145.75 344 ⇑P PKPab 10 59 12.1 +0.4
WLF Walferdange 145.83 0 PKP2 PKPdf 10 59 10.8 0.0
WLF Walferdange 145.83 0 ePKPbc PKPab 10 59 12.4 +0.6
baz=8.8,slm=3.1
WLF Walferdange 145.83 0 PKPdf PKPab 10 59 12.0 +0.2
WLF Walferdange 145.83 0 PKiKP PKiKP 10 59 15.4 +0.4
WLF Walferdange 145.83 0 PKPdf 10 59 10.8 0.0
MLR Muntele Rosu 145.85 335 ⇑P PKPab 10 59 12.4 +0.1
KHC Kasperske Hory 145.88 352 ePKP2 PKPbc 10 59 11.4 -0.2
KHC Kasperske Hory 145.88 352 ePKP PKPbc 10 59 11.4 -0.2
KHC ex x 10 59 25.7
KHC Kasperske Hory 145.88 352 PKPab 10 59 11.6 -0.5
DRGR 145.93 340 ⇑PKP2 PKPbc 10 59 11.4 -0.5
DRGR 145.93 340 ⇑P PKPbc 10 59 11.4 -0.5
MODS Modra-Piesok 145.96 347 ePKP2 PKPab 10 59 12.0 -0.4
MODS Modra-Piesok 145.96 347 ePKP PKPab 10 59 12.0 -0.4
WET Wettzell 145.96 353 ePKPbc PKPdf 10 59 11.1 0.0
baz=8.8,slm=3.1
BR131 Keskin Array S 146.12 321 PKP2 PKPbc 10 59 12.5 -0.3
BR131 Keskin Array S 146.12 321 PKPbc 10 59 12.5 -0.3
BRTR Keskin Array B 146.12 321 PKP2 PKPbc 10 59 12.2 -0.7
BRTR Keskin Array B 146.12 321 PKPbc PKPbc 10 59 12.4 -0.3
comp=Z,8.0nm,0.9s,baz=122,slow=1.3,SNR=24
BRTR pPKPbc sPKPdf 10 59 27.9 -1.0
comp=Z,7.8nm,0.9s,baz=115,slow=1.9,SNR=8.7
BRTR Keskin Array B 146.12 321 PKPbc 10 59 12.2 -0.7
GEC2 GERESS Array S 146.14 351 ePKPbc PKPbc 10 59 12.4 -0.2
baz=8.8,slm=3.1
GEC2 GERESS Array S 146.14 351 PKPbc 10 59 12.0 -0.5
GERES GERESS Array B 146.14 351 PKP2 PKPab 10 59 12.5 -0.7
GERES GERESS Array B 146.14 351 PKPbc PKPab 10 59 12.9 -0.3
comp=Z,3.4nm,0.8s,baz=26,slow=3.4,SNR=25
GERES pPKPbc sPKPdf 10 59 26.9 -1.8
comp=Z,2.2nm,0.8s,baz=60,slow=3.2,SNR=4.0
GERES GERESS Array B 146.14 351 PKPab 10 59 12.5 -0.7
ZST Bratislava 146.16 347 ePKP2 PKPab 10 59 13.4 +0.3
ZST Bratislava 146.16 347 ePKP PKPab 10 59 13.4 +0.3
VOIR 146.25 336 ⇑PKP2 PKPab 10 59 13.7 0.0
VOIR 146.25 336 ⇑P PKPab 10 59 13.7 0.0
CONA Conrad Observa 146.67 349 pPKPbc PKPab 10 59 15.3 0.0
comp=Z,7.6nm,1.2s
SIRR Siria 146.73 341 ⇑P PKPbc 10 59 13.8 -0.5
MOA Molln 147.02 350 ePKPbc PKPbc 10 59 15.0 0.0
baz=8.8,slm=3.1
MOA Molln 147.02 350 ePKPdf PKPab 10 59 15.7 -0.8
comp=Z,7.8nm,1.1s
FUR Furstenfeldbru 147.10 354 ePKPbc PKPab 10 59 15.7 -1.1
baz=8.8,slm=3.1
BFO Black Forest 147.14 358 PKP2 PKPbc 10 59 15.0 -0.4
BFO Black Forest 147.14 358 ePKPbc PKPbc 10 59 15.3 0.0
baz=8.8,slm=3.1
BFO Black Forest 147.14 358 PKPbc 10 59 15.0 -0.4
ECH Echery 147.28 359 PKP2 PKPbc 10 59 15.9 +0.2
ECH Echery 147.28 359 PKPbc 10 59 15.9 +0.2
BZS Buzias 147.32 340 ⇑PKiKP PKPdf 10 59 12.3 -1.2
BZS Buzias 147.32 340 ⇑P PKPdf 10 59 12.3 -1.2
RJOB Jochberg 147.35 352 ePKPbc PKPbc 10 59 16.4 +0.4
baz=8.8,slm=3.1
ARSA Arzberg 147.38 349 ePKPab PKPbc 10 59 16.2 +0.1
comp=Z,9.3nm,1.3s
UBR Ueberruh 147.68 355 ePKPbc PKPbc 10 59 17.3 +0.3
baz=8.8,slm=3.1
HERR Herculane 147.69 339 ⇑P PKPbc 10 59 16.3 -0.6
RETA Reutte 147.82 355 PKPab PKPbc 10 59 17.9 +0.6

	comp=Z,6.2nm,1.0s								
WATA	**Walderalm**	**147.89**	**354**	PKPab	**PKPbc**	10 59 18.1	**+0.5**		
	comp=Z,7.9nm,1.2s								
KBA	**Koelnbreinsper**	**147.92**	**351**	PKPab	**PKPbc**	10 59 17.6	**-0.1**		
	comp=Z,6.3nm,1.1s								
MOTA	**Moosalm**	**147.93**	**354**	*e*PKiKP	**PKPbc**	10 59 18.3	**+0.6**		
	comp=Z,7.3nm,1.1s								
WTTA	**Wattenberg**	**147.96**	**353**	*e*PKPbc	**PKPbc**	10 59 18.0	**+0.2**		
	baz=8.8,slow=3.1								
WTTA	**Wattenberg**	**147.96**	**353**	PKPab	**PKPbc**	10 59 18.3	**+0.5**		
	comp=Z,15nm,1.5s								
SOKA	**Soboth**	**148.03**	**349**	*e*PKPab	**PKPbc**	10 59 18.2	**+0.3**		
	comp=Z,8.5nm,1.0s								
SQTA	**Sankt Quirin**	**148.04**	**354**	*e*PKiKP	**PKiKP**	10 59 18.7	**-1.1**		
	comp=Z,7.2nm,1.1s								
DAVA	**Damuels**	**148.09**	**356**	*e*PKPbc	**PKPbc**	10 59 18.6	**+0.5**		
	baz=8.8,slow=3.1								
DAVA	**Damuels**	**148.09**	**356**	PKiKP	**PKiKP**	10 59 19.0	**-0.9**		
	comp=Z,9.0nm,0.9s								
OBKA	**Obir**	**148.28**	**349**	*e*PKPbc	**PKiKP**	10 59 19.4	**-0.9**		
	baz=8.8,slow=3.1								
OBKA	**Obir**	**148.28**	**349**	*e*pPKPbc	**PKiKP**	10 59 19.9	**-0.3**		
	comp=Z,4.4nm,0.8s								
FETA	**Feichten**	**148.29**	**355**	*e*PKiKP	**PKPbc**	10 59 19.1	**+0.5**		
	comp=Z,10.0nm,1.2s								
ABTA	**Abfaltersbach**	**148.36**	**352**	PKiKP	**PKPbc**	10 59 18.6	**-0.2**		
	comp=Z,6.4nm,0.8s								
FUORN	**Ofenpass-Fuorn**	**148.72**	**355**		**PKPbc**	10 59 19.6	**-0.3**		
ESDC	**Sonseca Array**	**154.14**	**19**	PKPab	**PKPab**	10 59 46.5	**+0.4**		
	comp=Z,0.1nm,0.3s,baz=308,slow=3.8,SNR=5.0								
TORD	**Torodi Ar. Bea**	**174.80**	**115**	pPKP	pPKPdf	10 59 59.9	+4.2		
	comp=Z,1.0nm,0.8s,baz=359,slow=2.3,SNR=4.4								

*SJA **26** 10:52:29.1±1.1,29.°87S×71.°65W,h32km±5km, ML3.1, MW3.2*
*GUC **26** 10:52:29.1±0.7,29.°69S×71.°33W,h66km±3km, ML3.7*
ISC 26 10:52:25.1±2.1,**29.°66S**±0.°05×**71.°84W**±0.°08,**h15**km±12km, **n20,**σ1**°51/29,1C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	**La Serena**	**0.57**	**116**⇓	*e*P	**Pn**	**10 52 40.2**	**+1.4**
LSCH				*i* S	**Sn**	**10 52 47.8**	**-0.1**
GO04	**Tololo Observa**	**1.04**	**120**	*e*P	**Pg**	**10 52 45.2**	**-0.1**
GO04				*i* S	**Sb**	**10 52 56.7**	**-1.7**
GO04				IAML		10 52 57.8	
	comp=E,8μm,0.5s						
GO04	**Tololo Observa**	**1.04**	**120**	*i* P	**Pg**	**10 52 45.3**	**0.0**
GO04				*i* S	**Sb**	**10 52 57.0**	**-1.5**
CO02	**Combarbal**	**1.70**	**155**⇑	*i*P	**Pb**	**10 52 55.6**	**-0.6**
CO02				*i* S	**Sn**	**10 53 14.9**	**-1.0**
CO02				IAML		10 53 15.9	
	comp=E,2μm,0.2s						
GO03	**Copiap**	**2.50**	**35**	*e*P	**Pn**	**10 53 06.2**	**+1.0**
GO03				*i* S	**Sn**	**10 53 34.4**	**-1.0**
GO03				IAML		10 53 47.0	
	comp=E,207nm,0.3s						
AGUA	**GUANDACOL**	**2.92**	**87**	*i* P	**Pn**	**10 53 14.0**	**+2.9**
AGUA				*i* S	**Sn**	**10 53 47.0**	**+0.9**
RTLS	**Leoncito**	**3.06**	**135**⇑	*i*P	**Pn**	**10 53 15.9**	**+2.7**
AMOG	**MOGNA**	**3.16**	**115**	*i* P	**Pn**	**10 53 16.6**	**+2.1**
VA03	**San Esteban**	**3.29**	**161**	*e*P	**Pn**	**10 53 18.0**	**+1.9**
VA03				*i* S	**Sn**	**10 53 54.5**	**-0.5**
VA03				IAML		10 53 57.6	
	comp=E,185nm,0.2s						
RTLL	**Cerro Villicun**	**3.35**	**121**	*i* P	**Pn**	**10 53 18.5**	**+1.6**
ROC1	**El Roble**	**3.38**	**168**	*i* P	**Pn**	**10 53 18.9**	**+1.3**
ROC1				*i* S	**Sn**	**10 53 56.9**	**-0.6**
RTCV	**Cerro Valdivia**	**3.59**	**129**⇑	*i*P	**Pn**	**10 53 22.6**	**+2.3**
PEL	**Peldehue**	**3.61**	**164**	*i* P	**Pn**	**10 53 22.0**	**+1.5**
CFA	**Coronel Fontan**	**3.66**	**123**⇓	*i*P	**Pn**	**10 53 22.7**	**+1.5**
FCH	**Farellones**	**3.89**	**160**	*e*P	**Pn**	**10 53 26.7**	**+2.1**
FCH				*i* S	**Sn**	**10 54 10.5**	**+0.4**
ACLC	**CERRO LA CRUZ**	**4.27**	**88**	*i* P	**Pn**	**10 53 30.6**	**+0.9**
APLL	**PUNTA DE LOS L**	**4.67**	**100**	*i* P	**Pn**	**10 53 35.5**	**+0.5**
APLL				IAML		10 54 26.9	
	comp=Z,18nm,0.5s						
GO05	**Hualla**	**5.33**	**181**	*i* P	**Pn**	**10 53 44.6**	**+0.3**
CYA	**Choya**	**5.42**	**79**	*i* P	**Pn**	**10 53 46.7**	**+1.2**
TCA	**Tanti**	**6.47**	**107**	*i* P	**Pn**	**10 53 59.2**	**-0.8**

*NEIC **26** 11:16:11.0±0.8,4.°7S±0.°2×153.°8E±0.°1,h109km±13km, mb4.2/12,Error ellipse: s-maj=25.9km s-min=12.8km az=160.0*
*IDC **26** 11:16:12.2±4.6,4.°76S×153.°66E,h118km±33km, mb3.3/3, mb1 3.6/4,mb1mx3.2/26,mbtmp3.8/4,MS3.0/1,Ms1 3.0/1, ms1mx2.6/17,Error ellipse: s-maj=51.7km s-min=25.5km az=100.0*
ISC 26 11:16:10.0±1.1,**4.°8S**±0.°1×**153.°9E**±0.°1,**h100**km,**n19,** σ1**°00/21,mb4.0/9,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRVT	**Keravat (AS076**	**1.87**	**284**	P	**Pn**	**11 16 41.6**	**+0.7**
	19nm,0.3s,baz=179,slow=0.1,SNR=25						
KRVT				S	**Sn**	**11 17 04.4**	**-0.1**
	25nm,0.3s,baz=143,slow=23,SNR=12						
HNR	**Honiara**	**7.63**	**128**	LR	LR	11 21 12.6	
	comp=Z,104nm,19.1s,baz=214,slow=39						
PMG	**Port Moresby**	**8.09**	**235**	P	**Pn**	**11 18 05.5**	**+0.7**
	6.4nm,0.3s,baz=70,slow=8.8,SNR=14						
PMG				S	**Sn**	**11 19 31.8**	**-2.9**
	baz=323,slow=20,SNR=2.0						
PMG	**Port Moresby**	**8.09**	**235**		**Pn**	**11 18 05.5**	**+0.7**
PMG				Sn	**Sn**	**11 19 36.1**	**+1.4**
EIDS	**Eidsvold**	**20.67**	**187**	P	P	**11 20 43.4**	**+1.4**
EIDS				IAmb	IAmb	11 21 00.3	
	comp=Z,12nm,1.1s						
WB0	**Warramunga Arr**	**24.12**	**230**	P	**P**	**11 21 17.6**	**+0.8**
WB0				IAmb	IAmb	11 21 25.5	
	comp=Z,14nm,1.4s						
WR0	**Warramunga Arr**	**24.13**	**230**	P	**P**	**11 21 17.1**	**+0.3**
WR0				IAmb	IAmb	11 21 22.1	
	comp=Z,9.8nm,1.4s						
WRAB	**Tennant Creek**	**24.25**	**230**	P	**P**	**11 21 18.3**	**+0.3**
WRAB				IAmb	IAmb	11 21 23.3	
	comp=Z,10nm,1.5s						
WB2	**Warramunga Arr**	**24.26**	**230**	P	**P**	**11 21 18.8**	**+0.8**
WB2				IAmb	IAmb	11 21 34.5	
	comp=Z,10nm,1.4s						
WRA	**Warramunga Arr**	**24.27**	**230**	P	**P**	**11 21 18.1**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=55,slow=10,SNR=8.3						
WRA	**Warramunga Arr**	**24.27**	**230**	P	**P**	**11 21 17.7**	**-0.4**
AS31	**Alice Springs**	**26.90**	**224**	P	**P**	**11 21 42.5**	**+0.6**
ASAR	**Alice Springs**	**26.90**	**224**	P	**P**	**11 21 41.4**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=55,slow=9.0,SNR=13						
STKA	**Stephens Creek**	**29.33**	**202**	P	**P**	**11 22 02.6**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=51,slow=9.3,SNR=4.0						
STKA	**Stephens Creek**	**29.33**	**202**	P	**P**	**11 22 03.0**	**-0.4**
FITZ	**Fitzroy Crossi**	**30.60**	**242**	P	**P**	**11 22 15.0**	**+0.2**
FITZ				IAmb	IAmb	11 22 24.2	
	comp=Z,4.6nm,1.1s						
FORT	**Forrest**	**35.49**	**220**	P	**P**	**11 22 56.7**	**-0.5**
FORT				IAmb	IAmb	11 22 57.0	
	comp=Z,9.1nm,0.8s						
OPA	**Opana**	**53.96**	**59**	P	**P**	**11 25 23.8**	**-0.1**
TORD	**Torodi Ar. Bea**	**151.28**	**289**	PKPbc	**PKPbc**	**11 35 52.0**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=66,slow=3.6,SNR=2.6						

*TEH **26** 11:44:43.7,28.°98N×60.°16E,h10km, ML3.7*
*THR **26** 11:44:48.8±0.3,29.°14N×60.°10E,h45km±3km, ML3.4*
ISC 26 11:44:45.8±1.3,**29.°00N**±0.°08×**60.°18E**±0.°06,**h10**km,**n17,** σ0**°75/20,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SZD1	**Zahaedan-tmp**	**0.77**	**51**	*e*Pg	**Pg**	**11 44 59.9**	**-0.8**
SZD1				*e*Sg	**Sg**	**11 45 11.2**	**+0.4**
SZD1				*e*		11 45 13.0	
ZHSF	**Zahedan**	**0.80**	**40**	*e*Pg	**Pn**	**11 45 04.2**	**+0.9**
ZHSF				*e*Sg	**Sn**	**11 45 15.6**	**+0.2**
NHDN	**Nehbandan**	**2.39**	**357**	*e*Pn	**Pn**	**11 45 25.4**	**+0.2**
NHDN				*e*		11 46 20.0	
KHNJ	**Kahnooj**	**2.42**	**245**	*e*Pn	**Pn**	**11 45 24.2**	**-1.3**
CHMN	**Cheshme madani**	**2.46**	**291**	*e*Pn	**Pn**	**11 45 24.5**	**-1.8**
CHMN				*e*		11 46 00.1	
NGRK	**Negar Kerman**	**3.08**	**283**	*e*Pn	**Pn**	**11 45 35.5**	**+0.6**
NGRK				*e*		11 46 20.6	
BSRN	**Basiran**	**3.10**	**343**	*e*Pn	**Pn**	**11 45 34.3**	**-0.6**
BSRN	**Basiran**	**3.10**	**343**	*e*Pn	**Pn**	**11 45 34.3**	**-0.6**
BSRN				*e*Sg	**Sb**	**11 46 18.6**	**-0.3**
KRBR	**Kerman**	**3.14**	**289**	*e*Pn	**Pn**	**11 45 35.8**	**+0.1**
KRBR	**Kerman**	**3.14**	**289**	*e*Pn	**Pn**	**11 45 35.8**	**+0.1**
KRBR				IAML		11 46 24.0	
	comp=N,82nm,0.4s						
TVBK	**TV Kerman**	**3.14**	**289**	*e*Pn	**Pn**	**11 45 35.3**	**-0.4**
TVBK				*e*		11 46 25.8	
NIAN	**Nian**	**3.28**	**245**	*e*	**Pg**	**11 45 49.8**	**+1.0**
KHGB	**Koh Gabri**	**3.51**	**294**	*e*Pn	**Pn**	**11 45 40.6**	**0.0**
GENO	**Geno**	**3.88**	**247**	*e*Pn	**Pn**	**11 45 45.3**	**-0.4**
SHRT	**Shahrakht**	**4.63**	**1**	*e*Pn	**Pn**	**11 45 55.7**	**-0.3**
SHRT	**Shahrakht**	**4.63**	**1**	*e*Pn	**Pn**	**11 45 55.7**	**-0.3**
TPRV	**Parvadeh(Tabas**	**5.01**	**324**	*e*Pn	**Pn**	**11 46 01.8**	**+0.6**

*DRS **26** 11:46:38.3±0.0,42.°92N×45.°66E,h11km*
*NORS **26** 11:46:38.1±0.0,42.°86N×45.°71E,h14km,MPVA4.0*
*MOS **26** 11:46:39.4±1.2,42.°95N×45.°70E,h10km,mb3.6/1,Error ellipse: s-maj=7.9km s-min=4.5km az=22.5*
ISC 26 11:46:39.4±1.2,**42.°94N**±0.°02×**45.°70E**±0.°02,**h6**km±10km, **n83,**σ1**°01/145,1C-5D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GROC	**Groznyy**	**0.28**	**15**	*e*PG	**Pb**	**11 46 45.7**	**-1.1**
GROC				*e*		11 46 51.4	
GROC				pmax	pmax		
	comp=Z,515nm,0.2s						
GROC				smax	smax		
	comp=E,4μm,0.4s						
GROC				smax	smax		
	comp=N,805nm,0.2s						
GROC				smax	smax		
	comp=E,4μm,0.6s						
GROC	**Groznyy**	**0.28**	**15**	*i* Pg	**Pb**	**11 46 45.9**	**-0.9**
GROC				eSg	**Sb**	**11 46 52.0**	**+0.3**
BTLR	**Botlikh**	**0.47**	**125**⇓	*e*PG	**Pb**	**11 46 49.1**	**-1.1**
BTLR				*e*		11 46 56.7	
BTLR				pmax	pmax		
	comp=Z,75nm,0.8s						
BTLR				smax	smax		
	comp=E,495nm,0.7s						
BTLR	**Botlikh**	**0.47**	**125**	*e*Pg	**Pb**	**11 46 48.9**	**-1.2**
BTLR				eSg	**Sb**	**11 46 56.8**	**-0.6**
KMGR	**Komgaron**	**0.62**	**281**	*e*PG	**Pb**	**11 46 52.4**	**-0.3**
KMGR				eS	**Sb**	**11 47 03.2**	**+1.5**
KMGR	**Komgaron**	**0.62**	**281**	*e*Pg	**Pb**	**11 46 52.0**	**-0.7**
KMGR				eSg	**Sb**	**11 47 01.3**	**-0.4**
DLMR	**Dylym**	**0.70**	**79**	*e*PG	**Pb**	**11 46 53.0**	**-0.9**
DLMR				eS	**Sb**	**11 47 03.0**	**-0.8**
DLMR	**Dylym**	**0.70**	**79**	*e*Pg	**Pb**	**11 46 53.0**	**-0.9**
VLKR	**Vladikavkaz**	**0.76**	**279**	*e*PG	**Pb**	**11 46 55.2**	**+0.2**
VLKR				eS	**Sn**	**11 47 08.1**	**-0.4**
VLKR	**Vladikavkaz**	**0.76**	**279**	*e*Pg	**Pb**	**11 46 55.2**	**+0.2**
VLKR				eSg	**Sb**	**11 47 07.1**	**+1.5**
DBC	**Dubki**	**0.83**	**84**⇓	*i*PG	**Pb**	**11 46 56.2**	**-0.1**
DBC				*i* S	**Sb**	**11 47 08.1**	**+0.2**
DBC				pmax	pmax		
	comp=Z,31nm,0.2s						
DBC	**Dubki**	**0.83**	**84**	*e*Pg	**Pb**	**11 46 56.2**	**-0.1**
UNCR	**Uncukul**	**0.84**	**105**	*i* PG	**Pb**	**11 46 55.5**	**-0.9**
UNCR				*i* S	**Sn**	**11 47 09.5**	**-0.9**
UNCR				pmax	pmax		
	comp=Z,86nm,0.2s						
UNCR	**Uncukul**	**0.84**	**105**	*i* Pg	**Pb**	**11 46 55.5**	**-0.9**
UNCR				*i* Sg	**Sn**	**11 47 09.5**	**-0.9**
XNZR	**Khunzakh**	**0.84**	**118**	*e*PG	**Pb**	**11 46 56.5**	**0.0**
XNZR				eS	**Sn**	**11 47 09.3**	**-1.4**
XNZR	**Khunzakh**	**0.84**	**118**	*e*Pg	**Pb**	**11 46 56.5**	**0.0**
XNZR				eSg	**Sn**	**11 47 09.3**	**-1.4**
KRNR	**Karanay**	**0.90**	**97**	*e*PG	**Pb**	**11 46 57.0**	**-0.4**
KRNR				eS	**Sn**	**11 47 11.0**	**-1.0**
KRNR	**Karanay**	**0.90**	**97**	*e*Pg	**Pb**	**11 46 57.0**	**-0.4**
KRNR				eSg	**Sn**	**11 47 11.0**	**-1.0**
BTKR	**Batakoyurt**	**0.95**	**298**	*e*PG	**Pn**	**11 46 59.2**	**-0.1**
BTKR				eS	**Sn**	**11 47 14.8**	**+1.5**
BTKR	**Batakoyurt**	**0.95**	**298**	*e*Pg	**Pn**	**11 46 58.9**	**-0.5**
BTKR				eSg	**Sb**	**11 47 12.4**	**+1.2**
ARKR	**Arakani**	**1.01**	**109**	PG	**Pb**	**11 46 59.0**	**-0.3**
ARKR				eS	**Sn**	**11 47 14.0**	**-0.8**
ARKR	**Arakani**	**1.01**	**109**	*e*Pg	**Pb**	**11 46 59.0**	**-0.3**
ARKR				eSg	**Sn**	**11 47 14.0**	**-0.8**
GUDG	**Gudauri**	**1.02**	**243**	P	**Pg**	**11 46 57.4**	**-1.6**
GUDG				S	**Sg**	**11 47 11.2**	**-0.9**
GUDG	**Gudauri**	**1.02**	**243**	*e*PG	**Pg**	**11 46 57.3**	**-1.6**
GUDG				eS	**Sg**	**11 47 10.9**	**-1.2**
GUDG	**Gudauri**	**1.02**	**243**	*e*Pg	**Pg**	**11 46 57.3**	**-1.6**
LACR	**Lac**	**1.04**	**264**⇓	*i*PG	**Pg**	**11 46 58.9**	**-0.4**
LACR				eS	**Sb**	**11 47 13.8**	**+0.1**
LACR	**Lac**	**1.04**	**264**	*e*Pg	**Pg**	**11 46 58.8**	**-0.4**
LACR				eSg	**Sb**	**11 47 13.8**	**+0.1**
BUJR	**Buynaksk**	**1.04**	**96**	*e*PG	**Pn**	**11 47 00.8**	**+0.3**
BUJR				eS	**Sn**	**11 47 17.0**	**+1.6**
BUJR	**Buynaksk**	**1.04**	**96**	*e*Pg	**Pn**	**11 47 00.9**	**+0.3**
BUJR				eSg	**Sn**	**11 47 17.1**	**+1.6**
TRKR	**Terskaya**	**1.06**	**318**	*e*PG	**Pn**	**11 47 01.5**	**+0.8**
TRKR				eS	**Sn**	**11 47 19.0**	**+3.2**
ARNR	**Ardon**	**1.06**	**284**	*e*PG	**Pn**	**11 47 00.7**	**-0.2**
ARNR				eS	**Sn**	**11 47 16.9**	**+0.9**
ARNR	**Ardon**	**1.06**	**284**	*e*Pg	**Pb**	**11 47 00.2**	**-0.1**
ARNR				eSg	**Sb**	**11 47 14.6**	**+0.2**
GNBR	**Gunib**	**1.08**	**120**⇓	*e*PG	**Pn**	**11 47 00.7**	**-0.5**
GNBR				*e*		11 47 17.0	
GNBR				pmax	pmax		
	comp=Z,48nm,0.5s						
GNBR				smax	smax		
	comp=N,212nm,0.5s						
GNBR	**Gunib**	**1.08**	**120**	*i* Pg	**Pn**	**11 47 00.8**	**-0.3**
GNBR				eSg	**Sn**	**11 47 16.1**	**-0.4**
LGD	**Lagodekhi**	**1.17**	**160**	P	**Pb**	**11 47 01.9**	**-0.2**
LGD				S	**Sb**	**11 47 17.5**	**-0.1**
LGD	**Lagodekhi**	**1.17**	**160**	*e*PG	**Pb**	**11 47 01.9**	**-0.2**
LGD				eS	**Sb**	**11 47 17.4**	**-0.1**
LGD	**Lagodekhi**	**1.17**	**160**	*e*Pg	**Pb**	**11 47 01.9**	**-0.2**
LGD				eSg	**Sb**	**11 47 17.4**	**-0.2**
KORR	**Kora**	**1.21**	**278**	*e*PG	**Pn**	**11 47 04.2**	**+1.4**
KORR				eS	**Sn**	**11 47 20.7**	**+1.2**
KORR	**Kora**	**1.21**	**278**	*e*Pg	**Pn**	**11 47 03.0**	**+0.2**
STDR	**Stavd-Durt**	**1.27**	**290**⇓	*i*PG	**Pb**	**11 47 04.5**	**+0.7**
STDR				eS	**Sn**	**11 47 24.6**	**+3.5**
STDR	**Stavd-Durt**	**1.27**	**290**	*e*Pg	**Pb**	**11 47 03.9**	**+0.2**
STDR				eSg	**Sn**	**11 47 22.1**	**+0.9**
KMKR	**Kumukh**	**1.31**	**127**	*e*PG	**Pb**	**11 47 05.0**	**+0.5**
KMKR				*i* S	**Sn**	**11 47 24.0**	**+1.6**
KMKR				pmax	pmax		
	comp=Z,59nm,0.2s						
KMKR	**Kumukh**	**1.31**	**127**	*e*Pg	**Pb**	**11 47 05.0**	**+0.5**
KMKR				*i* Sg	**Sn**	**11 47 24.0**	**+1.6**
PRTR	**Priterechnaya**	**1.31**	**309**	*i* PG	**Pg**	**11 47 04.9**	**+0.3**
PRTR				eS	**Sn**	**11 47 24.9**	**+2.7**
PRTR	**Priterechnaya**	**1.31**	**309**	*i* Pg	**Pg**	**11 47 04.7**	**+0.2**
PRTR				eSg	**Sn**	**11 47 23.9**	**+1.7**
MAK	**Makhachkala**	**1.33**	**88**	*e*PG	**Pb**	**11 47 04.4**	**-0.3**
MAK				*e*		11 47 24.7	
MAK				pmax	pmax		
	comp=Z,75nm,0.3s						
MAK				smax	smax		
	comp=E,428nm,0.4s						
MAK				smax	smax		
	comp=E,374nm,0.4s						
ZEI	**Tsey**	**1.33**	**264**	*e*PG	**Pn**	**11 47 03.8**	**-0.9**
ZEI				eS	**Sg**	**11 47 22.1**	**0.0**
ZEI	**Tsey**	**1.33**	**264**	*i* Pg	**Pn**	**11 47 03.5**	**-1.2**
ZEI				eSg	**Sg**	**11 47 22.1**	**0.0**
LSNR	**Lesken**	**1.41**	**285**	*e*PG	**Pn**	**11 47 06.0**	**-0.2**
LSNR				eS	**Sn**	**11 47 26.4**	**+1.7**
LSNR	**Lesken**	**1.41**	**285**	*e*Pg	**Pn**	**11 47 05.8**	**+0.1**
LSNR				eSg	**Sn**	**11 47 26.1**	**+1.4**
BTNK	**Botanikuri**	**1.42**	**208**	P	**Pg**	**11 47 06.6**	**0.0**
BTNK	**Botanikuri**	**1.42**	**208**	*e*Pg	**Pg**	**11 47 06.6**	**0.0**
DGRG	**David-gareji**	**1.50**	**189**	P	**Pg**	**11 47 09.1**	**+0.9**
DGRG				S	**Sg**	**11 47 30.2**	**+2.5**
DDFL	**Dedoflistskaro**	**1.52**	**168**	P	**Pg**	**11 47 11.1**	**+2.6**
DDFL	**Dedoflistskaro**	**1.52**	**168**	*e*Pg	**Pg**	**11 47 11.1**	**+2.6**
DIGR	**Digorskoe uzhe**	**1.56**	**269**	*e*PG	**Pn**	**11 47 06.6**	**-1.2**
DIGR				eS	**Sn**	**11 47 28.0**	**-0.4**
DIGR	**Digorskoe uzhe**	**1.56**	**269**	*e*Pg	**Pn**	**11 47 06.6**	**-1.2**
DIGR				eSg	**Sn**	**11 47 28.0**	**-0.4**
ONI	**Oni**	**1.69**	**259**	P	**Pb**	**11 47 10.3**	**-0.6**
ONI				S	**Sg**	**11 47 34.3**	**+0.6**
ONI	**Oni**	**1.69**	**259**	*e*PN	**Pb**	**11 47 10.3**	**-0.6**
ONI				eS	**Sb**	**11 47 33.0**	**+0.6**
ONI	**Oni**	**1.69**	**259**	*e*Pg	**Pb**	**11 47 10.3**	**-0.6**
ONI				eSg	**Sb**	**11 47 33.0**	**+0.6**
TRLG	**Trialeti**	**1.83**	**221**	P	**Pg**	**11 47 14.0**	**-0.5**
TRLG				S	**Sg**	**11 47 39.5**	**+1.3**
TRLG	**Trialeti**	**1.83**	**221**	*e*Pg	**Pg**	**11 47 14.0**	**-0.5**
KBTC	**Kuba-Taba**	**1.89**	**299**	*e*PN	**Pb**	**11 47 13.6**	**-0.7**
KBTC				eS	**Sb**	**11 47 37.9**	**-0.2**
KBTC	**Kuba-Taba**	**1.89**	**299**	*e*Pg	**Pn**	**11 47 12.9**	**+0.6**
KBTC				eSg	**Sb**	**11 47 37.7**	**-0.5**
TKB	**Tkibuli**	**2.08**	**255**	P	**Pg**	**11 47 18.4**	**-0.8**
TKB				S	**Sg**	**11 47 45.9**	**-0.3**
AKT	**Akhty**	**2.10**	**133**⇑	*e*PN	**Pb**	**11 47 18.0**	**+0.1**
AKT				*e*		11 47 48.5	
AKT				pmax	pmax		
	comp=Z,38nm,0.6s						
AKT				smax	smax		
	comp=N,29nm,0.2s						
AKT	**Akhty**	**2.10**	**133**	*e*Pg	**Pb**	**11 47 16.7**	**-1.2**
KBZ	**Khabaz**	**2.19**	**292**	*e*PN	**Pn**	**11 47 15.6**	**-0.7**
KBZ				eS	**Sb**	**11 47 45.8**	**-1.0**
KBZ	**Khabaz**	**2.19**	**292**	*e*Pg	**Pn**	**11 47 15.6**	**-0.7**
KBZ				eSg	**Sb**	**11 47 45.8**	**-1.0**
NEY	**Neytrino**	**2.20**	**279**	*e*PN	**Pn**	**11 47 17.3**	**+0.6**
NEY				eS	**Sb**	**11 47 46.8**	**-0.5**
NEY	**Neytrino**	**2.20**	**279**	*e*Pg	**Pn**	**11 47 17.1**	**+0.4**
NEY				eSg	**Sn**	**11 47 44.8**	**+0.5**
PYA1	**Pyatigorsk**	**2.20**	**302**	*e*PN	**Pn**	**11 47 15.7**	**-0.9**
PYA1				eS	**Sn**	**11 47 42.2**	**-1.9**
PYA1	**Pyatigorsk**	**2.20**	**302**	*e*Pg	**Pn**	**11 47 15.7**	**-0.9**
AKH	**Akhalkalaki**	**2.24**	**228**	P	**Pb**	**11 47 19.4**	**-0.9**
AKH				S	**Sb**	**11 47 49.3**	**+0.9**
AKH	**Akhalkalaki**	**2.24**	**228**	*e*PN	**Pn**	**11 47 16.8**	**-0.4**
AKH				eS	**Sn**	**11 47 44.7**	**-0.5**
AKH	**Akhalkalaki**	**2.24**	**228**	*e*Pg	**Pn**	**11 47 16.8**	**-0.4**
AKH				eSg	**Sn**	**11 47 45.0**	**-0.2**
SHA1	**Shidzhatmaz**	**2.36**	**291**	*e*PN	**Pn**	**11 47 19.5**	**+0.6**
SHA1				eS	**Sb**	**11 47 50.3**	**-1.6**
SHA1	**Shidzhatmaz**	**2.36**	**291**	*e*Pn	**Pn**	**11 47 18.4**	**-0.5**
SHA1				eSn	**Sn**	**11 47 48.1**	**-0.1**
KIV	**Kislovodsk**	**2.42**	**296**	*e*PN	**Pn**	**11 47 18.7**	**-0.9**
ARXR	**Arkhyz**	**3.29**	**282**	*e*PN	**Pn**	**11 47 31.5**	**-0.1**
ARU	**Arti**	**15.82**	**27**	*e*P	**Pn**	**11 50 23.0**	**+0.4**
ARU				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AAK	**Ala-Archa**	**21.10**	**81**	*e*P	**P**	**11 51 24.7**	**0.0**
KURK	**Kurchatov**	**23.68**	**59**	*e*P	**P**	**11 51 50.5**	**-1.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						

*IDC **26** 11:47:53.8±3.9,44.°13N×128.°74W,h0km, mb2.9/3, mb1 3.4/4,mb1mx3.3/28,mbtmp3.0/4,ML2.6/1,Error ellipse: s-maj=106.8km s-min=23.3km az=55.0*
*NEIC **26** 11:47:54.0±2.4,43.°93N±0.°08×128.°9W±0.°2,h10km±2km, ML3.0/18,Error ellipse: s-maj=19.3km s-min=12.4km az=246.0*
*ANF **26** 11:47:55.5±1.8,43.°76N×128.°58W,h0km, ML3.3/2,Error ellipse: s-maj=23.1km s-min=16.9km az=177.0*
ISC 26 11:47:53.6±1.7,**43.°91N**±0.°07×**129.°0W**±0.°1,**h13**km,**n41,** σ1**°35/41,Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**3.55**	**105**	Pn	**Pn**	**11 48 45.6**	**-2.8**
KEBM				Sn	**Sn**	**11 49 28.0**	**-2.2**
KEBM				IAML		11 50 58.3	
	comp=E,41nm,3.7s						
I02D	**Swisshome**	**3.71**	**85**	P	**Pn**	**11 48 50.2**	**-0.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.15 281**		P	**Pn**	**11 48 58.4**	**-0.3**
	186nm,0.3s,baz=104,slow=6.1,SNR=29						
GUMO				S	**Sn**	**11 49 14.9**	**+1.7**
	117nm,0.3s,baz=195,slow=20,SNR=12						
MJAR	**Matsushiro Arr**	**24.11 344**		P	**P**	**11 53 52.6**	**+1.7**
	0.9nm,0.5s,baz=128,slow=10,SNR=4.3						
WRA	**Warramunga Arr**	**35.05 199**		P	**P**	**11 55 28.5**	**+0.4**
	0.9nm,0.7s,baz=22,slow=9.7,SNR=3.4						
ASAR	**Alice Springs**	**38.68 198**		P	**P**	**11 55 58.9**	**0.0**
	0.3nm,0.8s,baz=21,slow=11,SNR=3.5						
ASAR				LR	LR	12 11 52.2	
	comp=Z,30nm,21.1s,baz=337,slow=36						
CMAR	**Chiang Mai Arr**	**45.47 283**		P	**P**	**11 56 53.6**	**-0.8**
	0.5nm,0.6s,baz=88,slow=5.5,SNR=4.8						
SONM	**Songino Array**	**47.56 324**		P	**P**	**11 57 09.7**	**-0.8**
	0.3nm,0.5s,baz=134,slow=6.2,SNR=2.7						
MKAR	**Makanchi Array**	**62.43 316**		P	**P**	**11 58 57.3**	**-0.6**
	0.4nm,0.5s,baz=87,slow=8.9,SNR=9.5						
ILAR	**Eielson Array**	**68.28 25**		P	**P**	**11 59 34.1**	**-1.2**
	0.3nm,0.6s,baz=254,slow=5.7,SNR=6.2						
YKA	**Yellowknife Ar**	**82.53 28**		P	**P**	**12 00 58.2**	**+1.0**
	0.1nm,0.5s,baz=285,slow=5.1,SNR=3.0						
NVAR	**Mina Array Bea**	**86.17 52**		P	**P**	**12 01 18.0**	**+1.6**
	0.2nm,0.6s,baz=264,slow=4.5,SNR=2.7						
FINES	**FINESS Array B**	**91.83 335**		P	**P**	**12 01 41.2**	**-1.2**
	0.7nm,0.5s,baz=64,slow=4.4,SNR=8.3						

ANF 26 11:53:51.7±0.8,31.11N×74.79W,h5km,ML4.2/7,Error ellipse: s-maj=7.8km s-min=6.3km az=17.0,Off east coast of United States

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
Y60A	**Bolivia**	**4.08 316**		P	Pn	11 54 56.2	+1.5
	baz=134						
Y60A				S	Sn	11 55 44.9	+2.0
	baz=134						
Z59A	**Georgetown, SC**	**4.36 300**		S	Sn	11 55 50.9	+1.3
	baz=118						
X60A	**Albert Glenn T**	**4.37 323**		P	Pn	11 54 59.6	+0.9
	baz=142						
X60A				S	Sn	11 55 52.1	+2.0
	baz=142						
W61A	**Ground Anchor**	**4.46 336**		P	Pn	11 55 00.0	+0.1
	baz=155						
W61A				S	Sn	11 55 54.1	+2.0
	baz=155						
Y59A	**Loris**	**4.49 311**		S	Sn	11 55 55.0	+2.2
	baz=129						
V62A	**Hyde County Ai**	**4.54 348**		P	Pn	11 55 00.2	-0.9
	baz=167						
W60A	**Pink Hill**	**4.63 329**		S	Sn	11 55 58.4	+1.9
	baz=147						
X59A	**McDuffie Farm,**	**4.71 318**		P	Pn	11 55 04.3	+0.9
	baz=136						
X59A				S	Sn	11 55 59.1	+0.7
	baz=136						
Z58A	**St. Stephen**	**4.80 299**		P	Pn	11 55 05.0	+0.4
	baz=116						
Z58A				S	Sn	11 56 01.0	+0.4
	baz=116						
CNNC	**Cliffs of the**	**4.87 329**		P	Pn	11 55 06.2	+0.6
	baz=147						
CNNC				S	Sn	11 56 03.9	+1.6
	baz=147						
V61A	**Roper**	**4.90 343**		P	Pn	11 55 05.3	-0.7
	baz=162						
V61A				S	Sn	11 56 02.9	-0.2
	baz=162						
Y58A	**Scranton**	**4.97 305**		S	Sn	11 56 05.8	+1.0
	baz=123						
W59A	**Clinton**	**5.07 324**		S	Sn	11 56 08.2	+0.8
	baz=142						
V60A	**Jim Taylor Roa**	**5.08 337**		P	Pn	11 55 08.3	-0.2
	baz=155						
V60A				S	Sn	11 56 08.7	+1.2
	baz=155						
X58A	**Rowland**	**5.14 313**		P	Pn	11 55 10.2	+0.9
	baz=131						
X58A				S	Sn	11 56 09.3	+0.2
	baz=131						
U61A	**Possum Corner**	**5.39 346**		P	Pn	11 55 11.6	-1.0
	baz=165						
W58A	**Raeford**	**5.39 317**		P	Pn	11 55 13.8	+1.0
	baz=135						
W58A				S	Sn	11 56 15.4	+0.2
	baz=135						
V59A	**Middlesex**	**5.46 329**		P	Pn	11 55 14.2	+0.5
	baz=147						
V59A				S	Sn	11 56 16.8	-0.1
	baz=147						
157A	**Early Branch**	**5.50 288**		P	Pn	11 55 12.9	-1.3
	baz=105						
157A				S	Sn	11 56 17.5	-0.4
	baz=105						
Y57A	**Sumter**	**5.54 303**		S	Sn	11 56 19.7	+0.7
	baz=120						
X57A	**Johnson Farm,**	**5.58 308**		S	Sn	11 56 20.8	+1.0
	baz=126						
U60A	**Pendleton**	**5.70 340**		P	Pn	11 55 17.7	+0.7
	baz=159						
U59A	**Littleton**	**5.79 335**		P	Pn	11 55 17.9	-0.3
	baz=154,SNR=23						
U59A				S	Sn	11 56 25.4	+0.2
	baz=154						
V58A	**Windy Hill, Pi**	**5.90 323**		P	Pn	11 55 19.9	+0.1
	baz=141,SNR=12						
V58A				S	Sn	11 56 27.1	-0.7
	baz=141						
W57A	**Gilead**	**5.94 314**		P	Pn	11 55 20.9	+0.6
	baz=131						
W57A				S	Sn	11 56 28.0	-0.7
	baz=131						
Z56A	**Williston**	**5.99 293**		P	Pn	11 55 19.6	-1.5
	baz=110						
Z56A				S	Sn	11 56 24.6	-5.4
	baz=110						
Y56A	**Pelion**	**6.12 298**		P	Pn	11 55 22.1	-0.7
	baz=114						
Y56A				S	Sn	11 56 30.4	-2.8
	baz=114						
U58A	**Oxford**	**6.13 330**		P	Pn	11 55 23.1	+0.2
	baz=148						
U58A				S	Sn	11 56 33.6	+0.2
	baz=148						
T60A	**Surry**	**6.22 346**		P	Pn	11 55 22.9	-1.3
	baz=164						
X56A	**White Oak**	**6.24 304**		P	Pn	11 55 24.4	0.0
	baz=121						
X56A				S	Sn	11 56 33.4	-2.7
	baz=121						
T59A	**Double "B" Far**	**6.28 339**		P	Pn	11 55 24.5	-0.4
	baz=158,SNR=10						
T59A				S	Sn	11 56 36.0	-1.1
	baz=158						
W56A	**Indian Trail**	**6.30 311**		S	Sn	11 56 37.0	-0.6
	baz=128						
V57A	**Coltrane Farms**	**6.33 320**		P	Pn	11 55 25.7	+0.1
	baz=138,SNR=17						
V57A				S	Sn	11 56 37.2	-1.0
	baz=138						
U57A	**Blanch**	**6.52 326**		P	Pn	11 55 28.6	+0.4
	baz=143,SNR=5.9						
U57A				S	Sn	11 56 41.4	-1.5
	baz=143						
Z55A	**Blythe**	**6.57 291**		P	Pn	11 55 27.2	-1.8
	baz=107						
Z55A				S	Sn	11 56 41.2	-3.1
	baz=107						
T58A	**Grand View Acr**	**6.60 333**		P	Pn	11 55 29.0	-0.3
	baz=151						
T58A				S	Sn	11 56 44.4	-0.5
	baz=151						
Y55A	**Saluda**	**6.60 297**		P	Pn	11 55 28.4	-1.0
	baz=114						
Y55A				S	Sn	11 56 41.1	-3.8
	baz=114						
255A	**Hazlehurst**	**6.61 279**		P	Pn	11 55 26.2	-3.3
	baz=95						
X55A	**Gracelyn & Ava**	**6.66 302**		S	Sn	11 56 43.1	-3.5
	baz=118						
V56A	**Mocksville**	**6.68 316**		P	Pn	11 55 31.5	+1.0
	baz=133						
V56A				S	Sn	11 56 45.4	-1.6
	baz=133						
155A	**Kite**	**6.70 285**		P	Pn	11 55 28.6	-2.1
	baz=101						
S60A	**Water View**	**6.76 347**		P	Pn	11 55 29.9	-1.5
	baz=166						
KMSC	**Kings Mountain**	**6.80 308**		S	Sn	11 56 48.9	-1.1
	baz=124						
T57A	**Hurt**	**6.94 329**		P	Pn	11 55 34.3	+0.2
	baz=147,SNR=7.0						
T57A				S	Sn	11 56 51.4	-2.0
	baz=147						
S59A	**Mechanicsville**	**6.95 343**		P	Pn	11 55 32.7	-1.4
	baz=162						
U56A	**King**	**7.00 320**		P	Pn	11 55 35.6	+0.8
	baz=137,SNR=9.1						
U56A				S	Sn	11 56 53.9	-0.8
	baz=137						
S58A	**Poland Farm, P**	**7.02 338**		P	Pn	11 55 34.3	-0.8
	baz=157,SNR=13						
S58A				S	Sn	11 56 54.2	-1.2
	baz=157						
Z54A	**Sparta**	**7.14 289**		P	Pn	11 55 34.6	-2.3
	baz=105						
Z54A				S	Sn	11 56 53.0	-5.5
	baz=105						
V55A	**Taylorsville**	**7.15 313**		P	Pn	11 55 37.8	+0.8
	baz=130						
V55A				S	Sn	11 56 57.1	-1.5
	baz=130						
Y54A	**Tignall**	**7.21 294**		P	Pn	11 55 35.9	-1.8
	baz=110						
Y54A				S	Sn	11 56 55.0	-5.1
	baz=110						
X54A	**Belton**	**7.24 300**		P	Pn	11 55 37.6	-0.6
	baz=116						
X54A				S	Sn	11 56 57.2	-3.6
	baz=116						
R58B	**Mineral**	**7.29 340**		P	Pn	11 55 38.5	-0.4
	baz=159,SNR=8.9						
R58B				S	Sn	11 57 02.1	0.0
	baz=159						
254A	**Abbeville**	**7.30 279**		P	Pn	11 55 36.7	-2.3
	baz=94						
254A				S	Sn	11 56 55.6	-6.7
	baz=94						
T56A	**Rocky Mt**	**7.33 325**		P	Pn	11 55 40.0	+0.6
	baz=142,SNR=14						
T56A				S	Sn	11 57 01.6	-1.4
	baz=142						
W54A	**Cherokee Point**	**7.36 305**		S	Sn	11 57 02.0	-1.8
	baz=121						
S57A	**Dark Hollow, R**	**7.47 334**		P	Pn	11 55 41.2	-0.1
	baz=152						
S57A				S	Sn	11 57 06.4	0.0
	baz=152						
U55A	**TA2, Sparta**	**7.48 318**		P	Pn	11 55 42.5	+0.9
	baz=134,SNR=14						
U55A				S	Sn	11 57 05.8	-1.0
	baz=134						
V54A	**Nebo**	**7.58 310**		S	Sn	11 57 07.7	-1.4
	baz=126						
R58A	**Rapidan**	**7.64 341**		P	Pn	11 55 42.6	-1.1
	baz=159,SNR=20						
S56A	**Natural Bridge**	**7.64 330**		P	Pn	11 55 43.8	+0.1
	baz=148,SNR=8.2						
S56A				S	Sn	11 57 11.0	+0.2
	baz=148						
BLA	**Blacksburg**	**7.67 324**		P	Pn	11 55 45.0	+0.9
	baz=141						
BLA				S	Sn	11 57 10.3	-1.0
	baz=141						
GOGA	**Godfrey**	**7.70 290**		P	Pn	11 55 41.8	-2.6
	baz=105						
GOGA				S	Sn	11 57 06.6	-5.3
	baz=105						
Z53A	**Monticello**	**7.75 289**		P	Pn	11 55 42.5	-2.6
	baz=104						
Z53A				S	Sn	11 57 08.2	-5.0
	baz=104						
T55A	**Pulaski**	**7.78 322**		P	Pn	11 55 46.6	+1.0
	baz=139,SNR=13						
T55A				S	Sn	11 57 14.5	+0.3
	baz=139						
R57A	**Stanardsville**	**7.80 338**		P	Pn	11 55 45.0	-0.8
	baz=156,SNR=34						
R57A				S	Sn	11 57 13.5	-1.0
	baz=156						
Y53A	**Monroe**	**7.92 293**		P	Pn	11 55 44.9	-2.5
	baz=108						
Y53A				S	Sn	11 57 13.5	-3.9
	baz=108						
X53A	**Estanollee**	**7.92 298**		P	Pn	11 55 47.0	-0.5
	baz=113						
X53A				S	Sn	11 57 12.6	-4.9
	baz=113						
U54A	**Nelsons Funny**	**7.96 315**		S	Sn	11 57 18.8	+0.3
	baz=131						
V53A	**Saluda**	**8.10 306**		S	Sn	11 57 20.9	-1.1
	baz=122						
W53A	**Cullowhee**	**8.10 302**		S	Sn	11 57 21.3	-0.8
	baz=118						
S55A	**Lewisburg**	**8.15 326**		P	Pn	11 55 51.6	+1.0
	baz=143,SNR=19						
S55A				S	Sn	11 57 22.4	-0.7
	baz=143						
Q58A	**Fox Den Farm,**	**8.16 344**		P	Pn	11 55 48.8	-2.0
	baz=162						
T54A	**Tazewell**	**8.18 318**		P	Pn	11 55 51.7	+0.6
	baz=135,SNR=11						
T54A				S	Sn	11 57 23.9	0.0
	baz=135						
R56A	**Bull Pasture M**	**8.21 334**		P	Pn	11 55 51.4	-0.1
	baz=151						
R56A				S	Sn	11 57 24.5	-0.2
	baz=151						
Y52A	**Lilburn**	**8.30 292**		S	Sn	11 57 22.2	-4.6
	baz=107						
U53A	**Fall Branch**	**8.33 311**		S	Sn	11 57 27.1	-0.6
	baz=127						
X52A	**Dahlonega**	**8.41 297**		S	Sn	11 57 25.9	-3.7
	baz=112						
Z52A	**Williamson**	**8.42 287**		P	Pn	11 55 52.2	-2.2
	baz=102						
Z52A				S	Sn	11 57 26.5	-3.4
	baz=102						
Q57A	**Strasburg**	**8.44 340**		P	Pn	11 55 54.0	-0.6
	baz=158,SNR=21						
Q57A				S	Sn	11 57 29.0	-1.4
	baz=158						
S54A	**Dingess, Beckl**	**8.57 323**		P	Pn	11 55 58.0	+1.6
	baz=139,SNR=8.4						
S54A				S	Sn	11 57 32.9	-0.7
	baz=139						
152A	**Waverly Hall**	**8.58 283**		P	Pn	11 55 55.0	-1.6
	baz=98						
P59A	**Jarrettsville**	**8.59 351**		P	Pn	11 55 54.4	-2.2
	baz=171						
P58A	**Pank, Wackersv**	**8.61 347**		P	Pn	11 55 54.6	-2.3
	baz=166						
W52A	**Murphy**	**8.63 300**		S	Sn	11 57 33.5	-1.5
	baz=115						
T53A	**Wise**	**8.69 314**		S	Sn	11 57 35.7	-0.8
	baz=130						
Q56A	**Snyder Ridge,**	**8.69 337**		P	Pn	11 55 58.2	+0.2
	baz=154						
Q56A				S	Sn	11 57 37.0	+0.5
	baz=154						
R54A	**Victor**	**8.71 326**		P	Pn	11 55 59.4	+1.1
	baz=142						
R54A				S	Sn	11 57 37.0	+0.2
	baz=142						
V52A	**Sevierville**	**8.73 305**		S	Sn	11 57 36.6	-0.9
	baz=120						
P57A	**Homestead Farm**	**8.76 343**		P	Pn	11 55 58.4	-0.6
	baz=162						
P57A				S	Sn	11 57 38.1	0.0
	baz=162						
P56A	**Dayton Farm, R**	**9.00 340**		P	Pn	11 56 02.2	-0.1
	baz=157						
T52A	**Hallie**	**9.05 314**		S	Sn	11 57 45.5	+0.2
	baz=129						
TZTN	**Tazewell**	**9.08 309**		S	Sn	11 57 44.7	-1.2
	baz=124						
O58A	**Lewisberry**	**9.16 350**		P	Pn	11 56 02.6	-1.9
	baz=168						
O58A				S	Sn	11 57 48.2	+0.3
	baz=168						
O59A	**Robesonia**	**9.25 353**		P	Pn	11 56 03.3	-2.4
	baz=173						
W51A	**Cleveland**	**9.28 298**		S	Sn	11 57 49.5	-1.5
	baz=113						
R53A	**Hurricane**	**9.30 323**		S	Sn	11 57 49.6	-1.9
	baz=139						
U51A	**La Follette**	**9.30 307**		S	Sn	11 57 50.1	-1.4
	baz=122						
O57A	**Amberson**	**9.37 347**		P	Pn	11 56 06.2	-1.1
	baz=165						
O57A				S	Sn	11 57 53.8	+0.7
	baz=165						
S52A	**Salyersville**	**9.47 316**		S	Sn	11 57 54.9	-0.8
	baz=131						
Q53A	**Leroy**	**9.50 326**		P	Pn	11 56 09.5	+0.4
	baz=143						
Q53A				S	Sn	11 57 55.3	-1.0
	baz=143						
T51A	**Gray**	**9.58 310**		S	Sn	11 57 56.4	-1.8
	baz=125						
Z50A	**Ashland**	**9.67 286**		P	Pn	11 56 08.7	-2.8
	baz=100						
N60A	**Cedar Hill Far**	**9.74 359**		P	Pn	11 56 09.0	-3.5
	baz=178						
N60A				S	Sn	11 57 57.5	-4.7
	baz=178						
S51A	**Beattyville**	**9.76 314**		S	Sn	11 58 02.8	+0.1
	baz=129						
O55A	**Ligonier**	**9.79 339**		P	Pn	11 56 13.0	-0.1
	baz=157						
SSPA	**Standing Stone**	**9.83 346**		P	Pn	11 56 13.1	-0.5
	baz=164						
N58A	**Sunbury**	**9.83 351**		P	Pn	11 56 12.6	-1.1
	baz=170						
N57A	**Milroy**	**9.88 348**		P	Pn	11 56 13.0	-1.3
	baz=166						
N57A				S	Sn	11 58 06.3	+0.6
	baz=166						
U50A	**Jamestown**	**9.90 305**		S	Sn	11 58 04.0	-2.1
	baz=120						
Q52A	**Bidwell**	**9.94 324**		S	Sn	11 58 04.8	-2.3
	baz=140						
N56A	**West Decatur**	**10.19 345**		P	Pn	11 56 18.2	-0.4
	baz=163,SNR=7.9						
M57A	**Sunshine Farm,**	**10.38 350**		P	Pn	11 56 20.4	-0.7
	baz=169						
P52A	**Corning**	**10.40 327**		P	Pn	11 56 21.5	0.0
	baz=143						
Q51A	**Peebles**	**10.55 321**		S	Sn	11 58 20.5	-1.7
	baz=136						
S49A	**Springfield**	**10.92 310**		S	Sn	11 58 29.9	-1.3
	baz=125						
P50A	**Jamestown**	**11.22 322**		S	Sn	11 58 37.5	-0.9
	baz=136						

*IDC **26** 12:15:30.6±3.3,4.86S×153.74E,h108km±25km,mb3.6/10, mb1 3.8/11,mb1mx3.7/32,mbtmp4.0/11,Error ellipse: s-maj=34.1km s-min=15.2km az=101.0*

*NEIC **26** 12:15:35±1.3,5.05S±0.1×153.7E±0.2,h142km±9km, mb4.1/16,Error ellipse: s-maj=26.6km s-min=14.5km az=84.0*

ISC 26 12:15:29.7±0.7,4.87S±0.09×153.8E±0.1,h100km,n33, σ0.94/35,mb3.9/17,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.89 287**		P	**Pn**	**12 16 00.8**	**-0.1**
	30nm,0.3s,baz=142,slow=0.3,SNR=38						
KRVT				S	**Sn**	**12 16 24.1**	**-0.4**
	56nm,0.3s,baz=66,slow=20,SNR=17						
KRVT				LR	LR	12 16 56.4	
	comp=Z,140nm,18.7s,baz=118,slow=48						
PMG	**Port Moresby**	**8.01 235**		P	**Pn**	**12 17 25.3**	**+2.0**
	11nm,0.3s,baz=31,slow=8.1,SNR=21						
PMG				S	**Sn**	**12 18 53.0**	**+0.7**
	0.6nm,0.3s,baz=137,slow=13,SNR=1.3						
ANA2	**Anatahan**	**22.56 339**		P	**P**	**12 20 23.8**	**+2.1**
WR0	**Warramunga Arr**	**24.04 230**		P	**P**	**12 20 36.6**	**+0.9**
WR0				IAmb	IAmb	12 20 46.1	
	comp=Z,7.8nm,1.1s						
WB0	**Warramunga Arr**	**24.04 230**		P	**P**	**12 20 36.4**	**+0.8**
WB0				IAmb	IAmb	12 20 37.2	
	comp=Z,5.2nm,0.8s						
WRAB	**Tennant Creek**	**24.16 230**		P	**P**	**12 20 37.8**	**+1.1**
WRAB				IAmb	IAmb	12 20 38.4	
	comp=Z,5.2nm,0.8s						
WB2	**Warramunga Arr**	**24.17 230**		P	**P**	**12 20 38.0**	**+1.2**
WB2				IAmb	IAmb	12 20 47.7	
	comp=Z,2.8nm,0.8s						
WRA	**Warramunga Arr**	**24.18 230**		P	**P**	**12 20 37.1**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=54,slow=10,SNR=12						
AS31	**Alice Springs**	**26.80 224**		P	**P**	**12 21 00.7**	**0.0**
ASAR	**Alice Springs**	**26.80 224**		P	**P**	**12 21 00.5**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=54,slow=9.0,SNR=28						
ASAR	**Alice Springs**	**26.80 224**		P	**P**	**12 21 01.5**	**+0.8**
STKA	**Stephens Creek**	**29.21 202**		P	**P**	**12 21 21.2**	**-0.7**
	comp=Z,2.2nm,0.7s,baz=36,slow=14,SNR=7.6						
STKA	**Stephens Creek**	**29.21 202**		P	**P**	**12 21 21.3**	**-0.7**
STKA				IAmb	IAmb	12 21 24.6	
	comp=Z,1.6nm,1.4s						
FITZ	**Fitzroy Crossi**	**30.53 242**		P	**P**	**12 21 33.3**	**-0.5**
	comp=Z,4.0nm,1.0s,baz=87,slow=7.5,SNR=5.1						
FITZ	**Fitzroy Crossi**	**30.53 242**		P	**P**	**12 21 33.0**	**-0.9**
FITZ				IAmb	IAmb	12 21 42.8	
	comp=Z,12nm,1.4s						
BBOO	**Buckleboo**	**32.38 209**		P	**P**	**12 21 49.5**	**-0.4**
BBOO				IAmb	IAmb	12 21 56.3	
	comp=Z,11nm,1.4s						
FORT	**Forrest**	**35.39 220**		P	**P**	**12 22 15.8**	**-0.2**
MORW	**Morawa**	**43.11 232**		P	**P**	**12 23 19.6**	**-0.6**
MORW				IAmb	IAmb	12 23 29.1	
	comp=Z,16nm,1.3s						
CISI	**Cisompet, Garu**	**45.81 264**		P	**P**	**12 23 41.6**	**-0.4**
SONM	**Songino Array**	**66.94 327**		P	**P**	**12 26 12.3**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=139,slow=5.5,SNR=3.3						
SONM	**Songino Array**	**66.94 327**		P	**P**	**12 26 12.5**	**+0.9**
MK31	**Makanchi Array**	**81.06 319**		P	**P**	**12 27 34.2**	**+0.4**
MKAR	**Makanchi Array**	**81.06 319**		P	**P**	**12 27 33.8**	**0.0**
	comp=Z,0.6nm,0.7s,baz=91,slow=8.6,SNR=8.2						
MKAR	**Makanchi Array**	**81.06 319**		P	**P**	**12 27 34.2**	**+0.5**
ZALV	**Zalesovo Beam**	**81.78 326**		P	**P**	**12 27 36.3**	**-1.1**
	comp=Z,0.5nm,0.3s,baz=133,slow=6.1,SNR=2.7						
ZALV	**Zalesovo Beam**	**81.78 326**		P	**P**	**12 27 36.7**	**-0.7**
ILAR	**Eielson Array**	**81.84 22**		P	**P**	**12 27 36.7**	**-0.8**
	comp=Z,0.5nm,0.9s,baz=266,slow=5.0,SNR=3.9						
QSPA	**South Pole Qui**	**85.09 180**		P	**P**	**12 27 54.3**	**0.0**
QSPA				IAmb	IAmb	12 28 06.0	
	comp=Z,4.4nm,1.4s						
MAW	**Mawson**	**85.90 203**		P	**P**	**12 27 57.0**	**-1.1**
	comp=Z,2.2nm,0.7s,baz=114,slow=12,SNR=4.6						
MAW	**Mawson**	**85.90 203**		P	**P**	**12 27 57.4**	**-0.7**
NVAR	**Mina Array Bea**	**91.32 52**		P	**P**	**12 28 26.5**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=215,slow=6.1,SNR=2.6						
TORD	**Torodi Ar. Bea**	**151.31 289**		PKPbc	**PKPbc**	**12 35 12.1**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=63,slow=1.6,SNR=5.3						
TORD	**Torodi Ar. Bea**	**151.31 289**			**PKPbc**	**12 35 11.1**	**-1.6**

KRSC 26 12:18:33.4±2.5,48.79N×156.77E,h7km±37km,ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.94 348**		eP	Pn	12 19 06.2	-0.5
SKR				eS	Sn	12 19 31.5	+0.2
ASAK	**Asacha**	**3.66**	**11**	eP	Pb	12 19 34.7	-3.8
MTVR	**Mutnovka**	**3.80**	**13**	eP	Pn	12 19 36.6	+4.1
RUS	**Russkaya**	**3.81**	**16**	eP	Pn	12 19 36.5	+4.1
RUS				eS	Sb	12 20 23.7	-3.5
GRL	**Gorelyy**	**3.85**	**12**	eP	Pn	12 19 37.4	+4.2
KRMR	**Karymshinskiy**	**4.13**	**12**	eP	Pn	12 19 41.6	+4.7
PET	**Petropavlovsk**	**4.40**	**15**	eP	Pn	12 19 45.4	+4.9
UGLR	**Uglovaya**	**4.61**	**16**	eP	Pn	12 19 47.2	+3.7
UGLR				eS	Sn	12 20 42.9	+5.6
AVH	**Avacha**	**4.64**	**15**	eP	Pn	12 19 47.8	+3.8
SMAR	**Somma**	**4.65**	**15**	eP	Pn	12 19 48.6	+4.3
KRX	**Arik**	**4.72**	**14**	eP	Pn	12 19 50.1	+5.0
MKZ	**Mys Kozlova**	**6.54**	**26**	eP	Pn	12 20 14.4	+4.5

*NEIC **26** 12:36:43.8±2.2,3.85S±0.06×139.71E±0.07,h61km±11km, mb4.1/10,Error ellipse: s-maj=10.7km s-min=9.1km az=109.0*

*IDC **26** 12:36:46.1±1.7,3.64S×139.65E,h70km±17km,mb3.5/4, mb1 3.8/6,mb1mx3.5/29,mbtmp4.0/6,MS3.0/1,Ms1 3.0/1,*

ms1mx2.5/22, Error ellipse: s-maj=26.6km s-min=15.4km az=129.0

DJA ***26*** *12:36:47.3±1.5, 4˚S±6˚×14˚0E±˚, h66km±17km, M4.1/3, MLv4.1/3*

ISC 26 12:36:45.5±0.7,**3˚79S**±0˚06×**139˚62E**±0˚06,**h66**km,**n29,** σ1§**71**/33,**mb3.8**/3,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WAMI	**Wamena**	**0.91**	**264**	P	**Pn**	**12 37 03.2**	**+0.6**
WAMI				S	**Sn**	**12 37 15.0**	**-0.4**
GENI	**Genyem**	**1.31**	**25**	P	**Pn**	**12 37 09.0**	**+1.2**
GENI				S	**Sn**	**12 37 25.8**	**+1.3**
JAY	**Jayapura**	**1.67**	**41**	P	**Pn**	**12 37 12.5**	**-0.1**
	28nm,0.3s,baz=232,slow=20,SNR=61						
JAY				S	**Sn**	**12 37 30.4**	**-2.7**
	27nm,0.3s,baz=164,slow=16,SNR=7.0						
SMPI	**Sarmi**	**2.00**	**333**	P	**Pn**	**12 37 17.4**	**+0.3**
SMPI				S	**Sn**	**12 37 40.8**	**-0.4**
FAKI	**Fak Fak**	**7.41**	**276**	Pn	**Pn**	**12 38 32.2**	**+1.2**
FAKI				Sn	**Sn**	**12 39 52.9**	**-0.7**
SIJI	**Sorong**	**8.83**	**289**	P	**Pn**	**12 38 50.3**	**-0.2**
	0.5nm,0.3s,baz=17,slow=19,SNR=2.0						
COEN	**Coen**	**10.70**	**161**	Pn	**Pn**	**12 39 18.1**	**+2.1**
MTN	**Manton Dam**	**12.30**	**222**		**Pn**	**12 39 37.0**	**-0.9**
KNRA	**Kununurra**	**15.93**	**221**	P	**Pn**	**12 40 25.9**	**+0.2**
KNRA				IAmb	IAmb	12 40 30.8	
	comp=Z,36nm,1.2s						
WB0	**Warramunga Arr**	**16.68**	**197**	P	**Pn**	**12 40 33.7**	**-1.4**
WB0				IAmb	IAmb	12 40 41.4	
	comp=Z,12nm,1.3s						
WR0	**Warramunga Arr**	**16.82**	**197**	P	**Pn**	**12 40 35.5**	**-1.3**
WRAB	**Tennant Creek**	**16.85**	**197**	P	**Pn**	**12 40 36.7**	**-0.5**
WRAB				IAmb	IAmb	12 40 41.1	
	comp=Z,6.4nm,0.5s						
WB2	**Warramunga Arr**	**16.86**	**197**	P	**Pn**	**12 40 36.9**	**-0.4**
WB2				IAmb	IAmb	12 40 41.8	
	comp=Z,7.1nm,0.8s						
WRA	**Warramunga Arr**	**16.86**	**197**	P	**Pn**	**12 40 35.9**	**-1.4**
	comp=Z,1.3nm,0.3s,baz=19,slow=11,SNR=20						
WRA				S	Sn	12 43 32.9	-11
	comp=Z,0.3nm,0.3s,baz=12,slow=23,SNR=4.0						
WRA	**Warramunga Arr**	**16.86**	**197**	P	**Pn**	**12 40 36.5**	**-0.9**
GUMO	**Guam**	**18.03**	**17**	LR	LR	12 47 09.0	
	comp=Z,48nm,19.2s,baz=260,slow=35						
FITZ	**Fitzroy Crossi**	**19.74**	**223**	P	**P**	**12 41 11.3**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=43,slow=13,SNR=15						
FITZ				S	S	12 44 37.2	-12
	comp=Z,0.3nm,0.3s,baz=354,slow=9.2,SNR=3.0						
FITZ	**Fitzroy Crossi**	**19.74**	**223**	P	**P**	**12 41 11.4**	**+1.3**
FITZ				IAmb	IAmb	12 41 16.1	
	comp=Z,14nm,1.4s						
AS31	**Alice Springs**	**20.52**	**195**	P	**P**	**12 41 20.6**	**+2.0**
ASAR	**Alice Springs**	**20.52**	**195**	P	**P**	**12 41 20.2**	**+1.7**
	comp=Z,6.4nm,0.6s,baz=27,slow=9.6,SNR=92						
ASAR				S	**S**	**12 44 57.9**	**-6.6**
	comp=Z,0.5nm,0.9s,baz=10.0,slow=27,SNR=2.8						
ASAR	**Alice Springs**	**20.52**	**195**	P	**P**	**12 41 19.9**	**+1.3**
ARMA	**Armidale**	**28.82**	**158**	P	P	12 42 34.9	-2.8
KSRS	**Korea Array**	**42.45**	**346**	P	**P**	**12 44 34.0**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=158,slow=8.6,SNR=3.9						
MKAR	**Makanchi Array**	**71.19**	**322**	P	**P**	**12 47 57.1**	**-0.3**
	comp=Z,0.6nm,0.5s,baz=110,slow=7.9,SNR=4.7						
MKAR	**Makanchi Array**	**71.19**	**322**	P	**P**	**12 47 57.8**	**+0.3**
MAKZ	**Makanchi**	**71.39**	**322**	P	**P**	**12 47 58.8**	**+0.1**
ILAR	**Eielson Array**	**86.43**	**24**	P	**P**	**12 49 19.2**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=261,slow=4.6,SNR=10						
ILAR	**Eielson Array**	**86.43**	**24**	P	**P**	**12 49 18.9**	**-1.7**
LPAZ	**La Paz**	**146.08**	**127**	PKPbc	**PKPdf**	**12 56 19.6**	**+0.7**
	comp=Z,1.9nm,0.8s,baz=254,slow=4.6,SNR=7.1						

BKK ***26*** *12:38:29.1±1.4, 23˚N±13˚×9˚6E±1˚7, h0km, M5.7/11, mb6.0/11, mB5.8/10, MLv5.8/6, Mw(mB)5.4/10*

IDC ***26*** *12:38:34.7±0.5, 22.˚91N×95.˚95E, h0km, mb4.6/31, mb1 4.7/32, mb1mx4.6/44, mbtmp4.6/32, ML4.8/1, MS4.3/35, Ms1 4.3/35, ms1mx4.2/50, Error ellipse: s-maj=14.7km s-min=9.8km az=60.0*

NDI ***26*** *12:38:34.1±2.6, 23.˚03N×96.˚30E, h10km, mb5.0, MW5.1, mb5.2(NEIC)*

BJI ***26*** *12:38:34.8±0.0, 22.˚91N×95.˚84E, h9km, mB5.3/50, mb4.9/70, ML5.4/8, Ms5.1/76, Ms7 4.8/70*

MOS ***26*** *12:38:36.2±1.2, 22.˚88N×95.˚89E, h21km, mb5.4/53, MS4.7/7, Error ellipse: s-maj=6.7km s-min=4.2km az=109.8*

GCMT ***26*** *12:38:37.2±0.2, 22.˚78N±0.˚01×96.˚01E±0.˚01, h20km±1km, MW5.1/116, Moment Tensor Solution. s53,c66; s116,c199; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr~0.81±.13; Mθθ0.50±.11; Mϕϕ0.30±.11; Mrθ1.60±.22; Mθϕ4.67±.11; Mϕr~0.11±.20; Best double couple: Mo4.96000×10^16 NP1:ϕs1.00000°, δ70.00000°, λ-174.00000°. NP2:ϕs269.00000°, δ85.00000°, λ-20.00000°. Principal axes: T 5.2670, Plg10.0000°, Azm317.0000°; N -0.6150, Plg69.0000°, Azm75.0000°; P -4.6530, Plg18.0000°, Azm224.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *12:38:37.2±2.5, 23˚00N±0˚04×95˚91E±0˚06, h12km±3km, mb5.2/108 Error ellipse: s-maj=8.7km s-min=5.1km az=60.0*

ISC 26 12:38:40.2±0.2,**22˚93N**±0˚03×**95˚80E**±0˚03,**h32**km,**n426,** σ1§**83**/463,**mb5.1**/126,**MS4.4**/49,**28C-7D**,**Myanmar**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIMRM	**Sittwe**	**3.88**	**225**		**Pn**	**12 39 39.6**	**+2.0**
SIMRM				Sn	**Sn**	**12 40 23.2**	**+1.1**
LKP	**Lekhapani**	**4.39**	**1**	*ex*	**Pn**	**12 39 41.1**	**-3.4**
LKP				*ex*	**Sn**	**12 40 38.9**	**+4.3**
SHL	**Shillong**	**4.43**	**307**	P	**Pn**	**12 39 46.7**	**+1.3**
SHL				SN	**Sn**	**12 40 37.3**	**+1.3**
SHL	**Shillong**	**4.43**	**307**	⇑*i*	**Pn**	**12 39 46.2**	**+0.9**
SHL				*eS*	**Sn**	**12 40 38.5**	**+2.6**
SHL				*ex*	x	12 40 39.1	
SHL	**Shillong**	**4.43**	**307**		**Pn**	**12 39 46.7**	**+1.3**
SHL				Sn	**Sn**	**12 40 34.5**	**-1.5**
TEZP	**TEZPUR**	**4.57**	**324**	⇑*i*	**Pn**	**12 39 46.9**	**-0.2**
TEZP				*ex*	x	12 40 39.5	
TEZP				*eS*	**Sn**	**12 40 39.5**	**+0.4**
CHTO	**Chiang Mai**	**5.04**	**144**	P	**Pn**	**12 39 51.0**	**-2.6**
CHTO	**Chiang Mai**	**5.04**	**144**		**Pn**	**12 39 51.0**	**-2.6**
CHTO					**Sb**	**12 41 10.5**	**+2.7**
CMMT	**Chiang Mai**	**5.04**	**144**	P	**Pn**	**12 39 51.0**	**-2.6**
CMMT				S	**Sn**	**12 40 55.5**	**+4.6**
MHMT	**Maesarieng**	**5.13**	**157**	P	**Pn**	**12 39 54.2**	**-0.7**
PAYA	**Payao**	**5.20**	**132**	P	**Pn**	**12 39 53.0**	**-2.8**
CM31	**Chiang Mai Arr**	**5.33**	**146**		**Pn**	**12 39 55.8**	**-1.8**
CMAR	**Chiang Mai Arr**	**5.33**	**146**	Pn	**Pn**	**12 39 55.1**	**-2.5**
	9.0nm,0.3s,baz=323,slow=13,SNR=336						
CMAR				Pg	**Pb**	**12 40 12.0**	**-0.7**
	16nm,0.3s,baz=329,slow=17,SNR=23						
CMAR				Lg	Lg	12 41 21.1	
	36nm,0.3s,baz=315,slow=16,SNR=4.8						
CMAR				LR	LR	12 42 20.6	
	comp=Z,3μm,18.1s,baz=353,slow=43						
LAMP	**Lampang**	**5.67**	**140**	P	**Pn**	**12 40 00.2**	**-2.0**
PHRA	**Phrae**	**6.05**	**136**	P	**Pn**	**12 40 04.8**	**-2.7**
KMI	**Kunming**	**6.71**	**70**	Pn	**Pn**	**12 40 17.8**	**+1.0**
KMI				Sg	**Sb**	**12 42 03.8**	**+7.7**
KMI				smax	smax		
	comp=N,3μm,1.3s						
KMI				smax	smax		
	comp=E,2μm,1.2s						
KMI				LR	LR		
	comp=N,36μm,8.2s						
KMI				LR	LR		
	comp=E,12μm,7.8s						
KMI				LR	LR		
	comp=Z,10μm,7.7s						
KMI	**Kunming**	**6.71**	**70**	P	**Pn**	**12 40 17.4**	**+0.6**
KMI	**Kunming**	**6.71**	**70**		**Pn**	**12 40 17.4**	**+0.6**
SLVN	**Son La**	**7.68**	**100**		**Pn**	**12 40 27.2**	**-2.8**
GTK	**Tadong**	**7.85**	**305**	*eP*	**Pn**	**12 40 31.9**	**-0.3**
GTK				*ex*	x	12 42 06.5	
LSA	**Lhasa**	**7.93**	**329**	P	**Pn**	**12 40 35.5**	**+1.9**
LSA				S	Sn	12 42 13.5	+11
LSA				pmax	pmax		
	comp=Z,240nm,1.0s						
LSA				LR	LR		
	comp=N,12μm,15.7s						
LSA				LR	LR		
	comp=E,22μm,14.9s						
LSA				LR	LR		
	comp=Z,20μm,12.8s						
LSA	**Lhasa**	**7.93**	**329**	P	**Pn**	**12 40 34.6**	**+1.0**
LSA	**Lhasa**	**7.93**	**329**		**Pn**	**12 40 34.5**	**+1.0**
PBKT	**Sadao Pong**	**7.98**	**141**		**Pn**	**12 40 31.4**	**-2.6**
PBKT	**Sadao Pong**	**7.98**	**141**	P	**Pn**	**12 40 31.7**	**-2.3**
TAPN	**Taplejung**	**8.55**	**303**	*ePn*	**Pn**	**12 40 43.3**	**+1.3**
TAPN				*eSn*	**Sn**	**12 42 18.1**	**+0.6**
	1μm,1.0s						
ODAN	**Odare**	**8.58**	**299**	*ePn*	**Pn**	**12 40 42.5**	**+0.2**
ODAN				*eSn*	**Sn**	**12 42 17.9**	**-0.2**
	751nm,0.6s						
BOK	**Bokaro**	**9.15**	**277**	*eP*	**Pn**	**12 40 50.2**	**+0.2**
BOK				*ex*	x	12 42 31.7	
RAMN	**Ramite**	**9.26**	**298**	*ePn*	**Pn**	**12 40 51.5**	**-0.2**
RAMN				*eSn*	**Sn**	**12 42 34.4**	**-0.4**
	693nm,0.9s						
BWNR	**Bhubaneshwar**	**9.65**	**256**	*eP*	**Pn**	**12 40 58.4**	**+1.5**
BWNR				*ex*	x	12 42 39.6	
BWNR				*ex*	x	12 42 40.5	
JIRN	**Jiri**	**9.88**	**300**	*ePn*	**Pn**	**12 41 00.7**	**+0.3**
JIRN				*eSn*	**Sn**	**12 42 50.1**	**-0.4**
	990nm,0.9s						
DGPR	**DIGLIPUR**	**10.07**	**196**	*eP*	**Pn**	**12 41 01.3**	**-1.4**
GUN	**Gumba**	**10.24**	**301**	*ePn*	**Pn**	**12 41 05.4**	**+0.1**
GUN				*eSn*	**Sn**	**12 42 59.3**	**+0.1**
	532nm,0.7s						
PKI	**Pulchoki**	**10.47**	**298**	*ePn*	**Pn**	**12 41 09.2**	**+0.8**
PKI				*eSn*	**Sn**	**12 43 04.2**	**-0.7**
	230nm,0.7s						
PKIN	**Phulchoki**	**10.49**	**298**	*ePn*	**Pn**	**12 41 09.2**	**+0.6**
PKIN				*eSn*	**Sn**	**12 43 04.3**	**-0.8**
	202nm,0.6s						
GYA	**Guiyang**	**10.49**	**68**	⇑*iP*	**Pn**	**12 41 07.3**	**-1.1**
GYA				PP	**PnPn**	**12 41 18.3**	**+2.1**
GYA				S	**Sn**	**12 43 05.0**	**+0.1**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,100nm,5.1s						
GYA				LR	LR		
	comp=N,6μm,11.8s						
GYA				LR	LR		
	comp=E,3μm,11.9s						
GYA				LR	LR		
	comp=Z,4μm,10.8s						
CD2	**Chengdu**	**10.66**	**40**	P	**Pn**	**12 41 11.8**	**+1.1**
CD2				S	**Sn**	**12 43 12.5**	**+3.5**
CD2				pmax	pmax		
	comp=Z,60nm,0.6s						
CD2				pmax	pmax		
	comp=Z,620nm,4.0s						
CD2				LR	LR		
	comp=N,12μm,9.0s						
CD2				LR	LR		
	comp=E,12μm,8.0s						
CD2				LR	LR		
	comp=Z,14μm,9.8s						
KKN	**Kakani**	**10.67**	**299**	*ePn*	**Pn**	**12 41 12.0**	**+1.0**
KKN				*eSn*	**Sn**	**12 43 08.9**	**-0.6**
	432nm,1.0s						
DMN	**Daman**	**10.74**	**298**	*ePn*	**Pn**	**12 41 12.4**	**+0.4**
DMN				*eSn*	**Sn**	**12 43 10.2**	**-1.0**
	290nm,0.7s						
GKN	**Gorkha**	**11.27**	**299**	*ePn*	**Pn**	**12 41 18.6**	**-0.6**
GKN				*eSn*	**Sn**	**12 43 23.4**	**-0.9**
	406nm,0.7s						
CHLP	**Challavanipeta**	**11.83**	**250**	*eP*	**Pn**	**12 41 25.6**	**-1.1**
UBPT	**Khong Chiam**	**11.89**	**128**		**Pn**	**12 41 25.1**	**-2.5**
KOLN	**Koldanda**	**12.03**	**296**	*ePn*	**Pn**	**12 41 27.8**	**-1.9**
KOLN				*eSn*	**Sn**	**12 43 39.1**	**-3.8**
	323nm,0.9s						
DANN	**Dangsing**	**12.12**	**299**	*ePn*	**Pn**	**12 41 29.1**	**-1.9**
DANN				*eSn*	**Sn**	**12 43 43.0**	**-2.2**
	317nm,0.9s						
QIZ	**Qiongzhong**	**13.68**	**104**	P	**Pn**	**12 41 49.8**	**-2.2**
QIZ				S	**Sn**	**12 44 22.8**	**-0.2**
QIZ				LR	LR		
	comp=N,10μm,13.8s						
QIZ				LR	LR		
	comp=E,5μm,13.2s						
QIZ				LR	LR		
	comp=Z,2μm,10.3s						
ENH	**Enshi**	**14.26**	**56**		**Pn**	**12 41 56.2**	**-3.7**
PVM	**Polavaram**	**14.46**	**250**	*eP*	**Pn**	**12 42 04.2**	**+1.5**
JBP	**Jabalpur**	**14.56**	**274**	‖*ex*	**Pn**	**12 42 06.0**	**+2.0**
JBP				*ex*	Sn	12 45 02.0	+18
JBP				AMB	AMB	12 45 08.6	
	comp=Z,64nm,3.4s						
LZH	**Lanzhou**	**14.86**	**26**	*eP*	**Pn**	**12 42 07.0**	**-1.1**
LZH				sP	P	12 42 12.0	-1.5
LZH				SS	**S**	**12 45 08.5**	**-0.7**
LZH				pmax	pmax		
	comp=Z,320nm,1.3s						
LZH				pmax	pmax		
	comp=Z,550nm,4.0s						
LZH				LR	LR		
	comp=Z,4μm,10.3s						
LZH				LR	LR		
	comp=Z,7μm,10.0s						
LZH				LR	LR		
	comp=Z,5μm,11.6s						
GGR	**Gangavaram**	**15.47**	**254**	*eP*	**P**	**12 42 19.7**	**-0.7**
MYLAV	**Mylavaram**	**15.53**	**249**	*eP*	**P**	**12 42 22.8**	**+1.9**
NGP	**Nagpur**	**15.63**	**267**	*ex*	**Pn**	**12 42 14.4**	**-3.8**
NGP				*ex*	**Sn**	**12 45 04.5**	**-5.9**
RPR	**Rampur**	**15.94**	**258**	*eP*	**P**	**12 42 27.3**	**+1.8**
XAN	**Xi'an**	**15.97**	**43**	P	**Pn**	**12 42 20.3**	**-2.3**
XAN				pP	P	12 42 26.5	+0.7
XAN				S	**Sn**	**12 45 21.5**	**+2.8**
XAN				pmax	pmax		
	comp=Z,300nm,2.0s						
XAN				LR	LR		
	comp=Z,6μm,11.9s						
XAN				LR	LR		
	comp=Z,3μm,11.9s						
XAN				LR	LR		
	comp=Z,4μm,16.3s						
XAN	**Xi'an**	**15.97**	**43**	P	**Pn**	**12 42 20.6**	**-2.0**
XAN				pmax	pmax		
	comp=Z,65nm,0.9s						
XAN	**Xi'an**	**15.97**	**43**		**Pn**	**12 42 20.6**	**-2.0**
ADKI	**Addanki**	**16.50**	**248**	*eP*	**P**	**12 42 32.7**	**+1.0**
NJS	**Nagarjunasagar**	**16.76**	**251**	*eP*	**P**	**12 42 35.1**	**+0.6**
SRSP	**Sriramsagar**	**16.78**	**260**	*eP*	**Pn**	**12 42 31.5**	**-1.4**
GTA	**Gaotai**	**16.78**	**11**	*eP*	**Pn**	**12 42 31.0**	**-1.9**
GTA				pP	P	12 42 35.0	+0.1
GTA				sP	pP	12 42 37.8	-5.5
GTA				S	**S**	**12 45 45.0**	**-3.5**
GTA				sS	Sn	12 45 47.8	+9.4
GTA				pmax	pmax		
	comp=Z,290nm,6.7s						
GTA				LR	LR		
	comp=Z,4μm,12.1s						
GTA				LR	LR		
	comp=Z,8μm,15.6s						
GTA				LR	LR		
	comp=Z,4μm,11.7s						
BHPL	**Bhopal**	**16.91**	**275**	*ex*	**Pn**	**12 42 33.8**	**-0.7**
BHPL				*eS*	**S**	**12 45 51.7**	**+0.6**
BHPL				*i* x	x	12 50 04.5	
HYB	**Hyderabad**	**17.09**	**254**	*i* P	**P**	**12 42 40.0**	**+1.8**
	comp=Z,70nm,1.0s						
HYB				*eS*	**S**	**12 45 53.0**	**-1.8**
HYB	**Hyderabad**	**17.09**	**254**	*ex*	**P**	**12 42 41.3**	**+3.1**
HYBB	**Hyderabad (bro**	**17.09**	**254**	*eP*	**P**	**12 42 40.4**	**+2.1**
SRLM	**Srisailam**	**17.31**	**250**	*eP*	**P**	**12 42 43.0**	**+2.2**
NDI	**New Delhi**	**17.68**	**293**	*eP*	**P**	**12 42 45.0**	**+0.3**
SKHT	**Srikalahasti**	**17.78**	**242**	*eP*	**P**	**12 42 48.1**	**+2.2**
KULM	**Kulim**	**18.15**	**164**	P	**P**	**12 42 50.7**	**+0.8**
KULM	**Kulim**	**18.15**	**164**	P	**Pn**	**12 42 49.0**	**-0.9**
WHN	**Wuhan**	**18.21**	**61**	⇓*iP*	**Pn**	**12 42 50.0**	**-0.5**
WHN				pP	**P**	**12 42 52.5**	**+2.0**
WHN				PP	**sP**	**12 43 02.5**	**-0.7**
WHN				S	**S**	**12 46 17.3**	**-0.1**
WHN				pmax	pmax		
	comp=Z,52nm,1.0s						
WHN				LR	LR		
	comp=Z,12μm,8.5s						
WHN				LR	LR		
	comp=Z,7μm,8.2s						
WHN				LR	LR		
	comp=Z,4μm,9.8s						
SMLA	**Simla**	**18.48**	**300**	*eP*	**P**	**12 42 53.0**	**-0.5**
SMLA				IAmb	IAmb	12 42 59.7	
	comp=Z,113nm,0.8s						
SMLA				*ex*	x	12 46 09.4	
MLSI	**Meulaboh, Aceh**	**18.56**	**178**	P	**Pn**	**12 42 55.3**	**+0.4**
	comp=Z,3μmcomp=Z,190nm,0.8s						
KLRI	**Killari**	**18.62**	**258**	*eP*	**Pn**	**12 42 56.6**	**+1.0**
IPM	**Ipoh**	**19.02**	**164**	P	**Pn**	**12 43 01.4**	**+0.9**
IPM	**Ipoh**	**19.02**	**164**	P	**Pn**	**12 43 02.0**	**+1.5**
URV	**Uravakonda**	**19.23**	**249**	*eP*	**Pn**	**12 43 03.8**	**+0.8**
DHRM	**DHARAMSHALA**	**19.59**	**303**	*eP*	**Pn**	**12 43 07.4**	**0.0**
DHRM				IAmb	IAmb	12 43 10.8	
	comp=Z,351nm,1.3s						
DHRM				*ex*	x	12 46 44.3	
JRMM	**Jerantut**	**20.00**	**160**	P	Pn	12 43 13.0	+0.9
PSI	**Prapat**	**20.24**	**171**	P	**P**	**12 43 13.6**	**+0.7**
	comp=Z,13nm,0.6s,baz=300,slow=7.3,SNR=15						
PSI				Lg	Lg	12 49 18.2	
	comp=Z,3.8nm,0.6s,baz=280,slow=19,SNR=2.6						
RPSI	**Rantau Prapat**	**20.34**	**171**	P	Pn	12 43 15.3	-0.8
RPSI	**Rantau Prapat**	**20.34**	**171**	P	**P**	**12 43 13.6**	**-0.3**
TIY	**Taiyuan**	**20.53**	**40**	*eP*	Pn	12 43 17.0	-1.2
TIY				PP	**PnPn**	**12 43 37.3**	**+3.4**
TIY				S	**S**	**12 47 03.5**	**-0.5**
TIY				pmax	pmax		
	comp=Z,32nm,0.8s						
TIY				LR	LR		
	comp=Z,2μm,9.0s						
TIY				LR	LR		
	comp=Z,2μm,9.2s						
TIY				LR	LR		
	comp=Z,1μm,15.9s						
POO	**Poona**	**20.98**	**262**	⇑*iP*	**P**	**12 43 21.6**	**+0.7**
	comp=Z,45nm,0.8s						
POO				IAmb	IAmb	12 43 29.3	
	comp=Z,25nm,1.0s						
POO				*ePP*	**PnPn**	**12 43 42.8**	**+2.6**
POO				*ex*	x	12 43 51.8	
POO				*ex*	x	12 47 07.0	
PALK	**Pallekele**	**21.29**	**225**	P	**P**	**12 43 26.9**	**+2.7**
PALK				pmax	pmax		
	comp=Z,31nm,1.1s						
PALK	**Pallekele**	**21.29**	**225**	P	**P**	**12 43 26.9**	**+2.7**
BTO	**Baotou**	**21.32**	**31**	*eP*	**P**	**12 43 23.5**	**-1.0**
BTO				S	**S**	**12 47 14.3**	**-5.4**
GSI	**Gunungsitoli**	**21.57**	**175**	P	**P**	**12 43 30.3**	**+3.2**
	comp=Z,40nm,1.0s						
GSI	**Gunungsitoli**	**21.57**	**175**	P	**P**	**12 43 25.8**	**-1.3**
GSI				IAmb	IAmb	12 43 33.2	
	comp=Z,223nm,1.8s						
WMQ	**Urumqi**	**21.89**	**344**	P	**P**	**12 43 31.5**	**+1.1**
WMQ				pP	pP	12 43 35.3	-3.8
WMQ				sP	sP	12 43 39.3	-3.9
WMQ				PP	**PnPn**	**12 43 56.3**	**+3.9**
WMQ				S	**S**	**12 47 29.5**	**-1.1**
WMQ				PcS	**PcS**	**12 51 09.3**	**+1.8**
WMQ				pmax	pmax		
	comp=Z,130nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,760nm,4.7s						
WMQ				LR	LR		
	comp=Z,1μm,15.1s						
WMQ				LR	LR		
	comp=Z,1μm,18.7s						
WMQ				LR	LR		
	comp=Z,1μm,14.3s						
WMQ	**Urumqi**	**21.89**	**344**	P	**P**	**12 43 30.5**	**+0.1**
WMQ				pmax	pmax		
	comp=Z,866nm,1.9s						
WMQ	**Urumqi**	**21.89**	**344**	P	**P**	**12 43 30.5**	**+0.1**
HHC	**Hu-ho-hao-te**	**22.27**	**33**	*eP*	**P**	**12 43 34.5**	**-0.1**
HHC				pP	pP	12 43 39.8	-3.4
HHC				S	**S**	**12 47 33.8**	**-4.0**
HHC				sS	pS	12 47 45.0	-3.3
HHC				SS	**SnSn**	**12 48 08.5**	**+2.2**
HHC				pmax	pmax		
	comp=Z,24nm,1.2s						
HHC				pmax	pmax		
	comp=Z,330nm,4.0s						
HHC				LR	LR		
	comp=Z,1μm,10.6s						
HHC				LR	LR		
	comp=Z,620nm,8.6s						
HHC				LR	LR		
	comp=Z,1μm,13.8s						
NJ2	**Nanjing**	**22.35**	**61**	*eP*	**P**	**12 43 35.0**	**-0.4**
NJ2				pP	**pP**	**12 43 39.5**	**-4.5**
NJ2				S	**S**	**12 47 43.3**	**+4.0**
NJ2				pmax	pmax		
	comp=Z,34nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,760nm,5.2s						
NJ2				LR	LR		
	comp=Z,5μm,12.8s						
NJ2				LR	LR		
	comp=Z,2μm,10.0s						
NJ2				LR	LR		
	comp=Z,2μm,10.4s						
MYKOM	**Kota Tinggi**	**22.42**	**158**	P	**P**	**12 43 35.4**	**-0.9**
MYKOM	**Kota Tinggi**	**22.42**	**158**	P	**P**	**12 43 39.0**	**+2.7**
NIL	**Nilore**	**22.50**	**303**	P	**P**	**12 43 36.6**	**-0.5**
NIL				pmax	pmax		
	comp=Z,139nm,0.9s						
NIL	**Nilore**	**22.50**	**303**	P	**P**	**12 43 36.6**	**-0.5**
TIA	**Tai'an**	**22.73**	**50**	P	**P**	**12 43 38.5**	**-1.0**
TIA				S	**S**	**12 47 47.0**	**+1.0**
TIA				pmax	pmax		
	comp=Z,16nm,1.0s						
TIA				LR	LR		
	comp=Z,2μm,16.2s						
TIA				LR	LR		
	comp=Z,2μm,14.5s						
TIA				LR	LR		
	comp=Z,1μm,8.6s						
BKNI	**Bangkinang**	**23.04**	**166**	P	**P**	**12 43 46.1**	**+3.3**
	comp=Z,61nm,0.6s						
BKNI	**Bangkinang**	**23.04**	**166**	P	**P**	**12 43 43.8**	**+1.0**
BKNI				IAmb	IAmb	12 44 02.8	
	comp=Z,51nm,0.5s						
SSLB	**Suanglung**	**23.11**	**83**	P	**P**	**12 43 40.5**	**-3.0**
SSLB				IAmb	IAmb	12 43 46.9	
	comp=Z,125nm,1.9s						
KSH	**Kashi**	**23.60**	**319**	⇑*iP*	**P**	**12 43 49.5**	**+1.2**
KSH				pP	pP	12 43 52.3	-5.1
KSH				PP	**PnPn**	**12 44 21.3**	**+5.4**
KSH				S	**S**	**12 48 00.8**	**+0.1**
KSH				sS	pS	12 48 06.0	-4.3
KSH				SS	**SnSn**	**12 48 47.8**	**+8.8**
KSH				pmax	pmax		
	comp=Z,340nm,1.0s						
KSH				pmax	pmax		
	comp=Z,820nm,4.4s						
KSH				LR	LR		
	comp=Z,2μm,10.4s						
KSH				LR	LR		
	comp=

PRZ **Przheval'sk** 24.29 327 P **P** 12 43 56.7 +1.8
PRZ pmax pmax
comp=Z,409nm,1.6s
PRZ **Przheval'sk** 24.29 327 P **P** 12 43 56.7 +1.8
PDGK **Podgornoye** 24.42 330 P **P** 12 43 56.4 +0.5
KDJ **Kajisay** 24.66 325 P **P** 12 44 00.4 +2.2
KDJ pmax pmax
comp=Z,236nm,1.2s
KDJ **Kajisay** 24.66 325 P **P** 12 44 00.4 +2.2
NRN **Naryn** 24.82 323 P **P** 12 44 01.9 +2.1
NRN pmax pmax
comp=Z,113nm,1.4s
NRN **Naryn** 24.82 323 P **P** 12 44 01.9 +2.1
NRN IAmb IAmb 12 44 03.4
comp=Z,113nm,1.4s
ULHL **Ulahol** 25.24 324 P **P** 12 44 05.3 +1.8
SNR=32
KSM **Kuching** 25.56 145 P **P** 12 44 05.1 -1.2
KSM IAmb IAmb 12 44 09.8
comp=Z,99nm,1.8s
BOOM **Boomskoye usch** 25.57 324 P **P** 12 44 07.4 +1.0
BOOM **Boomskoye usch** 25.57 324 P **P** 12 44 07.4 +1.0
KZA **Kyzart** 25.67 323 P **P** 12 44 09.0 +1.4
SNR=13
SBUM **Sibu** 25.85 140 P **P** 12 44 09.6 +0.6
SBUM **Sibu** 25.85 140 P **P** 12 44 12.0 +3.1
KBL **Kabul** 26.07 302 P **P** 12 44 12.2 +1.1
KBL pmax pmax
comp=Z,230nm,1.9s
KBL **Kabul** 26.07 302 P **P** 12 44 12.2 +1.1
UCH **Uchtor** 26.18 322 P **P** 12 44 13.5 +1.2
SNR=34
MK31 **Makanchi Array** 26.19 339 P **P** 12 44 11.4 -0.4
MK31 pmax pmax
comp=Z,41nm,1.0s
MK31 **Makanchi Array** 26.19 339 P **P** 12 44 11.4 -0.4
MK31 IAmb IAmb 12 44 15.5
comp=Z,41nm,0.9s
MKAR **Makanchi Array** 26.19 339 *ce*P **P** 12 44 12.1 +0.3
MKAR pmax pmax
comp=Z,29nm,0.8s
MKAR **Makanchi Array** 26.19 339 P **P** 12 44 12.5 +0.7
comp=Z,23nm,0.7s,baz=144,slow=11,SNR=96
MKAR ScP **ScP** 12 51 18.6 +2.9
comp=Z,1.0nm,1.0s,baz=159,slow=4.8,SNR=3.9
MKAR LR LR 12 56 01.0
comp=Z,604nm,20.5s,baz=155,slow=40
MKAR **Makanchi Array** 26.19 339 P **P** 12 44 11.3 -0.5
KBK **Karagaybulak** 26.22 324 P **P** 12 44 14.1 +1.8
SNR=46
SONM **Songino Array** 26.26 16 P **P** 12 44 12.4 -0.1
SONM pmax pmax
comp=Z,7.0nm,0.8s
SONM **Songino Array** 26.26 16 P **P** 12 44 12.7 +0.2
comp=Z,8.0nm,0.7s,baz=198,slow=11,SNR=25
SONM LR LR 12 54 31.6
comp=Z,278nm,21.5s,baz=198,slow=36
SONM **Songino Array** 26.26 16 P **P** 12 44 12.4 -0.1
MAKZ **Makanchi** 26.30 338 P **P** 12 44 12.9 0.0
MAKZ pmax pmax
comp=Z,53nm,1.0s
MAKZ **Makanchi** 26.30 338 P **P** 12 44 12.9 0.0
MAKZ IAmb IAmb 12 44 40.2
comp=Z,53nm,1.0s
AAK **Ala-Archa** 26.46 323 P **P** 12 44 15.7 +1.2
AAK pmax pmax
comp=Z,62nm,1.0s
AAK **Ala-Archa** 26.46 323 P **P** 12 44 16.4 +1.9
comp=Z,53nm,1.0s,baz=137,slow=5.6,SNR=106
AAK ScP **ScP** 12 51 21.5 +4.8
comp=Z,3.1nm,1.0s,baz=200,slow=5.0,SNR=3.8
AAK LR LR 12 56 37.6
comp=Z,413nm,19.9s,baz=348,slow=41
AAK **Ala-Archa** 26.46 323 P **P** 12 44 16.4 +1.9
SNR=47
AAK **Ala-Archa** 26.46 323 P **P** 12 44 15.7 +1.2
AAK IAmb IAmb 12 44 17.5
comp=Z,62nm,0.9s
ULN **Ulaanbaatar** 26.46 17 P **P** 12 44 14.3 -0.1
ULN pmax pmax
comp=Z,47nm,1.5s
ULN **Ulaanbaatar** 26.46 17 P **P** 12 44 14.3 -0.1
FRU1 **Bishkek** 26.50 323 P **P** 12 44 16.2 +1.5
FRU1 pmax pmax
comp=Z,69nm,1.1s
FRU1 **Bishkek** 26.50 323 P **P** 12 44 16.2 +1.5
FRU1 IAmb IAmb 12 44 17.6
comp=Z,69nm,1.1s
CHMS **Chumysh** 26.56 324 P **P** 12 44 16.3 +1.1
SNR=16
AML **Almayashu** 26.58 321 P **P** 12 44 17.5 +1.6
SNR=47
USP **Ospenovka** 26.87 324 P **P** 12 44 19.4 +1.3
SNR=27
EKS2 **Erkin-Say** 26.88 322 P **P** 12 44 19.9 +1.7
SNR=44
SPMM **Sapulut** 26.96 129 P **P** 12 44 21.0 +1.9
ZAK **Zakamensk** 28.02 10 *e*P **P** 12 44 27.8 -0.5
ZAK pmax pmax
comp=Z,18nm,1.6s
MDSI **Maura Dua** 28.45 162 P **P** 12 44 32.3 0.0
comp=Z,5.9nm,1.2s
TAS **Tashkent** 28.81 316 P **P** 12 44 36.8 +1.5
TAS pmax pmax
comp=Z,97nm,1.0s
TAS **Tashkent** 28.81 316 P **P** 12 44 36.8 +1.5
MOY **Mondy** 28.97 7 *e*P **P** 12 44 37.6 +0.8
MOY pmax pmax
comp=Z,34nm,2.1s
KK31 **Karatay Array** 29.04 320 P **P** 12 44 37.7 +0.3
KK31 pmax pmax
comp=Z,13nm,1.0s
KK31 **Karatay Array** 29.04 320 P **P** 12 44 37.7 +0.3
KKAR **Karatay Array** 29.04 320 P **P** 12 44 37.5 +0.1
KKAR pmax pmax
comp=Z,13nm,1.0s
KKAR **Karatay Array** 29.04 320 P **P** 12 44 37.5 +0.1
TLY **Talaya** 29.34 10 *e*P **P** 12 44 40.1 +0.2
TLY *e*PPP PPP 12 45 38.0
TLY *e*S **S** 12 49 39.8 +8.6
TLY *e*SSS SSS 12 51 10.4
TLY pmax pmax
comp=Z,35nm,2.2s
TLY MLR MLR
comp=Z,2μm,17.0s
TLY **Talaya** 29.34 10 P **P** 12 44 40.5 +0.6
comp=Z,0.8nm,0.2s,baz=210,slow=8.6,SNR=5.8
TLY LR LR 12 57 22.4
comp=Z,1μm,18.9s,baz=184,slow=38
TLY **Talaya** 29.34 10 P **P** 12 44 39.5 -0.4
IRK **Irkutsk** 29.98 10 *e*P **P** 12 44 47.4 +1.8
IRK pmax pmax
comp=Z,59nm,2.0s
KURK **Kurchatov** 30.80 338 P **P** 12 44 52.3 -0.5
KURK pmax pmax
comp=Z,10.0nm,0.8s
KURK **Kurchatov** 30.80 338 P **P** 12 44 52.3 -0.5
KSRS **Korea Array** 31.14 55 P **P** 12 44 54.5 -1.4
comp=Z,1.1nm,0.9s,baz=251,slow=7.8,SNR=3.5
KSRS LR LR 12 59 27.3
comp=Z,454nm,21.3s,baz=252,slow=40
HRA **Herat** 31.44 299 P **P** 12 44 59.6 +0.7
ZAA0 **Zalesovo Array** 32.07 348 P **P** 12 45 01.9 -2.0
ZALV **Zalesovo Beam** 32.07 348 P **P** 12 45 03.8 -0.1
comp=Z,4.0nm,0.6s,baz=168,slow=8.0,SNR=13
ZALV **Zalesovo Beam** 32.07 348 P **P** 12 45 03.0 -0.9
CN2 **Changchun** 32.08 42 *e*P **P** 12 45 06.3 +2.1
CN2 *e*S **S** 12 50 16.3 +2.0
CN2 LR LR
comp=Z,1μm,16.0s
CN2 LR LR
comp=Z,920nm,16.0s
CN2 LR LR
comp=Z,970nm,17.0s
HIA **Hailar** 32.37 30 P **P** 12 45 06.6 -0.1
HIA pmax pmax
comp=Z,50nm,1.5s
HIA **Hailar** 32.37 30 P **P** 12 45 06.6 -0.1
HIA IAmb IAmb 12 45 10.7
comp=Z,50nm,1.5s
GEYT **Alibeck** 35.50 304 P **P** 12 45 36.0 +1.9
comp=Z,19nm,1.2s,baz=120,slow=5.8,SNR=30
GEYT ScP **ScP** 12 51 48.9 +2.2
comp=Z,1.5nm,0.6s,baz=97,slow=12,SNR=5.9
GEYT LR LR 13 03 19.0
comp=Z,749nm,18.7s,baz=85,slow=42
GEYT **Alibeck** 35.50 304 P **P** 12 45 35.7 +1.6
GYA0B **ALIBECK ARRAY** 35.50 304 P **P** 12 45 35.9 +1.8
GYA0B IAmb IAmb 12 45 37.5
comp=Z,31nm,1.1s
BRVK **Borovoye** 35.80 334 P **P** 12 45 35.9 -0.5
BRVK pmax pmax
comp=Z,23nm,1.3s
BRVK **Borovoye** 35.80 334 P **P** 12 45 35.9 -0.5
USRK **Ussuriysk Ar.** 36.46 46 P **P** 12 45 41.9 -0.2
USRK **Ussuriysk Ar.** 36.46 46 P **P** 12 45 40.4 -1.7
comp=Z,1.8nm,0.6s,baz=227,slow=13,SNR=7.5
USRK LR LR 13 02 11.4
comp=Z,480nm,20.8s,baz=221,slow=39
USRK **Ussuriysk Ar.** 36.46 46 P **P** 12 45 41.9 -0.2
BOD **Bodaibo** 37.26 16 *e*P **P** 12 45 48.6 -0.1
BOD pmax pmax
comp=Z,42nm,1.8s
INU **Inuyama** 37.82 61 P **P** 12 45 52.5 -1.2
INU IAmb IAmb 12 46 33.3
comp=Z,80nm,1.6s
AB31 **Akbulak array** 38.53 322 *i* P **P** 12 45 59.9 +0.3
ABKAR **Akbulak array** 38.53 322 P **P** 12 45 59.8 +0.2
KLR **Kul'dur** 38.58 38 LR LR 13 01 36.5
comp=Z,310nm,19.7s,baz=236,slow=36
ZEA **Zeya** 38.85 30 *e*P **P** 12 46 02.6 +0.4
ZEA pmax pmax
comp=Z,48nm,1.6s
ZEA MLR MLR
comp=Z,2μm,13.0s
ZEA MLR MLR
comp=E,600nm,14.0s
ZEA MLR MLR
comp=N,1μm,13.0s
MJB9 **Matsu-Tunnel** 38.94 60 P **P** 12 46 02.0 -1.2
MJB9 IAmb IAmb 12 46 05.9
comp=Z,43nm,1.1s
MAJO **Matsushiro** 38.94 60 P **P** 12 46 02.3 -0.9
MAJO pmax pmax
comp=Z,40nm,1.1s
MAJO **Matsushiro** 38.94 60 P **P** 12 46 02.3 -0.9
MAJO IAmb IAmb 12 46 05.9
comp=Z,40nm,1.1s
MAT **Matsushiro** 38.94 60 P **P** 12 46 02.0 -1.2
MJAR **Matsushiro Arr** 38.94 60 P **P** 12 46 04.5 +1.3
MJAR pmax pmax
comp=Z,32nm,1.4s
MJAR **Matsushiro Arr** 38.94 60 P **P** 12 46 02.2 -1.1
comp=Z,35nm,1.2s,baz=271,slow=8.9,SNR=24
MJAR LR LR 13 02 58.2
comp=Z,707nm,19.0s,baz=270,slow=38
MJAR **Matsushiro Arr** 38.94 60 P **P** 12 46 04.5 +1.3
SVE **Sverdlovsk** 42.44 332 ⇓*e*P **P** 12 46 32.3 +0.5
SVE pmax pmax
comp=Z,47nm,0.9s
SOEI **Soe** 42.81 136 P **P** 12 46 34.6 -0.8
SOEI IAmb IAmb 12 46 44.6
comp=Z,76nm,1.0s
ARU **Arti** 43.12 331 *c i*P **P** 12 46 37.3 0.0
ARU 12 48 19.4
ARU S **S** 12 53 06.6 +5.2
ARU pmax pmax
comp=Z,15nm,0.8s
ARU **Arti** 43.12 331 P **P** 12 46 36.9 -0.5
ASAJ **Asahikawa** 43.68 49 P **P** 12 46 41.5 -0.4
comp=Z,4.7nm,0.8s,baz=201,slow=18
JKA **Kamikawa-asahi** 43.68 49 P **P** 12 46 41.5 -0.4
MAK **Makhachkala** 44.49 309 *e*P P 12 46 42.0 -6.5
MAK *e*S **S** 12 53 16.4 -5.3
MAK pmax pmax
comp=Z,190nm,0.9s
MAK MLR MLR
comp=Z,494nm,17.0s
YAK **Yakutsk** 45.38 22 *e*P **P** 12 46 54.4 -0.8
YAK pmax pmax
comp=Z,35nm,1.4s
YAK **Yakutsk** 45.38 22 P **P** 12 46 54.5 -0.8
comp=Z,3.1nm,0.4s,baz=218,slow=7.0,SNR=9.2
YAK **Yakutsk** 45.38 22 P **P** 12 46 54.4 -0.8
YAK IAmb IAmb 12 46 58.5
comp=Z,37nm,1.3s
YUK **Yuzh-Kuril'sk** 45.96 50 *e*P **P** 12 46 56.9 -3.3
YUK *e* 12 48 46.4
YUK *e*S **S** 12 53 41.0 -1.9
YUK pmax pmax
comp=Z,540nm,2.2s
YUK MLR MLR
comp=Z,291nm,18.0s
RAYN **Ar Rayn** 46.02 281 P **P** 12 47 02.5 +1.5
RAYN pmax pmax
comp=Z,19nm,1.2s
RAYN **Ar Rayn** 46.02 281 P **P** 12 47 02.5 +1.5
RAYN IAmb IAmb 12 47 11.9
comp=Z,19nm,1.1s
TBLG **Delisi** 46.32 306 P **P** 12 47 04.6 +1.5
TBLG pmax pmax
comp=Z,11nm,0.8s
TBLG **Delisi** 46.32 306 P **P** 12 47 04.6 +1.5
ZEI **Tsey** 47.08 308 *e*P **P** 12 47 08.9 -0.3
ZEI pmax pmax
comp=Z,21nm,0.9s
AKH **Akhalkalaki** 47.21 306 P **P** 12 47 11.9 +1.6
AKH pmax pmax
comp=Z,17nm,0.9s
AKH **Akhalkalaki** 47.21 306 ⇑P **P** 12 47 12.8 +2.5
AKH **Akhalkalaki** 47.21 306 P **P** 12 47 11.9 +1.6
AKH IAmb IAmb 12 47 33.4
comp=Z,17nm,0.9s
GUMO **Guam** 47.34 92 LR LR 13 07 12.8
comp=Z,193nm,19.6s,baz=277,slow=36
KBZ **Khabaz** 47.93 309 *e*P **P** 12 47 14.8 -0.8
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KBZ **Khabaz** 47.93 309 P **P** 12 47 15.5 -0.1
comp=Z,3.9nm,0.9s,baz=126,slow=8.7,SNR=6.4
KBZ LR LR 13 10 13.5
comp=Z,342nm,18.7s,baz=80,slow=40
SHA1 **Shidzhatmaz** 48.11 309 ⇓*e*P **P** 12 47 18.4 +1.2
KIV **Kislovodsk** 48.12 309 *e*P **P** 12 47 18.2 +1.0
KIV pmax pmax
comp=Z,76nm,1.1s
KIV MLR MLR
comp=Z,629nm,16.0s
KIV **Kislovodsk** 48.12 309 P **P** 12 47 18.1 +1.0
KIV IAmb IAmb 12 47 21.9
comp=Z,23nm,1.0s
VRH **Novokhopyorsk** 50.10 318 *e*P **P** 12 47 30.1 -2.0
VRH pmax pmax
comp=Z,50nm,1.4s
KNRA **Kunumurra** 50.13 137 P **P** 12 47 31.2 -1.4
FITZ **Fitzroy Crossi** 50.13 142 P **P** 12 47 31.9 -0.8
comp=Z,8.2nm,0.8s,baz=327,slow=11,SNR=5.9
FITZ LR LR 13 11 43.8
comp=Z,249nm,19.1s,baz=310,slow=40
FITZ **Fitzroy Crossi** 50.13 142 P **P** 12 47 32.6 -0.1
FITZ IAmb IAmb 12 47 34.7
comp=Z,39nm,1.4s
JAY **Jayapura** 50.55 114 LR LR 13 07 21.2
comp=Z,164nm,21.9s,baz=290,slow=34
PRGR **Permogore** 51.51 332 *e*P **P** 12 47 41.6 -0.9
PRGR *e*S **S** 12 54 57.7 -2.8
PRGR pmax pmax
comp=Z,25nm,0.8s
VORD **Divnogorie** 51.55 318 *e*P **P** 12 47 42.3 -0.7
VORD pmax pmax
comp=Z,8.0nm,0.8s
VSR **Storozhevoye** 51.68 318 *e*P **P** 12 47 41.7 -2.2
VSR pmax pmax
comp=Z,5.0nm,0.9s
LPSR **Galich'ya Gora** 52.10 320 *e*P **P** 12 47 45.3 -1.7
LPSR pmax pmax
comp=Z,10.0nm,0.8s
TIXI **Tiksi** 52.26 13 ⇓*e*P **P** 12 47 47.2 -0.7
TIXI pmax pmax
comp=Z,38nm,1.2s
TIXI **Tiksi** 52.26 13 P **P** 12 47 46.6 -1.3
comp=Z,11nm,0.7s,baz=180,slow=24,SNR=20
TIXI **Tiksi** 52.26 13 P **P** 12 47 44.9 -3.0
TIXI IAmb IAmb 12 47 51.1
comp=Z,30nm,1.1s
MA2 **Magadan** 52.93 31 ⇓*e*P **P** 12 47 53.3 +0.2
MA2 pmax pmax
comp=Z,72nm,1.4s
MA2 **Magadan** 52.93 31 P **P** 12 47 52.6 -0.5
comp=Z,16nm,0.8s,baz=260,slow=7.5,SNR=11
MA2 **Magadan** 52.93 31 P **P** 12 47 52.6 -0.5
MA2 IAmb IAmb 12 47 56.4
comp=Z,53nm,1.1s
KLMR **Klimovskoe** 53.96 330 *e*P **P** 12 47 59.3 -1.3
KLMR *e* 12 49 04.5
KLMR *e* 12 50 01.1
KLMR pmax pmax
comp=Z,59nm,1.5s
KLMR **Klimovskoe** 53.96 330 *e*P **P** 12 47 59.4 -1.2
KLMR AMP 12 48 16.6
comp=Z,59nm,1.5s
KLMR *e*PcP **PcP** 12 49 04.6 -1.0
KLMR *e*PP **PP** 12 50 01.1 -0.8
KLMR LQ LQ 13 07 30.5
KLMR LQ LQ 13 07 30.5
OBN **Obninsk** 53.98 322 ⇑*e*P **P** 12 48 00.8 0.0
OBN *e**SP **pP** 12 48 06.0 -4.6
OBN *e* 12 48 13.0
OBN 12 49 07.0
OBN pmax pmax
comp=Z,11nm,0.3s
OBN MLR MLR
comp=Z,338nm,12.0s
BRTR **Keskin Array B** 54.64 303 P **P** 12 48 08.4 +2.2
BRTR **Keskin Array B** 54.64 303 P **P** 12 48 05.8 -0.4
comp=Z,1.3nm,1.1s,baz=109,slow=7.6,SNR=2.9
BRTR PP **PP** 12 50 04.2 -4.5
comp=Z,1.4nm,0.9s,baz=111,slow=2.0,SNR=2.8
BRTR LR LR 13 15 51.3
comp=Z,113nm,19.6s,baz=58,slow=41
BRTR **Keskin Array B** 54.64 303 P **P** 12 48 08.4 +2.2
SEY **Seymchan** 54.78 28 P **P** 12 48 01.8 -4.8
comp=Z,1.1nm,0.5s,baz=233,slow=20,SNR=4.4
PEA0B **Petropavlovsk-** 55.19 40 *e*P **P** 12 48 08.6 -1.1
PETK **Petropavlovsk-** 55.19 40 P **P** 12 48 09.0 -0.7
PETK **Petropavlovsk-** 55.19 40 P **P** 12 48 07.0 -2.8
comp=Z,4.0nm,1.0s,baz=251,slow=6.8,SNR=3.8
PETK LR LR 13 13 06.7
comp=Z,250nm,19.7s,baz=239,slow=38
PETK **Petropavlovsk-** 55.19 40 P **P** 12 48 09.0 -0.7
TMCR **Tamitsa** 55.69 333 *e*P **P** 12 48 17.0 +3.9
TMCR pmax pmax
comp=Z,16nm,1.0s
PET **Petropavlovsk** 55.75 41 P **P** 12 48 12.3 -1.4
PET pmax pmax
comp=Z,147nm,2.0s
PET **Petropavlovsk** 55.75 41 P **P** 12 48 12.3 -1.4
WB0 **Warramunga Arr** 56.74 135 P **P** 12 48 20.7 -0.6
WB0 IAmb IAmb 12 48 23.2
comp=Z,66nm,1.8s
WRA **Warramunga Arr** 56.84 136 P **P** 12 48 21.4 -0.5
WRA **Warramunga Arr** 56.84 136 P **P** 12 48 20.1 -1.8
comp=Z,8.1nm,0.8s,baz=322,slow=7.5,SNR=14
WRA LR LR 13 16 35.7
comp=Z,165nm,19.5s,baz=320,slow=40
WRA **Warramunga Arr** 56.84 136 P **P** 12 48 21.4 -0.5
WRAB **Tennant Creek** 56.84 136 P **P** 12 48 21.1 -0.8
WRAB pmax pmax
comp=Z,17nm,0.9s
WRAB **Tennant Creek** 56.84 136 P **P** 12 48 21.1 -0.8
WRAB IAmb IAmb 12 48 24.6
comp=Z,17nm,0.9s
WB2 **Warramunga Arr** 56.84 136 P **P** 12 48 21.3 -0.7
WB2 IAmb IAmb 12 48 24.6
comp=Z,18nm,0.9s
WR0 **Warramunga Arr** 56.98 135 P **P** 12 48 21.8 -1.1
WR0 IAmb IAmb 12 48 25.9
comp=Z,13nm,0.8s
AKASG **Malin Array Be** 57.86 316 P **P** 12 48 27.9 -0.8
comp=Z,4.1nm,0.6s,baz=82,slow=6.3,SNR=1.5
AKASG LR LR 13 18 00.3
comp=Z,277nm,20.3s,baz=315,slow=41
AKASG **Malin Array Be** 57.86 316 P **P** 12 48 27.9 -0.8
AKBB **Malin Array Si** 57.86 316 P **P** 12 48 26.7 -2.0
AKBB pmax pmax
comp=Z,9.0nm,0.9s
AKBB **Malin Array Si** 57.86 316 P **P** 12 48 26.7 -2.0
NWAO **Narrogin (SRO)** 59.19 159 P **P** 12 48 37.5 -0.6
NWAO pmax pmax
comp=Z,122nm,2.0s
NWAO **Narrogin (SRO)** 59.19 159 LR LR 13 14 38.4
comp=Z,376nm,20.2s,baz=338,slow=37
NWAO **Narrogin (SRO)** 59.19 159 P **P** 12 48 37.5 -0.6
AS31 **Alice Springs** 59.30 139 P **P** 12 48 38.6 -0.6
ASAR **Alice Springs** 59.30 139 P **P** 12 48 38.7 -0.4
ASAR **Alice Springs** 59.30 139 P **P** 12 48 38.0 -1.1
comp=Z,4.6nm,0.7s,baz=319,slow=5.5,SNR=19
ASAR LR LR 13 16 44.4
comp=Z,159nm,21.6s,baz=316,slow=39
ASAR **Alice Springs** 59.30 139 P **P** 12 48 38.7 -0.4
VRI **Vrincioaia** 59.52 311 ⇑P **P** 12 48 41.5 +1.1
VRI **Vrincioaia** 59.52 311 ⇑P **P** 12 48 41.5 +1.1
PLOR **Plostina** 59.57 311 ⇑P **P** 12 48 42.1 +1.3
PLOR **Plostina** 59.57 311 ⇑P **P** 12 48 42.1 +1.3
PMG **Port Moresby** 59.66 117 LR LR 13 16 33.0
comp=Z,76nm,20.3s,baz=292,slow=38
BIZ **Bicaz** 59.91 312 ⇑P **P** 12 48 44.5 +1.5
MLR **Muntele Rosu** 60.09 310 ⇑P **P** 12 48 46.1 +1.7
FINES **FINESS Array B** 60.44 329 P **P** 12 48 45.8 -0.7
comp=Z,3.0nm,0.8s,baz=98,slow=7.2,SNR=5.3
FINES LR LR 13 17 04.6
comp=Z,613nm,21.0s,baz=274,slow=38
FINES **FINESS Array B** 60.44 329 P **P** 12 48 45.0 -1.5
DOPR **Dopca** 60.45 311 ⇑P **P** 12 48 49.1 +2.3
BURAR **Bucovina Array** 60.48 313 ⇑P **P** 12 48 46.8 -0.3
BURAR **Bucovina Array** 60.48 313 ⇑P **P** 12 48 46.8 -0.3
ARR **Arges** 61.01 310 ⇑P **P** 12 48 51.0 +0.3
KRVT **Keravat (AS076** 61.17 109 LR LR 13 14 01.8
comp=Z,94nm,20.1s,baz=294,slow=35
BILL **Bilibino** 61.65 24 ⇓*e*P **P** 12 48 53.7 -0.9
BILL *e**SP **pP** 12 49 00.3 -4.1
BILL *e* 12 49 06.0
BILL 12 49 39.0
BILL S S 12 57 05.0 -10
BILL SSS SSS 13 03 54.0
BILL pmax pmax
comp=Z,30nm,1.3s
BILL MLR MLR
comp=Z,915nm,18.0s
BILL **Bilibino** 61.65 24 P **P** 12 48 53.7 -0.9
FORT **Forrest** 61.73 149 P **P** 12 48 55.6 +0.2
KMBO **Kilima Mbogo** 61.74 256 LR LR 13 14 31.1
comp=Z,274nm,21.6s,baz=94,slow=35
ARCES **ARCESS Array B** 61.84 338 P **P** 12 48 55.6 -0.2
ARCES **ARCESS Array B** 61.84 338 P **P** 12 48 53.7 -2.1
comp=Z,6.2nm,0.8s,baz=81,slow=5.8,SNR=6.4
ARCES **ARCESS Array B** 61.84 338 P **P** 12 48 55.5 -0.2
KWP **Kalwaria Pacla** 62.05 315 P **P** 12 48 56.5 -1.1
KWP pmax pmax
comp=Z,190nm,1.0s
KWP **Kalwaria Pacla** 62.05 315 P **P** 12 48 56.5 -1.1
DRGR 62.24 312 ⇑P **P** 12 48 59.3 +0.3
DRGR 62.24 312 ⇑P **P** 12 48 59.3 +0.3
GZR **Gura Zlata** 62.32 310 ⇑P P 12 49 06.1 +6.6
GZR **Gura Zlata** 62.32 310 ⇑P P 12 49 06.1 +6.6
HERR **Herculane** 62.62 310 ⇓P **P** 12 49 04.4 +3.0
ABPO **Ambohimpanom** 63.15 233 P **P** 12 49 05.7 +0.3
ABPO pmax pmax
comp=Z,21nm,1.7s
ABPO **Ambohimpanom** 63.15 233 P **P** 12 49 05.7 +0.3
ABPO IAmb IAmb 12 49 26.8
comp=Z,21nm,1.6s
VYHS **Vyhne** 64.68 314 *e*P P 12 49 20.1 +5.1
VYHS **Vyhne** 64.68 314 *e*P P 12 49 20.1 +5.1
KRLC **Kraliky** 65.83 316 *e*P P 12 49 27.7 +5.2
KRLC *e* 12 49 33.4
KRLC **Kraliky** 65.83 316 *e*P P 12 49 27.7 +5.2
KRLC *ex* x 12 49 33.4
VRAC **Vranov** 66.05 315 ⇑P **P** 12 49 24.6 +0.8
VRAC **Vranov** 66.05 315 LR LR 13 21 01.4
comp=Z,450nm,21.2s,baz=70,slow=38
VRAC **Vranov** 66.05 315 ⇑P **P** 12 49 24.6 +0.8
OSTC **Ostas** 66.13 317 *e*P P 12 49 34.5 +10
OSTC *ex* x 12 49 42.8
CHVC **Chvalec** 66.23 317 *e*P P 12 49 30.9 +5.9
CHVC *ex* x 12 49 36.9
UPC **Upice** 66.26 317 *e*P P 12 49 39.2 +14
UPC **Upice** 66.26 317 *e*P P 12 49 39.2 +14
HFS **Hagfors** 66.50 327 LR LR 13 19 14.3
comp=Z,550nm,19.0s,baz=3.5,slow=37
PRU **Pruhonice** 67.27 316 *e*P P 12 49 38.7 +7.1
PRU **Pruhonice** 67.27 316 *e*P P 12 49 38.7 +7.1
BBOO **Buckleboo** 67.45 144 P **P** 12 49 32.2 -0.6
NC303 **NORSAR Array S** 67.52 329 P **P** 12 49 32.9 -0.1

NB2	**NORSAR Subarra**	**67.62**	**328**	P		**P**	**12 49 33.0**	**-0.6**
	comp=Z,4.8nm,1.1s,baz=83,slow=6.5							
NOA	**NORSAR Array B**	**67.62**	**328**	P		**P**	**12 49 32.7**	**-0.9**
	comp=Z,0.9nm,0.6s,baz=83,slow=6.2,SNR=3.8							
NOA				LR		LR	13 21 17.6	
	comp=Z,396nm,18.5s,baz=90,slow=38							
NC204	**NORSAR Array S**	**67.81**	**329**	P		**P**	**12 49 33.8**	**-1.0**
GERES	**GERESS Array B**	**68.00**	**315**	P		**P**	**12 49 36.2**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=57,slow=4.9,SNR=6.5							
GERES				PP		**PP**	**12 52 00.5**	**-5.8**
	comp=Z,1.3nm,0.8s,baz=52,slow=6.4,SNR=3.8							
GERES				LR		LR	13 26 12.5	
	comp=Z,342nm,19.7s,baz=34,slow=42							
GERES	**GERESS Array B**	**68.00**	**315**	P		**P**	**12 49 35.5**	**-0.8**
CLL	**Collm**	**68.03**	**318**	*e*P		**P**	**12 49 40.0**	**+3.7**
CLL	**Collm**	**68.03**	**318**	*e*pP		**P**	**12 49 40.0**	**+3.7**
CLL				*e*PP		**PP**	**12 52 06.0**	**-0.3**
KHC	**Kasperske Hory**	**68.03**	**315**	*e*P		P	12 49 48.2	+12
KHC	**Kasperske Hory**	**68.03**	**315**	*e*P		P	12 49 48.2	+12
STKA	**Stephens Creek**	**69.92**	**140**	P		**P**	**12 49 47.9**	**-0.4**
STKA				pmax		pmax		
	comp=Z,7.0nm,1.7s							
STKA	**Stephens Creek**	**69.92**	**140**	P		**P**	**12 49 46.8**	**-1.5**
	comp=Z,3.1nm,0.7s,baz=322,slow=7.4,SNR=7.8							
STKA				LR		LR	13 26 07.1	
	comp=Z,160nm,18.9s,baz=313,slow=41							
STKA	**Stephens Creek**	**69.92**	**140**	P		**P**	**12 49 47.9**	**-0.4**
NOR	**Nord**	**70.65**	**352**	*i* P		**P**	**12 49 51.1**	**-1.0**
	comp=Z,29nm,1.2s							
GAMB	**Gambell**	**70.78**	**28**	P		**P**	**12 49 52.2**	**-0.9**
GAMB				IAmb		IAmb	12 49 56.8	
	comp=Z,24nm,1.2s							
DAVOX	**Davos/Dischmat**	**70.94**	**314**	LR		LR	13 23 48.0	
	comp=Z,321nm,20.8s,baz=61,slow=38							
WLF	**Walferdange**	**72.65**	**317**	pP		**P**	**12 50 06.5**	**+1.9**
RDOG	**Red Dog Mine**	**73.08**	**23**	P		P	**12 50 06.3**	**-0.5**
RDOG				IAmb		IAmb	12 50 10.5	
	comp=Z,33nm,1.4s							
DAG	**Danmarks Havn**	**73.20**	**347**	*i* P		**P**	**12 50 06.0**	**-1.4**
DAG				pmax		pmax		
	comp=Z,14nm,1.0s							
DAG	**Danmarks Havn**	**73.20**	**347**	*i* P		**P**	**12 50 06.0**	**-1.4**
	comp=Z,14nm,1.0s							
ANM	**Nome**	**73.25**	**26**	P		**P**	**12 50 08.9**	**+1.0**
ANM				pmax		pmax		
	comp=Z,27nm,1.2s							
ANM	**Nome**	**73.25**	**26**	P		P	**12 50 08.9**	**+1.0**
ANM				IAmb		IAmb	12 50 11.9	
	comp=Z,27nm,1.2s							
TTA	**Tatalina**	**77.72**	**26**	P		**P**	**12 50 33.8**	**+0.1**
TTA	**Tatalina**	**77.72**	**26**	P		P	**12 50 33.8**	**+0.1**
COLD	**Coldfoot**	**77.83**	**21**	P		P	**12 50 35.9**	**+1.7**
MLY	**Manley**	**78.76**	**23**	P		P	**12 50 38.9**	**-0.4**
MLY				IAmb		IAmb	12 50 43.3	
	comp=Z,23nm,1.0s							
BPAW	**Bear Paw Mtn.**	**79.14**	**24**	P		P	**12 50 41.4**	**0.0**
PPLA	**Purkeypile**	**79.28**	**26**	P		P	**12 50 42.6**	**+0.3**
PPLA				IAmb		IAmb	12 50 45.6	
	comp=Z,38nm,1.2s							
MDM	**Murphy Dome**	**79.71**	**23**	P		P	**12 50 43.6**	**-0.9**
MDM				IAmb		IAmb	12 50 48.2	
	comp=Z,45nm,1.1s							
FYU	**Fort Yukon**	**79.84**	**21**	P		**P**	**12 50 46.4**	**+1.3**
COLA	**College**	**79.89**	**23**	P		P	**12 50 45.9**	**+0.5**
COLA				pmax		pmax		
	comp=Z,55nm,1.7s							
COLA	**College**	**79.89**	**23**	P		P	**12 50 45.9**	**+0.5**
COLA				IAmb		IAmb	12 50 48.9	
	comp=Z,55nm,1.6s							
SUMG	**Summit**	**79.89**	**347**	P		**P**	**12 50 44.7**	**-1.1**
SUMG				pmax		pmax		
	comp=Z,40nm,1.1s							
SUMG	**Summit**	**79.89**	**347**	*i* P		**P**	**12 50 45.0**	**-0.8**
	comp=Z,104nm,1.1s							
SUMG	**Summit**	**79.89**	**347**	P		**P**	**12 50 44.7**	**-1.1**
SUMG				IAmb		IAmb	12 50 46.8	
	comp=Z,40nm,1.1s							
SKT	**Skwentna**	**80.00**	**26**	P		P	**12 50 45.0**	**-1.2**
SKT				IAmb		IAmb	12 50 49.2	
	comp=Z,46nm,1.1s							
MCK	**McKinley**	**80.11**	**24**	P		**P**	**12 50 46.2**	**-0.5**
MCK				pmax		pmax		
	comp=Z,19nm,1.1s							
MCK	**McKinley**	**80.11**	**24**	P		P	**12 50 46.2**	**-0.5**
MCK				IAmb		IAmb	12 50 50.0	
	comp=Z,19nm,1.1s							
IL31		**80.29**	**23**	P		**P**	**12 50 47.1**	**-0.4**
ILAR	**Eielson Array**	**80.29**	**23**	P		**P**	**12 50 46.1**	**-1.5**
	comp=Z,5.7nm,1.1s,baz=290,slow=4.5,SNR=22							
ILAR				PP		**PP**	**12 53 49.1**	**-0.9**
	comp=Z,1.2nm,1.0s,baz=300,slow=6.7,SNR=3.8							
ILAR				LR		LR	13 31 60.0	
	comp=Z,280nm,18.4s,baz=307,slow=40							
ILAR	**Eielson Array**	**80.29**	**23**	P		**P**	**12 50 45.9**	**-1.8**
TULEG	**Thule**	**80.31**	**356**	P		P	**12 50 46.6**	**-0.9**
TULEG				IAmb		IAmb	12 50 50.9	
	comp=Z,35nm,1.0s							
RND	**Reindeer**	**80.31**	**24**	P		**P**	**12 50 46.6**	**-1.3**
RND				pmax		pmax		
	comp=Z,33nm,1.2s							
RND	**Reindeer**	**80.31**	**24**	P		**P**	**12 50 46.6**	**-1.3**
RND				IAmb		IAmb	12 50 50.8	
	comp=Z,32nm,1.2s							
PRP	**Porcupine Dome**	**80.34**	**22**	P		P	**12 50 48.6**	**+0.6**
PRP				IAmb		IAmb	12 50 52.1	
	comp=Z,19nm,0.9s							
SUA	**Susitna One**	**80.59**	**27**	P		**P**	**12 50 48.9**	**-0.6**
SUA				IAmb		IAmb	12 50 52.5	
	comp=Z,38nm,1.1s							
PMR	**Palmer**	**81.18**	**26**	P		**P**	**12 50 52.1**	**-0.3**
PMR				pmax		pmax		
	comp=Z,32nm,1.2s							
PMR	**Palmer**	**81.18**	**26**	P		P	**12 50 52.1**	**-0.3**
PMR				IAmb		IAmb	12 50 55.5	
	comp=Z,32nm,1.2s							
SML	**Sawmill**	**81.38**	**26**	P		**P**	**12 50 52.3**	**-1.3**
RIDG	**Independent Ri**	**81.61**	**23**	P		P	**12 50 54.2**	**-0.6**
RIDG				IAmb		IAmb	12 50 59.7	
	comp=Z,32nm,1.2s							
KDAK	**Kodiak Island**	**81.66**	**30**	P		**P**	**12 50 54.2**	**-0.8**
KDAK				pmax		pmax		
	comp=Z,185nm,1.5s							
KDAK	**Kodiak Island**	**81.66**	**30**	P		**P**	**12 50 52.8**	**-2.2**
	comp=Z,30nm,1.0s,baz=301,slow=5.1,SNR=4.0							
KDAK	**Kodiak Island**	**81.66**	**30**	P		**P**	**12 50 54.2**	**-0.8**
SCM	**Sheep Creek Mo**	**81.77**	**25**	P		P	**12 50 55.3**	**-0.3**
SCM				pmax		pmax		
	comp=Z,66nm,1.4s							
SCM	**Sheep Creek Mo**	**81.77**	**25**	P		**P**	**12 50 55.3**	**-0.3**
SCRK	**Sand Creek**	**81.78**	**23**	P		P	**12 50 55.7**	**-0.1**
SCRK				IAmb		IAmb	12 50 59.4	
	comp=Z,49nm,1.4s							
PAX	**Paxson**	**81.83**	**24**	P		P	**12 50 55.4**	**-0.6**
PAX				pmax		pmax		
	comp=Z,15nm,1.2s							
PAX	**Paxson**	**81.83**	**24**	P		**P**	**12 50 55.4**	**-0.6**
DOT	**Dot Lake**	**81.95**	**23**	P		P	**12 50 57.2**	**+0.7**
DOT				IAmb		IAmb	12 53 44.1	
	comp=Z,34nm,1.6s							
INK	**Inuvik**	**82.17**	**17**	P		**P**	**12 50 56.4**	**-1.1**
INK				pmax		pmax		
	comp=Z,74nm,1.4s							
INK	**Inuvik**	**82.17**	**17**	P		**P**	**12 50 56.8**	**-0.8**
	comp=Z,31nm,1.0s,baz=327,slow=5.7,SNR=30							
INK	**Inuvik**	**82.17**	**17**	P		**P**	**12 50 56.4**	**-1.1**
EGAK	**Eagle**	**82.27**	**21**	P		P	**12 50 57.8**	**-0.3**
EGAK				IAmb		IAmb	12 51 04.2	
	comp=Z,17nm,0.9s							
RES	**Resolute Bay**	**82.38**	**3**	P		P	**12 50 58.2**	**-0.3**
RES				pmax		pmax		
	comp=Z,10.0nm,1.0s							
RES	**Resolute Bay**	**82.38**	**3**	P		P	**12 50 58.0**	**-0.4**
	comp=Z,6.9nm,0.9s,baz=327,slow=3.9,SNR=16							
RES	**Resolute Bay**	**82.38**	**3**	P		**P**	**12 50 58.2**	**-0.3**
MENT	**Mentasta**	**82.50**	**23**	P		P	**12 51 00.4**	**+1.0**
MENT				IAmb		IAmb	12 51 03.9	
	comp=Z,17nm,1.2s							
EPYK	**Eagle Plains**	**82.63**	**19**	P		**P**	**12 50 58.5**	**-1.5**
EPYK				IAmb		IAmb	12 51 03.3	
	comp=Z,17nm,0.9s							
MCARA	**McCarthy VSAT**	**83.70**	**24**	P		**P**	**12 51 08.6**	**+3.0**
TGL	**Tana Glacier**	**84.16**	**25**	P		**P**	**12 51 10.8**	**+2.7**
BALM	**Baldy**	**84.17**	**25**	P		P	**12 51 10.4**	**+2.3**
BALM				IAmb		IAmb	12 51 12.4	
	comp=Z,20nm,1.0s							

BARN	**Barnard Glacie**	**84.42**	**24**	P		**P**	**12 51 11.4**	**+1.9**
BARN				IAmb		IAmb	12 51 19.5	
	comp=Z,26nm,1.2s							
CTGM	**Chitina Glacie**	**84.60**	**24**	P		**P**	**12 51 10.8**	**+0.4**
BOSA	**Boshof**	**85.09**	**236**	P		**P**	**12 51 12.0**	**-1.3**
BOSA				pmax		pmax		
	comp=Z,39nm,1.7s							
BOSA	**Boshof**	**85.09**	**236**	P		**P**	**12 51 13.0**	**-0.3**
	comp=Z,3.1nm,0.7s,baz=82,slow=1.9,SNR=3.6							
BOSA				LR		LR	13 28 51.9	
	comp=Z,122nm,19.5s,baz=36,slow=35							
BOSA	**Boshof**	**85.09**	**236**	P		**P**	**12 51 11.9**	**-1.3**
BOSA				IAmb		IAmb	12 51 52.2	
	comp=Z,39nm,1.7s							
WHY	**Whitehorse**	**87.17**	**22**	P		**P**	**12 51 22.6**	**-0.5**
WHY				IAmb		IAmb	12 51 27.1	
	comp=Z,34nm,1.6s							
SKAG	**Skagway**	**87.85**	**23**	P		**P**	**12 51 27.8**	**+1.6**
TORD	**Torodi Ar. Bea**	**88.66**	**284**	P		**P**	**12 51 31.5**	**+0.6**
	comp=Z,0.9nm,1.0s,baz=44,slow=7.3,SNR=2.5							
TORD				PP		**PP**	**12 54 57.5**	**-2.1**
	comp=Z,1.1nm,1.0s,baz=57,slow=7.6,SNR=3.1							
YKA	**Yellowknife Ar**	**91.50**	**14**	P		**P**	**12 51 42.7**	**-0.5**
	comp=Z,3.8nm,1.0s,baz=328,slow=4.7,SNR=25							
YKA				PP		PP	12 55 11.7	-8.8
	comp=Z,0.7nm,1.0s,baz=326,slow=6.4,SNR=4.4							
YKA				LR		LR	13 38 27.3	
	comp=Z,260nm,18.5s,baz=0.0,slow=39							
MAW	**Mawson**	**93.51**	**192**	LR		LR	13 31 38.6	
	comp=Z,58nm,18.5s,baz=57,slow=34							
URZ	**Urewera**	**97.43**	**128**	LR		LR	13 41 03.4	
	comp=Z,73nm,18.6s,baz=1.0,slow=38							
SYO	**Syowa Base**	**100.17**	**198**	*e*Pdiff		**Pdif**	**12 52 23.4**	**+1.2**
SYO	**Syowa Base**	**100.17**	**198**	*e*pPdiff		pPdif	12 52 28.5	-4.0
NVAR	**Mina Array Bea**	**111.09**	**28**	PKiKP		**PKiKP**	**12 57 11.3**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=253,slow=2.7,SNR=3.1							
PFO	**Pinyon Flats O**	**115.93**	**30**	PKIKP		**PKiKP**	**12 57 19.5**	**-0.8**
PFO	**Pinyon Flats O**	**115.93**	**30**	PKPdf		**PKiKP**	**12 57 19.5**	**-0.8**
WCI	**Wyandotte Cave**	**119.14**	**2**	PKIKP		**PKPdf**	**12 57 25.2**	**-1.0**
WCI	**Wyandotte Cave**	**119.14**	**2**	PKPdf		**PKPdf**	**12 57 25.2**	**-1.0**
CLTN	**Cedars of Leba**	**121.27**	**2**	PKPdf		**PKiKP**	**12 57 31.4**	**+0.9**
TXAR	**Lajitas Array**	**124.77**	**21**	PKP		**PKPdf**	**12 57 35.6**	**-1.8**
	comp=Z,0.2nm,0.6s,baz=48,slow=1.3,SNR=2.6							
JCT	**Junction City**	**124.83**	**16**	PKIKP		**PKiKP**	**12 57 38.8**	**+1.1**
JCT	**Junction City**	**124.83**	**16**			**PKiKP**	**12 57 38.8**	**+1.1**
BDFB	**Brasilia**	**145.15**	**275**	PKIKP		**PKPdf**	**12 58 17.2**	**+1.8**
BDFB	**Brasilia**	**145.15**	**275**	PKPbc		**PKPab**	**12 58 15.1**	**+0.1**
	comp=Z,8.0nm,0.9s,baz=130,slow=3.2,SNR=4.6							
BDFB	**Brasilia**	**145.15**	**275**			**PKPdf**	**12 58 17.2**	**+1.8**
ACON	**Acoyapa**	**145.31**	**2**			**PKPdf**	**12 58 17.1**	**+1.5**
SDV	**Santo Domingo**	**145.70**	**336**	*e*P		**PKPdf**	**12 58 15.9**	**-0.6**
SDV	**Santo Domingo**	**145.70**	**336**			**PKPdf**	**12 58 16.1**	**-0.4**
ELOV	**Elorza**	**146.95**	**332**	*e*P		**PKPdf**	**12 58 17.7**	**-0.7**
OCAC	**Ocana**	**147.24**	**340**	*e*P		**PKPbc**	**12 58 21.4**	**0.0**
ZARC	**Zaragoza, Cauc**	**148.41**	**342**	*e*P		**PKiKP**	**12 58 25.4**	**-0.5**
BARC	**Barichara**	**148.74**	**339**	*e*P		**PKPbc**	**12 58 23.8**	**-1.7**
PTBC	**PUERTO BERRIO**	**149.20**	**341**	*e*P		**PKPdf**	**12 58 23.8**	**+1.6**
RUSC	**La Rusia**	**149.36**	**338**	*e*P		**PKPbc**	**12 58 27.4**	**+0.1**
RUSC	**La Rusia**	**149.36**	**338**			**PKPdf**	**12 58 22.7**	**-0.4**
CBOC	**Ciudad Bolivar**	**150.28**	**343**	*e*P		**PKPab**	**12 58 35.9**	**+0.7**
GUY2C	**Guyana, Caldas**	**150.72**	**342**	*e*P		**PKiKP**	**12 58 32.9**	**+1.6**
ROSC	**El Rosal**	**150.76**	**340**	PKPbc		**PKiKP**	**12 58 31.4**	**+0.1**
	comp=Z,37nm,0.9s,baz=351,slow=8.7,SNR=8.7							
ROSC	**El Rosal**	**150.76**	**340**			**PKPbc**	**12 58 30.4**	**-0.3**
CHIC	**Chingaza**	**150.76**	**338**	*e*P		**PKiKP**	**12 58 31.1**	**-0.3**
PRAC	**Prado**	**152.00**	**340**	*e*P		**PKPbc**	**12 58 31.7**	**-1.4**
CPUP	**Villa Florida**	**155.35**	**257**	PKIKP		PKPdf	12 58 39.4	+8.5
CPUP	**Villa Florida**	**155.35**	**257**	PKPbc		**PKPdf**	**12 58 38.2**	**+7.4**
	comp=Z,14nm,0.7s,baz=122,slow=1.9,SNR=3.8							
CPUP	**Villa Florida**	**155.35**	**257**			PKPdf	12 58 39.4	+8.5
OTAV	**Otavalo**	**156.30**	**346**	PKP2		**PKPab**	**12 59 00.7**	**-0.3**
OTAV	**Otavalo**	**156.30**	**346**			**PKPab**	**12 59 00.7**	**-0.3**

*PAS **26** 12:40:51.8±3.2, 33°.86N±0°.01×118°.26W±0°.02, h13km±2km, ML2.0/115, Error ellipse: s-maj=2.3km s-min=1.7km az=89.0*

NEIC 26 12:40:51.4±1.4, 33°.84N±0°.04×118°.30W±0°.06, h20km±8km, Error ellipse: s-maj=7.6km s-min=6.4km az=91.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTT2	**Watts, South G**	**0.12**	**18**		Pb	12 40 57.3	+0.6
FMP	**Fort Macarthur**	**0.12**	**177**		Pb	12 40 58.0	+1.2
RPV	**Rancho Palos V**	**0.13**	**223**		Sb	12 40 58.6	-1.8
BHPC	**Baldwin Hills**	**0.16**	**342**		Pb	12 40 55.8	-0.9
BHPC					Sb	12 40 59.5	-0.9
DLAC	**Del Amo**	**0.17**	**85**		Pb	12 40 59.8	+3.1
LCGC	**La Cienega, Cu**	**0.18**	**339**		Pb	12 40 56.2	-0.6
USC	**University of**	**0.18**	**4**		Pb	12 40 56.0	-0.8
USC					Sb	12 40 59.7	-0.9
GVRC	**Garvey Reservo**	**0.26**	**35**		Pb	12 40 57.1	-0.4
GVRC	**Garvey Reservo**	**0.26**	**35**		Sb	12 41 01.5	-0.2
BREC	**Barre Substati**	**0.27**	**96**		Pb	12 40 57.6	+0.1
GR2C	**Griffith Obs.**	**0.28**	**0**		Pb	12 40 56.9	-0.9
DJJ	**Donna J Jenkin**	**0.30**	**335**		Pb	12 40 57.6	-0.4
DJJ					Sb	12 41 02.1	-0.5
PASC	**Pasadena Art C**	**0.35**	**16**		Pb	12 40 57.6	-1.2
DECC	**Green Verdugo**	**0.42**	**356**		Pb	12 40 59.2	-0.9
MWC	**Mount Wilson**	**0.44**	**27**		Sb	12 40 59.5	-7.1
MWC	**Mount Wilson**	**0.44**	**27**	Pg	Pb	12 40 59.4	-1.0
CIAC	**Catalina I. Ai**	**0.44**	**192**		Pb	12 41 01.1	+0.7
PSRC	**Puddingstone R**	**0.48**	**58**		Pb	12 41 00.4	-0.8
PEM	**Pine Mountain**	**0.49**	**47**		Pb	12 41 00.1	-1.1
CHFC	**Chilao Flat St**	**0.55**	**25**		Pb	12 41 01.1	-1.3
CHFC					Sb	12 41 08.0	-2.0
IR2C	**Iron Canyon**	**0.56**	**352**		Pb	12 41 01.8	-0.8
OAT	**Oat Mountain**	**0.57**	**333**		Pb	12 41 03.0	+0.2
XTL	**Crystal Lake,**	**0.59**	**38**		Pb	12 41 01.8	-1.3
SSK	**Sunset Peak**	**0.63**	**53**		Pb	12 41 02.7	-1.1
BFSC	**Mount Baldy Ra**	**0.67**	**53**		Pb	12 41 03.2	-1.3
BLG	**Laguna Peak, P**	**0.69**	**293**		Sb	12 41 14.6	+0.7
LRRC	**Littlerock Res**	**0.72**	**18**		Pb	12 41 04.5	-0.8
SS2	**San Sevaine**	**0.76**	**61**		Pb	12 41 04.9	-1.0
RVR	**Riverside**	**0.79**	**78**		Pb	12 41 05.3	-1.1
SME	**Santa Rosa Min**	**0.79**	**91**		Pb	12 41 05.2	-1.1
LEOC	**Leona Valley**	**0.79**	**360**		Pb	12 41 05.6	-0.9
CSP	**Cedar Springs**	**0.91**	**59**		Pb	12 41 07.4	-1.1
PEC	**Perris**	**0.95**	**86**		Pb	12 41 08.1	-1.0
MURC	**Murrieta**	**0.95**	**104**		Pb	12 41 08.0	-1.2
BACC	**Bachelor Mtn.**	**1.07**	**102**		Pb	12 41 10.2	-1.0
DGR	**Domenigoni Val**	**1.09**	**99**		Pn	12 41 10.6	-1.0
GORC	**Green Oak Ranc**	**1.12**	**127**		Pn	12 41 10.9	-1.0
BTL	**Butler Peak**	**1.16**	**68**		Pn	12 41 11.9	-0.7
POB	**Polly Butte**	**1.16**	**97**		Pn	12 41 11.8	-0.7
109C	**Camp Elliot, M**	**1.38**	**133**	Pn	Pn	12 41 14.6	-0.7
109C					Sn	12 41 33.1	+0.1
DPP	**Dos Picos Cty**	**1.41**	**126**		Pn	12 41 15.4	-0.5
BCW	**Bitter Crk WRg**	**1.44**	**320**		Pb	12 41 18.7	+1.3
PFO	**Pinyon Flats O**	**1.55**	**98**		Pn	12 41 18.5	+0.6
PFO				Sn	Sb	12 41 38.9	+0.2
XPFO	**Pion Flat**	**1.55**	**98**		Pn	12 41 18.4	+0.4
XPFO				Sn	Sn	12 41 37.8	+0.3
BAR	**Barrett**	**1.79**	**130**		Pn	12 41 21.2	+0.1
BAR					Sn	12 41 42.3	-0.9
GSC	**Goldstone, Bar**	**1.91**	**40**		Pb	12 41 26.3	+0.7

*IDC **26** 13:02:16.4±2.7, 7°.44S×128°.65E, h114km±32km, mb3.7/3, mb1 3.6/7, mb1mx3.4/32, mbtmp4.0/7, Error ellipse: s-maj=43.0km s-min=14.6km az=92.0*

*NEIC **26** 13:02:16.2±2.1, 7°.44S±0°.08×128°.54E±0°.07, h115km±11km, mb4.4/7, Error ellipse: s-maj=11.8km s-min=10.3km az=152.0*

ISC 26 13:02:18.0±0.8, 7°.49S±0°.06×128°.74E±0°.08, h151km, n25, σ2s70/26, mb4.3/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.58**	**101**	Pn	**Pn**	**13 03 02.0**	**+1.8**
SOEI	**Soe**	**4.96**	**243**	Pn	Pn	13 03 25.3	-5.8
SOEI					**Sn**	**13 04 32.0**	**+3.9**
FAKI	**Fak Fak**	**5.73**	**38**	Pn	**Pn**	**13 03 39.2**	**-1.9**
MTN	**Manton Dam**	**5.82**	**156**		**Pn**	**13 03 43.4**	**+1.1**
SIJI	**Sorong**	**7.04**	**21**	P	**Pn**	**13 03 57.8**	**-0.9**
	2.1nm,0.3s,baz=29,slow=22,SNR=16						
SIJI				S	**Sn**	**13 05 15.7**	**-1.9**
	1.3nm,0.3s,baz=270,slow=20,SNR=3.3						
KNRA	**Kununurra**	**8.14**	**180**	Pn	**Pn**	**13 04 13.6**	**+0.3**
LUWI	**Luwuk**	**8.74**	**317**	Pn	**Pn**	**13 04 16.8**	**-4.5**

FITZ	**Fitzroy Crossi**	**10.97**	**196**	P		**Pn**	**13 04 49.2**	**-1.6**
	1.1nm,0.3s,baz=24,slow=12,SNR=23							
FITZ				S		**Sn**	**13 06 44.9**	**-7.3**
	1.5nm,0.3s,baz=104,slow=23,SNR=9.4							
WB0	**Warramunga Arr**	**13.38**	**156**	Pn		**Pn**	**13 05 22.0**	**-0.1**
WRAB	**Tennant Creek**	**13.52**	**157**	Pn		**Pn**	**13 05 23.7**	**-0.1**
WRA	**Warramunga Arr**	**13.52**	**157**	P		**Pn**	**13 05 23.4**	**-0.5**
	0.4nm,0.3s,baz=337,slow=12,SNR=7.2							
WRA				S		Sn	13 07 43.1	-11
	1.7nm,0.3s,baz=329,slow=22,SNR=11							
WB2	**Warramunga Arr**	**13.52**	**157**	Pn		**Pn**	**13 05 23.1**	**-0.8**
WR0	**Warramunga Arr**	**13.62**	**156**	Pn		**Pn**	**13 05 23.7**	**-1.3**
COEN	**Coen**	**15.57**	**116**	P		**P**	**13 05 52.4**	**+1.9**
COEN				IAmb		IAmb	13 06 30.0	
	comp=Z,70nm,1.9s							
PSA00	**Pilbara Seismi**	**16.43**	**211**	Pn		**Pn**	**13 05 58.4**	**-1.6**
PSA00				IAmb		IAmb	13 06 56.4	
	comp=Z,47nm,1.4s							
AS31	**Alice Springs**	**16.83**	**163**	P		**Pn**	**13 06 06.4**	**+1.5**
ASAR	**Alice Springs**	**16.83**	**163**	P		**Pn**	**13 06 06.4**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=339,slow=10,SNR=56							
ASAR				S		**S**	**13 09 07.2**	**-5.0**
	comp=Z,0.4nm,0.3s,baz=315,slow=16,SNR=8.0							
ASAR	**Alice Springs**	**16.83**	**163**	P		**Pn**	**13 06 06.2**	**+1.3**
BBOO	**Buckleboo**	**26.10**	**166**	P		P	**13 07 39.4**	**+1.7**
BBOO				IAmb		IAmb	13 08 09.9	
	comp=Z,24nm,1.6s							
STKA	**Stephens Creek**	**27.06**	**155**	P		**P**	**13 07 49.5**	**+3.0**
	comp=Z,0.5nm,0.5s,baz=339,slow=8.6,SNR=3.1							
STKA	**Stephens Creek**	**27.06**	**155**	IAmb		IAmb	13 08 25.1	
	comp=Z,4.6nm,2.0s							
NWAO	**Narrogin (SRO)**	**27.48**	**201**	P		**P**	**13 07 52.7**	**+2.6**
	comp=Z,6.6nm,0.8s,baz=25,slow=14,SNR=2.2							
MKAR	**Makanchi Array**	**67.95**	**328**	P		**P**	**13 13 02.2**	**+1.6**
	comp=Z,0.3nm,0.5s,baz=121,slow=8.1,SNR=11							
MAKZ	**Makanchi**	**68.13**	**327**	P		**P**	**13 13 03.3**	**+1.6**
MAKZ				IAmb		IAmb	13 15 13.3	
	comp=Z,8.9nm,1.9s							
RAGM	**Ragged Mountai**	**94.76**	**30**			pP	13 15 54.1	-5.4

*ISK **26** 13:24:14.9, 40°.30N×25°.54E, h10km, ML2.9/18*

*THE **26** 13:24:15.6, 40°.31N×25°.56E, h13km±2km, ML2.4/8, Error ellipse: s-maj=2.1km s-min=0.7km az=33.0*

*DDA **26** 13:24:15.6, 40°.28N×25°.58E, h28km±1km, ML2.8*

*ATH **26** 13:24:15.7, 40°.32N×25°.54E, h11km±2km, ML2.5/7, Error ellipse: s-maj=2.6km s-min=0.8km az=46.0*

ISC 26 13:24:15.6±0.8, 40°.32N±0°.02×25°.55E±0°.02, h13km±6km, n59, σ0s57/85, 4C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.16**	**354**	P	**Pg**	**13 24 19.3**	**-0.1**
SMTH				S	**Sg**	**13 24 21.9**	**-0.2**
	4μm,0.1s						
SMTH	**Samothraki Isl**	**0.16**	**354**	P	**Pg**	**13 24 19.4**	**-0.1**
SMTH				S	**Sg**	**13 24 21.9**	**-0.2**
SMTH				AML	AML	13 24 22.0	
	comp=N,8892μm,0.1s						
SMTH				AML	AML	13 24 22.1	
	comp=E,6530μm,0.1s						
**GAD

PLG	**Polygyros**	**1.61**	**273**	P	**Pn**	**13 24 42.9**	**-0.9**
PLG				S	**Sn**	**13 25 04.2**	**-0.2**
	comp=E,105nm,0.9s						
PLG	**Polygyros**	**1.61**	**273**	P	**Pg**	**13 24 46.1**	**-0.4**
DKL	**Dikili**	**1.62**	**140**	PN	**Pn**	**13 24 43.9**	**0.0**
BALY	**Balya**	**1.69**	**109**	*i* P	**Pn**	**13 24 45.1**	**+0.3**
BALY				IAML		13 25 10.0	
	comp=N,100nm,0.5s						
BALY				IAML		13 25 11.0	
	comp=E,86nm,0.5s						
SRS	**Serrai**	**1.69**	**299**	P	**Pb**	**13 24 47.1**	**+0.5**
SOH	**Sokhos**	**1.75**	**288**	P	**Pb**	**13 24 48.2**	**+0.6**
EDC	**Edincik**	**1.77**	**88**	PN	**Pn**	**13 24 46.7**	**+0.8**
EDRB	**Edirne**	**1.78**	**30**	PN	**Pb**	**13 24 47.4**	**-0.6**
ZEDA	**zmir-Bergama**	**1.79**	**138**	*i* P	**Pn**	**13 24 46.2**	**+0.1**
ZEDA				IAML		13 25 13.0	
	comp=E,108nm,0.4s						
ZEDA				IAML		13 25 14.0	
	comp=N,83nm,0.3s						
KIRK	**Kırklareli**	**1.87**	**38**	*i* P	**Pb**	**13 24 48.7**	**-1.0**
KIRK				*i* S	**Sb**	**13 25 13.0**	**0.0**
BALB	**Balikesir**	**1.91**	**110**	PN	**Pn**	**13 24 48.0**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.91**	**119**	*i* P	**Pn**	**13 24 48.7**	**+0.8**
STEP				IAML		13 25 22.0	
	comp=N,42nm,0.7s						
CHOS	**Chios island**	**1.96**	**168**	PN	**Pn**	**13 24 48.2**	**-0.5**
ZEY	**zmir**	**2.20**	**160**	*i* P	**Pn**	**13 24 51.8**	**0.0**
SLVT	**Silivri**	**2.22**	**65**	PN	**Pn**	**13 24 52.9**	**+0.9**
DURS	**Dursunbey**	**2.36**	**107**	*i* P	**Pn**	**13 24 54.3**	**+0.3**
DURS				IAML		13 25 32.0	
	comp=E,52nm,0.2s						
DURS				IAML		13 25 32.0	
	comp=N,45nm,0.4s						
VAY	**Valandovo**	**2.48**	**295**	*i* Pn	**Pg**	**13 25 02.4**	**-0.7**
DEMI	**Demirci**	**2.75**	**116**	*i* P	**Pb**	**13 25 06.3**	**+1.6**
VTS	**Vitosha**	**2.88**	**324**	⇑P	**Pg**	**13 25 11.0**	**+0.1**
VTS				⇑S	**Sg**	**13 25 48.6**	**+0.3**
STIP	**Stip**	**2.90**	**299**	*i* Pn	**Pn**	**13 25 03.5**	**+2.1**
PLVB	**Pleven**	**3.15**	**348**	⇑S	**Sg**	**13 25 56.8**	**+0.1**
GZR	**Gura Zlata**	**5.47**	**339**	⇑P	**Sn**	**13 26 37.7**	**-1.9**

*TEH **26** 13:35:02.6,33˚.56N×45˚.88E,h15km,ML2.6*
*ISN **26** 13:35:02.2±0.5,33˚.57N×45˚.87E,h6km,2km,ML2.7*
ISC 26 13:35:02.5±1.2,**33˚.56N**±0˚.03×**45˚.89E**±0˚.04,**h7**km±12km,
n12,σ1ᵎ26/18,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**0.45**	**175**	*e*Pg		**Pg**	**Pg**	**13 35 11.2**	**-0.1**
IBDR				AML		AML	AML	13 35 12.0	
	comp=Z,570nm,0.4s								
IBDR				*e*Sg		**Sg**	**Sg**	**13 35 17.8**	**+0.5**
IGHG	**Ghaleghazi**	**0.95**	**36**	*e*Pg		**Pg**	**Pg**	**13 35 20.8**	**0.0**
IGHG				*e*Sg		**Sg**	**Sn**	**13 35 34.9**	**-1.6**
IGHG				*e*				13 35 40.9	
IDHR	**Dehrash**	**1.21**	**20**	*e*Pg		**Pb**	**Pb**	**13 35 25.4**	**-0.5**
IDHR				*e*				13 35 27.6	
IVIS	**Veis**	**1.25**	**40**	*e*Pg		**Pg**	**Pg**	**13 35 26.5**	**0.0**
IVIS				*e*				13 35 28.3	
BHD	**Baghdad**	**1.29**	**257**	*e*Pg		**Pg**	**Pg**	**13 35 27.0**	**-0.3**
BHD				*e*Sg		**Sg**	**Sg**	**13 35 44.5**	**+0.4**
IKOM	**Komasi**	**1.48**	**65**	*e*Pn		**Pb**	**Pb**	**13 35 30.1**	**-0.4**
IKOM				*e*				13 35 30.9	
ILIN	**Lien**	**1.62**	**33**	*e*Pn		**Pb**	**Pb**	**13 35 33.0**	**+0.1**
ILIN				*e*				13 35 57.3	
IKFM	**Kafar-mosalman**	**1.64**	**91**	*e*Pn		**Pb**	**Pb**	**13 35 33.1**	**0.0**
IKFM				*e*				13 35 58.0	
IDOB	**Doab**	**1.92**	**83**	*e*Pn		**Pn**	**Pn**	**13 35 36.6**	**+0.7**
IDOB				*e*				13 36 07.8	
IKRK	**Kirkuk**	**2.23**	**326**	*e*Pn		**Pb**	**Pb**	**13 35 41.5**	**-1.7**
IKRK				*e*Sn		**Sb**	**Sb**	**13 36 10.0**	**-1.1**
NSR	**Nassriya**	**2.56**	**175**	*e*Pn		**Pn**	**Pn**	**13 35 46.0**	**+1.6**
NSR				*e*Sn		**Sb**	**Sb**	**13 36 18.0**	**-2.3**
MSL	**Mosul**	**3.63**	**322**	*e*Pn		**Pn**	**Pn**	**13 36 01.0**	**+1.8**
MSL				*e*Sn		**Sn**	**Sn**	**13 36 44.0**	**+1.7**

SJA 26 13:44:14.5±0.6,**32˚.48S**×**69˚.71W**,**h123**km±5km,**ML2.5,**
MW2.9,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.77**	**27**	*e*P			Pn	13 44 36.1	+1.0
RTLS				IAML				13 44 36.2	
	comp=Z,151nm,0.1s								
RTLS				*i* S			Sn	13 44 51.9	+1.3
RTLS	**Leoncito**	**0.77**	**27**	*i* P			Pn	13 44 36.1	+1.0
RTLS				IAML				13 44 36.3	
	comp=Z,151nm,0.1s								
RTLS				*e*S			Sn	13 44 51.9	+1.3
RTCV	**Cerro Valdivia**	**1.17**	**58**	*e*P			Pn	13 44 39.3	+0.7
RTCV				*i* S			Sn	13 44 57.7	+0.9
RTCV	**Cerro Valdivia**	**1.17**	**58**	*i* P			Pn	13 44 39.4	+0.8
RTCV				*i* S			Sn	13 44 57.7	+0.8
ROC1	**El Roble**	**1.20**	**246**	*e*P			Pn	13 44 38.3	-0.8
ROC1				*i* S			Sn	13 44 56.0	-1.7
CFA	**Coronel Fontan**	**1.53**	**55**	*e*P			Pn	13 44 43.2	+0.7
CFA				*i* S			Sn	13 45 04.7	+0.8
CFA	**Coronel Fontan**	**1.53**	**55**	*i* P			Pn	13 44 43.2	+0.7
CFA				*i* S			Sn	13 45 04.6	+0.8
RTLL	**Cerro Villicun**	**1.56**	**43**	*e*P			Pn	13 44 43.8	+0.9
RTLL				*i* S			Sn	13 45 05.7	+1.2
RTLL				IAML				13 45 07.3	
	comp=Z,22nm,0.3s								
RTLL	**Cerro Villicun**	**1.56**	**43**	*e*P			Pn	13 44 43.9	+1.0
RTLL				*i* S			Sn	13 45 05.7	+1.2
RTLL				IAML				13 45 07.2	
	comp=Z,22nm,0.3s								
AMOG	**MOGNA**	**1.86**	**34**	*e*P			Pn	13 44 47.7	+1.2
AMOG				*i* S			Sn	13 45 11.3	+0.5
AMOG	**MOGNA**	**1.86**	**34**	*i* P			Pn	13 44 47.7	+1.2
AMOG				*i* S			Sn	13 45 11.4	+0.5
ACAN	**Cantantal**	**2.15**	**85**	*e*P			Pn	13 44 50.8	+0.8
ACAN	**Cantantal**	**2.15**	**85**	*i* P			Pn	13 44 50.8	+0.9
ACAN				*i* S			Sn	13 45 16.9	-0.2
APLL	**PUNTA DE LOS L**	**3.43**	**53**	*e*P			Pn	13 45 06.6	0.0
APLL	**PUNTA DE LOS L**	**3.43**	**53**	*e*P			Pn	13 45 06.6	+0.1
APLL				*i* S			Sn	13 45 44.9	-2.0
APLL				IAML				13 45 51.0	
	comp=Z,1.8nm,0.3s								

*IDC **26** 13:50:04.8±1.2,8˚.23S×122˚.26E,h0km,mb3.8/4,*
mb1 3.9/7,mb1mx3.8/40,mbtmp3.8/7,ML3.6/3,MS2.6/1,
Ms1 2.6/1,ms1mx2.5/37,Error ellipse: s-maj=106.7km
s-min=20.7km az=59.0
*DJA **26** 13:50:10.6±1.3,8˚.S±3˚×12˚.2E±˚,h25km±11km,M4.0/7,*
MLv4.0/7
*NEIC **26** 13:50:12.5±2.4,8˚.8S±0˚.1×121˚.97E±0˚.09,h85km±8km,*
mb4.2/9,Error ellipse: s-maj=18.3km s-min=8.9km
az=212.0
ISC 26 13:50:08.4±0.6,**8˚.43S**±0˚.05×**122˚.19E**±0˚.06,**h31**km,**n32,**
σ2ᵎ34/36,mb4.2/7,Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.24**	**236**	P			**Pn**	**13 50 45.4**	**+2.1**
SOEI	**Soe**	**2.44**	**123**	P			**Pb**	**13 50 52.3**	**+0.5**
SOEI				S			**Sb**	**13 51 24.2**	**+2.7**
SOEI	**Soe**	**2.44**	**123**				**Pn**	**13 50 53.6**	**+1.8**
BKSI	**Bulukumba**	**3.70**	**326**	P			**Pn**	**13 51 02.7**	**-0.8**
BKSI				S			**Sn**	**13 51 43.8**	**-2.3**
KAPI	**Kappang**	**4.16**	**324**				**Pn**	**13 51 10.1**	**+0.3**
PLAI	**Plampang**	**4.38**	**264**	P			**Pn**	**13 51 14.2**	**+1.4**
PLAI				S			**Sn**	**13 52 03.9**	**+1.1**
BNSI	**Bone**	**4.50**	**333**	P			**Pn**	**13 51 14.7**	**+0.2**
SPSI	**Sidrap Palu**	**5.04**	**331**	P			**Pn**	**13 51 22.2**	**+0.3**
JAGI	**Jajag, Banyuwa**	**7.95**	**269**	Pn			**Pn**	**13 52 02.5**	**+0.6**
BKB	**Balikpapan**	**8.86**	**323**	Pn			Pn	13 52 21.3	+7.0
KNRA	**Kununurra**	**9.66**	**139**	Pn			**Pn**	**13 52 26.6**	**+1.3**
MTN	**Manton Dam**	**9.83**	**117**	Pn			**Pn**	**13 52 30.8**	**+3.2**
FITZ	**Fitzroy Crossi**	**10.19**	**161**	Pn			**Pn**	**13 52 34.3**	**+1.8**
	0.4nm,0.3s,baz=2.5,slow=8.7,SNR=8.2								
FITZ				Sn			**Sn**	**13 54 20.0**	**-5.7**
	0.2nm,0.3s,baz=268,slow=17,SNR=2.0								
FITZ				LR			LR	13 57 00.6	
	comp=Z,33nm,19.0s,baz=2.0,slow=40								
PSA00	**Pilbara Seismi**	**13.27**	**190**	Pn			**Pn**	**13 53 12.7**	**-2.0**
WB0	**Warramunga Arr**	**16.34**	**135**	Pn			**Pn**	**13 53 54.6**	**-1.0**
WB0				IAmb			IAmb	13 54 52.8	
	comp=Z,30nm,1.7s								
WRA	**Warramunga Arr**	**16.41**	**136**	Pn			**Pn**	**13 53 56.2**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=306,slow=15,SNR=5.9								
WRA				Sn			**Sn**	**13 56 50.8**	**-7.2**
	comp=Z,0.1nm,0.3s,baz=312,slow=24,SNR=4.2								
WRA	**Warramunga Arr**	**16.41**	**136**				**Pn**	**13 53 55.2**	**-1.4**
WB2	**Warramunga Arr**	**16.42**	**135**	Pn			**Pn**	**13 53 55.3**	**-1.4**
WR0	**Warramunga Arr**	**16.57**	**135**	Pn			**Pn**	**13 53 57.5**	**-1.0**
WR0				IAmb			IAmb	13 54 11.5	
	comp=Z,8.2nm,0.9s								
ASAR	**Alice Springs**	**18.86**	**145**	P			**Pn**	**13 54 29.2**	**+2.3**
	comp=Z,0.2nm,0.3s,baz=315,slow=11,SNR=35								
ASAR				S			**Sn**	**13 57 53.5**	**-3.7**
	comp=Z,0.1nm,0.3s,baz=316,slow=21,SNR=4.9								
ASAR	**Alice Springs**	**18.86**	**145**	P			**P**	**13 54 25.3**	**-0.9**
COEN	**Coen**	**21.30**	**107**	P			**P**	**13 54 55.0**	**+2.2**
COEN				IAmb			IAmb	13 55 50.7	
	comp=Z,32nm,1.6s								
BBOO	**Buckleboo**	**27.46**	**154**	P			**P**	**13 55 47.5**	**-4.3**
BBOO				IAmb			IAmb	13 55 50.5	
	comp=Z,21nm,1.7s								
CMAR	**Chiang Mai Arr**	**35.21**	**319**	P			**P**	**13 57 00.3**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=144,slow=6.7,SNR=5.1								
SONM	**Songino Array**	**57.73**	**347**	P			**P**	**13 59 57.1**	**+0.7**
	comp=Z,0.4nm,0.4s,baz=169,slow=8.7,SNR=3.5								
SONM	**Songino Array**	**57.73**	**347**	IAmb			IAmb	14 00 04.9	
	comp=Z,1.8nm,1.2s								
MK31	**Makanchi Array**	**65.43**	**331**	P			**P**	**14 00 48.3**	**0.0**
MK31				IAmb			IAmb	14 00 49.9	
	comp=Z,1.4nm,0.7s								
MKAR	**Makanchi Array**	**65.43**	**331**	P			**P**	**14 00 48.8**	**+0.5**
	comp=Z,1.7nm,0.6s,baz=138,slow=7.7,SNR=24								
MKAR	**Makanchi Array**	**65.43**	**331**	P			**P**	**14 00 48.4**	**+0.1**
MAKZ	**Makanchi**	**65.59**	**331**	P			**P**	**14 00 49.9**	**+0.5**
ZALV	**Zalesovo Beam**	**69.67**	**338**	P			**P**	**14 01 14.0**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=140,slow=4.8,SNR=3.9								
ZALV	**Zalesovo Beam**	**69.67**	**338**	P			**P**	**14 01 13.6**	**-1.3**

*SJA **26** 13:52:33.9±1.2,21˚.53S×68˚.42W,h141km±10km,ML2.9,*
MW3.1
*GUC **26** 13:52:34.4±0.7,21˚.52S×68˚.51W,h140km±5km,ML3.2*
ISC 26 13:52:34.5±1.9,**21˚.52S**±0˚.04×**68˚.46W**±0˚.07,
h145km±15km,**n19,σ0ᵎ54**/37,**8C-2D,Chile-Bolivia border**
region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.78**	**249**	⇑*i*P			**Pn**	**13 52 57.3**	**+0.1**
PB09				*i* S			**Sn**	**13 53 14.2**	**-0.2**
PB09	**IPOC Station P**	**0.78**	**249**	*i* P			**Pn**	**13 52 57.4**	**+0.1**
PB09				*i* S			**Sn**	**13 53 14.5**	**+0.1**
LVC	**Limon Verde**	**1.16**	**201**	*i* P			**Pn**	**13 53 00.2**	**-0.4**
LVC				*i* S			**Sn**	**13 53 19.6**	**-1.1**
PB03	**IPOC Station P**	**1.31**	**246**	⇑*i*P			**Pn**	**13 53 02.0**	**+0.1**
PB03				*i* S			**Sn**	**13 53 22.3**	**-0.4**
PB03				IAML				13 53 23.9	
	comp=E,249nm,0.3s								
PB08	**IPOC Station P**	**1.52**	**335**	⇑*i*P			**Pn**	**13 53 04.9**	**+0.6**
PB08				*i* S			**Sn**	**13 53 27.5**	**+0.5**
PB08				IAML				13 53 30.0	
	comp=E,161nm,0.2s								
PB06	**IPOC Station P**	**1.57**	**221**	⇑*i*P			**Pn**	**13 53 04.5**	**0.0**
PB06				*i* S			**Sn**	**13 53 27.4**	**-0.2**
PB06				IAML				13 53 28.2	
	comp=E,119nm,0.3s								
PB06	**IPOC Station P**	**1.57**	**221**	*i* P			**Pn**	**13 53 04.6**	**0.0**
PB06				*i* S			**Sn**	**13 53 27.4**	**-0.2**
PB06				IAML				13 53 32.5	
	comp=Z,54nm,0.5s								
PATCX	**Punta Patache**	**1.73**	**293**	⇓*i*P			**Pn**	**13 53 06.8**	**+0.6**
PATCX				*i* S			**Sn**	**13 53 31.2**	**+0.7**
PATCX				IAML				13 53 33.0	
	comp=N,622nm,0.4s								
PB04	**IPOC Station P**	**1.76**	**242**	⇓*i*P			**Pn**	**13 53 07.0**	**+0.2**
PB04				*i* S			**Sn**	**13 53 31.2**	**-0.2**
PB04				IAML				13 53 34.1	
	comp=N,144nm,0.2s								
PB04	**IPOC Station P**	**1.76**	**242**	*i* P			**Pn**	**13 53 07.2**	**+0.4**
PB04				*i* S			**Sn**	**13 53 31.2**	**-0.2**
PB04				IAML				13 53 32.1	
	comp=Z,101nm,0.4s								
TA01	**Diego Aracena**	**1.87**	**300**	⇑*i*P			**Pn**	**13 53 07.9**	**+0.1**
TA01				*i* S			**Sn**	**13 53 33.2**	**0.0**
TA01				IAML				13 53 35.2	
	comp=E,458nm,0.2s								
PB15	**IPOC Station P**	**1.92**	**209**	*e*P			**Pn**	**13 53 09.4**	**+0.7**
PB15				*i* S			**Sn**	**13 53 35.2**	**+0.4**
PB15	**IPOC Station P**	**1.92**	**209**	*i* P			**Pn**	**13 53 09.3**	**+0.7**
PB15				*i* S			**Sn**	**13 53 35.7**	**+0.9**
GO01	**Chusmiza**	**1.97**	**339**	⇑*i*P			**Pn**	**13 53 09.8**	**+0.3**
GO01				*i* S			**Sn**	**13 53 36.5**	**+0.3**
GO01				IAML				13 53 40.1	
	comp=N,301nm,0.2s								
PB11	**IPOC Station P**	**2.08**	**327**	⇑*i*P			**Pn**	**13 53 10.3**	**-0.1**
PB11				*i* S			**Sn**	**13 53 38.2**	**+0.2**
PB11				IAML				13 53 40.3	
	comp=E,183nm,0.2s								
PB05	**IPOC Station P**	**2.09**	**230**	*e*P			**Pn**	**13 53 10.7**	**+0.2**
PB05				*i* S			**Sn**	**13 53 37.4**	**-0.8**
PB05				IAML				13 53 41.8	
	comp=E,49nm,0.2s								
PB05	**IPOC Station P**	**2.09**	**230**	*i* P			**Pn**	**13 53 10.9**	**+0.3**
PB05				*i* S			**Sn**	**13 53 37.5**	**-0.6**
PSGC	**Pisagua**	**2.47**	**321**	⇑*i*P			**Pn**	**13 53 14.3**	**-0.8**
PSGC				*i* S			**Sn**	**13 53 44.8**	**-1.6**
PSGC				IAML				13 53 47.8	
	comp=E,108nm,0.4s								
HJA	**Humahuaca**	**3.29**	**121**	*i* P			**Pn**	**13 53 25.7**	**0.0**

*TIR **26** 13:55:38.0,38˚.00N×20˚.73E,h16km,Md6.7/7*
*BGR **26** 13:55:39.2±0.8,37˚.94N×20˚.83E,h10km,Ms5.8,Error*
ellipse: s-maj=34.5km s-min=13.3km az=53.0
*BJI **26** 13:55:39.1±0.0,38˚.17N×20˚.41E,h10km,mB5.9/76,*
mb5.6/88,Ms6.3/92,Ms7 6.2/86
*HLW **26** 13:55:41.0,38˚.23N×20˚.96E,h10km±36km,Ml6.3*
*THE **26** 13:55:41.0,38˚.15N×20˚.29E,h14km,ML5.9/11,Error*
ellipse: s-maj=1.0km s-min=0.4km az=73.0
*MOS **26** 13:55:41.4±1.1,38˚.28N×20˚.45E,h12km,mb6.1/130,*
MS6.1/120,Error ellipse: s-maj=3.5km s-min=2.3km
az=83.1
*IDC **26** 13:55:41.3±0.3,38˚.31N×20˚.58E,h0km,mb5.4/36,*
mb1 5.4/45,mb1mx5.4/46,mbtmp5.4/45,ML4.9/9,MS6.0/26,
Ms1 6.0/26,ms1mx5.9/36,Error ellipse: s-maj=9.8km
s-min=8.5km az=77.0
*PDG **26** 13:55:41.7±0.6,38˚.23N×20˚.38E,h3km±1km,MD6.3/14,*
ML6.0/13,Error ellipse: s-maj=0.7km s-min=0.8km az=0.0
*BEO **26** 13:55:41.9±0.7,38˚.21N×20˚.27E,h0km,ML5.9/11*
*NEIC **26** 13:55:42.2±1.6,38˚.21N±0˚.05×20˚.45E±0˚.05,h8km±1km,*
mb6.0/494,Ms_20 6.1/673,Mwb6.1/85,Mww6.1,
ML5.9(THE),Mwc6.2(GCMT),Error ellipse: s-maj=8.3km
s-min=7.4km az=355.0,Moment Tensor Solution.
Moment tensor: Scale 10¹⁸Nm; Mrr0.00; Mθθ1.20;
Mϕϕ-1.21; Mrθ0.26; Mrϕ1.35; Mθr-0.17; Fault plane
solution: M₀1.83000×10¹⁸ NP1:φs290.74000°, δ88.11000°,
λ-9.64000°. NP2:φs21.06000°,δ80.36000°,λ-178.08000°.
Principal axes: T 1.8222, Plg5.0000°, Azm336.0000°; N
0.0238, Plg80.0000°, Azm100.0000°; P -1.8461,
Plg8.0000°, Azm246.0000°;
*MED_RC **26** 13:55:43.0±0.1,38˚.24N×20˚.32E,h19km,MW6.2/26,*
Moment Tensor Solution.Mantle waves: s26,c68;
Duration: 2ᵎ8 Moment tensor: Scale 10¹⁸Nm;
Mrr0.99±.05; Mθθ0.84±.03; Mϕϕ-1.83±.03; Mrθ0.88±.08;
Mθϕ1.65±.03; Mϕr-0.48±.08; Best double couple:
M₀2.41000×10¹⁸ NP1:φs17.00000°,δ57.00000°,
λ164.00000°. NP2:φs116.00000°,δ76.00000°,λ34.00000°.
Principal axes: T 2.0200, Plg33.0000°, Azm341.0000°;
N 0.7800, Plg54.0000°, Azm135.0000°; P -2.8000,
Plg12.0000°, Azm243.0000°; nsta1 refers to body waves.
nsta2 refers to surface waves, cutoff=40s.
*ATH **26** 13:55:43.0,38˚.22N×20˚.53E,h16km±1km,ML5.8/23 Error*
ellipse: s-maj=1.3km s-min=0.8km az=246.0
*GII **26** 13:55:46.9±0.0,37˚.42N×20˚.85E,h10km*
*GCMT **26** 13:55:48.2±0.1,38˚.08N×20˚.40E,h15km,MW6.1/157,*
Moment Tensor Solution. s148,c323; s157,c580;
Duration: 2ᵎ8 Moment tensor: Scale 10¹⁸Nm;
Mrr0.78±.01; Mθθ0.74±.01; Mϕϕ-1.52±.01; Mrθ0.30±.02;
Mθϕ1.46±.01; Mϕr-0.29±.02; Best double couple:
M₀1.88700×10¹⁸ NP1:φs19.00000°,δ76.00000°,
λ176.00000°. NP2:φs110.00000°,δ87.00000°,λ14.00000°.
Principal axes: T 1.4870, Plg12.0000°, Azm335.0000°;
N 0.7950, Plg76.0000°, Azm123.0000°; P -2.2880,
Plg7.0000°, Azm244.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface/mantle waves,
cutoff=50s. Triangular moment-rate function
*NEIC **26** 13:55:50,38˚.15N×20˚.36E,h14km,Moment Tensor*
Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.73;
Mθθ0.80; Mϕϕ-1.53; Mrθ0.59; Mθϕ1.48; Mϕr-0.68; Fault
plane solution: M₀2.18000×10¹⁸ NP1:φs20.00000°,
δ65.00000°,λ177.00000°. NP2:φs111.00000°,δ87.00000°,
λ25.00000°. Principal axes: T 1.5995, Plg19.0000°,
Azm339.0000°; N 0.8855, Plg65.0000°, Azm117.0000°; P
-2.4850, Plg15.0000°, Azm243.0000°;
*NEIC **26** 13:55:50,38˚.31N×20˚.30E,h20km,Moment Tensor*
Solution. Moment tensor: Scale 10¹⁸Nm; Mrr0.54;
Mθθ0.77; Mϕϕ-1.31; Mrθ0.14; Mθϕ1.26; Mϕr0.43; Fault
plane solution: M₀1.76000×10¹⁸ NP1:φs111.00000°,
δ71.00000°,λ8.00000°. NP2:φs18.00000°,δ82.00000°,
λ161.00000°. Principal axes: T 1.4681, Plg19.0000°,
Azm333.0000°; N 0.4790, Plg69.0000°, Azm176.0000°; P
-1.9471, Plg8.0000°, Azm66.0000°;
ISC 26 13:55:43.3±0.3,**38˚.19N**±0˚.02×**20˚.51E**±0˚.02,**h14**km±1km,
h14km:**pP-P,n2480,σ1ᵎ98**/2640,**mb5.9**/423,**MS6.1**/459,
108C-36D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.07**	**102**	P			**Pg**	**13 55 46.3**	**+0.2**
VLS				S			**Sg**	**13 55 50.0**	**+2.0**
VLS	**Valsamata**	**0.07**	**102**	P			**Pg**	**13 55 46.3**	**+0.2**
VLS	**Valsamata**	**0.07**	**102**	P			**Pg**	**13 55 46.3**	**+0.2**
KFL	**Anninata**	**0.24**	**110**	P			**Pg**	**13 55 48.8**	**+0.3**
KFL	**Anninata**	**0.24**	**110**	P			**Pg**	**13 55 48.8**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.34**	**159**	P			**Pg**	**13 55 50.3**	**+0.1**
EVGI	**Lefkada island**	**0.45**	**15**	P			**Pg**	**13 55 51.5**	**-0.7**
EVGI				S			**Sb**	**13 55 59.3**	**-0.2**
EVGI	**Lefkada island**	**0.45**	**15**	P			**Pg**	**13 55 51.5**	**-0.7**
MGNA	**Meganis**	**0.52**	**26**	P			**Pg**	**13 55 52.6**	**-0.9**
MGNA				S			**Sg**	**13 56 00.2**	**-0.1**
MGNA				AML		AML	AML	13 56 07.1	
MGNA				AML		AML	AML	13 56 07.3	
LKD2	**Lefkada island**	**0.61**	**11**	P			**Pg**	**13 55 54.2**	**-1.0**
LKD2				S			**Sb**	**13 56 04.4**	**+0.1**
	1065μm,1.0s								
LKD2	**Lefkada island**	**0.61**	**11**	P			**Pg**	**13 55 54.3**	**-1.0**
TSLK	**Tsoukalades, L**	**0.64**	**10**	P			**Pg**	**13 55 54.8**	**-1.1**
TSLK				S			**Sb**	**13 56 06.2**	**+1.0**
	916μm,0.8s								
TSLK	**Tsoukalades, L**	**0.64**	**10**	P			**Pg**	**13 55 54.9**	**-1.1**
RLS	**Riolos of Patr**	**0.77**	**100**	P			**Pg**	**13 55 57.8**	**-0.5**
RLS				S			**Sn**	**13 56 11.8**	**+0.7**
	393μm,1.2s								
RLS	**Riolos of Patr**	**0.77**	**100**	P			**Pg**	**13 55 57.8**	**-0.5**
RLS				S			**Sg**	**13 56 08.1**	**-0.3**
RLS				AML		AML	AML	13 56 17.2	
RLS				AML		AML	AML	13 56 23.6	
PVO	**Paravola**	**0.91**	**62**	P			**Pb**	**13 56 00.5**	**-0.4**
PVO				S			**Sn**	**13 56 17.2**	**+2.6**
	989μm,0.8s								
PVO	**Paravola**	**0.91**	**62**	P			**Pb**	**13 56 00.4**	**-0.4**
PVO				S			**Sg**	**13 56 12.3**	**-0.4**
PVO				AML		AML	AML	13 56 26.0	
PVO				AML		AML	AML	13 56 26.7	
DRO	**Drossia**	**0.98**	**104**	P			**Pb**	**13 56 01.3**	**-0.8**
DRO				S			**Sn**	**13 56 18.4**	**+2.0**
	614μm,0.6s								
DRO	**Drossia**	**0.98**	**104**	P			**Pb**	**13 56 01.3**	**-0.8**
DRO				S			**Sb**	**13 56 14.9**	**0.0**
DRO				AML		AML	AML	13 56 27.2	
DRO				AML		AML	AML	13 56 31.0	
UPR	**University Cam**	**1.01**	**84**	P			**Pb**	**13 56 02.7**	**+0.1**
EFP	**Efpalio**	**1.12**	**77**	P			**Pb**	**13 56 03.7**	**-0.9**
EFP				S			**Sn**	**13 56 22.0**	**+2.0**
	527μm,0.8s								
EFP	**Efpalio**	**1.12**	**77**	P			**Pb**	**13 56 03.5**	**-1.1**
EFP				AML		AML	AML	13 56 32.6	
EFP				AML		AML

SRN	Sarande	1.73	347	P	Pn	13 56 12.9	-0.1
SRN	Sarande	1.73	347	*i* PN	Pn	13 56 13.3	+0.3
SRN				*i* SN	Sg	13 56 43.3	+4.2
AXAR	Agios Charalam	1.78	71	P	Pb	13 56 14.9	-0.9
AXAR				AML	AML	13 56 59.8	
AXAR				AML	AML	13 57 01.7	
THL	Klokotos Trika	1.81	40	P	Pb	13 56 16.1	-0.1
THL	Klokotos Trika	1.81	40	P	Pb	13 56 15.7	-0.5
THL				AML	AML	13 56 53.9	
THL				AML	AML	13 56 55.8	
KPRO	Kipourio	1.88	20	P	Pb	13 56 17.2	-0.4
PROD	Prodromos	1.89	87	P	Pb	13 56 17.0	-0.6
LTK	Loutraki	1.95	94	P	Pb	13 56 17.7	-0.9
LTK	Loutraki	1.95	94	P	Pb	13 56 17.7	-0.9
LOUT	Loutraki	1.96	95	P	Pb	13 56 17.9	-0.9
LOUT	Loutraki	1.96	95	P	Pb	13 56 17.8	-1.0
LKR	Lokris	2.01	76	P	Pb	13 56 18.7	-1.0
LKR	Lokris	2.01	76	P	Pb	13 56 18.5	-1.1
LKR				AML	AML	13 57 03.5	
LKR				AML	AML	13 57 04.7	
PENT	Pentalofos	2.06	14	P	Pb	13 56 19.7	-0.9
LRSO	Larissa Observ	2.08	44	P	Pb	13 56 19.8	-1.1
LRSO	Larissa Observ	2.08	44	P	Pb	13 56 19.6	-1.3
TPE	Tepelena	2.14	350	P	Pn	13 56 19.0	+0.4
TPE	Tepelena	2.14	350	*i* PN	Pn	13 56 18.7	+0.1
TPE				*i* SN	Sg	13 56 52.9	+0.9
VIL2	Platees	2.17	89	P	Pb	13 56 21.2	-1.3
VIL2				AML	AML	13 57 11.1	
VIL2				AML	AML	13 57 14.5	
VILL	Villia	2.21	90	P	Pn	13 56 21.2	+1.5
NEST	Nestorio	2.26	11	P	Pb	13 56 22.8	-1.2
DID	Didima	2.27	107	P	Pn	13 56 21.7	+1.3
DID	Didima	2.27	107	P	Pn	13 56 21.7	+1.3
KZN	Kozani	2.33	25	P	Pn	13 56 23.0	+1.7
KZN	Kozani	2.33	25	P	Pn	13 56 23.0	+1.7
KZN				AML	AML	13 57 09.4	
KZN				AML	AML	13 57 10.0	
NEO	Neokhori	2.40	61	P	Pn	13 56 23.9	+1.7
NEO	Neokhori	2.40	61	P	Pn	13 56 23.6	+1.4
XOR	Xorichti	2.40	60	P	Pn	13 56 23.6	+1.3
VLO	Vlora	2.41	341	P	Pn	13 56 22.8	+0.5
VLO	Vlora	2.41	341	*i* PN	Pn	13 56 23.4	+1.1
VLO				*i* SN	Sb	13 56 58.1	+2.1
VLI	Veliai	2.43	127	P	Pn	13 56 24.7	+2.1
VLI	Veliai	2.43	127	P	Pb	13 56 25.0	-1.8
LIT	Litokhoron	2.45	38	P	Pn	13 56 24.1	+1.1
LIT	Litokhoron	2.45	38	P	Pn	13 56 24.3	+1.3
LIT	Litokhoron	2.45	38	P	Pn	13 56 24.5	+1.5
LIT	Litokhoron	2.45	38		Pn	13 56 24.3	+1.3
SCTE	Santa Cesarea	2.46	320		Pn	13 56 22.2	-0.8
MRKA	Markates	2.47	77	P	Pn	13 56 24.8	+1.6
MRKA	Markates	2.47	77	P	Pn	13 56 24.7	+1.4
YDRA	Hydra	2.49	109	P	Pb	13 56 25.8	-2.0
MNVA	Monemvasia	2.51	126	P	Pb	13 56 26.4	-1.8
SKIA	Skiathos	2.51	66	P	Pn	13 56 25.2	+1.4
SKIA	Skiathos	2.51	66	P	Pn	13 56 25.4	+1.7
ATH	Athens Observa	2.54	94	P	Pn	13 56 25.8	+1.6
ATH				S	Sb	13 56 57.7	-2.2
	89µm,1.3s						
ATH	Athens Observa	2.54	94	P	Pn	13 56 25.7	+1.6
ATH	Athens Observa	2.54	94	P	Pn	13 56 25.7	+1.6
ATHU	Athens Univers	2.60	94	P	Pn	13 56 26.2	+1.3
ATHU	Athens Univers	2.60	94	P	Pn	13 56 26.2	+1.3
VLY	Voula,Athens	2.62	96	P	Pn	13 56 26.5	+1.3
VLY	Voula,Athens	2.62	96	P	Pn	13 56 26.6	+1.4
PTL	Penteli	2.65	92	P	Pn	13 56 27.1	+1.4
PTL				S	Sn	13 57 00.1	+2.4
	70µm,1.3s						
PTL	Penteli	2.65	92	P	Pn	13 56 27.2	+1.5
FNA	Florina	2.67	14	P	Pn	13 56 27.1	+1.0
FNA	Florina	2.67	14	P	Pn	13 56 27.5	+1.4
FNA	Florina	2.67	14	P	Pn	13 56 27.1	+1.0
FNA	Florina	2.67	14		Pn	13 56 27.5	+1.4
EREA	Eretria	2.70	84	P	Pn	13 56 28.1	+1.6
EREA	Eretria	2.70	84	P	Pn	13 56 28.1	+1.6
KTHR	Kythira	2.77	133	P	Pb	13 56 30.2	-2.5
ALNA	Alonissos	2.80	69	P	Pn	13 56 29.1	+1.5
KTHA	Kythira Island	2.81	133	P	Pb	13 56 30.6	-2.7
KTHA	Kythira Island	2.81	133	P	Pn	13 56 30.3	+2.5
AOS	Alonnisos	2.81	69	P	Pn	13 56 28.6	+0.7
AOS	Alonnisos	2.81	69	P	Pn	13 56 29.0	+1.4
AOS	Alonnisos	2.81	69	P	Pn	13 56 29.9	+2.0
OHR	Ohrid	2.92	4	*i* Pn	Pn	13 56 31.0	+1.5
OHR				*i* Sn	Sb	13 57 11.1	+0.2
OHR				*e*Lg	Lg	13 57 24.6	
	comp=E,223µm,1.4s						
PAIG	Paliouri	3.02	54	P	Pn	13 56 31.4	+0.7
PAIG	Paliouri	3.02	54	P	Pn	13 56 32.4	+1.7
THE	Thessaloniki	3.09	37	P	Pn	13 56 32.6	+0.9
TIP	Timpagrande	3.10	290	⇓P	Pn	13 56 29.5	-2.3
TIP	Timpagrande	3.10	290	⇑S	Sn	13 57 01.0	-7.6
TIP	Timpagrande	3.10	290		Pn	13 56 31.8	0.0
KARY	Karystos	3.10	92	P	Pn	13 56 33.1	+1.2
KARY	Karystos	3.10	92	P	Pn	13 56 33.3	+1.4
GRG	Griva	3.13	27	P	Pn	13 56 32.8	+0.6
HORT	Hortiatis	3.13	39	P	Pn	13 56 32.9	+0.5
PLG	Polygyros	3.15	45	P	Pn	13 56 33.2	+0.7
PLG	Polygyros	3.15	45	P	Pn	13 56 33.3	+0.7
TIR	Tirane	3.19	351	P	Pn	13 56 33.5	+0.5
TIR	Tirane	3.19	351	P	Pn	13 56 33.6	+0.5
TIR	Tirane	3.19	351	*i* PN	Pn	13 56 33.6	+0.5
TIR				*i* SN	Sb	13 57 21.6	+3.0
TIR	Tirane	3.19	351	⇑P	Pn	13 56 33.6	+0.5
TIR	Tirane	3.19	351	⇓S	Sn	13 57 14.3	+3.3
TIR	Tirane	3.19	351		Pn	13 56 33.6	+0.5
ANKY	Antikythira Is	3.22	135	P	Pn	13 56 35.5	+2.0
ANKY	Antikythira Is	3.22	135	P	Pn	13 56 35.0	+1.5
SERI	Serifos	3.32	107	P	Pn	13 56 35.7	+0.8
CGL1	Ceglie Messapi	3.40	317	⇑*i*Pn	Pn	13 56 35.5	-0.5
TAR1	Taranto	3.42	314	⇑*i*Pn	Pn	13 56 35.9	-0.3
SOH	Sokhos	3.43	39	P	Pn	13 56 38.0	+1.6
MHLO	Agia Marina, M	3.44	115	P	Pn	13 56 38.1	+1.5
PHP	Peshkopia	3.49	359	P	Pn	13 56 37.8	+0.5
PHP	Peshkopia	3.49	359	*i* PN	Pn	13 56 38.2	+1.0
PHP				*i* SN	Sn	13 57 20.9	+2.4
KNT	Kendrikon	3.49	31	P	Pn	13 56 38.0	+0.7
VAY	Valandovo	3.51	26	*e*P	Pb	13 56 46.8	+1.6
VAY	Valandovo	3.51	26	*i* Pn	Pn	13 56 38.4	+0.9
VAY				*i* Sn	Sb	13 57 24.9	-2.8
VAY				*e*Lg	Lg	13 57 31.7	
	comp=E,22µm,1.1s						
MASS	Massafra	3.57	314	⇑*i*Pn	Pn	13 56 38.1	-0.2
CEL	Celeste	3.63	272		Pn	13 56 38.8	-0.5
RODP	Rodopos	3.70	134	P	Pn	13 56 42.4	+2.3
RODP	Rodopos	3.70	134	P	Pn	13 56 42.8	+2.7
STIP	Stip	3.73	20	⇑*i*Pn	Pn	13 56 43.0	+2.4
STIP				*i* Sn	Sb	13 57 33.4	-0.6
SRS	Serrai	3.77	38	P	Pn	13 56 41.9	+0.8
SKO	Skopje	3.84	10	⇓*i*Pn	Pn	13 56 42.8	+0.8
SKO				*i* Sn	Sb	13 57 32.4	-4.9
PUK	Puka	3.88	353	*i* PN	Pn	13 56 42.6	0.0
PUK				*i* SN	Sn	13 57 30.4	+2.4
ULC	Ulcinj	3.89	346	⇓*i*Pn	Pn	13 56 42.0	-0.7
ULC				*i* Sn	Sn	13 57 29.2	+0.9
CHAN	Chania	3.89	132	P	Pn	13 56 42.7	0.0
IMMV	Iera Moni Meta	3.90	133	P	Pn	13 56 43.7	+0.9
KNDR	Palaiochora Ch	3.90	138	P	Pn	13 56 44.6	+1.7
SG1	Sgolgore (BA)	3.97	313	⇑*i*Pn	Pn	13 56 43.4	-0.4
BAI	Bari	4.04	317	⇑*i*Pn	Pn	13 56 44.3	-0.4
THAS	Thassos island	4.06	52	P	Pn	13 56 45.6	+0.6
VAM	Vamos	4.06	132	P	Pn	13 56 45.8	+0.7
DRME	Dracevica, Mon	4.12	346	⇑*i*Pn	Pn	13 56 44.8	-1.0
DRME	Dracevica, Mon	4.12	346	*e*Pn	Pn	13 56 46.2	+0.4
DRME				*i* Sn	Sn	13 57 34.4	+0.6
APE	Apeiranthos	4.14	104	P	Pn	13 56 46.6	+0.4
APE	Apeiranthos	4.14	104	*e*P	Pn	13 56 50.1	+3.9
APE	Apeiranthos	4.14	104	⇑P	Pn	13 56 47.9	+1.6
KKB	Krupnik	4.17	27	*e*P	Pn	13 56 49.4	+2.8
KAVA	Kavala	4.17	47	P	Pn	13 56 47.1	+0.5
BCI	Bajram Curri	4.18	356	*i* PN	Pn	13 56 48.3	+1.5
BCI				*i* SN	Sn	13 57 32.5	-3.0
MMB	Musomiste	4.20	35	*e*P	Pn	13 56 47.9	+0.9
BUM	Brajici-Budva	4.29	344	⇑*i*Pn	Pn	13 56 47.5	-0.7
BUM				*i* Sn	Sn	13 57 38.3	+0.2
THT2	Imerovigli	4.29	113	P	Pn	13 56 51.7	+3.4
SIGR	SIGRI	4.31	75	P	Pn	13 56 49.2	+0.8
SIGR	SIGRI	4.31	75	P	Pn	13 56 50.9	+2.5
SAP1	Santorini-Akro	4.31	114	P	Pn	13 56 50.0	+1.6
PDG	Podgorica	4.34	348	*e*Pn	Pn	13 56 48.5	-0.4
PDG				*e*Sn	Sn	13 57 38.4	-0.9
PDG	Podgorica	4.34	348	⇑P	Pn	13 56 48.1	-0.8
PDG	Podgorica	4.34	348	⇓S	Sn	13 57 39.1	-0.1
PDG	Podgorica	4.34	348	⇑*i*Pn	Pn	13 56 48.0	-0.8
PDG	Podgorica	4.34	348		Pn	13 56 48.0	-0.8
TTG	Podgorica	4.34	348	⇑*i*Pn	Pn	13 56 48.3	-0.6
TTG				*i* Sn	Sn	13 57 39.9	+0.6
SANT	Santorini	4.35	113	P	Pn	13 56 50.2	+1.2
SANT	Santorini	4.35	113	⇑P	Pn	13 56 51.1	+2.1
SANT	Santorini	4.35	113		Pn	13 56 50.2	+1.2
CHOS	Chios island	4.37	86	P	Pn	13 56 50.4	+1.0
CHOS	Chios island	4.37	86	P	Pn	13 56 51.3	+1.9
ACER	Acerenza	4.38	308		Pn	13 56 49.8	+0.3
GVDS	Gavdos	4.41	138	P	Pn	13 56 53.3	+3.4
PVY	Plav	4.42	355	⇓*i*Pn	Pn	13 56 50.3	+0.2
PVY				*i* Sn	Sn	13 57 42.6	+1.2
AMGA	Amorgos Island	4.49	106	P	Pn	13 56 52.3	+1.3
SMTH	Samothraki Isl	4.51	58	P	Pn	13 56 51.8	+0.5
CEME	Cevo	4.52	345	⇓*i*Pn	Pn	13 56 50.4	-1.0
CEME				*i* Sn	Sn	13 57 44.1	+0.4
HCY	Herceg Novi	4.52	341	⇑*i*Pn	Pn	13 56 49.5	-1.8
HCY	Herceg Novi	4.52	341	⇑*i*Pn	Pn	13 56 49.6	-1.8
HCY				*i* Sn	Sn	13 57 43.9	+0.1
IDI	Anoyia	4.56	128	Pn	Pn	13 56 53.9	+2.0
	comp=E,9.9nm,0.3s,baz=30,slow=3.6,SNR=43						
IDI				Sn	Sn	13 57 48.7	+3.9
	comp=E,215nm,0.3s,baz=327,slow=20,SNR=7.7						
IDI				LR	LR	13 58 55.0	
	comp=E,139µm,21.7s,baz=302,slow=42						
BOZC	Bozcaada	4.62	67	P	Pn	13 56 54.4	+1.6
TMBK	Timbaki Herakl	4.63	131	P	Pn	13 56 54.8	+2.0
PRK	Paraskevi	4.63	75	P	Pn	13 56 55.3	+2.4
GADA	Gvkgeada	4.64	63	P	Pn	13 56 55.0	+2.0
HRKL	Herakleio	4.68	127	P	Pn	13 56 56.5	+3.0
SIVA	Sivas	4.69	131	P	Pn	13 56 55.2	+1.5
IVA	Berane	4.70	354	⇓*i*Pn	Pn	13 56 54.3	+0.4
IVA				*i* Sn	Sn	13 57 48.9	+0.6
KOME	Kolasin	4.71	351	*e*Pn	Pn	13 56 54.5	+0.4
KOME				*i* Sn	Sn	13 57 49.1	+0.4
NKME	Niksic	4.72	346	⇓*i*Pn	Pn	13 56 53.4	-0.8
NKME				*i* Sn	Sn	13 57 49.4	+0.6
BARS	Barje	4.73	12	*e*Pn	Pn	13 56 54.7	+0.5
BARS	Barje	4.73	12	*e*Pn	Pg	13 57 11.6	-2.2
NKY	Niksic	4.76	346	⇓*i*Pn	Pn	13 56 53.9	-0.8
NKY				*i* Sn	Sn	13 57 49.9	+0.5
RZN	Rozhen	4.76	41	*e*P	Pn	13 56 56.0	+1.2
TREB	Trebinje	4.81	341	⇑*i*Pn	Pn	13 56 53.4	-2.0
EZN	Ezine	4.82	68	P	Pn	13 56 56.9	+1.5
EZN	Ezine	4.82	68	P	Pn	13 56 58.1	+2.7
DBRK	Dubrovnik	4.82	339	*e*Pn	Pn	13 56 53.5	-2.0
RDO	Rodhopi	4.88	51	P	Pn	13 56 57.0	+0.8
RDO	Rodhopi	4.88	51	P	Pn	13 56 57.5	+1.3
VAE	Valguarnera	4.88	263	Pn	Pn	13 56 56.8	+0.4
	comp=E,110nm,0.3s,baz=4.9,slow=0.6,SNR=94						
VAE				Sn	Sn	13 57 53.3	+0.7
	comp=E,250nm,0.3s,baz=270,slow=9.7,SNR=5.4						
VTS	Vitosha	4.89	24	*e*Pn	Pn	13 56 56.9	+0.3
VTS	Vitosha	4.89	24	P	Pn	13 56 57.5	+0.9
VTS	Vitosha	4.89	24	⇑P	Pn	13 56 58.2	+1.6
VTS	Vitosha	4.89	24	*e*P	Pn	13 56 57.8	+1.2
VTS	Vitosha	4.89	24		Pn	13 56 57.5	+0.9
BRY	Bratogost	4.94	343	*e*Pn	Pn	13 56 56.2	-1.0
BRY				*i* Sn	Sn	13 57 53.6	-0.6
LAST	Lasithi	5.01	126	P	Pn	13 56 58.1	-0.1
SMG	Samos	5.03	94	P	Pn	13 56 59.6	+1.3
NPS	Neapolis	5.04	124	P	Pn	13 56 58.5	0.0
SELS	Selova	5.04	5	*e*Pn	Pn	13 56 57.9	-0.7
SELS				*e*Sn	Sn	13 57 55.7	-1.0
ENEZ	Enez	5.05	58	P	Pn	13 56 59.8	+1.1
PLD	Plovdiv	5.06	38	*e*P	Pn	13 57 00.5	+1.7
PLD	Plovdiv	5.06	38	P	Pn	13 57 01.1	+2.3
ALN	Alexandroupoli	5.06	56	P	Pn	13 56 59.5	+0.7
ALN	Alexandroupoli	5.06	56	P	Pn	13 56 59.8	+1.0
ALN	Alexandroupoli	5.06	56	P	Pn	13 57 00.7	+1.9
ALN	Alexandroupoli	5.06	56		Pn	13 56 59.8	+1.0
SJES	Sjenica	5.08	356	*e*Pn	Pn	13 56 59.6	+0.4
DKL	Dikili	5.09	78	P	Pn	13 57 01.9	+2.8
SGRT	San Giovanni R	5.10	316		Pn	13 56 58.4	-1.0
KDZ	Kurdzhali	5.12	46	*e*P	Pn	13 56 59.6	0.0
KDZ	Kurdzhali	5.12	46	P	Pn	13 56 59.8	+0.2
GELI	Tayfur-Gelibol	5.13	63	P	Pn	13 57 01.9	+2.2
STON	Ston	5.14	336	*i* Pn	Pn	13 56 58.2	-1.7
STON				Sn	Sn	13 57 56.4	-2.5
STON	Ston	5.14	336	*e*Pn	Pn	13 56 58.7	-1.2
STON				*e*Sn	Sn	13 57 55.7	-3.3
STON	Ston	5.14	336	⇑*i*Pn	Pn	13 56 58.0	-1.9
BLCB	Balcova	5.14	86	P	Pn	13 57 03.0	+3.1
UPM	Unac-Piva	5.15	347	*e*Pn	Pn	13 56 59.7	-0.5
UPM	Unac-Piva	5.15	347	⇑*i*Pn	Pn	13 57 00.1	-0.1
UPM				*i* Sn	Sn	13 58 00.4	+0.8
PGB	Panagyurishte	5.17	32	*e*P	Pn	13 57 02.1	+1.7
PLE	Pljevlja	5.20	351	⇓*i*Pn	Pn	13 57 01.2	+0.3
PLE				*i* Sn	Sn	13 58 01.3	+0.6
ERIK	Erikli-Kesan	5.27	60	P	Pn	13 57 03.1	+1.5
LPK	Lapseki	5.32	64	P	Pn	13 57 04.1	+1.8
ZAPS	Zavoj	5.33	17	*e*Pn	Pn	13 57 03.3	+0.8
WDD	Wied Dalam	5.33	246		Pn	13 57 01.4	-1.1
GCAM	G?zelcaml?	5.34	93	P	Pn	13 57 05.7	+3.1
IVAS	Ivanjica	5.39	357	*e*Pn	Pn	13 57 02.4	-0.9
IVAS				*e*Sn	Sn	13 58 04.7	-0.5
STIA	Sitia Lasithi	5.39	122	P	Pn	13 57 03.3	0.0
PAOL	Paolisi	5.39	304		Pn	13 57 04.4	+1.0
DIM	Dimitrovgrad	5.45	43	*e*P	Pn	13 57 06.7	+2.6
RUDO	Rudo	5.49	351	*e*Pn	Pn	13 57 03.8	-0.9
BOVS	Bovan	5.51	9	*e*Pn	Pn	13 57 04.6	-0.4
BODT	Bodrum	5.52	100	P	Pn	13 57 07.9	+2.8
ZKR	Zakros	5.52	122	P	Pn	13 57 06.5	+1.3
CORL	Corleone	5.69	269		Pn	13 57 07.6	+0.1
GRUS	Gruza	5.69	2	*e*Pn	Pn	13 57 07.0	-0.5
GRUS				*e*Sn	Sn	13 58 11.1	-1.6
KRBG	Karabiga-Canak	5.71	65	P	Pn	13 57 10.2	+2.5
BBLS	Lazići	5.73	352	*e*Pn	Pn	13 57 07.1	-1.0
BBLS				*e*Sn	Sn	13 58 11.6	-2.1
BBLS	Lazići	5.73	352	⇑*i*Pn	Pn	13 57 06.8	-1.3
RKY	Sarkoy-Tekirda	5.73	62	P	Pn	13 57 10.7	+2.6
MAKA	Makarska	5.74	334	*e*Pn	Pn	13 57 07.4	-0.7
MAKA				Sn	Sn	13 58 09.0	-4.7
ZAGS	Zajecar	5.77	13	*e*Pn	Pn	13 57 08.2	-0.3
CLTB	Caltabellotta	5.80	266		Pn	13 57 08.9	-0.2
DAT	Datca	5.81	102	*e*P	Pn	13 57 11.8	+2.6
AYDB	Zeytinkoy-Aydi	5.83	90	*e*P	Pn	13 57 12.6	+3.1
DIVS	Divibare	5.92	356	*e*Pn	Pn	13 57 09.5	-1.1
DIVS				*e*Sn	Sn	13 58 15.7	-2.5
DIVS	Divibare	5.92	356	⇑*i*Pn	Pn	13 57 09.3	-1.3
BALB	Balikesir	5.93	74	*e*P	Pn	13 57 13.3	+2.6
KARP	Karpathos	5.95	114	P	Pn	13 57 12.9	+1.8
KARP	Karpathos	5.95	114		Pn	13 57 12.7	+1.6
MRMT	Marmara Adasi	6.00	64	*e*P	Pn	13 57 14.1	+2.4
HAPS	Han Pijesak,Bl	6.01	349	*e*Pn	Pn	13 57 09.7	-2.2
TRUS	Trudelj	6.03	359	*e*Pn	Pn	13 57 11.0	-1.1
TRUS				*e*Sn	Sn	13 58 19.2	-1.7
PLVB	Pleven	6.06	30	⇓P	Pn	13 57 14.6	+2.1
SVIS	Svilajnac	6.09	5	*e*Pn	Pn	13 57 12.1	-0.8
SVIS				*e*Sn	Sn	13 58 20.3	-2.1
EDC	Edincik	6.10	67	*e*P	Pn	13 57 15.7	+2.6
BAIL	Bailesti	6.21	19	⇑P	Pn	13 57 14.9	+0.5
PVL	Pavlikeni	6.22	35	*e*P	Pn	13 57 14.6	0.0
ELND	Elena	6.25	39	⇑P	Pn	13 57 16.8	+1.6
YER	Yerkesik	6.26	97	*e*P	Pn	13 57 18.3	+3.0
KUBS	Kucevo	6.28	8	*e*Pn	Pn	13 57 14.5	-1.0
KUBS				*e*Sn	Sn	13 58 24.4	-2.6
JMB	Yambol	6.31	45	*e*P	Pn	13 57 17.2	+1.3
MANT	Manisa	6.34	85		Pn	13 57 15.5	-1.0
INTR	Introdacqua	6.34	309		Pn	13 57 16.3	-0.1
PUNG	Punghina	6.35	16	⇑P	Pn	13 57 17.5	+1.0
ARG	Arkhangelos	6.39	106	P	Pn	13 57 19.7	+2.6
ARG	Arkhangelos	6.39	106	*e*P	Pn	13 57 19.7	+2.6
TEKS	Tekeris	6.39	354	*e*Pn	Pn	13 57 16.6	-1.5
TEKS				*e*Sn	Sn	13 58 25.5	-4.4
TEKS	Tekeris	6.39	354	*e*Pn	Pn	13 57 15.4	-1.7
KULA	Kula-Manisa	6.42	85	*e*P	Pn	13 57 20.2	+2.7
VLAD	Vladila	6.50	26	⇑P	Pn	13 57 20.9	+2.3
SZH	Strazhica	6.53	37	*e*P	Pn	13 57 20.8	+1.8
TURN	Turunc	6.57	99	*e*P	Pn	13 57 18.3	-1.2
KIJV	Kijevo	6.58	333	*i* Pn	Pn	13 57 19.1	-0.6
KIJV				Sn	Sn	13 58 32.2	-2.3
ZIMR		6.58	32	⇓P	Pn	13 57 22.2	+2.5
ZIRJ	Zirje	6.58	328	*i* Pn	Pn	13 57 18.1	-1.5
ZIRJ				Sn	Sn	13 58 29.8	-4.7
DALY	Dalyan (Mula)	6.62	99	*e*P	Pn	13 57 22.9	+2.7
DJES	Djerdap	6.64	13	*e*Pn	Pn	13 57 21.1	+0.6
MDVR	Moldovita	6.65	7	⇑P	Pn	13 57 20.0	-0.6
MORI	Morici	6.73	329	*i* Pn	Pn	13 57 21.2	-0.5
MORI				Sn	Sn	13 58 34.1	-4.0
MGRS	Mrkonjic Grad	6.73	339	*e*Pn	Pn	13 57 21.5	-0.3
SRE	Strehaia	6.78	17	⇑P	Pn	13 57 23.6	+1.2
DOB	Doboj	6.78	345	*e*Pn	Pn	13 57 20.2	-2.2
HERR	Herculane	6.84	11	⇑P	Pn	13 57 23.6	+0.4
AQU	L'Aquila	6.84	310	P	Pn	13 57 24.2	+0.9
AQU	L'Aquila	6.84	310	*e*Pn	Pn	13 57 24.9	+1.6
AQU	L'Aquila	6.84	310		Pn	13 57 24.2	+0.9
COPA	Copaceanca	6.92	29	⇓P	Pn	13 57 25.6	+1.4
FRGS	Fruska Gora	6.98	356	*e*Pn	Pn	13 57 22.5	-2.7
FRGS				*e*Sn	Sn	13 58 40.5	-3.9
FRGS	Fruska Gora	6.98	356	⇑*i*Pn	Pn	13 57 22.3	-2.9
FETY	Fethiye	7.00	100	*e*P	Pn	13 57 28.3	+2.8
BLY	Banja Luka	7.01	340	⇑P	Pn	13 57 24.4	-1.1
BLY	Banja Luka	7.01	340	*e*Pn	Pn	13 57 24.1	-1.5
BLY	Banja Luka	7.01	340		Pn	13 57 24.0	-1.5
RAZG	Razgrad	7.03	38	⇑P	Pn	13 57 27.9	+2.0
DUGI	Dugi Otok	7.11	326	*i* Pn	Pn	13 57 27.1	+0.3
DUGI				Sn	Sn	13 58 43.6	-3.9
HUMR	Humele	7.17	27	⇑P	Pn	13 57 29.0	+1.3
PRD	Provadia	7.24	44	*e*P	Pn	13 57 31.1	+2.4
UDBI	Udbina	7.26	332	*i* Pn	Pn	13 57 28.9	-0.2
NRCA	Norcia	7.29	312		Pn	13 57 29.9	+0.3
SGRR	Singureni	7.30	33	⇑P	Pn	13 57 32.1	+2.6
GZR	Gura Zlata	7.39	13	⇑P	Pn	13 57 31.0	+0.1
BUC1	Bucharest	7.42	32	⇓P	Pn	13 57 34.4	+3.2
GOLR		7.44	25	⇑P	Pn	13 57 34.0	+2.7
BZS	Buzias	7.47	6	*e*Pn	Pn	13 57 30.6	-1.2
BZS	Buzias	7.47	6	⇑P	Pn	13 57 32.1	+0.3
INCR	INCERC-Sediu C	7.55	32	⇑P	Pn	13 57 32.6	+4.6
ELL	Elmali	7.61	98	P	Pn	13 57 34.6	+0.6
ELL	Elmali	7.61	98		Pn	13 57 34.6	+0.6
NVLJ	Novalja	7.65	328	*e*Pn	Pn	13 57 34.0	-0.3
LOT	Lotru	7.65	18	⇑P	Pn	13 57 36.1	+1.7
SLUM	Salum	7.72	149	P	Pn	13 57 32.9	-2.4
	baz=151						
SLUM				S	Sn	13 58 53.9	-8.7
	baz=151						
SLUM				AMP		13 59 00.0	

SOP	Sopron	9.92	344	*e*Pn		Pn	13 58 06.3	+0.9		
STAL	STALIGIAL	9.92	327			Pn	13 58 03.6	-1.8		
VASR	Vaslui	10.01	30	⇓P		Pn	13 58 09.3	+2.6		
BURAR	Bucovina Array	10.03	19	⇑P		Pn	13 58 09.3	+2.2		
TRPA	Tarpa	10.04	8	*e*Pn		Pn	13 58 09.0	+1.9		
TRPA	Tarpa	10.04	8	⇑P		Pn	13 58 07.7	+0.6		
BUR08	Bucovina Ar. S	10.05	18			Pn	13 58 07.9	+0.6		
PRMA	PARMA	10.08	314			Pn	13 58 07.2	-0.4		
PRAR	RASCA	10.08	23	⇑P		Pn	13 58 08.9	+1.3		
CTI	Castel Tesino	10.24	323	P		Pn	13 58 08.3	-1.6		
CTI	Castel Tesino	10.24	323			Pn	13 58 08.3	-1.6		
MSSA	Maissana	10.29	310			Pn	13 58 10.5	0.0		
KECS	Kecovo	10.29	360	*e*P		Pn	13 58 09.9	-0.6		
KECS				*e*			14 00 01.8			
KECS	Kecovo	10.29	360	*e*PN		Pn	13 58 09.9	-0.6		
KECS				*e*SN		Sn	14 00 01.8	-3.8		
ZST	Bratislava	10.30	347	*e*P		Pn	13 58 09.5	-1.2		
ZST				*e*			13 59 57.6			
ZST					MLR	MLR				
	comp=Z,75μm,18.2s									
ZST	Bratislava	10.30	347	*e*PN		Pn	13 58 09.5	-1.2		
ZST				*e*SN		Sn	13 59 57.6	-8.3		
ZST				*e*L		L	14 03 17.0			
CONA	Conrad Observa	10.31	342	*e*Pn		Pn	13 58 08.7	-2.1		
	comp=Z,37nm,0.9s,SNR=29									
KBA	Koelnbreinsper	10.32	332	*e*Pn		Pn	13 58 10.0	-1.2		
KBA	Koelnbreinsper	10.32	332	*i* Pn		Pn	13 58 09.9	-1.2		
	comp=Z,81nm,0.6s,SNR=112									
KBA					Sn	Sn	14 00 02.0	-4.8		
	comp=Z,292nm,0.5s									
BR131	Keskin Array S	10.34	77	P		Pn	13 58 13.7	+2.3		
BR131	Keskin Array S	10.34	77			Pn	13 58 13.7	+2.3		
BR131	Keskin Array S	10.34	77	P		Pn	13 58 15.4	+4.0		
	SNR=58									
BRTR	Keskin Array B	10.34	77	Pn		Pn	13 58 15.2	+3.8		
	comp=Z,2.3nm,0.3s,baz=256,slow=13,SNR=61									
BRTR					LR	LR	14 02 55.9			
	comp=Z,67μm,20.4s,baz=244,slow=42									
VYHS	Vyhne	10.37	354	*e*P		Pn	13 58 10.6	-1.0		
VYHS				*e*			14 00 02.9			
VYHS					MLR	MLR				
	comp=Z,166μm,18.8s									
VYHS	Vyhne	10.37	354	*e*PN		Pn	13 58 10.6	-1.0		
VYHS				*e*SN		Sn	14 00 02.9	-4.7		
VYHS				*e*L		L	14 02 59.7			
IAS	Iasi	10.38	28	⇑P		Pn	13 58 11.2	-0.5		
ABTA	Abfaltersbach	10.38	328	*e*Pn		Pn	13 58 10.1	-1.8		
	comp=Z,644nm,0.8s,SNR=244									
ABTA					Sn	Sn	14 00 03.6	-4.5		
	comp=Z,1μm,0.8s									
LEF	Lefka	10.41	103	⇑P		Pn	13 58 12.6	+0.4		
MODS	Modra-Piesok	10.45	348	*e*P		Pn	13 58 10.2	-2.5		
MODS				*e*			14 00 02.7			
MODS					MLR	MLR				
	comp=Z,247μm,16.9s									
MODS	Modra-Piesok	10.45	348	*e*PN		Pn	13 58 10.2	-2.5		
MODS				*e*SN		Sn	14 00 02.7	-6.8		
MODS				*e*L		L	14 03 21.5			
SALO	Salr	10.50	318			Pn	13 58 12.0	-1.4		
UZH	Uzhgorod	10.52	7	*d i*P		Pn	13 58 14.6	+1.0		
UZH				*e*S		Sn	14 00 12.7	+1.6		
UZH					MLR	MLR				
	comp=N,20μm,12.0s									
UZH					MLR	MLR				
	comp=E,82μm,12.0s									
UZH					MLR	MLR				
	comp=Z,13μm,12.0s									
CMAH	Djebel Manchou	10.53	265	P		Pn	13 58 14.1	+0.2		
SMOL	Smolenice	10.56	349	*e*P		Pn	13 58 13.1	-1.1		
SMOL				*e*			14 00 08.3			
SMOL	Smolenice	10.56	349	*e*PN		Pn	13 58 13.1	-1.1		
SMOL				*e*SN		Sn	14 00 08.3	-3.9		
ABSA	Djebel Ababsia	10.56	264	P		Pn	13 58 15.4	+1.0		
ILGA	Ilgaz	10.58	70			Pn	13 58 14.8	0.0		
MILM	Milestii Mici	10.65	32	⇑P		Pn	13 58 17.8	+2.3		
MOA	Molln	10.68	337	*e*Pn		Pn	13 58 14.2	-1.6		
MOA				*e*Sn		Sn	14 00 15.3	+0.2		
MOA	Molln	10.68	337	*e*Pn		Pn	13 58 14.2	-1.6		
	comp=Z,384nm,0.3s,SNR=205									
MOA					Sn	Sn	14 00 11.9	-3.2		
	comp=Z,245nm,0.4s									
KIS	Kishinev	10.72	32	⇑ *i*P		Pn	13 58 18.0	+1.7		
	comp=Z,190nm,1.0s									
KIS	Kishinev	10.72	32	*i* PP		Pn	13 58 32.0	+16		
KIS				*i* S		Sn	14 00 19.0	+2.9		
KIS				*i* Li			14 01 16.0			
KIS				*i* LQ	LQ		14 01 30.0			
KIS				*e*LR	LR		14 02 04.0			
	comp=Z,108μm,12.0s									
KIS	Kishinev	10.72	32	⇑ *i*P		Pn	13 58 18.0	+1.7		
KIS				*i* S		Sn	14 00 19.0	+2.9		
KIS					pmax	pmax				
	comp=Z,190nm,1.0s									
KIS					pmax	pmax				
	comp=Z,4μm,12.0s									
KIS					MLR	MLR				
	comp=Z,108μm,12.0s									
KIS	Kishinev	10.72	32	⇑P		Pn	13 58 19.5	+3.2		
CRVS	Cervenica-Dubn	10.73	3	*e*P		Pn	13 58 16.3	-0.2		
CRVS	Cervenica-Dubn	10.73	3	*e*PN		Pn	13 58 16.3	-0.2		
CSS	Mathiatis	10.80	103			Pn	13 58 16.4	-1.2		
KOLS	Kolonicke sedl	10.81	6	*e*P		Pn	13 58 18.1	+0.4		
KOLS					MLR	MLR				
	comp=Z,45μm,25.5s									
KOLS	Kolonicke sedl	10.81	6	*e*PN		Pn	13 58 18.1	+0.4		
KOLS				*e*L		L	14 02 18.4			
HBRG	Burj al `Arab	10.82	132	P		Pn	13 58 14.9	-2.9		
	baz=133									
HBRG					AMP		14 00 00.0			
	baz=133									
PURM	Purcari	10.83	37	⇓P		Pn	13 58 20.4	+2.6		
JAVC	Velka Javorina	10.86	350	*e*PN		Pn	13 58 17.5	-0.9		
CAEH	'Ain El Ouahch	10.95	267	P		Pn	13 58 19.8	+0.3		
LANS	Liptovska Anna	10.98	356	*e*P		Pn	13 58 20.5	+0.5		
LANS	Liptovska Anna	10.98	356	*e*PN		Pn	13 58 20.5	+0.5		
BZK	Bozkurt	11.00	66	⇓P		Pn	13 58 24.3	+4.0		
RJOB	Jochberg	11.08	332	*e*Pn		Pn	13 58 20.9	-0.5		
CKFL	Kef-Lekhel	11.13	265	P		Pn	13 58 22.8	+0.6		
WTTA	Wattenberg	11.16	327	*e*Pn		Pn	13 58 21.6	-1.0		
	comp=Z,155nm,0.0s,SNR=147									
WTTA					Sn	Sn	14 00 25.0	-2.3		
	comp=Z,749nm,0.7s									
NIE	Niedzica	11.22	359	*e*P		Pn	13 58 24.7	+1.4		
NIE					MLR	MLR				
	comp=E,534μm,18.7s									
NIE	Niedzica	11.22	359	*e*P		Pn	13 58 24.7	+1.4		
NIE				*e*L		L	14 02 28.1			
	comp=E,534μm,18.7s									
STHS	Stebnicka Huta	11.23	2	*e*P		Pn	13 58 23.0	-0.5		
STHS				*e*			14 00 27.5			
STHS	Stebnicka Huta	11.23	2	*e*PN		Pn	13 58 23.0	-0.5		
STHS	Stebnicka Huta	11.23	2	*e*SN		Sn	14 00 27.5	-1.3		
WATA	Walderalm	11.24	327	*e*Pn		Pn	13 58 22.9	-0.8		
	comp=E,116nm,0.3s,SNR=171									
WATA					Sn	Sn	14 00 26.0	-3.2		
	comp=E,1μm,0.9s									
KRUC	Moravsky	11.27	346	*e*PN		Pn	13 58 23.0	-0.8		
KRUC	Moravsky	11.27	346	*e*SN		Sn	14 00 29.8	+0.3		
SQTA	Sankt Quirin	11.31	326	*e*Pn		Pn	13 58 24.4	-0.3		
	comp=E,78nm,0.3s,SNR=107									
SQTA					Sn	Sn	14 00 26.5	-4.4		
	comp=E,386nm,0.7s									
FUORN	Ofenpass-Fuorn	11.32	321			Pn	13 58 21.7	-3.2		
CASM	Ain Smara	11.34	265	P		Pn	13 58 25.8	+0.8		
FETA	Feichten	11.38	324	*i* Pn		Pn	13 58 25.2	-0.4		
	comp=E,96nm,0.5s,SNR=72									
FETA					Sn	Sn	14 00 28.9	-3.8		
	comp=E,191nm,0.7s									
CTEI	Djebel Teioual	11.46	264	P		Pn	13 58 27.7	+1.1		
MOTA	Moosalm	11.46	326	*e*Pn		Pn	13 58 26.5	-0.2		
	comp=E,133nm,0.5s,SNR=137									
MOTA					Sn	Sn	14 00 32.0	-2.4		
	comp=E,609nm,0.7s									
SORM	Soroca	11.46	27	⇓P		Pn	13 58 29.8	+3.3		
VRAC	Vranov	11.47	347	Pn		Pn	13 58 25.4	-1.2		
	comp=E,2.2nm,0.3s,baz=184,slow=13,SNR=21									
VRAC					Sn	Sn	14 00 31.3	-3.1		
	comp=E,5.4nm,0.3s,baz=168,slow=17,SNR=2.9									
VRAC					LR	LR	14 03 25.1			
	comp=E,96μm,20.8s,baz=166,slow=41									
VRAC	Vranov	11.47	347	⇑P		Pn	13 58 25.9	-0.7		
VRAC	Vranov	11.47	347	*e*PN		Pn	13 58 25.0	-1.6		
VRAC	Vranov	11.47	347	*e*SN		Sn	14 00 35.5	+1.1		
KWP	Kalwaria Pacla	11.55	7	*e*P		Pn	13 58 29.8	+2.1		
KWP					MLR	MLR				
	comp=E,454μm,20.8s									
KWP	Kalwaria Pacla	11.55	7	*e*P		Pn	13 58 29.8	+2.1		
KWP				*e*L		L	14 02 28.7			
	comp=E,454μm,20.8s									
KWP	Kalwaria Pacla	11.55	7			Pn	13 58 26.9	-0.8		
DAVOX	Davos/Dischmat	11.62	321	Pn		Pn	13 58 30.0	+1.1		
	comp=E,12nm,0.3s,baz=134,slow=14,SNR=178									
DAVOX				Sn		Sn	14 00 33.1	-5.3		
	comp=E,54nm,0.3s,baz=1.7,slow=14,SNR=3.5									
DAVOX					LR	LR	14 03 34.8			
	comp=E,95μm,20.3s,baz=122,slow=41									
TREC	Trest	11.68	344	*e*P		Pn	13 58 28.6	-0.9		
TREC					MLR	MLR				
	comp=Z,102μm,11.5s									
TREC	Trest	11.68	344	*e*PN		Pn	13 58 28.6	-0.9		
TREC					AMS	AMS	14 03 30.0			
	comp=Z,102μm,11.5s									
TUE	Stuetta	11.68	319			Pn	13 58 28.0	-1.7		
RETA	Reutte	11.71	326	*e*Pn		Pn	13 58 29.9	-0.2		
	comp=Z,124nm,0.6s,SNR=44									
RETA					Sn	Sn	14 00 36.9	-3.8		
	comp=Z,752nm,1.0s									
GEC2	GERESS Array S	11.73	337	*e*Pn		Pn	13 58 27.7	-2.6		
GEC2	GERESS Array S	11.73	337			Pn	13 58 27.4	-2.9		
GERES	GERESS Array B	11.73	337	Pn		Pn	13 58 28.2	-2.1		
	comp=Z,13nm,0.3s,baz=155,slow=13,SNR=120									
GERES				Sn		Sn	14 00 34.6	-6.5		
	comp=Z,29nm,0.3s,baz=154,slow=24,SNR=6.8									
GERES					LR	LR	14 03 36.4			
	comp=Z,58μm,20.4s,baz=156,slow=41									
DFRA	Djebel Bou Aff	11.76	266	P		Pn	13 58 31.9	+1.1		
OKC	Ostrava-Krasne	11.77	352	*e*P		Pn	13 58 30.0	-0.7		
OKC				*e*			14 00 37.4			
OKC					MLR	MLR				
	comp=Z,106μm,13.4s									
OKC	Ostrava-Krasne	11.77	352	*e*PN		Pn	13 58 30.0	-0.7		
OKC				*e*SN		Sn	14 00 37.4	-4.3		
OKC					AMS	AMS	14 03 40.0			
	comp=Z,106μm,13.4s									
MORC	Moravsky Berou	11.78	351	P		Pn	13 58 28.4	-2.5		
MORC	Moravsky Berou	11.78	351	⇑P		Pn	13 58 30.0	-0.8		
MORC	Moravsky Berou	11.78	351	*e*PN		Pn	13 58 30.1	-0.8		
MORC	Moravsky Berou	11.78	351	*e*SN		Sn	14 00 42.4	+0.3		
MORC	Moravsky Berou	11.78	351			Pn	13 58 28.4	-2.5		
LVV	L'vov	11.90	11	*e*P		Pn	13 58 34.9	+2.4		
LVV				*e*S		Sn	14 00 44.6	-0.3		
LVV					pmax	pmax				
	comp=Z,410nm,1.2s									
LVV					smax	smax				
	comp=N,390nm,1.7s									
LVV					smax	smax				
	comp=E,310nm,1.7s									
LVV					MLR	MLR				
	comp=E,85μm,10.0s									
LVV					MLR	MLR				
	comp=N,38μm,8.0s									
LVV					MLR	MLR				
	comp=Z,86μm,9.0s									
HMYD	Mayadein	11.95	131	P		Pn	13 58 30.5	-2.9		
	baz=133									
HNAT	Natroun	11.97	133	P		Pn	13 58 31.0	-2.6		
	baz=134									
DAVA	Damuels	11.97	323	*e*Pn		Pn	13 58 33.8	+0.1		
DAVA				*e*Sn		Sn	14 00 42.5	-4.6		
DAVA	Damuels	11.97	323	*e*Pn		Pn	13 58 33.7	+0.1		
	comp=Z,65nm,0.3s,SNR=63									
DAVA					Sn	Sn	14 00 42.1	-5.0		
	comp=Z,1μm,0.7s									
RAC	Raciborz	12.00	353	*e*P		Pn	13 58 34.4	+0.5		
RAC				*e*S		Sn	14 00 49.3	+1.7		
RAC					MLR	MLR				
	comp=Z,137μm,16.5s									
FUR	Furstenfeldbru	12.02	329	*e*Pn		Pn	13 58 32.6	-1.6		
KHC	Kasperske Hory	12.02	338	*e*P		Pn	13 58 32.1	-2.2		
KHC				*e*			14 00 43.3			
KHC					MLR	MLR				
	comp=Z,210μm,11.7s									
KHC	Kasperske Hory	12.02	338	*e*PN		Pn	13 58 32.1	-2.2		
KHC				*e*SN		Sn	14 00 43.3	-4.8		
KHC					AMS	AMS	14 04 00.0			
	comp=Z,210μm,11.7s									
KHC	Kasperske Hory	12.02	338			Pn	13 58 31.4	-2.9		
OJC	Ojcow	12.04	358	*e*P		Pn	13 58 35.4	+1.0		
OJC					MLR	MLR				
	comp=N,163μm,16.3s									
OJC	Ojcow	12.04	358	*e*P		Pn	13 58 35.4	+1.0		
OJC				*e*L		L	14 04 12.3			
	comp=N,163μm,16.3s									
OJC	Ojcow	12.04	358			Pn	13 58 33.3	-1.1		
UBR	Ueberruh	12.15	325	*e*Pn		Pn	13 58 35.4	-0.7		
UBR				*e*Sn		Sn	14 00 49.0	-2.4		
CKHR	Kef el Ahmar	12.17	264	P		Pn	13 58 38.0	+1.6		
KRLC	Kraliky	12.18	349	*e*P		Pn	13 58 35.7	-0.6		
KRLC				*e*			14 00 47.3			
KRLC					MLR	MLR				
	comp=Z,135μm,18.2s									
KRLC	Kraliky	12.18	349	*e*PN		Pn	13 58 35.7	-0.6		
KRLC				*e*SN		Sn	14 00 47.3	-4.6		
KRLC					AMS	AMS	14 04 20.0			
	comp=Z,135μm,18.2s									
SET	Setif	12.21	265	P		Pn	13 58 40.0	+3.1		
SIM	Simferopol'	12.22	52	*e*P		Pn	13 58 38.1	+1.2		
SIM				S		Sn	14 00 56.0	+3.2		
SIM					pmax	pmax				
	comp=Z,81nm,0.9s									
SIM					pmax	pmax				
	comp=Z,44μm,11.6s									
SIM					MLR	MLR				
	comp=Z,42μm,10.6s									
WET	Wettzell	12.25	336	*e*Pn		Pn	13 58 34.9	-2.5		
BNI	Bardonecchia	12.40	308	P		Pn	13 58 39.0	-0.6		
BNI	Bardonecchia	12.40	308			Pn	13 58 39.0	-0.6		
PBCC	Pribram	12.40	340	*e*PN		Pn	13 58 37.9	-1.5		
PBCC				*e*SN		Sn	14 00 52.4	-5.0		
PBCC					AMS	AMS	14 04 10.0			
GOPC	GO Pecny, Ondr	12.41	343	*e*P		Pn	13 58 38.3	-1.3		
GOPC					MLR	MLR				
	comp=Z,120μm,11.8s									
GOPC	GO Pecny, Ondr	12.41	343	*e*PN		Pn	13 58 38.3	-1.3		
GOPC					AMS	AMS	14 03 50.0			
	comp=Z,120μm,11.8s									
KOT	Kottamia	12.48	128	P		Pn	13 58 37.6	-3.0		
	baz=129									
DPC	Dobruska-Polom	12.52	348	*e*P		Pn	13 58 40.0	-1.0		
DPC					MLR	MLR				
	comp=Z,184μm,12.1s									
DPC	Dobruska-Polom	12.52	348	*e*PN		Pn	13 58 40.0	-1.0		
DPC					AMS	AMS	14 04 20.0			
	comp=Z,184μm,12.1s									
PRU	Pruhonice	12.54	342	*e*P		Pn	13 58 39.8	-1.5		
PRU					MLR	MLR				
	comp=Z,119μm,10.5s									
PRU	Pruhonice	12.54	342	*e*PN		Pn	13 58 39.8	-1.5		
PRU					AMS	AMS	14 04 50.0			
	comp=Z,119μm,10.5s									
HHAG	Hagoal	12.63	127	P		Pn	13 58 39.3	-3.4		
	baz=128									
PRA	Prague	12.65	342	*e*P		Pn	13 58 41.5	-1.2		
PRA					MLR	MLR				
	comp=Z,118μm,11.4s									
PRA	Prague	12.65	342	*e*PN		Pn	13 58 41.5	-1.2		
PRA					AMS	AMS	14 05 00.0			
	comp=Z,118μm,11.4s									
UPC	Upice	12.72	347	*e*P		Pn	13 58 42.0	-1.8		
UPC					MLR	MLR				
	comp=Z,162μm,11.9s									
UPC	Upice	12.72	347	*e*PN		Pn	13 58 42.0	-1.8		
UPC					AMS	AMS	14 04 40.0			
	comp=Z,162μm,11.9s									
SENIN	Lac Senin/Sane	12.73	314			Pn	13 58 42.9	-1.2		
OSTC	Ostas	12.73	347	*e*PN		Pn	13 58 43.2	-0.8		
OSTC					AMS	AMS	14 04 30.0			
	comp=Z,155μm,15.8s									
MAHO	Mahon	12.74	283	*e*P		Pn	13 58 43.3	-0.8		
MAHO				*e*S		Sn	14 00 59.0	-6.7		
CHVC	Chvalec	12.79	347	*e*PN		Pn	13 58 43.6	-1.2		
CHVC					AMS	AMS	14 04 30.0			
	comp=Z,137μm,15.9s									
HFRF	Wahat Farafira	12.82	147	AMP			14 01 17.3			
	baz=148									
BHL	Bhannes	12.98	105	*e*P		Pn	13 58 46.6	-0.9		
KSP	Ksiaz	13.00	348	*e*P		Pn	13 58 51.5	+4.0		
KSP					MLR	MLR				
	comp=E,168μm,21.6s									
KSP	Ksiaz	13.00	348	*e*P		Pn	13 58 51.5	+4.0		
KSP				*e*L		L	14 03 22.5			
	comp=E,168μm,21.6s									
ROTZ	Rotzenmuhle	13.01	335	*e*Pn		Pn	13 58 45.3	-2.4		
PVCC	Panska Ves	13.04	343	*e*P		Pn	13 58 46.5	-1.6		
PVCC					MLR	MLR				
	comp=Z,103μm,11.7s									
PVCC	Panska Ves	13.04	343	*e*PN		Pn	13 58 46.5	-1.6		
PVCC					AMS	AMS	14 04 20.0			
	comp=Z,103μm,11.7s									
HWQ	Hawqa	13.06	103	*e*P		Pn	13 58 46.6	-1.9		
MMAI	Mount Meron Ar	13.17	109	Pn		Pn	13 58 46.9	-3.1		
	comp=Z,22nm,0.3s,baz=306,slow=10,SNR=20									
MMAI					Sn	Sn	14 01 10.1	-6.3		
	comp=Z,25nm,0.3s,baz=311,slow=26,SNR=4.0									
ATAF	Djebel Tarf	13.17	265	P		Pn	13 58 51.5	+1.4		
MANZ	Manzenberg	13.23	336	*e*Pn		Pn	13 58 48.2	-2.6		
GAZ	Gaziantep	13.27	89			Pn	13 58 53.0	+1.6		
GRA1	Grafenberg Arr	13.29	333			Pn	13 58 49.0	-2.5		
GRF	Grafenberg Arr	13.29	333	P		Pn	13 58 49.0	-2.5		
GRF	Grafenberg Arr	13.29	333	*e*Pn		Pn	13 58 49.6	-1.8		
GRF				*e*Sn		Sn	14 01 12.3	-6.7		
GRF				*e*L		L	14 05 44.6			
	comp=Z,74μm,18.3s									
NKC	Novy Kostel	13.34	337	*e*P		Pn	13 58 50.8	-1.4		
NKC					MLR	MLR				
	comp=Z,179μm,12.1s									
NKC	Novy Kostel	13.34	337	*e*PN		Pn	13 58 50.8	-1.4		
NKC					AMS	AMS	14 05 00.0			
	comp=Z,179μm,12.1s									
STU	Stuttgart	13.37	326	P		Pn	13 58 50.0	-2.6		
STU	Stuttgart	13.37	326			Pn	13 58 50.0	-2.6		
WERN	Wernitzgruen	13.41	337	*e*Pn		Pn	13 58 52.2	-1.0		
BFO	Black Forest	13.45	323	P		Pn	13 58 52.1	-1.7		
BFO	Black Forest	13.45	323			Pn	13 58 52.1	-1.7		
GUNZ	Gunzen	13.49	337	*e*Pn		Pn	13 58 52.8	-1.5		
TANN	Tannenbergstha	13.50	337	*e*Pn		Pn	13 58 53.6	-0.8		
BRG	Berggiesshubel	13.51	342	*i* P		Pn	13 58 52.9	-1.6		
	comp=Z,48nm,0.7s									
BRG					S	Sn	14 01 28.0	+3.7		
BRG				*e*SCS		ScS	14 11 25.3	-5.2		
	comp=Z,7.8nm,1.5s									
	comp=N,95μm,11.1s									
	comp=E,78μm,14.9s									
	comp=Z,106μm,13.1s									
BRG	Berggiesshubel	13.51	342	*i* P		Pn	13 58 52.8	-1.6		
BRG					S	Sn	14 01 28.0	+3.7		
BRG					pmax	pmax				
	comp=Z,48nm,0.7s									
BRG					MLR	MLR				
	comp=N,95μm,11.1s									
BRG					MLR	MLR				
	comp=E,78μm,14.9s									
BRG					MLR	MLR				
	comp=Z,106μm,13.1s									
BRG	Berggiesshubel	13.51	342	*e*Pn		Pn	13 58 52.6	-1.9		
TAMRE	El Minia	13.63	137	P		Pn	13 58 53.8	-2.5		
	baz=138									
BEL	Belsk	13.65	1	*e*P		P	13 59 07.5	+2.3		
BEL					MLR	MLR				
	comp=E,552μm,17.8s									
BEL	Belsk	13.65	1	*e*P		P	13 59 07.5	+2.3		
BEL				*e*L		L	14 04 02.5			
	comp=E,552μm,17.8s									
PLN	Plauen	13.65	337	*e*Pn		Pn	13 58 54.9	-1.5		
FBE	Freiberg	13.70	341	*e*Pn		Pn	13 58 55.9	-1.2		
ADJB	Djebel Djouab	13.76	267	P		Pn	13 59 00.6	+2.5		
SSB	Saint Sauveur	13.85	306	P		Pn	13 58 58.0	-1.2		
SSB	Saint Sauveur	13.85	306			Pn	13 58 58.0	-1.2		
ABA	Alger-Bouzarea	13.95	270	P		Pn	13 59 00.8	+0.3		
ECH	Echery	13.95	320	P		Pn	13 58 59.0	-1.5		
ECH	Echery	13.95	320			Pn	13 58 59.0	-1.5		
AKASG	Malin Array Be	13.96	24	Pn		Pn	13 59 00.6	0.0		
	comp=E,18nm,0.3s,baz=211,slow=12,SNR=9.9									
AKASG					LR	LR	14 05 12.7			
	comp=E,46μm,18.1s,baz=195,slow=41									
AKBB	Malin Array Si	13.96	24	*e*P		Pn	13 58 59.7	-0.9		
AKBB					pmax	pmax				
	comp=Z,159nm,1.1s									
AKBB	Malin Array Si	13.96	24			Pn	13 58 59.3	-1.3		
MOX	Moxa	13.96	336	*e*Pn		Pn	13 58 58

CART					*e*S		**Sn**	**14 02 46.7**	**-2.4**
CART	**Cartagena**	**16.99**	**275**		P		**Pn**	**13 59 39.4**	**-1.1**
CART					IAmb		IAmb	13 59 52.1	
	comp=Z,1μm,1.5s								
UCC	**Uccle**	**17.03**	**323**		P		**Pn**	**13 59 40.1**	**-0.8**
UCC					pmax		pmax		
	comp=Z,1μm,1.4s								
UCC	**Uccle**	**17.03**	**323**		Pn		**Pn**	**13 59 40.1**	**-0.8**
UCC					IAmb		IAmb	13 59 58.3	
	comp=Z,1μm,1.4s								
MICGM	**Minsk**	**17.07**	**15⇑**	*e*P			**Pn**	**13 59 37.0**	**-4.5**
MICGM					PM			13 59 46.0	
	comp=Z,3.5nm,1.2s								
MICGM					PM			13 59 46.0	
	comp=N,3.6nm,2.0s								
MICGM					PM			13 59 47.0	
	comp=E,0.9nm,2.0s								
MICGM					*e*PP		PnPn	14 00 07.0	+16
MICGM					*e*S		**Sn**	**14 02 46.0**	**-5.0**
MICGM					*e*SS		**SnSn**	**14 03 15.0**	**+11**
MICGM					*e*LR		LR	14 05 00.0	
MICGM					LRM		MLR	14 05 40.0	
	comp=E,237nm,16.0s								
MICGM					LRM		MLR	14 06 16.0	
	comp=E,89nm,14.0s								
MICGM					LRM		MLR	14 06 24.0	
	comp=Z,118nm,20.0s								
MICGM					LRM		MLR	14 06 26.0	
	comp=Z,60nm,24.0s								
MICGM					LRM		MLR	14 06 48.0	
	comp=N,94nm,14.0s								
MICGM					LRM		MLR	14 06 50.0	
	comp=N,73nm,12.0s								
MNK	**Minsk**	**17.07**	**15⇑**	*e*P			**Pn**	**13 59 37.0**	**-4.5**
MNK					*e*S		**Sn**	**14 02 46.0**	**-5.0**
MNK					pmax		pmax		
	comp=Z,3μm,1.2s								
MNK					pmax		pmax		
	comp=N,4μm,2.0s								
MNK					pmax		pmax		
	comp=E,900nm,2.0s								
MNK					MLR		MLR		
	comp=E,237μm,16.0s								
MNK					MLR		MLR		
	comp=E,89μm,14.0s								
MNK					MLR		MLR		
	comp=Z,118μm,20.0s								
MNK					MLR		MLR		
	comp=N,94μm,14.0s								
MNK					MLR		MLR		
	comp=N,73μm,12.0s								
RGN	**Rugen**	**17.08**	**346**	*e*P			**Pn**	**13 59 40.6**	**-0.9**
RGN	**Rugen**	**17.08**	**346**	P			**P**	**13 59 42.8**	**-0.4**
RGN					IAmb		IAmb	13 59 51.1	
	comp=Z,1μm,1.4s								
BSEG	**Bad Segeberg**	**17.23**	**339**	*e*Pn			**Pn**	**13 59 42.1**	**-1.4**
NACGM	**Naroch**	**17.25**	**12**	*e*P			**Pn**	**13 59 40.0**	**-3.7**
NACGM					PM			13 59 49.0	
	comp=Z,3.7nm,1.0s								
NACGM					*e*PP		**PnPn**	**14 00 00.0**	**+6.3**
NACGM					*e*PPP		PPP	14 00 20.0	
NACGM					*e*S		**Sn**	**14 02 54.0**	**-1.3**
NACGM					*e*SS		SnSn	14 03 27.0	+18
NACGM					*e*SSS		SSS	14 03 49.0	
NACGM					*e*LQ		LQ	14 05 00.0	
NACGM					*e*LR		LR	14 06 00.0	
OTSS	**Djebel Tessala**	**17.32**	**267**	P			**Pn**	**13 59 42.0**	**-2.8**
BSD	**Bornholm Skovb**	**17.35**	**349**	*i* P			**Pn**	**13 59 44.0**	**-0.9**
BSD					pmax		pmax		
	comp=Z,310nm,1.3s								
BSD					MLR		MLR		
	comp=Z,72μm,14.0s								
BSD	**Bornholm Skovb**	**17.35**	**349**	*i* P			**Pn**	**13 59 44.0**	**-0.9**
	comp=Z,312nm,1.3s								
	comp=Z,72μm,14.0s								
PABE	**Paberze**	**17.48**	**7**	*e*P			**Pn**	**13 59 44.7**	**-1.7**
PABE					IAmb		IAmb	13 59 54.1	
	comp=Z,845nm,0.8s								
NEY	**Neytrino**	**17.57**	**66**	*e*P			**P**	**13 59 49.6**	**+0.7**
IIGN	**Ignalina**	**17.59**	**11**	*e*P			**Pn**	**13 59 46.9**	**-1.0**
IIGN					IAmb		IAmb	13 59 55.9	
	comp=Z,321nm,1.0s								
IIGN					*e*S		**Sn**	**14 03 07.2**	**+3.7**
SHA1	**Shidzhatmaz**	**17.60**	**65**	*e*P			**P**	**13 59 49.5**	**+0.1**
KIV	**Kislovodsk**	**17.66**	**64**	*e*P			**P**	**13 59 50.8**	**+0.9**
KIV					*e*S		**Sn**	**14 03 08.8**	**+3.2**
KIV					pmax		pmax		
	comp=Z,2μm,1.1s								
KIV					MLR		MLR		
	comp=Z,38μm,14.0s								
KIV	**Kislovodsk**	**17.66**	**64**	*i* P			**P**	**13 59 50.1**	**+0.2**
	SNR=62								
KIV	**Kislovodsk**	**17.66**	**64**				**P**	**13 59 49.6**	**-0.3**
KVAR	**Kislovodsk Arr**	**17.67**	**64**	P			**P**	**13 59 52.8**	**+2.8**
	baz=255,slow=20,SNR=34								
KBZ	**Khabaz**	**17.77**	**65**	*e*P			**P**	**13 59 52.5**	**+1.5**
KBZ					pmax		pmax		
	comp=Z,346nm,0.9s								
KBZ					MLR		MLR		
	comp=Z,23μm,20.0s								
KBZ	**Khabaz**	**17.77**	**65**	P			**P**	**13 59 51.8**	**+0.8**
	comp=Z,1.3nm,0.3s,baz=272,slow=8.2,SNR=64								
KBZ					LR		LR	14 07 54.6	
	comp=Z,26μm,21.2s,baz=240,slow=42								
ISAL	**Salakas**	**17.80**	**10**	*e*P			**Pn**	**13 59 48.6**	**-1.8**
ISAL					IAmb		IAmb	13 59 56.2	
	comp=Z,256nm,1.0s								
ISAL					*e*S		**S**	**14 03 14.6**	**-0.7**
PBUR	**Paburg**	**17.87**	**3**	*e*P			**Pn**	**13 59 49.5**	**-1.8**
PBUR					*e*S		**S**	**14 03 17.3**	**+0.6**
AKH	**Akhalkalaki**	**17.94**	**72**	P			**Pn**	**13 59 52.5**	**-0.1**
AKH					pmax		pmax		
	comp=Z,488nm,1.0s								
AKH	**Akhalkalaki**	**17.94**	**72**				**Pn**	**13 59 52.5**	**-0.1**
PYA1	**Pyatigorsk**	**17.98**	**64**	*e*P			**P**	**13 59 54.2**	**+0.9**
IZAR	**Zarasai**	**17.98**	**11**	*e*P			**Pn**	**13 59 50.7**	**-2.1**
IZAR					*e*S		**S**	**14 03 16.4**	**-2.7**
SESP	**Santiago Espad**	**18.13**	**277**	P			**Pn**	**13 59 54.5**	**-0.3**
	SNR=23								
GOF	**Gofitskoye**	**18.16**	**61⇑**	*e*P			**P**	**13 59 55.6**	**+0.3**
GOF					pmax		pmax		
	comp=Z,267nm,0.8s								
COP	**Copenhagen**	**18.33**	**345**	*i* P			**P**	**13 59 58.6**	**+1.6**
COP					MLR		MLR		
	comp=Z,40μm,12.0s								
COP	**Copenhagen**	**18.33**	**345**	*i* P			**P**	**13 59 58.6**	**+1.6**
	comp=Z,40μm,12.0s								
ZEI	**Tsey**	**18.36**	**68**	*e*P			**P**	**13 59 58.3**	**+0.6**
ZEI					pmax		pmax		
	comp=Z,406nm,0.9s								
VORD	**Divnogorie**	**18.43**	**40**	*e*P			**P**	**13 59 57.8**	**-0.4**
VORD					*e*S		**Sn**	**14 03 25.8**	**+2.0**
VORD					pmax		pmax		
	comp=Z,210nm,0.6s								
VORD					smax		smax		
	comp=N,2μm,6.9s								
VORD					MLR		MLR		
	comp=Z,22μm,10.0s								
UCM	**Universidad Co**	**18.51**	**284**	*e*P			**P**	**13 59 55.8**	**-3.4**
UCM					*e*S		**Sn**	**14 03 23.7**	**-2.3**
VSR	**Storozhevoye**	**18.52**	**39**	*e*P			**P**	**13 59 57.4**	**-1.7**
VSR					*e*S		**Sn**	**14 03 21.1**	**-4.8**
VSR					pmax		pmax		
	comp=Z,680nm,1.8s								
VSR					smax		smax		
	comp=N,8μm,11.6s								
VSR					MLR		MLR		
	comp=Z,86μm,12.0s								
TAF	**Taforalt**	**18.72**	**267**	P			**Pn**	**14 00 03.0**	**+0.9**
	SNR=39								
FIGM	**Figuig**	**18.78**	**258**	P			**Pn**	**14 00 03.0**	**+0.2**
	SNR=280								
VORR	**Voronezh**	**18.82**	**38**	*e*P			**P**	**14 00 02.0**	**-0.4**
VORR					*e*S		**S**	**14 03 36.0**	**0.0**
VORR					pmax		pmax		
	comp=Z,1μm,1.2s								
GNI	**Garni**	**18.88**	**76**	*ce*P			**Pn**	**14 00 05.5**	**+1.5**
GNI					pmax		pmax		
	comp=Z,6μm,1.3s								
GNI					MLR		MLR		
	comp=Z,128μm,18.0s								
GNI	**Garni**	**18.88**	**76**	P			**Pn**	**14 00 05.5**	**+1.5**
	comp=Z,6.7nm,0.3s,baz=214,slow=0.9,SNR=68								
GNI					LR		LR	14 07 34.3	
	comp=Z,53μm,21.3s,baz=274,slow=38								
GNI	**Garni**	**18.88**	**76**	*i* P			**Pn**	**14 00 05.2**	**+1.2**
	SNR=111								
GNI	**Garni**	**18.88**	**76**	P			**Pn**	**14 00 04.8**	**+0.8**
TBLG	**Delisi**	**18.89**	**72**	P			**P**	**14 00 03.4**	**0.0**
TBLG					pmax		pmax		
	comp=Z,797nm,1.3s								
TBLG	**Delisi**	**18.89**	**72**	P			**P**	**14 00 03.4**	**0.0**
MELI	**Melilla**	**19.00**	**268**	*e*P			**P**	**14 00 02.5**	**-2.0**
MELI					*e*S		**Sn**	**14 03 31.6**	**-6.2**
GOG	**Mont Gurugu**	**19.07**	**268**	P			**Pn**	**14 00 07.0**	**+0.8**
	SNR=18								
ESBB	**Sonseca Array**	**19.08**	**282**	P			**P**	**14 00 04.6**	**-0.9**
ESDC	**Sonseca Array**	**19.08**	**282**	P			**P**	**14 00 05.3**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=81,slow=9.8,SNR=67								
ESDC					S		**Sn**	**14 03 32.9**	**-7.0**
	baz=89,slow=14,SNR=1.9								
ESDC					LR		LR	14 07 25.2	
	comp=Z,22μm,20.7s,baz=80,slow=37								
ESDC					ScP		**ScP**	**14 08 04.5**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=43,slow=2.8,SNR=5.2								
ESDC	**Sonseca Array**	**19.08**	**282**		IAmb		IAmb	14 00 14.2	
	comp=Z,218nm,1.6s								
LPSR	**Galich'ya Gora**	**19.28**	**36**	*e*P			**P**	**14 00 07.7**	**+0.2**
LPSR					*e*S		**Sn**	**14 03 41.0**	**-3.3**
LPSR					pmax		pmax		
	comp=Z,2μm,1.0s								
LPSR					smax		smax		
	comp=N,6μm,11.3s								
LPSR					MLR		MLR		
	comp=Z,65μm,14.0s								
PAB	**San Pablo**	**19.39**	**282**	P			**P**	**14 00 08.2**	**-0.7**
PAB					pmax		pmax		
	comp=Z,405nm,1.2s								
PAB	**San Pablo**	**19.39**	**282**	P			**P**	**14 00 08.2**	**-0.7**
SLIT	**Slitere, Latvi**	**19.49**	**3**	*e*P			**P**	**14 00 07.9**	**-1.8**
NAX	**Nakhchivan**	**19.52**	**79**	P			**Pn**	**14 00 11.3**	**-0.3**
JSA	**Saint Aubin**	**19.66**	**311**	*e*P			**Pn**	**14 00 13.0**	**-0.1**
JSA					IAMs_20		IAMs_20	14 08 38.5	
	comp=Z,55μm,14.8s								
MUD	**Monsted U'grnd**	**19.77**	**341**	*i* P			**Pn**	**14 00 13.8**	**-0.5**
MUD					MLR		MLR		
	comp=Z,76μm,13.0s								
MUD	**Monsted U'grnd**	**19.77**	**341**	*i* P			**Pn**	**14 00 13.8**	**-0.5**
	comp=Z,76μm,13.0s								
GROC	**Groznyy**	**19.79**	**67**	*e*P			**Pn**	**14 00 15.5**	**+0.9**
VRH	**Novokhopyorsk**	**19.82**	**42**	*e*P			**P**	**14 00 13.6**	**+0.2**
VRH					*e*S		**S**	**14 03 50.5**	**-5.7**
VRH					pmax		pmax		
	comp=Z,2μm,1.6s								
VRH					smax		smax		
	comp=N,23μm,13.0s								
VRH					MLR		MLR		
	comp=Z,47μm,11.0s								
EMAL	**Malaga-Limoner**	**19.83**	**274**	*e*P			**P**	**14 00 11.8**	**-1.9**
EMAL					*e*S		**S**	**14 03 51.8**	**-4.8**
AKLM	**AKL**	**19.95**	**267**	P			**Pn**	**14 00 17.0**	**+0.2**
	SNR=49								
TAM	**Tamanrasset**	**20.02**	**224**	P			Pn	14 00 17.2	-0.5
TAM					pmax		pmax		
	comp=Z,824nm,1.6s								
TAM	**Tamanrasset**	**20.02**	**224**				Pn	14 00 17.2	-0.4
TAM					IAmb		IAmb	14 00 32.0	
	comp=Z,824nm,1.6s								
WACR	**West Acre**	**20.04**	**323**	*e*P			**P**	**14 00 16.1**	**+0.3**
WACR					IAmb		IAmb	14 00 21.4	
	comp=Z,518nm,0.9s								
WACR					IAMs_20		IAMs_20	14 08 01.2	
	comp=Z,51μm,16.2s								
BTLR	**Botlikh**	**20.05**	**69**	*e*P			Pn	14 00 17.1	-0.8
BTLR					pmax		pmax		
	comp=Z,146nm,1.0s								
GANJ	**Ganja**	**20.07**	**75**	P			Pn	14 00 17.4	-0.7
PVLZ	**Pæn de**	**20.11**	**269**	*e*P			**P**	**14 00 16.0**	**-0.7**
PVLZ					*e*S		**S**	**14 03 56.7**	**-5.4**
OBN	**Obninsk**	**20.12**	**28**	*c i*P			**P**	**14 00 16.5**	**-0.1**
OBN				*i* *SP			**pP**	**14 00 20.9**	**+0.4**
OBN				*e*PPP			PPP	14 00 41.1	
OBN				*e*S			Sn	14 04 04.9	+0.5
OBN				*e*SS			**SnSn**	**14 04 14.6**	**-4.2**
OBN				*e*SSS			SSS	14 04 30.4	
OBN				pmax			pmax		
	comp=Z,298nm,1.0s								
OBN				MLR			MLR		
	comp=Z,29μm,14.0s								
OBN	**Obninsk**	**20.12**	**28**	P			**P**	**14 00 16.8**	**+0.2**
	comp=Z,7.8nm,0.3s,baz=216,slow=4.8,SNR=15								
OBN					S		S	14 03 50.1	-12
	comp=Z,1.1nm,0.3s,baz=162,slow=19,SNR=2.1								
OBN					LR		LR	14 09 26.0	
	comp=Z,8μm,18.4s,baz=216,slow=41								
OBN	**Obninsk**	**20.12**	**28**	P			**P**	**14 00 15.8**	**-0.8**
OBN					IAmb		IAmb	14 00 25.5	
	comp=Z,997nm,1.1s								
WOL	**Wolverton**	**20.16**	**318**	*e*P			**P**	**14 00 17.8**	**+0.8**
WOL					IAMs_20		IAMs_20	14 10 07.7	
	comp=Z,92μm,16.1s								
HORN	**Hornachuelos**	**20.29**	**277**	P			Pn	14 00 20.0	-0.6
	SNR=9.5								
ZKTA	**Zakatala**	**20.30**	**72**	P			Pn	14 00 19.8	-1.0
REAL	**Reales**	**20.50**	**273**	*e*P			**P**	**14 00 19.6**	**-1.5**
SWN1	**Swindon**	**20.57**	**318**	*e*P			**P**	**14 00 22.3**	**+0.7**
SWN1					IAmb		IAmb	14 00 28.1	
	comp=Z,883nm,1.0s								
SWN1					IAMs_20		IAMs_20	14 10 21.5	
	comp=Z,93μm,11.9s								
GNBR	**Gunib**	**20.58**	**70**	*e*P			Pn	14 00 23.3	-0.8
GNBR					pmax		pmax		
	comp=Z,290nm,0.8s								
GNBR					MLR		MLR		
	comp=Z,10μm,17.0s								
MNGR	**Mingechevir, A**	**20.65**	**74**	P			**P**	**14 00 23.6**	**+1.1**
VSU	**Vasula**	**20.69**	**9**	*e*P			**P**	**14 00 22.0**	**-0.7**
VSU					pmax		pmax		
	comp=Z,3μm,0.9s								
VSU					MLR		MLR		
	comp=Z,141μm,18.0s								
VSU	**Vasula**	**20.69**	**9**	*e*P			**P**	**14 00 22.2**	**-0.5**
VSU					*e*S		**S**	**14 04 13.1**	**-0.1**
SEKA	**Sheki**	**20.73**	**73**	P			Pn	14 00 25.2	-0.6
CEU	**Ceuta**	**20.77**	**272**	*e*P			**P**	**14 00 21.1**	**-2.7**
CEU					*e*S		**S**	**14 04 06.9**	**-8.2**
SMIR	**Smir Dam**	**20.82**	**271**	P			Pn	14 00 27.0	+0.1
	SNR=19								
ALJ	**Aljibe**	**20.84**	**274**	*e*P			**P**	**14 00 23.6**	**-1.1**
SSW	**Stow on the Wo**	**20.84**	**319**	*e*P			**P**	**14 00 25.7**	**+1.2**
STRD	**Stroud**	**20.90**	**318**	*e*P			**P**	**14 00 25.8**	**+0.7**
CHEFC	**Chefchaouen**	**20.94**	**269**	P			**P**	**14 00 27.0**	**+1.1**
	SNR=74								
MOS	**Moscow**	**20.98**	**28**	*e*P			**P**	**14 00 24.3**	**-1.7**
MOS					*e*PPP		PPP	14 00 49.3	
MOS					*e*S		**S**	**14 04 18.7**	**-0.5**
MOS					*e*			14 04 39.4	
MOS					*e*SSS		SSS	14 04 52.0	
MOS					pmax		pmax		
	comp=E,524nm,1.3s								
MOS					pmax		pmax		
	comp=Z,2μm,1.3s								
MOS					pmax		pmax		
	comp=Z,3μm,1.6s								
MOS					pmax		pmax		
	comp=E,800nm,1.5s								
MOS					MLR		MLR		
	comp=N,27μm,11.0s								
MOS					MLR		MLR		
	comp=E,45μm,11.0s								
MOS					MLR		MLR		
	comp=Z,49μm,11.0s								
CWF	**Charnwood Fore**	**20.99**	**321**	*e*P			**P**	**14 00 26.2**	**+0.1**
CWF					IAMs_20		IAMs_20	14 08 51.2	
	comp=Z,63μm,18.5s								
LCRM	**LCR**	**21.00**	**265**	P			Pn	14 00 29.0	-0.2
	SNR=26								
MAK	**Makhachkala**	**21.01**	**68**	*d* i P			**P**	**14 00 28.0**	**+1.6**
MAK					*e*S		Sn	14 04 24.1	-2.1
MAK					pmax		pmax		
	comp=Z,6μm,1.8s								
MAK					MLR		MLR		
	comp=Z,26μm,13.0s								
GIBL	**Gibalbin**	**21.03**	**274**	*e*P			**P**	**14 00 24.3**	**-2.3**
OLDB	**Oldbury-Upon-S**	**21.05**	**317**	*e*P			**P**	**14 00 27.4**	**+0.7**
OLDB					IAMs_20		IAMs_20	14 10 37.7	
	comp=Z,73μm,13.9s								
MDT	**Midelt**	**21.11**	**263**	P			**P**	**14 00 28.3**	**+0.6**
	comp=Z,56nm,0.9s,baz=270,slow=16,SNR=71								
MDT					LR		LR	14 09 50.2	
	comp=Z,27μm,21.3s,baz=74,slow=40								
MDT	**Midelt**	**21.11**	**263**	P			**P**	**14 00 28.7**	**+1.0**
	SNR=101								
AKT	**Akhty**	**21.13**	**72**	*e*P			**P**	**14 00 27.9**	**+0.1**
AKT				*e*				14 00 48.1	
AKT				*e*S			Sn	14 04 27.9	-1.3
AKT				*e*SS			**SnSn**	**14 04 46.7**	**+2.7**
AKT				pmax			pmax		
	comp=Z,2μm,1.1s								
PBRG	**Braganca**	**21.15**	**288**	*e*P			**P**	**14 00 27.8**	**-0.2**
	comp=Z,621nm,1.9s								
PBRG					*e*S		**S**	**14 04 20.5**	**-2.4**
CNIL	**Conil**	**21.19**	**273**	*e*P			**P**	**14 00 21.6**	**-6.8**
IFR	**Ifrane**	**21.27**	**265**	*e*P			**P**	**14 00 29.5**	**0.0**
IFR				*es*			**S**	**14 04 24.6**	**-0.9**
MONM	**Monmouth**	**21.27**	**317**	*e*P			**P**	**14 00 30.0**	**+0.9**
MONM					IAMs_20		IAMs_20	14 10 45.5	
	comp=Z,90μm,12.7s								
SFS	**San Fernando**	**21.29**	**274**	P			**P**	**14 00 28.8**	**-0.7**
SFS					pmax		pmax		
	comp=Z,897nm,1.2s								
SFS					MLR		MLR		
	comp=Z,20μm,20.0s								
SFS	**San Fernando**	**21.29**	**274**	*e*P			**P**	**14 00 28.7**	**-0.7**
SFS					*e*S		**S**	**14 04 27.3**	**+1.7**
SFS	**San Fernando**	**21.29**	**274**	P			**P**	**14 00 28.8**	**-0.7**
SFS					IAmb		IAmb	14 00 41.8	
	comp=Z,897nm,1.2s								
ARF	**Arif**	**21.36**	**259**	P			**P**	**14 00 32.0**	**+1.6**
	SNR=61								
MVO	**Moncorvo**	**21.37**	**287**	*e*P			**P**	**14 00 30.0**	**-0.3**
	comp=Z,941nm,1.6s								
MVO					*e*LQ		LQ	14 04 17.1	
MVO					*e*S		**S**	**14 04 30.0**	**+2.8**
MVO					*e*LR		LR	14 08 08.0	
	comp=Z,29μm,16.0s								
HEX	**Exmoor**	**21.44**	**315**	*e*P			**P**	**14 00 32.8**	**+1.8**
MCH1	**Michaelchurch**	**21.46**	**318**	*e*P			**P**	**14 00 31.6**	**+0.5**
MCH1					IAMs_20		IAMs_20	14 10 51.0	
	comp=Z,88μm,12.0s								
HOMB	**Homborsund**	**21.56**	**343**	*e*P			**P**	**14 00 32.4**	**+0.2**
HOMB					IVmB_BB			14 01 07.1	
	comp=Z,10μm,5.2s								
HOMB					*e*S		**S**	**14 04 31.8**	**+1.2**
LBWR	**Ladybower, Pea**	**21.58**	**322**	*e*P			**P**	**14 00 32.6**	**+0.1**
LBWR					IAMs_20		IAMs_20	14 11 53.1	
	comp=Z,35μm,12.8s								
STNC	**Stoke**	**21.64**	**321**	*e*P			**P**	**14 00 33.5**	**+0.4**
STNC					IAMs_20		IAMs_20	14 09 10.5	
	comp=Z,62μm,18.0s								
HLM1	**Long Mynd**	**21.67**	**319**	*e*P			**P**	**14 00 33.3**	**-0.1**
HLM1					IAMs_20		IAMs_20	14 11 11.6	
	comp=Z,69μm,19.6s								
SBD	**Saint Breward**	**21.72**	**313**	*e*P			**P**	**14 00 34.4**	**+0.4**
SBD					IAMs_20		IAMs_20	14 10 00.5	
	comp=Z,41μm,14.7s								
PMRV	**Marv??o**	**21.75**	**282**	*e*P			**P**	**14 00 33.5**	**-0.9**
	comp=Z,1μm,1.4s								
PMRV					*e*LQ		LQ	14 04 28.8	
PMRV					*e*S		**S**	**14 04 34.6**	**0.0**
PMRV					*e*LR		LR	14 08 07.6	
	comp=Z,19μm,16.0s								
PCBR	**Castelo Branco**	**21.77**	**283**	*e*P			**P**	**14 00 34.3**	**-0.3**
	comp=Z,789nm,1.5s								
PCBR					*e*S		**S**	**14 04 33.3**	**-1.8**
GDLE	**Glaisdale, N Y**	**21.78**	**325**	*e*P			**P**	**14 00 34.4**	**-0.2**
GDLE					IAMs_20		IAMs_20	14 12 23.1	
	comp=Z,48μm,10.0s								
MTE	**Manteigas**	**21.79**	**285**	*e*P			**P**	**14 00 33.6**	**-1.3**
	comp=Z,1μm,1.5s								
MTE					*e*LQ		LQ	14 04 29.0	
MTE					*e*S		**S**	**14 04 36.5**	**+1.0**
MTE					*e*LR		LR	14 08 08.3	
	comp=Z,50μm,20.0s								
MTE	**Manteigas**	**21.79**	**285**	P			**P**	**14 00 34.0**	**-0.9**
MTE					IAmb		IAmb	14 00 49.0	
	comp=Z,1μm,1.6s								
MTE					IAMs_20		IAMs_20	14 09 33.6	
	comp=Z,56μm,19.0s								
HTL	**Hartland**	**21.80**	**314**	*e*P			**P**	**14 00 35.9**	**+1.2**
HTL					IAMs_20		IAMs_20	14 12 21.1	
	comp=Z,53μm,15.1s								
HPK	**Haverah Park**	**21.87**	**323**	*e*P			**P**	**14 00 35.4**	**0.0**
HPK					IAMs_20		IAMs_20	14 09 09.0	
	comp=Z,41μm,14.5s								
PVRL	**Vila Real**	**21.88**	**287**	*e*P			**P**	**14 00 36.1**	**+0.2**
	comp=Z,534nm,1.8s								
PVRL					*e*S		**S**	**14 04 41.0**	**+3.7**
CCA1	**Carnmenellis**	**21.89**	**312**	*e*P			**P**	**14 00 37.5**	**+1.8**
CCA1					IAMs_20		IAMs_20	14 09 55.8	
	comp=Z,44μm,14.7s								
POLO	**Lamas de Olo**	**21.94**	**287**	*e*P			**P**	**14 00 36.7**	**+0.2**
	comp=Z,201nm,1.5s								
POLO					*e*LQ		LQ	14 04 30.8	
POLO					*e*S		**S**	**14 04 37.0**	**-1.5**
POLO					*e*LR		LR	14 08 17.6	
	comp=Z,10μm,18.0s								
PESTR	**Estremoz**	**21.96**	**281**	*e*LQ			LQ	14 04 30.8	
PESTR					*e*LR		LR	14 08 13.2	
	comp=Z,20μm,22.0s								
PESTR	**Estremoz**	**21.96**	**281**	P			**P**	**14 00 35.2**	**-1.4**
FOEL	**Foel Wylfa**	**22.03**	**319**	*e*P			**P**	**14 00 37.9**	**+0.6**
FOEL					IAmb		IAmb	14 00 42.4	
	comp=Z,364nm,0.7s								
FOEL					IAMs_20		IAMs_20	14 11 32.9	
	comp=Z,63μm,14.7s								
PVIS	**Viseu**	**22.04**	**286**	*e*P			**P**	**14 00 37.0**	**-0.5**
	comp=Z,1μm,1.7s								
PVIS					*e*S		**S**	**14 04 43.4**	**+3.1**
LKRN	**Lenkeran, Azer**	**22.12**	**80**	P			**P**	**14 00 39.5**	**+1.2**
PVAQ	**Vaqueiros**	**

PCAS	**Casmilo, Conde**	**22.54**	**284**	*e*P		**P**	**14 00 42.3**	**-0.6**
	comp=Z,772nm,1.5s							
PCAS				*e*S		**S**	**14 04 48.1**	**-1.5**
KONO	**Kongsberg**	**22.58**	**346**	P		**P**	**14 00 42.3**	**-0.8**
KONO				pmax	pmax			
	comp=Z,483nm,1.2s							
KONO				MLR	MLR			
	comp=Z,33µm,21.0s							
KONO	**Kongsberg**	**22.58**	**346**	*e*P		**P**	**14 00 42.8**	**-0.3**
KONO				IVmB_BB			14 00 46.4	
	comp=Z,6µm,3.5s							
KONO				*e*S		**S**	**14 04 56.3**	**+6.3**
KONO				*e*ScP		**ScP**	**14 08 12.7**	**-0.4**
KONO				IVMs_BB	IVMs_BB		14 11 29.9	
	comp=Z,34µm,10.3s							
KONO	**Kongsberg**	**22.58**	**346**	P		**P**	**14 00 42.3**	**-0.8**
KONO				IAmb	IAmb		14 00 58.3	
	comp=Z,483nm,1.1s							
OSL	**Oslo**	**22.64**	**347**	*e*P		**P**	**14 00 42.7**	**-1.0**
OSL				*e*S		**S**	**14 04 54.4**	**+3.4**
OSL				*e*ScP		**ScP**	**14 08 17.2**	**+4.0**
YLL	**Llanberis**	**22.66**	**319**	*e*P		**P**	**14 00 44.1**	**+0.1**
TZRR	**Tazzarine**	**22.68**	**259**	P		**P**	**14 00 46.0**	**+1.4**
	SNR=20							
TZRR				P		**P**	**14 00 46.0**	**+1.4**
	SNR=20							
ALMR	**Almeirim**	**22.69**	**282**	*e*P		**P**	**14 00 48.8**	**+4.4**
	comp=Z,2µm,1.2s							
ALMR				*e*S		**S**	**14 04 59.2**	**+6.9**
PNCL	**Nicolau / Gran**	**22.80**	**279**	*e*P		**P**	**14 00 44.7**	**-0.9**
	comp=Z,733nm,1.5s							
PNCL				*e*S		**S**	**14 04 52.2**	**-2.1**
WLF1	**Llynfaes**	**22.86**	**319**	*e*P		**P**	**14 00 46.5**	**+0.5**
WLF1				IAmb	IAmb		14 00 50.9	
	comp=Z,482nm,1.2s							
WLF1				IAMs_20	IAMs_20		14 11 59.2	
	comp=Z,129µm,15.2s							
WME	**Myndd Eilian**	**22.86**	**320**	*e*P		**P**	**14 00 46.4**	**+0.3**
YRC	**Rhoscolyn**	**22.93**	**319**	*e*P		**P**	**14 00 47.4**	**+0.6**
KESW	**Keswick, Cumbr**	**22.94**	**323**	*e*P		**P**	**14 00 46.5**	**-0.5**
ZGR	**Zagora**	**23.02**	**257**	P		**P**	**14 00 51.0**	**+2.9**
	SNR=20							
ZGR				P		**P**	**14 00 51.0**	**+2.9**
	SNR=20							
MORF	**Marmelete**	**23.04**	**277**	*e*P		**P**	**14 00 46.5**	**-1.6**
MORF				AMb	AMB		14 00 52.7	
	comp=Z,324nm,2.0s							
MORF				*e*S		**S**	**14 04 56.9**	**-1.6**
MORF	**Marmelete**	**23.04**	**277**	*e*P		**P**	**14 00 48.1**	**0.0**
	comp=Z,338nm,1.8s							
MORF				*e*S		**S**	**14 04 57.4**	**-1.1**
MORF	**Marmelete**	**23.04**	**277**	*e*P		**P**	**14 00 46.5**	**-1.6**
MORF				*e*S		**S**	**14 04 56.9**	**-1.6**
PTEO	**Sao Teotonio**	**23.05**	**277**	*e*P		**P**	**14 00 48.2**	**0.0**
	comp=Z,548nm,1.5s							
PTEO				*e*S		**S**	**14 04 57.0**	**-1.6**
BLS5	**Blasjo**	**23.08**	**342**	*e*P		**P**	**14 00 48.0**	**-0.3**
BLS5				IVmB_BB			14 01 04.2	
	comp=Z,6µm,3.8s							
BLS5				*e*S		**S**	**14 05 01.2**	**+2.4**
BLS5				*e*ScP		**ScP**	**14 08 18.1**	**+3.6**
BLS5				IVMs_BB	IVMs_BB		14 11 37.7	
	comp=Z,40µm,13.6s							
AVE	**Averroes**	**23.14**	**266**	*e*P		**P**	**14 00 48.9**	**-0.3**
AVE				*e*S		**S**	**14 04 57.3**	**-2.9**
AVE	**Averroes**	**23.14**	**266**	P		**P**	**14 00 50.4**	**+1.2**
	SNR=35							
LIS	**Lisbon**	**23.19**	**281**	*e*P		**P**	**14 00 48.1**	**-1.6**
LIS				AMb	AMB		14 01 07.8	
	comp=Z,786nm,1.7s							
LIS				*e*S		**S**	**14 04 59.3**	**-1.7**
LIS	**Lisbon**	**23.19**	**281**	*e*P		**P**	**14 00 48.0**	**-1.6**
LIS				*e*S		**S**	**14 04 59.2**	**-1.7**
PFVI	**Vila Bisbo**	**23.21**	**277**	*e*P		**P**	**14 00 50.4**	**+0.6**
	comp=Z,483nm,1.5s							
PFVI				*e*S		**S**	**14 05 00.6**	**-0.7**
PFVI	**Vila Bisbo**	**23.21**	**277**	P		**P**	**14 00 48.4**	**-1.4**
KMY	**Karmoy**	**23.21**	**340**	*e*P		**P**	**14 00 51.3**	**+1.7**
KMY				*e*S		**S**	**14 05 08.2**	**+7.2**
PMAFR	**Mafra**	**23.26**	**281**	*e*P		**P**	**14 00 49.4**	**-1.0**
	comp=Z,533nm,1.4s							
PMAFR				*e*S		**S**	**14 04 59.4**	**-2.8**
NC602	**NORSAR Array S**	**23.26**	**349**	*e*P		**P**	**14 00 49.4**	**-0.8**
NC602				IVmB_BB			14 00 58.7	
	comp=Z,7µm,1.6s							
NC602				*e*S		**S**	**14 05 01.5**	**-0.3**
NC602				IVMs_BB	IVMs_BB		14 11 06.7	
	comp=Z,27µm,10.6s							
NC602	**NORSAR Array S**	**23.26**	**349**	P		**P**	**14 00 49.2**	**-1.0**
EKA	**Eskdalemuir Ar**	**23.41**	**325**	P		**P**	**14 00 51.6**	**-0.1**
	comp=Z,255nm,0.8s,baz=127,slow=11,SNR=150							
EKA				LR	LR		14 11 10.4	
	comp=Z,24µm,20.6s,baz=115,slow=40							
ESK	**Eskdalemuir**	**23.42**	**325**	*e*P		**P**	**14 00 51.6**	**-0.2**
ESK				IAmb	IAmb		14 00 54.1	
	comp=Z,293nm,0.9s							
ESK				IAMs_20	IAMs_20		14 12 19.6	
	comp=Z,40µm,13.1s							
ESK	**Eskdalemuir**	**23.42**	**325**	P		**P**	**14 00 50.7**	**-1.1**
ESK				pmax	pmax			
	comp=Z,1µm,1.1s							
ESK				MLR	MLR			
	comp=Z,34µm,19.0s							
ESK	**Eskdalemuir**	**23.42**	**325**	P		**P**	**14 00 50.7**	**-1.1**
WIM	**Isle of Man**	**23.45**	**321**	*e*P		**P**	**14 00 52.0**	**-0.1**
IOMK	**Kirk Michael**	**23.46**	**321**	*e*P		**P**	**14 00 52.0**	**-0.2**
IOMK				IAMs_20	IAMs_20		14 12 30.9	
	comp=Z,120µm,11.7s							
NAO01	**NORSAR Array S**	**23.47**	**348**	P		**P**	**14 00 50.1**	**-2.1**
ODD1	**Odda**	**23.47**	**342**	*e*P		**P**	**14 00 52.4**	**+0.2**
ODD1				*e*S		**S**	**14 05 12.8**	**+7.5**
ODD1				IVMs_BB	IVMs_BB		14 12 15.0	
	comp=Z,52µm,10.0s							
FINES	**FINESS Array B**	**23.54**	**7**	P		**P**	**14 00 51.0**	**-1.9**
FINES							14 04 37.0	
FINES	**FINESS Array B**	**23.54**	**7**	P		**P**	**14 00 51.0**	**-1.9**
	comp=Z,141nm,0.7s,baz=169,slow=9.5,SNR=131							
FINES				PcP		**PcP**	**14 04 37.0**	**-0.8**
	comp=Z,32nm,0.9s,baz=170,slow=2.5,SNR=4.5							
FINES				S		**S**	**14 05 00.7**	**-5.5**
	comp=Z,43nm,0.9s,baz=196,slow=14,SNR=3.0							
FINES				LR	LR		14 11 17.5	
	comp=Z,65µm,19.3s,baz=192,slow=40							
FIA1	**FINESS Array S**	**23.54**	**7**	P		**P**	**14 00 51.1**	**-1.7**
FIA1				IAmb	IAmb		14 00 58.1	
	comp=Z,542nm,0.9s							
NC405	**NORSAR Array S**	**23.60**	**349**	P		**P**	**14 00 51.8**	**-1.7**
NB201	**NORSAR Array S**	**23.60**	**349**	P		**P**	**14 00 52.6**	**-0.9**
NB2	**NORSAR Subarra**	**23.60**	**349**	P		**P**	**14 00 52.4**	**-1.2**
	comp=Z,2µm,1.7s,baz=162,slow=9.3							
NB2	**NORSAR Subarra**	**23.60**	**349**	P		**P**	**14 00 52.4**	**-1.2**
	baz=162,slow=9.3							
NOA	**NORSAR Array B**	**23.60**	**349**	P		**P**	**14 00 52.3**	**-1.3**
	comp=Z,22nm,0.8s,baz=158,slow=10,SNR=113							
NOA				LR	LR		14 11 57.0	
	comp=Z,35µm,20.3s,baz=165,slow=42							
EBL	**Broad Law**	**23.63**	**326**	*e*P		**P**	**14 00 54.7**	**+0.8**
NBO00	**NORSAR Array S**	**23.66**	**348**	P		**P**	**14 00 52.9**	**-1.2**
NC303	**NORSAR Array S**	**23.76**	**349**	P		**P**	**14 00 53.7**	**-1.3**
EDI	**Edinburgh**	**23.79**	**326**	*e*P		**P**	**14 00 55.2**	**-0.1**
EDI				IAMs_20	IAMs_20		14 13 30.8	
	comp=Z,38µm,13.9s							
SKAR	**Skarslia**	**23.79**	**345**	*e*P		**P**	**14 00 56.2**	**+0.8**
SKAR				IVmB_BB			14 01 02.4	
	comp=Z,6µm,2.3s							
SKAR				*e*S		**S**	**14 05 11.1**	**+0.7**
SKAR				*e*ScP		**ScP**	**14 08 19.5**	**+3.2**
SKAR				IVMs_BB	IVMs_BB		14 14 37.1	
	comp=Z,22µm,8.9s							
EAU	**Auchinoon**	**23.85**	**326**	*e*P		**P**	**14 00 56.9**	**+0.9**
GAL1	**Galloway**	**23.86**	**322**	*e*P		**P**	**14 00 56.6**	**+0.5**
GAL1				IAMs_20	IAMs_20		14 10 26.0	
	comp=Z,52µm,21.4s							
DSB	**Dublin**	**23.87**	**318**	P		**P**	**14 00 55.2**	**-0.9**
DSB				IAmb	IAmb		14 01 02.9	
	comp=Z,495nm,1.3s							
DSB				IAMs_20	IAMs_20		14 11 02.2	
	comp=Z,56µm,20.0s							
NC204	**NORSAR Array S**	**23.90**	**348**	P		**P**	**14 00 54.8**	**-1.6**
EDU	**Dundee**	**24.10**	**327**	*e*P		**P**	**14 00 58.5**	**+0.2**
GMM	**Mts of Mourne**	**24.14**	**320**	*e*P		**P**	**14 00 59.2**	**+0.5**
BER	**Bergen**	**24.20**	**342**	*e*P		**P**	**14 00 58.6**	**-0.6**
BER				IVmB_BB			14 01 18.4	
	comp=Z,9µm,4.8s							
BER				*e*S		**S**	**14 05 16.9**	**+0.2**
BER				*e*ScP		**ScP**	**14 08 18.7**	**+1.4**
BER				*e*ScS		**ScS**	**14 12 05.7**	**+1.4**
OUK	**Oukaimeden**	**24.29**	**262**	P		**P**	**14 01 02.4**	**+1.7**
	SNR=21							
PGBU	**Glenifferbraes**	**24.30**	**325**	*e*P		**P**	**14 01 01.2**	**+1.1**
PGBU				IAMs_20	IAMs_20		14 10 42.5	
	comp=Z,35µm,20.8s							
ASK	**Askoy**	**24.32**	**341**	*e*P		**P**	**14 01 01.5**	**+1.3**
ASK				*e*S		**S**	**14 05 26.3**	**+7.6**
INVG	**Invergeldie, C**	**24.48**	**326**	*e*P		**P**	**14 01 01.9**	**+0.1**
INVG				IAMs_20	IAMs_20		14 12 23.2	
	comp=Z,39µm,15.4s							
CLGH	**Cloghs, Cushen**	**24.66**	**322**	*e*P		**P**	**14 01 03.8**	**+0.4**
CLGH				IAMs_20	IAMs_20		14 13 11.2	
	comp=Z,43µm,11.8s							
HYA	**Hoyanger**	**24.68**	**343**	*e*P		**P**	**14 01 04.2**	**+0.7**
HYA				IVmB_BB			14 01 19.1	
	comp=Z,5µm,3.5s							
DOMB	**Dombas**	**24.90**	**347**	*e*P		**P**	**14 01 05.8**	**+0.2**
DOMB				IVmB_BB			14 01 39.6	
	comp=Z,7µm,2.6s							
DOMB				*e*S		**S**	**14 05 31.2**	**+2.9**
DOMB				*e*ScP		**ScP**	**14 08 20.8**	**+1.5**
DOMB				IVMs_BB	IVMs_BB		14 13 01.1	
	comp=Z,22µm,11.3s							
SUE	**Sulen**	**24.92**	**342**	*e*P		**P**	**14 01 06.2**	**+0.5**
SUE				IVmB_BB			14 01 21.7	
	comp=Z,8µm,5.5s							
SUE				*e*S		**S**	**14 05 35.0**	**+6.5**
SUE				*e*ScP		**ScP**	**14 08 21.8**	**+2.5**
TTIG	**Tnine Tigouga,**	**25.01**	**261**	P		**P**	**14 01 10.0**	**+3.0**
	SNR=85							
FOO	**Floro**	**25.33**	**343**	*e*P		**P**	**14 01 08.7**	**-0.6**
FOO				IVmB_BB			14 01 29.4	
	comp=Z,5µm,2.7s							
FOO				*e*S		**S**	**14 05 42.7**	**+7.9**
FOO				*e*ScP	ScP		14 08 32.5	+12
FOO				IVMs_BB	IVMs_BB		14 13 26.7	
	comp=Z,39µm,9.9s							
MLA1	**Latheron**	**25.40**	**330**	*e*P		**P**	**14 01 10.6**	**+0.5**
AKN	**Aaknes**	**25.42**	**345**	*e*P		**P**	**14 01 11.3**	**+1.1**
AKN				*e*P		**pP**	**14 01 11.8**	**-2.6**
AKN				IVmB_BB			14 01 19.3	
	comp=Z,5µm,3.5s							
AKN				*e*S		**S**	**14 05 41.0**	**+4.6**
KLMR	**Klimovskoe**	**25.63**	**22**	*e*P		**P**	**14 01 10.5**	**-1.6**
KLMR				*e*S		**S**	**14 05 37.8**	**-1.9**
KLMR				pmax	pmax			
	comp=Z,442nm,0.9s							
KLMR				MLR	MLR			
	comp=Z,59µm,14.0s							
KLMR	**Klimovskoe**	**25.63**	**22**	*e*P		**P**	**14 01 10.5**	**-1.6**
KLMR				AMP			14 01 17.7	
	comp=Z,442nm,0.9s							
KLMR				*e*S		**S**	**14 05 37.8**	**-1.9**
KLMR				*e*S		**S**	**14 05 37.8**	**-1.9**
KLMR				LQ	LQ		14 09 11.4	
KLMR				LQ	LQ		14 09 11.4	
KLMR				LR	LR		14 11 06.7	
KLMR				AMP			14 12 28.8	
	comp=Z,59µm,13.9s							
MOL	**Molde**	**25.67**	**346**	*e*P		**P**	**14 01 12.8**	**+0.4**
MOL				IVmB_BB			14 01 17.8	
	comp=Z,4µm,1.7s							
MOL				*e*S		**S**	**14 05 44.0**	**+3.8**
MOL				*e*ScS		**ScS**	**14 12 13.8**	**+3.6**
MOL				IVMs_BB	IVMs_BB		14 13 33.4	
	comp=Z,30µm,11.9s							
KPL	**Plockton**	**25.73**	**327**	*e*P		**P**	**14 01 12.9**	**-0.2**
KPL				IAMs_20	IAMs_20		14 14 55.1	
	comp=Z,52µm,15.4s							
TBLU	**Trondheim**	**25.85**	**349**	*e*P		**P**	**14 01 15.7**	**+1.6**
TBLU				IVmB_BB			14 01 23.9	
	comp=Z,5µm,1.9s							
TBLU				*e*S		**S**	**14 05 49.6**	**+6.5**
RAYN	**Ar Rayn**	**25.86**	**117**	P		**P**	**14 01 15.0**	**+0.3**
RAYN				pmax	pmax			
	comp=Z,619nm,1.4s							
RAYN				MLR	MLR			
	comp=Z,22µm,20.0s							
RAYN	**Ar Rayn**	**25.86**	**117**	*i* P		**P**	**14 01 15.2**	**+0.5**
	SNR=100							
RAYN	**Ar Rayn**	**25.86**	**117**	P		**P**	**14 01 15.0**	**+0.3**
RAYN				IAmb	IAmb		14 01 25.2	
	comp=Z,619nm,1.4s							
LRW	**Lerwick**	**25.91**	**335**	*e*P		**P**	**14 01 14.3**	**-0.3**
LRW				IAMs_20	IAMs_20		14 14 11.9	
	comp=Z,41µm,24.0s							
RSC	**Scourie**	**26.15**	**329**	*e*P		**P**	**14 01 17.0**	**+0.1**
NSS	**Namsos**	**26.86**	**352**	*e*P		**P**	**14 01 22.6**	**-0.7**
NSS				IVmB_BB			14 01 29.4	
	comp=Z,4µm,3.2s							
NSS				*e*S		**S**	**14 05 59.7**	**+0.6**
NSS				*e*ScP		**ScP**	**14 08 29.4**	**+4.5**
KIRV	**Kirov**	**27.65**	**33**	P		**P**	**14 01 29.3**	**-1.0**
	comp=Z,159nm,0.8s,baz=238,slow=5.0,SNR=19							
KIRV				LR	LR		14 13 10.0	
	comp=Z,59µm,18.9s,baz=236,slow=38							
TMCR	**Tamitsa**	**28.03**	**16**	*e*P		**P**	**14 01 32.0**	**-1.7**
TMCR				*e*S		**S**	**14 06 18.6**	**+1.1**
TMCR				pmax	pmax			
	comp=Z,142nm,0.9s							
PRGR	**Permogore**	**28.16**	**25**	*i* P		**P**	**14 01 33.7**	**-1.1**
PRGR				*i* S		**S**	**14 06 16.4**	**-3.1**
PRGR				pmax	pmax			
	comp=Z,248nm,0.8s							
MOR8	**Moi Rana**	**28.24**	**355**	*e*P		**P**	**14 01 36.8**	**+1.2**
MOR8				*e*S		**S**	**14 06 27.2**	**+6.3**
STOK	**Stokkvaagen**	**28.51**	**354**	*e*P		**P**	**14 01 37.9**	**0.0**
STOK				*e*S		**S**	**14 06 28.3**	**+3.2**
STOK				*e*ScS		**ScS**	**14 12 22.0**	**-0.6**
KONS	**Konsvik**	**28.67**	**354**	*e*P		**P**	**14 01 39.0**	**-0.4**
KONS				*e*S		**S**	**14 06 31.1**	**+3.6**
KONS				*e*ScS		**ScS**	**14 12 23.2**	**-0.1**
AKTO	**Aktyubinsk**	**29.18**	**53**	P		**P**	**14 01 42.5**	**-1.7**
	comp=Z,13nm,0.4s,baz=260,slow=9.7,SNR=58							
GEYT	**Ailbeck**	**29.48**	**79**	P		**P**	**14 01 47.4**	**+0.4**
	comp=Z,43nm,0.7s,baz=273,slow=10,SNR=69							
GYA0B	**ALIBECK ARRAY**	**29.48**	**79**	P		**P**	**14 01 47.2**	**+0.2**
GYA0B				IAmb	IAmb		14 01 59.5	
	comp=Z,121nm,0.6s							
STEI	**Steigen**	**29.94**	**356**	*e*P		**P**	**14 01 50.0**	**-0.6**
STEI				IVmB_BB			14 01 57.4	
	comp=Z,4µm,2.4s							
STEI				*e*S		**S**	**14 06 46.9**	**-0.5**
STEI				*e*ScS		**ScS**	**14 12 29.7**	**+0.5**
STEI				IVMs_BB	IVMs_BB		14 15 24.2	
	comp=Z,54µm,11.6s							
TOC1	**Torodi Ar. Sit**	**30.01**	**219**	IAMs_20	IAMs_20		14 15 23.2	
	comp=Z,41µm,18.0s							
TOB2	**Torodi Ar. Sit**	**30.02**	**219**	IAMs_20	IAMs_20		14 15 23.5	
	comp=Z,35µm,18.0s							
TOC7	**Torodi Ar. Sit**	**30.03**	**219**	IAMs_20	IAMs_20		14 15 23.6	
	comp=Z,33µm,18.0s							
TOA1	**Torodi Ar. Sit**	**30.03**	**219**	IAMs_20	IAMs_20		14 15 15.7	
	comp=Z,32µm,18.0s							
TOA2	**Torodi Ar. Sit**	**30.03**	**219**	IAMs_20	IAMs_20		14 15 24.7	
	comp=Z,35µm,18.0s							
TOC3	**Torodi Ar. Sit**	**30.03**	**219**	IAMs_20	IAMs_20		14 15 24.7	
	comp=Z,36µm,18.0s							
TOA0	**Torodi Ar. Sit**	**30.03**	**219**	P	P		**14 01 51.1**	**-0.8**
TOA0				IAmb	IAmb		14 01 58.1	
	comp=Z,207nm,1.1s							
TOA0				IAMs_20	IAMs_20		14 15 24.8	
	comp=Z,34µm,18.0s							
TOA0	**Torodi Ar. Sit**	**30.03**	**219**	P	P		**14 01 52.7**	**+0.8**
	SNR=42							
TORD	**Torodi Ar. Bea**	**30.03**	**219**	P	P		**14 01 52.0**	**0.0**
	comp=Z,167nm,0.9s,baz=31,slow=9.3,SNR=183							
TORD				S		**S**	**14 06 46.2**	**-3.6**
	comp=Z,4.4nm,1.0s,baz=38,slow=22,SNR=2.5							
TORD				ScP		**ScP**	**14 08 35.6**	**0.0**
	comp=Z,6.6nm,1.0s,baz=345,slow=4.5,SNR=4.7							
TORD	**Torodi Ar. Bea**	**30.03**	**219**	IAmb	IAmb		14 01 58.1	
	comp=Z,128nm,1.0s							
TOB5	**Torodi Ar. Sit**	**30.04**	**219**	IAMs_20	IAMs_20		14 15 24.9	
	comp=Z,34µm,18.0s							
TOB3	**Torodi Ar. Sit**	**30.04**	**219**	IAMs_20	IAMs_20		14 15 24.9	
	comp=Z,34µm,18.0s							
TOA3	**Torodi Ar. Sit**	**30.04**	**219**	IAMs_20	IAMs_20		14 15 24.9	
	comp=Z,34µm,18.0s							
TOC5	**Torodi Ar. Sit**	**30.06**	**219**	IAMs_20	IAMs_20		14 15 33.3	
	comp=Z,31µm,18.0s							
PMPST	**Porto Santo, M**	**30.24**	**272**	*e*P		**P**	**14 01 55.3**	**+1.6**
	comp=Z,470nm,1.3s							
PMPST				*e*S		**S**	**14 06 50.4**	**-2.5**
LOF	**Lofoten**	**30.24**	**355**	*e*P		**P**	**14 01 52.6**	**-0.7**
LOF				IVmB_BB			14 02 15.2	
	comp=Z,3µm,3.0s							
LOF				*e*S		**S**	**14 06 54.7**	**+2.5**
LOF				*e*ScS		**ScS**	**14 12 33.1**	**+2.4**
LOF				IVMs_BB	IVMs_BB		14 15 50.6	
	comp=Z,31µm,11.1s							
AB31	**Akbulak array**	**30.24**	**56**	*e*P		**P**	**14 01 52.2**	**-1.3**
ABKAR	**Akbulak array**	**30.24**	**56**	P		**P**	**14 01 51.9**	**-1.6**
PMPS	**Porto Santo**	**30.25**	**272**	*e*P		**P**	**14 01 56.0**	**+2.3**
	comp=Z,440nm,1.9s							
APA	**Apatity**	**30.31**	**10**	*i* P		**P**	**14 01 57.1**	**+3.2**
APA				*i* S		**S**	**14 06 57.0**	**+3.8**
LVZ	**Lovozero**	**30.79**	**10**	P		**P**	**14 01 57.6**	**-0.6**
LVZ				pmax	pmax			
	comp=Z,324nm,1.2s							
LVZ				MLR	MLR			
	comp=Z,25µm,18.0s							
LVZ	**Lovozero**	**30.79**	**10**	P		**P**	**14 01 57.6**	**-0.6**
LVZ				IAmb	IAmb		14 02 59.8	
	comp=Z,324nm,1.2s							
PMAR	**Madeira**	**30.82**	**271**	*e*P		**P**	**14 02 00.5**	**+1.5**
	comp=Z,807nm,1.6s							
FUL	**Funchal**	**30.83**	**271**	*e*P		**P**	**14 02 02.3**	**+3.4**
	comp=Z,480nm,1.5s							
KTK1	**Kautokeino**	**30.91**	**2**	*e*P		**P**	**14 01 59.7**	**+0.4**
KTK1				*e*S		**S**	**14 07 04.9**	**+2.2**
KTK1				*e*ScS		**ScS**	**14 12 44.5**	**+10**
KTK1				IVMs_BB	IVMs_BB		14 15 55.6	
	comp=Z,34µm,11.6s							
PMOZ	**Porto Moniz, M**	**31.01**	**272**	*e*P		**P**	**14 02 02.5**	**+1.9**
	comp=Z,380nm,1.5s							
PMOZ				*e*S		**S**	**14 07 10.0**	**+4.9**
PMOZ				*e*LQ	LQ		14 07 12.9	
PMOZ				*e*LR	LR		14 11 11.8	
	comp=Z,4µm,18.0s							
PMOZ	**Porto Moniz, M**	**31.01**	**272**	P		**P**	**14 01 59.0**	**-1.6**
ARU	**Arti**	**31.06**	**42***c*	*i* P		**P**	**14 01 59.1**	**-1.5**
ARU				PPP	PPP		14 03 08.1	
ARU				S		**S**	**14 07 04.3**	**-0.9**
ARU				pmax	pmax			
	comp=Z,105nm,1.9s							
ARU				MLR	MLR			
	comp=Z,35µm,18.0s							
ARU	**Arti**	**31.06**	**42**	P		**P**	**14 01 59.4**	**-1.3**
	comp=Z,11nm,0.4s,baz=242,slow=7.2,SNR=58							
ARU				S		**S**	**14 06 58.5**	**-6.7**
	comp=Z,7.5nm,0.7s,baz=193,slow=18,SNR=2.0							
ARU				LR	LR		14 15 19.4	
	comp=Z,35µm,19.1s,baz=250,slow=38							
ARU	**Arti**	**31.06**	**42**	P		**P**	**14 01 58.4**	**-2.2**
ARU	**Arti**	**31.06**	**42**	IAMs_20	IAMs_20		14 15 15.0	
	comp=Z,38µm,18.0s							
TRO	**Tromso**	**31.51**	**359**	*e*P		**P**	**14 02 03.2**	**-1.3**
TRO				IVmB_BB			14 02 11.1	
	comp=Z,4µm,2.4s							
TRO				*e*S		**S**	**14 07 13.3**	**+1.3**
TRO				*e*ScS		**ScS**	**14 12 40.2**	**+3.3**
ARCES	**ARCESS Array B**	**31.52**	**3**	P		**P**	**14 02 03.4**	**-1.2**
	comp=Z,31nm,0.7s,baz=190,slow=10,SNR=117							
ARCES				PcP		**PcP**	**14 04 56.9**	**-0.1**
	comp=Z,7.9nm,0.5s,baz=191,slow=0.9,SNR=5.4							
ARCES				LR	LR		14 15 20.4	
	comp=Z,33µm,19.7s,baz=183,slow=38							
ARE0	**ARCESS Array S**	**31.52**	**3**	*e*P		**P**	**14 02 03.7**	**-0.9**
ARE0				IVmB_BB			14 02 40.5	
	comp=Z,5µm,4.8s							
ARE0				*e*S		**S**	**14 07 13.7**	**+1.4**
ARE0				*e*ScS		**ScS**	**14 12 39.0**	**+2.0**
ARE0				IVMs_BB	IVMs_BB		14 16 12.4	
	comp=Z,31µm,9.6s							
ARE0	**ARCESS Array S**	**31.52**	**3**	P		**P**	**14 02 03.5**	**-1.1**
DAMY	**Dhamar**	**31.62**	**132**	P		**P**	**14 02 06.0**	**-0.3**
DAMY	**Dhamar**	**31.62**	**132**	P		**P**	**14 02 09.0**	**+2.7**
	SNR=25							
MZR	**Muzera**	**31.97**	**109**	*i* P		**P**	**14 02 09.1**	**+0.1**
	SNR=15							
MZR	**Muzera**	**31.97**	**109**	P		**P**	**14 02 09.5**	**+0.5**
	SNR=52							
TEND	**Ethiopian Broa**	**32.03**	**140**	*e*P		**P**	**14 02 12.9**	**+3.3**
TEND				*e*S		S	14 07 36.4	+15
AJN	**Ajban**	**32.22**	**105**	*i* P		**P**	**14 02 10.9**	**-0.3**
	SNR=29							
AJN	**Ajban**	**32.22**	**105**	P		**P**	**14 02 12.0**	**+0.7**
	SNR=35							
AJN				P		**P**	**14 02 12.0**	**+0.7**
	SNR=35							
UMQ	**Umm Al-Quwin**	**32.23**	**103**	*i* P	

HRA	**Herat**	**33.65**	**83**	P		**P**		**14 02 22.8**	**-1.1**
ARQ	**Araqi**	**34.07**	**105**	P		**P**		**14 02 28.1**	**+0.7**
	SNR=71								
HOQ	**Hoqain**	**34.53**	**104**	P		**P**		**14 02 31.8**	**+0.3**
	SNR=34								
BSY	**Bisya**	**34.92**	**105**	P		**P**		**14 02 35.0**	**+0.3**
	SNR=51								
BIDO	**Bidbid**	**35.19**	**104**	P		**P**		**14 02 37.5**	**+0.5**
	SNR=24								
WHFO	**Wadi Hawf**	**35.35**	**116**	P		**P**		**14 02 41.0**	**+2.4**
	SNR=13								
WHFO				P		**P**		**14 02 41.0**	**+2.4**
	SNR=13								
SMDO	**Samad**	**35.39**	**104**	P		**P**		**14 02 39.0**	**+0.1**
	SNR=71								
ABTO	**Aybut**	**35.40**	**117**	P		**P**		**14 02 38.8**	**-0.1**
	SNR=32								
WSAR	**Wadi Sarin**	**35.73**	**104**	P		**P**		**14 02 42.8**	**+1.1**
	SNR=27								
JMDO	**Jabal Madar**	**35.82**	**105**	P		**P**		**14 02 41.7**	**-0.8**
	SNR=36								
JMDO				P		**P**		**14 02 41.7**	**-0.8**
	SNR=36								
RBK	**Rabkut**	**35.94**	**116**	P		**P**		**14 02 43.5**	**0.0**
	SNR=37								
RBK				P		**P**		**14 02 43.5**	**0.0**
	SNR=37								
JMIC	**Jan Mayen**	**36.14**	**344**	P		**P**		**14 02 44.8**	**+0.1**
	comp=Z,88nm,0.4s,baz=180,slow=7.1,SNR=2.4								
JMIC				LR		LR		14 19 59.2	
	comp=Z,15µm,18.6s,baz=136,slow=40								
DMTO	**DMTO**	**36.33**	**115**	P		**P**		**14 02 46.5**	**-0.4**
	SNR=16								
WBK	**Wadi Bani Khal**	**36.34**	**104**	P		**P**		**14 02 48.0**	**+1.0**
	SNR=41								
WBK				P		**P**		**14 02 48.0**	**+1.0**
	SNR=41								
BJO1	**Bjornoya**	**36.41**	**359**	*e*P		**P**		**14 02 47.6**	**+0.8**
BJO1				*e*S		**S**		**14 08 28.1**	**+0.6**
MHTO	**MHTO**	**36.52**	**107**	P		**P**		**14 02 48.7**	**+0.3**
	SNR=44								
SHAO	**Shalim**	**36.62**	**113**	*i* P		**P**		**14 02 50.0**	**+0.6**
	SNR=12								
SHAO	**Shalim**	**36.62**	**113**	P		**P**		**14 02 50.3**	**+0.9**
	SNR=9.9								
SHAO				P		**P**		**14 02 50.3**	**+0.9**
	SNR=9.9								
DQM	**DQM**	**36.83**	**109**	P		**P**		**14 02 51.0**	**-0.1**
	SNR=14								
BRVK	**Borovoye**	**37.06**	**50**	P		**P**		**14 02 51.7**	**-1.0**
BRVK				pmax		pmax			
	comp=Z,223nm,1.0s								
BRVK				MLR		MLR			
	comp=Z,15µm,19.0s								
BRVK	**Borovoye**	**37.06**	**50**	P		**P**		**14 02 51.7**	**-1.0**
BRVK				IAmb		IAmb		14 03 00.6	
	comp=Z,223nm,1.0s								
LODK	**Lodwar**	**37.17**	**155**	P		**P**		**14 02 56.6**	**+2.5**
	SNR=57								
CHM	**Chimkent**	**37.28**	**68**	*e*P		**P**		**14 02 57.0**	**+2.2**
CHM	**Chimkent**	**37.28**	**68**	*e*P		**P**		**14 02 57.1**	**+2.2**
CHM				*e*LR		LR		14 21 13.3	
BRLS	**Borolday**	**37.33**	**67**	*e*P		**P**		**14 02 56.2**	**+1.0**
BRLS				*e*S		**S**		**14 08 41.8**	**-0.6**
BRLS				*e*LR		LR		14 20 55.8	
IUG	**Iuzhnay**	**37.62**	**68**	*e*P		**P**		**14 02 58.7**	**+0.9**
IUG				*e*				14 04 24.0	
IUG				*e*S		**S**		**14 08 47.0**	**-0.1**
IUG	**Iuzhnay**	**37.62**	**68**	*e*P		**P**		**14 02 58.8**	**+0.9**
IUG				*e*PP		**PP**		**14 04 24.1**	**+0.5**
IUG				*e*S		**S**		**14 08 47.1**	**-0.1**
KK31	**Karatay Array**	**37.80**	**66**	P		**P**		**14 02 57.8**	**-1.4**
KK31				pmax		pmax			
	comp=Z,146nm,0.7s								
KK31	**Karatay Array**	**37.80**	**66**	P		**P**		**14 02 57.8**	**-1.4**
KK31				IAmb		IAmb		14 03 10.3	
	comp=Z,146nm,0.7s								
KKAR	**Karatay Array**	**37.80**	**66**	P		**P**		**14 02 57.7**	**-1.5**
KKAR				pmax		pmax			
	comp=Z,146nm,0.7s								
KKAR	**Karatay Array**	**37.80**	**66**	P		**P**		**14 02 57.7**	**-1.5**
KKAR				IAmb		IAmb		14 03 10.3	
	comp=Z,146nm,0.7s								
JBG	**Jabagly**	**37.95**	**67**	*e*P		**P**		**14 03 00.9**	**+0.3**
JBG				*e*				14 04 31.2	
JBG				*e*S		**S**		**14 08 53.2**	**+1.1**
JBG				pmax		pmax			
	comp=Z,150nm,1.2s								
DZA	**Taraz**	**38.43**	**66**	*e*P		**P**		**14 03 04.2**	**-0.3**
DZA				*e*S		**S**		**14 09 00.8**	**+1.7**
DZA	**Taraz**	**38.43**	**66**	*e*P		**P**		**14 03 04.3**	**-0.3**
DZA				*e*S		**S**		**14 09 00.9**	**+1.7**
HOPEN	**Hopen**	**38.47**	**2**	*e*P		**P**		**14 03 04.3**	**0.0**
HOPEN				IVmB_BB				14 03 11.6	
	comp=Z,4µm,2.4s								
HOPEN				*e*S		**S**		**14 09 01.4**	**+2.5**
HOPEN				*e*ScS		**ScS**		**14 13 15.5**	**+1.4**
HOPEN				IVMs_BB		IVMs_BB		14 20 58.4	
	comp=Z,26µm,11.0s								
BRZS	**Berezniki**	**38.54**	**55**	*e*P		**P**		**14 03 04.6**	**-0.7**
BRZS				*e*				14 04 37.6	
BRZS				pmax		pmax			
	comp=Z,260nm,2.2s								
BRZS	**Berezniki**	**38.54**	**55**	*e*P		**P**		**14 03 04.6**	**-0.7**
	comp=Z,260nm,2.2s								
BRZS				*e*PP		**PnPn**		**14 04 37.6**	**+2.3**
BRZS				*e*LR		LR		14 21 05.5	
BTK	**Batken**	**38.66**	**71**	P		**P**		**14 03 05.9**	**-0.6**
BTK				pmax		pmax			
	comp=Z,170nm,1.0s								
BTK	**Batken**	**38.66**	**71**	P		**P**		**14 03 05.9**	**-0.6**
DBIC	**Dimbokro**	**38.90**	**223**	P		**P**		**14 03 07.5**	**-1.0**
DBIC				S		**S**		**14 09 02.5**	**-3.9**
DBIC				pmax		pmax			
	comp=Z,213nm,1.1s								
DBIC	**Dimbokro**	**38.90**	**223**	P		**P**		**14 03 08.6**	**+0.1**
	comp=Z,125nm,0.9s,baz=11,slow=10,SNR=126								
DBIC				S		**S**		**14 09 02.5**	**-3.9**
	comp=Z,13nm,1.1s,baz=156,slow=20,SNR=2.8								
DBIC				LR		LR		14 20 55.7	
	comp=Z,26µm,18.1s,baz=18,slow=39								
DBIC	**Dimbokro**	**38.90**	**223**	P		**P**		**14 03 07.5**	**-1.0**
KBL	**Kabul**	**38.90**	**80**	P		**P**		**14 03 08.1**	**-0.7**
KBL				pmax		pmax			
	comp=Z,252nm,1.9s								
KBL				MLR		MLR			
	comp=Z,14µm,19.0s								
KBL	**Kabul**	**38.90**	**80**	P		**P**		**14 03 08.1**	**-0.7**
HSPB	**Hornsund (broa**	**38.97**	**358**	*e*P		**P**		**14 03 08.5**	**-0.1**
HSPB				IVmBBB				14 03 14.6	
	comp=Z,2µm,3.0s								
HSPB				*e*S		**S**		**14 09 14.6**	**+8.2**
HSPB				IVMs_BB		IVMs_BB		14 19 15.6	
	comp=Z,15µm,21.4s								
TIC	**Toumodi**	**39.00**	**223**	*e*P		**P**		**14 03 09.5**	**0.0**
KIC	**Kosan Boka**	**39.09**	**222**	*e*P		**P**		**14 03 10.0**	**-0.2**
	comp=Z,86nm,0.7s								
SCO	**Scoresbysund**	**39.17**	**339**	P		**P**		**14 03 09.2**	**-1.1**
SCO				pmax		pmax			
	comp=Z,748nm,1.7s								
SCO				MLR		MLR			
	comp=Z,18µm,20.0s								
SCO	**Scoresbysund**	**39.17**	**339**	*i* P		**P**		**14 03 12.0**	**+1.7**
	comp=Z,180nm,1.0s								
	comp=Z,16µm,14.0s								
SCO	**Scoresbysund**	**39.17**	**339**	P		**P**		**14 03 09.2**	**-1.1**
SCO				IAmb		IAmb		14 03 19.7	
	comp=Z,748nm,1.7s								
FRG	**Fergana**	**39.21**	**70**	P		**P**		**14 03 12.8**	**+1.7**
LIC	**Lamto**	**39.36**	**223**	*e*P		**P**		**14 03 11.7**	**-0.8**
	comp=Z,202nm,0.7s								
SOCY	**Socotra**	**39.49**	**122**	P		**P**		**14 03 10.1**	**-3.6**
SOCY				IAmb		IAmb		14 03 21.4	
	comp=Z,413nm,1.2s								
SOCY	**Socotra**	**39.49**	**122**	P		**P**		**14 03 11.5**	**-2.2**
	SNR=18								
MBAR	**Mbarara**	**39.74**	**164**	P		**P**		**14 03 15.6**	**-0.2**
MBAR				pmax		pmax			
	comp=Z,62nm,1.0s								
MBAR				MLR		MLR			
	comp=Z,15µm,20.0s								
MBAR	**Mbarara**	**39.74**	**164**	P		**P**		**14 03 16.5**	**+0.7**
	comp=Z,90nm,1.1s,baz=343,slow=7.4,SNR=31								
MBAR	**Mbarara**	**39.74**	**164**	P		**P**		**14 03 15.6**	**-0.2**
BTLS	**Baital**	**39.98**	**63**	*e*P		**P**		**14 03 16.9**	**-0.5**
BTLS				*e*		**S**		14 04 57.5	
BTLS				*e*S		**S**		**14 09 21.4**	**-1.0**
BTLS	**Baital**	**39.98**	**63**	*e*P		**P**		**14 03 17.0**	**-0.5**
BTLS				*e*PP		**PP**		**14 04 57.5**	**+8.3**
BTLS				*e*S		**S**		**14 09 21.4**	**-1.0**
BTLS				*e*LR		LR		14 21 36.8	
SPA0	**Spitsbergen Ar**	**40.13**	**359**	*e*P		**P**		**14 03 18.6**	**+0.3**
SPA0				IVmB_BB				14 03 26.1	
	comp=Z,4µm,1.9s								
SPA0				*e*S		**S**		**14 09 26.2**	**+2.3**
SPA0				IVMs_BB		IVMs_BB		14 19 52.5	
	comp=Z,20µm,20.2s								
SPA0	**Spitsbergen Ar**	**40.13**	**359**	P		**P**		**14 03 18.1**	**-0.1**
SPITS	**Spitsbergen Ar**	**40.13**	**359**	P		**P**		**14 03 18.2**	**0.0**
	comp=Z,16nm,0.4s,baz=158,slow=16,SNR=48								
SPITS				LR		LR		14 22 15.8	
	comp=Z,40µm,19.0s,baz=170,slow=40								
EKS2	**Erkin-Say**	**40.24**	**66**	P		**P**		**14 03 19.4**	**-0.3**
	SNR=50								
AML	**Almayashu**	**40.30**	**67**	P		**P**		**14 03 21.0**	**+0.5**
	SNR=17								
USP	**Ospenovka**	**40.63**	**65**	P		**P**		**14 03 21.9**	**-1.0**
	SNR=15								
SGDS	**Sogindy**	**40.69**	**65**	*e*P		**P**		**14 03 23.4**	**+0.1**
	comp=Z,93nm,1.5s								
SGDS				*e*PP		**PP**		**14 04 56.3**	**-0.7**
SGDS				*e*S		**S**		**14 09 31.4**	**-1.7**
SGDS				*e*LR		LR		14 23 25.2	
AAK	**Ala-Archa**	**40.76**	**66**	*e*P		**P**		**14 03 23.7**	**-0.4**
AAK				pmax		pmax			
	comp=Z,113nm,1.1s								
AAK				MLR		MLR			
	comp=Z,12µm,18.0s								
AAK	**Ala-Archa**	**40.76**	**66**	P		**P**		**14 03 23.3**	**-0.8**
	SNR=25								
AAK	**Ala-Archa**	**40.76**	**66**	*i* P		**P**		**14 03 24.1**	**0.0**
	SNR=61								
AAK	**Ala-Archa**	**40.76**	**66**	P		**P**		**14 03 23.2**	**-0.9**
FRU1	**Bishkek**	**40.82**	**66**	P		**P**		**14 03 23.6**	**-0.9**
FRU1				pmax		pmax			
	comp=Z,271nm,0.8s								
FRU1	**Bishkek**	**40.82**	**66**	P		**P**		**14 03 23.6**	**-0.9**
FRU1				IAmb		IAmb		14 03 31.5	
	comp=Z,271nm,0.8s								
UCH	**Uchtor**	**40.87**	**67**	P		**P**		**14 03 25.2**	**-0.1**
	SNR=16								
CHMS	**Chumysh**	**40.87**	**65**	P		**P**		**14 03 23.7**	**-1.2**
	SNR=24								
KBS	**Kingsbay**	**41.00**	**357**	P		**P**		**14 03 24.8**	**-0.6**
KBS				pmax		pmax			
	comp=Z,197nm,1.4s								
KBS				MLR		MLR			
	comp=Z,24µm,20.0s								
KBS	**Kingsbay**	**41.00**	**357**	*e*P		**P**		**14 03 27.2**	**+1.9**
KBS				IVmB_BB				14 03 49.5	
	comp=Z,3µm,3.0s								
KBS				*e*S		**S**		**14 09 43.4**	**+6.7**
KBS				*e*SS		**SS**		**14 12 38.6**	**+0.2**
KBS				IVMs_BB		IVMs_BB		14 24 02.6	
	comp=Z,9µm,11.3s								
KBS	**Kingsbay**	**41.00**	**357**	P		**P**		**14 03 24.8**	**-0.6**
KBS	**Kingsbay**	**41.00**	**357**	IAMs_20		IAMs_20		14 22 23.2	
	comp=Z,24µm,20.0s								
KBK	**Karagaybulak**	**41.09**	**66**	P		**P**		**14 03 26.7**	**-0.1**
	SNR=26								
KZA	**Kyzart**	**41.43**	**67**	P		**P**		**14 03 30.3**	**+0.4**
	SNR=17								
KUU	**Kurty**	**41.81**	**64**	*c i* P		**P**		**14 03 32.6**	**+0.1**
KUU				*e*				14 05 10.4	
KUU				*e*S		**S**		**14 09 52.0**	**+2.4**
KUU				pmax		pmax			
	comp=Z,560nm,2.0s								
KUU	**Kurty**	**41.81**	**64**	*i* P		**P**		**14 03 32.7**	**+0.2**
	comp=Z,560nm,2.0s								
KUU				*e*PP		**PP**		**14 05 10.4**	**+1.3**
KUU				*e*S		**S**		**14 09 52.1**	**+2.4**
KUU				*e*LR		LR		14 22 28.3	
BOOM	**Boomskoye usch**	**41.84**	**66**	P		**P**		**14 03 32.6**	**-0.4**
BOOM	**Boomskoye usch**	**41.84**	**66**	P		**P**		**14 03 32.6**	**-0.4**
MTBS	**Maitube**	**42.04**	**65**	*e*P		**P**		**14 03 33.9**	**-0.6**
MTBS				*e*				14 05 12.8	
MTBS				*e*S		**S**		**14 09 54.4**	**+1.2**
MTBS	**Maitube**	**42.04**	**65**	*e*P		**P**		**14 03 34.0**	**-0.6**
MTBS				*e*PP		**PP**		**14 05 12.9**	**+1.2**
MTBS				*e*S		**S**		**14 09 54.4**	**+1.2**
KMBO	**Kilima Mbogo**	**42.06**	**155**	P		**P**		**14 03 35.7**	**+0.6**
KMBO				pmax		pmax			
	comp=Z,117nm,1.4s								
KMBO				MLR		MLR			
	comp=Z,15µm,19.0s								
KMBO	**Kilima Mbogo**	**42.06**	**155**	P		**P**		**14 03 36.5**	**+1.4**
	comp=Z,37nm,1.0s,baz=343,slow=8.0,SNR=35								
KMBO	**Kilima Mbogo**	**42.06**	**155**	*e*P		**P**		**14 03 36.2**	**+1.1**
KMBO	**Kilima Mbogo**	**42.06**	**155**	*i* P		**P**		**14 03 39.2**	**+4.1**
KMBO	**Kilima Mbogo**	**42.06**	**155**	*i* P		**P**		**14 03 35.1**	**+0.1**
	SNR=65								
KMBO	**Kilima Mbogo**	**42.06**	**155**	P		**P**		**14 03 35.7**	**+0.6**
KMBO	**Kilima Mbogo**	**42.06**	**155**	*e*P		**P**		**14 03 36.2**	**+1.1**
ULHL	**Ulahol**	**42.11**	**66**	P		**P**		**14 03 35.3**	**+0.1**
	SNR=17								
NRN	**Naryn**	**42.13**	**67**	P		**P**		**14 03 34.5**	**-1.1**
NRN				pmax		pmax			
	comp=Z,101nm,1.0s								
NRN				MLR		MLR			
	comp=Z,15µm,20.0s								
NRN	**Naryn**	**42.13**	**67**	P		**P**		**14 03 34.5**	**-1.1**
KURK	**Kurchatov**	**42.28**	**53**	*e*P		**P**		**14 03 35.1**	**-1.1**
KURK				pmax		pmax			
	comp=Z,79nm,1.1s								
KURK				MLR		MLR			
	comp=Z,12µm,16.0s								
KURK	**Kurchatov**	**42.28**	**53**	P		**P**		**14 03 34.5**	**-1.6**
CHKK	**Chushkaly**	**42.28**	**64**	*e*P		**P**		**14 03 35.8**	**-0.6**
CHKK				*e*				14 05 12.7	
CHKK				pmax		pmax			
	comp=Z,398nm,1.0s								
CHKK	**Chushkaly**	**42.28**	**64**	*e*P		**P**		**14 03 35.8**	**-0.6**
	comp=Z,398nm,1.0s								
CHKK				*e*PP		**PP**		**14 05 12.7**	**-1.4**
CHKK				*e*LR		LR		14 23 24.9	
DAG	**Danmarks Havn**	**42.28**	**348**	*i* P		**P**		**14 03 36.4**	**+0.5**
DAG				MLR		MLR			
	comp=Z,15µm,20.0s								
DAG	**Danmarks Havn**	**42.28**	**348**	*i* P		**P**		**14 03 36.4**	**+0.5**
DAG				*e*				14 07 42.4	
	comp=Z,15µm,20.0s								
AAA	**Alma-Ata**	**42.37**	**65**	*e*P		**P**		**14 03 36.8**	**-0.4**
AAA				*e*				14 05 15.6	
AAA				*e*S		**S**		**14 09 59.7**	**+1.7**
AAA	**Alma-Ata**	**42.37**	**65**	*e*P		**P**		**14 03 36.8**	**-0.4**
AAA				*e*PP		**PP**		**14 05 15.7**	**+0.5**
AAA				*e*S		**S**		**14 09 59.8**	**+1.7**
TNSS	**Tian-Shan**	**42.43**	**65**	*e*P		**P**		**14 03 38.4**	**+0.3**
TNSS				*e*				14 05 14.8	
TNSS				*e*S		**S**		**14 10 00.6**	**+1.0**
TNSS	**Tian-Shan**	**42.43**	**65**	*e*P		**P**		**14 03 38.4**	**+0.3**
TNSS				*e*PP		**PP**		**14 05 14.8**	**-1.4**
TNSS				*e*S		**S**		**14 10 00.7**	**+1.0**
MDOK	**Medeo**	**42.48**	**65**	*e*P		**P**		**14 03 37.7**	**-0.4**
MDOK				*e*				14 05 15.6	
MDOK				*e*S		**S**		**14 10 01.2**	**+1.5**
MDOK	**Medeo**	**42.48**	**65**	*e*P		**P**		**14 03 37.8**	**-0.4**
MDOK				*e*PP		**PP**		**14 05 15.7**	**-0.8**
MDOK				*e*S		**S**		**14 10 01.2**	**+1.5**
MDOK				*e*LR		LR		14 24 33.8	
NIL	**Nilore**	**42.48**	**79**	P		**P**		**14 03 37.4**	**-0.7**
NIL				pmax		pmax			
	comp=Z,243nm,1.1s								
NIL	**Nilore**	**42.48**	**79**	P		**P**		**14 03 37.4**	**-0.7**
NIL				IAmb		IAmb		14 04 20.4	
	comp=Z,243nm,1.1s								
KSH	**Kashi**	**42.63**	**70**	*i* P		**P**		**14 03 38.0**	**-1.4**
KSH				PP		**PP**		**14 05 21.8**	**+3.7**
KSH				S		**S**		**14 09 56.8**	**-5.2**
KSH				SS		**SS**		**14 13 06.5**	**-5.5**
KSH				pmax		pmax			
	comp=Z,55nm,0.7s								
KSH				pmax		pmax			
	comp=Z,4µm,6.3s								
KSH				LR		LR			
	comp=Z,4µm,9.1s								
KSH				LR		LR			
	comp=Z,2µm,7.0s								
KSH				LR		LR			
	comp=Z,13µm,18.7s								
KDJ	**Kajisay**	**42.82**	**66**	P		**P**		**14 03 40.4**	**-0.6**
KDJ				pmax		pmax			
	comp=Z,113nm,1.0s								
KDJ				MLR		MLR			
	comp=Z,17µm,22.0s								
KDJ	**Kajisay**	**42.82**	**66**	P		**P**		**14 03 40.4**	**-0.6**
TDK	**Taldyqorghan**	**43.03**	**62**	*e*P		**P**		**14 03 41.9**	**-0.5**
TDK				*e*				14 05 20.9	
TDK				*e*S		**S**		**14 10 07.3**	**-0.3**
TDK				pmax		pmax			
	comp=Z,71nm,0.6s								
TDK	**Taldyqorghan**	**43.03**	**62**	*e*P		**P**		**14 03 41.9**	**-0.5**
	comp=Z,71nm,0.6s								
TDK				*e*PP		**PP**		**14 05 20.9**	**-1.3**
TDK				*e*S		**S**		**14 10 07.3**	**-0.3**
TDK				*e*LR		LR		14 23 47.8	
SEM	**Semipalatinsk**	**43.35**	**54**	*e*P		**P**		**14 03 44.7**	**-0.4**
SEM				*e*S		**S**		**14 10 10.1**	**-2.4**
SEM				pmax		pmax			
	comp=Z,147nm,1.8s								
SEM	**Semipalatinsk**	**43.35**	**54**	*e*P		**P**		**14 03 44.8**	**-0.4**
	comp=Z,147nm,1.8s								
SEM				*e*S		**S**		**14 10 10.1**	**-2.4**
SEM				*e*LR		LR		14 21 41.4	
ZHN	**Zhinishke**	**43.46**	**64**	*e*P		**P**		**14 03 46.0**	**-0.1**
ZHN				*e*				14 05 26.3	
ZHN				*e*S		**S**		**14 10 14.5**	**+0.4**
ZHN	**Zhinishke**	**43.46**	**64**	*e*P		**P**		**14 03 46.0**	**-0.1**
ZHN				*e*PP		**PP**		**14 05 26.4**	**-0.6**
ZHN				*e*S		**S**		**14 10 14.6**	**+0.4**
ZHN				*e*LR		LR		14 23 45.7	
SATY	**Saty**	**43.47**	**64**	*e*P		**P**		**14 03 45.6**	**-0.5**
SATY				*e*				14 05 26.8	
SATY				*e*S		**S**		**14 10 15.2**	**+0.9**
SATY				pmax		pmax			
	comp=Z,188nm,1.7s								
SATY	**Saty**	**43.47**	**64**	*e*P		**P**		**14 03 45.6**	**-0.5**
	comp=Z,188nm,1.7s								
SATY				*e*PP		**PP**		**14 05 26.9**	**-0.2**
SATY				*e*S		**S**		**14 10 15.2**	**+0.9**
SATY				*e*LR		LR		14 24 28.5	
KIBK	**Kibwezi**	**43.47**	**154**	P		**P**		**14 03 48.3**	**+2.0**
	SNR=21								
KPKS	**Kokpek**	**43.57**	**64**	*e*P		**P**		**14 03 46.3**	**-0.5**
KPKS				*e*				14 05 27.4	
KPKS				*e*S		**S**		**14 10 15.4**	**-0.2**
KPKS				pmax		pmax			
	comp=Z,211nm,2.2s								
KPKS	**Kokpek**	**43.57**	**64**	*e*P		**P**		**14 03 46.4**	**-0.5**
	comp=Z,211nm,2.2s								
KPKS				*e*PP		**PP**		**14 05 27.5**	**-0.6**
KPKS				*e*S		**S**		**14 10 15.4**	**-0.2**
KPKS				*e*LR		LR		14 24 27.9	
PRZ	**Przheval'sk**	**43.60**	**65**	P		**P**		**14 03 46.9**	**-0.4**
PRZ				pmax		pmax			
	comp=Z,111nm,1.0s								
PRZ	**Przheval'sk**	**43.60**	**65**	P		**P**		**14 03 46.9**	**-0.4**
UZB	**Uzynbulak**	**43.88**	**64**	*e*P		**P**		**14 03 48.2**	**-1.3**
UZB				*e*				14 05 30.2	
UZB				*e*S		**S**		**14 10 20.7**	**+0.3**
UZB				pmax		pmax			
	comp=Z,24nm,1.3s								
UZB	**Uzynbulak**	**43.88**	**64**	*e*P		**P**		**14 03 48.2**	**-1.3**
	comp=Z,24nm,1.3s								
UZB				*e*PP		**PP**		**14 05 30.3**	**-1.2**
UZB				*e*S		**S**		**14 10 20.7**	**+0.3**
UZB				*e*LR		LR		14 24 38.0	
PDGK	**Podgornoye**	**44.17**	**64**	P		**P**		**14 03 50.9**	**-0.9**
SHLS	**Shalkode**	**44.19**	**64**	*e*P		**P**		**14 03 54.9**	**+3.0**
SHLS				*e*				14 05 37.0	
SHLS				*e*S		**S**		**14 10 29.7**	**+4.9**
SHLS				pmax		pmax			
	comp=Z,38nm,0.9s								
SHLS	**Shalkode**	**44.19**	**64**	*e*P		**P**		**14 03 54.9**	**+3.0**
	comp=Z,38nm,0.9s								
SHLS				*e*PP		**PcP**		**14 05 37.1**	**+0.5**
SHLS				*e*S		**S**		**14 10 29.7**	**+4.9**
SHLS				*e*LR		LR		14 26 12.6	
BHUJ	**Bhuj**	**44.29**	**95**	*e*P		**P**		**14 03 53.3**	**+0.5**
BHUJ				IAmb		IAmb		14 04 30.1	
	comp=Z,117nm,0.6s								
SUMG	**Summit**	**44.80**	**339**	P		**P**		**14 03 57.3**	**+0.5**
SUMG				pmax		pmax			
	comp=Z,233nm,1.2s								
SUMG				MLR		MLR			
	comp=Z,19µm,20.0s								
SUMG	**Summit**	**44.80**	**339**	*i* P		**P**		**14 03 57.0**	**+0.3**
	comp=Z,46µm,17.0s								
SUMG	**Summit**	**44.80**	**339**	P		**P**		**14 03 57.3**	**+0.5**
SUMG				IAmb		IAmb		14 04 05.0	
	comp=Z,233nm,1.2s								
SUMG				IAMs_20		IAMs_20		14 22 41.9	
	comp=Z,19µm,20.0s								
MAKZ	**Makanchi**	**45.09**	**58**	P		**P**		**14 03 57.2**	**-1.7**
MAKZ				pmax		pmax			
	comp=Z,136nm,1.1s								
MAKZ	**Makanchi**	**45.09**	**58**	P		**P**		**14 03 57.2**	**-1.7**
MK31	**Makanchi Array**	**45.30**	**58**	P		**P**		**14 03 59.2**	**-1.4**
MK31				pmax		pmax			
	comp=Z,96nm,0.6s								
MK31	**Makanchi Array**	**45.30**	**58**	P		**P**		**14 03 59.2**	**-1.4**
MK31				IAmb		IAmb		14 04 08.0	
	comp=Z,96nm,0.6s								
MKAR	**Makanchi Array**	**45.30**	**58**	P		**P**		**14 03 59.4**	**-1.3**
	comp=Z,49nm,0.6s,baz=276,slow=6.8,SNR=321								
MKAR				S

	comp=Z,110nm,0.9s										
WMQ						pmax		pmax			
	comp=Z,980nm,6.5s										
WMQ						LR		LR			
	comp=Z,19μm,16.5s										
WMQ						LR		LR			
	comp=Z,12μm,14.7s										
WMQ						LR		LR			
	comp=Z,12μm,24.9s										
WMQ	**Urumqi**	**49.76**	**61**		P		**P**		**14 04 34.1**	**-1.3**	
WMQ					pmax		pmax				
	comp=Z,117nm,0.9s										
WMQ	**Urumqi**	**49.76**	**61**		P		**P**		**14 04 34.1**	**-1.3**	
WMQ					IAmb		IAmb		14 04 41.2		
	comp=Z,117nm,0.9s										
POO	**Poona**	**50.15**	**97**	⇑	*i* P		**P**		**14 04 37.4**	**-1.2**	
POO					IAmb		IAmb		14 04 45.2		
	comp=Z,172nm,1.2s										
KULLO	**Kullorsuaq**	**50.35**	**340**		*i* P		**P**		**14 04 40.9**	**+1.6**	
KULLO					MLR		MLR				
	comp=Z,18μm,21.0s										
KULLO	**Kullorsuaq**	**50.35**	**340**		*i* P		**P**		**14 04 40.9**	**+1.6**	
	comp=Z,18μm,21.0s										
BHPL	**Bhopal**	**50.42**	**90**	⇑	*i* P		**P**		**14 04 39.8**	**-0.8**	
GOA	**Goa**	**51.88**	**101**		*e* P		**P**		**14 04 51.6**	**0.0**	
GOA					IAmb		IAmb		14 04 55.6		
	comp=Z,132nm,1.2s										
KLRI	**Killari**	**52.55**	**96**		*e* P		**P**		**14 04 56.1**	**-0.6**	
KLRI					IAmb		IAmb		14 05 06.2		
	comp=Z,146nm,0.9s										
KLRI					IVMs_BB		IVMs_BB		14 25 24.6		
	comp=Z,2μm,34.5s										
NGP	**Nagpur**	**52.79**	**91**		*e* P		**P**		**14 04 57.8**	**-0.6**	
NGP					*e* S		**S**		**14 12 25.4**	**-1.1**	
DANN	**Dangsing**	**52.88**	**81**		*e* P		**P**		**14 04 58.0**	**-1.3**	
	comp=Z,467nm,0.7s										
KOLN	**Koldanda**	**53.03**	**81**		*e* P		**P**		**14 04 58.6**	**-1.7**	
TULEG	**Thule**	**53.08**	**343**		P		**P**		**14 04 59.3**	**-0.3**	
TULEG					IAMs_20		IAMs_20		14 27 45.4		
	comp=Z,18μm,19.0s										
SRSP	**Sriramsagar**	**53.45**	**94**		*e* P		**P**		**14 05 02.0**	**-1.1**	
SRSP					IAmb		IAmb		14 05 11.7		
	comp=Z,92nm,0.8s										
SRSP					IVMs_BB		IVMs_BB		14 28 35.8		
	comp=Z,2μm,21.2s										
MSEY	**Mahe Island**	**53.58**	**135**		P		**P**		**14 05 04.0**	**-0.1**	
MSEY					pmax		pmax				
	comp=Z,131nm,1.2s										
MSEY					MLR		MLR				
	comp=Z,6μm,21.0s										
MSEY	**Mahe Island**	**53.58**	**135**		P		**P**		**14 05 04.5**	**+0.4**	
MSEY	**Mahe Island**	**53.58**	**135**		P		**P**		**14 05 04.0**	**-0.1**	
GKN	**Gorkha**	**53.73**	**81**		*e* P		**P**		**14 05 04.2**	**-1.1**	
	comp=Z,241nm,0.6s										
ITZ	**Itezhi-Tezhi**	**53.90**	**173**		*i* P		**P**		**14 05 04.0**	**-2.5**	
ITZ					*i* S		**S**		**14 12 40.9**	**-0.5**	
ITZ	**Itezhi-Tezhi**	**53.90**	**173**		*i* P		**P**		**14 05 05.6**	**-0.9**	
ITZ					*i*				14 12 23.8		
ITZ					*i*				14 12 41.4		
ITZ	**Itezhi-Tezhi**	**53.90**	**173**		*i* P		**P**		**14 05 04.0**	**-2.5**	
ITZ					*i* S		**S**		**14 12 40.9**	**-0.5**	
RPR	**Rampur**	**54.23**	**93**		*e* P		**P**		**14 05 07.9**	**-1.0**	
RPR					IAmb		IAmb		14 05 17.6		
	comp=Z,71nm,0.8s										
RPR					IVMs_BB		IVMs_BB		14 29 26.5		
	comp=Z,1μm,21.6s										
DMN	**Daman**	**54.28**	**81**		*e* P		**P**		**14 05 08.3**	**-1.2**	
	comp=Z,106nm,0.5s										
KKN	**Kakani**	**54.33**	**81**		*e* P		**P**		**14 05 08.1**	**-1.7**	
	comp=Z,148nm,0.7s										
HYBB	**Hyderabad (bro**	**54.45**	**95**		*e* P		**P**		**14 05 09.4**	**-1.2**	
HYBB					IAmb		IAmb		14 05 19.6		
	comp=Z,117nm,0.9s										
HYBB					IVMs_BB		IVMs_BB		14 29 02.5		
	comp=Z,2μm,22.7s										
HYB	**Hyderabad**	**54.46**	**95**		*i* P		**P**		**14 05 08.0**	**-2.6**	
	comp=Z,330nm,1.0s										
HYB					*e* PcP		**PcP**		**14 06 09.0**	**-5.1**	
HYB					*e* PP		**PP**		**14 07 17.0**	**+4.3**	
HYB					*e* S		**S**		**14 12 52.0**	**+2.9**	
PKIN	**Phulchoki**	**54.52**	**81**		*e* P		**P**		**14 05 09.5**	**-1.8**	
PKI	**Pulchoki**	**54.54**	**81**		*e* P		**P**		**14 05 10.2**	**-1.2**	
GUN	**Gumba**	**54.74**	**80**		*e* P		**P**		**14 05 11.6**	**-1.3**	
	comp=Z,319nm,1.0s										
URV	**Uravakonda**	**54.87**	**99**		*e* P		**P**		**14 05 12.7**	**-0.9**	
URV					IAmb		IAmb		14 05 15.8		
	comp=Z,150nm,1.3s										
URV					IVMs_BB		IVMs_BB		14 31 28.5		
	comp=Z,2μm,17.7s										
DRLN	**Deer Lake**	**55.08**	**309**		P		**P**		**14 05 14.5**	**-0.2**	
DRLN					IAmb		IAmb		14 05 21.5		
	comp=Z,214nm,1.0s										
JIRN	**Jiri**	**55.10**	**80**		*e* P		**P**		**14 05 14.2**	**-1.4**	
SRLM	**Srisailam**	**55.48**	**96**		*e* P		**P**		**14 05 17.1**	**-0.9**	
SRLM					IAmb		IAmb		14 05 24.6		
	comp=Z,83nm,0.7s										
SRLM					IVMs_BB		IVMs_BB		14 31 26.9		
	comp=Z,1μm,23.2s										
GGR	**Gangavaram**	**55.52**	**94**		*e* P		**P**		**14 05 17.1**	**-1.2**	
GGR					IAmb		IAmb		14 05 27.3		
	comp=Z,74nm,0.9s										
GGR					IVMs_BB		IVMs_BB		14 34 05.6		
	comp=Z,1μm,16.7s										
NJS	**Nagarjunasagar**	**55.54**	**96**		*e* P		**P**		**14 05 17.4**	**-1.0**	
NJS					IAmb		IAmb		14 05 28.0		
	comp=Z,85nm,1.0s										
NJS					IVMs_BB		IVMs_BB		14 33 43.7		
	comp=Z,1μm,15.1s										
MOY	**Mondy**	**55.75**	**48**		*e* P		**P**		**14 05 19.7**	**+0.1**	
MOY					pmax		pmax				
	comp=Z,201nm,2.3s										
RAMN	**Ramite**	**55.76**	**81**		*e* P		**P**		**14 05 18.4**	**-1.8**	
	comp=Z,175nm,0.7s										
MNCI	**Minicoy**	**55.79**	**108**		P		**P**		**14 05 18.3**	**-1.8**	
MNCI					IAMs_20		IAMs_20		14 30 58.7		
	comp=Z,16μm,20.0s										
H10N2	**ASCENSION HYDR**	**56.20**	**223**		P		**P**		**14 05 26.4**	**+3.7**	
H10N1	**ASCENSION HYDR**	**56.21**	**223**		P		**P**		**14 05 26.5**	**+3.7**	
ASCN	**Ascension**	**56.22**	**223**		IAMs_20		IAMs_20		14 29 32.8		
	comp=Z,18μm,19.0s										
H10N3	**ASCENSION HYDR**	**56.22**	**223**		P		**P**		**14 05 26.6**	**+3.7**	
ODAN	**Odare**	**56.42**	**80**		*e* P		**P**		**14 05 23.8**	**-1.1**	
TAPN	**Taplejung**	**56.43**	**80**		*e* P		**P**		**14 05 24.3**	**-0.7**	
	comp=Z,155nm,0.6s										
ADKI	**Addanki**	**56.47**	**96**		*e* P		**P**		**14 05 24.1**	**-0.9**	
ADKI					IAmb		IAmb		14 05 28.5		
	comp=Z,68nm,1.1s										
ADKI					IVMs_BB		IVMs_BB		14 34 15.2		
	comp=Z,1μm,14.5s										
MYLAV	**Mylavaram**	**56.47**	**95**		*e* P		**P**		**14 05 23.8**	**-1.2**	
MYLAV					IAmb		IAmb		14 05 34.4		
	comp=Z,124nm,0.9s										
MYLAV					IVMs_BB		IVMs_BB		14 30 13.3		
	comp=Z,2μm,22.8s										
BOK	**Bokaro**	**56.79**	**84**		*e* P		**P**		**14 05 24.7**	**-2.5**	
BOK					IAmb		IAmb		14 05 29.3		
	comp=Z,90nm,0.3s										
BOK					*ex*		x		14 13 18.9		
PVM	**Polavaram**	**56.96**	**94**		*e* P		**P**		**14 05 27.5**	**-1.0**	
PVM					IAmb		IAmb		14 05 38.3		
	comp=Z,118nm,1.0s										
PVM					IVMs_BB		IVMs_BB		14 30 31.8		
	comp=Z,1μm,23.1s										
GTK	**Tadong**	**57.14**	**79**		*e* P		**P**		**14 05 29.3**	**-0.6**	
TSUM	**Tsumeb**	**57.15**	**183**		*i* P		**P**		**14 05 29.6**	**-0.2**	
TSUM	**Tsumeb**	**57.15**	**183**		*i* P		**P**		**14 05 29.6**	**-0.2**	
TSUM	**Tsumeb**	**57.15**	**183**		P		**P**		**14 05 29.1**	**-0.7**	
TSUM	**Tsumeb**	**57.15**	**183**		IAMs_20		IAMs_20		14 33 49.4		
	comp=Z,16μm,20.0s										
H10S2	**ASCENSION HYDR**	**57.23**	**223**		P		**P**		**14 05 32.1**	**+2.0**	
H10S3	**ASCENSION HYDR**	**57.24**	**223**		P		**P**		**14 05 32.1**	**+2.0**	
TLY	**Talaya**	**57.29**	**47**		*c i* P		**P**		**14 05 31.1**	**+0.7**	
TLY					*e*				14 08 58.9		
TLY					*e* S		**S**		**14 13 31.3**	**+5.3**	
TLY					*e*				14 15 22.6		
TLY					*e* SS		**SS**		**14 17 17.5**	**+2.8**	
TLY					pmax		pmax				
	comp=Z,695nm,1.6s										
TLY					MLR		MLR				
	comp=Z,58μm,16.0s										
TLY	**Talaya**	**57.29**	**47**		P		**P**		**14 05 30.2**	**-0.2**	
TLY					IAmb		IAmb		14 05 39.1		
	comp=Z,188nm,1.1s										
TLY					IAMs_20		IAMs_20		14 32 47.8		
	comp=Z,12μm,20.0s										
IRK	**Irkutsk**	**57.44**	**46**		*e* P		**P**		**14 05 31.0**	**-0.5**	
IRK					*e*				14 06 22.8		
IRK					*e*				14 13 26.8		
IRK					pmax		pmax				
	comp=Z,339nm,2.3s										
SKHT	**Srikalahasti**	**57.49**	**98**		*e* P		**P**		**14 05 31.0**	**-1.3**	
SKHT					IAmb		IAmb		14 05 41.4		
	comp=Z,34nm,0.8s										
SKHT					IVMs_BB		IVMs_BB		14 34 55.0		
	comp=Z,1μm,17.6s										
ZAK	**Zakamensk**	**57.56**	**49**		*e* P		**P**		**14 05 32.0**	**-0.5**	
ZAK					pmax		pmax				
	comp=Z,92nm,1.2s										
LSA	**Lhasa**	**57.94**	**76**		P		**P**		**14 05 35.3**	**-0.6**	
LSA					S		**S**		**14 13 29.8**	**-6.3**	
LSA					pmax		pmax				
	comp=Z,35nm,0.9s										
LSA					pmax		pmax				
	comp=Z,3μm,7.8s										
LSA					LR		LR				
	comp=Z,26μm,33.5s										
LSA					LR		LR				
	comp=Z,24μm,33.5s										
LSA					LR		LR				
	comp=Z,33μm,27.1s										
LSA	**Lhasa**	**57.94**	**76**		P		**P**		**14 05 34.5**	**-1.4**	
LSA					pmax		pmax				
	comp=Z,74nm,0.6s										
LSA					MLR		MLR				
	comp=Z,5μm,22.0s										
LSA	**Lhasa**	**57.94**	**76**		P		**P**		**14 05 34.5**	**-1.4**	
LSA					IAmb		IAmb		14 05 43.4		
	comp=Z,74nm,0.6s										
CHLP	**Challavanipeta**	**58.18**	**91**		*e* P		**P**		**14 05 36.2**	**-0.9**	
CHLP					IAmb		IAmb		14 05 47.0		
	comp=Z,88nm,1.0s										
CHLP					IVMs_BB		IVMs_BB		14 31 30.9		
	comp=Z,2μm,26.2s										
SBV	**Sambava**	**58.31**	**146**		P		**P**		**14 05 40.6**	**+2.8**	
	SNR=7.4										
MDRS	**Chennai**	**58.31**	**98**		*e* P		P		14 05 33.1	-4.9	
MDRS					IAmb		IAmb		14 05 38.8		
	comp=Z,60nm,0.8s										
SCHQ	**Schefferville**	**58.44**	**317**		P		**P**		**14 05 39.0**	**+0.5**	
	comp=Z,38nm,0.8s,baz=64,slow=5.3,SNR=46										
SCHQ					LR		LR		14 28 46.2		
	comp=Z,13μm,21.9s,baz=72,slow=34										
SCHQ	**Schefferville**	**58.44**	**317**		P		**P**		**14 05 38.6**	**+0.2**	
SCHQ					IAmb		IAmb		14 06 01.2		
	comp=Z,105nm,0.9s										
SCHQ					IAMs_20		IAMs_20		14 28 23.5		
	comp=Z,13μm,22.0s										
BWNR	**Bhubaneshwar**	**58.57**	**88**		*e* P		**P**		**14 05 39.1**	**-0.7**	
TRD	**Trivandrum**	**58.59**	**105**		*e* P		**P**		**14 05 40.8**	**+0.8**	
MATP	**Matopo**	**58.79**	**171**		*i* P		**P**		**14 05 40.3**	**-0.9**	
MATP	**Matopo**	**58.79**	**171**		*i* P		**P**		**14 05 42.8**	**+1.6**	
GBN	**Guysborough**	**59.06**	**306**		P		**P**		**14 05 43.4**	**+0.5**	
GBN					IAmb		IAmb		14 06 03.0		
	comp=Z,135nm,1.0s										
GBN					IAMs_20		IAMs_20		14 28 26.3		
	comp=Z,14μm,22.0s										
TIXI	**Tiksi**	**59.64**	**20**		*e* P		**P**		**14 05 46.9**	**+0.4**	
TIXI					pmax		pmax				
	comp=Z,17nm,1.0s										
TIXI					MLR		MLR				
	comp=Z,28μm,21.0s										
TIXI	**Tiksi**	**59.64**	**20**		P		**P**		**14 05 46.1**	**-0.4**	
TIXI					IAmb		IAmb		14 05 54.2		
	comp=Z,202nm,1.5s										
RES	**Resolute Bay**	**59.75**	**344**		P		**P**		**14 05 47.9**	**+0.7**	
RES					pmax		pmax				
	comp=Z,219nm,1.6s										
RES					MLR		MLR				
	comp=Z,15μm,21.0s										
RES	**Resolute Bay**	**59.75**	**344**		P		**P**		**14 05 47.9**	**+0.7**	
RES					IAmb		IAmb		14 05 54.6		
	comp=Z,219nm,1.6s										
RES					IAMs_20		IAMs_20		14 31 45.8		
	comp=Z,15μm,21.0s										
GTA	**Gaotai**	**59.83**	**62**		*e* P		**P**		**14 05 47.3**	**-1.2**	
GTA					pP		pP		14 05 51.5	-1.5	
GTA					sP		sP		14 05 54.8	0.0	
GTA					S		**S**		**14 14 00.0**	**+0.3**	
GTA					sS		sS		14 14 09.0	+1.7	
GTA					SS		**SS**		**14 17 58.8**	**+3.5**	
GTA					pmax		pmax				
	comp=Z,35nm,1.0s										
GTA					pmax		pmax				
	comp=Z,930nm,8.3s										
GTA					LR		LR				
	comp=Z,11μm,17.5s										
GTA					LR		LR				
	comp=Z,13μm,18.1s										
GTA					LR		LR				
	comp=Z,12μm,20.3s										
BOD	**Bodaibo**	**60.37**	**38**	⇓	*i* P		**P**		**14 05 50.1**	**-1.6**	
BOD					*e* S		**S**		**14 14 08.0**	**+2.2**	
SONM	**Songino Array**	**60.46**	**51**		P		**P**		**14 05 51.9**	**-0.8**	
	comp=Z,25nm,0.7s,baz=286,slow=8.1,SNR=82										
SONM	**Songino Array**	**60.46**	**51**		IAmb		IAmb		14 06 00.4		
	comp=Z,200nm,1.4s										
SHL	**Shillong**	**60.56**	**79**		P		**P**		**14 05 51.4**	**-2.3**	
SHL					pmax		pmax				
	comp=Z,148nm,1.3s										
SHL					MLR		MLR				
	comp=Z,7μm,22.0s										
SHL	**Shillong**	**60.56**	**79**		*e* P		**P**		**14 05 52.0**	**-1.7**	
SHL					IAmb		IAmb		14 05 54.3		
	comp=Z,22nm,0.7s										
SHL	**Shillong**	**60.56**	**79**		P		**P**		**14 05 51.4**	**-2.3**	
SHL					IAmb		IAmb		14 05 59.2		
	comp=Z,148nm,1.3s										
SHL	**Shillong**	**60.56**	**79**		P		**P**		**14 05 53.5**	**-0.2**	
	SNR=31										
TEZP	**TEZPUR**	**60.73**	**78**		*e* P		**P**		**14 05 52.3**	**-2.3**	
TEZP					IAmb		IAmb		14 06 00.9		
	comp=Z,224nm,1.7s										
ULN	**Ulaanbaatar**	**60.84**	**50**		P		**P**		**14 05 54.1**	**-1.2**	
ULN					pmax		pmax				
	comp=Z,187nm,1.4s										
ULN					MLR		MLR				
	comp=Z,20μm,20.0s										
ULN	**Ulaanbaatar**	**60.84**	**50**		P		**P**		**14 05 54.1**	**-1.2**	
ULN					IAmb		IAmb		14 06 02.4		
	comp=Z,187nm,1.4s										
LMN	**Caledonia Moun**	**60.96**	**307**		P		**P**		**14 05 55.6**	**-0.3**	
LMN					IAmb		IAmb		14 06 03.0		
	comp=Z,91nm,1.0s										
LMN					IAMs_20		IAMs_20		14 32 29.5		
	comp=Z,14μm,20.0s										
KAAM	**Kaadhehdhoo**	**60.98**	**115**		P		**P**		**14 05 56.2**	**-0.2**	
ABPO	**Ambohimpanom**	**62.20**	**151**		P		**P**		**14 06 04.9**	**+0.3**	
ABPO					pmax		pmax				
	comp=Z,78nm,1.1s										
ABPO					MLR		MLR				
	comp=Z,6μm,19.0s										
ABPO	**Ambohimpanom**	**62.20**	**151**		P		**P**		**14 06 04.9**	**+0.3**	
ABPO					IAmb		IAmb		14 06 08.2		
	comp=Z,78nm,1.1s										
PALK	**Pallekele**	**62.23**	**103**		P		**P**		**14 06 04.3**	**-0.6**	
PALK					pmax		pmax				
	comp=Z,175nm,1.1s										
PALK					MLR		MLR				
	comp=Z,8μm,20.0s										
PALK	**Pallekele**	**62.23**	**103**		*i* P		**P**		**14 06 04.4**	**-0.6**	
	SNR=11										
PALK	**Pallekele**	**62.23**	**103**		P		**P**		**14 06 04.3**	**-0.6**	
D63A	**Stockholm**	**62.47**	**310**		P		**P**		**14 06 07.9**	**+1.9**	
	baz=63										
GGN	**Saint George**	**62.57**	**307**		IAMs_20		IAMs_20		14 33 37.8		
	comp=Z,12μm,20.0s										
PQI	**Presque Isle**	**62.58**	**309**		P		**P**		**14 06 07.3**	**+0.4**	
PQI					IAmb		IAmb		14 06 14.0		
	comp=Z,122nm,1.2s										
E64A	**Bridgewater**	**62.59**	**309**		P		**P**		**14 06 09.0**	**+2.1**	
	baz=62										
LKP	**Lekhapani**	**62.70**	**76**		*e* P		**P**		**14 06 07.9**	**-0.1**	
LKP					IAmb		IAmb		14 06 13.6		
	comp=Z,124nm,0.6s										
CIT	**Chita**	**62.73**	**44**		*e* P		**P**		**14 06 08.3**	**+0.5**	
CIT					*e*				14 06 49.6		
CIT					pmax		pmax				
	comp=Z,235nm,1.4s										
E63A	**Oxbow**	**62.95**	**309**		P		**P**		**14 06 08.7**	**-0.6**	
E63A					IAmb		IAmb		14 06 16.7		
	comp=Z,73nm,1.1s										
E63A	**Oxbow**	**62.95**	**309**		P		**P**		**14 06 11.8**	**+2.6**	
	baz=62										
D62A	**Allapoint, All**	**63.02**	**310**		P		**P**		**14 06 09.9**	**+0.1**	
D62A					IAmb		IAmb		14 06 44.9		
	comp=Z,66nm,0.9s										
D62A					IAMs_20		IAMs_20		14 32 56.9		
	comp=Z,12μm,19.0s										
D62A	**Allapoint, All**	**63.02**	**310**		P		**P**		**14 06 12.5**	**+2.8**	
	baz=62,SNR=10										
H66A	**Whiting**	**63.02**	**307**		P		**P**		**14 06 10.2**	**+0.4**	
	baz=62										
EMMW	**East Machias**	**63.15**	**307**		IAMs_20		IAMs_20		14 34 25.4		
	comp=Z,11μm,20.0s										
F64A	**Sherman**	**63.16**	**308**		P		**P**		**14 06 10.9**	**+0.2**	
F64A					IAmb		IAmb		14 06 31.8		
	comp=Z,155nm,1.3s										
F64A					IAMs_20		IAMs_20		14 35 35.7		
	comp=Z,12μm,18.0s										
F64A	**Sherman**	**63.16**	**308**		P		**P**		**14 06 13.7**	**+3.0**	
	baz=62										
D61A	**St Aubert, Com**	**63.65**	**310**		P		**P**		**14 06 16.5**	**+2.6**	
	baz=62,SNR=10										
F63A	**Nahmakanta, Br**	**63.70**	**309**		P		**P**		**14 06 17.5**	**+3.1**	
	baz=62										
G64A	**Maxfield**	**63.70**	**308**		P		**P**		**14 06 17.1**	**+2.9**	
	baz=61										
E61A	**Lac Etchemin**	**64.20**	**310**		P		**P**		**14 06 19.7**	**+2.1**	
	baz=61										
LZH	**Lanzhou**	**64.21**	**63**	⇓	P		**P**		**14 06 17.5**	**-0.5**	
LZH					sP		pP		14 06 23.0	+0.4	
LZH					S		**S**		**14 14 53.0**	**-2.1**	
LZH					sS		sS		14 15 03.0	+0.2	
LZH					SS		**SS**		**14 19 08.8**	**+4.8**	
LZH					pmax		pmax				
	comp=Z,210nm,1.3s										
LZH					pmax		pmax				
	comp=Z,1μm,6.8s										
LZH					LR		LR				
	comp=Z,14μm,17.3s										
LZH					LR		LR				
	comp=Z,12μm,17.0s										
LZH					LR		LR				
	comp=Z,15μm,18.5s										
SIMRM	**Sittwe**	**64.23**	**84**		P		**P**		**14 06 17.5**	**-0.6**	
SIMRM					IAmb		IAmb		14 07 02.5		
	comp=Z,100nm,1.3s										
D60A	**Saint Jean D'O**	**64.23**	**310**		P		**P**		**14 06 20.3**	**+2.6**	
	baz=61										
H64A	**Troy**	**64.29**	**308**		P		**P**		**14 06 22.7**	**+4.6**	
	baz=61										
H08N2	**Diego Garcia H**	**64.48**	**122**		P		**P**		**14 06 18.1**	**-1.2**	
	baz=284,slow=7.1,SNR=4.3										
H08N3	**Diego Garcia H**	**64.49**	**122**		P		**P**		**14 06 18.1**	**-1.3**	
H08N1	**Diego Garcia H**	**64.50**	**122**		P		**P**		**14 06 17.3**	**-2.1**	
	baz=284,slow=7.1,SNR=4.8										
WVL	**Waterville**	**64.60**	**308**		IAMs_20		IAMs_20		14 34 27.8		
	comp=Z,9μm,19.0s										
F61A	**St Evariste**	**64.73**	**310**		P		**P**		**14 06 24.3**	**+3.3**	
	baz=60										
VOI	**Vohitsoka**	**64.76**	**153**		P		**P**		**14 06 22.4**	**+0.9**	
	SNR=20										
H63A	**New Sharon**	**64.79**	**308**		P		**P**		**14 06 24.1**	**+2.7**	
	baz=60										
E60A	**Ste Agathe de**	**64.81**	**310**		P		**P**		**14 06 23.6**	**+2.0**	
	baz=60										
G62A	**West of Eustis**	**64.82**	**309**		P		**P**		**14 06 21.6**	**-0.1**	
G62A					IAmb		IAmb		14 06 29.1		
	comp=Z,129nm,1.4s										
G62A					IAMs_20		IAMs_20		14 37 35.5		
	comp=Z,9μm,18.0s										
G62A	**West of Eustis**	**64.82**	**309**		P		**P**		**14 06 24.5**	**+2.9**	
	baz=60										
LATQ	**La Tuque**	**65.10**	**312**		P		**P**		**14 06 23.6**	**+0.2**	
LATQ					IAmb		IAmb		14 06 30.2		
	comp=Z,145nm,1.9s										
LATQ	**La Tuque**	**65.10**	**312**		P		**P**		**14 06 25.7**	**+2.3**	
	baz=60										
YAK	**Yakutsk**	**65.10**	**29**		*e* P		**P**		**14 06 21.8**	**-1.3**	
YAK					*e*				14 06 55.6		
YAK					*e*				14 08 42.3		
YAK					*e* PPP		PPP		14 10 19.7		
YAK					*e* S		**S**		**14 15 02.0**	**-3.0**	
YAK					*e** SS		sS		14 15 23.2	+11	
YAK					*e* SS		**SS**		**14 19 15.2**	**-1.2**	
YAK					pmax		pmax				
	comp=Z,57nm,0.8s										
YAK					pmax		pmax				
	comp=N,4.0nm,0.6s										
YAK					pmax		pmax				
	comp=E,5.0nm,0.6s										
YAK					pmax		pmax				
	comp=Z,158nm,2.0s										
YAK					pmax		pmax				
	comp=N,111nm,2.2s	

comp=Z,37nm,0.7s,baz=349,slow=6.7,SNR=55

BOSA Boshof 66.61 175 *i* P **P** **14 06 35.4 +2.2**
BOSA Boshof 66.61 175 P **P** **14 06 33.0 -0.3**
BOSA IAmb IAmb 14 06 40.4

comp=Z,126nm,1.4s

J62A Henniker 66.62 307 P **P** **14 06 36.6 +3.4**
baz=59

MATQ Matagami 66.65 316 P **P** **14 06 35.7 +2.4**
baz=58,SNR=27

LSQQ Lebel-sur-Quev 66.66 315 P **P** **14 06 35.6 +2.1**
baz=58

L64A Middleborough 66.66 306 P **P** **14 06 36.9 +3.3**
baz=59

HNH Hanover 66.67 308 IAMs_20 IAMs_20 14 38 52.4
comp=Z,10µm,18.0s

BCX Boston College 66.67 306 IAMs_20 IAMs_20 14 39 12.6
comp=Z,8µm,18.0s

K63A Dunstable 66.71 307 P **P** **14 06 35.6 +1.8**
baz=59

WES Weston 66.74 306 P **P** **14 06 34.7 +0.7**
WES pmax pmax

comp=Z,143nm,1.1s

WES MLR MLR

comp=Z,9µm,19.0s

WES Weston 66.74 306 P **P** **14 06 34.7 +0.7**
WES IAmb IAmb 14 06 42.5

comp=Z,143nm,1.1s

WES IAMs_20 IAMs_20 14 38 25.4

comp=Z,9µm,19.0s

TRQ Mont Tremblant 66.74 311 P **P** **14 06 33.8 -0.3**
CD2 Chengdu 66.78 68 P **P** **14 06 33.5 -1.0**
CD2 pP pP 14 06 39.3 +0.2
CD2 PP **PP** **14 08 59.3 -2.1**
CD2 S **S** **14 15 25.5 -1.0**
CD2 sS sS 14 15 37.0 +2.9
CD2 SS **SS** **14 19 41.5 -2.5**
CD2 pmax pmax

comp=Z,90nm,0.8s

CD2 pmax pmax

comp=Z,1µm,7.1s

CD2 LR LR

comp=Z,16µm,31.4s

CD2 LR LR

comp=Z,12µm,17.5s

CD2 LR LR

comp=Z,10µm,20.6s

HRV Adam Dziewonsk 66.83 307 P **P** **14 06 37.7 +3.1**
baz=59

E56A St. Veronique 66.86 312 P **P** **14 06 36.9 +2.2**
baz=58,SNR=15

D55A Sainte-Anne-du 66.87 312 P **P** **14 06 37.7 +2.9**
baz=58,SNR=19

FRNY Flat Rock 66.88 309 P **P** **14 06 34.1 -0.8**
FRNY IAmb IAmb 14 06 41.9

comp=Z,225nm,1.9s

G58A Ormstown 67.00 310 P **P** **14 06 38.1 +2.5**
baz=58

J61A Chester 67.02 308 P **P** **14 06 40.3 +4.5**
baz=59

HHC Hu-ho-hao-te 67.04 55 *e*P **P** **14 06 35.5 -0.6**
HHC pP pP 14 06 41.3 +0.6
HHC sP sP 14 06 47.5 +5.1
HHC PP **PP** **14 09 03.3 -0.2**
HHC S **S** **14 15 29.3 -0.2**
HHC SS **SS** **14 19 45.3 -2.3**
HHC pmax pmax

comp=Z,21nm,1.0s

HHC pmax pmax

comp=Z,530nm,4.1s

HHC LR LR

comp=Z,10µm,14.1s

HHC LR LR

comp=Z,11µm,15.2s

HHC LR LR

comp=Z,12µm,18.1s

F57A Harrington 67.04 311 P **P** **14 06 39.1 +3.2**
baz=58

H59A Cadyville 67.04 309 P **P** **14 06 38.0 +2.0**
baz=58,SNR=12

M64A Tiverton 67.10 305 P P 14 06 43.3 +7.0
baz=59

BRYW Bryant College 67.12 306 P **P** **14 06 34.8 -1.7**
K62A Royalston 67.17 307 IAMs_20 IAMs_20 14 36 53.8
comp=Z,11µm,19.0s

K62A Royalston 67.17 307 P **P** **14 06 40.2 +3.4**
baz=59

L63A North Scituate 67.19 306 P **P** **14 06 39.7 +2.7**
baz=59

I60A Shoreham 67.22 308 P **P** **14 06 40.5 +3.5**
baz=58

VLDQ Val d'Or 67.43 314 P **P** **14 06 38.8 +0.5**
QUA2 Belchertown 67.45 307 IAMs_20 IAMs_20 14 34 51.1
comp=Z,9µm,20.0s

H58A Gabriels 67.46 309 P **P** **14 06 41.4 +2.8**
baz=58,SNR=5.1

D54A Lac Fusel, La 67.48 313 P **P** **14 06 40.2 +1.5**
baz=58,SNR=16

E55A Montcerf-Lytto 67.51 312 P **P** **14 06 41.2 +2.4**
baz=58,SNR=15

HIA Hailar 67.52 44 P **P** **14 06 38.5 -0.4**
HIA pmax pmax

comp=Z,313nm,1.3s

HIA MLR MLR

comp=Z,18µm,20.0s

HIA Hailar 67.52 44 P **P** **14 06 38.5 -0.4**
L61B Northampton 67.56 307 P **P** **14 06 43.3 +4.0**
baz=58,SNR=5.6

G57A Newington 67.59 310 P **P** **14 06 42.2 +2.8**
baz=58

LONY Lake Ozonia 67.60 310 IAMs_20 IAMs_20 14 35 47.0
comp=Z,11µm,20.0s

LONY Lake Ozonia 67.60 310 P **P** **14 06 42.3 +2.8**
baz=58,SNR=14

I59A Olmsteadville 67.60 309 P **P** **14 06 42.3 +2.8**
baz=58

J60A Lant Hill Farm 67.61 308 P **P** **14 06 43.0 +3.4**
baz=58

RER Riviere de l'E 67.68 144 P **P** **14 06 40.1 -0.1**
ACCN Adirondack Com 67.69 308 P **P** **14 06 39.7 -0.4**
ACCN IAMs_20 IAMs_20 14 38 12.5

comp=Z,8µm,18.0s

M63A Gales Ferry 67.71 306 P **P** **14 06 43.3 +3.1**
baz=58

L62A Suffield 67.77 307 P **P** **14 06 43.3 +2.8**
baz=58

K61A Williamstown 67.82 307 P **P** **14 06 44.6 +3.7**
baz=58,SNR=5.4

F55A Otter Lake 68.01 312 P **P** **14 06 44.8 +2.7**
baz=58,SNR=14

TRY Troy 68.04 308 IAMs_20 IAMs_20 14 36 33.6
comp=Z,8µm,19.0s

J59A Piesco 68.17 309 P **P** **14 06 42.8 -0.3**
J59A IAmb IAmb 14 06 50.9

comp=Z,80nm,1.1s

J59A IAMs_20 IAMs_20 14 39 58.0

comp=Z,10µm,18.0s

J59A Piesco 68.17 309 P **P** **14 06 46.4 +3.3**
baz=58,SNR=6.0

H57A Richville 68.17 310 P **P** **14 06 45.7 +2.7**
baz=58

E54A Lac Daplat, Po 68.18 312 P **P** **14 06 44.9 +1.9**
baz=57,SNR=22

RCBR Riachuelo 68.18 243 P **P** **14 06 43.7 +0.2**
RCBR pmax pmax

comp=Z,72nm,1.2s

RCBR MLR MLR

comp=Z,23µm,19.0s

RCBR Riachuelo 68.18 243 *e*P **P** **14 06 45.4 +1.9**
RCBR Riachuelo 68.18 243 P **P** **14 06 43.7 +0.2**
DGPR DIGLIPUR 68.21 90 *e*P **P** **14 06 44.0 +0.3**
DGPR IAmb IAmb 14 06 49.3

M62A Hamden 68.23 306 P **P** **14 06 46.4 +2.9**
baz=58

K60A Five Rivers En 68.23 308 P **P** **14 06 47.2 +3.7**
baz=58

L61A Hillsdale 1, H 68.25 307 P **P** **14 06 46.7 +3.1**
baz=58

YLE Yale 68.33 306 IAMs_20 IAMs_20 14 38 52.4
comp=Z,9µm,19.0s

KSCT Kent School, K 68.46 307 IAMs_20 IAMs_20 14 37 33.8
comp=Z,10µm,19.0s

E53A Dumoine, Ponti 68.48 313 P **P** **14 06 46.8 +1.8**
baz=57,SNR=24

G55A Calabogie 68.54 311 P **P** **14 06 47.5 +2.1**
baz=57

D52A ZEK Kipawa Sen 68.59 313 P **P** **14 06 48.1 +2.4**
baz=57

I57A Carthage 68.62 310 P **P** **14 06 48.2 +2.3**
baz=57,SNR=13

H56A Elgin 68.62 310 P **P** **14 06 48.4 +2.5**
baz=57

WSPT Westport, CT 68.66 306 P **P** **14 06 46.7 +0.6**
WSPT IAMs_20 IAMs_20 14 38 52.1

comp=Z,8µm,18.0s

J58A Remsen 68.70 309 P **P** **14 06 46.4 0.0**
J58A IAmb IAmb 14 06 54.0

comp=Z,240nm,1.7s

J58A IAMs_20 IAMs_20 14 37 16.2

comp=Z,9µm,20.0s

J58A Remsen 68.70 309 P **P** **14 06 48.5 +2.0**
baz=57,SNR=12

K59A Cooperstown 68.75 308 P **P** **14 06 49.9 +3.1**
baz=57,SNR=6.5

L60A Shokan 68.78 307 P **P** **14 06 49.9 +3.0**
baz=57

XAN Xi'an 68.83 63 P **P** **14 06 46.8 -0.6**
XAN pP sP 14 06 53.3 -0.5
XAN S **S** **14 15 51.5 +0.5**
XAN sS pS 14 15 56.5 -0.3
XAN pmax pmax

comp=Z,150nm,1.1s

XAN pmax pmax

comp=Z,1µm,5.4s

XAN LR LR

comp=Z,8µm,24.5s

XAN Xi'an 68.83 63 P **P** **14 06 46.6 -0.8**
XAN pmax pmax

comp=Z,242nm,1.3s

XAN Xi'an 68.83 63 P **P** **14 06 46.6 -0.8**
M61A Granite Spring 68.86 306 P **P** **14 06 50.2 +2.8**
baz=57

ZEA Zeya 68.87 38 *e*P **P** **14 06 47.2 -0.1**
ZEA *e* 14 09 15.0
ZEA *e*S **S** **14 15 54.0 +3.2**
ZEA pmax pmax

comp=E,59nm,1.0s

ZEA pmax pmax

comp=Z,150nm,1.2s

ZEA pmax pmax

comp=Z,2µm,6.0s

ZEA pmax pmax

comp=Z,600nm,10.0s

ZEA smax smax

comp=E,2µm,11.0s

ZEA smax smax

comp=N,2µm,15.0s

ZEA MLR MLR

comp=Z,25µm,14.0s

ZEA MLR MLR

comp=E,11µm,15.0s

ZEA MLR MLR

comp=N,14µm,13.0s

ALGO Algonquin Park 68.94 312 P **P** **14 06 49.0 +1.2**
baz=56,SNR=15

PBA Port Blair 68.95 92 *e*P P 14 06 48.8 +0.4
PBA IAmb IAmb 14 06 56.6

comp=Z,158nm,1.0s

PBA Port Blair 68.95 92 P P 14 06 48.5 +0.2
D51A Lot 18 Range I 69.07 314 P **P** **14 06 50.7 +2.1**
baz=56,SNR=28

J57A Williamstown 69.11 309 P **P** **14 06 49.1 +0.2**
J57A IAmb IAmb 14 06 56.4

comp=Z,171nm,1.6s

J57A IAMs_20 IAMs_20 14 36 35.0

comp=Z,10µm,19.0s

J57A Williamstown 69.11 309 P **P** **14 06 51.3 +2.4**
baz=57,SNR=7.9

E52A Mattawa 69.11 313 P **P** **14 06 50.4 +1.5**
baz=56,SNR=30

PAL Palisades 69.11 306 IAMs_20 IAMs_20 14 37 54.2
comp=Z,9µm,20.0s

PAL Palisades 69.11 306 P **P** **14 06 52.0 +3.0**
baz=57

KMI Kunming 69.11 74 P **P** **14 06 48.8 -0.7**
KMI pP pP 14 06 53.5 -0.7
KMI S **S** **14 15 51.5 -3.5**
KMI sS pS 14 16 01.5 +0.8
KMI pmax pmax

comp=Z,19nm,0.9s

KMI pmax pmax

comp=Z,1µm,5.6s

KMI LR LR

comp=Z,6µm,16.9s

KMI LR LR

comp=Z,5µm,15.0s

KMI LR LR

comp=Z,6µm,22.5s

KMI Kunming 69.11 74 P **P** **14 06 48.4 -1.2**
KMI pmax pmax

comp=Z,68nm,1.2s

KMI Kunming 69.11 74 P **P** **14 06 48.4 -1.2**
L59A Walton 69.19 308 P **P** **14 06 47.1 -2.4**
L59A IAmb IAmb 14 06 57.9

comp=Z,140nm,1.2s

L59A IAMs_20 IAMs_20 14 34 45.1

comp=Z,9µm,21.0s

L59A Walton 69.19 308 P **P** **14 06 52.3 +2.8**
baz=57

H55A Tweed 69.20 311 P **P** **14 06 52.0 +2.6**
baz=57,SNR=13

FCC Fort Churchill 69.23 330 P **P** **14 06 48.7 -0.7**
FCC pmax pmax

comp=Z,352nm,1.9s

FCC Fort Churchill 69.23 330 P **P** **14 06 48.7 -0.7**
K58A Earlville 69.25 308 P **P** **14 06 50.4 +0.5**
K58A IAmb IAmb 14 06 58.0

comp=Z,106nm,1.1s

K58A IAMs_20 IAMs_20 14 40 40.7

comp=Z,9µm,18.0s

K58A Earlville 69.25 308 P **P** **14 06 53.0 +3.1**
baz=57

TIY Taiyuan 69.27 58 *e*P **P** **14 06 54.8 +4.7**
TIY PP **PP** **14 09 26.8 +4.0**
TIY S **S** **14 15 54.8 -1.3**
TIY SS **SS** **14 20 28.0 +5.9**
TIY pmax pmax

comp=Z,77nm,0.8s

TIY pmax pmax

comp=Z,870nm,6.6s

TIY LR LR

comp=Z,13µm,14.2s

TIY LR LR

comp=Z,8µm,13.5s

TIY LR LR

comp=Z,9µm,16.4s

G54A Lake Saint Pet 69.27 312 P **P** **14 06 52.5 +2.6**
baz=56,SNR=28

D50A G1974 Best Tow 69.30 314 P **P** **14 06 51.8 +1.8**
baz=56,SNR=36

M60A Port Jervis 69.39 307 P **P** **14 06 53.4 +2.6**
baz=57

PECO Prince Edward 69.43 310 P **P** **14 06 51.9 +1.0**
PECO IAmb IAmb 14 06 59.0

comp=Z,74nm,1.0s

PECO IAMs_20 IAMs_20 14 36 51.4

comp=Z,11µm,22.0s

DELO Deloro Mine 69.48 311 P **P** **14 06 50.8 -0.4**
DELO IAmb IAmb 14 06 59.3

comp=Z,84nm,1.1s

DELO IAMs_20 IAMs_20 14 37 42.7

comp=Z,13µm,19.0s

ODNJ Ogdensburg 69.51 307 P **P** **14 06 51.0 -0.5**
ODNJ IAmb IAmb 14 06 59.5

comp=Z,169nm,1.4s

ODNJ IAMs_20 IAMs_20 14 38 14.8

comp=Z,8µm,18.0s

I55A Frankford 69.68 311 P **P** **14 06 55.4 +2.9**
baz=56

CHTO Chiang Mai 69.70 82 P **P** **14 06 51.4 -1.6**
CHTO pmax pmax

comp=Z,94nm,1.0s

CHTO Chiang Mai 69.70 82 P **P** **14 06 51.4 -1.6**
CHTO IAmb IAmb 14 07 00.3

comp=Z,94nm,1.0s

BRNJ Basking Ridge 69.71 306 IAMs_20 IAMs_20 14 38 21.9
comp=Z,10µm,19.0s

J56A Wolcott 69.71 309 IAMs_20 IAMs_20 14 37 01.8
comp=Z,9µm,20.0s

J56A Wolcott 69.71 309 P **P** **14 06 55.6 +2.9**
baz=56

G53A Haliburton 69.74 312 P **P** **14 06 55.0 +2.2**
baz=56

BINY Binghamton 69.77 308 P **P** **14 06 52.3 -0.8**
baz=56,SNR=5.6

BINY Binghamton 69.77 308 P **P** **14 06 55.9 +2.9**
baz=56,SNR=5.6

L58A Harry Jones Me 69.77 308 P **P** **14 06 55.8 +2.7**
baz=56,SNR=11

F52A Sundridge 69.77 313 P **P** **14 06 55.7 +2.7**
baz=56,SNR=22

M59A Waymart 69.78 307 P **P** **14 06 56.1 +2.9**
baz=57

K57A Scipio Center 69.80 309 P **P** **14 06 56.2 +3.0**
baz=56

CM31 Chiang Mai Arr 69.90 82 P **P** **14 06 52.6 -1.6**
CM31 IAmb IAmb 14 07 03.5

comp=Z,93nm,0.9s

CM31 Chiang Mai Arr 69.90 82 P **P** **14 06 53.6 -0.6**
SNR=63

CMAR Chiang Mai Arr 69.90 82 P **P** **14 06 52.8 -1.4**
comp=Z,20nm,0.8s,baz=302,slow=7.5,SNR=108

CMAR S **S** **14 15 56.5 -7.4**
comp=Z,0.3nm,0.4s,baz=298,slow=6.0,SNR=3.9

CMAR PKP2bc 14 35 02.0
comp=Z,4.0nm,1.2s,baz=166,slow=2.1,SNR=6.5

N60A Cedar Hill Far 69.94 307 P **P** **14 06 57.0 +2.9**
baz=56

H53A Bobcaygeon 70.02 311 P **P** **14 06 57.0 +2.5**
baz=56,SNR=14

O61A Allentown 70.02 306 P **P** **14 06 57.6 +3.0**
baz=56

F51A Arnstein 70.03 313 P **P** **14 06 56.8 +2.2**
baz=56,SNR=17

D49A Beulah Townshi 70.09 315 P **P** **14 06 56.9 +2.0**
baz=55

SUR Sutherland 70.21 180 P **P** **14 06 56.1 +0.3**
SUR Sutherland 70.21 180 IAMs_20 IAMs_20 14 38 41.3
comp=Z,13µm,20.0s

SADO Sadowa 70.24 312 P **P** **14 06 55.7 -0.2**
SADO IAMs_20 IAMs_20 14 38 22.8

comp=Z,9µm,18.0s

J55A Hilton 70.30 310 P **P** **14 06 55.9 -0.3**
J55A IAmb IAmb 14 07 03.6

comp=Z,192nm,1.4s

J55A IAMs_20 IAMs_20 14 37 28.4

comp=Z,10µm,20.0s

J55A Hilton 70.30 310 P **P** **14 06 59.6 +3.3**
baz=56

K56A Middlesex 70.31 309 P **P** **14 06 58.8 +2.4**
baz=56,SNR=16

N59A State Game Lan 70.34 307 P **P** **14 06 57.2 +0.6**
N59A IAmb IAmb 14 07 05.4

comp=Z,132nm,1.1s

N59A IAMs_20 IAMs_20 14 38 51.7

comp=Z,9µm,19.0s

N59A State Game Lan 70.34 307 P **P** **14 06 59.4 +2.7**
baz=56,SNR=23

D48A Paudash Townsh 70.39 315 P **P** **14 06 59.6 +2.7**
baz=55

L57A Andrews Acres 70.41 308 P **P** **14 06 59.4 +2.4**
baz=56,SNR=14

BJI Beijing 70.44 54⇑ *i*P **P** **14 06 56.5 -0.7**
BJI sP **pP** **14 07 02.0 +0.2**
BJI S **S** **14 16 08.5 -1.1**
BJI SS **SS** **14 20 41.0 +1.1**
BJI pmax pmax

comp=Z,21nm,1.0s

BJI LR LR

comp=Z,19µm,14.3s

O60A Telford 70.44 306 P **P** **14 07 00.4 +3.2**
baz=56,SNR=13

BJT Baijiatuau 70.45 54 P **P** **14 06 56.2 -1.1**
BJT pmax pmax

comp=Z,91nm,1.1s

BJT MLR MLR

comp=Z,15µm,19.0s

BJT Baijiatuau 70.45 54 P **P** **14 06 56.2 -1.1**
BJT IAmb IAmb 14 07 04.2

comp=Z,90nm,1.1s

M58A Price's Panora 70.52 308 P **P** **14 07 01.2 +3.5**
baz=56,SNR=6.3

MMNY Mt. Morris Dam 70.65 309 IAMs_20 IAMs_20 14 38 15.8
comp=Z,10µm,18.0s

PSUB Penn St. - Bra 70.69 306 IAMs_20 IAMs_20 14 35 03.9
comp=Z,10µm,22.0s

MEDO Medina 70.74 310 IAMs_20 IAMs_20 14 37 41.0
comp=Z,10µm,20.0s

K55A Perry 70.75 309 P **P** **14 07 01.5 +2.5**
baz=56

L56A Greenwood 70.77 309 P **P** **14 06 58.4 -0.9**
L56A IAmb IAmb 14 07 06.6

comp=Z,106nm,1.1s

L56A IAMs_20 IAMs_20 14 37 38.0

comp=Z,11µm,20.0s

L56A Greenwood 70.77 309 P **P** **14 07 01.6 +2.3**
baz=56,SNR=13

J54A Appleton 70.79 310 IAMs_20 IAMs_20 14 37 42.4
comp=Z,9µm,21.0s

J54A Appleton 70.79 310 P **P** **14 07 02.5 +3.2**
baz=55

P60A Greenville 70.87 306 P **P** **14 06 58.7 -1.1**
P60A IAmb IAmb 14 07 06.8

comp=Z,188nm,1.4s

P60A IAMs_20 IAMs_20 14 39 07.8

comp=Z,8µm,19.0s

P60A Greenville 70.87 306 P **P** **14 07 02.4 +2.6**
baz=56,SNR=6.0

O59A Robesonia 70.94 307 P **P** **14 07 03.3 +3.0**
baz=56

M57A Sunshine Farm, 70.96 308 P **P** **14 06 59.8 -0.5**
M57A IAMs_20 IAMs_20 14 35 37.9

comp=Z,11µm,22.0s

M57A Sunshine Farm, 70.96 308 P **P** **14 07 02.6 +2.3**
baz=56,SNR=16

N58A Sunbury 70.98 307 P **P** **14 07 00.5 +0.1**
N58A IAMs_20 IAMs_20 14 39 01.5

comp=Z,9µm,18.0s

N58A Sunbury 70.98 307 P **P** **14 07 02.9 +2.4**
baz=56,SNR=5.4

E48A Lockeyer 71.00 315 P **P** **14 07 03.0 +2.5**
baz=54

BILL Bilibino 71.01 13 *ce*P **P** **14 07 00.5 +0.3**
BILL *e**PP **pP** **14 07 03.4 -1.4**
BILL *i**SP **sP** **14 07 05.6 -0.9**
BILL *e* 14 07 20.7
BILL *e* 14 09 38.8
BILL *i*S **S** **14 16 18.7 +3.3**
BILL pmax pmax

comp=Z,44nm,1.1s

BILL MLR MLR

comp=Z,15µm,18.0s

BILL Bilibino 71.01 13 P **P** **14 06 59.8 -0.4**
BILL IAmb IAmb 14 07 08.6

comp=Z,252nm,1.5s

I53A Kortright Cn E 71.04 311 P **P** **14 07 03.4 +2.6**
baz=55,SNR=5.3

D47A Chapleau 71.18 315 P **P** **14 07 03.9 +2.2**
baz=54

K54A Basiliko Farm, 71.19 310 P **P** **14 07 03.9 +2.1**
baz=55,SNR=11

MVL Millersville 71.22 306 P **P** **14 07 01.8 -0.2**
MVL IAmb IAmb 14 07 09.4

comp=Z,162nm,1.6s

MVL IAMs_20 IAMs_20 14 35 34.0

comp=Z,10µm,22.0s

I52A Shelburne 71.25 312 P **P** **14 07 04.6 +2.5**
baz=55,SNR=16

WVNY West Valley, N 71.26 309 P **P** **14 07 02.9 +0.7**
WVNY IAMs_20 IAMs_20 14 38 33.9

comp=Z,10µm,19.0s

ENH Enshi 71.28 66 P **P** **14 07 00.8 -1.7**
ENH IAmb IAmb 14 07 08.0

comp=Z,92nm,0.7s

ENH IAMs_20 IAMs_20 14 43 29.5

comp=Z,9µm,18.0s

L55A Hinsdale 71.28 309 P **P** **14 07 04.5 +2.1**
baz=55,SNR=14

GYA Guiyang 71.33 71⇑ *i*P **P** **14 07 00.8 -2.2**
GYA S **S** **14 16 14.5 -6.1**
GYA SKS **SKSac** **14 16 56.5 -9.5**
GYA SS **SS** **14 20 52.8 -1.6**
GYA pmax pmax

comp=Z,20nm,1.0s

GYA pmax pmax

comp=Z,170nm,5.5s

GYA LR LR

comp=Z,4µm,20.9s

GYA LR LR

comp=Z,6µm,21.0s

GYA LR LR

comp=Z,5µm,22.2s

PAGS Pennsylvania G **71.33 307** IAMs_20 IAMs_20 14 36 01.8
comp=Z,9µm,20.0s
F49A Sandfield **71.35 314** P **P** **14 07 04.5 +1.9**
baz=54,SNR=30
Q60A Greensboro **71.46 305** IAMs_20 IAMs_20 14 40 28.3
comp=Z,8µm,19.0s
Q60A Greensboro **71.46 305** P **P** **14 07 07.1 +3.7**
baz=56
P59A Jarrettsville **71.49 306** P **P** **14 07 06.3 +2.7**
baz=56
R61A Willards **71.51 304** IAMs_20 IAMs_20 14 39 17.7
comp=Z,13µm,20.0s
O58A Lewisberry **71.51 307** P **P** **14 07 05.8 +2.1**
baz=55
M56A Emporium **71.53 308** P **P** **14 07 03.7 -0.1**
M56A IAmb IAmb 14 07 11.3
comp=Z,229nm,1.3s
M56A IAMs_20 IAMs_20 14 38 13.0
comp=Z,9µm,19.0s
M56A Emporium **71.53 308** P **P** **14 07 06.0 +2.2**
baz=55,SNR=17
N57A Milroy **71.55 308** P **P** **14 07 06.4 +2.4**
baz=55,SNR=26
E47A Iron Bridge **71.64 315** P **P** **14 07 05.9 +1.6**
baz=54,SNR=28
F48A Evansville **71.64 314** P **P** **14 07 07.0 +2.6**
baz=54,SNR=7.9
L54A Sinclairville **71.79 310** P **P** **14 07 07.0 +1.7**
baz=55,SNR=16
D46A Sault St. Mari **71.80 316** P **P** **14 07 06.8 +1.5**
baz=53,SNR=44
SSPA Standing Stone **71.83 308** P **P** **14 07 05.2 -0.4**
SSPA Standing Stone **71.83 308** IAMs_20 IAMs_20 14 37 36.0
comp=Z,9µm,20.0s
SSPA Standing Stone **71.83 308** P **P** **14 07 08.2 +2.6**
baz=55
SDMD Soldier's Deli **71.86 306** P **P** **14 07 04.2 -1.6**
M55A Ridgway **71.89 309** P **P** **14 07 06.1 +0.1**
M55A IAmb IAmb 14 07 12.8
comp=Z,102nm,0.8s
M55A IAMs_20 IAMs_20 14 39 05.7
comp=Z,10µm,19.0s
M55A Ridgway **71.89 309** P **P** **14 07 07.9 +1.9**
baz=55,SNR=21
I51A Listowel **71.90 312** P **P** **14 07 08.0 +2.0**
baz=54,SNR=18
O57A Amberson **71.91 307** P **P** **14 07 09.1 +2.9**
baz=55
N56A West Decatur **71.92 308** P **P** **14 07 09.4 +3.2**
baz=55,SNR=18
INK Inuvik **72.05 350** P **P** **14 07 06.0 -0.4**
INK pmax pmax
comp=Z,123nm,1.4s
INK MLR MLR
comp=Z,11µm,20.0s
INK Inuvik **72.05 350** PKP2ab 14 34 50.1
comp=Z,1.1nm,0.9s,baz=157,slow=1.3,SNR=3.5
INK Inuvik **72.05 350** P **P** **14 07 06.0 -0.4**
INK IAmb IAmb 14 07 16.4
comp=Z,123nm,1.4s
INK IAMs_20 IAMs_20 14 43 36.7
comp=Z,11µm,20.0s
Q59A Harwood **72.06 305** P **P** **14 07 10.2 +3.2**
baz=55
S61A Accomac **72.09 304** IAMs_20 IAMs_20 14 36 15.2
comp=Z,13µm,22.0s
P58A Pank, Wackersv **72.11 306** P **P** **14 07 09.2 +1.9**
baz=55,SNR=29
SLVN Son La **72.11 77** P **P** **14 07 06.5 -1.2**
SEY Seymchan **72.13 21** *e*P **P** **14 07 07.7 +0.7**
E46A Sault Ste Mari **72.26 315** P **P** **14 07 08.3 +0.2**
E46A IAMs_20 IAMs_20 14 41 40.1
comp=Z,9µm,18.0s
ERPA Erie **72.27 310** P **P** **14 07 08.1 -0.1**
ERPA IAMs_20 IAMs_20 14 37 16.5
comp=Z,8µm,21.0s
ERPA Erie **72.27 310** P **P** **14 07 09.8 +1.6**
baz=54,SNR=39
K52A Tillsonburg **72.31 311** P **P** **14 07 11.4 +2.9**
baz=54
R60A Leonardtown, M **72.35 305** P **P** **14 07 12.1 +3.4**
baz=55
M54A Oil Creek Stat **72.42 309** P **P** **14 07 10.2 +1.0**
M54A IAMs_20 IAMs_20 14 38 36.7
comp=Z,11µm,20.0s
M54A Oil Creek Stat **72.42 309** P **P** **14 07 11.1 +1.9**
baz=54,SNR=28
N55A Marion Center **72.43 308** P **P** **14 07 10.7 +1.5**
baz=54,SNR=29
O56A Blue Knob Stat **72.46 308** P **P** **14 07 10.2 +0.7**
O56A IAMs_20 IAMs_20 14 41 09.2
comp=Z,9µm,18.0s
O56A Blue Knob Stat **72.46 308** P **P** **14 07 11.3 +1.9**
baz=55,SNR=5.8
L53A Girard **72.53 310** P **P** **14 07 11.7 +1.9**
baz=54,SNR=29
PBKT Sadao Pong **72.56 82** P **P** **14 07 09.3 -1.0**
PBKT IAmb IAmb 14 07 18.1
comp=Z,133nm,1.3s
P57A Homestead Farm **72.57 307** P **P** **14 07 10.2 +0.2**
P57A IAMs_20 IAMs_20 14 40 01.6
comp=Z,12µm,19.0s
P57A Homestead Farm **72.57 307** P **P** **14 07 11.7 +1.6**
baz=55,SNR=13
ALLY Alegheny Colle **72.63 309** P **P** **14 07 10.3 -0.1**
ALLY IAMs_20 IAMs_20 14 39 26.2
comp=Z,10µm,19.0s
Q58A Fox Den Farm, **72.67 306** P **P** **14 07 12.3 +1.6**
baz=55,SNR=21
CMBY CAMPBELL BAY **72.67 95** *e*P **P** **14 07 11.7 +0.8**
H48A Harrisville **72.71 314** IAMs_20 IAMs_20 14 36 53.0
comp=Z,13µm,22.0s
H48A Harrisville **72.71 314** P **P** **14 07 13.5 +2.7**
baz=53,SNR=5.5
S60A Water View **72.72 304** P **P** **14 07 14.7 +3.7**
baz=55
G47A Hillman **72.72 314** P **P** **14 07 13.6 +2.8**
baz=53,SNR=25
R59A King George, V **72.73 305** P **P** **14 07 12.9 +1.8**
baz=55
K51A Iona Station **72.82 311** P **P** **14 07 14.4 +2.9**
baz=54
I49A Point Hope **72.87 313** P **P** **14 07 12.4 +0.6**
I49A IAMs_20 IAMs_20 14 37 03.4
comp=Z,14µm,21.0s
I49A Point Hope **72.87 313** P **P** **14 07 14.0 +2.3**
baz=53
CBN Corbin Frederi **72.90 305** IAMs_20 IAMs_20 14 39 14.4
comp=Z,7µm,18.0s
CBN Corbin Frederi **72.90 305** P **P** **14 07 14.2 +2.2**
baz=55,SNR=6.1
N54A Moraine State **72.94 309** P **P** **14 07 12.4 +0.2**
N54A IAMs_20 IAMs_20 14 38 53.4
comp=Z,11µm,21.0s
N54A Moraine State **72.94 309** P **P** **14 07 14.4 +2.2**
baz=54,SNR=24
O55A Ligonier **72.96 308** P **P** **14 07 14.5 +2.2**
baz=54,SNR=30
E44A Grand Marais A **72.99 316** IAMs_20 IAMs_20 14 40 08.5
comp=Z,9µm,18.0s
E44A Grand Marais A **72.99 316** P **P** **14 07 14.7 +2.3**
baz=52
P56A Dayton Farm, R **73.08 307** P **P** **14 07 15.5 +2.4**
baz=54,SNR=19
M53A Wt Miller and **73.08 310** P **P** **14 07 15.0 +2.0**
baz=54,SNR=18
Q57A Strasburg **73.08 306** P **P** **14 07 15.9 +2.8**
baz=54
T60A Surry **73.09 304** IAMs_20 IAMs_20 14 36 56.7
comp=Z,13µm,22.0s
T60A Surry **73.09 304** P **P** **14 07 16.8 +3.6**
baz=55
S59A Mechanicsville **73.10 305** P **P** **14 07 15.7 +2.5**
baz=55
TIA Tal'an **73.22 57** P **P** **14 07 12.8 -1.2**
TIA PP **PP** **14 10 02.8 +6.1**
TIA S **SKiKP** **14 16 45.5 +0.1**
TIA pmax pmax
comp=Z,19nm,0.9s
TIA pmax pmax
comp=Z,770nm,5.1s
TIA LR LR
comp=Z,9µm,18.0s
TIA LR LR
comp=Z,10µm,16.5s
TIA LR LR
comp=Z,6µm,35.1s

I48A Sherman Twp **73.23 313** P **P** **14 07 16.0 +2.1**
baz=53,SNR=14
H47A Mio **73.27 314** P P 14 07 19.5 +5.4
baz=53
F45A CMU Biological **73.34 315** P **P** **14 07 16.5 +1.9**
baz=52,SNR=19
R58B Mineral **73.36 305** P **P** **14 07 15.3 +0.6**
R58B IAMs_20 IAMs_20 14 39 19.7
comp=Z,7µm,19.0s
R58B Mineral **73.36 305** P **P** **14 07 16.7 +2.0**
baz=54,SNR=7.7
GLMI Grayling **73.36 314** P **P** **14 07 14.4 -0.3**
GLMI IAMs_20 IAMs_20 14 37 21.4
comp=Z,13µm,22.0s
GLMI Grayling **73.36 314** P **P** **14 07 17.2 +2.5**
baz=52,SNR=5.5
U61A Possum Corner **73.37 303** IAMs_20 IAMs_20 14 36 38.1
comp=Z,8µm,21.0s
U61A Possum Corner **73.37 303** P **P** **14 07 18.3 +3.5**
baz=55
YKA Yellowknife Ar **73.37 340** P **P** **14 07 14.6 +0.2**
comp=Z,7.5nm,0.6s,baz=37,slow=5.3,SNR=83
YKA PKP2ab 14 34 44.8
comp=Z,0.8nm,1.0s,baz=209,slow=1.8,SNR=5.5
YKA LR LR 14 40 46.6
comp=Z,12µm,19.8s,baz=0.0,slow=37
J49A Marlette **73.40 312** P **P** **14 07 17.2 +2.3**
baz=53,SNR=16
M52A Chesterland **73.43 310** P **P** **14 07 15.2 0.0**
M52A IAMs_20 IAMs_20 14 40 06.3
comp=Z,9µm,19.0s
M52A Chesterland **73.43 310** P **P** **14 07 17.1 +1.9**
baz=54,SNR=32
V62A Hyde County Ai **73.49 302** IAMs_20 IAMs_20 14 40 52.3
comp=Z,7µm,20.0s
N53A Lisbon **73.55 309** P **P** **14 07 16.5 +0.6**
N53A IAmb IAmb 14 07 24.5
comp=Z,168nm,1.1s
N53A IAMs_20 IAMs_20 14 39 21.5
comp=Z,11µm,21.0s
N53A Lisbon **73.55 309** P **P** **14 07 18.9 +3.0**
baz=54,SNR=17
Q56A Snyder Ridge, **73.56 307** P **P** **14 07 15.6 -0.4**
Q56A IAMs_20 IAMs_20 14 40 31.0
comp=Z,9µm,19.0s
Q56A Snyder Ridge, **73.56 307** P **P** **14 07 18.1 +2.1**
baz=54
R57A Stanardsville **73.58 306** P **P** **14 07 18.3 +2.2**
baz=54
MCWV Mont Chateau **73.62 308** P **P** **14 07 15.8 -0.5**
MCWV IAmb IAmb 14 07 23.6
comp=Z,396nm,1.9s
MCWV Mont Chateau **73.62 308** P **P** **14 07 18.8 +2.5**
baz=54,SNR=18
O54A Avella **73.64 308** P **P** **14 07 16.3 -0.1**
O54A IAMs_20 IAMs_20 14 39 27.9
comp=Z,13µm,20.0s
O54A Avella **73.64 308** P **P** **14 07 18.5 +2.1**
baz=54,SNR=17
S58A Poland Farm, P **73.67 305** P **P** **14 07 16.2 -0.4**
S58A IAMs_20 IAMs_20 14 39 37.0
comp=Z,8µm,19.0s
S58A Poland Farm, P **73.67 305** P **P** **14 07 18.5 +1.9**
baz=54,SNR=18
P55A Reedsville **73.69 308** P **P** **14 07 18.4 +1.7**
baz=54,SNR=15
T59A Double "B" Far **73.73 304** P **P** **14 07 15.4 -1.5**
T59A IAmb IAmb 14 07 24.0
comp=Z,208nm,1.6s
T59A IAMs_20 IAMs_20 14 37 25.4
comp=Z,11µm,22.0s
T59A Double "B" Far **73.73 304** P **P** **14 07 19.7 +2.8**
baz=54,SNR=5.9
E43A Lone Tree Farm **73.73 317** P **P** **14 07 15.9 -0.9**
E43A IAmb IAmb 14 07 23.8
comp=Z,244nm,1.5s
E43A IAMs_20 IAMs_20 14 40 40.9
comp=Z,8µm,18.0s
U60A Pendleton **73.76 304** P **P** **14 07 19.1 +1.9**
baz=54
I47A Gladwin **73.79 313** P **P** **14 07 16.2 -1.0**
I47A IAmb IAmb 14 07 25.4
comp=Z,211nm,1.1s
I47A IAMs_20 IAMs_20 14 37 25.8
comp=Z,12µm,22.0s
I47A Gladwin **73.79 313** P **P** **14 07 19.1 +1.9**
baz=52,SNR=23
J48A Bridge Port **73.81 313** P **P** **14 07 16.1 -1.2**
J48A Bridge Port **73.81 313** P **P** **14 07 19.1 +1.7**
baz=53,SNR=17
G45A Suttons Bay **73.82 315** P **P** **14 07 16.0 -1.3**
G45A IAMs_20 IAMs_20 14 37 45.3
comp=Z,11µm,21.0s
G45A Suttons Bay **73.82 315** P **P** **14 07 19.0 +1.6**
baz=52
H46A Fife Lake **73.87 314** P **P** **14 07 19.4 +1.7**
baz=52,SNR=21
KLR Kul'dur **73.87 39***ce*P **P** **14 07 17.4 -0.2**
KLR pmax pmax
comp=Z,61nm,0.9s
KLR MLR MLR
comp=Z,12µm,16.0s
K49A Clarkson **73.94 312** P **P** **14 07 19.7 +1.6**
baz=53
SNY Shenyang **73.98 49** ⇑P **P** **14 07 15.5 -2.8**
SNY pP **sP** **14 07 26.5 +1.8**
SNY sP **PcP** **14 07 31.0 -2.6**
SNY PP **PP** **14 10 01.8 -1.2**
SNY S **SKiKP** **14 16 43.5 -2.8**
SNY SS **SS** **14 21 34.3 +0.4**
SNY pmax pmax
comp=Z,85nm,1.3s
SNY pmax pmax
comp=Z,1µm,5.3s
SNY LR LR
comp=Z,21µm,14.9s
SNY LR LR
comp=Z,33µm,15.9s
SNY LR LR
comp=Z,21µm,14.9s
L50A Kingsville **74.00 311** P **P** **14 07 20.2 +1.8**
baz=53,SNR=25
P54A Burton **74.04 308** P **P** **14 07 20.8 +2.0**
baz=54,SNR=19
RDOG Red Dog Mine **74.04 1** P **P** **14 07 17.4 -0.9**
RDOG IAmb IAmb 14 07 28.2
comp=Z,75nm,0.7s
M51A Elyria **74.05 310** P **P** **14 07 20.9 +2.1**
baz=53
N52A McGinn's Farm, **74.06 310** P **P** **14 07 21.3 +2.5**
baz=53,SNR=27
R56A Bull Pasture M **74.07 306** P **P** **14 07 22.4 +3.3**
baz=54,SNR=7.8
O53A New Philadelph **74.11 309** P **P** **14 07 22.1 +3.0**
baz=53,SNR=17
Q55A Buckhannon **74.16 307** P **P** **14 07 21.9 +2.4**
baz=54,SNR=5.7
S57A Dark Hollow, R **74.17 306** P **P** **14 07 19.1 -0.4**
S57A Dark Hollow, R **74.17 306** P **P** **14 07 22.0 +2.5**
baz=54
V60A Jim Taylor Roa **74.24 303** P **P** **14 07 22.8 +2.9**
baz=54
U59A Littleton **74.24 304** P **P** **14 07 19.6 -0.3**
U59A IAMs_20 IAMs_20 14 37 40.1
comp=Z,12µm,22.0s
U59A Littleton **74.24 304** P **P** **14 07 23.1 +3.2**
baz=54,SNR=16
MA2 Magadan **74.29 24** *e*P **P** **14 07 20.3 +0.5**
MA2 pmax pmax
comp=Z,52nm,1.0s
MA2 MLR MLR
comp=Z,24µm,16.0s
MA2 Magadan **74.29 24** P **P** **14 07 20.1 +0.3**
MA2 IAmb IAmb 14 07 29.0
comp=Z,184nm,1.1s
EPYK Eagle Plains **74.30 351** P **P** **14 07 19.6 -0.2**
EPYK IAmb IAmb 14 07 58.4
comp=Z,90nm,0.8s
EPYK Eagle Plains **74.30 351** P **P** **14 07 20.4 +0.6**
baz=18,SNR=32
K48A Perry **74.31 312** P **P** **14 07 22.8 +2.5**
baz=52,SNR=16
I46A Reed City **74.38 314** P **P** **14 07 22.0 +1.3**
baz=52,SNR=29
T58A Grand View Acr **74.38 305** P **P** **14 07 23.9 +3.1**
baz=54
N51A Ashland **74.42 310** P **P** **14 07 20.0 -1.0**

N51A IAmb IAmb 14 07 29.1
comp=Z,149nm,1.1s
N51A IAMs_20 IAMs_20 14 42 33.5
comp=Z,9µm,19.0s
N51A Ashland **74.42 310** P **P** **14 07 22.6 +1.7**
baz=53,SNR=18
J47A Sunmer **74.45 313** P **P** **14 07 20.6 -0.5**
J47A IAmb IAmb 14 07 29.5
comp=Z,131nm,0.9s
J47A IAMs_20 IAMs_20 14 39 56.2
comp=Z,11µm,18.0s
J47A Sunmer **74.45 313** P **P** **14 07 22.9 +1.9**
baz=52
M50A Fremont **74.53 311** P **P** **14 07 23.2 +1.6**
baz=53
L49A Milan **74.53 312** P **P** **14 07 24.7 +3.2**
baz=52,SNR=5.1
DL2 Dalian **74.54 53** P **P** **14 07 21.5 -0.1**
DL2 PP **PP** **14 10 06.5 -1.3**
DL2 S **S** **14 16 55.8 -0.7**
DL2 pmax pmax
comp=Z,71nm,1.5s
DL2 pmax pmax
comp=Z,1µm,5.6s
DL2 LR LR
comp=Z,17µm,14.4s
DL2 LR LR
comp=Z,25µm,14.8s
DL2 LR LR
comp=Z,14µm,20.6s
O52A Adamsville **74.57 309** P **P** **14 07 21.8 0.0**
O52A IAmb IAmb 14 07 30.2
comp=Z,149nm,1.0s
O52A IAMs_20 IAMs_20 14 40 37.6
comp=Z,12µm,19.0s
O52A Adamsville **74.57 309** P **P** **14 07 23.5 +1.6**
baz=53,SNR=23
WHN Wuhan **74.59 63** ⇑P **P** **14 07 21.5 -0.5**
WHN pP **sP** **14 07 28.5 +0.1**
WHN S **S** **14 16 59.5 +2.2**
WHN pmax pmax
comp=Z,41nm,1.0s
WHN pmax pmax
comp=Z,2µm,8.9s
WHN LR LR
comp=Z,6µm,11.4s
WHN LR LR
comp=Z,22µm,14.0s
WHN LR LR
comp=Z,18µm,16.5s
S56A Natural Bridge **74.61 306** P **P** **14 07 25.3 +3.2**
baz=54
Q54A Coxs Mills **74.63 308** P **P** **14 07 22.4 +0.2**
Q54A IAmb IAmb 14 07 30.3
comp=Z,97nm,0.9s
Q54A IAMs_20 IAMs_20 14 39 53.3
comp=Z,10µm,20.0s
Q54A Coxs Mills **74.63 308** P **P** **14 07 25.0 +2.9**
baz=53,SNR=17
COLD Coldfoot **74.67 356** P **P** **14 07 22.2 +0.3**
COLD IAMs_20 IAMs_20 14 38 56.0
comp=Z,13µm,22.0s
P53A Whipple **74.68 308** P **P** **14 07 21.6 -0.9**
P53A IAMs_20 IAMs_20 14 39 59.4
comp=Z,13µm,20.0s
P53A Whipple **74.68 308** P **P** **14 07 25.0 +2.5**
baz=53,SNR=24
U58A Oxford **74.71 304** P **P** **14 07 25.5 +2.8**
baz=54
F42A Maple Grove Fa **74.73 317** IAMs_20 IAMs_20 14 41 20.5
comp=Z,7µm,19.0s
T57A Hurt **74.81 305** P **P** **14 07 23.2 -0.1**
T57A IAmb IAmb 14 07 30.6
comp=Z,194nm,1.6s
T57A Hurt **74.81 305** P **P** **14 07 26.2 +2.9**
baz=54
J46A Howard City **74.86 313** P **P** **14 07 25.7 +2.3**
baz=52
V59A Middlesex **74.88 304** P **P** **14 07 26.6 +2.9**
baz=54
K47A Vermontville **74.90 313** P **P** **14 07 25.6 +1.9**
baz=52,SNR=17
CNNC Cliffs of the **74.96 303** IAMs_20 IAMs_20 14 43 26.5
comp=Z,6µm,18.0s
N50A Nevada **74.97 310** P **P** **14 07 26.7 +2.6**
baz=52,SNR=5.8
FYU Fort Yukon **75.00 354** P **P** **14 07 24.2 +0.4**
FYU IAmb IAmb 14 07 32.8
comp=Z,154nm,1.0s
FYU IAMs_20 IAMs_20 14 39 38.7
comp=Z,9µm,21.0s
L48A N Adams **75.02 312** P **P** **14 07 26.9 +2.5**
baz=52,SNR=17
O51A Pataskala **75.03 309** P **P** **14 07 26.4 +1.9**
baz=52,SNR=21
M49A Liberty Center **75.04 311** P **P** **14 07 25.7 +1.2**
baz=52,SNR=16
P52A Corning **75.05 309** P **P** **14 07 26.5 +1.9**
baz=53,SNR=21
EYMN Ely **75.09 320** P **P** **14 07 24.7 0.0**
EYMN IAmb IAmb 14 07 31.7
comp=Z,126nm,1.2s
EYMN Ely **75.09 320** IAMs_20 IAMs_20 14 39 00.7
comp=Z,9µm,19.0s
EYMN Ely **75.09 320** P **P** **14 07 25.7 +1.0**
baz=49,SNR=38
GRNR Gornyy **75.11 36** ⇑*i*P **P** **14 07 24.5 -0.3**
GRNR *i* 14 07 32.1
GRNR *i* 14 07 32.1
GRNR *e*S **S** **14 17 06.3 +3.7**
GRNR pmax pmax
comp=Z,180nm,0.8s
GRNR smax smax
comp=E,6.0nm,1.2s
GRNR MLR MLR
comp=Z,12µm,16.0s
Q53A Leroy **75.14 308** P **P** **14 07 27.2 +2.1**
baz=53,SNR=19
S55A Lewisburg **75.15 306** P **P** **14 07 27.9 +2.6**
baz=53,SNR=13
FFC Flin Flon **75.17 330** P **P** **14 07 25.5 +0.5**
FFC pmax pmax
comp=Z,83nm,1.1s
FFC MLR MLR
comp=Z,16µm,19.0s
FFC Flin Flon **75.17 330** P **P** **14 07 25.5 +0.5**
U57A Blanch **75.20 305** P **P** **14 07 27.5 +2.0**
baz=53,SNR=16
ACSO Alum Creek Sta **75.20 310** P **P** **14 07 24.7 -0.7**
ACSO IAmb IAmb 14 07 33.6
comp=Z,115nm,1.1s
ACSO IAMs_20 IAMs_20 14 40 11.2
comp=Z,9µm,19.0s
ACSO Alum Creek Sta **75.20 310** P **P** **14 07 27.4 +1.9**
baz=52,SNR=22
R54A Victor **75.21 307** P **P** **14 07 28.2 +2.6**
baz=53
T56A Rocky Mt **75.29 306** P **P** **14 07 28.4 +2.3**
baz=53,SNR=15
NKL Nikolayevsk **75.35 33** *e*P **P** **14 07 27.9 +1.9**
NKL *e*S **S** **14 17 06.5 +1.5**
NKL pmax pmax
comp=Z,170nm,0.8s
NKL pmax pmax
comp=N,7.0nm,1.0s
NKL pmax pmax
comp=E,25nm,0.9s
NKL pmax pmax
comp=Z,217nm,1.6s
K46A Dorr **75.35 313** P **P** **14 07 27.9 +1.6**
baz=51,SNR=7.2
H43A Windswept, Lux **75.35 315** P **P** **14 07 26.7 +0.5**
H43A IAMs_20 IAMs_20 14 43 40.8
comp=Z,10µm,18.0s
BLA Blacksburg **75.43 306** IAMs_20 IAMs_20 14 41 38.5
comp=Z,7µm,20.0s
BLA Blacksburg **75.43 306** P **P** **14 07 29.6 +2.7**
baz=53
V58A Windy Hill, Pi **75.44 304** P **P** **14 07 26.1 -0.7**
V58A IAmb IAmb 14 07 34.0
comp=Z,189nm,1.7s
V58A IAMs_20 IAMs_20 14 38 26.7
comp=Z,10µm,22.0s
V58A Windy Hill, Pi **75.44 304** P **P** **14 07 29.7 +2.8**
baz=53,SNR=5.8
L47A Sherwood **75.45 312** P **P** **14 07 27.9 +1.1**
baz=52,SNR=15

M48A Edgerton 75.47 312 P **P** **14 07 26.3 -0.7**
M48A Edgerton 75.47 312 P **P** **14 07 28.0 +1.0**
baz=52,SNR=14
N49A Columbus Grove 75.50 311 P **P** **14 07 26.6 -0.6**
N49A IAMs_20 IAMs_20 14 39 05.1
comp=Z,13µm,21.0s
N49A Columbus Grove 75.50 311 P **P** **14 07 28.6 +1.4**
baz=52,SNR=27
Q52A Bidwell 75.54 308 P **P** **14 07 29.4 +2.0**
baz=52,SNR=17
CDVI St. Croix 75.61 281 P **P** **14 07 26.6 -1.5**
O50A Cable 75.64 310 P **P** **14 07 29.8 +1.8**
baz=52
S54A Dingess, Beckl 75.64 307 P **P** **14 07 28.2 +0.1**
S54A IAMs_20 IAMs_20 14 44 36.1
comp=Z,9µm,18.0s
S54A Dingess, Beckl 75.64 307 P **P** **14 07 30.7 +2.6**
baz=53
ULM Lac du Bonnet 75.68 324 P **P** **14 07 28.0 0.0**
ULM pmax pmax
comp=Z,501nm,1.7s
ULM Lac du Bonnet 75.68 324 P **P** **14 07 28.5 +0.5**
comp=Z,104nm,0.8s,baz=42,slow=5.2,SNR=55
ULM Lac du Bonnet 75.68 324 P **P** **14 07 28.0 0.0**
ULM IAMs_20 IAMs_20 14 39 19.3
comp=Z,13µm,22.0s
CUPR Culebra, Puert 75.69 282 P **P** **14 07 27.2 -1.4**
CUPR IAmb IAmb 14 07 47.0
comp=Z,206nm,1.6s
MDJ Mudanjiang 75.70 44 P **P** **14 07 28.8 +0.6**
MDJ pP sP 14 07 37.5 +2.9
MDJ S **S** **14 17 08.0 -1.3**
MDJ sS sS 14 17 23.5 +6.6
MDJ pmax pmax
comp=Z,25nm,1.1s
MDJ pmax pmax
comp=Z,1µm,8.0s
MDJ LR LR
comp=Z,40µm,17.9s
MDJ LR LR
comp=Z,13µm,17.2s
MDJ Mudanjiang 75.70 44 P **P** **14 07 28.0 -0.3**
MDJ IAmb IAmb 14 07 37.1
comp=Z,114nm,1.2s
P51A Williamsport 75.71 309 P **P** **14 07 27.4 -1.0**
P51A Williamsport 75.71 309 P **P** **14 07 30.3 +2.0**
baz=52
T55A Pulaski 75.72 306 P **P** **14 07 31.4 +2.8**
baz=53
R53A Hurricane 75.72 308 P **P** **14 07 27.9 -0.6**
R53A IAmb IAmb 14 07 36.8
comp=Z,133nm,0.9s
R53A Hurricane 75.72 308 P **P** **14 07 30.8 +2.3**
baz=52,SNR=16
V57A Coltrane Farms 75.81 304 P **P** **14 07 31.6 +2.6**
baz=53,SNR=13
Y60A Bolivia 75.91 302 IAMs_20 IAMs_20 14 42 25.3
comp=Z,9µm,21.0s
U56A King 75.93 305 P **P** **14 07 32.7 +3.0**
baz=53,SNR=17
W58A Raeford 75.97 304 P **P** **14 07 33.2 +3.3**
baz=53
E38A The Farm, Brul 76.00 319 P **P** **14 07 29.6 -0.3**
E38A IAmb IAmb 14 07 36.5
comp=Z,250nm,1.6s
E38A IAMs_20 IAMs_20 14 39 37.9
comp=Z,10µm,18.0s
MTP Monte Pirata 76.02 282 P **P** **14 07 30.2 -0.3**
N48A Decatur 76.04 311 P **P** **14 07 32.0 +1.8**
baz=51,SNR=24
O49A Covington 76.05 310 P **P** **14 07 30.4 +0.1**
O49A IAMs_20 IAMs_20 14 41 45.5
comp=Z,7µm,19.0s
O49A Covington 76.05 310 P **P** **14 07 31.1 +0.8**
baz=52,SNR=22
PRP Porcupine Dome 76.05 354 P **P** **14 07 29.9 -0.2**
PRP IAMs_20 IAMs_20 14 40 10.6
comp=Z,10µm,22.0s
L46A Eue Claire 76.06 313 IAMs_20 IAMs_20 14 38 59.9
comp=Z,13µm,22.0s
P50A Jamestown 76.08 310 P **P** **14 07 32.8 +2.3**
baz=52,SNR=18
M47A Cromwell 76.08 312 P **P** **14 07 33.1 +2.6**
baz=51
CBYP Canovanas 76.15 282 P **P** **14 07 30.1 -1.2**
R52A Catlettsburg 76.15 308 P **P** **14 07 33.3 +2.4**
baz=52
G40A Rib Lake 76.16 317 P **P** **14 07 29.9 -1.0**
Q51A Peebles 76.16 309 P **P** **14 07 30.5 -0.5**
Q51A IAmb IAmb 14 07 39.0
comp=Z,122nm,1.1s
Q51A Peebles 76.16 309 P **P** **14 07 33.5 +2.5**
baz=52,SNR=22
S53A Williamson 76.23 307 P **P** **14 07 34.0 +2.6**
baz=52,SNR=5.9
T54A Tazewell 76.26 306 P **P** **14 07 33.9 +2.2**
baz=52,SNR=15
U55A TA2, Sparta 76.26 306 P **P** **14 07 33.7 +2.0**
baz=52,SNR=28
MLSI Meulaboh, Aceh 76.29 95 P **P** **14 07 31.2 -0.8**
comp=Z,3µmcomp=Z,237nm,0.9s
X58A Rowland 76.32 303 IAMs_20 IAMs_20 14 39 17.3
comp=Z,8µm,21.0s
X58A Rowland 76.32 303 P **P** **14 07 35.1 +3.1**
baz=53
V56A Mocksville 76.33 305 P **P** **14 07 34.5 +2.5**
baz=53
I42A Draeger Farm, 76.35 315 P **P** **14 07 31.5 -0.5**
I42A IAmb IAmb 14 07 39.0
comp=Z,322nm,1.9s
I42A IAMs_20 IAMs_20 14 39 13.4
comp=Z,8µm,20.0s
Y59A Loris 76.36 302 IAMs_20 IAMs_20 14 44 22.1
comp=Z,7µm,19.0s
EGAK Eagle 76.36 352 P **P** **14 07 31.6 -0.1**
W57A Gilead 76.39 304 P **P** **14 07 32.1 -0.3**
W57A IAmb IAmb 14 07 39.2
comp=Z,148nm,1.6s
W57A IAMs_20 IAMs_20 14 38 55.1
comp=Z,11µm,22.0s
W57A Gilead 76.39 304 P **P** **14 07 34.8 +2.5**
baz=53
N47A Urbana 76.42 311 P **P** **14 07 31.7 -0.8**
N47A Urbana 76.42 311 P **P** **14 07 33.6 +1.1**
baz=51,SNR=18
SJG San Juan 76.47 282 P **P** **14 07 32.1 -0.9**
SJG pmax pmax
comp=Z,82nm,1.1s
SJG San Juan 76.47 282 eP **P** **14 07 35.6 +2.6**
SJG San Juan 76.47 282 P **P** **14 07 32.1 -0.9**
O48A Farmland 76.50 311 P **P** **14 07 34.3 +1.4**
baz=51,SNR=24
IGPR InterUniversit 76.52 282 P **P** **14 07 32.8 -0.5**
EMPR Esperanza - Ma 76.55 283 P **P** **14 07 31.3 -2.2**
EMPR IAmb IAmb 14 07 45.6
comp=Z,138nm,0.9s
POKR Poker Plat Res 76.59 355 P **P** **14 07 34.1 +1.2**
baz=9.8,SNR=30
Q50A Georgetown 76.66 309 P **P** **14 07 35.9 +2.1**
baz=52
P49A Miami Univ. Ec 76.68 310 P **P** **14 07 34.5 +0.5**
baz=51,SNR=5.4
U54A Nelsons Funny 76.74 306 IAMs_20 IAMs_20 14 42 28.6
comp=Z,9µm,19.0s
U54A Nelsons Funny 76.74 306 P **P** **14 07 37.2 +2.8**
baz=52,SNR=17
R51A Hillsboro 76.76 308 P **P** **14 07 35.8 +1.5**
baz=52,SNR=22
V55A Taylorsville 76.76 305 P **P** **14 07 37.5 +3.1**
baz=52,SNR=11
W56A Indian Trail 76.79 304 P **P** **14 07 37.2 +2.6**
baz=52
K43A Burlington 76.79 314 IAMs_20 IAMs_20 14 41 19.0
comp=Z,11µm,18.0s
AOPR Arecibo Observ 76.80 283 P **P** **14 07 34.5 -0.4**
AOPR IAmb IAmb 14 07 50.1
comp=Z,139nm,1.2s
MDM Murphy Dome 76.81 355 P **P** **14 07 33.1 -1.1**
MDM IAmb IAmb 14 07 44.9
comp=Z,91nm,1.0s
NJ2 Nanjing 76.82 60 eP **P** **14 07 33.5 -1.3**
NJ2 pP **pP** **14 07 39.5 0.0**
NJ2 PcP **PcP** **14 07 46.0 0.0**
NJ2 S **S** **14 17 21.5 -0.4**
NJ2 SS **SS** **14 22 18.0 +0.6**
NJ2 pmax pmax
comp=Z,52nm,1.1s
NJ2 pmax pmax
comp=Z,960nm,4.3s
NJ2 LR LR
comp=Z,8µm,20.4s
NJ2 LR LR
comp=Z,13µm,17.1s
NJ2 LR LR
comp=Z,10µm,15.6s
UBPT Khong Chiam 76.82 81 P **P** **14 07 33.4 -1.6**
S52A Salyersville 76.83 308 P **P** **14 07 36.7 +1.9**
baz=52,SNR=21
OBIP Obispado Ponce 76.86 283 P **P** **14 07 33.8 -1.5**
OBIP IAmb IAmb 14 07 51.6
comp=Z,247nm,1.4s
COLA College 76.86 355 P **P** **14 07 34.0 -0.4**
COLA pmax pmax
comp=Z,151nm,1.7s
COLA College 76.86 355 P **P** **14 07 34.0 -0.4**
COLA IAmb IAmb 14 08 22.6
comp=Z,151nm,1.7s
COLA College 76.86 355 IAMs_20 IAMs_20 14 40 21.1
comp=Z,9µm,22.0s
TCOL CIGO, UAF Yank 76.86 355 P **P** **14 07 36.4 +1.9**
baz=9.4,SNR=13
X57A Johnson Farm, 76.88 303 P **P** **14 07 38.3 +3.2**
baz=53
MLY Manley 76.88 356 P **P** **14 07 34.8 +0.1**
MLY IAmb IAmb 14 07 46.8
comp=Z,109nm,1.2s
MLY IAMs_20 IAMs_20 14 40 18.6
comp=Z,11µm,21.0s
L44A Lake County Fo 76.89 314 P **P** **14 07 33.7 -1.3**
L44A Lake County Fo 76.89 314 P **P** **14 07 37.5 +2.5**
baz=50
IL31 76.89 354 P **P** **14 07 34.6 0.0**
ILAR Eielson Array 76.89 354 P **P** **14 07 35.6 +0.9**
comp=Z,10nm,0.8s,baz=350,slow=2.8,SNR=50
ILAR PKKPbc **PKKPbc** **14 26 45.2 +2.0**
comp=Z,0.2nm,0.5s,baz=209,slow=1.9,SNR=4.4
ILAR PKPPKP 14 34 47.8
comp=Z,1.0nm,0.9s,baz=202,slow=3.9,SNR=5.3
T53A Wise 76.91 307 P **P** **14 07 37.9 +2.5**
baz=52
Y58A Scranton 76.93 303 IAMs_20 IAMs_20 14 45 09.4
comp=Z,8µm,19.0s
Y58A Scranton 76.93 303 P **P** **14 07 38.1 +2.7**
baz=53
BIRD Birdtown, Kers 77.01 304 IAMs_20 IAMs_20 14 38 49.3
comp=Z,13µm,22.0s
AGMN Agassiz Nation 77.02 322 P **P** **14 07 34.9 -0.8**
AGMN IAmb IAmb 14 07 42.5
comp=Z,220nm,1.9s
AGMN Agassiz Nation 77.02 322 P **P** **14 07 37.4 +1.7**
baz=46
CCB Clear Creek Bu 77.08 355 P **P** **14 07 35.4 -0.3**
T52A Hallie 77.12 307 IAMs_20 IAMs_20 14 40 37.1
comp=Z,9µm,22.0s
T52A Hallie 77.12 307 P **P** **14 07 39.1 +2.6**
baz=52
Q49A Aurora 77.12 310 P **P** **14 07 38.9 +2.5**
baz=51
P48A Milroy 77.16 310 P **P** **14 07 35.8 -0.8**
P48A IAmb IAmb 14 07 42.8
comp=Z,323nm,1.8s
P48A IAMs_20 IAMs_20 14 40 07.9
comp=Z,12µm,20.0s
P48A Milroy 77.16 310 P **P** **14 07 38.5 +1.9**
baz=51,SNR=17
S51A Beattyville 77.17 308 P **P** **14 07 39.4 +2.7**
baz=52
R50A Paris 77.23 309 P **P** **14 07 37.2 +0.2**
R50A IAmb IAmb 14 07 43.7
comp=Z,257nm,1.8s
R50A Paris 77.23 309 P **P** **14 07 39.3 +2.3**
baz=51,SNR=6.3
NEA Nenana 77.24 355 IAMs_20 IAMs_20 14 40 29.6
comp=Z,9µm,22.0s
MLPR Magueyes Islan 77.24 283 P **P** **14 07 37.4 0.0**
MLPR IAmb IAmb 14 07 46.2
comp=Z,285nm,1.6s
HDA Harding Lake 77.26 354 P **P** **14 07 36.5 -0.3**
HDA IAmb IAmb 14 07 46.3
comp=Z,115nm,0.9s
HDA Harding Lake 77.26 354 P **P** **14 07 37.3 +0.6**
baz=10,SNR=46
KMSC Kings Mountain 77.27 305 P **P** **14 07 36.7 -0.6**
KMSC IAmb IAmb 14 07 44.5
comp=Z,242nm,1.8s
KMSC IAMs_20 IAMs_20 14 39 32.3
comp=Z,7µm,21.0s
KMSC Kings Mountain 77.27 305 P **P** **14 07 40.0 +2.7**
baz=52
USA0B Ussuriysk Arra 77.28 43 P **P** **14 07 36.3 -0.9**
USA0B pmax pmax
comp=Z,205nm,1.2s
USA0B MLR MLR
comp=Z,21µm,19.0s
USA0B Ussuriysk Arra 77.28 43 P **P** **14 07 36.3 -0.9**
USA0B IAmb IAmb 14 07 44.3
comp=Z,205nm,1.1s
USRK Ussuriysk Ar. 77.28 43 P **P** **14 07 36.5 -0.6**
comp=Z,36nm,0.8s,baz=302,slow=3.7,SNR=30
WRH Wood River Hil 77.28 355 P **P** **14 07 36.7 -0.1**
WRH IAmb IAmb 14 07 46.5
comp=Z,106nm,0.8s
V54A Nebo 77.28 306 P **P** **14 07 40.2 +2.8**
baz=52,SNR=18
I40A Norwalk 77.29 316 P **P** **14 07 35.7 -1.5**
I40A IAMs_20 IAMs_20 14 39 57.1
comp=Z,8µm,21.0s
U53A Fall Branch 77.32 306 P **P** **14 07 40.3 +2.7**
baz=52,SNR=6.1
Y57A Sumter 77.34 303 IAMs_20 IAMs_20 14 43 25.2
comp=Z,10µm,19.0s
Y57A Sumter 77.34 303 P **P** **14 07 41.3 +3.6**
baz=52
Z58A St. Stephen 77.37 302 P **P** **14 07 41.5 +3.6**
baz=52
SCRK Sand Creek 77.43 353 P **P** **14 07 38.1 +0.3**
SCRK IAmb IAmb 14 07 50.0
comp=Z,222nm,1.8s
M44A Midewin, Midew 77.47 313 P **P** **14 07 37.8 -0.5**
M44A IAmb IAmb 14 07 45.6
comp=Z,165nm,1.3s
M44A IAMs_20 IAMs_20 14 41 49.1
comp=Z,10µm,19.0s
X56A White Oak 77.47 304 P **P** **14 07 41.5 +3.0**
baz=52,SNR=12
ANM Nome 77.48 3 P **P** **14 07 37.8 -0.1**
ANM pmax pmax
comp=Z,143nm,1.4s
ANM MLR MLR
comp=Z,19µm,21.0s
ANM Nome 77.48 3 P **P** **14 07 37.8 -0.1**
ANM IAmb IAmb 14 07 46.9
comp=Z,143nm,1.4s
TPTI 77.52 96 P **P** **14 07 39.4 +0.4**
comp=Z,498nmcomp=Z,42nm,0.8s
SFIN Lafayette 77.57 312 P **P** **14 07 37.2 -1.7**
SFIN Lafayette 77.57 312 P **P** **14 07 40.4 +1.5**
baz=50,SNR=16
SPMN Marine on St. 77.57 318 P **P** **14 07 37.4 -1.4**
SPMN IAmb IAmb 14 07 46.5
comp=Z,138nm,1.2s
SPMN Marine on St. 77.57 318 P **P** **14 07 41.6 +2.8**
baz=48,SNR=17
S50A Richmond 77.65 308 P **P** **14 07 41.7 +2.4**
baz=51,SNR=7.0
BWN Browne 77.67 356 IAMs_20 IAMs_20 14 47 16.0
comp=Z,7µm,20.0s
Q48A North Vernon 77.67 310 P **P** **14 07 41.1 +1.6**
baz=51,SNR=30
JFWS Jewell Farm 77.73 315 P **P** **14 07 39.4 -0.3**
JFWS pmax pmax
comp=Z,358nm,1.9s
JFWS MLR MLR
comp=Z,7µm,18.0s
JFWS Jewell Farm 77.73 315 P **P** **14 07 39.4 -0.3**
JFWS Jewell Farm 77.73 315 IAMs_20 IAMs_20 14 43 15.7
comp=Z,7µm,18.0s
JFWS Jewell Farm 77.73 315 P **P** **14 07 40.9 +1.2**
baz=49,SNR=18
R49A Shelbyville 77.74 309 P **P** **14 07 40.1 +0.2**
R49A IAMs_20 IAMs_20 14 42 42.3
comp=Z,12µm,19.0s
R49A Shelbyville 77.74 309 P **P** **14 07 42.3 +2.4**
baz=51,SNR=22
RIDG Independent Ri 77.74 353 P **P** **14 07 39.8 +0.2**
RIDG IAmb IAmb 14 07 51.3
comp=Z,114nm,1.1s
NHSC New Hope 77.75 302 IAMs_20 IAMs_20 14 44 54.2
comp=Z,8µm,19.0s
NHSC New Hope 77.75 302 P **P** **14 07 44.0 +4.0**
baz=52
DOT Dot Lake 77.76 353 P **P** **14 07 39.6 0.0**
DOT IAmb IAmb 14 07 47.3
comp=Z,205nm,1.6s
PAULI Pauline 77.78 305 P **P** **14 07 39.2 -0.9**
PAULI IAmb IAmb 14 07 47.2
comp=Z,259nm,1.8s
PAULI IAMs_20 IAMs_20 14 39 59.8
comp=Z,7µm,22.0s
U52A Thorn Hill 77.80 307 P **P** **14 07 42.9 +2.6**
baz=51
T51A Gray 77.81 307 P **P** **14 07 42.9 +2.6**
baz=51,SNR=16
TZTN Tazewell 77.82 307 IAMs_20 IAMs_20 14 45 44.8
comp=Z,9µm,20.0s
TZTN Tazewell 77.82 307 P **P** **14 07 43.4 +3.0**
baz=51,SNR=13
BPAW Bear Paw Mtn. 77.83 356 P **P** **14 07 39.7 -0.2**
BPAW IAMs_20 IAMs_20 14 40 36.5
comp=Z,10µm,22.0s
TYV Tymovskoe 77.84 33 eP **P** **14 07 40.2 0.0**
TYV pmax pmax
comp=Z,17nm,0.9s
W54A Cherokee Point 77.86 305 P **P** **14 07 43.5 +2.9**
baz=52
X55A Gracelyn & Ava 77.88 304 P **P** **14 07 44.0 +3.3**
baz=52,SNR=13
MSHR Mys Shultsa 77.89 45 eP **P** **14 07 42.1 +1.5**
V53A Saluda 77.90 306 IAMs_20 IAMs_20 14 44 14.8
comp=Z,9µm,19.0s
V53A Saluda 77.90 306 P **P** **14 07 43.5 +2.6**
baz=52,SNR=6.4
GAMB Gambell 77.91 6 P **P** **14 07 40.0 -0.3**
GAMB IAmb IAmb 14 07 48.2
comp=Z,194nm,1.6s
VLA Vladivostok 77.93 44 eP **P** **14 07 40.3 -0.5**
VLA pmax pmax
comp=Z,88nm,1.4s
VLA MLR MLR
comp=Z,17µm,16.0s
QIZ Qiongzhong 77.98 75 P **P** **14 07 41.5 0.0**
QIZ sP **pP** **14 07 44.5 -1.7**
QIZ S **S** **14 17 33.5 -1.5**
QIZ ScS **ScS** **14 18 00.0 -1.0**
QIZ SS **SS** **14 22 32.0 -3.7**
QIZ pmax pmax
comp=Z,110nm,1.0s
QIZ LR LR
comp=Z,6µm,26.3s
QIZ LR LR
comp=Z,6µm,17.1s
QIZ LR LR
comp=Z,5µm,33.3s
QIZ Qiongzhong 77.98 75 P **P** **14 07 40.8 -0.8**
Z57A Bowman 77.99 303 P **P** **14 07 44.7 +3.3**
baz=52
BLO Bloomington 78.00 311 P **P** **14 07 40.8 -0.5**
BLO pmax pmax
comp=Z,662nm,1.8s
BLO Bloomington 78.00 311 P **P** **14 07 40.8 -0.5**
BLO IAMs_20 IAMs_20 14 40 41.1
comp=Z,12µm,21.0s
L42A Oliver, Polo 78.00 314 P **P** **14 07 40.9 -0.4**
L42A IAmb IAmb 14 07 49.2
comp=Z,85nm,0.9s
L42A IAMs_20 IAMs_20 14 42 05.0
comp=Z,10µm,18.0s
MCK McKinley 78.07 355 P **P** **14 07 41.0 -0.3**
MCK pmax pmax
comp=Z,112nm,1.1s
MCK MLR MLR
comp=Z,9µm,20.0s
MCK McKinley 78.07 355 P **P** **14 07 41.0 -0.3**
MCK IAmb IAmb 14 07 48.0
comp=Z,112nm,1.1s
MCK IAMs_20 IAMs_20 14 44 11.9
comp=Z,9µm,20.0s
Y56A Pelion 78.08 304 P **P** **14 07 45.1 +3.3**
baz=52
P46A Rosedale 78.12 311 P **P** **14 07 41.5 -0.4**
P46A IAmb IAmb 14 07 49.1
comp=Z,96nm,0.8s
S49A Springfield 78.13 309 P **P** **14 07 44.2 +2.1**
baz=51,SNR=14
GZH Guangzhou 78.22 70 P **P** **14 07 42.5 -0.3**
GZH S **S** **14 17 38.8 +1.4**
GZH LR LR
comp=Z,7µm,16.9s
GZH LR LR
comp=Z,8µm,17.1s
U51A La Follette 78.22 307 P **P** **14 07 44.7 +2.0**
baz=51,SNR=24
V52A Sevierville 78.29 306 P **P** **14 07 42.6 -0.4**
V52A IAmb IAmb 14 07 49.8
comp=Z,186nm,1.8s
V52A IAMs_20 IAMs_20 14 43 17.2
comp=Z,11µm,19.0s
V52A Sevierville 78.29 306 P **P** **14 07 45.3 +2.3**
baz=51,SNR=6.2
X54A Belton 78.31 305 P **P** **14 07 46.3 +3.1**
baz=52,SNR=5.4
T50A Nancy 78.33 308 P **P** **14 07 45.3 +2.1**
baz=51,SNR=20
Y55A Saluda 78.35 304 P **P** **14 07 46.0 +2.6**
baz=52
KTH Kantishna Hill 78.37 356 P **P** **14 07 42.9 -0.1**
KTH IAMs_20 IAMs_20 14 41 04.8
comp=Z,10µm,21.0s
RND Reindeer 78.39 355 P **P** **14 07 42.7 -0.4**
RND pmax pmax
comp=Z,35nm,0.8s
RND MLR MLR
comp=Z,10µm,21.0s
RND Reindeer 78.39 355 P **P** **14 07 42.7 -0.4**
RND IAMs_20 IAMs_20 14 44 31.3
comp=Z,10µm,21.0s
BG3 Lake Jocassee 78.39 305 P **P** **14 07 43.1 -0.5**
Z56A Williston 78.41 303 IAMs_20 IAMs_20 14 43 56.5
comp=Z,10µm,20.0s
MENT Mentasta 78.42 353 P **P** **14 07 43.1 -0.2**
HODGE Hodges 78.43 304 IAMs_20 IAMs_20 14 40 07.0
comp=Z,9µm,22.0s
TRF Thorofare Moun 78.43 356 P **P** **14 07 43.8 +0.3**
TRF IAMs_20 IAMs_20 14 44 39.5
comp=Z,10µm,20.0s
W53A Cullowhee 78.43 306 P **P** **14 07 46.7 +2.8**
baz=51
WCI Wyandotte Cave 78.46 310 P **P** **14 07 43.4 -0.5**
WCI pmax pmax
comp=Z,540nm,1.8s
WCI Wyandotte Cave 78.46 310 P **P** **14 07 43.4 -0.5**
WCI Wyandotte Cave 78.46 310 IAMs_20 IAMs_20 14 40 49.5
comp=Z,8µm,21.0s
WCI Wyandotte Cave 78.46 310 P **P** **14 07 45.4 +1.6**
baz=50
O44A Mansfield 78.52 312 P **P** **14 07 43.6 -0.5**
O44A IAmb IAmb 14 07 51.6
comp=Z,133nm,1.1s
TKL Tuckaleechee C 78.52 306 P **P** **14 07 44.7 +0.4**
TKL pmax pmax
comp=Z,78nm,1.2s
TKL MLR MLR
comp=Z,9µm,20.0s
TKL Tuckaleechee C 78.52 306 P **P** **14 07 44.6 +0.4**
TKL IAMs_20 IAMs_20 14 41 34.2
comp=Z,9µm,20.0s
INCN Inchon 78.52 51 P **P** **14 07 42.2 -2.1**
INCN pmax pmax
comp=Z,182nm,1.3s
INCN MLR MLR
comp=Z,13µm,19.0s
INCN Inchon 78.52 51 P **P** **14 07 42.2 -2.1**
INCN IAmb IAmb 14 07 51.6
comp=Z,182nm,1.2s
PAX Paxson 78.56 354 P **P** **14 07 44.6 +0.5**
PAX pmax pmax
comp=Z,26nm,1.0s
PAX MLR MLR
comp=Z,8µm,22.0s

PAX	**Paxson**	**78.56**	**354**	P		**P**		**14 07 44.6**	**+0.5**
PAX				IAMs_20		IAMs_20		14 43 51.7	
	comp=Z,8µm,22.0s								
T49A	**Edmonton**	**78.71**	**308**	P		**P**		**14 07 44.4**	**-0.9**
T49A				IAmb		IAmb		14 07 52.2	
	comp=Z,360nm,1.8s								
T49A	**Edmonton**	**78.71**	**308**	P		**P**		**14 07 46.5**	**+1.2**
	baz=50,SNR=22								
U50A	**Jamestown**	**78.72**	**308**	P		**P**		**14 07 48.2**	**+2.8**
	baz=51,SNR=17								
HDIL	**Hopedale**	**78.73**	**313**	P		**P**		**14 07 44.2**	**-1.1**
HDIL				IAMs_20		IAMs_20		14 42 28.5	
	comp=Z,9µm,19.0s								
HDIL	**Hopedale**	**78.73**	**313**	P		**P**		**14 07 47.8**	**+2.5**
	baz=49,SNR=16								
V51A	**Loudon**	**78.79**	**307**	P		**P**		**14 07 44.5**	**-1.2**
V51A				IAmb		IAmb		14 07 53.0	
	comp=Z,278nm,1.7s								
V51A				IAMs_20		IAMs_20		14 46 24.4	
	comp=Z,10µm,18.0s								
V51A	**Loudon**	**78.79**	**307**	P		**P**		**14 07 48.6**	**+2.8**
	baz=51,SNR=5.7								
L40A	**Anamosa**	**78.83**	**315**	P		**P**		**14 07 45.3**	**-0.6**
L40A				IAmb		IAmb		14 07 53.1	
	comp=Z,152nm,1.0s								
L40A				IAMs_20		IAMs_20		14 40 28.9	
	comp=Z,8µm,22.0s								
X53A	**Estanollee**	**78.94**	**305**	P		**P**		**14 07 49.2**	**+2.6**
	baz=51								
Y54A	**Tignall**	**78.94**	**304**	P		**P**		**14 07 49.4**	**+2.8**
	baz=51,SNR=18								
W52A	**Murphy**	**78.97**	**306**	IAMs_20		IAMs_20		14 44 58.2	
	comp=Z,6µm,19.0s								
W52A	**Murphy**	**78.97**	**306**	P		**P**		**14 07 49.2**	**+2.4**
	baz=51,SNR=5.5								
SSE	**Sheshan**	**78.98**	**59**	P		**P**		**14 07 46.5**	**-0.3**
SSE				S		**S**		**14 17 48.5**	**+3.2**
SSE				pmax		pmax			
	comp=Z,20nm,1.0s								
SSE				pmax		pmax			
	comp=Z,410nm,4.7s								
SSE				LR		LR			
	comp=Z,5µm,15.1s								
SSE				LR		LR			
	comp=Z,5µm,18.3s								
SSE	**Sheshan**	**78.98**	**59**	P		**P**		**14 07 45.1**	**-1.7**
SSE				IAmb		IAmb		14 07 53.5	
	comp=Z,170nm,1.2s								
SSE	**Sheshan**	**78.98**	**59**	IAMs_20		IAMs_20		14 46 14.8	
	comp=Z,8µm,18.0s								
KULM	**Kulim**	**79.00**	**92**	P		**P**		**14 07 46.0**	**-1.3**
KULM				IAmb		IAmb		14 07 54.4	
	comp=Z,111nm,1.0s								
KULM	**Kulim**	**79.00**	**92**	P		**P**		**14 07 48.0**	**+0.8**
GSI	**Gunungsitoli**	**79.03**	**97**	P		**P**		**14 07 47.7**	**+0.3**
	comp=Z,3µmcomp=Z,148nm,0.7s								
GSI	**Gunungsitoli**	**79.03**	**97**	P		**P**		**14 07 46.2**	**-1.1**
GSI				IAmb		IAmb		14 07 55.3	
	comp=Z,185nm,1.1s								
PPLA	**Purkeypile**	**79.08**	**357**	P		**P**		**14 07 46.9**	**-0.2**
PPLA				IAMs_20		IAMs_20		14 44 49.8	
	comp=Z,10µm,20.0s								
MDND	**Maddock**	**79.11**	**324**	P		**P**		**14 07 46.7**	**-0.7**
MDND				IAMs_20		IAMs_20		14 41 12.1	
	comp=Z,12µm,22.0s								
MDND	**Maddock**	**79.11**	**324**	P		**P**		**14 07 49.6**	**+2.3**
	baz=44								
CPCT	**Cooper Cave**	**79.12**	**307**	P		**P**		**14 07 46.8**	**-0.8**
CPCT				IAmb		IAmb		14 07 54.8	
	comp=Z,313nm,1.7s								
CPCT				IAMs_20		IAMs_20		14 43 42.2	
	comp=Z,10µm,19.0s								
TEY	**Ternei**	**79.14**	**40⇑**	*e*P		**P**		**14 07 46.6**	**-0.8**
TEY				*e*				14 07 52.6	
TEY				*e*				14 17 40.9	
TEY				pmax		pmax			
	comp=Z,40nm,0.6s								
TEY				MLR		MLR			
	comp=N,1µm,15.0s								
TEY				MLR		MLR			
	comp=E,900nm,15.0s								
TEY				MLR		MLR			
	comp=Z,900nm,17.0s								
SDD	**Santo Domingo**	**79.15**	**285**	IAMs_20		IAMs_20		14 36 29.2	
	comp=Z,11µm,22.0s								
PSI	**Prapat**	**79.17**	**95**	P		**P**		**14 07 46.9**	**-1.4**
PSI				pmax		pmax			
	comp=Z,174nm,1.2s								
PSI				MLR		MLR			
	comp=Z,6µm,22.0s								
TTA	**Tatalina**	**79.18**	**358**	P		**P**		**14 07 47.9**	**+0.4**
TTA	**Tatalina**	**79.18**	**358**	P		**P**		**14 07 47.9**	**+0.4**
OLIL	**Olney**	**79.22**	**311**	P		**P**		**14 07 47.7**	**-0.3**
OLIL				IAmb		IAmb		14 07 55.8	
	comp=Z,127nm,1.0s								
OLIL				IAMs_20		IAMs_20		14 40 41.5	
	comp=Z,12µm,22.0s								
RPSI	**Rantau Prapat**	**79.23**	**95**	P		**P**		**14 07 46.9**	**-1.5**
RPSI				IAmb		IAmb		14 07 55.6	
	comp=Z,174nm,1.2s								
U49A	**Red Boiling Sp**	**79.24**	**308**	P		**P**		**14 07 50.8**	**+2.6**
	baz=50,SNR=44								
X52A	**Dahlonega**	**79.26**	**306**	P		**P**		**14 07 51.0**	**+2.7**
	baz=51,SNR=19								
KS19	**Wonju Array Si**	**79.27**	**51**	P		**P**		**14 07 47.4**	**-1.0**
KS19				IAmb		IAmb		14 07 56.9	
	comp=Z,194nm,1.1s								
HKPS	**Hong Kong Po S**	**79.29**	**70**	P		**P**		**14 07 48.0**	**-0.7**
HKPS				IAmb		IAmb		14 07 56.8	
	comp=Z,158nm,1.0s								
HKPS				IAMs_20		IAMs_20		14 46 08.9	
	comp=Z,8µm,22.0s								
KSRS	**Korea Array**	**79.33**	**51**	P		**P**		**14 07 47.9**	**-0.7**
	comp=Z,19nm,0.6s,baz=312,slow=4.8,SNR=53								
V50A	**Pikevile**	**79.35**	**307**	P		**P**		**14 07 51.0**	**+2.2**
	baz=50,SNR=34								
Z54A	**Sparta**	**79.43**	**304**	P		**P**		**14 07 51.8**	**+2.5**
	baz=51								
WHY	**Whitehorse**	**79.45**	**348**	P		**P**		**14 07 48.5**	**-0.6**
W51A	**Cleveland**	**79.46**	**306**	P		**P**		**14 07 52.2**	**+2.8**
	baz=50,SNR=19								
USIN	**University of**	**79.46**	**310**	P		**P**		**14 07 48.2**	**-1.2**
USIN				IAmb		IAmb		14 07 57.0	
	comp=Z,142nm,1.1s								
P43A	**Skaggs, Pawnee**	**79.46**	**312**	P		**P**		**14 07 48.2**	**-1.1**
P43A				IAMs_20		IAMs_20		14 41 04.9	
	comp=Z,12µm,22.0s								
N41A	**Harden Midland**	**79.52**	**314**	P		**P**		**14 07 48.8**	**-0.9**
Y53A	**Monroe**	**79.53**	**305**	P		**P**		**14 07 52.7**	**+2.8**
	baz=51,SNR=17								
155A	**Kite**	**79.57**	**303**	P		**P**		**14 07 53.1**	**+3.0**
	baz=51								
TJN	**Taejon**	**79.68**	**52**	*e*P		**P**		**14 07 49.5**	**-1.1**
GOGA	**Godfrey**	**79.73**	**304**	P		**P**		**14 07 50.4**	**-0.5**
GOGA				pmax		pmax			
	comp=Z,139nm,1.4s								
GOGA	**Godfrey**	**79.73**	**304**	P		**P**		**14 07 50.4**	**-0.5**
GOGA	**Godfrey**	**79.73**	**304**	IAMs_20		IAMs_20		14 40 34.3	
	comp=Z,9µm,22.0s								
GOGA	**Godfrey**	**79.73**	**304**	P		**P**		**14 07 53.9**	**+3.0**
	baz=51								
T47A	**Sharon Grove**	**79.75**	**309**	P		**P**		**14 07 49.9**	**-1.1**
T47A				IAMs_20		IAMs_20		14 42 53.6	
	comp=Z,9µm,21.0s								
W50A	**Signal Mountai**	**79.78**	**307**	P		**P**		**14 07 50.5**	**-0.8**
W50A				IAMs_20		IAMs_20		14 43 04.6	
	comp=Z,12µm,20.0s								
W50A	**Signal Mountai**	**79.78**	**307**	P		**P**		**14 07 54.0**	**+2.8**
	baz=50,SNR=32								
V49A	**McMinnville**	**79.79**	**308**	P		**P**		**14 07 53.0**	**+1.8**
	baz=50,SNR=25								
IPM	**Ipoh**	**79.79**	**92**	P		**P**		**14 07 49.5**	**-2.0**
IPM	**Ipoh**	**79.79**	**92**	P		**P**		**14 07 52.0**	**+0.5**
Y52A	**Lilburn**	**79.83**	**305**	P		**P**		**14 07 51.8**	**+0.4**
Y52A	**Lilburn**	**79.83**	**305**	P		**P**		**14 07 54.3**	**+2.8**
	baz=51,SNR=18								
SCM	**Sheep Creek Mo**	**79.83**	**354**	P		**P**		**14 07 51.4**	**+0.3**
SCM				pmax		pmax			
	comp=Z,112nm,1.1s								
SCM				MLR		MLR			
	comp=Z,6µm,20.0s								
SCM	**Sheep Creek Mo**	**79.83**	**354**	P		**P**		**14 07 51.4**	**+0.3**
CLTN	**Cedars of Leba**	**79.85**	**308**	P		**P**		**14 07 50.2**	**-1.3**
CLTN				IAmb		IAmb		14 07 58.5	
	comp=Z,344nm,1.8s								
CLTN				IAMs_20		IAMs_20		14 43 51.3	
	comp=Z,7µm,20.0s								
MCARA	**McCarthy VSAT**	**79.87**	**352**	P		**P**		**14 07 51.3**	**+0.1**
SDDR	**Presa de Saban**	**79.88**	**286**	P		**P**		**14 07 51.6**	**-0.4**
SDDR				IAmb		IAmb		14 08 14.0	
	comp=Z,138nm,1.1s								
SDDR				IAMs_20		IAMs_20		14 39 22.4	
	comp=Z,7µm,21.0s								
Z53A	**Monticello**	**79.88**	**304**	P		**P**		**14 07 54.5**	**+2.8**
	baz=51,SNR=16								
X51A	**Calhoun**	**79.89**	**306**	IAMs_20		IAMs_20		14 47 19.7	
	comp=Z,7µm,18.0s								
X51A	**Calhoun**	**79.89**	**306**	P		**P**		**14 07 54.3**	**+2.5**
	baz=50								
GLB	**Gilahina Butte**	**79.90**	**352**	IAMs_20		IAMs_20		14 43 26.2	
	comp=Z,9µm,22.0s								
SML	**Sawmill**	**79.94**	**355**	P		**P**		**14 07 51.6**	**0.0**
154A	**Montrose**	**80.00**	**304**	P		**P**		**14 07 55.7**	**+3.4**
	baz=51								
255A	**Hazlehurst**	**80.01**	**303**	IAMs_20		IAMs_20		14 46 41.8	
	comp=Z,6µm,20.0s								
255A	**Hazlehurst**	**80.01**	**303**	P		**P**		**14 07 55.9**	**+3.5**
	baz=51								
GHO	**Glory Hole Cre**	**80.02**	**355**	P		**P**		**14 07 51.5**	**-0.6**
GHO				IAMs_20		IAMs_20		14 48 52.4	
	comp=Z,6µm,20.0s								
BARN	**Barnard Glacie**	**80.03**	**351**	P		**P**		**14 07 52.8**	**+0.5**
SCIA	**State Center**	**80.03**	**316**	IAMs_20		IAMs_20		14 41 39.7	
	comp=Z,7µm,21.0s								
VRDI	**Verde Repeater**	**80.07**	**352**	P		**P**		**14 07 51.5**	**-1.0**
CTGM	**Chitina Glacie**	**80.08**	**351**	P		**P**		**14 07 53.0**	**+0.5**
CTGM				IAMs_20		IAMs_20		14 44 16.1	
	comp=Z,7µm,22.0s								
BALM	**Baldy**	**80.13**	**352**	P		**P**		**14 07 53.2**	**+0.5**
BALM				IAMs_20		IAMs_20		14 42 56.4	
	comp=Z,9µm,22.0s								
SWET	**Sewanee**	**80.16**	**307**	P		**P**		**14 07 53.7**	**+0.4**
SWET				IAmb		IAmb		14 07 60.0	
	comp=Z,207nm,1.8s								
PMR	**Palmer**	**80.21**	**355**	P		**P**		**14 07 53.3**	**+0.4**
PMR				pmax		pmax			
	comp=Z,168nm,1.6s								
PMR	**Palmer**	**80.21**	**355**	P		**P**		**14 07 53.3**	**+0.4**
KNK	**Knik Glacier**	**80.34**	**355**	P		**P**		**14 07 53.8**	**+0.1**
KNK				IAMs_20		IAMs_20		14 45 44.9	
	comp=Z,7µm,21.0s								
V48A	**Smith Brothers**	**80.38**	**308**	P		**P**		**14 07 53.9**	**-0.5**
V48A				IAmb		IAmb		14 08 01.1	
	comp=Z,244nm,1.6s								
FPAL	**Fort Paine**	**80.39**	**306**	P		**P**		**14 07 53.5**	**-1.0**
W49A	**Belvidere**	**80.43**	**307**	P		**P**		**14 07 56.4**	**+1.7**
	baz=50,SNR=28								
153A	**Fort Valley**	**80.45**	**304**	P		**P**		**14 07 58.7**	**+3.9**
	baz=51								
Y51A	**Rockmart**	**80.45**	**306**	P		**P**		**14 07 57.5**	**+2.7**
	baz=50,SNR=22								
TGL	**Tana Glacier**	**80.46**	**352**	P		**P**		**14 07 53.5**	**-1.0**
TGL				IAMs_20		IAMs_20		14 50 19.2	
	comp=Z,6µm,19.0s								
Z52A	**Williamson**	**80.49**	**305**	P		**P**		**14 07 57.7**	**+2.7**
	baz=50,SNR=12								
CRQM	**Cirque**	**80.50**	**352**	P		**P**		**14 07 54.7**	**-0.1**
CRQM				IAmb		IAmb		14 08 06.3	
	comp=Z,106nm,0.9s								
CRQM				IAMs_20		IAMs_20		14 43 07.0	
	comp=Z,7µm,22.0s								
254A	**Abbeville**	**80.53**	**303**	P		**P**		**14 07 58.3**	**+3.0**
	baz=51,SNR=12								
ECSD	**EROS Data Cent**	**80.57**	**319**	P		**P**		**14 07 55.6**	**+0.3**
ECSD	**EROS Data Cent**	**80.57**	**319**	IAMs_20		IAMs_20		14 45 35.9	
	comp=Z,9µm,18.0s								
ECSD	**EROS Data Cent**	**80.57**	**319**	P		**P**		**14 07 56.2**	**+0.9**
	baz=45,SNR=71								
S44A	**Carbondale**	**80.59**	**311**	P		**P**		**14 07 55.5**	**+0.1**
S44A				IAmb		IAmb		14 08 03.2	
	comp=Z,141nm,1.1s								
SKAG	**Skagway**	**80.66**	**348**	P		**P**		**14 07 56.6**	**+1.1**
DGMT	**Dagmar**	**80.73**	**326**	IAMs_20		IAMs_20		14 47 48.8	
	comp=Z,10µm,19.0s								
RC01	**Rabbit Creek A**	**80.75**	**355**	P		**P**		**14 07 56.0**	**+0.1**
RC01				IAmb		IAmb		14 08 06.3	
	comp=Z,115nm,0.8s								
WVT	**Waverly**	**80.75**	**309**	P		**P**		**14 07 55.6**	**-0.7**
WVT				pmax		pmax			
WVT				MLR		MLR			
	comp=Z,218nm,1.6s								
	comp=Z,10µm,22.0s								
WVT	**Waverly**	**80.75**	**309**	P		**P**		**14 07 55.6**	**-0.7**
WVT				IAmb		IAmb		14 08 02.5	
	comp=Z,218nm,1.6s								
WVT	**Waverly**	**80.75**	**309**	IAMs_20		IAMs_20		14 42 49.1	
	comp=Z,10µm,22.0s								
WVT	**Waverly**	**80.75**	**309**	P		**P**		**14 07 57.6**	**+1.2**
	baz=49								
YSS	**Yuzh-Sakhalins**	**80.76**	**36⇑**	*e*P		**P**		**14 07 56.3**	**+0.1**
YSS				*e**SP		**sP**		**14 08 02.5**	**-0.1**
YSS				*e*				14 11 01.7	
YSS				*e*PPP		PPP		14 12 52.0	
YSS				*e*S		**S**		**14 17 58.0**	**-5.6**
YSS				*e*				14 18 04.5	
YSS				pmax		pmax			
	comp=Z,230nm,0.7s								
YSS				pmax		pmax			
	comp=Z,2µm,3.4s								
YSS				pmax		pmax			
	comp=N,300nm,2.9s								
YSS				pmax		pmax			
	comp=E,400nm,3.5s								
YSS				MLR		MLR			
	comp=E,17µm,17.0s								
YSS	**Yuzh-Sakhalins**	**80.76**	**36**	P		**P**		**14 07 56.1**	**-0.1**
BSFB	**Barra de Sao F**	**80.78**	**237**	*e*P		**P**		**14 07 59.7**	**+3.1**
Z51A	**Franklin**	**80.89**	**305**	IAMs_20		IAMs_20		14 44 24.1	
	comp=Z,8µm,20.0s								
SJMB	**Sao Joao De Ma**	**80.91**	**238**	*e*P		**P**		**14 07 59.5**	**+2.1**
MESA	**MESA**	**80.92**	**351**	IAMs_20		IAMs_20		14 44 54.3	
	comp=Z,10µm,22.0s								
EYAK	**Cordova Ski Ar**	**80.97**	**353**	P		**P**		**14 07 56.3**	**-0.7**
EYAK				IAMs_20		IAMs_20		14 46 58.2	
	comp=Z,8µm,20.0s								
SVW2	**Sparrevohn**	**81.01**	**358**	P		**P**		**14 07 56.2**	**-1.2**
SVW2				IAMs_20		IAMs_20		14 50 55.4	
	comp=Z,11µm,20.0s								
152A	**Waverly Hall**	**81.01**	**305**	IAMs_20		IAMs_20		14 41 12.3	
	comp=Z,9µm,22.0s								
152A	**Waverly Hall**	**81.01**	**305**	P		**P**		**14 08 00.4**	**+2.6**
	baz=50,SNR=16								
253A	**Americus**	**81.01**	**304**	IAMs_20		IAMs_20		14 45 56.4	
	comp=Z,7µm,21.0s								
253A	**Americus**	**81.01**	**304**	P		**P**		**14 08 00.9**	**+3.0**
	baz=50								
RAGM	**Ragged Mountai**	**81.02**	**353**	IAMs_20		IAMs_20		14 44 10.9	
	comp=Z,10µm,22.0s								
HMT	**Hamilton**	**81.03**	**352**	IAMs_20		IAMs_20		14 44 12.2	
	comp=Z,7µm,22.0s								
TIGA	**Tifton**	**81.05**	**303**	IAMs_20		IAMs_20		14 41 37.5	
	comp=Z,7µm,21.0s								
TIGA	**Tifton**	**81.05**	**303**	P		**P**		**14 08 01.1**	**+3.0**
	baz=51								
KNMB	**Chin-men Tao**	**81.08**	**66**	P		**P**		**14 07 57.3**	**-1.0**
KNMB				IAmb		IAmb		14 08 05.6	
	comp=Z,192nm,1.1s								
FVM	**French Village**	**81.09**	**312**	P		**P**		**14 07 58.2**	**0.0**
FVM				pmax		pmax			
	comp=Z,457nm,1.7s								
FVM	**French Village**	**81.09**	**312**	P		**P**		**14 07 58.2**	**0.0**
DLV	**T Lat**	**81.15**	**82**	P		**P**		**14 07 57.7**	**-1.4**
HIN	**Hinchinbrook I**	**81.19**	**354**	IAMs_20		IAMs_20		14 49 01.3	
	comp=Z,7µm,20.0s								
SUCK	**Suckling Hills**	**81.23**	**352**	IAMs_20		IAMs_20		14 45 55.6	
	comp=Z,7µm,19.0s								
SUSD	**Miller**	**81.25**	**321**	P		**P**		**14 07 59.9**	**+1.0**
SUSD				IAMs_20		IAMs_20		14 47 39.9	
	comp=Z,9µm,18.0s								
SUSD	**Miller**	**81.25**	**321**	P		**P**		**14 08 01.1**	**+2.2**
	baz=44								
YKU2	**Yakutat**	**81.28**	**350**	IAMs_20		IAMs_20		14 46 46.6	
	comp=Z,7µm,20.0s								
JRMM	**Jerantut**	**81.30**	**92**	P		**P**		**14 07 59.0**	**-0.6**
HICK	**Hickman**	**81.33**	**310**	IAMs_20		IAMs_20		14 42 34.5	
	comp=Z,8µm,20.0s								
Y49A	**Blount Mountai**	**81.34**	**306**	P		**P**		**14 07 58.2**	**-1.4**
Y49A				IAmb		IAmb		14 08 49.8	
	comp=Z,202nm,1.8s								
X48A	**Hartselle**	**81.35**	**307**	P		**P**		**14 07 59.1**	**-0.5**
X48A				IAMs_20		IAMs_20		14 44 02.2	
	comp=Z,9µm,19.0s								
PEXB	**Peixe**	**81.36**	**247**	*e*P		**P**		**14 08 01.8**	**+2.0**
HENM	**Henderson Moun**	**81.36**	**310**	IAMs_20		IAMs_20		14 42 23.3	
	comp=Z,11µm,21.0s								
Z50A	**Ashland**	**81.41**	**306**	P		**P**		**14 07 58.7**	**-1.3**
Z50A				IAmb		IAmb		14 08 06.9	
	comp=Z,179nm,1.7s								
Z50A				IAMs_20		IAMs_20		14 44 16.9	
	comp=Z,8µm,21.0s								
Z50A	**Ashland**	**81.41**	**306**	P		**P**		**14 08 02.3**	**+2.3**
	baz=50,SNR=14								
BESE	**Bessie Mountai**	**81.42**	**347**	P		**P**		**14 07 59.2**	**-0.4**
252A	**Lumpkin**	**81.45**	**304**	P		**P**		**14 08 02.6**	**+2.5**
	baz=50								
DHAK	**Deception Hill**	**81.47**	**349**	IAMs_20		IAMs_20		14 46 47.8	
	comp=Z,8µm,20.0s								
CCM	**Cathedral Cave**	**81.52**	**312**	P		**P**		**14 07 59.5**	**-0.9**
CCM				pmax		pmax			
	comp=Z,346nm,1.7s								
CCM				MLR		MLR			
	comp=Z,10µm,18.0s								
CCM	**Cathedral Cave**	**81.52**	**312**	P		**P**		**14 07 59.5**	**-0.9**
CCM	**Cathedral Cave**	**81.52**	**312**	IAMs_20		IAMs_20		14 44 53.3	
	comp=Z,10µm,18.0s								
CCM	**Cathedral Cave**	**81.52**	**312**	P		**P**		**14 08 01.2**	**+0.7**
	baz=48								
RSO	**Redoubt South**	**81.54**	**357**	P		**P**		**14 08 00.3**	**-0.1**
GLAT	**Glass**	**81.55**	**310**	IAMs_20		IAMs_20		14 42 43.2	
	comp=Z,9µm,20.0s								
JIS	**Juneau Island**	**81.62**	**347**	P		**P**		**14 08 00.8**	**+0.2**
PENMO	**Penman**	**81.63**	**310**	IAMs_20		IAMs_20		14 42 32.4	
	comp=Z,10µm,22.0s								
656A	**Willston**	**81.65**	**301**	IAMs_20		IAMs_20		14 45 54.4	
	comp=Z,7µm,21.0s								
PLAL	**Pickwick Lake**	**81.65**	**308**	P		**P**		**14 08 00.6**	**-0.6**
PLAL				IAmb		IAmb		14 08 07.4	
	comp=Z,190nm,1.5s								
PLAL				IAMs_20		IAMs_20		14 44 57.0	
	comp=Z,11µm,20.0s								
DWPF	**Disney Wildern**	**81.69**	**299**	IAMs_20		IAMs_20		14 45 47.5	
	comp=Z,7µm,20.0s								
PVMO	**Portageville**	**81.70**	**310**	IAMs_20		IAMs_20		14 42 35.2	
	comp=Z,11µm,22.0s								
SEW	**Seward**	**81.71**	**355**	P		**P**		**14 08 00.8**	**-0.1**
SEW				IAmb		IAmb		14 08 10.7	
	comp=Z,79nm,0.8s								
SEW				IAMs_20		IAMs_20		14 48 10.9	
	comp=Z,7µm,21.0s								
LNXT	**Lenox**	**81.78**	**310**	IAMs_20		IAMs_20		14 42 50.4	
	comp=Z,10µm,20.0s								
PEA0B	**Petropavlovsk-**	**81.80**	**24**	P		**P**		**14 08 00.6**	**-1.0**
PEA0B				pmax		pmax			
	comp=Z,231nm,1.6s								
PEA0B				MLR		MLR			
	comp=Z,26µm,18.0s								
PEA0B	**Petropavlovsk-**	**81.80**	**24**	P		**P**		**14 08 00.6**	**-1.0**
PEA0B				IAmb		IAmb		14 08 08.1	
	comp=Z,231nm,1.6s								
PETK	**Petropavlovsk-**	**81.80**	**24**	P		**P**		**14 08 00.4**	**-1.2**
	comp=Z,48nm,1.2s,baz=76,slow=2.5,SNR=15								
PETK				LR		LR		14 49 09.6	
	comp=Z,26µm,18.0s,baz=319,slow=39								
HALT	**Halls**	**81.81**	**310**	IAMs_20		IAMs_20		14 42 41.3	
	comp=Z,9µm,20.0s								
SISI	**Saibi**	**81.85**	**98**	P		**P**		**14 08 02.6**	**+0.1**
	comp=Z,2µmcomp=Z,77nm,1.0s								
PBMO	**Poplar Bluff**	**81.89**	**311**	P		**P**		**14 08 02.3**	**-0.2**
PBMO				IAMs_20		IAMs_20		14 42 27.3	
	comp=Z,11µm,22.0s								
352A	**Blakely**	**81.91**	**304**	IAMs_20		IAMs_20		14 44 49.1	
	comp=Z,7µm,21.0s								
PEBM	**Pemiscott Bayo**	**82.00**	**310**	IAMs_20		IAMs_20		14 42 55.1	
	comp=Z,10µm,20.0s								
BRLK	**Bradley Lake**	**82.14**	**356**	IAMs_20		IAMs_20		14 51 06.9	
	comp=Z,8µm,20.0s								
PET	**Petropavlovsk**	**82.17**	**24**	*e*P		**P**		**14 08 00.6**	**-3.0**
PET				*e*				14 11 12.3	
PET				*e*PPS		PPS		14 19 14.7	
PET				pmax		pmax			
	comp=Z,51nm,1.4s								
PET				pmax		pmax			
	comp=Z,500nm,13.2s								
PET				pmax		pmax			
	comp=Z,600nm,12.1s								
PET				MLR		MLR			
	comp=Z,16µm,19.0s								
PET	**Petropavlovsk**	**82.17**	**24**	P		**P**		**14 08 03.0**	**-0.6**
PET				IAmb		IAmb		14 08 34.1	
	comp=Z,138nm,1.6s								
GNAR	**Gosnell**	**82.19**	**310**	IAMs_20		IAMs_20		14 43 02.2	
	comp=Z,10µm,21.0s								
LRAL	**Lakeview Retre**	**82.24**	**306**	P		**P**		**14 08 04.1**	**-0.2**
LRAL				IAmb		IAmb		14 08 12.0	
	comp=Z,159nm,1.3s								
LRAL				IAMs_20		IAMs_20		14 48 41.8	
	comp=Z,10µm,18.0s								
LRAL	**Lakeview Retre**	**82.24**	**306**	P		**P**		**14 08 06.0**	**+1

BRAL Brewton 83.49 305 IAMs_20 IAMs_20 14 47 51.0
comp=Z,7µm,19.0s

BDFB Brasilia 83.51 244 P **P** **14 08 11.0 -0.1**
BDFB pmax pmax
comp=Z,192nm,1.5s
BDFB MLR MLR
comp=Z,15µm,19.0s

BDFB Brasilia 83.51 244 P **P** **14 08 13.3 +2.1**
comp=Z,15nm,0.8s,baz=60,slow=3.4,SNR=16

BDFB Brasilia 83.51 244 P **P** **14 08 11.0 -0.1**
BDFB IAmb IAmb 14 08 24.5
comp=Z,192nm,1.5s

NACB Ninganchiao 83.55 64 P **P** **14 08 10.8 -0.5**
NACB IAmb IAmb 14 08 46.0
comp=Z,158nm,1.3s
NACB IAMs_20 IAMs_20 14 49 55.3
comp=Z,7µm,20.0s

U40A Yellville 83.62 312 P **P** **14 08 10.9 -0.5**
U40A IAmb IAmb 14 08 19.6
comp=Z,93nm,1.0s

U40A Yellville 83.62 312 P **P** **14 08 13.1 +1.7**
baz=47,SNR=39

MYKOM Kota Tinggi 83.66 93 P **P** **14 08 10.6 -1.4**
MYKOM IAmb IAmb 14 08 19.5
comp=Z,115nm,1.3s

X43A Marvell 83.68 309 IAMs_20 IAMs_20 14 43 37.7
comp=Z,10µm,21.0s

X43A Marvell 83.68 309 P **P** **14 08 14.1 +2.4**
baz=48

YULB Yu-li 83.83 65 P **P** **14 08 11.8 -0.9**
YULB IAmb IAmb 14 08 19.7
comp=Z,112nm,1.1s
YULB IAMs_20 IAMs_20 14 50 28.6
comp=Z,10µm,18.0s

KSU1 Kansas State U 83.84 316 IAMs_20 IAMs_20 14 44 54.5
comp=Z,8µm,19.0s

KSU1 Kansas State U 83.84 316 P **P** **14 08 14.3 +1.8**
baz=45,SNR=23

RSSD Black Hills 83.95 323 P **P** **14 08 12.0 -1.3**
RSSD pmax pmax
comp=Z,150nm,1.4s

RSSD Black Hills 83.95 323 P **P** **14 08 12.0 -1.3**
RSSD IAmb IAmb 14 08 20.6
comp=Z,150nm,1.4s

RSSD Black Hills 83.95 323 P **P** **14 08 15.0 +1.8**
baz=41

JNU Nakatsue 83.99 52 P **P** **14 08 13.2 -0.2**

WHAR Wooly Hollow 84.01 311 P **P** **14 08 12.4 -1.0**
WHAR IAMs_20 IAMs_20 14 43 52.3
comp=Z,12µm,22.0s

CRAG Craig 84.02 345 IAMs_20 IAMs_20 14 46 09.3
comp=Z,8µm,22.0s

W41B Gary Mavity, V 84.06 311 P **P** **14 08 13.3 -0.3**

W41B Gary Mavity, V 84.06 311 P **P** **14 08 15.3 +1.7**
baz=47,SNR=46

KRJI Kerinci 84.18 97 P **P** **14 08 15.0 +0.3**
comp=Z,6µmcomp=Z,646nm,1.0s

KDAK Kodiak Island 84.21 356 IAMs_20 IAMs_20 14 44 57.1
comp=Z,10µm,22.0s

HHAR Hobbs 84.30 312 P **P** **14 08 14.3 -0.7**
HHAR IAmb IAmb 14 08 21.8
comp=Z,138nm,1.3s

PMNB Patos De Minas 84.36 241 *e*P **P** **14 08 18.7 +3.3**

YOJ Yonaguni jima 84.37 63 IAMs_20 IAMs_20 14 52 56.8
comp=Z,6µm,19.0s

KUR Kuril'sk 84.39 34 *e*P **P** **14 08 15.1 0.0**
KUR *i* 14 08 19.3
KUR *i* S **S** **14 18 38.4 -2.3**
KUR SSS SSS 14 27 34.8
KUR MLR MLR
comp=Z,12µm,18.0s
KUR MLR MLR
comp=N,13µm,21.0s
KUR MLR MLR
comp=E,10µm,14.0s

UALR University of 84.39 310 P **P** **14 08 14.5 -0.9**
UALR IAMs_20 IAMs_20 14 44 38.5
comp=Z,10µm,20.0s

YUK Yuzh-Kuril'sk 84.40 36 *e*P **P** **14 08 15.5 +0.3**
YUK *i* 14 08 21.5
YUK *i* 14 11 27.2
YUK *i* PPP PPP 14 13 19.8
YUK *i* S **S** **14 18 37.8 -3.0**
YUK *i* SS **SS** **14 24 11.5 +1.9**
YUK *e*SSS SSS 14 27 33.2
YUK pmax pmax
comp=Z,986nm,1.3s
YUK pmax pmax
comp=E,595nm,1.4s
YUK pmax pmax
comp=N,425nm,1.0s
YUK pmax pmax
comp=Z,834nm,2.1s
YUK MLR MLR
comp=Z,9µm,18.0s
YUK MLR MLR
comp=E,7µm,15.0s
YUK MLR MLR
comp=N,11µm,24.0s

ERM Erimo 84.62 39 *e*P **P** **14 08 15.3 -1.1**
ERM pmax pmax
comp=Z,659nm,3.4s
ERM MLR MLR
comp=Z,13µm,17.0s

ERM Erimo 84.62 39 P **P** **14 08 15.6 -0.8**

CCAR Cane Creek 84.63 309 IAMs_20 IAMs_20 14 44 17.9
comp=Z,11µm,21.0s

URIC Uribia, Colomb 84.81 281 *e*P **P** **14 08 19.4 +1.6**

X40A Basin Creek Fa 84.89 310 P **P** **14 08 17.8 -0.1**
X40A IAmb IAmb 14 08 24.9
comp=Z,189nm,1.5s
X40A IAMs_20 IAMs_20 14 44 52.5
comp=Z,10µm,20.0s

X40A Basin Creek Fa 84.89 310 P **P** **14 08 19.5 +1.6**
baz=46,SNR=42

BSCB Bom Sucesso 84.92 238 *e*P **P** **14 08 20.4 +2.3**

W39A Magazine 84.96 311 P **P** **14 08 17.9 -0.3**
W39A IAmb IAmb 14 08 25.5
comp=Z,188nm,1.4s

W39A Magazine 84.96 311 P **P** **14 08 20.4 +2.1**
baz=46,SNR=23

VBMS Vicksburg 85.00 307 P **P** **14 08 21.5 +3.1**
baz=48

GCMT Greycliff 85.17 328 P **P** **14 08 19.5 +0.2**

IPMB Ipameri, GO 85.22 243 *e*P **P** **14 08 22.5 +2.8**

MIAR Mount Ida 85.29 311 P **P** **14 08 19.8 -0.1**
MIAR pmax pmax
comp=Z,318nm,1.5s

MIAR Mount Ida 85.29 311 P **P** **14 08 19.8 -0.1**

MIAR Mount Ida 85.29 311 P **P** **14 08 22.1 +2.2**
baz=46,SNR=54

OGNE Ogallala 85.36 320 IAMs_20 IAMs_20 14 47 41.5
comp=Z,9µm,19.0s

OGNE Ogallala 85.36 320 P **P** **14 08 22.9 +2.6**
baz=42

JTMT Jette 85.43 331 P **P** **14 08 21.2 +0.7**

SDV Santo Domingo 85.47 278 *e*P **P** **14 08 22.4 +1.1**

SDV Santo Domingo 85.47 278 *e*P **P** **14 08 23.2 +1.9**

SDV Santo Domingo 85.47 278 P **P** **14 08 21.2 -0.1**

RLMT Red Lodge 85.53 327 P **P** **14 08 22.2 +1.0**
RLMT IAmb IAmb 14 08 39.8
comp=Z,113nm,1.1s

RLMT Red Lodge 85.53 327 P **P** **14 08 23.1 +1.9**
baz=37,SNR=59

LLLB Lillooet 85.59 337 P **P** **14 08 21.8 +0.6**
LLLB IAmb IAmb 14 08 30.6
comp=Z,200nm,1.6s

WLAR White Oak Lake 85.60 310 P **P** **14 08 21.6 +0.1**
WLAR IAmb IAmb 14 08 30.2
comp=Z,149nm,1.2s
WLAR IAMs_20 IAMs_20 14 44 55.5
comp=Z,10µm,21.0s

TUL1 Leonard 85.63 313 P **P** **14 08 21.2 -0.4**
TUL1 IAmb IAmb 14 08 29.5
comp=Z,115nm,0.9s
TUL1 IAMs_20 IAMs_20 14 46 41.2
comp=Z,9µm,19.0s

TUL1 Leonard 85.63 313 P **P** **14 08 23.2 +1.6**
baz=45,SNR=38

Z41A Richland Creek 85.71 309 P **P** **14 08 24.4 +2.4**
baz=46,SNR=25

ELOV Elorza 85.72 275 *e*P **P** **14 08 25.0 +2.7**

CBKS Cedar Bluff 85.74 317 P **P** **14 08 22.7 +0.6**
CBKS pmax pmax
comp=Z,362nm,1.3s
CBKS MLR MLR
comp=Z,8µm,21.0s

CBKS Cedar Bluff 85.74 317 P **P** **14 08 22.7 +0.6**
CBKS IAMs_20 IAMs_20 14 49 54.7
comp=Z,8µm,21.0s

CBKS Cedar Bluff 85.74 317 P **P** **14 08 24.4 +2.3**
baz=43,SNR=37

YNE Yellowstone No 85.94 327 P **P** **14 08 24.7 +1.5**

MJB9 Matsu-Tunnel 85.98 46 P **P** **14 08 23.1 -0.2**

MAJO Matsushiro 85.98 46 P **P** **14 08 23.2 -0.1**
MAJO pmax pmax
comp=Z,205nm,1.3s
MAJO MLR MLR
comp=Z,14µm,19.0s

MAJO Matsushiro 85.98 46 P **P** **14 08 23.2 -0.1**
MAJO IAmb IAmb 14 08 31.3
comp=Z,205nm,1.3s

MAT Matsushiro 85.98 46 P **P** **14 08 22.5 -0.8**
MAT S **S** **14 18 58.8 +1.9**

MJAR Matsushiro Arr 85.98 46 P **P** **14 08 22.9 -0.5**
MJAR pmax pmax
comp=Z,50nm,1.1s

MJAR Matsushiro Arr 85.98 46 P **P** **14 08 22.9 -0.5**
comp=Z,23nm,0.8s,baz=322,slow=4.9,SNR=23

MJAR Matsushiro Arr 85.98 46 IAmb IAmb 14 08 30.9
comp=Z,50nm,1.1s

SOCV Socops 86.01 277 *e*P **P** **14 08 23.5 -0.3**

DIB Dawson Inlet, 86.01 344 P **P** **14 08 24.1 +1.0**
DIB IAMs_20 IAMs_20 14 47 36.9
comp=Z,10µm,22.0s

H02S1 DAWSON INLET T 86.01 344 P **P** **14 08 24.2 +1.1**

KSI Kapahiang 86.03 98 P **P** **14 08 23.9 0.0**
comp=Z,7µmcomp=Z,310nm,0.9s

NEW Newport 86.04 333 P **P** **14 08 24.3 +0.9**
NEW pmax pmax
comp=Z,587nm,2.0s
NEW MLR MLR
comp=Z,8µm,20.0s

NEW Newport 86.04 333 P **P** **14 08 24.3 +0.9**

NEW Newport 86.04 333 IAMs_20 IAMs_20 14 46 42.9
comp=Z,8µm,20.0s

NEW Newport 86.04 333 P **P** **14 08 24.6 +1.2**
baz=32,SNR=60

MSO Missoula 86.06 331 P **P** **14 08 23.1 -0.5**
MSO IAmb IAmb 14 08 31.4
comp=Z,112nm,1.2s

MSO Missoula 86.06 331 P **P** **14 08 24.4 +0.7**
baz=34,SNR=40

CLDB Colider 86.11 253 *e*P **P** **14 08 24.8 +0.6**

INU Inuyama 86.15 47 P **P** **14 08 24.1 -0.1**
INU IAmb IAmb 14 08 31.7
comp=Z,190nm,1.6s

K22A Casper 86.24 324 P **P** **14 08 24.4 -0.3**
K22A IAmb IAmb 14 08 31.2
comp=Z,171nm,1.3s

K22A Casper 86.24 324 P **P** **14 08 25.4 +0.7**
baz=39,SNR=35

ARAG Araguaiana, MT 86.28 247 *e*P **P** **14 08 27.5 +2.5**

YHH Holmes Hill 86.47 328 P **P** **14 08 25.4 -0.6**

YHL Hebgen Lake 86.56 328 P **P** **14 08 27.0 +0.6**

SMY Shemya 86.58 16 IAMs_20 IAMs_20 14 50 15.7
comp=Z,7µm,20.0s

H17A Grant Village 86.67 327 P **P** **14 08 31.6 +4.7**
comp=Z,36,NR=70

QLMT Earthquake Lak 86.68 328 P **P** **14 08 27.4 +0.5**

B08A Colville Reser 86.72 334 P **P** **14 08 27.2 +0.4**
B08A IAmb IAmb 14 08 33.9
comp=Z,219nm,1.9s

DLMT Dillon 86.73 329 P **P** **14 08 27.9 +0.8**
DLMT IAmb IAmb 14 08 34.7
comp=Z,167nm,1.2s

PHWY Pilot Hill 86.78 322 P **P** **14 08 28.3 +0.8**
PHWY IAmb IAmb 14 08 34.9
comp=Z,143nm,1.3s

W35A Tecumseh 86.79 313 P **P** **14 08 27.5 +0.2**

SDPT Sand Point 86.82 1 IAMs_20 IAMs_20 14 53 51.4
comp=Z,9µm,19.0s

SMRC Santa Marta, M 86.87 282 *e*P **P** **14 08 31.1 +3.1**

OKCFA Oklahoma City 86.94 314 IAMs_20 IAMs_20 14 48 52.6
comp=Z,7µm,18.0s

COCO West Island 86.97 108 P **P** **14 08 28.1 -0.2**
COCO pmax pmax
comp=Z,164nm,1.2s
COCO MLR MLR
comp=Z,4µm,19.0s

COCO West Island 86.97 108 P **P** **14 08 28.1 -0.2**
COCO IAmb IAmb 14 08 41.3
comp=Z,164nm,1.2s

FLWY Flagg Ranch 86.97 327 P **P** **14 08 29.3 +1.0**
FLWY IAmb IAmb 14 08 37.0
comp=Z,159nm,1.2s
FLWY IAMs_20 IAMs_20 14 48 55.9
comp=Z,9µm,22.0s

CODC Agustn Codazz 87.02 280 *e*P **P** **14 08 30.0 +1.3**

PARB Paraibuna 87.10 237 *e*P **P** **14 08 32.4 +3.5**

KSCO Kaye Shedlock' 87.11 319 P **P** **14 08 29.1 +0.1**

KSCO Kaye Shedlock' 87.11 319 P **P** **14 08 30.9 +1.9**
baz=41,SNR=21

U32A Winter Ranch, 87.11 315 P **P** **14 08 28.9 0.0**

IMW Indian Meadow 87.23 327 P **P** **14 08 29.6 -0.1**
IMW IAmb IAmb 14 08 37.9
comp=Z,149nm,1.5s
IMW IAMs_20 IAMs_20 14 49 14.6
comp=Z,9µm,20.0s

MOOW Moose Ponds 87.26 327 P **P** **14 08 29.6 -0.1**
MOOW IAmb IAmb 14 08 37.5
comp=Z,139nm,1.8s
MOOW IAMs_20 IAMs_20 14 49 04.6
comp=Z,8µm,21.0s

MCMT McKenzie Canyo 87.27 329 P **P** **14 08 29.9 +0.1**

B06A Marblemount 87.30 336 P **P** **14 08 29.6 +0.1**
B06A IAmb IAmb 14 08 35.8
comp=Z,133nm,1.6s
B06A IAMs_20 IAMs_20 14 48 10.2
comp=Z,9µm,19.0s

N23A Red Feather La 87.33 322 P **P** **14 08 30.0 -0.2**

N23A Red Feather La 87.33 322 P **P** **14 08 32.0 +1.8**
baz=39,SNR=31

SNOW Snow King Moun 87.50 327 P **P** **14 08 30.9 0.0**

A04D Lummi Island 87.51 337 P **P** **14 08 33.0 +2.5**
baz=28

BB19B Bebedouro 87.52 241 *e*P **P** **14 08 34.1 +3.2**

BW06 Boulder Array 87.53 326 P **P** **14 08 30.4 -0.7**
BW06 IAmb IAmb 14 08 37.5
comp=Z,110nm,1.7s

BW06 Boulder Array 87.53 326 P **P** **14 08 32.0 +0.9**
baz=37,SNR=25

PD31 Pinedale Array 87.53 326 P **P** **14 08 30.3 -0.8**
PD31 IAmb IAmb 14 08 37.5
comp=Z,100nm,1.7s

PDAR Pinedale Array 87.53 326 P **P** **14 08 31.1 0.0**
comp=Z,13nm,0.9s,baz=56,slow=3.7,SNR=28

TPAW Teton Pass 87.56 327 P **P** **14 08 31.1 -0.2**
TPAW IAmb IAmb 14 08 37.2
comp=Z,57nm,0.9s
TPAW IAMs_20 IAMs_20 14 47 17.4
comp=Z,7µm,21.0s

REDW Red Top Meadow 87.62 327 P **P** **14 08 31.0 -0.5**
REDW IAmb IAmb 14 08 38.9
comp=Z,118nm,1.5s
REDW IAMs_20 IAMs_20 14 49 28.0
comp=Z,8µm,20.0s

C06D Leavenworth 87.63 335 P **P** **14 08 32.4 +1.2**
baz=29,SNR=14

ARGC Ariguani, Magd 87.69 281 *e*P **P** **14 08 34.5 +2.6**

B05A Bryant 87.72 336 P **P** **14 08 31.8 +0.3**
baz=29,SNR=22

MDSI Maura Dua 87.78 97 P **P** **14 08 31.2 -1.1**
comp=Z,1µmcomp=Z,51nm,0.7s

PGC Sidney 87.80 337 P **P** **14 08 32.0 +0.1**

TAMC Tame, Arauca 87.87 276 *e*P **P** **14 08 36.0 +3.1**

NATX Nacogdoches 87.88 310 P **P** **14 08 36.6 +4.0**
baz=45

ISCO Idaho Springs 88.01 321 P **P** **14 08 33.2 -0.3**
ISCO pmax pmax
comp=Z,54nm,1.3s
ISCO MLR MLR
comp=Z,11µm,18.0s

ISCO Idaho Springs 88.01 321 P **P** **14 08 33.2 -0.3**

ISCO Idaho Springs 88.01 321 P **P** **14 08 34.7 +1.2**
baz=40,SNR=27

LWLI Liwa 88.01 98 P **P** **14 08 33.3 -0.3**
comp=Z,129nm,1.0s

F10A Beach Ranch, E 88.02 332 P **P** **14 08 33.3 +0.2**

PAMC Pamplona, Colo 88.03 278 *e*P **P** **14 08 34.5 +0.4**

LTY Liberty 88.13 335 P **P** **14 08 33.4 -0.2**
LTY IAmb IAmb 14 08 40.1
comp=Z,72nm,1.2s

WMOK Wichita Mounta 88.18 314 P **P** **14 08 34.7 +0.6**
WMOK pmax pmax
comp=Z,138nm,1.2s
WMOK MLR MLR
comp=Z,11µm,19.0s

WMOK Wichita Mounta 88.18 314 P **P** **14 08 34.7 +0.6**

WMOK Wichita Mounta 88.18 314 P **P** **14 08 36.5 +2.4**
baz=43,SNR=88

SMLC San Martn de 88.20 280 *e*P **P** **14 08 35.5 +1.1**

AHID Auburn Hatcher 88.21 327 P **P** **14 08 33.8 -0.5**
AHID IAmb IAmb 14 08 41.0
comp=Z,67nm,1.0s
AHID IAMs_20 IAMs_20 14 49 36.6
comp=Z,9µm,20.0s

E08A Dider Farm, El 88.24 333 P **P** **14 08 34.0 0.0**
E08A IAmb IAmb 14 08 41.5
comp=Z,123nm,1.3s

KLSI 88.34 97 P **P** **14 08 33.9 -1.1**
comp=Z,5µmcomp=Z,506nmcomp=Z,28nm,0.9s

SJCC San Jacinto, C 88.38 281 *e*P **P** **14 08 37.2 +1.9**

Q24A Divide 88.42 321 P **P** **14 08 38.5 +3.0**
baz=40,SNR=15

HAWA Hanford 88.49 334 P **P** **14 08 34.9 -0.3**
HAWA IAMs_20 IAMs_20 14 52 20.7
comp=Z,8µm,19.0s

D05A Enumclaw 88.63 335 P **P** **14 08 36.0 +0.1**
D05A IAMs_20 IAMs_20 14 50 10.3
comp=Z,7µm,20.0s

KASI Kota Agung 88.67 98 P **P** **14 08 36.4 -0.1**
comp=Z,2µmcomp=Z,167nm,0.8s

D03D Eldon 88.68 336 P **P** **14 08 38.6 +2.5**
baz=28,SNR=46

NIKH Nikolski High 88.84 6 IAMs_20 IAMs_20 14 54 17.1
comp=Z,9µm,20.0s

BARC Barichara 88.86 277 *e*P **P** **14 08 33.5 -4.3**

D04E Lakebay 88.89 336 P **P** **14 08 39.5 +2.5**
baz=28

KSM Kuching 88.94 89 P **P** **14 08 37.8 -0.1**
KSM IAmb IAmb 14 08 47.4
comp=Z,144nm,1.2s

KSM Kuching 88.94 89 P **P** **14 08 39.0 +1.1**

LON Longmire 88.95 335 P **P** **14 08 37.2 -0.3**
LON pmax pmax
comp=Z,43nm,1.2s
LON MLR MLR
comp=Z,13µm,19.0s

LON Longmire 88.95 335 P **P** **14 08 37.2 -0.3**

BMO Blue Mountains 89.00 331 P **P** **14 08 37.0 -0.8**
BMO pmax pmax
comp=Z,120nm,1.3s
BMO MLR MLR
comp=Z,17µm,21.0s

BMO Blue Mountains 89.00 331 P **P** **14 08 37.0 -0.8**
BMO IAmb IAmb 14 08 44.1
comp=Z,120nm,1.2s

O20A White River Ci 89.01 323 P **P** **14 08 37.8 -0.3**
O20A IAmb IAmb 14 08 47.6
comp=Z,124nm,1.2s

O20A White River Ci 89.01 323 P **P** **14 08 38.7 +0.6**
baz=38,SNR=42

ADK Adak 89.05 11 IAMs_20 IAMs_20 14 50 07.7
comp=Z,8µm,21.0s

SMCO Snowmass 89.16 322 P **P** **14 08 38.0 -1.1**

RUSC La Rusia 89.22 277 *e*P **P** **14 08 40.9 +1.1**

RUSC La Rusia 89.22 277 P **P** **14 08 38.6 -1.2**

G08A Pilot Rock 89.23 333 P **P** **14 08 38.5 -0.4**

SALV Santo Antonio 89.24 249 *e*P **P** **14 08 41.9 +2.7**

HWUT Hardware Ranch 89.35 326 P **P** **14 08 39.7 0.0**

E04D Cinebar 89.37 336 P **P** **14 08 41.1 +1.7**
baz=28,SNR=8.8

WHTX Lake Whitney, 89.39 311 P **P** **14 08 39.6 -0.2**
WHTX IAmb IAmb 14 08 47.1
comp=Z,140nm,1.4s

WHTX Lake Whitney, 89.39 311 P **P** **14 08 42.2 +2.5**
baz=44,SNR=25

TPI Tanjungpandan 89.44 94 P **P** **14 08 40.6 +0.4**
comp=Z,1µmcomp=Z,95nm,1.1s

T25A Trinidad 89.44 319 P **P** **14 08 40.1 -0.2**
T25A IAmb IAmb 14 08 47.2
comp=Z,75nm,1.2s

T25A Trinidad 89.44 319 P **P** **14 08 41.9 +1.6**
baz=40,SNR=33

SDCO Great Sand Dun 89.53 320 P **P** **14 08 40.4 -0.3**

SDCO Great Sand Dun 89.53 320 P **P** **14 08 41.9 +1.2**
baz=40,SNR=68

F05D White Salmon 89.59 335 P **P** **14 08 42.0 +1.5**
baz=29

ZARC Zaragoza, Cauc 89.62 279 *e*P **P** **14 08 43.0 +1.9**

MFID Camas Ranch 89.64 330 P **P** **14 08 41.3 +0.4**
MFID IAmb IAmb 14 08 48.3
comp=Z,118nm,1.1s

TCUT Toone Canyon 89.68 326 P **P** **14 08 41.0 -0.3**

AMTX Amarillo 89.69 316 P **P** **14 08 42.8 +1.6**
baz=42

E03A Lebam 89.70 336 P **P** **14 08 40.7 -0.2**
E03A IAmb IAmb 14 08 48.7
comp=Z,136nm,1.2s

HVU Hansel Valley 89.73 327 P **P** **14 08 40.8 -0.6**
HVU pmax pmax
comp=Z,125nm,1.2s

HVU Hansel Valley 89.73 327 P **P** **14 08 40.8 -0.6**

PCMB Pacaembu 89.77 242 *e*P **P** **14 08 45.3 +3.7**

SBUM Sibu 89.85 87 P **P** **14 08 41.9 -0.2**

SBUM Sibu 89.85 87 P **P** **14 08 44.0 +1.9**

HKT Hockley 89.86 309 P **P** **14 08 42.2 +0.3**
HKT pmax pmax
comp=Z,117nm,1.5s
HKT MLR MLR
comp=Z,13µm,21.0s

HKT Hockley 89.86 309 P **P** **14 08 42.1 +0.3**
HKT IAmb IAmb 14 08 49.9
comp=Z,117nm,1.5s

F04A Amboy 89.87 335 P **P** **14 08 40.9 -0.8**

PTBC PUERTO BERRIO, 89.89 278 *e*P **P** **14 08 43.7 +1.3**

F04D Rainier, OR 89.94 336 P **P** **14 08 44.8 +2.8**
baz=28

SPUT South Promonto 89.98 327 P **P** **14 08 42.1 -0.5**

UREC San Jos de Ur 89.98 280 *e*P **P** **14 08 44.0 +1.2**

G05D Wamic, OR 90.11 334 P **P** **14 08 44.5 +1.6**
baz=29,SNR=7.1

JLU Jordanelle 90.11 326 P **P** **14 08 43.4 0.0**

SPBC San Pablo de B 90.14 277 *e*P **P** **14 08 46.2 +2.6**

CTU Camp Tracy 90.17 326 P **P** **14 08 43.3 -0.2**

S22A 4UR Ranch, Cre 90.20 321 P **P** **14 08 43.9 0.0**
S22A IAMs_20 IAMs_20 14 51 04.6
comp=Z,9µm,20.0s

S22A 4UR Ranch, Cre 90.20 321 P **P** **14 08 45.5 +1.7**
baz=39,SNR=47

ABTX Abilene, Hawle 90.21 313 P **P** **14 08 44.0 +0.4**
ABTX IAMs_20 IAMs_20 14 50 47.2
comp=Z,7µm,18.0s

ABTX Abilene, Hawle 90.21 313 P **P** **14 08 46.0 +2.4**
baz=43,SNR=30

F03A Seaside 90.25 336 IAMs_20 IAMs_20 14 50 02.2
comp=Z,9µm,21.0s

435B Jarrell 90.33 311 P **P** **14 08 44.3 +0.1**
435B IAmb IAmb 14 08 51.7
comp=Z,89nm,1.1s

435B Jarrell 90.33 311 P **P** **14 08 47.0 +2.8**
baz=44

I07A Izee 90.47 332 P **P** **14 08 44.5 -0.3**
I07A IAmb IAmb 14 08 55.4
comp=Z,77nm,1.2s

CHIC Chingaza 90.50 276 *e*P **P** **14 08 46.5 +0.8**

BGU Big Grassy Mou 90.54 327 P **P** **14 08 45.6 +0.4**

SAML Samuel 90.55 259 P **P** **14 08 44.0 -1.3**
SAML pmax pmax
comp=Z,55nm,1.4s

SAML Samuel 90.55 259 *e*P **P** **14 08 47.4 +2.1**

SAML Samuel 90.55 259 P **P** **14 08 44.0 -1.3**

SAML Samuel 90.55 259 IAMs_20 IAMs_20 14 56 18.5
comp=Z,8µm,18.0s

P17A Butcher Ranch, 90.70 324 P **P** **14 08 46.0 0.0**

J08A Circle Bar Ran 90.71 331 P **P** **14 08 45.9 0.0**
J08A IAmb IAmb 14 08 52.8
comp=Z,51nm,0.9s

STKI Sintang 90.72 89 P **P** **14 08 46.3 +0.1**
comp=Z,8µmcomp=Z,94nm,1.1s

VILC Villavicencio, 90.79 276 *e*P **P** **14 08 46.8 +0.1**

G03D McMinnville, O 90.79 335 P **P** **14 08 47.7 +1.7**
baz=28,SNR=29

NORC Norcasia 90.81 278 *e*P **P** **14 08 46.1 -0.6**

ROSC El Rosal 90.83 277 P **P** **14 08 48.6 +1.4**

comp=Z,16nm,0.8s,baz=27,slow=4.9,SNR=9.0
ROSC El Rosal 90.83 277 *e*P **P 14 08 49.4 +2.2**
ROSC El Rosal 90.83 277 P **P 14 08 47.6 +0.4**
H04A Detroit Lake 90.89 334 P **P 14 08 46.9 +0.3**
H04A IAmb IAmb 14 08 53.5
comp=Z,92nm,1.3s
SRU San Rafael Swe 90.89 324 P **P 14 08 46.7 -0.2**
SRU pmax pmax
comp=Z,93nm,0.9s
SRU San Rafael Swe 90.89 324 P **P 14 08 46.7 -0.2**
I05D Terrebonne, OR 90.90 334 P **P 14 08 48.7 +2.0**
baz=29,SNR=23
NLU North Lily Min 90.92 326 P **P 14 08 47.5 +0.5**
HELC Santa Helena 90.94 279 *e*P **P 14 08 48.5 +0.8**
MSTX Muleshoe 90.97 316 P **P 14 08 46.9 -0.3**
MSTX IAmb IAmb 14 08 54.7
comp=Z,74nm,1.2s
MSTX IAMs_20 IAMs_20 14 48 21.2
comp=Z,9µm,22.0s
MSTX Muleshoe 90.97 316 P **P 14 08 48.4 +1.2**
baz=41,SNR=6.8
DUG Dugway, Tooele 91.05 326 P **P 14 08 46.4 -1.1**
DUG pmax pmax
comp=Z,108nm,1.1s
DUG Dugway, Tooele 91.05 326 P **P 14 08 46.4 -1.1**
DUG IAmb IAmb 14 08 54.6
comp=Z,108nm,1.1s
DUG IAMs_20 IAMs_20 14 55 15.7
comp=Z,8µm,18.0s
DUG Dugway, Tooele 91.05 326 P **P 14 08 49.0 +1.5**
baz=35,SNR=97
TMUT Trail Mountain 91.06 325 P **P 14 08 47.1 -0.7**
DBJI Dramaga 91.06 97 P **P 14 08 47.5 -0.3**
comp=Z,100nm,0.9s
H04D Lebanon 91.22 335 P **P 14 08 49.7 +1.7**
baz=28,SNR=23
PINE Pine Mountain 91.24 333 P **P 14 08 48.9 +0.4**
Q16A Castle Valley 91.35 324 P **P 14 08 49.2 +0.2**
COR Corvallis 91.36 335 P **P 14 08 49.8 +1.1**
COR pmax pmax
comp=Z,174nm,1.4s
COR MLR MLR
comp=Z,12µm,18.0s
COR Corvallis 91.36 335 P **P 14 08 49.8 +1.1**
GUY2C Guyana, Caldas 91.41 278 *e*P **P 14 08 51.8 +1.8**
MVCO Mesa Verde 91.44 322 P **P 14 08 49.9 +0.3**
MVCO Mesa Verde 91.44 322 P **P 14 08 50.9 +1.4**
baz=38,SNR=25
TRCB Terra Rica 91.51 242 *e*P **P 14 08 52.8 +3.1**
CBOC Ciudad Bolivar 91.52 279 *e*P **P 14 08 50.6 +0.5**
TEIG Tepich 91.53 297 P **P 14 08 50.8 +0.9**
TEIG IAmb IAmb 14 09 28.4
comp=Z,62nm,1.2s
WVOR Wild Horse Val 91.56 331 P **P 14 08 50.0 +0.1**
WVOR pmax pmax
comp=Z,61nm,1.1s
WVOR MLR MLR
comp=Z,10µm,20.0s
WVOR Wild Horse Val 91.56 331 P **P 14 08 50.0 +0.1**
WVOR IAmb IAmb 14 08 57.1
comp=Z,61nm,1.1s
ELK Elko 91.63 328 P **P 14 08 50.4 0.0**
ELK pmax pmax
comp=Z,96nm,1.4s
ELK MLR MLR
comp=Z,9µm,22.0s
ELK Elko 91.63 328 P **P 14 08 50.4 0.0**
ELK IAmb IAmb 14 08 58.0
comp=Z,96nm,1.4s
ELK IAMs_20 IAMs_20 14 49 52.1
comp=Z,9µm,22.0s
I04A Tendick Farm, 91.75 334 P **P 14 08 51.3 +0.6**
baz=28,SNR=30
J05D Fort Rock, OR 91.79 333 P **P 14 08 53.2 +2.3**
baz=29,SNR=51
SPMM Sapulut 91.79 83 P **P 14 08 52.0 +0.8**
CNJI Cibinong 91.82 98 P **P 14 08 49.2 -2.0**
comp=Z,2µmcomp=Z,111nm,1.1s
JCT Junction City 91.86 312 P **P 14 08 51.6 +0.2**
JCT pmax pmax
comp=Z,220nm,1.9s
JCT MLR MLR
comp=Z,12µm,18.0s
JCT Junction City 91.86 312 P **P 14 08 51.6 +0.2**
JCT Junction City 91.86 312 P **P 14 08 53.3 +2.0**
baz=43,SNR=18
LEM Lembang 91.91 97 P **P 14 08 52.9 +1.0**
I02D Swisshome 91.96 335 P **P 14 08 55.0 +3.6**
baz=27
PRAC Prado 91.97 276 *e*P **P 14 08 53.2 +1.2**
MACC Macarena, Meta 92.11 274 *e*P **P 14 08 54.1 +1.4**
ORTC Ortega, Tolima 92.13 277 *e*P **P 14 08 54.4 +1.6**
J04D Umpqua Nationa 92.14 334 P **P 14 08 55.2 +2.7**
baz=29,SNR=6.5
MSU Marysvale 92.14 325 P **P 14 08 52.1 -0.6**
MSU Marysvale 92.14 325 P **P 14 08 52.1 -0.6**
K05A Summer Lake 92.15 333 P **P 14 08 53.5 +0.9**
I03D Drain, OR 92.16 335 P **P 14 08 54.4 +2.0**
baz=28,SNR=15
ANMO Albuquerque 92.19 319 P **P 14 08 53.1 +0.1**
ANMO MLR MLR
comp=Z,8µm,20.0s
ANMO Albuquerque 92.19 319 P **P 14 08 53.1 +0.1**
ANMO Albuquerque 92.19 319 IAMs_20 IAMs_20 14 49 18.3
comp=Z,8µm,20.0s
ANMO Albuquerque 92.19 319 P **P 14 08 54.7 +1.7**
baz=39
PLMC San Jos del P 92.32 278 *e*P **P 14 08 54.9 +1.2**
SOLC Bahia Solano 92.38 280 *e*P **P 14 08 55.6 +1.7**
CISI Cisompet, Garu 92.51 98 P **P 14 08 53.7 -0.8**
MTPU Mount Pierson 92.52 324 P **P 14 08 55.7 +1.0**
K04D Chiloquin, OR 92.55 333 P **P 14 08 56.2 +1.8**
baz=29,SNR=6.7
MOD Modoc Plateau 92.65 332 P **P 14 08 53.8 -1.2**
MOD IAmb IAmb 14 09 02.6
comp=Z,72nm,1.1s
J01E Myrtle Point 92.83 335 P **P 14 08 57.3 +1.8**
baz=27,SNR=7.6
KVTX Kingsville 92.84 309 IAMs_20 IAMs_20 14 50 48.2
comp=Z,6µm,21.0s
PSUT Pine Spring 92.87 326 P **P 14 08 55.5 -0.6**
YOTC Yotoco, Valle 92.94 277 *e*P **P 14 08 57.0 +0.4**
HUMO Hull Mountain 92.99 334 P **P 14 08 55.7 -0.6**
HUMO IAmb IAmb 14 09 03.5
comp=Z,86nm,1.4s
PKCU Pink Cliffs 93.07 324 P **P 14 08 55.9 -1.3**
L04D Klamath Falls 93.10 333 P **P 14 08 58.7 +1.7**
baz=28,SNR=35
Y22D IRIS PASSCAL I 93.10 319 IAMs_20 IAMs_20 14 55 17.6
comp=Z,7µm,19.0s
K02D Willamette Mer 93.15 334 P **P 14 08 59.3 +2.2**
baz=28,SNR=14
833A Chaparral WMA, 93.19 310 IAMs_20 IAMs_20 14 49 41.5
comp=Z,9µm,22.0s
833A Chaparral WMA, 93.19 310 P **P 14 09 00.9 +3.4**
baz=43
KEBM Edson Butte 93.22 335 IAMs_20 IAMs_20 14 53 32.9
comp=Z,6µm,18.0s
SZCU Shurtz Canyon 93.30 325 P **P 14 08 57.5 -0.6**
M04C Macdoel 93.32 333 P **P 14 08 59.5 +1.6**
baz=29,SNR=30
CCUT Cedar City 93.46 325 P **P 14 08 58.3 -0.6**
L02E Cave Junction 93.61 334 P **P 14 09 01.5 +2.3**
baz=28
KNB Kanab 93.65 324 P **P 14 08 58.9 -0.8**
KNB pmax pmax
comp=Z,24nm,1.2s
KNB Kanab 93.65 324 P **P 14 08 58.9 -0.8**
YBH Yreka Blue Hor 93.67 333 P **P 14 08 58.9 -0.7**
YBH pmax pmax
comp=Z,23nm,1.1s
YBH MLR MLR
comp=Z,9µm,18.0s
YBH Yreka Blue Hor 93.67 333 P **P 14 08 58.9 -0.7**
KBO Bosley Butte 93.77 335 IAMs_20 IAMs_20 14 56 51.5
comp=Z,7µm,18.0s
R11A Troy Canyon, C 93.78 327 P **P 14 09 00.0 -0.2**
R11A IAmb IAmb 14 09 08.6
comp=Z,120nm,1.9s
R11A IAMs_20 IAMs_20 14 55 06.0
comp=Z,8µm,19.0s
R11A Troy Canyon, C 93.78 327 P **P 14 09 01.5 +1.2**
baz=33,SNR=25
LCMT Little Creek M 93.85 325 P **P 14 08 59.9 -0.7**
FLOC Florencia 93.88 275 *e*P **P 14 09 02.6 +1.8**
FLOC Florencia 93.88 275 P **P 14 09 00.2 -0.6**
U15A North Rim 93.88 324 P **P 14 09 00.4 -0.5**
U15A IAmb IAmb 14 09 07.7
comp=Z,112nm,1.6s
PCON Cinco Dias 94.00 276 *e*P **P 14 09 04.7 +2.6**
M02C Callahan 94.02 333 P **P 14 09 03.6 +2.4**
baz=28
PTLC Puerto Leguiza 94.07 273 *e*P **P 14 09 04.7 +3.0**
MNTX Cornudas Mount 94.12 316 P **P 14 09 01.4 -0.3**
MNTX IAmb IAmb 14 09 08.3
comp=Z,117nm,1.6s
MNTX Cornudas Mount 94.12 316 P **P 14 09 02.8 +1.1**
baz=40,SNR=49
WUAZ Wupatki 94.19 322 P **P 14 09 01.2 -1.0**
WUAZ IAmb IAmb 14 09 09.5
comp=Z,71nm,1.2s
WUAZ IAMs_20 IAMs_20 14 55 29.1
comp=Z,7µm,19.0s
WUAZ Wupatki 94.19 322 P **P 14 09 03.9 +1.8**
baz=36,SNR=32
PAHR Pah Rah Range 94.19 330 P **P 14 09 02.3 +0.3**
PAHR IAmb IAmb 14 09 09.5
comp=Z,59nm,1.1s
KVN Kaiserville 94.24 329 P **P 14 09 02.5 +0.1**
KVN pmax pmax
comp=Z,26nm,1.1s
KVN Kaiserville 94.24 329 P **P 14 09 02.5 +0.1**
KRMB Red Mountain 94.28 334 P **P 14 09 02.8 +0.5**
X18A Snowflake 94.28 321 P **P 14 09 02.1 -0.5**
SOTA Rioblanco 94.29 276 *e*P **P 14 09 05.8 +2.4**
N02D Trinity Center 94.34 333 P **P 14 09 04.2 +1.6**
baz=28,SNR=16
BEKR Beckworth 94.43 331 P **P 14 09 02.6 -0.6**
O03E Paynes Creek 94.61 332 P **P 14 09 05.0 +1.1**
baz=29,SNR=6.5
WDC Whiskeytown Da 94.62 333 P **P 14 09 03.4 -0.4**
WDC pmax pmax
comp=Z,67nm,2.0s
WDC MLR MLR
comp=Z,12µm,19.0s
WDC Whiskeytown Da 94.62 333 P **P 14 09 03.4 -0.4**
VCNR Virginia City 94.65 330 P **P 14 09 03.6 -0.6**
121A Cookes Peak, D 94.76 318 P **P 14 09 04.3 -0.5**
121A IAmb IAmb 14 09 12.0
comp=Z,66nm,1.4s
121A IAMs_20 IAMs_20 14 56 17.4
comp=Z,7µm,20.0s
121A Cookes Peak, D 94.76 318 P **P 14 09 06.6 +1.8**
baz=38,SNR=21
YERR Yerington 94.76 330 P **P 14 09 05.1 +0.4**
YERR IAmb IAmb 14 09 12.3
comp=Z,91nm,1.3s
RYN Ryan 94.77 329 P **P 14 09 04.2 -0.6**
NV11 Mina Array Sit 94.79 329 P **P 14 09 04.8 -0.1**
PNTR Pine Nut 94.81 330 P **P 14 09 05.2 +0.2**
NVAR Mina Array Bea 94.85 329 P **P 14 09 06.3 +1.1**
comp=Z,12nm,0.9s,baz=43,slow=3.6,SNR=30
NVAR PP **PP 14 12 52.6 -0.5**
comp=Z,1.8nm,0.9s,baz=51,slow=7.1,SNR=3.4
NVAR PKKPbc **PKKPbc 14 26 01.3 +0.8**
comp=Z,0.6nm,0.6s,baz=191,slow=4.7,SNR=5.5
BBAC Balboa, Cauca 94.86 276 *e*P **P 14 09 05.9 +0.3**
TGUH Tegucigalpa,Un 94.87 292 IAMs_20 IAMs_20 14 50 21.3
comp=Z,5µm,20.0s
JCC Jacoby Creek, **94.94 334** IAMs_20 IAMs_20 14 54 02.5
comp=Z,8µm,20.0s
TX31 Lajitas Ar. Si 94.95 314 P **P 14 09 05.4 -0.3**
TX31 IAmb IAmb 14 09 13.2
comp=Z,145nm,1.9s
TX32 Lajitas Array 94.95 314 P **P 14 09 06.4 +0.7**
TX32 IAmb IAmb 14 09 13.2
comp=Z,148nm,1.9s
TXAR Lajitas Array 94.95 314 P **P 14 09 07.2 +1.5**
comp=Z,12nm,0.9s,baz=61,slow=3.9,SNR=36
TXAR PP **PP 14 13 00.7 +6.6**
comp=Z,2.5nm,0.9s,baz=57,slow=5.5,SNR=3.2
TXAR PKKPbc **PKKPbc 14 26 00.7 +0.8**
comp=Z,0.2nm,0.8s,baz=197,slow=5.6,SNR=2.5
RUBR Rubicon Trail 95.06 330 P **P 14 09 05.2 -1.0**
RUBR IAmb IAmb 14 09 13.6
comp=Z,102nm,1.3s
O02D Mt. Diablo Mer 95.07 333 P **P 14 09 08.3 +2.3**
baz=28
X16A Lo Mia Camp, P 95.11 322 P **P 14 09 06.4 0.0**
X16A IAMs_20 IAMs_20 14 56 01.4
comp=Z,8µm,19.0s
SHPR Sheep Range 95.13 326 P **P 14 09 06.6 +0.1**
ORV Oroville 95.14 331 P **P 14 09 06.1 -0.1**
ORV pmax pmax
comp=Z,45nm,1.2s
ORV MLR MLR
comp=Z,12µm,21.0s
ORV Oroville 95.14 331 P **P 14 09 06.1 -0.1**
TPNV Topopah Spring 95.24 327 P **P 14 09 06.9 0.0**
TPNV pmax pmax
comp=Z,20nm,1.3s
TPNV MLR MLR
comp=Z,11µm,20.0s
TPNV Topopah Spring 95.24 327 P **P 14 09 06.9 0.0**
TPNV Topopah Spring 95.24 327 P **P 14 09 08.1 +1.2**
baz=33,SNR=5.6
WAKR Walker 95.25 330 P **P 14 09 07.5 +0.5**
WAKR IAmb IAmb 14 09 14.8
comp=Z,68nm,1.4s
AFDM Forest Hills D 95.47 331 P **P 14 09 08.4 +0.7**
AFDM IAmb IAmb 14 09 15.2
comp=Z,62nm,1.4s
JTS Las Juntas de 95.59 288 IAMs_20 IAMs_20 14 48 58.7
comp=Z,6µm,21.0s
W13A Hualapai Mount 95.71 324 P **P 14 09 09.1 -0.1**
MLAC Mammoth, Mammo 95.75 329 P **P 14 09 12.3 +2.9**
baz=31
OMMB Old Mammoth Mi 95.83 329 P **P 14 09 10.4 +0.5**
MDPB Devils Postpil 95.85 329 P **P 14 09 10.8 +1.0**
FURC Furnace Creek, 95.91 327 P **P 14 09 12.4 +2.7**
baz=32,SNR=9.0
TIN Tinemaha, Big 95.99 328 P **P 14 09 14.4 +4.1**
baz=31
CMB Columbia Colle 96.03 330 P **P 14 09 11.5 +1.1**
CMB pmax pmax
comp=Z,27nm,1.2s
CMB Columbia Colle 96.03 330 P **P 14 09 11.5 +1.1**
SHOC Shoshone, Teco 96.13 326 P **P 14 09 13.3 +2.5**
baz=33
Y14A Wickenburg 96.25 323 P **P 14 09 12.2 +0.8**
Y14A IAMs_20 IAMs_20 14 53 13.7
comp=Z,8µm,20.0s
GDXM Geysers 96.28 332 P **P 14 09 10.1 -1.4**
GDXM IAmb IAmb 14 09 19.8
comp=Z,61nm,1.3s
TUQ Turquoise Moun 96.36 326 P **P 14 09 14.2 +2.2**
baz=33
DAC Darwin (Calif) 96.39 327 IAMs_20 IAMs_20 14 54 15.0
comp=Z,8µm,20.0s
319A Douglas 96.45 319 P **P 14 09 12.0 -0.5**
319A IAmb IAmb 14 09 19.8
comp=Z,80nm,1.4s
CWC Cottonwood Cre 96.45 328 P **P 14 09 13.9 +1.4**
baz=32
TUC Tucson 96.48 320 P **P 14 09 13.1 +0.6**
TUC pmax pmax
comp=Z,60nm,1.6s
TUC MLR MLR
comp=Z,12µm,18.0s
TUC Tucson 96.48 320 P **P 14 09 13.1 +0.6**
TUC IAmb IAmb 14 09 19.9
comp=Z,60nm,1.6s
TUC Tucson 96.48 320 P **P 14 09 15.1 +2.6**
baz=36
PDMCI Parker Dam,Lak 96.49 324 P **P 14 09 14.3 +1.9**
baz=34,SNR=17
MPMC Manual Prospec 96.53 327 P **P 14 09 14.2 +1.3**
baz=32,SNR=16
GSC Goldstone, Bar 96.86 326 P **P 14 09 14.6 +0.3**
GSC pmax pmax
comp=Z,22nm,1.3s
GSC Goldstone, Bar 96.86 326 P **P 14 09 14.6 +0.3**
GSC IAMs_20 IAMs_20 14 57 06.8
comp=Z,8µm,20.0s
GSC Goldstone, Bar 96.86 326 P **P 14 09 16.6 +2.4**
baz=32,SNR=6.6
CCIG Comitan 96.88 297 IAMs_20 IAMs_20 14 55 54.2
comp=Z,5µm,20.0s
OTAV Otavalo 96.90 276 P **P 14 09 13.6 -1.6**
OTAV pmax pmax
comp=Z,107nm,1.6s
OTAV Otavalo 96.90 276 *e*P **P 14 09 16.8 +1.7**
OTAV Otavalo 96.90 276 *e*P **P 14 09 18.2 +3.0**
OTAV Otavalo 96.90 276 P **P 14 09 13.6 -1.6**
HEC Hector,Ludlow 97.05 325 P Pdif 14 09 17.1 +1.9**
baz=33,SNR=15
IRM Iron Mountain 97.07 324 P Pdif 14 09 17.2 +1.9**
baz=34,SNR=24
LRMC Laurel Mtn Rad 97.10 327 P Pdif 14 09 17.0 +1.5**
baz=32,SNR=22
Y12C Blythe 97.12 324 P Pdif 14 09 15.5 +0.1**
Y12C IAmb IAmb 14 09 22.8
comp=Z,100nm,1.8s
Y12C Blythe 97.12 324 P Pdif 14 09 17.6 +2.2**
baz=34,SNR=7.3
ISA Isabella, Lake 97.28 327 P Pdif 14 09 16.6 +0.4**
ISA pmax pmax
comp=Z,61nm,1.3s
ISA Isabella, Lake 97.28 327 P Pdif 14 09 16.6 +0.4**
ISA IAmb IAmb 14 09 23.4
comp=Z,61nm,1.3s
ISA Isabella, Lake 97.28 327 P Pdif 14 09 17.8 +1.6**
baz=31,SNR=27
RRX Edison Barstow 97.31 326 P Pdif 14 09 21.6 +5.4**
baz=32
DAV Davao City (W) 97.36 75 IAMs_20 IAMs_20 14 58 43.0
comp=Z,5µm,22.0s
VES Vestal, Richgr 97.39 328 P Pdif 14 09 22.4 +5.8**
baz=31
SAO San Andreas Ge 97.55 330 P Pdif 14 09 18.3 +1.0**
SAO pmax pmax
comp=Z,41nm,1.1s
SAO San Andreas Ge 97.55 330 P Pdif 14 09 18.3 +1.0**
SAO IAmb IAmb 14 09 24.8
comp=Z,41nm,1.1s
113A Mohawk Valley, 97.57 323 P Pdif 14 09 17.4 0.0**
113A IAmb IAmb 14 09 24.2
comp=Z,44nm,1.6s
113A IAMs_20 IAMs_20 14 57 31.7
comp=Z,6µm,20.0s
BELC Belle Mtn. Jos 97.59 325 P Pdif 14 09 20.6 +2.8**
baz=33,SNR=6.3
BC3 Big Chuckawall 97.63 324 P Pdif 14 09 19.8 +1.9**
baz=34
EDW2 Edwards Air Fo 97.74 327 P Pdif 14 09 20.6 +2.4**
baz=32,SNR=20
PMPB Monarch Peak 97.77 329 P **P 14 09 17.9 -0.4**
214A Organ Pipe Nat 97.77 321 P **P 14 09 17.8 -0.5**
214A Organ Pipe Nat 97.77 321 P Pdif 14 09 19.4 +1.0**
baz=35
BBRC Big Bear Solar 97.79 326 P Pdif 14 09 21.9 +3.2**
baz=32
GLA Glamis 97.84 323 IAMs_20 IAMs_20 14 52 36.8
comp=Z,9µm,21.0s
GLA Glamis 97.84 323 P Pdif 14 09 21.6 +2.9**
baz=34
HPIG 97.92 313 IAMs_20 IAMs_20 14 54 32.5
comp=Z,7µm,18.0s
PAGB Antelope Grade 97.96 329 P **P 14 09 18.9 -0.2**
PAGB IAmb IAmb 14 09 29.1
comp=Z,29nm,1.1s
PAGB IAMs_20 IAMs_20 14 57 29.7
comp=Z,8µm,19.0s
XPFO Pion Flat 98.13 325 P **P 14 09 20.0 -0.1**
XPFO IAmb IAmb 14 09 27.6
comp=Z,79nm,1.6s
PFO Pinyon Flats O 98.13 325 P **P 14 09 19.7 -0.3**
PFO pmax pmax
comp=Z,79nm,1.7s
PFO MLR MLR
comp=Z,9µm,20.0s
PFO Pinyon Flats O 98.13 325 P **P 14 09 19.7 -0.3**
PFO IAmb IAmb 14 09 27.6
comp=Z,79nm,1.6s
PFO Pinyon Flats O 98.13 325 P Pdif 14 09 22.4 +2.4**
baz=33,SNR=31
BFSC Mount Baldy Ra 98.14 326 P Pdif 14 09 22.6 +2.5**
baz=32,SNR=5.5
SMMC Simmler 98.22 328 P Pdif 14 09 26.2 +5.9**
baz=30
MWC Mount Wilson 98.33 326 P **P 14 09 19.5 -1.5**
MWC pmax pmax
comp=Z,44nm,1.5s
MWC Mount Wilson 98.33 326 P **P 14 09 19.5 -1.5**
MWC IAmb IAmb 14 09 28.0
comp=Z,44nm,1.4s
MWC IAMs_20 IAMs_20 14 57 27.4
comp=Z,8µm,20.0s
SWSC Sam W. Stewart 98.38 324 P Pdif 14 09 25.0 +3.9**
baz=33
PASC Pasadena Art C 98.42 326 IAMs_20 IAMs_20 14 55 36.0
comp=Z,7µm,20.0s
MURC Murrieta 98.47 325 P Pdif 14 09 23.9 +2.4**
baz=32,SNR=5.5
PKM Mcpherson Peak 98.51 328 Pdiff Pdif 14 09 24.7 +2.9**
baz=30
MONP2 Monument Peak 98.72 324 Pdiff Pdif 14 09 22.8 0.0**
baz=33
IKP In-Ko-Pah, Jac 98.77 324 Pdiff Pdif 14 09 25.2 +2.4**
baz=33
LPAZ La Paz 98.84 256 P **P 14 09 21.6 -2.3**
LPAZ pmax pmax
comp=Z,18nm,1.7s
LPAZ La Paz 98.84 256 P Pdif 14 09 24.2 +0.3**
comp=Z,0.7nm,0.4s,baz=322,slow=3.8,SNR=4.0
LPAZ La Paz 98.84 256 P **P 14 09 21.6 -2.3**
CIS Catalina Islan 99.18 326 Pdiff **Pdif 14 09 27.7 +3.1**
baz=32
HSIG 99.19 318 IAMs_20 IAMs_20 15 03 19.8
comp=Z,5µm,18.0s
ZAIG Zacatecas 99.20 308 IAMs_20 IAMs_20 14 53 50.9
comp=Z,7µm,21.0s
SRIG Santa Rosalia 101.23 318 IAMs_20 IAMs_20 15 04 55.2
comp=Z,5µm,18.0s
GO01 Chusmiza 101.66 254 IAMs_20 IAMs_20 14 58 40.2
comp=Z,5µm,20.0s
PB11 IPOC Station P 102.07 254 IAMs_20 IAMs_20 14 54 45.9
comp=Z,5µm,22.0s
LVC Limon Verde 103.18 252 IAMs_20 IAMs_20 15 02 43.4
comp=Z,5µm,20.0s
PB04 IPOC Station P 103.94 253 IAMs_20 IAMs_20 15 01 52.7
comp=Z,5µm,20.0s
HOPE Hope Point 104.31 210 IAMs_20 IAMs_20 15 02 06.1
comp=Z,5µm,19.0s
PB10 IPOC Station P 104.93 252 IAMs_20 IAMs_20 14 59 18.8
comp=Z,7µm,21.0s
GO02 Mina Guanaco 105.16 250 IAMs_20 IAMs_20 15 02 31.0
comp=Z,5µm,19.0s
GO03 Coplap 107.02 248 IAMs_20 IAMs_20 15 03 06.3
comp=Z,6µm,19.0s
SYO Syowa Base 107.82 173 *l*eX **PKiKP 14 14 15.3 +6.2**
SYO Syowa Base 107.82 173 *l*eX PKiKP 14 14 20.0 +11
VNA1 Neumayer--Stat 110.50 190 PP PP 14 14 58.6 +7.9
SNAA Sanae 110.81 188 PP PP 14 14 33.5 -19
SNAA Sanae 110.81 188 IAMs_20 IAMs_20 15 00 19.9
comp=Z,7µm,21.0s
VNA3 Neumayer Olymp 111.24 190 PP PP 14 14 40.2 -16
PLCA Paso Flores 114.28 236 PKP **PKiKP 14 14 22.5 +0.2**
comp=Z,2.5nm,0.9s,baz=230,slow=2.8,SNR=6.9
WAKE Wake Island 114.58 35 IAMs_20 IAMs_20 14 58 05.4
comp=Z,5µm,19.0s
GO09 Cerro Castillo 120.24 227 IAMs_20 IAMs_20 15 08 10.9
comp=Z,5µm,20.0s
WB0 Warramunga Arr 120.50 92 **PKPdf 14 14 33.6 -1.2**
WRA Warramunga Arr 120.55 92 PKIKP **PKPdf 14 14 34.0 -1.0**
WRA Warramunga Arr 120.55 92 PKP **PKPdf 14 14 34.0 -1.0**
comp=Z,2.6nm,0.5s,baz=320,slow=1.8,SNR=12
WRA PP **PP 14 16 05.5 +3.1**
comp=Z,7.6nm,0.9s,baz=309,slow=6.8,SNR=8.8
WRA PKKPbc **PKKPab 14 24 43.3 +2.0**
comp=Z,1.9nm,0.7s,baz=120,slow=3.9,SNR=9.0
WB2 Warramunga Arr 120.56 92 **PKPdf 14 14 33.8 -1.2**
WR0 Warramunga Arr 120.72 92 **PKPdf 14 14 34.3 -0.9**
FORT Forrest 121.20 106 IAMs_20 IAMs_20 15 05 03.0
comp=Z,4µm,22.0s
PMSA Palmer Station 121.62 210 IAMs_20 IAMs_20 15 03 43.9
comp=Z,3µm,20.0s
ASAR Alice Springs 122.19 96 PKP **PKPdf 14 14 37.1 -0.9**
comp=Z,3.1nm,0.4s,baz=311,slow=1.5,SNR=22
ASAR PKKPbc **PKKPab 14 24 38.6 +4.6**
comp=Z,1.0nm,0.6s,baz=113,slow=3.4,SNR=15
AS31 Alice Springs 122.19 96 **PKPdf 14 14 36.7 -1.3**
COEN Coen 124.09 81 **PKPdf 14 14 41.3 -0.5**
CASY Casey 124.28 151 IAMs_20 IAMs_20 15 13 41.4
comp=Z,3µm,19.0s
QSPA South Pole Qui 128.04 180 **PKPdf 14 14 48.0 +0.1**
BBOO Buckleboo 128.19 105 IAMs_20 IAMs_20 15 09 23.1
comp=Z,5µm,22.0s

STKA	**Stephens Creek**	**132.05**	**101**	PKIKP	**PKPdf**	**14 14 55.6**	**-1.0**	
STKA	**Stephens Creek**	**132.05**	**101**	PKP	**PKPdf**	**14 14 56.0**	**-0.6**	
	comp=Z,3.7nm,0.8s,baz=342,slow=5.2,SNR=7.1							
STKA	**Stephens Creek**	**132.05**	**101**		**PKPdf**	**14 14 55.6**	**-1.0**	
HNR	**Honiara**	**133.70**	**63**	IAMs_20	IAMs_20	15 23 15.2		
	comp=Z,3μm,21.0s							
VNDA	**Vanda**	**137.29**	**168**	PKP	**PKPdf**	**14 15 03.9**	**-1.1**	
	comp=Z,1.5nm,0.9s,baz=207,slow=2.3,SNR=2.6							
SBA	**Scott Base**	**137.78**	**170**	IAMs_20	IAMs_20	15 21 03.9		
	comp=Z,3μm,19.0s							
CAN	**Canberra**	**139.06**	**102**	IAMs_20	IAMs_20	15 17 05.1		
	comp=Z,3μm,22.0s							
ARMA	**Armidale**	**139.27**	**94**	IAMs_20	IAMs_20	15 23 05.7		
	comp=Z,4μm,21.0s							
FUNA	**Funafuti**	**144.76**	**39**		PKPbc	14 15 19.5	+0.3	
TAOE	**Nuku Hiva Isla**	**145.99**	**324**	*e*LR	LR	15 03 26.6		
	comp=Z,6μm,23.9s							
DZM	**Mont Dzumac**	**146.67**	**71**	*e*PKPbc	**PKPbc**	**14 15 25.4**	**+0.3**	
	comp=Z,352nm,1.5s							
DZM	**Mont Dzumac**	**146.67**	**71**	*e*LR	LR	15 03 48.4		
	comp=Z,6μm,24.1s							
DZM	**Mont Dzumac**	**146.67**	**71**	PKPbc	**PKPbc**	**14 15 24.6**	**-0.5**	
	comp=Z,18nm,0.9s,baz=18,slow=3.2,SNR=7.0							
DZM	**Mont Dzumac**	**146.67**	**71**		**PKPbc**	**14 15 25.0**	**-0.1**	
DZM				IAMs_20	IAMs_20	15 25 25.6		
	comp=Z,3μm,20.0s							
AFI	**Afiamalu**	**153.47**	**28**	PKPbc	**PKPbc**	**14 15 40.7**	**-1.2**	
	comp=Z,31nm,1.0s,baz=266,slow=14,SNR=2.5							
RPZ	**Rata Peaks**	**157.15**	**113**	PKPab	**PKPab**	**14 16 10.2**	**+1.1**	
	comp=Z,29nm,0.8s,baz=127,slow=11,SNR=3.7							
PPT2	**Papeete2**	**157.71**	**334**	*e*PKIKP	**PKPdf**	**14 15 40.2**	**+0.3**	
	comp=Z,125nm,1.3s							
PPT2	**Papeete2**	**157.71**	**334**	*e*SS	SS	14 39 58.3	+11	
	comp=Z,2μm,27.5s							
PPT2	**Papeete2**	**157.71**	**334**	*e*LR	LR	15 08 51.2		
	comp=Z,9μm,26.8s							
OXZ	**Oxford**	**157.89**	**112**		**PKPab**	**14 16 13.2**	**+0.9**	
OUZ	**Omahuta**	**158.25**	**90**	IAMs_20	IAMs_20	15 34 21.1		
	comp=Z,4μm,22.0s							
HIZ	**Hauiti**	**159.90**	**99**	IAMs_20	IAMs_20	15 33 46.6		
	comp=Z,3μm,22.0s							
URZ	**Urewera**	**161.62**	**97**	PKPab	**PKPab**	**14 16 28.2**	**-0.5**	
	comp=Z,27nm,1.0s,baz=254,slow=5.1,SNR=4.3							
TBI	**Tubuai**	**162.90**	**327**	*e*SS	SS	14 40 50.2	+8.5	
	comp=Z,2μm,34.0s							
TBI	**Tubuai**	**162.90**	**327**	*e*LR	LR	15 11 17.1		
	comp=Z,5μm,23.2s							

*IDC **26** 13:57:17.6±1.1,38°.22N×20°.66E,h0km,mb5.1/9, mb1 5.1/10,mb1mx4.8/41,mbtmp5.1/10,Error ellipse: s-maj=38.3km s-min=25.0km az=129.0*
*NEIC **26** 13:57:19.2±2.0,38°.29N±0°.09×20°.57E±0°.08,h10km±1km, mb5.6/28,Error ellipse: s-maj=15.5km s-min=10.0km az=171.0*
ISC 26 13:57:19.1±0.5,**38°.22N**±0°.08×**20°.54E**±0°.05,**h11**km,**n69,**
σ1°.36/66,**mb5.5**/22,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGG	**Agios Georgios**	**1.62**	**60**	Pn	**Pb**	**13 57 49.3**	**+0.4**
IDI	**Anoyia**	**4.55**	**129**	Sn	**Sn**	**13 59 20.4**	**-0.6**
	baz=319,slow=20,SNR=1.4						
VAE	**Valgurarena**	**9.01**	**263**	Sn	**Sn**	**13 59 26.9**	**-2.8**
	baz=186,slow=18,SNR=0.9						
OSSC	**Osservatorio P**	**8.81**	**310**	Pn	**Pn**	**13 59 26.9**	**+0.5**
KEST	**Kesra**	**9.30**	**258**	Pn	**Pn**	**13 59 37.2**	**+4.1**
	4.3nm,0.3s,baz=38,slow=19,SNR=2.9						
TEOL	**Teolo**	**9.73**	**320**	Pn	**Pn**	**13 59 41.4**	**+2.4**
STAL	**STALIGIAL**	**9.91**	**327**	Pn	**Pn**	**13 59 41.1**	**-0.4**
BR131	**Keskin Array S**	**10.31**	**78**	Pn	**Pn**	**13 59 50.5**	**+3.4**
BRTR	**Keskin Array B**	**10.31**	**78**	Pn	**Pn**	**13 59 51.1**	**+4.1**
	baz=254,slow=12,SNR=1.8						
CSS	**Mathiatis**	**10.78**	**104**	Pn	**Pn**	**13 59 55.3**	**+1.9**
MORC	**Moravsky Berou**	**11.76**	**350**	Pn	**Pn**	**14 00 06.8**	**+0.1**
STU	**Stuttgart**	**13.37**	**326**	Pn	**Pn**	**14 00 29.4**	**+0.7**
AKH	**Akhalkalaki**	**17.91**	**73**	P	**P**	**14 01 30.3**	**+1.5**
GNI	**Garni**	**18.85**	**77**	P	**Pn**	**14 01 41.5**	**+1.7**
	4.3nm,0.3s,baz=71,slow=5.3,SNR=3.1						
GNI	**Garni**	**18.85**	**77**		**Pn**	**14 01 41.6**	**+1.9**
TBLG	**Delisi**	**18.86**	**72**		**Pn**	**14 01 41.7**	**+2.0**
GEYT	**Alibeck**	**29.45**	**79**	P	**P**	**14 03 23.3**	**+0.4**
GYA0B	**ALIBECK ARRAY**	**29.45**	**79**	P	**P**	**14 03 23.0**	**+0.1**
GYA0B				IAmb	IAmb	14 03 25.9	
	comp=Z,111nm,1.1s						
KK31	**Karatay Array**	**37.77**	**66**	P	**P**	**14 04 35.3**	**+0.2**
KK31				IAmb	IAmb	14 04 39.3	
	comp=Z,74nm,0.8s						
KKAR	**Karatay Array**	**37.77**	**66**	P	**P**	**14 04 35.2**	**+0.1**
KKAR	**Karatay Array**	**37.77**	**66**	P	**P**	**14 04 35.2**	**+0.1**
KKAR				IAmb	IAmb	14 04 39.3	
	comp=Z,74nm,0.8s						
SOCY	**Socotra**	**39.48**	**122**	P	**P**	**14 04 48.0**	**-1.8**
SOCY				IAmb	IAmb	14 04 48.9	
	comp=Z,139nm,0.9s						
KURBB	**Kurchatov Arra**	**42.19**	**54**	P	**P**	**14 05 11.9**	**+0.2**
	comp=Z,21nm,0.7s,baz=280,slow=9.1,SNR=2.8						
KURK	**Kurchatov**	**42.24**	**53**	P	**P**	**14 05 11.9**	**-0.2**
KURK	**Kurchatov**	**42.24**	**53**	IAmb	IAmb	14 05 45.6	
	comp=Z,115nm,1.0s						
MK31	**Makanchi Array**	**45.27**	**58**	P	**P**	**14 05 36.1**	**-0.5**
MK31				IAmb	IAmb	14 06 03.3	
	comp=Z,38nm,0.7s						
MKAR	**Makanchi Array**	**45.27**	**58**	P	**P**	**14 05 36.3**	**-0.3**
	comp=Z,27nm,0.5s,baz=280,slow=6.8,SNR=5.3						
ZAA0	**Zalesovo Array**	**45.65**	**48**	P	**P**	**14 05 38.7**	**-0.8**
ZALV	**Zalesovo Beam**	**45.65**	**48**	P	**P**	**14 05 38.5**	**-0.9**
	comp=Z,51nm,0.6s,baz=276,slow=7.5,SNR=2.1						
KLRI	**Killari**	**52.53**	**96**	*e*P	**P**	**14 06 31.6**	**-1.1**
SRSP	**Sriramsagar**	**53.42**	**94**	*e*P	**P**	**14 06 37.4**	**-1.8**
LSZ	**Lusaka**	**53.69**	**71**	P	**P**	**14 06 42.3**	**+1.1**
RPR	**Rampur**	**54.20**	**94**	*e*P	**P**	**14 06 44.1**	**-0.8**
HYBB	**Hyderabad (bro**	**54.43**	**95**	*e*P	**P**	**14 06 45.3**	**-1.3**
HYB	**Hyderabad**	**54.43**	**95**	*i* P	**P**	**14 06 45.0**	**-1.6**
URV	**Uravakonda**	**54.85**	**99**	*e*P	**P**	**14 06 47.8**	**-1.8**
SRLM	**Srisailam**	**55.45**	**97**	*e*P	**P**	**14 06 53.1**	**-0.9**
GGR	**Gangavaram**	**55.50**	**94**	*e*P	**P**	**14 06 52.9**	**-1.4**
NJS	**Nagarjunasagar**	**55.51**	**96**	*e*P	**P**	**14 06 53.6**	**-0.8**
ADKI	**Addanki**	**56.44**	**96**	*e*P	**P**	**14 06 59.8**	**-1.2**
MYLAV	**Mylavaram**	**56.44**	**95**	*e*P	**P**	**14 06 59.6**	**-1.5**
PVM	**Polavaram**	**56.94**	**94**	*e*P	**P**	**14 07 04.0**	**-0.6**
SKHT	**Srikalahasti**	**57.47**	**98**	*e*P	**P**	**14 07 07.5**	**-0.9**
LSA	**Lhasa**	**57.91**	**76**	P	**P**	**14 07 11.1**	**-0.8**
CHLP	**Challavanipeta**	**58.15**	**91**	*e*P	**P**	**14 07 11.6**	**-1.5**
SONM	**Songino Array**	**60.42**	**51**	P	**P**	**14 07 28.5**	**-0.1**
	comp=Z,27nm,1.0s,baz=291,slow=8.0,SNR=2.2						
SONM	**Songino Array**	**60.42**	**51**	IAmb	IAmb	14 07 32.3	
	comp=Z,35nm,1.1s						
ABPO	**Ambohimpanom**	**62.20**	**151**	P	**P**	**14 07 41.6**	**+0.7**
ABPO				IAmb	IAmb	14 07 43.1	
	comp=Z,33nm,1.1s						
PALK	**Pallekele**	**62.20**	**103**	P	**P**	**14 07 41.9**	**+0.8**
PALK				IAmb	IAmb	14 07 45.4	
	comp=Z,50nm,0.9s						
YAK	**Yakutsk**	**65.07**	**29**	P	**P**	**14 07 58.3**	**-0.8**
BOSA	**Boshof**	**66.63**	**175**	P	**P**	**14 08 10.2**	**+0.5**
	comp=Z,10nm,0.7s,baz=332,slow=10,SNR=3.0						
BOSA	**Boshof**	**66.63**	**175**	P	**P**	**14 08 09.9**	**+0.3**
BOSA				IAmb	IAmb	14 08 44.4	
	comp=Z,48nm,1.3s						
XAN	**Xi'an**	**68.79**	**63**	P	**P**	**14 08 22.6**	**-0.8**
XAN				IAmb	IAmb	14 08 29.2	
	comp=Z,48nm,0.9s						
PBA	**Port Blair**	**68.93**	**92**	P	P	14 08 23.5	-0.9
CM31	**Chiang Mai Arr**	**69.87**	**82**	P	**P**	**14 08 28.9**	**-1.3**
CM31				IAmb	IAmb	14 08 36.9	
	comp=Z,63nm,1.4s						
CMAR	**Chiang Mai Arr**	**69.87**	**82**	P	**P**	**14 08 29.1**	**-1.1**
	comp=Z,13nm,0.8s,baz=306,slow=7.0,SNR=2.4						
ENH	**Enshi**	**71.24**	**66**	P	**P**	**14 08 37.9**	**-0.6**
MPR	**Mayaguez**	**77.19**	**283**	P	**P**	**14 09 13.4**	**+0.1**
USRK	**Ussuriysk Ar.**	**77.24**	**43**	P	**P**	**14 09 12.6**	**-0.6**
	comp=Z,30nm,1.0s,baz=286,slow=5.2,SNR=3.0						
USRK	**Ussuriysk Ar.**	**77.24**	**43**	P	**P**	**14 09 12.2**	**-1.0**
QIZ	**Qiongzhong**	**77.95**	**75**	P	**P**	**14 09 16.9**	**-0.6**
QIZ				IAmb	IAmb	14 09 21.9	
	comp=Z,60nm,0.9s						
KULM	**Kulim**	**78.98**	**92**	P	**P**	**14 09 22.6**	**-0.7**
GSI	**Gunungsitoli**	**79.01**	**97**	P	**P**	**14 09 23.4**	**-0.1**
GSI				IAmb	IAmb	14 09 24.1	
	comp=Z,38nm,0.7s						
RPSI	**Rantau Prapat**	**79.21**	**95**	P	P	**14 09 23.7**	**-0.9**
KS19	**Wonju Array Si**	**79.23**	**51**	P	**P**	**14 09 24.4**	**0.0**
KS19				IAmb	IAmb	14 09 37.9	
	comp=Z,70nm,1.3s						
KSAR	**Wonju Array Be**	**79.28**	**51**	P	**P**	**14 09 24.5**	**-0.1**
KSRS	**Korea Array**	**79.29**	**51**	P	**P**	**14 09 24.4**	**-0.3**
	comp=Z,16nm,0.8s,baz=312,slow=4.9,SNR=3.2						
PDAR	**Pinedale Array**	**87.53**	**326**	P	**P**	**14 10 08.3**	**+1.0**
	comp=Z,2.4nm,0.9s,baz=51,slow=7.1,SNR=2.0						
ASAR	**Alice Springs**	**122.16**	**96**	PKP	**PKiKP**	**14 16 14.2**	**-0.1**
	comp=Z,4.5nm,0.9s,baz=316,slow=3.9,SNR=4.1						

*NEIC **26** 14:03:00.8±1.1,14°.00N±0°.04×93°.1W±0°.1,h39km±52km, Error ellipse: s-maj=18.4km s-min=4.1km az=105.0*
*MEX **26** 14:03:01.1±0.5,13°.92N×93°.10W,h42km±116km,MD4.1*
ISC 26 14:03:01.2±3.6,**14°.0N**±0°.2×**93°.1W**±0°.2,**h37**km,**n9,**
σ0°.69/15,**Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.18**	**41**	*i* P	**Pn**	**14 03 20.9**	**-0.3**
THIG				*i* S	**Sn**	**14 03 36.1**	**0.0**
THIG		**1.18**	**41**		**Pn**	**14 03 20.9**	**-0.3**
THIG					**Sn**	**14 03 36.1**	**0.0**
CCIG	**Comitan**	**2.43**	**22**	*i* P	**Pn**	**14 03 38.4**	**-0.1**
CCIG				*i* S	**Sn**	**14 04 07.2**	**+0.1**
CCIG	**Comitan**	**2.43**	**22**		**Pn**	**14 03 38.4**	**-0.1**
CCIG					**Sn**	**14 04 07.2**	**+0.1**
CCIG	**Comitan**	**2.43**	**22**	Pn	**Pn**	**14 03 40.7**	**+2.1**
TGIG		**2.75**	**359**	*e*P	**Pn**	**14 03 43.0**	**+0.1**
TGIG				*i* S	**Sn**	**14 04 14.4**	**-0.4**
TGIG		**2.75**	**359**		**Pn**	**14 03 43.0**	**+0.1**
TGIG					**Sn**	**14 04 14.4**	**-0.4**
TEIG	**Tepich**	**7.69**	**36**	Pn	**Pn**	**14 04 50.2**	**-0.5**
ACON	**Acoyapa**	**7.96**	**104**	Pn	**Pn**	**14 04 54.9**	**+0.4**

*IDC **26** 14:03:44.5±2.1,8°.43S×121°.98E,h0km,mb4.0/2, mb1 3.9/4,mb1mx3.6/45,mbtmp3.8/4,ML3.7/2,Error ellipse: s-maj=177.8km s-min=26.7km az=57.0*
*NEIC **26** 14:03:49.7±1.5,8°.50S±0°.10×122°.01E±0°.09,h40km±13km, mb4.2/9,Error ellipse: s-maj=15.7km s-min=10.9km az=221.0*
ISC 26 14:03:48.1±0.8,**8°.60S**±0°.09×**122°.16E**±0°.09,**h31**km,**n21,**
σ2°.52/22,**mb4.4**/4,**Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**4.29**	**326**	Pn	**Pn**	**14 04 50.0**	**-1.3**
LUWI	**Luwuk**	**7.54**	**5**	Pn	**Pn**	**14 05 35.2**	**-0.8**
JAGI	**Jajag, Banyuwa**	**7.92**	**270**	Pn	**Pn**	**14 05 40.0**	**-1.2**
KNRA	**Kununurra**	**9.55**	**138**	Pn	**Pn**	**14 06 06.4**	**+2.9**
MTN	**Manton Dam**	**9.78**	**116**		**Pn**	**14 06 10.3**	**+3.6**
FITZ	**Fitzroy Crossi**	**10.03**	**161**	Pn	**Pn**	**14 06 14.1**	**+3.9**
UGM	**Wanagama**	**11.53**	**273**	Pn	Pn	14 06 36.4	+5.5
CISI	**Cisompet, Garu**	**14.24**	**273**	P	**Pn**	**14 07 09.8**	**+2.0**
WB0	**Warramunga Arr**	**16.23**	**134**	Pn	**Pn**	**14 07 33.1**	**-1.0**
WB0				IAmb	IAmb	14 07 46.9	
	comp=Z,18nm,1.6s						
WRA	**Warramunga Arr**	**16.31**	**135**	Pn	**Pn**	**14 07 36.3**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=309,slow=14,SNR=3.7						
WRA				Sn	**Sn**	**14 10 31.4**	**-3.9**
	comp=Z,0.2nm,0.3s,baz=311,slow=24,SNR=4.7						
WRA	**Warramunga Arr**	**16.31**	**135**		**Pn**	**14 07 33.8**	**-1.3**
WB2	**Warramunga Arr**	**16.32**	**135**	Pn	**Pn**	**14 07 34.4**	**-0.8**
WR0	**Warramunga Arr**	**16.46**	**135**	Pn	**Pn**	**14 07 35.5**	**-1.5**
WR0				IAmb	IAmb	14 07 56.8	
	comp=Z,23nm,1.6s						
AS31	**Alice Springs**	**18.73**	**144**	P	**Pn**	**14 08 08.6**	**+3.5**
ASAR	**Alice Springs**	**18.73**	**144**	P	**Pn**	**14 08 08.6**	**+3.4**
	comp=Z,0.3nm,0.3s,baz=318,slow=12,SNR=27						
ASAR				S	**Sn**	**14 11 31.9**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=314,slow=21,SNR=4.2						
ASAR	**Alice Springs**	**18.73**	**144**	P	**Pn**	**14 08 08.9**	**+3.8**
COEN	**Coen**	**21.28**	**106**	P	**P**	**14 08 35.0**	**+2.7**
COEN				IAmb	IAmb	14 09 29.1	
	comp=Z,28nm,1.5s						
NWAO	**Narrogin (SRO)**	**24.63**	**190**	P	**P**	**14 09 04.0**	**-1.9**
BBOO	**Buckleboo**	**27.31**	**154**	P	**P**	**14 09 30.7**	**+0.4**
BBOO				IAmb	IAmb	14 09 36.4	
	comp=Z,18nm,1.4s						
SONM	**Songino Array**	**57.90**	**348**	P	**P**	**14 13 36.9**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=169,slow=7.8,SNR=2.0						
MKAR	**Makanchi Array**	**65.57**	**331**	P	**P**	**14 14 28.6**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=143,slow=7.8,SNR=8.5						

DDA 26 14:07:57.8,39°.10N×29°.04E,h7km±3km,**ML1.9,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.26**	**257**	*i* P	Pg	14 08 03.6	+0.7
DEMI				*i* S	Sg	14 08 07.8	+1.4
DEMI				IAML		14 08 08.0	
	comp=E,131nm,0.5s						
DEMI				IAML		14 08 10.0	
	comp=N,140nm,0.1s						
GDZ	**Gediz**	**0.34**	**92**	*i* P	Pg	14 08 05.2	+0.6
GDZ				*i* S	Sg	14 08 09.8	+0.7
GDZ				IAML		14 08 10.0	
	comp=E,71nm,1.2s						
GDZ				IAML		14 08 10.0	
	comp=N,200nm,0.3s						
USAK	**Uak-Merkez**	**0.39**	**183**	*i* P	Pb	14 08 06.7	-0.4
USAK				*i* S	Sg	14 08 11.6	+1.1
MANT	**Manisa**	**0.72**	**212**	*i* P	Pb	14 08 12.4	-0.4
MANT				IAML		14 08 21.0	
	comp=N,111nm,0.5s						
MANT				*i* S	Sg	14 08 21.2	+0.2
MANT				IAML		14 08 22.0	
	comp=E,179nm,1.8s						
KHAL	**Karahalli**	**0.81**	**154**	*i* P	Pn	14 08 15.1	-0.7
KHAL				IAML		14 08 25.0	
	comp=E,131nm,1.5s						
KHAL				IAML		14 08 25.0	
	comp=N,49nm,0.3s						
KHAL				*i* S	Sb	14 08 25.0	-0.5

*BJI **26** 14:08:36.0±0.0,38°.39N×19°.75E,h19km,mB5.3/10, mb4.7/18,Ms4.9/1,Ms7 4.6/1*
*IDC **26** 14:08:37.1±0.6,38°.24N×20°.54E,h0km,mb4.2/30, mb1 4.2/42,mb1mx4.1/60,mbtmp4.1/42,ML3.9/10,Error ellipse: s-maj=12.7km s-min=11.0km az=28.0*
*MOS **26** 14:08:37.0±1.4,38°.20N×20°.32E,h13km,mb4.9/14,Error ellipse: s-maj=6.7km s-min=4.0km az=78.3*
*NEIC **26** 14:08:38.8±2.5,38°.22N±0°.05×20°.49E±0°.05,h11km±3km, mb4.7/26,ML4.3(THE),Error ellipse: s-maj=7.9km s-min=6.0km az=185.0*
*ATH **26** 14:08:39.9,38°.19N×20°.53E,h19km,ML4.3/14,Error ellipse: s-maj=1.2km s-min=0.7km az=68.0*
*TIR **26** 14:08:39.8,38°.25N×20°.42E,h33km,Md4.7/6*
*THE **26** 14:08:39.6,38°.19N×20°.46E,h16km,ML4.3/4,Error ellipse: s-maj=1.0km s-min=0.3km az=239.0*
*BGR **26** 14:08:40.6±1.4,38°.30N×20°.78E,h10km,Error ellipse: s-maj=55.6km s-min=17.8km az=52.0*
ISC 26 14:08:39.7±0.4,**38°.19N**±0°.02×**20°.50E**±0°.02,**h19**km,**n401,**
σ2°.04/450,**mb4.4**/47,**23C-6D,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.07**	**98**	P	**Pb**	**14 08 43.2**	**-0.1**
VLS				S	**Sb**	**14 08 45.6**	**0.0**
	270μm,0.2s						
VLS	**Valsamata**	**0.07**	**98**	P	**Pb**	**14 08 43.2**	**-0.1**
VLS				S	**Sb**	**14 08 45.8**	**+0.2**
VLS	**Valsamata**	**0.07**	**98**	P	**Pb**	**14 08 43.3**	**-0.1**
VLS				S	**Sb**	**14 08 45.7**	**0.0**
VLS	**Valsamata**	**0.07**	**98**	P	**Pb**	**14 08 43.2**	**-0.1**
VLS				S	**Sb**	**14 08 45.8**	**+0.2**
VLS				AML	AML		
VLS				AML	AML		
	comp=N,94750μm,1.6s						
VLS				AML	AML		
VLS				AML	AML		
	comp=N,94700μm,1.6s						
VLS				AML	AML		
	comp=N,94700μm,1.6s						
KFL	**Anninata**	**0.24**	**109**	P	**Pb**	**14 08 45.4**	**+0.2**
KFL				S	**Sb**	**14 08 49.8**	**+1.0**
KFL	**Anninata**	**0.24**	**109**	P	**Pb**	**14 08 45.4**	**+0.2**
KFL				S	**Sb**	**14 08 49.5**	**+0.6**
VLMS	**Volimes, Zakyn**	**0.34**	**157**	P	**Pb**	**14 08 47.1**	**-0.1**
VLMS				S	**Sb**	**14 08 52.7**	**+0.6**
VLMS				AML	AML	14 08 56.2	
VLMS				AML	AML	14 08 58.0	
EVGI	**Lefkada island**	**0.45**	**16**	P	**Pb**	**14 08 48.6**	**-0.5**
EVGI	**Lefkada island**	**0.45**	**16**	P	**Pb**	**14 08 48.8**	**-0.3**
MGNA	**Meganis**	**0.52**	**26**	P	**Pb**	**14 08 49.7**	**-0.5**
MGNA				S	**Sb**	**14 08 57.3**	**0.0**
MGNA				AML	AML	14 09 03.0	
	comp=E,39305μm,0.3s						
MGNA				AML	AML	14 09 03.5	
	comp=N,55866μm,0.3s						
LKD2	**Lefkada island**	**0.61**	**12**	P	**Pb**	**14 08 51.3**	**-0.5**
LKD2				S	**Sb**	**14 09 00.9**	**+0.9**
	comp=N,30μm,0.7s						
LKD2	**Lefkada island**	**0.61**	**12**	P	**Pb**	**14 08 51.6**	**-0.2**
LKD2				S	**Sb**	**14 09 01.2**	**+1.2**
TSLK	**Tsoukalades, L**	**0.65**	**11**	P	**Pb**	**14 08 52.0**	**-0.4**
TSLK	**Tsoukalades, L**	**0.65**	**11**	P	**Pb**	**14 08 52.4**	**0.0**
TSLK				S	**Sb**	**14 09 02.4**	**+1.4**
TSLK				AML	AML	14 09 05.1	
	comp=E,54641μm,0.5s						
TSLK				AML	AML	14 09 07.8	
	comp=N,52773μm,0.5s						
RLS	**Riolos of Patr**	**0.78**	**99**	P	**Pb**	**14 08 54.4**	**-0.2**
RLS				S	**Sn**	**14 09 06.5**	**-0.2**
	comp=N,13μm,0.4s						
RLS	**Riolos of Patr**	**0.78**	**99**	P	**Pb**	**14 08 54.4**	**-0.2**
RLS				S	**Sb**	**14 09 04.8**	**0.0**
RLS				AML	AML	14 09 14.0	
	comp=E,24719μm,0.4s						
RLS				AML	AML	14 09 17.4	
	comp=N,26302μm,0.4s						
PVO	**Paravola**	**0.92**	**62**	P	**Pn**	**14 08 57.4**	**-0.1**
PVO	**Paravola**	**0.92**	**62**	P	**Pn**	**14 08 57.5**	**-0.1**
PVO				S	**Sn**	**14 09 09.7**	**-0.5**
PVO				AML	AML	14 09 12.9	
	comp=N,61156μm,0.4s						
PVO				AML	AML	14 09 17.2	
	comp=E,49328μm,0.8s						
DRO	**Drossia**	**0.99**	**103**	P	**Pb**	**14 08 58.2**	**0.0**
DRO	**Drossia**	**0.99**	**103**	P	**Pb**	**14 08 58.3**	**+0.1**
DRO				S	**Sb**	**14 09 10.5**	**-0.3**
DRO				AML	AML	14 09 19.0	
	comp=E,46902μm,0.4s						
DRO				AML	AML	14 09 33.6	
	comp=N,58489μm,0.5s						
UPR	**University Cam**	**1.02**	**84**	P	**Pn**	**14 08 59.3**	**+0.4**
UPR	**University Cam**	**1.02**	**84**	P	**Pn**	**14 08 59.4**	**+0.4**
UPR				S	**Sn**	**14 09 13.6**	**+0.8**
EFP	**Efpalio**	**1.13**	**77**	P	**Pn**	**14 09 00.6**	**+0.1**
EFP	**Efpalio**	**1.13**	**77**	P	**Pn**	**14 09 00.7**	**+0.1**
EFP				S	**Sn**	**14 09 16.2**	**+0.6**
EFP				AML	AML	14 09 22.8	
	comp=E,65641μm,0.6s						
EFP				AML	AML	14 09 24.4	
	comp=N,39423μm,0.8s						
AMT	**Artemida-Makis**	**1.16**	**124**	P	**Pn**	**14 09 01.2**	**+0.2**
AMT				AML	AML	14 09 22.9	
	comp=E,42290μm,0.5s						
AMT				AML	AML	14 09 28.8	
	comp=N,54646μm,0.6s						
LAKA	**Lakka**	**1.17**	**87**	P	**Pn**	**14 09 01.2**	**+0.1**
LAKA	**Lakka**	**1.17**	**87**	P	**Pb**	**14 09 01.4**	**+0.1**
LAKA				S	**Sn**	**14 09 18.2**	**+1.7**
LAKA				AML	AML	14 09 19.8	
	comp=N,19796μm,0.5s						
LAKA				AML	AML	14 09 22.1	
	comp=E,11313μm,0.5s						
SERG	**Sergoula**	**1.25**	**79**	P	**Pn**	**14 09 02.4**	**+0.3**
SERG	**Sergoula**	**1.25**	**79**	P	**Pn**	**14 09 02.5**	**+0.3**
TRIZ	**Trizonia**	**1.25**	**81**	P	**Pn**	**14 09 02.3**	**+0.1**
TRIZ	**Trizonia**	**1.25**	**81**	P	**Pn**	**14 09 02.5**	**+0.4**
EVR	**Evrytania**	**1.26**	**54**	P	**Pn**	**14 09 02.8**	**+0.4**
EVR	**Evrytania**	**1.26**	**54**	P	**Pb**	**14 09 03.0**	**+0.1**
ALIK	**Aliki, Aigiali**	**1.27**	**86**	P	**Pb**	**14 09 03.0**	**-0.1**
KALE	**Kalithea**	**1.31**	**81**	P	**Pn**	**14 09 03.2**	**+0.2**
KALE	**Kalithea**	**1.31**	**81**	P	**Pn**	**14 09 03.5**	**+0.5**
KALE				AML	AML	14 09 26.5	
	comp=N,24307μm,1.2s						
KALE				AML	AML	14 09 28.5	
	comp=E,15796μm,0.7s						
KLV	**Kalavryta, Ach**	**1.31**	**96**	P	**Pn**	**14 09 03.4**	**+0.4**
KLV	**Kalavryta, Ach**	**1.31**	**96**	P	**Pn**	**14 09 03.9**	**+0.1**
KLV	**Kalavryta, Ach**	**1.31**	**96**	P	**Pn**	**14 09 03.5**	**+0.4**
KLV				S	**Sb**	**14 09 24.3**	**+4.1**
IGT	**Igoumenitsa

ALNA Alonissos 2.81 69 P Pn 14 09 25.7 +2.1
KTHA Kythira Island 2.81 132 P Pn 14 09 26.6 +2.9
OHR Ohrid 2.93 4 ⇓*i*Pn Pn 14 09 28.1 +2.8
PAIG Paliouri 3.03 54 P Pn 14 09 28.1 +1.6
TIP Timpagrande 3.09 290 ⇑P Pn 14 09 29.3 +1.8
TIP Timpagrande 3.09 290 P Pn 14 09 28.3 +0.8
TIP Timpagrande 3.09 290 Pn Pn 14 09 28.4 +0.8
SERS Sersale 3.10 287 P Pn 14 09 29.1 +1.4
THE Thessaloniki 3.10 37 P Pn 14 09 29.3 +1.7
KARY Karystos 3.11 92 P Pn 14 09 29.6 +1.8
GRG Griva 3.13 27 P Pn 14 09 30.0 +2.0
HORT Hortiatis 3.14 39 P Pn 14 09 29.7 +1.5
PLG Polygyros 3.16 45 P Pn 14 09 29.9 +1.4
TIR Tirane 3.19 351 P Pn 14 09 30.1 +1.2
TIR Tirane 3.19 351 *i* PN Pn 14 09 29.8 +0.9
TIR Tirane 3.19 351 P Pn 14 09 30.6 +1.6
TIR Tirane 3.19 351 ⇑P Pn 14 09 31.2 +2.3
TIR Tirane 3.19 351 ⇑S Sn 14 10 09.6 +3.2
TIR Tirane 3.19 351 P Pn 14 09 30.5 +1.6
TIR AML AML
comp=E,3195µm,0.7s
TIR AML AML
comp=N,3045µm,0.8s
TIR Tirane 3.19 351 Pn Pn 14 09 30.1 +1.2
PLAC Placanica 3.20 276 P Pn 14 09 30.4 +1.4
SERI Serifos 3.33 107 P Pn 14 09 32.8 +2.1
CELI Celico 3.34 293 P Pn 14 09 32.2 +1.2
CGL1 Ceglie Messapi 3.40 317 *e*Pn Pn 14 09 32.7 +1.0
SOH Sokhos 3.44 39 P Pn 14 09 34.8 +2.6
PHP Peshkopia 3.49 359 *i* PN Pn 14 09 35.0 +1.9
PHP *i* SN Sn 14 10 16.4 +2.5
KNT Kendrikon 3.50 31 P Pn 14 09 34.8 +1.7
VAY Valandovo 3.51 26 ⇓*i*Pn Pn 14 09 35.0 +1.7
CAR1 CAROLEI 3.52 289 P Pn 14 09 35.4 +2.0
CAR1 AML AML
comp=N,1116µm,0.4s
CAR1 AML AML
comp=E,1108µm,1.2s
CEL Celeste 3.62 273 Pn Pn 14 09 35.5 +0.6
JOPP Joppolo 3.65 278 P Pn 14 09 35.6 +0.4
STIP Stip 3.73 20 ⇓*i*Pn Pn 14 09 39.3 +3.0
SRS Serrai 3.78 38 P Pn 14 09 38.6 +1.7
MATE Matera 3.83 311 ⇑P Pn 14 09 39.1 +1.5
MATE Matera 3.83 311 ⇑S Sn 14 10 21.8 -0.3
SKO Skopje 3.85 11 ⇓*i*Pn Pn 14 09 39.7 +1.8
PUK Puka 3.88 353 *i* PN Pn 14 09 38.9 +0.6
PUK *i* SN Sn 14 10 26.9 +3.4
PUK Puka 3.88 353 P Pn 14 09 39.7 +1.3
PUK AML AML
comp=E,1605µm,0.9s
PUK AML AML
comp=N,1100µm,1.1s
IMMV Iera Moni Meta 3.90 133 P Pn 14 09 41.1 +2.5
SG1 Sgolgore (BA) 3.97 313 *e*Pn Pn 14 09 40.7 +1.2
SG1 Sn Sg 14 10 50.5 +3.4
BAI Bari 4.04 317 *e*Pn Pn 14 09 41.5 +1.1
BAI Sn Sg 14 10 52.8 +3.5
MPNC Port Mandanici 4.05 271 P Pn 14 09 41.6 +0.9
DRME Dracevica, Mon 4.12 346 *e*Pn Pn 14 09 42.5 +0.9
APE Apeiranthos 4.15 104 *e*P Pn 14 09 43.9 +1.9
APE Apeiranthos 4.15 104 ⇑P Pn 14 09 43.9 +1.9
KAVA Kavala 4.18 47 P Pn 14 09 43.8 +1.3
BCI Bajram Curri 4.19 356 *i* PN Pn 14 09 44.5 +2.0
BCI *i* SN Sn 14 10 34.4 +3.4
SIGR SIGRI 4.32 75 P Pn 14 09 47.2 +2.9
PDG Podgorica 4.34 348 ⇑P Pn 14 09 45.3 +0.6
PDG Podgorica 4.34 348 ⇑S Sn 14 10 34.9 +0.1
PDG Podgorica 4.34 348 P Pn 14 09 46.1 +1.4
PDG AML AML
comp=E,1305µm,0.6s
PDG AML AML
comp=E,1024µm,0.6s
PDG AML AML
comp=N,944µm,0.5s
PDG AML AML
comp=N,1230µm,0.5s
PDG Podgorica 4.34 348 *e*Pn Pn 14 09 44.8 +0.2
PDG Podgorica 4.34 348 Pn Pn 14 09 44.9 +0.2
SANT Santorini 4.35 113 Pn Pn 14 09 48.1 +3.3
ACER Acerenza 4.38 308 Pn Pn 14 09 46.0 +0.8
CHOS Chios island 4.38 86 P Pn 14 09 47.4 +2.1
HAVL Avola 4.44 256 P Pn 14 09 44.9 -1.2
HAVL AML AML
comp=N,1260µm,0.2s
HAVL AML AML
comp=E,1277µm,0.6s
HCY Herceg Novi 4.52 341 *e*Pn Pn 14 09 46.5 -0.6
HLNI Lentini 4.54 261 P Pn 14 09 46.1 -1.2
HLNI AML AML
comp=E,1048µm,0.2s
HLNI AML AML
comp=N,1140µm,0.2s
HPAC Pachino 4.54 252 P Pn 14 09 47.6 +0.3
MEU Monte Lauro 4.55 258 P Pn 14 09 47.1 -0.5
MEU AML AML
comp=N,3045µm,0.3s
MEU AML AML
comp=E,2090µm,0.9s
IDI Anoyia 4.56 128 Pn Pn 14 09 48.1 +0.3
comp=E,2.1nm,0.3s,baz=334,slow=13,SNR=2.9
IDI Sn Sn 14 10 38.9 -1.4
comp=E,32nm,0.3s,baz=240,slow=22,SNR=8.2
IDI Anoyia 4.56 128 P Pn 14 09 51.5 +3.7
PRK Paraskevi 4.64 75 P Pn 14 09 52.8 +3.8
TREB Trebinje 4.81 341 *e*Pn Pn 14 09 50.8 -0.3
DBRK Dubrovnik 4.82 339 *e*Pn Pn 14 09 51.0 -0.2
DBRK Sn Sn 14 10 44.1 -2.5
VAE Valguarnera 4.87 264 Pn Pn 14 09 53.9 +1.9
comp=E,1.1nm,0.3s,baz=97,slow=17,SNR=2.2
VAE Sn Sn 14 10 44.5 -3.3
comp=E,4.3nm,0.3s,baz=153,slow=18,SNR=2.2
VTS Vitosha 4.89 24 P Pn 14 09 53.5 +1.1
VTS Vitosha 4.89 24 ⇑P Pn 14 09 54.2 +1.8
VTS Vitosha 4.89 24 P Pn 14 09 51.0 -1.4
VTS Vitosha 4.89 24 Pn 14 09 53.5 +1.1
ALN Alexandroupoli 5.07 56 P Pn 14 09 56.4 +1.7
ALN Alexandroupoli 5.07 56 Pn 14 09 56.4 +1.7
SGRT San Giovanni R 5.10 316 Pn Pn 14 09 50.6 +0.4
STON Ston 5.14 336 *e*Pn Pn 14 09 55.7 +0.1
STON Sn Sn 14 10 51.5 -2.9
STON Ston 5.14 336 P Pn 14 09 55.9 +0.3
STON Ston 5.14 336 *e*Pn Pn 14 09 55.4 -0.2
CLTA Licata 5.29 261 P Pn 14 09 58.0 +0.4
WDD Wied Dalam 5.32 246 P Pn 14 09 58.7 +0.5
WDD Wied Dalam 5.32 246 Pn Pn 14 09 57.6 -0.5
PAOL Paolisi 5.39 304 Pn 14 09 59.4 +0.3
RUDO Rudo 5.49 351 *e*Pn Pn 14 09 59.7 -0.8
BBLS Lazići 5.73 352 *e*Pn Pn 14 10 02.9 -0.9
MAKA Makarska 5.74 334 *e*Pn Pn 14 10 04.6 +0.8
DIVS Divibare 5.92 356 *e*Pn Pn 14 10 05.8 -0.6
HAPS Han Pijesak,BI 6.01 349 *e*Pn Pn 14 10 06.9 -0.7
PLVB Pleven 6.06 30 ⇑P Pn 14 10 10.7 +2.4
ELND Elena 6.26 39 ⇑P Pn 14 10 12.4 +1.4
INTR Introdacqua 6.33 309 Pn 14 10 13.3 +1.2
TEKS Tekeris 6.40 354 *e*Pn Pn 14 10 11.9 -1.0
KIJV Kijevo 6.58 333 *i* Pn Pn 14 10 30.4 +0.9
ZIRJ Zirje 6.58 328 *e*Pn Pn 14 10 15.1 -0.3
ZIRJ Sn Sn 14 11 25.8 -4.1
MDVR Moldovita 6.65 7 ⇑P Pn 14 10 16.8 +0.4
MORI Morici 6.73 329 *i* Pn Pn 14 10 18.6 +1.1
MGRS Mrkonjic Grad 6.73 339 *e*Pn Pn 14 10 18.0 +0.5
AQU L'Aquila 6.84 310 P Pn 14 10 19.5 +0.5
AQU L'Aquila 6.84 310 *e*Pn Pn 14 10 20.6 +1.6
AQU L'Aquila 6.84 310 Pn 14 10 19.4 +0.5
HERR Herculane 6.84 12 ⇑P Pn 14 10 19.8 +0.8
FRGS Fruska Gora 6.98 356 *e*Pn Pn 14 10 19.0 -2.0
BLY Banja Luka 7.01 340 ⇓P Pn 14 10 21.7 +0.4
BLY Banja Luka 7.01 340 *e*Pn Pn 14 10 21.2 -0.1
BLY Banja Luka 7.01 340 Pn 14 10 20.7 -0.6
DUGI Dugi Otok 7.10 326 *e*Pn Pn 14 10 23.3 +0.7
DUGI Sn Sn 14 11 40.1 -2.7
HUMR Humele 7.17 27 ⇑P Pn 14 10 25.7 +2.2
UDBI Udbina 7.26 332 *e*Pn Pn 14 10 26.3 +1.4
NRCA Norcia 7.29 312 Pn 14 10 26.6 +1.3
SGRR Singureni 7.31 33 ⇑P Pn 14 10 27.8 +2.4
GZR Gura Zlata 7.40 13 ⇑P Pn 14 10 27.7 +1.0
BZS Buzias 7.47 6 ⇑P Pn 14 10 27.6 0.0
ELL Elmali 7.62 98 P Pn 14 10 34.5 +4.7
ELL Elmali 7.62 98 Pn 14 10 34.5 +4.7
NVLJ Novalja 7.64 328 *e*Pn Pn 14 10 30.6 +0.6
ARR Arges 7.81 22 ⇑P Pn 14 10 34.1 +1.8

MURB Monte Urbino 7.89 312 Pn 14 10 35.5 +2.0
VOIR 8.00 24 ⇑P Pn 14 10 37.3 +2.3
MORH Mrgy, Hungar 8.14 351 *e*Pn Pn 14 10 35.3 -1.5
BOJS Bojanci 8.29 334 *i* Pn Pn 14 10 39.3 +0.5
OZLJ Ozalj 8.31 335 *i* Pn Pn 14 10 40.1 +1.0
MLR Muntele Rosu 8.35 27 Pn Pn 14 10 40.1 +0.2
comp=E,0.2nm,0.3s,baz=288,slow=6.4,SNR=5.6
MLR Muntele Rosu 8.35 27 ⇑P Pn 14 10 42.1 +2.3
RIY Rijeka 8.43 330 *e*Pn Pn 14 10 40.8 +0.1
GBRS Gornja Briga 8.47 332 *i* Pn Pn 14 10 42.0 +0.6
CRES Cresnjev 8.50 335 *i* Pn Pn 14 10 41.8 0.0
CRES Cresnjev 8.50 335 *e*Pn Pn 14 10 41.3 -0.5
DOPR Dopca 8.58 23 ⇑P Pn 14 10 45.0 +2.1
BEHE Becsehely 8.72 343 *e*Pn Pn 14 10 43.8 -1.0
CEY Cerknica 8.79 331 *i* Pn Pn 14 10 46.1 +0.4
CEY Cerknica 8.79 331 *e*Pn Pn 14 10 46.4 +0.6
SKDS Skadanscina 8.80 329 *e*Pn Pn 14 10 45.6 -0.2
PLOR Plostina 8.92 29 ⇓P Pn 14 10 50.1 +2.6
VRI Vrincioaia 8.96 29 ⇑P Pn 14 10 50.1 +2.0
LJU Ljubljana 9.01 332 *i* Pn Pn 14 10 49.1 +0.2
LJU Ljubljana 9.01 332 *e*Pn Pn 14 10 49.0 +0.2
KEST Kesra 9.26 258 Sn Sn 14 12 37.3 +1.5
comp=E,0.4nm,0.3s,baz=24,slow=20,SNR=2.8
SOKA Soboth 9.39 336 *e*Pn Pn 14 10 53.6 -0.5
comp=E,26nm,0.6s,SNR=23
SOKA Sn Sn 14 12 32.7 -6.5
comp=E,34nm,0.7s
OBKA Obir 9.41 334 *e*Pn Pn 14 10 54.8 +0.5
comp=E,12nm,0.4s,SNR=7.9
OBKA Sn Sn 14 12 37.1 -2.4
comp=E,122nm,0.7s
TEOL Teolo 9.73 320 Pn 14 10 58.9 +0.2
ARSA Arzberg 9.77 340 *e*Sn Sn 14 12 42.5 -5.8
ARSA Arzberg 9.77 340 Pn Pn 14 10 58.2 -0.9
comp=E,2.9nm,0.3s,SNR=6.4
ARSA *e*Sn Sn 14 12 42.6 -5.6
comp=E,9.1nm,0.6s
MYKA Terra Mystica 9.84 331 *e*Pn Pn 14 10 59.7 -0.4
comp=E,3.4nm,0.3s,SNR=4.7
MYKA *e*Sn Sn 14 12 45.9 -4.2
comp=E,20nm,0.5s
STAL STALIGIAL 9.91 327 Sn 14 12 48.0 -3.9
CTI Castel Tesino 10.23 323 P Pn 14 11 05.4 -0.2
CTI Castel Tesino 10.23 323 Pn 14 11 05.4 -0.2
KECS Kecovo 10.29 360 *e*P Pn 14 11 06.5 +0.2
KECS Kecovo 10.29 360 *e*PN Pn 14 11 06.5 +0.2
ZST Bratislava 10.30 347 *e*P Pn 14 11 00.5 -5.9
ZST *e* 14 12 53.4
ZST Bratislava 10.30 347 *e*PN Pn 14 11 00.5 -5.9
ZST *e*SN Sn 14 12 53.4 -8.0
CONA Conrad Observa 10.31 342 *e*Pn Pn 14 11 07.4 +0.8
comp=E,1.1nm,0.3s
KBA Koelnbreinsper 10.32 332 *e*Pn Pn 14 11 07.1 +0.3
comp=E,8.6nm,0.5s
KBA *e*Sn Sn 14 12 57.2 -4.9
comp=E,22nm,0.5s
BR131 Keskin Array S 10.35 77 P Pn 14 11 10.8 +3.5
BR131 Keskin Array S 10.35 77 Pn 14 11 10.8 +3.5
BRTR Keskin Array B 10.35 77 P Pn 14 11 12.0 +4.7
BRTR Keskin Array B 10.35 77 Pn Pn 14 11 11.9 +4.7
comp=E,0.6nm,0.3s,baz=261,slow=11,SNR=17
VYHS Vyhne 10.37 354 *e*P Pn 14 11 07.4 0.0
VYHS *e* 14 12 57.6
VYHS Vyhne 10.37 354 *e*PN Pn 14 11 07.4 0.0
VYHS *e*SN Sn 14 12 57.6 -5.5
ABTA Abfaltersbach 10.38 328 *e*Pn Pn 14 11 07.9 +0.3
comp=E,4.9nm,0.4s,SNR=6.4
ABTA Sn Sn 14 12 56.3 -7.1
comp=E,65nm,0.8s
MODS Modra-Piesok 10.45 348 *e*SN Sn 14 12 58.0 -6.9
SALO Salr 10.50 318 Pn 14 11 09.1 -0.1
SMOL Smolenice 10.56 349 *e*SN Sn 14 13 01.7 -5.9
MOA Molln 10.68 337 *e*Pn Pn 14 11 11.5 -0.1
comp=E,6.2nm,0.2s,SNR=15
MOA Sn Sn 14 13 05.2 -5.3
comp=E,19nm,0.6s
CRVS Cervenica-Dubn 10.73 3 *e*P Pn 14 11 13.1 +0.8
CRVS Cervenica-Dubn 10.73 3 *e*PN Pn 14 11 13.1 +0.8
CSS Mathiatis 10.81 103 Pn Pn 14 11 14.2 +0.7
KOLS Kolonicke sedl 10.82 6 *e*P Pn 14 11 14.7 +1.2
KOLS Kolonicke sedl 10.82 6 *e*PN Pn 14 11 14.7 +1.2
RJOB Jochberg 11.08 332 *e*Pn Pn 14 11 17.9 +0.8
RJOB *e*Sn Sn 14 13 15.8 -4.7
WTTA Wattenberg 11.16 327 *e*Pn Pn 14 11 19.0 +0.7
comp=E,4.6nm,0.3s,SNR=4.9
WTTA Sn Sn 14 13 18.5 -4.2
comp=E,31nm,0.6s
WATA Walderalm 11.24 327 *e*Pn Pn 14 11 18.3 -1.1
comp=E,6.1nm,0.2s,SNR=5.7
WATA Sn Sn 14 13 20.8 -3.8
comp=E,74nm,0.7s
SQTA Sankt Quirin 11.31 326 *i* Pn Pn 14 11 22.6 +2.2
comp=E,4.1nm,0.3s,SNR=5.4
SQTA Sn Sn 14 13 23.0 -3.3
comp=E,44nm,0.6s
FUORN Ofenpass-Fuorn 11.31 321 Pn 14 11 18.6 -2.0
FETA Feichten 11.38 324 Pn Pn 14 11 23.5 +2.2
comp=E,2.5nm,0.4s
FETA Sn Sn 14 13 20.1 -7.9
comp=E,7.8nm,0.5s
MOTA Moosalm 11.45 326 *e*Pn Pn 14 11 23.6 +1.3
comp=E,13nm,0.5s,SNR=10
MOTA *e*Sn Sn 14 13 27.2 -2.6
comp=E,43nm,0.7s
VRAC Vranov 11.47 347 Sn Sn 14 13 28.2 -1.6
comp=E,0.3nm,0.3s,baz=138,slow=14,SNR=3.3
PART Garmisch-Parte 11.57 327 *e*Sn Sn 14 13 30.4 -1.9
DAVOX Davos/Dischmat 11.62 321 Pn Pn 14 11 21.9 -2.7
comp=E,0.4nm,0.3s,baz=142,slow=19,SNR=2.5
DAVOX Sn Sn 14 13 30.0 -3.8
comp=E,1.9nm,0.3s,baz=80,slow=13,SNR=5.8
RETA Reutte 11.71 326 Pn Pn 14 11 27.8 +2.0
comp=E,1.3nm,0.2s
RETA Sn Sn 14 13 32.1 -3.9
comp=E,12nm,0.4s
GEC2 GERESS Array S 11.73 337 *e*Pn Pn 14 11 25.0 -1.1
GEC2 *e*Sn Sn 14 13 30.4 -6.1
GERES GERESS Array B 11.73 337 Pn Pn 14 11 24.8 -1.3
comp=E,1.4nm,0.3s,baz=160,slow=14,SNR=18
GERES Sn Sn 14 13 28.8 -7.7
comp=E,1.6nm,0.3s,baz=153,slow=24,SNR=13
KHC Kasperske Hory 12.02 338 *e*P Pn 14 11 28.4 -1.6
KHC *e* 14 13 37.8
KHC Kasperske Hory 12.02 338 *e*PN Pn 14 11 28.4 -1.6
KHC *e*SN Sn 14 13 37.8 -5.7
WET Wettzell 12.25 336 *e*Pn Pn 14 11 34.3 -0.2
WET *e*Sn Sn 14 13 44.2 -4.9
GOPC GO Pecny, Ondr 12.42 343 *e*P Pn 14 11 34.3 -1.0
GOPC *e* 14 13 47.0
GOPC GO Pecny, Ondr 12.42 343 *e*PN Pn 14 11 34.3 -1.0
GOPC *e*SN Sn 14 13 47.0 -6.1
PRU Pruhonice 12.54 342 *e*P Pn 14 11 35.3 -1.8
PRU Pruhonice 12.54 342 *e*PN Pn 14 11 35.3 -1.8
MMAI Mount Meron Ar 13.18 109 Pn Pn 14 11 44.7 -1.2
comp=E,3.6nm,0.3s,baz=289,slow=9.0,SNR=3.1
MMAI Sn Sn 14 14 04.1 -7.8
comp=E,3.7nm,0.3s,baz=327,slow=26,SNR=3.3
NKC Novy Kostel 13.34 337 *e*SN Sn 14 14 08.5 -7.2
BFO Black Forest 13.45 323 *e*Sn Sn 14 14 12.1 -6.3
MOX Moxa 13.96 336 *e*Pn Pn 14 11 56.8 +0.4
AKASG Malin Array Be 13.96 24 Pn Pn 14 11 55.9 -0.5
comp=E,1.5nm,0.3s,baz=210,slow=12,SNR=1.8
AKBB Malin Array Si 13.96 24 *e*P Pn 14 11 56.2 -0.2
AKBB pmax pmax
comp=E,10.0nm,1.3s
CLL Collm 14.15 340 *e*P P 14 12 03.0 -3.4
CLL Collm 14.15 340 *e*sP P 14 12 03.0 -3.4
CLL *e*PP PnPn 14 12 08.0 +1.2
ASF Jabal al Asfar 14.69 109 Pn Pn 14 12 04.5 -2.0
comp=E,0.3nm,0.3s,baz=204,slow=19,SNR=2.5
ASF Sn Sn 14 14 42.0 -6.8
comp=E,0.3nm,0.3s,baz=246,slow=20,SNR=2.9
EIL Elat 14.69 121 Pn Pn 14 12 04.7 -1.8
comp=Z,0.8nm,0.3s,baz=306,slow=3.4,SNR=6.0
EIL Sn Sn 14 14 33.5 -15
comp=Z,0.8nm,0.3s,baz=273,slow=19,SNR=2.9
TNS Taunus Mts 14.79 328 *e*Sn Sn 14 14 43.1 -7.9
SUW Suwalki 15.94 6 P Pn 14 12 22.4 -0.3
SUW pmax pmax
comp=Z,113nm,0.9s
SUW Suwalki 15.94 6 Pn 14 12 22.4 -0.3
KIV Kislovodsk 17.67 64 *e*P P 14 12 48.0 +2.3
KIV pmax pmax
comp=Z,36nm,1.1s

KBZ Khabaz 17.78 65 P P 14 12 46.5 -0.2
comp=Z,0.1nm,0.3s,baz=307,slow=15,SNR=2.3
VSR Storozhevoye 18.52 39 *e*P P 14 12 53.1 -1.7
VSR pmax pmax
comp=Z,30nm,1.4s
GNI Garni 18.89 76 P Pn 14 12 59.7 -0.1
GNI pmax pmax
comp=Z,31nm,1.1s
GNI Garni 18.89 76 P Pn 14 12 59.7 -0.1
comp=Z,0.6nm,0.3s,baz=190,slow=17,SNR=3.0
ESDC Sonseca Array 19.08 282 P P 14 13 01.4 +0.4
baz=82,slow=13,SNR=3.3
LPSR Galich'ya Gora 19.29 36 *e*P P 14 13 02.6 -0.6
LPSR pmax pmax
comp=Z,40nm,0.7s
OBN Obninsk 20.12 28 *e*P P 14 13 12.9 +0.6
OBN *SP pP 14 13 18.0 +0.3
OBN 14 13 28.0
OBN pmax pmax
comp=Z,220nm,4.9s
OBN MLR MLR
comp=Z,5µm,18.0s
OBN Obninsk 20.12 28 P P 14 13 11.1 -1.2
comp=Z,5.0nm,0.5s,baz=16,slow=15,SNR=4.0
OBN Obninsk 20.12 28 IAmb IAmb 14 13 15.0
comp=Z,22nm,0.5s
HFS Hagfors 22.39 351 P P 14 13 36.1 -0.5
comp=Z,8.9nm,0.3s,baz=162,slow=11,SNR=54
KONO Kongsberg 22.58 346 *e*P P 14 13 38.9 +0.2
OSL Oslo 22.64 347 *e*P P 14 13 39.8 +0.4
BLS5 Blasjo 23.08 342 *e*P P 14 13 44.2 +0.3
NC602 NORSAR Array S 23.27 349 *e*P P 14 13 45.8 0.0
NC602 NORSAR Array S 23.27 349 P P 14 13 44.7 -1.1
EKA Eskdalemuir Ar 23.41 325 P P 14 13 48.0 +0.7
comp=Z,3.7nm,0.7s,baz=118,slow=8.6,SNR=9.0
FINES FINESS Array B 23.54 7 *i* P P 14 13 47.2 -1.3
FINES pmax pmax
comp=Z,6.0nm,0.4s
FINES FINESS Array B 23.54 7 P P 14 13 47.2 -1.3
comp=Z,7.8nm,0.5s,baz=173,slow=10,SNR=35
NC405 NORSAR Array S 23.60 349 P P 14 13 48.5 -0.6
NB201 NORSAR Array S 23.60 349 P P 14 13 49.0 -0.2
NB2 NORSAR Subarra 23.61 349 P P 14 13 48.3 -0.9
comp=Z,4.4nm,0.5s,baz=151,slow=10
NB2 NORSAR Subarra 23.61 349 P P 14 13 48.3 -0.9
baz=151,slow=10
NOA NORSAR Array B 23.61 349 P P 14 13 49.0 -0.2
comp=Z,2.5nm,0.5s,baz=153,slow=9.4,SNR=27
NBO00 NORSAR Array S 23.66 348 P P 14 13 49.9 +0.1
NC303 NORSAR Array S 23.76 349 P P 14 13 50.0 -0.7
SKAR Skarslia 23.79 345 *e*P P 14 13 51.6 +0.6
DOMB Dombas 24.90 347 *e*P P 14 14 02.2 +1.0
KLMR Klimovskoe 25.64 22 *e*P P 14 14 06.3 -1.5
KLMR pmax pmax
comp=Z,58nm,1.4s
KLMR Klimovskoe 25.64 22 *e*P P 14 14 06.4 -1.4
KLMR AMP 14 14 15.2
comp=Z,58nm,1.4s
MOL Molde 25.67 346 *e*P P 14 14 08.1 0.0
NSS Namsos 26.86 352 *e*P P 14 14 18.7 -0.1
TMCR Tamitsa 28.04 16 *e*P P 14 14 28.3 -1.0
TMCR pmax pmax
comp=Z,22nm,0.8s
MOR8 Moi Rana 28.25 355 *e*P P 14 14 32.9 +1.7
KONS Konsvik 28.67 354 *e*P P 14 14 35.2 +0.3
AKTO Aktyubinsk 29.19 53 P P 14 14 39.6 -0.2
comp=Z,0.9nm,0.3s,baz=231,slow=8.3,SNR=8.3
GEYT Alibeck 29.49 79 P P 14 14 43.2 +0.5
comp=Z,1.3nm,0.5s,baz=281,slow=8.5,SNR=4.1
STEI Steigen 29.94 356 *e*P P 14 14 45.0 -1.2
TORD Torodi Ar. Bea 30.02 219 P P 14 14 47.9 +0.4
comp=Z,1.5nm,0.7s,baz=39,slow=8.5,SNR=4.3
APA Apatity 30.31 10 ⇑*i*P P 14 14 52.2 +2.7
APA pmax pmax
comp=Z,7.0nm,1.1s
APA MLR MLR
comp=Z,7µm,16.0s
KTK1 Kautokeino 30.92 2 *e*P P 14 14 55.0 +0.2
ARU Arti 31.07 42 P P 14 14 55.8 -0.5
ARU pmax pmax
comp=Z,117nm,2.0s
ARU Arti 31.07 42 P P 14 14 55.8 -0.5
comp=Z,1.3nm,0.4s,baz=222,slow=7.9,SNR=4.9
ARU Arti 31.07 42 IAmb IAmb 14 15 02.9
comp=Z,117nm,2.0s
TRO Tromso 31.52 359 *e*P P 14 15 00.2 +0.2
ARCES ARCESS Array B 31.52 3 P P 14 14 59.6 -0.6
comp=Z,3.7nm,0.8s,baz=191,slow=11,SNR=42
ARE0 ARCESS Array S 31.52 3 *e*P P 14 14 59.9 -0.3
HAMF Hammerfest 32.56 2 *e*P P 14 15 10.1 +0.9
WSAR Wadi Sarin 35.74 103 P P 14 15 38.2 +0.8
comp=Z,2.6nm,0.9s,baz=0.0,slow=4.0,SNR=2.6
KK31 Karatay Array 37.81 66 P P 14 15 54.7 -0.1
KK31 pmax pmax
comp=Z,35nm,2.0s
KK31 Karatay Array 37.81 66 P P 14 15 54.6 -0.1
KK31 IAmb IAmb 14 15 55.7
comp=Z,35nm,1.9s
KKAR Karatay Array 37.81 66 P P 14 15 54.7 -0.1
KKAR pmax pmax
comp=Z,35nm,2.0s
KKAR Karatay Array 37.81 66 P P 14 15 54.7 -0.1
DBIC Dimbokro 38.89 223 P P 14 16 04.9 +0.8
DBIC pmax pmax
comp=Z,114nm,1.9s
DBIC Dimbokro 38.89 223 P P 14 16 04.9 +0.8
comp=Z,4.7nm,0.8s,baz=342,slow=8.5,SNR=3.7
HSPB Hornsund (broa 38.98 358 *e*P P 14 16 05.1 +0.9
MBAR Mbarara 39.74 164 *e*P P 14 16 12.4 +1.1
MBAR pmax pmax
comp=Z,2.0nm,0.3s
SPA0 Spitsbergen Ar 40.14 359 *e*P P 14 16 14.6 +0.7
SPITS Spitsbergen Ar 40.14 359 P P 14 16 14.5 +0.7
comp=Z,21nm,1.1s,baz=165,slow=16,SNR=4.6
AAK Ala-Archa 40.77 66 P P 14 16 19.1 -0.7
AAK pmax pmax
comp=Z,33nm,2.0s
AAK Ala-Archa 40.77 66 P P 14 16 19.0 -0.7
comp=Z,0.7nm,0.4s,baz=202,slow=11,SNR=2.7
AAK Ala-Archa 40.77 66 IAmb IAmb 14 16 28.2
comp=Z,33nm,1.9s
KBS Kingsbay 41.00 357 *e*P P 14 16 21.5 +0.5
KMBO Kilima Mbogo 42.07 155 P P 14 16 30.1 -0.5
KMBO pmax pmax
comp=Z,17nm,1.8s
KMBO Kilima Mbogo 42.07 155 P P 14 16 30.1 -0.5
comp=Z,0.8nm,0.4s,baz=41,slow=20,SNR=3.3
KURBB Kurchatov Arra 42.24 54 P P 14 16 31.2 -0.3
comp=Z,1.5nm,0.7s,baz=281,slow=8.9,SNR=6.8
KURK Kurchatov 42.29 53 *e*P P 14 16 33.5 +1.7
KURK pmax pmax
comp=Z,30nm,2.4s
KURK Kurchatov 42.29 53 P P 14 16 31.2 -0.6
KURK Kurchatov 42.29 53 IAmb IAmb 14 16 52.3
comp=Z,19nm,1.6s
KSH Kashi 42.64 70 P P 14 16 36.0 +1.0
KSH pP pP 14 16 40.3 -0.8
KSH PP PP 14 18 15.0 +1.2
KSH S S 14 22 53.8 -3.4
MK31 Makanchi Array 45.31 58 P P 14 16 55.2 -1.1
MK31 pmax pmax
comp=Z,20nm,1.7s
MK31 Makanchi Array 45.31 58 P P 14 16 55.2 -1.1
MK31 IAmb IAmb 14 17 09.8
comp=Z,20nm,1.6s
MKAR Makanchi Array 45.31 58 P P 14 16 56.0 -0.2
comp=Z,1.8nm,0.3s,baz=274,slow=7.6,SNR=21
ZAA0 Zalesovo Array 45.70 48 P P 14 16 57.7 -1.4
ZAA0 IAmb IAmb 14 17 06.0
comp=Z,5.7nm,0.7s
ZALV Zalesovo Beam 45.70 48 P P 14 16 58.9 -0.2
comp=Z,4.4nm,0.4s,baz=274,slow=8.3,SNR=19
WMQ Urumqi 49.77 61 *e*P P 14 17 34.8 +3.8
WMQ pmax pmax
comp=Z,10.0nm,1.3s
WMQ pmax pmax
comp=Z,250nm,9.9s
TLY Talaya 57.29 47 *e*P P 14 18 34.3 +8.3
TLY pmax pmax
comp=Z,11nm,0.9s
SCHQ Schefferville 58.44 317 P P 14 18 34.9 +0.9
comp=Z,1.1nm,0.5s,baz=64,slow=8.6,SNR=4.7
TIXI Tiksi 59.65 20 *e*P P 14 18 44.4 +2.4
TIXI pmax pmax
comp=Z,1.0nm,0.3s

SONM	**Songino Array**	**60.47**	**51**	P	**P**	**14 18 48.7**	**+0.4**		
SONM				pmax	pmax				
	comp=Z,2.0nm,1.0s								
SONM	**Songino Array**	**60.47**	**51**	P	**P**	**14 18 48.6**	**+0.4**		
	comp=Z,0.9nm,0.8s,baz=292,slow=8.7,SNR=3.4								
SONM	**Songino Array**	**60.47**	**51**	IAmb	IAmb	14 18 56.3			
	comp=Z,2.4nm,1.0s								
ULN	**Ulaanbaatar**	**60.85**	**50**	*e*P	**P**	**14 18 51.4**	**+0.5**		
ULN				pmax	pmax				
	comp=Z,7.0nm,1.5s								
LZH	**Lanzhou**	**64.22**	**63**	*e*P	**P**	**14 19 14.8**	**+1.2**		
LZH				pP	pP	14 19 18.5	-1.3		
LZH				*e*PP	**PP**	**14 21 38.0**	**+3.4**		
LZH				pmax	pmax				
	comp=Z,23nm,1.3s								
LZH				pmax	pmax				
	comp=Z,130nm,7.2s								
LZH				LR	LR				
	comp=Z,250nm,15.4s								
LZH				LR	LR				
	comp=Z,260nm,15.5s								
LZH				LR	LR				
	comp=Z,370nm,18.4s								
YAK	**Yakutsk**	**65.11**	**29**	*e*P	**P**	**14 19 19.1**	**+0.4**		
YAK				pmax	pmax				
	comp=Z,5.0nm,0.7s								
YAK	**Yakutsk**	**65.11**	**29**	P	**P**	**14 19 18.5**	**-0.2**		
	comp=Z,4.0nm,0.5s,baz=167,slow=0.6,SNR=5.3								
YAK	**Yakutsk**	**65.11**	**29**	P	**P**	**14 19 18.0**	**-0.7**		
CD2	**Chengdu**	**66.79**	**68**	*e*P	**P**	**14 19 31.0**	**+0.9**		
HHC	**Hu-ho-hao-te**	**67.05**	**55**	*e*P	**P**	**14 19 34.0**	**+2.3**		
HHC				pmax	pmax				
	comp=Z,4.0nm,0.9s								
HHC				pmax	pmax				
	comp=Z,180nm,5.1s								
CMAR	**Chiang Mai Arr**	**69.91**	**82**	P	**P**	**14 19 49.1**	**-0.6**		
	comp=Z,1.2nm,0.8s,baz=302,slow=7.6,SNR=6.1								
BILL	**Bilibino**	**71.01**	**13**	*e*P	**P**	**14 19 56.1**	**+0.4**		
BILL				pmax	pmax				
	comp=Z,2.0nm,1.3s								
INK	**Inuvik**	**72.05**	**350**	P	**P**	**14 20 02.2**	**+0.2**		
INK				pmax	pmax				
	comp=Z,12nm,1.6s								
INK	**Inuvik**	**72.05**	**350**	P	**P**	**14 20 02.1**	**+0.2**		
	comp=Z,0.7nm,0.5s,baz=7.1,slow=6.0,SNR=6.8								
INK	**Inuvik**	**72.05**	**350**	IAmb	IAmb	14 20 33.8			
	comp=Z,12nm,1.6s								
YKA	**Yellowknife Ar**	**73.37**	**340**	P	**P**	**14 20 10.9**	**+1.0**		
	comp=Z,0.7nm,0.7s,baz=35,slow=5.3,SNR=6.5								
KLR	**Kul'dur**	**73.88**	**39**	*e*P	**P**	**14 20 12.6**	**-0.5**		
KLR				pmax	pmax				
	comp=Z,2.0nm,1.2s								
MA2	**Magadan**	**74.29**	**24**	P	**P**	**14 20 16.0**	**+0.7**		
MA2				pmax	pmax				
	comp=Z,33nm,1.7s								
MA2	**Magadan**	**74.29**	**24**	P	**P**	**14 20 16.0**	**+0.7**		
	comp=Z,2.8nm,0.7s,baz=162,slow=20,SNR=4.2								
GRNR	**Gornyy**	**75.12**	**36**	*e*P	P	14 20 11.2	-9.1		
GRNR				MLR	MLR				
	comp=Z,6μm,15.0s								
ULM	**Lac du Bonnet**	**75.68**	**324**	P	**P**	**14 20 24.9**	**+1.3**		
ULM				pmax	pmax				
	comp=Z,18nm,1.7s								
ULM	**Lac du Bonnet**	**75.68**	**324**	P	**P**	**14 20 24.9**	**+1.3**		
	comp=Z,4.7nm,1.1s,baz=0.0,slow=13,SNR=3.0								
NJ2	**Nanjing**	**76.83**	**60**	*e*P	**P**	**14 20 32.3**	**+1.9**		
NJ2				pmax	pmax				
	comp=Z,5.0nm,0.5s								
ILAR	**Eielson Array**	**76.90**	**354**	P	**P**	**14 20 30.9**	**+0.7**		
	comp=Z,0.2nm,0.7s,baz=1.9,slow=5.4,SNR=2.9								
USRK	**Ussuriysk Ar.**	**77.29**	**43**	P	**P**	**14 20 32.7**	**0.0**		
	comp=Z,1.0nm,0.5s,baz=320,slow=3.8,SNR=3.4								
KSRS	**Korea Array**	**79.34**	**51**	P	**P**	**14 20 44.8**	**+0.6**		
	comp=Z,0.9nm,0.6s,baz=302,slow=4.4,SNR=4.9								
YNE	**Yellowstone No**	**85.94**	**327**	P	**P**	**14 21 19.9**	**+1.1**		
TXAR	**Lajitas Array**	**94.95**	**314**	P	**P**	**14 22 03.6**	**+2.4**		
	comp=Z,0.2nm,0.6s,baz=56,slow=6.6,SNR=2.9								
JTS	**Las Juntas de**	**95.58**	**288**	*e*P	**P**	**14 22 00.8**	**-3.4**		
WRA	**Warramunga Arr**	**120.56**	**92**	PKP	**PKPdf**	**14 27 29.9**	**-0.6**		
	comp=Z,0.8nm,1.0s,baz=99,slow=10,SNR=3.3								
ASAR	**Alice Springs**	**122.19**	**96**	PKP	**PKiKP**	**14 27 33.8**	**+0.1**		
	comp=Z,0.7nm,1.0s,baz=301,slow=1.7,SNR=3.4								

IDC 26 14:16:18.6±17.0, **38°06'N**×**19°83'E, h0**km, **mb3.6**/4, **mb1 3.6**/5, **mb1mx3.3**/38, **mbtmp3.5**/5, **ML3.5**/1, **Error ellipse: s-maj=319.7km s-min=32.6km az=37.0, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**4.92**	**123**	Sn	Sn	14 18 27.5	-4.1
	1.3nm,0.3s,baz=287,slow=17,SNR=1.7						
GERES	**GERESS Array B**	**11.66**	**340**	Pn	Pn	14 19 06.9	+0.6
	0.1nm,0.3s,baz=160,slow=17,SNR=2.9						
HFS	**Hagfors**	**22.43**	**352**	P	P	14 21 20.5	+1.7
	1.8nm,0.8s,baz=165,slow=12,SNR=3.5						
FINES	**FINESS Array B**	**23.73**	**7**	P	P	14 21 31.2	-0.9
	1.0nm,0.8s,baz=187,slow=9.7,SNR=3.3						
MKAR	**Makanchi Array**	**45.83**	**58**	P	P	14 24 41.8	-0.5
	0.3nm,0.4s,baz=276,slow=7.3,SNR=3.2						
ZALV	**Zalesovo Beam**	**46.18**	**48**	P	P	14 24 45.0	+0.2
	0.8nm,0.5s,baz=269,slow=9.1,SNR=2.2						

*IDC **26** 14:21:57.0±0.8, 38°.39'N×20°.44'E, h0km, mb3.8/19, mb1 3.9/27, mb1mx3.9/42, mbtmp3.8/27, ML3.8/7, Error ellipse: s-maj=14.8km s-min=13.2km az=32.0*
*THE **26** 14:21:58.8, 38°.22'N×20°.40'E, h6km±1km, ML3.8/12, Error ellipse: s-maj=1.7km s-min=0.4km az=93.0*
*NEIC **26** 14:21:58.7±2.9, 38°.25'N±0°.04×20°.39'E±0°.06, h11km±2km, mb4.3/11, ML3.8(THE), Error ellipse: s-maj=6.3km s-min=5.4km az=102.0*
*ATH **26** 14:21:58.9, 38°.21'N×20°.38'E, h10km±4km, ML4.0/7, Error ellipse: s-maj=5.2km s-min=0.9km az=88.0*
ISC 26 14:21:58.7±0.8, **38°24'N**±0°.02×**20°38'E**±0°.03, **h14**km±5km, **n135**, **σ1§49**/157, **mb4.0**/22, **14C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.17**	**111**	P	**Pg**	**14 22 02.5**	**-0.4**
VLS				S	**Sg**	**14 22 04.5**	**-1.3**
	217μm,0.3s						
VLS	**Valsamata**	**0.17**	**111**	P	**Pg**	**14 22 02.5**	**-0.4**
VLS				S	**Sg**	**14 22 05.4**	**-0.4**
VLS				AML	AML	14 22 05.6	
VLS				AML	AML	14 22 05.8	
KFL	**Anninata**	**0.34**	**112**	P	**Pg**	**14 22 05.3**	**-0.5**
KFL				S	**Sg**	**14 22 09.6**	**-1.0**
	119μm,0.3s						
KFL	**Anninata**	**0.34**	**112**	P	**Pg**	**14 22 05.5**	**-0.3**
KFL				S	**Sg**	**14 22 10.6**	**0.0**
KFL				AML	AML	14 22 11.5	
KFL				AML	AML	14 22 11.6	
VLMS	**Volimes, Zakyn**	**0.42**	**149**	P	**Pg**	**14 22 06.8**	**-0.5**
VLMS				S	**Sg**	**14 22 12.9**	**-0.1**
VLMS				AML	AML	14 22 13.8	
	comp=E,94591μm,0.2s						
VLMS				AML	AML	14 22 14.0	
EVGl	**Lefkada island**	**0.44**	**29**	P	**Pg**	**14 22 07.7**	**+0.3**
EVGl	**Lefkada island**	**0.44**	**29**	P	**Pg**	**14 22 07.8**	**+0.3**
MGNA	**Meganis**	**0.52**	**38**	P	**Pg**	**14 22 09.1**	**0.0**
MGNA				S	**Sb**	**14 22 17.6**	**+0.5**
MGNA				AML	AML	14 22 18.2	
	comp=E,35510μm,0.2s						
MGNA				AML	AML	14 22 18.2	
	comp=N,24426μm,0.3s						
LKD2	**Lefkada island**	**0.59**	**21**	P	**Pg**	**14 22 09.9**	**-0.4**
LKD2				S	**Sb**	**14 22 19.2**	**+0.1**
	comp=N,6μm,0.4s						
LKD2	**Lefkada island**	**0.59**	**21**	P	**Pb**	**14 22 11.0**	**+0.2**
TSLK	**Tsoukalades, L**	**0.62**	**20**	P	**Pg**	**14 22 10.9**	**0.0**
TSLK	**Tsoukalades, L**	**0.62**	**20**	P	**Pb**	**14 22 11.6**	**+0.2**
TSLK				S	**Sb**	**14 22 20.5**	**+0.5**
TSLK				AML	AML	14 22 27.1	
	comp=N,17688μm,0.6s						
TSLK				AML	AML	14 22 28.1	
	comp=E,14043μm,0.3s						
RLS	**Riolos of Patr**	**0.87**	**102**	P	**Pg**	**14 22 14.6**	**-1.1**
RLS				S	**Sb**	**14 22 27.5**	**+0.3**
	comp=E,4μm,0.4s						
RLS	**Riolos of Patr**	**0.87**	**102**	P	**Pg**	**14 22 15.3**	**-0.3**
RLS				AML	AML	14 22 33.0	
	comp=N,6785μm,0.4s						
RLS				AML	AML	14 22 37.6	
	comp=E,7227μm,0.5s						
PVO	**Paravola**	**0.97**	**67**	P	**Pb**	**14 22 17.0**	**-0.4**
PVO				S	**Sn**	**14 22 31.5**	**0.0**
	comp=E,8μm,0.6s						
PVO	**Paravola**	**0.97**	**67**	P	**Pg**	**14 22 17.6**	**0.0**
PVO				AML	AML	14 22 37.2	
	comp=E,17996μm,0.3s						
PVO				AML	AML	14 22 38.3	
	comp=N,14870μm,0.5s						
DRO	**Drossia**	**1.09**	**105**	P	**Pb**	**14 22 18.1**	**-1.2**
DRO				S	**Sb**	**14 22 33.5**	**+0.2**
	comp=N,7μm,0.4s						
DRO	**Drossia**	**1.09**	**105**	P	**Pb**	**14 22 19.1**	**-0.2**
UPR	**University Cam**	**1.11**	**87**	P	**Pg**	**14 22 20.3**	**+0.2**
EFP	**Efpalio**	**1.21**	**81**	P	**Pn**	**14 22 20.8**	**-0.4**
EFP				S	**Sg**	**14 22 39.3**	**+1.4**
	comp=N,6μm,0.7s						
LAKA	**Lakka**	**1.26**	**90**	P	**Pn**	**14 22 21.4**	**-0.5**
LAKA				S	**Sg**	**14 22 41.1**	**+1.8**
	comp=N,2μm,0.6s						
AMT	**Artemida-Makis**	**1.27**	**124**	P	**Pn**	**14 22 21.8**	**-0.2**
AMT				S	**Sg**	**14 22 40.7**	**+1.1**
	comp=N,4μm,0.8s						
AMT	**Artemida-Makis**	**1.27**	**124**	P	**Pb**	**14 22 22.5**	**+0.2**
IGT	**Igoumenitsa**	**1.29**	**358**	P	**Pg**	**14 22 24.2**	**+0.6**
IGT	**Igoumenitsa**	**1.29**	**358**	P	**Pg**	**14 22 24.3**	**+0.6**
EVR	**Evrytania**	**1.31**	**58**	P	**Pn**	**14 22 22.8**	**+0.2**
EVR				S	**Sg**	**14 22 42.7**	**+1.8**
	comp=N,2μm,0.8s						
EVR	**Evrytania**	**1.31**	**58**	P	**Pg**	**14 22 23.7**	**-0.2**
TRIZ	**Trizonia**	**1.33**	**84**	P	**Pn**	**14 22 22.7**	**-0.2**
TRIZ				S	**Sg**	**14 22 42.0**	**+0.2**
	comp=N,5μm,0.6s						
KLV	**Kalavryta, Ach**	**1.41**	**97**	P	**Pn**	**14 22 24.0**	**0.0**
JAN	**Janina**	**1.46**	**14**	P	**Pg**	**14 22 26.8**	**0.0**
ITM	**Ithomi**	**1.62**	**130**		**Pb**	**14 22 27.6**	**-0.8**
AGG	**Agios Georgios**	**1.71**	**62**		**Pg**	**14 22 31.1**	**-0.5**
PYL	**PYLOS**	**1.72**	**141**	P	**Pb**	**14 22 29.7**	**-0.5**
PYL				S	**Sb**	**14 22 52.5**	**+0.9**
	comp=N,560nm,0.5s						
SCTE	**Santa Cesarea**	**2.36**	**321**		**Pn**	**14 22 37.3**	**+0.3**
LIT	**Litokhoron**	**2.48**	**41**		**Pn**	**14 22 41.6**	**-1.5**
FNA	**Florina**	**2.65**	**17**	P	**Pn**	**14 22 43.2**	**+2.1**
FNA	**Florina**	**2.65**	**17**		**Pn**	**14 22 42.8**	**+1.7**
OHR	**Ohrid**	**2.88**	**6**	*i* Pn	**Pn**	**14 22 46.0**	**+1.7**
TIP	**Timpagrande**	**2.99**	**289**	P	**Pn**	**14 22 46.3**	**+0.5**
TIP	**Timpagrande**	**2.99**	**289**	⇑S	**Sn**	**14 23 21.1**	**-0.2**
TIP	**Timpagrande**	**2.99**	**289**		**Pn**	**14 22 46.7**	**+1.0**
TIR	**Tirane**	**3.13**	**353**	⇑P	**Pn**	**14 22 48.8**	**+1.1**
TIR	**Tirane**	**3.13**	**353**		**Pn**	**14 22 48.4**	**+0.8**
CGL1	**Ceglie Messapi**	**3.30**	**318**	*e*Pn	**Pn**	**14 22 51.1**	**+1.2**
VAY	**Valandovo**	**3.51**	**28**	*i* Pn	**Pn**	**14 22 54.4**	**+1.6**
CEL	**Celeste**	**3.53**	**272**		**Pn**	**14 22 52.6**	**-0.6**
STIP	**Stip**	**3.72**	**21**	*i* Pn	**Pn**	**14 22 59.3**	**+3.6**
MATE	**Matera**	**3.73**	**311**	⇑P	**Pn**	**14 22 55.0**	**-0.8**
SKO	**Skopje**	**3.81**	**12**	*i* Pn	**Pn**	**14 22 58.5**	**+1.5**
SG1	**Sgolgore (BA)**	**3.87**	**313**	*e*Pn	**Pn**	**14 22 59.1**	**+1.3**
BAI	**Bari**	**3.94**	**318**	*e*Pn	**Pn**	**14 22 59.7**	**+1.0**
APE	**Apeiranthos**	**4.25**	**104**	⇓P	**Pb**	**14 23 09.5**	**-3.8**
ACER	**Acerenza**	**4.27**	**308**	Pn	**Pn**	**14 23 04.7**	**+1.3**
PDG	**Podgorica**	**4.27**	**349**	⇑P	**Pn**	**14 23 02.1**	**-1.2**
PDG	**Podgorica**	**4.27**	**349**	Pn	**Pn**	**14 23 03.5**	**+0.2**
IDI	**Anoyia**	**4.67**	**128**	Pn	**Pn**	**14 23 10.9**	**+2.1**
	comp=N,1.3nm,0.3s,baz=313,slow=19,SNR=3.3						
IDI				Sn	**Sn**	**14 24 03.7**	**+1.0**
	comp=N,5.2nm,0.3s,baz=326,slow=23,SNR=7.3						
VAE	**Valguarnera**	**4.79**	**263**	Pn	**Pn**	**14 23 11.7**	**+1.2**
	comp=N,0.6nm,0.3s,baz=12,slow=20,SNR=1.9						
VAE				Sn	**Sn**	**14 24 07.3**	**+1.6**
	comp=N,4.4nm,0.3s,baz=312,slow=15,SNR=3.6						
VTS	**Vitosha**	**4.88**	**26**	⇑P	**Pn**	**14 23 14.0**	**+2.1**
VTS	**Vitosha**	**4.88**	**26**	Pn	**Pn**	**14 23 13.0**	**+1.1**
SGRT	**San Giovanni R**	**5.00**	**316**	Pn	**Pn**	**14 23 13.8**	**+0.3**
ALN	**Alexandroupoli**	**5.12**	**57**	Pn	**Pn**	**14 23 16.1**	**+1.1**
PAOL	**Paolisi**	**5.28**	**304**		**Pn**	**14 23 18.3**	**+1.1**
CORL	**Corleone**	**5.60**	**269**	Pn	**Pn**	**14 23 21.9**	**+0.3**
INTR	**Introdacqua**	**6.23**	**309**		**Pn**	**14 23 32.3**	**+2.0**
MDVR	**Moldovita**	**6.61**	**8**	⇓P	**Pn**	**14 23 35.8**	**+0.3**
AQU	**L'Aquila**	**6.73**	**310**	Pn	**Pn**	**14 23 38.5**	**+1.4**
HERR	**Herculane**	**6.81**	**12**	⇑P	**Pn**	**14 23 38.7**	**+0.6**
BLY	**Banja Luka**	**6.93**	**341**	⇑P	**Pn**	**14 23 40.1**	**+0.3**
BLY	**Banja Luka**	**6.93**	**341**	Pn	**Pn**	**14 23 41.2**	**+1.3**
NRCA	**Norcia**	**7.19**	**312**		**Pn**	**14 23 45.6**	**+2.2**
BZS	**Buzias**	**7.43**	**7**	⇑P	**Pn**	**14 23 46.5**	**-0.2**
MURB	**Monte Urbino**	**7.79**	**313**	Pn	**Pn**	**14 23 53.4**	**+1.7**
ARR	**Arges**	**7.80**	**23**	⇑P	**Pn**	**14 23 53.1**	**+1.3**
VOIR		**7.99**	**24**	⇑P	**Pn**	**14 23 56.1**	**+1.7**
MLR	**Muntele Rosu**	**8.35**	**28**	Pn	**Pn**	**14 23 58.4**	**-1.0**
	comp=N,0.1nm,0.3s,baz=165,slow=12,SNR=2.1						
MLR	**Muntele Rosu**	**8.35**	**28**	⇑P	**Pn**	**14 24 01.5**	**+2.1**
MLR	**Muntele Rosu**	**8.35**	**28**	Pn	**Pn**	**14 24 01.4**	**+2.1**
GBRS	**Gornja Briga**	**8.38**	**332**	*i* Pn	**Pn**	**14 24 00.3**	**+0.5**
PLOR	**Plostina**	**8.92**	**29**	⇑P	**Pn**	**14 24 08.7**	**+1.6**
VRI	**Vrincioaia**	**8.96**	**30**	⇑P	**Pn**	**14 24 09.4**	**+1.8**
SOKA	**Soboth**	**9.31**	**337**	Pn	**Pn**	**14 24 11.8**	**-0.7**
	comp=N,4.5nm,0.4s,SNR=8.7						
SOKA				Sn	**Sn**	**14 25 49.7**	**-7.4**
	comp=N,3.8nm,0.5s						
OBKA	**Obir**	**9.32**	**334**	*e*Pn	**Pn**	**14 24 13.5**	**+0.9**
	comp=N,1.4nm,0.2s,SNR=8.9						
OBKA				Sn	**Sn**	**14 25 53.1**	**-4.1**
	comp=N,3.5nm,0.3s						
TEOL	**Teolo**	**9.63**	**320**	Pn	**Pn**	**14 24 16.4**	**-0.5**
ARSA	**Arzberg**	**9.69**	**340**	Pn	**Pn**	**14 24 16.1**	**-1.5**
	comp=N,1.2nm,0.3s						
ARSA				Sn	**Sn**	**14 26 02.7**	**-3.4**
	comp=N,2.9nm,0.4s						
MYKA	**Terra Mystica**	**9.75**	**331**	*e*Sn	**Sn**	**14 26 02.9**	**-4.9**
	comp=N,1.9nm,0.4s						
BURAR	**Bucovina Array**	**10.02**	**19**	⇑P	**Pn**	**14 24 22.8**	**+0.6**
CTI	**Castel Tesino**	**10.14**	**323**		**Pn**	**14 24 23.2**	**-0.7**
KBA	**Koelnbreinsper**	**10.24**	**332**	Pn	**Pn**	**14 24 25.6**	**+0.4**
	comp=N,2.6nm,0.5s						
ABTA	**Abfaltersbach**	**10.29**	**328**	Pn	**Pn**	**14 24 26.4**	**+0.4**
	comp=N,3.1nm,0.5s						
ABTA				Sn	**Sn**	**14 26 16.7**	**-4.4**
	comp=N,22nm,1.3s						
VYHS	**Vyhne**	**10.31**	**354**	*e*PN	**Pn**	**14 24 25.8**	**-0.4**
VYHS	**Vyhne**	**10.31**	**354**	*e*SN	Sn	14 26 32.5	+11
VYHS				*e*SG		14 28 21.6	
MODS	**Modra-Piesok**	**10.38**	**348**	*e*SN	Sn	14 26 39.7	+17
MODS				*e*SG		14 28 22.1	
SALO	**Salr**	**10.40**	**318**	Pn	**Pn**	**14 24 27.4**	**0.0**
BRTR	**Keskin Array B**	**10.43**	**78**	Pn	**Pn**	**14 24 30.9**	**+2.9**
	comp=N,0.1nm,0.3s,baz=263,slow=13,SNR=4.4						
MOA	**Molln**	**10.59**	**337**	Pn	**Pn**	**14 24 29.8**	**-0.2**
	comp=N,1.3nm,0.2s,SNR=6.1						
MOA				Sn	**Sn**	**14 26 24.6**	**-3.8**
	comp=N,2.3nm,0.5s						
WTTA	**Wattenberg**	**11.07**	**327**	Pn	**Pn**	**14 24 37.6**	**+0.9**
	comp=N,2.9nm,0.4s						
SQTA	**Sankt Quirin**	**11.22**	**326**	*e*Pn	**Pn**	**14 24 39.3**	**+0.6**
	comp=N,1.5nm,0.2s						
MOTA	**Mosalm**	**11.36**	**326**	Pn	**Pn**	**14 24 42.1**	**+1.4**
	comp=N,2.4nm,0.4s						
VRAC	**Vranov**	**11.40**	**347**	Pn	**Pn**	**14 24 38.9**	**-2.1**
	comp=N,0.6nm,0.3s,baz=315,slow=13,SNR=2.8						
DAVOX	**Davos/Dischmat**	**11.52**	**321**	Pn	**Pn**	**14 24 43.2**	**+0.3**
	comp=N,0.2nm,0.3s,baz=158,slow=19,SNR=3.6						
RETA	**Reutte**	**11.62**	**326**	Pn	**Pn**	**14 24 47.4**	**+3.3**
	comp=N,0.8nm,0.3s						
GEC2	**GERESS Array S**	**11.65**	**338**	Pn	**Pn**	**14 24 44.5**	**0.0**
GERES	**GERESS Array B**	**11.65**	**338**	Pn	**Pn**	**14 24 43.9**	**-0.6**
	comp=N,0.4nm,0.3s,baz=158,slow=13,SNR=9.2						
KHC	**Kasperske Hory**	**11.94**	**338**	*e*PN	**Pn**	**14 24 47.0**	**-1.5**
KHC	**Kasperske Hory**	**11.94**	**338**	Pn	**Pn**	**14 24 49.2**	**+0.8**
SENIN	**Lac Senin/Sane**	**12.62**	**314**	Pn	**Pn**	**14 24 59.3**	**+1.3**
AKASG	**Malin Array Be**	**13.95**	**24**	Pn	**Pn**	**14 25 14.9**	**-0.9**
	baz=214,slow=11,SNR=1.2						
CLL	**Collm**	**14.07**	**341**	*e*PP	**P**	**14 25 27.0**	**+1.8**
KBZ	**Khabaz**	**17.84**	**65**	P	**P**	**14 26 08.8**	**+1.8**
	comp=N,0.1nm,0.3s,baz=278,slow=5.6,SNR=6.5						
ESDC	**Sonseca Array**	**18.98**	**282**	P	**Pn**	**14 26 20.5**	**+0.1**
	comp=N,0.3nm,0.3s,baz=83,slow=10,SNR=3.8						
MDT	**Midelt**	**21.02**	**263**	P	**P**	**14 26 44.0**	**+1.9**
	comp=N,1.5nm,0.9s,baz=100,slow=12,SNR=2.1						
HFS	**Hagfors**	**22.32**	**351**	P	**P**	**14 26 55.3**	**-0.4**
	comp=N,3.2nm,0.6s,baz=158,slow=12,SNR=11						
EKA	**Eskdalemuir Ar**	**23.32**	**325**	P	**P**	**14 27 05.4**	**-0.6**
	comp=N,6.0nm,0.9s,baz=275,slow=8.9,SNR=4.5						
FINES	**FINESS Array B**	**23.50**	**7**	P	**P**	**14 27 06.4**	**-1.4**
	comp=N,3.9nm,0.8s,baz=165,slow=9.8,SNR=12						
NB2	**NORSAR Subarra**	**23.54**	**349**	P	**P**	**14 27 08.3**	**0.0**
	comp=Z,2.0nm,0.9s,baz=153,slow=10						
NOA	**NORSAR Array B**	**23.54**	**349**	P	**P**	**14 27 07.3**	**-0.9**
	comp=Z,1.7nm,0.8s,baz=159,slow=8.8,SNR=5.5						
AKTO	**Aktyubinsk**	**29.23**	**53**	P	**P**	**14 27 58.6**	**-1.3**
	comp=Z,4.0nm,0.4s,baz=297,slow=4.5,SNR=2.4						
GEYT	**Alibeck**	**29.57**	**79**	P	**P**	**14 28 03.6**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=316,slow=10,SNR=2.8						
TORD	**Torodi Ar. Bea**	**30.01**	**219**	P	**P**	**14 28 07.5**	**+0.4**
	comp=Z,0.4nm,0.7s,baz=45,slow=8.4,SNR=2.6						
ARCES	**ARCESS Array B**	**31.48**	**3**	P	**P**	**14 28 17.5**	**-2.0**
	comp=Z,6.8nm,1.2s,baz=199,slow=7.6,SNR=10						
KK31	**Karatay Array**	**37.87**	**66**	P	**P**	**14 29 15.2**	**+0.1**
KKAR	**Karatay Array**	**37.87**	**66**	P	**P**	**14 29 15.2**	**+0.1**
KKAR				IAmb	IAmb	14 29 17.5	
	comp=Z,2.2nm,0.8s						
KMBO	**Kilima Mbogo**	**42.15**	**154**	P	**P**	**14 29 52.6**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=66,slow=3.4,SNR=3.5						
MK31	**Makanchi Array**	**45.36**	**58**	P	**P**	**14 30 15.5**	**-1.0**
MK31				IAmb	IAmb	14 30 22.9	
	comp=Z,7.7nm,1.7s						
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**	**14 30 15.7**	**-0.7**
	comp=Z,1.4nm,0.5s,baz=275,slow=7.5,SNR=24						
ZAA0	**Zalesovo Array**	**45.73**	**48**	P	**P**	**14 30 17.8**	**-1.4**
ZAA0				IAmb	IAmb	14 30 19.2	
	comp=Z,4.1nm,0.8s						
ZALV	**Zalesovo Beam**	**45.73**	**48**	P	**P**	**14 30 18.5**	**-0.7**
	comp=Z,4.2nm,0.6s,baz=275,slow=8.8,SNR=17						
SONM	**Songino Array**	**60.50**	**51**	P	**P**	**14 32 07.8**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=286,slow=10,SNR=3.4						
CMAR	**Chiang Mai Arr**	**69.99**	**82**	P	**P**	**14 33 09.5**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=307,slow=7.7,SNR=4.8						
INK	**Inuvik**	**71.98**	**350**	P	**P**	**14 33 20.4**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=38,slow=2.9,SNR=3.2						
INK	**Inuvik**	**71.98**	**350**	P	**P**	**14 33 20.1**	**-1.3**
YKA	**Yellowknife Ar**	**73.29**	**340**	P	**P**	**14 33 29.4**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=37,slow=5.0,SNR=6.6						
ULM	**Lac du Bonnet**	**75.58**	**324**	P	**P**	**14 33 43.6**	**+0.8**
	comp=Z,1.1nm,0.6s,baz=36,slow=9.8,SNR=3.0						
ILAR	**Eielson Array**	**76.84**	**354**	P	**P**	**14 33 50.0**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=352,slow=3.8,SNR=3.9						
USRK	**Ussuriysk Ar.**	**77.31**	**43**	P	**P**	**14 33 52.6**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=275,slow=5.8,SNR=3.2						

*BGR **26** 14:23:57.5±1.1, 37°.88'N×20°.55'E, h10km, Error ellipse: s-maj=166.8km s-min=36.7km az=60.0*
*MOS **26** 14:24:03.0±1.3, 38°.26'N×20°.27'E, h12km, mb4.8/20, Error ellipse: s-maj=5.6km s-min=4.1km az=74.9*
*IDC **26** 14:24:03.1±0.5, 38°.31'N×20°.44'E, h0km, mb4.2/28, mb1 4.3/37, mb1mx4.2/45, mbtmp4.2/37, ML3.9/9, Error ellipse: s-maj=13.0km s-min=11.5km az=171.0*
*NEIC **26** 14:24:04.8±2.7, 38°.24'N±0°.05×20°.331'E±0°.009, h10km±2km, mb4.6/49, ML4.3(BUC), Error ellipse: s-maj=7.9km s-min=1.1km az=179.0*
*ATH **26** 14:24:05.0, 38°.25'N×20°.39'E, h14km±1km, ML4.2/11, Error ellipse: s-maj=2.6km s-min=1.0km az=74.0*
*

comp=E,6625µm,1.5s
KLV AML AML

comp=N,5590µm,1.2s
JAN Janina 1.50 17 P **Pg** **14 24 33.0 -0.1**
JAN S **Sb** **14 24 51.3 0.0**

comp=N,6µm,0.6s
JAN Janina 1.50 17 P **Pg** **14 24 33.0 -0.1**
JAN AML AML 14 24 57.2

comp=E,12582µm,0.6s
JAN AML AML 14 25 01.5

comp=N,11268µm,0.7s
MAKR Makrakomi, Fth 1.66 61 P **Pn** **14 24 33.9 +0.4**
SRN Sarande 1.66 353 *i* PN **Pg** **14 24 36.7 +0.4**
SRN *i* SN **Sn** **14 24 54.9 0.0**
ITM Ithomi 1.68 128 P **Pb** **14 24 35.3 0.0**
ITM AML AML

comp=E,982µm,1.3s
ITM AML AML

comp=N,956µm,1.0s
ITM Ithomi 1.68 128 **Pb** **14 24 34.9 -0.4**
PYL PYLOS 1.77 138 P **Pn** **14 24 35.3 +0.3**
PYL S **Sb** **14 24 58.7 -0.4**
PYL PYLOS 1.77 138 P **Pb** **14 24 35.9 -1.0**
AGG Agios Georgios 1.80 63 P **Pn** **14 24 36.1 +0.7**
AGG Agios Georgios 1.80 63 P **Pb** **14 24 37.0 -0.3**
AGG AML AML 14 25 10.8

comp=N,9852µm,0.7s
AGG AML AML 14 25 11.7

comp=E,11795µm,0.6s
AGG Agios Georgios 1.80 63 **Pn** **14 24 36.1 +0.7**
THL Klokotos Trika 1.91 45 P **Pb** **14 24 38.7 -0.5**
THL Klokotos Trika 1.91 45 P **Pb** **14 24 38.7 -0.5**
THL S **Sg** **14 25 05.9 +0.2**
THL AML AML

comp=E,1197µm,0.8s
THL AML AML

comp=N,1120µm,0.7s
KPRO Kipourio 1.92 26 P **Pb** **14 24 39.5 0.0**
AXAR Agios Charalam 1.95 73 P **Pn** **14 24 38.5 +1.0**
PROD Prodromos 2.07 88 P **Pb** **14 24 40.7 -1.3**
TPE Tepelena 2.07 354 *i* PN **Pb** **14 24 40.9 -1.2**
TPE *i* SN **Sb** **14 25 06.7 -1.2**
PENT Pentalofos 2.08 19 P **Pb** **14 24 42.2 0.0**
LTK Loutraki 2.14 95 P **Pn** **14 24 40.5 +0.4**
LOUT Loutraki 2.15 96 P **Pn** **14 24 40.0 -0.2**
LKR Lokris 2.18 78 P **Pn** **14 24 42.0 +1.4**
SCTE Santa Cesarea 2.31 323 P **Pn** **14 24 43.9 +1.4**
SCTE S **Sn** **14 25 12.3 +1.3**
SCTE AML AML

comp=E,1970µm,0.5s
SCTE AML AML

comp=N,2130µm,0.2s
SCTE Santa Cesarea 2.31 323 **Pn** **14 24 43.9 +1.4**
VIL2 Platees 2.36 89 P **Pn** **14 24 44.6 +1.5**
KZN Kozani 2.38 29 P **Pn** **14 24 45.3 +1.9**
LIT Litokhoron 2.54 42 P **Pn** **14 24 46.9 +1.2**
LIT Litokhoron 2.54 42 **Pn** **14 24 46.9 +1.2**
MRKA Markates 2.65 79 P **Pn** **14 24 47.9 +0.8**
FNA Florina 2.69 18 P **Pn** **14 24 49.4 +1.7**
FNA Florina 2.69 18 Pn **Pn** **14 24 49.4 +1.7**
ATH Athens Observa 2.73 94 P **Pb** **14 24 50.9 -2.3**
OHR Ohrid 2.91 8 *i* Pn **Pb** **14 24 53.8 -2.6**
TIP Timpagrande 2.91 290 ⇑P **Pn** **14 24 50.5 -0.2**
TIP Timpagrande 2.91 290 ⇑S **Sn** **14 25 27.1 +1.4**
TIP Timpagrande 2.91 290 P **Pn** **14 24 53.0 +2.2**
TIP AML AML

comp=E,446µm,0.7s
TIP AML AML

comp=N,418µm,0.6s
TIP AML AML

comp=E,504µm,0.7s
TIP AML AML

comp=N,530µm,0.6s
TIP Timpagrande 2.91 290 **Pn** **14 24 53.2 +2.5**
SERS Sersale 2.92 287 P **Pn** **14 24 53.3 +2.4**
SERS S **Sn** **14 25 26.4 +0.3**
SERS AML AML

comp=E,828µm,0.6s
SERS AML AML

comp=N,785µm,1.0s
MESG Mesagne 3.01 322 P **Pn** **14 24 53.5 +1.4**
MESG S **Sn** **14 25 26.9 -1.3**
MESG AML AML

comp=E,2315µm,0.6s
MESG AML AML

comp=N,2935µm,1.1s
PLAC Placanica 3.02 275 P **Pn** **14 24 54.4 +2.1**
PLAC S **Sn** **14 25 31.0 +2.5**
PLAC AML AML

comp=N,954µm,0.6s
PLAC AML AML

comp=E,936µm,0.6s
PLAC AML AML

comp=N,2025µm,0.7s
PLAC AML AML

comp=E,1990µm,0.7s
TIR Tirane 3.13 354 P **Pn** **14 24 55.4 +1.7**
TIR Tirane 3.13 354 *i* PN **Pn** **14 24 55.8 +2.1**
TIR *i* SN **Sn** **14 25 32.9 +1.7**
TIR Tirane 3.13 354 ⇑P **Pn** **14 24 53.8 +0.1**
TIR Tirane 3.13 354 P **Pn** **14 24 56.1 +2.3**
TIR AML AML

comp=E,1480µm,0.9s
TIR AML AML

comp=N,1460µm,0.9s
TIR Tirane 3.13 354 Pn **Pn** **14 24 55.4 +1.7**
CGL1 Ceglie Messapi 3.25 319 *e*Pn **Pn** **14 24 56.9 +1.6**
SOI Samo 3.33 269 P **Pn** **14 24 58.1 +1.7**
SOI S **Sn** **14 25 34.6 -1.4**
SOI AML AML

comp=E,1062µm,1.5s
SOI AML AML

comp=N,690µm,0.6s
CAR1 CAROLEI 3.33 289 P **Pn** **14 24 60.0 +3.4**
CAR1 AML AML

comp=E,2440µm,0.7s
CAR1 AML AML

comp=N,1935µm,0.9s
MPAZ Palizzi 3.38 267 P **Pn** **14 24 58.6 +1.5**
MPAZ S **Sn** **14 25 37.7 +0.5**
MPAZ AML AML

comp=E,1425µm,0.6s
MPAZ AML AML

comp=N,1310µm,0.5s
MASS Massafra 3.41 316 *e*Pn **Pn** **14 24 59.5 +1.9**
CEL Celeste 3.45 272 **Pn** **14 24 59.8 +1.7**
PHP Peshkopia 3.46 2 *i* PN **Pn** **14 25 00.2 +2.0**
PHP *i* SN **Sn** **14 25 40.8 +1.6**
JOPP Joppolo 3.46 278 P **Pn** **14 25 00.4 +2.0**
JOPP S **Sn** **14 25 40.3 +0.9**
JOPP AML AML

comp=E,1800µm,1.0s
JOPP AML AML

comp=N,1017µm,0.8s
SALB San Lorenzo Be 3.47 300 P **Pn** **14 25 01.4 +2.9**
SALB AML AML

comp=E,885µm,1.5s
SALB AML AML

comp=N,538µm,0.7s
SALB AML AML

comp=N,553µm,0.7s
SALB AML AML

comp=E,858µm,1.6s
VAY Valandovo 3.56 29 *e*P **Pn** **14 24 59.8 +0.2**
VAY Valandovo 3.56 29 *i* Pn **Pn** **14 25 00.1 +0.5**
NOCI Noci 3.56 317 P **Pn** **14 25 01.2 +1.5**
NOCI S **Sn** **14 25 40.2 -1.6**
NOCI AML AML

comp=E,1885µm,1.5s
NOCI AML AML

comp=N,1855µm,0.8s
LTRZ Laterza 3.57 313 P **Pn** **14 25 01.5 +1.7**
T0702 Acquaformosa (3.59 296 P **Pb** **14 25 04.3 -3.6**
MATE Matera 3.67 312 ⇑P **Pn** **14 25 01.3 +0.2**
MATE Matera 3.67 312 P **Pn** **14 25 03.4 +2.3**
MATE AML AML

comp=E,920µm,0.8s
MATE AML AML

comp=N,1285µm,0.9s
STIP Stip 3.76 22 *i* Pn **Pn** **14 25 05.5 +3.1**
SCHR S. Chirico Rap 3.81 302 P **Pn** **14 25 06.5 +3.4**
SCHR AML AML

comp=E,465µm,1.6s
SCHR AML AML

comp=N,532µm,1.3s
SG1 Sgolgore (BA) 3.81 314 *e*Pn **Pn** **14 25 05.0 +1.9**
SG1 Sn **Sn** **14 25 48.0 +0.1**
ULC Ulcinj 3.81 348 *e*Pn **Pn** **14 25 03.0 -0.1**
ULC *e*Sn **Sn** **14 25 47.4 -0.6**
PUK Puka 3.82 356 *i* PN **Pn** **14 25 04.8 +1.5**
PUK Puka 3.82 356 P **Pn** **14 25 02.7 -0.6**
SKO Skopje 3.84 13 *i* Pn **Pn** **14 25 04.9 +1.4**
BAI Bari 3.89 319 *e*Pn **Pn** **14 25 05.5 +1.4**
BAI Sn **Sn** **14 25 49.8 0.0**
AMUR Altamura 3.90 314 P **Pn** **14 25 06.0 +1.8**
AMUR S **Sn** **14 25 52.0 +1.9**
AMUR AML AML

comp=E,925µm,0.5s
AMUR AML AML

comp=N,1120µm,0.9s
MCSR Castroreale 3.96 269 P **Pn** **14 25 05.8 +0.5**
MCSR AML AML

comp=N,2510µm,0.4s
MCSR AML AML

comp=E,2115µm,0.5s
DRME Dracevica, Mon 4.04 348 *e*Pn **Pn** **14 25 06.6 +0.4**
DRME *e*Sn **Sn** **14 25 53.2 -0.4**
MGR Morigerati 4.13 299 P **Pn** **14 25 10.7 +3.2**
MGR AML AML

comp=E,386µm,1.6s
MGR AML AML

comp=N,444µm,0.7s
BCI Bajram Curri 4.14 358 *i* PN **Pn** **14 25 10.6 +3.0**
BCI *i* SN **Sn** **14 25 58.4 +2.4**
HAGA Augusta 4.16 258 P **Pn** **14 25 07.9 0.0**
SLCN Sala Consilina 4.20 302 P **Pn** **14 25 12.4 +4.0**
SLCN AML AML

comp=N,926µm,0.7s
SLCN AML AML

comp=E,1154µm,0.5s
BUM Brajici-Budva 4.20 346 *e*Pn **Pn** **14 25 08.5 0.0**
BUM *e*Sn **Sn** **14 25 57.0 -0.6**
ACER Acerenza 4.21 309 P **Pn** **14 25 11.5 +2.9**
ACER S **Sn** **14 25 60.0 +2.1**
ACER Acerenza 4.21 309 Pn **Pn** **14 25 10.6 +2.0**
KKB Krupnik 4.23 30 *e*P **Pn** **14 25 10.2 +1.4**
MRVN Minervino Murg 4.23 313 P **Pn** **14 25 10.7 +1.8**
MRVN S **Sn** **14 25 58.0 -0.3**
MRVN AML AML

comp=E,640µm,0.7s
MRVN AML AML

comp=N,692µm,1.3s
MUCR Ucria 4.26 269 P **Pn** **14 25 11.2 +1.9**
PDG Podgorica 4.27 350 ⇑P **Pn** **14 25 09.6 +0.3**
PDG Podgorica 4.27 350 Pn **Pn** **14 25 10.1 +0.7**
PDG Sn **Sn** **14 25 57.6 -1.6**
TTG Podgorica 4.27 350 *e*Pn **Pn** **14 25 09.3 0.0**
TTG *e*Sn **Sn** **14 25 58.4 -0.7**
HAVL Avola 4.28 254 P **Pn** **14 25 09.6 +0.1**
HAVL S **Sn** **14 25 58.2 -1.2**
HAVL AML AML

comp=E,2105µm,0.3s
HAVL AML AML

comp=N,1760µm,0.3s
MMB Musomiste 4.28 37 *e*P **Pn** **14 25 13.9 +4.3**
PALZ Palazzo San Ge 4.29 311 P **Pn** **14 25 12.4 +2.6**
PALZ S **Sn** **14 26 01.0 +1.1**
PALZ AML AML

comp=E,3490µm,1.3s
PALZ AML AML

comp=N,3570µm,1.0s
APE Apeiranthos 4.33 104 *e*P Pn 14 25 04.8 -5.5
APE Apeiranthos 4.33 104 ⇑P **Pn** **14 25 10.5 +0.2**
HLNI Lentini 4.37 260 S **Sn** **14 25 59.0 -2.6**
PVY Plav 4.37 357 *e*Pn **Pn** **14 25 11.6 +0.8**
PVY *e*Sn **Sn** **14 26 01.2 -0.6**
HPAC Pachino 4.38 251 P **Pn** **14 25 11.9 +1.1**
MEU Monte Lauro 4.38 257 P **Pn** **14 25 11.9 +0.9**
MEU S **Sn** **14 26 02.1 -0.1**
MEU AML AML

comp=N,3270µm,0.4s
MEU AML AML

comp=E,5095µm,0.4s
HCY Herceg Novi 4.43 343 *e*Pn **Pn** **14 25 11.3 -0.2**
HCY *e*Sn **Sn** **14 26 02.0 -1.1**
CEME Cevo 4.44 347 *e*Pn **Pn** **14 25 11.7 0.0**
CEME *e*Sn **Sn** **14 26 02.2 -1.2**
CDRU Civita di Ruta 4.46 302 P **Pn** **14 25 16.7 +4.6**
HVZN Vizzini 4.53 258 P **Pn** **14 25 12.7 -0.3**
HVZN S **Sn** **14 26 03.7 -2.0**
HVZN AML AML

comp=E,7390µm,0.5s
HVZN AML AML

comp=N,7040µm,0.4s
SANT Santorini 4.53 113 Pn **Pn** **14 25 13.0 -0.1**
HMDC Modica 4.54 255 P **Pn** **14 25 12.8 -0.3**
HMDC S **Sn** **14 26 04.0 -1.9**
NKME Niksic 4.64 348 *e*Pn **Pn** **14 25 14.5 -0.1**
NKME *e*Sn **Sn** **14 26 07.4 -1.1**
IVA Berane 4.65 357 *e*Pn **Pn** **14 25 14.5 -0.1**
IVA *e*Sn **Sn** **14 26 08.0 -0.7**
KOME Kolasin 4.65 353 *e*Pn **Pn** **14 25 15.2 +0.5**
KOME *e*Sn **Sn** **14 26 08.2 -0.6**
NKY Niksic 4.68 348 *e*Pn **Pn** **14 25 14.9 -0.2**
NKY *e*Sn **Sn** **14 26 08.7 -0.8**
VAE Valguarnera 4.70 263 Pn **Pn** **14 25 17.9 +2.6**
comp=N,3.4nm,0.3s,baz=173,slow=8.1,SNR=3.1
VAE Sn **Sn** **14 26 09.9 +0.1**
comp=N,9.6nm,0.3s,baz=102,slow=18,SNR=3.4
MCRV Calabrutti - M 4.70 304 P Pb 14 25 21.9 -5.0
DBRK Dubrovnik 4.72 341 *e*Pn **Pn** **14 25 16.0 +0.4**
DBRK Sn **Sn** **14 26 08.4 -2.0**
IDI Anoyia 4.73 127 Pn **Pn** **14 25 16.6 +0.8**
comp=N,2.0nm,0.3s,baz=328,slow=17,SNR=3.8
IDI Sn **Sn** **14 26 08.2 -2.4**
comp=N,10nm,0.3s,baz=143,slow=23,SNR=11
BARS Barje 4.73 14 *e*Pn **Pn** **14 25 17.6 +1.9**
SGTA Sant Agata di 4.77 309 P **Pn** **14 25 20.3 +4.0**
SGTA AML AML

comp=N,686µm,0.8s
SGTA AML AML

comp=E,739µm,1.3s
CAFE Carife 4.79 307 P **Pn** **14 25 20.6 +4.0**
CAFE AML AML

comp=N,580µm,1.1s
CAFE AML AML

comp=N,451µm,1.2s
CAFE AML AML

comp=E,674µm,1.3s
CAFE AML AML

comp=E,634µm,1.3s
MSAG Monte S. Angel 4.83 317 P **Pn** **14 25 18.9 +1.7**
BRY Bratogost 4.85 345 *e*Pn **Pn** **14 25 17.0 -0.5**
RZN Rozhen 4.86 43 *e*P **Pn** **14 25 19.4 +1.8**
VTS Vitosha 4.93 26 *e*Pn **Pn** **14 25 19.9 +1.3**
VTS *e*Sn **Sn** **14 26 17.5 +1.7**
VTS Vitosha 4.93 26 P **Pn** **14 25 19.3 +0.7**
VTS Vitosha 4.93 26 ⇑P **Pn** **14 25 19.8 +1.1**
VTS Vitosha 4.93 26 *e*P **Pn** **14 25 20.0 +1.3**
VTS Vitosha 4.93 26 Pn **Pn** **14 25 19.3 +0.7**
SGRT San Giovanni R 4.95 317 Pn **Pn** **14 25 19.7 +0.9**
SELS Selova 5.03 7 *e*Pn **Pn** **14 25 21.0 +1.2**
SELS *e*Sn **Sn** **14 26 16.4 -1.5**
SJES Sjenica 5.03 358 *e*Pn **Pn** **14 25 23.0 +3.0**
SJES *e*Sn **Sn** **14 26 18.8 +0.6**
STON Ston 5.04 338 *e*Pn **Pn** **14 25 20.4 +0.5**
STON Sn **Sn** **14 26 15.5 -2.5**
STON Ston 5.04 338 P **Pn** **14 25 20.3 +0.5**
STON S **Sn** **14 26 17.0 -1.0**
STON AML AML

comp=E,368µm,0.3s
STON AML AML

comp=N,339µm,0.4s
UPM Unac-Piva 5.08 349 *e*Pn **Pn** **14 25 21.1 +0.5**
UPM *e*Sn **Sn** **14 26 18.3 -1.1**
CLTA Licata 5.12 260 P **Pn** **14 25 21.9 +0.9**
PLE Pljevlja 5.14 353 *e*Pn **Pn** **14 25 21.7 +0.3**
PLE *e*Sn **Sn** **14 26 20.1 -0.7**
WDD Wied Dalam 5.18 244 P **Pn** **14 25 22.8 +0.9**
WDD S **Sn** **14 26 20.6 -1.0**
WDD AML AML

comp=E,1950µm,1.0s
WDD AML AML

comp=N,2650µm,0.8s
WDD Wied Dalam 5.18 244 **Pn** **14 25 23.2 +1.3**
WDD **Sn** **14 26 21.3 -0.3**
ALN Alexandroupoli 5.20 57 P **Pn** **14 25 22.9 +0.8**
ALN Alexandroupoli 5.20 57 Pn **Pn** **14 25 22.9 +0.8**
PAOL Paolisi 5.22 304 Pn **Pn** **14 25 25.8 +3.3**
KDZ Kurdzhali 5.23 48 *e*P **Pn** **14 25 22.3 -0.2**
PGB Panagyurishte 5.24 33 *e*P **Pn** **14 25 23.9 +1.1**
MELA Melanico ??? S 5.26 313 P **Pn** **14 25 25.4 +2.4**
MELA AML AML

comp=N,1880µm,0.8s
MELA AML AML

comp=E,1500µm,1.2s
MELA AML AML

comp=N,2000µm,1.3s
MELA AML AML

comp=E,1500µm,1.2s
IVAS Ivanjica 5.34 359 *e*Pn **Pn** **14 25 26.4 +2.2**
IVAS *e*Sn **Sn** **14 26 24.9 -0.9**
ZAPS Zavoj 5.35 19 *e*Pn **Pn** **14 25 26.2 +2.0**
ZAPS *e*Sn **Sn** **14 26 27.8 +1.9**
BSSO Busso 5.48 309 P **Pn** **14 25 30.1 +4.0**
CORL Corleone 5.51 269 **Pn** **14 25 28.3 +1.9**
BOVS Bovan 5.51 11 *e*Pn **Pn** **14 25 26.7 +0.3**
BOVS *e*Sn **Sn** **14 26 28.5 -1.3**
CLTB Caltabellotta 5.62 266 **Pn** **14 25 31.3 +3.3**
MAKA Makarska 5.62 335 *e*Pn **Pn** **14 25 28.8 +0.9**
MAKA Sn **Sn** **14 26 29.6 -2.9**
TRIV Trivento 5.64 311 P **Pn** **14 25 31.7 +3.5**
GRUS Gruza 5.67 3 *e*Pn **Pn** **14 25 30.4 +1.9**
GRUS *e*Sn **Sn** **14 26 32.3 -1.3**
BBLS Lazići 5.67 354 *e*Pn **Pn** **14 25 30.2 +1.5**
BBLS *e*Sn **Sn** **14 26 31.4 -2.4**
DIVS Divibare 5.87 358 *e*Pn **Pn** **14 25 31.2 -0.2**
DIVS *e*Sn **Sn** **14 26 38.4 -0.3**
LPEL Lama dei Pelig 6.03 311 P **Pn** **14 25 36.8 +3.2**
KARP Karpathos 6.14 114 Pn **Pn** **14 25 37.4 +2.4**
INTR Introdacqua 6.17 310 P **Pn** **14 25 39.4 +3.9**
INTR Introdacqua 6.17 310 Pn **Pn** **14 25 39.1 +3.5**
KUBS Kucevo 6.27 9 *e*Pn **Pn** **14 25 38.0 +1.2**
TEKS Tekeris 6.34 355 *e*Pn **Pn** **14 25 38.5 +0.7**
TEKS *e*Sn **Sn** **14 26 47.0 -3.3**
ZIRJ Zirje 6.45 329 *i* Pn **Pn** **14 25 39.7 +0.3**
ZIRJ Sn **Sn** **14 26 49.4 -3.6**
KIJV Kijevo 6.47 334 *e*Pn **Pn** **14 25 40.7 +1.2**
KIJV Sn **Sn** **14 26 52.3 -1.1**
MORI Morici 6.60 330 *i* Pn **Pn** **14 25 42.6 +1.2**
MORI Sn **Sn** **14 26 54.1 -2.5**
MDVR Moldovita 6.64 9 ⇑P **Pn** **14 25 43.4 +1.5**
AQU L'Aquila 6.67 310 P **Pn** **14 25 44.4 +1.9**
AQU L'Aquila 6.67 310 Pn **Pn** **14 25 44.4 +1.9**
PTMD Pantelleria Cu 6.74 260 P **Pb** **14 26 00.3 -1.2**
HERR Herculane 6.84 13 ⇑P **Pn** **14 25 44.8 +0.1**
OFFI Offida 6.87 315 P Pn 14 25 50.8 +5.7
BLY Banja Luka 6.91 341 Pn **Pn** **14 25 46.5 +0.9**
DUGI Dugi Otok 6.97 327 *e*Pn **Pn** **14 25 47.5 +1.0**
DUGI Sn **Sn** **14 27 03.2 -2.6**
LNSS Leonessa 7.04 311 P **Pn** **14 25 51.6 +4.1**
NRCA Norcia 7.13 312 P **Pn** **14 25 52.2 +3.5**
NRCA Norcia 7.13 312 Pn **Pn** **14 25 51.7 +2.9**
UDBI Udbina 7.15 333 *i* Pn **Pn** **14 25 50.8 +1.8**
ARRO Arrone 7.19 310 P **Pn** **14 25 53.5 +4.0**
FDMO Fiordimonte 7.27 314 P **Pn** **14 25 54.1 +3.4**
CESX Cesi 7.32 309 P **Pn** **14 25 53.8 +2.5**
GZR Gura Zlata 7.40 14 ⇑P **Pn** **14 25 52.1 -0.3**
BZS Buzias 7.45 7 *e*Pn **Pn** **14 25 54.6 +1.6**
BZS Buzias 7.45 7 ⇓P **Pn** **14 25 54.4 +1.4**
EL6 Elcito 7.45 315 P **Pn** **14 25 55.4 +2.3**
SNTG Esanatoglia 7.49 314 P **Pn** **14 25 56.1 +2.5**
NVLJ Novalja 7.52 329 *i* Pn **Pn** **14 25 54.7 +0.8**
ASSB Assisi San Ben 7.52 312 P Pn 14 25 58.9 +4.8
FOSV Fossato di Vic 7.62 314 P **Pn** **14 25 58.0 +2.6**
ARVD Arcevia 7.65 316 P **Pn** **14 25 57.9 +2.1**
SSFR Montelago di S 7.70 315 P **Pn** **14 25 59.0 +2.5**
MURB Monte Urbino 7.74 313 Pn **Pn** **14 26 00.5 +3.4**
ELL Elmali 7.80 98 P **Pn** **14 26 00.4 +2.4**
ELL Elmali 7.80 98 Pn **Pn** **14 26 00.4 +2.4**
ARR Arges 7.84 23 ⇑P **Pn** **14 25 59.2 +0.7**
MTUR Matau 7.86 26 ⇑P **Pn** **14 25 59.8 +1.1**
ATPI Pietralunga - 7.92 314 P **Pn** **14 26 03.5 +4.0**
VOIR 8.04 25 P **Pn** **14 26 03.2 +2.1**
VOIR 8.04 25 ⇑P **Pn** **14 26 03.7 +1.4**
BOJS Bojanci 8.18 334 P **Pn** **14 26 03.7 +0.7**
OZLJ Ozalj 8.20 336 *e*Pn **Pn** **14 26 04.4 +1.1**
GBRS Gornja Briga 8.36 333 *e*Pn **Pn** **14 26 06.4 +0.9**
MLR Muntele Rosu 8.40 28 P **Pn** **14 26 09.2 +3.0**
MLR Muntele Rosu 8.40 28 Pn **Pn** **14 26 09.7 +3.5**
comp=E,0.5nm,0.3s,baz=208,slow=11,SNR=7.1
MLR Muntele Rosu 8.40 28 ⇑P **Pn** **14 26 07.6 +1.4**
MLR Muntele Rosu 8.40 28 **Pn** **14 26 09.2 +3.0**
CASP Castiglione de 8.49 305 Pn **Pn** **14 26 11.2 +3.9**
DOPR Dopca 8.62 25 ⇑P **Pn** **14 26 10.7 +1.7**
OSSC Osservatorio P 8.64 311 Pn **Pn** **14 26 13.9 +4.5**
OZUR 8.86 26 ⇑P **Pn** **14 26 13.3 +0.9**
LJU Ljubljana 8.90 333 P **Pn** **14 26 12.8 -0.1**
PLOR Plostina 8.97 30 ⇑P **Pn** **14 26 15.3 +1.4**
VRI Vrincioaia 9.01 30 ⇓P **Pn** **14 26 14.7 +0.2**
KEST Kesra 9.09 257 Pn **Pn** **14 26 15.9 +0.3**
comp=E,1.2nm,0.3s,baz=348,slow=8.2,SNR=4.4
KEST Sn **Sn** **14 27 56.9 -1.1**
comp=E,0.3nm,0.3s,baz=90,slow=20,SNR=2.0
KEST Kesra 9.09 257 Pn **Pn** **14 26 16.2 +0.6**
SABO M.te Sabotino 9.19 330 P **Pn** **14 26 17.6 +0.6**
SOKA Soboth 9.29 337 Pn **Pn** **14 26 18.1 -0.2**
comp=E,19nm,0.5s,SNR=7.9
SOKA Sn **Sn** **14 27 56.1 -6.6**
comp=E,11nm,0.5s
OBKA Obir 9.29 335 *e*Pn **Pn** **14 26 19.6 +1.3**
OBKA *e*Sn **Sn** **14 27 59.3 -3.6**
OBKA Obir 9.29 335 *e*Pn **Pn** **14 26 19.5 +1.1**
comp=E,3.1nm,0.2s
OBKA Sn **Sn** **14 28 00.2 -2.8**
comp=E,23nm,0.4s
VLC Villacollemand 9.52 312 Pn **Pn** **14 26 25.0 +3.6**
TEOL Teolo 9.59 321 Pn **Pn** **14 26 25.4 +3.0**
ARSA Arzberg 9.67 340 *e*Pn **Pn** **14 26 22.6 -0.9**
ARSA Arzberg 9.67 340 *e*Pn **Pn** **14 26 22.6 -0.9**
comp=E,2.5nm,0.3s
PSZ Piszkesteto 9.69 358 P **Pn** **14 26 24.8 +1.0**
PSZ Piszkesteto 9.69 358 Pn **Pn** **14 26 24.8 +1.0**
POLC Polcenigo 9.69 326 P **Pn** **14 26 25.0 +1.3**
MYKA Terra Mystica 9.72 332 Pn **Pn** **14 26 25.2 +1.0**
comp=E,26nm,0.0s
MYKA Sn **Sn** **14 28 08.5 -4.9**
comp=E,9.2nm,0.5s
STAL STALIGIAL 9.79 328 Pn **Pn** **14 26 25.2 +0.2**
PRMA PARMA 9.92 314 Pn **Pn** **14 26 29.9 +3.1**
BURAR Bucovina Array 10.05 20 ⇑P **Pn** **14 26 29.6 +0.7**
CTI Castel Tesino 10.10 323 P **Pn** **14 26 28.6 -0.8**
CTI Castel Tesino 10.10 323 Pn **Pn** **14 26 28.6 -0.8**
KBA Koelnbreinsper 10.21 332 *e*Sn **Sn** **14 28 21.0 -4.5**
KBA Koelnbreinsper 10.21 332 Sn **Sn** **14 28 19.7 -5.8**
comp=E,3.5nm,0.3s
ABTA Abfaltersbach 10.26 329 Pn **Pn** **14 26 33.4 +1.8**
comp=E,7.7nm,0.7s
ABTA Sn **Sn** **14 28 22.2 -4.4**
comp=E,12nm,0.6s
BR131 Keskin Array S 10.52 78 P **Pn** **14 26 35.6 +0.4**
BR131 Keskin Array S 10.52 78 Pn **Pn** **14 26 35.6 +0.4**
BRTR Keskin Array B 10.52 78 Pn **Pn** **14 26 37.9 +2.7**
comp=E,0.2nm,0.3s,baz=254,slow=12,SNR=6.0
MOA Molln 10.57 337 *e*Pn Pn 14 26 27.3 -8.5
MOA Molln 10.57 337 *e*Pn **Pn** **14 26 36.2 +0.4**
comp=E,3.9nm,0.3s
MOA Sn **Sn** **14 28 30.8 -3.4**
comp=E,5.0nm,0.5s
ILGA Ilgaz 10.75 71 Pn **Pn** **14 26 38.5 +0.1**
RJOB Jochberg 10.96 332 *e*Pn Pn 14 26 33.5 -7.7
RJOB *e*Sn **Sn** **14 28 40.0 -3.9**
WTTA Wattenberg 11.03 328 *e*Pn **Pn** **14 26 37.9 -4.3**
WTTA *e*Sn **Sn** **14 28 43.5 -2.2**
WTTA Wattenberg 11.03 328 Pn **Pn** **14 26 37.9 -4.3**
comp=E,6.3nm,0.4s
WTTA Sn **Sn** **14 28 41.2 -4.5**
comp=E,22nm,0.6s
WATA Walderalm 11.11 328 Pn **Pn** **14 26 43.7 +0.3**
comp=E,10nm,0.5s,SNR=5.9
WATA Sn **Sn** **14 28 44.5 -3.2**
comp=E,9.8nm,0.4s
SQTA Sankt Quirin 11.18 326 Pn **Pn** **14 26 43.6 -0.7**
comp=E,5.1nm,0.5s
SQTA Sn **Sn** **14 28 47.0 -2.3**
comp=E,7.8nm,0.5s
MOTA Moosalm 11.32 327 Pn **Pn** **14 26 46.8 +0.5**
comp=E,8.1nm,0.4s,SNR=6.7
MOTA Sn **Sn** **14 28 50.8 -2.0**

comp=E,10nm,0.6s
VRAC Vranov 11.39 348 Pn **Pn** 14 26 46.8 -0.2
baz=177,slow=13,SNR=4.3
DAVOX Davos/Dischmat 11.47 321 Pn **Pn** 14 26 48.2 -0.2
comp=E,0.7nm,0.3s,baz=120,slow=20,SNR=5.0
DAVOX Sn **Sn** 14 28 49.7 -6.9
comp=E,0.6nm,0.3s,baz=291,slow=17,SNR=2.6
RETA Reutte 11.58 326 Pn **Pn** 14 26 52.6 +2.9
comp=E,5.4nm,0.7s
RETA Sn **Sn** 14 28 57.3 -1.7
comp=E,3.5nm,0.4s
GEC2 GERESS Array S 11.63 338 *e*Pn **Pn** 14 26 49.7 -0.6
GEC2 *e*Sn **Sn** 14 28 54.6 -5.6
GEC2 GERESS Array S 11.63 338 Pn **Pn** 14 26 48.9 -1.5
GERES GERESS Array B 11.63 338 Pn **Pn** 14 26 48.7 -1.7
comp=E,1.2nm,0.3s,baz=158,slow=14,SNR=16
GERES Sn **Sn** 14 28 51.8 -8.4
comp=E,0.6nm,0.3s,baz=170,slow=17,SNR=3.4
KHC Kasperske Hory 11.92 338 *e*P **Pn** 14 26 53.6 -0.7
KHC *e* 14 29 00.1
KHC Kasperske Hory 11.92 338 *e*PN **Pn** 14 26 53.6 -0.7
KHC *e*SN **Sn** 14 29 00.1 -7.2
KHC Kasperske Hory 11.92 338 **Pn** 14 26 53.5 -0.8
WET Wettzell 12.14 336 *e*Pn **Pn** 14 26 57.3 0.0
BNI Bardonecchia 12.23 308 P **Pn** 14 26 58.8 +0.1
BNI Bardonecchia 12.23 308 Pn **Pn** 14 26 58.8 +0.1
PRU Pruhonice 12.45 343 *e*P **Pn** 14 27 00.2 -1.3
PRU Pruhonice 12.45 343 *e*PN **Pn** 14 27 00.2 -1.3
SENIN Lac Senin/Sane 12.57 314 **Pn** 14 27 03.2 -0.1
GRA1 Grafenberg Arr 13.17 333 Pn **Pn** 14 27 10.2 -1.1
GRF Grafenberg Arr 13.17 333 P **Pn** 14 27 10.2 -1.1
BFO Black Forest 13.31 323 P **Pn** 14 27 11.6 -1.6
BFO Black Forest 13.31 323 Pn **Pn** 14 27 11.6 -1.6
MMAI Mount Meron Ar 13.36 108 Pn **Pn** 14 27 11.4 -2.7
comp=E,1.5nm,0.3s,baz=312,slow=13,SNR=2.2
ECH Echery 13.80 321 P **Pn** 14 27 20.7 +0.7
ECH Echery 13.80 321 Pn **Pn** 14 27 20.7 +0.7
AKASG Malin Array Be 14.00 24 Pn **Pn** 14 27 21.0 -1.6
comp=E,1.1nm,0.3s,baz=204,slow=12,SNR=1.5
CLL Collm 14.05 341 *e*P **P** 14 27 32.0 +0.8
CLL Collm 14.05 341 *e*PP **P** 14 27 32.0 +0.8
EIL Elat 14.86 121 Pn **Pn** 14 27 29.8 -4.8
comp=E,0.6nm,0.3s,baz=328,slow=19,SNR=3.2
ASF Jabal al Asfar 14.87 109 P **Pn** 14 27 33.0 -1.7
ASF Jabal al Asfar 14.87 109 Pn **Pn** 14 27 33.0 -1.7
comp=E,0.2nm,0.3s,baz=171,slow=12,SNR=2.8
WLF Walferdange 15.27 323 P **Pn** 14 27 41.3 +1.4
WLF pmax pmax
comp=Z,34nm,1.0s
WLF Walferdange 15.27 323 Pn **Pn** 14 27 41.3 +1.4
WLF IAmb IAmb 14 27 49.4
comp=Z,34nm,1.0s
SUW Suwalki 15.91 6 P **Pn** 14 27 49.3 +1.1
SUW pmax pmax
comp=Z,38nm,0.9s
SUW Suwalki 15.91 6 Pn **Pn** 14 27 49.3 +1.1
SUW IAmb IAmb 14 28 03.6
comp=Z,38nm,0.9s
KIV Kislovodsk 17.82 64 *e*P **Pn** 14 28 08.3 -4.1
KIV pmax pmax
comp=Z,41nm,1.1s
KIV Kislovodsk 17.82 64 P **P** 14 28 13.4 +0.3
KBZ Khabaz 17.93 65 P **P** 14 28 15.4 +1.2
comp=Z,0.2nm,0.3s,baz=279,slow=9.2,SNR=10.0
AKH Akhalkalaki 18.11 73 P **P** 14 28 17.4 +1.0
AKH pmax pmax
comp=Z,16nm,1.2s
AKH Akhalkalaki 18.11 73 P **P** 14 28 17.4 +1.0
ZEI Tsey 18.52 68 *e*P **Pn** 14 28 22.0 +0.9
ZEI pmax pmax
comp=Z,7.0nm,0.6s
VORD Divnogorie 18.52 40 *e*P **P** 14 28 20.1 -0.6
VORD pmax pmax
comp=Z,10.0nm,1.2s
VSR Storozhevoye 18.61 40 *e*P **P** 14 28 20.4 -1.2
VSR pmax pmax
comp=Z,5.0nm,0.4s
ESDC Sonseca Array 18.89 282 P **Pn** 14 28 26.0 +0.4
comp=Z,0.3nm,0.3s,baz=72,slow=11,SNR=6.1
GNI Garni 19.05 77 P **Pn** 14 28 28.1 +0.5
GNI pmax pmax
comp=Z,74nm,1.6s
GNI Garni 19.05 77 P **Pn** 14 28 28.4 +0.9
comp=Z,0.9nm,0.3s,baz=17,slow=3.9,SNR=6.1
GNI Garni 19.05 77 P **Pn** 14 28 28.1 +0.5
GNI IAmb IAmb 14 28 42.9
comp=Z,74nm,1.6s
TBLG Delisi 19.06 72 P **Pn** 14 28 28.1 +0.7
TBLG pmax pmax
comp=Z,8.0nm,0.7s
TBLG Delisi 19.06 72 P **Pn** 14 28 28.1 +0.7
PAB San Pablo 19.20 282 P **Pn** 14 28 29.4 +0.2
PAB pmax pmax
comp=Z,36nm,1.7s
PAB San Pablo 19.20 282 P **Pn** 14 28 29.4 +0.2
LPSR Galich'ya Gora 19.36 36 *e*P **P** 14 28 29.8 -0.1
LPSR pmax pmax
comp=Z,20nm,1.0s
VRH Novokhopyorsk 19.92 42 *e*P **P** 14 28 35.0 -1.0
VRH pmax pmax
comp=Z,10.0nm,0.6s
OBN Obninsk 20.17 28⇑ *e*P **P** 14 28 38.9 +0.2
OBN *e**SP **pwP** 14 28 45.3 +1.3
OBN 14 28 57.0
OBN PPP PPP 14 29 05.0
OBN SS Sn 14 32 42.0 +15
OBN pmax pmax
comp=Z,13nm,0.6s
OBN MLR MLR
comp=Z,3μm,17.0s
VSU Vasula 20.68 10 *e*P **P** 14 28 44.8 +0.6
VSU pmax pmax
comp=Z,105nm,1.0s
MDT Midelt 20.93 263 P Pn 14 28 48.9 -0.9
comp=Z,5.4nm,1.1s,baz=260,slow=10,SNR=7.6
MOS Moscow 21.04 28 *e*P **P** 14 28 49.9 +1.8
MOS pmax pmax
comp=Z,48nm,1.0s
AKT Akhty 21.29 73 *e*P **P** 14 28 51.1 0.0
AKT *e* 14 29 10.3
AKT pmax pmax
comp=Z,24nm,0.9s
PCBR Castelo Branco 21.59 283 *e*P **P** 14 28 57.1 +3.0
MTE Manteigas 21.60 285 *e*P **P** 14 28 58.4 +4.1
PESTR Estremoz 21.77 280 P **P** 14 28 57.6 +1.5
PESTR IAmb IAmb 14 29 04.5
comp=Z,32nm,1.9s
PMTG Montargil 22.24 281 *e*P **P** 14 29 01.9 +0.8
comp=Z,27nm,1.3s
HFS Hagfors 22.32 351 P **P** 14 29 01.2 -0.6
comp=Z,7.8nm,0.7s,baz=182,slow=13,SNR=10
PTOM Tomar 22.32 283 *e*P **P** 14 29 06.2 +4.2
NC602 NORSAR Array S 23.19 349 P **P** 14 29 11.5 +0.5
EKA Eskdalemuir Ar 23.27 325 P **P** 14 29 12.2 +0.3
comp=Z,14nm,1.0s,baz=128,slow=11,SNR=8.9
ESK Eskdalemuir 23.28 325 P **P** 14 29 12.6 +0.6
ESK pmax pmax
comp=Z,272nm,1.9s
ESK Eskdalemuir 23.28 325 P **P** 14 29 12.6 +0.6
NAO01 NORSAR Array S 23.39 348 P **P** 14 29 13.1 0.0
FINES FINESS Array B 23.52 7 P **P** 14 29 13.2 -1.1
comp=Z,10nm,0.8s,baz=166,slow=8.5,SNR=18
FIA1 FINESS Array S 23.52 7 P **P** 14 29 13.4 -0.9
FIA1 IAmb IAmb 14 29 17.6
comp=Z,14nm,0.8s
NC405 NORSAR Array S 23.53 350 P **P** 14 29 13.9 -0.5
NB201 NORSAR Array S 23.53 349 P **P** 14 29 14.6 +0.3
NB2 NORSAR Subarra 23.53 349 P **P** 14 29 14.6 +0.2
comp=Z,10.0nm,1.1s,baz=161,slow=10
NOA NORSAR Array B 23.53 349 P **P** 14 29 13.8 -0.6
comp=Z,4.7nm,0.8s,baz=160,slow=9.4,SNR=9.8
NC303 NORSAR Array S 23.68 349 P **P** 14 29 15.4 -0.5
NC204 NORSAR Array S 23.82 349 P **P** 14 29 18.2 +0.9
NC204 IAmb IAmb 14 29 30.1
comp=Z,70nm,1.5s
KLMR Klimovskoe 25.67 22 *e*P **P** 14 29 32.5 -1.4
KLMR pmax pmax
comp=Z,14nm,0.9s
KLMR Klimovskoe 25.67 22 *e*P **P** 14 29 32.6 -1.4
comp=Z,14nm,0.9s
KLMR AMP 14 29 37.2
RAYN Ar Rayn 26.04 117 P **P** 14 29 37.9 +0.1
RAYN Ar Rayn 26.04 117 P **P** 14 29 37.9 +0.1
KIRV Kirov 27.72 33 P **P** 14 29 51.6 -0.9
comp=Z,5.7nm,0.5s,baz=243,slow=4.5,SNR=3.4

PRGR Permogore 28.20 26 *e*P **P** 14 29 53.4 -3.4
PRGR pmax pmax
comp=Z,14nm,0.8s
AKTO Aktyubinsk 29.31 53 P **P** 14 30 04.6 -2.2
comp=Z,0.9nm,0.5s,baz=265,slow=11,SNR=2.9
GEYT Alibeck 29.66 79 P **P** 14 30 09.6 -0.5
comp=Z,1.7nm,0.5s,baz=280,slow=8.9,SNR=5.3
GEYT Alibeck 29.66 79 IAmb IAmb 14 30 15.1
comp=Z,1.7nm,0.8s
GYA0B ALIBECK ARRAY 29.66 79 P **P** 14 30 09.7 -0.4
GYA0B IAmb IAmb 14 30 27.9
comp=Z,5.4nm,0.8s
TOA0 Torodi Ar. Sit 29.95 218 P **P** 14 30 13.8 +1.1
TORD Torodi Ar. Bea 29.95 218 P **P** 14 30 13.7 +1.0
comp=Z,4.8nm,0.9s,baz=31,slow=8.8,SNR=12
TORD Torodi Ar. Bea 29.95 218 IAmb IAmb 14 30 19.6
comp=Z,4.2nm,1.0s
ABKAR Akbulak array 30.38 56 P **P** 14 30 15.3 -1.0
ABKAR IAmb IAmb 14 31 02.5
comp=Z,14nm,1.9s
ARU Arti 31.15 42 P **P** 14 30 23.8 +0.8
ARU Arti 31.15 42 P **P** 14 30 22.7 -0.3
ARU IAmb IAmb 14 31 14.7
comp=Z,26nm,1.8s
ARCES ARCESS Array B 31.49 4 P **P** 14 30 24.2 -1.7
comp=Z,1.3nm,0.6s,baz=192,slow=9.5,SNR=8.2
ARCES PcP **PcP** 14 33 18.4 -0.1
comp=Z,2.5nm,0.9s,baz=221,slow=1.7,SNR=6.0
SVE Sverdlovsk 32.37 42 *e*P **P** 14 30 33.2 -0.5
BRVK Borovoye 37.17 50 P **P** 14 31 15.2 -0.1
BRVK pmax pmax
comp=Z,12nm,1.5s
BRVK Borovoye 37.17 50 P **P** 14 31 15.2 -0.1
BRVK IAmb IAmb 14 31 19.1
comp=Z,12nm,1.4s
KK31 Karatay Array 37.96 66 P **P** 14 31 20.7 -1.3
KK31 pmax pmax
comp=Z,4.0nm,0.6s
KK31 Karatay Array 37.96 66 P **P** 14 31 20.7 -1.3
KK31 IAmb IAmb 14 31 28.1
comp=Z,4.5nm,0.6s
KKAR Karatay Array 37.96 66 P **P** 14 31 20.6 -1.4
KKAR pmax pmax
comp=Z,4.0nm,0.6s
KKAR Karatay Array 37.96 66 P **P** 14 31 20.6 -1.4
KKAR IAmb IAmb 14 31 28.2
comp=Z,4.5nm,0.6s
DBIC Dimbokro 38.80 222 P **P** 14 31 30.6 +1.3
DBIC pmax pmax
comp=Z,37nm,2.0s
DBIC Dimbokro 38.80 222 P **P** 14 31 30.6 +1.3
comp=Z,2.0nm,0.8s,baz=20,slow=12,SNR=2.6
DBIC Dimbokro 38.80 222 IAmb IAmb 14 32 43.9
comp=Z,37nm,2.0s
BTK Batken 38.82 71 P **P** 14 31 28.1 -1.3
BTK pmax pmax
comp=Z,5.0nm,1.1s
BTK Batken 38.82 71 P **P** 14 31 28.1 -1.3
SOCY Socotra 39.67 122 P **P** 14 31 35.1 -1.6
SOCY IAmb IAmb 14 32 08.0
comp=Z,40nm,1.2s
SPA0 Spitsbergen Ar 40.09 359 P **P** 14 31 41.8 +2.3
SPITS Spitsbergen Ar 40.09 359 P **P** 14 31 41.6 +2.1
comp=Z,5.4nm,0.7s,baz=153,slow=9.7,SNR=6.1
AAK Ala-Archa 40.92 66 P **P** 14 31 46.7 -0.3
AAK pmax pmax
comp=Z,5.0nm,1.0s
AAK Ala-Archa 40.92 66 P **P** 14 31 46.6 -0.3
KURK Kurchatov 42.40 53 P **P** 14 31 57.9 -0.9
KURK pmax pmax
comp=Z,5.0nm,1.2s
KURK Kurchatov 42.40 53 P **P** 14 31 57.9 -0.9
NIL Nilore 42.66 79 P **P** 14 32 00.6 -0.5
NIL pmax pmax
comp=Z,10.0nm,1.1s
NIL Nilore 42.66 79 P **P** 14 32 00.6 -0.5
NIL IAmb IAmb 14 32 05.2
comp=Z,10nm,1.1s
KSH Kashi 42.79 70 P **P** 14 32 02.3 0.0
KSH pmax pmax
comp=Z,6μm,10.5s
KDJ Kajisay 42.97 66 P **P** 14 32 02.3 -1.5
KDJ pmax pmax
comp=Z,7.0nm,1.3s
KDJ Kajisay 42.97 66 P **P** 14 32 02.3 -1.5
MAKZ Makanchi 45.23 58 P **P** 14 32 20.4 -1.2
MAKZ pmax pmax
comp=Z,15nm,2.0s
MAKZ Makanchi 45.23 58 P **P** 14 32 20.4 -1.2
MAKZ IAmb IAmb 14 33 21.3
comp=Z,15nm,1.9s
MK31 Makanchi Array 45.44 58 P **P** 14 32 21.7 -1.6
MK31 pmax pmax
comp=Z,3.0nm,0.7s
MK31 Makanchi Array 45.44 58 P **P** 14 32 21.6 -1.6
MKAR Makanchi Array 45.44 58 P **P** 14 32 22.1 -1.2
comp=Z,2.9nm,0.5s,baz=278,slow=7.0,SNR=19
ZAA0 Zalesovo Array 45.80 48 P **P** 14 32 24.6 -1.4
ZAA0 IAmb IAmb 14 32 35.8
comp=Z,7.0nm,0.6s
ZALV Zalesovo Beam 45.80 48 P **P** 14 32 25.0 -1.0
ZALV Zalesovo Beam 45.80 48 P **P** 14 32 25.0 -1.0
comp=Z,6.7nm,0.5s,baz=273,slow=8.7,SNR=18
WMQ Urumqi 49.91 61 *e*P **P** 14 33 00.8 +2.8
WMQ pmax pmax
comp=Z,8.0nm,0.7s
WMQ pmax pmax
comp=Z,46nm,5.3s
TLY Talaya 57.40 47 *e*P **P** 14 33 53.1 +0.3
TLY pmax pmax
comp=Z,8.0nm,0.8s
SCHQ Schefferville 58.29 317 P **P** 14 34 00.2 +1.3
comp=Z,2.9nm,0.8s,baz=60,slow=7.7,SNR=3.9
SCHQ Schefferville 58.29 317 P **P** 14 34 00.0 +1.1
SONM Songino Array 60.58 51 P **P** 14 34 14.4 -0.7
SONM pmax pmax
comp=Z,3.0nm,1.3s
SONM Songino Array 60.58 51 P **P** 14 34 14.4 -0.7
comp=Z,0.6nm,0.3s,baz=277,slow=5.8,SNR=7.3
SONM Songino Array 60.58 51 IAmb IAmb 14 34 18.9
comp=Z,3.2nm,1.3s
LZH Lanzhou 64.36 63 *e*P **P** 14 34 40.3 -0.2
LZH pP pP 14 34 43.5 0.0
LZH sP sP 14 34 45.3 +0.7
LZH *e*PP **PP** 14 37 03.5 +1.7
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,73nm,7.0s
YAK Yakutsk 65.16 29 *e*P **P** 14 34 44.9 -0.2
YAK pmax pmax
comp=Z,7.0nm,0.8s
BOSA Boshof 66.66 175 P **P** 14 34 56.2 +1.0
BOSA pmax pmax
comp=Z,47nm,1.8s
BOSA Boshof 66.66 175 P **P** 14 34 56.2 +1.0
comp=Z,2.4nm,0.9s,baz=353,slow=6.3,SNR=3.9
HHC Hu-ho-hao-te 67.17 55 *e*P **P** 14 34 58.5 0.0
HHC pmax pmax
comp=Z,7.0nm,0.9s
HHC pmax pmax
comp=Z,600nm,6.2s
ZEA Zeya 68.96 38 *e*P P 14 35 02.0 -7.4
ZEA pmax pmax
comp=Z,48nm,1.8s
XAN Xi'an 68.98 63 P **P** 14 35 12.0 +2.1
XAN sP PcP 14 35 46.0 +12
XAN pmax pmax
comp=Z,6.0nm,2.0s
CMAR Chiang Mai Arr 70.08 82 P **P** 14 35 15.9 -1.0
comp=Z,2.1nm,0.7s,baz=303,slow=7.7,SNR=12
INK Inuvik 71.98 350 P **P** 14 35 27.9 +0.3
INK pmax pmax
comp=Z,11nm,1.6s
INK Inuvik 71.98 350 P **P** 14 35 27.9 +0.3
comp=Z,1.8nm,0.8s,baz=11,slow=8.9,SNR=4.1
INK Inuvik 71.98 350 IAmb IAmb 14 35 31.2
comp=Z,11nm,1.6s
YKA Yellowknife Ar 73.28 340 P **P** 14 35 36.1 +0.7
comp=Z,0.9nm,0.8s,baz=35,slow=5.3,SNR=9.4
KLR Kul'dur 73.96 39 *e*P **P** 14 35 36.8 -2.9
KLR pmax pmax
comp=Z,5.0nm,0.9s
WHN Wuhan 74.73 63 P **P** 14 35 48.0 +3.5
ULM Lac du Bonnet 75.54 323 P **P** 14 35 50.0 +1.2
ULM pmax pmax
comp=Z,12nm,1.4s
ULM Lac du Bonnet 75.54 323 P **P** 14 35 50.0 +1.2
comp=Z,3.6nm,0.9s,baz=61,slow=4.9,SNR=6.0
ULM Lac du Bonnet 75.54 323 IAmb IAmb 14 36 03.0
comp=Z,12nm,1.4s
ILAR Eielson Array 76.84 354 P **P** 14 35 57.4 +1.4
comp=Z,0.7nm,0.9s,baz=2.5,slow=5.9,SNR=6.4
NJ2 Nanjing 76.96 60 *e*P **P** 14 35 55.8 -1.4
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
USRK Ussuriysk Ar. 77.38 43 P **P** 14 35 58.8 -0.5
comp=Z,3.3nm,0.9s,baz=301,slow=8.7,SNR=5.2
KSRS Korea Array 79.45 50 P **P** 14 36 10.8 0.0
comp=Z,3.4nm,1.1s,baz=317,slow=5.6,SNR=3.8
YSS Yuzh-Sakhalins 80.84 36 *e*P **P** 14 36 18.9 +0.7
YSS pmax pmax
comp=Z,10.0nm,1.0s
ASAJ Asahikawa 82.87 38 P **P** 14 36 28.9 -0.1
comp=Z,9.0nm,1.0s,baz=58,slow=9.9,SNR=5.4
JKA Kamikawa-asahi 82.87 38 P **P** 14 36 28.9 -0.1
SKR Severo-Kuril's 83.34 26 *e*P **P** 14 36 31.7 +0.5
JTMT Jette 85.31 331 P **P** 14 36 42.7 +1.2
YNE Yellowstone No 85.81 327 P **P** 14 36 45.5 +1.3
MJAR Matsushiro Arr 86.09 45 P **P** 14 36 45.5 0.0
MJAR pmax pmax
comp=Z,10.0nm,1.6s
MJAR Matsushiro Arr 86.09 45 P **P** 14 36 45.5 0.0
comp=Z,2.6nm,0.9s,baz=354,slow=6.3,SNR=4.4
PDAR Pinedale Array 87.39 326 P **P** 14 36 52.7 +0.7
comp=Z,0.4nm,0.8s,baz=39,slow=6.4,SNR=3.0
BMO Blue Mountains 88.88 331 P **P** 14 36 59.1 +0.2
BMO Blue Mountains 88.88 331 P **P** 14 36 59.1 +0.2
BMO IAmb IAmb 14 37 00.1
comp=Z,2.7nm,0.9s
BGU Big Grassy Mou 90.41 327 P **P** 14 37 06.3 +0.1
SRU San Rafael Swe 90.75 324 P **P** 14 37 08.0 +0.1
SRU pmax pmax
comp=Z,12nm,1.8s
SRU San Rafael Swe 90.75 324 P **P** 14 37 08.0 +0.1
DUG Dugway, Tooele 90.91 326 P **P** 14 37 08.6 +0.1
DUG pmax pmax
comp=Z,4.0nm,1.0s
DUG Dugway, Tooele 90.91 326 P **P** 14 37 08.6 +0.1
DUG IAmb IAmb 14 37 14.4
comp=Z,4.3nm,1.0s
NVAR Mina Array Bea 94.72 329 P **P** 14 37 26.1 -0.2
comp=Z,0.6nm,0.8s,baz=35,slow=3.3,SNR=2.9
TXAR Lajitas Array 94.80 313 P **P** 14 37 28.4 +1.9
comp=Z,0.4nm,0.8s,baz=56,slow=3.5,SNR=4.3
ASAR Alice Springs 122.37 96 PKP **PKPdf** 14 42 59.5 -0.5
comp=Z,0.4nm,0.8s,baz=303,slow=1.5,SNR=6.8
PMG Port Moresby 124.51 73 *i* PKIKP **PKPdf** 14 43 00.3 -4.0

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*IDC **26** 14:29:15.7±0.9,38.39N±20.35E,h0km,mb3.8/16, mb1 3.9/21,mb1mx3.8/42,mbtmp3.8/21,ML3.5/3,Error ellipse: s-maj=20.4km s-min=15.4km az=20.0*
*PDG **26** 14:29:17.9±0.5,38.43N±20.24E,h2km±1km,ML3.8/10, Error ellipse: s-maj=1.3km s-min=1.0km az=90.0*
*ATH **26** 14:29:17.3,38.29N±20.33E,h11km±5km,ML3.9/4, Error ellipse: s-maj=5.1km s-min=1.0km az=103.0*
*NEIC **26** 14:29:18.6±3.4,38.41N±0.03×20.32E±0.05,h10km±1km, mb4.3/12,ML3.7(THE), Error ellipse: s-maj=7.2km s-min=3.9km az=129.0*
*THE **26** 14:29:19.5,38.32N±20.42E,h2km±47km,ML3.7/3, Error ellipse: s-maj=47.8km s-min=1.0km az=0.0*
ISC 26 14:29:17.8±1.1,38.31N±0.02×20.33E±0.04,h10km±7km, n104,σ1°§47/130,mb4.0/21,1D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.24**	**123**	P	**Pg**	**14 29 21.8**	**-1.0**
VLS				S	**Sg**	**14 29 25.4**	**-0.8**
VLS				AML	AML	14 29 25.5	
VLS				AML	AML	14 29 25.7	
EVGI	**Lefkada island**	**0.40**	**40**	P	**Pg**	**14 29 25.9**	**+0.2**
EVGI				S	**Sg**	**14 29 31.5**	**+0.5**
EVGI	**Lefkada island**	**0.40**	**40**	P	**Pg**	**14 29 25.5**	**-0.2**
EVGI				S	**Sg**	**14 29 31.6**	**+0.5**
KFL	**Anninata**	**0.41**	**119**	P	**Pg**	**14 29 25.3**	**-0.7**
KFL				S	**Sg**	**14 29 31.2**	**-0.2**
	65μm,0.4s						
KFL	**Anninata**	**0.41**	**119**	P	**Pg**	**14 29 25.2**	**-0.7**
KFL				S	**Sg**	**14 29 31.1**	**-0.2**
KFL				AML	AML	14 29 31.3	
KFL				AML	AML	14 29 31.6	
MGNA	**Meganis**	**0.50**	**46**	P	**Pg**	**14 29 27.0**	**-0.5**
MGNA				S	**Sg**	**14 29 34.2**	**+0.1**
VLMS	**Volimes, Zakyn**	**0.51**	**149**	P	**Pg**	**14 29 26.8**	**-0.9**
LKD2	**Lefkada island**	**0.54**	**28**	P	**Pb**	**14 29 29.1**	**-0.3**
LKD2				S	**Sb**	**14 29 36.3**	**-0.9**
	5μm,0.7s						
LKD2	**Lefkada island**	**0.54**	**28**	P	**Pg**	**14 29 28.6**	**+0.3**
LKD2				AML	AML	14 29 36.8	
	comp=N,11537μm,0.9s						
LKD2				AML	AML	14 29 42.7	
	comp=E,8807μm,0.4s						
TSLK	**Tsoukalades, L**	**0.57**	**26**	P	**Pb**	**14 29 30.4**	**+0.5**
TSLK				S	**Sb**	**14 29 37.1**	**-1.0**
TSLK	**Tsoukalades, L**	**0.57**	**26**	P	**Pg**	**14 29 28.0**	**-0.9**
PVO	**Paravola**	**0.99**	**72**	P	**Pg**	**14 29 36.1**	**-0.7**
PVO				S	**Sb**	**14 29 49.6**	**-0.4**
PVO	**Paravola**	**0.99**	**72**	P	**Pg**	**14 29 36.0**	**-0.7**
UPR	**University Cam**	**1.15**	**91**	P	**Pb**	**14 29 39.6**	**-0.1**
DRO	**Drossia**	**1.15**	**108**	P	**Pb**	**14 29 38.8**	**-0.9**
EFP	**Efpalio**	**1.24**	**84**	P	**Pg**	**14 29 41.6**	**-0.1**
EFP				S	**Sg**	**14 29 58.9**	**+1.1**
LAKA	**Lakka**	**1.30**	**93**	P	**Pg**	**14 29 43.0**	**+0.3**
LAKA				S	**Sg**	**14 30 00.0**	**+0.4**
LAKA	**Lakka**	**1.30**	**93**	P	**Pn**	**14 29 41.0**	**-1.0**
LAKA				S	**Sg**	**14 29 59.6**	**0.0**
LAKA				AML	AML	14 30 04.0	
	comp=E,3282μm,0.6s						
LAKA				AML	AML	14 30 06.9	
	comp=N,4173μm,0.7s						
EVR	**Evrytania**	**1.31**	**62**	P	**Pg**	**14 29 43.3**	**+0.4**
EVR				S	**Sg**	**14 30 00.2**	**+0.4**
	comp=N,2μm,0.7s						
AMT	**Artemida-Makis**	**1.34**	**125**	P	**Pg**	**14 29 44.2**	**+0.7**
SERG	**Sergoula**	**1.36**	**85**	P	**Pg**	**14 29 44.3**	**+0.4**
SERG				S	**Sg**	**14 30 02.1**	**+0.5**
SERG	**Sergoula**	**1.36**	**85**	P	**Pb**	**14 29 43.2**	**-0.1**
TRIZ	**Trizonia**	**1.37**	**87**	P	**Pg**	**14 29 44.3**	**+0.2**
TRIZ				S	**Sg**	**14 30 03.7**	**+1.8**
ITM	**Ithomi**	**1.70**	**131**		**Pg**	**14 29 50.5**	**+0.1**
AGG	**Agios Georgios**	**1.72**	**65**	P	**Pb**	**14 29 49.2**	**-0.2**
AGG	**Agios Georgios**	**1.72**	**65**	Pg	**Pg**	**14 29 51.4**	**+0.6**
SCTE	**Santa Cesarea**	**2.28**	**321**		**Pn**	**14 29 55.0**	**-0.4**
LIT	**Litokhoron**	**2.45**	**43**	Pg	**Pg**	**14 30 05.2**	**+0.4**
FNA	**Florina**	**2.60**	**18**		**Pn**	**14 29 59.8**	**-0.1**
OHR	**Ohrid**	**2.82**	**7**	*i* Pn	**Pg**	**14 30 13.9**	**+2.1**
TIP	**Timpagrande**	**2.92**	**288**	Pn	**Pn**	**14 30 05.6**	**+1.2**
TIR	**Tirane**	**3.05**	**353**		**Pn**	**14 30 07.3**	**+1.2**
VAY	**Valandovo**	**3.46**	**29**	*i* Pn	**Pb**	**14 30 20.7**	**+1.5**
CEL	**Celeste**	**3.49**	**270**	Pn	**Pn**	**14 30 13.2**	**+1.0**
STIP	**Stip**	**3.67**	**22**	*i* Pn	**Pb**	**14 30 19.4**	**-3.3**
ULC	**Ulcinj**	**3.74**	**347**	*i* Pn	**Pn**	**14 30 15.8**	**+0.2**
ULC				eSn	**Sn**	**14 31 00.2**	**+0.5**
SG1	**Sgolgore (BA)**	**3.79**	**313**	*e*Pn	**Pn**	**14 30 18.5**	**+2.3**
DRME	**Dracevica, Mon**	**3.97**	**348**	*e*Pn	**Pn**	**14 30 19.1**	**+0.4**
DRME				*e*Sn	**Sn**	**14 31 05.9**	**+0.7**
BUM	**Brajici-Budva**	**4.13**	**345**	*e*Pn	**Pn**	**14 30 20.8**	**-0.2**
BUM				*e*Sn	**Sn**	**14 31 09.7**	**+0.3**
PDG	**Podgorica**	**4.19**	**349**	Pn	**Pn**	**14 30 22.3**	**+0.5**
TTG	**Podgorica**	**4.19**	**349**	*e*Pn	**Pn**	**14 30 22.1**	**+0.4**
TTG				*e*Sn	**Sn**	**14 31 11.4**	**+0.6**
ACER	**Acerenza**	**4.20**	**307**	Pn	**Pn**	**14 30 23.0**	**+1.2**
PVY	**Plav**	**4.29**	**356**	*e*Pn	**Pn**	**14 30 23.4**	**+0.2**
PVY				*e*Sn	**Sn**	**14 31 14.6**	**+1.3**
HCY	**Herceg Novi**	**4.36**	**342**	*e*Pn	**Pn**	**14 30 23.5**	**-0.6**
HCY				*e*Sn	**Sn**	**14 31 15.3**	**+0.4**
CEME	**Cevo**	**4.36**	**346**	*e*Pn	**Pn**	**14 30 24.7**	**+0.5**
CEME				*e*Sn	**Sn**	**14 31 15.9**	**+0.8**
IVA	**Berane**	**4.57**	**356**	*e*Pn	**Pn**	**14 30 27.5**	**+0.5**
IVA				*e*Sn	**Sn**	**14 31 20.6**	**+0.5**
NKME	**Niksic**	**4.57**	**347**	*e*Pn	**Pn**	**14 30 27.3**	**+0.3**
NKME				*e*Sn	**Sn**	**14 31 20.7**	**+0.5**
KOME	**Kolasin**	**4.58**	**352**	*e*Pn	**Pn**	**14 30 27.5**	**+0.4**
KOME				*e*Sn	**Sn**	**14 31 20.8**	**+0.5**
IDI	**Anoyia**	**4.74**	**128**	Pn	**Pn**	**14 30 33.3**	**+3.9**

comp=N,0.9nm,0.3s,baz=356,slow=19,SNR=2.5
IDI Sn **Sn** **14 31 27.6 +3.1**
comp=N,3.8nm,0.3s,baz=349,slow=23,SNR=9.2
VAE Valguarnera 4.75 262 Sn **Sn** **14 31 27.9 +3.2**
comp=N,3.7nm,0.3s,baz=89,slow=16,SNR=3.3
SGRT San Giovanni R 4.92 316 Pn **Pn** **14 30 32.9 +1.1**
PLE Pljevlja 5.06 352 *e*Pn **Pn** **14 30 34.5 +0.7**
PLE *e*Sn **Sn** **14 31 33.1 +0.7**
PAOL Paolisi 5.21 303 Pn **Pn** **14 30 37.5 +1.7**
INTR Introdacqua 6.15 309 Pn **Pn** **14 30 51.1 +2.4**
NRCA Norcia 7.11 312 Pn **Pn** **14 31 04.1 +2.3**
ELL Elmali 7.77 99 Pn **Pn** **14 31 12.9 +1.9**
BOJS Bojanci 8.12 334 *i* Pn **Pn** **14 31 16.2 +0.5**
GBRS Gornja Briga 8.30 332 *i* Pn **Pn** **14 31 18.9 +0.8**
MLR Muntele Rosu 8.30 28 Pn **Pn** **14 31 21.7 +3.4**
comp=N,0.1nm,0.3s,baz=154,slow=16,SNR=2.9
TEOL Teolo 9.55 320 Pn **Pn** **14 31 35.9 +0.6**
CTI Castel Tesino 10.06 323 Pn **Pn** **14 31 41.9 -0.4**
VYHS Vyhne 10.23 354 *e*PN **Pn** **14 31 44.9 +0.2**
VYHS *e*SN **Sn** **14 33 34.1 -5.3**
BRTR Keskin Array B 10.45 78 Pn **Pn** **14 31 52.0 +4.2**
comp=N,0.1nm,0.3s,baz=261,slow=12,SNR=4.9
DAVOX Davos/Dischmat 11.44 321 Pn **Pn** **14 32 04.3 +3.0**
comp=N,0.2nm,0.3s,baz=180,slow=19,SNR=2.1
DAVOX Sn **Sn** **14 34 08.3 -0.9**
comp=N,0.4nm,0.3s,baz=328,slow=19,SNR=3.6
GERES GERESS Array B 11.57 338 Pn **Pn** **14 32 02.5 -0.4**
comp=N,0.2nm,0.3s,baz=161,slow=13,SNR=4.2
GERES Sn **Sn** **14 34 06.8 -5.4**
comp=N,0.4nm,0.3s,baz=155,slow=23,SNR=6.2
KHC Kasperske Hory 11.86 338 Pn **Pn** **14 32 09.0 +2.1**
AKASG Malin Array Be 13.90 24 Pn **Pn** **14 32 35.7 +1.0**
comp=N,2.0nm,0.3s,baz=212,slow=11,SNR=2.5
ASF Jabal al Asfar 14.85 109 Pn **Pn** **14 32 48.2 +0.3**
comp=N,0.3nm,0.3s,baz=252,slow=20,SNR=1.5
KBZ Khabaz 17.85 65 P **P** **14 33 27.8 +1.1**
comp=N,0.1nm,0.3s,baz=273,slow=17,SNR=3.4
ESDC Sonseca Array 18.92 282 P **P** **14 33 38.8 +0.1**
baz=61,slow=11,SNR=2.9
GNI Garni 18.99 77 P **P** **14 33 39.3 -0.2**
comp=N,0.4nm,0.3s,baz=125,slow=7.6,SNR=3.8
GNI Garni 18.99 77 IAmb IAmb 14 33 43.0
comp=Z,60nm,1.5s
OBN Obninsk 20.07 28 P Pn 14 33 52.4 -0.5
comp=Z,4.3nm,0.3s,baz=249,slow=3.4,SNR=5.8
HFS Hagfors 22.24 351 P **P** **14 34 12.5 -2.0**
comp=Z,8.4nm,0.9s,baz=172,slow=12,SNR=8.2
EKA Eskdalemuir Ar 23.23 325 P **P** **14 34 22.8 -2.1**
comp=Z,1.3nm,0.7s,baz=111,slow=10.0,SNR=2.4
FINES FINESS Array B 23.43 7 P **P** **14 34 25.2 -1.6**
comp=Z,2.4nm,0.5s,baz=169,slow=8.4,SNR=10
NB201 NORSAR Array S 23.45 349 P **P** **14 34 26.8 -0.3**
NB2 NORSAR Subarra 23.46 349 P **P** **14 34 26.3 -0.8**
comp=Z,0.7nm,0.5s,baz=153,slow=9.3
NOA NORSAR Array B 23.46 349 P **P** **14 34 25.1 -2.0**
comp=Z,1.0nm,0.8s,baz=161,slow=9.7,SNR=4.9
NBO00 NORSAR Array S 23.52 348 P **P** **14 34 27.9 +0.2**
AKTO Aktyubinsk 29.22 53 P **P** **14 35 17.7 -1.8**
comp=Z,0.5nm,0.4s,baz=288,slow=3.2,SNR=2.9
GEYT Alibeck 29.60 79 P **P** **14 35 22.6 -0.5**
comp=Z,1.4nm,0.5s,baz=284,slow=7.5,SNR=4.8
GEYT Alibeck 29.60 79 IAmb IAmb 14 35 25.9
comp=Z,3.8nm,1.4s
TORD Torodi Ar. Bea 30.04 218 P **P** **14 35 26.6 -0.4**
comp=Z,1.6nm,0.9s,baz=29,slow=9.4,SNR=5.8
TORD Torodi Ar. Bea 30.04 218 IAmb IAmb 14 35 34.8
comp=Z,2.5nm,1.3s
ARCES ARCESS Array B 31.41 3 P **P** **14 35 36.8 -1.8**
comp=Z,5.7nm,1.1s,baz=180,slow=12,SNR=3.6
KK31 Karatay Array 37.88 66 P **P** **14 36 33.8 -1.0**
KK31 IAmb IAmb 14 36 40.1
comp=Z,2.3nm,0.7s
KKAR Karatay Array 37.88 66 P **P** **14 36 33.8 -1.1**
KSH Kashi 42.72 70 P **P** **14 37 17.5 +2.4**
KSH pmax pmax
comp=Z,3µm,10.0s
MK31 Makanchi Array 45.36 58 P **P** **14 37 34.8 -1.3**
MK31 IAmb IAmb 14 37 38.2
comp=Z,7.5nm,1.8s
MKAR Makanchi Array 45.36 58 P **P** **14 37 34.7 -1.4**
comp=Z,1.1nm,0.5s,baz=272,slow=7.5,SNR=15
ZAA0 Zalesovo Array 45.71 48 P **P** **14 37 37.6 -1.1**
ZALV Zalesovo Beam 45.71 48 P **P** **14 37 37.7 -1.0**
comp=Z,4.8nm,0.5s,baz=275,slow=8.7,SNR=17
WMQ Urumqi 49.83 61 *e*P P 14 38 16.5 +5.6
WMQ pmax pmax
comp=Z,8.0nm,1.1s
SCHQ Schefferville 58.26 317 P **P** **14 39 12.0 -0.2**
SONM Songino Array 60.49 51 P **P** **14 39 27.0 -0.8**
comp=Z,0.7nm,0.8s,baz=279,slow=9.3,SNR=2.9
LZH Lanzhou 64.28 63 *e*P **P** **14 39 55.0 +1.5**
LZH pP sP 14 39 58.5 +0.6
LZH sP pwP 14 40 00.3 +3.6
LZH *e*PP **PP** **14 42 18.0 +3.5**
LZH pmax pmax
comp=Z,17nm,1.3s
LZH pmax pmax
comp=Z,70nm,6.9s
HHC Hu-ho-hao-te 67.08 55 *e*P **P** **14 40 13.8 +2.4**
HHC pmax pmax
comp=Z,5.0nm,1.0s
CMAR Chiang Mai AR 70.02 82 P **P** **14 40 28.2 -1.8**
comp=Z,0.6nm,0.6s,baz=298,slow=7.3,SNR=6.7
YKA Yellowknife Ar 73.21 340 P **P** **14 40 48.3 -0.2**
comp=Z,0.2nm,0.6s,baz=33,slow=5.5,SNR=3.9
ILAR Eielson Array 76.76 354 P **P** **14 41 09.7 +0.7**
comp=Z,0.5nm,1.0s,baz=1.9,slow=2.7,SNR=3.3
PDAR Pinedale Array 87.35 326 P **P** **14 42 04.4 -0.9**
comp=Z,0.2nm,0.6s,baz=56,slow=8.8,SNR=2.8
TXAR Lajitas Array 94.77 313 P **P** **14 42 40.6 +0.7**
comp=Z,0.2nm,0.7s,baz=59,slow=3.5,SNR=2.5
ASAR Alice Springs 122.34 96 PKP **PKPdf** **14 48 12.6 -0.8**
comp=Z,0.2nm,0.7s,baz=320,slow=1.6,SNR=4.5

IDC 26 14:31:37.3±2.1, 19.71°S×174.20°W, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/27, mbtmp3.6/4, Error ellipse: s-maj=58.1km s-min=44.8km az=23.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.34**	**244**	P	P	14 39 23.5	-1.6
	0.8nm,0.6s,baz=65,slow=14,SNR=4.4						
ASAR	**Alice Springs**	**48.17**	**256**	P	P	14 40 20.1	+0.3
	0.7nm,1.0s,baz=96,slow=7.4,SNR=14						
WRA	**Warramunga Arr**	**48.25**	**261**	P	P	14 40 21.5	+1.1
	0.2nm,0.4s,baz=95,slow=8.3,SNR=2.0						
QSPA	**South Pole Qui**	**70.36**	**180**	P	P	14 42 53.2	+0.3
	1.5nm,1.0s,baz=347,slow=1.5,SNR=5.2						
BRTR	**Keskin Array B**	**148.86**	**316**	PKPbc	PKPbc	14 51 26.6	-0.9
	2.5nm,0.8s,baz=175,slow=2.9,SNR=7.6						

*IDC **26** 14:32:49.3±0.8, 38.19°N×20.22°E, h0km, mb3.9/13, mb1 3.9/18, mb1mx3.8/46, mbtmp3.8/18, ML4.1/4, Error ellipse: s-maj=17.6km s-min=15.4km az=134.0*
*THE **26** 14:32:51.2, 38.14°N×20.31°E, h0km±3km, ML3.5/7, Error ellipse: s-maj=4.3km s-min=1.2km az=243.0*
*ATH **26** 14:32:52.0, 38.18°N×20.42°E, h15km±1km, ML3.7/6, Error ellipse: s-maj=2.9km s-min=1.1km az=82.0*
*NEIC **26** 14:32:52.5±2.6, 38.25°N±0.05×20.23°E±0.06, h12km±3km, mb4.3/18, ML3.7(THE), Error ellipse: s-maj=7.9km s-min=6.6km az=154.0*
*BGR **26** 14:32:54.0±1.3, 38.54N×21.20E, h10km, Error ellipse: s-maj=80.1km s-min=15.6km az=52.0*
*PDG **26** 14:32:53.1±0.8, 38.18N×20.12E, h30km±2km, MD5.4/1, ML4.0/12, Error ellipse: s-maj=1.8km s-min=1.8km az=90.0*

ISC 26 14:32:51.3±1.1, 38.18N±0.03×20.29E±0.03, h10km±7km, n147, σ1s55/179, mb4.0/15, 7C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.24**	**91**	P	**Pg**	**14 32 55.7**	**-0.5**
VLS				S	**Sg**	**14 32 58.4**	**-1.2**
KFL	**Anninata**	**0.40**	**100**	P	**Pg**	**14 32 58.3**	**-0.9**
KFL				S	**Sg**	**14 33 03.2**	**-1.3**
	41µm,0.4s						
KFL	**Anninata**	**0.40**	**100**	P	**Pg**	**14 32 58.3**	**-0.9**
KFL				S	**Sg**	**14 33 02.9**	**-1.6**
KFL				AML	AML	14 33 03.8	
	comp=N,79336µm,0.5s						
KFL				AML	AML	14 33 05.1	
	comp=E,87080µm,0.3s						
VLMS	**Volimes, Zakyn**	**0.43**	**136**	P	**Pg**	**14 32 59.2**	**-0.5**
VLMS				S	**Sg**	**14 33 04.6**	**-0.7**
VLMS				AML	AML	14 33 05.6	
VLMS				AML	AML	14 33 07.5	
EVGI	**Lefkada island**	**0.52**	**33**	P	**Pg**	**14 33 01.6**	**+0.1**
EVGI				S	**Sg**	**14 33 09.2**	**+0.8**
EVGI	**Lefkada island**	**0.52**	**33**	P	**Pg**	**14 33 00.4**	**-1.1**
LKD2	**Lefkada island**	**0.67**	**26**	P	**Pg**	**14 33 04.5**	**+0.2**
LKD2				S	**Sb**	**14 33 14.5**	**+0.1**
	comp=E,4µm,0.3s						
LKD2	**Lefkada island**	**0.67**	**26**	P	**Pg**	**14 33 04.5**	**+0.2**
LKD2				AML	AML	14 33 21.8	
	comp=N,8344µm,0.4s						
LKD2				AML	AML	14 33 24.9	
	comp=E,9200µm,0.3s						
TSLK	**Tsoukalades, L**	**0.70**	**24**	P	**Pb**	**14 33 05.3**	**-0.3**
TSLK				S	**Sb**	**14 33 16.6**	**+1.3**
	comp=E,5µm,0.5s						
TSLK	**Tsoukalades, L**	**0.70**	**24**	P	**Pg**	**14 33 05.2**	**+0.3**
TSLK				AML	AML	14 33 21.4	
	comp=N,8309µm,0.5s						
TSLK				AML	AML	14 33 23.0	
	comp=E,10438µm,0.6s						
RLS	**Riolos of Patr**	**0.94**	**97**	P	**Pg**	**14 33 08.8**	**-0.5**
RLS				S	**Sg**	**14 33 21.6**	**0.0**
	comp=E,3µm,0.6s						
RLS	**Riolos of Patr**	**0.94**	**97**	P	**Pg**	**14 33 08.2**	**-1.2**
RLS				AML	AML	14 33 31.4	
	comp=N,6376µm,0.6s						
RLS				AML	AML	14 33 34.2	
	comp=E,4876µm,0.4s						
PVO	**Paravola**	**1.06**	**66**	P	**Pg**	**14 33 10.9**	**-0.9**
PVO				S	**Sn**	**14 33 26.6**	**-0.5**
PVO	**Paravola**	**1.06**	**66**	P	**Pn**	**14 33 10.1**	**-1.7**
DRO	**Drossia**	**1.15**	**101**	P	**Pb**	**14 33 13.2**	**0.0**
EFP	**Efpalio**	**1.30**	**79**	P	**Pg**	**14 33 16.0**	**-0.2**
EFP				S	**Sg**	**14 33 35.3**	**+2.3**
	comp=E,3µm,0.8s						
EFP	**Efpalio**	**1.30**	**79**	P	**Pn**	**14 33 14.8**	**-0.6**
AMT	**Artemida-Makis**	**1.30**	**120**	P	**Pn**	**14 33 15.0**	**-0.5**
IGT	**Igoumenitsa**	**1.35**	**1**	P	**Pg**	**14 33 17.5**	**+0.3**
EVR	**Evrytania**	**1.40**	**58**	P	**Pb**	**14 33 17.5**	**0.0**
EVR				S	**Sg**	**14 33 37.7**	**+1.4**
	comp=E,1µm,1.1s						
SERG	**Sergoula**	**1.41**	**80**	P	**Pn**	**14 33 16.3**	**-0.7**
SERG				S	**Sg**	**14 33 37.0**	**+0.3**
SERG	**Sergoula**	**1.41**	**80**	P	**Pn**	**14 33 17.3**	**+0.3**
SERG				AML	AML	14 33 40.8	
	comp=N,4723µm,0.4s						
SERG				AML	AML	14 33 47.7	
	comp=E,4314µm,0.4s						
TRIZ	**Trizonia**	**1.42**	**82**	P	**Pn**	**14 33 16.6**	**-0.4**
TRIZ				S	**Sg**	**14 33 38.6**	**+1.7**
	comp=E,2µm,0.5s						
KALE	**Kalithea**	**1.47**	**81**	P	**Pn**	**14 33 18.2**	**+0.4**
KLV	**Kalavryta, Ach**	**1.48**	**95**	P	**Pn**	**14 33 17.7**	**-0.2**
JAN	**Janina**	**1.54**	**16**	P	**Pg**	**14 33 21.4**	**+0.6**
ITM	**Ithomi**	**1.64**	**127**		**Pb**	**14 33 22.0**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.67**	**60**	P	**Pb**	**14 33 21.6**	**-0.5**
AGG	**Agios Georgios**	**1.81**	**62**		**Pb**	**14 33 24.4**	**-0.1**
SCTE	**Santa Cesarea**	**2.36**	**324**		**Pn**	**14 33 30.2**	**+0.2**
LIT	**Litokhoron**	**2.57**	**41**		**Pb**	**14 33 35.4**	**-2.0**
FNA	**Florina**	**2.73**	**18**		**Pn**	**14 33 36.1**	**+0.9**
TIP	**Timpagrande**	**2.94**	**291**	⇑P	**Pg**	**14 33 47.2**	**-0.3**
TIP	**Timpagrande**	**2.94**	**291**	Pn	**Pn**	**14 33 39.9**	**+1.9**
OHR	**Ohrid**	**2.95**	**8**	*i* Pn	**Pn**	**14 33 40.9**	**+2.6**
TIR	**Tirane**	**3.18**	**354**	⇓P	**Pn**	**14 33 42.3**	**+1.0**
TIR	**Tirane**	**3.18**	**354**		**Pn**	**14 33 42.9**	**+1.6**
CGL1	**Ceglie Messapi**	**3.29**	**319**	*e*Pn	**Pn**	**14 33 44.7**	**+1.9**
VAY	**Valandovo**	**3.59**	**29**	*i* Pn	**Pn**	**14 33 48.1**	**+1.2**
STIP	**Stip**	**3.80**	**22**	*i* Pn	**Pn**	**14 33 52.6**	**+2.8**
SG1	**Sgolgore (BA)**	**3.85**	**315**	*e*Pn	**Pn**	**14 33 53.1**	**+2.6**
ULC	**Ulcinj**	**3.86**	**348**	*e*Pn	**Pn**	**14 33 51.1**	**+0.4**
ULC				*e*Sn	**Sn**	**14 34 35.6**	**-0.5**
DRME	**Dracevica, Mon**	**4.09**	**348**	*e*Pn	**Pn**	**14 33 54.5**	**+0.7**
DRME				*e*Sn	**Sn**	**14 34 40.9**	**-0.7**
ACER	**Acerenza**	**4.25**	**309**	Pn	**Pn**	**14 33 57.7**	**+1.6**
BUM	**Brajici-Budva**	**4.25**	**346**	*e*Pn	**Pn**	**14 33 56.5**	**+0.4**
BUM				*e*Sn	**Sn**	**14 34 44.4**	**-1.3**
PDG	**Podgorica**	**4.32**	**350**	⇑P	**Pn**	**14 33 57.2**	**+0.3**
PDG	**Podgorica**	**4.32**	**350**	Pn	**Pn**	**14 33 57.4**	**+0.5**
TTG	**Podgorica**	**4.32**	**350**	*e*Pn	**Pn**	**14 33 57.7**	**+0.8**
TTG				*e*Sn	**Sn**	**14 34 46.3**	**-0.9**
PVY	**Plav**	**4.41**	**357**	*e*Pn	**Pn**	**14 33 59.8**	**+1.4**
PVY				*e*Sn	**Sn**	**14 34 49.3**	**-0.6**
HCY	**Herceg Novi**	**4.47**	**343**	*e*Pn	**Pn**	**14 33 59.0**	**-0.1**
HCY				*e*Sn	**Sn**	**14 34 50.2**	**-1.0**
CEME	**Cevo**	**4.48**	**347**	*e*Pn	**Pn**	**14 33 59.6**	**+0.3**
CEME				*e*Sn	**Sn**	**14 34 50.0**	**-1.5**
NKME	**Niksic**	**4.69**	**348**	⇑*i* Pn	**Pn**	**14 34 03.0**	**+0.9**
NKME				*i* Sn	**Sn**	**14 34 55.0**	**-1.6**
IDI	**Anoyia**	**4.69**	**127**	Pn	**Pn**	**14 34 05.5**	**+3.3**
	comp=E,1.5nm,0.3s,baz=318,slow=16,SNR=3.2						
IDI				Sn	**Sn**	**14 34 55.6**	**-1.0**
	comp=E,4.2nm,0.3s,baz=342,slow=20,SNR=4.7						
IVA	**Berane**	**4.69**	**356**	*e*Pn	**Pn**	**14 34 02.8**	**+0.6**
IVA				*i* Sn	**Sn**	**14 34 56.0**	**-0.7**
KOME	**Kolasin**	**4.70**	**353**	*e*Pn	**Pn**	**14 34 03.3**	**+1.0**
KOME				*e*Sn	**Sn**	**14 34 55.9**	**-0.9**
VAE	**Valguarnera**	**4.70**	**263**	Pn	Pb	14 34 08.1	-5.8
	comp=E,1.4nm,0.3s,baz=176,slow=14,SNR=2.3						
VAE				Sn	**Sn**	**14 34 58.0**	**+1.1**
	comp=E,3.0nm,0.3s,baz=306,slow=19,SNR=3.1						
NKY	**Niksic**	**4.73**	**348**	*e*Pn	**Pn**	**14 34 04.1**	**+1.4**
NKY				*e*Sn	**Sn**	**14 34 56.8**	**-0.8**
VTS	**Vitosha**	**4.97**	**26**	⇑P	**Pn**	**14 34 07.3**	**+1.3**
VTS	**Vitosha**	**4.97**	**26**		**Pn**	**14 34 06.8**	**+0.8**
SGRT	**San Giovanni R**	**4.99**	**317**	Pn	**Pn**	**14 34 07.1**	**+0.8**
UPM	**Unac-Piva**	**5.12**	**349**	*e*Pn	**Pn**	**14 34 08.7**	**+0.5**
UPM				*e*Sn	**Sn**	**14 35 05.7**	**-1.7**
WDD	**Wied Dalam**	**5.17**	**245**	Pn	**Pn**	**14 34 09.5**	**+0.8**
PLE	**Pljevlja**	**5.19**	**353**	*e*Pn	**Pn**	**14 34 10.0**	**+1.0**
PLE				*e*Sn	**Sn**	**14 35 07.8**	**-1.1**
ALN	**Alexandroupoli**	**5.21**	**57**	Pn	**Pn**	**14 34 10.0**	**+0.8**
PAOL	**Paolisi**	**5.25**	**305**		**Pn**	**14 34 11.7**	**+1.9**
CORL	**Corleone**	**5.52**	**269**	Pn	**Pn**	**14 34 15.0**	**+1.5**
INTR	**Introdacqua**	**6.21**	**310**		**Pn**	**14 34 24.8**	**+1.8**
BLY	**Banja Luka**	**6.96**	**341**	⇓P	**Pn**	**14 34 34.0**	**+0.8**
BLY	**Banja Luka**	**6.96**	**341**	Pn	**Pn**	**14 34 35.1**	**+1.9**
NRCA	**Norcia**	**7.17**	**313**		**Pn**	**14 34 38.9**	**+2.7**
GZR	**Gura Zlata**	**7.44**	**14**	⇑P	**Pn**	**14 34 39.8**	**0.0**
MURB	**Monte Urbino**	**7.78**	**313**	Pn	**Pn**	**14 34 46.8**	**+2.3**
ELL	**Elmali**	**7.79**	**98**	Pn	**Pn**	**14 34 48.5**	**+3.8**
ARR	**Arges**	**7.88**	**23**	⇓P	**Pn**	**14 34 46.9**	**+1.1**
MLR	**Muntele Rosu**	**8.43**	**28**	Pn	**Pn**	**14 34 57.1**	**+3.6**
	comp=E,0.4nm,0.3s,baz=240,slow=10,SNR=7.2						
MLR	**Muntele Rosu**	**8.43**	**28**	⇑P	**Pn**	**14 34 54.4**	**+0.8**
MLR	**Muntele Rosu**	**8.43**	**28**	Pn	**Pn**	**14 34 56.9**	**+3.3**
DOPR	**Dopca**	**8.65**	**24**	⇓P	**Pn**	**14 34 57.3**	**+0.8**
VRI	**Vrincioaia**	**9.05**	**30**	⇑P	**Pn**	**14 35 03.8**	**+2.0**
SOKA	**Soboth**	**9.33**	**337**	Pn	**Pn**	**14 35 05.9**	**+0.1**
	comp=E,5.6nm,0.3s,SNR=5.6						
OBKA	**Obir**	**9.34**	**335**	*e*Pn	**Pn**	**14 35 07.4**	**+1.5**
OBKA				*e*Sn	**Sn**	**14 36 48.7**	**-2.3**
OBKA	**Obir**	**9.34**	**335**	*e*Pn	**Pn**	**14 35 06.7**	**+0.8**
	comp=E,14nm,0.4s,SNR=14						
TEOL	**Teolo**	**9.63**	**321**	Pn	**Pn**	**14 35 09.8**	**0.0**
ARSA	**Arzberg**	**9.71**	**340**	*e*Pn	**Pn**	**14 35 11.5**	**+0.5**
ARSA	**Arzberg**	**9.71**	**340**	*e*Pn	**Pn**	**14 35 11.0**	**0.0**
	comp=E,3.2nm,0.3s,SNR=5.4						
MYKA	**Terra Mystica**	**9.76**	**332**	Pn	**Pn**	**14 35 13.6**	**+1.9**
	comp=E,5.8nm,0.4s						
CTI	**Castel Tesino**	**10.14**	**324**		**Pn**	**14 35 17.2**	**+0.3**
MSSA	**Maissana**	**10.16**	**310**	Pn	**Pn**	**14 35 19.3**	**+2.1**
KBA	**Koelnbreinsper**	**10.25**	**332**	*e*Pn	**Pn**	**14 35 19.3**	**+0.8**
KBA				*e*Sn	**Sn**	**14 37 08.8**	**-4.7**
KBA	**Koelnbreinsper**	**10.25**	**332**	Pn	**Pn**	**14 35 19.4**	**+0.9**
	comp=E,3.1nm,0.4s						
VYHS	**Vyhne**	**10.36**	**355**	*e*PN	**Pn**	**14 35 20.5**	**+0.7**
VYHS				*e*SN	**Sn**	**14 37 12.6**	**-3.3**
VYHS	**Vyhne**	**10.36**	**355**	*e*SG	**Pn**	**14 35 20.6**	**+0.7**
SALO	**Salr**	**10.39**	**319**	Pn	**Pn**	**14 35 21.0**	**+0.7**
BRTR	**Keskin Array B**	**10.51**	**77**	Pn	Pn	14 35 27.7	+5.6
	comp=E,0.1nm,0.3s,baz=255,slow=12,SNR=2.9						
MOA	**Molln**	**10.62**	**337**	*e*Pn	**Pn**	**14 35 24.8**	**+1.5**
MOA	**Molln**	**10.62**	**337**	*e*Pn	**Pn**	**14 35 24.8**	**+1.5**
	comp=E,9.0nm,0.5s,SNR=14						
RJOB	**Jochberg**	**11.01**	**333**	*e*Pn	**Pn**	**14 35 30.8**	**+2.0**
WTTA	**Wattenberg**	**11.07**	**328**	*e*Pn	**Pn**	**14 35 31.5**	**+1.7**
WTTA				*e*Sn	**Sn**	**14 37 33.3**	**-0.4**
WTTA	**Wattenberg**	**11.07**	**328**	Pn	**Pn**	**14 35 31.7**	**+1.9**
	comp=E,1.8nm,0.2s						
WATA	**Walderalm**	**11.16**	**328**	Pn	**Pn**	**14 35 32.6**	**+1.7**
	comp=E,3.6nm,0.2s,SNR=6.2						
FUORN	**Ofenpass-Fuorn**	**11.22**	**322**	Pn	**Pn**	**14 35 33.7**	**+1.9**
MOTA	**Moosalm**	**11.37**	**327**	Pn	**Pn**	**14 35 36.1**	**+2.3**
	comp=E,1.9nm,0.3s						
VRAC	**Vranov**	**11.44**	**348**	Pn	**Pn**	**14 35 31.5**	**-3.1**
	comp=E,0.7nm,0.3s,baz=45,slow=9.9,SNR=4.0						
DAVOX	**Davos/Dischmat**	**11.52**	**322**	Pn	**Pn**	**14 35 36.0**	**+0.1**
	comp=E,0.3nm,0.3s,baz=162,slow=20,SNR=2.7						
DAVOX				Sn	**Sn**	**14 37 40.1**	**-4.4**
	comp=E,0.4nm,0.3s,baz=316,slow=18,SNR=2.4						
RETA	**Reutte**	**11.62**	**326**	Pn	**Pn**	**14 35 39.9**	**+2.7**
	comp=E,1.4nm,0.4s						
GEC2	**GERESS Array S**	**11.67**	**338**	*e*Pn	**Pn**	**14 35 38.5**	**+0.6**
GEC2	**GERESS Array S**	**11.67**	**338**	Pn	**Pn**	**14 35 38.2**	**+0.3**
GERES	**GERESS Array B**	**11.67**	**338**	Pn	**Pn**	**14 35 36.6**	**-1.3**
	comp=E,0.5nm,0.3s,baz=160,slow=14,SNR=13						
GERES				Sn	**Sn**	**14 37 40.6**	**-7.7**
	comp=E,0.2nm,0.3s,baz=151,slow=24,SNR=3.4						
MORC	**Moravsky Berou**	**11.76**	**351**	Pn	**Pn**	**14 35 38.5**	**-0.5**
KHC	**Kasperske Hory**	**11.97**	**338**	*e*PN	**Pn**	**14 35 41.3**	**-0.5**
KHC				*e*SN	**Sn**	**14 37 51.3**	**-4.0**
KHC	**Kasperske Hory**	**11.97**	**338**	Pn	**Pn**	**14 35 41.4**	**-0.5**
WET	**Wettzell**	**12.19**	**336**	*e*Pn	**Pn**	**14 35 45.5**	**+0.6**
SENIN	**Lac Senin/Sane**	**12.61**	**315**	Pn	**Pn**	**14 35 52.5**	**+1.7**
MMAI	**Mount Meron Ar**	**13.33**	**108**	Pn	**Pn**	**14 36 02.4**	**+1.8**
	baz=311,slow=11,SNR=1.9						
MOX	**Moxa**	**13.90**	**336**	*e*Pn	**Pn**	**14 36 09.0**	**+0.8**
AKASG	**Malin Array Be**	**14.03**	**24**	Pn	**Pn**	**14 36 09.5**	**-0.5**
	comp=E,1.0nm,0.3s,baz=213,slow=11,SNR=1.4						
KBZ	**Khabaz**	**17.93**	**65**	P	**P**	**14 37 04.6**	**+3.5**
	comp=E,0.1nm,0.3s,baz=254,slow=11,SNR=3.2						
ESDC	**Sonseca Array**	**18.92**	**282**	P	**P**	**14 37 09.6**	**-2.5**
	comp=E,0.2nm,0.3s,baz=84,slow=13,SNR=2.9						
HFS	**Hagfors**	**22.37**	**351**	P	**P**	**14 37 48.8**	**-0.4**
	comp=E,3.7nm,0.4s,baz=156,slow=11,SNR=31						
NC602	**NORSAR Array S**	**23.24**	**349**	P	**P**	**14 37 58.1**	**-0.2**
EKA	**Eskdalemuir Ar**	**23.32**	**325**	P	**P**	**14 38 00.2**	**+1.1**
	comp=E,3.0nm,0.8s,baz=129,slow=10,SNR=4.0						
ESK	**Eskdalemuir**	**23.33**	**325**	P	**P**	**14 37 59.7**	**+0.4**
NAO01	**NORSAR Array S**	**23.44**	**348**	P	**P**	**14 38 01.4**	**+1.0**
FINES	**FINESS Array B**	**23.56**	**7**	P	**P**	**14 38 00.3**	**-1.3**
	comp=E,2.5nm,0.6s,baz=176,slow=9.2,SNR=17						
FIA1	**FINESS Array S**	**23.57**	**7**	P	**P**	**14 38 00.8**	**-0.8**
NC405	**NORSAR Array S**	**23.57**	**350**	P	**P**	**14 38 01.3**	**-0.4**
NB201	**NORSAR Array S**	**23.57**	**349**	P	**P**	**14 38 01.1**	**-0.7**
NB2	**NORSAR Subarra**	**23.58**	**349**	P	**P**	**14 38 01.6**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=150,slow=10						
NOA	**NORSAR Array B**	**23.58**	**349**	P	**P**	**14 38 01.7**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=150,slow=9.7,SNR=12						
NBO00	**NORSAR Array S**	**23.64**	**348**	P	**P**	**14 38 02.6**	**+0.3**
NC303	**NORSAR Array S**	**23.73**	**349**	P	**P**	**14 38 02.3**	**-0.9**
NC204	**NORSAR Array S**	**23.87**	**349**	P	**P**	**14 38 05.1**	**+0.5**
TORD	**Torodi Ar. Bea**	**29.92**	**219**	P	**P**	**14 38 59.6**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=30,slow=8.7,SNR=5.8						
TORD	**Torodi Ar. Bea**	**29.92**	**219**	IAmb	IAmb	14 39 01.3	
	comp=Z,1.9nm,1.1s						
ARCES	**ARCESS Array B**	**31.54**	**4**	P	**P**	**14 39 12.9**	**-0.3**
	comp=Z,4.2nm,1.0s,baz=191,slow=4.9,SNR=6.9						
KK31	**Karatay Array**	**37.96**	**66**	P	**P**	**14 40 09.3**	**+0.3**
KK31				IAmb	IAmb	14 40 56.6	
	comp=Z,7.0nm,1.6s						
KKAR	**Karatay Array**	**37.96**	**66**	P	**P**	**14 40 09.2**	**+0.2**
DBIC	**Dimbokro**	**38.77**	**222**	P	**P**	**14 40 14.3**	**-1.6**
	comp=Z,5.0nm,1.1s,baz=0.0,slow=3.0,SNR=3.6						
DBIC	**Dimbokro**	**38.77**	**222**	P	**P**	**14 40

	129µm,0.3s								
FSK	**Fiskardo**	**0.25**	**31**	P		**Pb**	14 41 45.4	-0.4
FSK				S		**Sb**	14 41 49.1	-0.4
KFL	**Anninata**	**0.34**	**114**	P		**Pg**	14 41 46.1	-1.1
KFL				S		**Sg**	14 41 50.7	-1.3
	152µm,0.3s								
KFL	**Anninata**	**0.34**	**114**	P		**Pg**	14 41 45.9	-1.3
KFL				S		**Sg**	14 41 50.4	-1.6
KFL				AML	AML		14 41 51.4	
KFL				AML	AML		14 41 51.6	
VLMS	**Volimes, Zakyn**	**0.42**	**150**	P		**Pg**	14 41 47.2	-1.5
VLMS				S		**Sg**	14 41 52.8	-1.8
VLMS				AML	AML		14 41 54.6	
VLMS				AML	AML		14 41 55.9	
	comp=N,83880µm,0.2s								
EVGI	**Lefkada island**	**0.43**	**28**	P		**Pg**	14 41 48.3	-0.5
EVGI				S		**Sb**	14 41 55.0	-0.1
EVGI	**Lefkada island**	**0.43**	**28**	P		**Pg**	14 41 48.2	-0.6
EVGI				S		**Sg**	14 41 54.3	-0.4
MGNA	**Meganis**	**0.51**	**37**	P		**Pg**	14 41 49.3	-1.0
MGNA				S		**Sb**	14 41 57.4	-0.1
MGNA				AML	AML		14 42 00.1	
	comp=N,23312µm,0.3s								
MGNA				AML	AML		14 42 01.3		
	comp=E,28353µm,0.4s								
LKD2	**Lefkada island**	**0.58**	**20**	P		**Pg**	14 41 51.7	+0.1
LKD2				S		**Sn**	14 42 01.3	-1.1
	comp=E,12µm,0.4s								
LKD2	**Lefkada island**	**0.58**	**20**	P		**Pb**	14 41 51.5	-0.1
LKD2				S		**Sg**	14 41 59.3	-0.1
TSLK	**Tsoukalades, L**	**0.61**	**19**	P		**Pb**	14 41 52.0	-0.1
TSLK				S		**Sn**	14 42 02.0	-1.1
TSLK	**Tsoukalades, L**	**0.61**	**19**	P		**Pb**	14 41 51.5	-0.6
TSLK				S		**Sg**	14 42 01.5	+1.1
RLS	**Riolos of Patr**	**0.86**	**102**	P		**Pb**	14 41 56.0	-0.3
RLS				S		**Sn**	14 42 09.5	+0.3
	comp=E,5µm,0.5s								
PVO	**Paravola**	**0.96**	**67**	P		**Pb**	14 41 57.8	-0.2
PVO				S		**Sn**	14 42 12.7	+1.1
	comp=E,20µm,0.5s								
PVO	**Paravola**	**0.96**	**67**	P		**Pb**	14 41 57.6	-0.5
PVO				S		**Sb**	14 42 10.1	-0.3
PVO				AML	AML		14 42 17.7	
	comp=N,34901µm,0.5s								
PVO				AML	AML		14 42 18.6		
	comp=E,43697µm,0.5s								
EFP	**Efpalio**	**1.20**	**81**	P		**Pg**	14 42 03.1	-0.1
LAKA	**Lakka**	**1.24**	**90**	P		**Pn**	14 42 01.6	-0.8
AMT	**Artemida-Makis**	**1.26**	**124**	P		**Pg**	14 42 04.5	+0.2
AMT	**Artemida-Makis**	**1.26**	**124**	P		**Pb**	14 42 03.7	+0.6
IGT	**Igoumenitsa**	**1.29**	**358**	P		**Pg**	14 42 05.2	+0.3
IGT				S		**Sg**	14 42 23.6	+1.9
	comp=E,3µm,0.6s								
IGT	**Igoumenitsa**	**1.29**	**358**	P		**Pg**	14 42 05.4	+0.5
IGT	**Igoumenitsa**	**1.29**	**358**	P		**Pg**	14 42 04.3	-0.6
EVR	**Evrytania**	**1.29**	**58**	P		**Pg**	14 42 05.7	+0.7
EVR	**Evrytania**	**1.29**	**58**	P		**Pb**	14 42 03.8	0.0
SERG	**Sergoula**	**1.31**	**82**	P		**Pg**	14 42 05.0	-0.4
TRIZ	**Trizonia**	**1.32**	**84**	P		**Pg**	14 42 04.9	-0.6
TRIZ				S		**Sg**	14 42 24.3	+1.5
TRIZ	**Trizonia**	**1.32**	**84**	P		**Pn**	14 42 03.3	-0.2
ALIK	**Aliki, Aigiali**	**1.35**	**89**	P		**Pb**	14 42 04.9	+0.3
ALIK				S		**Sg**	14 42 24.8	+1.2
KALE	**Kalithea**	**1.38**	**83**	P		**Pg**	14 42 06.5	-0.1
KALE	**Kalithea**	**1.38**	**83**	P		**Pn**	14 42 04.1	-0.1
KLV	**Kalavryta, Ach**	**1.40**	**98**	P		**Pn**	14 42 04.3	-0.2
JAN	**Janina**	**1.45**	**14**	P		**Pg**	14 42 08.1	+0.1
JAN	**Janina**	**1.45**	**14**	P		**Pg**	14 42 08.4	+0.4
JAN	**Janina**	**1.45**	**14**	P		**Pg**	14 42 07.9	-0.2
KASA	**Kassiopi**	**1.54**	**347**	P		**Pb**	14 42 08.8	+0.8
MAKR	**Makrakomi, Fth**	**1.56**	**60**	P		**Pb**	14 42 08.5	+0.2
ITM	**Ithomi**	**1.61**	**131**	P		**Pb**	14 42 09.5	+0.3
ITM	**Ithomi**	**1.61**	**131**			**Pb**	14 42 08.6	-0.6
DLFA	**Delphi**	**1.66**	**81**	P		**Pb**	14 42 10.4	+0.3
AGG	**Agios Georgios**	**1.70**	**62**	P		**Pb**	14 42 10.2	-0.5
AGG	**Agios Georgios**	**1.70**	**62**			**Pb**	14 42 10.2	-0.5
AXAR	**Agios Charalam**	**1.85**	**73**	P		**Pn**	14 42 11.5	+0.7
KPRO	**Kipourio**	**1.86**	**23**	P		**Pb**	14 42 12.9	-0.6
PENT	**Pentalofos**	**2.03**	**16**	P		**Pb**	14 42 16.0	-0.4
NEST	**Nestorio**	**2.23**	**13**	P		**Pb**	14 42 19.0	-0.7
KZN	**Kozani**	**2.32**	**27**	P		**Pb**	14 42 20.5	-0.8
SCTE	**Santa Cesarea**	**2.36**	**321**			**Pn**	14 42 18.2	+1.1
LIT	**Litokhoron**	**2.46**	**41**	P		**Pb**	14 42 22.6	-1.1
LIT	**Litokhoron**	**2.46**	**41**			**Pb**	14 42 22.6	-1.1
MRKA	**Markates**	**2.54**	**79**	P		**Pn**	14 42 21.5	+1.2
SKIA	**Skiathos**	**2.57**	**68**	P		**Pn**	14 42 22.0	+1.4
ATH	**Athens Observa**	**2.63**	**95**	P		**Pb**	14 42 26.4	-0.1
FNA	**Florina**	**2.65**	**16**	P		**Pn**	14 42 23.5	+1.7
FNA	**Florina**	**2.65**	**16**			**Pn**	14 42 23.5	+1.7
OHR	**Ohrid**	**2.88**	**6**	⇓	*i* Pn	**Pn**	14 42 27.8	+2.9
TIP	**Timpagrande**	**3.00**	**289**	⇑	P	**Pn**	14 42 28.0	+1.4
TIP	**Timpagrande**	**3.00**	**289**	⇑	S	**Sn**	14 43 02.5	+0.5
TIP	**Timpagrande**	**3.00**	**289**			**Pn**	14 42 27.7	+1.2
TIR	**Tirane**	**3.13**	**353**	⇓	P	**Pn**	14 42 29.3	+1.0
TIR	**Tirane**	**3.13**	**353**	⇓	P	**Pn**	14 42 29.3	+1.0
TIR	**Tirane**	**3.13**	**353**			**Pn**	14 42 29.3	+1.0
CGL1	**Ceglie Messapi**	**3.30**	**318**	*e*	Pn	**Pn**	14 42 31.8	+1.1
CGL1					Sn	**Sn**	14 43 10.5	+1.0
TAR1	**Taranto**	**3.32**	**314**	*e*	Pn	**Pn**	14 42 32.2	+1.3
MASS	**Massafra**	**3.47**	**314**	*e*	Pn	**Pn**	14 42 34.2	+1.2
VAY	**Valandovo**	**3.50**	**28**	*i*	Pn	**Pn**	14 42 35.0	+1.7
CEL	**Celeste**	**3.55**	**272**			**Pn**	14 42 34.7	+0.6
STIP	**Stip**	**3.71**	**21**	*i*	Pn	**Pn**	14 42 38.6	+2.3
MATE	**Matera**	**3.73**	**311**	⇑	P	**Pn**	14 42 35.0	-1.6
SKO	**Skopje**	**3.81**	**12**	⇓	*i* Pn	**Pn**	14 42 39.4	+1.7
ULC	**Ulcinj**	**3.82**	**347**	⇓	*i* Pn	**Pn**	14 42 37.6	-0.2
ULC					*i* Sn	**Sn**	14 43 21.0	-1.2
SG1	**Sgolgore (BA)**	**3.87**	**313**	*e*	Pn	**Pn**	14 42 40.1	+1.5
SG1					Sn	**Sn**	14 43 21.6	-1.9
BAI	**Bari**	**3.94**	**318**	*e*	Pn	**Pn**	14 42 40.6	+1.1
BAI					Sn	**Sn**	14 43 23.4	-1.8
DRME	**Dracevica, Mon**	**4.05**	**347**	*e*	Pn	**Pn**	14 42 41.7	+0.8
DRME	**Dracevica, Mon**	**4.05**	**347**	*e*	Pn	**Pn**	14 42 41.3	+0.4
DRME					*e*Sn	**Sn**	14 43 27.2	-0.6
BUM	**Brajici-Budva**	**4.21**	**345**	*e*	Pn	**Pn**	14 42 43.1	-0.2
BUM					*e*Sn	**Sn**	14 43 31.0	-1.0
APE	**Apeiranthos**	**4.24**	**105**	⇑	P	**Pb**	14 42 50.7	-3.0
APE	**Apeiranthos**	**4.24**	**105**	⇑	P	**Pn**	14 42 47.7	+4.1
PDG	**Podgorica**	**4.27**	**349**	*e*	Pn	**Pn**	14 42 45.0	+1.0
PDG	**Podgorica**	**4.27**	**349**	⇓	P	**Pn**	14 42 44.7	+0.7
PDG	**Podgorica**	**4.27**	**349**	⇓	S	**Sn**	14 43 33.4	+0.1
PDG	**Podgorica**	**4.27**	**349**	*e*	Pn	**Pn**	14 42 44.3	+0.3
PDG	**Podgorica**	**4.27**	**349**			**Pn**	14 42 44.7	+0.7
TTG	**Podgorica**	**4.27**	**349**	⇓	*i* Pn	**Pn**	14 42 44.1	+0.1
TTG					*e*Sn	**Sn**	14 43 32.4	-0.9
ACER	**Acerenza**	**4.28**	**308**			**Pn**	14 42 45.7	+1.5
PVY	**Plav**	**4.36**	**356**	*e*	Pn	**Pn**	14 42 45.4	+0.1
PVY					*e*Sn	**Sn**	14 43 34.7	-1.0
HCY	**Herceg Novi**	**4.44**	**341**	*e*	Pn	**Pn**	14 42 44.9	-1.5
HCY	**Herceg Novi**	**4.44**	**341**	*e*	Pn	**Pn**	14 42 45.8	-0.6
HCY					*e*Sn	**Sn**	14 43 36.6	-1.0
CEME	**Cevo**	**4.44**	**346**	*e*	Pn	**Pn**	14 42 46.2	-0.2
CEME					*e*Sn	**Sn**	14 43 36.6	-1.1
BOSS	**Bosilegrad**	**4.53**	**20**	*e*	Pn	**Pn**	14 42 49.2	+1.6
BOSS					*e*Sn	**Sn**	14 43 40.8	+0.9
IVA	**Berane**	**4.64**	**355**	*e*	Pn	**Pn**	14 42 49.3	+0.2
IVA					*e*Sn	**Sn**	14 43 41.6	-0.9
KOME	**Kolasin**	**4.65**	**352**	*e*	Pn	**Pn**	14 42 48.8	-0.5
KOME					*e*Sn	**Sn**	14 43 41.9	-0.9
NKME	**Niksic**	**4.65**	**347**	*e*	Pn	**Pn**	14 42 49.0	-0.3
NKME					*e*Sn	**Sn**	14 43 41.9	-0.9
IDI	**Anoyia**	**4.66**	**128**		Pn	**Pn**	14 42 50.5	+1.1
	comp=E,0.8nm,0.3s,baz=315,slow=20,SNR=2.9								
IDI					Sn	**Sn**	14 43 45.4	+2.4
	comp=E,7.9nm,0.3s,baz=151,slow=23,SNR=15								
NKY	**Niksic**	**4.69**	**347**	*e*	Pn	**Pn**	14 42 50.1	+0.3
NKY					*e*Sn	**Sn**	14 43 42.8	-1.0
BARS	**Barje**	**4.69**	**13**	*e*	Pn	**Pn**	14 42 50.9	+1.1
BARS					*e*Sn	**Sn**	14 43 45.1	+1.4
TREB	**Trebinje**	**4.73**	**341**	*e*	Pn	**Pn**	14 42 49.4	-1.0
DBRK	**Dubrovnik**	**4.74**	**339**	*i*	Pn	**Pn**	14 42 50.1	-0.4
VAE	**Valguarnera**	**4.80**	**263**		Pn	**Pn**	14 42 54.1	+2.8
	comp=E,2.8nm,0.3s,baz=232,slow=19,SNR=3.3								
VAE					Sn	**Sn**	14 43 48.3	+1.8
	comp=E,3.2nm,0.3s,baz=274,slow=16,SNR=2.6								
VTS	**Vitosha**	**4.88**	**25**	*e*	Pn	**Pn**	14 42 54.1	+1.6
VTS					*e*Sn	**Sn**	14 43 49.8	+1.4
VTS	**Vitosha**	**4.88**	**25**	⇑	P	**Pn**	14 42 54.0	+1.6
VTS	**Vitosha**	**4.88**	**25**	⇑	P	**Pn**	14 42 54.0	+1.6
VTS	**Vitosha**	**4.88**	**25**			**Pn**	14 42 53.5	+1.1
SELS	**Selova**	**5.00**	**6**	*e*	Pn	**Pn**	14 42 54.3	+0.2
SELS					*e*Sn	**Sn**	14 43 52.0	+0.7
SGRT	**San Giovanni R**	**5.01**	**316**		Pn	**Pn**	14 42 54.7	+0.5
SJES	**Sjenica**	**5.02**	**356**	*e*	Pn	**Pn**	14 42 55.5	+1.1
SJES					*e*Sn	**Sn**	14 43 52.5	+0.5
STON	**Ston**	**5.06**	**337**	*e*	Pn	**Pn**	14 42 54.7	-0.1
STON					Sn	**Sn**	14 43 51.0	-1.7
STON	**Ston**	**5.06**	**337**	*e*	Pn	**Pn**	14 42 54.9	+0.1
STON					*e*Sn	**Sn**	14 43 50.3	-2.4
STON	**Ston**	**5.06**	**337**	*e*	Pn	**Pn**	14 42 53.6	-1.2
UPM	**Unac-Piva**	**5.08**	**348**	⇓	*i* Pn	**Pn**	14 42 55.7	+0.4
UPM					*e*Sn	**Sn**	14 43 52.1	-1.5
ALN	**Alexandroupoli**	**5.10**	**57**	P		**Pn**	14 42 57.0	+1.6
ALN	**Alexandroupoli**	**5.10**	**57**	P		**Pn**	14 42 57.0	+1.6
PLE	**Pljevlja**	**5.14**	**352**	⇑	*i* Pn	**Pn**	14 42 56.5	+0.5
PLE					*i* Sn	**Sn**	14 43 53.8	-1.1
WDD	**Wied Dalam**	**5.28**	**245**		Pn	**Pn**	14 42 57.6	-0.2
PAOL	**Paolisi**	**5.29**	**304**			**Pn**	14 42 60.0	+1.9
ZAPS	**Zavoj**	**5.30**	**18**	*e*	Pn	**Pn**	14 43 00.6	+2.4
IVAS	**Ivanjica**	**5.33**	**358**	*e*	Pn	**Pn**	14 42 59.0	+0.4
BOVS	**Bovan**	**5.47**	**10**	*e*	Pn	**Pn**	14 43 00.9	+0.4
BOVS					*e*Sn	**Sn**	14 44 01.5	-1.5
CORL	**Corleone**	**5.61**	**269**		Pn	**Pn**	14 43 03.7	+1.2
GRUS	**Gruza**	**5.64**	**2**	*e*	Pn	**Pn**	14 43 03.1	+0.2
GRUS					*e*Sn	**Sn**	14 44 06.8	-0.4
MAKA	**Makarska**	**5.65**	**334**	*e*	Pn	**Pn**	14 43 03.5	+0.5
BBLS	**Lazići**	**5.67**	**353**	*e*	Pn	**Pn**	14 43 03.7	+0.5
BBLS					*e*Sn	**Sn**	14 44 05.1	-2.7
BBLS	**Lazići**	**5.67**	**353**	*e*	Pn	**Pn**	14 43 03.5	+0.3
ZAGS	**Zajecar**	**5.73**	**13**	*e*	Pn	**Pn**	14 43 04.6	+0.5
DIVS	**Divibare**	**5.86**	**357**	*e*	Pn	**Pn**	14 43 05.9	0.0
DIVS					*e*Sn	**Sn**	14 44 10.0	-2.5
DIVS	**Divibare**	**5.86**	**357**	*e*	Pn	**Pn**	14 43 05.7	-0.2
HAPS	**Han Pijesak,BI**	**5.94**	**350**	*e*	Pn	**Pn**	14 43 06.1	-0.9
TRUS	**Trudelj**	**5.97**	**0**	*e*	Pn	**Pn**	14 43 07.6	+0.2
PLVB	**Pleven**	**6.05**	**31**	⇓	P	**Pn**	14 43 10.7	+2.2
INTR	**Introdacqua**	**6.24**	**309**			**Pn**	14 43 13.3	+2.2
TEKS	**Tekeris**	**6.33**	**354**	*e*	Pn	**Pn**	14 43 12.7	+0.3
TEKS	**Tekeris**	**6.33**	**354**	*e*	Pn	**Pn**	14 43 10.8	-1.6
ZIRJ	**Zirje**	**6.49**	**328**	*e*	Pn	**Pn**	14 43 14.4	-0.1
KIJV	**Kijevo**	**6.50**	**334**	*e*	Pn	**Pn**	14 43 15.3	+0.7
KIJV					Sn	**Sn**	14 44 27.6	-0.6
MDVR	**Moldovita**	**6.61**	**8**	⇑	P	**Pn**	14 43 16.5	+0.4
MORI	**Morici**	**6.64**	**329**	*e*	Pn	**Pn**	14 43 17.4	+0.9
MGRS	**Mrkonjic Grad**	**6.65**	**339**	*e*	Pn	**Pn**	14 43 17.8	+1.1
AQU	**L'Aquila**	**6.74**	**310**	*e*	Pn	**Pn**	14 43 20.6	+2.6
HERR	**Herculane**	**6.80**	**12**	⇑	P	**Pn**	14 43 19.5	+0.8
FRGS	**Fruska Gora**	**6.92**	**357**	*e*	Pn	**Pn**	14 43 19.3	-1.1
FRGS					*e*Sn	**Sn**	14 44 34.4	-4.3
FRGS	**Fruska Gora**	**6.92**	**357**	*e*	Pn	**Pn**	14 43 18.6	-1.8
BLY	**Banja Luka**	**6.93**	**341**	⇑	P	**Pn**	14 43 21.2	+0.7
BLY	**Banja Luka**	**6.93**	**341**	*e*	Pn	**Pn**	14 43 21.0	+0.5
BLY	**Banja Luka**	**6.93**	**341**		Pn	**Pn**	14 43 20.9	+0.3
UDBI	**Udbina**	**7.18**	**332**	*i*	Pn	**Pn**	14 43 25.8	+1.8
NRCA	**Norcia**	**7.20**	**312**			**Pn**	14 43 26.6	+2.3
GZR	**Gura Zlata**	**7.36**	**13**	⇑	P	**Pn**	14 43 27.4	+0.9
GZR	**Gura Zlata**	**7.36**	**13**	⇑	P	**Pn**	14 43 27.4	+0.9
BZS	**Buzias**	**7.42**	**7**	*e*	Pn	**Pn**	14 43 26.6	-0.7
BZS	**Buzias**	**7.42**	**7**	⇑	P	**Pn**	14 43 27.3	0.0
BZS	**Buzias**	**7.42**	**7**	⇑	P	**Pn**	14 43 27.3	0.0
GOLR		**7.42**	**26**	⇑	P	**Pn**	14 43 27.4	+0.1
ARR	**Arges**	**7.79**	**23**	⇑	P	**Pn**	14 43 33.0	+0.6
MURB	**Monte Urbino**	**7.80**	**312**			**Pn**	14 43 35.0	+2.5
VOIR		**7.98**	**24**	⇑	P	**Pn**	14 43 35.5	+0.5
VOIR		**7.98**	**24**	⇑	P	**Pn**	14 43 35.5	+0.5
MORH	**Mrgy, Hungar**	**8.07**	**351**	*e*	Pn	**Pn**	14 43 35.3	-0.8
OZLJ	**Ozalj**	**8.23**	**335**	*e*	Pn	**Pn**	14 43 38.5	+0.2
MLR	**Muntele Rosu**	**8.34**	**28**		Pn	**Pn**	14 43 44.9	+5.0
	comp=E,0.8nm,0.3s,baz=192,slow=7.6,SNR=10								
MLR	**Muntele Rosu**	**8.34**	**28**	⇑	P	**Pn**	14 43 42.5	+2.5
RIY	**Rijeka**	**8.34**	**330**	*e*	Pn	**Pn**	14 43 40.5	+0.7
GBRS	**Gornja Briga**	**8.39**	**332**	*i*	Pn	**Pn**	14 43 41.5	+0.9
CRES	**Cresnjev**	**8.42**	**336**	*e*	Pn	**Pn**	14 43 40.6	-0.4
DOPR	**Dopca**	**8.56**	**24**	⇑	P	**Pn**	14 43 43.9	+1.0
CEY	**Cerknica**	**8.71**	**331**	*e*	Pn	**Pn**	14 43 44.5	-0.4
PLOR	**Plostina**	**8.91**	**29**	⇑	P	**Pn**	14 43 48.8	+1.1
PLOR	**Plostina**	**8.91**	**29**	⇑	P	**Pn**	14 43 48.8	+1.1
LJU	**Ljubljana**	**8.93**	**333**	*e*	Pn	**Pn**	14 43 48.3	+0.4
KEST	**Kesra**	**9.19**	**258**		Pn	**Pn**	14 43 52.8	+1.1
	comp=E,0.6nm,0.3s,baz=302,slow=9.5,SNR=3.1								
KEST					Sn	**Sn**	14 45 34.8	+0.2
	comp=E,0.4nm,0.3s,baz=347,slow=18,SNR=3.5								
KEST	**Kesra**	**9.19**	**258**		Pn	**Pn**	14 43 52.4	+0.8
SOKA	**Soboth**	**9.31**	**337**	*e*	Pn	**Pn**	14 43 52.9	-0.4
	comp=E,6.0nm,0.4s,SNR=4.6								
SOKA					Sn	**Sn**	14 45 32.4	-5.1
	comp=E,4.0nm,0.4s								
OBKA	**Obir**	**9.32**	**334**	*e*	Pn	**Pn**	14 43 54.8	+1.4
	comp=E,2.1nm,0.2s,SNR=4.4								
VLC	**Villacollemand**	**9.58**	**311**		Pn	**Pn**	14 43 56.4	-0.5
TEOL	**Teolo**	**9.64**	**320**			**Pn**	14 43 57.2	-0.5
PSZ	**Piszkesteto**	**9.68**	**358**		P	**Pn**	14 43 57.7	-0.6
PSZ	**Piszkesteto**	**9.68**	**358**		Pn	**Pn**	14 43 57.7	-0.6
ARSA	**Arzberg**	**9.69**	**340**		Pn	**Pn**	14 43 58.7	+0.4
	comp=E,1.3nm,0.3s								
MYKA	**Terra Mystica**	**9.75**	**331**	*e*	Pn	**Pn**	14 44 00.2	+1.0
	comp=E,4.5nm,0.4s								
STAL	**STALIGIAL**	**9.83**	**327**		Pn	**Pn**	14 44 00.1	-0.2
CTI	**Castel Tesino**	**10.14**	**323**		P	**Pn**	14 44 04.0	-0.7
CTI	**Castel Tesino**	**10.14**	**323**			**Pn**	14 44 04.0	-0.7
KBA	**Koelnbreinsper**	**10.24**	**332**		Pn	**Pn**	14 44 07.2	+1.2
	comp=E,4.6nm,0.4s								
KBA					Sn	**Sn**	14 45 56.2	-4.2
	comp=E,4.2nm,0.4s								
ABTA	**Abfaltersbach**	**10.29**	**328**	*e*	Pn	**Pn**	14 44 07.5	+0.7
	comp=E,1.0nm,0.2s								
ABTA					Sn	**Sn**	14 45 57.3	-4.3
	comp=E,5.1nm,0.6s								
VYHS	**Vyhne**	**10.31**	**354**	*e*	P	**Pn**	14 44 04.1	-2.7
VYHS				*e*			14 45 59.1	
VYHS	**Vyhne**	**10.31**	**354**	*e*	PN	**Pn**	14 44 04.1	-2.7
VYHS					*e*SG	**Sn**	14 45 58.5	-3.3
VYHS					*e*SN		14 45 59.1	
MODS	**Modra-Piesok**	**10.38**	**348**	*e*	SN	**Sn**	14 45 57.3	-6.2
SALO	**Salr**	**10.40**	**318**			**Pn**	14 44 08.3	+0.1
BR131	**Keskin Array S**	**10.41**	**78**	P		**Pn**	14 44 09.1	+0.6
BR131	**Keskin Array S**	**10.41**	**78**	P	Pn	**Pn**	14 44 09.1	+0.6
BRTR	**Keskin Array B**	**10.41**	**78**	P	Pn	**Pn**	14 44 12.8	+4.4
	comp=E,0.2nm,0.3s,baz=261,slow=12,SNR=6.2								
MOA	**Molln**	**10.59**	**337**	*e*	Pn	**Pn**	14 44 12.0	+1.3
	comp=E,4.2nm,0.3s,SNR=7.0								
MOA					Sn	**Sn**	14 46 05.2	-3.7
	comp=E,3.2nm,0.5s								
WTTA	**Wattenberg**	**11.07**	**327**	*e*	Pn	**Pn**	14 44 19.2	+1.8
	comp=E,2.0nm,0.3s								
WATA	**Walderalm**	**11.15**	**327**	*e*	Pn	**Pn**	14 44 19.5	+1.0
	comp=E,2.2nm,0.2s								
WATA					Sn	**Sn**	14 46 21.9	-0.8
	comp=E,5.2nm,0.4s								
FUORN	**Ofenpass-Fuorn**	**11.22**	**321**		Pn	**Pn**	14 44 20.0	+0.4
SQTA	**Sankt Quirin**	**11.22**	**326**		Pn	**Pn**	14 44 21.6	+2.1
	comp=E,3.1nm,0.3s								
SQTA					Sn	**Sn**	14 46 22.5	-1.9
	comp=E,15nm,0.6s								
FETA	**Feichten**	**11.29**	**324**		Pn	**Pn**	14 44 23.5	+3.1
	comp=E,0.4nm,0.2s								
MOTA	**Moosalm**	**11.36**	**326**		Pn	**Pn**	14 44 23.5	+2.0
	comp=E,2.6nm,0.4s								
MOTA					Sn	**Sn**	14 46 25.4	-2.5
	comp=E,5.1nm,0.5s								
DAVOX	**Davos/Dischmat**	**11.52**	**321**		Pn	**Pn**	14 44 26.7	+3.1
	comp=E,0.4nm,0.3s,baz=143,slow=20,SNR=2.7								
DAVOX					Sn	Sn	14 46 18.9	-13
	comp=E,0.6nm,0.3s,baz=180,slow=20,SNR=2.5								
RETA	**Reutte**	**11.62**	**326**	*e*	Pn	**Pn**	14 44 27.9	+3.0
	comp=E,1.0nm,0.3s								
GEC2	**GERESS Array S**	**11.65**	**338**		Pn	**Pn**	14 44 24.4	-0.9
GERES	**GERESS Array B**	**11.65**	**338**		Pn	**Pn**	14 44 24.9	-0.4
	comp=E,0.4nm,0.3s,baz=159,slow=14,SNR=7.6								
GERES					Sn	**Sn**	14 46 27.2	-7.7
	comp=E,0.4nm,0.3s,baz=149,slow=19,SNR=3.5								
KHC	**Kasperske Hory**	**11.94**	**338**	*e*	P	**Pn**	14 44 28.9	-0.3
KHC				*e*			14 46 35.8	
KHC	**Kasperske Hory**	**11.94**	**338**	*e*	PN	**Pn**	14 44 28.9	-0.3
KHC				*e*	SN	**Sn**	14 46 35.8	-6.1
KHC	**Kasperske Hory**	**11.94**	**338**		Pn	**Pn**	14 44 28.3	-1.0
SENIN	**Lac Senin/Sane**	**12.63**	**314**		Pn	**Pn**	14 44 40.1	+1.3
MMAI	**Mount Meron Ar**	**13.27**	**109**		Pn	**Pn**	14 44 48.3	+0.8
	comp=E,2.9nm,0.3s,baz=317,slow=14,SNR=2.5								
ECH	**Echery**	**13.85**	**320**		P	**Pn**	14 44 54.6	-0.7
ECH	**Echery**	**13.85**	**320**		Pn	**Pn**	14 44 54.6	-0.7
AKASG	**Malin Array Be**	**13.94**	**24**		Pn	**Pn**	14 44 56.2	-0.2
	comp=E,1.3nm,0.3s,baz=209,slow=12,SNR=1.4								
CLL	**Collm**	**14.07**	**341**	*e*	P	**P**	14 45 03.0	-2.8
NACGM	**Naroch**	**17.22**	**13**	*e*		**Pn**	14 45 39.0	-0.3
KIV	**Kislovodsk**	**17.72**	**64**	*e*	P	**P**	14 45 47.7	+1.2
KIV					pmax	pmax		
	comp=Z,36nm,1.1s								
KBZ	**Khabaz**	**17.83**	**65**		P	**P**	14 45 48.3	+0.8
	comp=Z,0.3nm,0.3s,baz=286,slow=10.0,SNR=13								
ZEI	**Tsey**	**18.42**	**68**	*e*	P	**Pn**	14 45 55.0	+0.6
ZEI					pmax	pmax		
	comp=Z,6.0nm,0.6s								
VSR	**Storozhevoye**	**18.53**	**40**	*e*	P	**P**	14 45 54.6	-0.6
VSR					pmax	pmax		
	comp=Z,10.0nm,0.5s								
GNI	**Garni**	**18.95**	**77**		P	**Pn**	14 46 01.7

INK	**Inuvik**	**71.98**	**350**	IAmb	IAmb	14 55 30.1			
	comp=Z,12nm,1.6s								
YKA	**Yellowknife Ar**	**73.29**	**340**	P	**P**	**14 53 10.5**	**+0.8**		
	comp=Z,0.1nm,0.6s,baz=42,slow=6.6,SNR=4.5								
WHN	**Wuhan**	**74.64**	**63**	P	**P**	14 53 23.3	+5.1		
PETK	**Petropavlovsk-**	**81.78**	**24**	P	**P**	**14 53 57.1**	**-0.3**		
	comp=Z,2.6nm,0.9s,baz=285,slow=6.9,SNR=2.5								
TXAR	**Lajitas Array**	**94.86**	**313**	P	**P**	**14 55 00.5**	**-0.5**		
	comp=Z,0.1nm,0.6s,baz=94,slow=2.8,SNR=3.1								
ASAR	**Alice Springs**	**122.28**	**96**	PKP	**PKPdf**	**15 00 33.4**	**-0.6**		
	comp=Z,0.8nm,1.1s,baz=321,slow=2.4,SNR=4.1								

IDC 26 14:42:54.0±8.1, **15°41S**×**167°69E**, **h130**km±73km, **mb3.3**/3, **mb1 3.5**/4, **mb1mx3.3**/30, **mbtmp3.7**/4, **Error ellipse: s-maj=67.4km s-min=42.2km az=167.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.73**	**190**	P	Pn	14 44 31.6	+1.1
	1.3nm,0.3s,baz=59,slow=11,SNR=54						
DZM				S	Sn	14 45 44.4	-1.5
	baz=102,slow=20,SNR=1.5						
STKA	**Stephens Creek**	**28.88**	**231**	P	P	14 48 41.6	+1.1
	0.5nm,0.3s,baz=50,slow=11,SNR=7.6						
WRA	**Warramunga Arr**	**32.06**	**257**	P	P	14 49 08.3	-0.5
	0.2nm,0.4s,baz=84,slow=8.2,SNR=9.3						
ASAR	**Alice Springs**	**32.82**	**250**	P	P	14 49 15.1	-0.3
	0.6nm,0.6s,baz=77,slow=9.0,SNR=19						
ARCES	**ARCESS Array B**	**121.01**	**345**	PKP	PKPdf	15 01 30.0	-0.5
	5.1nm,1.0s,baz=64,slow=2.1,SNR=3.2						

*IDC **26** 14:43:02.3±2.4, 4°83N×94°03E, h0km, mb3.7/5, mb1 3.8/7, mb1mx3.6/61, mbtmp3.7/7, ML3.8/2, Error ellipse: s-maj=81.8km s-min=20.2km az=59.0*

*NEIC **26** 14:43:10.4±2.1, 5°0N±0°1×94°5E±0°1, h51km±10km, mb4.4/9, Error ellipse: s-maj=18.5km s-min=12.6km az=49.0*

*DJA **26** 14:43:12.3±1.6, 5°N±10°×9°5E±1°5, h13km±25km, M3.7/6, mb3.8/2, MLv3.7/6*

ISC 26 14:43:10.1±0.9, **5°05N**±0°07×**94°51E**±0°09, **h43**km, **n33, σ1°22**/35, **mb4.1**/11, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**2.03**	**343**	*e*P	**Pn**	**14 43 42.8**	**+1.0**
CMBY				*e*S	**Sn**	**14 44 07.2**	**+1.2**
CMBY				IAML		14 44 17.0	
CMBY				IAML		14 44 18.8	
	comp=E,454nm,0.8s						
MLSI	**Meulaboh, Aceh**	**2.04**	**112**	P	**Pn**	**14 43 43.5**	**+1.5**
MLSI				S	**Sn**	**14 44 06.5**	**+0.2**
LHMI	**Lhok Sumawe**	**2.43**	**86**	P	**Pn**	**14 43 48.2**	**+0.9**
LHMI	**Lhok Sumawe**	**2.43**	**86**	Pn	**Pn**	**14 43 48.2**	**+0.9**
SNSI	**Sinabang, Aceh**	**3.19**	**145**	P	**Pn**	**14 44 00.3**	**+2.5**
TPTI		**3.20**	**124**	P	**Pn**	**14 43 58.2**	**+0.3**
TPTI				S	**Sn**	**14 44 36.2**	**+1.3**
GSI	**Gunungsitoli**	**4.82**	**140**	Pn	**Pn**	**14 44 19.2**	**-1.0**
PSI	**Prapat**	**4.94**	**117**	Pn	**Pn**	**14 44 24.1**	**+2.2**
	comp=E,2.2nm,0.3s,baz=322,slow=17,SNR=5.0						
PSI				Sn	**Sn**	**14 45 17.6**	**-0.3**
	comp=E,0.9nm,0.3s,baz=336,slow=20,SNR=2.1						
RPSI	**Rantau Prapat**	**4.99**	**118**		**Pn**	**14 44 24.1**	**+1.7**
RPSI					**Sn**	**14 45 17.6**	**-1.3**
KULM	**Kulim**	**6.12**	**88**	Pn	**Pn**	**14 44 38.7**	**+0.6**
IPM	**Ipoh**	**6.52**	**95**	Pn	**Pn**	**14 44 43.8**	**+0.3**
CM31	**Chiang Mai Arr**	**14.01**	**18**	P	**P**	**14 46 30.6**	**-2.4**
CMAR	**Chiang Mai Arr**	**14.01**	**18**	Pn	**Pn**	**14 46 28.8**	**+2.7**
	comp=E,0.2nm,0.3s,baz=211,slow=12,SNR=11						
CHTO	**Chiang Mai**	**14.35**	**17**	P	**P**	**14 46 35.0**	**-1.8**
H08S3	**Diego Garcia H**	**25.33**	**240**	T	T	15 14 37.4	
	baz=63						
H08S2	**Diego Garcia H**	**25.33**	**240**	T	T	15 14 34.5	
	baz=63,slow=74						
H08S1	**Diego Carcia H**	**25.35**	**240**	T	T	15 14 33.7	
	baz=63,slow=74						
WMQ	**Urumqi**	**39.08**	**352**	*e*P	**P**	**14 50 33.8**	**+0.7**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,32nm,11.7s						
MK31	**Makanchi Array**	**42.90**	**348**	P	**P**	**14 51 04.8**	**+0.3**
MKAR	**Makanchi Array**	**42.90**	**348**	P	**P**	**14 51 04.0**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=163,slow=8.5,SNR=7.8						
MKAR	**Makanchi Array**	**42.90**	**348**	P	**P**	**14 51 04.4**	**-0.1**
MAKZ	**Makanchi**	**42.98**	**347**	P	**P**	**14 51 04.6**	**-0.5**
MAKZ				IAmb	IAmb	14 51 05.9	
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**43.83**	**12**	P	**P**	**14 51 10.9**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=198,slow=8.8,SNR=2.3						
WRA	**Warramunga Arr**	**46.37**	**124**	P	**P**	**14 51 32.5**	**0.0**
	comp=Z,0.9nm,0.6s,baz=304,slow=9.6,SNR=9.0						
WRAB	**Tennant Creek**	**46.37**	**124**	P	**P**	**14 51 31.9**	**-0.6**
WRAB				IAmb	IAmb	14 52 07.3	
	comp=Z,7.9nm,0.7s						
WB2	**Warramunga Arr**	**46.38**	**124**	P	**P**	**14 51 32.4**	**-0.1**
WR0	**Warramunga Arr**	**46.54**	**124**	P	**P**	**14 51 33.8**	**-0.1**
WR0				IAmb	IAmb	14 52 21.8	
	comp=Z,23nm,1.7s						
KURK	**Kurchatov**	**47.42**	**346**	P	**P**	**14 51 40.5**	**+0.3**
KURK				IAmb	IAmb	14 51 54.1	
	comp=Z,8.8nm,1.6s						
ASAR	**Alice Springs**	**47.86**	**128**	P	**P**	**14 51 44.4**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=296,slow=8.0,SNR=9.9						
ZAA0	**Zalesovo Array**	**49.38**	**352**	P	**P**	**14 51 54.1**	**-1.1**
ZAA0				IAmb	IAmb	14 53 42.6	
	comp=Z,1.6nm,0.8s						
ZALV	**Zalesovo Beam**	**49.38**	**352**	P	**P**	**14 51 54.9**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=177,slow=7.5,SNR=6.0						
ZALV	**Zalesovo Beam**	**49.38**	**352**	P	**P**	**14 51 54.1**	**-1.1**
ABKAR	**Akbulak array**	**52.88**	**332**	P	**P**	**14 52 21.3**	**-0.3**

*IDC **26** 14:47:31.9±0.8, 38°28N×20°52E, h0km, mb4.0/14, mb1 4.0/20, mb1mx3.8/51, mbtmp3.8/20, ML3.8/5, Error ellipse: s-maj=17.9km s-min=14.7km az=23.0*

*THE **26** 14:47:32.5, 38°23N×20°31E, h5km±1km, ML4.1/3, Error ellipse: s-maj=1.7km s-min=0.7km az=65.0*

*ATH **26** 14:47:33.3, 38°27N×20°46E, h15km±1km, ML3.9/6, Error ellipse: s-maj=3.1km s-min=1.2km az=261.0*

*NEIC **26** 14:47:34.9±2.4, 38°30N±0°05×20°34E±0°05, h10km±1km, mb4.4/15, ML4.1(THE), Error ellipse: s-maj=8.9km s-min=6.9km az=194.0*

ISC 26 14:47:34.0±0.9, **38°29N**±0°02×**20°43E**±0°03, **h9**km±6km, **n129, σ1°46**/149, **mb4.0**/18, **9C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.17**	**131**	P	**Pg**	**14 47 37.0**	**-0.6**
VLS				S	**Sg**	**14 47 39.9**	**-0.1**
	131μm,0.2s						
VLS	**Valsamata**	**0.17**	**131**	P	**Pg**	**14 47 36.9**	**-0.7**
VLS				S	**Sg**	**14 47 39.2**	**-0.8**
VLS				AML	AML	14 47 40.0	
VLS				AML	AML	14 47 40.0	
FSK	**Fiskardo**	**0.20**	**32**	P	**Pg**	**14 47 38.5**	**+0.4**
FSK				S	**Sg**	**14 47 42.3**	**+1.3**
FSK	**Fiskardo**	**0.20**	**32**	P	**Pg**	**14 47 38.4**	**+0.2**
FSK				S	**Sg**	**14 47 41.8**	**+0.8**
KFL	**Anninata**	**0.34**	**122**	P	**Pg**	**14 47 40.1**	**-0.5**
KFL				S	**Sg**	**14 47 45.7**	**+0.7**
	62μm,0.5s						
KFL	**Anninata**	**0.34**	**122**	P	**Pg**	**14 47 40.0**	**-0.5**
KFL				S	**Sg**	**14 47 44.3**	**-0.7**
KFL				AML	AML	14 47 46.2	
KFL				AML	AML	14 47 48.6	
EVGI	**Lefkada island**	**0.38**	**28**	P	**Pg**	**14 47 41.3**	**-0.1**
EVGI				S	**Sb**	**14 47 48.3**	**-0.5**
EVGI	**Lefkada island**	**0.38**	**28**	P	**Pg**	**14 47 40.2**	**-1.2**
EVGI				S	**Sg**	**14 47 46.0**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.45**	**156**	P	**Pg**	**14 47 42.0**	**-0.7**
VLMS				S	**Sg**	**14 47 47.7**	**-1.0**
VLMS				AML	AML	14 47 50.3	
	comp=N,82562μm,0.6s						
VLMS				AML	AML	14 47 51.6	
	comp=E,62263μm,0.3s						
MGNA	**Meganis**	**0.47**	**38**	P	**Pg**	**14 47 43.0**	**0.0**
MGNA				S	**Sg**	**14 47 49.8**	**+0.7**
MGNA				AML	AML	14 47 51.2	
	comp=E,15397μm,0.2s						
MGNA				AML	AML	14 47 51.3	
	comp=N,20861μm,0.4s						
LKD2	**Lefkada island**	**0.53**	**20**	P	**Pg**	**14 47 44.3**	**0.0**
LKD2				S	**Sb**	**14 47 53.1**	**-0.2**
LKD2	**Lefkada island**	**0.53**	**20**	P	**Pg**	**14 47 43.7**	**-0.6**
TSLK	**Tsoukalades, L**	**0.56**	**18**	P	**Pg**	**14 47 45.0**	**+0.1**
TSLK				S	**Sb**	**14 47 54.8**	**+0.6**
TSLK	**Tsoukalades, L**	**0.56**	**18**	P	**Pg**	**14 47 44.6**	**-0.3**
TSLK				S	**Sg**	**14 47 51.5**	**-0.9**
TSLK				AML	AML	14 48 01.5	
	comp=N,9316μm,0.7s						
TSLK				AML	AML	14 48 01.7	
	comp=E,10207μm,0.8s						
RLS	**Riolos of Patr**	**0.85**	**105**	P	**Pg**	**14 47 48.1**	**-2.2**
PVO	**Paravola**	**0.92**	**69**	P	**Pg**	**14 47 51.6**	**-0.1**
PVO				S	**Sn**	**14 48 07.3**	**+0.8**
	comp=E,6μm,0.7s						
DRO	**Drossia**	**1.06**	**108**	P	**Pg**	**14 47 54.0**	**-0.4**
EFP	**Efpalio**	**1.17**	**83**	P	**Pb**	**14 47 55.2**	**-1.2**
LAKA	**Lakka**	**1.22**	**92**	P	**Pb**	**14 47 56.2**	**-1.1**
LAKA	**Lakka**	**1.22**	**92**	P	**Pb**	**14 47 55.8**	**-1.5**
AMT	**Artemida-Makis**	**1.26**	**126**	P	**Pn**	**14 47 56.0**	**-1.8**
SERG	**Sergoula**	**1.29**	**84**	P	**Pn**	**14 47 57.7**	**-0.5**
SERG				S	**Sn**	**14 48 17.4**	**+1.9**
SERG	**Sergoula**	**1.29**	**84**	P	**Pn**	**14 47 57.5**	**-0.7**
SERG				S	**Sb**	**14 48 13.9**	**-1.1**
SERG				AML	AML	14 48 31.3	
	comp=E,4432μm,0.7s						
SERG				AML	AML	14 48 32.7	
	comp=N,6225μm,0.6s						
TRIZ	**Trizonia**	**1.30**	**86**	P	**Pn**	**14 47 57.6**	**-0.6**
TRIZ	**Trizonia**	**1.30**	**86**	P	**Pn**	**14 47 56.2**	**-2.1**
ALIK	**Aliki, Aigiali**	**1.32**	**91**	P	**Pb**	**14 47 58.5**	**-0.5**
KALE	**Kalithea**	**1.35**	**85**	P	**Pn**	**14 47 57.8**	**-1.3**
KALE	**Kalithea**	**1.35**	**85**	P	**Pn**	**14 47 58.2**	**-0.9**
KLV	**Kalavryta, Ach**	**1.38**	**100**	P	**Pn**	**14 47 59.1**	**-0.4**
KLV	**Kalavryta, Ach**	**1.38**	**100**	P	**Pn**	**14 47 59.1**	**-0.4**
JAN	**Janina**	**1.41**	**13**	P	**Pn**	**14 47 59.2**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.52**	**61**	P	**Pb**	**14 48 02.3**	**0.0**
ITM	**Ithomi**	**1.62**	**133**	P	**Pn**	**14 48 03.0**	**+0.3**
ITM	**Ithomi**	**1.62**	**133**		**Pg**	**14 48 05.0**	**-0.1**
AGG	**Agios Georgios**	**1.66**	**63**	P	**Pn**	**14 48 02.9**	**-0.4**
AGG	**Agios Georgios**	**1.66**	**63**		**Pg**	**14 48 06.0**	**+0.2**
PYL	**PYLOS**	**1.74**	**143**	P	**Pn**	**14 48 03.8**	**-0.5**
AXAR	**Agios Charalam**	**1.81**	**74**	P	**Pn**	**14 48 05.4**	**0.0**
PROD	**Prodromos**	**1.95**	**90**	P	**Pb**	**14 48 08.8**	**-0.8**
LOUT	**Loutraki**	**2.03**	**98**	P	**Pn**	**14 48 08.9**	**+0.5**
VIL2	**Platees**	**2.24**	**91**	P	**Pb**	**14 48 12.8**	**-1.8**
SCTE	**Santa Cesarea**	**2.34**	**320**	Pn	**Pn**	**14 48 12.7**	**0.0**
LIT	**Litokhoron**	**2.42**	**41**	Pn	**Pb**	**14 48 15.9**	**-1.7**
MRKA	**Markates**	**2.51**	**79**	P	**Pn**	**14 48 16.5**	**+1.5**
FNA	**Florina**	**2.60**	**16**	Pn	**Pn**	**14 48 17.5**	**+1.3**
ATHU	**Athens Univers**	**2.67**	**96**	P	**Pn**	**14 48 18.6**	**+1.5**
OHR	**Ohrid**	**2.83**	**6**	*i*/*i*Pn	**Pb**	**14 48 23.5**	**-1.3**
TIP	**Timpagrande**	**3.00**	**288**	⇑P	**Pn**	**14 48 21.9**	**0.0**
TIP	**Timpagrande**	**3.00**	**288**	Pn	**Pn**	**14 48 22.1**	**+0.3**
TIR	**Tirane**	**3.09**	**352**	⇑P	**Pn**	**14 48 24.0**	**+1.1**
TIR	**Tirane**	**3.09**	**352**	Pn	**Pn**	**14 48 23.7**	**+0.8**
VAY	**Valandovo**	**3.45**	**28**	*i* Pn	**Pg**	**14 48 40.7**	**+0.6**
CEL	**Celeste**	**3.57**	**271**	Pn	**Pn**	**14 48 29.1**	**-0.5**
STIP	**Stip**	**3.66**	**21**	*i*/*i*Pn	**Pb**	**14 48 36.0**	**-2.8**
MATE	**Matera**	**3.72**	**310**	⇑P	**Pn**	**14 48 31.6**	**0.0**
SKO	**Skopje**	**3.76**	**12**	*i*/*i*Pn	**Pg**	**14 48 43.7**	**-2.3**
SG1	**Sgolgore (BA)**	**3.86**	**313**	*e*Pn	**Pn**	**14 48 33.8**	**+0.3**
BAI	**Bari**	**3.93**	**317**	*e*Pn	**Pn**	**14 48 35.3**	**+0.9**
BAI				Sn	Sg	14 49 50.5	+10
APE	**Apeiranthos**	**4.23**	**105**	⇑P	**Pb**	**14 48 50.0**	**+1.5**
PDG	**Podgorica**	**4.23**	**348**	⇑P	**Pn**	**14 48 39.1**	**+0.5**
PDG	**Podgorica**	**4.23**	**348**	⇑S	**Sn**	**14 49 24.4**	**-3.7**
PDG	**Podgorica**	**4.23**	**348**	Pn	**Pn**	**14 48 38.3**	**-0.3**
ACER	**Acerenza**	**4.27**	**307**	Pn	**Pn**	**14 48 39.9**	**+0.7**
IDI	**Anoyia**	**4.67**	**129**	Pn	**Pn**	**14 48 48.2**	**+3.5**
	comp=N,0.3nm,0.3s,baz=308,slow=17,SNR=2.1						
IDI				Sn	**Sn**	**14 49 41.2**	**+2.2**
	comp=N,2.7nm,0.3s,baz=162,slow=20,SNR=4.5						
VTS	**Vitosha**	**4.83**	**25**	⇑P	**Pn**	**14 48 50.9**	**+4.0**
VAE	**Valguarnera**	**4.83**	**262**	Pn	Pn	14 48 52.8	+5.9
	comp=N,1.3nm,0.3s,baz=8.1,slow=14,SNR=2.1						
VAE				Sn	**Sn**	**14 49 45.8**	**+2.8**
	comp=N,3.9nm,0.3s,baz=131,slow=19,SNR=3.5						
SGRT	**San Giovanni R**	**4.99**	**315**	Pn	**Pn**	**14 48 49.0**	**-0.1**
PAOL	**Paolisi**	**5.29**	**303**		**Pn**	**14 48 53.4**	**+0.2**
WDD	**Wied Dalam**	**5.32**	**244**	Pn	**Pn**	**14 48 52.7**	**-0.9**
CORL	**Corleone**	**5.63**	**268**	Pn	**Pn**	**14 48 59.5**	**+1.6**
KARP	**Karpathos**	**6.05**	**115**	Pn	**Pn**	**14 49 05.3**	**+1.7**
INTR	**Introdacqua**	**6.23**	**309**		**Pn**	**14 49 07.3**	**+1.1**
MDVR	**Moldovita**	**6.56**	**8**	⇓P	**Pn**	**14 49 12.7**	**+2.1**
BLY	**Banja Luka**	**6.90**	**340**	Pn	**Pn**	**14 49 16.9**	**+1.7**
NRCA	**Norcia**	**7.18**	**312**		**Pn**	**14 49 20.9**	**+1.7**
MURB	**Monte Urbino**	**7.79**	**312**	Pn	**Pn**	**14 49 29.5**	**+2.0**
VOIR		**7.93**	**24**	⇑P	**Pn**	**14 49 33.0**	**+3.6**
MLR	**Muntele Rosu**	**8.29**	**28**	Pn	**Pn**	**14 49 36.7**	**+2.3**
	comp=N,0.1nm,0.3s,baz=318,slow=13,SNR=3.5						
SOKA	**Soboth**	**9.28**	**336**	*e*Pn	**Pn**	**14 49 46.7**	**-1.3**
	comp=N,9.3nm,0.5s,SNR=11						
OBKA	**Obir**	**9.29**	**334**	*e*Pn	**Pn**	**14 49 49.1**	**+0.9**
	comp=N,6.8nm,0.5s						
OBKA				Sn	**Sn**	**14 51 29.5**	**-3.3**
	comp=N,11nm,0.9s						
TEOL	**Teolo**	**9.62**	**320**	Pn	**Pn**	**14 49 51.8**	**-0.8**
CTI	**Castel Tesino**	**10.12**	**323**		**Pn**	**14 49 59.0**	**-0.5**
VYHS	**Vyhne**	**10.27**	**354**	*e*PN	**Pn**	**14 50 02.0**	**+0.6**
VYHS				*e*SN	**Sn**	**14 51 51.8**	**-4.8**
ABTA	**Abfaltersbach**	**10.27**	**328**	Pn	**Pn**	**14 50 01.8**	**+0.3**
	comp=N,4.1nm,0.7s						
BR131	**Keskin Array S**	**10.38**	**78**	Pn	**Pn**	**14 50 04.4**	**+1.3**
BRTR	**Keskin Array B**	**10.38**	**78**	Pn	**Pn**	**14 50 05.3**	**+2.1**
	comp=N,0.1nm,0.3s,baz=140,slow=29,SNR=2.3						
SALO	**Salr**	**10.39**	**318**	Pn	**Pn**	**14 50 03.1**	**0.0**
MOA	**Molln**	**10.56**	**337**	*e*Pn	**Pn**	**14 50 05.4**	**-0.1**
	comp=N,2.2nm,0.3s,SNR=5.9						
MOA				Sn	**Sn**	**14 51 59.7**	**-4.2**
	comp=N,1.0nm,0.4s						
WTTA	**Wattenberg**	**11.05**	**327**	*e*Pn	**Pn**	**14 50 12.9**	**+0.6**
	comp=N,4.0nm,0.6s,SNR=4.9						
WATA	**Walderalm**	**11.13**	**327**	Pn	**Pn**	**14 50 15.1**	**+1.8**
	comp=N,4.9nm,0.5s,SNR=7.1						
FUORN	**Ofenpass-Fuorn**	**11.20**	**321**	Pn	**Pn**	**14 50 16.4**	**+1.9**
MOTA	**Moosalm**	**11.34**	**326**	Pn	**Pn**	**14 50 17.4**	**+1.2**
	comp=N,2.9nm,0.4s,SNR=4.2						
MOTA				Sn	**Sn**	**14 52 24.9**	**+1.8**
	comp=N,5.1nm,0.9s						
DAVOX	**Davos/Dischmat**	**11.51**	**321**	Pn	**Pn**	**14 50 18.0**	**-0.5**
	comp=N,0.2nm,0.3s,baz=180,slow=20,SNR=2.8						
DAVOX				Sn	**Sn**	**14 52 27.9**	**+0.7**
	comp=N,0.3nm,0.3s,baz=317,slow=19,SNR=3.2						
GEC2	**GERESS Array S**	**11.62**	**337**	Pn	**Pn**	**14 50 19.4**	**-0.6**
GERES	**GERESS Array B**	**11.62**	**337**	Pn	**Pn**	**14 50 19.6**	**-0.4**
	comp=N,0.3nm,0.3s,baz=158,slow=14,SNR=7.7						
GERES				Sn	**Sn**	**14 52 26.0**	**-3.8**
	comp=N,0.1nm,0.3s,baz=149,slow=24,SNR=2.2						
KHC	**Kasperske Hory**	**11.91**	**338**	*e*PN	Pn	14 50 35.0	+11
KHC	**Kasperske Hory**	**11.91**	**338**	Pn	**Pn**	**14 50 23.6**	**-0.3**
SENIN	**Lac Senin/Sane**	**12.62**	**314**	Pn	**Pn**	**14 50 35.4**	**+1.6**
MMAI	**Mount Meron Ar**	**13.26**	**109**	Pn	**Pn**	**14 50 40.3**	**-2.2**
	comp=N,0.9nm,0.3s,baz=272,slow=14,SNR=2.4						
AKASG	**Malin Array Be**	**13.89**	**24**	Pn	**Pn**	**14 50 53.3**	**+2.4**
	comp=N,1.0nm,0.3s,baz=210,slow=11,SNR=1.9						
SUW	**Suwalki**	**15.84**	**6**	P	**P**	**14 51 21.6**	**+0.8**
SUW				IAmb	IAmb	14 51 22.4	
	comp=Z,43nm,1.1s						
ESDC	**Sonseca Array**	**19.00**	**282**	P	**Pn**	**14 51 57.9**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=81,slow=9.9,SNR=3.2						
HFS	**Hagfors**	**22.28**	**351**	P	**P**	**14 52 30.0**	**-1.2**
	comp=Z,5.4nm,0.9s,baz=178,slow=18,SNR=4.1						
EKA	**Eskdalemuir Ar**	**23.30**	**325**	P	**P**	**14 52 41.1**	**-0.8**
	comp=Z,2.8nm,0.8s,baz=123,slow=7.7,SNR=3.5						
FINES	**FINESS Array B**	**23.45**	**7**	P	**P**	**14 52 40.8**	**-2.5**
	comp=Z,4.1nm,0.8s,baz=184,slow=7.3,SNR=6.7						
FIA1	**FINESS Array S**	**23.45**	**7**	P	**P**	**14 52 43.5**	**+0.2**
FIA1				IAmb	IAmb	14 52 55.4	
	comp=Z,65nm,1.6s						
NC405	**NORSAR Array S**	**23.49**	**349**	P	**P**	**14 52 45.2**	**+1.4**
NB201	**NORSAR Array S**	**23.49**	**349**	P	**P**	**14 52 44.9**	**+1.1**
NB2	**NORSAR Subarra**	**23.50**	**349**	P	**P**	**14 52 44.1**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=152,slow=11						
NOA	**NORSAR Array B**	**23.50**	**349**	P	**P**	**14 52 42.1**	**-1.7**
	comp=Z,1.9nm,0.8s,baz=161,slow=9.7,SNR=4.2						
NBO00	**NORSAR Array S**	**23.56**	**348**	P	**P**	**14 52 45.0**	**+0.6**
GEYT	**Alibeck**	**29.52**	**79**	P	**P**	**14 53 37.6**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=236,slow=11,SNR=3.9						
GEYT	**Alibeck**	**29.52**	**79**	IAmb	IAmb	14 53 45.5	
	comp=Z,0.8nm,0.7s						
TOA0	**Torodi Ar. Sit**	**30.07**	**219**	P	**P**	**14 53 45.0**	**+1.4**
TOA0				IAmb	IAmb	14 53 46.7	
	comp=Z,5.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**30.07**	**219**	P	**P**	**14 53 42.5**	**-1.2**
	comp=Z,2.8nm,1.0s,baz=35,slow=8.0,SNR=9.2						
TORD	**Torodi Ar. Bea**	**30.07**	**219**	IAmb	IAmb	14 53 47.1	
	comp=Z,2.1nm,1.1s						
ARCES	**ARCESS Array B**	**31.43**	**3**	P	**P**	**14 53 55.1**	**0.0**
	comp=Z,6.0nm,1.1s,baz=184,slow=13,SNR=5.3						
KK31	**Karatay Array**	**37.82**	**66**	P	**P**	**14 54 51.9**	**+1.2**
KK31				IAmb	IAmb	14 55 01.5	
	comp=Z,5.9nm,1.6s						
KKAR	**Karatay Array**	**37.82**	**66**	P	**P**	**14 54 51.9**	**+1.1**
MK31	**Makanchi Array**	**45.31**	**58**	P	**P**	**14 55 51.4**	**-0.7**
MKAR	**Makanchi Array**	**45.31**	**58**	P	**P**	**14 55 51.0**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=277,slow=7.7,SNR=8.9						
ZAA0	**Zalesovo Array**	**45.67**	**48**	P	**P**	**14 55 53.8**	**-1.0**
ZAA0				IAmb	IAmb	14 55 55.9	
	comp=Z,2.3nm,0.6s						
ZALV	**Zalesovo Beam**	**45.67**	**48**	P	**P**	**14 55 53.2**	**-1.6**
	comp=Z,1.9nm,0.6s,baz=278,slow=9.5,SNR=6.8						
SCHQ	**Schefferville**	**58.33**	**317**	P	**P**	**14 57 29.8**	**+0.7**
	comp=Z,4.8nm,1.1s,baz=38,slow=18,SNR=2.4						
CMAR	**Chiang Mai Arr**	**69.95**	**82**	P	**P**	**14 58 43.9**	**-2.1**
	comp=Z,0.7nm,0.7s,baz=306,slow=7.6,SNR=6.1						
YKA	**Yellowknife Ar**	**73.26**	**340**	P	**P**	**14 59 05.8**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=45,slow=6.1,SNR=4.1						
ULM	**Lac du Bonnet**	**75.57**	**324**	P	**P**	**14 59 20.2**	**+1.4**
	comp=Z,2.3nm,1.0s,baz=14,slow=5.3,SNR=3.8						
TXAR	**Lajitas Array**	**94.84**	**313**	P	**P**	**15 00 54.8**	**-1.8**
	comp=Z,0.2nm,0.8s,baz=57,slow=5.6,SNR=2.3						
ASAR	**Alice Springs**	**122.26**	**96**	PKP	**PKPdf**	**15 06 29.1**	**-0.5**
	comp=Z,0.3nm,0.9s,baz=317,slow=1.8,SNR=3.3						

*ATH **26** 14:53:35.4, 38°28N×20°46E, h14km±2km, ML2.9/13, Error ellipse: s-maj=2.5km s-min=0.9km az=80.0*

*IDC **26** 14:53:36.1±12.0, 38°67N×20°85E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.3/43, mbtmp3.5/5, ML3.6/1, Error ellipse: s-maj=236.1km s-min=30.9km az=35.0*

ISC 26 14:53:35.2±1.1, **38°26N**±0°03×**20°45E**±0°07, **h16**km±6km, **n29, σ0°65**/36, **mb3.7**/4, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.14**	**128**	P	**Pg**	**14 53 38.8**	**-0.2**
VLS				S	**Sg**	**14 53 41.5**	**-0.1**
FSK	**Fiskardo**	**0.22**	**24**	P	**Pg**	**14 53 39.8**	**-0.4**
FSK				S	**Sg**	**14 53 43.2**	**-0.4**
FSK				AML	AML	14 53 44.3	
	comp=N,22912μm,0.4s						
FSK				AML	AML	14 53 44.4	
	comp=E,55978μm,0.2s						
KFL	**Anninata**	**0.31**	**120**	P	**Pg**	**14 53 41.7**	**0.0**
KFL				S

43μm,0.3s
KFL Anninata 0.29 114 P **Pg** **14 55 56.5 -0.2**
KFL S **Sg** **14 56 01.4 +0.6**
KFL AML AML 14 56 02.6
comp=N,89518μm,0.2s
KFL AML AML 14 56 03.6
comp=E,80305μm,0.4s
VLMS Volimes, Zakyn 0.39 155 P **Pg** **14 55 57.9 -0.5**
VLMS S **Sg** **14 56 03.5 -0.3**
VLMS AML AML 14 56 04.9
comp=E,78866μm,0.3s
VLMS AML AML 14 56 05.1
LKD2 Lefkada island 0.58 16 P **Pg** **14 56 02.5 +0.3**
KLV Kalavryta, Ach 1.35 97 P **Pn** **14 56 15.6 +0.7**
OHR Ohrid 2.90 5⇑*i*Pn **Pn** **14 56 37.5 +1.3**
STIP Stip 3.71 20 *i* Pn **Pn** **14 56 48.8 +1.4**
SG1 Sgolgore (BA) 3.92 313 *e*Pn **Pn** **14 56 50.5 +0.3**
SG1 Sn **Sn** **14 57 33.1 -2.8**
IDI Anoyia 4.61 128 Pn **Pn** **14 57 04.2 +4.3**
comp=E,0.6nm,0.3s,baz=292,slow=19,SNR=2.4
IDI Sn **Sn** **14 57 52.3 -0.8**
comp=E,1.7nm,0.3s,baz=72,slow=20,SNR=4.0
GBRS Gornja Briga 8.43 332 *i* Pn **Pn** **14 57 51.9 -0.2**
BRTR Keskin Array B 10.38 78 Pn **Pn** **14 58 15.8 -3.2**
comp=E,0.0nm,0.3s,baz=256,slow=16,SNR=2.7
GERES GERESS Array B 11.69 337 Pn **Pn** **14 58 37.1 +0.3**
comp=E,0.3nm,0.3s,baz=160,slow=14,SNR=5.6
HFS Hagfors 22.34 351 P **P** **15 00 47.1 -0.6**
comp=E,2.9nm,0.9s,baz=170,slow=18,SNR=3.7
FINES FINESS Array B 23.51 7 P **P** **15 00 58.4 -1.2**
comp=E,1.4nm,0.8s,baz=208,slow=14,SNR=4.0
NOA NORSAR Array B 23.56 349 P **P** **15 00 59.4 -0.9**
comp=E,0.4nm,0.6s,baz=153,slow=11,SNR=2.7
MKAR Makanchi Array 45.32 58 P **P** **15 04 07.5 -0.3**
comp=E,0.5nm,0.4s,baz=276,slow=7.5,SNR=9.6
ZALV Zalesovo Beam 45.70 48 P **P** **15 04 10.4 -0.2**
comp=E,0.8nm,0.4s,baz=277,slow=8.7,SNR=3.8
YKA Yellowknife Ar 73.33 340 P **P** **15 07 23.6 +2.5**
comp=E,0.7nm,1.1s,baz=34,slow=7.1,SNR=2.8

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*IDC **26** 14:59:23.2±0.5,38˚39N×20˚47E,h0km,mb4.2/29, mb1 4.3/39,mb1mx4.2/58,mbtmp4.2/39,ML4.1/10,Error ellipse: s-maj=12.3km s-min=10.7km az=176.0*
*MOS **26** 14:59:23.3±1.4,38˚37N×20˚24E,h12km,mb4.7/28,Error ellipse: s-maj=5.2km s-min=3.1km az=81.3*
*BEO **26** 14:59:23.9±0.6,38˚31N×20˚25E,h0km,ML4.4/11*
*PDG **26** 14:59:24.0±0.3,38˚29N×20˚36E,h22km,MD4.7/2, ML4.6/12,Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*THE **26** 14:59:24.7,38˚30N×20˚37E,h10km,ML4.5/12,Error ellipse: s-maj=0.7km s-min=0.3km az=69.0*
*NEIC **26** 14:59:24.9±2.8,38˚38N±0˚05×20˚30E±0˚06,h10km±2km, mb4.6/45,ML4.5(THE),Error ellipse: s-maj=8.1km s-min=6.4km az=204.0*
*MED_RC **26** 14:59:24.0±0.6,38˚33N×20˚29E,h10km,MW4.6/7, Moment Tensor Solution.Mantle waves: s7,c9; Duration: 1±0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.14; $M_{\theta\theta}$0.97±.11; $M_{\phi\phi}$-0.67±.10; M_{rt}-0.67±.31; $M_{\theta\phi}$-0.01±.10; $M_{r\phi}$0.41±.29; Best double couple: $M_0$1.14000×10^{16} NP1:ϕ_s227.00000°,δ43.00000°,λ-167.00000°. NP2: ϕ_s127.00000°,δ81.00000°,λ-48.00000°. Principal axes: T 1.2700, Plg24.0000°, Azm186.0000°; N -0.2600, Plg41.0000°, Azm299.0000°; P -1.0100, Plg39.0000°, Azm74.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*BGR **26** 14:59:25.5±0.8,38˚54N×21˚06E,h10km Error ellipse: s-maj=27.8km s-min=10.0km az=57.0*
*ATH **26** 14:59:25.2,38˚30N×20˚48E,h13km±1km,ML4.5/15,Error ellipse: s-maj=1.6km s-min=0.9km az=69.0*
*SKO **26** 14:59:25.9,38˚25N×20˚44E,h13km*
ISC 26 14:59:24.6±0.8,38˚33N±0˚02×20˚34E±0˚02,h11km±5km, n573,σ1ŝ91/662,mb4.5/73,40C-8D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.22**	**53**	P	**Pg**	**14 59 29.4**	**+0.1**
FSK				S	**Sg**	**14 59 32.4**	**0.0**
FSK	**Fiskardo**	**0.22**	**53**	P	**Pg**	**14 59 28.9**	**-0.4**
FSK				S	**Sg**	**14 59 32.0**	**-0.4**
VLS	**Valsamata**	**0.25**	**127**	P	**Pg**	**14 59 29.0**	**-0.8**
VLS				S	**Sg**	**14 59 32.4**	**-0.8**
340μm,0.5s							
VLS	**Valsamata**	**0.25**	**127**	P	**Pg**	**14 59 29.0**	**-0.8**
VLS				S	**Sg**	**14 59 32.4**	**-0.8**
VLS	**Valsamata**	**0.25**	**127**	P	**Pg**	**14 59 29.0**	**-0.8**
VLS				S	**Sg**	**14 59 31.6**	**-1.7**
VLS				AML	AML	14 59 32.9	
VLS				AML	AML	14 59 33.6	
EVGI	**Lefkada island**	**0.39**	**40**	P	**Pg**	**14 59 32.5**	**+0.2**
EVGI				S	**Sg**	**14 59 38.3**	**+0.9**
41μm,0.1s							
EVGI	**Lefkada island**	**0.39**	**40**	P	**Pg**	**14 59 32.4**	**+0.1**
EVGI				S	**Sg**	**14 59 37.5**	**+0.1**
KFL	**Anninata**	**0.41**	**121**	P	**Pg**	**14 59 32.2**	**-0.6**
KFL				S	**Sg**	**14 59 37.6**	**-0.7**
439μm,0.5s							
KFL	**Anninata**	**0.41**	**121**	P	**Pg**	**14 59 32.1**	**-0.8**
KFL				S	**Sg**	**14 59 36.7**	**-1.7**
KFL				AML	AML	14 59 38.9	
KFL				AML	AML	14 59 39.1	
MGNA	**Meganis**	**0.48**	**47**	P	**Pg**	**14 59 33.8**	**-0.3**
MGNA				S	**Sg**	**14 59 39.7**	**-0.8**
MGNA				AML	AML	14 59 41.3	
MGNA				AML	AML	14 59 41.5	
VLMS	**Volimes, Zakyn**	**0.52**	**150**	P	**Pg**	**14 59 34.1**	**-0.6**
VLMS				S	**Sg**	**14 59 40.4**	**-1.2**
VLMS				AML	AML	14 59 42.7	
VLMS				AML	AML	14 59 45.0	
comp=N,94431μm,0.2s							
LKD2	**Lefkada island**	**0.53**	**28**	P	**Pg**	**14 59 34.7**	**-0.2**
LKD2				S	**Sb**	**14 59 42.9**	**-0.6**
comp=N,44μm,0.3s							
TSLK	**Tsoukalades, L**	**0.56**	**26**	P	**Pg**	**14 59 35.5**	**0.0**
TSLK				S	**Sb**	**14 59 44.2**	**-0.2**
comp=N,65μm,0.7s							
TSLK	**Tsoukalades, L**	**0.56**	**26**	P	**Pg**	**14 59 35.6**	**+0.1**
TSLK				S	**Sg**	**14 59 42.5**	**-0.3**
TSLK				AML	AML	14 59 46.1	
TSLK				AML	AML	14 59 47.4	
RLS	**Riolos of Patr**	**0.93**	**106**	P	**Pg**	**14 59 41.5**	**-1.0**
RLS				S	**Sg**	**14 59 54.2**	**-0.4**
comp=N,15μm,0.6s							
RLS	**Riolos of Patr**	**0.93**	**106**	P	**Pg**	**14 59 41.3**	**-1.2**
RLS				S	**Sg**	**14 59 52.7**	**-1.9**
PVO	**Paravola**	**0.98**	**72**	P	**Pg**	**14 59 42.7**	**-0.7**
PVO				S	**Sb**	**14 59 56.8**	**+0.4**
comp=N,49μm,0.4s							
PVO	**Paravola**	**0.98**	**72**	P	**Pg**	**14 59 42.5**	**-0.9**
PVO				S	**Sg**	**14 59 55.4**	**-0.8**
PVO				AML	AML	15 00 03.2	
comp=E,84124μm,0.4s							
PVO				AML	AML	15 00 03.8	
UPR	**University Cam**	**1.14**	**92**	P	**Pn**	**14 59 46.5**	**0.0**
DRO	**Drossia**	**1.15**	**109**	P	**Pb**	**14 59 45.2**	**-1.2**
DRO				S	**Sg**	**15 00 01.8**	**+0.3**
comp=E,37μm,0.6s							
DRO	**Drossia**	**1.15**	**109**	P	**Pb**	**14 59 44.7**	**-1.7**
DRO				S	**Sb**	**14 59 59.6**	**-1.7**
DRO				AML	AML	15 00 08.5	
comp=N,76517μm,0.4s							
DRO				AML	AML	15 00 09.8	
comp=E,71028μm,0.7s							
IGT	**Igoumenitsa**	**1.20**	**360**	P	**Pn**	**14 59 47.4**	**0.0**
IGT	**Igoumenitsa**	**1.20**	**360**	P	**Pn**	**14 59 47.4**	**0.0**
IGT	**Igoumenitsa**	**1.20**	**360**	P	**Pg**	**14 59 47.7**	**-0.1**
IGT				S	**Sn**	**15 00 06.0**	**+2.2**
IGT				AML	AML	15 00 08.8	
comp=E,30456μm,0.3s							
IGT				AML	AML	15 00 10.7	
comp=N,31633μm,0.3s							
EFP	**Efpalio**	**1.24**	**85**	P	**Pn**	**14 59 46.4**	**-1.4**
EFP	**Efpalio**	**1.24**	**85**	P	**Pn**	**14 59 46.4**	**-1.4**
EFP				S	**Sb**	**15 00 03.1**	**-0.8**
EFP				AML	AML	15 00 10.9	
comp=E,50550μm,0.8s							
EFP				AML	AML	15 00 14.6	
comp=N,29767μm,0.7s							
EVR	**Evrytania**	**1.29**	**62**	P	**Pn**	**14 59 48.1**	**-0.6**
EVR	**Evrytania**	**1.29**	**62**	P	**Pn**	**14 59 47.9**	**-0.8**
EVR				S	**Sb**	**15 00 03.9**	**-1.8**
EVR				AML	AML	15 00 13.5	
comp=N,28506μm,0.6s							
EVR				AML	AML	15 00 14.8	
comp=E,21991μm,0.4s							
LAKA	**Lakka**	**1.29**	**93**	P	**Pn**	**14 59 47.5**	**-1.2**
LAKA				S	**Sb**	**15 00 05.3**	**-0.3**
comp=E,15μm,0.7s							
LAKA	**Lakka**	**1.29**	**93**	P	**Pn**	**14 59 47.1**	**-1.5**
LAKA				S	**Sb**	**15 00 04.6**	**-1.0**
LAKA				AML	AML	15 00 08.4	
comp=E,24140μm,0.4s							
LAKA				AML	AML	15 00 09.0	
comp=N,32335μm,0.4s							
AMT	**Artemida-Makis**	**1.34**	**126**	P	**Pn**	**14 59 48.4**	**-0.9**
AMT				S	**Sb**	**15 00 06.5**	**-0.5**
comp=N,28μm,0.8s							
AMT	**Artemida-Makis**	**1.34**	**126**	P	**Pn**	**14 59 48.2**	**-1.2**
AMT				S	**Sb**	**15 00 04.3**	**-2.7**
SERG	**Sergoula**	**1.35**	**86**	P	**Pn**	**14 59 48.1**	**-1.3**
SERG				S	**Sb**	**15 00 07.3**	**0.0**
comp=N,14μm,0.5s							
SERG	**Sergoula**	**1.35**	**86**	P	**Pn**	**14 59 48.2**	**-1.3**
SERG				S	**Sb**	**15 00 06.5**	**-0.8**
SERG				AML	AML	15 00 15.5	
comp=E,32843μm,0.4s							
SERG				AML	AML	15 00 17.3	
comp=N,25718μm,0.4s							
TRIZ	**Trizonia**	**1.36**	**88**	P	**Pn**	**14 59 48.5**	**-1.0**
TRIZ				S	**Sb**	**15 00 07.2**	**-0.4**
comp=N,16μm,0.7s							
TRIZ	**Trizonia**	**1.36**	**88**	P	**Pn**	**14 59 48.5**	**-1.0**
JAN	**Janina**	**1.39**	**17**	P	**Pn**	**14 59 49.4**	**-0.5**
JAN	**Janina**	**1.39**	**17**	P	**Pn**	**14 59 49.4**	**-0.5**
JAN	**Janina**	**1.39**	**17**	P	**Pg**	**14 59 52.2**	**+0.9**
KALE	**Kalithea**	**1.42**	**87**	P	**Pn**	**14 59 49.5**	**-0.9**
KALE	**Kalithea**	**1.42**	**87**	P	**Pn**	**14 59 49.3**	**-1.1**
KASA	**Kassiopi**	**1.45**	**348**	P	**Pg**	**14 59 53.2**	**+0.7**
KLV	**Kalavryta, Ach**	**1.46**	**101**	P	**Pn**	**14 59 49.4**	**-1.5**
KLV	**Kalavryta, Ach**	**1.46**	**101**	P	**Pn**	**14 59 50.2**	**-0.7**
KLV				S	**Sn**	**15 00 07.7**	**-2.3**
KLV				AML	AML	15 00 20.9	
comp=E,14485μm,1.0s							
KLV				AML	AML	15 00 25.1	
comp=N,11598μm,0.9s							
MAKR	**Makrakomi, Fth**	**1.56**	**63**	P	**Pb**	**14 59 53.0**	**-0.5**
MAKR				S	**Sg**	**15 00 14.4**	**-0.5**
MAKR				AML	AML	15 00 19.9	
comp=N,31466μm,0.5s							
MAKR				AML	AML	15 00 23.5	
comp=E,52658μm,0.3s							
DLFA	**Delphi**	**1.70**	**84**	P	**Pn**	**14 59 54.1**	**-0.1**
ITM	**Ithomi**	**1.70**	**132**	P	**Pn**	**14 59 52.8**	**-1.5**
ITM	**Ithomi**	**1.70**	**132**	P	**Pb**	**14 59 56.3**	**+0.4**
ITM	**Ithomi**	**1.70**	**132**	Pn	**Pb**	**14 59 56.2**	**+0.3**
AGG	**Agios Georgios**	**1.71**	**65**	P	**Pb**	**14 59 55.4**	**-0.6**
AGG	**Agios Georgios**	**1.71**	**65**	P	**Pb**	**14 59 55.7**	**-0.3**
AGG				S	**Sg**	**15 00 19.6**	**0.0**
AGG				AML	AML	15 00 25.8	
comp=N,21380μm,0.9s							
AGG				AML	AML	15 00 26.8	
comp=E,19841μm,0.6s							
AGG	**Agios Georgios**	**1.71**	**65**		**Pb**	**14 59 55.4**	**-0.6**
THL	**Klokotos Trika**	**1.80**	**46**	P	**Pb**	**14 59 57.7**	**+0.1**
KPRO	**Kipourio**	**1.81**	**26**	P	**Pn**	**14 59 55.0**	**-0.8**
PYL	**PYLOS**	**1.81**	**142**	P	**Pn**	**14 59 54.9**	**-0.8**
THAL	**Thalero**	**1.85**	**98**	P	**Pb**	**14 59 58.0**	**-0.5**
KLMT	**Kalamata**	**1.86**	**132**	P	**Pn**	**14 59 55.1**	**-1.3**
AXAR	**Agios Charalam**	**1.87**	**76**	P	**Pn**	**14 59 57.0**	**+0.4**
VLX	**Vlachokerasia**	**1.88**	**120**	P	**Pn**	**14 59 56.8**	**0.0**
PENT	**Pentalofos**	**1.97**	**18**	P	**Pb**	**15 00 01.1**	**+0.6**
PROD	**Prodromos**	**2.02**	**91**	P	**Pb**	**15 00 00.3**	**-1.0**
LTK	**Loutraki**	**2.09**	**98**	P	**Pn**	**15 00 00.9**	**+1.2**
LOUT	**Loutraki**	**2.10**	**98**	P	**Pn**	**15 00 00.9**	**+1.1**
LKR	**Lokris**	**2.11**	**80**	P	**Pn**	**15 00 01.2**	**+1.4**
KZN	**Kozani**	**2.27**	**29**	P	**Pb**	**15 00 05.2**	**-0.4**
KZN	**Kozani**	**2.27**	**29**	P	**Pb**	**15 00 04.3**	**-1.3**
SCTE	**Santa Cesarea**	**2.27**	**321**	P	**Pn**	**15 00 03.3**	**+1.2**
SCTE				S	**Sn**	**15 00 31.3**	**+1.3**
SCTE	**Santa Cesarea**	**2.27**	**321**		**Pn**	**15 00 01.4**	**-0.6**
VIL2	**Platees**	**2.31**	**92**	P	**Pn**	**15 00 04.3**	**+1.7**
LIT	**Litokhoron**	**2.44**	**43**	P	**Pn**	**15 00 05.6**	**+1.3**
LIT	**Litokhoron**	**2.44**	**43**	Pn	**Pn**	**15 00 05.6**	**+1.3**
MRKA	**Markates**	**2.58**	**81**	P	**Pn**	**15 00 07.0**	**+0.7**
FNA	**Florina**	**2.58**	**18**	P	**Pn**	**15 00 06.8**	**+0.4**
FNA	**Florina**	**2.58**	**18**		**Pn**	**15 00 06.8**	**+0.4**
SKIA	**Skiathos**	**2.59**	**70**	P	**Pn**	**15 00 07.7**	**+1.3**
ATH	**Athens Observa**	**2.69**	**97**	P	**Pn**	**15 00 09.3**	**+1.5**
VLY	**Voula,Athens**	**2.77**	**99**	P	**Pn**	**15 00 09.4**	**+0.5**
OHR	**Ohrid**	**2.80**	**7**⇓*i*Pn	**Pn**	**Pn**	**15 00 12.1**	**+2.6**
OHR				*i* Sn	**Sb**	**15 00 46.3**	**-2.8**
OHR				*e*Lg	Lg	15 00 47.0	
comp=N,643nm,0.7s							
EREA	**Eretria**	**2.83**	**87**	P	**Pn**	**15 00 10.4**	**+0.7**
TIP	**Timpagrande**	**2.92**	**288**	⇑P	**Pn**	**15 00 13.9**	**+2.8**
TIP	**Timpagrande**	**2.92**	**288**	⇑S	**Sn**	**15 00 48.7**	**+2.5**
TIP	**Timpagrande**	**2.92**	**288**	P	**Pn**	**15 00 13.3**	**+2.1**
TIP	**Timpagrande**	**2.92**	**288**	P	**Pn**	**15 00 13.3**	**+2.1**
TIP				AML	AML		
comp=E,237μm,0.9s							
TIP				AML	AML		
comp=N,150μm,1.0s							
TIP				AML	AML		
comp=E,276μm,0.8s							
TIP				AML	AML		
comp=N,188μm,0.8s							
TIP				AML	AML		
comp=N,879μm,1.2s							
TIP				AML	AML		
comp=E,499μm,1.1s							
TIP				AML	AML		
comp=E,597μm,1.1s							
TIP				AML	AML		
comp=N,1088μm,1.2s							
TIP	**Timpagrande**	**2.92**	**288**		**Pn**	**15 00 12.6**	**+1.5**
SERS	**Sersale**	**2.94**	**285**	P	**Pn**	**15 00 13.3**	**+1.9**
SERS	**Sersale**	**2.94**	**285**	P	**Pn**	**15 00 13.3**	**+1.9**
SERS				S	**Sn**	**15 00 47.4**	**+0.6**
SERS				AML	AML		
comp=E,565μm,0.5s							
SERS				AML	AML		
comp=N,510μm,0.5s							
SERS				AML	AML		
comp=E,434μm,0.6s							
SERS				AML	AML		
comp=N,650μm,0.5s							
SERS				AML	AML		
comp=E,824μm,0.6s							
SERS				AML	AML		
comp=N,676μm,0.5s							
SERS				AML	AML		
comp=E,602μm,0.7s							
SERS				AML	AML		
comp=N,751μm,0.6s							
PIPA	**Pietrapaola**	**2.98**	**294**	P	**Pn**	**15 00 14.1**	**+2.2**
TIR	**Tirane**	**3.04**	**353**	P	**Pn**	**15 00 13.3**	**+0.7**
TIR	**Tirane**	**3.04**	**353**	⇑P	**Pn**	**15 00 14.8**	**+2.2**
TIR	**Tirane**	**3.04**	**353**		**Pn**	**15 00 13.3**	**+0.7**
CELI	**Celico**	**3.18**	**291**	P	**Pn**	**15 00 17.2**	**+2.6**
CELI				AML	AML		
comp=E,307μm,1.1s							
CELI				AML	AML		
comp=N,236μm,1.1s							
CELI				AML	AML		
comp=E,748μm,1.1s							
CELI				AML	AML		
comp=N,548μm,1.1s							
CELI				AML	AML		
comp=N,797μm,1.6s							
CELI				AML	AML		
comp=E,2945μm,1.1s							
CELI				AML	AML		
comp=N,1960μm,1.6s							
CELI				AML	AML		
comp=E,1195μm,1.1s							
CGL1	**Ceglie Messapi**	**3.21**	**317**	*e*Pn	**Pn**	**15 00 16.1**	**+1.1**
TAR1	**Taranto**	**3.23**	**314**	*e*Pn	**Pn**	**15 00 16.8**	**+1.6**
KARY	**Karystos**	**3.24**	**94**	P	**Pn**	**15 00 16.2**	**+0.8**
CAR1	**CAROLEI**	**3.35**	**287**	P	**Pn**	**15 00 19.9**	**+2.9**
CAR1	**CAROLEI**	**3.35**	**287**	P	**Pn**	**15 00 19.9**	**+2.9**
CAR1				S	**Sn**	**15 00 58.5**	**+1.6**
CAR1				AML	AML		
comp=E,631μm,0.9s							
CAR1				AML	AML		
comp=N,855μm,1.0s							
CAR1				AML	AML		
comp=E,582μm,0.9s							
CAR1				AML	AML		
comp=N,674μm,0.7s							
CAR1				AML	AML		
comp=E,1685μm,0.8s							
CAR1				AML	AML		
comp=E,2030μm,0.6s							
CAR1				AML	AML		
comp=N,1500μm,0.7s							
CAR1				AML	AML		
comp=N,1420μm,1.0s							
MASS	**Massafra**	**3.38**	**314**	*e*Pn	**Pn**	**15 00 18.5**	**+1.2**
VAY	**Valandovo**	**3.45**	**29**	*e*P	**Pb**	**15 00 23.7**	**-2.0**
VAY	**Valandovo**	**3.45**	**29**	*i* Pn	**Pn**	**15 00 19.6**	**+1.4**
VAY				*i* Sn	**Sn**	**15 01 00.1**	**+1.0**
VAY				*e*Lg	Lg	15 01 03.9	
comp=E,355nm,0.7s							
SALB	**San Lorenzo Be**	**3.47**	**298**	P	**Pn**	**15 00 21.7**	**+3.0**
SALB				AML	AML		
comp=E,926μm,1.6s							
SALB				AML	AML		
comp=N,360μm,0.5s							
SALB				AML	AML		
comp=E,556μm,0.6s							
SALB				AML	AML		
comp=N,352μm,0.5s							
SALB				AML	AML		
comp=N,982μm,1.0s							
SALB				AML	AML		
comp=E,1005μm,1.4s							
SERI	**Serifos**	**3.49**	**108**	P	**Pn**	**15 00 20.0**	**+1.2**
CEL	**Celeste**	**3.50**	**270**		**Pn**	**15 00 19.6**	**+0.6**
JOPP	**Joppolo**	**3.51**	**276**	P	**Pn**	**15 00 20.8**	**+1.7**
JOPP				S	**Sn**	**15 01 00.1**	**-0.4**
JOPP				AML	AML		
comp=N,898μm,0.7s							
JOPP				AML	AML		
comp=E,1290μm,0.7s							
NOCI	**Noci**	**3.53**	**315**	P	**Pn**	**15 00 20.8**	**+1.5**
NOCI	**Noci**	**3.53**	**315**	P	**Pn**	**15 00 20.8**	**+1.5**
NOCI				S	**Sn**	**15 01 01.1**	**+0.1**
NOCI				AML	AML		
comp=N,3690μm,0.6s							
NOCI				AML	AML		
comp=E,3080μm,0.5s							
T0702	**Acquaformosa (**	**3.59**	**294**	P	**Pn**	**15 00 24.2**	**+3.9**
T0702	**Acquaformosa (**	**3.59**	**294**	P	**Pn**	**15 00 24.2**	**+3.9**
T0702				S	**Sb**	**15 01 08.6**	**-3.2**
T0702				AML	AML		
comp=E,1596μm,0.8s							
T0702				AML	AML		
comp=N,880μm,1.0s							
MATE	**Matera**	**3.64**	**311**	⇑P	**Pn**	**15 00 23.0**	**+2.1**
MATE	**Matera**	**3.64**	**311**	P	**Pn**	**15 00 23.2**	**+2.3**
MATE				AML	AML		
comp=E,1930μm,0.6s							
MATE				AML	AML		
comp=N,2035μm,1.1s							
STIP	**Stip**	**3.65**	**22**⇓*i*Pn	**Pn**	**Pn**	**15 00 24.9**	**+3.9**
STIP				*i* Sn	**Sb**	**15 01 08.9**	**-4.5**
STIP				*e*Lg	Lg	15 01 09.6	
comp=E,75nm,0.3s							
ULC	**Ulcinj**	**3.73**	**347**	*e*Pn	**Pn**	**15 00 22.0**	**-0.1**
ULC				*e*Sn	**Sn**	**15 01 06.5**	**+0.5**
SKO	**Skopje**	**3.74**	**13**	*i* Pn	**Pn**	**15 00 23.9**	**+1.7**
SKO				*i* Sn	**Sn**	**15 01 07.2**	**+1.0**
SKO				*e*Lg	Lg	15 01 12.9	
comp=E,52nm,0.8s							
MIGL	**Miglionico**	**3.78**	**308**	P	**Pn**	**15 00 25.1**	**+2.3**
MIGL				AML	AML		
comp=E,6585μm,1.2s							
MIGL				AML	AML		
comp=N,6965μm,1.1s							
SG1	**Sgolgore (BA)**	**3.78**	**313**	*e*Pn	**Pn**	**15 00 24.5**	**+1.7**
SCHR	**S. Chirico Rap**	**3.80**	**301**	P	**Pn**	**15 00 26.5**	**+3.3**
SCHR				AML	AML		
comp=E,901μm,0.9s							
SCHR				AML	AML		
comp=N,906μm,1.5s							
AMUR	**Altamura**	**3.87**	**313**	P	**Pn**	**15 00 25.4**	**+1.4**
AMUR				AML	AML		
comp=N,1790μm,1.6s							
AMUR				AML	AML		
comp=E,2495μm,0.7s							
SIRI	**Monte Sirino -**	**3.93**	**299**	P	**Pn**	**15 00 28.2**	**+3.2**
DRME	**Dracevica, Mon**	**3.96**	**347**	*e*Pn	**Pn**	**15 00 25.0**	**-0.2**
DRME	**Dracevica, Mon**	**3.96**	**347**⇑*i*Pn	**Pn**	**Pn**	**15 00 25.0**	**-0.2**
DRME				*e*Sn	**Sn**	**15 01 11.9**	**+0.3**
MCEL	**Monticello**	**4.04**	**301**	P	**Pb**	**15 00 31.9**	**-4.0**
MCEL				AML	AML		
comp=E,1170μm,1.5s							
MCEL				AML	AML		
comp=N,1200μm,1.0s							
MCEL				AML	AML		
comp=N,1190μm,1.0s							
MCEL				AML	AML		
comp=E,1179μm,1.5s							
MCEL	**Monticello**	**4.04**	**301**	P	**Pb**	**15 00 31.9**	**-4.0**
KKB	**Krupnik**	**4.12**	**30**	*e*P	**Pb**	**15 00 35.2**	**-1.9**
BUM	**Brajici-Budva**	**4.12**	**345**	*e*Pn	**Pn**	**15 00 27.4**	**-0.1**
BUM				*e*Sn	**Sn**	**15 01 15.8**	**+0.1**
MGR	**Morigerati**	**4.13**	**297**	P	**Pn**	**15 00 30.8**	**+3.2**
MGR	**Morigerati**	**4.13**	**297**	P	**Pn**	**15 00 30.8**	**+3.2**
MGR				AML	AML		
comp=N,992μm,1.4s							
MGR				AML	AML		
comp=N,742μm,0.8s							
MGR				AML	AML		
comp=E,870μm,1.6s							
MGR				AML	AML		
comp=E,712μm,1.6s							
PDG	**Podgorica**	**4.18**	**349**	*e*Pn	**Pn**	**15 00 29.0**	**+0.7**
PDG				*e*Sn	**Sn**	**15 01 18.3**	**+1.2**
PDG	**Podgorica**	**4.18**	**349**⇓P		**Pn**	**15 00 28.1**	**-0.2**
PDG	**Podgorica**	**4.18**	**349**⇑*i*Pn		**Pn**	**15 00 28.5**	**+0.2**
PDG	**Podgorica**	**4.18**	**349**		**Pn**	**15 00 27.4**	**-0.9**
TTG	**Podgorica**	**4.18**	**349**	*e*Pn	**Pn**	**15 00 28.1**	**-0.2**
TTG				*e*Sn	**Sn**	**15 01 17.2**	**+0.1**
SLCN	**Sala Consilina**	**4.19**	**301**	P	**Pn**	**15 00 32.5**	**+4.0**
SLCN	**Sala Consilina**	**4.19**	**301**	P	**Pn**	**15 00 32.5**	**+4.0**
SLCN				AML	AML		
comp=N,1345μm,1.0s							
SLCN				AML	AML		
comp=E,2070μm,0.8s							
ACER	**Acerenza**	**4.19**	**307**	P	**Pn**	**15 00 30.7**	**+2.2**
ACER	**Acerenza**	**4.19**	**307**	P	**Pn**	**15 00 30.7**	**+2.2**
ACER	**Acerenza**	**4.19**	**307**		**Pn**	**15 00 29.5**	**+1.0**
MRVN	**Minervino Murg**	**4.20**	**312**	P	**Pn**	**15 00 30.4**	**+1.8**
MRVN	**Minervino Murg**	**4.20**	**312**	P	**Pn**	**15 00 30.4**	**+1.8**
MRVN				AML	AML		
comp=E,1480μm,1.1s							
MRVN				AML	AML		
comp=N,1225μm,0.9s							
PALZ	**Palazzo San Ge**	**4.27**	**309**	P	**Pn**	**15 00 31.7**	**+2.1**
PALZ				AML	AML		
comp=N,5510μm,0.9s							
PALZ				AML	AML		
comp=E,4675μm,1.6s							
PALZ	**Palazzo San Ge**	**4.27**	**309**	P

MRLC AML AML
comp=E,1190µm,0.9s
MRLC AML AML
comp=N,712µm,1.4s
MRLC AML AML
comp=E,1295µm,1.0s
MRLC AML AML
comp=N,805µm,1.4s
BOSS Bosilegrad 4.47 21 *e*Pn **Pn 15 00 33.3 +0.9**
BOSS *e*Sn **Sn 15 01 24.1 -0.3**
IVA Berane 4.55 356 *e*Pn **Pn 15 00 34.1 +0.6**
IVA *e*Sn **Sn 15 01 26.0 -0.4**
NKME Niksic 4.56 347⇓ *i*Pn **Pn 15 00 33.5 -0.1**
NKME *e*Sn **Sn 15 01 26.1 -0.4**
KOME Kolasin 4.56 352 *e*Pn **Pn 15 00 34.0 +0.4**
KOME *e*Sn **Sn 15 01 26.6 -0.1**
HVZN Vizzini 4.60 257 P **Pn 15 00 33.7 -0.5**
HVZN S **Sn 15 01 24.5 -3.1**
BARS Barje 4.62 14 *e*Pn **Pn 15 00 35.3 +0.9**
BARS Barje 4.62 14 *e*Pn **Pg 15 00 51.4 -1.8**
BARS *e*Sn **Sn 15 01 27.1 -1.0**
TREB Trebinje 4.64 342 *e*Pn **Pn 15 00 33.9 -0.7**
DBRK Dubrovnik 4.65 340 *e*Pn **Pn 15 00 34.3 -0.5**
DBRK Sn **Sn 15 01 27.3 -1.4**
SNAL S. Angelo Dei 4.73 305 P **Pn 15 00 38.8 +2.8**
SNAL S. Angelo Dei 4.73 305 P **Pn 15 00 38.8 +2.8**
SNAL AML AML
comp=N,1155µm,1.6s
SNAL AML AML
comp=E,11005µm,1.4s
SNAL AML AML
comp=N,15250µm,1.4s
SNAL AML AML
comp=E,1355µm,0.8s
IDI Anoyia 4.75 128 Pn **Pn 15 00 38.3 +2.2**
comp=E,1.6nm,0.3s,baz=295,slow=14,SNR=5.0
IDI Sn **Sn 15 01 33.2 +2.0**
comp=E,11nm,0.3s,baz=172,slow=23,SNR=12
RZN Rozhen 4.75 44 *e*P **Pn 15 00 38.6 +2.3**
SGTA Sant Agata di 4.75 308 P **Pn 15 00 38.8 +2.5**
SGTA Sant Agata di 4.75 308 P **Pn 15 00 38.8 +2.5**
SGTA AML AML
comp=E,1235µm,0.9s
SGTA AML AML
comp=N,946µm,0.8s
SGTA AML AML
comp=E,1284µm,0.9s
SGTA AML AML
comp=N,843µm,0.8s
VAE Valguarnera 4.76 262 Pn **Pn 15 00 39.6 +3.3**
comp=N,1.4nm,0.3s,baz=345,slow=16,SNR=3.4
VAE Sn **Sn 15 01 30.9 -0.6**
comp=N,3.2nm,0.3s,baz=31,slow=18,SNR=2.8
BRY Bratogost 4.77 344 *e*Pn **Pn 15 00 37.1 +0.6**
BRY *i* Sn **Sn 15 01 31.7 -0.2**
MSAG Monte S. Angel 4.79 316 P **Pn 15 00 38.2 +1.4**
VTS Vitosha 4.82 26 *e*Pn **Pn 15 00 39.0 +1.8**
VTS *e*Sn **Sn 15 01 33.5 +0.3**
VTS Vitosha 4.82 26 P **Pn 15 00 38.4 +1.2**
VTS Vitosha 4.82 26⇑P **Pn 15 00 39.1 +1.8**
VTS Vitosha 4.82 26⇑S **Sn 15 01 33.7 +0.6**
VTS Vitosha 4.82 26 *e*P **Pn 15 00 38.5 +1.2**
VTS Vitosha 4.82 26 **Pn 15 00 38.4 +1.2**
SGRT San Giovanni R 4.91 316 **Pn 15 00 38.7 +0.2**
SELS Selova 4.92 7 *e*Pn **Pn 15 00 38.8 +0.3**
SJES Sjenica 4.94 357 *e*Pn **Pn 15 00 39.8 +1.0**
SJES *e*Sn **Sn 15 01 36.9 +0.9**
STON Ston 4.96 337 *e*Pn **Pn 15 00 38.8 -0.3**
STON Sn **Sn 15 01 33.4 -3.0**
STON Ston 4.96 337 *e*Pn **Pn 15 00 39.0 0.0**
STON *e*Sn **Sn 15 01 35.2 -1.2**
STON Ston 4.96 337 *e*Pn **Pn 15 00 38.1 -0.9**
UPM Unac-Piva 4.99 348 *e*Pn **Pn 15 00 39.3 -0.3**
UPM Unac-Piva 4.99 348 *e*Pn **Pn 15 00 39.6 0.0**
UPM *e*Sn **Sn 15 01 37.1 -0.3**
PLE Pljevlja 5.05 352 *e*Pn **Pn 15 00 40.6 +0.2**
PLE *e*Sn **Sn 15 01 37.7 -1.0**
ALN Alexandroupoli 5.10 58 P **Pn 15 00 42.0 +1.1**
ALN Alexandroupoli 5.10 58 **Pn 15 00 42.0 +1.1**
KDZ Kurdzhali 5.12 48 *e*P **Pn 15 00 42.1 +0.9**
PAOL Paolisi 5.21 303 **Pn 15 00 44.0 +1.6**
ZAPS Zavoj 5.24 19 *e*Pn **Pn 15 00 43.5 +0.6**
IVAS Ivanjica 5.25 359 *e*Pn **Pn 15 00 43.0 0.0**
IVAS *e*Sn **Sn 15 01 43.8 +0.3**
GATE Gambatesa 5.25 309 P **Pn 15 00 46.7 +3.7**
GATE Gambatesa 5.25 309 P **Pn 15 00 46.7 +3.7**
GATE AML AML
comp=E,718µm,0.4s
GATE AML AML
comp=E,562µm,0.5s
GATE AML AML
comp=N,1032µm,1.1s
GATE AML AML
comp=N,1057µm,1.0s
WDD Wied Dalam 5.27 244 **Pn 15 00 43.5 +0.2**
SACR S. Croce Del S 5.31 307 P **Pn 15 00 47.1 +3.2**
SACR S. Croce Del S 5.31 307 P **Pn 15 00 47.1 +3.2**
SACR AML AML
comp=N,376µm,1.0s
SACR AML AML
comp=E,276µm,1.3s
RUDO Rudo 5.34 352 *e*Pn **Pn 15 00 43.9 -0.3**
BOVS Bovan 5.40 11 *e*Pn **Pn 15 00 45.0 -0.1**
BOVS *e*Sn **Sn 15 01 46.4 -0.8**
DIM Dimitrovgrad 5.45 45 *e*P **Pn 15 00 48.6 +2.9**
BSSO Busso 5.46 308 P **Pn 15 00 49.3 +3.3**
BSSO Busso 5.46 308 P **Pn 15 00 49.3 +3.3**
BSSO AML AML
comp=E,438µm,1.1s
BSSO AML AML
comp=E,186µm,1.0s
BSSO AML AML
comp=N,232µm,0.9s
BSSO AML AML
comp=N,600µm,0.9s
MAKA Makarska 5.56 334 *e*Pn **Pn 15 00 47.5 +0.3**
MAKA Sn **Sn 15 01 48.1 -2.9**
CORL Corleone 5.56 268 Pn **Pn 15 00 48.9 +1.5**
GRUS Gruza 5.56 3 *e*Pn **Pn 15 00 47.3 0.0**
GRUS *e*Sn **Sn 15 01 50.9 -0.3**
BBLS Lazići 5.58 353 *e*Pn **Pn 15 00 47.7 +0.1**
BBLS Lazići 5.58 353 *e*Pn **Pn 15 00 46.8 -0.8**
TRIV Trivento 5.61 310 P **Pn 15 00 51.1 +3.0**
TRIV Trivento 5.61 310 P **Pn 15 00 51.1 +3.0**
TRIV AML AML
comp=N,710µm,1.4s
TRIV AML AML
comp=E,964µm,1.0s
MPEP Malo Peshtene 5.65 26 *e*P **Pn 15 00 51.2 +2.7**
DIVS Divibare 5.77 358 *e*Pn **Pn 15 00 50.1 -0.2**
DIVS *e*Sn **Sn 15 01 54.6 -1.9**
DIVS Divibare 5.77 358⇑ *i*Pn **Pn 15 00 49.7 -0.6**
HAPS Han Pijesak,BI 5.85 350 *e*Pn **Pn 15 00 50.2 -1.1**
TRUS Trudelj 5.89 0 *e*Pn **Pn 15 00 51.8 0.0**
TRUS *e*Sn **Sn 15 01 59.0 -0.3**
LPEL Lama dei Pelig 6.00 310 P **Pn 15 00 56.2 +2.8**
LPEL AML AML
comp=E,443µm,0.6s
LPEL AML AML
comp=N,298µm,0.7s
LPEL Lama dei Pelig 6.00 310 P **Pn 15 00 56.2 +2.8**
CAFR Castel Frentan 6.01 312 P **Pn 15 00 56.1 +2.6**
CAFR AML AML
comp=E,2245µm,0.6s
CAFR AML AML
comp=N,1645µm,0.6s
CAFR Castel Frentan 6.01 312 P **Pn 15 00 56.1 +2.6**
KARP Karpathos 6.13 115 Pn **Pn 15 00 58.1 +3.0**
INTR Introdacqua 6.15 309 P **Pn 15 00 58.6 +3.1**
INTR Introdacqua 6.15 309 P **Pn 15 00 58.6 +3.1**
INTR AML AML
comp=N,783µm,0.8s
INTR AML AML
comp=E,466µm,1.2s
INTR Introdacqua 6.15 309 **Pn 15 00 57.6 +2.2**
KUBS Kucevo 6.16 9 *e*Pn **Pn 15 00 56.4 +0.9**
ELND Elena 6.23 41⇑P **Pn 15 00 57.5 +0.9**
TEKS Tekeris 6.25 355 *e*Pn **Pn 15 00 55.8 -0.9**
TEKS *e*Sn **Sn 15 02 04.9 -3.2**
TEKS Tekeris 6.25 355 *e*Pn **Pn 15 00 55.1 -1.6**
ZIRJ Zirje 6.40 328 *i*Pn **Pn 15 00 58.6 -0.1**
ZIRJ Sn **Sn 15 02 08.3 -3.4**
KIJV Kijevo 6.40 334 *i*Pn **Pn 15 00 59.6 +0.8**
KIJV Sn **Sn 15 02 10.4 -1.5**
MDVR Moldovita 6.53 9⇑P **Pn 15 01 00.7 +0.1**
MORI Morici 6.54 329 *i*Pn **Pn 15 01 01.5 +0.8**
MGRS Mrkonjic Grad 6.56 339 *e*Pn **Pn 15 01 01.8 +0.8**
DOB Doboj 6.62 346 *e*Pn **Pn 15 00 59.7 -2.1**
AQU L'Aquila 6.65 309 P **Pn 15 01 03.5 +1.2**
AQU L'Aquila 6.65 309 *e*Pn **Pn 15 01 05.6 +3.3**
AQU L'Aquila 6.65 309 **Pn 15 01 03.5 +1.2**
HERR Herculane 6.73 13⇑P **Pn 15 01 03.8 +0.5**
LAV9 Lanuvio 6.75 302 P **Pb** 15 01 15.7 -6.3
CAMP Campotosto 6.75 311 P **Pn 15 01 06.8 +3.0**
CAMP AML AML
comp=E,170µm,0.6s
CAMP AML AML
comp=N,232µm,0.7s
CAMP Campotosto 6.75 311 P **Pn 15 01 06.8 +3.0**
RMP Rome, Mte Porz 6.81 303 P **Pn** 15 01 11.1 +6.6
RMP Rome, Mte Porz 6.81 303 P **Pn** 15 01 11.1 +6.6
FRGS Fruska Gora 6.84 357 *e*Pn **Pn 15 01 03.6 -1.2**
FRGS *e*Sn **Sn 15 02 20.4 -2.2**
FRGS Fruska Gora 6.84 357⇑ *i*Pn **Pn 15 01 02.8 -2.0**
BLY Banja Luka 6.84 341⇑P **Pn 15 01 05.4 +0.6**
BLY Banja Luka 6.84 341 *e*Pn **Pn 15 01 04.2 -0.6**
BLY Banja Luka 6.84 341 **Pn 15 01 04.3 -0.5**
SMA1 SAN MARTINO 6.85 311 P **Pn 15 01 08.1 +3.0**
SMA1 AML AML
comp=E,385µm,1.5s
SMA1 AML AML
comp=N,383µm,1.2s
SMA1 SAN MARTINO 6.85 311 P **Pn 15 01 08.1 +3.0**
DUGI Dugi Otok 6.92 327 *e*Pn **Pn 15 01 07.0 +1.0**
LNSS Leonessa 7.01 310 P **Pn 15 01 11.1 +3.8**
LNSS AML AML
comp=N,260µm,0.4s
LNSS AML AML
comp=E,272µm,0.7s
LNSS Leonessa 7.01 310 P **Pn 15 01 11.1 +3.8**
UDBI Udbina 7.08 332 *i*Pn **Pn 15 01 09.7 +1.5**
UDBI Sn **Sn 15 02 28.4 -0.3**
NRCA Norcia 7.10 312 **Pn 15 01 10.5 +1.9**
HUMR Humele 7.11 28⇑P **Pn 15 01 10.2 +1.7**
ARRO Arrone 7.17 309 P **Pn 15 01 13.7 +4.4**
ARRO Arrone 7.17 309 P **Pn 15 01 13.7 +4.4**
FDMO Fiordimonte 7.24 313 P **Pn 15 01 13.3 +2.9**
GZR Gura Zlata 7.29 14⇓P **Pn 15 01 11.6 +0.5**
BZS Buzias 7.35 7 *e*Pn **Pn 15 01 11.1 -0.7**
BZS Buzias 7.35 7⇓P **Pn 15 01 12.4 +0.6**
EL6 Elcito 7.42 315 P **Pn 15 01 14.6 +1.8**
NVLJ Novalja 7.46 328 *e*Pn **Pn 15 01 14.0 +0.7**
ASSB Assisi San Ben 7.50 311 P **Pn 15 01 17.1 +3.2**
ASSB Assisi San Ben 7.50 311 P **Pn 15 01 17.1 +3.2**
FOSV Fossato di Vic 7.59 313 P **Pn 15 01 16.9 +1.7**
ATCC AVT- Casa Cast 7.59 312 P **Pn 15 01 18.9 +3.7**
ARVD Arcevia 7.62 315 P **Pn 15 01 18.1 +2.5**
ARVD Arcevia 7.62 315 P **Pn 15 01 18.1 +2.5**
SSFR Montelago di S 7.67 314 P **Pn 15 01 18.4 +2.1**
SSFR Montelago di S 7.67 314 P **Pn 15 01 18.4 +2.1**
MURB Monte Urbino 7.71 312 **Pn 15 01 18.8 +2.0**
ATFO Monte Foce - G 7.74 313 P **Pn 15 01 20.1 +2.7**
ATFO Monte Foce - G 7.74 313 P **Pn 15 01 20.1 +2.7**
ELL Elmali 7.76 99 P **Pn 15 01 20.5 +2.8**
ELL Elmali 7.76 99 **Pn 15 01 20.4 +2.8**
ATVO AVT- Monte Val 7.85 313 P **Pn 15 01 22.0 +3.3**
ATVO AVT- Monte Val 7.85 313 P **Pn 15 01 22.0 +3.3**
VOIR 7.92 25⇑P **Pn 15 01 21.8 +2.0**
MORH Mrgy, Hungar 7.98 351 *e*Pn **Pn 15 01 18.7 -1.8**
BADI Badiali 8.02 313 P **Pn 15 01 24.3 +3.2**
BADI Badiali 8.02 313 P **Pn 15 01 24.3 +3.2**
ISP Isparta 8.05 90 P **Pn 15 01 24.5 +3.0**
ISP Isparta 8.05 90 **Pn 15 01 24.5 +3.0**
OZLJ Ozalj 8.13 335 *i*Pn **Pn 15 01 22.8 +0.2**
ZAG Zagreb 8.16 338 *e*Pn **Pn 15 01 22.7 -0.2**
RIY Rijeka 8.24 330 *e*Pn **Pn 15 01 24.4 +0.3**
MLR Muntele Rosu 8.29 28 Pn **Pn 15 01 29.4 +4.6**
comp=E,0.9nm,0.3s,baz=181,slow=6.3,SNR=11
MLR Sn **Sn 15 03 01.7 +3.3**
comp=E,1.1nm,0.3s,baz=153,slow=15,SNR=2.1
MLR Muntele Rosu 8.29 28⇑P **Pn 15 01 27.1 +2.3**
MLR Muntele Rosu 8.29 28 **Pn 15 01 26.2 +1.4**
GBRS Gornja Briga 8.29 332⇑ *i*Pn **Pn 15 01 25.4 +0.6**
CRES Cresnjev 8.32 336⇑ *i*Pn **Pn 15 01 24.9 -0.3**
CRES *e*Sn **Sn 15 02 54.4 -4.7**
CRES Cresnjev 8.32 336⇑ *i*Pn **Pn 15 01 24.9 -0.3**
SFI Santa Sofia 8.49 314 P **Pn 15 01 31.3 +3.8**
DOPR Dopca 8.51 25⇑P **Pn 15 01 29.1 +1.4**
BEHE Becsehely 8.55 343 *e*Pn **Pn 15 01 26.8 -1.5**
CEY Cerknica 8.61 331⇑ *i*Pn **Pn 15 01 29.1 -0.1**
SKDS Skadanscina 8.61 329 *i*Pn **Pn 15 01 29.1 0.0**
OSSC Osservatorio P 8.62 310 **Pn 15 01 30.3 +1.1**
TIRR Tirgusor 8.62 42 P **Pn 15 01 30.2 +1.0**
TIRR Tirgusor 8.62 42 Pn **Pn 15 01 30.2 +1.0**
DRGR 8.64 11 P **Pn 15 01 33.0 +3.4**
DRGR 8.64 11⇑P **Pn 15 01 30.4 +0.8**
MDUB Mudurnu 8.68 72 Pn **Pn 15 01 32.4 +2.3**
OZUR 8.75 26⇑P **Pn 15 01 32.7 +1.6**
LJU Ljubljana 8.83 333 *i*Pn **Pn 15 01 32.4 +0.2**
LJU Ljubljana 8.83 333 *e*Pn **Pn 15 01 32.3 +0.2**
PLOR Plostina 8.86 30 P **Pn 15 01 33.7 +1.2**
PLOR Plostina 8.86 30⇑P **Pn 15 01 33.8 +1.2**
VRI Vrincioaia 8.90 30 P **Pn 15 01 37.9 +4.8**
VRI Vrincioaia 8.90 30⇑P **Pn 15 01 34.2 +1.1**
KEST Kesra 9.16 257 Pn **Pn 15 01 37.9 +1.1**
comp=E,0.4nm,0.3s,baz=112,slow=19,SNR=2.4
SOKA Soboth 9.22 337 Pn **Pn 15 01 36.7 -0.8**
comp=E,35nm,0.4s,SNR=15
SOKA Sn **Sn 15 03 14.5 -6.7**
comp=E,14nm,0.6s
OBKA Obir 9.23 334 *e*Pn **Pn 15 01 38.4 +0.8**
OBKA *e*Sn **Sn 15 03 19.0 -2.5**
OBKA Obir 9.23 334 *e*Pn **Pn 15 01 37.7 +0.1**
comp=E,14nm,0.4s,SNR=20
OBKA Sn **Sn 15 03 17.0 -4.5**
comp=E,44nm,0.5s
ZCCA Zocca 9.26 314 P **Pn 15 01 37.6 -0.4**
ZCCA Zocca 9.26 314 P **Pn 15 01 37.6 -0.4**
TEOL Teolo 9.55 320 **Pn 15 01 41.2 -0.8**
ARSA Arzberg 9.59 340 *e*Pn **Pn 15 01 41.6 -0.9**
ARSA *e*Sn **Sn 15 03 24.6 -5.7**
ARSA Arzberg 9.59 340 *e*Pn **Pn 15 01 41.7 -0.9**
comp=E,6.8nm,0.4s,SNR=21
ARSA *e*Sn **Sn 15 03 24.7 -5.7**
comp=E,6.2nm,0.5s
PSZ Piszkesteto 9.59 358 P **Pn 15 01 43.1 +0.4**
PSZ Piszkesteto 9.59 358⇑P **Pn 15 01 42.1 -0.6**
PSZ Piszkesteto 9.59 358 **Pn 15 01 43.1 +0.4**
MYKA Terra Mystica 9.66 331 *e*Pn **Pn 15 01 43.7 +0.2**
comp=E,8.3nm,0.4s,SNR=11
MYKA Sn **Sn 15 03 27.0 -4.9**
comp=E,11nm,0.5s
STAL STALIGIAL 9.73 327 P **Pn 15 01 46.1 +1.6**
STAL STALIGIAL 9.73 327 **Pn 15 01 43.5 -1.0**
BURAR Bucovina Array 9.95 19 P **Pn 15 01 49.1 +1.6**
BURAR Bucovina Array 9.95 19⇑P **Pn 15 01 49.1 +1.6**
BUR08 Bucovina Ar. S 9.97 19 Pn **Pn 15 01 48.5 +0.7**
CTI Castel Tesino 10.05 323 P **Pn 15 01 48.2 -0.7**
CTI Castel Tesino 10.05 323 **Pn 15 01 48.2 -0.7**
CONA Conrad Observa 10.14 343 *e*Pn **Pn 15 01 49.2 -0.9**
comp=E,2.7nm,0.4s
ZST Bratislava 10.14 348 *e*SN **Sn 15 03 36.6 -7.1**
KBA Koelnbreinsper 10.14 332 *e*Pn **Pn 15 01 50.5 +0.2**
KBA Koelnbreinsper 10.14 332 *e*Pn **Pn 15 01 50.3 0.0**
comp=E,5.0nm,0.4s,SNR=6.9
KBA Sn **Sn 15 03 39.5 -4.5**
comp=E,22nm,0.6s
ABTA Abfaltersbach 10.20 328 Pn **Pn 15 01 51.2 +0.2**
comp=E,11nm,0.5s,SNR=12
ABTA *e*Sn **Sn 15 03 41.3 -4.0**
comp=E,30nm,0.5s
VYHS Vyhne 10.22 354 *e*P **Pn 15 01 51.1 -0.1**
VYHS *e* 15 03 42.0
VYHS Vyhne 10.22 354 *e*PN **Pn 15 01 51.1 -0.1**
VYHS *e*SN **Sn 15 03 42.0 -3.7**
MODS Modra-Piesok 10.29 348 *e*P **Pn 15 01 51.1 -1.0**
MODS *e* 15 03 41.8
MODS Modra-Piesok 10.29 348 *e*PN **Pn 15 01 51.1 -1.0**
MODS *e*SN **Sn 15 03 41.8 -5.5**
SALO Salr 10.31 318 **Pn 15 01 51.5 -0.9**
UZH Uzhgorod 10.40 7 *e*P Pn 15 01 58.6 +5.0
SMOL Smolenice 10.40 349 *e*P **Pn 15 01 57.7 +4.1**
SMOL Smolenice 10.40 349 *e*PN **Pn 15 01 57.7 +4.1**
BR131 Keskin Array S 10.44 78 *e*P **Pn 15 01 55.2 +0.8**
BR131 Keskin Array S 10.44 78 **Pn 15 01 56.8 +2.4**
BRTR Keskin Array B 10.44 78 Pn **Pn 15 01 58.1 +3.7**
comp=E,1.0nm,0.3s,baz=262,slow=12,SNR=26
MOA Molln 10.50 337 *e*Pn **Pn 15 01 55.1 +0.1**
MOA *e*Sn **Sn 15 03 48.0 -4.5**
MOA Molln 10.50 337 *e*Pn **Pn 15 01 55.0 0.0**
comp=E,14nm,0.3s,SNR=14
MOA Sn **Sn 15 03 46.6 -5.9**
comp=E,12nm,0.4s
CRVS Cervenica-Dubn 10.60 4 *e*P **Pn 15 01 59.5 +3.1**
CRVS Cervenica-Dubn 10.60 4 *e*PN **Pn 15 01 59.5 +3.1**
KOLS Kolonicke sedl 10.70 7 *e*P **Pn 15 02 00.5 +2.8**
KOLS Kolonicke sedl 10.70 7 *e*PN **Pn 15 02 00.5 +2.8**
JAVC Velka Javorina 10.70 350 *e*PN **Pn 15 01 57.9 +0.1**
RJOB Jochberg 10.90 332 *e*Pn **Pn 15 02 00.9 +0.3**
RJOB *e*Sn **Sn 15 03 58.9 -3.6**
CSS Mathiatis 10.96 104 Pn **Pn 15 02 02.5 +1.1**
WTTA Wattenberg 10.98 327 *e*Pn **Pn 15 02 02.3 +0.6**
WTTA Wattenberg 10.98 327 *e*Pn **Pn 15 02 02.3 +0.6**
comp=E,17nm,0.5s,SNR=20
WTTA Sn **Sn 15 04 00.3 -4.1**
comp=E,60nm,0.6s
WATA Walderalm 11.06 327 Pn **Pn 15 02 03.8 +1.0**
comp=E,21nm,0.5s,SNR=22
KRUC Moravsky 11.10 346 *e*PN **Pn 15 02 03.5 +0.3**
SQTA Sankt Quirin 11.13 326 *e*Pn **Pn 15 02 05.4 +1.7**
comp=E,9.9nm,0.3s,SNR=11
FUORN Ofenpass-Fuorn 11.13 321 **Pn 15 02 03.9 +0.1**
FETA Feichten 11.20 324 Pn **Pn 15 02 05.8 +1.2**
comp=E,2.6nm,0.4s
MOTA Moosalm 11.27 326 *e*Pn **Pn 15 02 07.2 +1.5**
comp=E,14nm,0.5s,SNR=16
MOTA Sn **Sn 15 04 10.2 -1.4**
comp=E,16nm,0.5s
VRAC Vranov 11.30 347 Pn **Pn 15 02 03.9 -2.1**
comp=E,0.1nm,0.3s,baz=165,slow=8.2,SNR=4.4
VRAC Vranov 11.30 347 *e*PN **Pn 15 02 05.7 -0.3**
DAVOX Davos/Dischmat 11.43 321 Pn **Pn 15 02 08.7 +0.8**
comp=E,1.4nm,0.3s,baz=150,slow=16,SNR=10
DAVOX Sn **Sn 15 04 12.9 -2.7**
comp=E,1.3nm,0.3s,baz=179,slow=15,SNR=3.6
RETA Reutte 11.53 326 *e*Pn **Pn 15 02 10.2 +1.0**
comp=E,7.0nm,0.5s,SNR=11
RETA Sn **Sn 15 04 14.4 -3.4**
comp=E,9.2nm,0.4s
GEC2 GERESS Array S 11.56 338 *e*Pn **Pn 15 02 08.8 -0.8**
GEC2 *e*Sn **Sn 15 04 13.3 -5.3**
GEC2 GERESS Array S 11.56 338 **Pn 15 02 08.3 -1.2**
GERES GERESS Array B 11.56 338 Pn **Pn 15 02 08.5 -1.1**
comp=E,1.3nm,0.3s,baz=154,slow=13,SNR=25
GERES Sn **Sn 15 04 12.2 -6.4**
comp=E,1.1nm,0.3s,baz=158,slow=23,SNR=4.6
MORC Moravsky Berou 11.62 351 P **Pn 15 02 10.1 -0.3**
MORC Moravsky Berou 11.62 351⇑P **Pn 15 02 10.6 +0.2**
MORC Moravsky Berou 11.62 351 *e*PN **Pn 15 02 10.2 -0.2**
MORC Moravsky Berou 11.62 351 Pn **Pn 15 02 10.1 -0.2**
DAVA Damuels 11.79 323 *e*Sn **Sn 15 04 22.1 -2.2**
KHC Kasperske Hory 11.85 338 *e*P **Pn 15 02 11.9 -1.5**
KHC *e* 15 04 17.9
KHC Kasperske Hory 11.85 338 *e*PN **Pn 15 02 11.9 -1.5**
KHC *e*SN **Sn 15 04 17.9 -7.7**
KHC Kasperske Hory 11.85 338 **Pn 15 02 12.0 -1.5**
KRLC Kraliky 12.02 349 *e*P **Pn 15 02 16.1 +0.3**
KRLC Kraliky 12.02 349 *e*PN **Pn 15 02 16.1 +0.3**
WET Wettzell 12.08 336 *e*Pn **Pn 15 02 16.7 +0.1**
GOPC GO Pecny, Ondr 12.25 343 *e*P **Pn 15 02 18.7 -0.2**
GOPC GO Pecny, Ondr 12.25 343 *e*PN **Pn 15 02 18.7 -0.2**
PRU Pruhonice 12.37 342 *e*P **Pn 15 02 20.0 -0.6**
PRU Pruhonice 12.37 342 *e*PN **Pn 15 02 20.0 -0.6**
SENIN Lac Senin/Sane 12.54 314 **Pn 15 02 23.6 +0.5**
NORI Noerdlinger Ri 12.54 329 *e*Pn **Pn 15 02 22.1 -0.9**
NKC Novy Kostel 13.17 337 *e*P **Pn 15 02 30.3 -1.2**
NKC Novy Kostel 13.17 337 *e*PN **Pn 15 02 30.3 -1.2**
STU Stuttgart 13.19 326 P **Pn 15 02 30.6 -1.1**
STU Stuttgart 13.19 326 **Pn 15 02 30.6 -1.1**
BFO Black Forest 13.26 323 P **Pn 15 02 32.9 +0.1**
BFO Black Forest 13.26 323 *e*Sn **Sn 15 04 56.6 -3.6**
BFO Black Forest 13.26 323 Pn **Pn 15 02 32.9 +0.1**
BRG Berggiesshubel 13.34 342 *e*P **Pn 15 02 32.6 -1.1**
comp=E,4.8nm,1.1s
BRG Berggiesshubel 13.34 342 *e*P **Pn 15 02 32.6 -1.1**
BRG pmax pmax
comp=Z,5.0nm,1.1s
MMAI Mount Meron Ar 13.34 109 Pn **Pn 15 02 32.6 -1.3**
comp=Z,1.3nm,0.3s,baz=312,slow=13,SNR=3.5
MMAI Sn **Sn** 15 04 51.2 -11
comp=Z,1.5nm,0.3s,baz=269,slow=28,SNR=2.8
ECH Echery 13.76 320 P **Pn 15 02 39.9 +0.3**
ECH Echery 13.76 320 Pn **Pn 15 02 39.9 +0.3**
MOX Moxa 13.79 336 P **Pn 15 02 39.9 0.0**
MOX Moxa 13.79 336 *e*Pn **Pn 15 02 40.6 +0.7**
AKASG Malin Array Be 13.89 24 Pn **Pn 15 02 41.1 -0.1**
comp=Z,1.5nm,0.3s,baz=211,slow=12,SNR=1.4
AKASG Sn **S 15 05 32.3 -5.1**
comp=Z,0.5nm,0.3s,baz=210,slow=22,SNR=1.5
AKBB Malin Array Si 13.89 24 P **Pn 15 02 40.3 -0.9**
AKBB Malin Array Si 13.89 24 Pn **Pn 15 02 40.3 -0.9**
CLL Collm 13.97 341 *e*P **Pn** 15 02 37.0 -5.4
CLL Collm 13.97 341 *e*PP **P 15 02 52.0 +1.5**
TNS Taunus Mts 14.60 328 *e*Sn **Sn 15 05 26.7 -6.2**
ASF Jabal al Asfar 14.85 109 Pn **Pn 15 02 51.7 -2.9**
comp=Z,0.3nm,0.3s,baz=207,slow=9.0,SNR=2.1
ASF Sn **Sn 15 05 34.8 -4.3**
comp=Z,0.3nm,0.3s,baz=236,slow=11,SNR=1.8
EIL Elat 14.87 121 Pn **Pn 15 02 54.9 +0.2**
comp=Z,0.4nm,0.3s,baz=12,slow=19,SNR=4.4
EIL Sn Sn 15 05 23.6 -16
comp=Z,0.2nm,0.3s,baz=29,slow=19,SNR=2.2
SUW Suwalki 15.81 6 P **Pn 15 03 07.3 +0.3**
SUW pmax pmax
comp=Z,40nm,0.6s
SUW Suwalki 15.81 6 Pn **Pn 15 03 07.3 +0.3**
SUW IAmb IAmb 15 03 15.2
comp=Z,40nm,0.6s
NACGM Naroch 17.15 13 *e* **Pn 15 03 23.0 -1.0**
NEY Neytrino 17.63 67 *e*P **P 15 03 32.0 +0.7**
NEY pmax pmax
comp=Z,1.0nm,0.7s
KIV Kislovodsk 17.73 64 *e*P **P 15 03 32.5 +0.2**
KIV pmax pmax
comp=Z,25nm,1.0s
KVAR Kislovodsk Arr 17.73 64 P **P 15 03 34.4 +2.0**
baz=350,slow=6.1,SNR=2.2
KBZ Khabaz 17.84 65 P **P 15 03 33.8 +0.5**
comp=Z,0.3nm,0.3s,baz=279,slow=9.0,SNR=5.6
ZEI Tsey 18.43 69 *e*P P 15 03 32.6 -7.6
ZEI pmax pmax
comp=Z,7.0nm,0.6s
VSR Storozhevoye 18.50 40 *e*P **P 15 03 40.4 -0.2**
VSR pmax pmax
comp=Z,10.0nm,0.6s
ESDC Sonseca Array 18.93 282 P **Pn 15 03 46.2 +0.1**
comp=Z,0.4nm,0.3s,baz=79,slow=12,SNR=10
GNI Garni 18.98 77 P **Pn 15 03 48.0 +1.1**
GNI pmax pmax
comp=Z,25nm,1.1s
GNI Garni 18.98 77 P **Pn 15 03 47.2 +0.4**
comp=Z,1.0nm,0.3s,baz=2.5,slow=8.0,SNR=8.0
GNI Garni 18.98 77 P **Pn 15 03 48.0 +1.1**
GNI IAmb IAmb 15 04 44.6
comp=Z,25nm,1.1s
PAB San Pablo 19.23 281 P **Pn 15 03 49.8 0.0**
PAB pmax pmax
comp=Z,10.0nm,1.1s
PAB San Pablo 19.23 281 P **Pn 15 03 49.8 0.0**
LPSR Galich'ya Gora 19.25 36 *e*P **P 15 03 48.8 0.0**
LPSR pmax pmax
comp=Z,30nm,1.0s
VRH Novokhopyorsk 19.81 43 *e*P **Pn 15 03 59.7 +3.2**
VRH pmax pmax
comp=Z,20nm,0.6s
OBN Obninsk 20.06 28 *e*P Pn 15 03 58.8 -0.6
OBN *SP sP 15 04 03.0 +1.3
OBN 15 04 12.0
OBN pmax pmax
comp=Z,11nm,0.9s
OBN Obninsk 20.06 28 P **P 15 03 55.2 -2.4**
comp=Z,0.9nm,0.3s,baz=272,slow=24,SNR=4.2
OBN Obninsk 20.06 28 P **P 15 03 57.9 +0.3**
OBN IAmb IAmb 15 04 04.3
comp=Z,109nm,2.0s
VSU Vasula 20.57 10 *e*P **P 15 04 03.5 +0.3**
VSU pmax pmax
comp=Z,78nm,0.8s
GNBR Gunib 20.66 70 *e*P **P 15 04 05.2 +0.9**

GNBR						pmax	pmax			
	comp=Z,34nm,0.9s									
MOS	**Moscow**	**20.93**	**28**	*eP*		**P**		**15 04 06.6**	**-0.4**
MOS						pmax	pmax			
	comp=Z,54nm,0.7s									
MDT	**Midelt**	**21.00**	**262**	P		Pn		15 04 10.7	0.0
	comp=Z,2.2nm,0.9s,baz=263,slow=15,SNR=4.5									
AKT	**Akhty**	**21.21**	**73**	*eP*		**P**		**15 04 13.0**	**+2.6**
AKT				*e*				15 04 32.1		
AKT						pmax	pmax			
	comp=Z,28nm,1.2s									
PMRV	**Marv??o**	**21.59**	**282**	*eP*		**P**		**15 04 16.8**	**+2.5**
PCBR	**Castelo Branco**	**21.61**	**283**	*eP*		**P**		**15 04 14.8**	**+0.2**
PESTR	**Estremoz**	**21.81**	**280**	P		**P**		**15 04 16.4**	**-0.3**
PESTR						IAmb	IAmb	15 04 48.3		
	comp=Z,28nm,1.9s									
PVIS	**Viseu**	**21.87**	**285**	*eP*		**P**		**15 04 17.7**	**+0.3**
HFS	**Hagfors**	**22.23**	**351**	P		**P**		**15 04 20.9**	**-0.1**
	comp=Z,20nm,0.8s,baz=158,slow=9.3,SNR=18									
PMTG	**Montargil**	**22.27**	**281**	*eP*		**P**		**15 04 20.9**	**-0.8**
PCVE	**Castro Verde**	**22.35**	**277**	*eP*		**P**		**15 04 24.2**	**+1.7**
PCAS	**Casmilo, Conde**	**22.38**	**283**	*eP*		**P**		**15 04 24.3**	**+1.5**
NC602	**NORSAR Array S**	**23.10**	**349**	P		**P**		**15 04 29.4**	**-0.8**
EKA	**Eskdalemuir Ar**	**23.22**	**325**	P		**P**		**15 04 32.1**	**+0.6**
	comp=Z,6.5nm,0.8s,baz=127,slow=11,SNR=7.7									
NAO01	**NORSAR Array S**	**23.31**	**348**	P		**P**		**15 04 32.6**	**+0.3**
FINES	**FINESS Array B**	**23.42**	**7**	P		**P**		**15 04 32.0**	**-1.4**
FINES	**FINESS Array B**	**23.42**	**7**	P		**P**		**15 04 31.9**	**-1.4**
	comp=Z,5.4nm,0.6s,baz=172,slow=9.7,SNR=22									
FIA1	**FINESS Array S**	**23.42**	**7**	P		**P**		**15 04 32.0**	**-1.3**
NC405	**NORSAR Array S**	**23.44**	**349**	P		**P**		**15 04 32.3**	**-1.3**
NB201	**NORSAR Array S**	**23.44**	**349**	P		**P**		**15 04 33.5**	**-0.2**
NB2	**NORSAR Subarra**	**23.44**	**349**	P		**P**		**15 04 33.4**	**-0.3**
	comp=Z,4.4nm,0.6s,baz=149,slow=10									
NOA	**NORSAR Array B**	**23.44**	**349**	P		**P**		**15 04 33.1**	**-0.6**
	comp=Z,4.3nm,0.7s,baz=165,slow=11,SNR=14									
NBO00	**NORSAR Array S**	**23.50**	**348**	P		**P**		**15 04 34.1**	**-0.2**
NC303	**NORSAR Array S**	**23.60**	**349**	P		**P**		**15 04 34.6**	**-0.5**
NC204	**NORSAR Array S**	**23.74**	**348**	P		**P**		**15 04 36.1**	**-0.5**
KLMR	**Klimovskoe**	**25.55**	**22**	*eP*		**P**		**15 04 53.9**	**+0.8**
KLMR						pmax	pmax			
	comp=Z,18nm,0.9s									
KLMR	**Klimovskoe**	**25.55**	**22**	*eP*		**P**		**15 04 53.9**	**+0.8**
KLMR					AMP			15 04 57.8		
	comp=Z,18nm,0.9s									
RAYN	**Ar Rayn**	**26.04**	**117**	P		**P**		**15 04 59.8**	**+1.8**
RAYN						pmax	pmax			
	comp=Z,6.0nm,1.0s									
RAYN	**Ar Rayn**	**26.04**	**117**	P		**P**		**15 04 59.8**	**+1.8**
KIRV	**Kirov**	**27.61**	**33**	P		**P**		**15 05 11.2**	**-0.5**
	comp=Z,14nm,0.7s,baz=196,slow=8.9,SNR=5.5									
PRGR	**Permogore**	**28.09**	**26**	*eP*		**P**		**15 05 15.0**	**-1.0**
PRGR						pmax	pmax			
	comp=Z,12nm,0.5s									
AKTO	**Aktyubinsk**	**29.21**	**53**	P		**P**		**15 05 25.2**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=233,slow=5.7,SNR=10									
GEYT	**Alibeck**	**29.59**	**79**	P		**P**		**15 05 28.8**	**-0.8**
	comp=Z,3.5nm,0.5s,baz=275,slow=8.8,SNR=15									
GEYT	**Alibeck**	**29.59**	**79**	IAmb		IAmb		15 05 36.0		
	comp=Z,3.6nm,0.7s									
GYA0B	**ALIBECK ARRAY**	**29.59**	**79**	P		**P**		**15 05 29.2**	**-0.4**
GYA0B						IAmb	IAmb	15 05 40.5		
	comp=Z,7.2nm,0.7s									
TOA0	**Torodi Ar. Sit**	**30.06**	**218**	P		**P**		**15 05 34.9**	**+1.1**
TOA0						IAmb	IAmb	15 06 14.5		
	comp=Z,8.1nm,1.2s									
TORD	**Torodi Ar. Bea**	**30.06**	**218**	P		**P**		**15 05 34.7**	**+0.9**
	comp=Z,4.0nm,0.7s,baz=31,slow=9.3,SNR=18									
TORD	**Torodi Ar. Bea**	**30.06**	**218**	IAmb		IAmb		15 05 38.0		
	comp=Z,2.4nm,0.8s									
ABKAR	**Akbulak array**	**30.28**	**56**	P		**P**		**15 05 34.0**	**-1.5**
LVZ	**Lovozero**	**30.68**	**11**	P		**P**		**15 05 38.7**	**-0.2**
LVZ	**Lovozero**	**30.68**	**11**	P		**P**		**15 05 38.7**	**-0.2**
PMOZ	**Porto Moniz, M**	**30.87**	**271**	P		**P**		**15 05 40.2**	**-0.9**
ARU	**Arti**	**31.04**	**42**	*c i*	P	**P**		**15 05 43.8**	**+1.6**
ARU					S	**S**		**15 10 45.3**	**-1.6**
ARU					pmax	pmax				
	comp=Z,12nm,1.2s									
ARU	**Arti**	**31.04**	**42**	P		**P**		**15 05 40.8**	**-1.4**
ARCES	**ARCESS Array B**	**31.39**	**3**	P		**P**		**15 05 44.3**	**-0.9**
	comp=Z,2.2nm,0.6s,baz=193,slow=9.9,SNR=9.6									
SVE	**Sverdlovsk**	**32.26**	**42**	*eP*		**P**		**15 05 52.5**	**-0.4**
UOSS	**Minazif**	**33.11**	**103**	P		**P**		**15 05 58.6**	**-2.0**
UOSS						IAmb	IAmb	15 06 22.7		
	comp=Z,16nm,1.4s									
BRVK	**Borovoye**	**37.07**	**50**	P		**P**		**15 06 34.8**	**+0.3**
BRVK						pmax	pmax			
	comp=Z,9.0nm,1.0s									
BRVK	**Borovoye**	**37.07**	**50**	P		**P**		**15 06 34.8**	**+0.3**
BRVK						IAmb	IAmb	15 06 38.5		
	comp=Z,9.4nm,1.0s									
KK31	**Karatay Array**	**37.87**	**66**	P		**P**		**15 06 40.1**	**-1.4**
KK31						pmax	pmax			
	comp=Z,6.0nm,0.7s									
KK31	**Karatay Array**	**37.87**	**66**	P		**P**		**15 06 40.1**	**-1.4**
KK31						IAmb	IAmb	15 06 45.0		
	comp=Z,6.1nm,0.7s									
KKAR	**Karatay Array**	**37.87**	**66**	P		**P**		**15 06 40.2**	**-1.3**
KKAR						pmax	pmax			
	comp=Z,6.0nm,0.7s									
KKAR	**Karatay Array**	**37.87**	**66**	P		**P**		**15 06 40.2**	**-1.3**
KKAR						IAmb	IAmb	15 06 45.0		
	comp=Z,6.1nm,0.7s									
DBIC	**Dimbokro**	**38.91**	**222**	P		**P**		**15 06 51.0**	**+0.7**
DBIC						pmax	pmax			
	comp=Z,38nm,1.8s									
DBIC	**Dimbokro**	**38.91**	**222**	P		**P**		**15 06 51.4**	**+1.0**
	comp=Z,3.5nm,0.7s,baz=27,slow=9.4,SNR=5.8									
DBIC	**Dimbokro**	**38.91**	**222**	P		**P**		**15 06 51.0**	**+0.7**
DBIC						IAmb	IAmb	15 07 00.9		
	comp=Z,38nm,1.8s									
TIC	**Toumodi**	**39.01**	**223**	*eP*		**P**		**15 06 53.5**	**+2.2**
KIC	**Kosan Boka**	**39.10**	**222**	*eP*		**P**		**15 06 55.0**	**+3.0**
	comp=Z,14nm,1.1s									
LIC	**Lamto**	**39.37**	**222**	*eP*		**P**		**15 06 57.2**	**+2.9**
	comp=Z,20nm,0.9s									
MBAR	**Mbarara**	**39.91**	**164**	P		**P**		**15 07 00.3**	**+1.4**
MBAR						pmax	pmax			
	comp=Z,3.0nm,0.8s									
MBAR	**Mbarara**	**39.91**	**164**	P		**P**		**15 06 58.9**	**0.0**
	comp=Z,1.8nm,0.2s,baz=342,slow=8.3,SNR=3.5									
MBAR	**Mbarara**	**39.91**	**164**	P		**P**		**15 07 00.3**	**+1.4**
SPITS	**Spitsbergen Ar**	**39.99**	**359**	P		**P**		**15 06 58.6**	**-0.2**
	comp=Z,5.9nm,0.8s,baz=177,slow=10,SNR=4.8									
ARSB	**Arslanbob**	**40.03**	**69**	P		**P**		**15 06 58.0**	**-1.8**
AAK	**Ala-Archa**	**40.83**	**66**	*ce*	P	**P**		**15 07 09.1**	**+2.7**
AAK						pmax	pmax			
	comp=Z,6.0nm,1.7s									
AAK	**Ala-Archa**	**40.83**	**66**	P		**P**		**15 07 06.0**	**-0.3**
	comp=Z,2.4nm,0.7s,baz=244,slow=14,SNR=7.5									
AAK	**Ala-Archa**	**40.83**	**66**	P		**P**		**15 07 05.2**	**-1.2**
NRN	**Naryn**	**42.21**	**68**	P		**P**		**15 07 16.9**	**-1.0**
NRN						pmax	pmax			
	comp=Z,3.0nm,1.0s									
NRN	**Naryn**	**42.21**	**68**	P		**P**		**15 07 16.9**	**-1.0**
KURK	**Kurchatov**	**42.30**	**53**	*ce*	P	**P**		**15 07 21.3**	**+3.2**
KURK						pmax	pmax			
	comp=Z,26nm,1.3s									
KURK	**Kurchatov**	**42.30**	**53**	P		**P**		**15 07 16.9**	**-1.2**
NIL	**Nilore**	**42.59**	**80**	P		**P**		**15 07 20.2**	**-0.5**
NIL						pmax	pmax			
	comp=Z,10.0nm,1.0s									
NIL	**Nilore**	**42.59**	**80**	P		**P**		**15 07 20.2**	**-0.5**
NIL						IAmb	IAmb	15 07 25.6		
	comp=Z,9.6nm,0.9s									
KSH	**Kashi**	**42.71**	**70**	P		**P**		**15 07 22.8**	**+1.1**
KSH						PP	**PP**	**15 09 01.0**	**+0.4**
KSH						pmax	pmax			
	comp=Z,2μm,10.4s									
KDJ	**Kajisay**	**42.88**	**66**	P		**P**		**15 07 22.7**	**-0.5**
KDJ						pmax	pmax			
	comp=Z,3.0nm,0.8s									
KDJ	**Kajisay**	**42.88**	**66**	P		**P**		**15 07 22.7**	**-0.5**
MAKZ	**Makanchi**	**45.13**	**59**	P		**P**		**15 07 39.6**	**-1.4**
MAKZ						pmax	pmax			
	comp=Z,11nm,1.8s									
MAKZ	**Makanchi**	**45.13**	**59**	P		**P**		**15 07 39.6**	**-1.4**
MAKZ						IAmb	IAmb	15 09 26.0		
	comp=Z,11nm,1.8s									
MK31	**Makanchi Array**	**45.35**	**58**	P		**P**		**15 07 41.2**	**-1.5**
MK31						pmax	pmax			
	comp=Z,3.0nm,0.6s									
MK31	**Makanchi Array**	**45.35**	**58**	P		**P**		**15 07 41.2**	**-1.5**
MK31						IAmb	IAmb	15 07 47.8		
	comp=Z,3.0nm,0.6s									
MKAR	**Makanchi Array**	**45.35**	**58**	P		**P**		**15 07 41.6**	**-1.0**
	comp=Z,2.9nm,0.5s,baz=276,slow=7.2,SNR=34									
ZAA0	**Zalesovo Array**	**45.70**	**48**	P		**P**		**15 07 43.7**	**-1.6**
ZAA0						IAmb	IAmb	15 07 48.0		
	comp=Z,14nm,1.1s									
ZALV	**Zalesovo Beam**	**45.70**	**48**	P		**P**		**15 07 44.5**	**-0.8**
	comp=Z,7.8nm,0.4s,baz=275,slow=8.2,SNR=35									
WMQ	**Urumqi**	**49.81**	**61**	*eP*		**P**		**15 08 19.5**	**+2.0**
WMQ						pP	pwP	15 08 24.0	+1.0	
WMQ						pmax	pmax			
	comp=Z,11nm,0.9s									
WMQ						pmax	pmax			
	comp=Z,150nm,8.9s									
DANN	**Dangsing**	**52.99**	**81**	*eP*		**P**		**15 08 40.7**	**-1.1**
DANN	**Dangsing**	**52.99**	**81**	*eP*		**P**		**15 08 40.6**	**-1.2**
	comp=Z,16nm,0.6s									
KOLN	**Koldanda**	**53.15**	**81**	*eP*		**P**		**15 08 41.9**	**-0.9**
	comp=Z,6.6nm,0.6s									
GKN	**Gorkha**	**53.84**	**81**	*eP*		**P**		**15 08 46.4**	**-1.5**
DMN	**Daman**	**54.39**	**81**	*eP*		**P**		**15 08 50.9**	**-1.1**
DMN	**Daman**	**54.39**	**81**	*eP*		**P**		**15 08 50.2**	**-1.8**
	comp=Z,13nm,0.7s									
PKIN	**Phulchoki**	**54.63**	**81**	*eP*		**P**		**15 08 52.6**	**-1.2**
	comp=Z,4.0nm,0.5s									
PKI	**Pulchoki**	**54.65**	**81**	*eP*		**P**		**15 08 52.1**	**-1.9**
	comp=Z,3.6nm,0.4s									
PKI	**Pulchoki**	**54.65**	**81**	*eP*		**P**		**15 08 52.0**	**-1.9**
	comp=Z,3.6nm,0.4s									
GUN	**Gumba**	**54.85**	**80**	*eP*		**P**		**15 08 54.1**	**-1.3**
	comp=Z,3.7nm,0.4s									
JIRN	**Jiri**	**55.21**	**80**	*eP*		**P**		**15 08 56.8**	**-1.3**
	comp=Z,5.7nm,0.4s									
RAMN	**Ramite**	**55.87**	**81**	*eP*		**P**		**15 09 00.6**	**-2.1**
	comp=Z,8.9nm,0.6s									
FRB	**Frobisher Bay**	**55.95**	**328**	P		**P**		**15 09 03.7**	**+1.3**
	comp=Z,0.6nm,0.3s,baz=14,slow=12,SNR=3.0									
ODAN	**Odare**	**56.53**	**80**	*eP*		**P**		**15 09 05.3**	**-2.1**
	comp=Z,4.8nm,0.5s									
TAPN	**Taplejung**	**56.54**	**80**	*eP*		**P**		**15 09 06.0**	**-1.5**
	comp=Z,5.4nm,0.6s									
TAPN	**Taplejung**	**56.54**	**80**	*eP*		**P**		**15 09 05.8**	**-1.7**
	comp=Z,5.4nm,0.6s									
TLY	**Talaya**	**57.29**	**47**	*ce*	P	**P**		**15 09 13.9**	**+1.7**
TLY						pmax	pmax			
	comp=Z,9.0nm,1.3s									
TLY	**Talaya**	**57.29**	**47**	P		**P**		**15 09 11.9**	**-0.3**
TLY						IAmb	IAmb	15 09 16.5		
	comp=Z,9.0nm,1.2s									
LSA	**Lhasa**	**58.04**	**76**	P		**P**		**15 09 16.9**	**-1.4**
LSA						pmax	pmax			
	comp=Z,3.0nm,0.7s									
LSA	**Lhasa**	**58.04**	**76**	P		**P**		**15 09 16.9**	**-1.4**
LSA						IAmb	IAmb	15 09 24.1		
	comp=Z,2.6nm,0.7s									
SCHQ	**Schefferville**	**58.25**	**317**	P		**P**		**15 09 17.8**	**-1.1**
	comp=Z,4.7nm,0.8s,baz=52,slow=13,SNR=4.6									
TIXI	**Tiksi**	**59.56**	**20**	*ce*	P	**P**		**15 09 31.3**	**+3.7**
TIXI						pmax	pmax			
	comp=Z,11nm,2.5s									
SONM	**Songino Array**	**60.48**	**51**	P		**P**		**15 09 33.5**	**-1.0**
SONM						pmax	pmax			
	comp=Z,3.0nm,1.1s									
SONM	**Songino Array**	**60.48**	**51**	P		**P**		**15 09 33.5**	**-1.0**
	comp=Z,1.8nm,0.9s,baz=263,slow=8.8,SNR=8.4									
SONM	**Songino Array**	**60.48**	**51**	IAmb		IAmb		15 09 37.9		
	comp=Z,2.7nm,1.1s									
ULN	**Ulaanbaatar**	**60.86**	**50**	*ce*	P	**P**		**15 09 37.4**	**+0.3**
ULN						pmax	pmax			
	comp=Z,4.0nm,1.3s									
YAK	**Yakutsk**	**65.05**	**29**	*eP*		**P**		**15 10 05.8**	**+1.3**
YAK						pmax	pmax			
	comp=Z,5.0nm,0.8s									
YAK	**Yakutsk**	**65.05**	**29**	P		**P**		**15 10 05.3**	**+0.8**
HHC	**Hu-ho-hao-te**	**67.07**	**55**	*eP*		**P**		**15 10 18.5**	**+0.5**
HHC						pP	pwP	15 10 23.5	+0.1	
HHC						pmax	pmax			
	comp=Z,3.0nm,1.1s									
HHC						pmax	pmax			
	comp=Z,100nm,6.2s									
XAN	**Xi'an**	**68.88**	**63**	P		**P**		**15 10 31.3**	**+1.8**
XAN						pmax	pmax			
	comp=Z,5.0nm,1.5s									
CMAR	**Chiang Mai Arr**	**70.01**	**82**	*ce*	P	P		15 10 44.0	+7.4	
CMAR						pmax	pmax			
	comp=Z,1.0nm,0.6s									
CMAR	**Chiang Mai Arr**	**70.01**	**82**	P		**P**		**15 10 35.5**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=305,slow=7.3,SNR=13									
BILL	**Bilibino**	**70.90**	**13**	*i*	*eP*	**P**		**15 10 42.0**	**+0.7**
BILL					*e*			15 10 47.0		
BILL								15 11 00.0		
BILL						pmax	pmax			
	comp=Z,2.0nm,1.0s									
BILL						MLR	MLR			
	comp=Z,516nm,18.0s									
INK	**Inuvik**	**71.89**	**350**	P		**P**		**15 10 48.8**	**+1.6**
INK						pmax	pmax			
	comp=Z,12nm,1.7s									
INK	**Inuvik**	**71.89**	**350**	P		**P**		**15 10 48.8**	**+1.6**
	comp=Z,0.6nm,0.4s,baz=19,slow=5.2,SNR=6.4									
INK	**Inuvik**	**71.89**	**350**	IAmb		IAmb		15 12 54.6		
	comp=Z,12nm,1.6s									
YKA	**Yellowknife Ar**	**73.20**	**340**	P		**P**		**15 10 55.8**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=35,slow=5.4,SNR=7.7									
KLR	**Kul'dur**	**73.85**	**39**	*i*	*eP*	**P**		**15 11 00.0**	**+0.8**
KLR						pmax	pmax			
	comp=Z,5.0nm,1.0s									
CN2	**Changchun**	**73.89**	**47**	*eP*		**P**		**15 11 02.0**	**+2.5**
CN2						pmax	pmax			
	comp=Z,10.0nm,0.8s									
WHN	**Wuhan**	**74.64**	**63**	P		**P**		**15 11 02.8**	**-1.3**
GRNR	**Gornyy**	**75.08**	**36**	*i*	*iP*	**P**		**15 11 06.6**	**+0.3**
GRNR						pmax	pmax			
	comp=Z,5.0nm,0.8s									
GRNR						MLR	MLR			
	comp=Z,240nm,13.0s									
ULM	**Lac du Bonnet**	**75.49**	**323**	P		**P**		**15 11 10.2**	**+1.5**
ULM						pmax	pmax			
	comp=Z,17nm,1.7s									
ULM	**Lac du Bonnet**	**75.49**	**323**	P		**P**		**15 11 10.2**	**+1.5**
	comp=Z,2.2nm,0.7s,baz=21,slow=4.3,SNR=5.1									
ULM	**Lac du Bonnet**	**75.49**	**323**	IAmb		IAmb		15 11 52.7		
	comp=Z,17nm,1.7s									
ILAR	**Eielson Array**	**76.75**	**354**	P		**P**		**15 11 16.4**	**+0.8**
	comp=Z,0.5nm,0.7s,baz=356,slow=2.9,SNR=6.4									
NJ2	**Nanjing**	**76.86**	**60**	*eP*		**P**		**15 11 15.5**	**-1.3**
NJ2						pmax	pmax			
	comp=Z,8.0nm,0.5s									
NEA	**Nenana**	**77.09**	**355**			**PcP**		**15 11 29.8**	**+1.5**
USRK	**Ussuriysk Ar.**	**77.27**	**43**	P		**P**		**15 11 18.7**	**-0.2**
	comp=Z,5.7nm,0.9s,baz=309,slow=4.2,SNR=8.3									
KSRS	**Korea Array**	**79.35**	**51**	P		**P**		**15 11 30.4**	**-0.1**
	comp=Z,3.5nm,1.1s,baz=272,slow=5.8,SNR=4.8									
YSS	**Yuzh-Sakhalins**	**80.73**	**36**	*eP*		**P**		**15 11 40.4**	**+2.6**
YSS					*e*			15 11 49.7		
YSS						pmax	pmax			
	comp=Z,20nm,1.3s									
RAGM	**Ragged Mountai**	**80.87**	**353**	P		**P**		**15 11 36.2**	**-2.1**
MJAR	**Matsushiro Arr**	**85.98**	**46**	P		**P**		**15 12 05.6**	**+0.5**
MJAR						pmax	pmax			
	comp=Z,10.0nm,1.5s									
MJAR	**Matsushiro Arr**	**85.98**	**46**	P		**P**		**15 12 05.6**	**+0.5**
	comp=Z,4.1nm,0.9s,baz=317,slow=5.6,SNR=5.8									
NVAR	**Mina Array Bea**	**94.67**	**329**	P		**P**		**15 12 47.0**	**+0.9**
	comp=Z,0.2nm,0.5s,baz=46,slow=6.4,SNR=2.5									
TXAR	**Lajitas Array**	**94.77**	**313**	P		**P**		**15 12 46.6**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=90,slow=1.9,SNR=2.5									
JTS	**Las Juntas de**	**95.42**	**288**	*eP*		**P**		**15 12 53.3**	**+3.6**
JTS						pmax	pmax			
	comp=Z,5.0nm,1.0s									
ASAR	**Alice Springs**	**122.33**	**96**	PKP		**PKPdf**		**15 18 19.9**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=327,slow=1.5,SNR=5.1									

*NEIC **26** 15:06:57.7±3.1,38.19N±0.09×20.01E±0.08,h10km±2km, mb4.2/4, Error ellipse: s-maj=16.0km s-min=8.1km az=210.0*
*IDC **26** 15:07:00.9±9.3,38.69N×20.60E,h0km,mb3.7/4, mb1 3.6/6,mb1mx3.3/45,mbtmp3.5/6,ML3.1/2,MS4.0/1, Ms1 4.0/1,ms1mx3.1/53,Error ellipse: s-maj=170.7km s-min=25.0km az=33.0*
*ATH **26** 15:07:00.9,38.22N×20.44E,h14km±1km,ML3.2/17,Error ellipse: s-maj=2.7km s-min=0.9km az=77.0*
ISC 26 15:07:00.3±1.1,38.23N±0.03×20.39E±0.05,h14km±6km, n54,σ1§20/58,mb4.0/6,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
VLS	**Valsamata**	**0.17**	**108**	P		**Pg**	**15 07 04.1**		**-0.2**
VLS				S		**Sg**	**15 07 06.6**		**-0.5**
VLS				AML		AML	15 07 06.7		
	comp=N,51752μm,0.2s								
VLS				AML		AML	15 07 06.8		
FSK	**Fiskardo**	**0.27**	**31**	P		**Pg**	**15 07 06.4**		**+0.4**
FSK				S		**Sg**	**15 07 11.0**		**+1.1**
FSK				AML		AML	15 07 11.5		
	comp=N,17880μm,0.4s								
FSK				AML		AML	15 07 12.3		
	comp=E,19127μm,0.2s								
KFL	**Anninata**	**0.34**	**110**	P		**Pg**	**15 07 07.1**		**-0.1**
KFL				S		**Sb**	**15 07 12.3**		**-1.1**
KFL				AML		AML	15 07 12.7		
	comp=E,77215μm,0.4s								
KFL				AML		AML	15 07 13.0		
	comp=N,20378μm,0.3s								
VLMS	**Volimes, Zakyn**	**0.41**	**148**	P		**Pg**	**15 07 08.5**		**-0.1**
VLMS				S		**Sb**	**15 07 14.8**		**-0.8**
VLMS				AML		AML	15 07 17.9		
	comp=E,14384μm,0.2s								
VLMS				AML		AML	15 07 17.9		
	comp=N,11528μm,0.2s								
EVGI	**Lefkada island**	**0.45**	**28**	P		**Pg**	**15 07 09.4**		**+0.2**
EVGI				S		**Sb**	**15 07 16.6**		**0.0**
MGNA	**Meganis**	**0.53**	**36**	P		**Pg**	**15 07 10.6**		**-0.2**
MGNA				S		**Sb**	**15 07 19.0**		**-0.1**
MGNA				AML		AML	15 07 19.6		
	comp=E,6641μm,0.4s								
MGNA				AML		AML	15 07 19.8		
	comp=N,4837μm,0.3s								
LKD2	**Lefkada island**	**0.60**	**21**	P		**Pg**	**15 07 12.3**		**+0.2**
LKD2				AML		AML	15 07 29.4		
	comp=N,3852μm,0.3s								
LKD2				AML		AML	15 07 29.9		
	comp=E,2867μm,0.3s								
TSLK	**Tsoukalades, L**	**0.63**	**19**	P		**Pg**	**15 07 12.8**		**+0.1**
TSLK				AML		AML	15 07 30.6		
	comp=E,3476μm,0.4s								
TSLK				AML		AML	15 07 35.5		
	comp=N,3359μm,0.5s								
RLS	**Riolos of Patr**	**0.87**	**101**	P		**Pg**	**15 07 16.6**		**-0.5**
PVO	**Paravola**	**0.97**	**66**	P		**Pg**	**15 07 18.9**		**-0.3**
PVO				AML		AML	15 07 40.5		
	comp=E,6049μm,0.4s								
PVO				AML		AML	15 07 43.1		
	comp=N,3705μm,0.6s								
DRO	**Drossia**	**1.08**	**104**	P		**Pg**	**15 07 20.7**		**-0.5**
DRO				AML		AML	15 07 45.8		
	comp=N,3220μm,0.5s								
DRO				AML		AML	15 07 46.3		
	comp=E,4890μm,0.4s								
EFP	**Efpalio**	**1.21**	**80**	P		**Pb**	**15 07 22.3**		**-0.8**
EFP				AML		AML	15 07 46.9		
	comp=E,1580μm,0.3s								
EFP				AML		AML	15 07 51.9		
	comp=N,1532μm,0.7s								
LAKA	**Lakka**	**1.25**	**89**	P		**Pn**	**15 07 23.3**		**-0.2**
LAKA				AML		AML	15 07 45.5		
	comp=E,1081μm,0.6s								
LAKA				AML		AML	15 07 47.5		
	comp=N,1017μm,0.4s								
AMT	**Artemida-Makis**	**1.25**	**123**	P		**Pn**	**15 07 23.7**		**+0.2**
AMT				AML		AML	15 07 49.2		
	comp=E,1740μm,0.7s								
AMT				AML		AML	15 07 52.1		
	comp=N,1870μm,0.7s								
IGT	**Igoumenitsa**	**1.30**	**358**	P		**Pg**	**15 07 26.7**		**+1.2**
EVR	**Evrytania**	**1.31**	**58**	P		**Pn**	**15 07 24.8**		**+0.4**
EVR				AML		AML	15 07 52.8		
	comp=E,742μm,0.4s								
EVR				AML		AML	15 07 55.3		
	comp=N,919μm,0.6s			

FSK	**Fiskardo**	**0.24**	**31**	P		**Pg**	**15 09 52.0**	**0.0**
FSK				S		**Sg**	**15 09 55.6**	**+0.2**
	comp=N,12μm,0.5s							
FSK	**Fiskardo**	**0.24**	**31**	P		**Pg**	**15 09 51.8**	**-0.1**
FSK				S		**Sg**	**15 09 55.3**	**-0.1**
KFL	**Anninata**	**0.33**	**116**	P		**Pg**	**15 09 53.6**	**0.0**
KFL				S		**Sb**	**15 09 59.6**	**-0.1**
	comp=N,22μm,0.4s							
KFL	**Anninata**	**0.33**	**116**	P		**Pg**	**15 09 53.5**	**-0.1**
KFL				S		**Sg**	**15 09 57.6**	**-0.6**
KFL				AML	AML		15 09 59.7	
	comp=E,66816μm,0.4s							
KFL				AML	AML		15 10 02.1	
	comp=N,21480μm,0.4s							
EVGI	**Lefkada island**	**0.41**	**28**	P		**Pg**	**15 09 55.2**	**+0.1**
EVGI				S		**Sb**	**15 10 01.6**	**-0.5**
EVGI	**Lefkada island**	**0.41**	**28**	P		**Pg**	**15 09 55.0**	**-0.1**
EVGI				S		**Sb**	**15 10 01.1**	**-0.9**
MGNA	**Meganis**	**0.50**	**37**	P		**Pg**	**15 09 56.5**	**-0.2**
MGNA				S		**Sb**	**15 10 02.6**	**-1.9**
MGNA				AML	AML		15 10 04.7	
	comp=E,13116μm,0.3s							
MGNA				AML	AML		15 10 05.2	
	comp=N,9596μm,0.2s							
LKD2	**Lefkada island**	**0.57**	**20**	P		**Pg**	**15 09 57.7**	**-0.3**
LKD2				S		**Sb**	**15 10 06.5**	**0.0**
	comp=N,2μm,0.2s							
TSLK	**Tsoukalades, L**	**0.60**	**19**	P		**Pg**	**15 09 58.3**	**-0.3**
TSLK				S		**Sb**	**15 10 07.4**	**-0.1**
	comp=N,2μm,0.3s							
TSLK	**Tsoukalades, L**	**0.60**	**19**	P		**Pg**	**15 09 58.3**	**-0.3**
TSLK				S		**Sb**	**15 10 07.1**	**-0.3**
RLS	**Riolos of Patr**	**0.86**	**103**	P		**Pb**	**15 10 03.7**	**+0.2**
RLS				S		**Sn**	**15 10 15.9**	**-0.9**
PVO	**Paravola**	**0.95**	**67**	P		**Pb**	**15 10 04.5**	**-0.5**
PVO				S		**Sn**	**15 10 18.5**	**-0.6**
	comp=N,3μm,0.4s							
IGT	**Igoumenitsa**	**1.28**	**357**	P		**Pn**	**15 10 11.1**	**+0.9**
SERG	**Sergoula**	**1.31**	**83**	P		**Pn**	**15 10 11.4**	**+0.7**
KALE	**Kalithea**	**1.37**	**84**	P		**Pg**	**15 10 13.2**	**+0.1**
SG1	**Sgolgore (BA)**	**3.87**	**313**	*e*Pn		**Pn**	**15 10 47.4**	**+1.5**
IDI	**Anoyia**	**4.66**	**128**	Sn		**Sn**	**15 11 51.2**	**+0.5**
	comp=N,1.1nm,0.3s,baz=170,slow=23,SNR=1.3							
MLR	**Muntele Rosu**	**8.32**	**28**	Pn		**Pn**	**15 11 48.5**	**+1.3**
	comp=N,0.1nm,0.3s,baz=184,slow=16,SNR=1.8							
BRTR	**Keskin Array B**	**10.40**	**78**	Pn		**Pn**	**15 12 19.1**	**+3.3**
	comp=N,0.1nm,0.3s,baz=266,slow=13,SNR=2.4							
GERES	**GERESS Array B**	**11.64**	**338**	Pn		**Pn**	**15 12 31.4**	**-1.1**
	comp=N,0.1nm,0.3s,baz=161,slow=12,SNR=3.0							
AKASG	**Malin Array Be**	**13.93**	**24**	Pn		**Pn**	**15 13 07.9**	**+4.2**
	comp=N,1.2nm,0.3s,baz=212,slow=9.4,SNR=1.6							
HFS	**Hagfors**	**22.31**	**351**	P		**P**	**15 14 42.7**	**-1.0**
	comp=N,2.8nm,0.8s,baz=170,slow=8.8,SNR=3.4							
FINES	**FINESS Array B**	**23.48**	**7**	P		**P**	**15 14 54.9**	**-0.8**
	comp=N,1.1nm,0.6s,baz=185,slow=8.4,SNR=6.9							
NOA	**NORSAR Array B**	**23.52**	**349**	P		**P**	**15 14 56.0**	**-0.2**
	comp=N,0.6nm,0.8s,baz=162,slow=9.9,SNR=2.6							
GEYT	**Alibeck**	**29.55**	**79**	P		**P**	**15 15 51.4**	**+0.4**
	comp=N,0.6nm,0.5s,baz=301,slow=9.9,SNR=2.8							
TORD	**Torodi Ar. Bea**	**30.04**	**219**	P		**P**	**15 15 53.6**	**-1.8**
	comp=N,0.5nm,0.9s,baz=28,slow=9.1,SNR=2.9							
ARCES	**ARCESS Array B**	**31.46**	**3**	P		**P**	**15 16 06.2**	**-1.3**
	comp=N,2.0nm,0.8s,baz=186,slow=8.2,SNR=2.5							
KURBB	**Kurchatov Arra**	**42.26**	**54**	P		**P**	**15 17 39.0**	**-0.4**
	comp=N,0.2nm,0.6s,baz=279,slow=8.7,SNR=3.3							
MKAR	**Makanchi Array**	**45.34**	**58**	P		**P**	**15 18 04.3**	**0.0**
	comp=N,0.4nm,0.4s,baz=276,slow=7.1,SNR=8.7							
ZALV	**Zalesovo Beam**	**45.70**	**48**	P		**P**	**15 18 07.1**	**0.0**
	comp=N,1.3nm,0.4s,baz=270,slow=9.5,SNR=6.2							

IDC 26 15:10:57.7±48.0, 38.62N×20.74E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.2/41, mbtmp3.6/3, Error ellipse: s-maj=888.3km s-min=20.9km az=47.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDI	**Anoyia**	**4.71**	**134**	Sn		Sn	15 12 57.4	-7.9
	0.4nm,0.3s,baz=306,slow=12,SNR=1.4							
FINES	**FINESS Array B**	**23.09**	**7**	P		P	15 16 04.7	0.0
	2.0nm,0.9s,baz=187,slow=9.8,SNR=2.2							
MKAR	**Makanchi Array**	**44.92**	**59**	P		P	15 19 14.0	-0.1
	0.3nm,0.5s,baz=279,slow=8.3,SNR=3.5							
ZALV	**Zalesovo Beam**	**45.27**	**48**	P		P	15 19 16.6	-0.1
	0.8nm,0.5s,baz=269,slow=8.8,SNR=2.7							

IDC 26 15:11:05.6±2.9, 6.71S×130.39E, h52km±39km, mb3.4/1, mb1 3.6/5, mb1mx3.2/41, mbtmp3.6/5, ML3.5/4, Error ellipse: s-maj=74.0km s-min=24.1km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIJI	**Sorong**	**5.86**	**9**	P		Pn	15 12 30.2	+0.2
	1.2nm,0.3s,baz=180,slow=15,SNR=16							
SIJI				S		Sn	15 13 30.2	-5.8
	1.7nm,0.3s,baz=94,slow=24,SNR=9.0							
FITZ	**Fitzroy Crossi**	**12.23**	**202**	P		Pn	15 13 57.6	+0.4
	0.3nm,0.3s,baz=26,slow=12,SNR=13							
FITZ				S		Sn	15 16 07.3	-4.8
	0.3nm,0.3s,baz=256,slow=20,SNR=5.5							
WRA	**Warramunga Arr**	**13.77**	**164**	P		Pn	15 14 15.4	-1.9
	0.2nm,0.3s,baz=347,slow=13,SNR=5.3							
WRA				S		Sn	15 16 39.3	-8.8
	0.4nm,0.3s,baz=347,slow=24,SNR=6.2							
ASAR	**Alice Springs**	**17.20**	**169**	P		P	15 15 03.6	+0.4
	0.1nm,0.3s,baz=347,slow=8.7,SNR=14							
ASAR				S		Sn	15 18 03.3	-10
	0.1nm,0.3s,baz=351,slow=25,SNR=4.1							
MKAR	**Makanchi Array**	**68.19**	**327**	P		P	15 22 00.5	-0.1
	0.4nm,0.5s,baz=117,slow=7.2,SNR=10							

IDC 26 15:17:56.3±2.4, 7.47S×130.81E, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.2/39, mbtmp3.2/4, ML3.1/3, Error ellipse: s-maj=88.6km s-min=30.6km az=79.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.70**	**205**	Pn		Pn	15 20 45.1	+0.4
	0.3nm,0.3s,baz=24,slow=11,SNR=1.1							
FITZ				Sn		Sn	15 22 47.6	-8.6
	0.6nm,0.3s,baz=231,slow=22,SNR=3.7							
WRA	**Warramunga Arr**	**12.87**	**165**	Pn		Pn	15 21 00.3	-0.4
	0.1nm,0.3s,baz=347,slow=13,SNR=1.7							
WRA				Sn		Sn	15 23 12.8	-12
	0.2nm,0.3s,baz=345,slow=22,SNR=3.3							
ASAR	**Alice Springs**	**16.38**	**170**	Pn		Pn	15 21 47.8	0.0
	0.0nm,0.3s,baz=348,slow=8.9,SNR=2.2							
ASAR				Sn		Sn	15 24 39.5	-11
	0.1nm,0.3s,baz=353,slow=27,SNR=5.6							
MKAR	**Makanchi Array**	**69.05**	**327**	P		P	15 29 04.0	0.0
	0.2nm,0.5s,baz=113,slow=7.6,SNR=4.3							

*IDC **26** 15:20:57.1±6.3, 38.40N×20.53E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.3/36, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=122.9km s-min=9.3km az=35.0*
*THE **26** 15:20:57.7, 38.20N×20.36E, h2km±15km, ML3.4/4, Error ellipse: s-maj=15.1km s-min=0.5km az=91.0*
*ATH **26** 15:20:58.3, 38.22N×20.46E, h10km±4km, ML3.4/3, Error ellipse: s-maj=5.4km s-min=1.1km az=84.0*

ISC 26 15:20:57.2±1.8, 38.20N±0.05×20.4E±0.1, h12km±7km, n15, σ0.53/24, mb3.7/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.16**	**99**	P		**Pg**	**15 21 01.2**	**+0.2**
VLS				S		**Sg**	**15 21 03.8**	**+0.2**
	49μm,0.2s							
VLS	**Valsamata**	**0.16**	**99**	P		**Pg**	**15 21 01.1**	**+0.2**
VLS				S		**Sg**	**15 21 03.2**	**-0.5**
VLS				AML	AML		15 21 03.9	
VLS				AML	AML		15 21 04.7	
	comp=E,84905μm,0.2s							
FSK	**Fiskardo**	**0.29**	**29**	P		**Pg**	**15 21 03.7**	**+0.6**
FSK				S		**Sb**	**15 21 08.0**	**-1.2**
	comp=E,5μm,0.3s							
FSK	**Fiskardo**	**0.29**	**29**	P		**Pg**	**15 21 03.8**	**+0.6**
FSK				S		**Sg**	**15 21 07.3**	**+0.1**
FSK				AML	AML		15 21 07.9	
	comp=N,5394μm,0.4s							
FSK				AML	AML		15 21 09.2	
	comp=E,11684μm,0.1s							
KFL	**Anninata**	**0.33**	**106**	P		**Pg**	**15 21 04.1**	**+0.2**
KFL				S		**Sb**	**15 21 09.7**	**-0.6**
	comp=E,18μm,0.4s							
KFL	**Anninata**	**0.33**	**106**	P		**Pg**	**15 21 04.1**	**+0.2**
KFL				S		**Sg**	**15 21 08.2**	**-0.2**
KFL				AML	AML		15 21 10.1	
	comp=E,51964μm,0.3s							
KFL				AML	AML		15 21 12.3	
	comp=N,17807μm,0.4s							
EVGI	**Lefkada island**	**0.47**	**27**	P		**Pg**	**15 21 06.8**	**+0.4**
EVGI				S		**Sb**	**15 21 14.0**	**-0.3**
	comp=N,2μm,0.1s							
EVGI	**Lefkada island**	**0.47**	**27**	P		**Pg**	**15 21 06.6**	**+0.2**
EVGI				S		**Sg**	**15 21 13.0**	**+0.3**
MGNA	**Meganis**	**0.55**	**35**	P		**Pg**	**15 21 08.2**	**+0.2**
MGNA				S		**Sg**	**15 21 15.4**	**+0.1**
IDI	**Anoyia**	**4.64**	**127**	Sn		**Sn**	**15 23 02.4**	**+1.4**
	comp=N,0.8nm,0.3s,baz=28,slow=15,SNR=1.5							
GERES	**GERESS Array B**	**11.68**	**338**	Pn		**Pn**	**15 23 43.4**	**-0.4**
	comp=N,0.1nm,0.3s,baz=158,slow=16,SNR=3.1							
FINES	**FINESS Array B**	**23.54**	**7**	P		**P**	**15 26 06.4**	**-0.5**
	comp=N,1.9nm,1.0s,baz=184,slow=11,SNR=4.1							
KURBB	**Kurchatov Arra**	**42.30**	**54**	P		**P**	**15 28 50.7**	**+0.2**
	comp=N,0.2nm,0.5s,baz=273,slow=9.1,SNR=3.1							
MKAR	**Makanchi Array**	**45.38**	**58**	P		**P**	**15 29 15.4**	**+0.1**
	comp=N,0.7nm,0.5s,baz=280,slow=6.3,SNR=14							
ZALV	**Zalesovo Beam**	**45.76**	**48**	P		**P**	**15 29 18.4**	**+0.2**
	comp=N,1.2nm,0.5s,baz=275,slow=8.9,SNR=6.4							

*IDC **26** 15:22:43.3±1.6, 38.42N×20.31E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.3/34, mbtmp3.5/5, ML3.3/1, MS4.2/2, Ms1 4.2/2, ms1mx3.5/50, Error ellipse: s-maj=34.4km s-min=27.5km az=110.0*
*ATH **26** 15:22:47.2, 38.28N×20.49E, h12km±4km, ML3.2/5, Error ellipse: s-maj=4.8km s-min=0.9km az=88.0*

ISC 26 15:22:45.9±1.1, 38.29N±0.03×20.41E±0.07, h18km±3km, n13, σ0.74/17, mb3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.18**	**129**	P		**Pb**	**15 22 50.3**	**+0.2**
VLS				S		**Sb**	**15 22 52.7**	**0.0**
VLS				AML	AML		15 22 53.5	
	comp=N,52712μm,0.3s							
VLS				AML	AML		15 22 53.8	
	comp=E,74449μm,0.1s							
FSK	**Fiskardo**	**0.20**	**35**	P		**Pg**	**15 22 51.3**	**+0.4**
FSK				S		**Sg**	**15 22 54.6**	**+0.3**
FSK				AML	AML		15 22 55.8	
	comp=E,22032μm,0.3s							
FSK				AML	AML		15 22 58.8	
	comp=N,10228μm,0.4s							
KFL	**Anninata**	**0.35**	**121**	P		**Pg**	**15 22 53.4**	**+0.1**
KFL				S		**Sg**	**15 22 57.2**	**-1.0**
KFL				AML	AML		15 22 59.4	
	comp=N,10355μm,0.2s							
KFL				AML	AML		15 22 59.8	
	comp=E,20656μm,0.4s							
EVGI	**Lefkada island**	**0.38**	**30**	P		**Pb**	**15 22 54.4**	**+0.2**
EVGI				S		**Sb**	**15 23 00.5**	**+0.8**
VLMS	**Volimes, Zakyn**	**0.46**	**154**	P		**Pg**	**15 22 55.5**	**+0.2**
VLMS				S		**Sg**	**15 23 02.2**	**+0.7**
VLMS				AML	AML		15 23 03.6	
	comp=N,19864μm,0.4s							
VLMS				AML	AML		15 23 03.8	
	comp=E,12182μm,0.1s							
MGNA	**Meganis**	**0.47**	**39**	P		**Pb**	**15 22 56.0**	**+0.3**
MGNA				S		**Sg**	**15 23 01.8**	**-0.1**
MGNA				AML	AML		15 23 04.0	
	comp=N,4097μm,0.5s							
MGNA				AML	AML		15 23 04.3	
	comp=E,4573μm,0.4s							
MLR	**Muntele Rosu**	**8.29**	**28**	LR	LR	LR	15 29 21.3	
	comp=E,754nm,18.8s,baz=44,slow=48							
GERES	**GERESS Array B**	**11.61**	**337**	Pn		**Pn**	**15 25 29.4**	**-1.3**
	comp=E,0.1nm,0.3s,baz=157,slow=16,SNR=2.7							
KVAR	**Kislovodsk Arr**	**17.69**	**64**	LR		LR	15 35 37.1	
	comp=E,1μm,19.6s,baz=264,slow=44							
FINES	**FINESS Array B**	**23.44**	**7**	P		**P**	**15 27 52.9**	**-1.0**
	comp=E,1.6nm,0.9s,baz=196,slow=9.5,SNR=4.1							
TORD	**Torodi Ar. Bea**	**30.07**	**219**	P		**P**	**15 28 54.8**	**+0.7**
	comp=E,0.4nm,0.6s,baz=30,slow=8.9,SNR=2.6							
MKAR	**Makanchi Array**	**45.31**	**58**	P		**P**	**15 31 02.0**	**-0.6**
	comp=E,0.3nm,0.6s,baz=288,slow=7.0,SNR=2.8							
ZALV	**Zalesovo Beam**	**45.68**	**48**	P		**P**	**15 31 06.3**	**+1.0**
	comp=E,0.8nm,0.4s,baz=269,slow=9.7,SNR=3.8							

IDC 26 15:23:16.6±10.0, 17.34S×178.66W, h685km±120km, mb2.4/4, mb1 2.8/4, mb1mx2.6/20, mbtmp3.5/4, Error ellipse: s-maj=157.3km s-min=34.0km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.51**	**259**	P		P	15 30 31.5	0.0
	0.3nm,0.3s,baz=91,slow=6.8,SNR=2.6							
ASAR	**Alice Springs**	**44.72**	**254**	P		P	15 30 33.0	-0.1
	0.5nm,0.5s,baz=92,slow=7.2,SNR=4.6							
ASAR				PcP		PcP	15 31 59.4	-0.2
	0.8nm,1.1s,baz=100,slow=4.4,SNR=2.1							
NVAR	**Mina Array Bea**	**79.18**	**44**	P		P	15 34 14.0	+0.1
	0.2nm,0.5s,baz=203,slow=6.7,SNR=2.1							
ILAR	**Eielson Array**	**85.39**	**13**	P		P	15 34 44.0	0.0
	0.1nm,0.4s,baz=222,slow=5.7,SNR=1.5							

*KRNET **26** 15:27:24.6±0.1, 41.34N×73.23E, h13km, mb3.3*
*SOME **26** 15:27:24.4, 41.37N×73.15E, h5km*
*KNET **26** 15:27:26.9±0.7, 41.44N×73.38E, h2km±4km, ml2.7, Error ellipse: s-maj=4.5km s-min=3.9km az=87.0*
*NNC **26** 15:27:28.2±1.0, 41.54N×73.22E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=8.5km s-min=4.4km az=168.0*

ISC 26 15:27:24.7±1.0, 41.39N±0.03×73.18E±0.02, h8km±9km, n79, σ1.54/129, 30C-26D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARSB	**Arslanbob**	**0.16**	**247**	⇓*i*P		**Pg**	**15 27 28.4**	**+0.3**
	baz=64							
ARSB				⇓*i*S		**Sg**	**15 27 31.3**	**+0.8**
	baz=64							
AML	**Almayashu**	**0.84**	**27**	⇓*i*P		**Pg**	**15 27 41.1**	**+0.3**
	baz=24							
AML				⇓*i*S		**Sb**	**15 27 53.1**	**-0.2**
	baz=24							
AML	**Almayashu**	**0.84**	**27**	P		**Pg**	**15 27 41.1**	**+0.3**
	55nm,0.2s,SNR=230							
AML				⇑S		**Sb**	**15 27 53.2**	**-0.2**
	111nm,0.2s							
ANR	**Andizhan**	**0.89**	**225**	S		**Pg**	**15 27 43.4**	**+1.7**
ANR				S		**Sn**	**15 27 56.7**	**+0.1**
ARLS	**Aral**	**0.98**	**61**	⇓*i*P		**Pg**	**15 27 43.2**	**-0.3**
	baz=57							
ARLS				⇓*i*S		**Sg**	**15 27 56.5**	**+0.3**
	baz=57							
ARK	**Arkit**	**1.00**	**295**	⇓*i*P		**Pb**	**15 27 43.8**	**-0.6**
	baz=95							
ARK				⇓*i*S		**Sn**	**15 27 58.7**	**-0.9**
	baz=95							
UCH	**Uchtor**	**1.30**	**49**	⇓*i*P		**Pn**	**15 27 49.3**	**-0.4**
	baz=47							
UCH				⇓*i*S		**Sb**	**15 28 06.8**	**0.0**
	baz=47							
UCH	**Uchtor**	**1.30**	**49**	P		**Pn**	**15 27 49.3**	**-0.4**
	14nm,0.1s,SNR=26							
UCH				⇑S		**Sb**	**15 28 06.9**	**+0.1**
	50nm,0.2s							
EKS2	**Erkin-Say**	**1.35**	**19**	⇑*i*P		**Pg**	**15 27 50.7**	**+0.1**
	baz=17							
EKS2				⇑*i*S		**Sg**	**15 28 09.0**	**+0.9**
	baz=17							
EKS2	**Erkin-Say**	**1.35**	**19**	⇑P		**Pb**	**15 27 50.5**	**+0.2**
	15nm,0.2s,SNR=16							
EKS2				⇓S		**Sg**	**15 28 08.9**	**+0.8**
	24nm,0.2s							
MRKS	**Merke**	**1.36**	**1**	*e*P		**Pg**	**15 27 50.7**	**-0.1**
	54nm,0.3s							
MRKS				*e*S		**Sg**	**15 28 09.2**	**+0.8**
	87nm,0.3s							
MRKS	**Merke**	**1.36**	**1**	P		**Pg**	**15 27 50.7**	**-0.1**
	16nm,0.4s							
MRKS				S		**Sg**	**15 28 09.2**	**+0.8**

	34nm,0.3s							
AAK	**Ala-Archa**	**1.59**	**38**	⇑*i*P		**Pb**	**15 27 54.4**	**+0.1**
	baz=36							
AAK				⇑*i*S		**Sg**	**15 28 16.0**	**+0.3**
	baz=36							
AAK	**Ala-Archa**	**1.59**	**38**	⇑P		**Pb**	**15 27 54.5**	**+0.1**
	35nm,0.2s,SNR=15							
AAK				⇑S		**Sg**	**15 28 16.7**	**+0.9**
	49nm,0.3s							
AAK	**Ala-Archa**	**1.59**	**38**	⇓P		**Pb**	**15 27 54.5**	**+0.1**
	11nm,0.3s							
AAK				S		**Sn**	**15 28 14.5**	**+0.4**
	35nm,0.8s							
KZA	**Kyzart**	**1.69**	**65**	⇓*i*P		**Pb**	**15 27 56.1**	**-0.3**
	baz=63							
KZA				⇓*i*S		**Sb**	**15 28 18.9**	**+0.8**
	baz=63							
KZA	**Kyzart**	**1.69**	**65**	⇑P		**Pb**	**15 27 56.2**	**-0.1**
	22nm,0.2s,SNR=21							
KZA				⇓S		**Sg**	**15 28 19.1**	**-0.1**
	65nm,0.3s							
FRU1	**Bishkek**	**1.79**	**37**	⇑*i*P		**Pb**	**15 27 57.9**	**+0.2**
	baz=35							
FRU1				⇑*i*S		**Sg**	**15 28 22.3**	**+0.3**
	baz=35							
KBK	**Karagaybulak**	**1.83**	**45**	⇑*i*P		**Pb**	**15 27 58.8**	**+0.3**
	baz=44							
KBK				⇑*i*S		**Sg**	**15 28 23.4**	**0.0**
	baz=44							
KBK	**Karagaybulak**	**1.83**	**45**	⇓P		**Pg**	**15 27 59.5**	**-0.2**
	20nm,0.2s,SNR=42							
CHMS	**Chumysh**	**1.99**	**35**	⇑*i*P		**Pb**	**15 28 01.5**	**+0.3**
	baz=34							
CHMS				⇑*i*S		**Sg**	**15 28 28.0**	**-0.6**
	baz=34							
CHMS	**Chumysh**	**1.99**	**35**	⇓P		**Pg**	**15 28 02.2**	**-0.6**
	32nm,0.2s,SNR=36							
DZA	**Taraz**	**2.04**	**318**	*e*P		**Pg**	**15 28 02.9**	**-0.9**
	99nm,0.1s							
DZA				*e*S		**Sg**	**15 28 29.9**	**-0.2**
	205nm,0.3s							
USP	**Ospenovka**	**2.12**	**27**	⇓*i*P		**Pb**	**15 28 03.4**	**0.0**
	baz=26							
USP				⇓*i*S		**Sb**	**15 28 31.0**	**+1.1**
	baz=26							
USP	**Ospenovka**	**2.12**	**27**	⇑P		**Pb**	**15 28 04.4**	**+1.0**
	34nm,0.3s,SNR=45							
NRN	**Naryn**	**2.12**	**88**	⇓*e*P		**Pb**	**15 28 02.6**	**-1.0**
	baz=87							
NRN				⇓*i*S		**Sb**	**15 28 30.2**	**0.0**
	baz=87							
BTK	**Batken**	**2.23**	**234**	⇑*i*P		**Pb**	**15 28 04.2**	**-1.1**
	baz=36							
BTK				⇑*i*S		**Sg**	**15 28 33.6**	**-2.8**
	baz=36							
SGDS	**Sogindy**	**2.33**	**27**	Pg		**Pg**	**15 28 07.8**	**+0.9**
	18nm,0.4s							
SGDS				Lg		Lg	15 28 38.8	
	54nm,0.3s							
BOOM	**Boomskoye usch**	**2.33**	**61**	⇑*i*P		**Pb**	**15 28 05.9**	**-1.2**
	baz=60							
BOOM				⇑*i*S		**Sb**	**15 28 35.5**	**-0.7**
	baz=60							
CHRV	**Charvak**	**2.44**	**277**	*e*P		**Pg**	**15 28 10.5**	**-0.9**
CHRV				S		**Sg**	**15 28 44.5**	**+1.5**
ULHL	**Ulahol**	**2.44**	**68**	⇑*i*P		**Pb**	**15 28 07.4**	**-1.6**
	baz=67							
ULHL				⇑*i*S		**Sb**	**15 28 38.6**	**-0.8**
	baz=67							
IUG	**Iuzhnay**	**2.48**	**289**	*e*P		**Pg**	**15 28 11.1**	**-1.0**
	7.9nm,0.3s							
IUG				*e*S		**Sg**	**15 28 44.0**	**-0.2**
	146nm,0.3s							
IUG	**Iuzhnay**	**2.48**	**289**	Pg		**Pg**	**15 28 10.7**	**-1.4**
	5.9nm,0.3s							
IUG				Lg		Lg	15 28 43.1	
	140nm,0.3s							
KK31	**Karatay Array**	**2.62**	**312**	⇓Pn		**Pb**	**15 28 12.5**	**+0.6**
	13nm,0.4s,baz=128,slow=13,SNR=275							
KK31				⇑Lg		Lg	15 28 48.9	
	29nm,0.3s,baz=120,slow=28,SNR=18							
KST	**Kastek**	**2.65**	**50**	*e*P		**Pg**	**15 28 14.9**	**-0.4**
	13nm,0.4s							
KST				*e*S		**Sg**	**15 28 48.9**	**-0.8**
	85nm,0.4s							
KST	**Kastek**	**2.65**	**50**	Pg		**Pg**	**15 28 15.0**	**-0.4**
	13nm,0.4s							
KST				Lg		Lg	15 28 48.9	
	85nm,0.4s							
DGS	**Degeres**	**2.67**	**45**	*e*P		**Pg**	**15 28 15.0**	**-0.8**
	13nm,0.4s							
DGS				*e*S		**Sg**	**15 28 50.1**	**-0.3**
	74nm,0.6s							
DGS	**Degeres**	**2.67**	**45**	Pg		**Pg**	**15 28 15.4**	**-0.4**
	9.5nm,0.5s							
DGS				Lg		Lg	15 28 50.1	
	74nm,1.0s							
CHM	**Chimkent**	**2.83**	**290**	*e*P		**Pg**	**15 28 17.3**	**-1.6**
	60nm,0.2s							
CHM				*e*S		**Sg**	**15 28 53.5**	**-2.1**
	250nm,0.6s							
KRBS	**Karabastau**	**2.95**	**38**	*e*P		**Pg**	**15 28 19.8**	**-1.4**
	8.4nm,0.3s							
KRBS				*e*S		**Sg**	**15 28 57.2**	**-2.3**
	20nm,0.2s							
KRBS	**Karabastau**	**2.95**	**38**	Pg		**Pb**	**15 28 19.5**	**+1.9**
	8.4nm,0.3s							
KRBS				Lg		Lg	15 28 57.2	
	20nm,0.2s							
**MTB

	25nm,0.4s								
KUU	**Kurty**	**3.42**	**42**	Pg	**Pg**	**15 28 28.4**	**-1.8**		
	5.5nm,0.4s								
KUU				Lg	Lg	15 29 12.6			
	25nm,0.4s								
KOTS	**Kotyrbulak**	**3.45**	**56**	*e*P	**Pb**	**15 28 28.4**	**+2.2**		
	20nm,0.4s								
KOTS				*e*S	**Sg**	**15 29 13.2**	**-2.3**		
	80nm,0.5s								
KTBS	**Karatobe**	**3.48**	**47**	*e*P	**Pg**	**15 28 29.2**	**-2.0**		
	5.6nm,0.4s								
KTBS				*e*S	**Sg**	**15 29 15.0**	**-1.3**		
	50nm,0.6s								
ANVS	**Anan'yevo**	**3.62**	**66**⇑	*e*P	**Pn**	**15 28 23.6**	**+2.4**		
	baz=65								
ANVS				⇑*i*S	**Sn**	**15 29 06.5**	**+2.2**		
	baz=65								
BTLS	**Baital**	**3.71**	**10**	*e*P	**Pg**	**15 28 33.5**	**-2.2**		
	1.2nm,0.4s								
BTLS				*e*S	**Sg**	**15 29 22.1**	**-1.6**		
	15nm,0.5s								
BTLS	**Baital**	**3.71**	**10**	Pg	**Pg**	**15 28 35.1**	**-0.5**		
	1.2nm,0.4s								
BTLS				Lg	Lg	15 29 23.3			
	15nm,0.5s								
CHKK	**Chushkaly**	**3.74**	**47**	*e*P	**Pg**	**15 28 34.3**	**-2.0**		
	2.9nm,0.3s								
CHKK				*e*S	**Sg**	**15 29 23.1**	**-1.6**		
	21nm,0.4s								
CHKK	**Chushkaly**	**3.74**	**47**	Pg	**Pg**	**15 28 34.3**	**-2.0**		
	1.7nm,0.2s								
CHKK				Lg	Lg	15 29 22.5			
	21nm,0.4s								
SATY	**Saty**	**4.22**	**65**	*e*P	**Pg**	**15 28 42.9**	**-2.7**		
	8.8nm,0.6s								
SATY				*e*S	**Sg**	**15 29 37.6**	**-2.7**		
	12nm,0.4s								
SATY	**Saty**	**4.22**	**65**	Pg	**Pg**	**15 28 42.9**	**-2.7**		
	4.7nm,0.6s								
SATY				Lg	Lg	15 29 37.6			
	11nm,0.7s								
KURS	**Kuram**	**4.25**	**59**	*e*P	**Pg**	**15 28 43.9**	**-2.1**		
	5.4nm,1.1s								
KURS				*e*S	**Sg**	**15 29 39.2**	**-1.8**		
	8.2nm,1.2s								
KURS	**Kuram**	**4.25**	**59**	Pg	**Pg**	**15 28 43.9**	**-2.1**		
	5.4nm,1.1s								
KURS				Lg	Lg	15 29 39.2			
	8.2nm,1.2s								
ARXS	**Arharly**	**4.43**	**49**	*e*P	**Pg**	**15 28 47.3**	**-2.3**		
	9.0nm,0.5s								
ARXS				*e*S	**Sg**	**15 29 45.3**	**-1.7**		
	28nm,0.7s								
KPKS	**Kokpek**	**4.57**	**61**	*e*P	**Pg**	**15 28 50.4**	**-1.9**		
	6.9nm,0.5s								
KPKS				*e*S	**Sg**	**15 29 49.2**	**-2.3**		
	14nm,0.4s								
UZB	**Uzynbulak**	**4.68**	**66**	*e*P	**Pg**	**15 28 51.8**	**-2.4**		
	2.9nm,0.6s								
UZB				*e*S	**Sg**	**15 29 52.3**	**-2.5**		
	7.4nm,0.5s								
UZB	**Uzynbulak**	**4.68**	**66**	Pg	**Pb**	**15 28 50.1**	**+3.1**		
	2.9nm,0.6s								
UZB				Lg	Lg	15 29 50.0			
	6.9nm,0.5s								
SHLS	**Shalkode**	**4.99**	**67**	*e*P	**Pg**	**15 29 01.8**	**+1.8**		
	7.6nm,0.6s								
SHLS				*e*S	**Sg**	**15 30 09.3**	**+4.6**		
	15nm,0.6s								
SHLS	**Shalkode**	**4.99**	**67**	Pg	**Pg**	**15 29 01.9**	**+1.8**		
	4.7nm,0.8s								
SHLS				Lg	Lg	15 30 11.0			
	15nm,0.9s								
PDGK	**Podgornoye**	**5.06**	**65**	Pg	**Pg**	**15 28 57.9**	**-3.7**		
	0.6nm,0.4s								
PDGK				Lg	Lg	15 30 02.4			
	6.4nm,0.8s								
PDGK	**Podgornoye**	**5.06**	**65**	⇓Pg	**Pg**	**15 29 00.9**	**-0.7**		
	1.7nm,0.5s								
PDGK				⇓Lg	Lg	15 30 05.4			
	11nm,0.9s								
KAPS	**Kapalarasan**	**5.95**	**47**	*e*P	**Pg**	**15 29 15.7**	**-3.0**		
	1.4nm,0.5s								
KAPS				*e*S	**Sg**	**15 30 33.4**	**-2.4**		
	7.7nm,0.6s								
KAPS	**Kapalarasan**	**5.95**	**47**	Pg	Pg	15 29 14.1	-4.6		
	0.8nm,0.4s								
KAPS				Lg	Lg	15 30 30.7			
	7.7nm,0.6s								
MK31	**Makanchi Array**	**8.49**	**47**	⇑Pn	Pn	15 29 34.6	+6.5		
	0.4nm,0.5s,baz=273,slow=6.8,SNR=13								
MK31				⇓Lg	Lg	15 31 56.2			
	0.6nm,0.5s								

*IDC **26** 15:29:26.5±0.9,38˚.25N×20˚.38E,h0^{km},mb3.8/11, mb1 3.9/18,mb1mx3.7/44,mbtmp3.8/18,ML3.1/7,Error ellipse: s-maj=18.7km s-min=13.9km az=42.0*
*THE **26** 15:29:28.4,38˚.16N×20˚.37E,h10^{km}±5^{km},ML3.9/6,Error ellipse: s-maj=5.4km s-min=1.2km az=74.0*
*NEIC **26** 15:29:28.2±3.2,38˚.15N±0˚.06×20˚.33E±0˚.04,h11^{km}±4^{km}, mb4.3/14,ML3.9(THE),Error ellipse: s-maj=8.1km s-min=4.1km az=175.0*
*ATH **26** 15:29:29.2,38˚.17N×20˚.48E,h14^{km}±1^{km},ML3.7/8,Error ellipse: s-maj=2.1km s-min=1.0km az=68.0*
ISC 26 15:29:28.7±0.8,**38˚18N**±0˚.02×**20˚39E**±0˚.03,**h16**^{km}±5^{km}, **n121**,σ1§**39**/147,**mb4.0**/15,**10C**,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.15**	**90**	P	**Pg**	**15 29 32.4**	**-0.5**
VLS				S	**Sg**	**15 29 34.8**	**-0.8**
	141µm,0.3s						
VLS	**Valsamata**	**0.15**	**90**	P	**Pg**	**15 29 32.4**	**-0.5**
VLS				S	**Sg**	**15 29 34.6**	**-0.9**
VLS				AML	AML	15 29 35.1	
VLS				AML	AML	15 29 35.4	
FSK	**Fiskardo**	**0.31**	**25**	P	**Pg**	**15 29 35.4**	**+0.1**
FSK				S	**Sb**	**15 29 40.4**	**-0.4**
	43µm,0.3s						
FSK	**Fiskardo**	**0.31**	**25**	P	**Pg**	**15 29 35.4**	**+0.1**
FSK				S	**Sg**	**15 29 39.7**	**-0.1**
KFL	**Anninata**	**0.32**	**102**	P	**Pg**	**15 29 35.0**	**-0.4**
KFL				S	**Sg**	**15 29 40.1**	**+0.1**
	43µm,0.4s						
KFL	**Anninata**	**0.32**	**102**	P	**Pg**	**15 29 34.7**	**-0.7**
KFL				S	**Sg**	**15 29 38.1**	**-1.9**
KFL				AML	AML	15 29 41.2	
KFL				AML	AML	15 29 42.8	
	comp=N,72824µm,0.3s						
VLMS	**Volimes, Zakyn**	**0.37**	**145**	P	**Pg**	**15 29 35.9**	**-0.4**
VLMS				S	**Sg**	**15 29 41.4**	**-0.1**
VLMS				AML	AML	15 29 42.4	
VLMS				AML	AML	15 29 42.6	
	comp=N,95384µm,0.2s						
EVGI	**Lefkada island**	**0.49**	**25**	P	**Pg**	**15 29 38.4**	**-0.1**
EVGI				S	**Sb**	**15 29 46.0**	**+0.1**
EVGI	**Lefkada island**	**0.49**	**25**	P	**Pg**	**15 29 38.3**	**-0.2**
EVGI				S	**Sg**	**15 29 44.8**	**-0.3**
MGNA	**Meganis**	**0.57**	**33**	P	**Pg**	**15 29 39.6**	**-0.5**
LKD2	**Lefkada island**	**0.65**	**19**	P	**Pg**	**15 29 41.1**	**-0.4**
LKD2				S	**Sg**	**15 29 49.4**	**-0.7**
	comp=N,4µm,0.6s						
LKD2	**Lefkada island**	**0.65**	**19**	P	**Pg**	**15 29 41.1**	**-0.4**
LKD2				S	**Sg**	**15 29 49.4**	**-0.7**
LKD2				AML	AML	15 29 57.7	
	comp=E,7652µm,0.4s						
LKD2				AML	AML	15 29 58.9	
	comp=N,8126µm,0.3s						
TSLK	**Tsoukalades, L**	**0.68**	**18**	P	**Pg**	**15 29 41.7**	**-0.4**
TSLK	**Tsoukalades, L**	**0.68**	**18**	P	**Pg**	**15 29 41.9**	**-0.2**
TSLK				S	**Sb**	**15 29 52.5**	**+1.1**
RLS	**Riolos of Patr**	**0.85**	**98**	P	**Pg**	**15 29 44.3**	**-1.1**
RLS				S	**Sb**	**15 29 57.0**	**+0.6**
	comp=N,4µm,0.5s						
RLS	**Riolos of Patr**	**0.85**	**98**	P	**Pg**	**15 29 44.8**	**-0.6**
RLS				S	**Sg**	**15 29 55.8**	**-0.9**
RLS				AML	AML	15 30 00.2	
	comp=N,8468µm,0.3s						
RLS				AML	AML	15 30 00.8	
	comp=E,6162µm,0.5s						
PVO	**Paravola**	**0.99**	**63**	P	**Pg**	**15 29 47.6**	**-0.4**
PVO				S	**Sn**	**15 30 03.3**	**+1.6**
	comp=E,10µm,0.3s						
PVO	**Paravola**	**0.99**	**63**	P	**Pg**	**15 29 47.3**	**-0.6**

DRO	**Drossia**	**1.06**	**102**	P	**Pb**	**15 29 48.3**	**-0.5**
DRO				S	**Sb**	**15 30 03.5**	**+1.0**
EFP	**Efpalio**	**1.22**	**78**	P	**Pn**	**15 29 50.9**	**-0.2**
EFP				S	**Sb**	**15 30 07.1**	**+0.3**
EFP				AML	AML	15 30 16.1	
	comp=E,7780µm,0.5s						
EFP				AML	AML	15 30 16.4	
	comp=N,6124µm,0.8s						
AMT	**Artemida-Makis**	**1.22**	**121**	P	**Pn**	**15 29 50.5**	**-0.7**
LAKA	**Lakka**	**1.25**	**87**	P	**Pn**	**15 29 51.3**	**-0.3**
LAKA				S	**Sb**	**15 30 07.2**	**-0.7**
LAKA				AML	AML	15 30 17.7	
	comp=E,3144µm,0.4s						
LAKA				AML	AML	15 30 19.1	
	comp=N,3914µm,0.5s						
EVR	**Evrytania**	**1.33**	**56**	P	**Pn**	**15 29 52.9**	**+0.1**
TRIZ	**Trizonia**	**1.33**	**81**	P	**Pn**	**15 29 52.5**	**-0.2**
IGT	**Igoumenitsa**	**1.35**	**358**	P	**Pg**	**15 29 54.6**	**-0.2**
KLV	**Kalavryta, Ach**	**1.39**	**95**	P	**Pn**	**15 29 54.1**	**+0.5**
KLV				S	**Sg**	**15 30 13.3**	**-0.4**
KLV				AML	AML	15 30 23.1	
	comp=N,2058µm,0.7s						
KLV				AML	AML	15 30 24.7	
	comp=E,1816µm,0.9s						
JAN	**Janina**	**1.52**	**13**	P	**Pg**	**15 29 58.5**	**+0.5**
ITM	**Ithomi**	**1.57**	**129**	P	**Pb**	**15 29 58.1**	**+0.6**
ITM	**Ithomi**	**1.57**	**129**		**Pb**	**15 29 57.6**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.60**	**58**	P	**Pb**	**15 29 57.8**	**-0.1**
PYL	**PYLOS**	**1.67**	**140**	P	**Pb**	**15 29 58.7**	**-0.4**
AGG	**Agios Georgios**	**1.74**	**60**	P	**Pb**	**15 30 00.8**	**+0.5**
AGG	**Agios Georgios**	**1.74**	**60**		**Pg**	**15 30 01.2**	**-0.9**
THL	**Klokotos Trika**	**1.88**	**42**	P	**Pb**	**15 30 03.3**	**+0.7**
VIL2	**Platees**	**2.27**	**88**	P	**Pb**	**15 30 07.8**	**-1.5**
DID	**Didima**	**2.35**	**106**	P	**Pn**	**15 30 08.7**	**+2.0**
SCTE	**Santa Cesarea**	**2.41**	**322**		**Pn**	**15 30 08.2**	**+0.7**
LIT	**Litokhoron**	**2.52**	**40**		**Pb**	**15 30 12.2**	**-1.5**
FNA	**Florina**	**2.71**	**16**		**Pn**	**15 30 13.7**	**+2.0**
OHR	**Ohrid**	**2.95**	**6**	*i* Pn	**Pn**	**15 30 17.3**	**+2.3**
TIP	**Timpagrande**	**3.02**	**290**	⇑P	**Pn**	**15 30 18.2**	**+2.3**
TIP	**Timpagrande**	**3.02**	**290**		**Pn**	**15 30 16.9**	**+1.0**
TIR	**Tirane**	**3.19**	**353**	Pn	**Pn**	**15 30 20.4**	**+2.1**
CEL	**Celeste**	**3.54**	**273**	Pn	**Pn**	**15 30 24.1**	**+0.9**
VAY	**Valandovo**	**3.56**	**27**	*i* Pn	**Pn**	**15 30 23.7**	**+0.4**
STIP	**Stip**	**3.77**	**21**	*i* Pn	**Pn**	**15 30 30.0**	**+3.7**
MATE	**Matera**	**3.78**	**312**	⇑P	**Pg**	**15 30 41.7**	**+0.6**
SG1	**Sgolgore (BA)**	**3.92**	**314**	*e*Pn	**Pn**	**15 30 29.7**	**+1.5**
SG1				Sn	**Sn**	**15 31 14.1**	**+0.2**
APE	**Apeiranthos**	**4.23**	**104**	⇑P	**Pb**	**15 30 44.1**	**+1.4**
ACER	**Acerenza**	**4.32**	**309**	Pn	**Pn**	**15 30 34.2**	**+0.4**
PDG	**Podgorica**	**4.34**	**349**	⇑P	**Pn**	**15 30 34.2**	**+0.3**
PDG	**Podgorica**	**4.34**	**349**	⇑S	**Sn**	**15 31 20.4**	**-3.8**
PDG	**Podgorica**	**4.34**	**349**		**Pn**	**15 30 35.2**	**+1.2**
IDI	**Anoyia**	**4.62**	**127**	Pn	**Pn**	**15 30 40.4**	**+2.4**
	comp=E,0.7nm,0.3s,baz=196,slow=24,SNR=1.4						
IDI				Sn	**Sn**	**15 31 29.4**	**-1.9**
	comp=E,2.7nm,0.3s,baz=248,slow=11,SNR=1.7						
VAE	**Valguarnera**	**4.79**	**263**	Pn	**Pn**	**15 30 42.0**	**+1.7**
	comp=E,0.7nm,0.3s,baz=243,slow=20,SNR=3.1						
VAE				Sn	**Sn**	**15 31 33.6**	**-1.8**
	comp=E,2.2nm,0.3s,baz=202,slow=22,SNR=3.2						
VTS	**Vitosha**	**4.94**	**25**	⇑P	**Pn**	**15 30 44.4**	**+2.0**
VTS	**Vitosha**	**4.94**	**25**	Pn	**Pn**	**15 30 44.1**	**+1.7**
SGRT	**San Giovanni R**	**5.05**	**316**	Pn	**Pn**	**15 30 44.7**	**+0.8**
ALN	**Alexandroupoli**	**5.14**	**56**	Pn	**Pn**	**15 30 47.1**	**+2.0**
WDD	**Wied Dalam**	**5.25**	**245**	Pn	**Pn**	**15 30 46.5**	**0.0**
PAOL	**Paolisi**	**5.33**	**304**		**Pn**	**15 30 48.7**	**+1.1**
PLVB	**Plven**	**6.11**	**30**	⇑P	**Pn**	**15 31 01.1**	**+2.7**
INTR	**Introdacqua**	**6.28**	**310**		**Pn**	**15 31 02.6**	**+1.8**
NRCA	**Norcia**	**7.24**	**312**		**Pn**	**15 31 15.7**	**+1.8**
GZR	**Gura Zlata**	**7.43**	**13**	P	**Pn**	**15 31 17.1**	**+0.6**
MURB	**Monte Urbino**	**7.84**	**313**	Pn	**Pn**	**15 31 24.5**	**+2.4**
VOIR		**8.04**	**24**	⇑P	**Pn**	**15 31 26.7**	**+1.8**
MLR	**Muntele Rosu**	**8.40**	**28**	Pn	**Pn**	**15 31 34.1**	**+4.3**
	comp=E,0.3nm,0.3s,baz=255,slow=18,SNR=9.7						
MLR	**Muntele Rosu**	**8.40**	**28**	⇑P	**Pn**	**15 31 31.3**	**+1.4**
GBRS	**Gornja Briga**	**8.45**	**332**	*i* Pn	**Pn**	**15 31 31.4**	**+1.0**
PLOR	**Plostina**	**8.97**	**29**	⇑P	**Pn**	**15 31 39.4**	**+1.8**
SOKA	**Soboth**	**9.37**	**337**	*e*Pn	**Pn**	**15 31 42.8**	**-0.4**
	comp=E,4.4nm,0.4s,SNR=9.2						
OBKA	**Obir**	**9.38**	**334**	*e*Pn	**Pn**	**15 31 44.1**	**+0.8**
	comp=E,3.5nm,0.3s,SNR=11						
OBKA				Sn	**Sn**	**15 33 26.1**	**-2.3**
	comp=E,8.6nm,0.6s						
TEOL	**Teolo**	**9.69**	**321**	Pn	**Pn**	**15 31 47.6**	**+0.1**
PSZ	**Piszkesteto**	**9.74**	**358**	Pn	**Pn**	**15 31 48.6**	**+0.4**
ARSA	**Arzberg**	**9.75**	**340**	Pn	**Pn**	**15 31 47.9**	**-0.3**
	comp=E,1.5nm,0.3s						
MYKA	**Terra Mystica**	**9.81**	**332**	Pn	**Pn**	**15 31 50.1**	**+0.9**
	comp=E,1.4nm,0.3s						
CTI	**Castel Tesino**	**10.19**	**323**		**Pn**	**15 31 54.0**	**-0.4**
KBA	**Koelnbreinsper**	**10.29**	**332**	Pn	**Pn**	**15 31 56.6**	**+0.7**
	comp=E,2.1nm,0.4s						
ABTA	**Abfaltersbach**	**10.35**	**328**	Pn	**Pn**	**15 31 56.3**	**-0.3**
	comp=E,2.2nm,0.5s						
ABTA				Sn	**Sn**	**15 33 48.9**	**-3.3**
	comp=E,8.9nm,0.7s						
BRTR	**Keskin Array B**	**10.43**	**77**	Pn	**Pn**	**15 32 02.1**	**+4.3**
	comp=E,0.1nm,0.3s,baz=254,slow=10,SNR=3.0						
MOA	**Molln**	**10.65**	**337**	Pn	**Pn**	**15 32 01.8**	**+1.1**
	comp=E,3.4nm,0.5s,SNR=8.7						
WTTA	**Wattenberg**	**11.12**	**327**	Pn	**Pn**	**15 32 09.3**	**+2.0**
	comp=E,3.3nm,0.3s						
WTTA				Sn	**Sn**	**15 34 08.3**	**-3.0**
	comp=E,4.5nm,0.6s						
WATA	**Walderalm**	**11.21**	**328**	*e*Pn	**Pn**	**15 32 09.4**	**+1.0**
	comp=E,5.0nm,0.6s						
FUORN	**Ofenpass-Fuorn**	**11.27**	**322**	Pn	**Pn**	**15 32 11.3**	**+2.0**
MOTA	**Moosalm**	**11.42**	**326**	Pn	**Pn**	**15 32 13.2**	**+1.9**
	comp=E,2.8nm,0.5s						
DAVOX	**Davs/Dischmat**	**11.57**	**321**	Pn	**Pn**	**15 32 13.1**	**-0.4**
	comp=E,0.2nm,0.3s,baz=152,slow=19,SNR=3.2						
DAVOX				Sn	**Sn**	**15 34 17.2**	**-5.1**
	comp=E,0.4nm,0.3s,baz=307,slow=23,SNR=2.1						
GEC2	**GERESS Array S**	**11.71**	**338**	Pn	**Pn**	**15 32 14.4**	**-0.8**
GERES	**GERESS Array B**	**11.71**	**338**	Pn	**Pn**	**15 32 15.3**	**+0.1**
	comp=E,0.3nm,0.3s,baz=158,slow=14,SNR=7.5						
GERES				Sn	**Sn**	**15 34 22.0**	**-3.5**
	comp=E,0.4nm,0.3s,baz=152,slow=22,SNR=6.1						
KHC	**Kasperske Hory**	**12.00**	**338**	*e*Pn	**Pn**	**15 32 20.0**	**+0.9**
KHC				*e*Sn	Sn	15 34 42.0	+9.4
KHC	**Kasperske Hory**	**12.00**	**338**	Pn	**Pn**	**15 32 20.2**	**+1.1**
SENIN	**Lac Senin/Sane**	**12.67**	**314**	Pn	**Pn**	**15 32 30.4**	**+1.9**
AKASG	**Malin Array Be**	**14.01**	**24**	Pn	**Pn**	**15 32 45.8**	**-0.6**
	comp=E,1.2nm,0.3s,baz=212,slow=9.5,SNR=1.5						
AKBB	**Malin Array Si**	**14.01**	**24**	Pn	**Pn**	**15 32 46.5**	**+0.1**
EIL	**Elat**	**14.75**	**121**	Pn	**Pn**	**15 32 57.4**	**+0.6**
	comp=E,0.2nm,0.3s,baz=302,slow=14,SNR=2.3						
GNI	**Garni**	**18.97**	**76**	P	**P**	**15 33 49.1**	**-0.4**
	comp=E,0.3nm,0.3s,baz=275,slow=12,SNR=1.8						
GNI	**Garni**	**18.97**	**76**	IAmb	IAmb	15 34 03.7	
	comp=E,63nm,1.4s						
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**15 34 25.9**	**-0.2**
	comp=E,5.6nm,0.8s,baz=146,slow=11,SNR=15						
EKA	**Eskdalemuir Ar**	**23.37**	**325**	P	**P**	**15 34 35.9**	**-0.4**
	comp=E,2.4nm,0.9s,baz=131,slow=10,SNR=3.2						
NAO01	**NORSAR Array S**	**23.46**	**348**	P	**P**	**15 34 36.8**	**-0.5**
FINES	**FINESS Array B**	**23.56**	**7**	P	**P**	**15 34 37.2**	**-1.0**
	comp=E,2.3nm,0.6s,baz=182,slow=9.7,SNR=18						
FIA1	**FINESS Array S**	**23.56**	**7**	P	**P**	**15 34 37.8**	**-0.4**
NC405	**NORSAR Array S**	**23.59**	**349**	P	**P**	**15 34 38.6**	**0.0**
NB201	**NORSAR Array S**	**23.60**	**349**	P	**P**	**15 34 39.1**	**+0.5**
NB2	**NORSAR Subarra**	**23.60**	**349**	P	**P**	**15 34 38.9**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=153,slow=10						
NOA	**NORSAR Array B**	**23.60**	**349**	P	**P**	**15 34 37.6**	**-1.0**
	comp=Z,1.4nm,0.6s,baz=158,slow=8.9,SNR=7.6						
NBO00	**NORSAR Array S**	**23.66**	**348**	P	**P**	**15 34 39.0**	**-0.2**
NC303	**NORSAR Array S**	**23.75**	**349**	P	**P**	**15 34 40.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**29.97**	**219**	P	**P**	**15 35 36.5**	**0.0**
	comp=Z,0.9nm,0.7s,baz=26,slow=8.9,SNR=5.0						
LVZ	**Lovozero**	**30.82**	**10**	P	**P**	**15 35 45.2**	**+1.7**
ARCES	**ARCESS Array B**	**31.54**	**3**	P	**P**	**15 35 48.6**	**-1.2**
	comp=Z,3.0nm,0.9s,baz=190,slow=12,SNR=7.2						
KK31	**Karatay Array**	**37.89**	**66**	P	**P**	**15 36 45.4**	**+0.4**
KK31				IAmb	IAmb	15 36 51.8	
	comp=Z,11nm,1.9s						
KKAR	**Karatay Array**	**37.89**	**66**	P	**P**	**15 36 45.3**	**+0.3**
KKAR				IAmb	IAmb	15 36 51.9	
	comp=Z,11nm,1.9s						
MAKZ	**Makanchi**	**45.17**	**58**	P	**P**	**15 37 44.1**	**-0.5**
MK31	**Makanchi Array**	**45.39**	**58**	P	**P**	**15 37 45.6**	**-0.8**
MK31				IAmb	IAmb	15 37 51.8	
	comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**45.39**	**58**	P	**P**	**15 37 46.1**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=276,slow=7.1,SNR=24						

ZAA0	**Zalesovo Array**	**45.77**	**48**	P	**P**	**15 37 48.8**	**-0.4**
ZAA0				IAmb	IAmb	15 37 53.0	
	comp=Z,4.0nm,1.0s						
ZALV	**Zalesovo Beam**	**45.77**	**48**	P	**P**	**15 37 48.6**	**-0.6**
	comp=Z,4.2nm,0.8s,baz=276,slow=8.6,SNR=12						
SONM	**Songino Array**	**60.54**	**51**	P	**P**	**15 39 38.1**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=304,slow=6.3,SNR=3.0						
CMAR	**Chiang Mai Arr**	**69.99**	**82**	P	**P**	**15 40 39.7**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=304,slow=6.6,SNR=4.3						
YKA	**Yellowknife Ar**	**73.36**	**340**	P	**P**	**15 40 59.7**	**+0.3**
	comp=Z,0.1nm,0.4s,baz=34,slow=5.3,SNR=2.8						

*IDC **26** 15:31:35.2±1.0,38˚.28N×20˚.37E,h0^{km},mb3.8/11, mb1 3.8/12,mb1mx3.7/41,mbtmp3.7/12,ML3.3/2,MS4.4/1, Ms1 4.4/1,ms1mx3.4/46,Error ellipse: s-maj=23.8km s-min=21.2km az=98.0*
*NEIC **26** 15:31:38.2±1.6,38˚.19N±0˚.08×20˚.40E±0˚.08,h20^{km}±5^{km}, mb4.1/10,ML3.6(THE),Error ellipse: s-maj=11.4km s-min=8.9km az=164.0*
*THE **26** 15:31:38.0,38˚.17N×20˚.41E,h8^{km}±1^{km},ML3.6/8,Error ellipse: s-maj=2.1km s-min=0.6km az=68.0*
*ATH **26** 15:31:38.1,38˚.18N×20˚.47E,h17^{km}±1^{km},ML3.5/16,Error ellipse: s-maj=2.4km s-min=0.8km az=78.0*
ISC 26 15:31:37.1±0.9,**38˚16N**±0˚.03×**20˚38E**±0˚.03,**h14**^{km}±5^{km}, **n93**,σ1§**08**/109,**mb3.9**/16,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.17**	**83**	P	**Pg**	**15 31 41.2**	**+0.1**
VLS				S	**Sg**	**15 31 43.2**	**-0.7**
	70µm,0.3s						
VLS	**Valsamata**	**0.17**	**83**	P	**Pg**	**15 31 41.2**	**+0.1**
VLS				S	**Sg**	**15 31 43.7**	**-0.2**
VLS				AML	AML	15 31 43.8	
VLS				AML	AML	15 31 44.4	
KFL	**Anninata**	**0.33**	**98**	P	**Pg**	**15 31 43.9**	**+0.1**
KFL				S	**Sg**	**15 31 48.5**	**+0.2**
	26µm,0.4s						
KFL	**Anninata**	**0.33**	**98**	P	**Pg**	**15 31 44.0**	**+0.1**
KFL				S	**Sg**	**15 31 48.7**	**+0.3**
KFL				AML	AML	15 31 49.1	
	comp=N,42244µm,0.5s						
KFL				AML	AML	15 31 50.1	
	comp=E,63470µm,0.4s						
FSK	**Fiskardo**	**0.33**	**25**	P	**Pg**	**15 31 44.2**	**+0.3**
FSK				S	**Sb**	**15 31 49.4**	**-0.7**
	comp=E,36µm,0.2s						
FSK	**Fiskardo**	**0.33**	**25**	P	**Pg**	**15 31 44.3**	**+0.3**
FSK				S	**Sb**	**15 31 49.3**	**-0.7**
FSK				AML	AML	15 31 49.7	
	comp=N,54006µm,0.2s						
FSK				AML	AML	15 31 49.9	
	comp=E,89880µm,0.2s						
VLMS	**Volimes, Zakyn**	**0.36**	**142**	P	**Pg**	**15 31 44.9**	**+0.5**
VLMS				S	**Sg**	**15 31 50.7**	**+1.4**
VLMS				AML	AML	15 31 50.9	
	comp=E,29266µm,0.3s						
VLMS				AML	AML	15 31 53.8	
	comp=N,27718µm,0.4s						
EVGI	**Lefkada island**	**0.51**	**25**	P	**Pg**	**15 31 47.3**	**+0.1**
EVGI				S	**Sb**	**15 31 54.6**	**-0.6**
EVGI	**Lefkada island**	**0.51**	**25**	P	**Pg**	**15 31 47.3**	**+0.1**
EVGI				S	**Sb**	**15 31 54.6**	**-0.6**
MGNA	**Meganis**	**0.59**	**33**	P	**Pg**	**15 31 48.5**	**-0.3**
MGNA				S	**Sg**	**15 31 55.6**	**-1.0**
MGNA				AML	AML	15 31 57.8	
	comp=N,8004µm,0.1s						
MGNA				AML	AML	15 32 00.8	
	comp=E,7762µm,0.5s						
LKD2	**Lefkada island**	**0.67**	**19**	P	**Pg**	**15 31 50.1**	**-0.1**
LKD2				S	**Sg**	**15 31 58.9**	**-0.1**
	comp=E,3µm,0.4s						
LKD2	**Lefkada island**	**

CEL	Celeste	3.54	273	Pn	Pn	15 32 32.5	+0.8		
STIP	Stip	3.79	21	*i* Pn	Pn	15 32 39.0	+3.8		
SG1	Sgolgore (BA)	3.92	314	*e*Pn	Pn	15 32 38.8	+1.8		
SG1				Sn	Sn	15 33 23.0	+0.2		
PDG	Podgorica	4.35	349	Pn	Pn	15 32 42.9	+0.1		
IDI	Anoyia	4.62	127	Sn	Sn	15 33 38.8	-1.3		
	comp=E,1.7nm,0.3s,baz=295,slow=18,SNR=1.4								
VAE	Valguarnera	4.78	264	Sn	Sn	15 33 41.2	-2.6		
	comp=E,2.7nm,0.3s,baz=150,slow=12,SNR=2.0								
SGRT	San Giovanni R	5.06	317	Pn	Pn	15 32 53.5	+0.9		
ALN	Alexandroupoli	5.16	56	Pn	Pn	15 32 55.5	+1.5		
WDD	Wied Dalam	5.23	245	Pn	Pn	15 32 55.8	+0.9		
CORL	Corleone	5.59	269	Pn	Pn	15 32 59.8	-0.2		
BLY	Banja Luka	7.01	341	Pn	Pn	15 33 19.2	-0.1		
NRCA	Norcia	7.24	312	Pn	Pn	15 33 24.5	+1.9		
LATE	Laterza	7.91	307	Pn	Pn	15 33 31.6	-0.2		
MLR	Muntele Rosu	8.42	28	Pn	Pn	15 33 42.8	+4.0		
	comp=E,0.2nm,0.3s,baz=232,slow=10.0,SNR=2.1								
GBRS	Gornja Briga	8.46	332	*i* Pn	Pn	15 33 40.3	+1.1		
BR131	Keskin Array S	10.45	77	Pn	Pn	15 34 06.7	+0.1		
BRTR	Keskin Array B	10.45	77	Pn	Pn	15 34 10.0	+3.4		
	comp=E,0.1nm,0.3s,baz=258,slow=12,SNR=2.7								
BRTR	Keskin Array B	10.45	77		Pn	15 34 06.8	+0.1		
AKASG	Malin Array Be	14.03	24	Pn	Pn	15 34 52.7	-2.6		
	comp=E,0.8nm,0.3s,baz=209,slow=8.7,SNR=1.4								
HFS	Hagfors	22.40	351	P	P	15 36 33.8	-1.1		
	comp=E,2.4nm,0.5s,baz=152,slow=9.6,SNR=8.6								
FINES	FINESS Array B	23.58	7	P	P	15 36 46.4	-0.7		
	comp=E,2.3nm,0.7s,baz=181,slow=9.2,SNR=8.6								
FIA1	FINESS Array S	23.58	7	P	P	15 36 46.6	-0.5		
NC405	NORSAR Array S	23.61	349	P	P	15 36 47.4	0.0		
NC405				IAmb	IAmb	15 37 16.8			
	comp=Z,2.8nm,0.6s								
NB201	NORSAR Array S	23.61	349	P	P	15 36 48.9	+1.5		
NB201				IAmb	IAmb	15 36 55.5			
	comp=Z,4.9nm,0.8s								
NB2	NORSAR Subarra	23.62	349	P	P	15 36 47.6	+0.1		
	comp=Z,2.2nm,0.8s,baz=150,slow=10								
NOA	NORSAR Array B	23.62	349	P	P	15 36 46.9	-0.7		
	comp=Z,1.3nm,0.7s,baz=150,slow=8.3,SNR=5.4								
NBO00	NORSAR Array S	23.68	348	P	P	15 36 48.6	+0.6		
NC204	NORSAR Array S	23.91	349	P	P	15 36 50.9	+0.5		
TORD	Torodi Ar. Bea	29.95	219	P	P	15 37 46.4	+1.4		
	comp=Z,1.4nm,1.1s,baz=30,slow=8.9,SNR=3.8								
TORD	Torodi Ar. Bea	29.95	219	P	P	15 37 45.6	+0.6		
ARCES	ARCESS Array B	31.56	3	P	P	15 37 57.7	-1.0		
	comp=Z,1.5nm,0.8s,baz=186,slow=12,SNR=6.5								
KK31	Karatay Array	37.91	66	P	P	15 38 54.4	+0.5		
KK31				IAmb	IAmb	15 38 59.4			
	comp=Z,1.7nm,0.6s								
KKAR	Karatay Array	37.91	66	P	P	15 38 53.1	-0.7		
KKAR	Karatay Array	37.91	66	P	P	15 38 54.3	+0.5		
KKAR				IAmb	IAmb	15 38 59.4			
	comp=Z,1.7nm,0.6s								
AAK	Ala-Archa	40.87	66	LR	LR	16 01 10.6			
	comp=Z,455nm,18.9s,baz=298,slow=44								
MK31	Makanchi Array	45.41	58	P	P	15 39 54.9	-0.4		
MKAR	Makanchi Array	45.41	58	P	P	15 39 54.9	-0.3		
	comp=Z,0.6nm,0.4s,baz=273,slow=7.6,SNR=10								
ZAA0	Zalesovo Array	45.79	48	P	P	15 39 58.0	0.0		
ZAA0				IAmb	IAmb	15 40 01.9			
	comp=Z,2.4nm,0.6s								
ZALV	Zalesovo Beam	45.79	48	P	P	15 39 57.9	-0.2		
	comp=Z,2.1nm,0.5s,baz=274,slow=8.4,SNR=6.2								
SONM	Songino Array	60.56	51	P	P	15 41 46.9	-0.2		
	comp=Z,0.3nm,0.6s,baz=267,slow=10,SNR=2.1								
YAK	Yakutsk	65.18	29	P	P	15 42 17.3	-0.2		
CMAR	Chiang Mai Arr	70.00	82	P	P	15 42 48.6	0.0		
	comp=Z,0.3nm,0.3s,baz=300,slow=6.1,SNR=3.8								
YKA	Yellowknife Ar	73.37	340	P	P	15 43 07.4	-0.7		
	comp=Z,0.2nm,0.6s,baz=35,slow=5.4,SNR=3.2								
KSRS	Korea Array	79.43	51	P	P	15 43 43.4	+0.5		
	comp=Z,0.7nm,0.7s,baz=314,slow=5.7,SNR=3.5								
WRA	Warramunga Arr	120.65	92	PKP	PKPdf	15 50 28.8	-0.1		
	comp=Z,0.4nm,0.8s,baz=313,slow=2.4,SNR=2.6								

IDC 26 15:35:21.0±54.0, 23°.37S×175°.03W, h0^{km}, mb3.8/3, mb1 4.0/3, mb1mx3.6/28, mbtmp3.8/3, MS4.3/2, Ms1 4.4/2, ms1mx3.9/24, Error ellipse: s-maj=1013.0km s-min=174.4km az=88.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.15	248	P	P	15 42 51.1	+0.5
	1.0nm,0.9s,baz=80,slow=7.8,SNR=4.4						
ASAR	Alice Springs	46.62	259	P	P	15 43 51.3	0.0
	0.3nm,0.3s,baz=98,slow=7.1,SNR=10						
ASAR				LR	LR	16 03 10.6	
	comp=Z,542nm,19.7s,baz=120,slow=36						
WRA	Warramunga Arr	47.00	264	P	P	15 43 53.6	-0.8
	0.8nm,0.3s,baz=105,slow=8.3,SNR=7.4						
CMAR	Chiang Mai Arr	93.66	288	LR	LR	16 30 01.8	
	comp=Z,83nm,21.3s,baz=115,slow=35						

*NEIC **26** 15:36:38.0±3.0, 38°.20N±0°.06×20°.26E±0°.04, h11^{km}±2^{km}, mb4.3/24, ML3.9(THE), Error ellipse: s-maj=8.5km s-min=4.3km az=202.0*

*THE **26** 15:36:38.2, 38°.21N×20°.29E, h1^{km}±5^{km}, ML3.8/20, Error ellipse: s-maj=6.9km s-min=0.5km az=250.0*

*ATH **26** 15:36:39.2, 38°.24N×20°.44E, h17^{km}±1^{km}, ML4.1/5, Error ellipse: s-maj=2.4km s-min=1.0km az=67.0*

*IDC **26** 15:36:41.0±3.0, 38°.30N×20°.35E, h32^{km}±23^{km}, mb3.8/19, mb1 3.9/27, mb1mx3.8/53, mbtmp4.0/27, ML3.6/8, MS4.1/1, Ms1 4.1/1, ms1mx3.2/53, Error ellipse: s-maj=15.1km s-min=12.6km az=166.0*

ISC 26 15:36:38.1±0.9, 38°.24N±0°.02×20°.30E±0°.03, h14^{km}±5^{km}, n228, σ1°65/264, mb4.0/24, 7C-3D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	Valsamata	0.23	105	P	Pg	15 36 43.1	-0.2
VLS				S	Sg	15 36 46.1	-0.7
	155μm,0.1s						
VLS	Valsamata	0.23	105	P	Pg	15 36 43.0	-0.3
VLS				S	Sg	15 36 46.0	-0.8
VLS				AML	AML	15 36 46.3	
VLS				AML	AML	15 36 46.7	
FSK	Fiskardo	0.30	43	P	Pg	15 36 44.6	+0.2
FSK				S	Sg	15 36 48.8	+0.2
	12μm,0.3s						
FSK	Fiskardo	0.30	43	P	Pg	15 36 44.4	0.0
FSK				S	Sg	15 36 48.3	-0.3
KFL	Anninata	0.40	109	P	Pg	15 36 45.9	-0.3
KFL				S	Sg	15 36 51.5	-0.3
	96μm,0.4s						
KFL	Anninata	0.40	109	P	Pg	15 36 45.7	-0.5
KFL				S	Sg	15 36 50.2	-1.5
KFL				AML	AML	15 36 51.7	
KFL				AML	AML	15 36 51.9	
VLMS	Volimes, Zakyn	0.46	142	P	Pg	15 36 47.1	-0.1
VLMS				S	Sg	15 36 53.0	-0.5
VLMS				AML	AML	15 36 54.5	
VLMS				AML	AML	15 36 54.6	
EVGI	Lefkada island	0.47	36	P	Pg	15 36 47.8	+0.3
EVGI	Lefkada island	0.47	36	P	Pg	15 36 47.8	+0.3
MGNA	Meganis	0.56	43	P	Pg	15 36 48.8	-0.5
LKD2	Lefkada island	0.61	27	P	Pg	15 36 50.3	+0.1
LKD2	Lefkada island	0.61	27	P	Pg	15 36 50.3	+0.1
LKD2				S	Sb	15 36 59.1	-0.1
LKD2				AML	AML	15 37 07.2	
	comp=N,6656μm,0.2s						
LKD2				AML	AML	15 37 07.3	
	comp=E,5393μm,0.2s						
TSLK	Tsoukalades, L	0.65	25	P	Pg	15 36 50.7	-0.1
TSLK	Tsoukalades, L	0.65	25	P	Pb	15 36 51.3	+0.1
RLS	Riolos of Patr	0.94	101	P	Pb	15 36 55.0	-1.1
RLS				S	Sn	15 37 10.2	+0.3
	comp=E,6μm,0.6s						
RLS	Riolos of Patr	0.94	101	P	Pb	15 36 55.1	-1.0
RLS				S	Sb	15 37 06.3	-2.0
RLS				AML	AML	15 37 11.8	
	comp=E,8505μm,0.7s						
RLS				AML	AML	15 37 13.7	
	comp=N,16567μm,0.6s						
PVO	Paravola	1.03	68	P	Pb	15 36 57.5	-0.2
PVO				S	Sn	15 37 13.6	+1.3
	comp=N,6μm,0.4s						
PVO	Paravola	1.03	68	P	Pb	15 36 57.3	-0.4
DRO	Drossia	1.15	104	P	Pb	15 36 58.9	-0.8
DRO	Drossia	1.15	104	P	Pb	15 36 59.1	-0.6
UPR	University Cam	1.17	87	P	Pg	15 37 01.0	+0.4
EFP	Efpalio	1.27	81	P	Pn	15 37 01.4	-0.1
EFP				S	Sg	15 37 23.0	+3.7
	comp=N,7μm,1.0s						
EFP	Efpalio	1.27	81	P	Pn	15 37 01.4	-0.1
IGT	Igoumenitsa	1.29	1	P	Pg	15 37 03.8	+0.8
IGT	Igoumenitsa	1.29	1	P	Pg	15 37 03.4	+0.5
AMT	Artemida-Makis	1.32	122	P	Pg	15 37 05.1	+1.6
AMT				S	Sg	15 37 24.3	+3.7
	comp=N,7μm,0.7s						
AMT	Artemida-Makis	1.32	122	P	Pg	15 37 03.3	-0.2
LAKA	Lakka	1.32	89	P	Pn	15 37 01.7	-0.4
LAKA				S	Sg	15 37 23.1	+2.4
	comp=N,3μm,0.9s						
LAKA	Lakka	1.32	89	P	Pn	15 37 01.3	-0.8
EVR	Evrytania	1.36	60	P	Pg	15 37 04.3	0.0
EVR	Evrytania	1.36	60	P	Pb	15 37 03.6	+0.2
SERG	Sergoula	1.39	82	P	Pb	15 37 03.9	0.0
SERG				S	Sg	15 37 24.9	+1.9
SERG	Sergoula	1.39	82	P	Pn	15 37 03.2	+0.1
TRIZ	Trizonia	1.40	84	P	Pn	15 37 03.5	+0.4
TRIZ				S	Sg	15 37 26.1	+2.9
	comp=N,3μm,0.4s						
TRIZ	Trizonia	1.40	84	P	Pn	15 37 03.3	+0.2
ALIK	Aliki, Aigiali	1.42	89	P	Pn	15 37 03.7	+0.2
KALE	Kalithea	1.45	83	P	Pb	15 37 05.4	+0.4
KALE				S	Sg	15 37 26.9	+1.9
	comp=N,4μm,0.9s						
KALE	Kalithea	1.45	83	P	Pb	15 37 05.1	+0.1
KLV	Kalavryta, Ach	1.47	97	P	Pn	15 37 04.6	+0.4
KLV				S	Sg	15 37 27.8	+2.3
	comp=N,2μm,0.7s						
KLV	Kalavryta, Ach	1.47	97	P	Pn	15 37 04.5	+0.3
JAN	Janina	1.48	17	P	Pg	15 37 07.6	+1.0
JAN	Janina	1.48	17	P	Pg	15 37 07.5	+1.0
KASA	Kassiopi	1.53	349	P	Pg	15 37 07.5	-0.1
MAKR	Makrakomi, Fth	1.63	61	P	Pg	15 37 09.6	+0.2
MAKR				S	Sg	15 37 33.0	+2.5
MAKR	Makrakomi, Fth	1.63	61	P	Pb	15 37 07.8	-0.1
SRN	Sarande	1.65	352	P	Pg	15 37 09.9	0.0
ITM	Ithomi	1.67	129	P	Pg	15 37 09.0	+0.4
ITM				S	Sg	15 37 32.3	+0.5
	comp=N,2μm,0.9s						
ITM	Ithomi	1.67	129	P	Pb	15 37 09.0	+0.4
ITM	Ithomi	1.67	129		Pb	15 37 08.7	+0.1
PYL	PYLOS	1.76	139	P	Pb	15 37 10.2	0.0
PYL	PYLOS	1.76	139	P	Pb	15 37 09.7	-0.5
AGG	Agios Georgios	1.77	63	P	Pg	15 37 11.3	-0.8
AGG				S	Sg	15 37 36.9	+1.8
	comp=N,1μm,0.9s						
AGG	Agios Georgios	1.77	63		Pb	15 37 11.0	+0.7
KLMT	Kalamata	1.82	130	P	Pg	15 37 13.7	+0.6
KLMT				S	Sg	15 37 39.2	+2.4
	comp=N,3μm,0.7s						
VLX	Vlachokerasia	1.86	117	P	Pg	15 37 13.5	-0.3
THAL	Thalero	1.87	95	P	Pg	15 37 13.1	-0.9
THL	Klokotos Trika	1.88	45	P	Pb	15 37 12.9	+0.7
THL				S	Sg	15 37 39.4	+0.8
	comp=N,1μm,0.9s						
KPRO	Kipourio	1.90	25	P	Pb	15 37 13.3	+0.7
KPRO				S	Sg	15 37 39.2	-0.1
	comp=N,2μm,0.9s						
AXAR	Agios Charalam	1.92	73	P	Pn	15 37 11.3	+0.9
PROD	Prodromos	2.04	89	P	Pb	15 37 14.3	-0.7
PROD				S	Sb	15 37 41.4	+1.1
PROD	Prodromos	2.04	89	P	Pb	15 37 13.8	-1.2
PENT	Pentalofos	2.06	18	P	Pb	15 37 15.7	+0.4
PENT	Pentalofos	2.06	18	P	Pb	15 37 15.7	+0.4
LTK	Loutraki	2.11	95	P	Pb	15 37 14.7	-1.5
LOUT	Loutraki	2.12	96	P	Pb	15 37 14.9	-1.4
LOUT	Loutraki	2.12	96	P	Pb	15 37 14.9	-1.4
LKR	Lokris	2.16	78	P	Pb	15 37 15.4	-1.5
LKR	Lokris	2.16	78	P	Pb	15 37 15.2	-1.7
NEST	Nestorio	2.25	15	P	Pb	15 37 18.9	+0.4
SCTE	Santa Cesarea	2.32	323		Pn	15 37 16.9	+1.1
VIL2	Platees	2.34	90	P	Pb	15 37 18.3	-1.6
KZN	Kozani	2.36	28	P	Pb	15 37 19.9	-0.5
VILL	Villia	2.37	91	P	Pn	15 37 18.4	+1.8
DID	Didima	2.44	107	P	Pb	15 37 19.9	-1.8
DID				S	Sb	15 37 51.2	-0.3
	comp=N,1μm,0.8s						
LIT	Litokhoron	2.52	42	P	Pb	15 37 21.6	-1.5
LIT	Litokhoron	2.52	42		Pb	15 37 21.6	-1.5
NEO	Neokhori	2.52	64	P	Pb	15 37 21.2	-1.9
XOR	Xorichti	2.52	63	P	Pb	15 37 21.6	-1.6
VLI	Veliai	2.59	125	P	Pn	15 37 23.2	-1.1
MRKA	Markates	2.62	79	P	Pn	15 37 21.6	+1.6
MRKA	Markates	2.62	79	P	Pn	15 37 20.4	+0.4
FNA	Florina	2.67	18	P	Pb	15 37 24.5	-1.2
FNA	Florina	2.67	18		Pb	15 37 23.5	-2.2
ATH	Athens Observa	2.71	95	P	Pn	15 37 22.6	+1.5
ATHU	Athens Univers	2.76	95	P	Pn	15 37 23.3	+1.4
ATHU				S	Sn	15 37 57.5	+2.5
	comp=N,242nm,0.8s						
ATHU	Athens Univers	2.76	95	P	Pn	15 37 23.2	+1.4
VLY	Voula,Athens	2.78	97	P	Pn	15 37 23.7	+1.5
PTL	Penteli	2.81	93	P	Pn	15 37 24.1	+1.4
PTL				S	Sb	15 37 59.5	-3.0
	comp=N,640nm,0.9s						
EREA	Eretria	2.86	85	P	Pn	15 37 25.5	+2.2
EREA	Eretria	2.86	85	P	Pn	15 37 24.6	+1.3
OHR	Ohrid	2.89	7	*i* Pn	Pb	15 37 27.1	-2.4
KTHR	Kythira	2.92	132	P	Pb	15 37 27.7	-2.3
TIP	Timpagrande	2.93	290	P	Pn	15 37 26.7	+2.4
TIP				S	Sn	15 38 01.0	+1.8
TIP	Timpagrande	2.93	290	⇓P	Pn	15 37 23.9	-0.4
TIP	Timpagrande	2.93	290		Pn	15 37 26.1	+1.9
KTHA	Kythira Island	2.96	131	P	Pb	15 37 27.9	-2.7
KTHA				S	Sn	15 38 01.6	+1.6
	comp=N,580nm,0.7s						
PAIG	Paliouri	3.12	56	P	Pn	15 37 28.3	+1.4
TIR	Tirane	3.12	354	P	Pn	15 37 29.2	+2.3
TIR	Tirane	3.12	354		Pn	15 37 29.0	+2.1
GRG	Griva	3.16	30	P	Pn	15 37 30.2	+2.8
HORT	Hortiatis	3.20	42	P	Pn	15 37 31.1	+3.1
PLG	Polygyros	3.24	48	P	Pn	15 37 31.0	+2.5
CGL1	Ceglie Messapi	3.26	319	*e*Pn	Pn	15 37 30.6	+1.9
KARY	Karystos	3.27	92	P	Pn	15 37 29.8	+0.9
TAR1	Taranto	3.27	315	*e*Pn	Pn	15 37 31.4	+2.5
MASS	Massafra	3.42	315	*e*Pn	Pn	15 37 33.9	+2.9
CEL	Celeste	3.47	272		Pn	15 37 32.2	+0.4
SOH	Sokhos	3.50	42	P	Pn	15 37 35.0	+3.0
VAY	Valandovo	3.54	29	*i* Pn	Pb	15 37 36.9	-3.5
KNT	Kendrikon	3.54	34	P	Pn	15 37 34.6	+2.0
MATE	Matera	3.68	312	⇑P	Pn	15 37 31.4	-3.1
STIP	Stip	3.74	22	*i* Pn	Pn	15 37 39.5	+4.1
SG1	Sgolgore (BA)	3.82	314	*e*Pn	Pn	15 37 38.7	+2.2
SRS	Serrai	3.83	40	P	Pn	15 37 38.2	+1.5
BAI	Bari	3.90	318	*e*Pn	Pn	15 37 39.7	+2.2
IMMV	Iera Moni Meta	4.05	132	P	Pn	15 37 41.9	+2.3
VAM	Vamos	4.21	131	P	Pn	15 37 43.8	+1.9
ACER	Acerenza	4.22	308		Pn	15 37 44.1	+2.1
PDG	Podgorica	4.26	350	Pn	Pn	15 37 44.8	+2.3
APE	Apeiranthos	4.31	104	⇓P	Pb	15 37 56.9	+3.2
CHOS	Chios island	4.53	86	P	Pn	15 37 48.2	+1.9
IDI	Anoyia	4.72	127	Pn	Pn	15 37 51.3	+2.5
	comp=N,1.2nm,0.3s,baz=326,slow=18,SNR=4.8						
IDI				Sn	Sn	15 38 40.4	-2.9
	comp=N,7.4nm,0.3s,baz=82,slow=18,SNR=3.8						
DBRK	Dubrovnik	4.72	340	*e*Pn	Pn	15 37 50.1	+1.3
DBRK				Sn	Sn	15 38 42.3	-1.0
VAE	Valguarnera	4.72	263	Pn	Pn	15 37 51.3	+2.4
	comp=N,2.3nm,0.3s,baz=100,slow=6.1,SNR=3.7						
VAE				Sn	Sn	15 38 43.8	+0.3
	comp=N,3.3nm,0.3s,baz=18,slow=11,SNR=1.9						
VTS	Vitosha	4.91	26	⇑P	Pb	15 38 01.1	-2.9
VTS	Vitosha	4.91	26	Pn	Pn	15 37 54.7	+3.1
SGRT	San Giovanni R	4.96	317	Pn	Pn	15 37 53.4	+1.2
STON	Ston	5.03	338	*i* Pn	Pn	15 37 53.8	+0.7
ALN	Alexandroupoli	5.17	57	Pn	Pn	15 37 58.5	+3.5
WDD	Wied Dalam	5.21	244	Pn	Pn	15 37 55.6	+0.1
CORL	Corleone	5.53	269	Pn	Pn	15 38 02.3	+2.2
MAKA	Makarska	5.62	335	*e*Pn	Pn	15 38 02.2	+1.0
CLTB	Caltabellotta	5.64	265	Pn	Pn	15 38 03.5	+1.8
INTR	Introdacqua	6.18	310		Pn	15 38 10.2	+1.2
KIJV	Kijevo	6.47	334	*e*Pn	Pn	15 38 14.7	+1.9
BLY	Banja Luka	6.91	341	⇑P	Pn	15 38 17.5	-1.4
BLY	Banja Luka	6.91	341	Pn	Pn	15 38 20.6	+1.7
DUGI	Dugi Otok	6.98	327	*i* Pn	Pn	15 38 21.1	+1.2
NRCA	Norcia	7.14	312		Pn	15 38 24.8	+2.6
UDBI	Udbina	7.15	333	*e*Pn	Pn	15 38 24.6	+2.4
GZR	Gura Zlata	7.38	14	⇑P	Pn	15 38 27.2	+1.8
BZS	Buzias	7.44	7	⇑P	Pn	15 38 25.7	-0.4
NVLJ	Novalja	7.52	329	*e*Pn	Pn	15 38 28.6	+1.3
MURB	Monte Urbino	7.75	313	Pn	Pn	15 38 31.4	+0.9
ELL	Elmali	7.78	98	Pn	Pn	15 38 31.0	0.0
VOIR		8.02	25	⇑P	Pn	15 38 35.9	+1.8
BOJS	Bojanci	8.18	334	⇑*i* Pn	Pn	15 38 38.3	+2.0
OZLJ	Ozalj	8.20	335	*e*Pn	Pn	15 38 37.6	+1.0
GBRS	Gornja Briga	8.36	332	*i* Pn	Pn	15 38 40.4	+1.6
MLR	Muntele Rosu	8.38	28	Pn	Pn	15 38 43.6	+4.5
	comp=N,0.2nm,0.3s,baz=228,slow=18,SNR=3.9						
MLR	Muntele Rosu	8.38	28	⇓P	Pn	15 38 41.8	+2.6
KEST	Kesra	9.12	257	LR	LR	15 43 22.7	
	comp=N,964nm,18.2s,baz=161,slow=44						
SOKA	Soboth	9.29	337	*e*Pn	Pn	15 38 51.6	+0.1
	comp=N,7.6nm,0.3s,SNR=8.4						
OBKA	Obir	9.29	335	*e*Pn	Pn	15 38 53.2	+1.6
	comp=N,4.7nm,0.4s						
VLC	Villacollemand	9.53	312	Pn	Pn	15 38 56.4	+1.6
TEOL	Teolo	9.60	321		Pn	15 38 56.8	+1.0
ARSA	Arzberg	9.66	340	Pn	Pn	15 38 56.5	-0.2
	comp=N,2.0nm,0.4s						
MYKA	Terra Mystica	9.72	332	Pn	Pn	15 38 59.6	+2.1
	comp=N,1.3nm,0.2s						
MYKA				Sn	Sn	15 40 45.7	-0.7
	comp=N,4.0nm,0.4s						
PRMA	PARMA	9.93	314	Pn	Pn	15 39 00.8	+0.5
CTI	Castel Tesino	10.10	323		Pn	15 39 03.2	+0.4
MSSA	Maissana	10.13	310	Pn	Pn	15 39 05.5	+2.4
KBA	Koelnbreinsper	10.21	332	Pn	Pn	15 39 06.3	+2.0
	comp=N,2.7nm,0.4s						
CONA	Conrad Observa	10.21	343	Pn	Pn	15 39 06.8	+2.6
	comp=N,0.7nm,0.4s						
ABTA	Abfaltersbach	10.26	328	*e*Pn	Pn	15 39 06.3	+1.4
	comp=N,1.2nm,0.3s						
ABTA				Sn	Sn	15 40 53.8	-5.9
	comp=N,14nm,0.7s						
VYHS	Vyhne	10.30	355	*e*PN	Pn	15 39 06.3	+0.9
VYHS				*e*SN	Sn	15 40 59.0	-1.7
VYHS				*e*SG		15 42 44.8	
SALO	Salr	10.36	318	Pn	Pn	15 39 07.3	+1.1
BR131	Keskin Array S	10.49	78	Pn	Pn	15 39 07.9	-0.2
BRTR	Keskin Array B	10.49	78	Pn	Pn	15 39 11.4	+3.3
	comp=N,0.1nm,0.3s,baz=256,slow=13,SNR=6.6						
MOA	Molln	10.57	337	*e*Pn	Pn	15 39 11.1	+2.1
	comp=N,2.2nm,0.2s,SNR=9.3						
MOA				Sn	Sn	15 41 00.6	-6.5
	comp=N,2.2nm,0.3s						
CSS	Mathiatis	10.97	103	Pn	Pn	15 39 16.7	+2.1
WTTA	Wattenberg	11.03	328	Pn	Pn	15 39 17.8	+2.2
	comp=N,1.7nm,0.2s						
WATA	Walderalm	11.12	328	Pn	Pn	15 39 19.0	+2.3
	comp=N,1.8nm,0.3s						
FUORN	Ofenpass-Fuorn	11.18	322	Pn	Pn	15 39 18.4	+0.7
MOTA	Moosalm	11.32	326	*e*Pn	Pn	15 39 22.2	+2.6
	comp=N,1.7nm,0.3s						
DAVOX	Davos/Dischmat	11.48	321	Pn	Pn	15 39 23.8	+2.1
	comp=N,0.2nm,0.3s,baz=75,slow=2.0,SNR=2.9						
GEC2	GERESS Array S	11.63	338	Pn	Pn	15 39 24.5	+0.9
GERES	GERESS Array B	11.63	338	Pn	Pn	15 39 23.6	0.0
	comp=N,0.3nm,0.3s,baz=157,slow=13,SNR=6.9						
KHC	Kasperske Hory	11.92	338	*e*Pn	Pn	15 39 28.8	+1.3
KHC				*e*SN	Sn	15 41 35.1	-5.1
SENIN	Lac Senin/Sane	12.58	314	Pn	Pn	15 39 39.5	+2.7
BFO	Black Forest	13.32	323	Pn	Pn	15 39 48.6	+2.0
AKASG	Malin Array Be	13.98	24	Pn	Pn	15 39 55.5	-0.1
	comp=N,1.0nm,0.3s,baz=210,slow=11,SNR=1.5						
EIL	Elat	14.85	121	Pn	P	15 40 13.4	0.0
	comp=N,0.6nm,0.3s,baz=311,slow=11,SNR=5.0	

s-min=13.6km az=3.0
*NEIC **26** 15:38:27.8±1.9, 38°.37N±0°.04×20°.47E±0°.05, h10km±1km, mb4.4/13, ML3.8(THE), Error ellipse: s-maj=7.1km s-min=6.6km az=121.0*
*THE **26** 15:38:28.3, 38°.36N×20°.44E, h0km±2km, ML3.8/6, Error ellipse: s-maj=2.9km s-min=0.6km az=256.0*
*ATH **26** 15:38:28.6, 38°.38N×20°.51E, h10km±1km, ML4.0/19, Error ellipse: s-maj=2.0km s-min=0.7km az=269.0*

ISC 26 15:38:28.1±0.7, 38°.37N±0°.02×20°.51E±0°.03, h11km±4km, n117, σ1§12/135, mb4.0/21, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.10**	**28**	P	**Pg**	**15 38 30.6**	**-0.2**
FSK				S	**Sg**	**15 38 32.8**	**0.0**
	74μm,0.5s						
FSK	**Fiskardo**	**0.10**	**28**	P	**Pg**	**15 38 30.7**	**0.0**
FSK				S	**Sg**	**15 38 32.2**	**-0.6**
FSK				AML	AML	15 38 35.6	
FSK				AML	AML	15 38 39.5	
VLS	**Valsamata**	**0.21**	**161**	P	**Pg**	**15 38 32.4**	**-0.1**
VLS				S	**Sg**	**15 38 36.2**	**+0.6**
	70μm,0.3s						
VLS	**Valsamata**	**0.21**	**161**	P	**Pg**	**15 38 32.6**	**+0.1**
VLS				S	**Sg**	**15 38 36.2**	**+0.6**
VLS				AML	AML	15 38 36.5	
VLS				AML	AML	15 38 36.5	
EVGI	**Lefkada island**	**0.27**	**26**	P	**Pg**	**15 38 33.9**	**+0.2**
EVGI				S	**Sb**	**15 38 39.4**	**-0.3**
EVGI	**Lefkada island**	**0.27**	**26**	P	**Pg**	**15 38 34.2**	**+0.5**
EVGI				S	**Sg**	**15 38 38.8**	**+1.3**
KFL	**Anninata**	**0.34**	**140**	P	**Pg**	**15 38 35.2**	**+0.2**
KFL				S	**Sb**	**15 38 41.5**	**-0.2**
KFL	**Anninata**	**0.34**	**140**	P	**Pg**	**15 38 35.4**	**+0.4**
KFL				S	**Sb**	**15 38 41.3**	**-0.4**
KFL				AML	AML	15 38 42.6	
KFL				AML	AML	15 38 43.7	
MGNA	**Meganis**	**0.36**	**38**	P	**Pg**	**15 38 35.7**	**+0.4**
MGNA				S	**Sg**	**15 38 41.1**	**+1.0**
MGNA				AML	AML	15 38 42.6	
	comp=N,91813μm,0.5s						
MGNA				AML	AML	15 38 42.9	
	comp=E,88805μm,0.6s						
LKD2	**Lefkada island**	**0.43**	**16**	P	**Pg**	**15 38 36.8**	**+0.2**
LKD2				S	**Sb**	**15 38 44.0**	**-0.2**
	comp=E,15μm,0.5s						
LKD2	**Lefkada island**	**0.43**	**16**	P	**Pg**	**15 38 36.7**	**0.0**
LKD2				S	**Sb**	**15 38 43.7**	**-0.5**
LKD2				AML	AML	15 38 49.5	
	comp=E,28260μm,0.9s						
LKD2				AML	AML	15 38 50.2	
	comp=N,33300μm,0.6s						
TSLK	**Tsoukalades, L**	**0.47**	**15**	P	**Pg**	**15 38 37.6**	**+0.4**
TSLK				S	**Sb**	**15 38 45.0**	**-0.2**
	comp=N,17μm,0.7s						
TSLK	**Tsoukalades, L**	**0.47**	**15**	P	**Pg**	**15 38 37.7**	**+0.5**
TSLK				S	**Sb**	**15 38 44.7**	**-0.5**
TSLK				AML	AML	15 38 47.5	
	comp=E,34633μm,0.8s						
TSLK				AML	AML	15 38 48.9	
	comp=N,34364μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.51**	**166**	P	**Pg**	**15 38 38.2**	**+0.1**
VLMS				S	**Sb**	**15 38 46.6**	**+0.1**
VLMS				AML	AML	15 38 47.5	
	comp=E,78053μm,0.6s						
VLMS				AML	AML	15 38 48.7	
RLS	**Riolos of Patr**	**0.82**	**112**	P	**Pg**	**15 38 44.2**	**+0.3**
RLS				S	**Sn**	**15 38 58.1**	**+0.5**
	comp=E,6μm,0.7s						
RLS	**Riolos of Patr**	**0.82**	**112**	P	**Pg**	**15 38 44.0**	**+0.1**
RLS				AML	AML	15 39 05.4	
	comp=E,9500μm,0.6s						
RLS				AML	AML	15 39 08.8	
	comp=N,12823μm,0.5s						
PVO	**Paravola**	**0.84**	**73**	P	**Pb**	**15 38 44.9**	**+0.3**
PVO	**Paravola**	**0.84**	**73**	P	**Pb**	**15 38 44.9**	**+0.3**
PVO				AML	AML	15 39 06.0	
	comp=E,35372μm,0.6s						
PVO				AML	AML	15 39 06.4	
	comp=N,32032μm,0.5s						
DRO	**Drossia**	**1.04**	**114**	P	**Pg**	**15 38 47.9**	**-0.2**
EFP	**Efpalio**	**1.10**	**87**	P	**Pg**	**15 38 48.8**	**-0.4**
EFP				AML	AML	15 39 13.1	
	comp=N,17277μm,0.5s						
EFP				AML	AML	15 39 13.4	
	comp=E,14838μm,0.5s						
EVR	**Evrytania**	**1.16**	**62**	P	**Pb**	**15 38 50.1**	**0.0**
EVR				AML	AML	15 39 16.1	
	comp=E,7152μm,1.1s						
EVR				AML	AML	15 39 18.1	
	comp=N,7059μm,1.0s						
IGT	**Igoumenitsa**	**1.16**	**353**	P	**Pb**	**15 38 50.6**	**+0.4**
IGT				S	**Sn**	**15 39 08.1**	**+1.9**
	comp=N,4μm,0.7s						
IGT	**Igoumenitsa**	**1.16**	**353**	P	**Pb**	**15 38 49.8**	**-0.5**
LAKA	**Lakka**	**1.17**	**96**	P	**Pb**	**15 38 50.0**	**-0.2**
LAKA				AML	AML	15 39 20.0	
	comp=E,7902μm,1.4s						
LAKA				AML	AML	15 39 21.4	
	comp=N,6772μm,0.7s						
SERG	**Sergoula**	**1.22**	**88**	P	**Pn**	**15 38 50.8**	**-0.2**
TRIZ	**Trizonia**	**1.23**	**90**	P	**Pn**	**15 38 51.0**	**-0.2**
AMT	**Artemida-Makis**	**1.27**	**131**	P	**Pg**	**15 38 52.9**	**+0.4**
AMT				AML	AML	15 39 21.6	
	comp=N,18328μm,0.8s						
AMT				AML	AML	15 39 22.3	
	comp=E,20290μm,1.1s						
KALE	**Kalithea**	**1.28**	**89**	P	**Pn**	**15 38 51.8**	**-0.2**
KALE				AML	AML	15 39 18.6	
	comp=N,7854μm,0.8s						
KALE				AML	AML	15 39 24.7	
	comp=E,6844μm,0.6s						
JAN	**Janina**	**1.31**	**12**	P	**Pg**	**15 38 54.2**	**+0.9**
KLV	**Kalavryta, Ach**	**1.34**	**104**	P	**Pn**	**15 38 52.8**	**+0.1**
KLV				AML	AML	15 39 23.1	
	comp=E,4619μm,0.6s						
KLV				AML	AML	15 39 30.6	
	comp=N,4644μm,1.0s						
MAKR	**Makrakomi, Fth**	**1.42**	**63**	P	**Pb**	**15 38 55.1**	**+0.4**
MAKR				AML	AML	15 39 24.8	
	comp=N,9266μm,0.6s						
MAKR				AML	AML	15 39 31.1	
	comp=E,9488μm,0.9s						
KASA	**Kassiopi**	**1.44**	**342**	P	**Pg**	**15 38 55.8**	**+0.1**
AGG	**Agios Georgios**	**1.57**	**65**	P	**Pg**	**15 38 58.1**	**-0.1**
AGG				AML	AML	15 39 27.6	
	comp=N,5814μm,0.6s						
AGG				AML	AML	15 39 30.6	
	comp=E,7594μm,0.7s						
AGG	**Agios Georgios**	**1.57**	**65**	Pn	**Pb**	**15 38 57.1**	**+0.1**
ITM	**Ithomi**	**1.64**	**136**	P	**Pb**	**15 38 59.0**	**+0.6**
ITM	**Ithomi**	**1.64**	**136**	Pn	**Pg**	**15 38 59.4**	**-0.1**
THL	**Klokotos Trika**	**1.67**	**44**	P	**Pb**	**15 38 59.8**	**+0.9**
THL				AML	AML	15 39 32.7	
	comp=E,4485μm,0.7s						
THL				AML	AML	15 39 34.9	
	comp=N,4477μm,1.0s						
THAL	**Thalero**	**1.73**	**101**	P	**Pg**	**15 39 01.6**	**+0.3**
AXAR	**Agios Charalam**	**1.73**	**76**	P	**Pg**	**15 39 01.5**	**+0.1**
AXAR				AML	AML	15 39 41.0	
	comp=E,10950μm,0.8s						
AXAR				AML	AML	15 39 41.4	
	comp=N,20286μm,0.9s						
PYL	**PYLOS**	**1.77**	**146**	P	**Pb**	**15 39 00.1**	**-0.5**
PYL	**PYLOS**	**1.77**	**146**	P	**Pb**	**15 39 00.6**	**0.0**
VLX	**Vlachokerasia**	**1.79**	**123**	P	**Pg**	**15 39 02.6**	**+0.2**
PROD	**Prodromos**	**1.89**	**93**	P	**Pb**	**15 39 02.8**	**+0.2**
LTK	**Loutraki**	**1.97**	**99**	P	**Pb**	**15 39 04.0**	**0.0**
LKR	**Lokris**	**1.98**	**81**	P	**Pb**	**15 39 03.9**	**-0.1**
KZN	**Kozani**	**2.17**	**27**	P	**Pb**	**15 39 07.2**	**-0.1**
VIL2	**Platees**	**2.18**	**93**	P	**Pb**	**15 39 07.5**	**0.0**
LIT	**Litokhoron**	**2.31**	**41**	P	**Pb**	**15 39 08.8**	**-1.0**
LIT	**Litokhoron**	**2.31**	**41**		**Pb**	**15 39 11.0**	**+1.2**
SCTE	**Santa Cesarea**	**2.32**	**318**	Pn	**Pn**	**15 39 05.8**	**-0.4**
DID	**Didima**	**2.33**	**111**	P	**Pb**	**15 39 09.3**	**-0.8**
FNA	**Florina**	**2.50**	**15**	Pn	**Pn**	**15 39 08.9**	**+0.2**
VLY	**Voula,Athens**	**2.65**	**100**	P	**Pn**	**15 39 13.0**	**+2.4**
PTL	**Penteli**	**2.67**	**96**	P	**Pb**	**15 39 14.0**	**-1.9**
TIR	**Tirane**	**3.01**	**351**	Pn	**Pn**	**15 39 15.0**	**-0.7**
TIP	**Timpagrande**	**3.04**	**286**	Pn	**Pn**	**15 39 16.8**	**+0.7**
CEL	**Celeste**	**3.63**	**270**	Pn	**Pn**	**15 39 24.0**	**-0.2**
IDI	**Anoyia**	**4.67**	**130**	Sn	**Sn**	**15 40 33.0**	**+0.1**
	comp=N,2.9nm,0.3s,baz=279,slow=22,SNR=1.5						
IDI				LR	LR	15 41 25.5	
	comp=N,453nm,21.7s,baz=28,slow=38						
VTS	**Vitosha**	**4.72**	**25**	Pn	**Pn**	**15 39 38.8**	**-0.6**
VAE	**Valguarnera**	**4.90**	**261**	Sn	**Sn**	**15 40 40.9**	**+2.4**
	comp=N,2.7nm,0.3s,baz=155,slow=20,SNR=3.0						
ALN	**Alexandroupoli**	**4.96**	**58**	Pn	**Pn**	**15 39 43.5**	**+1.1**
WDD	**Wied Dalam**	**5.41**	**244**	Pn	**Pn**	**15 39 47.8**	**-0.8**
INTR	**Introdacqua**	**6.22**	**308**	Pn	**Pn**	**15 40 00.8**	**+0.9**
NRCA	**Norcia**	**7.17**	**311**	Pn	**Pn**	**15 40 12.9**	**0.0**
MLR	**Muntele Rosu**	**8.18**	**28**	Pn	**Pn**	**15 40 28.0**	**+1.2**
	comp=N,0.2nm,0.3s,baz=88,slow=20,SNR=2.0						
MLR				Sn	**Sn**	**15 41 55.9**	**-3.4**
	baz=103,slow=21,SNR=0.9						
MLR	**Muntele Rosu**	**8.18**	**28**		**Pn**	**15 40 26.1**	**-0.7**
MDUB	**Mudurnu**	**8.54**	**72**	Pn	**Pn**	**15 40 32.2**	**+0.6**
TEOL	**Teolo**	**9.60**	**319**		Pn	15 40 34.7	-11
BR231	**Keskin MP Arra**	**9.65**	**77**	Pn	**Pn**	**15 40 45.4**	**-1.6**
STAL	**STALIGIAL**	**9.76**	**326**	Pn	**Pn**	**15 40 47.4**	**-1.0**
CTI	**Castel Tesino**	**10.09**	**322**	Pn	**Pn**	**15 40 52.2**	**-0.8**
BRTR	**Keskin Array B**	**10.30**	**78**	Pn	**Pn**	**15 41 00.2**	**+4.2**
	comp=N,0.1nm,0.3s,baz=260,slow=13,SNR=3.9						
BRTR				Sn	**Sn**	**15 42 55.0**	**+3.5**
	comp=N,0.1nm,0.3s,baz=268,slow=28,SNR=2.6						
BRTR	**Keskin Array B**	**10.30**	**78**		**Pn**	**15 40 56.2**	**+0.3**
FUORN	**Ofenpass-Fuorn**	**11.18**	**321**	Pn	**Pn**	**15 41 07.7**	**-0.2**
DAVOX	**Davos/Dischmat**	**11.48**	**320**	Pn	**Pn**	**15 41 10.5**	**-1.4**
	comp=N,0.3nm,0.3s,baz=146,slow=20,SNR=2.4						
DAVOX				Sn	**Sn**	**15 43 18.9**	**-1.3**
	baz=126,slow=19						
TUE	**Stuetta**	**11.54**	**318**	Pn	**Pn**	**15 41 11.6**	**-1.3**
GEC2	**GERESS Array S**	**11.56**	**337**	Pn	**Pn**	**15 41 13.6**	**+0.4**
GERES	**GERESS Array B**	**11.56**	**337**	Pn	**Pn**	**15 41 13.5**	**+0.4**
	comp=N,0.3nm,0.3s,baz=159,slow=15,SNR=4.1						
GERES				Sn	**Sn**	**15 43 14.9**	**-7.3**
	comp=N,0.1nm,0.3s,baz=159,slow=22,SNR=2.2						
GERES	**GERESS Array B**	**11.56**	**337**		**Pn**	**15 41 11.9**	**-1.2**
SENIN	**Lac Senin/Sane**	**12.60**	**314**	Pn	**Pn**	**15 41 28.8**	**+1.4**
MMAI	**Mount Meron Ar**	**13.23**	**109**	Pn	**Pn**	**15 41 34.2**	**-1.8**
	comp=N,0.7nm,0.3s,baz=302,slow=12,SNR=2.7						
AKASG	**Malin Array Be**	**13.79**	**24**	Pn	**Pn**	**15 41 42.9**	**-0.5**
	comp=N,1.0nm,0.3s,baz=209,slow=9.2,SNR=1.5						
ESDC	**Sonseca Array**	**19.05**	**282**	P	**P**	**15 42 49.6**	**-0.6**
	comp=N,0.2nm,0.3s,baz=81,slow=11,SNR=4.5						
MDT	**Midelt**	**21.13**	**262**	P	**P**	**15 43 12.6**	**-0.5**
	comp=N,1.3nm,0.8s,baz=80,slow=6.1,SNR=2.4						
HFS	**Hagfors**	**22.20**	**351**	P	**P**	**15 43 24.5**	**+0.4**
	comp=N,4.9nm,0.8s,baz=171,slow=10,SNR=5.2						
EKA	**Eskdalemuir Ar**	**23.26**	**324**	P	**P**	**15 43 35.3**	**0.0**
	comp=N,1.9nm,0.8s,baz=125,slow=10,SNR=3.2						
FINES	**FINESS Array B**	**23.35**	**7**	P	**P**	**15 43 35.5**	**-0.6**
	comp=N,5.8nm,0.8s,baz=165,slow=9.5,SNR=6.9						
FIA1	**FINESS Array S**	**23.36**	**7**	P	**P**	**15 43 35.7**	**-0.4**
NC405	**NORSAR Array S**	**23.42**	**349**	P	**P**	**15 43 37.5**	**+0.6**
NB2	**NORSAR Subarra**	**23.42**	**349**	P	**P**	**15 43 38.6**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=152,slow=11						
NOA	**NORSAR Array B**	**23.42**	**349**		**P**	**15 43 36.2**	**-0.7**
	comp=Z,3.3nm,1.0s,baz=160,slow=9.9,SNR=4.8						
GEYT	**Alibeck**	**29.45**	**79**	P	**P**	**15 44 31.8**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=263,slow=8.8,SNR=4.9						
GEYT	**Alibeck**	**29.45**	**79**	IAmb	IAmb	15 44 34.3	
	comp=Z,1.3nm,0.6s						
GYA0B	**ALIBECK ARRAY**	**29.45**	**79**	P	**P**	**15 44 32.1**	**+0.3**
GYA0B				IAmb	IAmb	15 44 34.3	
	comp=Z,3.8nm,0.6s						
ABKAR	**Akbulak array**	**30.14**	**56**	P	**P**	**15 44 38.0**	**+0.3**
ABKAR	**Akbulak array**	**30.14**	**56**	P	**P**	**15 44 38.5**	**+0.8**
ABKAR				IAmb	IAmb	15 45 34.5	
	comp=Z,1.6nm,1.0s						
TORD	**Torodi Ar. Bea**	**30.18**	**219**	P	**P**	**15 44 38.9**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=30,slow=9.6,SNR=2.8						
ARCES	**ARCESS Array B**	**31.34**	**3**	P	**P**	**15 44 48.6**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=190,slow=10,SNR=3.7						
KK31	**Karatay Array**	**37.73**	**66**	P	**P**	**15 45 44.5**	**+0.8**
KK31				IAmb	IAmb	15 45 47.0	
	comp=Z,4.4nm,0.6s						
KKAR	**Karatay Array**	**37.73**	**66**	P	**P**	**15 45 44.4**	**+0.7**
KKAR				IAmb	IAmb	15 45 47.0	
	comp=Z,4.4nm,0.6s						
KKAR	**Karatay Array**	**37.73**	**66**	P	**P**	**15 45 43.8**	**0.0**
MK31	**Makanchi Array**	**45.21**	**59**	P	**P**	**15 46 44.3**	**-0.7**
MK31				IAmb	IAmb	15 46 49.7	
	comp=Z,1.4nm,0.7s						
MKAR	**Makanchi Array**	**45.21**	**59**	P	**P**	**15 46 44.8**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=280,slow=7.4,SNR=9.3						
MKAR	**Makanchi Array**	**45.21**	**59**	P	**P**	**15 46 44.5**	**-0.5**
ZAA0	**Zalesovo Array**	**45.57**	**48**	P	**P**	**15 46 47.1**	**-0.6**
ZAA0				IAmb	IAmb	15 46 49.7	
	comp=Z,3.8nm,0.6s						
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**15 46 47.5**	**-0.2**
	comp=Z,3.5nm,0.5s,baz=270,slow=8.4,SNR=7.9						
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**15 46 47.1**	**-0.7**
SCHQ	**Schefferville**	**58.31**	**317**	P	**P**	**15 48 23.0**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=357,slow=5.2,SNR=3.6						
SCHQ	**Schefferville**	**58.31**	**317**	P	**P**	**15 48 22.5**	**-0.2**
SONM	**Songino Array**	**60.34**	**51**	P	**P**	**15 48 37.4**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=289,slow=8.8,SNR=3.3						
YAK	**Yakutsk**	**64.94**	**29**	P	**P**	**15 49 08.0**	**+0.7**
CMAR	**Chiang Mai Arr**	**69.87**	**82**	P	**P**	**15 49 38.3**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=300,slow=7.3,SNR=3.1						
YKA	**Yellowknife Ar**	**73.20**	**340**	P	**P**	**15 49 58.5**	**-0.1**
	comp=Z,0.1nm,0.5s,baz=36,slow=5.3,SNR=3.3						
KLR	**Kul'dur**	**73.73**	**40**	P	**P**	**15 50 01.6**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=288,slow=7.1,SNR=3.6						
ILAR	**Eielson Array**	**76.71**	**354**	P	**P**	**15 50 19.4**	**+0.6**
	comp=Z,0.5nm,1.0s,baz=1.8,slow=5.7,SNR=3.6						
WRA	**Warrnunga Arr**	**120.56**	**92**	PKP	**PKPdf**	**15 57 18.9**	**-1.2**
	comp=Z,0.5nm,0.9s,baz=324,slow=2.0,SNR=2.7						
ASAR	**Alice Springs**	**122.21**	**96**	PKP	**PKPdf**	**15 57 22.5**	**-0.7**
	comp=Z,0.8nm,1.1s,baz=300,slow=1.6,SNR=4.1						

*IDC **26** 15:45:13.6±15.0, 38°.42N×20°.52E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.2/52, mbtmp3.5/4, ML3.1/1, MS4.2/2, Ms1 4.2/2, ms1mx3.4/45, Error ellipse: s-maj=292.0km s-min=34.5km az=35.0*
*NEIC **26** 15:45:14.2±3.0, 38°.34N±0°.05×20°.73E±0°.07, h10km±2km, mb4.4/2, Error ellipse: s-maj=10.6km s-min=6.8km az=241.0*
*ATH **26** 15:45:15.2, 38°.23N×20°.69E, h19km±7km, ML3.4/2, Error ellipse: s-maj=8.3km s-min=1.6km az=244.0*

ISC 26 15:45:15.3±0.9, 38°.28N±0°.05×20°.69E±0°.05, h18km±5km, n27, σ1§71/29, mb3.9/5, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.13**	**216**	P	**Pg**	**15 45 19.0**	**-0.3**
VLS				S	**Sg**	**15 45 21.8**	**-0.1**
VLS				AML	AML	15 45 22.6	
	comp=N,71991μm,0.2s						
VLS				AML	AML	15 45 23.0	
	comp=E,46610μm,0.1s						
KFL	**Anninata**	**0.19**	**155**	P	**Pg**	**15 45 19.3**	**-0.7**
FSK	**Fiskardo**	**0.20**	**331**	P	**Pg**	**15 45 20.9**	**+0.7**
FSK				S	**Sg**	**15 45 24.4**	**+0.9**
FSK				AML	AML	15 45 25.7	
	comp=N,12133μm,0.2s						
FSK				AML	AML	15 45 26.3	
	comp=E,20669μm,0.1s						
EVGI	**Lefkada island**	**0.34**	**356**	P	**Pn**	**15 45 23.5**	**-1.9**
EVGI				S	**Sb**	**15 45 29.9**	**+2.0**
ITM	**Ithomi**	**1.48**	**138**	Pn	**Pn**	**15 45 40.2**	**-0.8**
AGG	**Agios Georgios**	**1.48**	**60**	Pn	**Pn**	**15 45 38.6**	**-2.5**
LIT	**Litokhoron**	**2.29**	**37**	Pn	**Pn**	**15 45 51.7**	**-0.6**
SCTE	**Santa Cesarea**	**2.48**	**317**	Pn	**Pn**	**15 45 53.9**	**-1.0**
FNA	**Florina**	**2.55**	**12**	Pn	**Pn**	**15 45 52.9**	**-3.0**
TIR	**Tirane**	**3.12**	**349**	Pn	**Pn**	**15 46 01.3**	**-2.4**
TIP	**Timpagrande**	**3.20**	**287**	Pn	**Pn**	**15 46 03.1**	**-1.7**
CEL	**Celeste**	**3.77**	**271**	Pn	**Pn**	**15 46 12.2**	**-0.5**
SG1	**Sgolgore (BA)**	**4.01**	**311**	*e*Pn	**Pn**	**15 46 15.3**	**-0.7**
SG1				Sn	**Sn**	**15 46 58.0**	**-4.6**
SGRT	**San Giovanni R**	**5.14**	**314**	Pn	**Pn**	**15 46 30.3**	**-1.1**
INTR	**Introdacqua**	**6.39**	**308**	Pn	**Pn**	**15 46 48.4**	**-0.3**
NRCA	**Norcia**	**7.34**	**311**	Pn	**Pn**	**15 47 02.2**	**+0.5**
MURB	**Monte Urbino**	**7.94**	**311**	Pn	**Pn**	**15 47 09.0**	**-0.9**
GERES	**GERESS Array B**	**11.70**	**337**	Pn	**Pn**	**15 48 00.7**	**-0.7**
	comp=E,0.1nm,0.3s,baz=152,slow=13,SNR=1.8						
FINES	**FINESS Array B**	**23.43**	**7**	P	**P**	**15 50 22.9**	**-0.2**
	comp=E,1.1nm,0.8s,baz=203,slow=10,SNR=1.2						
WSAR	**Wadi Sarin**	**35.62**	**104**	LR	LR	16 10 18.0	
	comp=E,191nm,20.0s,baz=264,slow=42						
KKAR	**Karatay Array**	**37.63**	**66**	P	**P**	**15 52 30.7**	**+1.6**
MK31	**Makanchi Array**	**45.13**	**59**	P	**P**	**15 53 32.3**	**+1.6**
MK31				IAmb	IAmb	15 55 05.1	
	comp=Z,7.1nm,2.0s						
MKAR	**Makanchi Array**	**45.13**	**59**	P	**P**	**15 53 31.9**	**+1.2**
	comp=Z,0.4nm,0.5s,baz=276,slow=7.5,SNR=4.9						
MKAR	**Makanchi Array**	**45.13**	**59**	P	**P**	**15 53 32.2**	**+1.5**
ZAA0	**Zalesovo Array**	**45.52**	**48**	P	**P**	**15 53 35.1**	**+1.5**
ZAA0				IAmb	IAmb	15 53 40.0	
	comp=Z,15nm,2.0s						
ZALV	**Zalesovo Beam**	**45.52**	**48**	P	**P**	**15 53 34.7**	**+1.1**
	comp=Z,0.9nm,0.6s,baz=289,slow=8.5,SNR=3.2						
SIV	**San Ignacio**	**93.47**	**252**	LR	LR	16 40 24.7	
	comp=Z,219nm,19.3s,baz=130,slow=36						

*IDC **26** 15:50:46.4±1.4, 38°.32N×20°.47E, h0km, mb3.7/7, mb1 3.7/8, mb1mx3.4/46, mbtmp3.6/8, ML3.6/1, Error ellipse: s-maj=27.8km s-min=24.6km az=60.0*
*THE **26** 15:50:48.8, 38°.28N×20°.39E, h0km±3km, ML3.2/6, Error ellipse: s-maj=4.2km s-min=0.7km az=245.0*
*ATH **26** 15:50:48.8, 38°.30N×20°.43E, h14km±2km, ML3.3/6, Error ellipse: s-maj=3.2km s-min=0.8km az=84.0*

ISC 26 15:50:44.6±1.5, 38°.24N±0°.04×20°.16E±0°.05, h5km±10km, n36, σ1§56/52, mb3.7/7, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.35**	**99**	P	**Pb**	**15 50 52.7**	**-0.5**
VLS				S	**Sg**	**15 50 56.0**	**+0.1**
	15μm,0.1s						
VLS	**Valsamata**	**0.35**	**99**	P	**Pb**	**15 50 52.8**	**-0.5**
VLS				S	**Sg**	**15 50 55.8**	**0.0**
VLS				AML	AML	15 50 56.1	
	comp=E,34795μm,0.1s						
VLS				AML	AML	15 50 56.4	
	comp=N,27442μm,0.2s						
FSK	**Fiskardo**	**0.39**	**55**	P	**Pb**	**15 50 53.1**	**-0.9**
FSK				S	**Sg**	**15 50 56.6**	**-0.7**
	comp=N,19μm,0.3s						
FSK	**Fiskardo**	**0.39**	**55**	P	**Pb**	**15 50 53.1**	**-0.9**
FSK				S	**Sg**	**15 50 56.1**	**-1.2**
KFL	**Anninata**	**0.51**	**104**	P	**Pb**	**15 50 55.8**	**-0.3**
KFL				S	**Sg**	**15 51 01.1**	**0.0**
	comp=N,28μm,0.4s						
KFL	**Anninata**	**0.51**	**104**	P	**Pb**	**15 50 55.9**	**-0.2**
KFL				S	**Sg**	**15 51 01.1**	**0.0**
KFL				AML	AML	15 51 01.9	
	comp=N,42579μm,0.4s						
KFL				AML	AML	15 51 02.1	
	comp=E,69066μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.54**	**132**	P	**Pn**	**15 50 57.9**	**-1.0**
EVGI	**Lefkada island**	**0.55**	**45**	P	**Pb**	**15 50 56.4**	**-0.4**
EVGI				S	**Sg**	**15 51 02.4**	**+0.1**
EVGI	**Lefkada island**	**0.55**	**45**	P	**Pb**	**15 50 56.3**	**-0.4**
EVGI				S	**Sg**	**15 51 02.2**	**-0.1**
MGNA	**Meganis**	**0.65**	**50**	P	**Pb**	**15 50 57.8**	**-0.7**
MGNA				S	**Sg**	**15 51 04.0**	**-1.6**
MGNA				AML	AML	15 51 05.8	
	comp=N,6729μm,0.3s						
MGNA				AML	AML	15 51 08.1	
	comp=E,5810μm,0.2s						
LKD2	**Lefkada island**	**0.68**	**35**	P	**Pn**	**15 50 58.9**	**-2.0**
LKD2				S	**Sb**	**15 51 07.2**	**-1.4**
	comp=E,2μm,0.3s						
LKD2	**Lefkada island**	**0.68**	**35**	P	**Pb**	**15 50 58.6**	**-0.3**
LKD2				S	**Sb**	**15 51 06.8**	**-1.8**
LKD2				AML	AML	15 51 10.8	
	comp=N,3678μm,0.2s						
LKD2				AML	AML	15 51 12.4	
	comp=E,2892μm,0.3s						
TSLK	**Tsoukalades, L**	**0.71**	**33**	P	**Pn**	**15 50 59.5**	**-1.7**
TSLK				S	**Sb**	**15 51 08.4**	**-1.0**
TSLK	**Tsoukalades, L**	**0.71**	**33**	P	**Pn**	**15 50 59.4**	**-1.9**
TSLK				S	**Sb**	**15 51 07.6**	**-1.8**
RLS	**Riolos of Patr**	**1.05**	**99**	P	**Pg**	**15 51 04.8**	**+0.1**
RLS				AML	AML	15 51 24.3	
	comp=N,2197μm,0.5s						
RLS				AML	AML	15 51 27.6	
	comp=E,2750μm,0.5s						
PVO	**Paravola**	**1.14**	**70**	P	**Pn**	**15 51 06.6**	**-0.6**
PVO				AML	AML	15 51 23.0	
	comp=E,9551μm,0.3s						
PVO				AML	AML	15 51 23.1	
	com

LKD2	**Lefkada island**	**0.45**	**19**	P	**Pg**	**15 54 23.4**	**-0.2**
LKD2				S	**Sg**	**15 54 30.0**	**+0.6**
	comp=E,1μm,0.4s						
LKD2	**Lefkada island**	**0.45**	**19**	P	**Pg**	**15 54 22.7**	**-0.8**
LKD2				S	**Sg**	**15 54 29.1**	**-0.3**
LKD2				AML	AML	15 54 31.7	
	comp=N,2315μm,0.3s						
LKD2				AML	AML	15 54 34.9	
	comp=E,2238μm,0.3s						
TSLK	**Tsoukalades, L**	**0.48**	**18**	P	**Pg**	**15 54 23.7**	**-0.5**
TSLK				S	**Sg**	**15 54 31.4**	**+0.9**
	comp=E,2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.48**	**18**	P	**Pg**	**15 54 23.5**	**-0.8**
TSLK				S	**Sg**	**15 54 30.8**	**+0.3**
TSLK				AML	AML	15 54 32.8	
	comp=E,4108μm,0.4s						
TSLK				AML	AML	15 54 35.6	
	comp=N,4722μm,0.7s						
VLMS	**Volimes, Zakyn**	**0.51**	**162**	P	**Pg**	**15 54 24.0**	**-0.8**
VLMS				S	**Sg**	**15 54 30.9**	**-0.5**
VLMS				AML	AML	15 54 35.0	
	comp=E,21571μm,0.2s						
VLMS				AML	AML	15 54 35.8	
	comp=N,21566μm,0.4s						
RLS	**Riolos of Patr**	**0.85**	**111**	P	**Pg**	**15 54 31.0**	**-0.2**
RLS				S	**Sb**	**15 54 44.3**	**+0.2**
	comp=N,550nm,0.4s						
PVO	**Paravola**	**0.87**	**73**	P	**Pg**	**15 54 30.8**	**-0.8**
PVO				S	**Sb**	**15 54 45.4**	**+0.6**
	comp=N,2μm,0.4s						
PVO	**Paravola**	**0.87**	**73**	P	**Pg**	**15 54 30.8**	**-0.8**
PVO				S	**Sg**	**15 54 43.4**	**+0.5**
PVO				AML	AML	15 54 52.8	
	comp=N,1978μm,0.6s						
PVO				AML	AML	15 54 53.6	
	comp=E,3854μm,0.4s						
DRO	**Drossia**	**1.06**	**112**	P	**Pg**	**15 54 35.0**	**-0.3**
EFP	**Efpalio**	**1.13**	**86**	P	**Pg**	**15 54 35.4**	**-1.3**
EFP				S	**Sb**	**15 54 53.5**	**+1.1**
	comp=E,950nm,0.7s						
EFP	**Efpalio**	**1.13**	**86**	P	**Pg**	**15 54 35.0**	**-1.7**
EFP				S	**Sg**	**15 54 50.7**	**-0.7**
IGT	**Igoumenitsa**	**1.17**	**355**	P	**Pg**	**15 54 35.6**	**-1.8**
TRIZ	**Trizonia**	**1.26**	**89**	P	**Pg**	**15 54 37.4**	**-1.7**
TRIZ				S	**Sn**	**15 54 57.2**	**+0.1**
	comp=E,788nm,0.5s						
JAN	**Janina**	**1.32**	**13**	P	**Pg**	**15 54 39.0**	**-1.4**
IDI	**Anoyia**	**4.69**	**130**	Sn	**Sn**	**15 56 18.1**	**-3.8**
	comp=E,0.4nm,0.3s,baz=179,slow=16,SNR=1.5						
HFS	**Hagfors**	**22.21**	**351**	P	**P**	**15 59 13.8**	**+1.4**
	comp=E,3.4nm,1.0s,baz=155,slow=11,SNR=2.9						
FINES	**FINESS Array B**	**23.37**	**7**	P	**P**	**15 59 25.8**	**+1.4**
	comp=E,2.4nm,0.9s,baz=171,slow=9.6,SNR=3.5						
MKAR	**Makanchi Array**	**45.24**	**59**	P	**P**	**16 02 33.8**	**+0.2**
	comp=E,0.3nm,0.5s,baz=276,slow=7.2,SNR=5.3						
ZALV	**Zalesovo Beam**	**45.60**	**48**	P	**P**	**16 02 36.7**	**+0.5**
	comp=E,0.9nm,0.5s,baz=282,slow=8.6,SNR=3.7						

*IDC **26** 15:56:59.4±4.0, 38°.33N×20°.23E, h0km, mb3.5/6, mb1 3.5/9, mb1mx3.3/43, mbtmp3.5/9, ML3.0/3, Error ellipse: s-maj=77.5km s-min=20.1km az=41.0*
*THE **26** 15:57:01.1, 38°.24N×20°.40E, h14km±1km, ML3.3/5, Error ellipse: s-maj=2.5km s-min=0.8km az=247.0*
*ATH **26** 15:57:01.9, 38°.25N×20°.47E, h13km±1km, ML3.2/10, Error ellipse: s-maj=3.1km s-min=0.9km az=82.0*
ISC 26 15:57:00.6±1.1, **38°.25N**±0°.03×**20°.36E**±0°.05, **h12**km±7km, **n43**, σ0**°72**/52, **mb3.6**/6, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.20**	**111**	P	**Pg**	**15 57 05.1**	**+0.2**
VLS				S	**Sg**	**15 57 07.8**	**0.0**
	61μm,0.1s						
VLS	**Valsamata**	**0.20**	**111**	P	**Pg**	**15 57 05.2**	**+0.4**
VLS				S	**Sg**	**15 57 07.2**	**-0.6**
VLS				AML	AML	15 57 08.0	
	comp=E,97568μm,0.2s						
VLS				AML	AML	15 57 08.0	
KFL	**Anninata**	**0.37**	**112**	P	**Pg**	**15 57 08.4**	**+0.5**
KFL				S	**Sg**	**15 57 12.8**	**-0.1**
	comp=E,13μm,0.4s						
KFL	**Anninata**	**0.37**	**112**	P	**Pg**	**15 57 08.2**	**+0.2**
KFL				AML	AML	15 57 14.0	
	comp=N,19594μm,0.4s						
KFL				AML	AML	15 57 16.8	
	comp=E,34520μm,0.3s						
EVGI	**Lefkada island**	**0.44**	**33**	P	**Pb**	**15 57 10.0**	**-0.3**
EVGI				S	**Sb**	**15 57 16.2**	**-0.6**
EVGI	**Lefkada island**	**0.44**	**33**	P	**Pb**	**15 57 10.1**	**-0.3**
EVGI				S	**Sb**	**15 57 16.3**	**-0.6**
VLMS	**Volimes, Zakyn**	**0.45**	**147**	P	**Pb**	**15 57 10.3**	**-0.1**
VLMS				S	**Sb**	**15 57 16.3**	**-0.7**
VLMS				AML	AML	15 57 19.2	
	comp=E,23435μm,0.2s						
VLMS				AML	AML	15 57 24.7	
	comp=N,21307μm,0.4s						
MGNA	**Meganis**	**0.53**	**40**	P	**Pg**	**15 57 10.7**	**-0.2**
MGNA				AML	AML	15 57 19.6	
	comp=N,10766μm,0.4s						
MGNA				AML	AML	15 57 19.8	
	comp=E,11198μm,0.3s						
LKD2	**Lefkada island**	**0.59**	**24**	P	**Pg**	**15 57 11.4**	**-0.6**
LKD2	**Lefkada island**	**0.59**	**24**	P	**Pg**	**15 57 11.8**	**-0.2**
LKD2				AML	AML	15 57 26.0	
	comp=N,3138μm,0.5s						
LKD2				AML	AML	15 57 27.0	
	comp=E,3387μm,0.5s						
TSLK	**Tsoukalades, L**	**0.62**	**22**	P	**Pg**	**15 57 12.6**	**0.0**
TSLK				S	**Sb**	**15 57 22.7**	**+0.6**
	comp=E,2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.62**	**22**	P	**Pg**	**15 57 12.7**	**0.0**
TSLK				S	**Sg**	**15 57 21.0**	**+0.2**
TSLK				AML	AML	15 57 25.9	
	comp=N,4715μm,0.5s						
TSLK				AML	AML	15 57 27.8	
	comp=E,4627μm,0.6s						
RLS	**Riolos of Patr**	**0.90**	**102**	P	**Pg**	**15 57 16.9**	**-1.0**
RLS				S	**Sb**	**15 57 29.8**	**-0.2**
	comp=E,882nm,0.6s						
RLS	**Riolos of Patr**	**0.90**	**102**	P	**Pg**	**15 57 17.1**	**-0.8**
RLS				AML	AML	15 57 34.7	
	comp=E,1917μm,0.3s						
RLS				AML	AML	15 57 35.3	
	comp=N,1691μm,0.3s						
PVO	**Paravola**	**0.99**	**68**	P	**Pn**	**15 57 20.0**	**-0.3**
PVO				S	**Sb**	**15 57 32.8**	**+0.1**
	comp=N,2μm,0.4s						
PVO	**Paravola**	**0.99**	**68**	P	**Pb**	**15 57 19.4**	**-0.3**
PVO				AML	AML	15 57 41.9	
	comp=N,4209μm,0.4s						
PVO				AML	AML	15 57 44.0	
	comp=E,3016μm,0.5s						
LAKA	**Lakka**	**1.28**	**90**	P	**Pb**	**15 57 24.4**	**-0.2**
LAKA				AML	AML	15 57 46.5	
	comp=N,1366μm,0.6s						
LAKA				AML	AML	15 57 47.3	
	comp=E,1113μm,0.5s						
IGT	**Igoumenitsa**	**1.28**	**359**	P	**Pg**	**15 57 25.6**	**+0.5**
AMT	**Artemida-Makis**	**1.29**	**123**	P	**Pn**	**15 57 23.7**	**-0.8**
AMT	**Artemida-Makis**	**1.29**	**123**	P	**Pg**	**15 57 25.3**	**0.0**
TRIZ	**Trizonia**	**1.36**	**85**	P	**Pn**	**15 57 25.1**	**-0.2**
KALE	**Kalithea**	**1.41**	**84**	P	**Pn**	**15 57 25.4**	**-0.8**
KALE	**Kalithea**	**1.41**	**84**	P	**Pb**	**15 57 26.5**	**-0.4**
KLV	**Kalavryta, Ach**	**1.43**	**98**	P	**Pn**	**15 57 26.4**	**0.0**
KLV				AML	AML	15 57 51.0	
	comp=N,951μm,0.4s						
KLV				AML	AML	15 57 55.0	
	comp=E,714μm,0.6s						
JAN	**Janina**	**1.46**	**15**	P	**Pg**	**15 57 29.5**	**+1.0**
ITM	**Ithomi**	**1.64**	**130**	P	**Pb**	**15 57 31.0**	**+0.2**
AGG	**Agios Georgios**	**1.73**	**63**	P	**Pg**	**15 57 33.0**	**-0.7**
PYL	**PYLOS**	**1.75**	**140**	P	**Pb**	**15 57 32.4**	**-0.2**
LKR	**Lokris**	**2.12**	**78**	P	**Pb**	**15 57 38.6**	**-0.2**
NEST	**Nestorio**	**2.23**	**14**	P	**Pb**	**15 57 40.7**	**-0.1**
VIL2	**Platees**	**2.29**	**90**	P	**Pb**	**15 57 41.4**	**-0.5**
IDI	**Anoyia**	**4.69**	**128**	Pn	**Pn**	**15 58 13.6**	**+2.3**
	comp=E,0.1nm,0.3s,baz=285,slow=20,SNR=1.8						
IDI				Sn	**Sn**	**15 59 07.1**	**+1.4**
	comp=E,0.9nm,0.3s,baz=354,slow=11,SNR=1.6						
VAE	**Valguarnera**	**4.76**	**263**	Sn	**Sn**	**15 59 05.3**	**-2.1**
	comp=E,0.6nm,0.3s,baz=304,slow=20,SNR=1.1						
MLR	**Muntele Rosu**	**8.35**	**28**	Pn	Pn	15 59 06.7	+5.2
	comp=E,0.1nm,0.3s,baz=135,slow=20,SNR=1.3						
GBRS	**Gornja Briga**	**8.37**	**332**	*i* Pn	**Pn**	**15 59 03.5**	**+1.8**
BRTR	**Keskin Array B**	**10.45**	**78**	Pn	Pn	15 59 36.5	+6.1
	comp=E,0.0nm,0.3s,baz=260,slow=11,SNR=2.7						
GERES	**GERESS Array B**	**11.63**	**338**	Pn	**Pn**	**15 59 45.7**	**-0.7**
	comp=E,0.2nm,0.3s,baz=153,slow=13,SNR=3.6						
HFS	**Hagfors**	**22.31**	**351**	P	**P**	**16 01 57.8**	**0.0**
	comp=E,1.9nm,0.8s,baz=168,slow=7.4,SNR=4.2						
FINES	**FINESS Array B**	**23.49**	**7**	P	**P**	**16 02 09.9**	**-0.1**
	comp=E,2.7nm,0.9s,baz=178,slow=11,SNR=6.8						
NOA	**NORSAR Array B**	**23.52**	**349**	P	**P**	**16 02 10.7**	**+0.3**
	comp=E,0.3nm,0.5s,baz=162,slow=10,SNR=2.7						
KURBB	**Kurchatov Arra**	**42.29**	**54**	P	**P**	**16 04 54.4**	**+0.5**
	comp=E,0.2nm,0.7s,baz=277,slow=8.9,SNR=2.3						
MKAR	**Makanchi Array**	**45.38**	**58**	P	**P**	**16 05 19.2**	**+0.4**
	comp=E,0.3nm,0.4s,baz=278,slow=7.3,SNR=8.6						
ZALV	**Zalesovo Beam**	**45.74**	**48**	P	**P**	**16 05 21.6**	**+0.2**
	comp=E,0.6nm,0.4s,baz=266,slow=6.9,SNR=3.6						

*IDC **26** 16:00:00.5±0.9, 38°.52N×20°.30E, h0km, mb3.6/11, mb1 3.7/17, mb1mx3.6/44, mbtmp3.6/17, ML3.5/4, MS3.3/1, Ms1 3.3/1, ms1mx2.9/50, Error ellipse: s-maj=19.4km s-min=16.8km az=25.0*
*THE **26** 16:00:01.0, 38°.33N×20°.35E, h0km±3km, ML3.7/5, Error ellipse: s-maj=4.5km s-min=0.9km az=250.0*
*ATH **26** 16:00:02.1, 38°.36N×20°.50E, h7km±1km, ML3.6/11, Error ellipse: s-maj=1.7km s-min=0.7km az=271.0*
*NEIC **26** 16:00:03.6±2.5, 38°.34N±0°.07×20°.39E±0°.07, h10km±2km, mb4.2/2, ML3.7(THE), Error ellipse: s-maj=11.9km s-min=7.8km az=204.0*
ISC 26 16:00:02.1±1.0, **38°.36N**±0°.02×**20°.45E**±0°.03, **h7**km±7km, **n108**, σ1**°66**/123, **mb3.7**/13, **8C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.21**	**148**	P	**Pg**	**16 00 05.9**	**-0.4**
VLS				S	**Sg**	**16 00 09.8**	**+0.6**
	32μm,0.2s						
VLS	**Valsamata**	**0.21**	**148**	P	**Pg**	**16 00 05.5**	**-0.8**
VLS				S	**Sg**	**16 00 09.6**	**+0.4**
VLS				AML	AML	16 00 10.2	
	comp=E,68647μm,0.2s						
VLS				AML	AML	16 00 10.7	
	comp=N,59735μm,0.4s						
EVGI	**Lefkada island**	**0.31**	**32**	P	**Pg**	**16 00 07.6**	**-0.5**
EVGI				S	**Sg**	**16 00 13.4**	**+1.1**
EVGI	**Lefkada island**	**0.31**	**32**	P	**Pg**	**16 00 07.6**	**-0.5**
EVGI				S	**Sg**	**16 00 12.5**	**+0.2**
KFL	**Anninata**	**0.36**	**133**	P	**Pg**	**16 00 08.7**	**-0.5**
KFL				S	**Sg**	**16 00 15.5**	**+1.5**
	comp=N,30μm,0.4s						
MGNA	**Meganis**	**0.40**	**42**	P	**Pg**	**16 00 09.1**	**-0.8**
MGNA				S	**Sg**	**16 00 15.2**	**0.0**
MGNA				AML	AML	16 00 16.6	
	comp=N,37160μm,0.4s						
MGNA				AML	AML	16 00 16.8	
	comp=E,32129μm,0.5s						
LKD2	**Lefkada island**	**0.46**	**21**	P	**Pg**	**16 00 10.2**	**-0.8**
LKD2				S	**Sg**	**16 00 18.6**	**+1.5**
	comp=E,6μm,0.6s						
LKD2	**Lefkada island**	**0.46**	**21**	P	**Pg**	**16 00 10.2**	**-0.8**
LKD2				S	**Sg**	**16 00 16.4**	**-0.7**
LKD2				AML	AML	16 00 25.9	
	comp=E,10112μm,0.5s						
LKD2				AML	AML	16 00 26.5	
	comp=N,14882μm,0.8s						
TSLK	**Tsoukalades, L**	**0.49**	**19**	P	**Pg**	**16 00 10.6**	**-1.0**
TSLK				S	**Sg**	**16 00 19.9**	**+1.8**
TSLK	**Tsoukalades, L**	**0.49**	**19**	P	**Pg**	**16 00 11.3**	**-0.3**
TSLK				S	**Sg**	**16 00 18.1**	**0.0**
TSLK				AML	AML	16 00 20.8	
	comp=E,9659μm,0.5s						
TSLK				AML	AML	16 00 30.9	
	comp=N,10782μm,1.0s						
VLMS	**Volimes, Zakyn**	**0.51**	**160**	P	**Pg**	**16 00 11.5**	**-0.4**
VLMS				S	**Sg**	**16 00 19.1**	**+0.5**
VLMS				AML	AML	16 00 24.8	
	comp=E,23768μm,0.4s						
VLMS				AML	AML	16 00 25.4	
	comp=N,51971μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**110**	P	**Pg**	**16 00 18.2**	**-0.3**
RLS				S	**Sb**	**16 00 31.9**	**+1.0**
	comp=N,3μm,0.6s						
RLS	**Riolos of Patr**	**0.86**	**110**	P	**Pg**	**16 00 17.0**	**-1.5**
RLS				S	**Sg**	**16 00 28.8**	**-0.8**
RLS				AML	AML	16 00 38.5	
	comp=N,7581μm,0.7s						
RLS				AML	AML	16 00 41.6	
	comp=E,5126μm,0.6s						
PVO	**Paravola**	**0.89**	**73**	P	**Pg**	**16 00 18.4**	**-0.7**
PVO				S	**Sb**	**16 00 33.7**	**+1.9**
	comp=E,7μm,0.8s						
PVO	**Paravola**	**0.89**	**73**	P	**Pg**	**16 00 18.3**	**-0.8**
PVO				S	**Sg**	**16 00 29.6**	**-1.0**
PVO				AML	AML	16 00 38.3	
	comp=N,16136μm,0.7s						
PVO				AML	AML	16 00 39.2	
	comp=E,10749μm,0.7s						
IGT	**Igoumenitsa**	**1.18**	**356**	P	**Pg**	**16 00 24.4**	**-0.3**
IGT				S	**Sn**	**16 00 41.9**	**+0.6**
IGT	**Igoumenitsa**	**1.18**	**356**	P	**Pg**	**16 00 24.6**	**-0.1**
EVR	**Evrytania**	**1.20**	**62**	P	**Pg**	**16 00 23.7**	**-1.5**
LAKA	**Lakka**	**1.21**	**95**	P	**Pg**	**16 00 23.7**	**-1.6**
LAKA				AML	AML	16 00 49.4	
	comp=N,3769μm,0.6s						
LAKA				AML	AML	16 00 50.0	
	comp=E,4617μm,1.4s						
TRIZ	**Trizonia**	**1.28**	**89**	P	**Pg**	**16 00 24.4**	**-2.1**
AMT	**Artemida-Makis**	**1.29**	**129**	P	**Pg**	**16 00 26.8**	**-0.1**
AMT				AML	AML	16 00 55.0	
	comp=E,7576μm,0.8s						
AMT				AML	AML	16 00 55.3	
	comp=N,6446μm,0.7s						
JAN	**Janina**	**1.33**	**13**	P	**Pg**	**16 00 26.8**	**-0.9**
JAN				AML	AML	16 00 52.4	
	comp=E,2935μm,0.5s						
JAN				AML	AML	16 00 58.2	
	comp=N,2214μm,0.9s						
KLV	**Kalavryta, Ach**	**1.38**	**103**	P	**Pn**	**16 00 27.3**	**-0.5**
KASA	**Kassiopi**	**1.44**	**344**	P	**Pg**	**16 00 30.1**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.47**	**63**	P	**Pn**	**16 00 28.4**	**-0.7**
AGG	**Agios Georgios**	**1.62**	**65**	P	**Pn**	**16 00 31.6**	**+0.5**
AGG				S	**Sg**	**16 00 49.4**	**+1.4**
AGG	**Agios Georgios**	**1.62**	**65**	P	**Pn**	**16 00 31.5**	**+0.9**
AGG	**Agios Georgios**	**1.62**	**65**	Pn	**Pn**	**16 00 32.0**	**+0.9**
ITM	**Ithomi**	**1.66**	**135**	P	**Pn**	**16 00 32.5**	**+0.8**
ITM	**Ithomi**	**1.66**	**135**	Pn	**Pn**	**16 00 33.3**	**+1.7**
THL	**Klokotos Trika**	**1.72**	**45**	P	**Pn**	**16 00 33.8**	**+1.4**
KPRO	**Kipourio**	**1.75**	**24**	P	**Pb**	**16 00 35.0**	**+0.4**
KPRO				AML	AML	16 01 05.4	
	comp=N,2729μm,1.6s						
KPRO				AML	AML	16 01 09.4	
	comp=E,1956μm,0.9s						
AXAR	**Agios Charalam**	**1.78**	**76**	P	**Pb**	**16 00 35.8**	**+0.8**
PYL	**PYLOS**	**1.79**	**144**	P	**Pn**	**16 00 34.4**	**+1.1**
VLX	**Vlachokerasia**	**1.82**	**122**	P	**Pb**	**16 00 36.3**	**+0.6**
PENT	**Pentalofos**	**1.91**	**16**	P	**Pn**	**16 00 37.1**	**+1.9**
PROD	**Prodromos**	**1.93**	**92**	P	**Pn**	**16 00 37.0**	**+1.7**
LTK	**Loutraki**	**2.01**	**99**	P	**Pn**	**16 00 38.1**	**+1.6**
LKR	**Lokris**	**2.02**	**81**	P	**Pn**	**16 00 38.0**	**+1.4**
LOUT	**Loutraki**	**2.02**	**100**	P	**Pn**	**16 00 37.9**	**+1.2**
NEST	**Nestorio**	**2.11**	**13**	P	**Pn**	**16 00 39.8**	**+1.9**
KZN	**Kozani**	**2.20**	**27**	P	**Pn**	**16 00 40.9**	**+1.7**
VIL2	**Platees**	**2.22**	**93**	P	**Pb**	**16 00 42.4**	**-0.2**
SCTE	**Santa Cesarea**	**2.30**	**319**	Pn	**Pn**	**16 00 40.3**	**-0.1**
LIT	**Litokhoron**	**2.35**	**42**	P	**Pn**	**16 00 43.5**	**+2.3**
LIT	**Litokhoron**	**2.35**	**42**	Pn	**Pn**	**16 00 43.2**	**+2.0**
DID	**Didima**	**2.36**	**110**	P	**Pn**	**16 00 42.5**	**+1.2**
XOR	**Xorichti**	**2.37**	**64**	P	**Pn**	**16 00 43.3**	**+2.0**
MRKA	**Markates**	**2.49**	**81**	P	**Pn**	**16 00 44.7**	**+1.7**
FNA	**Florina**	**2.53**	**16**	P	**Pn**	**16 00 45.1**	**+1.5**
FNA	**Florina**	**2.53**	**16**	Pn	**Pn**	**16 00 45.1**	**+1.5**
VLI	**Veliai**	**2.57**	**129**	P	**Pn**	**16 00 47.2**	**+3.1**
ATHU	**Athens Univers**	**2.66**	**97**	P	**Pn**	**16 00 46.6**	**+1.2**
VLY	**Voula,Athens**	**2.69**	**100**	P	**Pn**	**16 00 46.4**	**+0.7**
PTL	**Penteli**	**2.71**	**95**	P	**Pn**	**16 00 46.8**	**+0.8**
OHR	**Ohrid**	**2.76**	**6**	*i* Pn	**Pn**	**16 00 49.0**	**+2.2**
TIP	**Timpagrande**	**3.00**	**287**	⇑P	**Pb**	**16 00 54.3**	**-1.6**
TIP	**Timpagrande**	**3.00**	**287**	Pn	**Pn**	**16 00 51.2**	**+1.1**
TIR	**Tirane**	**3.02**	**352**	⇑P	**Pn**	**16 00 53.1**	**+2.8**
TIR	**Tirane**	**3.02**	**352**	Pn	**Pn**	**16 00 51.3**	**+1.0**
PLG	**Polygyros**	**3.07**	**48**	P	**Pn**	**16 00 52.0**	**+0.9**
KARY	**Karystos**	**3.16**	**95**	P	**Pn**	**16 00 55.3**	**+3.1**
VAY	**Valandovo**	**3.38**	**28**	*i* Pn	**Pb**	**16 01 01.0**	**-1.3**
STIP	**Stip**	**3.59**	**21**	⇓*i* Pn	**Pn**	**16 01 02.6**	**+4.5**
MATE	**Matera**	**3.69**	**309**	⇑P	**Pn**	**16 01 01.3**	**+1.8**
PDG	**Podgorica**	**4.17**	**348**	⇑P	**Pn**	**16 01 08.2**	**+2.1**
PDG	**Podgorica**	**4.17**	**348**	Pn	**Pn**	**16 01 06.3**	**+0.2**
ACER	**Acerenza**	**4.24**	**306**	Pn	**Pn**	**16 01 07.9**	**+0.7**
IDI	**Anoyia**	**4.70**	**129**	Pn	**Pn**	**16 01 16.3**	**+2.9**
	comp=E,0.4nm,0.3s,baz=319,slow=20,SNR=3.3						
IDI				Sn	**Sn**	**16 02 08.7**	**+0.5**
	comp=E,2.1nm,0.3s,baz=101,slow=8.1,SNR=3.2						
VTS	**Vitosha**	**4.76**	**26**	⇑P	**Pb**	**16 01 22.4**	**-3.4**
VTS	**Vitosha**	**4.76**	**26**	Pn	**Pn**	**16 01 16.7**	**+2.4**
VAE	**Valguarnera**	**4.85**	**261**	Pn	**Pn**	**16 01 12.2**	**-3.3**
	comp=E,0.7nm,0.3s,baz=153,slow=6.8,SNR=1.7						
VAE				Sn	**Sn**	**16 02 16.1**	**+4.0**
	comp=E,1.9nm,0.3s,baz=301,slow=9.2,SNR=4.4						
SGRT	**San Giovanni R**	**4.95**	**315**	Pn	**Pn**	**16 01 17.2**	**+0.2**
ALN	**Alexandroupoli**	**5.01**	**58**	Pn	**Pn**	**16 01 18.9**	**+1.2**
INTR	**Introdacqua**	**6.20**	**308**		**Pn**	**16 01 35.3**	**+1.2**
MDVR	**Moldovita**	**6.49**	**8**	⇑P	Pn	16 01 43.0	+5.0
NRCA	**Norcia**	**7.15**	**311**		**Pn**	**16 01 48.6**	**+1.5**
ELL	**Elmali**	**7.69**	**99**	Pn	**Pn**	**16 01 57.2**	**+2.6**
MURB	**Monte Urbino**	**7.75**	**312**	Pn	**Pn**	**16 01 57.0**	**+1.6**
MLR	**Muntele Rosu**	**8.22**	**28**	Pn	**Pn**	**16 02 06.1**	**+4.3**
	comp=E,0.1nm,0.3s,baz=186,slow=9.2,SNR=2.7						
MLR	**Muntele Rosu**	**8.22**	**28**	⇑P	Pn	16 02 10.8	+9.0
MLR	**Muntele Rosu**	**8.22**	**28**	Pn	**Pn**	**16 02 05.4**	**+3.6**
PLOR	**Plostina**	**8.79**	**30**	⇑P	Pn	16 02 18.8	+9.2
CTI	**Castel Tesino**	**10.08**	**322**	Pn	**Pn**	**16 02 25.0**	**-2.3**
BRTR	**Keskin Array B**	**10.35**	**78**	Pn	Pn	16 02 36.6	+5.4
	comp=E,0.2nm,0.3s,baz=264,slow=13,SNR=7.0						
BRTR				LR	LR	16 07 08.3	
	comp=E,148nm,18.1s,baz=335,slow=41						
FUORN	**Ofenpass-Fuorn**	**11.16**	**321**	Pn	**Pn**	**16 02 44.7**	**+2.4**
DAVOX	**Davos/Dischmat**	**11.46**	**321**	Pn	**Pn**	**16 02 44.2**	**-2.1**
GERES	**GERESS Array B**	**11.56**	**337**	Pn	**Pn**	**16 02 44.6**	**-2.9**
	comp=E,0.1nm,0.3s,baz=157,slow=13,SNR=3.8						
GERES	**GERESS Array B**	**11.56**	**337**	Pn	**Pn**	**16 02 50.0**	**+2.5**
SENIN	**Lac Senin/Sane**	**12.58**	**314**	Pn	**Pn**	**16 03 04.3**	**+2.7**
ESDC	**Sonseca Array**	**19.00**	**282**	P	**P**	**16 04 22.9**	**-1.5**
	comp=E,0.2nm,0.3s,baz=78,slow=9.1,SNR=4.3						
HFS	**Hagfors**	**22.21**	**351**	P	**P**	**16 04 55.9**	**-3.0**
	comp=E,4.9nm,0.8s,baz=168,slow=10,SNR=8.3						
FINES	**FINESS Array B**	**23.38**	**7**	P	**P**	**16 05 08.6**	**-2.5**
	comp=E,1.8nm,0.7s,baz=179,slow=10,SNR=5.9						
NOA	**NORSAR Array B**	**23.43**	**349**	P	**P**	**16 05 08.8**	**-2.8**
	comp=E,1.2nm,0.9s,baz=155,slow=11,SNR=2.6						
TORD	**Torodi Ar. Bea**	**30.13**	**219**	P	**P**	**16 06 12.4**	**-0.2**
	comp=E,0.6nm,0.7s,baz=30,slow=9.7,SNR=3.6						
ABKAR	**Akbulak array**	**30.19**	**56**	P	**P**	**16 06 13.5**	**+0.6**
ARCES	**ARCESS Array B**	**31.36**	**3**	P	**P**	**16 06 21.7**	**-1.3**
	comp=E,3.4nm,1.0s,baz=190,slow=9.2,SNR=2.3						
KURBB	**Kurchatov Arra**	**42.17**	**54**	P	**P**	**16 07 55.1**	**-0.1**
	comp=E,0.3nm,0.5s,baz=281,slow=8.6,SNR=3.2						
MK31	**Makanchi Array**	**45.26**	**59**	P	**P**	**16 08 20.2**	**+0.1**
MK31				IAmb	IAmb	16 08 27.5	
	comp=Z,3.6nm,1.6s						
MKAR	**Makanchi Array**	**45.26**	**59**	P	**P**	**16 08 18.2**	**-1.9**
	comp=Z,0.5nm,0.5s,baz=277,slow=6.1,SNR=12						
ZAA0	**Zalesovo Array**	**45.61**	**48**	P	**P**	**16 08 22.8**	**0.0**
ZAA0				IAmb	IAmb	16 08 24.6	
	comp=Z,2.2nm,0.6s						
ZALV	**Zalesovo Beam**	**45.61**	**48**	P	**P**	**16 08 22.1**	**-0.7**
	comp=Z,2.0nm,0.5s,baz=276,slow=8.9,SNR=10.0						
ZALV	**Zalesovo Beam**	**45.61**	**48**	P	**P**	**16 08 23.2**	**+0.4**
SONM	**Songino Array**	**60.39**	**51**	P	**P**	**16 10 11.0**	**-1.0**
	comp=Z,2.5nm,0.8s,baz=282,slow=6.6,SNR=2.4						
CMAR	**Chiang Mai Arr**	**69.92**	**82**	P	**P**	**16 11 14.2**	**0.0**
	comp=Z,0.3nm,0.7s,baz=311,slow=8.2,SNR=3.1						
YKA	**Yellowknife Ar**	**73.20**	**340**	P	**P**	**16 11 33.5**	**+0.3**
	comp=Z,0.2nm,0.7s,

FINES	**FINESS Array B**	**23.37**	**7**	P		**P**		**16 07 44.2**	**-1.4**
	comp=N,2.2nm,0.9s,baz=183,slow=8.6,SNR=4.1								
NOA	**NORSAR Array B**	**23.41**	**349**	P		**P**		**16 07 45.4**	**-0.7**
	comp=N,0.5nm,0.5s,baz=157,slow=10,SNR=2.7								
MKAR	**Makanchi Array**	**45.30**	**59**	P		**P**		**16 10 54.6**	**-0.6**
	comp=N,0.4nm,0.5s,baz=282,slow=6.1,SNR=3.5								
ZALV	**Zalesovo Beam**	**45.65**	**48**	P		**P**		**16 10 57.2**	**-0.6**
	comp=N,1.3nm,0.5s,baz=266,slow=9.3,SNR=5.2								

*IDC **26** 16:02:47.4±4.1, 10°.83N×88°.05W, h0km, mb3.1/3, mb1 3.6/3, mb1mx3.4/28, mbtmp3.2/3, Error ellipse: s-maj=194.2km s-min=66.2km az=50.0*

INET 26 16:02:47.3, 11°.44N×88°.02W, h15km, ML2.8, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TXAR	**Lajitas Array**	**23.02**	**323**	P		P	16 07 58.6	+6.6
	0.2nm,0.4s,baz=135,slow=12,SNR=3.9							
PDAR	**Pinedale Array**	**36.41**	**333**	P		P	16 09 58.5	+7.0
	0.1nm,0.4s,baz=135,slow=9.0,SNR=2.6							
YKA	**Yellowknife Ar**	**54.44**	**345**	P		P	16 12 21.1	+7.3
	0.1nm,0.5s,baz=143,slow=7.3,SNR=2.1							
CMAR	**Chiang Mai Arr**	**149.51**	**347**	PKPbc		PKPab	16 22 40.1	-1.6
	0.4nm,0.4s,baz=352,slow=4.5,SNR=3.5							

*IDC **26** 16:02:53.6±1.0, 38°.33N×20°.30E, h0km, mb3.7/7, mb1 3.7/8, mb1mx3.5/38, mbtmp3.7/8, ML3.8/1, Error ellipse: s-maj=28.3km s-min=17.9km az=106.0*

*NEIC **26** 16:02:55.4±2.3, 38°.31N±0°.06×20°.34E±0°.04, h10km±1km, mb4.6/6, Error ellipse: s-maj=9.4km s-min=5.6km az=174.0*

ISC 26 16:02:55.1±0.7, 38°.29N±0°.08×20°.31E±0°.08, h9km, n29, σ0°98/28, mb3.8/8, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ITM	**Ithomi**	**1.70**	**130**	Pn		**Pb**	**16 03 26.9**	**+0.4**
AGG	**Agios Georgios**	**1.75**	**65**	Pn		**Pn**	**16 03 25.8**	**+0.3**
SCTE	**Santa Cesarea**	**2.28**	**322**	Pn		**Pn**	**16 03 33.7**	**+0.8**
TIR	**Tirane**	**3.07**	**354**	Pn		**Pn**	**16 03 45.9**	**+2.1**
ACER	**Acerenza**	**4.19**	**308**	Pn		**Pn**	**16 04 01.6**	**+2.4**
PDG	**Podgorica**	**4.21**	**349**	Pn		**Pn**	**16 04 00.5**	**+1.1**
SGRT	**San Giovanni R**	**4.92**	**316**	Pn		**Pn**	**16 04 10.7**	**+1.4**
BLY	**Banja Luka**	**6.86**	**341**	Pn		**Pn**	**16 04 36.2**	**+0.3**
MURB	**Monte Urbino**	**7.71**	**313**	Pn		**Pn**	**16 04 47.0**	**-0.6**
GBRS	**Gornja Briga**	**8.31**	**332**	*i* Pn		**Pn**	**16 04 57.2**	**+1.5**
TEOL	**Teolo**	**9.56**	**320**	Pn		**Pn**	**16 05 13.2**	**+0.4**
CTI	**Castel Tesino**	**10.06**	**323**	Pn		**Pn**	**16 05 19.9**	**+0.1**
SALO	**Salr**	**10.32**	**318**	Pn		**Pn**	**16 05 22.6**	**-0.7**
GERES	**GERESS Array B**	**11.58**	**338**	Pn		**Pn**	**16 05 40.9**	**+0.3**
	0.2nm,0.3s,baz=155,slow=14,SNR=4.3							
GERES	**GERESS Array B**	**11.58**	**338**			**Pn**	**16 05 39.7**	**-0.8**
KIV	**Kislovodsk**	**17.77**	**64**	P		**P**	**16 07 03.8**	**+0.4**
HFS	**Hagfors**	**22.26**	**351**	P		**P**	**16 07 52.2**	**+0.1**
	3.3nm,0.8s,baz=163,slow=12,SNR=5.4							
FINES	**FINESS Array B**	**23.46**	**7**	P		**P**	**16 08 03.1**	**-1.4**
	1.3nm,0.6s,baz=175,slow=11,SNR=5.6							
FINES	**FINESS Array B**	**23.46**	**7**	P		**P**	**16 08 03.6**	**-0.8**
NOA	**NORSAR Array B**	**23.48**	**349**	P		**P**	**16 08 04.4**	**-0.4**
	0.6nm,0.5s,baz=164,slow=11,SNR=3.0							
TORD	**Torodi Ar. Bea**	**30.01**	**218**	P		**P**	**16 09 04.5**	**+0.2**
	0.7nm,0.6s,baz=26,slow=9.2,SNR=3.7							
DBIC	**Dimbokro**	**38.86**	**222**	P		**P**	**16 10 21.1**	**+0.4**
	1.2nm,0.5s,baz=30,slow=8.1,SNR=2.7							
DBIC	**Dimbokro**	**38.86**	**222**	IAmb		IAmb	16 10 24.6	
	comp=Z,12nm,1.4s							
MKAR	**Makanchi Array**	**45.39**	**58**	P		**P**	**16 11 14.5**	**+0.7**
	comp=Z,0.6nm,0.5s,baz=276,slow=7.6,SNR=5.1							
ZALV	**Zalesovo Beam**	**45.74**	**48**	P		**P**	**16 11 16.0**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=270,slow=8.4,SNR=3.6							
TSUM	**Tsumeb**	**57.24**	**183**	P		**P**	**16 12 42.5**	**-0.4**
RES	**Resolute Bay**	**59.61**	**344**	P		**P**	**16 12 58.7**	**0.0**
RES						IAmb	IAmb	16 13 03.7	
	comp=Z,5.3nm,0.8s							
SONM	**Songino Array**	**60.52**	**51**	P		**P**	**16 13 04.7**	**-0.9**
ASAR	**Alice Springs**	**122.35**	**96**	PKP		**PKPdf**	**16 21 49.8**	**-1.1**
	comp=Z,0.5nm,1.0s,baz=300,slow=1.6,SNR=2.9							

IDC 26 16:04:25.5±3.8, 38°.90N×21°.12E, h0km, mb3.7/4, mb1 3.7/5, mb1mx3.3/37, mbtmp3.7/5, ML3.4/1, Error ellipse: s-maj=69.7km s-min=10.2km az=33.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDI	**Anoyia**	**4.70**	**139**	Sn		Sn	16 06 25.2	-7.8
	0.6nm,0.3s,baz=275,slow=18,SNR=1.2							
GERES	**GERESS Array B**	**11.29**	**334**	Pn		Pn	16 07 08.7	+0.6
	0.1nm,0.3s,baz=153,slow=15,SNR=2.6							
HFS	**Hagfors**	**21.77**	**350**	P		P	16 09 17.4	-1.1
	5.5nm,1.1s,baz=170,slow=10,SNR=2.3							
FINES	**FINESS Array B**	**22.78**	**6**	P		P	16 09 29.6	+0.2
	5.7nm,1.2s,baz=172,slow=11,SNR=3.4							
MKAR	**Makanchi Array**	**44.53**	**59**	P		P	16 12 38.4	-0.4
	0.3nm,0.5s,baz=280,slow=7.5,SNR=4.2							
ZALV	**Zalesovo Beam**	**44.86**	**49**	P		P	16 12 41.8	+0.5
	0.4nm,0.4s,baz=275,slow=9.4,SNR=2.7							

*IDC **26** 16:08:53.5±1.0, 38°.33N×20°.44E, h0km, mb3.9/15, mb1 3.9/18, mb1mx3.8/38, mbtmp3.8/18, ML4.2/2, MS3.3/1, Ms1 3.3/1, ms1mx3.0/42, Error ellipse: s-maj=21.9km s-min=16.2km az=28.0*

*THE **26** 16:08:55.9, 38°.21N×20°.33E, h1km±2km, ML4.0/5, Error ellipse: s-maj=2.5km s-min=0.7km az=229.0*

*BEO **26** 16:08:56.9±0.8, 38°.33N×20°.23E, h0km, ML3.8/8*

*NEIC **26** 16:08:56.1±2.9, 38°.25N±0°.06×20°.34E±0°.06, h14km±1km, mb4.4/17, ML4.0(THE), Error ellipse: s-maj=9.2km s-min=7.1km az=185.0*

*ATH **26** 16:08:56.0, 38°.22N×20°.35E, h11km±3km, ML3.9/10, Error ellipse: s-maj=4.0km s-min=1.0km az=82.0*

ISC 26 16:08:56.1±0.8, 38°.25N±0°.03×20°.35E±0°.03, h16km±5km, n149, σ1°74/188, mb4.0/19, 7C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.20**	**111**	P		**Pg**	**16 09 00.1**	**-0.8**
VLS				S		**Sg**	**16 09 03.2**	**-1.0**
	107μm,0.1s							
VLS	**Valsamata**	**0.20**	**111**	P		**Pg**	**16 09 00.1**	**-0.8**
VLS				S		**Sg**	**16 09 03.1**	**-1.0**
VLS				AML		AML	16 09 03.4	
VLS				AML		AML	16 09 03.6	
FSK	**Fiskardo**	**0.27**	**38**	P		**Pg**	**16 09 02.1**	**+0.2**
FSK				S		**Sg**	**16 09 06.4**	**+0.5**
	40μm,0.2s							
FSK	**Fiskardo**	**0.27**	**38**	P		**Pg**	**16 09 02.1**	**+0.2**
FSK				S		**Sg**	**16 09 06.2**	**+0.3**
KFL	**Anninata**	**0.37**	**112**	P		**Pg**	**16 09 03.0**	**-0.8**
KFL				S		**Sg**	**16 09 08.1**	**-0.8**
	80μm,0.3s							
KFL	**Anninata**	**0.37**	**112**	P		**Pg**	**16 09 02.9**	**-0.8**
KFL				S		**Sg**	**16 09 08.7**	**-0.3**
KFL				AML		AML	16 09 08.9	
	comp=N,84905μm,0.3s							
KFL				AML		AML	16 09 09.0	
EVGI	**Lefkada island**	**0.44**	**33**	P		**Pg**	**16 09 05.1**	**+0.1**
EVGI				S		**Sg**	**16 09 11.8**	**+0.8**
VLMS	**Volimes, Zakyn**	**0.45**	**146**	P		**Pg**	**16 09 04.4**	**-0.7**
VLMS				S		**Sg**	**16 09 10.8**	**-0.4**
VLMS				AML		AML	16 09 11.8	
	comp=E,74169μm,0.2s							
VLMS				AML		AML	16 09 13.1	
LKD2	**Lefkada island**	**0.59**	**24**	P		**Pg**	**16 09 07.2**	**-0.6**
LKD2				S		**Sb**	**16 09 16.8**	**+0.7**
LKD2	**Lefkada island**	**0.59**	**24**	P		**Pg**	**16 09 07.4**	**-0.3**
LKD2				S		**Sg**	**16 09 16.2**	**+0.5**
LKD2				AML		AML	16 09 24.4	
	comp=E,9625μm,0.3s							
LKD2				AML		AML	16 09 26.3	
	comp=N,9428μm,0.5s							
TSLK	**Tsoukalades, L**	**0.62**	**23**	P		**Pb**	**16 09 08.8**	**+0.3**
TSLK				S		**Sb**	**16 09 18.0**	**+1.0**
	comp=N,6μm,0.7s							
TSLK	**Tsoukalades, L**	**0.62**	**23**	P		**Pb**	**16 09 08.9**	**+0.3**
TSLK				S		**Sb**	**16 09 18.4**	**+1.4**
RLS	**Riolos of Patr**	**0.90**	**102**	P		**Pb**	**16 09 12.8**	**-0.5**
RLS				AML		AML	16 09 28.6	
	comp=E,5387μm,0.7s							
RLS				AML		AML	16 09 30.9	
	comp=N,10274μm,0.5s							
PVO	**Paravola**	**0.99**	**68**	P		**Pb**	**16 09 14.8**	**0.0**
PVO				S		**Sn**	**16 09 30.7**	**+1.8**
	comp=N,9μm,0.6s							
PVO	**Paravola**	**0.99**	**68**	P		**Pb**	**16 09 15.1**	**+0.2**
PVO				AML		AML	16 09 35.0	
	comp=E,20422μm,0.5s							
PVO				AML		AML	16 09 36.2	
	comp=N,15310μm,0.7s							
DRO	**Drossia**	**1.11**	**105**	P		**Pn**	**16 09 17.3**	**+0.4**
DRO				AML		AML	16 09 40.2	
	comp=N,14172μm,0.5s							
DRO				AML		AML	16 09 46.9	
	comp=E,12166μm,0.6s							
UPR	**University Cam**	**1.13**	**88**	P		**Pb**	**16 09 17.8**	**+0.7**
EFP	**Efpalio**	**1.24**	**81**	P		**Pb**	**16 09 19.7**	**+0.7**
EFP				S		**Sg**	**16 09 38.2**	**+2.2**
IGT	**Igoumenitsa**	**1.28**	**359**	P		**Pg**	**16 09 20.8**	**0.0**
IGT				S		**Sg**	**16 09 40.0**	**+2.5**
SERG	**Sergoula**	**1.35**	**83**	P		**Pb**	**16 09 21.0**	**+0.1**
SERG				AML		AML	16 09 45.8	
	comp=E,8052μm,0.6s							
SERG				AML		AML	16 09 49.4	
	comp=N,4963μm,0.7s							
TRIZ	**Trizonia**	**1.36**	**85**	P		**Pb**	**16 09 21.2**	**+0.1**
KALE	**Kalithea**	**1.42**	**84**	P		**Pg**	**16 09 23.2**	**-0.1**
KALE				AML		AML	16 09 47.1	
	comp=N,7981μm,0.6s							
KALE				AML		AML	16 09 49.8	
	comp=E,5481μm,0.6s							
ITM	**Ithomi**	**1.64**	**130**			**Pn**	**16 09 24.4**	**+0.2**
AGG	**Agios Georgios**	**1.73**	**63**	P		**Pb**	**16 09 28.3**	**+0.9**
AGG				AML		AML	16 10 00.6	
	comp=E,3293μm,0.7s							
AGG				AML		AML	16 10 03.7	
	comp=N,3619μm,0.8s							
AGG	**Agios Georgios**	**1.73**	**63**			**Pb**	**16 09 27.6**	**+0.1**
AXAR	**Agios Charalam**	**1.88**	**73**	P		**Pb**	**16 09 30.8**	**+0.7**
SCTE	**Santa Cesarea**	**2.34**	**322**			**Pn**	**16 09 34.9**	**+1.2**
LIT	**Litokhoron**	**2.49**	**41**			**Pb**	**16 09 39.1**	**-1.2**
FNA	**Florina**	**2.65**	**17**			**Pn**	**16 09 40.3**	**+2.1**
OHR	**Ohrid**	**2.88**	**7**	*i* Pn		**Pn**	**16 09 43.2**	**+2.0**
TIP	**Timpagrande**	**2.96**	**289**	⇑P		**Pn**	**16 09 44.1**	**+1.7**
TIP	**Timpagrande**	**2.96**	**289**			**Pn**	**16 09 43.7**	**+1.4**
TIR	**Tirane**	**3.12**	**353**	⇑P		**Pn**	**16 09 46.9**	**+2.4**
TIR	**Tirane**	**3.12**	**353**			**Pn**	**16 09 46.5**	**+2.0**
CGL1	**Ceglie Messapi**	**3.27**	**318**	*e*Pn		**Pn**	**16 09 48.2**	**+1.6**
CGL1				S		**Sn**	**16 10 24.3**	**-0.9**
MASS	**Massafra**	**3.44**	**315**	*e*Pn		**Pn**	**16 09 50.8**	**+1.9**
CEL	**Celeste**	**3.51**	**272**			**Pn**	**16 09 50.6**	**+0.7**
VAY	**Valandovo**	**3.51**	**28**	*i* Pn		**Pb**	**16 09 55.2**	**-2.6**
MATE	**Matera**	**3.70**	**311**	⇑P		**Pg**	**16 10 06.8**	**-0.1**
STIP	**Stip**	**3.72**	**22**	*i* Pn		**Pn**	**16 09 55.8**	**+3.0**
SKO	**Skopje**	**3.81**	**12**	*i* Pn		**Pn**	**16 09 55.7**	**+1.7**
SG1	**Sgolgore (BA)**	**3.84**	**313**	*e*Pn		**Pn**	**16 09 56.3**	**+1.8**
SG1				S		**Sn**	**16 10 38.9**	**-0.3**
BAI	**Bari**	**3.91**	**318**	*e*Pn		**Pn**	**16 09 57.1**	**+1.7**
BAI				S		**Sn**	**16 10 42.0**	**+1.1**
ACER	**Acerenza**	**4.25**	**308**			**Pn**	**16 10 00.9**	**+0.8**
PDG	**Podgorica**	**4.26**	**349**	⇓P		**Pn**	**16 10 00.7**	**+0.6**
PDG	**Podgorica**	**4.26**	**349**	Pn		**Pn**	**16 10 01.2**	**+1.0**
APE	**Apeiranthos**	**4.28**	**104**	⇑P		Pn	16 09 55.6	-4.9
SANT	**Santorini**	**4.48**	**113**	Pn		**Pn**	**16 10 06.2**	**+2.9**
BOSS	**Bosilegrad**	**4.54**	**20**	*e*Pn		**Pn**	**16 10 06.0**	**+1.9**
BOSS				*e*Sn		**Sn**	**16 10 58.2**	**+1.7**
IDI	**Anoyia**	**4.69**	**128**	Pn		**Pn**	**16 10 09.6**	**+3.4**
	comp=N,0.6nm,0.3s,baz=324,slow=14,SNR=4.1							
IDI				Sn		**Sn**	**16 11 00.0**	**-0.3**
	comp=N,3.3nm,0.3s,baz=61,slow=15,SNR=4.1							
IDI				LR		LR	16 12 35.2	
	comp=N,337nm,18.5s,baz=256,slow=47							
BARS	**Barje**	**4.70**	**13**	*e*Pn		**Pn**	**16 10 07.4**	**+1.2**
DBRK	**Dubrovnik**	**4.72**	**340**	*e*Pn		**Pn**	**16 10 06.2**	**-0.3**
DBRK				Sn		**Sn**	**16 10 58.3**	**-2.7**
VAE	**Valguarnera**	**4.76**	**263**	Sn		**Sn**	**16 11 09.1**	**+7.1**
	comp=N,4.1nm,0.3s,baz=237,slow=3.3,SNR=3.9							
VTS	**Vitosha**	**4.89**	**26**	Pn		**Pn**	**16 10 11.5**	**+2.5**
SGRT	**San Giovanni R**	**4.98**	**316**	Pn		**Pn**	**16 10 11.3**	**+1.2**
SELS	**Selova**	**5.00**	**6**	*e*Pn		**Pn**	**16 10 11.0**	**+0.6**
SJES	**Sjenica**	**5.01**	**357**	*e*Pn		**Pn**	**16 10 12.5**	**+1.8**
SJES				*e*Sn		**Sn**	**16 11 06.5**	**-1.8**
STON	**Ston**	**5.04**	**337**	*e*Pn		**Pn**	**16 10 11.0**	**+0.1**
STON				Sn		**Sn**	**16 11 05.8**	**-2.9**
ALN	**Alexandroupoli**	**5.13**	**57**	Pn		**Pn**	**16 10 14.4**	**+2.2**
WDD	**Wied Dalam**	**5.25**	**244**	Pn		**Pn**	**16 10 13.7**	**0.0**
ZAPS	**Zavoj**	**5.31**	**18**	*e*Pn		**Pn**	**16 10 16.3**	**+1.6**
IVAS	**Ivanjica**	**5.32**	**358**	*e*Pn		**Pn**	**16 10 15.1**	**+0.2**
IVAS				*e*Sn		**Sn**	**16 11 16.2**	**+0.4**
BOVS	**Bovan**	**5.48**	**10**	*e*Pn		**Pn**	**16 10 17.1**	**+0.2**
CORL	**Corleone**	**5.57**	**269**	Pn		**Pn**	**16 10 18.4**	**+0.1**
MAKA	**Makarska**	**5.63**	**334**	*e*Pn		**Pn**	**16 10 19.6**	**+0.6**
MAKA				Sn		**Sn**	**16 11 20.3**	**-3.0**
GRUS	**Gruza**	**5.64**	**3**	*e*Pn		**Pn**	**16 10 20.1**	**+1.0**
GRUS				*e*Sn		**Sn**	**16 11 23.8**	**+0.3**
BBLS	**Lazići**	**5.66**	**353**	*e*Pn		**Pn**	**16 10 21.3**	**+1.9**
BBLS				*e*Sn		**Sn**	**16 11 23.1**	**-0.9**
DIVS	**Divibare**	**5.85**	**357**	*e*Pn		**Pn**	**16 10 22.6**	**+0.5**
DIVS				*e*Sn		**Sn**	**16 11 27.5**	**-1.3**
TRUS	**Trudelj**	**5.97**	**0**	*e*Pn		**Pn**	**16 10 24.6**	**+0.9**
TRUS				*e*Sn		**Sn**	**16 11 30.8**	**-0.8**
INTR	**Introdacqua**	**6.21**	**309**			**Pn**	**16 10 30.0**	**+3.0**
ZIRJ	**Zirje**	**6.47**	**328**	*e*Pn		**Pn**	**16 10 30.6**	**+0.1**
ZIRJ				Sn		**Sn**	**16 11 40.9**	**-3.0**
KIJV	**Kijevo**	**6.47**	**334**	*e*Pn		**Pn**	**16 10 31.5**	**+0.9**
KIJV				Sn		**Sn**	**16 11 42.3**	**-1.8**
MORI	**Morici**	**6.62**	**329**	*e*Pn		**Pn**	**16 10 33.7**	**+1.2**
MORI				Sn		**Sn**	**16 11 44.7**	**-2.8**
BLY	**Banja Luka**	**6.91**	**341**	⇑P		**Pn**	**16 10 36.8**	**+0.2**
BLY	**Banja Luka**	**6.91**	**341**	Pn		**Pn**	**16 10 38.6**	**+2.0**
FRGS	**Fruska Gora**	**6.91**	**357**	*e*Pn		**Pn**	**16 10 38.4**	**+1.7**
FRGS				*e*Sn		**Sn**	**16 11 52.0**	**-2.9**
DUGI	**Dugi Otok**	**6.99**	**327**	*e*Pn		**Pn**	**16 10 39.6**	**+2.0**
DUGI				Sn		**Sn**	**16 11 54.7**	**-2.1**
NRCA	**Norcia**	**7.16**	**312**			**Pn**	**16 10 42.5**	**+2.4**
GZR	**Gura Zlata**	**7.36**	**13**	⇑P		**Pn**	**16 10 42.8**	**-0.1**
BZS	**Buzias**	**7.42**	**7**	⇑P		**Pn**	**16 10 44.5**	**+0.9**
NVLJ	**Novalja**	**7.53**	**329**	*e*Pn		**Pn**	**16 10 46.1**	**+1.0**
MURB	**Monte Urbino**	**7.77**	**313**			**Pn**	**16 10 51.0**	**+2.6**
LATE	**Laterza**	**7.84**	**306**	Pn		**Pn**	**16 10 50.4**	**+1.0**
OZLJ	**Ozalj**	**8.21**	**335**	*e*Pn		**Pn**	**16 10 56.0**	**+1.7**
MLR	**Muntele Rosu**	**8.35**	**28**	Pn		Pn	16 11 01.2	+4.8
	comp=N,0.2nm,0.3s,baz=276,slow=14,SNR=7.1							
KEST	**Kesra**	**9.16**	**257**	Pn		**Pn**	**16 11 07.4**	**-0.1**
SOKA	**Soboth**	**9.29**	**337**	*e*Pn		**Pn**	**16 11 08.7**	**-0.6**
	comp=N,5.6nm,0.5s,SNR=12							
SOKA				*e*Sn		**Sn**	**16 12 46.7**	**-6.7**
	comp=N,3.8nm,0.5s							
OBKA	**Obir**	**9.30**	**334**	*e*Pn		**Pn**	**16 11 10.5**	**+1.1**
	comp=N,3.0nm,0.4s,SNR=5.6							
OBKA				Sn		**Sn**	**16 12 49.9**	**-3.8**
	comp=N,7.0nm,0.3s							
TEOL	**Teolo**	**9.61**	**320**	Pn		**Pn**	**16 11 14.2**	**+0.5**
ARSA	**Arzberg**	**9.67**	**340**	Pn		**Pn**	**16 11 14.3**	**-0.1**
	comp=N,1.1nm,0.4s							
PSZ	**Piszkesteto**	**9.67**	**358**	Pn		**Pn**	**16 11 15.1**	**+0.6**
MYKA	**Terra Mystica**	**9.73**	**332**	*e*Pn		**Pn**	**16 11 15.4**	**+0.1**
	comp=N,1.1nm,0.2s							
MYKA				Sn		**Sn**	**16 12 59.6**	**-4.6**
	comp=N,1.7nm,0.4s							
PRMA	**PARMA**	**9.95**	**314**	Pn		**Pn**	**16 11 18.3**	**+0.1**
CTI	**Castel Tesino**	**10.12**	**323**			**Pn**	**16 11 20.2**	**-0.4**
KBA	**Koelnbreinsper**	**10.22**	**332**	Pn		**Pn**	**16 11 23.2**	**+1.1**
	comp=N,1.9nm,0.5s							
KBA				*e*Sn		**Sn**	**16 13 11.9**	**-4.4**
	comp=N,2.7nm,0.4s							
ABTA	**Abfaltersbach**	**10.27**	**328**	*e*Pn		**Pn**	**16 11 23.7**	**+1.0**
	comp=N,1.4nm,0.3s							
VYHS	**Vyhne**	**10.30**	**354**	*e*PN		**Pn**	**16 11 23.8**	**+0.8**
VYHS				*e*SN		**Sn**	**16 13 16.2**	**-1.9**
SALO	**Salr**	**10.38**	**318**	Pn		**Pn**	**16 11 26.0**	**+1.8**
BR131	**Keskin Array S**	**10.45**	**78**	Pn		**Pn**	**16 11 27.9**	**+2.6**
BRTR	**Keskin Array B**	**10.45**	**78**	Pn		**Pn**	**16 11 29.3**	**+4.0**
	comp=N,0.1nm,0.3s,baz=263,slow=12,SNR=5.1							
MOA	**Molln**	**10.57**	**337**	*e*Pn		**Pn**	**16 11 27.3**	**+0.5**
	comp=N,5.1nm,0.4s							
MOA				*e*Sn		**Sn**	**16 13 19.9**	**-4.9**
	comp=N,2.1nm,0.4s							
WTTA	**Wattenberg**	**11.05**	**327**	*e*Pn		**Pn**	**16 11 35.0**	**+1.6**
	comp=N,3.8nm,0.5s							
WTTA				Sn		**Sn**	**16 13 34.2**	**-2.4**
	comp=N,9.7nm,0.6s							
WATA	**Walderalm**	**11.13**	**327**	*e*Pn		**Pn**	**16 11 36.3**	**+1.8**
	comp=N,5.0nm,0.5s							
FUORN	**Ofenpass-Fuorn**	**11.20**	**322**	Pn		**Pn**	**16 11 36.5**	**+1.0**
SQTA	**Sankt Quirin**	**11.20**	**326**	*e*Pn		**Pn**	**16 11 37.7**	**+2.3**
	comp=N,2.5nm,0.4s							
MOTA	**Moosalm**	**11.34**	**326**	Pn		**Pn**	**16 11 39.5**	**+2.1**
	comp=N,2.8nm,0.5s							
MOTA				Sn		**Sn**	**16 13 43.3**	**-0.4**
	comp=N,5.1nm,0.6s							
DAVOX	**Davos/Dischmat**	**11.50**	**321**	Pn		**Pn**	**16 11 42.3**	**+2.7**
	comp=N,0.3nm,0.3s,baz=122,slow=18,SNR=4.8							
GERES	**GERESS Array B**	**11.63**	**338**	Pn		**Pn**	**16 11 40.7**	**-0.6**
	comp=N,0.4nm,0.3s,baz=165,slow=14,SNR=10							
KHC	**Kasperske Hory**	**11.92**	**338**	*e*PN		**Pn**	**16 11 44.6**	**-0.7**
KHC				*e*SN		**Sn**	**16 13 51.7**	**-6.2**
KHC	**Kasperske Hory**	**11.92**	**338**	Pn		**Pn**	**16 11 44.8**	**-0.4**
SENIN	**Lac Senin/Sane**	**12.60**	**314**	Pn		**Pn**	**16 11 56.8**	**+2.1**
BFO	**Black Forest**	**13.33**	**323**	Pn		**Pn**	**16 12 05.1**	**+0.6**
AKASG	**Malin Array Be**	**13.95**	**24**	Pn		**Pn**	**16 12 13.4**	**+0.5**
	comp=N,0.7nm,0.3s,baz=210,slow=8.9,SNR=1.3							
RGN	**Rugen**	**16.99**	**346**			**P**	**16 12 54.2**	**-0.4**
KBZ	**Khabaz**	**17.86**	**65**	P		**P**	**16 13 05.8**	**+1.5**
	comp=N,0.1nm,0.3s,baz=290,slow=7.0,SNR=8.8							
ESDC	**Sonseca Array**	**18.95**	**282**	P		**P**	**16 13 15.9**	**-0.5**
	comp=N,0.2nm,0.3s,baz=83,slow=12,SNR=2.8							
GNI	**Garni**	**18.99**	**77**	P		**Pn**	**16 13 18.7**	**+1.0**
	comp=N,0.4nm,0.3s,baz=328,slow=6.2,SNR=6.2							
GNI	**Garni**	**18.99**	**77**			**Pn**	**16 13 19.0**	**+1.4**
GNI				IAmb		IAmb	16 14 10.7	
	comp=Z,66nm,1.6s							
OBN	**Obninsk**	**20.12**	**28**	P		**P**	**16 13 28.4**	**-0.5**
OBN				IAmb		IAmb	16 13 29.7	
	comp=Z,13nm,0.5s							
HFS	**Hagfors**	**22.31**	**351**	P		**P**	**16 13 51.3**	**-1.2**
	comp=Z,5.2nm,0.7s,baz=155,slow=11,SNR=14							
EKA	**Eskdalemuir Ar**	**23.29**	**325**	P		**P**	**16 14 02.7**	**-0.1**
	comp=Z,4.9nm,0.9s,baz=122,slow=10,SNR=4.3							
FINES	**FINESS Array B**	**23.49**	**7**	P		**P**	**16 14 03.8**	**-1.0**
	comp=Z,2.7nm,0.6s,baz=170,slow=10,SNR=14							
FIA1	**FINESS Array S**	**23.49**	**7**	P		**P**	**16 14 03.9**	**-0.8**
NC405	**NORSAR Array S**	**23.52**	**349**	P		**P**	**16 14 05.7**	**+0.6**
NB201	**NORSAR Array S**	**23.52**	**349**	P		**P**	**16 14 05.0**	**0.0**
NB2	**NORSAR Subarra**	**23.52**	**349**	P		**P**	**16 14 05.2**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=153,slow=12							
NOA	**NORSAR Array B**	**23.52**	**349**	P		**P**	**16 14 04.7**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=157,slow=9.0,SNR=5.2							
GEYT	**Alibeck**	**29.59**	**79**	P		**P**	**16 14 58.1**	**-2.2**
	comp=Z,0.8nm,0.6s,baz=282,slow=6.8,SNR=2.6							
GEYT	**Alibeck**	**29.59

RLS AML AML 16 25 08.9
comp=E,1022μm,0.4s
RLS AML AML 16 25 18.1
comp=N,1447μm,0.4s
PVO Paravola 0.93 66 P **Pg 16 24 53.6 -0.2**
PVO S **Sn 16 25 07.3 -0.1**
comp=N,2μm,0.3s
PVO Paravola 0.93 66 P **Pg 16 24 53.6 -0.2**
DRO Drossia 1.05 106 P **Pg 16 24 55.4 -0.6**
DRO S **Sn 16 25 11.4 +1.1**
comp=N,1μm,0.5s
DRO Drossia 1.05 106 P **Pg 16 24 55.1 -0.9**
EFP Efpalio 1.17 81 P **Pg 16 24 57.5 -0.8**
EFP S **Sn 16 25 15.4 +2.2**
comp=N,745nm,0.4s
EFP Efpalio 1.17 81 P **Pg 16 24 56.8 -1.5**
LAKA Lakka 1.21 90 P **Pg 16 24 58.2 -0.9**
LAKA S **Sn 16 25 16.2 +1.8**
comp=N,285nm,0.5s
LAKA Lakka 1.21 90 P **Pg 16 24 58.0 -1.1**
AMT Artemida-Makis 1.23 125 P **Pb 16 24 58.3 -0.5**
AMT Artemida-Makis 1.23 125 P **Pn 16 24 59.7 +1.2**
EVR Evrytania 1.26 58 P **Pb 16 24 59.3 -0.1**
EVR AML AML 16 25 26.7
comp=N,493μm,0.4s
EVR AML AML 16 25 32.0
comp=E,488μm,0.5s
IGT Igoumenitsa 1.28 356 P **Pn 16 24 59.2 0.0**
IGT Igoumenitsa 1.28 356 P **Pg 16 25 01.1 +0.6**
SERG Sergoula 1.28 82 P **Pn 16 24 59.6 +0.4**
SERG Sergoula 1.28 82 P **Pn 16 24 59.7 +0.4**
TRIZ Trizonia 1.29 84 P **Pn 16 24 59.7 +0.4**
TRIZ Trizonia 1.29 84 P **Pn 16 24 59.6 +0.4**
KALE Kalithea 1.34 83 P **Pn 16 25 00.2 +0.1**
KLV Kalavryta, Ach 1.36 98 P **Pn 16 25 00.9 +0.6**
KLV AML AML 16 25 29.2
comp=N,389μm,0.5s
KLV AML AML 16 25 30.8
comp=E,392μm,0.3s
JAN Janina 1.44 13 P **Pg 16 25 03.6 +0.1**
MAKR Makrakomi, Fth 1.53 60 P **Pg 16 25 04.8 -0.4**
AGG Agios Georgios 1.67 62 P **Pg 16 25 07.6 -0.2**
THL Klokotos Trika 1.80 43 P **Pb 16 25 09.4 +1.0**
PROD Prodromos 1.94 89 P **Pb 16 25 11.4 +0.6**
LTK Loutraki 2.01 96 P **Pb 16 25 11.9 0.0**
MRKA Markates 2.51 79 P **Pn 16 25 18.1 +2.0**
GERES GERESS Array B 11.66 337 Pn **Pn 16 27 21.3 -0.3**
comp=E,0.2nm,0.3s,baz=157,slow=14,SNR=3.1
FINES FINESS Array B 23.48 7 P **P 16 29 42.3 -2.3**
comp=E,1.9nm,0.9s,baz=196,slow=9.5,SNR=4.4
MKAR Makanchi Array 45.32 58 P **P 16 32 52.4 -0.6**
comp=E,0.2nm,0.4s,baz=278,slow=8.0,SNR=7.4
ZALV Zalesovo Beam 45.69 48 P **P 16 32 55.7 -0.1**
comp=E,0.7nm,0.5s,baz=274,slow=8.1,SNR=3.7

*IDC **26** 16:26:22.2±2.2, 7.°58S×128.°11E, h143km±20km, mb3.5/9, mb1 3.8/13, mb1mx3.6/38, mbtmp4.2/13, Error ellipse: s-maj=26.1km s-min=12.5km az=81.0*
*DJA **26** 16:26:23.9±0.3, 8.°5S×12.°8E±.°, h216km±10km, M4.6/7, mB5.1/3, mb4.4/7, MLv4.7/7, Mw(mB)4.4/3*
*NEIC **26** 16:26:23.5±1.9, 7.°57S±0.°08×128.°29E±0.°07, h164km±6km, mb4.5/23, Error ellipse: s-maj=11.3km s-min=10.2km az=151.0*
ISC 26 16:26:25.4±0.4, **7.°76S**±0.°05×**128.°29E**±0.°06, **h200**km, **n60, σ2§70/55, mb4.1/20, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.00**	**94**	P	**Pn**	**16 27 15.7**	**+0.7**
SAUI				S	**Sn**	**16 27 54.7**	**+1.0**
SAUI	**Saumlaki**	**3.00**	**94**	Pn	**Pn**	**16 27 12.1**	**-2.8**
SOEI	**Soe**	**4.44**	**243**	P	**Pn**	**16 27 32.6**	**-0.3**
SOEI	**Soe**	**4.44**	**243**		**Pn**	**16 27 32.5**	**-0.3**
MTN	**Manton Dam**	**5.78**	**151**		**Pn**	**16 27 50.3**	**+0.5**
FAKI	**Fak Fak**	**6.22**	**40**	P	**Pn**	**16 27 51.7**	**-3.8**
	0.3nm53nm,1.8s						
FAKI	**Fak Fak**	**6.22**	**40**	Pn	**Pn**	**16 27 51.7**	**-3.8**
SIJI	**Sorong**	**7.46**	**24**	P	**Pn**	**16 28 08.3**	**-3.4**
	5.6nm,0.3s,baz=202,slow=23,SNR=36						
SIJI				S	**Sn**	**16 29 29.1**	**-7.2**
	0.9nm,0.3s,baz=276,slow=23,SNR=1.2						
SWI	**Sorong**	**7.46**	**24**	P	**Pn**	**16 28 08.6**	**-3.1**
	0.2nm32nm,1.0s						
KNRA	**Kununurra**	**7.88**	**177**		**Pn**	**16 28 17.7**	**+0.5**
WSI	**Waingapu**	**8.12**	**256**	P	**Pn**	**16 28 19.1**	**-1.1**
	134nm,0.6s						
RKPI	**Ransiki, Papua**	**8.54**	**44**	P	**Pn**	**16 28 23.0**	**-2.8**
	109nm,0.5s						
FITZ	**Fitzroy Crossi**	**10.60**	**194**	P	**Pn**	**16 28 51.5**	**-0.8**
	4.4nm,0.3s,baz=25,slow=11,SNR=117						
FITZ				S	**Sn**	**16 30 42.5**	**-8.2**
	2.0nm,0.3s,baz=86,slow=16,SNR=2.9						
WB0	**Warramunga Arr**	**13.33**	**154**	P	**P**	**16 29 27.0**	**-2.8**
WRAB	**Tennant Creek**	**13.46**	**155**	P	**P**	**16 29 29.2**	**-2.0**
WRA	**Warramunga Arr**	**13.46**	**155**	P	**P**	**16 29 29.0**	**-2.2**
	2.3nm,0.3s,baz=336,slow=11,SNR=35						
WRA				S	**S**	**16 31 52.5**	**-6.3**
	6.9nm,0.3s,baz=325,slow=25,SNR=14						
WB2	**Warramunga Arr**	**13.46**	**155**		**P**	**16 29 28.9**	**-2.4**
WR0	**Warramunga Arr**	**13.56**	**154**		**P**	**16 29 30.1**	**-2.3**
JAGI	**Jajag, Banyuwa**	**14.01**	**266**	Pn	**P**	**16 29 35.7**	**-1.8**
COEN	**Coen**	**15.86**	**114**	Pn	**Pn**	**16 30 01.4**	**+3.2**
PSA00	**Pilbara Seismi**	**15.97**	**210**	P	**Pn**	**16 30 01.2**	**+1.8**
PSA00				IAmb	IAmb	16 30 52.3	
	comp=Z,81nm,1.7s						
AS31	**Alice Springs**	**16.71**	**162**	P	**Pn**	**16 30 10.4**	**+2.1**
AS31				IAmb	IAmb	16 30 13.5	
	comp=Z,12nm,0.5s						
ASAR	**Alice Springs**	**16.71**	**162**	P	**Pn**	**16 30 12.2**	**+3.9**
	comp=Z,3.5nm,0.3s,baz=341,slow=10,SNR=625						
ASAR				S	**S**	**16 33 11.1**	**-0.6**
	comp=Z,0.7nm,0.3s,baz=324,slow=17,SNR=4.5						
SBUM	**Sibu**	**18.97**	**302**	P	**Pn**	**16 30 32.7**	**-2.2**
KSM	**Kuching**	**20.14**	**296**	P	Pn	16 30 45.5	-3.6
KSM				IAmb	IAmb	16 30 52.2	
	comp=Z,18nm,0.9s						
CISI	**Cisompet, Garu**	**20.29**	**269**	P	Pn	16 30 45.5	-5.4
CISI				IAmb	IAmb	16 31 07.7	
	comp=Z,53nm,1.4s						
MORW	**Morawa**	**24.13**	**207**	P	**P**	**16 31 25.5**	**+2.4**
MNAI	**Manna**	**25.41**	**276**	P	**P**	**16 31 36.0**	**+1.2**
BBOO	**Buckleboo**	**25.95**	**165**	P	**P**	**16 31 41.6**	**+2.2**
BBOO				IAmb	IAmb	16 32 35.2	
	comp=Z,13nm,1.3s						
STKA	**Stephens Creek**	**27.01**	**154**	P	**P**	**16 31 52.8**	**+3.9**
	comp=Z,0.4nm,0.4s,baz=335,slow=11,SNR=4.9						
STKA	**Stephens Creek**	**27.01**	**154**	P	**P**	**16 31 50.5**	**+1.6**
IPM	**Ipoh**	**29.79**	**293**	P	**P**	**16 32 14.9**	**+1.1**
IPM				IAmb	IAmb	16 32 51.2	
	comp=Z,17nm,1.2s						
KULM	**Kulim**	**30.46**	**294**	P	**P**	**16 32 20.5**	**+0.8**
KULM				IAmb	IAmb	16 33 17.1	
	comp=Z,14nm,1.1s						
TPUB	**Ta-pu**	**31.76**	**347**	P	**P**	**16 32 30.7**	**-0.3**
UBPT	**Khong Chiam**	**32.17**	**315**	P	**P**	**16 32 34.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**38.95**	**312**	P	**P**	**16 33 32.8**	**+0.5**
	comp=Z,0.7nm,0.8s,baz=145,slow=7.2,SNR=6.1						
CHTO	**Chiang Mai**	**39.17**	**313**	P	**P**	**16 33 33.5**	**-0.6**
CHTO				IAmb	IAmb	16 34 17.5	
	comp=Z,9.4nm,1.9s						
KSRS	**Korea Array**	**44.98**	**360**	P	**P**	**16 34 21.9**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=180,slow=9.5,SNR=6.4						
LZH	**Lanzhou**	**49.30**	**334**	⇓P	P	16 34 57.5	+3.1
LZH				pP	pwP	16 35 38.5	-4.6
LZH				sP	sP	16 35 55.8	-3.1
LZH				PP	PP	16 36 54.8	+4.4
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,54nm,6.0s						
HHC	**Hu-ho-hao-te**	**50.76**	**344**	*e*P	P	16 35 08.5	+3.3
HHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,28nm,3.6s						
LSA	**Lhasa**	**51.59**	**318**	P	**P**	**16 35 13.0**	**+1.0**
SONM	**Songino Array**	**58.64**	**343**	P	**P**	**16 36 03.0**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=148,slow=6.4,SNR=4.3						
SONM	**Songino Array**	**58.64**	**343**	IAmb	IAmb	16 36 04.4	
	comp=Z,1.2nm,0.8s						
WMQ	**Urumqi**	**63.12**	**328**	*e*P	P	16 36 34.5	+2.7
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,43nm,7.1s						
PETK	**Petropavlovsk-**	**65.58**	**19**	P	P	16 36 49.6	+2.0
	comp=Z,1.9nm,0.7s,baz=197,slow=7.4,SNR=5.8						
KSH	**Kashi**	**67.44**	**318**	P	P	16 37 04.3	+4.5
KSH				pP	pwP	16 37 47.3	-4.1
KSH				pmax	pmax		
	comp=Z,480nm,6.8s						
MKAR	**Makanchi Array**	**67.94**	**328**	P	P	16 37 04.1	+1.5
	comp=Z,0.7nm,0.5s,baz=115,slow=8.9,SNR=17						
YAK	**Yakutsk**	**69.59**	**1**	P	**P**	**16 37 13.1**	**+0.7**
YAK				IAmb	IAmb	16 37 14.1	
	comp=Z,5.0nm,0.8s						
ZAA0	**Zalesovo Array**	**71.52**	**335**	P	**P**	**16 37 24.8**	**+0.6**
ZAA0				IAmb	IAmb	16 37 26.0	
	comp=Z,3.5nm,0.8s						
ZALV	**Zalesovo Beam**	**71.52**	**335**	P	**P**	**16 37 25.3**	**+1.1**
	comp=Z,4.0nm,0.7s,baz=130,slow=6.2,SNR=15						
KURK	**Kurchatov**	**72.29**	**329**	P	**P**	**16 37 30.0**	**+1.1**
KURK				IAmb	IAmb	16 37 31.4	
	comp=Z,5.7nm,0.8s						
BRVK	**Borovoye**	**77.88**	**328**	P	**P**	**16 38 02.1**	**+1.3**
TIXI	**Tiksi**	**79.24**	**0**	P	**P**	**16 38 08.7**	**+0.9**
TIXI				IAmb	IAmb	16 39 29.5	
	comp=Z,11nm,1.7s						
AKTO	**Aktyubinsk**	**83.64**	**323**	P	P	16 38 33.5	+2.1
	comp=Z,0.9nm,0.6s,baz=45,slow=2.9,SNR=3.9						
ARU	**Arti**	**85.45**	**328**	P	**P**	**16 38 41.9**	**+1.6**
	comp=Z,0.7nm,0.4s,baz=94,slow=15,SNR=4.0						
PDAR	**Pinedale Array**	**118.63**	**45**	PKP	**PKiKP**	**16 44 52.8**	**+2.7**
	comp=Z,0.2nm,0.6s,baz=235,slow=3.2,SNR=3.4						
TXAR	**Lajitas Array**	**126.77**	**59**	PKP	**PKiKP**	**16 45 09.6**	**+3.2**
	comp=Z,0.2nm,0.7s,baz=304,slow=1.6,SNR=3.0						
TORD	**Torodi Ar. Bea**	**127.28**	**281**	PKP	**PKiKP**	**16 45 09.8**	**+2.2**
	comp=Z,0.6nm,0.6s,baz=111,slow=2.2,SNR=3.5						
CPUP	**Villa Florida**	**145.68**	**171**	PKPbc	**PKiKP**	**16 45 45.2**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=227,slow=2.9,SNR=3.9						
LPAZ	**La Paz**	**151.11**	**146**	PKPbc	**PKPab**	**16 46 01.0**	**-3.8**
	comp=Z,2.2nm,0.4s,baz=53,slow=3.4,SNR=22						

*IDC **26** 16:31:59.9±1.3, 38.°41N×20.°51E, h0km, mb3.7/7, mb1 3.8/11, mb1mx3.5/53, mbtmp3.7/11, ML3.2/4, Error ellipse: s-maj=28.0km s-min=17.8km az=40.0*
*THE **26** 16:32:02.1, 38.°34N×20.°37E, h9km±1km, ML3.7/8, Error ellipse: s-maj=1.6km s-min=0.6km az=78.0*
*ATH **26** 16:32:02.9, 38.°35N×20.°47E, h13km±2km, ML3.7/9, Error ellipse: s-maj=2.8km s-min=0.8km az=85.0*
*NEIC **26** 16:32:03.1±3.0, 38.°35N±0.°04×20.°40E±0.°06, h10km±1km, mb4.1/2, ML3.7(THE), Error ellipse: s-maj=9.9km s-min=4.5km az=231.0*
ISC 26 16:32:02.7±0.8, **38.°34N**±0.°02×**20.°45E**±0.°03, **h13**km±5km, **n80, σ1§43/95, mb3.9/9, 6C, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.15**	**38**	P	**Pg**	**16 32 06.2**	**-0.1**
FSK				S	**Sg**	**16 32 08.6**	**-0.3**
	67μm,0.4s						
FSK	**Fiskardo**	**0.15**	**38**	P	**Pg**	**16 32 06.1**	**-0.3**
FSK				S	**Sg**	**16 32 08.5**	**-0.4**
VLS	**Valsamata**	**0.20**	**146**	P	**Pg**	**16 32 07.2**	**0.0**
VLS				S	**Sg**	**16 32 10.8**	**+0.5**
	27μm,0.1s						
VLS	**Valsamata**	**0.20**	**146**	P	**Pg**	**16 32 07.1**	**-0.1**
VLS				S	**Sg**	**16 32 10.7**	**+0.5**
VLS				AML	AML	16 32 10.9	
	comp=N,49665μm,0.2s						
VLS				AML	AML	16 32 11.0	
	comp=E,54902μm,0.1s						
EVGI	**Lefkada island**	**0.32**	**31**	P	**Pg**	**16 32 09.2**	**-0.1**
EVGI				S	**Sg**	**16 32 14.3**	**+0.5**
EVGI	**Lefkada island**	**0.32**	**31**	P	**Pg**	**16 32 09.2**	**-0.1**
EVGI				S	**Sg**	**16 32 14.3**	**+0.5**
KFL	**Anninata**	**0.36**	**131**	P	**Pg**	**16 32 10.0**	**+0.1**
KFL				S	**Sb**	**16 32 16.2**	**-0.2**
	comp=E,26μm,0.4s						
KFL	**Anninata**	**0.36**	**131**	P	**Pg**	**16 32 10.0**	**+0.1**
KFL				S	**Sg**	**16 32 15.5**	**+0.7**
KFL				AML	AML	16 32 16.3	
	comp=N,67074μm,0.5s						
KFL				AML	AML	16 32 17.3	
	comp=E,35680μm,0.4s						
MGNA	**Meganis**	**0.41**	**41**	P	**Pg**	**16 32 10.6**	**-0.3**
MGNA				S	**Sg**	**16 32 16.8**	**+0.3**
MGNA				AML	AML	16 32 17.4	
	comp=N,57278μm,0.3s						
MGNA				AML	AML	16 32 17.6	
	comp=E,48515μm,0.3s						
LKD2	**Lefkada island**	**0.47**	**20**	P	**Pg**	**16 32 11.8**	**-0.3**
LKD2				S	**Sg**	**16 32 18.8**	**+0.4**
	comp=E,6μm,0.3s						
LKD2	**Lefkada island**	**0.47**	**20**	P	**Pg**	**16 32 11.8**	**-0.3**
LKD2				S	**Sg**	**16 32 18.9**	**+0.4**
LKD2				AML	AML	16 32 23.4	
	comp=E,10645μm,0.3s						
LKD2				AML	AML	16 32 23.5	
	comp=N,12787μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.50**	**160**	P	**Pg**	**16 32 12.5**	**0.0**
VLMS				S	**Sg**	**16 32 20.1**	**+1.1**
VLMS				AML	AML	16 32 21.2	
	comp=N,55160μm,0.4s						
VLMS				AML	AML	16 32 21.7	
	comp=E,37310μm,0.2s						
TSLK	**Tsoukalades, L**	**0.51**	**19**	P	**Pg**	**16 32 12.4**	**-0.3**
TSLK				S	**Sb**	**16 32 20.5**	**-0.3**
	comp=E,8μm,0.5s						
TSLK	**Tsoukalades, L**	**0.51**	**19**	P	**Pg**	**16 32 12.5**	**-0.3**
TSLK				S	**Sb**	**16 32 20.2**	**-0.6**
TSLK				AML	AML	16 32 22.3	
	comp=E,16418μm,0.3s						
TSLK				AML	AML	16 32 23.6	
	comp=N,15818μm,0.3s						
RLS	**Riolos of Patr**	**0.85**	**109**	P	**Pg**	**16 32 18.6**	**-0.6**
RLS				S	**Sn**	**16 32 32.1**	**-0.6**
	comp=N,2μm,0.8s						
RLS	**Riolos of Patr**	**0.85**	**109**	P	**Pg**	**16 32 18.7**	**-0.4**
RLS				AML	AML	16 32 40.0	
	comp=E,5149μm,0.5s						
RLS				AML	AML	16 32 45.0	
	comp=N,4636μm,0.5s						
PVO	**Paravola**	**0.89**	**72**	P	**Pg**	**16 32 19.8**	**-0.1**
PVO				S	**Sn**	**16 32 34.7**	**+1.1**
	comp=N,5μm,0.3s						
PVO	**Paravola**	**0.89**	**72**	P	**Pg**	**16 32 19.8**	**-0.1**
PVO				AML	AML	16 32 36.4	
	comp=E,10286μm,0.3s						
PVO				AML	AML	16 32 39.0	
	comp=N,10368μm,0.5s						
DRO	**Drossia**	**1.07**	**111**	P	**Pg**	**16 32 23.2**	**-0.2**
DRO				AML	AML	16 32 45.6	
	comp=N,12630μm,0.3s						
DRO				AML	AML	16 32 46.1	
	comp=E,9653μm,0.5s						
EFP	**Efpalio**	**1.15**	**85**	P	**Pb**	**16 32 23.9**	**-0.5**
EFP				S	**Sn**	**16 32 41.8**	**+1.8**
	comp=E,3μm,0.6s						
IGT	**Igoumenitsa**	**1.19**	**356**	P	**Pb**	**16 32 25.5**	**+0.3**
EVR	**Evrytania**	**1.21**	**61**	P	**Pb**	**16 32 25.2**	**-0.3**
TRIZ	**Trizonia**	**1.28**	**88**	P	**Pn**	**16 32 25.9**	**-0.3**
KLV	**Kalavryta, Ach**	**1.38**	**102**	P	**Pn**	**16 32 27.8**	**+0.2**
KASA	**Kassiopi**	**1.46**	**344**	P	**Pg**	**16 32 30.8**	**+0.1**
AGG	**Agios Georgios**	**1.62**	**65**		**Pg**	**16 32 33.7**	**-0.1**
ITM	**Ithomi**	**1.65**	**134**		**Pg**	**16 32 34.2**	**-0.2**
SCTE	**Santa Cesarea**	**2.31**	**319**	Pn	**Pn**	**16 32 40.7**	**+0.3**
LIT	**Litokhoron**	**2.37**	**41**		**Pb**	**16 32 44.1**	**-1.1**
FNA	**Florina**	**2.54**	**16**	Pn	**Pn**	**16 32 45.7**	**+2.1**
OHR	**Ohrid**	**2.78**	**6**	*i* Pn	**Pn**	**16 32 49.4**	**+2.5**
TIP	**Timpagrande**	**3.00**	**287**	⇑P	**Pb**	**16 32 56.5**	**+0.5**
TIP	**Timpagrande**	**3.00**	**287**	Pn	**Pn**	**16 32 51.0**	**+1.0**
TIR	**Tirane**	**3.03**	**352**	Pn	**Pn**	**16 32 50.9**	**+0.6**
VAY	**Valandovo**	**3.39**	**28**	*i* Pn	**Pn**	**16 32 58.0**	**+2.7**
CEL	**Celeste**	**3.58**	**270**	Pn	**Pn**	**16 32 57.8**	**-0.1**
STIP	**Stip**	**3.60**	**21**	*i* Pn	**Pb**	**16 33 03.7**	**-2.5**
MATE	**Matera**	**3.70**	**310**	⇑P	**Pg**	**16 33 12.1**	**-1.4**
SKO	**Skopje**	**3.70**	**12**	*i* Pn	**Pn**	**16 33 02.1**	**+2.5**
SG1	**Sgolgore (BA)**	**3.83**	**312**	*e*Pn	**Pn**	**16 33 02.9**	**+1.5**
SG1					Sn	**16 33 46.0**	**-0.3**
BAI	**Bari**	**3.90**	**316**	*e*Pn	**Pn**	**16 33 05.4**	**+3.2**
PDG	**Podgorica**	**4.18**	**348**	⇑P	Pn	16 32 56.0	-10
PDG	**Podgorica**	**4.18**	**348**	Pn	**Pn**	**16 33 07.1**	**+1.0**
ACER	**Acerenza**	**4.25**	**306**	Pn	**Pn**	**16 33 08.7**	**+1.6**
IDI	**Anoyia**	**4.69**	**129**	Pn	**Pn**	**16 33 13.8**	**+0.6**
	comp=E,0.3nm,0.3s,baz=280,slow=17,SNR=3.0						
IDI				Sn	**Sn**	**16 34 07.4**	**-0.1**
	comp=E,1.3nm,0.3s,baz=301,slow=23,SNR=1.7						
VTS	**Vitosha**	**4.77**	**26**	⇑P	Pb	16 33 20.6	-5.6
VTS	**Vitosha**	**4.77**	**26**		**Sn**	**16 34 14.6**	**+5.0**
VAE	**Valguarnera**	**4.85**	**262**	Pn	**Pn**	**16 33 16.6**	**+1.2**
	comp=E,0.9nm,0.3s,baz=299,slow=13,SNR=2.0						
VAE				Sn	**Sn**	**16 34 14.7**	**+3.3**
	comp=E,2.3nm,0.3s,baz=264,slow=18,SNR=4.6						
SGRT	**San Giovanni R**	**4.96**	**315**	Pn	**Pn**	**16 33 17.2**	**+0.3**
ALN	**Alexandroupoli**	**5.02**	**58**	Pn	**Pn**	**16 33 19.3**	**+1.7**
WDD	**Wied Dalam**	**5.35**	**244**	Pn	**Pn**	**16 33 23.0**	**+0.8**
INTR	**Introdacqua**	**6.21**	**308**		**Pn**	**16 33 36.5**	**+2.5**
HERR	**Herculane**	**6.70**	**12**	⇑P	Pn	16 33 49.3	+8.7
NRCA	**Norcia**	**7.16**	**311**	Pn	**Pn**	**16 33 43.2**	**-3.9**
GZR	**Gura Zlata**	**7.26**	**13**	⇑P	**Pn**	**16 33 52.0**	**+3.6**
MURB	**Monte Urbino**	**7.76**	**312**	Pn	**Pn**	**16 33 58.0**	**+2.7**
MLR	**Muntele Rosu**	**8.23**	**28**	Pn	Pn	16 34 06.7	+4.9
	comp=E,0.1nm,0.3s,baz=220,slow=16,SNR=3.6						
GBRS	**Gornja Briga**	**8.32**	**332**	*e*Pn	**Pn**	**16 34 03.1**	**+0.2**
TEOL	**Teolo**	**9.59**	**320**	Pn	**Pn**	**16 34 19.7**	**-0.6**
CTI	**Castel Tesino**	**10.09**	**323**	Pn	**Pn**	**16 34 25.9**	**-1.3**
BRTR	**Keskin Array B**	**10.36**	**78**	Pn	Pn	16 34 37.2	+6.2
	comp=E,0.1nm,0.3s,baz=263,slow=12,SNR=5.2						
BRTR	**Keskin Array B**	**10.36**	**78**	Pn	**Pn**	**16 34 32.2**	**+1.2**
FUORN	**Ofenpass-Fuorn**	**11.17**	**321**	Pn	**Pn**	**16 34 43.1**	**+1.0**
DAVOX	**Davos/Dischmat**	**11.47**	**321**	Pn	**Pn**	**16 34 45.7**	**-0.6**
	comp=E,0.2nm,0.3s,baz=267,slow=12,SNR=2.5						
GERES	**GERESS Array B**	**11.57**	**337**	Pn	**Pn**	**16 34 45.8**	**-1.8**
	comp=E,0.2nm,0.3s,baz=158,slow=14,SNR=4.5						
SENIN	**Lac Senin/Sane**	**12.59**	**314**	Pn	**Pn**	**16 35 04.0**	**+2.4**
GRA1	**Grafenberg Arr**	**13.13**	**333**	Pn	**Pn**	**16 35 09.6**	**+0.8**
STU	**Stuttgart**	**13.22**	**326**	Pn	**Pn**	**16 35 10.5**	**+0.5**
HFS	**Hagfors**	**22.23**	**351**	P	**P**	**16 36 59.1**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=154,slow=11,SNR=2.4						
FINES	**FINESS Array B**	**23.39**	**7**	P	**P**	**16 37 08.4**	**-2.5**
	comp=E,3.8nm,1.0s,baz=179,slow=11,SNR=3.8						
NOA	**NORSAR Array B**	**23.45**	**349**	P	**P**	**16 37 10.2**	**-1.3**
	comp=E,1.1nm,0.9s,baz=161,slow=9.9,SNR=2.6						
ARCES	**ARCESS Array B**	**31.37**	**3**	P	**P**	**16 38 22.4**	**-0.3**
	comp=E,4.3nm,1.1s,baz=191,slow=8.7,SNR=2.6						
ARCES	**ARCESS Array B**	**31.37**	**3**	P	**P**	**16 38 21.9**	**-0.8**
KK31	**Karatay Array**	**37.78**	**66**	P	**P**	**16 39 21.2**	**+2.8**
KK31				IAmb	IAmb	16 40 14.6	
	comp=Z,5.8nm,1.5s						
KKAR	**Karatay Array**	**37.78**	**66**	P	**P**	**16 39 19.4**	**+1.0**
MK31	**Makanchi Array**	**45.27**	**59**	P	**P**	**16 40 19.3**	**-0.5**
MK31				IAmb	IAmb	16 41 15.6	
	comp=Z,1.4nm,0.6s						
MKAR	**Makanchi Array**	**45.27**	**59**	P	**P**	**16 40 19.0**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=280,slow=7.3,SNR=6.6						
ZALV	**Zalesovo Beam**	**45.62**	**48**	P	**P**	**16 40 21.1**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=275,slow=9.1,SNR=3.0						
CMAR	**Chiang Mai Arr**	**69.92**	**82**	P	**P**	**16 43 11.7**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=316,slow=6.3,SNR=3.1						
ASAR	**Alice Springs**	**122.25**	**96**	PKP	**PKPdf**	**16 50 55.8**	**-1.8**
	comp=Z,0.3nm,0.9s,baz=322,slow=1.7,SNR=3.7						

*IDC **26** 16:32:54.0±1.0, 38.°24N×20.°54E, h0km, mb3.9/10, mb1 3.9/14, mb1mx3.7/53, mbtmp3.8/14, ML3.1/4, Error ellipse: s-maj=21.6km s-min=17.3km az=29.0*
*THE **26** 16:32:55.3, 38.°20N×20.°36E, h6km±4km, ML3.5/4, Error ellipse: s-maj=4.9km s-min=0.5km az=78.0*
*NEIC **26** 16:32:55.6±1.6, 38.°23N±0.°09×20.°49E±0.°07, h10km±1km, mb4.5/5, Error ellipse: s-maj=16.0km s-min=8.8km az=159.0*
*ATH **26** 16:32:56.1, 38.°23N×20.°44E, h9km±3km, ML3.5/5, Error ellipse: s-maj=4.4km s-min=1.1km az=89.0*
ISC 26 16:32:56.3±0.8, **38.°23N**±0.°03×**20.°49E**±0.°04, **h12**km±5km, **n48, σ1§34/60, mb3.9/11, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.10**	**123**	P	**Pg**	**16 32 58.9**	**-0.2**
VLS				S	**Sg**	**16 33 01.3**	**+0.1**
VLS	**Valsamata**	**0.10**	**123**	P	**Pg**	**16 32 58.9**	**-0.2**
VLS				S	**Sg**	**16 33 01.3**	**+0.1**
VLS				AML	AML	16 33 01.5	
VLS				AML	AML	16 33 02.1	
FSK	**Fiskardo**	**0.24**	**15**	P	**Pg**	**16 33 01.1**	**-0.2**
FSK				S	**Sg**	**16 33 05.2**	**+0.5**
	11μm,0.5s						
FSK	**Fiskardo**	**0.24**	**15**	P	**Pg**	**16 33 01.1**	**-0.2**
KFL	**Anninata**	**0.27**	**117**	P	**Pb**	**16 33 02.1**	**-0.9**
KFL				S	**Sb**	**16 33 07.3**	**-0.3**
	44μm,0.4s						
KFL	**Anninata**	**0.27**	**117**	P	**Pb**	**16 33 02.1**	**-0.9**
KFL				S	**Sb**

ARCES					PcP	**PcP**	**16 42 09.2**	**-0.9**
	comp=Z,4.1nm,1.0s,baz=215,slow=3.0,SNR=2.8								
MKAR	**Makanchi Array**	**45.30**	**58**	P	**P**		**16 41 13.3**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=272,slow=7.3,SNR=13								
ZALV	**Zalesovo Beam**	**45.68**	**48**	P	**P**		**16 41 16.1**	**-0.6**
	comp=Z,2.9nm,0.5s,baz=273,slow=8.5,SNR=8.8								
LSA	**Lhasa**	**57.95**	**76**	P	**P**		**16 42 48.6**	**-0.6**
LSA				IAmb	IAmb		16 43 37.6		
	comp=Z,11nm,1.8s								
SCHQ	**Schefferville**	**58.40**	**317**	P	**P**		**16 42 51.6**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=260,slow=18,SNR=2.2								
CMAR	**Chiang Mai Arr**	**69.91**	**82**	P	**P**		**16 44 06.8**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=302,slow=6.0,SNR=5.5								
ASAR	**Alice Springs**	**122.21**	**96**	PKP	**PKPdf**		**16 51 49.2**	**-2.1**
	comp=Z,0.1nm,0.8s,baz=325,slow=2.2,SNR=2.8								
ASAR	**Alice Springs**	**122.21**	**96**		**PKPdf**		**16 51 50.6**	**-0.7**

*BGR **26** 16:43:34.6±1.2,38°.33N×20°.85E,h10km,Error ellipse: s-maj=40.0km s-min=13.3km az=58.0*
*IDC **26** 16:43:35.8±0.9,38°.70N×20°.48E,h0km,mb3.9/10, mb1 3.9/18,mb1mx3.8/46,mbtmp3.9/18,ML3.6/7,Error ellipse: s-maj=18.1km s-min=14.5km az=24.0*
*PDG **26** 16:43:35.0±0.3,38°.46N×20°.37E,h13km,ML4.1/12,Error ellipse: s-maj=0.9km s-min=0.7km az=90.0*
*ATH **26** 16:43:35.7,38°.37N×20°.45E,h8km±3km,ML3.7/6,Error ellipse: s-maj=3.9km s-min=0.7km az=82.0*
*THE **26** 16:43:36.0,38°.39N×20°.43E,h0km±2km,ML3.6/4,Error ellipse: s-maj=3.2km s-min=0.6km az=268.0*
*NEIC **26** 16:43:37.5±2.5,38°.49N±0°.06×20°.37E±0°.06,h13km±5km, mb4.0/13,ML3.6(THE),Error ellipse: s-maj=9.0km s-min=6.8km az=193.0*

ISC 26 16:43:35.4±0.9,**38°.40N**±0°.02×**20°.40E**±0°.03,**h9**km±6km, **n162**,σ1§**66**/202,**mb4.0**/13,**8C-11D**,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FSK	**Fiskardo**	**0.14**	**65**	P	**Pg**		**16 43 38.3**	**-0.2**
FSK				S	**Sg**		**16 43 40.4**	**-0.2**
	49μm,0.4s							
FSK	**Fiskardo**	**0.14**	**65**	P	**Pg**		**16 43 38.4**	**-0.2**
FSK				S	**Sg**		**16 43 40.4**	**-0.2**
VLS	**Valsamata**	**0.27**	**146**	P	**Pg**		**16 43 40.4**	**-0.4**
VLS				S	**Sg**		**16 43 44.9**	**+0.5**
VLS	**Valsamata**	**0.27**	**146**	P	**Pg**		**16 43 40.3**	**-0.5**
VLS				S	**Sg**		**16 43 43.8**	**-0.6**
VLS				AML	AML		16 43 49.2	
	comp=E,39762μm,0.4s							
VLS				AML	AML		16 43 49.4	
	comp=N,36233μm,0.4s							
EVGI	**Lefkada island**	**0.30**	**42**	P	**Pg**		**16 43 41.7**	**+0.3**
EVGI				S	**Sg**		**16 43 46.4**	**+1.0**
EVGI	**Lefkada island**	**0.30**	**42**	P	**Pg**		**16 43 41.6**	**+0.3**
EVGI				S	**Sg**		**16 43 45.8**	**+0.4**
MGNA	**Meganis**	**0.40**	**50**	P	**Pg**		**16 43 43.1**	**-0.2**
MGNA				S	**Sg**		**16 43 49.2**	**+0.7**
MGNA				AML	AML		16 43 49.6	
	comp=E,32983μm,0.4s							
MGNA				AML	AML		16 43 49.7	
	comp=N,54799μm,0.3s							
KFL	**Anninata**	**0.42**	**134**	P	**Pg**		**16 43 43.0**	**-0.7**
KFL				S	**Sg**		**16 43 49.6**	**+0.4**
	comp=N,17μm,0.3s							
KFL	**Anninata**	**0.42**	**134**	P	**Pg**		**16 43 43.0**	**-0.7**
KFL				S	**Sg**		**16 43 48.9**	**-0.3**
KFL				AML	AML		16 43 52.1	
	comp=E,42865μm,0.3s							
KFL				AML	AML		16 43 55.7	
	comp=N,30225μm,0.7s							
LKD2	**Lefkada island**	**0.44**	**27**	P	**Pg**		**16 43 44.3**	**+0.3**
LKD2				S	**Sb**		**16 43 51.2**	**-0.9**
	comp=N,11μm,0.8s							
LKD2	**Lefkada island**	**0.44**	**27**	P	**Pg**		**16 43 44.4**	**+0.4**
LKD2				S	**Sg**		**16 43 50.8**	**+1.1**
LKD2				AML	AML		16 43 51.6	
	comp=E,20838μm,0.8s							
LKD2				AML	AML		16 43 52.0	
	comp=N,19910μm,0.8s							
TSLK	**Tsoukalades, L**	**0.47**	**25**	P	**Pg**		**16 43 44.5**	**0.0**
TSLK				S	**Sb**		**16 43 52.7**	**-0.2**
	comp=N,18μm,0.7s							
TSLK	**Tsoukalades, L**	**0.47**	**25**	P	**Pg**		**16 43 44.6**	**0.0**
TSLK				S	**Sg**		**16 43 51.5**	**+0.8**
TSLK				AML	AML		16 43 56.0	
	comp=N,24256μm,0.6s							
TSLK				AML	AML		16 43 56.4	
	comp=E,44520μm,0.9s							
VLMS	**Volimes, Zakyn**	**0.56**	**158**	P	**Pg**		**16 43 45.9**	**-0.4**
VLMS				S	**Sg**		**16 43 52.8**	**-1.0**
VLMS				AML	AML		16 43 59.5	
	comp=N,34443μm,0.6s							
VLMS				AML	AML		16 44 00.1	
	comp=E,33384μm,0.7s							
RLS	**Riolos of Patr**	**0.91**	**112**	P	**Pg**		**16 43 52.0**	**-0.9**
RLS	**Riolos of Patr**	**0.91**	**112**	P	**Pg**		**16 43 51.9**	**-0.9**
PVO	**Paravola**	**0.91**	**76**	P	**Pg**		**16 43 52.5**	**-0.4**
PVO	**Paravola**	**0.91**	**76**	P	**Pg**		**16 43 52.6**	**-0.4**
PVO				S	**Sg**		**16 44 04.3**	**-0.5**
DRO	**Drossia**	**1.12**	**113**	P	**Pg**		**16 43 56.0**	**-1.1**
IGT	**Igoumenitsa**	**1.13**	**357**	P	**Pg**		**16 43 57.5**	**+0.3**
EVR	**Évrytania**	**1.22**	**65**	P	**Pb**		**16 43 57.5**	**-1.2**
JAN	**Janina**	**1.30**	**15**	P	**Pg**		**16 44 01.2**	**+0.7**
AMT	**Artemida-Makis**	**1.35**	**130**	P	**Pn**		**16 44 00.5**	**0.0**
KLV	**Kalavryta, Ach**	**1.42**	**104**	P	**Pn**		**16 44 00.7**	**-0.9**
AGG	**Agios Georgios**	**1.63**	**67**		**Pb**		**16 44 05.2**	**-0.6**
ITM	**Ithomi**	**1.72**	**135**		**Pb**		**16 44 07.0**	**-0.2**
PYL	**PYLOS**	**1.84**	**144**	P	**Pb**		**16 44 08.4**	**-0.9**
PYL				S	**Sg**		**16 44 33.6**	**-1.0**
SCTE	**Santa Cesarea**	**2.25**	**319**		**Pn**		**16 44 13.8**	**+1.0**
LIT	**Litokhoron**	**2.35**	**43**		**Pb**		**16 44 16.4**	**-1.6**
FNA	**Florina**	**2.50**	**17**		**Pn**		**16 44 18.0**	**+1.7**
OHR	**Ohrid**	**2.72**	**6**	*i* Pn	**Pb**		**16 44 22.3**	**-2.1**
OHR				*i* Sn	**Sb**		**16 44 56.8**	**-1.1**
TIP	**Timpagrande**	**2.95**	**286**	⇑P	**Pn**		**16 44 25.1**	**+2.5**
TIP	**Timpagrande**	**2.95**	**286**	⇓S	**Sn**		**16 45 00.3**	**+2.1**
TIP	**Timpagrande**	**2.95**	**286**		**Pn**		**16 44 24.2**	**+1.6**
TIR	**Tirane**	**2.97**	**352**	⇑P	**Pn**		**16 44 25.2**	**+2.4**
TIR	**Tirane**	**2.97**	**352**	⇑S	**Sn**		**16 44 58.5**	**-0.1**
TIR	**Tirane**	**2.97**	**352**		**Pn**		**16 44 23.7**	**+0.9**
CGL1	**Ceglie Messapi**	**3.19**	**316**	*e*Pn	**Pn**		**16 44 27.3**	**+1.5**
VAY	**Valandovo**	**3.36**	**29**	*i* Pn	**Pn**		**16 44 30.4**	**+2.3**
CEL	**Celeste**	**3.55**	**269**		**Pn**		**16 44 32.0**	**+1.3**
STIP	**Stip**	**3.56**	**22**	*i* Pn	**Pb**		**16 44 35.6**	**-3.0**
MATE	**Matera**	**3.63**	**309**	⇓P	**Pn**		**16 44 34.1**	**+2.2**
SKO	**Skopje**	**3.66**	**12**	*i* Pn	**Pn**		**16 44 35.9**	**+3.7**
ULC	**Ulcinj**	**3.67**	**346**	*e*Pn	**Pn**		**16 44 32.1**	**-0.3**
ULC				*e*Sn	**Sn**		**16 45 15.3**	**-0.5**
SG1	**Sgolgore (BA)**	**3.77**	**311**	*e*Pn	**Pn**		**16 44 35.8**	**+2.0**
BAI	**Bari**	**3.83**	**316**	*e*Pn	**Pn**		**16 44 33.0**	**-1.6**
DRME	**Dracevica, Mon**	**3.89**	**347**	*e*Pn	**Pn**		**16 44 36.2**	**+0.7**
DRME	**Dracevica, Mon**	**3.89**	**347**	⇓*i*Pn	**Pn**		**16 44 35.3**	**-0.2**
DRME				*i* Sn	**Sn**		**16 45 20.4**	**-0.9**
BUM	**Brajici-Budva**	**4.06**	**344**	*e*Pn	**Pn**		**16 44 37.3**	**-0.5**
BUM				*e*Sn	**Sn**		**16 45 24.8**	**-0.8**
PDG	**Podgorica**	**4.12**	**348**	⇑P	**Pn**		**16 44 39.9**	**+1.3**
PDG	**Podgorica**	**4.12**	**348**	⇑S	**Sn**		**16 45 26.6**	**-0.3**
PDG	**Podgorica**	**4.12**	**348**	*e*Pn	**Pn**		**16 44 39.7**	**+1.2**
PDG	**Podgorica**	**4.12**	**348**		**Pn**		**16 44 38.9**	**+0.3**
TTG	**Podgorica**	**4.12**	**348**	*e*Pn	**Pn**		**16 44 38.7**	**+0.2**
TTG				*e*Sn	**Sn**		**16 45 26.0**	**-0.8**
ACER	**Acerenza**	**4.19**	**306**		**Pn**		**16 44 40.3**	**+0.7**
PVY	**Plav**	**4.20**	**356**	⇓*i*Pn	**Pn**		**16 44 39.4**	**-0.4**
PVY				*e*Sn	**Sn**		**16 45 28.5**	**-0.6**
CEME	**Cevo**	**4.29**	**345**	*e*Pn	**Pn**		**16 44 40.5**	**-0.5**
CEME				*e*Sn	**Sn**		**16 45 30.0**	**-1.3**
HCY	**Herceg Novi**	**4.30**	**341**	*e*Pn	**Pn**		**16 44 40.5**	**-0.5**
HCY	**Herceg Novi**	**4.30**	**341**	⇓*i*Pn	**Pn**		**16 44 40.6**	**-0.4**
HCY				*e*Sn	**Sn**		**16 45 30.4**	**-0.8**
IVA	**Berane**	**4.48**	**355**	*e*Pn	**Pn**		**16 44 43.6**	**-0.1**
IVA				*e*Sn	**Sn**		**16 45 34.8**	**-1.2**
KOME	**Kolasin**	**4.50**	**352**	*e*Pn	**Pn**		**16 44 44.0**	**+0.2**
KOME				*e*Sn	**Sn**		**16 45 35.5**	**-0.8**
NKME	**Niksic**	**4.50**	**346**	*e*Pn	**Pn**		**16 44 43.5**	**-0.3**
NKME				*e*Sn	**Sn**		**16 45 35.6**	**-0.7**
TREB	**Trebinje**	**4.58**	**341**	*e*Pn	**Pn**		**16 44 44.7**	**-0.3**
BRY	**Bratogost**	**4.71**	**343**	⇑*i*Pn	**Pn**		**16 44 45.4**	**-1.5**
BRY				*i* Sn	**Sn**		**16 45 38.7**	**-3.0**
VTS	**Vitosha**	**4.73**	**26**	⇓P	**Pn**		**16 44 48.7**	**+1.6**
VTS	**Vitosha**	**4.73**	**26**		**Pn**		**16 44 49.7**	**+2.5**
IDI	**Anoyia**	**4.75**	**129**	Pn	**Pn**		**16 44 51.2**	**+3.8**
	comp=E,0.7nm,0.3s,baz=317,slow=18,SNR=4.2							
IDI				Sn	**Sn**		**16 45 45.9**	**+3.2**
	comp=E,2.2nm,0.3s,baz=180,slow=23,SNR=1.5							
VAE	**Valguarnera**	**4.82**	**261**	Pn	**Pn**		**16 44 51.6**	**+3.4**
	comp=E,1.0nm,0.3s,baz=219,slow=14,SNR=2.6							
VAE				Sn	**Sn**		**16 45 45.6**	**+1.3**
	comp=E,2.1nm,0.3s,baz=322,slow=19,SNR=2.4							
SGRT	**San Giovanni R**	**4.90**	**315**	Pn	**Pn**		**16 44 50.3**	**+1.0**
STON	**Ston**	**4.92**	**336**	*e*Pn	**Pn**		**16 44 45.8**	**-3.7**
UPM	**Unac-Piva**	**4.93**	**347**	⇑*i*Pn	**Pn**		**16 44 49.5**	**-0.4**
UPM				*i* Sn	**Sn**		**16 45 45.9**	**-1.2**
PLE	**Pljevlja**	**4.98**	**351**	*e*Pn	**Pn**		**16 44 49.9**	**-0.7**
PLE				*e*Sn	**Sn**		**16 45 47.3**	**-1.1**
ALN	**Alexandroupoli**	**5.02**	**58**	Pn	**Pn**		**16 44 52.2**	**+1.3**
RUDO	**Rudo**	**5.27**	**352**	*e*Pn	**Pn**		**16 44 53.7**	**-0.7**
WDD	**Wied Dalam**	**5.35**	**243**	Pn	**Pn**		**16 44 56.7**	**+1.3**
BBLS	**Lazići**	**5.51**	**352**	*e*Pn	**Pn**		**16 44 58.1**	**+0.3**
CORL	**Corleone**	**5.62**	**267**	Pn	**Pn**		**16 45 00.8**	**+1.6**
DIVS	**Divibare**	**5.70**	**357**	*e*Pn	**Pn**		**16 44 59.1**	**-1.3**
HAPS	**Han Pijesak,BI**	**5.78**	**350**	*e*Pn	**Pn**		**16 45 00.4**	**-1.1**
INTR	**Introdacqua**	**6.14**	**308**		**Pn**		**16 45 09.0**	**+2.6**
MGRS	**Mrkonjic Grad**	**6.51**	**339**	*e*Pn	**Pn**		**16 45 12.0**	**+0.6**
AQU	**L'Aquila**	**6.64**	**309**	Pn	**Pn**		**16 45 14.1**	**+0.8**
FRGS	**Fruska Gora**	**6.77**	**356**	*e*Pn	**Pn**		**16 45 13.5**	**-1.4**
BLY	**Banja Luka**	**6.79**	**340**	⇓P	**Pn**		**16 45 16.2**	**+1.0**
BLY	**Banja Luka**	**6.79**	**340**	*e*Pn	**Pn**		**16 45 14.6**	**-0.6**
BLY	**Banja Luka**	**6.79**	**340**	Pn	**Pn**		**16 45 14.8**	**-0.4**
NRCA	**Norcia**	**7.09**	**311**		**Pn**		**16 45 19.8**	**+0.3**
GZR	**Gura Zlata**	**7.21**	**13**	⇓P	**Pn**		**16 45 22.3**	**+1.2**
BZS	**Buzias**	**7.27**	**7**	⇓P	**Pn**		**16 45 24.3**	**+2.6**
MURB	**Monte Urbino**	**7.70**	**312**		**Pn**		**16 45 29.8**	**+2.0**
LATE	**Laterza**	**7.78**	**305**	Pn	**Pn**		**16 45 30.2**	**+1.3**
VOIR		**7.84**	**25**	⇓P	**Pn**		**16 45 32.4**	**+2.7**
MORH	**Mrgy, Hungar**	**7.92**	**351**	*e*Pn	**Pn**		**16 45 30.5**	**-0.2**
MLR	**Muntele Rosu**	**8.20**	**28**	Pn	Pn		16 45 41.4	+6.7
	comp=E,0.2nm,0.3s,baz=319,slow=6.0,SNR=3.6								
MLR				Sn	**Sn**		**16 47 13.6**	**+6.1**
	baz=205,slow=10.0,SNR=1.5								
MLR	**Muntele Rosu**	**8.20**	**28**	⇓P	**Pn**		**16 45 36.9**	**+2.2**
RIY	**Rijeka**	**8.21**	**329**	*e*Pn	**Pn**		**16 45 36.0**	**+1.4**
CRES	**Cresnjev**	**8.28**	**335**	*e*Pn	**Pn**		**16 45 35.7**	**-0.7**
CEY	**Cerkno**	**8.57**	**331**	*e*Pn	**Pn**		**16 45 39.5**	**-0.2**
PLOR	**Plostina**	**8.77**	**30**	⇑P	**Pn**		**16 45 44.7**	**+2.2**
LJU	**Ljubljana**	**8.79**	**332**	*e*Pn	**Pn**		**16 45 42.8**	**+0.1**
SOKA	**Soboth**	**9.17**	**336**	*e*Pn	**Pn**		**16 45 47.1**	**-0.8**
	comp=E,11nm,0.6s,SNR=19								
SOKA				Sn	**Sn**		**16 47 25.9**	**-5.4**
	comp=E,7.0nm,0.6s								
OBKA	**Obir**	**9.18**	**334**	*e*Pn	**Pn**		**16 45 48.8**	**+0.7**
OBKA				*e*Sn	**Sn**		**16 47 28.8**	**-2.8**
OBKA	**Obir**	**9.18**	**334**	*e*Pn	**Pn**		**16 45 48.3**	**+0.2**
	comp=E,1.6nm,0.2s								
OBKA				Sn	**Sn**		**16 47 28.9**	**-2.8**
	comp=E,15nm,0.8s								
ZCCA	**Zocca**	**9.24**	**313**	Pn	**Pn**		**16 45 50.2**	**+1.2**
TEOL	**Teolo**	**9.52**	**320**		**Pn**		**16 45 52.3**	**-0.4**
ARSA	**Arzberg**	**9.54**	**340**	Pn	**Pn**		**16 45 52.2**	**-0.8**
	comp=E,1.3nm,0.3s								
MYKA	**Terra Mystica**	**9.62**	**331**	Pn	**Pn**		**16 45 54.1**	**0.0**
	comp=E,0.8nm,0.3s								
MYKA				Sn	**Sn**		**16 47 38.4**	**-3.8**
	comp=E,3.9nm,0.5s								
CTI	**Castel Tesino**	**10.02**	**322**		**Pn**		**16 45 58.8**	**-0.8**
CONA	**Conrad Observa**	**10.08**	**342**	Pn	**Pn**		**16 46 00.2**	**-0.3**
	comp=E,0.7nm,0.4s								
KBA	**Koelnbreinsper**	**10.10**	**331**	*e*Pn	**Pn**		**16 46 00.7**	**-0.1**
KBA	**Koelnbreinsper**	**10.10**	**331**	Pn	**Pn**		**16 46 01.9**	**+1.1**
	comp=E,1.2nm,0.3s								
VYHS	**Vyhne**	**10.15**	**354**	*e*PN	**Pn**		**16 46 01.3**	**-0.1**
VYHS				*e*SN	**Sn**		**16 47 50.9**	**-4.4**
ABTA	**Abfaltersbach**	**10.16**	**328**	Pn	**Pn**		**16 46 01.7**	**+0.2**
	comp=E,1.4nm,0.3s								
MODS	**Modra-Piesok**	**10.22**	**348**	*e*SN	**Sn**		**16 47 50.9**	**-6.1**
SALO	**Salr**	**10.29**	**318**	Pn	**Pn**		**16 46 03.3**	**+0.1**
BR131	**Keskin Array S**	**10.38**	**79**	Pn	**Pn**		**16 46 05.5**	**+0.9**
BRTR	**Keskin Array B**	**10.38**	**79**	Pn	Pn		16 46 10.0	+5.4
	comp=E,0.1nm,0.3s,baz=266,slow=9.9,SNR=3.6								
MOA	**Molln**	**10.45**	**337**	*e*Pn	**Pn**		**16 46 05.6**	**+0.2**
MOA				*e*Sn	**Sn**		**16 47 59.3**	**-3.3**
MOA	**Molln**	**10.45**	**337**	*e*Pn	**Pn**		**16 46 05.7**	**+0.2**
	comp=E,3.5nm,0.3s,SNR=13								
MOA				Sn	**Sn**		**16 47 59.1**	**-3.5**
	comp=E,4.5nm,0.5s								
RJOB	**Jochberg**	**10.86**	**332**	*e*Sn	**Sn**		**16 48 09.5**	**-3.1**
WTTA	**Wattenberg**	**10.94**	**327**	*e*Pn	**Pn**		**16 46 12.6**	**+0.3**
WTTA				*e*Sn	**Sn**		**16 48 12.8**	**-2.0**
WTTA	**Wattenberg**	**10.94**	**327**	Pn	**Pn**		**16 46 12.8**	**+0.5**
SQTA	**Sankt Quirin**	**11.09**	**326**	Pn	**Pn**		**16 46 18.0**	**+3.6**
	comp=E,5.1nm,0.5s								
FUORN	**Ofenpass-Fuorn**	**11.10**	**321**	Pn	**Pn**		**16 46 15.2**	**+0.7**
FETA	**Feichten**	**11.16**	**324**	Pn	**Pn**		**16 46 17.8**	**+2.4**
	comp=E,1.4nm,0.5s								
MOTA	**Moosalm**	**11.23**	**326**	Pn	**Pn**		**16 46 17.4**	**+1.1**
	comp=E,3.9nm,0.6s,SNR=6.3								
MOTA				Sn	**Sn**		**16 48 20.7**	**-1.3**
	comp=E,10nm,0.9s								
DAVOX	**Davos/Dischmat**	**11.40**	**321**	Pn	**Pn**		**16 46 18.4**	**-0.2**
	comp=E,3.3nm,0.3s,baz=110,slow=18,SNR=3.9								
GEC2	**GERESS Array S**	**11.51**	**337**	*e*Pn	**Pn**		**16 46 20.4**	**+0.4**
GEC2				*e*Sn	**Sn**		**16 48 25.9**	**-2.8**
GEC2	**GERESS Array S**	**11.51**	**337**	Pn	**Pn**		**16 46 19.9**	**0.0**
GERES	**GERESS Array B**	**11.51**	**337**	Pn	**Pn**		**16 46 18.4**	**-1.6**
	comp=E,0.2nm,0.3s,baz=156,slow=13,SNR=9.6								
DAVA	**Damuels**	**11.76**	**322**	*e*Sn	**Sn**		**16 48 32.7**	**-2.1**
KHC	**Kasperske Hory**	**11.80**	**338**	*e*PN	**Pn**		**16 46 22.5**	**-1.4**
KHC				*e*SN	**Sn**		**16 48 30.8**	**-4.9**
KHC	**Kasperske Hory**	**11.80**	**338**	Pn	**Pn**		**16 46 22.6**	**-1.3**
SENIN	**Lac Senin/Sane**	**12.52**	**314**	Pn	**Pn**		**16 46 34.5**	**+0.6**
ECH	**Echery**	**13.73**	**320**	Pn	**Pn**		**16 46 51.2**	**+0.9**
AKASG	**Malin Array Be**	**13.80**	**24**	Pn	**Pn**		**16 46 52.6**	**+1.5**
	baz=209,slow=11,SNR=1.5								
EIL	**Eilat**	**14.86**	**122**	Pn	**P**		**16 47 09.2**	**-2.4**
	comp=E,0.2nm,0.3s,baz=298,slow=11,SNR=2.4								
KVAR	**Kislovodsk Arr**	**17.66**	**65**	P	**Pn**		**16 47 40.9**	**-0.8**
	baz=274,slow=15,SNR=2.3								
ESDC	**Sonseca Array**	**18.96**	**281**	P	**Pn**		**16 47 58.0**	**+0.4**
	comp=E,0.2nm,0.3s,baz=81,slow=11,SNR=4.4								
ESDC	**Sonseca Array**	**18.96**	**281**	P	**Pn**		**16 47 58.0**	**+0.4**
ESDC	**Sonseca Array**	**18.96**	**281**	IAmb	IAmb		16 48 00.5		
	comp=Z,2.9nm,1.6s								
PESTR	**Estremoz**	**21.84**	**280**	P	**P**		**16 48 27.2**	**-1.0**
HFS	**Hagfors**	**22.16**	**351**	P	**P**		**16 48 31.5**	**+0.1**
	comp=Z,2.8nm,0.5s,baz=156,slow=11,SNR=11								
NC602	**NORSAR Array S**	**23.04**	**349**	P	**P**		**16 48 41.0**	**+0.2**
EKA	**Eskdalemuir Ar**	**23.19**	**325**	P	**P**		**16 48 42.8**	**+0.5**
	comp=Z,7.9nm,1.0s,baz=120,slow=9.3,SNR=3.0								
FINES	**FINESS Array B**	**23.34**	**7**	P	**P**		**16 48 42.6**	**-1.1**
	comp=Z,1.9nm,0.4s,baz=181,slow=11,SNR=20								
FIA1	**FINESS Array S**	**23.34**	**7**	P	**P**		**16 48 45.5**	**+1.8**
NC405	**NORSAR Array S**	**23.38**	**349**	P	**P**		**16 48 45.4**	**+1.2**
NB2	**NORSAR Subarra**	**23.38**	**349**	P	**P**		**16 48 44.6**	**+0.4**
	comp=Z,1.9nm,0.8s,baz=163,slow=11								
NOA	**NORSAR Array B**	**23.38**	**349**	P	**P**		**16 48 44.2**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=153,slow=11,SNR=3.5								
GEYT	**Alibeck**	**29.52**	**79**	P	**P**		**16 49 40.6**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=280,slow=8.6,SNR=4.6								
GEYT	**Alibeck**	**29.52**	**79**	IAmb	IAmb		16 49 43.6		
	comp=Z,1.0nm,0.6s								
TORD	**Torodi Ar. Bea**	**30.14**	**218**	P	**P**		**16 49 50.4**	**+4.6**
	comp=Z,0.6nm,0.7s,baz=31,slow=10.0,SNR=3.1								
ARCES	**ARCESS Array B**	**31.32**	**3**	P	**P**		**16 49 54.8**	**-0.9**
	comp=Z,5.6nm,1.1s,baz=193,slow=7.9,SNR=2.8								
KK31	**Karatay Array**	**37.79**	**66**	P	**P**		**16 50 51.0**	**-1.1**
KK31				IAmb	IAmb		16 50 55.3		
	comp=Z,1.7nm,0.6s								
KKAR	**Karatay Array**	**37.79**	**66**	P	**P**		**16 50 51.0**	**-1.1**
KKAR				IAmb	IAmb		16 50 55.3		
	comp=Z,1.7nm,0.6s								
MK31	**Makanchi Array**	**45.27**	**59**	P	**P**		**16 51 53.3**	**0.0**
MKAR	**Makanchi Array**	**45.27**	**59**	P	**P**		**16 51 52.0**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=274,slow=7.4,SNR=9.0								
ZAA0	**Zalesovo Array**	**45.61**	**48**	P	**P**		**16 51 56.2**	**+0.4**
ZAA0				IAmb	IAmb		16 52 10.9		
	comp=Z,2.6nm,0.9s								
ZALV	**Zalesovo Beam**	**45.61**	**48**	P	**P**		**16 51 55.5**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=270,slow=8.6,SNR=9.9								
SFJD	**Kangerlussuaq**	**47.99**	**330**	P	**P**		**16 52 16.5**	**+2.3**
SCHQ	**Schefferville**	**58.23**	**317**	P	**P**		**16 53 29.5**	**-0.4**
	comp=Z,2.9nm,1.1s,baz=0.0,slow=3.0,SNR=3.8								

*NEIC **26** 16:49:54.4±3.0,37°.90N±0°.05×19°.66E±0°.06,h10km±2km, mb4.1/5,Error ellipse: s-maj=11.2km s-min=4.6km az=224.0*

*IDC **26** 16:49:56.8±5.0,38°.22N×20°.34E,h0km,mb3.6/2, mb1 3.5/4,mb1mx3.2/42,mbtmp3.4/4,ML3.0/2,MS3.9/2, Ms1 3.9/2,ms1mx3.2/47,Error ellipse: s-maj=106.6km s-min=24.7km az=49.0*
*THE **26** 16:49:59.1,38°.19N×20°.35E,h2km±27km,ML3.2/5,Error ellipse: s-maj=27.5km s-min=0.7km az=0.0*
*ATH **26** 16:49:59.7,38°.21N×20°.44E,h13km±1km,ML3.1/3,Error ellipse: s-maj=3.1km s-min=1.1km az=75.0*

ISC 26 16:49:58.2±1.3,**38°.19N**±0°.03×**20°.30E**±0°.06,**h10**km±7km, **n47**,σ0§**83**/53,**mb4.0**/5,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VLS	**Valsamata**	**0.23**	**93**	P	**Pg**		**16 50 02.9**	**0.0**
VLS				S	**Sg**		**16 50 05.4**	**-0.6**
	23μm,0.2s							
VLS	**Valsamata**	**0.23**	**93**	P	**Pg**		**16 50 02.9**	**0.0**
VLS				S	**Sg**		**16 50 05.4**	**-0.6**
VLS				AML	AML		16 50 05.5	
	comp=N,50071μm,0.3s							
VLS				AML	AML		16 50 05.9	
	comp=E,40258μm,0.2s							
FSK	**Fiskardo**	**0.34**	**37**	P	**Pg**		**16 50 05.2**	**+0.2**
FSK				S	**Sg**		**16 50 09.3**	**-0.2**
	comp=E,4μm,0.3s							
FSK	**Fiskardo**	**0.34**	**37**	P	**Pg**		**16 50 05.2**	**+0.2**
FSK				S	**Sg**		**16 50 09.4**	**-0.1**
KFL	**Anninata**	**0.39**	**102**	P	**Pg**		**16 50 06.0**	**+0.1**
KFL				S	**Sg**		**16 50 11.2**	**+0.1**
	comp=E,8μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.42**	**138**	P	**Pg**		**16 50 07.7**	**+1.2**
EVGI	**Lefkada island**	**0.51**	**33**	P	**Pg**		**16 50 08.5**	**+0.3**
EVGI				S	**Sg**		**16 50 15.6**	**+0.6**
EVGI	**Lefkada island**	**0.51**	**33**	P	**Pg**		**16 50 08.5**	**

HIZ	**Hauiti**	**19.04 198**	P	**P**	**16 56 46.5 +4.5**	
HIZ	**Hauiti**	**19.04 198**	P	**P**	**16 56 46.1 +4.1**	
NMHZ	**Naumai**	**19.11 193**	P	**P**	**16 56 44.1 +1.4**	
BKZ	**Black Stump Fm**	**19.24 194**	P	**P**	**16 56 43.9 -0.1**	
BKZ	**Black Stump Fm**	**19.24 194**	P	**P**	**16 56 43.6 -0.4**	
NGZ	**Ngauruhoe**	**19.46 196**	P	**P**	**16 56 46.9 +0.7**	
KWHZ	**Kaweka Forest**	**19.50 194**	P	**P**	**16 56 48.3 +1.9**	
BHHZ	**Black Hill Sta**	**19.65 194**	P	**P**	**16 56 48.2 +0.3**	
KRHZ	**Kereru**	**19.72 194**	P	**P**	**16 56 49.4 +0.9**	
PNHZ	**Pukenui**	**20.02 194**	P	**P**	**16 56 52.2 +1.0**	
PRHZ	**Porangahau**	**20.27 193**	P	**P**	**16 56 55.2 +1.8**	
BFZ	**Birch Farm**	**20.75 193**	P	**P**	**16 56 57.5 -0.3**	
BHW	**Baring Head**	**21.75 195**	P	**P**	**16 57 07.2 +0.3**	
PLWZ	**Palliser**	**21.81 194**	P	**P**	**16 57 08.0 +0.4**	
QRZ	**Quartz Range**	**21.88 200**	P	**P**	**16 57 10.7 +2.5**	
NNZ	**Nelson**	**21.97 198**	P	**P**	**16 57 10.9 +2.0**	
TUWZ	**Tuamarina**	**22.01 197**	P	**P**	**16 57 10.8 +1.5**	
THZ	**Tophouse**	**22.61 198**	P	**P**	**16 57 16.7 +1.8**	
LTZ	**Lake Taylor**	**23.74 199**	P	**P**	**16 57 25.7 +0.7**	
WKZ	**Wanaka**	**26.61 201**	P	**P**	**16 57 52.6 +2.0**	
EIDS	**Eidsvold** baz=29	**29.08 255**	P	**P**	**16 58 13.3 +0.7**	
EIDS	**Eidsvold**	**29.08 255**	P	**P**	**16 58 13.1 +0.5**	
EIDS			IAmb	IAmb	16 58 56.4	
	comp=Z,40nm,1.4s					
ARMA	**Armidale** baz=30	**29.29 244**	P	**P**	**16 58 16.2 +1.8**	
ARMA	**Armidale**	**29.29 244**	P	**P**	**16 58 16.0 +1.6**	
ARMA			IAmb	IAmb	16 58 16.9	
	comp=Z,15nm,0.6s					
MGCD	**Mangrove Creek** baz=31	**30.41 239**	P	**P**	**16 58 26.2 +2.1**	
RMQ	**Roma** baz=32	**31.24 253**	P	**P**	**16 58 32.9 +1.6**	
CAN	**Canberra**	**32.71 236**	P	**P**	**16 58 45.5 +1.5**	
CAN			IAmb	IAmb	16 59 14.4	
	comp=Z,69nm,2.0s					
CMSA	**Cobar Meteorol** baz=35	**34.50 244**	P	**P**	**16 59 00.1 +0.9**	
QLP	**Quilpie** baz=36	**35.29 253**	P	**P**	**16 59 06.6 +0.7**	
PMG	**Port Moresby**	**35.59 283**	P	**P**	**16 59 06.7 -1.9**	
PMG			IAmb	IAmb	16 59 45.0	
	comp=Z,82nm,1.6s					
TOO	**Toolangi**	**36.09 234**	P	**P**	**16 59 13.4 +0.8**	
COEN	**Coen** baz=38	**37.83 274**	P	**P**	**16 59 27.6 +0.3**	
COEN	**Coen**	**37.83 274**	P	**P**	**16 59 26.9 -0.3**	
COEN			IAmb	IAmb	16 59 28.4	
	comp=Z,19nm,0.8s					
STKA	**Stephens Creek**	**38.01 244**	P	**P**	**16 59 29.5 +1.0**	
	comp=Z,5.1nm,0.5s,baz=98,slow=11,SNR=28					
STKA	**Stephens Creek**	**38.01 244**	P	**P**	**16 59 29.4 +0.9**	
HTT	**Hallett** baz=41,SNR=8.4	**40.44 242**	P	**P**	**16 59 49.4 +1.0**	
BBOO	**Buckleboo** baz=43,SNR=15	**42.76 244**	P	**P**	**17 00 07.3 +0.3**	
BBOO	**Buckleboo**	**42.76 244**	P	**P**	**17 00 07.0 0.0**	
JAY	**Jayapura**	**44.29 288**	P	**P**	**17 00 19.0 -0.2**	
	comp=Z,16nm,0.6s,baz=56,slow=5.4,SNR=4.6					
WR0	**Warramunga Arr**	**44.66 262**	P	**P**	**17 00 21.0 -1.0**	
AS31	**Alice Springs**	**44.76 257**	P	**P**	**17 00 22.6 -0.2**	
ASAR	**Alice Springs**	**44.76 257**	P	**P**	**17 00 22.9 +0.2**	
	comp=Z,18nm,0.5s,baz=91,slow=8.5,SNR=886					
ASAR			PcP	**PcP**	**17 01 57.7 +0.7**	
	comp=Z,1.0nm,0.6s,baz=104,slow=3.9,SNR=3.4					
ASAR			S	**S**	**17 06 28.6 -0.8**	
	comp=Z,0.4nm,0.7s,baz=94,slow=16,SNR=4.2					
WB0	**Warramunga Arr**	**44.83 262**	P	**P**	**17 00 22.3 -1.0**	
WB0			IAmb	IAmb	17 00 23.4	
	comp=Z,16nm,0.6s					
WB2	**Warramunga Arr**	**44.84 262**	P	**P**	**17 00 22.5 -0.9**	
WRA	**Warramunga Arr**	**44.85 262**	P	**P**	**17 00 23.1 -0.4**	
	comp=Z,9.5nm,0.5s,baz=98,slow=5.7,SNR=61					
WRA	**Warramunga Arr**	**44.85 262**	IAmb	IAmb	17 00 23.6	
	comp=Z,1.2nm,0.5s					
SBLHI	**Steaming Bluff**	**45.39 30**		P	17 00 22.1 -5.6	
KDU	**Kakadu** baz=48,SNR=9.1	**48.20 271**	P	**P**	**17 00 47.6 -1.6**	
MTN	**Manton Dam**	**49.41 270**	P	**P**	**17 00 57.6 -0.6**	
	baz=50,SNR=3.8					
MTN	**Manton Dam**	**49.41 270**	P	**P**	**17 00 57.7 -0.6**	
FORT	**Forrest** baz=50,SNR=27	**49.52 247**	P	**P**	**17 00 58.8 -0.1**	
FORT	**Forrest**	**49.52 247**	P	**P**	**17 00 58.5 -0.3**	
FORT			IAmb	IAmb	17 00 59.5	
	comp=Z,22nm,0.6s					
WRKA	**Warakurna** baz=50,SNR=35	**49.70 254**	P	**P**	**17 01 00.6 +0.2**	
KNRA	**Kununurra** baz=51,SNR=21	**50.91 266**	P	**P**	**17 01 09.1 -0.2**	
KNRA	**Kununurra**	**50.91 266**	P	**P**	**17 01 09.2 -0.1**	
KNRA			IAmb	IAmb	17 01 10.3	
	comp=Z,23nm,0.7s					
FAKI	**Fak Fak**	**51.75 283**	P	**P**	**17 01 14.7 -0.8**	
FITZ	**Fitzroy Crossi** baz=54,SNR=17	**53.27 262**	P	**P**	**17 01 26.8 +0.3**	
FITZ	**Fitzroy Crossi**	**53.27 262**	P	**P**	**17 01 26.9 +0.3**	
FITZ			IAmb	IAmb	17 02 37.0	
	comp=Z,39nm,1.8s					
SIJI	**Sorong**	**53.48 285**	P	**P**	**17 01 28.1 0.0**	
	comp=Z,29nm,0.7s,baz=103,slow=8.0,SNR=7.0					
SOEI	**Soe**	**56.75 272**	P	**P**	**17 01 52.0 +0.7**	
SOEI			IAmb	IAmb	17 02 04.7	
	comp=Z,54nm,1.2s					
PSA00	**Pilbara Seismi**	**57.91 257**	P	**P**	**17 01 58.8 -0.3**	
PSA00			IAmb	IAmb	17 01 59.7	
	comp=Z,25nm,0.8s					
VNDA	**Vanda**	**57.91 185**	P	**P**	**17 01 58.6 +0.5**	
QSPA	**South Pole Qui**	**69.55 180**	P	**P**	**17 03 16.2 +2.7**	
QSPA			IAmb	IAmb	17 03 19.8	
	comp=Z,20nm,1.6s					
MJAR	**Matsushiro Arr**	**70.37 324**	P	**P**	**17 03 18.3 -0.4**	
	comp=Z,2.0nm,0.5s,baz=136,slow=6.1,SNR=11					
NJ2	**Nanjing**	**80.08 310**	*e*P	**P**	**17 04 11.5 -2.0**	
NJ2			pmax	pmax		
	comp=Z,3.0nm,0.5s					
NVAR	**Mina Array Bea**	**80.87 43**	P	**P**	**17 04 20.4 +2.6**	
	comp=Z,0.4nm,0.8s,baz=235,slow=9.5,SNR=3.0					
RAGM	**Ragged Mountai**	**84.97 16**	P	**P**	**17 04 40.5 +2.8**	
TXAR	**Lajitas Array**	**86.85 57**	P	**P**	**17 04 49.5 +1.8**	
	comp=Z,0.3nm,0.7s,baz=203,slow=4.9,SNR=4.8					
ILAR	**Eielson Array**	**88.28 13**	P	**P**	**17 04 52.0 -1.4**	
	comp=Z,0.3nm,0.6s,baz=222,slow=5.5,SNR=4.4					
PDAR	**Pinedale Array**	**88.80 43**	P	**P**	**17 04 58.6 +1.9**	
	comp=Z,0.2nm,0.5s,baz=207,slow=7.0,SNR=3.4					
HHC	**Hu-ho-hao-te**	**89.55 314**	*e*P	**P**	**17 04 58.3 -1.8**	
CMAR	**Chiang Mai Arr**	**90.36 289**	P	**P**	**17 05 05.4 +1.2**	
	comp=Z,1.9nm,0.9s,baz=127,slow=3.3,SNR=10					
LZH	**Lanzhou**	**92.98 307**	⇓P	**P**	**17 05 12.3 -3.8**	
LZH			pP	pP	17 06 46.0 -2.1	
LZH			sP	sP	17 07 27.0 -2.1	
LZH			PP	**PP**	**17 09 04.5 -1.2**	
LZH			pmax	pmax		
	comp=Z,21nm,1.4s					
LZH			pmax	pmax		
	comp=Z,79nm,6.3s					
MKAR	**Makanchi Array**	**111.39 313**	PKiKP	**PKiKP**	**17 10 33.4 -0.6**	
	comp=Z,0.3nm,0.6s,baz=110,slow=2.1,SNR=3.2					
KSH	**Kashi**	**115.10 305**	PKP	PKPdf	17 10 38.8 -2.6	
KSH			PP	**PP**	**17 11 49.5 +1.1**	
KSH			AMB	AMB		
	comp=Z,1μm,7.1s					
FINES	**FINESS Array B**	**135.86 344**	PKP	**PKiKP**	**17 11 21.8 0.0**	
	comp=Z,3.0nm,0.8s,baz=44,slow=4.2,SNR=3.5					
HFS	**Hagfors**	**139.60 351**	PKhKP	PKPpre	17 11 21.8	
	comp=Z,4.1nm,1.0s,baz=206,slow=16,SNR=4.5					
AKASG	**Malin Array Be**	**143.15 331**	PKhKP	PKPpre	17 11 30.0	
	comp=Z,2.5nm,0.3s,baz=42,slow=4.2,SNR=2.5					
BRTR	**Keskin Array B**	**147.04 312**	PKPbc	**PKPbc**	**17 11 43.7 +0.1**	
	comp=Z,1.1nm,0.5s,baz=142,slow=5.4,SNR=8.1					
KOLS	**Kolonicke sedl**	**147.43 335**	*e*PKP	**PKPab**	**17 11 47.0 -0.4**	
MMAI	**Mount Meron Ar**	**148.04 300**	PKPbc	**PKPbc**	**17 11 47.2 +0.8**	
	comp=Z,3.1nm,0.6s,baz=80,slow=6.3,SNR=5.3					
CLL	**Collm**	**148.14 347**	*e*PKPbc	**PKPbc**	**17 11 46.0 +0.1**	
MLR	**Muntele Rosu**	**148.38 327**	PKPbc	**PKPbc**	**17 11 47.1 +0.2**	
	comp=Z,3.0nm,0.7s,baz=243,slow=18,SNR=2.7					
GERES	**GERESS Array B**	**150.28 345**	PKPbc	**PKPbc**	**17 11 51.3 0.0**	
	comp=Z,1.1nm,0.8s,baz=45,slow=2.6,SNR=6.2					
TORD	**Torodi Ar. Bea**	**172.65 176**	PKPab	**PKPab**	**17 13 38.9 +1.7**	
	comp=Z,0.5nm,0.8s,baz=191,slow=4.4,SNR=2.7					

*IDC **26** 16:55:49.3±0.9,38°.31N×20°.34E, h0km, mb3.9/12, mb1 3.9/20,mb1mx3.8/48,mbtmp3.8/20,ML3.8/8, Error ellipse: s-maj=18.4km s-min=14.4km az=19.0*
*THE **26** 16:55:50.7,38°.22N×20°.39E, h9km,ML3.9/8, Error ellipse: s-maj=1.3km s-min=0.4km az=65.0*
*ATH **26** 16:55:50.7,38°.22N×20°.39E, h9km±3km,ML3.8/9, Error ellipse: s-maj=3.3km s-min=0.7km az=82.0*
*BGR **26** 16:55:51.5±1.1,38°.58N×21°.45E, h10km, Error ellipse: s-maj=95.6km s-min=16.7km az=58.0*
*NEIC **26** 16:55:51.5±3.0,38°.30N±0°.05×20°.28E±0°.06, h10km±2km, mb4.4/16,ML3.9(THE), Error ellipse: s-maj=8.5km s-min=6.2km az=209.0*

ISC 26 16:55:51.2±0.8,38°.26N±0°.02×20°.43E±0°.03,h13km±5km, n148,σ1°65/176,mb4.0/16,8C-6D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.15**	**124**	P	**Pg**	**16 55 54.1**	**-0.9**
VLS				S	**Sg**	**16 55 56.6**	**-0.9**
	159μm,0.2s						
VLS	**Valsamata**	**0.15**	**124**	P	**Pg**	**16 55 54.1**	**-0.9**
VLS				S	**Sg**	**16 55 56.7**	**-0.9**
VLS				AML	AML	16 55 56.9	
VLS				AML	AML	16 55 57.0	
FSK	**Fiskardo**	**0.22**	**28**	P	**Pg**	**16 55 56.3**	**+0.2**
FSK				S	**Sg**	**16 56 00.6**	**+1.2**
	31μm,0.5s						
FSK	**Fiskardo**	**0.22**	**28**	P	**Pg**	**16 55 55.6**	**-0.5**
FSK				S	**Sg**	**16 56 00.6**	**+1.2**
KFL	**Anninata**	**0.32**	**118**	P	**Pg**	**16 55 57.2**	**-0.6**
KFL				S	**Sg**	**16 56 02.3**	**+0.1**
	40μm,0.5s						
KFL	**Anninata**	**0.32**	**118**	P	**Pg**	**16 55 57.3**	**-0.5**
KFL				S	**Sb**	**16 56 02.6**	**-1.3**
KFL				AML	AML	16 56 02.9	
	comp=N,99177μm,0.4s						
KFL				AML	AML	16 56 04.5	
	comp=E,61328μm,0.4s						
EVGI	**Lefkada island**	**0.40**	**26**	P	**Pb**	**16 55 59.6**	**-0.5**
EVGI				S	**Sb**	**16 56 06.2**	**0.0**
EVGI	**Lefkada island**	**0.40**	**26**	P	**Pb**	**16 55 59.7**	**-0.5**
EVGI				S	**Sb**	**16 56 06.2**	**0.0**
VLMS	**Volimes, Zakyn**	**0.43**	**154**	P	**Pg**	**16 55 58.7**	**-1.0**
VLMS				S	**Sg**	**16 56 04.8**	**-0.7**
VLMS				AML	AML	16 56 06.8	
	comp=E,38084μm,0.2s						
VLMS				AML	AML	16 56 10.8	
	comp=N,49554μm,0.5s						
MGNA	**Meganis**	**0.48**	**36**	P	**Pb**	**16 56 01.1**	**-0.5**
MGNA				S	**Sb**	**16 56 08.5**	**-0.1**
MGNA				AML	AML	16 56 09.8	
	comp=N,34976μm,0.5s						
MGNA				AML	AML	16 56 10.1	
	comp=E,31109μm,0.5s						
LKD2	**Lefkada island**	**0.56**	**19**	P	**Pb**	**16 56 02.1**	**-0.7**
LKD2				S	**Sb**	**16 56 10.8**	**+0.1**
	comp=E,8μm,0.6s						
LKD2	**Lefkada island**	**0.56**	**19**	P	**Pb**	**16 56 02.3**	**-0.6**
LKD2				S	**Sb**	**16 56 11.4**	**+0.7**
LKD2				AML	AML	16 56 17.4	
	comp=E,13595μm,0.5s						
LKD2				AML	AML	16 56 17.6	
	comp=N,17478μm,0.6s						
TSLK	**Tsoukalades, L**	**0.59**	**17**	P	**Pb**	**16 56 02.8**	**-0.6**
TSLK				S	**Sb**	**16 56 12.2**	**+0.5**
	comp=N,9μm,0.5s						
TSLK	**Tsoukalades, L**	**0.59**	**17**	P	**Pb**	**16 56 02.9**	**-0.5**
TSLK				S	**Sb**	**16 56 12.1**	**+0.5**
TSLK				AML	AML	16 56 15.5	
	comp=N,18817μm,0.5s						
TSLK				AML	AML	16 56 18.0	
	comp=E,18043μm,0.6s						
RLS	**Riolos of Patr**	**0.84**	**104**	P	**Pb**	**16 56 07.2**	**-0.5**
RLS				S	**Sb**	**16 56 19.3**	**+0.4**
	comp=E,3μm,0.6s						
RLS	**Riolos of Patr**	**0.84**	**104**	P	**Pb**	**16 56 07.1**	**-0.6**
RLS				AML	AML	16 56 22.7	
	comp=E,4366μm,0.5s						
RLS				AML	AML	16 56 26.5	
	comp=N,7468μm,0.5s						
PVO	**Paravola**	**0.93**	**67**	P	**Pb**	**16 56 09.0**	**-0.2**
PVO				S	**Sn**	**16 56 23.6**	**+0.4**
	comp=N,8μm,0.6s						
PVO	**Paravola**	**0.93**	**67**	P	**Pb**	**16 56 09.1**	**-0.2**
PVO				AML	AML	16 56 31.0	
	comp=N,15448μm,0.7s						
PVO				AML	AML	16 56 33.5	
	comp=E,15307μm,0.5s						
DRO	**Drossia**	**1.06**	**107**	P	**Pg**	**16 56 10.8**	**-0.8**
DRO				S	**Sn**	**16 56 26.9**	**+0.6**
	comp=E,7μm,0.5s						
DRO	**Drossia**	**1.06**	**107**	P	**Pg**	**16 56 10.5**	**-1.1**
EFP	**Efpalio**	**1.17**	**82**	P	**Pb**	**16 56 13.0**	**-0.3**
LAKA	**Lakka**	**1.22**	**91**	P	**Pg**	**16 56 13.6**	**-1.1**
LAKA	**Lakka**	**1.22**	**91**	P	**Pg**	**16 56 13.3**	**-1.5**
AMT	**Artemida-Makis**	**1.25**	**125**	P	**Pg**	**16 56 13.6**	**-1.6**
AMT	**Artemida-Makis**	**1.25**	**125**	P	**Pb**	**16 56 14.3**	**-0.3**
EVR	**Evrytania**	**1.26**	**58**	P	**Pg**	**16 56 14.3**	**-1.2**
EVR	**Evrytania**	**1.26**	**58**	P	**Pn**	**16 56 14.8**	**+0.1**
IGT	**Igoumenitsa**	**1.27**	**357**	P	**Pn**	**16 56 15.3**	**+0.6**
IGT				S	**Sn**	**16 56 33.2**	**+1.6**
IGT				AML	AML	16 56 37.1	
	comp=E,4597μm,0.7s						
IGT				AML	AML	16 56 44.5	
	comp=N,2670μm,0.7s						
SERG	**Sergoula**	**1.29**	**83**	P	**Pg**	**16 56 13.9**	**-2.1**
SERG	**Sergoula**	**1.29**	**83**	P	**Pg**	**16 56 14.8**	**-1.3**
TRIZ	**Trizonia**	**1.30**	**85**	P	**Pn**	**16 56 14.8**	**-0.2**
TRIZ	**Trizonia**	**1.30**	**85**	P	**Pn**	**16 56 14.8**	**-0.2**
KALE	**Kalithea**	**1.35**	**84**	P	**Pn**	**16 56 15.5**	**-0.4**
KALE	**Kalithea**	**1.35**	**84**	P	**Pn**	**16 56 15.4**	**-0.4**
KLV	**Kalavryta, Ach**	**1.37**	**99**	P	**Pg**	**16 56 16.7**	**-1.0**
KLV				S	**Sn**	**16 56 36.7**	**+2.4**
JAN	**Janina**	**1.43**	**13**	P	**Pg**	**16 56 19.2**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.53**	**60**	P	**Pg**	**16 56 21.0**	**+0.4**
ITM	**Ithomi**	**1.61**	**132**			**16 56 21.4**	**-0.7**
AGG	**Agios Georgios**	**1.67**	**62**	P	**Pg**	**16 56 23.0**	**-0.3**
AGG	**Agios Georgios**	**1.67**	**62**		**Pg**	**16 56 23.6**	**+0.3**
KPRO	**Kipourio**	**1.84**	**23**	P	**Pg**	**16 56 25.9**	**-0.6**
SCTE	**Santa Cesarea**	**2.36**	**320**		**Pn**	**16 56 30.1**	**+0.4**
LIT	**Litokhoron**	**2.44**	**40**		**Pb**	**16 56 35.4**	**+0.5**
FNA	**Florina**	**2.62**	**16**		**Pb**	**16 56 35.6**	**-2.5**
OHR	**Ohrid**	**2.86**	**6**	⇑*i*Pn	**Pb**	**16 56 39.8**	**-2.4**
TIP	**Timpagrande**	**3.01**	**289**	⇑P	**Pn**	**16 56 39.7**	**+1.0**
TIP	**Timpagrande**	**3.01**	**289**	⇓S	**Sn**	**16 57 14.9**	**+0.2**
TIP	**Timpagrande**	**3.01**	**289**		**Pn**	**16 56 39.3**	**+0.6**
TIR	**Tirane**	**3.11**	**352**	⇑P	**Pn**	**16 56 39.8**	**-0.2**
TIR	**Tirane**	**3.11**	**352**		**Pn**	**16 56 41.8**	**+1.8**
VAY	**Valandovo**	**3.47**	**28**	⇓*i*Pn	**Pb**	**16 56 51.8**	**-0.7**
CEL	**Celeste**	**3.57**	**271**	Pn	**Pn**	**16 56 45.2**	**-1.1**
STIP	**Stip**	**3.68**	**21**	*i*Pn	**Pb**	**16 56 53.1**	**-3.0**
MATE	**Matera**	**3.74**	**311**	⇑P	**Pn**	**16 56 48.9**	**+0.3**
SG1	**Sgolgore (BA)**	**3.88**	**313**	*e*Pn	**Pn**	**16 56 51.5**	**+1.0**
SG1				Sn	**Sn**	**16 57 35.7**	**-0.2**
BAI	**Bari**	**3.95**	**317**	*e*Pn	**Pn**	**16 56 53.3**	**+1.9**
PDG	**Podgorica**	**4.26**	**348**	⇓P	**Pn**	**16 56 55.4**	**-0.4**
PDG	**Podgorica**	**4.26**	**348**	⇓S	**Sn**	**16 57 41.5**	**-3.8**
PDG	**Podgorica**	**4.26**	**348**	Pn	**Pn**	**16 56 55.9**	**+0.1**
ACER	**Acerenza**	**4.29**	**307**	Pn	**Pn**	**16 56 55.7**	**-0.5**
SANT	**Santorini**	**4.43**	**114**	Pn	**Pn**	**16 57 01.9**	**+3.7**
IDI	**Anoyia**	**4.65**	**128**	Pn	**Pn**	16 57 06.1	+4.9
	comp=N,1.0nm,0.3s,baz=320,slow=19,SNR=3.0						
IDI				Sn	**Sn**	**16 57 56.2**	**+1.1**
	comp=N,0.8nm,0.3s,baz=91,slow=23,SNR=1.3						
VAE	**Valguarnera**	**4.83**	**263**	Pn	**Pn**	**16 57 03.0**	**-0.6**
	comp=N,0.8nm,0.3s,baz=338,slow=5.4,SNR=2.2						
VAE				Sn	**Sn**	**16 58 04.1**	**+4.7**
	comp=N,4.4nm,0.3s,baz=225,slow=20,SNR=6.5						
VTS	**Vitosha**	**4.85**	**25**	⇑P	**Pn**	**16 57 04.1**	**+0.1**
VTS	**Vitosha**	**4.85**	**25**	⇑S	**Sn**	**16 57 56.2**	**-3.9**
VTS	**Vitosha**	**4.85**	**25**	Pn	**Pn**	**16 57 06.5**	**+2.6**
SGRT	**San Giovanni R**	**5.01**	**316**	Pn	**Pn**	**16 57 06.2**	**+0.1**
WDD	**Wied Dalam**	**5.31**	**245**	Pn	**Pn**	**16 57 08.8**	**-1.4**
INTR	**Introdacqua**	**6.25**	**309**		**Pn**	**16 57 24.7**	**+1.5**
BLY	**Banja Luka**	**6.92**	**340**	⇑P	**Pn**	**16 57 32.3**	**0.0**
BLY	**Banja Luka**	**6.92**	**340**	Pn	**Pn**	**16 57 32.3**	**0.0**
NRCA	**Norcia**	**7.20**	**312**		**Pn**	**16 57 37.7**	**+1.5**
GZR	**Gura Zlata**	**7.34**	**13**	⇑P	**Pn**	**16 57 38.1**	**0.0**
ELL	**Elmali**	**7.69**	**98**	Pn	**Pn**	**16 57 47.0**	**+4.0**
MURB	**Monte Urbino**	**7.80**	**312**		**Pn**	**16 57 46.0**	**+1.5**
VOIR		**7.95**	**24**	⇓P	**Pn**	**16 57 46.9**	**+0.3**
MORH	**Mrgy, Hungar**	**8.06**	**351**	*e*PnC		16 57 46.8	
MLR	**Muntele Rosu**	**8.31**	**28**	Pn	Pn	16 57 57.0	+5.5
	comp=N,0.2nm,0.3s,baz=206,slow=8.7,SNR=7.6						
MLR	**Muntele Rosu**	**8.31**	**28**	⇓P	**Pn**	**16 57 51.4**	**-0.1**
GBRS	**Gornja Briga**	**8.38**	**332**	*i* Pn	**Pn**	**16 57 53.0**	**+0.6**
OSSC	**Osservatorio P**	**8.71**	**310**	Pn	**Pn**	**16 57 58.9**	**+1.9**
SOKA	**Soboth**	**9.30**	**336**	*e*Pn	**Pn**	**16 58 04.0**	**-1.1**
	comp=N,8.1nm,0.5s,SNR=19						
SOKA				Sn	**Sn**	**16 59 43.7**	**-5.9**
	comp=N,4.1nm,0.6s						
OBKA	**Obir**	**9.31**	**334**	*e*Pn	**Pn**	**16 58 05.8**	**+0.6**
OBKA				*e*Sn	**Sn**	**16 59 45.4**	**-4.5**
OBKA	**Obir**	**9.31**	**334**	*e*Pn	**Pn**	**16 58 05.5**	**+0.2**
	comp=N,3.8nm,0.4s,SNR=6.9						
TEOL	**Teolo**	**9.64**	**320**		**Pn**	**16 58 09.2**	**-0.4**
ARSA	**Arzberg**	**9.68**	**340**	*e*Pn	**Pn**	**16 58 09.0**	**-1.2**
ARSA	**Arzberg**	**9.68**	**340**	Pn	**Pn**	**16 58 08.2**	**-1.9**
	comp=N,2.3nm,0.3s						
MYKA	**Terra Mystica**	**9.75**	**331**	Pn	**Pn**	**16 58 10.1**	**-1.0**
	comp=N,4.8nm,0.5s						
CTI	**Castel Tesino**	**10.14**	**323**		**Pn**	**16 58 15.0**	**-1.5**
KBA	**Koelnbreinsper**	**10.23**	**332**	*e*Pn	**Pn**	**16 58 18.5**	**+0.6**
KBA				*e*Sn	**Sn**	**17 00 08.8**	**-3.8**
KBA	**Koelnbreinsper**	**10.23**	**332**	Pn	**Pn**	**16 58 17.2**	**-0.6**
	comp=N,3.1nm,0.6s						
KBA				Sn	**Sn**	**17 00 09.4**	**-3.1**
	comp=N,2.9nm,0.5s						
ABTA	**Abfaltersbach**	**10.29**	**328**	Pn	**Pn**	**16 58 18.4**	**-0.2**
	comp=N,4.6nm,0.6s,SNR=4.9						
VYHS	**Vyhne**	**10.29**	**354**	*e*PN	**Pn**	**16 58 19.1**	**+0.6**
VYHS				*e*SN	**Sn**	**17 00 11.5**	**-2.2**
BRTR	**Keskin Array B**	**10.39**	**78**	Pn	**Pn**	**16 58 23.8**	**+3.8**
	comp=N,0.1nm,0.3s,baz=262,slow=11,SNR=4.8						
SALO	**Salr**	**10.41**	**318**	Pn	**Pn**	**16 58 19.7**	**-0.5**
MOA	**Molln**	**10.59**	**337**	*e*Pn	**Pn**	**16 58 22.5**	**-0.1**
MOA				*e*Sn	**Sn**	**17 00 16.4**	**-4.5**
MOA	**Molln**	**10.59**	**337**	*e*Pn	**Pn**	**16 58 22.6**	**0.0**
	comp=N,3.0nm,0.4s,SNR=6.9						
MOA				Sn	**Sn**	**17 00 16.8**	**-4.1**
	comp=N,2.1nm,0.5s						
RJOB	**Jochberg**	**10.99**	**332**	*e*Pn	**Pn**	**16 58 28.7**	**+0.6**
RJOB				*e*Sn	**Sn**	**17 00 30.4**	**-0.5**
WTTA	**Wattenberg**	**11.07**	**327**	*e*Pn	**Pn**	**16 58 30.5**	**+1.2**
WTTA	**Wattenberg**	**11.07**	**327**	*e*Pn	**Pn**	**16 58 30.1**	**+0.8**
	comp=N,3.9nm,0.6s,SNR=4.8						
WATA	**Walderalm**	**11.15**	**327**	*e*Pn	**Pn**	**16 58 31.5**	**+1.1**
	comp=N,7.0nm,0.5s,SNR=8.7						
SQTA	**Sankt Quirin**	**11.22**	**326**	Pn	**Pn**	**16 58 32.7**	**+1.4**
	comp=N,1.3nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**11.22**	**321**	Pn	**Pn**	**16 58 32.5**	**+1.0**
MOTA	**Moosalm**	**11.36**	**326**	Pn	**Pn**	**16 58 34.6**	**+1.3**
	comp=N,6.9nm,0.7s						
DAVOX	**Davos/Dischmat**	**11.53**	**321**	Pn	**Pn**	**16 58 35.7**	**+0.2**
	comp=N,0.2nm,0.3s,baz=158,slow=14,SNR=4.8						
DAVOX				Sn	**Sn**	**17 00 41.2**	**-3.0**
	comp=N,0.3nm,0.3s,baz=196,slow=11,SNR=2.0						
GEC2	**GERESS Array S**	**11.64**	**337**	*e*Pn	**Pn**	**16 58 36.9**	**-0.2**
GEC2	**GERESS Array S**	**11.64**	**337**	Pn	**Pn**	**16 58 36.6**	**-0.5**
GERES	**GERESS Array B**	**11.64**	**337**	Pn	**Pn**	**16 58 35.7**	**-1.4**
	comp=N,0.4nm,0.3s,baz=158,slow=14,SNR=12						
GERES				Sn	**Sn**	**17 00 39.9**	**-7.0**
	comp=N,0.2nm,0.3s,baz=151,slow=22,SNR=3.3						
KHC	**Kasperske Hory**	**11.94**	**338**	*e*PN	**Pn**	**16 58 40.1**	**-0.9**
KHC				*e*SN	**Sn**	**17 00 48.0**	**-6.0**
KHC	**Kasperske Hory**	**11.94**	**338**	Pn	**Pn**	**16 58 39.4**	**-1.6**
WET	**Wettzell**	**12.16**	**336**	*e*Pn	**Pn**	**16 58 44.2**	**0.0**
BNI	**Bardonecchia**	**12.31**

az=73.0

ISC 26 16:58:28.6±0.8, 15°47.N±0'.07 × 144°.5E±0'.1, h35km, n13, σ1§25/12, mb3.8/8, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SARN	**Sarigan**	**1.77**	**46**	Pn	**Pn**	**16 58 55.9**	**-0.9**
GUMO	**Guam**	**1.91**	**168**	Pn	**Pn**	**16 58 57.6**	**-1.1**
	12nm,0.3s,baz=341,slow=18,SNR=2.1						
GUMO				LR	LR	16 59 21.5	
	comp=Z,130nm,21.1s,baz=308,slow=30						
GUMO				Sn	**Sn**	**16 59 23.3**	**+1.7**
	21nm,0.3s,baz=342,slow=20,SNR=2.3						
KLR	**Kul'dur**	**35.23**	**346**	P	**P**	**17 05 20.8**	**+1.1**
	2.2nm,0.6s,baz=157,slow=8.0,SNR=6.9						
WB2	**Warramunga Arr**	**36.56**	**196**	P	**P**	**17 05 30.8**	**-0.5**
WB2				IAmb	IAmb	17 05 46.8	
	comp=Z,19nm,1.6s						
WRA	**Warramunga Arr**	**36.57**	**196**	P	**P**	**17 05 30.0**	**-1.3**
	comp=Z,1.7nm,0.9s,baz=18,slow=9.5,SNR=6.4						
WRA	**Warramunga Arr**	**36.57**	**196**	IAmb	IAmb	17 05 32.0	
	comp=Z,0.2nm,0.9s						
ASAR	**Alice Springs**	**40.24**	**195**	P	**P**	**17 06 02.8**	**+0.6**
	comp=Z,0.8nm,1.0s,baz=32,slow=8.8,SNR=3.8						
CMAR	**Chiang Mai Arr**	**43.54**	**281**	P	**P**	**17 06 28.9**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=72,slow=5.8,SNR=3.8						
SONM	**Songino Array**	**44.97**	**324**	P	**P**	**17 06 42.5**	**+2.0**
	comp=Z,0.7nm,0.8s,baz=116,slow=6.6,SNR=3.0						
SONM	**Songino Array**	**44.97**	**324**	P	**P**	**17 06 39.6**	**-1.0**
YAK	**Yakutsk**	**47.67**	**351**	P	**P**	**17 07 01.4**	**+0.1**
YAK				IAmb	IAmb	17 07 04.0	
	comp=Z,4.9nm,0.8s						
MKAR	**Makanchi Array**	**59.87**	**315**	P	**P**	**17 08 30.3**	**-0.6**
	comp=Z,0.1nm,0.4s,baz=89,slow=8.0,SNR=2.9						
MMAI	**Mount Meron Ar**	**96.93**	**307**	LR	LR	18 01 36.3	
	comp=Z,84nm,18.2s,baz=350,slow=39						

*IDC **26** 17:01:29.6±4.9, 37°.53N × 19°.78E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.4/37, mbtmp3.6/6, ML3.5/2, MS3.7/1, Ms1 3.7/1, ms1mx3.1/53, Error ellipse: s-maj=81.3km s-min=35.3km az=36.0*

*THE **26** 17:01:40.6, 38°.38N × 20°.47E, h10km, ML3.3/13, Error ellipse: s-maj=1.2km s-min=0.5km az=257.0*

*ATH **26** 17:01:40.4, 38°.38N × 20°.52E, h12km±3km, ML3.3/8, Error ellipse: s-maj=3.9km s-min=0.9km az=275.0*

ISC 26 17:01:40.1±0.9, 38°.38N±0'.02 × 20°.47E±0'.04, h11km±5km, n52, σ0§69/77, mb3.7/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.11**	**42**	P	**Pg**	**17 01 43.0**	**0.0**
FSK				S	**Sg**	**17 01 45.1**	**+0.1**
	24μm,0.2s						
FSK	**Fiskardo**	**0.11**	**42**	P	**Pg**	**17 01 43.0**	**0.0**
FSK				S	**Sg**	**17 01 44.7**	**-0.4**
VLS	**Valsamata**	**0.22**	**154**	P	**Pg**	**17 01 45.2**	**+0.4**
VLS				S	**Sg**	**17 01 49.1**	**+1.2**
	14μm,0.3s						
VLS	**Valsamata**	**0.22**	**154**	P	**Pg**	**17 01 44.7**	**-0.1**
VLS				S	**Sg**	**17 01 47.3**	**-0.6**
VLS				AML	AML	17 01 49.3	
	comp=E,29964μm,0.2s						
VLS				AML	AML	17 01 50.4	
	comp=N,25000μm,0.3s						
EVGI	**Lefkada island**	**0.28**	**31**	P	**Pg**	**17 01 46.3**	**+0.4**
EVGI				S	**Sg**	**17 01 50.9**	**+1.1**
EVGI	**Lefkada island**	**0.28**	**31**	P	**Pg**	**17 01 46.1**	**+0.2**
EVGI				S	**Sg**	**17 01 50.4**	**+0.7**
KFL	**Anninata**	**0.37**	**137**	P	**Pg**	**17 01 47.9**	**+0.5**
KFL				S	**Sg**	**17 01 52.6**	**+0.3**
	comp=N,8μm,0.3s						
KFL	**Anninata**	**0.37**	**137**	P	**Pg**	**17 01 47.8**	**+0.5**
KFL				S	**Sg**	**17 01 52.8**	**+0.4**
KFL				AML	AML	17 01 55.4	
	comp=E,20201μm,0.3s						
KFL				AML	AML	17 01 56.0	
	comp=N,12837μm,0.3s						
MGNA	**Meganis**	**0.38**	**42**	P	**Pg**	**17 01 47.6**	**0.0**
MGNA				S	**Sg**	**17 01 52.0**	**-0.6**
MGNA				AML	AML	17 01 54.3	
	comp=N,16104μm,0.2s						
MGNA				AML	AML	17 01 55.2	
	comp=E,9860μm,0.3s						
LKD2	**Lefkada island**	**0.44**	**20**	P	**Pg**	**17 01 48.7**	**0.0**
LKD2				S	**Sg**	**17 01 55.8**	**+1.3**
	comp=E,3μm,0.5s						
LKD2	**Lefkada island**	**0.44**	**20**	P	**Pg**	**17 01 48.6**	**-0.2**
LKD2				S	**Sg**	**17 01 54.9**	**+0.4**
LKD2				AML	AML	17 02 01.0	
	comp=E,5042μm,0.5s						
LKD2				AML	AML	17 02 02.0	
	comp=N,6702μm,0.5s						
TSLK	**Tsoukalades, L**	**0.47**	**18**	P	**Pg**	**17 01 49.5**	**+0.1**
TSLK				S	**Sb**	**17 01 57.3**	**0.0**
	comp=N,4μm,0.6s						
TSLK	**Tsoukalades, L**	**0.47**	**18**	P	**Pg**	**17 01 49.4**	**+0.1**
TSLK				S	**Sg**	**17 01 56.1**	**+0.5**
TSLK				AML	AML	17 02 00.9	
	comp=E,9308μm,0.4s						
TSLK				AML	AML	17 02 01.5	
	comp=N,6432μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.52**	**163**	P	**Pg**	**17 01 50.6**	**+0.3**
VLMS				S	**Sg**	**17 01 57.8**	**+0.6**
VLMS				AML	AML	17 01 59.9	
	comp=N,34967μm,0.5s						
VLMS				AML	AML	17 02 03.3	
	comp=E,16167μm,0.2s						
RLS	**Riolos of Patr**	**0.85**	**112**	P	**Pg**	**17 01 56.5**	**0.0**
RLS				S	**Sb**	**17 02 08.8**	**+0.6**
	comp=E,742nm,0.5s						
RLS	**Riolos of Patr**	**0.85**	**112**	P	**Pg**	**17 01 56.5**	**0.0**
PVO	**Paravola**	**0.86**	**74**	P	**Pg**	**17 01 57.2**	**+0.5**
PVO				S	**Sb**	**17 02 09.1**	**+0.5**
	comp=E,3μm,0.4s						
PVO	**Paravola**	**0.86**	**74**	P	**Pg**	**17 01 57.0**	**+0.3**
PVO				S	**Sg**	**17 02 07.7**	**-0.4**
PVO				AML	AML	17 02 15.6	
	comp=E,4548μm,0.4s						
PVO				AML	AML	17 02 19.1	
	comp=N,6663μm,0.5s						
DRO	**Drossia**	**1.07**	**113**	P	**Pg**	**17 02 00.8**	**+0.2**
DRO				S	**Sn**	**17 02 16.5**	**+0.7**
	comp=N,3μm,0.4s						
DRO	**Drossia**	**1.07**	**113**	P	**Pg**	**17 02 00.2**	**-0.5**
EFP	**Efpalio**	**1.13**	**87**	P	**Pb**	**17 02 01.2**	**-0.4**
EFP				S	**Sb**	**17 02 17.2**	**+0.8**
	comp=N,2μm,0.6s						
EFP	**Efpalio**	**1.13**	**87**	P	**Pb**	**17 02 00.9**	**-0.7**
EFP				S	**Sb**	**17 02 17.1**	**+0.8**
EFP				AML	AML	17 02 24.4	
	comp=E,5324μm,0.7s						
EFP				AML	AML	17 02 24.8	
	comp=N,3833μm,0.4s						
IGT	**Igoumenitsa**	**1.16**	**355**	P	**Pb**	**17 02 01.8**	**-0.3**
IGT				S	**Sg**	**17 02 18.0**	**+0.6**
	comp=N,798nm,0.3s						
EVR	**Evrytania**	**1.18**	**62**	P	**Pb**	**17 02 02.2**	**-0.3**
EVR				S	**Sn**	**17 02 19.4**	**+0.7**
	comp=N,595nm,0.8s						
EVR	**Evrytania**	**1.18**	**62**	P	**Pb**	**17 02 02.1**	**-0.4**
LAKA	**Lakka**	**1.20**	**96**	P	**Pb**	**17 02 02.4**	**-0.4**
LAKA				S	**Sn**	**17 02 19.4**	**+0.4**
LAKA	**Lakka**	**1.20**	**96**	P	**Pb**	**17 02 02.3**	**-0.5**
SERG	**Sergoula**	**1.25**	**88**	P	**Pn**	**17 02 03.2**	**-0.3**
SERG				S	**Sn**	**17 02 21.6**	**+1.3**
	comp=N,1μm,0.6s						
SERG	**Sergoula**	**1.25**	**88**	P	**Pn**	**17 02 02.8**	**-0.7**
TRIZ	**Trizonia**	**1.26**	**90**	P	**Pn**	**17 02 03.3**	**-0.4**
TRIZ				S	**Sn**	**17 02 22.2**	**+1.7**
TRIZ	**Trizonia**	**1.26**	**90**	P	**Pn**	**17 02 03.2**	**-0.4**
AMT	**Artemida-Makis**	**1.29**	**130**	P	**Pb**	**17 02 05.0**	**+0.6**
JAN	**Janina**	**1.31**	**13**	P	**Pg**	**17 02 05.5**	**+0.2**
JAN				S	**Sg**	**17 02 23.5**	**+1.2**
	comp=N,905nm,0.4s						
KALE	**Kalithea**	**1.31**	**89**	P	**Pn**	**17 02 03.9**	**-0.5**
KALE	**Kalithea**	**1.31**	**89**	P	**Pn**	**17 02 03.9**	**-0.5**
KLV	**Kalavryta, Ach**	**1.37**	**104**	P	**Pn**	**17 02 05.3**	**+0.2**
KLV				S	**Sn**	**17 02 23.9**	**+0.6**
KLV	**Kalavryta, Ach**	**1.37**	**104**	P	**Pn**	**17 02 05.1**	**0.0**
MAKR	**Makrakomi, Fth**	**1.45**	**64**	P	**Pb**	**17 02 07.3**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.45**	**64**	P	**Pn**	**17 02 06.9**	**+0.6**
AGG	**Agios Georgios**	**1.59**	**66**	P	**Pn**	**17 02 09.0**	**+0.8**
AGG	**Agios Georgios**	**1.59**	**66**	P	**Pb**	**17 02 09.5**	**-0.1**
THL	**Klokotos Trika**	**1.69**	**45**	P	**Pn**	**17 02 10.8**	**+1.3**
OHR	**Ohrid**	**2.74**	**5**	*i* Pn	**Pn**	**17 02 25.6**	**+1.6**
STIP	**Stip**	**3.56**	**21**	*i* Pn	**Pb**	**17 02 41.3**	**-1.8**
IDI	**Anoyia**	**4.70**	**130**	LR	LR	17 05 10.9	
	comp=N,783nm,19.4s,baz=184,slow=47						
MLR	**Muntele Rosu**	**8.19**	**28**	Pn	Pn	17 03 45.2	+6.3
	comp=N,0.1nm,0.3s,baz=222,slow=12,SNR=3.5						
GBRS	**Gornja Briga**	**8.29**	**331**	*i* Pn	**Pn**	**17 03 40.5**	**+0.2**
GERES	**GERESS Array B**	**11.55**	**337**	Pn	**Pn**	**17 04 24.5**	**-0.4**
	comp=N,0.1nm,0.3s,baz=154,slow=14,SNR=2.7						
HFS	**Hagfors**	**22.20**	**351**	P	**P**	**17 06 36.6**	**+0.5**
	comp=N,3.3nm,0.9s,baz=159,slow=8.5,SNR=4.4						
FINES	**FINESS Array B**	**23.35**	**7**	P	**P**	**17 06 47.2**	**-0.9**
	comp=N,0.9nm,0.5s,baz=184,slow=11,SNR=7.6						
MKAR	**Makanchi Array**	**45.23**	**59**	P	**P**	**17 09 55.8**	**-1.4**
	comp=N,0.2nm,0.4s,baz=276,slow=7.3,SNR=5.8						
ZALV	**Zalesovo Beam**	**45.59**	**48**	P	**P**	**17 09 58.6**	**-1.3**
	comp=N,0.4nm,0.3s,baz=280,slow=8.6,SNR=2.8						

*THE **26** 17:08:47.9, 38°.26N × 20°.34E, h2km±22km, ML3.8/4, Error ellipse: s-maj=22.2km s-min=0.6km az=0.0*

*ATH **26** 17:08:48.7, 38°.28N × 20°.44E, h14km±1km, ML3.4/10, Error ellipse: s-maj=1.8km s-min=0.6km az=80.0*

*IDC **26** 17:08:51.9±3.7, 38°.42N × 20°.39E, h39km±26km, mb3.4/5, mb1 3.5/8, mb1mx3.3/35, mbtmp3.6/8, ML3.1/3, Error ellipse: s-maj=44.8km s-min=24.0km az=40.0*

ISC 26 17:08:48.9±0.8, 38°.28N±0'.02 × 20°.47E±0'.03, h15km±5km, n53, σ1§02/71, mb3.7/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.14**	**138**	P	**Pg**	**17 08 52.2**	**-0.4**
VLS				S	**Sg**	**17 08 55.2**	**+0.1**
	64μm,0.3s						
VLS	**Valsamata**	**0.14**	**138**	P	**Pg**	**17 08 52.2**	**-0.4**
VLS				S	**Sg**	**17 08 55.3**	**+0.1**
VLS				AML	AML	17 08 55.4	
VLS				AML	AML	17 08 55.6	
	comp=E,94618μm,0.1s						
FSK	**Fiskardo**	**0.19**	**22**	P	**Pg**	**17 08 53.2**	**-0.2**
FSK				S	**Sg**	**17 08 56.7**	**+0.3**
	comp=E,23μm,0.1s						
FSK	**Fiskardo**	**0.19**	**22**	P	**Pg**	**17 08 53.2**	**-0.2**
FSK				S	**Sb**	**17 08 57.2**	**-0.4**
KFL	**Anninata**	**0.30**	**124**	P	**Pg**	**17 08 55.2**	**0.0**
KFL				S	**Sb**	**17 09 00.8**	**0.0**
	comp=E,26μm,0.3s						
KFL	**Anninata**	**0.30**	**124**	P	**Pg**	**17 08 55.2**	**0.0**
KFL				S	**Sb**	**17 09 00.8**	**0.0**
KFL				AML	AML	17 09 01.5	
	comp=E,71617μm,0.3s						
KFL				AML	AML	17 09 01.9	
	comp=N,32987μm,0.3s						
EVGI	**Lefkada island**	**0.37**	**23**	P	**Pg**	**17 08 56.3**	**-0.1**
EVGI				S	**Sb**	**17 09 02.6**	**-0.2**
EVGI	**Lefkada island**	**0.37**	**23**	P	**Pg**	**17 08 56.6**	**+0.2**
EVGI				S	**Sb**	**17 09 02.6**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.43**	**159**	P	**Pg**	**17 08 57.3**	**-0.2**
VLMS				S	**Sb**	**17 09 04.6**	**0.0**
VLMS				AML	AML	17 09 05.3	
	comp=E,40559μm,0.2s						
VLMS				AML	AML	17 09 06.6	
	comp=N,53566μm,0.5s						
MGNA	**Meganis**	**0.45**	**34**	P	**Pg**	**17 08 57.8**	**0.0**
MGNA				S	**Sg**	**17 09 03.9**	**-0.1**
MGNA				AML	AML	17 09 06.5	
	comp=N,8098μm,0.1s						
MGNA				AML	AML	17 09 07.0	
	comp=E,7869μm,0.1s						
LKD2	**Lefkada island**	**0.53**	**16**	P	**Pg**	**17 08 58.9**	**-0.5**
LKD2	**Lefkada island**	**0.53**	**16**	P	**Pg**	**17 08 58.8**	**-0.5**
LKD2				S	**Sb**	**17 09 06.9**	**-0.5**
LKD2				AML	AML	17 09 16.1	
	comp=E,4929μm,0.3s						
LKD2				AML	AML	17 09 16.4	
	comp=N,4791μm,0.8s						
TSLK	**Tsoukalades, L**	**0.56**	**15**	P	**Pg**	**17 08 59.6**	**-0.4**
TSLK	**Tsoukalades, L**	**0.56**	**15**	P	**Pg**	**17 08 59.7**	**-0.3**
TSLK				S	**Sb**	**17 09 08.7**	**+0.4**
TSLK				AML	AML	17 09 15.7	
	comp=E,6125μm,0.6s						
TSLK				AML	AML	17 09 16.3	
	comp=N,5480μm,0.4s						
RLS	**Riolos of Patr**	**0.82**	**106**	P	**Pg**	**17 09 04.5**	**-0.2**
RLS	**Riolos of Patr**	**0.82**	**106**	P	**Pg**	**17 09 04.6**	**-0.1**
RLS				S	**Sn**	**17 09 16.8**	**-0.9**
RLS				AML	AML	17 09 25.5	
	comp=N,2509μm,0.5s						
RLS				AML	AML	17 09 25.5	
	comp=E,4132μm,0.5s						
PVO	**Paravola**	**0.89**	**68**	P	**Pn**	**17 09 06.5**	**-0.4**
PVO				S	**Sn**	**17 09 21.9**	**+2.3**
	comp=E,3μm,0.2s						
PVO	**Paravola**	**0.89**	**68**	P	**Pn**	**17 09 06.7**	**-0.3**
PVO				S	**Sn**	**17 09 19.4**	**-0.2**
PVO				AML	AML	17 09 23.0	
	comp=E,8158μm,0.3s						
PVO				AML	AML	17 09 23.1	
	comp=N,4466μm,0.2s						
DRO	**Drossia**	**1.03**	**108**	P	**Pb**	**17 09 08.0**	**-0.5**
ANX	**Ano Chora**	**1.18**	**74**	P	**Pg**	**17 09 11.6**	**0.0**
LAKA	**Lakka**	**1.19**	**92**	P	**Pb**	**17 09 11.2**	**+0.1**
EVR	**Evrytania**	**1.23**	**58**	P	**Pn**	**17 09 11.5**	**-0.1**
AMT	**Artemida-Makis**	**1.23**	**127**	P	**Pg**	**17 09 12.2**	**-0.5**
IGT	**Igoumenitsa**	**1.25**	**355**	P	**Pg**	**17 09 12.9**	**-0.1**
IGT				S	**Sg**	**17 09 30.2**	**+0.8**
IGT				AML	AML	17 09 38.6	
	comp=N,1177μm,0.4s						
IGT				AML	AML	17 09 40.1	
	comp=E,996μm,0.9s						
TRIZ	**Trizonia**	**1.26**	**86**	P	**Pb**	**17 09 12.5**	**+0.1**
JAN	**Janina**	**1.41**	**12**	P	**Pg**	**17 09 15.7**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.49**	**60**	P	**Pb**	**17 09 16.8**	**+0.5**
MAKR				S	**Sg**	**17 09 38.5**	**+1.6**
MAKR				AML	AML	17 09 44.8	
	comp=N,2054μm,0.9s						
MAKR				AML	AML	17 09 49.1	
	comp=E,3124μm,0.7s						
KASA	**Kassiopi**	**1.52**	**344**	P	**Pg**	**17 09 17.5**	**-0.6**
ITM	**Ithomi**	**1.59**	**133**	P	**Pg**	**17 09 18.9**	**-0.6**
DLFA	**Delphi**	**1.60**	**82**	P	**Pg**	**17 09 20.1**	**+0.4**
AGG	**Agios Georgios**	**1.63**	**62**	P	**Pg**	**17 09 20.0**	**-0.2**
PYL	**PYLOS**	**1.71**	**143**	P	**Pb**	**17 09 20.4**	**+0.3**
THL	**Klokotos Trika**	**1.76**	**43**	P	**Pb**	**17 09 21.4**	**+0.6**
KPRO	**Kipourio**	**1.81**	**22**	P	**Pb**	**17 09 22.1**	**+0.3**
LTK	**Loutraki**	**1.98**	**97**	P	**Pb**	**17 09 24.6**	**-0.1**
LKR	**Lokris**	**2.02**	**79**	P	**Pb**	**17 09 24.9**	**-0.4**
VIL2	**Platees**	**2.20**	**91**	P	**Pb**	**17 09 28.1**	**-0.4**
KZN	**Kozani**	**2.26**	**26**	P	**Pb**	**17 09 28.1**	**-1.3**
DID	**Didima**	**2.32**	**109**	P	**Pb**	**17 09 28.5**	**-1.9**
MRKA	**Markates**	**2.48**	**79**	P	**Pb**	**17 09 31.4**	**-1.8**
FNA	**Florina**	**2.59**	**15**	P	**Pn**	**17 09 32.2**	**+1.8**
VLY	**Voula,Athens**	**2.66**	**98**	P	**Pb**	**17 09 33.8**	**-2.4**
SG1	**Sgolgore (BA)**	**3.89**	**312**	*e* Pn	**Pn**	**17 09 48.6**	**+0.5**
SG1				Sn	**Sn**	**17 10 31.2**	**-2.4**
IDI	**Anoyia**	**4.64**	**129**	Pn	**Pn**	**17 10 01.9**	**+3.5**
	comp=E,0.6nm,0.3s,baz=326,slow=15,SNR=2.7						
IDI				Sn	**Sn**	**17 10 51.5**	**-0.6**
	comp=E,0.8nm,0.3s,baz=285,slow=20,SNR=3.8						
VAE	**Valguarnera**	**4.86**	**262**	Sn	**Sn**	**17 11 01.3**	**+3.7**
	comp=E,1.5nm,0.3s,baz=248,slow=22,SNR=4.6						
MLR	**Muntele Rosu**	**8.28**	**28**	Pn	**Pn**	**17 10 49.2**	**+0.7**
	comp=E,0.0nm,0.3s,baz=210,slow=14,SNR=2.6						
BRTR	**Keskin Array B**	**10.35**	**78**	Pn	Pn	17 11 25.2	+8.2
	comp=E,0.0nm,0.3s,baz=272,slow=12,SNR=2.7						
GERES	**GERESS Array B**	**11.64**	**337**	Pn	**Pn**	**17 11 34.4**	**-0.1**
	comp=E,0.1nm,0.3s,baz=162,slow=14,SNR=3.2						
HFS	**Hagfors**	**22.29**	**351**	P	**P**	**17 13 46.0**	**+0.6**
	comp=E,3.1nm,0.8s,baz=163,slow=10,SNR=3.5						
FINES	**FINESS Array B**	**23.45**	**7**	P	**P**	**17 13 56.0**	**-1.4**
	comp=E,2.2nm,0.9s,baz=170,slow=10,SNR=4.4						
MKAR	**Makanchi Array**	**45.28**	**58**	P	**P**	**17 17 05.2**	**-0.6**
	comp=E,0.3nm,0.5s,baz=275,slow=7.2,SNR=8.1						
ZALV	**Zalesovo Beam**	**45.65**	**48**	P	**P**	**17 17 08.2**	**-0.4**
	comp=E,1.5nm,0.5s,baz=272,slow=8.5,SNR=6.6						
YKA	**Yellowknife Ar**	**73.28**	**340**	P	**P**	**17 20 17.5**	**-1.7**
	comp=E,0.1nm,0.4s,baz=41,slow=5.7,SNR=2.4						

IDC 26 17:16:26.8±2.2, 2.77N × 128°.56E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/32, mbtmp3.6/4, Error ellipse: s-maj=168.5km s-min=25.2km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.28**	**166**	P	**P**	17 21 36.4	0.0
	0.9nm,0.4s,baz=345,slow=10.0,SNR=5.5						
ASAR	**Alice Springs**	**26.79**	**169**	P	**P**	17 22 08.2	-0.6
	0.2nm,0.6s,baz=348,slow=7.6,SNR=5.3						
STKA	**Stephens Creek**	**36.62**	**161**	P	**P**	17 23 34.7	-0.4
	2.4nm,1.1s,baz=331,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**59.38**	**325**	P	**P**	17 26 31.8	+0.7
	0.2nm,0.4s,baz=120,slow=8.0,SNR=4.2						

*ATH **26** 17:16:49.4, 38°.37N × 20°.36E, h22km±1km, ML3.2/9, Error ellipse: s-maj=2.4km s-min=1.1km az=85.0*

*THE **26** 17:16:52.2, 38°.36N × 20°.47E, h0km±4km, ML3.0/5, Error ellipse: s-maj=5.5km s-min=0.7km az=264.0*

*IDC **26** 17:16:53.9±5.0, 38°.63N × 20°.86E, h0km, mb3.6/4, mb1 3.6/5, mb1mx3.3/40, mbtmp3.7/5, ML2.6/1, MS3.9/1, Ms1 3.8/1, ms1mx2.9/51, Error ellipse: s-maj=104.9km s-min=26.2km az=58.0*

ISC 26 17:16:50.6±1.2, 38°.37N±0'.02 × 20°.38E±0'.05, h5km±8km, n49, σ1§15/61, mb3.6/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.17**	**57**	P	**Pg**	**17 16 54.3**	**+0.3**
FSK				S	**Sg**	**17 16 56.6**	**+0.4**
	16μm,0.5s						
FSK	**Fiskardo**	**0.17**	**57**	P	**Pg**	**17 16 54.4**	**+0.5**
FSK				S	**Sg**	**17 16 57.0**	**+0.8**
VLS	**Valsamata**	**0.25**	**140**	P	**Pg**	**17 16 55.8**	**+0.3**
VLS				S	**Sg**	**17 16 59.5**	**+0.7**
	9μm,0.1s						
VLS	**Valsamata**	**0.25**	**140**	P	**Pg**	**17 16 55.3**	**-0.2**
VLS				AML	AML	17 16 59.8	
	comp=N,19380μm,0.2s						
VLS				AML	AML	17 17 02.1	
	comp=E,15284μm,0.2s						
EVGI	**Lefkada island**	**0.33**	**40**	P	**Pg**	**17 16 57.6**	**+0.6**
EVGI				S	**Sg**	**17 17 02.7**	**+1.3**
EVGI	**Lefkada island**	**0.33**	**40**	P	**Pg**	**17 16 57.3**	**+0.3**
EVGI				S	**Sg**	**17 17 02.7**	**+1.3**
KFL	**Anninata**	**0.41**	**129**	P	**Pg**	**17 16 58.6**	**+0.1**
KFL				S	**Sg**	**17 17 04.7**	**+0.8**
	comp=E,6μm,0.3s						
KFL	**Anninata**	**0.41**	**129**	P	**Pg**	**17 16 57.8**	**-0.7**
KFL				S	**Sg**	**17 17 04.6**	**+0.8**
KFL				AML	AML	17 17 06.8	
	comp=N,8756μm,0.4s						
KFL				AML	AML	17 17 09.7	
	comp=E,16192μm,0.3s						
LKD2	**Lefkada island**	**0.47**	**27**	P	**Pb**	**17 17 01.0**	**-0.4**
LKD2				S	**Sb**	**17 17 07.7**	**-1.0**
	comp=E,2μm,0.4s						
LKD2	**Lefkada island**	**0.47**	**27**	P	**Pg**	**17 16 59.1**	**-0.6**
LKD2				S	**Sg**	**17 17 07.1**	**+1.3**
LKD2				AML	AML	17 17 09.3	
	comp=N,3450μm,0.3s						
LKD2				AML	AML	17 17 11.6	
	comp=E,3699μm,0.3s						
TSLK	**Tsoukalades, L**	**0.50**	**25**	P	**Pg**	**17 17 01.4**	**+1.1**
TSLK				S	**Sb**	**17 17 09.1**	**-0.5**
	comp=E,3μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.54**	**156**	P	**Pg**	**17 17 01.1**	**+0.1**
VLMS				S	**Sg**	**17 17 07.6**	**-0.4**
RLS	**Riolos of Patr**	**0.91**	**110**	P	**Pg**	**17 17 07.1**	**-1.0**
RLS				AML	AML	17 17 22.6	
	comp=N,1257μm,0.4s						
RLS				AML	AML	17 17 28.9	
	comp=E,1045μm,0.4s						
PVO	**Paravola**	**0.93**	**74**	P	**Pg**	**17 17 08.4**	**0.0**
DRO	**Drossia**	**1.12**	**111**	P	**Pg**	**17 17 11.5**	**-0.7**
DRO				AML	AML	17 17 34.1	
	comp=N,3471μm,0.4s						
DRO				AML	AML	17 17 42.1	
	comp=E,3163μm,0.6s						
IGT	**Igoumenitsa**	**1.16**	**358**	P	**Pg**	**17 17 13.8**	**+0.9**
IGT	**Igoumenitsa**	**1.16**	**358**	P	**Pb**	**17 17 11.2**	**-2.0**
EFP	**Efpalio**	**1.20**	**87**	P	**Pb**	**17 17 12.5**	**-1.3**
EFP				S	**Sn**	**17 17 29.9**	**-0.7**
EFP				AML	AML	17 17 39.1	
	comp=E,2367μm,0.5s						
EFP				AML	AML	17 17 41.4	
	comp=N,2437μm,0.8s						
ANX	**Ano Chora**	**1.23**	**79**	P	**Pb**	**17 17 13.1**	**-1.2**
ANX				AML	AML	17 17 38.8	
	comp=E,3751μm,0.6s						
ANX				AML	AML	17 17 40.2	
	comp=N,3563μm,0.6s						
EVR	**Evrytania**	**1.24**	**63**	P	**Pn**	**17 17 13.1**	**-1.7**
LAKA	**Lakka**	**1.26**	**95**	P	**Pn**	**17 17 14.0**	**-1.0**
SERG	**Sergoula**	**1.31**	**88**	P	**Pn**	**17 17 14.4**	**-1.3**
TRIZ	**Trizonia**	**1.33**	**90**	P	**Pn**	**17 17 14.4**	**-1.4**
JAN	**Janina**	**1.34**	**16**	P	**Pn**	**17 17 15.6**	**-0.4**
AMT	**Artemida-Makis**	**1.34**	**128**	P	**Pn**	**17 17 14.4**	**-1.6**
AMT				AML	AML	17 17 44.4	
	comp=E,1624μm,0.6s						
AMT				AML	AML	17 17 44.5	
	comp=N,1493μm,0.9s						
KALE	**Kalithea**	**1.38

FSK S **Sb** 17 22 48.8 -1.3
KFL Anninata 0.32 108 P **Pb** 17 22 44.7 -1.3
KFL S **Sb** 17 22 49.5 -1.7
46μm,0.4s
KFL Anninata 0.32 108 P **Pb** 17 22 44.8 -1.3
KFL S **Sb** 17 22 49.5 -1.7
KFL AML AML 17 22 50.0
comp=N,91904μm,0.4s
KFL AML AML 17 22 50.2
comp=E,92986μm,0.4s
VLMS Volimes, Zakyn 0.39 149 P **Pb** 17 22 46.1 -1.1
VLMS AML AML 17 22 53.1
comp=E,26309μm,0.2s
VLMS AML AML 17 22 58.6
comp=N,31616μm,0.3s
EVGI Lefkada island 0.46 25 P **Pb** 17 22 47.5 -0.9
EVGI S **Sb** 17 22 54.7 -0.5
EVGI Lefkada island 0.46 25 P **Pb** 17 22 47.5 -0.9
EVGI S **Sb** 17 22 54.6 -0.6
MGNA Meganis 0.54 34 P **Pb** 17 22 48.7 -1.0
MGNA S **Sb** 17 22 57.0 -0.6
MGNA AML AML 17 22 57.6
comp=E,61124μm,0.2s
MGNA AML AML 17 22 57.8
comp=N,51967μm,0.3s
LKD2 Lefkada island 0.61 19 P **Pb** 17 22 50.1 -0.9
LKD2 S **Sg** 17 22 57.1 -1.1
comp=N,6μm,0.5s
LKD2 Lefkada island 0.61 19 P **Pg** 17 22 49.7 -0.5
LKD2 S **Sb** 17 22 59.2 -0.5
TSLK Tsoukalades, L 0.65 18 P **Pg** 17 22 50.5 -0.3
TSLK S **Sg** 17 22 59.0 -0.2
comp=N,5μm,0.4s
TSLK Tsoukalades, L 0.65 18 P **Pb** 17 22 50.8 -0.8
TSLK S **Sb** 17 22 59.9 -0.7
TSLK AML AML 17 23 02.7
comp=E,10029μm,0.5s
TSLK AML AML 17 23 10.0
comp=N,11902μm,0.5s
RLS Riolos of Patr 0.85 100 P **Pb** 17 22 54.4 -0.7
RLS S **Sn** 17 23 07.0 -1.7
comp=N,3μm,0.4s
RLS Riolos of Patr 0.85 100 P **Pb** 17 22 54.4 -0.7
RLS S **Sb** 17 23 05.7 -0.8
RLS AML AML 17 23 09.6
comp=E,5264μm,0.5s
RLS AML AML 17 23 09.9
comp=N,6941μm,0.3s
PVO Paravola 0.97 65 P **Pn** 17 22 56.9 -1.0
PVO S **Sn** 17 23 12.2 +0.5
comp=N,6μm,0.3s
PVO Paravola 0.97 65 P **Pn** 17 22 57.0 -0.9
DRO Drossia 1.06 104 P **Pb** 17 22 58.2 -0.5
DRO S **Sn** 17 23 15.0 +1.0
comp=N,6μm,0.5s
DRO Drossia 1.06 104 P **Pn** 17 22 58.3 -0.8
EFP Efpalio 1.20 79 P **Pb** 17 23 00.1 -1.0
AMT Artemida-Makis 1.23 123 P **Pn** 17 23 01.5 0.0
LAKA Lakka 1.24 88 P **Pg** 17 23 01.0 -1.0
LAKA Lakka 1.24 88 P **Pg** 17 23 01.1 -1.0
LAKA S **Sn** 17 23 18.3 -0.1
ANX Ano Chora 1.25 72 P **Pg** 17 23 01.7 -0.6
ANX AML AML 17 23 25.2
comp=N,11965μm,0.5s
ANX AML AML 17 23 26.8
comp=E,5938μm,0.6s
EVR Evrytania 1.31 57 P **Pb** 17 23 02.2 -0.7
SERG Sergoula 1.31 81 P **Pn** 17 23 02.1 -0.6
SERG Sergoula 1.31 81 P **Pn** 17 23 01.8 -0.8
TRIZ Trizonia 1.32 83 P **Pn** 17 23 02.1 -0.6
TRIZ S **Sn** 17 23 22.5 +2.2
comp=E,4μm,0.4s
TRIZ Trizonia 1.32 83 P **Pn** 17 23 02.0 -0.6
TRIZ S **Sn** 17 23 21.9 +1.5
ALIK Aliki, Aigiali 1.34 87 P **Pb** 17 23 02.8 -0.7
KALE Kalithea 1.38 82 P **Pn** 17 23 03.1 -0.4
KALE S **Sg** 17 23 22.7 +0.1
KLV Kalavryta, Ach 1.39 96 P **Pg** 17 23 03.8 -1.1
KLV S **Sg** 17 23 25.3 +2.5
comp=E,1μm,0.5s
KLV Kalavryta, Ach 1.39 96 P **Pb** 17 23 03.6 -0.6
KLV S **Sg** 17 23 23.1 +0.3
MAKR Makrakomi, Fth 1.57 59 P **Pg** 17 23 07.4 -1.1
ITM Ithomi 1.58 130 P **Pb** 17 23 07.1 -0.5
ITM Ithomi 1.58 130 **Pg** 17 23 07.9 -0.8
DLFA Delphi 1.67 80 P **Pg** 17 23 09.5 -0.7
AGG Agios Georgios 1.71 61 **Pg** 17 23 11.4 +0.3
AGG Sn **Sg** 17 23 37.5 +4.2
AXAR Agios Charalam 1.85 72 P **Pb** 17 23 12.0 -0.2
LKR Lokris 2.08 77 P **Pb** 17 23 15.1 -1.0
LKR AML AML 17 23 49.4
comp=N,677μm,0.3s
LKR AML AML 17 23 49.5
comp=E,783μm,0.3s
DID Didima 2.35 107 P **Pb** 17 23 19.1 -1.5
SCTE Santa Cesarea 2.39 322 Pn **Pn** 17 23 16.8 -0.6
SCTE Sn **Sn** 17 23 47.8 +1.0
LIT Litokhoron 2.49 40 **Pg** 17 23 23.7 +0.6
MRKA Markates 2.55 78 P **Pn** 17 23 20.9 +1.3
FNA Florina 2.68 16 Pn **Pb** 17 23 23.9 -2.4
TIP Timpagrande 3.01 290 **Pn** 17 23 27.1 +1.1
TIP Sn **Sn** 17 24 03.4 +1.1
TIR Tirane 3.16 353 Pn **Pn** 17 23 27.8 -0.2
CEL Celeste 3.55 272 Pn **Pn** 17 23 34.0 +0.5
IDI Anoyia 4.63 128 Pn **Pn** 17 23 49.9 +1.6
comp=E,0.3nm,0.3s,baz=301,slow=18,SNR=1.8
IDI Sn **Sn** 17 24 43.8 +1.7
comp=E,2.4nm,0.3s,baz=117,slow=22,SNR=4.1
SGRT San Giovanni R 5.04 316 Pn **Pn** 17 23 54.0 +0.1
INTR Introdacqua 6.26 309 Pn **Pn** 17 24 11.2 +0.5
MRCA Norcia 7.22 312 **Pn** 17 24 25.0 +1.1
MURB Monte Urbino 7.83 313 Pn **Pn** 17 24 35.5 +3.3
MLR Muntele Rosu 8.37 28 Pn 17 24 46.8 +7.2
GBRS Gornja Briga 8.42 332 *i* Pn **Pn** 17 24 40.9 +0.6
SOKA Soboth 9.35 337 *e*Pn **Pn** 17 24 52.4 -0.6
comp=E,3.4nm,0.5s
OBKA Obir 9.36 334 *e*Pn **Pn** 17 24 54.0 +0.8
comp=E,1.7nm,0.2s
TEOL Teolo 9.67 320 Pn **Pn** 17 24 56.6 -0.7
ARSA Arzberg 9.72 340 Pn **Pn** 17 24 58.1 0.0
comp=E,1.1nm,0.3s
MYKA Terra Mystica 9.78 331 *e*Pn **Pn** 17 24 59.1 +0.1
comp=E,1.7nm,0.6s
CTI Castel Tesino 10.17 323 Pn **Pn** 17 25 03.4 -1.0
ABTA Abfaltersbach 10.33 328 *e*Pn **Pn** 17 25 07.5 +1.1
comp=E,1.6nm,0.5s
VYHS Vyhne 10.34 354 *e*PN **Pn** 17 25 09.1 +2.5
VYHS *e*SN **Sn** 17 27 00.2 -2.3
BRTR Keskin Array B 10.42 78 Pn Pn 17 25 13.1 +5.4
comp=E,0.1nm,0.3s,baz=281,slow=9.4,SNR=3.2
MOA Molln 10.63 337 Pn **Pn** 17 25 10.5 0.0
comp=E,1.8nm,0.3s
DAVOX **Davos/Dischmat 11.55 321** Pn **Pn** 17 25 22.5 -0.8
baz=135,slow=5.7,SNR=1.6
GERES **GERESS Array B 11.69 338** Pn **Pn** 17 25 24.1 -1.0
comp=E,0.2nm,0.3s,baz=158,slow=13,SNR=5.8
KHC Kasperske Hory 11.98 338 *e*PN **Pn** 17 25 28.0 -1.0
KHC Kasperske Hory 11.98 338 Pn **Pn** 17 25 27.2 -1.7
OJC Ojcow 12.02 358 Pn **Pn** 17 25 29.4 -0.1
SENIN Lac Senin/Sane 12.66 314 Pn **Pn** 17 25 40.1 +1.7
GRA1 Grafenberg Arr 13.23 333 Pn **Pn** 17 25 49.6 +3.5
HFS Hagfors 22.36 351 P **P** 17 27 37.8 +1.7
comp=E,1.9nm,0.7s,baz=165,slow=13,SNR=5.3
FINES **FINESS Array B 23.53 7** P **P** 17 27 49.3 +1.1
comp=E,1.3nm,0.6s,baz=179,slow=8.5,SNR=7.2
NOA NORSAR Array B 23.57 349 P **P** 17 27 49.4 +0.7
comp=E,0.8nm,0.7s,baz=159,slow=8.4,SNR=3.1
MK31 Makanchi Array 45.36 58 P **P** 17 30 56.3 -0.3
MK31 IAmb IAmb 17 31 09.8
comp=Z,1.0nm,1.0s
MKAR Makanchi Array 45.36 58 P **P** 17 30 56.2 -0.3
comp=Z,0.7nm,0.4s,baz=271,slow=11,SNR=10
ZAA0 Zalesovo Array 45.74 48 P **P** 17 30 58.6 -0.7
ZAA0 IAmb IAmb 17 30 59.4
comp=Z,2.2nm,0.7s
ZALV Zalesovo Beam 45.74 48 P **P** 17 30 58.9 -0.5
comp=Z,1.8nm,0.4s,baz=271,slow=8.9,SNR=7.2
CMAR Chiang Mai Arr 69.97 82 P **P** 17 33 50.1 0.0
comp=Z,0.2nm,0.3s,baz=323,slow=7.1,SNR=4.1

IDC 26 17:24:30.0±4.2, 38°17N×19°97E, h39km±33km, mb3.4/3, mb1 3.5/5, mb1mx3.2/41, mbtmp3.5/5, ML3.5/1, Error ellipse: s-maj=75.5km s-min=27.3km az=41.0, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
IDI	**Anoyia**	**4.88**	**125**	Pn		Pn	Pn	17 25 40.9	0.0
	baz=328,slow=15,SNR=1.8								
IDI				Sn		Sn	Sn	17 26 32.0	-4.2
	1.3nm,0.3s,baz=358,slow=9.5,SNR=3.8								
BRTR	**Keskin Array B**	**10.76**	**77**	Pn		Pn	Pn	17 27 07.9	+6.3
	0.0nm,0.3s,baz=267,slow=14,SNR=2.4								
GERES	**GERESS Array B**	**11.60**	**339**	Pn		Pn	Pn	17 27 14.1	+1.2
	0.1nm,0.3s,baz=162,slow=14,SNR=3.0								
MKAR	**Makanchi Array**	**45.67**	**58**	P		P	P	17 32 46.4	-0.4
	0.7nm,0.5s,baz=272,slow=7.1,SNR=5.8								
ZALV	**Zalesovo Beam**	**46.02**	**48**	P		P	P	17 32 49.5	+0.2
	1.6nm,0.6s,baz=270,slow=9.4,SNR=5.2								
YKA	**Yellowknife Ar**	**73.25**	**340**	P		P	P	17 35 56.7	0.0
	0.1nm,0.3s,baz=50,slow=5.2,SNR=2.9								

*TAP **26** 17:26:43.9, 23°.82N×122°.09E, h31km, ML2.8, D*
*JMA **26** 17:26:43.5±0.1, 23°.82N×122°.09E, h31km±3km, M2.6*
ISC 26 17:26:43.6±1.0, 23°.81N±0°.03×122°.09E±0°.03, h30km±10km, n60, σ0°.38/98, 3D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
ENLB	**Shoufeng**	**0.45**	**282**	*e*P		**Pb**		**17 26 52.9**	**-0.3**
	baz=280								
ENLB				*e*S		**Sn**		**17 27 01.1**	**0.0**
	baz=280								
HWA	**Hwalien**	**0.47**	**291**	*e*P		**Pb**		**17 26 53.8**	**+0.3**
	baz=289								
TWD	**Chiawan**	**0.52**	**301**	⇓*i*P		**Pb**		**17 26 54.3**	**-0.1**
	baz=300								
TWD				*i* S		**Sb**		**17 27 02.0**	**+0.2**
	baz=300								
NACB	**Ninganchiao**	**0.58**	**309**	*e*P		**Pb**		**17 26 54.9**	**-0.4**
	baz=308								
NACB				*e*S		**Sb**		**17 27 03.0**	**-0.3**
	baz=308								
ESL	**Shilin**	**0.60**	**270**	⇓*i*P		**Pb**		**17 26 55.5**	**-0.2**
	baz=269								
ESL				S		**Sb**		**17 27 04.1**	**+0.2**
	baz=269								
EGFH	**Guangfu**	**0.62**	**257**	*e*P		**Pn**		**17 26 56.6**	**+0.3**
	baz=256								
EGFH				*e*S		**Sn**		**17 27 05.8**	**+0.6**
	baz=256								
ETLH	**Xiulin Townshi**	**0.68**	**306**	*e*P		**Pb**		**17 26 56.6**	**-0.5**
	baz=304								
ETLH				*e*S		**Sb**		**17 27 06.0**	**-0.2**
	baz=304								
HGSD	**Ruisui**	**0.69**	**243**	*i* P		**Pb**		**17 26 57.2**	**+0.1**
	baz=242								
NANB	**Nanao**	**0.69**	**333**	*i* P		**Pb**		**17 26 56.9**	**-0.3**
	baz=332								
NANB				S		**Sn**		**17 27 06.8**	**-0.1**
	baz=332								
ENA	**Nanau**	**0.69**	**333**	*i* P		**Pb**		**17 26 56.9**	**-0.3**
	baz=332								
ENA				*i* S		**Sb**		**17 27 06.7**	**+0.2**
	baz=332								
EOS1	**EOS1**	**0.74**	**3**	*e*P		**Pb**		**17 26 58.6**	**+0.7**
	baz=2.0								
EOS1				*e*S		**Sn**		**17 27 08.2**	**+0.1**
	baz=2.0								
EHY	**Hungye**	**0.76**	**247**	P		**Pb**		**17 26 58.4**	**0.0**
	baz=245								
WHF	**Hehuan Shan**	**0.82**	**294**	P		**Pn**		**17 26 59.1**	**-0.4**
	baz=293								
WHF				S		**Sb**		**17 27 10.1**	**-0.5**
	baz=293								
TWC	**Suao**	**0.82**	**345**	*e*P		**Pn**		**17 26 59.2**	**+0.1**
	baz=345								
TWC				S		**Sn**		**17 27 10.4**	**+0.1**
	baz=345								
YULB	**Yu-li**	**0.83**	**240**	*i* P		**Pn**		**17 26 59.5**	**+0.2**
	baz=239								
YULB				*e*S		**Sb**		**17 27 10.5**	**0.0**
	baz=239								
OWD	**Renai**	**0.84**	**280**	*e*P		**Pn**		**17 26 59.7**	**+0.1**
	baz=279								
OWD				*e*S		**Sb**		**17 27 10.6**	**-0.3**
	baz=279								
TWF1	**Yuli**	**0.86**	**238**	*e*P		**Pb**		**17 27 00.0**	**+0.1**
	baz=237								
TWF1				*i* S		**Sb**		**17 27 11.4**	**+0.3**
	baz=237								
VWDT	**VWDT**	**0.87**	**266**	*e*P		**Pb**		**17 27 00.2**	**+0.1**
	baz=265								
VWDT				*e*S		**Sb**		**17 27 11.8**	**+0.3**
	baz=265								
CHGB	**Renai**	**0.87**	**287**	⇓*i*P		**Pn**		**17 26 59.9**	**-0.1**
	baz=286								
CHGB				*i* S		**Sb**		**17 27 11.5**	**-0.2**
	baz=286								
NNSB	**Datong**	**0.89**	**314**	P		**Pn**		**17 27 00.2**	**0.0**
	baz=313								
NNSB				*e*S		**Sb**		**17 27 12.2**	**0.0**
	baz=313								
NNSH	**Datong**	**0.89**	**314**	*i* P		**Pn**		**17 27 00.1**	**-0.1**
	baz=313								
NNSH				S		**Sn**		**17 27 12.0**	**0.0**
	baz=313								
NNS	**Nan Shan**	**0.90**	**314**	*i* P		**Pn**		**17 27 00.1**	**-0.2**
	baz=313								
NNS				S		**Sn**		**17 27 12.2**	**-0.2**
	baz=313								
TWT	**Tachien**	**0.94**	**298**	*e*P		**Pb**		**17 27 01.4**	**-0.1**
	baz=296								
TWT				*e*S		**Sb**		**17 27 13.7**	**0.0**
	baz=296								
NDT	**Datong Townshi**	**0.95**	**327**	P		**Pn**		**17 27 01.0**	**+0.2**
	baz=326								
NDT				*i* S		**Sn**		**17 27 13.5**	**+0.2**
	baz=326								
FULB	**Fuli**	**0.95**	**230**	*e*P		**Pn**		**17 27 00.8**	**-0.1**
	baz=229								
FULB				*e*S		**Sb**		**17 27 13.7**	**-0.1**
	baz=229								
ENTT	**Nioudou**	**0.95**	**330**	*i* P		**Pn**		**17 27 01.0**	**+0.1**
	baz=330								
ENTT				*i* S		**Sn**		**17 27 13.4**	**-0.1**
	baz=330								
TDCB	**Techi**	**0.96**	**298**	*e*P		**Pb**		**17 27 01.4**	**-0.3**
	baz=296								
TDCB				*e*S		**Sn**		**17 27 13.6**	**-0.2**
	baz=296								
CHKT	**Chengkung**	**0.97**	**223**	*e*S		**Sn**		**17 27 12.8**	**-1.0**
	baz=222								
TWE	**Neicheng**	**0.98**	**337**	*i* P		**Pn**		**17 27 01.4**	**+0.1**
	baz=337								
TWE				*i* S		**Sn**		**17 27 14.2**	**+0.1**
	baz=337								
SLBB	**Yuanshan**	**1.02**	**336**	*e*P		**Pn**		**17 27 01.2**	**-0.7**
	baz=336								
SSLB	**Suanglung**	**1.04**	**269**	*e*P		**Pb**		**17 27 02.6**	**-0.4**
	baz=268								
SSLB				*e*S		**Sn**		**17 27 15.9**	**+0.3**
	baz=268								
YHNB	**Yeheng**	**1.07**	**323**	P		**Pn**		**17 27 02.8**	**+0.2**
	baz=322								
YHNB				*i* S		**Sn**		**17 27 16.5**	**-0.1**
	baz=322								
DPDB	**Guoxing**	**1.08**	**282**	*e*P		**Pb**		**17 27 03.5**	**-0.3**
	baz=281								
NSK	**Sanguang**	**1.09**	**322**	*e*P		**Pn**		**17 27 03.0**	**+0.2**
	baz=322								
NSK				S		**Sn**		**17 27 16.6**	**-0.2**
	baz=322								
SMLT	**Sun Moon Lake**	**1.09**	**274**	*e*P		**Pb**		**17 27 03.6**	**-0.3**
	baz=273								
SMLT				*e*S		**Sn**		**17 27 17.4**	**+0.4**
	baz=273								
YUS	**Yu-Shan**	**1.09**	**253**	*e*P		**Pb**		**17 27 04.2**	**+0.1**
	baz=252								
YUS				*e*S		**Sn**		**17 27 17.5**	**0.0**
	baz=252								
NWLT	**Wulai**	**1.10**	**331**	*e*P		**Pn**		**17 27 03.3**	**+0.3**
	baz=330								
NWLT				*i* S		**Sn**		**17 27 17.2**	**+0.1**
	baz=330								
TYC	**Yuchr**	**1.13**	**275**	*e*P		**Pb**		**17 27 04.0**	**-0.5**
	baz=274								
WHYT	**Xinyi Township**	**1.14**	**264**	*e*P		**Pb**		**17 27 04.4**	**-0.2**
	baz=263								
WHP	**Taichung City**	**1.14**	**294**	*e*P		**Pb**		**17 27 05.0**	**+0.2**
	baz=293								
ELDTW	**Lidau**	**1.16**	**238**	*e*P		**Pn**		**17 27 04.0**	**+0.1**
	baz=237								
TIPB	**Shuangxi**	**1.18**	**348**	*e*P		**Pb**		**17 27 04.8**	**-0.7**
	baz=348								
TIPB				*e*S		**Sn**		**17 27 19.6**	**+0.5**
	baz=348								
ALS	**Alishan**	**1.21**	**256**	*e*P		**Pb**		**17 27 05.9**	**-0.2**
	baz=255								
WJS	**Zhushan**	**1.24**	**271**	*e*P		**Pb**		**17 27 06.5**	**+0.1**
	baz=270								
LIOB	**Emei**	**1.28**	**311**	*e*P		**Pb**		**17 27 07.1**	**-0.1**
	baz=310								
NSTT	**Nanjuang**	**1.28**	**310**	*e*P		**Pb**		**17 27 07.0**	**-0.2**
	baz=309								
WFSB	**Wu-fen Shan**	**1.28**	**348**	S		**Sn**		**17 27 21.8**	**+0.2**
	baz=347								
WNT	**Mingjian**	**1.28**	**273**	*e*P		**Pb**		**17 27 07.5**	**+0.4**
	baz=272								
CHN5	**Tsauling**	**1.31**	**261**	*e*P		**Pb**		**17 27 07.7**	**+0.1**
	baz=260								
TWQ1	**Liyutan**	**1.31**	**294**	*e*P		**Pb**		**17 27 07.7**	**+0.1**
	baz=293								
YM10	**YM10**	**1.42**	**340**	*e*P		**Pn**		**17 27 08.0**	**+0.6**
	baz=340								
WCHH	**Zhanghua**	**1.42**	**281**	*e*P		**Pb**		**17 27 09.3**	**-0.2**
	baz=280								
YM04	**YM04**	**1.43**	**340**	*e*P		**Pn**		**17 27 08.0**	**+0.6**
	baz=339								
YM04				S		**Sn**		**17 27 25.3**	**+0.1**
	baz=339								
YM05	**YM05**	**1.43**	**341**	*e*P		**Pn**		**17 27 08.0**	**+0.5**
	baz=340								
YM05				S		**Sn**		**17 27 25.4**	**+0.1**
	baz=340								
YM08	**YM08**	**1.44**	**342**	*e*S		**Sn**		**17 27 25.9**	**+0.2**
	baz=341								
IRIF	**Iriomote-Funau**	**1.59**	**71**	P		**Pn**		**17 27 10.1**	**+0.5**
IRIF				*e*S		**Sn**		**17 27 29.4**	**+0.2**
JKRS	**Kuro-shima**	**1.81**	**76**	P		**Pn**		**17 27 13.5**	**+0.9**
JKRS				S		**Sn**		**17 27 35.0**	**+0.4**
JIJ	**Ishigaki jima**	**1.96**	**73**	P		**Pn**		**17 27 14.6**	**-0.1**
JIJ				S		**Sn**		**17 27 37.1**	**-1.2**
JISG	**Ishigakijimahi**	**2.17**	**69**	P		**Pn**		**17 27 17.7**	**0.0**
JISG				*e*S		**Sn**		**17 27 41.8**	**-1.8**
JTJ	**Tarama**	**2.53**	**70**	S		**Sn**		**17 27 52.4**	**+0.1**

IDC 26 17:39:13.4±8.8, 38°17N×19°90E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.4/42, mbtmp3.7/4, Error ellipse: s-maj=181.4km s-min=54.2km az=59.0, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
IDI	**Anoyia**	**4.93**	**124**	Sn		Sn	Sn	17 41 22.8	-3.8
	1.2nm,0.3s,baz=269,slow=23,SNR=2.8								
FINES	**FINESS Array B**	**23.62**	**7**	P		P	P	17 44 25.8	0.0
	2.8nm,1.0s,baz=174,slow=9.4,SNR=3.9								
MKAR	**Makanchi Array**	**45.72**	**58**	P		P	P	17 47 36.2	0.0
	0.3nm,0.5s,baz=273,slow=7.9,SNR=6.9								
ZALV	**Zalesovo Beam**	**46.06**	**48**	P		P	P	17 47 38.5	-0.2
	1.0nm,0.4s,baz=279,slow=8.9,SNR=5.3								
CMAR	**Chiang Mai Arr**	**70.37**	**82**	P		P	P	17 50 29.5	0.0
	0.3nm,0.7s,baz=309,slow=5.7,SNR=3.5								

*IDC **26** 17:45:14.7±0.8, 38°.33N×20°.46E, h0km, mb3.9/12, mb1 3.9/18, mb1mx3.7/57, mbtmp3.8/18, ML3.8/5, MS3.6/1, Ms1 3.6/1, ms1mx2.8/44, Error ellipse: s-maj=17.0km s-min=13.1km az=10.0*
*THE **26** 17:45:15.4, 38°.21N×20°.34E, h2km±4km, ML3.9/7, Error ellipse: s-maj=6.1km s-min=0.4km az=247.0*
*NEIC **26** 17:45:16.9±3.5, 38°.19N±0°.04×20°.35E±0°.05, h10km±1km, Error ellipse: s-maj=7.4km s-min=4.4km az=224.0*
*ATH **26** 17:45:16.2, 38°.23N×20°.44E, h13km±1km, ML3.8/9, Error ellipse: s-maj=2.6km s-min=0.9km az=82.0*
ISC 26 17:45:16.0±0.9, 38°.24N±0°.02×20°.39E±0°.03, h9km±6km, n121, σ1s67/142, mb4.0/18, 8C-6D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res ISC
VLS	**Valsamata**	**0.17**	**111**	P		**Pg**		**17 45 19.2**	**-0.3**
VLS				S		**Sg**		**17 45 21.9**	**-0.1**
	87μm,0.2s								
VLS	**Valsamata**	**0.17**	**111**	P		**Pg**		**17 45 19.3**	**-0.3**
VLS				S		**Sg**		**17 45 21.8**	**-0.2**
VLS				AML		AML		17 45 22.2	
VLS				AML		AML		17 45 22.2	
FSK	**Fiskardo**	**0.26**	**31**	P		**Pg**		**17 45 21.4**	**+0.2**
FSK				S		**Sg**		**17 45 25.4**	**+0.7**
	31μm,0.9s								
FSK	**Fiskardo**	**0.26**	**31**	P		**Pg**		**17 45 21.2**	**+0.1**
KFL	**Anninata**	**0.34**	**112**	P		**Pg**		**17 45 22.4**	**-0.3**
KFL				S		**Sb**		**17 45 27.9**	**-1.7**
	46μm,0.7s								
KFL	**Anninata**	**0.34**	**112**	P		**Pg**		**17 45 22.3**	**-0.3**
KFL				S		**Sg**		**17 45 27.1**	**0.0**
KFL				AML		AML		17 45 28.6	
	comp=E,97521μm,0.3s								
KFL				AML		AML		17 45 29.1	
	comp=N,88294μm,1.0s								
VLMS	**Volimes, Zakyn**	**0.42**	**149**	P		**Pg**		**17 45 24.2**	**+0.1**
VLMS				S		**Sg**		**17 45 30.0**	**+0.3**
VLMS				AML		AML		17 45 32.5	
	comp=E,26926μm,0.4s								
VLMS				AML		AML		17 45 39.2	
	comp=N,45516μm,0.6s								
EVGI	**Lefkada island**	**0.43**	**28**	P		**Pg**		**17 45 24.3**	**-0.2**
EVGI				S		**Sb**		**17 45 31.4**	**-1.1**
EVGI	**Lefkada island**	**0.43**	**28**	P		**Pg**		**17 45 24.7**	**+0.2**
EVGI				S		**Sg**		**17 45 31.1**	**+0.8**
MGNA	**Meganis**	**0.52**	**37**	P		**Pg**		**17 45 26.1**	**0.0**
MGNA				S		**Sg**		**17 45 33.0**	**0.0**
LKD2	**Lefkada island**	**0.59**	**21**	P		**Pg**		**17 45 26.9**	**-0.5**
LKD2	**Lefkada island**	**0.59**	**21**	P		**Pg**		**17 45 26.9**	**-0.5**
LKD2				AML		AML		17 45 41.2	
	comp=E,8175μm,0.7s								
LKD2				AML		AML		17 45 44.6	
	comp=N,9105μm,0.6s								
TSLK	**Tsoukalades, L**	**0.62**	**19**	P		**Pg**		**17 45 28.0**	**0.0**
TSLK	**Tsoukalades, L**	**0.62**	**19**	P		**Pg**		**17 45 28.0**	**0.0**
TSLK				AML		AML		17 45 44.2	
	comp=E,8537μm,0.9s								
TSLK				AML		AML		17 45 46.6	
	comp=N,9471μm,0.5s								
RLS	**Riolos of Patr**	**0.87**	**102**	P		**Pg**		**17 45 32.1**	**-0.5**
RLS				S		**Sn**		**17 45 45.5**	**-1.6**
	comp=N,5μm,0.7s								
RLS	**Riolos of Patr**	**0.87**	**102**	P		**Pg**		**17 45 32.0**	**-0.7**
PVO	**Paravola**	**0.97**	**67**	P		**Pb**		**17 45 34.4**	**-0.5**
PVO				S		**Sn**		**17 45 49.6**	**0.0**
	comp=N,10μm,0.9s								
PVO	**Paravola**	**0.97**	**67**	P		**Pb**		**17 45 34.4**	**-0.5**
PVO				S		**Sb**		**17 45 47.1**	**-0.7**
PVO				AML		AML		17 45 51.7	
	comp=E,15358μm,0.4s								
PVO				AML		AML		17 45 55.9	
	comp=N,18311μm,0.9s								
DRO	**Drossia**	**1.08**	**105**	P		**Pb**		**17 45 36.2**	**-0.6**
DRO				S		**Sn**		**17 45 53.1**	**+0.7**
	comp=N,8μm,0.5s								
DRO	**Drossia**	**1.08**	**105**	P		**Pg**		**17 45 36.0**	**-0.6**
DRO				AML		AML		17 46 01.8	
	comp=E,17355μm,0.4s								
DRO				AML		AML		17 46 04.6	
	comp=N,14957μm,0.6s								
EFP	**Efpalio**	**1.21**	**80**	P		**Pb**		**17 45 37.6**	**-1.3**
LAKA	**Lakka**	**1.25**	**89**	P		**Pn**		**17 45 38.8**	**-0.8**
LAKA	**Lakka**	**1.25**	**89**	P		**Pn**		**17 45 38.7**	**-1.0**
ANX	**Ano Chora**	**1.25**	**73**	P		**Pg**		**17 45 39.7**	**-0.3**
ANX	**Ano Chora**	**1.25**	**73**	P		**Pn**		**17 45 38.9**	**-0.8**
ANX				AML		AML		17 46 03

EVR Evrytania 1.30 58 P Pn 17 45 39.6 -0.9
KLV Kalavryta, Ach 1.40 97 P Pn 17 45 41.1 -0.6
JAN Janina 1.46 14 P Pg 17 45 44.0 0.0
ITM Ithomi 1.61 130 P Pn 17 45 44.6 0.0
ITM Ithomi 1.61 130 Pg 17 45 45.9 -0.9
AGG Agios Georgios 1.71 62 Pg 17 45 49.6 +0.9
THL Klokotos Trika 1.83 43 P Pb 17 45 49.3 -0.4
SCTE Santa Cesarea 2.37 321 Pn 17 45 55.7 +0.8
LIT Litokhoron 2.47 41 Pb 17 45 59.7 -0.9
FNA Florina 2.65 16 Pb 17 46 01.7 -2.0
OHR Ohrid 2.89 6 *i* Pn Pn 17 46 04.1 +1.9
TIP Timpagrande 2.99 289 ⇓P Pn 17 46 05.2 +1.6
TIP Timpagrande 2.99 289 Pn 17 46 05.2 +1.6
TIP Sn Sn 17 46 37.0 -2.7
TIR Tirane 3.13 353 Pn Pn 17 46 07.0 +1.5
TIR Sn Sn 17 46 40.2 -2.8
CEL Celeste 3.54 272 Pn 17 46 11.4 +0.2
CEL Sn Sn 17 46 46.1 -7.1
STIP Stip 3.72 21 *i* Pn Pb 17 46 17.9 -3.9
APE Apeiranthos 4.24 104 ⇑P Pb 17 46 29.7 -1.0
PDG Podgorica 4.28 349 ⇓P Pn 17 46 20.3 -0.9
PDG Podgorica 4.28 349 Pn Pn 17 46 21.9 +0.7
PDG Sn Sn 17 47 12.3 +1.1
ACER Acerenza 4.28 308 Pn 17 46 23.8 +2.4
IDI Anoyia 4.66 128 Pn Pn 17 46 26.9 +0.4
comp=N,0.7nm,0.3s,baz=306,slow=14,SNR=3.7
IDI Sn Sn 17 47 23.8 +3.0
comp=N,2.1nm,0.3s,baz=172,slow=23,SNR=5.0
VAE Valguarnera 4.79 263 Pn Pn 17 46 30.9 +2.5
comp=N,1.2nm,0.3s,baz=351,slow=19,SNR=2.2
VAE Sn Sn 17 47 28.9 +4.9
comp=N,1.6nm,0.3s,baz=66,slow=16,SNR=2.9
VTS Vitosha 4.88 25 ⇑P Pn 17 46 31.6 +1.9
VTS Vitosha 4.88 25 Pn Pn 17 46 31.9 +2.2
SGRT San Giovanni R 5.01 316 Pn Pn 17 46 32.4 +1.0
WDD Wied Dalam 5.27 245 Pn Pn 17 46 35.2 +0.4
PAOL Paolisi 5.29 304 Pn 17 46 38.2 +3.0
INTR Introdacqua 6.24 309 Pn 17 46 50.0 +1.8
ELND Elena 6.27 40 ⇑P Pn 17 46 51.3 +2.7
MDVR Moldovita 6.61 8 ⇓P Pn 17 46 54.5 +1.2
AQU L'Aquila 6.74 310 Pn Pn 17 46 53.4 -1.7
BLY Banja Luka 6.94 341 ⇑P Pn 17 46 56.7 -1.1
BLY Banja Luka 6.94 341 Pn Pn 17 46 57.8 +0.1
NRCA Norcia 7.20 312 Pn 17 47 04.0 +2.6
GZR Gura Zlata 7.37 13 ⇓P Pn 17 47 05.2 +1.4
BZS Buzias 7.43 7 ⇑P Pn 17 47 05.6 +1.1
MURB Monte Urbino 7.80 313 Pn Pn 17 47 12.3 +2.7
VOIR 7.99 24 ⇓P Pn 17 47 13.4 +1.2
MLR Muntele Rosu 8.35 28 Pn Pn 17 47 20.3 +3.1
comp=N,0.1nm,0.3s,baz=221,slow=20,SNR=3.3
MLR Muntele Rosu 8.35 28 ⇑P Pn 17 47 20.8 +3.5
GBRS Gornja Briga 8.39 332 *i* Pn Pn 17 47 18.0 +0.3
DOPR Dopca 8.57 24 ⇓P Pn 17 47 22.9 +2.7
OZUR 8.81 25 ⇑P Pn 17 47 26.7 +3.2
PLOR Plostina 8.92 29 ⇑P Pn 17 47 28.5 +3.6
KEST Kesra 9.19 258 Sn Sn 17 49 12.8 +0.5
comp=N,0.2nm,0.3s,baz=325,slow=21,SNR=2.4
KEST LR LR 17 51 27.5
comp=N,323nm,18.4s,baz=332,slow=40
SOKA Soboth 9.32 337 *e*Pn Pn 17 47 29.9 -0.5
comp=N,4.7nm,0.4s,SNR=15
OBKA Obir 9.33 334 *e*Pn Pn 17 47 31.1 +0.5
comp=N,3.8nm,0.3s,SNR=8.5
ARSA Arzberg 9.69 340 *e*Pn Pn 17 47 35.2 -0.4
comp=N,1.8nm,0.4s
CTI Castel Tesino 10.15 323 Pn 17 47 41.8 -0.1
KBA Koelnbreinsper 10.24 332 *e*Pn Pn 17 47 43.3 0.0
comp=N,2.0nm,0.6s
ABTA Abfaltersbach 10.30 328 *e*Pn Pn 17 47 44.1 +0.2
comp=N,1.4nm,0.4s
VYHS Vyhne 10.31 354 *e*PN Pn 17 47 42.3 -1.8
VYHS *e*SN Sn 17 49 39.0 -0.8
BRTR Keskin Array B 10.42 78 Pn Pn 17 47 50.3 +4.6
comp=N,0.1nm,0.3s,baz=265,slow=12,SNR=6.1
MOA Molln 10.60 337 *e*Pn Pn 17 47 48.3 +0.4
comp=N,1.9nm,0.2s,SNR=11
WTTA Wattenberg 11.07 327 Pn Pn 17 47 55.5 +0.9
comp=N,2.6nm,0.4s,SNR=4.9
WATA Walderalm 11.16 327 *e*Pn Pn 17 47 57.6 +1.9
comp=N,5.3nm,0.6s,SNR=5.7
SQTA Sankt Quirin 11.23 326 Pn Pn 17 47 59.7 +3.0
comp=N,1.6nm,0.4s
MOTA Moosalm 11.37 326 Pn Pn 17 48 00.9 +2.3
comp=N,1.4nm,0.4s
DAVOX Davos/Dischmat 11.53 321 Pn Pn 17 48 02.9 +2.1
comp=N,0.3nm,0.3s,baz=180,slow=11,SNR=4.7
DAVOX Sn Sn 17 50 10.6 +0.9
comp=N,0.2nm,0.3s,baz=152,slow=23,SNR=3.2
GERES GERESS Array B 11.66 338 Pn Pn 17 48 01.7 -0.8
comp=N,0.2nm,0.3s,baz=157,slow=13,SNR=6.1
GERES Sn Sn 17 50 06.9 -5.9
comp=N,0.1nm,0.3s,baz=148,slow=24,SNR=2.7
KHC Kasperske Hory 11.95 338 *e*PN Pn 17 48 05.5 -0.9
MMAI Mount Meron Ar 13.27 109 Pn Pn 17 48 22.9 -1.7
comp=N,0.7nm,0.3s,baz=297,slow=9.5,SNR=4.0
CLL Collm 14.07 341 ePP P 17 48 45.0 +1.8
ASF Jabal al Asfar 14.78 109 Pn P 17 48 52.2 +0.9
comp=N,0.2nm,0.3s,baz=224,slow=7.4,SNR=3.0
EIL Elat 14.79 121 Pn P 17 48 50.9 -0.3
comp=N,0.5nm,0.3s,baz=331,slow=9.8,SNR=5.7
KBZ Khabaz 17.83 65 P P 17 49 27.2 +2.2
comp=N,0.1nm,0.3s,baz=273,slow=8.8,SNR=5.6
GNI Garni 18.96 77 P Pn 17 49 40.3 +2.1
comp=N,0.4nm,0.3s,baz=297,slow=5.6,SNR=5.3
GNI Garni 18.96 77 IAmb IAmb 17 50 03.7
comp=Z,30nm,1.4s
ESDC Sonseca Array 18.99 282 P P 17 49 38.3 +0.5
comp=Z,0.3nm,0.3s,baz=79,slow=12,SNR=5.0
MDT Midelt 21.03 263 P P 17 50 02.5 +2.4
comp=Z,2.5nm,0.9s,baz=224,slow=5.9,SNR=4.9
HFS Hagfors 22.33 351 P P 17 50 13.5 -0.1
comp=Z,3.4nm,0.7s,baz=148,slow=8.7,SNR=7.4
EKA Eskdalemuir Ar 23.32 325 P P 17 50 24.0 -0.1
comp=Z,4.8nm,0.9s,baz=110,slow=7.2,SNR=3.5
FINES FINESS Array B 23.50 7 P P 17 50 24.5 -1.3
comp=Z,1.8nm,0.5s,baz=181,slow=9.3,SNR=6.8
NB2 NORSAR Subarra 23.54 349 P P 17 50 27.2 +0.9
comp=Z,0.6nm,0.6s,baz=154,slow=10
NOA NORSAR Array B 23.54 349 P P 17 50 26.2 -0.1
comp=Z,1.1nm,1.0s,baz=110,slow=20,SNR=4.5
GEYT Alibeck 29.56 79 P P 17 51 20.2 -0.8
comp=Z,1.1nm,0.4s,baz=280,slow=8.7,SNR=4.9
TORD Torodi Ar. Bea 30.01 219 P P 17 51 25.6 +0.5
comp=Z,1.4nm,0.8s,baz=36,slow=9.3,SNR=6.8
TORD Torodi Ar. Bea 30.01 219 IAmb IAmb 17 51 27.6
comp=Z,1.1nm,0.9s
ARCES ARCESS Array B 31.48 3 P P 17 51 37.0 -0.6
comp=Z,1.9nm,0.9s,baz=191,slow=9.9,SNR=5.9
KK31 Karatay Array 37.87 66 P P 17 52 33.4 +0.3
KK31 IAmb IAmb 17 52 34.9
comp=Z,2.0nm,0.6s
KKAR Karatay Array 37.87 66 P P 17 52 33.6 +0.5
ARSB Arslanbob 40.02 68 P P 17 52 52.6 +1.2
ARSB IAmb IAmb 17 52 55.8
comp=Z,11nm,1.5s
NRN Naryn 42.20 67 P P 17 53 11.3 +1.9
KURK Kurchatov 42.32 53 P P 17 53 10.3 +0.3
KURK IAmb IAmb 17 53 24.2
comp=Z,15nm,2.0s
MAKZ Makanchi 45.14 58 P P 17 53 34.4 +1.6
MAKZ IAmb IAmb 17 55 06.0
comp=Z,6.6nm,1.7s
MK31 Makanchi Array 45.36 58 P P 17 53 35.8 +1.4
MK31 IAmb IAmb 17 53 37.8
comp=Z,1.6nm,0.6s
MKAR Makanchi Array 45.36 58 P P 17 53 33.9 -0.6
comp=Z,1.9nm,0.5s,baz=278,slow=7.6,SNR=36
MKAR PcP PcP 17 55 13.5 -0.3
comp=Z,0.3nm,0.7s,baz=282,slow=3.1,SNR=2.7
ZAA0 Zalesovo Array 45.73 48 P P 17 53 37.4 +0.2
ZALV Zalesovo Beam 45.73 48 P P 17 53 36.8 -0.4
comp=Z,2.8nm,0.5s,baz=277,slow=8.7,SNR=14
LSA Lhasa 58.02 76 P P 17 55 09.0 -0.8
SONM Songino Array 60.50 51 P P 17 55 25.9 -0.4
comp=Z,0.2nm,0.3s,baz=318,slow=5.8,SNR=3.5
CMAR Chiang Mai Arr 69.98 82 P P 17 56 27.6 -0.5
comp=Z,0.9nm,0.7s,baz=302,slow=6.9,SNR=14
APG El Apazote 96.45 295 P P 17 58 44.7 -1.6
comp=Z,9.5nm,0.3s,baz=49,slow=9.3,SNR=6.7

*IDC **26** 17:46:43.9±5.7, 18°.08N×105°.62W, h0km, mb3.2/2, mb1 3.8/5, mb1mx3.6/44, mbtmp3.6/5, ML3.5/3, MS3.3/3, Ms1 3.3/3, ms1mx3.0/22, Error ellipse: s-maj=106.6km s-min=40.7km az=38.0*

*MEX **26** 17:46:47.7±0.6, 18°.33N×105°.42W, h18km±27km, MD4.2*

ISC 26 17:46:48.6±1.5, 18°.47N±0°.08×105°.12W±0°.09, h10km, n15, σ2s0.02/18, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	Chamela	1.02	4	*i* P	Pg	17 47 06.0	-2.3
CJM				*i* S	Sg	17 47 20.5	-1.1
R15V		1.28	57	*e*P	Pn	17 47 11.6	-1.0
R15V				*e*S	Sb	17 47 31.0	+1.6
MMIG	Aquila	1.70	96	*e*P	Pn	17 47 16.7	-1.5
MMIG				*e*S	Sn	17 47 39.4	-0.6
EZ5V		1.75	55	*e*P	Pn	17 47 19.6	+0.3
EZ5V				*i* S	Sn	17 47 42.3	+0.5
ANIG	Ahuacatlan	2.63	12	*e*P	Pn	17 47 30.4	-0.8
ANIG				*i* S	Sn	17 48 03.2	-0.1
ZIIG	Zihuatanejo	3.58	103	*e*P	Pn	17 47 43.4	-0.8
ZIIG				*e*S	Sn	17 48 26.5	-0.1
H06E1	SOCORRO T-PHAS SNR=221	5.51	274	T	T	17 53 15.8	
H06S1	SOCORRO T SNR=70	5.54	274	T	T	17 53 17.0	
LPIG	La Paz comp=Z,263nm,18.9s,baz=122,slow=34	7.40	320	LR	LR	17 50 53.5	
CMIG	Matias Romero 1.1nm,0.3s,baz=281,slow=14,SNR=7.3	9.85	96	Pn	Pn	17 49 13.2	+2.9
CMIG	0.2nm,0.3s,baz=65,slow=10,SNR=2.4			Sn	Sn	17 50 57.2	-3.9
CMIG	comp=Z,100nm,21.3s,baz=3.0,slow=36			LR	LR	17 52 50.6	
TXAR	Lajitas Array 0.1nm,0.3s,baz=185,slow=13,SNR=8.3	10.89	7	Pn	Pn	17 49 28.4	+3.7
ANMO	Albuquerque 0.1nm,0.3s,baz=181,slow=11,SNR=9.9	16.45	356	Pn	Pn	17 50 42.4	+2.6
PFO	Pinyon Flats O comp=Z,146nm,18.4s,baz=28,slow=33	18.17	328	LR	LR	17 56 47.5	
PDAR	Pinedale Array 0.5nm,0.8s,baz=147,slow=14,SNR=3.7	24.51	352	P	P	17 52 09.0	+0.6
YKA	Yellowknife Ar 0.3nm,0.8s,baz=168,slow=7.2,SNR=4.6	44.47	354	P	P	17 54 58.3	-1.4

*NCEDC **26** 17:49:34.5±1.5, 36°.23N±0°.02×120°.37W±0°.04, h11km±6km, Md3.0/171, Error ellipse: s-maj=5.5km s-min=2.5km az=63.0*

*ANF **26** 17:49:34.8±0.6, 36°.23N×120°.26W, h12km±3km, ML3.0/15, Error ellipse: s-maj=4.1km s-min=3.0km az=124.0*

*NEIC **26** 17:49:35.2±1.3, 36°.21N±0°.03×120°.43W±0°.04, h19km±3km, Error ellipse: s-maj=4.6km s-min=3.8km az=70.0*

ISC 26 17:49:34.6±1.0, 36°.23N±0°.02×120°.36W±0°.02, h17km±8km, n207, σ0s91/220, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PJUM	Juniper Ridge	0.19	269		Pg	17 49 39.3	0.0
PWMM	Westland Maint	0.23	30		Pb	17 49 41.1	+0.7
PKEM	Kettleman Hill	0.26	130		Pb	17 49 41.2	+0.3
CTM	Castle Mountai	0.30	177		Pg	17 49 41.5	+0.5
PHHM	Hope Ranch	0.32	219		Pg	17 49 41.2	-0.2
PKD	Bear Valley Ra	0.32	208		Pb	17 49 41.9	0.0
PVCM	Vineyard Canyo	0.34	205		Pb	17 49 42.3	+0.1
PHFM	Heflinger Ranc	0.35	186		Pg	17 49 42.4	+0.5
PMPB	Monarch Peak	0.36	268		Pb	17 49 42.5	-0.1
PSRM	Scobie Ranch	0.38	170		Pb	17 49 43.2	+0.3
GHC	Gold Hill	0.40	179		Pb	17 49 43.3	+0.1
PPO	Portuguese Can	0.42	210		Pb	17 49 43.9	+0.3
PCMM	Cholame Hills	0.43	186		Pb	17 49 44.1	+0.4
PWKM	Work Ranch	0.43	197		Pb	17 49 44.1	+0.3
PSNM	Stone Corral	0.45	173		Pg	17 49 43.9	+0.4
PMRM	Maxey Ranch	0.46	167		Pg	17 49 44.3	+0.5
PKLM	Kerr Lake	0.46	178		Pb	17 49 44.4	+0.2
PSAM	San Ardo	0.48	245		Pg	17 49 44.2	+0.1
PMCM	McMillan Canyo	0.51	181		Pb	17 49 45.2	+0.2
PAGB	Antelope Grade	0.51	170		Pg	17 49 44.9	+0.2
THIS	South End of C	0.52	168		Pg	17 49 45.2	+0.4
TCHL	Shandon	0.54	184		Pb	17 49 46.0	+0.4
BMSM	Mercy Hot Spri	0.55	321		Pb	17 49 46.1	+0.2
LRC	Lone Oak Road	0.55	272		Pg	17 49 45.6	0.0
TRAM	Private Proper	0.56	173		Pg	17 49 46.0	+0.3
LRV	Little Rabbit	0.57	290		Pg	17 49 46.0	+0.2
PTRM	Twissleman Ran	0.59	168		Pg	17 49 46.5	+0.3
PANM	San Antonio Re	0.63	225		Pg	17 49 47.2	+0.2
BBNM	San Benito	0.64	296		Pg	17 49 47.0	-0.3
BBGB	Big Mountain B	0.65	302		Pg	17 49 47.6	+0.2
PCCM	Crazy Canyon	0.67	258		Pg	17 49 47.7	0.0
BAVM	Antelope Valle	0.68	308		Pg	17 49 48.0	0.0
TSCN	Private Proper	0.69	179		Pb	17 49 48.4	+0.3
PBPM	Bitterwater Pu	0.69	161		Pg	17 49 48.2	+0.1
PHSB	Hesperia Broad	0.69	234		Pg	17 49 48.1	-0.1
BRMM	Rolling Bench	0.71	328		Pb	17 49 49.0	+0.5
RAMR	Ramage Ranch	0.72	215		Pg	17 49 48.8	+0.1
BEMM	Emmet	0.73	306		Pb	17 49 49.3	+0.3
BSGM	Shirttail Gulc	0.73	284		Pg	17 49 48.9	-0.3
BEHM	Ellicott Ranch	0.79	304		Pg	17 49 49.9	0.0
VOG	Valley Oaks Go baz=264	0.79	83	P	Pg	17 49 49.0	-1.0
VOG				S	Sg	17 49 59.5	-1.0
	baz=264						
BLDC	Black Mountain	0.83	213		Pg	17 49 50.6	-0.1
BLDC	Black Mountain	0.83	213		Pg	17 49 50.6	-0.1
PHCM	Hearst Castle	0.85	230		Pg	17 49 51.2	+0.1
BLRM	Lewis Ranch	0.86	301		Pb	17 49 51.6	+0.6
BJOM	Mount Johnson	0.87	298		Pg	17 49 50.8	-0.7
PAPM	Alder Peak	0.87	249		Pg	17 49 51.2	-0.4
BSMM	Soledad Missio	0.88	280		Pg	17 49 51.1	-0.5
BHRM	Hodges Ranch	0.88	304		Pb	17 49 51.8	+0.4
PTAM	Tassajara Cree	0.88	199		Pg	17 49 51.5	-0.3
BJCM	Johnson Can.	0.89	291		Pg	17 49 51.2	-0.7
PCBM	Cambria	0.91	219		Pg	17 49 52.1	-0.2
ARDC	Alexander Ranc	0.92	214		Pg	17 49 52.1	-0.3
SCZ	Santa Cruz	0.92	294		Pg	17 49 51.7	-0.7
FRI	Friant	0.92	34		Pg	17 49 51.0	-1.5
BCGM	Cienega Road	0.93	301		Pg	17 49 52.5	-0.1
EFD	Emergency Oper	0.96	198		Pg	17 49 53.1	0.0
HJSM	John Smith Roa	0.96	308		Pb	17 49 53.2	+0.5
MHDM	Hidden Dam	0.96	23		Pg	17 49 51.5	-1.6
SMMC	Simmler	0.96	162		Pg	17 49 52.4	-0.8
SMMC	Simmler baz=342,SNR=59	0.96	162	P	Pg	17 49 52.6	-0.6
BSLM	Silva Ranch	0.97	305		Pb	17 49 53.5	+0.7
HAST	Hastings Reser	0.98	280		Pg	17 49 52.9	-0.7
BVYM	Vineyard	0.99	302		Pb	17 49 53.2	-0.2
HLTM	Lone Tree Road	1.00	311		Pb	17 49 53.8	+0.3
CARC	Carrizo Plain	1.01	156		Pb	17 49 52.9	-0.8
LSDC	Los Osos Digit	1.01	203		Pg	17 49 54.4	+0.2
SAO	San Andreas Ge	1.03	302		Pb	17 49 53.7	-0.2
MRHM	Rocky Hill	1.03	87		Pb	17 49 52.5	-1.5
BSRM	Salinas Radio	1.03	295		Pb	17 49 53.6	-0.4
BAPM	Anderson Peak	1.04	267		Pb	17 49 53.6	-0.6
SFJWR	San Luis Fatjo	1.05	322		Pb	17 49 53.6	-0.7
FRP	Fremont Peak	1.05	300		Pb	17 49 54.0	-0.3
DPD	Davis Peak	1.05	199		Pg	17 49 55.0	+0.1
BCH	Branch Mountai	1.07	168		Pb	17 49 54.2	-0.4
VPDC	Valencia Peak	1.07	203		Pb	17 49 54.9	+0.2
PACP	Pacheco Peak	1.08	316		Pb	17 49 55.2	+0.3
BPCNC	Pine Canyon	1.08	289		Pb	17 49 54.5	-0.3
DCD	Diablo Creek	1.09	201		Pb	17 49 54.7	-0.3
SLD	San Luis Dam	1.09	321		Pb	17 49 54.7	-0.3
VES	Vestal, Richgr	1.10	110		Pb	17 49 54.0	-1.2
VES	Vestal, Richgr baz=291,SNR=34	1.10	110	P	Pb	17 49 54.0	-1.2
VES				S	Sb	17 50 08.6	-0.6
	baz=291						
HPCM	Pacheco Lake	1.11	319		Pb	17 49 54.9	-0.4
SCKWR	San Luis Creek	1.11	329		Pb	17 49 54.9	-0.4
HFEM	San Felipe	1.13	312		Pb	17 49 55.3	-0.3
HJGM	San Juan Grade	1.13	300		Pb	17 49 55.3	-0.4
BPOM	Post Ranch	1.14	270		Pb	17 49 55.0	-0.8
HBTM	San Juan Bauti	1.14	303		Pg	17 49 56.5	-0.1
MYLM	Yosemite Lake	1.15	358		Pb	17 49 55.0	-1.0
OCR	O'Connell Ranc	1.15	307		Pb	17 49 55.9	-0.2
HELL	Mitchell Peak,	1.17	67		Pb	17 49 54.8	-1.5
HTUM	Tustin Road	1.19	300		Pb	17 49 56.6	+0.1
CDC	Canada Road	1.20	312		Pn	17 49 56.7	0.0
HERM	Elkhorn Road	1.23	298		Pn	17 49 57.2	+0.2
CBC	Chamberlain	1.26	304		Pn	17 49 57.5	0.0
HCOM	Corn Cob Canyo	1.27	301		Pn	17 49 57.2	-0.3
HSPM	Sheep	1.28	314		Pn	17 49 57.6	-0.2
MMIM	Miami Mountain	1.28	22		Pn	17 49 57.4	-0.5
SPG2	Springville 2	1.29	91		Pn	17 49 57.0	-0.8
HMOM	Monterey	1.31	287		Pn	17 49 57.6	-0.6
PMLM	Mount Lospe	1.35	189		Pn	17 49 58.4	-0.2
KCC	Kaiser Creek	1.37	37		Pn	17 49 58.7	-0.4
PKM	Mcpherson Peak	1.41	162		Pn	17 49 59.8	+0.1
PKM	Mcpherson Peak baz=342,SNR=18	1.41	162	P	Pn	17 49 59.6	0.0
JLAB	Laurel Hill	1.44	310		Pn	17 49 59.4	-0.6
JTGM	Trout Gulch Ro	1.46	304		Pn	17 49 59.9	-0.2
ARN	Arnold Ranch	1.46	320		Pn	17 49 59.9	-0.3
CCOB	Coe Ranch Numb	1.47	315		Pn	17 50 00.3	-0.1
BCW	Bitter Crk WRg	1.50	149		Pn	17 49 59.9	-1.0
WOFM	Oak Flat	1.50	117		Pn	17 50 00.2	-0.8
AMC	Almaden	1.51	308		Pn	17 50 00.4	-0.5
MHC	Mount Hamilton	1.51	317		Pn	17 50 00.7	-0.4
JRGM	Rodeo Gulch Ro	1.52	302		Pn	17 50 00.0	-1.0
CMMM	Mount Mocho	1.52	324		Pn	17 50 01.2	0.0
FIGC	Figueroa Mtn.	1.53	169		Pn	17 50 01.2	0.0
WASM	Alta Sierra Ca	1.54	108		Pn	17 50 01.1	-0.4
JUMM	Mount Umunhum	1.55	307		Pn	17 50 00.9	-0.5
ISA	Isabella, Lake	1.63	110		Pn	17 50 02.4	-0.2
ISA	Isabella, Lake baz=291,SNR=59	1.63	110	P	Pn	17 50 02.4	-0.2
ISA				S	Sn	17 50 23.1	-0.1
	baz=291						
ABL	Mount Abel	1.66	146		Pn	17 50 02.3	-0.8
ARVC	Arvin baz=312	1.66	131	Pb	Pn	17 50 04.1	+1.2
GATR	Gnd/Air Tx Cnt	1.68	184		Pn	17 50 01.9	-1.3
TEJ	El Tejon	1.69	126		Pn	17 50 02.8	-0.5
JBNB	Ben Lomond Mou	1.70	302		Pn	17 50 02.2	-1.3
MRDM	Red Cones	1.72	37		Pn	17 50 04.6	+0.6
MDPB	Devils Postpil	1.73	36		Pn	17 50 04.9	+0.7
MDPB	Devils Postpil	1.73	36	Sn	Sn	17 50 27.1	+1.1
MMPM	Mammoth Pass	1.74	37		Pn	17 50 05.3	+1.0
SCHCA	Scheelite	1.75	49		Pn	17 50 05.5	+1.0
MCUB	Copperopolis B	1.75	353		Pn	17 50 04.0	-0.3
JHUM	Huhtala Lane,	1.76	305		Pn	17 50 04.3	+0.1
OMMB	Old Mammoth Mi	1.76	38		Pn	17 50 05.4	+0.8
OMMB	Old Mammoth Mi	1.76	38	Sn	Sn	17 50 27.6	+0.9
MINS	Minaret Summit	1.76	36		Pn	17 50 05.4	+0.8
MDYM	Dry Creek	1.79	37		Pn	17 50 06.1	+1.1
WORM	Onyx Ranch	1.80	107		Pn	17 50 05.5	+0.6
MLCM	Laurel Creek C	1.80	40		Pn	17 50 06.1	+1.0
CMB	Columbia Colle	1.80	359		Pn	17 50 05.4	+0.5
MMLB	Mammoth Lakes	1.80	37		Pn	17 50 06.6	+1.4
MDCM	Deadman Creek	1.81	35		Pn	17 50 06.3	+1.0
RCCR	Rock Creek Can	1.81	46		Pn	17 50 06.5	+1.1
MGPM	Gravel Pit	1.82	40		Pn	17 50 06.7	+1.4
MCMM	Convict Lake	1.82	40		Pn	17 50 06.5	+1.1
MTUM	Tungsten Hills	1.82	52		Pn	17 50 06.6	+1.3
MCVM	Convict Lake	1.83	42		Pn	17 50 06.6	+1.0
MEMM	East Mammoth H	1.83	38		Pn	17 50 07.0	+1.5
WMD		1.83	48		Pn	17 50 06.9	+1.7
MCBM	Casa Benchmark	1.83	39		Pn	17 50 07.1	+1.6
MCSM	Casa Diablo Ho	1.84	39		Pn	17 50 07.2	+1.6
BHPR	Bishop	1.84	54		Pn	17 50 07.0	+1.3
CWC	Cottonwood Cre	1.85	83		Pn	17 50 06.6	+0.8
CWC	Cottonwood Cre baz=264	1.85	83	Pb	Pn	17 50 06.7	+1.0
CWC				Sb	Sn	17 50 30.1	+1.3
	baz=264						
JJRM	Joaquin Road	1.85	307		Pn	17 50 05.3	-0.3
MLAC	Mammoth, Mammo	1.85	41		Pn	17 50 07.2	+1.4
MLAC	Mammoth, Mammo baz=222,SNR=14	1.85	41	Pb	Pn	17 50 07.4	+1.6
MLAC				Sb	Sb	17 50 32.0	+0.8
	baz=222						
MDRNC	Doe Ridge	1.86	41		Pn	17 50 07.6	+1.7
JPSM		1.87	302		Pn	17 50 05.8	0.0
LMTM	Lookout Mounta	1.87	37		Pn	17 50 07.8	+1.7
WCHM	Chimney Peak	1.88	100		Pn	17 50 07.1	+0.8
TIN	Tinemaha, Big	1.90	64		Pn	17 50 07.8	+1.4
TIN	Tinemaha, Big baz=245,SNR=68	1.90	64	Pb	Pn	17 50 07.7	+1.4
TIN				Sb	Sb	17 50 32.5	+0.2
	baz=245						
MLHM	Little Hot Cre	1.90	40		Pn	17 50 08.4	+1.9
BGH	Bear Gulch	1.94	305		Pn	17 50 07.3	+0.5
MNHB	New Hogan Dam	1.95	349		Pn	17 50 06.7	-0.1
ORC	Owens River	1.96	44		Pn	17 50 08.9	+1.7
MFBM	Five Bridges	1.96	52		Pn	17 50 09.1	+2.0
POCCA	Poleta Canyon	2.01	55		Pn	17 50 09.9	+1.9
MCDM	Chidago Canyon	2.02	49		Pn	17 50 10.1	+2.1
LLIL	Lundy Lake	2.05	27		Pn	17 50 10.1	+1.8
BENR	Benton	2.06	43		Pn	17 50 10.5	+1.8
MGNR	McGee Canyon	2.06	40		Pb	17 50 11.2	-0.6
MRCM	Red Rock Canyo	2.07	45		Pn	17 50 10.5	+1.7
VPEM	Volcano Peak E	2.08	97		Pn	17 50 10.4	+1.6
OSI	Osito Audit: C	2.09	140		Pb	17 50 11.7	-0.4
OSI				Sn	Sn	17 50 33.6	-1.1
MLNR	Milner Canyon	2.11	49		Pn	17 50 11.4	+2.1
PYR	Pyramid	2.12	141		Pn	17 50 09.6	+0.2
TOW	Tower One	2.15	101		Pn	17 50 10.7	+1.0
ANTCA	Antelope Range	2.21	40		Pb	17 50 13.4	-0.9
BKS	Berkeley--Byer	2.23	318		Pn	17 50 10.6	-0.1
DAC	Darwin (Calif)	2.23	88		Pb	17 50 16.4	+1.7
AASM	Arroyo Seco	2.27	345		Pn	17 50 11.3	-0.1
LRMC	Laurel Mtn Rad baz=290,SNR=16	2.30	108	P	Pn	17 50 12.4	+0.5
LRMC				Sb	Sb	17 50 43.5	-0.3
	baz=290						
HCK	Huntoon Valley	2.32	37		Pn	17 50 14.2	+2.2
MPMC	Manual Prospec baz=275	2.33	93	Pn	Pn	17

VLS						AML	AML	17 56 55.4		
	comp=E,63150µm,0.2s									
FSK	**Fiskardo**	**0.28**	**27**		P	**Pg**		**17 56 55.1**	**+0.2**	
FSK					S	**Sg**		**17 56 58.8**	**+0.2**	
	comp=E,2µm,0.2s									
FSK	**Fiskardo**	**0.28**	**27**		P	**Pg**		**17 56 55.0**	**+0.1**	
FSK					S	**Sg**		**17 56 58.9**	**+0.4**	
KFL	**Anninata**	**0.32**	**108**		P	**Pg**		**17 56 55.7**	**0.0**	
KFL					S	**Sg**		**17 57 00.6**	**+0.7**	
	comp=E,26µm,0.4s									
KFL	**Anninata**	**0.32**	**108**		P	**Pg**		**17 56 55.7**	**0.0**	
KFL					S	**Sg**		**17 57 00.5**	**+0.6**	
KFL					AML	AML		17 57 01.2		
	comp=E,77210µm,0.4s									
KFL					AML	AML		17 57 03.4		
	comp=N,27497µm,0.6s									
VLMS	**Volimes, Zakyn**	**0.39**	**148**		P	**Pg**		**17 56 57.0**	**0.0**	
VLMS					S	**Sg**		**17 57 02.7**	**+0.6**	
EVGI	**Lefkada island**	**0.46**	**26**		P	**Pg**		**17 56 57.8**	**-0.5**	
EVGI					S	**Sg**		**17 57 05.0**	**+0.8**	
EVGI	**Lefkada island**	**0.46**	**26**		P	**Pg**		**17 56 58.1**	**-0.1**	
EVGI					S	**Sg**		**17 57 04.7**	**+0.5**	
MGNA	**Meganis**	**0.54**	**34**		P	**Pg**		**17 56 59.4**	**-0.4**	
LKD2	**Lefkada island**	**0.61**	**19**		P	**Pg**		**17 57 00.9**	**-0.3**	
LKD2	**Lefkada island**	**0.61**	**19**		P	**Pg**		**17 57 00.7**	**-0.5**	
LKD2					AML	AML		17 57 20.2		
	comp=N,2447µm,0.5s									
LKD2					AML	AML		17 57 22.6		
	comp=E,2217µm,0.6s									
TSLK	**Tsoukalades, L**	**0.64**	**18**		P	**Pg**		**17 57 01.2**	**-0.7**	
TSLK	**Tsoukalades, L**	**0.64**	**18**		P	**Pg**		**17 57 01.3**	**-0.5**	
RLS	**Riolos of Patr**	**0.85**	**100**		P	**Pg**		**17 57 05.3**	**-0.5**	
RLS					S	**Sg**		**17 57 17.9**	**+1.0**	
	comp=E,2µm,0.5s									
RLS	**Riolos of Patr**	**0.85**	**100**		P	**Pg**		**17 57 05.1**	**-0.7**	
RLS					S	**Sg**		**17 57 17.9**	**+1.0**	
RLS					AML	AML		17 57 24.6		
	comp=E,4257µm,0.4s									
RLS					AML	AML		17 57 25.2		
	comp=N,1976µm,0.5s									
PVO	**Paravola**	**0.97**	**65**		P	**Pg**		**17 57 07.9**	**-0.2**	
PVO					S	**Sb**		**17 57 23.4**	**+1.6**	
	comp=N,3µm,0.6s									
PVO	**Paravola**	**0.97**	**65**		P	**Pg**		**17 57 07.9**	**-0.2**	
PVO					S	**Sb**		**17 57 22.6**	**+0.7**	
PVO					AML	AML		17 57 27.8		
	comp=E,6344µm,0.4s									
PVO					AML	AML		17 57 30.3		
	comp=N,6027µm,0.5s									
DRO	**Drossia**	**1.06**	**104**		P	**Pg**		**17 57 09.4**	**-0.5**	
DRO					S	**Sb**		**17 57 25.8**	**+1.3**	
	comp=N,3µm,0.5s									
DRO	**Drossia**	**1.06**	**104**		P	**Pg**		**17 57 09.4**	**-0.5**	
DRO					AML	AML		17 57 34.4		
	comp=E,5572µm,0.4s									
DRO					AML	AML		17 57 37.9		
	comp=N,5606µm,0.6s									
UPR	**University Cam**	**1.09**	**86**		P	**Pn**		**17 57 12.3**	**+1.0**	
UPR	**University Cam**	**1.09**	**86**		P	**Pb**		**17 57 10.6**	**-0.2**	
EFP	**Efpalio**	**1.20**	**79**		P	**Pg**		**17 57 11.1**	**-1.4**	
EFP					S	**Sn**		**17 57 31.3**	**+1.8**	
	comp=N,1µm,0.5s									
EFP	**Efpalio**	**1.20**	**79**		P	**Pg**		**17 57 11.5**	**-1.0**	
EFP					AML	AML		17 57 35.5		
	comp=E,3112µm,0.6s									
EFP					AML	AML		17 57 40.5		
	comp=N,2093µm,0.7s									
AMT	**Artemida-Makis**	**1.23**	**123**		P	**Pg**		**17 57 12.6**	**-0.5**	
AMT	**Artemida-Makis**	**1.23**	**123**		P	**Pn**		**17 57 13.3**	**-0.1**	
AMT					AML	AML		17 57 40.8		
	comp=E,3253µm,0.4s									
AMT					AML	AML		17 57 44.8		
	comp=N,2603µm,0.5s									
LAKA	**Lakka**	**1.24**	**88**		P	**Pg**		**17 57 12.0**	**-1.2**	
LAKA					S	**Sn**		**17 57 31.4**	**+0.9**	
	comp=N,725nm,0.7s									
LAKA	**Lakka**	**1.24**	**88**		P	**Pg**		**17 57 12.0**	**-1.2**	
LAKA					S	**Sn**		**17 57 31.1**	**+0.6**	
LAKA					AML	AML		17 57 43.6		
	comp=E,1752µm,0.7s									
LAKA					AML	AML		17 57 44.4		
	comp=N,1336µm,0.6s									
ANX	**Ano Chora**	**1.25**	**72**		P	**Pg**		**17 57 12.8**	**-0.7**	
ANX					S	**Sn**		**17 57 35.0**	**+4.1**	
	comp=N,2µm,0.6s									
ANX	**Ano Chora**	**1.25**	**72**		P	**Pg**		**17 57 13.3**	**-0.1**	
ANX					AML	AML		17 57 37.4		
	comp=N,4483µm,0.5s									
ANX					AML	AML		17 57 37.7		
	comp=E,5521µm,0.8s									
EVR	**Evrytania**	**1.31**	**57**		P	**Pg**		**17 57 14.0**	**-0.5**	
EVR	**Evrytania**	**1.31**	**57**		P	**Pg**		**17 57 14.1**	**-0.4**	
EVR					S	**Sn**		**17 57 32.8**	**+0.5**	
EVR					AML	AML		17 57 38.2		
	comp=E,1165µm,0.6s									
EVR					AML	AML		17 57 38.7		
	comp=N,1097µm,0.6s									
SERG	**Sergoula**	**1.32**	**81**		P	**Pg**		**17 57 12.7**	**-2.0**	
SERG	**Sergoula**	**1.32**	**81**		P	**Pg**		**17 57 13.9**	**-0.8**	
IGT	**Igoumenitsa**	**1.32**	**358**		P	**Pb**		**17 57 15.4**	**+0.7**	
TRIZ	**Trizonia**	**1.32**	**83**		P	**Pg**		**17 57 13.1**	**-1.7**	
TRIZ	**Trizonia**	**1.32**	**83**		P	**Pg**		**17 57 13.2**	**-1.7**	
TRIZ					S	**Sn**		**17 57 33.4**	**+0.9**	
ALIK	**Aliki, Aigiali**	**1.34**	**87**		P	**Pn**		**17 57 13.9**	**-0.9**	
ALIK					S	**Sn**		**17 57 35.6**	**+2.6**	
KALE	**Kalithea**	**1.38**	**82**		P	**Pn**		**17 57 14.1**	**-1.3**	
KALE					S	**Sn**		**17 57 36.7**	**+2.7**	
	comp=N,860nm,0.6s									
KALE	**Kalithea**	**1.38**	**82**		P	**Pn**		**17 57 14.1**	**-1.3**	
KALE					S	**Sn**		**17 57 35.1**	**+1.1**	
KALE					AML	AML		17 57 43.0		
	comp=E,1839µm,1.0s									
KALE					AML	AML		17 57 47.5		
	comp=N,1782µm,0.6s									
KLV	**Kalavryta, Ach**	**1.39**	**96**		P	**Pn**		**17 57 14.8**	**-0.7**	
KLV					S	**Sn**		**17 57 36.5**	**+2.3**	
	comp=N,582nm,0.7s									
KLV	**Kalavryta, Ach**	**1.39**	**96**		P	**Pn**		**17 57 14.8**	**-0.7**	
KLV					S	**Sn**		**17 57 35.1**	**+0.9**	
KLV					AML	AML		17 57 40.0		
	comp=N,917µm,0.6s									
KLV					AML	AML		17 57 44.5		
	comp=E,1376µm,0.8s									
MAKR	**Makrakomi, Fth**	**1.57**	**59**		P	**Pg**		**17 57 19.6**	**0.0**	
MAKR	**Makrakomi, Fth**	**1.57**	**59**		P	**Pg**		**17 57 19.7**	**0.0**	
MAKR					AML	AML		17 57 47.4		
	comp=N,1339µm,0.6s									
MAKR					AML	AML		17 57 49.5		
	comp=E,1738µm,0.6s									
ITM	**Ithomi**	**1.59**	**130**		P	**Pb**		**17 57 19.1**	**-0.1**	
ITM					S	**Sg**		**17 57 41.9**	**+1.5**	
	comp=E,358nm,0.6s									
ITM	**Ithomi**	**1.59**	**130**		P	**Pn**		**17 57 18.5**	**+0.3**	
AGG	**Agios Georgios**	**1.71**	**61**		P	**Pg**		**17 57 22.3**	**0.0**	
AGG					S	**Sg**		**17 57 45.8**	**+1.3**	
	comp=E,425nm,0.9s									
AGG	**Agios Georgios**	**1.71**	**61**		P	**Pg**		**17 57 22.4**	**0.0**	
VLX	**Vlachokerasia**	**1.78**	**118**		P	**Pg**		**17 57 23.2**	**-0.3**	
VLX	**Vlachokerasia**	**1.78**	**118**		P	**Pg**		**17 57 22.9**	**-0.6**	
THL	**Klokotos Trika**	**1.85**	**42**		P	**Pn**		**17 57 22.6**	**+0.9**	
THL					S	**Sg**		**17 57 49.0**	**+0.2**	
	comp=E,358nm,0.6s									
THL	**Klokotos Trika**	**1.85**	**42**		P	**Pb**		**17 57 23.9**	**+0.2**	
AXAR	**Agios Charalam**	**1.85**	**72**		P	**Pb**		**17 57 24.3**	**+0.5**	
KPRO	**Kipourio**	**1.90**	**23**		P	**Pb**		**17 57 24.5**	**0.0**	
PROD	**Prodromos**	**1.97**	**88**		P	**Pb**		**17 57 24.7**	**-1.0**	
PROD	**Prodromos**	**1.97**	**88**		P	**Pb**		**17 57 24.8**	**-1.0**	
PROD					AML	AML		17 57 55.3		
	comp=N,641µm,0.8s									
PROD					AML	AML		17 57 59.1		
	comp=E,718µm,0.7s									
LTK	**Loutraki**	**2.03**	**95**		P	**Pn**		**17 57 25.5**	**+1.2**	
LTK	**Loutraki**	**2.03**	**95**		P	**Pn**		**17 57 25.5**	**+1.2**	
LOUT	**Loutraki**	**2.04**	**95**		P	**Pn**		**17 57 25.4**	**+1.0**	
LOUT	**Loutraki**	**2.04**	**95**		P	**Pn**		**17 57 25.5**	**+1.1**	
PENT	**Pentalofos**	**2.06**	**16**		P	**Pb**		**17 57 26.5**	**-0.9**	
LKR	**Lokris**	**2.08**	**77**		P	**Pn**		**17 57 26.3**	**+1.3**	
LKR	**Lokris**	**2.08**	**77**		P	**Pn**		**17 57 26.2**	**+1.3**	
VIL2	**Platees**	**2.26**	**89**		P	**Pb**		**17 57 29.2**	**-1.5**	
NEST	**Nestorio**	**2.26**	**13**		P	**Pb**		**17 57 29.5**	**-1.2**	
VILL	**Villia**	**2.29**	**90**		P	**Pn**		**17 57 29.1**	**+1.2**	
DID	**Didima**	**2.35**	**107**		P	**Pb**		**17 57 30.6**	**-1.7**	
LIT	**Litokhoron**	**2.49**	**40**		P	**Pb**		**17 57 33.7**	**-0.9**	
VLI	**Veliai**	**2.51**	**126**		P	**Pb**		**17 57 33.5**	**-1.4**	
MRKA	**Markates**	**2.55**	**78**		P	**Pn**		**17 57 32.5**	**+1.1**	
FNA	**Florina**	**2.68**	**16**		P	**Pn**		**17 57 34.0**	**+0.8**	
ATHU	**Athens Univers**	**2.68**	**94**		P	**Pn**		**17 57 33.8**	**+0.6**	
ATHU					S	**Sn**		**17 58 08.2**	**+2.2**	
	comp=E,60nm,0.8s									
VLY	**Voula,Athens**	**2.70**	**97**		P	**Pn**		**17 57 34.4**	**+0.9**	
PTL	**Penteli**	**2.73**	**92**		P	**Pn**		**17 57 34.9**	**+0.9**	
TIP	**Timpagrande**	**3.01**	**290**		P	**Pn**		**17 57 38.3**	**+0.5**	
TIP					S	**Sn**		**17 58 13.6**	**-0.7**	
IDI	**Anoyia**	**4.63**	**128**		Pn	**Pn**		**17 58 00.8**	**+0.6**	
	comp=E,0.3nm,0.3s,baz=320,slow=22,SNR=2.5									
IDI					Sn	**Sn**		**17 58 56.7**	**+2.4**	
	comp=E,2.1nm,0.3s,baz=340,slow=22,SNR=6.5									
VAE	**Valguarnera**	**4.80**	**263**		Pn	**Pn**		**17 58 03.0**	**+0.6**	
	comp=E,1.8nm,0.3s,baz=73,slow=4.3,SNR=3.2									
VAE					Sn	**Sn**		**17 59 01.9**	**+3.6**	
	comp=E,2.0nm,0.3s,baz=303,slow=13,SNR=3.6									
KEST	**Kesra**	**9.19**	**258**		Sn	**Sn**		**18 00 46.5**	**+0.1**	
	comp=E,0.1nm,0.3s,baz=66,slow=18,SNR=2.3									
BRTR	**Keskin Array B**	**10.42**	**78**		Pn	**Pn**		**17 59 21.4**	**+1.8**	
	comp=E,0.1nm,0.3s,baz=241,slow=5.9,SNR=3.1									
GERES	**GERESS Array B**	**11.68**	**338**		Pn	**Pn**		**17 59 36.1**	**-0.7**	
	comp=E,0.1nm,0.3s,baz=159,slow=12,SNR=2.6									
KBZ	**Khabaz**	**17.84**	**65**		P	**Pn**		**18 00 58.7**	**+0.5**	
	comp=E,0.1nm,0.3s,baz=266,slow=13,SNR=2.9									
HFS	**Hagfors**	**22.35**	**351**		P	**P**		**18 01 47.6**	**-0.4**	
	comp=E,3.0nm,0.8s,baz=186,slow=11,SNR=2.8									
FINES	**FINESS Array B**	**23.52**	**7**		P	**P**		**18 01 57.8**	**-2.3**	
	comp=E,1.7nm,0.7s,baz=177,slow=7.3,SNR=4.8									
NOA	**NORSAR Array B**	**23.57**	**349**		P	**P**		**18 01 60.0**	**-0.6**	
	comp=E,1.4nm,0.9s,baz=161,slow=8.2,SNR=2.7									
GEYT	**Alibeck**	**29.56**	**79**		P	**P**		**18 02 55.1**	**0.0**	
	comp=E,0.6nm,0.5s,baz=304,slow=8.4,SNR=2.6									
TORD	**Torodi Ar. Bea**	**30.00**	**219**		P	**P**		**18 02 59.8**	**+0.8**	
	comp=E,0.6nm,1.0s,baz=37,slow=8.7,SNR=2.7									
MKAR	**Makanchi Array**	**45.36**	**58**		P	**P**		**18 05 06.9**	**-1.7**	
	comp=E,0.4nm,0.4s,baz=277,slow=7.0,SNR=21									
ZALV	**Zalesovo Beam**	**45.74**	**48**		P	**P**		**18 05 10.1**	**-1.2**	
	comp=E,1.5nm,0.5s,baz=273,slow=8.1,SNR=7.9									
YKA	**Yellowknife Ar**	**73.33**	**340**		P	**P**		**18 08 20.1**	**-1.5**	
	comp=E,0.1nm,0.6s,baz=72,slow=10,SNR=3.6									

DJA ***26*** *17:57:33.9±0.9, 15°N±9°×12°2E±°, h10km, M4.8/26, mb5.0/26, mB5.4/23, Mw(mB)4.8/23, Mwp5.0/1*

MAN ***26*** *17:57:43.4, 13°54N×121°95E, h12km, mb5.8, ML4.8, MS5.3*

MAN Intensity III - Guinayangan Quezon; Lipa Batangas; Intensity II - Los Banos Laguna; Intensity I - Quezon City.

BJI ***26*** *17:57:43.3±0.0, 13°20N×122°15E, h46km, mB5.1/52, mb4.8/72, Ms4.8/63, Ms7 4.6/60*

GCMT ***26*** *17:57:44.6±0.2, 13°58N±0°01×121°93E±0°02, h14km±1km, MW5.1/89, Moment Tensor Solution. s46,c71; s89,c157; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=2.61±.22; Mθθ2.69±.15; Mϕϕ-0.07±.16; Mrθ2.08±.35; Mϕθ3.73±.11; Mϕr-2.13±.37; Best double couple: M≈5.45400×10¹⁶ NP1:ϕ=20.00000°, δ57.00000°, λ-148.00000°. NP2: ϕ=271.00000°, δ63.00000°, λ-38.00000°. Principal axes: T 5.3190, Plg4.0000°, Azm327.0000°; N 0.2710, Plg45.0000°, Azm61.0000°; P -5.5890, Plg45.0000°, Azm233.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

KLM ***26*** *17:57:45.0, 13°91N×121°95E, h32km, mb5.3*

MOS ***26*** *17:57:46.2±1.0, 13°62N×121°90E, h45km, mb5.0/26, MS4.5/6, Error ellipse: s-maj=8.0km s-min=4.4km az=114.1*

IDC ***26*** *17:57:46.6±1.4, 13°60N×121°88E, h34km±10km, mb4.5/49, mb1 4.5/51, mb1mx4.5/65, mbtmp4.7/51, ML5.1/1, MS4.2/18, Ms1 4.2/18, ms1mx4.0/50, Error ellipse: s-maj=11.3km s-min=8.3km az=72.0*

NEIC ***26*** *17:57:47.6±1.7, 13°51N±0°07×121°85E±0°08, h45km±5km, mb5.1/78, Error ellipse: s-maj=11.7km s-min=9.6km az=224.0*

ISC 26 17:57:45.9±0.6, 13°50N±0°02×121°93E±0°03, h30km±3km, n383, σ1§66/414, mb4.9/140, MS4.4/32, 25C-17D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.09**	**246**	*eP*		**Pb**		**17 57 48.0**	**-3.2**
BOAC				*eS*		**Sb**		**17 57 51.7**	**-3.1**
GQP	**Guinayangan**	**0.65**	**51**	*iP*		**Pb**		**17 57 55.5**	**-3.3**
GQP				*i* S		**Sb**		**17 58 04.2**	**-3.4**
LQP	**Lukban**	**0.72**	**329**	*iP*		**Pb**		**17 57 56.3**	**-3.8**
OTRP	**Odiongan**	**1.13**	**175**	*eP*		**Pn**		**17 58 05.5**	**-0.2**
OTRP				*eS*		**Sb**		**17 58 22.6**	**+1.4**
TGY	**Tagaytay City**	**1.14**	**302**	Pg		**Pn**		**17 58 05.3**	**-0.5**
	4µm,0.3s,baz=167,slow=2.2,SNR=506								
TGY					Lg	Lg		17 58 21.7	
	10µm,0.3s,baz=83,slow=10,SNR=28								
TGY					LR	LR		17 58 37.8	
	comp=Z,22µm,20.5s,baz=260,slow=49								
TGY	**Tagaytay City**	**1.14**	**302**	*eP*		**Pn**		**17 58 04.8**	**-1.1**
TGY				*i* S		**Sn**		**17 58 18.5**	**-1.9**
KALP	**Kalibo**	**1.85**	**167**	*eP*		**Pn**		**17 58 15.3**	**-0.3**
MMPH	**Masbate**	**2.00**	**124**	*eP*		**Pn**		**17 58 17.0**	**-0.7**
MMPH				*i* S		**Sn**		**17 58 36.5**	**-5.2**
RCP	**Roxas**	**2.08**	**157**	*eP*		**Pn**		**17 58 18.7**	**-0.1**
PVCP	**Virac**	**2.17**	**87**	*eP*		**Pn**		**17 58 18.4**	**-1.6**
PVCP				*eS*		**Sb**		**17 58 51.6**	**+0.6**
PCPH	**Palayan**	**2.21**	**339**	*eP*		**Pn**		**17 58 20.2**	**-0.3**
PCPH				*eS*		**Sn**		**17 58 48.9**	**+2.1**
BALP	**Baler**	**2.26**	**351**	*eP*		**Pn**		**17 58 20.1**	**-1.2**
BALP				*eS*		**Sn**		**17 58 48.8**	**+0.8**
CUYO	**Cuyo Island**	**2.77**	**199**	*eP*		**Pn**		**17 58 27.9**	**-0.4**
CNP	**Catarman**	**2.84**	**110**	*eP*		**Pb**		**17 58 37.0**	**+1.0**
CNP				*eS*		**Sb**		**17 59 12.3**	**+2.0**
SMPP	**San Manuel, Pa**	**2.90**	**336**	*eP*		**Pn**		**17 58 29.2**	**-0.9**
SMPP				*eS*		**Sb**		**17 59 11.5**	**-0.6**
GUIM	**Jordan**	**2.92**	**167**	*eP*		**Pn**		**17 58 30.9**	**+0.5**
ENPP	**El Nido**	**3.34**	**227**	*eP*		**Pn**		**17 58 35.9**	**-0.2**
CAUP	**Cauayan**	**3.43**	**358**	*eP*		**Pn**		**17 58 36.3**	**-1.1**
CAUP				*eS*		**Sn**		**17 59 18.0**	**+1.0**
BOLP	**Bolinao**	**3.47**	**326**	*eP*		**Pn**		**17 58 38.5**	**+0.7**
BOLP				*eS*		**Sn**		**17 59 22.5**	**+4.6**
OCLP	**Ormoc**	**3.57**	**133**	*eP*		**Pn**		**17 58 42.8**	**+3.5**
LLP	**Lapu-Lapu**	**3.74**	**147**	*eP*		**Pn**		**17 58 41.9**	**+0.3**
LLP				*eS*		**Sn**		**17 59 23.8**	**-0.8**
SZP	**Santa**	**4.28**	**341**			**Pn**		**17 58 51.0**	**+2.0**
SNPH	**Sibulan**	**4.32**	**163**	*iP*		**Pn**		**17 58 52.8**	**+3.2**
SNPH				*i* S		**Sb**		**17 59 46.9**	**-6.0**
APYP	**Conner**	**4.39**	**351**	*eP*		**Pn**		**17 58 50.3**	**-0.3**
APYP				*eS*		**Sn**		**17 59 39.1**	**-1.6**
MSLP	**Maasin**	**4.40**	**139**	*eP*		**Pn**		**17 58 51.5**	**+0.8**
SIPP	**Brgy, Tapao**	**4.62**	**342**	*iP*		Pn		17 58 58.7	+5.0
SGCP	**Mt. Cagua**	**4.72**	**1**	*eP*		**Pn**		**17 58 55.1**	**0.0**
SGCP				*eS*		**Sn**		**17 59 49.2**	**+0.4**
CGP	**Cagayan de Oro**	**5.70**	**151**	*eP*		**Pn**		**17 59 11.8**	**+3.2**
PAGZ	**Pagadian**	**5.79**	**166**	*eP*		**Pn**		**17 59 11.7**	**+1.8**
KCP	**Kidapawan**	**7.16**	**154**	*iP*		Pn		17 59 35.0	+6.4
DAV	**Davao City (W)**	**7.33**	**150**	Pn		**Pn**		**17 59 34.1**	**+3.1**
	30nm,0.3s,baz=24,slow=6.0,SNR=5.5								
QIZ	**Qiongzhong**	**12.84**	**297**	P		**Pn**		**18 00 49.3**	**+2.8**
QIZ				S		**Sn**		**18 03 14.0**	**+5.6**
QIZ				pmax		pmax			
	comp=Z,10.0nm,1.1s								
QIZ				pmax		pmax			
	comp=Z,430nm,5.1s								
QIZ				LR		LR			
	comp=N,2µm,13.8s								
QIZ				LR		LR			
	comp=E,2µm,14.7s								
QIZ				LR		LR			
	comp=Z,2µm,15.5s								
MRSI	**Marisa**	**12.93**	**180**	P		**P**		**18 00 56.1**	**-1.9**
	48nm,0.9s								
KMSI	**Cibinong**	**13.00**	**171**	P		**P**		**18 01 02.1**	**+3.4**
MPSI	**Mapaga**	**13.23**	**189**	P		**P**		**18 01 04.0**	**+2.7**
	39nm,1.0s								
TNTI	**Ternate**	**13.74**	**156**	P		**Pn**		**18 01 00.8**	**+2.0**
	966nm55nm,1.2s								
TNTI	**Ternate**	**13.74**	**156**			**Pn**		**18 00 59.8**	**+1.0**
APSI	**Ampana**	**14.31**	**181**	P		**P**		**18 01 12.3**	**-1.1**
	2µm166nm,1.4s								
LUWI	**Luwuk**	**14.47**	**177**	P		**P**		**18 01 14.6**	**-0.5**
	3µm184nm,1.1s								
SBUM	**Sibu**	**14.58**	**222**	P		**P**		**18 01 13.8**	**-2.5**
SBUM						**S**		**18 04 08.5**	**-1.0**
SBUM	**Sibu**	**14.58**	**222**	P		**P**		**18 01 14.0**	**-2.4**
SMKI	**Samarinda**	**14.62**	**199**	P		**P**		**18 01 16.6**	**-0.2**
LBMI	**Labuha**	**15.09**	**158**	P		**P**		**18 01 24.3**	**+2.3**
	2µm68nm,2.2s								
BKB	**Balikpapan**	**15.48**	**199**	P		**Pn**		**18 01 21.1**	**-1.2**
SANI	**Sanana**	**15.96**	**165**	P		**Pn**		**18 01 28.1**	**-0.3**
UBPT	**Khong Chiam**	**16.04**	**278**	P		**P**		**18 01 32.1**	**-0.5**
UBPT						IAmb	IAmb	18 01 36.9	
	comp=Z,126nm,1.0s								
TTSI	**Tana Toraja**	**16.57**	**187**	P		**P**		**18 01 42.2**	**+3.8**
	comp=Z,948nmcomp=Z,88nm,0.8s								
KSM	**Kuching**	**16.58**	**225**	P		**P**		**18 01 39.1**	**+0.6**
KSM						IAmb	IAmb	18 01 43.0	
	comp=Z,222nm,1.1s								
KSM	**Kuching**	**16.58**	**225**	P		**P**		**18 01 40.0**	**+1.4**
STKI	**Sintang**	**16.89**	**219**	P		**P**		**18 01 44.4**	**+2.4**
	comp=Z,81nm,1.3s								
SWI	**Sorong**	**17.00**	**146**	P		**Pn**		**18 01 42.0**	**+0.4**
	comp=Z,79nm,1.1s								
SIJI	**Sorong**	**17.01**	**146**	P		**P**		**18 01 44.2**	**+0.8**
	baz=331,slow=15,SNR=6.1								
SIJI					LR	LR		18 07 32.6	
	comp=Z,565nm,20.9s,baz=300,slow=34								
SPSI	**Sidrap Palu**	**17.48**	**187**	P		P		18 01 57.0	+8.5
	comp=Z,834nmcomp=Z,55nm,1.1s								
KBKI	**Kotabaru**	**17.64**	**199**	P		**P**		**18 01 54.3**	**+4.0**
	comp=Z,367nmcomp=Z,22nm,0.8s								
BNSI	**Bone**	**17.87**	**186**	P		P		18 02 00.1	+7.3
	comp=Z,1µmcomp=Z,66nm,1.4s								
MSAI	**Masohi**	**18.12**	**157**	P		**P**		**18 01 56.2**	**+0.6**
	comp=Z,904nmcomp=Z,72nm,1.4s								
AAI	**Ambon**	**18.17**	**160**	P		**P**		**18 01 58.1**	**+2.0**
	comp=Z,2µmcomp=Z,114nm,1.0s								
WHN	**Wuhan**	**18.35**	**339**	*iP*		**Pn**		**18 02 00.3**	**+2.1**
WHN				S		**S**		**18 05 27.8**	**+1.5**
WHN				pmax		pmax			
	comp=Z,88nm,1.5s								
WHN				LR		LR			
	comp=Z,2µm,5.4s								
WHN				LR		LR			
	comp=Z,2µm,12.6s								
WHN				LR		LR			
	comp=Z,3µm,15.9s								
NJ2	**Nanjing**	**18.68**	**352**	*eP*		**Pn**		**18 02 04.5**	**+2.3**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.6s								
NJ2				LR		LR			
	comp=Z,1µm,15.6s								
NJ2				LR		LR			
	comp=Z,1µm,14.2s								
NJ2				LR		LR			
	comp=Z,1µm,14.7s								
GYA	**Guiyang**	**19.26**	**314**	*iP*		**Pn**		**18 02 10.5**	**+1.1**
GYA				pP		sP		18 02 24.0	+3.9
GYA				PP		**PnPn**		**18 02 32.0**	**+9.3**
GYA				S		**Sn**		**18 05 36.5**	**-8.2**
GYA				SS		S		18 06 16.3	+31
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
GYA				pmax		pmax			
	comp=Z,130nm,5.0s								
GYA				LR		LR			
	comp=Z,1µm,15.1s								
GYA				LR		LR			
	comp=Z,1µm,16.0s								
GYA				LR		LR			
	comp=Z,2µm,18.5s								
ENH	**Enshi**	**20.27**	**327**	P		**P**		**18 02 19.5**	**+0.4**
PBKT	**Sadao Pong**	**20.47**	**281**			Pn		18 02 23.3	-0.3
PBKT						IAmb	IAmb	18 02 24.5	
	comp=Z,129nm,1.0s								
JNU	**Nakatsue**	**21.18**	**21**	P		**P**		**18 02 29.5**	**+0.6**
	comp=Z,6.

comp=Z,2µm,18.6s
CD2 LR LR
comp=Z,2µm,15.2s
UGM Wanagama 24.09 209 P P 18 03 01.3 +2.3
KPJI Karang Pucung 24.39 213 P P 18 03 03.2 +1.5
comp=Z,2µmcomp=Z,145nm,0.8s
KSRS Korea Array 24.45 12 P P 18 03 02.0 -0.1
KSRS Korea Array 24.45 12 P P 18 03 02.0 -0.1
comp=Z,2.0nm,0.7s,baz=189,slow=9.6,SNR=8.8
KSRS LR LR 18 13 00.9
comp=Z,342nm,20.4s,baz=204,slow=38
LEM Lembang 24.69 216 P P 18 03 05.8 +1.1
comp=Z,51nm,0.8s,baz=28,slow=13,SNR=16
LEM LR LR 18 13 11.5
comp=Z,363nm,20.7s,baz=44,slow=37
LEM Lembang 24.69 216 P P 18 03 05.1 +0.4
comp=Z,1µmcomp=Z,65nm,2.0s
PSI Prapat 25.10 247 P P 18 03 08.0 -0.3
PSI pmax pmax
comp=Z,73nm,0.8s
PSI Prapat 25.10 247 P P 18 03 08.8 +0.5
comp=Z,66nm,0.9s,baz=47,slow=6.4,SNR=27
RPSI Rantau Prapat 25.14 247 P P 18 03 08.0 -0.7
RPSI IAmb IAmb 18 03 09.9
comp=Z,73nm,0.8s
CISI Cisompet, Garu 25.17 215 P P 18 03 09.4 +0.5
CISI Cisompet, Garu 25.17 215 P P 18 03 08.3 -0.6
MNAI Manna 25.87 228 P P 18 03 15.8 +0.6
BJT Baijiatuau 26.90 350 P P 18 03 22.4 -1.9
BJT pmax pmax
comp=Z,17nm,0.7s
BJT Baijiatuau 26.90 350 P P 18 03 22.4 -1.9
BJI Beijing 26.92 350 P P 18 03 24.3 -0.1
BJI pP **sP 18 03 40.3 +3.5**
BJI S **S 18 08 00.5 +1.0**
BJI ScS **ScS 18 14 10.3 -4.8**
BJI pmax pmax
comp=Z,15nm,1.0s
GSI Gunungsitoli 26.97 245 P P 18 03 23.7 -1.5
GSI IAmb IAmb 18 03 25.6
comp=Z,76nm,0.9s
MJAR Matsushiro Arr 27.20 30 P P 18 03 26.3 -0.8
comp=Z,0.9nm,0.5s,baz=193,slow=8.4,SNR=5.0
LZH Lanzhou 27.75 327 ||P **P 18 03 32.8 +0.6**
LZH PP **PnPn 18 04 23.0 +4.3**
LZH *e*S **S 18 08 16.0 +3.0**
LZH SS **SnSn 18 09 38.0 +11**
LZH pmax pmax
comp=Z,50nm,1.1s
LZH pmax pmax
comp=Z,190nm,4.5s
LZH LR LR
comp=Z,2µm,12.5s
LZH LR LR
comp=Z,1µm,12.6s
LZH LR LR
comp=Z,3µm,14.7s
HHC Hu-ho-hao-te 28.72 344 *e*P **P 18 03 41.8 +1.1**
HHC pP sP 18 03 54.5 +1.4
HHC S **S 18 08 25.0 -3.1**
HHC pmax pmax
comp=Z,6.0nm,1.3s
HHC pmax pmax
comp=Z,170nm,4.9s
HHC LR LR
comp=Z,550nm,12.9s
HHC LR LR
comp=Z,320nm,12.8s
HHC LR LR
comp=Z,560nm,11.8s
SHL Shillong 30.68 298 P P 18 03 57.5 -0.8
SHL pmax pmax
comp=Z,61nm,0.9s
SHL Shillong 30.68 298 P P 18 03 57.5 -0.8
FITZ Fitzroy Crossi 31.61 173 P P 18 04 09.2 +3.0
comp=Z,18nm,1.1s,baz=0.3,slow=11,SNR=7.8
MDJ Mudanjiang 31.70 10 P P 18 04 07.5 +0.7
MDJ pP pP 18 04 15.0 -0.6
MDJ S **S 18 09 20.0 +5.5**
MDJ ScP **ScP 18 10 35.0 -4.5**
MDJ pmax pmax
comp=Z,12nm,1.3s
MDJ pmax pmax
comp=Z,380nm,4.3s
MDJ LR LR
comp=Z,550nm,10.5s
MDJ LR LR
comp=Z,1µm,19.1s
MDJ LR LR
comp=Z,610nm,13.5s
MDJ Mudanjiang 31.70 10 P P 18 04 06.2 -0.6
MDJ IAmb IAmb 18 04 27.9
comp=Z,39nm,1.5s
USA0B Ussuriysk Arra 31.79 14 *e*P **P 18 04 06.5 -1.1**
USRK Ussuriysk Ar. 31.79 14 P **P 18 04 08.0 +0.4**
USRK Ussuriysk Ar. 31.79 14 P **P 18 04 08.0 +0.4**
comp=Z,5.1nm,0.7s,baz=188,slow=6.4,SNR=11
GTA Gaotai 32.35 327 *e*P **P 18 04 13.3 +0.5**
GTA pmax pmax
comp=Z,23nm,1.0s
GTA pmax pmax
comp=Z,300nm,6.7s
GTA LR LR
comp=Z,1µm,20.0s
GTA LR LR
comp=Z,890nm,17.5s
GTA LR LR
comp=Z,1µm,17.1s
LSA Lhasa 32.71 305 P P 18 04 17.3 +0.9
LSA pmax pmax
comp=Z,47nm,0.7s
LSA Lhasa 32.71 305 P P 18 04 16.7 +0.3
LSA pmax pmax
comp=Z,39nm,1.4s
LSA Lhasa 32.71 305 P P 18 04 16.7 +0.3
LSA IAmb IAmb 18 04 19.2
comp=Z,39nm,1.4s
PMG Port Moresby 33.84 131 *e*P P 18 04 32.7 +6.8
PMG pmax pmax
comp=Z,134nm,1.1s
TAPN Taplejung 34.77 299 *e*P **P 18 04 34.0 -0.2**
comp=Z,22nm,0.7s
ODAN Odare 34.91 298 *e*P **P 18 04 35.0 -0.4**
comp=Z,80nm,0.7s
WB0 Warramunga Arr 35.26 159 P P 18 04 36.4 -1.6
ASAJ Asahikawa 35.28 26 P P 18 04 38.1 +0.1
comp=Z,9.1nm,0.9s,baz=244,slow=8.0,SNR=6.6
ASAJ LR LR 18 18 13.6
comp=Z,179nm,20.9s,baz=142,slow=35
WRAB Tennant Creek 35.40 160 *e*P **P 18 04 43.4 +4.1**
WRAB pmax pmax
comp=Z,21nm,1.1s
WRA Warramunga Arr 35.40 160 P P 18 04 40.3 +1.0
comp=Z,12nm,0.9s,baz=338,slow=9.6,SNR=10
WRA PcP **PcP 18 07 08.6 -0.4**
comp=Z,1.3nm,0.6s,baz=338,slow=2.9,SNR=4.4
WB2 Warramunga Arr 35.41 160 P P 18 04 38.9 -0.5
WR0 Warramunga Arr 35.49 159 P P 18 04 39.3 -0.7
RAMN Ramite 35.62 298 *e*P **P 18 04 41.2 -0.3**
comp=Z,32nm,0.6s
HIA Hailar 35.71 358 P P 18 04 41.0 -0.7
HIA pmax pmax
comp=Z,12nm,0.8s
HIA Hailar 35.71 358 P P 18 04 41.0 -0.7
JIRN Jiri 36.15 299 *e*P **P 18 04 45.8 -0.4**
comp=Z,68nm,0.6s
ULN Ulaanbaatar 36.44 343 P P 18 04 46.4 -1.7
ULN pmax pmax
comp=Z,21nm,1.3s
ULN Ulaanbaatar 36.44 343 P P 18 04 46.4 -1.7
ULN IAmb IAmb 18 04 49.6
comp=Z,21nm,1.2s
GUN Gumba 36.49 299 *e*P **P 18 04 48.6 -0.4**
comp=Z,121nm,1.0s
KLR Kul'dur 36.54 11 *e*P **P 18 04 48.9 +0.1**
KLR pmax pmax
comp=Z,10.0nm,1.3s
KLR Kul'dur 36.54 11 P P 18 04 48.4 -0.4
comp=Z,5.2nm,0.9s,baz=197,slow=6.4,SNR=15
SONM Songino Array 36.60 342 P P 18 04 49.5 +0.1
comp=Z,3.6nm,0.6s,baz=164,slow=9.8,SNR=21
SONM PcP **PcP 18 07 11.7 -0.6**
comp=Z,0.8nm,0.8s,baz=156,slow=5.3,SNR=3.0
SONM LR LR 18 21 56.0
comp=Z,907nm,18.4s,baz=154,slow=40
SONM Songino Array 36.60 342 P **P 18 04 48.8 -0.7**

CHLP Challavanipeta 36.69 283 *e*P **P 18 04 50.2 -0.3**
CHLP IAmb IAmb 18 04 52.1
comp=Z,36nm,1.6s
PKI Pulchoki 36.80 298 *e*P **P 18 04 50.7 -1.0**
comp=Z,39nm,0.8s
PKIN Phulchoki 36.81 298 *e*P **P 18 04 50.5 -1.2**
comp=Z,21nm,0.6s
KKN Kakani 36.97 298 *e*P **P 18 04 52.1 -0.9**
DMN Daman 37.07 298 *e*P **P 18 04 53.2 -0.7**
GKN Gorkha 37.57 299 *e*P **P 18 04 56.9 -1.1**
comp=Z,20nm,0.7s
YSS Yuzh-Sakhalins 37.65 24||*e*P **P 18 05 01.2 +3.0**
YSS *e* 18 05 13.7
YSS MLR MLR
comp=Z,400nm,13.0s
YSS MLR MLR
comp=N,300nm,15.0s
YSS MLR MLR
comp=E,300nm,15.0s
KOLN Koldanda 38.40 298 *e*P **P 18 05 04.2 -0.9**
DANN Dangsing 38.41 299 *e*P **P 18 05 04.2 -1.0**
comp=E,44nm,0.7s
AS31 Alice Springs 38.75 162 P P 18 05 08.3 +0.6
ASAR Alice Springs 38.75 162 P P 18 05 09.3 +1.6
comp=E,7.5nm,0.8s,baz=340,slow=6.9,SNR=23
ASAR PcP **PcP 18 07 19.1 0.0**
comp=E,3.5nm,0.7s,baz=338,slow=3.0,SNR=6.3
ASAR Alice Springs 38.75 162 P P 18 05 09.0 +1.3
PVM Polavaram 38.99 281 *e*P **P 18 05 09.5 -0.4**
PVM IAmb IAmb 18 05 11.1
comp=Z,7.8nm,0.9s
GRNR Gornyy 39.00 15||*i*P **P 18 05 09.4 -0.1**
GRNR pmax pmax
comp=Z,8.0nm,1.3s
GRNR MLR MLR
comp=Z,120nm,12.0s
ZAK Zakamensk 39.81 341 *e*P **P 18 05 15.5 -0.9**
ZAK pmax pmax
comp=Z,4.0nm,1.1s
MYLAV Mylavaram 39.95 280 *e*P **P 18 05 17.3 -0.6**
MYLAV IAmb IAmb 18 05 19.2
comp=Z,28nm,1.7s
GGR Gangavaram 40.35 282 *e*P **P 18 05 20.9 -0.4**
GGR IAmb IAmb 18 05 21.6
comp=Z,8.5nm,1.1s
ZEA Zeya 40.37 5 *e*P **P 18 05 20.2 -0.6**
ZEA pmax pmax
comp=Z,14nm,1.2s
ZEA MLR MLR
comp=Z,1µm,15.0s
ZEA MLR MLR
comp=E,300nm,16.0s
ZEA MLR MLR
comp=N,600nm,17.0s
ADKI Addanki 40.61 279 *e*P **P 18 05 23.5 +0.1**
ADKI IAmb IAmb 18 05 24.8
comp=Z,34nm,1.8s
TLY Talaya 40.84 343 *e*P **P 18 05 25.5 +0.7**
TLY pmax pmax
comp=Z,34nm,1.4s
TLY MLR MLR
comp=Z,1µm,16.0s
TLY Talaya 40.84 343 P **P 18 05 25.0 +0.1**
comp=Z,2.5nm,0.6s,baz=184,slow=4.9,SNR=5.9
TLY LR LR 18 24 33.4
comp=Z,702nm,18.1s,baz=133,slow=39
TLY Talaya 40.84 343 P **P 18 05 25.1 +0.3**
TYV Tymovskoe 40.90 20 *e*P **P 18 05 25.3 +0.1**
TYV pmax pmax
comp=Z,5.0nm,0.6s
SKHT Srikalahasti 40.99 275 *e*P **P 18 05 26.5 0.0**
SKHT IAmb IAmb 18 05 27.9
comp=Z,16nm,1.0s
CTA Charters Tower 41.07 144 P **P 18 05 27.0 0.0**
comp=Z,5.6nm,0.8s,baz=0.0,slow=8.1,SNR=2.0
CTA PcP **PcP 18 07 27.4 +0.9**
comp=Z,13nm,1.0s,baz=18,slow=3.2,SNR=3.5
IRK Irkutsk 41.16 344 *e*P **P 18 05 27.3 -0.2**
IRK pmax pmax
comp=Z,24nm,3.1s
RPR Rampur 41.22 283 *e*P **P 18 05 27.7 -0.6**
RPR IAmb IAmb 18 05 29.1
comp=Z,9.8nm,1.0s
NJS Nagarjunasagar 41.22 280 *e*P **P 18 05 28.1 -0.3**
NJS IAmb IAmb 18 05 28.9
comp=Z,8.0nm,0.8s
SRLM Srisailam 41.63 279 *e*P **P 18 05 31.7 -0.2**
SRLM IAmb IAmb 18 05 32.5
comp=Z,4.7nm,0.8s
MOY Mondy 41.65 340 *e*P **P 18 05 31.6 0.0**
MOY pmax pmax
comp=Z,26nm,1.8s
HYB Hyderabad 41.92 281 *i*P **P 18 05 33.5 -0.7**
HYBB Hyderabad (bro 41.92 281 *e*P **P 18 05 33.7 -0.5**
HYBB IAmb IAmb 18 05 34.5
comp=Z,7.9nm,0.8s
WMQ Urumqi 42.09 323 *e*P **P 18 05 36.3 +1.0**
WMQ pP sP 18 05 53.3 +5.5
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ pmax pmax
comp=Z,63nm,8.7s
WMQ LR LR
comp=Z,1µm,15.1s
WMQ LR LR
comp=Z,1µm,15.5s
WMQ LR LR
comp=Z,970nm,20.7s
SRSP Sriramsagar 42.12 283 *e*P **P 18 05 35.2 -0.5**
SRSP IAmb IAmb 18 05 36.0
comp=Z,7.6nm,0.8s
URV Uravakonda 43.27 278 *e*P **P 18 05 44.7 -0.5**
URV IAmb IAmb 18 05 45.3
comp=Z,22nm,1.1s
KLRI Killari 43.78 282 *e*P **P 18 05 48.7 -0.6**
KLRI IAmb IAmb 18 05 49.3
comp=Z,14nm,0.8s
FORT Forrest 44.41 172 P **P 18 05 54.8 +0.8**
BOD Bodaibo 44.64 354 *e*P **P 18 05 54.7 -0.8**
BOD pmax pmax
comp=Z,8.0nm,1.5s
NWAO Narrogin (SRO) 46.38 185 P **P 18 06 09.1 -0.4**
comp=Z,5.5nm,0.6s,baz=9.3,slow=10,SNR=5.6
NWAO Narrogin (SRO) 46.38 185 IAmb IAmb 18 06 34.8
comp=Z,30nm,1.4s
MK31 Makanchi Array 46.91 323 P **P 18 06 13.9 +0.2**
MK31 pmax pmax
comp=Z,11nm,0.9s
MK31 Makanchi Array 46.91 323 P **P 18 06 13.9 +0.2**
MKAR Makanchi Array 46.91 323 P **P 18 06 13.8 +0.1**
comp=Z,9.4nm,0.8s,baz=124,slow=8.7,SNR=73
MKAR PcP **PcP 18 07 45.5 -0.5**
comp=Z,1.4nm,0.7s,baz=117,slow=3.4,SNR=3.1
MKAR LR LR 18 24 49.2
comp=Z,491nm,21.1s,baz=110,slow=35
PDGK Podgornoye 46.97 318 P **P 18 06 13.9 -0.4**
MAKZ Makanchi 47.10 323 P **P 18 06 15.4 +0.2**
MAKZ pmax pmax
comp=Z,21nm,1.4s
MAKZ Makanchi 47.10 323 P **P 18 06 15.4 +0.2**
KSH Kashi 47.93 311 P **P 18 06 23.5 +1.7**
KSH PP **PP 18 08 11.3 -2.6**
KSH S **S 18 13 20.5 +2.8**
KSH SS **SS 18 16 45.5 -1.1**
KSH pmax pmax
comp=Z,15nm,0.9s
KSH LR LR
comp=Z,770nm,7.9s
KSH LR LR
comp=Z,790nm,7.7s
KSH LR LR
comp=Z,2µm,7.9s
BBOO Buckleboo 47.98 164 P **P 18 06 22.4 +0.3**
BBOO IAmb IAmb 18 06 29.3
comp=Z,27nm,0.8s
KDJ Kajisay 48.02 315 P **P 18 06 23.0 +0.4**
KDJ pmax pmax
comp=Z,20nm,0.9s
KDJ Kajisay 48.02 315 P **P 18 06 23.0 +0.4**
KDJ IAmb IAmb 18 06 24.3
comp=Z,20nm,0.8s
NIL Nilore 48.42 303 P **P 18 06 23.5 -2.1**
NIL pmax pmax
comp=Z,22nm,0.8s
NIL Nilore 48.42 303 P **P 18 06 23.5 -2.1**
NIL IAmb IAmb 18 06 25.9

comp=Z,22nm,0.8s
NRN Naryn 48.58 314 IAmb IAmb 18 06 28.5
comp=Z,19nm,0.8s
PETK Petropavlovsk- 48.64 28 P **P 18 06 27.2 +0.3**
comp=Z,8.7nm,0.8s,baz=206,slow=6.3,SNR=25
PETK LR LR 18 26 11.3
comp=Z,147nm,20.8s,baz=239,slow=35
ULHL Ulahol 48.71 315 P **P 18 06 28.6 +0.7**
SNR=20
YAK Yakutsk 48.78 5 *e*P **P 18 06 26.6 -1.3**
YAK pmax pmax
comp=Z,20nm,1.3s
YAK pmax pmax
comp=N,11nm,1.4s
YAK pmax pmax
comp=E,3.0nm,1.5s
YAK Yakutsk 48.78 5 P **P 18 06 27.3 -0.6**
YAK IAmb IAmb 18 06 32.8
comp=Z,15nm,0.8s
STKA Stephens Creek 48.90 158 P **P 18 06 30.0 +0.9**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 48.90 158 P **P 18 06 29.9 +0.7**
comp=Z,5.4nm,0.9s,baz=336,slow=8.6,SNR=10
STKA Stephens Creek 48.90 158 P **P 18 06 30.0 +0.9**
BOOM Boomskoye usch 49.01 315 P **P 18 06 30.0 -0.2**
BOOM Boomskoye usch 49.01 315 P **P 18 06 30.0 -0.2**
PET Petropavlovsk 49.02 29 *e*P **P 18 06 29.9 +0.1**
PET *e*S **S 18 13 32.9 +0.5**
PET pmax pmax
comp=Z,30nm,1.5s
PET MLR MLR
comp=Z,200nm,19.0s
KZA Kyzart 49.33 314 P **P 18 06 34.0 +1.0**
SNR=14
KBK Karagaybulak 49.75 315 P **P 18 06 36.6 +0.8**
SNR=17
ZAA0 Zalesovo Array 49.79 332 P **P 18 06 35.2 -0.5**
ZALV Zalesovo Beam 49.79 332 P **P 18 06 35.0 -0.7**
comp=Z,5.3nm,0.6s,baz=122,slow=6.5,SNR=23
ZALV LR LR 18 28 37.5
comp=Z,270nm,18.1s,baz=82,slow=37
ZALV Zalesovo Beam 49.79 332 P **P 18 06 34.9 -0.8**
UCH Uchtor 49.90 314 P **P 18 06 38.2 +0.9**
SNR=40
CHMS Chumysh 50.01 315 P **P 18 06 37.3 -0.3**
SNR=17
AAK Ala-Archa 50.05 315 *e*P **P 18 06 38.2 0.0**
AAK pmax pmax
comp=Z,8.0nm,1.2s
AAK Ala-Archa 50.05 315 P **P 18 06 37.8 -0.4**
comp=Z,4.5nm,0.9s
AAK LR LR 18 29 27.8
comp=Z,786nm,21.0s,baz=78,slow=38
AAK Ala-Archa 50.05 315 P **P 18 06 38.1 0.0**
SNR=5.3
USP Ospenovka 50.28 316 P **P 18 06 39.9 +0.2**
SNR=18
AML Almayashu 50.44 314 P **P 18 06 42.0 +0.6**
SNR=22
EKS2 Erkin-Say 50.56 315 P **P 18 06 42.6 +0.7**
SNR=21
ARSB Arslanbob 50.67 313 P **P 18 06 41.2 -1.7**
ARSB IAmb IAmb 18 07 02.0
comp=Z,17nm,1.2s
MA2 Magadan 50.71 18 *e*P **P 18 06 42.5 -0.1**
MA2 pmax pmax
comp=Z,9.0nm,1.3s
KURK Kurchatov 51.02 326 P **P 18 06 45.7 +0.6**
KURK pmax pmax
comp=Z,86nm,1.0s
KURK Kurchatov 51.02 326 P **P 18 06 45.7 +0.6**
KURBB Kurchatov Arra 51.03 326 P **P 18 06 43.6 -1.6**
comp=Z,33nm,0.8s,baz=122,slow=7.9,SNR=157
BTK Batken 51.87 311 P **P 18 06 51.0 -0.8**
BTK pmax pmax
comp=Z,30nm,1.7s
BTK Batken 51.87 311 P **P 18 06 51.0 -0.8**
BTK IAmb IAmb 18 06 53.0
comp=Z,30nm,1.6s
KK31 Karatay Array 52.97 314 P **P 18 06 59.8 0.0**
KK31 pmax pmax
comp=Z,18nm,1.1s
KK31 Karatay Array 52.97 314 P **P 18 06 59.8 0.0**
KK31 IAmb IAmb 18 07 00.6
comp=Z,18nm,1.1s
KKAR Karatay Array 52.97 314 P **P 18 06 59.8 0.0**
KKAR pmax pmax
comp=Z,18nm,1.1s
KKAR Karatay Array 52.97 314 P **P 18 06 59.8 0.0**
KKAR IAmb IAmb 18 07 00.6
comp=Z,18nm,1.1s
SEY Seymchan 53.86 17 *e*P **P 18 07 06.4 +0.5**
SEY Seymchan 53.86 17 P **P 18 07 06.3 +0.4**
comp=Z,1.8nm,0.6s,baz=226,slow=5.0,SNR=20
BVAR Borovoye Array 56.62 325 P **P 18 07 25.9 0.0**
comp=Z,15nm,0.7s,baz=115,slow=10.0,SNR=90
BRVK Borovoye 56.69 326 P **P 18 07 26.8 +0.3**
BRVK pmax pmax
comp=Z,60nm,1.0s
BRVK Borovoye 56.69 326 P **P 18 07 26.8 +0.3**
TIXI Tiksi 58.28 3 *e*P **P 18 07 36.1 -1.2**
TIXI pmax pmax
comp=Z,13nm,1.3s
TIXI Tiksi 58.28 3 P **P 18 07 36.7 -0.6**
TIXI IAmb IAmb 18 07 45.4
comp=Z,28nm,1.5s
GEYT Alibeck 61.22 306 P **P 18 07 57.7 -0.6**
comp=Z,4.6nm,0.6s,baz=151,slow=3.4,SNR=15
GEYT LR LR 18 38 51.0
comp=Z,354nm,19.1s,baz=10.0,slow=40
GEYT Alibeck 61.22 306 IAmb IAmb 18 07 59.1
comp=Z,5.5nm,0.8s
BILL Bilibino 61.54 17||*e*P **P 18 07 59.9 +0.1**
BILL SS SS 18 20 16.0 -4.5
BILL SSS SSS 18 23 04.0
BILL pmax pmax
comp=Z,9.0nm,1.0s
BILL MLR MLR
comp=Z,232nm,17.0s
BILL Bilibino 61.54 17 P **P 18 07 59.4 -0.5**
BILL IAmb IAmb 18 08 01.4
comp=Z,8.7nm,0.8s
AB31 Akbulak array 61.67 319 P **P 18 07 59.5 -1.5**
ABKAR Akbulak array 61.67 319 P **P 18 08 00.8 -0.2**
ABKAR IAmb IAmb 18 08 01.6
comp=Z,20nm,0.8s
AKTO Aktyubinsk 63.14 320 P **P 18 08 10.3 -0.6**
comp=Z,8.9nm,0.7s,baz=97,slow=8.2,SNR=21
SVE Sverdlovsk 63.22 327||*e*P **P 18 08 11.0 -0.2**
SVE pmax pmax
comp=Z,49nm,1.0s
MSVF Nonsavu 63.48 118 P **P 18 08 15.0 +1.3**
MSVF pmax pmax
comp=Z,29nm,1.1s
MSVF Nonsavu 63.48 118 P **P 18 08 15.0 +1.3**
MSVF IAmb IAmb 18 08 21.1
comp=Z,28nm,1.1s
ARU Arti 64.21 327*d i*P **P 18 08 16.9 -0.9**
ARU 18 08 47.1
ARU 18 10 34.1
ARU S **S 18 16 51.8 -1.4**
ARU pmax pmax
comp=Z,17nm,0.6s
ARU Arti 64.21 327 P **P 18 08 16.9 -0.9**
comp=Z,6.7nm,0.6s,baz=94,slow=4.1,SNR=38
ARU Arti 64.21 327 P **P 18 08 16.8 -1.0**
ARU IAmb IAmb 18 08 17.8
comp=Z,21nm,0.8s
KIRV Kirov 69.47 328 P **P 18 08 50.5 -0.7**
comp=Z,49nm,0.7s,baz=41,slow=0.5,SNR=20
PRGR Permogore 71.72 331 *e*P **P 18 09 02.4 -2.4**
PRGR pmax pmax
comp=Z,16nm,0.7s
ZEI Tsey 72.21 311 *e*P **P 18 09 05.8 -2.7**
ZEI pmax pmax
comp=Z,9.0nm,0.8s
RAYN Ar Rayn 72.44 291 P **P 18 09 09.5 -0.6**
RAYN pmax pmax
comp=Z,19nm,1.0s
RAYN Ar Rayn 72.44 291 P **P 18 09 09.5 -0.6**
RAYN IAmb IAmb 18 09 10.6
comp=Z,19nm,1.0s
AKH Akhalkalaki 72.57 309||P **P 18 09 11.0 +0.3**
KBZ Khabaz 72.91 312 P **P 18 09 12.1 -0.2**
comp=Z,6.5nm,0.9s,baz=109,slow=5.9,SNR=10.0

KVAR	**Kislovodsk Arr**	**73.04**	**312**	P		**P**		**18 09 13.5**	**+0.2**
	comp=Z,7.4nm,0.7s,baz=93,slow=6.4,SNR=9.1								
KIV	**Kislovodsk**	**73.05**	**312**	*e*P		**P**		**18 09 12.0**	**-1.3**
KIV				pmax		pmax			
	comp=E,71nm,1.1s								
KIV	**Kislovodsk**	**73.05**	**312**	P		**P**		**18 09 12.7**	**-0.7**
KIV				IAmb		IAmb		18 09 14.4	
	comp=Z,19nm,0.8s								
VRH	**Novokhopyorsk**	**73.48**	**320**	*e*P		**P**		**18 09 14.1**	**-1.5**
VRH				pmax		pmax			
	comp=Z,40nm,1.0s								
KLMR	**Klimovskoe**	**74.63**	**330**	*e*P		**P**		**18 09 19.6**	**-2.5**
KLMR				pmax		pmax			
	comp=Z,24nm,0.9s								
KLMR	**Klimovskoe**	**74.63**	**330**	*e*P		**P**		**18 09 19.6**	**-2.5**
KLMR				AMP				18 09 21.5	
	comp=Z,24nm,0.9s								
VORD	**Divnogorie**	**75.02**	**320**	*e*P		**P**		**18 09 22.1**	**-2.4**
VORD				pmax		pmax			
	comp=Z,10.0nm,0.9s								
VSR	**Storozhevoye**	**75.09**	**320**	*e*P		**P**		**18 09 22.5**	**-2.4**
VSR				pmax		pmax			
	comp=Z,20nm,0.9s								
LPSR	**Galich'ya Gora**	**75.16**	**321**	*e*P		**P**		**18 09 23.7**	**-1.6**
LPSR				pmax		pmax			
	comp=Z,30nm,0.8s								
TMCR	**Tamitsa**	**75.30**	**333**	*e*P		**P**		**18 09 25.4**	**-0.5**
TMCR				pmax		pmax			
	comp=Z,35nm,1.2s								
KDAK	**Kodiak Island**	**76.30**	**33**	P		**P**		**18 09 30.7**	**-1.1**
	comp=Z,19nm,0.9s,baz=293,slow=9.9,SNR=2.5								
OBN	**Obninsk**	**76.41**	**324**⇓	*e*P		**P**		**18 09 31.1**	**-1.3**
OBN								18 09 41.0	
OBN				*e*				18 20 11.4	
OBN				SS		SS		18 24 05.0	-5.0
OBN				pmax		pmax			
	comp=Z,13nm,0.8s								
OBN				MLR		MLR			
	comp=Z,432nm,15.0s								
OBN	**Obninsk**	**76.41**	**324**	P		**P**		**18 09 30.6**	**-1.7**
	comp=Z,2.6nm,0.5s,baz=137,slow=16,SNR=3.8								
BPAW	**Bear Paw Mtn.**	**76.70**	**27**	P		**P**		**18 09 34.3**	**+0.4**
MLY	**Manley**	**76.75**	**26**	P		**P**		**18 09 34.3**	**0.0**
SUA	**Susitna One**	**76.99**	**29**	P		**P**		**18 09 35.1**	**-0.7**
TRF	**Thorofare Moun**	**77.05**	**27**	P		**P**		**18 09 35.8**	**-0.3**
MCK	**McKinley**	**77.63**	**27**	P		**P**		**18 09 38.4**	**-0.8**
MCK				pmax		pmax			
	comp=Z,30nm,0.8s								
MCK	**McKinley**	**77.63**	**27**	P		**P**		**18 09 38.4**	**-0.8**
RND	**Reindeer**	**77.70**	**27**	P		**P**		**18 09 39.1**	**-0.6**
RND				pmax		pmax			
	comp=Z,56nm,1.5s								
RND	**Reindeer**	**77.70**	**27**	P		**P**		**18 09 39.1**	**-0.6**
PMR	**Palmer**	**77.75**	**29**	P		**P**		**18 09 38.7**	**-1.1**
PMR				pmax		pmax			
	comp=Z,18nm,1.0s								
PMR	**Palmer**	**77.75**	**29**	P		**P**		**18 09 38.6**	**-1.1**
PMR				IAmb		IAmb		18 09 43.4	
	comp=Z,18nm,1.0s								
WRH	**Wood River Hil**	**77.93**	**26**	P		**P**		**18 09 40.4**	**-0.4**
WRH				IAmb		IAmb		18 09 50.2	
	comp=Z,38nm,1.7s								
CCB	**Clear Creek Bu**	**78.03**	**26**	P		**P**		**18 09 40.1**	**-1.3**
ILAR	**Eielson Array**	**78.41**	**26**	P		**P**		**18 09 42.1**	**-1.4**
	comp=Z,3.8nm,0.7s,baz=245,slow=4.0,SNR=50								
ILAR				LR		LR		18 47 06.0	
	comp=Z,79nm,18.7s,baz=321,slow=38								
HDA	**Harding Lake**	**78.43**	**26**	P		**P**		**18 09 42.3**	**-1.3**
HDA				IAmb		IAmb		18 09 43.1	
	comp=Z,13nm,0.6s								
SCM	**Sheep Creek Mo**	**78.57**	**29**	P		**P**		**18 09 44.0**	**-0.5**
SCM				pmax		pmax			
	comp=Z,24nm,0.8s								
SCM	**Sheep Creek Mo**	**78.57**	**29**	P		**P**		**18 09 44.0**	**-0.5**
SCM				IAmb		IAmb		18 09 45.2	
	comp=Z,24nm,0.8s								
ASF	**Jabal al Asfar**	**78.79**	**301**	P		**P**		**18 09 46.9**	**+0.5**
	comp=Z,6.7nm,0.8s,baz=40,slow=3.1,SNR=8.6								
PAX	**Paxson**	**79.28**	**28**	IAmb		IAmb		18 09 49.8	
	comp=Z,10nm,0.7s								
RIDG	**Independent Ri**	**79.44**	**27**	IAmb		IAmb		18 09 49.5	
	comp=Z,27nm,0.8s								
ARCES	**ARCESS Array B**	**79.70**	**339**	P		**P**		**18 09 50.3**	**-0.1**
	comp=Z,6.5nm,0.8s,baz=71,slow=6.8,SNR=14								
SCRK	**Sand Creek**	**79.78**	**27**	P		**P**		**18 09 50.9**	**-0.2**
SCRK				IAmb		IAmb		18 09 51.5	
	comp=Z,35nm,1.6s								
MMAI	**Mount Meron Ar**	**79.90**	**302**	P		**P**		**18 09 52.9**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=74,slow=6.2,SNR=5.5								
MENT	**Mentasta**	**80.07**	**28**	P		**P**		**18 09 52.9**	**+0.2**
BR131	**Keskin Array S**	**80.21**	**309**	*e*P		**P**		**18 09 52.8**	**-1.2**
BRTR	**Keskin Array B**	**80.21**	**309**	P		**P**		**18 09 53.7**	**-0.3**
BRTR	**Keskin Array B**	**80.21**	**309**	P		**P**		**18 09 53.5**	**-0.5**
	comp=Z,2.4nm,0.8s,baz=117,slow=4.5,SNR=10								
BRTR	**Keskin Array B**	**80.21**	**309**	P		**P**		**18 09 53.7**	**-0.3**
MCARA	**McCarthy VSAT**	**80.68**	**29**	P		**P**		**18 09 56.2**	**+0.3**
EGAK	**Eagle**	**80.83**	**26**	P		**P**		**18 09 56.6**	**0.0**
EIL	**Elat**	**80.86**	**298**	P		**P**		**18 09 57.6**	**+0.2**
	comp=Z,15nm,1.0s,baz=93,slow=5.2,SNR=5.9								
FINES	**FINESS Array B**	**81.04**	**331**	P		**P**		**18 09 57.0**	**-0.8**
FINES	**FINESS Array B**	**81.04**	**331**	P		**P**		**18 09 57.0**	**-0.8**
	comp=Z,4.7nm,0.9s,baz=61,slow=3.3,SNR=9.0								
FINES	**FINESS Array B**	**81.04**	**331**	P		**P**		**18 09 56.7**	**-1.0**
VSU	**Vasula**	**81.31**	**328**	*e*P		**P**		**18 09 58.7**	**-0.6**
VSU				pmax		pmax			
	comp=Z,65nm,1.0s								
BARN	**Barnard Glacie**	**81.39**	**29**	P		**P**		**18 10 00.4**	**+0.5**
BARN				IAmb		IAmb		18 10 01.2	
	comp=Z,22nm,0.7s								
CTGM	**Chitina Glacie**	**81.56**	**29**	P		**P**		**18 10 01.8**	**+1.0**
EPYK	**Eagle Plains**	**82.24**	**24**	IAmb		IAmb		18 10 04.8	
	comp=Z,13nm,0.8s								
SORM	**Soroca**	**82.44**	**318**	⇑P		**P**		**18 10 03.2**	**-2.2**
SORM	**Soroca**	**82.44**	**318**	⇑P		**P**		**18 10 03.2**	**-2.2**
INK	**Inuvik**	**82.85**	**21**	P		**P**		**18 10 07.0**	**-0.2**
INK	**Inuvik**	**82.85**	**21**	P		**P**		**18 10 07.0**	**-0.2**
	comp=Z,7.5nm,0.9s,baz=279,slow=6.6,SNR=17								
NOR	**Nord**	**82.99**	**354**	*i* P		**P**		**18 10 07.0**	**-0.7**
	comp=Z,9.6nm,0.9s								
TESR	**Tescani**	**83.92**	**316**	⇑P		**P**		**18 10 11.8**	**-1.4**
PRAR	**RASCA**	**84.01**	**317**	⇑P		**P**		**18 10 13.0**	**-0.6**
VRI	**Vrincioaia**	**84.01**	**316**	⇑P		**P**		**18 10 13.0**	**-0.6**
VRI	**Vrincioaia**	**84.01**	**316**	⇑P		**P**		**18 10 13.0**	**-0.6**
SUW	**Suwalki**	**84.27**	**324**	*e*P		**P**		**18 10 13.9**	**-0.8**
SUW	**Suwalki**	**84.27**	**324**	*e*P		**P**		**18 10 13.9**	**-0.8**
BURAR	**Bucovina Array**	**84.61**	**318**	⇑P		**P**		**18 10 16.9**	**+0.1**
BURAR	**Bucovina Array**	**84.61**	**318**	⇑P		**P**		**18 10 16.9**	**+0.1**
BUR08	**Bucovina Ar. S**	**84.62**	**318**	P		**P**		**18 10 16.4**	**-0.4**
BUR08				IAmb		IAmb		18 10 19.5	
	comp=Z,14nm,1.0s								
MLR	**Muntele Rosu**	**84.63**	**315**	P		**P**		**18 10 15.1**	**-1.8**
MLR				pmax		pmax			
	comp=Z,39nm,1.4s								
MLR	**Muntele Rosu**	**84.63**	**315**	P		**P**		**18 10 16.3**	**-0.6**
	comp=Z,9.0nm,0.8s,baz=254,slow=3.3,SNR=17								
MLR	**Muntele Rosu**	**84.63**	**315**	⇓P		**P**		**18 10 16.4**	**-0.6**
MLR	**Muntele Rosu**	**84.63**	**315**	P		**P**		**18 10 15.1**	**-1.8**
WHY	**Whitehorse**	**84.69**	**29**	P		**P**		**18 10 16.6**	**-0.3**
SKAG	**Skagway**	**84.85**	**30**	P		**P**		**18 10 16.9**	**-0.6**
SKAG				IAmb		IAmb		18 10 19.7	
	comp=Z,17nm,0.8s								
DOPR	**Dopca**	**84.90**	**316**	⇓P		**P**		**18 10 17.7**	**-0.4**
KMBO	**Kilima Mbogo**	**85.08**	**268**	*c*e*i*P		**P**		**18 10 21.7**	**+1.8**
KMBO				pmax		pmax			
	comp=Z,1.0nm,0.4s								
KMBO	**Kilima Mbogo**	**85.08**	**268**	P		**P**		**18 10 20.0**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=159,slow=1.7,SNR=5.0								
ARCR	**ARCALIA**	**85.31**	**317**	⇑P		**P**		**18 10 19.6**	**-0.6**
HUMR	**Humele**	**85.53**	**315**	⇓P		**P**		**18 10 20.3**	**-1.0**
KWP	**Kalwaria Pacla**	**85.71**	**320**	*e*P		**P**		**18 10 22.3**	**+0.2**
KWP	**Kalwaria Pacla**	**85.71**	**320**	*e*P		**P**		**18 10 22.3**	**+0.2**
CJR	**Cluj-Napoca**	**85.91**	**317**	⇓P		**P**		**18 10 22.1**	**-1.1**
CJR	**Cluj-Napoca**	**85.91**	**317**	⇓P		**P**		**18 10 22.1**	**-1.1**
KOLS	**Kolonicke sedl**	**86.17**	**319**	*e*P		**P**		**18 10 24.1**	**-0.3**
KOLS				pmax		pmax			
	comp=Z,14nm,1.5s								
KOLS	**Kolonicke sedl**	**86.17**	**319**	*e*P		**P**		**18 10 24.1**	**-0.3**
TRPA	**Tarpa**	**86.22**	**319**	⇑P		**P**		**18 10 24.5**	**-0.1**
UZH	**Uzhgorod**	**86.24**	**319**	*c i*P		**P**		**18 10 24.9**	**+0.2**
UZH				*e*				18 10 35.1	
DRGR		**86.48**	**317**	⇑P		**P**		**18 10 24.1**	**-1.9**
DRGR		**86.48**	**317**	⇑P		**P**		**18 10 24.1**	**-1.9**
STHS	**Stebnicka Huta**	**86.68**	**320**	*e*P		**P**		**18 10 27.2**	**+0.3**
STHS				pmax		pmax			
	comp=Z,14nm,0.9s								
STHS	**Stebnicka Huta**	**86.68**	**320**	*e*P		**P**		**18 10 27.2**	**+0.3**
CRVS	**Cervenica-Dubn**	**86.69**	**319**	*e*P		**P**		**18 10 27.1**	**+0.1**
CRVS				pmax		pmax			
	comp=Z,45nm,1.1s								
CRVS	**Cervenica-Dubn**	**86.69**	**319**	*e*P		**P**		**18 10 27.1**	**+0.1**
DAG	**Danmarks Havn**	**86.99**	**352**	*i* P		**P**		**18 10 26.0**	**-1.8**
DAG				pmax		pmax			
	comp=Z,5.0nm,0.7s								
DAG	**Danmarks Havn**	**86.99**	**352**	*i* P		**P**		**18 10 26.0**	**-1.8**
	comp=Z,4.7nm,0.7s								
HFS	**Hagfors**	**87.22**	**332**	P		**P**		**18 10 28.2**	**-1.1**
	comp=Z,6.2nm,0.8s,baz=85,slow=3.3,SNR=13								
NIE	**Niedzica**	**87.27**	**320**	*e*P		**P**		**18 10 30.3**	**+0.5**
NIE	**Niedzica**	**87.27**	**320**	*e*P		**P**		**18 10 30.2**	**+0.5**
SIRR	**Siria**	**87.32**	**317**	⇑P		**P**		**18 10 29.9**	**-0.1**
OJC	**Ojcow**	**87.34**	**321**	*e*P		**P**		**18 10 30.0**	**-0.1**
OJC	**Ojcow**	**87.34**	**321**	*e*P		**P**		**18 10 30.0**	**-0.1**
KECS	**Kecovo**	**87.44**	**319**	*e*P		**P**		**18 10 30.8**	**+0.2**
KECS	**Kecovo**	**87.44**	**319**	*e*P		**P**		**18 10 30.8**	**+0.2**
LANS	**Liptovska Anna**	**87.87**	**320**	*e*P		**P**		**18 10 33.3**	**+0.6**
LANS				pmax		pmax			
	comp=Z,2.0nm,0.9s								
LANS	**Liptovska Anna**	**87.87**	**320**	*e*P		**P**		**18 10 33.3**	**+0.6**
NB2	**NORSAR Subarra**	**87.99**	**333**	P		**P**		**18 10 31.2**	**-1.8**
	comp=Z,0.8nm,0.5s,baz=67,slow=5.1								
NOA	**NORSAR Array B**	**87.99**	**333**	P		**P**		**18 10 31.1**	**-1.9**
	comp=Z,1.8nm,0.6s,baz=67,slow=4.9,SNR=9.9								
VYHS	**Vyhne**	**88.48**	**320**	*e*P		**P**		**18 10 35.5**	**0.0**
VYHS	**Vyhne**	**88.48**	**320**	*e*P		**P**		**18 10 35.5**	**0.0**
KSP	**Ksiaz**	**89.25**	**322**	*e*P		**P**		**18 10 39.2**	**+0.1**
KSP	**Ksiaz**	**89.25**	**322**	*e*P		**P**		**18 10 39.2**	**+0.1**
VRAC	**Vranov**	**89.60**	**321**	P		**P**		**18 10 40.9**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=93,slow=4.9,SNR=4.5								
VRAC	**Vranov**	**89.60**	**321**	⇑P		**P**		**18 10 40.9**	**+0.1**
ZST	**Bratislava**	**89.67**	**320**	*e*P		**P**		**18 10 41.6**	**+0.5**
ZST	**Bratislava**	**89.67**	**320**	*e*P		**P**		**18 10 41.6**	**+0.5**
MAW	**Mawson**	**91.29**	**199**	LR		LR		18 48 38.6	
	comp=Z,75nm,20.3s,baz=58,slow=33								
GERES	**GERESS Array B**	**91.54**	**321**	P		**P**		**18 10 49.5**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=59,slow=5.1,SNR=10								
YKA	**Yellowknife Ar**	**92.50**	**23**	P		**P**		**18 10 53.6**	**-0.3**
	comp=Z,3.5nm,0.9s,baz=303,slow=4.6,SNR=32								
PPT	**Papeete**	**92.59**	**107**	LR		LR		18 46 37.8	
	comp=Z,112nm,19.8s,baz=296,slow=32								
SUMG	**Summit**	**93.15**	**354**	*i* P		**P**		**18 10 57.4**	**+0.1**
SUMG	**Summit**	**93.15**	**354**	*i* P		**P**		**18 10 57.4**	**+0.1**
VNDA	**Vanda**	**93.67**	**172**	LR		LR		18 56 38.8	
	comp=Z,44nm,18.0s,baz=324,slow=38								
DAVOX	**Davos/Dischmat**	**94.73**	**320**	P		**P**		**18 11 04.3**	**-0.5**
NEW	**Newport**	**99.31**	**35**	P		**Pdif**		**18 11 25.3**	**0.0**
	comp=Z,1.0nm,0.7s,baz=307,slow=10,SNR=3.3								
SYO	**Syowa Base**	**99.76**	**201**	⇑*e*X		**PP**		**18 15 28.5**	**-2.8**
TORD	**Torodi Ar. Bea**	**115.13**	**292**	PKP		**PKPdf**		**18 16 24.6**	**-0.6**
	comp=Z,3.2nm,0.7s,baz=50,slow=1.9,SNR=20								
TORD				PKKPbc		**PKKPbc**		**18 27 00.9**	**+0.6**
	comp=Z,1.4nm,1.1s,baz=298,slow=2.2,SNR=4.0								
TXAR	**Lajitas Array**	**118.77**	**45**	PKP		**PKPdf**		**18 16 31.9**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=178,slow=1.1,SNR=8.1								
DBIC	**Dimbokro**	**123.49**	**287**	PKP		**PKPdf**		**18 16 40.6**	**-0.7**
	comp=Z,5.4nm,0.7s,baz=57,slow=3.1,SNR=13								
KIC	**Kosan Boka**	**123.49**	**287**	*e*PKIKP		**PKPdf**		**18 16 40.6**	**-0.8**
	comp=Z,20nm,0.7s								
TIC	**Toumodi**	**123.65**	**287**	*e*PKIKP		**PKPdf**		**18 16 40.8**	**-0.9**
	comp=Z,11nm,0.6s								
LIC	**Lamto**	**123.81**	**287**	*e*PKIKP		**PKPdf**		**18 16 41.2**	**-0.7**
	comp=Z,25nm,0.6s								
TKL	**Tuckaleechee C**	**125.40**	**26**	PKP		**PKPdf**		**18 16 43.8**	**-0.7**
	comp=Z,2.6nm,0.7s,baz=109,slow=2.0,SNR=4.6								
PLCA	**Paso Flores**	**150.75**	**160**	PKPbc		**PKiKP**		**18 17 36.2**	**-0.1**

*IDC **26** 17:57:46.4±1.4, 7.78S×130.17E, h0km, mb3.9/2, mb1 3.9/6, mb1mx3.6/49, mbtmp3.8/6, ML3.7/4, Error ellipse: s-maj=54.5km s-min=21.8km az=80.0*
ISC 26 17:57:46.8±1.1, 7.84S±0.07×130.5E±0.2, h10km, n6, σ3°01/9, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.97**	**6**	Pn	**Pn**	**17 59 27.5**	**-1.6**
	1.1nm,0.3s,baz=189,slow=19,SNR=3.3						
FITZ	**Fitzroy Crossi**	**11.24**	**204**	Pn	**Pn**	**18 00 29.2**	**+1.4**
	0.6nm,0.3s,baz=30,slow=13,SNR=18						
FITZ				Sn	**Sn**	**18 02 29.9**	**-3.6**
	0.2nm,0.3s,baz=135,slow=8.0,SNR=3.1						
WRA	**Warramunga Arr**	**12.59**	**163**	Pn	**Pn**	**18 00 47.2**	**+1.1**
	0.4nm,0.3s,baz=337,slow=14,SNR=5.3						
WRA				Sn	**Sn**	**18 03 01.6**	**-4.8**
	0.3nm,0.3s,baz=335,slow=22,SNR=4.2						
ASAR	**Alice Springs**	**16.07**	**169**	Pn	**Pn**	**18 01 33.8**	**+0.7**
	0.2nm,0.3s,baz=339,slow=9.3,SNR=22						
ASAR				Sn	**Sn**	**18 04 32.7**	**+1.3**
	0.1nm,0.3s,baz=354,slow=27,SNR=5.0						
STKA	**Stephens Creek**	**26.05**	**158**	P	**P**	**18 03 23.6**	**+3.1**
	1.2nm,0.7s,baz=335,slow=4.0,SNR=4.0						
MKAR	**Makanchi Array**	**69.21**	**327**	P	**P**	**18 08 54.0**	**+0.2**
	1.0nm,0.6s,baz=121,slow=7.8,SNR=7.4						

*IDC **26** 18:00:30.3±0.9, 13.79N×122.18E, h0km, mb3.9/7, mb1 4.1/8, mb1mx3.7/62, mbtmp3.9/8, ML2.8/1, Error ellipse: s-maj=24.4km s-min=12.8km az=28.0*
*MAN **26** 18:00:32.2, 13.55N×121.91E, h12km, mb4.5, ML3.4, MS3.3*
*NEIC **26** 18:00:34.9±2.7, 13.7N±0.1×122.0E±0.1, h35km±1km, mb4.2/5, Error ellipse: s-maj=17.1km s-min=14.0km az=68.0*
ISC 26 18:00:31.8±1.2, 13.62N±0.04×121.97E±0.05, h15km±8km, n25, σ1°36/31, mb4.1/7, 2C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.20**	**219**	*e*P	**Pg**	**18 00 36.3**	**-0.1**
BOAC				*e*S	**Sb**	**18 00 40.7**	**0.0**
GQP	**Guinayangan**	**0.54**	**58**⇓	*i*P	**Pn**	**18 00 44.6**	**-0.3**
GQP				*i* S	**Sn**	**18 00 53.1**	**-0.7**
LQP	**Lukban**	**0.65**	**320**⇑	*e*P	**Pb**	**18 00 45.2**	**+0.2**
TGY	**Tagaytay City**	**1.12**	**296**	Pg	**Pg**	**18 00 54.0**	**+0.6**
	705nm,0.3s,baz=303,slow=1.8,SNR=22						
TGY				Lg	Lg	18 01 11.1	
	2µm,0.3s,baz=342,slow=22,SNR=11						
TGY	**Tagaytay City**	**1.12**	**296**	*e*P	**Pb**	**18 00 51.4**	**-1.5**
TGY				*i* S	**Sg**	**18 01 10.2**	**+2.3**
OTRP	**Odiongan**	**1.25**	**178**	*e*P	**Pn**	**18 00 54.4**	**-0.3**
OTRP				*e*S	**Sb**	**18 01 10.1**	**-0.8**
SJMP	**San Jose**	**1.42**	**216**	*e*P	**Pn**	**18 00 55.7**	**-1.3**
SJMP				*e*S	**Sn**	**18 01 15.0**	**-0.4**
LUBP	**Lubang**	**1.68**	**274**	*e*P	**Pn**	**18 00 59.0**	**-0.9**
LUBP				*e*S	**Sn**	**18 01 21.5**	**-0.5**
PCPH	**Palayan**	**2.11**	**336**⇑	*e*P	**Pb**	**18 01 09.6**	**-0.2**
PCPH				*e*S	**Sg**	**18 01 39.3**	**-0.5**
TPUB	**Ta-pu**	**9.72**	**353**	Pn	**Pn**	**18 02 50.7**	**-0.4**
JOW	**Kunigami**	**14.41**	**23**	Pn	**Pn**	**18 03 53.4**	**-2.0**
	0.1nm,0.3s,baz=86,slow=20,SNR=1.8						
UBPT	**Khong Chiam**	**16.07**	**278**	Pn	**Pn**	**18 04 18.1**	**+0.8**
UBPT				IAmb	IAmb	18 04 25.6	
	comp=Z,19nm,1.0s						
KSM	**Kuching**	**16.70**	**225**	Pn	**Pn**	**18 04 24.5**	**-0.9**
KSM				IAmb	IAmb	18 04 32.3	
	comp=Z,20nm,1.0s						
SLVN	**Son La**	**18.85**	**297**	P	**P**	**18 04 49.2**	**-2.3**
CM31	**Chiang Mai Arr**	**22.64**	**285**	P	**P**	**18 05 29.9**	**-2.7**
CMAR	**Chiang Mai Arr**	**22.64**	**285**	P	**P**	**18 05 35.1**	**+2.5**
	comp=Z,8.1nm,1.1s,baz=96,slow=7.0,SNR=4.1						
FITZ	**Fitzroy Crossi**	**31.72**	**173**	P	**P**	**18 06 57.4**	**+2.2**
	comp=Z,2.0nm,0.8s,baz=0.0,slow=8.1,SNR=2.3						
WRA	**Warramunga Arr**	**35.50**	**160**	P	**P**	**18 07 29.5**	**+1.4**
	comp=Z,2.8nm,1.0s,baz=340,slow=9.6,SNR=3.7						
WRA	**Warramunga Arr**	**35.50**	**160**	IAmb	IAmb	18 07 34.2	
	comp=Z,0.4nm,1.2s						
ASAR	**Alice Springs**	**38.85**	**162**	P	**P**	**18 07 58.3**	**+1.7**
	comp=Z,1.3nm,0.6s,baz=341,slow=6.7,SNR=4.3						
KURBB	**Kurchatov Arra**	**50.95**	**326**	P	**P**	**18 09 33.8**	**+1.2**
	comp=Z,2.0nm,0.8s,baz=122,slow=8.8,SNR=4.0						
BVAR	**Borovoye Array**	**56.54**	**325**	P	**P**	**18 10 13.5**	**0.0**
	comp=Z,1.0nm,0.4s,baz=262,slow=40,SNR=4.0						
ILAR	**Eielson Array**	**78.28**	**26**	P	**P**	**18 12 30.8**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=270,slow=3.6,SNR=3.6						
TORD	**Torodi Ar. Bea**	**115.13**	**292**	PKP	**PKPdf**	**18 19 13.4**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=66,slow=1.7,SNR=2.1						
PLCA	**Paso Flores**	**150.85**	**160**	PKPbc	**PKiKP**	**18 20 26.0**	**+1.2**
	comp=Z,1.6nm,0.8s,baz=332,slow=5.3,SNR=3.4						

*IDC **26** 18:03:29.3±2.3, 37.45N×19.61E, h0km, mb3.6/5, mb1 3.6/9, mb1mx3.4/54, mbtmp3.5/9, ML3.0/4, Error ellipse: s-maj=44.2km s-min=24.0km az=33.0*
*THE **26** 18:03:40.7, 38.37N×20.42E, h6km±3km, ML3.2/11, Error ellipse: s-maj=3.1km s-min=0.4km az=230.0*
*ATH **26** 18:03:40.8, 38.36N×20.48E, h7km±3km, ML3.3/20, Error ellipse: s-maj=3.2km s-min=0.8km az=19.0*
ISC 26 18:03:40.6±1.0, 38.36N±0.02×20.44E±0.04, h11km±6km, n55, σ1°26/74, mb3.8/6, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.14**	**42**	P	**Pg**	**18 03 43.2**	**-0.7**
FSK	**Fiskardo**	**0.14**	**42**	P	**Pg**	**18 03 43.0**	**-0.9**
VLS	**Valsamata**	**0.21**	**147**	P	**Pg**	**18 03 45.2**	**0.0**
VLS				S	**Sg**	**18 03 49.0**	**+0.8**
	10µm,0.3s						
VLS	**Valsamata**	**0.21**	**147**	P	**Pg**	**18 03 45.2**	**0.0**
VLS				S	**Sg**	**18 03 48.6**	**+0.4**
VLS				AML	AML	18 03 51.1	
	comp=E,19365µm,0.3s						
VLS				AML	AML	18 03 51.8	
	comp=N,19823µm,0.3s						
EVGI	**Lefkada island**	**0.31**	**32**	P	**Pg**	**18 03 46.5**	**-0.4**
EVGI				S	**Sg**	**18 03 51.0**	**-0.2**
EVGI	**Lefkada island**	**0.31**	**32**	P	**Pg**	**18 03 46.6**	**-0.4**
EVGI				S	**Sg**	**18 03 50.9**	**-0.2**
KFL	**Anninata**	**0.37**	**132**	P	**Pg**	**18 03 47.9**	**0.0**
KFL				S	**Sg**	**18 03 54.1**	**+1.3**
	comp=N,17µm,0.4s						
KFL	**Anninata**	**0.37**	**132**	P	**Pg**	**18 03 47.1**	**-0.8**
KFL				AML	AML	18 03 55.3	
	comp=E,42261µm,0.3s						
KFL				AML	AML	18 03 56.8	
	comp=N,24719µm,0.5s						
MGNA	**Meganis**	**0.41**	**42**	P	**Pg**	**18 03 48.0**	**-0.6**
MGNA				S	**Sg**	**18 03 54.4**	**+0.4**
MGNA				AML	AML	18 03 54.9	
	comp=N,15628µm,0.1s						
MGNA				AML	AML	18 03 55.2	
	comp=E,16856µm,0.1s						
LKD2	**Lefkada island**	**0.46**	**21**	P	**Pg**	**18 03 49.7**	**-0.1**
LKD2				S	**Sg**	**18 03 56.3**	**+0.4**
	comp=E,3µm,0.6s						
LKD2	**Lefkada island**	**0.46**	**21**	P	**Pg**	**18 03 49.6**	**-0.1**
LKD2				S	**Sg**	**18 03 55.9**	**0.0**
LKD2				AML	AML	18 03 58.6	
	comp=E,7532µm,0.4s						
LKD2				AML	AML	18 03 59.0	
	comp=N,4010µm,0.3s						
TSLK	**Tsoukalades, L**	**0.50**	**19**	P	**Pg**	**18 03 50.0**	**-0.3**
TSLK				S	**Sg**	**18 03 57.8**	**+0.8**

PROD	**Prodromos**	**1.94**	**92**	P	**Pb**	**18 04 16.1**	**+0.2**
PROD				AML	AML	18 04 53.3	
	comp=N,868μm,0.7s						
PROD				AML	AML	18 04 53.4	
	comp=E,1010μm,0.6s						
LKR	**Lokris**	**2.03**	**81**	P	**Pb**	**18 04 16.7**	**-0.8**
VIL2	**Platees**	**2.23**	**93**	P	**Pb**	**18 04 19.9**	**-1.0**
IDI	**Anoyia**	**4.70**	**129**	Pn	Pn	18 04 41.2	-10
	comp=E,0.3nm,0.3s,baz=295,slow=14,SNR=2.3						
IDI				Sn	**Sn**	**18 05 38.2**	**-7.9**
	comp=E,0.5nm,0.3s,baz=293,slow=18,SNR=2.4						
MLR	**Muntele Rosu**	**8.22**	**28**	Pn	Pn	18 05 45.3	+5.5
	comp=E,0.1nm,0.3s,baz=262,slow=15,SNR=2.7						
MLR				Sn	Sb	18 07 29.0	-12
	comp=E,0.0nm,0.3s,baz=157,slow=23,SNR=2.3						
BRTR	**Keskin Array B**	**10.36**	**78**	Pn	**Pn**	**18 06 13.2**	**+4.1**
	comp=E,0.1nm,0.3s,baz=272,slow=39,SNR=2.9						
GERES	**GERESS Array B**	**11.56**	**337**	Pn	**Pn**	**18 06 24.1**	**-1.4**
	comp=E,0.0nm,0.3s,baz=149,slow=14,SNR=2.1						
HFS	**Hagfors**	**22.21**	**351**	P	**P**	**18 08 37.3**	**+0.5**
	comp=E,2.7nm,0.8s,baz=149,slow=11,SNR=3.8						
FINES	**FINESS Array B**	**23.38**	**7**	P	**P**	**18 08 48.7**	**-0.2**
	comp=E,3.5nm,1.0s,baz=167,slow=9.5,SNR=3.8						
MKAR	**Makanchi Array**	**45.26**	**59**	P	**P**	**18 11 57.3**	**-0.7**
	comp=E,0.3nm,0.5s,baz=280,slow=7.4,SNR=11						
ZALV	**Zalesovo Beam**	**45.62**	**48**	P	**P**	**18 11 59.6**	**-1.0**
	comp=E,0.9nm,0.4s,baz=271,slow=8.2,SNR=5.2						
YKA	**Yellowknife Ar**	**73.20**	**340**	P	P	18 15 05.1	-5.9
	comp=E,0.1nm,0.4s,baz=28,slow=5.3,SNR=3.0						
DLBC	**Dease Lake**	**80.46**	**345**	P	P	18 15 46.3	-5.8
	comp=E,5.5nm,0.8s,baz=325,slow=3.3,SNR=4.9						

*IDC **26** 18:06:19.7±11.0, 38.05N×19.88E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.2/50, mbtmp3.6/4, ML2.5/1, Error ellipse: s-maj=218.4km s-min=31.2km az=55.0*
*ATH **26** 18:06:26.6, 38.24N×20.47E, h14km±2km, ML3.2/7, Error ellipse: s-maj=2.7km s-min=0.8km az=243.0*

ISC 26 18:06:24.7±1.8, 38°21N±0.04×20°33E±0.09, h13km±8km, n18, σ0s81/27, mb3.6/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**99**	P	**Pg**	**18 06 29.8**	**+0.5**
VLS				S	**Sg**	**18 06 32.0**	**-0.3**
VLS				AML	AML	18 06 32.4	
	comp=E,56752μm,0.1s						
VLS				AML	AML	18 06 32.4	
	comp=N,66274μm,0.1s						
FSK	**Fiskardo**	**0.31**	**36**	P	**Pb**	**18 06 31.9**	**-0.2**
FSK				S	**Sg**	**18 06 35.0**	**-0.3**
FSK				AML	AML	18 06 36.5	
	comp=N,19128μm,0.5s						
FSK				AML	AML	18 06 37.0	
	comp=E,13700μm,0.4s						
KFL	**Anninata**	**0.37**	**105**	P	**Pg**	**18 06 32.6**	**+0.5**
KFL				S	**Sg**	**18 06 37.1**	**-0.1**
KFL				AML	AML	18 06 38.2	
	comp=E,25140μm,0.5s						
KFL				AML	AML	18 06 38.3	
	comp=N,23479μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.42**	**142**	P	**Pb**	**18 06 34.3**	**+0.3**
VLMS				S	**Sb**	**18 06 39.9**	**-0.5**
VLMS				AML	AML	18 06 41.5	
	comp=E,14726μm,0.3s						
VLMS				AML	AML	18 06 43.0	
	comp=N,14268μm,0.3s						
EVGI	**Lefkada island**	**0.48**	**32**	P	**Pg**	**18 06 34.8**	**+0.5**
EVGI				S	**Sg**	**18 06 40.3**	**-0.4**
LKD2	**Lefkada island**	**0.63**	**24**	P	**Pg**	**18 06 37.7**	**+0.7**
LKD2				S	**Sg**	**18 06 45.5**	**0.0**
LKD2				AML	AML	18 06 54.3	
	comp=N,2158μm,0.5s						
LKD2				AML	AML	18 06 54.7	
	comp=E,1645μm,0.3s						
TSLK	**Tsoukalades, L**	**0.67**	**22**	P	**Pb**	**18 06 38.5**	**+0.2**
TSLK				S	**Sg**	**18 06 46.9**	**+0.4**
TSLK				AML	AML	18 06 53.5	
	comp=E,1930μm,0.4s						
TSLK				AML	AML	18 06 53.9	
	comp=N,2468μm,0.4s						
RLS	**Riolos of Patr**	**0.91**	**99**	P	**Pg**	**18 06 42.1**	**-0.2**
PVO	**Paravola**	**1.02**	**66**	P	**Pb**	**18 06 44.1**	**-0.2**
PVO				S	**Sb**	**18 06 56.8**	**-0.8**
PVO				AML	AML	18 07 00.1	
	comp=E,2963μm,0.4s						
PVO				AML	AML	18 07 05.4	
	comp=N,2624μm,0.4s						
DRO	**Drossia**	**1.12**	**103**	P	**Pb**	**18 06 45.5**	**-0.4**
EFP	**Efpalio**	**1.26**	**80**	P	**Pn**	**18 06 48.1**	**+0.1**
AMT	**Artemida-Makis**	**1.28**	**121**	P	**Pg**	**18 06 49.3**	**-0.1**
LAKA	**Lakka**	**1.30**	**88**	P	**Pn**	**18 06 48.5**	**-0.1**
ANX	**Ano Chora**	**1.30**	**72**	P	**Pb**	**18 06 49.4**	**+0.2**
IDI	**Anoyia**	**4.68**	**127**	Pn	**Pn**	**18 07 34.4**	**-0.7**
	comp=N,0.2nm,0.3s,baz=286,slow=18,SNR=2.1						
IDI				Sn	**Sn**	**18 08 32.4**	**+3.1**
	comp=N,0.7nm,0.3s,baz=140,slow=23,SNR=4.5						
FINES	**FINESS Array B**	**23.53**	**7**	P	**P**	**18 11 33.2**	**-1.2**
	comp=N,1.4nm,0.7s,baz=191,slow=14,SNR=2.3						
MKAR	**Makanchi Array**	**45.41**	**58**	P	**P**	**18 14 43.5**	**+0.4**
	comp=N,0.3nm,0.4s,baz=279,slow=7.4,SNR=7.3						
ZALV	**Zalesovo Beam**	**45.78**	**48**	P	**P**	**18 14 45.0**	**-0.8**
	comp=N,0.6nm,0.4s,baz=269,slow=9.5,SNR=4.1						

*TEH **26** 18:09:03.3, 29.83N×50.78E, h18km, ML3.7*
*THR **26** 18:09:03.7±0.4, 29.81N×50.72E, h17km±15km, ML3.8*

ISC 26 18:09:03.9±1.7, 29.9N±0.1×50.79E±0.07, h10km, n36, σ1s78/35, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKAZ	**Kazeroun**	**0.92**	**96**	*e*Pg	**Pg**	**18 09 19.9**	**-1.8**
IKAZ				*e*		18 09 42.8	
KLNJ	**Kolanjah**	**1.31**	**32**	*e*Pn	**Pn**	**18 09 28.6**	**-0.1**
SHI	**Shiraz**	**1.52**	**99**	*e*Pg	**Pg**	**18 09 33.2**	**0.0**
SHI				*e*		18 10 01.2	
JHBN	**Jahan bin**	**2.34**	**357**	*e*Pn	**Pb**	**18 09 45.3**	**-1.1**
IRAM	**Ramesheh**	**2.35**	**35**	*e*Pn	**Pb**	**18 09 45.2**	**-1.4**
ROKH	**ROKH**	**2.46**	**5**	*e*Pn	**Pn**	**18 09 46.2**	**+1.9**
IPIR	**Pirpir**	**2.79**	**2**	*e*Pn	**Pn**	**18 09 50.2**	**+1.3**
SHGR	**Shooshtar-Gavs**	**2.79**	**323**	*e*Pn	**Pn**	**18 09 49.9**	**+1.2**
SHGR	**Shooshtar-Gavs**	**2.79**	**323**	*e*Pn	**Pn**	**18 09 49.9**	**+1.2**
SHGR				IAML		18 10 48.7	
	comp=N,213nm,0.6s						
SHGR				IAML		18 10 51.2	
	comp=E,328nm,0.8s						
ISAD	**Sadrabad**	**3.21**	**50**	*e*Pn	**Pn**	**18 09 56.8**	**+2.1**
IZEF	**Zefreh**	**3.27**	**23**	*e*Pn	**Pn**	**18 09 57.7**	**+2.1**
LMD1	**Lamerd**	**3.29**	**140**	*e*		18 11 11.4	
IKLH	**Kolahrood**	**3.49**	**11**	*e*Pn	**Pn**	**18 10 00.7**	**+2.2**
IMEH	**Mehriz**	**3.62**	**65**	*e*Pn	**Pn**	**18 10 02.5**	**+2.2**
QAM	**Ghamsar**	**3.90**	**8**	*e*Pn	**Pn**	**18 10 06.9**	**+2.8**
KHMZ	**Khomeyn**	**3.90**	**350**	*e*Pn	**Pn**	**18 10 06.2**	**+2.0**
KHMZ	**Khomeyn**	**3.90**	**350**	*e*Pn	**Pn**	**18 10 06.2**	**+2.0**
YZKH	**Yazd**	**4.11**	**52**	*e*Pn	**Pn**	**18 10 06.2**	**-0.7**
YZKH	**Yazd**	**4.11**	**52**	*e*Pn	**Pn**	**18 10 09.1**	**+2.3**
IKMR	**Kamar-syah**	**4.16**	**331**	*e*Pn	**Pn**	**18 10 08.2**	**+0.7**
KRSH	**Karshahi**	**4.23**	**15**	*e*Pn	**Pn**	**18 10 10.6**	**+2.0**
IKFM	**Kafar-mosalman**	**4.41**	**326**	*e*Pn	**Pn**	**18 10 10.7**	**-0.2**
GHVR	**GHOM**	**4.60**	**5**	*e*Pn	**Pn**	**18 10 15.8**	**+2.2**
GHVR	**GHOM**	**4.60**	**5**	*e*Pn	**Pn**	**18 10 15.8**	**+2.2**
ASAO	**Ashtian**	**4.69**	**352**	*e*Pn	**Pn**	**18 10 17.1**	**+2.1**
ASAO	**Ashtian**	**4.69**	**352**	*e*Pn	**Pn**	**18 10 17.1**	**+2.1**
IQOM	**Qom**	**4.95**	**3**	*e*Pn	**Pn**	**18 10 19.8**	**+1.3**
KHGB	**Koh Gabri**	**4.95**	**83**	*e*Pn	**Pn**	**18 10 19.9**	**+1.3**
KHGB				*e*		18 11 29.7	
IVRN	**Varamin**	**5.15**	**9**	*e*Pn	**Pn**	**18 10 22.3**	**+1.1**
NGRK	**Negar Kerman**	**5.17**	**91**	*e*Pn	**Pn**	**18 10 23.9**	**+2.1**
TVBK	**TV Kerman**	**5.19**	**87**	*e*Pn	**Pn**	**18 10 24.6**	**+2.7**
IRAZ	**Razeghan**	**5.55**	**353**	*e*Pn	**Pn**	**18 10 28.3**	**+1.5**
NIAN	**Nian**	**5.80**	**112**	*e*Pn	**Pn**	**18 10 29.6**	**-0.4**
TPRV	**Parvadeh(Tabas**	**5.93**	**57**	*e*Pn	**Pn**	**18 10 33.4**	**+1.4**
TNSJ	**Nastanj**	**6.40**	**49**	*e*Pn	**Pn**	**18 10 40.3**	**+1.9**
TKDS	**Koohdasht(Taba**	**6.55**	**54**	*e*Pn	**Pn**	**18 10 41.2**	**+0.7**

*IDC **26** 18:26:01.5±4.7, 38.57N×20.33E, h0km, mb3.7/4, mb1 3.7/6, mb1mx3.4/38, mbtmp3.7/6, ML2.3/1, Error ellipse: s-maj=90.0km s-min=29.9km az=51.0*
*ATH **26** 18:26:03.4, 38.30N×20.41E, h13km±31km, ML3.3/5, Error ellipse: s-maj=31.6km s-min=0.9km az=0.0*

ISC 26 18:26:01.9±2.0, 38.34N±0.04×20.29E±0.10, h8km±10km, n17, σ1s40/24, mb3.8/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.25**	**61**	P	**Pg**	**18 26 07.5**	**+0.7**
FSK				S	**Sg**	**18 26 10.8**	**+0.6**
FSK				AML	AML	18 26 11.2	
	comp=N,9085μm,0.9s						
FSK				AML	AML	18 26 11.3	
	comp=E,7370μm,0.3s						
VLS	**Valsamata**	**0.29**	**124**	P	**Pg**	**18 26 07.2**	**-0.4**
VLS				S	**Sg**	**18 26 10.6**	**-0.9**
VLS				AML	AML	18 26 10.7	
VLS				AML	AML	18 26 10.9	
	comp=E,71266μm,0.1s						
EVGI	**Lefkada island**	**0.41**	**46**	P	**Pb**	**18 26 10.8**	**-0.5**
EVGI				S	**Sb**	**18 26 16.4**	**-1.3**
KFL	**Anninata**	**0.46**	**120**	P	**Pg**	**18 26 10.1**	**-0.7**
KFL				S	**Sg**	**18 26 15.5**	**-1.2**
KFL				AML	AML	18 26 16.3	
	comp=N,20792μm,0.5s						
KFL				AML	AML	18 26 16.5	
	comp=E,37787μm,0.3s						
MGNA	**Meganis**	**0.51**	**51**	P	**Pb**	**18 26 13.0**	**-0.1**
MGNA				S	**Sb**	**18 26 19.4**	**-1.2**
VLMS	**Volimes, Zakyn**	**0.55**	**147**	P	**Pg**	**18 26 13.0**	**+0.5**
VLMS				S	**Sg**	**18 26 19.8**	**+0.1**
VLMS				AML	AML	18 26 21.1	
	comp=E,11913μm,0.1s						
VLMS				AML	AML	18 26 26.4	
	comp=N,9870μm,0.3s						
RLS	**Riolos of Patr**	**0.97**	**106**	P	**Pg**	**18 26 20.3**	**-0.2**
EFP	**Efpalio**	**1.28**	**86**	P	**Pn**	**18 26 26.2**	**+0.2**
EFP				AML	AML	18 26 48.9	
	comp=N,1057μm,0.6s						
EFP				AML	AML	18 26 49.0	
	comp=E,1597μm,0.5s						
ANX	**Ano Chora**	**1.31**	**78**	P	**Pn**	**18 26 27.1**	**+0.5**
KLV	**Kalavryta, Ach**	**1.50**	**101**	P	**Pg**	**18 26 30.5**	**-0.1**
PROD	**Prodromos**	**2.06**	**91**	P	**Pb**	**18 26 38.6**	**-1.0**
IDI	**Anoyia**	**4.79**	**128**	Pn	**Pn**	**18 27 17.1**	**+2.7**
	baz=285,slow=20,SNR=2.2						
IDI				Sn	**Sn**	**18 28 10.9**	**+0.8**
	comp=E,1.0nm,0.3s,baz=137,slow=24,SNR=3.5						
BRTR	**Keskin Array B**	**10.48**	**78**	Pn	**Pn**	**18 28 36.6**	**+4.0**
	comp=E,0.0nm,0.3s,baz=265,slow=11,SNR=3.8						
HFS	**Hagfors**	**22.21**	**351**	P	**P**	**18 30 56.7**	**-1.9**
	comp=E,4.5nm,1.1s,baz=156,slow=14,SNR=4.5						
FINES	**FINESS Array B**	**23.41**	**7**	P	**P**	**18 31 10.5**	**-0.5**
	comp=E,2.8nm,1.0s,baz=193,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**45.38**	**58**	P	**P**	**18 34 19.7**	**-1.0**
	comp=E,0.2nm,0.5s,baz=281,slow=6.9,SNR=3.7						
ZALV	**Zalesovo Beam**	**45.72**	**48**	P	**P**	**18 34 22.1**	**-1.1**
	comp=E,0.9nm,0.5s,baz=271,slow=8.5,SNR=4.9						

*IDC **26** 18:30:37.5±4.4, 38.49N×20.54E, h0km, mb3.5/3, mb1 3.5/5, mb1mx3.3/35, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=91.7km s-min=25.8km az=48.0*
*ATH **26** 18:30:37.9, 38.22N×20.44E, h12km±4km, ML3.2/6, Error ellipse: s-maj=4.1km s-min=1.1km az=114.0*

ISC 26 18:30:38.0±1.2, 38.25N±0.04×20.47E±0.08, h14km±6km, n16, σ0s87/25, mb3.6/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.12**	**128**	P	**Pg**	**18 30 41.2**	**-0.2**
VLS				S	**Sg**	**18 30 43.2**	**-0.5**
VLS				AML	AML	18 30 43.9	
	comp=N,78405μm,0.2s						
VLS				AML	AML	18 30 44.4	
	comp=E,49922μm,0.2s						
FSK	**Fiskardo**	**0.22**	**19**	P	**Pg**	**18 30 43.4**	**+0.5**
FSK				S	**Sg**	**18 30 47.1**	**+0.9**
FSK				AML	AML	18 30 50.7	
	comp=N,13184μm,0.6s						
FSK				AML	AML	18 30 50.8	
	comp=E,18228μm,0.3s						
KFL	**Anninata**	**0.29**	**119**	P	**Pg**	**18 30 43.8**	**-0.2**
KFL				S	**Sg**	**18 30 48.7**	**+0.6**
KFL				AML	AML	18 30 49.9	
	comp=N,14744μm,0.3s						
KFL				AML	AML	18 30 52.0	
	comp=E,13670μm,0.4s						
EVGI	**Lefkada island**	**0.40**	**21**	P	**Pb**	**18 30 46.6**	**-0.2**
EVGI				S	**Sb**	**18 30 52.9**	**+0.1**
VLMS	**Volimes, Zakyn**	**0.40**	**158**	P	**Pg**	**18 30 45.6**	**-0.5**
VLMS				S	**Sg**	**18 30 51.5**	**-0.1**
VLMS				AML	AML	18 30 54.5	
	comp=E,11079μm,0.2s						
VLMS				AML	AML	18 30 58.6	
	comp=N,10666μm,0.4s						
MGNA	**Meganis**	**0.48**	**32**	P	**Pb**	**18 30 47.8**	**-0.4**
LKD2	**Lefkada island**	**0.56**	**15**	P	**Pb**	**18 30 48.7**	**-0.9**
LKD2				S	**Sb**	**18 30 57.4**	**0.0**
LKD2				AML	AML	18 31 03.6	
	comp=E,2965μm,0.5s						
LKD2				AML	AML	18 31 04.5	
	comp=N,2818μm,0.6s						
TSLK	**Tsoukalades, L**	**0.59**	**14**	P	**Pb**	**18 30 49.5**	**-0.7**
TSLK				S	**Sb**	**18 30 58.7**	**+0.4**
TSLK				AML	AML	18 31 02.4	
	comp=N,3903μm,0.3s						
TSLK				AML	AML	18 31 05.3	
	comp=E,2896μm,0.3s						
RLS	**Riolos of Patr**	**0.81**	**104**	P	**Pg**	**18 30 52.9**	**-0.9**
PVO	**Paravola**	**0.91**	**66**	P	**Pn**	**18 30 56.3**	**0.0**
PVO				S	**Sn**	**18 31 08.1**	**-1.1**
DRO	**Drossia**	**1.02**	**107**	P	**Pn**	**18 30 58.1**	**+0.1**
IDI	**Anoyia**	**4.62**	**128**	Pn	**Pn**	**18 31 49.7**	**+2.3**
	baz=112,slow=19,SNR=1.7						
IDI				Sn	**Sn**	**18 32 42.6**	**+1.7**
	comp=E,1.3nm,0.3s,baz=41,slow=16,SNR=5.1						
GERES	**GERESS Array B**	**11.67**	**337**	Pn	**Pn**	**18 33 23.9**	**-0.2**
	comp=E,0.1nm,0.3s,baz=156,slow=15,SNR=3.6						
FINES	**FINESS Array B**	**23.48**	**7**	P	**P**	**18 35 45.6**	**-1.3**
	comp=E,1.6nm,0.9s,baz=181,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**45.30**	**58**	P	**P**	**18 38 55.9**	**+0.7**
	comp=E,0.3nm,0.6s,baz=271,slow=7.9,SNR=5.8						
ZALV	**Zalesovo Beam**	**45.67**	**48**	P	**P**	**18 38 57.7**	**-0.3**
	comp=E,0.5nm,0.4s,baz=282,slow=9.3,SNR=3.6						

*IDC **26** 18:38:03.5±1.0, 38.53N×20.41E, h0km, mb3.7/9, mb1 3.7/13, mb1mx3.6/38, mbtmp3.6/13, ML3.5/4, Error ellipse: s-maj=22.8km s-min=18.8km az=30.0*
*THE **26** 18:38:03.9, 38.36N×20.37E, h3km±12km, ML3.6/6, Error ellipse: s-maj=12.5km s-min=0.5km az=69.0*
*ATH **26** 18:38:04.5, 38.37N×20.46E, h10km±3km, ML3.6/8, Error ellipse: s-maj=3.2km s-min=0.7km az=82.0*

ISC 26 18:38:04.6±0.9, 38.37N±0.02×20.43E±0.04, h10km±5km, n42, σ1s38/61, mb3.6/9, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.14**	**48**	P	**Pg**	**18 38 07.1**	**-0.7**
FSK				S	**Sg**	**18 38 09.8**	**-0.1**
	52μm,1.2s						
FSK	**Fiskardo**	**0.14**	**48**	P	**Pg**	**18 38 07.1**	**-0.7**
FSK				S	**Sg**	**18 38 09.5**	**-0.4**
VLS	**Valsamata**	**0.23**	**147**	P	**Pg**	**18 38 08.9**	**-0.5**
VLS				S	**Sg**	**18 38 12.8**	**+0.3**
	28μm,0.7s						
VLS	**Valsamata**	**0.23**	**147**	P	**Pg**	**18 38 08.8**	**-0.5**
VLS				S	**Sg**	**18 38 12.6**	**+0.1**
VLS				AML	AML	18 38 16.0	
	comp=N,55492μm,0.5s						
VLS				AML	AML	18 38 20.4	
	comp=E,44078μm,0.6s						
EVGI	**Lefkada island**	**0.30**	**35**	P	**Pg**	**18 38 10.6**	**-0.2**
EVGI				S	**Sg**	**18 38 15.9**	**+1.0**
EVGI	**Lefkada island**	**0.30**	**35**	P	**Pg**	**18 38 10.4**	**-0.4**
EVGI				S	**Sg**	**18 38 14.5**	**-0.3**
KFL	**Anninata**	**0.38**	**133**	P	**Pg**	**18 38 11.6**	**-0.5**
KFL				S	**Sg**	**18 38 18.2**	**+1.0**
	comp=E,17μm,0.3s						
KFL	**Anninata**	**0.38**	**133**	P	**Pg**	**18 38 11.7**	**-0.4**
KFL				S	**Sg**	**18 38 17.0**	**-0.1**
KFL				AML	AML	18 38 18.8	
	comp=N,32492μm,0.3s						
KFL				AML	AML	18 38 20.0	
	comp=E,36302μm,0.3s						
MGNA	**Meganis**	**0.40**	**44**	P	**Pg**	**18 38 12.0**	**-0.5**
MGNA				S	**Sg**	**18 38 17.9**	**+0.1**
MGNA				AML	AML	18 38 19.2	
	comp=N,17354μm,0.2s						
MGNA				AML	AML	18 38 19.3	
	comp=E,13291μm,0.1s						
LKD2	**Lefkada island**	**0.45**	**23**	P	**Pg**	**18 38 12.7**	**-0.8**
LKD2				S	**Sg**	**18 38 20.2**	**+0.7**
	comp=E,4μm,0.6s						
LKD2	**Lefkada island**	**0.45**	**23**	P	**Pg**	**18 38 13.1**	**-0.5**
LKD2				S	**Sg**	**18 38 19.3**	**-0.2**
LKD2				AML	AML	18 38 26.0	
	comp=E,6770μm,0.6s						
LKD2				AML	AML	18 38 29.3	
	comp=N,7954μm,0.6s						
TSLK	**Tsoukalades, L**	**0.49**	**21**	P	**Pg**	**18 38 13.8**	**-0.3**
TSLK	**Tsoukalades, L**	**0.49**	**21**	P	**Pg**	**18 38 13.9**	**-0.2**
TSLK				S	**Sg**	**18 38 20.7**	**+0.2**
TSLK				AML	AML	18 38 28.1	
	comp=E,13812μm,0.6s						
TSLK				AML	AML	18 38 30.6	
	comp=N,9409μm,0.6s						
VLMS	**Volimes, Zakyn**	**0.52**	**160**	P	**Pg**	**18 38 14.5**	**-0.3**
VLMS				S	**Sg**	**18 38 21.7**	**0.0**
VLMS				AML	AML	18 38 24.4	
	comp=E,35112μm,0.3s						
VLMS				AML	AML	18 38 27.6	
	comp=N,28118μm,0.3s						
RLS	**Riolos of Patr**	**0.87**	**111**	P	**Pg**	**18 38 20.8**	**-0.6**
RLS				S	**Sb**	**18 38 34.0**	**+0.5**
	comp=N,2μm,0.7s						
RLS	**Riolos of Patr**	**0.87**	**111**	P	**Pg**	**18 38 20.5**	**-0.9**
PVO	**Paravola**	**0.89**	**74**	P	**Pg**	**18 38 21.4**	**-0.4**
PVO				S	**Sb**	**18 38 35.5**	**+1.4**
	comp=N,4μm,0.7s						
PVO	**Paravola**	**0.89**	**74**	P	**Pg**	**18 38 21.3**	**-0.5**
PVO				S	**Sg**	**18 38 33.3**	**-0.1**
PVO				AML	AML	18 38 40.1	
	comp=N,10224μm,1.0s						
PVO				AML	AML	18 38 41.7	
	comp=E,7282μm,0.5s						
DRO	**Drossia**	**1.09**	**112**	P	**Pg**	**18 38 24.4**	**-1.2**
EFP	**Efpalio**	**1.16**	**87**	P	**Pg**	**18 38 25.9**	**-0.9**
EFP				S	**Sg**	**18 38 41.0**	**-0.9**
EFP				AML	AML	18 38 49.3	
	comp=N,6853μm,0.6s						
EFP				AML	AML	18 38 54.6	
	comp=E,5445μm,0.8s						
IGT	**Igoumenitsa**	**1.16**	**356**	P	**Pg**	**18 38 26.4**	**-0.6**
ANX	**Ano Chora**	**1.19**	**79**	P	**Pg**	**18 38 26.5**	**-0.9**
IDI	**Anoyia**	**4.71**	**129**	Pn	**Pn**	**18 39 19.1**	**+3.3**
	comp=E,0.4nm,0.3s,baz=306,slow=14,SNR=3.2						
IDI				Sn	**Sn**	**18 40 10.9**	**+0.3**
	comp=E,1.3nm,0.3s,baz=307,slow=20,SNR=3.3						
VAE	**Valguarnera**	**4.84**	**261**	Sn	**Sn**	**18 40 15.6**	**+1.9**
	comp=E,1.3nm,0.3s,baz=178,slow=22,SNR=3.3						
MLR	**Muntele Rosu**	**8.21**	**28**	Pn	**Pn**	**18 40 07.8**	**+3.9**
	comp=E,0.1nm,0.3s,baz=297,slow=21,SNR=3.0						
SOKA	**Soboth**	**9.21**	**336**	*e*Pn	**Pn**	**18 40 16.5**	**-1.0**
	comp=E,3.9nm,0.6s						
OBKA	**Obir**	**9.22**	**334**	Pn	**Pn**	**18 40 18.2**	**+0.5**
	comp=E,1.0nm,0.3s						
BRTR	**Keskin Array B**	**10.36**	**78**	Pn	**Pn**	**18 40 38.0**	**+4.6**
	comp=E,0.1nm,0.3s,baz=259,slow=13,SNR=3.7						
DAVOX	**Davos/Dischmat**	**11.45**	**321**	Pn	**Pn**	**18 40 50.9**	**+2.7**
	comp=E,0.2nm,0.3s,baz=352,slow=22,SNR=2.7						
DAVOX				Sn	**Sn**	**18 42 51.8**	**-4.3**
	comp=E,0.2nm,0.3s,baz=47,slow=5.9,SNR=2.7						
GERES	**GERESS Array B**	**11.55**	**337**	Pn	**Pn**	**18 40 48.0**	**-1.5**
	comp=E,0.2nm,0.3s,baz=152,slow=15,SNR=4.9						
MMAI	**Mount Meron Ar**	**13.28**	**109**	Pn	**Pn**	**18 41 11.0**	**-2.3**
	comp=E,0.3nm,0.3s,baz=294,slow=14,SNR=3.0						
ESDC	**Sonseca Array**	**18.99**	**282**	P	**Pn**	**18 42 27.1**	**+0.1**
	comp=E,0.1nm,0.3s,baz=74,slow=8.8,SNR=4.6						
HFS	**Hagfors**	**22.20**	**351**	P	**P**	**18 43 00.3**	**-0.5**
	comp=E,1.7nm,0.6s,baz=145,slow=10,SNR=5.4						
FINES	**FINESS Array B**	**23.36**	**7**	P	**P**	**18 43 11.6**	**-1.4**
	comp=E,1.5nm,0.7s,baz=192,slow=13,SNR=3.6						
GEYT	**Alibeck**	**29.50**	**79**	P	**P**	**18 44 08.8**	**-0.2**
	comp=E,0.7nm,0.5s,baz=272,slow=10.0,SNR=3.1						
TORD	**Torodi Ar. Bea**	**30.14**	**219**	P	**P**	**18 44 15.5**	**+0.8**
	comp=E,0.6nm,0.9s,baz=32,slow=8.5,SNR=2.8						
MKAR	**Makanchi Array**	**45.26**	**59**	P	**P**	**18 46 21.3**	**-0.8**
	comp=E,0.4nm,0.5s,baz=276,slow=7.0,SNR=7.4						
ZALV	**Zalesovo Beam**	**45.61**	**48**	P	**P**	**18 46 24.2**	**-0.6**
	comp=E,1.2nm,0.5s,baz=276,slow=8.9,SNR=6.3						
YKA	**Yellowknife Ar**	**73.19**	**340**	P	**P**	**18 49 36.7**	**+1.5**
	comp=E,0.1nm,0.5s,baz=49,slow=7.5,SNR=2.7						
PETK	**Petropavlovsk-**	**81.66**	**24**	P	**P**	**18 50 23.2**	**+0.5**
	comp=E,2.8nm,0.9s,baz=308,slow=5.3,SNR=2.8						
PDAR	**Pinedale Array**	**87.35**	**326**	P	**P**	**18 50 50.3**	**-1.8**
	comp=E

	comp=N,1506µm,0.5s							
LAKA	**Lakka**	**1.28**	**86**	P	**Pn**	**18 43 24.6**	**-1.7**
ANX	**Ano Chora**	**1.30**	**70**	P	**Pg**	**18 43 27.8**	**-0.2**
ANX				S	**Sg**	**18 43 45.5**	**+0.6**
	comp=N,1µm,0.6s							
ANX	**Ano Chora**	**1.30**	**70**	P	**Pb**	**18 43 27.4**	**+0.2**
ANX				AML	AML	18 43 52.5	
	comp=E,2605µm,0.8s							
ANX				AML	AML	18 43 52.7	
	comp=N,3429µm,0.5s							
SERG	**Sergoula**	**1.36**	**79**	P	**Pb**	**18 43 28.6**	**+0.5**
SERG	**Sergoula**	**1.36**	**79**	P	**Pn**	**18 43 26.4**	**-1.0**
EVR	**Evrytania**	**1.36**	**56**	P	**Pn**	**18 43 28.0**	**+0.5**
TRIZ	**Trizonia**	**1.36**	**81**	P	**Pb**	**18 43 28.1**	**-0.1**
TRIZ	**Trizonia**	**1.36**	**81**	P	**Pn**	**18 43 26.8**	**-0.6**
KALE	**Kalithea**	**1.42**	**80**	P	**Pb**	**18 43 29.3**	**+0.1**
KLV	**Kalavryta, Ach**	**1.42**	**95**	P	**Pn**	**18 43 27.2**	**-1.1**
ITM	**Ithomi**	**1.59**	**128**	P	**Pg**	**18 43 33.1**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.62**	**58**	P	**Pb**	**18 43 32.8**	**+0.1**
AGG	**Agios Georgios**	**1.76**	**60**	P	**Pb**	**18 43 34.4**	**-0.6**
AGG	**Agios Georgios**	**1.76**	**60**	P	**Pb**	**18 43 34.4**	**-0.6**
AXAR	**Agios Charalam**	**1.90**	**71**	P	**Pb**	**18 43 37.7**	**+0.3**
IDI	**Anoyia**	**4.64**	**127**	Pn	**Pn**	**18 44 15.0**	**+2.5**
	comp=N,0.4nm,0.3s,baz=329,slow=17,SNR=4.9							
IDI				Sn	**Sn**	**18 45 03.5**	**-2.6**
	comp=N,1.4nm,0.3s,baz=264,slow=22,SNR=3.5							
MMAI	**Mount Meron Ar**	**13.27**	**108**	Pn	**Pn**	**18 46 07.9**	**-3.1**
	comp=N,0.4nm,0.3s,baz=291,slow=17,SNR=3.1							
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**18 48 03.6**	**+3.1**
	comp=N,3.2nm,1.0s,baz=180,slow=11,SNR=3.3							
FINES	**FINESS Array B**	**23.57**	**7**	P	**P**	**18 48 14.5**	**+1.8**
	comp=N,1.1nm,0.8s,baz=206,slow=15,SNR=2.3							
MKAR	**Makanchi Array**	**45.41**	**58**	P	**P**	**18 51 20.7**	**-0.3**
	comp=N,0.3nm,0.4s,baz=274,slow=7.6,SNR=10							
ZALV	**Zalesovo Beam**	**45.79**	**48**	P	**P**	**18 51 23.3**	**-0.5**
	comp=N,0.4nm,0.4s,baz=276,slow=2.8,SNR=2.6							

BJI ***26*** *18:45:04.5±0.0,38.˙10N×20.˙38E,h13km,mB5.5/47, mb5.2/66,Ms5.4/49,Ms7 5.1/52*

BGR ***26*** *18:45:05.9±0.7,38.˙37N×21.˙18E,h10km,Ms4.6,Error ellipse: s-maj=26.7km s-min=7.8km az=56.0*

IDC ***26*** *18:45:06.4±0.4,38.˙37N×20.˙45E,h0km,mb5.0/39, mb1 5.0/51,mb1mx5.0/54,mbtmp5.0/51,ML4.4/12, MS4.8/32,Ms1 4.8/32,ms1mx4.7/44,Error ellipse: s-maj=9.4km s-min=8.6km az=130.0*

MOS ***26*** *18:45:06.5±1.3,38.˙31N×20.˙33E,h13km,mb5.6/35, MS5.1/35,Error ellipse: s-maj=4.5km s-min=2.4km az=81.5*

BEO ***26*** *18:45:07.2±0.7,38.˙26N×20.˙19E,h0km,ML5.1/16*

GCMT ***26*** *18:45:08.9±0.1,38.˙09N±0.˙01×20.˙30E±0.˙01,h18km, MW5.4/141,Moment Tensor Solution. s108,c169; s141,c273; Duration: 1ŝ8 Moment tensor: Scale 10¹⁷ Nm; Mrr1.49±.03; Mθθ0.11±.02; Mϕϕ-1.60±.02; Mrθ0.62±.05; Mθϕ0.26±.01; Mϕr-0.01±.04; Best double couple: M₀1.68700×10¹⁷ NP1:ϕs11.00000°,δ47.00000°, λ120.00000°. NP2:ϕs151.00000°,δ51.00000°,λ62.00000°. Principal axes: T 1.7310, Plg69.0000°, Azm356.0000°; N -0.0880, Plg21.0000°, Azm170.0000°; P -1.6440, Plg2.0000°, Azm261.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***26*** *18:45:08.1±3.1,38.˙26N±0.˙06×20.˙34E±0.˙06,h10km±1km Error ellipse: s-maj=8.7km s-min=6.3km az=197.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.26; Mθθ0.29; Mϕϕ-1.55; Mrθ0.14; Mθϕ0.08; Mϕr-0.02; Fault plane solution: M₀1.43000×10¹⁷ NP1: ϕs169.69000°,δ45.99000°,λ78.85000°. NP2:ϕs5.52000°, δ45.11000°,λ101.32000°. Principal axes: T 1.2750, Plg82.0000°, Azm1.0000°; N 0.2782, Plg8.0000°, Azm177.0000°; P -1.5533, Plg0.0000°, Azm268.0000°;*

THE ***26*** *18:45:08.3,38.˙23N×20.˙38E,h2km±33km,ML5.3/5 Error ellipse: s-maj=33.4km s-min=0.7km az=67.0*

ATH ***26*** *18:45:08.0,38.˙23N×20.˙41E,h16km±1km,ML5.1/17,Error ellipse: s-maj=1.8km s-min=0.9km az=76.0*

TIR ***26*** *18:45:09.2,38.˙20N×20.˙25E,h24km,Md5.7/7*

PDG ***26*** *18:45:09.1±0.8,38.˙35N×20.˙24E,h18km±2km,MD5.7/12, ML5.3/12,Error ellipse: s-maj=0.9km s-min=0.9km az=0.0*

MED_RC ***26*** *18:45:09.0±0.1,38.˙10N×20.˙29E,h16km,MW5.5/33, Moment Tensor Solution. Body waves: s4,c5;Mantle waves: s33,c64; Duration: 1ŝ8 Moment tensor: Scale 10¹⁷Nm; Mrr1.34±.05; Mθθ0.20±.03; Mϕϕ-1.55±.03; Mrθ1.27±.10; Mθϕ0.32±.02; Mϕr-0.65±.06; Best double couple: M₀2.05000×10¹⁷ NP1:ϕs14.00000°,δ35.00000°, λ139.00000°. NP2:ϕs140.00000°,δ68.00000°,λ62.00000°. Principal axes: T 2.2000, Plg58.0000°, Azm11.0000°; N -0.3200, Plg26.0000°, Azm151.0000°; P -1.8900, Plg18.0000°, Azm250.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=40s.*

NEIC ***26*** *18:45:11,38.˙10N×20.˙25E,h16km,Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr1.39; Mθθ0.20; Mϕϕ-1.58; Mrθ1.31; Mθϕ0.25; Mϕr-0.47; Fault plane solution: M₀2.06000×10¹⁷ NP1:ϕs16.00000°, δ39.00000°,λ138.00000°. NP2:ϕs141.00000°,δ65.00000°, λ59.00000°. Principal axes: T 2.2481, Plg58.0000°, Azm7.0000°; N -0.4600, Plg28.0000°, Azm155.0000°; P -1.7881, Plg15.0000°, Azm253.0000°;*

GII ***26*** *18:45:16.8±0.0,37.˙38N×21.˙11E,h10km*

SKO ***26*** *18:45:16.8,38.˙71N×21.˙10E,h0km*

HLW ***26*** *18:45:22.3,37.˙13N×21.˙39E,h10km±20km,Md5.1,Ml5.4*

ISC 26 18:45:08.5±0.5,38°25N±0.˙02×20°41E±0.˙02,h15km±2km, h15km:pP-P,n1429,σ1ŝ79/1528,mb5.4/180,MS5.0/86, 102C-17D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.16**	**116**	P	**Pg**	**18 45 12.2**	**-0.5**
VLS				S	**Sg**	**18 45 13.2**	**-2.2**
VLS	**Valsamata**	**0.16**	**116**	P	**Pg**	**18 45 12.2**	**-0.5**
VLS	**Valsamata**	**0.16**	**116**	P	**Pg**	**18 45 12.2**	**-0.5**
VLS	**Valsamata**	**0.16**	**116**	P	**Pg**	**18 45 12.2**	**-0.5**
VLS				S	**Sg**	**18 45 13.2**	**-2.2**
FSK	**Fiskardo**	**0.24**	**30**	P	**Pg**	**18 45 13.9**	**0.0**
FSK				S	**Sg**	**18 45 17.0**	**-0.6**
FSK	**Fiskardo**	**0.24**	**30**	P	**Pg**	**18 45 13.9**	**0.0**
KFL	**Anninata**	**0.33**	**115**	P	**Pg**	**18 45 15.1**	**-0.3**
KFL				S	**Sg**	**18 45 20.4**	**+0.3**
KFL	**Anninata**	**0.33**	**115**	P	**Pg**	**18 45 15.0**	**-0.3**
EVGI	**Lefkada island**	**0.42**	**28**	P	**Pg**	**18 45 16.8**	**-0.2**
EVGI	**Lefkada island**	**0.42**	**28**	P	**Pg**	**18 45 16.8**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.42**	**151**	P	**Pg**	**18 45 16.2**	**-0.8**
VLMS				S	**Sg**	**18 45 22.9**	**0.0**
VLMS				AML	AML	18 45 24.4	
VLMS				AML	AML	18 45 27.7	
MGNA	**Meganis**	**0.51**	**37**	P	**Pg**	**18 45 18.0**	**-0.6**
MGNA				S	**Sb**	**18 45 26.2**	**0.0**
MGNA				AML	AML	18 45 29.6	
MGNA				AML	AML	18 45 31.3	
LKD2	**Lefkada island**	**0.57**	**20**	P	**Pg**	**18 45 19.4**	**-0.5**
LKD2				S	**Sg**	**18 45 27.8**	**+0.3**
	161µm,0.7s						
LKD2	**Lefkada island**	**0.57**	**20**	P	**Pg**	**18 45 19.3**	**-0.5**
LKD2				S	**Sg**	**18 45 27.8**	**+0.3**
LKD2				AML	AML	18 45 35.2	
LKD2				AML	AML	18 45 36.3	
TSLK	**Tsoukalades, L**	**0.61**	**19**	P	**Pg**	**18 45 20.0**	**-0.5**
TSLK				S	**Sb**	**18 45 29.6**	**+0.4**
	222µm,0.8s						
TSLK	**Tsoukalades, L**	**0.61**	**19**	P	**Pg**	**18 45 20.2**	**-0.3**
TSLK				S	**Sb**	**18 45 29.5**	**+0.3**
RLS	**Riolos of Patr**	**0.86**	**103**	P	**Pb**	**18 45 24.0**	**-1.0**
RLS	**Riolos of Patr**	**0.86**	**103**	P	**Pb**	**18 45 24.1**	**-1.0**
RLS				S	**Sb**	**18 45 35.8**	**-0.6**
RLS				AML	AML	18 45 43.7	
RLS				AML	AML	18 45 50.7	
PVO	**Paravola**	**0.95**	**67**	P	**Pb**	**18 45 26.6**	**-0.1**
PVO				S	**Sn**	**18 45 41.9**	**+1.3**
	161µm,0.9s						
PVO	**Paravola**	**0.95**	**67**	P	**Pb**	**18 45 26.6**	**-0.1**
PVO				S	**Sn**	**18 45 40.2**	**-0.4**
PVO				AML	AML	18 45 47.5	
PVO				AML	AML	18 45 48.9	
DRO	**Drossia**	**1.07**	**106**	P	**Pb**	**18 45 27.5**	**-1.2**
DRO	**Drossia**	**1.07**	**106**	P	**Pb**	**18 45 27.9**	**-0.8**
DRO				AML	AML	18 45 54.2	
DRO				AML	AML	18 46 03.5	
EFP	**Efpalio**	**1.19**	**81**	P	**Pn**	**18 45 30.0**	**-0.6**
EFP				S	**Sg**	**18 45 49.9**	**+2.8**
	127µm,1.4s						
EFP	**Efpalio**	**1.19**	**81**	P	**Pn**	**18 45 29.9**	**-0.6**
EFP				S	**Sg**	**18 45 47.7**	**+0.6**
ANX	**Ano Chora**	**1.24**	**73**	P	**Pn**	**18 45 31.2**	**-0.1**
ANX				S	**Sg**	**18 45 51.8**	**+3.2**
	178µm,0.6s						
ANX	**Ano Chora**	**1.24**	**73**	P	**Pn**	**18 45 31.3**	**-0.1**
ANX				S	**Sg**	**18 45 49.0**	**+0.4**
ANX				AML	AML	18 45 56.4	
ANX				AML	AML	18 45 57.2	
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**18 45 30.7**	**-0.5**
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**18 45 30.8**	**-0.5**
LAKA				S	**Sg**	**18 45 48.5**	**0.0**
LAKA				AML	AML	18 45 57.1	
LAKA				AML	AML	18 46 01.6	
AMT	**Artemida-Makis**	**1.25**	**124**	P	**Pb**	**18 45 31.7**	**-0.1**
AMT	**Artemida-Makis**	**1.25**	**124**	P	**Pb**	**18 45 31.8**	**-0.1**
AMT				AML	AML	18 46 00.3	
AMT				AML	AML	18 46 14.9	
IGT	**Igoumenitsa**	**1.28**	**357**	P	**Pb**	**18 45 32.2**	**-0.1**
IGT	**Igoumenitsa**	**1.28**	**357**	P	**Pb**	**18 45 32.2**	**-0.1**
IGT	**Igoumenitsa**	**1.28**	**357**	P	**Pb**	**18 45 32.4**	**+0.1**
IGT				AML	AML	18 45 56.7	
	comp=N,89661µm,0.3s						
IGT				AML	AML	18 45 59.0	
EVR	**Evrytania**	**1.29**	**58**	P	**Pn**	**18 45 31.4**	**-0.6**
EVR	**Evrytania**	**1.29**	**58**	P	**Pn**	**18 45 31.8**	**-0.2**
EVR				AML	AML	18 46 02.5	
EVR				AML	AML	18 46 07.9	
SERG	**Sergoula**	**1.31**	**82**	P	**Pn**	**18 45 32.0**	**-0.2**
SERG				AML	AML	18 45 57.6	
SERG				AML	AML	18 46 00.3	
TRIZ	**Trizonia**	**1.32**	**84**	P	**Pn**	**18 45 32.0**	**-0.3**
KLV	**Kalavryta, Ach**	**1.39**	**98**	P	**Pn**	**18 45 33.4**	**0.0**
KLV				AML	AML	18 46 00.6	
	comp=E,83425µm,0.8s						
KLV				AML	AML	18 46 09.3	
	comp=N,78515µm,0.9s						
KLV	**Kalavryta, Ach**	**1.39**	**98**	P	**Pn**	**18 45 33.6**	**+0.2**
KLV				AML	AML		
	comp=E,60250µm,1.6s						
KLV				AML	AML		
	comp=N,47650µm,0.9s						
KLV				AML	AML		
	comp=N,47650µm,0.9s						
JAN	**Janina**	**1.45**	**14**	P	**Pb**	**18 45 35.5**	**+0.3**
JAN	**Janina**	**1.45**	**14**	P	**Pb**	**18 45 35.5**	**+0.3**
JAN	**Janina**	**1.45**	**14**	P	**Pb**	**18 45 35.4**	**+0.3**
JAN				AML	AML	18 46 03.0	
JAN				AML	AML	18 46 03.0	
ITM	**Ithomi**	**1.61**	**131**	P	**Pb**	**18 45 37.3**	**-0.6**
ITM	**Ithomi**	**1.61**	**131**	P	**Pb**	**18 45 37.3**	**-0.6**
ITM				AML	AML	18 46 12.1	
	comp=N,46864µm,0.9s						
ITM				AML	AML	18 46 15.6	
	comp=E,74778µm,0.9s						
ITM	**Ithomi**	**1.61**	**131**	P	**Pb**	**18 45 37.8**	**-0.2**
ITM				AML	AML		
	comp=E,9610µm,0.9s						
ITM				AML	AML		
	comp=N,8200µm,1.3s						
ITM				AML	AML		
	comp=E,9605µm,0.9s						
ITM	**Ithomi**	**1.61**	**131**		**Pb**	**18 45 38.7**	**+0.7**
ITM				Sn	**Sb**	**18 45 59.0**	**+1.0**
DLFA	**Delphi**	**1.66**	**81**	P	**Pb**	**18 45 38.4**	**-0.4**
SRN	**Sarande**	**1.66**	**349**	*i* PN	**Pn**	**18 45 37.5**	**+0.5**
SRN				*i* SN	**Sn**	**18 45 58.1**	**+0.1**
AGG	**Agios Georgios**	**1.69**	**62**	P	**Pg**	**18 45 41.8**	**+0.7**
AGG	**Agios Georgios**	**1.69**	**62**	P	**Pb**	**18 45 39.5**	**+0.2**
AGG				AML	AML	18 46 14.6	
	comp=E,55387µm,0.7s						
AGG				AML	AML	18 46 16.0	
AGG	**Agios Georgios**	**1.69**	**62**		**Pg**	**18 45 41.8**	**+0.7**
VLX	**Vlachokerasia**	**1.79**	**119**	P	**Pb**	**18 45 40.7**	**-0.3**
THL	**Klokotos Trika**	**1.82**	**43**	P	**Pb**	**18 45 41.5**	**+0.1**
THL				AML	AML	18 46 17.1	
	comp=N,92713µm,1.2s						
THL				AML	AML	18 46 17.4	
THL	**Klokotos Trika**	**1.82**	**43**	P	**Pb**	**18 45 41.7**	**+0.2**
THL				AML	AML		
	comp=N,12300µm,1.2s						
THL				AML	AML		
	comp=E,13300µm,1.0s						
AXAR	**Agios Charalam**	**1.84**	**73**	P	**Pb**	**18 45 42.0**	**+0.2**
KPRO	**Kipourio**	**1.86**	**23**	P	**Pb**	**18 45 42.1**	**-0.2**
PENT	**Pentalofos**	**2.03**	**16**	P	**Pb**	**18 45 44.2**	**-0.8**
TPE	**Tepelena**	**2.07**	**352**	*i* PN	**Pn**	**18 45 43.9**	**+1.3**
TPE				*i* SN	**Sn**	**18 46 09.5**	**+1.4**
TPE	**Tepelena**	**2.07**	**352**	P	**Pn**	**18 45 43.4**	**+0.7**
LKR	**Lokris**	**2.08**	**78**	P	**Pb**	**18 45 44.8**	**-1.1**
VIL2	**Platees**	**2.25**	**90**	P	**Pb**	**18 45 47.3**	**-1.7**
KZN	**Kozani**	**2.31**	**27**	P	**Pb**	**18 45 48.7**	**-1.2**
VLO	**Vlora**	**2.33**	**343**	*i* PN	**Pn**	**18 45 47.3**	**+1.1**
VLO				*i* SN	**Sg**	**18 46 22.1**	**-1.2**
SCTE	**Santa Cesarea**	**2.36**	**321**	P	**Pn**	**18 45 46.9**	**+0.2**
SCTE				S	**Sn**	**18 46 15.2**	**-0.1**
SCTE	**Santa Cesarea**	**2.36**	**321**		**Pn**	**18 45 46.9**	**+0.2**
SCTE				Sn	**Sn**	**18 46 10.9**	**-4.5**
LIT	**Litokhoron**	**2.46**	**41**	P	**Pb**	**18 45 50.8**	**-1.6**
LIT	**Litokhoron**	**2.46**	**41**		**Pb**	**18 45 50.8**	**-1.6**
SKIA	**Skiathos**	**2.56**	**68**	P	**Pn**	**18 45 51.5**	**+2.1**
ATH	**Athens Observa**	**2.63**	**95**	P	**Pn**	**18 45 52.7**	**+2.4**
ATH	**Athens Observa**	**2.63**	**95**	P	**Pn**	**18 45 51.8**	**+1.5**
FNA	**Florina**	**2.64**	**16**	P	**Pn**	**18 45 52.5**	**+1.9**
FNA	**Florina**	**2.64**	**16**		**Pn**	**18 45 52.5**	**+1.9**
ATHU	**Athens Univers**	**2.68**	**95**	P	**Pn**	**18 45 52.4**	**+1.3**
VLY	**Voula,Athens**	**2.70**	**97**	P	**Pn**	**18 45 52.6**	**+1.2**
PTL	**Penteli**	**2.73**	**93**	P	**Pn**	**18 45 53.3**	**+1.4**
EREA	**Eretria**	**2.78**	**85**	P	**Pn**	**18 45 54.1**	**+1.7**
OHR	**Ohrid**	**2.88**	**6**	*i* Pn	**Pn**	**18 45 55.6**	**+1.9**
TIP	**Timpagrande**	**3.00**	**289**	⇑P	**Pn**	**18 45 56.0**	**+0.5**
TIP	**Timpagrande**	**3.00**	**289**	⇑S	**Sn**	**18 46 30.3**	**-0.9**
TIP	**Timpagrande**	**3.00**	**289**	P	**Pn**	**18 45 55.5**	**0.0**
TIP				AML	AML		
	comp=E,5930µm,1.2s						
TIP				AML	AML		
	comp=E,6925µm,1.2s						
TIP				AML	AML		
	comp=N,6220µm,1.2s						
TIP				AML	AML		
	comp=N,7790µm,1.2s						
TIP	**Timpagrande**	**3.00**	**289**		**Pn**	**18 45 55.6**	**+0.1**
MESG	**Mesagne**	**3.06**	**321**	P	**Pn**	**18 45 56.5**	**+0.2**
MESG				AML	AML		
	comp=E,38650µm,1.4s						
MESG				AML	AML		
	comp=N,35000µm,1.5s						
MESG				AML	AML		
	comp=E,38650µm,1.4s						
PIPA	**Pietrapaola**	**3.06**	**295**	P	**Pn**	**18 45 56.8**	**+0.5**
PIPA				AML	AML		
	comp=N,11545µm,1.0s						
PIPA				AML	AML		
	comp=E,15700µm,1.2s						
PIPA				AML	AML		
	comp=N,11325µm,1.3s						
PIPA				AML	AML		
	comp=E,15800µm,1.2s						
PIPA				AML	AML		
	comp=E,15700µm,1.2s						
TIR	**Tirane**	**3.12**	**353**	P	**Pn**	**18 45 58.5**	**+1.3**
TIR	**Tirane**	**3.12**	**353**	*i* PN	**Pn**	**18 45 58.3**	**+1.2**
TIR				*i* SN	**Sn**	**18 46 35.5**	**+1.4**
TIR	**Tirane**	**3.12**	**353**	P	**Pn**	**18 45 58.1**	**+1.0**
TIR	**Tirane**	**3.12**	**353**		**Pn**	**18 45 58.5**	**+1.3**
PLAC	**Placanica**	**3.12**	**275**	P	**Pn**	**18 45 57.0**	**-0.2**
PLAC				AML	AML		
	comp=E,14300µm,0.7s						
PLAC				AML	AML		
	comp=E,9845µm,0.6s						
PLAC				AML	AML		
	comp=N,14550µm,0.7s						
PLAC				AML	AML		
	comp=N,9615µm,0.6s						
GRI	**Girifalco**	**3.18**	**282**	P	**Pn**	**18 45 58.0**	**0.0**
GRI				S	**Sn**	**18 46 34.8**	**-0.7**
GRI				AML	AML		
	comp=E,12050µm,1.0s						
GRI				AML	AML		
	comp=N,10050µm,0.6s						
KARY	**Karystos**	**3.19**	**93**	P	**Pn**	**18 45 59.0**	**+1.0**
CELI	**Celíco**	**3.25**	**292**	P	**Pn**	**18 45 59.4**	**+0.3**
CGL1	**Ceglie Messapi**	**3.30**	**318**	⇑*i* Pn	**Pn**	**18 45 59.8**	**+0.2**
TAR1	**Taranto**	**3.32**	**314**	*e*Pn	**Pn**	**18 46 00.6**	**+0.8**
CAR1	**CAROLEI**	**3.43**	**288**	P	**Pn**	**18 46 02.0**	**+0.6**
CAR1				S	**Sn**	**18 46 40.9**	**-0.9**
CAR1				AML	AML		
	comp=E,34250µm,0.9s						
CAR1				AML	AML		
	comp=N,23850µm,0.8s						
CAR1				AML	AML		
	comp=N,24050µm,0.8s						
CAR1				AML	AML		
	comp=E,33300µm,1.0s						
CAR1				AML	AML		
	comp=N,23850µm,0.8s						
CAR1				AML	AML		
	comp=N,24050µm,0.8s						
SOI	**Samo**	**3.43**	**268**	P	**Pn**	**18 46 00.9**	**-0.5**
SOI				AML	AML		
	comp=E,6935µm,1.4s						
SOI				AML	AML		
	comp=N,5900µm,0.6s						
MASS	**Massafra**	**3.47**	**314**	*e*Pn	**Pn**	**18 46 02.7**	**+0.8**
MPAZ	**Palizzi**	**3.48**	**266**	P	**Pn**	**18 46 01.4**	**-0.7**
MPAZ				S	**Sn**	**18 46 40.1**	**-3.0**
MPAZ				AML	AML		
	comp=E,12850µm,0.5s						
MPAZ				AML	AML		
	comp=N,6910µm,1.6s						
VAY	**Valandovo**	**3.49**	**28**	*i* Pn	**Pn**	**18 46 03.3**	**+1.1**
CEL	**Celeste**	**3.55**	**272**	P	**Pn**	**18 46 02.9**	**-0.2**
CEL				S	**Sn**	**18 46 42.6**	**-2.2**
CEL				AML	AML		
	comp=N,16300µm,1.4s						
CEL				AML	AML		
	comp=E,16500µm,1.6s						
CEL				AML	AML		
	comp=N,20050µm,1.5s						
CEL				AML	AML		
	comp=N,16300µm,1.4s						
CEL				AML	AML		
	comp=E,13850µm,1.6s						
CEL				AML	AML		
	comp=E,16500µm,1.6s						
CEL	**Celeste**	**3.55**	**272**		**Pn**	**18 46 02.6**	**-0.5**
SALB	**San Lorenzo Be**	**3.55**	**298**	P	**Pn**	**18 46 05.6**	**+2.4**
SALB				S	**Sn**	**18 46 47.5**	**+2.6**
SALB				AML	AML		
	comp=N,8890µm,0.9s						
SALB				AML	AML		
	comp=N,8975µm,0.9s						
SALB				AML	AML		
	comp=E,10995µm,1.6s						
SALB				AML	AML		
	comp=E,11050µm,1.6s						
JOPP	**Joppolo**	**3.57**	**277**	P	**Pn**	**18 46 03.2**	**-0.1**
JOPP				S	**Sn**	**18 46 43.0**	**-2.2**
JOPP				AML	AML		
	comp=E,20200µm,1.2s						
JOPP				AML	AML		
	comp=N,10850µm,1.5s						
JOPP				AML	AML		
	comp=E,20200µm,1.2s						
ORI	**Oriolo Calabro**	**3.57**	**302**	P	**Pn**	**18 46 05.0**	**+1.7**
ORI				AML	AML		
	comp=N,26150µm,1.1s						
ORI				AML	AML		
	comp=E,22000µm,1.5s						
ORI				AML	AML		
	comp=N,26150µm,1.1s						
GMB	**Gambarie**	**3.61**	**270**	P	**Pn**	**18 46 03.4**	**-0.5**
GMB				S	**Sn**	**18 46 43.4**	**-2.9**
GMB				AML	AML		
	comp=E,68250µm,0.7s						
GMB				AML	AML		
	comp=N,37850µm,0.6s						
GMB				AML	AML		
	comp=N,37850µm,0.6s						
NOCI	**Noci**	**3.62**	**316**	P	**Pn**	**18 46 04.2**	**+0.2**
NOCI				S	**Sn**	**18 46 44.0**	**-2.5**
NOCI				AML	AML		
	comp=E,18300µm,1.6s						
NOCI				AML	AML		
	comp=N,30850µm,1.6s						
NOCI				AML	AML		
	comp=E,18300µm,1.6s						
NOCI				AML	AML		
	comp=N,30850µm,1.6s						
LTRZ	**Laterza**	**3.64**	**311**	P	**Pn**	**18 46 04.2**	**-0.1**
T0702	**Acquaformosa (**	**3.67**	**295**	P	**Pn**	**18 46 06.5**	**+1.6**
T0702				AML	AML		
	comp=N,6550µm,1.1s						
T0702				AML	AML		
	comp=E,9955µm,1.2s						
STIP	**Stip**	**3.70**	**21**	*i* Pn	**Pn**	**18 46 08.0**	**+2.9**
MTTG	**Motta San Giov**	**3.72**	**268**	P	**Pn**	**18 46 04.7**	**-0.7**
MTTG				S	**Sn**	**18 46 45.0**	**-4.0**
MTTG				AML	AML		
	comp=N,21500µm,1.5s						
MTTG				AML	AML		
	comp=E,22500µm,0.8s						
MATE	**Matera**	**3.73**	**311**	⇓P	**Pn**	**18 46 05.9**	**+0.4**
MATE	**Matera**	**3.73**	**311**	P	**Pn**	**18 46 05.9**	**+0.4**
MATE				S	**Sn**	**18 46 47.5**	**-1.7**
MATE				AML	AML		
	comp=E,15200µm,0.8s						
MATE				AML	AML		
	comp=N,19100µm,1.0s						
SKO	**Skopje**	**3.80**	**12**	*i* Pn	**Pn**	**18 46 07.9**	**+1.4**
PUK	**Puka**	**3.81**	**354**	*i* PN	**Pn**	**18 46 07.0**	**+0.3**
PUK				*i* SN	**Sn**	**18 46 52.9**	**+1.7**
PUK	**Puka**	**3.81**	**354**	P	**Pn**	**18 46 07.2**	**+0.5**
PUK				S	**Sn**	**18 46 51.1**	**-0.1**
PUK				AML	AML		
	comp=E,10300µm,0.5s						
PUK				AML	AML		
	comp=N,7465µm,0.6s						
ULC	**Ulcinj**	**3.81**	**347**	⇑*i* Pn	**Pn**	**18 46 06.2**	**-0.5**
ULC				*i* Sn	**Sn**	**18 46 50.1**	**-1.2**
T0721	**Laino Castello**	**3.84**	**297**	P	**Pn**	**18 46 10.2**	**+3.2**
T0721				AML	AML		
	comp=E,19950µm,1.2s						
T0721				AML	AML		
	comp=N,19550µm,1.5s						
T0721				AML	AML		
	comp=E,19600µm,1.2s						
T0721				AML	AML		
	comp=N,20300µm,1.6s						
T0721				AML	AML		
	comp=E,19950µm,1.2s						
T0721				AML	AML		
	comp=E,19600µm,1.2s						
T0721				AML	AML		
	comp=N,20300µm,1.6s						
T0721				AML	AML		
	comp=N,19550µm,1.5s						
MIGL	**Miglionico**	**3.87**	**309**	P	**Pn**	**18 46 08.9**	**+1.6**
MIGL				AML	AML		
	comp=E,92650µm,1.2s						
MIGL				AML	AML		
	comp=N,

AMUR AML AML
comp=E,13150µm,1.1s
SIRI Monte Sirino - 4.02 300 P **Pn** 18 46 11.1 +1.5
SIRI AML AML
comp=N,7000µm,1.6s
SIRI AML AML
comp=N,6920µm,0.9s
SIRI AML AML
comp=E,11025µm,1.6s
SIRI AML AML
comp=E,11040µm,1.6s
DRME Dracevica, Mon 4.04 347⇑ *i*Pn **Pn** 18 46 09.6 -0.2
DRME Dracevica, Mon 4.04 347⇑ *i*Pn **Pn** 18 46 09.1 -0.7
DRME *i* Sn **Sn** 18 46 56.2 -0.6
MCSR Castroreale 4.07 269 P **Pn** 18 46 09.1 -1.1
IST3 Stromboli F 4.09 279 P **Pn** 18 46 11.3 +0.8
IST3 AML AML
comp=E,8690µm,0.4s
IST3 AML AML
comp=N,8550µm,0.9s
BCI Bajram Curri 4.12 357 *i* PN **Pn** 18 46 12.5 +1.6
BCI *i* SN **Sn** 18 47 00.8 +2.0
MCEL Monticello 4.13 302 P **Pn** 18 46 12.2 +1.2
MCEL AML AML
comp=E,10800µm,1.2s
MCEL AML AML
comp=N,14550µm,1.0s
MCEL AML AML
comp=E,10800µm,1.2s
MCEL AML AML
comp=N,14550µm,1.0s
MCEL AML AML
comp=N,14650µm,1.0s
MTSN Montesano sull 4.14 301 P **Pn** 18 46 12.1 +0.9
KKB Krupnik 4.16 29 P **Pn** 18 46 12.9 +1.5
NOV Novara 4.16 269 P **Pn** 18 46 11.7 +0.2
NOV AML AML
comp=N,10545µm,0.5s
NOV AML AML
comp=E,18250µm,1.3s
MMB Musomiste 4.20 36 P **Pn** 18 46 13.9 +1.9
BUM Brajici-Budva 4.21 345⇑ *i*Pn **Pn** 18 46 11.6 -0.5
BUM *i* Sn **Sn** 18 46 59.6 -1.4
MGR Morigerati 4.21 298 P **Pn** 18 46 13.3 +1.2
MGR AML AML
comp=E,7445µm,1.0s
MGR AML AML
comp=N,7005µm,1.0s
MGR AML AML
comp=N,6165µm,1.0s
MGR AML AML
comp=E,6515µm,1.2s
AGST Augusta-Monte 4.22 258 P **Pn** 18 46 10.0 -2.2
AGST AML AML
comp=N,3645µm,0.8s
AGST AML AML
comp=E,5075µm,1.6s
APE Apeiranthos 4.23 105 *e*P Pb 18 46 17.6 -5.1
APE Apeiranthos 4.23 105 ⇑P **Pb** 18 46 18.4 -4.2
PDG Podgorica 4.27 348 ⇑P **Pn** 18 46 12.8 -0.1
PDG Podgorica 4.27 348 ⇑S **Sn** 18 47 01.5 -0.9
PDG Podgorica 4.27 348 P **Pn** 18 46 13.0 +0.1
PDG AML AML
comp=E,5850µm,0.9s
PDG AML AML
comp=E,7305µm,0.9s
PDG AML AML
comp=N,6040µm,0.4s
PDG AML AML
comp=N,4685µm,0.5s
PDG Podgorica 4.27 348⇑ *i*Pn **Pn** 18 46 12.6 -0.3
PDG Podgorica 4.27 348 **Pn** 18 46 13.2 +0.3
TTG Podgorica 4.27 348⇑ *i*Pn **Pn** 18 46 12.7 -0.1
TTG *i* Sn **Sn** 18 47 01.2 -1.1
HAGA Augusta 4.27 259 P **Pn** 18 46 10.0 -2.9
SLCN Sala Consilina 4.27 302 P **Pn** 18 46 16.6 +3.6
SLCN AML AML
comp=E,19250µm,0.9s
SLCN AML AML
comp=E,19250µm,0.9s
SLCN AML AML
comp=N,14800µm,0.9s
ACER Acerenza 4.28 308 P **Pn** 18 46 14.0 +0.9
ACER AML AML
comp=E,37100µm,0.8s
ACER AML AML
comp=N,31250µm,1.2s
ACER AML AML
comp=E,37700µm,0.8s
ACER AML AML
comp=E,37100µm,0.8s
ACER AML AML
comp=N,31250µm,1.2s
ACER AML AML
comp=N,30500µm,1.2s
ACER Acerenza 4.28 308 **Pn** 18 46 14.9 +1.8
PZUN Potenza 4.29 305 P **Pn** 18 46 16.3 +3.2
PZUN AML AML
comp=E,17050µm,1.3s
PZUN AML AML
comp=N,15750µm,1.6s
PZUN AML AML
comp=E,16800µm,1.3s
PZUN AML AML
comp=E,16800µm,1.3s
PZUN AML AML
comp=N,15750µm,1.6s
PZUN AML AML
comp=N,15400µm,1.6s
PZUN AML AML
comp=E,17050µm,1.3s
MRVN Minervino Murg 4.29 312 P **Pn** 18 46 13.6 +0.3
MRVN AML AML
comp=N,10790µm,1.4s
MRVN AML AML
comp=E,10620µm,1.6s
EMSG Monte Spagnolo 4.33 266 P **Pn** 18 46 13.6 -0.3
EMSG AML AML
comp=E,10590µm,0.8s
EMSG AML AML
comp=N,14150µm,0.4s
PVY Plav 4.35 356⇓ *i*Pn **Pn** 18 46 13.9 -0.3
PVY *i* Sn **Sn** 18 47 03.3 -1.4
PALZ Palazzo San Ge 4.36 309 P **Pn** 18 46 15.4 +1.2
PALZ AML AML
comp=E,72050µm,1.5s
PALZ AML AML
comp=N,53750µm,1.3s
PALZ AML AML
comp=E,72050µm,1.5s
MUCR Ucria 4.37 269 P **Pn** 18 46 14.0 -0.3
SSY Sortino 4.37 257 P **Pn** 18 46 11.8 -2.5
SSY S **Sn** 18 47 03.0 -1.9
EPZF Pizzo Felice 4.40 266 P **Pn** 18 46 14.1 -0.7
EPZF AML AML
comp=E,13800µm,1.4s
EPZF AML AML
comp=N,9545µm,0.6s
EPZF AML AML
comp=E,13800µm,1.4s
ESML S. M. di Licod 4.42 263 P **Pn** 18 46 13.8 -1.2
ESML AML AML
comp=E,7425µm,1.6s
ESML AML AML
comp=N,7420µm,1.3s
HCY Herceg Novi 4.44 341⇑ *i*Pn **Pn** 18 46 14.2 -1.1
HCY Herceg Novi 4.44 341⇑ *i*Pn **Pn** 18 46 14.4 -0.9
HCY *i* Sn **Sn** 18 47 05.7 -0.9
CEME Cevo 4.44 346⇑ *i*Pn **Pn** 18 46 14.7 -0.6
CEME *i* Sn **Sn** 18 47 05.3 -1.4
SANT Santorini 4.44 113 ⇑P Pn 18 46 20.5 +5.2
SANT Santorini 4.44 113 **Pn** 18 46 18.3 +3.0
CMPR Campora 4.46 299 P **Pn** 18 46 19.5 +3.8
CMPR AML AML
comp=N,4910µm,1.0s
CMPR AML AML
comp=E,5390µm,1.6s
HLNI Lentini 4.47 260 P **Pn** 18 46 12.9 -2.8
HLNI S **Sn** 18 47 04.0 -3.5
HLNI AML AML
comp=N,6340µm,1.4s
HLNI AML AML
comp=E,5315µm,1.3s
HPAC Pachino 4.49 251 P **Pn** 18 46 14.8 -1.1
HPAC AML AML
comp=N,11570µm,1.3s
HPAC AML AML
comp=E,14000µm,1.0s
MEU Monte Lauro 4.49 257 P **Pn** 18 46 14.3 -1.8
MEU S **Sn** 18 47 06.0 -2.1
MEU AML AML
comp=N,31700µm,0.4s
MEU AML AML
comp=E,26000µm,0.3s
MEU AML AML
comp=N,31700µm,0.4s
MNO Monte Soro 4.52 268 P **Pn** 18 46 16.7 +0.2
MNO AML AML
comp=E,18100µm,0.7s
MNO AML AML
comp=N,13100µm,1.2s
BOSS Bosilegrad 4.53 20 *e*Pn **Pn** 18 46 17.4 +0.9
BOSS *e*Sn **Sn** 18 47 09.8 +1.0
CDRU Civita di Ruta 4.54 301 P **Pn** 18 46 19.0 +2.2
CDRU AML AML
comp=E,5190µm,1.0s
CDRU AML AML
comp=N,4585µm,1.6s
MRLC Muro Lucano 4.55 305 P **Pn** 18 46 19.6 +2.8
MRLC AML AML
comp=E,8890µm,1.1s
MRLC AML AML
comp=N,9535µm,1.4s
MRLC AML AML
comp=E,9475µm,1.1s
MRLC AML AML
comp=N,10150µm,1.4s
VULT Monte Vulture 4.58 308 P **Pn** 18 46 18.2 +1.0
VULT AML AML
comp=N,26850µm,1.1s
VULT AML AML
comp=E,13900µm,1.5s
VULT AML AML
comp=N,27000µm,1.1s
VULT AML AML
comp=E,13900µm,1.5s
VULT AML AML
comp=N,26850µm,1.1s
IVA Berane 4.63 355⇓ *i*Pn **Pn** 18 46 17.3 -0.7
IVA *i* Sn **Sn** 18 47 09.6 -1.9
HVZN Vizzini 4.64 258 P **Pn** 18 46 15.5 -2.5
HVZN AML AML
comp=E,55100µm,0.4s
HVZN AML AML
comp=N,46700µm,0.4s
HVZN AML AML
comp=E,55100µm,0.4s
HVZN AML AML
comp=N,46700µm,0.4s
GALF Gagliano Caste 4.64 265 P **Pn** 18 46 17.5 -0.7
KOME Kolasin 4.65 352⇑ *i*Pn **Pn** 18 46 17.9 -0.3
KOME *i* Sn **Sn** 18 47 10.3 -1.5
HMDC Modica 4.65 256 S **Sn** 18 47 09.0 -2.8
NKME Niksic 4.65 347⇑ *i*Pn **Pn** 18 46 17.7 -0.4
NKME *i* Sn **Sn** 18 47 10.9 -0.9
IDI Anoyia 4.66 128 Pn **Pn** 18 46 19.0 +0.6
comp=N,6.5nm,0.3s,baz=237,slow=10.0,SNR=17
IDI Sn **Sn** 18 47 08.2 -3.9
comp=N,27nm,0.3s,baz=313,slow=22,SNR=4.8
IDI LR LR 18 48 07.4
comp=N,14µm,18.2s,baz=293,slow=38
NKY Niksic 4.68 347⇑ *i*Pn **Pn** 18 46 18.4 -0.3
NKY *i* Sn **Sn** 18 47 10.6 -2.2
BARS Barje 4.69 13 *e*Pn **Pn** 18 46 19.6 +0.9
BARS Barje 4.69 13 *e*Pn **Pg** 18 46 35.3 -3.0
BARS *e*Sn **Sn** 18 47 13.3 +0.6
BARS *e*Sn **Sg** 18 47 43.1 +4.1
CAGR Agira 4.71 264 P **Pn** 18 46 19.2 +0.2
CAGR AML AML
comp=N,12500µm,1.4s
CAGR AML AML
comp=E,11505µm,1.6s
TREB Trebinje 4.73 341 *e*Pn **Pn** 18 46 18.0 -1.2
DBRK Dubrovnik 4.74 339 *e*Pn **Pn** 18 46 18.2 -1.2
RZN Rozhen 4.77 43 P **Pn** 18 46 22.0 +2.0
VAE Valguarnera 4.80 263 Pn **Pn** 18 46 20.9 +0.6
comp=E,12nm,0.3s,baz=161,slow=9.1,SNR=22
VAE Sn **Sn** 18 47 17.3 +1.6
comp=E,74nm,0.3s,baz=4.3,slow=7.2,SNR=6.2
HBSP Bosco Santo Pi 4.82 258 S **Sn** 18 47 13.0 -3.1
SNAL S. Angelo Dei 4.82 305 P **Pn** 18 46 22.2 +1.7
SNAL AML AML
comp=E,33150µm,1.3s
SNAL AML AML
comp=N,33235µm,1.0s
SNAL AML AML
comp=N,33235µm,1.0s
SNAL AML AML
comp=E,33150µm,1.3s
SGTA Sant Agata di 4.84 308 P **Pn** 18 46 22.3 +1.5
SGTA AML AML
comp=E,15050µm,1.2s
SGTA AML AML
comp=E,14700µm,1.2s
SGTA AML AML
comp=N,9545µm,1.0s
SGTA AML AML
comp=N,8725µm,1.0s
CAFE Carife 4.86 306 P **Pn** 18 46 23.2 +2.1
CAFE AML AML
comp=E,8605µm,1.6s
CAFE AML AML
comp=N,9305µm,1.6s
CAFE AML AML
comp=N,9465µm,1.5s
CAFE AML AML
comp=E,8665µm,1.6s
VTS Vitosha 4.87 25 P **Pn** 18 46 22.8 +1.5
VTS Vitosha 4.87 25⇓P **Pn** 18 46 22.9 +1.7
VTS Vitosha 4.87 25 P **Pn** 18 46 22.9 +1.7
VTS AML AML
comp=N,1116µm,1.5s
VTS AML AML
comp=E,1600µm,1.1s
VTS Vitosha 4.87 25 P **Pn** 18 46 22.6 +1.3
VTS Vitosha 4.87 25 **Pn** 18 46 22.8 +1.5
MSAG Monte S. Angel 4.89 316 S **Sn** 18 47 16.0 -1.8
RDO Rodhopi 4.90 52 P **Pn** 18 46 23.3 +1.7
RDO AML AML
comp=E,336µm,1.2s
RDO AML AML
comp=N,397µm,1.4s
PETRA Petralia Sopra 4.98 267 P **Pn** 18 46 23.7 +0.9
PETRA S **Sn** 18 47 19.0 -1.3
PETRA AML AML
comp=N,5560µm,1.6s
PETRA AML AML
comp=E,4570µm,1.6s
SELS Selova 5.00 6 *e*Pn **Pn** 18 46 22.6 -0.3
SELS *e*Sn **Sn** 18 47 20.3 0.0
SGRT San Giovanni R 5.01 316 P **Pn** 18 46 23.1 0.0
SGRT AML AML
comp=E,10775µm,1.2s
SGRT AML AML
comp=N,13100µm,1.0s
SGRT San Giovanni R 5.01 316 **Pn** 18 46 23.2 +0.1
SJES Sjenica 5.02 356 *e*Pn **Pn** 18 46 23.5 +0.2
SJES *e*Sn **Sn** 18 47 18.5 -2.5
RESU Resuttano 5.05 265 P **Pn** 18 46 24.6 +0.9
RESU AML AML
comp=E,3380µm,1.6s
RESU AML AML
comp=N,3840µm,1.0s
STON Ston 5.06 337 *e*Pn **Pn** 18 46 23.2 -0.4
STON Sn **Sn** 18 47 17.9 -3.9
STON Ston 5.06 337 P **Pn** 18 46 23.5 -0.2
STON AML AML
comp=N,3160µm,0.8s
STON AML AML
comp=E,3450µm,0.6s
STON Ston 5.06 337⇑ *i*Pn **Pn** 18 46 22.6 -1.1
PLD Plovdiv 5.07 39 P **Pn** 18 46 27.2 +3.4
UPM Unac-Piva 5.08 348 *e*Pn **Pn** 18 46 24.5 +0.3
UPM Unac-Piva 5.08 348⇑ *i*Pn **Pn** 18 46 24.1 -0.1
UPM *i* Sn **Sn** 18 47 20.3 -2.3
MRB1 Monte Rocchett 5.08 306 P **Pn** 18 46 26.4 +2.3
MRB1 AML AML
comp=E,11600µm,1.5s
MRB1 AML AML
comp=N,11400µm,1.6s
MRB1 AML AML
comp=N,11550µm,1.6s
MRB1 AML AML
comp=E,11800µm,1.5s
ALN Alexandroupoli 5.10 57 P **Pn** 18 46 26.1 +1.8
ALN Alexandroupoli 5.10 57 **Pn** 18 46 26.1 +1.8
KDZ Kurdzhali 5.13 47 P **Pn** 18 46 26.9 +2.1
PLE Pljevlja 5.13 352⇑ *i*Pn **Pn** 18 46 25.3 +0.4
PLE *i* Sn **Sn** 18 47 22.7 -1.2
PGB Panagyurishte 5.17 33 P **Pn** 18 46 27.2 +1.9
CLTA Licata 5.22 260 P **Pn** 18 46 25.3 -0.8
CLTA AML AML
comp=E,15700µm,1.2s
CLTA AML AML
comp=N,24650µm,1.4s
WDD Wied Dalam 5.28 245 P **Pn** 18 46 26.2 -0.6
WDD AML AML
comp=E,13100µm,0.9s
WDD AML AML
comp=N,9210µm,0.8s
WDD Wied Dalam 5.28 245 **Pn** 18 46 25.5 -1.3
PAOL Paolisi 5.29 303 P **Pn** 18 46 29.6 +2.6
PAOL AML AML
comp=N,8830µm,1.6s
PAOL AML AML
comp=E,5820µm,1.6s
PAOL AML AML
comp=E,5690µm,1.6s
PAOL AML AML
comp=N,8835µm,1.6s
PAOL Paolisi 5.29 303 **Pn** 18 46 28.8 +1.8
ZAPS Zavoj 5.30 18 *e*Pn **Pn** 18 46 28.6 +1.5
ZAPS *e*Sn **Sn** 18 47 28.6 +0.8
IVAS Ivanjica 5.33 358 *e*Pn **Pn** 18 46 27.3 -0.2
IVAS *e*Sn **Sn** 18 47 28.2 -0.3
GATE Gambatesa 5.34 309 P **Pn** 18 46 30.4 +2.8
SACR S. Croce Del S 5.40 307 P **Pn** 18 46 30.0 +1.5
RUDO Rudo 5.42 352 *e*Pn **Pn** 18 46 28.9 +0.2
CIGN Sant'Elia a Pi 5.42 311 P **Pn** 18 46 30.2 +1.4
DIM Dimitrovgrad 5.46 44 P Pn 18 46 35.6 +6.3
BOVS Bovan 5.47 10 *e*Pn **Pn** 18 46 29.2 -0.2
BOVS *e*Sn **Sn** 18 47 31.3 -0.7
BSSO Busso 5.55 308 P **Pn** 18 46 32.3 +1.7
CORL Corleone 5.62 269 P **Pn** 18 46 31.9 +0.5
CORL Corleone 5.62 269 **Pn** 18 46 31.4 -0.1
PIGN Pignataro Magg 5.63 304 P **Pn** 18 46 32.7 +1.0
GRUS Gruza 5.64 2 *e*Pn **Pn** 18 46 31.9 +0.2
GRUS *e*Sn **Sn** 18 47 36.4 +0.2
MAKA Makarska 5.65 334 *i* Pn **Pn** 18 46 31.4 -0.4
MAKA S **Sn** 18 47 32.1 -4.3
BBLS Lazići 5.66 353 *e*Pn **Pn** 18 46 32.3 +0.2
BBLS *e*Sn **Sn** 18 47 35.5 -1.3
BBLS Lazići 5.66 353⇑ *i*Pn **Pn** 18 46 31.4 -0.7
MPEP Malo Peshtene 5.69 25 P **Pn** 18 46 35.2 +2.7
TRIV Trivento 5.70 310 P **Pn** 18 46 34.3 +1.6
CLTB Caltabellotta 5.72 265 **Pn** 18 46 33.9 +1.0
DIVS Divibare 5.85 357 *e*Pn **Pn** 18 46 34.2 -0.5
DIVS *e*Sn **Sn** 18 47 39.5 -2.0
DIVS Divibare 5.85 357⇑ *i*Pn **Pn** 18 46 33.8 -0.9
RNI2 Rionero Sannit 5.91 308 P **Pn** 18 46 39.4 +3.8
HAPS Han Pijesak,BI 5.93 350 *e*Pn **Pn** 18 46 34.6 -1.3
CERA Filignano 5.94 306 P **Pn** 18 46 38.1 +2.2
TRUS Trudelj 5.97 0 *e*Pn **Pn** 18 46 36.2 -0.1
TRUS *e*Sn **Sn** 18 47 43.4 -0.9
SVIS Svilajnac 6.04 6 *e*Pn **Pn** 18 46 37.5 +0.3
SVIS *e*Sn **Sn** 18 47 43.6 -2.5
PLVB Pleven 6.05 31⇑P **Pn** 18 46 39.2 +1.9
KARP Karpathos 6.05 114 **Pn** 18 46 40.7 +3.3
LPEL Lama dei Pelig 6.09 310 P **Pn** 18 46 40.5 +2.5
CAFR Castel Frentan 6.10 313 P **Pn** 18 46 39.7 +1.6
POFI Posta Fibreno 6.20 306 P **Pn** 18 46 41.7 +2.3
PVL Pavlikeni 6.21 35 P **Pn** 18 46 40.6 +1.0
KUBS Kucevo 6.23 8 *e*Pn **Pn** 18 46 39.2 -0.7
KUBS *e*Sn **Sn** 18 47 49.4 -1.4
INTR Introdacqua 6.24 309 P **Pn** 18 46 41.6 +1.5
INTR Introdacqua 6.24 309 **Pn** 18 46 42.1 +2.1
ELND Elena 6.26 40⇑P **Pn** 18 46 41.8 +1.6
JMB Yambol 6.32 46 P Pn 18 46 46.0 +4.9
TEKS Tekeris 6.33 354 *e*Pn **Pn** 18 46 40.5 -0.7
TEKS *e*Sn **Sn** 18 47 51.0 -2.2
TEKS Tekeris 6.33 354⇑ *i*Pn **Pn** 18 46 40.2 -1.0
VVLD Villa Vallelon 6.34 307 P **Pn** 18 46 44.0 +2.7
GIUL Giuliano Di Ro 6.41 303 P **Pn** 18 46 43.0 +0.6
VLAD Vladila 6.49 26⇑P **Pn** 18 46 45.2 +1.7
ZIRJ Zirje 6.49 328 *i* Pn **Pn** 18 46 42.4 -1.0
ZIRJ Sn **Sn** 18 47 54.5 -2.6
KIJV Kijevo 6.49 334 *i* Pn **Pn** 18 46 44.1 +0.6
KIJV Sn **Sn** 18 47 55.2 -2.0
VCEL Villa Celiera 6.50 312 P **Pn** 18 46 45.2 +1.6
SZH Strazhica 6.54 38 P **Pn** 18 46 48.4 +4.4
ZIMR 6.58 33⇑P **Pn** 18 46 46.4 +1.8
FAGN Fagnano 6.58 310 P **Pn** 18 46 46.6 +1.9
MDVR Moldovita 6.60 8⇑P **Pn** 18 46 45.2 +0.3
MGRS Mrkonjic Grad 6.65 339 *e*Pn **Pn** 18 46 45.3 -0.3
DOB Doboj 6.71 346 *e*Pn **Pn** 18 46 44.8 -1.5
AQU L'Aquila 6.74 310 P **Pn** 18 46 49.1 +2.2
AQU L'Aquila 6.74 310⇑ *i*Pn **Pn** 18 46 48.7 +1.8
AQU L'Aquila 6.74 310 **Pn** 18 46 49.1 +2.2
SRE Strehaia 6.74 17⇑P **Pn** 18 46 47.3 +0.4
TERO Teramo 6.78 312 P **Pn** 18 46 48.8 +1.3
T0104 Madonna delle 6.78 309 P **Pn** 18 46 49.6 +2.2
HERR Herculane 6.80 12⇑P **Pn** 18 46 48.5 +0.9
CAMP Campotosto 6.84 311 P **Pn** 18 46 50.0 +1.6
COPA Copaceanca 6.91 30⇑P **Pn** 18 46 51.0 +1.9
FRGS Fruska Gora 6.92 357 *e*Pn **Pn** 18 46 47.4 -1.9
FRGS *e*Sn **Sn** 18 48 04.5 -3.2
FRGS Fruska Gora 6.92 357⇑ *i*Pn **Pn** 18 46 47.1 -2.2
BLY Banja Luka 6.93 341 P **Pn** 18 46 49.2 -0.2
BLY Banja Luka 6.93 341⇑ *i*Pn **Pn** 18 46 48.7 -0.7
BLY Banja Luka 6.93 341 **Pn** 18 46 49.5 +0.1
OFFI Offida 6.93 315 P **Pn** 18 46 51.3 +1.8
SMA1 SAN MARTINO 6.94 311 P **Pn** 18 46 51.4 +1.7
DUGI Dugi Otok 7.01 327 *i* Pn **Pn** 18 46 50.7 +0.1
LNSS Leonessa 7.10 310 P **Pn** 18 46 53.9 +2.0
BANR Banloc 7.15 4⇑P **Pn** 18 46 52.8 +0.4
HUMR Humele 7.15 27⇑P **Pn** 18 46 54.3 +1.8
UDBI Udbina 7.18 332 *i* Pn **Pn** 18 46 53.6 +0.7
NRCA Norcia 7.20 312 P **Pn** 18 46 55.0 +1.8
NRCA Norcia 7.20 312 **Pn** 18 46 55.4 +2.3
ARRO Arrone 7.26 309 P **Pn** 18 46 56.7 +2.8
SGRR Singureni 7.29 33⇑P **Pn** 18 46 57.1 +2.7
FDMO Fiordimonte 7.33 313 P **Pn** 18 46 56.3 +1.2
GZR Gura Zlata 7.36 13⇑P **Pn** 18 46 55.8 +0.4
BZS Buzias 7.42 7⇑P **Pn** 18 46 55.9 -0.2
GOLR 7.42 26⇑P **Pn** 18 46 59.0 +2.9
CESI CESI - Serrava 7.42 312 P **Pn** 18 46 59.0 +2.8
CRM1 Catelraimondo 7.46 314 P Pn 18 47 05.0 +8.3
CING Cingoli 7.49 315 P **Pn** 18 46 57.6 +0.5
MOMA Monte Martano 7.50 310 P **Pn** 18 46 59.7 +2.3
EL6 Elcito 7.51 315 P **Pn** 18 46 57.9 +0.4
NVLJ Novalja 7.55 328 *i* Pn **Pn** 18 46 57.8 -0.2
SNTG Esanatoglia 7.55 314 P **Pn** 18 46 58.8 +0.7
ASSB Assisi San Ben 7.59 312 P **Pn** 18 47 01.0 +2.4
LOT Lotru 7.62 18⇑P **Pn** 18 47 00.4 +1.5
FOSV Fossato di Vic 7.68 313 P **Pn** 18 47 01.0 +1.2
ATCC AVT- Casa Cast 7.69 312 P **Pn** 18 47 02.3 +2.4
ELL Elmali 7.70 98 P Pn 18 47 07.3 +7.1
ELL Elmali 7.70 98 **Pn** 18 47 07.3 +7.2
ARVD Arcevia 7.71 315 P **Pn** 18 47 00.3 +0.2
SSFR Montelago di S 7.76 314 P **Pn** 18 47 01.7 +0.8
SULR 7.78 32⇓P **Pn** 18 47 04.0 +3.0
ARR Arges 7.78 23⇑P **Pn** 18 47 02.9 +1.8
MTUR Matau 7.79 25⇑P **Pn** 18 47 04.0 +2.6
MURB Monte Urbino 7.80 312 P **Pn** 18 47 03.6 +2.2
MURB Monte Urbino 7.80 312 **Pn** 18 47 03.6 +2.2
ATFO Monte Foce - G 7.84 313 P **Pn** 18 47 03.5 +1.5
MGAB Montegabbione 7.84 309 P **Pn** 18 47 04.4 +2.5
DEV Deva 7.85 13⇑P **Pn** 18 47 04.3 +2.2
ATTE AVT- Monte Tez 7.86 312 P **Pn** 18 47 04.6 +2.3
LATE Laterza 7.88 306 **Pn** 18 47 02.3 -0.2
MPAG Monte Paganucc 7.89 315 P **Pn** 18 47 03.3 +0.5
FSSB Fossombrone 7.93 316 P **Pn** 18 47 03.4 +0.2
ATVO AVT- Monte Val 7.94 313 P **Pn** 18 47 05.5 +2.1
PIEI Pieia 7.96 314 P **Pn** 18 47 04.5 +0.9
VOIR 7.97 24 P **Pn** 18 47 06.8 +3.0
NARO Abbazia di Nar 7.98 315 P **Pn** 18 47 04.6 +0.7
ATPI Pietralunga - 7.99 313 P **Pn** 18 47 05.6 +1.6
ATMI Monte Miggiano 7.99 312 P **Pn** 18 47 07.5 +3.4
PESA Pesaro 8.06 317 P **Pn** 18 47 05.5 +0.6
MORH Mrgy, Hungar 8.07 351⇑ *i*Pn **Pn** 18 47 03.1 -1.9

PE3	**Peglio**	**8.09**	**315**	P		**Pn**	**18 47 06.5**	**+1.2**
BADI	**Badiali**	**8.11**	**313**	P		**Pn**	**18 47 08.2**	**+2.5**
PARC	**Parchiule**	**8.20**	**314**	P		**Pn**	**18 47 09.4**	**+2.5**
BOJS	**Bojanci**	**8.20**	**334**	*e*Pn		**Pn**	**18 47 06.4**	**-0.5**
	comp=Z,19µm,7.4s							
BOJS	**Bojanci**	**8.20**	**334**	P		**Pn**	**18 47 06.4**	**-0.5**
SSP9	**Sansepolcro**	**8.22**	**313**	P		**Pn**	**18 47 08.2**	**+1.1**
OZLJ	**Ozalj**	**8.23**	**335**	*i* Pn		**Pn**	**18 47 06.6**	**-0.6**
ZAG	**Zagreb**	**8.25**	**338**	*e*Pn		**Pn**	**18 47 06.3**	**-1.3**
ZAG	**Zagreb**	**8.25**	**338**	⇑*i*Pn		**Pn**	**18 47 06.7**	**-0.9**
MLR	**Muntele Rosu**	**8.33**	**28**	P		**Pn**	**18 47 11.2**	**+2.4**
MLR	**Muntele Rosu**	**8.33**	**28**	Pn		**Pn**	**18 47 06.8**	**-1.9**
	comp=Z,0.4nm,0.3s,baz=239,slow=7.1,SNR=19							
MLR	**Muntele Rosu**	**8.33**	**28**	⇑P		**Pn**	**18 47 12.0**	**+3.2**
MLR	**Muntele Rosu**	**8.33**	**28**			**Pn**	**18 47 11.2**	**+2.4**
PTJ	**Puntijarka**	**8.33**	**338**	*i* Pn		**Pn**	**18 47 07.1**	**-1.6**
RIY	**Rijeka**	**8.34**	**330**	*i* Pn		**Pn**	**18 47 09.1**	**+0.3**
RIY	**Rijeka**	**8.34**	**330**	⇑*i*Pn		**Pn**	**18 47 08.4**	**-0.3**
CRE	**Caprese Michel**	**8.35**	**313**	P		**Pn**	**18 47 11.0**	**+2.0**
GBRS	**Gornja Briga**	**8.38**	**332**	*e*Pn		**Pn**	**18 47 09.5**	**0.0**
GBRS				*e*Sn		**Sn**	**18 48 39.6**	**-4.2**
KALN	**Kalnik**	**8.40**	**341**	*i* Pn		**Pn**	**18 47 08.0**	**-1.7**
CRES	**Cresnjev**	**8.42**	**336**	⇑*i*Pn		**Pn**	**18 47 09.1**	**-0.7**
MDB	**Medias**	**8.42**	**19**	⇑P		**Pn**	**18 47 12.5**	**+2.6**
ASQU	**Asqua**	**8.55**	**313**	P		**Pn**	**18 47 13.6**	**+1.9**
DOPR	**Dopca**	**8.55**	**24**	⇑P		**Pn**	**18 47 14.2**	**+2.4**
CASP	**Castiglione de**	**8.56**	**305**			**Pn**	**18 47 13.5**	**+1.6**
SFI	**Santa Sofia**	**8.58**	**314**	P		**Pn**	**18 47 14.1**	**+2.0**
BEHE	**Becsehely**	**8.64**	**343**	⇑*i*Pn		**Pn**	**18 47 11.7**	**-1.2**
GRER		**8.65**	**32**	⇑P		**Pn**	**18 47 14.7**	**+1.8**
MDUB	**Mudurnu**	**8.65**	**72**			Pn	18 47 18.6	+5.4
CEY	**Cerknica**	**8.71**	**331**	⇑*i*Pn		**Pn**	**18 47 13.1**	**-0.7**
DRGR		**8.71**	**11**	P		**Pn**	**18 47 15.0**	**+1.1**
DRGR		**8.71**	**11**	⇑P		**Pn**	**18 47 14.9**	**+1.1**
OSSC	**Osservatorio P**	**8.71**	**310**			**Pn**	**18 47 15.4**	**+1.5**
RUFI	**Rufina**	**8.74**	**313**	P		**Pn**	**18 47 16.3**	**+2.1**
KOGS	**Kog**	**8.75**	**341**	*e*Pn		**Pn**	**18 47 12.9**	**-1.5**
	comp=Z,16µm,7.1s							
CJR	**Cluj-Napoca**	**8.78**	**15**	⇑P		**Pn**	**18 47 16.6**	**+1.8**
OZUR		**8.80**	**25**	⇑P		**Pn**	**18 47 17.4**	**+2.3**
PLOR	**Plostina**	**8.90**	**29**	P		**Pn**	**18 47 19.6**	**+3.1**
PLOR	**Plostina**	**8.90**	**29**	⇓P		**Pn**	**18 47 19.6**	**+3.1**
BRIS	**BRISIGHELLA**	**8.92**	**314**	P		**Pn**	**18 47 16.4**	**-0.4**
LJU	**Ljubljana**	**8.93**	**333**	*e*Pn		**Pn**	**18 47 16.1**	**-0.8**
LJU				*e*Sn		**Sn**	**18 48 53.1**	**-3.9**
LJU	**Ljubljana**	**8.93**	**333**	P		**Pn**	**18 47 15.7**	**-1.1**
LJU	**Ljubljana**	**8.93**	**333**	⇑*i*Pn		**Pn**	**18 47 16.0**	**-0.8**
VRI	**Vrincioaia**	**8.94**	**30**	⇑P		**Pn**	**18 47 20.3**	**+3.2**
ODBI	**Odobesti**	**8.99**	**31**	⇓P		**Pn**	**18 47 20.3**	**+2.6**
CFR	**Carcaliu**	**9.02**	**37**	⇑P		**Pn**	**18 47 20.0**	**+2.0**
PETR	**Petresti**	**9.03**	**32**	⇑P		**Pn**	**18 47 20.5**	**+2.3**
TAMR	**Tamra**	**9.04**	**266**	P		**Pn**	**18 47 18.0**	**-0.4**
PTF	**Prato**	**9.06**	**312**	P		**Pn**	**18 47 20.3**	**+1.6**
MTCR	**Monte La Croce**	**9.14**	**312**	P		**Pn**	**18 47 22.9**	**+3.0**
KEST	**Kesra**	**9.20**	**258**	Pn		**Pn**	**18 47 20.3**	**-0.4**
	comp=Z,3.4nm,0.3s,baz=43,slow=3.5,SNR=24							
KEST				Sn		**Sn**	**18 49 01.9**	**-2.0**
	comp=Z,2.7nm,0.3s,baz=178,slow=19,SNR=3.9							
KEST				LR		LR	18 51 38.8	
	comp=Z,4µm,19.2s,baz=7.5,slow=42							
KEST	**Kesra**	**9.20**	**258**			**Pn**	**18 47 20.4**	**-0.2**
SABO	**M.te Sabotino**	**9.23**	**329**	P		**Pn**	**18 47 19.8**	**-1.2**
ARCR	**ARCALIA**	**9.30**	**17**	⇑P		**Pn**	**18 47 23.3**	**+1.4**
SOKA	**Soboth**	**9.31**	**337**	*e*Pn		**Pn**	**18 47 20.8**	**-1.4**
	comp=Z,96nm,0.5s,SNR=73							
SOKA				Sn		**Sn**	**18 48 59.7**	**-6.8**
	comp=Z,86nm,0.6s							
OBKA	**Obir**	**9.32**	**334**	*e*Pn		**Pn**	**18 47 20.7**	**-1.6**
OBKA				*e*Sn		**Sn**	**18 49 03.7**	**-3.1**
OBKA	**Obir**	**9.32**	**334**	*e*Pn		**Pn**	**18 47 21.9**	**-0.4**
	comp=Z,99nm,0.5s,SNR=52							
OBKA				Sn		**Sn**	**18 49 02.0**	**-4.8**
	comp=Z,132nm,0.3s							
ZCCA	**Zocca**	**9.35**	**314**	P		**Pn**	**18 47 25.8**	**+3.1**
ZCCA	**Zocca**	**9.35**	**314**			**Pn**	**18 47 26.2**	**+3.5**
GORS	**Gorjuse**	**9.35**	**332**	*e*Pn		**Pn**	**18 47 21.6**	**-1.2**
	comp=Z,14µm,7.2s							
TLCR		**9.35**	**40**	⇑P		**Pn**	**18 47 24.2**	**+1.5**
MAIM	**Mastiano**	**9.38**	**310**	P		**Pn**	**18 47 26.7**	**+3.6**
BDI	**Bagni Di Lucca**	**9.40**	**311**	P		**Pn**	**18 47 26.5**	**+3.1**
TESR	**Tescani**	**9.46**	**27**	⇑P		**Pn**	**18 47 26.1**	**+2.0**
VLC	**Villacollemand**	**9.58**	**311**			**Pn**	**18 47 28.2**	**+2.4**
TEOL	**Teolo**	**9.64**	**320**			**Pn**	**18 47 26.4**	**-0.2**
GEPF	**Gemona**	**9.66**	**328**	P		**Pn**	**18 47 26.4**	**-0.3**
PSZ	**Piszkesteto**	**9.67**	**358**	P		**Pn**	**18 47 27.4**	**+0.3**
PSZ	**Piszkesteto**	**9.67**	**358**	⇑P		**Pn**	**18 47 27.0**	**-0.1**
PSZ	**Piszkesteto**	**9.67**	**358**			**Pn**	**18 47 27.4**	**+0.3**
SRO	**Srobarova**	**9.68**	**352**	*e*P		**Pn**	**18 47 27.7**	**+0.6**
SRO				*e*			18 49 12.1	
SRO	**Srobarova**	**9.68**	**352**	*e*PN		**Pn**	**18 47 27.7**	**+0.6**
SRO				*e*SN		**Sn**	**18 49 12.1**	**-3.4**
ARSA	**Arzberg**	**9.68**	**340**	*e*Pn		**Pn**	**18 47 25.6**	**-1.6**
ARSA	**Arzberg**	**9.68**	**340**	*e*Pn		**Pn**	**18 47 25.3**	**-1.9**
	comp=Z,32nm,0.3s,SNR=35							
BMR	**Baia Mare**	**9.69**	**13**	⇑P		**Pn**	**18 47 29.0**	**+1.7**
ERBM	**Eremo**	**9.71**	**313**	P		**Pn**	**18 47 31.3**	**+3.6**
ACOM	**Acomizza, Ital**	**9.73**	**331**	P		**Pn**	**18 47 28.0**	**0.0**
POLC	**Polcenigo**	**9.73**	**325**	P		**Pn**	**18 47 27.9**	**+0.1**
MYKA	**Terra Mystica**	**9.75**	**331**	*e*Pn		**Pn**	**18 47 27.3**	**-0.9**
	comp=Z,59nm,0.5s,SNR=37							
MYKA				Sn		**Sn**	**18 49 11.9**	**-5.4**
	comp=Z,76nm,0.5s							
ANTO	**Ankara**	**9.77**	**77**	⇑P		Pn	18 47 33.7	+5.2
ANTO	**Ankara**	**9.77**	**77**	P		Pn	18 47 34.1	+5.6
GIRR	**Girov**	**9.79**	**25**	⇑P		**Pn**	**18 47 31.4**	**+2.8**
STAL	**STALIGIAL**	**9.82**	**327**	P		**Pn**	**18 47 29.2**	**+0.1**
STAL	**STALIGIAL**	**9.82**	**327**			**Pn**	**18 47 28.0**	**-1.1**
SWA2		**9.91**	**153**	P		**Pn**	**18 47 28.1**	**-2.3**
	baz=155							
SWA2				S		Sn	18 48 54.9	-27
	baz=155							
GRAM	**Graiana**	**9.96**	**312**	P		**Pn**	**18 47 35.2**	**+4.2**
PRMA	**PARMA**	**9.98**	**314**			**Pn**	**18 47 32.0**	**+0.8**
BURAR	**Bucovina Array**	**10.00**	**19**	P		**Pn**	**18 47 34.0**	**+2.4**
BURAR	**Bucovina Array**	**10.00**	**19**	⇑P		**Pn**	**18 47 34.0**	**+2.4**
VASR	**Vaslui**	**10.00**	**31**	⇑P		**Pn**	**18 47 32.5**	**+0.9**
BUR08	**Bucovina Ar. S**	**10.02**	**19**			**Pn**	**18 47 32.9**	**+0.9**
LEOM	**Leova**	**10.05**	**33**	⇑P		**Pn**	**18 47 35.1**	**+2.8**
PRAR	**RASCA**	**10.06**	**23**	⇑P		**Pn**	**18 47 34.4**	**+2.0**
FVI	**Forni Avoltri**	**10.06**	**328**	P		**Pn**	**18 47 33.6**	**+1.1**
CTI	**Castel Tesino**	**10.14**	**323**	P		**Pn**	**18 47 32.1**	**-1.5**
CTI	**Castel Tesino**	**10.14**	**323**			**Pn**	**18 47 32.1**	**-1.5**
MSSA	**Maissana**	**10.19**	**310**			**Pn**	**18 47 35.6**	**+1.4**
CONA	**Conrad Observa**	**10.23**	**343**	*e*Pn		**Pn**	**18 47 33.3**	**-1.4**
	comp=Z,3.7nm,0.3s							
ZST	**Bratislava**	**10.23**	**347**	*e*P		**Pn**	**18 47 32.8**	**-1.8**
ZST				*e*			18 49 20.4	
ZST				MLR		MLR		
	comp=Z,14µm,14.2s							
ZST	**Bratislava**	**10.23**	**347**	*e*PN		**Pn**	**18 47 32.8**	**-1.8**
ZST				*e*SN		**Sn**	**18 49 20.4**	**-8.6**
ZST				*e*L		L	18 52 30.3	
KECS	**Kecovo**	**10.23**	**0**	*e*P		**Pn**	**18 47 36.1**	**+1.4**
KECS				*e*			18 49 24.5	
KECS	**Kecovo**	**10.23**	**0**	*e*PN		**Pn**	**18 47 36.1**	**+1.4**
KECS				*e*SN		**Sn**	**18 49 24.5**	**-4.5**
KBA	**Koelnbreinsper**	**10.24**	**332**	*e*Pn		**Pn**	**18 47 33.4**	**-1.5**
KBA				*e*Sn		**Sn**	**18 49 24.9**	**-4.6**
KBA	**Koelnbreinsper**	**10.24**	**332**	*e*Pn		**Pn**	**18 47 34.3**	**-0.7**
	comp=Z,30nm,0.4s,SNR=45							
KBA				Sn		**Sn**	**18 49 23.9**	**-5.6**
	comp=Z,101nm,0.7s							
ABTA	**Abfaltersbach**	**10.29**	**328**	*e*Pn		**Pn**	**18 47 34.7**	**-1.0**
	comp=Z,58nm,0.4s,SNR=36							
ABTA				Sn		**Sn**	**18 49 24.1**	**-6.6**
	comp=Z,257nm,0.6s							
VYHS	**Vyhne**	**10.30**	**354**	*e*P		**Pn**	**18 47 35.7**	**0.0**
VYHS				*e*			18 49 26.9	
VYHS				MLR		MLR		
	comp=Z,16µm,15.4s							
VYHS	**Vyhne**	**10.30**	**354**	*e*PN		**Pn**	**18 47 35.7**	**0.0**
VYHS				*e*SN		**Sn**	**18 49 26.9**	**-3.9**
VYHS				*e*L		L	18 52 22.4	
MODS	**Modra-Piesok**	**10.37**	**348**	*e*P		**Pn**	**18 47 36.1**	**-0.5**
MODS				*e*			18 49 26.1	
MODS				MLR		MLR		
	comp=Z,24µm,15.2s							
MODS	**Modra-Piesok**	**10.37**	**348**	*e*PN		**Pn**	**18 47 36.1**	**-0.5**
MODS				*e*SN		**Sn**	**18 49 26.1**	**-6.4**
MODS				*e*L		L	18 52 35.2	
SALO	**Salr**	**10.40**	**318**			**Pn**	**18 47 36.7**	**-0.4**
BR131	**Keskin Array S**	**10.41**	**78**	*e*P		**Pn**	**18 47 41.7**	**+4.4**
BR131	**Keskin Array S**	**10.41**	**78**	P		**Pn**	**18 47 41.3**	**+4.0**
BR131	**Keskin Array S**	**10.41**	**78**	P		**Pn**	**18 47 41.7**	**+4.4**
	SNR=14							
BRTR	**Keskin Array B**	**10.41**	**78**	*ce*P		**Pn**	**18 47 41.2**	**+4.0**
BRTR				pmax		pmax		
	comp=Z,12nm,0.7s							
BRTR	**Keskin Array B**	**10.41**	**78**	Pn		**Pn**	**18 47 40.3**	**+3.1**
	comp=Z,1.3nm,0.3s,baz=257,slow=11,SNR=36							
BRTR				LR		LR	18 51 47.3	
	comp=Z,3µm,18.5s,baz=233,slow=39							
CMAH	**Djebel Manchou**	**10.45**	**265**	P		**Pn**	**18 47 37.9**	**+0.1**
UZH	**Uzhgorod**	**10.47**	**7**	*d*iP		**Pn**	**18 47 38.6**	**+0.7**
UZH				*e*S		**Sn**	**18 49 36.1**	**+1.3**
UZH				MLR		MLR		
	comp=N,2µm,12.0s							
UZH				MLR		MLR		
	comp=E,2µm,12.0s							
UZH				MLR		MLR		
	comp=Z,2µm,12.0s							
SMOL	**Smolenice**	**10.49**	**349**	*e*P		**Pn**	**18 47 38.1**	**-0.1**
SMOL				*e*			18 49 30.7	
SMOL	**Smolenice**	**10.49**	**349**	*e*PN		**Pn**	**18 47 38.0**	**-0.1**
SMOL				*e*SN		**Sn**	**18 49 30.7**	**-4.6**
ABSA	**Djebel Ababsia**	**10.49**	**263**	P		**Pn**	**18 47 39.6**	**+1.2**
MOA	**Molln**	**10.59**	**337**	*e*Pn		**Pn**	**18 47 38.5**	**-1.1**
MOA	**Molln**	**10.59**	**337**	*e*Pn		**Pn**	**18 47 39.1**	**-0.5**
	comp=Z,54nm,0.3s,SNR=49							
MOA				Sn		**Sn**	**18 49 33.4**	**-4.5**
	comp=Z,28nm,0.3s							
BRES	**Bressanone**	**10.59**	**326**	P		**Pn**	**18 47 40.2**	**+0.3**
MILM	**Milestii Mici**	**10.65**	**33**	⇑P		**Pn**	**18 47 41.7**	**+1.3**
CRVS	**Cervenica-Dubn**	**10.68**	**4**	*e*P		**Pn**	**18 47 40.9**	**+0.1**
CRVS				*e*			18 49 33.0	
CRVS	**Cervenica-Dubn**	**10.68**	**4**	*e*PN		**Pn**	**18 47 40.9**	**+0.1**
CRVS				*e*PG			18 48 30.6	
CRVS				*e*SN		**Sn**	**18 49 33.0**	**-7.0**
KIS	**Kishinev**	**10.71**	**33**	*e*P		**Pn**	**18 47 43.0**	**+1.8**
KIS				*e*S		**Sn**	**18 49 46.0**	**+5.2**
KIS				*e*LQ		LQ	18 50 36.0	
KIS				*i* LR		LR	18 51 24.0	
	comp=Z,16µm,14.0s							
KIS	**Kishinev**	**10.71**	**33**	*e*P		**Pn**	**18 47 43.0**	**+1.8**
KIS				*e*S		**Sn**	**18 49 46.0**	**+5.2**
KIS				MLR		MLR		
	comp=Z,16µm,14.0s							
KIS				MLR		MLR		
	comp=N,9µm,15.0s							
KOLS	**Kolonicke sedl**	**10.77**	**7**	*e*P		**Pn**	**18 47 43.0**	**+1.0**
KOLS				MLR		MLR		
	comp=Z,9µm,14.4s							
KOLS	**Kolonicke sedl**	**10.77**	**7**	*e*PN		**Pn**	**18 47 43.0**	**+1.0**
KOLS				*e*L		L	18 52 27.3	
JAVC	**Velka Javorina**	**10.79**	**350**	*e*PN		**Pn**	**18 47 42.3**	**-0.1**
PURM	**Purcari**	**10.83**	**37**	⇑P		**Pn**	**18 47 44.8**	**+2.0**
CAEH	**'Ain El Ouahch**	**10.87**	**266**	P		**Pn**	**18 47 43.6**	**+0.1**
CSS	**Mathiatis**	**10.89**	**104**			**Pn**	**18 47 43.9**	**+0.1**
LANS	**Liptovska Anna**	**10.92**	**357**	*e*P		**Pn**	**18 47 46.1**	**+2.0**
LANS				*e*			18 49 46.6	
LANS	**Liptovska Anna**	**10.92**	**357**	*e*PN		**Pn**	**18 47 46.1**	**+2.0**
LANS				*e*SN		**Sn**	**18 49 46.6**	**+0.6**
RJOB	**Jochberg**	**10.99**	**332**	*e*Pn		**Pn**	**18 47 43.6**	**-0.6**
RJOB				*e*Sn		**Sn**	**18 49 43.4**	**-4.4**
CKFL	**Kef-Lekhel**	**11.05**	**265**	P		**Pn**	**18 47 46.9**	**+0.8**
WTTA	**Wattenberg**	**11.07**	**327**	*e*Pn		**Pn**	**18 47 45.9**	**-0.4**
WTTA				*e*Sn		**Sn**	**18 49 45.2**	**-4.6**
WTTA	**Wattenberg**	**11.07**	**327**	*e*Pn		**Pn**	**18 47 46.0**	**-0.4**
	comp=Z,37nm,0.4s,SNR=38							
WTTA				Sn		**Sn**	**18 49 44.3**	**-5.6**
	comp=Z,222nm,0.6s							
WATA	**Walderalm**	**11.15**	**327**	*e*Pn		**Pn**	**18 47 47.6**	**+0.2**
	comp=Z,80nm,0.5s,SNR=63							
WATA				Sn		**Sn**	**18 49 47.9**	**-3.9**
	comp=Z,216nm,0.9s							
NIE	**Niedzica**	**11.17**	**360**	*e*P		**Pn**	**18 47 48.1**	**+0.6**
NIE	**Niedzica**	**11.17**	**360**	*e*P		**Pn**	**18 47 48.1**	**+0.6**
STHS	**Stebnicka Huta**	**11.18**	**3**	*e*P		**Pn**	**18 47 49.4**	**+1.7**
STHS				*e*			18 49 54.0	
STHS	**Stebnicka Huta**	**11.18**	**3**	*e*PN		**Pn**	**18 47 49.4**	**+1.7**
STHS	**Stebnicka Huta**	**11.18**	**3**	*e*SN		**Sn**	**18 49 54.0**	**+1.7**
KRUC	**Moravsky**	**11.19**	**346**	*e*PN		**Pn**	**18 47 47.5**	**-0.3**
FUORN	**Ofenpass-Fuorn**	**11.22**	**321**			**Pn**	**18 47 48.8**	**+0.3**
SQTA	**Sankt Quirin**	**11.22**	**326**	*e*Pn		**Pn**	**18 47 49.3**	**+1.0**
	comp=Z,50nm,0.5s,SNR=18							
CASM	**Ain Smara**	**11.27**	**264**	P		**Pn**	**18 47 49.5**	**+0.5**
FETA	**Feichten**	**11.29**	**324**	*e*Pn		**Pn**	**18 47 49.5**	**+0.2**
	comp=Z,11nm,0.5s,SNR=13							
MOTA	**Moosalm**	**11.36**	**326**	*e*Pn		**Pn**	**18 47 51.3**	**+1.0**
	comp=Z,44nm,0.5s,SNR=37							
MOTA				Sn		**Sn**	**18 49 54.1**	**-2.9**
	comp=Z,106nm,0.7s							
CTEI	**Djebel Teioual**	**11.38**	**263**	P		**Pn**	**18 47 51.7**	**+1.1**
VRAC	**Vranov**	**11.39**	**347**	Pn		**Pn**	**18 47 49.2**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=174,slow=12,SNR=23							
VRAC				Sn		**Sn**	**18 49 50.8**	**-6.7**
	comp=Z,1.5nm,0.3s,baz=184,slow=9.0,SNR=2.9							
VRAC	**Vranov**	**11.39**	**347**	⇓P		**Pn**	**18 47 49.9**	**-0.6**
VRAC	**Vranov**	**11.39**	**347**	*e*PN		**Pn**	**18 47 49.6**	**-1.0**
SORM	**Soroca**	**11.45**	**28**	⇑P		**Pn**	**18 47 52.3**	**+0.9**
PART	**Garmisch-Parte**	**11.48**	**327**	*e*Pn		**Pn**	**18 47 52.1**	**+0.3**
PART				*e*Sn		**Sn**	**18 49 58.0**	**-1.6**
KWP	**Kalwaria Pacla**	**11.50**	**8**	*e*P		**Pn**	**18 47 53.8**	**+1.8**
KWP	**Kalwaria Pacla**	**11.50**	**8**	*e*P		**Pn**	**18 47 53.8**	**+1.8**
DAVOX	**Davos/Dischmat**	**11.52**	**321**	Pn		**Pn**	**18 47 54.1**	**+1.6**
	comp=Z,7.6nm,0.3s,baz=132,slow=16,SNR=61							
DAVOX				Sn		**Sn**	**18 49 55.8**	**-5.2**
	comp=Z,6.6nm,0.3s,baz=315,slow=20,SNR=4.9							
TUE	**Stuetta**	**11.59**	**319**			**Pn**	**18 47 53.9**	**+0.5**
TREC	**Trest**	**11.60**	**344**	*e*P		**Pn**	**18 47 52.7**	**-0.7**
TREC				MLR		MLR		
	comp=Z,11µm,10.4s							
TREC	**Trest**	**11.60**	**344**	*e*PN		**Pn**	**18 47 52.7**	**-0.7**
TREC				AMS		AMS	18 53 30.0	
	comp=Z,11µm,10.4s							
RETA	**Reutte**	**11.62**	**326**	*e*Pn		**Pn**	**18 47 54.8**	**+1.0**
	comp=Z,24nm,0.6s,SNR=6.3							
RETA				Sn		**Sn**	**18 49 60.0**	**-3.3**
	comp=Z,122nm,0.9s							
GEC2	**GERESS Array S**	**11.65**	**338**	*e*Pn		**Pn**	**18 47 51.8**	**-2.3**
GEC2				*e*Sn		**Sn**	**18 49 59.3**	**-4.6**
GERES	**GERESS Array B**	**11.65**	**338**	Pn		**Pn**	**18 47 52.6**	**-1.6**
	comp=Z,6.1nm,0.3s,baz=156,slow=13,SNR=108							
GERES				Sn		Sn	18 49 54.9	-9.0
	comp=Z,1.9nm,0.3s,baz=153,slow=20,SNR=2.9							
DFRA	**Djebel Bou Aff**	**11.68**	**266**	P		**Pn**	**18 47 55.6**	**+0.9**
OKC	**Ostrava-Krasne**	**11.70**	**353**	*e*P		**Pn**	**18 47 54.2**	**-0.5**
OKC				*e*			18 49 57.3	
OKC				MLR		MLR		
	comp=Z,11µm,11.2s							
OKC	**Ostrava-Krasne**	**11.70**	**353**	*e*PN		**Pn**	**18 47 54.2**	**-0.5**
OKC				*e*SN		**Sn**	**18 49 57.3**	**-7.6**
OKC				AMS		AMS	18 53 00.0	
	comp=Z,11µm,11.2s							
MORC	**Moravsky Berou**	**11.71**	**351**	P		**Pn**	**18 47 53.7**	**-1.2**
MORC	**Moravsky Berou**	**11.71**	**351**	⇑P		**Pn**	**18 47 55.0**	**+0.1**
MORC	**Moravsky Berou**	**11.71**	**351**	*e*PN		**Pn**	**18 47 53.7**	**-1.2**
MORC	**Moravsky Berou**	**11.71**	**351**			**Pn**	**18 47 53.6**	**-1.2**
OBER	**Oberstdorf**	**11.77**	**324**	*e*Pn		**Pn**	**18 47 56.7**	**+0.8**
LVV	**L'vov**	**11.86**	**12**	*e*P		**Pn**	**18 47 58.4**	**+1.5**
LVV				*e*S		**Sn**	**18 50 07.7**	**-1.1**
LVV				MLR		MLR		
	comp=Z,9µm,9.0s							
DAVA	**Damuels**	**11.88**	**323**	*e*Pn		**Pn**	**18 47 57.4**	**0.0**
DAVA				*e*Sn		**Sn**	**18 50 06.7**	**-2.9**
DAVA	**Damuels**	**11.88**	**323**	*e*Pn		**Pn**	**18 47 57.7**	**+0.3**
	comp=Z,14nm,0.2s							
DAVA				Sn		**Sn**	**18 50 02.7**	**-7.0**
	comp=Z,248nm,0.5s							
FUR	**Furstenfeldbru**	**11.93**	**329**	*e*Pn		**Pn**	**18 47 56.8**	**-1.2**
RAC	**Raciborz**	**11.94**	**353**	*e*P		**Pn**	**18 47 58.4**	**+0.4**
RAC				MLR		MLR		
	comp=Z,12µm,15.8s							
KHC	**Kasperske Hory**	**11.94**	**338**	*e*P		**Pn**	**18 47 56.2**	**-1.9**
KHC				*e*			18 50 03.6	
KHC				MLR		MLR		
	comp=Z,16µm,14.2s							
KHC	**Kasperske Hory**	**11.94**	**338**	*e*PN		**Pn**	**18 47 56.2**	**-1.9**
KHC				*e*SN		**Sn**	**18 50 03.6**	**-7.4**
KHC				AMS		AMS	18 53 20.0	
	comp=Z,16µm,14.2s							
OJC	**Ojcow**	**11.98**	**358**	*e*P		**Pn**	**18 47 59.5**	**+1.0**
OJC	**Ojcow**	**11.98**	**358**	*e*P		**Pn**	**18 47 59.5**	**+1.0**
OJC	**Ojcow**	**11.98**	**358**			**Pn**	**18 47 56.6**	**-2.0**
UBR	**Ueberruh**	**12.06**	**325**	*e*Pn		**Pn**	**18 47 59.5**	**-0.3**
HNAT	**Natroun**	**12.06**	**132**	P		**Pn**	**18 47 57.5**	**-2.3**
	baz=131							
HNAT				S		Sn	18 49 51.0	-23
	baz=131							
CKHR	**Kef el Ahmar**	**12.10**	**264**	P		**Pn**	**18 48 01.8**	**+1.4**
KRLC	**Kraliky**	**12.10**	**349**	*e*P		**Pn**	**18 47 59.5**	**-0.8**
KRLC				*e*			18 50 06.9	
KRLC				MLR		MLR		
	comp=Z,14µm,12.3s							
KRLC	**Kraliky**	**12.10**	**349**	*e*PN		**Pn**	**18 47 59.5**	**-0.8**
KRLC				*e*SN		**Sn**	**18 50 06.9**	**-8.1**
KRLC				AMS		AMS	18 53 40.0	
	comp=Z,14µm,12.3s							
SET	**Setif**	**12.14**	**265**	P		**Pn**	**18 48 05.0**	**+4.1**
WET	**Wettzell**	**12.17**	**336**	*e*Pn		**Pn**	**18 47 59.3**	**-1.9**
SIM	**Simferopol'**	**12.24**	**53**	*e*P		Pn	18 48 08.3	+6.1
SIM				pmax		pmax		
	comp=Z,110nm,1.4s							
SIM				MLR		MLR		
	comp=Z,3µm,10.8s							
BNI	**Bardonecchia**	**12.30**	**308**	P		**Pn**	**18 48 05.7**	**+2.5**
BNI	**Bardonecchia**	**12.30**	**308**			**Pn**	**18 48 05.7**	**+2.5**
PBCC	**Pribram**	**12.32**	**340**	*e*PN		**Pn**	**18 48 02.4**	**-0.9**
PBCC				AMS		AMS	18 53 40.0	
	comp=Z,3µm,8.9s							
GOPC	**GO Pecny, Ondr**	**12.34**	**343**	*e*P		**Pn**	**18 48 02.1**	**-1.4**
GOPC				MLR		MLR		
	comp=Z,11µm,10.0s							
GOPC	**GO Pecny, Ondr**	**12.34**	**343**	*e*PN		**Pn**	**18 48 02.1**	**-1.4**
GOPC				AMS		AMS	18 53 30.0	
	comp=Z,11µm,10.0s							
DPC	**Dobruska-Polom**	**12.44**	**348**	*e*P		**Pn**	**18 48 04.4**	**-0.6**
DPC				MLR		MLR		
	comp=Z,16µm,13.5s							
DPC

SOC					pmax	pmax			
	comp=Z,181nm,0.9s								
SOC					MLR	MLR			
	comp=Z,1µm,10.0s								
ETRT	**Tiaret**	**15.56**	**265**		P	**P**	**18 48 50.0**	**-1.7**	
EANR	**'Ain N'Sour**	**15.58**	**267**		P	**Pn**	**18 48 47.0**	**-0.5**	
SUW	**Suwalki**	**15.88**	**6**	*eP*	**Pn**	**18 48 51.2**	**-0.1**		
SUW	**Suwalki**	**15.88**	**6**	*eP*	**Pn**	**18 48 51.2**	**-0.1**		
SUW	**Suwalki**	**15.88**	**6**		**Pn**	**18 48 50.3**	**-1.0**		
SUW					IAmb	IAmb	18 49 02.7		
	comp=Z,366nm,1.0s								
OKGL	**Djebel Kef Gue**	**15.91**	**268**		P	**P**	**18 48 54.0**	**-1.5**	
MEM	**Membach**	**16.04**	**325**		Pn	**Pn**	**18 48 54.2**	**+0.8**	
MEM					pP	**pP**	**18 48 59.4**	**-1.0**	
BSTI	**Sart Tilman**	**16.22**	**324**		pPn	**P**	**18 48 57.6**	**-1.2**	
BSTI					pP	**pP**	**18 49 01.9**	**-0.5**	
OJBR	**Djebel Berber**	**16.26**	**267**		P	**Pn**	**18 48 56.0**	**-0.4**	
BEBN	**Eben Emael**	**16.32**	**325**		Pn	**Pn**	**18 48 58.0**	**+1.1**	
BEBN					pPn	**pPn**	**18 49 00.5**	**+0.4**	
BEBN					pP	**pP**	**18 49 03.0**	**-0.5**	
BEBN					x	x	18 49 04.6		
DOU	**Dourbes**	**16.36**	**321**		pPn	**P**	**18 48 59.7**	**-0.5**	
DOU					pP	**pP**	**18 49 02.6**	**-1.3**	
ODJA	**Bouhanifia**	**16.72**	**266**		P	**P**	**18 49 07.0**	**+2.6**	
UCC	**Uccle**	**16.93**	**323**		P	**P**	**18 49 08.4**	**+1.8**	
UCC					pmax	pmax			
	comp=Z,113nm,1.1s								
UCC	**Uccle**	**16.93**	**323**		P	**P**	**18 49 08.4**	**+1.8**	
RGN	**Rugen**	**17.00**	**346**	*eP*	**P**	**18 49 09.3**	**+2.0**		
MICGM	**Minsk**	**17.04**	**15**⇓	*eP*	**Pn**	**18 49 02.0**	**-4.0**		
MICGM					PM		18 49 06.0		
	comp=Z,1.0nm,1.5s								
MICGM					PM		18 49 07.0		
	comp=N,1.3nm,0.5s								
MICGM					*eS*	**Sn**	**18 52 05.0**	**-10**	
MICGM					*eLR*	LR	18 55 36.0		
MNK	**Minsk**	**17.04**	**15**⇓	*eP*	**Pn**	**18 49 02.0**	**-4.0**		
MNK					*eS*	**Sn**	**18 52 05.0**	**-10**	
MNK					pmax	pmax			
	comp=Z,1µm,1.5s								
MNK					pmax	pmax			
	comp=N,1µm,1.5s								
NACGM	**Naroch**	**17.21**	**13**	*eP*	**Pn**	**18 49 06.0**	**-2.2**		
NACGM					PM		18 49 10.0		
	comp=Z,1.2nm,1.0s								
NACGM					*eS*	**Sn**	**18 52 19.0**	**-0.2**	
BSD	**Bornholm Skovb**	**17.28**	**349**	*eP*	**P**	**18 49 09.7**	**-0.6**		
BSD	**Bornholm Skovb**	**17.28**	**349**	*i P*	**P**	**18 49 09.7**	**-0.6**		
PABE	**Paberze**	**17.43**	**7**	*eP*	**Pn**	**18 49 09.6**	**-1.3**		
PABE					IAmb	IAmb	18 49 13.2		
	comp=Z,215nm,0.8s								
IIGN	**Ignalina**	**17.55**	**11**	*eP*	**Pn**	**18 49 10.6**	**-1.8**		
IIGN					IAmb	IAmb	18 49 14.6		
	comp=Z,104nm,1.2s								
IIGN					*eS*	**Sn**	**18 52 30.2**	**+2.8**	
NEY	**Neytrino**	**17.61**	**66**	*eP*	**P**	**18 49 17.3**	**+2.9**		
NEY					pmax	pmax			
	comp=Z,12nm,0.8s								
SHA1	**Shidzhatmaz**	**17.65**	**65**	*eP*	**P**	**18 49 16.3**	**+1.4**		
KIV	**Kislovodsk**	**17.71**	**64**	*eP*	**P**	**18 49 17.4**	**+2.0**		
KIV					*eS*	**S**	**18 52 36.2**	**-2.5**	
KIV					pmax	pmax			
	comp=Z,569nm,1.0s								
KIV					MLR	MLR			
	comp=Z,4µm,14.0s								
KIV	**Kislovodsk**	**17.71**	**64**	*i* P		**P**	**18 49 15.7**	**+0.4**	
	SNR=39								
KIV	**Kislovodsk**	**17.71**	**64**	P		**P**	**18 49 15.5**	**+0.1**	
KIV	**Kislovodsk**	**17.71**	**64**	P		**P**	**18 49 17.1**	**+1.7**	
KVAR	**Kislovodsk Arr**	**17.72**	**64**	P		**P**	**18 49 17.2**	**+1.7**	
	baz=275,slow=23,SNR=20								
ISAL	**Salakas**	**17.75**	**11**	*eP*		**Pn**	**18 49 12.9**	**-2.0**	
ISAL					IAmb	IAmb	18 49 19.4		
	comp=Z,78nm,0.9s								
ISAL					*eS*	**Sn**	**18 52 34.1**	**+1.9**	
PBUR	**Paburg**	**17.81**	**3**	*eP*		**Pn**	**18 49 13.9**	**-1.6**	
KBZ	**Khabaz**	**17.82**	**65**	*eP*		**P**	**18 49 18.5**	**+2.1**	
KBZ	**Khabaz**	**17.82**	**65**	P		**P**	**18 49 18.1**	**+1.7**	
	comp=Z,1.3nm,0.3s,baz=266,slow=9.2,SNR=86								
IZAR	**Zarasai**	**17.94**	**11**	*eP*		**Pn**	**18 49 15.0**	**-2.2**	
IZAR					*eS*	**Sn**	**18 52 38.6**	**+1.8**	
AKH	**Akhalkalaki**	**18.00**	**73**	⇓P		**P**	**18 49 20.2**	**+1.5**	
PYA1	**Pyatigorsk**	**18.02**	**64**	*eP*		**P**	**18 49 19.9**	**+1.2**	
PYA1					pmax	pmax			
	comp=Z,4.0nm,0.8s								
SESP	**Santiago Espad**	**18.04**	**277**		P	**P**	**18 49 19.1**	**0.0**	
	SNR=13								
GOF	**Gofitskoye**	**18.20**	**61**⇑	*eP*		**P**	**18 49 21.7**	**+1.0**	
GOF					pmax	pmax			
	comp=Z,129nm,0.9s								
ZEI	**Tsey**	**18.41**	**68**	*eP*		**Pn**	**18 49 23.9**	**+0.6**	
ZEI					pmax	pmax			
	comp=Z,181nm,1.3s								
VORD	**Divnogorie**	**18.44**	**40**	*eP*		**P**	**18 49 23.2**	**0.0**	
VORD					pmax	pmax			
	comp=Z,90nm,1.0s								
VORD					MLR	MLR			
	comp=Z,6µm,11.0s								
VSR	**Storozhevoye**	**18.52**	**40**	*eP*		**P**	**18 49 23.5**	**-0.6**	
VSR					pmax	pmax			
	comp=Z,230nm,1.4s								
VSR					MLR	MLR			
	comp=Z,9µm,12.0s								
TAF	**Taforalt**	**18.65**	**266**		P	**Pn**	**18 49 30.0**	**+3.9**	
	SNR=12								
VORR	**Voronezh**	**18.82**	**38**	*eP*		**P**	**18 49 27.0**	**-0.4**	
VORR					pmax	pmax			
	comp=Z,300nm,1.6s								
GNI	**Garni**	**18.95**	**77**	P		**Pn**	**18 49 30.5**	**+0.8**	
GNI					pmax	pmax			
	comp=Z,319nm,1.1s								
GNI	**Garni**	**18.95**	**77**	P		**Pn**	**18 49 30.3**	**+0.6**	
	comp=Z,8.6nm,0.3s,baz=274,slow=3.3,SNR=78								
GNI	**Garni**	**18.95**	**77**	*i* P		**Pn**	**18 49 30.2**	**+0.5**	
	SNR=28								
GNI	**Garni**	**18.95**	**77**	P		**Pn**	**18 49 30.5**	**+0.8**	
GNI					IAmb	IAmb	18 49 36.5		
	comp=Z,319nm,1.1s								
GNI	**Garni**	**18.95**	**77**	P		**Pn**	**18 49 31.4**	**+1.6**	
TBLG	**Delisi**	**18.95**	**72**	P		**Pn**	**18 49 30.3**	**+0.7**	
TBLG					pmax	pmax			
	comp=Z,212nm,1.2s								
TBLG	**Delisi**	**18.95**	**72**	P		**Pn**	**18 49 30.3**	**+0.7**	
ESDC	**Sonseca Array**	**18.99**	**282**	P		**Pn**	**18 49 30.0**	**-0.2**	
	comp=Z,1.1nm,0.3s,baz=79,slow=11,SNR=33								
ESDC					LR	LR	18 56 44.8		
	comp=Z,2µm,21.4s,baz=75,slow=37								
ESDC	**Sonseca Array**	**18.99**	**282**		IAmb	IAmb	18 49 38.5		
	comp=Z,26nm,1.2s								
LPSR	**Galich'ya Gora**	**19.28**	**36**	*eP*		**P**	**18 49 32.1**	**-0.3**	
LPSR					pmax	pmax			
	comp=Z,380nm,1.0s								
LPSR					MLR	MLR			
	comp=Z,5µm,14.0s								
MUD	**Monsted U'grnd**	**19.69**	**341**	*i* P		**P**	**18 49 37.2**	**+0.3**	
MUD					pmax	pmax			
	comp=Z,280nm,1.5s								
MUD	**Monsted U'grnd**	**19.69**	**341**	*i* P		**P**	**18 49 37.2**	**+0.3**	
	comp=Z,277nm,1.5s								
VRH	**Novokhopyorsk**	**19.84**	**42**	*eP*		**P**	**18 49 38.7**	**+0.2**	
VRH					pmax	pmax			
	comp=Z,490nm,1.7s								
VRH					MLR	MLR			
	comp=Z,8µm,12.0s								
GROC	**Groznyy**	**19.84**	**68**	*eP*		**Pn**	**18 49 40.2**	**0.0**	
GROC					*eS*	**Sn**	**18 53 24.4**	**+1.6**	
GROC					pmax	pmax			
	comp=Z,165nm,0.7s								
WACR	**West Acre**	**19.95**	**323**	*eP*		**P**	**18 49 39.5**	**-0.2**	
WACR					IAmb	IAmb	18 49 44.0		
	comp=Z,306nm,1.0s								
TAM	**Tamanrasset**	**20.00**	**224**	P		Pn	18 49 42.6	+0.2	
TAM					pmax	pmax			
	comp=Z,167nm,1.7s								
TAM	**Tamanrasset**	**20.00**	**224**	P		Pn	18 49 42.6	+0.2	
PVLZ	**Peæn de**	**20.03**	**269**	*eP*		Pn	18 49 41.8	-0.7	
PVLZ					*eS*	**S**	**18 53 24.6**	**-0.7**	
OBN	**Obninsk**	**20.10**	**28**	*c i* P		**P**	**18 49 40.5**	**-0.8**	
OBN					*i* *SP	**pP**	**18 49 45.6**	**0.0**	
OBN					*eS*	**S**	**18 53 27.5**	**+1.0**	
OBN					*eSS*	**SnSn**	**18 53 44.1**	**+0.7**	
OBN					pmax	pmax			
	comp=Z,141nm,1.7s								
OBN					MLR	MLR			
	comp=Z,5µm,16.0s								
OBN	**Obninsk**	**20.10**	**28**	P		**P**	**18 49 40.7**	**-0.6**	
	comp=Z,2.5nm,0.3s,baz=217,slow=5.5,SNR=27								
OBN					LR	LR	18 58 56.2		
	comp=Z,707nm,21.2s,baz=216,slow=42								
OBN	**Obninsk**	**20.10**	**28**	P		**P**	**18 49 39.7**	**-1.7**	
OBN					IAmb	IAmb	18 49 47.0		
	comp=Z,248nm,1.1s								
SWN1	**Swindon**	**20.47**	**318**	*eP*		Pn	18 49 46.6	-1.0	
SWN1					IAmb	IAmb	18 49 54.6		
	comp=Z,304nm,0.9s								
GNBR	**Gunib**	**20.64**	**70**	*eP*		Pn	18 49 48.8	-0.9	
GNBR					pmax	pmax			
	comp=Z,313nm,0.9s								
VSU	**Vasula**	**20.64**	**9**	*eP*		**P**	**18 49 46.1**	**-1.1**	
VSU	**Vasula**	**20.64**	**9**	*eP*		**P**	**18 49 47.5**	**+0.3**	
SSW	**Stow on the Wo**	**20.74**	**319**	*eP*		Pn	18 49 49.8	-1.0	
SMIR	**Smir Dam**	**20.74**	**271**	P		Pn	18 49 53.0	+2.0	
	SNR=10								
STRD	**Stroud**	**20.80**	**318**	*eP*		**P**	**18 49 49.8**	**+0.8**	
STRD					IAmb	IAmb	18 49 54.3		
	comp=Z,382nm,0.7s								
CHEFC	**Chefchaouen**	**20.86**	**269**	P		Pn	18 49 54.0	+1.5	
	SNR=16								
CWF	**Charnwood Fore**	**20.90**	**321**	*eP*		**P**	**18 49 50.7**	**+0.7**	
CWF					IAmb	IAmb	18 49 54.6		
	comp=Z,419nm,1.5s								
OLDB	**Oldbury-Upon-S**	**20.95**	**317**	*eP*		**P**	**18 49 50.5**	**-0.1**	
MOS	**Moscow**	**20.97**	**28**	*eP*		**P**	**18 49 47.7**	**-3.1**	
MOS					*eS*	**S**	**18 53 36.3**	**-7.4**	
MOS					*e*		18 53 56.9		
MOS					pmax	pmax			
	comp=Z,608nm,1.6s								
MOS					pmax	pmax			
	comp=Z,1µm,1.8s								
MOS					MLR	MLR			
	comp=N,7µm,13.0s								
MOS					MLR	MLR			
	comp=E,5µm,13.0s								
MOS					MLR	MLR			
	comp=Z,7µm,13.0s								
MDT	**Midelt**	**21.04**	**263**	P		**P**	**18 49 53.0**	**+1.1**	
	comp=Z,47nm,1.1s,baz=259,slow=8.7,SNR=22								
MDT					LR	LR	18 59 10.7		
	comp=Z,881nm,20.2s,baz=58,slow=40								
PBRG	**Braganca**	**21.05**	**288**	*eP*		**P**	**18 49 51.9**	**0.0**	
	comp=Z,169nm,1.7s								
MAK	**Makhachkala**	**21.07**	**68**	*c i* P		**P**	**18 49 53.9**	**+2.0**	
MAK					*eS*	**S**	**18 53 47.9**	**+2.1**	
MAK					pmax	pmax			
	comp=Z,2µm,2.0s								
MONM	**Monmouth**	**21.18**	**317**	*eP*		**P**	**18 49 53.2**	**+0.2**	
MONM					IAmb	IAmb	18 49 58.1		
	comp=Z,338nm,1.2s								
AKT	**Akhty**	**21.19**	**73**	*eP*		**P**	**18 49 54.0**	**+0.6**	
AKT					*e*		18 50 12.3		
AKT					*eS*	Sn	18 53 54.0	-1.5	
AKT					*eSS*	**SnSn**	**18 54 13.7**	**+3.4**	
AKT					pmax	pmax			
	comp=Z,567nm,1.3s								
IFR	**Ifrane**	**21.19**	**265**	*eP*		**P**	**18 49 55.0**	**+1.4**	
IFR					*eS*	**S**	**18 53 47.8**	**-1.0**	
MVO	**Moncorvo**	**21.27**	**287**	*eP*		**P**	**18 49 54.1**	**-0.2**	
	comp=Z,180nm,1.8s								
MVO					*eLR*	LR	18 54 08.6		
	comp=Z,2µm,16.0s								
MCH1	**Michaelchurch**	**21.36**	**318**	*eP*		**P**	**18 49 55.1**	**+0.1**	
MCH1					IAmb	IAmb	18 49 59.8		
	comp=Z,252nm,1.1s								
LBWR	**Ladybower, Pea**	**21.49**	**322**	*eP*		**P**	**18 49 56.9**	**+0.5**	
LBWR					IAmb	IAmb	18 50 00.2		
	comp=Z,239nm,1.0s								
STNC	**Stoke**	**21.55**	**321**	*eP*		**P**	**18 49 57.9**	**+0.9**	
STNC					IAmb	IAmb	18 49 59.7		
	comp=Z,721nm,1.5s								
HLM1	**Long Mynd**	**21.57**	**319**	*eP*		**P**	**18 49 57.9**	**+0.6**	
HLM1					IAmb	IAmb	18 50 00.9		
	comp=Z,163nm,0.7s								
PMRV	**Marv??o**	**21.66**	**282**	*eP*		**P**	**18 49 57.7**	**-0.6**	
	comp=Z,201nm,1.2s								
PMRV					*eLR*	LR	18 54 07.3		
	comp=Z,2µm,16.0s								
PCBR	**Castelo Branco**	**21.68**	**283**	*eP*		**P**	**18 49 58.4**	**-0.2**	
	comp=Z,174nm,1.2s								
GDLE	**Glaisdale, N Y**	**21.69**	**325**	*eP*		**P**	**18 49 59.6**	**+1.1**	
MTE	**Manteigas**	**21.70**	**284**	*eP*		**P**	**18 49 57.9**	**-0.9**	
MTE					pmax	pmax			
	comp=Z,304nm,1.8s								
MTE					*eLR*	LR	18 54 08.7		
	comp=Z,3µm,18.0s								
MTE	**Manteigas**	**21.70**	**284**	P		**P**	**18 49 58.1**	**-0.7**	
MTE					IAmb	IAmb	18 50 06.9		
	comp=Z,468nm,1.8s								
HTL	**Hartland**	**21.70**	**314**	*eP*		**P**	**18 49 59.3**	**+0.7**	
HTL					IAmb	IAmb	18 50 02.8		
	comp=Z,456nm,1.3s								
HPK	**Haverah Park**	**21.77**	**323**	*eP*		**P**	**18 49 59.5**	**+0.1**	
HPK					IAmb	IAmb	18 50 01.4		
	comp=Z,280nm,1.4s								
PVRL	**Vila Real**	**21.79**	**287**	*eP*		**P**	**18 50 02.1**	**+2.3**	
	comp=Z,119nm,2.0s								
POLO	**Lamas de Olo**	**21.85**	**287**	*eP*		**P**	**18 50 03.2**	**+2.7**	
	comp=Z,65nm,1.7s								
PESTR	**Estremoz**	**21.87**	**280**	P		**P**	**18 49 59.5**	**-1.2**	
FOEL	**Foel Wylfa**	**21.94**	**319**	*eP*		**P**	**18 50 01.6**	**+0.4**	
FOEL					IAmb	IAmb	18 50 05.0		
	comp=Z,309nm,0.8s								
PVIS	**Viseu**	**21.95**	**285**	*eP*		**P**	**18 50 00.9**	**-0.6**	
	comp=Z,279nm,1.4s								
PCAB	**Cabril**	**22.02**	**288**	*eP*		**P**	**18 50 02.5**	**+0.3**	
	comp=Z,144nm,1.3s								
PVAQ	**Vaqueiros**	**22.20**	**277**	*eP*		**P**	**18 50 05.9**	**+1.7**	
	comp=Z,75nm,1.3s								
PVAQ					*eLR*	LR	18 54 19.1		
	comp=Z,1µm,18.0s								
PVAQ	**Vaqueiros**	**22.20**	**277**	P		**P**	**18 50 03.2**	**-1.0**	
PBEJ	**Beja**	**22.21**	**278**	*eP*		**P**	**18 50 03.1**	**-1.2**	
	comp=Z,97nm,1.3s								
HFS	**Hagfors**	**22.32**	**351**	P		**P**	**18 50 05.0**	**-0.2**	
HFS	**Hagfors**	**22.32**	**351**	P		**P**	**18 50 05.0**	**-0.2**	
	comp=Z,89nm,0.8s,baz=174,slow=4.2,SNR=56								
HFS					S	**S**	**18 54 06.7**	**-3.2**	
	comp=Z,7.7nm,0.9s,baz=231,slow=9.4,SNR=3.6								
HFS					LR	LR	19 01 18.6		
	comp=Z,2µm,19.3s,baz=172,slow=44								
PMTG	**Montargil**	**22.34**	**281**	*eP*		**P**	**18 50 04.2**	**-1.4**	
	comp=Z,211nm,1.6s								
COI	**Coimbra**	**22.37**	**284**	*eP*		**P**	**18 50 08.5**	**+2.5**	
	comp=Z,274nm,1.1s								
PBDV	**Barranco-do-Ve**	**22.40**	**276**	*eP*		**P**	**18 50 06.8**	**+0.5**	
	comp=Z,110nm,1.3s								
PCVE	**Castro Verde**	**22.41**	**277**	*eP*		**P**	**18 50 06.7**	**+0.3**	
	comp=Z,126nm,1.5s								
PTOM	**Tomar**	**22.42**	**283**	*eP*		**P**	**18 50 06.5**	**0.0**	
	comp=Z,250nm,1.2s								
PCAS	**Casmilo, Conde**	**22.45**	**284**	*eP*		**P**	**18 50 06.4**	**-0.4**	
	comp=Z,160nm,1.3s								
PUL	**Pulkovo**	**22.45**	**13**	*eP*		**P**	**18 50 05.9**	**-0.7**	
PUL					pmax	pmax			
	comp=Z,508nm,1.0s								
EDMD	**Edmundbyers**	**22.47**	**325**	*eP*		**P**	**18 50 06.2**	**-0.7**	
EDMD					IAmb	IAmb	18 50 09.6		
	comp=Z,495nm,1.5s								
KONO	**Kongsberg**	**22.50**	**346**	*eP*		**P**	**18 50 05.8**	**-1.4**	
YLL	**Lianberis**	**22.57**	**319**	*eP*		**P**	**18 50 08.1**	**+0.1**	
OSL	**Oslo**	**22.57**	**347**	*eP*		**P**	**18 50 07.1**	**-0.8**	
PNCL	**Nicolau / Gran**	**22.71**	**279**	*eP*		**P**	**18 50 10.6**	**+1.0**	
	comp=Z,117nm,1.5s								
WLF1	**Llynfaes**	**22.76**	**319**	*eP*		**P**	**18 50 09.5**	**-0.5**	
WLF1					IAmb	IAmb	18 50 11.7		
	comp=Z,272nm,1.1s								
KESW	**Keswick, Cumbr**	**22.85**	**323**	*eP*		**P**	**18 50 09.3**	**-1.6**	
KESW					IAmb	IAmb	18 50 13.1		
	comp=Z,210nm,1.2s								
MORF	**Marmelete**	**22.95**	**277**	*eP*		**P**	**18 50 12.0**	**-0.2**	
MORF					AMb	AMB	18 50 21.6		
	comp=Z,88nm,1.5s								
MORF	**Marmelete**	**22.95**	**277**	*eP*		**P**	**18 50 12.0**	**-0.2**	
ZGR	**Zagora**	**22.95**	**257**	P		P	18 50 20.0	+7.6	
	SNR=6.4								
PTEO	**Sao Teotonio**	**22.96**	**277**	*eP*		**P**	**18 50 11.5**	**-0.7**	
	comp=Z,158nm,1.6s								
BLS5	**Blasjo**	**23.00**	**342**	*eP*		**P**	**18 50 12.6**	**+0.1**	
AVE	**Averroes**	**23.06**	**266**	*eP*		**P**	**18 50 15.8**	**+2.4**	
AVE					*eS*	**S**	**18 54 21.4**	**-2.3**	
AVE	**Averroes**	**23.06**	**266**	P		**P**	**18 50 18.6**	**+5.3**	
	SNR=9.9								
LIS	**Lisbon**	**23.10**	**280**	*eP*		**P**	**18 50 13.6**	**-0.1**	
LIS					AMb	AMB	18 50 18.9		
	comp=Z,197nm,1.8s								
LIS	**Lisbon**	**23.10**	**280**	*eP*		**P**	**18 50 13.5**	**-0.1**	
KMY	**Karmoy**	**23.13**	**340**	*eP*		**P**	**18 50 13.9**	**+0.2**	
PMAFR	**Mafra**	**23.17**	**281**	*eP*		**P**	**18 50 16.9**	**+2.5**	
	comp=Z,157nm,1.5s								
NC602	**NORSAR Array S**	**23.19**	**349**	*eP*		**P**	**18 50 13.2**	**-1.1**	
EKA	**Eskdalemuir Ar**	**23.32**	**325**	P		**P**	**18 50 15.8**	**+0.1**	
	comp=Z,174nm,1.0s,baz=126,slow=10,SNR=68								
ESK	**Eskdalemuir**	**23.33**	**325**	*eP*		**P**	**18 50 14.0**	**-1.8**	
ESK					IAmb	IAmb	18 50 18.2		
	comp=Z,229nm,1.1s								
ODD1	**Odda**	**23.39**	**342**	*eP*		**P**	**18 50 17.2**	**+0.8**	
FINES	**FINESS Array B**	**23.49**	**7**	P		**P**	**18 50 16.0**	**-1.3**	
	comp=Z,54nm,0.7s,baz=173,slow=8.8,SNR=80								
FINES					PcP	**PcP**	**18 54 02.9**	**+0.2**	
	comp=Z,8.3nm,0.7s,baz=222,slow=2.6,SNR=3.4								
FINES					S	**S**	**18 54 27.0**	**-3.2**	
	comp=Z,9.0nm,1.0s,baz=171,slow=14,SNR=3.0								
FINES					LR	LR	19 00 28.8		
	comp=Z,4µm,20.6s,baz=196,slow=40								
FIA1	**FINESS Array S**	**23.49**	**7**	P		**P**	**18 50 16.0**	**-1.3**	
FIA1					IAmb	IAmb	18 50 18.5		
	comp=Z,179nm,1.1s								
NB201	**NORSAR Array S**	**23.53**	**349**	P		**P**	**18 50 17.6**	**-0.2**	
NB2	**NORSAR Subarra**	**23.53**	**349**	P		**P**	**18 50 16.9**	**-0.9**	
	comp=Z,1µm,2.5s,baz=158,slow=11								
NB2	**NORSAR Subarra**	**23.53**	**349**	P		**P**	**18 50 16.9**	**-0.9**	
	baz=158,slow=11								
NOA	**NORSAR Array B**	**23.53**	**349**	P		**P**	**18 50 17.2**	**-0.6**	
	comp=Z,93nm,1.1s,baz=160,slow=9.8,SNR=71								
NOA					PcP	**PcP**	**18 54 04.0**	**+1.2**	
	comp=Z,1.9nm,0.8s,baz=138,slow=2.4,SNR=3.6								
NOA					LR	LR	19 00 38.2		
	comp=Z,2µm,20.7s,baz=165,slow=40								
SKAR	**Skarslia**	**23.71**	**345**	*eP*		**P**	**18 50 20.4**	**+0.8**	
NC204	**NORSAR Array S**	**23.82**	**348**	P		**P**	**18 50 20.9**	**+0.3**	
BER	**Bergen**	**24.12**	**342**	*eP*		**P**	**18 50 23.8**	**+0.5**	
ASK	**Askoy**	**24.24**	**342**	*eP*		**P**	**18 50 23.7**	**-0.7**	
INVG	**Invergeldie, C**	**24.38**	**326**	*eP*		**P**	**18 50 23.9**	**-1.9**	
HYA	**Hoyanger**	**24.60**	**343**	*eP*		**P**	**18 50 28.8**	**+1.0**	
DOMB	**Dombas**	**24.83**	**347**	*eP*		**P**	**18 50 30.5**	**+0.6**	
SUE	**Sulen**	**24.84**	**342**	*eP*		**P**	**18 50 29.0**	**-0.9**	
FOO	**Floro**	**25.25**	**343**	*eP*		**P**	**18 50 34.0**	**+0.5**	
AKN	**Aaknes**	**25.34**	**345**	*eP*		**P**	**18 50 33.9**	**-0.6**	
MOL	**Molde**	**25.59**	**346**	*eP*		**P**	**18 50 37.8**	**+1.1**	
KLMR	**Klimovskoe**	**25.61**	**22**	*eP*		**P**	**18 50 35.3**	**-1.6**	
KLMR					*eS*	**S**	**18 55 00.8**	**-3.3**	
KLMR					pmax	pmax			
	comp=Z,268nm,1.3s								
KLMR					MLR	MLR			
	comp=Z,9µm,15.0s								
KLMR	**Klimovskoe**	**25.61**	**22**	*eP*		**P**	**18 50 35.4**	**-1.4**	
KLMR					AMP		18 50 42.8		
	comp=Z,268nm,1.3s								
KLMR					*eS*	**S**	**18 55 00.9**	**-3.2**	
KLMR					*eS*	**S**	**18 55 00.9**	**-3.2**	
KLMR					LQ	LQ	18 57 53.9		
KLMR					LQ	LQ	18 57 53.9		
KLMR					LR	LR	19 00 18.0		
KLMR					AMP		19 01 49.4		
	comp=Z,9µm,14.7s								
TBLU	**Trondheim**	**25.78**	**349**	*eP*		**P**	**18 50 40.2**	**+1.8**	
RAYN	**Ar Rayn**	**25.96**	**117**	P		**P**	**18 50 41.5**	**+1.0**	
RAYN					pmax	pmax			
	comp=Z,70nm,1.1s								
RAYN	**Ar Rayn**	**25.96**	**117**	*i* P		**P**	**18 50 41.1**	**+0.7**	
	SNR=40								
RAYN	**Ar Rayn**	**25.96**	**117**	P		**P**	**18 50 41.5**	**+1.0**	
NSS	**Namsos**	**26.79**	**352**	*eP*		**P**	**18 50 47.2**	**-0.3**	
KIRV	**Kirov**	**27.65**	**33**	P		**P**	**18 50 54.3**	**-1.0**	
	comp=Z,55nm,0.7s,baz=247,slow=1.9,SNR=26								
KIRV					LR	LR	19 03 17.2		
	comp=Z,3µm,19.6s,baz=312,slow=40								
TMCR	**Tamitsa**	**28.00**	**16**	*eP*		**P**	**18 50 56.8**	**-1.5**	
TMCR					pmax	pmax			
	comp=Z,57nm,1.2s								
PRGR	**Permogore**	**

SVE MLR MLR
comp=Z,4µm,12.0s
UMQ Umm Al-Quwin 32.32 103 *i* P **P** **18 51 37.9 +0.9**
SNR=5.3
UMQ Umm Al-Quwin 32.32 103 P **P** **18 51 38.3 +1.3**
SNR=5.3
SHME Shamm 32.41 101 *i* P **P** **18 51 36.9 -0.9**
SNR=38
HAMF Hammerfest 32.51 2 *e*P **P** **18 51 38.7 +0.6**
BANOM Banah 32.60 102 *i* P **P** **18 51 39.0 -0.5**
SNR=29
BANOM Banah 32.60 102 P **P** **18 51 39.1 -0.5**
SNR=14
NAZ Nazwa, Dubai 32.60 104 *i* P **P** **18 51 39.6 +0.1**
SNR=6.7
NAZ Nazwa, Dubai 32.60 104 P **P** **18 51 39.8 +0.3**
SNR=12
MSFE Esma-Masafi 32.79 103 *i* P **P** **18 51 40.4 -0.7**
SNR=13
MDH Madha 32.92 102 P **P** **18 51 41.9 -0.4**
SNR=8.5
UOSS Minazif 33.04 103 *i* P **P** **18 51 42.1 -1.2**
SNR=5.8
UOSS Minazif 33.04 103 P **P** **18 51 42.1 -1.2**
UOSS IAmb IAmb 18 51 46.1
comp=Z,31nm,0.7s
UOSS Minazif 33.04 103 P **P** **18 51 42.7 -0.6**
HATD Hatta, Dubai 33.05 103 *i* P **P** **18 51 43.1 -0.3**
SNR=28
HATD Hatta, Dubai 33.05 103 P **P** **18 51 43.2 -0.2**
SNR=13
ASHO Ashiyiah 33.07 104 *i* P **P** **18 51 43.0 -0.6**
SNR=21
ASHO Ashiyiah 33.07 104 P **P** **18 51 43.3 -0.3**
SNR=12
ALNE Al Ain 33.18 105 *i* P **P** **18 51 44.5 0.0**
SNR=16
HRA Herat 33.73 84 P **P** **18 51 49.4 -0.1**
SOHO SOHO 33.73 104 P **P** **18 51 49.2 -0.1**
SNR=23
ARQ Araqi 34.16 105 P **P** **18 51 54.0 +0.8**
SNR=13
HOQ Hoqain 34.63 104 P **P** **18 51 57.1 0.0**
BSY Bisya 35.01 105 P **P** **18 52 01.3 +0.8**
SNR=10
WHFO Wadi Hawf 35.45 115 P **P** **18 52 04.4 +0.1**
SMDO Samad 35.48 104 P **P** **18 52 04.2 -0.4**
SNR=11
ABTO Aybut 35.49 117 P **P** **18 52 05.3 +0.6**
SNR=5.4
WSAR Wadi Sarin 35.83 103 P **P** **18 52 07.1 -0.3**
comp=Z,4.6nm,0.4s,baz=278,slow=8.9,SNR=13
WSAR Wadi Sarin 35.83 103 P **P** **18 52 07.7 +0.3**
JMDO Jabal Madar 35.91 105 P **P** **18 52 09.3 +1.1**
SNR=6.6
DMTO DMTO 36.42 114 P **P** **18 52 12.8 +0.2**
WBK Wadi Bani Khal 36.43 104 P **P** **18 52 13.7 +1.0**
SNR=7.5
MHTO MHTO 36.61 107 P **P** **18 52 15.2 +1.1**
SNR=8.2
SHAO Shalim 36.71 113 P **P** **18 52 15.9 +0.9**
DQM DQM 36.92 109 P **P** **18 52 17.0 +0.2**
BRVK Borovoye 37.08 50 P **P** **18 52 17.5 -0.3**
BRVK pmax pmax
comp=Z,77nm,1.1s
BRVK Borovoye 37.08 50 P **P** **18 52 17.5 -0.3**
BRVK IAmb IAmb 18 52 23.4
comp=Z,77nm,1.1s
BRVK Borovoye 37.08 50 P **P** **18 52 17.2 -0.7**
BVAR Borovoye Array 37.14 50 P **P** **18 52 18.1 -0.3**
comp=Z,7.3nm,0.6s,baz=264,slow=6.0,SNR=43
BVAR PcP **PcP** **18 54 39.7 +1.3**
comp=Z,6.4nm,0.8s,baz=247,slow=2.1,SNR=3.7
LODK Lodwar 37.26 155 P **P** **18 52 22.0 +2.2**
SNR=18
IUG Iuzhnay 37.68 68 *e*P **P** **18 52 22.4 -0.8**
IUG *e* 18 53 49.3
IUG Iuzhnay 37.68 68 *e*P **P** **18 52 22.4 -0.8**
IUG *e*PP **PP** **18 53 49.3 +0.2**
IUG *e*LR LR 19 09 38.6
KK31 Karatay Array 37.85 66 *i* P **P** **18 52 24.0 -0.5**
KK31 Karatay Array 37.85 66 IAmb IAmb 18 52 27.6
comp=Z,36nm,0.6s
KKAR Karatay Array 37.85 66 IAmb IAmb 18 52 27.6
comp=Z,36nm,0.6s
JBG Jabagly 38.00 67 *e*P **P** **18 52 24.8 -1.1**
JBG *e* 18 53 52.1
JBG pmax pmax
comp=Z,44nm,1.6s
DZA Taraz 38.48 66 *e*P **P** **18 52 27.7 -2.1**
DZA Taraz 38.48 66 *e*P **P** **18 52 27.7 -2.1**
BRZS Berezniki 38.57 55*c* *i*P **P** **18 52 29.4 -1.0**
BRZS *e* 18 53 59.8
BRZS pmax pmax
comp=Z,31nm,1.4s
BRZS Berezniki 38.57 55⇑ *i*P **P** **18 52 29.5 -1.0**
comp=Z,31nm,1.4s
BRZS *e*PP **PnPn** **18 53 59.9 -0.8**
BRZS *e*LR LR 19 09 50.1
DBIC Dimbokro 38.88 222 P **P** **18 52 33.1 -0.3**
DBIC pmax pmax
comp=Z,47nm,1.1s
DBIC Dimbokro 38.88 222 P **P** **18 52 33.5 +0.1**
comp=Z,23nm,0.8s,baz=14,slow=10,SNR=34
DBIC LR LR 19 09 36.7
comp=Z,2µm,18.0s,baz=14,slow=38
DBIC Dimbokro 38.88 222 P **P** **18 52 33.0 -0.3**
KBL Kabul 38.97 80 P **P** **18 52 34.4 +0.2**
TIC Toumodi 38.99 223 *e*P **P** **18 52 33.2 -1.1**
comp=Z,9.4nm,0.3s
KIC Kosan Boka 39.08 222 *e*P **P** **18 52 34.3 -0.8**
comp=Z,56nm,0.9s
LIC Lamto 39.35 222 *e*P **P** **18 52 36.6 -0.7**
comp=Z,117nm,1.0s
SOCY Socotra 39.59 122 P **P** **18 52 37.4 -2.0**
MBAR Mbarara 39.82 164 *e*P **P** **18 52 43.5 +2.1**
MBAR pmax pmax
comp=Z,13nm,1.0s
ARSB Arslanbob 40.01 68 IAmb IAmb 18 52 54.2
comp=Z,64nm,1.0s
SPA0 Spitsbergen Ar 40.07 359 *e*P **P** **18 52 42.8 +0.1**
SPITS Spitsbergen Ar 40.07 359 P **P** **18 52 41.4 -1.3**
comp=Z,16nm,0.9s,baz=167,slow=13,SNR=4.8
SPITS PcP **PcP** **18 54 48.1 +1.1**
comp=Z,10nm,0.6s,baz=145,slow=5.3,SNR=5.5
EKS2 Erkin-Say 40.29 66 P **P** **18 52 45.3 +0.2**
SNR=41
AML Almayashu 40.35 67 P **P** **18 52 45.9 0.0**
SNR=18
USP Ospenovka 40.68 65 P **P** **18 52 47.5 -0.7**
SNR=12
SGDS Sogindy 40.74 65 *e*P **P** **18 52 47.7 -1.0**
comp=Z,156nm,5.1s
SGDS *e*PP **PP** **18 54 23.8 +1.3**
AAK Ala-Archa 40.81 66 *e*P **P** **18 52 50.0 +0.6**
AAK pmax pmax
comp=Z,15nm,0.8s
AAK Ala-Archa 40.81 66 P **P** **18 52 49.3 -0.1**
comp=Z,18nm,0.7s,baz=250,slow=5.4,SNR=22
AAK Ala-Archa 40.81 66 P **P** **18 52 49.7 +0.3**
SNR=15
AAK Ala-Archa 40.81 66 *i* P **P** **18 52 49.7 +0.3**
SNR=40
AAK Ala-Archa 40.81 66 P **P** **18 52 49.4 -0.1**
FRU1 Bishkek 40.87 66 P **P** **18 52 50.6 +0.8**
FRU1 pmax pmax
comp=Z,61nm,0.8s
FRU1 Bishkek 40.87 66 P **P** **18 52 50.5 +0.8**
FRU1 IAmb IAmb 18 52 56.5
comp=Z,60nm,0.8s
UCH Uchtor 40.92 67 P **P** **18 52 50.9 +0.2**
SNR=17
CHMS Chumysh 40.92 66 P **P** **18 52 50.1 -0.1**
SNR=18
KBS Kingsbay 40.94 358 *e*P **P** **18 52 50.3 +0.5**
KBK Karagaybulak 41.13 66 P **P** **18 52 52.5 +0.3**
SNR=13
KZA Kyzart 41.48 67 P **P** **18 52 56.3 +1.0**
SNR=13
KUU Kurty 41.86 64 *e*P **P** **18 52 57.1 -0.7**
KUU pmax pmax
comp=Z,69nm,1.2s
KUU Kurty 41.86 64 *e*P **P** **18 52 57.2 -0.7**
comp=Z,69nm,1.2s
KUU *e*LR LR 19 12 59.1
MTBS Maitube 42.09 65 *e*P **P** **18 52 58.6 -1.2**
MTBS Maitube 42.09 65 *e*P **P** **18 52 58.6 -1.2**
KMBO Kilima Mbogo 42.15 154 P **P** **18 53 02.3 +1.6**
comp=Z,2.0nm,0.5s,baz=351,slow=6.5,SNR=6.0
KMBO LR LR 19 14 17.2
comp=Z,634nm,18.4s,baz=38,slow=41
ULHL Ulahol 42.16 66 P **P** **18 53 00.1 -0.5**
SNR=11
DAG Danmarks Havn 42.21 348⇑ *i*P **P** **18 53 00.7 +0.5**
DAG Danmarks Havn 42.21 348⇑ *i*P **P** **18 53 00.7 +0.5**
KURBB Kurchatov Arra 42.26 54 P **P** **18 53 00.2 -0.8**
comp=Z,18nm,0.7s,baz=282,slow=8.7,SNR=90
KURBB PP **PP** **18 54 42.0 +3.3**
comp=Z,19nm,1.2s,baz=279,slow=10,SNR=4.7
KURBB PcP **PcP** **18 54 55.3 +0.7**
comp=Z,6.9nm,0.9s,baz=274,slow=3.6,SNR=5.5
KURK Kurchatov 42.31 53 P **P** **18 53 00.7 -0.7**
KURK pmax pmax
comp=Z,37nm,1.1s
KURK Kurchatov 42.31 53 P **P** **18 53 00.7 -0.7**
CHKK Chushkaly 42.33 64 *e*P **P** **18 53 00.9 -0.7**
CHKK Chushkaly 42.33 64 *e*P **P** **18 53 00.9 -0.7**
AAA Alma-Ata 42.42 65 *e*P **P** **18 53 01.5 -0.9**
AAA Alma-Ata 42.42 65 *e*P **P** **18 53 01.6 -0.9**
TNSS Tian-Shan 42.48 65 *e*P **P** **18 53 01.6 -1.8**
TNSS *e*S **S** **18 59 25.3 +0.3**
TNSS Tian-Shan 42.48 65 *e*P **P** **18 53 01.7 -1.7**
TNSS *e*S **S** **18 59 25.4 +0.3**
MDOK Medeo 42.52 65*c* *i*P **P** **18 53 01.9 -1.5**
MDOK *e* 18 54 41.3
MDOK *e*S **S** **18 59 26.7 +1.5**
MDOK Medeo 42.52 65⇑ *i*P **P** **18 53 02.0 -1.5**
MDOK *e*PP **PP** **18 54 41.3 -0.6**
MDOK *e*S **S** **18 59 26.7 +1.5**
MDOK *e*LR LR 19 13 02.6
NIL Nilore 42.55 79 P **P** **18 53 04.0 +0.4**
NIL pmax pmax
comp=Z,85nm,1.0s
NIL Nilore 42.55 79 P **P** **18 53 04.0 +0.4**
NIL IAmb IAmb 18 53 09.0
comp=Z,85nm,0.9s
KSH Kashi 42.69 70 P **P** **18 53 03.5 -1.3**
KSH PP **PP** **18 54 46.0 +2.3**
KSH S **S** **18 59 25.8 -1.8**
KSH SS **SS** **19 02 31.5 -6.4**
KSH pmax pmax
comp=Z,29nm,0.8s
KSH pmax pmax
comp=Z,1µm,5.3s
KSH LR LR
comp=Z,910nm,7.6s
KSH LR LR
comp=Z,940nm,8.9s
KSH LR LR
comp=Z,540nm,7.7s
KDJ Kajisay 42.87 66 P **P** **18 53 06.5 +0.2**
KDJ pmax pmax
comp=Z,29nm,1.0s
KDJ Kajisay 42.87 66 P **P** **18 53 06.5 +0.2**
TDK Taldyqorghan 43.07 62 *e*P **P** **18 53 07.0 -0.7**
TDK *e* 18 54 47.2
TDK pmax pmax
comp=Z,41nm,1.1s
TDK Taldyqorghan 43.07 62 *e*P **P** **18 53 07.1 -0.7**
comp=Z,41nm,1.1s
TDK *e*PP **PP** **18 54 47.3 -0.3**
TDK *e*LR LR 19 12 56.7
ZHN Zhinishke 43.51 64*c* *i*P **P** **18 53 10.8 -0.5**
ZHN *e* 18 54 52.0
ZHN Zhinishke 43.51 64⇑ *i*P **P** **18 53 10.8 -0.5**
ZHN *e*PP **PP** **18 54 52.0 -0.4**
SATY Saty 43.51 65*c* *i*P **P** **18 53 10.7 -0.7**
SATY *e* 18 54 52.3
SATY pmax pmax
comp=Z,29nm,1.0s
SATY Saty 43.51 65⇑ *i*P **P** **18 53 10.8 -0.7**
comp=Z,29nm,1.0s
SATY *e*PP **PP** **18 54 52.3 -0.2**
SATY *e*LR LR 19 12 23.9
KPKS Kokpek 43.61 64 *e*P **P** **18 53 11.2 -0.9**
KPKS *e* 18 54 53.5
KPKS *e*S **S** **18 59 41.5 +0.5**
KPKS pmax pmax
comp=Z,34nm,1.6s
KPKS Kokpek 43.61 64 *e*P **P** **18 53 11.3 -0.9**
comp=Z,34nm,1.6s
KPKS *e*PP **PP** **18 54 53.6 +0.1**
KPKS *e*S **S** **18 59 41.6 +0.5**
KPKS *e*LR LR 19 14 10.6
UZB Uzynbulak 43.93 64 *e*P **P** **18 53 13.6 -1.2**
UZB *e* 18 54 56.0
UZB Uzynbulak 43.93 64 *e*P **P** **18 53 13.7 -1.2**
UZB *e*PP **PP** **18 54 56.1 -0.9**
UZB *e*LR LR 19 13 43.0
PDGK Podgornoye 44.22 64 P **P** **18 53 15.2 -1.9**
SHLS Shalkode 44.24 64 *e*P **P** **18 53 18.5 +1.3**
SHLS *e* 18 55 04.6
SHLS pmax pmax
comp=Z,9.0nm,0.6s
SHLS Shalkode 44.24 64 *e*P **P** **18 53 18.5 +1.3**
comp=Z,9.2nm,0.6s
SHLS *e*PP **PcP** **18 55 04.7 +3.0**
SHLS *e*LR LR 19 14 15.7
SUMG Summit 44.72 339 P **P** **18 53 22.3 +1.3**
SUMG pmax pmax
comp=Z,239nm,1.5s
SUMG Summit 44.72 339 *i* P **P** **18 53 22.6 +1.6**
SUMG Summit 44.72 339 P **P** **18 53 22.3 +1.3**
MAKZ Makanchi 45.13 58 P **P** **18 53 23.1 -1.1**
MAKZ pmax pmax
comp=Z,22nm,1.0s
MAKZ Makanchi 45.13 58 P **P** **18 53 23.1 -1.1**
MK31 Makanchi Array 45.34 58 *i* P **P** **18 53 25.1 -0.8**
MKAR Makanchi Array 45.34 58 *i* P **P** **18 53 24.7 -1.2**
MKAR pmax pmax
comp=Z,28nm,0.6s
MKAR Makanchi Array 45.34 58 P **P** **18 53 25.2 -0.7**
comp=Z,28nm,0.6s,baz=280,slow=7.0,SNR=291
MKAR PcP **PcP** **18 55 05.4 +0.2**
comp=Z,8.2nm,0.7s,baz=274,slow=4.4,SNR=2.0
MKAR LR LR 19 14 32.1
comp=Z,915nm,21.2s,baz=289,slow=39
NOR Nord 45.40 353⇑ *i*P **P** **18 53 25.9 +0.1**
comp=Z,70nm,1.2s
ZALV Zalesovo Beam 45.71 48 P **P** **18 53 28.0 -0.6**
ZALV Zalesovo Beam 45.71 48 P **P** **18 53 28.0 -0.6**
comp=Z,85nm,0.6s,baz=275,slow=8.8,SNR=298
ZALV PP **PP** **18 55 15.3 -0.2**
comp=Z,13nm,0.7s,baz=274,slow=10,SNR=3.0
ZALV LR LR 19 15 41.5
comp=Z,1µm,18.2s,baz=285,slow=40
ZALV Zalesovo Beam 45.71 48 P **P** **18 53 27.7 -0.9**
ZSN Zaisan 46.91 57*c* *i*P **P** **18 53 37.7 -0.5**
ZSN *e* 18 55 27.2
ZSN Zaisan 46.91 57⇑ *i*P **P** **18 53 37.7 -0.5**
ZSN *e*PP **PP** **18 55 27.2 -1.1**
SFJD Kangerlussuaq 48.12 330 *i* P **P** **18 53 48.0 +0.7**
SFJD Kangerlussuaq 48.12 330 *i* P **P** **18 53 48.0 +0.7**
ILULI Ilulissat 48.31 333 *i* P **P** **18 53 49.3 +0.6**
ILULI pmax pmax
comp=Z,49nm,0.9s
ILULI Ilulissat 48.31 333 *i* P **P** **18 53 49.3 +0.6**
comp=Z,48nm,0.9s
WMQ Urumqi 49.80 61 P **P** **18 54 01.0 +0.4**
WMQ pP pP 18 54 04.5 -1.1
WMQ sP sP 18 54 08.5 +1.0
WMQ PcP **PcP** **18 55 25.3 +4.1**
WMQ pmax pmax
comp=Z,33nm,1.1s
WMQ pmax pmax
comp=Z,550nm,7.5s
WMQ LR LR
comp=Z,1µm,16.5s
WMQ LR LR
comp=Z,1µm,15.5s
WMQ LR LR
comp=Z,1µm,24.7s
POO Poona 50.23 97 *e*P **P** **18 54 02.4 -1.7**
KULLO Kullorsuaq 50.27 340⇑ *i*P **P** **18 54 04.5 +0.9**
KULLO pmax pmax
comp=Z,52nm,0.8s
KULLO Kullorsuaq 50.27 340 *i*P **P** **18 54 04.5 +0.9**
comp=Z,52nm,0.8s
KLRI Killari 52.64 96 *e*P **P** **18 54 21.1 -1.1**
KLRI IAmb IAmb 18 54 25.8
comp=Z,99nm,1.2s
NGP Nagpur 52.87 91 *e*P **P** **18 54 22.6 -1.3**
DANN Dangsing 52.95 81 *e*P **P** **18 54 23.8 -0.9**
comp=Z,275nm,0.9s
KOLN Koldanda 53.10 81 *e*P **P** **18 54 24.5 -1.2**
comp=Z,242nm,1.3s
SRSP Sriramsagar 53.53 94 *e*P **P** **18 54 27.3 -1.4**
SRSP IAmb IAmb 18 54 31.8
comp=Z,41nm,0.9s
GKN Gorkha 53.80 81 *e*P **P** **18 54 29.4 -1.4**
comp=Z,57nm,0.6s
RPR Rampur 54.31 93 *e*P **P** **18 54 33.2 -1.2**
RPR IAmb IAmb 18 54 37.7
comp=Z,26nm,0.9s
DMN Daman 54.35 81 *e*P **P** **18 54 33.6 -1.3**
comp=Z,58nm,0.7s
KKN Kakani 54.40 81 *e*P **P** **18 54 34.0 -1.2**
comp=Z,67nm,1.1s
HYBB Hyderabad (bro 54.54 95 *e*P **P** **18 54 34.5 -1.6**
HYBB IAmb IAmb 18 54 39.4
comp=Z,42nm,1.0s
HYB Hyderabad 54.54 95 *i* P **P** **18 54 34.5 -1.6**
PKIN Phulchoki 54.59 81 *e*P **P** **18 54 35.2 -1.5**
PKI Pulchoki 54.61 81 *e*P **P** **18 54 35.2 -1.7**
GUN Gumba 54.81 80 *e*P **P** **18 54 37.3 -1.0**
comp=Z,140nm,1.1s
URV Uravakonda 54.96 99 *e*P **P** **18 54 37.7 -1.4**
URV IAmb IAmb 18 54 42.6
comp=Z,61nm,1.2s
JIRN Jiri 55.17 80 *e*P **P** **18 54 39.8 -1.2**
SRLM Srisailam 55.56 96 *e*P **P** **18 54 42.0 -1.5**
SRLM IAmb IAmb 18 54 47.1
comp=Z,118nm,1.4s
GGR Gangavaram 55.60 94 *e*P **P** **18 54 41.8 -2.1**
GGR IAmb IAmb 18 54 47.0
comp=Z,35nm,1.0s
NJS Nagarjunasagar 55.62 96 *e*P **P** **18 54 42.5 -1.4**
NJS IAmb IAmb 18 54 47.2
comp=Z,72nm,1.2s
MOY Mondy 55.77 48 *e*P **P** **18 54 45.4 +0.8**
MOY pmax pmax
comp=Z,70nm,1.9s
RAMN Ramite 55.83 81 *e*P **P** **18 54 44.1 -1.5**
comp=Z,96nm,0.9s
ODAN Odare 56.49 80 *e*P **P** **18 54 49.7 -0.6**
TAPN Taplejung 56.50 80 *e*P **P** **18 54 49.4 -1.0**
ADKI Addanki 56.55 96 *e*P **P** **18 54 49.2 -1.4**
ADKI IAmb IAmb 18 54 54.0
comp=Z,49nm,1.2s
MYLAV Mylavaram 56.55 95 *e*P **P** **18 54 49.6 -1.0**
MYLAV IAmb IAmb 18 54 54.1
comp=Z,46nm,0.8s
PVM Polavaram 57.05 94 *e*P **P** **18 54 53.3 -0.7**
PVM IAmb IAmb 18 54 58.0
comp=Z,71nm,1.1s
TSUM Tsumeb 57.21 183 IAMs_20 IAMs_20 19 21 29.1
comp=Z,1µm,19.0s
TLY Talaya 57.31 47*c* *i*P **P** **18 54 55.8 +0.3**
TLY pmax pmax
comp=Z,175nm,1.4s
TLY MLR MLR
comp=Z,5µm,12.0s
TLY Talaya 57.31 47 P **P** **18 54 56.3 +0.8**
comp=Z,18nm,0.9s,baz=284,slow=6.0,SNR=28
TLY Talaya 57.31 47 P **P** **18 54 56.3 +0.8**
TLY IAmb IAmb 18 54 57.7
comp=Z,65nm,1.2s
IRK Irkutsk 57.46 46 *e*P **P** **18 54 55.7 -0.8**
IRK pmax pmax
comp=Z,109nm,2.2s
ZAK Zakamensk 57.58 49 *e*P **P** **18 54 57.7 +0.2**
ZAK pmax pmax
comp=Z,20nm,1.4s
SKHT Srikalahasti 57.58 98 *e*P **P** **18 54 56.5 -1.3**
SKHT IAmb IAmb 18 55 01.0
comp=Z,31nm,1.3s
LSA Lhasa 58.01 76 P **P** **18 55 01.0 -0.3**
LSA pmax pmax
comp=Z,79nm,0.7s
LSA Lhasa 58.01 76 P **P** **18 55 00.5 -0.8**
LSA pmax pmax
comp=Z,26nm,0.6s
LSA MLR MLR
comp=Z,500nm,21.0s
LSA Lhasa 58.01 76 P **P** **18 55 00.5 -0.8**
LSA IAmb IAmb 18 55 02.4
comp=Z,26nm,0.6s
LSA Lhasa 58.01 76 P **P** **18 55 00.7 -0.6**
CHLP Challavanipeta 58.26 91 *e*P **P** **18 55 01.3 -1.2**
CHLP IAmb IAmb 18 55 06.0
comp=Z,60nm,1.2s
SCHQ Schefferville 58.34 317 P **P** **18 55 03.0 +0.3**
comp=Z,22nm,0.8s,baz=55,slow=6.3,SNR=32
SCHQ LR LR 19 18 08.2
comp=Z,643nm,21.7s,baz=78,slow=34
SCHQ Schefferville 58.34 317 P **P** **18 55 02.5 -0.2**
SCHQ IAmb IAmb 18 55 07.4
comp=Z,36nm,1.0s
TIXI Tiksi 59.62 20 *e*P **P** **18 55 11.7 +0.5**
TIXI pmax pmax
comp=Z,23nm,1.2s
TIXI Tiksi 59.62 20 P **P** **18 55 11.3 +0.1**
comp=Z,14nm,1.1s,baz=360,slow=24,SNR=34
TIXI PP **PP** **18 57 20.6 -1.7**
comp=Z,6.0nm,0.9s,baz=319,slow=7.9,SNR=3.8
TIXI Tiksi 59.62 20 P **P** **18 55 12.1 +0.9**
TIXI IAmb IAmb 18 55 13.2
comp=Z,74nm,1.5s
BOD Bodaibo 60.37 38 *e*P **P** **18 55 15.3 -1.3**
BOD pmax pmax
comp=Z,48nm,1.1s
SONM Songino Array 60.48 51 P **P** **18 55 17.4 -0.3**
comp=Z,13nm,0.8s,baz=286,slow=8.8,SNR=67
SONM LR LR 19 22 10.2
comp=Z,966nm,19.9s,baz=298,slow=37
SONM Songino Array 60.48 51 IAmb IAmb 18 55 23.2
comp=Z,45nm,1.3s
SHL Shillong 60.62 79 P **P** **18 55 18.8 -0.3**
SNR=17
PALK Pallekele 62.32 103 *e*P **P** **18 55 32.3 +1.8**
PALK pmax pmax
comp=Z,90nm,1.1s
PALK Pallekele 62.32 103 *i* P **P** **18 55 31.6 +1.1**
SNR=6.3
CIT Chita 62.74 44 *e*P **P** **18 55 30.7 -2.1**
CIT *e* 18 56 14.6
CIT pmax pmax
comp=Z,90nm,1.5s
D62A Allapoint, All 62.92 310 P **P** **18 55 36.5 +2.5**
baz=62
D61A St Aubert, Com 63.55 310 P **P** **18 55 39.5 +1.4**
baz=62
LZH Lanzhou 64.25 63 ⇓P **P** **18 55 42.8 -0.4**
LZH pP pP 18 55 46.0 -2.2
LZH sP sP 18 55 47.5 -2.6
LZH SS SS 19 08 29.8 +0.3
LZH pmax pmax
comp=Z,55nm,1.3s
LZH pmax pmax
comp=Z,290nm,6.8s
LZH LR LR
comp=Z,1µm,15.7s
LZH LR LR
comp=Z,960nm,16.0s
LZH LR LR
comp=Z,990nm,18.1s
VOI Vohitsoka 64.85 153 P **P** **18 55 48.3 +1.3**
SNR=6.1
LATQ La Tuque 65.00 312 P **P** **18 55 49.1 +1.5**
baz=60
YAK Yakutsk 65.09 29 *e*P **P** **18 55 47.2 -0.7**
YAK *e* 18 56 19.9
YAK *e*S **S** **19 04 27.5 -2.1**
YAK *e**SS sS 19 04 50.0 +12
YAK *e* 19 05 35.7
YAK *e*SS **SS** **19 08 38.7 -2.3**
YAK pmax pmax
comp=Z,74nm,0.8s
YAK pmax pmax
comp=E,26nm,1.0s
YAK pmax pmax
comp=N,23nm,1.3s
YAK smax smax
comp=N,86nm,2.7s
YAK smax smax
comp=E,88nm,2.1s

YAK MLR MLR
comp=Z,697nm,18.0s
YAK MLR MLR
comp=N,438nm,18.0s
YAK MLR MLR
comp=E,362nm,18.0s
YAK Yakutsk 65.09 29 P **P 18 55 47.3 -0.7**
comp=E,49nm,0.7s,baz=262,slow=0.7,SNR=92
YAK Yakutsk 65.09 29 P **P 18 55 47.3 -0.7**
YAK IAMs_20 IAMs_20 19 28 14.7
comp=Z,1µm,18.0s
D58A Chemin du LacG 65.21 311 P **P 18 55 49.6 +0.5**
baz=60
F60A Warwick 65.21 310 P **P 18 55 50.6 +1.5**
baz=60
G61A St-Isidore-de- 65.30 309 P **P 18 55 51.6 +1.9**
baz=60
E58A La Victoria 65.81 311 P **P 18 55 54.0 +1.1**
baz=59
BTO Baotou 66.19 56 *e*P **P 18 55 53.3 -2.3**
E57A Chemin Saint G 66.30 311 P **P 18 55 57.3 +1.1**
baz=59
D56A ZEC Mazanza, M 66.33 312 P **P 18 55 57.5 +1.2**
baz=59
MATQ Matagami 66.56 316 P **P 18 55 58.9 +1.3**
baz=58,SNR=7.1
LSQQ Lebel-sur-Quev 66.56 315 P **P 18 55 59.1 +1.4**
baz=58
BOSA Boshof 66.67 175 P **P 18 55 58.8 +0.2**
comp=Z,9,6nm,0.8s,baz=342,slow=6.2,SNR=15
E56A St. Veronique 66.76 312 P **P 18 56 00.3 +1.3**
baz=58
D55A Sainte-Anne-du 66.77 312 P **P 18 56 01.0 +1.9**
baz=58,SNR=8.1
CD2 Chengdu 66.83 68 P **P 18 55 59.3 -0.5**
CD2 S **S 19 04 52.0 +0.1**
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 LR LR
comp=Z,1µm,14.7s
CD2 LR LR
comp=Z,770nm,13.7s
J61A Chester 66.92 308 P **P 18 56 03.3 +3.3**
baz=59
H59A Cadyville 66.94 309 P **P 18 56 01.7 +1.5**
baz=58
HHC Hu-ho-hao-te 67.07 55 *e*P **P 18 56 01.3 +0.1**
HHC pP pP 18 56 04.5 -1.8
HHC PcP **PcP 18 56 29.0 -0.4**
HHC pmax pmax
comp=Z,15nm,0.7s
HHC pmax pmax
comp=Z,250nm,4.9s
HHC LR LR
comp=Z,350nm,10.8s
HHC LR LR
comp=Z,490nm,11.4s
HHC LR LR
comp=Z,640nm,13.1s
D54A Lac Fusel, La 67.39 313 P **P 18 56 04.4 +1.4**
baz=58,SNR=6.1
E55A Montcerf-Lytto 67.41 312 P **P 18 56 05.0 +1.9**
baz=58
I59A Olmsteadville 67.50 309 P **P 18 56 05.9 +2.1**
baz=58
HIA Hailar 67.53 44 P **P 18 56 05.1 +1.2**
HIA pmax pmax
comp=Z,79nm,1.1s
HIA MLR MLR
comp=Z,900nm,20.0s
HIA Hailar 67.53 44 P **P 18 56 05.1 +1.2**
HIA Hailar 67.53 44 IAMs_20 IAMs_20 19 28 06.5
comp=Z,873nm,20.0s
K61A Williamstown 67.72 307 P **P 18 56 07.6 +2.4**
baz=58
F55A Otter Lake 67.91 311 P **P 18 56 08.1 +1.8**
baz=58
H57A Richville 68.07 310 P **P 18 56 08.8 +1.4**
baz=58
E54A Lac Daplat, Po 68.08 312 P **P 18 56 08.8 +1.5**
baz=57,SNR=5.7
NBPV Pedro Velho 68.13 242 *e*P **P 18 56 11.7 +3.7**
RCBR Riachuelo 68.14 243 *e*P **P 18 56 09.6 +1.5**
RCBR Riachuelo 68.14 243 IAMs_20 IAMs_20 19 26 08.4
comp=Z,1µm,19.0s
E53A Dumoine, Ponti 68.39 312 P **P 18 56 11.0 +1.7**
baz=57,SNR=6.4
D52A ZEK Kipawa Sen 68.49 313 P **P 18 56 11.3 +1.3**
baz=57
I57A Carthage 68.52 309 P **P 18 56 11.9 +1.7**
baz=57
J58A Remsen 68.60 309 P **P 18 56 11.7 +1.0**
baz=57
NBCL Cascavel-CE 68.72 246 *e*P **P 18 56 14.3 +2.5**
ALGO Algonquin Park 68.84 312 P **P 18 56 13.7 +1.6**
baz=56
XAN Xi'an 68.87 63 P **P 18 56 11.8 -0.8**
XAN pP pP 18 56 16.3 -1.4
XAN S **S 19 05 08.8 -7.4**
XAN pmax pmax
comp=Z,37nm,1.4s
XAN LR LR
comp=Z,470nm,15.7s
XAN LR LR
comp=Z,550nm,16.7s
XAN LR LR
comp=Z,650nm,14.7s
XAN Xi'an 68.87 63 P **P 18 56 11.9 -0.7**
XAN pmax pmax
comp=Z,88nm,1.4s
XAN Xi'an 68.87 63 P **P 18 56 11.9 -0.7**
ZEA Zeya 68.88 38 *e*P **P 18 56 12.4 +0.2**
ZEA pmax pmax
comp=E,29nm,1.2s
ZEA pmax pmax
comp=Z,71nm,1.2s
ZEA pmax pmax
comp=Z,500nm,7.0s
ZEA MLR MLR
comp=Z,2µm,14.0s
ZEA MLR MLR
comp=E,1µm,13.0s
ZEA MLR MLR
comp=N,1µm,15.0s
NBPA Parau_RN 68.94 244 *e*P **P 18 56 17.1 +4.0**
D51A Lot 18 Range I 68.97 314 P **P 18 56 14.6 +1.6**
baz=56,SNR=6.5
E52A Mattawa 69.01 313 P **P 18 56 14.8 +1.6**
baz=56,SNR=7.4
L59A Walton 69.09 308 P **P 18 56 16.1 +2.3**
baz=57
H55A Tweed 69.10 311 P **P 18 56 15.7 +1.9**
baz=57,SNR=6.1
G54A Lake Saint Pet 69.17 312 P **P 18 56 16.2 +1.9**
baz=56,SNR=8.1
KMI Kunming 69.17 74 P **P 18 56 14.0 -0.8**
KMI pP pP 18 56 19.3 -0.6
KMI sP sP 18 56 22.5 +0.7
KMI pmax pmax
comp=N,16nm,1.5s
KMI pmax pmax
comp=N,390nm,5.7s
KMI LR LR
comp=N,300nm,11.4s
KMI LR LR
comp=N,580nm,15.1s
KMI LR LR
comp=N,680nm,21.8s
D50A G1974 Best Tow 69.20 314 P **P 18 56 15.8 +1.5**
baz=56,SNR=6.9
E51A G1948 Merrick 69.35 313 P **P 18 56 17.0 +1.7**
baz=56
NBMO Morrinhos-CE 69.37 248 *e*P **P 18 56 18.2 +2.4**
NBRF Rio Formoso - 69.63 240 *e*P **P 18 56 20.5 +3.1**
BINY Binghamton 69.67 308 P **P 18 56 19.3 +1.9**
baz=56
L58A Harry Jones Me 69.67 308 P **P 18 56 19.0 +1.6**
baz=56
F52A Sundridge 69.67 313 P **P 18 56 19.2 +1.9**
baz=56
K57A Scipio Center 69.70 309 P **P 18 56 19.4 +1.9**
baz=56
CHTO Chiang Mai 69.77 82 IAmb IAmb 18 56 21.8
comp=Z,65nm,1.4s
CHTO Chiang Mai 69.77 82 P **P 18 56 17.6 -0.7**
N60A Cedar Hill Far 69.84 306 P **P 18 56 20.5 +2.1**
baz=56
H53A Bobcaygeon 69.92 311 P **P 18 56 20.6 +1.8**
baz=56,SNR=5.7
F51A Arnstein 69.94 313 P **P 18 56 21.0 +2.1**
baz=56
NBLI Livramento-PB 69.95 243 *e*P **P 18 56 22.6 +3.1**
CM31 Chiang Mai Arr 69.97 82 P **P 18 56 18.6 -0.9**
CM31 IAmb IAmb 18 56 23.1
comp=Z,52nm,1.4s
CM31 Chiang Mai Arr 69.97 82 P **P 18 56 19.2 -0.3**
SNR=18
CMAR Chiang Mai Arr 69.97 82 P **P 18 56 19.0 -0.6**
CMAR Chiang Mai Arr 69.97 82 P **P 18 56 19.0 -0.6**
comp=Z,10.0nm,0.8s,baz=304,slow=7.4,SNR=122
D49A Beulah Townshi 69.99 315 P **P 18 56 20.6 +1.3**
baz=55,SNR=5.8
K56A Middlesex 70.22 309 P **P 18 56 22.9 +2.1**
baz=56,SNR=5.1
N59A State Game Lan 70.24 307 P **P 18 56 23.0 +2.1**
baz=56
D48A Paudash Townsh 70.30 315 P **P 18 56 22.5 +1.3**
baz=55
L57A Andrews Acres 70.31 308 P **P 18 56 23.4 +2.1**
baz=56
O60A Telford 70.34 306 P **P 18 56 23.6 +2.1**
baz=56,SNR=5.2
M58A Price's Panora 70.42 308 P **P 18 56 23.7 +1.7**
baz=56
BJI Beijing 70.47 54 P **P 18 56 21.5 -0.8**
BJI pmax pmax
comp=Z,22nm,1.6s
NBPB Pedra_Branca-C 70.56 246 *e*P **P 18 56 26.0 +2.9**
K55A Perry 70.65 309 P **P 18 56 25.2 +1.8**
baz=56
L56A Greenwood 70.67 309 P **P 18 56 25.5 +1.9**
baz=56
O59A Robesonia 70.84 306 P **P 18 56 25.5 +1.0**
baz=56
M57A Sunshine Farm, 70.86 308 P **P 18 56 26.7 +2.1**
baz=56,SNR=5.5
N58A Sunbury 70.88 307 P **P 18 56 26.0 +1.3**
baz=56
E48A Lockeyer 70.90 314 P **P 18 56 26.7 +1.9**
baz=54,SNR=5.7
I53A Kortright Cn E 70.94 311 P **P 18 56 27.4 +2.3**
baz=55
BILL Bilibino 70.97 13 *e*P **P 18 56 25.2 +0.4**
BILL pmax pmax
comp=Z,39nm,1.2s
K54A Basiliko Farm, 71.10 310 P **P 18 56 27.8 +1.7**
baz=55
NBAN Anadia - AL 71.12 241 *e*P **P 18 56 28.3 +1.8**
NBPS Pedro II - PI 71.13 248 *e*P **P 18 56 29.2 +2.5**
I52A Shelburne 71.15 312 P **P 18 56 28.5 +2.1**
baz=55
L55A Hinsdale 71.19 309 P **P 18 56 28.5 +1.9**
baz=55
NBMA Muriti-CE 71.23 244 *e*P **P 18 56 29.4 +2.1**
F49A Sandfield 71.25 314 P **P 18 56 28.7 +1.8**
baz=54,SNR=5.6
M56A Emporium 71.43 308 P **P 18 56 30.0 +1.9**
baz=55
N57A Milroy 71.45 307 P **P 18 56 30.1 +1.8**
baz=55,SNR=5.8
F48A Evansville 71.54 314 P **P 18 56 30.6 +2.0**
baz=54
E47A Iron Bridge 71.54 315 P **P 18 56 30.7 +2.0**
baz=54,SNR=11
L54A Sinclairville 71.69 310 P **P 18 56 31.4 +1.7**
baz=55
D46A Sault St. Mari 71.70 316 P **P 18 56 31.6 +2.0**
baz=53
SSPA Standing Stone 71.73 308 P **P 18 56 31.8 +1.8**
baz=55
M55A Ridgway 71.80 309 P **P 18 56 32.3 +2.0**
baz=55,SNR=8.6
I51A Listowel 71.80 312 P **P 18 56 32.2 +1.9**
baz=54
O57A Amberson 71.81 307 P **P 18 56 32.1 +1.7**
baz=55
N56A West Decatur 71.82 308 P **P 18 56 32.6 +2.0**
baz=55
NBTA Tacaratu-PE 71.97 242 *e*P **P 18 56 34.5 +2.8**
INK Inuvik 71.98 350 IAMs_20 IAMs_20 19 32 57.3
comp=Z,992nm,20.0s
P58A Pank, Wackersv 72.01 306 P **P 18 56 33.4 +1.7**
baz=55,SNR=6.2
SEY Seymchan 72.10 21 *e*P **P 18 56 33.3 +1.6**
ERPA Erie 72.17 310 P **P 18 56 34.1 +1.6**
baz=54,SNR=13
K52A Tillsonburg 72.22 311 P **P 18 56 34.4 +1.6**
baz=54
M54A Oil Creek Stat 72.32 309 P **P 18 56 35.4 +1.9**
baz=54,SNR=6.5
N55A Marion Center 72.33 308 P **P 18 56 35.5 +2.0**
baz=54,SNR=7.5
O56A Blue Knob Stat 72.36 308 P **P 18 56 35.6 +1.8**
baz=55
L53A Girard 72.43 310 P **P 18 56 35.7 +1.6**
baz=54,SNR=11
P57A Homestead Farm 72.47 307 P **P 18 56 36.0 +1.6**
baz=55
Q58A Fox Den Farm, 72.57 306 P **P 18 56 36.6 +1.6**
baz=55
G47A Hillman 72.63 314 P **P 18 56 37.5 +2.3**
baz=53,SNR=5.7
PBKT Sadao Pong 72.63 82 IAmb IAmb 18 56 39.5
comp=Z,500nm,1.5s
I49A Point Hope 72.77 313 P **P 18 56 37.8 +1.7**
baz=53
N54A Moraine State 72.84 309 P **P 18 56 38.2 +1.6**
baz=54,SNR=10.0
O55A Ligonier 72.86 308 P **P 18 56 38.6 +1.9**
baz=54,SNR=7.0
E44A Grand Marais A 72.90 316 P **P 18 56 38.8 +2.1**
baz=52
P56A Dayton Farm, R 72.98 307 P **P 18 56 39.0 +1.6**
baz=54
M53A WI Miller and 72.98 309 P **P 18 56 38.9 +1.6**
baz=54
S59A Mechanicsville 73.00 305 P **P 18 56 39.4 +1.9**
baz=55
NBLA Lagarto - SE 73.10 241 *e*P **P 18 56 41.4 +3.1**
I48A Sherman Twp 73.13 313 P **P 18 56 40.1 +1.9**
baz=53
F45A CMU Biological 73.25 315 P **P 18 56 40.2 +1.4**
baz=52
TIA Tai'an 73.25 57 P **P 18 56 38.0 -1.1**
TIA pmax pmax
comp=Z,9.0nm,0.7s
R58B Mineral 73.26 305 P **P 18 56 40.6 +1.5**
baz=54
GLMI Grayling 73.27 314 P **P 18 56 40.8 +1.8**
baz=52
YKA Yellowknife Ar 73.29 340 P **P 18 56 39.2 +0.4**
comp=Z,7.3nm,0.6s,baz=34,slow=5.4,SNR=95
YKA LR LR 19 30 26.3
comp=Z,691nm,18.3s,baz=0.0,slow=37
J49A Marlette 73.30 312 P **P 18 56 40.9 +1.6**
baz=53
M52A Chesterland 73.33 310 P **P 18 56 41.3 +1.8**
baz=54,SNR=6.4
N53A Lisbon 73.45 309 P **P 18 56 42.0 +1.8**
baz=54,SNR=8.5
Q56A Snyder Ridge, 73.47 307 P **P 18 56 42.0 +1.6**
baz=54
R57A Stanardsville 73.48 306 P **P 18 56 41.8 +1.4**
baz=54
MCWV Mont Chateau 73.52 308 P **P 18 56 42.4 +1.8**
baz=54
O54A Avella 73.54 308 P **P 18 56 42.3 +1.6**
baz=54
S58A Poland Farm, P 73.58 305 P **P 18 56 42.4 +1.4**
baz=54
P55A Reedsville 73.59 307 P **P 18 56 42.6 +1.6**
baz=54
T59A Double "B" Far 73.63 304 P **P 18 56 42.8 +1.5**
baz=54
I47A Gladwin 73.70 313 P **P 18 56 43.5 +2.0**
baz=52
J48A Bridge Port 73.72 312 P **P 18 56 43.0 +1.4**
baz=53
G45A Suttons Bay 73.72 315 P **P 18 56 43.4 +1.8**
baz=52
H46A Fife Lake 73.77 314 P **P 18 56 43.4 +1.4**
baz=52
KLR Kul'dur 73.88 39 *e*P **P 18 56 42.8 +0.3**
KLR pmax pmax
comp=Z,67nm,1.2s
L50A Kingsville 73.90 311 P **P 18 56 44.4 +1.6**
baz=53,SNR=5.2
CN2 Changchun 73.90 47 *e*P **P 18 56 43.0 +0.2**
CN2 *es*P sP 18 56 50.0 +0.2
CN2 *e*S **SKiKP 19 06 10.0 -0.9**
CN2 pmax pmax
comp=Z,80nm,1.2s
CN2 LR LR
comp=Z,2µm,18.0s
CN2 LR LR
comp=Z,1µm,18.0s
CN2 LR LR
comp=Z,2µm,14.0s
P54A Burton 73.94 308 P **P 18 56 44.9 +1.8**
baz=54,SNR=6.1
N52A McGinn's Farm, 73.97 309 P **P 18 56 45.1 +1.9**
baz=53,SNR=5.4
O53A New Philadelph 74.01 309 P **P 18 56 45.0 +1.5**
baz=53,SNR=6.9
Q55A Buckhannon 74.06 307 P **P 18 56 45.3 +1.5**
baz=54
U59A Littleton 74.14 304 P **P 18 56 46.0 +1.7**
baz=54
K48A Perry 74.21 312 P **P 18 56 46.0 +1.4**
baz=52
EPYK Eagle Plains 74.23 351 P **P 18 56 45.1 +0.8**
baz=18,SNR=12
MA2 Magadan 74.27 24 *e*P **P 18 56 46.1 +1.5**
MA2 pmax pmax
comp=Z,59nm,1.4s
MA2 Magadan 74.27 24 IAMs_20 IAMs_20 19 33 30.9
comp=Z,2µm,18.0s
I46A Reed City 74.28 314 P **P 18 56 46.7 +1.7**
baz=52
N51A Ashland 74.32 310 P **P 18 56 46.6 +1.3**
baz=53
J47A Sunmer 74.35 313 P **P 18 56 46.8 +1.4**
baz=52,SNR=7.9
O52A Adamsville 74.47 309 P **P 18 56 47.6 +1.4**
baz=53,SNR=8.9
S56A Natural Bridge 74.51 306 P **P 18 56 48.1 +1.7**
baz=54
Q54A Coxs Mills 74.53 308 P **P 18 56 47.9 +1.4**
baz=53
COLD Coldfoot 74.60 356 IAmb IAmb 18 56 49.1
comp=Z,54nm,1.2s
U58A Oxford 74.61 304 P **P 18 56 48.9 +1.9**
baz=54
WHN Wuhan 74.63 63 ⇑P **P 18 56 46.8 -0.4**
WHN S **SKiKP 19 06 10.3 -2.0**
WHN pmax pmax
comp=Z,240nm,2.1s
WHN pmax pmax
comp=Z,900nm,6.5s
WHN LR LR
comp=Z,510nm,5.1s
WHN LR LR
comp=Z,1µm,11.7s
WHN LR LR
comp=Z,1µm,15.3s
NBPN Ponto Novo - B 74.67 243 *e*P **P 18 56 50.7 +3.2**
T57A Hurt 74.71 305 P **P 18 56 49.6 +2.0**
baz=54
V59A Middlesex 74.78 304 P **P 18 56 49.8 +1.9**
baz=54
K47A Vermontville 74.81 313 P **P 18 56 49.4 +1.4**
baz=52
N50A Nevada 74.88 310 P **P 18 56 49.7 +1.3**
baz=52
L48A N Adams 74.92 312 P **P 18 56 50.0 +1.2**
baz=52
O51A Pataskala 74.93 309 P **P 18 56 50.0 +1.2**
baz=52,SNR=9.8
M49A Liberty Center 74.94 311 P **P 18 56 50.1 +1.3**
baz=52
P52A Corning 74.95 309 P **P 18 56 50.0 +1.0**
baz=53
EYMN Ely 74.99 320 P **P 18 56 50.1 +1.1**
baz=49,SNR=9.2
Q53A Leroy 75.04 308 P **P 18 56 51.3 +1.8**
baz=53,SNR=6.2
S55A Lewisburg 75.05 306 P **P 18 56 51.6 +2.0**
baz=53
U57A Blanch 75.10 305 P **P 18 56 51.3 +1.4**
baz=53
ACSO Alum Creek Sta 75.10 310 P **P 18 56 51.2 +1.4**
baz=52
GRNR Gornyy 75.11 36 ⇑*i*P **P 18 56 49.7 0.0**
GRNR *i* 18 56 50.5
GRNR *e*S **S 19 06 31.1 +3.8**
GRNR pmax pmax
comp=Z,60nm,0.7s
GRNR smax smax
comp=N,2.0nm,1.0s
GRNR MLR MLR
comp=Z,2µm,14.0s
R54A Victor 75.11 307 P **P 18 56 51.0 +1.1**
baz=53
T56A Rocky Mt 75.19 306 P **P 18 56 52.1 +1.7**
baz=53
L47A Sherwood 75.35 312 P **P 18 56 52.3 +1.1**
baz=52
N49A Columbus Grove 75.40 311 P **P 18 56 52.7 +1.2**
baz=52
SVB Belmont 75.41 275 IAMs_20 IAMs_20 19 25 52.1
comp=Z,670nm,20.0s
Q52A Bidwell 75.44 308 P **P 18 56 53.1 +1.4**
baz=52
O50A Cable 75.54 310 P **P 18 56 53.6 +1.3**
baz=52
S54A Dingess, Beckl 75.55 307 P **P 18 56 53.5 +1.1**
baz=53
ULM Lac du Bonnet 75.59 324 P **P 18 56 53.2 +0.8**
comp=Z,28nm,0.8s,baz=44,slow=5.6,SNR=47
ULM LR LR 19 30 02.4
comp=Z,898nm,20.3s,baz=58,slow=36
P51A Williamsport 75.61 309 P **P 18 56 53.7 +1.0**
baz=52
T55A Pulaski 75.62 306 P **P 18 56 54.2 +1.3**
baz=53
R53A Hurricane 75.62 308 P **P 18 56 54.5 +1.6**
baz=52,SNR=5.7
V57A Coltrane Farms 75.71 304 P **P 18 56 55.0 +1.6**
baz=53
MDJ Mudanjiang 75.72 44 P **P 18 56 53.0 -0.2**
MDJ S **S 19 06 35.0 +0.8**
MDJ sS sS 19 06 49.5 +6.9
MDJ ScS **ScS 19 07 05.8 -0.8**
MDJ pmax pmax
comp=Z,19nm,1.6s
MDJ pmax pmax
comp=Z,99nm,3.6s
MDJ LR LR
comp=Z,2µm,16.7s
MDJ LR LR
comp=Z,3µm,16.7s
MDJ LR LR
comp=Z,720nm,12.7s
MDJ Mudanjiang 75.72 44 IAMs_20 IAMs_20 19 33 00.6
comp=Z,1µm,18.0s
W58A Raeford 75.88 303 P **P 18 56 56.0 +1.7**
baz=53
N48A Decatur 75.94 311 P **P 18 56 55.4 +0.7**
baz=51,SNR=6.9
O49A Covington 75.95 310 P **P 18 56 55.4 +0.7**
baz=52,SNR=7.0
P50A Jamestown 75.98 309 P **P 18 56 55.8 +0.9**
baz=52
M47A Cromwell 75.98 312 P **P 18 56 56.1 +1.3**
baz=51
R52A Catlettsburg 76.05 308 P **P 18 56 56.6 +1.3**
baz=52
Q51A Peebles 76.06 309 P **P 18 56 56.5 +1.2**
baz=52,SNR=6.2
S53A Williamson 76.13 307 P **P 18 56 57.1 +1.3**
baz=52
T54A Tazewell 76.16 306 P **P 18 56 57.1 +1.1**
baz=52
U55A TA2, Sparta 76.16 306 P **P 18 56 57.7 +1.6**
baz=52,SNR=8.1
N47A Urbana 76.33 311 P **P 18 56 57.5 +0.7**
baz=51,SNR=5.9
O48A Farmland 76.40 311 P **P 18 56 57.7 +0.5**
baz=51
POKR Poker Plat Res 76.53 355 P **P 18 56 59.0 +1.5**
baz=9.8,SNR=20
P49A Miami Univ. Ec 76.58 310 P **P 18 56 58.6 +0.4**
baz=51

U54A	Nelsons Funny	76.64	306	P	P	18 57 00.0	+1.2			
	baz=52									
R51A	Hillsboro	76.66	308	P	P	18 56 59.7	+1.0			
	baz=52,SNR=5.9									
V55A	Taylorsville	76.66	305	P	P	18 57 00.7	+1.9			
	baz=52									
W56A	Indian Trail	76.69	304	P	P	18 56 59.5	+0.5			
	baz=52									
S52A	Salyersville	76.73	308	P	P	18 57 00.5	+1.4			
	baz=52,SNR=8.2									
TCOL	CIGO, UAF Yank	76.80	355	P	P	18 57 01.0	+2.0			
	baz=9.4									
ILAR	Eielson Array	76.83	354	P	P	18 56 59.9	+0.7			
	comp=Z,5.5nm,0.6s,baz=351,slow=3.1,SNR=74									
ILAR				LR	LR	19 31 58.6				
	comp=Z,475nm,20.8s,baz=1.0,slow=37									
NJ2	Nanjing	76.86	60	eP	P	18 56 59.5	-0.4			
NJ2				pmax	pmax					
	comp=Z,29nm,0.6s									
NJ2				LR	LR					
	comp=Z,500nm,13.0s									
NJ2				LR	LR					
	comp=Z,670nm,12.6s									
NJ2				LR	LR					
	comp=Z,880nm,14.5s									
Q49A	Aurora	77.02	310	P	P	18 57 01.6	+0.8			
	baz=51									
NBIT	Itapeh - BA	77.02	239	eP	P	18 57 03.6	+2.7			
P48A	Milroy	77.06	310	P	P	18 57 01.6	+0.6			
	baz=51									
R50A	Paris	77.13	309	P	P	18 57 02.2	+0.8			
	baz=51									
KMSC	Kings Mountain	77.17	305	P	P	18 57 03.1	+1.4			
	baz=52									
V54A	Nebo	77.18	305	P	P	18 57 03.2	+1.4			
	baz=52									
HDA	Harding Lake	77.19	354	P	P	18 57 02.1	+0.8			
	baz=10,SNR=16									
WRH	Wood River Hil	77.21	355	IAmb	IAmb	18 57 03.3				
	comp=Z,39nm,0.8s									
USA0B	Ussuriysk Arra	77.29	43	eP	P	18 57 02.1	0.0			
USA0B	Ussuriysk Arra	77.29	43	IAMs_20	IAMs_20	19 33 20.2				
	comp=Z,1µm,21.0s									
USRK	Ussuriysk Ar.	77.29	43	P	P	18 57 02.2	0.0			
	comp=Z,24nm,0.8s,baz=297,slow=5.1,SNR=46									
USRK				LR	LR	19 33 32.1				
	comp=Z,993nm,20.9s,baz=313,slow=38									
X56A	White Oak	77.37	304	P	P	18 57 04.3	+1.5			
	baz=52									
ANM	Nome	77.42	3	IAMs_20	IAMs_20	19 34 54.4				
	comp=Z,1µm,22.0s									
SFIN	Lafayette	77.47	312	P	P	18 57 04.2	+1.0			
	baz=50,SNR=5.2									
S50A	Richmond	77.55	308	P	P	18 57 05.2	+1.5			
	baz=51									
Q48A	North Vernon	77.58	310	P	P	18 57 04.7	+0.9			
	baz=51,SNR=7.1									
JFWS	Jewell Farm	77.63	315	P	P	18 57 05.0	+0.9			
	baz=49									
R49A	Shelbyville	77.64	309	P	P	18 57 05.4	+1.1			
	baz=51									
U52A	Thorn Hill	77.70	307	P	P	18 57 05.9	+1.3			
	baz=51									
T51A	Gray	77.71	307	P	P	18 57 06.1	+1.4			
	baz=51									
W54A	Cherokee Point	77.76	305	P	P	18 57 06.3	+1.4			
	baz=52									
X55A	Gracelyn & Ava	77.78	304	P	P	18 57 06.6	+1.6			
	baz=52									
V53A	Saluda	77.80	306	P	P	18 57 06.6	+1.3			
	baz=52									
TYV	Tymovskoe	77.84	33	eP	P	18 57 05.2	+0.1			
TYV				pmax	pmax					
	comp=Z,300nm,3.0s									
TYV				pmax	pmax					
	comp=Z,14nm,0.9s									
GAMB	Gambell	77.86	5	IAMs_20	IAMs_20	19 29 32.1				
	comp=Z,644nm,20.0s									
VLA	Vladivostok	77.95	44	eP	P	18 57 06.0	+0.2			
VLA				pmax	pmax					
	comp=Z,52nm,1.1s									
S49A	Springfield	78.03	309	P	P	18 57 07.3	+0.9			
	baz=51									
QIZ	Qiongzhong	78.05	75	P	P	18 57 06.8	0.0			
QIZ				pP	pP	18 57 10.5	-1.4			
QIZ				S	S	19 07 01.8	+1.4			
QIZ				pmax	pmax					
	comp=Z,46nm,0.8s									
QIZ				LR	LR					
	comp=Z,300nm,17.2s									
QIZ				LR	LR					
	comp=Z,450nm,16.2s									
QIZ				LR	LR					
	comp=Z,620nm,19.1s									
U51A	La Follette	78.12	307	P	P	18 57 08.2	+1.3			
	baz=51,SNR=7.8									
T50A	Nancy	78.23	308	P	P	18 57 08.8	+1.2			
	baz=51,SNR=5.4									
WCI	Wyandotte Cave	78.36	310	IAmb	IAmb	18 57 13.6				
	comp=Z,32nm,0.9s									
WCI	Wyandotte Cave	78.36	310	P	P	18 57 09.4	+1.2			
	baz=50									
T49A	Edmonton	78.61	308	P	P	18 57 10.5	+0.8			
	baz=50,SNR=7.5									
U50A	Jamestown	78.62	307	P	P	18 57 11.1	+1.3			
	baz=51									
SMTB	Santa Maria do	78.63	249	eP	P	18 57 11.7	+1.7			
HDIL	Hopedale	78.63	313	P	P	18 57 10.9	+1.2			
	baz=49									
V51A	Loudon	78.69	307	P	P	18 57 12.0	+1.9			
	baz=51									
Y54A	Tignall	78.84	304	P	P	18 57 12.5	+1.5			
	baz=51									
KULM	Kulim	79.09	92	P	P	18 57 13.0	+0.4			
SC01	Santiago de lo	79.10	286	IAMs_20	IAMs_20	19 25 19.9				
	comp=Z,958nm,21.0s									
U49A	Red Boiling Sp	79.14	308	P	P	18 57 13.9	+1.3			
	baz=50,SNR=13									
X52A	Dahlonega	79.16	306	P	P	18 57 14.1	+1.4			
	baz=51,SNR=6.9									
V50A	Pikevile	79.25	307	P	P	18 57 14.7	+1.5			
	baz=50,SNR=9.2									
Z54A	Sparta	79.33	304	P	P	18 57 15.0	+1.3			
	baz=51									
KSRS	Korea Array	79.36	51	P	P	18 57 13.3	-0.4			
	comp=Z,9.7nm,0.6s,baz=311,slow=5.1,SNR=57									
W51A	Cleveland	79.36	306	P	P	18 57 15.0	+1.3			
	baz=50									
Y53A	Monroe	79.43	305	P	P	18 57 15.6	+1.4			
	baz=51									
GOGA	Godfrey	79.63	304	P	P	18 57 17.0	+1.8			
	baz=51									
W50A	Signal Mountai	79.68	307	IAMs_20	IAMs_20	19 29 32.6				
	comp=Z,624nm,21.0s									
W50A	Signal Mountai	79.68	307	P	P	18 57 16.9	+1.4			
	baz=50,SNR=9.0									
V49A	McMinnville	79.69	308	P	P	18 57 16.7	+1.1			
	baz=50,SNR=8.5									
TJN	Taejon	79.70	52	ceP	P	18 57 16.7	+1.1			
Y52A	Lilburn	79.73	305	P	P	18 57 17.4	+1.6			
	baz=51									
SCM	Sheep Creek Mo	79.77	354	IAmb	IAmb	18 57 21.9				
	comp=Z,81nm,1.4s									
Z53A	Monticello	79.78	304	P	P	18 57 17.5	+1.4			
	baz=51									
IPM	Ipoh	79.88	92	P	P	18 57 16.0	-0.9			
SCIA	State Center	79.94	316	P	P	18 57 17.8	+1.1			
	baz=47									
GHO	Glory Hole Cre	79.95	355	IAmb	IAmb	18 57 18.7				
	comp=Z,102nm,1.4s									
PMR	Palmer	80.14	355	P	P	18 57 18.1	+0.6			
PMR				pmax	pmax					
	comp=Z,74nm,1.6s									
PMR	Palmer	80.14	355	P	P	18 57 18.1	+0.6			
PMR				IAmb	IAmb	18 57 19.4				
	comp=Z,74nm,1.6s									
W49A	Belvidere	80.33	307	P	P	18 57 19.9	+0.8			
	baz=50,SNR=8.5									
Y51A	Rockmart	80.35	306	P	P	18 57 20.8	+1.5			
	baz=50,SNR=6.8									
Z52A	Williamson	80.39	305	P	P	18 57 20.8	+1.4			
	baz=50									
CRQM	Cirque	80.43	352	IAmb	IAmb	18 57 23.9				
	comp=Z,105nm,1.5s									
JANB	Januaria	80.46	242	eP	P	18 57 21.4	+1.5			
ECSD	EROS Data Cent	80.48	319	P	P	18 57 20.6	+0.9			
	baz=45,SNR=28									
S44A	Carbondale	80.49	311	IAmb	IAmb	18 57 24.8				
	comp=Z,34nm,0.9s									
WVT	Waverly	80.65	309	P	P	18 57 20.6	-0.1			
WVT				pmax	pmax					
	comp=Z,56nm,1.6s									
WVT	Waverly	80.65	309	P	P	18 57 20.6	-0.1			
WVT				IAmb	IAmb	18 57 22.1				
	comp=Z,56nm,1.6s									
WVT	Waverly	80.65	309	P	P	18 57 21.2	+0.5			
	baz=49									
RC01	Rabbit Creek A	80.68	355	P	P	18 57 21.0	+0.6			
RC01				IAmb	IAmb	18 57 23.1				
	comp=Z,39nm,0.8s									
BSFB	Barra de Sao F	80.74	237	eP	P	18 57 23.9	+2.6			
YSS	Yuzh-Sakhalins	80.76	36	ljeP	P	18 57 21.7	+0.6			
YSS				e		18 57 25.6				
YSS				eS	S	19 07 26.4	-1.9			
YSS				pmax	pmax					
	comp=Z,170nm,1.3s									
YSS				pmax	pmax					
	comp=N,30nm,0.8s									
YSS				pmax	pmax					
	comp=E,40nm,1.1s									
YSS				MLR	MLR					
	comp=Z,900nm,16.0s									
YSS				MLR	MLR					
	comp=E,800nm,15.0s									
YSS	Yuzh-Sakhalins	80.76	36	IAMs_20	IAMs_20	19 31 07.5				
	comp=Z,1µm,19.0s									
SJMB	Sao Joao De Ma	80.88	238	eP	P	18 57 24.8	+2.7			
152A	Waverly Hall	80.91	304	P	P	18 57 23.4	+1.2			
	baz=50									
TIGA	Tifton	80.95	303	P	P	18 57 24.4	+2.0			
	baz=50									
HIN	Hinchinbrook I	81.12	353	IAMs_20	IAMs_20	19 34 07.4				
	comp=Z,1µm,20.0s									
Y49A	Blount Mountai	81.24	306	IAmb	IAmb	18 57 30.4				
	comp=Z,47nm,1.5s									
PEXB	Peixe	81.30	247	eP	P	18 57 26.7	+2.3			
Z50A	Ashland	81.31	306	P	P	18 57 25.4	+1.0			
	baz=50,SNR=5.5									
BESE	Bessie Mountai	81.34	347	IAmb	IAmb	18 57 27.2				
	comp=Z,39nm,1.1s									
JRMM	Jerantut	81.38	92	P	P	18 57 25.0	+0.1			
CCM	Cathedral Cave	81.42	312	P	P	18 57 25.8	+0.9			
	baz=48									
PLAL	Pickwick Lake	81.55	308	IAmb	IAmb	18 57 27.1				
	comp=Z,60nm,1.4s									
PEA0B	Petropavlovsk-	81.78	24	IAMs_20	IAMs_20	19 38 11.5				
	comp=Z,2µm,19.0s									
PETK	Petropavlovsk-	81.78	24	P	P	18 57 25.5	-0.9			
	comp=Z,20nm,1.3s,baz=283,slow=13,SNR=7.3									
PETK				LR	LR	19 38 32.0				
	comp=Z,2µm,18.6s,baz=313,slow=39									
LRAL	Lakeview Retre	82.14	306	IAmb	IAmb	18 57 31.0				
	comp=Z,85nm,1.6s									
LRAL	Lakeview Retre	82.14	306	P	P	18 57 30.0	+1.3			
	baz=49,SNR=11									
PET	Petropavlovsk	82.15	24	eP	P	18 57 29.2	+0.9			
PET				e		19 00 35.3				
PET				eS	S	19 07 38.5	-4.0			
PET				pmax	pmax					
	comp=Z,100nm,10.5s									
PET				pmax	pmax					
	comp=Z,100nm,13.6s									
PET				MLR	MLR					
	comp=Z,1µm,20.0s									
PET	Petropavlovsk	82.15	24	IAMs_20	IAMs_20	19 38 24.5				
	comp=Z,1µm,20.0s									
LCAR	Lake Charles	82.70	311	IAmb	IAmb	18 57 34.0				
	comp=Z,58nm,1.6s									
PDSI	Padang	82.75	97	P	P	18 57 32.3	+0.2			
BGNE	Belgrade	82.93	318	P	P	18 57 34.5	+1.8			
	baz=44									
EGMT	Eagleton	83.33	329	P	P	18 57 36.9	+2.1			
	baz=37,SNR=32									
BDFB	Brasilia	83.47	244	P	P	18 57 37.1	+1.2			
	comp=Z,5.2nm,0.7s,baz=47,slow=6.7,SNR=6.1									
BDFB				LR	LR	19 35 45.6				
	comp=Z,1µm,18.1s,baz=51,slow=36									
U40A	Yellville	83.52	312	P	P	18 57 36.9	+1.1			
	baz=47,SNR=9.4									
KSU1	Kansas State U	83.74	316	P	P	18 57 38.1	+1.2			
	baz=45,SNR=6.8									
MYKOM	Kota Tinggi	83.74	93	P	P	18 57 39.0	+1.8			
RSSD	Black Hills	83.86	323	P	P	18 57 39.4	+1.7			
	baz=41									
W41B	Gary Mavity, V	83.97	311	IAmb	IAmb	18 57 43.5				
	comp=Z,42nm,1.1s									
W41B	Gary Mavity, V	83.97	311	P	P	18 57 39.5	+1.4			
	baz=47,SNR=16									
PMNB	Patos De Minas	84.32	241	eP	P	18 57 41.6	+1.5			
ERM	Erimo	84.62	39	eP	P	18 57 42.6	+1.3			
ERM				pmax	pmax					
	comp=Z,96nm,1.0s									
X40A	Basin Creek Fa	84.79	310	P	P	18 57 43.6	+1.3			
	baz=46,SNR=12									
W39A	Magazine	84.86	311	P	P	18 57 44.4	+1.8			
	baz=46,SNR=6.0									
BSCB	Bom Sucesso	84.88	238	eP	P	18 57 44.5	+1.7			
IPMB	Ipameri, GO	85.18	243	eP	P	18 57 47.1	+2.7			
MIAR	Mount Ida	85.19	311	P	P	18 57 46.3	+1.9			
	baz=46,SNR=16									
SDV	Santo Domingo	85.38	278	eP	P	18 57 46.9	+1.1			
SDV	Santo Domingo	85.38	278	eP	P	18 57 46.2	+0.4			
SDV	Santo Domingo	85.38	278	IAmb	IAmb	18 58 00.1				
	comp=Z,42nm,1.1s									
RLMT	Red Lodge	85.44	327	P	P	18 57 47.8	+2.2			
	baz=37,SNR=7.2									
LLLB	Lilooet	85.51	337	IAmb	IAmb	18 57 53.3				
	comp=Z,54nm,1.4s									
TUL1	Leonard	85.54	313	P	P	18 57 47.5	+1.5			
	baz=45,SNR=11									
Z41A	Richland Creek	85.61	309	P	P	18 57 48.4	+1.9			
	baz=46									
CBKS	Cedar Bluff	85.64	317	IAMs_20	IAMs_20	19 42 34.7				
	comp=Z,829nm,18.0s									
CBKS	Cedar Bluff	85.64	317	P	P	18 57 48.2	+1.6			
	baz=43,SNR=14									
NEW	Newport	85.95	333	P	P	18 57 49.3	+1.4			
	baz=32,SNR=29									
MSO	Missoula	85.97	331	P	P	18 57 49.1	+1.0			
	baz=34,SNR=18									
MAJO	Matsushiro	86.00	46	P	P	18 57 47.6	-0.7			
MAJO				pmax	pmax					
	comp=Z,100nm,1.5s									
MAJO	Matsushiro	86.00	46	P	P	18 57 47.6	-0.7			
MAT	Matsushiro	86.00	46	P	P	18 57 47.7	-0.6			
MJAR	Matsushiro Arr	86.00	46	P	P	18 57 48.5	+0.1			
	comp=Z,16nm,0.8s,baz=326,slow=5.3,SNR=29									
MJAR				LR	LR	19 38 39.7				
	comp=Z,554nm,18.4s,baz=340,slow=37									
CLDB	Colider	86.05	253	eP	P	18 57 48.8	0.0			
K22A	Casper	86.15	324	P	P	18 57 49.9	+0.8			
	baz=39,SNR=11									
X37A	Clayton	86.22	312	IAmb	IAmb	18 57 52.3				
	comp=Z,54nm,1.2s									
ARAG	Araguaiana, MT	86.23	247	eP	P	18 57 52.6	+3.0			
H17A	Grant Village	86.58	327	IAMs_20	IAMs_20	19 37 00.8				
	comp=Z,1µm,19.0s									
H17A	Grant Village	86.58	327	P	P	18 57 55.1	+3.7			
	baz=36,SNR=25									
KSCO	Kaye Shedlock'	87.01	319	P	P	18 57 55.2	+1.7			
	baz=41,SNR=6.5									
U32A	Winter Ranch,	87.01	315	IAMs_20	IAMs_20	19 27 28.1				
	comp=Z,630nm,20.0s									
MOOW	Moose Ponds	87.17	327	IAmb	IAmb	18 57 57.2				
	comp=Z,57nm,1.9s									
N23A	Red Feather La	87.23	322	P	P	18 57 56.0	+1.4			
	baz=39									
BW06	Boulder Array	87.44	326	IAMs_20	IAMs_20	19 35 04.7				
	comp=Z,758nm,21.0s									
BW06	Boulder Array	87.44	326	P	P	18 57 56.1	+0.6			
	baz=37,SNR=6.7									
PDAR	Pinedale Array	87.44	326	P	P	18 57 55.6	0.0			
	comp=Z,2.1nm,0.6s,baz=60,slow=4.8,SNR=20									
PDAR				LR	LR	19 39 18.6				
	comp=Z,409nm,18.3s,baz=40,slow=37									
C06D	Leavenworth	87.54	335	P	P	18 57 57.1	+1.4			
	baz=29									
B05A	Bryant	87.63	336	P	P	18 57 56.4	+0.4			
	baz=29									
ISCO	Idaho Springs	87.92	321	P	P	18 57 59.2	+1.2			
	baz=40,SNR=7.2									
LTY	Liberty	88.04	335	IAmb	IAmb	18 57 59.9				
	comp=Z,25nm,1.4s									
WMOK	Wichita Mounta	88.08	314	P	P	18 58 00.1	+1.6			
	baz=43,SNR=16									
SMLC	San Martn de	88.11	280	eP	P	18 57 59.1	+0.2			
SJCC	San Jacinto, C	88.29	281	eP	P	18 58 01.1	+1.3			
Q24A	Divide	88.33	321	P	P	18 58 01.5	+1.6			
	baz=40									
SPB	Sao Paulo	88.44	238	IAMs_20	IAMs_20	19 38 56.8				
	comp=Z,2µm,18.0s									
D03D	Eldon	88.59	336	P	P	18 58 03.3	+2.7			
	baz=28,SNR=15									
O20A	White River Ci	88.92	323	P	P	18 58 03.5	+0.9			
	baz=38,SNR=9.6									
KSM	Kuching	89.02	89	P	P	18 58 05.0	+1.8			
SALV	Santo Antonio	89.19	249	eP	P	18 58 05.0	+1.2			
HWUT	Hardware Ranch	89.26	326	IAMs_20	IAMs_20	19 37 58.8				
	comp=Z,654nm,19.0s									
E04D	Cinebar	89.29	335	P	P	18 58 05.3	+1.4			
	baz=28,SNR=5.5									
WHTX	Lake Whitney,	89.29	311	P	P	18 58 06.4	+2.2			
	baz=44									
T25A	Trinidad	89.35	319	P	P	18 58 06.0	+1.3			
	baz=40,SNR=6.3									
SDCO	Great Sand Dun	89.44	320	P	P	18 58 06.1	+0.9			
	baz=40,SNR=20									
F05D	White Salmon	89.51	334	P	P	18 58 06.8	+1.8			
	baz=29									
PP1B	Ponte de Pedra	89.69	247	eP	P	18 58 08.4	+2.3			
PTBC	PUERTO BERRIO,	89.80	278	eP	P	18 58 07.2	+0.3			
SBUM	Sibu	89.93	87	P	P	18 58 10.0	+2.6			
G05D	Wamic, OR	90.02	334	P	P	18 58 09.2	+1.8			
	baz=29									
S22A	4UR Ranch, Cre	90.11	321	P	P	18 58 09.7	+1.4			
	baz=39,SNR=12									
ABTX	Abilene, Hawle	90.11	313	P	P	18 58 10.0	+2.0			
	baz=43,SNR=6.4									
435B	Jarrell	90.23	311	IAMs_20	IAMs_20	19 43 15.7				
	comp=Z,790nm,18.0s									
435B	Jarrell	90.23	311	P	P	18 58 10.6	+2.0			
	baz=44									
I07A	Izee	90.38	332	IAmb	IAmb	18 58 15.4				
	comp=Z,23nm,1.2s									
SAML	Samuel	90.48	259	eP	P	18 58 09.9	0.0			
SAML	Samuel	90.48	259	IAMs_20	IAMs_20	19 45 49.7				
	comp=Z,506nm,18.0s									
VILC	Villavicencio,	90.70	276	eP	P	18 58 10.9	-0.3			
G03D	McMinnville, O	90.70	335	P	P	18 58 12.8	+2.3			
	baz=28,SNR=7.1									
NORC	Norcasia	90.73	278	eP	P	18 58 10.7	-0.5			
ROSC	El Rosal	90.74	277	P	P	18 58 11.7	0.0			
	comp=Z,5.4nm,0.5s,baz=58,slow=19,SNR=3.3									
ROSC				LR	LR	19 35 00.5				
	comp=Z,300nm,21.5s,baz=50,slow=33									
I05D	Terrebonne, OR	90.82	334	P	P	18 58 13.3	+2.1			
	baz=29									
MSTX	Muleshoe	90.87	316	P	P	18 58 12.7	+1.0			
	baz=41									
DBBC	Dabeiba	90.87	280	eP	P	18 58 13.3	+1.4			
DUG	Dugway, Tooele	90.95	326	P	P	18 58 13.5	+1.4			
	baz=35,SNR=16									
H04D	Lebanon	91.14	335	P	P	18 58 14.1	+1.5			
	baz=28,SNR=5.8									
GUY2C	Guyana, Caldas	91.32	278	eP	P	18 58 16.1	+1.5			
MVCO	Mesa Verde	91.35	322	P	P	18 58 15.2	+1.2			
	baz=38									
CBOC	Ciudad Bolivar	91.43	279	eP	P	18 58 15.4	+0.8			
I04A	Tendick Farm,	91.67	334	P	P	18 58 16.1	+1.0			
	baz=28,SNR=9.6									
J05D	Fort Rock, OR	91.70	333	P	P	18 58 17.9	+2.5			
	baz=29,SNR=17									
JCT	Junction City	91.77	312	P	P	18 58 17.6	+1.8			
	baz=43									
I02D	Swisshome	91.88	335	P	P	18 58 18.1	+2.1			
	baz=27									
ORTC	Ortega, Tolima	92.04	277	eP	P	18 58 18.8	+1.5			
J04D	Umpqua Nationa	92.05	334	P	P	18 58 19.1	+2.0			
	baz=29,SNR=5.5									
I03D	Drain, OR	92.07	335	P	P	18 58 18.6	+1.7			
	baz=28,SNR=6.0									
ANMO	Albuquerque	92.09	319	P	P	18 58 18.5	+1.1			
	baz=39									
PLMC	San Jos del P	92.23	278	eP	P	18 58 21.3	+3.1			
K04D	Chiloquin, OR	92.46	333	P	P	18 58 21.3	+2.4			
	baz=29									
J01E	Myrtle Point	92.74	335	P	P	18 58 22.0	+2.0			
	baz=27									
YOTC	Yotoco, Valle	92.85	277	eP	P	18 58 21.6	+0.4			
L04D	Klamath Falls	93.01	333	P	P	18 58 23.2	+1.7			
	baz=28,SNR=8.4									
K02D	Willamette Mer	93.07	334	P	P	18 58 23.2	+1.6			
	baz=28									
M04C	Macdoel	93.23	333	P	P	18 58 24.1	+1.6			
	baz=29									
L02E	Cave Junction	93.52	334	P	P	18 58 25.4	+1.7			
	baz=28									
R11A	Troy Canyon, C	93.69	327	IAmb	IAmb	18 58 28.2				
	comp=Z,40nm,1.8s									
R11A	Troy Canyon, C	93.69	327	P	P	18 58 26.0	+1.3			
	baz=33,SNR=12									
M02C	Callahan	93.93	333	P	P	18 58 27.0	+1.3			
	baz=28									
MNTX	Cornudas Mount	94.02	316	P	P	18 58 26.9	+0.7			
	baz=40,SNR=12									
WUAZ	Wupatki	94.09	322	P	P	18 58 28.1	+1.5			
	baz=36,SNR=8.3									
N02D	Trinity Center	94.25	333	P	P	18 58 28.4	+1.3			
	baz=28									
O03E	Paynes Creek	94.52	332	P	P	18 58 29.1	+0.8			
	baz=29									
121A	Cookes Peak, D	94.66	318	P	P	18 58 30.8	+1.6			
	baz=38									
NVAR	Mina Array Bea	94.76	329	P	P	18 58 30.1	+0.4			
	comp=Z,1.9nm,0.8s,baz=42,slow=4

GO05	**Huala**	**112.24**	**242**		IAMs_20	IAMs_20	19 53 09.7		
	comp=Z,872nm,20.0s								
WRA	**Warramunga Arr**	**120.63**	**92**		PKP	**PKPdf**	**19 03 59.2**	**-0.8**	
	comp=Z,1.7nm,0.6s,baz=326,slow=1.7,SNR=12								
WR2	**Warramunga Arr**	**120.65**	**92**		IAMs_20	IAMs_20	20 05 42.2		
	comp=Z,1µm,20.0s								
ASAR	**Alice Springs**	**122.27**	**96**		PKP	**PKPdf**	**19 04 02.3**	**-0.8**	
	comp=Z,2.8nm,0.6s,baz=322,slow=1.7,SNR=58								
ASAR					PP	**PP**	**19 05 37.2**	**-1.8**	
	comp=Z,1.6nm,0.9s,baz=316,slow=7.0,SNR=5.1								
CTA	**Charters Tower**	**130.08**	**85**		PKP	**PKPdf**	**19 04 16.6**	**-1.4**	
	comp=Z,2.9nm,0.5s,baz=333,slow=2.3,SNR=4.2								
STKA	**Stephens Creek**	**132.14**	**101**		PKP	**PKPdf**	**19 04 20.7**	**-0.9**	
	comp=Z,1.7nm,0.6s,baz=329,slow=2.4,SNR=6.0								

*ATH **26** 18:55:59.0, 38˚.21N×20˚.31E, h12km±4km, ML3.7/16, Error ellipse: s-maj=4.1km s-min=1.0km az=67.0*
*IDC **26** 18:55:59.8±1.3, 38˚.55N×20˚.58E, h0km, mb3.9/14, mb1 3.9/21,mb1mx3.8/48,mbtmp3.8/21, ML3.6/6, Error ellipse: s-maj=26.9km s-min=14.4km az=29.0*
*THE **26** 18:55:59.9, 38˚.24N×20˚.35E, h0km±3km, ML3.8/3, Error ellipse: s-maj=4.7km s-min=0.7km az=243.0*
*NEIC **26** 18:56:00.7±3.6, 38˚.31N±0˚.05×20˚.47E±0˚.06, h10km±1km, mb4.2/10, ML3.7(ATH), ML3.8(THE), Error ellipse: s-maj=9.7km s-min=5.4km az=217.0*
*PDG **26** 18:56:02.6±0.8, 38˚.59N×20˚.23E, h8km±2km, ML4.0/13, Error ellipse: s-maj=2.1km s-min=1.7km az=90.0*

ISC 26 18:56:00.4±0.8, 38°26N±0˚02×20°41E±0˚03, h13km±5km, n125, σ1§62/163, mb3.9/18, 15C-6D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.17**	**120**	P		**Pg**	**18 56 03.8**	**-0.5**
VLS				S		**Sg**	**18 56 06.5**	**-0.5**
	64µm,0.2s							
VLS	**Valsamata**	**0.17**	**120**	P		**Pg**	**18 56 03.6**	**-0.7**
VLS				S		**Sg**	**18 56 06.6**	**-0.4**
VLS				AML	AML		18 56 07.0	
VLS				AML	AML		18 56 07.0	
FSK	**Fiskardo**	**0.23**	**31**	P		**Pg**	**18 56 05.1**	**-0.3**
FSK				S		**Sg**	**18 56 09.3**	**+0.5**
	29µm,0.2s							
FSK	**Fiskardo**	**0.23**	**31**	P		**Pg**	**18 56 05.1**	**-0.3**
FSK				S		**Sg**	**18 56 09.1**	**+0.3**
KFL	**Anninata**	**0.34**	**117**	P		**Pg**	**18 56 06.9**	**-0.3**
KFL				S		**Sg**	**18 56 12.4**	**+0.6**
	19µm,0.3s							
KFL	**Anninata**	**0.34**	**117**	P		**Pg**	**18 56 07.0**	**-0.2**
KFL				S		**Sb**	**18 56 12.8**	**-0.8**
KFL				AML	AML		18 56 13.1	
	comp=E,51786µm,0.3s							
KFL				AML	AML		18 56 13.6	
	comp=N,26794µm,0.3s							
EVGI	**Lefkada island**	**0.41**	**28**	P		**Pg**	**18 56 08.3**	**-0.3**
EVGI				S		**Sb**	**18 56 15.1**	**-0.6**
EVGI	**Lefkada island**	**0.41**	**28**	P		**Pg**	**18 56 08.2**	**-0.3**
EVGI				S		**Sb**	**18 56 15.2**	**-0.5**
VLMS	**Volimes, Zakyn**	**0.43**	**152**	P		**Pg**	**18 56 08.0**	**-1.0**
VLMS				S		**Sg**	**18 56 14.6**	**-0.2**
VLMS				AML	AML		18 56 16.6	
	comp=N,65404µm,0.4s							
VLMS				AML	AML		18 56 18.0	
	comp=E,23855µm,0.5s							
MGNA	**Meganis**	**0.50**	**37**	P		**Pg**	**18 56 10.1**	**-0.1**
MGNA				S		**Sb**	**18 56 17.5**	**-0.7**
MGNA				AML	AML		18 56 18.4	
	comp=N,13517µm,0.3s							
MGNA				AML	AML		18 56 21.4	
	comp=E,16569µm,0.5s							
LKD2	**Lefkada island**	**0.56**	**20**	P		**Pg**	**18 56 10.8**	**-0.7**
LKD2	**Lefkada island**	**0.56**	**20**	P		**Pg**	**18 56 11.0**	**-0.5**
LKD2				S		**Sb**	**18 56 19.7**	**-0.5**
LKD2				AML	AML		18 56 28.6	
	comp=N,13972µm,0.4s							
LKD2				AML	AML		18 56 30.0	
	comp=E,11256µm,0.5s							
TSLK	**Tsoukalades, L**	**0.60**	**19**	P		**Pg**	**18 56 11.7**	**-0.4**
TSLK	**Tsoukalades, L**	**0.60**	**19**	P		**Pg**	**18 56 11.9**	**-0.2**
TSLK				S		**Sb**	**18 56 22.0**	**+0.9**
RLS	**Riolos of Patr**	**0.86**	**103**	P		**Pg**	**18 56 16.7**	**-0.3**
RLS	**Riolos of Patr**	**0.86**	**103**	P		**Pg**	**18 56 16.8**	**-0.3**
RLS				S		**Sn**	**18 56 29.8**	**-0.8**
RLS				AML	AML		18 56 35.8	
	comp=N,4763µm,0.6s							
RLS				AML	AML		18 56 38.1	
	comp=E,5436µm,0.7s							
PVO	**Paravola**	**0.95**	**68**	P		**Pb**	**18 56 18.6**	**-0.1**
PVO				S		**Sn**	**18 56 34.2**	**+1.4**
PVO				AML	AML		18 56 35.0	
	comp=E,12700µm,0.6s							
PVO				AML	AML		18 56 40.2	
	comp=N,11461µm,0.4s							
DRO	**Drossia**	**1.07**	**106**	P		**Pb**	**18 56 20.3**	**-0.6**
DRO				S		**Sn**	**18 56 37.2**	**+1.2**
DRO				AML	AML		18 56 45.5	
	comp=E,12942µm,0.9s							
DRO				AML	AML		18 56 49.1	
	comp=N,9776µm,0.6s							
UPR	**University Cam**	**1.08**	**88**	P		**Pb**	**18 56 19.8**	**-1.3**
LAKA	**Lakka**	**1.24**	**90**	P		**Pn**	**18 56 23.0**	**-0.5**
LAKA				S		**Sg**	**18 56 42.6**	**+2.3**
LAKA				AML	AML		18 56 48.3	
	comp=E,3728µm,0.8s							
LAKA				AML	AML		18 56 49.3	
	comp=N,3155µm,1.0s							
AMT	**Artemida-Makis**	**1.26**	**125**	P		**Pn**	**18 56 23.0**	**-0.8**
IGT	**Igoumenitsa**	**1.27**	**357**	P		**Pg**	**18 56 24.6**	**-0.3**
IGT				S		**Sg**	**18 56 43.0**	**+1.6**
IGT	**Igoumenitsa**	**1.27**	**357**	P		**Pg**	**18 56 24.7**	**-0.3**
IGT				S		**Sg**	**18 56 43.2**	**+1.8**
IGT				AML	AML		18 56 47.2	
	comp=N,2873µm,0.4s							
IGT				AML	AML		18 56 55.0	
	comp=E,3438µm,0.6s							
EVR	**Evrytania**	**1.28**	**59**	P		**Pg**	**18 56 25.2**	**+0.2**
EVR				S		**Sg**	**18 56 43.8**	**+2.1**
EVR				AML	AML		18 56 56.6	
	comp=E,2995µm,0.8s							
EVR				AML	AML		18 56 59.3	
	comp=N,3851µm,0.8s							
SERG	**Sergoula**	**1.30**	**83**	P		**Pg**	**18 56 25.2**	**-0.3**
SERG				S		**Sg**	**18 56 44.7**	**+2.2**
SERG				AML	AML		18 56 48.9	
	comp=N,4504µm,0.5s							
SERG				AML	AML		18 56 51.9	
	comp=E,4758µm,0.4s							
TRIZ	**Trizonia**	**1.31**	**85**	P		**Pn**	**18 56 24.2**	**-0.3**
TRIZ				S		**Sg**	**18 56 45.2**	**+2.4**
KALE	**Kalithea**	**1.37**	**84**	P		**Pg**	**18 56 27.4**	**+0.7**
KALE				S		**Sg**	**18 56 46.3**	**+1.7**
KALE				AML	AML		18 56 51.8	
	comp=N,5581µm,0.7s							
KALE				AML	AML		18 56 53.8	
	comp=E,6286µm,0.7s							
KLV	**Kalavryta, Ach**	**1.39**	**98**	P		**Pb**	**18 56 26.3**	**0.0**
KLV				S		**Sg**	**18 56 45.7**	**+0.5**
KLV				AML	AML		18 56 54.5	
	comp=E,2788µm,0.8s							
KLV				AML	AML		18 57 00.3	
	comp=N,2258µm,0.6s							
JAN	**Janina**	**1.44**	**14**	P		**Pg**	**18 56 27.7**	**-0.4**
JAN				S		**Sg**	**18 56 48.3**	**+1.6**
JAN				AML	AML		18 56 54.9	
	comp=E,4076µm,0.7s							
JAN				AML	AML		18 56 58.7	
	comp=N,3673µm,0.4s							
ITM	**Ithomi**	**1.62**	**131**	P		**Pb**	**18 56 29.8**	**-0.4**
ITM				S		**Sg**	**18 56 51.4**	**-1.0**
ITM	**Ithomi**	**1.62**	**131**			**Pn**	**18 56 27.6**	**-1.1**
AGG	**Agios Georgios**	**1.69**	**63**			**Pn**	**18 56 29.8**	**+0.1**
PYL	**PYLOS**	**1.73**	**142**	P		**Pb**	**18 56 31.2**	**-0.8**
THL	**Klokotos Trika**	**1.81**	**43**	P		**Pg**	**18 56 34.8**	**-0.3**
THL				AML	AML		18 57 03.5	
	comp=N,2288µm,0.8s							
THL				AML	AML		18 57 03.8	
	comp=E,3632µm,0.6s							
SCTE	**Santa Cesarea**	**2.36**	**321**			**Pn**	**18 56 38.2**	**-0.7**
LIT	**Litokhoron**	**2.45**	**41**			**Pg**	**18 56 46.8**	**-0.5**
FNA	**Florina**	**2.63**	**16**			**Pg**	**18 56 52.3**	**+1.5**
TIP	**Timpagrande**	**3.00**	**289**	⇑P		**Pn**	**18 56 49.9**	**+2.1**
TIP	**Timpagrande**	**3.00**	**289**	⇑S		**Sn**	**18 57 24.8**	**+1.2**
TIP	**Timpagrande**	**3.00**	**289**			**Pn**	**18 56 48.6**	**+0.9**
TIR	**Tirane**	**3.11**	**352**	⇑P		**Pn**	**18 56 48.5**	**-0.7**
TIR	**Tirane**	**3.11**	**352**			**Pn**	**18 56 46.6**	**-2.6**
ULC	**Ulcinj**	**3.81**	**347**	⇓*i*Pn		**Pn**	**18 56 57.6**	**-1.2**
ULC				*i* Sn		**Sn**	**18 57 40.2**	**-3.2**
DRME	**Dracevica, Mon**	**4.03**	**347**	⇑*i*Pn		**Pn**	**18 57 01.5**	**-0.4**
DRME				*i* Sn		**Sn**	**18 57 46.6**	**-2.4**
BUM	**Brajici-Budva**	**4.20**	**344**	⇑*i*Pn		**Pn**	**18 57 02.5**	**-1.7**
BUM				*i* Sn		**Sn**	**18 57 50.6**	**-2.6**
PDG	**Podgorica**	**4.26**	**348**	⇑P		**Pn**	**18 57 04.4**	**-0.5**
PDG	**Podgorica**	**4.26**	**348**	Pn		**Pn**	**18 57 05.1**	**+0.2**
PDG						**Sn**	**18 57 53.8**	**-0.7**
TTG	**Podgorica**	**4.26**	**348**	⇓*i*Pn		**Pn**	**18 57 03.7**	**-1.2**
TTG				*i* Sn		**Sn**	**18 57 52.2**	**-2.3**
ACER	**Acerenza**	**4.28**	**308**			**Pn**	**18 57 06.5**	**+1.2**
PVY	**Plav**	**4.34**	**356**	⇑*i*Pn		**Pn**	**18 57 05.1**	**-1.2**
PVY				*i* Sn		**Sn**	**18 57 54.2**	**-2.6**
CEME	**Cevo**	**4.43**	**346**	⇓*i*Pn		**Pn**	**18 57 06.3**	**-1.1**
CEME				*i* Sn		**Sn**	**18 57 55.7**	**-3.2**
HCY	**Herceg Novi**	**4.43**	**341**	⇑*i*Pn		**Pn**	**18 57 05.8**	**-1.5**
HCY				*i* Sn		**Sn**	**18 57 55.9**	**-2.9**
IVA	**Berane**	**4.62**	**355**	⇑*i*Pn		**Pn**	**18 57 09.2**	**-0.9**
IVA				*i* Sn		**Sn**	**18 58 00.8**	**-2.9**
KOME	**Kolasin**	**4.63**	**352**	⇓*i*Pn		**Pn**	**18 57 09.4**	**-0.8**
KOME				*i* Sn		**Sn**	**18 58 00.9**	**-3.1**
NKME	**Niksic**	**4.64**	**347**	⇑*i*Pn		**Pn**	**18 57 09.3**	**-0.9**
NKME				*i* Sn		**Sn**	**18 58 00.2**	**-3.7**
IDI	**Anoyia**	**4.66**	**128**	Pn		**Pn**	**18 57 13.1**	**+2.4**
	comp=E,0.5nm,0.3s,baz=306,slow=8.6,SNR=2.0							
IDI				Sn		**Sn**	**18 58 07.0**	**+2.3**
	comp=E,1.3nm,0.3s,baz=166,slow=23,SNR=4.7							
VAE	**Valguarnera**	**4.81**	**262**	Pn		Pn	18 57 17.7	+5.1
	comp=E,1.1nm,0.3s,baz=206,slow=7.6,SNR=2.3							
VAE				Sn		**Sn**	**18 58 12.9**	**+4.6**
	comp=E,7.5nm,0.3s,baz=245,slow=22,SNR=9.8							
BRY	**Bratogost**	**4.85**	**344**	⇓*i*Pn		**Pn**	**18 57 11.8**	**-1.4**
BRY				*i* Sn		**Sn**	**18 58 06.4**	**-2.9**
VTS	**Vitosha**	**4.86**	**25**	⇑P		**Pn**	**18 57 15.1**	**+1.8**
VTS	**Vitosha**	**4.86**	**25**	⇑S		**Sn**	**18 58 08.7**	**-0.8**
VTS	**Vitosha**	**4.86**	**25**	Pn		**Pn**	**18 57 15.8**	**+2.4**
SGRT	**San Giovanni R**	**5.00**	**316**	Pn		**Pn**	**18 57 15.6**	**+0.3**
UPM	**Unac-Piva**	**5.07**	**347**	*e*Pn		**Pn**	**18 57 15.4**	**-0.9**
UPM				*e*Sn		**Sn**	**18 58 10.9**	**-3.9**
PLE	**Pljevlja**	**5.12**	**352**	*e*Pn		**Pn**	**18 57 16.2**	**-0.8**
PLE				*i* Sn		**Sn**	**18 58 11.6**	**-4.4**
PAOL	**Paolisi**	**5.29**	**303**			**Pn**	**18 57 20.7**	**+1.5**
INTR	**Introdacqua**	**6.23**	**309**			**Pn**	**18 57 34.2**	**+2.0**
MDVR	**Moldovita**	**6.59**	**8**	⇑P		**Pn**	**18 57 37.4**	**+0.3**
BLY	**Banja Luka**	**6.92**	**341**	⇓P		**Pn**	**18 57 40.3**	**-1.3**
BLY	**Banja Luka**	**6.92**	**341**	Pn		**Pn**	**18 57 40.0**	**-1.5**
NRCA	**Norcia**	**7.19**	**312**			**Pn**	**18 57 47.3**	**+2.0**
MURB	**Monte Urbino**	**7.79**	**312**	Pn		**Pn**	**18 57 56.0**	**+2.5**
VOIR		**7.96**	**24**	⇑P		**Pn**	**18 57 57.9**	**+2.0**
MLR	**Muntele Rosu**	**8.32**	**28**	Pn		**Pn**	**18 58 03.8**	**+2.9**
	comp=E,0.2nm,0.3s,baz=190,slow=6.7,SNR=5.7							
MLR	**Muntele Rosu**	**8.32**	**28**	⇑P		**Pn**	**18 58 04.2**	**+3.3**
GBRS	**Gornja Briga**	**8.38**	**332**	*i* Pn		**Pn**	**18 58 01.6**	**+0.1**
SKDS	**Skadanscina**	**8.70**	**329**	*i* Pn		**Pn**	**18 58 05.6**	**-0.3**
KEST	**Kesra**	**9.20**	**257**	Sn		**Sn**	**18 59 54.9**	**-1.6**
	comp=E,0.2nm,0.3s,baz=309,slow=20,SNR=3.8							
SOKA	**Soboth**	**9.30**	**336**	*e*Pn		**Pn**	**18 58 13.0**	**-1.2**
	comp=E,5.3nm,0.3s,SNR=11							
OBKA	**Obir**	**9.31**	**334**	*e*Pn		**Pn**	**18 58 14.4**	**0.0**
	comp=E,5.4nm,0.4s,SNR=7.0							
ARSA	**Arzberg**	**9.67**	**340**	*e*Pn		**Pn**	**18 58 17.7**	**-1.6**
	comp=E,2.0nm,0.3s							
MYKA	**Terra Mystica**	**9.74**	**331**	Pn		**Pn**	**18 58 19.7**	**-0.5**
	comp=E,1.5nm,0.4s							
CTI	**Castel Tesino**	**10.13**	**323**			**Pn**	**18 58 24.0**	**-1.7**
KBA	**Koelnbreinsper**	**10.23**	**332**	*e*Pn		**Pn**	**18 58 26.6**	**-0.4**
	comp=E,0.8nm,0.4s							
ABTA	**Abfaltersbach**	**10.29**	**328**	Pn		**Pn**	**18 58 26.8**	**-0.9**
	comp=E,2.5nm,0.6s							
VYHS	**Vyhne**	**10.29**	**354**	*e*PN		**Pn**	**18 58 23.6**	**-4.2**
VYHS				*e*SN		**Sn**	**19 00 18.7**	**-4.3**
SALO	**Salr**	**10.40**	**318**	Pn		**Pn**	**18 58 29.1**	**-0.1**
BRTR	**Keskin Array B**	**10.40**	**78**	Pn		**Pn**	**18 58 34.1**	**+4.7**
	comp=E,0.1nm,0.3s,baz=299,slow=25,SNR=3.8							
MOA	**Molln**	**10.58**	**337**	*e*Pn		**Pn**	**18 58 31.2**	**-0.5**
	comp=E,2.5nm,0.3s,SNR=6.4							
WTTA	**Wattenberg**	**11.06**	**327**	*i* Pn		**Pn**	**18 58 39.0**	**+0.5**
	comp=E,3.6nm,0.7s,SNR=4.7							
WATA	**Walderalm**	**11.14**	**327**	*e*Pn		**Pn**	**18 58 39.3**	**-0.2**
	comp=E,2.9nm,0.5s							
SQTA	**Sankt Quirin**	**11.21**	**326**	*e*Pn		**Pn**	**18 58 41.4**	**+0.9**
	comp=E,0.9nm,0.2s							
MOTA	**Moosalm**	**11.36**	**326**	*e*Pn		**Pn**	**18 58 43.2**	**+0.7**
	comp=E,2.8nm,0.5s							
DAVOX	**Davos/Dischmat**	**11.52**	**321**	Pn		**Pn**	**18 58 45.3**	**+0.7**
	comp=E,0.2nm,0.3s,baz=126,slow=17,SNR=3.9							
DAVOX				Sn		**Sn**	**19 00 51.5**	**-1.7**
	comp=E,0.3nm,0.3s,baz=347,slow=23,SNR=4.0							
GERES	**GERESS Array B**	**11.64**	**338**	Pn		**Pn**	**18 58 44.9**	**-1.4**
	comp=E,0.2nm,0.3s,baz=157,slow=14,SNR=6.1							
KHC	**Kasperske Hory**	**11.93**	**338**	*e*PN		**Pn**	**18 58 48.5**	**-1.7**
MMAI	**Mount Meron Ar**	**13.27**	**109**	Pn		**Pn**	**18 59 09.7**	**+1.2**
	comp=E,0.4nm,0.3s,baz=284,slow=13,SNR=2.8							
CLL	**Collm**	**14.05**	**341**	*e*PP		**P**	**18 59 29.0**	**+2.1**
KVAR	**Kisloodsk Arr**	**17.71**	**64**	P		**P**	**19 00 09.9**	**+2.2**
	baz=153,slow=2.0,SNR=2.3							
KBZ	**Khabaz**	**17.81**	**65**	P		**P**	**19 00 11.3**	**+2.6**
	comp=E,0.1nm,0.3s,baz=256,slow=4.2,SNR=3.3							
GNI	**Garni**	**18.94**	**77**	P		**Pn**	**19 00 22.3**	**+0.3**
	comp=E,0.5nm,0.3s,baz=0.4,slow=4.7,SNR=4.4							
GNI	**Garni**	**18.94**	**77**	IAmb		IAmb	19 00 35.4	
	comp=Z,35nm,1.6s							
ESDC	**Sonseca Array**	**18.99**	**282**	P		**Pn**	**19 00 23.6**	**+1.1**
	comp=Z,0.2nm,0.3s,baz=82,slow=12,SNR=3.2							
HFS	**Hagfors**	**22.30**	**351**	P		**P**	**19 00 56.1**	**-1.3**
	comp=Z,4.5nm,0.7s,baz=148,slow=8.7,SNR=6.5							
FINES	**FINESS Array B**	**23.48**	**7**	P		**P**	**19 01 07.3**	**-2.1**
	comp=Z,2.8nm,0.6s,baz=164,slow=9.4,SNR=13							
NB2	**NORSAR Subarra**	**23.52**	**349**	P		**P**	**19 01 10.1**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=157,slow=10							
NOA	**NORSAR Array B**	**23.52**	**349**	P		**P**	**19 01 08.9**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=155,slow=9.6,SNR=4.6							
AKTO	**Aktyubinsk**	**29.20**	**53**	P		**P**	**19 02 01.0**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=248,slow=17,SNR=2.5							
GEYT	**Alibeck**	**29.55**	**79**	P		**P**	**19 02 04.7**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=282,slow=8.9,SNR=3.6							
GEYT	**Alibeck**	**29.55**	**79**	IAmb		IAmb	19 02 05.5	
	comp=Z,1.2nm,0.6s							
TORD	**Torodi Ar. Bea**	**30.04**	**219**	P		**P**	**19 02 09.9**	**+0.7**
	comp=Z,1.4nm,0.8s,baz=44,slow=10,SNR=3.9							
TORD	**Torodi Ar. Bea**	**30.04**	**219**	IAmb		IAmb	19 02 12.6	
	comp=Z,2.2nm,1.2s							
ARU	**Arti**	**31.06**	**42**	P		**P**	**19 02 16.2**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=283,slow=14,SNR=2.6							
ARU	**Arti**	**31.06**	**42**	IAmb		IAmb	19 02 16.8	
	comp=Z,17nm,1.5s							
ARCES	**ARCESS Array B**	**31.45**	**3**	P		**P**	**19 02 20.3**	**-1.0**
	comp=Z,4.8nm,1.0s,baz=190,slow=10,SNR=4.3							
KK31	**Karatay Array**	**37.84**	**66**	P		**P**	**19 03 17.2**	**+0.4**
KK31				IAmb		IAmb	19 03 18.5	
	comp=Z,2.0nm,0.6s							
KKAR	**Karatay Array**	**37.84**	**66**	P		**P**	**19 03 17.4**	**+0.6**
KURBB	**Kurchatov Arra**	**42.25**	**54**	P		**P**	**19 03 52.3**	**-0.9**
	comp=Z,0.8nm,0.5s,baz=276,slow=9.1,SNR=3.7							
MK31	**Makanchi Array**	**45.33**	**58**	P		**P**	**19 04 17.2**	**-0.9**
MK31				IAmb		IAmb	19 04 23.9	
	comp=Z,3.8nm,1.5s							
MKAR	**Makanchi Array**	**45.33**	**58**	P		**P**	**19 04 17.3**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=274,slow=7.2,SNR=12							
ZAA0	**Zalesovo Array**	**45.70**	**48**	P		**P**	**19 04 20.4**	**-0.5**
ZAA0				IAmb		IAmb	19 04 20.7	
	comp=Z,3.9nm,0.6s							
ZALV	**Zalesovo Beam**	**45.70**	**48**	P		**P**	**19 04 20.2**	**-0.7**
	comp=Z,3.5nm,0.5s,baz=271,slow=8.6,SNR=16							
SONM	**Songino Array**	**60.47**	**51**	P		**P**	**19 06 09.9**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=299,slow=5.7,SNR=2.9							
CMAR	**Chiang Mai Arr**	**69.97**	**82**	P		**P**	**19 07 11.1**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=309,slow=8.1,SNR=10							
YKA	**Yellowknife Ar**	**73.28**	**340**	P		**P**	**19 07 31.7**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=27,slow=5.4,SNR=2.8							
KSRS	**Korea Array**	**79.34**	**51**	P		**P**	**19 08 04.8**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=283,slow=5.2,SNR=3.4							

SJA 26 19:00:44.2±1.1, 31°25S×68°05W, h100km±4km, ML2.2, MW2.7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RTLL	**Cerro Villicun**	**0.37**	**257**	*e*P		Pn	19 00 59.6	+0.4
RTLL				*i* S		Sn	19 01 11.0	+0.5
RTLL				IAML			19 01 12.6	

*MOS **26** 19:03:05.5±1.4, 38˚.16N×20˚.19E, h14km, mb4.3/9, Error ellipse: s-maj=6.6km s-min=4.4km az=80.1*
*IDC **26** 19:03:05.6±0.6, 38˚.27N×20˚.40E, h0km, mb4.1/21, mb1 4.2/31,mb1mx4.1/53,mbtmp4.1/31, ML3.9/11, MS4.2/1, Ms1 4.2/1,ms1mx3.2/52, Error ellipse: s-maj=13.5km s-min=11.4km az=169.0*
*NEIC **26** 19:03:06.9±2.4, 38˚.15N±0˚.05×20˚.41E±0˚.06, h10km±1km, Error ellipse: s-maj=7.5km s-min=6.7km az=209.0*
*BGR **26** 19:03:06.8±0.9, 38˚.37N×21˚.12E, h10km, Error ellipse: s-maj=52.3km s-min=13.3km az=59.0*
*ATH **26** 19:03:07.2, 38˚.19N×20˚.42E, h17km±1km, ML4.3/14, Error ellipse: s-maj=2.7km s-min=1.0km az=72.0*
*MED_RC **26** 19:03:07.0±0.6, 38˚.21N×20˚.22E, h10km, MW4.4/9, Moment Tensor Solution. Mantle waves: s9,c9; Duration: 1§0 Moment tensor: Scale 10^{15}Nm; M_{rr}=0.03±.43; $M_{\theta\theta}$=1.16±.68; $M_{\phi\phi}$=-1.20±.56; $M_{r\theta}$=3.36±1.11; $M_{\theta\phi}$=3.36±.30; $M_{\phi r}$=0.85±1.10; Best double couple: M_o=4.82000×10^{15} NP1:φs=4.00000°, δ49.00000°, λ174.00000°. NP2: φs98.00000°, δ85.00000°, λ41.00000°. Principal axes: T 5.5100, Plg31.0000°, Azm329.0000°; N -1.3900, Plg49.0000°, Azm104.0000°; P -4.1300, Plg24.0000°, Azm224.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
*THE **26** 19:03:07.1, 38˚.18N×20˚.37E, h12km±3km, ML4.2/6 Error ellipse: s-maj=3.9km s-min=0.9km az=73.0*
*GII **26** 19:03:14.9±0.0, 37˚.59N×21˚.34E, h1km, mb4.7/3, MD4.6/3*

ISC 26 19:03:07.6±0.7, 38°20N±0˚.02×20°42E±0˚.03, h15km±4km, n276, σ1§89/309, mb4.2/40, 17C-11D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.14**	**100**	P		**Pg**	**19 03 11.1**	**-0.3**
VLS				S		**Sg**	**19 03 13.8**	**0.0**
VLS	**Valsamata**	**0.14**	**100**	P		**Pg**	**19 03 10.9**	**-0.4**
VLS	**Valsamata**	**0.14**	**100**	P		**Pg**	**19 03 11.0**	**-0.4**
FSK	**Fiskardo**	**0.28**	**24**	P		**Pg**	**19 03 13.5**	**-0.1**
FSK				S		**Sg**	**19 03 17.7**	**0.0**
	76µm,0.3s							
FSK	**Fiskardo**	**0.28**	**24**	P		**Pg**	**19 03 13.5**	**-0.1**
FSK				S		**Sg**	**19 03 18.2**	**+0.5**
KFL	**Anninata**	**0.31**	**107**	P		**Pg**	**19 03 13.8**	**-0.2**
KFL				S		**Sb**	**19 03 19.0**	**-0.7**
	298µm,0.4s							
KFL	**Anninata**	**0.31**	**107**	P		**Pg**	**19 03 13.9**	**-0.1**
KFL				S		**Sg**	**19 03 18.9**	**+0.5**
KFL				AML	AML		19 03 19.6	
KFL				AML	AML		19 03 20.7	
VLMS	**Volimes, Zakyn**	**0.38**	**149**	P		**Pg**	**19 03 15.0**	**-0.3**
VLMS				S		**Sg**	**19 03 19.9**	**-0.6**
VLMS				AML	AML		19 03 23.9	
VLMS				AML	AML		19 03 23.9	
EVGI	**Lefkada island**	**0.46**	**24**	P		**Pg**	**19 03 16.5**	**-0.3**
EVGI	**Lefkada island**	**0.46**	**24**	P		**Pg**	**19 03 16.5**	**-0.3**
MGNA	**Meganis**	**0.54**	**33**	P		**Pg**	**19 03 18.2**	**-0.2**
MGNA				S		**Sb**	**19 03 26.3**	**-0.1**
LKD2	**Lefkada island**	**0.62**	**18**	P		**Pg**	**19 03 19.3**	**-0.5**
LKD2				S		**Sb**	**19 03 30.0**	**+1.3**

PVO AML AML 19 03 47.7
comp=E,45767µm,0.4s
PVO AML AML 19 03 49.9
comp=N,43338µm,0.6s
DRO Drossia 1.05 103 P **Pn 19 03 27.8 -0.1**
DRO AML AML 19 03 51.0
comp=E,48406µm,0.5s
DRO AML AML 19 03 56.4
comp=N,36008µm,0.7s
EFP Efpalio 1.19 79 P **Pn 19 03 29.5 -0.4**
EFP AML AML 19 03 53.6
comp=E,29206µm,1.0s
EFP AML AML 19 03 58.7
comp=N,27152µm,0.9s
AMT Artemida-Makis 1.22 123 P **Pg 19 03 31.0 -0.2**
AMT AML AML 19 03 59.9
comp=E,27704µm,0.9s
AMT AML AML 19 04 01.4
comp=N,40959µm,0.7s
LAKA Lakka 1.23 88 P **Pn 19 03 29.8 -0.6**
LAKA S **Sn 19 03 46.9 +0.1**
comp=N,7µm,0.7s
LAKA Lakka 1.23 88 P **Pn 19 03 29.7 -0.7**
LAKA AML AML 19 03 53.2
comp=N,18532µm,1.3s
LAKA AML AML 19 04 03.3
comp=E,11256µm,0.8s
ANX Ano Chora 1.25 71 P **Pb 19 03 31.1 +0.2**
ANX AML AML 19 03 56.3
comp=E,37526µm,1.0s
ANX AML AML 19 03 56.5
comp=N,47130µm,0.7s
EVR Evrytania 1.30 56 P **Pn 19 03 31.2 -0.3**
TRIZ Trizonia 1.31 82 P **Pn 19 03 31.0 -0.5**
IGT Igoumenitsa 1.33 357 P **Pg 19 03 33.3 0.0**
IGT Igoumenitsa 1.33 357 P **Pb 19 03 32.5 +0.2**
IGT AML AML 19 03 54.2
comp=E,11737µm,0.5s
IGT AML AML 19 04 02.8
comp=N,8851µm,0.7s
KALE Kalithea 1.37 82 P **Pb 19 03 32.8 -0.3**
KALE AML AML 19 03 57.8
comp=N,13018µm,0.9s
KALE AML AML 19 04 02.4
comp=E,13671µm,0.8s
KLV Kalavryta, Ach 1.38 96 P **Pn 19 03 32.3 -0.1**
KLV AML AML 19 04 02.7
comp=N,9776µm,1.0s
KLV AML AML 19 04 03.9
comp=E,10735µm,1.2s
JAN Janina 1.49 13 P **Pg 19 03 37.1 +0.8**
JAN Janina 1.49 13 P **Pg 19 03 36.6 +0.3**
JAN AML AML 19 04 01.7
comp=E,14887µm,0.8s
JAN AML AML 19 04 06.7
comp=N,15300µm,0.9s
ITM Ithomi 1.57 130 P **Pb 19 03 36.6 +0.1**
KASA Kassiopi 1.59 347 P **Pn 19 03 36.0 +0.7**
PYL PYLOS 1.68 141 P **Pn 19 03 37.2 +0.7**
AGG Agios Georgios 1.71 61 P **Pg 19 03 40.2 -0.3**
AGG Agios Georgios 1.71 61 Pg 19 03 40.2 -0.3
VLX Vlachokerasia 1.76 117 P **Pb 19 03 40.3 +0.6**
THL Klokotos Trika 1.85 42 P **Pb 19 03 41.5 +0.4**
LKR Lokris 2.08 77 P **Pb 19 03 43.0 -1.1**
VIL2 Platees 2.25 89 P **Pb 19 03 46.2 -1.8**
KZN Kozani 2.35 26 P **Pb 19 03 48.8 -1.0**
SCTE Santa Cesarea 2.41 322 Pn 19 03 46.8 +0.3
LIT Litokhoron 2.49 40 P **Pb 19 03 50.3 -1.8**
LIT Litokhoron 2.49 40 Pb 19 03 50.2 -1.8
ATH Athens Observa 2.62 94 P **Pb 19 03 53.0 -1.2**
FNA Florina 2.68 16 P **Pn 19 03 52.1 +1.7**
FNA Florina 2.68 16 Pn 19 03 52.1 +1.7
OHR Ohrid 2.92 6 *i* Pn **Pn 19 03 55.4 +1.8**
TIP Timpagrande 3.02 290 ⇑P **Pn 19 03 56.1 +1.0**
TIP Timpagrande 3.02 290 ⇑S **Sn 19 04 30.8 -0.3**
TIP Timpagrande 3.02 290 Pn 19 03 55.7 +0.6
TIR Tirane 3.17 352 P **Pn 19 03 58.2 +1.2**
TIR Tirane 3.17 352 ⇓P **Pn 19 03 58.2 +1.2**
TIR Tirane 3.17 352 Pn 19 03 58.2 +1.2
CGL1 Ceglie Messapi 3.34 318 ⇑*i* Pn **Pn 19 03 59.5 +0.1**
CGL1 Sn **Sn 19 04 38.4 -0.5**
TAR1 Taranto 3.36 315 *e*Pn **Pn 19 03 58.6 -1.0**
MASS Massafra 3.51 315 *e*Pn **Pn 19 04 02.0 +0.3**
VAY Valandovo 3.53 27 *i* Pn **Pn 19 04 04.9 +3.0**
CEL Celeste 3.56 272 Pn 19 04 02.1 -0.4
STIP Stip 3.75 21 *i* Pn **Pn 19 04 08.1 +3.2**
MATE Matera 3.77 312 ⇑P **Pn 19 04 04.8 -0.5**
MATE Matera 3.77 312 ⇑S **Sn 19 04 48.6 -0.8**
SG1 Sgolgore (BA) 3.91 314 *e*Pn **Pn 19 04 07.8 +0.6**
SG1 Sn **Sn 19 04 49.8 -3.1**
BAI Bari 3.98 318 *e*Pn **Pn 19 04 08.4 +0.2**
BAI Sn **Sn 19 04 55.4 +0.8**
DRME Dracevica, Mon 4.09 347 *e*Pn **Pn 19 04 09.5 -0.2**
APE Apeiranthos 4.21 104 *e*P **Pn 19 04 13.5 +2.1**
PDG Podgorica 4.32 349 ⇑P **Pn 19 04 13.0 +0.3**
PDG Podgorica 4.32 349 ⇑S **Sn 19 05 02.2 -0.6**
PDG Podgorica 4.32 349 *e*Pn **Pn 19 04 12.4 -0.3**
PDG Podgorica 4.32 349 Pn 19 04 12.7 -0.1
ACER Acerenza 4.32 308 Pn 19 04 13.8 +1.0
HCY Herceg Novi 4.49 342 *e*Pn **Pn 19 04 14.0 -1.1**
IDI Anoyia 4.62 128 Pn **Pn 19 04 17.9 +0.9**
comp=N,3.2nm,0.3s,baz=223,slow=5.6,SNR=24
IDI Sn **Sn 19 05 10.3 -0.2**
comp=N,8.5nm,0.3s,baz=97,slow=22,SNR=5.7
TREB Trebinje 4.78 341 *e*Pn **Pn 19 04 18.0 -1.1**
DBRK Dubrovnik 4.79 340 *e*Pn **Pn 19 04 18.1 -1.1**
DBRK Sn **Sn 19 05 11.7 -2.8**
VAE Valguarnera 4.81 263 Pn **Pn 19 04 20.0 +0.4**
comp=N,3.1nm,0.3s,baz=191,slow=5.6,SNR=5.5
VAE Sn **Sn 19 05 15.7 +0.6**
comp=N,12nm,0.3s,baz=170,slow=11,SNR=6.4
VTS Vitosha 4.91 25 P **Pn 19 04 23.7 +2.7**
VTS Vitosha 4.91 25 ⇑P **Pn 19 04 22.6 +1.6**
VTS Vitosha 4.91 25 Pn 19 04 23.7 +2.7
SGRT San Giovanni R 5.05 316 Pn 19 04 22.6 -0.2
STON Ston 5.10 337 *i* Pn **Pn 19 04 23.0 -0.5**
STON Sn **Sn 19 05 18.5 -3.7**
STON Ston 5.10 337 *e*Pn **Pn 19 04 22.4 -1.1**
WDD Wied Dalam 5.27 245 Pn 19 04 24.8 -1.1
PAOL Paolisi 5.33 304 Pn 19 04 28.4 +1.7
RUDO Rudo 5.47 352 *e*Pn **Pn 19 04 29.9 +1.3**
MAKA Makarska 5.70 334 *e*Pn **Pn 19 04 31.8 +0.1**
BBLS Lazići 5.71 353 *e*Pn **Pn 19 04 30.7 -1.3**
DIVS Divibare 5.90 357 *e*Pn **Pn 19 04 33.0 -1.6**
HAPS Han Pijesak,BI 5.98 350 *e*Pn **Pn 19 04 33.6 -2.1**
PLVB Pleven 6.08 30 ⇑P **Pn 19 04 38.6 +1.6**
INTR Introdacqua 6.28 309 Pn 19 04 41.5 +1.8
ELND Elena 6.29 40 ⇑P **Pn 19 04 41.0 +2.0**
TEKS Tekeris 6.38 354 *e*Pn **Pn 19 04 39.8 -1.3**
ZIRJ Zirje 6.54 328 *i* Pn **Pn 19 04 42.1 -1.1**
KIJV Kijevo 6.54 334 *e*Pn **Pn 19 04 42.9 -0.5**
MDVR Moldovita 6.65 8 ⇓P **Pn 19 04 45.3 +0.5**
MORI Morici 6.68 329 *e*Pn **Pn 19 04 44.9 -0.3**
MGRS Mrkonjic Grad 6.70 339 *e*Pn **Pn 19 04 45.2 -0.3**
DOB Doboj 6.75 346 *e*Pn **Pn 19 04 43.8 -2.4**
AQU L'Aquila 6.78 310 P **Pn 19 04 47.7 +1.1**
AQU L'Aquila 6.78 310 *e*Pn **Pn 19 04 47.7 +1.1**
AQU L'Aquila 6.78 310 Pn 19 04 47.7 +1.1
HERR Herculane 6.84 12 ⇓P **Pn 19 04 48.9 +1.5**
FRGS Fruska Gora 6.97 356 *e*Pn **Pn 19 04 46.5 -2.7**
BLY Banja Luka 6.98 341 ⇑P **Pn 19 04 49.2 -0.1**
BLY Banja Luka 6.98 341 *e*Pn **Pn 19 04 48.0 -1.3**
BLY Banja Luka 6.98 341 Pn 19 04 49.2 -0.1
DUGI Dugi Otok 7.06 327 *i* Pn **Pn 19 04 50.0 -0.5**
UDBI Udbina 7.22 333 *e*Pn **Pn 19 04 53.0 +0.3**
NRCA Norcia 7.23 312 Pn 19 04 54.8 +1.9
GZR Gura Zlata 7.40 13 ⇑P **Pn 19 04 55.5 +0.3**
BZS Buzias 7.46 7 ⇓P **Pn 19 04 56.5 +0.6**
NVLJ Novalja 7.60 329 *i* Pn **Pn 19 04 57.2 -0.6**
ELL Elmali 7.69 98 Pn 19 05 05.1 +5.9
MURB Monte Urbino 7.84 313 Pn 19 05 03.6 +2.4
VOIR 8.01 24 ⇓P **Pn 19 05 06.0 +2.4**
MORH Mrgy, Hungar 8.12 351 *e*Pn **Pn 19 05 02.4 -2.5**
BOJS Bojanci 8.25 334 ⇓*i* Pn **Pn 19 05 06.6 -0.2**
OZLJ Ozalj 8.27 335 *i* Pn **Pn 19 05 06.2 -0.8**
ZAG Zagreb 8.30 338 *e*Pn **Pn 19 05 04.8 -2.6**
MLR Muntele Rosu 8.37 28 Pn **Pn 19 05 12.6 +4.1**
comp=N,0.4nm,0.3s,baz=259,slow=6.2,SNR=11
MLR Muntele Rosu 8.37 28 ⇑P **Pn 19 05 11.7 +3.2**
MLR Muntele Rosu 8.37 28 Pn 19 05 13.3 +4.8
RIY Rijeka 8.38 330 *e*Pn **Pn 19 05 08.1 -0.5**
GBRS Gornja Briga 8.43 332 *e*Pn **Pn 19 05 09.2 -0.1**
KALN Kalnik 8.45 341 *i* Pn **Pn 19 05 07.0 -2.6**
CRES Cresnjev 8.46 336 *e*Pn **Pn 19 05 08.7 -1.0**
DOPR Dopca 8.59 24 ⇑P **Pn 19 05 14.0 +2.5**
BEHE Becsehely 8.69 343 *e*Pn **Pn 19 05 10.7 -2.1**
OSSC Osservatorio P 8.75 310 Pn 19 05 16.0 +2.4
DRGR 8.75 10 ⇓P **Pn 19 05 15.6 +1.9**
CEY Cerknica 8.75 331 *e*Pn **Pn 19 05 13.0 -0.6**
OZUR 8.84 25 ⇑P **Pn 19 05 17.5 +2.7**
PLOR Plostina 8.94 29 ⇓P **Pn 19 05 19.2 +3.0**
LJU Ljubljana 8.97 333 *e*Pn **Pn 19 05 16.1 -0.6**
LJU Ljubljana 8.97 333 *e*Pn **Pn 19 05 15.8 -0.9**
VRI Vrincioaia 8.98 29 P **Pn 19 05 16.0 -0.8**
VRI Vrincioaia 8.98 29 ⇓P **Pn 19 05 19.8 +3.0**
KEST Kesra 9.20 258 Pn **Pn 19 05 20.2 +0.4**
comp=N,0.9nm,0.3s,baz=10,slow=8.0,SNR=8.3
KEST Sn **Sn 19 07 00.8 -2.3**
comp=N,0.5nm,0.3s,baz=53,slow=20,SNR=4.8
SOKA Soboth 9.36 337 *e*Pn **Pn 19 05 20.6 -1.4**
comp=N,29nm,0.4s,SNR=24
SOKA Sn **Sn 19 07 00.1 -6.9**
comp=N,6.4nm,0.5s
OBKA Obir 9.37 334 *e*Pn **Pn 19 05 21.3 -0.8**
OBKA *e*Sn **Sn 19 07 02.1 -5.1**
OBKA Obir 9.37 334 *e*Pn **Pn 19 05 21.4 -0.8**
comp=N,34nm,0.5s,SNR=15
OBKA Sn **Sn 19 07 01.6 -5.7**
comp=N,16nm,0.4s
ZCCA Zocca 9.39 314 Pn 19 05 25.1 +2.7
TEOL Teolo 9.68 320 Pn 19 05 24.1 -2.3
ARSA Arzberg 9.73 340 *e*Pn **Pn 19 05 25.5 -1.6**
comp=N,7.3nm,0.3s
MYKA Terra Mystica 9.79 331 *e*Pn **Pn 19 05 27.4 -0.6**
comp=N,6.5nm,0.3s
MYKA Sn **Sn 19 07 12.9 -4.9**
comp=N,6.0nm,0.3s
STAL STALIGIAL 9.87 327 Pn 19 05 28.1 -0.9
PRMA PARMA 10.02 314 Pn 19 05 33.2 +2.3
TRPA Tarpa 10.04 8 ⇑P **Pn 19 05 31.7 +0.4**
CTI Castel Tesino 10.19 323 P **Pn 19 05 31.9 -1.5**
CTI Castel Tesino 10.19 323 Pn 19 05 31.9 -1.5
CONA Conrad Observa 10.27 343 Pn **Pn 19 05 34.9 +0.3**
comp=N,1.6nm,0.3s
KBA Koelnbreinsper 10.28 332 *e*Pn **Pn 19 05 34.1 -0.7**
KBA *e*Sn **Sn 19 07 24.6 -5.2**
KBA Koelnbreinsper 10.28 332 *e*Pn **Pn 19 05 34.0 -0.7**
comp=N,10nm,0.4s,SNR=8.8
KBA Sn **Sn 19 07 23.4 -6.4**
comp=N,9.9nm,0.8s
ABTA Abfaltersbach 10.34 328 *e*Pn **Pn 19 05 34.5 -1.0**
comp=N,10.0nm,0.4s,SNR=6.8
VYHS Vyhne 10.35 354 *e*P **Pn 19 05 34.9 -0.7**
VYHS *e* 19 07 27.7
VYHS Vyhne 10.35 354 *e*PN **Pn 19 05 34.9 -0.7**
VYHS *e*SN **Sn 19 07 27.7 -3.6**
BR131 Keskin Array S 10.41 77 P **Pn 19 05 38.2 +1.7**
BR131 Keskin Array S 10.41 77 Pn 19 05 38.2 +1.7
BRTR Keskin Array B 10.41 77 P **Pn 19 05 41.0 +4.5**
BRTR Keskin Array B 10.41 77 Pn **Pn 19 05 41.0 +4.5**
comp=N,0.5nm,0.3s,baz=260,slow=12,SNR=11
MODS Modra-Piesok 10.42 348 *e*P **Pn 19 05 36.4 -0.1**
MODS *e* 19 07 26.8
MODS Modra-Piesok 10.42 348 *e*PN **Pn 19 05 36.4 -0.1**
MODS *e*SN **Sn 19 07 26.8 -6.2**
SALO Salr 10.45 318 Pn 19 05 36.1 -0.8
MOA Molln 10.64 337 *e*Pn **Pn 19 05 39.0 -0.5**
MOA Molln 10.64 337 *e*Pn **Pn 19 05 38.7 -0.8**
comp=N,13nm,0.3s,SNR=12
MOA Sn **Sn 19 07 31.5 -6.8**
comp=N,6.3nm,0.6s
RJOB Jochberg 11.04 332 *e*Pn **Pn 19 05 44.7 -0.3**
RJOB *e*Sn **Sn 19 07 46.2 -2.0**
WTTA Wattenberg 11.12 327 *e*Pn **Pn 19 05 46.1 -0.1**
WTTA Wattenberg 11.12 327 *e*Pn **Pn 19 05 46.2 +0.1**
comp=N,12nm,0.3s,SNR=7.8
WATA Walderalm 11.20 327 *e*Pn **Pn 19 05 47.6 +0.3**
comp=N,6.4nm,0.3s,SNR=9.4
WATA Sn **Sn 19 07 48.2 -4.0**
comp=N,12nm,0.3s
FUORN Ofenpass-Fuorn 11.27 322 Pn 19 05 48.9 +0.6
SQTA Sankt Quirin 11.27 326 *e*Pn **Pn 19 05 48.8 +0.6**
comp=N,8.1nm,0.6s
FETA Feichten 11.33 324 Pn **Pn 19 05 49.1 0.0**
comp=N,3.8nm,0.4s
MOTA Moosalm 11.41 326 *e*Pn **Pn 19 05 50.8 +0.7**
comp=N,10nm,0.4s
MOTA Sn **Sn 19 07 53.7 -3.7**
comp=N,16nm,0.7s
VRAC Vranov 11.44 347 Pn **Pn 19 05 51.1 +0.7**
comp=N,0.1nm,0.3s,baz=183,slow=15,SNR=3.1
DAVOX Davos/Dischmat 11.57 321 Pn **Pn 19 05 52.7 +0.4**
comp=N,1.3nm,0.3s,baz=132,slow=14,SNR=19
DAVOX Sn **Sn 19 07 56.5 -4.8**
comp=N,2.3nm,0.3s,baz=336,slow=22,SNR=6.4
GEC2 GERESS Array S 11.70 338 *e*Pn **Pn 19 05 52.6 -1.5**
GERES GERESS Array B 11.70 338 Pn **Pn 19 05 52.8 -1.2**
comp=N,1.4nm,0.3s,baz=158,slow=14,SNR=37
GERES Sn **Sn 19 07 58.1 -6.3**
comp=N,1.4nm,0.3s,baz=155,slow=24,SNR=8.3
GERES LR LR 19 11 46.0
comp=N,1µm,19.3s,baz=281,slow=45
DAVA Damuels 11.92 323 *e*Pn **Pn 19 05 57.5 +0.3**
DAVA Damuels 11.92 323 *e*Pn **Pn 19 05 57.9 +0.7**
comp=N,4.4nm,0.2s
KHC Kasperske Hory 11.99 338 *e*P **Pn 19 05 56.0 -2.0**
KHC *e* 19 08 03.1
KHC Kasperske Hory 11.99 338 *e*PN **Pn 19 05 56.0 -2.0**
KHC *e*SN **Sn 19 08 03.1 -8.3**
KHC Kasperske Hory 11.99 338 Pn 19 05 58.4 +0.5
WET Wettzell 12.21 336 *e*Pn **Pn 19 06 00.2 -0.8**
GOPC GO Pecny, Ondr 12.38 343 *e*P **Pn 19 06 02.0 -1.4**
GOPC GO Pecny, Ondr 12.38 343 *e*PN **Pn 19 06 02.0 -1.4**
PRU Pruhonice 12.51 342 *e*P **Pn 19 06 03.8 -1.3**
PRU Pruhonice 12.51 342 *e*PN **Pn 19 06 03.8 -1.3**
SENIN Lac Senin/Sane 12.67 314 Pn **Pn 19 06 07.1 -0.3**
NORI Noerdlinger Ri 12.68 329 *e*Pn **Pn 19 06 05.9 -1.5**
ROTZ Rotzenmuhle 12.97 336 *e*Pn **Pn 19 06 10.2 -1.2**
MANZ Manzenberg 13.20 336 *e*Pn **Pn 19 06 13.9 -0.5**
MMAI Mount Meron Ar 13.24 108 Pn **Pn 19 06 12.1 -3.1**
comp=N,1.4nm,0.3s,baz=307,slow=11,SNR=11
MMAI Sn **Sn 19 08 33.7 -8.5**
comp=N,1.7nm,0.3s,baz=320,slow=24,SNR=5.3
BFO Black Forest 13.40 323 *e*Pn **Pn 19 06 17.3 +0.1**
MOX Moxa 13.93 336 P **Pn 19 06 23.9 -0.5**
MOX Moxa 13.93 336 *e*Pn **Pn 19 06 23.6 -0.7**
AKASG Malin Array Be 13.98 24 P **Pn 19 06 22.0 -3.0**
AKASG Malin Array Be 13.98 24 Pn **Pn 19 06 22.0 -3.0**
comp=N,1.6nm,0.3s,baz=206,slow=12,SNR=1.5
CLL Collm 14.11 341 *e*P **P 19 06 35.0 +0.5**
CLL Collm 14.11 341 *e*PP **P 19 06 35.0 +0.5**
CLL *e* 19 10 09.0
CLL LmH 19 11 00.0
comp=N,1µm,19.2s
CLL LmH 19 11 00.0
comp=E,1µm,19.2s
EIL Elat 14.75 121 Pn **Pn 19 06 31.8 -3.9**
comp=E,0.5nm,0.3s,baz=334,slow=1.7,SNR=5.2
EIL Sn Sn 19 09 06.3 -13
comp=E,1.0nm,0.3s,baz=335,slow=19,SNR=5.0
ASF Jabal al Asfar 14.75 109 Pn **Pn 19 06 37.8 +2.0**
comp=E,0.4nm,0.3s,baz=225,slow=2.9,SNR=2.7
KIV Kislovodsk 17.73 64 *e*P **P 19 07 15.8 +1.0**
KIV pmax pmax
comp=Z,47nm,1.1s
KVAR Kislovodsk Arr 17.73 64 Pn **P 19 07 17.9 +3.0**
baz=258,slow=18,SNR=3.7
KBZ Khabaz 17.83 65 *e*P **P 19 07 17.5 +1.7**
KBZ pmax pmax
comp=Z,9.0nm,1.0s
KBZ Khabaz 17.83 65 P **P 19 07 17.2 +1.4**
comp=Z,0.1nm,0.3s,baz=291,slow=9.8,SNR=8.7
ZEI Tsey 18.42 68 *e*P **Pn 19 07 23.5 +0.9**
ZEI pmax pmax
comp=Z,7.0nm,0.8s
GNI Garni 18.95 76 P **Pn 19 07 29.3 +0.3**
GNI pmax pmax
comp=Z,23nm,1.0s
GNI Garni 18.95 76 P **Pn 19 07 31.3 +2.3**
comp=Z,0.5nm,0.3s,baz=3.4,slow=4.2,SNR=7.0
GNI Garni 18.95 76 Pn 19 07 29.2 +0.3
GNI IAmb IAmb 19 07 34.9
comp=Z,23nm,0.9s
ESDC Sonseca Array 19.01 282 P **P 19 07 29.1 +0.2**
comp=Z,0.2nm,0.3s,baz=80,slow=11,SNR=5.9
OBN Obninsk 20.14 28⇑*e*P **P 19 07 41.6 +0.6**

OBN *e*PPP PPP 19 08 09.2
OBN S Sn 19 11 30.0 +0.9
OBN SS **SnSn 19 11 47.0 +3.4**
OBN pmax pmax
comp=Z,12nm,0.9s
OBN MLR MLR
comp=Z,499nm,14.0s
VSU Vasula 20.69 9 *e*P **P 19 07 47.1 +0.2**
MDT Midelt 21.04 263 P **P 19 07 51.7 +0.6**
comp=Z,3.1nm,0.9s,baz=90,slow=2.0,SNR=3.3
AKT Akhty 21.19 72 *e*P **P 19 07 53.6 +0.9**
AKT *e* 19 08 13.2
AKT pmax pmax
comp=Z,59nm,1.4s
HFS Hagfors 22.36 351 P **P 19 08 04.8 -0.1**
comp=Z,11nm,0.7s,baz=153,slow=10.0,SNR=21
EKA Eskdalemuir Ar 23.36 325 P **P 19 08 15.1 -0.3**
comp=Z,11nm,0.9s,baz=122,slow=11,SNR=8.5
FINES FINESS Array B 23.53 7 *i* P **P 19 08 15.5 -1.5**
FINES pmax pmax
comp=Z,2.0nm,0.5s
FINES FINESS Array B 23.53 7 P **P 19 08 15.7 -1.3**
comp=Z,2.3nm,0.5s,baz=171,slow=9.9,SNR=16
NC405 NORSAR Array S 23.57 349 P **P 19 08 16.5 -1.0**
NB2 NORSAR Subarra 23.58 349 P **P 19 08 16.6 -0.9**
comp=Z,15nm,1.0s,baz=153,slow=10
NOA NORSAR Array B 23.58 349 P **P 19 08 17.1 -0.4**
comp=Z,3.7nm,0.8s,baz=162,slow=8.5,SNR=9.8
KLMR Klimovskoe 25.65 22 *e*P **P 19 08 35.3 -1.2**
KLMR pmax pmax
comp=Z,22nm,1.2s
KLMR Klimovskoe 25.65 22 *e*P **P 19 08 35.4 -1.1**
KLMR AMP 19 08 39.3
comp=Z,22nm,1.2s
RAYN Ar Rayn 25.93 117 P **P 19 08 39.8 +0.4**
RAYN pmax pmax
comp=Z,5.0nm,1.0s
RAYN Ar Rayn 25.93 117 P **P 19 08 39.8 +0.4**
AKTO Aktyubinsk 29.23 53 P **P 19 09 08.4 -0.4**
comp=Z,0.6nm,0.2s,baz=246,slow=12,SNR=3.6
GEYT Ailbeck 29.55 79 P **P 19 09 12.3 +0.5**
comp=Z,1.6nm,0.5s,baz=291,slow=8.7,SNR=7.2
TOA0 Torodi Ar. Sit 30.00 219 P **P 19 09 14.4 -1.4**
TOA0 IAmb IAmb 19 09 18.0
comp=Z,4.4nm,0.8s
TORD Torodi Ar. Bea 30.00 219 P **P 19 09 15.7 -0.1**
comp=Z,4.0nm,0.8s,baz=30,slow=8.4,SNR=20
TORD Torodi Ar. Bea 30.00 219 IAmb IAmb 19 09 17.5
comp=Z,3.0nm,0.9s
ABKAR Akbulak array 30.30 56 P **P 19 09 17.5 -0.7**
ABKAR IAmb IAmb 19 10 08.3
comp=Z,6.0nm,1.4s
ARU Arti 31.10 42 P **P 19 09 27.3 +2.2**
ARU Arti 31.10 42 P **P 19 09 24.6 -0.6**
comp=Z,0.6nm,0.3s,baz=233,slow=12,SNR=4.1
ARCES ARCESS Array B 31.51 3 P **P 19 09 28.0 -0.7**
ARCES ARCESS Array B 31.51 3 P **P 19 09 28.0 -0.7**
comp=Z,1.7nm,0.6s,baz=189,slow=11,SNR=13
SVE Sverdlovsk 32.31 42 *e*P **P 19 09 35.9 +0.1**
KK31 Karatay Array 37.86 66 P **P 19 10 24.2 +0.3**
KK31 pmax pmax
comp=Z,24nm,2.0s
KK31 Karatay Array 37.86 66 P **P 19 10 24.1 +0.3**
KK31 IAmb IAmb 19 10 34.5
comp=Z,24nm,1.9s
KKAR Karatay Array 37.86 66 P **P 19 10 24.2 +0.3**
KKAR pmax pmax
comp=Z,24nm,2.0s
KKAR Karatay Array 37.86 66 P **P 19 10 24.2 +0.3**
KKAR IAmb IAmb 19 10 34.5
comp=Z,24nm,1.9s
BTK Batken 38.72 71 P **P 19 10 31.1 -0.1**
BTK pmax pmax
comp=Z,3.0nm,0.7s
BTK Batken 38.72 71 P **P 19 10 31.1 -0.1**
DBIC Dimbokro 38.85 223 P **P 19 10 32.1 -0.2**
comp=Z,2.6nm,0.6s,baz=5.8,slow=12,SNR=6.9
DBIC Dimbokro 38.85 223 IAmb IAmb 19 10 46.8
comp=Z,12nm,1.3s
TIC Toumodi 38.96 223 *e*P **P 19 10 33.7 +0.4**
KIC Kosan Boka 39.05 222 *e*P **P 19 10 33.9 -0.2**
comp=Z,4.5nm,0.6s
LIC Lamto 39.32 222 *e*P **P 19 10 36.1 -0.2**
comp=Z,6.5nm,0.3s
ARSB Arslanbob 40.02 68 P **P 19 10 41.4 -0.7**
ARSB IAmb IAmb 19 11 05.2
comp=Z,5.6nm,0.9s
SPITS Spitsbergen Ar 40.12 359 P **P 19 10 42.1 -0.2**
comp=Z,30nm,1.2s,baz=166,slow=13,SNR=3.1
AAK Ala-Archa 40.82 66 *e*P **P 19 10 52.3 +3.5**
AAK pmax pmax
comp=Z,17nm,3.3s
KURK Kurchatov 42.33 53 *e*P **P 19 11 04.0 +3.2**
KURK pmax pmax
comp=Z,5.0nm,1.3s
KSH Kashi 42.69 70 P **P 19 11 03.0 -1.1**
KSH pmax pmax
comp=Z,800nm,6.4s
MK31 Makanchi Array 45.36 58 P **P 19 11 24.7 -0.6**
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MK31 Makanchi Array 45.36 58 P **P 19 11 24.7 -0.6**
MKAR Makanchi Array 45.36 58 P **P 19 11 25.0 -0.3**
MKAR Makanchi Array 45.36 58 P **P 19 11 25.0 -0.3**
comp=Z,2.1nm,0.4s,baz=273,slow=7.4,SNR=55
ZAA0 Zalesovo Array 45.74 48 P **P 19 11 27.4 -0.6**
ZAA0 IAmb IAmb 19 11 43.8
comp=Z,5.0nm,0.8s
ZALV Zalesovo Beam 45.74 48 P **P 19 11 27.7 -0.4**
comp=Z,4.8nm,0.5s,baz=272,slow=8.8,SNR=28
WMQ Urumqi 49.82 61 *e*P **P 19 12 02.8 +2.8**
WMQ pmax pmax
comp=Z,9.0nm,0.7s
WMQ pmax pmax
comp=Z,19nm,7.5s
TIXI Tiksi 59.66 20 *e*P **P 19 13 14.3 +3.6**
TIXI pmax pmax
comp=Z,2.0nm,1.1s
HHC Hu-ho-hao-te 67.09 55 *e*P **P 19 14 00.0 -0.6**
HHC pmax pmax
comp=Z,4.0nm,1.1s
HHC pmax pmax
comp=Z,89nm,5.2s
ZEA Zeya 68.91 38 *e*P **P 19 14 12.6 +0.9**
ZEA *e* 19 14 35.0
CMAR Chiang Mai Arr 69.97 82 *i* P **P 19 14 22.2 +3.4**
CMAR pmax pmax
comp=Z,1.0nm,0.6s
CMAR Chiang Mai Arr 69.97 82 P **P 19 14 18.4 -0.4**
comp=Z,1.4nm,0.9s,baz=303,slow=8.0,SNR=12
BILL Bilibino 71.01 13⇓*e*P **P 19 14 24.7 +0.4**
BILL 19 14 42.0
BILL pmax pmax
comp=Z,2.0nm,1.0s
BILL MLR MLR
comp=Z,204nm,16.0s
YKA Yellowknife Ar 73.34 340 P **P 19 14 38.6 +0.3**
comp=Z,0.6nm,0.8s,baz=34,slow=5.3,SNR=7.7
KLR Kul'dur 73.91 39 *e*P **P 19 14 42.8 +0.9**
KLR pmax pmax
comp=Z,2.0nm,0.9s
ULM Lac du Bonnet 75.63 324 P **P 19 14 52.4 +0.5**
comp=Z,1.6nm,0.8s,baz=37,slow=6.1,SNR=3.3
ILAR Eielson Array 76.88 354 P **P 19 14 59.5 +0.8**
comp=Z,0.3nm,0.8s,baz=5.7,slow=4.8,SNR=4.1
USRK Ussuriysk Ar. 77.32 43 P **P 19 15 03.0 +1.5**
comp=Z,1.1nm,0.6s,baz=298,slow=3.9,SNR=4.5
KSRS Korea Array 79.38 51 P **P 19 15 13.4 +0.4**
comp=Z,1.0nm,0.6s,baz=309,slow=4.8,SNR=6.1
YSS Yuzh-Sakhalins 80.80 36⇓*e*P **P 19 15 11.7 -8.8**
YSS *e* 19 15 16.9
PDAR Pinedale Array 87.48 326 P **P 19 15 56.6 +1.6**
comp=Z,0.3nm,0.9s,baz=23,slow=4.9,SNR=2.6

*IDC **26** 19:03:45.7±3.3, 4.°80S×133.°88E, h0km, mb3.5/2, mb1 4.0/5, mb1mx3.6/34, mbtmp3.8/5, ML4.1/3, MS3.2/4, Ms1 3.2/4, ms1mx3.0/30, Error ellipse: s-maj=104.0km s-min=27.5km az=77.0*
*NEIC **26** 19:03:48.0±2.8, 4.°87S±0.°07×134.°0E±0.°1, h28km±9km, mb4.2/5, Error ellipse: s-maj=22.5km s-min=3.3km az=64.0*
ISC 26 19:03:47.7±0.9,**4.°91S**±0.°06×**133.°9E**±0.°1,**h28km,n20,**

σ2^{s}64/24, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.58**	**320**		**Pn**	**19 04 27.7**	**+0.1**
SIJI	**Sorong**	**4.80**	**327**	Pn	**Pn**	**19 04 58.3**	**0.0**
	2.6nm,0.3s,baz=132,slow=11,SNR=7.8						
SIJI				Sn	**Sn**	**19 05 49.7**	**-3.4**
	5.0nm,0.3s,baz=152,slow=22,SNR=6.4						
SIJI				LR	LR	19 07 19.9	
	comp=Z,235nm,20.3s,baz=248,slow=46						
JAY	**Jayapura**	**7.18**	**71**	LR	LR	19 09 21.4	
	comp=Z,135nm,18.7s,baz=204,slow=47						
MTN	**Manton Dam**	**8.35**	**199**	Pn	**Pn**	**19 05 50.6**	**+3.5**
MTN					**Sn**	**19 07 24.6**	**+4.1**
KNRA	**Kununurra**	**11.84**	**205**		**Pn**	**19 06 37.2**	**+2.3**
KNRA					**Sn**	**19 08 47.7**	**+1.6**
COEN	**Coen**	**12.81**	**135**	Pn	**Pn**	**19 06 47.1**	**-1.1**
PMG	**Port Moresby**	**13.88**	**110**	LR	LR	19 14 09.6	
	comp=Z,144nm,20.3s,baz=82,slow=45						
WB0	**Warramunga Arr**	**14.78**	**178**	Pn	**Pn**	**19 07 15.5**	**+0.5**
WB2	**Warramunga Arr**	**14.95**	**178**	Pn	**Pn**	**19 07 17.8**	**+0.4**
WRA	**Warramunga Arr**	**14.95**	**178**	Pn	**Pn**	**19 07 16.9**	**-0.4**
	0.3nm,0.3s,baz=353,slow=13,SNR=5.3						
WRA				Sn	**Sn**	**19 09 57.4**	**-4.9**
	0.3nm,0.3s,baz=358,slow=23,SNR=5.4						
WR0	**Warramunga Arr**	**14.98**	**178**		**Pn**	**19 07 19.3**	**+1.6**
WR0				IAmb	IAmb	19 07 37.5	
	comp=Z,18nm,1.4s						
FITZ	**Fitzroy Crossi**	**15.41**	**211**	Pn	**Pn**	**19 07 25.0**	**+1.7**
	comp=Z,1.1nm,0.3s,baz=27,slow=11,SNR=21						
FITZ				Sn	**Sn**	**19 10 06.9**	**-6.3**
	comp=Z,0.5nm,0.3s,baz=194,slow=16,SNR=5.5						
FITZ	**Fitzroy Crossi**	**15.41**	**211**		**Pn**	**19 07 23.8**	**+0.5**
FITZ				IAmb	IAmb	19 07 24.0	
	comp=Z,10nm,1.2s						
FITZ					**Sn**	**19 10 11.8**	**-1.5**
KRVT	**Keravat (AS076**	**18.06**	**89**	LR	LR	19 15 11.0	
	comp=Z,82nm,20.1s,baz=287,slow=38						
AS31	**Alice Springs**	**18.65**	**180**	P	**Pn**	**19 08 05.1**	**+1.0**
ASAR	**Alice Springs**	**18.65**	**180**	P	**Pn**	**19 08 06.6**	**+2.6**
	comp=Z,0.6nm,0.3s,baz=5.9,slow=12,SNR=52						
ASAR				S	**Sn**	**19 11 28.8**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=0.6,slow=28,SNR=4.3						
BBOO	**Buckleboo**	**27.84**	**176**	P	**P**	**19 09 36.0**	**+1.1**
BBOO				IAmb	IAmb	19 09 38.5	
	comp=Z,11nm,1.4s						
MORW	**Morawa**	**29.40**	**213**	P	**P**	**19 09 47.3**	**-1.6**
CMAR	**Chiang Mai Arr**	**41.56**	**305**	P	**P**	**19 11 34.6**	**+1.3**
	comp=Z,0.5nm,0.8s,baz=132,slow=6.6,SNR=6.9						
MKAR	**Makanchi Array**	**68.70**	**325**	P	**P**	**19 14 50.5**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=114,slow=8.0,SNR=4.2						

MAN 26 19:03:47.6, 5.62N×126.28E, h5km, mb4.6, ML3.5, MS3.5, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**0.74**	**310**	*e*P	Pg	19 04 02.1	+0.2
DDMP				*e*S	Sb	19 04 13.3	-0.2
MATI	**Mati**	**1.32**	**359**	*e*P	Pn	19 04 12.5	-0.1
MATI				*e*S	Sb	19 04 30.3	+0.3
GSPH	**General Santos**	**1.41**	**289**	*e*S	Sb	19 04 27.9	-4.8
KCP	**Kidapawan**	**1.82**	**319**	⇓*e*P	Pn	19 04 19.5	-0.1
SKMP	**Bagumbayan, Su**	**1.95**	**297**	*e*P	Pn	19 04 20.1	-1.2
SKMP				*e*S	Sb	19 04 47.5	-0.7
CTBH	**Cotabato--PC H**	**2.57**	**308**	*e*P	Pn	19 04 30.9	+1.0
CTBH				*i* S	Sn	19 05 02.6	+1.0
CGP	**Cagayan de Oro**	**3.23**	**331**	⇓*e*P	Pg	19 04 49.6	+0.2
CGP				*e*S	Sn	19 05 18.6	+0.9

PRU ***26*** *19:06:36.6±0.0, 43.04N×20.02E, h0km, M4.1*
BGR ***26*** *19:06:38.6±1.0, 43.52N×20.81E, h10km, ML4.4, Error ellipse: s-maj=42.3km s-min=16.7km az=48.0*
PDG ***26*** *19:06:39.4±0.6, 43.26N×19.90E, h1km±1km, MD4.0/9, ML4.1/9, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
BEO ***26*** *19:06:39.9±0.3, 43.24N×19.87E, h0km, ML4.2/17*
RHSSO ***26*** *19:06:39.9±0.4, 43.28N×19.85E, h2km±1km, ML4.2/15*
MED_RC ***26*** *19:06:40.3±0.7, 43.35N×19.77E, h21km±2km, MW4.5/11, Moment Tensor Solution.Mantle waves: s11,c12; Duration: 1s1 Moment tensor: Scale 10^{15}Nm; M_{rr}2.13±1.20; $M_{\theta\theta}$-2.52±.99; $M_{\phi\phi}$0.39±1.16; $M_{r\theta}$-1.48±1.23; $M_{\theta\phi}$7.92±.75; $M_{r\phi}$1.59±1.09; Best double couple: M_o8.26000×10^{15} NP1:ϕ_s84.00000°, δ80.00000°, λ-5.00000°. NP2:ϕ_s175.00000°, δ85.00000°, λ-170.00000°. Principal axes: T 7.0000, Plg3.0000°, Azm309.0000°; N 2.5100, Plg79.0000°, Azm201.0000°; P -9.5200, Plg10.0000°, Azm40.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=30s.*
NEIC ***26*** *19:06:40.8±1.9, 43.27N±0.04×19.87E±0.07, h5km±1km, mb4.1/13, ML4.5/2(BUC), ML4.4(VIE) Error ellipse: s-maj=8.0km s-min=4.8km az=118.0*
LDG ***26*** *19:06:40.3±0.2, 43.32N×20.01E, h5km, ML4.1/25, Error ellipse: s-maj=5.2km s-min=2.9km az=175.0*
MOS ***26*** *19:06:40.4±0.8, 43.33N×19.88E, h14km, mb4.5/4, Error ellipse: s-maj=6.1km s-min=3.2km az=93.6*
IDC ***26*** *19:06:40.4±0.8, 43.31N×19.84E, h0km, mb3.9/12, mb1 4.0/22, mb1mx3.9/48, mbtmp3.9/22, ML3.9/8, MS4.0/2, Ms1 4.0/2, ms1mx3.3/52, Error ellipse: s-maj=13.2km s-min=9.1km az=15.0*
TIR ***26*** *19:06:43.7, 42.93N×19.57E, h11km, Md4.6/6*

ISC 26 19:06:40.3±0.7, 43.27N±0.01×19.82E±0.01, h8km±4km, n398, σ2^{s}06/513, mb4.0/22, 39C-29D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.11**	**93**	*e*Pg	**Pg**	**19 06 41.5**	**-1.5**
SJES				*e*Sg	**Sg**	**19 06 42.9**	**-1.9**
PLE	**Pljevlja**	**0.32**	**281**	⇑*i*Pg	**Pg**	**19 06 46.4**	**-0.3**
PLE				*e*Sg	**Sg**	**19 06 51.7**	**+0.8**
PLE	**Pljevlja**	**0.32**	**281**	⇓*i*Pg	**Pg**	**19 06 46.3**	**-0.4**
PLE				*i* Sg	**Sb**	**19 06 52.5**	**-1.3**
IVAS	**Ivanjica**	**0.39**	**38**	*e*Pg	**Pg**	**19 06 46.3**	**-1.7**
IVAS				*e*Sg	**Sg**	**19 06 51.2**	**-2.0**
IVA	**Berane**	**0.40**	**172**	⇑*i*Pg	**Pg**	**19 06 47.0**	**-1.2**
IVA				*i* Sg	**Sg**	**19 06 52.5**	**-0.9**
IVA	**Berane**	**0.40**	**172**	⇑*i*Pg	**Pg**	**19 06 47.0**	**-1.2**
IVA				*i* Sg	**Sg**	**19 06 52.5**	**-0.9**
KOME	**Kolasin**	**0.47**	**208**	⇓*i*Pg	**Pg**	**19 06 48.7**	**-0.8**
KOME				*i* Sg	**Sg**	**19 06 56.6**	**+0.9**
KOME	**Kolasin**	**0.47**	**208**	⇓*i*Pg	**Pg**	**19 06 48.7**	**-0.8**
KOME				*i* Sg	**Sg**	**19 06 56.6**	**+0.9**
RUDO	**Rudo**	**0.48**	**317**	*e*Pg	**Pg**	**19 06 48.0**	**-1.6**
RUDO				*e*Sg	**Sg**	**19 06 55.5**	**-0.4**
BBLS	**Lazići**	**0.67**	**333**	*e*Pg	**Pg**	**19 06 52.7**	**-0.6**
BBLS				*e*Sg	**Sg**	**19 07 01.5**	**-0.5**
BBLS	**Lazići**	**0.67**	**333**	*e*Pg	**Pg**	**19 06 51.6**	**-1.7**
BBLS				*e*Sg	**Sg**	**19 07 01.6**	**-0.5**
UPM	**Unac-Piva**	**0.67**	**265**	*e*Pg	**Pg**	**19 06 53.1**	**-0.2**
UPM				*e*Sg	**Sg**	**19 07 02.7**	**+0.6**
UPM	**Unac-Piva**	**0.67**	**265**	⇑*i*Pg	**Pg**	**19 06 53.2**	**-0.1**
UPM				*e*Sg	**Sb**	**19 07 03.4**	**-0.6**
UPM	**Unac-Piva**	**0.67**	**265**	⇑*i*Pg	**Pg**	**19 06 53.2**	**-0.1**
UPM				*i* Sg	**Sb**	**19 07 04.6**	**+0.6**
PVY	**Plav**	**0.68**	**171**	⇑*i*Pg	**Pg**	**19 06 52.0**	**-1.5**
PVY				*i* Sg	**Sg**	**19 07 01.9**	**-0.5**
PVY	**Plav**	**0.68**	**171**	⇑*i*Pg	**Pg**	**19 06 51.8**	**-1.7**
PVY				*i* Sg	**Sg**	**19 07 01.9**	**-0.5**
NKY	**Niksic**	**0.76**	**233**	⇓*i*Pg	**Pg**	**19 06 54.2**	**-0.7**
NKY	**Niksic**	**0.76**	**233**	⇓*i*Pg	**Pg**	**19 06 54.0**	**-0.9**
NKY				*i* Sg	**Sb**	**19 07 06.9**	**+0.5**
NKME	**Niksic**	**0.81**	**232**	⇓*i*Pg	**Pg**	**19 06 54.8**	**-1.1**
NKME				*i* Sg	**Sb**	**19 07 07.6**	**-0.2**
NKME	**Niksic**	**0.81**	**232**	⇓*i*Pg	**Pg**	**19 06 54.8**	**-1.1**
NKME				*i* Sg	**Sb**	**19 07 07.9**	**+0.1**
DIVS	**Divibare**	**0.84**	**9**	*e*Pg	**Pg**	**19 06 55.2**	**-1.3**
DIVS				*e*Sg	**Sb**	**19 07 08.5**	**-0.3**
DIVS	**Divibare**	**0.84**	**9**	⇓*i*Pg	**Pg**	**19 06 55.2**	**-1.3**
DIVS				*e*Sg	**Sg**	**19 07 06.7**	**-0.7**
GRUS	**Gruza**	**0.90**	**46**	*e*Pg	**Pg**	**19 06 56.3**	**-1.3**
GRUS				*e*Sg	**Sg**	**19 07 07.6**	**-1.7**
BCI	**Bajram Curri**	**0.92**	**168**	*i* PG	**Pg**	**19 06 56.5**	**-1.5**
BCI				*i* SG	**Sg**	**19 07 07.8**	**-2.1**
PDG	**Podgorica**	**0.94**	**207**	*e*Pg	**Pg**	**19 06 57.0**	**-1.3**
PDG				*e*Sg	**Sg**	**19 07 09.3**	**-1.1**
PDG	**Podgorica**	**0.94**	**207**	⇑P	**Pg**	**19 06 57.0**	**-1.3**
PDG				⇑S	**Sg**	**19 07 09.4**	**-1.0**
PDG	**Podgorica**	**0.94**	**207**	⇓*i*Pg	**Pg**	**19 06 56.5**	**-1.8**
PDG				*e*Sg	**Sg**	**19 07 10.2**	**-0.2**
PDG	**Podgorica**	**0.94**	**207**		**Pg**	**19 06 57.0**	**-1.3**
PDG					**Sg**	**19 07 09.4**	**-1.0**
TTG	**Podgorica**	**0.94**	**207**	⇓*i*Pg	**Pg**	**19 06 56.6**	**-1.7**
TTG				*i* Sg	**Sb**	**19 07 10.9**	**-0.5**
TTG	**Podgorica**	**0.94**	**207**	⇓*i*Pg	**Pg**	**19 06 56.4**	**-1.9**
TTG				*i* Sg	**Sb**	**19 07 11.9**	**+0.5**
SELS	**Selova**	**0.95**	**92**	*e*Pg	**Pg**	**19 06 56.5**	**-2.1**
SELS				*e*Sg	**Sg**	**19 07 08.8**	**-2.2**
CEME	**Cevo**	**0.98**	**223**	⇓*i*Pg	**Pg**	**19 06 57.3**	**-1.8**
CEME				*i* Sg	**Sn**	**19 07 13.6**	**-1.0**
CEME	**Cevo**	**0.98**	**223**	⇓*i*Pg	**Pg**	**19 06 57.7**	**-1.4**
CEME				*i* Sg	**Sb**	**19 07 13.4**	**+0.7**
BRY	**Bratogost**	**1.01**	**249**	⇑*i*Pg	**Pg**	**19 06 58.6**	**-1.1**
BRY				*i* Sg	**Sn**	**19 07 15.8**	**+0.4**
HAPS	**Han Pijesak,Bl**	**1.03**	**323**	*e*Pg	**Pg**	**19 06 58.6**	**-1.6**
HAPS				*e*Sg	**Sg**	**19 07 13.5**	**-0.1**
HAPS	**Han Pijesak,Bl**	**1.03**	**323**	*e*Pg	**Pg**	**19 06 57.9**	**-2.3**
HAPS				*e*Sg	**Sg**	**19 07 12.7**	**-0.9**
TRUS	**Trudelj**	**1.05**	**24**	*e*Pg	**Pg**	**19 06 59.4**	**-1.0**
TRUS				*e*Sg	**Sg**	**19 07 13.5**	**-0.5**
DRME	**Dracevica, Mon**	**1.18**	**204**	⇓*i*Pg	**Pg**	**19 07 01.1**	**-1.8**
DRME				*e*Sg	**Sb**	**19 07 18.3**	**-0.1**
DRME	**Dracevica, Mon**	**1.18**	**204**	⇓*i*Pg	**Pg**	**19 07 01.5**	**-1.4**
DRME				*i* Sg	**Sn**	**19 07 20.7**	**+1.3**
DRME	**Dracevica, Mon**	**1.18**	**204**	⇑*i*Pg	**Pg**	**19 07 01.6**	**-1.4**
DRME				*i* Sg	**Sn**	**19 07 20.4**	**+1.0**
BUM	**Brajici-Budva**	**1.18**	**215**	⇓*i*Pg	**Pg**	**19 07 01.6**	**-1.4**
BUM				*i* Sg	**Sn**	**19 07 20.4**	**+0.8**
BUM	**Brajici-Budva**	**1.18**	**215**	⇓*i*Pg	**Pg**	**19 07 01.6**	**-1.4**
BUM				*i* Sg	**Sn**	**19 07 20.4**	**+0.8**
TREB	**Trebinje**	**1.21**	**243**	*e*Pg	**Pg**	**19 07 01.8**	**-1.8**
TREB				*e*Sg	**Sb**	**19 07 19.3**	**0.0**
PUK	**Puka**	**1.23**	**177**	*i* PG	**Pg**	**19 07 02.3**	**-1.5**
PUK				*i* SG	**Sg**	**19 07 15.8**	**-4.0**
HCY	**Herceg Novi**	**1.27**	**230**	*e*Pg	**Pn**	**19 07 02.9**	**-1.6**
HCY				*e*Sg	**Sb**	**19 07 21.0**	**-0.2**
HCY	**Herceg Novi**	**1.27**	**230**	⇑*i*Pg	**Pn**	**19 07 02.9**	**-1.6**
HCY				*i* Sg	**Sn**	**19 07 24.2**	**+2.5**
HCY	**Herceg Novi**	**1.27**	**230**	⇑*i*Pg	**Pn**	**19 07 02.9**	**-1.6**
HCY				*i* Sg	**Sn**	**19 07 24.3**	**+2.5**
TEKS	**Tekeris**	**1.30**	**351**	*e*Pg	**Pn**	**19 07 04.6**	**-0.3**
TEKS				*e*Sg	**Sn**	**19 07 23.2**	**+0.8**
TEKS	**Tekeris**	**1.30**	**351**	*e*Pg	**Pn**	**19 07 03.1**	**-1.8**
TEKS				*e*Sg	**Sb**	**19 07 21.2**	**-0.7**
DBRK	**Dubrovnik**	**1.37**	**245**	*e*Pn	**Pn**	**19 07 04.8**	**-1.0**
DBRK				Sn	**Sg**	**19 07 25.5**	**+1.3**
ULC	**Ulcinj**	**1.37**	**198**	*e*Pg	**Pn**	**19 07 05.3**	**-0.5**
ULC				*e*Sg	**Sn**	**19 07 26.5**	**+2.3**
ULC	**Ulcinj**	**1.37**	**198**	⇓*i*Pg	**Pn**	**19 07 05.1**	**-0.7**
ULC				*i* Sg	**Sn**	**19 07 26.6**	**+2.3**
SVIS	**Svilajnac**	**1.42**	**45**	*e*Pg	**Pn**	**19 07 05.7**	**-0.8**
SVIS				*e*Sg	**Sg**	**19 07 25.9**	**-0.1**
BOVS	**Bovan**	**1.42**	**74**	*e*Pg	**Pn**	**19 07 05.7**	**-0.8**
BOVS				*e*Sg	**Sb**	**19 07 24.9**	**-0.5**
BARS	**Barje**	**1.53**	**106**	*e*Pg	**Pn**	**19 07 07.3**	**-0.7**
BARS	**Barje**	**1.53**	**106**	*e*Pg	**Pg**	**19 07 12.6**	**+2.9**
BARS				*e*Sg	**Sn**	**19 07 28.1**	**-0.1**
BARS				*e*Sg	**Sg**	**19 07 36.0**	**+6.4**
STON	**Ston**	**1.60**	**256**	*i* Pn	**Pn**	**19 07 09.3**	**+0.3**
STON				Sn	**Sg**	**19 07 32.9**	**+1.1**
STON	**Ston**	**1.60**	**256**	⇓*i*Pn	**Pn**	**19 07 08.9**	**-0.1**
STON				*e*Sn	**Sg**	**19 07 31.2**	**-0.6**
BEO	**Beograd**	**1.61**	**17**	*e*Pg	**Pn**	**19 07 08.2**	**-0.9**
BEO				*e*Sg	**Sb**	**19 07 30.7**	**-0.2**
PHP	**Peshkopia**	**1.65**	**164**	*i* PN	**Pn**	**19 07 10.7**	**0.0**
PHP				*i* SN	**Sn**	**19 07 31.0**	**-0.1**
SKO	**Skopje**	**1.76**	**137**	*i* Pn	**Pn**	**19 07 08.1**	**-3.1**
KUBS	**Kucevo**	**1.76**	**49**	*e*Pg	**Pn**	**19 07 09.4**	**-1.8**
KUBS				*e*Sg	**Sb**	**19 07 35.4**	**+0.1**
FRGS	**Fruska Gora**	**1.89**	**360**	*e*Pg	**Pb**	**19 07 14.2**	**-0.9**
FRGS				*e*Sg	**Sg**	**19 07 41.6**	**+0.6**
FRGS	**Fruska Gora**	**1.89**	**360**	*e*Pn	**Pn**	**19 07 12.4**	**-0.6**
FRGS				*e*Sn	**Sn**	**19 07 37.3**	**+0.3**
DOB	**Doboj**	**1.92**	**320**	*e*Pn	**Pn**	**19 07 13.1**	**-0.3**
TIR	**Tirane**	**1.92**	**179**	P	**Pg**	**19 07 16.4**	**-0.7**
TIR	**Tirane**	**1.92**	**179**	*i* PN	**Pb**	**19 07 16.1**	**+0.5**
TIR				*i* SN	**Sn**	**19 07 36.0**	**-1.8**
TIR	**Tirane**	**1.92**	**179**		**Pg**	**19 07 16.4**	**-0.7**
MDVR	**Moldovita**	**2.04**	**41**	⇑P	**Pn**	**19 07 15.0**	**-0.1**
MDVR	**Moldovita**	**2.04**	**41**	⇑S	**Sn**	**19 07 41.9**	**+1.2**
MDVR	**Moldovita**	**2.04**	**41**		**Pn**	**19 07 15.0**	**-0.1**
MDVR					**Sn**	**19 07 41.9**	**+1.2**
MAKA	**Makarska**	**2.04**	**272**	*i* Pn	**Pb**	**19 07 14.4**	**-0.4**
MAKA				Sn	**Sg**	**19 07 46.1**	**+0.1**
ZAPS	**Zavoj**	**2.06**	**89**	*e*Pg	**Pn**	**19 07 15.7**	**+0.4**
ZAPS				*e*Sg	**Sb**	**19 07 43.6**	**-0.1**
BOSS	**Bosilegrad**	**2.10**	**111**	*e*Pg	**Pn**	**19 07 15.0**	**-0.9**
OHR	**Ohrid**	**2.27**	**161**	*i* Pn	**Pn**	**19 07 19.1**	**+0.8**
MGRS	**Mrkonjic Grad**	**2.29**	**301**	*e*Sn	**Sn**	**19 07 47.7**	**+0.8**
BANR	**Banloc**	**2.31**	**24**	⇑P	**Pn**	**19 07 17.8**	**-1.0**
BANR	**Banloc**	**2.31**	**24**		**Pn**	**19 07 17.8**	**-1.0**
STIP	**Stip**	**2.35**	**131**	*i* Pn	**Pn**	**19 07 19.2**	**-0.1**
DJES	**Djerdap**	**2.40**	**53**	*e*Pn	**Pn**	**19 07 20.1**	**+0.1**
DJES				*e*Sg	**Sb**	**19 07 55.2**	**+1.6**
BLY	**Banja Luka**	**2.41**	**309**	*e*Pn	**Pn**	**19 07 20.8**	**+0.7**
BLY				*e*Sn	**Sn**	**19 07 51.3**	**+1.5**
HERR	**Herculane**	**2.47**	**48**	⇑P	**Pn**	**19 07 20.6**	**-0.3**
HERR	**Herculane**	**2.47**	**48**		**Pn**	**19 07 20.6**	**-0.3**
KIJV	**Kijevo**	**2.59**	**288**	*e*Pn	**Pn**	**19 07 24.5**	**+1.9**
VTS	**Vitosha**	**2.59**	**103**	⇑P	**Pn**	**19 07 22.2**	**-0.6**
BZS	**Buzias**	**2.68**	**28**	P	**Pn**	**19 07 24.5**	**+0.7**
BZS	**Buzias**	**2.68**	**28**	⇓P	**Pn**	**19 07 24.5**	**+0.7**
BZS	**Buzias**	**2.68**	**28**		**Pn**	**19 07 24.5**	**+0.7**
FNA	**Florina**	**2.74**	**154**	P	**Pn**	**19 07 25.7**	**+1.0**
FNA	**Florina**	**2.74**	**154**		**Pn**	**19 07 25.7**	**+1.0**
VLO	**Vlora**	**2.81**	**185**	*i* SN	**Pn**	**19 07 28.2**	**+2.6**
VLO				*i* SN	**Sn**	**19 08 00.2**	**+0.6**
SRE	**Strehaia**	**2.81**	**59**	P	**Pn**	**19 07 26.0**	**+0.3**
SRE	**Strehaia**	**2.81**	**59**	⇑P	**Pn**	**19 07 26.0**	**+0.3**
SRE	**Strehaia**	**2.81**	**59**		**Pn**	**19 07 26.0**	**+0.3**
VAY	**Valandovo**	**2.82**	**133**	*i* Pn	**Pn**	**19 07 25.1**	**-0.6**
TPE	**Tepelena**	**2.97**	**177**	*i* SN	**Pn**	**19 07 30.9**	**+3.1**
TPE				*i* SN	**Sn**	**19 08 03.6**	**-0.1**
GZR	**Gura Zlata**	**3.00**	**44**	P	**Pn**	**19 07 27.0**	**-1.3**
GZR	**Gura Zlata**	**3.00**	**44**	⇓P	**Pn**	**19 07 27.0**	**-1.3**
GZR	**Gura Zlata**	**3.00**	**44**		**Pn**	**19 07 27.0**	**-1.3**
MORI	**Morici**	**3.05**	**283**	*e*Pn	**Pn**	**19 07 31.7**	**+2.9**
MORI				Sn	**Sb**	**19 07 58.2**	**-2.0**
MORH	**Mrgy, Hungar**	**3.06**	**345**	*e*Pn	**Pn**	**19 07 28.6**	**-0.5**
ZIRJ	**Zirje**	**3.06**	**279**	*i* Pn	**Pn**	**19 07 31.2**	**+2.2**
BAI	**Bari**	**3.07**	**226**	*e*Pn	**Pn**	**19 07 29.8**	**+0.6**
BAI				Sn	**Sn**	**19 08 08.0**	**+1.9**
CGL1	**Ceglie Messapi**	**3.14**	**215**	*e*Pn	**Pn**	**19 07 33.0**	**+2.8**
UDBI	**Udbina**	**3.19**	**295**	*e*Pn	**Pn**	**19 07 33.7**	**+2.9**
SIRR	**Siria**	**3.27**	**23**	⇑P	**Pn**	**19 07 31.4**	**-0.6**
KZN	**Kozani**	**3.30**	**153**	P	**Pn**	**19 07 34.4**	**+2.0**
MASS	**Massafra**	**3.30**	**218**	*e*Pn	**Pn**	**19 07 32.3**	**-0.1**
TAR1	**Taranto**	**3.33**	**215**	*e*Pn	**Pb**	**19 07 37.9**	**-1.7**
SG1	**Sgolgore (BA)**	**3.37**	**225**	*e*Pn	**Pn**	**19 07 34.0**	**+0.7**
SG1				Sn	**Sn**	**19 08 14.9**	**+1.4**
SGRT	**San Giovanni R**	**3.37**	**245**		**Pn**	**19 07 36.1**	**+2.7**
VLAD	**Vladila**	**3.41**	**76**	⇑P	**Pn**	**19 07 35.8**	**+2.0**
VLAD	**Vladila**	**3.41**	**76**	⇓S	**Sg**	**19 08 28.9**	**-0.8**
VLAD	**Vladila**	**3.41**	**76**		**Pn**	**19 07 35.8**	**+2.0**
DEV	**Deva**	**3.42**	**39**	P	**Pn**	**19 07 34.5**	**+0.5**
DEV	**Deva**	**3.42**	**39**	⇓P	**Pn**	**19 07 34.5**	**+0.5**
DEV	**Deva**	**3.42**	**39**		**Pn**	**19 07 34.5**	**+0.5**
MATE	**Matera**	**3.50**	**223**	⇓P	**Pn**	**19 07 33.0**	**-2.0**
PLVB	**Pleven**	**3.50**	**86**	⇑S	**Sb**	**19 08 26.0**	**+0.6**
DUGI	**Dugi Otok**	**3.53**	**283**	*e*Pn	**Pn**	**19 07 37.1**	**+1.6**
LOT	**Lotru**	**3.57**	**51**	⇑P	**Pn**	**19 07 36.2**	**0.0**
LOT	**Lotru**	**3.57**	**51**		**Pn**	**19 07 36.2**	**0.0**
KALN	**Kalnik**	**3.73**	**321**	*i* Pn	**Pn**	**19 07 38.7**	**+0.3**
LIT	**Litokhoron**	**3.74**	**147**	P	**Pn**	**19 07 38.6**	**+0.1**
LIT	**Litokhoron**	**3.74**	**147**		**Pn**	**19 07 38.6**	**+0.1**
NVLJ	**Novalja**	**3.80**	**292**	*e*Pn	**Pn**	**19 07 40.7**	**+1.5**
PTJ	**Puntijarka**	**3.81**	**315**	*e*Pn	**Pn**	**19 07 39.9**	**+0.4**
BEHE	**Becsehely**	**3.86**	**327**	*e*Pn	**Pn**	**19 07 40.8**	**+0.7**
OZLJ	**Ozalj**	**3.90**	**308**	*e*Pn	**Pn**	**19 07 41.6**	**+1.1**
HUMR	**Humele**	**3.94**	**70**	⇑P	**Pn**	**19 07 42.2**	**+1.1**
HUMR	**Humele**	**3.94**	**70**		**Pn**	**19 07 42.2**	**+1.1**
GCIS	**Gornji Cirnik**	**3.96**	**312**	*e*Pn	**Pg**	**19 07 54.0**	**-2.3**
GCIS				*e*Sn	**Sg**	**19 08 55.6**	**+8.0**
COPA	**Copaceanca**	**4.01**	**76**	⇑P	**Pn**	**19 07 40.9**	**-1.1**
CRES	**Cresnjev**	**4.03**	**311**	*e*Pn	**Pn**	**19 07 42.8**	**+0.4**
ARR	**Arges**	**4.04**	**57**	⇑P	**Pn**	**19 07 43.6**	**+1.0**
ARR	**Arges**	**4.04**	**57**		**Pn**	**19 07 43.6**	**+1.0**
KOGS	**Kog**	**4.07**	**323**	*i* Pn	**Pn**	**19 07 43.4**	**+0.5**
DRGR		**4.08**	**29**	P	**Pn**	**19 07 42.5**	**-0.6**
DRGR		**4.08**	**29**	⇑P	**Pn**	**19 07 42.5**	**-0.6**
DRGR		**4.08**	**29**		**Pn**	**19 07 42.5**	**-0.6**
MTUR	**Matau**	**4.25**	**61**	P	**Pn**	**19 07 45.5**	**+0.1**
MTUR	**Matau**	**4.25**	**61**	⇑P	**Pn**	**19 07 45.5**	**+0.1**
MTUR	**Matau**	**4.25**	**61**		**Pn**	**19 07 45.5**	**+0.1**
VOIR		**4.33**	**58**	P	**Pn**	**19 07 47.7**	**+1.1**
VOIR		**4.33**	**58**	⇑P	**Pn**	**19 07 47.6**	**+1.1**
VOIR		**4.33**	**58**		**Pn**	**19 07 47.6**	**+1.1**
RIY	**Rijeka**	**4.35**	**300**	*e*Pn	**Pn**	**19 07 47.2**	**+0.5**
PAOL	**Paolisi**	**4.50**	**242**		**Pn**	**19 07 50.9**	**+2.0**
CEY	**Cerknica**	**4.58**	**304**	*e*Pn	**Pn**	**19 07 50.5**	**+0.5**
PSZ	**Piszkesteto**	**4.65**	**1**	P	**Pn**	**19 07 50.9**	**-0.1**
PSZ	**Piszkesteto**	**4.65**	**1**	⇑P	**Pn**	**19 07 49.9**	**-1.1**
PSZ	**Piszkesteto**	**4.65**	**1**		**Pn**	**19 07 50.9**	**-0.1**
PSZ	**Piszkesteto**	**4.65**	**1**		**Pn**	**19 07 49.9**	**-1.1**
SRO	**Srobarova**	**4.67**	**347**	*e*P	**Pn**	**19 07 52.0**	**+0.9**
SRO	**Srobarova**	**4.67**	**347**	*e*PN	**Pn**	**19 07 52.0**	**+0.9**
LJU	**Ljubljana**	**4.69**	**308**	*e*Pn	**Pn**	**19 07 52.8**	**+1.4**
LJU	**Ljubljana**	**4.69**	**308**	*e*Pn	**Pn**	**19 07 51.7**	**+0.3**
TIP	**Timpagrande**	**4.69**	**210**	⇑P	**Pn**	**19 07 51.0**	**-0.5**
TIP	**Timpagrande**	**4.69**	**210**		**Pn**	**19 07 52.6**	**+1.0**
PERS	**Pernice**	**4.74**	**317**	*i* Pn	**Pn**	**19 07 52.9**	**+0.7**
DOPR	**Dopca**	**4.80**	**54**	⇑P	**

GEC2	**GERESS Array S**	**7.01 325**	*e*Pn		**Pn**	**19 08 25.9 +2.5**		
GERES	**GERESS Array B**	**7.01 325**	Pn		**Pn**	**19 08 24.7 +1.3**		
	comp=E,1.5nm,0.3s,baz=141,slow=14,SNR=10							
PRMA	**PARMA**	**7.01 286**			**Pn**	**19 08 24.5 +1.2**		
WTTA	**Wattenberg**	**7.02 308**	P		**Pn**	**19 08 26.4 +2.8**		
WTTA	**Wattenberg**	**7.02 308**	*e*Pn		**Pn**	**19 08 27.0 +3.4**		
WTTA			*e*Sn		**Sn**	**19 09 49.7 +6.0**		
WTTA	**Wattenberg**	**7.02 308**	*e*Pn		**Pn**	**19 08 26.4 +2.8**		
	comp=E,67nm,0.7s,SNR=7.4							
WTTA	**Wattenberg**	**7.02 308**				**19 08 26.4 +2.8**		
WATA	**Walderalm**	**7.09 308**	P		**Pn**	**19 08 27.4 +2.9**		
WATA	**Walderalm**	**7.09 308**	*e*Pn		**Pn**	**19 08 27.4 +2.9**		
	comp=E,29nm,0.4s,SNR=11							
WATA	**Walderalm**	**7.09 308**				**19 08 27.4 +2.9**		
VAE	**Valguarnera**	**7.10 217**	Pn		Pn	19 08 29.4 +4.8		
	comp=E,1.9nm,0.3s,baz=80,slow=6.3,SNR=2.4							
VAE			Sn		**Sn**	**19 09 50.5 +4.9**		
	baz=141,slow=14,SNR=2.0							
KRLC	**Kraliky**	**7.12 344**	*e*P		**Pn**	**19 08 26.1 +1.2**		
KRLC			*e*			19 09 45.9		
KRLC	**Kraliky**	**7.12 344**	*e*PN		**Pn**	**19 08 26.1 +1.2**		
KRLC			*e*SN		**Sn**	**19 09 45.9 -0.1**		
LVV	**L'vov**	**7.17 22**	*e*P		**Pn**	**19 08 24.5 -0.9**		
LVV			*e*S		**Sn**	**19 09 44.7 -2.3**		
LVV			MLR	MLR				
	comp=E,3μm,7.0s							
LVV			MLR	MLR				
	comp=N,2μm,6.0s							
LVV			MLR	MLR				
	comp=Z,3μm,6.0s							
SQTA	**Sankt Quirin**	**7.25 306**	P		**Pn**	**19 08 29.6 +2.9**		
SQTA	**Sankt Quirin**	**7.25 306**	Pn		**Pn**	**19 08 29.6 +2.9**		
	comp=Z,33nm,0.5s,SNR=14							
SQTA	**Sankt Quirin**	**7.25 306**			**Pn**	**19 08 29.6 +2.9**		
KHC	**Kasperske Hory**	**7.29 326**	*e*P		**Pn**	**19 08 29.0 +1.9**		
KHC			*e*			19 09 52.2		
KHC	**Kasperske Hory**	**7.29 326**	*e*PN		**Pn**	**19 08 29.0 +1.9**		
KHC			*e*SN		**Sn**	**19 09 52.2 +2.2**		
KHC	**Kasperske Hory**	**7.29 326**			**Pn**	**19 08 28.2 +1.1**		
MOTA	**Moosalm**	**7.37 307**	P		**Pn**	**19 08 31.2 +2.8**		
MOTA	**Moosalm**	**7.37 307**	Pn		**Pn**	**19 08 31.2 +2.8**		
	comp=Z,74nm,0.8s,SNR=11							
MOTA	**Moosalm**	**7.37 307**			**Pn**	**19 08 31.2 +2.8**		
FETA	**Feichten**	**7.44 303**	*e*Pn		**Pn**	**19 08 32.4 +3.1**		
	comp=Z,9.6nm,0.4s							
FETA	**Feichten**	**7.44 303**			**Pn**	**19 08 32.4 +3.1**		
PART	**Garmisch-Parte**	**7.45 308**	*e*Pn		**Pn**	**19 08 31.3 +2.0**		
DPC	**Dobruska-Polom**	**7.48 343**	*e*P		**Pn**	**19 08 31.3 +1.5**		
DPC			*e*			19 09 54.3		
DPC	**Dobruska-Polom**	**7.48 343**	*e*PN		**Pn**	**19 08 31.3 +1.5**		
DPC			*e*SN		**Sn**	**19 09 54.3 -0.5**		
GOPC	**GO Pecny, Ondr**	**7.50 334**	*e*P		**Pn**	**19 08 30.5 +0.5**		
GOPC	**GO Pecny, Ondr**	**7.50 334**	*e*PN		**Pn**	**19 08 30.5 +0.5**		
MSSA	**Maissana**	**7.53 282**			**Pn**	**19 08 32.1 +1.6**		
FUORN	**Ofenpass-Fuorn**	**7.56 300**	Pn		**Pn**	**19 08 32.4 +1.3**		
APE	**Apeiranthos**	**7.58 143**	*e*P		**Pn**	**19 08 32.6 +1.4**		
WET	**Wettzell**	**7.59 323**	*e*Sn		**Sn**	**19 09 57.4 -0.2**		
PRU	**Pruhonice**	**7.64 333**	*e*P		**Pn**	**19 08 33.2 +1.3**		
PRU	**Pruhonice**	**7.64 333**	*e*PN		**Pn**	**19 08 33.2 +1.3**		
RETA	**Reutte**	**7.64 307**	Pn		**Pn**	**19 08 34.6 +2.6**		
	comp=Z,16nm,0.7s							
RETA	**Reutte**	**7.64 307**			**Pn**	**19 08 34.6 +2.6**		
OSTC	**Ostas**	**7.70 343**	*e*PN		**Pn**	**19 08 33.2 +0.5**		
DAVOX	**Davos/Dischmat**	**7.87 300**	Pn		**Pn**	**19 08 37.4 +2.1**		
	comp=Z,4.7nm,0.3s,baz=122,slow=19,SNR=9.0							
DAVOX			Sn		**Sn**	**19 10 07.4 +2.9**		
	comp=Z,0.8nm,0.3s,baz=342,slow=20,SNR=1.5							
DAVOX			LR		LR	19 12 24.2		
	comp=Z,1μm,21.1s,baz=88,slow=44							
PGF	**Pioggiola**	**7.98 269**	*e*Pn		**Pn**	**19 08 36.8 +0.1**		
PGF			*e*Sn		**Sn**	**19 10 02.2 -4.9**		
	comp=Z,31nm,0.9s							
TUE	**Stuetta**	**8.10 297**	Pn		**Pn**	**19 08 40.8 +2.4**		
UBR	**Ueberruh**	**8.12 306**	*e*Pn		**Pn**	**19 08 41.2 +2.6**		
NORI	**Noerdlinger Ri**	**8.40 314**	*e*Pn		**Pn**	**19 08 43.4 +1.0**		
BRG	**Berggiesshubel**	**8.60 334**	PG		**Pn**	**19 08 47.8 +2.8**		
BRG			SG		Sn	19 10 42.2 +20		
	comp=Z,38nm,1.4s							
BRG	**Berggiesshubel**	**8.60 334**	P		**Pn**	**19 08 47.8 +2.8**		
NKC	**Novy Kostel**	**8.61 327**	*e*P		**Pn**	**19 08 46.9 +1.7**		
NKC	**Novy Kostel**	**8.61 327**	*e*PN		**Pn**	**19 08 46.9 +1.7**		
IDI	**Anoyia**	**8.88 152**	Sn		**Sn**	**19 10 30.3 +0.9**		
	comp=Z,0.9nm,0.3s,baz=248,slow=19,SNR=3.2							
SBF	**Sospel**	**9.01 278**	*e*Pn		**Pn**	**19 08 50.1 -0.7**		
SBF			*e*Sn		**Sn**	**19 10 26.8 -5.7**		
	comp=Z,20nm,0.6s							
STU	**Stuttgart**	**9.21 310**	*e*Pn		**Pn**	**19 08 56.8 +3.3**		
CLL	**Collm**	**9.28 332**	*e*P		**Pn**	**19 08 55.0 +0.7**		
CLL	**Collm**	**9.28 332**	*e*Pn		**Pn**	**19 08 55.0 +0.7**		
CLL			*e*			19 09 27.0		
CLL			*e*Sn		Sn	19 10 22.0 -17		
CLL			*e*			19 11 03.0		
CLL			*e*Sg			19 11 36.0		
CLL	**Collm**	**9.28 332**	*e*		**Pn**	**19 08 55.0 +0.7**		
BFO	**Black Forest**	**9.48 306**	P		**Pn**	**19 08 58.0 +0.7**		
BFO	**Black Forest**	**9.48 306**	*e*Pn		**Pn**	**19 08 58.4 +1.2**		
BFO	**Black Forest**	**9.48 306**			**Pn**	**19 08 58.0 +0.7**		
MBDF	**Montbardon**	**9.52 283**	*e*Pn		**Pn**	**19 08 56.0 -1.8**		
MBDF			*e*Sn		**Sn**	**19 10 39.5 -5.6**		
	comp=Z,30nm,0.8s							
FRF	**La Foret Royal**	**9.59 276**	*e*Pn		**Pn**	**19 08 59.4 +0.7**		
FRF			*e*Sn		**Sn**	**19 10 40.6 -6.1**		
	comp=Z,31nm,1.0s							
LPG	**La Plagne**	**9.62 288**	*e*Pn		**Pn**	**19 08 59.8 +0.5**		
LPG			*e*Sn		**Sn**	**19 10 41.8 -5.9**		
	comp=Z,53nm,0.9s							
LPL	**La Plagne**	**9.64 288**	*e*Pn		**Pn**	**19 08 59.4 -0.1**		
LPL			*e*Sn		**Sn**	**19 10 42.1 -5.9**		
	comp=Z,24nm,0.6s							
LMR	**La Mourre**	**9.71 275**	*e*Pn		**Pn**	**19 09 00.0 -0.3**		
LMR			*e*Sn		**Sn**	**19 10 43.5 -6.0**		
	comp=Z,14nm,0.9s							
AKASG	**Malin Array Be**	**9.82 38**	Pn		**Pn**	**19 09 02.4 +0.6**		
	comp=Z,1.5nm,0.3s,baz=219,slow=13,SNR=1.5							
CDF	**Champ du Feu**	**10.15 305**	*e*Pn		**Pn**	**19 09 06.2 -0.2**		
CDF			*e*Sn		**Sn**	**19 10 53.7 -6.7**		
	comp=Z,8.6nm,0.8s							
ORIF	**Oris-en-Rattie**	**10.16 284**	*e*Pn		**Pn**	**19 09 06.4 -0.2**		
ORIF			*e*Sn		**Sn**	**19 10 54.4 -6.5**		
	comp=Z,28nm,0.7s							
HINF	**Hinteralfeld**	**10.17 301**	*e*Pn		**Pn**	**19 09 07.8 +1.2**		
HINF			*e*Sn		**Sn**	**19 10 54.2 -6.6**		
	comp=Z,49nm,1.3s							
CABF	**La Chapelle**	**10.29 294**	*e*Pn		**Pn**	**19 09 08.6 +0.2**		
CABF			*e*Sn		**Sn**	**19 10 57.3 -6.7**		
	comp=Z,14nm,0.7s							
SMRF	**Simiane la Rot**	**10.36 279**	*e*Pn		**Pn**	**19 09 09.5 +0.3**		
SMRF			*e*Sn		**Sn**	**19 10 58.9 -6.5**		
	comp=Z,5.5nm,0.6s							
HAU	**Haudompre**	**10.55 301**	*e*Pn		**Pn**	**19 09 12.4 +0.5**		
HAU			*e*Sn		**Sn**	**19 11 03.4 -6.8**		
	comp=Z,6.5nm,0.5s							
BRTR	**Keskin Array B**	**10.95 104**	Pn		**Pn**	**19 09 21.0 +3.5**		
	comp=Z,0.0nm,0.3s,baz=288,slow=16,SNR=3.3							
VIVF	**Saint-Julien-l**	**11.02 283**	*e*Pn		**Pn**	**19 09 17.2 -1.1**		
VIVF			*e*Sn		**Sn**	**19 11 15.1 -6.6**		
	comp=Z,7.8nm,0.8s							
KEST	**Kesra**	**11.04 231**	Pn		Pn	19 09 24.8 +6.1		
	comp=Z,1.2nm,0.3s,baz=28,slow=15,SNR=9.2							
SSB	**Saint Sauveur**	**11.14 286**	*e*Pn		**Pn**	**19 09 19.6 -0.3**		
SSB	**Saint Sauveur**	**11.14 286**	Pn		**Pn**	**19 09 19.6 -0.3**		
PAGF	**Fort de Pagny**	**11.15 303**	*e*Pn		**Pn**	**19 09 18.8 -1.2**		
	baz=122							
PAGF			*e*Sn		**Sn**	**19 11 17.4 -7.3**		
	comp=Z,5.5nm,0.3s							
SFTF	**Sexfontaines**	**11.44 301**	*e*Pn		**Pn**	**19 09 23.1 -0.9**		
	baz=121							
MEZF	**Maizieres J'vi**	**11.54 302**	*e*Pn		**Pn**	**19 09 27.2 +1.9**		
	baz=122							
LASF	**Ste Croix**	**11.59 279**	*e*Pn		**Pn**	**19 09 25.5 -0.6**		
SMF	**Signal de Mont**	**11.81 292**	*e*Pn		**Pn**	**19 09 27.9 -1.2**		
SMF			*e*Sn		**Sn**	**19 11 34.0 -7.1**		
	comp=Z,11nm,0.6s							
LOR	**Lormes**	**11.93 295**	*e*Pn		**Pn**	**19 09 30.6 -0.2**		
	baz=115							
LOR			*e*Sn		**Sn**	**19 11 36.5 -7.5**		
	comp=Z,9.6nm,0.7s							
MEM	**Membach**	**11.95 313**	Pn		**Pn**	**19 09 32.0 +1.1**		
MEM			pPn		**pPn**	**19 09 33.2 +0.2**		
MEM			sPn		**sPn**	**19 09 33.8 -0.4**		
SSF	**Saint Saulge**	**12.12 294**	*e*Pn		**Pn**	**19 09 32.6 -0.7**		
SSF			*e*Sn		**Sn**	**19 11 41.6 -7.0**		
	comp=Z,4.4nm,0.6s							
AVF	**Avril sur Loir**	**12.17 293**	*e*Pn		**Pn**	**19 09 34.1 +0.1**		
AVF			*e*Sn		**Sn**	**19 11 42.3 -7.5**		
	comp=Z,26nm,1.1s							
BGF	**Bois d'Agland**	**12.47 291**	*e*Pn		**Pn**	**19 09 36.6 -1.5**		
BGF			*e*Sn		**Sn**	**19 11 49.4 -7.8**		
	comp=Z,12nm,0.5s							
BMRD	**Maredsous**	**12.47 310**	sPn		**Pn**	**19 09 41.1 +3.0**		
HYF	**Humbligny**	**12.74 294**	*e*Pn		**Pn**	**19 09 40.9 -0.9**		
TCF	**Toulx Ste Croi**	**12.87 290**	*e*Pn		**Pn**	**19 09 43.0 -0.6**		
TCF			*e*Sn		**Sn**	**19 11 59.0 -8.0**		
	comp=Z,22nm,1.0s							
CAF	**Calviac**	**12.87 284**	*e*Pn		**Pn**	**19 09 42.8 -0.8**		
RJF	**Les Rejaudoux**	**13.27 285**	*e*Pn		**Pn**	**19 09 47.8 -1.2**		
RJF			*e*Sn		**Sn**	**19 12 08.6 -8.2**		
	comp=Z,2.3nm,0.4s							
EPF	**Esparros**	**14.23 276**	*e*Pn		**Pn**	**19 10 01.7 -0.4**		
ETSF	**Etsaut**	**14.90 276**	*e*Pn		**Pn**	**19 10 11.6 +0.3**		
SJPF	**Ste Jean**	**15.35 277**	*e*Pn		**Pn**	**19 10 16.7 -0.6**		
MMAI	**Mount Meron Ar**	**15.95 125**	Pn		**P**	**19 10 27.7 -1.1**		
	baz=318,slow=11,SNR=5.4							
OBN	**Obninsk**	**16.08 37**[1]	*e*P		**Pn**	**19 10 26.7 +0.1**		
OBN			pmax	pmax				
	comp=Z,35nm,1.1s							
OBN			MLR	MLR				
	comp=Z,499nm,14.0s							
OBN	**Obninsk**	**16.08 37**	Pn		**Pn**	**19 10 25.2 -1.4**		
	comp=Z,0.3nm,0.3s,baz=349,slow=1.1,SNR=4.4							
SHA1	**Shidzhatmaz**	**16.57 81**	*e*P		**P**	**19 10 37.5 +1.7**		
KBZ	**Khabaz**	**16.75 80**	*e*P		**P**	**19 10 38.3 +0.8**		
KBZ			pmax	pmax				
	comp=Z,3.0nm,1.0s							
MOS	**Moscow**	**16.95 36**	*e*P		**Pn**	**19 10 35.4 -2.2**		
MOS			pmax	pmax				
	comp=E,68nm,1.3s							
HFS	**Hagfors**	**17.30 350**	P		**P**	**19 10 43.2 -0.2**		
	comp=Z,0.1nm,0.3s,baz=163,slow=10,SNR=2.6							
ESDC	**Sonseca Array**	**18.16 267**	P		**P**	**19 10 55.1 +1.8**		
	comp=Z,0.2nm,0.3s,baz=60,slow=11,SNR=4.2							
NB201	**NORSAR Array S**	**18.53 347**	P		**Pn**	**19 10 57.8 +0.6**		
FINES	**FINESS Array B**	**18.59 9**	P		**Pn**	**19 10 58.7 +0.9**		
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=3.4							
FIA1	**FINESS Array S**	**18.59 9**	P		**Pn**	**19 10 59.1 +1.2**		
FIA1			IAmb	IAmb		19 11 03.4		
	comp=Z,7.7nm,0.9s							
EKA	**Eskdalemuir Ar**	**19.14 317**	P		**Pn**	**19 11 04.8 +0.3**		
	baz=112,slow=9.2,SNR=3.4							
MTE	**Manteigas**	**20.55 271**	P		**P**	**19 11 19.5 +0.1**		
PESTR	**Estremoz**	**21.09 267**	P		**P**	**19 11 24.7 -0.4**		
PESTR			IAmb	IAmb		19 11 30.2		
	comp=Z,8.5nm,1.2s							
KLMR	**Klimovskoe**	**21.22 27**	*e*P		**P**	**19 11 26.5 +0.2**		
KLMR			pmax	pmax				
	comp=Z,51nm,1.4s							
KLMR	**Klimovskoe**	**21.22 27**	*e*		**P**	**19 11 26.6 +0.2**		
KLMR			AMP			19 11 32.4		
	comp=Z,51nm,1.4s							
PRGR	**Permogore**	**23.92 31**	*e*P		**P**	**19 11 53.5 -1.0**		
PRGR			pmax	pmax				
	comp=Z,28nm,1.0s							
ARCES	**ARCESS Array B**	**26.50 4**	P		**P**	**19 12 17.2 -0.6**		
	comp=Z,3.7nm,0.9s,baz=192,slow=13,SNR=4.0							
AKTO	**Aktyubinsk**	**26.85 61**	LR		LR	19 24 32.6		
	comp=Z,390nm,21.0s,baz=278,slow=40							
ARU	**Arti**	**27.82 48**	P		**P**	**19 12 30.7 +0.8**		
ARU	**Arti**	**27.82 48**	P		**P**	**19 12 30.9 +1.0**		
	comp=Z,0.7nm,0.5s,baz=235,slow=8.4,SNR=4.4							
GEYT	**Alibeck**	**29.38 87**	P		**P**	**19 12 45.0 +1.0**		
	comp=Z,1.8nm,0.6s,baz=278,slow=10,SNR=5.2							
GEYT	**Alibeck**	**29.38 87**	IAmb		IAmb	19 12 47.7		
	comp=Z,2.9nm,1.1s							
TOA0	**Torodi Ar. Sit**	**33.84 213**	P		**P**	**19 13 24.3 +1.0**		
TOA0			IAmb		IAmb	19 13 29.1		
	comp=Z,1.4nm,0.7s							
TORD	**Torodi Ar. Bea**	**33.84 213**	P		**P**	**19 13 24.2 +0.9**		
	comp=E,1.0nm,0.5s,baz=18,slow=9.2,SNR=14							
AAK	**Ala-Archa**	**39.41 71**	*e*P		**P**	**19 14 14.4 +3.6**		
AAK			pmax	pmax				
	comp=Z,2.0nm,1.2s							
KSH	**Kashi**	**41.62 75**	P		**P**	**19 14 27.5 -1.6**		
KSH			PP		**PnPn**	**19 16 07.5 -2.4**		
KSH			S		**S**	**19 20 38.3 -7.4**		
KSH			sS		pS	19 20 48.0 -0.8		
KSH			SS		SS	19 23 37.5 -13		
KSH			pmax	pmax				
	comp=Z,700nm,7.1s							
KSH			LR		LR			
	comp=N,410nm,6.8s							
KSH			LR		LR			
	comp=E,380nm,6.1s							
KSH			LR		LR			
	comp=Z,920nm,7.3s							
DBIC	**Dimbokro**	**42.43 218**	P		**P**	**19 14 36.2 +0.5**		
DBIC			pmax	pmax				
	comp=Z,11nm,1.5s							
DBIC	**Dimbokro**	**42.43 218**	P		**P**	**19 14 36.2 +0.5**		
DBIC			IAmb		IAmb	19 14 43.3		
	comp=Z,11nm,1.4s							
ZAA0	**Zalesovo Array**	**42.83 52**	P		**P**	**19 14 39.4 +0.8**		
ZAA0			IAmb		IAmb	19 14 40.4		
	comp=Z,4.1nm,1.1s							
ZALV	**Zalesovo Beam**	**42.83 52**	P		**P**	**19 14 38.6 +0.1**		
	comp=Z,1.5nm,0.7s,baz=276,slow=7.4,SNR=4.4							
MK31	**Makanchi Array**	**43.26 63**	P		**P**	**19 14 42.3 +0.1**		
MK31			pmax	pmax				
	comp=Z,2.0nm,1.1s							
MK31	**Makanchi Array**	**43.26 63**	P		**P**	**19 14 42.3 +0.1**		
MKAR	**Makanchi Array**	**43.26 63**	P		**P**	**19 14 42.3 +0.1**		
	comp=Z,0.5nm,0.5s,baz=278,slow=7.5,SNR=4.5							
WMQ	**Urumqi**	**47.91 65**	*e*P		**P**	**19 15 22.0 +3.0**		
SCHQ	**Schefferville**	**54.43 315**	P		**P**	**19 16 08.3 +0.6**		
SONM	**Songino Array**	**57.72 53**	P		**P**	**19 16 32.0 +0.4**		
SONM	**Songino Array**	**57.72 53**	P		**P**	**19 16 32.0 +0.4**		
	comp=Z,2.1nm,1.0s,baz=286,slow=7.8,SNR=6.1							
SONM	**Songino Array**	**57.72 53**	IAmb		IAmb	19 16 35.1		
	comp=Z,2.3nm,1.1s							
HHC	**Hu-ho-hao-te**	**64.65 57**	*e*P		**P**	**19 17 21.0 +2.3**		
HHC			pmax	pmax				
	comp=Z,1.0nm,0.9s							
HHC			pmax	pmax				
	comp=Z,65nm,4.7s							
YKA	**Yellowknife Ar**	**68.44 339**	P		**P**	**19 17 42.9 +0.5**		
	comp=Z,0.4nm,0.6s,baz=37,slow=5.2,SNR=6.7							
CMAR	**Chiang Mai Arr**	**69.77 83**	P		**P**	**19 17 51.8 +0.5**		
	comp=Z,0.9nm,0.8s,baz=306,slow=7.5,SNR=9.8							
KLR	**Kul'dur**	**70.31 40**	*e*P		**P**	**19 17 54.7 +0.5**		
KLR			pmax	pmax				
	comp=Z,2.0nm,1.1s							
ILAR	**Eielson Array**	**71.80 354**	P		**P**	**19 18 05.6 +2.7**		
	comp=Z,0.2nm,0.5s,baz=2.5,slow=5.1,SNR=4.8							
PDAR	**Pinedale Array**	**83.06 325**	P		**P**	**19 19 08.0 +1.3**		
	comp=Z,0.5nm,0.8s,baz=49,slow=4.5,SNR=3.6							
TXAR	**Lajitas Array**	**91.09 313**	P		**P**	**19 19 47.9 +2.1**		
	comp=Z,0.5nm,0.8s,baz=50,slow=6.0,SNR=3.6							
EFI	**East Falkland**	**116.04 223**	*i* PKIKP		**PKPdf**	**19 25 22.6 -0.5**		

*IDC **26** 19:12:03.7±0.5,38°.30N×20°.46E,h0km,mb4.3/28, mb1 4.4/38,mb1mx4.4/48,mbtmp4.3/38,ML4.2/8,MS3.6/3, Ms1 3.6/3,ms1mx3.1/56,Error ellipse: s-maj=11.5km s-min=10.6km az=168.0*

*MOS **26** 19:12:03.3±1.3,38°.19N×20°.28E,h13km,mb5.0/17,Error ellipse: s-maj=5.7km s-min=3.5km az=76.1*

*THE **26** 19:12:04.7,38°.24N×20°.37E,h10km±2km,ML4.4/9,Error ellipse: s-maj=2.3km s-min=0.6km az=72.0*

*MED_RC **26** 19:12:04.0±0.4,38°.07N×20°.33E,h17km±1km,MW4.7/15, Moment Tensor Solution.Mantle waves: s15,c19; Duration: 1ᵗ0 Moment tensor: Scale 10¹⁶Nm; Mrr0.80±.15; Mθθ0.04±.09; Mϕϕ-0.84±.09; Mrθ0.77±.21; Mθϕ0.42±.05; Mϕr-0.03±.11; Best double couple: M₀1.18000×10¹⁶ NP1:φ5.00000°,δ43.00000°, λ139.00000°. NP2:φ127.00000°,δ64.00000°,λ55.00000°. Principal axes: T 1.3000, Plg56.0000°, Azm350.0000°; N -0.2300, Plg31.0000°, Azm144.0000°; P -1.0700, Plg12.0000°, Azm242.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

*ATH **26** 19:12:04.7,38°.24N×20°.40E,h18km±1km,ML4.4/17 Error ellipse: s-maj=2.0km s-min=0.9km az=77.0*

*TIR **26** 19:12:04.4,38°.24N×20°.54E,h26km,Md4.6/7*

*PDG **26** 19:12:05.3±0.3,38°.32N×20°.34E,h18km±1km,MD4.5/1, ML4.3/14,Error ellipse: s-maj=2.0km s-min=0.8km az=90.0*

*NEIC **26** 19:12:05.2±2.9,38°.26N±0°.05×20°.37E±0°.05,h10km±2km, Error ellipse: s-maj=6.9km s-min=5.8km az=174.0*

*BGR **26** 19:12:06.7±0.8,38°.51N×21°.14E,h10km,Error ellipse: s-maj=32.2km s-min=8.9km az=56.0*

ISC 26 19:12:05.3±0.7,38°.24N±0°.02×20°.38E±0°.02,h13km±4km, n536,σ1§73/627,mb4.5/59,MS4.4/4,28C-16D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time		Res
				Op	ISC	h m s		ISC
VLS	**Valsamata**	**0.17**	**109**	P	**Pg**	**19 12 08.8**		**-0.5**
VLS				S	**Sg**	**19 12 11.8**		**-0.3**
VLS	**Valsamata**	**0.17**	**109**	P	**Pg**	**19 12 08.8**		**-0.5**
VLS				S	**Sg**	**19 12 11.8**		**-0.3**
VLS	**Valsamata**	**0.17**	**109**	P	**Pg**	**19 12 08.8**		**-0.5**
VLS	**Valsamata**	**0.17**	**109**	P	**Pg**	**19 12 08.8**		**-0.5**
VLS				S	**Sg**	**19 12 11.7**		**-0.4**
VLS				AML	AML			
VLS				AML	AML			
FSK	**Fiskardo**	**0.27**	**32**	P	**Pg**	**19 12 10.2**		**-0.6**
FSK				S	**Sg**	**19 12 14.2**		**-0.4**
	131μm,0.5s							
FSK	**Fiskardo**	**0.27**	**32**	P	**Pg**	**19 12 10.3**		**-0.6**
FSK				S	**Sg**	**19 12 14.4**		**-0.2**
KFL	**Anninata**	**0.34**	**111**	P	**Pg**	**19 12 11.9**		**-0.3**
KFL				S	**Sg**	**19 12 17.4**		**+0.4**
	296μm,0.4s							
KFL	**Anninata**	**0.34**	**111**	P	**Pg**	**19 12 11.9**		**-0.3**
KFL				S	**Sg**	**19 12 16.8**		**-0.2**
KFL				AML	AML	19 12 17.8		
KFL				AML	AML	19 12 18.1		
VLMS	**Volimes, Zakyn**	**0.42**	**148**	P	**Pg**	**19 12 13.6**		**-0.1**
VLMS				S	**Sg**	**19 12 19.4**		**+0.1**
VLMS				AML	AML	19 12 21.9		
VLMS				AML	AML	19 12 21.9		
EVGI	**Lefkada island**	**0.44**	**29**	P	**Pg**	**19 12 13.3**		**-0.7**
EVGI				S	**Sg**	**19 12 20.1**		**+0.1**
EVGI	**Lefkada island**	**0.44**	**29**	P	**Pg**	**19 12 13.4**		**-0.6**
MGNA	**Meganis**	**0.53**	**37**	P	**Pg**	**19 12 14.8**		**-0.9**
MGNA				S	**Sg**	**19 12 22.8**		**+0.1**
MGNA				AML	AML	19 12 23.5		
	comp=E,64904μm,0.3s							
MGNA				AML	AML	19 12 23.6		
	comp=N,44506μm,0.3s							
LKD2	**Lefkada island**	**0.59**	**21**	P	**Pg**	**19 12 15.6**		**-1.3**
LKD2				S	**Sg**	**19 12 24.0**		**-0.8**
	comp=N,25μm,0.6s							
LKD2	**Lefkada island**	**0.59**	**21**	P	**Pg**	**19 12 15.9**		**-1.0**
LKD2				AML	AML	19 12 33.8		
	comp=E,48093μm,0.6s							
LKD2				AML	AML	19 12 34.5		
	comp=N,52201μm,0.7s							
TSLK	**Tsoukalades, L**	**0.63**	**20**	P	**Pg**	**19 12 16.6**		**-0.9**
TSLK	**Tsoukalades, L**	**0.63**	**20**	P	**Pg**	**19 12 16.8**		**-0.7**
TSLK				S	**Sg**	**19 12 25.9**		**0.0**
TSLK				AML	AML	19 12 29.5		
	comp=N,37192μm,0.8s							
TSLK				AML	AML	19 12 33.0		
	comp=E,47279μm,0.9s							
RLS	**Riolos of Patr**	**0.87**	**101**	P	**Pg**	**19 12 21.3**		**-0.8**
RLS				S	**Sg**	**19 12 32.9**		**-0.7**
	comp=E,20μm,0.7s							
RLS	**Riolos of Patr**	**0.87**	**101**	P	**Pg**	**19 12 21.4**		**-0.8**
RLS				S	**Sg**	**19 12 33.3**		**-0.3**
RLS				AML	AML	19 12 37.2		
	comp=E,36584μm,0.6s							
RLS				AML	AML	19 12 37.6		
	comp=N,32599μm,0.5s							
PVO	**Paravola**	**0.98**	**67**	P	**Pb**	**19 12 23.3**		**-0.7**
PVO				S	**Sn**	**19 12 38.8**		**+0.4**
	comp=N,27μm,0.5s							
PVO	**Paravola**	**0.98**	**67**	P	**Pb**	**19 12 23.5**		**-0.6**
PVO				AML	AML	19 12 40.2		
	comp=E,48821μm,0.5s							
PVO				AML	AML	19 12 44.0		
	comp=N,58506μm,0.5s							
DRO	**Drossia**	**1.09**	**105**	P	**Pb**	**19 12 25.2**		**-0.7**
DRO				S	**Sn**	**19 12 41.8**		**+0.7**
	comp=N,56μm,0.5s							
DRO	**Drossia**	**1.09**	**105**	P	**Pb**	**19 12 25.3**		**-0.7**
DRO				AML	AML	19 12 50.5		
DRO				AML	AML	19 12 50.5		
	comp=N,87458μm,0.5s							
UPR	**University Cam**

AXAR comp=E,29102µm,0.6s AML AML 19 13 19.5
comp=N,28886µm,0.6s
TPE Tepelena 2.08 352 *i* PN **Pn** **19 12 41.1 +1.3**
TPE *i* SN **Sb** **19 13 09.3 +0.8**
TPE Tepelena 2.08 352 P **Pn** **19 12 41.2 +1.3**
KZN Kozani 2.33 27 P **Pb** **19 12 47.1 -0.1**
VLO Vlora 2.33 343 *i* PN **Pn** **19 12 44.4 +1.0**
VLO *i* SN **Sb** **19 13 16.2 +0.4**
VLO Vlora 2.33 343 P **Pn** **19 12 44.5 +1.2**
VLO AML AML
comp=N,6240µm,0.7s
VLO AML AML
comp=E,5705µm,0.8s
SCTE Santa Cesarea 2.36 322 P **Pn** **19 12 44.1 +0.4**
SCTE AML AML
comp=E,5380µm,0.7s
SCTE AML AML
comp=N,4570µm,0.6s
SCTE Santa Cesarea 2.36 322 **Pn** **19 12 44.2 +0.5**
LIT Litokhoron 2.48 41 P **Pn** **19 12 47.1 +1.7**
LIT Litokhoron 2.48 41 **Pn** **19 12 47.1 +1.7**
LIT Sn **Sn** **19 13 11.3 -4.3**
ATH Athens Observa 2.64 95 P **Pn** **19 12 49.8 +2.2**
FNA Florina 2.66 17 P **Pn** **19 12 49.6 +1.7**
FNA Florina 2.66 17 **Pn** **19 12 49.6 +1.7**
ATHU Athens Univers 2.70 95 P **Pn** **19 12 49.6 +1.3**
OHR Ohrid 2.89 6 *i* Pn **Pn** **19 12 53.1 +2.1**
TIP Timpagrande 2.99 290 ⇑P **Pn** **19 12 53.4 +1.1**
TIP Timpagrande 2.99 290 ⇑S **Sn** **19 13 29.3 +1.2**
TIP Timpagrande 2.99 290 P **Pn** **19 12 53.5 +1.1**
TIP AML AML
comp=N,531µm,1.1s
TIP AML AML
comp=E,758µm,1.0s
TIP AML AML
comp=E,650µm,1.1s
TIP AML AML
comp=N,647µm,1.1s
TIP Timpagrande 2.99 290 **Pn** **19 12 53.2 +0.8**
TIP Sn **Sn** **19 13 25.4 -2.6**
SERS Sersale 3.00 287 P **Pn** **19 12 53.3 +0.7**
SERS AML AML
comp=N,1110µm,0.6s
SERS AML AML
comp=E,1085µm,0.7s
SERS AML AML
comp=N,990µm,1.0s
SERS AML AML
comp=E,890µm,0.7s
PIPA Pietrapaola 3.05 295 P **Pn** **19 12 54.5 +1.3**
PIPA AML AML
comp=E,1365µm,0.9s
PIPA AML AML
comp=N,1720µm,0.9s
PIPA AML AML
comp=N,1820µm,0.9s
PIPA AML AML
comp=E,1350µm,0.9s
MESG Mesagne 3.06 321 P **Pn** **19 12 53.7 +0.4**
MESG AML AML
comp=N,3080µm,0.8s
MESG AML AML
comp=E,3070µm,0.7s
PLAC Placanica 3.11 275 P **Pn** **19 12 54.6 +0.6**
PLAC AML AML
comp=E,2905µm,0.8s
PLAC AML AML
comp=N,1048µm,1.2s
PLAC AML AML
comp=N,2930µm,0.8s
PLAC AML AML
comp=E,1090µm,0.5s
TIR Tirane 3.13 353 P **Pn** **19 12 55.4 +1.1**
TIR Tirane 3.13 353 *i* PN **Pn** **19 12 55.4 +1.1**
TIR *i* SN **Sb** **19 13 41.6 +2.7**
TIR Tirane 3.13 353 ⇓P **Pn** **19 12 55.1 +0.7**
TIR Tirane 3.13 353 P **Pn** **19 12 55.5 +1.2**
TIR Tirane 3.13 353 **Pn** **19 12 55.4 +1.1**
CELI Celico 3.24 292 P **Pn** **19 12 56.7 +0.8**
CELI AML AML
comp=E,1715µm,1.2s
CELI AML AML
comp=N,1950µm,1.3s
CELI AML AML
comp=N,790µm,1.3s
CELI AML AML
comp=E,694µm,1.2s
CGL1 Ceglie Messapi 3.30 318 ⇓*i* PN **Pn** **19 12 57.0 +0.4**
TAR1 Taranto 3.31 315 ⇓*i* PN **Pn** **19 12 57.5 +0.7**
SOI Samo 3.41 269 P **Pn** **19 12 58.5 +0.3**
SOI AML AML
comp=E,1170µm,1.6s
SOI AML AML
comp=N,1260µm,0.7s
CAR1 CAROLEI 3.42 289 P **Pn** **19 12 59.5 +1.3**
CAR1 S **Sn** **19 13 39.5 +0.9**
CAR1 AML AML
comp=N,2075µm,1.5s
CAR1 AML AML
comp=E,2595µm,0.8s
CAR1 AML AML
comp=E,2610µm,0.8s
CAR1 AML AML
comp=N,2375µm,0.7s
PHP Peshkopia 3.44 1 *i* PN **Pn** **19 13 00.0 +1.4**
PHP *i* SN **Sb** **19 13 44.0 -3.9**
MPAZ Palizzi 3.46 267 P **Pn** **19 12 59.1 +0.2**
MPAZ S **Sn** **19 13 38.1 -1.7**
MPAZ AML AML
comp=E,2415µm,0.5s
MPAZ AML AML
comp=N,2000µm,0.7s
MPAZ Palizzi 3.46 267 P **Pn** **19 12 59.1 +0.2**
MASS Massafra 3.47 315 ⇓*i* PN **Pn** **19 12 59.6 +0.7**
VAY Valandovo 3.51 28 *i* Pn **Pn** **19 13 00.5 +1.0**
CEL Celeste 3.53 272 **Pn** **19 13 00.0 +0.1**
CEL Sn **Sn** **19 13 39.6 -2.0**
SALB San Lorenzo Be 3.54 299 P **Pn** **19 13 02.3 +2.2**
SALB AML AML
comp=E,852µm,1.0s
SALB AML AML
comp=E,897µm,1.0s
SALB AML AML
comp=N,829µm,1.1s
SALB AML AML
comp=N,786µm,1.0s
JOPP Joppolo 3.55 277 P **Pn** **19 13 00.8 +0.7**
JOPP S **Sn** **19 13 41.3 -0.6**
JOPP AML AML
comp=E,2000µm,0.9s
JOPP AML AML
comp=N,1175µm,0.9s
GMB Gambarie 3.59 270 P **Pn** **19 13 00.9 +0.2**
GMB S **Sn** **19 13 42.5 -0.4**
GMB AML AML
comp=N,8325µm,1.0s
GMB AML AML
comp=E,14500µm,0.6s
NOCI Noci 3.62 316 P **Pn** **19 13 01.4 +0.4**
NOCI S **Sn** **19 13 41.2 -2.4**
NOCI AML AML
comp=E,1985µm,0.7s
NOCI AML AML
comp=N,2365µm,1.4s
T0702 Acquaformosa (3.66 295 P **Pn** **19 13 04.5 +2.8**
MTTG Motta San Giov 3.70 268 P **Pn** **19 13 02.3 +0.1**
MTTG S **Sn** **19 13 42.2 -3.5**
MTTG AML AML
comp=E,3140µm,0.7s
MTTG AML AML
comp=N,2705µm,0.7s
STIP Stip 3.72 21 *i* Pn **Pn** **19 13 04.7 +2.3**
MATE Matera 3.73 311 ⇑P **Pn** **19 13 03.4 +0.9**
MATE Matera 3.73 311 P **Pn** **19 13 03.1 +0.6**
MATE AML AML
comp=E,1410µm,0.7s
MATE AML AML
comp=N,1715µm,0.5s
SKO Skopje 3.82 12 *i* Pn **Pn** **19 13 05.6 +1.8**
PUK Puka 3.82 355 *i* PN **Pn** **19 13 04.4 +0.5**
PUK *i* SN **Sn** **19 13 49.4 +0.7**
PUK Puka 3.82 355 P **Pn** **19 13 04.4 +0.5**
PUK S **Sn** **19 13 47.0 -1.7**
PUK AML AML
comp=E,1046µm,1.6s
PUK AML AML
comp=N,722µm,1.5s
PUK Puka 3.82 355 S **Sn** **19 13 47.0 -1.7**
ULC Ulcinj 3.82 347 ⇑*i* Pn **Pn** **19 13 03.3 -0.6**
ULC *i* Sn **Sn** **19 13 47.6 -1.1**
T0721 Laino Castello 3.83 298 P **Pn** **19 13 07.0 +3.1**
T0721 AML AML
comp=E,2215µm,1.6s
T0721 AML AML
comp=N,1480µm,0.8s
T0721 AML AML
comp=N,1410µm,0.9s
T0721 AML AML
comp=E,2174µm,1.6s
MSRU Castanea 3.84 272 P **Pn** **19 13 04.0 0.0**
SG1 Sgolgore (BA) 3.87 313 *e*Pn **Pn** **19 13 05.2 +0.8**
SG1 Sn **Sn** **19 13 48.6 -1.1**
ATN Antennamare 3.87 270 S **Sn** **19 13 51.0 +1.0**
ATN Antennamare 3.87 270 S **Sn** **19 13 51.0 +1.0**
SCHR S. Chirico Rap 3.88 302 P **Pn** **19 13 06.4 +1.8**
SCHR AML AML
comp=E,702µm,1.0s
SCHR AML AML
comp=N,836µm,1.2s
BAI Bari 3.94 318 *e*Pn **Pn** **19 13 05.8 +0.4**
BAI Sn **Sn** **19 13 52.2 +0.7**
AMUR Altamura 3.95 314 P **Pn** **19 13 06.2 +0.6**
AMUR AML AML
comp=E,1415µm,0.7s
AMUR AML AML
comp=N,1310µm,0.8s
SIRI Monte Sirino - 4.01 300 P **Pn** **19 13 08.4 +1.9**
SIRI AML AML
comp=N,745µm,0.4s
SIRI AML AML
comp=E,684µm,1.0s
SIRI AML AML
comp=N,751µm,0.4s
SIRI AML AML
comp=E,694µm,1.0s
DRME Dracevica, Mon 4.05 347 *e*Pn **Pn** **19 13 06.5 -0.5**
DRME Dracevica, Mon 4.05 347 ⇓*i* Pn **Pn** **19 13 06.7 -0.3**
DRME *i* Sn **Sn** **19 13 52.6 -1.6**
MCEL Monticello 4.12 302 P **Pn** **19 13 09.5 +1.5**
MCEL AML AML
comp=E,1017µm,1.3s
MCEL AML AML
comp=N,935µm,0.9s
MCEL AML AML
comp=N,936µm,0.9s
MCEL AML AML
comp=E,1009µm,1.4s
MTSN Montesano sull 4.13 301 P **Pn** **19 13 09.4 +1.3**
MTSN AML AML
comp=E,805µm,1.1s
MTSN AML AML
comp=N,946µm,1.2s
BCI Bajram Curri 4.13 357 *i* PN **Pn** **19 13 09.6 +1.5**
BCI *i* SN **Sn** **19 13 57.8 +1.4**
NOV Novara 4.14 269 P **Pn** **19 13 08.4 +0.2**
NOV AML AML
comp=E,2895µm,0.9s
NOV AML AML
comp=N,3080µm,0.6s
BUM Brajici-Budva 4.22 345 ⇓*i* Pn **Pn** **19 13 08.9 -0.4**
BUM *i* Sn **Sn** **19 13 56.3 -2.1**
APE Apeiranthos 4.25 104 *e*P **Pn** **19 13 12.8 +3.1**
APE Apeiranthos 4.25 104 ⇑P Pn 19 13 14.8 +5.1
ACER Acerenza 4.28 308 P **Pn** **19 13 11.2 +1.0**
ACER AML AML
comp=E,3390µm,0.9s
ACER AML AML
comp=N,4110µm,1.0s
ACER AML AML
comp=E,3480µm,1.0s
ACER AML AML
comp=N,4215µm,1.0s
ACER Acerenza 4.28 308 **Pn** **19 13 11.1 +1.0**
ACER Sn **Sn** **19 13 59.3 -0.5**
PDG Podgorica 4.28 349 ⇑P **Pn** **19 13 11.3 +1.3**
PDG Podgorica 4.28 349 ⇑S **Sn** **19 13 58.3 -1.5**
PDG Podgorica 4.28 349 P **Pn** **19 13 10.4 +0.3**
PDG S **Sn** **19 14 01.0 +1.2**
PDG AML AML
comp=N,735µm,0.5s
PDG AML AML
comp=E,487µm,0.8s
PDG AML AML
comp=N,582µm,0.4s
PDG AML AML
comp=E,605µm,0.8s
PDG Podgorica 4.28 349 S **Sn** **19 14 01.0 +1.2**
PDG Podgorica 4.28 349 *e*Pn **Pn** **19 13 09.9 -0.1**
PDG Podgorica 4.28 349 **Pn** **19 13 10.2 +0.2**
PDG Sn **Sn** **19 13 59.5 -0.3**
TTG Podgorica 4.28 349 *e*Pn **Pn** **19 13 10.2 +0.2**
TTG *i* Sn **Sn** **19 13 58.6 -1.2**
PZUN Potenza 4.28 306 S **Sn** **19 13 59.0 -0.9**
PZUN Potenza 4.28 306 S **Sn** **19 13 59.0 -0.9**
MRVN Minervino Murg 4.29 312 P **Pn** **19 13 11.1 +0.8**
MRVN S **Sn** **19 13 60.0 -0.2**
MRVN AML AML
comp=N,793µm,1.0s
MRVN AML AML
comp=E,1003µm,1.6s
MRVN Minervino Murg 4.29 312 S **Sn** **19 13 60.0 -0.2**
MUCR Ucria 4.35 269 P **Pn** **19 13 11.5 +0.4**
MUCR AML AML
comp=N,1845µm,0.6s
MUCR AML AML
comp=E,1270µm,0.6s
SSY Sortino 4.35 257 P **Pn** **19 13 09.2 -1.9**
SSY AML AML
comp=E,1585µm,0.4s
SSY AML AML
comp=N,2280µm,1.2s
PALZ Palazzo San Ge 4.36 310 P **Pn** **19 13 12.6 +1.4**
PALZ AML AML
comp=E,5640µm,1.0s
PALZ AML AML
comp=N,3780µm,1.6s
PALZ Palazzo San Ge 4.36 310 P **Pn** **19 13 12.6 +1.4**
HAVL Avola 4.36 255 P **Pn** **19 13 09.6 -1.7**
HAVL S **Sn** **19 13 60.0 -2.0**
HAVL AML AML
comp=N,3505µm,0.4s
HAVL AML AML
comp=E,3975µm,0.3s
HAVL Avola 4.36 255 S **Sn** **19 13 60.0 -2.0**
PVY Plav 4.37 356 ⇑*i* Pn **Pn** **19 13 11.3 -0.1**
PVY *i* Sn **Sn** **19 14 00.7 -1.5**
EPZF Pizzo Felice 4.38 266 P **Pn** **19 13 11.4 -0.1**
EPZF S **Sn** **19 14 01.6 -0.9**
EPZF AML AML
comp=E,2080µm,0.9s
EPZF AML AML
comp=N,2660µm,0.5s
HCY Herceg Novi 4.45 342 *e*Pn **Pn** **19 13 11.3 -1.1**
HCY Herceg Novi 4.45 342 ⇓*i* Pn **Pn** **19 13 11.3 -1.1**
HCY *i* Sn **Sn** **19 14 02.5 -1.5**
CEME Cevo 4.45 346 ⇑*i* Pn **Pn** **19 13 11.2 -1.3**
CEME *i* Sn **Sn** **19 14 02.2 -1.9**
HLNI Lentini 4.45 260 P **Pn** **19 13 10.4 -2.0**
HLNI S **Sn** **19 14 01.0 -3.1**
HLNI AML AML
comp=E,1410µm,0.6s
HLNI AML AML
comp=N,1845µm,0.4s
HLNI Lentini 4.45 260 S **Sn** **19 14 01.0 -3.1**
HPAC Pachino 4.46 251 P **Pn** **19 13 12.3 -0.3**
HPAC AML AML
comp=E,3040µm,0.6s
HPAC AML AML
comp=N,2415µm,0.7s
MEU Monte Lauro 4.47 257 P **Pn** **19 13 11.9 -0.9**
MEU S **Sn** **19 14 02.4 -2.3**
MEU AML AML
comp=N,5725µm,0.3s
MEU AML AML
comp=E,5295µm,0.4s
MEU Monte Lauro 4.47 257 P **Pn** **19 13 11.9 -0.9**
CDRU Civita di Ruta 4.53 301 P **Pn** **19 13 16.1 +2.5**
CDRU Civita di Ruta 4.53 301 P **Pn** **19 13 16.1 +2.5**
CDRU AML AML
comp=E,540µm,1.2s
CDRU AML AML
comp=N,398µm,1.0s
HVZN Vizzini 4.62 259 P **Pn** **19 13 13.2 -1.6**
HVZN Vizzini 4.62 259 P **Pn** **19 13 13.2 -1.6**
HVZN S **Sn** **19 14 07.0 -1.3**
HVZN AML AML
comp=N,10070µm,0.6s
HVZN AML AML
comp=E,13650µm,0.5s
HVZN Vizzini 4.62 259 S **Sn** **19 14 07.0 -1.3**
GALF Gagliano Caste 4.62 265 P **Pn** **19 13 14.2 -0.7**
GALF AML AML
comp=E,1355µm,0.6s
GALF AML AML
comp=N,1790µm,0.8s
GALF Gagliano Caste 4.62 265 P **Pn** **19 13 14.2 -0.7**
HMDC Modica 4.63 256 P **Pn** **19 13 13.4 -1.4**
HMDC Modica 4.63 256 P **Pn** **19 13 13.4 -1.4**
HMDC AML AML
comp=E,2000µm,1.3s
HMDC AML AML
comp=N,1895µm,0.8s
IVA Berane 4.65 356 ⇓*i* Pn **Pn** **19 13 15.2 0.0**
IVA *i* Sn **Sn** **19 14 07.5 -1.5**
NKME Niksic 4.66 347 ⇓*i* Pn **Pn** **19 13 14.8 -0.5**
NKME *i* Sn **Sn** **19 14 07.6 -1.6**
KOME Kolasin 4.66 352 ⇓*i* Pn **Pn** **19 13 15.3 -0.1**
KOME *i* Sn **Sn** **19 14 07.1 -2.2**
IDI Anoyia 4.66 128 Pn **Pn** **19 13 18.1 +2.7**
comp=N,4.9nm,0.3s,baz=339,slow=18,SNR=8.1
IDI Sn **Sn** **19 14 11.5 +2.0**
comp=N,20nm,0.3s,baz=346,slow=23,SNR=11
NKY Niksic 4.69 347 ⇑*i* Pn **Pn** **19 13 14.9 -1.0**
NKY *i* Sn **Sn** **19 14 08.2 -2.0**
TREB Trebinje 4.74 342 *e*Pn **Pn** **19 13 14.5 -1.9**
DBRK Dubrovnik 4.75 340 *e*Pn **Pn** **19 13 15.7 -0.8**
DBRK Sn **Sn** **19 14 08.4 -2.9**
VAE Valguarnera 4.78 263 Pn **Pn** **19 13 18.7 +1.6**
comp=N,3.2nm,0.3s,baz=84,slow=18,SNR=3.7
VAE Sn **Sn** **19 14 16.9 +4.5**
comp=N,19nm,0.3s,baz=317,slow=5.4,SNR=5.9
HBSP Bosco Santo Pi 4.80 258 P **Pn** **19 13 16.6 -0.6**
HBSP AML AML
comp=E,3640µm,1.2s
HBSP AML AML
comp=N,3295µm,0.9s
HBSP Bosco Santo Pi 4.80 258 P **Pn** **19 13 16.6 -0.6**
SNAL S. Angelo Dei 4.81 306 P **Pn** **19 13 20.1 +2.6**
SNAL S. Angelo Dei 4.81 306 P **Pn** **19 13 20.1 +2.6**
SGTA Sant Agata di 4.83 308 P **Pn** **19 13 20.3 +2.5**
SGTA Sant Agata di 4.83 308 P **Pn** **19 13 20.3 +2.5**
SGTA AML AML
comp=N,955µm,1.4s
SGTA AML AML
comp=E,1022µm,1.2s
SGTA AML AML
comp=N,990µm,1.6s
SGTA AML AML
comp=E,1006µm,1.2s
BRY Bratogost 4.87 344 *e*Pn **Pn** **19 13 18.3 0.0**
MSAG Monte S. Angel 4.88 317 P **Pn** **19 13 19.1 +0.6**
MSAG S **Sn** **19 14 12.0 -2.9**
MSAG AML AML
comp=E,1028µm,1.1s
MSAG AML AML
comp=N,1990µm,0.3s
MSAG AML AML
comp=N,2070µm,1.0s
MSAG AML AML
comp=E,953µm,0.7s
MSAG Monte S. Angel 4.88 317 P **Pn** **19 13 19.1 +0.6**
MSAG Monte S. Angel 4.88 317 S **Sn** **19 14 12.0 -2.9**
VTS Vitosha 4.89 26 P **Pn** **19 13 19.7 +1.1**
VTS Vitosha 4.89 26 ⇓P **Pn** **19 13 19.7 +1.1**
VTS Vitosha 4.89 26 P **Pn** **19 13 19.4 +0.8**
VTS S **Sn** **19 14 15.7 +0.6**
VTS AML AML
comp=N,141µm,1.4s
VTS AML AML
comp=E,168µm,0.6s
VTS Vitosha 4.89 26 **Pn** **19 13 19.7 +1.1**
SGRT San Giovanni R 5.00 316 **Pn** **19 13 20.1 0.0**
STON Ston 5.06 337 *i* Pn **Pn** **19 13 20.0 -0.8**
STON Ston 5.06 337 P **Pn** **19 13 19.9 -0.8**
STON AML AML
comp=E,350µm,0.4s
STON AML AML
comp=N,377µm,0.8s
STON Ston 5.06 337 P **Pn** **19 13 19.9 -0.8**
STON Ston 5.06 337 *e*Pn **Pn** **19 13 19.8 -1.0**
MRB1 Monte Rocchett 5.07 306 P **Pn** **19 13 24.1 +3.1**
MRB1 Monte Rocchett 5.07 306 P **Pn** **19 13 24.1 +3.1**
MRB1 AML AML
comp=N,1080µm,0.5s
MRB1 AML AML
comp=E,994µm,1.6s
MRB1 AML AML
comp=N,1090µm,0.5s
MRB1 AML AML
comp=E,1065µm,1.6s
UPM Unac-Piva 5.09 348 ⇑*i* Pn **Pn** **19 13 20.8 -0.6**
UPM *i* Sn **Sn** **19 14 18.1 -1.9**
ALN Alexandroupoli 5.12 57 P **Pn** **19 13 23.6 +2.0**
ALN Alexandroupoli 5.12 57 **Pn** **19 13 23.6 +2.0**
PLE Pljevlja 5.14 352 ⇓*i* Pn **Pn** **19 13 21.8 -0.3**
PLE *i* Sn **Sn** **19 14 19.8 -1.6**
WDD Wied Dalam 5.26 245 P **Pn** **19 13 23.2 -0.3**
WDD AML AML
comp=E,3720µm,0.6s
WDD AML AML
comp=N,3865µm,0.6s
WDD Wied Dalam 5.26 245 **Pn** **19 13 22.8 -0.8**
WDD **Sn** **19 14 21.9 -2.1**
PAOL Paolisi 5.29 304 **Pn** **19 13 24.9 +0.9**
MELA Melanico ??? S 5.32 312 P **Pn** **19 13 25.9 +1.5**
MELA Melanico ??? S 5.32 312 P **Pn** **19 13 25.9 +1.5**
GATE Gambatesa 5.33 310 P **Pn** **19 13 27.7 +3.2**
GATE Gambatesa 5.33 310 P **Pn** **19 13 27.7 +3.2**
RUDO Rudo 5.43 352 *e*Pn **Pn** **19 13 25.2 -0.7**
BSSO Busso 5.54 308 P **Pn** **19 13 29.8 +2.2**
BSSO Busso 5.54 308 P **Pn** **19 13 29.8 +2.2**
CORL Corleone 5.59 269 **Pn** **19 13 28.5 +0.3**
MAKA Makarska 5.66 334 *e*Pn **Pn** **19 13 28.7 -0.3**
BBLS Lazići 5.67 353 *e*Pn **Pn** **19 13 29.3 0.0**
VAGA Valle Agricola 5.70 306 P **Pn** **19 13 33.3 +3.7**
VAGA Valle Agricola 5.70 306 P **Pn** **19 13 33.3 +3.7**
TRIV Trivento 5.70 310 P **Pn** **19 13 31.7 +2.1**
TRIV Trivento 5.70 310 P **Pn** **19 13 31.7 +2.1**
DIVS Divibare 5.87 357 *e*Pn **Pn** **19 13 31.0 -0.9**
RNI2 Rionero Sannit 5.91 308 P **Pn** **19 13 35.7 +3.2**
RNI2 Rionero Sannit 5.91 308 P **Pn** **19 13 35.7 +3.2**
CERA Filignano 5.93 306 P **Pn** **19 13 35.3 +2.5**
CERA Filignano 5.93 306 P **Pn** **19 13 35.3 +2.5**
HAPS Han Pijesak,BI 5.94 350 *e*Pn **Pn** **19 13 31.6 -1.5**
PLVB Pleven 6.07 31 ⇑P **Pn** **19 13 36.1 +1.5**
LPEL Lama dei Pelig 6.08 311 P **Pn** **19 13 37.0 +2.1**
LPEL Lama dei Pelig 6.08 311 P **Pn** **19 13 37.0 +2.1**
CAFR Castel Frentan 6.10 313 P **Pn** **19 13 37.1 +2.1**
CAFR Castel Frentan 6.10 313 P **Pn** **19 13 37.1 +2.1**
INTR Introdacqua 6.23 309 P **Pn** **19 13 38.8 +1.8**
INTR Introdacqua 6.23 309 P **Pn** **19 13 38.8 +1.8**
INTR Introdacqua 6.23 309 **Pn** **19 13 39.2 +2.2**
ELND Elena 6.28 40 ⇑P **Pn** **19 13 38.7 +1.1**
VVLD Villa Vallelon 6.33 307 P **Pn** **19 13 41.5 +3.2**
VVLD Villa Vallelon 6.33 307 P **Pn** **19 13 41.5 +3.2**
TEKS Tekeris 6.34 354 *e*Pn **Pn** **19 13 36.8 -1.6**
ZIRJ Zirje 6.49 328 *i* Pn **Pn** **19 13 40.0 -0.5**
ZIRJ Sn **Sn** **19 14 50.1 -4.2**
VCEL Villa Celiera 6.50 312 P **Pn** **19 13 41.1 +0.5**
VCEL Villa Celiera 6.50 312 P **Pn** **19 13 41.1 +0.5**
FAGN Fagnano 6.57 310 P **Pn** **19 13 43.5 +1.8**
FAGN Fagnano 6.57 310 P **Pn** **19 13 43.5 +1.8**
MDVR Moldovita 6.62 8 ⇑P **Pn** **19 13 43.9 +1.7**
MORI Morici 6.64 329 *e*Pn **Pn** **19 13 42.6 +0.1**
MGRS Mrkonjic Grad 6.66 339 *e*Pn **Pn** **19 13 43.0 +0.3**
DOB Doboj 6.71 346 *e*Pn **Pn** **19 13 41.6 -1.9**
AQU L'Aquila 6.74 310 P **Pn** **19 13 46.6 +2.7**
AQU L'Aquila 6.74 310 *e*Pn **Pn** **19 13 45.8 +1.9**
AQU L'Aquila 6.74 310 **Pn** **19 13 46.6 +2.7**
T0104 Madonna delle 6.78 310 P **Pn** **19 13 47.6 +3.2**
T0104 Madonna delle 6.78 310 P **Pn** **19 13 47.6 +3.2**

HERR Herculane 6.81 12 ⇑P Pn 19 13 46.0 +1.2
CAMP Campotosto 6.84 311 P Pn 19 13 46.8 +1.5
CAMP Campotosto 6.84 311 P Pn 19 13 46.8 +1.5
FRGS Fruska Gora 6.93 357 ePn Pn 19 13 41.8 -4.7
BLY Banja Luka 6.94 341 ⇑P Pn 19 13 47.4 +0.9
BLY Banja Luka 6.94 341 ePn Pn 19 13 45.8 -0.7
BLY Banja Luka 6.94 341 19 13 46.2 -0.4
SMA1 SAN MARTINO 6.94 311 P Pn 19 13 45.9 -0.8
SMA1 SAN MARTINO 6.94 311 P Pn 19 13 45.9 -0.8
DUGI Dugi Otok 7.01 327 ePn Pn 19 13 47.4 -0.2
DUGI Sn Sn 19 15 03.5 -3.7
HUMR Humele 7.17 27 ⇑P Pn 19 13 50.7 +0.9
UDBI Udbina 7.18 333 ePn Pn 19 13 50.9 +0.9
UDBI Sn Sn 19 15 08.4 -3.0
NRCA Norcia 7.19 312 Pn 19 13 52.1 +1.9
FDMO Fiordimonte 7.33 313 P Pn 19 13 54.1 +2.1
FDMO Fiordimonte 7.33 313 P Pn 19 13 54.1 +2.1
GZR Gura Zlata 7.37 13 ⇑P Pn 19 13 53.0 +0.4
CESI CESI - Serrava 7.42 312 P Pn 19 13 55.7 +2.5
CESI CESI - Serrava 7.42 312 P Pn 19 13 55.7 +2.5
BZS Buzias 7.43 7 ⇑P Pn 19 13 54.4 +1.0
EL6 Elcito 7.51 315 P Pn 19 13 54.8 +0.3
EL6 Elcito 7.51 315 P Pn 19 13 54.8 +0.3
SNTG Esanatoglia 7.55 314 P Pn 19 13 56.5 +1.5
SNTG Esanatoglia 7.55 314 P Pn 19 13 56.5 +1.5
NVLJ Novalja 7.56 329 ePg Pn 19 13 54.6 -0.4
NVLJ Sn Sn 19 15 15.6 -4.9
ASSB Assisi San Ben 7.58 312 P Pn 19 13 58.4 +2.8
ASSB Assisi San Ben 7.58 312 P Pn 19 13 58.4 +2.8
FOSV Fossato di Vic 7.68 314 P Pn 19 13 58.4 +1.6
FOSV Fossato di Vic 7.68 314 P Pn 19 13 58.4 +1.6
ATCC AVT- Casa Cast 7.68 313 P Pn 19 13 59.8 +3.0
ATCC AVT- Casa Cast 7.68 313 P Pn 19 13 59.8 +3.0
ELL Elmali 7.72 98 Pn 19 14 02.5 +5.0
SSFR Montelago di S 7.75 314 P Pn 19 13 59.1 +1.3
SSFR Montelago di S 7.75 314 P Pn 19 13 59.1 +1.3
MURB Monte Urbino 7.79 313 P Pn 19 14 01.4 +2.9
MURB Monte Urbino 7.79 313 P Pn 19 14 01.4 +2.9
MURB Monte Urbino 7.79 313 19 14 01.0 +2.6
ARR Arges 7.80 23 ⇑P Pn 19 13 60.0 +1.5
ATFO Monte Foce - G 7.83 313 P Pn 19 14 00.8 +1.9
ATFO Monte Foce - G 7.83 313 P Pn 19 14 00.8 +1.9
MGAB Montegabbione 7.84 309 P Pn 19 14 02.0 +3.1
MGAB Montegabbione 7.84 309 P Pn 19 14 02.0 +3.1
LATE Laterza 7.87 306 Pn 19 14 01.7 +2.3
MPAG Monte Paganucc 7.89 315 P Pn 19 14 01.2 +1.4
MPAG Monte Paganucc 7.89 315 P Pn 19 14 01.2 +1.4
FSSB Fossombrone 7.92 316 P Pn 19 14 01.2 +1.0
FSSB Fossombrone 7.92 316 P Pn 19 14 01.2 +1.0
ATVO AVT- Monte Val 7.94 313 P Pn 19 14 02.8 +2.5
ATVO AVT- Monte Val 7.94 313 P Pn 19 14 02.8 +2.5
NARO Abbazia di Nar 7.98 315 P Pn 19 14 02.3 +1.4
NARO Abbazia di Nar 7.98 315 P Pn 19 14 02.3 +1.4
ATPI Pietralunga - 7.98 313 P Pn 19 14 03.2 +2.3
ATPI Pietralunga - 7.98 313 P Pn 19 14 03.2 +2.3
VOIR 7.99 24 ⇑P Pn 19 14 02.6 +1.5
MORH Mrgy, Hungar 8.08 351 ePn Pn 19 14 00.7 -1.5
PE3 Peglio 8.08 315 P Pn 19 14 03.8 +1.5
PE3 Peglio 8.08 315 P Pn 19 14 03.8 +1.5
BADI Badiali 8.11 313 P Pn 19 14 05.8 +3.2
BADI Badiali 8.11 313 P Pn 19 14 05.8 +3.2
BOJS Bojanci 8.21 334 P Pn 19 14 04.2 +0.3
BOJS Bojanci 8.21 334 P Pn 19 14 04.2 +0.3
OZLJ Ozalj 8.23 335 i Pn Pn 19 14 03.7 -0.6
RIY Rijeka 8.34 330 ePn Pn 19 14 05.6 -0.2
MLR Muntele Rosu 8.35 28 P Pn 19 14 10.0 +3.9
MLR Muntele Rosu 8.35 28 Pn Pn 19 14 10.4 +4.3
comp=N,0.9nm,0.3s,baz=211,slow=8.3,SNR=8.1
MLR Muntele Rosu 8.35 28 ⇓P Pn 19 14 07.9 +1.8
MLR Muntele Rosu 8.35 28 Pn 19 14 10.0 +3.9
GBRS Gornja Briga 8.39 332 i Pn Pn 19 14 06.7 +0.2
KALN Kalnik 8.41 341 ePn Pn 19 14 05.8 -1.0
CRES Cresnjev 8.42 336 ePn Pn 19 14 05.5 -1.4
DOPR Dopca 8.57 24 ⇓P Pn 19 14 10.5 +1.5
BEHE Becsehely 8.65 343 ePn Pn 19 14 08.5 -1.6
OSSC Osservatorio P 8.70 310 Pn 19 14 14.6 +3.8
CEY Cerknica 8.71 331 ePn Pn 19 14 10.8 -0.1
SKDS Skadanscina 8.71 329 i Pn Pn 19 14 10.0 -0.9
OZUR 8.82 25 ⇑P Pn 19 14 14.1 +1.7
PLOR Plostina 8.92 29 P Pn 19 14 15.9 +2.1
PLOR Plostina 8.92 29 ⇑P Pn 19 14 16.0 +2.1
LJU Ljubljana 8.93 333 ePn Pn 19 14 13.8 -0.1
VRI Vrincioaia 8.96 30 P Pn 19 14 16.7 +2.3
VRI Vrincioaia 8.96 30 ⇓P Pn 19 14 16.7 +2.3
KEST Kesra 9.18 258 Pn Pn 19 14 17.9 +0.6
comp=N,0.7nm,0.3s,baz=25,slow=6.9,SNR=5.9
KEST Sn Sn 19 15 58.8 -1.8
comp=N,0.3nm,0.3s,baz=288,slow=20,SNR=4.8
SOKA Soboth 9.31 337 ePn Pn 19 14 18.5 -0.8
comp=N,35nm,0.5s,SNR=18
SOKA Sn Sn 19 15 57.8 -6.1
comp=N,10nm,0.6s
OBKA Obir 9.32 334 ePn Pn 19 14 19.2 -0.2
OBKA eSn Sn 19 16 00.8 -3.3
OBKA Obir 9.32 334 ePn Pn 19 14 19.1 -0.3
comp=N,13nm,0.3s,SNR=20
OBKA Sn Sn 19 15 59.2 -4.9
comp=N,62nm,0.8s
TEOL Teolo 9.64 320 Pn 19 14 22.9 -0.7
PSZ Piszkesteto 9.69 358 P Pn 19 14 25.8 +1.5
PSZ Piszkesteto 9.69 358 ⇑P Pn 19 14 25.4 +1.1
PSZ Piszkesteto 9.69 358 Pn 19 14 25.8 +1.5
ARSA Arzberg 9.69 340 ePn Pn 19 14 23.3 -1.1
ARSA Arzberg 9.69 340 ePn Pn 19 14 23.2 -1.1
comp=N,3.5nm,0.3s,SNR=10
MYKA Terra Mystica 9.75 331 ePn Pn 19 14 25.4 +0.1
comp=N,7.5nm,0.4s,SNR=9.2
MYKA Sn Sn 19 16 09.9 -4.7
comp=N,10nm,0.7s
TRPA Tarpa 10.02 8 ⇑P Pn 19 14 28.5 -0.2
CTI Castel Tesino 10.14 323 P Pn 19 14 29.8 -0.8
CTI Castel Tesino 10.14 323 Pn 19 14 29.8 -0.8
CONA Conrad Observa 10.23 343 ePn Pn 19 14 31.8 0.0
comp=N,0.9nm,0.2s
KBA Koelnbreinsper 10.24 332 ePn Pn 19 14 32.2 +0.2
KBA eSn Sn 19 16 22.3 -4.4
KBA Koelnbreinsper 10.24 332 ePn Pn 19 14 32.0 0.0
comp=N,4.4nm,0.3s,SNR=8.4
ABTA Abfaltersbach 10.29 328 ePn Pn 19 14 32.2 -0.5
comp=N,11nm,0.6s,SNR=12
ABTA Sn Sn 19 16 23.7 -4.3
comp=N,21nm,0.7s
VYHS Vyhne 10.32 354 eP Pn 19 14 32.9 0.0
VYHS Vyhne 10.32 354 ePN Pn 19 14 32.9 0.0
MODS Modra-Piesok 10.38 348 eP Pn 19 14 34.1 +0.3
MODS Modra-Piesok 10.38 348 ePN Pn 19 14 34.1 +0.3
MODS eSN Sn 19 16 22.4 -7.6
SALO Salr 10.40 318 Pn 19 14 33.9 -0.2
BR131 Keskin Array S 10.43 78 P Pn 19 14 37.4 +2.8
BR131 Keskin Array S 10.43 78 Pn 19 14 37.4 +2.8
BRTR Keskin Array B 10.43 78 Pn Pn 19 14 38.4 +3.8
comp=N,0.5nm,0.3s,baz=258,slow=11,SNR=20
BRTR LR LR 19 18 19.2
comp=N,227nm,20.8s,baz=270,slow=36
MOA Molln 10.60 337 ePn Pn 19 14 36.6 -0.1
MOA eSn Sn 19 16 30.7 -4.5
MOA Molln 10.60 337 ePn Pn 19 14 37.1 +0.4
comp=N,18nm,0.6s,SNR=24
MOA Sn Sn 19 16 30.4 -4.8
comp=N,6.4nm,0.4s
KOLS Kolonicke sedl 10.78 7 eP Pn 19 14 39.8 +0.5
KOLS Kolonicke sedl 10.78 7 ePN Pn 19 14 39.8 +0.5
JAVC Velka Javorina 10.80 350 ePN Pn 19 14 42.3 +2.7
RJOB Jochberg 10.99 332 ePn Pn 19 14 43.3 +1.1
RJOB eSn Sn 19 16 40.5 -4.6
WTTA Wattenberg 11.07 327 ePn Pn 19 14 44.4 +1.0
WTTA eSn Sn 19 16 44.8 -2.3
WTTA Wattenberg 11.07 327 ePn Pn 19 14 43.8 +0.4
comp=N,17nm,0.5s,SNR=24
WATA Walderalm 11.15 327 ePn Pn 19 14 44.8 +0.3
comp=N,21nm,0.5s,SNR=27
KRUC Moravsky 11.20 346 ePN Pn 19 14 46.5 +1.5
FUORN Ofenpass-Fuorn 11.22 322 Pn 19 14 46.5 +1.0
SQTA Sankt Quirin 11.22 326 ePn Pn 19 14 46.2 +0.8
comp=N,6.5nm,0.3s,SNR=11
FETA Feichten 11.29 324 Pn Pn 19 14 47.0 +0.6
comp=N,4.3nm,0.5s
MOTA Moosalm 11.36 326 ePn Pn 19 14 48.4 +1.1
comp=N,12nm,0.4s
VRAC Vranov 11.40 347 Pn Pn 19 14 49.1 +1.4
comp=N,0.2nm,0.3s,baz=171,slow=12,SNR=5.2
VRAC Vranov 11.40 347 ePN Pn 19 14 48.7 +1.0

PART Garmisch-Parte 11.48 327 ePn Pn 19 14 51.2 +2.4
PART eSn Sn 19 16 56.3 -0.6
DAVOX Davos/Dischmat 11.52 321 Pn Pn 19 14 50.2 +0.7
comp=N,1.0nm,0.3s,baz=352,slow=4.3,SNR=8.0
DAVOX Sn Sn 19 16 55.2 -2.9
comp=N,1.0nm,0.3s,baz=162,slow=20,SNR=5.8
RETA Reutte 11.62 326 ePn Pn 19 14 52.7 +1.9
comp=N,6.9nm,0.5s
GEC2 GERESS Array S 11.65 338 ePn Pn 19 14 50.9 -0.4
GEC2 eSn Sn 19 16 56.4 -4.8
GEC2 GERESS Array S 11.65 338 Pn Pn 19 14 50.4 -0.9
GERES GERESS Array B 11.65 338 Pn Pn 19 14 50.1 -1.2
comp=N,1.8nm,0.3s,baz=159,slow=13,SNR=33
GERES Sn Sn 19 16 55.0 -6.3
comp=N,1.0nm,0.3s,baz=153,slow=23,SNR=5.4
MORC Moravsky Berou 11.72 351 ePN Pn 19 14 52.8 +0.7
DAVA Damuels 11.88 323 ePn Pn 19 14 57.0 +2.6
DAVA eSn Sn 19 17 03.4 -3.4
DAVA Damuels 11.88 323 Pn Pn 19 14 56.7 +2.2
comp=N,3.3nm,0.3s
KHC Kasperske Hory 11.95 338 eP Pn 19 14 54.2 -1.0
KHC Kasperske Hory 11.95 338 ePN Pn 19 14 54.2 -1.0
KHC eSN Sn 19 17 00.0 -8.3
KHC Kasperske Hory 11.95 338 Pn 19 14 54.3 -1.0
WET Wettzell 12.17 336 ePn Pn 19 14 58.5 +0.2
GOPC GO Pecny, Ondr 12.34 343 eP Pn 19 15 00.7 +0.1
GOPC GO Pecny, Ondr 12.34 343 ePN Pn 19 15 00.7 +0.1
PRU Pruhonice 12.47 342 eP Pn 19 15 01.6 -0.7
PRU Pruhonice 12.47 342 ePN Pn 19 15 01.6 -0.7
SENIN Lac Senin/Sane 12.63 314 Pn 19 15 05.1 +0.4
SENIN Sn 19 17 22.3 -2.9
ROTZ Rotzenmuhle 12.93 336 ePn Pn 19 15 09.2 +0.6
MANZ Manzenberg 13.15 336 ePn Pn 19 15 12.5 +0.8
GRF Grafenberg Arr 13.20 333 ePn Pn 19 15 12.5 +0.1
MMAI Mount Meron Ar 13.28 109 Pn Pn 19 15 10.1 -3.4
comp=N,1.7nm,0.3s,baz=315,slow=12,SNR=7.2
MMAI Sn Sn 19 17 34.3 -6.8
comp=N,2.6nm,0.3s,baz=315,slow=28,SNR=5.8
STU Stuttgart 13.28 326 P Pn 19 15 13.4 0.0
STU Stuttgart 13.28 326 Pn 19 15 13.4 0.0
MOX Moxa 13.88 336 P Pn 19 15 21.8 +0.2
MOX Moxa 13.88 336 ePn Pn 19 15 22.2 +0.6
AKASG Malin Array Be 13.96 24 Pn Pn 19 15 19.9 -2.7
comp=N,1.8nm,0.3s,baz=214,slow=14,SNR=1.4
CLL Collm 14.07 341 eP Pn 19 15 27.0 +2.8
CLL Collm 14.07 341 epP Pn 19 15 27.0 +2.8
CLL i (PP) 19 15 35.0
TNS Taunus Mts 14.70 328 ePn Pn 19 15 33.9 +1.0
ASF Jabal al Asfar 14.79 109 Pn Pn 19 15 33.2 -1.0
comp=N,0.3nm,0.3s,baz=266,slow=8.4,SNR=3.1
ASF Sn Sn 19 18 14.0 -3.9
comp=N,0.2nm,0.3s,baz=315,slow=17,SNR=2.2
EIL Elat 14.79 121 Pn Pn 19 15 30.8 -3.4
comp=N,1.0nm,0.3s,baz=359,slow=7.2,SNR=7.2
EIL Sn Sn 19 18 06.3 -12
comp=N,2.3nm,0.3s,baz=139,slow=19,SNR=6.3
WLF Walferdange 15.32 323 P Pn 19 15 42.8 +1.8
WLF pmax pmax
comp=Z,61nm,1.0s
WLF Walferdange 15.32 323 P Pn 19 15 42.8 +1.8
WLF lAmb lAmb 19 15 52.0
comp=Z,60nm,1.0s
NACGM Naroch 17.23 13 e Pn 19 16 06.0 +0.6
SHA1 Shidzhatmaz 17.67 65 eP P 19 16 12.9 +0.7
KIV Kislovodsk 17.73 64 eP P 19 16 14.3 +1.6
KIV pmax pmax
comp=Z,46nm,1.0s
KIV Kislovodsk 17.73 64 P P 19 16 13.9 +1.2
KBZ Khabaz 17.84 65 eP P 19 16 16.0 +2.2
KBZ pmax pmax
comp=Z,14nm,1.0s
KBZ Khabaz 17.84 65 P P 19 16 15.0 +1.2
comp=Z,0.3nm,0.3s,baz=289,slow=6.2,SNR=13
PYA1 Pyatigorsk 18.05 64 eP P 19 16 17.3 +1.2
ZEI Tsey 18.43 68 eP Pn 19 16 20.9 +0.3
ZEI pmax pmax
comp=Z,13nm,0.8s
VORD Divnogorie 18.46 40 eP Pn 19 16 20.7 +0.1
VORD pmax pmax
comp=Z,7.0nm,0.7s
VSR Storozhevoye 18.55 40 eP P 19 16 20.2 -1.3
VSR pmax pmax
comp=Z,10.0nm,0.7s
GNI Garni 18.97 77 P Pn 19 16 27.8 +0.7
comp=Z,1.5nm,0.3s,baz=328,slow=4.2,SNR=19
GNI LR LR 19 24 38.2
comp=Z,203nm,18.0s,baz=294,slow=40
GNI Garni 18.97 77 i P Pn 19 16 28.3 +1.2
SNR=8.4
GNI Garni 18.97 77 P Pn 19 16 27.6 +0.5
GNI lAmb lAmb 19 16 32.6
comp=Z,51nm,1.0s
ESDC Sonseca Array 18.98 282 P Pn 19 16 27.0 -0.1
comp=Z,0.3nm,0.3s,baz=78,slow=11,SNR=7.9
ESDC Sonseca Array 18.98 282 lAmb lAmb 19 16 34.4
comp=Z,3.6nm,1.1s
LPSR Galich'ya Gora 19.30 36 eP P 19 16 30.0 +0.2
LPSR pmax pmax
comp=Z,40nm,0.8s
VRH Novokhopyorsk 19.86 42 eP Pn 19 16 37.1 -0.3
VRH pmax pmax
comp=Z,20nm,0.9s
OBN Obninsk 20.12 28⇑ eP Pn 19 16 40.2 -0.3
OBN e*SP sP 19 16 45.1 +1.5
OBN ePPP PPP 19 17 01.9
OBN pmax pmax
comp=Z,21nm,1.0s
OBN Obninsk 20.12 28 P P 19 16 38.7 0.0
comp=Z,2.5nm,0.4s,baz=15,slow=14,SNR=5.4
OBN Obninsk 20.12 28 lAmb lAmb 19 16 41.7
comp=Z,23nm,1.0s
BTLR Botlikh 20.13 69 eP Pn 19 16 40.5 -0.3
BTLR pmax pmax
comp=Z,7.0nm,0.9s
GNBR Gunib 20.66 70 eP P 19 16 45.9 +1.2
GNBR pmax pmax
comp=Z,59nm,0.9s
VSU Vasula 20.66 9 eP P 19 16 44.5 0.0
VSU pmax pmax
comp=Z,166nm,0.9s
MOS Moscow 20.99 28 eP P 19 16 48.6 +0.5
MOS pmax pmax
comp=Z,53nm,0.9s
MDT Midelt 21.02 263 P P 19 16 50.0 +1.3
comp=Z,6.7nm,1.1s,baz=293,slow=8.9,SNR=4.6
MDT LR LR 19 26 56.0
comp=Z,224nm,18.0s,baz=60,slow=42
AKT Akhty 21.21 73 eP P 19 16 51.7 +1.0
AKT pmax pmax
comp=Z,27nm,0.8s
MVO Moncorvo 21.26 287 eP P 19 16 54.3 +3.1
PMRV Marv??o 21.64 282 eP P 19 16 55.2 -0.1
comp=Z,46nm,1.3s
PCBR Castelo Branco 21.67 283 eP P 19 16 55.3 -0.2
MTE Mateigas 21.68 285 eP P 19 16 58.0 +2.3
PMTG Montargil 22.32 281 eP P 19 17 01.6 -1.0
HFS Hagfors 22.33 351 P P 19 17 02.3 -0.1
comp=Z,11nm,0.6s,baz=168,slow=9.1,SNR=27
PBDV Barranco-do-Ve 22.38 276 eP P 19 17 06.2 +3.0
PUL Pulkovo 22.47 13 eP P 19 17 04.7 +0.8
PUL pmax pmax
comp=Z,137nm,1.1s
KONO Kongsberg 22.51 346 eP P 19 17 04.6 +0.2
OSL Oslo 22.58 347 eP P 19 17 05.2 +0.2
NC602 NORSAR Array S 23.20 349 eP P 19 17 12.2 +0.7
EKA Eskdalemuir Ar 23.32 325 P P 19 17 13.5 +0.7
comp=Z,19nm,1.0s,baz=137,slow=11,SNR=12
FINES FINESS Array B 23.50 7 P P 19 17 13.3 -1.2
comp=Z,8.9nm,0.6s,baz=194,slow=9.2,SNR=24
FINES PcP PcP 19 20 60.0 +0.1
comp=Z,3.7nm,0.9s,baz=173,slow=1.5,SNR=3.5
NC405 NORSAR Array S 23.54 349 P P 19 17 15.6 +0.7
NB2 NORSAR Subarra 23.54 349 P P 19 17 14.7 -0.3
comp=Z,4.4nm,0.7s,baz=158,slow=10
NB2 NORSAR Subarra 23.54 349 P P 19 17 14.7 -0.3
baz=158,slow=10
NOA NORSAR Array B 23.54 349 P P 19 17 15.0 0.0
comp=Z,5.8nm,0.7s,baz=160,slow=9.6,SNR=21
NBO00 NORSAR Array S 23.60 348 P P 19 17 16.2 +0.6
SKAR Skarslia 23.72 345 eP P 19 17 17.0 +0.2
SUF Sumiainen 24.77 6 P P 19 17 26.8 +0.5
SUF pmax pmax
comp=Z,28nm,0.8s
DOMB Dombas 24.84 347 eP P 19 17 27.8 +0.8
KLMR Klimovskoe 25.63 22 eP P 19 17 33.4 -0.7

KLMR pmax pmax
comp=Z,27nm,1.2s
KLMR Klimovskoe 25.63 22 eP P 19 17 33.4 -0.7
KLMR AMP 19 17 37.3
comp=Z,27nm,1.2s
RAYN Ar Rayn 25.97 117 P P 19 17 36.9 -0.8
RAYN pmax pmax
comp=Z,10.0nm,1.1s
RAYN Ar Rayn 25.97 117 P P 19 17 38.5 +0.8
RAYN Ar Rayn 25.97 117 P P 19 17 36.9 -0.8
PRGR Permogore 28.16 26 eP P 19 17 55.7 -1.2
PRGR pmax pmax
comp=Z,14nm,0.8s
AKTO Aktyubinsk 29.23 53 P P 19 18 05.9 -0.7
comp=Z,0.8nm,0.3s,baz=266,slow=4.4,SNR=5.0
GEYT Alibeck 29.57 79 P P 19 18 09.8 0.0
comp=Z,4.1nm,0.6s,baz=282,slow=9.0,SNR=16
GYA0B ALIBECK ARRAY 29.57 79 P P 19 18 09.4 -0.4
GYA0B lAmb lAmb 19 18 17.8
comp=Z,7.0nm,0.8s
TOA0 Torodi Ar. Sit 30.01 219 P P 19 18 14.1 +0.4
TOA0 lAmb lAmb 19 18 15.2
comp=Z,6.4nm,0.8s
TORD Torodi Ar. Bea 30.01 219 P P 19 18 14.6 +0.8
comp=Z,4.6nm,0.8s,baz=32,slow=9.6,SNR=23
ABKAR Akbulak array 30.30 56 P P 19 18 16.0 -0.1
ABKAR S 19 23 17.6 +1.9
ARU Arti 31.09 42 c iP P 19 18 21.8 -1.2
ARU 19 19 20.3
ARU S S 19 23 27.8 0.0
ARU pmax pmax
comp=Z,11nm,1.5s
ARU Arti 31.09 42 P P 19 18 21.9 -1.0
comp=Z,0.8nm,0.4s,baz=232,slow=10,SNR=7.0
ARU Arti 31.09 42 P P 19 18 21.6 -1.4
TRO Tromso 31.47 359 eP P 19 18 26.5 +0.4
ARCES ARCESS Array B 31.48 3 P P 19 18 26.2 -0.1
comp=Z,4.8nm,0.9s,baz=190,slow=9.8,SNR=12
ARCES PcP PcP 19 21 19.1 +0.2
comp=Z,1.9nm,0.8s,baz=197,slow=1.5,SNR=5.5
ARE0 ARCESS Array S 31.48 3 eP P 19 18 26.6 +0.3
SVE Sverdlovsk 32.30 42 eP P 19 18 33.1 -0.5
UMQ Umm Al-Quwin 32.33 103 P P 19 18 34.3 +0.1
SHME Shamm 32.43 101 i P P 19 18 34.3 -0.8
SNR=11
HAMF Hammerfest 32.52 2 eP P 19 18 34.7 -0.6
BANOM Banah 32.62 101 i P P 19 18 36.1 -0.7
SNR=11
NAZ Nazwa, Dubai 32.62 103 i P P 19 18 36.6 -0.1
SNR=11
UOSS Minazif 33.05 103 P P 19 18 38.9 -1.7
UOSS Minazif 33.05 103 P P 19 18 39.7 -0.8
UOSS lAmb lAmb 19 18 43.4
comp=Z,9.1nm,0.7s
HATD Hatta, Dubai 33.06 103 i P P 19 18 40.3 -0.4
SNR=5.7
ASHO Ashiyiah 33.08 104 i P P 19 18 40.1 -0.7
SNR=7.6
ALNE Al Ain 33.19 105 i P P 19 18 41.2 -0.6
SNR=5.5
KK31 Karatay Array 37.87 66 P P 19 19 20.9 -1.0
KK31 pmax pmax
comp=Z,8.0nm,0.8s
KK31 Karatay Array 37.87 66 P P 19 19 20.9 -1.0
KK31 lAmb lAmb 19 19 26.1
comp=Z,8.3nm,0.8s
KKAR Karatay Array 37.87 66 P P 19 19 20.9 -1.0
KKAR pmax pmax
comp=Z,8.0nm,0.8s
KKAR Karatay Array 37.87 66 P P 19 19 20.9 -1.0
KKAR lAmb lAmb 19 19 26.1
comp=Z,8.3nm,0.8s
BTK Batken 38.73 71 P P 19 19 28.1 -1.1
BTK pmax pmax
comp=Z,5.0nm,0.8s
BTK Batken 38.73 71 P P 19 19 28.1 -1.1
DBIC Dimbokro 38.86 222 P P 19 19 29.2 -1.1
DBIC pmax pmax
comp=Z,6.0nm,0.8s
DBIC Dimbokro 38.86 222 P P 19 19 30.9 +0.6
comp=Z,3.8nm,0.7s,baz=15,slow=10,SNR=6.3
DBIC Dimbokro 38.86 222 P P 19 19 29.2 -1.1
TIC Toumodi 38.97 223 eP P 19 19 29.4 -1.9
KIC Kosan Boka 39.06 222 eP P 19 19 32.0 0.0
comp=Z,14nm,0.8s
LIC Lamto 39.33 222 eP P 19 19 34.7 +0.5
comp=Z,25nm,0.8s
ARSB Arslanbob 40.03 68 P P 19 19 40.4 +0.3
ARSB lAmb lAmb 19 20 10.9
comp=Z,21nm,1.2s
AAK Ala-Archa 40.84 66 P P 19 19 47.2 +0.4
AAK pmax pmax
comp=Z,7.0nm,0.9s
AAK Ala-Archa 40.84 66 P P 19 19 47.2 +0.4
KMBO Kilima Mbogo 42.15 154 P P 19 19 59.3 +1.5
comp=Z,1.3nm,0.5s,baz=358,slow=13,SNR=3.8
KMBO Kilima Mbogo 42.15 154 lAmb lAmb 19 20 01.4
comp=Z,20nm,1.9s
KURK Kurchatov 42.33 53 P P 19 19 58.2 -0.5
KURK pmax pmax
comp=Z,5.0nm,1.0s
KURK Kurchatov 42.33 53 P P 19 19 58.2 -0.5
KSH Kashi 42.71 70 eP P 19 20 01.0 -1.1
KSH ePP PP 19 21 41.0 0.0
KSH eS S 19 26 23.0 -2.3
KSH esS pS 19 26 28.8 -1.4
KSH pmax pmax
comp=Z,690nm,8.3s
KSH LR LR
comp=N,660nm,6.3s
KSH LR LR
comp=E,490nm,5.9s
KSH LR LR
comp=Z,1μm,8.2s
SUMG Summit 44.73 339 i P P 19 20 21.8 +3.6
SUMG Summit 44.73 339 i P P 19 20 21.8 +3.6
MAKZ Makanchi 45.15 58 P P 19 20 20.2 -1.3
MAKZ pmax pmax
comp=Z,7.0nm,1.3s
MAKZ Makanchi 45.15 58 P P 19 20 20.2 -1.3
MAKZ lAmb lAmb 19 21 40.5
comp=Z,7.4nm,1.2s
MK31 Makanchi Array 45.37 58 P P 19 20 22.7 -0.5
MK31 pmax pmax
comp=Z,4.0nm,0.7s
MK31 Makanchi Array 45.37 58 P P 19 20 22.7 -0.5
MK31 lAmb lAmb 19 20 29.1
comp=Z,4.1nm,0.7s
MKAR Makanchi Array 45.37 58 P P 19 20 22.6 -0.6
comp=Z,4.6nm,0.5s,baz=276,slow=7.2,SNR=35
ZAA0 Zalesovo Array 45.73 48 P P 19 20 25.6 -0.3
ZALV Zalesovo Beam 45.73 48 i P P 19 20 25.2 -0.7
ZALV pmax pmax
comp=Z,11nm,0.5s
ZALV Zalesovo Beam 45.73 48 P P 19 20 25.4 -0.6
comp=Z,11nm,0.5s,baz=275,slow=8.5,SNR=29
LSZ Lusaka 53.73 171 P P 19 21 25.9 -1.4
LSZ pmax pmax
comp=Z,5.0nm,0.9s
LSZ Lusaka 53.73 171 P P 19 21 25.9 -1.4
LSZ lAmb lAmb 19 21 29.7
comp=Z,4.7nm,0.9s
TLY Talaya 57.33 47 eP P 19 21 53.8 +1.0
TLY pmax pmax
comp=Z,13nm,1.2s
LSA Lhasa 58.03 76 P P 19 21 57.2 -1.4
LSA pmax pmax
comp=Z,6.0nm,0.7s
LSA Lhasa 58.03 76 i P P 19 21 58.2 -0.4
SNR=7.2
LSA Lhasa 58.03 76 P P 19 21 57.2 -1.4
LSA lAmb lAmb 19 22 01.9
comp=Z,6.3nm,0.7s
SCHQ Schefferville 58.34 317 P P 19 22 00.7 +0.9
comp=Z,5.3nm,0.7s,baz=66,slow=5.5,SNR=9.6
SCHQ Schefferville 58.34 317 P P 19 22 00.4 +0.6
TIXI Tiksi 59.63 20 eP P 19 22 07.7 -0.8
TIXI pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 60.51 51 P P 19 22 14.8 -0.2
comp=Z,1.9nm,0.8s,baz=286,slow=9.3,SNR=6.6
LZH Lanzhou 64.28 63 eP P 19 22 40.0 -0.5
LZH pP pP 19 22 43.5 -1.3
LZH sP sP 19 22 45.3 -1.0
LZH ePP PP 19 25 03.3 +1.7

LZH					pmax	pmax				
	comp=Z,23nm,1.3s									
LZH					pmax	pmax				
	comp=Z,76nm,6.9s									
LZH					LR	LR				
	comp=N,140nm,15.5s									
LZH					LR	LR				
	comp=E,150nm,15.3s									
LZH					LR	LR				
	comp=Z,260nm,18.0s									
YAK	**Yakutsk**	**65.11**	**29**	*eP*	**P**		**19 22 45.3**	**0.0**		
YAK					pmax	pmax				
	comp=Z,8.0nm,0.7s									
BOSA	**Boshof**	**66.66**	**175**	P	**P**		**19 22 56.5**	**+0.8**		
	comp=Z,3.5nm,0.9s,baz=350,slow=10,SNR=4.8									
BOSA	**Boshof**	**66.66**	**175**	IAmb	IAmb		19 23 03.0			
	comp=Z,41nm,1.9s									
HHC	**Hu-ho-hao-te**	**67.09**	**55**	*eP*	**P**		**19 22 58.5**	**0.0**		
HHC					pmax	pmax				
	comp=Z,4.0nm,0.9s									
HHC					pmax	pmax				
	comp=Z,10.0nm,3.8s									
CMAR	**Chiang Mai Arr**	**69.99**	**82**	P	**P**		**19 23 16.3**	**-0.5**		
	comp=Z,3.5nm,0.8s,baz=305,slow=7.7,SNR=29									
BILL	**Bilibino**	**70.98**	**13**	*eP*	**P**		**19 23 23.1**	**+1.0**		
BILL					pmax	pmax				
	comp=Z,4.0nm,1.0s									
YKA	**Yellowknife Ar**	**73.30**	**340**	P	**P**		**19 23 36.9**	**+0.9**		
	comp=Z,1.0nm,0.7s,baz=35,slow=5.2,SNR=13									
CN2	**Changchun**	**73.93**	**47**	*eP*	**P**		**19 23 39.5**	**-0.5**		
MA2	**Magadan**	**74.28**	**24**	*eP*	**P**		**19 23 44.3**	**+2.5**		
MA2					pmax	pmax				
	comp=Z,10.0nm,1.4s									
GRNR	**Gornyy**	**75.13**	**36**⇑	*iP*	**P**		**19 23 46.7**	**-0.2**		
GRNR					pmax	pmax				
	comp=Z,7.0nm,0.9s									
GRNR					MLR	MLR				
	comp=Z,160nm,18.0s									
ULM	**Lac du Bonnet**	**75.59**	**324**	P	**P**		**19 23 50.6**	**+1.0**		
	comp=Z,6.1nm,0.8s,baz=50,slow=6.3,SNR=12									
ILAR	**Eielson Array**	**76.84**	**354**	P	**P**		**19 23 57.8**	**+1.3**		
	comp=Z,1.2nm,0.9s,baz=355,slow=4.7,SNR=10									
NJ2	**Nanjing**	**76.88**	**60**	*eP*	**P**		**19 23 56.8**	**-0.4**		
NJ2					pmax	pmax				
	comp=Z,10.0nm,0.5s									
USRK	**Ussuriysk Ar.**	**77.31**	**43**	P	**P**		**19 23 59.5**	**+0.1**		
	comp=Z,4.4nm,0.8s,baz=298,slow=6.7,SNR=7.3									
KSRS	**Korea Array**	**79.38**	**51**	P	**P**		**19 24 11.1**	**+0.2**		
	comp=Z,1.5nm,0.6s,baz=311,slow=4.0,SNR=8.3									
YSS	**Yuzh-Sakhalins**	**80.78**	**36**⇓	*eP*	**P**		**19 24 18.0**	**-0.4**		
YSS				*e*			19 24 26.5			
YSS					pmax	pmax				
	comp=Z,300nm,0.8s									
YSS					MLR	MLR				
	comp=Z,300nm,11.0s									
MJAR	**Matsushiro Arr**	**86.03**	**46**	P	**P**		**19 24 45.9**	**+0.3**		
	comp=Z,3.6nm,0.9s,baz=310,slow=4.4,SNR=6.2									
PDAR	**Pinedale Array**	**87.44**	**326**	P	**P**		**19 24 53.5**	**+0.8**		
	comp=Z,0.5nm,0.8s,baz=65,slow=8.4,SNR=4.9									
NVAR	**Mina Array Bea**	**94.76**	**329**	P	**P**		**19 25 27.0**	**+0.1**		
	comp=Z,0.1nm,0.3s,baz=4.5,slow=4.6,SNR=2.5									
TXAR	**Lajitas Array**	**94.85**	**313**	P	**P**		**19 25 28.0**	**+0.7**		
	comp=Z,0.7nm,0.8s,baz=72,slow=4.1,SNR=4.4									
WRA	**Warramunga Arr**	**120.65**	**92**	PKP	**PKPdf**		**19 30 56.5**	**-0.7**		
	comp=Z,1.3nm,1.1s,baz=319,slow=2.4,SNR=4.5									
ASAR	**Alice Springs**	**122.29**	**96**	PKP	**PKPdf**		**19 30 59.9**	**-0.4**		
	comp=Z,0.2nm,0.3s,baz=310,slow=1.7,SNR=9.5									

DJA ***26*** *19:12:07.7±4.2,9˚N±35˚×12˚7E±1˚0,h85km±19km, M5.2/10,mb5.2/10,mB5.2/7,MLv5.7/3,Mw(mB)4.7/7*
MAN ***26*** *19:12:15.5,8˚.32N×126˚.86E,h2km,mb5.6,ML4.6,MS4.9*
MAN Intensity II - Bislig City.
MOS ***26*** *19:12:17.0±0.8,8˚.34N×126˚.63E,h38km,mb5.0/15,Error ellipse: s-maj=13.0km s-min=6.0km az=106.5*
NEIC ***26*** *19:12:21.4±1.5,8˚.39N±0˚.06×126˚.84E±0˚.09,h64km±1km, mb4.7/46,Error ellipse: s-maj=12.5km s-min=9.3km az=84.0*
IDC ***26*** *19:12:23.2±1.4,8˚.36N×126˚.69E,h78km±12km,mb4.2/28, mb1 4.3/28,mb1mx4.2/45,mbtmp4.5/28,MS3.9/7, Ms1 3.9/7,ms1mx3.6/47,Error ellipse: s-maj=15.7km s-min=8.7km az=88.0*
BJI ***26*** *19:12:25.9±0.0,9˚.01N×126˚.30E,h69km,mB5.2/29, mb4.6/49,Ms4.8/23,Ms7 4.5/23*

ISC 26 19:12:19.6±0.8,8˚33N±0˚03×126˚90E±0˚06,h47km±7km, n215,σ1s56/225,mb4.7/92,MS4.4/13,14C-3D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.55**	**254**⇑	*eP*	**Pn**	**19 12 27.6**	**-3.8**
BIPH				*eS*	**Sn**	**19 12 33.8**	**-6.0**
BUTP	**Butuan**	**1.41**	**297**	*eP*	**Pn**	**19 12 41.8**	**-1.1**
BUTP				*eS*	**Sn**	**19 12 59.3**	**-1.1**
MATI	**Mati**	**1.52**	**205**	*eP*	**Pn**	**19 12 41.7**	**-2.6**
MATI				*eS*	**Sn**	**19 13 00.7**	**-2.2**
DAV	**Davao City (W)**	**1.81**	**226**	P	Pn	19 12 50.9	+2.6
	518nm,0.3s,baz=55,slow=5.4,SNR=76						
DAV				S	**Sn**	**19 13 12.4**	**+2.2**
	545nm,0.3s,baz=96,slow=19,SNR=8.0						
DAV				LR	LR	19 13 40.5	
	comp=Z,4μm,18.0s,baz=14,slow=46						
DAV	**Davao City (W)**	**1.81**	**226**⇑	*eP*	**Pn**	**19 12 45.1**	**-3.3**
DAV	**Davao City (W)**	**1.81**	**226**		Pn	19 12 50.5	+2.2
DMPH	**Davao City--Mi**	**1.86**	**228**⇑	*iP*	Pn	19 12 54.2	+5.3
DMPH				*i* S	Sn	19 13 19.7	+8.5
BUKP	**Musuan**	**1.88**	**256**	*eP*	**Pn**	**19 12 50.3**	**+1.1**
BUKP				*eS*	**Sn**	**19 13 15.2**	**+3.4**
SCPH	**Surigao**	**2.00**	**316**⇑	*iP*	**Pn**	**19 12 51.7**	**+0.7**
SCPH				*i* S	**Sn**	**19 13 14.6**	**-0.3**
CGP	**Cagayan de Oro**	**2.19**	**273**⇑	*iP*	**Pn**	**19 12 53.7**	**+0.2**
CGP				*i* S	**Sn**	**19 13 21.4**	**+2.1**
KCP	**Kidapawan**	**2.23**	**234**⇑	*eP*	**Pn**	**19 12 55.5**	**+1.4**
KCP				*i* S	**Sn**	**19 13 21.8**	**+1.4**
DDMP	**Don Marcelino,**	**2.51**	**208**	*eP*	**Pn**	**19 12 57.1**	**-0.8**
DDMP				*eS*	**Sn**	**19 13 30.1**	**+2.8**
CTBH	**Cotabato--PC H**	**2.85**	**247**⇓	*eP*	**Pn**	**19 13 03.0**	**+0.4**
CTBH				*i* S	**Sn**	**19 13 36.7**	**+0.9**
SKMP	**Bagumbayan, Su**	**2.95**	**233**	*eP*	**Pn**	**19 13 02.9**	**-1.1**
SKMP				*eS*	**Sn**	**19 13 38.5**	**+0.3**
GSPH	**General Santos**	**2.96**	**221**	*eP*	**Pn**	**19 13 04.1**	**-0.1**
GSPH				*eS*	**Sn**	**19 13 40.4**	**+1.9**
LLP	**Lapu-Lapu**	**3.50**	**304**⇑	*eP*	**Pn**	**19 13 12.4**	**+0.8**
LLP				*eS*	**Sn**	**19 13 53.7**	**+1.9**
PAGZ	**Pagadian**	**3.52**	**262**	*eP*	**Pn**	**19 13 11.4**	**-0.3**
DCPH	**Dipolog City**	**3.52**	**274**⇑	*eP*	**Pn**	**19 13 13.4**	**+1.6**
SNPH	**Sibulan**	**3.76**	**286**⇑	*iP*	**Pn**	**19 13 16.2**	**+1.1**
SNPH				*i* S	**Sn**	**19 14 01.3**	**+3.1**
CNP	**Catarman**	**4.70**	**332**	*eP*	**Pn**	**19 13 28.4**	**+0.4**
CNP				*eS*	**Sn**	**19 14 21.6**	**+0.4**
GUIM	**Jordan**	**4.83**	**299**	*eP*	**Pn**	**19 13 30.1**	**+0.4**
GUIM				*eS*	Sn	19 14 11.2	-13
RCP	**Roxas**	**5.20**	**308**⇓	*eP*	**Pn**	**19 13 36.3**	**+1.4**
PVCP	**Virac**	**5.88**	**333**	*eP*	**Pn**	**19 13 43.2**	**-1.1**
PVCP				*eS*	Sn	19 15 08.4	+18
TNTI	**Ternate**	**7.53**	**176**		**Pn**	**19 14 08.6**	**+1.8**
LQP	**Lukban**	**7.79**	**318**⇑	*eP*	**Pn**	**19 14 10.3**	**-0.2**
LQP				*i* S	Pn	19 14 16.7	+6.2
TGY	**Tagaytay City**	**8.19**	**315**	P	**Pn**	**19 14 17.4**	**+1.5**
	51nm,0.3s,baz=141,slow=13,SNR=3.9						
TGY				LR	LR	19 17 34.8	
	comp=Z,1μm,20.6s,baz=118,slow=39						
KMSI	**Cibinong**	**8.24**	**201**	P	Pn	19 14 20.3	+3.7
	2μm126nm,0.7s						
LBMI	**Labuha**	**8.93**	**176**	P	Pn	19 14 29.2	+3.1
	85nm,0.8s						
MRSI	**Marisa**	**9.24**	**213**	P	**Pn**	**19 14 31.1**	**+0.8**
	976nm104nm,0.9s						
SIJI	**Sorong**	**10.12**	**154**	P	**Pn**	**19 14 43.5**	**+1.1**
	4.2nm,0.3s,baz=328,slow=15,SNR=6.1						
SIJI				S	**Sn**	**19 16 31.4**	**-3.3**
	1.0nm,0.3s,baz=197,slow=19,SNR=3.8						
SIJI				LR	LR	19 19 24.0	
	comp=Z,196nm,19.4s,baz=325,slow=41						
LUWI	**Luwuk**	**10.18**	**204**	P	Pn	19 14 49.4	+6.2
	2μm160nm,0.8s						
LUWI	**Luwuk**	**10.18**	**204**		Pn	19 14 49.4	+6.2
SANI	**Sanana**	**10.35**	**185**	P	**Pn**	**19 14 46.7**	**+1.1**
	59nm,0.9s						
APSI	**Ampana**	**10.57**	**210**	P	Pn	19 14 52.9	+4.4
	768nm85nm,1.2s						
NLAI	**Namlea**	**11.50**	**179**	P	**Pn**	**19 15 02.8**	**+1.6**
	60nm,0.9s						
BNSI	**Bone**	**14.35**	**208**	P	**Pn**	**19 15 41.5**	**+1.4**

SBUM	**Sibu**	**15.73**	**249**	P	**P**		**19 16 00.9**	**-0.5**		
TPUB	**Ta-pu**	**16.05**	**339**		**Pn**		**19 16 02.4**	**+0.2**		
TPUB				IAmb	IAmb		19 16 10.5			
	comp=Z,57nm,1.1s									
SOEI	**Soe**	**18.16**	**188**		**P**		**19 16 33.0**	**+4.7**		
SOEI				IAmb	IAmb		19 16 52.1			
	comp=Z,87nm,1.2s									
QIZ	**Qiongzhong**	**19.67**	**304**	P	**P**		**19 16 43.3**	**-1.5**		
QIZ				LR	LR					
	comp=Z,280nm,15.7s									
QIZ				LR	LR					
	comp=Z,490nm,17.2s									
QIZ				LR	LR					
	comp=Z,630nm,18.1s									
MTN	**Manton Dam**	**21.45**	**169**	P	**P**		**19 17 05.2**	**+1.1**		
	baz=22,SNR=26									
MTN	**Manton Dam**	**21.45**	**169**	P	**P**		**19 17 05.5**	**+1.4**		
MTN				IAmb	IAmb		19 17 23.3			
	comp=Z,32nm,0.9s									
KDU	**Kakadu**	**21.61**	**165**	P	**P**		**19 17 06.4**	**+0.8**		
	baz=22,SNR=26									
UBPT	**Khong Chiam**	**22.07**	**290**	P	**P**		**19 17 11.2**	**+0.5**		
UBPT				IAmb	IAmb		19 17 12.0			
	comp=Z,28nm,1.3s									
SSE	**Sheshan**	**23.27**	**348**	P	**P**		**19 17 22.4**	**-0.6**		
SSE				IAmb	IAmb		19 17 24.8			
	comp=Z,52nm,1.2s									
KNRA	**Kununurra**	**23.93**	**176**	P	**P**		**19 17 30.4**	**+1.1**		
	baz=24,SNR=51									
KNRA	**Kununurra**	**23.93**	**176**	P	**P**		**19 17 30.7**	**+1.3**		
KNRA				IAmb	IAmb		19 17 47.7			
	comp=Z,41nm,0.9s									
LEM	**Lembang**	**24.42**	**232**	P	**P**		**19 17 37.3**	**+3.2**		
	comp=Z,14nm,0.7s,baz=337,slow=13,SNR=5.2									
NJ2	**Nanjing**	**24.76**	**344**	*eP*	**P**		**19 17 38.5**	**+1.7**		
NJ2				pmax	pmax					
	comp=Z,13nm,0.5s									
JNU	**Nakatsue**	**24.94**	**8**	P	**P**		**19 17 39.6**	**+1.0**		
	comp=Z,16nm,0.8s,baz=339,slow=2.5,SNR=6.7									
JNU	**Nakatsue**	**24.94**	**8**	IAmb	IAmb		19 17 41.6			
	comp=Z,35nm,1.1s									
WHN	**Wuhan**	**25.02**	**334**	P	P		19 17 31.3	-7.9		
IPM	**Ipoh**	**25.99**	**263**	P	**P**		**19 17 50.2**	**+2.0**		
IPM				IAmb	IAmb		19 17 51.1			
	comp=Z,17nm,0.7s									
KULM	**Kulim**	**26.24**	**265**	P	**P**		**19 17 52.2**	**+1.7**		
KULM				IAmb	IAmb		19 17 53.7			
	comp=Z,23nm,0.9s									
FITZ	**Fitzroy Crossi**	**26.29**	**183**	P	**P**		**19 17 51.4**	**+0.5**		
	baz=26,SNR=34									
FITZ	**Fitzroy Crossi**	**26.29**	**183**	P	**P**		**19 17 51.4**	**+0.5**		
	comp=Z,21nm,0.7s,baz=5.9,slow=7.2,SNR=21									
FITZ	**Fitzroy Crossi**	**26.29**	**183**	P	**P**		**19 17 51.3**	**+0.5**		
FITZ				IAmb	IAmb		19 17 55.5			
	comp=Z,24nm,0.9s									
PBKT	**Sadao Pong**	**26.59**	**290**	P	**P**		**19 17 53.5**	**-0.1**		
PBKT				IAmb	IAmb		19 18 04.0			
	comp=Z,23nm,0.9s									
KMI	**Kunming**	**28.45**	**309**	P	**P**		**19 18 09.0**	**-1.4**		
KMI				pP	sP		19 18 23.0	-4.0		
KMI				sP	pP		19 18 31.0	+9.2		
KMI				pmax	pmax					
	comp=Z,5.0nm,1.0s									
KMI				pmax	pmax					
	comp=Z,140nm,5.1s									
KMI				LR	LR					
	comp=Z,530nm,14.0s									
KMI				LR	LR					
	comp=Z,580nm,20.8s									
KMI				LR	LR					
	comp=Z,680nm,21.8s									
WB0	**Warramunga Arr**	**28.88**	**165**	P	**P**		**19 18 14.0**	**-0.1**		
CM31	**Chiang Mai Arr**	**28.96**	**293**	P	**P**		**19 18 14.0**	**-0.8**		
CMAR	**Chiang Mai Arr**	**28.96**	**293**	P	**P**		**19 18 14.3**	**-0.5**		
	comp=Z,5.2nm,0.9s,baz=112,slow=6.7,SNR=35									
CMAR				PcP	**PcP**		**19 21 22.8**	**-0.1**		
	comp=Z,1.8nm,0.9s,baz=87,slow=1.1,SNR=8.3									
KSRS	**Korea Array**	**29.00**	**2**	P	**P**		**19 18 16.0**	**+1.1**		
KSRS	**Korea Array**	**29.00**	**2**	P	**P**		**19 18 15.9**	**+1.1**		
	comp=Z,7.6nm,0.8s,baz=176,slow=11,SNR=20									
WRA	**Warramunga Arr**	**29.04**	**165**	P	**P**		**19 18 15.5**	**+0.1**		
	comp=Z,2.1nm,0.7s,baz=345,slow=9.4,SNR=13									
WRA				S	**S**		**19 22 59.3**	**-4.4**		
	comp=Z,1.7nm,1.0s,baz=351,slow=21,SNR=3.7									
WRA				ScP	**ScP**		**19 24 58.9**	**-2.0**		
	comp=Z,1.1nm,0.8s,baz=350,slow=3.4,SNR=3.0									
WRA				LR	LR		19 32 41.9			
	comp=Z,67nm,18.6s,baz=355,slow=42									
WB2	**Warramunga Arr**	**29.04**	**165**	P	**P**		**19 18 15.9**	**+0.4**		
KS19	**Wonju Array Si**	**29.05**	**2**	P	**P**		**19 18 12.1**	**-3.3**		
KS19				IAmb	IAmb		19 18 17.1			
	comp=Z,23nm,1.1s									
CHTO	**Chiang Mai**	**29.06**	**294**	P	**P**		**19 18 14.7**	**-1.0**		
CHTO				pmax	pmax					
	comp=Z,12nm,1.2s									
CHTO	**Chiang Mai**	**29.06**	**294**	P	**P**		**19 18 14.7**	**-1.0**		
MJAR	**Matsushiro Arr**	**29.91**	**18**	P	**P**		**19 18 22.8**	**-0.2**		
	comp=Z,1.6nm,0.8s,baz=175,slow=8.8,SNR=3.7									
GSI	**Gunungsitoli**	**30.02**	**258**	P	**P**		**19 18 22.0**	**-2.3**		
GSI				IAmb	IAmb		19 18 26.3			
	comp=Z,15nm,0.9s									
XAN	**Xi'an**	**30.48**	**330**	P	**P**		**19 18 26.0**	**-2.1**		
XAN				pP	sP		19 18 47.8	+3.4		
XAN				pmax	pmax					
	comp=Z,6.0nm,0.6s									
XAN				LR	LR					
	comp=Z,450nm,11.8s									
XAN				LR	LR					
	comp=Z,850nm,12.8s									
XAN				LR	LR					
	comp=Z,650nm,15.2s									
CD2	**Chengdu**	**31.16**	**319**	*eP*	**P**		**19 18 33.5**	**-0.7**		
CD2				pmax	pmax					
	comp=Z,10.0nm,0.5s									
CD2				pmax	pmax					
	comp=Z,120nm,4.5s									
QIS	**Mount Isa**	**31.31**	**157**	P	**P**		**19 18 36.6**	**+1.1**		
	baz=32,SNR=5.7									
MTSU	**Mount Surprise**	**31.42**	**147**	P	**P**		**19 18 38.2**	**+1.6**		
	baz=32,SNR=4.8									
AS31	**Alice Springs**	**32.53**	**168**	P	**P**		**19 18 47.8**	**+1.5**		
ASAR	**Alice Springs**	**32.53**	**168**	P	**P**		**19 18 47.5**	**+1.2**		
	comp=Z,3.4nm,0.5s,baz=344,slow=7.2,SNR=66									
ASAR				PcP	**PcP**		**19 21 33.3**	**+1.0**		
	comp=Z,0.9nm,0.6s,baz=346,slow=3.5,SNR=3.8									
ASAR				S	**S**		**19 23 55.0**	**-3.4**		
	comp=Z,0.5nm,0.8s,baz=348,slow=16,SNR=3.8									
ASAR				ScP	**ScP**		**19 25 10.8**	**-1.7**		
	comp=Z,3.1nm,1.0s,baz=355,slow=3.2,SNR=11									
BJT	**Baijiatuao**	**32.98**	**345**	P	**P**		**19 18 49.6**	**-0.3**		
BJT				pmax	pmax					
	comp=Z,19nm,1.1s									
BJT	**Baijiatuao**	**32.98**	**345**	P	**P**		**19 18 49.6**	**-0.3**		
BJT				IAmb	IAmb		19 18 50.9			
	comp=Z,19nm,1.1s									
BJI	**Beijing**	**33.00**	**345**	P	**P**		**19 18 49.8**	**-0.3**		
BJI				pmax	pmax					
	comp=Z,16nm,1.2s									
WRKA	**Warakurna**	**33.20**	**178**	P	**P**		**19 18 52.9**	**+0.8**		
	baz=34,SNR=31									
CTA	**Charters Tower**	**34.07**	**146**	P	**P**		**19 19 01.7**	**+2.0**		
	comp=Z,7.2nm,1.0s,baz=331,slow=13,SNR=2.8									
LZH	**Lanzhou**	**34.72**	**326**	*eP*	**P**		**19 19 04.3**	**-1.0**		
LZH				pP	pwP		19 19 19.3	-3.0		
LZH				sP	sP		19 19 26.5	+4.9		
LZH				*e*PP	**PnPn**		**19 20 22.5**	**+0.1**		
LZH				pmax	pmax					
	comp=Z,25nm,1.1s									
LZH				pmax	pmax					
	comp=Z,92nm,5.2s									
LZH				LR	LR					
	comp=Z,380nm,12.9s									
LZH				LR	LR					
	comp=Z,400nm,13.2s									
LZH				LR	LR					
	comp=Z,540nm,16.5s									
VLA	**Vladivostok**	**34.92**	**6**	*eP*	**P**		**19 19 08.4**	**+1.6**		
HHC	**Hu-ho-hao-te**	**35.14**	**340**	*eP*	**P**		**19 19 09.3**	**+0.5**		
HHC				pmax	pmax					
	comp=Z,4.0nm,1.0s									
HHC				pmax	pmax					
	comp=Z,110nm,4.6s									
HHC				LR	LR					
	comp=Z,250nm,11.1s									
HHC				LR	LR					
	comp=Z,240nm,14.5s									

HHC				LR	LR					
	comp=Z,290nm,10.6s									
USA0B	**Ussuriysk Arra**	**36.00**	**6**	P	**P**		**19 19 15.5**	**-0.5**		
USA0B				pmax	pmax					
	comp=Z,59nm,1.1s									
USA0B	**Ussuriysk Arra**	**36.00**	**6**	P	**P**		**19 19 15.5**	**-0.5**		
USRK	**Ussuriysk Ar.**	**36.00**	**6**	P	**P**		**19 19 17.6**	**+1.6**		
	comp=Z,39nm,0.8s,baz=192,slow=7.4,SNR=55									
MDJ	**Mudanjiang**	**36.22**	**3**	P	**P**		**19 19 19.5**	**+1.6**		
MDJ				sS	sS		19 25 17.5	+3.7		
MDJ				PcS	**PcS**		**19 25 27.0**	**-3.0**		
MDJ				ScS	**ScS**		**19 29 33.0**	**+2.0**		
MDJ				pmax	pmax					
	comp=Z,69nm,1.0s									
MDJ				pmax	pmax					
	comp=Z,110nm,3.6s									
MDJ				LR	LR					
	comp=Z,2μm,17.7s									
MDJ				LR	LR					
	comp=Z,3μm,17.2s									
MDJ				LR	LR					
	comp=Z,720nm,12.4s									
MDJ	**Mudanjiang**	**36.22**	**3**	P	**P**		**19 19 19.3**	**+1.4**		
SHL	**Shillong**	**37.46**	**302**	P	**P**		**19 19 27.7**	**-1.3**		
SHL				pmax	pmax					
	comp=Z,18nm,0.6s									
SHL	**Shillong**	**37.46**	**302**	P	**P**		**19 19 27.6**	**-1.3**		
MORW	**Morawa**	**38.63**	**195**	P	**P**		**19 19 39.3**	**+0.9**		
	baz=39,SNR=13									
MORW	**Morawa**	**38.63**	**195**	P	**P**		**19 19 39.2**	**+0.7**		
FORT	**Forrest**	**38.90**	**178**	P	**P**		**19 19 41.7**	**+1.0**		
	baz=39,SNR=21									
FORT	**Forrest**	**38.90**	**178**	P	**P**		**19 19 40.2**	**-0.5**		
GTA	**Gaotai**	**39.32**	**326**	*eP*	**P**		**19 19 43.0**	**-1.4**		
GTA				pmax	pmax					
	comp=Z,7.0nm,1.0s									
LSA	**Lhasa**	**39.67**	**307**	P	**P**		**19 19 48.0**	**+0.2**		
LSA	**Lhasa**	**39.67**	**307**	P	**P**		**19 19 47.8**	**0.0**		
LSA				pmax	pmax					
	comp=Z,14nm,1.5s									
LSA	**Lhasa**	**39.67**	**307**	P	**P**		**19 19 47.8**	**0.0**		
LSA				IAmb	IAmb		19 20 00.6			
	comp=Z,14nm,1.5s									
KMBL	**Kambalda**	**39.77**	**187**	P	**P**		**19 19 49.0**	**+1.1**		
	baz=40,SNR=12									
H11S3	**WAKE ISLAND Hy**	**39.91**	**71**	T	T		20 03 15.5			
	baz=262,slow=73,SNR=62									
H11S1	**WAKE ISLAND Hy**	**39.93**	**71**	T	T		20 03 01.7			
	baz=262,slow=73,SNR=42									
H11S2	**WAKE ISLAND Hy**	**39.93**	**71**	T	T		20 03 04.7			
	baz=262,slow=73,SNR=28									
BLDU	**Balidu**	**39.94**	**194**	P	**P**		**19 19 50.2**	**+0.8**		
	baz=40,SNR=16									
H11N1	**WAKE ISLAND Hy**	**40.31**	**69**	T	T		20 03 43.8			
	baz=265,slow=74,SNR=29									
H11N2	**WAKE ISLAND Hy**	**40.32**	**69**	T	T		20 03 47.3			
	baz=265,slow=74,SNR=34									
H11N3	**WAKE ISLAND Hy**	**40.33**	**69**	T	T		20 03 40.1			
	baz=265,slow=74,SNR=32									
YSS	**Yuzh-Sakhalins**	**40.80**	**17**⇓	*eP*	P		19 20 10.3	+14		
YSS				*e*			19 20 16.7			
YSS				*e*			19 26 05.0			
YSS				MLR	MLR					
	comp=N,700nm,16.0s									
YSS				MLR	MLR					
	comp=Z,1μm,16.0s									
KLR	**Kul'dur**	**40.96**	**5**	*eP*	**P**		**19 19 58.7**	**+1.1**		
KLR				pmax	pmax					
	comp=Z,11nm,0.9s									
HIA	**Hailar**	**41.24**	**353**	P	**P**		**19 20 00.0**	**+0.1**		
HIA				pmax	pmax					
	comp=Z,8.0nm,1.0s									
HIA	**Hailar**	**41.24**	**353**	P	**P**		**19 19 60.0**	**+0.1**		
MUN	**Mundaring**	**41.37**	**194**	P	**P**		**19 20 02.2**	**+1.1**		
	baz=42,SNR=8.1									
TAPN	**Taplejung**	**41.58**	**302**	*eP*	**P**		**19 20 03.2**	**-0.2**		
	comp=Z,26nm,0.4s									
ODAN	**Odare**	**41.69**	**301**	*eP*	**P**		**19 20 03.5**	**-0.7**		
	comp=Z,30nm,0.4s									
BBOO	**Buckleboo**	**41.84**	**168**	P	**P**		**19 20 05.8**	**+0.8**		
	baz=42,SNR=44									
BBOO	**Buckleboo**	**41.84**	**168**	P	**P**		**19 20 05.2**

YAK pmax pmax
comp=Z,27nm,1.1s
YAK pmax pmax
comp=N,16nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.4s
MKAR Makanchi Array 53.94 323 *i* P **P 19 21 38.7 +0.2**
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MKAR Makanchi Array 53.94 323 P **P 19 21 38.0 -0.5**
comp=Z,2.9nm,0.4s,baz=112,slow=7.0,SNR=28
MAKZ Makanchi 54.13 323 P **P 19 21 39.4 -0.5**
MAKZ pmax pmax
comp=Z,7.0nm,1.3s
MAKZ Makanchi 54.13 323 P **P 19 21 39.4 -0.5**
MA2 Magadan 54.23 15 *e*P **P 19 21 41.4 +1.0**
MA2 pmax pmax
comp=Z,5.0nm,1.0s
KSH Kashi 54.99 313 P **P 19 21 47.3 +0.9**
KSH pP pwP 19 22 02.5 +0.9
KSH **PP 19 23 52.0 +2.1**
KSH S **S 19 29 20.8 -4.5**
KSH sS sS 19 29 49.0 +1.6
KSH pmax pmax
comp=Z,890nm,8.8s
KSH LR LR
comp=Z,340nm,4.8s
KSH LR LR
comp=Z,470nm,5.3s
KSH LR LR
comp=Z,1μm,7.2s
NIL Nilore 55.34 305 P **P 19 21 46.9 -2.0**
NIL pmax pmax
comp=Z,19nm,0.9s
NIL Nilore 55.34 305 P **P 19 21 46.9 -2.0**
ZALV Zalesovo Beam 56.61 332 P **P 19 21 56.3 -1.3**
comp=Z,2.7nm,0.6s,baz=129,slow=7.3,SNR=5.6
ZALV PcP **PcP 19 22 52.3 -1.2**
comp=Z,0.8nm,0.4s,baz=123,slow=5.3,SNR=2.1
AAK Ala-Archa 57.13 316 *e*P P 19 21 57.2 -4.5
AAK pmax pmax
comp=Z,2.0nm,1.0s
SEY Seymchan 57.54 13 *e*P **P 19 22 06.5 +2.5**
KURK Kurchatov 58.01 326 P **P 19 22 07.0 -0.5**
KURK pmax pmax
comp=Z,26nm,1.2s
KURK Kurchatov 58.01 326 P **P 19 22 07.0 -0.5**
BTK Batken 58.93 312 P **P 19 22 13.2 -1.1**
BTK pmax pmax
comp=Z,8.0nm,1.3s
BTK Batken 58.93 312 P **P 19 22 13.2 -1.1**
BTK IAmb IAmb 19 22 20.6
comp=Z,8.4nm,1.3s
KK31 Karatay Array 60.05 315 P **P 19 22 21.1 -0.8**
KK31 pmax pmax
comp=Z,10.0nm,1.2s
KK31 Karatay Array 60.05 315 P **P 19 22 21.1 -0.8**
KK31 IAmb IAmb 19 22 21.8
comp=Z,10.0nm,1.1s
KKAR Karatay Array 60.05 315 P **P 19 22 21.0 -0.9**
KKAR pmax pmax
comp=Z,10.0nm,1.2s
KKAR Karatay Array 60.05 315 P **P 19 22 21.0 -0.9**
KKAR IAmb IAmb 19 22 21.8
comp=Z,10.0nm,1.1s
TIXI Tiksi 63.27 1 *e*P **P 19 22 43.6 +0.7**
TIXI pmax pmax
comp=Z,18nm,1.0s
TIXI Tiksi 63.27 1 P **P 19 22 43.4 +0.5**
BRVK Borovoye 63.68 326 P **P 19 22 45.6 -0.4**
BRVK pmax pmax
comp=Z,11nm,1.0s
BRVK Borovoye 63.68 326 P **P 19 22 45.6 -0.4**
BRVK IAmb IAmb 19 22 46.2
comp=Z,11nm,0.9s
BILL Bilibino 65.09 15 *ce*P **P 19 22 56.7 +1.7**
BILL *i* 19 23 13.0
BILL *i* 19 23 28.8
BILL pmax pmax
comp=Z,10.0nm,1.1s
BILL MLR MLR
comp=Z,194nm,17.0s
RPZ Rata Peaks 65.44 146 LR LR 19 51 17.9
comp=Z,73nm,19.8s,baz=348,slow=36
GEYT Alibeck 68.20 307 P **P 19 23 14.8 -0.6**
comp=Z,1.8nm,0.7s,baz=132,slow=4.4,SNR=4.1
SVE Sverdlovsk 70.17 328 *e*P **P 19 23 26.4 -0.8**
SVE pmax pmax
comp=Z,18nm,1.2s
AKTO Aktyubinsk 70.20 321 P **P 19 23 26.1 -1.4**
comp=Z,1.1nm,0.4s,baz=8.5,slow=5.9,SNR=6.1
ARU Arti 71.18 327 *c i*P **P 19 23 31.8 -1.5**
ARU S **S 19 32 50.5 +3.8**
ARU SS **SS 19 37 25.1 +4.1**
ARU pmax pmax
comp=Z,8.0nm,1.2s
ARU Arti 71.18 327 P **P 19 23 31.9 -1.4**
comp=Z,1.9nm,0.4s,baz=98,slow=7.0,SNR=17
ARU Arti 71.18 327 S **P 19 23 32.1 -1.2**
RAYN Ar Rayn 78.87 292 P **P 19 24 17.2 -1.2**
RAYN pmax pmax
comp=Z,4.0nm,0.7s
RAYN Ar Rayn 78.87 292 P **P 19 24 17.2 -1.2**
BPAW Bear Paw Mtn. 79.11 26 P **P 19 24 21.3 +2.4**
MLY Manley 79.27 25 P **P 19 24 21.6 +1.8**
MLY IAmb IAmb 19 24 22.9
comp=Z,9.4nm,0.8s
MCK McKinley 80.00 27 P **P 19 24 24.0 +0.3**
MCK pmax pmax
comp=Z,31nm,1.0s
MCK McKinley 80.00 27 P **P 19 24 24.0 +0.3**
RND Reindeer 80.03 27 P **P 19 24 25.6 +1.6**
RND pmax pmax
comp=Z,24nm,1.2s
RND Reindeer 80.03 27 P **P 19 24 25.6 +1.6**
KIV Kislovodsk 80.12 313 *e*P **P 19 24 21.9 -3.0**
KIV pmax pmax
comp=Z,18nm,1.0s
ILAR Eielson Array 80.90 26 P **P 19 24 29.3 +0.7**
comp=Z,4.2nm,0.9s,baz=247,slow=5.7,SNR=24
OBN Obninsk 83.42 325↑ *e*P **P 19 24 40.6 -1.3**
OBN pmax pmax
comp=Z,5.0nm,0.9s
SPITS Spitsbergen Ar 86.03 349 P **P 19 24 55.3 +0.7**
baz=108,slow=9.3
ARCES ARCESS Array B 86.21 340 P **P 19 24 55.1 -0.6**
comp=Z,6.5nm,0.9s,baz=85,slow=6.6,SNR=21
MMAI Mount Meron Ar 86.77 303 P **P 19 24 58.9 -0.4**
comp=Z,1.4nm,0.5s,baz=71,slow=6.2,SNR=4.3
BRTR Keskin Array B 87.23 310 *i* P **P 19 24 59.9 -1.6**
BRTR pmax pmax
comp=Z,1.0nm,0.6s
BRTR Keskin Array B 87.23 310 P **P 19 24 59.8 -1.8**
comp=Z,1.1nm,0.6s,baz=137,slow=4.0,SNR=12
FINES FINESS Array B 87.88 332 P **P 19 25 03.0 -0.9**
comp=Z,5.3nm,0.4s,baz=79,slow=4.7,SNR=88
VNDA Vanda 87.94 173 P **P 19 25 04.1 +0.3**
comp=Z,2.6nm,0.9s,baz=334,slow=4.8,SNR=3.0
VNDA LR LR 20 05 50.9
comp=Z,162nm,19.1s,baz=212,slow=36
AKASG Malin Array Be 88.45 321 P **P 19 25 05.2 -1.6**
comp=Z,25nm,0.3s,baz=65,slow=4.8,SNR=1.4
KMBO Kilima Mbogo 89.81 269 P **P 19 25 13.3 -1.0**
KMBO pmax pmax
comp=Z,2.0nm,0.8s
KMBO Kilima Mbogo 89.81 269 P **P 19 25 13.2 -1.0**
comp=Z,0.9nm,0.3s,baz=39,slow=6.5,SNR=4.6
KMBO Kilima Mbogo 89.81 269 IAmb IAmb 19 25 15.5
comp=Z,2.2nm,0.8s
DAG Danmarks Havn 92.74 353 *i* P **P 19 25 25.7 -0.6**
DAG pmax pmax
comp=Z,1.0nm,0.5s
DAG Danmarks Havn 92.74 353 *i* P **P 19 25 25.0 -1.3**
DAG Danmarks Havn 92.74 353 *i* P **P 19 25 25.7 -0.6**
comp=Z,1.3nm,0.5s
HFS Hagfors 94.04 333 P **P 19 25 31.1 -1.5**
comp=Z,2.4nm,0.5s,baz=104,slow=3.1,SNR=18
NB2 NORSAR Subarra 94.76 334 P **P 19 25 34.2 -1.7**
comp=Z,0.4nm,0.6s,baz=58,slow=5.6
NOA NORSAR Array B 94.76 334 P **P 19 25 34.7 -1.3**
comp=Z,1.9nm,1.0s,baz=74,slow=6.5,SNR=5.6
NOA LR LR 20 11 37.1
comp=Z,216nm,18.1s,baz=60,slow=38
YKA Yellowknife Ar 95.26 24 P **P 19 25 39.3 +1.2**
comp=Z,2.3nm,1.0s,baz=295,slow=4.8,SNR=11
GERES GERESS Array B 98.59 322 P **P 19 25 52.9 -0.8**
comp=Z,0.9nm,0.6s,baz=62,slow=6.2,SNR=7.0
NVAR Mina Array Bea 103.70 47 Pdiff **Pdif 19 26 20.9 +4.1**
comp=Z,0.5nm,0.7s,baz=264,slow=1.5,SNR=3.9
TORD Torodi Ar. Bea 121.55 291 PKP **PKPdf 19 31 08.4 -0.6**
comp=Z,0.7nm,0.4s,baz=58,slow=1.9,SNR=9.8
DBIC Dimbokro 129.64 286 PKP **PKPdf 19 31 24.1 -0.5**
comp=Z,2.5nm,1.0s,baz=232,slow=2.7,SNR=4.1
PLCA Paso Flores 144.19 157 PKP **PKPdf 19 31 50.3 -0.4**
comp=Z,2.3nm,0.9s,baz=317,slow=5.5,SNR=4.2

*IDC **26** 19:23:33.5±1.6, 38.59N×20.22E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.3/41, mbtmp3.7/4, ML2.5/1, Error ellipse: s-maj=55.8km s-min=26.1km az=134.0*
*THE **26** 19:23:34.8, 38.23N×20.35E, h9km±3km, ML3.2/3, Error ellipse: s-maj=3.4km s-min=0.5km az=77.0*
*ATH **26** 19:23:35.4, 38.25N×20.42E, h12km±2km, ML3.4/7, Error ellipse: s-maj=3.0km s-min=1.0km az=79.0*
ISC 26 19:23:35.8±1.2, 38.26N±0.03×20.43E±0.06, h11km±6km, n31, σ0§91/46, mb3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.15**	**122**	P		**Pg**	**19 23 38.9**	**-0.4**
VLS				S		**Sg**	**19 23 41.7**	**-0.1**
	38μm,0.2s							
VLS	**Valsamata**	**0.15**	**122**	P		**Pg**	**19 23 38.9**	**-0.4**
VLS				S		**Sg**	**19 23 41.6**	**-0.1**
VLS				AML	AML		19 23 41.8	
	comp=N,95175μm,0.2s							
VLS				AML	AML		19 23 41.9	
	comp=E,52499μm,0.1s							
FSK	**Fiskardo**	**0.23**	**28**	P		**Pg**	**19 23 40.6**	**0.0**
FSK				S		**Sg**	**19 23 44.6**	**+0.8**
FSK	**Fiskardo**	**0.23**	**28**	P		**Pg**	**19 23 40.5**	**-0.1**
FSK				S		**Sg**	**19 23 44.2**	**+0.4**
FSK				AML	AML		19 23 45.1	
	comp=N,18160μm,0.2s							
FSK				AML	AML		19 23 45.2	
	comp=E,18695μm,0.2s							
KFL	**Anninata**	**0.32**	**117**	P		**Pg**	**19 23 42.0**	**-0.2**
KFL				S		**Sg**	**19 23 47.4**	**+0.8**
KFL	**Anninata**	**0.32**	**117**	P		**Pg**	**19 23 42.0**	**-0.2**
KFL				S		**Sg**	**19 23 46.9**	**+0.4**
KFL				AML	AML		19 23 47.9	
	comp=E,60785μm,0.3s							
KFL				AML	AML		19 23 50.1	
	comp=N,29136μm,0.4s							
EVGI	**Lefkada island**	**0.41**	**26**	P		**Pg**	**19 23 43.6**	**-0.2**
EVGI				S		**Sb**	**19 23 50.6**	**-0.6**
EVGI	**Lefkada island**	**0.41**	**26**	P		**Pg**	**19 23 43.7**	**-0.2**
EVGI				S		**Sg**	**19 23 50.2**	**+1.0**
VLMS	**Volimes, Zakyn**	**0.42**	**154**	P		**Pg**	**19 23 43.7**	**-0.4**
VLMS				S		**Sb**	**19 23 50.5**	**-1.1**
VLMS				AML	AML		19 23 51.1	
	comp=E,35787μm,0.3s							
VLMS				AML	AML		19 23 51.4	
	comp=N,50463μm,0.4s							
MGNA	**Meganis**	**0.49**	**36**	P		**Pg**	**19 23 45.1**	**-0.3**
MGNA				S		**Sg**	**19 23 53.0**	**+1.1**
LKD2	**Lefkada island**	**0.56**	**19**	P		**Pg**	**19 23 46.6**	**-0.1**
LKD2	**Lefkada island**	**0.56**	**19**	P		**Pg**	**19 23 46.6**	**-0.1**
LKD2				S		**Sg**	**19 23 53.8**	**-0.4**
LKD2				AML	AML		19 24 04.7	
	comp=N,1651μm,0.5s							
LKD2				AML	AML		19 24 06.8	
	comp=E,1601μm,0.4s							
TSLK	**Tsoukalades, L**	**0.59**	**17**	P		**Pg**	**19 23 46.5**	**-0.9**
TSLK				S		**Sb**	**19 23 56.7**	**+0.1**
	comp=E,885nm,0.4s							
TSLK	**Tsoukalades, L**	**0.59**	**17**	P		**Pg**	**19 23 46.7**	**-0.7**
RLS	**Riolos of Patr**	**0.84**	**103**	P		**Pg**	**19 23 51.4**	**-0.7**
RLS				S		**Sb**	**19 24 04.6**	**+0.9**
	comp=E,1μm,0.4s							
RLS	**Riolos of Patr**	**0.84**	**103**	P		**Pg**	**19 23 51.7**	**-0.4**
RLS				S		**Sg**	**19 24 03.1**	**0.0**
RLS				AML	AML		19 24 10.0	
	comp=E,2522μm,0.5s							
RLS				AML	AML		19 24 13.0	
	comp=N,3271μm,0.5s							
PVO	**Paravola**	**0.94**	**67**	P		**Pg**	**19 23 53.8**	**0.0**
DRO	**Drossia**	**1.06**	**106**	P		**Pg**	**19 23 54.8**	**-1.3**
EFP	**Efpalio**	**1.18**	**81**	P		**Pn**	**19 23 56.8**	**-1.3**
ANX	**Ano Chora**	**1.22**	**74**	P		**Pg**	**19 23 59.6**	**+0.4**
LAKA	**Lakka**	**1.22**	**90**	P		**Pn**	**19 23 58.1**	**-0.7**
AMT	**Artemida-Makis**	**1.25**	**125**	P		**Pn**	**19 23 57.8**	**-1.3**
SERG	**Sergoula**	**1.29**	**83**	P		**Pb**	**19 24 00.1**	**+0.1**
TRIZ	**Trizonia**	**1.30**	**85**	P		**Pn**	**19 23 59.5**	**-0.3**
KALE	**Kalithea**	**1.35**	**84**	P		**Pn**	**19 24 00.7**	**+0.1**
KLV	**Kalavryta, Ach**	**1.38**	**98**	P		**Pn**	**19 24 00.9**	**0.0**
KLV				AML	AML		19 25 24.9	
	comp=E,1364μm,1.0s							
KLV				AML	AML		19 25 31.7	
	comp=N,1310μm,0.9s							
LKR	**Lokris**	**2.06**	**78**	P		**Pb**	**19 24 12.5**	**-0.6**
IDI	**Anoyia**	**4.65**	**128**	Pn		**Pn**	**19 24 49.8**	**+3.9**
IDI	comp=N,0.2nm,0.3s,baz=331,slow=10,SNR=2.4			Sn		**Sn**	**19 25 41.3**	**+1.3**
	comp=N,1.9nm,0.3s,baz=346,slow=23,SNR=7.6							
TORD	**Torodi Ar. Bea**	**30.05**	**219**	P		**P**	**19 29 45.7**	**+0.8**
	comp=N,0.6nm,0.8s,baz=36,slow=8.7,SNR=3.5							
MKAR	**Makanchi Array**	**45.32**	**58**	P		**P**	**19 31 52.3**	**-1.3**
	comp=N,0.8nm,0.6s,baz=276,slow=7.4,SNR=12							
ZALV	**Zalesovo Beam**	**45.69**	**48**	P		**P**	**19 31 55.4**	**-1.0**
	comp=N,1.3nm,0.7s,baz=289,slow=9.0,SNR=4.6							

*IDC **26** 19:24:10.2±15.0, 38.09N×20.10E, h0km, mb3.8/4, mb1 3.7/5, mb1mx3.3/42, mbtmp3.7/5, ML3.5/1, Error ellipse: s-maj=284.7km s-min=32.4km az=36.0*
*ATH **26** 19:24:14.3, 38.37N×20.42E, h10km±31km, ML3.4/3, Error ellipse: s-maj=31.6km s-min=1.1km az=0.0*
ISC 26 19:24:14.2±1.6, 38.37N±0.03×20.4E±0.1, h8km±12km, n14, σ0§61/22, mb3.8/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.16**	**54**	P		**Pg**	**19 24 17.3**	**-0.3**
FSK				S		**Sg**	**19 24 19.7**	**-0.2**
FSK				AML	AML		19 24 19.9	
	comp=E,55130μm,0.3s							
FSK				AML	AML		19 24 19.9	
	comp=N,42478μm,0.4s							
VLS	**Valsamata**	**0.24**	**141**	P		**Pg**	**19 24 18.9**	**-0.2**
VLS				S		**Sg**	**19 24 22.6**	**+0.3**
EVGI	**Lefkada island**	**0.33**	**39**	P		**Pg**	**19 24 20.5**	**-0.2**
EVGI				S		**Sg**	**19 24 25.9**	**+0.8**
KFL	**Anninata**	**0.40**	**129**	P		**Pg**	**19 24 21.8**	**-0.2**
KFL				S		**Sg**	**19 24 28.1**	**+0.8**
MGNA	**Meganis**	**0.42**	**47**	P		**Pg**	**19 24 22.2**	**-0.3**
MGNA				S		**Sg**	**19 24 28.2**	**+0.1**
MGNA				AML	AML		19 24 28.9	
	comp=N,20204μm,0.3s							
MGNA				AML	AML		19 24 29.0	
	comp=E,21320μm,0.4s							
LKD2	**Lefkada island**	**0.47**	**26**	P		**Pg**	**19 24 23.9**	**+0.5**
LKD2				S		**Sg**	**19 24 29.2**	**-0.3**
LKD2				AML	AML		19 24 30.6	
	comp=E,5936μm,0.5s							
LKD2				AML	AML		19 24 30.9	
	comp=N,6364μm,0.8s							
TSLK	**Tsoukalades, L**	**0.50**	**24**	P		**Pg**	**19 24 23.9**	**-0.1**
TSLK				S		**Sg**	**19 24 31.1**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.53**	**157**	P		**Pg**	**19 24 23.7**	**-0.8**
VLMS				S		**Sg**	**19 24 32.9**	**+1.4**
GBRS	**Gornja Briga**	**8.28**	**332**	*e*Pn		**Pn**	**19 26 14.6**	**-0.1**
GERES	**GERESS Array B**	**11.54**	**337**	Pn		**Pn**	**19 26 58.8**	**-0.6**
	comp=N,0.1nm,0.3s,baz=155,slow=14,SNR=4.2							
HFS	**Hagfors**	**22.20**	**351**	P		**P**	**19 29 11.4**	**+0.6**
	comp=N,3.7nm,0.8s,baz=165,slow=8.7,SNR=4.7							
FINES	**FINESS Array B**	**23.37**	**7**	P		**P**	**19 29 23.8**	**+0.7**
	comp=N,1.1nm,0.7s,baz=190,slow=11,SNR=5.6							
MKAR	**Makanchi Array**	**45.29**	**59**	P		**P**	**19 32 32.1**	**-0.3**
	comp=N,0.4nm,0.4s,baz=273,slow=7.9,SNR=4.5							
ZALV	**Zalesovo Beam**	**45.64**	**48**	P		**P**	**19 32 34.6**	**-0.4**
	comp=N,0.8nm,0.4s,baz=276,slow=9.0,SNR=3.4							

BEO 26 19:26:08.1±0.9, 43.19N×19.92E, h0km, ML1.8/6, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.08**	**30**	*e*Pg		Pg	19 26 08.6	-1.1
SJES				*e*Sg		Sg	19 26 10.2	-0.5
IVAS	**Ivanjica**	**0.42**	**24**	*e*Pg		Pg	19 26 14.9	-1.3
IVAS				*e*Sg		Sg	19 26 19.8	-1.9
BBLS	**Lazići**	**0.77**	**331**	*e*Pg		Pg	19 26 21.6	-1.3
BBLS				*e*Sg		Sg	19 26 32.4	-0.5
GRUS	**Gruza**	**0.91**	**39**	*e*Pg		Pg	19 26 25.3	-0.2
GRUS				*e*Sg		Sg	19 26 37.1	-0.1
DIVS	**Divibare**	**0.91**	**3**	*e*Pg		Pg	19 26 25.3	-0.2
DIVS				*e*Sg		Sg	19 26 37.7	+0.4
TRUS	**Trudelj**	**1.09**	**19**	*e*Pg		Pg	19 26 28.2	-0.8
TRUS				*e*Sg		Sg	19 26 43.5	+0.3
BOVS	**Bovan**	**1.38**	**71**	*e*Sg		Pg	19 26 32.1	-2.4
BOVS	**Bovan**	**1.38**	**71**	*e*Pg		Sg	19 26 52.3	0.0

*IDC **26** 19:35:36.0±12.0, 17.08S×178.93W, h484km±152km, mb3.1/6, mb1 3.4/6, mb1mx3.1/34, mbtmp3.9/6, Error ellipse: s-maj=119.0km s-min=33.5km az=163.0*
*NEIC **26** 19:35:41.3±2.0, 17.6S±0.4×178.9W±0.3, h555km±10km, mb4.2/4, Error ellipse: s-maj=66.4km s-min=14.8km az=150.0*
ISC 26 19:35:40.2±1.0, 18.1S±0.5×178.5W±0.2, h550km, n15, σ1§47/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**3.28**	**275**	P		**P**	**19 37 00.4**	**+3.3**
AFI	**Afiamalu**	**7.68**	**59**	P		**P**	**19 37 34.3**	**-0.7**
NOUC	**Port Laguerre**	**14.81**	**252**	P		**P**	**19 38 45.9**	**-1.9**
EIDS	**Eidsvold**	**29.12**	**250**	P		**P**	**19 40 56.0**	**-1.1**
ARMA	**Armidale**	**29.77**	**240**	P		**P**	**19 41 03.6**	**+0.8**
TOO	**Toolangi**	**36.99**	**231**	P		**P**	**19 42 04.5**	**+1.1**
TOO				IAmb	IAmb		19 42 19.6	
	comp=Z,5.8nm,1.1s							
STKA	**Stephens Creek**	**38.47**	**241**	P		**P**	**19 42 16.6**	**+1.0**
	comp=Z,2.0nm,0.4s,baz=83,slow=9.7,SNR=18							
STKA	**Stephens Creek**	**38.47**	**241**	IAmb	IAmb		19 42 17.1	
	comp=Z,0.6nm,0.7s							
BBOO	**Buckleboo**	**43.24**	**241**	P		**P**	**19 42 53.4**	**0.0**
BBOO				IAmb	IAmb		19 42 54.1	
	comp=Z,4.5nm,0.5s							
WRA	**Warramunga Arr**	**44.50**	**260**	P		**P**	**19 43 02.0**	**-1.4**
	comp=Z,0.6nm,0.4s,baz=92,slow=7.0,SNR=6.2							
ASAR	**Alice Springs**	**44.65**	**254**	P		**P**	**19 43 04.2**	**-0.3**
	comp=Z,8.4nm,0.6s,baz=89,slow=7.8,SNR=175							
NVAR	**Mina Array Bea**	**79.60**	**44**	P		**P**	**19 46 50.6**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=235,slow=7.6,SNR=2.4							
TXAR	**Lajitas Array**	**86.16**	**58**	P		**P**	**19 47 25.0**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=225,slow=6.2,SNR=2.6							
PDAR	**Pinedale Array**	**87.53**	**43**	P		**P**	**19 47 29.4**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=248,slow=4.8,SNR=3.1							
GERES	**GERESS Array B**	**147.73**	**345**	PKPbc		**PKPbc**	**19 54 22.3**	**-1.0**
	comp=Z,0.3nm,0.5s,baz=12,slow=5.1,SNR=3.2							

*IDC **26** 19:37:42.7±1.5, 38.45N×20.34E, h0km, mb3.8/4, mb1 3.8/5, mb1mx3.3/41, mbtmp3.8/5, ML2.7/1, Error ellipse: s-maj=42.3km s-min=27.1km az=120.0*
*ATH **26** 19:37:44.9, 38.26N×20.48E, h17km±3km, ML3.6/3, Error ellipse: s-maj=5.5km s-min=1.4km az=77.0*
ISC 26 19:37:44.2±1.9, 38.27N±0.05×20.3E±0.1, h8km±11km, n9, σ1§32/14, mb3.8/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.22**	**114**	P		**Pg**	**19 37 49.1**	**+0.5**
VLS				S		**Sg**	**19 37 51.0**	**-0.6**
VLS				AML	AML		19 37 51.2	
	comp=N,42510μm,0.2s							
VLS				AML	AML		19 37 51.5	
	comp=E,48786μm,0.1s							
FSK	**Fiskardo**	**0.26**	**43**	P		**Pg**	**19 37 49.9**	**+0.5**
FSK				S		**Sg**	**19 37 53.7**	**+0.7**
FSK				AML	AML		19 37 54.5	
	comp=N,36937μm,0.3s							
FSK				AML	AML		19 37 54.6	
	comp=E,69153μm,0.2s							
KFL	**Anninata**	**0.39**	**114**	P		**Pg**	**19 37 51.1**	**-0.7**
KFL				S		**Sg**	**19 37 55.6**	**-1.4**
KFL				AML	AML		19 37 57.2	
	comp=E,59360μm,0.3s							
KFL				AML	AML		19 37 60.0	
	comp=N,20082μm,0.5s							
VLMS	**Volimes, Zakyn**	**0.47**	**146**	P		**Pg**	**19 37 52.9**	**-0.3**
VLMS				S		**Sg**	**19 37 59.4**	**0.0**
IDI	**Anoyia**	**4.71**	**128**	Pn		**Pn**	**19 38 57.4**	**+1.7**
	comp=N,0.3nm,0.3s,baz=300,slow=14,SNR=2.3							
IDI				Sn		**Sn**	**19 39 52.4**	**+1.7**
	comp=N,0.6nm,0.3s,baz=336,slow=20,SNR=4.5							
FINES	**FINESS Array B**	**23.48**	**7**	P		**P**	**19 42 52.4**	**-1.6**
	comp=N,2.8nm,0.9s,baz=202,slow=9.9,SNR=2.9							
TORD	**Torodi Ar. Bea**	**30.01**	**218**	P		**P**	**19 43 54.4**	**+0.9**
	comp=N,0.6nm,0.7s,baz=18,slow=9.6,SNR=3.5							
MKAR	**Makanchi Array**	**45.38**	**58**	P		**P**	**19 46 01.6**	**-1.4**
	comp=N,0.5nm,0.4s,baz=275,slow=7.6,SNR=8.7							
ZALV	**Zalesovo Beam**	**45.74**	**48**	P		**P**	**19 46 04.2**	**-1.5**
	comp=N,1.0nm,0.5s,baz=280,slow=8.1,SNR=5.1							

*IDC **26** 19:52:37.4±7.2, 10.67S×161.58E, h74km±48km, mb3.4/4, mb1 3.6/5, mb1mx3.4/37, mbtmp3.8/5, ML4.3/1, Error ellipse: s-maj=61.7km s-min=28.8km az=101.0*
ISC 26 19:52:31.6±1.6, 10.8S±0.2×161.9E±0.2, h35km, n7, σ1§32/9, mb3.6/5, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.40**	**305**	P		**Pn**	**19 53 09.7**	**+1.2**
	97nm,0.3s,baz=155,slow=8.1,SNR=21							
HNR				S		**Sn**	**19 53 34.5**	**-2.2**
	112nm,0.3s,baz=165,slow=20,SNR=6.9							
HNR	**Honiara**	**2.40**	**305**	*e*P		**Pn**	**19 53 10.0**	**+1.5**
HNR				*i* S		**Sn**	**19 53 37.0**	**+0.2**
WRA	**Warramunga Arr**	**28.07**	**248**	P		**P**	**19 58 20.2**	**+0.1**
	1.4nm,0.6s,baz=78,slow=9.1,SNR=6.4							
ASAR	**Alice Springs**	**29.59**	**241**	P		**P**	**19 58 33.5**	**-0.2**
	0.5nm,0.5s,baz=66,slow=10.0,SNR=11							
XAN	**Xi'an**	**67.25**	**314**	P		**P**	**20 03 23.5**	**+0.6**
XAN				pP	sP		20 03 42.3	+4.7
XAN				pmax	pmax			
	comp=Z,12nm,1.4s							
SONM	**Songino Array**	**76.32**	**325**	P		**P**	**20 04 17.0**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=119,slow=4.8,SNR=2.9							
MKAR	**Makanchi Array**	**90.82**	**317**	P		**P**	**20 05 30.3**	**-1.2**
	comp=Z,0.1nm,0.5s,baz=87,slow=5.8,SNR=2.9							

*IDC **26** 19:53:15.3±0.7, 38.35N×20.50E, h0km, mb3.9/14, mb1 3.9/21, mb1mx3.8/46, mbtmp3.8/21, ML3.6/7, Error ellipse: s-maj=15.1km s-min=13.1km az=3.0*
*ATH **26** 19:53:16.6, 38.22N×20.33E, h10km±1km, ML3.7/25, Error ellipse: s-maj=1.9km s-min=0.9km az=63.0*
*NEIC **26** 19:53:17.0±3.5, 38.23N±0.05×20.36E±0.06, h10km±2km, Error ellipse: s-maj=7.3km s-min=6.1km az=211.0*
*THE **26** 19:53:16.4, 38.21N×20.31E, h1km±8km, ML4.0/6, Error ellipse: s-maj=9.9km s-min=0.7km az=249.0*
*TIR **26** 19:53:31.5, 38.17N×20.20E, h29km, Md4.0/7*
ISC 26 19:53:16.4±1.0, 38.21N±0.02×20.30E±0.03, h10km±6km, n147, σ1§70/198, mb4.1/21, 9C-3D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.23**	**99**	P		**Pg**	**19 53 20.6**	**-0.5**
VLS				S		**Sg**	**19 53 23.9**	**-0.4**
	165μm,0.3s							
VLS	**Valsamata**	**0.23**	**99**	P		**Pg**	**19 53 20.7**	**-0.4**
VLS				S		**Sg**	**19 53 24.1**	**-0.2**
VLS				AML	AML		19 53 24.2	
VLS				AML	AML		19 53 24.4	
FSK	**Fiskardo**	**0.32**	**40**	P		**Pg**	**19 53 22.7**	**-0.1**
FSK				S		**Sg**	**19 53 27.0**	**0.0**
	28μm,0.6s							
FSK	**Fiskardo**	**0.32**	**40**	P		**Pg**	**19 53 22.7**	**-0.1**
FSK				S		**Sg**	**

VLMS S Sb 19 53 31.9 -1.1
VLMS AML AML 19 53 33.9
comp=E,77961µm,0.2s
VLMS AML AML 19 53 34.1
EVGI Lefkada island 0.49 34 P Pg **19 53 25.4 -0.6**
EVGI Lefkada island 0.49 34 P Pg **19 53 26.3 +0.3**
EVGI S Sg **19 53 32.9 +0.4**
MGNA Meganis 0.59 41 P Pg **19 53 27.4 -0.3**
MGNA S Sg **19 53 35.8 +0.3**
MGNA AML AML 19 53 38.5
comp=N,8957µm,0.5s
MGNA AML AML 19 53 40.1
comp=E,10452µm,0.3s
LKD2 Lefkada island 0.64 26 P Pg **19 53 28.5 -0.3**
LKD2 Lefkada island 0.64 26 P Pg **19 53 28.2 -0.6**
LKD2 S Sg **19 53 36.1 -1.0**
LKD2 AML AML 19 53 46.4
comp=N,10162µm,0.7s
LKD2 AML AML 19 53 47.7
comp=E,7854µm,0.5s
TSLK Tsoukalades, L 0.67 25 P Pg **19 53 29.1 -0.2**
TSLK Tsoukalades, L 0.67 25 P Pg **19 53 29.2 -0.2**
RLS Riolos of Patr 0.93 99 P Pg **19 53 33.0 -1.3**
RLS S Sn **19 53 48.1 -0.9**
comp=E,5µm,0.5s
RLS Riolos of Patr 0.93 99 P Pg **19 53 33.0 -1.3**
RLS S Sb **19 53 46.3 -0.8**
RLS AML AML 19 53 51.8
comp=N,11834µm,0.6s
RLS AML AML 19 53 52.4
comp=E,6974µm,0.5s
PVO Paravola 1.04 67 P Pg **19 53 35.7 -0.8**
PVO S Sn **19 53 50.8 -1.0**
comp=E,6µm,0.8s
PVO Paravola 1.04 67 P Pg **19 53 35.6 -0.8**
PVO S Sb **19 53 50.0 -0.4**
PVO AML AML 19 53 55.8
comp=E,12472µm,0.8s
PVO AML AML 19 53 57.0
comp=N,11673µm,0.7s
DRO Drossia 1.14 103 P Pb **19 53 37.7 -0.5**
DRO Drossia 1.14 103 P Pb **19 53 37.8 -0.5**
DRO S Sb **19 53 52.6 -0.6**
DRO AML AML 19 54 01.5
comp=E,14235µm,0.4s
DRO AML AML 19 54 05.8
comp=N,12610µm,0.5s
UPR University Cam 1.17 86 P Pn **19 53 39.4 +0.6**
EFP Efpalio 1.28 80 P Pg **19 53 42.4 +1.4**
EFP S Sn **19 54 01.1 +3.5**
comp=N,5µm,1.0s
EFP Efpalio 1.28 80 P Pn **19 53 39.8 -0.6**
EFP AML AML 19 54 02.6
comp=E,9357µm,1.2s
EFP AML AML 19 54 03.2
comp=N,8738µm,0.8s
AMT Artemida-Makis 1.31 121 P Pg **19 53 41.5 +0.1**
AMT S Sb **19 53 57.2 -0.7**
AMT AML AML 19 54 08.2
comp=N,6316µm,0.7s
AMT AML AML 19 54 15.7
comp=E,7449µm,0.6s
IGT Igoumenitsa 1.32 1 P Pg **19 53 42.2 +0.6**
IGT Igoumenitsa 1.32 1 P Pg **19 53 42.3 +0.6**
IGT S Sb **19 53 58.2 0.0**
IGT AML AML 19 54 07.0
comp=N,1889µm,0.3s
IGT AML AML 19 54 10.2
comp=E,2878µm,0.6s
LAKA Lakka 1.32 88 P Pn **19 53 39.8 -1.2**
LAKA Lakka 1.32 88 P Pn **19 53 39.8 -1.2**
LAKA S Sg **19 53 58.6 -0.4**
LAKA AML AML 19 54 05.3
comp=N,4732µm,0.6s
LAKA AML AML 19 54 06.9
comp=E,5138µm,0.5s
ANX Ano Chora 1.33 73 P Pg **19 53 41.6 -0.3**
ANX S Sg **19 53 59.7 +0.5**
ANX AML AML 19 54 04.7
comp=E,16368µm,0.6s
ANX AML AML 19 54 05.0
comp=N,17623µm,0.5s
EVR Evrytania 1.38 59 P Pb **19 53 42.0 -0.3**
EVR AML AML 19 54 14.8
comp=N,3550µm,0.9s
EVR AML AML 19 54 16.1
comp=E,3511µm,0.7s
SERG Sergoula 1.40 81 P Pn **19 53 41.6 -0.4**
SERG S Sg **19 54 01.0 -0.3**
SERG AML AML 19 54 06.1
comp=N,4395µm,0.5s
SERG AML AML 19 54 06.9
comp=E,8346µm,0.7s
TRIZ Trizonia 1.41 83 P Pn **19 53 42.0 -0.1**
KALE Kalithea 1.46 82 P Pg **19 53 44.9 +0.6**
KALE S Sg **19 54 04.0 +0.7**
KALE AML AML 19 54 09.1
comp=E,4588µm,0.9s
KALE AML AML 19 54 10.1
comp=N,6746µm,0.5s
KLV Kalavryta, Ach 1.47 96 P Pb **19 53 43.5 -0.4**
KLV S Sg **19 54 03.9 +0.2**
KLV AML AML 19 54 17.3
comp=N,2796µm,0.7s
KLV AML AML 19 54 17.4
comp=E,2029µm,0.5s
JAN Janina 1.50 16 P Pg **19 53 45.6 +0.4**
JAN S Sg **19 54 06.3 +1.6**
JAN AML AML 19 54 16.1
comp=N,2066µm,0.4s
JAN AML AML 19 54 19.7
comp=E,3051µm,0.6s
KASA Kassiopi 1.56 350 P Pb **19 53 45.7 +0.4**
KASA S Sg **19 54 06.5 0.0**
KASA AML AML 19 54 11.4
comp=E,3536µm,0.3s
KASA AML AML 19 54 14.5
comp=N,2708µm,0.3s
MAKR Makrakomi, Fth 1.64 60 P Pg **19 53 47.1 -0.7**
MAKR S Sg **19 54 09.8 +0.5**
MAKR AML AML 19 54 19.3
comp=N,4316µm,0.5s
MAKR AML AML 19 54 21.0
comp=E,6200µm,0.8s
ITM Ithomi 1.65 128 P Pb **19 53 46.5 -0.4**
ITM S Sg **19 54 09.3 -0.1**
ITM AML AML 19 54 19.9
comp=N,2108µm,0.5s
ITM AML AML 19 54 19.9
comp=E,1876µm,0.5s
ITM Ithomi 1.65 128 Pb **19 53 46.6 -0.4**
SRN Sarande 1.68 352 *i* PN Pg **19 53 49.7 +1.1**
SRN *i* SN Sb **19 54 08.9 +0.3**
PYL PYLOS 1.75 138 P Pb **19 53 48.6 +0.1**
DLFA Delphi 1.75 81 P Pg **19 53 49.5 -0.4**
AGG Agios Georgios 1.79 62 P Pb **19 53 49.4 +0.2**
AGG S Sg **19 54 12.2 -1.5**
AGG AML AML 19 54 22.6
comp=N,1931µm,0.6s
AGG AML AML 19 54 24.3
comp=E,2813µm,0.5s
AGG Agios Georgios 1.79 62 Pg **19 53 50.1 -0.5**
VLX Vlachokerasia 1.85 116 P Pb **19 53 50.0 -0.4**
THL Klokotos Trika 1.90 44 P Pb **19 53 50.6 -0.6**
THL AML AML 19 54 22.9
comp=N,2205µm,0.8s
THL AML AML 19 54 26.9
comp=E,2614µm,0.6s
PROD Prodromos 2.05 88 P Pb **19 53 53.2 -0.5**
PROD S Sb **19 54 19.9 +0.6**
PROD AML AML 19 54 27.3
comp=N,2014µm,1.0s
PROD AML AML 19 54 28.0
comp=E,2742µm,0.8s
TPE Tepelena 2.09 354 *i* PN Pn **19 53 52.5 +1.0**
TPE *i* SN Sb **19 54 19.8 -0.7**
VLO Vlora 2.34 345 *i* PN Pn **19 53 56.8 +1.9**
VLO *i* SN Sb **19 54 26.1 -1.4**
SCTE Santa Cesarea 2.34 323 Pn **19 53 55.9 +0.9**
LIT Litokhoron 2.54 41 Pn **19 53 59.6 +1.9**
VLI Veliai 2.58 125 P Pb **19 54 01.6 -1.1**
VLI AML AML 19 54 55.7
comp=N,1510µm,0.8s
VLI AML AML 19 55 03.0
comp=E,1564µm,1.0s
FNA Florina 2.70 18 Pn **19 54 01.7 +1.8**
OHR Ohrid 2.92 7 *i* Pn Pn **19 54 03.9 +1.0**
TIP Timpagrande 2.93 290 ⇑P Pn **19 54 05.2 +2.1**
TIP Timpagrande 2.93 290 ⇑S Sn **19 54 39.9 +1.4**
TIP Timpagrande 2.93 290 Pn **19 54 05.3 +2.1**
TIR Tirane 3.15 354 *i* PN Pn **19 54 07.1 +1.1**
TIR *i* SN Sn **19 54 47.0 +3.3**
TIR Tirane 3.15 354 ⇑P Pn **19 54 07.7 +1.7**
TIR Tirane 3.15 354 ⇑S Sn **19 54 45.0 +1.3**
TIR Tirane 3.15 354 Pn **19 54 07.0 +0.9**
CGL1 Ceglie Messapi 3.27 319 *e*Pn Pn **19 54 08.8 +1.0**
CEL Celeste 3.47 272 Pn **19 54 11.9 +1.4**
PHP Peshkopia 3.47 2 *i* PN Pn **19 54 11.5 +1.0**
PHP *i* SN Sb **19 54 57.0 -3.2**
VAY Valandovo 3.56 29 *i* Pn Pn **19 54 12.4 +0.7**
MATE Matera 3.70 312 ⇑P Pn **19 54 15.7 +2.1**
STIP Stip 3.77 22 *i* Pn Pn **19 54 15.9 +1.4**
SG1 Sgolgore (BA) 3.84 314 *e*Pn Pn **19 54 17.1 +1.6**
SG1 Sn Sn **19 55 00.1 -0.6**
PUK Puka 3.84 355 *i* PN Pn **19 54 16.1 +0.5**
PUK *i* SN Sn **19 55 01.7 +0.9**
BAI Bari 3.91 319 *e*Pn Pn **19 54 18.4 +1.9**
BCI Bajram Curri 4.15 358 *i* PN Pn **19 54 21.3 +1.4**
BCI *i* SN Sn **19 55 13.0 +4.5**
ACER Acerenza 4.24 309 Pn Pn **19 54 22.9 +1.9**
PDG Podgorica 4.29 350 ⇑P Pn **19 54 22.2 +0.6**
PDG Podgorica 4.29 350 Pn Pn **19 54 22.3 +0.6**
PDG Sn **19 55 11.0 -0.7**
APE Apeiranthos 4.31 104 ⇓P Pn **19 54 21.2 -0.8**
IDI Anoyia 4.70 127 Pn Pn **19 54 28.1 +0.7**
comp=E,1.1nm,0.3s,baz=348,slow=9.3,SNR=3.5
IDI Sn Sn **19 55 23.3 +1.1**
comp=E,4.0nm,0.3s,baz=320,slow=22,SNR=8.2
VAE Valguarnera 4.72 263 Pn Pn **19 54 32.2 +4.5**
comp=E,2.5nm,0.3s,baz=81,slow=19,SNR=4.2
VAE Sn Sb **19 55 30.9 -5.2**
comp=E,6.2nm,0.3s,baz=67,slow=18,SNR=7.0
VTS Vitosha 4.94 26 ⇑P Pn **19 54 31.6 +0.8**
SGRT San Giovanni R 4.97 317 Pn Pn **19 54 32.3 +1.1**
SGRT Sn **19 55 28.3 -0.5**
WDD Wied Dalam 5.19 245 Pn Pn **19 54 34.8 +0.7**
PAOL Paolisi 5.24 304 Pn **19 54 37.2 +2.3**
PLVB Pleven 6.12 31 ⇓P Pn **19 54 47.6 +0.8**
INTR Introdacqua 6.20 310 Pn **19 54 50.1 +2.1**
MDVR Moldovita 6.65 9 ⇑P Pn **19 54 55.1 +0.9**
NRCA Norcia 7.16 312 Pn **19 55 03.6 +2.4**
GZR Gura Zlata 7.41 14 ⇑P Pn **19 55 04.7 0.0**
MURB Monte Urbino 7.76 313 Pn **19 55 11.6 +2.1**
VOIR 8.04 25 ⇓P Pn **19 55 14.6 +1.3**
BOJS Bojanci 8.20 334 *e*Pn Pn **19 55 15.6 +0.2**
GBRS Gornja Briga 8.38 333 *e*Pn Pn **19 55 17.1 -0.8**
MLR Muntele Rosu 8.40 28 Pn Pn **19 55 20.2 +1.9**
comp=E,0.2nm,0.3s,baz=236,slow=7.3,SNR=6.3
KEST Kesra 9.11 258 Pn Pn **19 55 30.1 +2.1**
comp=E,0.3nm,0.3s,baz=49,slow=11,SNR=4.9
KEST Sn Sn **19 57 11.0 +0.4**
comp=E,0.2nm,0.3s,baz=252,slow=20,SNR=3.1
SOKA Soboth 9.31 337 *e*Pn Pn **19 55 29.9 -0.8**
comp=E,3.7nm,0.4s,SNR=10
SOKA Sn Sn **19 57 07.8 -7.7**
comp=E,2.2nm,0.5s
OBKA Obir 9.32 335 *e*Pn Pn **19 55 31.0 +0.2**
comp=E,2.1nm,0.2s,SNR=8.2
OBKA Sn Sn **19 57 12.8 -2.8**
comp=E,3.2nm,0.3s
VLC Villacollemand 9.54 312 Pn Pn **19 55 36.8 +3.0**
TEOL Teolo 9.61 321 Pn Pn **19 55 35.7 +0.9**
ARSA Arzberg 9.69 340 *e*Pn Pn **19 55 34.5 -1.3**
comp=E,1.0nm,0.3s
MYKA Terra Mystica 9.74 332 Pn Pn **19 55 37.5 +0.9**
CTI Castel Tesino 10.12 323 Pn **19 55 42.2 +0.3**
KBA Koelnbreinsper 10.23 332 Pn Pn **19 55 44.4 +1.0**
comp=E,2.2nm,0.3s
KBA Sn Sn **19 57 31.9 -6.3**
comp=E,2.2nm,0.3s
ABTA Abfaltersbach 10.28 329 Pn Pn **19 55 44.3 +0.3**
comp=E,3.5nm,0.5s
VYHS Vyhne 10.33 355 *e*PN Pn 19 55 37.0 -7.6
VYHS *e*SN Sn **19 57 37.1 -3.4**
BRTR Keskin Array B 10.50 78 Pn Pn **19 55 48.5 +1.5**
comp=E,0.1nm,0.3s,baz=256,slow=13,SNR=5.3
MOA Molln 10.59 337 *e*Pn Pn **19 55 48.2 0.0**
comp=E,2.0nm,0.2s,SNR=5.1
MOA Sn Sn **19 57 41.8 -5.0**
comp=E,1.6nm,0.3s
WTTA Wattenberg 11.05 328 Pn Pn **19 55 55.9 +1.2**
comp=E,2.4nm,0.4s
WATA Walderalm 11.14 328 Pn Pn **19 55 56.9 +1.1**
comp=E,0.9nm,0.2s
SQTA Sankt Quirin 11.21 326 *e*Pn Pn **19 55 59.1 +2.5**
comp=E,1.1nm,0.2s
MOTA Moosalm 11.35 326 Pn Pn **19 56 00.3 +1.6**
comp=E,1.4nm,0.4s
DAVOX Davos/Dischmat 11.50 321 Pn Pn **19 56 02.9 +2.1**
comp=E,0.2nm,0.3s,baz=143,slow=19,SNR=4.6
DAVOX Sn Sn **19 58 08.4 -1.0**
comp=E,0.6nm,0.3s,baz=320,slow=21,SNR=5.7
GEC2 GERESS Array B 11.65 338 Pn Pn **19 56 03.9 +1.1**
GERES GERESS Array B 11.65 338 Pn Pn **19 56 02.7 -0.1**
comp=E,0.4nm,0.3s,baz=160,slow=14,SNR=12
GERES Sn Sn **19 58 07.3 -5.6**
comp=E,0.4nm,0.3s,baz=157,slow=24,SNR=4.3
MORC Moravsky Berou 11.73 351 Pn Pn **19 56 04.7 +0.9**
KHC Kasperske Hory 11.94 338 *e*PN Pn **19 56 05.0 -1.7**
KHC *e*SN Sn **19 58 12.1 -7.9**
SENIN Lac Senin/Sane 12.60 314 Pn Pn **19 56 18.9 +3.2**
KBZ Khabaz 17.91 65 P P **19 57 26.5 +0.4**
comp=E,0.1nm,0.3s,baz=258,slow=12,SNR=7.8
ESDC Sonseca Array 18.92 282 P Pn **19 57 40.3 +2.3**
comp=E,0.1nm,0.3s,baz=72,slow=11,SNR=5.3
GNI Garni 19.04 77 P Pn **19 57 39.0 -0.5**
comp=E,0.4nm,0.3s,baz=296,slow=2.6,SNR=6.5
GNI Garni 19.04 77 P P **19 57 37.1 -1.7**
HFS Hagfors 22.34 351 P P **19 58 13.2 -0.9**
comp=E,2.4nm,0.5s,baz=157,slow=9.5,SNR=11
NC602 NORSAR Array S 23.21 349 P P **19 58 23.8 +0.5**
NC602 IAmb IAmb 19 58 29.0
comp=E,16nm,1.0s
EKA Eskdalemuir Ar 23.30 325 P P **19 58 23.2 -1.0**
comp=E,2.8nm,0.7s,baz=120,slow=11,SNR=3.6
FINES FINESS Array B 23.53 7 P P **19 58 24.6 -1.9**
comp=E,2.8nm,0.6s,baz=173,slow=11,SNR=11
FIA1 FINESS Array S 23.53 7 P P **19 58 24.6 -1.9**
FIA1 IAmb IAmb 19 58 30.6
comp=E,24nm,1.3s
NB201 NORSAR Array S 23.55 349 P P **19 58 26.1 -0.5**
NB2 NORSAR Subarra 23.55 349 P P **19 58 26.2 -0.5**
comp=E,0.8nm,0.7s,baz=157,slow=10
NOA NORSAR Array B 23.55 349 P P **19 58 26.4 -0.4**
comp=E,1.1nm,0.8s,baz=157,slow=9.1,SNR=5.1
GEYT Alibeck 29.64 79 P P **19 59 20.8 -1.3**
comp=E,1.3nm,0.6s,baz=278,slow=10.0,SNR=3.7
TOA0 Torodi Ar. Sit 29.95 218 P P **19 59 24.6 -0.3**
TORD Torodi Ar. Bea 29.95 218 P P **19 59 25.9 +1.1**
comp=E,0.6nm,0.6s,baz=31,slow=8.9,SNR=5.0
ARCES ARCESS Array B 31.51 4 P P **19 59 37.3 -0.8**
comp=E,0.6nm,0.4s,baz=186,slow=9.6,SNR=5.7
ARCES PcP PcP **20 02 30.5 -0.2**
comp=E,3.1nm,1.0s,baz=208,slow=2.3,SNR=5.8
KK31 Karatay Array 37.94 66 P P **20 00 34.9 +0.8**
KK31 IAmb IAmb 20 00 35.8
comp=E,2.7nm,0.5s
KKAR Karatay Array 37.94 66 P P **20 00 34.9 +0.8**
KKAR IAmb IAmb 20 00 35.8
comp=E,2.7nm,0.5s
DBIC Dimbokro 38.80 222 P P **20 00 43.2 +1.7**
comp=E,2.3nm,0.8s,baz=41,slow=12,SNR=3.6
DBIC Dimbokro 38.80 222 P P **20 00 41.3 -0.1**
DBIC IAmb IAmb 20 00 48.2
comp=E,9.2nm,1.1s
KBL Kabul 39.06 80 P P **20 00 42.1 -1.6**
KSH Kashi 42.78 70 *e*P P **20 01 13.3 -1.0**
KSH pmax pmax
comp=E,560nm,5.3s
MK31 Makanchi Array 45.43 58 P P **20 01 34.1 -1.2**
MK31 IAmb IAmb 20 01 34.4
comp=E,1.8nm,0.7s
MKAR Makanchi Array 45.43 58 P P **20 01 34.0 -1.4**
comp=E,1.9nm,0.5s,baz=274,slow=7.3,SNR=52
MKAR PcP PcP **20 03 14.3 -0.1**
comp=E,0.3nm,0.6s,baz=274,slow=4.6,SNR=2.2
ZAA0 Zalesovo Array 45.80 48 P P **20 01 36.6 -1.5**
ZALV Zalesovo Beam 45.80 48 P P **20 01 36.7 -1.4**
comp=E,5.2nm,0.6s,baz=275,slow=8.9,SNR=22
WMQ Urumqi 49.90 61 *e*P P **20 02 12.5 +2.4**
WMQ pP sP 20 02 16.3 +2.0
WMQ sP pP 20 02 19.5 +6.4
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,140nm,6.5s
SCHQ Schefferville 58.31 317 P P **20 03 12.2 +0.9**
comp=Z,2.9nm,0.9s,baz=53,slow=10,SNR=4.3
SCHQ Schefferville 58.31 317 P P **20 03 11.2 -0.1**
SONM Songino Array 60.57 51 P P **20 03 26.2 -0.9**
comp=Z,0.9nm,0.9s,baz=280,slow=7.6,SNR=5.2
HHC Hu-ho-hao-te 67.16 55 *e*P P **20 04 11.0 +0.4**
HHC pmax pmax
comp=Z,5.0nm,1.0s
CMAR Chiang Mai Arr 70.06 82 P P **20 04 28.1 -0.8**
comp=Z,0.8nm,0.8s,baz=307,slow=8.0,SNR=4.1
YKA Yellowknife Ar 73.30 340 P P **20 04 48.0 +0.4**
comp=Z,0.3nm,0.5s,baz=32,slow=5.5,SNR=5.5

BJI ***26*** *19:54:55.3±0.0,4.°84S×134.°30E,h11km,mB5.3/41, mb4.8/54,Ms5.0/16,Ms7 4.7/14*
IDC ***26*** *19:54:57.1±0.6,4.°76S×134.°03E,h0km,mb4.4/15, mb1 4.5/21,mb1mx4.4/38,mbtmp4.4/21,ML4.6/5,MS4.1/13, Ms1 4.1/13,ms1mx3.9/40, Error ellipse: s-maj=19.0km s-min=13.2km az=67.0*
MOS ***26*** *19:54:57.4±1.0,4.°82S×134.°04E,h17km,mb5.1/14,Error ellipse: s-maj=12.6km s-min=6.8km az=110.6*
NEIC ***26*** *19:54:58.7±2.8,4.°72S±0.°06×134.°03E±0.°02,h13km±4km, mb5.0/28,Error ellipse: s-maj=9.2km s-min=3.2km az=187.0*
GCMT ***26*** *19:54:59.7±0.3,4.°61S±0.°04×134.°05E±0.°03,h18km±1km, MW4.9/70,Moment Tensor Solution. s23,c28; s70,c93; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-2.50±.21; Mθθ 0.54±.11; Mϕϕ 1.96±.14; Mrθ-0.36±.33; Mrϕ 1.17±.09; Mθϕ 0.12±.30; Best double couple: Mo2.58900×10¹⁶ NP1:ϕ201.00000°,δ45.00000°,λ-102.00000°. NP2: ϕ38.00000°,δ46.00000°,λ-78.00000°. Principal axes: T 2.6190, Plg1.0000°, Azm119.0000°; N -0.0630, Plg9.0000°, Azm210.0000°; P -2.5590, Plg81.0000°, Azm24.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
DJA ***26*** *19:55:00.1±0.8,5.°5S±2.°×13.°4E±.°,h15km±7km,M4.9/42, mb5.1/42,mB5.4/18,MLv5.0/17,Mw(mB)4.9/18,Mwp5.4/2*
KLM ***26*** *19:55:15.0,4.°99S×134.°19E,h127km,mb5.0*
ISC 26 19:55:01.0±0.3,4.°87S±0.°04×134.°02E±0.°05,h28km,n198, σ1ᵍ93/191,mb4.9/65,MS4.1/11,3C,Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMPI	**Kaimana, Papua**	**1.24**	**345**	P	**Pn**	**19 55 19.8**	**-2.7**
FAKI	**Fak Fak**	**2.62**	**317**	P	**Pn**	**19 55 40.1**	**-1.5**
FAKI	**Fak Fak**	**2.62**	**317**		**Pn**	**19 55 39.8**	**-1.8**
RKPI	**Ransiki, Papua**	**3.34**	**3**	P	**Pn**	**19 55 50.4**	**-1.0**
SAUI	**Saumlaki**	**4.11**	**221**	P	**Pn**	**19 56 04.5**	**+2.4**
SAUI	**Saumlaki**	**4.11**	**221**		**Pn**	**19 56 04.9**	**+2.8**
BNDI	**Bandanaira**	**4.12**	**275**	P	**Pn**	**19 56 03.0**	**+0.8**
BAKI	**Biak**	**4.20**	**30**	P	**Pn**	**19 56 03.0**	**-0.3**
SIJI	**Sorong**	**4.83**	**325**	Pn	**Pn**	**19 56 10.3**	**-1.7**
	6.3nm,0.3s,baz=143,slow=14,SNR=33						
SIJI				Sn	**Sn**	**19 57 00.9**	**-6.2**
	25nm,0.3s,baz=330,slow=22,SNR=10						
SIJI				LR	LR	19 58 50.5	
	comp=Z,3µm,18.0s,baz=114,slow=49						
SWI	**Sorong**	**4.84**	**325**	P	**Pn**	**19 56 11.6**	**-0.5**
MSAI	**Masohi**	**5.30**	**286**	P	**Pn**	**19 56 17.9**	**-0.5**
	0.5nm1µm143nm,0.9s						
SMPI	**Sarmi**	**5.48**	**59**	P	**Pn**	**19 56 21.0**	**+0.1**
	0.5nm84nm,0.6s						
AAI	**Ambon**	**5.93**	**281**	P	**Pn**	**19 56 27.5**	**+0.4**
	2.6nm6µm785nm,0.9s						
GENI	**Genyem**	**6.53**	**70**	P	**Pn**	**19 56 35.1**	**-0.3**
	1.0nm214nm,0.7s						
JAY	**Jayapura**	**7.06**	**71**	Pn	**Pn**	**19 56 41.8**	**-0.9**
	4.0nm,0.3s,baz=253,slow=6.5,SNR=6.1						
JAY				Sn	**Sn**	**19 58 01.5**	**-0.6**
	2.8nm,0.3s,baz=131,slow=20,SNR=2.1						
JAY				LR	LR	20 00 11.9	
	comp=Z,1µm,20.7s,baz=273,slow=45						
JAY	**Jayapura**	**7.06**	**71**	P	**Pn**	**19 56 45.2**	**+2.5**
	0.2nm44nm,0.8s						
NLAI	**Namlea**	**7.09**	**283**	P	**Pn**	**19 56 43.8**	**+0.8**
	1.1nm3µm221nm,1.0s						
LBMI	**Labuha**	**7.75**	**303**	P	**Pn**	**19 56 52.1**	**0.0**
	0.8nm3µm261nm,1.2s						
KDU	**Kakadu**	**7.92**	**191**	P	**Pn**	**19 56 55.9**	**+1.5**
	baz=8.0,SNR=72						
MTN	**Manton Dam**	**8.43**	**200**	P	**Pn**	**19 57 02.2**	**+0.9**
	baz=8.5,SNR=31						
MTN	**Manton Dam**	**8.43**	**200**		**Pn**	**19 57 02.5**	**+1.2**
SANI	**Sanana**	**8.49**	**289**	P	**Pn**	**19 57 00.5**	**-1.8**
	0.4nm2µm1µm123nm,0.7s						
SOEI	**Soe**	**10.83**	**243**	P	**Pn**	**19 57 35.0**	**+0.6**
	147nm,1.0s						
SOEI	**Soe**	**10.83**	**243**		**Pn**	**19 57 34.5**	**+0.1**
KMSI	**Cibinong**	**11.39**	**298**	P	**Pn**	**19 57 40.9**	**-1.2**
	3µm272nm,1.2s						
LUWI	**Luwuk**	**11.86**	**288**	P	**Pn**	**19 57 47.4**	**-1.0**
	3µm239nm,1.3s						
LUWI	**Luwuk**	**11.86**	**288**		**Pn**	**19 57 46.6**	**-1.8**
KNRA	**Kununurra**	**11.92**	**205**	P	**Pn**	**19 57 48.8**	**-0.4**
	baz=12,SNR=63						
KNRA	**Kununurra**	**11.92**	**205**		**Pn**	**19 57 48.5**	**-0.8**
COEN	**Coen**	**12.77**	**136**	P	**Pn**	**19 57 59.2**	**-1.6**
	baz=13,SNR=42						
COEN	**Coen**	**12.77**	**136**		**Pn**	**19 57 59.6**	**-1.2**
APSI	**Ampana**	**12.97**	**287**	P	**Pn**	**19 58 04.2**	**+0.6**
	2µm218nm,1.1s						
MRSI	**Marisa**	**13.19**	**293**	P	**Pn**	**19 58 10.8**	**+4.2**
PMG	**Port Moresby**	**13.79**	**110**	P	**Pn**	**19 58 13.0**	**-1.8**
PMG	**Port Moresby**	**13.79**	**110**	Pn	**Pn**	**19 58 14.9**	**+0.1**
	2.0nm,0.3s,baz=294,slow=6.5,SNR=6.5						
PMG				Sn	Sn	20 00 37.7	-9.4
	1.4nm,0.3s,baz=196,slow=20,SNR=3.6						
PMG				LR	LR	20 04 48.4	
	comp=Z,1µm,18.4s,baz=322,slow=43						
PMG	**Port Moresby**	**13.79**	**110**		**Pn**	**19 58 13.0**	**-1.8**
BKSI	**Bulukumba**	**13.85**	**268**	P	**Pn**	**19 58 18.4**	**+2.7**
	864nm92nm,0.9s						
SPSI	**Sidrap Palu**	**14.24**	**273**	P	**P**	**19 58 26.5**	**-1.5**
TTSI	**Tana Toraja**	**14.29**	**277**	P	**Pn**	**19 58 24.2**	**+2.6**
	547nm42nm,1.4s						
DAV	**Davao City (W)**	**14.55**	**325**	LR	LR	20 05 23.9	
	comp=Z,1µm,18.3s,baz=135,slow=43						
WB0	**Warramunga Arr**	**14.81**	**179**		**Pn**	**19 58 26.4**	**-2.4**
WRAB	**Tennant Creek**	**14.98**	**179**	*e*P	**Pn**	**19 58 31.2**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.4s						
WRAB	**Tennant Creek**	**14.98**	**179**		**Pn**	**19 58 29.8**	**-1.2**
WRAB				IAmb	IAmb	19 58 48.2	
	comp=Z,33nm,0.7s						
WB2	**Warramunga Arr**	**14.99**	**179**		**Pn**	**19 58 29.4**	**-1.7**
WB2				IAmb	IAmb	19 58 46.7	
	comp=Z,80nm,1.4s						
WRA	**Warramunga Arr**	**14.99**	**179**	Pn	**Pn**	**19 58 29.3**	**-1.8**
	comp=Z,1.4nm,0.3s,baz=346,slow=15,SNR=16						
WRA				Sn	**Sn**	**20 01 09.0**	**-7.4**
	comp=Z,1.5nm,0.3s,baz=3.6,slow=21,SNR=4.4						
WR0	**Warramunga Arr**	**15.01**	**178**		**Pn**	**19 58 29.7**	**-1.7**
WR0				IAmb	IAmb	19 58 39.8	
	comp=Z,65nm,1.1s						
FITZ	**Fitzroy Crossi**	**15.50**	**211**	P	**Pn**	**19 58 36.5**	**-1.3**
	baz=16,SNR=21						
FITZ	**Fitzroy Crossi**	**15.50**	**211**	Pn	**Pn**	**19 58 36.4**	**-1.3**
	comp=Z,3.8nm,0.3s,baz=32,slow=11,SNR=34						
FITZ				Sn	**Sn**	**20 01 18.9**	**-10**
	comp=Z,3.4nm,0.3s,baz=188,slow=21,SNR=9.5						
FITZ	**Fitzroy Crossi**	**15.50**	**211**		**Pn**	**19 58 36.6**	**-1.3**
QIS	**Mount Isa**	**16.52**	**161**	P	**Pn**	**19 58 49.7**	**-1.2**
	baz=17,SNR=13						
MTSU	**Mount Surprise**	**16.59**	**143**	P	**Pn**	**19 58 48.9**	**-2.9**
	baz=17,SNR=12						
PLAI	**Plampang**	**16.60**	**255**	P	**P**	**19 58 58.5**	**+4.2**
KBKI	**Kotabaru**	**17.88**	**274**	P	**P**	**19 59 14.4**	**+6.0**
KRVT	**Keravat (AS076**	**17.95**	**89**	LR	LR	20 06 16.6	
	comp=Z,457nm,18.9s,baz=279,slow=38						
AS31	**Alice Springs**	**18.69**	**180**	P	**Pn**	**19 59 17.8**	**0.0**
ASAR	**Alice Springs**	**18.69**	**180**	P	**P**	**19 59 17.2**	**-0.1**
	comp=Z,3.8nm,0.3s,baz=7.1,slow=11,SNR=150						
ASAR				S	**Sn**	**20 02 41.9**	**-4.3**

comp=Z,0.5nm,0.3s,baz=358,slow=26,SNR=4.0
SRBI Singaraja 18.96 259 P **Pn** **19 59 27.6 +6.5**
CTA Charters Tower 19.25 143 P **Pn** **19 59 25.7 +1.1**
comp=Z,1.3nm,0.3s,baz=319,slow=11,SNR=22
CTA LR LR 20 07 20.5
comp=Z,1μm,21.6s,baz=330,slow=38
SPMM Sapulut 19.95 298 P Pn 19 59 44.0 +11
KMMI Kalianget 20.07 263 P Pn 19 59 42.2 +7.9
GMJI Gumukmas 20.72 260 P Pn 19 59 51.8 +10
WRKA Warakurna 20.80 195 P Pn 19 59 41.9 -0.9
baz=21,SNR=16
KKM Kota Kinabalu 20.82 301 P **P** **19 59 38.5 -2.2**
KKM IAmb IAmb 19 59 48.6
comp=Z,58nm,1.0s
GUMO Guam 21.26 30 LR LR 20 09 05.1
comp=Z,289nm,18.9s,baz=220,slow=40
PSA00 Pilbara Seismi 21.56 218 P **P** **19 59 49.9 +1.4**
PSA00 IAmb IAmb 20 00 14.3
comp=Z,238nm,2.0s
LQP Lukban 22.56 327⇑ *e*P **P** **19 59 58.2 -1.3**
SBUM Sibu 22.96 288 P **P** **20 00 06.0 +2.5**
QLP Quilpie 23.70 157 P **P** **20 00 12.0 +1.4**
baz=24,SNR=4.7
KPJI Karang Pucung 25.07 263 P **P** **20 00 23.3 -0.1**
comp=Z,82nm,1.1s
CISI Cisompet, Garu 26.19 263 P **P** **20 00 35.0 +1.4**
comp=Z,49nm,0.7s
LEM Lembang 26.34 264 P **P** **20 00 36.0 +0.9**
LEM Lembang 26.34 264 P **P** **20 00 36.0 +0.9**
comp=Z,8.1nm,0.4s,baz=45,slow=8.6,SNR=3.7
LEM LR LR 20 13 04.9
comp=Z,607nm,20.6s,baz=97,slow=41
FORT Forrest 26.38 192 P **P** **20 00 37.6 +2.5**
baz=27,SNR=9.4
FORT Forrest 26.38 192 P **P** **20 00 36.2 +1.1**
FORT IAmb IAmb 20 01 01.4
comp=Z,34nm,0.8s
CNJI Cibinong 26.85 263 P **P** **20 00 39.5 0.0**
comp=Z,1μmcomp=Z,108nm,1.0s
DBJI Dramaga 27.19 265 P P 20 00 51.5 +8.9
STKA Stephens Creek 27.79 166 P **P** **20 00 50.0 +2.2**
baz=28,SNR=4.8
STKA Stephens Creek 27.79 166 P **P** **20 00 48.6 +0.8**
STKA pmax pmax
comp=Z,2.0nm,0.8s
STKA Stephens Creek 27.79 166 P **P** **20 00 48.9 +1.1**
comp=Z,1.2nm,0.5s,baz=347,slow=9.5,SNR=8.4
STKA LR LR 20 13 35.6
comp=Z,438nm,18.8s,baz=336,slow=40
STKA Stephens Creek 27.79 166 P **P** **20 00 48.6 +0.8**
BBOO Buckleboo 27.87 176 P **P** **20 00 49.7 +1.2**
baz=28,SNR=22
BBOO Buckleboo 27.87 176 P **P** **20 00 49.8 +1.4**
BBOO IAmb IAmb 20 00 58.5
comp=Z,57nm,1.6s
CGJI Cibinong 28.24 265 P **P** **20 00 53.0 +1.0**
comp=Z,23nm,1.5s
MORW Morawa 29.49 213 P **P** **20 01 02.7 -0.3**
MORW IAmb IAmb 20 01 39.3
comp=Z,40nm,1.4s
MDSI Maura Dua 29.75 269 P P 20 01 12.9 +7.5
ARMA Armidale 30.36 149 P **P** **20 01 11.2 +0.4**
ARMA IAmb IAmb 20 01 59.4
comp=Z,52nm,1.6s
MYKOM Kota Tinggi 30.86 282 P P 20 01 23.0 +7.7
NWAO Narrogin (SRO) 32.02 207 P **P** **20 01 24.2 -1.0**
NWAO pmax pmax
comp=Z,83nm,1.9s
NWAO Narrogin (SRO) 32.02 207 P **P** **20 01 24.2 -1.0**
ARPS Mount Arapiles 32.55 168 P **P** **20 01 31.9 +2.1**
baz=33,SNR=9.1
KRJI Kerinci 32.61 274 P **P** **20 01 31.7 +0.9**
comp=Z,170nm,0.9s
JRMM Jerantut 32.69 285 P P 20 01 39.0 +7.6
SDSI Sungai Dareh 32.78 276 P **P** **20 01 29.5 -2.6**
comp=Z,2μmcomp=Z,15nm,0.6s
PDSI Padang 33.74 276 P P 20 01 46.7 +6.1
UBPT Khong Chiam 34.65 306 P **P** **20 01 45.9 -2.5**
UBPT IAmb IAmb 20 01 56.0
comp=Z,28nm,1.2s
SISI Saibi 35.05 275 P P 20 01 58.8 +6.9
PSI Prapat 35.88 282 P **P** **20 01 58.4 -0.9**
comp=Z,5.8nm,0.8s,baz=123,slow=12,SNR=3.5
GSI Gunungsitoli 36.92 279 P P 20 02 14.6 +6.6
JNU Nakatsue 37.90 356 P **P** **20 02 15.3 -0.6**
comp=Z,18nm,1.1s,baz=180,slow=11,SNR=3.1
JNU Nakatsue 37.90 356 P **P** **20 02 12.7 -3.2**
MLSI Meulaboh, Aceh 38.66 283 P P 20 02 29.4 +6.8
PBKT Sadao Pong 39.01 304 P **P** **20 02 24.1 -1.4**
NJ2 Nanjing 39.45 340 *e*P **P** **20 02 29.3 +0.4**
NJ2 pmax pmax
comp=Z,11nm,0.5s
WHN Wuhan 39.93 333 P P 20 02 39.5 +6.6
WHN pmax pmax
comp=Z,70nm,1.5s
GYA Guiyang 40.89 321⇑ *i*P P 20 02 47.3 +6.2
GYA PP PcP 20 04 31.5 -10
GYA S S 20 09 00.3 +9.1
GYA SS **SS** **20 11 51.3 -2.1**
GYA pmax pmax
comp=Z,30nm,1.2s
GYA pmax pmax
comp=Z,120nm,5.4s
GYA LR LR
comp=N,260nm,17.5s
GYA LR LR
comp=E,270nm,17.4s
GYA LR LR
comp=Z,160nm,17.1s
MJAR Matsushiro Arr 41.38 5 LR LR 20 19 10.5
comp=Z,271nm,18.8s,baz=190,slow=35
CM31 Chiang Mai Arr 41.63 305 P **P** **20 02 46.2 -1.0**
CM31 IAmb IAmb 20 02 55.4
comp=Z,23nm,1.1s
CMAR Chiang Mai Arr 41.63 305 P **P** **20 02 47.1 0.0**
comp=Z,2.9nm,0.8s,baz=132,slow=6.9,SNR=39
CMAR LR LR 20 22 20.5
comp=Z,81nm,20.1s,baz=72,slow=40
CHTO Chiang Mai 41.81 305 P **P** **20 02 46.9 -1.7**
CHTO pmax pmax
comp=Z,24nm,1.1s
CHTO Chiang Mai 41.81 305 P **P** **20 02 46.9 -1.7**
CHTO IAmb IAmb 20 02 56.6
comp=Z,24nm,1.1s
KMI Kunming 42.58 316 P **P** **20 02 55.3 +0.2**
KMI pP pP 20 02 59.5 -3.1
KMI sP sP 20 03 02.5 -3.2
KMI pmax pmax
comp=Z,12nm,1.2s
KMI pmax pmax
comp=Z,200nm,4.6s
MSVF Nonsavu 44.90 110 *e*P **P** **20 03 15.5 +1.8**
MSVF pmax pmax
comp=Z,8.0nm,1.1s
CD2 Chengdu 45.84 323 *e*P **P** **20 03 21.0 0.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,4.6s
BJI Beijing 47.61 341 P **P** **20 03 33.5 -1.0**
BJI pP **pP** **20 03 37.8 -4.3**
BJI pmax pmax
comp=Z,8.0nm,1.3s
VLA Vladivostok 47.80 358 *e*P **P** **20 03 35.3 -0.7**
VLA pmax pmax
comp=Z,17nm,1.5s
USA0B Ussuriysk Arra 48.88 358 *e*P **P** **20 03 42.0 -2.2**
USRK Ussuriysk Ar. 48.88 358 P **P** **20 03 44.1 -0.1**
comp=Z,1.5nm,0.4s,baz=166,slow=8.8,SNR=6.2
CN2 Changchun 49.06 352 *e*P **P** **20 03 45.0 -0.7**
MDJ Mudanjiang 49.42 356 P **P** **20 03 48.3 -0.1**
MDJ pP pP 20 03 55.5 -0.5
MDJ sP pwP 20 04 00.5 +0.5
MDJ ScS ScS 20 13 36.8 -1.6
MDJ pmax pmax
comp=Z,19nm,1.1s
MDJ pmax pmax
comp=Z,100nm,3.6s
MDJ LR LR
comp=Z,390nm,7.8s
MDJ LR LR
comp=Z,310nm,6.0s
MDJ LR LR
comp=Z,480nm,9.8s
LZH Lanzhou 49.59 328 *e*P **P** **20 03 52.0 +1.9**
LZH pP pP 20 03 55.3 -2.4
LZH sP sP 20 03 56.8 -4.0
LZH *e*PP PP 20 06 15.3 +31
LZH pmax pmax
comp=Z,18nm,1.3s
LZH pmax pmax
comp=Z,71nm,6.0s
LZH Lanzhou 49.59 328 *e*P **P** **20 03 50.0 -0.1**
LZH pP pP 20 03 56.0 -1.7
LZH sP sP 20 03 57.8 -3.0
LZH PP **PP** **20 05 45.3 +0.6**
LZH pmax pmax
comp=Z,22nm,1.4s
LZH pmax pmax
comp=Z,160nm,6.2s
HHC Hu-ho-hao-te 49.94 338 *e*P **P** **20 03 53.0 +0.4**
HHC pP pP 20 03 56.0 -4.2
HHC sP sP 20 04 00.0 -3.3
HHC *e*S **S** **20 11 00.5 -0.8**
HHC pmax pmax
comp=Z,7.0nm,0.6s
HHC pmax pmax
comp=Z,170nm,4.7s
HHC LR LR
comp=Z,100nm,12.8s
HHC LR LR
comp=Z,89nm,10.2s
YSS Yuzh-Sakhalins 52.17 8 *e*P P 20 04 16.0 +6.9
YSS *e* 20 04 22.6
YSS pmax pmax
comp=Z,20nm,1.3s
YSS MLR MLR
comp=Z,400nm,11.0s
LSA Lhasa 53.57 313 P **P** **20 04 20.8 +0.4**
LSA Lhasa 53.57 313 P **P** **20 04 20.9 +0.5**
LSA pmax pmax
comp=Z,14nm,0.9s
LSA Lhasa 53.57 313 P **P** **20 04 20.9 +0.5**
LSA IAmb IAmb 20 04 29.2
comp=Z,14nm,0.9s
KLR Kul'dur 53.91 358 *e*P **P** **20 04 22.4 +0.5**
KLR pmax pmax
comp=Z,4.0nm,1.0s
GTA Gaotai 54.19 328 *e*P **P** **20 04 23.8 -0.5**
GTA pP pP 20 04 28.3 -3.7
GTA sP sP 20 04 31.0 -4.1
GTA pmax pmax
comp=Z,6.0nm,1.7s
TAPN Taplejung 54.99 308 *e*P **P** **20 04 30.2 -0.4**
comp=Z,63nm,1.1s
ODAN Odare 55.02 308 *e*P **P** **20 04 30.0 -0.7**
comp=Z,73nm,1.0s
RAMN Ramite 55.68 307 *e*P **P** **20 04 35.3 -0.2**
JIRN Jiri 56.33 308 *e*P **P** **20 04 40.5 +0.2**
GUN Gunnba 56.69 308 *e*P **P** **20 04 42.2 -0.6**
PKI Pulchoki 56.91 307 *e*P **P** **20 04 43.5 -0.8**
PKIN Phulchoki 56.92 307 *e*P **P** **20 04 43.4 -0.9**
KKN Kakani 57.11 308 *e*P **P** **20 04 45.1 -0.5**
comp=Z,42nm,1.1s
DMN Daman 57.16 307 *e*P **P** **20 04 45.5 -0.6**
comp=Z,62nm,1.1s
ULN Ulaanbaatar 57.61 339 P **P** **20 04 48.6 -0.1**
ULN pmax pmax
comp=Z,10.0nm,1.0s
ULN Ulaanbaatar 57.61 339 P **P** **20 04 48.6 -0.1**
GKN Gorkha 57.71 307 *e*P **P** **20 04 49.4 -0.4**
comp=Z,108nm,1.3s
SONM Songino Array 57.82 338 P **P** **20 04 49.9 -0.2**
comp=Z,1.4nm,0.8s,baz=153,slow=8.0,SNR=8.7
SONM LR LR 20 32 21.8
comp=Z,114nm,18.3s,baz=52,slow=39
KOLN Koldanda 58.43 307 *e*P **P** **20 04 54.8 -0.1**
DANN Dangsing 58.56 307 *e*P **P** **20 04 56.1 +0.2**
ZEA Zeya 58.67 355 *e*P **P** **20 04 55.8 +0.1**
ZEA pmax pmax
comp=Z,48nm,1.6s
HYB Hyderabad 59.06 294 *i* P **P** **20 04 59.0 -0.2**
HYB *e* 20 05 06.5
ZAK Zakamensk 61.08 338 *e*P **P** **20 05 12.6 0.0**
ZAK pmax pmax
comp=Z,7.0nm,1.1s
PETK Petropavlovsk- 61.12 16 P **P** **20 05 12.5 -0.1**
comp=Z,3.8nm,0.9s,baz=187,slow=5.8,SNR=2.6
TLY Talaya 62.01 339 *e*P **P** **20 05 23.2 +4.5**
TLY pmax pmax
comp=Z,16nm,1.1s
MOY Mondy 62.98 338 *e*P **P** **20 05 26.2 +0.9**
MOY pmax pmax
comp=Z,59nm,2.4s
WMQ Urumqi 63.90 324 *e*P **P** **20 05 32.5 +1.0**
WMQ pP pP 20 05 37.5 -1.8
WMQ sP sP 20 05 40.0 -2.4
WMQ pmax pmax
comp=Z,38nm,1.3s
WMQ pmax pmax
comp=Z,320nm,8.3s
WMQ LR LR
comp=Z,390nm,22.5s
BOD Bodaibo 64.54 348 *e*P **P** **20 05 33.6 -1.7**
BOD pmax pmax
comp=Z,8.0nm,1.7s
YAK Yakutsk 66.79 358 *e*P **P** **20 05 49.2 -0.5**
YAK *e**PP **pP** **20 05 57.0 -0.5**
YAK *e* 20 06 21.8
YAK *e*S **S** **20 14 38.7 -1.3**
YAK *e**SS **sS** **20 14 59.0 +5.7**
YAK *e* 20 15 42.4
YAK pmax pmax
comp=Z,10.0nm,1.3s
YAK pmax pmax
comp=N,5.0nm,1.3s
YAK pmax pmax
comp=E,2.0nm,1.6s
YAK smax smax
comp=N,36nm,2.8s
YAK smax smax
comp=E,54nm,2.8s
PDGK Podgornoye 68.64 320 *i* P **P** **20 06 01.9 -0.1**
PDGK pmax pmax
comp=Z,35nm,1.0s
MK31 Makanchi Array 68.73 325 P **P** **20 06 03.0 +0.7**
MK31 pmax pmax
comp=Z,28nm,1.0s
MK31 Makanchi Array 68.73 325 P **P** **20 06 03.0 +0.7**
MKAR Makanchi Array 68.73 325 P **P** **20 06 02.7 +0.3**
comp=Z,5.0nm,0.6s,baz=119,slow=7.9,SNR=78
MAKZ Makanchi 68.92 325 P **P** **20 06 03.6 +0.1**
MAKZ pmax pmax
comp=Z,42nm,1.0s
MAKZ Makanchi 68.92 325 P **P** **20 06 03.6 +0.1**
NIL Nilore 68.94 309 P **P** **20 06 03.1 -0.8**
NIL pmax pmax
comp=Z,33nm,0.8s
NIL Nilore 68.94 309 P **P** **20 06 03.1 -0.8**
KSH Kashi 69.24 315 P **P** **20 06 07.5 +1.7**
KSH pP sP 20 06 15.0 -1.7
KSH PcP **PcP** **20 06 30.3 +0.9**
KSH PP **PP** **20 08 43.8 +4.7**
KSH S **S** **20 15 13.0 +2.5**
KSH sS sS 20 15 22.5 -1.0
KSH SS **SS** **20 19 42.5 +4.9**
KSH pmax pmax
comp=Z,73nm,0.9s
KSH pmax pmax
comp=Z,840nm,7.3s
KSH LR LR
comp=Z,420nm,6.2s
KSH LR LR
comp=Z,340nm,5.4s
KSH LR LR
comp=Z,940nm,8.0s
BOOM Boomskoye usch 70.55 318 P **P** **20 06 14.5 +0.6**
BOOM Boomskoye usch 70.55 318 P **P** **20 06 14.5 +0.6**
KZA Kyzart 70.83 318 P **P** **20 06 17.1 +1.2**
SNR=7.6
KBK Karagaybulak 71.28 318 P P 20 06 25.9 +7.6
SNR=5.6
UCH Uchtor 71.39 318 P **P** **20 06 20.4 +1.0**
SNR=11
ZALV Zalesovo Beam 71.53 332 P **P** **20 06 18.6 -0.7**
comp=Z,1.4nm,0.6s,baz=123,slow=5.3,SNR=5.9
CHMS Chumysh 71.56 318 P P 20 06 27.9 +8.1
SNR=6.7
AAK Ala-Archa 71.58 318 *i* P **P** **20 06 20.2 +0.1**
AAK pmax pmax
comp=Z,26nm,1.1s
AAK Ala-Archa 71.58 318 P P 20 06 28.7 +8.6
SNR=6.9
USP Ospenovka 71.84 319 P **P** **20 06 22.1 +0.6**
SNR=9.8
AML Almayashu 71.91 317 P **P** **20 06 23.4 +1.0**
SNR=15
EKS2 Erkin-Say 72.07 318 P **P** **20 06 23.9 +0.9**
SNR=8.1
KURK Kurchatov 72.86 327 P **P** **20 06 28.3 +1.0**
KURK pmax pmax
comp=Z,31nm,1.1s
KURK Kurchatov 72.86 327 P **P** **20 06 28.3 +1.0**
VNDA Vanda 74.10 174 P **P** **20 06 35.4 +1.1**
comp=Z,1.2nm,0.6s,baz=348,slow=6.3,SNR=4.6
BILL Bilibino 76.18 12 *e*P **P** **20 06 47.1 +0.8**
BILL pmax pmax
comp=Z,1.0nm,1.1s
TIXI Tiksi 76.44 358 *e*P **P** **20 06 46.7 -1.0**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
TIXI Tiksi 76.44 358 P **P** **20 06 47.1 -0.6**
TIXI IAmb IAmb 20 06 57.3
comp=Z,15nm,1.4s
MAW Mawson 78.39 202 P **P** **20 06 59.3 +0.6**
MAW pmax pmax
comp=Z,4.0nm,1.2s
MAW Mawson 78.39 202 P **P** **20 06 59.8 +1.1**
comp=Z,5.9nm,0.7s,baz=104,slow=8.3,SNR=6.1
MAW LR LR 20 39 49.7
comp=Z,174nm,18.6s,baz=62,slow=34
MAW Mawson 78.39 202 P **P** **20 06 59.3 +0.6**
BRVK Borovoye 78.53 326 *i* P **P** **20 06 59.2 -0.5**
BRVK pmax pmax
comp=Z,28nm,1.1s
GEYT Alibeck 81.94 309 P **P** **20 07 19.0 +0.5**
comp=Z,5.0nm,1.0s,baz=101,slow=4.7,SNR=13
GEYT Alibeck 81.94 309 IAmb IAmb 20 07 27.9
comp=Z,16nm,1.0s
AKTO Aktyubinsk 84.88 321 P **P** **20 07 33.8 +0.5**
comp=Z,1.5nm,0.8s,baz=105,slow=5.5,SNR=5.6
SVE Sverdlovsk 85.05 328 *e*P P 20 07 39.7 +5.7
SVE pmax pmax
comp=Z,27nm,1.5s
QSPA South Pole Qui 85.09 180 P **P** **20 07 35.4 +1.1**
QSPA IAmb IAmb 20 07 41.7
comp=Z,19nm,1.5s
TTA Tatalina 85.34 26 P **P** **20 07 35.2 -0.2**
TTA Tatalina 85.34 26 P **P** **20 07 35.2 -0.2**
SYO Syowa Base 87.08 201⇑ *e*P **P** **20 07 45.0 +1.2**
ILAR Eielson Array 89.73 25 P **P** **20 07 54.6 -1.9**
comp=Z,0.3nm,0.5s,baz=261,slow=5.0,SNR=5.7
KLMR Klimovskoe 96.42 331 P **P** **20 08 27.8 +0.5**
KLMR *e* 20 12 21.9
KLMR pmax pmax
comp=Z,19nm,1.5s
KLMR Klimovskoe 96.42 331 P **P** **20 08 27.8 +0.5**
KLMR AMP 20 08 33.9
comp=Z,19nm,1.5s
KLMR *e*PP **PP** **20 12 21.9 +0.7**
KHC Kasperske Hory 113.28 322 *i* PKIKP **PKiKP** **20 13 35.9 -0.4**
TORD Tordi Ar. Bea 132.27 283 PKP **PKiKP** **20 14 14.8 +0.1**
comp=Z,0.7nm,0.8s,baz=76,slow=3.6,SNR=2.7
CPUP Villa Florida 147.09 161 PKPbc **PKPbc** **20 14 42.3 +0.2**
comp=Z,1.5nm,0.5s,baz=225,slow=2.8,SNR=4.9
LPAZ La Paz 149.63 134 PKPbc **PKiKP** **20 14 50.6 -0.3**
comp=Z,1.6nm,0.7s,baz=238,slow=1.9,SNR=4.5

BEO 26 20:07:04.3±0.9, 43°.17N×19°.85E, h0km, ML1.6/5,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.13**	**45**	*e*Pg		Pg	Pg	20 07 06.9	+0.1
SJES				*e*Sg		Sg	Sg	20 07 08.8	+0.2
IVAS	**Ivanjica**	**0.47**	**29**	*e*Pg		Pg	Pg	20 07 12.5	-0.7
IVAS				*e*Sg		Sg	Sg	20 07 17.8	-1.5
BBLS	**Lazići**	**0.77**	**335**	*e*Pg		Pg	Pg	20 07 17.1	-1.9
BBLS				*e*Sg		Sg	Sg	20 07 28.9	-0.1
SELS	**Selova**	**0.93**	**86**	*e*Sg		Pg	Pg	20 07 21.8	-0.4
SELS	**Selova**	**0.93**	**86**	*e*Pg		Sg	Sg	20 07 33.4	-0.8
DIVS	**Divibare**	**0.94**	**6**	*e*Sg		Pg	Pg	20 07 21.3	-1.0
DIVS	**Divibare**	**0.94**	**6**	*e*Pg		Sg	Sg	20 07 35.0	+0.6
GRUS	**Gruza**	**0.96**	**41**	*e*Sg		Sg	Sg	20 07 34.9	-0.2

*NEIC **26** 20:09:37.1±1.8, 17°.16N×0°.07×101°.43W±0°.03, h21km±6km,*
Error ellipse: s-maj=10.0km s-min=3.4km az=197.0
*MEX **26** 20:09:40.7±0.6, 17°.29N×101°.33W, h14km±7km, MD4.0*
ISC 26 20:09:34.8±1.8, 17°.33N±0°.06×101°.31W±0°.04, h2km±11km,
n20, σ1°.47/38, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.31**	**332**	*e*P		**Pn**	**Pn**	**20 09 47.0**	**+0.7**
ZIIG				*e*S		**Sb**	**Sb**	**20 09 52.3**	**+3.8**
ZIIG	**Zihuatanejo**	**0.31**	**332**			**Pn**	**Pn**	**20 09 47.0**	**+0.7**
ZIIG						**Sb**	**Sb**	**20 09 52.3**	**+3.8**
CAIG	**El Cayaco**	**1.04**	**106**	*e*P		**Pn**	**Pn**	**20 09 56.9**	**+0.5**
CAIG				*e*S		**Sb**	**Sb**	**20 10 10.1**	**+0.6**
CAIG	**El Cayaco**	**1.04**	**106**			**Pn**	**Pn**	**20 09 56.9**	**+0.5**
CAIG							**Sb**	**20 10 10.1**	**+0.6**
ARIG	**Puente Sto Nin**	**1.32**	**44**	*e*P		**Pg**	**Pg**	**20 10 01.2**	**+1.1**
ARIG				*e*S		**Sg**	**Sg**	**20 10 17.9**	**+0.7**
ARIG	**Puente Sto Nin**	**1.32**	**44**			**Pg**	**Pg**	**20 10 01.2**	**+1.1**
ARIG							**Sn**	**20 10 17.3**	**-1.1**
MEIG	**Mezcala**	**1.72**	**70**	*e*P		**Pg**	**Pg**	**20 10 08.2**	**+0.5**
MEIG				*i* S		**Sb**	**Sb**	**20 10 29.0**	**-0.3**
MEIG	**Mezcala**	**1.72**	**70**			**Pg**	**Pg**	**20 10 08.2**	**+0.5**
MEIG							**Sb**	**20 10 29.4**	**+0.1**
PLIG	**Platanillo**	**2.02**	**58**	*e*P		**Pb**	**Pb**	**20 10 12.5**	**+0.2**
PLIG				*i* S		**Sb**	**Sb**	**20 10 36.1**	**-1.9**
PLIG	**Platanillo**	**2.02**	**58**			**Pb**	**Pb**	**20 10 12.8**	**+0.5**
PLIG						**Sg**	**Sg**	**20 10 39.0**	**-0.7**
MMIG	**Aquila**	**2.16**	**296**	*i* P		**Pn**	**Pn**	**20 10 12.4**	**+0.7**
MMIG				*i* S		**Sn**	**Sn**	**20 10 38.4**	**-0.7**
MMIG	**Aquila**	**2.16**	**296**			**Pn**	**Pn**	**20 10 11.6**	**-0.2**
MMIG							**Sn**	**20 10 37.6**	**-1.5**
MOIG	**Morelia**	**2.33**	**3**			**Pg**	**Pg**	**20 10 18.7**	**-0.9**
MOIG				Sn		**Sg**	**Sg**	**20 10 48.1**	**-1.8**
YAIG	**Yautepec**	**2.62**	**54**	*e*P		**Pb**	**Pb**	**20 10 20.6**	**-2.0**
YAIG				*i* S		**Sn**	**Sn**	**20 10 51.4**	**+0.6**
YAIG	**Yautepec**	**2.62**	**54**			**Pb**	**Pb**	**20 10 20.6**	**-2.0**
YAIG						**Sb**	**Sb**	**20 10 56.5**	**+1.2**
TLIG	**Tlapa**	**2.63**	**85**	*e*P		**Pn**	**Pn**	**20 10 20.6**	**+2.1**
TLIG				*i* S		**Sn**	**Sn**	**20 10 51.3**	**+0.3**
TLIG	**Tlapa**	**2.63**	**85**			**Pb**	**Pb**	**20 10 22.8**	**0.0**
TLIG				Sn		**Sb**	**Sb**	**20 10 57.1**	**+1.5**
TLIG	**Tlapa**	**2.63**	**85**			**Pn**	**Pn**	**20 10 20.6**	**+2.1**
TLIG						**Sg**	**Sg**	**20 10 58.5**	**-1.0**
NATX	**Nacogdoches**	**15.58**	**22**	Pn		**P**	**P**	**20 13 18.0**	**-2.0**
NATX				IAmb	IAmb	20 13 24.0			
comp=Z,16nm,0.8s									
MSTX	**Muleshoe**	**16.62**	**356**	Pn		**P**	**P**	**20 13 31.1**	**-0.5**
MSTX				IAmb	IAmb	20 13 54.1			
comp=Z,12nm,1.4s									

*IDC **26** 20:14:43.2±9.5, 38°.32N×20°.30E, h0km, mb3.7/3,*
mb1 3.7/4, mb1mx3.3/52, mbtmp3.7/4, ML2.5/1, Error
ellipse: s-maj=187.6km s-min=30.3km az=60.0
*THE **26** 20:14:45.9, 38°.24N×20°.34E, h3km±6km, ML3.3/11, Error*
ellipse: s-maj=6.5km s-min=0.5km az=80.0
*ATH **26** 20:14:46.5, 38°.25N×20°.45E, h14km±1km, ML3.1/12, Error*
ellipse: s-maj=2.6km s-min=0.9km az=80.0
ISC 26 20:14:46.0±1.3, 38°.24N±0°.03×20°.35E±0°.06, h10km±7km,
n44, σ1°.04/63, mb3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**109**	P		**Pg**	**Pg**	**20 14 50.0**	**-0.2**
VLS				S		**Sg**	**Sg**	**20 14 53.0**	**0.0**
32μm,0.1s									
VLS	**Valsamata**	**0.20**	**109**	P		**Pg**	**Pg**	**20 14 49.9**	**-0.2**
VLS				S		**Sg**	**Sg**	**20 14 52.7**	**-0.2**
VLS				AML	AML	20 14 53.0			
comp=E,51520μm,0.2s									
VLS				AML	AML	20 14 53.1			
comp=N,78696μm,0.3s									
FSK	**Fiskardo**	**0.27**	**37**	P		**Pg**	**Pg**	**20 14 51.5**	**0.0**
FSK				S		**Sg**	**Sg**	**20 14 55.5**	**+0.3**
comp=N,14μm,0.3s									

FSK	**Fiskardo**	**0.27**	**37**	P		**Pg**	**20 14 51.5**	**0.0**
FSK				S		**Sg**	**20 14 55.3**	**+0.1**
KFL	**Anninata**	**0.37**	**111**	P		**Pg**	**20 14 52.9**	**-0.3**
KFL				S		**Sg**	**20 14 58.4**	**+0.3**
	comp=N,31μm,0.3s							
KFL	**Anninata**	**0.37**	**111**	P		**Pg**	**20 14 53.0**	**-0.2**
KFL				S		**Sg**	**20 14 58.0**	**-0.1**
KFL				AML	AML		20 14 59.1	
	comp=E,98065μm,0.4s							
KFL				AML	AML		20 14 59.2	
	comp=N,25093μm,0.2s							
VLMS	**Volimes, Zakyn**	**0.44**	**146**	P		**Pg**	**20 14 54.6**	**+0.1**
VLMS				S		**Sg**	**20 15 01.1**	**+0.7**
VLMS				AML	AML		20 15 02.2	
	comp=E,25115μm,0.2s							
VLMS				AML	AML		20 15 03.9	
	comp=N,42634μm,0.4s							
EVGI	**Lefkada island**	**0.45**	**32**	P		**Pg**	**20 14 54.6**	**-0.2**
EVGI				S		**Sg**	**20 15 00.5**	**-0.1**
EVGI	**Lefkada island**	**0.45**	**32**	P		**Pg**	**20 14 54.4**	**-0.4**
EVGI				S		**Sg**	**20 15 00.6**	**-0.1**
MGNA	**Meganis**	**0.54**	**40**	P		**Pg**	**20 14 56.0**	**-0.5**
MGNA				S		**Sg**	**20 15 03.6**	**+0.1**
MGNA				AML	AML		20 15 04.6	
	comp=E,3525μm,0.2s							
MGNA				AML	AML		20 15 07.4	
	comp=N,3053μm,0.3s							
LKD2	**Lefkada island**	**0.60**	**23**	P		**Pg**	**20 14 57.4**	**-0.2**
LKD2				S		**Sg**	**20 15 05.8**	**+0.4**
	comp=N,1μm,0.6s							
LKD2	**Lefkada island**	**0.60**	**23**	P		**Pg**	**20 14 57.3**	**-0.3**
LKD2				AML	AML		20 15 14.9	
	comp=N,2942μm,0.7s							
LKD2				AML	AML		20 15 16.6	
	comp=E,2154μm,0.4s							
TSLK	**Tsoukalades, L**	**0.63**	**22**	P		**Pg**	**20 14 58.0**	**-0.2**
TSLK	**Tsoukalades, L**	**0.63**	**22**	P		**Pg**	**20 14 58.1**	**-0.2**
RLS	**Riolos of Patr**	**0.90**	**101**	P		**Pg**	**20 15 02.2**	**-1.0**
RLS				S		**Sb**	**20 15 17.1**	**+1.5**
	comp=E,968nm,0.5s							
RLS	**Riolos of Patr**	**0.90**	**101**	P		**Pg**	**20 15 01.9**	**-1.4**
RLS				AML	AML		20 15 20.5	
	comp=E,1568μm,0.7s							
RLS				AML	AML		20 15 21.1	
	comp=N,2302μm,0.5s							
PVO	**Paravola**	**0.99**	**67**	P		**Pg**	**20 15 04.5**	**-0.6**
PVO				S		**Sb**	**20 15 19.4**	**+1.0**
	comp=N,2μm,0.3s							
PVO	**Paravola**	**0.99**	**67**	P		**Pg**	**20 15 04.5**	**-0.6**
DRO	**Drossia**	**1.11**	**105**	P		**Pg**	**20 15 06.5**	**-0.7**
DRO				S		**Sn**	**20 15 24.1**	**+1.2**
	comp=N,2μm,0.5s							
DRO	**Drossia**	**1.11**	**105**	P		**Pg**	**20 15 06.6**	**-0.7**
EFP	**Efpalio**	**1.23**	**81**	P		**Pg**	**20 15 08.0**	**-1.7**
EFP				S		**Sn**	**20 15 28.1**	**+2.1**
	comp=N,850nm,0.4s							
EFP	**Efpalio**	**1.23**	**81**	P		**Pg**	**20 15 08.0**	**-1.7**
LAKA	**Lakka**	**1.28**	**90**	P		**Pg**	**20 15 08.9**	**-1.7**
LAKA				S		**Sb**	**20 15 28.2**	**+1.5**
	comp=N,580nm,0.5s							
LAKA	**Lakka**	**1.28**	**90**	P		**Pg**	**20 15 08.8**	**-1.7**
LAKA				AML	AML		20 15 34.2	
	comp=N,1244μm,0.5s							
LAKA				AML	AML		20 15 37.2	
	comp=E,989μm,0.5s							
ANX	**Ano Chora**	**1.28**	**74**	P		**Pg**	**20 15 09.7**	**-0.9**
ANX				S		**Sg**	**20 15 27.5**	**+0.3**
	comp=E,2μm,0.6s							
EVR	**Evrytania**	**1.32**	**59**	P		**Pg**	**20 15 10.4**	**-1.1**
EVR				AML	AML		20 15 39.1	
	comp=E,826μm,0.5s							
EVR				AML	AML		20 15 39.3	
	comp=N,726μm,1.1s							
SERG	**Sergoula**	**1.35**	**82**	P		**Pn**	**20 15 10.1**	**-0.8**
TRIZ	**Trizonia**	**1.36**	**84**	P		**Pn**	**20 15 10.1**	**-0.9**
TRIZ	**Trizonia**	**1.36**	**84**	P		**Pn**	**20 15 10.0**	**-0.9**
KALE	**Kalithea**	**1.41**	**83**	P		**Pn**	**20 15 11.0**	**-0.8**
KALE				AML	AML		20 15 38.8	
	comp=E,1068μm,0.6s							
KALE				AML	AML		20 15 40.6	
	comp=N,1166μm,0.7s							
KLV	**Kalavryta, Ach**	**1.43**	**97**	P		**Pn**	**20 15 11.5**	**-0.5**
KLV				S		**Sn**	**20 15 33.2**	**+2.3**
	comp=N,370nm,0.6s							
KLV	**Kalavryta, Ach**	**1.43**	**97**	P		**Pn**	**20 15 11.3**	**-0.7**
KLV				AML	AML		20 15 38.7	
	comp=N,744μm,0.6s							
KLV				AML	AML		20 15 43.2	
	comp=E,559μm,0.5s							
JAN	**Janina**	**1.47**	**15**	P		**Pn**	**20 15 13.1**	**+0.6**
JAN				AML	AML		20 15 40.3	
	comp=N,704μm,0.7s							
JAN				AML	AML		20 15 45.0	
	comp=E,660μm,0.7s							
MAKR	**Makrakomi, Fth**	**1.59**	**60**	P		**Pn**	**20 15 15.5**	**+1.2**
MAKR				AML	AML		20 15 47.2	
	comp=N,1254μm,0.5s							
MAKR				AML	AML		20 15 47.4	
	comp=E,1141μm,0.3s							
ITM	**Ithomi**	**1.64**	**130**	P		**Pn**	**20 15 16.3**	**+1.4**
AGG	**Agios Georgios**	**1.73**	**63**	P		**Pb**	**20 15 18.1**	**+0.2**
THL	**Klokotos Trika**	**1.85**	**44**	P		**Pb**	**20 15 20.0**	**+0.1**
PROD	**Prodromos**	**2.01**	**89**	P		**Pn**	**20 15 21.1**	**+1.2**
LKR	**Lokris**	**2.12**	**78**	P		**Pn**	**20 15 22.7**	**+1.3**
IDI	**Anoyia**	**4.69**	**128**	Pn		**Pn**	**20 15 56.2**	**-0.6**
	comp=E,0.2nm,0.3s,baz=335,slow=19,SNR=1.9							
IDI				Sn		**Sn**	**20 16 54.2**	**+3.0**
	comp=E,1.2nm,0.3s,baz=326,slow=21,SNR=6.7							
GBRS	**Gornja Briga**	**8.37**	**332**	*e*Pn		**Pn**	**20 16 47.4**	**+0.1**
FINES	**FINESS Array B**	**23.50**	**7**	P		**P**	**20 19 53.7**	**-2.0**
	comp=E,2.9nm,0.9s,baz=170,slow=12,SNR=4.0							
MKAR	**Makanchi Array**	**45.38**	**58**	P		**P**	**20 23 03.0**	**-1.4**
	comp=E,0.2nm,0.4s,baz=280,slow=6.9,SNR=8.3							
ZALV	**Zalesovo Beam**	**45.75**	**48**	P		**P**	**20 23 05.9**	**-1.3**
	comp=E,0.6nm,0.4s,baz=272,slow=6.8,SNR=4.1							

BEO 26 20:14:52.0±0.4, 43.26N×20.00E, h0km, ML1.3/4,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SJES	**Sjenica**	**0.02**	**264**	*e*Pg		Pg	20 14 51.6	-0.7
SJES				*e*Sg		Sg	20 14 53.2	+0.7
IVAS	**Ivanjica**	**0.33**	**20**	*e*Pg		Pg	20 14 56.9	-1.5
IVAS				*e*Sg		Sg	20 15 01.3	-1.4
BBLS	**Lazići**	**0.74**	**325**	*e*Pg		Pg	20 15 05.1	-1.1
BBLS				*e*Sg		Sg	20 15 15.2	-0.6
SELS	**Selova**	**0.82**	**93**	*e*Sg		Pg	20 15 07.1	-0.6
SELS	**Selova**	**0.82**	**93**	*e*Pg		Sg	20 15 18.2	-0.2
DIVS	**Divibare**	**0.83**	**360**	*e*Pg		Pg	20 15 07.4	-0.6
DIVS				*e*Sg		Sg	20 15 19.5	+0.7
TRUS	**Trudelj**	**1.00**	**17**	*e*Sg		Sg	20 15 24.9	+0.6

*TAP **26** 20:19:06.6, 24.64N×122.31E, h12km, ML3.2, D*
*JMA **26** 20:19:07.8, 24.57N×122.25E, h32km±4km, M2.7*
ISC 26 20:19:06.5±1.1, 24.63N±0.02×122.37E±0.02, h14km±9km,
n89, σ1s00/168, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EOS1	**EOS1**	**0.23**	**250**	P		**Pb**	**20 19 11.5**	**-1.0**
	baz=241							
EOS1				S		**Sb**	**20 19 14.8**	**-1.7**
	baz=241							
TWC	**Suao**	**0.47**	**268**	*i* P		**Pb**	**20 19 14.5**	**-2.1**
	baz=265							
TWC				*i* S		**Sg**	**20 19 21.6**	**-0.6**
	baz=265							
TWB1	**Santiao Chiao**	**0.51**	**318**	*e*P		**Pb**	**20 19 16.5**	**-0.8**
	baz=322							
TWB1				S		**Sb**	**20 19 22.7**	**-1.9**
	baz=322							
NTC	**Toucheng**	**0.54**	**295**	*e*P		**Pb**	**20 19 16.9**	**-0.8**
	baz=296							
NTC				S		**Sb**	**20 19 24.6**	**-0.7**
	baz=296							
JYNG	**Yonaguni jima**	**0.56**	**109**	P		**Pn**	**20 19 20.0**	**0.0**
JYNG				S		**Sn**	**20 19 29.6**	**+0.5**
ILA	**Ilan**	**0.58**	**284**	P		**Pb**	**20 19 16.7**	**-1.7**
	baz=275							
ILA				S		**Sb**	**20 19 26.2**	**-0.4**
	baz=275							
NANB	**Nanao**	**0.60**	**250**	*e*P		**Pb**	**20 19 17.1**	**-1.7**
	baz=254							
NANB				S		**Sb**	**20 19 24.7**	**-2.4**
	baz=254							
TIPB	**Shuangxi**	**0.60**	**305**	*i* P		**Pb**	**20 19 18.0**	**-0.8**
	baz=299							
TIPB				*e*S		**Sb**	**20 19 25.6**	**-1.5**
	baz=299							
ENA	**Nanau**	**0.60**	**251**	*i* P		**Pb**	**20 19 17.1**	**-1.8**
	baz=254							
ENA				S		**Sb**	**20 19 25.9**	**-1.4**
	baz=254							
YOJ	**Yonaguni jima**	**0.61**	**106**	P		**Pn**	**20 19 21.1**	**+0.3**
YOJ				*e*S		**Sn**	**20 19 31.6**	**+1.2**
TWE	**Neicheng**	**0.64**	**278**	*i* P		**Pb**	**20 19 17.8**	**-1.7**
	baz=269							
TWE				S		**Sb**	**20 19 26.6**	**-1.8**
	baz=269							
SLBB	**Yuanshan**	**0.68**	**281**	*e*P		**Pb**	**20 19 18.9**	**-1.2**
	baz=273							
SLBB				S		**Sb**	**20 19 27.9**	**-1.5**
	baz=273							
WFSB	**Wu-fen Shan**	**0.69**	**310**	P		**Pb**	**20 19 20.7**	**+0.4**
	baz=305							
WFSB				S		**Sb**	**20 19 30.1**	**+0.3**
	baz=305							
ENTT	**Nioudou**	**0.73**	**271**	P		**Pb**	**20 19 19.4**	**-1.6**
	baz=269							
ENTT				S		**Sb**	**20 19 29.5**	**-1.4**
	baz=269							
NDT	**Datong Townshi**	**0.78**	**268**	P		**Pb**	**20 19 20.6**	**-1.2**
	baz=266							
NDT				S		**Sb**	**20 19 31.0**	**-1.4**
	baz=266							
TWA	**Mucha**	**0.79**	**296**	P		**Pb**	**20 19 21.8**	**-0.3**
	baz=289							
TWA				S		**Sb**	**20 19 32.4**	**-0.3**
	baz=289							
NWLT	**Wulai**	**0.80**	**281**	P		**Pb**	**20 19 21.3**	**-1.0**
	baz=274							
NWLT				S		**Sb**	**20 19 32.2**	**-0.7**
	baz=274							
NHDH	**Xindian Distri**	**0.83**	**294**	*e*P		**Pb**	**20 19 22.5**	**-0.3**
	baz=286							
NHDH				*e*S		**Sb**	**20 19 32.5**	**-1.4**
	baz=286							
NACB	**Ninganchiao**	**0.84**	**237**	P		**Pb**	**20 19 21.4**	**-1.5**
	baz=233							
NACB				*e*S		**Sb**	**20 19 32.6**	**-1.5**
	baz=233							
TAP	**Taipei**	**0.88**	**298**	P		**Pb**	**20 19 23.9**	**+0.3**
	baz=291							
TAP				S		**Sb**	**20 19 35.1**	**-0.1**
	baz=291							
YM01	**YM01**	**0.89**	**306**	*e*P		**Pb**	**20 19 23.6**	**-0.1**
	baz=307							
YM01				*e*S		**Sb**	**20 19 34.8**	**-0.7**
	baz=307							
TWD	**Chiawan**	**0.89**	**232**	*e*P		**Pb**	**20 19 22.9**	**-0.9**
	baz=235							
TWD				S		**Sb**	**20 19 35.4**	**-0.2**
	baz=235							
YM11	**YM11**	**0.90**	**307**	P		**Pb**	**20 19 23.9**	**-0.1**
	baz=308							
YM11				*e*S		**Sb**	**20 19 35.1**	**-0.7**
	baz=308							
YM08	**YM08**	**0.90**	**308**	P		**Pb**	**20 19 23.6**	**-0.3**
	baz=310							
YM08				*e*S		**Sb**	**20 19 36.1**	**+0.3**
	baz=310							
YM10	**YM10**	**0.90**	**306**	P		**Pb**	**20 19 24.0**	**0.0**
	baz=307							
YM10				*e*S		**Sb**	**20 19 35.8**	**-0.1**
	baz=307							
YM05	**YM05**	**0.90**	**306**	P		**Pb**	**20 19 23.9**	**-0.1**
	baz=308							
YM05				*e*S		**Sb**	**20 19 35.5**	**-0.5**
	baz=308							
YHNB	**Yeheng**	**0.90**	**273**	P		**Pb**	**20 19 23.0**	**-1.0**
	baz=266							
YHNB				S		**Sb**	**20 19 35.3**	**-0.7**
	baz=266							
ETLH	**Xiulin Townshi**	**0.91**	**243**	*e*P		**Pb**	**20 19 23.1**	**-1.0**
	baz=249							
ETLH				S		**Sb**	**20 19 35.5**	**-0.7**
	baz=249							
YM04	**YM04**	**0.92**	**305**	P		**Pb**	**20 19 24.3**	**+0.1**
	baz=306							
YM04				*e*S		**Sb**	**20 19 35.6**	**-0.8**
	baz=306							
NNSB	**Datong**	**0.92**	**258**	*i* P		**Pb**	**20 19 23.1**	**-1.2**
	baz=255							
NNSB				S		**Sb**	**20 19 35.0**	**-1.5**
	baz=255							
NNSH	**Datong**	**0.92**	**258**	P		**Pb**	**20 19 23.1**	**-1.2**
	baz=255							
NNSH				S		**Sb**	**20 19 34.6**	**-1.9**
	baz=255							
NSK	**Sanguang**	**0.92**	**273**	P		**Pb**	**20 19 23.3**	**-1.0**
	baz=266							
NSK				S		**Sb**	**20 19 35.6**	**-0.8**
	baz=266							
NNS	**Nan Shan**	**0.93**	**258**	P		**Pb**	**20 19 23.4**	**-1.0**
	baz=256							
NNS				S		**Sb**	**20 19 34.8**	**-1.9**
	baz=256							
YM03	**YM03**	**0.93**	**306**	*e*P		**Pb**	**20 19 24.5**	**0.0**
	baz=308							
YM03				*e*S		**Sb**	**20 19 36.9**	**+0.2**
	baz=308							
ANP	**Anpu**	**0.95**	**306**	P		**Pb**	**20 19 24.8**	**0.0**
	baz=307							
ANP				S		**Sb**	**20 19 37.9**	**+0.6**
	baz=307							
TWY	**Chenhua**	**0.95**	**313**	*e*P		**Pb**	**20 19 24.8**	**+0.1**
	baz=315							
TWY				S		**Sb**	**20 19 37.0**	**-0.1**
	baz=315							
TWS1	**Kuangyinshan**	**0.98**	**299**	*e*P		**Pb**	**20 19 24.9**	**-0.5**
	baz=314							
TWS1				*e*S		**Sb**	**20 19 39.0**	**+0.9**
	baz=314							
NTST	**Danshui**	**0.99**	**303**	*e*P		**Pb**	**20 19 25.3**	**-0.1**
	baz=304							
NTST				S		**Sb**	**20 19 39.0**	**+0.7**
	baz=304							
ENLB	**Shoufeng**	**1.01**	**224**	*e*S		**Sg**	**20 19 41.9**	**+2.8**
	baz=201							
WLTB	**Daxi**	**1.04**	**283**	P		**Pb**	**20 19 26.1**	**-0.1**
	baz=282							
WLTB				S		**Sb**	**20 19 40.1**	**+0.4**
	baz=282							
WHF	**Hehuan Shan**	**1.11**	**245**	P		**Pn**	**20 19 27.4**	**-0.7**
	baz=241							
WHF				S		**Sb**	**20 19 41.5**	**-1.0**
	baz=241							
NCUH	**Zhongli**	**1.13**	**288**	P		**Pb**	**20 19 28.5**	**+0.8**
	baz=287							
NCUH				S		**Sb**	**20 19 42.7**	**+0.4**
	baz=287							
TWT	**Tachien**	**1.15**	**251**	*e*P		**Pn**	**20 19 28.5**	**+0.2**
	baz=240							
TWT				S		**Sb**	**20 19 43.9**	**+0.7**
	baz=240							
TDCB	**Techi**	**1.16**	**251**	*e*P		**Pn**	**20 19 28.1**	**-0.5**
	baz=240							
TDCB				*e*S		**Sb**	**20 19 42.7**	**-0.8**
	baz=240							
ESL	**Shilin**	**1.18**	**227**	P		**Pn**	**20 19 28.8**	**+0.2**
	baz=222							
ESL				*e*S		**Sn**	**20 19 45.0**	**+0.5**
	baz=222							
CHGB	**Renai**	**1.23**	**243**	P		**Pn**	**20 19 29.5**	**0.0**
	baz=247							
CHGB				*e*S		**Sb**	**20 19 45.0**	**-0.5**
	baz=247							
LIOB	**Emei**	**1.23**	**271**	P		**Pb**	**20 19 30.2**	**+0.6**
	baz=261							
LIOB				S		**Sn**	**20 19 46.1**	**+0.3**
	baz=261							
NSTT	**Nanjuang**	**1.24**	**270**	P		**Pn**	**20 19 30.1**	**+0.6**
	baz=259							
NSTT				S		**Sn**	**20 19 46.0**	**-0.1**
	baz=259							
SBCB	**Hsinchu**	**1.27**	**278**	*e*P		**Pn**	**20 19 29.5**	**-0.3**
	baz=297							
SBCB				*e*S		**Sn**	**20 19 46.9**	**+0.3**
	baz=297							
IRIF	**Iriomote-Funau**	**1.28**	**103**	P		**Pg**	**20 19 31.1**	**0.0**
IRIF				*e*S		**Sg**	**20 19 48.8**	**+1.1**
OWD	**Renai**	**1.28**	**239**	*e*P		**Pn**	**20 19 29.9**	**-0.2**
	baz=242							
OWD				S		**Sn**	**20 19 46.8**	**-0.4**
	baz=242							
HSN	**Hsinchu**	**1.28**	**278**	*e*S		**Sn**	**20 19 45.8**	**-1.2**
	baz=298							
WHP	**Taichung City**	**1.34**	**255**	*e*P		**Pn**	**20 19 31.1**	**+0.2**
	baz=252							
WHP				S		**Sn**	**20 19 47.6**	**-1.0**
	baz=252							
VWDT	**VWDT**	**1.42**	**232**	P		**Pn**	**20 19 32.2**	**+0.3**
	baz=234							
VWDT				*e*S		**Sb**	**20 19 51.1**	**+0.4**
	baz=234							
HGSD	**Ruisui**	**1.42**	**217**	*e*P		**Pn**	**20 19 31.9**	**-0.1**
	baz=198							
HGSD				*e*S		**Sb**	**20 19 51.6**	**+0.7**
	baz=198							
NMLH	**Miaoli**	**1.44**	**267**	*e*P		**Pb**	**20 19 33.7**	**+0.6**
	baz=264							
NMLH				*e*S		**Sb**	**20 19 53.1**	**+1.7**
	baz=264							
DPDB	**Guoxing**	**1.44**	**246**	P		**Pb**	**20 19 33.4**	**+0.2**
	baz=243							
DPDB				*e*S		**Sb**	**20 19 51.9**	**+0.4**
	baz=243							
EHY	**Hungye**	**1.47**	**221**	P		**Pn**	**20 19 32.6**	**-0.1**
	baz=216							
EHY				*e*S		**Sb**	**20 19 52.6**	**+0.3**
	baz=216							
NSY	**Sanyi**	**1.48**	**262**	P		**Pb**	**20 19 34.2**	**+0.4**
	baz=259							
NSY				S		**Sb**	**20 19 54.5**	**+2.0**
	baz=259							
PTSB	**Yuanli**	**1.52**	**263**	*e*S		**Sb**	**20 19 55.8**	**+2.0**
	baz=261							
SMLT	**Sun Moon Lake**	**1.53**	**241**	*e*P		**Pn**	**20 19 34.5**	**+1.0**
	baz=244							
SMLT				*e*S		**Sb**	**20 19 54.5**	**+0.4**
	baz=244							
SSLB	**Suanglung**	**1.54**	**237**	P		**Pn**	**20 19 34.6**	**+0.9**
	baz=216							
SSLB				*e*S		**Sb**	**20 19 55.0**	**+0.7**
	baz=216							
JKRS	**Kuro-shima**	**1.55**	**104**	P		**Pg**	**20 19 35.3**	**-0.9**
JKRS				S		**Sg**	**20 19 55.6**	**-0.7**
YULB	**Yu-li**	**1.57**	**219**	*e*P		**Pn**	**20 19 33.5**	**-0.5**
	baz=214							
YULB				*e*S		**Sn**	**20 19 54.7**	**+0.4**
	baz=214							
TWF1	**Yuli**	**1.61**	**218**	P		**Pn**	**20 19 33.9**	**-0.6**
	baz=203							
TCU	**Taichung**	**1.62**	**253**	*e*P		**Pn**	**20 19 35.8**	**+1.2**
	baz=250							
TCU				*e*S		**Sg**	**20 19 59.0**	**+0.5**
	baz=250							
JIJ	**Ishigaki jima**	**1.64**	**99**	P		**Pb**	**20 19 36.1**	**-0.4**
JIJ				*e*S		**Sb**	**20 19 56.9**	**-0.2**
WHYT	**Xinyi Township**	**1.67**	**236**	*e*P		**Pn**	**20 19 36.6**	**+1.2**
	baz=221							
WJS	**Zhushan**	**1.70**	**242**	P		**Pb**	**20 19 39.0**	**+1.5**
	baz=220							
WJS				S		**Sg**	**20 20 01.6**	**+0.4**
	baz=220							
WNT	**Mingjian**	**1.71**	**244**	P		**Pb**	**20 19 38.4**	**+0.6**
	baz=221							
WNT				S		**Sb**	**20 20 01.4**	**+2.3**
	baz=221							
YUS	**Yu-Shan**	**1.72**	**229**	P		**Pn**	**20 19 37.1**	**+0.6**
	baz=208							
YUS				S		**Sn**	**20 19 59.0**	**+0.4**
	baz=208							
FULB	**Fuli**	**1.73**	**215**	*e*P		**Pn**	**20 19 36.0**	**-0.3**
	baz=197							
FULB				S		**Sb**	**20 19 59.8**	**+0.1**
	baz=197							
JISG	**Ishigakijimahi**	**1.77**	**91**	P		**Pb**	**20 19 38.1**	**-0.6**
JISG				S		**Sb**	**20 19 59.7**	**-1.1**
ALS	**Alishan**	**1.81**	**232**	*e*P		**Pn**	**20 19 38.9**	**+1.3**
	baz=215							
CHN5	**Tsauling**	**1.85**	**237**	*e*S		**Sb**	**20 20 04.0**	**+0.6**
	baz=216							
ELDTW	**Lidau**	**1.89**	**221**	P		**Pn**	**20 19 38.9**	**+0.3**
	baz=203							
ELDTW				S		**Sn**	**20 20 02.1**	**-0.2**
	baz=203							
WGK	**Gukeng**	**1.90**	**241**	*e*P		**Pb**	**20 19 40.8**	**-0.2**
	baz=218							
WGK				*e*S		**Sb**	**20 20 06.5**	**+1.9**
	baz=218							
WDLH	**Douliu**	**1.92**	**241**	P		**Pb**	**20 19 41.8**	**+0.5**
	baz=219							
WDLH				*e*S		**Sb**	**20 20 06.8**	**+1.7**
	baz=219							
RLNB	**Erlin**	**1.98**	**249**	*e*S		**Sb**	**20 20 07.2**	**+0.5**
	baz=263							
CHN4	**Tsaushan**	**2.06**	**232**	*e*P		**Pb**	**20 19 43.1**	**-0.7**
	baz=212							
CHN4				*e*S		**Sb**	**20 20 09.7**	**+0.4**
	baz=212							
TPUB	**Ta-pu**	**2.07**	**231**	*e*P		**Pn**	**20 19 42.7**	**+1.9**
	baz=210							
TPUB				*e*S		**Sb**	**20 20 09.0**	**-0.5**
	baz=210							
STYT	**Tauyuan**	**2.08**	**226**	*e*P		**Pn**	**20 19 42.4**	**+1.4**
	baz=207							
STYT				*e*S		**Sb**	**20 20 09.0**	**-0.7**
	baz=207							
CHY	**Chiayi**	**2.10**	**238**	*e*S		**Sb**	**20 20 10.5**	**0.0**
	baz=216							
WTP	**Ta-pu**	**2.12**	**230**	*e*P		**Pn**	**20 19 43.4**	**+1.8**
	baz=208							
WTP				*e*S		**Sb**	**20 20 10.6**	**-0.2**
	baz=208							
TWGBT	**Beinan**	**2.16**	**213**	*e*P		**Pn**	**20 19 40.8**	**-1.3**
	baz=212							
TWK	**Hsinying**	**2.19**	**232**	*e*P		**Pn**	**20 19 44.5**	**+1.9**
	baz=210							
TWK				*e*S		**Sb**	**20 20 13.1**	**0.0**
	baz=210							
CHN1	**Nanshi**	**2.21**	**230**	*e*P		**Pn**	**20 19 44.5**	**+1.6**
	baz=212							
CHN1				*e*S		**Sb**	**20 20 13.7**	**0.0**
	baz=212							
SGST	**Jiashian**	**2.25**	**227**	P		**Pb**	**20 19 46.0**	**-0.9**
	baz=207							
SGST				S		**Sb**	**20 20 14.5**	**-0.1**
	baz=207							
SLGT	**Liugui**	**2.27**	**224**	P		**Pn**	**20 19 45.3**	**+1.7**
	baz=221							
SLGT				*e*S		**Sb**	**20 20 14.5**	**-0.7**
	baz=221							

*OSPL **26** 20:21:30.5±1.6, 17.55N×68.48W, h0km±47km, ML3.1*
*RSPR **26** 20:21:33.9, 18.40N×68.60W, h83km±1km, MD3.2/7*
*NEIC **26** 20:21:34.7±1.7, 18.3N±0.2×68.56W±0.06, h74km±8km,*
Error ellipse: s-maj=24.8km s-min=5.6km az=192.0
ISC 26 20:21:36.0±1.3, 18.3N±0.1×68.50W±0.04, h74km, n57,
σ1s24/61, 8C-4D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.25**	**27**	⇑ *i*P		**Pn**	**20 21 45.8**	**-1.4**
PCDR	**Punta Cana, DR**	**0.25**	**27**	*e*S		**Sn**	**20 21 54.6**	**-1

CRPR	**Cabo Rojo, PR**	**1.35**	**102**	*eS*		**Sn**	**20 22 17.8**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.35**	**102**			**Sn**	**20 22 17.8**	**+1.3**
CRPR	**Cabo Rojo, PR**	**1.35**	**102**		Pn	**Pn**	**20 21 57.9**	**-1.3**
SDD	**Santo Domingo**	**1.35**	**277**		Pn	**Pn**	**20 21 57.1**	**-2.0**
MLPR	**Magueyes Islan**	**1.42**	**103**	*eS*		**Sn**	**20 22 19.1**	**+1.0**
MLPR	**Magueyes Islan**	**1.42**	**103**			**Sn**	**20 22 19.1**	**+1.0**
MLPR	**Magueyes Islan**	**1.42**	**103**		Pn	**Pn**	**20 21 57.6**	**-2.4**
GBPR	**Guanica, Bosqu**	**1.57**	**101**	*eP*		**Pn**	**20 22 01.0**	**-1.0**
GBPR	**Guanica, Bosqu**	**1.57**	**101**	*eS*		**Sn**	**20 22 22.6**	**+0.9**
GBPR	**Guanica, Bosqu**	**1.57**	**101**			**Pn**	**20 22 01.0**	**-1.0**
GBPR						**Sn**	**20 22 22.6**	**+0.9**
AOPR	**Arecibo Observ**	**1.66**	**88**	*eP*		**Pn**	**20 22 02.5**	**-0.7**
AOPR	**Arecibo Observ**	**1.66**	**88**	*eS*		**Sn**	**20 22 24.1**	**+0.3**
AOPR	**Arecibo Observ**	**1.66**	**88**		Pn	**Pn**	**20 22 03.1**	**-0.1**
AOPR	**Arecibo Observ**	**1.66**	**88**			**Sn**	**20 22 24.1**	**+0.3**
BANI	**BANI**	**1.77**	**274**			**Pn**	**20 22 03.4**	**-1.3**
OBIP	**Obispado Ponce**	**1.82**	**97**	*eP*		**Pn**	**20 22 04.3**	**-1.0**
OBIP	**Obispado Ponce**	**1.82**	**97**		Pn	**Pn**	**20 22 04.2**	**-1.0**
CELP	**Cerrillos**	**1.84**	**96**	*eP*		**Pn**	**20 22 04.7**	**-0.8**
CELP	**Cerrillos**	**1.84**	**96**			**Pn**	**20 22 04.7**	**-0.8**
EMPR	**Esperanza - Ma**	**1.88**	**84**	*eS*		**Sn**	**20 22 29.1**	**+0.1**
EMPR	**Esperanza - Ma**	**1.88**	**84**	*eP*		**Pn**	**20 22 05.2**	**-0.9**
EMPR	**Esperanza - Ma**	**1.88**	**84**		Pn	**Pn**	**20 22 06.7**	**+0.6**
BON1	**Bonao**	**1.91**	**290**	*i*	P	**Pn**	**20 22 06.3**	**-0.2**
ICMP	**Isla Caja de M**	**1.92**	**102**		Pn	**Pn**	**20 22 05.0**	**-1.6**
SJG	**San Juan**	**2.24**	**94**		Pn	**Pn**	**20 22 09.8**	**-1.1**
IGPR	**InterUniversit**	**2.30**	**98**	*eP*		**Pn**	**20 22 10.2**	**-1.5**
IGPR	**InterUniversit**	**2.30**	**98**		Pn	**Pn**	**20 22 10.4**	**-1.3**
SC01	**Santiago de lo**	**2.40**	**299**	*i*	P	**Pn**	**20 22 15.4**	**+2.4**
CBYP	**Canovanas**	**2.51**	**90**	*eP*		**Pn**	**20 22 14.1**	**-0.6**
CBYP	**Canovanas**	**2.51**	**90**	*eS*		**Sn**	**20 22 44.4**	**0.0**
CBYP	**Canovanas**	**2.51**	**90**			**Sn**	**20 22 44.4**	**0.0**
CBYP	**Canovanas**	**2.51**	**90**		Pn	**Pn**	**20 22 15.1**	**+0.4**
CBYP						Pn	20 22 15.8	+1.2
HUMP	**Col San Antoni**	**2.52**	**93**			Pn	20 22 20.5	+5.8
SDDR	**Presa de Saban**	**2.73**	**285**	*i*	P	**Pn**	**20 22 18.4**	**+0.8**
SDDR					*eS*	**Sn**	**20 22 53.2**	**+3.6**
SDDR					IAML		20 22 59.0	
	comp=Z,80nm,0.3s							
SDDR	**Presa de Saban**	**2.73**	**285**			**Pn**	**20 22 18.6**	**+0.9**
MTP	**Monte Pirata**	**2.81**	**93**	*eP*		**Pn**	**20 22 17.9**	**-0.7**
MTP	**Monte Pirata**	**2.81**	**93**	*eS*		**Sn**	**20 22 52.8**	**+1.3**
MTP	**Monte Pirata**	**2.81**	**93**			**Pn**	**20 22 19.7**	**+1.0**
MTP	**Monte Pirata**	**2.81**	**93**			**Sn**	**20 22 52.8**	**+1.3**
CUPR	**Culebra, Puert**	**3.06**	**89**		Pn	**Pn**	**20 22 21.4**	**-0.6**

*RSPR **26** 20:22:50.2, 18°.06N×68°.86W, h104km±3km, MD3.1/15*
*NEIC **26** 20:22:50.1±1.0, 18°.0N±0°.2×68°.86W±0°.04, h100km± 19km, Error ellipse: s-maj=28.4km s-min=2.5km az=191.0*
ISC 26 20:22:50.7±1.4, **17°.9N**±0°.1×**68°.86W**±0°.04, **h84**km±16km, **n54**, σ0**°87**/71, **8C-8D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCDR	**Punta Cana, DR**	**0.73**	**39**	*eP*	**Pn**	**20 23 06.7**	**-0.4**
PCDR				*eS*	**Sn**	**20 23 20.5**	**+1.3**
PCDR	**Punta Cana, DR**	**0.73**	**39**	*iP*	**Pn**	**20 23 06.7**	**-0.4**
PCDR	**Punta Cana, DR**	**0.73**	**39**		**Pn**	**20 23 06.7**	**-0.4**
PCDR					**Sn**	**20 23 20.5**	**+1.3**
DR12	**Loma Pena Alta**	**0.98**	**330**	Pn	**Pn**	**20 23 07.4**	**-2.4**
SDD	**Santo Domingo**	**1.12**	**298**	Pn	**Pn**	**20 23 10.5**	**-1.0**
SDD				Pn	**Sn**	**20 23 26.1**	**-1.0**
IDE	**Isla Desecheo**	**1.40**	**71**	*eP*	**Pn**	**20 23 14.5**	**-0.3**
IDE	**Isla Desecheo**	**1.40**	**71**	*eS*	**Sn**	**20 23 34.1**	**+1.0**
IDE	**Isla Desecheo**	**1.40**	**71**		**Pn**	**20 23 14.5**	**-0.3**
IDE					**Sn**	**20 23 34.1**	**+1.0**
BANI	**BANI**	**1.49**	**288**	Pn	**Pn**	**20 23 16.1**	**-0.1**
BANI				Pn	**Sn**	**20 23 36.9**	**+1.4**
MPR	**Mayaguez**	**1.66**	**80**	Pn	**Pn**	**20 23 17.9**	**-0.3**
CRPR	**Cabo Rojo, PR**	**1.67**	**87**	*eP*	**Pn**	**20 23 18.4**	**+0.1**
CRPR	**Cabo Rojo, PR**	**1.67**	**87**	*eS*	**Sn**	**20 23 39.7**	**+0.4**
CRPR	**Cabo Rojo, PR**	**1.67**	**87**		**Pn**	**20 23 18.4**	**+0.1**
CRPR					**Sn**	**20 23 39.7**	**+0.4**
LSP	**Las Mesas**	**1.71**	**82**	*eP*	**Pn**	**20 23 18.9**	**0.0**
LSP	**Las Mesas**	**1.71**	**82**	*eS*	**Sn**	**20 23 41.1**	**+0.8**
LSP	**Las Mesas**	**1.71**	**82**		**Pn**	**20 23 18.9**	**0.0**
LSP					**Sn**	**20 23 41.1**	**+0.8**
MLPR	**Magueyes Islan**	**1.73**	**89**	*eP*	**Pn**	**20 23 18.2**	**-0.9**
MLPR	**Magueyes Islan**	**1.73**	**89**	*eS*	**Sn**	**20 23 41.7**	**+0.9**
MLPR	**Magueyes Islan**	**1.73**	**89**		**Pn**	**20 23 18.2**	**-0.9**
MLPR					**Sn**	**20 23 41.7**	**+0.9**
AGPR	**Aguadilla, PR**	**1.75**	**72**	*eP*	**Pn**	**20 23 19.8**	**+0.5**
AGPR	**Aguadilla, PR**	**1.75**	**72**	*eS*	**Sn**	**20 23 41.5**	**+0.3**
AGPR	**Aguadilla, PR**	**1.75**	**72**		**Pn**	**20 23 19.8**	**+0.5**
AGPR					**Sn**	**20 23 41.5**	**+0.3**
GBPR	**Guanica, Bosqu**	**1.89**	**89**	*eP*	**Pn**	**20 23 21.4**	**+0.1**
GBPR	**Guanica, Bosqu**	**1.89**	**89**	*eS*	**Sn**	**20 23 45.0**	**+0.5**
GBPR	**Guanica, Bosqu**	**1.89**	**89**		**Pn**	**20 23 21.4**	**+0.1**
GBPR					**Sn**	**20 23 45.0**	**+0.5**
AOPR	**Arecibo Observ**	**2.05**	**78**	*eP*	**Pn**	**20 23 23.1**	**-0.3**
AOPR	**Arecibo Observ**	**2.05**	**78**	*eS*	**Sn**	**20 23 48.0**	**-0.3**
AOPR	**Arecibo Observ**	**2.05**	**78**		**Pn**	**20 23 23.1**	**-0.3**
AOPR					**Sn**	**20 23 48.0**	**-0.3**
OBIP	**Obispado Ponce**	**2.15**	**87**	*eP*	**Pn**	**20 23 24.6**	**-0.1**
OBIP	**Obispado Ponce**	**2.15**	**87**	*eS*	**Sn**	**20 23 51.1**	**+0.4**
OBIP	**Obispado Ponce**	**2.15**	**87**		**Pn**	**20 23 24.6**	**-0.1**
OBIP	**Obispado Ponce**	**2.15**	**87**		**Sn**	**20 23 49.6**	**-1.1**
ICMP	**Isla Caja de M**	**2.23**	**91**	Pn	**Pn**	**20 23 25.4**	**-0.3**
ICMP				Pn	**Sn**	**20 23 48.4**	**-4.0**
EMPR	**Esperanza - Ma**	**2.28**	**76**	*eP*	**Pn**	**20 23 26.2**	**-0.2**
EMPR	**Esperanza - Ma**	**2.28**	**76**	*eS*	**Sn**	**20 23 53.4**	**-0.5**
EMPR	**Esperanza - Ma**	**2.28**	**76**		**Pn**	**20 23 26.2**	**-0.2**
EMPR					**Sn**	**20 23 53.4**	**-0.5**
SC01	**Santiago de lo**	**2.31**	**310**	Pn	**Pn**	**20 23 27.0**	**+0.3**
SC01					**Sn**	**20 23 55.9**	**+1.5**
SDDR	**Presa de Saban**	**2.52**	**295**	Pn	**Pn**	**20 23 29.8**	**+0.1**
SJG	**San Juan**	**2.59**	**86**	Pn	**Pn**	**20 23 30.1**	**-0.5**
IGPR	**InterUniversit**	**2.62**	**89**	*eP*	**Pn**	**20 23 31.3**	**+0.3**
IGPR	**InterUniversit**	**2.62**	**89**	*eS*	**Sn**	**20 24 03.3**	**+1.3**
IGPR	**InterUniversit**	**2.62**	**89**		**Sn**	**20 24 03.3**	**+1.3**
IGPR	**InterUniversit**	**2.62**	**89**	Pn	**Pn**	**20 23 31.7**	**+0.7**
HUMP	**Col San Antoni**	**2.88**	**85**	Pn	**Pn**	**20 23 34.0**	**-0.4**
CBYP	**Canovanas**	**2.88**	**83**	*eP*	**Pn**	**20 23 34.1**	**-0.4**
CBYP	**Canovanas**	**2.88**	**83**	*eP*	**Sn**	**20 24 04.2**	**-0.3**
CBYP				*eS*	**Sn**	**20 24 07.7**	**-0.6**
CBYP	**Canovanas**	**2.88**	**83**		**Pn**	**20 23 34.2**	**-0.3**
CBYP					**Sn**	**20 24 07.7**	**-0.6**
MTP	**Monte Pirata**	**3.15**	**87**	*eP*	**Pn**	**20 23 38.7**	**+0.4**
MTP	**Monte Pirata**	**3.15**	**87**	*eS*	**Sn**	**20 24 15.6**	**+0.7**
MTP	**Monte Pirata**	**3.15**	**87**		**Pn**	**20 23 38.6**	**+0.4**
MTP	**Monte Pirata**	**3.15**	**87**		**Sn**	**20 24 15.6**	**+0.7**
CUPR	**Culebra, Puert**	**3.43**	**83**	*eP*	**Pn**	**20 23 41.1**	**-0.7**
CUPR	**Culebra, Puert**	**3.43**	**83**	*eS*	**Sn**	**20 24 21.0**	**-0.4**
CUPR	**Culebra, Puert**	**3.43**	**83**		**Pn**	**20 23 41.1**	**-0.7**
CUPR					**Sn**	**20 24 21.0**	**-0.4**

*IDC **26** 20:24:26.2±3.1, 38°.49N×20°.64E, h0km, mb3.6/3, mb1 3.6/6, mb1mx3.2/52, mbtmp3.5/6, ML3.1/3, MS4.1/1, Ms1 4.1/1, ms1mx2.9/49, Error ellipse: s-maj=67.1km s-min=20.4km az=46.0*
*ATH **26** 20:24:27.3, 38°.21N×20°.44E, h11km±1km, ML3.1/17, Error ellipse: s-maj=2.5km s-min=1.0km az=69.0*
ISC 26 20:24:26.8±1.0, **38°.23N**±0°.03×**20°.43E**±0°.05, **h13**km±6km, **n34**, σ0**°75**/43, **mb3.7**/3, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.13**	**114**	P	**Pg**	**20 24 30.0**	**-0.2**
VLS				S	**Sg**	**20 24 32.7**	**+0.1**
VLS				AML	AML	20 24 33.0	
	comp=N,15749μm,0.3s						
VLS				AML	AML	20 24 33.8	
	comp=E,13394μm,0.3s						
FSK	**Fiskardo**	**0.25**	**24**	P	**Pg**	**20 24 32.4**	**+0.3**
FSK				S	**Sb**	**20 24 36.3**	**-1.1**
FSK				AML	AML	20 24 37.3	
	comp=N,23732μm,0.2s						
FSK				AML	AML	20 24 37.3	
	comp=E,30104μm,0.2s						
KFL	**Anninata**	**0.30**	**113**	P	**Pg**	**20 24 32.9**	**-0.1**
KFL				S	**Sg**	**20 24 38.0**	**+0.9**
KFL				AML	AML	20 24 40.3	
	comp=N,10527μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.40**	**153**	P	**Pg**	**20 24 34.3**	**-0.4**
VLMS				S	**Sg**	**20 24 39.9**	**-0.1**
VLMS				AML	AML	20 24 41.5	
	comp=N,13540μm,0.5s						
VLMS				AML	AML	20 24 44.9	
	comp=E,7332μm,0.4s						
EVGI	**Lefkada island**	**0.43**	**24**	P	**Pb**	**20 24 36.3**	**+0.1**
EVGI				S	**Sb**	**20 24 42.4**	**-0.2**
MGNA	**Meganis**	**0.51**	**33**	P	**Pg**	**20 24 36.8**	**0.0**
MGNA				S	**Sb**	**20 24 44.1**	**-0.8**
MGNA				AML	AML	20 24 45.6	
	comp=N,8277μm,0.2s						
MGNA				AML	AML	20 24 45.8	
	comp=E,8651μm,0.1s						
LKD2	**Lefkada island**	**0.58**	**17**	P	**Pb**	**20 24 39.1**	**+0.2**
LKD2				S	**Sb**	**20 24 47.1**	**-0.1**
LKD2				AML	AML	20 24 53.1	
	comp=E,2220μm,0.3s						
LKD2				AML	AML	20 24 55.0	
	comp=N,2789μm,0.2s						
TSLK	**Tsoukalades, L**	**0.62**	**16**	P	**Pb**	**20 24 39.4**	**0.0**
RLS	**Riolos of Patr**	**0.83**	**102**	P	**Pg**	**20 24 43.0**	**+0.1**
RLS				S	**Sb**	**20 24 54.8**	**+0.6**
RLS				AML	AML	20 24 58.0	
	comp=E,1252μm,0.5s						
PVO	**Paravola**	**0.94**	**65**	P	**Pn**	**20 24 45.2**	**-0.5**
PVO				AML	AML	20 25 01.7	
	comp=E,5777μm,0.3s						
PVO				AML	AML	20 25 02.5	
	comp=N,2658μm,0.2s						
DRO	**Drossia**	**1.04**	**105**	P	**Pn**	**20 24 47.4**	**+0.3**
DRO				AML	AML	20 25 11.3	
	comp=E,3834μm,0.5s						
DRO				AML	AML	20 25 17.0	
	comp=N,2535μm,0.5s						
EFP	**Efpalio**	**1.17**	**80**	P	**Pg**	**20 24 50.0**	**+0.6**
EFP				AML	AML	20 25 12.2	
	comp=E,1563μm,0.9s						
EFP				AML	AML	20 25 15.8	
	comp=N,1515μm,0.4s						
ANX	**Ano Chora**	**1.22**	**72**	P	**Pg**	**20 24 50.9**	**+0.6**
ANX				AML	AML	20 25 14.1	
	comp=N,2151μm,0.5s						
ANX				AML	AML	20 25 15.7	
	comp=E,1928μm,0.6s						
AMT	**Artemida-Makis**	**1.23**	**124**	P	**Pg**	**20 24 50.7**	**+0.3**
AMT				AML	AML	20 25 19.0	
	comp=E,1746μm,0.8s						
AMT				AML	AML	20 25 24.9	
	comp=N,1317μm,0.7s						
EVR	**Evrytania**	**1.28**	**57**	P	**Pg**	**20 24 52.1**	**+0.8**
EVR				AML	AML	20 25 18.7	
	comp=N,660μm,0.4s						
EVR				AML	AML	20 25 20.9	
	comp=E,704μm,0.7s						
SERG	**Sergoula**	**1.29**	**81**	P	**Pg**	**20 24 51.7**	**+0.2**
SERG				AML	AML	20 25 16.3	
	comp=E,1360μm,0.4s						
SERG				AML	AML	20 25 16.4	
	comp=N,1545μm,0.5s						
TRIZ	**Trizonia**	**1.30**	**84**	P	**Pg**	**20 24 51.8**	**+0.2**
IGT	**Igoumenitsa**	**1.30**	**357**	P	**Pg**	**20 24 52.4**	**+0.6**
IGT				AML	AML	20 25 14.0	
	comp=N,860μm,0.3s						
IGT				AML	AML	20 25 15.9	
	comp=E,778μm,0.2s						
KLV	**Kalavryta, Ach**	**1.37**	**97**	P	**Pn**	**20 24 51.9**	**+0.3**
KLV				AML	AML	20 25 21.0	
	comp=E,431μm,0.6s						
KLV				AML	AML	20 25 22.0	
	comp=N,409μm,0.9s						
JAN	**Janina**	**1.46**	**13**	P	**Pg**	**20 24 55.9**	**+1.0**
JAN				AML	AML	20 25 19.8	
	comp=E,634μm,0.6s						
JAN				AML	AML	20 25 23.4	
	comp=N,618μm,0.4s						
KASA	**Kassiopi**	**1.56**	**346**	P	**Pg**	**20 24 57.4**	**+0.6**
ITM	**Ithomi**	**1.58**	**131**	P	**Pg**	**20 24 57.0**	**-0.1**
AGG	**Agios Georgios**	**1.68**	**61**	P	**Pg**	**20 24 59.2**	**+0.1**
THL	**Klokotos Trika**	**1.81**	**42**	P	**Pg**	**20 25 00.7**	**-0.9**
PROD	**Prodromos**	**1.94**	**88**	P	**Pb**	**20 25 02.1**	**0.0**
PENT	**Pentalofos**	**2.04**	**15**	P	**Pb**	**20 25 04.0**	**+0.3**
LKR	**Lokris**	**2.06**	**77**	P	**Pb**	**20 25 03.2**	**-0.8**
IDI	**Anoyia**	**4.63**	**128**	Pn	**Pn**	**20 25 38.2**	**+1.8**
	comp=N,0.3nm,0.3s,baz=302,slow=15,SNR=2.1						
IDI				Sn	**Sn**	**20 26 32.6**	**+2.4**
	comp=N,0.5nm,0.3s,baz=317,slow=19,SNR=4.9						
GBRS	**Gornja Briga**	**8.41**	**332**	*e*Pn	**Pn**	**20 26 28.6**	**+0.2**
DAVOX	**Davos/Dischmat**	**11.55**	**321**	Pn	**Pn**	**20 27 11.7**	**+0.2**
	comp=N,0.1nm,0.3s,baz=139,slow=18,SNR=2.5						
GERES	**GERESS Array B**	**11.67**	**337**	Pn	**Pn**	**20 27 12.5**	**-0.6**
	comp=N,0.1nm,0.3s,baz=156,slow=13,SNR=4.6						
FINES	**FINESS Array B**	**23.50**	**7**	P	**P**	**20 29 34.6**	**-1.5**
	comp=N,1.6nm,1.0s,baz=165,slow=12,SNR=2.2						
MKAR	**Makanchi Array**	**45.33**	**58**	P	**P**	**20 32 43.6**	**-0.9**
	comp=N,0.5nm,0.5s,baz=275,slow=7.3,SNR=8.1						
ZALV	**Zalesovo Beam**	**45.71**	**48**	P	**P**	**20 32 46.5**	**-0.8**
	comp=N,0.8nm,0.6s,baz=276,slow=9.3,SNR=4.5						
ZALV				LR	LR	20 54 07.9	
	comp=N,228nm,20.3s,baz=320,slow=39						

*ATH **26** 20:33:00.4, 38°.22N×20°.41E, h13km±4km, ML3.0/11, Error ellipse: s-maj=4.3km s-min=0.8km az=105.0*
*IDC **26** 20:33:02.0±7.7, 38°.58N×20°.98E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/40, mbtmp3.6/4, ML2.4/1, Error ellipse: s-maj=158.9km s-min=29.2km az=64.0*
ISC 26 20:33:00.5±1.4, **38°.23N**±0°.03×**20°.42E**±0°.07, **h13**km±7km, **n20**, σ0**°80**/31, **mb3.6**/3, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.15**	**112**	P	**Pg**	**20 33 03.8**	**-0.4**
VLS				AML	AML	20 33 06.5	
	comp=N,61661μm,0.1s						
VLS				AML	AML	20 33 06.6	
	comp=E,62717μm,0.1s						
FSK	**Fiskardo**	**0.25**	**27**	P	**Pg**	**20 33 05.4**	**-0.5**
FSK				S	**Sg**	**20 33 09.8**	**+0.3**
FSK				AML	AML	20 33 10.9	
	comp=N,16372μm,0.4s						
FSK				AML	AML	20 33 10.9	
	comp=E,11648μm,0.3s						
KFL	**Anninata**	**0.32**	**112**	P	**Pg**	**20 33 06.6**	**-0.3**
KFL				S	**Sg**	**20 33 11.3**	**0.0**
KFL				AML	AML	20 33 12.2	
	comp=N,10580μm,0.2s						
KFL				AML	AML	20 33 12.7	
	comp=E,11528μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.40**	**151**	P	**Pg**	**20 33 08.2**	**-0.3**
VLMS				S	**Sb**	**20 33 14.6**	**-1.0**
VLMS				AML	AML	20 33 15.3	
	comp=E,24194μm,0.1s						
VLMS				AML	AML	20 33 15.9	
	comp=N,26732μm,0.3s						
EVGI	**Lefkada island**	**0.43**	**26**	P	**Pg**	**20 33 09.2**	**+0.1**
EVGI				S	**Sb**	**20 33 16.3**	**-0.1**
MGNA	**Meganis**	**0.52**	**35**	P	**Pb**	**20 33 11.2**	**-0.2**
MGNA				S	**Sg**	**20 33 18.6**	**+1.1**
LKD2	**Lefkada island**	**0.59**	**19**	P	**Pg**	**20 33 11.6**	**-0.4**
LKD2				S	**Sg**	**20 33 20.6**	**+0.8**
LKD2				AML	AML	20 33 27.8	
	comp=E,1352μm,0.3s						
LKD2				AML	AML	20 33 28.7	
	comp=N,1430μm,0.4s						
TSLK	**Tsoukalades, L**	**0.62**	**17**	P	**Pb**	**20 33 12.7**	**-0.5**
TSLK				S	**Sg**	**20 33 21.3**	**+0.5**
TSLK				AML	AML	20 33 29.3	
	comp=N,1817μm,0.5s						
TSLK				AML	AML	20 33 30.4	
	comp=E,1647μm,0.3s						
RLS	**Riolos of Patr**	**0.84**	**102**	P	**Pg**	**20 33 16.1**	**-0.8**
PVO	**Paravola**	**0.95**	**66**	P	**Pg**	**20 33 18.7**	**-0.2**
PVO				S	**Sg**	**20 33 31.9**	**+0.6**
PVO				AML	AML	20 33 39.1	
	comp=N,1752μm,0.6s						
PVO				AML	AML	20 33 39.5	
	comp=E,2802μm,0.6s						
DRO	**Drossia**	**1.06**	**105**	P	**Pg**	**20 33 20.6**	**-0.2**
DRO				S	**Sg**	**20 33 34.8**	**+0.1**
DRO				AML	AML	20 33 43.1	
	comp=N,1175μm,0.4s						
DRO				AML	AML	20 33 45.1	
	comp=E,1570μm,0.3s						
EFP	**Efpalio**	**1.19**	**80**	P	**Pg**	**20 33 22.4**	**-0.9**
EFP				AML	AML	20 33 46.5	
	comp=E,1130μm,0.5s						
EFP				AML	AML	20 33 47.1	
	comp=N,1008μm,0.8s						
LAKA	**Lakka**	**1.23**	**89**	P	**Pg**	**20 33 23.0**	**-1.2**
ANX	**Ano Chora**	**1.23**	**73**	P	**Pg**	**20 33 23.4**	**-0.9**
ANX				S	**Sg**	**20 33 40.7**	**+0.3**
ANX				AML	AML	20 33 48.8	
	comp=E,1105μm,0.8s						
ANX				AML	AML	20 33 49.0	
	comp=N,1403μm,0.5s						
EVR	**Evrytania**	**1.29**	**57**	P	**Pg**	**20 33 24.4**	**-0.9**
EVR				AML	AML	20 33 50.1	
	comp=E,411μm,0.6s						
EVR				AML	AML	20 33 52.0	
	comp=N,373μm,0.7s						
KLV	**Kalavryta, Ach**	**1.38**	**97**	P	**Pg**	**20 33 26.8**	**-0.2**
IDI	**Anoyia**	**4.64**	**128**	Pn	**Pn**	**20 34 12.3**	**+2.0**
	comp=N,0.2nm,0.3s,baz=322,slow=12,SNR=3.1						
IDI				Sn	**Sn**	**20 35 05.6**	**+1.5**
	comp=N,0.7nm,0.3s,baz=338,slow=19,SNR=3.6						
FINES	**FINESS Array B**	**23.50**	**7**	P	**P**	**20 38 09.0**	**-0.8**
	comp=N,1.8nm,1.0s,baz=173,slow=13,SNR=3.0						
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**20 41 17.5**	**-0.7**
	comp=N,0.3nm,0.6s,baz=283,slow=7.6,SNR=6.2						
ZALV	**Zalesovo Beam**	**45.72**	**48**	P	**P**	**20 41 20.0**	**-1.0**
	comp=N,0.5nm,0.4s,baz=274,slow=8.3,SNR=4.0						

BEO 26 20:33:01.7±0.3, **43°.28N**×**19°.99E**, **h0**km, **ML1.3**/4,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJES	**Sjenica**	**0.02**	**208**	*eP*	Pg	20 33 01.4	-0.7
SJES				*eS*	Sg	20 33 02.7	+0.4
IVAS	**Ivanjica**	**0.32**	**22**	*eP*	Pg	20 33 06.5	-1.3
IVAS				*eS*	Sg	20 33 10.4	-1.6
BBLS	**Lazići**	**0.72**	**324**	*eP*	Pg	20 33 13.9	-1.7
BBLS				*eS*	Sg	20 33 25.5	+0.6
DIVS	**Divibare**	**0.82**	**0**	*eS*	Sg	20 33 27.5	-0.5
SELS	**Selova**	**0.83**	**94**	*eS*	Sg	20 33 17.1	-0.5
SELS	**Selova**	**0.83**	**94**	*eP*	Sg	20 33 28.2	-0.1
TRUS	**Trudelj**	**0.99**	**18**	*eP*	Pg	20 33 20.7	0.0
TRUS				*eS*	Sg	20 33 34.2	+0.7

JMA 26 20:42:18.7±0.2, **37°.22N**×**144°.44E**, **h43**km, **M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.60**	**296**	P	Pn	20 42 59.7	+1.5
JIKH				*eS*	Sn	20 43 30.2	+1.7
JIO	**Ouri**	**2.74**	**298**	P	Pn	20 43 01.9	+1.8
JIO				S	Sn	20 43 34.0	+2.0
JKMT	**Kesennumamotoy**	**2.83**	**305**	P	Pn	20 43 02.8	+1.4
JKMT				S	Sn	20 43 35.4	+1.2
JFK	**Kawauchi**	**2.85**	**274**	P	Pn	20 43 03.0	+1.3
JFK				*eS*	Sn	20 43 36.1	+1.4
OFUJ	**Ofunato**	**2.87**	**311**	P	Pn	20 43 03.1	+1.2
OFUJ				*eS*	Sn	20 43 35.8	+0.7
JMST	**Minamisoumatoc**	**2.87**	**281**	P	Pn	20 43 03.2	+1.3
JMST				*eS*	Sn	20 43 36.7	+1.5
JMK	**Ichinoseki**	**3.07**	**305**	P	Pn	20 43 06.3	+1.6
JMK				*eS*	Sn	20 43 41.8	+1.6
JOU	**Okura**	**3.20**	**292**	P	Pn	20 43 08.8	+2.3
JOU				*eS*	Sn	20 43 45.7	+2.3
JFT	**Otama**	**3.28**	**276**	P	Pn	20 43 10.1	+2.5
JFT				*eS*	Sn	20 43 48.0	+2.6
JYK	**Kaneyama**	**3.64**	**299**	P	Pn	20 43 14.9	+2.4
JRG	**Rokugo**	**3.70**	**307**	P	Pn	20 43 16.2	+2.9
JRG				*eS*	Sn	20 43 58.3	+2.7
JRY	**Ryogami san**	**4.61**	**257**	P	Pn	20 43 27.0	+1.1
JRY				*eS*	Sn	20 44 18.2	-0.1
JOD2	**Odawara 2**	**4.75**	**247**	P	Pn	20 43 28.7	+1.0
JCH	**Churui**	**5.45**	**352**	P	Pn	20 43 36.7	-0.6
JCH				*eS*	Sn	20 44 36.2	-2.5
JTKR	**Abashiri--Toko**	**6.76**	**357**	P	Pn	20 43 55.0	-0.2
JTKR				*eS*	Sn	20 45 05.8	-5.0

*IDC **26** 20:42:38.6±1.1, 35°.07N×23°.20E, h0km, mb3.9/9, mb1 3.8/12, mb1mx3.6/47, mbtmp3.

EIL Elat 11.09 115 Pn **Pn** **20 45 18.2 -2.7**
comp=E,0.5nm,0.3s,baz=338,slow=4.8,SNR=7.0
EIL Sn Sn 20 47 13.8 -9.5
comp=E,0.5nm,0.3s,baz=163,slow=19,SNR=3.7
GERES GERESS Array B 15.62 336 Pn **Pn** **20 46 19.3 -2.2**
comp=E,0.0nm,0.3s,baz=152,slow=11,SNR=2.2
KHC Kasperske Hory 15.91 336 *eP* **P** **20 46 29.0 +1.2**
AKASG Malin Array Be 16.28 13 Pn **Pn** **20 46 27.5 -2.2**
comp=E,2.5nm,0.3s,baz=204,slow=16,SNR=5.0
HFS Hagfors 25.97 349 P **P** **20 48 11.7 -0.2**
comp=E,0.9nm,0.4s,baz=153,slow=10.0,SNR=9.7
FINES FINESS Array B 26.55 3 P **P** **20 48 16.6 -0.5**
comp=E,1.7nm,0.7s,baz=190,slow=9.5,SNR=3.5
NOA NORSAR Array B 27.25 347 P **P** **20 48 23.4 0.0**
comp=E,0.2nm,0.5s,baz=153,slow=11,SNR=5.1
ATD Arta Tunnel 29.26 138 LR LR 21 00 33.1
comp=E,58nm,21.0s,baz=53,slow=36
TORD Torodi Ar. Bea 29.29 227 P **P** **20 48 42.6 +0.6**
comp=E,0.2nm,0.7s,baz=30,slow=9.1,SNR=3.1
ARCES ARCESS Array B 34.64 1 P **P** **20 49 27.7 -0.6**
comp=E,2.5nm,0.9s,baz=168,slow=6.2,SNR=7.5
SPITS Spitsbergen Ar 43.42 358 P **P** **20 50 41.8 +0.3**
comp=E,22nm,1.1s,baz=157,slow=15,SNR=4.4
MKAR Makanchi Array 45.07 56 P **P** **20 50 56.2 +1.1**
comp=E,0.6nm,0.4s,baz=270,slow=7.6,SNR=19
MKAR PcP **PcP** **20 52 36.7 +1.7**
comp=E,0.1nm,0.4s,baz=257,slow=4.9,SNR=2.9
ZALV Zalesovo Beam 46.17 46 P **P** **20 51 03.7 +0.1**
comp=E,0.6nm,0.4s,baz=269,slow=10,SNR=4.2
SONM Songino Array 60.71 50 P **P** **20 52 51.9 +1.5**
comp=E,0.5nm,0.4s,baz=283,slow=6.3,SNR=13

*IDC **26** 20:47:08.5±1.0,38.37N×20.38E,h0km,mb3.7/6,*
mb1 3.8/14,mb1mx3.5/49,mbtmp3.7/14,ML3.4/7,MS3.4/1,
Ms1 3.4/1,ms1mx2.7/47,Error ellipse: s-maj=17.2km
s-min=14.4km az=37.0
*PDG **26** 20:47:09.0±0.3,38.22N×20.18E,h9km±1km,ML4.1/12,*
Error ellipse: s-maj=2.0km s-min=0.8km az=90.0
*THE **26** 20:47:10.6,38.23N×20.34E,h11km±1km,ML3.7/6,Error*
ellipse: s-maj=1.5km s-min=0.5km az=71.0
*ATH **26** 20:47:10.9,38.24N×20.40E,h18km±1km,ML3.5/17,Error*
ellipse: s-maj=1.6km s-min=0.7km az=70.0
ISC 26 20:47:10.8±0.9,38°25N±0.02×20°36E±0.03,h19km±2km,
n116,σ1s77/170,mb3.7/6,17C-6D,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.20**	**112**	P	**Pg**	**20 47 15.2**	**-0.6**
VLS				S	**Sg**	**20 47 18.4**	**-0.8**
	94μm,0.2s						
VLS	**Valsamata**	**0.20**	**112**	P	**Pg**	**20 47 15.2**	**-0.6**
VLS				S	**Sg**	**20 47 18.4**	**-0.8**
VLS				AML	AML	20 47 18.6	
VLS				AML	AML	20 47 18.7	
FSK	**Fiskardo**	**0.26**	**37**	P	**Pg**	**20 47 16.8**	**0.0**
FSK				S	**Sg**	**20 47 20.9**	**0.0**
	22μm,0.7s						
FSK	**Fiskardo**	**0.26**	**37**	P	**Pg**	**20 47 16.9**	**+0.1**
FSK				S	**Sg**	**20 47 20.8**	**-0.1**
KFL	**Anninata**	**0.37**	**112**	P	**Pg**	**20 47 18.0**	**-0.5**
KFL				S	**Sg**	**20 47 23.1**	**-0.7**
	48μm,0.4s						
KFL	**Anninata**	**0.37**	**112**	P	**Pg**	**20 47 18.0**	**-0.5**
KFL				S	**Sg**	**20 47 23.1**	**-0.7**
KFL				AML	AML	20 47 23.9	
	comp=N,93152μm,0.5s						
KFL				AML	AML	20 47 24.1	
	comp=E,99423μm,0.4s						
EVGI	**Lefkada island**	**0.44**	**32**	P	**Pg**	**20 47 19.8**	**0.0**
EVGI				S	**Sb**	**20 47 26.8**	**+0.5**
EVGI	**Lefkada island**	**0.44**	**32**	P	**Pg**	**20 47 19.8**	**0.0**
EVGI				S	**Sb**	**20 47 26.3**	**0.0**
VLMS	**Volimes, Zakyn**	**0.44**	**147**	P	**Pg**	**20 47 19.2**	**-0.7**
VLMS				S	**Sg**	**20 47 25.3**	**-0.7**
VLMS				AML	AML	20 47 26.7	
	comp=N,91788μm,0.3s						
VLMS				AML	AML	20 47 27.2	
	comp=E,48424μm,0.2s						
MGNA	**Meganis**	**0.53**	**40**	P	**Pg**	**20 47 21.1**	**-0.4**
MGNA				S	**Sg**	**20 47 28.3**	**-0.3**
MGNA				AML	AML	20 47 33.0	
	comp=E,12428μm,0.6s						
MGNA				AML	AML	20 47 33.1	
	comp=N,12238μm,0.4s						
LKD2	**Lefkada island**	**0.59**	**23**	P	**Pg**	**20 47 22.0**	**-0.6**
LKD2	**Lefkada island**	**0.59**	**23**	P	**Pg**	**20 47 22.2**	**-0.3**
LKD2				S	**Sb**	**20 47 31.2**	**+0.8**
LKD2				AML	AML	20 47 35.5	
	comp=E,4875μm,0.3s						
LKD2				AML	AML	20 47 38.4	
	comp=N,5369μm,0.2s						
TSLK	**Tsoukalades, L**	**0.62**	**22**	P	**Pg**	**20 47 22.9**	**-0.2**
TSLK				S	**Sg**	**20 47 31.6**	**+0.1**
	comp=N,4μm,0.5s						
TSLK	**Tsoukalades, L**	**0.62**	**22**	P	**Pg**	**20 47 23.0**	**-0.1**
TSLK				S	**Sg**	**20 47 31.6**	**+0.1**
TSLK				AML	AML	20 47 39.7	
	comp=N,9440μm,0.4s						
TSLK				AML	AML	20 47 41.7	
	comp=E,7553μm,0.6s						
RLS	**Riolos of Patr**	**0.89**	**102**	P	**Pb**	**20 47 27.0**	**-0.7**
RLS				S	**Sn**	**20 47 41.1**	**+0.3**
	comp=E,2μm,0.6s						
RLS	**Riolos of Patr**	**0.89**	**102**	P	**Pb**	**20 47 27.2**	**-0.5**
RLS				S	**Sb**	**20 47 39.6**	**+0.4**
RLS				AML	AML	20 47 45.8	
	comp=N,4574μm,0.8s						
RLS				AML	AML	20 47 46.4	
	comp=E,3572μm,0.4s						
PVO	**Paravola**	**0.99**	**68**	P	**Pb**	**20 47 29.5**	**+0.2**
PVO				S	**Sn**	**20 47 44.8**	**+1.7**
	comp=E,2μm,0.4s						
PVO	**Paravola**	**0.99**	**68**	P	**Pb**	**20 47 29.5**	**+0.2**
PVO				S	**Sb**	**20 47 42.2**	**+0.3**
PVO				AML	AML	20 47 46.4	
	comp=E,6229μm,0.4s						
PVO				AML	AML	20 47 50.5	
	comp=N,6537μm,0.4s						
DRO	**Drossia**	**1.11**	**105**	P	**Pb**	**20 47 31.1**	**-0.3**
DRO	**Drossia**	**1.11**	**105**	P	**Pb**	**20 47 31.5**	**+0.2**
DRO				S	**Sb**	**20 47 46.0**	**+0.6**
DRO				AML	AML	20 47 56.1	
	comp=N,9809μm,0.4s						
DRO				AML	AML	20 48 00.8	
	comp=E,6880μm,0.8s						
EFP	**Efpalio**	**1.23**	**81**	P	**Pn**	**20 47 33.0**	**0.0**
EFP	**Efpalio**	**1.23**	**81**	P	**Pb**	**20 47 33.5**	**+0.1**
EFP				S	**Sn**	**20 47 49.8**	**+0.7**
EFP				AML	AML	20 47 59.4	
	comp=E,3249μm,0.9s						
EFP				AML	AML	20 47 59.9	
	comp=N,2933μm,0.8s						
ANX	**Ano Chora**	**1.27**	**74**	P	**Pb**	**20 47 34.7**	**+0.4**
ANX	**Ano Chora**	**1.27**	**74**	P	**Pb**	**20 47 34.4**	**+0.1**
ANX				S	**Sg**	**20 47 52.2**	**+0.1**
ANX				AML	AML	20 47 58.7	
	comp=E,6925μm,0.7s						
ANX				AML	AML	20 47 59.1	
	comp=N,9038μm,0.5s						
LAKA	**Lakka**	**1.28**	**90**	P	**Pn**	**20 47 33.8**	**+0.1**
LAKA	**Lakka**	**1.28**	**90**	P	**Pn**	**20 47 33.9**	**+0.3**
LAKA				S	**Sg**	**20 47 51.7**	**-0.4**
LAKA				AML	AML	20 47 57.8	
	comp=N,1457μm,0.7s						
LAKA				AML	AML	20 48 02.0	
	comp=E,2490μm,0.8s						
IGT	**Igoumenitsa**	**1.28**	**359**	P	**Pg**	**20 47 35.1**	**-0.5**
IGT	**Igoumenitsa**	**1.28**	**359**	P	**Pg**	**20 47 35.6**	**0.0**
AMT	**Artemida-Makis**	**1.29**	**123**	P	**Pb**	**20 47 35.0**	**+0.6**
AMT				S	**Sn**	**20 47 51.5**	**+0.9**
AMT				AML	AML	20 47 58.3	
	comp=E,5622μm,0.4s						
AMT				AML	AML	20 48 02.0	
	comp=N,6760μm,0.5s						
EVR	**Evrytania**	**1.32**	**59**	P	**Pb**	**20 47 35.5**	**+0.5**
EVR				S	**Sg**	**20 47 53.2**	**-0.3**
EVR				AML	AML	20 48 01.9	
	comp=N,1636μm,0.6s						
EVR				AML	AML	20 48 02.4	
	comp=E,1393μm,0.5s						
SERG	**Sergoula**	**1.34**	**82**	P	**Pb**	**20 47 35.5**	**+0.1**
TRIZ	**Trizonia**	**1.35**	**85**	P	**Pn**	**20 47 34.5**	**-0.2**
TRIZ	**Trizonia**	**1.35**	**85**	P	**Pb**	**20 47 35.5**	**0.0**
ALIK	**Aliki, Aigiali**	**1.38**	**89**	P	**Pn**	**20 47 35.5**	**+0.5**
KALE	**Kalithea**	**1.41**	**84**	P	**Pb**	**20 47 36.7**	**+0.2**
KLV	**Kalavryta, Ach**	**1.43**	**98**	P	**Pb**	**20 47 36.6**	**-0.2**
KLV	**Kalavryta, Ach**	**1.43**	**98**	P	**Pb**	**20 47 36.7**	**-0.2**
KLV				S	**Sg**	**20 47 56.6**	**-0.4**
KLV				AML	AML	20 48 03.1	
	comp=N,1338μm,0.6s						
KLV				AML	AML	20 48 06.3	
	comp=E,1023μm,0.4s						
JAN	**Janina**	**1.46**	**15**	P	**Pg**	**20 47 38.5**	**-0.4**
JAN				S	**Sg**	**20 47 58.1**	**+0.2**
JAN				AML	AML	20 48 06.7	
	comp=E,2781μm,0.5s						
JAN				AML	AML	20 48 07.2	
	comp=N,2156μm,0.5s						
MAKR	**Makrakomi, Fth**	**1.58**	**61**	P	**Pg**	**20 47 40.6**	**-0.7**
ITM	**Ithomi**	**1.64**	**130**	P	**Pb**	**20 47 40.1**	**-0.3**
ITM	**Ithomi**	**1.64**	**130**	P	**Pb**	**20 47 40.4**	**0.0**
ITM				S	**Sg**	**20 48 02.5**	**-1.2**
ITM				AML	AML	20 48 12.1	
	comp=E,1443μm,0.4s						
ITM				AML	AML	20 48 16.6	
	comp=N,1395μm,0.5s						
PYL	**PYLOS**	**1.74**	**140**	P	**Pb**	**20 47 41.6**	**-0.6**
VLX	**Vlachokerasia**	**1.82**	**118**	P	**Pb**	**20 47 44.7**	**+1.1**
OHR	**Ohrid**	**2.88**	**7**	*i* Pn	**Pb**	**20 47 59.1**	**-2.5**
TIP	**Timpagrande**	**2.96**	**289**	⇑P	**Pn**	**20 47 58.6**	**+1.7**
TIP	**Timpagrande**	**2.96**	**289**	⇑S	**Sn**	**20 48 31.9**	**-0.1**
TIR	**Tirane**	**3.12**	**353**	P	**Pn**	**20 47 59.7**	**+0.8**
CGL1	**Ceglie Messapi**	**3.28**	**318**	*e*Pn	**Pn**	**20 48 02.5**	**+1.3**
MASS	**Massafra**	**3.44**	**315**	*e*Pn	**Pn**	**20 48 07.3**	**+3.9**
MATE	**Matera**	**3.71**	**311**	⇓P	**Pn**	**20 48 07.8**	**+0.8**
STIP	**Stip**	**3.72**	**22**	*i* Pn	**Pn**	**20 48 10.9**	**+3.8**
ULC	**Ulcinj**	**3.81**	**347**	*i* Pn	**Pn**	**20 48 08.8**	**+0.3**
ULC				*e*Sn	**Sn**	**20 48 54.8**	**+2.1**
SG1	**Sgolgore (BA)**	**3.84**	**313**	*e*Pn	**Pn**	**20 48 10.6**	**+1.6**
SG1				Sn	**Sn**	**20 48 54.9**	**+1.2**
BAI	**Bari**	**3.92**	**318**	*e*Pn	**Pn**	**20 48 11.2**	**+1.3**
DRME	**Dracevica, Mon**	**4.03**	**347**	*i* Pn	**Pn**	**20 48 12.7**	**+1.1**
DRME				*e*Sn	**Sn**	**20 49 01.0**	**+2.7**
BUM	**Brajici-Budva**	**4.20**	**345**	⇓*i* Pn	**Pn**	**20 48 14.2**	**+0.3**
BUM				*e*Sn	**Sn**	**20 49 04.7**	**+2.3**
PDG	**Podgorica**	**4.26**	**349**	⇓P	**Pn**	**20 48 15.3**	**+0.6**
PDG	**Podgorica**	**4.26**	**349**	⇑S	**Sn**	**20 49 01.7**	**-2.1**
TTG	**Podgorica**	**4.26**	**349**	*i* Pn	**Pn**	**20 48 15.8**	**+1.2**
TTG				*e*Sn	**Sn**	**20 49 05.2**	**+1.4**
PVY	**Plav**	**4.35**	**356**	*i* Pn	**Pn**	**20 48 17.6**	**+1.6**
PVY				*e*Sn	**Sn**	**20 49 08.7**	**+2.4**
HCY	**Herceg Novi**	**4.43**	**342**	⇓*i* Pn	**Pn**	**20 48 17.6**	**+0.6**
HCY				*e*Sn	**Sn**	**20 49 09.2**	**+1.2**
CEME	**Cevo**	**4.43**	**346**	*i* Pn	**Pn**	**20 48 17.2**	**+0.1**
CEME				*e*Sn	**Sn**	**20 49 09.8**	**+1.6**
IVA	**Berane**	**4.63**	**356**	*i* Pn	**Pn**	**20 48 21.3**	**+1.5**
IVA				*e*Sn	**Sn**	**20 49 15.7**	**+2.6**
NKME	**Niksic**	**4.64**	**347**	*i* Pn	**Pn**	**20 48 20.7**	**+0.8**
NKME				*e*Sn	**Sn**	**20 49 14.7**	**+1.5**
KOME	**Kolasin**	**4.64**	**352**	*i* Pn	**Pn**	**20 48 21.1**	**+1.1**
KOME				*e*Sn	**Sn**	**20 49 15.5**	**+2.1**
NKY	**Niksic**	**4.68**	**348**	*i* Pn	**Pn**	**20 48 20.6**	**+0.1**
NKY				*e*Sn	**Sn**	**20 49 15.7**	**+1.4**
IDI	**Anoyia**	**4.69**	**128**	Pn	**Pn**	**20 48 22.2**	**+1.6**
	comp=N,0.6nm,0.3s,baz=280,slow=11,SNR=5.6						
IDI				Sn	**Sn**	**20 49 17.6**	**+3.1**
	comp=N,6.8nm,0.3s,baz=167,slow=24,SNR=18						
DBRK	**Dubrovnik**	**4.73**	**340**	*e*Pn	**Pn**	**20 48 21.0**	**0.0**
DBRK				Sn	**Sn**	**20 49 11.0**	**-4.3**
VAE	**Valguarnera**	**4.77**	**263**	Pn	**Pn**	**20 48 24.1**	**+2.4**
	comp=N,2.2nm,0.3s,baz=287,slow=19,SNR=3.6						
VAE				Sn	**Sn**	**20 49 20.5**	**+4.0**
	comp=N,6.4nm,0.3s,baz=29,slow=10,SNR=6.2						
VTS	**Vitosha**	**4.88**	**26**	⇑P	**Pn**	**20 48 25.3**	**+1.9**
STON	**Ston**	**5.04**	**337**	*e*Pn	**Pn**	**20 48 25.6**	**+0.2**
STON				Sn	**Sn**	**20 49 20.7**	**-2.3**
PLE	**Pljevlja**	**5.13**	**352**	⇑*i* Pn	**Pn**	**20 48 28.2**	**+1.5**
PLE				*e*Sn	**Sn**	**20 49 27.2**	**+1.8**
ZIRJ	**Zirje**	**6.47**	**328**	*e*Pn	**Pn**	**20 48 44.8**	**-0.2**
ZIRJ				Sn	**Sn**	**20 49 55.1**	**-3.2**
KIJV	**Kijevo**	**6.48**	**334**	*i* Pn	**Pn**	**20 48 46.2**	**+1.0**
MORI	**Morici**	**6.62**	**329**	*i* Pn	**Pn**	**20 48 47.9**	**+0.8**
MORI				Sn	**Sn**	**20 49 58.8**	**-3.1**
BLY	**Banja Luka**	**6.92**	**341**	⇑P	**Pn**	**20 48 51.9**	**+0.8**
BLY	**Banja Luka**	**6.92**	**341**	⇑S	**Sn**	**20 50 06.3**	**-3.0**
DUGI	**Dugi Otok**	**6.99**	**327**	*e*Pn	**Pn**	**20 48 52.7**	**+0.5**
UDBI	**Udbina**	**7.16**	**333**	*i* Pn	**Pn**	**20 48 56.0**	**+1.4**
UDBI				Sn	**Sn**	**20 50 13.0**	**-2.4**
GZR	**Gura Zlata**	**7.36**	**13**	⇓P	**Pn**	**20 48 58.5**	**+1.2**
BZS	**Buzias**	**7.42**	**7**	⇑P	**Pn**	**20 48 59.6**	**+1.6**
NVLJ	**Novalja**	**7.54**	**329**	*e*Pn	**Pn**	**20 49 00.3**	**+0.7**
NVLJ				Sn	**Sn**	**20 50 21.3**	**-3.1**
BOJS	**Bojanci**	**8.19**	**334**	*i* Pn	**Pn**	**20 49 09.4**	**+0.8**
OZLJ	**Ozalj**	**8.21**	**335**	*e*Pn	**Pn**	**20 49 09.9**	**+1.1**
MLR	**Muntele Rosu**	**8.35**	**28**	Pn	Pn	20 49 15.8	+4.9
	comp=N,0.2nm,0.3s,baz=272,slow=23,SNR=5.0						
MLR	**Muntele Rosu**	**8.35**	**28**	⇓P	**Pn**	**20 49 13.9**	**+3.0**
GBRS	**Gornja Briga**	**8.37**	**332**	*i* Pn	**Pn**	**20 49 12.3**	**+1.2**
KEST	**Kesra**	**9.16**	**257**	Pn	**Pn**	**20 49 22.6**	**+0.5**
	comp=N,0.3nm,0.3s,baz=53,slow=20,SNR=3.5						
SOKA	**Soboth**	**9.29**	**337**	*e*Pn	**Pn**	**20 49 23.5**	**-0.3**
	comp=N,5.4nm,0.4s,SNR=14						
SOKA				Sn	**Sn**	**20 51 01.8**	**-6.1**
	comp=N,3.3nm,0.5s						
OBKA	**Obir**	**9.30**	**334**	*e*Pn	**Pn**	**20 49 24.8**	**+0.8**
	comp=N,7.5nm,0.5s,SNR=11						
GORS	**Gorjuse**	**9.34**	**332**	*i* Pn	**Pn**	**20 49 24.8**	**+0.4**
ARSA	**Arzberg**	**9.67**	**340**	*e*Pn	**Pn**	**20 49 29.3**	**+0.4**
	comp=N,2.6nm,0.4s						
MYKA	**Terra Mystica**	**9.73**	**332**	*e*Pn	**Pn**	**20 49 30.2**	**+0.4**
	comp=N,1.6nm,0.2s						
KBA	**Koinbreinsper**	**10.22**	**332**	*e*Pn	**Pn**	**20 49 37.4**	**+0.8**
	comp=N,1.8nm,0.4s						
KBA				Sn	**Sn**	**20 51 26.3**	**-4.3**
	comp=N,2.7nm,0.3s						
ABTA	**Abfaltersbach**	**10.27**	**328**	*e*Pn	**Pn**	**20 49 38.3**	**+1.1**
	comp=N,1.3nm,0.3s						
ABTA				Sn	**Sn**	**20 51 26.7**	**-5.2**
	comp=N,5.8nm,0.6s						
VYHS	**Vyhne**	**10.30**	**354**	*e*PN	**Pn**	**20 49 36.0**	**-1.5**
VYHS				*e*SN	**Sn**	**20 51 30.5**	**-1.9**
MODS	**Modra-Piesok**	**10.36**	**349**	*e*SN	**Sn**	**20 51 29.3**	**-4.7**
BRTR	**Keskin Array B**	**10.45**	**78**	Pn	**Pn**	**20 49 42.5**	**+2.9**
	comp=N,0.0nm,0.3s,baz=254,slow=13,SNR=3.0						
MOA	**Molln**	**10.57**	**337**	*e*Pn	**Pn**	**20 49 42.4**	**+1.1**
	comp=N,2.8nm,0.3s,SNR=10						
MOA				*e*Sn	**Sn**	**20 51 36.2**	**-3.0**
	comp=N,2.4nm,0.3s						
WTTA	**Wattenberg**	**11.05**	**327**	*e*Pn	**Pn**	**20 49 49.5**	**+1.6**
	comp=N,1.0nm,0.2s						
WATA	**Walderalm**	**11.13**	**327**	*e*Pn	**Pn**	**20 49 50.9**	**+1.9**
	comp=N,1.9nm,0.2s,SNR=6.5						
SQTA	**Sankt Quirin**	**11.20**	**326**	*e*Pn	**Pn**	**20 49 52.3**	**+2.3**
	comp=N,0.9nm,0.2s						
MOTA	**Moosalm**	**11.34**	**326**	Pn	**Pn**	**20 49 53.9**	**+2.0**
	comp=N,1.8nm,0.4s						
DAVOX	**Davos/Dischmat**	**11.50**	**321**	Pn	**Pn**	**20 49 55.8**	**+1.7**
	comp=N,0.4nm,0.3s,baz=140,slow=17,SNR=4.8						
DAVOX				Sn	**Sn**	**20 51 59.5**	**-2.6**
	baz=330,slow=20						
GERES	**GERESS Array B**	**11.63**	**338**	Pn	**Pn**	**20 49 55.1**	**-0.8**
	comp=N,0.5nm,0.3s,baz=157,slow=14,SNR=18						
GERES				Sn	**Sn**	**20 52 00.7**	**-4.5**
	comp=N,0.4nm,0.3s,baz=154,slow=23,SNR=5.2						
KHC	**Kasperske Hory**	**11.93**	**338**	*e*PN	**Pn**	**20 49 58.5**	**-1.3**
KHC				*e*SN	**Sn**	**20 52 06.6**	**-5.7**
MMAI	**Mount Meron Ar**	**13.30**	**109**	Pn	**Pn**	**20 50 19.1**	**+0.4**
	comp=N,0.5nm,0.3s,baz=270,slow=13,SNR=3.8						
MMAI				Sn	**Sn**	**20 52 39.2**	**-6.9**
	comp=N,0.6nm,0.3s,baz=335,slow=27,SNR=2.8						
EIL	**Elat**	**14.81**	**121**	Pn	**Pn**	**20 50 38.0**	**-1.3**
	comp=N,0.1nm,0.3s,baz=7.6,slow=15,SNR=2.6						
EIL				Sn	Sn	20 53 13.1	-10
	comp=N,0.4nm,0.3s,baz=44,slow=18,SNR=3.3						
ESDC	**Sonseca Array**	**18.96**	**282**	P	**Pn**	**20 51 32.2**	**+0.5**
	baz=80,slow=11,SNR=4.2						
GNI	**Garni**	**18.98**	**77**	LR	LR	20 59 13.8	
	comp=N,124nm,19.1s,baz=340,slow=38						
HFS	**Hagfors**	**22.31**	**351**	P	**P**	**20 52 06.9**	**-0.1**
	comp=N,3.7nm,0.8s,baz=159,slow=13,SNR=10						
FINES	**FINESS Array B**	**23.49**	**7**	P	**P**	**20 52 18.7**	**-0.4**
	comp=N,1.1nm,0.5s,baz=170,slow=12,SNR=8.2						
NOA	**NORSAR Array B**	**23.52**	**349**	P	**P**	**20 52 19.8**	**+0.3**
	comp=N,1.7nm,0.9s,baz=163,slow=11,SNR=3.4						
TORD	**Torodi Ar. Bea**	**30.01**	**219**	P	**P**	**20 53 19.1**	**+0.6**
	comp=N,0.9nm,0.7s,baz=33,slow=9.4,SNR=5.2						
MKAR	**Makanchi Array**	**45.37**	**58**	P	**P**	**20 55 27.8**	**-0.1**
	comp=N,0.5nm,0.4s,baz=275,slow=7.4,SNR=16						
ZALV	**Zalesovo Beam**	**45.74**	**48**	P	**P**	**20 55 30.5**	**-0.1**
	comp=N,1.0nm,0.6s,baz=273,slow=8.1,SNR=3.3						

*IDC **26** 20:53:34.3±60.0,38.09N×20.53E,h0km,mb3.6/2,*
mb1 3.6/3,mb1mx3.1/40,mbtmp3.4/3,ML3.3/1,Error
ellipse: s-maj=1180.0km s-min=35.9km az=35.0
*THE **26** 20:53:36.5,38.23N×20.39E,h16km,mb4.1/6,Error*
ellipse: s-maj=1.1km s-min=0.4km az=70.0
*ATH **26** 20:53:37.9,38.25N×20.50E,h13km±1km,ML3.1/17,Error*
ellipse: s-maj=2.5km s-min=0.9km az=255.0
ISC 26 20:53:37.6±0.9,38°25N±0.03×20°51E±0.05,h15km±5km,
n55,σ0s73/69,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.10**	**138**	P	**Pg**	**20 53 40.7**	**-0.2**
VLS				S	**Sg**	**20 53 43.5**	**+0.5**
	18μm,0.3s						
VLS	**Valsamata**	**0.10**	**138**	P	**Pg**	**20 53 40.6**	**-0.2**
VLS				S	**Sg**	**20 53 43.3**	**+0.3**
VLS				AML	AML	20 53 43.6	
	comp=N,48667μm,0.5s						
VLS				AML	AML	20 53 44.4	
	comp=E,21662μm,0.2s						
FSK	**Fiskardo**	**0.21**	**12**	P	**Pb**	**20 53 42.4**	**-0.9**
FSK				S	**Sb**	**20 53 46.6**	**-0.4**
	comp=E,36μm,0.2s						
FSK	**Fiskardo**	**0.21**	**12**	P	**Pb**	**20 53 42.4**	**-0.9**
FSK				S	**Sb**	**20 53 46.4**	**-0.7**
KFL	**Anninata**	**0.26**	**122**	P	**Pb**	**20 53 43.5**	**-0.6**
KFL				S	**Sb**	**20 53 49.0**	**+0.6**
	comp=E,8μm,0.5s						
KFL	**Anninata**	**0.26**	**122**	P	**Pb**	**20 53 43.4**	**-0.7**
KFL				S	**Sb**	**20 53 48.2**	**-0.2**
KFL				AML	AML	20 53 49.4	
	comp=N,13447μm,0.4s						
KFL				AML	AML	20 53 49.8	
	comp=E,20117μm,0.5s						
EVGI	**Lefkada island**	**0.39**	**18**	P	**Pb**	**20 53 45.5**	**-0.8**
EVGI				S	**Sb**	**20 53 52.2**	**+0.1**
EVGI	**Lefkada island**	**0.39**	**18**	P	**Pb**	**20 53 45.5**	**-0.8**
EVGI				S	**Sb**	**20 53 52.1**	**0.0**
VLMS	**Volimes, Zakyn**	**0.39**	**162**	P	**Pb**	**20 53 45.2**	**-1.1**
VLMS				S	**Sb**	**20 53 52.0**	**-0.1**
VLMS				AML	AML	20 53 52.8	
	comp=N,20791μm,0.4s						
VLMS				AML	AML	20 53 53.8	
	comp=E,10594μm,0.3s						
MGNA	**Meganis**	**0.46**	**29**	P	**Pb**	**20 53 47.0**	**-0.5**
MGNA				S	**Sb**	**20 53 54.6**	**+0.4**
MGNA				AML	AML	20 53 55.5	
	comp=E,11210μm,0.1s						
MGNA				AML	AML	20 53 55.7	
	comp=N,6752μm,0.1s						
LKD2	**Lefkada island**	**0.55**	**12**	P	**Pg**	**20 53 47.8**	**-0.7**
LKD2				S	**Sb**	**20 53 57.0**	**+0.2**
	comp=N,1μm,0.3s						
LKD2	**Lefkada island**	**0.55**	**12**	P	**Pg**	**20 53 48.1**	**-0.4**
LKD2				AML	AML	20 54 04.4	
	comp=E,2785μm,0.3s						
LKD2				AML	AML	20 54 06.5	
	comp=N,3282μm,0.4s						
TSLK	**Tsoukalades, L**	**0.59**	**12**	P	**Pg**	**20 53 48.2**	**-1.0**
TSLK				S	**Sb**	**20 53 58.3**	**+0.5**
	comp=N,2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.59**	**12**	P	**Pb**	**20 53 49.0**	**-0.6**
TSLK				AML	AML	20 54 03.6	
	comp=N,3337μm,0.4s						
TSLK				AML	AML	20 54 05.1	
	comp=E,3467μm,0.5s						
RLS	**Riolos of Patr**	**0.78**	**104**	P	**Pn**	**20 53 53.0**	**-1.1**
RLS				S	**Sn**	**20 54 05.0**	**-0.6**
	comp=E,690nm,0.6s						
RLS	**Riolos of Patr**	**0.78**	**104**	P	**Pn**	**20 53 52.8**	**-1.3**
RLS				AML	AML	20 54 11.8	
	comp=N,1667μm,0.6s						
RLS				AML	AML	20 54 13.7	
	comp=E,1165μm,0.6s						
PVO	**Paravola**	**0.88**	**65**	P	**Pn**	**20 53 55.4**	**-0.1**
PVO	**Paravola**	**0.88**	**65**	P	**Pn**	**20 53 55.4**	**-0.1**
PVO				AML	AML	20 54 12.3	
	comp=E,9293μm,0.3s						
PVO				AML	AML	20 54 12.4	
	comp=N,6405μm,0.3s						
DRO	**Drossia**	**1.00**	**107**	P	**Pn**	**20 53 56.3**	**-0.8**

*ATH **26** 21:05:17.4, 38˚.15N×20˚.43E, h8km±3km, ML3.0/15, Error ellipse: s-maj=3.5km s-min=1.1km az=69.0*
*THE **26** 21:05:17.0, 38˚.16N×20˚.37E, h2km±27km, ML3.1/7, Error ellipse: s-maj=27.8km s-min=0.6km az=90.0*
*IDC **26** 21:05:19.4±7.9, 38˚.55N×20˚.96E, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.4/47, mbtmp3.8/4, ML2.3/1, Error ellipse: s-maj=160.9km s-min=29.4km az=65.0*
ISC 26 21:05:17.6±1.0, 38˚.18N±0˚.03×20˚.43E±0˚.04, h10km±6km, n45, σ0ˢ73/62, mb4.0/3, 2C, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.12**	**91**	P	**Pg**	**21 05 20.3**	**-0.3**
VLS				S	**Sg**	**21 05 22.6**	**0.0**
VLS	**Valsamata**	**0.12**	**91**	P	**Pg**	**21 05 20.2**	**-0.3**
VLS				S	**Sg**	**21 05 22.4**	**-0.1**
VLS				AML	AML	21 05 22.8	
	comp=E,28439μm,0.2s						
VLS				AML	AML	21 05 23.6	
	comp=N,20462μm,0.3s						
KFL	**Anninata**	**0.29**	**104**	P	**Pg**	**21 05 23.4**	**0.0**
KFL				S	**Sg**	**21 05 28.0**	**+0.7**
	comp=N,16μm,0.3s						
KFL	**Anninata**	**0.29**	**104**	P	**Pg**	**21 05 23.4**	**0.0**
KFL				S	**Sg**	**21 05 28.0**	**+0.7**
KFL				AML	AML	21 05 28.8	
	comp=E,51940μm,0.3s						
KFL				AML	AML	21 05 29.1	
	comp=N,13950μm,0.3s						
FSK	**Fiskardo**	**0.30**	**20**	P	**Pg**	**21 05 23.5**	**-0.1**
FSK				S	**Sg**	**21 05 28.5**	**+0.9**
	comp=N,7μm,0.2s						
FSK	**Fiskardo**	**0.30**	**20**	P	**Pg**	**21 05 23.7**	**+0.1**
FSK				S	**Sg**	**21 05 28.3**	**+0.7**
VLMS	**Volimes, Zakyn**	**0.35**	**149**	P	**Pg**	**21 05 24.2**	**-0.4**
VLMS				AML	AML	21 05 35.4	
	comp=N,6707μm,0.4s						
VLMS				AML	AML	21 05 36.6	
	comp=E,6029μm,0.3s						
EVGI	**Lefkada island**	**0.47**	**21**	P	**Pg**	**21 05 26.9**	**0.0**
EVGI				S	**Sb**	**21 05 34.8**	**-0.5**
EVGI	**Lefkada island**	**0.47**	**21**	P	**Pg**	**21 05 26.9**	**0.0**
EVGI				S	**Sb**	**21 05 34.7**	**-0.5**
MGNA	**Meganis**	**0.55**	**30**	P	**Pg**	**21 05 28.3**	**-0.1**
MGNA				S	**Sb**	**21 05 37.2**	**-0.2**
MGNA				AML	AML	21 05 38.0	
	comp=E,5439μm,0.2s						
MGNA				AML	AML	21 05 39.5	
	comp=N,3165μm,0.4s						
LKD2	**Lefkada island**	**0.63**	**16**	P	**Pg**	**21 05 29.6**	**-0.3**
LKD2				S	**Sg**	**21 05 38.9**	**+0.7**
	comp=N,762nm,0.3s						
LKD2	**Lefkada island**	**0.63**	**16**	P	**Pg**	**21 05 29.6**	**-0.3**
LKD2				AML	AML	21 05 47.3	
	comp=E,2660μm,0.3s						
LKD2				AML	AML	21 05 49.8	
	comp=N,1940μm,0.7s						
TSLK	**Tsoukalades, L**	**0.67**	**15**	P	**Pg**	**21 05 30.1**	**-0.5**
TSLK				S	**Sg**	**21 05 40.0**	**+0.7**
	comp=N,1μm,0.8s						
TSLK	**Tsoukalades, L**	**0.67**	**15**	P	**Pg**	**21 05 30.2**	**-0.3**
TSLK				AML	AML	21 05 47.7	
	comp=N,2347μm,0.5s						
TSLK				AML	AML	21 05 47.8	
	comp=E,1962μm,0.5s						
RLS	**Riolos of Patr**	**0.82**	**98**	P	**Pg**	**21 05 33.2**	**-0.3**
RLS				S	**Sb**	**21 05 46.5**	**+1.3**
	comp=E,692nm,0.5s						
RLS	**Riolos of Patr**	**0.82**	**98**	P	**Pg**	**21 05 33.1**	**-0.4**
RLS				S	**Sg**	**21 05 44.5**	**+0.3**
RLS				AML	AML	21 05 51.8	
	comp=E,1665μm,0.5s						
RLS				AML	AML	21 05 53.9	
	comp=N,1062μm,0.4s						
PVO	**Paravola**	**0.96**	**63**	P	**Pg**	**21 05 36.3**	**+0.1**
PVO				S	**Sn**	**21 05 51.5**	**+0.5**
	comp=N,3μm,0.5s						
PVO	**Paravola**	**0.96**	**63**	P	**Pg**	**21 05 36.4**	**+0.3**
PVO				AML	AML	21 05 54.8	
	comp=E,6712μm,0.4s						
PVO				AML	AML	21 05 59.0	
	comp=N,4628μm,0.6s						
DRO	**Drossia**	**1.03**	**102**	P	**Pg**	**21 05 37.1**	**-0.4**
DRO				S	**Sn**	**21 05 53.3**	**+0.5**
	comp=N,925nm,0.6s						
DRO	**Drossia**	**1.03**	**102**	P	**Pg**	**21 05 36.5**	**-0.9**
DRO				AML	AML	21 06 00.7	
	comp=N,2020μm,0.5s						
DRO				AML	AML	21 06 02.7	
	comp=E,2755μm,0.5s						
UPR	**University Cam**	**1.07**	**84**	P	**Pg**	**21 05 37.7**	**-0.5**
EFP	**Efpalio**	**1.18**	**78**	P	**Pb**	**21 05 39.3**	**-0.9**
EFP				AML	AML	21 06 03.3	
	comp=N,1199μm,0.6s						
EFP				AML	AML	21 06 08.4	
	comp=E,1199μm,0.4s						
AMT	**Artemida-Makis**	**1.20**	**122**	P	**Pb**	**21 05 40.1**	**-0.4**
LAKA	**Lakka**	**1.22**	**87**	P	**Pn**	**21 05 40.2**	**-0.6**
LAKA				AML	AML	21 06 06.0	
	comp=E,938μm,0.9s						
LAKA				AML	AML	21 06 06.8	
	comp=N,998μm,0.5s						
ANX	**Ano Chora**	**1.24**	**70**	P	**Pn**	**21 05 41.0**	**-0.1**
SERG	**Sergoula**	**1.30**	**79**	P	**Pn**	**21 05 41.6**	**-0.4**
TRIZ	**Trizonia**	**1.30**	**81**	P	**Pn**	**21 05 41.3**	**-0.7**
EVR	**Evrytania**	**1.30**	**55**	P	**Pn**	**21 05 42.3**	**+0.2**
EVR				AML	AML	21 06 10.7	
	comp=N,1001μm,0.8s						
EVR				AML	AML	21 06 11.6	
	comp=E,891μm,0.6s						
IGT	**Igoumenitsa**	**1.35**	**357**	P	**Pg**	**21 05 43.9**	**+0.2**
KALE	**Kalithea**	**1.36**	**81**	P	**Pn**	**21 05 42.1**	**-0.7**
KALE				AML	AML	21 06 13.0	
	comp=E,781μm,1.1s						
KALE				AML	AML	21 06 16.7	
	comp=N,1155μm,0.7s						
KLV	**Kalavryta, Ach**	**1.36**	**95**	P	**Pn**	**21 05 42.8**	**0.0**
KLV				AML	AML	21 06 14.6	
	comp=N,720μm,0.9s						
KLV				AML	AML	21 06 20.6	
	comp=E,771μm,1.1s						
JAN	**Janina**	**1.51**	**12**	P	**Pg**	**21 05 47.1**	**+0.4**
ITM	**Ithomi**	**1.55**	**130**	P	**Pb**	**21 05 46.8**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.57**	**57**	P	**Pb**	**21 05 47.3**	**+0.5**
MAKR				AML	AML	21 06 18.1	
	comp=N,1540μm,0.7s						
MAKR				AML	AML	21 06 21.4	
	comp=E,1952μm,0.9s						
AGG	**Agios Georgios**	**1.71**	**60**	P	**Pg**	**21 05 50.8**	**+0.4**
AXAR	**Agios Charalam**	**1.84**	**71**	P	**Pg**	**21 05 52.8**	**-0.1**
THL	**Klokotos Trika**	**1.85**	**41**	P	**Pb**	**21 05 52.7**	**+1.0**
PROD	**Prodromos**	**1.94**	**87**	P	**Pn**	**21 05 51.9**	**+1.1**
LKR	**Lokris**	**2.07**	**76**	P	**Pb**	**21 05 54.3**	**-1.0**
PENT	**Pentalofos**	**2.09**	**15**	P	**Pb**	**21 05 55.8**	**+0.1**
TIP	**Timpagrande**	**3.04**	**290**	⇑P	**Pn**	**21 06 06.8**	**+0.8**
TIP				⇑S	**Sn**	**21 06 42.0**	**-0.6**
IDI	**Anoyia**	**4.60**	**128**	Pn	**Pn**	**21 06 29.3**	**+2.0**
	comp=E,0.1nm,0.3s,baz=304,slow=15,SNR=1.8						
IDI				Sn	**Sn**	**21 07 23.5**	**+2.7**
	comp=E,0.5nm,0.3s,baz=279,slow=19,SNR=4.0						
FINES	**FINESS Array B**	**23.55**	**7**	P	**P**	**21 10 26.9**	**-1.0**
	comp=E,4.5nm,1.0s,baz=167,slow=8.4,SNR=3.5						
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**	**21 13 35.0**	**-1.0**
	comp=E,0.4nm,0.5s,baz=271,slow=7.4,SNR=9.7						
ZALV	**Zalesovo Beam**	**45.74**	**48**	P	**P**	**21 13 37.5**	**-1.4**
	comp=E,1.1nm,0.5s,baz=270,slow=10.0,SNR=5.8						

*AEIC **26** 21:07:10.1±1.1, 57˚.7N±0˚.1×142˚.7W±0˚.1, h26km±9km, Error ellipse: s-maj=15.6km s-min=8.9km az=190.0*
NEIC 26 21:07:08.2±0.7, 57˚.7N±0˚.1×142˚.8W±0˚.1, h39km±50km, ML2.5/28(AEIC), Error ellipse: s-maj=17.2km s-min=10.3km az=185.0, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MESA	**MESA**	**2.49**	**9**		Pn	21 07 46.5	+0.1
KULT	**Kultieth River**	**2.53**	**0**		Pn	21 07 46.8	0.0
GRIN	**Grindle Hills**	**2.58**	**354**		Pn	21 07 47.9	+0.4
PNL	**Peninsula**	**2.62**	**41**		Pn	21 07 47.8	-0.2
PNL					Sn	21 08 17.2	-1.3
RKAV	**Rock Avalanche**	**2.68**	**15**		Pn	21 07 49.6	+0.6
KHIT	**Khitrov Hills**	**2.73**	**355**		Pn	21 07 49.5	-0.2
DHAK	**Deception Hill**	**2.75**	**58**		Pn	21 07 49.0	-0.8
DHAK					Sn	21 08 19.1	-2.7
GOAT	**Goat Mountain**	**3.04**	**341**		Pn	21 07 53.3	-0.4
TGL	**Tana Glacier**	**3.04**	**359**		Pn	21 07 53.7	-0.1
CRQM	**Cirque**	**3.04**	**356**		Pn	21 07 53.6	-0.3
GRNC	**Granite Creek**	**3.06**	**9**		Pn	21 07 54.5	+0.3
KIAG	**Kiagna River**	**3.21**	**3**		Pn	21 07 56.3	0.0
KIAG					Sn	21 08 33.1	-0.2
BALM	**Baldy**	**3.33**	**3**		Pn	21 07 58.0	+0.2
CTGM	**Chitina Glacie**	**3.33**	**12**		Pn	21 07 58.0	+0.2
BARN	**Barnard Glacie**	**3.39**	**9**		Pn	21 07 58.9	+0.2
PTPK	**Patty Peak**	**3.47**	**2**		Pn	21 08 00.2	+0.4
VRDI	**Verde Repeater**	**3.53**	**355**		Pn	21 08 00.6	-0.1
FID	**Port Fidalgo**	**3.58**	**329**		Sn	21 08 41.3	-0.9
MCARA	**McCarthy VSAT**	**3.67**	**358**		Pn	21 08 02.4	0.0
GLB	**Gilahina Butte**	**3.76**	**352**		Pn	21 08 03.4	-0.3
PLBC	**Pleasant Camp**	**3.77**	**60**		Pn	21 08 03.7	0.0
PLBC					Sn	21 08 45.5	-1.2
YUK6	**Outpost Mounta**	**3.93**	**33**		Pn	21 08 06.8	+0.6
PS12	**TAPS Pump St12**	**3.95**	**343**		Pn	21 08 05.7	-0.6
RSO	**Redoubt South**	**5.84**	**302**		Pn	21 08 32.3	+0.1

*MAN **26** 21:07:42.8, 4˚.18N×127˚.48E, h131km, mb5.0, ML4.0, MS4.1*
*IDC **26** 21:07:46.8±4.5, 4˚.50N×127˚.36E, h55km±44km, mb3.8/12, mb1 4.0/13, mb1mx3.7/52, mbtmp4.1/13, ML4.2/1, MS2.5/1, Ms1 2.5/1, ms1mx2.3/54, Error ellipse: s-maj=41.8km s-min=14.8km az=80.0*
*DJA **26** 21:07:46.0±1.7, 5˚N±12˚×12˚7E±˚, h34km±11km, M4.6/12, mB5.5/3, mb4.7/12, ML4.4/11, Mw(mB)5.0/3*
*NEIC **26** 21:07:48.1±1.3, 4˚.40N±0˚.06×127˚.4E±0˚.1, h75km±9km, mb4.2/17, Error ellipse: s-maj=18.0km s-min=7.6km az=74.0*
ISC 26 21:07:50.4±0.5, 4˚.36N±0˚.04×127˚.27E±0˚.08, h104km, n53, σ1ˢ80/59, mb4.1/18, 1C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.33**	**318**	*e*P	Pn	21 08 20.1	-7.3
DDMP				*e*S	**Sn**	**21 08 55.2**	**-0.7**
MATI	**Mati**	**2.77**	**339**	*e*P	**Pn**	**21 08 30.8**	**-2.4**
MATI				*e*S	**Sn**	**21 09 06.7**	**+0.7**
GSPH	**General Santos**	**2.88**	**307**	*e*P	**Pn**	**21 08 30.9**	**-3.9**
DAV	**Davao City (W)**	**3.18**	**328**	S	**Sn**	**21 09 16.8**	**+0.9**
	66nm,0.3s,baz=249,slow=23,SNR=9.1						
DAV	**Davao City (W)**	**3.18**	**328**	Pn	**Pn**	**21 08 35.9**	**-2.7**
DAV					**Sn**	**21 09 14.5**	**-1.4**
KCP	**Kidapawan**	**3.42**	**321**	⇓*e*P	**Pn**	**21 08 39.5**	**-2.3**
KCP				*i* S	Sn	21 09 11.8	-10
SKMP	**Bagumbayan, Su**	**3.46**	**308**	*e*P	**Pn**	**21 08 39.6**	**-2.8**
SKMP				*e*S	**Sn**	**21 09 23.4**	**+0.7**
TNTI	**Ternate**	**3.56**	**178**	P	**Pn**	**21 08 41.6**	**-2.2**
TNTI	**Ternate**	**3.56**	**178**		**Pn**	**21 08 41.6**	**-2.2**
TNTI				Sn	**Sn**	**21 09 25.3**	**+0.3**
BUKP	**Musuan**	**4.13**	**328**	*e*P	**Pn**	**21 08 49.0**	**-2.5**
BUKP				*e*S	**Sn**	**21 09 40.1**	**+1.2**
CGP	**Cagayan de Oro**	**4.81**	**328**	⇑*e*P	Pn	21 09 09.4	+8.8
CGP				*e*S	**Sn**	**21 09 55.8**	**+0.6**
BUTP	**Butuan**	**4.87**	**340**	*e*P	**Pn**	**21 08 57.9**	**-3.5**
BUTP				*e*S	**Sn**	**21 09 54.6**	**-2.0**
LBMI	**Labuha**	**4.96**	**177**	P	**Pn**	**21 09 00.5**	**-2.2**
	0.3nm41nm,0.4s						
KMSI	**Cibinong**	**4.99**	**221**	P	**Pn**	**21 09 01.7**	**-1.4**
	0.5nm137nm,0.8s						
PAGZ	**Pagadian**	**5.20**	**312**	*e*P	**Pn**	**21 09 03.4**	**-2.4**
PAGZ				*e*S	**Sn**	**21 10 06.0**	**+1.4**
SWI	**Sorong**	**6.54**	**142**	P	**Pn**	**21 09 22.1**	**-1.9**
	0.1nm29nm,0.7s						
SIJI	**Sorong**	**6.55**	**142**	P	**Pn**	**21 09 21.7**	**-2.5**
	4.5nm,0.3s,baz=324,slow=19,SNR=9.1						
MRSI	**Marisa**	**6.57**	**234**	P	**Pn**	**21 09 22.7**	**-1.8**
	0.2nm763nm52nm,0.6s						
LUWI	**Luwuk**	**7.00**	**220**	P	**Pn**	**21 09 29.2**	**-1.1**
	0.3nm112nm,0.9s						
LUWI	**Luwuk**	**7.00**	**220**		**Pn**	**21 09 29.6**	**-0.7**
NLAI	**Namlea**	**7.55**	**181**	P	**Pn**	**21 09 35.6**	**-2.1**
	0.2nm46nm,0.5s						
APSI	**Ampana**	**7.68**	**227**	P	Pn	21 09 45.0	+5.5
FAKI	**Fak Fak**	**8.77**	**145**	Pn	**Pn**	**21 09 50.5**	**-4.0**
KSM	**Kuching**	**17.18**	**261**		**Pn**	**21 11 45.1**	**+1.0**
MTN	**Manton Dam**	**17.51**	**167**	Pn	**P**	**21 11 45.9**	**-1.8**
MTN				IAmb	IAmb	21 11 50.5	
	comp=Z,7.9nm,0.7s						
JAGI	**Jajag, Banyuwa**	**18.26**	**226**	P	**P**	**21 11 53.3**	**-2.7**
JAGI				IAmb	IAmb	21 12 07.0	
	comp=Z,15nm,0.9s						
TPUB	**Ta-pu**	**19.90**	**342**	P	**P**	**21 12 12.1**	**-1.7**
TPUB				IAmb	IAmb	21 12 16.7	
	comp=Z,21nm,1.1s						
KNRA	**Kununurra**	**19.96**	**176**	P	**P**	**21 12 14.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**22.37**	**184**	P	**P**	**21 12 41.0**	**+0.9**
	comp=Z,9.9nm,0.8s,baz=32,slow=11,SNR=4.6						
FITZ	**Fitzroy Crossi**	**22.37**	**184**	P	**P**	**21 12 40.3**	**+0.2**
WB0	**Warramunga Arr**	**24.97**	**164**	P	**P**	**21 13 04.9**	**+0.4**
WB0				IAmb	IAmb	21 13 09.1	
	comp=Z,7.8nm,0.7s						
WRA	**Warramunga Arr**	**25.12**	**164**	P	**P**	**21 13 07.1**	**+1.3**
	comp=Z,5.6nm,0.9s,baz=342,slow=10,SNR=14						
WB2	**Warramunga Arr**	**25.13**	**164**	P	**P**	**21 13 06.8**	**+0.9**
WB2				IAmb	IAmb	21 13 10.1	
	comp=Z,7.7nm,0.8s						
WR0	**Warramunga Arr**	**25.20**	**164**	P	**P**	**21 13 07.1**	**+0.7**
WR0				IAmb	IAmb	21 13 10.8	
	comp=Z,8.0nm,0.9s						
AS31	**Alice Springs**	**28.59**	**167**	P	**P**	**21 13 37.5**	**+0.6**
ASAR	**Alice Springs**	**28.59**	**167**	P	**P**	**21 13 39.6**	**+2.7**
	comp=Z,2.5nm,0.6s,baz=354,slow=7.8,SNR=40						
KSRS	**Korea Array**	**32.95**	**1**	P	**P**	**21 14 15.4**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=174,slow=11,SNR=4.5						
KSRS				LR	LR	21 29 08.7	
	comp=Z,8.1nm,20.9s,baz=350,slow=39						
XAN	**Xi'an**	**34.11**	**332**	P	**P**	**21 14 25.6**	**+0.3**
XAN				IAmb	IAmb	21 14 27.0	
	comp=Z,2.7nm,0.9s						
FORT	**Forrest**	**34.95**	**179**	P	**P**	**21 14 33.7**	**+1.3**
BBOO	**Buckleboo**	**37.89**	**168**	P	**P**	**21 14 58.4**	**+0.9**
STKA	**Stephens Creek**	**38.52**	**160**	P	**P**	**21 15 05.4**	**+2.6**
	comp=Z,5.6nm,0.5s,baz=339,slow=8.9,SNR=29						
STKA	**Stephens Creek**	**38.52**	**160**	P	**P**	**21 15 03.3**	**+0.5**
KLR	**Kul'dur**	**44.88**	**4**	P	**P**	**21 15 53.6**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=49,slow=5.3,SNR=3.7						
ULN	**Ulaanbaatar**	**46.70**	**341**	P	**P**	**21 16 07.8**	**-1.1**
ULN				IAmb	IAmb	21 16 13.2	
	comp=Z,3.1nm,1.1s						
SONM	**Songino Array**	**46.88**	**341**	P	**P**	**21 16 09.8**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=144,slow=7.2,SNR=3.6						
TAU	**Tasmania Unive**	**50.43**	**161**	P	**P**	**21 16 37.0**	**-0.3**
PETK	**Petropavlovsk-**	**54.65**	**22**	P	**P**	**21 17 09.1**	**+0.8**
	comp=Z,3.0nm,0.7s,baz=212,slow=9.4,SNR=3.2						
MKAR	**Makanchi Array**	**57.36**	**325**	P	**P**	**21 17 29.9**	**+2.1**
	comp=Z,2.0nm,0.6s,baz=116,slow=7.7,SNR=18						
MAKZ	**Makanchi**	**57.55**	**325**	P	**P**	**21 17 30.8**	**+1.6**
MAKZ				IAmb	IAmb	21 17 33.2	
	comp=Z,3.6nm,0.9s						
KSH	**Kashi**	**57.99**	**315**	*e*P	**P**	**21 17 34.3**	**+1.8**
KSH				pP	pP	21 17 38.5	-19
KSH				pmax	pmax		
	comp=Z,670nm,6.6s						
ZALV	**Zalesovo Beam**	**60.28**	**333**	P	**P**	**21 17 49.1**	**+1.3**
	comp=Z,0.8nm,0.4s,baz=122,slow=6.5,SNR=5.3						
ILAR	**Eielson Array**	**84.31**	**25**	P	**P**	**21 20 11.5**	**+1.0**
	comp=Z,0.7nm,0.9s,baz=262,slow=6.1,SNR=4.0						
ARCES	**ARCESS Array B**	**90.05**	**340**	P	**P**	**21 20 38.9**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=72,slow=6.1,SNR=3.6						

*IDC **26** 21:08:49.0±1.0, 38˚.39N×20˚.38E, h0km, mb3.9/12, mb1 3.9/18, mb1mx3.7/50, mbtmp3.8/18, ML3.1/6, Error ellipse: s-maj=19.6km s-min=14.1km az=36.0*
*ATH **26** 21:08:51.4, 38˚.25N×20˚.49E, h12km±1km, ML3.6/24, Error ellipse: s-maj=2.1km s-min=0.9km az=73.0*
*THE **26** 21:08:51.1, 38˚.24N×20˚.44E, h12km, ML3.7/10, Error ellipse: s-maj=0.9km s-min=0.3km az=248.0*
*PDG **26** 21:08:52.7±0.3, 38˚.50N×20˚.17E, h1km±11km, MD5.2/1, ML4.0/11, Error ellipse: s-maj=2.8km s-min=1.1km az=90.0*
ISC 26 21:08:51.2±0.8, 38˚.26N±0˚.02×20˚.45E±0˚.03, h15km±4km, n110, σ1ˢ01/144, mb3.9/12, 11C-14D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.13**	**126**	P	**Pg**	**21 08 54.5**	**-0.4**
VLS				S	**Sg**	**21 08 57.0**	**-0.3**
	200μm,0.3s						
VLS	**Valsamata**	**0.13**	**126**	P	**Pg**	**21 08 54.5**	**-0.4**
VLS				S	**Sg**	**21 08 56.8**	**-0.5**
VLS				AML	AML	21 08 57.2	
VLS				AML	AML	21 08 57.4	
FSK	**Fiskardo**	**0.22**	**23**	P	**Pg**	**21 08 56.2**	**0.0**
FSK				S	**Sg**	**21 09 00.3**	**+0.7**
	35μm,0.3s						
FSK	**Fiskardo**	**0.22**	**23**	P	**Pg**	**21 08 55.6**	**-0.7**
FSK				S	**Sg**	**21 08 59.7**	**+0.1**
KFL	**Anninata**	**0.30**	**119**	P	**Pg**	**21 08 57.4**	**-0.1**
KFL				S	**Sg**	**21 09 02.3**	**+0.4**
	79μm,0.3s						
KFL	**Anninata**	**0.30**	**119**	P	**Pg**	**21 08 57.4**	**-0.1**
KFL				S	**Sg**	**21 09 01.8**	**-0.1**
KFL				AML	AML	21 09 03.0	
KFL				AML	AML	21 09 03.2	
EVGI	**Lefkada island**	**0.40**	**24**	P	**Pg**	**21 08 59.4**	**+0.1**
EVGI				S	**Sb**	**21 09 05.7**	**-0.2**
EVGI	**Lefkada island**	**0.40**	**24**	P	**Pg**	**21 08 58.9**	**-0.4**
EVGI				S	**Sb**	**21 09 05.6**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.41**	**156**	P	**Pg**	**21 08 59.3**	**-0.3**
VLMS				S	**Sb**	**21 09 05.9**	**-0.4**
VLMS				AML	AML	21 09 07.3	
	comp=E,31100μm,0.2s						
VLMS				AML	AML	21 09 10.8	
	comp=N,51292μm,0.5s						
MGNA	**Meganis**	**0.48**	**33**	P	**Pg**	**21 09 00.8**	**0.0**
MGNA				S	**Sg**	**21 09 07.8**	**+0.5**
MGNA				AML	AML	21 09 08.7	
	comp=N,17039μm,0.2s						
MGNA				AML	AML	21 09 09.1	
	comp=E,13146μm,0.2s						
LKD2	**Lefkada island**	**0.56**	**17**	P	**Pg**	**21 09 01.9**	**-0.3**
LKD2				S	**Sb**	**21 09 10.3**	**-0.2**
	comp=E,5μm,0.7s						
LKD2	**Lefkada island**	**0.56**	**17**	P	**Pg**	**21 09 02.1**	**-0.1**
LKD2				AML	AML	21 09 18.8	
	comp=N,8344μm,0.4s						
LKD2				AML	AML	21 09 21.0	
	comp=E,8336μm,0.4s						
TSLK	**Tsoukalades, L**	**0.59**	**16**	P	**Pg**	**21 09 02.8**	**-0.1**
TSLK				S	**Sb**	**21 09 12.0**	**+0.5**
TSLK	**Tsoukalades, L**	**0.59**	**16**	P	**Pg**	**21 09 02.7**	**-0.1**
TSLK				AML	AML	21 09 20.6	
	comp=E,13488μm,0.4s						
TSLK				AML	AML	21 09 22.3	
	comp=N,9444μm,0.5s						
RLS	**Riolos of Patr**	**0.82**	**104**	P	**Pb**	**21 09 06.5**	**-0.7**
RLS				S	**Sb**	**21 09 18.4**	**+0.3**
	comp=N,3μm,0.5s						
RLS	**Riolos of Patr**	**0.82**	**104**	P	**Pb**	**21 09 06.4**	**-0.7**
RLS				AML	AML	21 09 26.8	
	comp=E,6115μm,0.4s						
RLS				AML	AML	21 09 27.7	
	comp=N,5635μm,0.6s						
PVO	**Paravola**	**0.92**	**66**	P	**Pb**	**21 09 08.7**	**-0.1**
PVO				S	**Sn**	**21 09 22.9**	**+0.4**
	comp=N,10μm,0.3s						
PVO	**Paravola**	**0.92**	**66**	P	**Pg**	**21 09 09.0**	**0.0**
PVO				AML	AML	21 09 25.2	
	comp=N,15498μm,0.3s						
PVO				AML	AML	21 09 25.4	
	comp=E,22548μm,0.3s						
DRO	**Drossia**	**1.04**	**107**	P	**Pb**	**21 09 10.4**	**-0.5**
DRO				S	**Sn**	**21 09 25.6**	**+0.1**
	comp=E,5μm,0.5s						
DRO	**Drossia**	**1.04**	**107**	P	**Pb**	**21 09 10.5**	**-0.4**
DRO				AML	AML	21 09 34.3	
	comp=N,11018μm,0.5s						
DRO				AML	AML	21 09 35.1	
	comp=E,8849μm,0.4s						
UPR	**University Cam**	**1.05**	**88**	P	**Pb**	**21 09 10.8**	**-0.3**
EFP	**Efpalio**	**1.16**	**81**	P	**Pn**	**21 09 12.2**	**-0.6**
EFP	**Efpalio**	**1.16**	**81**	P	**Pn**	**21 09 12.2**	**-0.6**
EFP				AML	AML	21 09 37.4	
	comp=E,4863μm,0.4s						
EFP				AML	AML	21 09 38.0	
	comp=N,4584μm,0.4s						
LAKA	**Lakka**	**1.20**	**90**	P	**Pn**	**21 09 13.2**	**-0.3**
LAKA	**Lakka**	**1.20**	**90**	P	**Pn**	**21 09 13.2**	**-0.3**
LAKA				AML	AML	21 09 37.4	
	comp=E,3015μm,0.6s						
LAKA				AML	AML	21 09 38.1	
	comp=N,2802μm,0.5s						
ANX	**Ano Chora**	**1.20**	**73**	P	**Pn**	**21 09 13.4**	**-0.2**
ANX				S	**Sg**	**21 09 29.9**	**-0.2**
	comp=N,4μm,0.5s						
ANX	**Ano Chora**	**1.20**	**73**	P	**Pn**	**21 09 13.4**	**-0.2**
ANX				AML	AML	21 09 42.2	
	comp=E,7807μm,0.5s						
ANX				AML	AML	21 09 43.0	
	comp=N,9119μm,0.6s						
AMT	**Artemida-Makis**	**1.23**	**126**	P	**Pn**	**21 09 13.6**	**-0.3**
AMT	**Artemida-Makis**	**1.23**	**126**	P	**Pb**	**21 09 14.2**	**+0.1**
AMT				AML	AML	21 09 43.5	
	comp=E,4643μm,0.5s						
AMT				AML	AML	21 09 53.5	
	comp=N,5123μm,0.7s						
EVR	**Evrytania**	**1.25**	**58**	P	**Pn**	**21 09 14.1**	**-0.

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
	comp=E,3543μm,0.5s			Op	ISC		
AXAR				AML	AML	21 10 10.1	
	comp=N,4368μm,0.8s						
KPRO	**Kipourio**	**1.84**	**22**	P	**Pb**	**21 09 25.3**	**+0.7**
PROD	**Prodromos**	**1.93**	**89**	P	**Pb**	**21 09 26.0**	**-0.1**
PROD				AML	AML	21 10 04.0	
	comp=E,2308μm,0.6s						
PROD				AML	AML	21 10 04.1	
	comp=N,1408μm,0.5s						
LTK	**Loutraki**	**2.00**	**96**	P	**Pb**	**21 09 26.8**	**-0.4**
PENT	**Pentalofos**	**2.01**	**15**	P	**Pb**	**21 09 27.7**	**+0.1**
LKR	**Lokris**	**2.04**	**78**	P	**Pb**	**21 09 27.5**	**-0.4**
VIL2	**Platees**	**2.22**	**90**	P	**Pb**	**21 09 30.2**	**-0.8**
KZN	**Kozani**	**2.29**	**26**	P	**Pb**	**21 09 31.0**	**-1.3**
DID	**Didima**	**2.33**	**108**	P	**Pb**	**21 09 31.9**	**-1.0**
TIP	**Timpagrande**	**3.03**	**289**	⇑P	**Pn**	**21 09 39.4**	**+0.7**
TIP	**Timpagrande**	**3.03**	**289**	⇓S	**Sn**	**21 10 16.1**	**+1.3**
MATE	**Matera**	**3.76**	**311**	⇓P	**Pn**	**21 09 49.4**	**+0.7**
ULC	**Ulcinj**	**3.82**	**346**	⇓*i*Pn	**Pn**	**21 09 49.5**	**0.0**
ULC				*e*Sn	**Sn**	**21 10 33.7**	**-0.4**
SG1	**Sgolgore (BA)**	**3.90**	**313**	*e*Pn	**Pn**	**21 09 51.3**	**+0.8**
SG1				Sn	**Sn**	**21 10 35.7**	**-0.3**
DRME	**Dracevica, Mon**	**4.05**	**347**	⇓*i*Pn	**Pn**	**21 09 53.5**	**+0.9**
DRME				*e*Sn	**Sn**	**21 10 39.2**	**-0.5**
BUM	**Brajici-Budva**	**4.21**	**344**	⇓*i*Pn	**Pn**	**21 09 54.7**	**-0.3**
BUM				*e*Sn	**Sn**	**21 10 42.7**	**-1.2**
PDG	**Podgorica**	**4.27**	**348**	⇑P	**Pn**	**21 09 56.4**	**+0.7**
PDG	**Podgorica**	**4.27**	**348**	⇑S	**Sn**	**21 10 43.9**	**-1.2**
TTG	**Podgorica**	**4.27**	**348**	⇑*i*Pn	**Pn**	**21 09 56.6**	**+1.0**
TTG				*e*Sn	**Sn**	**21 10 45.0**	**-0.2**
PVY	**Plav**	**4.35**	**355**	⇓*i*Pn	**Pn**	**21 09 58.0**	**+1.1**
PVY				*e*Sn	**Sn**	**21 10 47.1**	**-0.3**
CEME	**Cevo**	**4.44**	**345**	⇑*i*Pn	**Pn**	**21 09 58.2**	**+0.1**
CEME				*e*Sn	**Sn**	**21 10 48.5**	**-1.1**
HCY	**Herceg Novi**	**4.45**	**341**	⇓*i*Pn	**Pn**	**21 09 58.0**	**-0.1**
HCY				*e*Sn	**Sn**	**21 10 48.2**	**-1.4**
IDI	**Anoyia**	**4.63**	**128**	Pn	**Pn**	**21 10 03.2**	**+2.5**
	comp=N,0.4nm,0.3s,baz=300,slow=16,SNR=3.6						
IDI				Sn	**Sn**	**21 10 54.2**	**0.0**
	comp=N,2.0nm,0.3s,baz=332,slow=17,SNR=4.2						
IVA	**Berane**	**4.63**	**355**	⇓*i*Pn	**Pn**	**21 10 01.5**	**+0.8**
IVA				*e*Sn	**Sn**	**21 10 54.0**	**-0.3**
KOME	**Kolasin**	**4.65**	**351**	⇓*i*Pn	**Pn**	**21 10 02.1**	**+1.2**
KOME				*e*Sn	**Sn**	**21 10 54.3**	**-0.3**
NKME	**Niksic**	**4.65**	**346**	⇓*i*Pn	**Pn**	**21 10 01.1**	**+0.2**
NKME				*e*Sn	**Sn**	**21 10 54.1**	**-0.6**
NKY	**Niksic**	**4.69**	**347**	⇓*i*Pn	**Pn**	**21 10 02.0**	**+0.5**
NKY				*e*Sn	**Sn**	**21 10 54.3**	**-1.4**
VAE	**Valguarnera**	**4.84**	**263**	Pn	**Pn**	**21 10 04.1**	**+0.5**
	comp=N,1.4nm,0.3s,baz=135,slow=16,SNR=2.2						
VAE				Sn	**Sn**	**21 11 02.0**	**+2.6**
	comp=N,1.9nm,0.3s,baz=315,slow=17,SNR=2.1						
VTS	**Vitosha**	**4.85**	**25**	⇑P	**Pn**	**21 10 05.6**	**+1.8**
VTS	**Vitosha**	**4.85**	**25**	⇑S	**Sn**	**21 11 00.2**	**+0.6**
PLE	**Pljevlja**	**5.13**	**351**	⇓*i*Pn	**Pn**	**21 10 08.2**	**+0.6**
PLE				*e*Sn	**Sn**	**21 11 05.7**	**-1.0**
BLKB	**Belogradchik**	**5.62**	**17**	⇑S	**Sn**	**21 11 19.6**	**+1.0**
ELND	**Elena**	**6.23**	**40**	⇓P	**Pn**	**21 10 24.9**	**+2.3**
MDVR	**Moldovita**	**6.59**	**8**	⇑P	**Pn**	**21 10 27.6**	**0.0**
GZR	**Gura Zlata**	**7.34**	**13**	⇑P	**Pn**	**21 10 39.7**	**+1.8**
BZS	**Buzias**	**7.41**	**6**	⇓P	**Pn**	**21 10 39.8**	**+1.1**
MLR	**Muntele Rosu**	**8.31**	**28**	⇑P	**Pn**	**21 10 54.6**	**+3.3**
GBRS	**Gornja Briga**	**8.40**	**332**	*i* Pn	**Pn**	**21 10 52.8**	**+0.4**
SOKA	**Soboth**	**9.32**	**336**	*e*Pn	**Pn**	**21 11 04.2**	**-0.8**
	comp=N,3.2nm,0.3s,SNR=11						
OBKA	**Obir**	**9.33**	**334**	*e*Pn	**Pn**	**21 11 05.8**	**+0.6**
	comp=N,2.8nm,0.2s						
KBA	**Koelnbreinsper**	**10.25**	**332**	Pn	**Pn**	**21 11 19.1**	**+1.2**
	comp=N,1.1nm,0.3s						
ABTA	**Abfaltersbach**	**10.31**	**328**	Pn	**Pn**	**21 11 21.1**	**+2.6**
	comp=N,1.3nm,0.4s						
BRTR	**Keskin Array B**	**10.37**	**78**	Pn	**Pn**	**21 11 23.6**	**+4.1**
	comp=N,0.1nm,0.3s,baz=258,slow=12,SNR=3.8						
MOA	**Molln**	**10.60**	**337**	*e*Pn	**Pn**	**21 11 22.3**	**-0.2**
	comp=N,1.2nm,0.2s						
WTTA	**Wattenberg**	**11.09**	**327**	Pn	**Pn**	**21 11 30.6**	**+1.3**
	comp=N,1.7nm,0.4s						
GERES	**GERESS Array B**	**11.66**	**337**	Pn	**Pn**	**21 11 35.9**	**-1.2**
	comp=N,0.1nm,0.3s,baz=163,slow=15,SNR=4.2						
GERES				Sn	**Sn**	**21 13 42.2**	**-4.7**
	comp=N,0.2nm,0.3s,baz=149,slow=23,SNR=3.4						
MMAI	**Mount Meron Ar**	**13.23**	**109**	Pn	**Pn**	**21 12 01.1**	**+2.5**
	comp=N,0.6nm,0.3s,baz=294,slow=11,SNR=3.7						
GNI	**Garni**	**18.91**	**77**	P	**Pn**	**21 13 13.2**	**+1.1**
	comp=N,0.4nm,0.3s,baz=357,slow=18,SNR=3.1						
HFS	**Hagfors**	**22.32**	**351**	P	**P**	**21 13 47.1**	**-0.9**
	comp=N,2.0nm,0.6s,baz=151,slow=9.5,SNR=8.9						
EKA	**Eskdalemuir Ar**	**23.33**	**325**	P	**P**	**21 13 55.9**	**-2.7**
	comp=N,3.6nm,1.0s,baz=159,slow=12,SNR=3.3						
FINES	**FINESS Array B**	**23.48**	**7**	P	**P**	**21 13 58.7**	**-1.3**
	comp=N,5.0nm,0.9s,baz=160,slow=4.4,SNR=9.8						
NB2	**NORSAR Subarra**	**23.53**	**349**	P	**P**	**21 14 00.5**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=154,slow=11						
NOA	**NORSAR Array B**	**23.53**	**349**	P	**P**	**21 14 00.1**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=163,slow=10,SNR=3.6						
GEYT	**Alibeck**	**29.51**	**79**	P	**P**	**21 14 55.3**	**+0.3**
	comp=Z,1.0nm,0.5s,baz=275,slow=7.3,SNR=4.2						
TORD	**Torodi Ar. Bea**	**30.06**	**219**	P	**P**	**21 15 00.5**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=12,slow=7.8,SNR=3.3						
ARCES	**ARCESS Array B**	**31.46**	**3**	P	**P**	**21 15 11.4**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=190,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**45.31**	**58**	P	**P**	**21 17 07.9**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=274,slow=7.2,SNR=24						
ZALV	**Zalesovo Beam**	**45.68**	**48**	P	**P**	**21 17 10.7**	**-0.5**
	comp=Z,2.5nm,0.5s,baz=274,slow=9.1,SNR=12						
SONM	**Songino Array**	**60.45**	**51**	P	**P**	**21 18 59.5**	**-0.8**
	comp=Z,0.5nm,0.8s,baz=282,slow=10,SNR=3.5						
CMAR	**Chiang Mai Arr**	**69.93**	**82**	P	**P**	**21 20 01.3**	**-0.8**
	comp=Z,0.5nm,0.7s,baz=307,slow=7.6,SNR=6.5						
KLR	**Kul'dur**	**73.85**	**39**	P	**P**	**21 20 25.2**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=315,slow=7.1,SNR=7.1						
VLS	**Valsamata**	**0.20**	**78**	P	**Pg**	**21 15 39.1**	**-0.2**
VLS				S	**Sg**	**21 15 42.0**	**-0.3**
	622μm,0.7s						
VLS	**Valsamata**	**0.20**	**78**	P	**Pg**	**21 15 39.1**	**-0.2**
VLS	**Valsamata**	**0.20**	**78**	P	**Pg**	**21 15 39.3**	**0.0**
KFL	**Anninata**	**0.35**	**95**	P	**Pg**	**21 15 42.0**	**0.0**
KFL				S	**Sg**	**21 15 47.0**	**+0.3**
	202μm,0.4s						
KFL	**Anninata**	**0.35**	**95**	P	**Pg**	**21 15 42.1**	**+0.1**
VLMS	**Volimes, Zakyn**	**0.36**	**136**	P	**Pb**	**21 15 43.0**	**-0.3**
VLMS				S	**Sb**	**21 15 48.6**	**-0.3**
VLMS				AML	AML	21 15 48.8	
VLMS				AML	AML	21 15 49.7	
FSK	**Fiskardo**	**0.36**	**28**	P	**Pg**	**21 15 42.4**	**+0.2**
FSK				S	**Sg**	**21 15 47.9**	**+0.7**
	280μm,0.6s						
FSK	**Fiskardo**	**0.36**	**28**	P	**Pg**	**21 15 42.5**	**+0.2**
FSK				S	**Sg**	**21 15 47.9**	**+0.7**
EVGI	**Lefkada island**	**0.54**	**27**	P	**Pg**	**21 15 45.4**	**-0.2**
MGNA	**Meganis**	**0.62**	**34**	P	**Pg**	**21 15 47.1**	**0.0**
MGNA				S	**Sb**	**21 15 56.2**	**-0.3**
MGNA				AML	AML	21 15 56.8	
MGNA				AML	AML	21 15 57.0	
LKD2	**Lefkada island**	**0.69**	**21**	P	**Pg**	**21 15 47.9**	**-0.6**
LKD2				S	**Sg**	**21 15 57.6**	**0.0**
	47μm,0.6s						
LKD2	**Lefkada island**	**0.69**	**21**	P	**Pg**	**21 15 48.4**	**-0.1**
LKD2				S	**Sg**	**21 15 57.9**	**+0.2**
LKD2				AML	AML	21 16 04.5	
LKD2				AML	AML	21 16 05.3	
	comp=N,77338μm,0.6s						
TSLK	**Tsoukalades, L**	**0.73**	**19**	P	**Pg**	**21 15 48.9**	**-0.2**
TSLK				S	**Sb**	**21 15 59.4**	**-0.1**
	comp=N,50μm,0.5s						
TSLK	**Tsoukalades, L**	**0.73**	**19**	P	**Pg**	**21 15 49.3**	**+0.2**
TSLK				S	**Sb**	**21 15 59.4**	**-0.1**
RLS	**Riolos of Patr**	**0.89**	**95**	P	**Pg**	**21 15 51.4**	**-0.7**
RLS				S	**Sb**	**21 16 04.7**	**+0.6**
	comp=N,29μm,0.8s						
RLS	**Riolos of Patr**	**0.89**	**95**	P	**Pg**	**21 15 51.5**	**-0.6**
RLS				S	**Sn**	**21 16 05.7**	**-0.3**
RLS				AML	AML	21 16 09.8	
	comp=E,40650μm,0.6s						
RLS				AML	AML	21 16 10.0	
	comp=N,75841μm,0.9s						
PVO	**Paravola**	**1.04**	**62**	P	**Pb**	**21 15 54.6**	**-0.3**
PVO				S	**Sn**	**21 16 09.8**	**-0.1**
	comp=N,56μm,0.6s						
PVO	**Paravola**	**1.04**	**62**	P	**Pb**	**21 15 54.8**	**-0.2**
PVO				S	**Sg**	**21 16 09.2**	**+0.5**
PVO				AML	AML	21 16 17.0	
PVO				AML	AML	21 16 20.5	
	comp=E,91537μm,0.7s						
DRO	**Drossia**	**1.09**	**99**	P	**Pb**	**21 15 55.5**	**-0.3**
DRO				S	**Sn**	**21 16 12.0**	**+0.9**
	comp=E,46μm,0.7s						
DRO	**Drossia**	**1.09**	**99**	P	**Pb**	**21 15 55.8**	**0.0**
DRO				S	**Sn**	**21 16 11.1**	**0.0**
DRO				AML	AML	21 16 16.4	
	comp=N,66047μm,0.7s						
DRO				AML	AML	21 16 18.5	
UPR	**University Cam**	**1.14**	**82**	P	**Pg**	**21 15 57.5**	**+0.5**
UPR				S	**Sn**	**21 16 13.9**	**+1.6**
AMT	**Artemida-Makis**	**1.24**	**119**	P	**Pb**	**21 15 58.3**	**0.0**
AMT	**Artemida-Makis**	**1.24**	**119**	P	**Pg**	**21 15 59.5**	**+0.7**
AMT				S	**Sg**	**21 16 15.1**	**+0.2**
AMT				AML	AML	21 16 21.8	
	comp=N,62756μm,0.8s						
AMT				AML	AML	21 16 31.6	
	comp=E,68349μm,0.9s						
EFP	**Efpalio**	**1.26**	**76**	P	**Pn**	**21 15 57.5**	**-0.9**
EFP	**Efpalio**	**1.26**	**76**	P	**Pn**	**21 15 58.5**	**+0.1**
EFP				AML	AML	21 16 25.5	
	comp=E,38979μm,0.6s						
EFP				AML	AML	21 16 27.0	
	comp=N,38599μm,0.9s						
LAKA	**Lakka**	**1.29**	**85**	P	**Pn**	**21 15 58.5**	**-0.3**
LAKA	**Lakka**	**1.29**	**85**	P	**Pn**	**21 15 58.9**	**+0.1**
LAKA				S	**Sg**	**21 16 18.1**	**+1.5**
LAKA				AML	AML	21 16 23.5	
	comp=N,20873μm,1.1s						
LAKA				AML	AML	21 16 23.6	
	comp=E,37316μm,1.0s						
ANX	**Ano Chora**	**1.32**	**69**	P	**Pn**	**21 15 59.3**	**0.0**
ANX	**Ano Chora**	**1.32**	**69**	P	**Pn**	**21 15 59.4**	**+0.1**
ANX				S	**Sg**	**21 16 20.0**	**+2.5**
ANX				AML	AML	21 16 24.4	
	comp=N,98451μm,0.7s						
ANX				AML	AML	21 16 28.5	
	comp=E,84391μm,1.4s						
SERG	**Sergoula**	**1.37**	**78**	P	**Pn**	**21 15 59.4**	**-0.6**
TRIZ	**Trizonia**	**1.38**	**80**	P	**Pn**	**21 15 59.6**	**-0.4**
TRIZ	**Trizonia**	**1.38**	**80**	P	**Pn**	**21 16 00.1**	**+0.1**
EVR	**Evrytania**	**1.39**	**55**	P	**Pg**	**21 16 01.4**	**-0.2**
EVR				S	**Sg**	**21 16 21.3**	**+1.6**
EVR				AML	AML	21 16 26.1	
	comp=E,26397μm,0.8s						
EVR				AML	AML	21 16 28.3	
	comp=N,45646μm,1.7s						
IGT	**Igoumenitsa**	**1.39**	**360**	P	**Pg**	**21 16 01.4**	**-0.3**
IGT	**Igoumenitsa**	**1.39**	**360**	P	**Pg**	**21 16 01.6**	**-0.1**
IGT				AML	AML	21 16 29.3	
	comp=E,20864μm,0.5s						
IGT				AML	AML	21 16 32.4	
	comp=N,27800μm,0.5s						
KLV	**Kalavryta, Ach**	**1.43**	**93**	P	**Pb**	**21 16 01.5**	**-0.1**
KLV				S	**Sg**	**21 16 23.1**	**+2.2**
KLV				AML	AML	21 16 27.1	
	comp=N,17429μm,0.8s						
KLV				AML	AML	21 16 32.6	
	comp=E,18108μm,1.3s						
KLV	**Kalavryta, Ach**	**1.43**	**93**	P	**Pb**	**21 16 01.1**	**-0.4**
KALE	**Kalithea**	**1.44**	**79**	P	**Pn**	**21 16 00.6**	**-0.2**
JAN	**Janina**	**1.57**	**14**	P	**Pg**	**21 16 04.9**	**-0.2**
JAN				S	**Sg**	**21 16 26.3**	**+0.9**
JAN				AML	AML	21 16 34.4	
	comp=N,21479μm,0.6s						
JAN				AML	AML	21 16 34.9	
	comp=E,30078μm,0.8s						
ITM	**Ithomi**	**1.58**	**127**	P	**Pb**	**21 16 04.2**	**+0.1**
ITM				S	**Sg**	**21 16 27.8**	**+2.0**
ITM				AML	AML	21 16 35.3	
	comp=N,17138μm,0.5s						
ITM				AML	AML	21 16 40.8	
	comp=E,22937μm,1.7s						
ITM	**Ithomi**	**1.58**	**127**	P	**Pb**	**21 16 04.2**	**+0.1**
ITM	**Ithomi**	**1.58**	**127**		**Pb**	**21 16 03.6**	**-0.4**
ITM				Sn	**Sn**	**21 16 23.1**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.65**	**57**	P	**Pg**	**21 16 07.5**	**+0.8**
MAKR				S	**Sg**	**21 16 28.9**	**+0.8**
PYL	**PYLOS**	**1.67**	**138**	P	**Pg**	**21 16 06.3**	**-0.6**
PYL				S	**Sg**	**21 16 29.2**	**+0.7**
PYL				AML	AML	21 16 37.9	
	comp=N,7554μm,1.3s						
PYL				AML	AML	21 16 43.8	
	comp=E,11104μm,0.9s						
SRN	**Sarande**	**1.76**	**351**	P	**Pb**	**21 16 06.7**	**-0.4**
SRN				AML	AML		
	comp=E,7385μm,0.6s						
SRN				AML	AML		
	comp=N,5445μm,0.6s						
VLX	**Vlachokerasia**	**1.79**	**115**	P	**Pg**	**21 16 08.5**	**-0.7**
VLX				AML	AML	21 16 46.1	
	comp=N,22231μm,0.7s						
VLX				AML	AML	21 16 46.1	
	comp=E,24608μm,1.5s						
AGG	**Agios Georgios**	**1.79**	**60**	P	**Pb**	**21 16 07.2**	**-0.5**
AGG	**Agios Georgios**	**1.79**	**60**	P	**Pg**	**21 16 09.1**	**-0.2**
AGG	**Agios Georgios**	**1.79**	**60**		**Pn**	**21 16 06.1**	**+0.5**
AGG				Sn	**Sn**	**21 16 28.7**	**+0.4**
AXAR	**Agios Charalam**	**1.92**	**70**	P	**Pg**	**21 16 11.3**	**-0.5**
THL	**Klokotos Trika**	**1.93**	**42**	P	**Pb**	**21 16 10.1**	**+0.1**
THL				S	**Sg**	**21 16 36.5**	**-0.6**
THL				AML	AML	21 16 43.5	
	comp=N,14528μm,1.3s						
THL				AML	AML	21 16 45.5	
	comp=E,23944μm,0.6s						
PROD	**Prodromos**	**2.02**	**86**	P	**Pb**	**21 16 10.9**	**-0.7**
LTK	**Loutraki**	**2.07**	**92**	P	**Pb**	**21 16 11.4**	**-1.1**
LOUT	**Loutraki**	**2.08**	**93**	P	**Pb**	**21 16 11.6**	**-1.0**
TPE	**Tepelena**	**2.17**	**353**	P	**Pn**	**21 16 12.4**	**+1.5**
SCTE	**Santa Cesarea**	**2.42**	**323**	P	**Pn**	**21 16 15.5**	**+1.2**
SCTE				S	**Sn**	**21 16 44.2**	**+0.3**
SCTE				AML	AML		
	comp=N,7915μm,0.6s						
SCTE				AML	AML		
	comp=E,8600μm,0.7s						
SCTE	**Santa Cesarea**	**2.42**	**323**		**Pn**	**21 16 13.6**	**-0.7**
SCTE				Sn	**Sn**	**21 16 44.4**	**+0.5**
LIT	**Litokhoron**	**2.57**	**40**	P	**Pn**	**21 16 16.6**	**+0.2**
LIT						21 16 48.9	
LIT	**Litokhoron**	**2.57**	**40**		**Pn**	**21 16 16.6**	**+0.2**
LIT				Sn	**Sn**	**21 16 48.9**	**+1.2**
OHR	**Ohrid**	**2.99**	**7**	*i* Pn	**Pn**	**21 16 24.9**	**+2.7**
TIP	**Timpagrande**	**2.99**	**291**	⇑P	**Pn**	**21 16 24.1**	**+1.9**
TIP	**Timpagrande**	**2.99**	**291**	⇑S	**Sn**	**21 17 00.5**	**+2.4**
TIP	**Timpagrande**	**2.99**	**291**	P	**Pn**	**21 16 23.9**	**+1.6**
TIP	**Timpagrande**	**2.99**	**291**	P	**Pn**	**21 16 23.9**	**+1.6**
TIP				S	**Sn**	**21 16 58.0**	**-0.1**
TIP				AML	AML		
	comp=N,1135μm,1.1s						
TIP				AML	AML		
	comp=E,1380μm,1.5s						
TIP				AML	AML		
	comp=E,1180μm,1.5s						
TIP				AML	AML		
	comp=N,1415μm,1.1s						
TIP	**Timpagrande**	**2.99**	**291**		**Pn**	**21 16 21.2**	**-1.1**
TIP				Sn	**Sn**	**21 16 57.0**	**-1.1**
SERS	**Sersale**	**3.00**	**288**	P	**Pn**	**21 16 23.9**	**+1.5**
SERS	**Sersale**	**3.00**	**288**	P	**Pn**	**21 16 23.9**	**+1.5**
SERS				S	**Sn**	**21 16 59.0**	**+0.6**
SERS				AML	AML		
	comp=N,2620μm,0.6s						
SERS				AML	AML		
	comp=E,2700μm,0.6s						
SERS				AML	AML		
	comp=N,1520μm,0.3s						
SERS				AML	AML		
	comp=E,1565μm,0.3s						
PIPA	**Pietrapaola**	**3.07**	**297**	P	**Pn**	**21 16 24.9**	**+1.6**
PIPA				AML	AML		
	comp=E,2980μm,1.1s						
PIPA				AML	AML		
	comp=N,2415μm,1.1s						
PIPA				AML	AML		
	comp=N,2470μm,1.2s						
PIPA				AML	AML		
	comp=E,2795μm,1.0s						
PLAC	**Placanica**	**3.09**	**277**	P	**Pn**	**21 16 25.0**	**+1.4**
PLAC	**Placanica**	**3.09**	**277**	P	**Pn**	**21 16 25.0**	**+1.4**
PLAC				S	**Sn**	**21 17 00.9**	**+0.5**
PLAC				AML	AML		
	comp=N,1880μm,0.6s						
PLAC				AML	AML		
	comp=N,3465μm,1.2s						
PLAC				AML	AML		
	comp=E,3430μm,1.2s						
PLAC				AML	AML		
	comp=E,2050μm,0.6s						
MESG	**Mesagne**	**3.12**	**322**	P	**Pn**	**21 16 25.1**	**+1.2**
MESG				S	**Sn**	**21 17 00.5**	**-0.5**
MESG				AML	AML		
	comp=N,10400μm,0.9s						
MESG				AML	AML		
	comp=E,5225μm,1.1s						
GRI	**Girifalco**	**3.15**	**284**	P	**Pn**	**21 16 25.9**	**+1.4**
GRI				S	**Sn**	**21 17 01.6**	**-0.4**
GRI				AML	AML		
	comp=E,3730μm,0.5s						
GRI				AML	AML		
	comp=N,3265μm,0.4s						
GRI	**Girifalco**	**3.15**	**284**	P	**Pn**	**21 16 25.9**	**+1.4**
TIR	**Tirane**	**3.23**	**354**	P	**Pn**	**21 16 27.3**	**+1.9**
TIR				S	**Sb**	**21 17 08.6**	**-2.8**
TIR	**Tirane**	**3.23**	**354**	P	**Pn**	**21 16 27.5**	**+2.1**
TIR				AML	AML		
	comp=E,3890μm,0.9s						
TIR				AML	AML		
	comp=N,4105μm,1.5s						
CGL1	**Ceglie Messapi**	**3.35**	**319**	*e*Pn	**Pn**	**21 16 28.3**	**+1.1**
CGL1				Sn	**Sn**	**21 17 08.8**	**+1.9**
TAR1	**Taranto**	**3.36**	**316**	*e*Pn	**Pn**	**21 16 28.9**	**+1.6**
SOI	**Samo**	**3.38**	**270**	P	**Pn**	**21 16 28.6**	**+1.0**
SOI				S	**Sn**	**21 17 06.0**	**-1.7**
SOI				AML	AML		
	comp=E,1690μm,0.4s						
SOI				AML	AML		
	comp=N,1120μm,0.6s						
CAR1	**CAROLEI**	**3.42**	**290**	P	**Pn**	**21 16 30.3**	**+2.2**
CAR1				S	**Sn**	**21 17 09.7**	**+1.1**
CAR1				AML	AML		
	comp=E,4725μm,1.1s						
CAR1				AML	AML		
	comp=N,3350μm,1.4s						
CAR1				AML	AML		
	comp=N,3480μm,0.9s						
CAR1				AML	AML		
	comp=E,4410μm,0.6s						
MPAZ	**Palizzi**	**3.43**	**268**	P	**Pn**	**21 16 29.0**	**+0.8**
MPAZ				S	**Sn**	**21 17 07.7**	**-1.2**
MPAZ				AML	AML		
	comp=E,3915μm,0.6s						
MPAZ				AML	AML		
	comp=N,5305μm,0.6s						
CEL	**Celeste**	**3.51**	**273**		**Pn**	**21 16 29.6**	**+0.3**
CEL				Sn	**Sn**	**21 17 08.3**	**-2.5**
MASS	**Massafra**	**3.52**	**316**	*e*Pn	**Pn**	**21 16 31.1**	**+1.7**
MASS				Sn	**Sn**	**21 17 11.5**	**+0.6**
JOPP	**Joppolo**	**3.54**	**279**	P	**Pn**	**21 16 31.0**	**+1.3**
JOPP				S	**Sn**	**21 17 11.1**	**-0.3**
JOPP				AML	AML		
	comp=E,2090μm,0.6s						
JOPP				AML	AML		
	comp=N,2775μm,0.6s						
GMB	**Gambarie**	**3.56**	**272**	P	**Pn**	**21 16 31.0**	**+0.9**
GMB				S	**Sn**	**21 17 11.3**	**-0.9**
GMB				AML	AML		
	comp=E,10895μm,1.5s						
GMB				AML	AML		
	comp=N,10810μm,0.5s						
SALB	**San Lorenzo Be**	**3.57**	**300**	P	**Pb**	**21 16 34.8**	**-3.2**
SALB	**San Lorenzo Be**	**3.57**	**300**	P	**Pb**	**21 16 34.8**	**-3.2**
SALB				AML	AML		
	comp=E,2145μm,1.1s						
SALB				AML	AML		
	comp=N,1630μm,1.1s						
SALB				AML	AML		
	comp=E,1865μm,0.4s						
SALB				AML	AML		
	comp=N,1610μm,1.1s						
VAY	**Valandovo**	**3.61**	**28**	*i* Pn	**Pn**	**21 16 32.5**	**+1.8**
NOCI	**Noci**	**3.67**	**317**	P	**Pn**	**21 16 32.9**	**+1.4**
NOCI				AML	AML		
	comp=N,5320μm,1.4s						
NOCI				AML	AML		
	comp=E,3885μm,0.5s						
NOCI	**Noci**	**3.67**	**317**	P	**Pn**	**21 16 32.9**	**+1.4**
MTTG	**Motta San Giov**	**3.67**	**269**	P	**Pn**	**21 16 32.4**	**+0.9**
MTTG				AML	AML		
	comp=N,3945μm,0.7s						
MTTG				AML	AML		
	comp=E,4655μm,0.8s						
MTTG	**Motta San Giov**	**3.67**	**269**	P	**Pn**	**21 16 32.4**	**+0.9**
T0702	**Acquaformosa (**	**3.68**	**297**	P	**Pn**	**21 16 34.9**	**+3.1**
T0702				AML	AML		
	comp=N,1116μm,1.4s						
T0702				AML	AML		
	comp=E,1535μm,1.6s						
T0702	**Acquaformosa (**	**3.68**	**297**	P	**Pn**	**21 16 34.9**	**+3.1**
MATE	**Matera**	**3.77**	**313**	⇑P	**Pn**	**21 16 35.0**	**+2.1**
MATE	**Matera**	**3.77**	**313**	⇑S	**Sn**	**21 17 17.7**	**+0.5**
MATE	**Matera**	**3.77**	**313**	P	**Pn**	**21 16 34.9**	**+2.1**
MATE				AML	AML		
	comp=N,2920μm,1.0s						
MATE				AML	AML		
	comp=E,3005μm,0.7s						
MATE	**Matera**	**3.77**	**313**	P	**Pn**	**21 16 34.9**	**+2.1**
MSRU	**Castanea**	**3.81**	**273**	P	**Pn**	**21 16 34.3**	**+

comp=N,3125µm,1.4s
T0721 AML AML
comp=E,5185µm,1.0s
T0721 AML AML
comp=N,3040µm,1.3s
ATN Antennamare 3.85 272 P **Pn** 21 16 35.0 +1.0
ATN S **Sn** 21 17 18.3 -0.9
ATN AML AML
comp=E,4345µm,0.4s
ATN AML AML
comp=N,3700µm,0.5s
ULC Ulcinj 3.91 348⇑ *i*Pn **Pn** 21 16 34.7 -0.2
ULC *i* Sn **Sn** 21 17 21.5 +0.8
PUK Puka 3.92 355 P **Pn** 21 16 36.4 +1.4
PUK AML AML
comp=E,1965µm,1.0s
PUK AML AML
comp=N,2170µm,0.4s
PUK Puka 3.92 355 P **Pn** 21 16 36.4 +1.4
SG1 Sgolgore (BA) 3.92 315 *e*Pn **Pn** 21 16 36.8 +1.9
SG1 Sn **Sn** 21 17 21.5 +0.7
SKO Skopje 3.92 12 *i*Pn **Pn** 21 16 37.5 +2.5
MPNC Port Mandanici 3.94 272 P **Pn** 21 16 35.6 +0.4
BAI Bari 3.99 319 *e*Pn **Pn** 21 16 37.1 +1.2
BAI Sn **Sn** 21 17 24.8 +2.2
AMUR Altamura 4.00 315 P **Pn** 21 16 37.2 +1.1
SIRI Monte Sirino - 4.04 302 P **Pn** 21 16 40.3 +3.7
SIRI AML AML
comp=N,1775µm,1.6s
SIRI AML AML
comp=N,1830µm,1.5s
SIRI AML AML
comp=E,1590µm,1.2s
SIRI AML AML
comp=E,1605µm,1.2s
SIRI Monte Sirino - 4.04 302 P **Pn** 21 16 40.3 +3.7
AIO Antillo 4.04 269 P **Pn** 21 16 37.5 +0.9
NOV Novara 4.11 270 P **Pn** 21 16 38.7 +1.1
NOV Novara 4.11 270 P **Pn** 21 16 38.7 +1.1
NOV AML AML
comp=N,2750µm,0.5s
NOV AML AML
comp=E,3945µm,1.0s
DRME Dracevica, Mon 4.14 348 *e*Pn **Pn** 21 16 38.6 +0.6
DRME Dracevica, Mon 4.14 348⇑ *i*Pn **Pn** 21 16 38.1 +0.1
DRME *i* Sn **Sn** 21 17 26.6 +0.3
MCEL Monticello 4.15 303 P **Pn** 21 16 41.5 +3.3
MCEL AML AML
comp=N,2725µm,1.1s
MCEL AML AML
comp=E,1675µm,0.4s
MCEL AML AML
comp=N,2755µm,1.1s
MCEL AML AML
comp=E,1660µm,0.4s
MCEL Monticello 4.15 303 P **Pn** 21 16 41.5 +3.3
MTSN Montesano sull 4.15 302 P **Pn** 21 16 40.5 +2.3
MTSN Montesano sull 4.15 302 P **Pn** 21 16 40.5 +2.3
MTSN AML AML
comp=E,1760µm,1.5s
MTSN AML AML
comp=N,1550µm,1.0s
MGR Morigerati 4.23 300 P **Pn** 21 16 41.2 +2.0
MGR Morigerati 4.23 300 P **Pn** 21 16 41.2 +2.0
MGR AML AML
comp=E,1024µm,1.1s
MGR AML AML
comp=N,1032µm,1.0s
VPL Vulcano Piano 4.23 275 P **Pn** 21 16 40.1 +0.9
VPL Vulcano Piano 4.23 275 P **Pn** 21 16 40.1 +0.9
VPL AML AML
comp=E,5565µm,0.7s
VPL AML AML
comp=N,8360µm,0.5s
APE Apeiranthos 4.25 103 *e*P **Pb** 21 16 45.3 -4.4
APE Apeiranthos 4.25 103⇑⇑P **Pb** 21 16 44.9 -4.8
EMSG Monte Spagnolo 4.28 267 P **Pn** 21 16 40.5 +0.5
EMSG AML AML
comp=N,2590µm,1.0s
EMSG AML AML
comp=E,2770µm,0.6s
EMSG Monte Spagnolo 4.28 267 P **Pn** 21 16 40.5 +0.5
SLCN Sala Consilina 4.29 303 P **Pn** 21 16 43.2 +3.0
SLCN AML AML
comp=E,3300µm,0.4s
SLCN AML AML
comp=N,3310µm,1.6s
SLCN Sala Consilina 4.29 303 P **Pn** 21 16 43.2 +3.0
BUM Brajici-Budva 4.30 345⇑ *i*Pn **Pn** 21 16 39.6 -0.7
BUM *i* Sn **Sn** 21 17 30.5 +0.1
HAVL Avola 4.31 256 P **Pn** 21 16 39.7 -0.6
HAVL AML AML
comp=N,2270µm,1.0s
HAVL AML AML
comp=E,2460µm,1.0s
ACER Acerenza 4.31 309 P **Pn** 21 16 43.5 +3.1
ACER Acerenza 4.31 309 P **Pn** 21 16 43.5 +3.1
ACER AML AML
comp=N,5285µm,1.5s
ACER AML AML
comp=N,5375µm,1.5s
ACER AML AML
comp=E,5150µm,0.9s
ACER AML AML
comp=E,5080µm,0.9s
ACER Acerenza 4.31 309 **Pn** 21 16 40.6 +0.2
ACER Sn **Sn** 21 17 28.5 -2.1
PZUN Potenza 4.32 307 P **Pn** 21 16 44.5 +4.1
PZUN Potenza 4.32 307 P **Pn** 21 16 44.5 +4.1
PZUN AML AML
comp=E,2890µm,1.6s
PZUN AML AML
comp=N,3075µm,1.2s
PZUN AML AML
comp=E,2845µm,1.6s
PZUN AML AML
comp=N,3015µm,1.2s
MUCR Ucria 4.32 270 P **Pn** 21 16 41.8 +1.3
MUCR Ucria 4.32 270 P **Pn** 21 16 41.8 +1.3
MRVN Minervino Murg 4.33 314 P **Pn** 21 16 42.5 +1.8
MRVN Minervino Murg 4.33 314 P **Pn** 21 16 42.5 +1.8
MRVN AML AML
comp=N,1975µm,1.3s
MRVN AML AML
comp=E,1585µm,1.4s
EPZF Pizzo Felice 4.35 268 P **Pn** 21 16 41.9 +1.0
EPZF Pizzo Felice 4.35 268 P **Pn** 21 16 41.9 +1.0
EPZF AML AML
comp=N,2315µm,0.5s
EPZF AML AML
comp=E,2660µm,0.8s
ESML S. M. di Licod 4.36 265 P **Pn** 21 16 42.5 +1.5
ESML S. M. di Licod 4.36 265 P **Pn** 21 16 42.5 +1.5
PDG Podgorica 4.37 349⇓⇓P **Pn** 21 16 41.8 +0.7
PDG Podgorica 4.37 349⇑⇑S **Sn** 21 17 31.2 -0.6
PDG Podgorica 4.37 349 *e*Pn **Pn** 21 16 41.6 +0.5
PDG Podgorica 4.37 349 **Pn** 21 16 41.5 +0.4
PDG Sn **Sn** 21 17 32.3 +0.4
TTG Podgorica 4.37 349 *e*Pn **Pn** 21 16 40.8 -0.3
TTG *e*Sn **Sn** 21 17 32.4 +0.6
PALZ Palazzo San Ge 4.40 311 P **Pn** 21 16 44.2 +2.7
PALZ AML AML
comp=E,10800µm,1.2s
PALZ AML AML
comp=N,7550µm,1.0s
PALZ Palazzo San Ge 4.40 311 P **Pn** 21 16 44.2 +2.7
HPAC Pachino 4.41 253 P **Pn** 21 16 42.3 +0.7
HPAC AML AML
comp=N,3405µm,0.8s
HPAC AML AML
comp=E,3805µm,0.5s
HLNI Lentini 4.41 261 P **Pn** 21 16 40.5 -1.1
HLNI AML AML
comp=E,2565µm,0.6s
HLNI AML AML
comp=N,1715µm,1.5s
MEU Monte Lauro 4.42 258 P **Pn** 21 16 42.1 +0.2
MEU AML AML
comp=N,4875µm,0.4s
MEU AML AML
comp=E,4955µm,0.4s
MCPD Capo d'Orlando 4.43 271 P **Pn** 21 16 44.4 +2.4
SANT Santorini 4.44 112 Pn **Pn** 21 16 41.9 -0.2
SANT Sn **Sn** 21 17 34.4 +0.6
PVY Plav 4.46 356⇓ *i*Pn **Pn** 21 16 43.0 +0.5
PVY *i* Sn **Sn** 21 17 34.0 -0.4
HCY Herceg Novi 4.53 342 *e*Pn **Pn** 21 16 42.9 -0.4
HCY Herceg Novi 4.53 342⇓ *i*Pn **Pn** 21 16 42.9 -0.4
HCY *i* Sn **Sn** 21 17 35.7 -0.2
CEME Cevo 4.54 347⇓ *i*Pn **Pn** 21 16 43.0 -0.5
CEME *i* Sn **Sn** 21 17 35.4 -0.7
HVZN Vizzini 4.57 260 P **Pn** 21 16 43.2 -0.7
HVZN AML AML
comp=E,17950µm,0.6s
HVZN AML AML
comp=N,16300µm,0.5s
HVZN Vizzini 4.57 260 P **Pn** 21 16 43.2 -0.7
HMDC Modica 4.58 257 P **Pn** 21 16 43.2 -0.7
HMDC AML AML
comp=N,2360µm,0.5s
HMDC AML AML
comp=E,2585µm,0.4s
HMDC Modica 4.58 257 P **Pn** 21 16 43.2 -0.7
MRLC Muro Lucano 4.58 306 P **Pn** 21 16 47.6 +3.6
MRLC Muro Lucano 4.58 306 P **Pn** 21 16 47.6 +3.6
MRLC AML AML
comp=E,1630µm,1.6s
MRLC AML AML
comp=N,1885µm,1.0s
MRLC AML AML
comp=E,1810µm,1.6s
MRLC AML AML
comp=N,1860µm,1.0s
GALF Gagliano Caste 4.59 266 P **Pn** 21 16 46.4 +2.2
GALF Gagliano Caste 4.59 266 P **Pn** 21 16 46.4 +2.2
IDI Anoyia 4.63 127 Pn **Pn** 21 16 44.7 -0.1
comp=N,2.2nm,0.3s,baz=337,slow=8.6,SNR=16
IDI Sn **Sn** 21 17 41.5 +3.1
comp=N,27nm,0.3s,baz=311,slow=19,SNR=21
IDI LR LR 21 18 40.6
comp=N,2µm,18.1s,baz=277,slow=41
IACL Alicudi 4.72 277 P **Pn** 21 16 46.3 +0.3
IACL AML AML
comp=N,1240µm,0.4s
IACL AML AML
comp=E,1260µm,0.5s
IACL Alicudi 4.72 277 P **Pn** 21 16 46.3 +0.3
IVA Berane 4.74 356⇑ *i*Pn **Pn** 21 16 46.8 +0.5
IVA *i* Sn **Sn** 21 17 41.7 +0.5
NKME Niksic 4.74 348⇑ *i*Pn **Pn** 21 16 46.1 -0.2
NKME *i* Sn **Sn** 21 17 40.6 -0.6
VAE Valguarnera 4.75 264 Pn **Pn** 21 16 47.9 +1.5
comp=E,3.9nm,0.3s,baz=106,slow=7.4,SNR=6.2
VAE Sn **Sn** 21 17 45.3 +4.0
comp=E,24nm,0.3s,baz=51,slow=9.4,SNR=8.6
KOME Kolasin 4.75 353⇑ *i*Pn **Pn** 21 16 46.7 +0.3
KOME *i* Sn **Sn** 21 17 41.5 +0.1
NKY Niksic 4.78 348⇑ *i*Pn **Pn** 21 16 46.6 -0.3
NKY *i* Sn **Sn** 21 17 42.2 -0.1
TREB Trebinje 4.82 342 *e*Pn **Pn** 21 16 46.7 -0.6
DBRK Dubrovnik 4.83 340 *e*Pn **Pn** 21 16 47.5 +0.1
SNAL S. Angelo Dei 4.85 307 P **Pn** 21 16 52.7 +4.5
MSAG Monte S. Angel 4.94 318 P **Pn** 21 16 50.4 +1.5
MSAG Monte S. Angel 4.94 318 P **Pn** 21 16 50.4 +1.5
BRY Bratogost 4.95 344 *e*Pn **Pn** 21 16 49.5 +0.2
BRY *i* Sn **Sn** 21 17 45.4 -1.1
VTS Vitosha 4.99 25 P **Pn** 21 16 51.6 +1.9
VTS S **Sn** 21 17 47.3 -0.1
VTS Vitosha 4.99 25⇓⇓P **Pn** 21 16 51.7 +1.9
VTS Vitosha 4.99 25 P **Pn** 21 16 51.8 +2.0
VTS Vitosha 4.99 25 P **Pn** 21 16 51.8 +2.0
VTS Vitosha 4.99 25 **Pn** 21 16 49.8 +0.1
VTS Sn **Sn** 21 17 47.8 +0.4
RDO Rodhopi 5.01 52 P **Pn** 21 16 51.7 +1.8
SGRT San Giovanni R 5.05 317 P **Pn** 21 16 52.0 +1.4
SGRT San Giovanni R 5.05 317 P **Pn** 21 16 52.0 +1.4
SGRT San Giovanni R 5.05 317 **Pn** 21 16 51.3 +0.7
STON Ston 5.14 338 *e*Pn **Pn** 21 16 51.3 -0.3
STON Ston 5.14 338 P **Pn** 21 16 51.7 0.0
STON Ston 5.14 338 *e*Pn **Pn** 21 16 51.3 -0.3
CLTA Licata 5.16 261 P **Pn** 21 16 52.9 +1.0
UPM Unac-Piva 5.18 348 *e*Pn **Pn** 21 16 53.1 +0.7
UPM Unac-Piva 5.18 348⇓ *i*Pn **Pn** 21 16 52.8 +0.4
UPM *i* Sn **Sn** 21 17 51.7 -0.4
WDD Wied Dalam 5.20 246 P **Pn** 21 16 53.1 +0.7
WDD Wied Dalam 5.20 246 **Pn** 21 16 52.3 -0.1
WDD **Sn** 21 17 52.2 -0.1
ALN Alexandroupoli 5.20 56 P **Pn** 21 16 52.9 +0.4
ALN Alexandroupoli 5.20 56 **Pn** 21 16 52.9 +0.4
PLE Pljevlja 5.24 352⇓ *i*Pn **Pn** 21 16 53.4 +0.3
PLE *i* Sn **Sn** 21 17 53.4 -0.1
PAOL Paolisi 5.32 305 **Pn** 21 16 52.9 -1.3
MELA Melanico ??? S 5.37 313 P **Pn** 21 16 57.4 +2.6
RUDO Rudo 5.52 353 *e*Pn **Pn** 21 16 57.6 +0.6
CORL Corleone 5.57 270 **Pn** 21 16 57.6 0.0
BSSO Busso 5.58 309 P **Pn** 21 17 02.2 +4.3
BSSO Busso 5.58 309 P **Pn** 21 17 02.2 +4.3
MAKA Makarska 5.73 335 *e*Pn **Pn** 21 17 00.5 +0.7
TRIV Trivento 5.74 311 P **Pn** 21 17 02.8 +2.8
TRIV Trivento 5.74 311 P **Pn** 21 17 02.8 +2.8
BBLS Lazići 5.77 353 *e*Pn **Pn** 21 17 01.1 +0.7
RNI2 Rionero Sannit 5.94 309 P **Pn** 21 17 06.8 +4.0
DIVS Divibare 5.96 358 *e*Pn **Pn** 21 17 02.4 -0.6
CERA Filignano 5.97 307 P **Pn** 21 17 06.0 +2.8
CERA Filignano 5.97 307 P **Pn** 21 17 06.0 +2.8
HAPS Han Pijesak,Bl 6.04 350 *e*Pn **Pn** 21 17 02.8 -1.3
KARP Karpathos 6.05 113 Pn **Pn** 21 17 03.8 -0.4
LPEL Lama dei Pelig 6.13 311 P **Pn** 21 17 08.3 +2.9
LPEL Lama dei Pelig 6.13 311 P **Pn** 21 17 08.3 +2.9
CAFR Castel Frentan 6.14 314 P **Pn** 21 17 08.5 +3.0
CAFR Castel Frentan 6.14 314 P **Pn** 21 17 08.5 +3.0
PLVB Pleven 6.17 30⇑⇑P **Pn** 21 17 07.8 +2.1
INTR Introdacqua 6.27 310 P **Pn** 21 17 10.5 +3.1
INTR Introdacqua 6.27 310 P **Pn** 21 17 10.5 +3.1
ELND Elena 6.37 40⇑⇑P **Pn** 21 17 10.7 +2.0
TEKS Tekeris 6.43 355 *e*Pn **Pn** 21 17 07.5 -2.0
VCEL Villa Celiera 6.54 313 P **Pn** 21 17 14.0 +2.9
VCEL Villa Celiera 6.54 313 P **Pn** 21 17 14.0 +2.9
ZIRJ Zirje 6.56 329 *i*Pn **Pn** 21 17 11.1 -0.1
KIJV Kijevo 6.57 334 *i*Pn **Pn** 21 17 12.4 +1.0
KIJV **Sn** 21 18 25.5 -0.8
VLAD Vladila 6.61 26⇑⇑P **Pn** 21 17 12.8 +1.0
FAGN Fagnano 6.62 311 P **Pn** 21 17 16.2 +4.2
FAGN Fagnano 6.62 311 P **Pn** 21 17 16.2 +4.2
MORI Morici 6.71 330 *e*Pn **Pn** 21 17 13.3 +0.1
MDVR Moldovita 6.72 8⇑⇑P **Pn** 21 17 13.8 +0.4
MGRS Mrkonjic Grad 6.74 340 *e*Pn **Pn** 21 17 14.5 +0.9
AQU L'Aquila 6.78 311 *e*Pn **Pn** 21 17 17.5 +3.3
DOB Doboj 6.80 346 *e*Pn **Pn** 21 17 13.6 -0.9
T0104 Madonna delle 6.82 310 P **Pn** 21 17 19.2 +4.4
T0104 Madonna delle 6.82 310 P **Pn** 21 17 19.2 +4.4
CAMP Campotosto 6.88 312 P **Pn** 21 17 18.8 +3.1
HERR Herculane 6.91 12⇑⇑P **Pn** 21 17 17.3 +1.3
SMA1 SAN MARTINO 6.98 312 P **Pn** 21 17 20.1 +3.0
BLY Banja Luka 7.02 341⇓⇓P **Pn** 21 17 18.1 +0.7
BLY Banja Luka 7.02 341 P **Pn** 21 17 17.9 +0.4
BLY Banja Luka 7.02 341 *e*Pn **Pn** 21 17 17.9 +0.4
FRGS Fruska Gora 7.03 357 *e*Pn **Pn** 21 17 13.2 -4.4
COPA Copaceanca 7.03 30⇑⇑P **Pn** 21 17 19.8 +2.2
DUGI Dugi Otok 7.08 327 *i*Pn **Pn** 21 17 18.2 -0.1
LNSS Leonessa 7.14 311 P **Pn** 21 17 23.1 +3.9
NRCA Norcia 7.24 313 P **Pn** 21 17 24.0 +3.5
UDBI Udbina 7.25 333 *i*Pn **Pn** 21 17 22.1 +1.3
HUMR Humele 7.27 27⇓⇓P **Pn** 21 17 22.9 +1.9
FDMO Fiordimonte 7.38 314 P **Pn** 21 17 25.5 +3.0
FDMO Fiordimonte 7.38 314 P **Pn** 21 17 25.5 +3.0
GZR Gura Zlata 7.47 13⇑⇑P **Pn** 21 17 24.4 +0.6
BZS Buzias 7.53 7⇑⇑P **Pn** 21 17 25.9 +1.3
CING Cingoli 7.54 316 P **Pn** 21 17 26.3 +1.6
CING Cingoli 7.54 316 P **Pn** 21 17 26.3 +1.6
MOMA Monte Martano 7.54 311 P **Pn** 21 17 28.6 +3.9
MOMA Monte Martano 7.54 311 P **Pn** 21 17 28.6 +3.9
EL6 Elcito 7.56 316 P **Pn** 21 17 26.6 +1.7
SNTG Esanatoglia 7.60 315 P **Pn** 21 17 27.9 +2.4
NVLJ Novalja 7.62 329 *e*Pn **Pn** 21 17 26.1 +0.4
ASSB Assisi San Ben 7.63 312 P **Pn** 21 17 29.9 +4.0
FOSV Fossato di Vic 7.72 314 P **Pn** 21 17 29.5 +2.3
ATCC AVT- Casa Cast 7.73 313 P **Pn** 21 17 31.0 +3.8
LOT Lotru 7.74 18⇑⇑P **Pn** 21 17 29.2 +1.7
SLUM Salum 7.74 147 P **Pn** 21 17 24.2 -3.3
baz=150
ARVD Arcevia 7.76 316 P **Pn** 21 17 29.2 +1.6
SSFR Montelago di S 7.80 315 P **Pn** 21 17 30.6 +2.3
SSFR Montelago di S 7.80 315 P **Pn** 21 17 30.6 +2.3
MURB Monte Urbino 7.84 313 P **Pn** 21 17 32.9 +4.0
MURB Monte Urbino 7.84 313 P **Pn** 21 17 32.9 +4.0
MGAB Montegabbione 7.88 310 P **Pn** 21 17 33.1 +3.8
MGAB Montegabbione 7.88 310 P **Pn** 21 17 33.1 +3.8
ATFO Monte Foce - G 7.88 314 P **Pn** 21 17 32.1 +2.8
FRON Frontone 7.89 315 P **Pn** 21 17 31.7 +2.3
ATTE AVT- Monte Tez 7.90 312 P **Pn** 21 17 32.9 +3.3
ARR Arges 7.90 23⇑⇑P **Pn** 21 17 31.2 +1.5
MTUR Matau 7.91 25⇑⇑P **Pn** 21 17 32.0 +2.2
MPAG Monte Paganucc 7.94 316 P **Pn** 21 17 31.9 +1.7
SACS San Casciano d 7.96 309 P **Pn** 21 17 31.6 +1.1
SACS San Casciano d 7.96 309 P **Pn** 21 17 31.6 +1.1
FSSB Fossombrone 7.97 316 P **Pn** 21 17 32.6 +2.0
FSSB Fossombrone 7.97 316 P **Pn** 21 17 32.6 +2.0
ATVO AVT- Monte Val 7.98 314 P **Pn** 21 17 34.1 +3.3
ATVO AVT- Monte Val 7.98 314 P **Pn** 21 17 34.1 +3.3
PIEI Pieia 8.01 315 P **Pn** 21 17 33.2 +2.1
PIEI Pieia 8.01 315 P **Pn** 21 17 33.2 +2.1
ATPI Pietralunga - 8.03 314 P **Pn** 21 17 34.4 +3.0
NARO Abbazia di Nar 8.03 315 P **Pn** 21 17 33.6 +2.2
NARO Abbazia di Nar 8.03 315 P **Pn** 21 17 33.6 +2.2
VOIR 8.09 24 P **Pn** 21 17 35.0 +2.7
VOIR 8.09 24⇑⇑P **Pn** 21 17 34.6 +2.3
PESA Pesaro 8.11 318 P **Pn** 21 17 34.1 +1.7
PESA Pesaro 8.11 318 P **Pn** 21 17 34.1 +1.7
BADI Badiali 8.15 314 P **Pn** 21 17 38.0 +4.9
MORH Mrgy, Hungar 8.17 352 *e*Pn **Pn** 21 17 32.1 -1.1
PARC Parchiule 8.24 314 P **Pn** 21 17 38.8 +4.5
BOJS Bojanci 8.28 334 *i*Pn **Pn** 21 17 35.3 +0.5
BOJS *e*Sn **Sn** 21 19 04.4 -3.8
CPGN Carpegna, Ital 8.29 316 P **Pn** 21 17 37.9 +2.8
ZAG Zagreb 8.34 339 *e*Pn **Pn** 21 17 36.5 +0.9
ZAG Zagreb 8.34 339 *e*Pn **Pn** 21 17 35.0 -0.6
CRE Caprese Michel 8.39 313 P **Pn** 21 17 41.1 +4.7
CRE Caprese Michel 8.39 313 P **Pn** 21 17 41.1 +4.7
RIY Rijeka 8.41 330 *e*Pn **Pn** 21 17 37.2 +0.6
RIY Rijeka 8.41 330 *e*Pn **Pn** 21 17 37.3 +0.7
MLR Muntele Rosu 8.45 28 Pn **Pn** 21 17 39.5 +2.2
comp=E,0.8nm,0.3s,baz=167,slow=5.3,SNR=22
MLR Muntele Rosu 8.45 28⇑⇑P **Pn** 21 17 39.1 +1.8
MLR Muntele Rosu 8.45 28 **Pn** 21 17 37.3 +0.1
GBRS Gornja Briga 8.46 333⇑ *e*Pn **Pn** 21 17 38.2 +0.9
CRES Cresnjev 8.50 336 *e*Pn **Pn** 21 17 37.5 -0.3
DOPR Dopca 8.67 24⇓⇓P **Pn** 21 17 41.6 +1.4
BEHE Becsehely 8.73 344 *e*Pn **Pn** 21 17 40.2 -0.8
TIRR Tirgusor 8.76 41⇓⇓P **Pn** 21 17 43.3 +2.0
CEY Cerknica 8.78 332 *e*Pn **Pn** 21 17 42.0 +0.3
DRGR 8.82 11 P **Pn** 21 17 44.4 +2.1
MATC Matruh 8.83 138 P **Pn** 21 17 39.0 -3.4
baz=138
CJR Cluj-Napoca 8.90 15⇑⇑P **Pn** 21 17 44.5 +1.2
OZUR 8.92 25⇓⇓P **Pn** 21 17 45.8 +2.2
LJU Ljubljana 9.00 333 *e*Pn **Pn** 21 17 45.1 +0.4
LJU Ljubljana 9.00 333 *e*Pn **Pn** 21 17 44.8 +0.1
PLOR Plostina 9.02 29 P **Pn** 21 17 46.8 +1.8
PLOR Plostina 9.02 29⇓⇓P **Pn** 21 17 46.8 +1.8
VRI Vrincioaia 9.06 30⇑⇑P **Pn** 21 17 47.2 +1.6
KEST Kesra 9.13 258 Pn **Pn** 21 17 46.9 +0.3
comp=E,0.8nm,0.3s,baz=36,slow=7.3,SNR=14
KEST Sn **Sn** 21 19 28.6 -0.7
comp=E,0.8nm,0.3s,baz=90,slow=23,SNR=10
KEST LR LR 21 21 16.8
comp=E,290nm,19.6s,baz=62,slow=37
SOKA Soboth 9.39 337 *e*Pn **Pn** 21 17 49.5 -0.7
SNR=25
SOKA Sn **Sn** 21 19 28.7 -6.9
comp=E,18nm,0.5s
OBKA Obir 9.40 335 *e*Pn **Pn** 21 17 50.1 -0.1
OBKA *e*Sn **Sn** 21 19 34.9 -0.9
OBKA Obir 9.40 335 *e*Pn **Pn** 21 17 50.4 +0.2
comp=E,57nm,0.6s,SNR=21
OBKA Sn **Sn** 21 19 35.6 -0.3
comp=E,76nm,0.4s
ARCR ARCALIA 9.42 17⇓⇓P **Pn** 21 17 51.7 +1.4
TEOL Teolo 9.70 321 **Pn** 21 17 54.5 +0.3
ARSA Arzberg 9.77 340 *e*Pn **Pn** 21 17 54.6 -0.6
ARSA Arzberg 9.77 340 *e*Pn **Pn** 21 17 54.8 -0.5
comp=E,9.4nm,0.4s,SNR=7.0
PSZ Piszkesteto 9.78 358 P **Pn** 21 17 55.8 +0.4
PSZ Piszkesteto 9.78 358⇑⇑P **Pn** 21 17 56.8 +1.4
PSZ Piszkesteto 9.78 358 **Pn** 21 17 55.8 +0.4
MYKA Terra Mystica 9.82 332 *e*Pn **Pn** 21 17 56.1 +0.1
comp=E,24nm,0.5s,SNR=7.9
MYKA Sn **Sn** 21 19 42.4 -3.9
comp=E,38nm,0.8s
SWA2 9.84 153 P **Pn** 21 17 54.5 -1.7
baz=156
SWA2 S Sn 21 19 21.7 -25
baz=156
SWA2 AMP 21 20 00.0
baz=156
GIRR Girov 9.91 25⇑⇑P **Pn** 21 17 58.7 +1.6
PRMA PARMA 10.02 315 **Pn** 21 17 58.5 -0.1
TRPA Tarpa 10.12 8⇑⇑P **Pn** 21 18 02.9 +1.0
BURAR Bucovina Array 10.12 19 P **Pn** 21 18 02.0 +1.9
BURAR Bucovina Array 10.12 19⇓⇓P **Pn** 21 18 02.1 +1.9
BUR08 Bucovina Ar. S 10.14 19 **Pn** 21 18 00.5 +0.1
CTI Castel Tesino 10.20 324 P **Pn** 21 18 01.2 0.0
CTI Castel Tesino 10.20 324 **Pn** 21 18 01.2 0.0
KBA Koelnbreinsper 10.31 332 *e*Pn **Pn** 21 18 01.0 -1.8
KBA *e*Sn **Sn** 21 19 54.0 -4.3
KBA Koelnbreinsper 10.31 332 *e*Pn **Pn** 21 18 02.9 +0.1
comp=E,12nm,0.3s,SNR=8.4
KBA Sn **Sn** 21 19 54.3 -4.1
comp=E,24nm,0.5s
CONA Conrad Observa 10.32 343 *e*Pn **Pn** 21 18 01.5 -1.3
comp=E,3.3nm,0.4s
ZST Bratislava 10.33 348 *e*SN **Sn** 21 19 51.2 -7.2
KECS Kecovo 10.34 1 *e*P **Pn** 21 18 05.2 +2.2
KECS Kecovo 10.34 1 *e*PN **Pn** 21 18 05.2 +2.2
ABTA Abfaltersbach 10.36 329 *e*Pn **Pn** 21 18 03.4 0.0
comp=E,9.4nm,0.3s,SNR=8.9
ABTA Sn **Sn** 21 19 53.3 -6.2
comp=E,107nm,0.9s
VYHS Vyhne 10.41 354 *e*P **Pn** 21 18 04.6 +0.6
VYHS *e* 21 19 58.2
VYHS Vyhne 10.41 354 *e*PN **Pn** 21 18 04.6 +0.6
VYHS *e*SN **Sn** 21 19 58.2 -2.3
SALO Salr 10.46 319 **Pn** 21 18 03.8 -0.9
MODS Modra-Piesok 10.47 349 *e*P **Pn** 21 18 06.0 +1.2
MODS *e* 21 19 55.3
MODS Modra-Piesok 10.47 349 *e*PN **Pn** 21 18 06.0 +1.2
MODS *e*SN **Sn** 21 19 55.3 -6.7
BR131 Keskin Array S 10.48 77 P **Pn** 21 18 04.6 -0.5
BR131 Keskin Array S 10.48 77 **Pn** 21 18 04.6 -0.5
BRTR Keskin Array B 10.48 77 Pn **Pn** 21 18 08.5 +3.4
comp=E,0.4nm,0.3s,baz=262,slow=12,SNR=20
UZH Uzhgorod 10.58 7 *e*P **Pn** 21 18 09.7 +3.4
UZH *e*S **Sn** 21 20 09.5 +4.8
MOA Molln 10.67 337 *e*Pn **Pn** 21 18 07.7 +0.1
MOA *e*Sn **Sn** 21 20 03.5 -3.5
MOA Molln 10.67 337 *e*Pn **Pn** 21 18 08.9 +1.3
comp=E,31nm,0.5s,SNR=11
MOA Sn **Sn** 21 20 03.4 -3.5
comp=E,21nm,0.5s
CRVS Cervenica-Dubn 10.79 4 *e*P **Pn** 21 18 13.1 +3.9
CRVS Cervenica-Dubn 10.79 4 *e*PN **Pn** 21 18 13.1 +3.9
KOLS Kolonicke sedl 10.88 7 *e*P **Pn** 21 18 12.8 +2.4
KOLS Kolonicke sedl 10.88 7 *e*PN **Pn** 21 18 12.8 +2.4
JAVC Velka Javorina 10.89 351 *e*PN **Pn** 21 18 12.0 +1.4
RJOB Jochberg 11.07 332 *e*Pn **Pn** 21 18 13.8 +0.8
RJOB *e*Sn **Sn** 21 20 13.0 -3.7
WTTA Wattenberg 11.14 328 *e*Pn **Pn** 21 18 15.2 +1.1
WTTA *e*Sn **Sn** 21 20 14.3 -4.3
WTTA Wattenberg 11.14 328 *e*Pn **Pn** 21 18 15.4 +1.3
comp=E,22nm,0.4s,SNR=11
WATA Walderalm 11.22 328 *e*Pn **Pn** 21 18 16.2 +1.1
comp=E,12nm,0.3s,SNR=9.1
WATA Sn **Sn** 21 20 17.9 -2.6
comp=E,72nm,1.0s
FUORN Ofenpass-Fuorn 11.28 322 **Pn** 21 18 16.5 +0.4
KRUC Moravsky 11.29 347 *e*PN **Pn** 21 18 16.2 +0.3
SQTA Sankt Quirin 11.29 326 *e*Pn **Pn** 21 18 17.1 +1.0
comp=E,17nm,0.4s
FETA Feichten 11.35 325 *e*Pn **Pn** 21 18 17.9 +0.9
comp=E,19nm,0.8s
FETA Sn **Sn** 21 20 20.2 -3.6
comp=E,18nm,0.7s
MOTA Moosalm 11.43 327 *e*Pn **Pn** 21 18 19.4 +1.3
comp=E,31nm,0.7s,SNR=5.6
MOTA Sn **Sn** 21 20 21.7 -3.9
comp=E,32nm,0.6s
VRAC Vranov 11.49 348 Pn **Pn** 21 18 19.6 +0.9
comp=E,0.4nm,0.3s,baz=173,slow=10.0,SNR=7.4
VRAC Sn **Sn** 21 20 19.2 -7.7

VRAC LR LR 21 24 16.8
comp=E,406nm,22.0s,baz=188,slow=46
VRAC Vranov 11.49 348 *e*PN **Pn** **21 18 19.2 +0.5**
PART Garmisch-Parte 11.54 327 *e*Pn **Pn** **21 18 20.4 +0.8**
PART *e*Sn **Sn** **21 20 25.3 -3.0**
DAVOX Davos/Dischmat 11.58 322 Pn **Pn** **21 18 21.4 +1.2**
comp=E,2.2nm,0.3s,baz=125,slow=16,SNR=21
DAVOX Sn **Sn** **21 20 24.8 -4.7**
comp=E,2.3nm,0.3s,baz=310,slow=17,SNR=7.1
DAVOX LR LR 21 24 18.2
comp=E,493nm,21.5s,baz=114,slow=45
RETA Reutte 11.69 326 *e*Pn **Pn** **21 18 23.1 +1.6**
comp=E,4.7nm,0.4s
GEC2 GERESS Array S 11.73 338 *e*Pn **Pn** **21 18 21.5 -0.7**
GEC2 GERESS Array S 11.73 338 Pn **Pn** **21 18 20.5 -1.6**
GERES GERESS Array B 11.73 338 Pn **Pn** **21 18 21.2 -1.0**
comp=E,2.0nm,0.3s,baz=158,slow=13,SNR=49
GERES Sn **Sn** **21 20 24.1 -9.0**
comp=E,0.7nm,0.3s,baz=164,slow=18,SNR=3.1
GERES LR LR 21 24 24.4
comp=E,628nm,19.4s,baz=178,slow=45
OKC Ostrava-Krasne 11.80 353 *e*P **Pn** **21 18 23.6 +0.6**
OKC Ostrava-Krasne 11.80 353 *e*PN **Pn** **21 18 23.6 +0.6**
MORC Moravsky Berou 11.81 351 ⇑P **Pn** **21 18 24.5 +1.4**
MORC Moravsky Berou 11.81 351 *e*PN **Pn** **21 18 23.6 +0.5**
DAVA Damuels 11.94 323 *e*Pn **Pn** **21 18 26.8 +1.7**
comp=E,5.6nm,0.3s
DAVA Sn **Sn** **21 20 31.0 -7.2**
comp=E,58nm,0.5s
LVV L'vov 11.97 12 *e*P **Pn** **21 18 25.2 -0.1**
LVV *e*S **Sn** **21 20 40.6 +1.9**
LVV MLR MLR
comp=E,3µm,8.0s
LVV MLR MLR
comp=N,2µm,9.0s
LVV MLR MLR
comp=Z,3µm,9.0s
FUR Furstenfeldbru 12.00 330 *e*Pn **Pn** **21 18 25.9 +0.2**
HNAT Natroun 12.03 132 P **Pn** **21 18 24.9 -1.2**
baz=131
HNAT AMP 21 20 00.0
baz=131
KHC Kasperske Hory 12.03 338 *e*P **Pn** **21 18 25.1 -1.0**
KHC *e* 21 20 33.1
KHC Kasperske Hory 12.03 338 *e*PN **Pn** **21 18 25.1 -1.0**
KHC *e*SN **Sn** **21 20 33.1 -7.0**
WET Wettzell 12.25 336 *e*Pn **Pn** **21 18 29.1 0.0**
GOPC GO Pecny, Ondr 12.43 343 *e*P **Pn** **21 18 31.2 -0.4**
GOPC GO Pecny, Ondr 12.43 343 *e*PN **Pn** **21 18 31.2 -0.4**
LPL La Plagne 12.54 310 P **Pn** **21 18 32.7 -0.6**
DPC Dobruska-Polom 12.54 348 *e*P **Pn** **21 18 33.7 +0.5**
DPC Dobruska-Polom 12.54 348 *e*PN **Pn** **21 18 33.7 +0.5**
PRU Pruhonice 12.55 343 *e*PN **Pn** **21 18 32.8 -0.5**
HSAF As Saff 12.60 129 P **Pn** **21 18 32.4 -1.6**
baz=128
SENIN Lac Senin/Sane 12.67 315 **Pn** **21 18 34.0 -1.1**
NORI Noerdlinger Ri 12.71 329 *e*Pn **Pn** **21 18 34.4 -1.0**
OSTC Ostas 12.76 348 *e*PN **Pn** **21 18 35.9 -0.2**
NBNS Bani Suef 13.17 133 P **Pn** **21 18 38.6 -3.2**
baz=133
MMAI Mount Meron Ar 13.28 108 Pn **Pn** **21 18 40.2 -3.1**
comp=Z,2.4nm,0.3s,baz=292,slow=12,SNR=16
MMAI Sn **Sn** **21 21 03.0 -7.8**
comp=Z,4.0nm,0.3s,baz=308,slow=28,SNR=7.1
NKC Novy Kostel 13.34 338 *e*P **Pn** **21 18 44.2 +0.1**
NKC Novy Kostel 13.34 338 *e*PN **Pn** **21 18 44.2 +0.1**
STU Stuttgart 13.35 326 *e*Pn **Pn** **21 18 43.9 -0.2**
BFO Black Forest 13.42 323 P **Pn** **21 18 44.2 -0.9**
BFO Black Forest 13.42 323 **Pn** **21 18 44.2 -0.9**
BRG Berggiesshubel 13.52 342 *e*P **Pn** **21 18 44.6 -1.8**
comp=Z,12nm,0.6s
BRG Berggiesshubel 13.52 342 *e*P **Pn** **21 18 44.6 -1.8**
BRG pmax pmax
comp=Z,12nm,0.6s
MOX Moxa 13.96 336 P **Pn** **21 18 52.7 +0.3**
MOX Moxa 13.96 336 *e*Pn **Pn** **21 18 52.8 +0.3**
AKASG Malin Array Be 14.06 24 Pn **Pn** **21 18 52.6 -1.1**
comp=Z,1.8nm,0.3s,baz=208,slow=12,SNR=2.0
AKBB Malin Array Si 14.06 24 *e*P **Pn** **21 18 54.0 +0.2**
AKBB Malin Array Si 14.06 24 **Pn** **21 18 53.7 0.0**
CLL Collm 14.15 341 *e*P **Pn** **21 18 56.0 +0.9**
CLL Collm 14.15 341 *e*P **Pn** **21 18 56.0 +0.9**
CLL *e*PP **P** **21 19 04.0 +1.3**
CLL *e* 21 21 27.0
CLL *e* 21 21 58.0
CLL LmV 21 24 00.0
comp=Z,600nm,19.9s
EIL Elat 14.77 121 Pn **Pn** **21 19 00.9 -2.7**
comp=Z,0.7nm,0.3s,baz=301,slow=17,SNR=14
EIL Sn Sn 21 21 32.0 -15
comp=Z,0.8nm,0.3s,baz=330,slow=14,SNR=3.2
ASF Jabal al Asfar 14.78 109 Pn **Pn** **21 19 02.5 -1.4**
comp=Z,0.2nm,0.3s,baz=270,slow=1.0,SNR=2.2
ASF Sn **Sn** **21 21 43.0 -4.7**
comp=Z,0.3nm,0.3s,baz=260,slow=19,SNR=2.8
RUE Ruedersdorf 15.06 344 *e*P **P** **21 19 12.9 +0.2**
RUE *e* 21 19 54.6
WLF Walferdange 15.38 323 PnPn **P** **21 19 19.9 +3.6**
WLF Walferdange 15.38 323 IAmb IAmb 21 19 24.7
comp=Z,56nm,1.0s
SOC Sochi 15.62 64 *e*P **P** **21 19 20.5 +1.5**
SOC *e* 21 22 15.7
SOC pmax pmax
comp=Z,66nm,1.0s
SOC MLR MLR
comp=Z,618nm,8.0s
SUW Suwalki 16.00 6 P **Pn** **21 19 19.3 -0.3**
SUW pmax pmax
comp=Z,94nm,0.8s
SUW Suwalki 16.00 6 **Pn** **21 19 19.3 -0.3**
MEM Membach 16.10 325 Pn **Pn** **21 19 19.9 -1.1**
MEM pPn **pP** **21 19 26.1 -1.4**
DOU Dourbes 16.41 322 P **P** **21 19 27.8 +0.1**
DOU PnPn **sP** **21 19 34.5 +2.1**
MICGM Minsk 17.16 15 *e* **Pn** **21 19 32.0 -2.3**
MNK Minsk 17.16 15 *e*P **Pn** **21 19 32.0 -2.3**
NACGM Naroch 17.33 13 *e*P **Pn** **21 19 31.0 -5.5**
NACGM PM 21 19 40.0
comp=Z,0.3nm,1.0s
PABE Paberze 17.55 7 *e*P **Pn** **21 19 38.5 -0.7**
PABE IAmb IAmb 21 19 41.9
comp=Z,75nm,0.8s
IIGN Ignalina 17.67 11 *i* Pg **Pn** **21 19 40.4 -0.3**
IIGN *e*P **Pn** **21 19 40.4 -0.3**
IIGN IAmb IAmb 21 19 44.9
comp=Z,20nm,1.0s
NEY Neytrino 17.70 66 *e*P **P** **21 19 43.8 +1.5**
NEY pmax pmax
comp=Z,1.0nm,0.8s
SHA1 Shidzhatmaz 17.74 65 *e*P **P** **21 19 45.2 +2.5**
KIV Kislovodsk 17.80 64 *e*P **P** **21 19 46.8 +3.5**
KIV pmax pmax
comp=Z,169nm,1.1s
KIV Kislovodsk 17.80 64 *i* P **P** **21 19 46.2 +2.9**
SNR=18
KIV Kislovodsk 17.80 64 P **Pn** **21 19 42.7 +0.2**
KIV IAmb IAmb 21 19 49.4
comp=Z,47nm,1.0s
KVAR Kislovodsk Arr 17.81 64 P **P** **21 19 43.8 +0.4**
baz=300,slow=20,SNR=3.3
ISAL Salakas 17.87 11 *e*P **Pn** **21 19 42.4 -0.8**
ISAL IAmb IAmb 21 19 45.8
comp=Z,26nm,0.9s
KBZ Khabaz 17.91 65 P **P** **21 19 44.0 -0.3**
comp=Z,0.2nm,0.3s,baz=245,slow=12,SNR=9.5
IZAR Zarasai 18.06 11 *e*P **Pn** **21 19 43.5 -2.1**
PYA1 Pyatigorsk 18.11 64 *e*P **P** **21 19 49.5 +2.9**
ZEI Tsey 18.50 68 *e*P **Pn** **21 19 53.4 +2.2**
ZEI pmax pmax
comp=Z,16nm,0.6s
VSR Storozhevoye 18.64 39 *e*P **P** **21 19 51.6 -0.7**
VSR pmax pmax
comp=Z,10.0nm,0.5s
ESDC Sonseca Array 18.97 282 P **Pn** **21 19 57.1 +0.3**
comp=Z,0.3nm,0.3s,baz=77,slow=11,SNR=11
GNI Garni 19.02 76 *e*P **Pn** **21 19 59.1 +1.6**
GNI pmax pmax
comp=Z,171nm,1.1s
GNI Garni 19.02 76 P **Pn** **21 19 57.8 +0.3**
comp=Z,1.4nm,0.3s,baz=270,slow=4.4,SNR=10
GNI LR LR 21 27 21.3
comp=Z,380nm,18.6s,baz=282,slow=37
GNI Garni 19.02 76 *i* P **Pn** **21 19 57.7 +0.3**
SNR=9.8
GNI Garni 19.02 76 P **P** **21 19 56.8 0.0**
GNI IAmb IAmb 21 20 02.5
comp=Z,50nm,1.0s
TBLG Delisi 19.03 71 IAmb IAmb 21 20 03.9
comp=Z,33nm,1.1s
LPSR Galich'ya Gora 19.40 36 *e*P **P** **21 20 00.6 0.0**
LPSR pmax pmax
comp=Z,50nm,0.7s
SLIT Slitere, Latvi 19.55 3 *e* P 21 19 53.5 -8.7
TAM Tamanrasset 19.89 224 P **P** **21 20 06.4 0.0**
TAM pmax pmax
comp=Z,7.0nm,1.0s
TAM Tamanrasset 19.89 224 P **P** **21 20 06.4 0.0**
GROC Groznyy 19.92 67 *e*P **Pn** **21 20 11.1 +3.0**
GROC pmax pmax
comp=Z,21nm,1.0s
VRH Novokhopyorsk 19.95 42 *e*P **Pn** **21 20 07.7 -0.6**
VRH pmax pmax
comp=Z,50nm,0.5s
OBN Obninsk 20.22 28⇓ *e*P **P** **21 20 09.7 +0.1**
OBN *i* *PP **sP** **21 20 13.8 -0.7**
OBN *e* 21 20 24.6
OBN PPP PPP 21 20 36.0
OBN S **S** **21 23 54.0 -2.0**
OBN SS **SnSn** **21 24 15.0 +1.7**
OBN SSS SSS 21 24 29.0
OBN pmax pmax
comp=Z,45nm,1.0s
OBN MLR MLR
comp=Z,305nm,12.0s
OBN Obninsk 20.22 28 P **P** **21 20 09.6 +0.1**
comp=Z,6.1nm,0.6s,baz=203,slow=9.5,SNR=7.4
OBN LR LR 21 29 35.6
comp=Z,66nm,21.5s,baz=206,slow=42
OBN Obninsk 20.22 28 P **P** **21 20 08.3 -1.3**
OBN IAmb IAmb 21 20 14.5
comp=Z,29nm,0.7s
GNBR Gunib 20.72 70 *e*P Pn 21 20 17.1 -0.4
GNBR pmax pmax
comp=Z,95nm,0.9s
VSU Vasula 20.76 9 *e*P **P** **21 20 16.1 +0.8**
VSU pmax pmax
comp=Z,548nm,0.9s
VSU Vasula 20.76 9 *e*P **P** **21 20 16.2 +0.9**
MDT Midelt 20.98 263 P Pn 21 20 20.4 -0.3
comp=Z,5.5nm,0.8s,baz=100,slow=6.1,SNR=8.4
MDT LR LR 21 28 60.0
comp=Z,162nm,22.0s,baz=56,slow=38
PBRG Braganca 21.05 289 *e*P **P** **21 20 24.4 +5.7**
MOS Moscow 21.09 28 *e*P **P** **21 20 17.7 -1.2**
MOS *e* 21 20 38.7
MOS *e* 21 20 52.9
MOS *e*S **S** **21 24 16.0 +2.7**
MOS pmax pmax
comp=Z,79nm,1.1s
MVO Moncorvo 21.26 287 *e*P **P** **21 20 21.4 +0.4**
comp=Z,47nm,1.4s
AKT Akhty 21.27 72 *e*P **P** **21 20 21.9 +0.8**
AKT *e* 21 20 39.9
AKT *e*S Sn 21 24 23.8 -0.6
AKT pmax pmax
comp=Z,53nm,0.9s
PMRV Marv??o 21.63 282 *e*P **P** **21 20 29.6 +4.6**
comp=Z,43nm,1.3s
PCBR Castelo Branco 21.66 283 *e*P **P** **21 20 26.6 +1.3**
comp=Z,39nm,2.4s
MTE Manteigas 21.68 285 *e*P **P** **21 20 31.8 +6.3**
comp=Z,59nm,1.6s
PMTG Montargil 22.31 281 *e*P **P** **21 20 32.6 +0.3**
comp=Z,33nm,1.8s
PTOM Tomar 22.40 283 *e*P P 21 20 40.6 +7.4
comp=Z,62nm,1.9s
HFS Hagfors 22.42 351 P **P** **21 20 32.9 -0.3**
comp=Z,375nm,1.4s,baz=159,slow=8.3,SNR=40
PUL Pulkovo 22.57 13 *e*P **P** **21 20 34.8 0.0**
PUL pmax pmax
comp=Z,112nm,1.0s
KONO Kongsberg 22.60 346 *e*P **P** **21 20 36.8 +1.7**
OSL Oslo 22.66 347 *e*P **P** **21 20 35.4 -0.4**
PNCL Nicolau / Gran 22.68 279 *e*P **P** **21 20 42.2 +6.0**
comp=Z,43nm,1.7s
NC602 NORSAR Array S 23.29 349 *e*P **P** **21 20 42.3 0.0**
EKA Eskdalemuir Ar 23.38 325 P **P** **21 20 44.5 +1.2**
comp=Z,26nm,1.0s,baz=127,slow=9.6,SNR=14
FINES FINESS Array B 23.60 7 *i* P **P** **21 20 44.9 -0.5**
FINES pmax pmax
comp=Z,14nm,0.6s
FINES FINESS Array B 23.60 7 P **P** **21 20 43.8 -1.6**
comp=Z,14nm,0.6s,baz=172,slow=11,SNR=44
FINES PcP **PcP** **21 24 30.6 +0.7**
comp=Z,1.8nm,0.7s,baz=130,slow=5.6,SNR=3.1
FINES LR LR 21 31 10.0
comp=Z,677nm,18.5s,baz=226,slow=40
FIA1 FINESS Array S 23.60 7 P **P** **21 20 44.3 -1.1**
NC405 NORSAR Array S 23.63 350 P **P** **21 20 44.0 -1.6**
NB2 NORSAR Subarra 23.63 349 P **P** **21 20 46.1 +0.4**
comp=Z,183nm,2.0s,baz=157,slow=10
NB2 NORSAR Subarra 23.63 349 P **P** **21 20 46.1 +0.4**
baz=157,slow=10
NOA NORSAR Array B 23.63 349 P **P** **21 20 45.2 -0.5**
comp=Z,9.5nm,0.9s,baz=159,slow=9.8,SNR=22
NOA LR LR 21 32 47.1
comp=Z,168nm,18.8s,baz=175,slow=44
NBO00 NORSAR Array S 23.69 348 P **P** **21 20 44.3 -1.9**
NC303 NORSAR Array S 23.78 349 IAmb IAmb 21 21 04.3
comp=Z,29nm,0.8s
SKAR Skarsla 23.81 345 *e*P **P** **21 20 50.2 +2.7**
NC204 NORSAR Array S 23.92 349 P **P** **21 20 47.1 -1.4**
SUF Sumiainen 24.87 6 P **P** **21 20 58.4 +1.3**
SUF pmax pmax
comp=Z,50nm,2.8s
DOMB Dombas 24.93 347 *e*P **P** **21 20 59.3 +1.6**
JOF Joensuu 25.70 12 P **P** **21 21 05.7 +1.1**
KLMR Klimovskoe 25.73 22 *e*P **P** **21 21 03.8 -1.1**
KLMR pmax pmax
comp=Z,35nm,0.8s
KLMR Klimovskoe 25.73 22 *e*P **P** **21 21 03.8 -1.1**
KLMR AMP 21 21 08.4
comp=Z,35nm,0.8s
KLMR LQ LQ 21 29 11.4
KLMR LQ LQ 21 29 11.4
KLMR LR LR 21 31 35.5
RAYN Ar Rayn 25.95 117 P **P** **21 21 05.0 -2.3**
RAYN pmax pmax
comp=Z,9.0nm,1.0s
RAYN Ar Rayn 25.95 117 P **P** **21 21 06.9 -0.5**
RAYN Ar Rayn 25.95 117 P **P** **21 21 05.0 -2.3**
NSS Namsos 26.89 352 *e*P **P** **21 21 13.7 -1.7**
KIRV Kirov 27.76 33 P **P** **21 21 23.0 -0.2**
comp=Z,13nm,0.7s,baz=215,slow=12,SNR=5.5
KIRV LR LR 21 33 14.4
comp=Z,390nm,18.6s,baz=259,slow=38
TMCR Tamitsa 28.12 16 *e*P **P** **21 21 25.9 -0.4**
TMCR pmax pmax
comp=Z,14nm,0.8s
PRGR Permogore 28.26 26 *e*P **P** **21 21 27.0 -0.6**
PRGR pmax pmax
comp=Z,19nm,0.8s
AKTO Aktyubinsk 29.32 53 P **P** **21 21 36.9 -0.3**
comp=Z,2.9nm,0.6s,baz=278,slow=12,SNR=8.4
AKTO LR LR 21 34 41.3
comp=Z,187nm,20.4s,baz=303,slow=39
GEYT Alibeck 29.62 79 P **P** **21 21 40.2 +0.1**
comp=Z,2.5nm,0.6s,baz=280,slow=8.9,SNR=7.0
TOA0 Torodi Ar. Sit 29.91 219 P **P** **21 21 40.6 -2.1**
TORD Torodi Ar. Bea 29.91 219 P **P** **21 21 44.2 +1.4**
comp=Z,3.8nm,0.8s,baz=39,slow=9.2,SNR=14
TORD LR LR 21 34 00.7
comp=Z,174nm,20.3s,baz=15,slow=37
TORD Torodi Ar. Bea 29.91 219 IAmb IAmb 21 21 47.8
comp=Z,3.0nm,0.9s
ARU Arti 31.18 42*c* *i*P **P** **21 21 53.1 -0.5**
ARU 21 22 50.2
ARU S **S** **21 27 01.5 +2.4**
ARU pmax pmax
comp=Z,14nm,1.2s
ARU Arti 31.18 42 P **P** **21 21 53.0 -0.5**
ARU IAmb IAmb 21 21 56.9
comp=Z,5.8nm,0.6s
TRO Tromso 31.56 359 *e*P **P** **21 21 56.8 +0.1**
ARCES ARCESS Array B 31.58 3 P **P** **21 21 56.9 -0.1**
comp=Z,5.6nm,0.8s,baz=189,slow=11,SNR=21
ARCES PcP **PcP** **21 24 49.6 +0.5**
comp=Z,2.0nm,0.8s,baz=186,slow=3.6,SNR=3.7
ARCES LR LR 21 34 42.5
comp=Z,658nm,19.2s,baz=276,slow=36
ARE0 ARCESS Array S 31.58 3 *e*P **P** **21 21 56.8 -0.1**
SVE Sverdlovsk 32.40 42 *e*P **P** **21 22 03.8 -0.5**
SVE pmax pmax
comp=Z,19nm,0.7s
SHME Shamm 32.44 101 P **P** **21 22 04.7 -0.3**
BANOM Banah 32.63 101 *i* P **P** **21 22 06.5 -0.1**
SNR=9.2
MSFE Esma-Masafi 32.81 102 P **P** **21 22 09.1 +0.9**
MDH Madha 32.95 102 P **P** **21 22 09.2 -0.2**
UOSS Minazif 33.06 103 P **P** **21 22 10.1 -0.3**
UOSS Minazif 33.06 103 P **P** **21 22 09.8 -0.6**
UOSS IAmb IAmb 21 22 28.0
comp=Z,6.8nm,0.8s
HATD Hatta, Dubai 33.07 103 P **P** **21 22 10.1 -0.4**
ASHO Ashiyiah 33.09 103 P **P** **21 22 10.7 0.0**
ALNE Al Ain 33.19 105 P **P** **21 22 11.3 -0.3**
BRVK Borovoye 37.19 50 P **P** **21 22 45.3 -0.4**
BRVK pmax pmax
comp=Z,8.0nm,1.0s
BRVK Borovoye 37.19 50 P **P** **21 22 45.2 -0.4**
BRVK IAmb IAmb 21 22 50.1
comp=Z,8.3nm,0.9s
KK31 Karatay Array 37.94 66 IAmb IAmb 21 22 59.9
comp=Z,10nm,0.7s
KKAR Karatay Array 37.94 66 P **P** **21 22 52.2 0.0**
KKAR pmax pmax
comp=Z,10.0nm,0.7s
KKAR Karatay Array 37.94 66 P **P** **21 22 52.2 0.0**
KKAR IAmb IAmb 21 22 59.9
comp=Z,10nm,0.7s
DBIC Dimbokro 38.77 222 P **P** **21 22 59.0 -0.4**
DBIC pmax pmax
comp=Z,5.0nm,0.8s
DBIC Dimbokro 38.77 222 P **P** **21 23 00.1 +0.8**
comp=Z,3.6nm,0.6s,baz=11,slow=9.1,SNR=11
DBIC LR LR 21 39 39.8
comp=Z,107nm,18.3s,baz=10.0,slow=37
DBIC Dimbokro 38.77 222 P **P** **21 22 59.0 -0.4**
TIC Toumodi 38.88 223 *e*P **P** **21 23 03.5 +3.2**
comp=Z,3.8nm,0.3s
KIC Kosan Boka 38.97 222 *e*P **P** **21 23 01.6 +0.5**
comp=Z,6.0nm,0.7s
KIC Kosan Boka 38.97 222 P **P** **21 23 01.6 +0.5**
LIC Lamto 39.23 222 *e*P **P** **21 23 04.2 +0.9**
comp=Z,20nm,0.7s
SPA0 Spitsbergen Ar 40.18 359 *e*P **P** **21 23 10.9 +0.4**
SPITS Spitsbergen Ar 40.18 359 LR LR 21 41 44.2
comp=Z,356nm,20.5s,baz=175,slow=39
AAK Ala-Archa 40.90 66 P **P** **21 23 17.1 0.0**
AAK pmax pmax
comp=Z,8.0nm,0.9s
AAK Ala-Archa 40.90 66 P **P** **21 23 18.1 +1.0**
AAK Ala-Archa 40.90 66 P **P** **21 23 17.1 0.0**
AAK IAmb IAmb 21 23 27.5
comp=Z,7.8nm,0.8s
KURK Kurchatov 42.41 53 *e*P **P** **21 23 28.9 -0.2**
KURK pmax pmax
comp=Z,6.0nm,1.1s
KURK Kurchatov 42.41 53 P **P** **21 23 27.3 -1.8**
NIL Nilore 42.62 79 P **P** **21 23 30.3 -0.8**
NIL pmax pmax
comp=Z,14nm,1.0s
NIL Nilore 42.62 79 P **P** **21 23 30.3 -0.8**
NIL IAmb IAmb 21 23 39.8
comp=Z,14nm,0.9s
KSH Kashi 42.77 70 *e*P **P** **21 23 34.5 +2.1**
KSH pmax pmax
comp=Z,10.0nm,0.6s
KSH pmax pmax
comp=Z,1µm,9.0s
PDGK Podgornoye 44.31 64 *i* P **P** **21 23 44.6 -0.1**
PDGK pmax pmax
comp=Z,7.0nm,0.9s
SUMG Summit 44.81 339 P **P** **21 23 48.0 -0.6**
SUMG pmax pmax
comp=Z,16nm,1.0s
SUMG Summit 44.81 339 *i* P **P** **21 23 51.3 +2.7**
comp=Z,44nm,1.0s
SUMG Summit 44.81 339 P **P** **21 23 48.0 -0.6**
MAKZ Makanchi 45.23 58 P **P** **21 23 50.9 -1.0**
MAKZ pmax pmax
comp=Z,4.0nm,0.8s
MAKZ Makanchi 45.23 58 P **P** **21 23 50.9 -1.0**
MK31 Makanchi Array 45.44 58 P **P** **21 23 52.9 -0.7**
MK31 pmax pmax
comp=Z,6.0nm,0.8s
MK31 Makanchi Array 45.44 58 P **P** **21 23 52.9 -0.7**
MK31 IAmb IAmb 21 24 01.5
comp=Z,6.0nm,0.8s
MKAR Makanchi Array 45.44 58 *i* P **P** **21 23 53.0 -0.6**
MKAR pmax pmax
comp=Z,7.0nm,0.5s
MKAR Makanchi Array 45.44 58 P **P** **21 23 52.5 -1.1**
comp=Z,7.3nm,0.5s,baz=274,slow=7.2,SNR=200
MKAR PcP **PcP** **21 25 32.4 -0.2**
comp=Z,0.7nm,0.6s,baz=318,slow=1.9,SNR=1.7
MKAR PP **PP** **21 25 39.6 -0.1**
comp=Z,1.7nm,0.9s,baz=264,slow=8.0,SNR=2.1
MKAR LR LR 21 46 49.7
comp=Z,142nm,19.7s,baz=306,slow=41
ZAA0 Zalesovo Array 45.82 48 P **P** **21 23 55.8 -0.7**
ZALV Zalesovo Beam 45.82 48 P **P** **21 23 56.0 -0.4**
comp=Z,11nm,0.4s,baz=274,slow=9.3,SNR=31
ZALV PP **PP** **21 25 41.8 -1.7**
comp=Z,4.2nm,0.6s,baz=279,slow=10,SNR=3.6
ZALV LR LR 21 45 16.1
comp=Z,261nm,20.8s,baz=311,slow=39
WMQ Urumqi 49.90 61 *e*P **P** **21 24 32.0 +3.7**
WMQ pP sP 21 24 36.5 +2.9
WMQ pmax pmax
comp=Z,10.0nm,1.1s
WMQ pmax pmax
comp=Z,400nm,6.7s
DANN Dangsing 53.02 81 *e*P **P** **21 24 51.5 -0.6**
comp=Z,51nm,1.0s
KOLN Koldanda 53.17 81 *e*P **P** **21 24 51.3 -1.8**
GKN Gorkha 53.86 81 *e*P **P** **21 24 57.3 -0.9**
DMN Daman 54.42 81 *e*P **P** **21 25 01.4 -1.0**
comp=Z,18nm,0.9s
PKIN Phulchoki 54.66 81 *e*P **P** **21 25 02.8 -1.3**
PKI Pulchoki 54.67 81 *e*P **P** **21 25 03.4 -0.9**
GUN Gumba 54.87 80 *e*P **P** **21 25 05.2 -0.6**
MOY Mondy 55.88 48 *e*P **P** **21 25 14.0 +1.6**
RAMN Ramite 55.90 81 *e*P **P** **21 25 11.7 -1.3**
ODAN Odare 56.56 80 *e*P **P** **21 25 17.2 -0.5**
TAPN Taplejung 56.56 80 *e*P **P** **21 25 17.3 -0.6**
comp=Z,19nm,1.0s
TLY Talaya 57.41 47 *e*P **P** **21 25 24.1 +0.9**
TLY pmax pmax
comp=Z,13nm,1.2s
TLY MLR MLR
comp=Z,272nm,7.0s
TLY Talaya 57.41 47 P **P** **21 25 24.7 +1.5**
comp=Z,1.4nm,0.4s,baz=277,slow=7.2,SNR=4.4
ZAK Zakamensk 57.69 49 *e*P **P** **21 25 25.0 -0.2**
ZAK pmax pmax
comp=Z,3.0nm,1.0s
LSA Lhasa 58.08 75 P **P** **21 25 27.9 -0.8**
SCHQ Schefferville 58.40 317 P **P** **21 25 32.0 +2.0**
comp=Z,1.7nm,0.4s,baz=44,slow=6.1,SNR=5.7
SCHQ Schefferville 58.40 317 P **P** **21 25 29.8 -0.2**
SCHQ IAmb IAmb 21 25 46.8
comp=Z,4.0nm,0.8s
TIXI Tiksi 59.74 20 *e*P **P** **21 25 39.5 +0.5**
TIXI pmax pmax
comp=Z,4.0nm,1.4s
TIXI Tiksi 59.74 20 P **P** **21 25 38.5 -0.5**
TIXI IAmb IAmb 21 25 53.7
comp=Z,4.0nm,1.1s
GTA Gaotai 59.97 62 *e*P **P** **21 25 41.0 -0.3**
GTA pP pP 21 25 45.5 +0.4
GTA sP sP 21 25 48.5 +1.9
GTA pmax pmax
comp=Z,4.0nm,1.4s
BOD Bodaibo 60.49 38 *e*P **P** **21 25 42.8 -1.6**
BOD pmax pmax
comp=Z,9.0nm,1.8s
SONM Songino Array 60.59 50 P **P** **21 25 45.3 -0.1**
comp=Z,2.5nm,0.7s,baz=279,slow=6.9,SNR=17
SONM LR LR 21 52 36.5
comp=Z,204nm,19.1s,baz=326,slow=37
SONM Songino Array 60.59 50 IAmb IAmb 21 25 53.9
comp=Z,4.1nm,1.1s
SHL Shillong 60.69 79 IAmb IAmb 21 25 54.0

comp=Z,5.1nm,0.9s
ULN Ulaanbaatar 60.98 50 P **P** **21 25 47.8 -0.3**
ULN pmax pmax
comp=Z,4.0nm,0.8s
ULN Ulaanbaatar 60.98 50 P **P** **21 25 47.8 -0.3**
ULN IAmb IAmb 21 25 52.5
comp=Z,3.9nm,0.8s
YAK Yakutsk 65.21 29 *e*P **P** **21 26 15.3 -0.4**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,2.0nm,1.2s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK Yakutsk 65.21 29 P **P** **21 26 14.2 -1.5**
comp=E,8.3nm,0.5s,baz=138,slow=1.4,SNR=4.6
YAK Yakutsk 65.21 29 P **P** **21 26 14.4 -1.3**
BOSA Boshof 66.56 175 P **P** **21 26 24.3 -0.6**
BOSA pmax pmax
comp=Z,5.0nm,1.1s
BOSA Boshof 66.56 175 P **P** **21 26 25.8 +0.9**
comp=Z,1.7nm,0.6s,baz=348,slow=7.0,SNR=4.1
BOSA LR LR 21 58 24.9
comp=Z,277nm,18.4s,baz=0.0,slow=39
BOSA Boshof 66.56 175 P **P** **21 26 24.3 -0.6**
BOSA IAmb IAmb 21 26 34.1
comp=Z,5.2nm,1.1s
HHC Hu-ho-hao-te 67.17 55 *e*P **P** **21 26 30.5 +1.7**
HHC pP sP 21 26 37.0 +2.8
HHC pmax pmax
comp=Z,3.0nm,1.0s
HHC pmax pmax
comp=Z,65nm,4.0s
XAN Xi'an 68.97 63 P **P** **21 26 39.8 -0.4**
XAN pP PcP 21 27 12.3 +7.9
XAN pmax pmax
comp=Z,6.0nm,1.2s
XAN Xi'an 68.97 63 P **P** **21 26 39.6 -0.6**
XAN pmax pmax
comp=Z,6.0nm,1.0s
XAN Xi'an 68.97 63 P **P** **21 26 39.6 -0.6**
XAN IAmb IAmb 21 26 47.9
comp=Z,6.1nm,1.0s
CHTO Chiang Mai 69.83 82 P **P** **21 26 44.3 -1.4**
CHTO pmax pmax
comp=Z,3.0nm,1.0s
CHTO Chiang Mai 69.83 82 P **P** **21 26 44.3 -1.4**
CMAR Chiang Mai Arr 70.03 82 *i* P **P** **21 26 46.5 -0.4**
CMAR pmax pmax
comp=Z,2.0nm,0.6s
CMAR Chiang Mai Arr 70.03 82 P **P** **21 26 45.9 -1.0**
comp=Z,1.3nm,0.6s,baz=303,slow=7.2,SNR=17
BILL Bilibino 71.09 13⇓ *e*P **P** **21 26 53.3 +0.8**
BILL *e* 21 27 07.3
BILL pmax pmax
comp=Z,4.0nm,1.1s
BILL MLR MLR
comp=Z,115nm,17.0s
BILL Bilibino 71.09 13 P **P** **21 26 52.8 +0.2**
ENH Enshi 71.42 66 P **P** **21 26 55.1 -0.1**
ENH IAmb IAmb 21 27 02.1
comp=Z,6.9nm,0.9s
INK Inuvik 72.08 350 LR LR 22 00 13.4
comp=Z,110nm,18.2s,baz=52,slow=37
SEY Seymchan 72.22 21 P **P** **21 27 00.6 +1.2**
comp=Z,2.1nm,0.7s,baz=293,slow=6.8,SNR=6.4
YKA Yellowknife Ar 73.38 340 P **P** **21 27 07.3 +1.1**
comp=Z,1.0nm,0.6s,baz=40,slow=5.3,SNR=12
YKA LR LR 22 03 54.0
comp=Z,190nm,18.3s,baz=0.0,slow=40
KLR Kul'dur 73.99 39 *e*P **P** **21 27 11.2 +1.0**
KLR pmax pmax
comp=Z,9.0nm,1.0s
KLR Kul'dur 73.99 39 P **P** **21 27 10.5 +0.3**
comp=Z,5.0nm,0.7s,baz=308,slow=7.2,SNR=15
CN2 Changchun 74.01 47 *e*P **P** **21 27 09.5 -0.9**
RDOG Red Dog Mine 74.10 1 P **P** **21 27 10.2 -0.2**
RDOG IAmb IAmb 21 27 13.1
comp=Z,4.5nm,0.9s
MA2 Magadan 74.39 24 P **P** **21 27 14.0 +1.7**
MA2 Magadan 74.39 24 P **P** **21 27 13.9 +1.7**
comp=Z,5.2nm,0.3s,baz=304,slow=5.9,SNR=6.1
WHN Wuhan 74.72 63 P P 21 27 22.0 +7.3
GRNR Gornyy 75.23 36⇑ *i*P **P** **21 27 18.0 +0.7**
GRNR pmax pmax
comp=Z,9.0nm,0.6s
GRNR MLR MLR
comp=Z,110nm,15.0s
ULM Lac du Bonnet 75.65 324 P **P** **21 27 21.6 +1.8**
comp=Z,3.9nm,0.8s,baz=30,slow=7.1,SNR=5.1
ULM LR LR 22 01 03.1
comp=Z,228nm,18.6s,baz=70,slow=36
ULM Lac du Bonnet 75.65 324 IAmb IAmb 21 27 27.1
comp=Z,8.4nm,1.1s
Y58A Scranton 76.85 303 P **P** **21 27 28.4 +1.6**
ILAR Eielson Array 76.94 354 P **P** **21 27 28.5 +1.7**
comp=Z,1.2nm,0.9s,baz=360,slow=4.7,SNR=8.1
ILAR LR LR 22 04 45.7
comp=Z,51nm,18.1s,baz=9.5,slow=38
NJ2 Nanjing 76.95 60 *e*P **P** **21 27 30.0 +2.6**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
USRK Ussuriysk Ar. 77.40 43 P **P** **21 27 29.5 -0.3**
comp=Z,2.5nm,0.7s,baz=298,slow=3.8,SNR=6.4
USRK LR LR 22 05 32.8
comp=Z,194nm,19.1s,baz=325,slow=39
KSRS Korea Array 79.46 51 P **P** **21 27 41.2 0.0**
comp=Z,2.8nm,0.7s,baz=307,slow=4.7,SNR=8.2
YSS Yuzh-Sakhalins 80.88 36 *e*P **P** **21 27 50.0 +1.3**
YSS pmax pmax
comp=Z,20nm,1.1s
YSS MLR MLR
comp=Z,100nm,18.0s
PETK Petropavlovsk- 81.89 24 LR LR 22 10 02.1
comp=Z,80nm,18.0s,baz=41,slow=40
ASAJ Asahikawa 82.90 38 P **P** **21 27 59.1 -0.3**
comp=Z,5.7nm,0.7s,baz=20,slow=2.7,SNR=5.9
BDFB Brasilia 83.37 244 LR LR 22 06 10.9
comp=Z,99nm,18.1s,baz=322,slow=36
JTMT Jette 85.41 331 P **P** **21 28 10.7 -1.6**
YNE Yellowstone No 85.91 327 P **P** **21 28 14.4 -0.7**
NEW Newport 86.03 333 IAmb IAmb 21 28 18.5
comp=Z,5.0nm,1.1s
MJAR Matsushiro Arr 86.11 46 P **P** **21 28 15.9 0.0**
MJAR pmax pmax
comp=Z,4.0nm,1.2s
MJAR Matsushiro Arr 86.11 46 P **P** **21 28 15.8 0.0**
comp=Z,1.3nm,0.7s,baz=310,slow=6.5,SNR=3.4
PDAR Pinedale Array 87.50 326 P **P** **21 28 24.0 +1.1**
comp=Z,0.3nm,0.6s,baz=292,slow=4.8,SNR=3.2
PDAR LR LR 22 09 54.8
comp=Z,133nm,18.9s,baz=35,slow=37
HAWA Hanford 88.48 334 P **P** **21 28 26.6 -0.5**
HAWA IAmb IAmb 21 28 35.8
comp=Z,5.7nm,1.1s
BMO Blue Mountains 88.98 331 P **P** **21 28 28.0 -1.6**
BMO pmax pmax
comp=Z,3.0nm,0.8s
BMO Blue Mountains 88.98 331 P **P** **21 28 28.0 -1.6**
BMO IAmb IAmb 21 28 37.1
comp=Z,2.6nm,0.8s
HWUT Hardware Ranch 89.32 326 IAmb IAmb 21 28 38.1
comp=Z,4.0nm,0.8s
LEM Lembang 92.03 97 P **P** **21 28 44.7 +0.4**
comp=Z,13nm,0.4s,baz=301,slow=19,SNR=2.3
NVAR Mina Array Bea 94.83 329 P **P** **21 28 58.4 +1.4**
comp=Z,0.1nm,0.3s,baz=40,slow=2.9,SNR=2.2
TXAR Lajitas Array 94.90 313 P **P** **21 28 58.1 +0.7**
comp=Z,0.3nm,0.6s,baz=76,slow=3.8,SNR=3.7
CPUP Villa Florida 96.91 242 LR LR 22 14 14.5
comp=Z,80nm,18.2s,baz=48,slow=36
LPAZ La Paz 98.70 256 LR LR 22 14 16.1
comp=Z,48nm,20.4s,baz=46,slow=36
WRA Warramunga Arr 120.67 92 PKP **PKPdf** **21 34 26.2 -0.8**
comp=Z,0.5nm,0.7s,baz=316,slow=2.0,SNR=8.1
ASAR Alice Springs 122.31 96 PKP **PKPdf** **21 34 30.1 0.0**
comp=Z,0.3nm,0.4s,baz=313,slow=1.6,SNR=7.2

BEO 26 21:15:51.0±1.4, 43°28N×19°72E, h0km, ML1.3/3,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJES	**Sjenica**	**0.19**	**96**	*e*Pg	Pg	21 15 54.8	+0.3
SJES				*e*Sg	Sg	21 15 56.2	-0.7
IVAS	**Ivanjica**	**0.43**	**47**	*e*Pg	Pg	21 15 59.5	+0.2
IVAS				*e*Sg	Sg	21 16 05.0	+0.2
DIVS	**Divibare**	**0.84**	**13**	*e*Pg	Pg	21 16 05.4	-1.7
DIVS				*e*Sg	Sg	21 16 17.4	-0.6

*THE **26** 21:32:00.9, 38°.14N×20°.35E, h8km±1km, ML3.5/7, Error ellipse: s-maj=1.9km s-min=0.3km az=65.0*
*ATH **26** 21:32:00.7, 38°.16N×20°.37E, h17km±2km, ML3.3/11, Error ellipse: s-maj=3.1km s-min=1.0km az=76.0*
ISC 26 21:32:00.8±1.8, 38°.16N±0°.04×20°.36E±0°.08, h13km±6km, n30, σ0↑47/51, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.18**	**84**	P	**Pg**	**21 32 04.9**	**-0.1**
VLS				S	**Sg**	**21 32 07.6**	**-0.3**
	40μm,0.2s						
VLS	**Valsamata**	**0.18**	**84**	P	**Pg**	**21 32 05.0**	**-0.1**
VLS				S	**Sg**	**21 32 07.7**	**-0.3**
FSK	**Fiskardo**	**0.34**	**28**	P	**Pg**	**21 32 07.7**	**0.0**
FSK				S	**Sg**	**21 32 13.2**	**+0.8**
	16μm,0.5s						
FSK	**Fiskardo**	**0.34**	**28**	P	**Pg**	**21 32 07.7**	**0.0**
FSK				S	**Sg**	**21 32 12.4**	**-0.1**
FSK				AML	AML	21 32 13.8	
	comp=N,30620μm,0.5s						
FSK				AML	AML	21 32 14.0	
	comp=E,24785μm,0.6s						
KFL	**Anninata**	**0.34**	**98**	P	**Pg**	**21 32 07.7**	**0.0**
KFL				S	**Sg**	**21 32 13.1**	**+0.7**
	comp=E,26μm,0.3s						
KFL	**Anninata**	**0.34**	**98**	P	**Pg**	**21 32 07.7**	**0.0**
KFL				S	**Sg**	**21 32 12.9**	**+0.5**
KFL				AML	AML	21 32 13.8	
	comp=N,46852μm,0.3s						
KFL				AML	AML	21 32 14.0	
	comp=E,58861μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.37**	**139**	P	**Pg**	**21 32 08.5**	**+0.2**
VLMS				S	**Sb**	**21 32 14.0**	**-0.8**
VLMS				AML	AML	21 32 15.0	
	comp=N,77344μm,0.3s						
VLMS				AML	AML	21 32 16.4	
	comp=E,43716μm,0.2s						
EVGI	**Lefkada island**	**0.52**	**27**	P	**Pg**	**21 32 11.2**	**+0.2**
EVGI				S	**Sb**	**21 32 18.9**	**-0.2**
EVGI	**Lefkada island**	**0.52**	**27**	P	**Pb**	**21 32 11.6**	**-0.1**
EVGI				S	**Sg**	**21 32 18.7**	**+0.7**
MGNA	**Meganis**	**0.60**	**34**	P	**Pg**	**21 32 12.4**	**-0.2**
MGNA				S	**Sg**	**21 32 20.3**	**-0.3**
MGNA				AML	AML	21 32 21.9	
	comp=E,10963μm,0.4s						
MGNA				AML	AML	21 32 22.0	
	comp=N,6527μm,0.3s						
LKD2	**Lefkada island**	**0.67**	**20**	P	**Pg**	**21 32 13.9**	**0.0**
LKD2				S	**Sg**	**21 32 23.3**	**+0.5**
LKD2				AML	AML	21 32 29.4	
	comp=N,2505μm,0.3s						
LKD2				AML	AML	21 32 29.5	
	comp=E,2816μm,0.6s						
TSLK	**Tsoukalades, L**	**0.71**	**19**	P	**Pg**	**21 32 14.2**	**-0.3**
TSLK				S	**Sg**	**21 32 24.4**	**+0.5**
TSLK				AML	AML	21 32 32.0	
	comp=N,3460μm,0.4s						
TSLK				AML	AML	21 32 32.8	
	comp=E,2999μm,0.4s						
RLS	**Riolos of Patr**	**0.88**	**96**	P	**Pg**	**21 32 17.1**	**-0.7**
RLS				S	**Sn**	**21 32 30.8**	**-0.6**
	comp=E,1μm,0.5s						
RLS	**Riolos of Patr**	**0.88**	**96**	P	**Pg**	**21 32 17.1**	**-0.7**
RLS				S	**Sb**	**21 32 30.2**	**+0.7**
RLS				AML	AML	21 32 33.6	
	comp=E,2552μm,0.4s						
RLS				AML	AML	21 32 34.4	
	comp=N,3196μm,0.5s						
PVO	**Paravola**	**1.02**	**63**	P	**Pb**	**21 32 20.2**	**-0.1**
PVO				S	**Sn**	**21 32 35.4**	**+0.4**
	comp=N,2μm,0.6s						
PVO	**Paravola**	**1.02**	**63**	P	**Pb**	**21 32 20.1**	**-0.3**
PVO				S	**Sn**	**21 32 34.8**	**-0.2**
PVO				AML	AML	21 32 39.7	
	comp=E,3208μm,0.4s						
PVO				AML	AML	21 32 42.0	
	comp=N,3032μm,0.7s						
DRO	**Drossia**	**1.09**	**100**	P	**Pb**	**21 32 21.0**	**-0.4**
DRO				S	**Sn**	**21 32 36.9**	**+0.4**
	comp=N,2μm,0.3s						
DRO	**Drossia**	**1.09**	**100**	P	**Pb**	**21 32 21.2**	**-0.2**
DRO				S	**Sg**	**21 32 36.3**	**+0.4**
DRO				AML	AML	21 32 40.8	
	comp=E,5195μm,0.3s						
DRO				AML	AML	21 32 42.0	
	comp=N,4296μm,0.4s						
AMT	**Artemida-Makis**	**1.24**	**120**	P	**Pb**	**21 32 24.1**	**+0.1**
AMT				S	**Sg**	**21 32 42.1**	**+1.4**
	comp=N,1μm,0.5s						
EFP	**Efpalio**	**1.25**	**77**	P	**Pn**	**21 32 23.5**	**-0.3**
EFP	**Efpalio**	**1.25**	**77**	P	**Pn**	**21 32 23.7**	**-0.1**
EFP				AML	AML	21 32 47.2	
	comp=E,1395μm,0.4s						
EFP				AML	AML	21 32 57.5	
	comp=N,1450μm,0.5s						
LAKA	**Lakka**	**1.28**	**86**	P	**Pn**	**21 32 24.2**	**-0.1**
LAKA				S	**Sg**	**21 32 43.4**	**+1.4**
LAKA	**Lakka**	**1.28**	**86**	P	**Pn**	**21 32 24.0**	**-0.3**
SERG	**Sergoula**	**1.36**	**79**	P	**Pn**	**21 32 25.4**	**0.0**
TRIZ	**Trizonia**	**1.36**	**81**	P	**Pn**	**21 32 25.4**	**-0.1**
TRIZ	**Trizonia**	**1.36**	**81**	P	**Pn**	**21 32 25.4**	**-0.1**
EVR	**Evrytania**	**1.37**	**56**	P	**Pb**	**21 32 26.5**	**+0.2**
EVR				AML	AML	21 32 54.8	
	comp=N,921μm,0.7s						
EVR				AML	AML	21 33 00.4	
	comp=E,866μm,0.6s						
ALIK	**Aliki, Aigiali**	**1.38**	**85**	P	**Pn**	**21 32 25.9**	**+0.2**
KLV	**Kalavryta, Ach**	**1.42**	**94**	P	**Pb**	**21 32 26.9**	**-0.2**
KLV				S	**Sg**	**21 32 46.6**	**+0.1**
KLV	**Kalavryta, Ach**	**1.42**	**94**	P	**Pb**	**21 32 26.8**	**-0.2**

*IDC **26** 21:42:09.4±0.6, 38°.29N×20°.49E, h0km, mb4.0/18, mb1 4.0/26, mb1mx3.9/46, mbtmp3.9/26, ML3.6/8, MS3.3/2, Ms1 3.3/2, ms1mx2.8/59, Error ellipse: s-maj=12.6km s-min=11.7km az=42.0*
*NEIC **26** 21:42:10.6±2.0, 38°.21N±0°.04×20°.49E±0°.06, h7km±5km, Error ellipse: s-maj=8.1km s-min=5.0km az=47.0*
*PDG **26** 21:42:10.9±0.6, 38°.14N×20°.33E, h9km±1km, ML4.2/10, Error ellipse: s-maj=1.1km s-min=1.1km az=0.0*
*THE **26** 21:42:11.5, 38°.16N×20°.40E, h8km±1km, ML3.8/20, Error ellipse: s-maj=1.6km s-min=0.4km az=62.0*
*ATH **26** 21:42:12.2, 38°.19N×20°.49E, h13km±2km, ML4.0/12, Error ellipse: s-maj=2.2km s-min=0.8km az=36.0*
*TIR **26** 21:42:13.1, 38°.46N×20°.11E, h34km, Md4.0/7*
ISC 26 21:42:11.4±0.8, 38°.18N±0°.02×20°.46E±0°.02, h17km±5km, n227, σ1↑85/277, mb4.0/22, 19C-6D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.10**	**89**	P	**Pb**	**21 42 14.9**	**0.0**
VLS				S	**Sg**	**21 42 17.0**	**-0.3**
VLS	**Valsamata**	**0.10**	**89**	P	**Pb**	**21 42 15.0**	**0.0**
KFL	**Anninata**	**0.27**	**104**	P	**Pb**	**21 42 17.6**	**-0.2**
KFL				S	**Sb**	**21 42 22.1**	**0.0**
KFL	**Anninata**	**0.27**	**104**	P	**Pb**	**21 42 17.6**	**-0.2**
KFL				S	**Sb**	**21 42 21.8**	**-0.2**
KFL				AML	AML	21 42 22.4	
KFL				AML	AML	21 42 22.6	
FSK	**Fiskardo**	**0.29**	**16**	P	**Pg**	**21 42 17.9**	**+0.1**
FSK				S	**Sb**	**21 42 22.8**	**-0.1**
FSK	**Fiskardo**	**0.29**	**16**	P	**Pg**	**21 42 17.9**	**+0.1**
FSK				S	**Sg**	**21 42 22.4**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.34**	**152**	P	**Pb**	**21 42 18.9**	**-0.1**
VLMS				S	**Sb**	**21 42 24.6**	**+0.4**
VLMS				AML	AML	21 42 25.1	
VLMS				AML	AML	21 42 26.1	
EVGI	**Lefkada island**	**0.47**	**19**	P	**Pg**	**21 42 20.9**	**0.0**
EVGI				S	**Sg**	**21 42 27.8**	**+0.5**
	7μm,0.3s						
EVGI	**Lefkada island**	**0.47**	**19**	P	**Pg**	**21 42 20.9**	**0.0**
MGNA	**Meganis**	**0.55**	**28**	P	**Pg**	**21 42 22.1**	**-0.1**
MGNA				S	**Sg**	**21 42 29.9**	**+0.3**
MGNA				AML	AML	21 42 34.2	
	comp=N,32514μm,0.6s						
MGNA				AML	AML	21 42 34.6	
	comp=E,42149μm,0.8s						
LKD2	**Lefkada island**	**0.63**	**14**	P	**Pg**	**21 42 23.6**	**-0.3**
LKD2	**Lefkada island**	**0.63**	**14**	P	**Pg**	**21 42 23.9**	**0.0**
LKD2				S	**Sg**	**21 42 32.5**	**+0.2**
LKD2				AML	AML	21 42 39.8	
	comp=E,12767μm,0.6s						
LKD2				AML	AML	21 42 43.3	
	comp=N,12082μm,0.6s						
TSLK	**Tsoukalades, L**	**0.67**	**13**	P	**Pb**	**21 42 24.8**	**+0.2**
TSLK				S	**Sb**	**21 42 35.2**	**+1.6**
	comp=N,9μm,0.7s						
RLS	**Riolos of Patr**	**0.80**	**98**	P	**Pg**	**21 42 26.9**	**-0.1**
RLS				S	**Sn**	**21 42 39.5**	**0.0**
	comp=N,5μm,0.4s						
RLS	**Riolos of Patr**	**0.80**	**98**	P	**Pb**	**21 42 27.0**	**+0.1**
RLS				S	**Sb**	**21 42 37.9**	**+0.4**
RLS				AML	AML	21 42 44.2	
	comp=N,12584μm,0.5s						
RLS				AML	AML	21 42 46.7	
	comp=E,8216μm,0.4s						
PVO	**Paravola**	**0.95**	**62**	P	**Pg**	**21 42 29.9**	**+0.2**
PVO				S	**Sn**	**21 42 45.4**	**+2.3**
	comp=E,18μm,0.3s						
PVO	**Paravola**	**0.95**	**62**	P	**Pg**	**21 42 30.0**	**+0.2**
PVO				S	**Sg**	**21 42 42.9**	**+0.7**
PVO				AML	AML	21 42 45.7	
	comp=N,36925μm,0.4s						
PVO				AML	AML	21 42 46.0	
	comp=E,35455μm,0.3s						
DRO	**Drossia**	**1.01**	**102**	P	**Pg**	**21 42 30.8**	**-0.2**
DRO				S	**Sn**	**21 42 45.8**	**+1.1**
	comp=E,11μm,0.6s						
DRO	**Drossia**	**1.01**	**102**	P	**Pg**	**21 42 30.9**	**-0.2**
DRO				S	**Sn**	**21 42 45.2**	**+0.5**
DRO				AML	AML	21 42 57.9	
	comp=N,20913μm,0.6s						
DRO				AML	AML	21 42 58.1	
	comp=E,23194μm,0.7s						
UPR	**University Cam**	**1.05**	**84**	P	**Pg**	**21 42 33.2**	**+1.5**
UPR				S	**Sn**	**21 42 47.3**	**+1.7**
EFP	**Efpalio**	**1.17**	**77**	P	**Pn**	**21 42 33.0**	**+0.1**
EFP				S	**Sg**	**21 42 52.0**	**+2.9**
	comp=E,8μm,0.5s						
EFP	**Efpalio**	**1.17**	**77**	P	**Pb**	**21 42 33.3**	**+0.2**
EFP				S	**Sg**	**21 42 49.8**	**+0.6**
EFP				AML	AML	21 42 56.7	
	comp=N,13767μm,0.4s						
EFP				AML	AML	21 42 57.7	
	comp=E,16008μm,0.5s						
AMT	**Artemida-Makis**	**1.18**	**123**	P	**Pg**	**21 42 34.6**	**+0.4**
AMT				S	**Sg**	**21 42 55.9**	**+6.3**
	comp=E,6μm,0.6s						
AMT	**Artemida-Makis**	**1.18**	**123**	P	**Pg**	**21 42 34.9**	**+0.7**
AMT				S	**Sg**	**21 42 50.4**	**+0.9**
AMT				AML	AML	21 43 09.9	
	comp=N,10840μm,0.6s						
AMT				AML	AML	21 43 10.5	
	comp=E,12015μm,0.5s						
LAKA	**Lakka**	**1.20**	**86**	P	**Pb**	**21 42 33.8**	**+0.2**
LAKA				S	**Sg**	**21 42 52.3**	**+2.1**
	comp=E,4μm,0.5s						
LAKA	**Lakka**	**1.20**	**86**	P	**Pb**	**21 42 33.9**	**+0.2**
LAKA				S	**Sg**	**21 42 50.7**	**+0.5**
LAKA				AML	AML	21 43 00.3	
	comp=N,9449μm,0.5s						
LAKA				AML	AML	21 43 03.2	
	comp=E,7215μm,0.6s						
ANX	**Ano Chora**	**1.22**	**70**	P	**Pb**	**21 42 34.4**	**+0.3**
ANX				S	**Sg**	**21 42 53.9**	**+2.9**
	comp=E,11μm,0.6s						
ANX	**Ano Chora**	**1.22**	**70**	P	**Pg**	**21 42 34.9**	**-0.1**
SERG	**Sergoula**	**1.28**	**79**	P	**Pb**	**21 42 35.0**	**-0.1**
SERG				S	**Sg**	**21 42 56.1**	**+3.3**
	comp=E,5μm,0.5s						
TRIZ	**Trizonia**	**1.28**	**81**	P	**Pg**	**21 42 36.3**	**+0.2**
EVR	**Evrytania**	**1.29**	**55**	P	**Pb**	**21 42 35.5**	**+0.2**
EVR	**Evrytania**	**1.29**	**55**	P	**Pg**	**21 42 36.1**	**-0.2**
EVR				S	**Sg**	**21 42 53.8**	**+0.7**
EVR				AML	AML	21 43 03.2	
	comp=N,4991μm,0.5s						
EVR				AML	AML	21 43 10.9	
	comp=E,5307μm,1.0s						
ALIK	**Aliki, Aigiali**	**1.30**	**86**	P	**Pb**	**21 42 35.9**	**+0.5**
ALIK				S	**Sg**	**21 42 56.5**	**+3.0**
KALE	**Kalithea**	**1.34**	**80**	P	**Pb**	**21 42 36.0**	**-0.1**
KLV	**Kalavryta, Ach**	**1.34**	**95**	P	**Pb**	**21 42 36.5**	**+0.4**
KLV				S	**Sg**	**21 42 57.0**	**+2.3**
	comp=E,2μm,0.7s						
KLV	**Kalavryta, Ach**	**1.34**	**95**	P	**Pg**	**21 42 36.7**	**-0.6**
KLV				S	**Sg**	**21 42 55.3**	**+0.6**
KLV				AML	AML	21 43 01.0	
	comp=N,4545μm,0.6s						
KLV				AML	AML	21 43 08.1	
	comp=E,5352μm,0.8s						
IGT	**Igoumenitsa**	**1.36**	**356**	P	**Pb**	**21 42 38.5**	**+0.9**
IGT				S	**Sg**	**21 42 58.0**	**+2.7**
	comp=E,2μm,0.5s						
IGT	**Igoumenitsa**	**1.36**	**356**	P	**Pg**	**21 42 38.2**	**+0.6**
JAN	**Janina**	**1.51**	**12**	P	**Pg**	**21 42 41.2**	**+0.7**
JAN				S	**Sg**	**21 43 02.5**	**+2.3**
	comp=E,2μm,0.6s						
JAN	**Janina**	**1.51**	**12**	P	**Pg**	**21 42 40.3**	**-0.2**
ITM	**Ithomi**	**1.53**	**130**	P	**Pg**	**21 42 40.3**	**-0.6**
ITM				S	**Sg**	**21 43 02.6**	**+1.8**
	comp=E,2μm,0.5s						
ITM	**Ithomi**	**1.53**	**130**	P	**Pg**	**21 42 40.7**	**-0.2**
ITM	**Ithomi**	**1.53**	**130**		**Pb**	**21 42 39.8**	**+0.4**
ITM				Sn	**Sg**	**21 42 59.5**	**-1.2**
MAKR	**Makrakomi, Fth**	**1.55**	**57**	P	**Pg**	**21 42 40.8**	**-0.5**
PYL	**PYLOS**	**1.63**	**141**	P	**Pb**	**21 42 41.1**	**0.0**
PYL	**PYLOS**	**1.63**	**141**	P	**Pg**	**21 42 42.7**	**-0.1**
KLMT	**Kalamata**	**1.69**	**131**	P	**Pg**	**21 42 43.1**	**-0.7**
AGG	**Agios Georgios**	**1.69**	**59**	P	**Pg**	**21 42 43.9**	**0.0**
AGG	**Agios Georgios**	**1.69**	**59**		**Pn**	**21 42 39.8**	**+0.5**
VLX	**Vlachokerasia**	**1.72**	**117**	P	**Pg**	**21 42 44.7**	**+0.2**
VLX	**Vlachokerasia**	**1.72**	**117**	P	**Pg**	**21 42 44.5**	**0.0**
SRN	**Sarande**	**1.74**	**348**	P	**Pg**	**21 42 44.5**	**-0.3**
SRN	**Sarande**	**1.74**	**348**	*i* PN	**Pb**	**21 42 42.9**	**0.0**
SRN				*i* SN	**Sb**	**21 43 05.3**	**+0.8**
THL	**Klokotos Trika**	**1.84**	**41**	P	**Pb**	**21 42 45.9**	**+1.2**
THL				S	**Sg**	**21 43 10.7**	**0.0**
	comp=E,2μm,0.7s						
KPRO	**Kipourio**	**1.91**	**21**	P	**Pb**	**21 42 46.8**	**+0.9**
PROD	**Prodromos**	**1.92**	**87**	P	**Pb**	**21 42 46.4**	**+0.3**
LTK	**Loutraki**	**1.98**	**94**	P	**Pb**	**21 42 47.0**	**-0.1**
LOUT	**Loutraki**	**1.99**	**95**	P	**Pb**	**21 42 46.9**	**-0.3**
LKR	**Lokris**	**2.05**	**76**	P	**Pb**	**21 42 48.0**	**-0.2**
LKR				S	**Sb**	**21 43 14.5**	**+1.1**
	comp=E,1μm,0.4s						
PENT	**Pentalofos**	**2.08**	**14**	P	**Pb**	**21 42 49.4**	**+0.5**
LRSO	**Larissa Observ**	**2.12**	**45**	P	**Pb**	**21 42 49.4**	**0.0**
TPE	**Tepelena**	**2.15**	**351**	P	**Pb**	**21 42 50.1**	**+0.3**
TPE	**Tepelena**	**2.15**	**351**	*i* PN	**Pn**	**21 42 48.2**	**+1.8**
TPE				*i* SN	**Sn**	**21 43 14.3**	**+1.6**
VILL	**Villia**	**2.25**	**89**	P	**Pb**	**21 42 50.9**	**-0.7**
NEST	**Nestorio**	**2.28**	**11**	P	**Pb**	**21 42 52.4**	**+0.2**
DID	**Didima**	**2.30**	**106**	P	**Pn**	**21 42 48.4**	**-0.2**
KZN	**Kozani**	**2.36**	**25**	P	**Pb**	**21 42 52.6**	**-0.9**
VLO	**Vlora**	**2.41**	**342**	*i* PN	**Pb**	**21 42 53.5**	**-0.8**
NEO	**Neokhori**	**2.44**	**62**	P	**Pb**	**21 42 53.4**	**-1.4**
NEO				S	**Sb**	**21 43 23.6**	**-1.0**
	comp=E,1μm,0.4s						
XOR	**Xorichti**	**2.44**	**60**	P	**Pb**	**21 42 53.6**	**-1.3**
SCTE	**Santa Cesarea**	**2.45**	**321**		**Pn**	**21 42 51.8**	**+1.2**
VLI	**Veliai**	**2.45**	**126**	P	**Pb**	**21 42 55.0**	**0.0**
LIT	**Litokhoron**	**2.49**	**39**	P	**Pb**	**21 42 54.0**	**-1.7**
LIT	**Litokhoron**	**2.49**	**39**		**Pn**	**21 42 51.8**	**+0.7**
MRKA	**Markates**	**2.51**	**77**	P	**Pb**	**21 42 54.0**	**-2.1**
MRKA				S	**Sb**	**21 43 26.6**	**-0.1**
	comp=E,545nm,0.7s						
SKIA	**Skiathos**	**2.55**	**66**	P	**Pb**	**21 42 55.0**	**-1.8**
KTI	**Kastanea**	**2.56**	**30**	P	**Pb**	**21 42 55.7**	**-1.3**
ATH	**Athens Observa**	**2.58**	**94**	P	**Pn**

OHR	**Ohrid**	**2.94**	**5**	*i* Pn		**Pn**	**21 42 59.8**	**+2.3**
PAIG	**Paliouri**	**3.06**	**54**	P		**Pn**	**21 43 01.3**	**+2.3**
TIP	**Timpagrande**	**3.07**	**290**	P		**Pn**	**21 43 00.5**	**+1.3**
TIP	**Timpagrande**	**3.07**	**290**	⇑P		**Pn**	**21 43 00.7**	**+1.5**
TIP	**Timpagrande**	**3.07**	**290**			**Pn**	**21 43 00.2**	**+1.0**
THE	**Thessaloniki**	**3.13**	**38**	P		**Pb**	**21 43 03.7**	**-2.9**
KARY	**Karystos**	**3.14**	**91**	P		**Pn**	**21 43 02.3**	**+2.2**
GRG	**Griva**	**3.16**	**28**	P		**Pn**	**21 43 02.3**	**+1.9**
HORT	**Hortiatis**	**3.17**	**39**	P		**Pn**	**21 43 02.4**	**+1.8**
PLG	**Polygyros**	**3.19**	**46**	P		**Pn**	**21 43 02.9**	**+2.0**
TIR	**Tirane**	**3.20**	**352**	P		**Pn**	**21 43 03.0**	**+2.0**
TIR	**Tirane**	**3.20**	**352**	*i* PN		**Pn**	**21 43 03.3**	**+2.3**
TIR				*i* SN		**Sb**	**21 43 43.6**	**-3.0**
TIR	**Tirane**	**3.20**	**352**	⇑P		**Pn**	**21 43 04.7**	**+3.8**
TIR	**Tirane**	**3.20**	**352**			**Pn**	**21 43 02.2**	**+1.3**
SERI	**Serifos**	**3.35**	**106**	P		**Pn**	**21 43 05.5**	**+2.5**
SERI				S		**Sn**	**21 43 44.7**	**+2.2**
	comp=E,178nm,0.7s							
SOH	**Sokhos**	**3.46**	**39**	P		**Pn**	**21 43 07.3**	**+2.7**
PHP	**Peshkopia**	**3.50**	**360**	P		**Pn**	**21 43 07.6**	**+2.4**
PHP	**Peshkopia**	**3.50**	**360**	*i* PN		**Pn**	**21 43 07.7**	**+2.5**
PHP				*i* SN		**Sn**	**21 43 49.1**	**+2.8**
KNT	**Kendrikon**	**3.53**	**31**	P		**Pn**	**21 43 07.6**	**+2.2**
CEL	**Celeste**	**3.60**	**273**			**Pn**	**21 43 07.2**	**+0.8**
STIP	**Stip**	**3.76**	**20**	*i* Pn		**Pn**	**21 43 12.6**	**+4.0**
SRS	**Serrai**	**3.81**	**38**	P		**Pn**	**21 43 11.5**	**+2.2**
MATE	**Matera**	**3.82**	**312**	⇓P		**Pn**	**21 43 10.9**	**+1.6**
PUK	**Puka**	**3.89**	**354**	*i* PN		**Pn**	**21 43 11.9**	**+1.4**
PUK				*i* SN		Sg	21 44 28.7	+12
ULC	**Ulcinj**	**3.90**	**347**	⇑*i* Pn		**Pn**	**21 43 11.6**	**+1.0**
ULC				*i* Sn		**Sn**	**21 43 59.3**	**+3.4**
IMMV	**Iera Moni Meta**	**3.91**	**133**	P		**Pn**	**21 43 13.2**	**+2.4**
SG1	**Sgolgore (BA)**	**3.95**	**313**	*e*Pn		**Pn**	**21 43 12.8**	**+1.5**
SG1				S		**Sn**	**21 43 57.6**	**+0.3**
BAI	**Bari**	**4.03**	**318**	*e*Pn		**Pn**	**21 43 13.5**	**+1.2**
VAM	**Vamos**	**4.08**	**132**	P		**Pn**	**21 43 15.1**	**+2.1**
VAM				S		**Sn**	**21 44 03.5**	**+3.1**
THAS	**Thassos island**	**4.10**	**52**	P		**Pn**	**21 43 15.3**	**+2.1**
DRME	**Dracevica, Mon**	**4.12**	**347**	⇑*i* Pn		**Pn**	**21 43 14.9**	**+1.3**
DRME				*i* Sn		**Sn**	**21 44 04.4**	**+2.9**
APE	**Apeiranthos**	**4.17**	**104**	P		**Pn**	**21 43 16.3**	**+1.9**
APE	**Apeiranthos**	**4.17**	**104**	⇑P		**Pb**	**21 43 20.7**	**-3.7**
BCI	**Bajram Curri**	**4.20**	**356**	*i* PN		**Pn**	**21 43 16.5**	**+1.8**
BCI				*i* SN		**Sn**	**21 44 06.3**	**+3.0**
KAVA	**Kavala**	**4.21**	**47**	P		**Pn**	**21 43 16.7**	**+1.9**
BUM	**Brajici-Budva**	**4.29**	**344**	⇑*i* Pn		**Pn**	**21 43 17.0**	**+1.0**
BUM				*i* Sn		**Sn**	**21 44 08.2**	**+2.5**
PDG	**Podgorica**	**4.35**	**348**	Pn		**Pn**	**21 43 17.6**	**+0.9**
PDG						**Sn**	**21 44 07.8**	**+0.8**
TTG	**Podgorica**	**4.35**	**348**	⇑*i* Pn		**Pn**	**21 43 18.7**	**+2.0**
TTG				*i* Sn		**Sn**	**21 44 09.8**	**+2.8**
ACER	**Acerenza**	**4.36**	**308**	Pn		**Pn**	**21 43 17.3**	**+0.4**
PVY	**Plav**	**4.43**	**355**	⇑*i* Pn		**Pn**	**21 43 20.2**	**+2.2**
PVY				*i* Sn		**Sn**	**21 44 12.8**	**+3.6**
CEME	**Cevo**	**4.52**	**345**	⇓*i* Pn		**Pn**	**21 43 20.0**	**+0.8**
CEME				*i* Sn		**Sn**	**21 44 14.1**	**+2.7**
AMGA	**Amorgos Island**	**4.52**	**106**	P		**Pn**	**21 43 23.7**	**+4.5**
HCY	**Herceg Novi**	**4.52**	**341**	⇓*i* Pn		**Pn**	**21 43 20.0**	**+0.9**
HCY				*i* Sn		**Sn**	**21 44 14.0**	**+2.6**
SMTH	**Samothraki Isl**	**4.55**	**58**	P		**Pn**	**21 43 21.9**	**+2.4**
IDI	**Anoyia**	**4.58**	**128**	Pn		**Pn**	**21 43 21.7**	**+1.7**
	comp=E,1.1nm,0.3s,baz=187,slow=7.1,SNR=11							
IDI				Sn		**Sn**	**21 44 15.9**	**+3.1**
	comp=E,6.0nm,0.3s,baz=309,slow=20,SNR=5.6							
IDI				LR		LR	21 45 41.2	
	comp=E,162nm,20.3s,baz=275,slow=46							
IVA	**Berane**	**4.71**	**355**	⇓*i* Pn		**Pn**	**21 43 23.7**	**+1.9**
IVA				*i* Sn		**Sn**	**21 44 19.7**	**+3.6**
KOME	**Kolasin**	**4.72**	**352**	⇑*i* Pn		**Pn**	**21 43 24.7**	**+2.7**
KOME				*i* Sn		**Sn**	**21 44 19.5**	**+3.1**
VAE	**Valguarnera**	**4.84**	**264**	Pn		**Pn**	**21 43 24.5**	**+1.0**
	comp=E,1.2nm,0.3s,baz=158,slow=16,SNR=2.3							
VAE				Sn		**Sn**	**21 44 26.0**	**+6.8**
	comp=E,2.9nm,0.3s,baz=116,slow=18,SNR=3.4							
RDO	**Rodhopi**	**4.91**	**51**	P		**Pn**	**21 43 26.8**	**+2.3**
VTS	**Vitosha**	**4.92**	**25**	P		**Pn**	**21 43 26.5**	**+1.8**
VTS	**Vitosha**	**4.92**	**25**	⇑P		Pn	21 43 31.0	+6.3
VTS	**Vitosha**	**4.92**	**25**			**Pn**	**21 43 25.3**	**+0.6**
VTS				Sn		**Sn**	**21 44 20.9**	**-0.4**
SMG	**Samos**	**5.06**	**93**	P		**Pn**	**21 43 29.0**	**+2.4**
SGRT	**San Giovanni R**	**5.09**	**316**	Pn		**Pn**	**21 43 27.5**	**+0.5**
ALN	**Alexandroupoli**	**5.10**	**56**	P		**Pn**	**21 43 29.7**	**+2.6**
ALN	**Alexandroupoli**	**5.10**	**56**	Pn		**Pn**	**21 43 28.3**	**+1.2**
PLE	**Pljevlja**	**5.21**	**351**	⇓*i* Pn		**Pn**	**21 43 31.0**	**+2.3**
PLE				*i* Sn		**Sn**	**21 44 31.0**	**+2.5**
PAOL	**Paolisi**	**5.37**	**304**			**Pn**	**21 43 31.8**	**+1.0**
KARP	**Karpathos**	**5.98**	**114**	Pn		**Pn**	**21 43 38.8**	**-0.4**
PLVB	**Pleven**	**6.09**	**30**	⇑P		Pn	21 43 46.2	+5.6
ELND	**Elena**	**6.29**	**39**	⇑P		Pn	21 43 49.5	+6.1
INTR	**Introdacqua**	**6.32**	**309**			**Pn**	**21 43 44.4**	**+0.5**
NRCA	**Norcia**	**7.28**	**312**			**Pn**	**21 43 57.7**	**+0.6**
GZR	**Gura Zlata**	**7.42**	**13**	⇑P		Pn	21 44 04.0	+5.1
ARR	**Arges**	**7.83**	**22**	⇑P		Pn	21 44 10.2	+5.6
MTUR	**Matau**	**7.84**	**25**	⇑P		Pn	21 44 09.7	+5.0
VOIR		**8.02**	**24**	⇑P		Pn	21 44 12.7	+5.4
MLR	**Muntele Rosu**	**8.38**	**27**	Pn		**Pn**	**21 44 16.4**	**+4.2**
	comp=E,0.3nm,0.3s,baz=251,slow=14,SNR=3.7							
MLR	**Muntele Rosu**	**8.38**	**27**	⇑P		Pn	21 44 17.7	+5.6
MLR	**Muntele Rosu**	**8.38**	**27**			**Pn**	**21 44 13.8**	**+1.7**
OZUR		**8.85**	**25**	⇑P		Pn	21 44 09.7	-8.8
PLOR	**Plostina**	**8.94**	**29**	⇓P		Pn	21 44 26.1	+6.2
VRI	**Vrincioaia**	**8.99**	**29**	⇑P		Pn	21 44 26.9	+6.5
KEST	**Kesra**	**9.22**	**258**	Pn		**Pn**	**21 44 23.3**	**-0.4**
	comp=E,0.4nm,0.3s,baz=355,slow=8.5,SNR=5.9							
KEST				Sn		**Sn**	**21 46 03.2**	**-4.0**
	comp=E,0.1nm,0.3s,baz=352,slow=18,SNR=1.8							
SOKA	**Soboth**	**9.39**	**336**	*e*Pn		**Pn**	**21 44 25.7**	**-0.3**
	comp=E,3.5nm,0.4s							
OBKA	**Obir**	**9.40**	**334**	*e*Pn		**Pn**	**21 44 27.7**	**+1.5**
	comp=E,1.3nm,0.2s							
TEOL	**Teolo**	**9.72**	**320**	Pn		**Pn**	**21 44 30.8**	**+0.3**
MYKA	**Terra Mystica**	**9.84**	**331**	Pn		**Pn**	**21 44 34.3**	**+2.2**
	comp=E,1.7nm,0.3s							
CTI	**Castel Tesino**	**10.23**	**323**			**Pn**	**21 44 37.7**	**+0.2**
CTI						**Sn**	**21 46 26.2**	**-5.6**
KBA	**Koelnbreinsper**	**10.32**	**332**	Pn		**Pn**	**21 44 39.5**	**+0.6**
	comp=E,3.0nm,0.6s							
ABTA	**Abfaltersbach**	**10.38**	**328**	Pn		**Pn**	**21 44 40.0**	**+0.5**
	comp=E,2.4nm,0.6s							
VYHS	**Vyhne**	**10.38**	**354**	*e*PN		Pn	21 44 33.1	-6.4
VYHS	**Vyhne**	**10.38**	**354**	*e*SN		**Sn**	**21 46 34.0**	**-1.4**
BRTR	**Keskin Array B**	**10.38**	**77**	Pn		**Pn**	**21 44 42.3**	**+2.6**
	comp=E,0.1nm,0.3s,baz=260,slow=13,SNR=4.8							
SALO	**Salr**	**10.49**	**318**	Pn		**Pn**	**21 44 40.7**	**-0.3**
MOA	**Molln**	**10.68**	**337**	*e*Pn		**Pn**	**21 44 44.8**	**+1.3**
	comp=E,2.0nm,0.2s							
WTTA	**Wattenberg**	**11.15**	**327**	Pn		**Pn**	**21 44 52.2**	**+2.0**
	comp=E,3.4nm,0.6s							
WATA	**Walderalm**	**11.24**	**327**	Pn		**Pn**	**21 44 53.8**	**+2.4**
	comp=E,4.2nm,0.5s							
FUORN	**Ofenpass-Fuorn**	**11.31**	**322**	Pn		**Pn**	**21 44 51.2**	**-1.2**
FUORN						**Sn**	**21 46 57.7**	**-0.7**
SQTA	**Sankt Quirin**	**11.31**	**326**	Pn		**Pn**	**21 44 55.4**	**+3.1**
	comp=E,1.0nm,0.2s							
MOTA	**Moosalm**	**11.45**	**326**	Pn		**Pn**	**21 44 58.0**	**+3.8**
	comp=E,2.1nm,0.6s							
DAVOX	**Davos/Dischmat**	**11.61**	**321**	Sn		**Sn**	**21 47 03.2**	**-2.6**
	comp=E,0.4nm,0.3s,baz=162,slow=20,SNR=3.4							
GERES	**GERESS Array B**	**11.73**	**338**	Pn		**Pn**	**21 44 58.0**	**0.0**
	comp=E,0.2nm,0.3s,baz=155,slow=14,SNR=7.6							
GERES				Sn		**Sn**	**21 47 04.5**	**-4.1**
	comp=E,0.2nm,0.3s,baz=148,slow=24,SNR=5.1							
KHC	**Kasperske Hory**	**12.03**	**338**	*e*PN		**Pn**	**21 45 03.3**	**+1.3**
KHC				*e*SN		**Sn**	**21 47 10.1**	**-5.6**
KHC	**Kasperske Hory**	**12.03**	**338**	Pn		**Pn**	**21 45 02.9**	**+0.9**
SENIN	**Lac Senin/Sane**	**12.71**	**314**	Pn		**Pn**	**21 45 13.0**	**+1.4**
MMAI	**Mount Meron Ar**	**13.20**	**108**	Pn		**Pn**	**21 45 19.2**	**+1.1**
	comp=E,0.4nm,0.3s,baz=305,slow=10,SNR=2.6							
MMAI				Sn		**Sn**	**21 47 37.5**	**-7.1**
	comp=E,1.0nm,0.3s,baz=289,slow=31,SNR=3.9							
AKASG	**Malin Array Be**	**13.99**	**24**	Pn		**Pn**	**21 45 26.0**	**-2.7**
	comp=E,1.6nm,0.3s,baz=215,slow=14,SNR=1.9							
CLL	**Collm**	**14.15**	**341**	*e*(P)		**Pn**	**21 45 30.0**	**-0.9**
CLL				*es*PP			21 45 44.0	
EIL	**Elat**	**14.71**	**121**	Pn		**Pn**	**21 45 34.2**	**-4.5**
	comp=E,0.2nm,0.3s,baz=8.9,slow=17,SNR=3.4							
EIL				Sn		Sn	21 48 06.4	-15
	comp=E,0.2nm,0.3s,baz=286,slow=15,SNR=2.5							
KBZ	**Khabaz**	**17.81**	**65**	P		**P**	**21 46 21.7**	**+2.7**
	comp=E,0.1nm,0.3s,baz=254,slow=10,SNR=5.8							
GNI	**Garni**	**18.92**	**76**	P		**Pn**	**21 46 33.2**	**+1.1**
	comp=E,0.5nm,0.3s,baz=358,slow=7.3,SNR=6.1							
GNI	**Garni**	**18.92**	**76**	P		**P**	**21 46 31.4**	**-0.1**
GNI				IAmb	IAmb		21 46 36.9	
	comp=Z,8.8nm,0.8s							
TBLG	**Delisi**	**18.93**	**72**	P		**P**	**21 46 30.6**	**-0.9**
TBLG				IAmb	IAmb		21 46 41.0	
	comp=Z,13nm,1.2s							
ESDC	**Sonseca Array**	**19.05**	**282**	P		**Pn**	**21 46 33.7**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=95,slow=14,SNR=4.2							
ESDC	**Sonseca Array**	**19.05**	**282**	IAmb	IAmb		21 46 36.2	
	comp=Z,1.4nm,1.1s							
HFS	**Hagfors**	**22.39**	**351**	P		**P**	**21 47 07.8**	**-0.9**
	comp=Z,3.4nm,0.5s,baz=156,slow=11,SNR=14							
NC602	**NORSAR Array S**	**23.27**	**349**	P		**P**	**21 47 18.1**	**+0.2**
EKA	**Eskdalemuir Ar**	**23.40**	**325**	P		**P**	**21 47 18.9**	**-0.4**
	comp=Z,6.2nm,0.9s,baz=127,slow=9.2,SNR=2.8							
FINES	**FINESS Array B**	**23.55**	**7**	P		**P**	**21 47 19.3**	**-1.4**
	comp=Z,1.8nm,0.5s,baz=175,slow=9.8,SNR=17							
FIA1	**FINESS Array S**	**23.56**	**7**	P		**P**	**21 47 20.0**	**-0.7**
NC405	**NORSAR Array S**	**23.61**	**349**	P		**P**	**21 47 20.9**	**-0.3**
NB2	**NORSAR Subarra**	**23.61**	**349**	P		**P**	**21 47 21.3**	**0.0**
	comp=Z,1.5nm,0.6s,baz=151,slow=10							
NOA	**NORSAR Array B**	**23.61**	**349**	P		**P**	**21 47 20.6**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=157,slow=9.3,SNR=6.2							
NBO00	**NORSAR Array S**	**23.67**	**348**	P		**P**	**21 47 22.4**	**+0.5**
NC303	**NORSAR Array S**	**23.76**	**349**	P		**P**	**21 47 22.2**	**-0.5**
AKTO	**Aktyubinsk**	**29.22**	**53**	P		**P**	**21 48 11.0**	**-1.1**
	comp=Z,0.7nm,0.4s,baz=242,slow=15,SNR=3.4							
GEYT	**Alibeck**	**29.52**	**79**	P		**P**	**21 48 14.1**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=264,slow=5.7,SNR=4.4							
GEYT				LR		LR	22 02 13.0	
	comp=Z,109nm,20.1s,baz=350,slow=41							
GEYT	**Alibeck**	**29.52**	**79**	IAmb	IAmb		21 48 20.4	
	comp=Z,1.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**30.00**	**219**	P		**P**	**21 48 19.7**	**+0.5**
	comp=Z,2.0nm,0.9s,baz=29,slow=8.9,SNR=6.2							
TORD	**Torodi Ar. Bea**	**30.00**	**219**	IAmb	IAmb		21 48 26.7	
	comp=Z,1.2nm,0.9s							
ABKAR	**Akbulak array**	**30.28**	**56**	P		**P**	**21 48 21.5**	**0.0**
ARU	**Arti**	**31.09**	**42**	P		**P**	**21 48 28.3**	**-0.3**
ARU				IAmb	IAmb		21 48 46.6	
	comp=Z,2.0nm,0.9s							
ARCES	**ARCESS Array B**	**31.54**	**3**	P		**P**	**21 48 32.0**	**-0.4**
	comp=Z,2.8nm,1.0s,baz=184,slow=11,SNR=5.6							
BRVK	**Borovoye**	**37.09**	**50**	P		**P**	**21 49 19.2**	**-1.4**
KK31	**Karatay Array**	**37.84**	**66**	P		**P**	**21 49 25.8**	**-1.4**
KK31				IAmb	IAmb		21 49 34.1	
	comp=Z,3.3nm,0.8s							
KKAR	**Karatay Array**	**37.84**	**66**	P		**P**	**21 49 26.3**	**-0.8**
KKAR				IAmb	IAmb		21 49 34.1	
	comp=Z,3.3nm,0.8s							
DBIC	**Dimbokro**	**38.86**	**223**	P		**P**	**21 49 36.7**	**+0.8**
	comp=Z,1.4nm,0.4s,baz=7.8,slow=8.1,SNR=5.5							
AAK	**Ala-Archa**	**40.80**	**66**	P		**P**	**21 49 52.8**	**+0.7**
MK31	**Makanchi Array**	**45.34**	**58**	P		**P**	**21 50 28.8**	**+0.2**
MK31				IAmb	IAmb		21 50 42.1	
	comp=Z,1.7nm,0.7s							
MKAR	**Makanchi Array**	**45.34**	**58**	P		**P**	**21 50 28.4**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=275,slow=7.3,SNR=49							
ZAA0	**Zalesovo Array**	**45.73**	**48**	P		**P**	**21 50 30.4**	**-1.1**
ZALV	**Zalesovo Beam**	**45.73**	**48**	P		**P**	**21 50 31.5**	**+0.1**
	comp=Z,6.4nm,0.5s,baz=273,slow=8.9,SNR=27							
LSZ	**Lusaa**	**53.66**	**171**	P		**P**	**21 51 34.0**	**+1.7**
	comp=Z,0.5nm,0.4s,baz=346,slow=4.2,SNR=2.4							
SONM	**Songino Array**	**60.50**	**51**	P		**P**	**21 52 20.1**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=286,slow=8.0,SNR=10							
SONM	**Songino Array**	**60.50**	**51**	IAmb	IAmb		21 52 26.1	
	comp=Z,1.4nm,1.1s							
CMAR	**Chiang Mai Arr**	**69.94**	**82**	P		**P**	**21 53 21.9**	**-0.2**
	comp=Z,0.8nm,0.7s,baz=301,slow=7.3,SNR=9.1							
YKA	**Yellowknife Ar**	**73.38**	**340**	P		**P**	**21 53 42.0**	**0.0**
	comp=Z,0.1nm,0.4s,baz=34,slow=5.2,SNR=3.4							
ULM	**Lac du Bonnet**	**75.67**	**324**	P		**P**	**21 53 57.6**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=95,slow=11,SNR=2.2							
ILAR	**Eielson Array**	**76.91**	**354**	P		**P**	**21 54 03.6**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=18,slow=5.0,SNR=4.4							
KSRS	**Korea Array**	**79.37**	**51**	P		**P**	**21 54 17.1**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=316,slow=4.4,SNR=4.5							

*IDC **26** 21:50:50.5±8.7,38°.45N×20°.66E,h0km,mb3.8/3, mb1 3.8/4,mb1mx3.3/45,mbtmp3.8/4,ML2.6/1,Error ellipse: s-maj=174.4km s-min=30.0km az=63.0*
*ATH **26** 21:50:50.9,38°.22N×20°.43E,h12km±3km,ML3.2/11,Error ellipse: s-maj=3.7km s-min=0.9km az=103.0*
*THE **26** 21:50:50.5,38°.21N×20°.37E,h4km±3km,ML3.4/7,Error ellipse: s-maj=3.6km s-min=0.4km az=79.0*

ISC 26 21:50:50.8±1.2,38°.23N±0°.03×20°.43E±0°.06,h12km±5km, n30,σ0°.83/53,mb3.9/3,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.14**	**114**	P		**Pg**	**21 50 53.9**	**-0.3**
VLS				S		**Sg**	**21 50 56.3**	**-0.2**
	21μm,0.2s							
VLS	**Valsamata**	**0.14**	**114**	P		**Pg**	**21 50 53.9**	**-0.3**
VLS				S		**Sg**	**21 50 56.4**	**-0.2**
FSK	**Fiskardo**	**0.25**	**24**	P		**Pg**	**21 50 56.1**	**+0.1**
FSK				S		**Sg**	**21 51 00.5**	**+1.0**
	4μm,0.6s							
FSK	**Fiskardo**	**0.25**	**24**	P		**Pg**	**21 50 56.2**	**+0.1**
FSK				S		**Sg**	**21 51 00.3**	**+0.8**
FSK				AML	AML		21 51 01.8	
	comp=N,6469μm,0.6s							
FSK				AML	AML		21 51 02.4	
	comp=E,7586μm,0.2s							
KFL	**Anninata**	**0.30**	**114**	P		**Pg**	**21 50 56.9**	**-0.2**
KFL				S		**Sg**	**21 51 01.9**	**+0.7**
	comp=E,13μm,0.4s							
KFL	**Anninata**	**0.30**	**114**	P		**Pg**	**21 50 56.8**	**-0.2**
KFL				S		**Sg**	**21 51 01.8**	**+0.7**
KFL				AML	AML		21 51 02.6	
	comp=E,25596μm,0.4s							
KFL				AML	AML		21 51 04.8	
	comp=N,25336μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.40**	**153**	P		**Pg**	**21 50 58.8**	**0.0**
VLMS				S		**Sg**	**21 51 04.9**	**+0.9**
VLMS				AML	AML		21 51 06.5	
	comp=E,16358μm,0.2s							
VLMS				AML	AML		21 51 08.5	
	comp=N,10066μm,0.2s							
EVGI	**Lefkada island**	**0.42**	**24**	P		**Pg**	**21 50 59.4**	**+0.1**
EVGI				S		**Sb**	**21 51 06.5**	**-0.2**
EVGI	**Lefkada island**	**0.42**	**24**	P		**Pg**	**21 50 59.2**	**0.0**
EVGI				S		**Sb**	**21 51 06.3**	**-0.4**
MGNA	**Meganis**	**0.51**	**33**	P		**Pg**	**21 51 00.6**	**-0.2**
MGNA				S		**Sg**	**21 51 07.9**	**+0.4**
MGNA				AML	AML		21 51 09.3	
	comp=E,7452μm,0.2s							
MGNA				AML	AML		21 51 09.5	
	comp=N,8168μm,0.2s							
LKD2	**Lefkada island**	**0.58**	**18**	P		**Pg**	**21 51 02.6**	**+0.4**
LKD2				S		**Sg**	**21 51 10.5**	**+0.6**
LKD2	**Lefkada island**	**0.58**	**18**	P		**Pg**	**21 51 02.3**	**+0.1**
LKD2				S		**Sg**	**21 51 10.1**	**+0.2**
LKD2				AML	AML		21 51 17.7	
	comp=N,1574μm,0.4s							
LKD2				AML	AML		21 51 18.2	
	comp=E,2073μm,0.6s							
TSLK	**Tsoukalades, L**	**0.62**	**16**	P		**Pg**	**21 51 02.5**	**-0.3**
TSLK	**Tsoukalades, L**	**0.62**	**16**	P		**Pg**	**21 51 02.7**	**-0.2**
TSLK				S		**Sg**	**21 51 11.7**	**+0.7**
TSLK				AML	AML		21 51 20.1	
	comp=N,2225μm,0.7s							
TSLK				AML	AML		21 51 20.2	
	comp=E,2317μm,0.3s							
RLS	**Riolos of Patr**	**0.83**	**102**	P		**Pg**	**21 51 06.3**	**-0.6**
RLS				S		**Sn**	**21 51 20.3**	**-0.3**
	comp=E,1μm,0.3s							
RLS	**Riolos of Patr**	**0.83**	**102**	P		**Pg**	**21 51 06.7**	**-0.2**
RLS				S		**Sn**	**21 51 19.0**	**-1.6**
RLS				AML	AML		21 51 23.7	
	comp=E,3045μm,0.3s							
RLS				AML	AML		21 51 26.1	
	comp=N,2135μm,0.4s							
PVO	**Paravola**	**0.94**	**66**	P		**Pb**	**21 51 09.1**	**0.0**
PVO				S		**Sn**	**21 51 23.6**	**+0.3**
	comp=N,2μm,0.5s							
PVO	**Paravola**	**0.94**	**66**	P		**Pb**	**21 51 09.1**	**0.0**
PVO				S		**Sn**	**21 51 22.0**	**-1.3**
PVO				AML	AML		21 51 25.6	
	comp=E,4706μm,0.4s							
PVO				AML	AML		21 51 30.2	
	comp=N,2939μm,0.5s							
DRO	**Drossia**	**1.05**	**105**	P		**Pb**	**21 51 10.8**	**-0.1**
DRO				S		**Sn**	**21 51 26.6**	**+0.7**
	comp=N,2μm,0.4s							
DRO	**Drossia**	**1.05**	**105**	P		**Pb**	**21 51 10.6**	**-0.3**
DRO				S		**Sg**	**21 51 24.2**	**-0.4**
DRO				AML	AML		21 51 34.5	
	comp=N,3542μm,0.3s							
DRO				AML	AML		21 51 35.5	
	comp=E,4416μm,0.5s							
EFP	**Efpalio**	**1.17**	**80**	P		**Pg**	**21 51 13.3**	**-0.1**
EFP				AML	AML		21 51 36.7	
	comp=E,1544μm,0.5s							
EFP				AML	AML		21 51 38.8	
	comp=N,2167μm,0.4s							
LAKA	**Lakka**	**1.22**	**89**	P		**Pn**	**21 51 13.3**	**-0.4**
LAKA				S		**Sn**	**21 51 32.1**	**+2.0**
ANX	**Ano Chora**	**1.22**	**72**	P		**Pg**	**21 51 14.3**	**0.0**
ANX				S		**Sn**	**21 51 32.6**	**+2.2**
	comp=N,1μm,0.5s							
ANX	**Ano Chora**	**1.22**	**72**	P		**Pg**	**21 51 14.2**	**-0.2**
ANX				AML	AML		21 51 37.9	
	comp=N,2794μm,0.6s							
ANX				AML	AML		21 51 39.7	
	comp=E,2698μm,0.5s							
SERG	**Sergoula**	**1.29**	**81**	P		**Pb**	**21 51 14.9**	**-0.1**
KLV	**Kalavryta, Ach**	**1.37**	**97**	P		**Pb**	**21 51 16.0**	**-0.4**
KLV				S		**Sg**	**21 51 36.6**	**+1.7**
IDI	**Anoyia**	**4.63**	**128**	Pn		**Pn**	**21 52 01.8**	**+1.1**
	comp=E,0.3nm,0.3s,baz=344,slow=19,SNR=2.3							
IDI				Sn		**Sn**	**21 52 57.1**	**+2.7**
	comp=E,1.9nm,0.3s,baz=321,slow=13,SNR=5.8							
FINES	**FINESS Array B**	**23.50**	**7**	P		**P**	**21 55 59.2**	**-1.0**
	comp=E,2.5nm,0.9s,baz=186,slow=11,SNR=3.1							
MKAR	**Makanchi Array**	**45.33**	**58**	P		**P**	**21 59 08.0**	**-0.7**
	comp=E,0.7nm,0.5s,baz=275,slow=7.3,SNR=9.0							
ZALV	**Zalesovo Beam**	**45.71**	**48**	P		**P**	**21 59 10.8**	**-0.6**
	comp=E,1.3nm,0.5s,baz=280,slow=8.4,SNR=6.2							

*JMA **26** 21:59:08.3±0.2,43°.94N×148°.13E,h14km,M3.8*
*SKHL **26** 21:59:09.9±0.3,44°.40N×148°.00E,h28km±3km,mb3.7/2*

ISC 26 21:59:05.8±3.4,44°.33N±0°.09×148°.2E±0°.2,h13km±16km, n16,σ1°.47/25,Kuril Islands

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

CHAN					S		Sn	22 05 27.7	+1.1
	comp=E,402nm,0.6s								
VAM	Vamos	0.86	58		P		Pn	22 05 16.2	+0.3
VAM					S		Sn	22 05 29.0	+1.5
	comp=E,2μm,0.5s								
VAM	Vamos	0.86	58		P		Pn	22 05 16.2	+0.3
VAM					AML	AML		22 05 32.1	
	comp=E,3472μm,0.5s								
VAM					AML	AML		22 05 33.7	
	comp=N,3221μm,0.4s								
ANKY	Antikythira Is	0.91	360		P		Pn	22 05 17.7	+1.1
ANKY					S		Sn	22 05 30.4	+1.8
ANKY	Antikythira Is	0.91	360		P		Pn	22 05 17.5	+0.9
SIVA	Sivas	1.24	87		P		Pn	22 05 22.1	+1.2
SIVA					S		Sn	22 05 40.4	+3.9
	comp=N,1μm,0.6s								
SIVA	Sivas	1.24	87		P		Pn	22 05 21.8	+0.9
SIVA					AML	AML		22 05 49.3	
	comp=N,2056μm,0.5s								
SIVA					AML	AML		22 05 49.6	
	comp=E,2183μm,0.7s								
KTHA	Kythira Island	1.31	351		P		Pn	22 05 23.5	+1.5
KTHA	Kythira Island	1.31	351		P		Pn	22 05 23.7	+1.6
KTHR	Kythira	1.33	349		P		Pn	22 05 23.3	+1.1
IDI	Anoyia	1.34	75		Pn		Pn	22 05 23.4	+0.9
	comp=E,5.8nm,0.3s,baz=251,slow=12,SNR=28								
IDI	Anoyia	1.34	75		P		Pn	22 05 23.1	+0.7
LAST	Lasithi	1.79	83		P		Pn	22 05 29.9	+1.2
NPS	Neapolis	1.92	80		P		Pn	22 05 31.9	+1.6
MHLO	Agia Marina, M	1.95	27		P		Pn	22 05 31.4	+0.8
MHLA	Plaka, Milos I	2.00	27		P		Pn	22 05 32.3	+0.9
IOSP	Ios island	2.39	42		P		Pn	22 05 36.6	-0.2
ZKR	Zakros	2.40	85		P		Pn	22 05 38.3	+1.5
APE	Apeiranthos	2.78	40		P		Pn	22 05 41.7	-0.3
AMGA	Amorgos Island	2.82	48		P		Pn	22 05 41.7	-0.8
BRTR	Keskin Array B	9.51	57		Pn		Pn	22 07 16.3	+1.9
	comp=E,0.1nm,0.3s,baz=245,slow=15,SNR=5.0								
MMAI	Mount Meron Ar	10.23	97		Pn		Pn	22 07 23.3	-1.0
	comp=E,0.5nm,0.3s,baz=296,slow=9.7,SNR=5.1								
HFS	Hagfors	25.96	349		P		P	22 10 27.1	-0.5
	comp=E,2.5nm,0.7s,baz=154,slow=14,SNR=6.2								
NOA	NORSAR Array B	27.23	347		P		P	22 10 38.2	-1.0
	comp=E,0.8nm,0.9s,baz=174,slow=12,SNR=2.5								
GEYT	Alibeck	28.07	74		LR		LR	22 24 52.8	
	comp=E,193nm,19.2s,baz=270,slow=42								
ARCES	ARCESS Array B	34.66	1		P		P	22 11 42.1	-2.3
	comp=E,2.9nm,0.9s,baz=187,slow=8.1,SNR=6.0								
MKAR	Makanchi Array	45.16	56		P		P	22 13 11.6	-0.2
	comp=E,0.4nm,0.4s,baz=267,slow=7.2,SNR=11								
SONM	Songino Array	60.79	50		P		P	22 15 07.0	0.0
	comp=E,0.4nm,0.4s,baz=289,slow=7.0,SNR=11								
YKA	Yellowknife Ar	77.17	341		P		P	22 16 48.5	+0.3
	comp=E,0.1nm,0.4s,baz=27,slow=5.3,SNR=3.2								

IDC ***26*** *22:13:01.0±1.0, 10°.12S×120°.04E, h0km, mb3.7/4, mb1 3.8/7, mb1mx3.6/36, mbtmp3.7/7, ML3.6/3, Error ellipse: s-maj=55.6km s-min=18.8km az=66.0*

ISC 26 22:13:06.1±1.1, 10°.2S±0°.2×120°.4E±0°.2, h35km, n7, σ2$ 26/10, mb3.8/4, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	9.35	148	Pn	Pn	22 15 19.4	+1.0
	0.2nm,0.3s,baz=333,slow=9.1,SNR=8.6						
FITZ				Sn	Sn	22 17 00.6	-1.8
	1.4nm,0.3s,baz=181,slow=19,SNR=10						
WRA	Warramunga Arr	16.56	127	Pn	P	22 16 58.3	+0.3
	0.3nm,0.3s,baz=295,slow=14,SNR=6.8						
WRA				Sn	Sn	22 19 57.9	-0.7
	0.3nm,0.3s,baz=292,slow=25,SNR=6.3						
ASAR	Alice Springs	18.58	138	P	Pn	22 17 24.2	+3.5
	0.3nm,0.3s,baz=313,slow=11,SNR=37						
ASAR				S	Sn	22 20 44.0	-3.5
	0.1nm,0.3s,baz=306,slow=20,SNR=5.2						
NWAO	Narrogin (SRO)	22.83	187	P	P	22 18 06.4	+0.3
	4.1nm,0.6s,baz=19,slow=12,SNR=7.0						
SONM	Songino Array	59.09	349	P	P	22 23 03.7	+0.7
	0.4nm,0.5s,baz=172,slow=9.0,SNR=5.8						
MKAR	Makanchi Array	66.15	332	P	P	22 23 48.5	-1.5
	0.2nm,0.4s,baz=155,slow=7.4,SNR=8.7						
ZALV	Zalesovo Beam	70.64	339	P	P	22 24 16.0	-1.8
	0.4nm,0.5s,baz=139,slow=5.3,SNR=2.4						

NEIC ***26*** *22:17:56.8±1.4, 3°.9N±0°.1×126°.5E±0°.1, h39km±8km, mb4.2/14, Error ellipse: s-maj=22.6km s-min=13.0km az=67.0*

IDC ***26*** *22:17:58.6±4.2, 3°.96N×126°.63E, h51km±41km, mb3.8/15, mb1 3.9/16, mb1mx3.7/53, mbtmp4.1/16, ML4.0/1, MS3.8/2, Ms1 3.8/2, ms1mx2.9/52, Error ellipse: s-maj=30.6km s-min=15.0km az=74.0*

DJA ***26*** *22:17:59.4±0.4, 4°N±2°×12°7E±°, h10km, M4.4/7, mB5.1/2, mb4.7/3, MLv4.3/7, Mw(mB)4.4/2*

ISC 26 22:17:56.7±0.5, 4°.09N±0°.07×126°.89E±0°.10, h36km, n41, σ1$ 81/41, mb4.2/23, MS4.4/3, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	3.33	172	P	Pn	22 18 50.9	+4.6
TNTI	Ternate	3.33	172	Pn	Pn	22 18 45.9	-0.4
KCP	Kidapawan	3.41	328	⇓*e*P	Pn	22 18 53.9	+6.5
KMSI	Cibinong	4.54	220	P	Pn	22 19 07.2	+4.2
MRSI	Marisa	6.11	234	P	Pn	22 19 26.8	+2.2
	0.3nm803nm51nm,0.6s						
LUWI	Luwuk	6.55	219	P	Pn	22 19 33.2	+2.6
SIJI	Sorong	6.59	138	P	Pn	22 19 32.8	+1.6
	2.7nm,0.3s,baz=330,slow=14,SNR=5.7						
FAKI	Fak Fak	8.79	142	Pn	Pn	22 20 02.1	+0.8
KNRA	Kununurra	19.73	175	P	P	22 22 21.4	-2.0
KNRA				IAmb	IAmb	22 22 28.4	
	comp=Z,14nm,1.0s						
TPUB	Ta-pu	20.03	343	P	P	22 22 27.2	+0.5
TPUB				IAmb	IAmb	22 22 42.7	
	comp=Z,9.9nm,0.7s						
FITZ	Fitzroy Crossi	22.09	183	P	P	22 22 49.9	+1.1
	comp=Z,1.4nm,0.4s,baz=353,slow=13,SNR=4.8						
FITZ	Fitzroy Crossi	22.09	183	P	P	22 22 46.8	-2.0
LEM	Lembang	22.09	241	LR	LR	22 32 26.1	
	comp=Z,56nm,18.1s,baz=227,slow=40						
WB0	Warramunga Arr	24.83	163	P	P	22 23 15.0	-0.9
WB0				IAmb	IAmb	22 23 32.7	
	comp=Z,7.0nm,0.8s						
WRA	Warramunga Arr	24.98	163	P	P	22 23 16.5	-0.7
	comp=Z,2.3nm,0.7s,baz=344,slow=10,SNR=8.7						
ASAR	Alice Springs	28.43	166	P	P	22 23 48.8	+0.5
	comp=Z,0.3nm,0.6s,baz=336,slow=7.5,SNR=3.8						
WHN	Wuhan	28.86	337	P	P	22 24 05.8	+14
CMAR	Chiang Mai Arr	30.83	300	P	P	22 24 09.3	-0.3
	comp=Z,0.3nm,0.3s,baz=113,slow=6.2,SNR=4.8						
CHTO	Chiang Mai	30.98	300	P	P	22 24 08.9	-2.0
XAN	Xi'an	34.17	333	P	P	22 24 42.3	+3.6
XAN				pP	pP	22 24 48.5	-0.6
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,390nm,6.4s						
XAN				LR	LR		
	comp=N,460nm,11.3s						
XAN				LR	LR		
	comp=E,310nm,9.3s						
XAN				LR	LR		
	comp=Z,310nm,9.8s						
XAN	Xi'an	34.17	333	P	P	22 24 38.5	-0.2
NWAO	Narrogin (SRO)	37.94	193	P	P	22 25 09.8	-1.1
	comp=Z,8.3nm,1.0s,baz=17,slow=8.1,SNR=5.7						
NWAO	Narrogin (SRO)	37.94	193	P	P	22 25 09.1	-1.8
STKA	Stephens Creek	38.41	160	P	P	22 25 14.2	-0.7
	comp=Z,2.4nm,0.6s,baz=342,slow=5.8,SNR=5.5						
STKA	Stephens Creek	38.41	160	P	P	22 25 13.7	-1.2
SHL	Shillong	39.79	306	P	P	22 25 25.0	-1.8
LSA	Lhasa	42.32	311	P	P	22 25 45.7	-2.2
LSA				IAmb	IAmb	22 25 50.0	
	comp=Z,3.6nm,0.6s						
ULN	Ulaanbaatar	46.83	342	P	P	22 26 21.8	-1.4
ULN				IAmb	IAmb	22 26 31.8	
	comp=Z,2.2nm,1.1s						
SONM	Songino Array	47.01	341	P	P	22 26 25.8	+1.2
	comp=Z,0.6nm,0.7s,baz=166,slow=6.8,SNR=6.2						
SONM				PcP	PcP	22 27 56.8	+0.3
	comp=Z,0.2nm,0.6s,baz=141,slow=0.9,SNR=2.6						
PETK	Petropavlovsk-	55.04	22	P	P	22 27 27.3	+2.6
	comp=Z,2.9nm,0.9s,baz=148,slow=2.0,SNR=5.7						
MK31	Makanchi Array	57.35	325	P	P	22 27 41.3	-0.1
MK31				IAmb	IAmb	22 27 46.4	
	comp=Z,1.6nm,0.7s						
MKAR	Makanchi Array	57.35	325	P	P	22 27 41.5	+0.2
	comp=Z,2.1nm,0.7s,baz=117,slow=7.7,SNR=35						
MKAR				PcP	PcP	22 28 36.1	+0.9
	comp=Z,0.8nm,0.8s,baz=113,slow=5.5,SNR=2.4						
MAKZ	Makanchi	57.54	325	P	P	22 27 41.9	-0.8
MAKZ				IAmb	IAmb	22 27 47.6	
	comp=Z,1.8nm,0.8s						
MAKZ				PcP	PcP	22 28 33.5	-2.4
ZALV	Zalesovo Beam	60.34	333	P	P	22 28 00.9	-1.0
	comp=Z,1.1nm,0.4s,baz=140,slow=6.9,SNR=7.1						
KURK	Kurchatov	61.52	327	P	P	22 28 09.3	-0.7
KURK				IAmb	IAmb	22 28 15.8	
	comp=Z,5.0nm,0.9s						
AKTO	Aktyubinsk	73.48	322	P	P	22 29 25.6	-0.1
	comp=Z,1.3nm,0.7s,baz=88,slow=11,SNR=3.4						
ILAR	Eielson Array	84.71	25	P	P	22 30 29.0	+2.3
	comp=Z,2.6nm,0.9s,baz=244,slow=6.4,SNR=4.2						
BRTR	Keskin Array B	89.91	310	P	P	22 30 50.8	-1.8
	comp=Z,1.0nm,1.0s,baz=130,slow=2.3,SNR=2.6						
ARCES	ARCESS Array B	90.17	340	P	P	22 30 52.9	-0.1
	comp=Z,7.8nm,1.1s,baz=78,slow=6.5,SNR=3.6						
FINES	FINESS Array B	91.59	332	P	P	22 31 00.1	+0.4
	comp=Z,2.4nm,0.8s,baz=64,slow=3.2,SNR=3.6						
AKASG	Malin Array Be	91.71	321	P	P	22 30 59.5	-1.0
	comp=Z,2.2nm,0.3s,baz=69,slow=5.0,SNR=2.7						
AKASG				LR	LR	23 15 34.5	
	comp=Z,138nm,18.3s,baz=330,slow=38						

NEIC ***26*** *22:28:43.1±1.5, 38°.37N±0°.04×20°.39E±0°.05, h1km±2km, Error ellipse: s-maj=6.8km s-min=5.1km az=218.0*

IDC ***26*** *22:28:44.3±1.1, 38°.49N×20°.32E, h0km, mb3.8/10, mb1 3.8/15, mb1mx3.7/67, mbtmp3.7/15, ML3.8/4, MS3.5/4, Ms1 3.6/4, ms1mx3.1/56, Error ellipse: s-maj=19.1km s-min=15.1km az=40.0*

BGR ***26*** *22:28:44.6±1.1, 38°.29N×20°.72E, h10km, Error ellipse: s-maj=65.6km s-min=13.3km az=60.0*

PDG ***26*** *22:28:44.0±0.8, 38°.35N×20°.28E, h4km±1km, ML4.1/10, Error ellipse: s-maj=1.4km s-min=1.7km az=0.0*

ATH ***26*** *22:28:45.0, 38°.37N×20°.38E, h12km±2km, ML3.9/20, Error ellipse: s-maj=2.4km s-min=0.8km az=58.0*

THE ***26*** *22:28:45.8, 38°.38N×20°.43E, h0km±2km, ML3.9/17, Error ellipse: s-maj=2.3km s-min=0.4km az=265.0*

TIR ***26*** *22:28:46.2, 38°.48N×20°.77E, h30km, Md4.2/7*

ISC 26 22:28:44.8±0.9, 38°.37N±0°.02×20°.37E±0°.02, h8km±6km, n181, σ1$ 41/254, mb4.0/14, 16C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	Fiskardo	0.17	59	P	Pg	22 28 48.6	+0.2
FSK				S	Sg	22 28 50.0	-0.9
	51μm,0.4s						
FSK	Fiskardo	0.17	59	P	Pg	22 28 48.7	+0.2
FSK				S	Sg	22 28 51.0	+0.1
VLS	Valsamata	0.26	138	P	Pg	22 28 50.4	+0.5
VLS				S	Sg	22 28 54.2	+0.8
	43μm,0.4s						
VLS	Valsamata	0.26	138	P	Pg	22 28 50.5	+0.6
VLS				S	Sg	22 28 54.4	+1.0
VLS				AML	AML	22 28 54.6	
	comp=E,78593μm,0.3s						
VLS				AML	AML	22 28 56.5	
	comp=N,90933μm,0.4s						
EVGI	Lefkada island	0.34	41	P	Pg	22 28 51.8	+0.4
EVGI				S	Sg	22 28 56.5	+0.6
EVGI	Lefkada island	0.34	41	P	Pg	22 28 51.9	+0.4
EVGI				S	Sg	22 28 56.4	+0.6
KFL	Anninata	0.42	128	P	Pg	22 28 53.1	+0.2
KFL				S	Sg	22 28 58.2	-0.2
	comp=N,31μm,0.6s						
KFL	Anninata	0.42	128	P	Pg	22 28 53.2	+0.3
KFL				S	Sg	22 28 59.4	+0.9
KFL				AML	AML	22 29 02.6	
	comp=E,75912μm,0.3s						
KFL				AML	AML	22 29 03.8	
	comp=N,39056μm,0.4s						
MGNA	Meganis	0.43	49	P	Pg	22 28 53.4	+0.1
MGNA				S	Sg	22 28 59.6	+0.6
MGNA				AML	AML	22 29 00.0	
	comp=N,39644μm,0.3s						
MGNA				AML	AML	22 29 01.0	
	comp=E,28776μm,0.4s						
LKD2	Lefkada island	0.47	28	P	Pg	22 28 54.3	+0.3
LKD2				S	Sb	22 29 01.2	-1.4
	comp=E,14μm,0.5s						
LKD2	Lefkada island	0.47	28	P	Pg	22 28 54.3	+0.3
LKD2				S	Sg	22 29 00.8	+0.5
LKD2				AML	AML	22 29 01.9	
	comp=E,24343μm,0.5s						
LKD2				AML	AML	22 29 02.1	
	comp=N,30118μm,0.9s						
TSLK	Tsoukalades, L	0.51	26	P	Pg	22 28 55.0	+0.4
TSLK				S	Sb	22 29 02.4	-1.0
TSLK	Tsoukalades, L	0.51	26	P	Pg	22 28 55.2	+0.6
TSLK				S	Sb	22 29 02.2	-1.2
VLMS	Volimes, Zakyn	0.54	155	P	Pg	22 28 55.9	+0.6
VLMS				S	Sb	22 29 03.9	-0.6
VLMS				AML	AML	22 29 05.2	
VLMS				AML	AML	22 29 08.6	
	comp=E,48994μm,0.5s						
ZAK2	Zakynthos	0.71	144	P	Pg	22 28 58.9	+0.3
ZAK2				S	Sb	22 29 10.4	+1.0
RLS	Riolos of Patr	0.92	110	P	Pg	22 29 01.7	-0.7
RLS	Riolos of Patr	0.92	110	P	Pg	22 29 02.1	-0.3
RLS				S	Sb	22 29 15.0	-0.1
RLS				AML	AML	22 29 23.0	
	comp=N,9559μm,0.9s						
RLS				AML	AML	22 29 25.6	
	comp=E,5468μm,0.8s						
PVO	Paravola	0.94	74	P	Pg	22 29 02.6	-0.2
PVO				S	Sb	22 29 16.0	+0.2
	comp=E,12μm,0.8s						
PVO	Paravola	0.94	74	P	Pg	22 29 02.8	-0.1
PVO				S	Sb	22 29 16.1	+0.3
PVO				AML	AML	22 29 23.8	
	comp=N,24111μm,0.6s						
PVO				AML	AML	22 29 24.6	
	comp=E,16485μm,0.8s						
UPR	University Cam	1.11	94	P	Pn	22 29 06.7	0.0
DRO	Drossia	1.13	111	P	Pb	22 29 05.3	-1.3
DRO				S	Sn	22 29 24.0	+1.3
	comp=E,12μm,0.4s						
DRO	Drossia	1.13	111	P	Pb	22 29 05.9	-0.7
DRO				AML	AML	22 29 28.6	
	comp=N,23121μm,0.4s						
DRO				AML	AML	22 29 29.1	
	comp=E,24503μm,0.4s						
IGT	Igoumenitsa	1.16	358	P	Pb	22 29 07.1	0.0
IGT				S	Sn	22 29 24.9	+1.5
	comp=E,4μm,0.5s						
IGT	Igoumenitsa	1.16	358	P	Pg	22 29 07.4	+0.3
IGT				S	Sb	22 29 22.2	-0.1
IGT				AML	AML	22 29 27.9	
	comp=E,8499μm,0.7s						
IGT				AML	AML	22 29 28.9	
	comp=N,6594μm,0.4s						
EFP	Efpalio	1.21	87	P	Pb	22 29 06.7	-1.1
EFP				S	Sn	22 29 24.9	+0.5
	comp=N,12μm,0.6s						
EFP	Efpalio	1.21	87	P	Pb	22 29 06.8	-1.0
EFP				S	Sn	22 29 25.1	+0.7
EFP				AML	AML	22 29 30.0	
	comp=E,28588μm,0.8s						
EFP				AML	AML	22 29 30.4	
	comp=N,18226μm,0.5s						
ANX	Ano Chora	1.23	79	P	Pn	22 29 07.4	-1.0
ANX				S	Sn	22 29 27.6	+2.3
	comp=N,12μm,0.6s						
ANX	Ano Chora	1.23	79	P	Pn	22 29 08.0	-0.4
ANX				S	Sn	22 29 24.5	-0.7
ANX				AML	AML	22 29 31.2	
	comp=N,22719μm,0.7s						
ANX				AML	AML	22 29 31.5	
	comp=E,25143μm,0.6s						
EVR	Evrytania	1.25	64	P	Pn	22 29 07.4	-1.2
EVR				S	Sn	22 29 28.2	+2.5
	comp=E,4μm,0.8s						
EVR	Evrytania	1.25	64	P	Pn	22 29 08.0	-0.7
EVR				AML	AML	22 29 31.7	
	comp=N,7910μm,0.8s						
EVR				AML	AML	22 29 37.0	
	comp=E,5822μm,0.9s						
LAKA	Lakka	1.27	95	P	Pn	22 29 07.5	-1.3
LAKA				S	Sn	22 29 25.5	-0.5
	comp=E,1μm,0.7s						
LAKA	Lakka	1.27	95	P	Pn	22 29 08.3	-0.5
LAKA				S	Sn	22 29 25.8	-0.2
LAKA				AML	AML	22 29 31.4	
	comp=E,5256μm,0.6s						
LAKA				AML	AML	22 29 31.6	
	comp=N,6148μm,0.8s						
SERG	Sergoula	1.32	88	P	Pn	22 29 08.6	-1.0
SERG	Sergoula	1.32	88	P	Pn	22 29 09.1	-0.4
SERG				S	Sg	22 29 27.4	0.0
SERG				AML	AML	22 29 32.7	
	comp=N,11771μm,0.5s						
SERG				AML	AML	22 29 33.0	
	comp=E,11826μm,0.7s						
TRIZ	Trizonia	1.34	90	P	Pn	22 29 08.7	-1.0
TRIZ	Trizonia	1.34	90	P	Pn	22 29 09.2	-0.5
TRIZ				S	Sg	22 29 29.6	+1.9
JAN	Janina	1.34	16	P	Pg	22 29 11.3	+0.8
JAN				S	Sg	22 29 30.6	+2.7
	comp=E,4μm,0.8s						
JAN	Janina	1.34	16	P	Pg	22 29 10.9	+0.4
JAN				S	Sg	22 29 29.0	+1.2
JAN				AML	AML	22 29 33.5	
	comp=E,9892μm,0.4s						
JAN				AML	AML	22 29 37.2	
	comp=N,5226μm,0.6s						
AMT	Artemida-Makis	1.35	128	P	Pb	22 29 10.1	-0.2
AMT				S	Sg	22 29 30.7	+2.6
	comp=N,7μm,0.7s						
AMT	Artemida-Makis	1.35	128	P	Pg	22 29 10.6	0.0
AMT				AML	AML	22 29 41.0	
	comp=E,9494μm,0.8s						
AMT				AML	AML	22 29 41.3	
	comp=N,10188μm,0.5s						
ALIK	Aliki, Aigiali	1.37	94	P	Pn	22 29 09.7	-0.5
ALIK				S	Sg	22 29 32.3	+3.4
KALE	Kalithea	1.39	89	P	Pn	22 29 08.8	-1.7
KALE				S	Sg	22 29 30.8	+1.4
	comp=N,5μm,0.6s						
KALE	Kalithea	1.39	89	P	Pn	22 29 10.1	-0.3
KALE				S	Sg	22 29 30.9	+1.4
KALE				AML	AML	22 29 35.0	
	comp=E,6714μm,0.5s						
KALE				AML	AML	22 29 36.2	
	comp=N,13233μm,0.7s						
KLV	Kalavryta, Ach	1.44	103	P	Pn	22 29 10.7	-0.5
KLV				S	Sg	22 29 31.4	+0.4
	comp=N,2μm,0.8s						
KLV	Kalavryta, Ach	1.44	103	P	Pn	22 29 10.8	-0.3
KLV				S	Sg	22 29 32.2	+1.2
KLV				AML	AML	22 29 39.4	
	comp=N,3788μm,1.4s						
KLV				AML	AML	22 29 51.0	
	comp=E,2953μm,0.8s						
MAKR	Makrakomi, Fth	1.52	64	P	Pb	22 29 12.5	-0.7
SRN	Sarande	1.54	349	P	Pb	22 29 13.9	+0.5
SRN	Sarande	1.54	349	*i* PN	Pb	22 29 13.9	+0.5
SRN				*i* SN	Sg	22 29 35.7	+1.5
AGG	Agios Georgios	1.66	66		Pn	22 29 12.7	-1.5
AGG				Sn	Sb	22 29 35.8	-1.0
ITM	Ithomi	1.71	134	P	Pb	22 29 16.8	+0.3
ITM	Ithomi	1.71	134	P	Pg	22 29 17.1	-0.5
ITM				S	Sg	22 29 40.5	+0.8
ITM				AML	AML	22 29 47.9	
	comp=E,3479μm,1.0s						
ITM				AML	AML	22 29 49.6	
	comp=N,3830μm,0.8s						
ITM	Ithomi	1.71	134		Pn	22 29 13.8	-1.1
ITM				Sn	Sn	22 29 35.9	-1.0
THL	Klokotos Trika	1.75	46	P	Pn	22 29 15.8	+0.4
THL				S	Sg	22 29 43.7	+2.7
	comp=N,2μm,0.6s						
KPRO	Kipourio	1.76	26	P	Pg	22 29 18.3	-0.3
KPRO				S	Sg	22 29 43.9	+2.5
	comp=N,3μm,1.1s						
PYL	PYLOS	1.83	143	P	Pb	22 29 18.5	0.0
VLX	Vlachokerasia	1.88	122	P	Pg	22 29 20.7	0.0
VLX	Vlachokerasia	1.88	122	P	Pn	22 29 18.0	+0.8
VLX				AML	AML	22 29 58.2	
	comp=N,5922μm,0.6s						
VLX				AML	AML	22 30 07.5	
	comp=E,4146μm,0.9s						
PENT	Pentalofos	1.92	18	P	Pb	22 29 20.7	+0.6
TPE	Tepelena	1.94	352	P	Pb	22 29 19.6	-0.8
TPE	Tepelena	1.94	352	*i* PN	Pb	22 29 19.7	-0.7
TPE				*i* SN	Sb	22 29 45.2	+0.4
VLO	Vlora	2.20	342	*i* PN	Pb	22 29 24.9	+0.1
KZN	Kozani	2.22	29	P	Pb	22 29 25.2	+0.1
SCTE	Santa Cesarea	2.25	320		Pn	22 29 22.0	-0.3
SCTE				Sn	Sn	22 29 51.7	+1.4
LIT	Litokhoron	2.38	43		Pn	22 29 23.6	-0.5
LIT				Sn	Sb	22 29 56.1	-1.4
FNA	Florina	2.53	18	Pn	Pn	22 29 25.5	-0.7
OHR	Ohrid	2.76	7	*i* Pn	Pb	22 29 32.5	-1.8
TIP	Timpagrande	2.94	287	⇑P	Pb	22 29 35.0	-2.5
TIP	Timpagrande	2.94	287		Pn	22 29 30.1	-1.7
TIP				Sn	Sn	22 30 07.5	+0.2
TIR	Tirane	3.00	353	*i* PN	Pn	22 29 34.7	+2.1
TIR				*i* SN	Sb	22 30 12.0	-3.2
TIR	Tirane	3.00	353	⇑P	Pb	22 29 35.3	+2.7
TIR	Tirane	3.00	353		Pn	22 29 31.7	-0.9
TIR				Sn	Sn	22 29 59.5	-9.2
CGL1	Ceglie Messapi	3.20	316	*e*Pn	Pn	22 29 37.5	+2.2
PHP	Peshkopia	3.31	1	*i* PN	Pn	22 29 39.1	+2.1
PHP				*i* SN	Sn	22 30 13.8	-2.7
VAY	Valandovo	3.40	29	*i* Pn	Pn	22 29 41.0	+2.9
CEL	Celeste	3.52	270	Pn	Pn	22 29 41.4	+1.6
MATE	Matera	3.64	310	⇑P	Pg	22 29 53.2	-1.3
PUK	Puka	3.69	354	*i* PN	Pn	22 29 42.9	+0.8
PUK				*i* SN	Sn	22 30 27.1	+1.3
ULC	Ulcinj	3.69	347	⇓*i*Pn	Pn	22 29 42.1	0.0
ULC				*i* Sn	Sn	22 30 28.5	+2.7
SG1	Sgolgore (BA)	3.77	312	*e*Pn	Pn	22 29 45.0	+1.8
SG1				Sn	Sn	22 30 27.9	+0.1
BAI	Bari	3.84	317	*e*P

PLE				*i* Sn		**Sn**	**22 31 00.1**	**+1.6**
ALN	**Alexandroupoli**	**5.05**	**58**	Pn		**Pn**	**22 30 00.4**	**-0.4**
PAOL	**Paolisi**	**5.21**	**303**			**Pn**	**22 30 01.7**	**-1.3**
RUDO	**Rudo**	**5.30**	**352**	*e*Pn		**Pn**	**22 30 03.9**	**-0.3**
BBLS	**Lazići**	**5.54**	**353**	*e*Pn		**Pn**	**22 30 08.1**	**+0.6**
CORL	**Corleone**	**5.59**	**267**	Pn		**Pn**	**22 30 07.0**	**-1.3**
DIVS	**Divibare**	**5.73**	**357**	*e*Pn		**Pn**	**22 30 09.1**	**-1.1**
HAPS	**Han Pijesak,BI**	**5.81**	**350**	*e*Pn		**Pn**	**22 30 10.6**	**-0.7**
INTR	**Introdacqua**	**6.14**	**308**			**Pn**	**22 30 14.7**	**-1.1**
MDVR	**Moldovita**	**6.49**	**8**	⇑P		Pn	22 30 26.0	+5.5
MGRS	**Mrkonjic Grad**	**6.53**	**339**	*e*Pn		**Pn**	**22 30 21.5**	**+0.4**
AQU	**L'Aquila**	**6.65**	**309**	*e*Pn		**Pn**	**22 30 25.1**	**+2.4**
AQU	**L'Aquila**	**6.65**	**309**	Pn		**Pn**	**22 30 21.9**	**-0.8**
FRGS	**Fruska Gora**	**6.80**	**357**	*e*Pn		**Pn**	**22 30 22.9**	**-1.8**
BLY	**Banja Luka**	**6.81**	**340**	*e*Pn		**Pn**	**22 30 22.6**	**-2.3**
BLY	**Banja Luka**	**6.81**	**340**			**Pn**	**22 30 24.1**	**-0.8**
NRCA	**Norcia**	**7.10**	**311**			**Pn**	**22 30 26.2**	**-2.8**
GZR	**Gura Zlata**	**7.24**	**14**	⇑P		**Pn**	**22 30 32.0**	**+1.1**
ARR	**Arges**	**7.68**	**23**	⇑P		Pn	22 30 29.4	-7.6
MURB	**Monte Urbino**	**7.70**	**312**			**Pn**	**22 30 35.9**	**-1.3**
VOIR		**7.87**	**25**	⇑P		Pn	22 30 30.0	-10
MORH	**Mrgy, Hungar**	**7.94**	**351**	*e*Pn		**Pn**	**22 30 37.9**	**-2.5**
BOJS	**Bojanci**	**8.08**	**333**	*i* Pn		**Pn**	**22 30 43.2**	**+0.8**
RIY	**Rijeka**	**8.22**	**330**	*e*Pn		**Pn**	**22 30 45.0**	**+0.7**
MLR	**Muntele Rosu**	**8.24**	**28**	Pn		**Pn**	**22 30 45.2**	**+0.6**
	comp=E,0.2nm,0.3s,baz=344,slow=15,SNR=2.7							
MLR	**Muntele Rosu**	**8.24**	**28**			**Pn**	**22 30 43.2**	**-1.4**
GBRS	**Gornja Briga**	**8.27**	**332**	*e*Pn		**Pn**	**22 30 46.0**	**+1.1**
CRES	**Cresnjev**	**8.30**	**335**	*e*Pn		**Pn**	**22 30 44.8**	**-0.5**
CEY	**Cerknica**	**8.59**	**331**	*e*Pn		**Pn**	**22 30 49.6**	**+0.3**
LJU	**Ljubljana**	**8.81**	**332**	*e*Pn		**Pn**	**22 30 51.7**	**-0.6**
SOKA	**Soboth**	**9.19**	**336**	*e*Pn		**Pn**	**22 30 57.4**	**-0.2**
	comp=E,8.2nm,0.5s,SNR=18							
KEST	**Kesra**	**9.20**	**257**	Pn		**Pn**	**22 30 56.8**	**-1.0**
OBKA	**Obir**	**9.20**	**334**	*e*Pn		**Pn**	**22 30 59.0**	**+1.2**
OBKA				*e*Sn		**Sn**	**22 32 39.6**	**-1.9**
OBKA	**Obir**	**9.20**	**334**	*e*Pn		**Pn**	**22 30 59.1**	**+1.3**
	comp=E,8.4nm,0.5s							
TEOL	**Teolo**	**9.53**	**320**			**Pn**	**22 31 01.9**	**-0.3**
CTI	**Castel Tesino**	**10.03**	**323**			**Pn**	**22 31 08.6**	**-0.6**
KBA	**Koelnbreinsper**	**10.12**	**332**	*e*Pn		**Pn**	**22 31 10.4**	**0.0**
KBA				*e*Sn		**Sn**	**22 33 01.1**	**-3.1**
KBA	**Koelnbreinsper**	**10.12**	**332**	*e*Pn		**Pn**	**22 31 10.6**	**+0.1**
	comp=E,2.5nm,0.5s							
ABTA	**Abfaltersbach**	**10.18**	**328**	Pn		**Pn**	**22 31 11.1**	**-0.1**
	comp=E,2.3nm,0.5s,SNR=5.6							
VYHS	**Vyhne**	**10.18**	**354**	*e*PN		**Pn**	**22 31 12.9**	**+1.8**
VYHS				*e*SN		**Sn**	**22 33 03.3**	**-2.1**
SALO	**Salr**	**10.30**	**318**	Pn		**Pn**	**22 31 12.8**	**0.0**
BRTR	**Keskin Array B**	**10.41**	**78**	Pn		Pn	22 31 20.4	+6.0
	comp=E,0.1nm,0.3s,baz=260,slow=13,SNR=7.3							
BRTR				LR		LR	22 35 58.7	
	comp=E,129nm,18.2s,baz=287,slow=42							
MOA	**Molln**	**10.47**	**337**	*e*Pn		**Pn**	**22 31 15.4**	**+0.3**
MOA				*e*Sn		**Sn**	**22 33 10.5**	**-2.0**
MOA	**Molln**	**10.47**	**337**	*e*Pn		**Pn**	**22 31 15.4**	**+0.3**
	comp=E,3.2nm,0.6s,SNR=8.2							
RJOB	**Jochberg**	**10.87**	**332**	*e*Pn		**Pn**	**22 31 21.1**	**+0.4**
RJOB				*e*Sn		**Sn**	**22 33 18.3**	**-4.2**
WTTA	**Wattenberg**	**10.96**	**327**	*e*Pn		**Pn**	**22 31 22.6**	**+0.7**
WTTA				*e*Sn		**Sn**	**22 33 23.1**	**-1.5**
WTTA	**Wattenberg**	**10.96**	**327**	*e*Pn		**Pn**	**22 31 22.8**	**+0.9**
	comp=E,2.2nm,0.4s							
WATA	**Walderalm**	**11.04**	**327**	*e*Pn		**Pn**	**22 31 24.1**	**+1.2**
	comp=E,5.2nm,0.5s,SNR=8.7							
SQTA	**Sankt Quirin**	**11.11**	**326**	Pn		**Pn**	**22 31 25.7**	**+1.8**
	comp=E,3.9nm,0.4s							
FUORN	**Ofenpass-Fuorn**	**11.11**	**321**	Pn		**Pn**	**22 31 23.6**	**-0.6**
FETA	**Feichten**	**11.18**	**324**	Pn		**Pn**	**22 31 27.7**	**+2.8**
	comp=E,1.8nm,0.6s							
MOTA	**Moosalm**	**11.25**	**326**	*i* Pn		**Pn**	**22 31 27.4**	**+1.5**
	comp=E,5.7nm,0.7s,SNR=8.3							
VRAC	**Vranov**	**11.27**	**347**	LR		LR	22 36 50.3	
	comp=E,343nm,19.8s,baz=339,slow=44							
DAVOX	**Davos/Dischmat**	**11.41**	**321**	Pn		**Pn**	**22 31 30.4**	**+2.2**
	comp=E,0.5nm,0.3s,baz=252,slow=12,SNR=7.6							
RETA	**Reutte**	**11.51**	**325**	Pn		**Pn**	**22 31 31.3**	**+2.0**
	comp=E,1.2nm,0.5s							
GEC2	**GERESS Array S**	**11.53**	**337**	*e*Pn		**Pn**	**22 31 30.1**	**+0.5**
GERES	**GERESS Array B**	**11.53**	**337**	Pn		**Pn**	**22 31 28.9**	**-0.7**
	comp=E,0.4nm,0.3s,baz=156,slow=14,SNR=11							
GERES				Sn		**Sn**	**22 33 33.6**	**-4.9**
	comp=E,0.3nm,0.3s,baz=153,slow=22,SNR=4.4							
KHC	**Kasperske Hory**	**11.82**	**338**	*e*PN		**Pn**	**22 31 32.8**	**-0.8**
KHC				*e*SN		**Sn**	**22 33 42.5**	**-3.1**
MMAI	**Mount Meron Ar**	**13.33**	**109**	Pn		**Pn**	**22 31 52.4**	**-1.9**
	comp=E,0.6nm,0.3s,baz=295,slow=12,SNR=5.0							
ESDC	**Sonseca Array**	**18.94**	**282**	P		**Pn**	**22 33 07.2**	**+0.4**
	comp=E,0.2nm,0.3s,baz=93,slow=12,SNR=4.1							
ESDC				LR		LR	22 41 09.2	
	comp=E,180nm,18.5s,baz=0.0,slow=40							
HFS	**Hagfors**	**22.19**	**351**	P		**P**	**22 33 42.1**	**+0.9**
	comp=E,3.5nm,0.5s,baz=148,slow=12,SNR=13							
NC602	**NORSAR Array S**	**23.07**	**349**	P		**P**	**22 33 48.7**	**-1.7**
NC602				IAmb		IAmb	22 34 04.6	
	comp=Z,4.3nm,0.6s							
EKA	**Eskdalemuir Ar**	**23.20**	**325**	P		**P**	**22 33 51.0**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=115,slow=12,SNR=3.1							
FINES	**FINESS Array B**	**23.37**	**7**	P		**P**	**22 33 52.9**	**-0.6**
	comp=Z,2.1nm,0.4s,baz=187,slow=10.0,SNR=24							
FIA1	**FINESS Array S**	**23.37**	**7**	P		**P**	**22 33 52.5**	**-1.0**
FIA1				IAmb		IAmb	22 33 55.7	
	comp=Z,9.1nm,1.1s							
NC405	**NORSAR Array S**	**23.40**	**349**	P		**P**	**22 33 53.4**	**-0.4**
NB2	**NORSAR Subarra**	**23.41**	**349**	P		**P**	**22 33 56.2**	**+2.3**
	comp=Z,0.5nm,0.6s,baz=159,slow=9.3							
NOA	**NORSAR Array B**	**23.41**	**349**	P		**P**	**22 33 53.2**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=165,slow=11,SNR=3.9							
NOA				LR		LR	22 44 25.1	
	comp=Z,114nm,21.4s,baz=10.0,slow=40							
GEYT	**Alibeck**	**29.55**	**79**	P		**P**	**22 34 51.2**	**+1.3**
	comp=Z,1.2nm,0.5s,baz=267,slow=8.9,SNR=3.7							
TORD	**Torodi Ar. Bea**	**30.11**	**218**	P		**P**	**22 34 55.2**	**+0.4**
	comp=Z,1.0nm,0.9s,baz=19,slow=8.3,SNR=4.1							
BVAR	**Borovoye Array**	**37.08**	**50**	P		**P**	**22 35 55.6**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=263,slow=8.0,SNR=3.7							
KK31	**Karatay Array**	**37.83**	**66**	P		**P**	**22 36 00.4**	**-1.3**
KK31				IAmb		IAmb	22 36 05.0	
	comp=Z,2.9nm,0.7s							
KKAR	**Karatay Array**	**37.83**	**66**	P		**P**	**22 36 01.0**	**-0.7**
KKAR				IAmb		IAmb	22 36 05.1	
	comp=Z,2.9nm,0.7s							
MK31	**Makanchi Array**	**45.30**	**59**	P		**P**	**22 37 02.0**	**-0.9**
MKAR	**Makanchi Array**	**45.30**	**59**	P		**P**	**22 37 02.3**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=278,slow=6.8,SNR=24							
ZAA0	**Zalesovo Array**	**45.65**	**48**	P		**P**	**22 37 05.3**	**-0.2**
ZALV	**Zalesovo Beam**	**45.65**	**48**	P		**P**	**22 37 05.7**	**+0.2**
	comp=Z,2.8nm,0.4s,baz=272,slow=8.8,SNR=16							
YKA	**Yellowknife Ar**	**73.17**	**340**	P		**P**	**22 40 17.3**	**+1.8**
	comp=Z,0.3nm,0.8s,baz=46,slow=5.2,SNR=4.2							

IDC 26 22:30:20.9±1.4, 38.48N×20.75E, h0km, mb3.7/5, mb1 3.7/5, mb1mx3.4/62, mbtmp3.7/5, Error ellipse: s-maj=43.8km s-min=24.3km az=120.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
HFS	**Hagfors**	**22.13**	**351**	P		P	22 35 18.0	+0.2
	1.1nm,0.5s,baz=163,slow=10,SNR=3.0							
FINES	**FINESS Array B**	**23.23**	**6**	P		P	22 35 29.1	-0.2
	1.7nm,0.7s,baz=184,slow=12,SNR=2.8							
TORD	**Torodi Ar. Bea**	**30.38**	**219**	P		P	22 36 34.6	0.0
	0.4nm,0.6s,baz=22,slow=9.7,SNR=2.7							
MKAR	**Makanchi Array**	**44.99**	**59**	P		P	22 38 37.9	0.0
	0.3nm,0.4s,baz=279,slow=7.1,SNR=3.9							
ZALV	**Zalesovo Beam**	**45.36**	**48**	P		P	22 38 40.5	-0.2
	1.2nm,0.5s,baz=292,slow=7.8,SNR=3.5							

KRSC **26** *22:33:35.2±1.3, 55.60N×160.10E, h224km±12km, ML5.0*
MOS **26** *22:33:36.8±0.9, 55.63N×159.86E, h215km, mb4.6/20, Error ellipse: s-maj=8.0km s-min=3.7km az=84.7*
IDC **26** *22:33:38.7±0.4, 55.70N×159.70E, h214km±3km, mb3.9/43, mb1 4.0/49, mb1mx4.0/63, mbtmp4.5/49, Error ellipse: s-maj=7.3km s-min=5.5km az=157.0*
NEIC **26** *22:33:38.2±1.3, 55.65N±0.08×159.8E±0.2, h215km±5km, mb4.4/105, Error ellipse: s-maj=12.8km s-min=10.9km az=115.0*
ISC 26 22:33:37.9±0.3, 55.58N±0.03×160.00E±0.03, h214km±3km, n377, σ1s22/469, mb4.4/129, 18C-8D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KMNR	**Kamenistaya**	**0.22**	**38**	PN		**Pn**	**22 34 05.8**	**-0.3**
KMNR	**Kamenistaya**	**0.22**	**38**	*i* P		**Pn**	**22 34 05.8**	**-0.3**
TUMR	**Tumrok**	**0.31**	**164**	PN		**Pn**	**22 34 06.2**	**-0.1**
TUMR	**Tumrok**	**0.31**	**164**	*i* P		**Pn**	**22 34 06.2**	**-0.1**
KPT	**Kopyto**	**0.41**	**18**	PN		**Pn**	**22 34 05.7**	**-0.7**
KPT	**Kopyto**	**0.41**	**18**	*i* P		**Pn**	**22 34 05.7**	**-0.7**
KIRR	**Kirishev**	**0.42**	**27**	PN		**Pn**	**22 34 05.8**	**-0.8**
KIRR				S		**S**	**22 34 28.3**	**-0.8**
KIRR	**Kirishev**	**0.42**	**27**	*i* P		**Pn**	**22 34 05.8**	**-0.8**
KIRR				*i* S		**S**	**22 34 28.3**	**-0.8**
TUMD	**Tumrok D**	**0.44**	**148**	*i* P		**Pn**	**22 34 06.0**	**-0.5**
BZMR	**Bezymyannaya**	**0.45**	**38**	PN		**Pn**	**22 34 06.2**	**-0.5**
BZMR	**Bezymyannaya**	**0.45**	**38**	*e*P		**Pn**	**22 34 06.2**	**-0.5**
KOZ	**Kozyrevsk**	**0.48**	**352**	PN		**Pn**	**22 34 06.0**	**-0.6**
KOZ	**Kozyrevsk**	**0.48**	**352**	*i* P		**Pn**	**22 34 06.0**	**-0.6**
KZV	**Kizimen**	**0.50**	**160**	PN		**Pn**	**22 34 06.6**	**-0.3**
KZV	**Kizimen**	**0.50**	**160**	*i* P		**Pn**	**22 34 06.6**	**-0.3**
BZGR	**Bezymyannyi-Gr**	**0.54**	**47**	PN		**Pn**	**22 34 06.3**	**-0.6**
BZGR				S		**S**	**22 34 29.2**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**0.54**	**47**	*i* P		**Pn**	**22 34 06.3**	**-0.6**
BZGR				*e*S		**S**	**22 34 29.2**	**-0.4**
ZLN	**Zelenaya**	**0.63**	**46**	PN		**Pn**	**22 34 07.1**	**-0.2**
ZLN	**Zelenaya**	**0.63**	**46**	*i* P		**Pn**	**22 34 07.1**	**-0.2**
LGNR	**Loginova**	**0.64**	**38**	PN		**Pn**	**22 34 07.0**	**-0.5**
LGNR				S		**S**	**22 34 30.9**	**+0.2**
LGNR	**Loginova**	**0.64**	**38**	*e*P		**Pn**	**22 34 07.0**	**-0.5**
LGNR				*e*S		**S**	**22 34 30.9**	**+0.2**
CIRR	**Tsirk**	**0.68**	**38**	PN		**Pn**	**22 34 06.8**	**-0.7**
CIRR	**Tsirk**	**0.68**	**38**	*i* P		**Pn**	**22 34 06.8**	**-0.7**
KRSR	**Krestovskiy**	**0.71**	**26**	PN		**Pn**	**22 34 06.4**	**-1.2**
KRSR				S		**S**	**22 34 29.1**	**-1.8**
KRSR	**Krestovskiy**	**0.71**	**26**	*e*P		**Pn**	**22 34 06.4**	**-1.2**
KRSR				*e*S		**S**	**22 34 29.1**	**-1.8**
SRDR	**Sredinnyy**	**0.76**	**348**	PN		**Pn**	**22 34 06.8**	**-1.0**
SRDR	**Sredinnyy**	**0.76**	**348**	*i* P		**Pn**	**22 34 06.8**	**-1.0**
ESO	**Esso**	**0.81**	**296**	PN		**Pn**	**22 34 07.6**	**-0.4**
ESO				S		**S**	**22 34 30.4**	**-1.1**
ESO	**Esso**	**0.81**	**296**	*i* P		**Pn**	**22 34 07.6**	**-0.4**
ESO				*i* S		**S**	**22 34 30.4**	**-1.1**
KLY	**Klyuchi**	**0.82**	**26**	PN		**Pn**	**22 34 07.8**	**-0.2**
KLY				S		**S**	**22 34 31.7**	**+0.1**
KLY	**Klyuchi**	**0.82**	**26**	*i* P		**Pn**	**22 34 07.8**	**-0.2**
KLY				*i* S		**S**	**22 34 31.7**	**+0.1**
BDR	**Baidarnaya**	**1.20**	**34**	PN		**Pn**	**22 34 10.2**	**-0.3**
BDR				S		**S**	**22 34 36.2**	**+0.2**
BDR	**Baidarnaya**	**1.20**	**34**	*i* P		**Pn**	**22 34 10.2**	**-0.3**
BDR				*e*S		**S**	**22 34 36.2**	**+0.2**
SRKR	**Sorokina**	**1.26**	**31**	PN		**Pn**	**22 34 10.4**	**-0.6**
SRKR				S		**S**	**22 34 35.9**	**-0.8**
SRKR	**Sorokina**	**1.26**	**31**	*i* P		**Pn**	**22 34 10.4**	**-0.6**
SRKR				*i* S		**S**	**22 34 35.9**	**-0.8**
SMKR	**Semkarok**	**1.30**	**39**	PN		**Pn**	**22 34 10.5**	**-0.8**
SMKR				S		**S**	**22 34 36.8**	**-0.4**
SMKR	**Semkarok**	**1.30**	**39**	*e*P		**Pn**	**22 34 10.5**	**-0.8**
SMKR				*e*S		**S**	**22 34 36.8**	**-0.4**
MKZ	**Mys Kozlova**	**1.43**	**135**	PN		**Pn**	**22 34 10.4**	**-1.9**
MKZ				S		**S**	**22 34 35.6**	**-3.2**
MKZ	**Mys Kozlova**	**1.43**	**135**	*e*P		**Pn**	**22 34 10.4**	**-1.9**
MKZ				*e*S		**S**	**22 34 35.6**	**-3.2**
KII	**Karymskiy**	**1.58**	**192**	PN		**Pn**	**22 34 13.9**	**+0.2**
KII	**Karymskiy**	**1.58**	**192**	*e*P		**Pn**	**22 34 13.9**	**+0.2**
KBG	**Krutoberegovo**	**1.67**	**65**	PN		**Pn**	**22 34 12.9**	**-1.3**
KBG				S		**S**	**22 34 39.8**	**-2.6**
KBG	**Krutoberegovo**	**1.67**	**65**	*i* P		**Pn**	**22 34 12.9**	**-1.3**
KBG				*i* S		**S**	**22 34 39.8**	**-2.6**
KBTR	**Krutoberegovo**	**1.71**	**67**	PN		**Pn**	**22 34 13.1**	**-1.5**
KBTR				S		**S**	**22 34 39.9**	**-3.2**
KBTR	**Krutoberegovo**	**1.71**	**67**	*i* P		**Pn**	**22 34 13.1**	**-1.5**
KBTR				*i* S		**S**	**22 34 39.9**	**-3.2**
KRX	**Arik**	**2.36**	**200**	PN		**Pn**	**22 34 21.8**	**+0.4**
KRX				S		**S**	**22 34 56.0**	**+1.1**
KRX	**Arik**	**2.36**	**200**	*e*P		**Pn**	**22 34 21.8**	**+0.4**
KRX				*e*S		**S**	**22 34 56.0**	**+1.1**
KRER	**Koryakskii**	**2.39**	**198**	PN		**Pn**	**22 34 22.4**	**+0.6**
KRER				S		**S**	**22 34 56.1**	**+0.5**
KRER	**Koryakskii**	**2.39**	**198**	*e*P		**Pn**	**22 34 22.4**	**+0.6**
KRER				*e*S		**S**	**22 34 56.1**	**+0.5**
SDLR	**Sedlovina**	**2.40**	**196**	PN		**Pn**	**22 34 21.7**	**0.0**
SDLR				S		**S**	**22 34 55.7**	**+0.1**
SDLR	**Sedlovina**	**2.40**	**196**	*e*P		**Pn**	**22 34 21.7**	**0.0**
SDLR				*e*S		**S**	**22 34 55.7**	**+0.1**
SMAR	**Somma**	**2.42**	**197**	PN		**Pn**	**22 34 22.2**	**+0.1**
SMAR				S		**S**	**22 34 56.8**	**+0.5**
SMAR	**Somma**	**2.42**	**197**	*e*P		**Pn**	**22 34 22.2**	**+0.1**
SMAR				*e*S		**S**	**22 34 56.8**	**+0.5**
KOK	**Koryaka**	**2.43**	**200**	PN		**Pn**	**22 34 22.3**	**+0.3**
KOK				S		**S**	**22 34 57.0**	**+0.9**
KOK	**Koryaka**	**2.43**	**200**	*e*P		**Pn**	**22 34 22.3**	**+0.3**
KOK				*e*S		**S**	**22 34 57.0**	**+0.9**
AVH	**Avacha**	**2.43**	**198**	PN		**Pn**	**22 34 22.5**	**+0.4**
AVH				S		**S**	**22 34 56.9**	**+0.7**
AVH	**Avacha**	**2.43**	**198**	*e*P		**Pn**	**22 34 22.5**	**+0.4**
AVH				*i* S		**S**	**22 34 56.9**	**+0.7**
NLC	**Nalytchevo**	**2.44**	**189**	PN		**Pn**	**22 34 21.2**	**-0.9**
NLC				S		**S**	**22 34 54.2**	**-2.0**
NLC	**Nalytchevo**	**2.44**	**189**	*e*P		**Pn**	**22 34 21.2**	**-0.9**
NLC				*e*S		**S**	**22 34 54.2**	**-2.0**
UGLR	**Uglovaya**	**2.47**	**197**	PN		**Pn**	**22 34 22.6**	**+0.1**
UGLR				S		**S**	**22 34 56.7**	**-0.3**
UGLR	**Uglovaya**	**2.47**	**197**	*e*P		**Pn**	**22 34 22.6**	**+0.1**
UGLR				*i* S		**S**	**22 34 56.7**	**-0.3**
SPN	**Mys Shipunski**	**2.49**	**180**	PN		**Pn**	**22 34 20.6**	**-1.9**
SPN	**Mys Shipunski**	**2.49**	**180**	*i* P		**Pn**	**22 34 20.6**	**-1.9**
SPN				*i* S		**S**	**22 34 52.5**	**-4.6**
PET	**Petropavlovsk**	**2.68**	**198**	*α i*PN		**Pn**	**22 34 24.3**	**-0.3**
PET				*e*S		**S**	**22 34 59.2**	**-1.6**
PET				pmax	pmax			
	comp=Z,830nm,0.6s							
PET				pmax	pmax			
	comp=Z,800nm,0.3s							
PET				smax	smax			
	comp=N,2μm,0.5s							
PET				smax	smax			
	comp=N,2μm,0.6s							
PET				smax	smax			
	comp=E,2μm,0.5s							
PET				MLR	MLR			
	comp=Z,700nm,13.0s							
PET	**Petropavlovsk**	**2.68**	**198**	*e*P		**Pn**	**22 34 24.4**	**-0.3**
PET				*i* S		**S**	**22 34 59.8**	**-1.0**
PET	**Petropavlovsk**	**2.68**	**198**			**Pn**	**22 34 24.4**	**-0.3**
PET				S		**S**	**22 34 59.5**	**-1.3**
PEA0B	**Petropavlovsk-**	**2.82**	**209**	PN		**Pn**	**22 34 26.3**	**+0.1**
PEA0B				S		**S**	**22 35 05.1**	**+1.4**
PEA0B	**Petropavlovsk-**	**2.82**	**209**			**Pn**	**22 34 26.3**	**+0.1**
PEA0B				S		**S**	**22 35 05.1**	**+1.4**
PETK	**Petropavlovsk-**	**2.82**	**209**	P		**Pn**	**22 34 26.5**	**+0.3**
	comp=Z,58nm,0.3s,baz=70,slow=17,SNR=995							
PETK				S		**S**	**22 35 06.2**	**+2.5**
	comp=Z,15nm,0.3s,baz=0.7,slow=24,SNR=5.3							
KRMR	**Karymshinskiy**	**2.96**	**202**	PN		**Pn**	**22 34 27.7**	**-0.2**
KRMR				S		**S**	**22 35 07.7**	**+1.1**
KRMR	**Karymshinskiy**	**2.96**	**202**	*e*P		**Pn**	**22 34 27.7**	**-0.2**
KRMR				*e*S		**S**	**22 35 07.7**	**+1.1**
APC	**Apacha**	**3.14**	**213**	PN		**Pn**	**22 34 30.8**	**+0.9**
APC				S		**S**	**22 35 11.3**	**+1.1**
APC	**Apacha**	**3.14**	**213**	*i* P		**Pn**	**22 34 30.8**	**+0.9**
APC				*i* S		**S**	**22 35 11.3**	**+1.1**
GRL	**Gorelyy**	**3.24**	**201**	PN		**Pn**	**22 34 31.4**	**+0.2**
GRL				S		**S**	**22 35 13.4**	**+0.8**
GRL	**Gorelyy**	**3.24**	**201**	*e*P		**Pn**	**22 34 31.4**	**+0.2**
GRL				*e*S		**S**	**22 35 13.4**	**+0.8**
RUS	**Russkaya**	**3.27**	**196**	PN		**Pn**	**22 34 30.1**	**-1.3**
RUS				S		**S**	**22 35 10.3**	**-2.7**
RUS	**Russkaya**	**3.27**	**196**	*e*P		**Pn**	**22 34 30.1**	**-1.3**
RUS				*e*S		**S**	**22 35 10.3**	**-2.7**
MTVR	**Mutnovka**	**3.28**	**200**	PN		**Pn**	**22 34 31.7**	**0.0**
MTVR	**Mutnovka**	**3.28**	**200**	*e*P		**Pn**	**22 34 31.7**	**0.0**
BKI	**Bering**	**3.43**	**94**	PN		**Pn**	**22 34 32.5**	**-0.7**
BKI				S		**S**	**22 35 13.8**	**-2.5**
BKI	**Bering**	**3.43**	**94**	*i* P		**Pn**	**22 34 32.5**	**-0.7**
BKI				*i* S		**S**	**22 35 13.8**	**-2.5**
ASAK	**Asacha**	**3.43**	**202**	PN		**Pn**	**22 34 33.5**	**+0.1**
ASAK				S		**S**	**22 35 16.4**	**-0.3**
ASAK	**Asacha**	**3.43**	**202**	*i* P		**Pn**	**22 34 33.5**	**+0.1**
ASAK				*i* S		**S**	**22 35 16.4**	**-0.3**
PALN	**Palana**	**3.52**	**360**	PN		**Pn**	**22 34 34.0**	**-0.2**
PALN	**Palana**	**3.52**	**360**	*i* P		**Pn**	**22 34 34.0**	**-0.2**
KDTR	**Khodutka, Kamc**	**3.95**	**198**	PN		**Pn**	**22 34 37.9**	**-1.6**
KDTR				S		**S**	**22 35 22.9**	**-4.7**
KDTR	**Khodutka, Kamc**	**3.95**	**198**	*e*P		**Pn**	**22 34 37.9**	**-1.6**
KDTR				*e*S		**S**	**22 35 22.9**	**-4.7**
OSSR	**Ossora**	**4.04**	**23**	PN		**Pn**	**22 34 40.8**	**+0.3**
OSSR	**Ossora**	**4.04**	**23**	*i* P		**Pn**	**22 34 40.8**	**+0.3**
PAU	**Pauzhetka**	**4.54**	**206**	PN		**Pn**	**22 34 46.9**	**+0.1**
PAU	**Pauzhetka**	**4.54**	**206**	*i* P		**Pn**	**22 34 46.9**	**+0.1**
SKR	**Severo-Kuril's**	**5.43**	**207**	*e*PN		**Pn**	**22 34 57.5**	**-0.6**
SKR				*e*S		**S**	**22 35 58.0**	**-3.3**
SKR				pmax	pmax			
	comp=Z,114nm,0.5s							
SKR				smax	smax			
	comp=N,142nm,0.4s							
SKR				smax	smax			
	comp=E,264nm,0.6s							
SKR	**Severo-Kuril's**	**5.43**	**207**	*e*P		**Pn**	**22 34 57.4**	**-0.6**
TILK	**Tilichiki**	**5.87**	**31**	PN		**Pn**	**22 35 04.4**	**+0.9**
TILK	**Tilichiki**	**5.87**	**31**	*i* P		**Pn**	**22 35 04.4**	**+0.9**
MA2	**Magadan**	**6.38**	**313**	*e*PN		**Pn**	**22 35 10.5**	**+0.5**
MA2				pmax	pmax			
	comp=Z,9.0nm,0.7s							
MA2	**Magadan**	**6.38**	**313**	P		**Pn**	**22 35 09.7**	**-0.3**
	comp=Z,1.8nm,0.3s,baz=125,slow=12,SNR=5.1							
MA2	**Magadan**	**6.38**	**313**			**Pn**	**22 35 08.7**	**-1.4**
SEY	**Seymchan**	**8.34**	**335**	*e*PN		**Pn**	**22 35 36.6**	**+1.4**
SEY	**Seymchan**	**8.34**	**335**	P		**Pn**	**22 35 35.5**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=148,slow=18,SNR=7.6							
BILL	**Bilibino**	**12.84**	**11**	*c i*PN		**Pn**	**22 36 33.8**	**+1.2**
BILL				pmax	pmax			
	comp=Z,32nm,1.4s							
BILL	**Bilibino**	**12.84**	**11**	P		**Pn**	**22 36 33.0**	**+0.5**
KUR	**Kuril'sk**	**12.90**	**222**	*e*PN		**Pn**	**22 36 33.7**	**+0.1**
KUR				pmax	pmax

SCRK Sand Creek 28.51 50 P **P** 22 39 13.0 -0.1
SCRK IAmb IAmb 22 39 13.8
comp=Z,3.6nm,0.7s
SCRK PcP **PcP** **22 42 19.7 +1.0**
INK Inuvik 31.96 40 P **P** **22 39 44.3 +1.1**
comp=Z,1.0nm,0.5s,baz=285,slow=6.2,SNR=9.8
INK PcP **PcP** **22 42 28.3 +0.8**
comp=Z,0.8nm,0.4s,baz=302,slow=3.7,SNR=4.0
INK Inuvik 31.96 40 P **P** **22 39 44.1 +0.9**
TLY Talaya 32.86 287|| *eP* **P** **22 39 49.9 -1.3**
TLY pmax pmax
comp=Z,2.0nm,1.0s
TLY Talaya 32.86 287 PcP **PcP** **22 42 30.9 +0.6**
comp=Z,2.2nm,0.6s,baz=162,slow=13,SNR=5.0
ULN Ulaanbaatar 32.97 279 *eP* **P** **22 39 52.4 0.0**
ULN pmax pmax
comp=Z,2.0nm,0.9s
SONM Songino Array 33.35 279 P **P** **22 39 55.0 -0.7**
comp=Z,1.3nm,0.4s,baz=61,slow=8.1,SNR=26
SONM PP **PP** **22 41 18.9 +3.3**
comp=Z,1.5nm,0.8s,baz=52,slow=9.6,SNR=6.2
SONM PcP **PcP** **22 42 32.2 +0.3**
comp=Z,3.6nm,0.6s,baz=80,slow=1.4,SNR=19
SONM Songino Array 33.35 279 IAmb IAmb 22 39 57.9
comp=Z,1.6nm,0.8s
WHN Wuhan 40.65 251 P **P** **22 41 01.3 +4.3**
RES Resolute Bay 41.04 23 P **P** **22 41 00.5 +0.9**
comp=Z,0.9nm,0.4s,baz=325,slow=5.8,SNR=9.0
RES PcP **PcP** **22 42 55.1 +0.3**
comp=Z,0.9nm,0.6s,baz=297,slow=3.1,SNR=8.0
YKA Yellowknife Ar 41.39 44 P **P** **22 41 03.7 +1.0**
comp=Z,1.5nm,0.6s,baz=300,slow=7.7,SNR=17
YKA pP **pP** **22 41 48.0 0.0**
comp=Z,0.6nm,0.7s,baz=299,slow=7.9,SNR=1.7
YKA PcP **PcP** **22 42 57.1 +0.9**
comp=Z,2.0nm,0.5s,baz=308,slow=3.7,SNR=19
YKA ScP **ScP** **22 46 26.8 +1.5**
comp=Z,0.5nm,0.8s,baz=306,slow=4.1,SNR=6.4
ZAA0 Zalesovo Array 41.43 300 P **P** **22 41 01.7 -1.4**
ZAA0 PcP **PcP** **22 42 56.0 -0.4**
ZALV Zalesovo Beam 41.43 300 P **P** **22 41 01.9 -1.2**
comp=Z,3.6nm,0.4s,baz=50,slow=6.9,SNR=17
ZALV PP **PP** **22 42 38.8 -4.3**
comp=Z,1.1nm,0.5s,baz=46,slow=10,SNR=3.6
ZALV PcP **PcP** **22 42 55.6 -0.8**
comp=Z,3.5nm,0.7s,baz=29,slow=3.4,SNR=7.6
GTA Gaotai 42.33 274 *eP* **P** **22 41 10.0 -0.7**
GTA pmax pmax
comp=Z,4.0nm,0.8s
SPITS Spitsbergen Ar 44.67 350 P **P** **22 41 28.2 -0.5**
comp=Z,4.0nm,0.5s,baz=92,slow=7.5,SNR=27
KURK Kurchatov 46.41 300 *eP* **P** **22 41 41.5 -1.1**
KURK pmax pmax
comp=Z,20nm,0.8s
KURK Kurchatov 46.41 300 P **P** **22 41 41.4 -1.1**
KURK **PcP** **22 43 13.2 -0.4**
KURK **PP** **22 43 33.6 -0.5**
KURBB Kurchatov Arra 46.51 300 P **P** **22 41 42.4 -1.0**
comp=Z,19nm,0.4s,baz=56,slow=8.1,SNR=132
KURBB PcP **PcP** **22 43 13.1 -0.9**
comp=Z,4.1nm,0.5s,baz=50,slow=3.3,SNR=11
KURBB PP **PP** **22 43 34.5 -0.5**
comp=Z,5.0nm,0.9s,baz=51,slow=10,SNR=5.4
MK31 Makanchi Array 47.06 294 P **P** **22 41 46.5 -1.3**
MK31 Makanchi Array 47.06 294 P **P** **22 41 46.5 -1.3**
MKAR Makanchi Array 47.06 294 *ceP* **P** **22 41 46.7 -1.1**
MKAR pmax pmax
comp=Z,3.0nm,0.4s
MKAR Makanchi Array 47.06 294 P **P** **22 41 46.5 -1.3**
comp=Z,3.0nm,0.4s,baz=47,slow=6.1,SNR=80
MKAR PcP **PcP** **22 43 16.2 +0.1**
comp=Z,0.7nm,0.7s,baz=48,slow=2.1,SNR=2.7
MAKZ Makanchi 47.22 294 P **P** **22 41 47.5 -1.5**
MAKZ pmax pmax
comp=Z,6.0nm,1.2s
MAKZ Makanchi 47.22 294 P **P** **22 41 47.5 -1.5**
BVAR Borovoye Array 48.83 307 P **P** **22 42 00.4 -0.7**
comp=Z,19nm,0.6s,baz=64,slow=7.2,SNR=146
BVAR PcP **PcP** **22 43 21.7 -0.6**
comp=Z,3.3nm,0.6s,baz=57,slow=4.1,SNR=5.2
BVAR PP **PP** **22 43 58.5 +2.4**
comp=Z,3.2nm,0.6s,baz=58,slow=12,SNR=6.8
BRVK Borovoye 48.85 307 P **P** **22 42 00.9 -0.4**
BRVK 22 43 21.6
BRVK pmax pmax
comp=Z,25nm,0.8s
BRVK Borovoye 48.85 307 P **P** **22 42 00.9 -0.4**
BRVK PcP **PcP** **22 43 21.6 -0.7**
YBH Yreka Blue Hor 50.26 72 P **P** **22 42 14.6 +2.4**
comp=Z,0.8nm,0.6s,baz=357,slow=5.3,SNR=4.2
SVE Sverdlovsk 50.44 315 *eP* **P** **22 42 13.3 0.0**
SVE pmax pmax
comp=Z,13nm,0.6s
PDGK Podgornoye 50.86 292 *i P* **P** **22 42 14.3 -2.5**
PDGK pmax pmax
comp=Z,6.0nm,1.1s
ARCES ARCESS Array B 50.91 341 P **P** **22 42 14.9 -1.6**
comp=Z,4.4nm,0.6s,baz=39,slow=9.2,SNR=25
ARCES PcP **PcP** **22 43 28.9 -0.7**
comp=Z,1.2nm,0.5s,baz=57,slow=4.5,SNR=1.4
SUMG Summit 51.49 7 *i P* **P** **22 42 21.5 +0.2**
SUMG pmax pmax
comp=Z,49nm,0.7s
SUMG Summit 51.49 7 *i P* **P** **22 42 21.5 +0.2**
comp=Z,49nm,0.7s
SUMG Summit 51.49 7 P **P** **22 42 20.9 -0.5**
ARU Arti 51.55 316 *c iP* **P** **22 42 19.2 -2.2**
ARU 22 44 19.7
ARU S **S** **22 49 25.2 +0.5**
ARU pmax pmax
comp=Z,39nm,1.2s
ARU Arti 51.55 316 P **P** **22 42 21.0 -0.4**
comp=Z,9.3nm,0.4s,baz=50,slow=5.3,SNR=72
ARU Arti 51.55 316 P **P** **22 42 21.1 -0.4**
FCC Fort Churchill 51.58 40 P **P** **22 42 22.5 +0.8**
FCC pmax pmax
comp=Z,6.0nm,0.5s
FCC Fort Churchill 51.58 40 P **P** **22 42 22.4 +0.8**
FCC IAmb IAmb 22 42 22.6
comp=Z,6.1nm,0.5s
PRGR Permogore 52.31 327 *eP* **P** **22 42 26.4 -0.6**
PRGR pmax pmax
comp=Z,23nm,0.8s
KDJ Kajisay 52.92 292 P **P** **22 42 31.0 -1.0**
KDJ pmax pmax
comp=Z,5.0nm,0.8s
KDJ Kajisay 52.92 292 P **P** **22 42 31.0 -1.0**
BOOM Boomskoye usch 53.31 293 **PcP** **22 43 38.6 -0.8**
KIRV Kirov 53.37 322 P **P** **22 42 34.9 +0.1**
comp=Z,22nm,0.5s,baz=40,slow=2.1,SNR=13
KIRV PcP **PcP** **22 43 38.6 -0.4**
comp=Z,5.6nm,0.6s,baz=67,slow=15,SNR=2.3
JMIC Jan Mayen 53.47 355 P **P** **22 42 34.8 -0.5**
comp=Z,68nm,0.4s,baz=152,slow=12,SNR=1.9
JMIC pP **pP** **22 43 20.9 -2.1**
comp=Z,182nm,0.4s,baz=158,slow=18,SNR=3.5
PNTR Pine Nut 53.80 72 P **P** **22 42 39.7 +1.2**
PNTR IAmb IAmb 22 42 50.1
comp=Z,5.7nm,0.8s
AAK Ala-Archa 53.96 295 P **P** **22 42 38.9 -0.6**
AAK 22 43 41.6
AAK pmax pmax
comp=Z,6.0nm,0.7s
AAK Ala-Archa 53.96 295 P **P** **22 42 38.8 -0.6**
comp=Z,4.8nm,0.6s,baz=89,slow=4.9,SNR=22
AAK PcP **PcP** **22 43 41.2 -0.6**
comp=Z,1.1nm,0.4s,baz=107,slow=3.5,SNR=4.4
AAK Ala-Archa 53.96 295 P **P** **22 42 38.9 -0.6**
AAK IAmb IAmb 22 42 41.2
comp=Z,5.7nm,0.7s
AAK **PcP** **22 43 41.6 -0.2**
LSA Lhasa 54.26 272 P **P** **22 42 41.7 -0.5**
LSA pmax pmax
comp=Z,3.0nm,0.8s
LSA Lhasa 54.26 272 P **P** **22 42 41.7 -0.5**
YHH Holmes Hill 54.27 61 P **P** **22 42 42.8 +0.8**
KVN Kaiserville 54.64 71 P **P** **22 42 44.1 -0.4**
KVN pmax pmax
comp=Z,2.0nm,0.7s
KVN Kaiserville 54.64 71 P **P** **22 42 44.1 -0.4**
H17A Grant Village 54.69 61 P **P** **22 42 46.0 +1.1**
H17A IAmb IAmb 22 42 49.1
comp=Z,5.6nm,1.1s
KLMR Klimovskoe 54.78 329 *eP* **P** **22 42 43.9 -1.0**
KLMR pmax pmax
comp=Z,16nm,0.7s
KLMR Klimovskoe 54.78 329 *eP* **P** **22 42 43.9 -1.0**
KLMR AMP 22 42 45.6
comp=Z,16nm,0.7s
RLMT Red Lodge 54.82 60 IAmb IAmb 22 42 48.7
comp=Z,8.4nm,1.0s
ELK Elko 54.93 68 P **P** **22 42 49.1 +2.5**
ELK pmax pmax
comp=Z,3.0nm,0.8s
ELK Elko 54.93 68 P **P** **22 42 49.4 +2.7**
comp=Z,2.5nm,0.6s,baz=312,slow=6.2,SNR=12
ELK Elko 54.93 68 P **P** **22 42 49.1 +2.5**
NVAR Mina Array Bea 54.98 72 P **P** **22 42 49.4 +2.5**
comp=Z,2.1nm,0.7s,baz=303,slow=7.7,SNR=16
NVAR pP **pP** **22 43 36.5 +1.8**
comp=Z,1.3nm,0.6s,baz=301,slow=8.2,SNR=4.3
JOF Joensuu 55.29 334 P **P** **22 42 47.1 -1.4**
JOF pmax pmax
comp=Z,18nm,1.0s
SFJD Kangerlussuaq 55.61 14 P **P** **22 42 50.1 -0.6**
baz=352,slow=11
SFJD Kangerlussuaq 55.61 14 P **P** **22 42 50.1 -0.6**
SFJD IAmb IAmb 22 43 06.4
comp=Z,4.9nm,0.8s
KK31 Karatay Array 55.65 297 P **P** **22 42 49.9 -1.6**
KK31 pmax pmax
comp=Z,8.0nm,0.7s
KK31 Karatay Array 55.65 297 P **P** **22 42 49.9 -1.6**
KK31 IAmb IAmb 22 42 52.6
comp=Z,7.9nm,0.7s
KKAR Karatay Array 55.65 297 P **P** **22 42 50.0 -1.4**
KKAR pmax pmax
comp=Z,8.0nm,0.7s
KKAR Karatay Array 55.65 297 P **P** **22 42 50.0 -1.4**
KKAR IAmb IAmb 22 42 52.6
comp=Z,7.9nm,0.7s
SPUT South Promonto 55.98 65 P **P** **22 42 54.8 +0.8**
AKTO Aktyubinsk 56.12 311 P **P** **22 42 53.9 -0.7**
comp=Z,5.0nm,0.5s,baz=68,slow=8.7,SNR=29
AKTO PcP **PcP** **22 43 49.5 -0.4**
comp=Z,7.3nm,0.7s,baz=54,slow=5.9,SNR=10.0
ABKAR Akbulak array 56.16 309 P **P** **22 42 54.4 -0.5**
HWUT Hardware Ranch 56.21 64 IAmb IAmb 22 42 58.9
comp=Z,6.4nm,0.7s
BW06 Boulder Array 56.38 62 IAmb IAmb 22 42 59.5
comp=Z,4.4nm,0.8s
PD31 Pinedale Array 56.38 62 P **P** **22 42 58.1 +1.2**
PD31 IAmb IAmb 22 42 59.5
comp=Z,4.4nm,0.8s
PDAR Pinedale Array 56.38 62 P **P** **22 42 58.8 +1.9**
comp=Z,2.4nm,0.4s,baz=343,slow=2.1,SNR=32
PDAR pP **pP** **22 43 45.4 +0.5**
comp=Z,1.1nm,0.8s,baz=349,slow=1.8,SNR=2.1
DUG Dugway, Tooele 56.60 66 P **P** **22 42 59.3 +0.9**
DUG pmax pmax
comp=Z,5.0nm,1.0s
DUG Dugway, Tooele 56.60 66 P **P** **22 42 59.3 +0.9**
NLU North Lily Min 57.16 66 P **P** **22 43 03.0 +0.6**
TPNV Topopah Spring 57.17 71 P **P** **22 43 02.7 +0.3**
TPNV pmax pmax
comp=Z,4.0nm,1.1s
TPNV Topopah Spring 57.17 71 P **P** **22 43 02.7 +0.3**
ULM Lac du Bonnet 57.17 48 P **P** **22 43 03.0 +1.0**
comp=Z,1.1nm,0.3s,baz=356,slow=6.7,SNR=4.8
ULM PcP **PcP** **22 43 54.2 +0.3**
comp=Z,2.5nm,0.4s,baz=317,slow=4.4,SNR=6.6
ULM Lac du Bonnet 57.17 48 P **P** **22 43 02.9 +0.9**
ULM **PcP** **22 43 54.5 +0.5**
MPU Maple Canyon 57.34 66 P **P** **22 43 04.3 +0.7**
BTK Batken 57.73 295 P **P** **22 43 05.3 -0.9**
BTK pmax pmax
comp=Z,6.0nm,0.9s
BTK Batken 57.73 295 P **P** **22 43 05.3 -0.9**
BTK IAmb IAmb 22 43 09.1
comp=Z,5.7nm,0.8s
FINES FINESS Array B 57.82 336 P **P** **22 43 05.8 -0.5**
comp=Z,8.8nm,0.4s,baz=32,slow=8.3,SNR=96
FINES pP **pP** **22 43 55.2 +0.6**
comp=Z,2.1nm,0.7s,baz=39,slow=7.1,SNR=1.7
RDMU Red Mountain 57.99 64 P **P** **22 43 09.2 +1.0**
TAPN Taplejung 58.01 272 *eP* **P** **22 43 07.9 -0.6**
comp=Z,5.2nm,0.3s
RSSD Black Hills 58.09 58 P **P** **22 43 09.2 +0.4**
RSSD pmax pmax
comp=Z,10.0nm,0.7s
RSSD Black Hills 58.09 58 P **P** **22 43 09.2 +0.4**
ODAN Odare 58.56 272 *eP* **P** **22 43 11.4 -0.9**
SRU San Rafael Swe 58.59 66 P **P** **22 43 13.0 +0.7**
SRU pmax pmax
comp=Z,6.0nm,0.6s
SRU San Rafael Swe 58.59 66 P **P** **22 43 13.0 +0.7**
GUN Gumba 58.61 274 *eP* **P** **22 43 12.1 -0.7**
comp=Z,11nm,0.4s
CMAR Chiang Mai Arr 58.67 256 P **P** **22 43 12.2 -0.7**
comp=Z,1.1nm,0.4s,baz=20,slow=6.2,SNR=5.6
CMAR PcP **pP** **22 44 00.9 -0.5**
comp=Z,4.1nm,0.8s,baz=19,slow=3.5,SNR=17
RAMN Ramite 58.94 273 *eP* **P** **22 43 13.5 -1.4**
comp=Z,9.7nm,0.3s
O20A White River Ci 58.99 63 P **P** **22 43 15.7 +0.6**
O20A IAmb IAmb 22 43 17.8
comp=Z,7.3nm,0.6s
KKN Kakani 59.04 275 *eP* **P** **22 43 15.2 -0.4**
PKI Pulchoki 59.14 274 *eP* **P** **22 43 15.5 -0.9**
PKIN Phulchoki 59.14 275 *eP* **P** **22 43 15.4 -0.9**
GKN Gorkha 59.24 275 *eP* **P** **22 43 16.5 -0.4**
comp=Z,5.0nm,0.3s
DMN Daman 59.28 275 *eP* **P** **22 43 16.3 -0.9**
comp=Z,4.2nm,0.4s
DANN Dangsing 59.47 276 *eP* **P** **22 43 18.1 -0.5**
comp=Z,16nm,0.6s
PFO Pinyon Flats O 59.55 74 P **P** **22 43 18.9 +0.1**
comp=Z,1.5nm,0.5s,baz=332,slow=5.8,SNR=4.5
PFO PcP **PcP** **22 44 05.6 +1.7**
comp=Z,1.5nm,0.6s,baz=333,slow=9.0,SNR=3.2
PFO Pinyon Flats O 59.55 74 P **P** **22 43 19.3 +0.5**
KOLN Koldanda 60.01 276 *eP* **P** **22 43 21.4 -0.7**
comp=Z,11nm,0.6s
OBN Obninsk 60.40 327|| *eP* **P** **22 43 23.2 -0.8**
OBN pmax pmax
comp=Z,16nm,1.9s
NB2 NORSAR Subarra 61.14 343 P **P** **22 43 28.3 -0.7**
comp=Z,1.3nm,0.5s,baz=20,slow=6.9
NOA NORSAR Array B 61.14 343 P **P** **22 43 27.9 -1.1**
comp=Z,1.1nm,0.4s,baz=20,slow=6.8,SNR=9.6
NIL Nilore 61.26 288 P **P** **22 43 29.1 -1.2**
NIL pmax pmax
comp=Z,4.0nm,0.6s
NIL Nilore 61.26 288 P **P** **22 43 29.1 -1.2**
NIL IAmb IAmb 22 43 30.0
comp=Z,4.3nm,0.6s
HFS Hagfors 61.56 342 P **P** **22 43 30.7 -1.1**
comp=Z,2.6nm,0.4s,baz=46,slow=4.3,SNR=18
HFS PcP **PcP** **22 44 10.8 -0.5**
comp=Z,2.4nm,0.5s,baz=58,slow=3.7,SNR=6.7
LPSR Galich'ya Gora 61.73 324 *eP* **P** **22 43 32.2 -0.9**
LPSR pmax pmax
comp=Z,20nm,0.9s
VRH Novokhopyorsk 61.93 321 *eP* **P** **22 43 32.7 -1.7**
VRH pmax pmax
comp=Z,30nm,0.6s
VSR Storozhevoye 62.81 323 *eP* **P** **22 43 38.3 -1.9**
VSR pmax pmax
comp=Z,10.0nm,0.6s
KBL Kabul 62.82 292 P **P** **22 43 38.9 -1.9**
KBL pmax pmax
comp=Z,3.0nm,0.8s
KBL Kabul 62.82 292 P **P** **22 43 38.9 -1.9**
SCHQ Schefferville 63.47 28 P **P** **22 43 44.5 0.0**
comp=Z,4.1nm,0.5s,baz=330,slow=5.5,SNR=8.6
SCHQ Schefferville 63.47 28 P **P** **22 43 44.4 -0.2**
SCHQ IAmb IAmb 22 43 47.2
comp=Z,9.8nm,1.1s
ANMO Albuquerque 63.86 66 *eP* **P** **22 43 48.5 +0.8**
ANMO pmax pmax
comp=Z,1.0nm,0.9s
ANMO Albuquerque 63.86 66 P **P** **22 43 49.5 +1.8**
comp=Z,1.3nm,0.6s,baz=318,slow=10,SNR=6.5
ANMO pP **pP** **22 44 38.1 +1.3**
comp=Z,0.6nm,0.5s,baz=325,slow=9.2,SNR=3.2
ANMO Albuquerque 63.86 66 P **P** **22 43 48.1 +0.5**
SBUM Sibu 65.40 234 P **P** **22 43 57.8 +0.2**
GEYT Alibeck 65.70 302 P **P** **22 43 58.8 -0.5**
comp=Z,4.4nm,0.6s,baz=46,slow=5.1,SNR=11
GEYT PP **PP** **22 46 23.3 -2.9**
comp=Z,1.7nm,0.7s,baz=330,slow=7.9,SNR=3.6
GEYT Alibeck 65.70 302 IAmb IAmb 22 44 01.4
comp=Z,4.0nm,0.7s
AKASG Malin Array Be 66.46 328 P **P** **22 44 03.4 -0.4**
comp=Z,4.2nm,0.4s,baz=27,slow=7.1,SNR=3.2
AKASG Malin Array Be 66.46 328 IAmb IAmb 22 44 05.9
comp=Z,0.7nm,0.6s
AKBB Malin Array Si 66.46 328 P **P** **22 44 02.7 -1.1**
AKBB pmax pmax
comp=Z,7.0nm,0.7s
AKBB Malin Array Si 66.46 328 P **P** **22 44 02.6 -1.1**
AKBB IAmb IAmb 22 44 04.5
comp=Z,7.1nm,0.7s
MNTX Cornudas Mount 66.96 67 P **P** **22 44 08.2 +0.9**
KSM Kuching 67.15 236 P **P** **22 44 08.8 +0.2**
KIV Kislovodsk 67.59 316 *eP* **P** **22 44 11.7 +0.5**
KIV pmax pmax
comp=Z,13nm,1.0s
KBZ Khabaz 67.70 316 *eP* **P** **22 44 10.5 -1.2**
KBZ pmax pmax
comp=Z,12nm,1.0s
KBZ Khabaz 67.70 316 P **P** **22 44 11.8 +0.1**
comp=Z,9.4nm,0.9s,baz=9.1,slow=4.0,SNR=14
WMOK Wichita Mounta 67.92 61 P **P** **22 44 14.0 +0.7**
WMOK pmax pmax
comp=Z,4.0nm,0.8s
WMOK Wichita Mounta 67.92 61 P **P** **22 44 14.0 +0.7**
WMOK IAmb IAmb 22 44 15.1
comp=Z,4.3nm,0.8s
EKA Eskdalemuir Ar 68.59 350 P **P** **22 44 16.8 -0.3**
comp=Z,0.6nm,0.4s,baz=20,slow=5.0,SNR=5.6
SORM Soroca 69.00 328↑|P **P** **22 44 18.5 -1.2**
SORM Soroca 69.00 328↑|P **P** **22 44 18.5 -1.2**
HHAR Hobbs 69.02 56 P **P** **22 44 20.5 +0.4**
MGMO Mountain Grove 69.09 55 IAmb IAmb 22 44 21.3
comp=Z,6.7nm,0.5s
U40A Yellville 69.47 55 IAmb IAmb 22 44 23.8
comp=Z,14nm,1.1s
TX31 Lajitas Ar. Si 69.73 68 IAmb IAmb 22 44 27.2
comp=Z,4.4nm,0.7s
TX32 Lajitas Array 69.73 68 IAmb IAmb 22 44 27.2
comp=Z,4.5nm,0.7s
TXAR Lajitas Array 69.73 68 P **P** **22 44 26.4 +1.8**
comp=Z,3.6nm,0.5s,baz=300,slow=5.0,SNR=44
TXAR pP **pP** **22 45 17.2 +2.6**
comp=Z,0.9nm,0.7s,baz=290,slow=4.8,SNR=2.7
STHS Stebnicka Huta 69.85 333 *eP* **P** **22 44 26.5 +1.6**
STHS pmax pmax
comp=Z,8.0nm,0.9s
STHS Stebnicka Huta 69.85 333 *eP* **P** **22 44 26.5 +1.6**
MILM Milestii Mici 69.94 327↑|P **P** **22 44 24.8 -0.7**
CLL Collm 70.01 339 *eP* **P** **22 44 26.0 +0.2**
CLL Collm 70.01 339 *eP* **P** **22 44 26.0 +0.2**
KOLS Kolonicke sedl 70.02 332 *eP* **P** **22 44 26.4 +0.5**
KOLS Kolonicke sedl 70.02 332 *eP* **P** **22 44 26.4 +0.5**
DPC Dobruska-Polom 70.19 336 *eP* **P** **22 44 27.7 +0.7**
DPC Dobruska-Polom 70.19 336 *eP* **P** **22 44 27.7 +0.7**
LPIG La Paz 70.31 76 P **P** **22 44 29.9 +1.9**
comp=Z,28nm,0.3s,baz=293,slow=0.5,SNR=5.1
BUR08 Bucovina Ar. S 70.37 329 P **P** **22 44 27.9 -0.3**
BUR08 IAmb IAmb 22 44 30.0
comp=Z,5.8nm,0.5s
BURAR Bucovina Array 70.40 329||P **P** **22 44 28.7 +0.3**
BURAR Bucovina Array 70.40 329||P **P** **22 44 28.7 +0.3**
MORC Moravsky Berou 70.44 335 P **P** **22 44 29.2 +0.7**
MORC pmax pmax
comp=Z,6.0nm,0.8s
MORC Moravsky Berou 70.44 335 IAmb IAmb 22 44 30.9
comp=Z,4.1nm,0.7s
LANS Liptovska Anna 70.55 334 *eP* **P** **22 44 29.5 +0.3**
LANS pmax pmax
comp=Z,5.0nm,0.5s
LANS Liptovska Anna 70.55 334 *eP* **P** **22 44 29.5 +0.3**
ACSO Alum Creek Sta 70.61 46 IAmb IAmb 22 44 30.6
comp=Z,12nm,0.9s
TRPA Tarpa 70.68 331↑|P **P** **22 44 30.6 +0.7**
W41B Gary Mavity, V 70.72 56 IAmb IAmb 22 44 32.0
comp=Z,8.1nm,0.8s
WCI Wyandotte Cave 70.89 50 P **P** **22 44 31.7 +0.4**
WCI pmax pmax
comp=Z,6.0nm,0.7s
WCI Wyandotte Cave 70.89 50 P **P** **22 44 31.7 +0.4**
WCI IAmb IAmb 22 44 32.4
comp=Z,6.3nm,0.7s
PRU Pruhonice 70.92 337 *eP* **P** **22 44 31.8 +0.4**
PRU Pruhonice 70.92 337 *eP* **P** **22 44 31.8 +0.4**
VRAC Vranov 71.10 336↑|P **P** **22 44 33.4 +0.9**
VRAC Vranov 71.10 336↑|P **P** **22 44 33.4 +0.9**
ARCR ARCALIA 71.12 330↑|P **P** **22 44 33.6 +0.9**
VYHS Vyhne 71.31 334 *eP* **P** **22 44 34.6 +0.8**
VYHS Vyhne 71.31 334 *eP* **P** **22 44 34.5 +0.8**
T47A Sharon Grove 71.57 51 IAmb IAmb 22 44 36.9
comp=Z,10nm,1.0s
SMOL Smolenice 71.64 335 *eP* **P** **22 44 37.3 +1.6**
SMOL Smolenice 71.64 335 *eP* **P** **22 44 37.3 +1.6**
CJR Cluj-Napoca 71.68 330↑|P **P** **22 44 36.7 +0.7**
CJR Cluj-Napoca 71.68 330↑|P **P** **22 44 36.7 +0.7**
CFR Carcaliu 71.71 326||P **P** **22 44 37.1 +1.0**
CFR Carcaliu 71.71 326||P **P** **22 44 37.1 +1.0**
KHC Kasperske Hory 71.94 338 *eP* **P** **22 44 37.9 +0.4**
KHC pmax pmax
comp=Z,10.0nm,1.1s
KHC Kasperske Hory 71.94 338 *eP* **P** **22 44 38.5 +1.0**
WVT Waverly 71.96 52 P **P** **22 44 38.5 +0.7**
WVT pmax pmax
comp=Z,4.0nm,0.7s
WVT Waverly 71.96 52 P **P** **22 44 38.5 +0.7**
WVT IAmb IAmb 22 44 39.3
comp=Z,4.2nm,0.7s
MLR Muntele Rosu 72.10 328 P **P** **22 44 38.6 0.0**
MLR pmax pmax
comp=Z,9.0nm,1.0s
MLR Muntele Rosu 72.10 328↑|P **P** **22 44 39.0 +0.4**
MLR Muntele Rosu 72.10 328 P **P** **22 44 38.6 0.0**
MLR IAmb IAmb 22 44 40.7
comp=Z,8.8nm,1.0s
T49A Edmonton 72.16 50 IAmb IAmb 22 44 40.2
comp=Z,5.8nm,0.8s
GERES GERESS Array B 72.19 337 P **P** **22 44 39.1 +0.1**
comp=Z,0.8nm,0.5s,baz=35,slow=5.3,SNR=10
VOIR 72.42 328↑|P **P** **22 44 41.1 +0.7**
VOIR 72.42 328↑|P **P** **22 44 41.1 +0.7**
CONA Conrad Observa 72.56 336 *eP* **P** **22 44 42.5 +1.3**
comp=Z,8.3nm,1.3s
ARR Arges 72.60 329↑|P **P** **22 44 42.5 +1.0**
PLAL Pickwick Lake 72.80 53 IAmb IAmb 22 44 44.0
comp=Z,10nm,0.8s
GZR Gura Zlata 73.12 330||P **P** **22 44 44.1 -0.4**
GZR Gura Zlata 73.12 330||P **P** **22 44 44.1 -0.4**
SOKA Soboth 73.93 336 *eP* **P** **22 44 49.2 0.0**
comp=Z,7.4nm,1.3s
KBA Koelnbreinsper 73.94 337 *eP* **P** **22 44 49.8 +0.4**
comp=Z,13nm,1.1s
TKL Tuckaleechee C 74.14 49 P **P** **22 44 50.6 +0.1**
comp=Z,2.7nm,0.8s,baz=0.0,slow=8.1,SNR=3.4
OBKA Obir 74.20 336 *eP* **P** **22 44 51.8 +0.9**
comp=Z,12nm,1.4s
ABTA Abfaltersbach 74.43 337 *eP* **P** **22 44 52.9 +0.8**
comp=Z,7.3nm,1.1s
FETA Feichten 74.55 339 *eP* **P** **22 44 54.0 +1.0**
comp=Z,6.5nm,1.0s
BR131 Keskin Array S 74.67 320 *eP* **P** **22 44 53.4 -0.3**
BR131 Keskin Array S 74.67 320 IAmb IAmb 22 44 54.1
comp=Z,4.5nm,0.7s
BRTR Keskin Array B 74.67 320 P **P** **22 44 53.8 +0.1**
comp=Z,3.8nm,0.6s,baz=26,slow=3.0,SNR=31
LRAL Lakeview Retre 74.92 53 IAmb IAmb 22 44 55.5
comp=Z,6.2nm,0.6s
WB0 Warramunga Arr 78.14 205 P **P** **22 45 13.0 -0.1**
WRAB Tennant Creek 78.31 205 *eP* **P** **22 45 14.5 +0.5**
WRAB pmax pmax
comp=Z,7.0nm,0.9s
WB2 Warramunga Arr 78.32 205 P **P** **22 45 14.6 +0.5**
WB2 IAmb IAmb 22 45 15.9
comp=Z,12nm,1.1s
WRA Warramunga Arr 78.32 205 P **P** **22 45 15.0 +1.0**
comp=Z,6.6nm,0.8s,baz=17,slow=5.7,SNR=17
WRA pP **pP** **22 46 05.3 -0.3**
comp=Z,2.0nm,0.7s,baz=20,slow=6.0,SNR=4.5
WRA Warramunga Arr 78.32 205 IAmb IAmb 22 45 15.9
comp=Z,0.7nm,1.1s
FITZ Fitzroy Crossi 78.95 213 P **P** **22 45 17.6 +0.1**
MMAI Mount Meron Ar 79.89 315 P **P** **22 45 22.7 0.0**
comp=Z,5.9nm,0.9s,baz=36,slow=4.4,SNR=7.3
ASAR Alice Springs 82.01 204 P **P** **22 45 34.6 +0.9**
comp=Z,6.0nm,0.6s,baz=15,slow=5.2,SNR=60
ASAR pP **pP** **22 46 25.1 -0.4**

comp=Z,2.0nm,0.8s,baz=12,slow=5.4,SNR=5.2

RAYN	**Ar Rayn**	**83.65 303**	P	**P**	**22 45 41.5**	**-0.9**
RAYN			pmax	pmax		
	comp=Z,6.0nm,0.8s					
RAYN	**Ar Rayn**	**83.65 303**	P	**P**	**22 45 41.5**	**-0.9**
RAYN			IAmb	IAmb	22 45 42.2	
	comp=Z,5.5nm,0.8s					
ESDC	**Sonseca Array**	**84.13 348**	P	**P**	**22 45 45.3**	**+0.7**
	comp=Z,6.2nm,0.8s,baz=1.6,slow=4.9,SNR=26					
ESDC	**Sonseca Array**	**84.13 348**	IAmb	IAmb	22 45 46.2	
	comp=Z,6.3nm,0.9s					
KEST	**Kesra**	**85.65 336**	P	**P**	**22 45 51.4**	**-0.9**
	comp=Z,7.7nm,1.0s,baz=326,slow=5.4,SNR=4.8					
KEST	**Kesra**	**85.65 336**	IAmb	IAmb	22 45 58.5	
	comp=Z,8.6nm,1.1s					
STKA	**Stephens Creek**	**88.52 196**	P	**P**	**22 46 07.1**	**+1.5**
	comp=Z,0.9nm,0.6s,baz=358,slow=6.0,SNR=3.2					
TORD	**Torodi Ar. Bea**	**109.14 338**	PKiKP	**PKiKP**	**22 51 40.9**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=5.2,slow=2.0,SNR=7.0					
TORD			PKKPbc	**PKKPbc**	**23 02 48.9**	**+2.4**
	comp=Z,0.4nm,0.4s,baz=192,slow=2.8,SNR=17					
DBIC	**Dimbokro**	**116.71 343**	PKP	**PKPdf**	**22 51 55.8**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=345,slow=4.4,SNR=5.9					
LPAZ	**La Paz**	**126.40 63**	PKP	**PKiKP**	**22 52 16.3**	**0.0**
	comp=Z,0.8nm,0.5s,baz=10.0,slow=11,SNR=4.0					
VNDA	**Vanda**	**132.84 179**	PKP	**PKiKP**	**22 52 27.4**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=6.3,slow=5.8,SNR=3.2					
BOSA	**Boshof**	**138.04 291**	PKiKP	**PKPdf**	**22 52 35.4**	**-1.4**
BOSA	**Boshof**	**138.04 291**	PKP	**PKPdf**	**22 52 36.8**	**0.0**
	comp=Z,1.6nm,0.5s,baz=347,slow=2.1,SNR=7.9					
BOSA	**Boshof**	**138.04 291**		**PKPdf**	**22 52 35.4**	**-1.4**

DJA 26 22:42:53.8±1.1,**8°S**±8°×**10°9E**±°,**h38**km±31km,**M3.7**/7, **MLv3.7**/7,**Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**1.04**	**308**	P	Pn	22 43 12.1	+0.3
CMJI				S	Sn	22 43 25.9	+0.9
KPJI	**Karang Pucung**	**1.14**	**343**	P	Pn	22 43 13.4	+0.2
KPJI				S	Sn	22 43 28.5	+0.9
UGM	**Wanagama**	**1.34**	**68**	P	Pn	22 43 16.2	+0.2
UGM				S	Sn	22 43 33.1	+0.4
CISI	**Cisompet, Garu**	**1.68**	**301**	P	Pn	22 43 21.0	+0.3
CISI				S	Sn	22 43 41.7	+0.6
PCJI	**Pacitan**	**1.90**	**83**	P	Pn	22 43 23.7	0.0
PCJI				S	Sn	22 43 47.2	+0.8
CNJI	**Cibinong**	**2.40**	**298**	P	Pn	22 43 30.4	-0.1
UWJI	**Ujung Watu**	**2.60**	**40**	P	Pn	22 43 33.4	+0.1
KRJI	**Kerinci**	**10.00**	**309**	P	Pn	22 45 12.8	-2.3

*TEH **26** 22:43:02.3, 36°.00N×45°.89E, h8km, ML2.9*
*ISN **26** 22:43:03.2±1.4, 36°.09N×45°.82E, h15km±6km, ML2.8*
ISC 26 22:43:02.3±0.9,**35°.98N**±0°.03×**45°.87E**±0°.05,**h10**km,**n15**, σ1§**67**/19,**Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAHB	**Mahabad**	**0.79**	**351**	*e*Pg	**Pg**	**22 43 17.5**	**-0.2**
MAHB				*e*Sg	**Sb**	**22 43 29.0**	**-0.2**
IDHR	**Dehrash**	**1.35**	**161**	*e*Pn	**Pn**	**22 43 26.8**	**-0.6**
IDHR				*e*		22 43 52.9	
IKRK	**Kirkuk**	**1.37**	**245**	*e*Pg	**Pn**	**22 43 28.0**	**+0.5**
IKRK				*e*Sg	**Sg**	**22 43 47.0**	**+0.6**
IGHG	**Ghaleghazi**	**1.75**	**161**	*e*Pn	**Pg**	**22 43 35.5**	**-0.3**
IGHG				*e*		22 43 36.1	
HSRG	**Sareghieh**	**2.10**	**110**	*e*Pn	**Pb**	**22 43 40.2**	**-0.5**
ITBZ	**Tabriz**	**2.26**	**6**	*e*Pn	**Pb**	**22 43 42.6**	**-0.7**
ITBZ				*e*		22 43 48.6	
MSL	**Mosul**	**2.27**	**281**	*e*Pn	**Pn**	**22 43 41.0**	**+1.2**
MSL				AML	AML	22 43 46.3	
	comp=Z,65nm,0.4s						
MSL				*e*Sn	**Sn**	**22 44 10.0**	**+2.1**
ISRB	**Sarab**	**2.34**	**38**	*e*Pn	**Pb**	**22 43 43.5**	**-1.2**
ISRB				*e*		22 43 53.0	
IHRS	**Heris**	**2.51**	**22**	*e*Pn	**Pb**	**22 43 45.3**	**-2.4**
IHRS				*e*		22 44 31.9	
IHSH	**Hashtrud**	**2.58**	**25**	*e*Pn	Pn	22 43 34.3	-10
IHSH				*e*		22 43 37.0	
IMRD	**Marand**	**2.73**	**357**	*e*Pn	**Pb**	**22 43 49.5**	**-1.8**
IMRD				*e*		22 43 59.9	
IBDR	**Badra**	**2.87**	**179**	*e*Pn	**Pb**	**22 43 52.0**	**-1.5**
IBDR				*e*Sn	**Sb**	**22 44 28.0**	**-0.7**
IDOB	**Doab**	**2.90**	**138**	*e*Pn	**Pn**	**22 43 51.1**	**+2.4**
IDOB				*e*		22 44 45.0	
IKFM	**Kafar-mosalman**	**2.94**	**146**	*e*Pn	**Pn**	**22 43 51.3**	**+2.2**
IKFM				*e*		22 43 52.1	
BHD	**Baghdad**	**2.97**	**205**	*e*Pn	**Pn**	**22 43 52.0**	**+2.5**
BHD				*e*Sn	**Sb**	**22 44 29.0**	**-2.6**

WEL 26 22:45:12.7±0.7,**35°S**±10°×**17°9E**±°,**h217**km±12km,**M4.0**/25, **MLv4.0**/25,**Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.13**	**193**	P	Pn	22 45 54.1	+0.4
WMGZ	**Waiomatatini S**	**2.37**	**190**	P	Pn	22 45 57.8	+1.7
HAZ	**Te Kaha**	**2.45**	**202**	P	Pn	22 45 56.6	-0.3
HAZ				S	S	22 46 32.1	+0.6
PUZ	**Puketiti**	**2.64**	**191**	P	Pn	22 45 58.6	-0.5
PUZ				S	S	22 46 36.2	+0.8
RUGZ	**Raukumara Rang**	**2.67**	**202**	P	Pn	22 45 59.0	-0.5
RUGZ				S	S	22 46 33.5	-2.6
TWGZ	**Tauwhareparae**	**2.79**	**195**	P	Pn	22 46 01.0	+0.2
TWGZ				S	S	22 46 40.8	+2.3
OPRZ	**Ohinepanea**	**3.03**	**218**	P	Pn	22 46 03.0	-0.4
CNGZ	**Carnagh Statio**	**3.05**	**191**	P	Pn	22 46 03.7	0.0
MWZ	**Matawai**	**3.06**	**201**	P	Pn	22 46 03.9	+0.1
MWZ				S	S	22 46 45.4	+1.6
TKGZ	**Te Karaka**	**3.07**	**196**	P	Pn	22 46 03.6	-0.3
TKGZ				S	S	22 46 45.5	+1.5
URZ	**Urewera**	**3.13**	**207**	P	Pn	22 46 03.7	-0.9
URZ				S	S	22 46 45.3	+0.1
EDRZ	**Edgecumbe**	**3.15**	**213**	P	Pn	22 46 05.8	+0.9
KARZ	**Kaharoa**	**3.32**	**219**	P	Pn	22 46 07.1	+0.2
RIGZ	**Rimuhau**	**3.35**	**196**	P	Pn	22 46 06.5	-0.7
RIGZ				S	S	22 46 51.2	+1.3
TARZ	**Mount Tarawera**	**3.36**	**214**	P	Pn	22 46 09.1	+1.7
HLRZ	**Highlands Stat**	**3.45**	**216**	P	Pn	22 46 09.5	+1.1
MUGZ	**Murupara**	**3.45**	**209**	P	Pn	22 46 07.9	-0.4
RTZ	**Ruatahuna**	**3.49**	**206**	P	Pn	22 46 08.0	-1.0
SNGZ	**Shannon Statio**	**3.53**	**200**	P	Pn	22 46 09.1	-0.2
PRGZ	**Paritu Road**	**3.53**	**193**	P	Pn	22 46 10.2	+0.9
TOZ	**Tahuroa Road**	**3.55**	**230**	P	Pn	22 46 09.8	+0.3
HRRZ	**Handcock Road**	**3.59**	**215**	P	Pn	22 46 11.1	+1.0
PRRZ	**Plateau Road**	**3.63**	**213**	P	Pn	22 46 10.3	-0.2
ALRZ	**Allen Road**	**3.70**	**213**	P	Pn	22 46 11.2	-0.2
RAHZ	**Arahi**	**3.73**	**203**	P	Pn	22 46 11.4	-0.3
WPRZ	**Whakapapatarin**	**3.75**	**215**	P	Pn	22 46 12.9	+0.9
MTHZ	**Maungataniwha**	**3.75**	**206**	P	Pn	22 46 11.5	-0.5
MHGZ	**Mahia Peninsul**	**3.75**	**192**	P	Pn	22 46 11.3	-0.7
WHHZ	**Waihua**	**3.83**	**200**	P	Pn	22 46 13.3	+0.4
ARHZ	**Aropaoanui**	**4.07**	**201**	P	Pn	22 46 15.2	-0.6
BKZ	**Black Stump Fm**	**4.15**	**207**	P	Pn	22 46 15.9	-1.0
MCHZ	**McNeill Hill**	**4.33**	**203**	P	Pn	22 46 18.8	-0.3
KATZ	**Kakaramea**	**4.33**	**215**	P	Pn	22 46 19.5	+0.3
KWHZ	**Kaweka Forest**	**4.41**	**206**	P	Pn	22 46 19.1	-0.9
CKHZ	**Cape Kidnapper**	**4.42**	**199**	P	Pn	22 46 20.0	-0.1
HIZ	**Hauiti**	**4.44**	**226**	P	Pn	22 46 21.4	+1.0
KRVZ	**Karewarewa**	**4.45**	**215**	P	Pn	22 46 20.4	-0.3
WTVZ	**West Tongariro**	**4.49**	**215**	P	Pn	22 46 20.8	-0.4
TWVZ	**Taurewa**	**4.53**	**217**	P	Pn	22 46 21.5	-0.2
NGZ	**Ngauruhoe**	**4.54**	**215**	P	Pn	22 46 21.7	-0.1
TUVZ	**Tukino**	**4.59**	**214**	P	Pn	22 46 21.8	-0.6
BHHZ	**Black Hill Sta**	**4.60**	**209**	P	Pn	22 46 20.8	-1.6
KAHZ	**Kahuranaki**	**4.60**	**200**	P	Pn	22 46 21.1	-1.4
KRHZ	**Kereru**	**4.62**	**205**	P	Pn	22 46 20.7	-1.9
FWVZ	**Far West T-bar**	**4.62**	**214**	P	Pn	22 46 22.1	-0.8
MOVZ	**Moawhango**	**4.66**	**212**	P	Pn	22 46 21.3	-1.9
PXZ	**Pawanui**	**4.82**	**199**	P	Pn	22 46 24.0	-1.1
PNHZ	**Pukenui**	**4.92**	**205**	P	Pn	22 46 24.2	-2.2
PRHZ	**Porangahau**	**5.11**	**200**	P	Pn	22 46 27.6	-1.2
TSZ	**Takapari Road**	**5.13**	**206**	P	Pn	22 46 27.4	-1.7
DVHZ	**Dannevirke**	**5.28**	**204**	P	Pn	22 46 29.1	-1.8

IDC 26 22:51:57.7±2.2,**10°.24S**×**119°.87E**,**h0**km,**mb3.4**/1, **mb1 3.5**/3,**mb1mx3.2**/58,**mbtmp3.3**/3,**ML3.2**/2,**Error ellipse: s-maj=188.0km s-min=25.6km az=52.0,Sumba region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**9.61**	**145**	Pn	Pn	22 54 16.7	-0.6
	baz=337,slow=13						
FITZ				Sn	Sn	22 55 56.3	-10
	0.9nm,0.3s,baz=174,slow=22,SNR=12						
WRA	**Warramunga Arr**	**16.96**	**126**	Pn	Pn	22 55 55.5	-1.1
	0.1nm,0.3s,baz=301,slow=13,SNR=5.4						
WRA				Sn	Sn	22 58 54.0	-12
	0.2nm,0.3s,baz=290,slow=25,SNR=4.7						
ASAR	**Alice Springs**	**18.91**	**137**	P	Pn	22 56 21.2	+0.5
	0.1nm,0.3s,baz=313,slow=11,SNR=7.9						
MKAR	**Makanchi Array**	**65.95**	**333**	P	P	23 02 45.6	-0.1
	0.2nm,0.5s,baz=149,slow=7.3,SNR=5.7						

*NEIC **26** 22:55:12.8±1.6,5°.64S±0°.08×147°.7E±0°.2,h211km±12km, mb4.3/9,Error ellipse: s-maj=25.9km s-min=11.0km az=98.0*
*IDC **26** 22:55:13.1±2.5,5°.56S×147°.51E,h206km±33km,mb3.3/4, mb1 3.6/7,mb1mx3.2/51,mbtmp3.9/7,Error ellipse: s-maj=56.9km s-min=14.6km az=128.0*
ISC 26 22:55:12.3±0.9,**5°.58S**±0°.09×**147°.5E**±0°.1,**h200**km,**n18**, σ1§**31**/20,**mb4.0**/5,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.81**	**185**	P	**Pn**	**22 56 14.1**	**+2.3**
	3.5nm,0.3s,baz=17,slow=9.0,SNR=9.4						
PMG				S	**Sn**	**22 56 59.2**	**+0.6**
	5.6nm,0.3s,baz=248,slow=19,SNR=4.4						
PMG	**Port Moresby**	**3.81**	**185**		**Pn**	**22 56 12.3**	**+0.5**
PMG					**Sn**	**22 56 57.8**	**-0.9**
KRVT	**Keravat (AS076**	**4.70**	**75**	P	**Pn**	**22 56 25.2**	**+2.3**
	15nm,0.3s,baz=246,slow=20,SNR=4.9						
MTN	**Manton Dam**	**17.67**	**245**	P	**P**	**22 59 05.0**	**+0.2**
MTN				IAmb	IAmb	22 59 10.8	
	comp=Z,11nm,1.1s						
WB0	**Warramunga Arr**	**19.00**	**221**	P	**P**	**22 59 20.0**	**+0.9**
WR0	**Warramunga Arr**	**19.05**	**220**	P	**P**	**22 59 20.2**	**+0.6**
WR0				IAmb	IAmb	22 59 20.9	
	comp=Z,5.5nm,0.6s						
WB2	**Warramunga Arr**	**19.16**	**221**	P	**P**	**22 59 21.4**	**+0.6**
WB2				IAmb	IAmb	22 59 22.0	
	comp=Z,11nm,1.1s						
WRA	**Warramunga Arr**	**19.16**	**221**	P	**P**	**22 59 21.9**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=44,slow=9.5,SNR=17						
KNRA	**Kununurra**	**20.94**	**240**	P	**P**	**22 59 40.4**	**+0.6**
AS31	**Alice Springs**	**22.23**	**215**	P	**P**	**22 59 53.1**	**+0.3**
ASAR	**Alice Springs**	**22.24**	**215**	P	**P**	**22 59 54.5**	**+1.6**
	comp=Z,2.9nm,0.6s,baz=48,slow=8.0,SNR=34						
SOEI	**Soe**	**23.38**	**258**	P	**P**	**23 00 03.5**	**+0.1**
DZM	**Mont Dzumac**	**24.60**	**134**	P	**P**	**23 00 11.3**	**-3.0**
DZM				IAmb	IAmb	23 00 15.7	
	comp=Z,11nm,1.1s						
FITZ	**Fitzroy Crossi**	**24.70**	**238**	P	**P**	**23 00 15.3**	**+0.1**
	comp=Z,2.5nm,0.5s,baz=59,slow=9.9,SNR=9.0						
FITZ	**Fitzroy Crossi**	**24.70**	**238**	P	**Pn**	**23 00 14.6**	**-0.6**
FITZ				IAmb	IAmb	23 00 27.5	
	comp=Z,6.7nm,1.1s						
MKAR	**Makanchi Array**	**77.48**	**320**	P	**P**	**23 06 45.8**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=91,slow=5.8,SNR=3.2						
ILAR	**Eielson Array**	**84.91**	**23**	P	**P**	**23 07 22.9**	**-1.5**
	comp=Z,0.5nm,0.9s,baz=231,slow=4.3,SNR=2.8						
TORD	**Torodi Ar. Bea**	**145.45**	**285**	PKPbc	**PKPdf**	**23 14 27.6**	**0.0**
	comp=Z,0.3nm,0.5s,baz=50,slow=4.4,SNR=3.1						

*IDC **26** 22:57:29.6±1.1,31°.37N×49°.80E,h0km,mb3.8/12, mb1 3.9/15,mb1mx3.7/63,mbtmp3.8/15,ML3.5/3,MS4.0/2, Ms1 4.0/2,ms1mx3.0/40,Error ellipse: s-maj=27.5km s-min=17.6km az=155.0*
*TEH **26** 22:57:31.2,31°.31N×49°.94E,h10km,ML3.9*
*THR **26** 22:57:33.6±0.3,31°.40N×50°.01E,h16km±4km,ML3.8*
*OMAN **26** 22:57:38.2±2.2,31°.14N×50°.15E,h106km±35km,Error ellipse: s-maj=32.9km s-min=9.3km az=89.0*
*DSN **26** 22:57:40.2±2.1,30°.53N×50°.04E,h10km,ML4.4/6,Error ellipse: s-maj=31.4km s-min=10.7km az=8.0*
ISC 26 22:57:30.8±0.5,**31°.29N**±0°.04×**49°.94E**±0°.04,**h10**km,**n111**, σ2§**21**/123,**mb3.8**/13,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHBN	**Jahan bin**	**1.12**	**33**	*e*Pg	**Pg**	**22 57 52.1**	**-0.3**
SHGR	**Shooshtar-Gavs**	**1.27**	**310**	*e*Pg	**Pg**	**22 57 56.6**	**+1.4**
SHGR	**Shooshtar-Gavs**	**1.27**	**310**	*e*Pg	**Pg**	**22 57 56.6**	**+1.4**
SHGR				*e*Sg	**Sn**	**22 58 13.5**	**+1.8**
SHGR				IAML		22 58 17.1	
	comp=N,2μm,0.2s						
SHGR				IAML		22 58 17.8	
	comp=E,2μm,0.3s						
IBRJ	**Brojen**	**1.28**	**61**	*e*Pg	**Pg**	**22 57 55.9**	**+0.5**
IBRJ				*e*		22 58 20.2	
ROKH	**ROKH**	**1.41**	**41**	*e*Pg	**Pb**	**22 57 57.5**	**+0.2**
ROKH				*e*		22 58 23.6	
KLNJ	**Kolanjah**	**1.44**	**101**	*e*Pg	**Pb**	**22 57 58.8**	**+0.9**
KLNJ				*e*		22 58 28.1	
IPIR	**Pirpir**	**1.61**	**30**	*e*Pg	**Pb**	**22 58 00.4**	**-0.4**
IPIR				*e*		22 58 27.0	
IRAM	**Ramesheh**	**2.15**	**75**	*e*Pn	**Pb**	**22 58 09.8**	**-0.1**
IKAZ	**Kazeroun**	**2.22**	**132**	*e*Pn	**Pb**	**22 58 11.0**	**-0.2**
IKAZ				*e*		22 58 53.1	
KHMZ	**Khomeyn**	**2.44**	**0**	*e*Pn	**Pb**	**22 58 13.5**	**-1.5**
KHMZ	**Khomeyn**	**2.44**	**0**	*e*Pn	**Pb**	**22 58 13.5**	**-1.5**
KHMZ				*e*Sg	**Sg**	**22 58 47.0**	**-2.3**
IKLH	**Kolahrood**	**2.45**	**34**	*e*Pn	**Pb**	**22 58 13.9**	**-1.2**
IKLH				*e*		22 59 00.1	
BMDN	**Meydan**	**2.56**	**339**	*e*Pn	**Pn**	**22 58 13.7**	**+1.2**
IZEF	**Zefreh**	**2.58**	**51**	*e*Pn	**Pb**	**22 58 15.5**	**-1.8**
IZEF				*e*		22 58 56.5	
IKMR	**Kamar-syah**	**2.59**	**330**	*e*Pn	**Pn**	**22 58 14.2**	**+1.5**
IKMR				*e*		22 59 04.1	
SHI	**Shiraz**	**2.76**	**126**	*e*Pn	**Pn**	**22 58 18.5**	**+3.2**
SHI				*e*		22 59 24.4	
QAM	**Ghamsar**	**2.77**	**27**	*e*Pn	**Pb**	**22 58 19.1**	**-1.4**
BDRS	**Dareh Seyedi**	**2.81**	**342**	*e*Pn	**Pn**	**22 58 17.9**	**+1.9**
IKFM	**Kafar-mosalman**	**2.85**	**322**	*e*Pn	**Pn**	**22 58 18.4**	**+2.1**
IKFM				*e*		22 59 15.6	
IDOB	**Doab**	**2.90**	**330**	*e*Pn	**Pn**	**22 58 19.1**	**+1.8**
HSAM	**Samen**	**3.13**	**339**	*e*Pn	**Pn**	**22 58 22.4**	**+2.0**
ASAO	**Ashtian**	**3.25**	**1**	*e*Pn	**Pn**	**22 58 24.7**	**+2.6**
ASAO	**Ashtian**	**3.25**	**1**	*e*Pn	**Pn**	**22 58 24.7**	**+2.6**
KRSH	**Karshahi**	**3.25**	**34**	*e*Pn	**Pn**	**22 58 25.2**	**+3.2**
ISAD	**Sadrabad**	**3.25**	**78**	*e*Pn	**Pn**	**22 58 25.2**	**+3.1**
IKOM	**Komasi**	**3.53**	**325**	*e*Pn	**Pn**	**22 58 28.0**	**+2.1**
HAGD	**Aghdareh**	**3.59**	**349**	*e*Pn	**Pn**	**22 58 28.7**	**+2.0**
IBZA	**Bozab**	**3.62**	**332**	*e*Pn	**Pn**	**22 58 28.6**	**+1.4**
IQOM	**Qom**	**3.67**	**15**	*e*Pn	**Pn**	**22 58 30.2**	**+2.4**
IQOM				*e*		22 59 33.5	
ANAR	**Anarak**	**3.73**	**58**	*e*Pn	**Pn**	**22 58 31.9**	**+3.4**
ICHK	**Chekchek**	**3.92**	**75**	*e*Pn	**Pn**	**22 58 34.2**	**+3.0**
ICHK				*e*		22 58 38.0	
IMEH	**Mehriz**	**4.00**	**87**	*e*Pn	**Pn**	**22 58 35.2**	**+2.9**
IMEH				*e*		23 00 04.7	
IRAZ	**Razeghan**	**4.11**	**360**	*e*Pn	**Pn**	**22 58 36.0**	**+2.2**
IRAZ				*e*		22 59 56.7	
YZKH	**Yazd**	**4.11**	**73**	*e*Pn	**Pn**	**22 58 37.0**	**+3.3**
YZKH	**Yazd**	**4.11**	**73**	*e*Pn	**Pn**	**22 58 37.0**	**+3.3**
QABG	**Abgarm-Qazvin**	**4.42**	**356**	*e*Pn	**Pn**	**22 58 39.8**	**+1.7**
IMHD	**Mahdasht**	**4.43**	**8**	*e*Pn	**Pn**	**22 58 40.4**	**+2.3**
IDHR	**Dehrash**	**4.53**	**320**	*e*Pn	**Pn**	**22 58 41.7**	**+2.1**
IDMV	**Damavand**	**4.62**	**22**	*e*Pn	**Pn**	**22 58 43.1**	**+2.2**
ILAS	**Lasjerd**	**4.80**	**31**	*e*Pn	**Pn**	**22 58 45.8**	**+2.4**
IBAF	**Bafgh**	**4.82**	**85**	*e*Pn	**Pn**	**22 58 47.0**	**+3.5**
IFIR	**Firoozkooh**	**4.94**	**28**	*e*Pn	**Pn**	**22 58 47.7**	**+2.4**
QALM	**Alamut, Qazvin**	**5.16**	**6**	*e*Pn	**Pn**	**22 58 50.7**	**+2.3**
ISHM	**Shahmirzad**	**5.30**	**31**	*e*Pn	**Pn**	**22 58 53.5**	**+3.2**
IPRN	**Peran**	**5.33**	**21**	*e*Pn	**Pn**	**22 58 54.1**	**+3.6**
IANJ	**Anjilo**	**5.33**	**37**	*e*Pn	**Pn**	**22 58 53.0**	**+2.4**
IALA	**Alasht**	**5.34**	**26**	*e*Pn	**Pn**	**22 58 53.9**	**+3.0**
KHGB	**Koh Gabri**	**5.69**	**98**	*e*Pn	**Pn**	**22 58 58.3**	**+2.7**
TPRV	**Parvadeh(Tabas**	**5.97**	**71**	*e*Pn	**Pn**	**22 59 02.3**	**+2.9**
TVBK	**TV Kerman**	**6.02**	**101**	*e*Pn	**Pn**	**22 59 02.8**	**+2.6**
NGRK	**Negar Kerman**	**6.08**	**104**	*e*Pn	**Pn**	**22 59 04.4**	**+3.3**
IGLO	**Ghaloghah**	**6.12**	**31**	*e*Pn	**Pn**	**22 59 04.3**	**+2.8**
TNSJ	**Nastanj**	**6.22**	**63**	*e*Pn	**Pn**	**22 59 05.7**	**+2.9**
TKDS	**Koohdasht(Taba**	**6.50**	**67**	*e*Pn	**Pn**	**22 59 09.3**	**+2.8**
GENO	**Geno**	**6.67**	**124**	*e*Pn	**Pn**	**22 59 10.9**	**+1.8**
NIAN	**Nian**	**7.07**	**120**	*e*Pn	**Pn**	**22 59 15.6**	**+1.3**
SHME	**Shamm**	**7.54**	**132**	P	**Pn**	**22 59 22.3**	**+1.4**
SHME	**Shamm**	**7.54**	**132**	*e*Pn	**Pn**	**22 59 22.0**	**+1.1**
BANOM	**Banah**	**7.73**	**132**	*i* P	**Pn**	**22 59 25.0**	**+1.5**
	SNR=20						
BANOM				S	**Sn**	**23 00 47.9**	**-3.2**
BANOM	**Banah**	**7.73**	**132**	P	**Pn**	**22 59 24.6**	**+1.2**
	SNR=6.5						
BANOM				S	**Sn**	**23 00 48.8**	**-2.3**
	SNR=17						
NAZ	**Nazwa, Dubai**	**8.05**	**140**	*i* P	**Pn**	**22 59 31.4**	**+3.5**
	SNR=7.7						
NAZ	**Nazwa, Dubai**	**8.05**	**140**	*e*Pn	**Pn**	**22 59 29.7**	**+1.9**
NAZ	**Nazwa, Dubai**	**8.05**	**140**	P	**Pn**	**22 59 29.9**	**+2.1**
	SNR=7.8						
NAZ				S	**Sn**	**23 00 57.5**	**-1.4**
MSFE	**Esma-Masafi**	**8.05**	**136**	P	**Pn**	**22 59 28.6**	**+0.8**
MSFE	**Esma-Masafi**	**8.05**	**136**	*e*Pn	**Pn**	**22 59 29.5**	**+1.6**
MDH	**Madha**	**8.18**	**135**	*e*Pn	**Pn**	**22 59 30.6**	**+1.0**
MDH	**Madha**	**8.18**	**135**	P	**Pn**	**22 59 30.7**	**+1.0**
MDH				S	**Sn**	**23 00 59.3**	**-2.9**
UOSS	**Minazif**	**8.39**	**137**	P	**Pn**	**22 59 33.8**	**+1.3**
UOSS	**Minazif**	**8.39**	**137**	*e*Pn	**Pn**	**22 59 33.9**	**+1.3**
UOSS	**Minazif**	**8.39**	**137**	P	**Pn**	**22 59 34.3**	**+1.8**
HATD	**Hatta, Dubai**	**8.44**	**138**	P	**Pn**	**22 59 34.2**	**+1.0**
HATD	**Hatta, Dubai**	**8.44**	**138**	*e*Pn	**Pn**	**22 59 35.6**	**+2.4**
HATD	**Hatta, Dubai**	**8.44**	**138**	P	**Pn**	**22 59 35.1**	**+1.9**
HATD				S	**Sn**	**23 01 06.0**	**-2.7**
ASHO	**Ashiyiah**	**8.51**	**139**	*i* P	**Pn**	**22 59 36.0**	**+1.8**
	SNR=12						
ASHO	**Ashiyiah**	**8.51**	**139**	*e*Pn	**Pn**	**22 59 35.4**	**+1.3**
ASHO	**Ashiyiah**	**8.51**	**139**	P	**Pn**	**22 59 35.5**	**+1.3**
	SNR=11						
ASHO				S	**Sn**	**23 01 08.6**	**-1.8**
RAYN	**Ar Rayn**	**8.68**	**208**	*i* P	**Pn**	**22 59 37.0**	**+0.5**
	SNR=6.7						
ALNE	**Al Ain**	**8.85**	**143**	P	**Pn**	**22 59 40.7**	**+1.9**
ALNE	**Al Ain**	**8.85**	**143**	*e*Pn	**Pn**	**22 59 40.9**	**+2.1**
SOHO	**SOHO**	**9.21**	**139**	P	**Pn**	**22 59 43.8**	**+0.1**
SOHO				S	**Sn**	**23 01 24.1**	**-3.3**
GEYT	**Alibeck**	**9.44**	**43**	Pn	**Pn**	**22 59 50.9**	**+4.0**
	comp=E,0.5nm,0.3s,baz=237,slow=14,SNR=13						
ARQ	**Araqi**	**9.84**	**142**	P	**Pn**	**22 59 55.5**	**+3.1**
	SNR=9.7						
ARQ				S	**Sn**	**23 01 40.1**	**-2.9**
HOQ	**Hoqain**	**10.08**	**138**	P	**Pn**	**22 59 58.5**	**+2.8**
HOQ				S	**Sn**	**23 01 45.3**	**-3.6**
BSY	**Bisya**	**10.69**	**141**	P	**Pn**	**23 00 05.8**	**+1.8**
	SNR=31						
BSY				S	**Sn**	**23 01 58.1**	**-5.6**
SMDO	**Samad**	**10.92**	**137**	P	**Pn**	**23 00 10.1**	**+2.9**
WSAR	**Wadi Sarin**	**11.13**	**134**	Pn	**Pn**	**23 00 10.7**	**+0.6**
	comp=E,1.2nm,0.3s,baz=340,slow=11,SNR=21			

214A	**Organ Pipe Nat**	**7.63**	**305**		**Pn**	**23 02 46.8**	**+0.1**
X18A	**Snowflake**	**7.78**	**332**		**Pn**	**23 02 47.7**	**-1.1**
AMTX	**Amarillo**	**7.82**	**24**		**Pn**	**23 02 50.5**	**+1.1**
WHTX	**Lake Whitney,**	**8.15**	**57**	Pn	**Pn**	**23 02 56.7**	**+3.0**
W18A	**Petrified Fore**	**8.20**	**335**	Pn	**Pn**	**23 02 54.7**	**0.0**
HKT	**Hockley**	**8.73**	**73**		**Pn**	**23 03 04.4**	**+2.6**
113A	**Mohawk Valley,**	**8.75**	**307**	Pn	**Pn**	**23 03 02.0**	**+0.1**
MOIG	**Morelia**	**8.94**	**153**	Pn	**Pn**	**23 03 03.9**	**-0.9**
Y14A	**Wickenburg**	**8.95**	**316**		**Pn**	**23 03 04.0**	**-0.8**
WMOK	**Wichita Mounta**	**9.02**	**38**		**Pn**	**23 03 05.9**	**+0.2**
WUAZ	**Wupatki**	**9.24**	**329**	Pn	**Pn**	**23 03 09.1**	**+0.3**
T25A	**Trinidad**	**9.41**	**5**	Pn	**Pn**	**23 03 11.6**	**+0.3**
X34A	**Smith Ranch, M**	**9.46**	**42**	Pn	**Pn**	**23 03 13.3**	**+1.5**
GLA	**Glamis**	**9.65**	**306**	Pn	**Pn**	**23 03 13.7**	**-0.7**
MVCO	**Mesa Verde**	**9.78**	**346**		**Pn**	**23 03 16.7**	**+0.4**
Y12C	**Blythe**	**9.82**	**310**	Pn	**Pn**	**23 03 16.0**	**-0.7**
SDCO	**Great Sand Dun**	**9.98**	**360**		**Pn**	**23 03 21.0**	**+2.0**
S22A	**4UR Ranch, Cre**	**10.04**	**354**	Pn	**Pn**	**23 03 21.1**	**+1.1**
FNO	**Franklin**	**10.17**	**41**	Pn	**Pn**	**23 03 22.9**	**+1.4**
U32A	**Winter Ranch,**	**10.21**	**31**	Pn	**Pn**	**23 03 22.4**	**+0.4**
W13A	**Hualapai Mount**	**10.26**	**318**	Pn	**Pn**	**23 03 22.3**	**-0.6**
U15A	**North Rim**	**10.41**	**328**	Pn	**Pn**	**23 03 23.7**	**-1.3**
W35A	**Tecumseh**	**10.41**	**43**	Pn	**Pn**	**23 03 26.1**	**+1.3**
XPFO	**Pion Flat**	**11.11**	**304**	Pn	**Pn**	**23 03 33.5**	**-1.1**
PFO	**Pinyon Flats O**	**11.12**	**304**	Pn	**Pn**	**23 03 32.5**	**-2.1**
	0.1nm,0.3s,baz=124,slow=18,SNR=1.9						
PFO				LR	LR	23 06 33.0	
	comp=Z,59nm,21.4s,baz=69,slow=31						
PFO				Lg	Lg	23 06 44.8	
	0.2nm,0.3s,baz=130,slow=18,SNR=2.8						
KNB	**Kanab**	**11.13**	**328**	Pn	**Pn**	**23 03 34.0**	**-0.8**
Q24A	**Divide**	**11.20**	**1**		**Pn**	**23 03 34.3**	**-1.5**
PKCU	**Pink Cliffs**	**11.26**	**331**	Pn	**Pn**	**23 03 36.6**	**0.0**
LCMT	**Little Creek M**	**11.33**	**327**	Pn	**Pn**	**23 03 36.9**	**-0.6**
TUL1	**Leonard**	**11.57**	**43**		**Pn**	**23 03 42.0**	**+1.3**
MTPU	**Mount Pierson**	**11.71**	**333**		**Pn**	**23 03 43.3**	**+0.4**
CCUT	**Cedar City**	**11.82**	**328**		**Pn**	**23 03 44.5**	**+0.2**
TLIG	**Tlapa**	**11.97**	**146**	Pn	**Pn**	**23 03 46.0**	**-0.2**
SHPR	**Sheep Range**	**11.98**	**319**		**Pn**	**23 03 45.5**	**-0.9**
WLAR	**White Oak Lake**	**12.17**	**58**	Pn	**Pn**	**23 03 51.9**	**+3.0**
MIAR	**Mount Ida**	**12.23**	**53**	Pn	**Pn**	**23 03 52.8**	**+3.1**
W39A	**Magazine**	**12.43**	**50**	Pn	**Pn**	**23 03 56.4**	**+4.0**
PASC	**Pasadena Art C**	**12.50**	**304**	Pn	**Pn**	**23 03 52.5**	**-2.9**
TPNV	**Topopah Spring**	**12.92**	**318**	Pn	**Pn**	**23 03 59.8**	**+0.5**
RDMU	**Red Mountain**	**13.24**	**346**	Pn	**Pn**	**23 04 03.9**	**+0.3**
MPU	**Maple Canyon**	**13.26**	**339**	Pn	**Pn**	**23 04 01.1**	**-2.8**
WHAR	**Wooly Hollow**	**13.52**	**53**	Pn	**Pn**	**23 04 10.1**	**+2.8**
U40A	**Yellville**	**13.71**	**48**		**Pn**	**23 04 10.4**	**+0.5**
MGMO	**Mountain Grove**	**14.56**	**47**		**Pn**	**23 04 23.2**	**+1.7**
NVAR	**Mina Array Bea**	**15.12**	**318**	Pn	**Pn**	**23 04 32.0**	**+2.7**
	0.1nm,0.3s,baz=137,slow=14,SNR=4.0						
ELK	**Elko**	**15.26**	**331**	Pn	**P**	**23 04 34.3**	**-1.9**
	0.1nm,0.3s,baz=130,slow=16,SNR=3.3						
ELK				LR	LR	23 10 35.0	
	comp=Z,221nm,21.8s,baz=52,slow=38						
PD31	**Pinedale Array**	**15.35**	**349**	Pn	**Pn**	**23 04 31.9**	**-0.5**
PDAR	**Pinedale Array**	**15.35**	**349**	Pn	**Pn**	**23 04 33.2**	**+0.9**
	0.0nm,0.3s,baz=163,slow=19,SNR=3.1						
AHID	**Auburn Hatcher**	**15.67**	**344**	Pn	**Pn**	**23 04 35.5**	**-1.0**
CCM	**Cathedral Cave**	**15.75**	**46**	Pn	**Pn**	**23 04 37.8**	**+0.6**
CCM				IAmb	IAmb	23 05 13.7	
	comp=Z,36nm,1.9s						
YERR	**Yerington**	**16.04**	**318**	Pn	**Pn**	**23 04 39.0**	**-2.3**
YERR				IAmb	IAmb	23 04 49.7	
	comp=Z,13nm,1.5s						
X48A	**Hartselle**	**17.13**	**62**		**P**	**23 04 58.0**	**+1.4**
X48A				IAmb	IAmb	23 05 03.7	
	comp=Z,31nm,1.8s						
WVT	**Waverly**	**17.14**	**56**	Pn	**P**	**23 04 56.6**	**0.0**
APG	**El Apazote**	**18.84**	**129**	LR	LR	23 13 26.8	
	comp=Z,89nm,20.6s,baz=333,slow=40						
TKL	**Tuckaleechee C**	**20.05**	**61**	P	**P**	**23 05 29.7**	**+0.9**
	comp=Z,3.0nm,0.9s,baz=220,slow=13,SNR=3.0						
TKL				LR	LR	23 13 55.5	
	comp=Z,174nm,19.1s,baz=264,slow=39						
SADO	**Sadowa**	**27.02**	**44**	LR	LR	23 17 30.6	
	comp=Z,103nm,20.9s,baz=36,slow=37						
YKA	**Yellowknife Ar**	**35.27**	**353**	P	**P**	**23 07 49.3**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=167,slow=8.6,SNR=11						
INK	**Inuvik**	**43.89**	**345**	P	**P**	**23 09 02.0**	**+0.3**
	comp=Z,3.1nm,1.1s,baz=142,slow=5.3,SNR=3.9						
INK	**Inuvik**	**43.89**	**345**	IAmb	IAmb	23 09 22.0	
	comp=Z,5.9nm,1.4s						
ILAR	**Eielson Array**	**45.31**	**336**	P	**P**	**23 09 14.6**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=145,slow=7.6,SNR=8.1						
ILAR	**Eielson Array**	**45.31**	**336**	P	**P**	**23 09 13.9**	**+0.7**

*RHSSO **26** 23:06:47.5±0.4, 43.˚26N×19.˚81E, h9km±2km, ML2.3/9*
*BEO **26** 23:06:48.1±0.4, 43.˚29N×19.˚92E, h0km, ML2.3/12*
ISC 26 23:06:46.1±1.0, **43.˚29N**±0.˚02×**19.˚82E**±0.˚02, **h5**km±9km,
n25,σ1ş42/47,1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SJES	**Sjenica**	**0.12**	**103**	*e*Pg	**Pg**	**23 06 48.2**		**-0.3**
SJES				*e*Sg	**Sg**	**23 06 50.0**		**-0.2**
IVAS	**Ivanjica**	**0.38**	**40**	*e*Pg	**Pg**	**23 06 53.2**		**-0.2**
IVAS				*e*Sg	**Sg**	**23 06 56.8**		**-1.5**
RUDO	**Rudo**	**0.46**	**315**	*e*Sg	**Sb**	**23 07 03.7**		**-0.4**
BBLS	**Lazići**	**0.65**	**333**	*e*Pg	**Pb**	**23 07 00.4**		**+0.3**
BBLS				*e*Sg	**Sb**	**23 07 09.8**		**+0.3**
BBLS	**Lazići**	**0.65**	**333**	↑*i*Pg	**Pb**	**23 07 00.0**		**-0.1**
BBLS				*e*Sg	**Sb**	**23 07 10.3**		**+0.8**
UPM	**Unac-Piva**	**0.67**	**263**	*e*Pg	**Pg**	**23 06 59.6**		**+0.6**
UPM				*e*Sg	**Sg**	**23 07 09.1**		**+1.3**
DIVS	**Divibare**	**0.82**	**9**	*e*Pg	**Pb**	**23 07 02.8**		**-0.1**
DIVS				*e*Sg	**Sb**	**23 07 14.8**		**+0.4**
DIVS	**Divibare**	**0.82**	**9**	*e*Pg	**Pg**	**23 07 02.2**		**+0.3**
DIVS				*e*Sg	**Sb**	**23 07 15.3**		**+0.9**
GRUS	**Gruza**	**0.89**	**47**	*e*Pg	**Pg**	**23 07 03.3**		**+0.2**
GRUS				*e*Sg	**Sg**	**23 07 15.2**		**+0.6**
PDG	**Podgorica**	**0.95**	**206**	*e*Pg	**Pg**	**23 07 03.8**		**-0.5**
PDG				*e*Sg	**Sg**	**23 07 16.5**		**-0.2**
SELS	**Selova**	**0.95**	**94**	*e*Pg	**Pg**	**23 07 04.0**		**-0.4**
SELS				*e*Sg	**Sg**	**23 07 15.6**		**-1.1**
HAPS	**Han Pijesak,Bl**	**1.02**	**322**	*e*Pg	**Pg**	**23 07 05.4**		**-0.2**
HAPS				*e*Sg	**Sb**	**23 07 20.5**		**+0.5**
TRUS	**Trudelj**	**1.03**	**24**	*e*Pg	**Pg**	**23 07 06.2**		**+0.4**
TRUS				*e*Sg	**Sn**	**23 07 21.0**		**-1.1**
DRME	**Dracevica, Mon**	**1.20**	**203**	*e*Pg	**Pg**	**23 07 09.0**		**0.0**
DRME				*e*Sg	**Sn**	**23 07 25.4**		**-0.8**
TREB	**Trebinje**	**1.22**	**243**	*e*Pg	**Pn**	**23 07 08.5**		**-1.4**
TREB				*e*Sg	**Sn**	**23 07 26.3**		**-0.5**
TEKS	**Tekeris**	**1.28**	**351**	*e*Pg	**Pg**	**23 07 11.7**		**+1.1**
TEKS				*e*Sg	**Sg**	**23 07 29.1**		**+1.9**
TEKS	**Tekeris**	**1.28**	**351**	*e*Pg	**Pb**	**23 07 10.9**		**+0.2**
TEKS				*e*Sg	**Sg**	**23 07 29.4**		**+2.2**
HCY	**Herceg Novi**	**1.29**	**230**	*e*Pg	**Pg**	**23 07 10.9**		**+0.2**
BOVS	**Bovan**	**1.42**	**75**	*e*Pg	**Pb**	**23 07 12.6**		**-0.5**
BOVS				*e*Sg	**Sn**	**23 07 30.2**		**-1.5**
BARS	**Barje**	**1.54**	**107**	*e*Pg	**Pn**	**23 07 13.9**		**-0.4**
BARS				*e*Sg	**Sg**	**23 07 35.3**		**-0.2**
BARS				*e*Sg	**Sb**	**23 07 42.7**		**+7.8**
STON	**Ston**	**1.61**	**256**	*e*Pn	**Pn**	**23 07 15.1**		**-0.1**
STON				*e*Sn	**Sb**	**23 07 37.2**		**+0.3**
KUBS	**Kucevo**	**1.75**	**49**	*e*Pg	**Pb**	**23 07 18.5**		**-0.3**
KUBS				*e*Sg	**Sg**	**23 07 42.2**		**-0.2**
FRGS	**Fruska Gora**	**1.87**	**360**	*e*Pg	**Pg**	**23 07 21.8**		**-0.1**
FRGS	**Fruska Gora**	**1.87**	**360**	*e*Pn	**Pb**	**23 07 19.7**		**-1.1**
FRGS				*e*Sn	**Sb**	**23 07 44.3**		**-0.2**
BOSS	**Bosilegrad**	**2.11**	**111**	*e*Pg	**Pb**	**23 07 24.7**		**-0.2**

*IDC **26** 23:06:53.0±0.5, 38.˚28N×20.˚43E, h0km, mb4.1/29,*
mb1 4.2/40, mb1mx4.1/67, mbtmp4.2/40, ML4.0/9, MS3.6/5,
Ms1 3.7/5, ms1mx3.2/45, Error ellipse: s-maj=12.7km
s-min=10.0km az=173.0
*MOS **26** 23:06:52.9±1.2, 38.˚19N×20.˚28E, h13km, mb4.6/8, Error*
ellipse: s-maj=5.4km s-min=3.6km az=70.0
*NEIC **26** 23:06:54.8±2.3, 38.˚18N±0.˚06×20.˚38E±0.˚06, h10km±1km,*
Error ellipse: s-maj=8.9km s-min=6.7km az=183.0
*THE **26** 23:06:54.8, 38.˚22N×20.˚34E, h11km, ML4.3/9, Error*
ellipse: s-maj=1.2km s-min=0.4km az=66.0
*MED_RC **26** 23:06:54.0±0.5, 38.˚17N×20.˚31E, h12km±2km, MW4.4/13,*
Moment Tensor Solution.Mantle waves: s13,c13;
Duration: 1ş0 Moment tensor: Scale 10^{15}Nm;
M_{rr}4.77±1.07; $M_{\theta\theta}$-0.71±.58; $M_{\phi\phi}$-4.06±.84; $M_{r\theta}$2.73±1.18;
$M_{\theta\phi}$0.85±.34; $M_{\phi r}$0.31±.61; Best double couple:

M_o5.11000×10^{15} NP1,ϕ_b7.00000°, δ47.00000°,
λ122.00000°. NP2,ϕ_b144.00000°, δ52.00000°, λ60.00000°.
Principal axes: T 5.9300, Plg67.0000°, Azm351.0000°;
N -1.6600, Plg23.0000°, Azm163.0000°; P -4.2800,
Plg3.0000°, Azm255.0000°; nsta1 refers to body waves.
nsta2 refers to surface waves, cutoff=35s.
*ATH **26** 23:06:55.3, 38.˚24N×20.˚43E, h18km±1km, ML4.2/17 Error*
ellipse: s-maj=1.4km s-min=0.7km az=63.0
*SKO **26** 23:06:56.5, 38.˚24N×20.˚79E, h2km*
*TIR **26** 23:06:57.5, 38.˚37N×20.˚29E, h35km, Md4.5/7*
*BGR **26** 23:06:57.9±0.8, 38.˚44N×20.˚71E, h10km, Error ellipse:*
s-maj=32.2km s-min=11.1km az=58.0
ISC 26 23:06:54.8±0.8, **38.˚23N**±0.˚02×**20.˚34E**±0.˚03, **h13**km±5km,
n366,σ1ş71/420, mb4.4/64, MS3.9/3, 21C-8D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VLS	**Valsamata**	**0.21**	**103**	P	**Pg**	**23 06 59.2**		**-0.2**
VLS				S	**Sg**	**23 07 02.0**		**-0.5**
	173μm,0.5s							
VLS	**Valsamata**	**0.21**	**103**	P	**Pg**	**23 06 59.2**		**-0.2**
VLS				S	**Sg**	**23 07 02.0**		**-0.5**
VLS	**Valsamata**	**0.21**	**103**	P	**Pg**	**23 06 59.2**		**-0.2**
VLS				S	**Sg**	**23 07 02.1**		**-0.5**
VLS				AML	AML	23 07 02.1		
VLS				AML	AML	23 07 02.1		
FSK	**Fiskardo**	**0.29**	**37**	P	**Pg**	**23 07 01.1**		**+0.2**
FSK				S	**Sg**	**23 07 05.6**		**+0.6**
	221μm,0.4s							
FSK	**Fiskardo**	**0.29**	**37**	P	**Pg**	**23 07 01.1**		**+0.2**
FSK				S	**Sg**	**23 07 05.3**		**+0.2**
KFL	**Anninata**	**0.38**	**108**	P	**Pg**	**23 07 02.1**		**-0.3**
KFL				S	**Sg**	**23 07 07.7**		**+0.2**
	106μm,0.4s							
KFL	**Anninata**	**0.38**	**108**	P	**Pg**	**23 07 02.1**		**-0.3**
KFL				S	**Sg**	**23 07 07.2**		**-0.2**
KFL				AML	AML	23 07 07.9		
KFL				AML	AML	23 07 08.2		
VLMS	**Volimes, Zakyn**	**0.43**	**143**	P	**Pg**	**23 07 03.6**		**+0.2**
VLMS				S	**Sg**	**23 07 09.9**		**+0.7**
VLMS				AML	AML	23 07 12.0		
VLMS				AML	AML	23 07 13.3		
EVGI	**Lefkada island**	**0.47**	**32**	P	**Pg**	**23 07 04.0**		**-0.1**
MGNA	**Meganis**	**0.56**	**40**	P	**Pg**	**23 07 05.5**		**-0.4**
MGNA				S	**Sg**	**23 07 12.5**		**-0.8**
MGNA				AML	AML	23 07 17.1		
	comp=E,76166μm,0.4s							
MGNA				AML	AML	23 07 17.4		
	comp=N,95094μm,0.6s							
LKD2	**Lefkada island**	**0.62**	**24**	P	**Pg**	**23 07 06.5**		**-0.4**
LKD2				S	**Sg**	**23 07 15.2**		**+0.1**
	comp=N,21μm,0.7s							
LKD2	**Lefkada island**	**0.62**	**24**	P	**Pg**	**23 07 06.6**		**-0.4**
LKD2				S	**Sg**	**23 07 14.9**		**-0.2**
LKD2				AML	AML	23 07 24.9		
	comp=N,44269μm,0.6s							
LKD2				AML	AML	23 07 27.5		
	comp=E,33307μm,0.4s							
TSLK	**Tsoukalades, L**	**0.65**	**23**	P	**Pg**	**23 07 07.3**		**-0.2**
TSLK				S	**Sb**	**23 07 16.9**		**-0.1**
	comp=E,20μm,0.7s							
TSLK	**Tsoukalades, L**	**0.65**	**23**	P	**Pg**	**23 07 07.3**		**-0.2**
TSLK				S	**Sg**	**23 07 16.0**		**-0.1**
TSLK				AML	AML	23 07 23.9		
	comp=N,37282μm,0.4s							
TSLK				AML	AML	23 07 25.9		
	comp=E,39617μm,0.6s							
RLS	**Riolos of Patr**	**0.91**	**100**	P	**Pg**	**23 07 11.3**		**-1.0**
RLS				S	**Sb**	**23 07 24.9**		**+0.5**
	comp=E,9μm,0.6s							
RLS	**Riolos of Patr**	**0.91**	**100**	P	**Pg**	**23 07 11.4**		**-1.0**
RLS				S	**Sg**	**23 07 22.9**		**-1.4**
RLS				AML	AML	23 07 27.2		
	comp=E,18017μm,0.5s							
RLS				AML	AML	23 07 30.4		
	comp=N,18356μm,0.8s							
PVO	**Paravola**	**1.01**	**67**	P	**Pb**	**23 07 13.8**		**-0.4**
PVO				S	**Sn**	**23 07 29.1**		**+0.2**
	comp=N,28μm,0.3s							
PVO	**Paravola**	**1.01**	**67**	P	**Pb**	**23 07 13.7**		**-0.6**
PVO				S	**Sb**	**23 07 26.5**		**-1.0**
PVO				AML	AML	23 07 34.4		
	comp=E,60492μm,0.4s							
PVO				AML	AML	23 07 34.4		
	comp=N,35692μm,0.4s							
DRO	**Drossia**	**1.12**	**104**	P	**Pb**	**23 07 14.9**		**-1.1**
DRO				S	**Sg**	**23 07 31.1**		**+0.1**
	comp=N,15μm,0.5s							
DRO	**Drossia**	**1.12**	**104**	P	**Pb**	**23 07 15.5**		**-0.6**
DRO				S	**Sb**	**23 07 29.9**		**-0.6**
DRO				AML	AML	23 07 40.4		
	comp=N,26371μm,0.5s							
DRO				AML	AML	23 07 40.6		
	comp=E,31273μm,0.5s							
EFP	**Efpalio**	**1.25**	**80**	P	**Pn**	**23 07 17.5**		**-0.5**
EFP				S	**Sg**	**23 07 36.4**		**+1.2**
	comp=E,10μm,1.1s							
EFP	**Efpalio**	**1.25**	**80**	P	**Pn**	**23 07 17.4**		**-0.6**
EFP				S	**Sb**	**23 07 33.4**		**-0.9**
EFP				AML	AML	23 07 41.2		
	comp=E,16164μm,0.9s							
EFP				AML	AML	23 07 44.3		
	comp=N,19052μm,0.5s							
AMT	**Artemida-Makis**	**1.29**	**122**	P	**Pn**	**23 07 18.7**		**+0.1**
AMT	**Artemida-Makis**	**1.29**	**122**	P	**Pn**	**23 07 18.7**		**+0.1**
AMT				S	**Sn**	**23 07 35.6**		**0.0**
AMT				AML	AML	23 07 48.5		
	comp=E,22766μm,1.1s							
AMT				AML	AML	23 07 54.3		
	comp=N,22052μm,0.5s							
LAKA	**Lakka**	**1.29**	**89**	P	**Pn**	**23 07 18.1**		**-0.5**
LAKA	**Lakka**	**1.29**	**89**	P	**Pn**	**23 07 18.3**		**-0.3**
LAKA				S	**Sb**	**23 07 35.2**		**-0.3**
LAKA				AML	AML	23 07 42.7		
	comp=E,17484μm,1.0s							
LAKA				AML	AML	23 07 43.7		
	comp=N,11194μm,0.9s							
ANX	**Ano Chora**	**1.30**	**73**	P	**Pn**	**23 07 18.4**		**-0.4**
ANX	**Ano Chora**	**1.30**	**73**	P	**Pn**	**23 07 18.3**		**-0.4**
ANX				S	**Sb**	**23 07 35.6**		**-0.2**
ANX				AML	AML	23 07 42.9		
	comp=N,39752μm,0.6s							
ANX				AML	AML	23 07 43.8		
	comp=E,34887μm,1.0s							
IGT	**Igoumenitsa**	**1.30**	**360**	P	**Pg**	**23 07 20.6**		**+0.7**
IGT				S	**Sg**	**23 07 36.9**		**0.0**
IGT	**Igoumenitsa**	**1.30**	**360**	P	**Pb**	**23 07 19.1**		**-0.2**
EVR	**Evrytania**	**1.35**	**59**	P	**Pn**	**23 07 18.7**		**-0.7**
EVR	**Evrytania**	**1.35**	**59**	P	**Pn**	**23 07 19.5**		**+0.1**
EVR				S	**Sn**	**23 07 37.3**		**0.0**
EVR				AML	AML	23 07 46.6		
	comp=N,14779μm,1.2s							
EVR				AML	AML	23 07 52.3		
	comp=E,12457μm,0.8s							
SERG	**Sergoula**	**1.37**	**82**	P	**Pn**	**23 07 19.1**		**-0.5**
SERG	**Sergoula**	**1.37**	**82**	P	**Pn**	**23 07 19.8**		**+0.1**
KALE	**Kalithea**	**1.43**	**83**	P	**Pn**	**23 07 20.2**		**-0.3**
KALE	**Kalithea**	**1.43**	**83**	P	**Pn**	**23 07 20.3**		**-0.3**
KLV	**Kalavryta, Ach**	**1.44**	**97**	P	**Pn**	**23 07 21.0**		**+0.3**
KLV				S	**Sb**	**23 07 39.9**		**0.0**
KLV				AML	AML	23 07 46.5		
	comp=E,7018μm,0.8s							
KLV				AML	AML	23 07 57.4		
	comp=N,7767μm,1.2s							
JAN	**Janina**	**1.48**	**16**	P	**Pg**	**23 07 23.8**		**+0.4**
JAN	**Janina**	**1.48**	**16**	P	**Pg**	**23 07 22.9**		**-0.4**
JAN				S	**Sg**	**23 07 42.3**		**-0.4**
JAN				AML	AML	23 07 48.6		
	comp=E,11996μm,0.8s							
JAN				AML	AML	23 07 50.2		
	comp=N,9980μm,0.4s							
MAKR	**Makrakomi, Fth**	**1.61**	**60**	P	**Pb**	**23 07 24.4**		**-0.1**
ITM	**Ithomi**	**1.64**	**129**	P	**Pb**	**23 07 24.3**		**-0.6**
ITM				S	**Sb**	**23 07 46.1**		**+0.7**
ITM				AML	AML	23 07 59.8		
	comp=N,6478μm,1.1s							
ITM				AML	AML	23 08 05.9		
	comp=E,4782μm,1.3s							
ITM	**Ithomi**	**1.64**	**129**		**Pb**	**23 07 24.9**		**0.0**
SRN	**Sarande**	**1.67**	**351**	*i* PN	**Pb**	**23 07 25.7**		**+0.2**
SRN				*i* SN	**Sb**	**23 07 46.6**		**+0.1**
PYL	**PYLOS**	**1.74**	**139**	P	**Pn**	**23 07 25.4**		**+0.7**
AGG	**Agios Georgios**	**1.75**	**62**	P	**Pb**	**23 07 26.5**		**-0.4**
AGG	**Agios Georgios**	**1.75**	**62**		**Pb**	**23 07 26.5**		**-0.4**
VLX	**Vlachokerasia**	**1.83**	**117**	P	**Pb**	**23 07 28.2**		**-0.1**
THL	**Klokotos Trika**	**1.87**	**44**	P	**Pb**	**23 07 28.1**		**-0.8**
TPE	**Tepelena**	**2.08**	**353**	*i* PN	**Pb**	**23 07 32.8**		**+0.3**
TPE				*i* SN	**Sn**	**23 07 56.2**		**+1.0**
VLO	**Vlora**	**2.33**	**344**	*i* PN	**Pn**	**23 07 33.1**		**+0.2**
VLO				*i* SN	**Sn**	**23 08 03.0**		**+1.6**
SCTE	**Santa Cesarea**	**2.35**	**322**		**Pn**	**23 07 34.4**		**+1.3**
KZN	**Kozani**	**2.36**	**28**	P	**Pb**	**23 07 35.9**		**-1.3**
LIT	**Litokhoron**	**2.51**	**41**	P	**Pn**	**23 07 36.4**		**+1.0**
LIT	**Litokhoron**	**2.51**	**41**		**Pn**	**23 07 36.4**		**+1.0**
FNA	**Florina**	**2.68**	**17**	P	**Pn**	**23 07 39.3**		**+1.6**
FNA	**Florina**	**2.68**	**17**		**Pn**	**23 07 39.3**		**+1.6**
ATH	**Athens Observa**	**2.68**	**94**	P	**Pn**	**23 07 39.3**		**+1.7**
OHR	**Ohrid**	**2.91**	**7**	*i* Pn	**Pn**	**23 07 43.3**		**+2.5**
TIP	**Timpagrande**	**2.96**	**290**	⇑P	**Pn**	**23 07 39.1**		**-2.4**
TIP	**Timpagrande**	**2.96**	**290**		**Pn**	**23 07 43.3**		**+1.8**
TIR	**Tirane**	**3.14**	**354**	P	**Pn**	**23 07 45.4**		**+1.4**
TIR				S	**Sn**	**23 08 23.7**		**+2.4**
TIR	**Tirane**	**3.14**	**354**	*i* PN	**Pn**	**23 07 45.8**		**+1.8**
TIR				*i* SN	**Sn**	**23 08 23.9**		**+2.6**
TIR	**Tirane**	**3.14**	**354**	⇓P	**Pb**	**23 07 51.4**		**+0.9**
TIR	**Tirane**	**3.14**	**354**		**Pn**	**23 07 45.4**		**+1.4**
CGL1	**Ceglie Messapi**	**3.28**	**319**	*e*Pn	**Pn**	**23 07 47.3**		**+1.3**
CGL1				Sn	**Sn**	**23 08 26.3**		**+1.4**
TAR1	**Taranto**	**3.30**	**315**	*e*Pn	**Pn**	**23 07 48.2**		**+2.1**
MASS	**Massafra**	**3.45**	**315**	*e*Pn	**Pn**	**23 07 50.3**		**+2.1**
PHP	**Peshkopia**	**3.46**	**1**	*i* PN	**Pn**	**23 07 50.0**		**+1.6**
PHP				*i* SN	**Sn**	**23 08 30.5**		**+1.2**
CEL	**Celeste**	**3.50**	**272**		**Pn**	**23 07 50.0**		**+1.0**
VAY	**Valandovo**	**3.54**	**28**	*i* Pn	**Pn**	**23 07 49.9**		**+0.4**
MATE	**Matera**	**3.71**	**312**	⇑P	**Pn**	**23 07 54.5**		**+2.7**
STIP	**Stip**	**3.75**	**22**	*i* Pn	**Pn**	**23 07 55.3**		**+3.0**
PUK	**Puka**	**3.83**	**355**	*i* PN	**Pn**	**23 07 54.5**		**+1.0**
PUK				*i* SN	**Sn**	**23 08 39.6**		**+1.2**
SKO	**Skopje**	**3.84**	**12**	*i* Pn	**Pn**	**23 07 55.1**		**+1.6**
SG1	**Sgolgore (BA)**	**3.85**	**314**	*e*Pn	**Pn**	**23 07 55.5**		**+1.8**
SG1				Sn	**Sn**	**23 08 38.8**		**0.0**
BAI	**Bari**	**3.92**	**318**	*e*Pn	**Pn**	**23 07 56.0**		**+1.3**
DRME	**Dracevica, Mon**	**4.05**	**348**	*e*Pn	**Pn**	**23 07 57.2**		**+0.7**
BCI	**Bajram Curri**	**4.14**	**357**	*i* PN	**Pn**	**23 07 59.3**		**+1.5**
BCI				*i* SN	**Sn**	**23 08 50.7**		**+4.6**
ACER	**Acerenza**	**4.25**	**308**		**Pn**	**23 08 01.5**		**+2.2**
PDG	**Podgorica**	**4.28**	**349**	⇑P	**Pb**	**23 08 07.8**		**-2.1**
PDG	**Podgorica**	**4.28**	**349**	*e*Pn	**Pn**	**23 08 00.4**		**+0.8**
PDG	**Podgorica**	**4.28**	**349**		**Pn**	**23 08 02.8**		**+3.2**
HCY	**Herceg Novi**	**4.45**	**342**	*e*Pn	**Pn**	**23 08 01.6**		**-0.3**
SANT	**Santorini**	**4.49**	**113**	Pn	**Pn**	**23 08 03.3**		**+0.8**
IDI	**Anoyia**	**4.69**	**127**	Pn	**Pn**	**23 08 06.0**		**+0.7**
	comp=E,1.1nm,0.3s,baz=316,slow=8.9,SNR=14							
IDI				Sn	**Sn**	**23 08 59.9**		**+0.3**
	comp=E,7.8nm,0.3s,baz=354,slow=13,SNR=5.2							
IDI				LR

PSZ	Piszkesteto	9.69	358	P	Pn	23 09 15.4	+1.4
PSZ	Piszkesteto	9.69	358	Pn	Pn	23 09 15.4	+1.4
MYKA	Terra Mystica	9.74	332	*e*Pn	Pn	23 09 15.2	+0.5
	comp=E,3.4nm,0.3s,SNR=6.6						
STAL	STALIGIAL	9.81	327	Pn	Pn	23 09 16.1	+0.5
BR231	Keskin MP Arra	9.81	77	Pn	Pn	23 09 15.9	+0.1
ANTO	Ankara	9.83	77	P	Pn	23 09 19.4	+3.5
ANTO	Ankara	9.83	77	Pn	Pn	23 09 14.8	-1.1
PRMA	PARMA	9.95	314		Pn	23 09 17.9	+0.5
BUR08	Bucovina Ar. S	10.06	19	Pn	Pn	23 09 19.8	+0.7
CTI	Castel Tesino	10.13	323	P	Pn	23 09 19.9	-0.1
CTI	Castel Tesino	10.13	323		Pn	23 09 19.9	-0.1
MSSA	Maissana	10.16	310	Pn	Pn	23 09 20.6	+0.9
KBA	Koelnbreinsper	10.23	332	P	Pn	23 09 22.3	+0.9
KBA	Koelnbreinsper	10.23	332	*e*Pn	Pn	23 09 22.1	+0.7
KBA				*e*Sn	Sn	23 11 11.2	-4.9
KBA	Koelnbreinsper	10.23	332	*e*Pn	Pn	23 09 22.3	+0.9
	comp=E,3.6nm,0.4s,SNR=10						
KBA				Sn	Sn	23 11 11.0	-5.0
	comp=E,9.0nm,0.4s						
CONA	Conrad Observa	10.23	343	*e*Pn	Pn	23 09 24.1	+2.7
	comp=E,1.3nm,0.4s						
ABTA	Abfaltersbach	10.29	328	*e*Pn	Pn	23 09 22.2	+0.1
	comp=E,6.4nm,0.5s						
VYHS	Vyhne	10.32	354	*e*P	Pn	23 09 22.6	+0.1
VYHS				*e*		23 11 12.4	
MODS	Modra-Piesok	10.38	349	*e*P	Pn	23 09 29.3	+5.9
MODS				*e*		23 11 13.3	
SALO	Salr	10.39	318		Pn	23 09 24.1	+0.7
BR131	Keskin Array S	10.47	78	P	Pn	23 09 25.8	+1.1
BR131	Keskin Array S	10.47	78		Pn	23 09 25.8	+1.1
BRTR	Keskin Array B	10.47	78	P	Pn	23 09 27.0	+2.3
BRTR	Keskin Array B	10.47	78	Pn	Pn	23 09 27.9	+3.1
	comp=E,0.3nm,0.3s,baz=258,slow=13,SNR=16						
BRTR				LR	LR	23 14 23.8	
	comp=E,155nm,18.2s,baz=254,slow=43						
BRTR	Keskin Array B	10.47	78		Pn	23 09 27.0	+2.3
MOA	Molln	10.59	337	*e*Pn	Pn	23 09 27.1	+0.9
MOA				*e*Sn	Sn	23 11 19.9	-4.8
MOA	Molln	10.59	337	*e*Pn	Pn	23 09 27.1	+0.9
	comp=E,3.3nm,0.2s,SNR=21						
MOA				Sn	Sn	23 11 18.5	-6.2
	comp=E,7.7nm,0.4s						
CSS	Mathiatis	10.94	103	Pn	Pn	23 09 30.6	-0.5
RJOB	Jochberg	10.99	332	*e*Pn	Pn	23 09 33.4	+1.7
RJOB				*e*Sn	Sn	23 11 29.9	-4.5
WTTA	Wattenberg	11.06	328	*e*Pn	Pn	23 09 34.4	+1.6
WTTA				*e*Sn	Sn	23 11 32.5	-3.9
WTTA	Wattenberg	11.06	328	*e*Pn	Pn	23 09 34.3	+1.6
	comp=E,7.6nm,0.3s,SNR=15						
WATA	Walderalm	11.14	328	*e*Pn	Pn	23 09 35.4	+1.6
	comp=E,7.8nm,0.4s,SNR=17						
FUORN	Ofenpass-Fuorn	11.21	322		Pn	23 09 36.5	+1.6
SQTA	Sankt Quirin	11.21	326	Pn	Pn	23 09 36.7	+1.9
	comp=E,3.7nm,0.3s,SNR=6.1						
FETA	Feichten	11.28	324	Pn	Pn	23 09 37.7	+2.0
	comp=E,2.4nm,0.3s						
MOTA	Moosalm	11.35	326	*e*Pn	Pn	23 09 38.5	+1.8
	comp=E,9.5nm,0.5s,SNR=7.1						
VRAC	Vranov	11.40	348	Sn	Sn	23 11 33.1	-11
	comp=E,0.3nm,0.3s,baz=168,slow=9.3,SNR=2.4						
PART	Garmisch-Parte	11.46	327	*e*Pn	Pn	23 09 40.6	+2.4
PART				*e*Sn	Sn	23 11 44.1	-2.0
DAVOX	Davos/Dischmat	11.51	321	Pn	Pn	23 09 39.9	+1.0
	comp=E,1.1nm,0.3s,baz=113,slow=17,SNR=17						
DAVOX				Sn	Sn	23 11 35.6	-12
	comp=E,0.9nm,0.3s,baz=144,slow=18,SNR=3.4						
RETA	Reutte	11.61	326	*e*Pn	Pn	23 09 43.1	+2.9
	comp=E,2.0nm,0.3s						
GEC2	GERESS Array S	11.65	338	*e*Pn	Pn	23 09 40.7	-0.1
GEC2	GERESS Array S	11.65	338		Pn	23 09 41.1	+0.3
GERES	GERESS Array B	11.65	338	Pn	Pn	23 09 39.9	-0.9
	comp=E,1.3nm,0.3s,baz=159,slow=13,SNR=27						
GERES				Sn	Sn	23 11 40.6	-10
	comp=E,0.6nm,0.3s,baz=160,slow=15,SNR=4.0						
MORC	Moravsky Berou	11.72	351	P	Pn	23 09 42.7	+1.0
MORC	Moravsky Berou	11.72	351	Pn	Pn	23 09 42.7	+1.0
DAVA	Damuels	11.87	323	*e*Pn	Pn	23 09 44.5	+0.7
DAVA				*e*Sn	Sn	23 11 50.5	-5.5
DAVA	Damuels	11.87	323	*e*Pn	Pn	23 09 45.8	+2.0
	comp=E,2.8nm,0.3s						
KHC	Kasperske Hory	11.94	338	*e*P	Pn	23 09 44.8	+0.1
KHC				*e*		23 11 51.4	
KHC	Kasperske Hory	11.94	338	*e*PN	Pn	23 09 44.8	+0.1
KHC				*e*SN	Sn	23 11 51.4	-6.4
KHC	Kasperske Hory	11.94	338		Pn	23 09 45.4	+0.6
WET	Wettzell	12.17	336	*e*Pn	Pn	23 09 48.4	+0.6
BNI	Bardonecchia	12.28	308	P	Pn	23 09 50.7	+1.3
BNI	Bardonecchia	12.28	308	Pn	Pn	23 09 50.6	+1.3
PRU	Pruhonice	12.47	342	*e*P	Pn	23 09 52.0	+0.1
PRU	Pruhonice	12.47	342	*e*PN	Pn	23 09 52.0	+0.1
SENIN	Lac Senin/Sane	12.61	314		Pn	23 09 55.2	+1.2
ROTZ	Rotzenmuhle	12.93	336	*e*Pn	Pn	23 09 57.9	-0.3
MMAI	Mount Meron Ar	13.31	108	Pn	Pn	23 09 59.5	-4.0
	comp=E,0.9nm,0.3s,baz=295,slow=11,SNR=9.9						
MMAI				Sn	Sn	23 12 22.1	-9.4
	comp=E,1.0nm,0.3s,baz=308,slow=31,SNR=5.5						
BFO	Black Forest	13.34	323	P	Pn	23 10 04.7	+0.9
BFO	Black Forest	13.34	323	Pn	Pn	23 10 04.7	+0.9
ECH	Echery	13.84	320	P	Pn	23 10 11.3	+0.7
ECH	Echery	13.84	320	Pn	Pn	23 10 11.3	+0.7
MOX	Moxa	13.88	336	*e*Pn	Pn	23 10 13.2	+2.1
CLL	Collm	14.07	341	*e*P	Pn	23 10 17.0	+3.3
EIL	Elat	14.82	121	Pn	Pn	23 10 22.9	-1.2
	comp=E,0.3nm,0.3s,baz=341,slow=4.3,SNR=8.7						
EIL				Sn	Sn	23 12 56.6	-11
	comp=E,0.8nm,0.3s,baz=225,slow=19,SNR=5.6						
SUW	Suwalki	15.91	6	P	Pn	23 10 39.6	+1.3
SUW				pmax	pmax		
	comp=Z,50nm,1.1s						
SUW	Suwalki	15.91	6		Pn	23 10 39.6	+1.3
SUW				IAmb	IAmb	23 10 42.7	
	comp=Z,50nm,1.1s						
KIV	Kislovodsk	17.77	64	*e*P	P	23 11 03.5	+0.8
KIV				pmax	pmax		
	comp=Z,71nm,1.1s						
KIV	Kislovodsk	17.77	64	P	P	23 11 03.3	+0.6
KIV				IAmb	IAmb	23 11 08.9	
	comp=Z,20nm,1.0s						
KBZ	Khabaz	17.88	65	P	Pn	23 11 02.7	-0.4
	comp=Z,0.3nm,0.3s,baz=276,slow=9.1,SNR=14						
AKH	Akhalkalaki	18.06	73	P	P	23 11 07.1	+1.1
AKH				pmax	pmax		
	comp=Z,12nm,0.9s						
AKH	Akhalkalaki	18.06	73	P	P	23 11 07.1	+1.1
ZEI	Tsey	18.47	68	*e*P	Pn	23 11 11.3	+0.7
ZEI				pmax	pmax		
	comp=Z,11nm,0.6s						
VORD	Divnogorie	18.49	40	*e*P	Pn	23 11 10.9	+0.3
VORD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VSR	Storozhevoye	18.58	40	*e*P	P	23 11 11.4	0.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ESDC	Sonseca Array	18.94	282	P	Pn	23 11 16.8	+0.5
	comp=Z,0.2nm,0.3s,baz=79,slow=11,SNR=9.9						
ESDC				LR	LR	23 19 23.5	
	comp=Z,221nm,18.3s,baz=335,slow=40						
GNI	Garni	19.00	77	P	Pn	23 11 17.1	0.0
GNI				pmax	pmax		
	comp=Z,37nm,0.9s						
GNI	Garni	19.00	77	P	P	23 11 15.8	-0.6
	comp=Z,1.3nm,0.3s,baz=324,slow=4.6,SNR=21						
GNI	Garni	19.00	77	P	Pn	23 11 17.1	0.0
TBLG	Delisi	19.01	72	P	P	23 11 16.6	+0.4
TBLG				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TBLG	Delisi	19.01	72	P	P	23 11 16.6	+0.4
TBLG				IAmb	IAmb	23 11 20.0	
	comp=Z,10nm,0.7s						
LPSR	Galich'ya Gora	19.33	36	*e*P	P	23 11 19.6	-0.1
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
NAX	Nakhchivan	19.65	79	P	Pn	23 11 24.6	-0.1
VRH	Novokhopyorsk	19.89	42	*e*P	P	23 11 24.9	-0.8
VRH				pmax	pmax		
	comp=Z,20nm,1.4s						
GROC	Groznyy	19.90	67	*e*P	P	23 11 25.7	-0.2
GROC				*e*S	Sn	23 15 14.3	+3.3
GROC				pmax	pmax		
	comp=Z,24nm,0.7s						
OBN	Obninsk	20.15	28‖	*e*P	Pn	23 11 32.0	+1.6
OBN				*e*		23 11 34.0	
OBN				pmax	pmax		
	comp=Z,14nm,0.8s						
OBN	Obninsk	20.15	28	P	P	23 11 28.7	+0.2
	comp=Z,2.4nm,0.5s,baz=83,slow=7.5,SNR=2.7						
OBN	Obninsk	20.15	28	IAmb	IAmb	23 11 43.9	
	comp=Z,13nm,0.9s						
GANJ	Ganja	20.20	75	P	Pn	23 11 30.2	-1.0
ZKTA	Zakatala	20.42	72	P	P	23 11 32.3	+0.7
VSU	Vasula	20.68	10	*ce*P	P	23 11 35.1	+0.9
VSU				pmax	pmax		
	comp=Z,123nm,0.8s						
MNGR	Mingechevir, A	20.77	75	P	P	23 11 36.2	+0.8
SEKA	Sheki	20.85	73	P	Pn	23 11 37.9	-0.9
MDT	Midelt	20.98	263	P	Pn	23 11 39.9	-0.6
	comp=Z,3.2nm,0.8s,baz=58,slow=19,SNR=6.1						
MOS	Moscow	21.02	28	*e*P	P	23 11 36.5	-1.4
MVO	Moncorvo	21.23	287	*e*P	P	23 11 43.2	+2.8
PMRV	Marv??o	21.61	282	*e*P	P	23 11 46.5	+2.0
PCBR	Castelo Branco	21.64	283	*e*P	P	23 11 47.9	+3.2
	comp=Z,37nm,1.9s						
PVAQ	Vaqueiros	22.15	277	*e*P	P	23 11 50.7	+0.4
PBEJ	Beja	22.16	278	*e*P	P	23 11 50.3	-0.1
	comp=Z,34nm,1.8s						
LKRN	Lenkeran, Azer	22.24	80	P	P	23 11 52.2	+0.9
PMTG	Montargil	22.29	281	*e*P	P	23 11 50.7	-1.1
	comp=Z,40nm,1.6s						
HFS	Hagfors	22.33	351	P	P	23 11 51.8	-0.2
	comp=Z,4.1nm,0.5s,baz=156,slow=11,SNR=18						
PCVE	Castro Verde	22.36	277	*e*P	P	23 11 54.1	+1.6
PTOM	Tomar	22.37	283	*e*P	P	23 11 54.4	+1.8
PUL	Pulkovo	22.49	13	*ce*P	P	23 11 54.4	+0.7
PUL				pmax	pmax		
	comp=Z,51nm,0.7s						
KONO	Kongsberg	22.52	346	*ce*P	P	23 11 59.8	+5.8
KONO				pmax	pmax		
	comp=Z,46nm,1.7s						
PNCL	Nicolau / Gran	22.66	279	*e*P	P	23 11 58.5	+2.8
EKA	Eskdalemuir Ar	23.30	325	P	P	23 12 02.2	0.0
	comp=Z,6.6nm,0.9s,baz=114,slow=10,SNR=5.8						
FINES	FINESS Array B	23.52	7	P	P	23 12 02.7	-1.6
	comp=Z,3.0nm,0.5s,baz=170,slow=9.8,SNR=18						
FINES				PcP	PcP		
	comp=Z,2.9nm,0.9s,baz=191,slow=2.1,SNR=3.8						
NB2	NORSAR Subarra	23.54	349	P	P	23 12 04.5	-0.1
	comp=Z,17nm,1.7s,baz=159,slow=9.3						
NOA	NORSAR Array B	23.54	349	P	P	23 12 04.2	-0.4
	comp=Z,3.0nm,0.9s,baz=161,slow=9.0,SNR=11						
KLMR	Klimovskoe	25.65	22	*e*P	P	23 12 23.5	-0.4
KLMR				pmax	pmax		
	comp=Z,31nm,1.3s						
KLMR	Klimovskoe	25.65	22	*e*	P	23 12 23.6	-0.4
KLMR				AMP		23 12 28.8	
	comp=Z,31nm,1.3s						
RAYN	Ar Rayn	26.00	117	P	P	23 12 28.1	+0.6
RAYN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
RAYN	Ar Rayn	26.00	117	P	P	23 12 28.1	+0.6
KIRV	Kirov	27.70	33	P	P	23 12 41.0	-1.4
KIRV	Kirov	27.70	33	P	P	23 12 41.0	-1.4
	comp=Z,6.4nm,0.7s,baz=195,slow=12,SNR=3.5						
AKTO	Aktyubinsk	29.27	53	P	P	23 12 55.1	-1.4
	comp=Z,1.3nm,0.5s,baz=263,slow=7.0,SNR=6.9						
GEYT	Alibeck	29.61	79	P	P	23 12 58.4	-1.3
	comp=Z,3.7nm,0.6s,baz=268,slow=8.9,SNR=11						
GEYT	Alibeck	29.61	79	IAmb	IAmb	23 13 01.4	
	comp=Z,2.4nm,0.6s						
GYA0B	ALIBECK ARRAY	29.61	79	P	P	23 12 59.3	-0.4
GYA0B				IAmb	IAmb	23 13 01.4	
	comp=Z,5.2nm,0.7s						
TORD	Torodi Ar. Bea	29.98	219	P	P	23 13 04.1	+1.0
	comp=Z,2.0nm,0.7s,baz=26,slow=9.2,SNR=12						
ABKAR	Akbulak array	30.34	56	P	P	23 13 04.4	-1.6
ABKAR	Akbulak array	30.34	56	P	P	23 13 05.5	-0.4
ABKAR				IAmb	IAmb	23 13 07.6	
	comp=Z,1.2nm,0.7s						
ARU	Arti	31.12	42	P	P	23 13 11.8	-1.0
	comp=Z,0.7nm,0.4s,baz=246,slow=10.0,SNR=5.1						
ARU	Arti	31.12	42	IAmb	IAmb	23 13 12.2	
	comp=Z,3.2nm,0.7s						
ARCES	ARCESS Array B	31.49	3	P	P	23 13 15.2	-0.7
	comp=Z,1.3nm,0.6s,baz=194,slow=9.6,SNR=6.6						
ARCES				PcP	PcP	23 16 08.4	-0.1
	comp=Z,2.3nm,0.8s,baz=180,slow=0.6,SNR=6.3						
SVE	Sverdlovsk	32.34	42	*e*P	P	23 13 22.6	-0.9
UOSS	Minazif	33.09	103	P	P	23 13 29.6	-0.8
UOSS				IAmb	IAmb	23 13 37.4	
	comp=Z,4.2nm,0.8s						
BRVK	Borovoye	37.14	50	P	P	23 14 05.2	+0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRVK	Borovoye	37.14	50	P	P	23 14 05.2	+0.2
BVAR	Borovoye Array	37.20	50	P	P	23 14 05.1	-0.4
	comp=Z,1.7nm,0.7s,baz=270,slow=9.3,SNR=13						
KKAR	Karatay Array	37.91	66	P	P	23 14 12.6	+0.9
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KKAR	Karatay Array	37.91	66	P	P	23 14 12.6	+0.9
BTK	Batken	38.77	71	P	P	23 14 19.3	+0.2
BTK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BTK	Batken	38.77	71	P	P	23 14 19.3	+0.2
BTK				IAmb	IAmb	23 14 23.4	
	comp=Z,4.2nm,0.7s						
DBIC	Dimbokro	38.83	222	P	P	23 14 20.0	+0.4
DBIC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DBIC	Dimbokro	38.83	222	P	P	23 14 20.1	+0.5
	comp=Z,1.9nm,0.7s,baz=16,slow=12,SNR=5.1						
DBIC	Dimbokro	38.83	222	P	P	23 14 20.0	+0.4
DBIC				IAmb	IAmb	23 14 28.0	
	comp=Z,5.3nm,1.1s						
TIC	Toumodi	38.94	223	*e*P	P	23 14 24.2	+3.6
KIC	Kosan Boka	39.03	222	*e*P	P	23 14 22.3	+1.0
	comp=Z,7.2nm,0.8s						
KBL	Kabul	39.03	80	P	P	23 14 21.2	-0.3
KBL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KBL	Kabul	39.03	80	P	P	23 14 21.2	-0.3
LIC	Lamto	39.29	222	*e*P	P	23 14 24.6	+1.1
	comp=Z,12nm,0.5s						
SOCY	Socotra	39.62	122	P	P	23 14 23.0	-3.4
AAK	Ala-Archa	40.87	66	P	P	23 14 37.3	+0.7
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
AAK	Ala-Archa	40.87	66	P	P	23 14 37.3	+0.7
BOOM	Boomskoye usch	41.95	66	IAmb	IAmb	23 14 47.1	
	comp=Z,2.6nm,0.7s						
KURBB	Kurchatov Arra	42.32	54	P	P	23 14 47.2	-1.0
	comp=Z,2.5nm,0.7s,baz=279,slow=8.8,SNR=11						
KURK	Kurchatov	42.37	53	*ce*P	P	23 14 48.4	-0.1
KURK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KURK	Kurchatov	42.37	53	P	P	23 14 48.0	-0.5
KURK				IAmb	IAmb	23 14 48.7	
	comp=Z,5.6nm,1.1s						
NIL	Nilore	42.61	79	P	P	23 14 50.9	+0.1
NIL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NIL	Nilore	42.61	79	P	P	23 14 50.9	+0.1
NIL				IAmb	IAmb	23 14 51.6	
	comp=Z,5.2nm,0.7s						
KSH	Kashi	42.75	70	P	P	23 14 51.5	-0.4
KSH				pP	sP	23 14 57.3	-0.3
KSH				pmax	pmax		
	comp=Z,500nm,6.1s						
KDJ	Kajisay	42.93	66	P	P	23 14 53.6	+0.2
KDJ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KDJ	Kajisay	42.93	66	P	P	23 14 53.6	+0.2
KDJ				IAmb	IAmb	23 14 55.0	
	comp=Z,4.1nm,1.0s						
PRZ	Przheval'sk	43.71	65	P	P	23 14 59.4	-0.4
PRZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PRZ	Przheval'sk	43.71	65	P	P	23 14 59.4	-0.4
PRZ				IAmb	IAmb	23 15 08.8	
	comp=Z,2.8nm,0.8s						
MAKZ	Makanchi	45.19	58	P	P	23 15 11.0	-0.3
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAKZ	Makanchi	45.19	58	P	P	23 15 11.0	-0.3
MAKZ				IAmb	IAmb	23 15 14.4	
	comp=Z,2.7nm,0.8s						
MK31	Makanchi Array	45.40	58	IAmb	IAmb	23 15 15.3	
	comp=Z,3.9nm,0.5s						
MKAR	Makanchi Array	45.40	58	*ce*P	P	23 15 12.1	-0.9
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MKAR	Makanchi Array	45.40	58	P	P	23 15 12.2	-0.8
	comp=Z,5.8nm,0.4s,baz=275,slow=7.4,SNR=83						
MKAR				PcP	PcP	23 16 52.3	+0.2
	comp=Z,0.6nm,0.5s,baz=275,slow=3.6,SNR=2.3						
ZALV	Zalesovo Beam	45.77	48	P	P	23 15 15.2	-0.6
	comp=Z,1.1nm,0.6s,baz=275,slow=6.6,SNR=56						
ZALV				PP	PP	23 17 00.4	-2.4
	comp=Z,1.5nm,0.7s,baz=280,slow=8.6,SNR=2.6						
WMQ	Urumqi	49.86	61	*e*P	P	23 15 51.8	+4.0
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,23nm,4.5s						
DANN	Dangsing	53.01	81	*e*P	P	23 16 11.8	0.0
	comp=Z,15nm,0.6s						
KOLN	Koldanda	53.16	81	*e*P	P	23 16 12.2	-0.6
	comp=Z,11nm,0.7s						
GKN	Gorkha	53.86	81	*e*P	P	23 16 17.1	-0.8
	comp=Z,13nm,0.7s						
JIRN	Jiri	55.23	80	*e*P	P	23 16 27.7	-0.4
	comp=Z,9.0nm,0.6s						
RAMN	Ramite	55.89	81	*e*P	P	23 16 31.4	-1.3
	comp=Z,12nm,0.7s						
FRB	Frobisher Bay	56.03	328	P	P	23 16 32.8	0.0
	comp=Z,1.3nm,0.5s,baz=73,slow=10.0,SNR=4.9						
TAPN	Taplejung	56.56	80	*e*P	P	23 16 36.9	-0.7
	comp=Z,10nm,0.8s						
SCHQ	Schefferville	58.33	317	P	P	23 16 50.4	+1.1
	comp=Z,2.9nm,0.7s,baz=109,slow=1.1,SNR=5.2						
SCHQ	Schefferville	58.33	317	P	P	23 16 50.0	+0.7
GTA	Gaotai	59.93	62	*e*P	P	23 17 00.3	-0.5
GTA				pP	pP	23 17 04.3	-0.7
GTA				sP	sP	23 17 07.3	+0.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	Songino Array	60.54	51	P	P	23 17 04.5	-0.3
	comp=Z,2.5nm,0.9s,baz=281,slow=8.1,SNR=16						
SONM				LR	LR	23 44 22.3	
	comp=Z,83nm,18.9s,baz=334,slow=37						
SONM	Songino Array	60.54	51	IAmb	IAmb	23 17 05.7	
	comp=Z,3.7nm,1.2s						
ULN	Ulaanbaatar	60.93	50	*ce*P	P	23 17 07.5	0.0
ULN				pmax	pmax		
	comp=Z,11nm,2.5s						
LZH	Lanzhou	64.31	63	*e*P	P	23 17 30.5	+0.2
LZH				pP	pP	23 17 33.9	-0.7
LZH				sP	sP	23 17 35.3	-0.8
LZH				*e*PP	PP	23 19 53.5	+2.1
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,79nm,6.7s						
HHC	Hu-ho-hao-te	67.13	55	*e*P	P	23 17 49.3	+1.0
HHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,62nm,3.8s						
XAN	Xi'an	68.93	63	P	P	23 17 59.8	+0.1
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CMAR	Chiang Mai Arr	70.03	82	P	P	23 18 06.2	-0.5
	comp=Z,1.6nm,0.6s,baz=306,slow=7.0,SNR=12						
SADO	Sadowa	70.12	312	P	P	23 18 07.8	+1.1
	comp=Z,6.8nm,1.0s,baz=270,slow=19,SNR=2.7						
BILL	Bilibino	71.00	13‖	*e*P	P	23 18 12.1	+0.3
BILL				*e*		23 18 18.1	
BILL						23 18 34.0	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,99nm,16.0s						
SEY	Seymchan	72.14	21	P	P	23 18 19.4	+0.8
	comp=Z,0.5nm,0.4s,baz=285,slow=9.8,SNR=3.9						
YKA	Yellowknife Ar	73.30	340	P	P	23 18 26.1	+0.5
	comp=Z,0.5nm,0.6s,baz=35,slow=5.2,SNR=9.8						
CN2	Changchun	73.96	47	*e*P	P	23 18 21.3	-8.5
WHN	Wuhan	74.69	63	P	P	23 18 27.3	-7.0
ILAR	Eielson Array	76.85	354	P	P	23 18 46.8	+0.7
	comp=Z,0.6nm,0.7s,baz=356,slow=5.2,SNR=7.6						
USRK	Ussuriysk Ar.	77.35	43	P	P	23 18 49.0	-0.1
	comp=Z,2.0nm,0.6s,baz=275,slow=5.0,SNR=5.4						
KSRS	Korea Array	79.41	51	P	P	23 19 00.1	-0.6
	comp=Z,0.9nm,0.4s,baz=298,slow=5.4,SNR=4.9						
YSS	Yuzh-Sakhalins	80.81	36	*e*P	P	23 19 08.7	+0.6
YSS				*e*		23 19 11.6	
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YNE	Yellowstone No	85.84	327	P	P	23 19 34.0	-0.3
PDAR	Pinedale Array	87.43	326	P	P	23 19 41.6	-0.6
	comp=Z,0.3nm,0.6s,baz=35,slow=3.3,SNR=2.5						
RDMU	Red Mountain	89.18	324	P	P	23 19 51.9	+1.3
TXAR	Lajitas Array	94.83	313	P	P	23 20 15.7	-1.0
	comp=Z,0.4nm,0.7s,baz=48,slow=1.9,SNR=3.6						
LPAZ	La Paz	98.71	256	LR	LR	00 05 33.4	
	comp=Z,42nm,19.7s,baz=28,slow=36						
WRA	Warramunga Arr	120.69	92	PKP	PKPdf	23 25 46.6

h7km±1km, **ML0.5/1, Error ellipse: s-maj=0.5km s-min=0.2km az=41.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.04**	**288**	P	Pg	00 10 00.2	+0.1
ATPI				S	Sg	00 10 01.4	0.0
ATVO	**AVT- Monte Val**	**0.07**	**213**	P	Pg	00 10 00.7	+0.2
ATVO				S	Sg	00 10 02.2	+0.4
ATFO	**Monte Foce - G**	**0.11**	**130**	P	Pg	00 10 01.4	+0.2
ATFO				S	Sg	00 10 03.7	+0.9
PIEI	**Pieia**	**0.11**	**30**	P	Pg	00 10 01.5	+0.3
PIEI				S	Sg	00 10 04.0	+1.0
PIEI				AML	AML		
	comp=E,46μm,0.1s						
PIEI				AML	AML		
	comp=N,40μm,0.6s						
BADI	**Badiali**	**0.17**	**295**	P	Pg	00 10 02.7	+0.6
BADI				S	Sg	00 10 05.9	+1.4
MURB	**Monte Urbino**	**0.18**	**164**	P	Pg	00 10 02.9	+0.6
NARO	**Abbazia di Nar**	**0.20**	**28**	P	Pg	00 10 02.8	+0.2

PRU ***27*** *00:12:25.1±0.0, 41.74N×19.89E, h0km*
TIR ***27*** *00:12:26.9, 42.48N×19.79E, h20km, Md3.3/4*
BEO ***27*** *00:12:28.1±0.5, 42.17N×18.92E, h0km, ML2.9/15*
PDG ***27*** *00:12:29.5±0.2, 42.34N×18.90E, h9km±1km, MD3.1/7, ML3.0/12, Error ellipse: s-maj=0.2km s-min=0.7km az=0.0*
RHSSO ***27*** *00:12:30.3±0.3, 42.33N×18.94E, h5km±1km, ML3.1/14*
SKO ***27*** *00:12:31.9, 42.45N×18.97E, h0km*

ISC 27 00:12:30.0±1.0, 42.35N±0.02×18.90E±0.02, h1km±9km, **n111, σ1s45/164, 19C-13D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUM	**Brajici-Budva**	**0.05**	**186**	⇑*i* Pg	**Pg**	**00 12 30.9**	**-0.1**
BUM				*i* Sg	**Sg**	**00 12 32.0**	**+0.4**
CEME	**Cevo**	**0.20**	**4**	*e* Pg	**Pg**	**00 12 33.9**	**+0.1**
CEME				*e* Sg	**Sg**	**00 12 36.9**	**+0.5**
DRME	**Dracevica, Mon**	**0.27**	**128**	⇓*i* Pg	**Pg**	**00 12 34.6**	**-0.5**
DRME				*e* Sg	**Sg**	**00 12 39.2**	**+0.7**
DRME	**Dracevica, Mon**	**0.27**	**128**	*e* Pg	**Pg**	**00 12 34.7**	**-0.4**
DRME				*e* Sg	**Sg**	**00 12 38.9**	**+0.4**
PDG	**Podgorica**	**0.27**	**73**	*e* Pg	**Pg**	**00 12 35.0**	**-0.2**
PDG				*e* Sg	**Sg**	**00 12 38.7**	**-0.1**
PDG	**Podgorica**	**0.27**	**73**	⇑P	**Pg**	**00 12 35.0**	**-0.2**
PDG				⇑S	**Sg**	**00 12 38.9**	**+0.1**
PDG	**Podgorica**	**0.27**	**73**	⇓*i* Pg	**Pg**	**00 12 34.8**	**-0.4**
PDG				*e* Sg	**Sg**	**00 12 39.0**	**+0.3**
TTG	**Podgorica**	**0.27**	**73**	*e* Pg	**Pg**	**00 12 34.8**	**-0.4**
TTG				*e* Sg	**Sg**	**00 12 39.1**	**+0.3**
HCY	**Herceg Novi**	**0.32**	**288**	⇓*i* Pg	**Pg**	**00 12 36.4**	**+0.4**
HCY				*e* Sg	**Sb**	**00 12 42.2**	**-1.8**
NKME	**Niksic**	**0.42**	**5**	*e* Pg	**Pg**	**00 12 37.6**	**-0.4**
NKME				*e* Sg	**Sg**	**00 12 44.2**	**+0.8**
ULC	**Ulcinj**	**0.46**	**146**	*e* Pg	**Pg**	**00 12 38.4**	**-0.4**
ULC				*e* Sg	**Sg**	**00 12 45.4**	**+0.6**
NKY	**Niksic**	**0.47**	**8**	*e* Pg	**Pg**	**00 12 38.3**	**-0.6**
NKY				*e* Sg	**Sg**	**00 12 45.9**	**+0.9**
TREB	**Trebinje**	**0.55**	**312**	*e* Pg	**Pg**	**00 12 40.5**	**0.0**
TREB				*e* Sg	**Sb**	**00 12 51.0**	**+0.3**
TREB	**Trebinje**	**0.55**	**312**	*e* Pg	**Pg**	**00 12 40.5**	**0.0**
TREB				*e* Sg	**Sb**	**00 12 50.0**	**-0.7**
DBRK	**Dubrovnik**	**0.64**	**300**	*e* Pg	**Pg**	**00 12 42.3**	**0.0**
DBRK				Sg	**Sb**	**00 12 53.8**	**+0.4**
KOME	**Kolasin**	**0.68**	**42**	*e* Pg	**Pg**	**00 12 42.0**	**-0.9**
KOME				*i* Sg	**Sb**	**00 12 53.1**	**-1.4**
PUK	**Puka**	**0.80**	**112**	*i* PG	**Pg**	**00 12 45.4**	**+0.1**
PUK				*i* SG	**Sn**	**00 12 58.6**	**-2.4**
PVY	**Plav**	**0.82**	**72**	*e* Pg	**Pg**	**00 12 45.1**	**-0.6**
PVY				*e* Sg	**Sb**	**00 12 57.5**	**-1.1**
UPM	**Unac-Piva**	**0.85**	**0**	*e* Pg	**Pg**	**00 12 45.6**	**-0.8**
UPM				*e* Sg	**Sb**	**00 12 59.0**	**-0.7**
UPM	**Unac-Piva**	**0.85**	**0**	*e* Pg	**Pg**	**00 12 45.5**	**-0.8**
UPM				*e* Sg	**Sb**	**00 12 59.2**	**-0.5**
BCI	**Bajram Curri**	**0.86**	**89**	*i* PG	**Pg**	**00 12 45.4**	**-1.2**
BCI				*i* SG	**Sb**	**00 12 59.0**	**-0.9**
IVA	**Berane**	**0.90**	**54**	*e* Pg	**Pg**	**00 12 46.5**	**-0.7**
IVA				*e* Sg	**Sb**	**00 13 00.4**	**-0.5**
STON	**Ston**	**1.03**	**301**	*e* Pg	**Pg**	**00 12 48.6**	**-1.1**
STON				Sg	**Sn**	**00 13 04.9**	**-1.6**
STON	**Ston**	**1.03**	**301**	*e* Pg	**Pg**	**00 12 48.8**	**-0.9**
STON				*e* Sg	**Sn**	**00 13 04.6**	**-1.9**
PLE	**Pljevlja**	**1.04**	**20**	*e* Pg	**Pg**	**00 12 48.9**	**-1.1**
PLE				*e* Sg	**Sn**	**00 13 05.3**	**-1.8**
SJES	**Sjenica**	**1.21**	**41**	*e* Pg	**Pb**	**00 12 52.9**	**-0.7**
SJES				*e* Sg	**Sn**	**00 13 12.2**	**+1.2**
TIR	**Tirane**	**1.23**	**144**	*i* PN	**Pn**	**00 12 52.8**	**-1.5**
TIR				*i* SN	**Sn**	**00 13 12.8**	**+1.2**
TIR	**Tirane**	**1.23**	**144**	⇓P	**Pg**	**00 12 54.7**	**+1.1**
TIR	**Tirane**	**1.23**	**144**	⇑S	**Sn**	**00 13 13.3**	**+1.7**
RUDO	**Rudo**	**1.31**	**15**	⇓*i* Pg	**Pn**	**00 12 53.9**	**-1.5**
PHP	**Peshkopia**	**1.33**	**120**	*i* PN	**Pn**	**00 12 54.5**	**-1.2**
PHP				*i* SN	**Sg**	**00 13 14.9**	**+2.3**
IVAS	**Ivanjica**	**1.53**	**36**	*e* Pg	**Pn**	**00 12 57.7**	**-0.8**
IVAS				*e* Sg	**Sg**	**00 13 22.0**	**+2.8**
BBLS	**Lazići**	**1.56**	**14**	*e* Pg	**Pb**	**00 12 59.6**	**0.0**
BBLS				*e* Sg	**Sg**	**00 13 21.9**	**+1.8**
BBLS	**Lazići**	**1.56**	**14**	*e* Pn	**Pb**	**00 12 59.3**	**-0.3**
BBLS				*e* Sn	**Sg**	**00 13 20.6**	**+0.5**
MAKA	**Makarska**	**1.67**	**305**	*i* Pn	**Pb**	**00 13 00.8**	**-0.7**
MAKA				Sn	**Sg**	**00 13 25.2**	**+1.5**
HAPS	**Han Pijesak,BI**	**1.73**	**1**	*e* Pn	**Pn**	**00 13 01.2**	**-0.1**
HAPS				*e* Sg	**Sg**	**00 13 28.1**	**+2.4**
HAPS	**Han Pijesak,BI**	**1.73**	**1**	*e* Pn	**Pn**	**00 13 01.0**	**-0.3**
HAPS				*e* Sn	**Sb**	**00 13 24.3**	**-0.7**
SELS	**Selova**	**1.85**	**61**	*e* Pg	**Pb**	**00 13 03.4**	**-1.2**
SELS				*e* Sg	**Sg**	**00 13 30.5**	**+1.1**
OHR	**Ohrid**	**1.88**	**130**	*i* Pn	**Pb**	**00 13 05.3**	**+0.1**
OHR				*i* Sg	**Sg**	**00 13 32.7**	**+2.2**
DIVS	**Divibare**	**1.92**	**24**	*e* Pg	**Pb**	**00 13 05.9**	**+0.1**
DIVS				*e* Sg	**Sg**	**00 13 34.4**	**+2.7**
DIVS	**Divibare**	**1.92**	**24**	⇓*i* Pn	**Pb**	**00 13 04.3**	**-1.5**
DIVS				*e* Sn	**Sb**	**00 13 28.8**	**-1.5**
SKO	**Skopje**	**1.93**	**100**	*i* Pn	**Pb**	**00 13 05.9**	**+0.1**
GRUS	**Gruza**	**2.03**	**40**	*e* Pn	**Pb**	**00 13 05.8**	**-1.8**
TRUS	**Trudelj**	**2.17**	**30**	*e* Pg	**Pb**	**00 13 08.7**	**-1.3**
BARS	**Barje**	**2.20**	**77**	*e* Pn	**Pn**	**00 13 05.7**	**-1.9**
BARS	**Barje**	**2.20**	**77**	*e* Pn	**Pg**	**00 13 16.5**	**+4.3**
BARS				*e* Sg	**Sg**	**00 13 40.5**	**-0.2**
TEKS	**Tekeris**	**2.25**	**12**	*e* Pn	**Pb**	**00 13 09.2**	**-2.1**
TEKS				*e* Sg	**Sg**	**00 13 44.5**	**+2.4**
TEKS	**Tekeris**	**2.25**	**12**	*e* Pn	**Pn**	**00 13 08.9**	**+0.7**
MATE	**Matera**	**2.37**	**225**	⇓P	**Pb**	**00 13 12.6**	**-0.7**
BOVS	**Bovan**	**2.42**	**57**	*e* Pn	**Pn**	**00 13 10.8**	**+0.1**
BOVS	**Bovan**	**2.42**	**57**	*e* Pg	**Pb**	**00 13 12.1**	**-2.2**
BOVS				*e* Sg	**Sg**	**00 13 47.8**	**-0.1**
DOB	**Doboj**	**2.45**	**347**	*e* Pn	**Pn**	**00 13 11.0**	**0.0**
DOB				*e* Sn	**Sn**	**00 13 41.4**	**-0.2**
MGRS	**Mrkonjic Grad**	**2.45**	**328**	*e* Pn	**Pn**	**00 13 12.1**	**+1.0**
MGRS				*e* Sn	**Sn**	**00 13 42.2**	**+0.5**
KIJV	**Kijevo**	**2.46**	**313**	*i* Pn	**Pb**	**00 13 12.8**	**-2.2**
STIP	**Stip**	**2.53**	**104**	*i* Pn	**Pb**	**00 13 15.7**	**-0.5**
BOSS	**Bosilegrad**	**2.65**	**86**	*e* Pg	**Pn**	**00 13 15.2**	**+1.4**
BOSS				*e* Sg	**Sb**	**00 13 51.6**	**+0.3**
BLY	**Banja Luka**	**2.70**	**333**	⇓P	**Pb**	**00 13 17.1**	**-2.0**
BLY	**Banja Luka**	**2.70**	**333**	⇑S	**Sb**	**00 13 51.2**	**-1.5**
BLY	**Banja Luka**	**2.70**	**333**	*e* Pn	**Pn**	**00 13 15.4**	**+0.9**
BLY				*e* Sn	**Sn**	**00 13 48.6**	**+0.8**
ZIRJ	**Zirje**	**2.72**	**300**	*e* Pn	**Pn**	**00 13 15.7**	**+1.0**
MORI	**Morici**	**2.79**	**304**	*i* Pn	**Pn**	**00 13 16.9**	**+1.2**
FRGS	**Fruska Gora**	**2.88**	**13**	*e* Pn	**Pn**	**00 13 17.6**	**+0.6**
FRGS	**Fruska Gora**	**2.88**	**13**	*e* Pn	**Pb**	**00 13 16.4**	**-0.6**
FRGS				*e* Sn	**Sn**	**00 13 52.3**	**0.0**
ZAPS	**Zavoj**	**2.90**	**70**	*e* Pg	**Pb**	**00 13 20.7**	**-1.7**
VAY	**Valandovo**	**2.93**	**109**	*i* Pn	**Pb**	**00 13 20.5**	**-2.4**
BLKB	**Belogradchik**	**3.05**	**64**	⇑S	**Sn**	**00 13 57.9**	**+1.5**
UDBI	**Udbina**	**3.15**	**315**	*e* Pn	**Pb**	**00 13 23.5**	**-3.3**
MDVR	**Moldovita**	**3.17**	**39**	⇑P	**Pn**	**00 13 21.5**	**+0.5**
VTS	**Vitosha**	**3.22**	**84**	⇑P	**Pn**	**00 13 22.9**	**+1.2**
VTS	**Vitosha**	**3.22**	**84**	⇑S	**Sb**	**00 14 03.1**	**-4.5**
DUGI	**Dugi Otok**	**3.25**	**302**	*i* Pn	**Pn**	**00 13 23.0**	**+0.9**
HERR	**Herculane**	**3.59**	**44**	⇑P	**Pn**	**00 13 27.2**	**+0.5**
HERR	**Herculane**	**3.59**	**44**	⇓S	**Sn**	**00 14 10.2**	**+0.4**
NVLJ	**Novalja**	**3.67**	**308**	*e* Pn	**Pn**	**00 13 29.1**	**+1.3**
BZS	**Buzias**	**3.81**	**30**	⇓P	**Pn**	**00 13 31.1**	**+1.4**
BZS	**Buzias**	**3.81**	**30**	⇑S	**Sn**	**00 14 16.2**	**+1.1**
MORH	**Mrgy, Hungar**	**3.87**	**357**	*e* Pn	**Pn**	**00 13 31.0**	**+0.5**
GZR	**Gura Zlata**	**4.13**	**41**	⇑P	**Pn**	**00 13 34.8**	**+0.5**
GZR	**Gura Zlata**	**4.13**	**41**	⇑S	**Sn**	**00 14 23.9**	**+0.6**
CRES	**Cresnjev**	**4.27**	**326**	*e* Pn	**Pn**	**00 13 35.7**	**-0.3**
CRES				*e* Sn	**Sn**	**00 14 25.2**	**-1.3**
RIY	**Rijeka**	**4.37**	**314**	*e* Pn	**Pn**	**00 13 36.8**	**-0.5**
RIY				*e* Sn	**Sn**	**00 14 28.6**	**-0.2**
SIRR	**Siria**	**4.39**	**26**	⇑P	**Pn**	**00 13 38.3**	**+0.7**
BEHE	**Becsehely**	**4.39**	**340**	*e* Pn	**Pn**	**00 13 37.6**	**-0.1**
CEY	**Cerknica**	**4.68**	**318**	*e* Pn	**Pn**	**00 13 42.1**	**+0.4**
CEY				*e* Sn	**Sn**	**00 14 35.3**	**-1.2**
LOT	**Lotru**	**4.69**	**47**	⇑P	**Pn**	**00 13 43.7**	**+1.8**
LJU	**Ljubljana**	**4.85**	**321**	*e* Pn	**Pn**	**00 13 44.6**	**+0.6**
LJU				*e* Sn	**Sn**	**00 14 39.2**	**-1.6**
MPLH	**Magyarpolny**	**4.92**	**349**	*e* Pn	**Pb**	**00 13 53.9**	**-2.9**
ARR	**Arges**	**5.12**	**52**	⇑P	**Pn**	**00 13 50.0**	**+2.2**
ARR	**Arges**	**5.12**	**52**	⇓S	**Sn**	**00 14 49.5**	**+1.8**
SOKA	**Soboth**	**5.13**	**329**	*e* Pn	**Pn**	**00 13 50.1**	**+2.1**
	3.9nm,0.5s						
OBKA	**Obir**	**5.20**	**325**	*e* Pn	**Pn**	**00 13 51.3**	**+2.4**
	1.6nm,0.3s						
VOIR		**5.41**	**53**	⇑P	**Pn**	**00 13 53.0**	**+1.3**
ARSA	**Arzberg**	**5.46**	**335**	Pn	**Pn**	**00 13 54.8**	**+2.5**
	2.2nm,0.5s						
SGRR	**Singureni**	**5.49**	**68**	⇓P	**Pn**	**00 13 53.9**	**+1.1**
PSZ	**Piszkesteto**	**5.61**	**7**	⇑P	**Pn**	**00 13 55.0**	**+0.5**
MYKA	**Terra Mystica**	**5.70**	**320**	*e* Pn	**Pn**	**00 13 58.0**	**+2.3**
	1.4nm,0.3s						
DOPR	**Dopca**	**5.90**	**50**	⇑P	**Pn**	**00 14 00.0**	**+1.5**
MLR	**Muntele Rosu**	**5.98**	**56**	⇓P	**Pn**	**00 14 01.6**	**+2.0**
ZST	**Bratislava**	**5.98**	**348**	*e* SN	**Sn**	**00 15 06.7**	**-1.9**
MODS	**Modra-Piesok**	**6.13**	**350**	*e* PN	**Pn**	**00 14 03.9**	**+2.3**
MODS				*e* SN	**Sn**	**00 15 11.6**	**-0.7**
VYHS	**Vyhne**	**6.14**	**360**	*e* PN	**Pn**	**00 14 04.4**	**+2.6**
VYHS				*e* SN	**Sn**	**00 15 14.8**	**+2.1**
KBA	**Koelnbreinsper**	**6.17**	**322**	*e* Pn	**Pn**	**00 14 03.9**	**+1.7**
	0.9nm,0.2s						
SMOL	**Smolenice**	**6.25**	**351**	*e* SN	**Sn**	**00 15 16.6**	**+1.4**
ABTA	**Abfaltersbach**	**6.34**	**316**	*e* Pn	**Pn**	**00 14 05.2**	**+0.7**
	0.6nm,0.2s						
MOA	**Molln**	**6.40**	**331**	*e* Pn	**Pn**	**00 14 08.6**	**+3.2**
	1.0nm,0.2s						
CRVS	**Cervenica-Dubn**	**6.79**	**14**	*e* PN	**Pn**	**00 14 13.5**	**+2.8**
WTTA	**Wattenberg**	**7.13**	**316**	*e* Pn	**Pn**	**00 14 18.2**	**+2.7**
	1.6nm,0.3s						
SQTA	**Sankt Quirin**	**7.32**	**314**	*e* Pn	**Pn**	**00 14 20.4**	**+2.3**
	1.0nm,0.2s						
MOTA	**Moosalm**	**7.46**	**315**	*e* Pn	**Pn**	**00 14 22.1**	**+2.1**
	1.5nm,0.5s						
FETA	**Feichten**	**7.46**	**312**	Pn	**Pn**	**00 14 21.7**	**+1.7**
	0.6nm,0.4s						
KHC	**Kasperske Hory**	**7.73**	**333**	*e* PN	**Pn**	**00 14 24.9**	**+1.3**
KHC				*e* SN	**Sn**	**00 15 53.9**	**+2.1**

ROM 27 00:12:43.5±0.2, 43.99N±0.004×12.96E±0.006, h7km±1km, **ML0.9/3, Error ellipse: s-maj=0.5km s-min=0.3km az=86.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**120**	P	Pg	00 12 45.3	+0.1
ATFO				S	Sg	00 12 46.6	+0.1
ATVO	**AVT- Monte Val**	**0.07**	**256**	P	Pg	00 12 45.4	+0.1
ATVO				S	Sg	00 12 46.8	+0.2
ATPI	**Pietralunga -**	**0.09**	**307**	P	Pg	00 12 45.9	+0.3
ATPI				S	Sg	00 12 47.6	+0.6
MURB	**Monte Urbino**	**0.14**	**171**	P	Pg	00 12 46.8	+0.4
MURB				S	Sg	00 12 49.5	+1.1
MURB				AML	AML		
	comp=N,134μm,1.4s						
MURB				AML	AML		
	comp=E,178μm,0.2s						
PIEI	**Pieia**	**0.14**	**12**	P	Pg	00 12 47.0	+0.6
PIEI				S	Sg	00 12 50.0	+1.5
PIEI				AML	AML		
	comp=N,61μm,1.3s						
PIEI				AML	AML		
	comp=E,44μm,1.1s						
FRON	**Frontone**	**0.20**	**54**	P	Pg	00 12 48.0	+0.4
FRON				S	Sg	00 12 51.8	+1.4
NARO	**Abbazia di Nar**	**0.22**	**16**	P	Pg	00 12 48.2	+0.4
NARO				S	Sg	00 12 52.0	+1.2
NARO				AML	AML		
	comp=E,29μm,1.6s						
NARO				AML	AML		
	comp=N,35μm,1.6s						
ATCC	**AVT- Casa Cast**	**0.24**	**154**	P	Pg	00 12 48.8	+0.6
ATCC				S	Sg	00 12 53.2	+1.9

IDC ***27*** *00:24:33.5±0.6, 0.95N×126.05E, h0km, mb4.4/21, mb1 4.5/22, mb1mx4.3/52, mbtmp4.4/22, ML4.0/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/42, Error ellipse: s-maj=29.1km s-min=11.9km az=75.0*
NEIC ***27*** *00:24:39.7±1.7, 1.01N±0.09×126.33E±0.06, h51km±7km, mb4.6/42, Error ellipse: s-maj=12.4km s-min=8.5km az=179.0*
DJA ***27*** *00:24:39.8±0.4, 1.1N±3×12.6E±°, h38km±5km, M4.7/18, mb4.8/18, mB5.4/6, MLv4.6/12, Mw(mB)4.8/6, Mwp4.8/1*
MAN ***27*** *00:24:46.3, 1.33N×125.52E, h32km, mb5.5, ML4.5, MS4.9*

ISC 27 00:24:39.3±0.4, 0.99N±0.04×126.26E±0.04, h39km, **n117, σ1s61/117, mb4.5/51, MS3.8/6, 2C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.13**	**101**	P	**Pn**	**00 24 59.4**	**+0.8**
TNTI				S	**Sn**	**00 25 14.4**	**+1.6**
TNTI	**Ternate**	**1.13**	**101**		**Pn**	**00 24 58.6**	**0.0**
LBMI	**Labuha**	**2.04**	**142**	P	**Pn**	**00 25 13.2**	**+2.1**
KMSI	**Cibinong**	**2.32**	**260**	P	**Pn**	**00 25 14.3**	**-0.6**
KMSI				S	**Sn**	**00 25 41.6**	**-0.6**
SANI	**Sanana**	**3.03**	**185**	P	**Pn**	**00 25 25.0**	**+0.2**
LUWI	**Luwuk**	**4.03**	**240**	P	**Pn**	**00 25 40.2**	**+1.7**
LUWI	**Luwuk**	**4.03**	**240**		**Pn**	**00 25 40.6**	**+2.1**
NLAI	**Namlea**	**4.28**	**169**	P	**Pn**	**00 25 44.3**	**+2.3**
MRSI	**Marisa**	**4.35**	**263**	P	**Pn**	**00 25 43.4**	**+0.5**
DDMP	**Don Marcelino,**	**5.11**	**354**	*e* P	**Pn**	**00 25 57.1**	**+3.8**
DDMP				*e* S	**Sn**	**00 26 52.2**	**+1.0**
SIJI	**Sorong**	**5.34**	**110**	LR	LR	00 28 28.9	
	comp=Z,577nm,20.9s,baz=258,slow=43						
SKMP	**Bagumbayan, Su**	**5.75**	**343**	*e* P	**Pn**	**00 26 04.2**	**+2.0**
SKMP				*e* S	**Sn**	**00 27 04.7**	**-2.3**
KCP	**Kidapawan**	**6.09**	**349**	⇑*e* P	**Pn**	**00 26 11.1**	**+4.1**
KCP				*e* S	**Sn**	**00 27 20.9**	**+5.5**
MPSI	**Mapaga**	**6.39**	**264**	P	**Pn**	**00 26 12.3**	**+1.3**
	0.2nm42nm,0.8s						
FAKI	**Fak Fak**	**7.14**	**123**	Pn	**Pn**	**00 26 20.1**	**-1.1**
TTSI	**Tana Toraja**	**7.58**	**238**	P	**Pn**	**00 26 29.0**	**+1.7**
	0.4nm2μm126nm,0.8s						
SPSI	**Sidrap Palu**	**8.14**	**233**	P	**Pn**	**00 26 37.1**	**+2.1**
	644nm68nm,0.7s						
BNSI	**Bone**	**8.15**	**229**	P	**Pn**	**00 26 35.8**	**+0.7**
	2μm52nm,0.6s						
BKSI	**Bulukumba**	**8.77**	**224**	P	**Pn**	**00 26 45.9**	**+2.3**
	56nm,1.1s						
KAPI	**Kappang**	**8.82**	**227**	Pn	**Pn**	**00 26 46.1**	**+1.7**
SOEI	**Soe**	**10.86**	**190**	Pn	**Pn**	**00 27 12.8**	**+0.4**
MTN	**Manton Dam**	**14.57**	**161**	Pn	**Pn**	**00 28 02.2**	**-0.7**
KSM	**Kuching**	**15.96**	**272**		**Pn**	**00 28 20.8**	**-0.2**
KSM				IAmb	IAmb	00 28 31.5	
	comp=Z,25nm,0.8s						
KNRA	**Kununurra**	**16.74**	**172**		**Pn**	**00 28 30.8**	**-0.2**
KNRA				IAmb	IAmb	00 28 32.6	
	comp=Z,45nm,0.8s						
UGM	**Wanagama**	**18.01**	**240**		**P**	**00 28 48.1**	**+1.1**
UGM				IAmb	IAmb	00 28 50.0	
	comp=Z,65nm,1.1s						
FITZ	**Fitzroy Crossi**	**18.98**	**182**	P	**P**	**00 28 56.6**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=29,slow=10,SNR=8.3						
FITZ	**Fitzroy Crossi**	**18.98**	**182**	P	**P**	**00 28 57.0**	**-0.5**
KPJI	**Karang Pucung**	**19.16**	**244**	P	**Pn**	**00 29 07.4**	**+6.7**
WB0	**Warramunga Arr**	**22.12**	**159**	P	**P**	**00 29 31.0**	**-0.5**
WRAB	**Tennant Creek**	**22.26**	**160**	P	**P**	**00 29 32.6**	**-0.4**
WRA	**Warramunga Arr**	**22.26**	**160**	P	**P**	**00 29 32.4**	**-0.7**
	comp=Z,29nm,0.8s,baz=336,slow=11,SNR=25						
WRA	**Warramunga Arr**	**22.26**	**160**	P	**P**	**00 29 32.2**	**-0.9**
WB2	**Warramunga Arr**	**22.27**	**160**	P	**P**	**00 29 32.6**	**-0.5**
GUMO	**Guam**	**22.27**	**55**	LR	LR	00 36 31.8	
	comp=Z,233nm,18.4s,baz=174,slow=32						
WR0	**Warramunga Arr**	**22.35**	**159**	P	**P**	**00 29 33.4**	**-0.6**
WR0				IAmb	IAmb	00 29 39.2	
	comp=Z,34nm,1.0s						
COEN	**Coen**	**22.39**	**132**	P	**P**	**00 29 34.6**	**0.0**
KASI	**Kota Agung**	**22.68**	**253**	P	**P**	**00 29 43.8**	**+6.2**
YULB	**Yu-li**	**22.78**	**348**	P	**P**	**00 29 38.5**	**-0.1**
TPUB	**Ta-pu**	**22.84**	**347**	P	**P**	**00 29 39.2**	**0.0**
TPUB				IAmb	IAmb	00 29 43.1	
	comp=Z,21nm,1.0s						
SSLB	**Suanglung**	**23.24**	**348**	P	**P**	**00 29 43.3**	**0.0**
SSLB				IAmb	IAmb	00 29 43.7	
	comp=Z,15nm,0.9s						
PSA00	**Pilbara Seismi**	**23.28**	**195**	P	**P**	**00 29 43.5**	**-0.2**
PSA00				IAmb	IAmb	00 29 44.2	
	comp=Z,22nm,0.8s						
SDSI	**Sungai Dareh**	**24.90**	**266**	P	**P**	**00 30 02.0**	**+3.1**
	comp=Z,2μmcomp=Z,6.4nm,1.0s						
UBPT	**Khong Chiam**	**24.96**	**306**	P	**P**	**00 29 59.7**	**+0.4**
ASAR	**Alice Springs**	**25.61**	**164**	P	**P**	**00 30 04.7**	**-0.5**
	comp=Z,11nm,0.9s,baz=351,slow=9.5,SNR=42						
MORW	**Morawa**	**31.45**	**197**	P	**P**	**00 30 56.4**	**-0.7**
MORW				IAmb	IAmb	00 30 57.4	
	comp=Z,7.5nm,0.9s						
WHN	**Wuhan**	**31.49**	**340**	P	**P**	**00 30 59.5**	**+2.0**
NJ2	**Nanjing**	**31.68**	**348**	*e*P	**P**	**00 30 58.8**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.94**	**305**	P	**P**	**00 31 01.2**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=152,slow=7.8,SNR=5.6						
CMAR				PcP	**PcP**	**00 33 53.0**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=149,slow=1.6,SNR=5.7						
CMAR				LR	LR	00 44 17.0	
	comp=Z,48nm,20.5s,baz=56,slow=37						
CHTO	**Chiang Mai**	**32.12**	**305**	P	**P**	**00 31 03.1**	**-0.1**
JNU	**Nakatsue**	**32.26**	**7**	P	**P**	**00 31 04.9**	**+0.6**
	comp=Z,15nm,1.0s,baz=204,slow=1.9,SNR=4.4						
JNU	**Nakatsue**	**32.26**	**7**	IAmb	IAmb	00 31 05.8	
	comp=Z,12nm,0.9s						
KMI	**Kunming**	**33.04**	**318**	P	**P**	**00 31 11.5**	**+0.1**
KMI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KMI				LR	LR		
	comp=N,130nm,16.0s						
KMI				LR	LR		
	comp=E,170nm,18.1s						
KMI				LR	LR		
	comp=Z,220nm,13.6s						
NWAO	**Narrogin (SRO)**	**34.80**	**193**	P	**P**	**00 31 25.8**	**-0.5**
NWAO	**Narrogin (SRO)**	**34.80**	**193**	P	**P**	**00 31 26.2**	**-0.1**
NWAO				IAmb	IAmb	00 31 34.2	
	comp=Z,16nm,1.1s						
BBOO	**Buckleboo**	**34.87**	**165**	IAmb	IAmb	00 31 27.0	
	comp=Z,5.7nm,0.9s						
STKA	**Stephens Creek**	**35.77**	**157**	P	**P**	**00 31 34.6**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=332,slow=8.5,SNR=27						
KSRS	**Korea Array**	**36.32**	**2**	P	**P**	**00 31 40.5**	**+1.2**
	comp=Z,1.4nm,0.7s,baz=179,slow=9.5,SNR=6.0						
XAN	**Xi'an**	**36.67**	**336**	P

TIXI	Tiksi	70.57	1	P	P	00 35 49.3	-0.6	
	comp=Z,1.9nm,0.4s,baz=188,slow=4.8,SNR=10							
TIXI	Tiksi	70.57	1	P	P	00 35 49.1	-0.9	
TIXI				IAmb	IAmb	00 35 50.4		
	comp=Z,7.3nm,1.1s							
GEYT	Alibeck	72.25	310	P	P	00 36 00.9	+0.1	
	comp=Z,2.0nm,0.7s,baz=129,slow=5.9,SNR=6.3							
GEYT	Alibeck	72.25	310	IAmb	IAmb	00 36 05.0		
	comp=Z,1.6nm,0.7s							
ABKAR	Akbulak array	73.97	321	P	P	00 36 10.0	-0.7	
ABKAR	Akbulak array	73.97	321	P	P	00 36 09.6	-1.1	
ABKAR				IAmb	IAmb	00 36 11.3		
	comp=Z,2.9nm,0.9s							
AKTO	Aktyubinsk	75.51	322	P	P	00 36 18.7	-0.9	
	comp=Z,1.9nm,0.5s,baz=100,slow=8.2,SNR=7.6							
ARU	Arti	76.99	328	P	P	00 36 26.7	-1.2	
	comp=Z,2.8nm,0.7s,baz=45,slow=0.6,SNR=20							
ARU	Arti	76.99	328	P	P	00 36 26.4	-1.5	
VNDA	Vanda	80.79	173	P	P	00 36 48.8	+0.5	
	comp=Z,3.6nm,0.9s,baz=300,slow=6.1,SNR=5.2							
RAYN	Ar Rayn	81.13	294	P	P	00 36 49.3	-2.0	
KBZ	Khabaz	84.51	314	P	P	00 37 07.5	-0.8	
	comp=Z,3.3nm,0.9s,baz=103,slow=8.0,SNR=4.9							
KMBO	Kilima Mbogo	89.03	269	P	P	00 37 32.0	+0.6	
	comp=Z,2.2nm,0.9s,baz=55,slow=8.1,SNR=5.8							
KMBO	Kilima Mbogo	89.03	269	IAmb	IAmb	00 37 34.4		
	comp=Z,2.5nm,0.9s							
SYO	Syowa Base	89.72	201⇑e	P	P	00 37 32.0	-1.0	
BRTR	Keskin Array B	91.39	310	P	P	00 37 40.1	-1.6	
	comp=Z,1.1nm,0.8s,baz=115,slow=5.6,SNR=4.0							
TORD	Torodi Ar. Bea	123.28	286	PKP	PKPdf	00 43 32.9	-0.2	
	comp=Z,2.0nm,0.8s,baz=75,slow=1.8,SNR=11							

SLM ***27*** *00:35:52.6±1.9, 37.°09N±0.°02×88.°88W±0.°02, h4km±6km, Md2.6/9, Error ellipse: s-maj=2.8km s-min=2.3km az=129.0*

ANF ***27*** *00:35:52.8±0.4, 37.°04N×88.°89W, h2km±2km, ML4.0/63, Error ellipse: s-maj=1.4km s-min=1.0km az=167.0*

NEIC ***27*** *00:35:53.5±2.2, 37.°08N±0.°02×88.°86W±0.°02, h6km±6km, Error ellipse: s-maj=2.8km s-min=2.1km az=146.0*

CERI ***27*** *00:35:54.0, 37.°07N×88.°85W, h10km*

ISC 27 00:35:53.3±1.1, 37.°08N±0.°02×88.°99W±0.°02, h5km±10km, n148, σ1§54/206, Southern Illinois

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HENM	Henderson Moun	0.53	227		Pb	00 36 04.7	-0.4
HENM				Sg	Sb	00 36 12.8	-0.2
HICK	Hickman	0.57	200	Pg	Pg	00 36 05.0	+0.7
HICK					Sg	00 36 12.8	+1.1
S44A	Carbondale	0.65	341		Pb	00 36 05.7	-1.6
S44A				Sg	Sb	00 36 14.5	-2.1
PARMO	Parma	0.74	236		Pb	00 36 08.5	-0.2
PARMO				Sg	Sb	00 36 18.9	-0.1
UTMT	University of	0.74	172		Pg	00 36 07.0	-0.5
UTMT				Sg	Sg	00 36 16.6	-0.5
PENMO	Penman	0.81	220	Pg	Pg	00 36 09.5	+0.7
PENMO					Sn	00 36 24.6	+0.9
GLAT	Glass	0.84	197		Pg	00 36 10.0	+0.5
PVMO	Portageville	0.87	221	Pg	Pn	00 36 12.2	-0.1
PVMO				Sg	Sn	00 36 25.0	-0.4
LNXT	Lenox	1.05	203		Pb	00 36 13.9	-0.2
LNXT				Sg	Sn	00 36 29.4	-0.5
PEBM	Pemiscott Bayo	1.19	216	Pn	Pb	00 36 16.4	-0.1
PEBM					Sn	00 36 33.6	+0.4
PBMO	Poplar Bluff	1.19	256		Pn	00 36 16.2	-0.5
PBMO				Sg	Sn	00 36 33.1	-0.2
HALT	Halls	1.20	194		Pn	00 36 15.9	-0.8
HALT				Sg	Sb	00 36 31.8	-0.5
WVT	Waverly	1.33	135		Pn	00 36 15.9	-2.6
WVT				Sg	Sn	00 36 32.4	-4.2
WVT	Waverly baz=319	1.33	135	P	Pn	00 36 15.9	-2.6
WVT				S	Sn	00 36 32.4	-4.2
	baz=319						
USIN	University of	1.38	49		Pn	00 36 17.0	-2.2
USIN				Sg	Sn	00 36 34.5	-3.3
GNAR	Gosnell	1.39	217		Sg	00 36 39.8	+1.9
FVM	French Village	1.46	309		Pg	00 36 20.4	-0.9
FVM					Sg	00 36 40.0	-0.2
T47A	Sharon Grove	1.51	93		Pn	00 36 19.0	-2.1
T47A				Sg	Sn	00 36 37.5	-3.5
OLIL	Olney	1.80	23		Pn	00 36 24.8	-0.2
OLIL				Sn	Sn	00 36 48.0	-0.2
LPAR	Lepanto	1.81	216	Pn	Pb	00 36 26.8	-0.2
SLM	Saint Louis	1.84	328		Pb	00 36 26.4	-1.2
SLM				Sn	Sg	00 36 50.9	-1.7
LCAR	Lake Charles	2.01	241		Pb	00 36 29.8	-0.7
HBAR	Harrisburg	2.03	222	Pn	Pn	00 36 28.8	+0.6
HBAR				Sn	Sb	00 36 54.3	-1.9
CCM	Cathedral Cave	2.04	299		Pb	00 36 29.7	-1.2
CCM				Sn	Sg	00 36 57.2	-1.7
CCM	Cathedral Cave baz=117	2.04	299	P	Pb	00 36 29.6	-1.3
CCM				S	Sg	00 36 56.8	-2.1
	baz=117						
MET	Memphis--Engin	2.10	202	Pn	Pn	00 36 29.2	+0.1
MET				Sn	Sn	00 36 54.4	-1.2
V48A	Smith Brothers	2.20	127	Sn	Sn	00 36 58.1	0.0
PLAL	Pickwick Lake	2.22	160		Pn	00 36 29.4	-1.3
WCI	Wyandotte Cave	2.43	61		Pn	00 36 32.8	-0.8
WCI	Wyandotte Cave baz=241	2.43	61	P	Pn	00 36 32.5	-1.1
WCI				S	Sn	00 37 02.7	-1.0
	baz=241						
OXF	Oxford	2.58	188		Pn	00 36 35.2	-0.6
OXF	Oxford baz=9.9	2.58	188	P	Pn	00 36 34.9	-0.9
OXF				S	Sn	00 37 07.7	+0.1
	baz=9.9						
P43A	Skaggs, Pawnee	2.59	351		Pn	00 36 36.6	+0.7
MGMO	Mountain Grove	2.62	273		Pb	00 36 37.7	-3.2
U49A	Red Boiling Sp baz=284,SNR=65	2.64	101	P	Pn	00 36 35.8	-0.7
T49A	Edmonton	2.76	88		Pn	00 36 37.9	-0.4
T49A	Edmonton baz=270	2.76	88	P	Pn	00 36 37.3	-1.0
T49A				S	Sn	00 37 11.7	-0.4
	baz=270						
V49A	McMinnville baz=300,SNR=28	2.81	117	P	Pn	00 36 38.3	-0.7
V49A				S	Sn	00 37 13.0	-0.2
	baz=300						
BLO	Bloomington	2.86	42		Pn	00 36 39.4	-0.2
P46A	Rosedale	2.90	28		Pn	00 36 40.5	+0.4
W49A	Belvidere baz=314	2.95	131	P	Pn	00 36 40.0	-0.8
W49A				Sb	Sn	00 37 21.4	+4.8
	baz=314						
X43A	Marvell	2.98	212	Pn	Pn	00 36 41.6	+0.4
X43A	Marvell baz=32	2.98	212	P	Pn	00 36 41.3	+0.1
S49A	Springfield baz=257	3.03	75	P	Pn	00 36 40.6	-1.4
S49A				S	Sn	00 37 16.8	-1.8
	baz=257						
O44A	Mansfield	3.10	7		Pn	00 36 42.6	-0.2
Q48A	North Vernon baz=234	3.17	53	P	Pn	00 36 43.8	-0.1
U40A	Yellville	3.19	258		Pn	00 36 45.6	+1.4
U40A	Yellville baz=76	3.19	258	P	Pn	00 36 45.2	+1.1
U40A				S	Sb	00 37 25.2	-4.4
	baz=76						
W41B	Gary Mavity, V baz=54	3.25	235	P	Pn	00 36 45.4	+0.5
W41B				S	Sn	00 37 25.0	+1.0
	baz=54						
R49A	Shelbyville	3.26	67	Pn	Pn	00 36 44.4	-0.8
R49A	Shelbyville baz=248	3.26	67	P	Pn	00 36 44.2	-1.0
R49A				S	Sn	00 37 22.5	-1.8
	baz=248						
T50A	Nancy baz=272	3.32	90	P	Pn	00 36 45.1	-0.9
T50A				S	Sn	00 37 24.7	-1.1
	baz=272						
U50A	Jamestown baz=283,SNR=8.5	3.39	100	P	Pn	00 36 45.8	-1.2
V50A	Pikevile baz=296,SNR=19	3.44	113	P	Pn	00 36 46.7	-0.9
HDIL	Hopedale	3.48	356		Pn	00 36 49.6	+1.5
UALR	University of	3.56	231		Pn	00 36 50.1	+0.8
SFIN	Lafayette	3.61	24		Pn	00 36 51.0	+1.0
SFIN	Lafayette baz=203	3.61	24	S	Sn	00 37 34.9	+1.9
P48A	Milroy	3.68	49		Pn	00 36 50.2	-0.7
P48A	Milroy baz=230	3.68	49	P	Pn	00 36 49.8	-1.1
P48A				S	Sn	00 37 34.5	-0.1
	baz=230						
S50A	Richmond baz=262	3.70	79	P	Pn	00 36 50.0	-1.3
S50A				S	Sn	00 37 34.5	-0.8
	baz=262						
FPAL	Fort Paine	3.73	132		Pn	00 36 51.2	-0.5
Q49A	Aurora baz=239	3.76	58	P	Pn	00 36 51.0	-1.0
Q49A				S	Sn	00 37 34.8	-1.9
	baz=239						
CCAR	Cane Creek	3.88	217	Pn	Pn	00 36 54.6	+0.9
R50A	Paris	3.89	71	Pn	Pn	00 36 53.5	-0.3
R50A	Paris baz=253	3.89	71	P	Pn	00 36 52.4	-1.3
R50A				S	Sn	00 37 37.5	-2.3
	baz=253						
N41A	Harden Midland	3.91	339	Pn	Pn	00 36 54.3	+0.2
W51A	Cleveland baz=301,SNR=10	3.92	118	P	Pn	00 36 53.3	-0.9
W51A				S	Sn	00 37 40.0	-0.6
	baz=301						
V51A	Loudon	3.95	107		Pn	00 36 53.9	-0.7
V51A	Loudon baz=291,SNR=12	3.95	107	P	Pn	00 36 53.6	-1.0
V51A				S	Sn	00 37 40.5	-0.8
	baz=291						
CPCT	Cooper Cave	3.96	113		Pn	00 36 54.4	-0.3
T51A	Gray baz=273	4.04	90	P	Pn	00 36 55.0	-0.8
T51A				S	Sn	00 37 42.3	-1.2
	baz=273						
U51A	La Follette baz=282,SNR=7.3	4.05	98	P	Pn	00 36 55.0	-1.1
U51A				Sb	Sb	00 37 55.5	+0.9
	baz=282						
X40A	Basin Creek Fa	4.06	232		Pn	00 36 56.6	+0.5
X40A	Basin Creek Fa baz=50	4.06	232	P	Pn	00 36 56.1	+0.1
X40A				S	Sn	00 37 44.9	+1.0
	baz=50						
HHAR	Hobbs	4.06	260		Pn	00 36 57.1	+1.0
P49A	Miami Univ. Ec baz=234	4.16	53	P	Pn	00 36 55.8	-1.7
P49A				S	Sn	00 37 43.2	-3.3
	baz=234						
X51A	Calhoun baz=309	4.19	126	P	Pn	00 36 56.8	-1.1
X51A				Sb	Sb	00 37 59.4	+1.0
	baz=309						
W39A	Magazine baz=63	4.31	246	P	Pn	00 37 00.4	+0.9
W39A				S	Sn	00 37 50.6	+0.4
	baz=63						
Q50A	Georgetown baz=247	4.33	64	P	Pn	00 36 58.6	-1.3
Q50A				S	Sn	00 37 48.4	-2.4
	baz=247						
S51A	Beattyville	4.33	81		Pn	00 36 58.4	-1.5
S51A	Beattyville baz=264	4.33	81	P	Pn	00 36 59.1	-0.8
S51A				S	Sn	00 37 49.3	-1.5
	baz=264						
LRAL	Lakeview Retre baz=340	4.35	157	Sb	Sb	00 38 05.0	+2.0
M44A	Midewin, Midew	4.37	9	Pn	Pn	00 37 00.6	+0.3
O48A	Farmland baz=223	4.37	42	P	Pn	00 37 00.2	-0.2
O48A				Sb	Sb	00 38 05.6	+2.1
	baz=223						
TZTN	Tazewell	4.40	95		Pn	00 37 00.1	-0.7
TZTN	Tazewell baz=279,SNR=8.2	4.40	95	P	Pn	00 36 59.9	-0.8
TZTN				Sb	Sb	00 38 06.2	+1.8
	baz=279						
TKL	Tuckaleechee C	4.44	107		Pn	00 37 01.4	+0.1
R51A	Hillsboro baz=255	4.46	72	P	Pn	00 37 00.4	-1.2
R51A				S	Sn	00 37 51.5	-2.3
	baz=255						
MIAR	Mount Ida	4.50	237		Pn	00 37 03.2	+0.9
MIAR	Mount Ida baz=55	4.50	237	P	Pn	00 37 02.9	+0.6
Y51A	Rockmart baz=317	4.50	134	P	Pn	00 37 01.0	-1.3
Y51A				Sb	Sb	00 38 08.8	+1.3
	baz=317						
V52A	Sevierville	4.52	104		Pn	00 37 01.9	-0.5
V52A	Sevierville baz=288,SNR=13	4.52	104	P	Pn	00 37 01.4	-1.1
V52A				Sb	Sb	00 38 09.4	+1.5
	baz=288						
W52A	Murphy	4.55	114		Pn	00 37 02.0	-0.9
W52A	Murphy baz=298	4.55	114	P	Pn	00 37 02.3	-0.6
W52A				Sb	Sb	00 38 09.5	+0.6
	baz=298						
U52A	Thorn Hill baz=280	4.57	97	P	Pn	00 37 01.6	-1.5
Z50A	Ashland	4.57	146	Pn	Pn	00 37 01.3	-1.9
Z50A	Ashland baz=329	4.57	146	P	Pn	00 37 01.2	-1.9
Z50A				Sb	Sb	00 38 10.7	+1.4
	baz=329						
N47A	Urbana	4.58	33	Pn	Pn	00 37 02.3	-1.0
N47A	Urbana baz=214	4.58	33	Sb	Sb	00 38 13.3	+3.5
S52A	Salyersville baz=264	4.75	81	S	Sn	00 38 00.0	-0.9
WLAR	White Oak Lake	4.77	226	Pn	Pn	00 37 06.1	+0.2
O49A	Covington	4.79	48	Pn	Pn	00 37 06.6	+0.5
O49A	Covington baz=230	4.79	48	Sb	Sb	00 38 18.7	+3.1
P50A	Jamestown baz=239	4.80	57	Sb	Sb	00 38 19.0	+3.1
T52A	Hallie	4.80	88	Pn	Pn	00 37 05.8	-0.5
T52A					Pb	00 37 18.7	+0.8
T52A	Hallie baz=271	4.80	88	Sb	Sb	00 38 17.8	+1.8
X52A	Dahlonega baz=303,SNR=8.7	4.82	119	P	Pn	00 37 05.7	-0.9
X52A				S	Sn	00 37 59.7	-3.1
	baz=303						
Q51A	Peebles	4.86	65	Pn	Pn	00 37 07.0	-0.1
Q51A	Peebles baz=248	4.86	65	Sb	Sb	00 38 19.9	+2.1
Z41A	Richland Creek	4.93	220	Pn	Pn	00 37 09.8	+1.8
L42A	Oliver, Polo	4.95	354	Pn	Pn	00 37 09.2	+0.8
M47A	Cromwell baz=211	5.01	30	Sb	Sb	00 38 25.9	+3.9
W53A	Cullowhee baz=294	5.08	110	P	Pn	00 37 09.4	-0.9
W53A				Sb	Sb	00 38 25.9	+1.5
	baz=294						
Y52A	Lilburn	5.14	127	Pn	Pn	00 37 10.6	-0.4
Y52A	Lilburn baz=311	5.14	127	Sb	Sb	00 38 26.8	+0.9
L44A	Lake County Fo baz=188	5.16	9	Sb	Sb	00 38 30.7	+4.3
T53A	Wise baz=273	5.16	89	Sb	Sb	00 38 28.6	+2.0
V53A	Saluda	5.18	104		Pn	00 37 10.6	-0.9
V53A	Saluda baz=288,SNR=10	5.18	104	P	Pn	00 37 10.1	-1.4
V53A				S	Sn	00 38 08.9	-2.8
	baz=288						
R52A	Catlettsburg baz=258	5.18	74	Sb	Sb	00 38 28.9	+1.8
U53A	Fall Branch baz=280	5.20	96	Sb	Sb	00 38 28.7	+1.2
O50A	Cable baz=235	5.20	52	Sb	Sb	00 38 29.9	+2.3
P51A	Williamsport baz=244	5.25	61	Sb	Sb	00 38 31.8	+3.0
L40A	Anamosa	5.27	342		Pn	00 37 13.6	+0.9
X53A	Estanollee baz=301,SNR=7.1	5.29	117	P	Pn	00 37 12.3	-0.7
X53A				S	Sn	00 38 12.9	-1.4
	baz=301						
BG3	Lake Jocassee	5.33	111	Pn	Pn	00 37 13.0	-0.6
L46A	Eue Claire baz=203	5.35	22	Sb	Sb	00 38 35.9	+4.1
N49A	Columbus Grove	5.36	43	Pn	Pn	00 37 13.6	-0.4
N49A	Columbus Grove baz=225	5.36	43	Sb	Sb	00 38 35.5	+3.4
Z52A	Williamson baz=318	5.39	135	P	Pn	00 37 13.7	-0.7
Z52A				Sb	Sb	00 38 34.5	+1.5
	baz=318						
250A	Grady	5.56	155	Pn	Pn	00 37 16.4	-0.4
TUL1	Leonard	5.60	260	Pn	Pn	00 37 17.4	0.0
TUL1	Leonard baz=76	5.60	260	P	Pn	00 37 17.3	0.0
152A	Waverly Hall	5.62	140	Pn	Pn	00 37 17.0	-0.7
Q52A	Bidwell baz=252	5.63	68	P	Pn	00 37 16.7	-1.0
R53A	Hurricane	5.72	75	Pn	Pn	00 37 19.2	+0.3
R53A					LR	00 38 47.6	
U54A	Nelsons Funny	5.78	93	Pn	Pn	00 37 19.6	-0.2
Z53A	Monticello baz=313	5.83	129	P	Pn	00 37 19.4	-1.0
JFWS	Jewell Farm	5.91	351	Pn	Pn	00 37 22.9	+1.3
X54A	Belton baz=298	5.94	113	P	Pn	00 37 20.8	-1.1
S54A	Dingess, Beckl	6.15	81	Pn	Pn	00 37 24.1	-0.8
HODGE	Hodges	6.17	115	Pn	Pn	00 37 23.7	-1.4
KSU1	Kansas State U baz=106	6.34	291	P	Pn	00 37 27.4	-0.1
U55A	TA2, Sparta baz=278	6.40	93	P	Pn	00 37 27.1	-1.2
D32A	Dogwood Acres,	11.68	332		Pn	00 38 44.0	+3.5
SMCO	Snowmass	14.31	284		Pn	00 39 18.5	+1.5

IDC 27 00:36:52.6±70.0, 20.°08S×179.°75E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.5/20, mbtmp3.5/3, Error ellipse: s-maj=1252.0km s-min=163.7km az=81.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.08	243	P	P	00 43 56.1	-0.1
	1.4nm,0.7s,baz=56,slow=7.3,SNR=3.9						
ASAR	Alice Springs	42.56	257	P	P	00 44 51.0	+0.5
	0.4nm,0.8s,baz=88,slow=8.3,SNR=6.3						
WRA	Warramunga Arr	42.56	262	P	P	00 44 49.8	-0.8
	0.5nm,1.0s,baz=100,slow=7.7,SNR=3.3						

IDC ***27*** *00:41:35.9±1.2, 38.°35N×20.°52E, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.4/45, mbtmp3.8/8, ML3.4/2, Error ellipse: s-maj=26.1km s-min=18.7km az=70.0*

THE ***27*** *00:41:36.6, 38.°22N×20.°33E, h0km±3km, ML3.3/8, Error ellipse: s-maj=4.0km s-min=0.5km az=253.0*

ATH ***27*** *00:41:36.2, 38.°20N×20.°35E, h14km±2km, ML3.2/13, Error ellipse: s-maj=2.8km s-min=1.0km az=76.0*

ISC 27 00:41:36.9±1.1, 38.°22N±0.°03×20.°34E±0.°05, h11km±6km, n51, σ1§29/73, mb3.9/6, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.20	102	P	Pg	00 41 40.6	-0.5
VLS				S	Sg	00 41 43.4	-0.6
	27μm,0.1s						
VLS	Valsamata	0.20	102	P	Pg	00 41 40.7	-0.5
VLS				S	Sg	00 41 43.4	-0.6
VLS				AML	AML	00 41 44.0	
	comp=E,63397μm,0.1s						
VLS				AML	AML	00 41 44.1	
	comp=N,36170μm,0.1s						
FSK	Fiskardo	0.29	36	P	Pg	00 41 42.8	-0.1
FSK				S	Sg	00 41 47.3	+0.5
	comp=N,8μm,0.3s						
FSK	Fiskardo	0.29	36	P	Pg	00 41 42.8	-0.1
FSK				S	Sg	00 41 47.3	+0.5
KFL	Anninata	0.37	107	P	Pg	00 41 43.5	-0.7
KFL				S	Sg	00 41 48.8	-0.3
	comp=N,18μm,0.5s						
KFL	Anninata	0.37	107	P	Pg	00 41 43.4	-0.7
KFL				S	Sg	00 41 48.8	-0.3
KFL				AML	AML	00 41 49.2	
	comp=E,42113μm,0.4s						
KFL				AML	AML	00 41 49.3	
	comp=N,25593μm,0.3s						
VLMS	Volimes, Zakyn	0.42	144	P	Pg	00 41 44.5	-0.8
VLMS				S	Sg	00 41 51.2	+0.3
VLMS				AML	AML	00 41 51.5	
	comp=E,34026μm,0.3s						
VLMS				AML	AML	00 41 54.5	
	comp=N,25518μm,0.3s						
EVGI	Lefkada island	0.47	31	P	Pg	00 41 45.8	-0.3
EVGI				S	Sb	00 41 53.3	-0.9
EVGI	Lefkada island	0.47	31	P	Pg	00 41 45.9	-0.2
EVGI				S	Sg	00 41 53.0	+0.7
MGNA	Meganis	0.56	39	P	Pg	00 41 47.5	-0.3
MGNA				S	Sg	00 41 55.5	+0.3
MGNA				AML	AML	00 41 59.2	
	comp=N,2758μm,0.2s						
MGNA				AML	AML	00 42 01.0	
	comp=E,3000μm,0.6s						
ZAK2	Zakynthos	0.62	134	P	Pg	00 41 48.2	-0.6
ZAK2				S	Sb	00 41 58.5	+0.2
LKD2	Lefkada island	0.62	23	P	Pg	00 41 48.4	-0.5
LKD2	Lefkada island	0.62	23	P	Pg	00 41 48.5	-0.5
LKD2				AML	AML	00 42 04.9	
	comp=E,3830μm,0.3s						
LKD2				AML	AML	00 42 05.3	
	comp=N,2339μm,0.3s						
TSLK	Tsoukalades, L	0.65	22	P	Pg	00 41 48.8	-0.8
TSLK				S	Sg	00 41 58.7	+0.6
	comp=N,2μm,0.6s						
TSLK	Tsoukalades, L	0.65	22	P	Pg	00 41 48.7	-0.8
TSLK				S	Sg	00 41 58.7	+0.6
TSLK				AML	AML	00 42 06.4	
	comp=E,2838μm,0.5s						
TSLK				AML	AML	00 42 06.7	
	comp=N,3645μm,0.5s						
RLS	Riolos of Patr	0.90	100	P	Pg	00 41 53.3	-0.9
RLS				S	Sb	00 42 07.5	+1.0
	comp=N,615nm,0.5s						
RLS	Riolos of Patr	0.90	100	P	Pg	00 41 52.9	-1.4
RLS				S	Sb	00 42 06.2	-0.4
RLS				AML	AML	00 42 13.2	
	comp=N,1035μm,0.4s						
RLS				AML	AML	00 42 16.9	
	comp=E,1280μm,0.5s						
PVO	Paravola	1.01	67	P	Pg	00 41 55.5	-0.8
PVO				S	Sb	00 42 10.4	+0.7
	comp=E,1μm,0.6s						
PVO	Paravola	1.01	67	P	Pg	00 41 55.6	-0.8
PVO				AML	AML	00 42 16.4	
	comp=N,2889μm,0.8s						
PVO				AML	AML	00 42 17.6	
	comp=E,2950μm,0.5s						
DRO	Drossia	1.11	103	P	Pg	00 41 57.7	-0.6
DRO				S	Sn	00 42 15.1	+1.3
	comp=E,2μm,0.6s						
DRO	Drossia	1.11	103	P	Pg	00 41 57.0	-1.3
DRO				S	Sb	00 42 13.1	+0.5
DRO				AML	AML	00 42 20.8	
	comp=E,3839μm,0.5s						
DRO				AML	AML	00 42 29.1	
	comp=N,2620μm,0.5s						
EFP	Efpalio	1.25	80	P	Pn	00 42 02.0	+1.7
EFP	Efpalio	1.25	80	P	Pg	00 42 00.1	-0.7
EFP				S	Sg	00 42 16.4	-0.6
EFP				AML	AML	00 42 25.3	
	comp=E,1942μm,0.7s						
EFP				AML	AML	00 42 28.0	
	comp=N,1389μm,0.8s						
AMT	Artemida-Makis	1.28	122	P	Pn	00 42 02.3	+1.5
LAKA	Lakka	1.29	89	P	Pg	00 41 59.6	-2.0
LAKA	Lakka	1.29	89	P	Pg	00 41 59.6	-2.0
ANX	Ano Chora	1.29	73	P	Pn	00 42 02.1	+1.1
ANX				S	Sn	00 42 22.4	+4.0
	comp=N,1μm,0.6s						
ANX	Ano Chora	1.29	73	P	Pg	00 42 01.2	-0.6
ANX				AML	AML	00 42 24.3	
	comp=N,3259μm,0.6s						
ANX				AML	AML	00 42 25.2	
	comp=E,2402μm,0.9s						
EVR	Evrytania	1.34	58	P	Pg	00 42 02.1	-0.6
EVR				AML	AML	00 42 25.4	
	comp=E,876μm,1.2s						

EVR					AML	AML	00 42 27.4		
	comp=N,774µm,0.5s								
SERG	**Sergoula**	**1.36**	**81**	P	**Pg**		**00 42 01.2**	**-1.8**	
TRIZ	**Trizonia**	**1.37**	**83**	P	**Pb**		**00 42 02.9**	**+0.4**	
KALE	**Kalithea**	**1.42**	**83**	P	**Pn**		**00 42 03.4**	**+0.6**	
KLV	**Kalavryta, Ach**	**1.44**	**96**	P	**Pn**		**00 42 02.4**	**-0.6**	
KLV	**Kalavryta, Ach**	**1.44**	**96**	P	**Pn**		**00 42 02.3**	**-0.6**	
KLV					AML	AML	00 42 31.4		
	comp=E,485µm,0.6s								
KLV					AML	AML	00 42 36.4		
	comp=N,566µm,0.6s								
MAKR	**Makrakomi, Fth**	**1.61**	**60**	P	**Pg**		**00 42 08.1**	**+0.3**	
MAKR	**Makrakomi, Fth**	**1.61**	**60**	P	**Pb**		**00 42 06.4**	**-0.2**	
IDI	**Anoyia**	**4.68**	**127**	Pn	**Pn**		**00 42 49.6**	**+2.1**	
	comp=N,0.3nm,0.3s,baz=295,slow=14,SNR=3.0								
IDI					Sn	**Sn**	**00 43 42.8**	**+0.9**	
	comp=N,1.4nm,0.3s,baz=180,slow=23,SNR=7.3								
SOKA	**Soboth**	**9.32**	**337**	*e*Pn	**Pn**		**00 43 50.5**	**-0.7**	
	comp=N,3.1nm,0.4s,SNR=7.2								
OBKA	**Obir**	**9.32**	**335**	*e*Pn	**Pn**		**00 43 51.9**	**+0.5**	
	comp=N,1.6nm,0.3s,SNR=5.8								
KBA	**Koelnbreinsper**	**10.24**	**332**	*e*Pn	**Pn**		**00 44 04.0**	**+0.1**	
	comp=N,0.4nm,0.3s								
ABTA	**Abfaltersbach**	**10.29**	**328**	Pn	**Pn**		**00 44 04.1**	**-0.5**	
	comp=N,0.5nm,0.2s								
MOA	**Molln**	**10.60**	**337**	*e*Pn	**Pn**		**00 44 09.1**	**+0.4**	
	comp=N,1.5nm,0.3s								
WTTA	**Wattenberg**	**11.07**	**328**	Pn	**Pn**		**00 44 16.5**	**+1.2**	
	comp=N,1.4nm,0.4s								
SQTA	**Sankt Quirin**	**11.22**	**326**	Pn	**Pn**		**00 44 19.0**	**+1.7**	
	comp=N,0.9nm,0.3s								
GERES	**GERESS Array B**	**11.66**	**338**	Pn	**Pn**		**00 44 23.4**	**+0.2**	
	comp=N,0.3nm,0.3s,baz=160,slow=13,SNR=9.8								
GERES					Sn	**Sn**	**00 46 27.1**	**-6.3**	
	comp=N,0.2nm,0.3s,baz=154,slow=23,SNR=5.5								
HFS	**Hagfors**	**22.34**	**351**	P	**P**		**00 46 35.1**	**+0.6**	
	comp=N,9.3nm,1.1s,baz=169,slow=8.5,SNR=3.5								
FINES	**FINESS Array B**	**23.52**	**7**	P	**P**		**00 46 46.8**	**+0.1**	
	comp=N,1.6nm,0.9s,baz=190,slow=9.7,SNR=5.1								
TORD	**Torodi Ar. Bea**	**29.98**	**219**	P	**P**		**00 47 47.5**	**+2.0**	
	comp=N,0.5nm,0.7s,baz=29,slow=10,SNR=2.8								
ARCES	**ARCESS Array B**	**31.50**	**3**	P	**P**		**00 47 57.8**	**-0.6**	
	comp=N,2.9nm,1.0s,baz=188,slow=10,SNR=4.1								
MKAR	**Makanchi Array**	**45.40**	**58**	P	**P**		**00 49 53.9**	**-1.6**	
	comp=N,0.4nm,0.4s,baz=276,slow=7.2,SNR=15								
ZALV	**Zalesovo Beam**	**45.77**	**48**	P	**P**		**00 49 56.6**	**-1.6**	
	comp=N,0.9nm,0.4s,baz=277,slow=10.0,SNR=5.4								

IDC 27 00:46:07.1±1.7,55°42′N×35°37′W,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.3/45,mbtmp3.6/4,Error ellipse: s-maj=77.0km s-min=25.5km az=36.0,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**39.01**	**314**	P	P	00 53 34.4	-0.3
	0.6nm,0.8s,baz=61,slow=5.0,SNR=5.6						
BRTR	**Keskin Array B**	**47.12**	**79**	P	P	00 54 41.1	+0.2
	1.4nm,1.0s,baz=309,slow=5.9,SNR=3.7						
ILAR	**Eielson Array**	**49.26**	**328**	P	P	00 54 57.1	+0.2
	0.5nm,0.8s,baz=40,slow=6.5,SNR=6.9						
TORD	**Torodi Ar. Bea**	**51.03**	**131**	P	P	00 55 10.7	-0.2
	0.4nm,0.7s,baz=346,slow=9.2,SNR=4.4						
ASAR	**Alice Springs**	**147.30**	**18**	PKPbc	PKPdf	01 05 51.1	+1.1
	0.6nm,0.6s,baz=359,slow=2.6,SNR=4.8						

IDC 27 01:03:16.1±1.3,38°29′N×20°44′E,h0km,mb3.7/5, mb1 3.8/6,mb1mx3.4/34,mbtmp3.7/6,ML2.5/1,Error ellipse: s-maj=33.5km s-min=22.8km az=99.0
ATH 27 01:03:17.5,38°17′N×20°39′E,h12km±3km,ML3.1/10,Error ellipse: s-maj=3.3km s-min=0.8km az=81.0
THE 27 01:03:17.8,38°16′N×20°42′E,h12km±1km,ML3.4/3,Error ellipse: s-maj=1.9km s-min=0.5km az=72.0
ISC 27 01:03:17.8±1.1,38°18′N±0′03×20°43′E±0′06,h14km±5km, n33,σ0°65/48,mb3.8/5,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.12**	**91**	P	**Pg**	**01 03 21.0**	**-0.3**
VLS				S	**Sg**	**01 03 23.6**	**0.0**
	36µm,0.1s						
VLS	**Valsamata**	**0.12**	**91**	P	**Pg**	**01 03 21.0**	**-0.3**
VLS				S	**Sg**	**01 03 23.5**	**0.0**
VLS				AML	AML	01 03 23.7	
	comp=N,83373µm,0.2s						
VLS				AML	AML	01 03 23.7	
	comp=E,56480µm,0.1s						
KFL	**Anninata**	**0.29**	**104**	P	**Pg**	**01 03 23.3**	**-0.5**
KFL				S	**Sg**	**01 03 28.5**	**+0.6**
	comp=E,9µm,0.4s						
KFL	**Anninata**	**0.29**	**104**	P	**Pg**	**01 03 23.6**	**-0.2**
KFL				S	**Sg**	**01 03 28.6**	**+0.7**
KFL				AML	AML	01 03 28.9	
	comp=N,15438µm,0.4s						
KFL				AML	AML	01 03 29.7	
	comp=E,19225µm,0.3s						
FSK	**Fiskardo**	**0.30**	**20**	P	**Pg**	**01 03 24.1**	**+0.1**
FSK				S	**Sb**	**01 03 29.0**	**-0.6**
	comp=E,8µm,0.4s						
FSK	**Fiskardo**	**0.30**	**20**	P	**Pg**	**01 03 24.1**	**+0.1**
FSK				S	**Sb**	**01 03 29.1**	**-0.5**
VLMS	**Volimes, Zakyn**	**0.35**	**149**	P	**Pg**	**01 03 24.7**	**-0.3**
VLMS				S	**Sb**	**01 03 30.5**	**-0.8**
VLMS				AML	AML	01 03 30.8	
	comp=E,45577µm,0.1s						
VLMS				AML	AML	01 03 30.9	
	comp=N,29000µm,0.2s						
EVGI	**Lefkada island**	**0.47**	**22**	P	**Pg**	**01 03 27.2**	**0.0**
EVGI				S	**Sb**	**01 03 34.7**	**-0.1**
EVGI	**Lefkada island**	**0.47**	**22**	P	**Pg**	**01 03 27.1**	**0.0**
EVGI				S	**Sb**	**01 03 34.7**	**-0.1**
ZAK2	**Zakynthos**	**0.54**	**137**	P	**Pg**	**01 03 28.4**	**0.0**
MGNA	**Meganis**	**0.55**	**30**	P	**Pg**	**01 03 28.5**	**-0.2**
MGNA				S	**Sb**	**01 03 36.7**	**-0.2**
MGNA				AML	AML	01 03 37.7	
	comp=N,2441µm,0.1s						
MGNA				AML	AML	01 03 37.9	
	comp=E,2128µm,0.3s						
LKD2	**Lefkada island**	**0.63**	**16**	P	**Pg**	**01 03 30.3**	**+0.1**
LKD2				S	**Sg**	**01 03 38.5**	**-0.1**
LKD2				AML	AML	01 03 44.5	
	comp=E,2040µm,0.5s						
LKD2				AML	AML	01 03 45.6	
	comp=N,1613µm,0.4s						
TSLK	**Tsoukalades, L**	**0.67**	**15**	P	**Pg**	**01 03 30.7**	**-0.1**
TSLK				S	**Sg**	**01 03 39.6**	**-0.1**
TSLK				AML	AML	01 03 47.3	
	comp=E,2724µm,0.5s						
TSLK				AML	AML	01 03 48.6	
	comp=N,2839µm,0.6s						
RLS	**Riolos of Patr**	**0.82**	**98**	P	**Pg**	**01 03 33.5**	**-0.3**
RLS	**Riolos of Patr**	**0.82**	**98**	P	**Pg**	**01 03 33.6**	**-0.1**
RLS				S	**Sb**	**01 03 46.1**	**+1.3**
RLS				AML	AML	01 03 50.7	
	comp=E,1012µm,0.4s						
RLS				AML	AML	01 03 50.8	
	comp=N,971µm,0.5s						
PVO	**Paravola**	**0.96**	**63**	P	**Pg**	**01 03 36.3**	**-0.1**
PVO	**Paravola**	**0.96**	**63**	P	**Pb**	**01 03 36.4**	**+0.2**
PVO				AML	AML	01 03 52.9	
	comp=E,9189µm,0.3s						
PVO				AML	AML	01 03 53.0	
	comp=N,4002µm,0.3s						
DRO	**Drossia**	**1.03**	**102**	P	**Pb**	**01 03 37.0**	**-0.4**
DRO	**Drossia**	**1.03**	**102**	P	**Pn**	**01 03 37.9**	**+0.1**
DRO				S	**Sn**	**01 03 52.5**	**+0.4**
DRO				AML	AML	01 03 58.4	
	comp=E,2602µm,0.5s						
DRO				AML	AML	01 04 05.6	
	comp=N,1955µm,0.6s						
EFP	**Efpalio**	**1.18**	**78**	P	**Pg**	**01 03 41.0**	**+0.4**
EFP				AML	AML	01 04 04.0	
	comp=N,1070µm,0.4s						
EFP				AML	AML	01 04 04.5	
	comp=E,1404µm,0.4s						
AMT	**Artemida-Makis**	**1.20**	**122**	P	**Pn**	**01 03 39.0**	**-1.1**
AMT	**Artemida-Makis**	**1.20**	**122**	P	**Pg**	**01 03 40.5**	**-0.3**
LAKA	**Lakka**	**1.22**	**87**	P	**Pn**	**01 03 40.4**	**0.0**
ANX	**Ano Chora**	**1.24**	**70**	P	**Pn**	**01 03 41.1**	**+0.3**
EVR	**Evrytania**	**1.30**	**55**	P	**Pg**	**01 03 42.8**	**-0.1**
KALE	**Kalithea**	**1.36**	**81**	P	**Pg**	**01 03 43.5**	**-0.4**
KLV	**Kalavryta, Ach**	**1.36**	**95**	P	**Pn**	**01 03 42.8**	**+0.5**
IDI	**Anoyia**	**4.60**	**128**	Pn	**Pn**	**01 04 29.4**	**+2.5**
	comp=E,0.2nm,0.3s,baz=250,slow=15,SNR=2.2						
IDI				Sn	**Sn**	**01 05 18.9**	**-1.2**
	comp=E,0.5nm,0.3s,baz=185,slow=9.7,SNR=3.4						
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**01 08 16.3**	**+0.9**
	comp=E,3.6nm,0.8s,baz=160,slow=14,SNR=5.2						
FINES	**FINESS Array B**	**23.55**	**7**	P	**P**	**01 08 26.4**	**-1.0**
	comp=E,3.0nm,1.0s,baz=172,slow=11,SNR=4.8						
TORD	**Torodi Ar. Bea**	**29.99**	**219**	P	**P**	**01 09 26.9**	**+1.0**
	comp=E,0.6nm,1.0s,baz=34,slow=10,SNR=2.4						
ARCES	**ARCESS Array B**	**31.53**	**3**	P	**P**	**01 09 38.2**	**-0.9**
	comp=E,2.2nm,0.9s,baz=196,slow=8.4,SNR=3.0						
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**	**01 11 34.8**	**-0.7**
	comp=E,0.2nm,0.4s,baz=271,slow=7.2,SNR=11						

BEO 27 01:03:42.8±0.6,43°22′N×19°83′E,h0km,ML1.7/7, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.11**	**69**	*e*Pg	Pg	01 03 44.5	-0.4
SJES				*e*Sg	Sg	01 03 46.3	-0.1
IVAS	**Ivanjica**	**0.43**	**33**	*e*Pg	Pg	01 03 49.6	-1.4
IVAS				*e*Sg	Sg	01 03 55.0	-1.5
BBLS	**Lazići**	**0.71**	**334**	*e*Pg	Pg	01 03 55.0	-1.5
BBLS				*e*Sg	Sg	01 04 05.9	+0.1
DIVS	**Divibare**	**0.89**	**8**	*e*Pg	Pg	01 03 59.4	-0.4
DIVS				*e*Sg	Sg	01 04 11.4	+0.2
GRUS	**Gruza**	**0.93**	**44**	*e*Sg	Pg	01 03 59.8	-0.8
GRUS	**Gruza**	**0.93**	**44**	*e*Pg	Sg	01 04 12.1	-0.5
SELS	**Selova**	**0.94**	**90**	*e*Pg	Pg	01 03 59.7	-1.1
SELS				*e*Sg	Sg	01 04 13.9	+0.9
TRUS	**Trudelj**	**1.09**	**22**	*e*Pg	Pg	01 04 02.4	-1.2
TRUS				*e*Sg	Sg	01 04 17.4	-0.3
BOVS	**Bovan**	**1.43**	**72**	*e*Pg	Pn	01 04 08.8	-1.2
BOVS				*e*Sg	Sg	01 04 28.6	0.0
BARS	**Barje**	**1.51**	**105**	*e*Sg	Pg	01 04 09.9	-1.8
BARS	**Barje**	**1.51**	**105**	*e*Pg	Sg	01 04 29.8	-1.5

IDC 27 01:06:40.1±1.0,38°34′N×20°37′E,h0km,mb3.9/10, mb1 4.0/14,mb1mx3.8/37,mbtmp3.9/14,ML3.7/3,Error ellipse: s-maj=22.0km s-min=15.4km az=48.0
THE 27 01:06:40.2,38°23′N×20°32′E,h2km±8km,ML3.7/10,Error ellipse: s-maj=8.6km s-min=0.3km az=1.0
ATH 27 01:06:41.1,38°25′N×20°43′E,h12km±2km,ML3.7/13,Error ellipse: s-maj=2.3km s-min=0.7km az=88.0
NEIC 27 01:06:41.7±2.5,38°27′N±0°05×20°42′E±0°04,h7km±5km, Error ellipse: s-maj=8.0km s-min=4.8km az=165.0
ISC 27 01:06:41.5±0.9,38°27′N±0°02×20°42′E±0°03,h10km±5km, n209,σ1°34/245,mb4.2/16,10C-9D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.16**	**124**	P	**Pg**	**01 06 44.2**	**-0.8**
VLS				S	**Sg**	**01 06 47.1**	**-0.4**
	47µm,0.4s						
VLS	**Valsamata**	**0.16**	**124**	P	**Pg**	**01 06 44.3**	**-0.8**
VLS				S	**Sg**	**01 06 47.1**	**-0.4**
VLS				AML	AML	01 06 47.2	
	comp=N,93581µm,0.4s						
VLS				AML	AML	01 06 47.9	
	comp=E,64596µm,0.3s						
FSK	**Fiskardo**	**0.22**	**30**	P	**Pg**	**01 06 46.0**	**-0.1**
FSK				S	**Sg**	**01 06 50.0**	**+0.8**
	comp=E,31µm,0.5s						
FSK	**Fiskardo**	**0.22**	**30**	P	**Pg**	**01 06 46.2**	**0.0**
FSK				S	**Sg**	**01 06 49.8**	**+0.6**
FSK	**Fiskardo**	**0.22**	**30**	P	**Pg**	**01 06 46.0**	**-0.1**
FSK				S	**Sg**	**01 06 50.0**	**+0.8**
KFL	**Anninata**	**0.33**	**118**	P	**Pg**	**01 06 47.5**	**-0.5**
KFL				S	**Sg**	**01 06 53.4**	**+0.9**
	comp=E,24µm,0.5s						
KFL	**Anninata**	**0.33**	**118**	P	**Pg**	**01 06 47.6**	**-0.5**
KFL				S	**Sg**	**01 06 52.2**	**-0.3**
KFL				AML	AML	01 06 54.2	
	comp=E,63635µm,0.4s						
KFL				AML	AML	01 07 00.0	
	comp=N,52610µm,0.8s						
KFL	**Anninata**	**0.33**	**118**		**Pg**	**01 06 47.3**	**-0.8**
KFL	**Anninata**	**0.33**	**118**		**Sg**	**01 06 53.4**	**+0.9**
EVGI	**Lefkada island**	**0.40**	**28**	P	**Pg**	**01 06 49.0**	**-0.4**
EVGI				S	**Sb**	**01 06 56.4**	**-0.5**
EVGI	**Lefkada island**	**0.40**	**28**	P	**Pg**	**01 06 49.0**	**-0.4**
EVGI	**Lefkada island**	**0.40**	**28**		**Pg**	**01 06 49.0**	**-0.4**
EVGI					**Sb**	**01 06 56.4**	**-0.5**
VLMS	**Volimes, Zakyn**	**0.43**	**154**	P	**Pg**	**01 06 49.4**	**-0.7**
VLMS				S	**Sg**	**01 06 55.3**	**-0.5**
VLMS				AML	AML	01 07 03.1	
	comp=N,32408µm,0.4s						
VLMS				AML	AML	01 07 03.1	
	comp=E,26367µm,0.5s						
MGNA	**Meganis**	**0.49**	**37**	P	**Pg**	**01 06 50.9**	**-0.1**
MGNA				S	**Sg**	**01 06 57.7**	**+0.3**
MGNA				AML	AML	01 06 59.2	
	comp=N,34435µm,0.4s						
MGNA				AML	AML	01 06 59.3	
	comp=E,16483µm,0.2s						
MGNA	**Meganis**	**0.49**	**37**		**Pg**	**01 06 50.6**	**-0.4**
LKD2	**Lefkada island**	**0.55**	**20**	P	**Pg**	**01 06 52.0**	**-0.3**
LKD2				S	**Sb**	**01 07 00.6**	**-0.8**
	comp=E,5µm,0.7s						
LKD2	**Lefkada island**	**0.55**	**20**	P	**Pg**	**01 06 51.9**	**-0.4**
LKD2				S	**Sg**	**01 06 59.7**	**+0.1**
LKD2				AML	AML	01 07 08.4	
	comp=N,9438µm,0.5s						
LKD2				AML	AML	01 07 11.4	
	comp=E,9340µm,0.9s						
LKD2	**Lefkada island**	**0.55**	**20**		**Pg**	**01 06 52.5**	**+0.1**
TSLK	**Tsoukalades, L**	**0.59**	**18**	P	**Pg**	**01 06 52.6**	**-0.3**
TSLK	**Tsoukalades, L**	**0.59**	**18**	P	**Pg**	**01 06 52.8**	**-0.2**
TSLK				S	**Sb**	**01 07 01.3**	**-1.0**
TSLK				AML	AML	01 07 08.8	
	comp=E,12887µm,0.5s						
TSLK				AML	AML	01 07 12.3	
	comp=N,10910µm,0.6s						
TSLK	**Tsoukalades, L**	**0.59**	**18**		**Pg**	**01 06 53.0**	**0.0**
RLS	**Riolos of Patr**	**0.85**	**104**	P	**Pg**	**01 06 57.0**	**-0.9**
RLS				S	**Sb**	**01 07 10.7**	**+0.8**
	comp=N,2µm,0.4s						
RLS	**Riolos of Patr**	**0.85**	**104**	P	**Pg**	**01 06 56.8**	**-1.1**
RLS				S	**Sg**	**01 07 08.6**	**-0.4**
RLS				AML	AML	01 07 11.8	
	comp=N,4764µm,0.5s						
RLS				AML	AML	01 07 16.9	
	comp=E,4793µm,0.5s						
RLS	**Riolos of Patr**	**0.85**	**104**		**Pg**	**01 06 56.9**	**-0.9**
RLS	**Riolos of Patr**	**0.85**	**104**		**Sb**	**01 07 10.7**	**+0.8**
PVO	**Paravola**	**0.94**	**68**	P	**Pg**	**01 06 59.4**	**-0.1**
PVO				S	**Sn**	**01 07 14.7**	**+0.5**
	comp=E,6µm,0.5s						
PVO	**Paravola**	**0.94**	**68**	P	**Pg**	**01 06 59.2**	**-0.3**
PVO				S	**Sg**	**01 07 11.6**	**-0.1**
PVO				AML	AML	01 07 20.7	
	comp=N,14550µm,0.8s						
PVO				AML	AML	01 07 21.5	
	comp=E,10050µm,0.7s						
PVO	**Paravola**	**0.94**	**68**		**Pg**	**01 06 59.3**	**-0.3**
PVO	**Paravola**	**0.94**	**68**		**Sn**	**01 07 14.7**	**+0.5**
DRO	**Drossia**	**1.06**	**107**	P	**Pg**	**01 07 01.1**	**-0.9**
DRO				S	**Sn**	**01 07 17.8**	**+0.3**
	comp=E,5µm,0.6s						
DRO	**Drossia**	**1.06**	**107**	P	**Pg**	**01 07 01.3**	**-0.7**
DRO				S	**Sb**	**01 07 15.9**	**-0.2**
DRO				AML	AML	01 07 23.2	
	comp=E,11218µm,0.6s						
DRO				AML	AML	01 07 25.4	
	comp=N,9570µm,0.6s						
DRO	**Drossia**	**1.06**	**107**		**Pg**	**01 07 01.2**	**-0.7**
UPR	**University Cam**	**1.07**	**89**	P	**Pn**	**01 07 02.4**	**-0.3**
EFP	**Efpalio**	**1.18**	**82**	P	**Pg**	**01 07 03.0**	**-1.2**
EFP				S	**Sn**	**01 07 22.1**	**+1.9**
	comp=N,3µm,0.5s						
EFP	**Efpalio**	**1.18**	**82**	P	**Pg**	**01 07 03.2**	**-0.9**
EFP				S	**Sb**	**01 07 19.5**	**+0.1**
EFP				AML	AML	01 07 29.5	
	comp=E,4557µm,0.5s						
EFP				AML	AML	01 07 30.1	
	comp=N,5777µm,0.5s						
EFP	**Efpalio**	**1.18**	**82**		**Pg**	**01 07 03.6**	**-0.6**
ANX	**Ano Chora**	**1.22**	**74**	P	**Pg**	**01 07 04.1**	**-0.9**
ANX				S	**Sn**	**01 07 23.6**	**+2.1**
	comp=N,7µm,0.7s						
ANX	**Ano Chora**	**1.22**	**74**	P	**Pg**	**01 07 03.9**	**-1.1**
ANX				S	**Sb**	**01 07 20.9**	**+0.2**
ANX				AML	AML	01 07 31.7	
	comp=N,18108µm,0.6s						
ANX				AML	AML	01 07 32.1	
	comp=E,9664µm,0.8s						
LAKA	**Lakka**	**1.23**	**91**	P	**Pb**	**01 07 03.7**	**-1.2**
LAKA	**Lakka**	**1.23**	**91**	P	**Pb**	**01 07 03.9**	**-0.9**
LAKA	**Lakka**	**1.23**	**91**		**Pb**	**01 07 03.6**	**-1.3**
AMT	**Artemida-Makis**	**1.25**	**125**	P	**Pn**	**01 07 04.1**	**-1.1**
AMT	**Artemida-Makis**	**1.25**	**125**	P	**Pn**	**01 07 04.2**	**-0.9**
AMT				S	**Sg**	**01 07 21.9**	**0.0**
AMT				AML	AML	01 07 36.3	
	comp=N,6150µm,0.6s						
AMT				AML	AML	01 07 38.2	
	comp=E,6148µm,0.5s						
IGT	**Igoumenitsa**	**1.27**	**357**	P	**Pn**	**01 07 04.9**	**-0.4**
IGT				S	**Sn**	**01 07 23.3**	**+0.9**
	comp=E,1µm,0.7s						
IGT	**Igoumenitsa**	**1.27**	**357**	P	**Pg**	**01 07 05.5**	**-0.3**
EVR	**Evrytania**	**1.27**	**59**	P	**Pn**	**01 07 04.5**	**-0.9**
EVR	**Evrytania**	**1.27**	**59**	P	**Pn**	**01 07 05.0**	**-0.4**
EVR	**Evrytania**	**1.27**	**59**		**Pg**	**01 07 05.8**	**-0.1**
SERG	**Sergoula**	**1.29**	**83**	P	**Pn**	**01 07 05.0**	**-0.7**
SERG	**Sergoula**	**1.29**	**83**	P	**Pn**	**01 07 05.5**	**-0.3**
TRIZ	**Trizonia**	**1.30**	**85**	P	**Pn**	**01 07 04.6**	**-1.2**
ALIK	**Aliki, Aigiali**	**1.33**	**90**	P	**Pn**	**01 07 05.6**	**-0.6**
KALE	**Kalithea**	**1.36**	**84**	P	**Pn**	**01 07 05.7**	**-0.9**
KALE	**Kalithea**	**1.36**	**84**	P	**Pn**	**01 07 06.4**	**-0.3**
KLV	**Kalavryta, Ach**	**1.38**	**99**	P	**Pn**	**01 07 06.2**	**-0.8**
KLV	**Kalavryta, Ach**	**1.38**	**99**	P	**Pn**	**01 07 06.6**	**-0.4**
KLV				S	**Sb**	**01 07 25.2**	**0.0**
KLV				AML	AML	01 07 30.3	
	comp=N,4177µm,0.4s						
KLV				AML	AML	01 07 31.0	
	comp=E,3278µm,0.5s						
JAN	**Janina**	**1.43**	**13**	P	**Pb**	**01 07 08.2**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.53**	**60**	P	**Pb**	**01 07 10.0**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.53**	**60**	P	**Pb**	**01 07 10.0**	**-0.1**
ITM	**Ithomi**	**1.61**	**132**	P	**Pn**	**01 07 10.0**	**-0.1**
ITM	**Ithomi**	**1.61**	**132**	P	**Pb**	**01 07 10.8**	**-0.7**
ITM	**Ithomi**	**1.61**	**132**	Pn	**Pn**	**01 07 10.3**	**+0.2**
AGG	**Agios Georgios**	**1.68**	**63**	P	**Pb**	**01 07 12.2**	**-0.3**
AGG	**Agios Georgios**	**1.68**	**63**		**Pb**	**01 07 12.3**	**-0.3**
PYL	**PYLOS**	**1.73**	**142**	P	**Pn**	**01 07 10.3**	**-1.3**
PYL	**PYLOS**	**1.73**	**142**	P	**Pb**	**01 07 12.5**	**-0.8**
KLMT	**Kalamata**	**1.77**	**132**	P	**Pn**	**01 07 11.7**	**-0.5**
VLX	**Vlachokerasia**	**1.79**	**119**	P	**Pn**	**01 07 12.8**	**+0.2**
VLX	**Vlachokerasia**	**1.79**	**119**	P	**Pb**	**01 07 13.9**	**-0.6**
THL	**Klokotos Trika**	**1.80**	**43**	P	**Pb**	**01 07 14.4**	**-0.1**
LTK	**Loutraki**	**2.02**	**96**	P	**Pb**	**01 07 17.1**	**-1.3**
LOUT	**Loutraki**	**2.03**	**97**	P	**Pb**	**01 07 17.3**	**-1.3**
LRSO	**Larissa Observ**	**2.08**	**47**	P	**Pb**	**01 07 18.7**	**-0.7**
DID	**Didima**	**2.35**	**108**	P	**Pn**	**01 07 21.6**	**+1.3**
SCTE	**Santa Cesarea**	**2.36**	**321**		**Pn**	**01 07 20.7**	**+0.3**
LIT	**Litokhoron**	**2.44**	**41**		**Pn**	**01 07 23.2**	**+1.8**
VLI	**Veliai**	**2.53**	**127**	P	**Pn**	**01 07 22.7**	**0.0**
FNA	**Florina**	**2.62**	**16**	Pn	**Pn**	**01 07 25.9**	**+1.9**
VLY	**Voula,Athens**	**2.69**	**98**	P	**Pn**	**01 07 26.1**	**+1.1**
OHR	**Ohrid**	**2.86**	**6**	*i* Pn	**Pb**	**01 07 30.3**	**-2.4**
TIP	**Timpagrande**	**3.01**	**289**	⇑P	**Pn**	**01 07 29.6**	**+0.3**
TIP	**Timpagrande**	**3.01**	**289**	⇑S	**Sn**	**01 08 07.0**	**+1.6**
TIP	**Timpagrande**	**3.01**	**289**	Pn	**Pn**	**01 07 29.9**	**+0.6**
TIR	**Tirane**	**3.11**	**352**	⇑P	**Pn**	**01 07 32.0**	**+1.3**
TIR	**Tirane**	**3.11**	**352**		**Pn**	**01 07 31.6**	**+1.0**
STIP	**Stip**	**3.68**	**21**	*i* Pn	**Pn**	**01 07 42.3**	**+3.8**
MATE	**Matera**	**3.73**	**311**	⇓P	**Pn**	**01 07 40.3**	**+1.1**
SG1	**Sgolgore (BA)**	**3.87**	**313**	*e*Pn	**Pn**	**01 07 42.0**	**+0.9**
SG1					Sn	**Sn**	**01 08 25.9**	**-0.8**
BAI	**Bari**	**3.94**	**317**	*e*Pn	**Pn**	**01 07 42.8**	**+0.8**
DRME	**Dracevica, Mon**	**4.03**	**347**	*e*Pn	**Pn**	**01 07 43.2**	**-0.1**
PDG	**Podgorica**	**4.25**	**348**	⇑P	**Pn**	**01 07 45.3**	**-1.1**
PDG	**Podgorica**	**4.25**	**348**	⇑S	**Sn**	**01 08 34.9**	**-1.2**
PDG	**Podgorica**	**4.25**	**348**	*e*Pn	**Pn**	**01 07 45.0**	**-1.4**
PDG	**Podgorica**	**4.25**	**348**		**Pn**	**01 07 46.3**	**0.0**
ACER	**Acerenza**	**4.28**	**307**		**Pn**	**01 07 48.5**	**+1.7**
HCY	**Herceg Novi**	**4.43**	**341**	*e*Pn	**Pn**	**01 07 47.2**	**-1.6**
IDI	**Anoyia**	**4.66**	**128**	Pn	**Pn**	**01 07 53.3**	**+1.2**
	comp=E,0.5nm,0.3s,baz=314,slow=8.5,SNR=5.7						
IDI				Sn	**Sn**	**01 08 47.8**	**+1.6**

MOA	**Molln**	**10.58**	**337**	*e*Pn		**Pn**	**01 09 12.8**	**-0.4**
	comp=E,3.3nm,0.3s,SNR=15								
WTTA	**Wattenberg**	**11.06**	**327**	*e*Pn		**Pn**	**01 09 20.0**	**+0.1**
	comp=E,3.6nm,0.3s,SNR=9.0								
WATA	**Walderalm**	**11.14**	**327**	*e*Pn		**Pn**	**01 09 20.6**	**-0.4**
	comp=E,8.2nm,0.5s,SNR=9.5								
SQTA	**Sankt Quirin**	**11.21**	**326**	*e*Pn		**Pn**	**01 09 22.9**	**+1.0**
	comp=E,2.5nm,0.4s								
FUORN	**Ofenpass-Fuorn**	**11.22**	**321**	Pn		**Pn**	**01 09 24.2**	**+2.0**
FUORN						**Sn**	**01 11 24.8**	**-2.8**
FETA	**Feichten**	**11.28**	**324**	*e*Pn		**Pn**	**01 09 25.8**	**+2.8**
	comp=E,1.3nm,0.5s								
MOTA	**Moosalm**	**11.36**	**326**	*e*Pn		**Pn**	**01 09 25.4**	**+1.4**
	comp=E,5.1nm,0.7s								
DAVOX	**Davos/Dischmat**	**11.52**	**321**	Pn		**Pn**	**01 09 27.3**	**+1.1**
	comp=E,0.3nm,0.3s,baz=118,slow=22,SNR=5.0								
GEC2	**GERESS Array S**	**11.64**	**337**	Pn		**Pn**	**01 09 26.8**	**-0.9**
GERES	**GERESS Array B**	**11.64**	**337**	Pn		**Pn**	**01 09 25.8**	**-1.9**
	comp=E,0.7nm,0.3s,baz=157,slow=14,SNR=16								
GERES				Sn		**Sn**	**01 11 30.7**	**-7.1**
	comp=E,0.2nm,0.3s,baz=156,slow=25,SNR=2.5								
KHC	**Kasperske Hory**	**11.93**	**338**	*e*PN		**Pn**	**01 09 29.8**	**-1.9**
KHC				*e*SN		**Sn**	**01 11 40.3**	**-4.5**
KHC	**Kasperske Hory**	**11.93**	**338**	Pn		**Pn**	**01 09 30.8**	**-0.9**
SENIN	**Lac Senin/Sane**	**12.63**	**314**	Pn		**Pn**	**01 09 42.0**	**+0.6**
SENIN				Sn		**Sn**	**01 11 59.6**	**-2.5**
MMAI	**Mount Meron Ar**	**13.26**	**109**	Pn		**Pn**	**01 09 47.5**	**-2.5**
	comp=E,0.5nm,0.3s,baz=313,slow=9.9,SNR=6.1								
ECH	**Echery**	**13.85**	**320**	Pn		**Pn**	**01 09 58.1**	**+0.2**
AKBB	**Malin Array Si**	**13.91**	**24**	Pn		**Pn**	**01 10 01.3**	**+2.6**
GNI	**Garni**	**13.93**	**77**	Pn		**Pn**	**01 11 05.7**	**+2.3**
	comp=E,0.5nm,0.3s,baz=293,slow=7.7,SNR=6.7								
GNI	**Garni**	**18.93**	**77**			**Pn**	**01 11 05.4**	**+2.1**
HFS	**Hagfors**	**22.30**	**351**	P		**P**	**01 11 38.6**	**-0.3**
	comp=E,2.4nm,0.5s,baz=150,slow=12,SNR=16								
NC602	**NORSAR Array S**	**23.18**	**349**	P		**P**	**01 11 48.9**	**+0.9**
FINES	**FINESS Array B**	**23.47**	**7**	P		**P**	**01 11 50.2**	**-0.8**
	comp=E,1.9nm,0.6s,baz=175,slow=9.1,SNR=18								
FIA1	**FINESS Array S**	**23.47**	**7**			**P**	**01 11 49.4**	**-1.6**
FIA1				IAmb		IAmb	01 11 54.6		
	comp=Z,13nm,1.1s								
NC405	**NORSAR Array S**	**23.51**	**349**	P		**P**	**01 11 51.0**	**-0.4**
NC405				IAmb		IAmb	01 11 57.9		
	comp=Z,4.7nm,0.7s								
NB201	**NORSAR Array S**	**23.51**	**349**	P		**P**	**01 11 51.5**	**0.0**
NB2	**NORSAR Subarra**	**23.52**	**349**	P		**P**	**01 11 50.8**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=153,slow=9.3								
NOA	**NORSAR Array B**	**23.52**	**349**	P		**P**	**01 11 51.3**	**-0.3**
	comp=Z,0.4nm,0.5s,baz=158,slow=9.6,SNR=7.9								
NBO00	**NORSAR Array S**	**23.58**	**348**	P		**P**	**01 11 53.1**	**+1.0**
NC303	**NORSAR Array S**	**23.67**	**349**	P		**P**	**01 11 52.6**	**-0.4**
NC204	**NORSAR Array S**	**23.81**	**348**	P		**P**	**01 11 55.3**	**+0.9**
GEYT	**Alibeck**	**29.54**	**79**	P		**P**	**01 12 47.3**	**+1.0**
	comp=Z,2.2nm,0.6s,baz=264,slow=10,SNR=6.9								
GEYT	**Alibeck**	**29.54**	**79**	IAmb		IAmb	01 12 48.4		
	comp=Z,1.5nm,0.6s								
TOA0	**Torodi Ar. Sit**	**30.05**	**219**	P		**P**	**01 12 50.8**	**-0.1**
TORD	**Torodi Ar. Bea**	**30.05**	**219**	P		**P**	**01 12 50.5**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=41,slow=6.8,SNR=6.4								
TORD	**Torodi Ar. Bea**	**30.05**	**219**	IAmb		IAmb	01 12 59.6		
	comp=Z,1.3nm,1.0s								
ARCES	**ARCESS Array B**	**31.45**	**3**	P		**P**	**01 13 02.6**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=191,slow=11,SNR=10								
UOSS	**Minazif**	**33.03**	**103**	P		**P**	**01 13 17.4**	**+0.2**
UOSS				IAmb		IAmb	01 13 19.3		
	comp=Z,2.6nm,0.9s								
KK31	**Karatay Array**	**37.83**	**66**	P		**P**	**01 13 59.0**	**+0.7**
KK31				IAmb		IAmb	01 14 02.2		
	comp=Z,2.7nm,0.5s								
KKAR	**Karatay Array**	**37.83**	**66**	P		**P**	**01 13 59.0**	**+0.7**
KKAR				IAmb		IAmb	01 14 02.2		
	comp=Z,2.7nm,0.5s								
MK31	**Makanchi Array**	**45.32**	**58**	P		**P**	**01 14 59.3**	**-0.3**
MK31				IAmb		IAmb	01 15 02.0		
	comp=Z,1.6nm,0.6s								
MKAR	**Makanchi Array**	**45.32**	**58**	P		**P**	**01 14 59.1**	**-0.5**
	comp=Z,1.6nm,0.4s,baz=276,slow=7.0,SNR=31								
MKAR				PcP		**PcP**	**01 16 40.2**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=270,slow=5.9,SNR=3.7								
ZAA0	**Zalesovo Array**	**45.69**	**48**	P		**P**	**01 15 02.4**	**0.0**
ZALV	**Zalesovo Beam**	**45.69**	**48**	P		**P**	**01 15 01.9**	**-0.5**
	comp=Z,2.7nm,0.4s,baz=273,slow=9.0,SNR=13								
CMAR	**Chiang Mai Arr**	**69.95**	**82**	P		**P**	**01 17 52.9**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=302,slow=8.1,SNR=5.2								
YKA	**Yellowknife Ar**	**73.28**	**340**	P		**P**	**01 18 13.5**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=3.8,slow=27,SNR=3.9								

*THE **27** 01:16:15.4,38°.21N×20°.36E,h7km±2km, ML3.2/6, Error ellipse: s-maj=2.4km s-min=0.3km az=78.0*
*ATH **27** 01:16:15.6,38°.22N×20°.41E,h13km±3km, ML3.2/14, Error ellipse: s-maj=3.4km s-min=0.9km az=81.0*
*IDC **27** 01:16:16.8±1.4,38°.55N×20°.49E,h0km, mb3.6/5, mb1 3.6/6, mb1mx3.4/38, mbtmp3.6/6, ML3.4/1, MS3.6/1, Ms1 3.6/1, ms1mx2.8/38, Error ellipse: s-maj=30.9km s-min=23.4km az=104.0*

ISC 27 01:16:15.7±1.1, 38°.23N±0°.03×20°.40E±0°.05, h12km±6km, n52, σ0s68/68, mb3.9/5, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.16**	**108**	P		**Pg**	**01 16 19.1**	**-0.2**
VLS				S		**Sg**	**01 16 21.7**	**-0.2**
	44μm,0.2s							
VLS	**Valsamata**	**0.16**	**108**	P		**Pg**	**01 16 19.1**	**-0.2**
VLS				S		**Sg**	**01 16 21.7**	**-0.2**
VLS				AML		AML	01 16 21.9	
	comp=N,83730μm,0.3s							
VLS				AML		AML	01 16 22.4	
	comp=E,91172μm,0.1s							
FSK	**Fiskardo**	**0.27**	**29**	P		**Pg**	**01 16 21.0**	**-0.2**
FSK				S		**Sg**	**01 16 25.5**	**+0.6**
	comp=E,8μm,0.4s							
FSK	**Fiskardo**	**0.27**	**29**	P		**Pg**	**01 16 21.2**	**0.0**
FSK				S		**Sg**	**01 16 25.0**	**+0.1**
KFL	**Anninata**	**0.33**	**111**	P		**Pg**	**01 16 22.3**	**0.0**
KFL				S		**Sb**	**01 16 27.8**	**-0.9**
	comp=E,11μm,0.4s							
KFL	**Anninata**	**0.33**	**111**	P		**Pg**	**01 16 22.3**	**0.0**
KFL				S		**Sg**	**01 16 27.3**	**+0.6**
KFL				AML		AML	01 16 27.9	
	comp=N,21934μm,0.5s							
KFL				AML		AML	01 16 30.8	
	comp=E,20331μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.41**	**149**	P		**Pg**	**01 16 23.9**	**+0.2**
VLMS				S		**Sg**	**01 16 29.5**	**+0.4**
VLMS				AML		AML	01 16 38.6	
	comp=N,10776μm,0.5s							
VLMS				AML		AML	01 16 39.3	
	comp=E,8337μm,0.6s							
EVGI	**Lefkada island**	**0.44**	**27**	P		**Pg**	**01 16 24.5**	**+0.1**
EVGI				S		**Sb**	**01 16 31.7**	**-0.3**
EVGI	**Lefkada island**	**0.44**	**27**	P		**Pg**	**01 16 24.5**	**+0.1**
EVGI				S		**Sg**	**01 16 31.4**	**+1.1**
MGNA	**Meganis**	**0.53**	**35**	P		**Pg**	**01 16 25.7**	**-0.4**
MGNA				S		**Sg**	**01 16 33.5**	**+0.5**
MGNA				AML		AML	01 16 34.5	
	comp=N,11538μm,0.2s							
MGNA				AML		AML	01 16 36.8	
	comp=E,9393μm,0.5s							
LKD2	**Lefkada island**	**0.60**	**20**	P		**Pg**	**01 16 27.0**	**-0.3**
LKD2				S		**Sg**	**01 16 36.1**	**+0.9**
	comp=E,1μm,0.4s							
LKD2	**Lefkada island**	**0.60**	**20**	P		**Pg**	**01 16 26.9**	**-0.5**
LKD2				S		**Sg**	**01 16 36.2**	**+0.9**
LKD2				AML		AML	01 16 42.3	
	comp=N,2876μm,0.5s							
LKD2				AML		AML	01 16 50.0	
	comp=E,2990μm,0.7s							
TSLK	**Tsoukalades, L**	**0.63**	**18**	P		**Pg**	**01 16 27.8**	**-0.2**
TSLK				S		**Sb**	**01 16 37.4**	**-0.1**
	comp=E,2μm,0.6s							
TSLK	**Tsoukalades, L**	**0.63**	**18**	P		**Pg**	**01 16 27.4**	**-0.6**
TSLK				S		**Sb**	**01 16 37.7**	**+0.2**
TSLK				AML		AML	01 16 42.7	
	comp=E,3071μm,0.5s							
TSLK				AML		AML	01 16 44.0	
	comp=N,4091μm,0.6s							
RLS	**Riolos of Patr**	**0.86**	**101**	P		**Pg**	**01 16 31.8**	**-0.4**
RLS				S		**Sb**	**01 16 44.6**	**+0.7**
	comp=N,735nm,0.4s							
RLS	**Riolos of Patr**	**0.86**	**101**	P		**Pg**	**01 16 31.9**	**-0.3**
RLS				AML		AML	01 16 47.2	
	comp=E,1613μm,0.5s							
RLS				AML		AML	01 16 51.8	
	comp=N,1266μm,0.5s							
PVO	**Paravola**	**0.97**	**66**	P		**Pg**	**01 16 34.3**	**0.0**
PVO				S		**Sb**	**01 16 48.6**	**+1.5**
PVO	**Paravola**	**0.97**	**66**	P		**Pg**	**01 16 34.2**	**0.0**
PVO				AML		AML	01 16 55.3	
	comp=N,3210μm,0.4s							
PVO				AML		AML	01 16 57.9	
	comp=E,3605μm,0.7s							
DRO	**Drossia**	**1.07**	**104**	P		**Pg**	**01 16 35.9**	**-0.3**
DRO	**Drossia**	**1.07**	**104**	P		**Pg**	**01 16 35.9**	**-0.3**
DRO				S		**Sb**	**01 16 50.8**	**+0.8**
DRO				AML		AML	01 17 01.5	
	comp=E,3776μm,0.7s							
DRO				AML		AML	01 17 04.4	
	comp=N,2682μm,0.6s							
EFP	**Efpalio**	**1.20**	**80**	P		**Pg**	**01 16 37.9**	**-0.9**
EFP	**Efpalio**	**1.20**	**80**	P		**Pg**	**01 16 37.9**	**-0.9**
EFP				AML		AML	01 17 04.6	
	comp=N,1994μm,0.6s							
EFP				AML		AML	01 17 04.9	
	comp=E,1741μm,0.5s							
LAKA	**Lakka**	**1.24**	**89**	P		**Pb**	**01 16 38.5**	**-0.6**
LAKA	**Lakka**	**1.24**	**89**	P		**Pb**	**01 16 38.7**	**-0.4**
AMT	**Artemida-Makis**	**1.25**	**123**	P		**Pb**	**01 16 38.4**	**-0.7**
ANX	**Ano Chora**	**1.25**	**72**	P		**Pg**	**01 16 39.0**	**-0.7**
ANX	**Ano Chora**	**1.25**	**72**	P		**Pg**	**01 16 39.1**	**-0.6**
ANX				AML		AML	01 17 03.6	
	comp=N,3048μm,0.7s							
ANX				AML		AML	01 17 05.4	
	comp=E,2595μm,0.7s							
EVR	**Evrytania**	**1.30**	**58**	P		**Pn**	**01 16 39.5**	**-0.3**
EVR				AML		AML	01 17 08.9	
	comp=E,833μm,0.7s							
EVR				AML		AML	01 17 14.6	
	comp=N,1115μm,0.7s							
IGT	**Igoumenitsa**	**1.31**	**358**	P		**Pn**	**01 16 40.3**	**+0.5**
IGT	**Igoumenitsa**	**1.31**	**358**	P		**Pn**	**01 16 40.2**	**+0.4**
IGT				AML		AML	01 17 01.8	
	comp=E,1012μm,0.7s							
IGT				AML		AML	01 17 03.1	
	comp=N,746μm,0.6s							
ALIK	**Aliki, Aigiali**	**1.35**	**88**	P		**Pn**	**01 16 40.3**	**0.0**
KLV	**Kalavryta, Ach**	**1.39**	**97**	P		**Pn**	**01 16 41.4**	**+0.4**
JAN	**Janina**	**1.47**	**14**	P		**Pg**	**01 16 43.9**	**-0.1**
JAN				AML		AML	01 17 12.9	
	comp=E,981μm,0.4s							
JAN				AML		AML	01 17 17.1	
	comp=N,1075μm,1.1s							
DBRK	**Dubrovnik**	**4.76**	**340**	*e*Pn		**Pn**	**01 17 26.2**	**-1.0**
DBRK				Sn		**Sn**	**01 18 19.8**	**-2.5**
STON	**Ston**	**5.08**	**337**	*i* Pn		**Pn**	**01 17 31.0**	**-0.5**
ZIRJ	**Zirje**	**6.51**	**328**	*e*Pn		**Pn**	**01 17 50.4**	**-0.8**
KIJV	**Kijevo**	**6.51**	**334**	*i* Pn		**Pn**	**01 17 51.5**	**+0.2**
MORI	**Morici**	**6.66**	**329**	*i* Pn		**Pn**	**01 17 53.6**	**+0.4**
DUGI	**Dugi Otok**	**7.03**	**327**	*e*Pn		**Pn**	**01 17 59.2**	**+0.8**
UDBI	**Udbina**	**7.20**	**333**	*e*Pn		**Pn**	**01 18 02.0**	**+1.3**
NVLJ	**Novalja**	**7.57**	**328**	*e*Pn		**Pn**	**01 18 06.0**	**+0.3**
SOKA	**Soboth**	**9.33**	**337**	*i* Pn		**Pn**	**01 18 29.5**	**-0.5**
	comp=N,3.3nm,0.5s							
OBKA	**Obir**	**9.34**	**334**	*e*Pn		**Pn**	**01 18 30.7**	**+0.5**
	comp=N,1.5nm,0.4s							
ABTA	**Abfaltersbach**	**10.31**	**328**	*e*Pn		**Pn**	**01 18 43.8**	**+0.4**
	comp=N,0.9nm,0.4s							
MOA	**Molln**	**10.61**	**337**	*e*Pn		**Pn**	**01 18 46.8**	**-0.7**
	comp=N,1.0nm,0.3s							
GERES	**GERESS Array B**	**11.67**	**338**	Pn		**Pn**	**01 19 00.8**	**-1.2**
	comp=N,0.1nm,0.3s,baz=159,slow=14,SNR=4.6							
GNI	**Garni**	**18.95**	**77**	LR		LR	01 29 32.3	
	comp=N,174nm,19.7s,baz=324,slow=42							
HFS	**Hagfors**	**22.34**	**351**	P		**P**	**01 21 14.2**	**+1.1**
	comp=N,2.8nm,0.7s,baz=148,slow=12,SNR=4.9							
FINES	**FINESS Array B**	**23.51**	**7**	P		**P**	**01 21 25.8**	**+0.6**
	comp=N,3.7nm,1.1s,baz=180,slow=7.2,SNR=4.0							
TORD	**Torodi Ar. Bea**	**30.01**	**219**	P		P	01 22 29.9	+5.6
	comp=N,0.2nm,0.7s,baz=34,slow=11,SNR=3.0							
MKAR	**Makanchi Array**	**45.36**	**58**	P		**P**	**01 24 34.5**	**+0.8**
	comp=N,0.2nm,0.3s,baz=274,slow=7.6,SNR=7.5							
ZALV	**Zalesovo Beam**	**45.73**	**48**	P		**P**	**01 24 36.7**	**+0.2**
	comp=N,1.1nm,0.7s,baz=294,slow=10,SNR=4.2							

*IDC **27** 01:22:55.8±1.3,38°.27N×20°.42E,h0km, mb3.9/5, mb1 3.8/8, mb1mx3.5/40, mbtmp3.7/8, ML3.7/2, Error ellipse: s-maj=26.9km s-min=19.4km az=64.0*
*THE **27** 01:22:56.8,38°.23N×20°.35E,h2km±13km, ML3.5/8, Error ellipse: s-maj=13.7km s-min=0.4km az=110.0*
*ATH **27** 01:22:57.8,38°.25N×20°.49E,h12km±2km, ML3.5/6, Error ellipse: s-maj=2.7km s-min=1.0km az=249.0*

ISC 27 01:22:57.1±1.0, 38°.25N±0°.02×20°.42E±0°.04, h11km±5km, n70, σ1s15/95, mb3.9/6, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.15**	**118**	P		**Pg**	**01 23 00.6**	**0.0**
VLS				S		**Sg**	**01 23 03.1**	**0.0**
	46μm,0.3s							
VLS	**Valsamata**	**0.15**	**118**	P		**Pg**	**01 23 00.7**	**0.0**
VLS				S		**Sg**	**01 23 02.4**	**-0.7**
VLS				AML		AML	01 23 04.1	
	comp=E,81815μm,0.1s							
VLS				AML		AML	01 23 04.1	
	comp=N,93289μm,0.2s							
FSK	**Fiskardo**	**0.24**	**28**	P		**Pg**	**01 23 02.3**	**+0.3**
FSK				S		**Sg**	**01 23 06.1**	**+0.7**
	comp=N,15μm,1.0s							
FSK	**Fiskardo**	**0.24**	**28**	P		**Pg**	**01 23 02.4**	**+0.3**
FSK				S		**Sg**	**01 23 05.4**	**0.0**
KFL	**Anninata**	**0.32**	**115**	P		**Pg**	**01 23 03.8**	**+0.2**
KFL				S		**Sb**	**01 23 09.1**	**-1.0**
	comp=N,24μm,0.4s							
KFL	**Anninata**	**0.32**	**115**	P		**Pg**	**01 23 03.5**	**-0.1**
KFL				S		**Sg**	**01 23 07.5**	**-0.4**
KFL				AML		AML	01 23 09.6	
	comp=N,42665μm,0.5s							
KFL				AML		AML	01 23 11.4	
	comp=E,55243μm,0.3s							
EVGI	**Lefkada island**	**0.42**	**27**	P		**Pg**	**01 23 05.8**	**+0.5**
EVGI				S		**Sb**	**01 23 12.8**	**0.0**
EVGI	**Lefkada island**	**0.42**	**27**	P		**Pg**	**01 23 05.7**	**+0.4**
EVGI				S		**Sg**	**01 23 11.9**	**+1.0**
VLMS	**Volimes, Zakyn**	**0.42**	**152**	P		**Pg**	**01 23 05.3**	**-0.1**
VLMS				S		**Sb**	**01 23 11.9**	**-1.0**
VLMS				AML		AML	01 23 19.3	
	comp=N,44936μm,0.5s							
VLMS				AML		AML	01 23 19.3	
	comp=E,24869μm,0.5s							
MGNA	**Meganis**	**0.50**	**36**	P		**Pg**	**01 23 07.1**	**+0.2**
MGNA				S		**Sg**	**01 23 13.7**	**+0.2**
MGNA				AML		AML	01 23 16.5	
	comp=N,12118μm,0.3s							
MGNA				AML		AML	01 23 16.9	
	comp=E,10055μm,0.4s							
LKD2	**Lefkada island**	**0.57**	**19**	P		**Pg**	**01 23 08.3**	**+0.1**
LKD2				S		**Sb**	**01 23 16.8**	**-0.5**
	comp=E,3μm,0.4s							
LKD2	**Lefkada island**	**0.57**	**19**	P		**Pg**	**01 23 08.2**	**0.0**
TSLK	**Tsoukalades, L**	**0.60**	**18**	P		**Pg**	**01 23 09.1**	**+0.2**
TSLK				S		**Sb**	**01 23 18.0**	**-0.2**
	comp=E,3μm,0.6s							
TSLK	**Tsoukalades, L**	**0.60**	**18**	P		**Pg**	**01 23 08.9**	**+0.1**
RLS	**Riolos of Patr**	**0.85**	**103**	P		**Pg**	**01 23 13.1**	**-0.3**
RLS				S		**Sb**	**01 23 26.8**	**+1.6**
	comp=E,2μm,0.6s							
RLS	**Riolos of Patr**	**0.85**	**103**	P		**Pg**	**01 23 13.2**	**-0.3**
RLS				S		**Sg**	**01 23 24.3**	**-0.3**
RLS				AML		AML	01 23 29.4	
	comp=N,4846μm,0.8s							
RLS				AML		AML	01 23 33.7	
	comp=E,4673μm,0.5s							
PVO	**Paravola**	**0.94**	**67**	P		**Pb**	**01 23 15.6**	**+0.1**
PVO				S		**Sn**	**01 23 30.8**	**+1.0**
	comp=E,3μm,0.6s							
PVO	**Paravola**	**0.94**	**67**	P		**Pb**	**01 23 15.5**	**+0.1**
DRO	**Drossia**	**1.06**	**106**	P		**Pg**	**01 23 17.3**	**-0.3**
DRO				S		**Sn**	**01 23 34.4**	**+1.7**
	comp=E,4μm,0.6s							
DRO	**Drossia**	**1.06**	**106**	P		**Pg**	**01 23 17.3**	**-0.3**
DRO				S		**Sg**	**01 23 31.0**	**-0.4**
DRO				AML		AML	01 23 39.6	
	comp=E,7534μm,0.4s							
DRO				AML		AML	01 23 39.9	
	comp=N,4646μm,0.5s							
LAKA	**Lakka**	**1.23**	**90**	P		**Pg**	**01 23 20.1**	**-0.6**
LAKA	**Lakka**	**1.23**	**90**	P		**Pg**	**01 23 20.1**	**-0.6**
ANX	**Ano Chora**	**1.23**	**73**	P		**Pg**	**01 23 20.5**	**-0.2**
AMT	**Artemida-Makis**	**1.25**	**125**	P		**Pb**	**01 23 21.0**	**+0.4**
AMT	**Artemida-Makis**	**1.25**	**125**	P		**Pb**	**01 23 21.0**	**+0.4**
EVR	**Evrytania**	**1.28**	**58**	P		**Pg**	**01 23 20.8**	**-0.9**
EVR	**Evrytania**	**1.28**	**58**	P		**Pg**	**01 23 20.5**	**-1.2**
IGT	**Igoumenitsa**	**1.28**	**357**	P		**Pn**	**01 23 22.1**	**+1.1**
SERG	**Sergoula**	**1.30**	**82**	P		**Pg**	**01 23 21.0**	**-1.1**
SERG	**Sergoula**	**1.30**	**82**	P		**Pg**	**01 23 20.4**	**-1.6**
TRIZ	**Trizonia**	**1.31**	**84**	P		**Pg**	**01 23 21.3**	**-0.9**
TRIZ	**Trizonia**	**1.31**	**84**	P		**Pg**	**01 23 21.4**	**-0.8**
ALIK	**Aliki, Aigiali**	**1.33**	**89**	P		**Pg**	**01 23 21.8**	**-0.9**
KALE	**Kalithea**	**1.36**	**84**	P		**Pg**	**01 23 22.2**	**-1.1**
KALE	**Kalithea**	**1.36**	**84**	P		**Pg**	**01 23 22.0**	**-1.2**
KLV	**Kalavryta, Ach**	**1.38**	**98**	P		**Pn**	**01 23 22.8**	**+0.4**
KLV	**Kalavryta, Ach**	**1.38**	**98**	P		**Pn**	**01 23 22.4**	**0.0**
JAN	**Janina**	**1.45**	**13**	P		**Pg**	**01 23 24.7**	**-0.2**
JAN	**Janina**	**1.45**	**13**	P		**Pg**	**01 23 25.7**	**+0.9**
MAKR	**Makrakomi, Fth**	**1.54**	**60**	P		**Pg**	**01 23 27.1**	**+0.4**
ITM	**Ithomi**	**1.60**	**131**	P		**Pb**	**01 23 26.8**	**0.0**
VLX	**Vlachokerasia**	**1.78**	**119**	P		**Pb**	**01 23 29.7**	**-0.1**
THL	**Klokotos Trika**	**1.81**	**43**	P		**Pb**	**01 23 30.9**	**+0.7**
THL	**Klokotos Trika**	**1.81**	**43**	P		**Pb**	**01 23 30.4**	**+0.1**
OHR	**Ohrid**	**2.87**	**6**	*i* Pn		**Pb**	**01 23 47.6**	**-0.8**
STIP	**Stip**	**3.70**	**21**	*i* Pn		**Pb**	**01 23 59.1**	**-3.4**
IDI	**Anoyia**	**4.65**	**128**	Pn		**Pn**	**01 24 05.4**	**-1.9**
	comp=N,0.2nm,0.3s,baz=274,slow=7.8,SNR=3.0							
IDI				Sn		**Sn**	**01 25 03.0**	**+1.7**
	comp=N,3.9nm,0.3s,baz=152,slow=21,SNR=10							
DBRK	**Dubrovnik**	**4.74**	**339**	*e*Pn		**Pn**	**01 24 08.0**	**-0.5**
DBRK				Sn		**Sn**	**01 25 01.9**	**-1.6**
STON	**Ston**	**5.06**	**337**	*e*Pn		**Pn**	**01 24 12.5**	**-0.3**
STON				Sn		**Sn**	**01 25 09.3**	**-1.9**
MAKA	**Makarska**	**5.66**	**334**	*e*Pn		**Pn**	**01 24 21.2**	**+0.2**
MAKA				Sn		**Sn**	**01 25 23.0**	**-2.9**
ZIRJ	**Zirje**	**6.50**	**328**	*e*Pn		**Pn**	**01 24 32.2**	**-0.4**
ZIRJ				Sn		**Sn**	**01 25 43.6**	**-3.0**
KIJV	**Kijevo**	**6.50**	**334**	*e*Pn		**Pn**	**01 24 33.3**	**+0.7**
MORI	**Morici**	**6.64**	**329**	*e*Pn		**Pn**	**01 24 35.4**	**+0.8**
MORI				Sn		**Sn**	**01 25 49.1**	**-1.2**
DUGI	**Dugi Otok**	**7.02**	**327**	*e*Pn		**Pn**	**01 24 40.7**	**+1.0**
UDBI	**Udbina**	**7.18**	**332**	*e*Pn		**Pn**	**01 24 43.2**	**+1.1**
NVLJ	**Novalja**	**7.56**	**328**	*i* Pn		**Pn**	**01 24 47.8**	**+0.6**
NVLJ				Sn		**Sn**	**01 26 11.6**	**-1.2**
OZLJ	**Ozalj**	**8.23**	**335**	*e*Pn		**Pn**	**01 24 56.5**	**+0.1**
SOKA	**Soboth**	**9.31**	**336**	*e*Pn		**Pn**	**01 25 10.9**	**-0.4**
	comp=N,2.7nm,0.6s							
OBKA	**Obir**	**9.32**	**334**	*e*Pn		**Pn**	**01 25 12.5**	**+1.0**
	comp=N,1.2nm,0.2s							
KBA	**Koelnbreinsper**	**10.24**	**332**	Pn		**Pn**	**01 25 24.4**	**+0.2**
	comp=N,0.7nm,0.3s							
VYHS	**Vyhne**	**10.30**	**354**	*e*SN		**Sn**	**01 27 20.9**	**+0.6**
MOA	**Molln**	**10.59**	**337**	*e*Pn		**Pn**	**01 25 29.7**	**+0.9**
	comp=N,1.6nm,0.3s							
GERES	**GERESS Array B**	**11.65**	**338**	Pn		**Pn**	**01 25 42.9**	**-0.4**
	comp=N,0.2nm,0.3s,baz=153,slow=12,SNR=5.0							
GERES				Sn		**Sn**	**01 27 48.5**	**-5.0**
	comp=N,0.1nm,0.3s,baz=158,slow=24,SNR=2.7							
MMAI	**Mount Meron Ar**	**13.26**	**109**	Pn		**Pn**	**01 26 04.2**	**-1.1**
	comp=N,0.5nm,0.3s,baz=300,slow=12,SNR=4.7							
HFS	**Hagfors**	**22.32**	**351**	P		**P**	**01 27 57.8**	**+3.4**
	comp=N,4.7nm,1.0s,baz=150,slow=12,SNR=4.5							

THE ***27*** *02:14:06.3,38˚.23N×20˚.39E, h0km±3km, ML2.9/7, Error ellipse: s-maj=4.2km s-min=0.6km az=253.0*

ISC 27 02:14:05.5±1.1**, 38˚.23N**±0˚.03×**20˚.37E**±0˚.04**, h12**km±6km**, n44, σ0s86/68, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.18**	**106**	P	**Pg**	**02 14 09.7**	**+0.2**
VLS				S	**Sg**	**02 14 12.0**	**-0.3**
	10μm,0.1s						
VLS	**Valsamata**	**0.18**	**106**	P	**Pg**	**02 14 09.7**	**+0.2**
VLS				S	**Sg**	**02 14 12.0**	**-0.3**
VLS				AML	AML	02 14 12.3	
	comp=N,19862μm,0.2s						
VLS				AML	AML	02 14 12.8	
	comp=E,17182μm,0.1s						
FSK	**Fiskardo**	**0.28**	**32**	P	**Pb**	**02 14 11.9**	**-0.5**
FSK				S	**Sb**	**02 14 16.2**	**-0.8**
	comp=E,7μm,0.2s						
FSK	**Fiskardo**	**0.28**	**32**	P	**Pb**	**02 14 11.9**	**-0.5**
FSK				S	**Sb**	**02 14 16.1**	**-0.9**
KFL	**Anninata**	**0.35**	**109**	P	**Pb**	**02 14 12.7**	**-0.9**
KFL				S	**Sg**	**02 14 17.5**	**+0.3**
	comp=E,5μm,0.4s						
KFL	**Anninata**	**0.35**	**109**	P	**Pb**	**02 14 12.7**	**-0.9**
KFL				S	**Sg**	**02 14 17.8**	**+0.6**
KFL				AML	AML	02 14 20.8	
	comp=N,10175μm,0.4s						
KFL				AML	AML	02 14 20.9	
	comp=E,11310μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.42**	**147**	P	**Pg**	**02 14 13.4**	**-0.3**
VLMS				S	**Sb**	**02 14 20.3**	**-0.7**
EVGI	**Lefkada island**	**0.45**	**29**	P	**Pb**	**02 14 15.0**	**-0.4**
EVGI				S	**Sb**	**02 14 22.1**	**0.0**
EVGI	**Lefkada island**	**0.45**	**29**	P	**Pb**	**02 14 15.1**	**-0.4**
EVGI				S	**Sb**	**02 14 22.0**	**0.0**
MGNA	**Meganis**	**0.54**	**37**	P	**Pb**	**02 14 16.5**	**-0.4**
MGNA				S	**Sb**	**02 14 24.4**	**-0.2**
MGNA				AML	AML	02 14 25.3	
	comp=N,9112μm,0.2s						
MGNA				AML	AML	02 14 25.4	
	comp=E,9507μm,0.2s						
ZAK2	**Zakynthos**	**0.60**	**136**	P	**Pb**	**02 14 17.9**	**0.0**
ZAK2				S	**Sb**	**02 14 26.9**	**+0.5**
LKD2	**Lefkada island**	**0.60**	**22**	P	**Pb**	**02 14 17.5**	**-0.5**
LKD2				S	**Sg**	**02 14 25.4**	**+0.1**
	comp=E,1μm,0.7s						
LKD2	**Lefkada island**	**0.60**	**22**	P	**Pb**	**02 14 17.7**	**-0.3**
LKD2				S	**Sb**	**02 14 26.3**	**-0.2**
LKD2				AML	AML	02 14 31.8	
	comp=N,2141μm,0.3s						
LKD2				AML	AML	02 14 34.0	
	comp=E,2182μm,0.5s						
TSLK	**Tsoukalades, L**	**0.64**	**20**	P	**Pb**	**02 14 18.4**	**-0.1**
TSLK	**Tsoukalades, L**	**0.64**	**20**	P	**Pb**	**02 14 18.2**	**-0.3**
TSLK				S	**Sb**	**02 14 27.1**	**-0.3**
TSLK				AML	AML	02 14 33.8	
	comp=E,2483μm,0.4s						
TSLK				AML	AML	02 14 45.8	
	comp=N,2137μm,0.6s						
RLS	**Riolos of Patr**	**0.88**	**101**	P	**Pb**	**02 14 22.2**	**-0.4**
RLS				S	**Sn**	**02 14 35.9**	**-0.4**
	comp=N,400nm,0.3s						
RLS	**Riolos of Patr**	**0.88**	**101**	P	**Pb**	**02 14 22.2**	**-0.4**
RLS				S	**Sg**	**02 14 34.0**	**0.0**
RLS				AML	AML	02 14 43.0	
	comp=N,717μm,0.3s						
RLS				AML	AML	02 14 45.5	
	comp=E,872μm,0.4s						
PVO	**Paravola**	**0.99**	**66**	P	**Pn**	**02 14 24.9**	**-0.2**
PVO	**Paravola**	**0.99**	**66**	P	**Pn**	**02 14 24.8**	**-0.3**
PVO				S	**Sn**	**02 14 38.9**	**-0.1**
PVO				AML	AML	02 14 41.5	
	comp=E,2639μm,0.5s						
PVO				AML	AML	02 14 48.0	
	comp=N,2021μm,0.3s						
DRO	**Drossia**	**1.09**	**104**	P	**Pg**	**02 14 25.8**	**-0.7**
DRO				S	**Sn**	**02 14 43.7**	**+2.2**
	comp=N,758nm,0.4s						
DRO	**Drossia**	**1.09**	**104**	P	**Pg**	**02 14 26.0**	**-0.5**
DRO				S	**Sb**	**02 14 41.4**	**+1.0**
DRO				AML	AML	02 15 01.9	
	comp=N,1578μm,0.4s						
DRO				AML	AML	02 15 04.6	
	comp=E,1777μm,0.4s						
EFP	**Efpalio**	**1.22**	**80**	P	**Pn**	**02 14 28.1**	**-0.2**
EFP	**Efpalio**	**1.22**	**80**	P	**Pn**	**02 14 28.1**	**-0.2**
EFP				S	**Sn**	**02 14 46.2**	**+1.4**
EFP				AML	AML	02 14 53.8	
	comp=E,825μm,0.8s						
EFP				AML	AML	02 14 54.6	
	comp=N,1028μm,0.4s						
LAKA	**Lakka**	**1.26**	**89**	P	**Pn**	**02 14 29.0**	**0.0**
LAKA	**Lakka**	**1.26**	**89**	P	**Pn**	**02 14 29.0**	**0.0**
ANX	**Ano Chora**	**1.27**	**73**	P	**Pn**	**02 14 28.8**	**-0.3**
ANX	**Ano Chora**	**1.27**	**73**	P	**Pb**	**02 14 29.4**	**0.0**
ANX				S	**Sn**	**02 14 48.3**	**+2.2**
ANX				AML	AML	02 14 55.6	
	comp=E,1574μm,0.5s						
ANX				AML	AML	02 14 57.5	
	comp=N,1263μm,0.5s						
IGT	**Igoumenitsa**	**1.30**	**359**	P	**Pg**	**02 14 31.0**	**+0.4**
IGT	**Igoumenitsa**	**1.30**	**359**	P	**Pg**	**02 14 31.0**	**+0.4**
EVR	**Évrytania**	**1.32**	**58**	P	**Pn**	**02 14 29.8**	**0.0**
SERG	**Sergoula**	**1.34**	**81**	P	**Pn**	**02 14 29.8**	**-0.2**
TRIZ	**Trizonia**	**1.34**	**84**	P	**Pn**	**02 14 30.0**	**0.0**
KLV	**Kalavryta, Ach**	**1.41**	**97**	P	**Pb**	**02 14 31.5**	**-0.3**
KLV	**Kalavryta, Ach**	**1.41**	**97**	P	**Pb**	**02 14 31.6**	**-0.3**
ITM	**Ithomi**	**1.61**	**130**	P	**Pg**	**02 14 35.8**	**-0.7**
DBRK	**Dubrovnik**	**4.75**	**340**	*i* Pn	**Pn**	**02 15 16.5**	**-0.4**
DBRK				Sn	**Sn**	**02 16 10.8**	**-1.1**
STON	**Ston**	**5.07**	**337**	*e*Pn	**Pn**	**02 15 21.7**	**+0.6**
STON				Sn	**Sn**	**02 16 17.4**	**-2.1**
MAKA	**Makarska**	**5.66**	**334**	*e*Pn	**Pn**	**02 15 30.2**	**+0.9**
MAKA				Sn	**Sn**	**02 16 32.1**	**-2.1**
ZIRJ	**Zirje**	**6.50**	**328**	*e*Pn	**Pn**	**02 15 41.1**	**+0.3**
KIJV	**Kijevo**	**6.50**	**334**	*i* Pn	**Pn**	**02 15 42.5**	**+1.6**
MORI	**Morici**	**6.65**	**329**	*e*Pn	**Pn**	**02 15 43.9**	**+1.1**
DUGI	**Dugi Otok**	**7.02**	**327**	*e*Pn	**Pn**	**02 15 49.4**	**+1.4**
UDBI	**Udbina**	**7.19**	**333**	*e*Pn	**Pn**	**02 15 52.4**	**+2.1**
OZLJ	**Ozalj**	**8.24**	**335**	*e*Pn	**Pn**	**02 16 06.9**	**+2.2**

IDC ***27*** *02:22:06.4±2.0, 42˚.95N×4˚.14W, h0km, mb4.0/1, mb1 3.6/5, mb1mx3.3/63, mbtmp3.4/5, ML3.5/4, MS3.5/1, Ms1 3.6/1, ms1mx2.8/54, Error ellipse: s-maj=45.0km s-min=16.6km az=100.0*

MDD ***27*** *02:22:07.9±0.3, 42˚.99N×3˚.93W, h10km, mbLg2.8/46, Error ellipse: s-maj=3.5km s-min=2.0km az=158.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA.

STR ***27*** *02:22:07.9±0.8, 43˚.N±4˚×±˚, h0km, mb4.1/1, MLv3.4/6*

INMG ***27*** *02:22:08.0±1.5, 42˚.93N×3˚.94W, h3km±3km, ML2.8, Error ellipse: s-maj=2.4km s-min=1.6km az=138.0*

SFS ***27*** *02:22:08.0, 42˚.96N×3˚.92W, ML2.8, SANTA GADEA DE ALFOZ (BURGOS)*

LDG ***27*** *02:22:08.7±0.1, 42˚.97N×3˚.93W, h11km, Md2.9/1, Ml3.2/36, Error ellipse: s-maj=2.2km s-min=1.3km az=146.0*

ISC 27 02:22:07.0±1.1**, 42˚.98N**±0˚.03×**3˚.87W**±0˚.02**, h15**km±8km**, n165, σ2s25/268, 1C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELAN	**Lanestosa**	**0.41**	**51**	⇑Pg	**Pg**	**02 22 16.0**	**+0.8**
	54nm,0.2s,SNR=18						
ELAN				Lg	Lg	02 22 21.5	
	668nm,0.3s,SNR=13						
EARI	**Arriondas**	**1.03**	**289**	Pg	**Pg**	**02 22 26.4**	**-0.5**
	13nm,0.2s,SNR=49						
EARI				Lg	Lg	02 22 40.5	
	54nm,0.1s,SNR=9.9						
EARA	**Aranguren**	**1.70**	**96**	Pn	**Pb**	**02 22 39.7**	**+1.8**
EARA				Sn	**Sg**	**02 23 02.8**	**+1.2**
EARA	**Aranguren**	**1.70**	**96**	Pn	**Pn**	**02 22 37.0**	**+0.9**
	0.1nm,0.1s,SNR=8.1						
EARA				Pg	Pg	02 22 39.7	+0.1
	19nm,0.8s,SNR=7.9						
EARA				Sn	**Sn**	**02 22 58.5**	**+0.8**
	5.6nm,0.1s,SNR=7.9						
EARA				Lg	Lg	02 23 03.1	
	28nm,0.1s,SNR=6.2						
EALK	**Alkurruntz**	**1.75**	**81**	Pn	**Pn**	**02 22 39.6**	**+2.7**
EALK				Sn	**Sb**	**02 23 02.5**	**+1.9**
EALK	**Alkurruntz**	**1.75**	**81**	Pn	**Pn**	**02 22 37.6**	**+0.7**
	0.1nm,0.9s,SNR=7.9						
EALK				Pg	Pg	02 22 40.0	-0.5
	11nm,0.2s,SNR=7.9						
EALK				Sn	**Sn**	**02 22 59.5**	**+0.5**
	20nm,1.6s,SNR=7.9						
EALK				Lg	Lg	02 23 04.4	
	134nm,0.5s,SNR=11						
EORO	**Oroz-Betelu**	**1.88**	**92**	Pn	**Pn**	**02 22 39.3**	**+0.6**
	2.1nm,0.1s,SNR=16						
EORO				Pg	Pg	02 22 42.9	-0.2
	4.6nm,0.1s,SNR=7.9						
EORO				Sn	**Sn**	**02 23 02.8**	**+0.5**
	4.6nm,0.1s,SNR=7.9						
EORO				Lg	Lg	02 23 08.6	
	124nm,0.4s,SNR=7.4						
SJPF	**Ste Jean**	**1.94**	**85**	*e*Pn	**Pn**	**02 22 40.1**	**+0.6**
SJPF	**Ste Jean**	**1.94**	**85**	*e*P	**Pn**	**02 22 42.2**	**+2.7**
SJPF	**Ste Jean**	**1.94**	**85**	*e*Pg	**Pg**	**02 22 45.1**	**+0.8**
SJPF				*e*Sn	**Sn**	**02 23 03.2**	**-0.5**
	23nm,0.3s						
SJPF				*e*Sg	Sg	02 23 10.9	+1.4
	36nm,0.3s						
SJPF	**Ste Jean**	**1.94**	**85**	Pn	**Pn**	**02 22 40.1**	**+0.6**
SJPF				Pg	Pg	02 22 45.1	+0.8
SJPF				Sn	**Sn**	**02 23 03.2**	**-0.5**
	12nm,0.3s						
SJPF				Lg	Lg	02 23 10.9	
	18nm,0.3s						
ATE	**Arette**	**2.33**	**86**	Pn	**Pn**	**02 22 47.4**	**+2.6**
ATE				Sn	**Sn**	**02 23 17.2**	**+4.0**
ATE	**Arette**	**2.33**	**86**	Pn	**Pn**	**02 22 45.4**	**+0.6**
	0.2nm,0.1s,SNR=7.9						
ATE				Sn	**Sn**	**02 23 13.8**	**+0.6**
	5.9nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	**2.34**	**185**	Pn	**Pn**	**02 22 44.8**	**-0.3**
	3.3nm,0.3s,SNR=7.9						
GUD				Pg	Pg	02 22 50.0	-1.9
	8.5nm,0.2s,SNR=50						
GUD				Sn	**Sn**	**02 23 13.6**	**-0.1**
	13nm,0.9s,SNR=7.9						
GUD				Lg	Lg	02 23 21.9	
	58nm,0.3s,SNR=5.0						
ECAL	**Calabor**	**2.36**	**245**	Pn	**Pn**	**02 22 44.9**	**-0.4**
	2.3nm,0.2s,SNR=7.9						
ECAL				Pg	Pg	02 22 50.1	-2.1
	11nm,0.2s,SNR=18						
ECAL				Sn	**Sn**	**02 23 12.9**	**-1.1**
	20nm,0.2s,SNR=7.9						
ECAL				Lg	Lg	02 23 21.9	
	103nm,0.4s,SNR=7.3						
PBRG	**Braganca**	**2.43**	**242**	*e*Pn	**Pn**	**02 22 48.2**	**+2.0**
PBRG	**Braganca**	**2.43**	**242**	*e*Pg	**Pg**	**02 22 53.6**	**+0.1**
PBRG				*e*Sn	**Sn**	**02 23 17.4**	**+1.7**
PBRG				*e*Sg	Sg	02 23 23.4	-1.6
PBRG				A	A	02 23 30.3	
	49nm,0.5s						
PBRG	**Braganca**	**2.43**	**242**	Lg	Lg	02 23 23.4	
	24nm,0.5s						
ETSF	**Etsaut**	**2.43**	**91**	*e*Pn	**Pn**	**02 22 46.8**	**+0.5**
ETSF	**Etsaut**	**2.43**	**91**	*e*P	**Pn**	**02 22 49.2**	**+2.9**
ETSF	**Etsaut**	**2.43**	**91**	*e*Pg	**Pg**	**02 22 53.9**	**+0.3**
ETSF				*e*Sn	**Sn**	**02 23 15.1**	**-0.8**
	13nm,0.3s						
ETSF				*e*Sg	Sg	02 23 26.3	+1.1
	16nm,0.3s						
ETSF	**Etsaut**	**2.43**	**91**	Pn	**Pn**	**02 22 46.8**	**+0.5**
ETSF				Pg	Pg	02 22 53.9	+0.3
ETSF				Sn	**Sn**	**02 23 15.1**	**-0.8**
	6.7nm,0.3s						
ETSF				Lg	Lg	02 23 26.3	
	7.8nm,0.3s						
ETOR	**Torete**	**2.55**	**147**	Pn	**Pn**	**02 22 49.0**	**+1.1**
	0.1nm,0.2s,SNR=7.9						
ETOR				Pg	Pg	02 22 54.4	-1.4
	11nm,0.3s,SNR=20						
ETOR				Sn	**Sn**	**02 23 18.5**	**-0.2**
	1.8nm,2.2s,SNR=7.9						
ETOR				Lg	Lg	02 23 29.4	
	122nm,0.5s,SNR=7.9						
UCM	**Universidad Co**	**2.71**	**170**	*e*P	**Pb**	**02 22 57.0**	**+1.8**
UCM				*e*S	**Sn**	**02 23 22.2**	**-0.4**
UCM	**Universidad Co**	**2.71**	**170**	Pg	**Pb**	**02 22 57.0**	**+1.8**
UCM				Sn	**Sn**	**02 23 22.2**	**-0.4**
ESAC	**San Caprasio**	**2.82**	**115**	Pn	**Pn**	**02 22 52.8**	**+1.3**
	2.4nm,0.1s,SNR=7.9						
ESAC				Pg	Pg	02 22 59.4	-1.6
	88nm,3.1s,SNR=7.9						
ESAC				Sn	**Sn**	**02 23 25.7**	**+0.4**
	58nm,0.3s,SNR=5.2						
ESAC				Lg	Lg	02 23 38.7	
	149nm,0.3s,SNR=4.7						
MVO	**Moncorvo**	**2.97**	**233**	*e*Pn	**Pn**	**02 22 53.5**	**-0.2**
MVO	**Moncorvo**	**2.97**	**233**	*e*Pg	**Pb**	**02 23 02.4**	**+2.8**
MVO				*e*Sn	**Sn**	**02 23 29.4**	**+0.3**
MVO				*e*Sg	Sg	02 23 40.7	-1.6
MVO				A	A	02 23 48.0	
	49nm,0.4s						
MVO	**Moncorvo**	**2.97**	**233**	Pn	**Pn**	**02 22 53.1**	**-0.6**
	0.3nm,0.2s,SNR=7.9						
MVO				Pg	Pg	02 23 01.2	-2.7
	7.7nm,0.2s,SNR=9.9						
MVO				Sn	**Sn**	**02 23 27.8**	**-1.3**
	10nm,0.2s,SNR=7.9						
MVO				Lg	Lg	02 23 41.4	
	36nm,0.2s,SNR=7.6						
ECHI	**Chisagues Biel**	**3.01**	**95**	Pn	**Pn**	**02 22 56.6**	**+2.3**
ECHI	**Chisagues Biel**	**3.01**	**95**	Pn	**Pn**	**02 22 55.7**	**+1.4**
	0.9nm,0.2s,SNR=7.9						
ECHI				Pg	Pg	02 23 03.8	-0.8
	2.1nm,2.5s,SNR=7.9						
ECHI				Sn	**Sn**	**02 23 30.4**	**+0.3**
	1.5nm,0.1s,SNR=7.9						
EPF	**Esparros**	**3.09**	**88**	*e*Pn	**Pn**	**02 22 56.0**	**+0.7**
EPF	**Esparros**	**3.09**	**88**	*e*P	**Pn**	**02 22 58.8**	**+3.5**
EPF	**Esparros**	**3.09**	**88**	*e*Pg	**Pg**	**02 23 06.2**	**0.0**
EPF				*e*Sn	**Sn**	**02 23 30.6**	**-1.4**
	13nm,0.3s						
EPF				*e*Sg	Sg	02 23 46.6	+0.4
	8.0nm,0.3s						
EPF	**Esparros**	**3.09**	**88**	Pn	**Pn**	**02 22 56.0**	**+0.7**
EPF				Sn	**Sn**	**02 23 30.6**	**-1.4**
	6.5nm,0.3s						
EPF				Lg	Lg	02 23 46.6	
	4.0nm,0.3s						
EAGO	**Agolada(Pontev**	**3.10**	**268**	Pn	**Pn**	**02 22 55.7**	**+0.2**
	0.2nm,0.2s,SNR=7.9						
EAGO				Pg	Pg	02 23 03.9	-2.6
	8.9nm,2.7s,SNR=7.9						
EAGO				Sn	**Sn**	**02 23 30.3**	**-2.1**
	2.3nm,0.1s,SNR=7.9						
EAGO				Lg	Lg	02 23 45.3	
	15nm,0.2s,SNR=7.9						
LRVF	**chteau la Riv**	**3.24**	**51**	Pn	**Pn**	**02 22 59.3**	**+2.0**
LRVF				Sn	**Sn**	**02 23 37.1**	**+1.6**
ELOB	**Lobios**	**3.29**	**252**	Pn	**Pn**	**02 22 57.6**	**-0.5**
	0.3nm,0.2s,SNR=7.9						
ELOB				Pg	Pg	02 23 07.4	-2.7
	8.6nm,0.4s,SNR=7.9						
ELOB				Sn	**Sn**	**02 23 34.6**	**-2.5**
	3.7nm,3.2s,SNR=7.9						
ELOB				Lg	Lg	02 23 51.4	
	24nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**3.30**	**181**	Pn	**Pn**	**02 22 58.1**	**-0.1**
	1.4nm,0.3s,baz=355,slow=12,SNR=14						
ESDC				Lg	Lg	02 23 51.0	
	9.7nm,0.3s,baz=360,slow=28,SNR=9.0						
ESDC	**Sonseca Array**	**3.30**	**181**	Pn	**Pn**	**02 22 58.8**	**+0.6**
	1.8nm,0.2s,baz=354,slow=12,SNR=9.8						
ESDC				Pg	Pg	02 23 08.0	-2.2
	3.0nm,0.3s,baz=360,slow=17,SNR=6.2						
ESDC				Sn	**Sn**	**02 23 35.8**	**-1.5**
	SNR=7.9						
ESDC				Lg	Lg	02 23 52.4	
	baz=348,slow=30,SNR=7.9						
POLO	**Lamas de Olo**	**3.33**	**243**	*e*Pn	**Pn**	**02 22 59.2**	**+0.6**
POLO				*e*Sg	**Sg**	**02 23 51.9**	**-1.9**
POLO				A	A	02 23 59.1	
	12nm,0.7s						
POLO	**Lamas de Olo**	**3.33**	**243**	Pn	**Pn**	**02 22 59.2**	**+0.6**
POLO				Lg	Lg	02 23 51.9	
	12nm,0.7s						
PVRL	**Vila Real**	**3.33**	**241**	*e*Pn	**Pn**	**02 22 59.1**	**+0.5**
PVRL				*e*Sg	**Sb**	**02 23 50.8**	**+4.7**
PVRL				A	A	02 23 57.7	
	34nm,0.4s						
PVRL	**Vila Real**	**3.33**	**241**	Pn	**Pn**	**02 22 59.1**	**+0.5**
PVRL				Lg	Lg	02 23 50.8	
	17nm,0.4s						
PCAB	**Cabril**	**3.33**	**249**	*e*Pn	**Pn**	**02 22 58.4**	**-0.2**
PCAB				*e*Sn	**Sn**	**02 23 38.6**	**+0.6**
PCAB				*e*Sg	Sg	02 23 51.4	-2.5
PCAB				A	A	02 23 56.1	
	27nm,0.4s						
PCAB	**Cabril**	**3.33**	**249**	Pn	**Pn**	**02 22 58.4**	**-0.2**
PCAB				Lg	Lg	02 23 51.4	
	14nm,0.4s						
EPLA	**Plasencia**	**3.35**	**210**	Pn	**Pn**	**02 22 58.2**	**-0.7**
	1.6nm,0.2s,SNR=7.1						
EPLA				Pg	Pg	02 23 08.7	-2.4
	2.0nm,0.2s,SNR=9.8						
EPLA				Sn	**Sn**	**02 23 36.4**	**-2.1**
	4.3nm,0.6s,SNR=7.9						
EPLA				Lg	Lg	02 23 52.9	
	14nm,0.3s,SNR=6.9						
EMOS	**Mosqueruela**	**3.65**	**135**	Pn	**Pn**	**02 23 03.9**	**+0.9**
	0.3nm,0.1s,SNR=50						
EMOS				Pg	Pg	02 23 14.4	-2.4
	10nm,3.1s,SNR=7.9						
EMOS				Sn	**Sn**	**02 23 45.4**	**-0.5**
	1.1nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	02 24 04.6	
	20nm,0.4s,SNR=7.9						
EZAM	**Zamans**	**3.66**	**259**	Pn	**Pn**	**02 23 03.1**	**0.0**
	4.3nm,0.2s,SNR=4.0						
EZAM				Pg	Pg	02 23 12.5	-4.6
	5.9nm,1.5s,SNR=7.9						
EZAM				Sn	**Sn**	**02 23 44.2**	**-1.8**
	0.3nm,0.4s,SNR=4.0						
ERTA	**Horta de San J**	**3.73**	**121**	Pn	**Pn**	**02 23 04.9**	**+0.8**
	1.1nm,0.2s,SNR=8.2						
ERTA				Pg	Pg	02 23 16.5	-1.9
	8.8nm,3.3s,SNR=7.9						
ERTA				Sn	**Sn**	**02 23 47.1**	**-0.6**
	11nm,0.3s,SNR=7.9						
ERTA				Lg	Lg	02 24 07.3	
	14nm,0.3s,SNR=5.0						
CSOR	**Sort**	**3.74**	**98**	Pn	**Pn**	**02 23 05.8**	**+1.5**
	0.8nm,0.1s,SNR=12						
CSOR				Sn	**Sn**	**02 23 47.7**	**-0.5**
	2.5nm,0.2s,SNR=7.9						
CSOR				Lg	Lg	02 24 07.6	
	19nm,0.5s,SNR=5.0						
PVIS	**Viseu**	**3.76**	**234**	*e*Pn	**Pn**	**02 23 05.2**	**+0.7**
PVIS	**Viseu**	**3.76**	**234**	*e*Pg	**Pb**	**02 23 16.6**	**+3.5**
PVIS				*e*Sn	**Sn**	**02 23 48.1**	**-0.5**
PVIS				*e*Sg	Sg	02 24 04.9	-2.8
PVIS				A	A	02 24 14.4	
	16nm,0.5s						
PVIS	**Viseu**	**3.76**	**234**	Pn	**Pn**	**02 23 05.2**	**+0.7**
PVIS				Pg	Pg	02 23 16.6	-2.4
PVIS				Lg	Lg	02 24 04.9	
	7.9nm,0.5s						
MTE	**Manteigas**	**3.77**	**228**	*e*Pn	**Pn**	**02 23 05.4**	**+0.8**
MTE	**Manteigas**	**3.77**	**228**	*e*Pg	**Pb**	**02 23 17.6**	**+4.3**
MTE				*e*Sg	**Sg**	**02 24 05.5**	**-2.5**
MTE				A	A	02 24 17.5	
	30nm,0.6s						
MTE	**Manteigas**	**3.77**	**228**	Pn	**Pn**	**02 23 05.4**	**+0.8**
MTE				Lg	Lg	02 24 05.5	
	15nm,0.6s						
LFF	**La Frestale**	**3.86**	**58**	*e*Pn	**Pn**	**02 23 06.9**	**+1.0**
LFF				*e*Sn	**Sn**	**02 23 49.0**	**-2.0**
	8.9nm,0.3s						
LFF	**La Frestale**	**3.86**	**58**	Pn	**Pn**	**02 23 06.9**	**+1.0**
LFF				Sn	**Sn**	**02 23 49.0**	**-2.0**
	4.4nm,0.3s						
MONQ	**Montcuq**	**3.93**	**68**	Pn	**Pn**	**02 23 08.5**	**+1.8**
MONQ				Sn	**Sn**	**02 23 53.8**	**+1.2**
CHIF	**Chize**	**4.01**	**37**	Pn	**Pn**	**02 23 09.3**	**+1.5**
CHIF				Sn	**Sn**	**02 23 54.6**	**0.0**
EPOB	**Poblet**	**4.02**	**112**	Pn	**Pn**	**02 23 08.6**	**+0.5**
	1.5nm,0.1s,SNR=7.9						
EPOB				Pg	Pg	02 23 21.0	-3.0
	2.9nm,2.1s,SNR=7.9						
EPOB				Sn	**Sn**	**02 23 53.8**	**-1.3**
	1.0nm,0.2s,SNR=7.9						
EPOB				Lg	Lg	02 24 15.4	
	16nm,0.5s,SNR=7.9						
EMIR	**Miracle**	**4.13**	**103**	Pn	**Pn**	**02 23 10.9**	**+1.3**
	2.0nm,0.2s,SNR=13						
EMIR				Pg	Pg	02 23 24.1	-2.0
	6.4nm,1.1s,SNR=7.9						
EMIR				Sn	**Sn**	**02 23 56.6**	**-1.1**
	11nm,0.3s,SNR=7.9						
EMIR				Lg	Lg	02 24 19.2	
	3.8nm,1.6s,SNR=7.9						
PCBR	**Castelo Branco**	**4.14**	**222**	*e*Pg	Pb	02 23 24.3	+4.7
PCBR				*e*Sg	**Sg**	**02 24 17.0**	**-3.0**
PCBR				A	A	02 24 26.3	
	14nm,0.6s						
PCBR	**Castelo Branco**	**4.14**	**222**	Lg	Lg	02 24 17.0	
	7.0nm,0.6s						
CLLI	**Llivia**	**4.33**	**95**	Pn	**Pn**	**02 23 13.9**	**+1.4**
	0.6nm,0.1s,SNR=12						
CLLI				Sn	**Sn**	**02 24 01.5**	**-1.3**
	0.7nm,0.2s,SNR=8.3						
CLLI				Lg	Lg	02 24 27.1	
	40nm,1.5s,SNR=7.9						
COI	**Coimbra**	**4.39**	**232**	*e*Sg	**Sg**	**02 24 24.2**	**-3.6**
COI				A	A	02 24 28.9	
	31nm,0.7s						
PMRV	**Marv??o**	**4.43**	**218**	*e*Pg	**Pg**	**02 23 30.1**	**-1.7**
PMRV				*e*Sg	**Sg**	**02 24 26.7**	**-2.5**
PMRV				A	A	02 24 43.1	
	15nm,0.5s						
PMRV	**Marv??o**	**4.43**	**218**	Lg	Lg	02 24 26.7	
	15nm,0.5s						
MTLF	**Montolieu**	**4.47**	**83**	*e*Pn	**Pn**	**02 23 14.9**	**+0.7**
MTLF	**Montolieu**	**4.47**	**83**	*e*Pg	**Pg**	**02 23 31.5**	**-1

EADA Sn **Sn** **02 24 11.1 -4.0**
1.6nm,0.1s,SNR=7.9
EADA Lg Lg 02 24 41.2
12nm,0.5s,SNR=4.6
EBAD Badajoz 4.84 211 Pn **Pn** **02 23 18.8 -0.6**
0.2nm,0.2s,SNR=7.9
EBAD Sn **Sn** **02 24 12.3 -2.9**
2.6nm,0.2s,SNR=7.9
EBAD Lg Lg 02 24 40.3
11nm,0.4s,SNR=7.9
SESP Santiago Espad 4.96 168 Pg **Pb** **02 23 38.1 +4.5**
6.5nm,1.7s,SNR=7.9
SESP Lg Lg 02 24 45.7
17nm,1.7s,SNR=7.9
QUIF Quistinic 4.96 5 *e*Pn **Pn** **02 23 21.6 +0.6**
QUIF *e*Sn **Sn** **02 24 15.3 -2.8**
5.6nm,0.2s
QUIF Quistinic 4.96 5 Pn **Pn** **02 23 21.6 +0.6**
QUIF Sn **Sn** **02 24 15.3 -2.8**
2.8nm,0.2s
PESTR Estremoz 4.98 216 *e*Pn **Pn** **02 23 20.8 -0.4**
PESTR *e*Sn **Sn** **02 24 16.6 -2.0**
PESTR *e*Sg Sg 02 24 43.9 -2.9
PESTR A A 02 24 49.1
6.8nm,0.5s
SJAF Saint Jean de 5.00 93 Pn **Pn** **02 23 22.7 +1.2**
0.0nm,0.0s,SNR=7.9
SJAF Sn **Sn** **02 24 17.8 -1.3**
0.2nm,0.2s,SNR=7.9
SJAF Lg Lg 02 24 48.2
2.8nm,0.4s,SNR=7.9
EJON La Jonquera 5.01 94 Pn **Pn** **02 23 23.2 +1.5**
0.9nm,0.1s,SNR=7.9
EJON Pg Pg 02 23 39.7 -3.1
24nm,3.6s,SNR=7.9
EJON Sn **Sn** **02 24 17.9 -1.4**
0.2nm,0.2s,SNR=7.9
ECAB El Cabril 5.04 194 Pn **Pn** **02 23 21.2 -0.8**
0.5nm,0.1s,SNR=6.0
ECAB Pg Pg 02 23 39.0 -4.4
0.0nm,0.1s,SNR=8.0
ECAB Sn **Sn** **02 24 15.7 -4.3**
1.1nm,0.2s,SNR=5.8
ECAB Lg Lg 02 24 47.9
4.7nm,0.3s,SNR=5.0
PMTG Montargil 5.11 222 *e*Pn **Pn** **02 23 22.4 -0.6**
PMTG *e*Sn **Sn** **02 24 19.1 -2.6**
PMTG *e*Sg Sg 02 24 48.4 -2.5
PMTG A A 02 24 54.3
7.6nm,0.6s
PMTG Montargil 5.11 222 Pn **Pn** **02 23 22.4 -0.6**
PMTG Sn **Sn** **02 24 19.1 -2.6**
PMTG Lg Lg 02 24 48.4
7.6nm,0.6s
EBEN2 Beniarda presa 5.12 146 Pn **Pn** **02 23 24.1 +0.9**
4.6nm,0.1s,SNR=7.9
EBEN2 Sn **Sn** **02 24 20.0 -2.1**
0.5nm,0.1s,SNR=7.9
EQES Quesada 5.20 173 Pn **Pn** **02 23 24.7 +0.3**
0.1nm,0.2s,SNR=7.9
EQES Pg Pg 02 23 42.7 -3.9
0.1nm,0.1s,SNR=7.9
EQES Sn **Sn** **02 24 21.8 -2.5**
16nm,4.2s,SNR=7.9
EQES Lg Lg 02 24 53.2
7.4nm,0.5s,SNR=7.9
SGMF Saint Gilles 5.36 9 *e*Pn **Pn** **02 23 26.7 +0.3**
SGMF *e*Sn **Sn** **02 24 24.2 -3.6**
3.4nm,0.2s
SGMF Saint Gilles 5.36 9 Pn **Pn** **02 23 26.7 +0.3**
SGMF Sn **Sn** **02 24 24.2 -3.6**
1.7nm,0.2s
ROSF Rostrenen 5.38 4 *e*Pn **Pn** **02 23 27.2 +0.6**
ROSF *e*Sn **Sn** **02 24 24.2 -4.1**
15nm,0.2s
ROSF Rostrenen 5.38 4 Pn **Pn** **02 23 27.2 +0.6**
ROSF Sn **Sn** **02 24 24.2 -4.1**
7.7nm,0.2s
TCF Toulx Ste Croi 5.46 51 *e*Pn **Pn** **02 23 27.9 +0.1**
TCF *e*Sn **Sn** **02 24 27.2 -3.1**
6.9nm,0.3s
TCF Toulx Ste Croi 5.46 51 Pn **Pn** **02 23 27.9 +0.1**
TCF Sn **Sn** **02 24 27.2 -3.1**
3.5nm,0.3s
EMUR La Murta 5.51 158 Pg Pb 02 23 47.8 +4.9
1.5nm,0.7s,SNR=7.9
EMUR Lg Lg 02 25 02.7
22nm,0.7s,SNR=7.9
GORA Gorafe 5.53 173 Pg Pb 02 23 48.5 +5.2
78nm,5.1s,SNR=7.9
GORA Lg Lg 02 25 03.3
30nm,0.5s,SNR=7.9
LBL Lubilhac 5.60 64 Pn **Pn** **02 23 30.9 +1.1**
EMIN Mina Concepcio 5.63 203 Pn **Pn** **02 23 29.3 -0.8**
0.2nm,0.2s,SNR=7.9
EMIN Sn **Sn** **02 24 30.5 -4.0**
0.8nm,0.3s,SNR=7.9
EMIN Lg Lg 02 25 06.2
6.5nm,0.6s,SNR=7.9
LASF Ste Croix 5.72 76 *e*Pn **Pn** **02 23 32.6 +1.1**
LASF *e*Sn **Sn** **02 24 33.8 -3.1**
6.8nm,0.4s
LASF Ste Croix 5.72 76 Pn **Pn** **02 23 32.6 +1.1**
LASF Sn **Sn** **02 24 33.8 -3.1**
3.4nm,0.4s
PMAFR Mafra 5.74 227 Pn **Pn** **02 23 31.7 +0.1**
16nm,1.6s,SNR=7.9
EQUE Quentar 5.78 177 Lg Lg 02 25 11.2
8.1nm,0.5s,SNR=7.9
GRR Gorron 5.81 20 *e*Pn **Pn** **02 23 32.4 -0.2**
GRR *e*Sn **Sn** **02 24 35.0 -3.9**
12nm,0.4s
GRR Gorron 5.81 20 Pn **Pn** **02 23 32.4 -0.2**
GRR Sn **Sn** **02 24 35.0 -3.9**
6.2nm,0.4s
EGOR Sierra Gorda, 5.86 182 Pn **Pn** **02 23 33.6 +0.1**
4.7nm,3.3s,SNR=7.9
EGOR Sn **Sn** **02 24 36.6 -3.9**
1.3nm,1.1s,SNR=7.9
ETOS Mallorca 5.96 120 Sn **Sn** **02 24 39.2 -3.7**
17nm,1.6s,SNR=7.9
BGF Bois d'Agland 5.97 51 *e*Pn **Pn** **02 23 35.1 +0.2**
BGF *e*Sn **Sn** **02 24 39.3 -3.7**
17nm,0.5s
BGF Bois d'Agland 5.97 51 Pn **Pn** **02 23 35.1 +0.2**
BGF Sn **Sn** **02 24 39.3 -3.7**
8.6nm,0.5s
EGRO El Granado 6.10 208 Pn **Pn** **02 23 36.0 -0.6**
1.4nm,1.6s,SNR=7.9
EGRO Pg Pg 02 23 57.9 -5.8
5.2nm,1.7s,SNR=7.9
EGRO Sn **Sn** **02 24 41.8 -4.3**
1.9nm,2.1s,SNR=7.9
EGRO Lg Lg 02 25 21.4
11nm,3.2s,SNR=7.9
LDF La Druitiere 6.20 24 *e*Pn **Pn** **02 23 37.6 -0.3**
LDF *e*Sn **Sn** **02 24 44.0 -4.5**
3.0nm,0.2s
FLN La Foliniere 6.25 21 *e*Pn **Pn** **02 23 38.3 -0.3**
baz=201
FLN *e*Sn **Sn** **02 24 44.7 -5.1**
5.6nm,0.3s,baz=205
FLN La Foliniere 6.25 21 Pn **Pn** **02 23 38.3 -0.3**
FLN Sn **Sn** **02 24 44.7 -5.1**
2.8nm,0.3s
ESPR Espera 6.29 195 Pn **Pn** **02 23 38.9 -0.3**
0.1nm,0.1s,SNR=7.9
ESPR Sn **Sn** **02 24 45.7 -5.1**
0.4nm,0.2s,SNR=7.9
ESPR Lg Lg 02 25 27.0
2.6nm,0.3s,SNR=7.9
HYF Humbligny 6.29 45 *e*Pn **Pn** **02 23 39.2 -0.1**
HYF *e*Sn **Sn** **02 24 47.0 -3.9**
HYF Humbligny 6.29 45 Pn **Pn** **02 23 39.2 -0.1**
HYF Sn **Sn** **02 24 47.0 -3.9**
AVF Avril sur Loir 6.39 51 *e*Pn **Pn** **02 23 40.0 -0.6**
AVF *e*Sn **Sn** **02 24 48.7 -4.6**
2.4nm,0.3s
AVF Avril sur Loir 6.39 51 Pn **Pn** **02 23 40.0 -0.6**
AVF Sn **Sn** **02 24 48.7 -4.6**
1.2nm,0.3s
EMIJ Mijas 6.44 186 Pn **Pn** **02 23 41.3 -0.1**
1.2nm,2.7s,SNR=7.9
EMIJ Sn **Sn** **02 24 50.3 -4.3**
0.5nm,4.7s,SNR=7.9
VIVF Saint-Julien-l 6.45 70 *e*Pn **Pn** **02 23 42.4 +1.0**
VIVF *e*Sn **Sn** **02 24 51.8 -3.0**
5.4nm,0.3s
VIVF Saint-Julien-l 6.45 70 Pn **Pn** **02 23 42.4 +1.0**
VIVF Sn **Sn** **02 24 51.8 -3.0**
2.7nm,0.3s
SMF Signal de Mont 6.60 54 *e*Pn **Pn** **02 23 44.0 +0.6**
SMF *e*Sn **Sn** **02 24 54.7 -3.7**
SMF Signal de Mont 6.60 54 Pn **Pn** **02 23 44.0 +0.6**
SMF Sn **Sn** **02 24 54.7 -3.7**
SSF Saint Saulge 6.63 49 *e*Pn **Pn** **02 23 44.0 +0.1**
SSF *e*Sn **Sn** **02 24 55.9 -3.3**
3.3nm,0.4s
SSF Saint Saulge 6.63 49 Pn **Pn** **02 23 44.0 +0.1**
SSF Sn **Sn** **02 24 55.9 -3.3**
1.7nm,0.4s
SMRF Simiane la Rot 6.94 79 *e*Pn **Pn** **02 23 48.2 0.0**
SMRF Simiane la Rot 6.94 79 Pn **Pn** **02 23 48.2 0.0**
LOR Lormes 6.95 49 *e*Pn **Pn** **02 23 48.1 -0.2**
baz=231
LOR *e*Sn **Sn** **02 25 03.5 -3.5**
3.2nm,0.3s,baz=214
LOR Lormes 6.95 49 Pn **Pn** **02 23 48.1 -0.2**
LOR Sn **Sn** **02 25 03.5 -3.5**
1.6nm,0.3s
ORIF Oris-en-Rattie 7.30 71 *e*Pn **Pn** **02 23 54.8 +1.6**
ORIF *e*Sn **Sn** **02 25 11.4 -4.4**
1.4nm,0.3s
ORIF Oris-en-Rattie 7.30 71 Pn **Pn** **02 23 54.8 +1.6**
ORIF Sn **Sn** **02 25 11.4 -4.4**
0.7nm,0.3s
FRF La Foret Royal 7.70 82 *e*Pn **Pn** **02 23 59.6 +1.0**
FRF La Foret Royal 7.70 82 Pn **Pn** **02 23 59.6 +1.0**
MBDF Montbardon 7.89 74 *e*Pn **Pn** **02 24 02.8 +1.5**
MBDF *e*Sn **Sn** **02 25 26.2 -4.2**
5.0nm,0.7s
MBDF Montbardon 7.89 74 Pn **Pn** **02 24 02.8 +1.5**
MBDF Sn **Sn** **02 25 26.2 -4.2**
2.5nm,0.7s
CABF La Chapelle 7.96 59 *e*Pn **Pn** **02 24 03.0 +0.8**
CABF La Chapelle 7.96 59 Pn **Pn** **02 24 03.0 +0.8**
LPL La Plagne 8.03 68 *e*Pn **Pn** **02 24 05.5 +2.3**
LPG La Plagne 8.03 68 *e*Pn **Pn** **02 24 05.4 +2.0**
LPG La Plagne 8.03 68 Pn **Pn** **02 24 05.4 +2.0**
SFTF Sexfontaines 8.14 47 *e*Pn **Pn** **02 24 05.2 +0.6**
baz=230
SFTF *e*Sn **Sn** **02 25 29.9 -6.5**
1.7nm,0.2s
SFTF Sexfontaines 8.14 47 Pn **Pn** **02 24 05.2 +0.6**
SFTF Sn **Sn** **02 25 29.9 -6.5**
1.7nm,0.2s
MEZF Maizieres J'vi 8.33 45 *e*Pn **Pn** **02 24 07.8 +0.6**
baz=232
MEZF *e*Sn Sn 02 25 34.2 -6.8
2.3nm,0.2s,baz=223
MEZF Maizieres J'vi 8.33 45 Pn **Pn** **02 24 07.8 +0.6**
MEZF Sn Sn 02 25 34.2 -6.8
2.3nm,0.2s
HAU Haudompre 8.76 51 *e*Pn **Pn** **02 24 13.0 -0.1**
HAU *e*Sn Sn 02 25 44.9 -6.7
0.6nm,0.2s
HAU Haudompre 8.76 51 Pn **Pn** **02 24 13.0 -0.1**
HAU Sn Sn 02 25 44.9 -6.7
0.3nm,0.2s
HINF Hinteralfeld 8.96 54 *e*Pn **Pn** **02 24 16.2 +0.3**
HINF *e*Sn **Sn** **02 25 52.7 -3.8**
0.4nm,0.2s
HINF Hinteralfeld 8.96 54 Pn **Pn** **02 24 16.2 +0.3**
BAIF Baives 9.01 35 *e*Pn **Pn** **02 24 16.1 -0.3**
BAIF *e*Sn **Sn** **02 25 51.5 -6.0**
0.7nm,0.2s
BAIF Baives 9.01 35 Pn **Pn** **02 24 16.1 -0.3**
BAIF Sn **Sn** **02 25 51.5 -6.0**
0.3nm,0.2s
GIVF Givet 9.30 37 *e*Pn **Pn** **02 24 19.9 -0.6**
GIVF *e*Sn **Sn** **02 25 59.2 -5.7**
2.5nm,0.2s
GIVF Givet 9.30 37 Pn **Pn** **02 24 19.9 -0.6**
GIVF Sn **Sn** **02 25 59.2 -5.7**
1.2nm,0.2s
MDT Midelt 10.16 184 Pn **Pn** **02 24 33.2 +0.7**
0.1nm,0.3s,baz=346,slow=18,SNR=5.8
MDT Sn Sn 02 26 20.1 -6.1
0.1nm,0.3s,baz=202,slow=13,SNR=3.7
EKA Eskdalemuir Ar 12.38 2 Pn **Pn** **02 25 02.1 -0.4**
baz=178,slow=14,SNR=3.8
GERES GERESS Array B 13.56 58 Pn **Pn** **02 25 21.6 +2.8**
0.1nm,0.3s,baz=242,slow=12,SNR=2.5
NOA NORSAR Array B 20.24 21 LR LR 02 34 31.2
comp=Z,113nm,18.0s,baz=355,slow=37
FINES FINESS Array B 25.68 34 P **P** **02 27 39.5 +3.4**
2.9nm,1.0s,baz=222,slow=12,SNR=2.7

*IDC **27** 02:24:15.9±0.8, 38.°34N×20.°48E, h0km, mb4.1/11, mb1 4.1/20, mb1mx3.9/54, mbtmp4.0/20, ML3.4/9, MS3.6/4, Ms1 3.6/4, ms1mx3.1/54, Error ellipse: s-maj=17.4km s-min=13.7km az=8.0*
*PDG **27** 02:24:16.7±0.3, 38.°24N×20.°40E, h21km, ML4.2/13, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*
*NEIC **27** 02:24:17.9±2.7, 38.°29N±0.°03×20.°41E±0.°03, h10km±1km, Error ellipse: s-maj=5.8km s-min=2.9km az=43.0*
*THE **27** 02:24:17.3, 38.°23N×20.°42E, h11km, ML3.9/5, Error ellipse: s-maj=1.6km s-min=0.4km az=69.0*
*ATH **27** 02:24:17.2, 38.°23N×20.°43E, h12km±2km, ML3.8/19, Error ellipse: s-maj=2.1km s-min=0.6km az=66.0*
ISC 27 02:24:17.7±0.8, 38.°25N±0.°02×20.°43E±0.°03, h12km±4km, n229, σ1°75/285, mb4.2/18, 24C-10D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.14**	**119**	P	**Pg**	**02 24 20.5**	**-0.6**
VLS				S	**Sg**	**02 24 23.1**	**-0.5**
115μm,0.1s							
VLS	**Valsamata**	**0.14**	**119**	↑Pc0	**Pg**	**02 24 20.5**	**-0.6**
VLS				S	**Sg**	**02 24 23.0**	**-0.5**
VLS				AML	AML	02 24 23.2	
VLS				AML	AML	02 24 23.7	
VLS	**Valsamata**	**0.14**	**119**		**Pg**	**02 24 20.3**	**-0.8**
VLS	**Valsamata**	**0.14**	**119**		**Sg**	**02 24 23.1**	**-0.5**
FSK	**Fiskardo**	**0.24**	**26**	P	**Pg**	**02 24 22.5**	**-0.1**
FSK				S	**Sg**	**02 24 26.6**	**+0.6**
59μm,0.4s							
FSK	**Fiskardo**	**0.24**	**26**	↓Pd0	**Pg**	**02 24 22.6**	**-0.1**
FSK				S	**Sg**	**02 24 26.4**	**+0.3**
FSK	**Fiskardo**	**0.24**	**26**		**Pg**	**02 24 22.3**	**-0.3**
FSK	**Fiskardo**	**0.24**	**26**		**Sg**	**02 24 26.6**	**+0.6**
KFL	**Anninata**	**0.31**	**116**	P	**Pg**	**02 24 23.6**	**-0.4**
KFL				S	**Sg**	**02 24 28.9**	**+0.6**
38μm,0.4s							
KFL	**Anninata**	**0.31**	**116**	↑Pc0	**Pg**	**02 24 23.6**	**-0.4**
KFL				S	**Sg**	**02 24 28.1**	**-0.2**
KFL				AML	AML	02 24 29.4	
KFL				AML	AML	02 24 32.7	
comp=N,41231μm,0.5s							
KFL	**Anninata**	**0.31**	**116**		**Pg**	**02 24 23.6**	**-0.4**
KFL					**Sg**	**02 24 28.9**	**+0.6**
VLMS	**Volimes, Zakyn**	**0.41**	**153**	↑Pc0	**Pg**	**02 24 25.3**	**-0.5**
VLMS				S	**Sg**	**02 24 31.1**	**-0.2**
VLMS				AML	AML	02 24 36.6	
comp=E,27782μm,0.3s							
VLMS				AML	AML	02 24 43.2	
comp=N,35376μm,0.3s							
EVGI	**Lefkada island**	**0.41**	**25**	P	**Pg**	**02 24 25.8**	**-0.1**
EVGI	**Lefkada island**	**0.41**	**25**	↓Pd0	**Pg**	**02 24 25.7**	**-0.2**
EVGI				S	**Sg**	**02 24 32.0**	**+0.6**
EVGI	**Lefkada island**	**0.41**	**25**		**Pg**	**02 24 25.6**	**-0.3**
MGNA	**Meganis**	**0.50**	**35**	↓Pd0	**Pg**	**02 24 27.2**	**-0.2**
MGNA				S	**Sg**	**02 24 34.2**	**+0.1**
MGNA				AML	AML	02 24 36.2	
comp=E,65655μm,0.3s							
MGNA				AML	AML	02 24 37.4	
comp=N,33806μm,0.3s							
MGNA	**Meganis**	**0.50**	**35**		**Pg**	**02 24 27.1**	**-0.4**
LKD2	**Lefkada island**	**0.57**	**18**	P	**Pg**	**02 24 28.2**	**-0.6**
LKD2				S	**Sb**	**02 24 37.6**	**-0.1**
comp=N,10μm,0.6s							
LKD2	**Lefkada island**	**0.57**	**18**	↓Pd0	**Pg**	**02 24 28.4**	**-0.5**
LKD2				S	**Sg**	**02 24 36.9**	**+0.5**
LKD2				AML	AML	02 24 44.9	
comp=N,20597μm,0.7s							
LKD2				AML	AML	02 24 45.2	
comp=E,20210μm,0.4s							
LKD2	**Lefkada island**	**0.57**	**18**		**Pg**	**02 24 28.2**	**-0.6**
LKD2	**Lefkada island**	**0.57**	**18**		**Sb**	**02 24 37.6**	**-0.1**

TSLK Tsoukalades, L 0.60 17 P **Pg** **02 24 29.2 -0.2**
TSLK S **Sg** **02 24 37.7 +0.3**
comp=E,13μm,0.5s
TSLK Tsoukalades, L 0.60 17 ↓Pd0 **Pg** **02 24 29.0 -0.4**
TSLK S **Sg** **02 24 37.7 +0.3**
TSLK AML AML 02 24 46.7
comp=E,25249μm,0.5s
TSLK AML AML 02 24 47.7
comp=N,30763μm,0.6s
TSLK Tsoukalades, L 0.60 17 **Pg** **02 24 29.0 -0.4**
RLS Riolos of Patr 0.84 103 P **Pg** **02 24 33.1 -0.8**
RLS S **Sb** **02 24 45.2 -0.2**
RLS Riolos of Patr 0.84 103 P **Pg** **02 24 33.1 -0.8**
RLS S **Sb** **02 24 44.9 -0.4**
RLS AML AML 02 24 50.4
comp=N,5172μm,0.7s
RLS AML AML 02 24 52.2
comp=E,8202μm,0.5s
RLS Riolos of Patr 0.84 103 **Pg** **02 24 33.5 -0.3**
PVO Paravola 0.94 66 P **Pg** **02 24 35.6 -0.1**
PVO Paravola 0.94 66 P **Pg** **02 24 35.2 -0.5**
PVO S **Sb** **02 24 48.4 +0.2**
PVO AML AML 02 24 54.6
comp=E,19306μm,0.7s
PVO AML AML 02 24 57.1
comp=N,18311μm,0.5s
PVO Paravola 0.94 66 **Pg** **02 24 35.6 -0.1**
DRO Drossia 1.05 106 P **Pb** **02 24 37.2 -0.6**
DRO Drossia 1.05 106 P **Pb** **02 24 37.3 -0.6**
DRO S **Sg** **02 24 51.4 -0.2**
DRO AML AML 02 25 03.1
comp=E,18590μm,0.5s
DRO AML AML 02 25 06.0
comp=N,11610μm,0.5s
UPR University Cam 1.07 88 P **Pb** **02 24 37.2 -0.9**
EFP Efpalio 1.17 81 P **Pb** **02 24 39.1 -0.8**
EFP Efpalio 1.17 81 P **Pn** **02 24 39.5 -0.3**
EFP S **Sg** **02 24 55.4 -0.1**
EFP AML AML 02 25 03.6
comp=E,9491μm,0.5s
EFP AML AML 02 25 04.9
comp=N,5935μm,0.4s
EFP Efpalio 1.17 81 **Pg** **02 24 41.0 +0.7**
LAKA Lakka 1.22 90 P **Pn** **02 24 39.8 -0.8**
LAKA Lakka 1.22 90 P **Pn** **02 24 39.9 -0.6**
LAKA S **Sg** **02 24 57.1 +0.2**
LAKA AML AML 02 25 04.2
comp=N,4431μm,0.8s
LAKA AML AML 02 25 05.8
comp=E,6078μm,0.6s
LAKA Lakka 1.22 90 **Pn** **02 24 39.7 -0.8**
ANX Ano Chora 1.22 73 P **Pn** **02 24 40.0 -0.6**
ANX Ano Chora 1.22 73 P **Pb** **02 24 40.7 0.0**
ANX S **Sg** **02 24 57.5 +0.4**
ANX AML AML 02 25 04.8
comp=N,22179μm,0.7s
ANX AML AML 02 25 06.5
comp=E,21936μm,0.6s
ANX Ano Chora 1.22 73 **Pg** **02 24 41.5 +0.4**
AMT Artemida-Makis 1.24 125 P **Pn** **02 24 39.8 -1.0**
AMT Artemida-Makis 1.24 125 P **Pn** **02 24 40.6 -0.2**
AMT S **Sg** **02 24 57.6 +0.1**
AMT AML AML 02 25 08.1
comp=E,5600μm,0.6s
AMT AML AML 02 25 11.1
comp=N,5755μm,0.6s
AMT Artemida-Makis 1.24 125 **Pg** **02 24 41.2 -0.2**
EVR Evrytania 1.27 58 P **Pn** **02 24 40.8 -0.5**
EVR Evrytania 1.27 58 P **Pn** **02 24 41.3 -0.1**
EVR S **Sg** **02 24 59.5 +0.8**
EVR AML AML 02 25 06.1
comp=N,7008μm,0.5s
EVR AML AML 02 25 10.8
comp=E,6601μm,0.5s
EVR Evrytania 1.27 58 **Pb** **02 24 41.7 +0.1**
IGT Igoumenitsa 1.29 357 P **Pb** **02 24 42.1 +0.2**
IGT S **Sg** **02 24 59.2 0.0**
IGT AML AML 02 25 07.6
comp=N,4925μm,0.4s
IGT AML AML 02 25 08.3
comp=E,4503μm,0.6s
IGT Igoumenitsa 1.29 357 **Pb** **02 24 42.0 +0.2**
SERG Sergoula 1.29 82 P **Pb** **02 24 41.5 -0.3**
SERG S **Sg** **02 24 59.1 -0.2**
SERG AML AML 02 25 06.7
comp=N,5911μm,0.6s
SERG AML AML 02 25 10.2
comp=E,8658μm,0.5s
SERG Sergoula 1.29 82 **Pb** **02 24 42.0 +0.1**
TRIZ Trizonia 1.30 84 P **Pn** **02 24 40.9 -0.7**
TRIZ Trizonia 1.30 84 P **Pn** **02 24 41.1 -0.5**
ALIK Aliki, Aigiali 1.32 89 P **Pn** **02 24 41.5 -0.4**
KALE Kalithea 1.35 83 P **Pn** **02 24 42.2 -0.2**
KALE S **Sg** **02 25 01.6 +0.3**
KALE AML AML 02 25 11.1
comp=E,5906μm,1.1s
KALE AML AML 02 25 12.6
comp=N,6275μm,0.5s
KALE Kalithea 1.35 83 **Pb** **02 24 43.1 +0.2**
KLV Kalavryta, Ach 1.37 98 P **Pb** **02 24 42.9 -0.4**
KLV S **Sg** **02 25 01.5 -0.3**
KLV AML AML 02 25 13.9
comp=N,2658μm,0.6s
KLV AML AML 02 25 14.0
comp=E,3194μm,0.6s
JAN Janina 1.45 13 P **Pg** **02 24 45.1 -0.3**
MAKR Makrakomi, Fth 1.54 60 P **Pb** **02 24 46.2 +0.1**
ITM Ithomi 1.59 131 P **Pb** **02 24 46.8 -0.3**
ITM S **Sg** **02 25 08.9 -0.1**
ITM AML AML 02 25 21.5
comp=N,1936μm,0.8s
ITM AML AML 02 25 23.0
comp=E,1613μm,0.6s
ITM Ithomi 1.59 131 **Pn** **02 24 46.0 +0.3**
AGG Agios Georgios 1.68 62 **Pb** **02 24 47.7 -0.8**
PYL PYLOS 1.70 142 P **Pb** **02 24 48.5 -0.4**
VLX Vlachokerasia 1.77 119 P **Pb** **02 24 50.1 -0.1**
SCTE Santa Cesarea 2.38 321 **Pn** **02 24 56.7 +0.2**
LIT Litokhoron 2.45 40 **Pn** **02 24 58.6 +1.2**
LIT Sn **Sn** **02 25 18.7 -8.6**
FNA Florina 2.64 16 Pn **Pn** **02 25 01.8 +1.7**
FNA Sn **Sn** **02 25 25.2 -6.8**
OHR Ohrid 2.88 6 *i* Pn **Pn** **02 25 05.6 +2.2**
TIP Timpagrande 3.02 289 ↑P **Pn** **02 25 05.9 +0.5**
TIP Timpagrande 3.02 289 ↑S **Sn** **02 25 37.6 -3.8**
TIP Timpagrande 3.02 289 **Pn** **02 25 05.7 +0.4**
TIR Tirane 3.13 352 ↑P **Pn** **02 25 07.0 +0.2**
TIR Tirane 3.13 352 **Pn** **02 25 07.3 +0.6**
CGL1 Ceglie Messapi 3.32 317 *e*Pn **Pn** **02 25 09.6 +0.2**
MASS Massafra 3.49 314 *e*Pn **Pn** **02 25 12.2 +0.5**
VAY Valandovo 3.49 28 *i* Pn **Pn** **02 25 12.9 +1.2**
CEL Celeste 3.57 272 **Pn** **02 25 12.9 0.0**
STIP Stip 3.70 21 *i* Pn **Pn** **02 25 18.6 +4.0**
MATE Matera 3.75 311 ↓P **Pn** **02 25 14.6 -0.7**
ULC Ulcinj 3.82 347 *e*Pn **Pn** **02 25 15.6 -0.8**
ULC *e*Sn **Sn** **02 26 00.3 -0.9**
SG1 Sgolgore (BA) 3.89 313 *e*Pn **Pn** **02 25 18.1 +0.8**
SG1 Sn **Sn** **02 26 01.7 -1.2**
BAI Bari 3.96 317 *e*Pn **Pn** **02 25 18.9 +0.7**
DRME Dracevica, Mon 4.05 347 *e*Pn **Pn** **02 25 19.3 -0.2**
DRME Dracevica, Mon 4.05 347 *e*Pn **Pn** **02 25 19.2 -0.2**
DRME *e*Sn **Sn** **02 26 05.9 -0.9**
APE Apeiranthos 4.21 105 ↓P **Pb** **02 25 27.1 -4.6**
BUM Brajici-Budva 4.22 344 *e*Pn **Pn** **02 25 21.1 -0.7**
BUM *e*Sn **Sn** **02 26 09.6 -1.4**
PDG Podgorica 4.28 348 ↑P **Pn** **02 25 22.3 -0.2**
PDG Podgorica 4.28 348 ↓S **Sn** **02 26 11.1 -1.2**
PDG Podgorica 4.28 348 *e*Pn **Pn** **02 25 21.6 -0.9**
PDG Podgorica 4.28 348 **Pn** **02 25 22.4 -0.1**
PDG Sn **Sn** **02 26 09.1 -3.2**
TTG Podgorica 4.28 348 *e*Pn **Pn** **02 25 21.9 -0.6**
TTG *e*Sn **Sn** **02 26 10.9 -1.4**
ACER Acerenza 4.30 308 **Pn** **02 25 24.5 +1.6**
PVY Plav 4.36 355 *e*Pn **Pn** **02 25 23.9 +0.1**
PVY *e*Sn **Sn** **02 26 13.7 -0.9**
CEME Cevo 4.45 345 *e*Pn **Pn** **02 25 24.1 -0.9**
CEME *e*Sn **Sn** **02 26 15.1 -1.6**
HCY Herceg Novi 4.45 341 *e*Pn **Pn** **02 25 22.8 -2.1**
HCY Herceg Novi 4.45 341 *e*Pn **Pn** **02 25 24.1 -0.8**
HCY *e*Sn **Sn** **02 26 15.4 -1.2**
IVA Berane 4.64 355 *e*Pn **Pn** **02 25 27.4 -0.2**
IVA *i* Sn **Sn** **02 26 20.5 -0.9**

IDI	**Anoyia**	4.64	128	Pn		**Pn**	02 25 28.3	+0.7
	comp=E,0.4nm,0.3s,baz=229,slow=10.0,SNR=5.7							
IDI				Sn		**Sn**	02 26 22.9	+1.4
	comp=E,2.5nm,0.3s,baz=172,slow=23,SNR=10							
KOME	**Kolasin**	4.65	352	*i* Pn		**Pn**	02 25 26.8	-1.0
KOME				*e*Sn		**Sn**	02 26 20.3	-1.5
NKME	**Niksic**	4.65	346	*i* Pn		**Pn**	02 25 26.9	-0.9
NKME				*e*Sn		**Sn**	02 26 20.2	-1.6
TREB	**Trebinje**	4.74	341	*e*Pn		**Pn**	02 25 27.5	-1.4
DBRK	**Dubrovnik**	4.75	339	*e*Pn		**Pn**	02 25 28.1	-0.9
DBRK				Sn		**Sn**	02 26 21.5	-2.5
VAE	**Valguarnera**	4.82	263	Pn		**Pn**	02 25 33.4	+3.2
	comp=E,1.5nm,0.3s,baz=165,slow=13,SNR=6.1							
VTS	**Vitosha**	4.86	25	⇑P		**Pn**	02 25 32.0	+1.3
VTS	**Vitosha**	4.86	25	⇑S		**Sn**	02 26 28.6	+1.5
VTS	**Vitosha**	4.86	25			**Pn**	02 25 32.4	+1.6
VTS						**Sn**	02 26 27.6	+0.6
BRY	**Bratogost**	4.87	343	*e*Pn		**Pn**	02 25 30.6	-0.2
BRY				*i* Sn		**Sn**	02 26 24.7	-2.5
SGRT	**San Giovanni R**	5.02	316			**Pn**	02 25 33.4	+0.5
SGRT						**Sn**	02 26 27.0	-3.9
STON	**Ston**	5.07	337	*e*Pn		**Pn**	02 25 32.7	-0.7
STON				Sn		**Sn**	02 26 27.2	-4.6
STON	**Ston**	5.07	337	*e*Pn		**Pn**	02 25 32.5	-0.9
ALN	**Alexandroupoli**	5.08	57	Pn		**Pn**	02 25 35.8	+2.1
UPM	**Unac-Piva**	5.09	347	*e*Pn		**Pn**	02 25 33.3	-0.5
UPM	**Unac-Piva**	5.09	347	⇑*i*Pn		**Pn**	02 25 33.1	-0.7
UPM				*i* Sn		**Sn**	02 26 30.1	-2.5
PLE	**Pljevlja**	5.14	351	⇑*i*Pn		**Pn**	02 25 34.7	+0.2
PLE				*i* Sn		**Sn**	02 26 32.2	-1.6
WDD	**Wied Dalam**	5.30	245	Pn		**Pn**	02 25 35.9	-0.7
WDD				Sn		**Sn**	02 26 36.7	-0.9
PAOL	**Paolisi**	5.31	303	Pn		**Pn**	02 25 39.0	+2.1
PAOL						**Sn**	02 26 40.7	+2.8
RUDO	**Rudo**	5.43	352	*e*Pn		**Pn**	02 25 37.3	-1.1
CORL	**Corleone**	5.63	269	Pn		**Pn**	02 25 41.5	+0.2
CORL						**Sn**	02 26 46.7	+0.8
MAKA	**Makarska**	5.66	334	*e*Pn		**Pn**	02 25 41.4	-0.1
MAKA				Sn		**Sn**	02 26 42.6	-3.9
DIVS	**Divibare**	5.86	357	*e*Pn		**Pn**	02 25 42.7	-1.6
HAPS	**Han Pijesak,BI**	5.94	350	*e*Pn		**Pn**	02 25 44.0	-1.5
PLVB	**Pleven**	6.04	30	⇑P		**Pn**	02 25 48.3	+1.6
INTR	**Introdacqua**	6.26	309			**Pn**	02 25 51.7	+1.9
ZIRJ	**Zirje**	6.50	328	*e*Pn		**Pn**	02 25 56.2	-0.7
MDVR	**Moldovita**	6.60	8	⇑P		**Pn**	02 25 54.3	-0.2
MORI	**Morici**	6.65	329	*e*Pn		**Pn**	02 25 55.1	0.0
MGRS	**Mrkonjic Grad**	6.66	339	*e*Pn		**Pn**	02 25 54.9	-0.4
DOB	**Doboj**	6.71	346	*e*Pn		**Pn**	02 25 54.2	-1.8
AQU	**L'Aquila**	6.76	310	*e*Pn		**Pn**	02 25 58.6	+1.9
AQU	**L'Aquila**	6.76	310	Pn		**Pn**	02 25 58.8	+2.1
HERR	**Herculane**	6.79	12	⇑P		**Pn**	02 25 57.4	+0.3
FRGS	**Fruska Gora**	6.92	356	*e*Pn		**Pn**	02 25 57.0	-1.9
BLY	**Banja Luka**	6.94	340	⇑P		**Pn**	02 25 58.2	-0.9
BLY	**Banja Luka**	6.94	340	⇑S		**Sn**	02 27 14.8	-3.1
BLY	**Banja Luka**	6.94	340	*e*Pn		**Pn**	02 25 58.3	-0.8
BLY	**Banja Luka**	6.94	340	Pn		**Pn**	02 25 59.6	+0.5
DUGI	**Dugi Otok**	7.03	326	*e*Pn		**Pn**	02 26 00.0	-0.3
UDBI	**Udbina**	7.19	332	*i* Pn		**Pn**	02 26 03.4	+0.8
NRCA	**Norcia**	7.21	312			**Pn**	02 26 04.7	+1.7
NRCA						**Sn**	02 27 23.6	-1.3
GZR	**Gura Zlata**	7.35	13	⇑P		**Pn**	02 26 04.8	-0.1
BZS	**Buzias**	7.42	6	⇑P		**Pn**	02 26 05.5	-0.2
NVLJ	**Novalja**	7.57	328	*e*Pn		**Pn**	02 26 07.4	-0.3
ELL	**Elmali**	7.68	98	Pn		Pn	02 26 15.4	+5.9
ARR	**Arges**	7.78	22	⇑P		**Pn**	02 26 11.9	+1.3
MURB	**Monte Urbino**	7.82	312	Pn		**Pn**	02 26 13.2	+2.0
MURB						**Sn**	02 27 38.5	-1.2
LATE	**Laterza**	7.89	306	Pn		**Pn**	02 26 14.6	+2.3
VOIR		7.97	24	⇑P		**Pn**	02 26 15.2	+1.9
MORH	**Mrgy, Hungar**	8.07	351	*e*Pn		**Pn**	02 26 13.0	-1.6
OZLJ	**Ozalj**	8.24	335	*i* Pn		**Pn**	02 26 16.3	-0.6
MLR	**Muntele Rosu**	8.32	28	Pn		Pn	02 26 23.5	+5.3
	comp=E,0.2nm,0.3s,baz=191,slow=6.4,SNR=7.3							
MLR	**Muntele Rosu**	8.32	28	⇑P		**Pn**	02 26 19.4	+1.2
MLR	**Muntele Rosu**	8.32	28	Pn		Pn	02 26 23.2	+4.9
RIY	**Rijeka**	8.35	330	*e*Pn		**Pn**	02 26 17.4	-1.1
CRES	**Cresnjev**	8.43	336	*e*Pn		**Pn**	02 26 18.6	-0.9
DOPR	**Dopca**	8.55	24	⇓P		**Pn**	02 26 22.2	+1.0
CEY	**Cerknica**	8.72	331	*e*Pn		**Pn**	02 26 22.9	-0.6
OSSC	**Osservatorio P**	8.73	310	Pn		**Pn**	02 26 26.4	+2.8
PLOR	**Plostina**	8.89	29	⇑P		**Pn**	02 26 27.5	+1.5
VRI	**Vrincioaia**	8.94	30	⇑P		**Pn**	02 26 28.1	+1.6
LJU	**Ljubljana**	8.94	333	*e*Pn		**Pn**	02 26 25.9	-0.6
KEST	**Kesra**	9.22	258			**Pn**	02 26 31.0	+0.5
	comp=E,0.3nm,0.3s,baz=55,slow=12,SNR=3.8							
KEST	**Kesra**	9.22	258	Pn		**Pn**	02 26 31.2	+0.8
SOKA	**Soboth**	9.32	336	*e*Pn		**Pn**	02 26 29.3	-2.5
	comp=E,7.0nm,0.4s,SNR=18							
SOKA				Sn		**Sn**	02 28 10.4	-6.2
	comp=E,4.9nm,0.7s							
OBKA	**Obir**	9.33	334	Pn		**Pn**	02 26 31.6	-0.4
	comp=E,2.8nm,0.3s							
OBKA				Sn		**Sn**	02 28 11.8	-5.0
	comp=E,19nm,0.7s							
ZCCA	**Zocca**	9.37	314	Pn		**Pn**	02 26 35.6	+3.2
VLC	**Villacollemand**	9.60	311	Pn		**Pn**	02 26 37.7	+2.1
PSZ	**Piszkesteto**	9.68	358	Pn		**Pn**	02 26 37.1	+0.4
ARSA	**Arzberg**	9.69	340	*e*Pn		**Pn**	02 26 36.0	-0.9
	comp=E,1.5nm,0.3s							
MYKA	**Terra Mystica**	9.76	331	*e*Pn		**Pn**	02 26 38.7	+0.8
	comp=E,1.5nm,0.3s							
STAL	**STALIGIAL**	9.84	327	Pn		**Pn**	02 26 40.0	+1.1
CTI	**Castel Tesino**	10.16	323			**Pn**	02 26 43.0	-0.3
KBA	**Koelnbreinsper**	10.25	332	*e*Pn		**Pn**	02 26 44.0	-0.6
	comp=E,2.7nm,0.5s							
KBA				*e*Sn		**Sn**	02 28 33.8	-5.7
	comp=E,4.0nm,0.5s							
ABTA	**Abfaltersbach**	10.31	328	Pn		**Pn**	02 26 45.4	0.0
	comp=E,3.4nm,0.5s							
VYHS	**Vyhne**	10.31	354	*e*PN		**Pn**	02 26 43.1	-2.2
VYHS				*e*SN		**Sn**	02 28 37.0	-3.8
BR13	**Keskin Array S**	10.39	78	Pn		**Pn**	02 26 51.2	+4.6
BRTR	**Keskin Array B**	10.39	78	Pn		**Pn**	02 26 50.5	+3.9
	comp=E,0.1nm,0.3s,baz=261,slow=12,SNR=8.2							
BRTR				LR		LR	02 30 50.5	
	comp=E,98nm,19.5s,baz=289,slow=38							
SALO	**Salr**	10.42	318	Pn		**Pn**	02 26 47.9	+1.1
MOA	**Molln**	10.60	337	*e*Pn		**Pn**	02 26 49.4	+0.1
	comp=E,2.2nm,0.3s							
MOA				*e*Sn		**Sn**	02 28 42.8	-5.1
	comp=E,2.2nm,0.5s							
WTTA	**Wattenberg**	11.08	327	*e*Pn		**Pn**	02 26 57.1	+1.0
	comp=E,1.7nm,0.3s							
SQTA	**Sankt Quirin**	11.23	326	Pn		**Pn**	02 26 59.8	+1.7
	comp=E,4.5nm,0.5s							
FUORN	**Ofenpass-Fuorn**	11.24	321	Pn		**Pn**	02 26 59.8	+1.6
MOTA	**Moosalm**	11.38	326	*e*Pn		**Pn**	02 27 00.8	+0.7
	comp=E,4.1nm,0.6s							
DAVOX	**Davos/Dischmat**	11.54	321	Pn		**Pn**	02 27 03.5	+1.2
	comp=E,0.3nm,0.3s,baz=127,slow=16,SNR=5.6							
GEC2	**GERESS Array S**	11.66	337	Pn		**Pn**	02 27 03.5	-0.3
GERES	**GERESS Array B**	11.66	337	Pn		**Pn**	02 27 02.4	-1.5
	comp=E,0.3nm,0.3s,baz=165,slow=14,SNR=7.0							
GERES				Sn		**Sn**	02 29 05.9	-8.1
	comp=E,0.4nm,0.3s,baz=153,slow=22,SNR=5.3							
KHC	**Kasperske Hory**	11.95	338	*e*PN		**Pn**	02 27 06.8	-1.0
KHC				*e*SN		**Sn**	02 29 12.7	-8.3
KHC	**Kasperske Hory**	11.95	338	Pn		**Pn**	02 27 08.2	+0.4
SENIN	**Lac Senin/Sane**	12.65	314	Pn		**Pn**	02 27 17.0	-0.5
ECH	**Echery**	13.87	320	Pn		**Pn**	02 27 34.8	+0.9
KBZ	**Khabaz**	17.80	65	Pn		**P**	02 28 27.9	+2.0
	comp=E,0.1nm,0.3s,baz=291,slow=9.3,SNR=5.2							
GNI	**Garni**	18.93	77	Pn		**Pn**	02 28 40.5	+1.4
	comp=E,0.7nm,0.3s,baz=353,slow=2.1,SNR=9.9							
GNI				LR		LR	02 36 24.6	
	comp=E,128nm,19.0s,baz=312,slow=39							
GNI	**Garni**	18.93	77	P		**Pn**	02 28 40.1	+1.0
GNI				IAmb		IAmb	02 28 41.4	
	comp=Z,21nm,0.9s							
ESDC	**Sonseca Array**	19.01	282	P		**Pn**	02 28 39.6	-0.4
	comp=Z,0.2nm,0.3s,baz=75,slow=12,SNR=7.1							
HFS	**Hagfors**	22.32	351	P		**P**	02 29 14.6	-0.3
	comp=Z,6.4nm,0.8s,baz=147,slow=14,SNR=12							
NC602	**NORSAR Array S**	23.20	349	P		**P**	02 29 24.3	+0.2
FINES	**FINESS Array B**	23.49	7	P		**P**	02 29 25.6	-1.4
	comp=Z,3.3nm,0.7s,baz=180,slow=10,SNR=14							
FIA1	**FINESS Array S**	23.49	7	P		**P**	02 29 25.3	-1.7
NC405	**NORSAR Array S**	23.53	349	P		**P**	02 29 27.8	+0.3
NB201	**NORSAR Array S**	23.54	349	P		**P**	02 29 27.3	-0.2
NB2	**NORSAR Subarra**	23.54	349	P		**P**	02 29 27.3	-0.2
	comp=Z,1.7nm,0.8s,baz=158,slow=10							
NOA	**NORSAR Array B**	23.54	349	P		**P**	02 29 26.9	-0.6
	comp=Z,1.4nm,0.8s,baz=160,slow=9.8,SNR=5.2							
NBO00	**NORSAR Array S**	23.60	348	P		**P**	02 29 27.6	-0.5
NC303	**NORSAR Array S**	23.69	349	P		**P**	02 29 30.0	+1.0
NC204	**NORSAR Array S**	23.83	348	P		**P**	02 29 31.1	+0.7
GEYT	**Alibeck**	29.53	79	P		**P**	02 30 22.2	+0.2
	comp=Z,2.0nm,0.6s,baz=258,slow=7.4,SNR=5.0							
GEYT	**Alibeck**	29.53	79	IAmb		IAmb	02 30 25.6	
	comp=Z,1.6nm,0.6s							
TORD	**Torodi Ar. Bea**	30.04	219	P		**P**	02 30 26.4	-0.2
	comp=Z,4.2nm,1.0s,baz=30,slow=7.7,SNR=10							
TORD	**Torodi Ar. Bea**	30.04	219	IAmb		IAmb	02 30 30.7	
	comp=Z,2.7nm,0.9s							
ARCES	**ARCESS Array B**	31.47	3	P		**P**	02 30 37.8	-1.0
	comp=Z,3.3nm,0.9s,baz=193,slow=11,SNR=6.1							
KK31	**Karatay Array**	37.83	66	P		**P**	02 31 34.2	+0.2
KK31				IAmb		IAmb	02 31 36.5	
	comp=Z,4.9nm,1.0s							
KKAR	**Karatay Array**	37.83	66	P		**P**	02 31 34.2	+0.2
KKAR				IAmb		IAmb	02 31 36.5	
	comp=Z,4.9nm,1.0s							
BTK	**Batken**	38.70	71	P		**P**	02 31 41.5	+0.1
BOOM	**Boomskoye usch**	41.87	66	P		**P**	02 32 08.9	+1.1
KSH	**Kashi**	42.67	70	P		**P**	02 32 14.0	-0.3
KSH				pmax		pmax		
	comp=Z,480nm,5.4s							
MKAR	**Makanchi Array**	45.33	58	P		**P**	02 32 34.5	-1.0
	comp=Z,1.9nm,0.5s,baz=273,slow=6.9,SNR=25							
ZAA0	**Zalesovo Array**	45.70	48	P		**P**	02 32 37.7	-0.5
ZALV	**Zalesovo Beam**	45.70	48	P		**P**	02 32 37.2	-1.0
	comp=Z,5.3nm,0.5s,baz=275,slow=9.2,SNR=22							
WMQ	**Urumqi**	49.79	61	*e*P		**P**	02 33 14.8	+4.6
WMQ				pmax		pmax		
	comp=Z,9.0nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,47nm,5.5s							
GTA	**Gaotai**	59.85	62	*e*P		**P**	02 34 22.0	-1.3
GTA				pP		pP	02 34 26.0	-1.1
GTA				sP		sP	02 34 29.3	+0.7
GTA				pmax		pmax		
	comp=Z,4.0nm,0.9s							
SONM	**Songino Array**	60.47	51	P		**P**	02 34 26.5	-0.8
	comp=Z,0.9nm,0.8s,baz=282,slow=10,SNR=6.1							
LZH	**Lanzhou**	64.24	63	*e*P		**P**	02 34 53.5	+0.7
LZH				pP		pP	02 34 56.8	+0.1
LZH				sP		sP	02 34 58.3	+0.1
LZH				*e*PP		**PP**	02 37 16.5	+2.7
LZH				pmax		pmax		
	comp=Z,18nm,1.3s							
LZH				pmax		pmax		
	comp=Z,77nm,6.9s							
HHC	**Hu-ho-hao-te**	67.06	55	*e*P		**P**	02 35 11.3	+0.5
HHC				pmax		pmax		
	comp=Z,4.0nm,1.0s							
HHC				pmax		pmax		
	comp=Z,96nm,6.6s							
CMAR	**Chiang Mai Arr**	69.95	82	P		**P**	02 35 26.5	-2.6
	comp=Z,1.2nm,0.3s,baz=312,slow=6.9,SNR=6.8							
YKA	**Yellowknife Ar**	73.30	340	P		**P**	02 35 48.6	+0.1
	comp=Z,0.3nm,0.7s,baz=46,slow=6.5,SNR=4.9							
ULM	**Lac du Bonnet**	75.60	324	P		**P**	02 36 03.3	+1.1
	comp=Z,2.8nm,0.9s,baz=92,slow=2.7,SNR=3.7							
ULM	**Lac du Bonnet**	75.60	324	IAmb		IAmb	02 36 05.4	
	comp=Z,5.2nm,1.1s							
YBH	**Yreka Blue Hor**	93.60	333	LR		LR	03 23 07.4	
	comp=Z,39nm,19.1s,baz=142,slow=38							
PFO	**Pinyon Flats O**	98.05	325	LR		LR	03 24 20.3	
	comp=Z,88nm,18.1s,baz=22,slow=37							

ISK ***27*** *02:28:20.9, 36°.06N×35°.82E, h14km, ML2.6/14*
DDA ***27*** *02:28:21.6, 36°.14N×35°.81E, h7km±2km, ML2.2*

ISC 27 02:28:21.7±1.2, 36°.08N±0°.05×35°.83E±0°.03, h16km±8km, n25, σ0°.55/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h	m	s	Res ISC
YAYL	**Yayladag**	**0.23**	**101**	*i* P		**Pg**		**02 28**	**26.9**		**0.0**
YAYL				IAML				02 28	31.0		
	comp=E,430nm,0.8s										
YAYL				*i* S		**Sb**		**02 28**	**31.2**		**-0.2**
YAYL				IAML				02 28	32.0		
	comp=N,514nm,0.1s										
TAHT	**Tahtakopru-Hat**	**0.41**	**44**	PG		**Pg**		**02 28**	**29.9**		**-0.1**
TAHT				SG		**Sg**		**02 28**	**36.1**		**+0.4**
KRTS	**Karatas**	**0.61**	**323**	PG		**Pg**		**02 28**	**33.8**		**0.0**
KRTS				SG		**Sb**		**02 28**	**43.1**		**+0.7**
YURE	**YUREGIR**	**0.76**	**348**	PG		**Pb**		**02 28**	**36.3**		**-0.3**
YURE	**YUREGIR**	**0.76**	**348**	*i* P		**Pb**		**02 28**	**35.5**		**-1.0**
CEYT	**Ceyhan**	**0.93**	**356**	PG		**Pb**		**02 28**	**39.9**		**+0.5**
CEYT				SG		**Sn**		**02 28**	**53.5**		**+0.4**
DED	**Mersin**	**1.21**	**317**	*i* P		**Pn**		**02 28**	**43.7**		**-0.2**
DED				*i* S		**Sb**		**02 28**	**59.7**		**+0.1**
DED				IAML				02 29	05.0		
	comp=E,26nm,0.7s										
KUZU	**Kuzuini**	**1.22**	**55**	*i* P		**Pb**		**02 28**	**44.4**		**0.0**
KUZU				*i* S		**Sg**		**02 29**	**00.8**		**-0.4**
KUZU				IAML				02 29	01.0		
	comp=N,303nm,0.9s										
KUZU				IAML				02 29	02.0		
	comp=E,225nm,0.3s										
KAMA	**Osmaniye**	**1.29**	**31**	*i* P		**Pb**		**02 28**	**45.6**		**-0.1**
KAMA				*i* S		**Sb**		**02 29**	**00.7**		**-1.3**
KAMA				IAML				02 29	07.0		
	comp=N,21nm,0.3s										
KAMA				IAML				02 29	08.0		
	comp=E,22nm,0.4s										
MERS	**Mersin**	**1.32**	**307**	PN		**Pn**		**02 28**	**45.1**		**-0.3**
MERS				SN		**Sn**		**02 29**	**02.4**		**-0.3**
KARA	**Karaisali**	**1.33**	**332**	PN		**Pn**		**02 28**	**45.8**		**+0.2**
KARA				SN		**Sb**		**02 29**	**03.6**		**+0.4**
KOZT	**Kozan**	**1.40**	**360**	PN		**Pn**		**02 28**	**47.1**		**+0.8**
KOZT				SN		**Sb**		**02 29**	**05.8**		**+0.8**
AKO	**Adana**	**1.41**	**347**	*i* P		**Pn**		**02 28**	**47.0**		**+0.3**
AKO				*i* S		**Sg**		**02 29**	**07.1**		**-0.3**
GULE	**Gulek**	**1.47**	**325**	*i* P		**Pn**		**02 28**	**48.0**		**+0.4**
GULE				*i* S		**Sb**		**02 29**	**08.0**		**+0.8**
GULE				IAML				02 29	14.0		
	comp=N,53nm,0.5s										
ANDN	**Andirin**	**1.55**	**15**	*i* P		**Pb**		**02 28**	**49.9**		**-0.3**
ANDN				*i* S		**Sb**		**02 29**	**09.6**		**0.0**
ANDN				IAML				02 29	16.0		
	comp=N,31nm,0.5s										
ANDN				IAML				02 29	26.0		
	comp=E,57nm,0.7s										
GAZ	**Gaziantep**	**1.56**	**45**	PN		**Pn**		**02 28**	**49.4**		**+0.7**
GAZ				SN		**Sb**		**02 29**	**09.9**		**+0.3**
KMRS	**Kahramanmaras**	**1.66**	**31**	PN		**Pn**		**02 28**	**50.9**		**+0.7**
CMRD	**Camardi-Nigde**	**1.72**	**337**	PN		**Pn**		**02 28**	**51.8**		**+0.8**
IKL	**Isikli**	**1.74**	**276**	PN		**Pn**		**02 28**	**51.4**		**+0.2**
KEBE	**Keben-Mersin**	**1.75**	**283**	PN		**Pn**		**02 28**	**51.3**		**-0.1**
KEBE				SN		**Sn**		**02 29**	**13.4**		**0.0**
AKKU	**Akkuyu-Mersin**	**1.85**	**273**	PN		**Pn**		**02 28**	**52.9**		**+0.2**
GZT	**Gaziantep**	**1.89**	**47**	*i* P		**Pg**		**02 28**	**57.8**		**-0.1**
GZT				*i* S		**Sn**		**02 29**	**16.8**		**0.0**
GZT				IAML				02 29	18.0		
	comp=N,40nm,1.2s										
GZT				IAML				02 29	33.0		
	comp=E,30nm,0.4s										
SAIM	**ADANA**	**1.90**	**6**	*i* P		**Pb**		**02 28**	**55.7**		**-0.4**
SAIM				*i* S		**Sn**		**02 29**	**15.7**		**-1.6**
SAIM				IAML				02 29	31.0		
	comp=E,11nm,0.4s										
BERE	**Bereket-Mersin**	**2.13**	**278**	PN		**Pn**		**02 28**	**56.8**		**+0.2**
TEKE	**Tekeli-Mersin**	**2.20**	**272**	PN		**Pn**		**02 28**	**58.3**		**+0.8**

IDC ***27*** *02:28:55.8±0.5, 41°.25S×90°.03W, h0km, mb4.6/15, mb1 4.7/16, mb1mx4.6/30, mbtmp4.6/16, ML4.1/1, MS4.2/20, Ms1 4.2/20, ms1mx4.1/25, Error ellipse: s-maj=19.7km s-min=15.7km az=101.0*
MOS ***27*** *02:28:56.4±1.5, 41°.06S×89°.78W, h10km, mb5.1/23, Error ellipse: s-maj=18.2km s-min=10.5km az=75.3*
NEIC ***27*** *02:28:56.9±2.2, 41°.2S±0°.1×89°.8W±0°.1, h10km±1km, mb5.1/176, Error ellipse: s-maj=17.3km s-min=17.2km az=147.0*
GCMT ***27*** *02:28:58.9±0.2, 41°.34S±0°.01×89°.74W±0°.02, h12km, MW5.1/127, Moment Tensor Solution. s85,c118; s127,c183; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-5.73±.12; Mθθ3.57±.11; Mϕϕ2.16±.13; Mrθ-1.02±.35; Mθϕ-3.02±.09; Mϕr-0.68±.37; Best double couple: M₀5.97900×10¹⁶ NP1:ϕs320.00000°, δ44.00000°, λ-73.00000°. NP2:ϕs117.00000°, δ48.00000°, λ-106.00000°. Principal axes: T 5.9780, Plg2.0000°, Azm218.0000°; N 0.0010, Plg11.0000°, Azm128.0000°; P -5.9790, Plg78.0000°, Azm317.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 27 02:28:57.1±0.3, 41°.24S±0°.07×89°.89W±0°.06, h10km, n538, σ1§06/469, mb5.1/93, MS4.3/21, 6C-1D, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h	m	s	Res ISC
PLCA	**Paso Flores**	**14.62**	**94**	Pn		**P**		**02 32**	**29.5**		**-0.9**
	0.1nm,0.3s,baz=292,slow=14,SNR=7.3										
PLCA				LR		LR		02 36	36.2		
	comp=Z,2μm,21.9s,baz=286,slow=31										
PLCA	**Paso Flores**	**14.62**	**94**	*e*P		**P**		**02 32**	**29.8**		**-0.6**
PLCA	**Paso Flores**	**14.62**	**94**			**Pn**		**02 32**	**21.2**		**-2.7**
PLCA						**Sn**		**02 35**	**01.6**		**-4.4**
GO05	**Huala**	**15.43**	**72**			**Pn**		**02 32**	**32.7**		**-2.1**
GO05				IAmb		IAmb		02 32	45.9		
	comp=Z,162nm,1.9s										
ROC1	**El Roble**	**17.14**	**67**	Pn		**Pn**		**02 32**	**54.2**		**-2.7**
PEL	**Peldehue**	**17.28**	**68**	P		**Pn**		**02 32**	**57.0**		**-1.5**
PEL				pmax		pmax					
	comp=Z,129nm,1.6s										
PEL	**Peldehue**	**17.28**	**68**	P		**Pn**		**02 32**	**57.0**		**-1.5**
AAGR	**Agrelo**	**18.62**	**71**	*i* P		**Pn**		**02 33**	**19.0**		**+3.9**
ARCO	**CERRO ARCO**	**18.68**	**70**	*i* P		**Pn**		**02 33**	**20.1**		**+4.2**
ASAL	**Salagasta**	**18.88**	**70**	*i* P		**Pn**		**02 33**	**21.5**		**+3.3**
GO04	**Tololo Observa**	**18.99**	**60**	P		**P**		**02 33**	**19.4**		**+0.4**
RTLS	**Leoncito**	**19.00**	**67**	*i* P		**Pn**		**02 33**	**22.2**		**+2.3**
RTCV	**Cerro Valdivia**	**19.50**	**68**	*i* P		**Pn**		**02 33**	**26.7**		**+1.1**
ZON	**Zonda**	**19.58**	**67**	*i* P		**Pn**		**02 33**	**29.0**		**+2.4**
USHA	**Ushuaia**	**19.65**	**141**	LR		LR		02 39	43.7		
	comp=Z,461nm,18.4s,baz=311,slow=33										
RTLL	**Cerro Villicun**	**19.85**	**67**	*i* P		**Pn**		**02 33**	**30.5**		**+0.7**
CFA	**Coronel Fontan**	**19.85**	**68**	P		**Pn**		**02 33**	**30.4**		**+0.5**
	comp=Z,0.6nm,0.3s,baz=235,slow=11,SNR=13										
CFA				PcP		**PcP**		**02 37**	**45.2**		**-0.4**

PRAC Prado 46.79 21 eP P 02 37 28.4 +1.5
ORTC Ortega, Tolima 46.88 20 eP P 02 37 28.5 +0.8
SJMB Sao Joao De Ma 47.07 77 eP P 02 37 31.0 +1.8
JANB Januaria 47.19 70 eP P 02 37 31.6 +1.4
BSFB Barra de Sao F 47.24 77 eP P 02 37 32.2 +1.8
CHIC Chingaza 47.98 22 eP P 02 37 36.6 0.0
ROSC El Rosal 48.02 21 P P 02 37 39.9 +3.0
comp=Z,20nm,0.8s,baz=159,slow=5.8,SNR=18
ROSC LR LR 02 55 55.9
comp=Z,374nm,18.3s,baz=192,slow=34
ROSC El Rosal 48.02 21 eP P 02 37 40.0 +3.1
ROSC El Rosal 48.02 21 P P 02 37 36.6 -0.3
ROSC IAmb IAmb 02 37 42.0
comp=Z,28nm,1.1s
GUY2C Guyana, Caldas 48.11 20 eP P 02 37 38.4 +0.7
VNA3 Neumayer Olymp 48.48 155 P P 02 37 41.0 +1.6
NORC Norcasia 48.57 20 eP P 02 37 42.0 +1.3
CBOC Ciudad Bolivar 48.57 19 eP P 02 37 41.1 +0.2
SPBC San Pablo de B 48.86 21 eP P 02 37 41.2 -1.9
QSPA South Pole Qui 48.99 180 P P 02 37 45.0 +1.4
comp=Z,2.0nm,0.6s,baz=125,slow=2.1,SNR=19
QSPA South Pole Qui 48.99 180 P P 02 37 43.0 -0.6
QSPA IAmb IAmb 02 37 50.4
comp=Z,56nm,2.0s
VNA1 Neumayer--Stat 49.02 154 P P 02 37 44.9 +1.4
SMTB Santa Maria do 49.33 61 eP P 02 37 48.0 +1.4
RUSC La Rusia 49.37 22 eP P 02 37 47.4 +0.1
PTBC PUERTO BERRIO, 49.61 20 eP P 02 37 48.3 -0.3
DBBC Dabeiba 49.64 18 eP P 02 37 51.0 +2.0
BARC Barichara 50.01 22 eP P 02 37 50.6 -1.3
UREC San Jos de Ur 50.51 19 eP P 02 37 55.0 -0.4
SNAA Sanae 50.56 156 P P 02 37 56.5 +1.1
SNAA Sanae 50.56 156 P P 02 37 55.3 -0.1
SNAA 02 39 13.6
SNAA pmax pmax
comp=Z,11nm,1.0s
SNAA Sanae 50.56 156 P P 02 37 56.2 +0.9
comp=Z,6.9nm,0.8s,baz=273,slow=7.2,SNR=21
SNAA Sanae 50.56 156 P P 02 37 55.2 -0.1
SNAA PcP PcP 02 39 13.6 +0.6
NBIT Itapeh - BA 50.78 74 eP P 02 37 58.7 +1.1
JTS Las Juntas de 51.48 6 eP P 02 38 01.6 -1.2
JTS pmax pmax
comp=Z,7.0nm,1.1s
OCAC Ocana 51.54 21 eP P 02 38 01.9 -1.5
SMLC San Martn de 51.88 20 eP P 02 38 06.5 +0.7
TBI Tubuai 52.43 271 eS S 02 45 35.5 -0.5
comp=Z,374nm,24.2s
TBI eLR LR 02 53 10.3
comp=Z,630nm,31.5s
SJCC San Jacinto, C 52.66 18 eP P 02 38 14.5 +2.9
SDV Santo Domingo 52.93 24 eP P 02 38 13.1 -0.7
SDV Santo Domingo 52.93 24 P P 02 38 13.2 -0.6
NBPN Ponto Novo - B 52.98 70 eP P 02 38 15.1 +1.1
CODC Agustn Codazz 53.13 20 eP P 02 38 12.9 -2.1
VNDA Vanda 53.87 195 P P 02 38 19.9 +0.1
VNDA pmax pmax
comp=Z,29nm,1.9s
VNDA Vanda 53.87 195 LR LR 02 56 35.3
comp=Z,199nm,21.4s,baz=116,slow=31
VNDA Vanda 53.87 195 P P 02 38 19.9 +0.1
VNDA IAmb IAmb 02 38 23.5
comp=Z,29nm,1.9s
ESTN Estel 54.17 4 P P 02 38 21.5 -1.2
NBLA Lagarto - SE 54.60 72 eP P 02 38 26.9 +1.0
TAOE Nuku Hiva Isla 54.77 292 eLR LR 02 54 21.6
comp=Z,248nm,26.8s
NBTA Tacaratu-PE 55.69 70 eP P 02 38 34.9 +1.1
PPT2 Papeete2 55.93 276 eS S 02 46 22.6 -0.9
comp=Z,312nm,25.2s
PPT2 eLR LR 02 54 45.7
comp=Z,556nm,28.6s,baz=128
PPT Papeete 55.94 276 LR LR 02 56 06.4
comp=Z,92nm,18.0s,baz=132,slow=29
NBMA Muriti-CE 56.42 68 eP P 02 38 40.2 +1.1
NBAN Anadia - AL 56.58 72 eP P 02 38 41.3 +1.1
NBPS Pedro II - PI 56.71 63 eP P 02 38 42.1 +0.9
NBPB Pedra_Branca-C 57.15 66 eP P 02 38 45.3 +1.1
NBLI Livramento-PB 57.69 69 eP P 02 38 49.3 +1.2
NBRF Rio Formoso - 58.08 72 eP P 02 38 51.8 +1.1
NBPA Parau_RN 58.71 68 eP P 02 38 56.5 +1.3
NBCL Cascavel-CE 58.98 66 eP P 02 38 58.0 +1.0
SYO Syowa Base 63.91 162 eP P 02 39 10.0 -20
SYO Syowa Base 63.91 162 epP P 02 39 29.4 -0.1
ZAIG Zacatecas 64.76 347 P P 02 39 34.9 -1.1
ZAIG IAmb IAmb 02 39 38.9
comp=Z,18nm,1.4s
HPIG 69.39 345 P P 02 40 05.3 0.0
MAW Mawson 69.53 169 P P 02 40 06.3 +0.9
comp=Z,8.0nm,0.8s,baz=194,slow=7.9,SNR=9.1
MAW LR LR 03 08 08.9
comp=Z,150nm,21.3s,baz=234,slow=34
833A Chaparral WMA, 69.77 351 P P 02 40 07.0 -0.3
833A Chaparral WMA, 69.77 351 P P 02 40 07.8 +0.5
baz=172
HKT Hockley 71.05 355 P P 02 40 14.0 -1.0
HKT pmax pmax
comp=Z,41nm,1.7s
HKT Hockley 71.05 355 P P 02 40 14.0 -1.0
HKT IAmb IAmb 02 40 17.1
comp=Z,41nm,1.6s
TX32 Lajitas Array 71.37 347 IAmb IAmb 02 40 20.1
comp=Z,19nm,1.4s
TXAR Lajitas Array 71.37 347 P P 02 40 17.7 +0.5
comp=Z,3.7nm,0.6s,baz=171,slow=8.3,SNR=65
TX31 Lajitas Ar. Si 71.37 347 IAmb IAmb 02 40 20.1
comp=Z,19nm,1.4s
JCT Junction City 71.95 351 P P 02 40 20.5 -0.1
baz=172,SNR=8.5
435B Jarrell 72.02 353 P P 02 40 21.5 +0.5
baz=174
BRAL Brewton 72.10 3 P P 02 40 22.0 +0.7
baz=182
352A Blakely 72.50 4 P P 02 40 24.4 +0.7
baz=184
TIGA Tifton 72.55 6 P P 02 40 24.0 0.0
baz=185
NATX Nacogdoches 72.77 356 P P 02 40 25.5 +0.2
baz=176
250A Grady 72.93 3 IAmb IAmb 02 40 28.9
comp=Z,18nm,0.9s
252A Lumpkin 73.03 5 P P 02 40 26.9 0.0
baz=184
254A Abbeville 73.08 6 P P 02 40 27.2 0.0
baz=185
255A Hazlehurst 73.13 7 P P 02 40 27.6 +0.1
baz=186
WHTX Lake Whitney, 73.20 353 IAmb IAmb 02 40 30.3
comp=Z,28nm,1.1s
WHTX Lake Whitney, 73.20 353 P P 02 40 28.0 0.0
baz=174,SNR=8.1
152A Waverly Hall 73.70 5 P P 02 40 30.5 -0.4
baz=184
154A Montrose 73.75 6 P P 02 40 30.9 -0.2
baz=185
155A Kite 73.82 7 P P 02 40 31.4 -0.1
baz=186
156A Sylvania 73.94 7 P P 02 40 31.1 -1.1
baz=187
LRAL Lakeview Retre 73.96 3 IAmb IAmb 02 40 34.0
comp=Z,33nm,1.4s
LRAL Lakeview Retre 73.96 3 P P 02 40 32.2 -0.1
baz=182
MNTX Cornudas Mount 73.98 346 P P 02 40 31.7 -0.8
baz=168
157A Early Branch 74.01 8 P P 02 40 32.6 0.0
baz=187
ABTX Abilene, Hawle 74.05 351 P P 02 40 32.9 0.0
baz=172,SNR=10
Z41A Richland Creek 74.18 357 P P 02 40 34.0 +0.3
baz=178
Z50A Ashland 74.22 3 P P 02 40 33.7 -0.2
baz=183
Z52A Williamson 74.24 5 P P 02 40 34.2 +0.2
baz=184
Z53A Monticello 74.38 5 P P 02 40 34.8 0.0
baz=185
Z54A Sparta 74.39 6 P P 02 40 34.5 -0.3
baz=186
Z55A Blythe 74.44 7 P P 02 40 34.8 -0.3
baz=186
319A Douglas 74.44 343 IAmb IAmb 02 40 38.0
comp=Z,62nm,2.0s
GOGA Godfrey 74.52 6 P P 02 40 36.2 +0.6
GOGA pmax pmax
comp=Z,22nm,2.0s
GOGA Godfrey 74.52 6 P P 02 40 35.6 0.0
baz=185,SNR=5.1
NHSC New Hope 74.52 8 P P 02 40 35.4 -0.2
baz=188
Z56A Williston 74.61 7 P P 02 40 35.7 -0.5
baz=187
WLAR White Oak Lake 74.62 357 IAmb IAmb 02 40 38.0
comp=Z,22nm,1.1s
Z58A St. Stephen 74.79 9 P P 02 40 37.2 0.0
baz=188
Y51A Rockmart 74.90 4 P P 02 40 37.6 -0.3
baz=184,SNR=9.1
Y52A Lilburn 74.93 5 P P 02 40 38.0 0.0
baz=185
Y53A Monroe 74.95 5 P P 02 40 37.8 -0.4
baz=185
Y54A Tignall 75.03 6 P P 02 40 38.4 -0.1
baz=186,SNR=8.4
Y55A Saluda 75.17 7 P P 02 40 39.4 0.0
baz=186,SNR=7.1
X48A Hartselle 75.37 2 P P 02 40 38.6 -1.9
X48A IAmb IAmb 02 40 41.9
comp=Z,16nm,0.8s
X40A Basin Creek Fa 75.41 357 P P 02 40 40.3 -0.5
baz=178
HODGE Hodges 75.43 7 IAmb IAmb 02 40 42.7
comp=Z,21nm,1.0s
MIAR Mount Ida 75.49 357 P P 02 40 40.9 -0.4
baz=177
Y59A Loris 75.55 9 P P 02 40 41.1 -0.4
baz=189
X51A Calhoun 75.58 4 P P 02 40 41.6 -0.1
baz=184
X53A Estanollee 75.62 6 P P 02 40 41.6 -0.3
baz=185,SNR=6.4
X52A Dahlonega 75.68 5 P P 02 40 42.4 +0.1
baz=185
TUC Tucson 75.69 342 P P 02 40 41.0 -1.5
TUC pmax pmax
comp=Z,43nm,2.0s
TUC Tucson 75.69 342 P P 02 40 41.0 -1.5
TUC IAmb IAmb 02 40 45.1
comp=Z,43nm,1.9s
TUC Tucson 75.69 342 P P 02 40 42.9 +0.4
baz=164
X55A Gracelyn & Ava 75.72 7 P P 02 40 42.7 +0.1
baz=186,SNR=5.9
X54A Belton 75.73 6 P P 02 40 43.0 +0.3
baz=186,SNR=6.2
MSTX Muleshoe 75.78 349 IAmb IAmb 02 40 45.3
comp=Z,26nm,0.9s
MSTX Muleshoe 75.78 349 P P 02 40 43.0 0.0
baz=170
X56A White Oak 75.80 8 P P 02 40 42.9 -0.1
baz=187
214A Organ Pipe Nat 75.85 340 IAmb IAmb 02 40 47.3
comp=Z,27nm,1.8s
214A Organ Pipe Nat 75.85 340 P P 02 40 43.4 0.0
baz=162
X57A Johnson Farm, 75.87 8 P P 02 40 43.3 -0.1
baz=188
X58A Rowland 76.05 9 P P 02 40 43.6 -0.8
baz=188
WMOK Wichita Mounta 76.05 352 IAmb IAmb 02 40 45.6
comp=Z,23nm,1.6s
WMOK Wichita Mounta 76.05 352 P P 02 40 43.8 -0.7
baz=173,SNR=5.8
W49A Belvidere 76.06 3 P P 02 40 44.4 -0.1
baz=183
W41B Gary Mavity, V 76.08 358 IAmb IAmb 02 40 45.9
comp=Z,23nm,1.3s
W41B Gary Mavity, V 76.08 358 P P 02 40 44.3 -0.2
baz=178,SNR=5.7
BG3 Lake Jocassee 76.13 6 IAmb IAmb 02 40 46.8
comp=Z,16nm,1.0s
W39A Magazine 76.15 357 P P 02 40 45.3 +0.3
baz=177,SNR=5.2
X59A McDuffie Farm, 76.15 10 P P 02 40 44.5 -0.4
baz=189
W52A Murphy 76.16 5 IAmb IAmb 02 40 46.9
comp=Z,20nm,1.1s
W52A Murphy 76.16 5 P P 02 40 45.1 +0.1
baz=185
SWET Sewanee 76.17 3 IAmb IAmb 02 40 46.4
comp=Z,17nm,0.8s
W51A Cleveland 76.18 4 P P 02 40 44.9 -0.2
baz=184
WHAR Wooly Hollow 76.19 358 IAmb IAmb 02 40 47.3
comp=Z,38nm,1.4s
W54A Cherokee Point 76.28 6 P P 02 40 45.6 -0.1
baz=186
W53A Cullowhee 76.29 6 P P 02 40 45.8 -0.1
baz=185,SNR=5.1
KMSC Kings Mountain 76.42 7 P P 02 40 46.4 -0.1
baz=187
CPCT Cooper Cave 76.48 5 IAmb IAmb 02 40 48.4
comp=Z,18nm,0.8s
W56A Indian Trail 76.48 8 P P 02 40 47.0 +0.1
baz=187
W58A Raeford 76.52 9 P P 02 40 46.8 -0.2
baz=188
AMTX Amarillo 76.53 350 IAmb IAmb 02 40 49.9
comp=Z,18nm,0.9s
AMTX Amarillo 76.53 350 P P 02 40 47.5 +0.2
baz=171
W57A Gilead 76.56 8 P P 02 40 47.0 -0.3
baz=188
V50A Pikeville 76.67 4 P P 02 40 47.8 -0.1
baz=184,SNR=6.0
V49A McMinnville 76.72 3 P P 02 40 47.6 -0.6
baz=183,SNR=7.1
V53A Saluda 76.81 6 IAmb IAmb 02 40 50.3
comp=Z,16nm,0.9s
V53A Saluda 76.81 6 P P 02 40 48.4 -0.4
baz=186
V51A Loudon 76.84 5 IAmb IAmb 02 40 50.2
comp=Z,13nm,1.0s
V51A Loudon 76.84 5 P P 02 40 48.5 -0.3
baz=184
V52A Sevierville 76.93 5 P P 02 40 48.8 -0.6
baz=185
LCAR Lake Charles 76.95 359 IAmb IAmb 02 40 50.2
comp=Z,35nm,1.6s
TUL1 Leonard 76.97 355 IAmb IAmb 02 40 51.5
comp=Z,37nm,1.3s
TUL1 Leonard 76.97 355 P P 02 40 49.4 -0.1
baz=176
V54A Nebo 76.99 7 P P 02 40 49.4 -0.4
baz=186
WVT Waverly 77.02 2 P P 02 40 48.5 -1.4
WVT pmax pmax
comp=Z,12nm,1.2s
WVT Waverly 77.02 2 P P 02 40 48.5 -1.4
WVT Waverly 77.02 2 P P 02 40 49.2 -0.7
baz=182
CLTN Cedars of Leba 77.03 3 IAmb IAmb 02 40 50.9
comp=Z,19nm,1.5s
V55A Taylorsville 77.13 7 P P 02 40 49.9 -0.6
baz=187
V56A Mocksville 77.16 8 P P 02 40 50.0 -0.7
baz=187
HHAR Hobbs 77.24 357 IAmb IAmb 02 40 52.4
comp=Z,54nm,1.9s
U40A Yellville 77.27 358 IAmb IAmb 02 40 52.6
comp=Z,34nm,1.5s
U40A Yellville 77.27 358 P P 02 40 50.8 -0.5
baz=178,SNR=5.2
V57A Coltrane Farms 77.31 8 P P 02 40 51.0 -0.6
baz=188
ANMO Albuquerque 77.33 346 P P 02 40 52.6 +0.7
ANMO pmax pmax
comp=Z,55nm,2.0s
ANMO Albuquerque 77.33 346 P P 02 40 52.6 +0.7
ANMO IAmb IAmb 02 40 54.2
comp=Z,54nm,2.0s
ANMO Albuquerque 77.33 346 P P 02 40 51.3 -0.6
baz=167
V59A Middlesex 77.38 10 P P 02 40 51.3 -0.5
baz=189
U50A Jamestown 77.42 4 P P 02 40 51.7 -0.5
baz=184,SNR=8.6
U51A La Follette 77.43 5 P P 02 40 51.7 -0.5
baz=185,SNR=5.4
U49A Red Boiling Sp 77.47 3 P P 02 40 52.1 -0.3
baz=183,SNR=8.8
U52A Thorn Hill 77.49 5 P P 02 40 52.2 -0.4
baz=185
U53A Fall Branch 77.52 6 P P 02 40 52.1 -0.6
baz=186,SNR=7.8
SWSC Sam W. Stewart 77.59 338 P P 02 40 53.5 +0.4
baz=160
V61A Roper 77.63 11 P P 02 40 53.6 +0.4
baz=190
X18A Snowflake 77.63 343 IAmb IAmb 02 40 56.4
comp=Z,35nm,1.6s
TZTN Tazewell 77.63 5 IAmb IAmb 02 40 54.7
comp=Z,28nm,1.3s
TZTN Tazewell 77.63 5 P P 02 40 53.3 0.0
baz=185
U56A King 77.70 8 P P 02 40 53.4 -0.3
baz=187
U54A Nelsons Funny 77.74 7 P P 02 40 53.7 -0.3
baz=186
U55A TA2, Sparta 77.79 7 P P 02 40 54.0 -0.3
baz=187
X16A Lo Mia Camp, P 77.86 342 IAmb IAmb 02 40 57.6
comp=Z,39nm,1.8s
U57A Blanch 77.90 9 P P 02 40 54.8 0.0
baz=188
109C Camp Elliot, M 77.92 337 P P 02 40 54.3 -0.7
baz=159
U58A Oxford 77.96 9 P P 02 40 54.2 -0.9
baz=189
Y12C Blythe 78.00 339 P P 02 40 55.4 0.0
baz=161
U59A Littleton 78.01 10 P P 02 40 54.5 -0.9
baz=189
T51A Gray 78.02 5 P P 02 40 55.0 -0.4
baz=185
T50A Nancy 78.02 4 P P 02 40 55.3 -0.2
baz=184
T49A Edmonton 78.07 4 P P 02 40 55.0 -0.8
baz=183
BC3 Big Chuckawall 78.16 338 P P 02 40 56.6 +0.1
baz=161
T52A Hallie 78.23 6 P P 02 40 56.6 0.0
baz=185
T54A Tazewell 78.30 7 P P 02 40 57.0 -0.1
baz=186
XPFO Pion Flat 78.40 338 P P 02 40 59.4 +1.6
XPFO IAmb IAmb 02 41 00.4
comp=Z,25nm,1.6s
PFO Pinyon Flats O 78.41 338 P P 02 40 59.4 +1.6
PFO pmax pmax
comp=Z,24nm,1.7s
PFO Pinyon Flats O 78.41 338 P P 02 40 59.4 +1.6
PFO IAmb IAmb 02 41 00.4
comp=Z,24nm,1.6s
PFO Pinyon Flats O 78.41 338 P P 02 40 57.4 -0.4
baz=160
T56A Rocky Mt 78.42 8 P P 02 40 57.7 0.0
baz=188
T55A Pulaski 78.43 7 P P 02 40 57.5 -0.3
baz=187
T57A Hurt 78.47 9 P P 02 40 56.9 -1.0
baz=188
T58A Grand View Acr 78.50 9 P P 02 40 57.9 -0.2
baz=189
IRM Iron Mountain 78.55 339 P P 02 40 58.8 +0.3
baz=161
MURC Murrieta 78.61 337 P P 02 40 58.5 -0.3
baz=159
S50A Richmond 78.70 4 P P 02 40 59.0 -0.2
baz=184,SNR=6.0
S51A Beattyville 78.72 5 IAmb IAmb 02 41 00.7
comp=Z,23nm,0.8s
S51A Beattyville 78.72 5 P P 02 40 59.1 -0.2
baz=185,SNR=7.7
S49A Springfield 78.76 4 P P 02 40 58.9 -0.7
baz=184
CIS Catalina Islan 78.79 336 P P 02 41 00.4 +0.6
baz=159
S52A Salyersville 78.79 6 P P 02 40 59.4 -0.3
baz=185
S53A Williamson 78.87 6 P P 02 41 00.4 +0.2
baz=186
WUAZ Wupatki 78.89 342 IAmb IAmb 02 41 03.4
comp=Z,24nm,1.5s
WUAZ Wupatki 78.89 342 P P 02 41 01.3 +0.8
baz=164
CCM Cathedral Cave 78.93 359 P P 02 40 59.2 -1.3
CCM PP PP 02 44 03.4 +3.6
CCM Cathedral Cave 78.93 359 P P 02 41 00.5 0.0
baz=179
S54A Dingess, Beckl 79.05 7 P P 02 41 00.8 -0.4
baz=187
S55A Lewisburg 79.10 8 P P 02 41 00.7 -0.7
baz=187
S56A Natural Bridge 79.11 8 P P 02 41 00.9 -0.6
baz=188
T25A Trinidad 79.13 348 IAmb IAmb 02 41 04.6
comp=Z,26nm,1.2s
T25A Trinidad 79.13 348 P P 02 41 02.5 +0.6
baz=169
WCI Wyandotte Cave 79.16 3 P P 02 40 59.5 -2.2
WCI pmax pmax
comp=Z,85nm,2.0s
WCI Wyandotte Cave 79.16 3 P P 02 40 59.5 -2.2
WCI Wyandotte Cave 79.16 3 P P 02 41 02.5 +0.8
baz=183
S58A Poland Farm, P 79.22 10 P P 02 41 01.5 -0.5
baz=189
R49A Shelbyville 79.27 4 P P 02 41 02.1 -0.2
baz=184
R50A Paris 79.31 4 P P 02 41 02.3 -0.2
baz=184
BFSC Mount Baldy Ra 79.34 337 P P 02 41 02.7 -0.3
baz=159
R51A Hillsboro 79.37 5 P P 02 41 02.4 -0.4
baz=185,SNR=5.5
S59A Mechanicsville 79.47 10 P P 02 41 02.4 -1.0
baz=190
HEC Hector,Ludlow 79.51 338 P P 02 41 02.7 -1.1
baz=160
R58B Mineral 79.59 10 P P 02 41 03.6 -0.4
baz=189
R57A Stanardsville 79.84 9 P P 02 41 04.8 -0.6
baz=189
Q48A North Vernon 79.88 3 P P 02 41 05.0 -0.6
baz=183
Q50A Georgetown 79.89 5 P P 02 41 05.4 -0.2
baz=185
SDCO Great Sand Dun 79.90 347 IAmb IAmb 02 41 08.6
comp=Z,36nm,2.0s
SDCO Great Sand Dun 79.90 347 P P 02 41 05.7 -0.4
baz=168
MVCO Mesa Verde 79.92 345 IAmb IAmb 02 41 08.6
comp=Z,39nm,1.6s
MVCO Mesa Verde 79.92 345 P P 02 41 07.0 +0.9
baz=166
TUQ Turquoise Moun 79.97 339 P P 02 41 06.2 -0.2
baz=160
U15A North Rim 79.98 342 IAmb IAmb 02 41 09.3
comp=Z,49nm,1.9s
Q49A Aurora 80.00 4 P P 02 41 05.8 -0.4
baz=184
EDW2 Edwards Air Fo 80.04 337 P P 02 41 06.5 -0.1
baz=159
MSVF Nonsavu 80.04 255 eP P 02 41 10.0 +2.7
MSVF pmax pmax
comp=Z,6.0nm,1.1s
GSC Goldstone, Bar 80.09 338 P P 02 41 07.2 +0.2
baz=160
Q53A Leroy 80.09 7 P P 02 41 06.5 -0.2
baz=186
Q51A Peebles 80.11 5 P P 02 41 06.9 0.0
baz=185
S22A 4UR Ranch, Cre 80.12 346 P P 02 41 07.5 +0.2
baz=167
Q52A Bidwell 80.13 6 P P 02 41 07.3 +0.4
baz=186
KSU1 Kansas State U 80.20 355 P P 02 41 07.6 +0.3
baz=175
Q54A Coxs Mills 80.27 7 P P 02 41 07.7 0.0
baz=187
Q55A Buckhannon 80.36 8 P P 02 41 08.1 -0.2
baz=188
P48A Milroy 80.43 3 P P 02 41 07.9 -0.7
baz=183
LRMC Laurel Mtn Rad 80.50 337 P P 02 41 09.6 +0.4
baz=159
P49A Miami Univ. Ec 80.53 4 P P 02 41 08.1 -1.0
baz=184,SNR=6.9
Q57A Strasburg 80.58 9 P P 02 41 08.4 -1.0
baz=189

P51A	Williamsport	80.58	5	IAmb	IAmb	02 41 10.4		
	comp=Z,26nm,1.2s							
P51A	Williamsport	80.58	5	P	P	02 41 08.4	-1.0	
	baz=185							
P50A	Jamestown	80.66	5	P	P	02 41 09.5	-0.3	
	baz=185,SNR=5.1							
P53A	Whipple	80.72	7	P	P	02 41 09.9	-0.2	
	baz=186							
P52A	Corning	80.81	6	P	P	02 41 10.1	-0.4	
	baz=186							
P54A	Burton	80.92	7	P	P	02 41 10.6	-0.6	
	baz=187							
MPMC	Manual Prospec	80.99	338	P	P	02 41 11.3	-0.6	
	baz=159							
Q24A	Divide	81.03	348	IAmb	IAmb	02 41 14.8		
	comp=Z,45nm,1.8s							
Q24A	Divide	81.03	348	P	P	02 41 11.7	-0.5	
	baz=168							
MCWV	Mont Chateau	81.04	8	P	P	02 41 11.6	-0.2	
	baz=188							
P57A	Homestead Farm	81.07	9	P	P	02 41 11.9	-0.1	
	baz=189							
P58A	Pank, Wackersv	81.17	10	P	P	02 41 12.2	-0.3	
	baz=190							
FURC	Furnace Creek,	81.19	338	P	P	02 41 12.2	-0.5	
	baz=160							
O49A	Covington	81.21	4	P	P	02 41 11.9	-0.8	
	baz=184							
O48A	Farmland	81.23	4	P	P	02 41 12.1	-0.8	
	baz=184							
O51A	Pataskala	81.28	6	P	P	02 41 12.4	-0.7	
	baz=186							
O52A	Adamsville	81.31	6	IAmb	IAmb	02 41 14.2		
	comp=Z,18nm,0.8s							
O52A	Adamsville	81.31	6	P	P	02 41 12.9	-0.3	
	baz=186							
ACSO	Alum Creek Sta	81.34	5	P	P	02 41 12.9	-0.4	
	baz=185							
TPNV	Topopah Spring	81.48	339	P	P	02 41 14.2	-0.2	
	baz=160							
O53A	New Philadelph	81.49	7	P	P	02 41 13.5	-0.7	
	baz=187							
CWC	Cottonwood Cre	81.51	337	P	P	02 41 14.5	-0.1	
	baz=159							
SMCO	Snowmass	81.54	347	IAmb	IAmb	02 41 20.9		
	comp=Z,23nm,1.3s							
O56A	Blue Knob Stat	81.78	9	P	P	02 41 15.7	-0.1	
	baz=189							
GRAC	Grapevine Rang	81.83	338	P	P	02 41 16.1	-0.1	
	baz=160							
N47A	Urbana	81.83	3	P	P	02 41 15.0	-1.0	
	baz=183							
N48A	Decatur	81.84	4	P	P	02 41 15.2	-0.8	
	baz=184							
N50A	Nevada	81.86	5	P	P	02 41 15.6	-0.5	
	baz=185							
ISCO	Idaho Springs	81.92	348	P	P	02 41 16.9	0.0	
	baz=168							
N49A	Columbus Grove	81.95	4	IAmb	IAmb	02 41 17.4		
	comp=Z,13nm,0.8s							
N49A	Columbus Grove	81.95	4	P	P	02 41 15.7	-0.9	
	baz=184							
N52A	McGinn's Farm,	82.01	6	P	P	02 41 16.3	-0.7	
	baz=186							
N51A	Ashland	82.06	6	P	P	02 41 16.8	-0.4	
	baz=186							
N53A	Lisbon	82.08	7	P	P	02 41 16.4	-0.9	
	baz=187							
N55A	Marion Center	82.24	8	P	P	02 41 16.8	-1.4	
	baz=188							
O60A	Telford	82.24	11	P	P	02 41 16.8	-1.3	
	baz=191							
M51A	Elyria	82.49	6	P	P	02 41 18.1	-1.3	
	baz=186							
M50A	Fremont	82.50	5	P	P	02 41 17.4	-2.0	
	baz=185							
M49A	Liberty Center	82.51	4	P	P	02 41 18.3	-1.2	
	baz=184							
R11A	Troy Canyon, C	82.62	340	IAmb	IAmb	02 41 23.3		
	comp=Z,29nm,1.8s							
R11A	Troy Canyon, C	82.62	340	P	P	02 41 20.7	+0.3	
	baz=161,SNR=6.4							
O20A	White River Ci	82.70	346	IAmb	IAmb	02 41 23.2		
	comp=Z,44nm,1.9s							
O20A	White River Ci	82.70	346	P	P	02 41 21.2	+0.4	
	baz=166							
M52A	Chesterland	82.76	6	P	P	02 41 21.0	+0.1	
	baz=186							
N59A	State Game Lan	82.78	11	P	P	02 41 20.9	0.0	
	baz=191							
N61A	South Mountain	82.83	12	P	P	02 41 21.4	+0.2	
	baz=192							
L47A	Sherwood	82.94	4	P	P	02 41 22.6	+0.8	
	baz=184							
M55A	Ridgway	82.94	8	P	P	02 41 21.4	-0.4	
	baz=188							
N23A	Red Feather La	83.05	348	P	P	02 41 23.3	+0.7	
	baz=168							
L50A	Kingsville	83.15	5	P	P	02 41 22.0	-0.8	
	baz=185							
L49A	Milan	83.15	5	P	P	02 41 22.3	-0.5	
	baz=185							
L53A	Girard	83.27	7	P	P	02 41 21.8	-1.7	
	baz=187							
PHWY	Pilot Hill	83.37	348	IAmb	IAmb	02 41 26.8		
	comp=Z,20nm,1.2s							
NV11	Mina Array Sit	83.39	338	IAmb	IAmb	02 41 26.8		
	comp=Z,34nm,2.0s							
NVAR	Mina Array Bea	83.43	338	P	P	02 41 25.5	+0.9	
	comp=Z,2.3nm,0.7s,baz=169,slow=5.3,SNR=17							
CMB	Columbia Colle	83.68	336	IAmb	IAmb	02 41 27.9		
	comp=Z,41nm,2.0s							
RYN	Ryan	83.68	338	IAmb	IAmb	02 41 28.4		
	comp=Z,37nm,1.9s							
DUG	Dugway, Tooele	83.69	343	P	P	02 41 26.4	+0.5	
	baz=163,SNR=13							
L56A	Greenwood	83.74	9	P	P	02 41 25.6	-0.3	
	baz=189							
WAKR	Walker	83.83	337	IAmb	IAmb	02 41 39.7		
	comp=Z,32nm,1.9s							
L58A	Harry Jones Me	83.87	10	P	P	02 41 26.5	0.0	
	baz=191							
KVN	Kaiserville	83.95	338	IAmb	IAmb	02 41 28.6		
	comp=Z,23nm,1.7s							
L59A	Walton	84.13	11	P	P	02 41 28.4	+0.5	
	baz=191							
YERR	Yerington	84.22	337	IAmb	IAmb	02 41 31.2		
	comp=Z,24nm,1.8s							
K57A	Scipio Center	84.46	10	P	P	02 41 29.1	-0.4	
	baz=190							
RUBR	Rubicon Trail	84.55	337	P	P	02 41 29.9	-0.4	
K58A	Earlville	84.61	10	P	P	02 41 30.0	-0.3	
	baz=191							
AFDM	Forest Hills D	84.70	336	IAmb	IAmb	02 41 33.6		
	comp=Z,13nm,1.3s							
ELK	Elko	84.79	341	IAmb	IAmb	02 41 33.7		
	comp=Z,26nm,1.9s							
ECSD	EROS Data Cent	84.81	355	P	P	02 41 31.1	-0.2	
	baz=175,SNR=21							
K22A	Casper	84.85	348	P	P	02 41 32.7	+1.0	
	baz=168,SNR=13							
HRV	Adam Dziewonsk	85.00	13	P	P	02 41 32.4	+0.2	
	baz=194							
J57A	Williamstown	85.19	10	P	P	02 41 33.3	+0.1	
	baz=190							
J58A	Remsen	85.24	11	P	P	02 41 32.2	-1.2	
	baz=191							
BEKR	Beckworth	85.36	337	IAmb	IAmb	02 41 37.4		
	comp=Z,16nm,1.6s							
DZM	Mont Dzumac	85.41	245	*e*LR	LR	03 08 28.4		
	comp=Z,521nm,27.1s							
ORV	Oroville	85.41	336	IAmb	IAmb	02 41 37.0		
	comp=Z,29nm,1.9s							
BW06	Boulder Array	85.49	346	P	P	02 41 34.6	-0.4	
	baz=165,SNR=10							
PDAR	Pinedale Array	85.49	346	P	P	02 41 35.4	+0.4	
	comp=Z,2.0nm,0.7s,baz=149,slow=5.3,SNR=17							
PDAR				LR	LR	03 16 32.7		
	comp=Z,126nm,19.2s,baz=102,slow=33							
H46A	Fife Lake	85.50	3	P	P	02 41 34.2	-0.5	
	baz=184							
I57A	Carthage	85.76	10	P	P	02 41 35.6	-0.4	
	baz=191							
RSSD	Black Hills	85.93	350	P	P	02 41 36.9	-0.2	
RSSD				pmax	pmax			
	comp=Z,7.0nm,0.9s							
RSSD	Black Hills	85.93	350	P	P	02 41 36.9	-0.2	
RSSD	Black Hills	85.93	350	P	P	02 41 37.4	+0.3	
	baz=169							
SPMN	Marine on St.	86.12	358	P	P	02 41 37.5	-0.3	
	baz=178							
IMW	Indian Meadow	86.85	345	IAmb	IAmb	02 41 44.1		
	comp=Z,18nm,1.5s							
G55A	Calabogie	86.92	9	P	P	02 41 42.2	+0.6	
	baz=190							
G57A	Newington	86.99	11	P	P	02 41 43.2	+1.2	
	baz=191							
F51A	Arnstein	87.24	7	P	P	02 41 42.3	-0.9	
	baz=188							
WVOR	Wild Horse Val	87.25	339	IAmb	IAmb	02 41 46.1		
	comp=Z,18nm,1.6s							
ALGO	Algonquin Park	87.45	8	P	P	02 41 45.1	+0.9	
	baz=189							
RLMT	Red Lodge	87.72	346	IAmb	IAmb	02 42 02.9		
	comp=Z,16nm,1.7s							
RLMT	Red Lodge	87.72	346	P	P	02 41 45.7	-0.2	
	baz=166							
YBH	Yreka Blue Hor	87.78	336	LR	LR	03 12 41.3		
	comp=Z,36nm,20.2s,baz=142,slow=30							
D46A	Sault St. Mari	87.90	4	P	P	02 41 45.8	-0.6	
	baz=184							
E53A	Dumoine, Ponti	87.92	8	P	P	02 41 46.7	+0.2	
	baz=189							
E54A	Lac Daplat, Po	88.02	9	P	P	02 41 46.3	-0.6	
	baz=190							
BOSA	Boshof	88.21	127	P	P	02 41 48.3	-0.5	
BOSA				pmax	pmax			
	comp=Z,20nm,1.8s							
BOSA	Boshof	88.21	127	P	P	02 41 48.1	-0.7	
	comp=Z,2.0nm,0.8s,baz=281,slow=6.2,SNR=3.5							
BOSA	Boshof	88.21	127	P	P	02 41 48.3	-0.5	
BOSA				IAmb	IAmb	02 42 03.0		
	comp=Z,20nm,1.8s							
E56A	St. Veronique	88.40	10	P	P	02 41 48.4	-0.4	
	baz=191							
D52A	ZEK Kipawa Sen	88.43	8	P	P	02 41 48.2	-0.7	
	baz=189							
D50A	G1974 Best Tow	88.48	7	P	P	02 41 48.8	-0.3	
	baz=188							
E60A	Ste Agathe de	88.77	13	P	P	02 41 51.0	+0.5	
	baz=194							
D55A	Sainte-Anne-du	88.81	10	P	P	02 41 49.1	-1.5	
	baz=191							
E61A	Lac Etchemin	88.99	13	P	P	02 41 49.7	-1.9	
	baz=194							
I07A	Izee	89.02	339	IAmb	IAmb	02 41 54.5		
	comp=Z,23nm,1.7s							
D57A	Chemin Vers le	89.02	11	P	P	02 41 49.8	-1.9	
	baz=192							
D58A	Chemin du LacG	89.25	12	P	P	02 41 51.9	-0.8	
	baz=193							
LATQ	La Tuque	89.54	12	P	P	02 41 53.4	-0.6	
	baz=193							
D62A	Allapoint, All	89.87	14	P	P	02 41 55.6	-0.1	
	baz=196							
LIC	Lamto	90.20	82	*e*P	P	02 41 57.5	-0.6	
	comp=Z,4.0nm,0.3s							
LIC	Lamto	90.20	82	P	P	02 41 57.5	-0.6	
TIC	Toumodi	90.48	82	*e*P	P	02 41 57.6	-1.8	
	comp=Z,1.7nm,0.2s							
KIC	Kosan Boka	90.50	82	*e*P	P	02 41 59.7	+0.2	
	comp=Z,11nm,0.8s							
DBIC	Dimbokro	90.62	82	P	P	02 41 59.7	-0.3	
DBIC				pmax	pmax			
	comp=Z,5.0nm,1.0s							
DBIC	Dimbokro	90.62	82	P	P	02 41 59.7	-0.3	
	comp=Z,3.6nm,0.9s,baz=182,slow=5.8,SNR=7.7							
DBIC				LR	LR	03 22 09.3		
	comp=Z,64nm,19.1s,baz=224,slow=35							
DBIC	Dimbokro	90.62	82	IAmb	IAmb	02 42 01.2		
	comp=Z,5.2nm,0.9s							
LSQQ	Lebel-sur-Quev	90.64	8	P	P	02 41 58.8	-0.3	
	baz=190							
ULM	Lac du Bonnet	91.26	356	P	P	02 42 01.0	-1.0	
	comp=Z,1.9nm,0.6s,baz=156,slow=4.3,SNR=4.9							
ULM				LR	LR	03 17 54.6		
	comp=Z,217nm,19.3s,baz=92,slow=32							
ULM	Lac du Bonnet	91.26	356	IAmb	IAmb	02 42 03.2		
	comp=Z,28nm,1.9s							
NEW	Newport	92.33	342	LR	LR	03 18 07.2		
	comp=Z,114nm,18.5s,baz=104,slow=32							
STKA	Sthens Creek	93.12	222	LR	LR	03 17 10.5		
	comp=Z,102nm,18.5s,baz=189,slow=31							
SCHQ	Schefferville	97.71	13	LR	LR	03 24 03.6		
	comp=Z,99nm,18.9s,baz=146,slow=34							
TORD	Torodi Ar. Bea	99.71	81	P	Pdif	02 42 40.8	-0.6	
	comp=Z,0.5nm,0.9s,baz=244,slow=4.7,SNR=3.6							
H11S2	WAKE ISLAND Hy	111.90	276	T	T	04 48 50.0		
	baz=127							
H11S1	WAKE ISLAND Hy	111.92	276	T	T	04 48 52.1		
	baz=127,SNR=3.1							
H11S3	WAKE ISLAND Hy	111.92	276	T	T	04 48 51.9		
	baz=127							
ILAR	Eielson Array	114.67	337	PKP	PKPdf	02 47 36.1	-0.4	
	comp=Z,0.4nm,0.8s,baz=183,slow=1.4,SNR=5.2							
DAVOX	Davos/Dischmat	124.40	55	PKP	PKiKP	02 47 56.3	-0.1	
	comp=Z,1.7nm,0.7s,baz=153,slow=16,SNR=4.8							
PAOL	Paolisi	124.88	63		PKPdf	02 47 56.1	-0.9	
GERES	GERESS Array B	127.59	54	PKP	PKPdf	02 48 01.0	-0.9	
	comp=Z,0.9nm,0.8s,baz=112,slow=1.4,SNR=6.0							
KHC	Kasperske Hory	127.63	54	*e*PKiKP	PKPdf	02 48 01.3	-0.6	
KONO	Kongsberg	128.97	40	*e*PKiKP	PKPdf	02 48 04.0	-0.1	
VYHS	Vyhne	130.65	56	*e*PKiKP	PKiKP	02 48 08.8	+0.3	
VYHS	Vyhne	130.65	56	*e*PKP	PKiKP	02 48 08.8	+0.3	
KBS	Kingsbay	132.39	15	*e*PKiKP	PKPdf	02 48 08.8	-1.3	
BILL	Bilibino	132.56	330	*e*PKiKP	PKiKP	02 48 12.1	+0.3	
BILL				pmax	pmax			
	comp=Z,7.0nm,1.2s							
BILL	Bilibino	132.56	330	*e*	PKiKP	02 48 12.2	+0.4	
FINES	FINESS Array B	137.27	40	PKP	PKiKP	02 48 20.6	-0.9	
	comp=Z,1.6nm,0.9s,baz=197,slow=4.2,SNR=3.9							
VSU	Vasula	137.42	44	*i* PKiKP	PKPdf	02 48 19.5	-0.5	
BRTR	Keskin Array B	137.67	73	PKiKP	PKiKP	02 48 23.0	-0.3	
BRTR	Keskin Array B	137.67	73	PKP	PKiKP	02 48 23.0	-0.3	
	comp=Z,1.6nm,0.7s,baz=193,slow=4.0,SNR=8.0							
SEY	Seymchan	138.12	323	*e*PKiKP	PKPdf	02 48 21.3	+0.1	
OBN	Obninsk	142.65	50	*e*PKiKP	PKPdf	02 48 29.8	+0.2	
OBN				*e*		02 51 35.4		
OBN				pmax	pmax			
	comp=Z,11nm,1.8s							
MJAR	Matsushiro Arr	142.65	279	PKhKP	PKPpre	02 48 25.2		
	comp=Z,2.7nm,0.7s,baz=123,slow=3.9,SNR=4.2							
KLMR	Klimovskoe	143.80	40	*e*PKiKP	PKPbc	02 48 29.4	+0.3	
KLMR				pmax	pmax			
	comp=Z,46nm,1.4s							
KLMR	Klimovskoe	143.80	40	*e*PKPdf	PKPbc	02 48 29.5	+0.4	
KLMR				AMP		02 48 32.8		
	comp=Z,46nm,1.4s							
LPSR	Galich'ya Gora	143.97	54	*e*PKiKP	PKPab	02 48 29.2	-0.1	
LPSR				pmax	pmax			
	comp=Z,10.0nm,0.9s							
VSR	Storozhevoye	144.04	56	*e*PKiKP	PKPab	02 48 28.5	-1.1	
VSR				pmax	pmax			
	comp=Z,10.0nm,1.2s							
VORD	Divnogorie	144.10	57	*e*PKHKP	PKPpre	02 48 28.4		
VORD				pmax	pmax			
	comp=Z,30nm,1.8s							
AKH	Akhalkalaki	145.32	74	PKiKP	PKPab	02 48 35.5	+0.5	
AKH	Akhalkalaki	145.32	74		PKPab	02 48 35.5	+0.5	
KIV	Kislovodsk	145.35	69	*e*PKiKP	PKPab	02 48 35.8	+0.9	
KIV				pmax	pmax			
	comp=Z,61nm,1.1s							
KIV	Kislovodsk	145.35	69		PKPdf	02 48 33.9	-1.0	
KBZ	Khabaz	145.46	70	PKPbc	PKPbc	02 48 35.2	+0.3	
	comp=Z,2.8nm,0.8s,baz=276,slow=3.5,SNR=6.6							
VRH	Novokhopyorsk	145.64	56	*e*PKiKP	PKPdf	02 48 34.3	-0.6	
VRH				pmax	pmax			
	comp=Z,30nm,0.7s							
GNI	Garni	145.88	77	PKP2	PKPbc	02 48 36.9	+0.3	
GNI	Garni	145.88	77	PKPbc	PKPab	02 48 37.1	+0.1	
	comp=Z,6.0nm,0.7s,baz=65,slow=1.2,SNR=5.0							
GNI	Garni	145.88	77		PKPbc	02 48 36.9	+0.3	
TEY	Ternei	146.23	292	*e*PKiKP	PKPdf	02 48 36.0	-0.1	
TEY				pmax	pmax			
	comp=Z,20nm,1.6s							
PRGR	Permogore	146.50	37	*e*PKP2	PKPdf	02 48 36.1	0.0	
PRGR				pmax	pmax			
	comp=Z,39nm,0.8s							
YAK	Yakutsk	148.57	325	*e*PKP2	PKPbc	02 48 41.8	-1.4	
YAK				pmax	pmax			
	comp=Z,43nm,0.8s							
YAK				pmax	pmax			
	comp=E,7.0nm,1.0s							
YAK				pmax	pmax			
	comp=N,6.0nm,1.5s							
YAK	Yakutsk	148.57	325		PKPbc	02 48 42.1	-1.0	
USRK	Ussuriysk Ar.	149.33	290	PKPbc	PKPbc	02 48 44.9	-0.8	
	comp=N,2.7nm,0.6s,baz=2.9,slow=3.8,SNR=6.8							
KSRS	Korea Array	150.67	275	PKPbc	PKPbc	02 48 48.9	-0.2	
	comp=N,2.6nm,0.6s,baz=107,slow=2.7,SNR=7.4							
MDJ	Mudanjiang	151.09	290	PKPbc	PKPbc	02 48 48.5	-1.4	
MDJ				AMB	AMB			
	comp=N,190nm,3.5s							
ARU	Arti	154.56	43	PKP2	PKPab	02 49 13.0	+1.1	
NJ2	Nanjing	155.28	257	*e*PKP	PKPdf	02 48 52.3	+1.8	
AKTO	Aktyubinsk	155.98	57	PKP	PKPdf	02 48 51.2	+0.3	
	comp=N,1.9nm,1.1s,baz=168,slow=6.9,SNR=4.5							
AKTO				PKPab	PKPab	02 49 18.7	+0.5	
	comp=N,3.0nm,0.9s,baz=302,slow=7.8,SNR=6.5							
KMI	Kunming	160.80	217	PKP	PKPdf	02 48 57.5	-0.3	
BRVK	Borovoye	162.14	42	PKIKP	PKPdf	02 48 56.4	-1.6	
BRVK	Borovoye	162.14	42		PKPdf	02 48 56.4	-1.6	
BVAR	Borovoye Array	162.21	42	PKP	PKPdf	02 48 57.3	-0.8	
	comp=N,1.0nm,0.8s,baz=293,slow=1.1,SNR=6.5							
HHC	Hu-ho-hao-te	163.81	276	*e*PKP	PKPdf	02 48 59.0	-1.2	
CD2	Chengdu	164.92	231	PKP	PKPdf	02 49 01.0	-0.4	
SONM	Songino Array	166.66	305	PKP2	PKPab	02 50 05.0	-0.1	
SONM	Songino Array	166.66	305	PKPab	PKPab	02 50 05.0	-0.1	
	comp=N,1.0nm,1.1s,baz=64,slow=2.7,SNR=4.2							
ZAA0	Zalesovo Array	166.80	14		PKPdf	02 48 59.5	-2.6	
ZAA0				PKPab	PKPab	02 50 03.2	-1.9	
ZALV	Zalesovo Beam	166.80	14	PKIKP	PKPdf	02 49 00.0	-2.1	
ZALV	Zalesovo Beam	166.80	14	PKP	PKPdf	02 48 60.0	-2.1	
	comp=N,2.8nm,0.8s,baz=110,slow=0.3,SNR=7.5							
KURK	Kurchatov	167.62	36	PKIKP	PKPdf	02 49 00.0	-2.8	
LZH	Lanzhou	168.10	249	*e*PKP	PKPdf	02 49 03.0	-0.9	
LZH				pPKP	sPKPdf	02 49 08.0	+1.2	
LZH				sPKP		02 49 10.3		
LZH				SS	SS	03 14 50.3	-1.2	
LZH				LR	LR			
	comp=N,270nm,18.4s							
LZH				LR	LR			
	comp=N,290nm,17.4s							
LZH				LR	LR			
	comp=N,710nm,21.7s							
MKAR	Makanchi Array	172.09	43	PKPab	PKPab	02 50 29.5	+0.5	
	comp=N,0.7nm,0.7s,baz=286,slow=2.7,SNR=3.1							
GTA	Gaotai	172.37	259	PKP	PKPdf	02 49 05.5	-0.6	
WMQ	Urumqi	176.86	34	*e*PKP	PKPdf	02 49 08.5	+1.2	
WMQ				AMB	AMB			
	comp=N,350nm,5.9s							

IDC ***27*** *02:36:31.4±3.1, 4.°42S×153.°11E, h11km±18km, mb4.6/20, mb1 4.7/20, mb1mx4.6/33, mbtmp4.7/20, MS3.7/10, Ms1 3.7/10, ms1mx3.5/31, Error ellipse: s-maj=16.4km s-min=12.5km az=82.0*

MOS ***27*** *02:36:33.3±1.2, 4.°39S×153.°00E, h33km, mb5.1/22, Error ellipse: s-maj=11.5km s-min=7.2km az=102.9*

NEIC ***27*** *02:36:35.2±2.0, 4.°39S±0.°07×153.°10E±0.°05, h40km±1km, mb5.1/52, Error ellipse: s-maj=10.4km s-min=7.6km az=193.0*

DJA ***27*** *02:36:37.7±0.8, 4.°S±9.°×15.°3E±.°, h70km±8km, M5.2/13, mb4.8/13, mB5.7/3, MLv5.4/2, Mw(mB)5.2/3*

BJI ***27*** *02:36:38.4±0.0, 4.°02S×153.°33E, h73km, mB5.3/36, mb5.0/53, Ms5.0/10, Ms7 4.7/7*

ISC 27 02:36:35.3±0.4, 4°35S±0°05×153°11E±0°06, h38km±1km, n202, σ1°33/204, mb5.0/69, 8C, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.96	280	Pn	Pn	02 36 51.8	-0.6
RABL					Sn	02 37 03.5	-1.3
KRVT	Keravat (AS076	1.09	272	Pn	Pn	02 36 53.4	-0.6
	4μm,0.3s,baz=119,slow=1.3,SNR=1050						
KRVT				Sn	Sn	02 37 08.3	+0.5
	6μm,0.3s,baz=77,slow=19,SNR=17						
MANU	Manus Island	6.18	292		Pn	02 38 05.9	+1.8
PMG	Port Moresby	7.76	229	P	Pn	02 38 24.6	-1.1
PMG	Port Moresby	7.76	229	Pn	Pn	02 38 27.9	+2.2
	5.3nm,0.3s,baz=17,slow=11,SNR=4.0						
PMG				Sn	Sn	02 39 53.9	+1.5
	9.8nm,0.3s,baz=223,slow=24,SNR=8.5						
PMG	Port Moresby	7.76	229		Pn	02 38 24.6	-1.1
PMG				Sn	Sn	02 39 40.9	-11
HNR	Honiara	8.45	127	P	Pn	02 38 36.0	+0.7
HNR	Honiara	8.45	127	Pn	Pn	02 38 37.4	+2.1
	84nm,0.3s,baz=235,slow=3.2,SNR=7.5						
HNR				LR	LR	02 42 02.7	
	comp=Z,450nm,20.9s,baz=307,slow=39						
HNR	Honiara	8.45	127	*e*P	Pn	02 38 38.0	+2.7
HNR	Honiara	8.45	127		Pn	02 38 36.0	+0.7
PATS	Pohnpei	12.27	25	Pn	Pn	02 39 28.8	+1.2
PATS					Sn	02 41 38.5	-4.6
JAY	Jayapura	12.52	278	LR	LR	02 43 40.5	
	comp=Z,326nm,19.6s,baz=13,slow=34						
COEN	Coen	13.68	225	Pn	Pn	02 39 47.2	+0.3
FAKI	Fak Fak	20.87	273	P	P	02 41 14.7	+0.3
FAKI				IAmb	IAmb	02 41 46.5	
	comp=Z,68nm,1.2s						
EIDS	Eidsvold	20.99	185	P	P	02 41 16.5	+1.0
NOUC	Port Laguerre	21.79	145	P	P	02 41 23.9	-0.3
NOUC				IAmb	IAmb	02 41 40.1	
	comp=Z,139nm,1.9s						
DZM	Mont Dzumac	21.84	145	P	P	02 41 25.0	+0.1
	comp=Z,6.9nm,0.4s,baz=295,slow=6.1,SNR=16						
DZM	Mont Dzumac	21.84	145	P	P	02 41 24.8	0.0
SIJI	Sorong	22.09	278	P	P	02 41 30.2	+2.7
	comp=Z,17nm,0.5s,baz=30,slow=18,SNR=5.7						
MTN	Manton Dam	23.30	247	P	P	02 41 39.0	-1.0
MTN				IAmb	IAmb	02 41 40.5	
	comp=Z,44nm,1.1s						
MTN				PcP	PcP	02 45 27.0	+0.1
WB0	Warramunga Arr	23.83	228	P	P	02 41 43.7	-1.4
WB0				IAmb	IAmb	02 41 45.3	
	comp=Z,37nm,0.8s						
WR0	Warramunga Arr	23.84	228	P	P	02 41 44.1	-1.0
WR0				IAmb	IAmb	02 41 46.1	
	comp=Z,56nm,1.

CAN	Canberra	31.05	187	P	P	02 42 48.5	-1.9		
BBOO	Buckleboo	32.49	207	P	P	02 43 00.6	-1.9		
TOO	Toolangi	33.79	191	P	P	02 43 12.5	-1.3		
TOO	comp=Z,38nm,1.9s			pmax	pmax				
TOO	Toolangi	33.79	191	P	P	02 43 12.5	-1.3		
TOO	comp=Z,38nm,1.9s			IAmb	IAmb	02 43 22.6			
FORT	Forrest	35.33	219	IAmb	IAmb	02 43 26.4			
PSA00	comp=Z,24nm,0.6s Pilbara Seismi	36.53	239	P	P	02 43 35.6	-1.9		
QRZ	Quartz Range	40.29	157	P	P	02 44 09.0	+0.1		
BKZ	Black Stump Fm	40.63	152	P	P	02 44 11.8	0.0		
BKZ	comp=Z,98nm,1.7s			IAmb	IAmb	02 44 32.9			
NNZ	Nelson	40.96	157	P	P	02 44 16.2	+1.8		
NNZ	Nelson	40.96	157	P	P	02 44 14.3	-0.1		
POWZ	Post Office Ro	41.28	154	P	P	02 44 19.2	+2.1		
TUWZ	Tuamarina	41.36	156	P	P	02 44 18.0	+0.3		
TUWZ	Tuamarina	41.36	156	P	P	02 44 17.3	-0.4		
MRZ	Mangatainoka R	41.41	154	P	P	02 44 16.9	-1.3		
PRWZ	Pori Road	41.50	153	P	P	02 44 17.7	-1.1		
HOWZ	Holdsworth Sta	41.58	154	P	P	02 44 18.9	-0.7		
TIWZ	Tintock	41.64	154	P	P	02 44 19.2	-0.9		
GIRL	Giralia	41.76	241	P	P	02 44 20.4	-0.8		
MTW	Mount Morrison	41.79	154	P	P	02 44 18.5	-2.8		
TMWZ	Te Maipa	41.91	154	P	P	02 44 21.8	-0.5		
MJAR	Matsushiro Arr	43.00	342	P	P	02 44 31.0	-0.2		
MJAR	comp=Z,3.2nm,0.6s,baz=163,slow=8.1,SNR=7.0			PcP	PcP	02 46 21.6	+0.5		
CISI	comp=Z,3.3nm,1.0s,baz=153,slow=4.2,SNR=4.5 Cisompet, Garu	45.15	264	P	P	02 44 46.5	-2.3		
CISI	Cisompet, Garu	45.15	264	P	P	02 44 46.6	-2.3		
TJN	Taejon	47.13	331	*e*P	P	02 45 04.9	+1.0		
KSRS	Korea Array	47.75	333	P	P	02 45 09.5	+0.9		
KSRS	comp=Z,9.9nm,0.8s,baz=149,slow=8.6,SNR=19			LR	LR	03 04 52.4			
NJ2	comp=Z,22nm,18.4s,baz=115,slow=36 Nanjing	48.70	320	*e*P	P	02 45 18.0	+1.8		
NJ2	comp=Z,12nm,0.6s			pmax	pmax				
WHN	Wuhan	50.75	316	P	P	02 45 32.3	+0.5		
USA0B	Ussuriysk Arra	51.93	341	P	P	02 45 41.6	+1.2		
USA0B	comp=Z,24nm,1.0s			pmax	pmax				
USA0B	Ussuriysk Arra	51.93	341	P	P	02 45 41.6	+1.2		
USA0B	comp=Z,24nm,0.9s			IAmb	IAmb	02 45 42.3			
USRK	Ussuriysk Ar.	51.93	341	P	P	02 45 41.4	+1.0		
TIA	comp=Z,13nm,0.7s,baz=169,slow=7.7,SNR=28 Tai'an	52.54	323	P	P	02 45 45.5	+0.4		
TIA	comp=Z,14nm,0.8s			pmax	pmax				
MDJ	Mudanjiang	53.12	339	P	P	02 45 50.0	+0.8		
MDJ	comp=Z,36nm,0.9s			pmax	pmax				
MDJ	comp=Z,170nm,3.5s			pmax	pmax				
MDJ	Mudanjiang	53.12	339	P	P	02 45 49.0	-0.2		
MDJ	comp=Z,24nm,0.8s			IAmb	IAmb	02 45 50.9			
CN2	Changchun	54.02	335	*e*P	P	02 45 56.5	+0.7		
CN2	comp=Z,20nm,0.8s			pmax	pmax				
ENH	Enshi	54.08	313	P	P	02 45 56.2	-0.4		
ENH	comp=Z,23nm,1.1s			IAmb	IAmb	02 45 58.2			
GYA	Guiyang	54.38	307	*e*P	P	02 46 00.5	+1.6		
GYA	comp=Z,10.0nm,0.8s			pmax	pmax				
SKR	Severo-Kuril's	54.88	2	*e*P	P	02 46 01.8	-0.1		
BJI	Beijing	55.70	326	*e*P	P	02 46 09.0	+1.0		
BJI	comp=Z,7.0nm,1.1s			pmax	pmax				
KLR	Kul'dur	56.51	343	*e*P	P	02 46 14.6	+1.0		
KLR	comp=Z,24nm,0.9s			pmax	pmax				
XAN	Xi'an	56.52	316	P	P	02 46 14.5	+0.4		
XAN	comp=Z,14nm,0.9s			pmax	pmax				
XAN	Xi'an	56.52	316	P	P	02 46 12.9	-1.2		
XAN	comp=Z,11nm,0.8s			pmax	pmax				
XAN	Xi'an	56.52	316	P	P	02 46 12.9	-1.2		
XAN	comp=Z,11nm,0.8s			IAmb	IAmb	02 46 15.3			
GRNR	Gornyy	56.75	347⇑	*i*P	P	02 46 16.0	+0.6		
GRNR	comp=Z,7.0nm,0.9s			pmax	pmax				
KMI	Kunming	57.00	304	P	P	02 46 18.5	+0.6		
KMI	comp=Z,7.0nm,1.3s			pmax	pmax				
PETK	Petropavlovsk-	57.38	3	P	P	02 46 21.1	+1.3		
PETK	comp=Z,3.5nm,0.6s,baz=166,slow=7.9,SNR=5.2			LR	LR	03 10 47.9			
CMAR	comp=Z,34nm,18.5s,baz=241,slow=36 Chiang Mai Arr	57.97	295	*ce*P	P	02 46 26.0	+1.4		
CMAR	comp=Z,6.0nm,0.8s			pmax	pmax				
CMAR	Chiang Mai Arr	57.97	295	P	P	02 46 25.6	+1.0		
HHC	comp=Z,6.3nm,0.8s,baz=115,slow=5.2,SNR=18 Hu-ho-hao-te	58.87	324	*e*P	P	02 46 31.5	+0.9		
HHC	comp=Z,5.0nm,1.1s			pmax	pmax				
HHC	comp=Z,180nm,7.5s			pmax	pmax				
HIA	Hailar	60.76	336	*e*P	P	02 46 44.3	+1.0		
HIA	comp=Z,48nm,0.9s			pmax	pmax				
HIA	Hailar	60.76	336	P	P	02 46 42.7	-0.6		
HIA	comp=Z,15nm,1.2s			IAmb	IAmb	02 46 44.8			
LZH	Lanzhou	61.13	315	*e*P	P	02 46 48.0	+1.7		
LZH				pP	sP	02 47 09.8	+7.5		
LZH				sP	PcP	02 47 19.3	-10		
LZH				*e*PP	PP	02 49 06.5	+5.2		
LZH	comp=Z,23nm,1.3s			pmax	pmax				
LZH	comp=Z,86nm,6.2s			pmax	pmax				
LZH	comp=Z,260nm,15.1s			LR	LR				
LZH	comp=Z,260nm,15.3s			LR	LR				
LZH	comp=Z,400nm,18.0s			LR	LR				
MA2	Magadan	63.76	359	*e*P	P	02 47 03.1	0.0		
MA2	comp=Z,23nm,0.9s			pmax	pmax				
MA2	Magadan	63.76	359	P	P	02 47 03.7	+0.5		
GTA	Gaotai	65.54	317	*e*P	P	02 47 16.8	+1.4		
GTA				PcP	PcP	02 47 47.8	+0.9		
GTA	comp=Z,9.0nm,1.0s			pmax	pmax				
ULN	Ulaanbaatar	65.78	328⇑	*e*P	P	02 47 17.5	+0.7		
ULN	comp=Z,6.0nm,0.9s			pmax	pmax				
ULN	Ulaanbaatar	65.78	328	P	P	02 47 16.7	-0.1		
SONM	Songino Array	66.12	328	P	P	02 47 20.0	+1.1		
SONM	comp=Z,4.3nm,0.6s,baz=142,slow=5.6,SNR=32			PcP	PcP	02 47 49.3	+0.3		
SHL	comp=Z,1.8nm,0.5s,baz=151,slow=3.8,SNR=9.2 Shillong	66.35	300	P	P	02 47 21.2	+0.3		
SHL	comp=Z,12nm,0.9s			pmax	pmax				
SHL	Shillong	66.35	300	IAmb	IAmb	02 47 21.8			
SEY	comp=Z,12nm,0.9s Seymchan	67.10	360⇑	*e*P	P	02 47 25.1	+0.4		
YAK	Yakutsk	68.60	348	*e*P	P	02 47 32.4	-1.7		
YAK	comp=Z,21nm,1.3s			pmax	pmax				
ZAK	Zakamensk	69.28	328	*e*P	P	02 47 38.6	-0.1		
ZAK	comp=Z,9.0nm,0.9s			pmax	pmax				
BOD	Bodaibo	69.49	339	*e*P	P	02 47 39.4	-0.3		
BOD	comp=Z,9.0nm,1.4s			pmax	pmax				
TLY	Talaya	69.85	330	*e*P	P	02 47 40.1	-2.1		
TLY	comp=Z,3.0nm,0.9s			pmax	pmax				
BILL	Bilibino	72.82	5⇑	*e*P	P	02 47 59.4	-0.3		
BILL				*e*		02 50 46.2			
BILL	comp=Z,6.0nm,1.0s			pmax	pmax				
BILL	Bilibino	72.82	5	P	P	02 48 00.6	+0.8		
BILL	comp=Z,11nm,0.3s			IAmb	IAmb	02 48 41.2			
VNDA	Vanda	73.26	178	P	P	02 48 02.3	0.0		
WMQ	comp=Z,2.6nm,0.7s,baz=324,slow=8.3,SNR=7.7 Urumqi	75.63	317	*e*P	P	02 48 18.5	+1.8		
WMQ				pP	sP	02 48 40.0	+7.0		
WMQ				sP	PcP	02 48 50.8	+21		
WMQ	comp=Z,12nm,1.1s			pmax	pmax				
WMQ	comp=Z,120nm,5.9s			pmax	pmax				
KDAK	Kodiak Island	75.64	27	LR	LR	03 18 20.4			
TIXI	comp=Z,67nm,20.7s,baz=126,slow=33 Tiksi	77.50	352	*e*P	P	02 48 26.7	+0.1		
TIXI	comp=Z,6.0nm,0.7s			pmax	pmax				
TIXI	Tiksi	77.50	352	P	P	02 48 27.2	+0.7		
TIXI	comp=Z,9.6nm,0.7s			IAmb	IAmb	02 48 29.4			
MKAR	Makanchi Array	80.20	319	P	P	02 48 42.4	+0.4		
MLY	comp=Z,3.1nm,0.5s,baz=94,slow=7.5,SNR=82 Manley	80.36	21	P	P	02 48 42.6	+0.2		
MLY	comp=Z,22nm,1.6s			IAmb	IAmb	02 48 42.8			
MAKZ	Makanchi	80.41	319	P	P	02 48 43.4	+0.3		
MAKZ	comp=Z,10.0nm,0.8s			pmax	pmax				
MAKZ	Makanchi	80.41	319	P	P	02 48 43.4	+0.3		
MAKZ	comp=Z,10nm,0.8s			IAmb	IAmb	02 48 45.1			
ZAA0	Zalesovo Array	80.96	326	IAmb	IAmb	02 49 01.1			
ZALV	comp=Z,50nm,1.9s Zalesovo Beam	80.96	326	*i* P	P	02 48 45.2	-0.6		
ZALV	comp=Z,2.0nm,0.4s			pmax	pmax				
ZALV	Zalesovo Beam	80.96	326	P	P	02 48 45.1	-0.8		
IL31	comp=Z,1.7nm,0.4s,baz=117,slow=6.5,SNR=11	81.63	22	P	P	02 48 47.8	-1.3		
ILAR	Eielson Array	81.63	22	P	P	02 48 47.9	-1.3		
KSH	comp=Z,1.7nm,0.6s,baz=241,slow=5.2,SNR=26 Kashi	82.88	311	P	P	02 48 59.0	+2.5		
KSH				pP	sP	02 49 19.8	+6.8		
KSH				PP	PP	02 52 16.3	+9.0		
KSH				S	S	02 59 10.0	-2.7		
KSH				sS	sS	02 59 45.0	+14		
KSH				SS	SS	03 04 36.0	-0.5		
KSH	comp=Z,23nm,0.6s			pmax	pmax				
KSH	comp=Z,850nm,5.9s			pmax	pmax				
ULHL	Ulahol	83.24	313	P	P	02 48 59.3	+0.9		
NRN	SNR=12 Naryn	83.25	312	IAmb	IAmb	02 50 58.6			
KURK	comp=Z,12nm,0.8s Kurchatov	83.61	322⇑	*e*P	P	02 48 59.3	-0.5		
KURK	comp=Z,16nm,1.5s			pmax	pmax				
KURK	Kurchatov	83.61	322	P	P	02 48 59.0	-0.8		
KURK	comp=Z,24nm,0.9s			IAmb	IAmb	02 52 10.6			
KURBB	Kurchatov Arra	83.64	322	P	P	02 48 60.0	0.0		
KZA	comp=Z,1.4nm,0.5s,baz=100,slow=5.7,SNR=13 Kyzart	83.93	313	P	P	02 49 03.8	+1.6		
NIL	SNR=7.9 Nilore	83.98	304	P	P	02 49 00.9	-1.3		
NIL	comp=Z,65nm,1.0s			pmax	pmax				
NIL	Nilore	83.98	304	P	P	02 49 00.9	-1.3		
H02S1	DAWSON INLET T	84.20	36	T	T	04 22 08.1			
KBK	SNR=34 Karagaybulak	84.26	313	P	P	02 49 04.7	+1.2		
CHMS	SNR=13 Chumysh	84.47	314	P	P	02 49 05.1	+0.7		
UCH	SNR=13 Uchtor	84.50	313	P	P	02 49 04.6	-0.5		
AAK	SNR=19 Ala-Archa	84.59	313	PKIKP	P	02 49 03.6	-1.6		
AAK	comp=Z,18nm,0.7s			pmax	pmax				
AAK	Ala-Archa	84.59	313⇑	*e*P	P	02 49 05.7	+0.5		
AAK	comp=Z,14nm,0.8s			pmax	pmax				
AAK	Ala-Archa	84.59	313	P	P	02 49 05.3	+0.1		
AAK	comp=Z,16nm,0.7s,baz=117,slow=4.5,SNR=61 Ala-Archa	84.59	313	P	P	02 49 03.6	-1.6		
AAK	SNR=16 Ala-Archa	84.59	313	P	P	02 49 06.0	+0.8		
USP	SNR=27 Ospenovka	84.70	314	P	P	02 49 06.4	+0.8		
AML	SNR=31 Almayashu	85.08	313	P	P	02 49 08.7	+0.7		
EKS2	SNR=6.4 Erkin-Say	85.11	313	P	P	02 49 08.8	+1.1		
QSPA	SNR=6.4 South Pole Qui	85.61	180	P	P	02 49 08.0	-1.8		
QSPA				IAmb	IAmb	02 49 10.6			
MAW	comp=Z,10nm,0.9s Mawson	86.10	203	P	P	02 49 11.4	-0.5		
KKAR	comp=Z,5.7nm,0.6s,baz=102,slow=5.3,SNR=10 Karatay Array	87.55	313	IAmb	IAmb	02 50 32.4			
BVAR	comp=Z,19nm,0.9s Borovoye Array	89.07	323	P	P	02 49 25.7	-0.9		
BRVK	comp=Z,13nm,0.7s,baz=100,slow=5.7,SNR=67 Borovoye	89.14	323	P	P	02 49 26.1	-0.8		
BRVK	comp=Z,45nm,0.9s			pmax	pmax				
BRVK	Borovoye	89.14	323	P	P	02 49 26.1	-0.8		
NVAR	Mina Array Bea	91.56	52	LR	LR	03 26 25.6			
SYO	comp=Z,84nm,18.2s,baz=360,slow=33 Syowa Base	94.19	199⇑	*e*P	P	02 49 51.0	+1.0		
YKA	Yellowknife Ar	94.89	28	P	P	02 49 53.0	-0.2		
YKA	comp=Z,0.5nm,0.6s,baz=271,slow=5.1,SNR=9.8			LR	LR	03 29 13.0			
LCMT	comp=Z,53nm,19.8s,baz=0.0,slow=33 Little Creek M	95.50	53	P	P	02 49 54.3	-2.6		
ARU	Arti	96.12	326	P	P	02 49 57.5	-1.5		
ARU				S	SKSac	03 00 26.1	-6.4		
AKTO	Aktyubinsk	96.58	320	P	P	02 49 59.7	-1.6		
H06E1	comp=Z,2.4nm,0.7s,baz=101,slow=6.5,SNR=7.7 SOCORRO T-PHAS	97.02	72	T	T	04 38 04.4			
BRTR	SNR=51 Keskin Array B	115.24	312	PKP	PKPdf	02 55 13.5	+0.2		
NB2	comp=Z,0.8nm,0.6s,baz=114,slow=2.0,SNR=4.2 NORSAR Subarra	116.60	340	PKPdf	PKPdf	02 55 14.2	-1.0		
NOA	comp=Z,1.5nm,0.7s,baz=39,slow=1.8 NORSAR Array B	116.60	340	PKP	PKPdf	02 55 14.9	-0.3		
KOLS	comp=Z,1.2nm,0.7s,baz=48,slow=2.0,SNR=4.3 Kolonicke sedl	119.12	325	*e*PKIKP	PKiKP	02 55 21.4	+1.0		
KOLS	Kolonicke sedl	119.12	325	*e*PKP	PKiKP	02 55 21.4	+1.0		
PLCA	Paso Flores	119.94	143	PKP	PKiKP	02 55 22.8	+0.3		
BOSA	comp=Z,0.9nm,0.5s,baz=98,slow=0.1,SNR=9.1 Boshof	120.14	233	PKP	PKPdf	02 55 22.9	-0.2		
VYHS	comp=Z,2.4nm,0.5s,baz=118,slow=2.2,SNR=7.7 Vyhne	121.29	326	*e*PKIKP	PKiKP	02 55 25.0	+0.2		
VYHS	Vyhne	121.29	326	*e*PKP	PKiKP	02 55 24.9	+0.2		
MODS	Modra-Piesok	122.22	327	*e*PKIKP	PKPdf	02 55 26.3	-0.1		
MODS	Modra-Piesok	122.22	327	*e*PKP	PKPdf	02 55 26.3	-0.1		
BRG	Berggiesshubel	122.44	331	*i* PKP	PKiKP	02 55 27.3	+0.5		
BRG	comp=Z,8.4nm,1.1s Berggiesshubel	122.44	331	*i* PKIKP	PKiKP	02 55 27.3	+0.5		
BRG	comp=Z,8.0nm,1.1s			pmax	pmax				
CLL	Collm	122.61	331	*i* PKIKP	PKiKP	02 55 27.1	-0.1		
CLL				*e*		02 55 36.0			
CLL	comp=Z,8.0nm,0.6s			pmax	pmax				
CLL	Collm	122.61	331	*i* PKPdf	PKiKP	02 55 27.1	-0.1		
CLL	comp=Z,8.0nm,0.6s			*e*		02 55 31.0			
CLL				*e*(pPKPdf)		02 55 36.0			
CONA	Conrad Observa	123.25	327	PKiKP	PKPdf	02 55 28.5	0.0		
KHC	comp=Z,3.7nm,1.0s Kasperske Hory	123.72	329	PKIKP	PKiKP	02 55 30.1	+0.6		
KHC	Kasperske Hory	123.72	329	*e*P	PKiKP	02 55 29.5	0.0		
KHC	Kasperske Hory	123.72	329		PKiKP	02 55 30.1	+0.6		
GERES	GERESS Array B	123.84	329	PKP	PKiKP	02 55 30.1	+0.2		
SOKA	comp=Z,3.7nm,0.7s,baz=62,slow=1.9,SNR=12 Soboth	124.44	326	PKiKP	PKPdf	02 55 30.5	-0.3		
EKA	comp=Z,5.2nm,1.0s Eskdalemuir Ar	125.69	344	PKIKP	PKiKP	02 55 33.0	-0.2		
EKA	Eskdalemuir Ar	125.69	344	PKP	PKiKP	02 55 33.0	-0.2		
ABTA	comp=Z,1.4nm,0.6s,baz=23,slow=4.5,SNR=5.3 Abfaltersbach	125.78	327	*e*PKiKP	PKPdf	02 55 33.1	-0.2		
WTTA	comp=Z,4.4nm,0.9s,SNR=5.2 Wattenberg	125.91	328	PKiKP	PKiKP	02 55 34.2	+0.1		
STAL	comp=Z,2.8nm,0.5s,SNR=5.1 STALIGIAL	125.97	327		PKPdf	02 55 33.1	-0.5		
SQTA	Sankt Quirin	126.16	329	PKiKP	PKPdf	02 55 33.7	-0.4		
FETA	comp=Z,7.5nm,1.2s,SNR=4.9 Feichten	126.54	329	PKiKP	PKiKP	02 55 35.6	+0.2		
DAVA	comp=Z,8.2nm,1.0s,SNR=5.9 Damuels	126.80	329	PKiKP	PKiKP	02 55 35.8	0.0		
DAVOX	comp=Z,7.2nm,0.8s Davos/Dischmat	127.14	329	PKP	PKiKP	02 55 36.7	+0.1		
TAM	comp=Z,6.7nm,0.7s,baz=351,slow=3.3,SNR=5.2 Tamanrasset	143.70	303	PKIKP	PKPbc	02 56 05.6	+0.6		
TAM	Tamanrasset	143.70	303		PKPbc	02 56 05.6	+0.7		
MDT	Midelt	144.85	326	PKP	PKPdf	02 56 08.9	-0.2		
MDT	comp=Z,9.9nm,0.9s,baz=293,slow=1.3,SNR=11 Midelt	144.85	326	P	PKPdf	02 56 09.1	0.0		
ARF	SNR=6.1 Arif	145.66	324	P	PKPab	02 56 12.0	+0.9		
GOLM	SNR=9.0 Goulmima	145.88	325	P	PKPab	02 56 13.0	+1.0		
TZRR	SNR=10 Tazzarine	146.91	325	P	PKPbc	02 56 15.0	+0.4		
ZGR	SNR=10 Zagora	147.44	324	P	PKPbc	02 56 17.0	+0.9		
TORD	SNR=11 Torodi Ar. Bea	150.46	289	PKPbc	PKPbc	02 56 23.4	-0.6		
BDFB	comp=Z,35nm,0.6s,baz=47,slow=3.4,SNR=191 Brasilia	151.15	134	PKP	PKPdf	02 56 21.0	+1.2		
BDFB	comp=Z,8.0nm,0.6s,baz=188,slow=3.9,SNR=3.1			PKPbc	PKPbc	02 56 26.0	+0.2		
BDFB	comp=Z,8.0nm,0.6s,baz=259,slow=2.4,SNR=15 Brasilia	151.15	134		PKiKP	02 56 26.4	0.0		
KIC	Kosan Boka	157.86	276	*e*PKP2	PKPdf	02 56 31.8	+2.7		
KIC	comp=Z,31nm,1.6s Kosan Boka	157.86	276	*e*P	PKPab	02 57 01.4	-0.7		
KIC	comp=Z,18nm,0.8s Kosan Boka	157.86	276		PKPab	02 57 01.4	-0.7		
TIC	Toumodi	158.12	277	*e*PKP2	PKPdf	02 56 32.6	+3.1		
TIC	comp=Z,2.5nm,0.3s Toumodi	158.12	277	*e*P	PKPab	02 57 03.0	-0.2		
TIC	comp=Z,4.3nm,0.3s Toumodi	158.12	277	PKP2	PKPab	02 57 03.0	-0.2		
TIC	Toumodi	158.12	277		PKPab	02 57 03.0	-0.2		
LIC	Lamto	158.16	276	*e*PKP2	PKPdf	02 56 33.1	+3.6		
LIC	comp=Z,2.1nm,0.2s Lamto	158.16	276	*e*P	PKPab	02 57 02.7	-0.7		
LIC	comp=Z,19nm,0.7s Lamto	158.16	276		PKPab	02 57 02.7	-0.7		

BJI ***27*** *02:46:30.7±0.0,28.92N×59.91E,h15km,mB5.1/29, mb4.6/47,Ms4.7/15,Ms7 4.6/11*
TEH ***27*** *02:46:32.4,28.98N×60.13E,h13km, ML4.9*
DSN ***27*** *02:46:34.0±0.7,29.37N×59.49E,h10km, mb4.4/2, ML4.8/10, Error ellipse: s-maj=28.7km s-min=8.2km az=128.0*
OMAN ***27*** *02:46:33.7±1.3,28.93N×60.31E,h80km±301km, ml4.6/5, Error ellipse: s-maj=46.8km s-min=12.7km az=262.0*
MOS ***27*** *02:46:34.3±1.6,28.91N×60.26E,h33km, mb5.0/43, Error ellipse: s-maj=6.3km s-min=4.6km az=98.8*
THR ***27*** *02:46:35.8±0.3,28.97N×60.13E,h46km±2km, ML4.8*
NEIC ***27*** *02:46:35.8±3.9,28.95N±0.05×60.10E±0.06,h38km±5km, Error ellipse: s-maj=8.3km s-min=6.6km az=225.0*
IDC ***27*** *02:46:37.0±2.5,29.00N×60.15E,h33km±18km, mb4.3/29, mb1 4.4/31,mb1mx4.2/53,mbtmp4.5/31,ML4.3/2,MS3.8/17, Ms1 3.8/17,ms1mx3.5/54, Error ellipse: s-maj=12.8km s-min=10.8km az=143.0*

ISC 27 02:46:32.9±0.3,28.88N±0.04×60.13E±0.04,h10km,n382,
σ1s82/375,mb4.8/115,MS4.0/19,21C-8D,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZD1	Zahaedan-tmp	0.88	47	*e*Pg	Pg	02 46 48.2	-1.7
ZHSF	Zahedan	0.92	38	*e*Pg	Pn	02 46 53.0	+0.9
ZHSF	Zahedan	0.92	38	*e*Pg	Pn	02 46 53.0	+0.9
ZHSF				*e*Sg	Sn	02 47 05.4	-0.1
KHNJ	Kahnooj	2.33	247	*e*Pn	Pn	02 47 12.4	+1.1
CHMN	Cheshme madani	2.46	294	*e*Pn	Pn	02 47 12.5	-0.9
CHMN	Cheshme madani	2.46	294	Pn	Pn	02 47 12.5	-0.9
NHDN	Nehbandan	2.50	358	*e*Pn	Pn	02 47 13.6	-0.2
NGRK	Negar Kerman	3.06	285	*e*Pn	Pn	02 47 22.4	+0.6
NGRK				*e*		02 48 08.3	
KRBR	Kerman	3.14	291	*e*Pn	Pn	02 47 23.8	+1.1
KRBR	Kerman	3.14	291	*e*Pn	Pn	02 47 23.8	+1.1
KRBR				*e*Sg	Sg	02 48 11.1	-2.6
KRBR	comp=N,2μm,0.5s			IAML		02 48 11.8	
TVBK	TV Kerman	3.14	291	*e*Pn	Pn	02 47 23.3	+0.6
NIAN	Nian	3.19	246	*e*Pn	Pn	02 47 26.4	+3.2
NIAN				*e*		02 48 27.9	
CHBR	Chabahar	3.29	174	*e*Pn	Pn	02 47 27.1	+2.6
CHBR	Chabahar	3.29	174	*e*Pn	Pn	02 47 27.1	+2.6
CHBR	Chabahar	3.29	174	Pn	Pn	02 47 27.1	+2.6
KHGB	Koh Gabri	3.51	296	*e*Pn	Pn	02 47 27.6	-0.2
KHGB				*e*		02 48 31.6	
GENO	Geno	3.79	248	*e*Pn	Pn	02 47 34.1	+2.5
IDAH	Dahanechah	3.85	357	*e*Pn	Pn	02 47 32.0	-0.5
JSK1	Jask	3.85	214	*e*Pn	Pn	02 47 35.0	+2.7
ITEG	Tejag	4.17	344	*e*Pn	Pn	02 47 36.2	-0.7
ITEG				*e*		02 48 59.7	
BANOM	Banah	4.50	230	*i* P	Pn	02 47 42.2	+1.0
BANOM	SNR=82 Banah	4.50	230	P	Pn	02 47 42.4	+1.2
SHME	SNR=82 Shamm	4.53	232	*i* P	Pn	02 47 42.8	+1.1
SHME	SNR=15 Shamm	4.53	232	*e*Pn	Pn	02 47 43.8	+2.2
SHRT	Shahrakht	4.75	2	*e*Pn	Pn	02 47 44.9	+0.2
SHRT	Shahrakht	4.75	2	*e*Pn	Pn	02 47 44.9	+0.2
IBAF	Bafgh	4.78	305	*e*Pn	Pn	02 47 45.0	-0.2
IBAF	Bafgh	4.78	305	Pn	Pn	02 47 44.9	-0.2
MDH	Madha	4.94	225	*i* P	Pn	02 47 47.2	0.0
MDH	SNR=33 Madha	4.94	225	*e*Pn	Pn	02 47 47.0	-0.2
MDH	Madha	4.94	225	P	Pn	02 47 47.1	0.0
MSFE	SNR=33 Esma-Masafi	4.98	226	*i* P	Pn	02 47 47.7	-0.1
MSFE	SNR=96 Esma-Masafi	4.98	226	*e*Pn	Pn	02 47 47.4	-0.4
TPRV	Parvadeh(Tabas	5.08	325	*e*Pn	Pn	02 47 49.2	0.0
UMQ	Umm Al-Quwin	5.20	231	P	Pn	02 47 50.6	-0.1
UMQ	Umm Al-Quwin	5.20	231	*e*Pn	Pn	02 47 51.3	+0.6
UMQ	Umm Al-Quwin	5.20	231	P	Pn	02 47 54.2	+3.4
LAR1	SNR=5.3 LAR	5.22	258	*e*Pn	Pn	02 47 52.4	+1.3
UOSS	Minazif	5.26	223	*i* P	Pn	02 47 51.5	-0.1
UOSS	SNR=56 Minazif	5.26	223	*e*Pn	Pn	02 47 51.3	-0.3
UOSS	Minazif	5.26	223		Pn	02 47 51.4	-0.3
UOSS					Sn	02 48 51.2	-1.1
UOSS	Minazif	5.26	223	P	Pn	02 47 51.7	+0.1

comp=N,304nm,19.3s,baz=47,slow=44
WSAR Wadi Sarin 5.78 194 P **Pn 02 47 59.9 +1.1**
SNR=156
WSAR S **Sn 02 49 00.8 -4.4**
HOQ Hoqain 5.85 206 P **Pn 02 47 59.5 -0.3**
SNR=20
TNSJ Nastanj 5.89 330 *e*Pn **Pn 02 47 59.6 -0.8**
YZKH Yazd 5.92 308 *e*Pn **Pn 02 48 02.0 +1.3**
YZKH Yazd 5.92 308 *e*Pn **Pn 02 48 02.0 +1.3**
ICHK Chekchek 5.96 306 *e*Pn **Pn 02 48 02.9 +1.4**
ICHK Chekchek 5.96 306 Pn **Pn 02 48 02.9 +1.4**
ASUD Al Ashush, Dub 6.03 226 *i* P **Pn 02 48 04.3 +2.1**
SNR=13
ASUD Al Ashush, Dub 6.03 226 *e*Pn **Pn 02 48 04.7 +2.5**
ASUD Al Ashush, Dub 6.03 226 Pn **Pn 02 48 04.6 +2.4**
ASUD Al Ashush, Dub 6.03 226 P **Pn 02 48 04.9 +2.7**
SNR=12
SMDO Samad 6.09 198 P **Pn 02 48 04.1 +1.0**
SNR=13
ALNE Al Ain 6.20 220 *i* P **Pn 02 48 06.8 +2.2**
SNR=15
ALNE Al Ain 6.20 220 *e*Pn **Pn 02 48 06.6 +1.9**
ALNE Al Ain 6.20 220 Pn **Pn 02 48 06.5 +1.9**
AJN Ajban 6.30 228 *i* P **Pn 02 48 07.4 +1.5**
SNR=6.0
AJN Ajban 6.30 228 *e*Pn **Pn 02 48 07.9 +2.1**
AJN Ajban 6.30 228 P **Pn 02 48 07.9 +2.1**
SNR=6.0
WBK Wadi Bani Khal 6.33 190 P **Pn 02 48 07.0 +0.6**
SNR=75
WBK S **Sn 02 49 18.5 -0.3**
ARQ Araqi 6.40 211 P **Pn 02 48 10.5 +3.1**
SNR=13
BSY Bisya 6.66 204 P **Pn 02 48 13.4 +2.5**
SNR=5.6
JMDO Jabal Madar 6.74 196 P **Pn 02 48 14.1 +2.2**
SNR=14
ANAR Anarak 6.97 310 *e*Pn **Pn 02 48 16.0 +0.8**
ANAR Anarak 6.97 310 Pn **Pn 02 48 16.0 +0.8**
JRKH Jarkhoshk 7.01 1 *e*Pn **Pn 02 48 17.2 +1.5**
IRAM Ramesheh 7.30 295 *e*Pn **Pn 02 48 21.7 +1.8**
IMYA Miami 7.44 360 *e*Pn **Pn 02 48 22.3 +0.6**
KLNJ Kolanjah 7.70 288 *e*Pn **Pn 02 48 27.4 +1.9**
IAKL Akhelmad 7.79 352 *e*Pn **Pn 02 48 26.7 +0.2**
IAKL Akhelmad 7.79 352 Pn **Pn 02 48 26.6 +0.1**
IZEF Zefreh 7.80 303 *e*Pn **Pn 02 48 28.6 +1.8**
IKRD Kardeh 7.99 351 *e*Pn **Pn 02 48 29.4 +0.1**
MHTO MHTO 8.10 194 P **Pn 02 48 33.1 +2.5**
SNR=17
IBRJ Brojen 8.23 294 *e*Pn **Pn 02 48 34.5 +1.8**
IBRJ Brojen 8.23 294 Pn **Pn 02 48 34.4 +1.8**
ISFR Sfrayin 8.34 348 *e*Pn **Pn 02 48 34.5 +0.3**
IANJ Anjilo 8.41 323 *e*Pn **Pn 02 48 35.9 +0.8**
IANJ Anjilo 8.41 323 Pn **Pn 02 48 35.9 +0.8**
KRSH Karshahi 8.51 309 *e*Pn **Pn 02 48 39.0 +2.7**
IKLH Kolahrood 8.56 303 *e*Pn **Pn 02 48 40.5 +3.3**
IEMG Emamgholi 8.60 352 *e*Pn **Pn 02 48 38.1 +0.4**
IPIR Pirpir 8.80 298 *e*Pn **Pn 02 48 42.6 +2.1**
QAM Ghamsar 8.88 305 *e*Pn **Pn 02 48 44.7 +3.2**
ISHM Shahmirzad 9.00 322 *e*Pn **Pn 02 48 44.8 +1.5**
GEYT Alibeck 9.18 350 Pn **Pn 02 48 47.9 +2.5**
comp=N,0.5nm,0.3s,baz=170,slow=12,SNR=8.1
GEYT LR LR 02 51 50.3
comp=N,125nm,19.9s,baz=210,slow=35
GYA0B ALIBECK ARRAY 9.18 350 Pn 02 48 45.9 +0.5
IFIR Firoozkooh 9.19 319 *e*Pn **Pn 02 48 47.3 +1.6**
IGLO Ghaloghah 9.27 327 *e*Pn **Pn 02 48 49.6 +2.8**
KBL Kabul 9.46 51 P **Pn 02 48 50.8 +1.4**
KBL Kabul 9.46 51 *e*Pn **Pn 02 48 53.0 +3.6**
KBL Kabul 9.46 51 Pn 02 48 50.8 +1.4
IALA Alasht 9.47 321 *e*Pn **Pn 02 48 51.8 +2.1**
IALA Alasht 9.47 321 Pn **Pn 02 48 51.8 +2.1**
IDMV Damavand 9.57 316 *e*Pn **Pn 02 48 54.0 +3.0**
BHUJ Bhuj 10.23 121 *e*P **Pn 02 49 00.0 +0.2**
THW Thamme Wali 10.72 66 P **Pn 02 49 07.5 +1.0**
CEP Cherat 11.21 61 P **Pn 02 49 16.3 +3.0**
NIL Nilore 12.19 64 *e*Pn **Pn 02 49 30.2 +3.5**
CHCP Chirah Chowk 12.20 64 P **Pn 02 49 30.0 +3.2**
WHFO Wadi Hawf 12.37 209 P **Pn 02 49 29.0 -0.2**
SNR=12
ABTO Aybut 13.08 210 P **Pn 02 49 38.0 -0.9**
SNR=23
RAYN Ar Rayn 14.17 251 P Pn 02 49 48.8 -5.0
RAYN Ar Rayn 14.17 251 *i* P Pn 02 49 48.9 -4.9
SNR=63
RAYN Ar Rayn 14.17 251 Pn 02 49 48.8 -5.0
DHRM DHARAMSHALA 14.33 72 *e*P **Pn 02 49 54.4 -1.8**
DHRM IAML 02 50 09.2
comp=N,33nm,0.2s
DHRM IAML 02 50 28.5
comp=E,46nm,0.6s
SMLA Simla 14.93 77 *e*P **Pn 02 50 02.8 -1.2**
SMLA IAML 02 50 17.1
comp=E,36nm,0.4s
SMLA IAML 02 50 17.2
comp=N,34nm,0.8s
KK31 Karatay Array 16.47 28 P **Pn 02 50 20.4 -3.7**
KK31 pmax pmax
comp=Z,19nm,1.0s
KK31 Karatay Array 16.47 28 Pn 02 50 20.4 -3.7
KKAR Karatay Array 16.47 28 P **Pn 02 50 20.3 -3.8**
KKAR pmax pmax
comp=Z,19nm,1.0s
KKAR Karatay Array 16.47 28 Pn 02 50 20.3 -3.8
BHPL Bhopal 16.52 106 *e*P **Pn 02 50 25.2 +0.4**
BHPL IAmb IAmb 02 50 27.1
comp=Z,14nm,0.8s
KSH Kashi 16.84 47 P **Pn 02 50 23.8 -5.1**
KSH sP P 02 50 30.0 -1.0
KSH PP **PnPn 02 50 38.8 +0.5**
KSH S Sn 02 53 24.3 -12
KSH sS S 02 53 32.5 -14
KSH SS **SnSn 02 53 47.8 -1.4**
KSH pmax pmax
comp=Z,77nm,0.9s
KSH pmax pmax
comp=Z,760nm,6.1s
KSH LR LR
comp=Z,1μm,6.9s
KSH LR LR
comp=Z,940nm,7.1s
KSH LR LR
comp=Z,1μm,7.6s
JOSI Joshimath 16.96 80 *e*P **Pn 02 50 29.5 -1.1**
AML Almayashu 17.20 36 P **Pn 02 50 34.0 +0.4**
SNR=7.7
SOCY Socotra 17.57 200 Pn Pn 02 50 30.6 -7.5
EKS2 Erkin-Say 17.62 35 P **P 02 50 39.9 +0.2**
SNR=21
UCH Uchtor 17.69 37 P **P 02 50 42.4 +1.6**
SNR=7.5
BTLR Botlikh 17.75 324 *e*P **P 02 50 41.8 +0.7**
BTLR pmax pmax
comp=Z,20nm,1.2s
AAK Ala-Archa 17.97 36*ce*P **P 02 50 43.9 +0.3**
AAK pmax pmax
comp=Z,60nm,2.5s
AAK Ala-Archa 17.97 36 P **P 02 50 43.8 +0.2**
comp=Z,0.4nm,0.3s,baz=207,slow=12,SNR=10
AAK LR LR 02 57 49.1
comp=Z,196nm,18.6s,baz=224,slow=38
AAK Ala-Archa 17.97 36 *i* P **P 02 50 43.6 +0.1**
SNR=8.1
AAK Ala-Archa 17.97 36 P **Pn 02 50 40.6 -2.4**
KZA Kyzart 17.99 39 P **P 02 50 45.3 +1.2**
SNR=9.1
NRN Naryn 18.00 42 P **Pn 02 50 39.8 -3.7**
NRN pmax pmax
comp=Z,12nm,0.9s
NRN Naryn 18.00 42 P **Pn 02 50 39.8 -3.7**
FRU1 Bishkek 18.16 36 P **Pn 02 50 41.1 -4.2**
FRU1 pmax pmax
comp=Z,26nm,0.8s
FRU1 Bishkek 18.16 36 Pn **Pn 02 50 41.1 -4.2**
GROC Groznyy 18.36 325 *e*P **P 02 50 48.0 +0.4**
GROC *e*S **Sn 02 54 14.2 +1.6**
GROC pmax pmax
comp=Z,19nm,0.8s
USP Ospenovka 18.43 35 P **P 02 50 48.3 -0.1**
SNR=7.9
ULHL Ulahol 18.66 40 P **Pn 02 50 52.5 +1.1**
SNR=18
ZEI Tsey 19.07 321 *e*P **Pn 02 51 03.5 +7.0**
ZEI pmax pmax
comp=Z,8.0nm,0.7s
KDJ Kajisay 19.12 42 P **P 02 50 52.8 -3.4**
KDJ pmax pmax
comp=Z,28nm,0.8s
KDJ Kajisay 19.12 42 P **P 02 50 52.8 -3.4**
KDJ IAmb IAmb 02 51 00.2
comp=Z,28nm,0.8s
PRZ Przheval'sk 20.05 43 P **P 02 51 03.4 -3.0**
PRZ pmax pmax
comp=Z,41nm,1.0s
PRZ Przheval'sk 20.05 43 P **P 02 51 03.4 -3.0**
PRZ IAmb IAmb 02 51 16.2
comp=Z,41nm,1.0s
KBZ Khabaz 20.25 322 *e*P Pn 02 51 12.3 +2.1
KBZ pmax pmax
comp=Z,7.0nm,1.0s
ASF Jabal al Asfar 20.27 285 P Pn 02 51 10.4 -0.4
comp=Z,23nm,0.9s,baz=23,slow=1.4,SNR=13
ABKAR Akbulak array 20.35 360 P **P 02 51 08.3 -1.0**
ABKAR IAmb IAmb 02 51 17.4
comp=Z,86nm,1.3s
PYA1 Pyatigorsk 20.36 323 *e*P Pn 02 51 11.5 -0.1
DAMY Dhamar 20.37 229 P **P 02 51 09.0 -1.2**
DAMY IAmb IAmb 02 51 15.2
comp=Z,46nm,0.8s
SHA1 Shidzhatmaz 20.38 321⇓ *e*P Pn 02 51 12.4 +0.3
HYB Hyderabad 20.39 120 *i* P Pn 02 51 13.0 +0.8
KIV Kislovodsk 20.51 322 *e*P Pn 02 51 14.0 +0.6
KIV pmax pmax
comp=Z,57nm,1.0s
KIV Kislovodsk 20.51 322 P **P 02 51 06.3 -4.9**
KOLN Koldanda 20.69 87 *e*P Pn 02 51 15.0 -0.8
comp=Z,154nm,0.9s
DANN Dangsing 20.75 86 *e*P Pn 02 51 16.2 -0.4
comp=Z,934nm,1.0s
GAZ Gaziantep 20.88 299 P **P 02 51 12.3 -3.1**
GAZ IAmb IAmb 02 51 24.0
comp=Z,30nm,0.8s
GKN Gorkha 21.56 86 *e*P **P 02 51 24.0 +1.2**
comp=Z,321nm,1.1s
AKTO Aktyubinsk 21.59 356 P **P 02 51 23.1 +0.4**
comp=Z,24nm,1.0s,baz=164,slow=14,SNR=21
AKTO LR LR 03 01 07.1
comp=Z,206nm,21.9s,baz=175,slow=40
MMAI Mount Meron Ar 21.59 287 P **P 02 51 24.3 +1.4**
comp=Z,1.1nm,0.3s,baz=110,slow=8.4,SNR=5.3
MMAI LR LR 03 01 33.6
comp=Z,393nm,19.2s,baz=80,slow=42
EIL Elat 21.97 278 P **P 02 51 28.1 +1.1**
comp=Z,43nm,0.9s,baz=4.0,slow=2.7,SNR=14
EIL LR LR 03 01 31.3
comp=Z,265nm,19.8s,baz=94,slow=41
DMN Daman 22.03 87 *e*P **P 02 51 29.3 +1.3**
comp=Z,89nm,0.9s
KKN Kakani 22.16 87 *e*P **P 02 51 30.5 +1.2**
comp=Z,162nm,0.9s
PKIN Phulchoki 22.29 87 *e*P **P 02 51 31.8 +1.0**
comp=Z,89nm,1.0s
PKI Pulchoki 22.30 87 *e*P **P 02 51 31.8 +0.8**
comp=Z,94nm,0.9s
GUN Gumba 22.66 86 *e*P **P 02 51 35.7 +0.9**
comp=Z,336nm,0.9s
JIRN Jiri 22.97 87 *e*P **P 02 51 38.9 +0.8**
comp=Z,166nm,0.8s
RAMN Ramite 23.46 88 *e*P **P 02 51 43.5 +0.6**
comp=Z,75nm,0.8s
BOK Bokaro 23.61 96 *ex* **P 02 51 46.4 +2.2**
BOK IAmb IAmb 02 51 52.6
comp=Z,30nm,0.3s
ANN Anapa 24.01 318 *e*P **P 02 51 43.8 -4.0**
ANN pmax pmax
comp=Z,178nm,1.6s
ODAN Odare 24.17 88 *e*P **P 02 51 50.9 +1.2**
comp=Z,186nm,1.0s
BR131 Keskin Array S 24.32 303 P **P 02 51 49.1 -1.9**
BR131 pmax pmax
comp=Z,43nm,1.6s
BR131 Keskin Array S 24.32 303 P **P 02 51 49.1 -1.9**
BR131 IAmb IAmb 02 51 57.2
comp=Z,43nm,1.6s
BRTR Keskin Array B 24.32 303 P **P 02 51 51.2 +0.2**
comp=Z,7.9nm,0.8s,baz=120,slow=12,SNR=25
BRTR LR LR 03 02 06.3
comp=Z,125nm,18.1s,baz=308,slow=38
TAPN Taplejung 24.36 87 *e*P **P 02 51 53.1 +1.6**
comp=Z,107nm,1.0s
ILGA Ilgaz 24.71 306 P **P 02 51 52.0 -2.6**
ILGA IAmb IAmb 02 51 56.5
comp=Z,28nm,0.6s
MAKZ Makanchi 24.72 38 P **P 02 51 54.6 +0.2**
MAKZ pmax pmax
comp=Z,22nm,0.8s
MAKZ Makanchi 24.72 38 P **P 02 51 54.6 +0.2**
MAKZ IAmb IAmb 02 51 58.0
comp=Z,22nm,0.8s
MK31 Makanchi Array 24.88 38 IAmb IAmb 02 51 58.0
comp=Z,26nm,0.9s
MKAR Makanchi Array 24.88 38*ce*P **P 02 51 56.2 +0.4**
MKAR pmax pmax
comp=Z,25nm,0.8s
MKAR Makanchi Array 24.88 38 P **P 02 51 55.8 0.0**
comp=Z,25nm,0.8s,baz=226,slow=7.4,SNR=83
MKAR PcP **PcP 02 55 30.6 -0.8**
comp=Z,1.2nm,0.6s,baz=230,slow=3.7,SNR=4.2
MKAR ScP **ScP 02 59 08.6 -1.9**
comp=Z,0.5nm,0.9s,baz=228,slow=3.7,SNR=3.6
MKAR LR LR 03 03 08.5
comp=Z,306nm,20.0s,baz=256,slow=40
BR231 Keskin MP Arra 24.99 303 P **P 02 51 54.7 -2.2**
BR231 IAmb IAmb 02 52 05.8
comp=Z,47nm,1.7s
BVAR Borovoye Array 25.28 15 P **P 02 51 59.6 +0.3**
comp=Z,20nm,0.5s,baz=190,slow=9.3,SNR=117
BVAR PcP **PcP 02 55 31.4 -0.8**
comp=Z,1.9nm,0.7s,baz=196,slow=2.6,SNR=3.5
BVAR ScP **ScP 02 59 09.6 -1.9**
comp=Z,0.6nm,0.9s,baz=51,slow=4.7,SNR=3.8
BRVK Borovoye 25.29 14 P **P 02 51 57.2 -2.2**
BRVK pmax pmax
comp=Z,45nm,0.9s
BRVK Borovoye 25.29 14 P **P 02 51 57.2 -2.2**
KURBB Kurchatov Arra 25.78 28 P **P 02 52 04.6 +0.8**
comp=Z,25nm,0.9s,baz=224,slow=8.5,SNR=113
KURK Kurchatov 25.89 28*ce*P **P 02 52 05.7 +0.9**
KURK pmax pmax
comp=Z,36nm,1.3s
KURK Kurchatov 25.89 28 P **P 02 52 01.1 -3.7**
VRH Novokhopyorsk 26.23 333 *e*P **P 02 52 06.9 -1.0**
VRH pmax pmax
comp=Z,10.0nm,0.9s
ELL Elmali 26.50 295 P **P 02 52 09.5 -1.2**
ELL pmax pmax
comp=Z,156nm,1.3s
ELL Elmali 26.50 295 P **P 02 52 09.5 -1.2**
WMQ Urumqi 26.59 48 *e*P **P 02 52 13.0 +1.7**
WMQ pP sP 02 52 16.8 +0.5
WMQ pmax pmax
comp=Z,18nm,1.1s
WMQ pmax pmax
comp=Z,160nm,5.9s
WMQ Urumqi 26.59 48 P **P 02 52 08.9 -2.4**
WMQ pmax pmax
comp=Z,93nm,1.9s
WMQ Urumqi 26.59 48 P **P 02 52 08.9 -2.4**
LSA Lhasa 27.03 81 P **P 02 52 12.5 -3.4**
LSA pmax pmax
comp=Z,13nm,1.2s
LSA Lhasa 27.03 81 P **P 02 52 12.5 -3.4**
VORD Divnogorie 27.06 330 *e*P **P 02 52 15.1 -0.3**
VORD pmax pmax
comp=Z,10.0nm,1.3s
VSR Storozhevoye 27.30 331 *e*P **P 02 52 16.6 -0.9**
VSR pmax pmax
comp=Z,30nm,2.0s
ARU Arti 27.55 358*c* *i* P **P 02 52 20.3 +0.5**
ARU 02 53 01.6
ARU S **S 02 57 02.1 +1.3**
ARU pmax pmax
comp=Z,6.0nm,0.9s
ARU Arti 27.55 358 P **P 02 52 20.3 +0.5**
comp=Z,0.7nm,0.4s,baz=174,slow=9.2,SNR=4.4
ARU LR LR 03 03 25.1
comp=Z,106nm,21.5s,baz=144,slow=37
ARU Arti 27.55 358 P **P 02 52 15.3 -4.5**
MANT Manisa 27.85 298 P **P 02 52 19.5 -3.4**
SHL Shillong 28.39 89 P P 02 52 22.6 -5.2
SHL pmax pmax
comp=Z,6.0nm,0.8s
SHL Shillong 28.39 89 P P 02 52 22.6 -5.1
LPSR Galich'ya Gora 28.42 332 *e*P **P 02 52 29.3 +1.8**
LPSR pmax pmax
comp=Z,10.0nm,0.8s
SANT Santorini 30.02 293 P **P 02 52 40.1 -1.9**
GHRR 30.84 313⇑ P **P 02 52 50.2 +1.1**
ZALV Zalesovo Beam 30.84 29 P **P 02 52 49.0 +0.1**
comp=Z,15nm,0.5s,baz=240,slow=10,SNR=66
ZALV PcP **PcP 02 55 44.2 -1.6**
comp=Z,3.3nm,0.6s,baz=234,slow=4.7,SNR=4.7
ZALV LR LR 03 06 23.8
comp=Z,306nm,20.3s,baz=273,slow=39
OBN Obninsk 31.22 334 *e*P **P 02 52 51.2 -1.1**
OBN *e* 02 53 52.0
OBN *e* 02 55 52.1
OBN pmax pmax
comp=Z,52nm,1.7s
OBN Obninsk 31.22 334 P **P 02 52 51.2 -1.1**
PLOR Plostina 31.25 312⇑ P **P 02 52 54.9 +2.1**
PLOR Plostina 31.25 312⇑ P **P 02 52 54.9 +2.1**
TESR Tescani 31.49 313⇓ P **P 02 52 56.2 +1.4**
MLR Muntele Rosu 31.59 311⇑ P **P 02 52 57.9 +2.1**
MLR Muntele Rosu 31.59 311 P **P 02 52 58.8 +3.0**
comp=Z,9.1nm,0.8s,baz=116,slow=15,SNR=8.3
MLR Muntele Rosu 31.59 311⇑ P **P 02 52 57.9 +2.1**
AKBB Malin Array Si 31.86 322 P **P 02 52 56.6 -1.4**
AKBB pmax pmax
comp=Z,25nm,1.4s
AKBB Malin Array Si 31.86 322 P **P 02 52 56.6 -1.4**
AKBB IAmb IAmb 02 53 02.5
comp=Z,25nm,1.4s
VOIR 32.16 311⇓ P **P 02 53 01.5 +0.6**
VOIR 32.16 311⇓ P **P 02 53 01.5 +0.6**
ARR Arges 32.42 310⇑ P **P 02 53 04.9 +1.8**
BURAR Bucovina Array 32.82 314⇓ P **P 02 53 08.5 +1.9**
BURAR Bucovina Array 32.82 314⇓ P **P 02 53 08.5 +1.9**
BUR08 Bucovina Ar. S 32.84 314 P **P 02 53 05.5 -1.3**
BUR08 IAmb IAmb 02 53 09.9
comp=Z,14nm,1.2s
DRGR 34.14 312 P **P 02 53 19.0 +1.0**
DRGR pmax pmax
comp=Z,19nm,0.8s
GTA Gaotai 34.24 62 *e*P **P 02 53 19.5 +0.4**
GTA pP sP 02 53 24.0 -0.1
GTA sP pP 02 53 27.0 +4.3
GTA pmax pmax
comp=Z,6.0nm,1.1s
MDVR Moldovita 34.24 308⇑ P **P 02 53 19.1 +0.1**
BZS Buzias 34.52 310⇑ P **P 02 53 22.9 +1.6**
BZS Buzias 34.52 310⇑ P **P 02 53 22.9 +1.6**
SIRR Siria 34.67 311⇑ P **P 02 53 23.9 +1.2**
TRPA Tarpa 34.69 314 *e*P **P 02 53 21.8 -0.9**
TRPA Tarpa 34.69 314⇓ P **P 02 53 23.8 +1.1**
KLMR Klimovskoe 34.83 342 *e*P **P 02 53 22.3 -1.4**
KLMR pmax pmax
comp=Z,28nm,1.4s
KLMR Klimovskoe 34.83 342 *e*P **P 02 53 22.3 -1.4**
KLMR AMP 02 53 24.6
comp=Z,28nm,1.4s
KWP Kalwaria Pacla 35.12 317 P **P 02 53 24.9 -1.6**
KWP pmax pmax
comp=Z,37nm,1.3s
KWP Kalwaria Pacla 35.12 317 P **P 02 53 24.9 -1.6**
KWP IAmb IAmb 02 53 28.8
comp=Z,37nm,1.3s
KOLS Kolonicke sedl 35.13 315 *e*P **P 02 53 27.9 +1.4**
KOLS pmax pmax
comp=Z,19nm,1.2s
KOLS Kolonicke sedl 35.13 315 *e*P **P 02 53 27.9 +1.4**
CRVS Cervenica-Dubn 35.62 315 *e*P **P 02 53 30.7 -0.1**
CRVS Cervenica-Dubn 35.62 315 *e*P **P 02 53 30.7 -0.1**
PSZ Piszkesteto 36.30 313 P **P 02 53 33.0 -3.7**
PSZ pmax pmax
comp=Z,16nm,1.5s
PSZ Piszkesteto 36.30 313 P **P 02 53 33.0 -3.7**
PSZ IAmb IAmb 02 53 37.9
comp=Z,16nm,1.5s
MORH Mrgy, Hungar 36.68 310 *e*P **P 02 53 40.0 +0.2**
BUD Budapest 36.74 312 *e*P **P 02 53 41.4 +1.0**
CHTO Chiang Mai 36.75 97 P **P 02 53 37.2 -3.5**
CHTO pmax pmax
comp=Z,8.0nm,1.1s
CHTO Chiang Mai 36.75 97 P **P 02 53 37.2 -3.5**
CMAR Chiang Mai Arr 36.89 98*ce*P **P 02 53 46.4 +4.5**
CMAR *e* 02 55 12.6
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 36.89 98 P **P 02 53 42.8 +0.8**
comp=Z,1.1nm,0.3s,baz=307,slow=8.9,SNR=4.8
CMAR PcP **PcP 02 56 04.5 +0.9**
comp=Z,4.3nm,0.8s,baz=283,slow=4.4,SNR=9.5
KMBO Kilima Mbogo 37.02 220 P **P 02 53 41.7 -1.6**
KMBO pmax pmax
comp=Z,16nm,1.5s
KMBO Kilima Mbogo 37.02 220 P **P 02 53 46.2 +2.9**
comp=Z,3.4nm,0.7s,baz=36,slow=12,SNR=10
KMBO Kilima Mbogo 37.02 220 *i* P **P 02 53 45.7 +2.4**
SNR=6.3
KMBO Kilima Mbogo 37.02 220 P **P 02 53 41.6 -1.6**
KMBO IAmb IAmb 02 53 48.0
comp=Z,16nm,1.4s
OJC Ojcow 37.09 316 P **P 02 53 41.0 -2.3**
OJC pmax pmax
comp=Z,24nm,1.4s
OJC Ojcow 37.09 316 P **P 02 53 41.0 -2.3**
OJC IAmb IAmb 02 53 46.0
comp=Z,24nm,1.4s
VYHS Vyhne 37.15 313 *e*P **P 02 53 44.2 +0.4**
VYHS pmax pmax
comp=Z,4.0nm,0.8s
VYHS Vyhne 37.15 313 *e*P **P 02 53 44.2 +0.4**
LZH Lanzhou 37.32 67 *e*P **P 02 53 45.5 -0.2**
LZH pP pP 02 53 48.5 -0.7
LZH *e*PP **PnPn 02 55 12.8 +1.6**
LZH pmax pmax
comp=Z,25nm,1.1s
LZH pmax pmax
comp=Z,93nm,5.3s
LZH LR LR
comp=Z,380nm,13.2s
LZH LR LR
comp=Z,380nm,13.5s
LZH LR LR
comp=Z,580nm,16.8s
VSU Vasula 37.47 332*ce*P **P 02 53 49.4 +3.0**
VSU pmax pmax
comp=Z,81nm,1.7s
MPLH Magyarpolny 37.64 311 *e*P **P 02 53 48.3 +0.3**
CD2 Chengdu 37.70 76 *e*P **P 02 53 48.5 -0.3**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
TMCR Tamitsa 38.00 344 *e*P **P 02 53 50.8 0.0**
TMCR pmax pmax
comp=Z,7.0nm,0.6s
KMI Kunming 38.00 85 P **P 02 53 50.5 -1.1**
KMI sP sP 02 53 57.3 +0.7
KMI pmax pmax
comp=Z,15nm,0.8s
KMI Kunming 38.00 85 P **P 02 53 49.3 -2.3**
KMI pmax pmax
comp=Z,29nm,1.1s
KMI Kunming 38.00 85 P **P 02 53 49.3 -2.3**
KMI IAmb IAmb 02 53 58.4
comp=Z,29nm,1.1s
MODS Modra-Piesok 38.11 313 *e*P **P 02 53 53.0 +1.0**
MODS Modra-Piesok 38.11 313 *e*P **P 02 53 53.0 +1.0**
SOP Sopron 38.41 311 *e*P **P 02 53 54.9 +0.4**
ZAK Zakamensk 38.85 44 *e*P **P 02 53 58.5 +0.2**
ZAK *e* 02 56 07.7
ZAK pmax pmax
comp=Z,6.0nm,1.0s
CONA Conrad Observa 38.92 312 pP **P 02 53 59.1 +0.2**
comp=Z,3.8nm,1.2s
ARSA Arzberg 39.00 311 *e*pP **P 02 53 59.9 +0.4**
comp=Z,9.4nm,1.0s
DPC Dobruska-Polom 39.25 315 *e*P **P 02 54 01.8 +0.3**
DPC Dobruska-Polom 39.25 315 *e*P **P 02 54 01.8 +0.3**
OSTC Ostas 39.37 316 *e*P **P 02 54 03.1 +0.6**
PBKT Sadao Pong 39.43 99 P **P 02 54 01.2 -2.1**
TLY Talaya 39.47 42*ce*P **P 02 54 05.4 +2.1**
TLY pmax pmax
comp=Z,9.0nm,1.3s

TLY	**Talaya**	**39.47**	**42**	LR	LR	03 13 19.2		
	comp=Z,73nm,19.7s,baz=261,slow=41							
TLY	**Talaya**	**39.47**	**42**	P	**P**	**02 54 00.8**	**-2.5**	
TLY				IAmb	IAmb	02 55 25.0		
	comp=Z,11nm,0.7s							
CHVC	**Chvalec**	**39.48**	**316**	*e*P	**P**	**02 54 03.5**	**+0.1**	
FiA1	**FINESS Array S**	**39.60**	**335**	P	**P**	**02 54 02.4**	**-1.8**	
FINES	**FINESS Array B**	**39.60**	**335**	P	**P**	**02 54 04.1**	**-0.1**	
	comp=Z,2.6nm,0.7s,baz=120,slow=11,SNR=7.7							
MOA	**Molln**	**39.96**	**311**	pP	**P**	**02 54 07.5**	**0.0**	
	comp=Z,14nm,1.2s,SNR=7.6							
SONM	**Songino Array**	**40.22**	**49**	P	**P**	**02 54 10.3**	**+0.5**	
	comp=Z,6.9nm,1.0s,baz=254,slow=9.5,SNR=37							
KBA	**Koelnbreinsper**	**40.43**	**310**	pP	**P**	**02 54 12.2**	**+0.6**	
	comp=Z,3.7nm,0.8s							
GEC2	**GERESS Array S**	**40.53**	**313**	P	**P**	**02 54 10.1**	**-2.2**	
GEC2				IAmb	IAmb	02 54 13.6		
	comp=Z,14nm,1.1s							
GERES	**GERESS Array B**	**40.53**	**313**	P	**P**	**02 54 12.0**	**-0.3**	
GERES	**GERESS Array B**	**40.53**	**313**	P	**P**	**02 54 12.0**	**-0.3**	
	comp=Z,6.9nm,0.7s,baz=99,slow=8.2,SNR=26							
GERES				LR	LR	03 14 54.1		
	comp=Z,300nm,18.4s,baz=303,slow=42							
MBAR	**Mbarara**	**40.62**	**229**	P	**P**	**02 54 15.6**	**+2.2**	
	comp=Z,3.9nm,0.7s,baz=42,slow=15,SNR=8.2							
ULN	**Ulaanbaatar**	**40.66**	**49**	*ce*P	**P**	**02 54 13.9**	**+0.4**	
ULN				pmax	pmax			
	comp=Z,11nm,1.0s							
KHC	**Kasperske Hory**	**40.67**	**313**	*e*P	**P**	**02 54 14.1**	**+0.7**	
KHC	**Kasperske Hory**	**40.67**	**313**	*e*P	**P**	**02 54 14.1**	**+0.7**	
ABTA	**Abfaltersbach**	**40.94**	**309**	pP	**P**	**02 54 15.6**	**-0.1**	
	comp=Z,8.5nm,1.1s							
CLL	**Collm**	**41.53**	**316**	*i* P	**P**	**02 54 20.8**	**+0.5**	
CLL				pmax	pmax			
	comp=Z,19nm,1.1s							
CLL	**Collm**	**41.53**	**316**	*i* P	**P**	**02 54 20.8**	**+0.5**	
	comp=Z,19nm,1.1s							
CLL				*i* pP	**pP**	**02 54 24.1**	**+0.1**	
CLL				*e*PPPP		02 56 34.0		
CLL	**Collm**	**41.53**	**316**	P	**P**	**02 54 18.6**	**-1.7**	
CLL				IAmb	IAmb	02 54 26.3		
	comp=Z,15nm,1.0s							
WTTA	**Wattenberg**	**41.61**	**310**	*e*pP	**P**	**02 54 20.5**	**-0.8**	
	comp=Z,19nm,1.1s,SNR=8.9							
XAN	**Xi'an**	**41.63**	**70**	P	**P**	**02 54 21.0**	**-0.4**	
XAN				pmax	pmax			
	comp=Z,11nm,1.2s							
XAN				LR	LR			
	comp=Z,330nm,11.9s							
XAN				LR	LR			
	comp=Z,250nm,7.9s							
XAN	**Xi'an**	**41.63**	**70**	P	**P**	**02 54 19.5**	**-2.0**	
XAN				pmax	pmax			
	comp=Z,8.0nm,0.8s							
XAN	**Xi'an**	**41.63**	**70**	P	**P**	**02 54 19.5**	**-2.0**	
WATA	**Walderalm**	**41.66**	**310**	*e*pP	**P**	**02 54 21.2**	**-0.5**	
	comp=Z,26nm,1.3s,SNR=6.3							
SQTA	**Sankt Quirin**	**41.89**	**310**	*e*pP	**P**	**02 54 23.5**	**0.0**	
	comp=Z,12nm,1.0s,SNR=4.8							
APA	**Apatity**	**41.90**	**345**	⇑*i*P	P	02 54 28.6	+5.5	
APA				pmax	pmax			
	comp=Z,9.0nm,1.0s							
APA				MLR	MLR			
	comp=Z,200nm,17.0s							
MOTA	**Moosalm**	**41.98**	**310**	P	**P**	**02 54 22.5**	**-1.8**	
	comp=Z,14nm,1.1s,SNR=4.3							
FETA	**Feichten**	**42.19**	**309**	pP	**P**	**02 54 25.7**	**-0.3**	
	comp=Z,16nm,1.2s							
MLSI	**Meulaboh, Aceh**	**42.22**	**119**	P	**P**	**02 54 27.3**	**+0.9**	
	comp=Z,54nm,1.0s							
RETA	**Reutte**	**42.23**	**310**	*e*P	**P**	**02 54 25.4**	**-0.8**	
	comp=Z,7.1nm,1.0s,SNR=5.2							
GRF	**Grafenberg Arr**	**42.29**	**313**	*e*P	**P**	**02 54 27.1**	**+0.5**	
	comp=Z,17nm,1.5s,baz=101,slow=8.7							
ENH	**Enshi**	**42.68**	**76**	P	**P**	**02 54 27.9**	**-2.1**	
ENH				IAmb	IAmb	02 54 50.8		
	comp=Z,16nm,1.2s							
DAVA	**Damuels**	**42.80**	**310**	P	**P**	**02 54 30.0**	**-1.0**	
	comp=Z,29nm,1.8s							
HHC	**Hu-ho-hao-te**	**43.30**	**60**	*e*P	**P**	**02 54 36.8**	**+1.8**	
HHC				pmax	pmax			
	comp=Z,3.0nm,1.0s							
HHC				pmax	pmax			
	comp=Z,44nm,5.5s							
HFS	**Hagfors**	**44.07**	**329**	P	**P**	**02 54 41.2**	**+0.4**	
	comp=Z,3.0nm,0.6s,baz=107,slow=7.9,SNR=8.1							
ECH	**Echery**	**44.73**	**311**	P	**P**	**02 54 44.5**	**-1.8**	
ECH				pmax	pmax			
	comp=Z,24nm,1.3s							
ECH	**Echery**	**44.73**	**311**	P	**P**	**02 54 44.5**	**-1.8**	
ECH				IAmb	IAmb	02 54 46.6		
	comp=Z,24nm,1.3s							
PSI	**Prapat**	**45.09**	**118**	P	**P**	**02 54 47.4**	**-2.2**	
PSI				pmax	pmax			
	comp=Z,10.0nm,0.8s							
RPSI	**Rantau Prapat**	**45.15**	**118**	P	**P**	**02 54 47.4**	**-2.6**	
RPSI				IAmb	IAmb	02 54 51.2		
	comp=Z,10nm,0.8s							
ARCES	**ARCESS Array B**	**45.28**	**344**	P	**P**	**02 54 50.1**	**-0.2**	
	comp=Z,4.6nm,0.8s,baz=120,slow=5.3,SNR=8.2							
NB2	**NORSAR Subarra**	**45.35**	**329**	P	**P**	**02 54 51.8**	**-0.9**	
	comp=Z,3.8nm,1.0s,baz=112,slow=7.9							
NOA	**NORSAR Array B**	**45.55**	**329**	P	**P**	**02 54 52.3**	**-0.3**	
	comp=Z,3.0nm,0.9s,baz=113,slow=7.8,SNR=6.4							
WHN	**Wuhan**	**46.74**	**74**	P	**P**	**02 55 05.0**	**+2.6**	
BOD	**Bodaibo**	**46.95**	**36**	*e*P	**P**	**02 55 03.6**	**-0.1**	
BOD				pmax	pmax			
	comp=Z,34nm,1.3s							
TIA	**Tai'an**	**48.01**	**66**	P	**P**	**02 55 12.5**	**+0.2**	
TIA				pmax	pmax			
	comp=Z,9.0nm,0.7s							
HIA	**Hailar**	**49.18**	**48**	*e*P	**P**	**02 55 24.6**	**+3.5**	
HIA				pmax	pmax			
	comp=Z,42nm,1.0s							
NJ2	**Nanjing**	**50.18**	**71**	*e*P	**P**	**02 55 28.3**	**-0.6**	
NJ2				pmax	pmax			
	comp=Z,5.0nm,0.6s							
EKA	**Eskdalemuir Ar**	**51.71**	**319**	P	**P**	**02 55 40.2**	**+0.1**	
	comp=Z,1.3nm,0.4s,baz=96,slow=8.0,SNR=6.2							
ESDC	**Sonseca Array**	**53.04**	**300**	P	**P**	**02 55 49.4**	**-0.9**	
	comp=Z,0.9nm,0.6s,baz=64,slow=7.5,SNR=6.0							
CN2	**Changchun**	**53.37**	**55**	*e*P	**P**	**02 55 56.0**	**+3.4**	
YAK	**Yakutsk**	**55.37**	**32**	*e*P	**P**	**02 56 09.0**	**+2.2**	
YAK				pmax	pmax			
	comp=Z,19nm,0.9s							
YAK	**Yakutsk**	**55.37**	**32**	LR	LR	03 21 41.8		
	comp=Z,98nm,20.0s,baz=263,slow=38							
TIXI	**Tiksi**	**56.19**	**21**	LR	LR	03 23 01.3		
	comp=Z,189nm,19.3s,baz=292,slow=39							
TOA0	**Torodi Ar. Sit**	**56.23**	**267**	P	**P**	**02 56 11.3**	**-2.4**	
TORD	**Torodi Ar. Bea**	**56.23**	**267**	P	**P**	**02 56 12.2**	**-1.5**	
	comp=Z,6.6nm,0.7s,baz=63,slow=6.6,SNR=39							
KSRS	**Korea Array**	**56.31**	**62**	P	**P**	**02 56 12.9**	**-1.1**	
	comp=Z,1.0nm,0.5s,baz=262,slow=7.0,SNR=3.4							
KLR	**Kul'dur**	**57.03**	**48**	*e*P	**P**	**02 56 20.9**	**+2.0**	
KLR				pmax	pmax			
	comp=Z,8.0nm,1.0s							
KLR	**Kul'dur**	**57.03**	**48**	LR	LR	03 23 20.2		
	comp=Z,135nm,20.7s,baz=269,slow=39							
USRK	**Ussuriysk Ar.**	**57.98**	**54**	P	**P**	**02 56 26.9**	**+1.2**	
	comp=Z,3.1nm,0.8s,baz=264,slow=9.2,SNR=6.5							
USRK				LR	LR	03 23 13.0		
	comp=Z,123nm,18.8s,baz=311,slow=38							
DAG	**Danmarks Havn**	**59.54**	**345**	*i* P	**P**	**02 56 35.5**	**-0.5**	
DAG	**Danmarks Havn**	**59.54**	**345**	*i* P	**P**	**02 56 35.5**	**-0.5**	
NOR	**Nord**	**59.69**	**350**	*i* P	**P**	**02 56 36.1**	**-0.9**	
GRNR	**Gornyy**	**59.79**	**46**	⇑*i*P	**P**	**02 56 37.7**	**-0.5**	
GRNR				pmax	pmax			
	comp=Z,5.0nm,1.3s							
GRNR				MLR	MLR			
	comp=Z,90nm,16.0s							
TSUM	**Tsumeb**	**63.03**	**226**	P	**P**	**02 56 59.8**	**-0.8**	
TSUM				IAmb	IAmb	02 57 03.0		
	comp=Z,13nm,1.3s							
TYV	**Tymovskoe**	**63.64**	**45**	*e*P	**P**	**02 57 03.5**	**-0.6**	
TYV				*e*		03 05 37.2		
TYV				pmax	pmax			
	comp=Z,8.0nm,1.1s							
YSS	**Yuzh-Sakhalins**	**64.71**	**49**	⇓*i*P	**P**	**02 57 10.7**	**-0.5**	
YSS				pmax	pmax			
	comp=Z,30nm,0.8s							
YSS				MLR	MLR			
	comp=Z,300nm,17.0s							
YSS				MLR	MLR			
	comp=Z,200nm,15.0s							
YSS	**Yuzh-Sakhalins**	**64.71**	**49**	P	**P**	**02 57 09.3**	**-1.9**	

SUMG	**Summit**	**65.24**	**341**	*e*P	**P**	**02 57 14.9**	**+0.2**	
SUMG	**Summit**	**65.24**	**341**	*i* P	**P**	**02 57 14.9**	**+0.2**	
SEY	**Seymchan**	**65.70**	**30**	*e*P	**P**	**02 57 20.5**	**+3.2**	
MA2	**Magadan**	**65.88**	**34**	*ce*P	**P**	**02 57 21.7**	**+3.1**	
MA2				pmax	pmax			
	comp=Z,10.0nm,1.7s							
BOSA	**Boshof**	**66.19**	**213**	P	**P**	**02 57 19.8**	**-1.2**	
BOSA				pmax	pmax			
	comp=Z,12nm,0.9s							
BOSA	**Boshof**	**66.19**	**213**	P	**P**	**02 57 22.4**	**+1.4**	
	comp=Z,9.3nm,0.7s,baz=31,slow=5.6,SNR=18							
BOSA	**Boshof**	**66.19**	**213**	P	**P**	**02 57 19.8**	**-1.2**	
BOSA				IAmb	IAmb	02 57 24.4		
	comp=Z,12nm,0.9s							
BILL	**Bilibino**	**69.30**	**23**	*e*P	**P**	**02 57 44.3**	**+4.3**	
BILL				pmax	pmax			
	comp=Z,7.0nm,1.7s							
JCJ	**Chichijima**	**70.99**	**69**	LR	LR	03 33 04.9		
	comp=Z,189nm,21.6s,baz=298,slow=39							
ANM	**Nome**	**80.33**	**18**	P	**P**	**02 58 43.1**	**-0.9**	
ANM				pmax	pmax			
	comp=Z,11nm,1.0s							
ANM	**Nome**	**80.33**	**18**	P	**P**	**02 58 43.1**	**-0.9**	
ANM				IAmb	IAmb	02 58 44.8		
	comp=Z,11nm,1.0s							
INK	**Inuvik**	**82.57**	**5**	P	**P**	**02 58 54.8**	**-0.9**	
	comp=Z,5.6nm,1.1s,baz=9.8,slow=8.5,SNR=9.7							
INK	**Inuvik**	**82.57**	**5**	IAmb	IAmb	02 58 59.6		
	comp=Z,6.3nm,1.0s							
MLY	**Manley**	**83.36**	**13**	IAmb	IAmb	02 59 03.8		
	comp=Z,16nm,1.5s							
BPAW	**Bear Paw Mtn.**	**84.15**	**13**	IAmb	IAmb	02 59 08.7		
	comp=Z,16nm,1.2s							
ILAR	**Eielson Array**	**84.30**	**11**	P	**P**	**02 59 03.1**	**-1.6**	
	comp=Z,1.3nm,0.6s,baz=318,slow=4.5,SNR=26							
MCK	**McKinley**	**84.88**	**13**	P	**P**	**02 59 07.1**	**-0.6**	
MCK				pmax	pmax			
	comp=Z,20nm,1.2s							
MCK	**McKinley**	**84.88**	**13**	P	**P**	**02 59 07.1**	**-0.6**	
SCRK	**Sand Creek**	**85.52**	**10**	P	**P**	**02 59 11.1**	**+0.1**	
SCRK				IAmb	IAmb	02 59 15.7		
	comp=Z,9.9nm,0.9s							
DOT	**Dot Lake**	**85.81**	**11**	IAmb	IAmb	02 59 12.9		
	comp=Z,6.7nm,0.8s							
WRA	**Warramunga Arr**	**86.47**	**115**	P	**P**	**02 59 16.7**	**+0.4**	
	comp=Z,2.5nm,0.6s,baz=317,slow=4.2,SNR=22							
WB2	**Warramunga Arr**	**86.48**	**115**	P	**P**	**02 59 17.5**	**+1.2**	
ASAR	**Alice Springs**	**88.12**	**118**	P	**P**	**02 59 24.8**	**+0.6**	
	comp=Z,4.8nm,0.9s,baz=305,slow=5.0,SNR=36							
YKA	**Yellowknife Ar**	**88.85**	**358**	P	**P**	**02 59 26.3**	**-0.6**	
	comp=Z,5.0nm,0.7s,baz=355,slow=4.9,SNR=92							
NVAR	**Mina Array Bea**	**113.02**	**359**	PKiKP	**PKiKP**	**03 05 11.0**	**+0.1**	
	comp=Z,0.4nm,0.7s,baz=246,slow=1.6,SNR=4.5							
TXAR	**Lajitas Array**	**120.08**	**344**	PKP	**PKPdf**	**03 05 23.5**	**-1.0**	
	comp=Z,0.8nm,0.8s,baz=174,slow=1.4,SNR=7.7							

*IDC **27** 02:46:35.5±1.2,38.35N×20.33E,h0km,mb4.0/6, mb1 4.0/8,mb1mx3.6/50,mbtmp3.9/8,ML3.5/2,Error ellipse: s-maj=26.5km s-min=16.6km az=68.0*
*PDG **27** 02:46:36.6±0.6,38.27N×20.19E,h7km±1km,ML4.1/13, Error ellipse: s-maj=1.2km s-min=1.2km az=0.0*
*THE **27** 02:46:37.7,38.24N×20.33E,h14km±1km,ML3.8/4, Error ellipse: s-maj=2.1km s-min=0.6km az=76.0*
*ATH **27** 02:46:38.3,38.25N×20.41E,h14km±1km,ML3.4/11, Error ellipse: s-maj=1.6km s-min=0.7km az=72.0*

ISC 27 02:46:37.7±0.9, 38°26N±0.02×20°36E±0.03, h16km±6km, n129,σ1§26/167, mb4.0/6, 14C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.20**	**115**	P	**Pg**	**02 46 42.4**	**0.0**
VLS				S	**Sg**	**02 46 45.5**	**-0.1**
	68μm,0.1s						
VLS	**Valsamata**	**0.20**	**115**	P	**Pg**	**02 46 42.4**	**0.0**
VLS				S	**Sg**	**02 46 45.5**	**-0.1**
VLS				AML	AML	02 46 45.9	
VLS				AML	AML	02 46 45.9	
	comp=N,85318μm,0.2s						
FSK	**Fiskardo**	**0.26**	**39**	P	**Pb**	**02 46 43.7**	**-0.2**
KFL	**Anninata**	**0.37**	**114**	P	**Pg**	**02 46 45.2**	**-0.1**
KFL				S	**Sb**	**02 46 51.3**	**-0.2**
	comp=N,31μm,0.3s						
EVGI	**Lefkada island**	**0.43**	**33**	P	**Pb**	**02 46 46.7**	**-0.2**
EVGI				S	**Sb**	**02 46 53.9**	**+0.7**
	comp=N,6μm,0.8s						
EVGI	**Lefkada island**	**0.43**	**33**	P	**Pg**	**02 46 46.2**	**-0.1**
EVGI				S	**Sg**	**02 46 52.4**	**+0.2**
VLMS	**Volimes, Zakyn**	**0.46**	**148**	P	**Pg**	**02 46 46.5**	**-0.3**
VLMS				S	**Sg**	**02 46 53.1**	**+0.1**
VLMS				AML	AML	02 46 54.3	
	comp=N,56694μm,0.5s						
VLMS				AML	AML	02 46 55.3	
	comp=E,23769μm,0.2s						
MGNA	**Meganis**	**0.52**	**41**	P	**Pg**	**02 46 48.1**	**+0.1**
MGNA				S	**Sg**	**02 46 55.4**	**+0.4**
MGNA				AML	AML	02 46 58.9	
	comp=E,9856μm,0.2s						
MGNA				AML	AML	02 47 01.1	
	comp=N,10787μm,0.4s						
LKD2	**Lefkada island**	**0.58**	**24**	P	**Pg**	**02 46 48.8**	**-0.3**
LKD2				S	**Sb**	**02 46 58.5**	**+1.0**
	comp=N,4μm,0.2s						
LKD2	**Lefkada island**	**0.58**	**24**	P	**Pg**	**02 46 49.0**	**-0.1**
LKD2				S	**Sb**	**02 46 57.7**	**+0.2**
LKD2				AML	AML	02 47 01.5	
	comp=E,5212μm,0.2s						
LKD2				AML	AML	02 47 03.0	
	comp=N,7292μm,0.3s						
TSLK	**Tsoukalades, L**	**0.61**	**23**	P	**Pg**	**02 46 49.8**	**+0.2**
TSLK	**Tsoukalades, L**	**0.61**	**23**	P	**Pg**	**02 46 49.9**	**+0.2**
TSLK				S	**Sb**	**02 46 58.8**	**+0.4**
TSLK				AML	AML	02 47 02.1	
	comp=N,7523μm,0.3s						
TSLK				AML	AML	02 47 05.0	
	comp=E,11053μm,0.5s						
ZAK2	**Zakynthos**	**0.64**	**138**	P	**Pg**	**02 46 50.3**	**+0.1**
RLS	**Riolos of Patr**	**0.90**	**103**	P	**Pb**	**02 46 54.4**	**-0.5**
RLS	**Riolos of Patr**	**0.90**	**103**	P	**Pb**	**02 46 54.4**	**-0.5**
RLS				S	**Sb**	**02 47 06.8**	**+0.1**
RLS				AML	AML	02 47 14.6	
	comp=E,2791μm,0.5s						
RLS				AML	AML	02 47 15.1	
	comp=N,3523μm,0.6s						
PVO	**Paravola**	**0.98**	**69**	P	**Pn**	**02 46 56.9**	**0.0**
DRO	**Drossia**	**1.11**	**106**	P	**Pb**	**02 46 56.9**	**-1.7**
IGT	**Igoumenitsa**	**1.27**	**359**	P	**Pb**	**02 47 01.4**	**+0.1**
IGT	**Igoumenitsa**	**1.27**	**359**	P	**Pg**	**02 47 02.2**	**0.0**
IGT				S	**Sg**	**02 47 20.5**	**+1.8**
IGT				AML	AML	02 47 23.9	
	comp=N,2263μm,0.3s						
IGT				AML	AML	02 47 24.8	
	comp=E,2428μm,0.4s						
ANX	**Ano Chora**	**1.27**	**74**	P	**Pb**	**02 47 01.4**	**0.0**
LAKA	**Lakka**	**1.28**	**90**	P	**Pn**	**02 47 01.1**	**+0.2**
LAKA	**Lakka**	**1.28**	**90**	P	**Pn**	**02 47 01.2**	**+0.3**
LAKA				S	**Sg**	**02 47 18.7**	**-0.3**
LAKA				AML	AML	02 47 26.2	
	comp=E,1944μm,0.6s						
LAKA				AML	AML	02 47 27.3	
	comp=N,2030μm,0.8s						
AMT	**Artemida-Makis**	**1.29**	**124**	P	**Pb**	**02 47 01.8**	**+0.1**
EVR	**Evrytania**	**1.31**	**60**	P	**Pg**	**02 47 03.0**	**0.0**
EVR				S	**Sg**	**02 47 19.6**	**-0.5**
EVR				AML	AML	02 47 33.3	
	comp=N,1893μm,0.4s						
EVR				AML	AML	02 47 34.0	
	comp=E,1741μm,0.4s						
TRIZ	**Trizonia**	**1.35**	**85**	P	**Pb**	**02 47 02.7**	**0.0**
KALE	**Kalithea**	**1.41**	**84**	P	**Pb**	**02 47 03.7**	**+0.1**
KALE				AML	AML	02 47 29.0	
	comp=E,1309μm,1.4s						
KALE				AML	AML	02 47 31.2	
	comp=N,1901μm,0.7s						
KLV	**Kalavryta, Ach**	**1.43**	**98**	P	**Pb**	**02 47 03.9**	**-0.1**
JAN	**Janina**	**1.45**	**15**	P	**Pg**	**02 47 05.3**	**-0.2**
JAN				AML	AML	02 47 30.9	
	comp=E,2540μm,0.5s						
JAN				AML	AML	02 47 34.1	
	comp=N,2630μm,0.7s						
KASA	**Kassiopi**	**1.52**	**348**	P	**Pg**	**02 47 07.3**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.58**	**61**	P	**Pg**	**02 47 07.7**	**-0.3**
ITM	**Ithomi**	**1.65**	**130**	P	**Pb**	**02 47 08.1**	**+0.4**
DLFA	**Delphi**	**1.69**	**82**	P	**Pg**	**02 47 09.6**	**-0.7**

AGG	**Agios Georgios**	**1.72**	**63**	P	**Pg**	**02 47 10.1**	**-0.7**	
THAL	**Thalero**	**1.83**	**96**	P	**Pb**	**02 47 11.2**	**+0.3**	
THL	**Klokotos Trika**	**1.83**	**44**	P	**Pb**	**02 47 11.6**	**+0.8**	
KPRO	**Kipourio**	**1.86**	**25**	P	**Pb**	**02 47 11.9**	**+0.5**	
AXAR	**Agios Charalam**	**1.88**	**74**	P	**Pb**	**02 47 11.9**	**+0.3**	
PROD	**Prodromos**	**2.00**	**89**	P	**Pb**	**02 47 12.8**	**-0.9**	
PENT	**Pentalofos**	**2.02**	**17**	P	**Pb**	**02 47 14.7**	**+0.5**	
LOUT	**Loutraki**	**2.08**	**97**	P	**Pb**	**02 47 14.6**	**-0.6**	
LKR	**Lokris**	**2.11**	**79**	P	**Pb**	**02 47 14.5**	**-1.1**	
NEST	**Nestorio**	**2.22**	**14**	P	**Pb**	**02 47 17.0**	**-0.4**	
VIL2	**Platees**	**2.29**	**90**	P	**Pb**	**02 47 17.5**	**-1.2**	
KZN	**Kozani**	**2.32**	**28**	P	**Pb**	**02 47 18.0**	**-1.1**	
LIT	**Litokhoron**	**2.47**	**41**	P	**Pb**	**02 47 20.8**	**-1.0**	
MRKA	**Markates**	**2.57**	**79**	P	**Pn**	**02 47 21.0**	**+2.2**	
FNA	**Florina**	**2.64**	**17**	P	**Pb**	**02 47 22.5**	**-2.1**	
ATHU	**Athens Univers**	**2.72**	**95**	P	**Pn**	**02 47 23.4**	**+2.7**	
VLY	**Voula,Athens**	**2.74**	**98**	P	**Pb**	**02 47 23.9**	**-2.5**	
EREA	**Eretria**	**2.81**	**86**	P	**Pb**	**02 47 25.2**	**-2.4**	
OHR	**Ohrid**	**2.87**	**7**	*i* Pn	**Pb**	**02 47 26.0**	**-2.5**	
TIP	**Timpagrande**	**2.96**	**289**	⇑P	**Pn**	**02 47 24.6**	**+0.5**	
TIP	**Timpagrande**	**2.96**	**289**	⇑S	**Sn**	**02 47 58.6**	**-0.7**	
TIR	**Tirane**	**3.10**	**353**	⇓P	**Pn**	**02 47 26.2**	**+0.1**	
GRG	**Griva**	**3.12**	**30**	P	**Pn**	**02 47 29.0**	**+2.7**	
CGL1	**Ceglie Messapi**	**3.27**	**318**	*e*Pn	**Pn**	**02 47 29.2**	**+0.9**	
MASS	**Massafra**	**3.43**	**315**	*e*Pn	**Pn**	**02 47 32.2**	**+1.6**	
MATE	**Matera**	**3.70**	**311**	⇑P	**Pn**	**02 47 34.4**	**+0.3**	
STIP	**Stip**	**3.71**	**22**	*i* Pn	**Pn**	**02 47 38.0**	**+3.7**	
ULC	**Ulcinj**	**3.79**	**347**	*e*Pn	**Pn**	**02 47 35.5**	**0.0**	
ULC				*e*Sn	**Sn**	**02 48 21.7**	**+1.8**	
SG1	**Sgolgore (BA)**	**3.83**	**313**	*e*Pn	**Pn**	**02 47 37.4**	**+1.3**	
SG1				Sn	**Sn**	**02 48 21.0**	**+0.1**	
BAI	**Bari**	**3.91**	**318**	*e*Pn	**Pn**	**02 47 38.0**	**+1.0**	
DRME	**Dracevica, Mon**	**4.02**	**347**	*e*Pn	**Pn**	**02 47 38.9**	**+0.3**	
DRME	**Dracevica, Mon**	**4.02**	**347**	*e*Pn	**Pn**	**02 47 39.0**	**+0.3**	
DRME				*e*Sn	**Sn**	**02 48 27.0**	**+1.6**	
BUM	**Brajici-Budva**	**4.19**	**345**	*e*Pn	**Pn**	**02 47 41.1**	**+0.1**	
BUM				*e*Sn	**Sn**	**02 48 30.8**	**+1.2**	
PDG	**Podgorica**	**4.25**	**349**	⇓P	**Pn**	**02 47 42.1**	**+0.4**	
PDG	**Podgorica**	**4.25**	**349**	⇑S	**Sn**	**02 48 30.1**	**-0.9**	
PDG	**Podgorica**	**4.25**	**349**	*e*Pn	**Pn**	**02 47 41.7**	**0.0**	
TTG	**Podgorica**	**4.25**	**349**	*e*Pn	**Pn**	**02 47 42.3**	**+0.6**	
TTG				*e*Sn	**Sn**	**02 48 32.6**	**+1.6**	
PVY	**Plav**	**4.34**	**356**	⇑*i*Pn	**Pn**	**02 47 44.4**	**+1.3**	
PVY				*e*Sn	**Sn**	**02 48 35.6**	**+2.2**	
HCY	**Herceg Novi**	**4.42**	**342**	*e*Pn	**Pn**	**02 47 43.7**	**-0.4**	
HCY				*i* Sn	**Sn**	**02 48 36.8**	**+1.6**	
CEME	**Cevo**	**4.42**	**346**	*e*Pn	**Pn**	**02 47 44.4**	**+0.2**	
CEME				*i* Sn	**Sn**	**02 48 36.8**	**+1.5**	
IVA	**Berane**	**4.62**	**356**	⇓*i*Pn	**Pn**	**02 47 47.7**	**+0.8**	
IVA				*e*Sn	**Sn**	**02 48 41.9**	**+1.6**	
NKME	**Niksic**	**4.62**	**347**	*e*Pn	**Pn**	**02 47 47.4**	**+0.4**	
NKME				*e*Sn	**Sn**	**02 48 41.7**	**+1.3**	
KOME	**Kolasin**	**4.63**	**352**	⇑*i*Pn	**Pn**	**02 47 48.1**	**+1.0**	
KOME				*e*Sn	**Sn**	**02 48 42.1**	**+1.6**	
NKY	**Niksic**	**4.66**	**348**	⇓*i*Pn	**Pn**	**02 47 48.4**	**+0.8**	
NKY				*e*Sn	**Sn**	**02 48 42.4**	**+1.0**	
IDI	**Anoyia**	**4.70**	**128**	Pn	**Pn**	**02 47 50.2**	**+2.2**	
	comp=N,0.3nm,0.3s,baz=307,slow=10,SNR=5.5							
IDI				Sn	**Sn**	**02 48 45.9**	**+3.7**	
	comp=N,2.5nm,0.3s,baz=331,slow=23,SNR=15							
TREB	**Trebinje**	**4.71**	**342**	*e*Pn	**Pn**	**02 47 45.8**	**-2.2**	
DBRK	**Dubrovnik**	**4.71**	**340**	*e*Pn	**Pn**	**02 47 47.8**	**-0.4**	
BRY	**Bratogost**	**4.84**	**344**	*e*Pn	**Pn**	**02 47 50.0**	**0.0**	
VTS	**Vitosha**	**4.87**	**26**	⇑P	**Pn**	**02 47 51.1**	**+0.6**	
STON	**Ston**	**5.03**	**337**	*e*Pn	**Pn**	**02 47 52.1**	**-0.3**	
STON				Sn	**Sn**	**02 48 48.3**	**-1.

SVB	**Belmont**	**2.02**	**285**	*e*P	**Pn**	**02 56 52.0 +0.5**
SVB				*e*S	**Sn**	**02 57 15.8 -0.3**
SLB	**Belfond**	**2.05**	**301**	*e*	**Pn**	**02 56 52.3 +0.5**
SLB	**Belfond**	**2.05**	**301**	*e*P	**Pn**	**02 56 54.5 +2.7**
SLBI	**Saint Lucia, B**	**2.10**	**307**	*e*P	**Pn**	**02 56 52.3 -0.2**
SLBI				*e*S	**Sn**	**02 57 17.8 0.0**
MPOM	**Morne Pois Mar**	**2.29**	**317**	*e*P	**Pn**	**02 56 54.9 -0.2**
GRSS	**Sisters**	**2.36**	**259**	*e*P	**Pn**	**02 56 57.3 +1.3**
GRSS				*e*S	**Sn**	**02 57 24.4 +0.3**
MVM	**Montagne Vaucl**	**2.40**	**318**	*e*P	**Pn**	**02 56 56.6 +0.1**
GRHS	**Sauteurs**	**2.41**	**257**	*e*P	**Pn**	**02 56 57.5 +0.9**
GRHS				*e*S	**Sn**	**02 57 26.2 +1.0**
GRGR	**Grenville**	**2.44**	**255**	*e*P	**Pn**	**02 56 58.0 +0.9**
GRGR	**Grenville**	**2.44**	**255**	*e*P	**Pn**	**02 56 58.0 +0.9**
GRGR				*e*S	**Sn**	**02 57 26.7 +0.7**
GRGR	**Grenville**	**2.44**	**255**	*e*P	**Pn**	**02 56 58.1 +1.0**
GRGR				*e*S	**Sn**	**02 57 27.3 +1.3**
LPMF	**Morne Lapointe**	**2.46**	**317**	*e*P	**Pn**	**02 56 57.3 -0.1**
BIM	**Bigot**	**2.49**	**315**	*e*P	**Pn**	**02 56 58.1 +0.3**
TRMF	**Trois Ilets**	**2.49**	**315**	*e*P	**Pn**	**02 56 58.0 +0.2**
ZAM	**Aeronautique**	**2.50**	**316**	*e*P	**Pn**	**02 56 57.9 +0.1**
ILAM	**Ilet Lapin Mar**	**2.55**	**322**	*e*P	**Pn**	**02 56 58.0 -0.5**
FDF	**Fort de France**	**2.70**	**317**	*e*P	**Pn**	**02 57 01.0 +0.4**
FDF				*e*S	**Sn**	**02 57 30.1 -2.2**
FDF	**Fort de France**	**2.70**	**317**	*e*P	**Pn**	**02 57 00.9 +0.3**
FDF				*e*S	**Sn**	**02 57 32.4 +0.1**
GBMF	**Grand Be**	**2.75**	**317**	*e*P	**Pn**	**02 57 02.0 +0.6**
PML	**Morne Lenard**	**2.75**	**317**	*e*P	**Pn**	**02 57 02.0 +0.7**
BAMF	**Morne Balai**	**2.75**	**318**	*e*P	**Pn**	**02 57 01.8 +0.4**
CXM	**Morne La Croix**	**2.77**	**318**	*e*P	**Pn**	**02 57 02.5 +0.8**
SVN	**Savane Anatole**	**2.79**	**318**	*e*P	**Pn**	**02 57 02.7 +0.9**
PCM	**Pelee Case Pet**	**2.80**	**317**	*e*P	**Pn**	**02 57 02.4 +0.5**
TRN	**Trinidad (W)**	**2.98**	**225**	*e*P	**Pn**	**02 57 07.1 +2.6**
TRN				*e*S	**Sn**	**02 57 39.6 +0.4**
DBCT	**Belle View Cho**	**3.22**	**321**	*e*P	**Pn**	**02 57 08.7 +1.0**
DBCT				*e*S	**Sn**	**02 57 44.9 -0.2**
DPMT	**Pointe Michel**	**3.23**	**320**	*e*P	**Pn**	**02 57 08.8 +1.0**
DPMT				*e*S	**Sn**	**02 57 45.2 0.0**
MDN	**Morne-Daniel**	**3.29**	**321**	*e*P	**Pn**	**02 57 09.1 +0.6**
MDN				*e*S	**Sn**	**02 57 46.6 0.0**
DWS	**Wesley**	**3.44**	**324**	*e*P	**Pn**	**02 57 11.4 +0.8**
DWS				*e*S	**Sn**	**02 57 49.1 -1.1**
MDPO	**Dominica; Chan**	**3.52**	**323**	*e*P	**Pn**	**02 57 12.9 +1.2**
MDPO				*e*S	**Sn**	**02 57 52.4 +0.1**
TDBA	**Terre de Bas,**	**3.85**	**323**	*e*P	**Pn**	**02 57 17.6 +1.4**
CRUV	**Carupano**	**4.43**	**242**	*e*P	**Pn**	**02 57 26.1 +1.9**
CRUV				*e*S	**Sn**	**02 58 13.1 -1.4**
GUNV	**Guanoco**	**4.46**	**235**	*e*P	**Pn**	**02 57 27.2 +2.7**
GUNV				*e*S	**Sn**	**02 58 13.9 -1.3**
RIOV	**Rio Grande**	**5.31**	**209**	*e*S	**Sn**	**02 58 33.6 -2.4**
ORIV	**Oritupano**	**5.50**	**229**	*e*S	**Sn**	**02 58 38.2 -2.5**
PCRV	**Puerto La Cruz**	**5.88**	**245**	*e*P	**Pn**	**02 57 45.6 +1.6**
PCRV				*e*S	**Sn**	**02 58 47.0 -3.1**
PRGV	**PARIAGUAN**	**6.64**	**234**	*e*P	**Pn**	**02 57 55.3 +1.0**
PRGV				*e*S	**Sn**	**02 59 04.5 -3.9**
BAUV	**El Baul**	**9.44**	**247**	*e*P	**Pn**	**02 58 33.5 +1.0**
BAUV				*e*S	**Sn**	**03 00 11.0 -6.1**

*IDC **27** 03:03:11.4±3.0, 11°.07S×112°.65E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.5/43, mbtmp3.6/5, ML3.3/1, Error ellipse: s-maj=146.5km s-min=20.0km az=45.0*
*DJA **27** 03:03:17.4±1.6, 10°.5S±13°×11°.3E±°, h26km±24km, M4.1/7, mb4.4/1, MLv3.9/7*

ISC 27 03:03:17.4±1.3, 10°.5S±0°.1×113°.18E±0°.07, h28km±, n16, σ0s94/13, mb3.3/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GMJI	**Gumukmas**	**2.27**	**7**	P	**Pn**	**03 03 52.1**	**-0.9**
JAGI	**Jajag, Banyuwa**	**2.27**	**25**	P	**Pn**	**03 03 52.3**	**-0.8**
JAGI				S	**Sn**	**03 04 19.9**	**-0.2**
DNP	**Denpasar**	**2.72**	**47**	S	**Sn**	**03 04 32.0**	**+0.6**
PCJI	**Pacitan**	**3.06**	**319**	P	**Pn**	**03 04 02.9**	**-1.0**
SRBI	**Singaraja**	**3.16**	**40**	P	**Pn**	**03 04 05.0**	**-0.3**
UGM	**Wanagama**	**3.70**	**315**	P	**Pn**	**03 04 12.8**	**0.0**
PLAI	**Plampang**	**4.84**	**70**	P	**Pn**	**03 04 28.3**	**-0.2**
CMJI	**Cimerak**	**5.42**	**300**	P	**Pn**	**03 04 35.7**	**-0.7**
FITZ	**Fitzroy Crossi**	**14.21**	**123**	Pn	Pn	03 06 34.9	-2.1
	0.1nm,0.3s,baz=322,slow=11,SNR=3.7						
FITZ				Sn	Sn	03 08 57.7	-16
	0.2nm,0.3s,baz=359,slow=23,SNR=5.2						
WRA	**Warramunga Arr**	**22.43**	**117**	P	**P**	**03 08 13.7**	**-0.6**
	0.6nm,0.6s,baz=290,slow=11,SNR=5.6						
ASAR	**Alice Springs**	**23.68**	**126**	P	**P**	**03 08 26.8**	**-0.2**
	0.6nm,0.6s,baz=301,slow=8.6,SNR=14						
CMAR	**Chiang Mai Arr**	**32.05**	**334**	P	**P**	**03 09 44.1**	**+2.1**
	1.3nm,0.4s,baz=166,slow=8.0,SNR=6.7						
H08S2	**Diego Garcia H**	**40.26**	**271**	T	T	03 53 54.8	
	baz=95,slow=74,SNR=6.4						
H08S3	**Diego Garcia H**	**40.27**	**271**	T	T	03 53 58.2	
	baz=95,slow=74,SNR=22						
H08S1	**Diego Carcia H**	**40.28**	**271**	T	T	03 53 54.5	
	baz=95						
MKAR	**Makanchi Array**	**63.40**	**337**	P	**P**	**03 13 43.6**	**-0.8**
	0.1nm,0.3s,baz=164,slow=5.8,SNR=3.5						

IDC 27 03:19:01.2±2.4, 4°.00S×148°.16E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/26, mbtmp3.3/3, Error ellipse: s-maj=331.1km s-min=28.7km az=122.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.80**	**219**	P	P	03 23 44.3	0.0
	0.4nm,0.4s,baz=42,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**23.91**	**214**	P	P	03 24 16.9	-0.1
	0.3nm,0.5s,baz=48,slow=8.3,SNR=5.5						
ILAR	**Eielson Array**	**83.20**	**23**	P	P	03 31 29.1	0.0
	0.4nm,0.6s,baz=247,slow=6.0,SNR=7.9						

*TIR **27** 03:24:38.7, 41°.46N×20°.42E, h23km, Md2.6/5*
*SKO **27** 03:24:39.1, 41°.46N×20°.41E, h15km*
*PDG **27** 03:24:39.9±0.2, 41°.44N×20°.33E, h0km±11km, ML2.4/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

ISC 27 03:24:39.8±1.0, 41°.43N±0°.03×20°.36E±0°.03, h11km±9km, n21, σ1s40/41, 1D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PHP	**Peshkopia**	**0.26**	**14**	*i* PG	**Pg**	**03 24 44.5**	**-0.6**
PHP				*i* SG	**Sg**	**03 24 48.3**	**-0.4**
TIR	**Tirane**	**0.38**	**257**	*i* PG	**Pg**	**03 24 47.8**	**-0.7**
TIR				*i* SG	**Sb**	**03 24 55.1**	**+0.6**
OHR	**Ohrid**	**0.46**	**134**	*i* Pg	**Pg**	**03 24 48.7**	**-0.2**
OHR				*i* Sg	**Sg**	**03 24 56.2**	**+1.2**
OHR				*e*Lg	Lg	03 24 56.9	
	comp=N,50nm,0.3s						
OHR				*e*Lg	Lg	03 24 57.9	
	comp=E,58nm,0.4s						
PUK	**Puka**	**0.70**	**330**	*i* PG	**Pg**	**03 24 52.7**	**-0.6**
PUK				*i* SG	**Sb**	**03 25 03.0**	**-0.8**
BCI	**Bajram Curri**	**0.96**	**347**	*i* PG	**Pg**	**03 24 56.9**	**-1.3**
BCI				*i* SG	**Sb**	**03 25 10.4**	**-0.7**
SKO	**Skopje**	**0.97**	**56**	*i* Pg	**Pg**	**03 24 57.4**	**-1.1**
ULC	**Ulcinj**	**0.99**	**303**	*i* Pg	**Pg**	**03 24 57.6**	**-1.2**
ULC				*e*Sg	**Sn**	**03 25 13.1**	**-0.6**
FNA	**Florina**	**1.01**	**130**	*i* PG	**Pb**	**03 24 58.1**	**-1.2**
FNA				*i* SG	**Sg**	**03 25 12.4**	**+0.2**
DRME	**Dracevica, Mon**	**1.16**	**311**	*e*Pg	**Pb**	**03 25 00.9**	**-0.9**
DRME				*e*Sg	**Sn**	**03 25 18.3**	**+0.5**
PVY	**Plav**	**1.20**	**346**	*e*Pg	**Pb**	**03 25 01.6**	**-1.0**
PVY				*e*Sg	**Sn**	**03 25 20.4**	**+1.4**
TTG	**Podgorica**	**1.29**	**321**	*e*Pg	**Pn**	**03 25 03.3**	**-0.5**
TTG				*e*Sg	**Sg**	**03 25 23.4**	**+2.0**
BUM	**Brajici-Budva**	**1.40**	**309**	*e*Pg	**Pb**	**03 25 05.3**	**-0.6**
BUM				*e*Sg	**Sg**	**03 25 27.0**	**+2.3**
STIP	**Stip**	**1.40**	**79**	*i* Pg	**Pg**	**03 25 07.6**	**+1.0**
STIP				*i* Sg	**Sg**	**03 25 27.6**	**+2.9**
STIP				*e*Lg	Lg	03 25 29.3	
	comp=E,2.8nm,0.3s						
STIP				*e*Lg	Lg	03 25 29.7	
	comp=N,3.9nm,0.3s						
IVA	**Berane**	**1.48**	**347**	*e*Pg	**Pb**	**03 25 07.2**	**-0.2**
IVA				*e*Sg	**Sg**	**03 25 29.5**	**+2.1**
CEME	**Cevo**	**1.55**	**316**	*e*Pg	**Pb**	**03 25 07.8**	**-0.7**
CEME				*e*Sg	**Sg**	**03 25 32.1**	**+2.6**
KOME	**Kolasin**	**1.55**	**336**	*e*Pg	**Pb**	**03 25 07.9**	**-0.7**
KOME				*e*Sg	**Sg**	**03 25 32.4**	**+2.8**
NKME	**Niksic**	**1.69**	**322**	*e*Pn	**Pb**	**03 25 10.8**	**-0.2**
NKME				*e*Sn	**Sg**	**03 25 36.8**	**+2.5**
NKY	**Niksic**	**1.71**	**324**	*e*Pn	**Pb**	**03 25 11.1**	**-0.3**
NKY				*e*Sn	**Sg**	**03 25 37.1**	**+2.2**
HCY	**Herceg Novi**	**1.72**	**307**	*e*Pn	**Pb**	**03 25 11.0**	**-0.4**
HCY				*e*Sn	**Sg**	**03 25 37.4**	**+2.3**
PLE	**Pljevlja**	**2.03**	**340**	*e*Pn	**Pb**	**03 25 16.2**	**-0.5**
PLE				*e*Sn	**Sg**	**03 25 45.0**	**+0.1**
UPM	**Unac-Piva**	**2.07**	**329**	*e*Pn	**Pb**	**03 25 16.8**	**-0.7**
UPM				*e*Sn	**Sg**	**03 25 46.0**	**-0.4**

*ATH **27** 03:28:22.2, 38°.23N×20°.38E, h15km±2km, ML3.0/13, Error ellipse: s-maj=2.8km s-min=0.9km az=97.0*
*THE **27** 03:28:22.1, 38°.22N×20°.33E, h4km±4km, ML3.0/5, Error ellipse: s-maj=4.8km s-min=0.3km az=77.0*

ISC 27 03:28:21.4±1.2, 38°.21N±0°.03×20°.31E±0°.04, h15km±7km, n43, σ0s97/69, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.23**	**99**	P	**Pg**	**03 28 26.2**	**-0.3**
VLS				S	**Sg**	**03 28 29.3**	**-0.6**
	10μm,0.1s						
VLS	**Valsamata**	**0.23**	**99**	P	**Pg**	**03 28 25.7**	**-0.7**
VLS				S	**Sg**	**03 28 29.2**	**-0.6**
VLS				AML	AML	03 28 29.4	
	comp=N,26888μm,0.3s						
VLS				AML	AML	03 28 29.6	
	comp=E,12714μm,0.1s						
FSK	**Fiskardo**	**0.32**	**39**	P	**Pg**	**03 28 28.1**	**0.0**
FSK				S	**Sg**	**03 28 32.5**	**-0.1**
	comp=E,8μm,0.2s						
FSK	**Fiskardo**	**0.32**	**39**	P	**Pg**	**03 28 28.0**	**0.0**
FSK				S	**Sg**	**03 28 32.1**	**-0.4**
KFL	**Anninata**	**0.39**	**105**	P	**Pg**	**03 28 29.1**	**-0.2**
KFL	**Anninata**	**0.39**	**105**	P	**Pg**	**03 28 29.2**	**-0.2**
KFL				S	**Sg**	**03 28 34.5**	**-0.3**
KFL				AML	AML	03 28 35.4	
	comp=E,28847μm,0.3s						
KFL				AML	AML	03 28 38.2	
	comp=N,9892μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.44**	**140**	P	**Pg**	**03 28 30.5**	**+0.4**
VLMS				S	**Sb**	**03 28 37.3**	**+0.1**
VLMS				AML	AML	03 28 39.2	
	comp=N,7948μm,0.4s						
VLMS				AML	AML	03 28 40.4	
	comp=E,4358μm,0.4s						
EVGI	**Lefkada island**	**0.49**	**34**	P	**Pg**	**03 28 31.2**	**0.0**
EVGI				S	**Sg**	**03 28 38.1**	**+0.3**
	comp=E,1μm,0.1s						
EVGI	**Lefkada island**	**0.49**	**34**	P	**Pg**	**03 28 31.0**	**-0.2**
EVGI				S	**Sg**	**03 28 37.9**	**+0.1**
MGNA	**Meganis**	**0.58**	**40**	P	**Pg**	**03 28 32.5**	**-0.4**
MGNA				S	**Sg**	**03 28 40.6**	**-0.1**
MGNA				AML	AML	03 28 45.2	
	comp=N,2131μm,0.2s						
MGNA				AML	AML	03 28 46.0	
	comp=E,2483μm,0.3s						
LKD2	**Lefkada island**	**0.64**	**25**	P	**Pg**	**03 28 33.7**	**-0.2**
LKD2				S	**Sg**	**03 28 42.9**	**+0.5**
	comp=E,945nm,0.3s						
LKD2	**Lefkada island**	**0.64**	**25**	P	**Pg**	**03 28 33.7**	**-0.2**
LKD2				S	**Sg**	**03 28 41.9**	**-0.5**
LKD2				AML	AML	03 28 51.3	
	comp=E,1905μm,0.4s						
LKD2				AML	AML	03 28 52.8	
	comp=N,1848μm,0.6s						
TSLK	**Tsoukalades, L**	**0.67**	**24**	P	**Pg**	**03 28 34.5**	**0.0**
TSLK	**Tsoukalades, L**	**0.67**	**24**	P	**Pg**	**03 28 34.9**	**+0.4**
TSLK				S	**Sg**	**03 28 43.4**	**0.0**
TSLK				AML	AML	03 28 51.0	
	comp=E,2537μm,0.5s						
TSLK				AML	AML	03 28 51.9	
	comp=N,2172μm,0.5s						
RLS	**Riolos of Patr**	**0.93**	**99**	P	**Pg**	**03 28 39.4**	**0.0**
RLS				S	**Sb**	**03 28 52.7**	**+1.4**
	comp=N,482nm,0.9s						
RLS	**Riolos of Patr**	**0.93**	**99**	P	**Pg**	**03 28 38.9**	**-0.4**
RLS				S	**Sg**	**03 28 50.5**	**-1.0**
RLS				AML	AML	03 28 57.2	
	comp=N,1336μm,0.9s						
RLS				AML	AML	03 29 04.3	
	comp=E,560μm,0.5s						
PVO	**Paravola**	**1.04**	**67**	P	**Pg**	**03 28 40.9**	**-0.6**
PVO	**Paravola**	**1.04**	**67**	P	**Pg**	**03 28 40.9**	**-0.6**
PVO				S	**Sb**	**03 28 55.0**	**+0.5**
PVO				AML	AML	03 29 01.1	
	comp=E,2532μm,0.8s						
PVO				AML	AML	03 29 02.4	
	comp=N,2358μm,0.5s						
DRO	**Drossia**	**1.14**	**103**	P	**Pg**	**03 28 42.8**	**-0.5**
DRO	**Drossia**	**1.14**	**103**	P	**Pg**	**03 28 42.8**	**-0.5**
DRO				S	**Sn**	**03 28 58.6**	**+0.4**
DRO				AML	AML	03 29 07.5	
	comp=E,1634μm,0.6s						
DRO				AML	AML	03 29 15.5	
	comp=N,1599μm,0.8s						
EFP	**Efpalio**	**1.28**	**80**	P	**Pn**	**03 28 45.1**	**+0.4**
EFP	**Efpalio**	**1.28**	**80**	P	**Pn**	**03 28 45.1**	**+0.4**
EFP				S	**Sb**	**03 29 01.8**	**+0.4**
EFP				AML	AML	03 29 08.0	
	comp=E,1846μm,1.1s						
EFP				AML	AML	03 29 08.4	
	comp=N,1307μm,0.7s						
AMT	**Artemida-Makis**	**1.30**	**121**	P	**Pb**	**03 28 46.3**	**+0.7**
LAKA	**Lakka**	**1.32**	**88**	P	**Pn**	**03 28 45.1**	**-0.2**
IGT	**Igoumenitsa**	**1.32**	**1**	P	**Pn**	**03 28 46.6**	**+1.3**
IGT	**Igoumenitsa**	**1.32**	**1**	P	**Pg**	**03 28 47.2**	**+0.4**
ANX	**Ano Chora**	**1.32**	**73**	P	**Pn**	**03 28 46.1**	**+0.7**
ANX	**Ano Chora**	**1.32**	**73**	P	**Pn**	**03 28 45.8**	**+0.4**
ANX				AML	AML	03 29 10.4	
	comp=N,3354μm,0.5s						
ANX				AML	AML	03 29 10.6	
	comp=E,2934μm,0.7s						
EVR	**Evrytania**	**1.37**	**59**	P	**Pn**	**03 28 47.0**	**+0.9**
EVR				S	**Sb**	**03 29 04.7**	**+0.5**
EVR				AML	AML	03 29 20.1	
	comp=N,558μm,0.8s						
EVR				AML	AML	03 29 21.5	
	comp=E,545μm,0.8s						
SERG	**Sergoula**	**1.39**	**81**	P	**Pn**	**03 28 46.7**	**+0.4**
SERG	**Sergoula**	**1.39**	**81**	P	**Pn**	**03 28 46.6**	**+0.4**
SERG				S	**Sg**	**03 29 06.1**	**-0.2**
SERG				AML	AML	03 29 12.2	
	comp=E,1219μm,0.6s						
SERG				AML	AML	03 29 15.5	
	comp=N,603μm,0.7s						
KALE	**Kalithea**	**1.45**	**82**	P	**Pn**	**03 28 47.8**	**+0.6**
KLV	**Kalavryta, Ach**	**1.46**	**96**	P	**Pn**	**03 28 48.1**	**+0.8**
KLV	**Kalavryta, Ach**	**1.46**	**96**	P	**Pn**	**03 28 47.9**	**+0.6**
DBRK	**Dubrovnik**	**4.75**	**340**	*e*Pn	**Pn**	**03 29 31.9**	**-0.5**
DBRK				S	**Sn**	**03 30 26.1**	**-1.0**
STON	**Ston**	**5.06**	**338**	*i* Pn	**Pn**	**03 29 37.0**	**+0.4**
STON				S	**Sn**	**03 30 32.3**	**-2.5**
MAKA	**Makarska**	**5.65**	**335**	*e*Pn	**Pn**	**03 29 45.6**	**+0.8**
MAKA				S	**Sn**	**03 30 46.5**	**-2.9**
ZIRJ	**Zirje**	**6.48**	**328**	*i* Pn	**Pn**	**03 29 57.0**	**+0.8**
KIJV	**Kijevo**	**6.49**	**334**	*i* Pn	**Pn**	**03 29 57.7**	**+1.3**
KIJV				S	**Sn**	**03 31 09.4**	**-0.8**
MORI	**Morici**	**6.63**	**330**	*e*Pn	**Pn**	**03 29 59.6**	**+1.3**
DUGI	**Dugi Otok**	**7.00**	**327**	*e*Pn	**Pn**	**03 30 04.8**	**+1.5**
DUGI				S	**Sn**	**03 31 20.4**	**-2.3**
UDBI	**Udbina**	**7.17**	**333**	*i* Pn	**Pn**	**03 30 08.0**	**+2.2**
UDBI				S	**Sn**	**03 31 25.2**	**-1.8**
NVLJ	**Novalja**	**7.55**	**329**	*e*Pn	**Pn**	**03 30 11.9**	**+1.1**
NVLJ				S	**Sn**	**03 31 33.0**	**-3.0**

*THE **27** 03:41:01.2, 38°.18N×20°.32E, h14km±1km, ML3.1/5, Error ellipse: s-maj=1.4km s-min=0.4km az=73.0*
*ATH **27** 03:41:03.0, 38°.19N×20°.44E, h11km±5km, ML2.9/5, Error ellipse: s-maj=5.9km s-min=1.0km az=92.0*

ISC 27 03:41:02.2±1.1, 38°.20N±0°.03×20°.43E±0°.05, h18km±4km, n32, σ0s89/49, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.13**	**101**	P	**Pb**	**03 41 05.9**	**+0.1**
VLS				S	**Sg**	**03 41 09.6**	**+0.7**
	18μm,0.2s						
VLS	**Valsamata**	**0.13**	**101**	P	**Pb**	**03 41 05.9**	**+0.1**
VLS				S	**Sb**	**03 41 08.2**	**+0.1**
VLS				AML	AML	03 41 09.7	
	comp=N,35547μm,0.2s						
VLS				AML	AML	03 41 10.0	
	comp=E,28118μm,0.1s						
FSK	**Fiskardo**	**0.28**	**22**	P	**Pg**	**03 41 07.8**	**-0.6**
FSK				S	**Sb**	**03 41 13.4**	**+0.4**
	comp=E,4μm,0.3s						
FSK	**Fiskardo**	**0.28**	**22**	P	**Pb**	**03 41 09.0**	**+0.3**
FSK				S	**Sg**	**03 41 12.5**	**-0.1**
KFL	**Anninata**	**0.30**	**108**	P	**Pg**	**03 41 08.6**	**-0.1**
KFL				S	**Sb**	**03 41 14.5**	**+0.9**
	comp=E,4μm,0.3s						
KFL	**Anninata**	**0.30**	**108**	P	**Pg**	**03 41 08.5**	**-0.2**
KFL				S	**Sb**	**03 41 13.7**	**+0.1**
KFL				AML	AML	03 41 15.8	
	comp=E,12442μm,0.3s						
KFL				AML	AML	03 41 18.2	
	comp=N,5918μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.37**	**151**	P	**Pg**	**03 41 09.9**	**-0.1**
VLMS				S	**Sg**	**03 41 15.1**	**-0.2**
VLMS				AML	AML	03 41 20.3	
	comp=E,3544μm,0.1s						
VLMS				AML	AML	03 41 22.7	
	comp=N,4950μm,0.3s						
EVGI	**Lefkada island**	**0.46**	**23**	P	**Pg**	**03 41 11.5**	**0.0**
EVGI				S	**Sb**	**03 41 19.0**	**+0.8**
	comp=N,2μm,0.3s						
EVGI	**Lefkada island**	**0.46**	**23**	P	**Pb**	**03 41 11.9**	**+0.2**
EVGI				S	**Sb**	**03 41 18.4**	**+0.2**
MGNA	**Meganis**	**0.54**	**32**	P	**Pb**	**03 41 13.6**	**+0.5**
MGNA				S	**Sg**	**03 41 20.5**	**+0.4**
MGNA				AML	AML	03 41 22.4	
	comp=N,4718μm,0.2s						
MGNA				AML	AML	03 41 22.8	
	comp=E,6312μm,0.1s						
ZAK2	**Zakynthos**	**0.56**	**138**	P	**Pg**	**03 41 12.5**	**-0.8**
LKD2	**Lefkada island**	**0.61**	**17**	P	**Pg**	**03 41 13.9**	**-0.5**
LKD2				S	**Sb**	**03 41 23.5**	**+0.7**
	comp=E,618nm,0.4s						
LKD2	**Lefkada island**	**0.61**	**17**	P	**Pb**	**03 41 15.3**	**+0.8**
LKD2				S	**Sb**	**03 41 23.5**	**+0.7**
LKD2				AML	AML	03 41 29.1	
	comp=N,1420μm,0.3s						
LKD2				AML	AML	03 41 29.4	
	comp=E,1149μm,0.4s						
TSLK	**Tsoukalades, L**	**0.65**	**16**	P	**Pg**	**03 41 14.7**	**-0.3**
TSLK	**Tsoukalades, L**	**0.65**	**16**	P	**Pb**	**03 41 15.5**	**+0.5**
TSLK				S	**Sb**	**03 41 24.3**	**+0.6**
RLS	**Riolos of Patr**	**0.83**	**100**	P	**Pb**	**03 41 18.2**	**+0.1**
PVO	**Paravola**	**0.95**	**64**	P	**Pb**	**03 41 20.6**	**+0.3**
DRO	**Drossia**	**1.04**	**103**	P	**Pn**	**03 41 22.3**	**+0.3**
EFP	**Efpalio**	**1.18**	**79**	P	**Pb**	**03 41 24.5**	**+0.4**
ANX	**Ano Chora**	**1.23**	**71**	P	**Pn**	**03 41 25.1**	**+0.4**
SERG	**Sergoula**	**1.30**	**80**	P	**Pn**	**03 41 25.7**	**+0.2**
TRIZ	**Trizonia**	**1.30**	**82**	P	**Pb**	**03 41 26.1**	**-0.1**
IGT	**Igoumenitsa**	**1.33**	**357**	P	**Pn**	**03 41 25.8**	**-0.2**
DBRK	**Dubrovnik**	**4.79**	**339**	*i* Pn	**Pn**	**03 42 15.0**	**+1.5**
DBRK				S	**Sn**	**03 43 07.2**	**-1.3**
STON	**Ston**	**5.11**	**337**	*i* Pn	**Pn**	**03 42 17.4**	**-0.5**
STON				S	**Sn**	**03 43 15.5**	**-0.8**
MAKA	**Makarska**	**5.70**	**334**	*e*Pn	**Pn**	**03 42 27.8**	**+1.8**
MAKA				S	**Sn**	**03 43 29.2**	**-1.8**
ZIRJ	**Zirje**	**6.54**	**328**	*e*Pn	**Pn**	**03 42 38.7**	**+1.2**
KIJV	**Kijevo**	**6.55**	**334**	*e*Pn	**Pn**	**03 42 39.0**	**+1.4**
MORI	**Morici**	**6.69**	**329**	*e*Pn	**Pn**	**03 42 40.7**	**+1.1**
MORI				S	**Sn**	**03 43 54.0**	**-1.3**
DUGI	**Dugi Otok**	**7.06**	**327**	*i* Pn	**Pn**	**03 42 47.1**	**+2.3**
UDBI	**Udbina**	**7.23**	**332**	*e*Pn	**Pn**	**03 42 48.6**	**+1.6**
NVLJ	**Novalja**	**7.61**	**328**	*i* Pn	**Pn**	**03 42 53.8**	**+1.7**

*IDC **27** 03:44:06.0±2.2, 0°.52S×120°.42E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/35, mbtmp3.7/3, Error ellipse: s-maj=445.7km s-min=27.4km az=59.0*
*NEIC **27** 03:44:11.6±0.9, 0°.75S±0°.05×119°.76E±0°.05, h35km±2km, mb3.7/2, Error ellipse: s-maj=11.8km s-min=5.6km az=134.0*
*DJA **27** 03:44:13.2±2.2, 1°.5S±3°×12°.0E±°, h26km±25km, M3.8/7, MLv3.8/7*

ISC 27 03:44:11.1±0.9, 0°.78S±0°.06×119°.69E±0°.05, h35km, n16, σ2s12/20, mb3.8/5, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**1.13**	**10**	P	**Pn**	**03 44 30.8**	**+0.4**
MPSI				S	**Sn**	**03 44 46.0**	**+1.3**
APSI	**Ampana**	**1.96**	**94**	P	**Pn**	**03 44 42.7**	**+0.9**
APSI				S	**Sn**	**03 45 04.0**	**-1.2**
TTSI	**Tana Toraja**	**2.25**	**177**	P	**Pn**	**03 44 50.3**	**+4.4**
MRSI	**Marisa**

	comp=N,878nm,0.4s								
TSLK	**Tsoukalades, L**	**0.66**	**15**	P	**Pb**	03 54 05.3	**+0.8**		
TSLK				AML	AML	03 54 21.8			
	comp=E,1778μm,0.3s								
TSLK				AML	AML	03 54 23.6			
	comp=N,1672μm,0.6s								
RLS	**Riolos of Patr**	**0.83**	**99**	P	**Pg**	03 54 06.5	**-1.0**		
RLS	**Riolos of Patr**	**0.83**	**99**	P	**Pg**	03 54 07.2	**-0.3**		
RLS				S	**Sg**	03 54 17.7	**-0.8**		
RLS				AML	AML	03 54 22.9			
	comp=E,1226μm,0.7s								
RLS				AML	AML	03 54 24.9			
	comp=N,844μm,0.3s								
PVO	**Paravola**	**0.96**	**63**	P	**Pb**	03 54 10.3	**+0.7**		
DRO	**Drossia**	**1.04**	**103**	P	**Pb**	03 54 11.0	**+0.2**		
LAKA	**Lakka**	**1.22**	**87**	P	**Pn**	03 54 14.0	**+0.4**		
LAKA	**Lakka**	**1.22**	**87**	P	**Pn**	03 54 14.2	**+0.6**		
LAKA				AML	AML	03 54 35.4			
	comp=E,578μm,0.5s								
LAKA				AML	AML	03 54 37.7			
	comp=N,473μm,0.4s								
ANX	**Ano Chora**	**1.24**	**70**	P	**Pg**	03 54 15.4	**+0.1**		
EVR	**Evrytania**	**1.30**	**56**	P	**Pg**	03 54 17.8	**+1.2**		
EVR	**Evrytania**	**1.30**	**56**	P	**Pn**	03 54 15.8	**+1.0**		
EVR				AML	AML	03 54 40.5			
	comp=N,344μm,0.6s								
EVR				AML	AML	03 54 44.2			
	comp=E,600μm,1.3s								
TRIZ	**Trizonia**	**1.31**	**82**	P	**Pn**	03 54 15.1	**+0.4**		
TRIZ	**Trizonia**	**1.31**	**82**	P	**Pn**	03 54 15.7	**+0.9**		
IGT	**Igoumenitsa**	**1.35**	**357**	P	**Pg**	03 54 18.4	**+1.1**		
IGT	**Igoumenitsa**	**1.35**	**357**	P	**Pg**	03 54 17.7	**+0.3**		
IGT				AML	AML	03 54 40.0			
	comp=N,365μm,0.3s								
IGT				AML	AML	03 54 41.2			
	comp=E,414μm,0.5s								
KALE	**Kalithea**	**1.36**	**81**	P	**Pb**	03 54 17.1	**+0.7**		
KLV	**Kalavryta, Ach**	**1.36**	**95**	P	**Pn**	03 54 16.9	**+1.2**		
JAN	**Janina**	**1.50**	**12**	P	**Pg**	03 54 20.7	**+0.4**		
ITM	**Ithomi**	**1.56**	**130**	P	**Pg**	03 54 21.4	**+0.1**		
MAKR	**Makrakomi, Fth**	**1.57**	**58**	P	**Pg**	03 54 21.2	**-0.4**		
MAKR				AML	AML	03 54 51.7			
	comp=N,703μm,0.7s								
MAKR				AML	AML	03 54 56.0			
	comp=E,703μm,0.5s								
AGG	**Agios Georgios**	**1.71**	**60**	P	**Pg**	03 54 23.9	**-0.3**		
THL	**Klokotos Trika**	**1.85**	**41**	P	**Pb**	03 54 26.1	**+1.4**		
KPRO	**Kipourio**	**1.91**	**22**	P	**Pb**	03 54 26.8	**+1.0**		
PROD	**Prodromos**	**1.95**	**87**	P	**Pb**	03 54 27.1	**+0.8**		
LKR	**Lokris**	**2.07**	**76**	P	**Pb**	03 54 28.7	**+0.2**		
VIL2	**Platees**	**2.24**	**88**	P	**Pb**	03 54 31.1	**-0.2**		
DBRK	**Dubrovnik**	**4.80**	**339**	*e*Pn	**Pn**	03 55 03.3	**+0.5**		
STON	**Ston**	**5.12**	**337**	*e*Pn	**Pn**	03 55 07.5	**+0.4**		
STON				Sn	**Sn**	03 56 02.9	**-2.9**		
MAKA	**Makarska**	**5.72**	**334**	*e*Pn	**Pn**	03 55 15.8	**+0.5**		
MAKA				Sn	**Sn**	03 56 18.0	**-2.5**		
ZIRJ	**Zirje**	**6.55**	**328**	*e*Pn	**Pn**	03 55 26.8	**-0.1**		
ZIRJ				Sn	**Sn**	03 56 38.6	**-2.6**		
KIJV	**Kijevo**	**6.56**	**334**	*e*Pn	**Pn**	03 55 27.7	**+0.8**		
KIJV				Sn	**Sn**	03 56 39.0	**-2.3**		
MORI	**Morici**	**6.70**	**329**	*e*Pn	**Pn**	03 55 29.8	**+0.8**		
MORI				Sn	**Sn**	03 56 42.8	**-2.0**		
DUGI	**Dugi Otok**	**7.08**	**327**	*e*Pn	**Pn**	03 55 34.3	**+0.3**		
DUGI				Sn	**Sn**	03 56 52.1	**-1.9**		
UDBI	**Udbina**	**7.24**	**333**	*e*Pn	**Pn**	03 55 37.8	**+1.4**		
NVLJ	**Novalja**	**7.62**	**329**	*i* Pn	**Pn**	03 55 42.0	**+0.6**		

MAN 27 03:57:51.3, 9°90N×124°00E, h28km, mb4.4, ML3.2, MS3.1, 1C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.41**	**355**	*i* P	Pb	03 58 00.7	+0.4
LLP				*i* S	Sn	03 58 08.1	-0.2
MSLP	**Maasin**	**0.88**	**75**	*e*P	Pn	03 58 03.9	-3.9
MSLP				*e*S	Sb	03 58 13.9	-5.4
OCLP	**Ormoc**	**1.29**	**28**	*e*P	Pn	03 58 12.8	-0.7
OCLP				*e*S	Sb	03 58 31.0	-0.1
CGP	**Cagayan de Oro**	**1.59**	**154**	*e*P	Pn	03 58 17.7	0.0
CGP				*e*S	Sn	03 58 37.9	+0.5
RCP	**Roxas**	**2.06**	**323**	*e*P	Pb	03 58 28.9	+0.9
PAGZ	**Pagadian**	**2.13**	**197**	*e*P	Pb	03 58 28.1	-1.2
PAGZ				*e*S	Sb	03 58 57.6	+2.3
BUKP	**Musuan**	**2.27**	**152**	*e*P	Pn	03 58 27.8	+0.7
BUKP				*e*S	Sn	03 58 54.9	+0.8

*NEIC **27** 04:06:30.3±1.4, 27.74N±0.02×105.38W±0.06, h10km±1km, Md4.0/7(MEX), Error ellipse: s-maj=8.5km s-min=3.7km az=83.0*
*MEX **27** 04:06:34.3±0.9, 27.50N×104.98W, h16km±20km, MD4.0*
ISC 27 04:06:28.6±1.1, 27.66N±0.04×105.38W±0.06, h10km, n26, σ2§01/33, Northern Mexico

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HPIG		**0.76**	**199**	*e*P	**Pn**	**04 06 48.1**	**+2.4**
HPIG				*i* S	**Sn**	**04 06 57.6**	**+0.3**
HPIG		**0.76**	**199**		**Pn**	**04 06 47.0**	**+1.4**
HPIG					**Sn**	**04 06 57.6**	**+0.3**
HPIG		**0.76**	**199**		**Pn**	**04 06 48.1**	**+2.4**
HPIG					**Sn**	**04 06 57.6**	**+0.3**
TX31	**Lajitas Ar. Si**	**2.25**	**42**		**Pn**	**04 07 07.8**	**+1.9**
TX32	**Lajitas Array**	**2.25**	**42**		**Pn**	**04 07 08.7**	**+2.7**
CGIG		**3.53**	**320**	*i* P	**Pb**	**04 07 31.2**	**0.0**
CGIG				*i* S	**Sb**	**04 08 14.2**	**+0.1**
CGIG		**3.53**	**320**		**Pb**	**04 07 31.2**	**0.0**
CGIG					**Sb**	**04 08 14.2**	**+0.1**
MNTX	**Cornudas Mount**	**4.03**	**360**	*e*P	**Pn**	**04 07 34.7**	**+4.4**
MNTX				*e*S	**Sb**	**04 08 23.4**	**-5.0**
MNTX	**Cornudas Mount**	**4.03**	**360**		**Pn**	**04 07 31.7**	**+1.3**
MNTX					**Sn**	**04 08 21.4**	**+3.8**
319A	**Douglas**	**5.03**	**318**		**Pn**	**04 07 44.1**	**-0.1**
HSIG		**5.09**	**287**	*e*S	**Sb**	**04 08 56.5**	**-2.5**
HSIG		**5.09**	**287**		**Sb**	**04 08 56.5**	**-2.5**
HSIG		**5.09**	**287**	Pn	**Pn**	**04 07 48.1**	**+3.2**
121A	**Cookes Peak, D**	**5.29**	**337**	Pn	**Pn**	**04 07 48.3**	**+0.5**
JCT	**Junction City**	**5.63**	**59**	Pn	**Pn**	**04 07 53.1**	**+0.6**
TUC	**Tucson**	**6.59**	**316**	Pn	**Pn**	**04 08 06.1**	**+0.5**
MSTX	**Muleshoe**	**6.68**	**19**	Pn	**Pn**	**04 08 07.6**	**+0.7**
435B	**Jarrell**	**7.49**	**64**	Pn	**Pn**	**04 08 15.4**	**-2.5**
214A	**Organ Pipe Nat**	**7.75**	**305**	Pn	**Pn**	**04 08 23.0**	**+1.5**
AMTX	**Amarillo**	**7.87**	**23**	Pn	**Pn**	**04 08 23.8**	**+0.7**
X18A	**Snowflake**	**7.89**	**331**	Pn	**Pn**	**04 08 23.5**	**-0.1**
W18A	**Petrified Fore**	**8.31**	**335**	Pn	**Pn**	**04 08 29.4**	**0.0**
X16A	**Lo Mia Camp, P**	**8.51**	**324**		**Pn**	**04 08 33.0**	**+0.9**
WMOK	**Wichita Mounta**	**9.04**	**37**	Pn	**Pn**	**04 08 37.7**	**-1.5**
NATX	**Nacogdoches**	**10.18**	**64**	Pn	**Pn**	**04 08 54.5**	**-0.2**
JLU	**Jordanelle**	**13.85**	**340**		**Pn**	**04 09 45.4**	**+0.3**

*SNET **27** 04:18:46.7±1.3, 13.75N×90.36W, h24km±9km, ML2.6*
*GCG **27** 04:18:48.0±0.3, 13.84N×90.25W, h48km±13km, MD3.3*
ISC 27 04:18:46.9±2.2, 13.7N±0.2×90.34W±0.07, h22km±7km, n10, σ0§72/17, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAME	**Alcalda de S**	**0.37**	**59**	*e*P	**Pb**	**04 18 53.5**	**-1.1**
FAME				*e*S	**Sb**	**04 19 00.4**	**+0.4**
FAME				IAML		04 19 00.8	
	comp=Z,178nm,0.1s						
IXG	**Ixpaco**	**0.52**	**349**	*e*P	**Pb**	**04 18 58.3**	**+0.8**
CEVE	**Cerro Verde**	**0.72**	**76**	*e*P	**Pb**	**04 19 01.2**	**+0.4**
CEVE				*e*S	**Sn**	**04 19 12.3**	**-0.1**
CEVE				IAML		04 19 17.8	
	comp=Z,757nm,0.2s						
RTR	**El Retiro**	**0.72**	**70**	*e*P	**Pb**	**04 19 01.0**	**+0.3**
SBLS	**San Blas**	**0.72**	**75**	*e*P	**Pb**	**04 19 01.3**	**+0.4**
SBLS				*e*S	**Sb**	**04 19 11.5**	**+1.1**
SNJE	**San Jose**	**0.74**	**73**	*e*P	**Pb**	**04 19 01.5**	**+0.2**
SNJE				*e*S	**Sb**	**04 19 11.7**	**+0.7**
UNIC	**Universidad Ca**	**0.83**	**67**	*e*S	**Sb**	**04 19 14.4**	**+0.9**
FUG	**Fuego 3**	**0.93**	**328**	*e*P	**Pb**	**04 19 04.1**	**-0.3**
FUG				*e*S	**Sb**	**04 19 16.4**	**+0.1**
MTO3	**Montecristo**	**1.20**	**52**	*e*P	**Pn**	**04 19 07.5**	**-1.1**
MTO3				*e*S	**Sb**	**04 19 24.9**	**+0.6**
STG3	**Santiaguito 3,**	**1.59**	**311**	*e*P	**Pn**	**04 19 13.8**	**-0.1**
STG3				*e*S	**Sn**	**04 19 34.1**	**+0.2**

*IDC **27** 04:44:45.0±1.9, 38.43N×20.30E, h0km, mb3.7/3, mb1 3.6/4, mb1mx3.3/51, mbtmp3.6/4, ML2.6/1, Error ellipse: s-maj=105.0km s-min=27.5km az=141.0*
*ATH **27** 04:44:47.4, 38.24N×20.48E, h9km±2km, ML3.2/9, Error ellipse: s-maj=2.4km s-min=0.9km az=70.0*
*THE **27** 04:44:47.0, 38.22N×20.39E, h5km±4km, ML3.2/6, Error ellipse: s-maj=4.3km s-min=0.3km az=78.0*
ISC 27 04:44:47.5±1.0, 38.25N±0.02×20.45E±0.04, h11km±6km, n44, σ0§79/64, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.13**	**123**	P	**Pg**	**04 44 50.2**	**-0.4**
VLS				S	**Sg**	**04 44 52.8**	**0.0**
	40μm,0.1s						
VLS	**Valsamata**	**0.13**	**123**	P	**Pg**	**04 44 50.0**	**-0.6**
VLS				S	**Sg**	**04 44 52.5**	**-0.3**
VLS				AML	AML	04 44 52.9	
	comp=N,93750μm,0.1s						
VLS				AML	AML	04 44 52.9	
	comp=E,62625μm,0.1s						
FSK	**Fiskardo**	**0.23**	**22**	P	**Pg**	**04 44 52.2**	**0.0**
FSK				S	**Sg**	**04 44 56.6**	**+1.1**
	comp=E,5μm,0.4s						
FSK	**Fiskardo**	**0.23**	**22**	P	**Pg**	**04 44 52.2**	**0.0**
FSK				S	**Sg**	**04 44 56.1**	**+0.6**
KFL	**Anninata**	**0.30**	**118**	P	**Pg**	**04 44 53.4**	**-0.1**
KFL				S	**Sg**	**04 44 58.4**	**+0.8**
	comp=E,16μm,0.5s						
KFL	**Anninata**	**0.30**	**118**	P	**Pg**	**04 44 53.2**	**-0.3**
KFL				S	**Sg**	**04 44 57.9**	**+0.4**
KFL				AML	AML	04 44 59.0	
	comp=E,41768μm,0.4s						
KFL				AML	AML	04 45 01.3	
	comp=N,21633μm,0.6s						
EVGI	**Lefkada island**	**0.41**	**23**	P	**Pg**	**04 44 55.4**	**-0.1**
EVGI				S	**Sb**	**04 45 02.4**	**-0.5**
	comp=N,2μm,0.4s						
EVGI	**Lefkada island**	**0.41**	**23**	P	**Pg**	**04 44 55.1**	**-0.4**
EVGI				S	**Sg**	**04 45 01.4**	**+0.4**
VLMS	**Volimes, Zakyn**	**0.41**	**156**	P	**Pg**	**04 44 54.8**	**-0.7**
VLMS				S	**Sg**	**04 45 01.3**	**+0.4**
VLMS				AML	AML	04 45 02.1	
	comp=E,11986μm,0.2s						
VLMS				AML	AML	04 45 06.8	
	comp=N,20036μm,0.4s						
MGNA	**Meganis**	**0.49**	**33**	P	**Pg**	**04 44 56.6**	**-0.4**
MGNA				S	**Sg**	**04 45 03.9**	**+0.5**
MGNA				AML	AML	04 45 05.4	
	comp=E,5376μm,0.3s						
MGNA				AML	AML	04 45 05.8	
	comp=N,3886μm,0.1s						
LKD2	**Lefkada island**	**0.56**	**16**	P	**Pg**	**04 44 58.2**	**-0.3**
LKD2	**Lefkada island**	**0.56**	**16**	P	**Pg**	**04 44 58.1**	**-0.3**
LKD2				S	**Sg**	**04 45 05.6**	**-0.3**
ZAK2	**Zakynthos**	**0.58**	**142**	P	**Pg**	**04 44 58.5**	**-0.3**
ZAK2				S	**Sg**	**04 45 07.2**	**+0.8**
TSLK	**Tsoukalades, L**	**0.60**	**15**	P	**Pg**	**04 44 59.0**	**-0.1**
TSLK				S	**Sb**	**04 45 08.1**	**-0.4**
	comp=N,1μm,0.5s						
TSLK	**Tsoukalades, L**	**0.60**	**15**	P	**Pg**	**04 44 58.9**	**-0.3**
TSLK				S	**Sg**	**04 45 07.7**	**+0.7**
RLS	**Riolos of Patr**	**0.82**	**103**	P	**Pg**	**04 45 02.9**	**-0.4**
RLS	**Riolos of Patr**	**0.82**	**103**	P	**Pg**	**04 45 03.0**	**-0.3**
RLS				S	**Sg**	**04 45 12.7**	**-1.4**
RLS				AML	AML	04 45 19.1	
	comp=E,2169μm,0.4s						
RLS				AML	AML	04 45 20.1	
	comp=N,1725μm,0.2s						
PVO	**Paravola**	**0.92**	**66**	P	**Pg**	**04 45 05.2**	**0.0**
PVO	**Paravola**	**0.92**	**66**	P	**Pg**	**04 45 04.9**	**-0.3**
PVO				S	**Sg**	**04 45 17.7**	**+0.5**
PVO				AML	AML	04 45 21.9	
	comp=E,4170μm,0.5s						
PVO				AML	AML	04 45 22.9	
	comp=N,2210μm,0.4s						
DRO	**Drossia**	**1.03**	**106**	P	**Pg**	**04 45 07.0**	**-0.4**
DRO	**Drossia**	**1.03**	**106**	P	**Pg**	**04 45 07.2**	**-0.2**
DRO				S	**Sg**	**04 45 20.3**	**-0.6**
DRO				AML	AML	04 45 25.8	
	comp=N,3394μm,0.3s						
DRO				AML	AML	04 45 27.7	
	comp=E,3310μm,0.3s						
EFP	**Efpalio**	**1.16**	**81**	P	**Pb**	**04 45 07.9**	**-1.6**
EFP				S	**Sb**	**04 45 24.8**	**+0.2**
EFP				AML	AML	04 45 33.6	
	comp=E,1580μm,0.6s						
EFP				AML	AML	04 45 35.7	
	comp=N,1445μm,0.8s						
LAKA	**Lakka**	**1.20**	**90**	P	**Pn**	**04 45 09.4**	**-0.9**
AMT	**Artemida-Makis**	**1.22**	**125**	P	**Pn**	**04 45 10.8**	**+0.2**
AMT	**Artemida-Makis**	**1.22**	**125**	P	**Pn**	**04 45 10.6**	**0.0**
EVR	**Evrytania**	**1.25**	**57**	P	**Pb**	**04 45 11.5**	**+0.3**
SERG	**Sergoula**	**1.27**	**82**	P	**Pn**	**04 45 10.5**	**-0.8**
TRIZ	**Trizonia**	**1.28**	**84**	P	**Pn**	**04 45 10.8**	**-0.5**
IGT	**Igoumenitsa**	**1.29**	**356**	P	**Pn**	**04 45 10.9**	**-0.5**
IGT				S	**Sg**	**04 45 29.7**	**+0.8**
	comp=N,262nm,0.7s						
IGT	**Igoumenitsa**	**1.29**	**356**	P	**Pn**	**04 45 10.7**	**-0.8**
KALE	**Kalithea**	**1.33**	**83**	P	**Pn**	**04 45 11.6**	**-0.6**
KLV	**Kalavryta, Ach**	**1.35**	**98**	P	**Pn**	**04 45 12.4**	**0.0**
JAN	**Janina**	**1.44**	**12**	P	**Pg**	**04 45 15.1**	**-0.1**
ITM	**Ithomi**	**1.58**	**132**	P	**Pn**	**04 45 16.2**	**+0.7**
AGG	**Agios Georgios**	**1.66**	**62**	P	**Pn**	**04 45 17.5**	**+0.9**
AGG				S	**Sg**	**04 45 41.2**	**+0.2**
AGG				AML	AML	04 45 48.9	
	comp=N,1043μm,0.6s						
AGG				AML	AML	04 45 49.8	
	comp=E,609μm,0.6s						
PYL	**PYLOS**	**1.69**	**142**	P	**Pn**	**04 45 17.8**	**+0.8**
VLX	**Vlachokerasia**	**1.76**	**119**	P	**Pb**	**04 45 20.6**	**+0.8**
THL	**Klokotos Trika**	**1.79**	**42**	P	**Pb**	**04 45 21.0**	**+0.7**
NEST	**Nestorio**	**2.21**	**12**	P	**Pb**	**04 45 26.3**	**-1.3**
VIL2	**Platees**	**2.22**	**90**	P	**Pb**	**04 45 26.5**	**-1.1**
BRTR	**Keskin Array B**	**10.37**	**78**	Pn	**Pn**	**04 47 20.1**	**+3.8**
	comp=E,0.1nm,0.3s,baz=287,slow=9.9,SNR=2.6						
TORD	**Torodi Ar. Bea**	**30.05**	**219**	P	**P**	**04 50 56.5**	**-0.2**
	comp=E,0.4nm,0.7s,baz=21,slow=7.7,SNR=2.1						
MKAR	**Makanchi Array**	**45.31**	**58**	P	**P**	**04 53 04.4**	**-0.9**
	comp=E,0.5nm,0.5s,baz=272,slow=7.2,SNR=11						
ZALV	**Zalesovo Beam**	**45.68**	**48**	P	**P**	**04 53 07.1**	**-1.0**
	comp=E,1.4nm,0.6s,baz=268,slow=8.2,SNR=4.6						

*IDC **27** 04:56:43.1±0.7, 2.27S×138.97E, h0km, mb4.1/12, mb1 4.3/13, mb1mx4.1/34, mbtmp4.1/13, ML4.8/1, MS3.4/7, Ms1 3.4/7, ms1mx3.1/34, Error ellipse: s-maj=16.7km s-min=13.3km az=29.0*
*DJA **27** 04:56:46.4±0.8, 2.5S±10°×13.9E±°, h17km±5km, M4.2/3, mb5.0/1, MLv3.7/3*
*NEIC **27** 04:56:49.0±1.2, 2.3S±0.1×139.00E±0.07, h47km±8km, mb4.1/14, Error ellipse: s-maj=14.9km s-min=9.8km az=172.0*
ISC 27 04:56:48.3±0.5, 2.30S±0.06×138.92E±0.04, h37km, n42, σ1§78/42, mb4.2/13, MS3.4/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.38**	**326**	P	**Pn**	**04 56 55.1**	**-1.8**
SMPI				S	**Sn**	**04 57 01.1**	**-2.6**
GENI	**Genyem**	**1.28**	**103**	P	**Pn**	**04 57 10.3**	**+0.7**
GENI				S	**Sn**	**04 57 27.5**	**+2.0**
JAY	**Jayapura**	**1.80**	**97**	Pn	**Pn**	**04 57 16.7**	**-0.1**
	41nm,0.3s,baz=242,slow=9.8,SNR=81						
JAY				Lg	Lg	04 57 38.4	
	25nm,0.3s,baz=216,slow=15,SNR=4.6						
JAY				LR	LR	04 58 00.3	
	comp=Z,625nm,21.5s,baz=199,slow=44						
JAY	**Jayapura**	**1.80**	**97**	P	**Pn**	**04 57 15.9**	**-0.8**
JAY				S	**Sn**	**04 57 38.4**	**+0.1**
BAKI	**Biak**	**3.02**	**291**	P	**Pn**	**04 57 33.9**	**+0.4**
FAKI	**Fak Fak**	**6.69**	**265**	P	**Pn**	**04 58 25.8**	**+1.8**
FAKI	**Fak Fak**	**6.69**	**265**	Pn	**Pn**	**04 58 26.1**	**+2.1**
FAKI					**Sn**	**04 59 41.4**	**+2.3**
MANU	**Manus Island**	**8.45**	**88**		Pn	04 58 37.7	-10
SAUI	**Saumlaki**	**9.45**	**233**	Pn	Pn	04 59 07.5	+5.6
PMG	**Port Moresby**	**10.81**	**131**	LR	LR	05 04 30.1	
	comp=Z,155nm,19.6s,baz=338,slow=43						
COEN	**Coen**	**12.32**	**160**	Pn	**Pn**	**04 59 42.5**	**+1.3**
MTN	**Manton Dam**	**13.00**	**216**	Pn	**Pn**	**04 59 50.2**	**-0.3**
KNRA	**Kununurra**	**16.64**	**216**		**Pn**	**05 00 36.9**	**-1.9**
KNRA				IAmb	IAmb	05 00 42.0	

	comp=Z,12nm,0.8s								
GUMO	**Guam**	**16.86**	**20**	LR	LR	05 07 44.5			
	comp=Z,40nm,18.7s,baz=209,slow=39								
WB0	**Warramunga Arr**	**17.91**	**194**	P	**Pn**	**05 00 54.8**	**+0.2**		
WRAB	**Tennant Creek**	**18.08**	**194**	P	**Pn**	**05 00 57.0**	**+0.3**		
WRAB				IAmb	IAmb	05 01 08.0			
	comp=E,7.5nm,0.8s								
WB2	**Warramunga Arr**	**18.09**	**194**	P	**Pn**	**05 00 56.3**	**-0.5**		
WB2				IAmb	IAmb	05 01 08.9			
	comp=Z,5.4nm,0.7s								
WRA	**Warramunga Arr**	**18.09**	**194**	P	**Pn**	**05 00 56.3**	**-0.5**		
	comp=Z,3.4nm,0.3s,baz=13,slow=12,SNR=70								
WRA				S	Sn	05 04 05.9	-12		
	comp=Z,0.1nm,0.3s,baz=7.9,slow=23,SNR=4.2								
WRA				LR	LR	05 08 47.3			
	comp=Z,147nm,19.9s,baz=5.0,slow=40								
FITZ	**Fitzroy Crossi**	**20.40**	**219**	P	**P**	**05 01 22.4**	**+0.3**		
	comp=Z,4.5nm,1.2s,baz=37,slow=15,SNR=1.6								
FITZ				S	**S**	**05 05 00.1**	**-8.6**		
	comp=Z,4.1nm,0.7s,baz=349,slow=16,SNR=5.7								
FITZ				LR	LR	05 10 11.4			
	comp=Z,137nm,18.6s,baz=42,slow=40								
FITZ	**Fitzroy Crossi**	**20.40**	**219**	IAmb	IAmb	05 01 41.1			
	comp=Z,7.2nm,1.1s								
AS31	**Alice Springs**	**21.78**	**192**	P	**P**	**05 01 37.8**	**+0.7**		
ASAR	**Alice Springs**	**21.79**	**192**	P	**P**	**05 01 37.1**	**+0.1**		
	comp=Z,1.5nm,0.7s,baz=24,slow=10,SNR=15								
ASAR				S	**S**	**05 05 34.2**	**-2.0**		
	comp=Z,0.5nm,0.8s,baz=18,slow=25,SNR=3.8								
ASAR				LR	LR	05 10 52.3			
	comp=Z,160nm,18.7s,baz=22,slow=39								
STKA	**Stephens Creek**	**29.52**	**175**	P	**P**	**05 02 50.5**	**+1.3**		
	comp=Z,1.3nm,0.6s,baz=349,slow=8.2,SNR=4.3								
STKA				LR	LR	05 15 49.8			
	comp=Z,131nm,21.6s,baz=18,slow=39								
STKA	**Stephens Creek**	**29.52**	**175**	P	**P**	**05 02 48.9**	**-0.4**		
MJAR	**Matsushiro Arr**	**38.65**	**359**	P	**P**	**05 04 08.4**	**+0.1**		
	comp=Z,0.6nm,0.3s,baz=164,slow=7.2,SNR=2.4								
KSRS	**Korea Array**	**40.85**	**347**	LR	LR	05 20 41.9			
	comp=Z,25nm,19.3s,baz=10.0,slow=35								
CMAR	**Chiang Mai Arr**	**44.42**	**299**	P	**P**	**05 04 57.1**	**+1.3**		
	comp=Z,1.0nm,0.4s,baz=123,slow=6.2,SNR=6.4								
SONM	**Songino Array**	**57.44**	**335**	P	**P**	**05 06 33.3**	**-0.2**		
	comp=Z,0.3nm,0.5s,baz=108,slow=4.7,SNR=2.4								
MK31	**Makanchi Array**	**69.60**	**322**	P	**P**	**05 07 53.7**	**0.0**		
MK31				IAmb	IAmb	05 07 56.0			
	comp=Z,4.9nm,1.1s								
MKAR	**Makanchi Array**	**69.60**	**322**	P	**P**	**05 07 55.2**	**+1.5**		
	comp=Z,4.4nm,0.9s,baz=111,slow=8.1,SNR=27								
MAKZ	**Makanchi**	**69.80**	**322**	P	**P**	**05 07 56.1**	**+1.2**		
ZALV	**Zalesovo Beam**	**71.69**	**330**	P	**P**	**05 08 06.6**	**+0.4**		
	comp=Z,1.3nm,0.5s,baz=107,slow=6.8,SNR=5.8								
VNDA	**Vanda**	**76.16**	**175**	P	**P**	**05 08 32.2**	**+0.2**		
	comp=Z,2.5nm,0.8s,baz=311,slow=7.5,SNR=7.4								
BRVK	**Borovoye**	**79.17**	**325**	P	**P**	**05 08 48.9**	**-0.4**		
BRVK				IAmb	IAmb	05 08 51.3			
	comp=Z,5.8nm,0.8s								
ABKAR	**Akbulak array**	**84.55**	**320**	P	**P**	**05 09 17.3**	**-0.3**		
ABKAR				IAmb	IAmb	05 09 19.9			
	comp=Z,4.0nm,1.1s								
CCB	**Clear Creek Bu**	**84.97**	**24**	P	**P**	**05 09 18.7**	**-0.7**		
IL31		**85.38**	**24**	P	**P**	**05 09 21.6**	**+0.2**		
ILAR	**Eielson Array**	**85.38**	**24**	P	**P**	**05 09 20.6**	**-0.8**		
	comp=Z,3.0nm,0.9s,baz=261,slow=5.1,SNR=22								
AKTO	**Aktyubinsk**	**85.97**	**321**	P	**P**	**05 09 24.2**	**-0.5**		
	comp=Z,1.3nm,0.9s,baz=24,slow=3.1,SNR=3.6								
EGAK	**Eagle**	**87.77**	**25**	P	**P**	**05 09 33.2**	**0.0**		
YKA	**Yellowknife Ar**	**99.61**	**27**	P	**Pdif**	**05 10 28.6**	**+1.0**		
	comp=Z,0.4nm,0.8s,baz=281,slow=4.8,SNR=6.0								
TORD	**Torodi Ar. Bea**	**136.34**	**287**	PKP	**PKPdf**	**05 16 06.8**	**-0.3**		
	comp=Z,0.7nm,1.0s,baz=96,slow=2.9,SNR=2.6								

*IDC **27** 04:58:25.0±1.2, 38.45N×20.31E, h0km, mb3.9/9, mb1 3.8/12, mb1mx3.7/47, mbtmp3.8/12, ML3.0/3, Error ellipse: s-maj=24.

comp=N,2200μm,0.3s
PVO Paravola 0.94 66 P **Pg** **04 58 45.2 -0.2**
PVO S **Sn** **04 58 59.7 -0.1**
comp=N,5μm,0.4s
PVO Paravola 0.94 66 P **Pg** **04 58 45.4 0.0**
PVO Paravola 0.94 66 **Pg** **04 58 45.2 -0.2**
DRO Drossia 1.05 105 P **Pb** **04 58 46.8 -0.6**
DRO Drossia 1.05 105 P **Pb** **04 58 47.0 -0.4**
DRO AML AML 04 59 08.3
comp=E,6412μm,0.6s
DRO AML AML 04 59 13.9
comp=N,5656μm,0.7s
DRO Drossia 1.05 105 **Pg** **04 58 47.4 0.0**
EFP Efpalio 1.18 80 P **Pb** **04 58 48.7 -0.9**
EFP Efpalio 1.18 80 **Pg** **04 58 50.8 +0.9**
LAKA Lakka 1.22 89 P **Pn** **04 58 49.5 -0.8**
LAKA Lakka 1.22 89 **Pn** **04 58 49.5 -0.8**
ANX Ano Chora 1.23 73 P **Pb** **04 58 50.6 +0.2**
ANX Ano Chora 1.23 73 **Pg** **04 58 53.8 +3.0**
AMT Artemida-Makis 1.24 124 P **Pn** **04 58 49.3 -1.1**
AMT Artemida-Makis 1.24 124 P **Pg** **04 58 50.9 -0.1**
AMT AML AML 04 59 17.3
comp=N,2504μm,0.5s
AMT AML AML 04 59 22.8
comp=E,4195μm,0.7s
EVR Evrytania 1.28 58 P **Pn** **04 58 50.6 -0.4**
EVR Evrytania 1.28 58 **Pg** **04 58 52.8 +0.9**
IGT Igoumenitsa 1.30 357 P **Pn** **04 58 50.9 -0.3**
IGT Igoumenitsa 1.30 357 P **Pb** **04 58 51.8 +0.2**
SERG Sergoula 1.30 82 P **Pn** **04 58 51.0 -0.2**
TRIZ Trizonia 1.30 84 P **Pn** **04 58 50.6 -0.7**
KALE Kalithea 1.36 83 P **Pn** **04 58 51.6 -0.5**
KLV Kalavryta, Ach 1.38 98 P **Pn** **04 58 52.3 0.0**
JAN Janina 1.46 13 P **Pg** **04 58 55.3 +0.1**
MAKR Makrakomi, Fth 1.55 59 P **Pg** **04 58 56.7 -0.2**
KASA Kassiopi 1.56 346 P **Pg** **04 58 56.7 -0.4**
ITM Ithomi 1.59 131 **Pg** **04 58 57.7 0.0**
AGG Agios Georgios 1.69 62 P **Pg** **04 58 59.2 -0.4**
AGG Agios Georgios 1.69 62 Pn **Pn** **04 58 57.3 +0.8**
KPRO Kipourio 1.86 23 P **Pb** **04 59 01.7 +0.4**
SCTE Santa Cesarea 2.38 321 Pn **Pb** **04 59 06.7 +0.6**
LIT Litokhoron 2.46 40 **Pb** **04 59 10.2 -1.1**
FNA Florina 2.65 16 Pn **Pn** **04 59 11.9 +2.1**
TIP Timpagrande 3.02 289 **Pn** **04 59 15.6 +0.7**
TIR Tirane 3.14 352 **Pn** **04 59 17.9 +1.4**
CEL Celeste 3.57 272 **Pn** **04 59 23.2 +0.8**
CEL Sn **Sn** **05 00 04.1 -0.5**
STIP Stip 3.71 21 *i* Pn **Pn** **04 59 26.0 +1.6**
ULC Ulcinj 3.83 347 *e*Pn **Pn** **04 59 25.5 -0.6**
ULC *e*Sn **Sn** **05 00 10.5 -0.5**
DRME Dracevica, Mon 4.06 347 *e*Pn **Pn** **04 59 29.2 +0.1**
DRME *e*Sn **Sn** **05 00 16.0 -0.6**
BUM Brajici-Budva 4.22 344 *e*Pn **Pn** **04 59 30.9 -0.6**
BUM *e*Sn **Sn** **05 00 20.1 -0.7**
PDG Podgorica 4.28 348 **Pn** **04 59 31.9 -0.3**
PDG Sn **Sn** **05 00 21.0 -1.1**
TTG Podgorica 4.28 348 *e*Pn **Pn** **04 59 31.9 -0.3**
TTG *e*Sn **Sn** **05 00 21.5 -0.6**
ACER Acerenza 4.30 308 Pn **Pn** **04 59 34.7 +2.2**
PVY Plav 4.37 355 *e*Pn **Pn** **04 59 33.2 -0.3**
PVY *e*Sn **Sn** **05 00 24.1 -0.3**
CEME Cevo 4.46 346 *e*Pn **Pn** **04 59 34.1 -0.6**
CEME *e*Sn **Sn** **05 00 25.2 -1.3**
HCY Herceg Novi 4.46 341 *e*Pn **Pn** **04 59 33.7 -0.9**
IDI Anoyia 4.64 128 Pn **Pn** **04 59 40.2 +3.0**
comp=E,0.4nm,0.3s,baz=245,slow=14,SNR=2.8
IDI Sn **Sn** **05 00 32.6 +1.6**
comp=E,1.5nm,0.3s,baz=317,slow=19,SNR=8.2
IVA Berane 4.65 355 *e*Pn **Pn** **04 59 37.6 +0.3**
IVA *e*Sn **Sn** **05 00 31.0 -0.3**
KOME Kolasin 4.66 352 *e*Pn **Pn** **04 59 37.6 +0.1**
NKME Niksic 4.66 347 *e*Pn **Pn** **04 59 36.9 -0.6**
NKME *e*Sn **Sn** **05 00 31.2 -0.4**
VTS Vitosha 4.87 25 Pn **Pn** **04 59 42.0 +1.5**
SGRT San Giovanni R 5.03 316 Pn **Pn** **04 59 42.9 +0.3**
SGRT **Sn** **05 00 38.1 -2.4**
ALN Alexandroupoli 5.09 57 Pn **Pn** **04 59 44.2 +0.9**
UPM Unac-Piva 5.09 347 *e*Pn **Pn** **04 59 43.0 -0.5**
UPM *e*Sn **Sn** **05 00 41.5 -0.9**
PLE Pljevlja 5.15 352 *e*Pn **Pn** **04 59 43.9 -0.3**
PLE *e*Sn **Sn** **05 00 42.8 -0.8**
PAOL Paolisi 5.31 304 **Pn** **04 59 48.3 +1.9**
CORL Corleone 5.63 269 Pn **Pn** **04 59 53.7 +2.9**
CLTB Caltabellotta 5.74 266 Pn **Pn** **04 59 55.1 +2.7**
INTR Introdacqua 6.26 309 Pn **Pn** **05 00 00.5 +1.1**
NRCA Norcia 7.21 312 **Pn** **05 00 14.1 +1.5**
MURB Monte Urbino 7.82 312 Pn Pn 05 00 25.8 +4.9
MURB **Sn** **05 01 48.0 -1.4**
MLR Muntele Rosu 8.34 28 Pn **Pn** **05 00 31.7 +3.7**
comp=E,0.2nm,0.3s,baz=118,slow=21,SNR=5.3
SOKA Soboth 9.33 336 *e*Pn **Pn** **05 00 40.0 -1.5**
comp=E,4.8nm,0.6s
OBKA Obir 9.34 334 Pn **Pn** **05 00 42.0 +0.3**
comp=E,1.4nm,0.5s
VLC Villacollemand 9.60 311 Pn **Pn** **05 00 48.8 +3.5**
TEOL Teolo 9.66 320 Pn **Pn** **05 00 47.4 +1.4**
CTI Castel Tesino 10.16 323 Pn **Pn** **05 00 53.1 +0.1**
KBA Koelnbreinsper 10.25 332 *e*Pn **Pn** **05 00 55.5 +1.2**
comp=E,0.2nm,0.2s
BRTR Keskin Array B 10.40 78 Pn **Pn** **05 00 58.0 +1.8**
comp=E,0.0nm,0.3s,baz=265,slow=14,SNR=2.5
SALO Salr 10.42 318 Pn **Pn** **05 00 58.1 +1.6**
MOA Molln 10.61 337 *e*Pn **Pn** **05 00 58.7 -0.3**
comp=E,1.0nm,0.3s
FUORN Ofenpass-Fuorn 11.24 321 Pn **Pn** **05 01 10.9 +3.0**
GERES GERESS Array B 11.67 338 Pn **Pn** **05 01 09.4 -4.1**
comp=E,0.1nm,0.3s,baz=158,slow=16,SNR=3.2
SENIN Lac Senin/Sane 12.65 314 Pn **Pn** **05 01 26.9 -0.3**
ECH Echery 13.87 320 Pn **Pn** **05 01 46.6 +2.9**
HFS Hagfors 22.33 351 P **P** **05 03 22.4 -2.1**
comp=E,2.5nm,0.7s,baz=153,slow=9.7,SNR=3.3
KONO Kongsberg 22.52 346 P **P** **05 03 28.4 +1.8**
KONO IAmb IAmb 05 03 35.5
comp=Z,10nm,1.1s
FINES FINESS Array B 23.50 7 P **P** **05 03 33.1 -3.5**
comp=Z,7.2nm,1.1s,baz=167,slow=9.4,SNR=5.7
NC405 NORSAR Array S 23.54 349 P **P** **05 03 38.3 +1.1**
NOA NORSAR Array B 23.55 349 P **P** **05 03 36.2 -1.0**
comp=Z,0.7nm,0.8s,baz=166,slow=10,SNR=2.9
GEYT Ailbeck 29.54 79 P **P** **05 04 31.3 -0.4**
comp=Z,1.3nm,0.5s,baz=259,slow=12,SNR=3.2
TORD Torodi Ar. Bea 30.03 219 P **P** **05 04 36.2 +0.1**
comp=Z,1.4nm,1.0s,baz=32,slow=11,SNR=5.3
ARCES ARCESS Array B 31.48 3 P **P** **05 04 46.9 -1.5**
comp=Z,2.1nm,0.9s,baz=200,slow=10,SNR=2.5
KK31 Karatay Array 37.84 66 P **P** **05 05 43.9 +0.1**
KKAR Karatay Array 37.84 66 P **P** **05 05 43.9 +0.1**
KKAR IAmb IAmb 05 05 44.6
comp=Z,2.3nm,0.9s
MK31 Makanchi Array 45.34 58 P **P** **05 06 44.6 -0.5**
MKAR Makanchi Array 45.34 58 P **P** **05 06 44.2 -0.9**
comp=Z,1.4nm,0.5s,baz=275,slow=7.1,SNR=25
ZAA0 Zalesovo Array 45.71 48 P **P** **05 06 47.3 -0.6**
ZALV Zalesovo Beam 45.71 48 P **P** **05 06 47.0 -0.9**
comp=Z,3.5nm,0.5s,baz=272,slow=8.7,SNR=14
SONM Songino Array 60.48 51 P **P** **05 08 36.2 -0.8**
comp=Z,0.6nm,0.8s,baz=281,slow=6.7,SNR=4.8

*IDC **27** 05:03:03.1±1.4,38.°57N×20.°24E,h0km,mb3.7/4,*
mb1 3.8/5,mb1mx3.5/40,mbtmp3.7/5,ML2.3/1,MS3.8/1,
Ms1 3.8/1,ms1mx2.7/48, Error ellipse: s-maj=40.4km
s-min=24.8km az=122.0
*THE **27** 05:03:04.8,38.°25N×20.°34E,h1km±2km,ML3.0/7, Error*
ellipse: s-maj=3.5km s-min=0.4km az=255.0
*ATH **27** 05:03:05.2,38.°27N×20.°46E,h12km±4km,ML3.2/5, Error*
ellipse: s-maj=4.2km s-min=0.9km az=249.0
ISC 27 05:03:04.5±1.3,38.°26N±0.°03×20.°40E±0.°06,h14km±6km,
n31,σ0s84/47,mb3.8/4,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.17**	**118**	P		**Pb**	**05 03 08.8**	**-0.8**
VLS				S		**Sb**	**05 03 11.7**	**-1.2**
VLS	**Valsamata**	**0.17**	**118**	P		**Pb**	**05 03 08.6**	**-0.9**
VLS				S		**Sb**	**05 03 11.4**	**-1.5**
VLS				AML		AML	05 03 11.8	
	comp=N,59087μm,0.2s							
VLS				AML		AML	05 03 11.8	
	comp=E,97056μm,0.1s							
FSK	**Fiskardo**	**0.24**	**33**	P		**Pg**	**05 03 10.1**	**+0.4**
FSK				S		**Sg**	**05 03 14.0**	**+0.8**
	comp=E,13μm,0.3s							
FSK	**Fiskardo**	**0.24**	**33**	P		**Pg**	**05 03 08.6**	**-1.1**
FSK				S		**Sg**	**05 03 12.8**	**-0.4**
KFL	**Anninata**	**0.34**	**116**	P		**Pg**	**05 03 11.8**	**+0.3**
KFL				S		**Sg**	**05 03 17.5**	**+1.3**
	comp=E,8μm,0.4s							
KFL	**Anninata**	**0.34**	**116**	P		**Pg**	**05 03 11.4**	**-0.1**
KFL				S		**Sg**	**05 03 15.9**	**-0.3**
EVGI	**Lefkada island**	**0.41**	**29**	P		**Pg**	**05 03 13.2**	**+0.3**
EVGI				S		**Sb**	**05 03 19.7**	**-0.2**
EVGI	**Lefkada island**	**0.41**	**29**	P		**Pg**	**05 03 13.1**	**+0.3**
EVGI				S		**Sg**	**05 03 18.7**	**+0.2**
VLMS	**Volimes, Zakyn**	**0.43**	**151**	P		**Pg**	**05 03 13.5**	**+0.3**
VLMS				S		**Sb**	**05 03 20.2**	**-0.3**
VLMS				AML		AML	05 03 21.4	
	comp=N,33412μm,0.4s							
VLMS				AML		AML	05 03 22.4	
	comp=E,23303μm,0.2s							
MGNA	**Meganis**	**0.50**	**38**	P		**Pg**	**05 03 14.4**	**-0.1**
MGNA				S		**Sg**	**05 03 20.9**	**-0.3**
LKD2	**Lefkada island**	**0.57**	**21**	P		**Pg**	**05 03 15.6**	**-0.1**
LKD2				S		**Sb**	**05 03 24.7**	**+0.4**
	comp=E,1μm,0.5s							
LKD2	**Lefkada island**	**0.57**	**21**	P		**Pg**	**05 03 15.8**	**+0.1**
LKD2				S		**Sg**	**05 03 23.7**	**+0.4**
LKD2				AML		AML	05 03 30.6	
	comp=E,2012μm,0.2s							
LKD2				AML		AML	05 03 32.2	
	comp=N,1887μm,0.4s							
TSLK	**Tsoukalades, L**	**0.60**	**20**	P		**Pg**	**05 03 16.4**	**+0.1**
TSLK				S		**Sb**	**05 03 26.1**	**+0.8**
	comp=N,1μm,0.5s							
TSLK	**Tsoukalades, L**	**0.60**	**20**	P		**Pg**	**05 03 16.3**	**0.0**
TSLK				S		**Sg**	**05 03 23.9**	**-0.5**
TSLK				AML		AML	05 03 32.8	
	comp=E,2470μm,0.5s							
TSLK				AML		AML	05 03 33.0	
	comp=N,2262μm,0.5s							
ZAK2	**Zakynthos**	**0.61**	**140**	P		**Pg**	**05 03 17.2**	**+0.6**
ZAK2				S		**Sn**	**05 03 26.9**	**-1.7**
RLS	**Riolos of Patr**	**0.87**	**103**	P		**Pb**	**05 03 21.2**	**-0.2**
RLS				S		**Sn**	**05 03 35.6**	**+0.8**
	comp=N,892nm,0.5s							
RLS	**Riolos of Patr**	**0.87**	**103**	P		**Pb**	**05 03 20.9**	**-0.5**
PVO	**Paravola**	**0.96**	**68**	P		**Pn**	**05 03 23.3**	**-0.3**
PVO				S		**Sn**	**05 03 38.2**	**+1.2**
	comp=N,3μm,0.4s							
PVO	**Paravola**	**0.96**	**68**	AML		AML	05 03 40.3	
	comp=N,3325μm,0.4s							
PVO				AML		AML	05 03 40.6	
	comp=E,6684μm,0.3s							
DRO	**Drossia**	**1.08**	**106**	P		**Pg**	**05 03 25.7**	**+0.3**
LAKA	**Lakka**	**1.25**	**90**	P		**Pb**	**05 03 27.9**	**0.0**
LAKA				S		**Sg**	**05 03 47.0**	**+2.3**
	comp=E,390nm,0.5s							
LAKA	**Lakka**	**1.25**	**90**	P		**Pn**	**05 03 27.7**	**0.0**
TRIZ	**Trizonia**	**1.32**	**85**	P		**Pn**	**05 03 28.7**	**+0.1**
KLV	**Kalavryta, Ach**	**1.40**	**98**	P		**Pb**	**05 03 30.8**	**+0.3**
KLV	**Kalavryta, Ach**	**1.40**	**98**	P		**Pb**	**05 03 30.5**	**0.0**
IDI	**Anoyia**	**4.67**	**128**	Pn		Pn	05 04 20.0	+5.3
	comp=E,0.1nm,0.3s,baz=267,slow=13,SNR=2.4							
IDI				Sn		**Sn**	**05 05 07.5**	**-1.3**
	comp=E,0.6nm,0.3s,baz=333,slow=7.5,SNR=2.7							
FINES	**FINESS Array B**	**23.48**	**7**	P		**P**	**05 08 11.8**	**-1.7**
	comp=E,7.9nm,1.2s,baz=189,slow=11,SNR=3.6							
TORD	**Torodi Ar. Bea**	**30.03**	**219**	P		**P**	**05 09 15.2**	**+2.0**
	comp=E,0.4nm,0.9s,baz=29,slow=8.4,SNR=2.0							
MKAR	**Makanchi Array**	**45.34**	**58**	P		**P**	**05 11 21.7**	**-0.5**
	comp=E,0.3nm,0.4s,baz=279,slow=7.5,SNR=7.3							
ZALV	**Zalesovo Beam**	**45.71**	**48**	P		**P**	**05 11 24.8**	**-0.1**
	comp=E,0.7nm,0.4s,baz=283,slow=9.2,SNR=3.8							
TLY	**Talaya**	**57.30**	**47**	LR		LR	05 39 53.5	
	comp=E,93nm,20.4s,baz=333,slow=39							

*IDC **27** 05:12:05.1±1.2,38.°30N×20.°27E,h0km,mb3.7/8,*
mb1 3.7/12,mb1mx3.6/39,mbtmp3.6/12,ML3.1/4,MS3.5/4,
Ms1 3.5/4,ms1mx3.0/47, Error ellipse: s-maj=23.2km
s-min=17.7km az=62.0
*THE **27** 05:12:06.3,38.°25N×20.°37E,h0km±3km,ML3.5/10, Error*
ellipse: s-maj=3.8km s-min=0.5km az=254.0
*ATH **27** 05:12:07.0,38.°26N×20.°47E,h11km±2km,ML3.6/7, Error*
ellipse: s-maj=2.4km s-min=0.7km az=258.0
ISC 27 05:12:06.1±1.1,38.°26N±0.°02×20.°36E±0.°04,h8km±6km,
n66,σ1s24/88,mb3.8/8,MS3.5/3,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VLS	**Valsamata**	**0.20**	**115**	P		**Pg**	**05 12 09.8**	**-0.3**
VLS				S		**Sg**	**05 12 12.8**	**0.0**
	64μm,0.2s							
VLS	**Valsamata**	**0.20**	**115**	P		**Pg**	**05 12 09.8**	**-0.3**
VLS				S		**Sg**	**05 12 12.6**	**-0.2**
VLS				AML		AML	05 12 13.3	
VLS				AML		AML	05 12 13.3	
FSK	**Fiskardo**	**0.25**	**38**	P		**Pg**	**05 12 11.3**	**+0.2**
FSK				S		**Sg**	**05 12 15.2**	**+0.7**
	19μm,0.4s							
FSK	**Fiskardo**	**0.25**	**38**	P		**Pg**	**05 12 11.3**	**+0.2**
FSK				S		**Sg**	**05 12 15.0**	**+0.4**
KFL	**Anninata**	**0.37**	**114**	P		**Pg**	**05 12 13.0**	**-0.3**
KFL				S		**Sb**	**05 12 18.6**	**-2.2**
	24μm,0.6s							
KFL	**Anninata**	**0.37**	**114**	P		**Pg**	**05 12 13.0**	**-0.3**
KFL				S		**Sg**	**05 12 17.6**	**-0.5**
KFL				AML		AML	05 12 21.8	
	comp=E,38374μm,0.3s							
KFL				AML		AML	05 12 23.2	
	comp=N,49435μm,0.9s							
EVGI	**Lefkada island**	**0.43**	**32**	P		**Pg**	**05 12 14.6**	**+0.2**
EVGI				S		**Sb**	**05 12 21.5**	**-1.1**
EVGI	**Lefkada island**	**0.43**	**32**	P		**Pg**	**05 12 14.6**	**+0.2**
EVGI				S		**Sg**	**05 12 20.6**	**+0.6**
VLMS	**Volimes, Zakyn**	**0.45**	**148**	P		**Pg**	**05 12 15.3**	**+0.4**
VLMS				S		**Sg**	**05 12 21.5**	**+0.7**
VLMS				AML		AML	05 12 23.7	
	comp=E,26334μm,0.2s							
VLMS				AML		AML	05 12 28.1	
	comp=N,38581μm,0.4s							
MGNA	**Meganis**	**0.52**	**40**	P		**Pg**	**05 12 16.2**	**+0.1**
MGNA				S		**Sg**	**05 12 23.2**	**+0.3**
MGNA				AML		AML	05 12 24.8	
	comp=E,12381μm,0.3s							
MGNA				AML		AML	05 12 24.9	
	comp=N,19730μm,0.2s							
LKD2	**Lefkada island**	**0.57**	**24**	P		**Pg**	**05 12 16.9**	**-0.3**
LKD2				S		**Sg**	**05 12 25.9**	**+1.1**
	comp=N,4μm,0.5s							
LKD2	**Lefkada island**	**0.57**	**24**	P		**Pg**	**05 12 17.1**	**-0.2**
LKD2				S		**Sg**	**05 12 25.3**	**+0.5**
TSLK	**Tsoukalades, L**	**0.61**	**22**	P		**Pg**	**05 12 17.9**	**0.0**
TSLK				S		**Sb**	**05 12 28.0**	**+0.2**
	comp=N,3μm,0.5s							
TSLK	**Tsoukalades, L**	**0.61**	**22**	P		**Pg**	**05 12 18.2**	**+0.4**
TSLK				S		**Sg**	**05 12 26.2**	**+0.4**
TSLK				AML		AML	05 12 31.5	
	comp=E,6066μm,0.4s							
TSLK				AML		AML	05 12 33.2	
	comp=N,6525μm,0.4s							
ZAK2	**Zakynthos**	**0.64**	**138**	P		**Pg**	**05 12 18.7**	**+0.4**
ZAK2				S		**Sb**	**05 12 28.5**	**0.0**
RLS	**Riolos of Patr**	**0.89**	**103**	P		**Pg**	**05 12 22.5**	**-0.8**
RLS				S		**Sn**	**05 12 36.2**	**-2.0**
	comp=N,2μm,0.7s							
RLS	**Riolos of Patr**	**0.89**	**103**	P		**Pg**	**05 12 22.3**	**-0.9**
RLS				AML		AML	05 12 38.7	
	comp=E,4094μm,0.7s							
RLS				AML		AML	05 12 40.5	
	comp=N,3053μm,0.5s							
PVO	**Paravola**	**0.98**	**68**	P		**Pb**	**05 12 24.5**	**-0.9**
PVO	**Paravola**	**0.98**	**68**	P		**Pb**	**05 12 24.5**	**-0.9**
PVO				AML		AML	05 12 46.2	
	comp=N,8822μm,1.0s							
PVO				AML		AML	05 12 47.2	
	comp=E,8947μm,0.5s							
DRO	**Drossia**	**1.11**	**106**	P		**Pb**	**05 12 26.7**	**-0.8**
DRO	**Drossia**	**1.11**	**106**	P		**Pb**	**05 12 26.5**	**-1.0**
EFP	**Efpalio**	**1.22**	**82**	P		**Pb**	**05 12 28.3**	**-1.2**
EFP				S		**Sg**	**05 12 47.8**	**+2.3**
	comp=E,2μm,1.0s							
EFP	**Efpalio**	**1.22**	**82**	P		**Pb**	**05 12 28.1**	**-1.4**
ANX	**Ano Chora**	**1.27**	**74**	P		**Pn**	**05 12 29.5**	**-0.8**
ANX				S		**Sg**	**05 12 49.3**	**+2.4**
	comp=E,6μm,0.7s							
ANX	**Ano Chora**	**1.27**	**74**	P		**Pb**	**05 12 29.8**	**-0.5**
IGT	**Igoumenitsa**	**1.27**	**359**	P		**Pn**	**05 12 30.8**	**+0.6**
LAKA	**Lakka**	**1.27**	**90**	P		**Pn**	**05 12 29.2**	**-1.1**
LAKA				S		**Sg**	**05 12 49.0**	**+2.0**
	comp=E,2μm,0.7s							
LAKA	**Lakka**	**1.27**	**90**	P		**Pn**	**05 12 29.2**	**-1.1**
AMT	**Artemida-Makis**	**1.29**	**124**	P		**Pn**	**05 12 30.3**	**-0.4**
EVR	**Evrytania**	**1.31**	**60**	P		**Pn**	**05 12 30.2**	**-0.7**
SERG	**Sergoula**	**1.34**	**83**	P		**Pn**	**05 12 30.5**	**-0.7**
SERG				S		**Sg**	**05 12 50.8**	**+1.6**
	comp=E,2μm,0.5s							
SERG	**Sergoula**	**1.34**	**83**	P		**Pn**	**05 12 30.5**	**-0.7**
TRIZ	**Trizonia**	**1.35**	**85**	P		**Pn**	**05 12 30.1**	**-1.2**
KALE	**Kalithea**	**1.40**	**84**	P		**Pn**	**05 12 31.3**	**-0.8**
KLV	**Kalavryta, Ach**	**1.43**	**98**	P		**Pn**	**05 12 32.0**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.57**	**61**	P		**Pg**	**05 12 35.7**	**-0.6**
PROD	**Prodromos**	**2.00**	**89**	P		**Pb**	**05 12 42.3**	**-0.4**
LKR	**Lokris**	**2.10**	**79**	P		**Pb**	**05 12 43.8**	**-0.7**
OHR	**Ohrid**	**2.87**	**7**	*i* Pn		**Pb**	**05 12 57.8**	**+0.2**
STIP	**Stip**	**3.70**	**22**	*i* Pn		**Pb**	**05 13 08.4**	**-3.4**
IDI	**Anoyia**	**4.69**	**128**	Pn		**Pn**	**05 13 19.8**	**+2.5**
	comp=E,0.3nm,0.3s,baz=299,slow=10,SNR=5.3							
IDI				Sn		**Sn**	**05 14 13.2**	**+1.2**
	comp=E,2.2nm,0.3s,baz=323,slow=20,SNR=8.8							
DBRK	**Dubrovnik**	**4.72**	**340**	*e*Pn		**Pn**	**05 13 17.4**	**-0.2**
DBRK				Sn		**Sn**	**05 14 10.0**	**-2.5**
STON	**Ston**	**5.03**	**337**	*e*Pn		**Pn**	**05 13 21.4**	**-0.5**
STON				Sn		**Sn**	**05 14 18.3**	**-1.9**
MAKA	**Makarska**	**5.63**	**334**	*e*Pn		**Pn**	**05 13 29.9**	**-0.2**
MAKA				Sn		**Sn**	**05 14 32.0**	**-2.8**
ZIRJ	**Zirje**	**6.46**	**328**	*e*Pn		**Pn**	**05 13 41.0**	**-0.5**
KIJV	**Kijevo**	**6.47**	**334**	*e*Pn		**Pn**	**05 13 42.1**	**+0.4**
MORI	**Morici**	**6.61**	**329**	*i* Pn		**Pn**	**05 13 44.1**	**+0.5**
DUGI	**Dugi Otok**	**6.99**	**327**	*e*Pn		**Pn**	**05 13 50.0**	**+1.2**
UDBI	**Udbina**	**7.15**	**333**	*e*Pn		**Pn**	**05 13 52.2**	**+1.1**
NVLJ	**Novalja**	**7.53**	**329**	*e*Pn		**Pn**	**05 13 56.1**	**0.0**
MLR	**Muntele Rosu**	**8.34**	**28**	Pn		**Pn**	**05 14 09.5**	**+2.1**
	comp=E,0.1nm,0.3s,baz=180,slow=19,SNR=1.7							
BRTR	**Keskin Array B**	**10.44**	**78**	Pn		**Pn**	**05 14 39.8**	**+3.5**
	comp=E,0.0nm,0.3s,baz=265,slow=12,SNR=3.0							
DAVOX	**Davos/Dischmat**	**11.49**	**321**	Sn		**Sn**	**05 16 55.5**	**-3.9**
	comp=E,0.2nm,0.3s,baz=184,slow=19,SNR=2.0							
GERES	**GERESS Array B**	**11.62**	**338**	Pn		**Pn**	**05 14 51.0**	**-1.4**
	comp=E,0.2nm,0.3s,baz=172,slow=12,SNR=5.7							
GNI	**Garni**	**18.97**	**77**	LR		LR	05 24 26.2	
	comp=E,123nm,21.2s,baz=309,slow=39							
MDT	**Midelt**	**21.01**	**263**	LR		LR	05 26 18.9	
	comp=E,85nm,18.8s,baz=3.5,slow=41							
HFS	**Hagfors**	**22.30**	**351**	P		**P**	**05 17 04.3**	**+0.5**
	comp=E,3.5nm,0.8s,baz=186,slow=12,SNR=5.0							
FINES	**FINESS Array B**	**23.48**	**7**	P		**P**	**05 17 15.8**	**-0.2**
	comp=E,2.3nm,0.8s,baz=170,slow=12,SNR=6.2							
NOA	**NORSAR Array B**	**23.51**	**349**	P		**P**	**05 17 16.6**	**+0.2**
	comp=E,0.4nm,0.6s,baz=161,slow=11,SNR=2.7							
TORD	**Torodi Ar. Bea**	**30.02**	**219**	P		**P**	**05 18 15.7**	**+0.1**
	comp=E,0.7nm,0.8s,baz=37,slow=7.5,SNR=3.8							
ARCES	**ARCESS Array B**	**31.46**	**3**	P		**P**	**05 18 28.1**	**+0.4**
	comp=E,6.9nm,1.1s,baz=183,slow=12,SNR=4.7							
DBIC	**Dimbokro**	**38.87**	**222**	LR		LR	05 36 21.3	
	comp=E,61nm,18.4s,baz=352,slow=38							
MKAR	**Makanchi Array**	**45.36**	**58**	P		**P**	**05 20 24.4**	**-0.5**
	comp=E,0.5nm,0.4s,baz=277,slow=7.3,SNR=15							
MKAR				ScP		**ScP**	**05 25 59.4**	**+2.1**
	comp=E,0.2nm,0.5s,baz=270,slow=4.3,SNR=4.1							
ZALV	**Zalesovo Beam**	**45.73**	**48**	P		**P**	**05 20 28.4**	**+0.7**
	comp=E,1.1nm,0.5s,baz=269,slow=8.1,SNR=5.0							
ZALV				ScP		**ScP**	**05 25 58.9**	**+0.3**
	comp=E,0.4nm,0.5s,baz=271,slow=5.6,SNR=2.3							
SONM	**Songino Array**	**60.50**	**51**	P		**P**	**05 22 16.7**	**0.0**
	comp=E,0.2nm,0.5s,baz=270,slow=7.2,SNR=2.7							
LEM	**Lembang**	**92.03**	**97**	LR		LR	06 09 56.4	
	comp=E,50nm,18.3s,baz=213,slow=38							

*SOME **27** 05:21:33.8,39.°57N×75.°87E,h20km*
*NNC **27** 05:21:36.2±2.7,39.°71N×75.°93E,h0km,mb3.6,mpv3.2,*
Error ellipse: s-maj=17.9km s-min=12.4km az=1.0
*KRNET **27** 05:21:47.6±0.1,40.°15N×75.°60E,h19km,mb2.9*
ISC 27 05:21:47.5±3.3,40.°2N±0.°1×75.°67E±0.°04,h8km±19km,n33,
σ1s88/52,27C-4D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NRN	**Naryn**	**1.28**	**11**	⇑*i*	P	**Pb**	**05 22 12.1**	**-0.1**
	baz=12							
NRN				⇑*i*	S	**Sg**	**05 22 29.9**	**+1.0**
	baz=12							
KZA	**Kyzart**	**1.93**	**351**	⇑*i*	P	**Pb**	**05 22 23.2**	**0.0**
	baz=52							
KZA				⇑*i*	S	**Sg**	**05 22 49.8**	**+0.2**
	baz=52							
KZA	**Kyzart**	**1.93**	**351**	P		**Pb**	**05 22 23.3**	**0.0**
	SNR=6.5							
ARLS	**Aral**	**1.97**	**329**	⇑*e*	P	**Pb**	**05 22 23.7**	**-0.1**
	baz=31							
ARLS				⇑*i*	S	**Sg**	**05 22 50.0**	**-0.

MTBS					Lg	Lg	05 23 25.0		
	10nm,0.4s								
TNSS	**Tian-Shan**	**3.02**	**18**	*e*P	**Pb**		**05 22 38.6**	**-3.1**	
	1.3nm,0.1s								
TNSS				*e*S	**Sg**		**05 23 25.6**	**+1.2**	
	7.4nm,0.3s								
TNSS	**Tian-Shan**	**3.02**	**18**	Pg	**Pb**		**05 22 38.6**	**-3.1**	
	1.3nm,0.1s								
TNSS				Lg	Lg		05 23 25.6		
	7.4nm,0.3s								
MDOK	**Medeo**	**3.16**	**19**	*e*P	**Pn**		**05 22 40.1**	**+2.3**	
	2.3nm,0.3s								
MDOK				*e*S	**Sg**		**05 23 28.4**	**-0.6**	
	11nm,0.6s								
MDOK	**Medeo**	**3.16**	**19**	Pg	**Pn**		**05 22 40.1**	**+2.3**	
	2.3nm,0.3s								
MDOK				Lg	Lg		05 23 28.4		
	11nm,0.6s								
MRKS	**Merke**	**3.16**	**325**	*e*P	**Pb**		**05 22 41.2**	**-2.8**	
	2.7nm,0.4s								
MRKS				*e*S	**Sg**		**05 23 30.2**	**+1.2**	
	8.5nm,0.4s								
MRKS	**Merke**	**3.16**	**325**	Pg	**Pb**		**05 22 41.2**	**-2.8**	
	2.7nm,0.4s								
MRKS				Lg	Lg		05 23 30.2		
	8.5nm,0.4s								
USP	**Ospenovka**	**3.21**	**345**	P	**Sg**		**05 23 32.4**	**+1.7**	
	SNR=6.9								
SGDS	**Sogindy**	**3.37**	**347**	Pg	**Pb**		**05 22 44.2**	**-3.3**	
	3.9nm,0.7s								
SGDS				Lg	Lg		05 23 35.3		
	10nm,0.7s								
PDGK	**Podgornoye**	**4.25**	**41**	⇑Pg	**Pb**		**05 22 59.9**	**-2.7**	
	1.8nm,0.8s								
PDGK				⇓Lg	Lg		05 23 59.8		
	7.7nm,0.7s								
KK31	**Karatay Array**	**4.85**	**309**	⇑Pg	**Pb**		**05 23 14.0**	**+1.2**	
	0.4nm,0.5s,baz=120,slow=28,SNR=3.8								
KK31				⇓Lg	Lg		05 24 25.9		
	0.6nm,0.5s,baz=125,slow=28,SNR=2.6								

BEO ***27*** *05:41:35.6±0.5, 43°.26N×19°.86E, h0km, ML2.7/15*
PDG ***27*** *05:41:35.0±0.3, 43°.26N×19°.83E, h10km, MD2.8/2, ML2.6/14, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*
RHSSO ***27*** *05:41:35.7±0.4, 43°.27N×19°.88E, h8km±2km, ML2.7/10*
TIR ***27*** *05:41:36.7, 43°.12N×19°.83E, h6km, Md2.8/3*
ISC 27 05:41:35.1±1.1, **43°.27N**±0°.01×**19°.84E**±0°.01, **h1**km±10km, **n63,** σ1**9**′**47**/109, **9C-9D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.10**	**97**		*e*Pg	**Pg**	**05 41 37.3**	**+0.2**
SJES					*e*Sg	**Sg**	**05 41 38.6**	**+0.2**
PLE	**Pljevlja**	**0.33**	**280**		*e*Pg	**Pg**	**05 41 41.5**	**0.0**
PLE					*e*Sg	**Sg**	**05 41 46.6**	**+0.8**
IVAS	**Ivanjica**	**0.38**	**37**		*e*Pg	**Pg**	**05 41 42.2**	**-0.2**
IVAS					*e*Sg	**Sg**	**05 41 46.0**	**-1.4**
IVA	**Berane**	**0.41**	**174**		*e*Pg	**Pg**	**05 41 42.4**	**-0.5**
IVA					*e*Sg	**Sg**	**05 41 47.9**	**-0.2**
KOME	**Kolasin**	**0.48**	**209**		*e*Pg	**Pg**	**05 41 43.7**	**-0.7**
KOME					*e*Sg	**Sg**	**05 41 51.0**	**+0.3**
BBLS	**Lazići**	**0.67**	**332**		*e*Pg	**Pg**	**05 41 48.1**	**+0.1**
BBLS					*e*Sg	**Sg**	**05 41 57.3**	**+0.6**
BBLS	**Lazići**	**0.67**	**332**	⇑	*i*Pg	**Pg**	**05 41 48.0**	**+0.1**
BBLS					*e*Sg	**Sg**	**05 41 57.7**	**+1.0**
UPM	**Unac-Piva**	**0.68**	**264**		*e*Pg	**Pg**	**05 41 48.7**	**+0.5**
UPM					*e*Sg	**Sg**	**05 41 58.2**	**+1.1**
UPM	**Unac-Piva**	**0.68**	**264**		*e*Pg	**Pg**	**05 41 47.4**	**-0.8**
UPM					*e*Sg	**Sg**	**05 41 58.2**	**+1.1**
PVY	**Plav**	**0.69**	**172**	⇓	*i*Pg	**Pg**	**05 41 47.7**	**-0.6**
PVY					*i*Sg	**Sg**	**05 41 57.8**	**+0.7**
NKY	**Niksic**	**0.77**	**234**		*e*Pg	**Pg**	**05 41 48.9**	**-1.0**
NKY					*e*Sg	**Sg**	**05 42 00.9**	**+1.0**
NKME	**Niksic**	**0.82**	**232**		*e*Pg	**Pg**	**05 41 50.2**	**-0.7**
NKME					*e*Sg	**Sg**	**05 42 02.5**	**+1.0**
DIVS	**Divibare**	**0.83**	**8**		*e*Pg	**Pg**	**05 41 51.3**	**+0.2**
DIVS					*e*Sg	**Sg**	**05 42 02.7**	**+0.8**
DIVS	**Divibare**	**0.83**	**8**		*e*Pg	**Pg**	**05 41 50.8**	**-0.3**
DIVS					*e*Sg	**Sg**	**05 42 02.6**	**+0.7**
GRUS	**Gruza**	**0.89**	**46**		*e*Pg	**Pg**	**05 41 52.2**	**+0.1**
GRUS					*e*Sg	**Sb**	**05 42 05.1**	**-0.6**
BCI	**Bajram Curri**	**0.92**	**169**		*i*PG	**Pg**	**05 41 52.7**	**-0.7**
BCI					*i*SG	**Sg**	**05 42 03.6**	**-1.1**
SELS	**Selova**	**0.94**	**93**		*e*Pg	**Pg**	**05 41 52.0**	**-1.1**
SELS					*e*Sg	**Sg**	**05 42 04.6**	**-0.7**
PDG	**Podgorica**	**0.95**	**207**	⇓	P	**Pg**	**05 41 53.0**	**-0.3**
PDG				⇑	S	**Sg**	**05 42 06.2**	**+0.7**
PDG	**Podgorica**	**0.95**	**207**	⇑	*i*Pg	**Pg**	**05 41 52.5**	**-0.7**
PDG					*e*Sg	**Sg**	**05 42 05.6**	**+0.1**
TTG	**Podgorica**	**0.95**	**207**	⇑	*i*Pg	**Pg**	**05 41 52.1**	**-1.1**
TTG					*e*Sg	**Sb**	**05 42 06.7**	**-0.6**
CEME	**Cevo**	**0.99**	**223**		*e*Pg	**Pg**	**05 41 52.8**	**-1.3**
CEME					*e*Sg	**Sb**	**05 42 08.7**	**0.0**
BRY	**Bratogost**	**1.02**	**249**	⇓	*i*Pg	**Pg**	**05 41 53.5**	**-1.2**
BRY					*i*Sg	**Sb**	**05 42 09.2**	**-0.4**
HAPS	**Han Pijesak,BI**	**1.03**	**322**		*e*Pg	**Pg**	**05 41 53.7**	**-1.3**
HAPS					*e*Sg	**Sb**	**05 42 09.7**	**-0.3**
TRUS	**Trudelj**	**1.03**	**23**		*e*Pg	**Pg**	**05 41 55.2**	**+0.2**
TRUS					*e*Sg	**Sg**	**05 42 08.1**	**-0.3**
DRME	**Dracevica, Mon**	**1.19**	**204**		*e*Pg	**Pg**	**05 41 57.1**	**-0.8**
DRME					*e*Sg	**Sb**	**05 42 12.4**	**-0.1**
DRME	**Dracevica, Mon**	**1.19**	**204**		*e*Pg	**Pg**	**05 41 56.9**	**-1.0**
DRME					*e*Sg	**Sb**	**05 42 14.8**	**+0.5**
BUM	**Brajici-Budva**	**1.20**	**216**		*e*Pg	**Pg**	**05 41 57.1**	**-0.9**
BUM					*e*Sg	**Sn**	**05 42 15.5**	**-0.4**
TREB	**Trebinje**	**1.22**	**243**		*e*Pg	**Pg**	**05 41 58.4**	**-0.2**
TREB					*e*Sg	**Sb**	**05 42 15.2**	**-0.2**
PUK	**Puka**	**1.23**	**178**	*i*	PG	**Pg**	**05 41 58.0**	**-0.8**
PUK					*i*SG	**Sg**	**05 42 13.8**	**-0.9**
HCY	**Herceg Novi**	**1.29**	**230**		*e*Pg	**Pg**	**05 41 59.0**	**-0.8**
HCY					*e*Sg	**Sn**	**05 42 17.9**	**-0.2**
HCY	**Herceg Novi**	**1.29**	**230**		*e*Pg	**Pg**	**05 41 58.6**	**-1.2**
HCY					*e*Sg	**Sn**	**05 42 18.3**	**+0.2**
TEKS	**Tekeris**	**1.29**	**350**		*e*Pg	**Pg**	**05 41 58.7**	**-1.2**
TEKS					*e*Sg	**Sb**	**05 42 17.2**	**-0.2**
TEKS	**Tekeris**	**1.29**	**350**		*e*Pg	**Pg**	**05 41 59.7**	**-0.2**
TEKS					*e*Sg	**Sb**	**05 42 17.4**	**0.0**
DBRK	**Dubrovnik**	**1.38**	**245**		*e*Pg	**Pn**	**05 42 01.1**	**-0.4**
DBRK					Sg	**Sn**	**05 42 21.0**	**+0.6**
ULC	**Ulcinj**	**1.38**	**199**	⇓	*i*Pg	**Pn**	**05 42 00.5**	**-1.1**
ULC					*e*Sg	**Sn**	**05 42 21.2**	**+0.7**
SVIS	**Svilajnac**	**1.41**	**45**		*e*Sg	**Pn**	**05 42 01.6**	**-0.3**
SVIS	**Svilajnac**	**1.41**	**45**		*e*Pg	**Sg**	**05 42 20.2**	**-0.1**
BOVS	**Bovan**	**1.41**	**75**		*e*Pg	**Pn**	**05 42 00.3**	**-1.6**
BOVS					*e*Sg	**Sg**	**05 42 19.9**	**-0.5**
BARS	**Barje**	**1.52**	**107**		*e*Pg	**Pn**	**05 42 03.4**	**-0.1**
BARS	**Barje**	**1.52**	**107**		*e*Pg	**Pg**	**05 42 07.4**	**+3.1**
BARS					*e*Sg	**Sb**	**05 42 23.9**	**0.0**
BARS					*e*Sg	**Sg**	**05 42 32.0**	**+8.0**
BEO	**Beograd**	**1.60**	**16**		*e*Sg	**Sg**	**05 42 26.5**	**-0.1**
STON	**Ston**	**1.62**	**256**		*e*Pn	**Pb**	**05 42 05.8**	**0.0**
STON	**Ston**	**1.62**	**256**		*e*Pn	**Pn**	**05 42 05.0**	**+0.3**
STON					*e*Sn	**Sb**	**05 42 26.5**	**-0.1**
PHP	**Peshkopia**	**1.65**	**164**	*i*	PN	**Pn**	**05 42 05.3**	**0.0**
PHP				*i*	SN	**Sg**	**05 42 27.6**	**-0.1**
KUBS	**Kucevo**	**1.75**	**49**		*e*Pg	**Pn**	**05 42 05.7**	**+0.9**
KUBS					*e*Sg	**Sg**	**05 42 31.4**	**0.0**
FRGS	**Fruska Gora**	**1.88**	**359**		*e*Pg	**Pn**	**05 42 08.8**	**+0.3**
FRGS					*e*Sg	**Sg**	**05 42 35.9**	**+0.3**
FRGS	**Fruska Gora**	**1.88**	**359**		*e*Pn	**Pn**	**05 42 07.4**	**-1.1**
FRGS					*e*Sn	**Sn**	**05 42 31.4**	**-1.5**
TIR	**Tirane**	**1.93**	**179**	⇓	P	**Pn**	**05 42 09.6**	**+0.6**
TIR	**Tirane**	**1.93**	**179**	⇓	S	**Sg**	**05 42 41.6**	**+4.7**
MDVR	**Moldovita**	**2.03**	**41**	⇑	P	**Pn**	**05 42 10.0**	**-0.5**
ZAPS	**Zavoj**	**2.04**	**89**		*e*Pg	**Pb**	**05 42 12.2**	**-0.9**
ZAPS					*e*Sg	**Sb**	**05 42 39.5**	**+0.5**
MAKA	**Makarska**	**2.06**	**271**		*e*Pn	**Pb**	**05 42 13.1**	**-0.2**
BOSS	**Bosilegrad**	**2.09**	**111**		*e*Pg	**Pn**	**05 42 11.2**	**-0.2**
BLKB	**Belogradchik**	**2.10**	**79**	⇓	S	**Sg**	**05 42 42.4**	**-0.1**
BLY	**Banja Luka**	**2.42**	**309**	⇓	P	**Pn**	**05 42 16.5**	**+0.8**
BLY	**Banja Luka**	**2.42**	**309**	⇑	S	**Sg**	**05 43 01.6**	**+8.9**
BLY	**Banja Luka**	**2.42**	**309**		*e*Pn	**Pn**	**05 42 16.6**	**+0.8**
BLY					*e*Sn	**Sn**	**05 42 46.1**	**+0.1**
VTS	**Vitosha**	**2.58**	**104**	⇑	P	**Pn**	**05 42 18.2**	**0.0**
VTS	**Vitosha**	**2.58**	**104**	⇑	S	**Sb**	**05 42 55.6**	**+1.1**
KIJV	**Kijevo**	**2.59**	**288**		*e*Pn	**Pb**	**05 42 21.0**	**-1.4**
KIJV					Sn	**Sb**	**05 42 53.0**	**-1.9**
BZS	**Buzias**	**2.67**	**28**	⇓	P	**Pn**	**05 42 19.6**	**+0.4**
GZR	**Gura Zlata**	**2.99**	**44**	⇑	P	**Pn**	**05 42 24.3**	**+0.6**
MORH	**Mrgy, Hungar**	**3.06**	**344**		*e*Pn	**Pn**	**05 42 24.7**	**+0.1**

CNRM ***27*** *05:44:16.8±0.9, 33°.66N×5°.96W, h15km±6km, Error ellipse: s-maj=4.6km s-min=4.0km az=103.0*
MDD ***27*** *05:44:18.4±2.0, 33°.71N×5°.83W, h60km, mb3.7/8, Error ellipse: s-maj=18.2km s-min=13.7km az=155.0, PRXIMO*
SFS ***27*** *05:44:19.0, 34°.02N×6°.08W, ML3.3, KANSERA (MARRUECOS)*
INMG ***27*** *05:44:19.3±1.3, 33°.81N×5°.88W, h53km±11km, MD2.9, ML2.0, Error ellipse: s-maj=5.0km s-min=2.9km az=85.0*
ISC 27 05:44:15.1±0.9, **33°.78N**±0°.03×**5°.88W**±0°.03, **h10**km, **n47,** σ2**9**′**19**/74, **1D, Morocco**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
IFR	**Ifrane**	**0.68**	**113**		*e*P	**Pb**	**05 44 30.3**	**+1.1**
IFR					*e*S	**Sb**	**05 44 39.3**	**+0.5**
RSA	**Sarsar**	**1.10**	**3**		P	**Pn**	**05 44 39.4**	**+2.8**
RSA					S	**Sn**	**05 44 55.9**	**+4.1**
MD31	**MD31**	**1.31**	**134**		P	**Pn**	**05 44 39.8**	**+0.3**
MD31					S	**Sb**	**05 44 57.2**	**+0.5**
AVE	**Averroes**	**1.37**	**250**	⇓	*i*P	**Pn**	**05 44 41.1**	**+0.9**
AVE					*e*S	**Sb**	**05 44 59.1**	**+0.9**
AVE	**Averroes**	**1.37**	**250**		P	**Pn**	**05 44 41.0**	**+0.7**
AVE					S	**Sb**	**05 44 58.4**	**+0.2**
MDT	**Midelt**	**1.44**	**132**		P	**Pn**	**05 44 41.9**	**+0.6**
MDT					S	**Sb**	**05 45 00.6**	**+0.1**
SMIR	**Smir Dam**	**1.94**	**12**		P	**Pn**	**05 44 51.6**	**+3.6**
SMIR					S	**Sn**	**05 45 14.8**	**+2.4**
TISM	**Timmit**	**2.11**	**193**		P	**Pn**	**05 44 50.5**	**+0.1**
TISM					S	**Sn**	**05 45 15.0**	**-1.7**
ECEU	**Ceuta**	**2.15**	**11**		S	**Sn**	**05 45 17.0**	**-0.7**
	44nm,3.4s,SNR=7.9							
GOLM	**Goulmima**	**2.22**	**159**		P	**Pb**	**05 44 56.0**	**+0.7**
GOLM					Lg	Lg	05 45 25.5	
EMIJ	**Mijas**	**2.92**	**18**		P	**Pn**	**05 45 02.0**	**+0.4**
	18nm,0.8s,SNR=7.9							
EMIJ					S	**Sn**	**05 45 35.5**	**-1.2**
	3.8nm,0.3s,SNR=7.9							
TZRR	**Tazzarine**	**3.00**	**175**		P	**Pn**	**05 45 02.4**	**-0.4**
TZRR					Lg	Lg	05 45 47.4	
OUK	**Oukaimeden**	**3.07**	**214**		Lg	Lg	05 45 46.5	
ESPR	**Espera**	**3.08**	**0**		S	**Sn**	**05 45 38.8**	**-1.8**
	6.1nm,2.0s,SNR=7.9							
TDRA	**Tendrara**	**3.31**	**102**		Lg	Lg	05 45 59.1	
ELGU	**Los Guajares,**	**3.59**	**30**		S	**Sn**	**05 45 51.0**	**-2.2**
	25nm,2.7s,SNR=7.9							
ZGR	**Zagora**	**3.66**	**176**		Lg	Lg	05 46 08.1	
PBDV	**Barranco-do-Ve**	**3.83**	**335**		*e*P	**Pn**	**05 45 15.8**	**+1.6**
PBDV					*e*S	**Sn**	**05 45 57.0**	**-2.3**
PBDV	**Barranco-do-Ve**	**3.83**	**335**		P	**Pn**	**05 45 15.8**	**+1.6**
PBDV					S	**Sn**	**05 45 57.0**	**-2.3**
PVAQ	**Vaqueiros**	**3.91**	**338**		*e*P	**Pn**	**05 45 17.1**	**+2.0**
PVAQ					*e*S	**Sn**	**05 46 01.5**	**+0.4**
PVAQ					A	A	05 46 03.6	
	2.3nm,0.3s							
PVAQ	**Vaqueiros**	**3.91**	**338**		P	**Pn**	**05 45 17.1**	**+2.0**
EGRO	**El Granado**	**3.96**	**341**		P	**Pn**	**05 45 17.4**	**+1.6**
	2.9nm,0.9s,SNR=7.9							
EGRO					S	**Sn**	**05 46 00.5**	**-1.9**
	0.5nm,0.3s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.03**	**351**		P	**Pn**	**05 45 17.7**	**+0.9**
	5.4nm,1.0s,SNR=7.1							
EMIN					S	**Sn**	**05 46 01.5**	**-2.5**
	0.5nm,0.1s,SNR=7.9							
MORF	**Marmelete**	**4.18**	**328**		*e*P	**Pn**	**05 45 19.9**	**+1.0**
MORF	**Marmelete**	**4.18**	**328**		P	**Pn**	**05 45 19.9**	**+1.0**
PCVE	**Castro Verde**	**4.22**	**336**		*e*P	**Pn**	**05 45 21.3**	**+1.9**
PCVE					*e*S	**Sn**	**05 46 06.5**	**-2.3**
PCVE	**Castro Verde**	**4.22**	**336**		P	**Pn**	**05 45 21.3**	**+1.9**
PCVE					S	**Sn**	**05 46 06.5**	**-2.3**
ECAB	**El Cabril**	**4.30**	**5**		P	**Pn**	**05 45 21.9**	**+1.3**
	6.4nm,1.1s,SNR=9.0							
ECAB					S	**Sn**	**05 46 08.2**	**-2.5**
	0.2nm,0.1s,SNR=7.3							
GORA	**Gorafe**	**4.35**	**31**		S	**Sn**	**05 46 09.6**	**-2.6**
	4.1nm,0.7s,SNR=7.9							
PTEO	**Sao Teotonio**	**4.41**	**329**		*e*P	**Pn**	**05 45 23.2**	**+1.2**
PTEO					*e*S	**Sn**	**05 46 12.2**	**-1.2**
PTEO	**Sao Teotonio**	**4.41**	**329**		P	**Pn**	**05 45 23.2**	**+1.2**
PTEO					S	**Sn**	**05 46 12.2**	**-1.2**
EADA	**Adamuz**	**4.50**	**13**		P	**Pn**	**05 45 24.5**	**+1.2**
	8.0nm,1.1s,SNR=7.9							
EADA					S	**Sn**	**05 46 13.0**	**-2.8**
	1.6nm,0.1s,SNR=7.9							
EQES	**Quesada**	**4.62**	**29**		S	**Sn**	**05 46 15.4**	**-3.3**
	0.1nm,0.0s,SNR=7.9							
PNCL	**Nicolau / Gran**	**4.82**	**334**		*e*P	**Pn**	**05 45 28.7**	**+1.0**
PNCL					*e*S	**Sn**	**05 46 21.8**	**-1.8**
PNCL	**Nicolau / Gran**	**4.82**	**334**		P	**Pn**	**05 45 28.7**	**+1.0**
PNCL					S	**Sn**	**05 46 21.8**	**-1.8**
EBAD	**Badajoz**	**5.04**	**350**		P	**Pn**	**05 45 31.6**	**+0.9**
	2.1nm,0.5s,SNR=11							
EBAD					S	**Sn**	**05 46 25.8**	**-3.3**
	0.4nm,0.1s,SNR=7.9							
PESTR	**Estremoz**	**5.26**	**345**		*e*P	**Pn**	**05 45 35.4**	**+1.7**
PESTR					*e*S	**Sn**	**05 46 31.6**	**-2.8**
PMTG	**Montargil**	**5.60**	**341**		*e*P	**Pn**	**05 45 40.3**	**+1.9**
PMTG	**Montargil**	**5.60**	**341**		P	**Pn**	**05 45 40.3**	**+1.9**
PMRV	**Marv??o**	**5.76**	**348**		*e*P	**Pn**	**05 45 41.5**	**+0.9**
PMRV					S	**Sn**	**05 46 43.0**	**-3.8**
PMRV	**Marv??o**	**5.76**	**348**		P	**Pn**	**05 45 41.5**	**+0.9**
PMRV					S	**Sn**	**05 46 43.0**	**-3.8**
ESDC	**Sonseca Array**	**6.08**	**14**		S	**Sn**	**05 46 49.9**	**-4.7**
	SNR=7.9							
PCBR	**Castelo Branco**	**6.18**	**349**		*e*P	**Pn**	**05 45 47.1**	**+0.8**
PCBR					*e*S	**Sn**	**05 46 52.7**	**-4.3**
PCBR	**Castelo Branco**	**6.18**	**349**		P	**Pn**	**05 45 47.1**	**+0.8**
PCBR					S	**Sn**	**05 46 52.7**	**-4.3**
EPLA	**Plasencia**	**6.27**	**359**		P	**Pn**	**05 45 48.4**	**+0.8**
	13nm,0.9s,SNR=7.9							
EPLA					S	**Sn**	**05 46 55.0**	**-4.3**
	3.3nm,3.7s,SNR=7.9							
MVO	**Moncorvo**	**7.42**	**353**		*e*P	**Pn**	**05 46 04.8**	**+1.3**
MVO	**Moncorvo**	**7.42**	**353**		P	**Pn**	**05 46 04.6**	**+1.1**
	6.1nm,3.2s,SNR=7.9							
MVO					S	**Sn**	**05 47 22.3**	**-5.5**
	11nm,14.2s,SNR=7.9							

TIR ***27*** *05:48:05.3, 43°.29N×20°.11E, h8km, Md3.1/4*
PDG ***27*** *05:48:06.7±0.3, 43°.27N×19°.86E, h12km±1km, MD2.7/5, ML2.9/12, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
RHSSO ***27*** *05:48:07.7±0.4, 43°.29N×19°.78E, h9km±2km, ML2.8/11*
BEO ***27*** *05:48:08.2±0.4, 43°.30N×19°.92E, h0km, ML2.8/13*
ISC 27 05:48:06.7±1.1, **43°.28N**±0°.01×**19°.84E**±0°.01, **h1**km±9km, **n78,** σ1**8**′**47**/125, **16C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.10**	**103**		*e*Pg	**Pg**	**05 48 08.6**	**+0.1**
SJES					*e*Sg	**Sg**	**05 48 10.0**	**+0.2**
PLE	**Pljevlja**	**0.34**	**278**	⇑	*i*Pg	**Pg**	**05 48 13.6**	**+0.5**
PLE					*e*Sg	**Sg**	**05 48 18.6**	**+1.1**
IVAS	**Ivanjica**	**0.37**	**37**		*e*Pg	**Pg**	**05 48 13.7**	**-0.1**
IVAS					*e*Sg	**Sg**	**05 48 16.8**	**-1.8**
IVA	**Berane**	**0.41**	**175**	⇓	*i*Pg	**Pg**	**05 48 14.2**	**-0.3**
IVA					*i*Sg	**Sg**	**05 48 19.7**	**-0.2**
RUDO	**Rudo**	**0.48**	**314**	⇑	*i*Pg	**Pg**	**05 48 15.3**	**-0.6**
RUDO					*e*Sg	**Sg**	**05 48 22.6**	**+0.5**
KOME	**Kolasin**	**0.49**	**209**		*e*Pg	**Pg**	**05 48 15.6**	**-0.5**
KOME					*e*Sg	**Sg**	**05 48 23.2**	**+0.7**
BBLS	**Lazići**	**0.67**	**331**		*e*Pg	**Pg**	**05 48 20.0**	**+0.5**
BBLS					*e*Sg	**Sg**	**05 48 29.4**	**+1.4**
BBLS	**Lazići**	**0.67**	**331**	⇓	*i*Pg	**Pg**	**05 48 19.9**	**+0.5**
BBLS					*e*Sg	**Sg**	**05 48 28.7**	**+0.7**
UPM	**Unac-Piva**	**0.69**	**264**	⇑	*i*Pg	**Pg**	**05 48 20.2**	**+0.3**
UPM	**Unac-Piva**	**0.69**	**264**	⇑	*i*Pg	**Pg**	**05 48 19.9**	**0.0**
UPM					*e*Sg	**Sg**	**05 48 30.4**	**+1.6**
PVY	**Plav**	**0.69**	**173**	⇓	*i*Pg	**Pg**	**05 48 19.3**	**-0.6**
PVY					*i*Sg	**Sg**	**05 48 29.3**	**+0.4**
NKY	**Niksic**	**0.78**	**233**	⇑	*i*Pg	**Pg**	**05 48 21.3**	**-0.3**
NKY					*e*Sg	**Sb**	**05 48 33.4**	**-0.8**
DIVS	**Divibare**	**0.82**	**7**		*e*Pg	**Pg**	**05 48 23.0**	**+0.6**
DIVS					*e*Sg	**Sg**	**05 48 32.9**	**-0.2**
DIVS	**Divibare**	**0.82**	**7**	⇓	*i*Pg	**Pg**	**05 48 22.6**	**+0.2**
DIVS					*e*Sg	**Sb**	**05 48 34.5**	**-0.9**
NKME	**Niksic**	**0.83**	**232**		*e*Pg	**Pg**	**05 48 22.6**	**0.0**
GRUS	**Gruza**	**0.88**	**46**		*e*Pg	**Pg**	**05 48 23.8**	**+0.3**
GRUS					*e*Sg	**Sg**	**05 48 33.8**	**-1.0**
BCI	**Bajram Curri**	**0.93**	**170**	*i*	PG	**Pg**	**05 48 23.7**	**-0.7**
BCI				*i*	SG	**Sg**	**05 48 37.0**	**+0.5**
SELS	**Selova**	**0.93**	**93**		*e*Pg	**Pg**	**05 48 23.6**	**-0.9**
SELS					*e*Sg	**Sg**	**05 48 35.5**	**-1.1**
PDG	**Podgorica**	**0.95**	**207**	⇑	P	**Pg**	**05 48 24.3**	**-0.7**
PDG				⇓	S	**Sg**	**05 48 37.7**	**+0.4**
PDG	**Podgorica**	**0.95**	**207**		*e*Pg	**Pg**	**05 48 23.7**	**-1.2**
PDG					*e*Sg	**Sg**	**05 48 37.3**	**0.0**
TTG	**Podgorica**	**0.95**	**207**		*e*Pg	**Pg**	**05 48 23.9**	**-1.0**
TTG					*e*Sg	**Sb**	**05 48 39.2**	**+0.1**
CEME	**Cevo**	**1.00**	**223**	⇓	*i*Pg	**Pg**	**05 48 24.5**	**-1.3**
CEME					*e*Sg	**Sb**	**05 48 40.7**	**+0.2**
TRUS	**Trudelj**	**1.02**	**23**		*e*Pg	**Pb**	**05 48 26.8**	**-0.4**
TRUS					*e*Sg	**Sg**	**05 48 39.0**	**-0.6**
BRY	**Bratogost**	**1.03**	**249**	⇓	*i*Pg	**Pg**	**05 48 25.8**	**-0.6**
BRY					*e*Sg	**Sn**	**05 48 42.8**	**-0.6**
HAPS	**Han Pijesak,BI**	**1.03**	**321**		*e*Pg	**Pg**	**05 48 25.3**	**-1.1**
HAPS					*e*Sg	**Sg**	**05 48 39.8**	**0.0**
DRME	**Dracevica, Mon**	**1.20**	**204**		*e*Pg	**Pg**	**05 48 28.9**	**-0.7**
DRME					*e*Sg	**Sb**	**05 48 45.8**	**-0.3**
DRME	**Dracevica, Mon**	**1.20**	**204**	⇑	*i*Pg	**Pg**	**05 48 28.6**	**-1.0**
DRME					*e*Sg	**Sn**	**05 48 47.6**	**+0.2**
BUM	**Brajici-Budva**	**1.21**	**216**	⇑	*i*Pg	**Pg**	**05 48 28.8**	**-0.9**
BUM					*i*Sg	**Sn**	**05 48 47.0**	**-0.7**
TREB	**Trebinje**	**1.23**	**243**		*e*Pg	**Pg**	**05 48 29.1**	**-1.2**
TREB					*e*Sg	**Sg**	**05 48 45.7**	**-0.5**
PUK	**Puka**	**1.24**	**178**	*i*	PN	**Pg**	**05 48 29.8**	**-0.6**
PUK				*i*	SN	**Sn**	**05 48 48.6**	**+0.1**
TEKS	**Tekeris**	**1.29**	**350**		*e*Pg	**Pb**	**05 48 31.7**	**0.0**
TEKS					*e*Sg	**Sb**	**05 48 48.9**	**+0.2**
TEKS	**Tekeris**	**1.29**	**350**		*e*Pg	**Pg**	**05 48 31.5**	**+0.2**
TEKS					*e*Sg	**Sb**	**05 48 48.9**	**+0.2**
HCY	**Herceg Novi**	**1.30**	**230**		*e*Pg	**Pg**	**05 48 30.0**	**-1.0**
HCY	**Herceg Novi**	**1.30**	**230**	⇑	*i*Pg	**Pg**	**05 48 30.9**	**-0.6**
HCY					*i*Sg	**Sn**	**05 48 50.7**	**+0.8**
DBRK	**Dubrovnik**	**1.39**	**244**	*i*	Pg	**Pn**	**05 48 32.6**	**-0.5**
DBRK					Sg	**Sn**	**05

PVO	**Paravola**	**0.84**	**74**	P		**Pg**	**05 51 42.4**	**-0.1**
PVO				S		**Sb**	**05 51 56.5**	**+1.7**
	comp=N,2µm,0.8s							
DRO	**Drossia**	**1.05**	**114**	P		**Pg**	**05 51 45.6**	**-1.0**
DRO				S		**Sn**	**05 52 02.7**	**+0.1**
	comp=N,1µm,0.8s							
EFP	**Efpalio**	**1.11**	**88**	P		**Pg**	**05 51 46.6**	**-1.1**
EFP				S		**Sn**	**05 52 04.6**	**+0.7**
	comp=N,1µm,1.1s							
ANX	**Ano Chora**	**1.13**	**79**	P		**Pg**	**05 51 47.5**	**-0.7**
ANX				S		**Sn**	**05 52 06.0**	**+1.2**
	comp=N,1µm,0.8s							
IGT	**Igoumenitsa**	**1.15**	**354**	P		**Pg**	**05 51 47.8**	**-0.7**
IGT				S		**Sb**	**05 52 04.3**	**+0.5**
	comp=N,545nm,0.8s							
IGT	**Igoumenitsa**	**1.15**	**354**	P		**Pg**	**05 51 48.1**	**-0.4**
IGT				AML		AML	05 52 06.8	
	comp=N,840µm,0.7s							
IGT				AML		AML	05 52 10.0	
	comp=E,1314µm,0.6s							
EVR	**Evrytania**	**1.15**	**62**	P		**Pg**	**05 51 47.6**	**-1.0**
EVR				S		**Sn**	**05 52 06.4**	**+1.2**
	comp=E,430nm,0.7s							
EVR	**Evrytania**	**1.15**	**62**	P		**Pg**	**05 51 47.9**	**-0.7**
EVR				S		**Sb**	**05 52 04.1**	**+0.1**
EVR				AML		AML	05 52 15.1	
	comp=E,665µm,0.6s							
EVR				AML		AML	05 52 15.1	
	comp=N,1048µm,0.7s							
LAKA	**Lakka**	**1.17**	**97**	P		**Pg**	**05 51 47.6**	**-1.4**
LAKA				S		**Sn**	**05 52 06.5**	**+0.9**
	comp=N,478nm,0.9s							
LAKA	**Lakka**	**1.17**	**97**	P		**Pg**	**05 51 47.9**	**-1.1**
LAKA				S		**Sg**	**05 52 04.0**	**-0.2**
LAKA				AML		AML	05 52 11.1	
	comp=E,662µm,1.0s							
LAKA				AML		AML	05 52 11.3	
	comp=N,1047µm,1.2s							
SERG	**Sergoula**	**1.22**	**88**	P		**Pg**	**05 51 48.4**	**-1.5**
TRIZ	**Trizonia**	**1.24**	**91**	P		**Pg**	**05 51 48.5**	**-1.7**
TRIZ				S		**Sn**	**05 52 08.0**	**+0.9**
	comp=N,688nm,0.7s							
TRIZ	**Trizonia**	**1.24**	**91**	P		**Pg**	**05 51 48.6**	**-1.6**
TRIZ				S		**Sb**	**05 52 06.2**	**-0.1**
ALIK	**Aliki, Aigiali**	**1.27**	**95**	P		**Pg**	**05 51 49.4**	**-1.5**
ALIK				S		**Sn**	**05 52 09.6**	**+1.6**
AMT	**Artemida-Makis**	**1.28**	**131**	P		**Pg**	**05 51 50.8**	**-0.3**
KALE	**Kalithea**	**1.29**	**89**	P		**Pg**	**05 51 49.5**	**-1.7**
KALE				S		**Sn**	**05 52 10.1**	**+1.6**
	comp=N,620nm,1.0s							
KALE	**Kalithea**	**1.29**	**89**	P		**Pg**	**05 51 49.7**	**-1.5**
KALE				AML		AML	05 52 17.6	
	comp=N,1652µm,0.5s							
KALE				AML		AML	05 52 21.5	
	comp=E,716µm,0.6s							
JAN	**Janina**	**1.29**	**12**	P		**Pg**	**05 51 50.9**	**-0.4**
JAN	**Janina**	**1.29**	**12**	P		**Pg**	**05 51 51.0**	**-0.3**
JAN				S		**Sb**	**05 52 08.7**	**+0.7**
JAN				AML		AML	05 52 17.7	
	comp=N,861µm,0.8s							
JAN				AML		AML	05 52 20.2	
	comp=E,1260µm,0.7s							
KLV	**Kalavryta, Ach**	**1.35**	**104**	P		**Pg**	**05 51 50.5**	**-1.8**
KLV				S		**Sn**	**05 52 12.0**	**+2.1**
	comp=E,310nm,1.2s							
KLV	**Kalavryta, Ach**	**1.35**	**104**	P		**Pg**	**05 51 50.6**	**-1.6**
KLV				AML		AML	05 52 17.8	
	comp=N,657µm,1.0s							
KLV				AML		AML	05 52 19.5	
	comp=E,456µm,0.6s							
MAKR	**Makrakomi, Fth**	**1.42**	**64**	P		**Pn**	**05 51 52.4**	**-0.4**
MAKR				S		**Sn**	**05 52 14.2**	**+2.5**
	comp=E,730nm,0.9s							
MAKR	**Makrakomi, Fth**	**1.42**	**64**	P		**Pn**	**05 51 53.0**	**+0.3**
MAKR				AML		AML	05 52 20.4	
	comp=E,996µm,0.6s							
MAKR				AML		AML	05 52 21.7	
	comp=N,926µm,0.7s							
KASA	**Kassiopi**	**1.42**	**342**	P		**Pn**	**05 51 53.1**	**+0.3**
AGG	**Agios Georgios**	**1.57**	**66**	P		**Pn**	**05 51 54.9**	**+0.1**
AGG	**Agios Georgios**	**1.57**	**66**	P		**Pn**	**05 51 55.0**	**+0.3**
AGG				AML		AML	05 52 24.3	
	comp=N,429µm,0.4s							
AGG				AML		AML	05 52 27.3	
	comp=E,901µm,1.0s							
ITM	**Ithomi**	**1.66**	**136**	P		**Pb**	**05 51 57.3**	**0.0**
THL	**Klokotos Trika**	**1.66**	**45**	P		**Pn**	**05 51 56.6**	**+0.5**
THL				S		**Sg**	**05 52 20.9**	**+0.9**
	comp=E,402nm,0.7s							
THL	**Klokotos Trika**	**1.66**	**45**	P		**Pn**	**05 51 56.8**	**+0.8**
THL				AML		AML	05 52 28.9	
	comp=E,744µm,0.8s							
THL				AML		AML	05 52 29.4	
	comp=N,654µm,0.7s							
KPRO	**Kipourio**	**1.70**	**23**	P		**Pb**	**05 51 58.2**	**+0.1**
AXAR	**Agios Charalam**	**1.73**	**77**	P		**Pg**	**05 51 59.1**	**-0.6**
AXAR				AML		AML	05 52 32.0	
	comp=E,1469µm,0.9s							
AXAR				AML		AML	05 52 33.0	
	comp=N,1707µm,0.8s							
PENT	**Pentalofos**	**1.87**	**15**	P		**Pb**	**05 52 00.6**	**-0.4**
PROD	**Prodromos**	**1.89**	**93**	P		**Pb**	**05 52 01.2**	**-0.2**
PROD				AML		AML	05 52 35.5	
	comp=N,676µm,0.9s							
PROD				AML		AML	05 52 36.9	
	comp=E,809µm,1.1s							
LKR	**Lokris**	**1.98**	**82**	P		**Pb**	**05 52 02.3**	**-0.5**
LOUT	**Loutraki**	**1.99**	**101**	P		**Pb**	**05 52 02.9**	**-0.1**
NEST	**Nestorio**	**2.07**	**12**	P		**Pb**	**05 52 03.4**	**-1.0**
VIL2	**Platees**	**2.19**	**94**	P		**Pb**	**05 52 05.7**	**-0.6**
VIL2				AML		AML	05 52 47.6	
	comp=E,663µm,1.0s							
VIL2				AML		AML	05 52 48.2	
	comp=N,492µm,1.0s							
FNA	**Florina**	**2.48**	**16**	P		**Pb**	**05 52 09.8**	**-1.7**
IDI	**Anoyia**	**4.69**	**130**	Pn		**Pn**	**05 52 40.3**	**+2.6**
	comp=N,0.1nm,0.3s,baz=342,slow=19,SNR=2.2							
IDI				Sn		**Sn**	**05 53 34.6**	**+2.2**
	comp=N,0.6nm,0.3s,baz=288,slow=19,SNR=3.5							
FINES	**FINESS Array B**	**23.34**	**7**	P		**P**	**05 56 34.0**	**-1.0**
	comp=N,6.0nm,1.1s,baz=200,slow=12,SNR=3.7							
MKAR	**Makanchi Array**	**45.20**	**59**	P		**P**	**05 59 42.4**	**-1.7**
	comp=N,0.1nm,0.5s,baz=267,slow=6.8,SNR=4.4							
ZALV	**Zalesovo Beam**	**45.56**	**48**	P		**P**	**05 59 45.7**	**-1.0**
	comp=N,0.7nm,0.4s,baz=278,slow=9.2,SNR=3.6							

*IDC **27** 05:58:55.3±1.0, 10˚.46S×119˚.59E, h0km, mb4.0/6, mb1 4.0/9, mb1mx3.8/43, mbtmp3.9/9, ML3.5/3, MS3.3/3, Ms1 3.3/3, ms1mx2.8/49, Error ellipse: s-maj=47.4km s-min=17.9km az=64.0*
*NEIC **27** 05:58:59.2±2.4, 10˚.66S±0˚.07×119˚.65E±0˚.06, h37km±11km, mb4.0/4, Error ellipse: s-maj=11.0km s-min=7.6km az=201.0*
*DJA **27** 05:59:03.6±1.2, 10˚.S±6˚×11˚.9E±˚, h34km±20km, M4.4/7, mB4.8/1, mb4.7/2, MLv4.3/7, Mw(mB)4.1/1, Mwp4.9/1*

ISC 27 05:58:59.3±0.6, 10˚.68S±0˚.06×119˚.65E±0˚.07, h35km, n26, σ2°64/32, mb4.0/7, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**1.19**	**32**	P	**Pn**	**05 59 22.0**	**+2.5**
PLAI	**Plampang**	**2.61**	**315**	P	**Pn**	**05 59 39.7**	**+0.7**
PLAI				S	**Sn**	**06 00 07.0**	**-2.5**
SOEI	**Soe**	**4.64**	**79**	P	Pn	06 00 13.7	+6.7
SOEI				S	Sn	06 01 09.2	+9.5
SRBI	**Singaraja**	**5.08**	**300**	P	**Pn**	**06 00 12.8**	**-0.3**
BKSI	**Bulukumba**	**5.35**	**5**	P	**Pn**	**06 00 17.9**	**+1.2**
	0.4nm2µm1µm93nm,0.6s						
BKSI				S	**Sn**	**06 01 16.4**	**-0.7**
	0.4nm2µm1µm93nm,0.6s						
KAPI	**Kappang**	**5.63**	**1**	Pn	**Pn**	**06 00 18.7**	**-1.9**
KAPI				Sn	**Sn**	**06 01 23.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**9.38**	**142**	Pn	**Pn**	**06 01 14.2**	**+2.1**
	0.2nm,0.3s,baz=306,slow=14,SNR=4.6						
FITZ				Sn	**Sn**	**06 02 54.7**	**-1.7**
	1.0nm,0.3s,baz=343,slow=19,SNR=7.3						
FITZ				LR	LR	06 05 35.1	
	comp=Z,80nm,18.2s,baz=322,slow=42						
FITZ	**Fitzroy Crossi**	**9.38**	**142**		**Pn**	**06 01 14.6**	**+2.5**
FITZ					**Sn**	**06 02 56.3**	**-0.1**
UGM	**Wanagama**	**9.42**	**286**	Pn	**Pn**	**06 01 12.4**	**-0.2**
KNRA	**Kununurra**	**10.16**	**120**	Pn	**Pn**	**06 01 24.2**	**+1.3**
PSA00	**Pilbara Seismi**	**10.83**	**179**	Pn	**Pn**	**06 01 31.2**	**-0.7**

MTN	**Manton Dam**	**11.45**	**102**	Pn		**Pn**	**06 01 41.1**	**+0.7**
MTN						**Sn**	**06 03 46.0**	**-1.1**
WRA	**Warramunga Arr**	**16.88**	**125**	P		**Pn**	**06 02 53.6**	**+0.5**
	0.3nm,0.3s,baz=298,slow=13,SNR=8.0							
WRA				S		**Sn**	**06 05 51.2**	**-8.5**
	0.1nm,0.3s,baz=301,slow=20,SNR=5.7							
WRAB	**Tennant Creek**	**16.89**	**125**	Pn		**Pn**	**06 02 53.4**	**+0.3**
WRAB				IAmb		IAmb	06 03 06.7	
	comp=Z,38nm,2.0s							
AS31	**Alice Springs**	**18.74**	**135**	P		**P**	**06 03 14.6**	**-0.8**
AS31				IAmb		IAmb	06 03 43.6	
	comp=Z,1.6nm,0.9s							
AS31				S		**Sn**	**06 06 41.1**	**-3.7**
ASAR	**Alice Springs**	**18.74**	**135**	P		**Pn**	**06 03 18.9**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=316,slow=11,SNR=24							
ASAR				S		**Sn**	**06 06 37.5**	**-7.2**
	comp=Z,0.1nm,0.3s,baz=316,slow=14,SNR=4.7							
NWAO	**Narrogin (SRO)**	**22.25**	**185**	P		**P**	**06 03 56.4**	**+3.2**
	comp=Z,4.6nm,0.9s,baz=337,slow=13,SNR=1.6							
NWAO				LR		LR	06 11 26.0	
	comp=Z,67nm,21.3s,baz=355,slow=33							
CMAR	**Chiang Mai Arr**	**35.44**	**325**	P		**P**	**06 05 52.5**	**0.0**
	comp=Z,1.0nm,0.5s,baz=151,slow=6.8,SNR=4.4							
KSRS	**Korea Array**	**48.51**	**9**	LR		LR	06 29 02.5	
	comp=Z,80nm,18.0s,baz=336,slow=37							
SONM	**Songino Array**	**59.44**	**350**	P		**P**	**06 08 58.2**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=170,slow=8.6,SNR=8.3							
SONM	**Songino Array**	**59.44**	**350**	IAmb		IAmb	06 09 07.8	
	comp=Z,1.7nm,1.1s							
MK31	**Makanchi Array**	**66.24**	**333**	P		**P**	**06 09 43.9**	**+0.1**
MK31				IAmb		IAmb	06 11 23.9	
	comp=Z,2.8nm,1.4s							
MKAR	**Makanchi Array**	**66.24**	**333**	P		**P**	**06 09 43.3**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=159,slow=7.2,SNR=16							
ZALV	**Zalesovo Beam**	**70.83**	**339**	P		**P**	**06 10 11.0**	**-1.3**
	comp=Z,0.7nm,0.5s,baz=150,slow=4.7,SNR=4.1							
ZALV	**Zalesovo Beam**	**70.83**	**339**	P		**P**	**06 10 11.0**	**-1.3**
SEY	**Seymchan**	**77.62**	**15**	P		**P**	**06 10 53.0**	**+1.4**
	comp=Z,0.7nm,0.6s,baz=163,slow=19,SNR=4.7							

*NEIC **27** 06:01:05.5±2.4, 10˚.59S±0˚.08×165˚.9E±0˚.1, h136km±5km, mb4.7/8, Error ellipse: s-maj=21.3km s-min=11.7km az=99.0*
*IDC **27** 06:01:10.1±7.1, 10˚.77S×165˚.86E, h172km±69km, mb3.7/7, mb1 3.9/8, mb1mx3.5/45, mbtmp4.2/8, Error ellipse: s-maj=37.9km s-min=19.8km az=176.0*

ISC 27 06:01:07.9±0.9, 10˚.76S±0˚.09×166˚.0E±0˚.1, h150km, n33, σ2°90/33, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SANVU	**Saraoutou**	**4.81**	**166**		**Pn**	**06 02 17.6**	**-1.2**
SANVU					**Sn**	**06 03 13.0**	**-1.1**
DZM	**Mont Dzumac**	**11.25**	**178**	P	**Pn**	**06 03 46.6**	**+2.1**
	1.3nm,0.3s,baz=52,slow=19,SNR=20						
DZM				S	**Sn**	**06 05 42.7**	**-6.4**
	0.4nm,0.3s,baz=322,slow=19,SNR=2.2						
DZM	**Mont Dzumac**	**11.25**	**178**		**Pn**	**06 03 47.1**	**+2.6**
DZM					**Sn**	**06 05 49.5**	**+0.4**
NOUC	**Port Laguerre**	**11.28**	**178**	Pn	**Pn**	**06 03 48.4**	**+3.6**
NOUC				Sn	**Sn**	**06 05 50.9**	**+1.4**
CTA	**Charters Tower**	**21.12**	**242**	P	**P**	**06 05 40.0**	**-0.9**
	3.8nm,0.5s,baz=79,slow=11,SNR=3.5						
GRZ	**Great Barrier**	**26.79**	**163**	P	P	06 06 44.1	+10
WHRZ	**Whale Island**	**28.73**	**162**	P	P	06 06 48.2	-3.0
HAZ	**Te Kaha**	**28.90**	**160**	P	**P**	**06 06 54.3**	**+1.7**
RUGZ	**Raukumara Rang**	**29.06**	**161**	P	**P**	**06 06 54.5**	**+0.3**
URZ	**Urewera**	**29.15**	**162**	P	**P**	**06 06 55.1**	**+0.3**
	10nm,0.7s,baz=293,slow=1.1,SNR=6.2						
URZ	**Urewera**	**29.15**	**162**	P	**P**	**06 06 55.6**	**+0.8**
URZ	**Urewera**	**29.15**	**162**	P	**P**	**06 06 55.5**	**+0.7**
URZ				IAmb	IAmb	06 07 03.0	
	comp=Z,25nm,1.1s						
MWZ	**Matawai**	**29.34**	**161**	P	**P**	**06 06 57.3**	**+0.7**
TWVZ	**Taurewa**	**29.43**	**165**	P	**P**	**06 07 01.8**	**+4.3**
NGZ	**Ngauruhoe**	**29.57**	**165**	P	**P**	**06 07 01.7**	**+2.9**
RIGZ	**Rimuhau**	**29.76**	**161**	P	**P**	**06 07 01.0**	**+0.8**
BKZ	**Black Stump Fm**	**29.80**	**163**	P	**P**	**06 07 01.6**	**+0.9**
NMHZ	**Naumai**	**29.83**	**163**	P	**P**	**06 07 02.6**	**+1.6**
BHHZ	**Black Hill Sta**	**29.99**	**164**	P	**P**	**06 07 04.0**	**+1.7**
BFZ	**Birch Farm**	**31.16**	**165**	P	**P**	**06 07 12.4**	**-0.1**
TUWZ	**Tuamarina**	**31.34**	**168**	P	**P**	**06 07 16.4**	**+2.3**
MSWZ	**Moikau Station**	**31.61**	**167**	P	**P**	**06 07 16.8**	**+0.3**
WB0	**Warramunga Arr**	**31.70**	**250**	P	**P**	**06 07 17.3**	**-0.3**
WB0				IAmb	IAmb	06 07 31.2	
	comp=Z,14nm,1.2s						
WRA	**Warramunga Arr**	**31.78**	**249**	P	**P**	**06 07 17.2**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=80,slow=8.8,SNR=5.1						
ASAR	**Alice Springs**	**33.11**	**243**	P	**P**	**06 07 29.1**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=68,slow=9.4,SNR=8.1						
BBOO	**Buckleboo**	**35.17**	**227**	P	**P**	**06 07 48.1**	**+0.5**
FITZ	**Fitzroy Crossi**	**39.66**	**255**	P	**P**	**06 08 25.4**	**-0.1**
	comp=Z,5.1nm,0.6s,baz=73,slow=6.5,SNR=11						
FITZ	**Fitzroy Crossi**	**39.66**	**255**	P	**P**	**06 08 25.0**	**-0.5**
FITZ				IAmb	IAmb	06 08 26.0	
	comp=Z,5.4nm,0.6s						
QSPA	**South Pole Qui**	**79.24**	**180**	P	**P**	**06 12 54.6**	**-1.7**
SCM	**Sheep Creek Mo**	**81.00**	**20**	P	P	06 13 03.0	-2.6
SCM				IAmb	IAmb	06 13 10.3	
	comp=Z,23nm,1.3s						
ILAR	**Eielson Array**	**83.18**	**18**	P	**P**	**06 13 16.8**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=240,slow=5.2,SNR=17						
NLWA	**Neilton Lookou**	**84.82**	**40**		pP	06 13 57.9	-5.0
NVAR	**Mina Array Bea**	**85.68**	**50**	P	**P**	**06 13 30.4**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=241,slow=7.0,SNR=3.3						

*UCR **27** 06:07:30.6±1.8, 8˚.64N×83˚.72W, h1km±7km*
*UPA **27** 06:07:33.1±2.8, 8˚.68N×83˚.68W, h10km±16km, MW3.9*

ISC 27 06:07:30.7±1.7, 8˚.67N±0˚.05×83˚.70W±0˚.05, h7km±13km, n22, σ0°96/37, 2D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDPN	**Palmar Norte**	**0.38**	**39**	eP	**Pb**	**06 07 39.6**	**-0.3**
EDPN				eS	**Sb**	**06 07 46.3**	**+0.3**
EDDO	**Dominical**	**0.61**	**345**	eP	**Pb**	**06 07 43.2**	**-0.5**
EDDO				eS	**Sb**	**06 07 53.6**	**+1.1**
EDLM	**Las Mercedes**	**0.62**	**10**	eP	**Pb**	**06 07 43.6**	**-0.4**
EDLM				eS	**Sn**	**06 07 54.7**	**-1.7**
EDBA	**Buenos Aires**	**0.65**	**40**	iP	**Pb**	**06 07 44.0**	**-0.5**
EDBA				eS	**Sb**	**06 07 53.9**	**0.0**
EDSV	**San Vito**	**0.74**	**78**	eP	**Pb**	**06 07 46.2**	**+0.1**
EDSV				eS	**Sn**	**06 07 58.6**	**-0.8**
BRU2	**Volcan**	**1.01**	**83**	eP	**Pn**	**06 07 50.5**	**-1.0**
BRU2				eS	**Sn**	**06 08 06.8**	**+0.7**
BRU2	**Volcan**	**1.01**	**83**	eP	**Pb**	**06 07 49.6**	**-1.1**
BRU2				eS	**Sn**	**06 08 04.9**	**-1.1**
LCR2	**La Lucha 2**	**1.11**	**344**	eP	**Pg**	**06 07 51.5**	**-0.6**
LCR2				eS	**Sn**	**06 08 08.1**	**-0.6**
BCO2	**Palmira**	**1.16**	**87**	eP	**Pb**	**06 07 52.9**	**-0.4**
BCO2				eS	**Sn**	**06 08 09.7**	**-0.2**
DVD	**David**	**1.26**	**100**	eP	**Pn**	**06 07 57.6**	**+2.8**
DVD				eS	**Sn**	**06 08 12.0**	**0.0**
CVTR	**Volcan Turrial**	**1.35**	**358**	eP	**Pn**	**06 07 56.5**	**0.0**
CHIR3	**Chiriqui UPA,**	**1.38**	**101**	eP	**Pg**	**06 07 57.6**	**+0.3**
CHIR3				eS	**Sn**	**06 08 16.1**	**+1.0**
HDC	**Heredia**	**1.39**	**343**	eP	**Pb**	**06 07 57.0**	**-0.2**
HDC	**Heredia**	**1.39**	**343**	eP	**Pb**	**06 07 56.9**	**-0.3**
HDC				eS	**Sn**	**06 08 16.7**	**+1.3**
RGM0	**Gandoca**	**1.42**	**50**	eP	**Pg**	**06 07 59.1**	**+1.2**
CNI2	**El Empalme, Bo**	**1.43**	**58**	eP	**Pn**	**06 07 56.6**	**-0.6**
CNI2				eS	**Sn**	**06 08 16.2**	**0.0**
SRA1	**San Ramn**	**1.61**	**331**	eP	**Pb**	**06 08 00.7**	**-0.2**
JTS	**Las Juntas de**	**2.03**	**323**	eP	**Pb**	**06 08 07.9**	**-0.2**
ARE1	**Arenal 1**	**2.05**	**331**	eP	**Pb**	**06 08 08.1**	**-0.3**
CUI	**Cuipilapa**	**2.45**	**324**	eP	**Pb**	**06 08 14.2**	**-1.0**
GMAL	**Guarumal, Vera**	**2.60**	**110**	eP	**Pb**	**06 08 15.7**	**-2.1**
GMAL				eS	**Sn**	**06 08 45.0**	**-0.3**
CACAO	**El Cacao, Vera**	**3.10**	**115**	eP	**Pb**	**06 08 25.1**	**-1.2**
CACAO				eS	**Sn**	**06 08 58.1**	**+0.4**

IDC 27 06:14:14.9±5.6, 5˚.81S×147˚.83E, h190km±63km, mb3.1/2, mb1 3.4/4, mb1mx3.0/25, mbtmp3.7/4, Error ellipse: s-maj=134.2km s-min=27.8km az=130.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.63**	**190**	P	Pn	06 15 13.0	+1.3
	9.3nm,0.3s,baz=360,slow=4.5,SNR=6.9						
PMG				S	Sn	06 15 56.3	-0.2
	4.2nm,0.3s,baz=310,slow=16,SNR=5.8						
WRA	**Warramunga Arr**	**19.22**	**222**	P	P	06 18 24.3	-0.4
	0.4nm,0.3s,baz=49,slow=12,SNR=5.9						
ASAR	**Alice Springs**	**22.25**	**216**	P	P	06 18 57.0	+0.6
	1.3nm,0.7s,baz=49,slow=8.3,SNR=22						
ILAR	**Eielson Array**	**84.98**	**23**	P	P	06 26 28.4	-0.1
	0.5nm,1.0s,baz=242,slow=4.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	**145.84**	**285**	PKPbc	PKPdf	06 33 31.3	-0.6
	0.4nm,0.5s,baz=68,slow=4.1,SNR=3.1						

*IDC **27** 06:30:22.8±1.4, 38˚.50N×20˚.25E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.3/42, mbtmp3.6/4, Error ellipse: s-maj=65.4km s-min=25.1km az=126.0*
*ATH **27** 06:30:24.0, 38˚.27N×20˚.38E, h11km±3km, ML3.1/9, Error ellipse: s-maj=3.5km s-min=1.0km az=82.0*
*THE **27** 06:30:25.2, 38˚.31N×20˚.47E, h5km±2km, ML3.0/12, Error ellipse: s-maj=2.0km s-min=0.3km az=224.0*

ISC 27 06:30:24.5±1.0, 38˚.30N±0˚.02×20˚.42E±0˚.04, h10km±6km, n48, σ0°69/71, mb3.5/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.18**	**131**	P	**Pg**	**06 30 28.1**	**-0.3**
VLS				S	**Sg**	**06 30 31.1**	**+0.1**
	13µm,0.5s						
VLS	**Valsamata**	**0.18**	**131**	P	**Pg**	**06 30 28.1**	**-0.3**
VLS				S	**Sg**	**06 30 30.8**	**-0.2**
VLS				AML	AML	06 30 33.6	
	comp=E,23940µm,0.6s						
VLS				AML	AML	06 30 34.3	
	comp=N,34963µm,0.6s						
FSK	**Fiskardo**	**0.20**	**35**	P	**Pg**	**06 30 28.6**	**0.0**
FSK				S	**Sg**	**06 30 31.0**	**-0.5**
	comp=N,8µm,0.7s						
FSK	**Fiskardo**	**0.20**	**35**	P	**Pg**	**06 30 28.6**	**0.0**
FSK				S	**Sg**	**06 30 32.9**	**+1.4**
KFL	**Anninata**	**0.35**	**123**	P	**Pg**	**06 30 31.1**	**-0.3**
KFL				S	**Sg**	**06 30 36.8**	**+0.8**
	comp=N,11µm,0.6s						
KFL	**Anninata**	**0.35**	**123**	P	**Pg**	**06 30 31.3**	**-0.1**
KFL				S	**Sg**	**06 30 37.1**	**+1.1**
KFL				AML	AML	06 30 40.0	
	comp=E,20695µm,0.5s						
KFL				AML	AML	06 30 41.4	
	comp=N,23806µm,0.6s						
EVGI	**Lefkada island**	**0.37**	**30**	P	**Pg**	**06 30 31.9**	**0.0**
EVGI				S	**Sg**	**06 30 36.7**	**-0.1**
	comp=N,2µm,0.4s						
EVGI	**Lefkada island**	**0.37**	**30**	P	**Pg**	**06 30 32.1**	**+0.3**
EVGI				S	**Sb**	**06 30 38.7**	**-0.4**
MGNA	**Meganis**	**0.46**	**39**	P	**Pg**	**06 30 33.7**	**+0.2**
MGNA				S	**Sb**	**06 30 40.8**	**-0.8**
MGNA				AML	AML	06 30 43.5	
	comp=E,6560µm,0.5s						
MGNA				AML	AML	06 30 43.7	
	comp=N,5165µm,0.5s						
VLMS	**Volimes, Zakyn**	**0.46**	**155**	P	**Pg**	**06 30 33.4**	**-0.2**
VLMS				S	**Sg**	**06 30 39.8**	**+0.1**
VLMS				AML	AML	06 30 43.1	
	comp=N,11562µm,0.4s						
VLMS				AML	AML	06 30 43.9	
	comp=E,8655µm,0.5s						
LKD2	**Lefkada island**	**0.53**	**21**	P	**Pb**	**06 30 35.0**	**-0.8**
LKD2				S	**Sg**	**06 30 42.1**	**+0.4**
	comp=E,1µm,0.9s						
LKD2	**Lefkada island**	**0.53**	**21**	P	**Pb**	**06 30 35.0**	**-0.8**
LKD2				S	**Sb**	**06 30 42.8**	**-0.7**
LKD2				AML	AML	06 30 50.5	
	comp=E,2363µm,0.8s						
LKD2				AML	AML	06 30 52.9	
	comp=N,3495µm,0.9s						
TSLK	**Tsoukalades, L**	**0.56**	**20**	P	**Pg**	**06 30 35.0**	**-0.4**
TSLK				S	**Sb**	**06 30 43.4**	**-1.0**
	comp=N,2µm,0.9s						
TSLK	**Tsoukalades, L**	**0.56**	**20**	P	**Pg**	**06 30 35.0**	**-0.4**
TSLK				AML	AML	06 30 54.9	
	comp=N,2985µm,0.9s						
TSLK				AML	AML	06 30 55.3	
	comp=E,4661µm,0.8s						
RLS	**Riolos of Patr**	**0.86**	**106**	P	**Pg**	**06 30 40.5**	**-0.6**
RLS				S	**Sg**	**06 30 52.0**	**-0.3**
	comp=E,818nm,0.8s						
RLS	**Riolos of Patr**	**0.86**	**106**	P	**Pg**	**06 30 40.3**	**-0.7**
RLS				S	**Sg**	**06 30 52.5**	**+0.2**
RLS				AML	AML	06 31 01.8	
	comp=E,1520µm,0.5s						
RLS				AML	AML	06 31 04.8	
	comp=N,1740µm,0.5s		

KZV				eS		Sn	06 46 53.8	+3.5
TUMR	**Tumrok**	**3.15**	**280**	eP		Pb	06 46 20.8	-3.5
TUMR				eS		Sb	06 46 57.6	-4.7
KLY	**Klyuchi**	**3.16**	**300**	eS		Sn	06 46 54.4	+1.8
KIRR	**Kirishev**	**3.19**	**293**	eP		Pb	06 46 21.4	-3.5
KIRR				eS		Sb	06 46 58.8	-4.5
KMNR	**Kamenistaya**	**3.19**	**289**	eP		Pb	06 46 21.5	-3.4
KMNR				eS		Sb	06 46 58.5	-4.8
KPT	**Kopyto**	**3.25**	**292**	eP		Pb	06 46 22.4	-3.6
KPT				eS		Sb	06 47 00.7	-4.5
SRDR	**Sredinnyy**	**3.64**	**296**	eP		Pb	06 46 28.6	-3.9
SPN	**Mys Shipunski**	**3.71**	**244**	eP		Pn	06 46 27.7	+3.9
SPN				eS		Sn	06 47 08.7	+2.4
NLC	**Nalytchevo**	**4.04**	**248**	eS		Sn	06 47 17.1	+2.9
SDLR	**Sedlovina**	**4.24**	**251**	eP		Pn	06 46 36.8	+5.6
SDLR				eS		Sn	06 47 24.3	+4.8
SMAR	**Somma**	**4.29**	**251**	eP		Pn	06 46 37.5	+5.6
UGLR	**Uglovaya**	**4.30**	**250**	eP		Pn	06 46 37.1	+5.1
UGLR				eS		Sn	06 47 26.2	+5.2
KRER	**Koryakskii**	**4.30**	**252**	eS		Sn	06 47 25.6	+4.4
AVH	**Avacha**	**4.33**	**251**	eP		Pn	06 46 37.9	+5.6
AVH				eS		Sn	06 47 26.2	+4.7
KRX	**Arik**	**4.34**	**253**	eP		Pn	06 46 37.9	+5.4
KRX				eS		Sn	06 47 26.5	+4.6
KOK	**Koryaka**	**4.37**	**252**	eP		Pn	06 46 38.3	+5.4
PET	**Petropavlovsk**	**4.48**	**249**	eS		Sn	06 47 28.7	+3.6
OSSR	**Ossora**	**4.63**	**344**	eP		Pn	06 46 39.1	+2.8
RUS	**Russkaya**	**4.84**	**243**	eP		Pn	06 46 43.1	+3.8
RUS				eS		Sn	06 47 36.8	+2.7
KRMR	**Karymshinskiy**	**4.85**	**248**	eP		Pn	06 46 45.1	+5.8
KRMR				eS		Sn	06 47 38.6	+4.4
MTVR	**Mutnovka**	**4.99**	**245**	eP		Pn	06 46 46.8	+5.4
GRL	**Gorelyy**	**5.01**	**246**	eP		Pn	06 46 47.9	+6.2
GRL				eS		Sn	06 47 42.1	+3.6
ASAK	**Asacha**	**5.19**	**245**	eP		Pn	06 46 50.1	+6.0
ASAK				eS		Sn	06 47 46.7	+3.9

KRSC 27 06:46:25.5±2.4, 54°.77N×165°.72E, h40km±16km, ML3.9, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BKI	**Bering**	**0.46**	**18**	eP		Pn	06 46 36.5	+0.7
BKI				eS		Sn	06 46 42.1	-0.9
MKZ	**Mys Kozlova**	**2.33**	**266**	eP		Pn	06 47 05.9	+4.7
MKZ				eS		Sn	06 47 32.2	+3.7
TUMD	**Tumrok D**	**3.10**	**280**	S		Sn	06 47 50.9	+3.3
BZGR	**Bezymyannyi-Gr**	**3.10**	**294**	eS		Sn	06 47 52.3	+4.5
KZV	**Kizimen**	**3.15**	**279**	eP		Pn	06 47 17.4	+4.7
KZV				eS		Sn	06 47 52.5	+3.5
TUMR	**Tumrok**	**3.25**	**281**	eP		Pn	06 47 19.5	+5.5
KLY	**Klyuchi**	**3.27**	**300**	eS		Sn	06 47 52.1	+0.3
KMNR	**Kamenistaya**	**3.29**	**290**	eS		Sn	06 47 59.0	+6.5
KIRR	**Kirishev**	**3.29**	**293**	eS		Sn	06 47 56.0	+3.4
KII	**Karymskiy**	**3.73**	**261**	eS		Sn	06 48 08.4	+5.0
SPN	**Mys Shipunski**	**3.76**	**246**	P		Pn	06 47 26.5	+5.6
SPN				S		Sn	06 48 07.0	+3.2
NLC	**Nalytchevo**	**4.09**	**250**	eS		Sn	06 48 15.4	+3.5
SDLR	**Sedlovina**	**4.30**	**252**	eS		Sn	06 48 22.5	+5.2
UGLR	**Uglovaya**	**4.36**	**252**	eS		Sn	06 48 25.1	+6.3
KRER	**Koryakskii**	**4.36**	**253**	eS		Sn	06 48 23.9	+4.9
AVH	**Avacha**	**4.38**	**253**	eS		Sn	06 48 24.7	+5.4
KRX	**Arik**	**4.40**	**254**	eS		Sn	06 48 24.4	+4.6
PET	**Petropavlovsk**	**4.53**	**250**	eS		Sn	06 48 26.5	+3.7
RUS	**Russkaya**	**4.88**	**244**	eS		Sn	06 48 34.8	+3.2
KRMR	**Karymshinskiy**	**4.90**	**250**	eS		Sn	06 48 35.3	+3.4
GRL	**Gorelyy**	**5.06**	**247**	eS		Sn	06 48 40.5	+4.5
ASAK	**Asacha**	**5.23**	**246**	eS		Sn	06 48 46.3	+6.0

ISK 27 07:01:46.0, 40°.29N×25°.51E, h9km, ML2.7/15
ATH 27 07:01:46.7, 40°.31N×25°.53E, h12km±4km, ML2.4/1, Error ellipse: s-maj=4.2km s-min=1.4km az=2.0
DDA 27 07:01:47.2, 40°.30N×25°.63E, h7km±4km, ML2.7
ISC 27 07:01:47.2±0.9, 40°.32N±0°.03×25°.56E±0°.02, h10km±8km, n35, σ1$19/45, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.15**	**351**	P		**Pg**	**07 01 50.6**	**-0.1**
SMTH				S		**Sg**	**07 01 53.1**	**0.0**
SMTH				AML	AML		07 01 53.2	
	comp=N,4910μm,0.2s							
SMTH				AML	AML		07 01 53.4	
	comp=E,3307μm,0.2s							
GADA	**Gvkgeada**	**0.29**	**116**	PG		**Pg**	**07 01 53.1**	**+0.1**
GADA				SG		**Sg**	**07 01 57.6**	**+0.7**
BOZC	**Bozcaada**	**0.61**	**141**	PG		**Pg**	**07 01 58.5**	**-0.5**
BOZC				SG		**Sg**	**07 02 07.3**	**+0.3**
ENEZ	**Enez**	**0.61**	**47**	PG		**Pg**	**07 01 59.1**	**-0.1**
ENEZ				SG		**Sb**	**07 02 09.7**	**+1.0**
ALN	**Alexandroupoli**	**0.69**	**32**	P		**Pg**	**07 02 00.3**	**-0.1**
ALN				S		**Sg**	**07 02 09.9**	**+0.4**
ALN	**Alexandroupoli**	**0.69**	**32**	PG		**Pg**	**07 02 00.4**	**-0.1**
THAS	**Thassos island**	**0.70**	**294**	P		**Pg**	**07 01 60.0**	**-0.8**
THAS				S		**Sg**	**07 02 09.0**	**-1.0**
EZN	**Ezine**	**0.77**	**130**	PG		**Pg**	**07 02 01.3**	**-0.7**
ERIK	**Erikli-Kesan**	**0.81**	**64**	PG		**Pg**	**07 02 02.4**	**-0.4**
RDO	**Rodhopi**	**0.83**	**359**	P		**Pg**	**07 02 02.5**	**-0.7**
RDO	**Rodhopi**	**0.83**	**359**	PG		**Pg**	**07 02 02.8**	**-0.4**
LPK	**Lapseki**	**0.92**	**86**	PG		**Pg**	**07 02 04.8**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.95**	**127**	IAML			07 02 05.0	
	comp=E,112nm,0.2s							
BAYC				*i* P		**Pg**	**07 02 05.1**	**-0.5**
BAYC				*i* S		**Sg**	**07 02 17.9**	**0.0**
BAYC				IAML			07 02 18.0	
	comp=N,98nm,0.4s							
KESN	**Edirne-Kesan**	**0.99**	**59**	*i* S		**Sg**	**07 02 18.9**	**-0.4**
KAVA	**Kavala**	**1.05**	**311**	P		**Pg**	**07 02 06.4**	**-0.9**
SIGR	**SIGRI**	**1.13**	**168**	P		**Pb**	**07 02 07.6**	**-1.2**
SIGR	**SIGRI**	**1.13**	**168**	PN		**Pb**	**07 02 08.0**	**-0.8**
UKOP	**Uzunkopru-Edir**	**1.15**	**45**	PN		**Pb**	**07 02 09.1**	**0.0**
PRK	**Paraskevi**	**1.20**	**153**	P		**Pn**	**07 02 09.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.29**	**73**	PN		**Pn**	**07 02 11.0**	**-0.3**
SART	**Tekirdag**	**1.29**	**73**	*i* P		**Pn**	**07 02 09.9**	**-1.5**
SART				*i* S		**Sg**	**07 02 28.9**	**+0.2**
KRBG	**Karabiga-Canak**	**1.33**	**86**	PN		**Pn**	**07 02 11.1**	**-0.7**
KDZ	**Kurdzhali**	**1.33**	**355**	PN		**Pn**	**07 02 11.5**	**-0.4**
MRMT	**Marmara Adasi**	**1.58**	**79**	PN		**Pn**	**07 02 15.0**	**-0.3**
DKL	**Dikili**	**1.62**	**140**	PN		**Pn**	**07 02 15.6**	**-0.2**
BALY	**Balya**	**1.68**	**109**	*i* P		**Pn**	**07 02 16.5**	**-0.2**
BALY				*i* S		**Sb**	**07 02 40.2**	**+0.7**
EDC	**Edincik**	**1.76**	**88**	PN		**Pn**	**07 02 18.1**	**+0.3**
BALB	**Balikesir**	**1.91**	**110**	PN		**Pn**	**07 02 19.2**	**-0.5**
STEP	**BALIKESIR_Sava**	**1.91**	**119**	*i* S		**Sb**	**07 02 46.5**	**+0.5**
TSLK	**Tsoukalades, L**	**4.07**	**250**	P		**Pg**	**07 03 03.6**	**-1.6**
LKD2	**Lefkada island**	**4.09**	**250**	P		**Pb**	**07 03 01.2**	**+2.0**
EVGI	**Lefkada island**	**4.16**	**248**	P		**Pn**	**07 02 52.7**	**+2.0**
FSK	**Fiskardo**	**4.29**	**246**	P		**Pn**	**07 02 49.3**	**-3.3**
FSK				S		**Pn**	**07 02 51.1**	**-1.5**
KFL	**Anninata**	**4.31**	**241**	P		**Pn**	**07 02 57.3**	**+4.4**
VLS	**Valsamata**	**4.41**	**243**	P		**Pn**	**07 02 55.8**	**+1.6**

NNC 27 07:15:13.9±0.3, 50°.01N×78°.69E, h0km, mb3.7, mpv3.2, 20C-7D, Error ellipse: s-maj=3.0km s-min=1.4km az=65.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KUR07	**Kurchatov Arra**	**0.58**	**349**	⇑P		Pg	07 15 25.3	+0.2
KUR07				⇓S		Sg	07 15 34.2	+1.6
KUR06	**Kurchatov Arra**	**0.60**	**350**	⇑P		Pg	07 15 25.9	+0.4
KUR06				⇑S		Sg	07 15 34.6	+1.3
KUR14	**Kurchatov Arra**	**0.60**	**354**	⇓P		Pg	07 15 25.8	+0.2
KUR14				⇑S		Sg	07 15 34.2	+0.8
KUR15	**Kurchatov Arra**	**0.61**	**352**	⇓P		Pg	07 15 25.8	+0.1
KUR15				⇑S		Sg	07 15 34.1	+0.5
KURBB	**Kurchatov Arra**	**0.62**	**350**	⇓P		Pg	07 15 26.1	+0.3
	38nm,0.3s							
KURBB				⇑S		Sg	07 15 34.7	+0.8
	86nm,0.5s							
KUR16	**Kurchatov Arra**	**0.63**	**349**	⇑P		Pg	07 15 26.3	+0.3
KUR16				⇑S		Sg	07 15 35.3	+1.2
KUR17	**Kurchatov Arra**	**0.64**	**347**	⇑P		Pg	07 15 26.5	+0.4
KUR17				⇑S		Sg	07 15 35.7	+1.4
KUR05	**Kurchatov Arra**	**0.64**	**351**	⇑P		Pg	07 15 26.1	0.0
KUR05				⇓S		Sg	07 15 35.0	+0.6
KUR04	**Kurchatov Arra**	**0.66**	**352**	⇑P		Pg	07 15 26.6	+0.1
KUR04				⇑S		Sg	07 15 35.9	+0.8
SEM	**Semipalatinsk**	**1.08**	**68**	P		Pg	07 15 34.7	+0.1
	9.4nm,0.1s							
SEM				S		Sb	07 15 50.0	-0.2
	93nm,0.3s							
BRZS	**Berezniki**	**3.88**	**272**	Pg		Pg	07 16 26.3	-2.0
	16nm,0.2s							
BRZS				Lg		Lg	07 17 18.6	
	23nm,0.4s							
MAKZ	**Makanchi**	**3.88**	**144**	⇓Pn		Pn	07 16 15.5	+0.6
	0.5nm,0.5s							
MAKZ				⇑Pg		Pb	07 16 23.3	+0.1
	2.6nm,0.6s							
MAKZ				⇑Lg		Lg	07 17 16.2	
	11nm,0.6s							
MK31	**Makanchi Array**	**4.01**	**142**	⇑Pn		Pn	07 16 17.7	+1.0
	0.1nm,0.1s,baz=322,slow=10,SNR=6s							
MK31				⇑Pg		Pb	07 16 26.8	+1.2
	2.0nm,0.5s,baz=324,slow=14,SNR=26							
MK31				Lg		Lg	07 17 21.6	
	7.1nm,0.5s,baz=328,slow=25,SNR=22							
KAPS	**Kapalarasan**	**4.75**	**174**	Pg		Pb	07 16 39.6	+1.5
	1.5nm,0.4s							
KAPS				Lg		Lg	07 17 42.1	
	10nm,0.5s							
ZSN	**Zaisan**	**4.82**	**120**	Pg		Pb	07 16 36.5	-2.8
	4.7nm,0.3s							
ZSN				Lg		Lg	07 17 36.8	
	11nm,0.6s							
BRVK	**Borovoye**	**6.07**	**303**	⇑Pn		Pn	07 16 45.3	+0.4
BRVK				⇑Sn		Sn	07 17 56.5	+1.5
	2.1nm,0.6s							
BRVK				⇑Lg		Lg	07 18 25.0	
	2.0nm,0.5s							
PDGK	**Podgornoye**	**6.71**	**175**	⇓Lg		Lg	07 18 45.8	
	5.3nm,0.5s							

IDC 27 07:22:29.0±1.2, 38°.46N×20°.26E, h0km, mb3.8/8, mb1 3.7/11, mb1mx3.5/47, mbtmp3.7/11, ML3.1/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/57, Error ellipse: s-maj=24.8km s-min=19.3km az=54.0
THE 27 07:22:30.2, 38°.32N×20°.39E, h2km±20km, ML3.3/9, Error ellipse: s-maj=20.1km s-min=0.4km az=96.0
ATH 27 07:22:30.5, 38°.30N×20°.47E, h15km±1km, ML3.5/4, Error ellipse: s-maj=2.8km s-min=0.9km az=259.0
ISC 27 07:22:29.9±0.9, 38°.32N±0°.02×20°.40E±0°.04, h12km±6km, n58, σ1$06/74, mb3.9/8, Greece

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
FSK	**Fiskardo**	**0.18**	**43**	P		**Pg**	**07 22 34.1**	**+0.2**
FSK				S		**Sg**	**07 22 36.5**	**-0.2**
	13μm,0.6s							
FSK	**Fiskardo**	**0.18**	**43**	P		**Pg**	**07 22 34.3**	**+0.4**
FSK				S		**Sg**	**07 22 37.8**	**+1.1**
VLS	**Valsamata**	**0.21**	**135**	P		**Pg**	**07 22 34.1**	**-0.2**
VLS				S		**Sg**	**07 22 37.2**	**-0.2**
	25μm,0.4s							
VLS	**Valsamata**	**0.21**	**135**	P		**Pg**	**07 22 34.1**	**-0.2**
VLS				S		**Sg**	**07 22 37.1**	**-0.3**
VLS				AML	AML		07 22 40.4	
	comp=E,37685μm,0.6s							
VLS				AML	AML		07 22 41.1	
	comp=N,62327μm,0.5s							
EVGI	**Lefkada island**	**0.36**	**34**	P		**Pg**	**07 22 37.6**	**+0.6**
EVGI				S		**Sg**	**07 22 42.1**	**+0.3**
	comp=N,3μm,0.3s							
EVGI	**Lefkada island**	**0.36**	**34**	P		**Pg**	**07 22 37.4**	**+0.4**
EVGI				S		**Sg**	**07 22 43.4**	**+1.5**
KFL	**Anninata**	**0.37**	**125**	P		**Pg**	**07 22 37.1**	**-0.2**
KFL				S		**Sg**	**07 22 43.0**	**+0.8**
	comp=N,15μm,0.5s							
KFL	**Anninata**	**0.37**	**125**	P		**Pg**	**07 22 37.2**	**-0.1**
KFL				S		**Sg**	**07 22 41.8**	**-0.4**
KFL				AML	AML		07 22 47.5	
	comp=N,28085μm,0.7s							
KFL				AML	AML		07 22 47.6	
	comp=E,25971μm,0.5s							
MGNA	**Meganis**	**0.45**	**42**	P		**Pb**	**07 22 39.2**	**-0.5**
VLMS	**Volimes, Zakyn**	**0.49**	**155**	P		**Pb**	**07 22 39.5**	**-0.9**
VLMS				S		**Sb**	**07 22 46.1**	**-1.5**
VLMS				AML	AML		07 22 48.2	
	comp=N,27148μm,0.7s							
VLMS				AML	AML		07 22 49.1	
	comp=E,14849μm,0.4s							
LKD2	**Lefkada island**	**0.51**	**23**	P		**Pg**	**07 22 40.1**	**+0.3**
LKD2				S		**Sn**	**07 22 47.9**	**-3.7**
	comp=E,3μm,0.5s							
LKD2	**Lefkada island**	**0.51**	**23**	P		**Pb**	**07 22 40.3**	**-0.4**
TSLK	**Tsoukalades, L**	**0.54**	**21**	P		**Pb**	**07 22 40.8**	**-0.5**
TSLK				S		**Sb**	**07 22 48.3**	**-0.7**
	comp=E,3μm,0.7s							
TSLK	**Tsoukalades, L**	**0.54**	**21**	P		**Pb**	**07 22 41.0**	**-0.3**
TSLK				S		**Sn**	**07 22 49.5**	**-2.9**
TSLK				AML	AML		07 22 56.8	
	comp=E,6652μm,0.8s							
TSLK				AML	AML		07 23 01.2	
	comp=N,6337μm,0.7s							
RLS	**Riolos of Patr**	**0.88**	**107**	P		**Pb**	**07 22 46.2**	**-0.8**
RLS				S		**Sg**	**07 23 00.4**	**+2.1**
	comp=N,1μm,0.6s							
RLS	**Riolos of Patr**	**0.88**	**107**	P		**Pb**	**07 22 46.5**	**-0.6**
PVO	**Paravola**	**0.93**	**71**	P		**Pb**	**07 22 48.2**	**+0.3**
PVO				S		**Sn**	**07 23 01.9**	**-0.1**
	comp=N,2μm,0.6s							
PVO	**Paravola**	**0.93**	**71**	P		**Pb**	**07 22 48.1**	**+0.3**
DRO	**Drossia**	**1.09**	**109**	P		**Pb**	**07 22 50.3**	**-0.5**
DRO	**Drossia**	**1.09**	**109**	P		**Pb**	**07 22 50.5**	**-0.3**
EFP	**Efpalio**	**1.18**	**85**	P		**Pn**	**07 22 51.8**	**-0.4**
EFP	**Efpalio**	**1.18**	**85**	P		**Pn**	**07 22 51.9**	**-0.4**
IGT	**Igoumenitsa**	**1.21**	**357**	P		**Pn**	**07 22 52.7**	**+0.1**
IGT				S		**Sg**	**07 23 11.2**	**+2.4**
	comp=N,872nm,0.5s							
IGT	**Igoumenitsa**	**1.21**	**357**	P		**Pg**	**07 22 53.6**	**+0.5**
ANX	**Ano Chora**	**1.22**	**77**	P		**Pn**	**07 22 52.8**	**-0.1**
ANX	**Ano Chora**	**1.22**	**77**	P		**Pn**	**07 22 53.1**	**+0.3**
LAKA	**Lakka**	**1.24**	**93**	P		**Pn**	**07 22 52.2**	**-0.9**
LAKA	**Lakka**	**1.24**	**93**	P		**Pn**	**07 22 52.5**	**-0.5**
EVR	**Evrytania**	**1.25**	**61**	P		**Pg**	**07 22 53.8**	**-0.1**
EVR	**Evrytania**	**1.25**	**61**	P		**Pg**	**07 22 53.9**	**-0.1**
AMT	**Artemida-Makis**	**1.30**	**127**	P		**Pn**	**07 22 53.7**	**-0.2**
AMT	**Artemida-Makis**	**1.30**	**127**	P		**Pn**	**07 22 55.1**	**+1.2**
SERG	**Sergoula**	**1.30**	**86**	P		**Pn**	**07 22 53.4**	**-0.5**
TRIZ	**Trizonia**	**1.31**	**88**	P		**Pn**	**07 22 53.7**	**-0.3**
KALE	**Kalithea**	**1.37**	**87**	P		**Pn**	**07 22 54.8**	**-0.1**
KLV	**Kalavryta, Ach**	**1.40**	**101**	P		**Pn**	**07 22 55.4**	**+0.1**
KLV	**Kalavryta, Ach**	**1.40**	**101**	P		**Pn**	**07 22 55.5**	**+0.1**
ITM	**Ithomi**	**1.66**	**133**	P		**Pn**	**07 23 00.6**	**+1.8**
OHR	**Ohrid**	**2.80**	**6**	*i* Pn		**Pb**	**07 23 18.6**	**-1.2**
STIP	**Stip**	**3.63**	**22**	*i* Pn		**Pb**	**07 23 32.5**	**-1.5**
DBRK	**Dubrovnik**	**4.67**	**339**	*e*Pn		**Pn**	**07 23 40.0**	**-0.1**
IDI	**Anoyia**	**4.71**	**129**	Pn		Pn	07 23 45.5	+4.7
	comp=N,0.2nm,0.3s,baz=243,slow=9.0,SNR=2.9							
IDI				Sn		**Sn**	**07 24 36.7**	**+1.4**
	comp=N,0.8nm,0.3s,baz=37,slow=20,SNR=2.7							
STON	**Ston**	**4.99**	**336**	*e*Pn		**Pn**	**07 23 44.2**	**-0.3**
MAKA	**Makarska**	**5.58**	**334**	Sn		**Sn**	**07 24 54.6**	**-2.2**
KIJV	**Kijevo**	**6.43**	**333**	*e*Pn		**Pn**	**07 24 05.3**	**+1.0**
KIJV				Sn		**Sn**	**07 25 17.2**	**-0.4**
ZIRJ	**Zirje**	**6.43**	**327**	*e*Pn		**Pn**	**07 24 04.3**	**0.0**
ZIRJ				Sn		**Sn**	**07 25 14.9**	**-2.7**
MORI	**Morici**	**6.57**	**329**	*e*Pn		**Pn**	**07 24 07.2**	**+0.9**
MORI				Sn		**Sn**	**07 25 19.4**	**-1.8**
BRTR	**Keskin Array B**	**10.39**	**78**	Pn		Pn	07 25 05.9	+7.0
	comp=N,0.1nm,0.3s,baz=266,slow=13,SNR=2.8							
DAVOX	**Davos/Dischmat**	**11.46**	**321**	LR		LR	07 30 05.8	
	comp=N,200nm,21.3s,baz=316,slow=40							
GERES	**GERESS Array B**	**11.58**	**337**	Pn		**Pn**	**07 25 14.9**	**-0.1**
	comp=N,0.1nm,0.3s,baz=152,slow=13,SNR=4.1							
HFS	**Hagfors**	**22.24**	**351**	P		**P**	**07 27 24.8**	**-1.5**
	comp=N,2.9nm,0.7s,baz=151,slow=9.9,SNR=3.4							
FINES	**FINESS Array B**	**23.41**	**7**	P		**P**	**07 27 38.4**	**0.0**
	comp=N,4.6nm,0.9s,baz=176,slow=9.8,SNR=6.8							
NOA	**NORSAR Array B**	**23.46**	**349**	P		**P**	**07 27 39.5**	**+0.5**
	comp=N,0.9nm,0.8s,baz=162,slow=11,SNR=3.7							
TORD	**Torodi Ar. Bea**	**30.09**	**219**	P		**P**	**07 28 40.2**	**+1.0**
	comp=N,0.6nm,0.5s,baz=30,slow=9.4,SNR=4.4							
KURBB	**Kurchatov Arra**	**42.22**	**54**	P		**P**	**07 30 22.8**	**+0.3**
	comp=N,0.2nm,0.3s,baz=278,slow=9.3,SNR=2.7							
MKAR	**Makanchi Array**	**45.30**	**58**	P		**P**	**07 30 47.9**	**+0.4**
	comp=N,0.7nm,0.5s,baz=278,slow=7.3,SNR=20							
ZALV	**Zalesovo Beam**	**45.66**	**48**	P		**P**	**07 30 50.8**	**+0.6**
	comp=N,1.9nm,0.4s,baz=271,slow=9.4,SNR=6.4							
KLR	**Kul'dur**	**73.82**	**39**	P		**P**	**07 34 05.1**	**+1.0**
	comp=N,0.8nm,0.6s,baz=286,slow=10,SNR=3.8							

MAN 27 07:22:30.2, 13°.50N×122°.01E, h22km, mb3.7, ML2.4, MS2.0, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BOAC	**Boac**	**0.16**	**255**	*e*P		Pb	07 22 35.3	-0.3
BOAC				*e*S		Sb	07 22 37.2	-2.1
GQP	**Guinayangan**	**0.58**	**47**	⇑*i*P		Pn	07 22 43.0	-0.3
GQP				*i* S		Sn	07 22 52.8	+0.7
OTRP	**Odiongan**	**1.13**	**179**	*e*P		Pb	07 22 54.0	+2.8
OTRP				*e*S		Sn	07 23 10.0	+4.3
POLP	**Polilio Island**	**1.22**	**357**	*e*P		Pn	07 22 51.9	-0.1
POLP				*e*S		Sn	07 23 07.9	0.0
SJMP	**San Jose**	**1.35**	**220**	*e*P		Pb	07 22 56.8	+2.0
SJMP				*e*S		Sb	07 23 16.7	+5.0
LUBP	**Lubang**	**1.73**	**278**	*e*P		Pn	07 22 59.6	+0.6
LUBP				*e*S		Sn	07 23 21.3	+0.9

IDC 27 08:00:09.2±4.6, 14°.41N×93°.39W, h0km, mb3.5/2, mb1 3.7/6, mb1mx3.5/37, mbtmp3.4/6, ML3.3/4, MS3.1/1, Ms1 3.1/1, ms1mx2.4/29, Error ellipse: s-maj=86.1km s-min=28.5km az=12.0
ISC 27 08:00:16.0±1.9, 14°.7N±0°.2×93°.27W±0°.08, h36km, n6, σ0$65/8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
APG	**El Apazote**	**2.73**	**83**	Pn		**Pn**	**08 00 57.4**	**-0.1**
	1.7nm,0.3s,baz=270,slow=12,SNR=20							
APG				Lg		Lg	08 01 39.9	
	5.1nm,0.3s,baz=338,slow=15,SNR=4.2							
CMIG	**Matias Romero**	**2.86**	**327**	Pn		**Pn**	**08 00 58.6**	**-0.6**
	1.5nm,0.3s,baz=155,slow=13,SNR=62							
CMIG				Sn		**Sn**	**08 01 32.8**	**+0.4**
	6.1nm,0.3s,baz=150,slow=10,SNR=4.8							
TEIG	**Tepich**	**7.29**	**40**	Pn		**Pn**	**08 02 00.4**	**+0.4**
	3.3nm,0.3s,baz=217,slow=20,SNR=16							
TEIG				Sn		**Sn**	**08 03 20.9**	**-0.7**
	baz=139,slow=19,SNR=2.5							
TEIG				LR		LR	08 05 30.8	
	comp=Z,129nm,19.9s,baz=227,slow=42							
TXAR	**Lajitas Array**	**17.47**	**328**	Pn		**P**	**08 04 18.8**	**+0.9**
	0.0nm,0.3s,baz=151,slow=13,SNR=2.2							
NVAR	**Mina Array Bea**	**32.38**	**322**	P		**P**	**08 06 42.1**	**-0.4**
	0.1nm,0.5s,baz=134,slow=11,SNR=3.1							
YKA	**Yellowknife Ar**	**50.10**	**347**	P		**P**	**08 09 07.2**	**+0.1**
	0.7nm,0.7s,baz=155,slow=7.3,SNR=11							

LSZ 27 08:05:42.5±0.3, 15°.48S×28°.25E, h10km, MD2.2
ISC 27 08:05:44.5±2.2, 17°.0S±0°.2×27°.5E±0°.3, h10km, n7, σ3$22/15, Zimbabwe

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
ITZ	**Itezhi-Tezhi**	**1.90**	**312**	*i* P		**Pb**	**08 06 18.7**	**-0.6**
ITZ				*i*			08 06 19.1	
	baz=83,slow=7.9							
ITZ				*i* S		**Sg**	**08 06 45.1**	**-0.4**
ITZ	**Itezhi-Tezhi**	**1.90**	**312**	*i* P		**Pn**	**08 06 17.4**	**+0.3**
ITZ				*i*			08 06 17.4	
	baz=103,slow=28							
ITZ				AMP			08 06 17.5	
	comp=Z,179nm,0.1s							
ITZ				*i* S		**Sg**	**08 06 45.6**	**0.0**
ITZ	**Itezhi-Tezhi**	**1.90**	**312**	*i* P		**Pb**	**08 06 18.7**	**-0.6**
IT

VLS	**Valsamata**	**0.12**	**108**	P	**Pg**	**08 44 47.3**	**-0.3**
VLS				S	**Sg**	**08 44 49.5**	**0.0**
VLS				AML	AML	08 44 49.7	
	comp=N,88780µm,0.2s						
VLS				AML	AML	08 44 50.0	
	comp=E,58446µm,0.1s						
FSK	**Fiskardo**	**0.26**	**22**	P	**Pg**	**08 44 49.9**	**-0.2**
FSK				S	**Sg**	**08 44 53.8**	**+0.2**
	comp=E,3µm,0.3s						
FSK	**Fiskardo**	**0.26**	**22**	P	**Pg**	**08 44 50.0**	**0.0**
FSK				S	**Sg**	**08 44 54.4**	**+0.8**
KFL	**Anninata**	**0.29**	**111**	P	**Pg**	**08 44 50.5**	**-0.2**
KFL				S	**Sg**	**08 44 55.5**	**+0.9**
	comp=E,18µm,0.4s						
KFL	**Anninata**	**0.29**	**111**	P	**Pg**	**08 44 50.5**	**-0.2**
KFL				S	**Sg**	**08 44 55.9**	**+1.2**
KFL				AML	AML	08 44 56.0	
	comp=E,54058µm,0.4s						
KFL				AML	AML	08 44 58.1	
	comp=N,21781µm,0.3s						
VLMS	**Volimes, Zakyn**	**0.38**	**152**	P	**Pg**	**08 44 52.1**	**-0.3**
VLMS				S	**Sg**	**08 44 58.6**	**+1.2**
VLMS				AML	AML	08 45 00.2	
	comp=N,19857µm,0.3s						
VLMS				AML	AML	08 45 00.7	
	comp=E,16972µm,0.2s						
EVGI	**Lefkada island**	**0.44**	**23**	P	**Pg**	**08 44 53.2**	**-0.2**
EVGI				S	**Sg**	**08 45 00.0**	**+0.8**
EVGI	**Lefkada island**	**0.44**	**23**	P	**Pg**	**08 44 53.2**	**-0.2**
EVGI				S	**Sg**	**08 44 60.0**	**+0.8**
MGNA	**Meganis**	**0.52**	**32**	P	**Pg**	**08 44 54.4**	**-0.5**
MGNA				S	**Sg**	**08 45 01.8**	**+0.1**
MGNA				AML	AML	08 45 03.3	
	comp=E,3001µm,0.2s						
MGNA				AML	AML	08 45 10.7	
	comp=N,2001µm,0.5s						
ZAK2	**Zakynthos**	**0.56**	**139**	P	**Pg**	**08 44 55.9**	**+0.2**
LKD2	**Lefkada island**	**0.60**	**17**	P	**Pg**	**08 44 55.7**	**-0.7**
LKD2				S	**Sg**	**08 45 05.1**	**+0.9**
	comp=N,835nm,0.7s						
LKD2	**Lefkada island**	**0.60**	**17**	P	**Pg**	**08 44 55.7**	**-0.7**
LKD2				S	**Sg**	**08 45 04.8**	**+0.6**
LKD2				AML	AML	08 45 10.7	
	comp=E,1575µm,0.6s						
LKD2				AML	AML	08 45 13.4	
	comp=N,1757µm,0.6s						
TSLK	**Tsoukalades, L**	**0.63**	**16**	P	**Pg**	**08 44 56.3**	**-0.8**
TSLK	**Tsoukalades, L**	**0.63**	**16**	P	**Pg**	**08 44 56.2**	**-0.9**
PDO	**Prodromos**	**0.70**	**57**	P	**Pg**	**08 44 57.9**	**-0.4**
RLS	**Riolos of Patr**	**0.83**	**101**	P	**Pg**	**08 45 00.2**	**-0.5**
RLS				S	**Sb**	**08 45 13.0**	**+0.3**
	comp=N,1µm,0.4s						
RLS	**Riolos of Patr**	**0.83**	**101**	P	**Pg**	**08 45 00.3**	**-0.5**
RLS				S	**Sb**	**08 45 12.4**	**-0.3**
RLS				AML	AML	08 45 15.7	
	comp=E,2959µm,0.5s						
RLS				AML	AML	08 45 16.8	
	comp=N,2369µm,0.3s						
PVO	**Paravola**	**0.94**	**65**	P	**Pg**	**08 45 02.8**	**-0.2**
PVO				S	**Sb**	**08 45 17.3**	**+1.2**
	comp=N,2µm,0.5s						
PVO	**Paravola**	**0.94**	**65**	P	**Pg**	**08 45 02.7**	**-0.2**
PVO				AML	AML	08 45 21.0	
	comp=E,5218µm,0.4s						
PVO				AML	AML	08 45 24.5	
	comp=N,4570µm,0.6s						
DRO	**Drossia**	**1.04**	**104**	P	**Pg**	**08 45 04.0**	**-0.8**
DRO				S	**Sn**	**08 45 20.4**	**-0.1**
	comp=N,2µm,0.4s						
DRO	**Drossia**	**1.04**	**104**	P	**Pg**	**08 45 04.0**	**-0.8**
DRO				S	**Sg**	**08 45 18.6**	**+0.4**
DRO				AML	AML	08 45 26.5	
	comp=N,4003µm,0.4s						
DRO				AML	AML	08 45 28.1	
	comp=E,4619µm,0.3s						
EFP	**Efpalio**	**1.17**	**79**	P	**Pg**	**08 45 06.1**	**-1.3**
EFP	**Efpalio**	**1.17**	**79**	P	**Pg**	**08 45 06.3**	**-1.1**
EFP				AML	AML	08 45 30.6	
	comp=E,2500µm,0.5s						
EFP				AML	AML	08 45 38.6	
	comp=N,1449µm,0.6s						
LAKA	**Lakka**	**1.21**	**88**	P	**Pb**	**08 45 06.9**	**-1.2**
LAKA				S	**Sn**	**08 45 26.1**	**+1.3**
	comp=N,735nm,0.5s						
LAKA	**Lakka**	**1.21**	**88**	P	**Pb**	**08 45 07.1**	**-1.0**
AMT	**Artemida-Makis**	**1.22**	**124**	P	**Pb**	**08 45 07.0**	**-1.1**
AMT	**Artemida-Makis**	**1.22**	**124**	P	**Pb**	**08 45 08.1**	**0.0**
AMT				AML	AML	08 45 39.3	
	comp=E,1657µm,0.6s						
AMT				AML	AML	08 45 39.6	
	comp=N,1791µm,0.7s						
ANX	**Ano Chora**	**1.22**	**72**	P	**Pb**	**08 45 07.2**	**-1.1**
ANX	**Ano Chora**	**1.22**	**72**	P	**Pb**	**08 45 07.8**	**-0.5**
ANX				AML	AML	08 45 33.7	
	comp=E,3367µm,0.7s						
ANX				AML	AML	08 45 35.0	
	comp=N,4598µm,0.6s						
EVR	**Evrytania**	**1.28**	**57**	P	**Pg**	**08 45 10.4**	**+0.9**
EVR	**Evrytania**	**1.28**	**57**	P	**Pn**	**08 45 08.5**	**-0.7**
EVR				AML	AML	08 45 36.0	
	comp=N,730µm,0.8s						
EVR				AML	AML	08 45 37.8	
	comp=E,692µm,1.1s						
SERG	**Sergoula**	**1.29**	**81**	P	**Pn**	**08 45 07.9**	**-1.3**
SERG	**Sergoula**	**1.29**	**81**	P	**Pn**	**08 45 08.4**	**-0.8**
SERG				AML	AML	08 45 34.5	
	comp=N,1408µm,0.4s						
SERG				AML	AML	08 45 35.2	
	comp=E,1378µm,0.3s						
TRIZ	**Trizonia**	**1.29**	**83**	P	**Pn**	**08 45 08.0**	**-1.2**
IGT	**Igoumenitsa**	**1.32**	**356**	P	**Pg**	**08 45 10.2**	**+0.1**
IGT				S	**Sn**	**08 45 29.0**	**+1.6**
	comp=E,290nm,0.5s						
IGT	**Igoumenitsa**	**1.32**	**356**	P	**Pn**	**08 45 09.3**	**-0.3**
IGT				S	**Sn**	**08 45 27.4**	**+0.1**
IGT				AML	AML	08 45 30.4	
	comp=E,390µm,0.9s						
IGT				AML	AML	08 45 31.5	
	comp=N,467µm,0.4s						
ALIK	**Aliki, Aigiali**	**1.32**	**88**	P	**Pn**	**08 45 09.2**	**-0.4**
KALE	**Kalithea**	**1.35**	**82**	P	**Pn**	**08 45 08.5**	**-1.6**
KLV	**Kalavryta, Ach**	**1.36**	**97**	P	**Pn**	**08 45 09.3**	**-0.9**
KLV				S	**Sg**	**08 45 29.3**	**+0.7**
KLV	**Kalavryta, Ach**	**1.36**	**97**	P	**Pn**	**08 45 09.7**	**-0.6**
KLV				AML	AML	08 45 34.8	
	comp=E,782µm,0.4s						
KLV				AML	AML	08 45 43.4	
	comp=N,1017µm,1.1s						
AGG	**Agios Georgios**	**1.69**	**61**	P	**Pb**	**08 45 16.2**	**0.0**
VLX	**Vlachokerasia**	**1.75**	**118**	P	**Pb**	**08 45 17.8**	**+0.5**
THL	**Klokotos Trika**	**1.82**	**42**	P	**Pb**	**08 45 17.7**	**-0.8**
THL	**Klokotos Trika**	**1.82**	**42**	P	**Pb**	**08 45 17.6**	**-0.8**
BRTR	**Keskin Array B**	**10.39**	**78**	Pn	**Pn**	**08 47 18.1**	**+3.8**
	comp=N,0.1nm,0.3s,baz=267,slow=12,SNR=2.6						
FINES	**FINESS Array B**	**23.52**	**7**	P	**P**	**08 49 52.9**	**-2.1**
	comp=N,0.9nm,0.6s,baz=172,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**08 53 02.2**	**-1.2**
	comp=N,0.7nm,0.4s,baz=276,slow=6.8,SNR=19						
ZALV	**Zalesovo Beam**	**45.71**	**48**	P	**P**	**08 53 04.8**	**-1.3**
	comp=N,1.6nm,0.5s,baz=264,slow=9.8,SNR=6.8						

*IDC **27** 08:45:20.4±1.8,30.˚26S×177.˚87W,h0km,mb4.2/3, mb1 4.4/4,mb1mx4.0/32,mbtmp4.2/4,ML3.1/1,Error ellipse: s-maj=44.0km s-min=21.5km az=110.0*
*NEIC **27** 08:45:25.7±0.2,30.˚11S±0.˚07×178.˚1W±0.˚2,h30km±6km, mb4.2/7,Error ellipse: s-maj=21.8km s-min=10.0km az=93.0*

ISC 27 08:45:27.7±1.2,30.˚0S±0.˚1×178.˚0W±0.˚2,h50km,n18, σ0s71/16,mb4.1/7,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.77**	**4**	Pn	**Pn**	**08 45 42.2**	**-0.1**
	473nm,0.3s,baz=95,slow=13,SNR=18						
RAO				Sn	**Sn**	**08 45 53.3**	**+0.4**
	818nm,0.3s,baz=287,slow=19,SNR=15						
RAO	**Raoul Island**	**0.77**	**4**	Pn	**Pn**	**08 45 42.0**	**-0.3**
RAO				Sn	**Sn**	**08 45 53.7**	**+0.7**
URZ	**Urewera**	**9.17**	**205**	Pn	Pn	08 47 29.4	-7.8
	0.2nm,0.3s,baz=59,slow=16,SNR=5.4						
STKA	**Stephens Creek**	**34.59**	**256**	P	**P**	**08 52 12.9**	**+1.2**
	4.0nm,0.8s,baz=89,slow=10,SNR=15						
STKA	**Stephens Creek**	**34.58**	**256**	P	**P**	**08 52 12.9**	**+1.2**
	comp=E,1.1nm,0.9s			IAmb	IAmb	08 52 14.1	
BBOO	**Buckleboo**	**39.09**	**254**	P	**P**	**08 52 49.3**	**-0.7**
BBOO				IAmb	IAmb	08 53 02.1	
	comp=E,3.3nm,1.1s						
AS31	**Alice Springs**	**43.14**	**267**	P	**P**	**08 53 23.8**	**+0.2**
ASAR	**Alice Springs**	**43.15**	**267**	P	**P**	**08 53 23.0**	**-0.6**
	comp=Z,1.3nm,0.5s,baz=104,slow=7.3,SNR=29						
WR0	**Warramunga Arr**	**43.92**	**272**	P	**P**	**08 53 29.4**	**-0.4**
WR0				IAmb	IAmb	08 53 31.4	
	comp=Z,3.6nm,1.0s						
WB2	**Warramunga Arr**	**44.09**	**272**	P	**P**	**08 53 30.8**	**-0.3**
WB2				IAmb	IAmb	08 53 35.2	
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**44.10**	**272**	P	**P**	**08 53 30.8**	**-0.5**
	comp=Z,2.1nm,0.4s,baz=111,slow=8.1,SNR=13						
WB0	**Warramunga Arr**	**44.12**	**272**	P	**P**	**08 53 31.0**	**-0.5**
WB0				IAmb	IAmb	08 53 32.6	
	comp=Z,6.1nm,1.0s						
QSPA	**South Pole Qui**	**60.09**	**180**	P	**P**	**08 55 30.0**	**+0.4**
H10N3	**ASCENSION HYDR**	**139.15**	**154**	T	T	11 40 38.9	
	baz=203						
H10N1	**ASCENSION HYDR**	**139.15**	**155**	T	T	11 40 41.1	
	baz=203						
H10N2	**ASCENSION HYDR**	**139.16**	**155**	T	T	11 40 39.9	
	baz=203						
FINES	**FINESS Array B**	**144.79**	**340**	PKPbc	**PKPab**	**09 04 56.1**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=49,slow=4.2,SNR=7.3						
TORD	**Torodi Ar. Bea**	**163.21**	**179**	PKPab	**PKPab**	**09 06 15.6**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=182,slow=3.8,SNR=2.5						

WEL 27 08:48:22.8,40.˚S±2.˚×17.˚E±.˚,h73km±8km,M3.3/26, mB5.2/1,ML3.5/25,MLv3.3/26,Mw(mB)4.6/1,Error ellipse: s-maj=0.0km s-min=0.0km az=92.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAHZ	**Kahuranaki**	**0.12**	**348**	P	Pn	08 48 32.5	-1.0
WPHZ	**Waipukurau**	**0.39**	**247**	P	Pn	08 48 35.7	+0.8
BHHZ	**Black Hill Sta**	**0.78**	**303**	P	Pn	08 48 38.5	-0.4
WHHZ	**Waihua**	**0.87**	**17**	P	Pn	08 48 40.5	+0.6
MOVZ	**Moawhango**	**1.03**	**299**	P	Pn	08 48 40.7	-1.1
MTHZ	**Maungataniwha**	**1.06**	**357**	P	Pn	08 48 42.2	0.0
KNZ	**Kokohu**	**1.07**	**34**	P	Pn	08 48 43.0	+0.7
MHGZ	**Mahia Peninsul**	**1.08**	**46**	P	Pn	08 48 43.7	+1.2
MRHZ	**Matea Rd**	**1.15**	**340**	P	Pn	08 48 43.7	+0.4
SNGZ	**Shannon Statio**	**1.18**	**17**	P	Pn	08 48 44.2	+0.5
HATZ	**Hinemaiaia**	**1.20**	**328**	P	Pn	08 48 44.5	+0.5
MTVZ	**Mangateitei**	**1.23**	**295**	P	Pn	08 48 42.2	-2.2
PRGZ	**Paritu Road**	**1.25**	**38**	P	Pn	08 48 45.5	+1.0
RTZ	**Ruatahuna**	**1.30**	**2**	P	Pn	08 48 45.6	+0.3
RIGZ	**Rimuhau**	**1.38**	**29**	P	Pn	08 48 47.0	+0.8
ALRZ	**Allen Road**	**1.42**	**342**	P	Pn	08 48 47.3	+0.5
MUGZ	**Murupara**	**1.44**	**356**	P	Pn	08 48 47.3	+0.3
PRRZ	**Plateau Road**	**1.47**	**344**	P	Pn	08 48 47.9	+0.5
TKGZ	**Te Karaka**	**1.64**	**27**	P	Pn	08 48 50.2	+0.5
MWZ	**Matawai**	**1.65**	**17**	P	Pn	08 48 50.0	+0.1
URZ	**Urewera**	**1.66**	**5**	P	Pn	08 48 50.1	+0.1
HSRZ	**Hossack Road**	**1.68**	**342**	P	Pn	08 48 51.1	+0.8
TARZ	**Mount Tarawera**	**1.71**	**349**	P	Pn	08 48 51.2	+0.6
RUGZ	**Raukumara Rang**	**2.04**	**17**	P	Pn	08 48 55.5	+0.4
PUZ	**Puketiti**	**2.12**	**30**	P	Pn	08 48 55.1	-1.0
HAZ	**Te Kaha**	**2.26**	**18**	P	Pn	08 48 57.7	-0.2
TUWZ	**Tuamarina**	**2.72**	**235**	P	Pn	08 49 05.2	+1.1
BSWZ	**Blackbirch Sta**	**2.92**	**231**	P	Pn	08 49 08.2	+1.3
NNZ	**Nelson**	**2.99**	**243**	P	Pn	08 49 09.4	+1.7
QRZ	**Quartz Range**	**3.47**	**253**	P	Pn	08 49 15.3	+0.9
GVZ	**Greta Valley S**	**4.22**	**222**	P	Pn	08 49 26.6	+2.1
LTZ	**Lake Taylor**	**4.52**	**229**	P	Pn	08 49 29.8	+1.1
OKCZ	**Okains Bay**	**4.77**	**216**	P	Pn	08 49 33.3	+1.2
MQZ	**McQueen's Vall**	**4.95**	**219**	P	Pn	08 49 35.4	+0.9
AKCZ	**Akaroa Harbour**	**4.95**	**216**	P	Pn	08 49 36.0	+1.4
ODZ	**Otahua Downs**	**6.91**	**220**	P	Pn	08 50 02.4	+1.1

*ATH **27** 08:50:56.5,38.˚28N×20.˚47E,h17km±2km,ML3.7/4,Error ellipse: s-maj=3.2km s-min=1.0km az=259.0*
*THE **27** 08:50:56.0,38.˚26N×20.˚35E,h9km±1km,ML3.4/7,Error ellipse: s-maj=1.8km s-min=0.3km az=83.0*
*IDC **27** 08:50:58.6±11.0,38.˚81N×20.˚81E,h0km,mb3.8/3, mb1 3.7/4,mb1mx3.4/36,mbtmp3.6/4,Error ellipse: s-maj=212.5km s-min=30.1km az=33.0*

ISC 27 08:50:56.4±1.1,38.˚26N±0.˚03×20.˚43E±0.˚06,h15km±5km, n38,σ0s63/54,mb3.9/3,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.15**	**124**	P	**Pg**	**08 51 00.2**	**-0.1**
VLS				S	**Sg**	**08 51 03.2**	**+0.3**
VLS	**Valsamata**	**0.15**	**124**	P	**Pg**	**08 51 00.2**	**-0.1**
VLS				S	**Sg**	**08 51 02.7**	**-0.2**
VLS				AML	AML	08 51 03.6	
	comp=E,94993µm,0.1s						
VLS				AML	AML	08 51 03.6	
FSK	**Fiskardo**	**0.22**	**28**	P	**Pg**	**08 51 01.3**	**-0.1**
FSK				S	**Sg**	**08 51 05.2**	**+0.5**
	comp=E,16µm,0.2s						
FSK	**Fiskardo**	**0.22**	**28**	P	**Pg**	**08 51 01.3**	**-0.1**
FSK				S	**Sg**	**08 51 05.1**	**+0.3**
KFL	**Anninata**	**0.32**	**118**	P	**Pb**	**08 51 03.3**	**-0.5**
KFL				S	**Sb**	**08 51 08.8**	**-0.1**
	comp=E,16µm,0.5s						
KFL	**Anninata**	**0.32**	**118**	P	**Pb**	**08 51 03.3**	**-0.5**
KFL				S	**Sb**	**08 51 08.1**	**-0.7**
KFL				AML	AML	08 51 09.2	
	comp=N,35392µm,0.5s						
KFL				AML	AML	08 51 11.9	
	comp=E,37877µm,0.3s						
EVGI	**Lefkada island**	**0.40**	**26**	P	**Pg**	**08 51 04.5**	**+0.1**
EVGI				S	**Sb**	**08 51 10.9**	**-0.3**
EVGI	**Lefkada island**	**0.40**	**26**	P	**Pg**	**08 51 04.6**	**+0.1**
EVGI				S	**Sg**	**08 51 09.5**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.43**	**154**	P	**Pg**	**08 51 04.9**	**-0.1**
VLMS				S	**Sg**	**08 51 11.4**	**+0.6**
VLMS				AML	AML	08 51 12.9	
	comp=E,24062µm,0.4s						
VLMS				AML	AML	08 51 13.4	
	comp=N,38440µm,0.4s						
MGNA	**Meganis**	**0.48**	**36**	P	**Pg**	**08 51 05.8**	**-0.2**
MGNA				S	**Sg**	**08 51 11.5**	**-1.0**
MGNA				AML	AML	08 51 14.0	
	comp=N,8711µm,0.5s						
MGNA				AML	AML	08 51 14.3	
	comp=E,8022µm,0.1s						
LKD2	**Lefkada island**	**0.56**	**19**	P	**Pg**	**08 51 06.9**	**-0.4**
LKD2				S	**Sb**	**08 51 15.2**	**-0.5**
	comp=E,2µm,0.4s						
LKD2	**Lefkada island**	**0.56**	**19**	P	**Pg**	**08 51 07.0**	**-0.4**
TSLK	**Tsoukalades, L**	**0.59**	**17**	P	**Pg**	**08 51 07.8**	**-0.2**
TSLK				S	**Sb**	**08 51 16.7**	**+0.1**
	comp=E,3µm,0.7s						
TSLK	**Tsoukalades, L**	**0.59**	**17**	P	**Pg**	**08 51 07.4**	**-0.6**
PDO	**Prodromos**	**0.68**	**60**	P	**Pb**	**08 51 09.8**	**-0.2**
RLS	**Riolos of Patr**	**0.84**	**104**	P	**Pg**	**08 51 12.4**	**-0.3**
RLS	**Riolos of Patr**	**0.84**	**104**	P	**Pb**	**08 51 12.5**	**-0.2**
PVO	**Paravola**	**0.93**	**67**	P	**Pb**	**08 51 14.7**	**+0.5**
PVO				S	**Sn**	**08 51 29.4**	**+1.4**
	comp=E,3µm,0.5s						
DRO	**Drossia**	**1.06**	**107**	P	**Pg**	**08 51 16.1**	**-0.7**
EFP	**Efpalio**	**1.17**	**82**	P	**Pg**	**08 51 18.4**	**-0.6**
EFP				S	**Sn**	**08 51 36.0**	**+2.0**
	comp=E,2µm,0.5s						
EFP	**Efpalio**	**1.17**	**82**	P	**Pb**	**08 51 17.8**	**-0.6**
ANX	**Ano Chora**	**1.22**	**74**	P	**Pn**	**08 51 19.9**	**+0.9**
LAKA	**Lakka**	**1.22**	**91**	P	**Pb**	**08 51 19.2**	**0.0**
LAKA				S	**Sn**	**08 51 36.5**	**+1.3**
	comp=E,822nm,0.5s						
LAKA	**Lakka**	**1.22**	**91**	P	**Pb**	**08 51 19.0**	**-0.2**
EVR	**Evrytania**	**1.26**	**58**	P	**Pb**	**08 51 19.9**	**-0.1**
EVR	**Evrytania**	**1.26**	**58**	P	**Pb**	**08 51 19.5**	**-0.5**
SERG	**Sergoula**	**1.29**	**83**	P	**Pn**	**08 51 19.6**	**-0.3**
TRIZ	**Trizonia**	**1.30**	**85**	P	**Pn**	**08 51 20.0**	**+0.1**
KALE	**Kalithea**	**1.35**	**84**	P	**Pb**	**08 51 21.4**	**-0.1**
KALE	**Kalithea**	**1.35**	**84**	P	**Pn**	**08 51 20.7**	**-0.1**
KLV	**Kalavryta, Ach**	**1.37**	**99**	P	**Pn**	**08 51 21.5**	**+0.4**
KLV				S	**Sg**	**08 51 40.8**	**+0.1**
KLV	**Kalavryta, Ach**	**1.37**	**99**	P	**Pn**	**08 51 21.7**	**+0.5**
JAN	**Janina**	**1.43**	**13**	P	**Pb**	**08 51 23.1**	**+0.3**
VLY	**Voula,Athens**	**2.69**	**98**	P	**Pn**	**08 51 40.1**	**+1.0**
GERES	**GERESS Array B**	**11.64**	**337**	Pn	**Pn**	**08 53 42.2**	**+0.2**
	baz=159,slow=14,SNR=2.0						
FINES	**FINESS Array B**	**23.47**	**7**	P	**P**	**08 56 03.3**	**-1.9**
	comp=E,3.5nm,0.9s,baz=171,slow=9.7,SNR=6.3						
MKAR	**Makanchi Array**	**45.32**	**58**	P	**P**	**08 59 13.8**	**+0.1**
	comp=E,0.4nm,0.5s,baz=277,slow=6.7,SNR=2.5						
ZALV	**Zalesovo Beam**	**45.69**	**48**	P	**P**	**08 59 16.4**	**0.0**
	comp=E,1.4nm,0.4s,baz=276,slow=9.0,SNR=4.3						

*GEN **27** 08:53:24.9,43.˚82N×7.˚50E,h6km±1km,Ml2.8*
*ROM **27** 08:53:24.8±0.3,43.˚86N±0.˚02×7.˚52E±0.˚01,h10km±1km, ML2.9/2,Error ellipse: s-maj=2.8km s-min=0.7km az=199.0*
*LDG **27** 08:53:25.2±0.0,43.˚83N×7.˚49E,h2km,Md3.3/3,Ml3.3/46, Error ellipse: s-maj=0.9km s-min=0.6km az=141.0*
*STR **27** 08:53:25.3±0.4,44.˚N±2.˚×±.˚,h0km,MLv3.2/7*

ISC 27 08:53:25.0±0.8,43.˚85N±0.˚02×7.˚48E±0.˚01,h13km±4km, n134,σ2s07/227,Near south coast of France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBF	**Sospel**	**0.03**	**298**	*e*Pg	**Pg**	**08 53 26.4**	**-1.0**
SBF				*e*Sg	**Sg**	**08 53 27.2**	**-1.9**
	31µm,0.3s						
ESCA	**l'Escarene**	**0.07**	**257**	Pg	**Pg**	**08 53 27.3**	**-0.4**
ESCA				Sg	**Sg**	**08 53 29.2**	**-0.4**
MON	**Monaco**	**0.12**	**197**	Pg	**Pg**	**08 53 28.0**	**-0.2**
MON				Sg	**Sg**	**08 53 30.7**	**+0.2**
TURF	**col de Turini**	**0.14**	**335**	Pg	**Pg**	**08 53 28.5**	**-0.2**
TURF				Sg	**Sg**	**08 53 31.1**	**-0.2**
SAOF	**Saorge**	**0.15**	**23**	Pg	**Pg**	**08 53 28.0**	**-0.7**
SAOF				Sg	**Sg**	**08 53 31.2**	**-0.1**
SAOF	**Saorge**	**0.15**	**23**	P	**Pg**	**08 53 28.0**	**-0.7**
SAOF				S	**Sg**	**08 53 30.4**	**-0.9**
SAOF				AML	AML		
	comp=N,4730µm,0.8s						
SAOF				AML	AML		
	comp=E,5180µm,1.4s						
NEGI	**Seborga**	**0.17**	**90**	P	**Pg**	**08 53 28.2**	**-0.7**
NEGI				S	**Sg**	**08 53 30.8**	**-0.8**
NEGI				AML	AML		
	comp=N,9050µm,1.3s						
NEGI				AML	AML		
	comp=E,11600µm,0.4s						
NEGI	**Seborga**	**0.17**	**90**	P	**Pg**	**08 53 28.1**	**-0.7**
NEGI				S	**Sg**	**08 53 30.6**	**-1.0**
IMI	**Imperia**	**0.31**	**78**	P	**Pg**	**08 53 30.8**	**-0.6**
IMI				S	**Sg**	**08 53 35.3**	**-0.3**
IMI				AML	AML		
	comp=E,2865µm,1.2s						
IMI				AML	AML		
	comp=N,5510µm,0.5s						
IMI	**Imperia**	**0.31**	**78**	P	**Pg**	**08 53 30.7**	**-0.6**
IMI				S	**Sg**	**08 53 35.3**	**-0.3**
ENR	**Entracque**	**0.38**	**354**	P	**Pg**	**08 53 32.9**	**+0.2**
ENR				S	**Sg**	**08 53 38.5**	**+0.7**
ENR				AML	AML		
	comp=E,1560µm,0.4s						
ENR				AML	AML		
	comp=N,2350µm,0.6s						
ENR	**Entracque**	**0.38**	**354**	P	**Pg**	**08 53 32.9**	**+0.2**
ENR				S	**Sg**	**08 53 38.6**	**+0.7**
CALF	**Calern**	**0.41**	**257**	Pg	**Pg**	**08 53 34.1**	**+0.9**
CALF				Sg	**Sg**	**08 53 40.5**	**+1.7**
STV	**Sant Anna di V**	**0.41**	**345**	P	**Pg**	**08 53 33.5**	**+0.2**
STV				S	**Sg**	**08 53 39.3**	**+0.5**
STV				AML	AML		
	comp=E,2195µm,0.4s						
STV				AML	AML		
	comp=N,2790µm,0.3s						
STV	**Sant Anna di V**	**0.41**	**345**	P	**Pg**	**08 53 33.5**	**+0.2**
STV				S	**Sg**	**08 53 39.3**	**+0.5**
ISO	**Isola**	**0.46**	**318**	Pg	**Pg**	**08 53 34.5**	**+0.5**
ISO				Sg	**Sg**	**08 53 41.1**	**+1.0**
GBOS	**Grotte di Boss**	**0.47**	**34**	P	**Pg**	**08 53 34.2**	**-0.2**
GBOS				S	**Sg**	**08 53 40.9**	**+0.2**
GBOS				AML	AML		
	comp=E,661µm,1.2s						
GBOS				AML	AML		
	comp=N,527µm,1.0s						
GBOS	**Grotte di Boss**	**0.47**	**34**	P	**Pg**	**08 53 34.2**	**-0.2**
GBOS				S	**Sg**	**08 53 40.8**	**+0.1**
RORO	**Rocca Rossa**	**0.50**	**58**	P	**Pg**	**08 53 34.8**	**-0.1**
RORO				S	**Sg**	**08 53 41.4**	**-0.1**
RORO				AML	AML		
	comp=E,1235µm,1.4s						
RORO				AML	AML		
	comp=N,1435µm,1.1s						
RORO	**Rocca Rossa**	**0.50**	**58**	P	**Pg**	**08 53 34.6**	**-0.2**
RORO				S	**Sg**	**08 53 41.3**	**-0.3**
FRF	**La Foret Royal**	**0.67**	**245**	*e*Pg	**Pg**	**08 53 38.4**	**+0.5**
FRF	**La Foret Royal**	**0.67**	**245**	*e*P	**Pg**	**08 53 39.0**	**+1.1**
FRF	**La Foret Royal**	**0.67**	**245**	*e*Pn	**Pn**	**08 53 40.6**	**+0.5**
FRF				*e*Sg	**Sg**	**08 53 46.3**	**-0.4**
	comp=N,708nm,0.4s						
FRF				*e*Sn	**Sb**	**08 53 50.4**	**+2.8**
	comp=N,174nm,0.2s						
DOI	**San Damiano**	**0.68**	**346**	P	**Pg**	**08 53 38.3**	**+0.1**
DOI				S	**Sg**	**08 53 47.5**	**+0.4**
DOI				AML	AML		
	comp=E,1390µm,0.3s						
DOI				AML	A

MLYF				Sg	Sn	08 54 07.7	+3.0		
MONC	**Moncucco Torin**	**1.27**	**15**	P	Pn	08 53 49.0	+0.5		
MONC				AML	AML				
	comp=N,1285μm,0.5s								
MONC				AML	AML				
	comp=E,1185μm,0.5s								
RSP	**Reno Superiore**	**1.31**	**353**	P	Pn	08 53 47.8	-1.3		
RSP				AML	AML				
	comp=E,370μm,0.2s								
RSP				AML	AML				
	comp=N,310μm,1.3s								
BSTF	**la Bastide-des**	**1.32**	**272**	Pg	Pg	08 53 51.6	+1.2		
BSTF				Sg	Sn	08 54 10.4	+3.6		
BNI	**Bardonecchia**	**1.33**	**335**	P	Pn	08 53 50.0	+0.5		
SMRF	**Simiane la Rot**	**1.38**	**276**	*e*P	Pn	08 53 51.5	+1.5		
SMRF				*e*Sn	Sb	08 54 07.7	-0.5		
SMRF				*e*Sg	Sn	08 54 09.2	+1.1		
	comp=N,2μm,0.3s								
GORR	**Gorreto**	**1.51**	**59**	P	Pn	08 53 51.7	-0.1		
GORR				AML	AML				
	comp=E,394μm,1.2s								
GORR				AML	AML				
	comp=N,368μm,1.0s								
MSSA	**Maissana**	**1.54**	**72**	P	Pn	08 53 51.7	-0.6		
MSSA				AML	AML				
	comp=N,235μm,1.1s								
MSSA				AML	AML				
	comp=E,252μm,1.6s								
ORIF	**Oris-en-Rattie**	**1.57**	**314**	*e*Pg	Pb	08 53 54.7	+0.8		
ORIF				*e*Sn	Sn	08 54 12.3	-0.6		
ORIF				*e*Sg	Sb	08 54 15.7	+2.0		
	comp=E,193nm,0.3s								
GDM	**Grand'Maison**	**1.67**	**325**	Pn	Pb	08 53 57.1	+1.4		
TRAV	**Traversella**	**1.68**	**7**	P	Pn	08 53 54.3	+0.2		
PGF	**Pioggiola**	**1.71**	**139**	*e*Pn	Pn	08 53 52.7	-1.9		
PGF				*e*Sn	Sn	08 54 13.2	-3.2		
	comp=E,25nm,0.2s								
LPG	**La Plagne**	**1.73**	**343**	*e*Pn	Pn	08 53 55.6	+0.6		
LPG	**La Plagne**	**1.73**	**343**	*e*P	Pb	08 53 57.5	+0.7		
LPG	**La Plagne**	**1.73**	**343**	*e*Pg	Pg	08 53 58.9	+0.7		
LPG				*e*Sn	Sn	08 54 16.6	-0.5		
LPG				*e*Sg	Sg	08 54 20.8	+0.1		
	comp=E,158nm,0.5s								
LPL	**La Plagne**	**1.75**	**343**	*e*Pn	Pn	08 53 56.0	+0.7		
LPL	**La Plagne**	**1.75**	**343**	*e*P	Pb	08 53 57.9	+0.8		
LPL	**La Plagne**	**1.75**	**343**	*e*Pg	Pg	08 53 59.3	+0.7		
LPL				*e*Sn	Sn	08 54 16.8	-0.8		
	comp=E,40nm,0.3s								
LPL				*e*Sg	Sg	08 54 21.5	+0.2		
	comp=E,145nm,0.4s								
CIRO	**Champorcher**	**1.75**	**2**	P	Pn	08 53 54.6	-0.8		
GRN	**Grenoble**	**1.86**	**319**	Pn	Pb	08 53 59.4	+0.4		
MRGE	**Morge**	**1.94**	**351**	P	Pn	08 53 59.0	+1.1		
OGSM	**Saint Maurice**	**2.17**	**325**	Pn	Pb	08 54 03.8	-0.3		
VIVF	**Saint-Julien-l**	**2.25**	**298**	*e*Pn	Pn	08 54 02.2	+0.2		
VIVF	**Saint-Julien-l**	**2.25**	**298**	*e*P	Pn	08 54 04.1	+2.1		
VIVF	**Saint-Julien-l**	**2.25**	**298**	*e*Pg	Pb	08 54 07.1	+1.6		
VIVF				*e*Sn	Sn	08 54 28.6	-1.0		
	comp=E,54nm,0.4s								
VIVF				*e*Sg	Sb	08 54 36.4	+3.2		
	comp=E,110nm,0.4s								
EMBD	**Embd, Matterta**	**2.38**	**6**	Pn	Pn	08 54 06.2	+2.3		
OG35	**Corcelles**	**2.58**	**329**	Pn	Pn	08 54 09.2	+2.7		
LASF	**Ste Croix**	**2.62**	**276**	*e*Pn	Pn	08 54 07.3	+0.2		
LASF	**Ste Croix**	**2.62**	**276**	*e*P	Pn	08 54 09.2	+2.1		
LASF	**Ste Croix**	**2.62**	**276**	*e*Pg	Pb	08 54 14.1	+2.2		
LASF				*e*Sn	Sn	08 54 37.3	-1.5		
	comp=E,32nm,0.3s								
LASF				*e*Sg	Sg	08 54 48.2	-1.0		
	comp=E,19nm,0.2s								
GIMEL	**St. Georges /**	**2.82**	**343**	Pn	Pn	08 54 12.9	+3.0		
CABF	**La Chapelle**	**2.93**	**341**	*e*P	Pn	08 54 13.8	+2.4		
CABF	**La Chapelle**	**2.93**	**341**	*e*Pg	Pg	08 54 20.7	-0.5		
CABF				*e*Sn	Sn	08 54 44.5	-2.0		
CABF				*e*Sg	Sg	08 54 58.2	-1.0		
	comp=E,55nm,0.7s								
LBL	**Lubilhac**	**3.33**	**296**	Pn	Pn	08 54 18.9	+2.1		
SULZ	**Cheisacher**	**3.71**	**7**	Pn	Pn	08 54 24.2	+2.2		
SMF	**Signal de Mont**	**3.80**	**319**	*e*Pn	Pn	08 54 23.1	-0.1		
SMF	**Signal de Mont**	**3.80**	**319**	*e*P	Pn	08 54 26.2	+3.0		
SMF	**Signal de Mont**	**3.80**	**319**	*e*Pg	Pg	08 54 36.2	-1.5		
SMF				*e*Sn	Sn	08 55 05.9	-1.8		
	comp=E,14nm,0.3s								
SMF				*e*Sg	Sg	08 55 24.8	-2.0		
	comp=E,8.2nm,0.3s								
DAVA	**Damuels**	**3.83**	**25**	*e*Pn	Pn	08 54 28.2	+4.3		
	comp=E,3.4nm,0.2s								
DAVA				Sn	Sn	08 55 14.6	+5.8		
	comp=E,12nm,0.3s								
MTLF	**Montolieu**	**3.85**	**264**	*e*Pn	Pn	08 54 23.8	-0.2		
MTLF	**Montolieu**	**3.85**	**264**	*e*Pg	Pb	08 54 36.2	+3.4		
MTLF				*e*Sn	Sn	08 55 06.8	-2.3		
	comp=E,15nm,0.3s								
MTLF				*e*Sg	Sg	08 55 26.2	-2.5		
	comp=E,11nm,0.3s								
FETA	**Feichten**	**3.91**	**35**	*e*Pn	Pn	08 54 29.3	+4.3		
	comp=E,17nm,1.0s								
FETA				Sn	Sn	08 55 16.2	+5.4		
	comp=E,5.7nm,0.5s								
HINF	**Hinteralfeld**	**3.99**	**354**	*e*Pn	Pn	08 54 25.4	-0.5		
HINF	**Hinteralfeld**	**3.99**	**354**	*e*P	Pn	08 54 29.1	+3.2		
HINF				*e*Sn	Sn	08 55 10.4	-2.2		
	comp=E,8.5nm,0.3s								
HINF				*e*Sg	Sg	08 55 30.7	-2.5		
	comp=E,7.6nm,0.4s								
CAF	**Calviac**	**4.03**	**287**	*e*Pn	Pn	08 54 26.2	-0.2		
CAF				*e*Sn	Sn	08 55 10.9	-2.5		
	comp=E,4.4nm,0.2s								
CAF				*e*Sg	Sg	08 55 31.7	-2.5		
	comp=E,19nm,0.5s								
KIZ	**Kirchzarten**	**4.12**	**4**	Pn	Pn	08 54 29.1	+1.4		
AVF	**Avril sur Loir**	**4.14**	**317**	*e*Pn	Pn	08 54 27.5	-0.3		
AVF	**Avril sur Loir**	**4.14**	**317**	*e*P	Pn	08 54 30.9	+3.1		
AVF	**Avril sur Loir**	**4.14**	**317**	*e*Pg	Pg	08 54 42.2	-2.0		
AVF				*e*Sn	Sn	08 55 13.6	-2.5		
AVF				*e*Sg	Sg	08 55 35.2	-2.6		
	comp=E,5.5nm,0.3s								
HAU	**Haudompre**	**4.23**	**350**	*e*Pn	Pn	08 54 29.1	-0.1		
HAU	**Haudompre**	**4.23**	**350**	*e*P	Pn	08 54 32.5	+3.3		
HAU				*e*Sn	Sn	08 55 16.2	-2.3		
	comp=E,31nm,0.3s								
HAU				*e*Sg	Sg	08 55 38.5	-2.3		
	comp=E,6.0nm,0.3s								
BGF	**Bois d'Agland**	**4.25**	**311**	*e*Pn	Pn	08 54 28.9	-0.5		
BGF	**Bois d'Agland**	**4.25**	**311**	*e*P	Pn	08 54 32.5	+3.1		
BGF	**Bois d'Agland**	**4.25**	**311**	*e*Pg	Pg	08 54 44.2	-2.1		
BGF				*e*Sn	Sn	08 55 16.3	-2.5		
BGF				*e*Sg	Sg	08 55 39.0	-2.3		
	comp=E,26nm,0.4s								
SSF	**Saint Saulge**	**4.26**	**320**	*e*Pn	Pn	08 54 29.4	-0.1		
SSF	**Saint Saulge**	**4.26**	**320**	*e*P	Pn	08 54 32.9	+3.4		
SSF	**Saint Saulge**	**4.26**	**320**	*e*Pg	Pg	08 54 44.3	-2.2		
SSF				*e*Sn	Sn	08 55 16.9	-2.2		
SSF				*e*Sg	Sg	08 55 39.3	-2.3		
	comp=E,3.9nm,0.3s								
LOR	**Lormes**	**4.26**	**325**	*e*Pn	Pn	08 54 29.9	+0.3		
LOR	**Lormes**	**4.26**	**325**	*e*P	Pn	08 54 32.9	+3.3		
LOR	**Lormes**	**4.26**	**325**	*e*Pg	Pg	08 54 44.9	-1.7		
LOR				*e*Sn	Sn	08 55 16.8	-2.4		
	comp=E,7.5nm,0.3s								
LOR				*e*Sg	Sg	08 55 39.4	-2.3		
	comp=E,5.3nm,0.3s								
SQTA	**Sankt Quirin**	**4.27**	**37**	*e*Pn	Pn	08 54 34.9	+5.1		
	comp=E,4.0nm,0.3s								
RETA	**Reutte**	**4.31**	**31**	*e*Pn	Pn	08 54 33.9	+3.6		
	comp=E,1.8nm,0.3s								
RETA				Sn	Sn	08 55 25.9	+5.5		
	comp=E,2.8nm,0.3s								
MOTA	**Moosalm**	**4.33**	**35**	*e*Pn	Pn	08 54 34.5	+3.9		
	comp=E,6.5nm,0.6s								
TCF	**Toulx Ste Croi**	**4.46**	**305**	*e*Pn	Pn	08 54 32.3	0.0		
TCF	**Toulx Ste Croi**	**4.46**	**305**	*e*Pg	Pg	08 54 48.0	-2.3		
TCF				*e*Sn	Sn	08 55 21.5	-2.5		
TCF				*e*Sg	Sg	08 55 45.4	-2.6		
	comp=E,7.2nm,0.3s								
WTTA	**Wattenberg**	**4.50**	**39**	Pn	Pn	08 54 37.2	+4.2		
	comp=E,2.8nm,0.3s								
WTTA				Sn	Sn	08 55 30.6	+5.4		
	comp=E,21nm,0.9s								
RJF	**Les Rejaudoux**	**4.50**	**291**	*e*Pn	Pn	08 54 32.3	-0.6		
RJF	**Les Rejaudoux**	**4.50**	**291**	*e*Pg	Pb	08 54 48.2	+4.4		
RJF				*e*Sn	Sn	08 55 22.1	-3.0		
RJF				*e*Sg	Sg	08 55 46.7	-2.7		
	comp=E,13nm,0.4s								
CDF	**Champ du Feu**	**4.57**	**358**	*e*Pn	Pn	08 54 33.9	0.0		
CDF	**Champ du Feu**	**4.57**	**358**	*e*P	Pn	08 54 37.4	+3.5		
CDF	**Champ du Feu**	**4.57**	**358**	*e*Pg	Pg	08 54 50.0	-2.4		
CDF				*e*Sn	Sn	08 55 24.3	-2.5		
CDF				*e*Sg	Sg	08 55 48.7	-2.9		
	comp=E,2.9nm,0.3s								
SFTF	**Sexfontaines**	**4.68**	**340**	*e*Pn	Pn	08 54 34.9	-0.4		
SFTF	**Sexfontaines**	**4.68**	**340**	*e*Pg	Pg	08 54 52.1	-2.4		
SFTF				*e*Sn	Sn	08 55 26.6	-2.8		
	comp=E,4.5nm,0.2s								
SFTF				*e*Sg	Sg	08 55 52.4	-2.7		
	comp=E,2.0nm,0.2s								
HYF	**Humbligny**	**4.82**	**317**	*e*Pn	Pn	08 54 36.8	-0.4		
HYF	**Humbligny**	**4.82**	**317**	*e*Pg	Pg	08 54 55.0	-2.3		
HYF				*e*Sn	Sn	08 55 30.2	-2.7		
HYF				*e*Sg	Sg	08 55 56.7	-3.0		
PAGF	**Fort de Pagny**	**4.86**	**346**	*e*Pn	Pn	08 54 37.9	+0.1		
PAGF	**Fort de Pagny**	**4.86**	**346**	*e*Pg	Pg	08 54 55.3	-2.8		
PAGF				*e*Sn	Sn	08 55 31.1	-2.9		
PAGF				*e*Sg	Sg	08 55 58.1	-2.9		
	comp=E,9.3nm,0.4s								
LFF	**La Frestale**	**4.95**	**285**	*e*Pn	Pn	08 54 38.3	-0.7		
LFF	**La Frestale**	**4.95**	**285**	*e*Pg	Pg	08 54 56.9	-2.8		
LFF				*e*Sn	Sn	08 55 33.0	-3.1		
	comp=E,11nm,0.3s								
LFF				*e*Sg	Sg	08 55 59.5	-4.3		
	comp=E,18nm,0.4s								
MEZF	**Maizieres J'vi**	**4.95**	**341**	*e*Pn	Pn	08 54 39.6	+0.6		
MEZF	**Maizieres J'vi**	**4.95**	**341**	*e*Pg	Pg	08 54 57.2	-2.5		
MEZF				*e*Sn	Sn	08 55 32.5	-3.6		
MEZF				*e*Sg	Sg	08 56 00.6	-3.2		
EPF	**Esparros**	**5.26**	**264**	*e*Pn	Pn	08 54 42.5	-0.8		
EPF	**Esparros**	**5.26**	**264**	*e*P	Pn	08 54 46.8	+3.5		
EPF	**Esparros**	**5.26**	**264**	*e*Pg	Pg	08 55 02.7	-3.0		
EPF				*e*Sn	Sn	08 55 40.3	-3.6		
	comp=E,4.0nm,0.2s								
EPF				*e*Sg	Sg	08 56 10.2	-3.6		
	comp=E,10nm,0.3s								
ETSF	**Etsaut**	**5.93**	**264**	*e*Pn	Pn	08 54 52.4	-0.2		
ETSF	**Etsaut**	**5.93**	**264**	*e*Pg	Pg	08 55 15.0	-3.5		
ETSF				*e*Sn	Sn	08 55 56.2	-4.3		
ETSF				*e*Sg	Sg	08 56 31.0	-4.4		
	comp=E,3.7nm,0.4s								
SJPF	**Ste Jean**	**6.37**	**266**	*e*Pn	Pn	08 54 57.8	-0.8		
SJPF	**Ste Jean**	**6.37**	**266**	*e*P	Pn	08 55 02.4	+3.8		
SJPF	**Ste Jean**	**6.37**	**266**	*e*Pg	Pg	08 55 22.8	-4.2		
SJPF				*e*Sn	Sn	08 56 08.8	-2.4		
	comp=E,1.8nm,0.2s								
KHC	**Kasperske Hory**	**6.76**	**36**	*e*PN	Pn	08 55 05.0	+1.1		
KHC				*e*SN	Sn	08 56 20.5	-0.2		
GRR	**Gorron**	**7.36**	**311**	*e*Pn	Pn	08 55 12.1	+0.1		

BJI ***27*** *08:54:05.7±0.0,49.°68N×156.°42E,h52km,mB5.2/30, mb4.6/32,Ms4.7/12,Ms7 4.5/11*

KRSC ***27*** *08:54:05.4±2.6,49.°34N×156.°03E,h62km±32km,ML5.3, FELT [II-III] at RNS Podgornay; [II] at cape Vasilyeva.*

MOS ***27*** *08:54:08.1±1.1,49.°43N×155.°93E,h59km,mb4.8/23,Error ellipse: s-maj=7.7km s-min=3.1km az=71.8*

NEIC ***27*** *08:54:11.8±1.7,49.°55N±0.°08×155.°8E±0.°1,h72km±6km, mb4.8/150,Error ellipse: s-maj=13.5km s-min=8.5km az=135.0*

IDC ***27*** *08:54:12.7±2.3,49.°62N×155.°66E,h80km±21km,mb3.9/23, mb1 4.1/29,mb1mx4.1/38,mbtmp4.3/29,MS3.8/16, Ms1 3.9/16,ms1mx3.6/35,Error ellipse: s-maj=16.0km s-min=9.8km az=144.0*

ISC 27 08:54:09.5±0.4,49.°42N±0.°05×156.°12E±0.°04,h54km,n416, σ1$6**4**/414,**mb4.7**/107,**MS3.9**/13,**4C-4D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.26**	**360**	*i* PN	**Pn**	**08 54 29.7**	**-1.1**
SKR				*e*S	**Sn**	**08 54 44.6**	**-2.1**
SKR				pmax	pmax		
	comp=Z,1μm,0.5s						
SKR				smax	smax		
	comp=N,5μm,0.4s						
SKR				smax	smax		
	comp=E,6μm,0.6s						
SKR	**Severo-Kuril's**	**1.26**	**360**	*e*P	**Pn**	**08 54 29.7**	**-1.1**
SKR				*e*S	**Sn**	**08 54 45.0**	**-1.7**
PAU	**Pauzhetka**	**2.09**	**12**	PN	**Pn**	**08 54 42.0**	**-0.1**
PAU				S	**Sn**	**08 55 07.1**	**+0.1**
PAU	**Pauzhetka**	**2.09**	**12**	*e*P	**Pn**	**08 54 42.0**	**-0.1**
PAU				*e*S	**Sn**	**08 55 07.1**	**+0.1**
KDTR	**Khodutka, Kamc**	**2.69**	**27**	PN	**Pn**	**08 54 49.8**	**-0.5**
KDTR				S	**Sn**	**08 55 19.7**	**-2.0**
KDTR	**Khodutka, Kamc**	**2.69**	**27**	*e*P	**Pn**	**08 54 49.8**	**-0.5**
KDTR				*e*S	**Sn**	**08 55 19.7**	**-2.0**
ASAK	**Asacha**	**3.17**	**20**	PN	**Pn**	**08 54 57.9**	**+0.9**
ASAK	**Asacha**	**3.17**	**20**	*i* P	**Pn**	**08 54 57.9**	**+0.9**
MTVR	**Mutnovka**	**3.33**	**22**	PN	**Pn**	**08 55 00.5**	**+1.3**
MTVR				S	**Sn**	**08 55 39.7**	**+2.1**
MTVR	**Mutnovka**	**3.33**	**22**	*e*P	**Pn**	**08 55 00.5**	**+1.3**
MTVR				*e*S	**Sn**	**08 55 39.7**	**+2.1**
GRL	**Gorelyy**	**3.37**	**21**	PN	**Pn**	**08 55 00.6**	**+0.9**
GRL				S	**Sn**	**08 55 40.7**	**+2.3**
GRL	**Gorelyy**	**3.37**	**21**	*i* P	**Pn**	**08 55 00.6**	**+0.9**
GRL				*e*S	**Sn**	**08 55 40.7**	**+2.3**
RUS	**Russkaya**	**3.37**	**26**	PN	**Pn**	**08 54 59.6**	**0.0**
RUS				S	**Sn**	**08 55 37.6**	**-0.8**
RUS	**Russkaya**	**3.37**	**26**	*e*P	**Pn**	**08 54 59.6**	**0.0**
RUS				*e*S	**Sn**	**08 55 37.6**	**-0.8**
APC	**Apacha**	**3.57**	**10**	PN	**Pn**	**08 55 03.7**	**+1.4**
APC	**Apacha**	**3.57**	**10**	*e*P	**Pn**	**08 55 03.7**	**+1.4**
KRMR	**Karymshinskiy**	**3.64**	**20**	PN	**Pn**	**08 55 05.1**	**+1.8**
KRMR	**Karymshinskiy**	**3.64**	**20**	*e*P	**Pn**	**08 55 05.1**	**+1.8**
PEA0B	**Petropavlovsk-**	**3.82**	**14**	*i* PN	**Pn**	**08 55 06.6**	**+0.8**
PEA0B	**Petropavlovsk-**	**3.82**	**14**	P	**Pn**	**08 55 07.2**	**+1.3**
PETK	**Petropavlovsk-**	**3.82**	**14**	P	**Pn**	**08 55 07.0**	**+1.2**
	comp=E,22nm,0.3s,baz=184,slow=11,SNR=289						
PETK				S	**Sn**	**08 55 52.4**	**+3.0**
	comp=E,4.2nm,0.3s,baz=142,slow=15,SNR=3.3						
PETK				LR	LR	08 56 50.7	
	comp=E,822nm,19.5s,slow=42						
PET	**Petropavlovsk**	**3.94**	**23**	PN	**Pn**	**08 55 08.7**	**+1.3**
PET				S	**Sn**	**08 55 53.5**	**+1.2**
PET	**Petropavlovsk**	**3.94**	**23**	*e*P	**Pn**	**08 55 08.7**	**+1.3**
PET				*e*S	**Sn**	**08 55 53.5**	**+1.2**
PET	**Petropavlovsk**	**3.94**	**23**		**Pn**	**08 55 08.5**	**+1.1**
PET				Sn	**Sn**	**08 55 56.4**	**+4.1**
UGLR	**Uglovaya**	**4.15**	**23**	PN	**Pn**	**08 55 12.2**	**+1.8**
UGLR	**Uglovaya**	**4.15**	**23**	*i* P	**Pn**	**08 55 12.2**	**+1.8**
AVH	**Avacha**	**4.18**	**22**	PN	**Pn**	**08 55 13.0**	**+2.2**
AVH	**Avacha**	**4.18**	**22**	*e*P	**Pn**	**08 55 13.0**	**+2.2**
KOK	**Koryaka**	**4.18**	**21**	PN	**Pn**	**08 55 13.2**	**+2.4**
KOK	**Koryaka**	**4.18**	**21**	*i* P	**Pn**	**08 55 13.2**	**+2.4**
SMAR	**Somma**	**4.20**	**23**	PN	**Pn**	**08 55 12.7**	**+1.6**
SMAR	**Somma**	**4.20**	**23**	*e*P	**Pn**	**08 55 12.7**	**+1.6**
KRER	**Koryakskii**	**4.22**	**22**	PN	**Pn**	**08 55 13.7**	**+2.2**
KRER				S	**Sn**	**08 56 03.6**	**+4.1**
KRER	**Koryakskii**	**4.22**	**22**	*i* P	**Pn**	**08 55 13.7**	**+2.2**
KRER				*e*S	**Sn**	**08 56 03.6**	**+4.1**
SDLR	**Sedlovina**	**4.23**	**23**	PN	**Pn**	**08 55 12.6**	**+1.1**
SDLR	**Sedlovina**	**4.23**	**23**	*i* P	**Pn**	**08 55 12.6**	**+1.1**
KRX	**Arik**	**4.25**	**21**	PN	**Pn**	**08 55 14.1**	**+2.3**
KRX	**Arik**	**4.25**	**21**	*e*P	**Pn**	**08 55 14.1**	**+2.3**
NLC	**Nalytchevo**	**4.26**	**27**	PN	**Pn**	**08 55 11.1**	**-0.7**
NLC	**Nalytchevo**	**4.26**	**27**	*e*P	**Pn**	**08 55 11.1**	**-0.7**
KII	**Karymskiy**	**5.06**	**23**	PN	**Pn**	**08 55 25.7**	**+2.9**
KII	**Karymskiy**	**5.06**	**23**	*e*P	**Pn**	**08 55 25.7**	**+2.9**
MKZ	**Mys Kozlova**	**6.20**	**32**	PN	**Pn**	**08 55 37.7**	**-0.6**
MKZ	**Mys Kozlova**	**6.20**	**32**	*e*P	**Pn**	**08 55 37.7**	**-0.6**
KZV	**Kizimen**	**6.25**	**23**	PN	**Pn**	**08 55 40.4**	**+1.2**
KZV	**Kizimen**	**6.25**	**23**	*e*P	**Pn**	**08 55 40.4**	**+1.2**
TUMD	**Tumrok D**	**6.36**	**23**	*e*P	**Pn**	**08 55 41.5**	**+1.0**
TUMR	**Tumrok**	**6.37**	**21**	PN	**Pn**	**08 55 41.5**	**+0.8**
TUMR	**Tumrok**	**6.37**	**21**	*i* P	**Pn**	**08 55 43.0**	**+2.3**
ESO	**Esso**	**6.70**	**13**	PN	**Pn**	**08 55 47.6**	**+2.4**
ESO	**Esso**	**6.70**	**13**	*e*P	**Pn**	**08 55 47.6**	**+2.4**
KMNR	**Kamenistaya**	**6.82**	**20**	PN	**Pn**	**08 55 49.1**	**+2.2**
KMNR	**Kamenistaya**	**6.82**	**20**	*e*P	**Pn**	**08 55 49.1**	**+2.2**
KUR	**Kuril'sk**	**7.00**	**236**	*d* iPN	**Pn**	**08 55 49.5**	**+0.2**
KUR				*e*S	**Sn**	**08 57 09.2**	**+1.7**
KUR				pmax	pmax		
	comp=Z,99nm,0.9s						
KUR				pmax	pmax		
	comp=N,48nm,0.8s						
KUR				smax	smax		
	comp=N,113nm,0.7s						
KUR				smax	smax		
	comp=E,69nm,0.7s						
KIRR	**Kirishev**	**7.03**	**20**	PN	**Pn**	**08 55 52.3**	**+2.5**
KIRR	**Kirishev**	**7.03**	**20**	*e*P	**Pn**	**08 55 52.3**	**+2.5**
KOZ	**Kozyrevsk**	**7.03**	**17**	PN	**Pn**	**08 55 51.2**	**+1.5**
KOZ	**Kozyrevsk**	**7.03**	**17**	*e*P	**Pn**	**08 55 51.2**	**+1.5**
SRDR	**Sredinnyy**	**7.24**	**16**	PN	**Pn**	**08 55 54.9**	**+2.2**
SRDR	**Sredinnyy**	**7.24**	**16**	*e*P	**Pn**	**08 55 54.9**	**+2.2**
KRSR	**Krestovskiy**	**7.32**	**20**	PN	**Pn**	**08 55 51.7**	**-2.1**
KRSR	**Krestovskiy**	**7.32**	**20**	*e*P	**Pn**	**08 55 51.7**	**-2.1**
KLY	**Klyuchi**	**7.42**	**20**	PN	**Pn**	**08 55 57.4**	**+2.3**
KLY	**Klyuchi**	**7.42**	**20**	*e*P	**Pn**	**08 55 57.4**	**+2.3**
BDR	**Baidarnaya**	**7.79**	**21**	PN	**Pn**	**08 56 01.9**	**+1.8**
BDR	**Baidarnaya**	**7.79**	**21**	*e*P	**Pn**	**08 56 01.9**	**+1.8**
SRKR	**Sorokina**	**7.86**	**21**	PN	**Pn**	**08 56 02.3**	**+1.2**
SRKR	**Sorokina**	**7.86**	**21**	*e*P	**Pn**	**08 56 02.3**	**+1.2**
KBTR	**Krutoberegovo**	**7.91**	**28**	PN	**Pn**	**08 56 01.4**	**-0.4**
KBTR	**Krutoberegovo**	**7.91**	**28**	*i* P	**Pn**	**08 56 01.4**	**-0.4**
KBG	**Krutoberegovo**	**7.92**	**28**	PN	**Pn**	**08 56 03.0**	**+1.2**
KBG	**Krutoberegovo**	**7.92**	**28**	*e*P	**Pn**	**08 56 03.0**	**+1.2**
BKI	**Bering**	**8.36**	**42**	PN	**Pn**	**08 56 06.9**	**-1.0**
BKI	**Bering**	**8.36**	**42**	*e*P	**Pn**	**08 56 06.9**	**-1.0**
BKI				*e*S	**Sn**	**08 57 33.7**	**-7.0**
SHO	**Shikotan**	**8.46**	**232**	⇑ *i* PN	Pn	08 56 06.1	-3.3
SHO				pmax	pmax		
	comp=Z,44nm,1.0s						
SHO				pmax	pmax		
	comp=E,26nm,0.6s						
SHO				pmax	pmax		
	comp=N,28nm,0.4s						
TYV	**Tymovskoe**	**8.77**	**285**	*e*PN	**Pn**	**08 56 14.2**	**+0.7**
TYV				*e*S	**Sn**	**08 57 54.5**	**+3.7**
TYV				pmax	pmax		
	comp=Z,17nm,1.2s						
TYV				smax	smax		
	comp=E,9.0nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**8.87**	**236**	*e*PN	Pn	08 56 13.2	-1.7
YUK				pmax	pmax		
	comp=Z,226nm,0.3s						
YUK				pmax	pmax		
	comp=E,85nm,0.4s						
YUK				pmax	pmax		
	comp=N,65nm,0.8s						
YUK				MLR	MLR		
	comp=Z,245nm,21.0s						
GRPR	**Tuman**	**8.94**	**237**	*e*PN	**Pn**	**08 56 14.8**	**-1.1**
UGL	**Uglegorsk**	**9.20**	**273**	⇓ *i* PN	**Pn**	**08 56 21.3**	**+1.9**
UGL				S	**Sn**	**08 58 04.1**	**+2.7**
UGL				pmax	pmax		
	comp=Z,339nm,0.7s						
GLVR	**Golovnino**	**9.25**	**236**	*e*PN	Pn	08 56 18.0	-2.1
GLVR				pmax	pmax		
	comp=E,159nm,0.8s						
GLVR				pmax	pmax		
	comp=Z,187nm,0.8s						
GLVR				pmax	pmax		
	comp=N,153nm,0.7s						
YSS	**Yuzh-Sakhalins**	**9.26**	**260**	*e*PN	**Pn**	**08 56 21.8**	**+1.5**
YSS				*e*S	**Sn**	**08 58 04.0**	**+1.0**
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS				smax	smax		
	comp=E,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,200n

H11N1 WAKE ISLAND Hy 30.87 160 T T 09 33 09.1
baz=342,slow=74
H11N3 WAKE ISLAND Hy 30.87 160 T T 09 33 20.8
baz=342
CNPM China Poot 31.40 51 P **P** **09 00 26.1 +1.0**
BPAW Bear Paw Mtn. 31.41 42 P **P** **09 00 26.3 +1.2**
KTH Kantishna Hill 31.42 43 P **P** **09 00 26.8 +1.5**
KTH IAmb IAmb 09 01 29.4
comp=Z,26nm,1.6s
SUA Susitna One 31.52 47 P **P** **09 00 26.9 +0.7**
BRLK Bradley Lake 31.56 51 P **P** **09 00 27.2 +0.8**
MLY Manley 31.57 40 P **P** **09 00 27.9 +1.4**
MLY IAmb IAmb 09 00 29.2
comp=Z,33nm,2.0s
TRF Thorofare Moun 31.71 43 P **P** **09 00 28.9 +1.0**
COLD Coldfoot 31.98 36 P **P** **09 00 31.0 +1.0**
H11S1 WAKE ISLAND Hy 32.00 161 T T 09 34 49.3
baz=347,slow=76,SNR=1614
H11S3 WAKE ISLAND Hy 32.01 161 T T 09 34 34.5
baz=347,slow=76,SNR=2533
H11S2 WAKE ISLAND Hy 32.02 161 T T 09 34 40.7
baz=347,slow=76,SNR=1277
HHC Hu-ho-hao-te 32.17 272 *e*P **P** **09 00 32.3 +0.2**
HHC pmax pmax
comp=Z,8.0nm,0.8s
HHC pmax pmax
comp=Z,160nm,4.1s
SEW Seward 32.24 50 P **P** **09 00 33.2 +0.9**
PMR Palmer 32.29 47 P **P** **09 00 33.1 +0.4**
PMR pmax pmax
comp=Z,42nm,1.6s
PMR Palmer 32.29 47 P **P** **09 00 33.0 +0.4**
MCK McKinley 32.31 43 P **P** **09 00 33.9 +0.9**
MCK pmax pmax
comp=Z,32nm,1.7s
MCK McKinley 32.31 43 P **P** **09 00 33.9 +0.9**
MCK IAmb IAmb 09 01 44.1
comp=Z,32nm,1.7s
RND Reindeer 32.35 44 P **P** **09 00 33.9 +0.5**
RND pmax pmax
comp=Z,8.0nm,0.7s
RND Reindeer 32.35 44 P **P** **09 00 33.9 +0.5**
RND IAmb IAmb 09 00 34.3
comp=Z,7.6nm,0.7s
GHO Glory Hole Cre 32.38 47 P **P** **09 00 34.0 +0.4**
SONM Songino Array 32.43 287 P **P** **09 00 32.8 -1.5**
comp=Z,0.6nm,0.6s,baz=52,slow=7.5,SNR=2.4
SONM LR LR 09 13 43.9
comp=Z,136nm,19.1s,baz=58,slow=36
KNK Knik Glacier 32.62 47 P **P** **09 00 36.3 +0.6**
KNK IAmb IAmb 09 00 37.3
comp=Z,15nm,0.7s
MDM Murphy Dome 32.63 41 P **P** **09 00 36.9 +1.1**
SML Sawmill 32.66 47 P **P** **09 00 36.5 +0.5**
WRH Wood River Hil 32.69 42 P **P** **09 00 37.2 +1.0**
WRH IAmb IAmb 09 00 54.2
comp=Z,12nm,1.1s
NJ2 Nanjing 32.73 252 *e*P **P** **09 00 36.0 -0.9**
NJ2 pmax pmax
comp=Z,3.0nm,0.5s
TCOL CIGO, UAF Yank 32.79 41 P **P** **09 00 37.4 +0.3**
baz=270,SNR=5.2
COLA College 32.79 41 P **P** **09 00 38.4 +1.3**
COLA pmax pmax
comp=Z,18nm,0.6s
COLA College 32.79 41 P **P** **09 00 38.4 +1.3**
CCB Clear Creek Bu 32.81 41 P **P** **09 00 38.4 +1.2**
CCB IAmb IAmb 09 01 01.5
comp=Z,18nm,1.6s
TLY Talaya 32.83 294 *i* P **P** **09 00 36.2 -1.4**
TLY pmax pmax
comp=Z,3.0nm,0.9s
POKR Poker Plat Res 32.97 40 P **P** **09 00 39.8 +1.1**
baz=270,SNR=7.8
HDA Harding Lake 33.18 42 P **P** **09 00 40.9 +0.3**
HDA IAmb IAmb 09 00 41.7
comp=Z,11nm,0.5s
HDA Harding Lake 33.18 42 P **P** **09 00 40.9 +0.3**
baz=271,SNR=8.5
IL31 33.20 41 P **P** **09 00 41.4 +0.8**
IL31 IAmb IAmb 09 00 43.1
comp=Z,24nm,1.6s
ILAR Eielson Array 33.20 41 P **P** **09 00 41.1 +0.4**
comp=Z,2.6nm,0.6s,baz=258,slow=5.7,SNR=44
ILAR LR LR 09 14 45.6
comp=Z,61nm,19.7s,baz=316,slow=37
FID Port Fidalgo 33.64 48 P **P** **09 00 45.5 +0.9**
PRP Porcupine Dome 33.77 40 P **P** **09 00 47.1 +1.3**
PRP IAmb IAmb 09 00 47.9
comp=Z,11nm,0.6s
FYU Fort Yukon 33.90 38 P **P** **09 00 48.5 +1.8**
FYU IAmb IAmb 09 00 48.8
comp=Z,12nm,0.7s
PAX Paxson 33.90 44 P **P** **09 00 46.0 -1.0**
PAX pmax pmax
comp=Z,29nm,1.8s
PAX Paxson 33.90 44 P **P** **09 00 46.0 -1.0**
PAX IAmb IAmb 09 01 50.6
comp=Z,29nm,1.8s
EYAK Cordova Ski Ar 34.02 49 P **P** **09 00 49.5 +1.7**
RIDG Independent Ri 34.13 43 P **P** **09 00 49.9 +1.1**
DOT Dot Lake 34.49 43 P **P** **09 00 52.2 +0.3**
SCRK Sand Creek 34.49 42 P **P** **09 00 51.9 -0.2**
MENT Mentasta 34.70 44 P **P** **09 00 55.5 +1.7**
MENT IAmb IAmb 09 01 10.8
comp=Z,14nm,1.3s
GLB Gilahina Butte 34.84 47 P **P** **09 00 56.1 +1.1**
VRDI Verde Repeater 35.04 47 P **P** **09 00 58.4 +1.5**
VRDI IAmb IAmb 09 00 58.7
comp=Z,8.3nm,0.8s
MCARA McCarthy VSAT 35.22 47 P **P** **09 00 58.9 +0.7**
MCARA IAmb IAmb 09 01 01.4
comp=Z,12nm,1.0s
CRQM Cirque 35.27 48 P **P** **09 01 00.7 +1.9**
TGL Tana Glacier 35.41 48 P **P** **09 01 01.8 +1.7**
TGL IAmb IAmb 09 01 11.4
comp=Z,12nm,1.0s
BALM Baldy 35.60 47 P **P** **09 01 02.8 +1.1**
BALM IAmb IAmb 09 01 08.0
comp=Z,32nm,1.6s
EGAK Eagle 35.65 41 P **P** **09 01 02.5 +0.7**
EGAK IAmb IAmb 09 01 03.0
comp=Z,9.2nm,0.6s
BARN Barnard Glacie 35.93 47 P **P** **09 01 06.3 +1.8**
BARN IAmb IAmb 09 01 07.2
comp=Z,11nm,0.8s
MESA MESA 35.95 49 P **P** **09 01 06.8 +2.1**
CTGM Chitina Glacie 36.10 47 P **P** **09 01 07.8 +1.9**
CTGM IAmb IAmb 09 01 08.6
comp=Z,18nm,1.0s
WHN Wuhan 36.57 255 P **P** **09 01 08.5 -1.5**
PCA Pinnacle 36.79 49 P **P** **09 01 13.4 +1.6**
EPYK Eagle Plains 37.32 38 P **P** **09 01 17.6 +1.4**
EPYK IAmb IAmb 09 01 44.0
comp=Z,19nm,1.4s
EPYK Eagle Plains 37.32 38 P **P** **09 01 17.5 +1.4**
baz=277
XAN Xi'an 37.77 264 P **P** **09 01 21.3 +1.0**
XAN pmax pmax
comp=Z,7.0nm,1.0s
INK Inuvik 38.31 34 P **P** **09 01 25.7 +1.4**
INK pmax pmax
comp=Z,32nm,2.0s
INK Inuvik 38.31 34 P **P** **09 01 24.4 +0.1**
comp=Z,3.0nm,0.7s,baz=285,slow=7.2,SNR=10
INK Inuvik 38.31 34 P **P** **09 01 25.7 +1.4**
INK IAmb IAmb 09 01 39.3
comp=Z,32nm,2.0s
WHY Whitehorse 39.25 47 P **P** **09 01 35.4 +3.0**
WHY IAmb IAmb 09 01 35.9
comp=Z,29nm,1.8s
LZH Lanzhou 39.84 271 *e*P **P** **09 01 38.3 +0.5**
LZH pP pP 09 01 54.5 +2.8
LZH sP sP 09 02 02.0 +4.0
LZH *e*PP **PnPn** **09 03 14.3 +0.7**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,87nm,5.6s
LZH LR LR
comp=Z,370nm,14.0s
LZH LR LR
comp=Z,370nm,13.6s
LZH LR LR
comp=Z,520nm,16.8s

CD2 Chengdu 43.12 265 *e*P **P** **09 02 03.5 -1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
GYA Guiyang 44.26 257 *e*P **P** **09 02 15.5 +1.7**
GYA pmax pmax
comp=Z,10.0nm,0.9s
WMQ Urumqi 45.86 290 *e*P **P** **09 02 26.8 +0.6**
WMQ pP pP 09 02 42.8 +2.4
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ pmax pmax
comp=Z,47nm,6.5s
MK31 Makanchi Array 47.53 297 P **P** **09 02 37.9 -1.2**
MK31 pmax pmax
comp=Z,3.0nm,1.2s
MK31 Makanchi Array 47.53 297 P **P** **09 02 37.9 -1.2**
MKAR Makanchi Array 47.53 297 *i* P **P** **09 02 37.5 -1.7**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR Makanchi Array 47.53 297 P **P** **09 02 36.2 -2.9**
comp=Z,1.7nm,0.8s,baz=61,slow=7.5,SNR=14
MKAR LR LR 09 23 53.3
comp=Z,210nm,19.6s,baz=10,slow=38
YKA Yellowknife Ar 47.58 39 P **P** **09 02 40.2 +0.9**
comp=Z,1.9nm,0.6s,baz=298,slow=7.7,SNR=18
KURK Kurchatov 47.59 303 P **P** **09 02 39.7 +0.2**
KURK pmax pmax
comp=Z,6.0nm,1.1s
KURK Kurchatov 47.59 303 P **P** **09 02 39.7 +0.2**
KURBB Kurchatov Arra 47.68 303 P **P** **09 02 37.1 -3.1**
comp=Z,2.5nm,0.4s,baz=71,slow=8.2,SNR=6.8
MAKZ Makanchi 47.70 297 P **P** **09 02 37.5 -3.0**
MAKZ pmax pmax
comp=Z,5.0nm,1.3s
MAKZ Makanchi 47.70 297 P **P** **09 02 37.5 -3.0**
KHLU Kahalu`u 48.36 110 P **P** **09 02 46.6 +0.7**
A04D Lummi Island 50.67 58 P **P** **09 03 04.7 +1.7**
baz=304
D03D Eldon 51.11 59 P **P** **09 03 08.3 +1.8**
baz=304
B05A Bryant 51.26 58 P **P** **09 03 09.2 +1.7**
baz=304
E04D Cinebar 51.96 60 P **P** **09 03 14.3 +1.5**
baz=305
LTY Liberty 52.62 58 P **P** **09 03 19.6 +1.8**
LTY IAmb IAmb 09 03 31.1
comp=Z,18nm,1.6s
I02D Swisshome 52.65 63 P **P** **09 03 20.4 +2.5**
baz=306
I03D Drain, OR 53.18 63 P **P** **09 03 23.8 +2.0**
baz=307
K02D Willamette Mer 53.59 65 P **P** **09 03 26.5 +1.5**
baz=307
I04A Tendick Farm, 53.67 63 P **P** **09 03 27.0 +1.5**
baz=307
L02E Cave Junction 53.95 65 P **P** **09 03 29.9 +2.3**
baz=308
I05D Terrebonne, OR 53.96 62 P **P** **09 03 29.3 +1.7**
baz=307
NEW Newport 53.97 56 P **P** **09 03 28.9 +1.2**
baz=307
J04D Umpqua Nationa 54.18 63 P **P** **09 03 31.4 +2.0**
baz=308
ARU Arti 54.41 317 *d* *i* P **P** **09 03 29.1 -1.5**
ARU S **S** **09 11 04.3 -0.4**
ARU SS **SS** **09 14 46.4 -0.4**
ARU pmax pmax
comp=Z,35nm,2.7s
AAK Ala-Archa 54.46 296 *i* P **P** **09 03 29.2 -2.2**
AAK pmax pmax
comp=Z,1.0nm,0.9s
E09A Wood Farm, Sta 54.46 58 P **P** **09 03 32.6 +1.5**
PINE Pine Mountain 54.52 62 P **P** **09 03 33.7 +1.8**
PINE IAmb IAmb 09 03 35.8
comp=Z,19nm,1.4s
J05D Fort Rock, OR 54.66 63 P **P** **09 03 35.2 +2.4**
baz=308,SNR=7.8
L04D Klamath Falls 54.68 64 P **P** **09 03 34.9 +1.9**
baz=308,SNR=5.8
CHTO Chiang Mai 54.69 257 P **P** **09 03 33.3 +0.2**
CHTO pmax pmax
comp=Z,5.0nm,0.8s
CHTO Chiang Mai 54.69 257 P **P** **09 03 33.3 +0.2**
CHTO IAmb IAmb 09 03 34.1
comp=Z,5.2nm,0.8s
YBH Yreka Blue Hor 54.74 65 P **P** **09 03 36.2 +2.8**
YBH pmax pmax
comp=Z,6.0nm,0.7s
YBH Yreka Blue Hor 54.74 65 P **P** **09 03 36.2 +2.8**
YBH IAmb IAmb 09 03 37.4
comp=Z,5.8nm,0.7s
K04D Chiloquin, OR 54.76 64 P **P** **09 03 35.8 +2.2**
baz=308
M02C Callahan 54.87 65 P **P** **09 03 36.9 +2.6**
baz=308,SNR=6.8
CMAR Chiang Mai Arr 54.95 257 P **P** **09 03 35.1 +0.1**
comp=Z,3.8nm,0.7s,baz=31,slow=7.4,SNR=14
CMAR LR LR 09 27 57.2
comp=Z,43nm,19.2s,baz=351,slow=37
I07A Izee 55.17 61 P **P** **09 03 38.6 +2.2**
I07A IAmb IAmb 09 03 39.0
comp=Z,24nm,1.9s
N02D Trinity Center 55.21 66 P **P** **09 03 39.0 +2.3**
baz=309,SNR=5.4
M04C Macdoel 55.22 64 P **P** **09 03 39.1 +2.1**
baz=308,SNR=7.6
KSH Kashi 55.50 292 *e*P **P** **09 03 43.0 +4.1**
KSH *e*pP pP 09 03 56.8 +3.3
KSH *e*PP **PP** **09 05 49.3 +6.3**
KSH *e*S **S** **09 11 21.0 +0.9**
KSH *e*sS sS 09 11 49.0 +4.6
KSH *e*SS **SS** **09 15 08.3 +3.4**
KSH pmax pmax
comp=Z,760nm,8.1s
KSH LR LR
comp=Z,410nm,6.0s
KSH LR LR
comp=Z,340nm,5.2s
KSH LR LR
comp=Z,1μm,7.7s
WDC Whiskeytown Da 55.55 66 P **P** **09 03 41.7 +2.6**
WDC pmax pmax
comp=Z,6.0nm,1.0s
WDC Whiskeytown Da 55.55 66 P **P** **09 03 41.7 +2.6**
O02D Mt. Diablo Mer 55.66 66 P **P** **09 03 42.6 +2.6**
baz=309
JTMT Jette 55.81 55 P **P** **09 03 42.8 +1.7**
BMO Blue Mountains 55.94 59 P **P** **09 03 43.7 +1.7**
BMO pmax pmax
comp=Z,12nm,1.6s
BMO Blue Mountains 55.94 59 P **P** **09 03 43.7 +1.7**
BMO IAmb IAmb 09 03 45.6
comp=Z,12nm,1.6s
ARCES ARCESS Array B 55.98 341 P **P** **09 03 39.5 -2.3**
comp=Z,4.3nm,0.9s,baz=38,slow=9.2,SNR=4.5
ARCES LR LR 09 30 13.7
comp=Z,277nm,19.1s,baz=290,slow=39
O03E Paynes Creek 56.17 66 P **P** **09 03 45.5 +1.8**
baz=309,SNR=7.7
J08A Circle Bar Ran 56.20 61 IAmb IAmb 09 03 47.5
comp=Z,8.5nm,1.2s
MSO Missoula 56.56 55 P **P** **09 03 47.8 +1.5**
baz=309
WVOR Wild Horse Val 56.69 62 IAmb IAmb 09 03 50.8
comp=Z,14nm,1.3s
BEKR Beckworth 57.30 65 IAmb IAmb 09 03 54.7
comp=Z,5.0nm,1.0s
SUMG Summit 57.87 5 P **P** **09 03 54.7 -0.9**
SUMG pmax pmax
comp=Z,4.0nm,1.0s
SUMG Summit 57.87 5 *i* P **P** **09 03 55.0 -0.6**
SUMG Summit 57.87 5 P **P** **09 03 54.7 -0.9**
PAHR Pah Rah Range 57.98 65 IAmb IAmb 09 04 00.0
comp=Z,9.5nm,1.3s
EGMT Eagleton 58.01 52 P **P** **09 03 57.7 +1.1**
baz=310
VCNR Virginia City 58.09 65 IAmb IAmb 09 04 00.7
comp=Z,5.9nm,0.9s
PNTR Pine Nut 58.25 66 IAmb IAmb 09 04 03.3
comp=Z,8.3nm,0.7s
ABKAR Akbulak array 58.26 310 P **P** **09 03 55.3 -2.8**
ABKAR IAmb IAmb 09 03 58.5
comp=Z,4.1nm,0.7s
MCMT McKenzie Canyo 58.42 57 P **P** **09 04 00.5 +0.9**
WAKR Walker 58.72 66 IAmb IAmb 09 04 04.6
comp=Z,14nm,1.4s

KVN Kaiserville 59.16 65 P **P** **09 04 06.9 +2.1**
KVN pmax pmax
comp=Z,7.0nm,0.8s
KVN Kaiserville 59.16 65 P **P** **09 04 06.9 +2.1**
KVN IAmb IAmb 09 04 08.1
comp=Z,7.2nm,0.8s
YHB Horse Butte 59.36 56 P **P** **09 04 07.7 +1.6**
NVAR Mina Array Bea 59.45 65 P **P** **09 04 09.1 +2.2**
comp=Z,2.8nm,0.6s,baz=298,slow=7.4,SNR=30
NVAR LR LR 09 29 06.5
comp=Z,57nm,18.3s,baz=349,slow=35
GCMT Greycliff 59.50 54 P **P** **09 04 09.3 +2.3**
NV11 Mina Array Sit 59.53 65 P **P** **09 04 09.2 +1.8**
NV11 IAmb IAmb 09 04 10.5
comp=Z,4.5nm,0.8s
YMR Madison River 59.54 56 P **P** **09 04 09.2 +1.8**
H17A Grant Village 59.93 56 IAmb IAmb 09 04 14.7
comp=Z,8.5nm,1.0s
H17A Grant Village 59.93 56 P **P** **09 04 13.1 +3.0**
baz=312,SNR=5.8
IMW Indian Meadow 60.06 56 IAmb IAmb 09 04 15.4
comp=Z,8.9nm,1.3s
RLMT Red Lodge 60.15 54 P **P** **09 04 13.3 +1.7**
baz=312,SNR=6.4
TIN Tinemaha, Big 60.39 67 P **P** **09 04 15.0 +1.8**
baz=312
SNOW Snow King Moun 60.45 57 P **P** **09 04 16.1 +2.5**
VES Vestal, Richgr 60.68 68 P **P** **09 04 16.2 +1.2**
baz=312
LAO LASA Array 60.70 51 P **P** **09 04 16.9 +1.8**
baz=312
PKM Mcpherson Peak 60.88 69 P **P** **09 04 18.4 +1.8**
baz=312
CWC Cottonwood Cre 60.89 67 P **P** **09 04 18.6 +2.0**
baz=312
GRAC Grapevine Rang 60.95 66 P **P** **09 04 19.0 +2.1**
baz=312,SNR=5.9
R11A Troy Canyon, C 61.10 64 IAmb IAmb 09 04 21.5
comp=Z,5.3nm,1.0s
R11A Troy Canyon, C 61.10 64 P **P** **09 04 19.6 +1.5**
baz=312,SNR=9.5
ARVC Arvin 61.31 69 P **P** **09 04 21.4 +2.0**
baz=312
DUG Dugway, Tooele 61.47 61 P **P** **09 04 22.4 +1.8**
baz=312,SNR=6.4
MPMC Manual Prospec 61.50 67 P **P** **09 04 22.4 +1.6**
baz=312
BW06 Boulder Array 61.57 57 P **P** **09 04 22.3 +1.1**
BW06 IAmb IAmb 09 04 23.9
comp=Z,6.5nm,1.1s
BW06 Boulder Array 61.57 57 P **P** **09 04 22.3 +1.1**
baz=313,SNR=6.2
PD31 Pinedale Array 61.57 57 P **P** **09 04 22.1 +0.8**
PD31 IAmb IAmb 09 04 23.9
comp=Z,5.9nm,1.1s
PDAR Pinedale Array 61.57 57 P **P** **09 04 22.7 +1.5**
comp=Z,3.3nm,0.8s,baz=317,slow=2.4,SNR=25
FURC Furnace Creek, 61.60 66 P **P** **09 04 23.2 +2.0**
baz=312,SNR=8.7
TPNV Topopah Spring 61.65 65 P **P** **09 04 23.2 +1.4**
TPNV pmax pmax
comp=Z,9.0nm,1.0s
TPNV Topopah Spring 61.65 65 P **P** **09 04 23.2 +1.4**
TPNV IAmb IAmb 09 04 24.8
comp=Z,8.8nm,1.0s
TPNV Topopah Spring 61.65 65 P **P** **09 04 23.2 +1.4**
baz=312,SNR=7.1
LRMC Laurel Mtn Rad 61.77 68 P **P** **09 04 24.3 +1.7**
baz=313
EDW2 Edwards Air Fo 61.99 68 P **P** **09 04 25.4 +1.5**
baz=313,SNR=6.1
DECC Green Verdugo 62.20 69 P **P** **09 04 27.1 +1.8**
baz=313
SHOC Shoshone, Teco 62.34 66 P **P** **09 04 27.7 +1.4**
baz=313
GSC Goldstone, Bar 62.42 67 P **P** **09 04 28.5 +1.6**
GSC pmax pmax
comp=Z,6.0nm,1.0s
GSC Goldstone, Bar 62.42 67 P **P** **09 04 28.5 +1.6**
GSC IAmb IAmb 09 04 29.5
comp=Z,6.0nm,0.9s
GSC Goldstone, Bar 62.42 67 P **P** **09 04 28.4 +1.6**
baz=313
FINES FINESS Array B 62.46 335 *i* P **P** **09 04 24.7 -1.9**
FINES pmax pmax
comp=Z,2.0nm,0.8s
FINES FINESS Array B 62.46 335 P **P** **09 04 24.2 -2.4**
comp=Z,2.0nm,0.8s,baz=35,slow=7.0,SNR=6.0
BFSC Mount Baldy Ra 62.62 69 P **P** **09 04 29.8 +1.5**
baz=313
TUQ Turquoise Moun 62.86 66 P **P** **09 04 31.7 +1.9**
baz=313
CCUT Cedar City 62.94 63 P **P** **09 04 31.6 +1.2**
MSU Marysvale 62.97 62 P **P** **09 04 32.7 +2.0**
MSU Marysvale 62.97 62 P **P** **09 04 32.7 +2.0**
HEC Hector,Ludlow 63.02 67 P **P** **09 04 32.9 +2.0**
baz=313
RDMU Red Mountain 63.05 58 P **P** **09 04 33.3 +2.2**
BBRC Big Bear Solar 63.06 68 P **P** **09 04 32.8 +1.5**
baz=313
ULM Lac du Bonnet 63.19 43 P **P** **09 04 32.1 +0.5**
comp=Z,1.7nm,0.8s,baz=341,slow=7.9,SNR=4.1
ULM Lac du Bonnet 63.19 43 IAmb IAmb 09 05 36.5
comp=Z,31nm,2.0s
Q16A Castle Valley 63.27 61 P **P** **09 04 34.6 +2.0**
K22A Casper 63.28 55 IAmb IAmb 09 04 36.0
comp=Z,27nm,1.8s
K22A Casper 63.28 55 P **P** **09 04 33.5 +0.9**
baz=314
MURC Murrieta 63.34 69 P **P** **09 04 34.5 +1.5**
baz=314
LCMT Little Creek M 63.38 64 P **P** **09 04 35.4 +2.1**
RSSD Black Hills 63.58 52 P **P** **09 04 35.1 +0.5**
RSSD pmax pmax
comp=Z,25nm,1.4s
RSSD Black Hills 63.58 52 P **P** **09 04 35.1 +0.5**
RSSD IAmb IAmb 09 04 36.8
comp=Z,25nm,1.4s
RSSD Black Hills 63.58 52 P **P** **09 04 35.8 +1.2**
baz=314
PFO Pinyon Flats O 63.78 68 P **P** **09 04 37.4 +1.4**
baz=314
BELC Belle Mtn. Jos 63.79 68 P **P** **09 04 37.4 +1.3**
baz=314
109C Camp Elliot, M 63.88 69 P **P** **09 04 37.9 +1.4**
baz=314
O20A White River Ci 64.08 58 P **P** **09 04 38.8 +0.9**
baz=314
IRM Iron Mountain 64.20 67 P **P** **09 04 39.9 +1.3**
baz=314,SNR=7.8
OBN Obninsk 64.22 326 *e*P **P** **09 04 37.1 -1.2**
OBN *e* 09 05 10.7
OBN *e* 09 06 56.6
OBN *e*PPP PPP 09 08 32.8
OBN pmax pmax
comp=Z,3.0nm,0.8s
W13A Hualapai Mount 64.31 65 IAmb IAmb 09 04 42.8
comp=Z,20nm,1.8s
BC3 Big Chuckawall 64.36 68 P **P** **09 04 41.2 +1.5**
baz=314
SWSC Sam W. Stewart 64.64 68 P **P** **09 04 43.0 +1.6**
baz=314
IKP In-Ko-Pah, Jac 64.65 69 P **P** **09 04 42.8 +1.1**
baz=314
PDMCI Parker Dam,Lak 64.70 66 P **P** **09 04 43.5 +1.7**
baz=314
N23A Red Feather La 64.81 56 P **P** **09 04 43.8 +1.0**
baz=315
Y12C Blythe 64.85 67 P **P** **09 04 44.4 +1.6**
baz=314
WUAZ Wupatki 65.50 64 P **P** **09 04 48.0 +0.8**
WUAZ IAmb IAmb 09 04 50.5
comp=Z,9.8nm,1.1s
WUAZ Wupatki 65.50 64 P **P** **09 04 49.1 +1.9**
baz=315,SNR=5.1
ISCO Idaho Springs 65.76 57 P **P** **09 04 50.7 +1.7**
ISCO pmax pmax
comp=Z,5.0nm,0.8s
ISCO Idaho Springs 65.76 57 P **P** **09 04 50.7 +1.7**
ISCO Idaho Springs 65.76 57 P **P** **09 04 50.7 +1.7**
baz=315,SNR=6.3
MVCO Mesa Verde 65.97 60 P **P** **09 04 50.4 +0.1**
MVCO IAmb IAmb 09 04 53.1
comp=Z,15nm,1.4s
MVCO Mesa Verde 65.97 60 P **P** **09 04 51.8 +1.5**
baz=315,SNR=5.2
NOA NORSAR Array B 66.32 342 P **P** **09 04 50.2 -1.7**

comp=Z,1.1nm,0.9s,baz=39,slow=7.4,SNR=3.2
NOA LR LR 09 38 14.1

comp=Z,128nm,18.9s,baz=355,slow=40
S22A 4UR Ranch, Cre 66.54 59 IAmb IAmb 09 04 57.9
comp=Z,10nm,1.2s
S22A 4UR Ranch, Cre 66.54 59 P **P 09 04 55.9 +1.9**
baz=315,SNR=7.9
Q24A Divide 66.61 57 P **P 09 04 55.8 +1.4**
baz=316
W18A Petrified Fore 66.73 63 P **P 09 04 57.1 +2.0**
baz=315
OGNE Ogallala 66.87 54 P **P 09 04 56.6 +0.8**
baz=316
214A Organ Pipe Nat 67.14 67 P **P 09 04 58.9 +1.4**
baz=315,SNR=5.8
SDCO Great Sand Dun 67.28 58 P **P 09 05 00.4 +1.7**
SDCO Great Sand Dun 67.28 58 P **P 09 05 00.0 +1.3**
baz=316,SNR=6.7
ECSD EROS Data Cent 67.59 48 P **P 09 05 00.8 +0.5**
ECSD IAmb IAmb 09 05 01.5
comp=Z,28nm,1.7s
ECSD EROS Data Cent 67.59 48 P **P 09 05 00.7 +0.5**
baz=318
TUC Tucson 68.10 66 P **P 09 05 03.9 +0.2**
TUC pmax pmax
comp=Z,3.0nm,0.9s
TUC Tucson 68.10 66 P **P 09 05 03.9 +0.2**
TUC Tucson 68.10 66 P **P 09 05 05.5 +1.8**
baz=316
SPMN Marine on St. 68.29 45 P **P 09 05 05.1 +0.5**
baz=319
T25A Trinidad 68.32 58 P **P 09 05 06.7 +1.5**
T25A IAmb IAmb 09 05 09.1
comp=Z,13nm,1.2s
T25A Trinidad 68.32 58 P **P 09 05 06.6 +1.4**
baz=316
ANMO Albuquerque 68.74 61 P **P 09 05 09.2 +1.4**
ANMO pmax pmax
comp=Z,8.0nm,1.3s
ANMO Albuquerque 68.74 61 P **P 09 05 09.2 +1.4**
ANMO Albuquerque 68.74 61 P **P 09 05 09.3 +1.4**
baz=316
319A Douglas 69.66 65 P **P 09 05 14.7 +1.3**
319A IAmb IAmb 09 05 16.9
comp=Z,14nm,0.9s
121A Cookes Peak, D 69.71 64 P **P 09 05 15.6 +1.8**
baz=317
SCHQ Schefferville 70.05 25 P **P 09 05 14.4 -0.9**
comp=Z,2.3nm,0.5s,baz=286,slow=9.4,SNR=4.0
AKASG Malin Array Be 70.41 327 P **P 09 05 14.8 -2.7**
comp=Z,25nm,0.3s,baz=32,slow=6.2,SNR=1.5
AKASG LR LR 09 38 01.1
comp=Z,261nm,18.1s,baz=285,slow=38
AKASG Malin Array Be 70.41 327 IAmb IAmb 09 05 18.4
comp=Z,1.3nm,0.8s
KBZ Khabaz 70.42 315 P **P 09 05 16.4 -1.4**
comp=Z,1.5nm,0.6s,baz=70,slow=16,SNR=3.8
WB0 Warramunga Arr 71.54 202 P **P 09 05 23.5 -1.2**
WR0 Warramunga Arr 71.69 201 P **P 09 05 24.3 -1.2**
WR0 IAmb IAmb 09 05 26.0
comp=Z,8.0nm,0.8s
WRAB Tennant Creek 71.71 202 *ce*P **P 09 05 24.1 -1.5**
WRAB pmax pmax
comp=Z,11nm,1.3s
MNTX Cornudas Mount 71.71 63 P **P 09 05 27.8 +2.0**
MNTX Cornudas Mount 71.71 63 P **P 09 05 26.3 +0.5**
baz=318,SNR=6.7
WRA Warramunga Arr 71.72 202 P **P 09 05 25.4 -0.3**
comp=Z,5.7nm,0.8s,baz=19,slow=6.5,SNR=13
WRA Warramunga Arr 71.72 202 IAmb IAmb 09 05 26.3
comp=Z,0.6nm,0.9s
TUL1 Leonard 73.88 53 P **P 09 05 38.7 +0.2**
baz=320
TX31 Lajitas Ar. Si 74.45 63 P **P 09 05 43.1 +1.0**
TX31 IAmb IAmb 09 05 44.6
comp=Z,12nm,1.0s
TX32 Lajitas Array 74.45 63 P **P 09 05 43.3 +1.2**
TX32 IAmb IAmb 09 05 44.6
comp=Z,13nm,1.1s
TXAR Lajitas Array 74.45 63 P **P 09 05 43.5 +1.5**
comp=Z,6.2nm,0.8s,baz=298,slow=5.0,SNR=77
CCM Cathedral Cave 74.54 49 P **P 09 05 42.4 0.0**
baz=322
I51A Listowel 74.58 39 P **P 09 05 43.2 +0.7**
baz=326
CLL Collm 74.83 337 *e*P P 09 05 50.0 +6.3
U40A Yellville 75.06 51 P **P 09 05 45.6 +0.2**
baz=321
E58A La Victoria 75.39 33 P **P 09 05 47.5 +0.4**
baz=330
AS31 Alice Springs 75.40 201 P **P 09 05 47.6 +0.3**
ASAR Alice Springs 75.41 201 P **P 09 05 47.8 +0.5**
comp=Z,2.7nm,0.7s,baz=15,slow=5.3,SNR=51
VYHS Vyhne 75.74 332 *e*P **P 09 05 47.8 -1.3**
VYHS Vyhne 75.74 332 *e*P **P 09 05 47.8 -1.3**
D60A Saint Jean D'O 75.74 31 P **P 09 05 49.3 +0.3**
baz=331
JCT Junction City 75.81 60 P **P 09 05 49.7 -0.1**
JCT pmax pmax
comp=Z,11nm,1.1s
JCT Junction City 75.81 60 P **P 09 05 49.7 -0.1**
JCT IAmb IAmb 09 05 52.5
comp=Z,11nm,1.1s
JCT Junction City 75.81 60 P **P 09 05 50.9 +1.1**
baz=320
MIAR Mount Ida 76.09 53 P **P 09 05 52.2 +1.0**
MIAR pmax pmax
comp=Z,10.0nm,1.2s
MIAR Mount Ida 76.09 53 P **P 09 05 52.2 +1.0**
MIAR IAmb IAmb 09 05 53.1
comp=Z,9.8nm,1.1s
MIAR Mount Ida 76.09 53 P **P 09 05 52.2 +1.0**
baz=321
O49A Covington 76.11 43 P **P 09 05 52.1 +0.8**
baz=324
W41B Gary Mavity, V 76.28 52 P **P 09 05 53.4 +1.1**
baz=322
X40A Basin Creek Fa 76.52 52 P **P 09 05 54.3 +0.6**
baz=322
M53A WI Miller and 76.67 40 P **P 09 05 54.5 +0.1**
baz=326
GERES GERESS Array B 76.89 336 P **P 09 05 54.1 -1.7**
comp=Z,0.6nm,0.6s,baz=36,slow=8.5,SNR=3.5
GERES LR LR 09 44 08.4
comp=Z,329nm,18.5s,baz=334,slow=39
N53A Lisbon 77.13 41 P **P 09 05 57.0 0.0**
baz=326
Q50A Georgetown 77.36 44 P **P 09 05 59.7 +1.3**
baz=325
I60A Shoreham 77.56 34 P **P 09 06 00.7 +1.3**
baz=330
NATX Nacogdoches 77.67 55 P **P 09 06 00.9 +0.7**
baz=321
BRTR Keskin Array B 77.78 318 P **P 09 05 59.4 -1.5**
comp=Z,1.0nm,0.8s,baz=30,slow=9.9,SNR=2.9
OXF Oxford 78.24 50 P **P 09 06 04.3 +1.0**
baz=323
U49A Red Boiling Sp 78.41 47 P **P 09 06 05.2 +1.0**
baz=324
T50A Nancy 78.44 46 P **P 09 06 05.6 +1.2**
baz=325
S51A Beattyville 78.51 44 P **P 09 06 05.9 +1.1**
baz=325
T53A Wise 79.53 44 P **P 09 06 10.9 +0.4**
baz=326
Q57A Strasburg 79.63 40 P **P 09 06 11.0 +0.1**
baz=328
P58A Pank, Wackersv 79.71 39 P **P 09 06 12.3 +1.0**
baz=328
TKL Tuckaleechee C 80.05 46 LR LR 09 44 03.1
comp=Z,57nm,18.9s,baz=11,slow=37
BLA Blacksburg 80.29 43 P **P 09 06 13.7 -0.8**
baz=327
Q59A Harwood 80.51 39 P **P 09 06 15.3 -0.3**
baz=328
GOGA Godfrey 82.03 47 P **P 09 06 23.6 -0.1**
baz=326
PPT Papeete 82.17 129 LR LR 09 36 44.4
comp=Z,44nm,19.0s,baz=223,slow=31
BBOO Buckleboo 83.79 197 P **P 09 06 32.8 +0.2**
BBOO IAmb IAmb 09 06 33.7
comp=Z,23nm,1.6s
RAYN Ar Rayn 84.86 300 P **P 09 06 37.9 -0.6**
RAYN pmax pmax
comp=Z,4.0nm,0.7s
RAYN Ar Rayn 84.86 300 P **P 09 06 37.9 -0.6**
DWPF Disney Wildern 87.39 48 P **P 09 06 51.0 +0.2**

baz=327
ESDC Sonseca Array 89.55 345 P **P 09 07 00.2 -0.7**
comp=Z,0.3nm,0.4s,baz=343,slow=5.3,SNR=3.1
CPUP Villa Florida 145.39 61 PKPbc **PKPbc 09 13 41.5 +0.4**
comp=Z,6.6nm,0.9s,baz=318,slow=3.0,SNR=13
PLCA Paso Flores 146.39 93 PKPbc **PKPdf 09 13 44.2 +1.7**
comp=Z,3.9nm,0.8s,baz=328,slow=3.8,SNR=13

*IDC **27** 09:07:47.8±28.0, 38°.26N×20°.17E, h0km, mb3.7/2, mb1 3.7/3, mb1mx3.4/28, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=553.6km s-min=35.8km az=35.0*
*THE **27** 09:07:50.5, 38°.19N×20°.40E, h0km±2km, ML3.2/10, Error ellipse: s-maj=3.0km s-min=0.5km az=249.0*
*ATH **27** 09:07:50.8, 38°.20N×20°.45E, h10km±1km, ML3.3/9, Error ellipse: s-maj=2.3km s-min=0.9km az=72.0*

ISC 27 09:07:50.1±1.0, 38°.20N±0°.03×20°.41E±0°.04, h13km±5km, n57, σ0°87/84, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.14**	**100**	P	**Pg**	**09 07 53.6**	**-0.1**
VLS				S	**Sg**	**09 07 55.8**	**-0.5**
	36μm,0.2s						
VLS	**Valsamata**	**0.14**	**100**	P	**Pg**	**09 07 53.6**	**-0.1**
VLS				S	**Sg**	**09 07 55.9**	**-0.3**
VLS				AML	AML	09 07 56.1	
	comp=N,72601μm,0.3s						
VLS				AML	AML	09 07 56.6	
	comp=E,77042μm,0.2s						
FSK	**Fiskardo**	**0.28**	**25**	P	**Pg**	**09 07 56.2**	**+0.2**
FSK				S	**Sg**	**09 08 00.3**	**+0.3**
	comp=E,8μm,0.3s						
FSK	**Fiskardo**	**0.28**	**25**	P	**Pg**	**09 07 56.3**	**+0.3**
FSK				S	**Sg**	**09 08 00.5**	**+0.5**
KFL	**Anninata**	**0.31**	**107**	P	**Pg**	**09 07 56.7**	**+0.2**
KFL				S	**Sg**	**09 08 00.6**	**-0.3**
	comp=E,13μm,0.2s						
KFL	**Anninata**	**0.31**	**107**	P	**Pg**	**09 07 56.8**	**+0.2**
KFL				S	**Sg**	**09 08 01.0**	**+0.1**
KFL				AML	AML	09 08 02.2	
	comp=N,24445μm,0.2s						
KFL				AML	AML	09 08 02.4	
	comp=E,27339μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.38**	**148**	P	**Pg**	**09 07 58.2**	**+0.4**
VLMS				S	**Sg**	**09 08 03.2**	**+0.2**
VLMS				AML	AML	09 08 09.7	
	comp=N,13562μm,0.4s						
VLMS				AML	AML	09 08 10.0	
	comp=E,10841μm,0.3s						
EVGI	**Lefkada island**	**0.46**	**25**	P	**Pg**	**09 07 59.5**	**+0.3**
EVGI				S	**Sb**	**09 08 06.7**	**-0.2**
	comp=E,2μm,0.3s						
EVGI	**Lefkada island**	**0.46**	**25**	P	**Pg**	**09 07 59.6**	**+0.3**
EVGI				S	**Sb**	**09 08 06.2**	**-0.7**
MGNA	**Meganis**	**0.54**	**33**	P	**Pb**	**09 08 01.0**	**-0.6**
MGNA				S	**Sg**	**09 08 08.2**	**+0.1**
MGNA				AML	AML	09 08 09.9	
	comp=E,7814μm,0.4s						
MGNA				AML	AML	09 08 10.1	
	comp=N,7378μm,0.3s						
ZAK2	**Zakynthos**	**0.57**	**137**	P	**Pg**	**09 08 02.0**	**+0.8**
ZAK2				S	**Sb**	**09 08 09.3**	**-0.6**
LKD2	**Lefkada island**	**0.62**	**18**	P	**Pb**	**09 08 02.0**	**-0.8**
LKD2				S	**Sg**	**09 08 11.8**	**+1.4**
	comp=N,2μm,0.4s						
LKD2	**Lefkada island**	**0.62**	**18**	P	**Pb**	**09 08 02.1**	**-0.7**
LKD2				S	**Sg**	**09 08 11.1**	**+0.8**
LKD2				AML	AML	09 08 15.2	
	comp=E,3096μm,0.4s						
LKD2				AML	AML	09 08 17.5	
	comp=N,3505μm,0.3s						
TSLK	**Tsoukalades, L**	**0.65**	**17**	P	**Pb**	**09 08 02.6**	**-0.8**
TSLK				S	**Sn**	**09 08 13.2**	**-2.0**
	comp=N,2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.65**	**17**	P	**Pb**	**09 08 02.5**	**-0.8**
TSLK				S	**Sg**	**09 08 12.8**	**+1.4**
TSLK				AML	AML	09 08 18.5	
	comp=E,4081μm,0.6s						
TSLK				AML	AML	09 08 23.1	
	comp=N,3271μm,0.4s						
PDO	**Prodromos**	**0.72**	**57**	P	**Pb**	**09 08 04.3**	**-0.3**
PDO				S	**Sn**	**09 08 15.6**	**-1.5**
PDO	**Prodromos**	**0.72**	**57**	P	**Pb**	**09 08 04.4**	**-0.3**
RLS	**Riolos of Patr**	**0.85**	**100**	P	**Pb**	**09 08 06.2**	**-0.5**
RLS				S	**Sn**	**09 08 19.5**	**-0.5**
	comp=N,1μm,0.6s						
RLS	**Riolos of Patr**	**0.85**	**100**	P	**Pg**	**09 08 06.4**	**-0.1**
RLS				S	**Sg**	**09 08 17.5**	**-0.1**
RLS				AML	AML	09 08 22.2	
	comp=E,2639μm,0.7s						
RLS				AML	AML	09 08 26.1	
	comp=N,2048μm,0.6s						
PVO	**Paravola**	**0.97**	**64**	P	**Pg**	**09 08 09.0**	**+0.1**
PVO				S	**Sn**	**09 08 23.0**	**-0.1**
	comp=N,4μm,0.4s						
PVO	**Paravola**	**0.97**	**64**	P	**Pg**	**09 08 09.2**	**+0.3**
PVO				S	**Sn**	**09 08 21.9**	**-1.2**
PVO				AML	AML	09 08 25.9	
	comp=E,8144μm,0.3s						
PVO				AML	AML	09 08 31.5	
	comp=N,6320μm,0.5s						
DRO	**Drossia**	**1.06**	**103**	P	**Pn**	**09 08 10.2**	**-0.5**
DRO				S	**Sg**	**09 08 26.4**	**+2.1**
	comp=N,2μm,0.5s						
DRO	**Drossia**	**1.06**	**103**	P	**Pg**	**09 08 10.6**	**+0.1**
EFP	**Efpalio**	**1.20**	**79**	P	**Pb**	**09 08 12.2**	**-0.5**
AMT	**Artemida-Makis**	**1.23**	**123**	P	**Pg**	**09 08 13.7**	**0.0**
AMT	**Artemida-Makis**	**1.23**	**123**	P	**Pg**	**09 08 13.7**	**0.0**
LAKA	**Lakka**	**1.24**	**88**	P	**Pb**	**09 08 13.2**	**-0.1**
LAKA				AML	AML	09 08 33.5	
	comp=N,2294μm,0.5s						
LAKA				AML	AML	09 08 33.7	
	comp=E,1788μm,0.5s						
ANX	**Ano Chora**	**1.25**	**71**	P	**Pg**	**09 08 13.9**	**-0.3**
EVR	**Evrytania**	**1.31**	**57**	P	**Pb**	**09 08 14.4**	**-0.2**
SERG	**Sergoula**	**1.31**	**80**	P	**Pb**	**09 08 14.4**	**-0.2**
TRIZ	**Trizonia**	**1.32**	**82**	P	**Pb**	**09 08 14.3**	**-0.5**
IGT	**Igoumenitsa**	**1.33**	**357**	P	**Pb**	**09 08 15.4**	**+0.5**
IGT				S	**Sg**	**09 08 34.6**	**+1.6**
	comp=E,425nm,0.4s						
IGT	**Igoumenitsa**	**1.33**	**357**	P	**Pg**	**09 08 15.6**	**-0.1**
KALE	**Kalithea**	**1.37**	**82**	P	**Pb**	**09 08 15.2**	**-0.5**
KLV	**Kalavryta, Ach**	**1.38**	**96**	P	**Pb**	**09 08 15.8**	**-0.1**
KLV	**Kalavryta, Ach**	**1.38**	**96**	P	**Pb**	**09 08 16.0**	**+0.1**
JAN	**Janina**	**1.49**	**13**	P	**Pg**	**09 08 19.3**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.57**	**59**	P	**Pg**	**09 08 20.3**	**-0.1**
ITM	**Ithomi**	**1.58**	**130**	P	**Pb**	**09 08 19.2**	**0.0**
KASA	**Kassiopi**	**1.58**	**347**	P	**Pg**	**09 08 20.4**	**-0.2**
AGG	**Agios Georgios**	**1.71**	**61**	P	**Pg**	**09 08 23.4**	**+0.4**
VLX	**Vlachokerasia**	**1.77**	**117**	P	**Pg**	**09 08 24.2**	**+0.2**
THL	**Klokotos Trika**	**1.85**	**42**	P	**Pb**	**09 08 24.4**	**+0.6**
PROD	**Prodromos**	**1.96**	**88**	P	**Pg**	**09 08 26.8**	**-1.0**
LTK	**Loutraki**	**2.02**	**94**	P	**Pb**	**09 08 26.8**	**0.0**
VIL2	**Platees**	**2.25**	**89**	P	**Pb**	**09 08 30.2**	**-0.4**
DBRK	**Dubrovnik**	**4.78**	**340**	*e*Pn	**Pn**	**09 09 03.4**	**+1.6**
DBRK				Sn	**Sn**	**09 09 56.5**	**-0.7**
STON	**Ston**	**5.10**	**337**	*e*Pn	**Pn**	**09 09 06.5**	**+0.3**
STON				Sn	**Sn**	**09 10 03.1**	**-1.8**
MAKA	**Makarska**	**5.69**	**334**	*e*Pn	**Pn**	**09 09 16.2**	**+1.8**
MAKA				Sn	**Sn**	**09 10 17.5**	**-2.1**
ZIRJ	**Zirje**	**6.53**	**328**	*e*Pn	**Pn**	**09 09 26.0**	**+0.1**
ZIRJ				Sn	**Sn**	**09 10 36.8**	**-3.4**
KIJV	**Kijevo**	**6.54**	**334**	*e*Pn	**Pn**	**09 09 27.0**	**+1.0**
KIJV				Sn	**Sn**	**09 10 39.8**	**-0.6**
MORI	**Morici**	**6.68**	**329**	*e*Pn	**Pn**	**09 09 28.8**	**+0.9**
DUGI	**Dugi Otok**	**7.05**	**327**	*e*Pn	**Pn**	**09 09 34.4**	**+1.4**
NVLJ	**Novalja**	**7.59**	**329**	*e*Pn	**Pn**	**09 09 40.8**	**+0.3**
GERES	**GERESS Array B**	**11.69**	**338**	Pn	**Pn**	**09 10 35.5**	**-1.2**
	comp=E,0.1nm,0.3s,baz=161,slow=16,SNR=1.8						
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**	**09 16 08.6**	**+0.6**
	comp=E,0.4nm,0.5s,baz=276,slow=6.7,SNR=13						
ZALV	**Zalesovo Beam**	**45.74**	**48**	P	**P**	**09 16 11.5**	**+0.6**
	comp=E,0.6nm,0.4s,baz=280,slow=8.6,SNR=3.7						

*IDC **27** 09:21:46.6±21.0, 37°.54N×19°.83E, h0km, mb3.7/3, mb1 3.7/4, mb1mx3.4/37, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=417.8km s-min=33.9km az=38.0*
*ATH **27** 09:21:54.9, 38°.22N×20°.43E, h11km±2km, ML3.5/5, Error ellipse: s-maj=3.8km s-min=1.1km az=82.0*
*THE **27** 09:21:55.2, 38°.21N×20°.44E, h0km±2km, ML3.2/10, Error ellipse: s-maj=2.4km s-min=0.3km az=245.0*

ISC 27 09:21:54.0±1.1, 38°.19N±0°.03×20°.36E±0°.05, h12km±6km, n48, σ1°08/70, mb3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VLS	**Valsamata**	**0.18**	**94**	P	**Pg**	**09 21 57.9**	**-0.1**
VLS				S	**Sg**	**09 21 59.5**	**-1.3**
VLS	**Valsamata**	**0.18**	**94**	P	**Pg**	**09 21 57.8**	**-0.1**
VLS				S	**Sg**	**09 22 00.3**	**-0.5**
VLS				AML	AML	09 22 00.6	
VLS				AML	AML	09 22 00.9	
	comp=E,60719μm,0.1s						
FSK	**Fiskardo**	**0.31**	**30**	P	**Pg**	**09 22 00.4**	**+0.1**
FSK				S	**Sg**	**09 22 04.7**	**+0.2**
	comp=E,7μm,0.3s						
FSK	**Fiskardo**	**0.31**	**30**	P	**Pg**	**09 22 00.5**	**+0.1**
FSK				S	**Sg**	**09 22 04.7**	**+0.2**
KFL	**Anninata**	**0.34**	**103**	P	**Pg**	**09 22 01.0**	**0.0**
KFL				S	**Sg**	**09 22 05.5**	**-0.1**
	comp=E,20μm,0.4s						
KFL	**Anninata**	**0.34**	**103**	P	**Pg**	**09 22 00.9**	**0.0**
KFL				S	**Sg**	**09 22 06.1**	**+0.5**
KFL				AML	AML	09 22 06.7	
	comp=E,48745μm,0.4s						
KFL				AML	AML	09 22 08.9	
	comp=N,39699μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.39**	**143**	P	**Pg**	**09 22 02.3**	**+0.5**
VLMS				S	**Sb**	**09 22 08.5**	**-0.3**
VLMS				AML	AML	09 22 12.1	
	comp=E,13225μm,0.3s						
VLMS				AML	AML	09 22 16.2	
	comp=N,24810μm,0.5s						
EVGI	**Lefkada island**	**0.49**	**28**	P	**Pg**	**09 22 03.6**	**0.0**
EVGI				S	**Sg**	**09 22 10.5**	**+0.4**
EVGI	**Lefkada island**	**0.49**	**28**	P	**Pg**	**09 22 03.8**	**+0.2**
MGNA	**Meganis**	**0.57**	**36**	P	**Pg**	**09 22 05.0**	**-0.2**
MGNA				S	**Sg**	**09 22 12.0**	**-0.8**
MGNA				AML	AML	09 22 13.8	
	comp=E,13669μm,0.3s						
MGNA				AML	AML	09 22 14.0	
	comp=N,12306μm,0.3s						
ZAK2	**Zakynthos**	**0.58**	**133**	P	**Pb**	**09 22 06.1**	**0.0**
TSLK	**Tsoukalades, L**	**0.67**	**20**	P	**Pg**	**09 22 07.0**	**-0.1**
TSLK				S	**Sb**	**09 22 16.8**	**-0.2**
	comp=N,3μm,0.4s						
PDO	**Prodromos**	**0.76**	**57**	P	**Pg**	**09 22 08.4**	**-0.3**
PDO	**Prodromos**	**0.76**	**57**	P	**Pg**	**09 22 08.6**	**-0.1**
RLS	**Riolos of Patr**	**0.88**	**98**	P	**Pg**	**09 22 10.9**	**-0.1**
RLS				S	**Sg**	**09 22 22.4**	**-0.1**
	comp=N,2μm,0.5s						
RLS	**Riolos of Patr**	**0.88**	**98**	P	**Pg**	**09 22 11.1**	**+0.1**
RLS				AML	AML	09 22 26.2	
	comp=E,3990μm,0.6s						
RLS				AML	AML	09 22 30.4	
	comp=N,4201μm,0.4s						
PVO	**Paravola**	**1.01**	**65**	P	**Pg**	**09 22 13.2**	**-0.2**
PVO				S	**Sn**	**09 22 27.6**	**-0.5**
	comp=N,4μm,0.5s						
PVO	**Paravola**	**1.01**	**65**	P	**Pb**	**09 22 13.5**	**+0.1**
DRO	**Drossia**	**1.09**	**102**	P	**Pb**	**09 22 14.9**	**+0.1**
DRO				S	**Sn**	**09 22 30.2**	**+0.1**
	comp=N,4μm,0.4s						
DRO	**Drossia**	**1.09**	**102**	P	**Pb**	**09 22 14.9**	**+0.1**
EFP	**Efpalio**	**1.24**	**79**	P	**Pn**	**09 22 16.7**	**-0.4**
EFP	**Efpalio**	**1.24**	**79**	P	**Pn**	**09 22 16.9**	**-0.2**
AMT	**Artemida-Makis**	**1.25**	**121**	P	**Pg**	**09 22 18.5**	**+0.5**
LAKA	**Lakka**	**1.27**	**87**	P	**Pn**	**09 22 17.6**	**-0.1**
LAKA				S	**Sg**	**09 22 35.3**	**+0.3**
	comp=N,1μm,0.4s						
LAKA	**Lakka**	**1.27**	**87**	P	**Pn**	**09 22 17.6**	**-0.1**
ANX	**Ano Chora**	**1.29**	**71**	P	**Pn**	**09 22 18.1**	**+0.2**
IGT	**Igoumenitsa**	**1.34**	**359**	P	**Pg**	**09 22 20.5**	**+0.8**
IGT				S	**Sg**	**09 22 39.7**	**+2.5**
	comp=N,628nm,0.3s						
TRIZ	**Trizonia**	**1.36**	**82**	P	**Pn**	**09 22 18.8**	**+0.1**
TRIZ	**Trizonia**	**1.36**	**82**	P	**Pn**	**09 22 18.9**	**+0.1**
KALE	**Kalithea**	**1.41**	**81**	P	**Pg**	**09 22 20.9**	**-0.2**
KALE				S	**Sg**	**09 22 39.8**	**+0.3**
	comp=N,880nm,0.4s						
KLV	**Kalavryta, Ach**	**1.42**	**95**	P	**Pb**	**09 22 20.3**	**-0.1**
KLV				S	**Sg**	**09 22 41.0**	**+1.4**
KLV	**Kalavryta, Ach**	**1.42**	**95**	P	**Pb**	**09 22 20.4**	**-0.1**
JAN	**Janina**	**1.51**	**14**	P	**Pg**	**09 22 23.6**	**+0.6**
JAN				S	**Sg**	**09 22 43.8**	**+1.1**
	comp=N,622nm,0.4s						
ITM	**Ithomi**	**1.60**	**129**	P	**Pb**	**09 22 23.8**	**+0.3**
KPRO	**Kipourio**	**1.93**	**24**	P	**Pb**	**09 22 29.7**	**+0.6**
VLY	**Voula,Athens**	**2.73**	**96**	P	**Pn**	**09 22 39.4**	**+1.8**
DBRK	**Dubrovnik**	**4.78**	**340**	*e*Pn	**Pn**	**09 23 07.0**	**+1.1**
DBRK				Sn	**Sn**	**09 23 59.1**	**-2.1**
STON	**Ston**	**5.10**	**337**	*e*Pn	**Pn**	**09 23 10.4**	**+0.3**
STON				Sn	**Sn**	**09 24 04.9**	**-4.0**
MAKA	**Makarska**	**5.69**	**335**	*i* Pn	**Pn**	**09 23 19.1**	**+0.8**
MAKA				Sn	**Sn**	**09 24 20.1**	**-3.3**
ZIRJ	**Zirje**	**6.52**	**328**	*e*Pn	**Pn**	**09 23 29.8**	**+0.1**
ZIRJ				Sn	**Sn**	**09 24 39.8**	**-4.2**
KIJV	**Kijevo**	**6.53**	**334**	*i* Pn	**Pn**	**09 23 30.8**	**+0.9**
MORI	**Morici**	**6.67**	**330**	*i* Pn	**Pn**	**09 23 32.5**	**+0.7**
DUGI	**Dugi Otok**	**7.04**	**327**	*i* Pn	**Pn**	**09 23 38.3**	**+1.4**
NVLJ	**Novalja**	**7.59**	**329**	*e*Pn	**Pn**	**09 23 44.9**	**+0.5**
GERES	**GERESS Array B**	**11.69**	**338**	Pn	**Pn**	**09 24 41.8**	**+1.1**
	comp=N,0.2nm,0.3s,baz=161,slow=14,SNR=4.1						
FINES	**FINESS Array B**	**23.55**	**7**	P	**P**	**09 27 05.3**	**+1.4**
	comp=N,2.2nm,1.0s,baz=169,slow=8.3,SNR=5.5						
MKAR	**Makanchi Array**	**45.40**	**58**	P	**P**	**09 30 12.3**	**-0.1**
	comp=N,0.5nm,0.4s,baz=274,slow=7.6,SNR=16						
ZALV	**Zalesovo Beam**	**45.77**	**48**	P	**P**	**09 30 15.2**	**+0.1**
	comp=N,1.0nm,0.6s,baz=266,slow=6.8,SNR=2.4						

IDC 27 09:40:15.0±843.0, 54°.39N×1°.90E, h0km, Error ellipse: s-maj=411.9km s-min=192.9km az=104.0, North Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I26DE	**FREYUNG INFRAS**	**9.20**	**122**	*i*		10 35 35.0	
	baz=312,slow=320,SNR=1.9						
I43RU	**DUBNA INFRASON**	**9.97**	**69**	*i*		11 46 50.0	
	baz=280,slow=334,SNR=0.5						
I31KZ	**AKTYUBINSK INF**	**33.70**	**73**	*i*		13 06 00.0	
	baz=298,slow=368,SNR=2.7						

ROM 27 09:46:42.5±0.0, 43°.225N±0°.002×12°.817E±0°.003, h11km, ML1.1/2, Error ellipse: s-maj=0.2km s-min=0.1km az=217.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FOSV	**Fossato di Vic**	**0.08**	**330**	P	Pg	09 46 45.4	+0.3
FOSV				S	Sg	09 46 47.5	+0.5
FIU1	**Fiuminata**	**0.09**	**113**	P	Pg	09 46 45.6	+0.4
FIU1				S	Sg	09 46 47.6	+0.5
SNTG	**Esanatoglia**	**0.10**	**71**	P	Pg	09 46 45.7	+0.4
SNTG				S	Sg	09 46 47.9	+0.6
SNTG				AML	AML		
	comp=E,100μm,0.5s						
SNTG				AML	AML		
	comp=N,124μm,0.2s						
SNTG				AML	AML		
	comp=E,100μm,0.5s						
ATCC	**AVT- Casa Cast**	**0.14**	**253**	P	Pg	09 46 46.3	+0.5
ATCC				S	Sg	09 46 49.1	+1.0
SSFR	**Montelago di S**	**0.21**	**353**	P	Pg	09 46 47.5	+0.4
SSFR				S	Sg	09 46 51.3	+1.1
SSFR				AML	AML		
	comp=E,74μm,0.2s						
SSFR				AML	AML		
	comp=N,84μm,0.3s						
ASSB	**Assisi San Ben**	**0.22**	**213**	P	Pg	09 46 47.5	+0.3
ASSB				S	Sg	09 46 51.3	+1.0
MURB	**Monte Urbino**	**0.22**	**280**	P	Pb	09 46 47.9	-0.7
MURB				S	Sg	09 46 51.6	+1.3
CESI	**CESI - Serrava**	**0.23**	**164**	P	Pg	09 46 47.8	+0.4
CESI				S	Sg	09 46 51.8	+1.1
EL6	**Elcito**

PIEI	**Pieia**	**0.37**	**327**	P	Pg	09 46 50.3 +0.3

MOS **27** *09:47:35.8±1.4,38.°10N±20.°19E,h13km,mb4.6/23,Error ellipse: s-maj=6.4km s-min=3.8km az=68.2*
IDC **27** *09:47:36.7±0.7,38.°24N±20.°39E,h0km,mb4.2/22, mb1 4.2/34,mb1mx4.1/55,mbtmp4.1/34,ML3.9/12,MS3.8/4, Ms1 3.8/4,ms1mx3.1/47,Error ellipse: s-maj=14.3km s-min=11.7km az=14.0*
PDG **27** *09:47:37.4±0.5,38.°22N±20.°20E,h10km±3km,MD4.6/1, ML4.4/10,Error ellipse: s-maj=3.5km s-min=1.5km az=90.0*
THE **27** *09:47:38.5,38.°15N±20.°35E,h0km±1km,ML4.3/7,Error ellipse: s-maj=1.7km s-min=0.6km az=229.0*
MED_RC **27** *09:47:38.0±1.6,37.°97N±20.°14E,h20km±5km,MW4.4/3, Moment Tensor Solution.Mantle waves: s3,c3; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr1.88±.95; Mθθ1.28±.71; Mϕϕ-3.16±.91; Mrθ-1.32±1.75; Mθϕ3.44±1.13; Mϕr-1.66±1.00; Best double couple: M₀4.87000×10¹⁵ NP1:ϕs292.00000°,δ59.00000°,λ23.00000°. NP2: ϕs190.00000°,δ71.00000°,λ147.00000°. Principal axes: T 4.6000, Plg36.0000°, Azm148.0000°; N 0.5400, Plg53.0000°, Azm343.0000°; P -5.1400, Plg7.0000°, Azm243.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
ATH **27** *09:47:38.7,38.°15N±20.°40E,h15km±1km,ML4.1/15 Error ellipse: s-maj=2.0km s-min=0.8km az=72.0*
BGR **27** *09:47:39.7±0.9,38.°29N±20.°73E,h10km,Error ellipse: s-maj=35.6km s-min=11.1km az=58.0*
NEIC **27** *09:47:41.3±2.7,38.°17N±0.°05×20.°28E±0.°05,h31km±5km, Error ellipse: s-maj=7.6km s-min=5.6km az=211.0*
ISC 27 09:47:37.9±1.0,38.°15N±0.°02×20.°31E±0.°03,h9km±6km, n382,σ1§87/454,mb4.3/44,MS3.8/4,23C-18D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
VLS	**Valsamata**	**0.22**	**84**	P		**Pg**	**09 47 42.6**	**+0.1**
VLS				S		**Sg**	**09 47 45.4**	**-0.2**
	221μm,0.3s							
VLS	**Valsamata**	**0.22**	**84**	P		**Pg**	**09 47 42.6**	**+0.1**
VLS	**Valsamata**	**0.22**	**84**	P		**Pg**	**09 47 42.6**	**+0.1**
VLS				S		**Sg**	**09 47 45.5**	**-0.2**
VLS				AML	AML		09 47 45.8	
VLS				AML	AML		09 47 45.9	
FSK	**Fiskardo**	**0.37**	**33**	P		**Pg**	**09 47 45.5**	**+0.4**
FSK				S		**Sg**	**09 47 50.8**	**+0.8**
	93μm,0.3s							
KFL	**Anninata**	**0.38**	**96**	P		**Pg**	**09 47 45.3**	**-0.1**
KFL				S		**Sg**	**09 47 50.7**	**+0.2**
	261μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.39**	**134**	P		**Pg**	**09 47 45.9**	**+0.3**
VLMS				S		**Sg**	**09 47 51.1**	**+0.3**
VLMS				AML	AML		09 47 53.1	
VLMS				AML	AML		09 47 53.6	
EVGI	**Lefkada island**	**0.54**	**30**	P		**Pg**	**09 47 48.5**	**+0.1**
EVGI				S		**Sg**	**09 47 56.4**	**+0.9**
EVGI	**Lefkada island**	**0.54**	**30**	P		**Pg**	**09 47 48.7**	**+0.3**
EVGI				S		**Sg**	**09 47 56.4**	**+0.9**
MGNA	**Meganis**	**0.63**	**37**	P		**Pg**	**09 47 49.9**	**-0.2**
MGNA				S		**Sg**	**09 47 58.8**	**+0.5**
MGNA				AML	AML		09 47 59.4	
	comp=N,34733μm,0.2s							
MGNA				AML	AML		09 47 59.6	
	comp=E,72140μm,0.2s							
LKD2	**Lefkada island**	**0.69**	**23**	P		**Pg**	**09 47 51.2**	**-0.1**
LKD2				S		**Sb**	**09 48 01.4**	**-0.4**
	comp=E,10μm,0.6s							
LKD2	**Lefkada island**	**0.69**	**23**	P		**Pg**	**09 47 51.2**	**-0.1**
LKD2				S		**Sg**	**09 48 00.7**	**+0.3**
LKD2				AML	AML		09 48 08.0	
	comp=N,25655μm,0.3s							
LKD2				AML	AML		09 48 09.6	
	comp=E,27665μm,0.5s							
TSLK	**Tsoukalades, L**	**0.72**	**22**	P		**Pg**	**09 47 51.8**	**-0.1**
TSLK				S		**Sb**	**09 48 02.5**	**-0.2**
	comp=E,23μm,0.7s							
TSLK	**Tsoukalades, L**	**0.72**	**22**	P		**Pg**	**09 47 51.9**	**+0.1**
TSLK				S		**Sg**	**09 48 01.8**	**+0.4**
TSLK				AML	AML		09 48 10.3	
	comp=N,42786μm,0.7s							
TSLK				AML	AML		09 48 10.6	
	comp=E,46026μm,0.6s							
PDO	**Prodromos**	**0.82**	**57**	P		**Pg**	**09 47 52.9**	**-0.8**
RLS	**Riolos of Patr**	**0.92**	**96**	P		**Pg**	**09 47 54.8**	**-0.8**
RLS				S		**Sg**	**09 48 06.9**	**-0.6**
RLS				AML	AML		09 48 12.9	
	comp=E,16647μm,0.6s							
RLS				AML	AML		09 48 12.9	
	comp=N,35703μm,0.7s							
PVO	**Paravola**	**1.06**	**64**	P		**Pg**	**09 47 57.8**	**-0.5**
PVO				S		**Sb**	**09 48 13.0**	**+0.6**
	comp=N,28μm,0.5s							
LAKA	**Lakka**	**1.32**	**86**	P		**Pn**	**09 48 01.6**	**-0.9**
LAKA				AML	AML		09 48 26.6	
	comp=E,12367μm,1.2s							
LAKA				AML	AML		09 48 29.8	
	comp=N,12437μm,0.5s							
IGT	**Igoumenitsa**	**1.38**	**1**	P		**Pb**	**09 48 04.1**	**+0.3**
IGT				S		**Sg**	**09 48 24.2**	**+2.0**
	comp=N,5μm,0.4s							
IGT	**Igoumenitsa**	**1.38**	**1**	P		**Pg**	**09 48 04.4**	**+0.1**
IGT	**Igoumenitsa**	**1.38**	**1**	P		**Pg**	**09 48 04.3**	**-0.1**
IGT				S		**Sg**	**09 48 24.1**	**+1.9**
IGT				AML	AML		09 48 31.1	
	comp=E,11657μm,0.6s							
IGT				AML	AML		09 48 31.9	
	comp=N,7319μm,0.4s							
EVR	**Evrytania**	**1.40**	**57**	P		**Pn**	**09 48 03.3**	**-0.4**
EVR				AML	AML		09 48 29.6	
	comp=E,10206μm,0.8s							
EVR				AML	AML		09 48 31.1	
	comp=N,12196μm,1.1s							
TRIZ	**Trizonia**	**1.41**	**81**	P		**Pn**	**09 48 03.4**	**-0.2**
KLV	**Kalavryta, Ach**	**1.46**	**94**	P		**Pn**	**09 48 04.3**	**-0.1**
KLV	**Kalavryta, Ach**	**1.46**	**94**	P		**Pn**	**09 48 04.3**	**-0.1**
KLV				AML	AML		09 48 32.3	
	comp=E,5775μm,0.7s							
KLV				AML	AML		09 48 33.6	
	comp=N,5929μm,0.6s							
KLV	**Kalavryta, Ach**	**1.46**	**94**	P		**Pn**	**09 48 03.8**	**-0.6**
KLV				AML	AML			
	comp=E,3565μm,1.2s							
KLV				AML	AML			
	comp=N,5075μm,1.3s							
KALE	**Kalithea**	**1.46**	**80**	P		**Pn**	**09 48 04.6**	**+0.1**
KALE				AML	AML		09 48 31.7	
	comp=N,15194μm,0.9s							
KALE				AML	AML		09 48 33.2	
	comp=E,13153μm,0.8s							
JAN	**Janina**	**1.56**	**16**	P		**Pg**	**09 48 08.4**	**+0.6**
JAN	**Janina**	**1.56**	**16**	P		**Pg**	**09 48 08.2**	**+0.4**
JAN				AML	AML		09 48 37.4	
	comp=E,10930μm,0.7s							
JAN				AML	AML		09 48 39.0	
	comp=N,8134μm,0.4s							
ITM	**Ithomi**	**1.61**	**127**	P		**Pb**	**09 48 07.5**	**-0.3**
ITM	**Ithomi**	**1.61**	**127**	P		**Pb**	**09 48 07.7**	**-0.1**
ITM				AML	AML		09 48 35.7	
	comp=E,5454μm,0.6s							
ITM				AML	AML		09 48 38.5	
	comp=N,6209μm,0.6s							
ITM	**Ithomi**	**1.61**	**127**	P		**Pb**	**09 48 07.5**	**-0.3**
ITM				AML	AML			
	comp=N,811μm,0.6s							
ITM				AML	AML			
	comp=E,1024μm,1.2s							
ITM	**Ithomi**	**1.61**	**127**			**Pb**	**09 48 07.7**	**-0.1**
ITM				Sn		**Sg**	**09 48 30.5**	**+0.8**
KASA	**Kassiopi**	**1.62**	**350**	P		**Pg**	**09 48 08.7**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.67**	**58**	P		**Pb**	**09 48 08.5**	**-0.2**
MAKR				AML	AML		09 48 41.8	
	comp=E,20774μm,1.1s							
MAKR				AML	AML		09 48 41.9	
	comp=N,14993μm,0.8s							
PYL	**PYLOS**	**1.70**	**137**	P		**Pb**	**09 48 08.5**	**-0.7**
DLFA	**Delphi**	**1.75**	**79**	P		**Pb**	**09 48 10.3**	**+0.2**
AGG	**Agios Georgios**	**1.81**	**61**	P		**Pb**	**09 48 11.5**	**+0.4**
AGG	**Agios Georgios**	**1.81**	**61**	P		**Pb**	**09 48 10.8**	**-0.3**
AGG	**Agios Georgios**	**1.81**	**61**	Pn		**Pb**	**09 48 11.5**	**+0.4**
THL	**Klokotos Trika**	**1.94**	**43**	P		**Pb**	**09 48 13.2**	**-0.2**
THL				AML	AML			
	comp=E,696μm,0.6s							
THL				AML	AML			
	comp=N,887μm,0.6s							
AXAR	**Agios Charalam**	**1.94**	**71**	P		**Pb**	**09 48 12.9**	**-0.6**
KPRO	**Kipourio**	**1.98**	**24**	P		**Pb**	**09 48 13.4**	**-0.6**
PROD	**Prodromos**	**2.05**	**86**	P		**Pb**	**09 48 14.2**	**-1.0**
PROD				AML	AML		09 48 49.3	
	comp=E,5366μm,0.7s							
PROD				AML	AML		09 48 50.9	
	comp=N,5734μm,0.8s							
LOUT	**Loutraki**	**2.11**	**94**	P		**Pn**	**09 48 14.8**	**+1.4**
PENT	**Pentalofos**	**2.14**	**17**	P		**Pb**	**09 48 16.3**	**-0.6**
LKR	**Lokris**	**2.17**	**76**	P		**Pb**	**09 48 15.9**	**-1.5**
VIL2	**Platees**	**2.33**	**88**	P		**Pb**	**09 48 18.3**	**-1.8**
SCTE	**Santa Cesarea**	**2.39**	**324**	P		**Pn**	**09 48 18.4**	**+1.3**
SCTE				S		**Sn**	**09 48 47.2**	**+0.6**
SCTE				AML	AML			
	comp=N,6000μm,0.8s							
SCTE				AML	AML			
	comp=E,3815μm,0.5s							
SCTE	**Santa Cesarea**	**2.39**	**324**			**Pn**	**09 48 18.4**	**+1.3**
SCTE				Sn		**Sn**	**09 48 47.9**	**+1.4**
KZN	**Kozani**	**2.43**	**27**	P		**Pb**	**09 48 22.3**	**+0.5**
KZN	**Kozani**	**2.43**	**27**	P		**Pb**	**09 48 20.6**	**-1.2**
NEO	**Neokhori**	**2.56**	**62**	P		**Pn**	**09 48 21.4**	**+1.9**
LIT	**Litokhoron**	**2.58**	**40**	P		**Pn**	**09 48 21.8**	**+2.0**
LIT	**Litokhoron**	**2.58**	**40**	P		**Pn**	**09 48 21.9**	**+2.0**
LIT	**Litokhoron**	**2.58**	**40**	Pn		**Pn**	**09 48 21.8**	**+2.0**
MRKA	**Markates**	**2.63**	**77**	P		**Pn**	**09 48 22.2**	**+1.6**
SKIA	**Skiathos**	**2.67**	**67**	P		**Pn**	**09 48 22.9**	**+1.9**
ATH	**Athens Observa**	**2.70**	**93**	P		**Pn**	**09 48 23.5**	**+2.1**
ATH	**Athens Observa**	**2.70**	**93**	P		**Pn**	**09 48 22.6**	**+1.2**
ATHU	**Athens Univers**	**2.75**	**93**	P		**Pn**	**09 48 23.1**	**+1.0**
FNA	**Florina**	**2.75**	**17**	P		**Pn**	**09 48 23.9**	**+1.7**
FNA	**Florina**	**2.75**	**17**	P		**Pn**	**09 48 24.5**	**+2.3**
FNA	**Florina**	**2.75**	**17**			**Pn**	**09 48 23.9**	**+1.7**
VLY	**Voula,Athens**	**2.77**	**95**	P		**Pn**	**09 48 23.5**	**+1.1**
PTL	**Ponteli**	**2.81**	**91**	P		**Pn**	**09 48 24.1**	**+1.2**
EREA	**Eretria**	**2.87**	**84**	P		**Pn**	**09 48 25.2**	**+1.5**
TIP	**Timpagrande**	**2.96**	**291**	⇑P		**Pn**	**09 48 27.1**	**+2.0**
TIP	**Timpagrande**	**2.96**	**291**	⇓S		**Sn**	**09 49 02.1**	**+1.4**
TIP	**Timpagrande**	**2.96**	**291**	P		**Pn**	**09 48 26.7**	**+1.6**
TIP				S		**Sn**	**09 49 01.5**	**+0.8**
TIP				AML	AML			
	comp=E,490μm,0.7s							
TIP				AML	AML			
	comp=N,685μm,1.1s							
TIP				AML	AML			
	comp=E,569μm,0.7s							
TIP				AML	AML			
	comp=N,858μm,1.1s							
TIP	**Timpagrande**	**2.96**	**291**			**Pn**	**09 48 26.6**	**+1.5**
SERS	**Sersale**	**2.97**	**288**	P		**Pn**	**09 48 26.9**	**+1.6**
SERS				AML	AML			
	comp=N,737μm,1.0s							
SERS				AML	AML			
	comp=E,1195μm,0.9s							
OHR	**Ohrid**	**2.98**	**7**	*i* Pn		**Pn**	**09 48 27.7**	**+2.4**
PLAC	**Placanica**	**3.06**	**277**	P		**Pn**	**09 48 27.8**	**+1.4**
PLAC				S		**Sn**	**09 49 03.5**	**+0.4**
PLAC				AML	AML			
	comp=N,1840μm,1.0s							
PLAC				AML	AML			
	comp=E,1010μm,0.7s							
TIR	**Tirane**	**3.21**	**354**	P		**Pn**	**09 48 29.9**	**+1.5**
TIR				S		**Sn**	**09 49 09.3**	**+2.6**
TIR	**Tirane**	**3.21**	**354**	⇑P		**Pn**	**09 48 30.0**	**+1.6**
TIR	**Tirane**	**3.21**	**354**	P		**Pn**	**09 48 30.4**	**+2.0**
TIR				AML	AML			
	comp=N,1385μm,0.9s							
TIR				AML	AML			
	comp=E,1370μm,1.5s							
TIR	**Tirane**	**3.21**	**354**			**Pn**	**09 48 30.4**	**+2.0**
CELI	**Celico**	**3.22**	**294**	P		**Pn**	**09 48 30.5**	**+1.8**
CELI				S		**Sn**	**09 49 08.2**	**+1.0**
CGL1	**Ceglie Messapi**	**3.32**	**320**	*e*Pn		**Pn**	**09 48 31.4**	**+1.4**
CGL1				Sn		**Sn**	**09 49 11.9**	**+2.3**
TAR1	**Taranto**	**3.33**	**316**	*e*Pn		**Pn**	**09 48 32.0**	**+1.9**
MPAZ	**Palizzi**	**3.40**	**268**	P		**Pn**	**09 48 31.9**	**+0.8**
MPAZ				S		**Sn**	**09 49 11.4**	**-0.2**
MPAZ				AML	AML			
	comp=E,1550μm,0.7s							
MPAZ				AML	AML			
	comp=N,2540μm,0.6s							
CEL	**Celeste**	**3.48**	**273**	P		**Pn**	**09 48 33.6**	**+1.5**
CEL				S		**Sn**	**09 49 13.0**	**-0.5**
CEL				AML	AML			
	comp=N,1775μm,0.7s							
CEL				AML	AML			
	comp=N,1455μm,0.7s							
CEL				AML	AML			
	comp=E,1880μm,0.4s							
CEL				AML	AML			
	comp=E,2260μm,0.4s							
CEL	**Celeste**	**3.48**	**273**			**Pn**	**09 48 33.2**	**+1.0**
CEL				Sn		**Sn**	**09 49 10.9**	**-2.6**
MASS	**Massafra**	**3.48**	**316**	*e*Pn		**Pn**	**09 48 33.9**	**+1.7**
JOPP	**Joppolo**	**3.50**	**279**	P		**Pn**	**09 48 34.0**	**+1.4**
JOPP				S		**Sn**	**09 49 14.7**	**+0.6**
JOPP				AML	AML			
	comp=E,1225μm,0.7s							
JOPP				AML	AML			
	comp=N,1017μm,0.5s							
GMB	**Gambarie**	**3.53**	**272**	P		**Pn**	**09 48 34.0**	**+1.1**
GMB				S		**Sn**	**09 49 14.6**	**-0.3**
GMB				AML	AML			
	comp=E,3825μm,0.8s							
GMB				AML	AML			
	comp=N,5980μm,0.5s							
SALB	**San Lorenzo Be**	**3.53**	**300**	P		**Pn**	**09 48 34.9**	**+1.9**
SALB				AML	AML			
	comp=E,1094μm,1.0s							
SALB				AML	AML			
	comp=E,1210μm,1.0s							
SALB				AML	AML			
	comp=N,1070μm,0.7s							
SALB				AML	AML			
	comp=N,1104μm,0.7s							
MSCL	**Scilla**	**3.56**	**273**	P		**Pn**	**09 48 34.6**	**+1.3**
MSCL				S		**Sn**	**09 49 15.9**	**+0.4**
MSCL				AML	AML			
	comp=E,3200μm,0.6s							
MSCL				AML	AML			
	comp=N,2710μm,0.6s							
VAY	**Valandovo**	**3.61**	**28**	*i* Pn		**Pn**	**09 48 36.3**	**+2.3**
NOCI	**Noci**	**3.64**	**317**	P		**Pn**	**09 48 35.8**	**+1.4**
NOCI				AML	AML			
	comp=N,2720μm,0.3s							
NOCI				AML	AML			
	comp=E,2555μm,0.6s							
MATE	**Matera**	**3.74**	**313**	⇑P		**Pn**	**09 48 37.4**	**+1.7**
STIP	**Stip**	**3.82**	**22**	*i* Pn		**Pn**	**09 48 40.6**	**+3.8**
MIGL	**Miglionico**	**3.87**	**310**	P		**Pn**	**09 48 39.9**	**+2.4**
MIGL				S		**Sn**	**09 49 24.0**	**+0.9**
MIGL				AML	AML			
	comp=E,7100μm,1.3s							
MIGL				AML	AML			
	comp=N,6745μm,1.4s							
SG1	**Sgolgore (BA)**	**3.88**	**315**	*e*Pn		**Pn**	**09 48 39.5**	**+1.8**
SG1				Sn		**Sn**	**09 49 23.0**	**-0.4**
ULC	**Ulcinj**	**3.89**	**348**	⇑*i* Pn		**Pn**	**09 48 37.4**	**-0.4**
ULC				*i* Sn		**Sn**	**09 49 23.3**	**-0.3**
PUK	**Puka**	**3.90**	**355**	P		**Pn**	**09 48 38.6**	**+0.7**
PUK				AML	AML			
	comp=E,887μm,0.3s							
PUK				AML	AML			
	comp=N,740μm,1.2s							
MPNC	**Port Mandanici**	**3.91**	**271**	P		**Pn**	**09 48 39.5**	**+1.4**
MPNC				AML	AML			
	comp=E,2455μm,0.5s							
MPNC				AML	AML			
	comp=N,2465μm,0.6s							
BAI	**Bari**	**3.96**	**319**	*e*Pn		**Pn**	**09 48 40.3**	**+1.5**
BAI				Sn		**Sn**	**09 49 25.5**	**+0.2**
AMUR	**Altamura**	**3.97**	**315**	P		**Pn**	**09 48 40.3**	**+1.4**
AMUR				AML	AML			
	comp=N,1370μm,0.7s							
AMUR				AML	AML			
	comp=E,1560μm,0.8s							
MCSR	**Castroreale**	**3.99**	**270**	P		**Pn**	**09 48 39.0**	**-0.2**
MCSR				AML	AML			
	comp=N,2350μm,0.3s							
MCSR				AML	AML			
	comp=E,2525μm,0.4s							
SIRI	**Monte Sirino -**	**4.00**	**302**			AML	AML	
	comp=N,684μm,0.7s							
SIRI						AML	AML	
	comp=E,1175μm,0.3s							
AIO	**Antillo**	**4.01**	**269**	P		**Pn**	**09 48 40.6**	**+1.1**
AIO				AML	AML			
	comp=E,846μm,0.5s							
AIO				AML	AML			
	comp=N,838μm,0.8s							
IST3	**Stromboli F**	**4.04**	**281**	P		**Pn**	**09 48 40.9**	**+1.1**
IST3				AML	AML			
	comp=N,1315μm,0.3s							
IST3				AML	AML			
	comp=E,1140μm,0.3s							
NOV	**Novara**	**4.08**	**270**	P		**Pn**	**09 48 42.0**	**+1.5**
NOV				AML	AML			
	comp=E,1795μm,0.9s							
NOV				AML	AML			
	comp=N,1235μm,0.8s							
DRME	**Dracevica, Mon**	**4.12**	**348**	*e*Pn		**Pn**	**09 48 41.3**	**+0.4**
DRME	**Dracevica, Mon**	**4.12**	**348**	⇓*i* Pn		**Pn**	**09 48 40.6**	**-0.3**
DRME				*i* Sn		**Sn**	**09 49 29.2**	**0.0**
MTSN	**Montesano sull**	**4.12**	**302**			AML	AML	
	comp=E,968μm,1.5s							
MTSN						AML	AML	
	comp=N,830μm,0.4s							
SLCN	**Sala Consilina**	**4.26**	**303**			AML	AML	
	comp=E,1610μm,0.4s							
SLCN						AML	AML	
	comp=N,486μm,1.6s							
SLCN						AML	AML	
	comp=N,974μm,1.4s							
SLCN						AML	AML	
	comp=E,382μm,1.6s							
HCRL	**Carlentini**	**4.27**	**260**	P		**Pn**	**09 48 42.2**	**-0.8**
HCRL				S		**Sn**	**09 49 31.0**	**-2.0**
HCRL				AML	AML			
	comp=E,1945μm,0.4s							
HCRL				AML	AML			
	comp=N,1115μm,1.1s							
ACER	**Acerenza**	**4.28**	**309**	P		**Pn**	**09 48 45.3**	**+2.1**
ACER				S		**Sn**	**09 49 32.7**	**-0.6**
ACER				AML	AML			
	comp=E,2770μm,0.8s							
ACER				AML	AML			
	comp=N,2805μm,1.6s							
ACER				AML	AML			
	comp=E,2840μm,0.8s							
ACER				AML	AML			
	comp=N,2735μm,1.6s							
ACER	**Acerenza**	**4.28**	**309**			**Pn**	**09 48 45.3**	**+2.1**
ACER				Sn		**Sn**	**09 49 33.7**	**+0.4**
BUM	**Brajici-Budva**	**4.28**	**346**	⇓*i* Pn		**Pn**	**09 48 42.2**	**-1.0**
BUM				*i* Sn		**Sn**	**09 49 32.5**	**-0.8**
HAVL	**Avola**	**4.29**	**255**	P		**Pn**	**09 48 42.5**	**-0.8**
HAVL				AML	AML			
	comp=E,1810μm,0.9s							
HAVL				AML	AML			
	comp=N,1385μm,0.3s							
APE	**Apeiranthos**	**4.29**	**103**	*i* P		**Pn**	**09 48 44.6**	**+1.3**
APE	**Apeiranthos**	**4.29**	**103**	⇑P		**Pn**	**09 48 45.8**	**+2.5**
MUCR	**Ucria**	**4.29**	**270**	P		**Pn**	**09 48 44.7**	**+1.4**
MUCR				AML	AML			
	comp=E,1010μm,0.6s							
MUCR				AML	AML			
	comp=N,1280μm,0.4s							
MRVN	**Minervino Murg**	**4.30**	**314**	P		**Pn**	**09 48 45.4**	**+1.9**
MRVN				AML	AML			
	comp=E,902μm,0.8s							
MRVN				AML	AML			
	comp=N,948μm,0.9s							
EPZF	**Pizzo Felice**	**4.32**	**267**	P		**Pn**	**09 48 44.3**	**+0.5**
EPZF				AML	AML			
	comp=E,1245μm,0.6s							
EPZF				AML	AML			
	comp=N,1280μm,0.7s							
PDG	**Podgorica**	**4.35**	**350**	⇓P		**Pn**	**09 48 44.5**	**+0.4**
PDG	**Podgorica**	**4.35**	**350**	⇑S		**Sn**	**09 49 34.7**	**-0.1**
PDG	**Podgorica**	**4.35**	**350**	S		**Sn**	**09 49 35.0**	**+0.2**
PDG				AML	AML			
	comp=E,775μm,0.3s							
PDG				AML	AML			
	comp=E,612μm,0.3s							
PDG				AML	AML			
	comp=N,586μm,0.5s							
PDG				AML	AML			
	comp=N,734μm,0.5s							
PDG	**Podgorica**	**4.35**	**350**	*e*Pn		**Pn**	**09 48 44.2**	**+0.2**
PDG	**Podgorica**	**4.35**	**350**			**Pn**	**09 48 44.4**	**+0.4**
PDG						Sn	**09 49 35.4**	**+0.6**
TTG	**Podgorica**	**4.35**	**350**	⇑*i* Pn		**Pn**	**09 48 43.7**	**-0.3**
TTG				*i* Sn		**Sn**	**09 49 34.0**	**-0.8**
PALZ	**Palazzo San Ge**	**4.37**	**311**	P		**Pn**	**09 48 46.4**	**+2.0**
PALZ				S		**Sn**	**09 49 35.4**	**+0.1**
PALZ				AML	AML			
	comp=E,3555μm,1.0s							
PALZ				AML	AML			
	comp=N,2975μm,1.0s							
HLNI	**Lentini**	**4.38**	**261**	P		**Pn**	**09 48 43.4**	**-1.1**
HLNI				S		**Sn**	**09 49 33.0**	**-2.7**
HLNI				AML	AML			
	comp=E,1250μm,0.9s							
HLNI				AML	AML			
	comp=N,1090μm,0.9s							
HPAC	**Pachino**	**4.38**	**252**	P		**Pn**	**09 48 45.4**	**+0.9**
HPAC				AML	AML			
	comp=N,1695μm,0.4s							
HPAC				AML	AML			
	comp=E,1695μm,1.4s							
MEU	**Monte Lauro**	**4.40**	**258**	P		**Pn**	**09 48 44.8**	**0.0**
MEU				S		**Sn**	**09 49 35.0**	**-1.2**
MEU				AML	AML			
	comp=E,2295μm,0.3s							
MEU				AML	AML			
	comp=N,2410μm,1.3s							
MCPD	**Capo d'Orlando**	**4.40**	**271**	P		**Pn**	**09 48 46.0**	**+1.3**
PVY	**Plav**	**4.44**	**357**	⇓*i* Pn		**Pn**	**09 48 45.4**	**-0.1**
PVY				*i* Sn		**Sn**	**09 49 36.3**	**-1.1**
CMPR	**Campora**	**4.45**	**301**	P		**Pn**	**09 48 48.3**	**+2.8**
CMPR				AML	AML			
	comp=N,438μm,1.6s							
CMPR				AML	AML			
	comp=E,486μm,0.4s							
HCY	**Herceg Novi**	**4.51**	**343**	*e*Pn		**Pn**	**09 48 45.8**	**-0.5**
HCY	**Herceg Novi**	**4.51**	**343**	⇓*i* Pn		**Pn**	**09 48 45.6**	**-0.7**
HCY				*i* Sn		**Sn**	**09 49 37.6**	**-1.2**
CEME	**Cevo**	**4.51**	**347**	⇑*i* Pn		**Pn**	**09 48 45.3**	**-1.1**
CEME				*i* Sn		**Sn**	**09 49 37.6**	**-1.4**
CDRU	**Civita di Ruta**	**4.53**	**303**	P		**Pn**	**09 48 50.1**	**+3.5**
CDRU				AML	AML			
	comp=E,448μm,1.2s							
CDRU				AML	AML			
	comp=N,327μm,1.4s							
HMDC	**Modica**	**4.55**	**256**	P		**Pn**	**09 48 46.0**	**-0.8**
HMDC				S		**Sn**	**09 49 37.0**	**-2.9**
HMDC				AML	AML			
	comp=N,1182μm,0.9s							
HMDC				AML	AML			
	comp=E,1300μm,0.5s							
GALF	**Gagliano Caste**	**4.56**	**266**	P		**Pn**	**09 48 48.4**	**+1.3**
CAGR	**Agira**	**4.62**	**265**	P		**Pn**	**09 48 49.7**	**+1.8**
CAGR				AML	AML			
	comp=E,982

DBRK Sn **Sn** 09 49 44.2 -1.8
MSAG Monte S. Angel 4.90 318 P **Pn** 09 48 53.2 +1.4
MSAG AML AML
comp=E,1285µm,0.2s
MSAG AML AML
comp=N,2510µm,0.2s
BRY Bratogost 4.93 345 *e*Pn **Pn** 09 48 51.5 -0.7
BRY Bratogost 4.93 345 ⇓*i*Pn **Pn** 09 48 51.4 -0.8
BRY *i* Sn **Sn** 09 49 47.5 -1.9
VTS Vitosha 4.99 26 ⇑P **Pn** 09 48 54.9 +1.9
VTS Vitosha 4.99 26 ⇑S **Sn** 09 49 50.9 +0.1
VTS Vitosha 4.99 26 P **Pn** 09 48 54.3 +1.3
VTS AML AML
comp=E,135µm,0.8s
VTS AML AML
comp=N,91µm,1.4s
VTS Vitosha 4.99 26 **Pn** 09 48 55.4 +2.4
VTS Sn **Sn** 09 49 51.3 +0.5
SGRT San Giovanni R 5.02 317 P **Pn** 09 48 54.6 +1.2
SGRT San Giovanni R 5.02 317 **Pn** 09 48 54.6 +1.2
SGRT Sn **Sn** 09 49 49.3 -2.3
RDO Rodhopi 5.02 52 P **Pn** 09 48 54.9 +1.6
RDO AML AML
comp=N,36µm,1.6s
RDO AML AML
comp=E,44µm,1.0s
STON Ston 5.11 338 *e*Pn **Pn** 09 48 54.5 -0.1
STON Sn **Sn** 09 49 50.1 -3.6
STON Ston 5.11 338 *e*Pn **Pn** 09 48 54.1 -0.5
CLTA Licata 5.13 261 P **Pn** 09 48 56.1 +1.2
CLTA AML AML
comp=N,1670µm,0.7s
CLTA AML AML
comp=E,2210µm,0.5s
UPM Unac-Piva 5.16 349 *e*Pn **Pn** 09 48 56.0 +0.7
UPM Unac-Piva 5.16 349 ⇓*i*Pn **Pn** 09 48 55.4 +0.1
UPM *i* Sn **Sn** 09 49 54.0 -1.0
WDD Wied Dalam 5.17 245 P **Pn** 09 48 56.3 +0.9
WDD AML AML
comp=N,2870µm,0.6s
WDD AML AML
comp=E,2310µm,0.7s
WDD Wied Dalam 5.17 245 **Pn** 09 48 56.3 +0.9
WDD Sn **Sn** 09 49 53.8 -1.3
ALN Alexandroupoli 5.21 57 P **Pn** 09 48 57.2 +1.2
ALN Alexandroupoli 5.21 57 **Pn** 09 48 57.1 +1.2
PLE Pljevlja 5.22 353 ⇓*i*Pn **Pn** 09 48 56.2 +0.1
PLE *i* Sn **Sn** 09 49 55.9 -0.6
PAOL Paolisi 5.28 305 **Pn** 09 48 59.5 +2.5
MELA Melanico ??? S 5.33 313 P **Pn** 09 48 60.0 +2.4
MELA AML AML
comp=E,2250µm,0.8s
MELA AML AML
comp=N,2240µm,1.1s
MELA AML AML
comp=N,2185µm,1.1s
MELA AML AML
comp=E,2295µm,0.8s
RUDO Rudo 5.50 353 *e*Pn **Pn** 09 49 00.6 +0.6
CORL Corleone 5.54 269 Pn **Pn** 09 49 01.3 +0.8
CLTB Caltabellotta 5.64 266 P Pn 09 49 07.9 +6.0
CLTB Caltabellotta 5.64 266 **Pn** 09 49 03.8 +1.8
MAKA Makarska 5.70 335 *e*Pn **Pn** 09 49 03.1 +0.5
MAKA Sn **Sn** 09 50 04.7 -3.5
BBLS Lazići 5.75 353 *e*Pn **Pn** 09 49 03.7 +0.3
DIVS Divibare 5.94 358 *e*Pn **Pn** 09 49 05.4 -0.7
HAPS Han Pijesak,BI 6.01 351 *e*Pn **Pn** 09 49 06.0 -1.1
KARP Karpathos 6.08 113 Pn **Pn** 09 49 08.5 +0.5
LPEL Lama dei Pelig 6.09 312 P **Pn** 09 49 11.4 +3.3
CAFR Castel Frentan 6.11 314 P **Pn** 09 49 11.5 +3.2
PLVB Pleven 6.17 31 ⇑P **Pn** 09 49 10.0 +1.0
INTR Introdacqua 6.24 310 P **Pn** 09 49 13.7 +3.6
INTR Introdacqua 6.24 310 **Pn** 09 49 13.2 +3.0
TEKS Tekeris 6.42 355 *e*Pn **Pn** 09 49 12.0 -0.5
ZIRJ Zirje 6.53 329 *i* Pn **Pn** 09 49 13.9 -0.1
KIJV Kijevo 6.55 334 *i* Pn **Pn** 09 49 15.3 +1.0
MORI Morici 6.68 330 *i* Pn **Pn** 09 49 16.8 +0.7
MDVR Moldovita 6.71 9 ⇓P **Pn** 09 49 16.3 -0.2
MGRS Mrkonjic Grad 6.71 340 *e*Pn **Pn** 09 49 17.4 +0.8
HERR Herculane 6.91 13 ⇑P **Pn** 09 49 19.5 +0.3
SMA1 SAN MARTINO 6.95 312 P **Pn** 09 49 23.3 +3.4
BLY Banja Luka 6.99 341 ⇓P **Pn** 09 49 21.0 +0.6
BLY Banja Luka 6.99 341 ⇓S **Sn** 09 50 36.6 -3.4
BLY Banja Luka 6.99 341 *e*Pn **Pn** 09 49 20.5 +0.1
BLY Banja Luka 6.99 341 **Pn** 09 49 21.2 +0.8
FRGS Fruska Gora 7.01 357 *e*Pn **Pn** 09 49 18.2 -2.4
DUGI Dugi Otok 7.05 327 *e*Pn **Pn** 09 49 21.9 +0.7
LNSS Leonessa 7.11 311 P **Pn** 09 49 25.2 +3.2
NRCA Norcia 7.20 313 P **Pn** 09 49 27.2 +3.8
NRCA Norcia 7.20 313 **Pn** 09 49 26.8 +3.5
UDBI Udbina 7.23 333 *i* Pn **Pn** 09 49 25.0 +1.3
FDMO Fiordimonte 7.34 314 P **Pn** 09 49 26.3 +1.1
GZR Gura Zlata 7.46 14 ⇓P **Pn** 09 49 27.3 +0.4
BZS Buzias 7.52 7 ⇑P **Pn** 09 49 27.8 +0.1
EL6 Elcito 7.53 316 P **Pn** 09 49 29.6 +1.9
NVLJ Novalja 7.60 329 *e*Pn **Pn** 09 49 29.2 +0.6
FOSV Fossato di Vic 7.69 314 P **Pn** 09 49 32.9 +2.9
ARVD Arcevia 7.72 316 P **Pn** 09 49 32.4 +2.0
ELL Elmali 7.76 97 P **Pn** 09 49 32.4 +1.3
ELL Elmali 7.76 97 Pn **Pn** 09 49 32.4 +1.3
SSFR Montelago di S 7.77 315 P **Pn** 09 49 33.4 +2.2
MURB Monte Urbino 7.81 313 **Pn** 09 49 35.3 +3.6
MURB Sn **Sn** 09 50 57.9 -2.3
ARR Arges 7.90 23 ⇓P **Pn** 09 49 32.9 +0.1
ATVO AVT- Monte Val 7.95 314 P **Pn** 09 49 37.2 +3.6
PIEI Pieia 7.97 315 P **Pn** 09 49 36.3 +2.4
VOIR 8.09 24 ⇓P **Pn** 09 49 35.7 +0.2
MORH Mrgy, Hungar 8.15 352 *e*Pn **Pn** 09 49 35.2 -1.0
BOJS Bojanci 8.26 334 P **Pn** 09 49 38.5 +0.8
OZLJ Ozalj 8.28 336 *e*Pn **Pn** 09 49 38.8 +0.8
RIY Rijeka 8.38 331 *e*Pn **Pn** 09 49 39.9 +0.5
GBRS Gornja Briga 8.43 333 *i* Pn **Pn** 09 49 41.0 +0.8
GBRS *i* Sn **Sn** 09 51 10.2 -5.3
comp=Z,83nm,0.4s
MLR Muntele Rosu 8.45 28 P **Pn** 09 49 41.5 +1.0
MLR Muntele Rosu 8.45 28 Pn **Pn** 09 49 40.8 +0.3
comp=Z,0.3nm,0.3s,baz=135,slow=11,SNR=8.9
MLR Muntele Rosu 8.45 28 ⇑P **Pn** 09 49 40.8 +0.3
MLR Muntele Rosu 8.45 28 **Pn** 09 49 41.5 +1.0
CRES Cresnjev 8.47 336 *e*Pn **Pn** 09 49 40.5 -0.2
DOPR Dopca 8.67 24 ⇓P **Pn** 09 49 44.0 +0.5
CEY Cerknica 8.75 332 *e*Pn **Pn** 09 49 44.7 +0.2
DRGR 8.81 11 P **Pn** 09 49 46.4 +1.0
LJU Ljubljana 8.98 333 *e*Pn **Pn** 09 49 48.0 +0.4
TRI Trieste 8.98 329 P **Pn** 09 49 48.0 +0.3
TRI Trieste 8.98 329 Pn **Pn** 09 49 48.0 +0.3
PLOR Plostina 9.02 30 P **Pn** 09 49 49.0 +0.8
PLOR Plostina 9.02 30 ⇑P **Pn** 09 49 49.0 +0.8
VRI Vrincioaia 9.06 30 P **Pn** 09 49 52.4 +3.6
VRI Vrincioaia 9.06 30 ⇑P **Pn** 09 49 49.7 +0.9
KEST Kesra 9.10 258 Pn **Pn** 09 49 51.6 +2.2
comp=Z,0.4nm,0.3s,baz=23,slow=11,SNR=5.1
KEST Sn **Sn** 09 51 31.4 -0.6
comp=Z,0.4nm,0.3s,baz=82,slow=23,SNR=5.7
KEST LR LR 09 54 04.4
comp=Z,267nm,18.6s,baz=104,slow=42
SABO M.te Sabotino 9.27 330 P **Pn** 09 49 52.0 +0.3
SOKA Soboth 9.37 337 *e*Pn **Pn** 09 49 52.7 -0.4
comp=Z,16nm,0.3s,SNR=18
SOKA Sn **Sn** 09 51 31.6 -6.9
comp=Z,13nm,0.6s
OBKA Obir 9.37 335 *e*Pn **Pn** 09 49 53.7 +0.6
OBKA *e*Sn **Sn** 09 51 35.6 -3.0
OBKA Obir 9.37 335 *e*Pn **Pn** 09 49 53.8 +0.6
comp=Z,21nm,0.6s,SNR=32
OBKA Sn **Sn** 09 51 35.2 -3.4
comp=Z,56nm,0.7s
TEOL Teolo 9.66 321 **Pn** 09 49 57.8 +0.7
ARSA Arzberg 9.75 340 *e*Pn **Pn** 09 49 56.6 -1.5
ARSA *e*Sn **Sn** 09 51 42.2 -5.5
ARSA Arzberg 9.75 340 Pn **Pn** 09 49 56.3 -1.9
comp=Z,5.9nm,0.3s
POLC Polcenigo 9.77 326 P **Pn** 09 49 58.5 0.0
MYKA Terra Mystica 9.80 332 *e*Pn **Pn** 09 49 59.0 +0.1
comp=Z,7.1nm,0.4s
MYKA Sn **Sn** 09 51 44.5 -4.5
comp=Z,8.8nm,0.4s
STAL STALIGIAL 9.86 328 Pn **Pn** 09 50 00.0 +0.2
CTI Castel Tesino 10.17 324 **Pn** 09 50 04.5 +0.4
CTI Sn **Sn** 09 51 51.2 -7.1
MSSA Maissana 10.19 311 Pn **Pn** 09 50 07.8 +3.4
KBA Koelnbreinsper 10.28 332 *e*Pn **Pn** 09 50 05.6 -0.1
KBA *e*Sn **Sn** 09 51 56.4 -4.7
KBA Koelnbreinsper 10.28 332 *e*Pn **Pn** 09 50 05.6 -0.1
comp=Z,4.5nm,0.3s,SNR=11
KBA *e*Sn **Sn** 09 51 55.8 -5.3
comp=Z,14nm,0.5s
CONA Conrad Observa 10.29 343 *e*Pn **Pn** 09 50 05.5 -0.2
comp=Z,4.6nm,0.6s
ZST Bratislava 10.31 348 *e*SN Sn 09 51 52.3 -9.0
ABTA Abfaltersbach 10.33 329 Pn **Pn** 09 50 05.6 -0.7
comp=Z,2.5nm,0.2s
ABTA *e*Sn **Sn** 09 51 56.4 -5.9
comp=Z,39nm,0.6s
VYHS Vyhne 10.39 355 *e*P **Pn** 09 50 06.4 -0.6
VYHS *e* 09 52 00.4
VYHS Vyhne 10.39 355 *e*PN **Pn** 09 50 06.4 -0.6
VYHS *e*SN **Sn** 09 52 00.4 -3.1
SALO Salr 10.43 319 Pn **Pn** 09 50 08.7 +1.2
MODS Modra-Piesok 10.45 349 *e*SN **Sn** 09 51 58.0 -6.9
BR131 Keskin Array S 10.51 77 P **Pn** 09 50 10.7 +2.0
BR131 Keskin Array S 10.51 77 **Pn** 09 50 10.7 +2.0
BRTR Keskin Array B 10.51 77 Pn **Pn** 09 50 12.2 +3.5
comp=Z,0.2nm,0.3s,baz=260,slow=11,SNR=5.4
UZH Uzhgorod 10.57 7 *e*P **Pn** 09 50 09.0 -0.4
MOA Molln 10.65 337 *e*Pn **Pn** 09 50 10.9 +0.4
MOA *e*Sn **Sn** 09 52 05.4 -4.4
MOA Molln 10.65 337 *e*Pn **Pn** 09 50 11.0 +0.4
comp=Z,10nm,0.3s,SNR=22
MOA *e*Sn **Sn** 09 52 06.0 -3.8
comp=Z,9.0nm,0.5s
KOLS Kolonicke sedl 10.87 7 *e*P **Pn** 09 50 17.6 +4.1
KOLS Kolonicke sedl 10.87 7 *e*PN **Pn** 09 50 17.6 +4.1
RJOB Jochberg 11.04 333 *e*Pn **Pn** 09 50 16.9 +1.0
RJOB *e*Sn **Sn** 09 52 16.1 -3.4
WTTA Wattenberg 11.11 328 *e*Pn **Pn** 09 50 18.8 +1.8
WTTA *e*Sn **Sn** 09 52 17.4 -3.9
WTTA Wattenberg 11.11 328 *e*Pn **Pn** 09 50 18.6 +1.6
comp=Z,13nm,0.5s,SNR=9.8
WATA Walderalm 11.19 328 *e*Pn **Pn** 09 50 18.8 +0.7
comp=Z,21nm,0.6s,SNR=5.9
FUORN Ofenpass-Fuorn 11.25 322 **Pn** 09 50 20.7 +1.7
FETA Feichten 11.32 325 *e*Pn **Pn** 09 50 23.4 +3.5
comp=Z,0.7nm,0.2s
MOTA Moosalm 11.40 327 *e*Pn **Pn** 09 50 23.1 +2.2
comp=Z,12nm,0.7s,SNR=5.8
DAVOX Davos/Dischmat 11.55 322 Pn **Pn** 09 50 24.2 +1.2
comp=Z,1.2nm,0.3s,baz=119,slow=18,SNR=6.2
DAVOX Sn **Sn** 09 52 24.7 -7.4
comp=Z,0.9nm,0.3s,baz=156,slow=20,SNR=3.8
GEC2 GERESS Array S 11.71 338 *e*Pn **Pn** 09 50 24.9 -0.2
GEC2 GERESS Array S 11.71 338 **Pn** 09 50 25.5 +0.4
GERES GERESS Array B 11.71 338 Pn **Pn** 09 50 24.1 -0.9
comp=Z,1.0nm,0.3s,baz=156,slow=14,SNR=28
GERES Sn **Sn** 09 52 29.0 -6.9
comp=Z,2.0nm,0.3s,baz=153,slow=24,SNR=8.6
DAVA Damuels 11.91 323 *e*Sn **Sn** 09 52 35.7 -5.2
KHC Kasperske Hory 12.00 338 *e*P **Pn** 09 50 28.3 -0.7
KHC *e* 09 52 37.1
KHC Kasperske Hory 12.00 338 *e*PN **Pn** 09 50 28.3 -0.7
KHC *e*SN **Sn** 09 52 37.1 -5.8
KHC Kasperske Hory 12.00 338 **Pn** 09 50 28.7 -0.3
WET Wettzell 12.22 336 *e*Pn **Pn** 09 50 32.0 0.0
SENIN Lac Senin/Sane 12.64 315 **Pn** 09 50 39.4 +1.4
MMAI Mount Meron Ar 13.31 108 Pn **Pn** 09 50 47.2 +0.2
comp=Z,2.5nm,0.3s,baz=298,slow=13,SNR=2.7
MMAI Sn Sn 09 53 05.2 -10
comp=Z,4.1nm,0.3s,baz=314,slow=27,SNR=3.4
MOX Moxa 13.93 336 P **Pn** 09 50 55.5 +0.1
MOX Moxa 13.93 336 *e*Pn **Pn** 09 50 55.9 +0.6
AKASG Malin Array Be 14.05 24 Pn **Pn** 09 50 56.1 -0.9
comp=Z,1.5nm,0.3s,baz=208,slow=12,SNR=2.5
AKBB Malin Array Si 14.05 24 *i* P **Pn** 09 50 55.1 -1.9
CLL Collm 14.13 341 *e*P **Pn** 09 51 00.0 +2.0
CLL Collm 14.13 341 *e*P **Pn** 09 51 00.0 +2.0
CLL *e*PP **PnPn** 09 51 08.0 +2.1
EIL Elat 14.80 121 Pn **Pn** 09 51 06.7 -0.6
comp=Z,0.6nm,0.3s,baz=344,slow=15,SNR=4.6
EIL Sn Sn 09 53 38.8 -13
comp=Z,0.7nm,0.3s,baz=356,slow=15,SNR=4.3
ASF Jabal al Asfar 14.82 109 Pn **Pn** 09 51 08.5 +0.9
comp=Z,0.3nm,0.3s,baz=299,slow=19,SNR=2.4
NACGM Naroch 17.32 13 *e* **P** 09 51 43.0 +1.9
NEY Neytrino 17.72 66 *i* P **P** 09 51 46.0 +0.2
SHA1 Shidzhatmaz 17.76 65 *i* P **P** 09 51 47.6 +1.3
KIV Kislovodsk 17.82 64 *e*P **P** 09 51 46.7 -0.1
KIV pmax pmax
comp=Z,45nm,1.0s
KBZ Khabaz 17.93 65 *i* P **Pn** 09 51 47.3 0.0
KBZ Khabaz 17.93 65 P **P** 09 51 48.8 +0.9
comp=Z,0.2nm,0.3s,baz=268,slow=8.2,SNR=7.8
PYA1 Pyatigorsk 18.13 64 *i* P **P** 09 51 51.4 +1.2
ZEI Tsey 18.52 68 *e*P **Pn** 09 51 55.2 +0.4
ZEI pmax pmax
comp=Z,7.0nm,0.6s
VORD Divnogorie 18.56 40 *e*P **P** 09 51 53.4 -1.4
VORD pmax pmax
comp=Z,10.0nm,1.1s
VSR Storozhevoye 18.65 39 *e*P **P** 09 51 54.0 -1.7
VSR pmax pmax
comp=Z,6.0nm,0.9s
ESDC Sonseca Array 18.94 282 P **Pn** 09 52 01.1 +1.3
comp=Z,0.3nm,0.3s,baz=75,slow=10,SNR=4.2
ESDC Sonseca Array 18.94 282 IAmb IAmb 09 52 06.4
comp=Z,4.7nm,1.4s
GNI Garni 19.04 76 *i* P **Pn** 09 52 01.2 +0.1
GNI pmax pmax
comp=Z,88nm,1.2s
GNI Garni 19.04 76 P **P** 09 52 00.3 -0.1
comp=Z,1.1nm,0.3s,baz=302,slow=19,SNR=2.9
LPSR Galich'ya Gora 19.40 36 *e*P **P** 09 52 03.0 -1.0
LPSR pmax pmax
comp=Z,10.0nm,1.0s
GROC Groznyy 19.95 67 *i* P **Pn** 09 52 12.1 +0.4
GROC pmax pmax
comp=Z,22nm,0.8s
VRH Novokhopyorsk 19.96 42 *e*P **P** 09 52 10.9 +0.8
VRH pmax pmax
comp=Z,10.0nm,1.0s
BTLR Botlikh 20.21 69 *i* P **P** 09 52 13.5 +0.5
OBN Obninsk 20.22 28 *e*P **P** 09 52 11.1 -1.8
OBN *e*PPP PPP 09 52 34.8
OBN pmax pmax
comp=Z,13nm,0.9s
OBN MLR MLR
comp=Z,229nm,12.0s
VSU Vasula 20.75 10 *i* P **P** 09 52 17.1 -1.5
VSU pmax pmax
comp=Z,194nm,0.8s
MOS Moscow 21.09 28 *e*P **P** 09 52 15.4 -6.9
MOS pmax pmax
comp=Z,30nm,0.7s
HFS Hagfors 22.40 351 P **P** 09 52 36.1 -0.2
comp=Z,12nm,0.6s,baz=155,slow=11,SNR=10
NC602 NORSAR Array S 23.27 349 P **P** 09 52 45.2 -0.2
NC602 IAmb IAmb 09 52 50.8
comp=Z,17nm,0.8s
EKA Eskdalemuir Ar 23.35 325 P **P** 09 52 46.0 -0.3
EKA Eskdalemuir Ar 23.35 325 P **P** 09 52 46.0 -0.3
comp=Z,9.0nm,0.8s,baz=119,slow=9.9,SNR=4.1
FINES FINESS Array B 23.59 7 *i* P **P** 09 52 49.4 +0.8
FINES pmax pmax
comp=Z,9.0nm,0.8s
FINES FINESS Array B 23.59 7 P **P** 09 52 47.3 -1.2
comp=Z,8.9nm,0.8s,baz=168,slow=10,SNR=16
FIA1 FINESS Array S 23.59 7 P **P** 09 52 47.5 -1.1
FIA1 IAmb IAmb 09 52 52.3
comp=Z,16nm,0.9s
NC405 NORSAR Array S 23.61 350 P **P** 09 52 51.1 +2.4
NB2 NORSAR Subarra 23.61 349 P **P** 09 52 48.6 -0.2
comp=Z,8.3nm,1.0s,baz=159,slow=9.3
NOA NORSAR Array B 23.61 349 P **P** 09 52 48.4 -0.4
comp=Z,2.2nm,0.7s,baz=163,slow=10,SNR=11
NC303 NORSAR Array S 23.76 349 P **P** 09 52 50.5 +0.2
SUF Sumiainen 24.85 6 P **P** 09 52 59.9 -0.4
SUF pmax pmax
comp=Z,25nm,1.9s
KLMR Klimovskoe 25.73 22 *e*P **P** 09 53 06.7 -1.5
KLMR pmax pmax
comp=Z,28nm,1.4s
KLMR Klimovskoe 25.73 22 *e*P **P** 09 53 06.7 -1.5
KLMR AMP 09 53 20.9
comp=Z,28nm,1.4s
PRGR Permogore 28.26 26 *e*P P 09 53 26.0 -5.0
PRGR pmax pmax
comp=Z,13nm,1.0s
AKTO Aktyubinsk 29.33 53 P **P** 09 53 39.7 -1.0
comp=Z,0.7nm,0.5s,baz=243,slow=6.8,SNR=3.5
AKTO LR LR 10 07 50.6
comp=Z,151nm,18.1s,baz=309,slow=42
GEYT Alibeck 29.64 79 P **P** 09 53 43.2 -0.4
comp=Z,1.0nm,0.3s,baz=296,slow=8.8,SNR=2.1
GEYT Alibeck 29.64 79 IAmb IAmb 09 53 52.8
comp=Z,1.5nm,0.8s
TORD Torodi Ar. Bea 29.91 219 P **P** 09 53 46.9 +0.8
comp=Z,2.7nm,0.8s,baz=30,slow=6.9,SNR=12
TORD Torodi Ar. Bea 29.91 219 IAmb IAmb 09 53 50.9
comp=Z,2.8nm,1.1s
ABKAR Akbulak array 30.40 56 P **P** 09 53 51.2 +1.1
ARU Arti 31.19 42 *c i*P **P** 09 53 58.1 +1.1
ARU 09 55 00.6
ARU S **S** 09 59 09.2 +6.3
ARU SS **SnSn** 10 00 53.1 +8.5
ARU pmax pmax
comp=Z,15nm,2.1s
ARU Arti 31.19 42 P **P** 09 53 55.9 -1.1
comp=Z,1.2nm,0.4s,baz=232,slow=8.0,SNR=4.7
ARCES ARCESS Array B 31.57 3 P **P** 09 53 59.2 -1.0
comp=Z,3.4nm,0.9s,baz=192,slow=11,SNR=4.9
KK31 Karatay Array 37.96 66 P **P** 09 54 56.0 +0.2
KK31 pmax pmax
comp=Z,4.0nm,1.0s
KK31 Karatay Array 37.96 66 P **P** 09 54 56.0 +0.2
KK31 IAmb IAmb 09 55 04.0
comp=Z,4.4nm,0.9s
KKAR Karatay Array 37.96 66 P **P** 09 54 55.8 0.0
KKAR pmax pmax
comp=Z,4.0nm,1.0s
KKAR Karatay Array 37.96 66 P **P** 09 54 55.8 0.0
KKAR IAmb IAmb 09 55 04.0
comp=Z,4.4nm,0.9s
SPITS Spitsbergen Ar 40.17 359 P **P** 09 55 14.4 +0.7
comp=Z,16nm,1.2s,baz=190,slow=8.6,SNR=3.4
AAK Ala-Archa 40.92 66 *c e*P **P** 09 55 21.0 +0.3
AAK pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 42.43 53 *c e*P **P** 09 55 32.8 +0.2
KURK pmax pmax
comp=Z,9.0nm,1.7s
MK31 Makanchi Array 45.46 58 P **P** 09 55 55.9 -1.2
MK31 pmax pmax
comp=Z,2.0nm,0.7s
MK31 Makanchi Array 45.46 58 P **P** 09 55 55.9 -1.2
MKAR Makanchi Array 45.46 58 P **P** 09 55 55.9 -1.2
comp=Z,2.1nm,0.4s,baz=275,slow=7.2,SNR=50
ZALV Zalesovo Beam 45.83 48 P **P** 09 55 59.1 -0.8
comp=Z,4.7nm,0.4s,baz=274,slow=8.9,SNR=24
WMQ Urumqi 49.92 61 *e*P **P** 09 56 35.3 +3.5
TLY Talaya 57.43 47 *e*P **P** 09 57 27.8 +1.1
TLY pmax pmax
comp=Z,7.0nm,1.0s
SCHQ Schefferville 58.36 317 LR LR 10 23 04.6
comp=Z,163nm,18.4s,baz=280,slow=36
TIXI Tiksi 59.73 20 *c e*P **P** 09 57 40.6 -1.7
TIXI pmax pmax
comp=Z,5.0nm,2.5s
SONM Songino Array 60.60 50 P **P** 09 57 48.0 -0.9
comp=Z,1.6nm,0.7s,baz=286,slow=8.5,SNR=10
SONM Songino Array 60.60 50 IAmb IAmb 09 57 49.2
comp=Z,2.2nm,1.0s
ULN Ulaanbaatar 60.99 50 *c e*P **P** 09 57 50.8 -0.8
ULN pmax pmax
comp=Z,3.0nm,1.7s
LZH Lanzhou 64.36 63 *e*P **P** 09 58 15.0 +0.7
LZH pP sP 09 58 19.3 +0.9
LZH sP pP 09 58 21.5 +4.3
LZH *e*PP **PP** 10 00 38.3 +2.8
LZH pmax pmax
comp=Z,16nm,1.3s
LZH pmax pmax
comp=Z,45nm,7.2s
YAK Yakutsk 65.21 29 *i* P **P** 09 58 18.0 -1.1
YAK pmax pmax
comp=Z,9.0nm,0.8s
HHC Hu-ho-hao-te 67.19 55 *e*P **P** 09 58 34.0 +1.7
HHC pmax pmax
comp=Z,5.0nm,1.1s
HHC pmax pmax
comp=Z,96nm,6.0s
HIA Hailar 67.66 44 *i* P **P** 09 58 34.2 -0.9
HIA pmax pmax
comp=Z,24nm,1.2s
XAN Xi'an 68.98 63 P **P** 09 58 46.8 +3.1
XAN pP sP 09 58 52.0 +4.2
XAN pmax pmax
comp=Z,2.0nm,0.5s
CMAR Chiang Mai Arr 70.06 82 *i* P **P** 09 58 49.7 -0.8
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 70.06 82 P **P** 09 58 49.5 -0.9
comp=Z,1.1nm,0.3s,baz=304,slow=8.0,SNR=7.3
BILL Bilibino 71.08 13 *e*P **P** 09 58 54.8 -1.1
BILL *e* 09 59 13.5
BILL *e* 10 01 41.1
BILL *e*PPP PPP 10 03 15.2
BILL pmax pmax
comp=Z,10.0nm,2.5s
INK Inuvik 72.06 350 P **P** 09 59 01.8 +0.1
comp=Z,1.4nm,0.9s,baz=42,slow=2.7,SNR=4.3
INK Inuvik 72.06 350 IAmb IAmb 09 59 21.1
comp=Z,4.3nm,1.4s
SEY Seymchan 72.22 21 P **P** 09 59 04.0 +1.2
comp=Z,0.4nm,0.3s,baz=236,slow=5.8,SNR=4.4
YKA Yellowknife Ar 73.36 340 P **P** 09 59 07.4 -2.1
comp=Z,0.4nm,0.6s,baz=29,slow=5.6,SNR=6.1
KLR Kul'dur 74.00 39 *i* P **P** 09 59 12.4 -1.2
KLR pmax pmax
comp=Z,5.0nm,0.9s
MA2 Magadan 74.38 24 *i* P **P** 09 59 13.7 -1.9
MA2 pmax pmax
comp=Z,7.0nm,1.0s
MA2 Magadan 74.38 24 P **P** 09 59 14.4 -1.2
comp=Z,1.1nm,0.3s,baz=356,slow=15,SNR=3.0
MA2 Magadan 74.38 24 IAmb IAmb 09 59 26.4
comp=Z,5.7nm,0.8s
WHN Wuhan 74.74 63 P **P** 09 59 17.3 -0.9
ULM Lac du Bonnet 75.62 324 P **P** 09 59 22.2 -0.7
comp=Z,1.8nm,0.7s,baz=20,slow=6.8,SNR=4.2
ULM Lac du Bonnet 75.62 324 IAmb IAmb 09 59 24.8
comp=Z,3.6nm,1.0s
ILAR Eielson Array 76.92 354 P **P** 09 59 30.4 +0.3
comp=Z,1.2nm,1.1s,baz=352,slow=5.5,SNR=4.8
USRK Ussuriysk Ar. 77.41 43 P **P** 09 59 33.2 0.0
comp=Z,1.0nm,0.5s,baz=213,slow=6.7,SNR=4.2
MSHR Mys Shultsa 78.03 45 *e*P **P** 09 59 34.6 -2.0
KSRS Korea Array 79.47 50 P **P** 09 59 44.6 -0.1
comp=Z,0.7nm,0.5s,baz=307,slow=4.9,SNR=3.7
YSS Yuzh-Sakhalins 80.89 36 *i* P **P** 09 59 51.5 -0.6
YSS pmax pmax
comp=Z,15nm,1.0s
PETK Petropavlovsk- **81.89 24** LR LR 10 43 47.3
comp=Z,56nm,19.6s,slow=41
TXAR Lajitas Array 94.87 313 P **P** 10 01 01.8 +1.2
comp=Z,0.1nm,0.5s,baz=76,slow=3.8,SNR=2.4
ASAR Alice Springs 122.34 96 PKP **PKPdf** 10 06 33.1 -0.5
comp=Z,0.4nm,0.9s,baz=315,slow=1.4,SNR=3.7

NEIC ***27*** *09:52:28.8±1.5, 6.8S±0.2×125.4E±0.2, h523km±12km, mb4.3/7, Error ellipse: s-maj=34.5km s-min=12.3km az=225.0*

IDC ***27*** *09:52:29.7±2.6, 6.81S×125.45E, h532km×31km, mb3.0/4, mb1 3.2/6, mb1mx2.9/32, mbtmp4.0/6, Error ellipse: s-maj=166.0km s-min=15.7km az=65.0*

ISC 27 09:52:28.2±0.9, 6.8S±0.1×125.4E±0.2, h511km, n17, σ1s32/21, mb3.6/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**3.11**	**201**	P	**P**	**09 53 43.2**	**+2.2**
SOEI					**S**	**09 54 39.5**	**-0.6**
MTN	**Manton Dam**	**8.23**	**137**	P	**P**	**09 54 29.3**	**+2.1**
KNRA	**Kununurra**	**9.39**	**160**	P	**P**	**09 54 41.1**	**+1.9**
FITZ	**Fitzroy Crossi**	**11.20**	**179**	P	**P**	**09 54 59.0**	**+0.7**
WB0	**Warramunga Arr**	**15.55**	**147**	P	**P**	**09 55 43.7**	**-0.3**
WB0				IAmb	IAmb	09 55 46.4	
comp=Z,14nm,1.4s							
WRA	**Warramunga Arr**	**15.66**	**147**	P	**P**	**09 55 44.3**	**-0.9**
comp=Z,1.3nm,0.3s,baz=324,slow=11,SNR=38							
WRA				S	**S**	**09 58 26.6**	**-0.9**
comp=Z,0.0nm,0.3s,baz=332,slow=16,SNR=3.9							
WB2	**Warramunga Arr**	**15.67**	**147**	P	**P**	**09 55 45.2**	**0.0**

WB2					IAmb	IAmb	09 55 46.8		
	comp=Z,4.0nm,0.6s								
WR0	**Warramunga Arr**	**15.79**	**147**	P		**P**	**09 55 46.4**	**0.0**	
WR0					IAmb	IAmb	09 55 48.1		
	comp=Z,13nm,0.9s								
AS31	**Alice Springs**	**18.63**	**155**	P		**P**	**09 56 14.3**	**+0.5**	
AS31					IAmb	IAmb	09 56 15.6		
	comp=Z,4.1nm,0.3s								
ASAR	**Alice Springs**	**18.63**	**155**	P		**P**	**09 56 14.2**	**+0.4**	
	comp=Z,1.5nm,0.3s,baz=336,slow=9.0,SNR=128								
ASAR					S	**S**	**09 59 16.2**	**-1.4**	
	comp=Z,0.1nm,0.3s,baz=344,slow=22,SNR=6.6								
ASAR					ScP	**ScP**	**10 03 00.2**	**-3.4**	
	comp=Z,0.0nm,0.3s,baz=348,slow=2.3,SNR=3.9								
COEN	**Coen**	**18.86**	**113**	P		**P**	**09 56 16.4**	**+0.4**	
BBOO	**Buckleboo**	**27.69**	**160**	P		**P**	**09 57 34.6**	**-0.1**	
BBOO					IAmb	IAmb	09 57 35.4		
	comp=Z,2.9nm,0.8s								
STKA	**Stephens Creek**	**29.15**	**151**	P		**P**	**09 57 48.1**	**+0.6**	
	comp=Z,2.0nm,0.5s,baz=321,slow=6.4,SNR=9.0								
STKA	**Stephens Creek**	**29.15**	**151**	P		**P**	**09 57 46.5**	**-1.1**	
SONM	**Songino Array**	**56.96**	**345**	P		**P**	**10 01 24.6**	**0.0**	
	comp=Z,0.4nm,0.6s,baz=157,slow=4.7,SNR=3.0								
MKAR	**Makanchi Array**	**65.65**	**329**	P		**P**	**10 02 21.6**	**0.0**	
	comp=Z,0.4nm,0.4s,baz=128,slow=6.2,SNR=4.4								
ZALV	**Zalesovo Beam**	**69.48**	**336**	P		**P**	**10 02 44.1**	**-0.6**	
	comp=Z,0.8nm,0.4s,baz=151,slow=5.9,SNR=3.5								

IDC ***27*** *09:57:18.9±1.0,49°.89N×178°.34W,h0km,mb3.6/9, mb1 4.0/10,mb1mx3.7/45,mbtmp3.7/10,ML3.8/1,Error ellipse: s-maj=31.3km s-min=20.8km az=148.0*
AEIC ***27*** *09:57:23.6±2.4,50°.18N±0°.09×178°.0W±0°.1,h7km±5km, mb4.0/9(NEIC),Error ellipse: s-maj=12.3km s-min=9.6km az=181.0*

ISC 27 09:57:20.3±3.7,50°.04N±0°.08×178°.31W±0°.08,h8km±23km, n38,σ0s95/40,mb3.7/12,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GAEA	**Gareloi East**	**1.77**	**351**			**Pb**	**09 57 52.9**	**-0.2**
TASE	**Tanaga Southea**	**1.81**	**5**			**Pn**	**09 57 52.5**	**+0.7**
TASE						**Sn**	**09 58 15.1**	**+0.1**
KIMD	**Kanaga Island**	**1.86**	**21**			**Pn**	**09 57 52.7**	**+0.3**
KIMD						**Sn**	**09 58 15.3**	**-0.7**
TAFP	**Tanaga Falls P**	**1.88**	**6**			**Pn**	**09 57 53.3**	**+0.5**
TAFP						**Sn**	**09 58 16.5**	**-0.1**
KIWB	**Kanaga Island**	**1.96**	**21**			**Pn**	**09 57 54.3**	**+0.4**
KIWB						**Sn**	**09 58 18.0**	**-0.6**
KIKV	**Kanaga Island**	**1.98**	**21**			**Pn**	**09 57 54.5**	**+0.4**
ADK	**Adak**	**2.12**	**28**			**Sn**	**09 58 21.4**	**-1.0**
ADK	**Adak**	**2.12**	**28**			**Pn**	**09 57 55.9**	**-0.1**
ADAG	**Mount Adagdak**	**2.22**	**28**			**Pn**	**09 57 58.0**	**+0.5**
GSTD	**Great Sitkin T**	**2.44**	**33**			**Pn**	**09 58 00.9**	**+0.4**
GSTD						**Sn**	**09 58 29.7**	**-0.9**
GSMY	**Great Sitkin M**	**2.46**	**34**			**Pn**	**09 58 01.0**	**+0.3**
ATKA	**Atka Island**	**3.38**	**48**			**Sn**	**09 58 51.1**	**-2.5**
ATKA	**Atka Island**	**3.38**	**48**			**Pn**	**09 58 13.2**	**-0.2**
KOWE	**Korovin West**	**3.46**	**46**			**Pn**	**09 58 14.7**	**+0.3**
UNV	**Unalaska Valle**	**8.23**	**58**	Pn		**Pn**	**09 59 21.1**	**+1.2**
PETK	**Petropavlovsk-**	**15.21**	**291**	Pn		**P**	**10 00 58.1**	**-2.2**
	0.2nm,0.3s,baz=88,slow=18,SNR=5.9							
KDAK	**Kodiak Island**	**16.94**	**53**	P		**Pn**	**10 01 16.6**	**-0.8**
	0.4nm,0.3s,baz=243,slow=9.0,SNR=3.1							
BPAW	**Bear Paw Mtn.**	**20.23**	**36**	P		**P**	**10 01 56.0**	**+0.4**
BPAW					IAmb	IAmb	10 01 59.1	
	comp=Z,6.4nm,1.4s							
RND	**Reindeer**	**20.73**	**39**	P		**P**	**10 02 00.5**	**-0.6**
RND					IAmb	IAmb	10 02 04.6	
	comp=Z,6.4nm,1.4s							
MCK	**McKinley**	**20.85**	**38**	P		**P**	**10 02 03.0**	**+0.7**
NEA	**Nenana**	**21.20**	**36**	P		**P**	**10 02 05.8**	**-0.2**
ILAR	**Eielson Array**	**22.12**	**36**	P		**P**	**10 02 16.3**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=241,slow=8.1,SNR=9.4							
SCRK	**Sand Creek**	**22.95**	**40**	P		**P**	**10 02 24.0**	**-0.9**
BARN	**Barnard Glacie**	**23.15**	**48**	P		**P**	**10 02 29.2**	**+2.2**
BARN					IAmb	IAmb	10 02 37.7	
	comp=Z,18nm,1.4s							
CTGM	**Chitina Glacie**	**23.29**	**48**	P		**P**	**10 02 29.1**	**+0.7**
CTGM					IAmb	IAmb	10 02 29.6	
	comp=Z,7.2nm,1.2s							
INK	**Inuvik**	**28.39**	**33**	P		**P**	**10 03 15.5**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=251,slow=10,SNR=5.2							
INK	**Inuvik**	**28.39**	**33**	IAmb		IAmb	10 03 23.4	
	comp=Z,2.5nm,1.3s							
H11N2	**WAKE ISLAND Hy**	**32.46**	**207**	T		T	10 37 41.7	
	baz=18,slow=75							
H11N3	**WAKE ISLAND Hy**	**32.47**	**207**	T		T	10 37 46.3	
	baz=18							
H11N1	**WAKE ISLAND Hy**	**32.48**	**207**	T		T	10 37 42.9	
	baz=18,slow=75							
YKA	**Yellowknife Ar**	**35.94**	**45**	P		**P**	**10 04 22.6**	**+1.8**
	comp=Z,1.3nm,0.8s,baz=279,slow=7.8,SNR=13							
PDAR	**Pinedale Array**	**46.43**	**71**	P		**P**	**10 05 47.8**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=318,slow=4.2,SNR=4.1							
TXAR	**Lajitas Array**	**58.55**	**81**	P		**P**	**10 07 17.1**	**-0.4**
	comp=Z,0.1nm,0.6s,baz=299,slow=4.0,SNR=2.9							
TXAR					PcP	**PcP**	**10 08 08.5**	**+0.7**
	comp=Z,0.3nm,0.7s,baz=297,slow=3.6,SNR=4.2							
ARCES	**ARCESS Array B**	**59.47**	**351**	P		**P**	**10 07 23.8**	**+0.7**
	comp=Z,3.8nm,0.9s,baz=24,slow=9.3,SNR=7.0							
MKAR	**Makanchi Array**	**61.12**	**309**	P		**P**	**10 07 35.4**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=46,slow=5.2,SNR=3.9							
AKASG	**Malin Array Be**	**76.92**	**342**	P		**P**	**10 09 13.4**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=12,slow=5.2,SNR=1.8							
WRA	**Warramunga Arr**	**81.27**	**224**	P		**P**	**10 09 35.5**	**-1.4**
	comp=Z,0.7nm,1.0s,baz=30,slow=5.8,SNR=2.8							
ASAR	**Alice Springs**	**84.71**	**223**	P		**P**	**10 09 54.1**	**-0.6**
	comp=Z,0.5nm,1.1s,baz=27,slow=6.0,SNR=4.1							

MAN 27 10:20:51.8,9°.87N×123°.85E,h6km,mb4.4,ML3.2,MS3.1, 1D,Negros

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.46**	**14**	⇓	*i*	P	10 21 01.0	+0.2
LLP					*i*	S	10 21 08.2	+1.3
MSLP	**Maasin**	**1.03**	**75**	*e*		P	10 21 10.7	-0.8
MSLP				*e*		S	10 21 27.0	-0.5
OCLP	**Ormoc**	**1.39**	**32**	*e*		P	10 21 17.4	-0.5
OCLP				*e*		S	10 21 37.3	+0.6
GUIM	**Jordan**	**1.46**	**301**	*e*		P	10 21 17.6	-1.1
GUIM				*e*		S	10 21 38.4	+0.2
BUKP	**Musuan**	**2.31**	**149**	*e*		P	10 21 28.2	-2.2
BUKP				*e*		S	10 21 55.6	-3.6

UPA ***27*** *10:21:05.2±0.6,5°.85N×82°.52W,h1km±27km,MW4.2*

ISC 27 10:21:05.9±1.5,5°.77N±0°.06×82°.47W±0°.09,h14km,n30, σ2s12/38,1C,South of Panama

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CACAO	**El Cacao, Vera**	**2.23**	**46**	*e*		**Pn**	**10 21 42.7**	**+0.2**
CACAO				*e*		**Sn**	**10 22 10.3**	**+0.3**
GMAL	**Guarumal, Vera**	**2.33**	**32**	*e*		**Pn**	**10 21 43.6**	**-0.2**
GMAL				*e*		**Sb**	**10 22 14.0**	**-2.3**
PEDE3	**Pedregal, Chir**	**2.60**	**1**	*e*		**Pn**	**10 21 47.4**	**-0.1**
PEDE3				*e*		**Sn**	**10 22 20.3**	**+1.5**
CHIR3	**Chiriqui UPA,**	**2.61**	**3**	*e*		**Pn**	**10 21 47.7**	**0.0**
CHIR3				*e*		**Sn**	**10 22 19.2**	**0.0**
LOCO3	**Loma Colorada,**	**2.62**	**1**	*e*		**Pn**	**10 21 47.6**	**-0.2**
LOCO3				*e*		**Sn**	**10 22 18.7**	**-0.7**
DVD	**David**	**2.65**	**0**	*e*		**Pn**	**10 21 47.1**	**-1.1**
DVD				*e*		**Sn**	**10 22 20.5**	**+0.4**
BCO2	**Palmira**	**2.93**	**359**	*e*		**Pn**	**10 21 51.3**	**-0.9**
BCO2				*e*		**Sn**	**10 22 24.6**	**-2.7**
AZU	**Azuero**	**2.96**	**47**	*e*		**Pn**	**10 21 54.1**	**+1.6**
AZU				*e*		**Sn**	**10 22 23.2**	**-4.6**
BRU2	**Volcan**	**3.01**	**356**	⇑	*i*	P	**10 21 52.8**	**-0.6**
BRU2				*e*		**Sn**	**10 22 29.3**	**0.0**
HDC	**Heredia**	**4.51**	**339**	*e*		**Pn**	**10 22 13.8**	**-0.1**
HDC				*e*		**Sn**	**10 23 06.8**	**+0.5**
PTAC	**Punta Ardita,**	**4.83**	**73**	*e*		**Pn**	**10 22 20.9**	**+2.7**
SOLC	**Bahia Solano**	**5.05**	**85**	*e*		**Pn**	**10 22 21.5**	**+0.2**
MALC	**Bahia Malaga**	**5.40**	**109**	*e*		**Pn**	**10 22 28.2**	**+2.0**
PLMC	**San Jos del P**	**6.22**	**98**	*e*		**Pn**	**10 22 38.1**	**+0.7**
PLMC				*e*		**Pn**	**10 22 38.1**	**+0.7**
YOTC	**Yotoco, Valle**	**6.35**	**106**	*e*		**Pn**	**10 22 39.5**	**+0.2**
BBAC	**Balboa, Cauca**	**6.40**	**125**	*e*		**Pn**	**10 22 39.9**	**-0.2**
BBAC				*i*			10 22 54.8	
	comp=Z,24nm,0.4s							
BBAC				*e*	S	**Pb**	**10 22 56.2**	**-1.1**
SOTA	**Rioblanco**	**6.87**	**121**	*e*		**Pn**	**10 22 47.4**	**+0.7**
PCON	**Cinco Dias**	**6.95**	**119**	*e*		**Pn**	**10 22 50.1**	**+2.1**
GUY2C	**Guyana, Caldas**	**7.09**	**94**	*e*		**Pn**	**10 22 53.4**	**+3.7**
UREC	**San Jos de Ur**	**7.16**	**74**	*e*		Pn	10 22 56.1	+5.8
ORTC	**Ortega, Tolima**	**7.43**	**104**	*e*		**Pn**	**10 22 54.8**	**+0.7**
NORC	**Norcasia**	**7.56**	**91**	*e*		Pn	10 23 01.4	+5.5
PRAC	**Prado**	**7.83**	**105**	*e*		**Pn**	**10 23 02.1**	**+2.6**
PTBC	**PUERTO BERRIO,**	**8.00**	**84**	*e*		Pn	10 23 07.4	+5.5
SJCC	**San Jacinto, C**	**8.30**	**60**	*e*		**Pn**	**10 23 10.7**	**+4.7**
SMLC	**San Martn de**	**8.86**	**70**	*e*		**Pn**	**10 23 18.0**	**+4.5**
VILC	**Villavicencio,**	**8.90**	**100**	*e*		**Pn**	**10 23 18.7**	**+4.4**
MACC	**Macarena, Meta**	**9.32**	**112**	*e*		**Pn**	**10 23 21.3**	**+1.3**
RUSC	**La Rusia**	**9.34**	**89**	*e*		Pn	10 23 28.6	+8.0
OCAC	**Ocana**	**9.40**	**74**	*e*		**Pn**	**10 23 24.6**	**+3.4**

IDC ***27*** *10:33:19.4±0.5,34°.82N×73°.08E,h0km,mb4.3/25, mb1 4.4/31,mb1mx4.3/55,mbtmp4.3/31,ML4.2/6,MS3.6/2, Ms1 3.6/2,ms1mx3.0/31,Error ellipse: s-maj=13.6km s-min=11.8km az=35.0*
NDI ***27*** *10:33:20.5±2.5,34°.98N×72°.52E,h33km,mb4.4,ML4.3, mb4.6(NEIC)*
BJI ***27*** *10:33:23.0±0.0,34°.90N×73°.10E,h30km,mB4.6/16, mb4.4/21,Ms4.3/5,Ms7 4.1/4*
MOS ***27*** *10:33:23.3±1.1,34°.91N×73°.12E,h33km,mb4.7/17,Error ellipse: s-maj=8.6km s-min=4.5km az=89.9*
NEIC ***27*** *10:33:23.6±1.3,34°.79N±0°.05×73°.11E±0°.07,h28km±4km, mb4.6/21,Error ellipse: s-maj=8.8km s-min=7.6km az=80.0*
NNC ***27*** *10:33:29.8±2.3,35°.11N×73°.11E,h84km±21km,mb4.1, mpv4.4,Error ellipse: s-maj=17.0km s-min=12.8km az=13.0*

ISC 27 10:33:22.9±0.3,34°.84N±0°.04×73°.16E±0°.04,h24km,n178, σ1s97/203,mb4.5/51,12C-5D,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHCP	**Chirah Chowk**	**1.18**	**176**	P		**Pn**	**10 33 43.5**	**-0.4**
NIL	**Nilore**	**1.18**	**176**	P		**Pn**	**10 33 43.5**	**-0.5**
NIL	**Nilore**	**1.18**	**176**			**Pn**	**10 33 43.5**	**-0.5**
CEP	**Cherat**	**1.45**	**226**	⇓	P	**Pn**	**10 33 46.2**	**-1.5**
THW	**Thamme Wali**	**2.35**	**211**	P		**Pn**	**10 34 01.7**	**+1.6**
SARP	**Sargodha**	**2.93**	**188**	P		**Pn**	**10 34 09.3**	**+1.3**
KBL	**Kabul**	**3.41**	**266**	P		**Pn**	**10 34 17.2**	**+2.5**
KBL							10 34 52.7	
KBL	**Kabul**	**3.41**	**266**			**Pn**	**10 34 17.2**	**+2.5**
KBL					Sn	**Sn**	**10 34 52.7**	**-1.8**
DHRM	**DHARAMSHALA**	**3.67**	**134**	*e*	P	**Pn**	**10 34 21.2**	**+2.8**
DHRM				*e*	S	**Sb**	**10 35 07.8**	**-3.7**
DHRM					IAML		10 35 09.3	
	comp=N,1μm,0.3s							
DHRM					IAML		10 35 09.5	
	comp=E,1μm,0.3s							
SMLA	**Simla**	**5.00**	**137**	*e*	P	**Pn**	**10 34 39.4**	**+3.0**
SMLA				*e*	S	**Sn**	**10 35 38.4**	**+5.0**
SMLA					IAML		10 35 40.3	
	comp=N,444nm,0.2s							
SMLA					IAML		10 36 00.9	
	comp=E,850nm,0.6s							
KSH	**Kashi**	**5.18**	**25**	Pn		**Pn**	**10 34 39.0**	**-0.1**
KSH					Sn	**Sn**	**10 35 33.5**	**-4.7**
KSH					smax	smax		
	comp=N,480nm,0.4s							
KSH					smax	smax		
	comp=E,340nm,0.7s							
BTK	**Batken**	**5.54**	**341**	P		**Pn**	**10 34 45.6**	**+1.7**
BTK	**Batken**	**5.54**	**341**			**Pn**	**10 34 45.6**	**+1.7**
DDI	**Dehra Dun**	**6.11**	**136**	*e*	P	**Pn**	**10 34 55.2**	**+3.5**
DDI				*e*	S	**Sn**	**10 36 02.4**	**+1.5**
DDI					IAML		10 36 11.8	
	comp=N,550nm,0.4s							
DDI					IAML		10 36 36.8	
	comp=E,637nm,0.4s							
JOSI	**Joshimath**	**6.87**	**127**	*e*	P	**Pn**	**10 35 06.5**	**+4.1**
JOSI				*e*	S	**Sn**	**10 36 22.2**	**+2.2**
JOSI				*e*	S	**Sn**	**10 36 22.7**	**+2.8**
JOSI					IAML		10 36 25.8	
	comp=E,397nm,0.2s							
NRN	**Naryn**	**6.96**	**18**	P		**Pn**	**10 35 06.0**	**+2.4**
NRN	**Naryn**	**6.96**	**18**			**Pn**	**10 35 06.0**	**+2.4**
NDI	**New Delhi**	**7.04**	**150**	*e*	P	**Pn**	**10 35 06.0**	**+1.6**
NDI				*e*	S	**Sn**	**10 36 22.0**	**-1.7**
AYAN	**Aya Nagar**	**7.18**	**151**	*e*	P	**Pn**	**10 35 08.8**	**+2.5**
AYAN				*e*	S	**Sn**	**10 36 26.3**	**-0.8**
KUDL	**Kundal**	**7.25**	**156**	*e*	P	Pn	10 35 01.0	-6.3
KUDL				*e*	S	Sn	10 36 18.9	-10
AML	**Almayashu**	**7.30**	**3**	P		**Pn**	**10 35 11.6**	**+3.2**
	SNR=34							
SONA	**Sohna**	**7.37**	**152**	*e*	S	**Sn**	**10 36 29.8**	**-1.9**
SONA					IAML		10 36 34.3	
	comp=E,121nm,0.5s							
KZA	**Kyzart**	**7.42**	**12**	P		**Pn**	**10 35 13.3**	**+3.4**
	SNR=6.2							
UCH	**Uchtor**	**7.46**	**8**	P		**Pn**	**10 35 14.2**	**+3.6**
	SNR=22							
ULHL	**Ulahol**	**7.78**	**17**	P		**Pn**	**10 35 18.3**	**+3.5**
	SNR=20							
EKS2	**Erkin-Say**	**7.83**	**3**	P		**Pn**	**10 35 19.1**	**+3.7**
	SNR=23							
AAK	**Ala-Archa**	**7.86**	**7**	Pn		**Pn**	**10 35 18.8**	**+3.0**
	comp=E,2.4nm,0.3s,baz=176,slow=13,SNR=18							
AAK					Sn	**Sn**	**10 36 45.6**	**+1.5**
	comp=E,1.3nm,0.3s,baz=158,slow=16,SNR=5.9							
AAK	**Ala-Archa**	**7.86**	**7**	P		**Pn**	**10 35 19.1**	**+3.2**
	SNR=11							
AAK	**Ala-Archa**	**7.86**	**7**	⇑	P	**Pn**	**10 35 18.8**	**+3.0**
	comp=E,12nm,0.7s							
AAK					S	**Sn**	**10 36 43.4**	**-0.7**
	comp=E,22nm,0.7s							
AAK	**Ala-Archa**	**7.86**	**7**			**Pn**	**10 35 18.6**	**+2.7**
KBK	**Karagaybulak**	**7.93**	**10**	P		**Pn**	**10 35 21.1**	**+4.2**
	SNR=7.8							
KDJ	**Kajisay**	**7.94**	**22**	P		**Pn**	**10 35 19.9**	**+3.0**
KDJ	**Kajisay**	**7.94**	**22**			**Pn**	**10 35 19.9**	**+3.0**
USP	**Ospenovka**	**8.48**	**7**	P		**Pn**	**10 35 24.5**	**+0.2**
	SNR=6.1							
KK31	**Karatay Array**	**8.51**	**347**	P		**Pn**	**10 35 26.1**	**+1.5**
KK31							10 36 58.8	
KK31	**Karatay Array**	**8.51**	**347**	⇑	P	**Pn**	**10 35 26.2**	**+1.5**
	comp=E,16nm,0.5s,baz=162,slow=12,SNR=286							
KK31					⇑S	**Sn**	**10 36 59.7**	**-0.2**
	comp=E,32nm,0.6s,baz=169,slow=23,SNR=11							
KK31	**Karatay Array**	**8.51**	**347**			**Pn**	**10 35 26.1**	**+1.5**
KK31					Sn	**Sn**	**10 36 58.8**	**-1.1**
KKAR	**Karatay Array**	**8.51**	**347**	P		**Pn**	**10 35 26.2**	**+1.6**
KKAR							10 37 00.1	
KKAR	**Karatay Array**	**8.51**	**347**			**Pn**	**10 35 26.2**	**+1.6**
KKAR					Sn	**Sn**	**10 37 00.1**	**+0.2**
PRZ	**Przheval'sk**	**8.66**	**27**	P		**Pn**	**10 35 29.5**	**+2.6**
PRZ	**Przheval'sk**	**8.66**	**27**			**Pn**	**10 35 29.5**	**+2.6**
MDOK	**Medeo**	**8.85**	**19**	P		**Pn**	**10 35 32.0**	**+2.6**
MDOK					S	**Sn**	**10 37 05.0**	**-3.4**
MDOK	**Medeo**	**8.85**	**19**	⇓	P	**Pn**	**10 35 31.9**	**+2.5**
	comp=E,9.4nm,0.6s							
MDOK					⇑S	**Sn**	**10 37 06.8**	**-1.6**
	comp=E,11nm,0.7s							
PDGK	**Podgornoye**	**9.80**	**28**	P		**Pn**	**10 35 44.6**	**+2.2**
PDGK					S	**Sn**	**10 37 32.1**	**+0.4**
PDGK	**Podgornoye**	**9.80**	**28**	⇑	P	**Pn**	**10 35 44.6**	**+2.2**
	comp=E,17nm,0.8s							
PDGK					⇑S	**Sn**	**10 37 32.1**	**+0.4**
	comp=E,22nm,0.9s							
DANN	**Dangsing**	**11.11**	**123**	*e*	P	**Pn**	**10 35 59.0**	**-1.5**
	comp=E,97nm,0.3s							
DANN				*e*	S	**Sn**	**10 37 57.7**	**-6.4**
KOLN	**Koldanda**	**11.36**	**125**	*e*	P	**Pn**	**10 36 03.1**	**-0.8**
	comp=E,24nm,0.2s							
GKN	**Gorkha**	**11.93**	**122**	*e*	P	**Pn**	**10 36 10.7**	**-0.9**
	comp=E,126nm,0.3s							
BHPL	**Bhopal**	**12.14**	**161**	*e*	P	**Pn**	**10 36 13.4**	**-0.9**
BHPL				*e*	S	**Sn**	**10 38 22.9**	**-6.1**
BHPL					IAML		10 38 25.4	
	comp=E,31nm,0.4s							
BHPL					IAML		10 38 25.6	
	comp=N,27nm,0.3s							
DMN	**Daman**	**12.50**	**122**	*e*	P	**Pn**	**10 36 17.7**	**-1.8**
	comp=N,36nm,0.3s							
KKN	**Kakani**	**12.51**	**121**	*e*	P	**Pn**	**10 36 17.7**	**-1.9**
	comp=N,47nm,0.4s							
GEYT	**Alibeck**	**12.51**	**289**	Pn		**Pn**	**10 36 18.8**	**-0.6**
	comp=N,0.8nm,0.3s,baz=140,slow=7.2,SNR=3.7							
GEYT					Sn	**Sn**	**10 38 36.7**	**-1.4**
	comp=N,0.4nm,0.3s,baz=94,slow=19,SNR=3.4							
PKIN	**Phulchoki**	**12.72**	**121**	*e*	P	**Pn**	**10 36 21.1**	**-1.4**
	comp=N,41nm,0.4s							
PKIN				*e*	S	**Sn**	**10 38 37.1**	**-6.5**
PKI	**Pulchoki**	**12.73**	**121**	*e*	P	**Pn**	**10 36 21.6**	**-1.2**
	comp=N,27nm,0.3s							
GUN	**Gumba**	**12.87**	**119**	*e*	P	**Pn**	**10 36 23.2**	**-1.4**
	comp=N,28nm,0.3s							
JIRN	**Jiri**	**13.23**	**119**	*e*	P	**Pn**	**10 36 27.6**	**-2.1**
	comp=N,143nm,0.4s							
MAKZ	**Makanchi**	**13.68**	**26**	P		**Pn**	**10 36 36.5**	**+1.1**
MAKZ	**Makanchi**	**13.68**	**26**	⇑	P	**Pn**	**10 36 36.9**	**+1.5**
	comp=N,3.9nm,0.5s							
MAKZ	**Makanchi**	**13.68**	**26**			**Pn**	**10 36 36.5**	**+1.1**
MK31	**Makanchi Array**	**13.79**	**27**	P		**Pn**	**10 36 37.9**	**+1.1**
MK31	**Makanchi Array**	**13.79**	**27**	P		**Pn**	**10 36 37.4**	**+0.6**
	comp=N,1.9nm,0.5s,baz=202,slow=14,SNR=55							
MK31	**Makanchi Array**	**13.79**	**27**			**Pn**	**10 36 37.9**	**+1.1**
MKAR	**Makanchi Array**	**13.79**	**27**	Pn		**Pn**	**10 36 37.7**	**+0.9**
	comp=N,0.2nm,0.3s,baz=207,slow=14,SNR=21							
MKAR					LR	LR	10 42 20.6	
	comp=N,166nm,18.6s,baz=292,slow=39							
RAMN	**Ramite**	**13.95**	**121**	*e*	P	**Pn**	**10 36 36.9**	**-2.4**
	comp=N,49nm,0.4s							
TAPN	**Taplejung**	**14.52**	**117**	*e*	P	**Pn**	**10 36 44.8**	**-2.3**
	comp=N,54nm,0.4s							
ODAN	**Odare**	**14.57**	**119**	*e*	P	**Pn**	**10 36 45.3**	**-2.5**
	comp=N,32nm,0.4s							
KURBB	**Kurchatov Arra**	**16.26**	**12**	Pn		**Pn**	**10 37 06.9**	**-2.6**
	comp=N,0.4nm,0.3s,baz=200,slow=10,SNR=12							
KURBB	**Kurchatov Arra**	**16.26**	**12**	⇓	P	**Pn**	**10 37 07.2**	**-2.3**
	comp=N,3.9nm,0.5s							
KURK	**Kurchatov**	**16.36**	**12**	P		**Pn**	**10 37 08.9**	**-2.0**
KURK					pmax	pmax		
	comp=Z,5.0nm,0.8s							
KURK	**Kurchatov**	**16.36**	**12**			**Pn**	**10 37 08.9**	**-2.0**
WSAR	**Wadi Sarin**	**17.15**	**232**	P		**P**	**10 37 24.3**	**+1.8**
	comp=Z,0.6nm,0.3s,baz=74,slow=8.0,SNR=7.2							
AB31	**Akbulak array**	**17.40**	**330**	P		**Pn**	**10 37 22.7**	**-1.2**
AB31					S	**Sn**	**10 40 33.6**	**-3.1**
AB31	**Akbulak array**	**17.40**	**330**	P		**Pn**	**10 37 22.7**	**-1.2**
	comp=Z,4.4nm,0.6s,baz=148,slow=11,SNR=80							
AB31					⇑S	**Sn**	**10 40 33.1**	**-3.7**
	comp=Z,2.1nm,0.6s,baz=132,slow=28,SNR=4.1							
ABKAR	**Akbulak array**	**17.40**	**330**			**Pn**	**10 37 23.2**	**-0.7**
HYB	**Hyderabad**	**18.00**	**163**	*i*	P	**Pn**	**10 37 29.5**	**-2.1**
HYB				*e*			10 40 40.0	
BVAR	**Borovoye Array**	**18.29**	**355**	P		**Pn**	**10 37 33.6**	**-1.3**
	comp=Z,2.4nm,0.3s,baz=153,slow=10.0,SNR=56							
BRVK	**Borovoye**	**18.33**	**354**	P		**Pn**	**10 37 36.1**	**+0.7**
BRVK					pmax	pmax		
	comp=Z,18nm,0.7s							
BRVK	**Borovoye**	**18.33**	**354**	⇓	P	**Pn**	**10 37 35.6**	**+0.2**
	comp=Z,17nm,0.7s							
BRVK	**Borovoye**	**18.33**	**354**	P		**Pn**	**10 37 36.1**	**+0.7**
AKTO	**Aktyubinsk**	**19.10**	**329**	P		**P**	**10 37 44.2**	**+0.4**
	comp=Z,5.8nm,0.3s,baz=132,slow=10,SNR=90							
AKTO					S	**Sn**	**10 41 09.7**	**-8.3**
	comp=Z,0.1nm,0.3s,baz=233,slow=19,SNR=2.6							
AKTO	**Aktyubinsk**	**19.10**	**329**	⇑	P	**P**	**10 37 43.6**	**-0.2**
	comp=Z,37nm,0.8s							
ZAA0	**Zalesovo Array**	**20.

KTK1	**Kautokeino**	**43.84**	**337**	*e*P		**P**		**10 41 26.8**	**0.0**
HAMF	**Hammerfest**	**44.41**	**339**	*e*P		**P**		**10 41 31.9**	**+0.7**
KLR	**Kul'dur**	**44.73**	**53**	P		**P**		**10 41 35.2**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=273,slow=11,SNR=3.6								
TRO	**Tromso**	**45.50**	**337**	*e*P		**P**		**10 41 38.1**	**-1.7**
MOR8	**Moi Rana**	**46.12**	**331**	*e*P		**P**		**10 41 43.8**	**-1.1**
STEI	**Steigen**	**46.25**	**334**	*e*P		**P**		**10 41 46.1**	**+0.3**
NC602	**NORSAR Array S**	**46.58**	**323**	*e*P		**P**		**10 41 48.0**	**-0.5**
TIXI	**Tiksi**	**46.67**	**21**	*ce*P		**P**		**10 41 50.0**	**+0.9**
TIXI					pmax	pmax			
	comp=Z,10.0nm,2.5s								
NC303	**NORSAR Array S**	**46.70**	**324**	P		**P**		**10 41 49.6**	**+0.1**
NB2	**NORSAR Subarra**	**46.76**	**324**	P		**P**		**10 41 49.2**	**-0.8**
	comp=Z,2.2nm,0.6s,baz=94,slow=7.9								
NB2	**NORSAR Subarra**	**46.76**	**324**	P		**P**		**10 41 49.2**	**-0.8**
	baz=94,slow=7.9								
NOA	**NORSAR Array B**	**46.76**	**324**	P		**P**		**10 41 49.4**	**-0.6**
	comp=Z,2.5nm,0.6s,baz=96,slow=7.7,SNR=12								
NBO00	**NORSAR Array S**	**46.98**	**324**	P		**P**		**10 41 50.9**	**-0.7**
NC204	**NORSAR Array S**	**47.00**	**324**	P		**P**		**10 41 51.1**	**-0.8**
TBLU	**Trondheim**	**47.42**	**327**	*e*P		**P**		**10 41 54.2**	**-0.8**
KONO	**Kongsberg**	**47.48**	**322**	*e*P		**P**		**10 41 54.1**	**-1.5**
DOMB	**Dombas**	**47.87**	**325**	*e*P		**P**		**10 41 58.7**	**+0.1**
KMBO	**Kilima Mbogo**	**49.08**	**231**	*i* P		**P**		**10 42 12.0**	**+3.3**
KMBO					pmax	pmax			
	comp=Z,2.0nm,0.5s								
KMBO	**Kilima Mbogo**	**49.08**	**231**	P		**P**		**10 42 10.2**	**+1.5**
	comp=Z,1.5nm,0.5s,baz=47,slow=12,SNR=5.0								
SPA0	**Spitsbergen Ar**	**49.51**	**347**	*e*P		**P**		**10 42 12.5**	**+1.5**
MAT	**Matsushiro**	**51.93**	**68**	P		**P**		**10 42 29.9**	**+0.1**
MJAR	**Matsushiro Arr**	**51.93**	**68**	P		**P**		**10 42 30.4**	**+0.6**
	comp=Z,5.7nm,0.8s,baz=294,slow=9.8,SNR=11								
BILL	**Bilibino**	**59.33**	**26**	*e*P		**P**		**10 43 23.0**	**+0.6**
BILL				*e*				10 44 05.7	
BILL				*e*				10 45 29.8	
BILL					pmax	pmax			
	comp=Z,3.0nm,1.0s								
ESDC	**Sonseca Array**	**59.80**	**299**	P		**P**		**10 43 25.0**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=48,slow=8.2,SNR=3.5								
SUMG	**Summit**	**63.20**	**342**	P		**P**		**10 43 49.9**	**+0.9**
SUMG	**Summit**	**63.20**	**342**	P		**P**		**10 43 49.9**	**+0.9**
TOA0	**Torodi Ar. Sit**	**67.47**	**271**	P		**P**		**10 44 16.4**	**-0.6**
TOA0					IAmb	IAmb		10 44 17.0	
	comp=Z,4.5nm,0.8s								
TORD	**Torodi Ar. Bea**	**67.47**	**271**	P		**P**		**10 44 16.3**	**-0.8**
	comp=Z,4.4nm,0.8s,baz=45,slow=6.0,SNR=16								
ANM	**Nome**	**70.89**	**23**	P		**P**		**10 44 38.0**	**+0.5**
ANM					pmax	pmax			
	comp=Z,6.0nm,0.8s								
ANM	**Nome**	**70.89**	**23**	P		**P**		**10 44 38.0**	**+0.5**
ANM					IAmb	IAmb		10 44 40.1	
	comp=Z,5.5nm,0.8s								
FITZ	**Fitzroy Crossi**	**72.48**	**128**	P		**P**		**10 44 48.5**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=321,slow=6.5,SNR=2.7								
INK	**Inuvik**	**75.25**	**10**	P		**P**		**10 45 04.2**	**+1.0**
INK					pmax	pmax			
	comp=Z,16nm,1.4s								
INK	**Inuvik**	**75.25**	**10**	P		**P**		**10 45 03.7**	**+0.5**
	comp=Z,5.9nm,0.7s,baz=345,slow=5.9,SNR=33								
INK	**Inuvik**	**75.25**	**10**	P		**P**		**10 45 04.2**	**+1.0**
C36M	**Paulatuk**	**75.35**	**6**	P		**P**		**10 45 04.0**	**+0.3**
BPAW	**Bear Paw Mtn.**	**75.43**	**18**	P		**P**		**10 45 04.5**	**+0.1**
BPAW					IAmb	IAmb		10 45 11.1	
	comp=Z,8.4nm,1.3s								
ILAR	**Eielson Array**	**75.88**	**17**	P		**P**		**10 45 07.4**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=304,slow=5.6,SNR=11								
KTH	**Kantishna Hill**	**75.89**	**19**	P		**P**		**10 45 08.0**	**+0.9**
KTH					IAmb	IAmb		10 45 08.6	
	comp=Z,7.0nm,1.1s								
PPLA	**Purkeypile**	**76.07**	**20**	P		**P**		**10 45 08.4**	**+0.2**
DBIC	**Dimbokro**	**76.39**	**269**	P		**P**		**10 45 10.6**	**-0.1**
	comp=Z,5.4nm,0.8s,baz=66,slow=6.3,SNR=8.4								
DBIC	**Dimbokro**	**76.39**	**269**	IAmb		IAmb		10 45 11.7	
	comp=Z,7.5nm,0.9s								
KIC	**Kosan Boka**	**76.47**	**268**	*e*PKIKP		**P**		**10 45 10.9**	**-0.2**
	comp=Z,16nm,0.9s								
TIC	**Toumodi**	**76.54**	**269**	*e*PKIKP		**P**		**10 45 11.1**	**-0.4**
	comp=Z,7.5nm,0.4s								
LIC	**Lamto**	**76.78**	**268**	*e*PKIKP		**P**		**10 45 11.4**	**-1.5**
	comp=Z,7.2nm,0.3s								
SKT	**Skwentna**	**76.99**	**20**	P		**P**		**10 45 13.7**	**+0.4**
SKT					IAmb	IAmb		10 45 14.1	
	comp=Z,6.9nm,0.9s								
BOSA	**Boshof**	**77.65**	**222**	P		**P**		**10 45 17.4**	**0.0**
	comp=Z,1.6nm,0.6s,baz=24,slow=7.6,SNR=3.9								
WRA	**Warramunga Arr**	**79.61**	**123**	P		**P**		**10 45 28.6**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=323,slow=5.0,SNR=11								
WB2	**Warramunga Arr**	**79.62**	**123**	P		**P**		**10 45 28.7**	**+0.3**
WB2					IAmb	IAmb		10 45 33.8	
	comp=Z,4.6nm,0.9s								
ASAR	**Alice Springs**	**81.86**	**126**	P		**P**		**10 45 40.8**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=310,slow=5.0,SNR=20								
YKA	**Yellowknife Ar**	**82.81**	**4**	P		**P**		**10 45 45.1**	**+0.4**
	comp=Z,1.8nm,0.5s,baz=345,slow=5.3,SNR=27								
SCHQ	**Schefferville**	**84.31**	**338**	P		**P**		**10 45 52.8**	**+0.2**
	comp=Z,3.9nm,0.8s,baz=30,slow=16,SNR=3.6								
CTA	**Charters Tower**	**88.24**	**116**	P		**P**		**10 46 11.9**	**-0.5**
	comp=Z,8.4nm,1.0s,baz=254,slow=7.4,SNR=2.8								
PDAR	**Pinedale Array**	**102.73**	**2**	PKiKP		**PKiKP**		**10 51 38.5**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=343,slow=4.6,SNR=3.6								
TXAR	**Lajitas Array**	**116.11**	**357**	PKP		**PKiKP**		**10 52 04.5**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=39,slow=3.5,SNR=3.2								
LVC	**Limon Verde**	**144.78**	**280**	PKiKP		PKPbc		10 52 57.9	+0.3
LVC	**Limon Verde**	**144.78**	**280**			PKPbc		10 52 57.9	+0.3
PLCA	**Paso Flores**	**150.87**	**247**	PKPbc		**PKiKP**		**10 53 15.2**	**+1.3**
	comp=Z,0.9nm,0.6s,baz=150,slow=8.1,SNR=4.6								

*DJA **27** 10:35:34.1±1.9, 10°S±14°×11°7E±°, h16km±16km, M4.4/13, mB5.5/1, mb4.5/5, MLv4.3/13, Mw(mB)4.9/1*
*IDC **27** 10:35:37.9±2.0, 9°.95S×117°.98E, h0km, mb3.6/3, mb1 4.0/6, mb1mx3.6/49, mbtmp3.8/6, ML3.9/3, MS2.9/2, Ms1 2.9/2, ms1mx2.6/35, Error ellipse: s-maj=70.9km s-min=21.8km az=58.0*

ISC 27 10:35:33.1±0.9, 10°.01S±0°.08×117°.07E±0°.05, h25km, n22, σ2s19/20, mb3.7/3, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**1.36**	**31**	P	**Pn**	**10 35 55.5**	**-1.1**
PLAI				S	**Sn**	**10 36 10.6**	**-3.2**
IGBI	**Denpasar**	**2.24**	**302**	P	**Pn**	**10 36 07.4**	**-1.2**
IGBI				S	**Sn**	**10 36 30.8**	**-4.6**
DNP	**Denpasar**	**2.26**	**306**	P	**Pn**	**10 36 08.8**	**-0.1**
SRBI	**Singaraja**	**2.65**	**316**	P	**Pn**	**10 36 14.7**	**+0.5**
JAGI	**Jajag, Banyuwa**	**3.26**	**298**	P	**Pn**	**10 36 22.0**	**-0.7**
GMJI	**Gumukmas**	**3.97**	**295**	P	**Pn**	**10 36 31.8**	**-0.7**
BKSI	**Bulukumba**	**5.55**	**33**	P	**Pn**	**10 36 54.7**	**+0.5**
	0.3nm48nm,0.4s						
PWJI	**Pagerwojo**	**5.56**	**290**	P	**Pn**	**10 36 53.7**	**-0.7**
	0.2nm38nm,0.9s						
KAPI	**Kappang**	**5.63**	**28**	Pn	**Pn**	**10 36 56.5**	**+1.3**
	2.6nm,0.3s,baz=176,slow=15,SNR=4.4						
KAPI				Sn	**Sn**	**10 37 56.4**	**-2.8**
	2.4nm,0.3s,baz=59,slow=19,SNR=4.5						
KAPI				LR	LR	10 39 30.4	
	comp=Z,53nm,19.7s,baz=296,slow=45						
PCJI	**Pacitan**	**6.09**	**287**	P	**Pn**	**10 37 01.5**	**-0.1**
	0.2nm38nm,1.4s						
BNSI	**Bone**	**6.33**	**29**	P	**Pn**	**10 37 05.7**	**+0.8**
FITZ	**Fitzroy Crossi**	**11.56**	**135**	Pn	**Pn**	**10 38 16.3**	**-0.4**
	1.2nm,0.3s,baz=326,slow=12,SNR=15						
FITZ				Sn	Sn	10 40 14.9	-10
	0.3nm,0.3s,baz=94,slow=19,SNR=2.9						
WRA	**Warramunga Arr**	**19.37**	**123**	P	**P**	**10 39 57.5**	**+0.3**
	0.3nm,0.3s,baz=299,slow=13,SNR=9.3						
WRA				S	S	10 43 21.1	-14
	0.1nm,0.3s,baz=292,slow=22,SNR=2.7						
ASAR	**Alice Springs**	**21.04**	**132**	P	**P**	**10 40 17.2**	**+1.8**
	2.1nm,0.7s,baz=310,slow=10,SNR=30						
ASAR				S	**S**	**10 44 04.4**	**-4.3**
	1.1nm,0.8s,baz=303,slow=21,SNR=5.7						
WHN	**Wuhan**	**40.40**	**356**	P	**P**	**10 43 12.0**	**+2.7**
H08S2	**Diego Garcia H**	**44.09**	**269**	T	T	11 30 51.1	
	baz=98						
H08S3	**Diego Garcia H**	**44.10**	**269**	T	T	11 30 48.8	
	baz=98						
H08S1	**Diego Carcia H**	**44.11**	**269**	T	T	11 30 56.6	
	baz=98						
MJAR	**Matsushiro Arr**	**50.39**	**22**	LR	LR	11 09 25.5	
	comp=Z,28nm,18.0s,baz=290,slow=40						
SONM	**Songino Array**	**58.36**	**352**	P	P	10 45 36.6	+10
	0.7nm,0.7s,baz=161,slow=6.8,SNR=4.7						
KSH	**Kashi**	**62.30**	**325**	P	**P**	**10 45 56.0**	**+2.5**
KSH				pP	pwP	10 46 07.3	+1.9
KSH					pmax	pmax			
	comp=Z,850nm,6.8s								
MKAR	**Makanchi Array**	**64.50**	**334**	P	P	10 46 17.8	+10
	comp=Z,0.2nm,0.3s,baz=150,slow=6.0,SNR=2.8								

*IDC **27** 10:40:50.7±3.2, 16°.31S×174°.07W, h107km±26km, mb3.4/8, mb1 3.7/9, mb1mx3.6/33, mbtmp3.8/9, Error ellipse: s-maj=90.2km s-min=16.1km az=146.0*
*NEIC **27** 10:40:51.1±0.8, 16°.03S±0°.07×174°.3W±0°.1, h108km±7km, mb4.1/5, Error ellipse: s-maj=16.9km s-min=8.9km az=107.0*

ISC 27 10:40:51.7±0.7, 16°.02S±0°.08×174°.17W±0°.09, h115km, n16, σ1s27/19, mb3.7/11, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.12**	**48**	P	**Pn**	**10 41 40.5**	**+1.0**
	63nm,0.3s,baz=191,slow=3.8,SNR=149						
AFI				S	**Sn**	**10 42 13.6**	**-2.8**
	207nm,0.3s,baz=32,slow=23,SNR=21						
NIUE	**Niue**	**5.06**	**128**		**Pn**	**10 42 07.2**	**+1.8**
NIUE					**Sn**	**10 43 00.3**	**-2.4**
STKA	**Stephens Creek**	**43.09**	**240**	P	**P**	**10 48 39.9**	**-0.7**
	2.1nm,0.6s,baz=92,slow=11,SNR=9.3						
STKA	**Stephens Creek**	**43.09**	**240**	IAmb	IAmb	10 48 41.5	
	comp=Z,0.9nm,1.0s						
BBOO	**Buckleboo**	**47.87**	**240**	P	**P**	**10 49 17.6**	**-0.7**
BBOO				IAmb	IAmb	10 49 33.0	
	comp=Z,5.8nm,1.3s						
WB0	**Warramunga Arr**	**48.95**	**258**	P	**P**	**10 49 26.4**	**-0.3**
WB0				IAmb	IAmb	10 49 32.6	
	comp=Z,7.0nm,1.4s						
WB2	**Warramunga Arr**	**48.98**	**257**	P	**P**	**10 49 26.2**	**-0.7**
WRA	**Warramunga Arr**	**48.99**	**257**	P	**P**	**10 49 26.5**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=92,slow=6.4,SNR=10						
WRA				PcP	**PcP**	**10 50 49.5**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=92,slow=3.4,SNR=4.5						
AS31	**Alice Springs**	**49.22**	**252**	P	**P**	**10 49 28.1**	**-0.7**
AS31				IAmb	IAmb	10 49 28.8	
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**49.22**	**252**	P	**P**	**10 49 28.1**	**-0.6**
	comp=Z,2.6nm,0.5s,baz=86,slow=7.9,SNR=36						
ASAR				PcP	**PcP**	**10 50 50.2**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=101,slow=4.2,SNR=4.7						
NVAR	**Mina Array Bea**	**75.28**	**42**	P	**P**	**10 52 23.1**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=229,slow=8.2,SNR=2.6						
TXAR	**Lajitas Array**	**81.57**	**56**	P	**P**	**10 52 57.2**	**0.0**
	comp=Z,0.2nm,0.7s,baz=239,slow=6.2,SNR=2.8						
ILAR	**Eielson Array**	**83.19**	**11**	P	**P**	**10 53 05.0**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=233,slow=5.6,SNR=6.2						
PDAR	**Pinedale Array**	**83.22**	**42**	P	**P**	**10 53 06.0**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=197,slow=2.8,SNR=4.1						
YKA	**Yellowknife Ar**	**90.96**	**24**	P	**P**	**10 53 44.1**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=254,slow=4.4,SNR=2.0						
BRTR	**Keskin Array B**	**146.16**	**320**	PKPbc	**PKiKP**	**11 00 21.0**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=52,slow=4.8,SNR=2.6						

ROM 27 10:47:07.2±0.1, 43°.411N±0°.002×12°.505E±0°.003, h6km, ML0.5/1, Error ellipse: s-maj=0.2km s-min=0.2km az=168.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATVO	**AVT- Monte Val**	**0.08**	**248**	P	Pg	10 47 09.4	+0.3
ATVO				S	Sg	10 47 10.9	+0.5
ATVO				AML	AML		
	comp=N,47μm,1.4s						
ATVO				AML	AML		
	comp=E,54μm,0.7s						
ATPI	**Pietralunga -**	**0.08**	**298**	P	Pg	10 47 09.4	+0.2
ATPI				S	Sg	10 47 11.1	+0.4
PIEI	**Pieia**	**0.13**	**10**	P	Pg	10 47 10.2	+0.3
PIEI				S	Sg	10 47 12.6	+0.9
SSFR	**Montelago di S**	**0.20**	**83**	P	Pg	10 47 11.9	+0.7
SSFR				S	Sg	10 47 15.3	+1.2
NARO	**Abbazia di Nar**	**0.21**	**15**	P	Pg	10 47 10.4	-1.0

MAN 27 10:47:42.0, 10°.12N×124°.12E, h28km, mb3.8, ML2.5, MS2.1, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.25**	**323**	*e*P	Pn	10 47 50.4	+0.6
LLP				*e*S	Sb	10 47 56.6	+3.5
MSLP	**Maasin**	**0.73**	**89**	*e*P	Pb	10 47 55.8	-0.4
MSLP				*e*S	Sn	10 48 07.8	+1.1

*IDC **27** 11:02:46.4±2.7, 30°.52S×179°.27W, h334km±31km, mb2.7/2, mb1 3.3/5, mb1mx3.1/21, mbtmp4.1/5, Error ellipse: s-maj=44.2km s-min=22.5km az=133.0*

ISC 27 11:02:46.2±0.8, 30°.66S±0°.09×179°.5W±0°.2, h321km, n76, σ2s01/85, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.95**	**45**	P	**Pn**	**11 03 37.1**	**+2.6**
GLKZ				S	**S**	**11 04 12.0**	**-1.2**
RIZ	**Raoul Island**	**1.96**	**45**	S	**S**	**11 04 15.4**	**+2.2**
URZ	**Urewera**	**8.08**	**199**	P	**P**	**11 04 43.6**	**-1.6**
	5.9nm,0.3s,baz=331,slow=4.3,SNR=33						
URZ				S	**S**	**11 06 17.5**	**+3.5**
	4.7nm,0.3s,baz=78,slow=23,SNR=19						
RAHZ	**Arahi**	**8.70**	**198**	P	**S**	**11 06 29.7**	**+1.8**
MTHZ	**Maungataniwha**	**8.71**	**199**	P	**S**	**11 06 31.1**	**+3.0**
WHHZ	**Waihua**	**8.82**	**197**	P	**S**	**11 06 33.8**	**+3.4**
NMHZ	**Naumai**	**8.95**	**199**	P	**S**	**11 06 37.0**	**+3.5**
ARHZ	**Aropaoanui**	**9.05**	**198**	P	**S**	**11 06 37.5**	**+1.8**
BKZ	**Black Stump Fm**	**9.10**	**200**	P	**S**	**11 06 39.2**	**+2.3**
MCHZ	**McNeill Hill**	**9.30**	**199**	P	**S**	**11 06 43.9**	**+2.7**
KRVZ	**Karewarewa**	**9.31**	**204**	P	S	11 06 52.5	+11
WTVZ	**West Tongariro**	**9.35**	**204**	P	**P**	**11 05 00.1**	**+0.5**
KWHZ	**Kaweka Forest**	**9.36**	**200**	P	**S**	**11 06 46.0**	**+3.3**
BHHZ	**Black Hill Sta**	**9.53**	**201**	P	**S**	**11 06 45.6**	**-0.9**
MOVZ	**Moawhango**	**9.56**	**203**	P	**S**	**11 06 49.3**	**+2.3**
KRHZ	**Kereru**	**9.58**	**199**	P	**S**	**11 06 49.3**	**+1.8**
KAHZ	**Kahuranaki**	**9.59**	**197**	P	**S**	**11 06 47.3**	**-0.4**
PKVZ	**Pokaka**	**9.59**	**205**	P	**P**	**11 05 02.5**	**+0.3**
VRZ	**Vera Road**	**9.67**	**208**	P	**P**	**11 05 05.1**	**+2.1**
PXZ	**Pawanui**	**9.81**	**197**	P	**S**	**11 06 51.3**	**-1.3**
PNHZ	**Pukenui**	**9.88**	**200**	P	**Pn**	**11 05 03.1**	**+0.5**
PNHZ				S	**S**	**11 06 53.4**	**-0.9**
WPHZ	**Waipukurau**	**9.95**	**198**	P	**S**	**11 06 59.3**	**+3.4**
PKE	**Pukeiti**	**10.05**	**210**	P	**P**	**11 05 11.8**	**+4.4**
TSZ	**Takapari Road**	**10.08**	**200**	P	**Pn**	**11 05 06.3**	**+1.2**
TSZ				S	**S**	**11 06 57.4**	**-1.4**
PRHZ	**Porangahau**	**10.09**	**197**	P	**P**	**11 05 01.0**	**+1.0**
PRHZ				S	**S**	**11 06 59.2**	**+0.3**
PRHZ	**Porangahau**	**10.09**	**197**	P	**S**	**11 06 56.4**	**-2.5**
WAZ	**Wanganui**	**10.13**	**205**	P	**P**	**11 05 08.2**	**0.0**
WAZ				S	**S**	**11 07 01.5**	**+1.6**
DVHZ	**Dannevirke**	**10.25**	**199**	P	**P**	**11 05 08.9**	**-0.6**
DVHZ				S	**S**	**11 07 00.5**	**-2.0**
DVHZ	**Dannevirke**	**10.25**	**199**	P	**S**	**11 07 02.7**	**+0.2**
ANWZ	**Angora Road**	**10.31**	**197**	P	**S**	**11 07 04.3**	**+0.4**
POWZ	**Post Office Ro**	**10.45**	**200**	P	**P**	**11 05 11.5**	**-0.2**
POWZ				S	**S**	**11 07 06.1**	**-0.9**
POWZ	**Post Office Ro**	**10.45**	**200**	P	**S**	**11 07 08.6**	**+1.7**
PRWZ	**Pori Road**	**10.54**	**199**	P	**Pn**	**11 05 11.6**	**+1.0**
PRWZ				S	**S**	**11 07 06.2**	**-2.8**
PRWZ	**Pori Road**	**10.54**	**199**	P	**S**	**11 07 10.5**	**+1.5**
BFZ	**Birch Farm**	**10.58**	**198**	P	**Pn**	**11 05 11.0**	**-0.1**
BFZ	**Birch Farm**	**10.58**	**198**	P	**S**	**11 07 09.4**	**-0.5**
MRZ	**Mangatainoka R**	**10.75**	**200**	P	**Pn**	**11 05 12.2**	**-0.9**
MRZ	**Mangatainoka R**	**10.75**	**200**	P	**S**	**11 07 09.7**	**-4.0**
TIWZ	**Tintock**	**10.77**	**199**	P	**Pn**	**11 05 11.6**	**-1.7**
CPWZ	**Castlepoint**	**10.81**	**198**	P	**P**	**11 05 17.7**	**+2.0**
CPWZ	**Castlepoint**	**10.81**	**198**	P	**S**	**11 07 17.7**	**+2.8**
HOWZ	**Holdsworth Sta**	**10.99**	**200**	P	**P**	**11 05 17.1**	**-0.6**
HOWZ	**Holdsworth Sta**	**10.99**	**200**	P	**S**	**11 07 16.3**	**-2.8**
OGWZ	**Otaki Gorge**	**11.02**	**202**	P	**P**	**11 05 17.4**	**-0.7**
OGWZ	**Otaki Gorge**	**11.02**	**202**	P	**S**	**11 07 19.3**	**-0.5**
TMWZ	**Te Maipa**	**11.07**	**198**	P	**Pn**	**11 05 17.0**	**0.0**
TMWZ	**Te Maipa**	**11.07**	**198**	P	**S**	**11 07 17.4**	**-3.7**
KIW	**Kapiti Island**	**11.14**	**202**	P	**S**	**11 07 21.0**	**-1.7**
MTW	**Mount Morrison**	**11.23**	**200**	P	**P**	**11 05 20.6**	**+0.3**
MTW	**Mount Morrison**	**11.23**	**200**	P	**S**	**11 07 19.9**	**-4.7**
CAW	**Cannon Point**	**11.32**	**201**	P	**S**	**11 07 24.1**	**-2.4**
TRWZ	**Traveller**	**11.40**	**199**	P	**P**	**11 05 22.4**	**+0.1**
TRWZ	**Traveller**	**11.40**	**199**	P	**S**	**11 07 26.1**	**-2.3**
DUWZ	**D'Urville Isla**	**11.44**	**206**	P	**P**	**11 05 23.6**	**+0.8**
DUWZ	**D'Urville Isla**	**11.44**	**206**	P	**S**	**11 07 28.7**	**-0.6**
PAWZ	**Paruwai Farm**	**11.46**	**200**	P	**P**	**11 05 23.6**	**+0.6**
PAWZ	**Paruwai Farm**	**11.46**	**200**	P	**S**	**11 07 27.0**	**-2.7**
MSWZ	**Moikau Station**	**11.54**	**200**	P	**P**	**11 05 24.8**	**+0.9**
MSWZ	**Moikau Station**	**11.54**	**200**	P	**S**	**11 07 28.5**	**-3.1**
TCW	**Tory Channel**	**11.67**	**204**	P	**P**	**11 05 26.5**	**+1.2**
TCW	**Tory Channel**	**11.67**	**204**	P	**S**	**11 07 32.3**	**-2.1**
PLWZ	**Palliser**	**11.68**	**200**	P	**P**	**11 05 25.8**	**+0.3**
PLWZ	**Palliser**	**11.68**	**200**	P	**S**	**11 07 34.0**	**-0.8**
TUWZ	**Tuamarina**	**11.98**	**204**	P	**Pn**	**11 05 27.7**	**-0.2**
TUWZ	**Tuamarina**	**11.98**	**204**	P	**S**	**11 07 37.9**	**-3.4**
NNZ	**Nelson**	**12.01**	**207**	P	**Pn**	**11 05 27.4**	**-0.9**
NNZ	**Nelson**	**12.01**	**207**	P	**S**	**11 07 38.2**	**-3.7**
QRZ	**Quartz Range**	**12.03**	**210**	P	**Pn**	**11 05 28.8**	**+0.3**
QRZ	**Quartz Range**	**12.03**	**210**	P	**S**	**11 07 42.3**	**-0.1**
BSWZ	**Blackbirch Sta**	**12.26**	**204**	P	**P**	**11 05 32.1**	**+0.3**
RPZ	**Rata Peaks**	**15.04**	**207**	P	**Pn**	**11 06 04.1**	**-0.1**
	0.5nm,0.3s,baz=18,slow=6.4,SNR=3.5						
RPZ				S	**S**	**11 08 43.0**	**-2.3**
	1.1nm,0.3s,baz=121,slow=19,SNR=8.1						
AFI	**Afiamalu**	**18.12**	**25**	P	**P**	**11 06 33.5**	**-2.7**
	2.3nm,0.3s,baz=196,slow=7.4,SNR=3.9						
ASAR	**Alice Springs**	**41.80**	**268**	P	**P**	**11 10 06.1**	**+0.7**
	0.2nm,0.4s,baz=103,slow=7.3,SNR=7.2						
WRA	**Warramunga Arr**	**42.81**	**273**	P	**P**	**11 10 14.0**	**+0.4**
	0.5nm,0.5s,baz=110,slow=8.0,SNR=5.8						
FINES	**FINESS Array B**	**144.93**	**339**	PKP	**PKPdf**	**11 21 42.5**	**-1.9**
	1.5nm,0.4s,baz=47,slow=3.2,SNR=14						
AKASG	**Malin Array Be**	**150.70**	**321**	PKPbc	**PKPbc**	**11 21 58.6**	**-1.5**
	2.8nm,0.3s,baz=62,slow=2.9,SNR=1.8						

MAN 27 11:12:59.7, 16°.28N×120°.04E, h23km, mb4.3, ML3.1, MS2.9, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	**Bolinao**	**0.16**	**311**	*e*P	Pn	11 13 06.0	-0.7
BOLP				*e*S	Sb	11 13 12.8	+4.8
SCZP	**Santa Cruz**	**0.51**	**194**	*e*P	Pn	11 13 11.2	-0.4
SCZP				*e*S	Sn	11 13 20.8	+1.1
SMPP	**San Manuel, Pa**	**0.63**	**102**	*e*P	Pb	11 13 11.9	-0.2
SMPP				*e*S	Sn	11 13 23.9	+1.3

*PDG **27** 11:36:05.8±0.6, 38°.42N×20°.31E, h3km±1km, ML4.1/13, Error ellipse: s-maj=0.9km s-min=0.9km az=90.0*
*NEIC **27** 11:36:06.4±1.9, 38°.348N±0°.009×20°.38E±0°.03, h3km±4km, Error ellipse: s-maj=4.1km s-min=0.9km az=74.0*
*IDC **27** 11:36:06.2±0.9, 38°.47N×20°.49E, h0km, mb3.9/13, mb1 3.9/18, mb1mx3.8/53, mbtmp3.8/18, ML3.7/6, MS3.4/8, Ms1 3.4/8, ms1mx3.2/49, Error ellipse: s-maj=18.8km s-min=15.5km az=38.0*
*THE **27** 11:36:06.5, 38°.40N×20°.40E, h1km±2km, ML3.9/20,

ANX	**Ano Chora**	**1.19**	**80**			**Pg**	**11 36 28.2**	**-1.7**
ANX						**Sn**	**11 36 48.1**	**+1.0**
EVR	**Evrytania**	**1.20**	**64**	P		**Pg**	**11 36 28.6**	**-1.5**
EVR	**Evrytania**	**1.20**	**64**	P		**Pg**	**11 36 28.3**	**-1.8**
EVR	**Evrytania**	**1.20**	**64**			**Pg**	**11 36 28.6**	**-1.5**
LAKA	**Lakka**	**1.23**	**97**	P		**Pg**	**11 36 28.5**	**-2.2**
LAKA				S		**Sn**	**11 36 49.1**	**+1.1**
	comp=N,4µm,0.9s							
LAKA	**Lakka**	**1.23**	**97**			**Pg**	**11 36 28.5**	**-2.2**
LAKA						**Sn**	**11 36 49.1**	**+1.1**
SERG	**Sergoula**	**1.28**	**89**	P		**Pn**	**11 36 29.4**	**-2.3**
SERG				S		**Sn**	**11 36 49.8**	**+0.5**
	comp=N,5µm,0.8s							
SERG	**Sergoula**	**1.28**	**89**	P		**Pn**	**11 36 29.4**	**-2.3**
SERG	**Sergoula**	**1.28**	**89**			**Pn**	**11 36 29.4**	**-2.3**
SERG						**Sn**	**11 36 49.8**	**+0.5**
TRIZ	**Trizonia**	**1.29**	**91**	P		**Pn**	**11 36 29.5**	**-2.3**
TRIZ				S		**Sn**	**11 36 50.1**	**+0.6**
	comp=N,6µm,1.0s							
TRIZ	**Trizonia**	**1.29**	**91**			**Pn**	**11 36 29.5**	**-2.3**
TRIZ						**Sn**	**11 36 50.1**	**+0.6**
JAN	**Janina**	**1.30**	**15**	P		**Pg**	**11 36 32.5**	**+0.4**
JAN				S		**Sn**	**11 36 50.1**	**+0.3**
	comp=N,4µm,1.0s							
JAN	**Janina**	**1.30**	**15**	P		**Pn**	**11 36 31.4**	**-0.7**
JAN				S		**Sg**	**11 36 48.6**	**-0.4**
JAN				AML	AML		11 36 56.8	
	comp=E,10467µm,1.2s							
JAN				AML	AML		11 37 02.3	
	comp=N,7416µm,0.7s							
JAN	**Janina**	**1.30**	**15**			**Pg**	**11 36 32.5**	**+0.4**
JAN						**Sn**	**11 36 50.1**	**+0.3**
AMT	**Artemida-Makis**	**1.33**	**130**	P		**Pn**	**11 36 31.0**	**-1.4**
AMT	**Artemida-Makis**	**1.33**	**130**	P		**Pn**	**11 36 31.4**	**-1.0**
AMT	**Artemida-Makis**	**1.33**	**130**			**Pn**	**11 36 31.0**	**-1.4**
ALIK	**Aliki, Aigiali**	**1.33**	**95**	P		**Pn**	**11 36 30.4**	**-1.9**
ALIK				S		**Sg**	**11 36 49.8**	**-0.1**
ALIK	**Aliki, Aigiali**	**1.33**	**95**			**Pn**	**11 36 30.4**	**-1.9**
ALIK						**Sg**	**11 36 49.8**	**-0.1**
KALE	**Kalithea**	**1.35**	**90**	P		**Pn**	**11 36 30.4**	**-2.2**
KALE				S		**Sn**	**11 36 52.3**	**+1.4**
	comp=N,4µm,0.8s							
KALE	**Kalithea**	**1.35**	**90**			**Pn**	**11 36 30.4**	**-2.2**
KALE						**Sn**	**11 36 52.3**	**+1.4**
KLV	**Kalavryta, Ach**	**1.40**	**104**	P		**Pn**	**11 36 31.5**	**-1.9**
KLV				S		**Sn**	**11 36 52.9**	**+0.6**
	comp=N,2µm,0.8s							
KLV	**Kalavryta, Ach**	**1.40**	**104**	P		**Pn**	**11 36 31.6**	**-1.9**
KLV				S		**Sn**	**11 36 51.9**	**-0.4**
KLV	**Kalavryta, Ach**	**1.40**	**104**			**Pn**	**11 36 31.5**	**-1.9**
KLV						**Sn**	**11 36 52.9**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.47**	**65**	P		**Pn**	**11 36 33.4**	**-0.9**
MAKR	**Makrakomi, Fth**	**1.47**	**65**			**Pn**	**11 36 33.4**	**-0.9**
AGG	**Agios Georgios**	**1.61**	**67**	P		**Pn**	**11 36 35.9**	**-0.4**
AGG				S		**Sg**	**11 36 59.9**	**+0.9**
	comp=N,2µm,0.7s							
AGG	**Agios Georgios**	**1.61**	**67**			**Pb**	**11 36 36.7**	**-0.7**
AGG					Sn	**Sg**	**11 37 00.2**	**+1.2**
ITM	**Ithomi**	**1.70**	**135**	P		**Pn**	**11 36 37.8**	**+0.4**
ITM	**Ithomi**	**1.70**	**135**	P		**Pn**	**11 36 37.1**	**-0.3**
ITM	**Ithomi**	**1.70**	**135**			**Pb**	**11 36 38.6**	**-0.2**
ITM						**Sg**	**11 37 01.0**	**-0.6**
THL	**Klokotos Trika**	**1.70**	**46**	P		**Pb**	**11 36 38.2**	**-0.7**
THL				S		**Sg**	**11 37 03.9**	**+2.1**
	comp=N,2µm,0.7s							
KPRO	**Kipourio**	**1.72**	**25**	P		**Pb**	**11 36 39.3**	**+0.1**
KPRO				S		**Sg**	**11 37 05.2**	**+2.8**
	comp=N,3µm,1.1s							
PENT	**Pentalofos**	**1.88**	**17**	P		**Pb**	**11 36 42.4**	**+0.4**
PENT				S		**Sg**	**11 37 07.7**	**+0.1**
	comp=N,2µm,1.1s							
SCTE	**Santa Cesarea**	**2.26**	**318**			**Pn**	**11 36 44.7**	**-0.4**
SCTE					Sn	**Sn**	**11 37 11.9**	**-1.5**
LIT	**Litokhoron**	**2.34**	**43**			**Pn**	**11 36 47.2**	**+1.0**
FNA	**Florina**	**2.50**	**17**			**Pn**	**11 36 49.1**	**+0.7**
FNA						**Sb**	**11 37 21.2**	**-2.3**
OHR	**Ohrid**	**2.73**	**6**	*e*Pn		**Pn**	**11 36 53.5**	**+1.8**
TIP	**Timpagrande**	**2.97**	**286**	P		**Pn**	**11 36 56.0**	**+1.0**
TIP	**Timpagrande**	**2.97**	**286**	⇑P		**Pn**	**11 36 56.0**	**+1.0**
TIP	**Timpagrande**	**2.97**	**286**			**Pn**	**11 36 55.2**	**+0.2**
TIR	**Tirane**	**2.98**	**352**	⇓P		**Pn**	**11 36 55.1**	**+0.1**
TIR	**Tirane**	**2.98**	**352**			**Pn**	**11 36 55.4**	**+0.4**
CGL1	**Ceglie Messapi**	**3.21**	**316**	*e*Pn		**Pn**	**11 36 59.5**	**+1.3**
VAY	**Valandovo**	**3.35**	**29**	*e*Pn		**Pn**	**11 37 01.5**	**+1.3**
STIP	**Stip**	**3.56**	**22**	*e*Pn		**Pn**	**11 37 05.5**	**+2.5**
CEL	**Celeste**	**3.57**	**269**			**Pn**	**11 37 02.6**	**-0.5**
MATE	**Matera**	**3.65**	**309**	⇑P		**Pn**	**11 37 04.9**	**+0.6**
ULC	**Ulcinj**	**3.68**	**346**	⇑*i*Pn		**Pn**	**11 37 03.4**	**-1.3**
ULC				*i* Sn		**Sn**	**11 37 48.9**	**+0.5**
SG1	**Sgolgore (BA)**	**3.79**	**311**	*e*Pn		**Pn**	**11 37 06.5**	**+0.3**
DRME	**Dracevica, Mon**	**3.91**	**346**	*e*Pn		**Pn**	**11 37 07.0**	**-0.8**
DRME	**Dracevica, Mon**	**3.91**	**346**	*e*Pn		**Pn**	**11 37 06.4**	**-1.4**
DRME				*e*Sn		**Sn**	**11 37 54.2**	**+0.2**
BUM	**Brajici-Budva**	**4.07**	**344**	⇑*i*Pn		**Pn**	**11 37 08.7**	**-1.4**
BUM				*i* Sn		**Sn**	**11 37 57.7**	**-0.5**
PDG	**Podgorica**	**4.13**	**348**	⇑P		**Pn**	**11 37 10.1**	**-0.7**
PDG	**Podgorica**	**4.13**	**348**	*e*Pn		**Pn**	**11 37 09.3**	**-1.5**
PDG	**Podgorica**	**4.13**	**348**			**Pn**	**11 37 10.5**	**-0.3**
TTG	**Podgorica**	**4.13**	**348**	*e*Pn		**Sn**	**11 37 10.1**	**-0.7**
TTG				*e*Sn		**Sn**	**11 37 59.4**	**-0.1**
ACER	**Acerenza**	**4.21**	**306**			**Pn**	**11 37 11.6**	**-0.4**
PVY	**Plav**	**4.21**	**355**	⇓*i*Pn		**Pn**	**11 37 12.1**	**0.0**
PVY				*i* Sn		**Sn**	**11 38 02.0**	**+0.3**
CEME	**Cevo**	**4.30**	**345**	⇓*i*Pn		**Pn**	**11 37 12.0**	**-1.3**
CEME				*e*Sn		**Sn**	**11 38 03.8**	**-0.1**
HCY	**Herceg Novi**	**4.31**	**341**	*e*Pn		**Pn**	**11 37 11.3**	**-2.0**
HCY	**Herceg Novi**	**4.31**	**341**	⇓*i*Pn		**Pn**	**11 37 11.3**	**-2.0**
HCY				*i* Sn		**Sn**	**11 38 03.6**	**-0.3**
IVA	**Berane**	**4.49**	**355**	⇑*i*Pn		**Pn**	**11 37 15.6**	**-0.3**
IVA				*i* Sn		**Sn**	**11 38 08.1**	**-0.5**
KOME	**Kolasin**	**4.50**	**351**	⇓*i*Pn		**Pn**	**11 37 15.7**	**-0.4**
KOME				*i* Sn		**Sn**	**11 38 09.2**	**+0.3**
NKME	**Niksic**	**4.51**	**346**	⇑*i*Pn		**Pn**	**11 37 15.3**	**-0.8**
NKME				*i* Sn		**Sn**	**11 38 09.2**	**+0.2**
NKY	**Niksic**	**4.55**	**347**	⇓*i*Pn		**Pn**	**11 37 15.7**	**-1.0**
NKY				*i* Sn		**Sn**	**11 38 10.2**	**+0.2**
TREB	**Trebinje**	**4.60**	**341**	*e*Pn		**Pn**	**11 37 15.4**	**-1.9**
DBRK	**Dubrovnik**	**4.61**	**339**	*e*Pn		**Pn**	**11 37 16.0**	**-1.4**
DBRK				Sn		**Sn**	**11 38 08.2**	**-3.1**
BRY	**Bratogost**	**4.72**	**343**	*e*Pn		**Pn**	**11 37 17.2**	**-2.0**
BRY	**Bratogost**	**4.72**	**343**	*e*Pn		**Pn**	**11 37 18.2**	**-1.0**
BRY				*i* Sn		**Sn**	**11 38 14.4**	**0.0**
VTS	**Vitosha**	**4.73**	**26**	⇑P		**Pn**	**11 37 19.1**	**-0.2**
VTS	**Vitosha**	**4.73**	**26**			**Pn**	**11 37 19.5**	**+0.2**
VTS				Sn		**Sn**	**11 38 15.8**	**+1.2**
IDI	**Anoyia**	**4.74**	**130**	Pn		**Pn**	**11 37 21.2**	**+1.9**
	comp=N,1.0nm,0.3s,baz=292,slow=8.5,SNR=8.0							
IDI				Sn		**Sn**	**11 38 15.5**	**+0.9**
	comp=N,2.0nm,0.3s,baz=37,slow=20,SNR=4.8							
VAE	**Valguarnera**	**4.84**	**261**	Pn		Pn	11 37 25.9	+5.1
	comp=N,2.2nm,0.3s,baz=114,slow=20,SNR=2.7							
VAE				Sn		**Sn**	**11 38 23.0**	**+5.8**
	comp=N,3.7nm,0.3s,baz=88,slow=18,SNR=5.5							
SGRT	**San Giovanni R**	**4.92**	**315**	Pn		**Pn**	**11 37 20.9**	**-0.9**
SGRT				Sn		**Sn**	**11 38 17.5**	**-1.6**
STON	**Ston**	**4.93**	**336**	*i* Pn		**Pn**	**11 37 20.0**	**-1.8**
STON				Sn		**Sn**	**11 38 15.8**	**-3.4**
STON	**Ston**	**4.93**	**336**	*e*Pn		**Pn**	**11 37 19.7**	**-2.1**
UPM	**Unac-Piva**	**4.94**	**347**	*e*Pn		**Pn**	**11 37 21.4**	**-0.8**
UPM	**Unac-Piva**	**4.94**	**347**	⇓*i*Pn		**Pn**	**11 37 21.2**	**-1.0**
UPM				*i* Sn		**Sn**	**11 38 19.0**	**-0.8**
PLE	**Pljevlja**	**4.99**	**351**	⇓*i*Pn		**Pn**	**11 37 22.8**	**0.0**
PLE				*i* Sn		**Sn**	**11 38 20.4**	**-0.6**
ALN	**Alexandroupoli**	**5.00**	**58**	Pn		**Pn**	**11 37 23.6**	**+0.8**
PAOL	**Paolisi**	**5.23**	**302**			**Pn**	**11 37 26.5**	**+0.5**
RUDO	**Rudo**	**5.28**	**352**	*e*Pn		**Pn**	**11 37 25.7**	**-0.9**
WDD	**Wied Dalam**	**5.36**	**243**	Pn		**Pn**	**11 37 27.3**	**-0.4**
WDD				Sn		**Sn**	**11 38 27.0**	**-2.9**
BBLS	**Lazići**	**5.52**	**352**	*e*Pn		**Pn**	**11 37 28.7**	**-1.3**
MAKA	**Makarska**	**5.53**	**333**	*e*Pn		**Pn**	**11 37 29.2**	**-0.8**
MAKA				Sn		**Sn**	**11 38 29.7**	**-4.3**
CORL	**Corleone**	**5.64**	**267**	Pn		**Pn**	**11 37 31.4**	**-0.2**
DIVS	**Divibare**	**5.71**	**357**	*e*Pn		Pn	11 37 25.3	-7.3
CLTB	**Caltabellotta**	**5.75**	**264**	Pn		**Pn**	**11 37 32.7**	**-0.5**
HAPS	**Han Pijesak,BI**	**5.79**	**349**	*e*Pn		**Pn**	**11 37 31.6**	**-2.2**
KARP	**Karpathos**	**6.09**	**116**	Pn		**Pn**	**11 37 38.6**	**+0.7**
INTR	**Introdacqua**	**6.16**	**308**			**Pn**	**11 37 38.4**	**-0.4**
KIJV	**Kijevo**	**6.37**	**333**	*e*Pn		**Pn**	**11 37 40.6**	**-1.1**
ZIRJ	**Zirje**	**6.38**	**327**	*i* Pn		**Pn**	**11 37 39.1**	**-2.6**
ZIRJ				Sn		**Sn**	**11 38 48.6**	**-6.3**
MDVR	**Moldovita**	**6.45**	**8**	⇑P		**Pn**	**11 37 42.8**	**0.0**
MGRS	**Mrkonjic Grad**	**6.52**	**338**	*e*Pn		**Pn**	**11 37 42.9**	**-0.8**
MORI	**Morici**	**6.52**	**328**	*i* Pn		**Pn**	**11 37 42.7**	**-1.0**
AQU	**L'Aquila**	**6.66**	**309**	Pn		**Pn**	**11 37 44.5**	**-1.2**
FRGS	**Fruska Gora**	**6.77**	**356**	*e*Pn		**Pn**	**11 37 42.6**	**-4.6**
BLY	**Banja Luka**	**6.80**	**340**	*e*Pn		**Pn**	**11 37 48.3**	**+0.8**
BLY	**Banja Luka**	**6.80**	**340**	Pn		**Pn**	**11 37 47.4**	**-0.1**
DUGI	**Dugi Otok**	**6.90**	**326**	*i* Pn		**Pn**	**11 37 47.8**	**-1.2**
UDBI	**Udbina**	**7.06**	**332**	*e*Pn		**Pn**	**11 37 51.2**	**+0.1**
UDBI				Sn		**Sn**	**11 39 10.6**	**-1.1**
NRCA	**Norcia**	**7.11**	**311**			**Pn**	**11 37 52.0**	**+0.2**
GZR	**Gura Zlata**	**7.21**	**13**	⇑P		**Pn**	**11 37 52.9**	**-0.3**
BZS	**Buzias**	**7.27**	**7**	⇑P		**Pn**	**11 37 53.4**	**-0.5**
NVLJ	**Novalja**	**7.44**	**328**	*i* Pn		**Pn**	**11 37 55.1**	**-1.1**
ELL	**Elmali**	**7.71**	**99**	Pn		**Pn**	**11 38 01.0**	**+0.9**
VOIR		**7.83**	**25**	⇓P		**Pn**	**11 38 02.6**	**+0.8**
MORH	**Mrgy, Hungar**	**7.92**	**351**	*e*Pn		**Pn**	**11 38 00.8**	**-2.1**
MLR	**Muntele Rosu**	**8.19**	**28**	Pn		**Pn**	**11 38 10.6**	**+3.8**
	comp=N,0.3nm,0.3s,baz=248,slow=12,SNR=5.7							
MLR				Sn		**Sn**	**11 39 41.4**	**+1.6**
	comp=N,0.2nm,0.3s,baz=153,slow=18,SNR=5.7							
MLR	**Muntele Rosu**	**8.19**	**28**	⇓P		**Pn**	**11 38 08.4**	**+1.7**
MLR	**Muntele Rosu**	**8.19**	**28**	Pn		**Pn**	**11 38 08.9**	**+2.1**
RIY	**Rijeka**	**8.22**	**329**	*e*Pn		**Pn**	**11 38 05.2**	**-1.8**
CRES	**Cresnjev**	**8.29**	**335**	*e*Pn		**Pn**	**11 38 06.3**	**-1.7**
CEY	**Cerknica**	**8.59**	**331**	*e*Pn		**Pn**	**11 38 10.5**	**-1.5**
OSSC	**Osservatorio P**	**8.63**	**309**	Pn		**Pn**	**11 38 12.2**	**-0.4**
PLOR	**Plostina**	**8.77**	**30**	⇑P		**Pn**	**11 38 14.2**	**-0.3**
TRI	**Trieste**	**8.83**	**328**	Pn		**Pn**	**11 38 15.6**	**+0.3**
SOKA	**Soboth**	**9.18**	**336**	*e*Pn		**Pn**	**11 38 17.9**	**-2.4**
	comp=N,5.9nm,0.4s							
OBKA	**Obir**	**9.20**	**334**	*e*Pn		**Pn**	**11 38 21.9**	**+1.4**
	comp=N,2.9nm,0.3s							
OBKA				*e*Sn		**Sn**	**11 39 58.2**	**-6.1**
	comp=N,10nm,0.5s							
KEST	**Kesra**	**9.25**	**257**	Pn		**Pn**	**11 38 20.5**	**-0.7**
ZCCA	**Zocca**	**9.26**	**313**	Pn		**Pn**	**11 38 20.7**	**-0.7**
TEOL	**Teolo**	**9.54**	**320**	Pn		**Pn**	**11 38 23.5**	**-1.6**
ARSA	**Arzberg**	**9.55**	**339**	*e*Pn		**Pn**	**11 38 22.7**	**-2.6**
	comp=N,0.7nm,0.2s							
CTI	**Castel Tesino**	**10.04**	**322**	Pn		**Pn**	**11 38 29.9**	**-2.1**
KBA	**Koelnbreinsper**	**10.12**	**331**	*e*Pn		**Pn**	**11 38 31.6**	**-1.5**
	comp=N,1.3nm,0.4s							
KBA				*e*Sn		**Sn**	**11 40 21.6**	**-5.5**
	comp=N,1.9nm,0.4s							
VYHS	**Vyhne**	**10.16**	**354**	*e*PN		**Pn**	**11 38 34.2**	**+0.6**
VYHS				*e*SN		**Sn**	**11 40 24.7**	**-3.2**
ABTA	**Abfaltersbach**	**10.18**	**328**	*e*Pn		**Pn**	**11 38 32.1**	**-1.8**
	comp=N,3.3nm,0.5s							
ABTA				*e*Sn		**Sn**	**11 40 25.4**	**-3.1**
	comp=N,21nm,1.1s							
BRTR	**Keskin Array B**	**10.36**	**79**	Pn		**Pn**	**11 38 40.5**	**+4.0**
	comp=N,0.1nm,0.3s,baz=263,slow=12,SNR=4.2							
BRTR				LR		LR	11 42 47.4	
	comp=N,157nm,18.9s,baz=266,slow=39							
BRTR	**Keskin Array B**	**10.36**	**79**			**Pn**	**11 38 39.5**	**+3.0**
MOA	**Molln**	**10.46**	**337**	*i* Pn		**Pn**	**11 38 37.0**	**-0.8**
	comp=N,1.9nm,0.3s							
MOA				*e*Sn		**Sn**	**11 40 32.7**	**-2.7**
	comp=N,1.6nm,0.4s							
WATA	**Walderalm**	**11.04**	**327**	*e*Pn		**Pn**	**11 38 45.6**	**-0.2**
	comp=N,3.1nm,0.4s							
FUORN	**Ofenpass-Fuorn**	**11.12**	**321**	Pn		**Pn**	**11 38 46.5**	**-0.5**
FETA	**Feichten**	**11.18**	**324**	Sn		**Sn**	**11 40 52.4**	**-0.8**
	comp=N,3.1nm,0.6s							
MOTA	**Moosalm**	**11.25**	**326**	*e*Pn		**Pn**	**11 38 48.4**	**-0.2**
	comp=N,2.3nm,0.4s							
DAVOX				Sn		**Sn**	**11 40 52.0**	**-7.0**
	comp=N,0.3nm,0.3s,baz=150,slow=14,SNR=2.2							
GEC2	**GERESS Array S**	**11.52**	**337**	Pn		**Pn**	**11 38 52.0**	**-0.3**
GERES	**GERESS Array B**	**11.52**	**337**	Pn		**Pn**	**11 38 50.8**	**-1.5**
	comp=N,0.2nm,0.3s,baz=157,slow=13,SNR=5.9							
GERES				Sn		**Sn**	**11 40 55.0**	**-6.3**
	comp=N,0.2nm,0.3s,baz=154,slow=27,SNR=3.5							
GERES	**GERESS Array B**	**11.52**	**337**			**Pn**	**11 38 51.6**	**-0.7**
KHC	**Kasperske Hory**	**11.81**	**338**	*e*PN		**Pn**	**11 38 55.0**	**-1.2**
KHC				*ex*	x		11 39 46.5	
KHC				*ex*	x		11 41 07.0	
KHC	**Kasperske Hory**	**11.81**	**338**	Pn		**Pn**	**11 38 56.9**	**+0.6**
SENIN	**Lac Senin/Sane**	**12.54**	**314**	Pn		**Pn**	**11 39 06.4**	**0.0**
MMAI	**Mount Meron Ar**	**13.30**	**109**	LR		LR	11 45 09.8	
	comp=N,91nm,18.2s,baz=320,slow=41							
ECH	**Echery**	**13.75**	**320**	Pn		**Pn**	**11 39 22.9**	**+0.2**
AKASG	**Malin Array Be**	**13.80**	**24**	Pn		**Pn**	**11 39 22.5**	**-0.8**
	comp=N,0.9nm,0.3s,baz=211,slow=12,SNR=1.6							
EIL	**Elat**	**14.84**	**122**	LR		LR	11 47 29.4	
	comp=N,85nm,18.8s,baz=273,slow=46							
NACGM	**Naroch**	**17.07**	**13**	*e*		**P**	**11 40 14.0**	**+5.9**
GNI	**Garni**	**18.89**	**77**	LR		LR	11 48 51.7	
	comp=N,94nm,20.8s,baz=310,slow=41							
ESDC	**Sonseca Array**	**18.98**	**282**	P		**Pn**	**11 40 30.5**	**+0.4**
	comp=N,0.2nm,0.3s,baz=77,slow=10,SNR=3.6							
ESDC	**Sonseca Array**	**18.98**	**282**			**P**	**11 40 29.1**	**-0.3**
MDT	**Midelt**	**21.07**	**262**	LR		LR	11 50 33.2	
	comp=N,122nm,19.3s,baz=356,slow=41							
HFS	**Hagfors**	**22.17**	**351**	P		**P**	**11 41 03.2**	**-0.6**
	comp=N,91nm,9.9s,baz=176,slow=1,SNR=8.7							
NC602	**NORSAR Array S**	**23.05**	**349**	P		**P**	**11 41 13.4**	**+0.4**
NC602				IAmb		IAmb	11 41 32.1	
	comp=Z,11nm,0.9s							
EKA	**Eskdalemuir Ar**	**23.21**	**325**	P		**P**	**11 41 15.7**	**+0.9**
	comp=Z,2.2nm,0.6s,baz=122,slow=9.7,SNR=5.1							
FINES	**FINESS Array B**	**23.34**	**7**	P		**P**	**11 41 13.8**	**-2.2**
	comp=Z,5.2nm,0.7s,baz=180,slow=10,SNR=11							
FINES	**FINESS Array B**	**23.34**	**7**	P		**P**	**11 41 15.9**	**0.0**
FIA1	**FINESS Array S**	**23.34**	**7**	P		**P**	**11 41 15.9**	**-0.1**
NB2	**NORSAR Subarra**	**23.39**	**349**	P		**P**	**11 41 15.6**	**-1.0**
	comp=Z,15nm,1.2s,baz=159,slow=10							
NOA	**NORSAR Array B**	**23.39**	**349**	P		**P**	**11 41 16.3**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=159,slow=9.9,SNR=5.5							
NOA				LR		LR	11 52 18.3	
	comp=Z,127nm,20.4s,baz=175,slow=42							
AKTO	**Aktyubinsk**	**29.11**	**53**	P		**P**	**11 42 07.5**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=261,slow=4.8,SNR=4.2							
TORD	**Torodi Ar, Bea**	**30.15**	**219**	P		**P**	**11 42 17.4**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=34,slow=10,SNR=6.5							
ABKAR	**Akbulak array**	**30.18**	**56**	P		**P**	**11 42 17.9**	**-0.3**
ABKAR	**Akbulak array**	**30.18**	**56**	P		**P**	**11 42 16.8**	**-1.3**
ARCES	**ARCESS Array B**	**31.32**	**3**	P		**P**	**11 42 26.5**	**-1.5**
	comp=Z,2.2nm,0.9s,baz=195,slow=9.9,SNR=2.6							
BRVK	**Borovoye**	**36.97**	**50**	P		**P**	**11 43 17.4**	**+0.2**
BRVK				IAmb		IAmb	11 43 18.5	
	comp=Z,4.1nm,1.1s							
KK31	**Karatay Array**	**37.78**	**66**	P		**P**	**11 43 23.4**	**-0.7**
KK31				IAmb		IAmb	11 43 26.0	
	comp=Z,4.6nm,0.9s							
KKAR	**Karatay Array**	**37.78**	**66**	P		**P**	**11 43 23.4**	**-0.8**
KKAR				IAmb		IAmb	11 43 25.9	
	comp=Z,4.6nm,0.9s							
DBIC	**Dimbokro**	**39.00**	**222**	LR		LR	12 01 27.0	
	comp=Z,85nm,18.2s,baz=342,slow=39							
DBIC	**Dimbokro**	**39.00**	**222**	P		**P**	**11 43 33.7**	**-1.0**
DBIC				IAmb		IAmb	11 43 52.5	
	comp=Z,3.0nm,0.9s							
KURK	**Kurchatov**	**42.21**	**54**	P		**P**	**11 44 00.6**	**-0.2**
NIL	**Nilore**	**42.51**	**80**	P		**P**	**11 44 04.1**	**+0.6**
KDJ	**Kajisay**	**42.79**	**66**	P		**P**	**11 44 06.3**	**+0.4**
MK31	**Makanchi Array**	**45.25**	**59**	P		**P**	**11 44 23.8**	**-1.6**
MK31				IAmb		IAmb	11 44 27.1	
	comp=Z,1.3nm,0.8s							
MKAR	**Makanchi Array**	**45.25**	**59**	P		**P**	**11 44 23.1**	**-2.3**
	comp=Z,0.8nm,0.4s,baz=279,slow=7.4,SNR=16							
MKAR				PcP		**PcP**	**11 46 06.2**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=289,slow=4.4,SNR=2.7							
MKAR	**Makanchi Array**	**45.25**	**59**	P		**P**	**11 44 23.6**	**-1.8**
ZAA0	**Zalesovo Array**	**45.60**	**48**	P		**P**	**11 44 27.5**	**-0.5**
ZALV	**Zalesovo Beam**	**45.60**	**48**	P		**P**	**11 44 25.6**	**-2.4**
	comp=Z,4.4nm,0.6s,baz=276,slow=9.2,SNR=18							
ZALV	**Zalesovo Beam**	**45.60**	**48**	P		**P**	**11 44 26.6**	**-1.4**
WMQ	**Urumqi**	**49.72**	**61**	*e*P		**P**	**11 45 03.0**	**+2.8**
SONM	**Songino Array**	**60.38**	**51**	P		**P**	**11 46 16.8**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=311,slow=9.2,SNR=7.0							
SONM	**Songino Array**	**60.38**	**51**	IAmb		IAmb	11 46 18.0	
	comp=Z,1.1nm,1.0s							
HHC	**Hu-ho-hao-te**	**66.97**	**55**	*e*P		**P**	**11 47 00.3**	**-0.6**
HHC				pmax		pmax		
	comp=Z,3.0nm,1.0s							
HHC				pmax		pmax		
	comp=Z,90nm,6.2s							
CMAR	**Chiang Mai Arr**	**69.93**	**82**	P		**P**	**11 47 18.9**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=304,slow=7.1,SNR=5.5							
BILL	**Bilibino**	**70.82**	**13**	P		**P**	**11 47 23.7**	**-0.6**
BILL				IAmb		IAmb	11 47 27.0	
	comp=Z,3.3nm,1.1s							
YKA	**Yellowknife Ar**	**73.16**	**340**	P		**P**	**11 47 39.1**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=54,slow=8.2,SNR=2.9							
WHN	**Wuhan**	**74.55**	**63**	P		**P**	**11 47 48.5**	**+1.4**
USRK	**Ussuriysk Ar.**	**77.17**	**43**	P		**P**	**11 48 02.4**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=299,slow=3.0,SNR=4.1							
ASAR	**Alice Springs**	**122.27**	**96**	PKP		**PKPdf**	**11 55 03.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=309,slow=1.9,SNR=3.8							

TEH 27 11:52:23.3, 27.13N × 54.51E, h16km, ML3.5, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAR1	**LAR**	**0.55**	**347**	*e*Pg	Pg	11 52 33.9	-0.4
LAR1				*e*		11 52 46.1	
LMD1	**Lamerd**	**1.22**	**280**	*e*Pg	Pg	11 52 46.4	-0.4
LMD1				*e*		11 53 19.6	
GENO	**Geno**	**1.50**	**79**	*e*Pg	Pg	11 52 51.7	-0.5
GENO				*e*		11 53 24.3	
JHRM	**Jahrom**	**1.60**	**329**	*e*Pg	Pg	11 52 53.4	-0.7
JHRM				*e*		11 52 56.4	
SHME	**Shamm**	**1.81**	**126**	*e*Pn	Pb	11 52 55.1	-1.0
NIAN	**Nian**	**2.11**	**78**	*e*Pn	Pb	11 53 00.0	-1.1
MSFE	**Esma-Masafi**	**2.30**	**140**	*e*Pn	Pn	11 53

ITM	**Ithomi**	**1.73**	**135**	P	**Pb**	**12 02 09.9**	**-0.2**
PYL	**PYLOS**	**1.85**	**144**	P	**Pn**	**12 02 10.4**	**+0.3**
PYL				S	**Sb**	**12 02 36.2**	**+0.8**
	comp=N,718nm,0.5s						
OHR	**Ohrid**	**2.72**	**7**	*i* Pn	**Pb**	**12 02 24.8**	**-2.2**
MASS	**Massafra**	**3.35**	**313**	*e*Pn	**Pn**	**12 02 33.0**	**+2.3**
VAY	**Valandovo**	**3.36**	**29**	*i* Pn	**Pn**	**12 02 32.0**	**+1.2**
STIP	**Stip**	**3.56**	**22**	*i* Pn	**Pn**	**12 02 37.2**	**+3.7**
ULC	**Ulcinj**	**3.66**	**347**	*e*Pn	**Pn**	**12 02 35.1**	**+0.2**
ULC				*e*Sn	**Sn**	**12 03 19.3**	**+1.1**
SG1	**Sgolgore (BA)**	**3.75**	**311**	*e*Pn	**Pn**	**12 02 37.8**	**+1.5**
SG1				Sn	**Sn**	**12 03 21.6**	**+1.0**
DRME	**Dracevica, Mon**	**3.89**	**347**	*e*Pn	**Pn**	**12 02 38.5**	**+0.5**
DRME				*e*Sn	**Sn**	**12 03 24.9**	**+1.1**
BUM	**Brajici-Budva**	**4.05**	**344**	*e*Pn	**Pn**	**12 02 40.7**	**+0.3**
BUM				*e*Sn	**Sn**	**12 03 29.2**	**+1.2**
TTG	**Podgorica**	**4.11**	**348**	⇓ *i* Pn	**Pn**	**12 02 41.9**	**+0.8**
TTG				*e*Sn	**Sn**	**12 03 30.3**	**+1.0**
PVY	**Plav**	**4.20**	**356**	⇑ *i* Pn	**Pn**	**12 02 43.2**	**+0.8**
PVY				*e*Sn	**Sn**	**12 03 32.4**	**+0.8**
CEME	**Cevo**	**4.28**	**345**	*e*Pn	**Pn**	**12 02 44.0**	**+0.4**
CEME				*e*Sn	**Sn**	**12 03 34.3**	**+0.6**
HCY	**Herceg Novi**	**4.29**	**341**	⇓ *i* Pn	**Pn**	**12 02 43.2**	**-0.3**
HCY				*e*Sn	**Sn**	**12 03 35.0**	**+1.3**
IVA	**Berane**	**4.48**	**355**	⇑ *i* Pn	**Pn**	**12 02 46.8**	**+0.6**
IVA				*i* Sn	**Sn**	**12 03 39.4**	**+0.9**
KOME	**Kolasin**	**4.49**	**352**	*e*Pn	**Pn**	**12 02 47.3**	**+0.9**
KOME				*i* Sn	**Sn**	**12 03 39.7**	**+0.9**
NKME	**Niksic**	**4.49**	**346**	*e*Pn	**Pn**	**12 02 46.8**	**+0.4**
NKME				*i* Sn	**Sn**	**12 03 40.0**	**+1.2**
NKY	**Niksic**	**4.53**	**347**	*e*Pn	**Pn**	**12 02 47.7**	**+0.8**
NKY				*e*Sn	**Sn**	**12 03 40.2**	**+0.4**
DBRK	**Dubrovnik**	**4.59**	**339**	*e*Pn	**Pn**	**12 02 47.6**	**-0.1**
DBRK				Sn	**Sn**	**12 03 38.9**	**-2.1**
IDI	**Anoyia**	**4.77**	**129**	Pn	**Pn**	**12 02 53.5**	**+3.3**
	comp=N,0.3nm,0.3s,baz=315,slow=11,SNR=4.7						
IDI				Sn	**Sn**	**12 03 47.4**	**+1.8**
	comp=N,4.8nm,0.3s,baz=170,slow=23,SNR=15						
VAE	**Valguarnera**	**4.81**	**261**	Sn	**Sn**	**12 03 46.6**	**-0.2**
	comp=N,2.3nm,0.3s,baz=151,slow=10,SNR=3.2						
STON	**Ston**	**4.91**	**336**	*e*Pn	**Pn**	**12 02 51.8**	**-0.2**
STON				Sn	**Sn**	**12 03 46.8**	**-2.1**
UPM	**Unac-Piva**	**4.92**	**347**	⇑ *i* Pn	**Pn**	**12 02 53.4**	**+1.0**
UPM				*e*Sn	**Sn**	**12 03 50.1**	**+0.5**
PLE	**Pljevlja**	**4.98**	**352**	⇑ *i* Pn	**Pn**	**12 02 54.0**	**+0.9**
PLE				*e*Sn	**Sn**	**12 03 51.8**	**+1.0**
MAKA	**Makarska**	**5.50**	**333**	*e*Pn	**Pn**	**12 03 00.9**	**+0.6**
MAKA				Sn	**Sn**	**12 04 02.4**	**-1.3**
KIJV	**Kijevo**	**6.35**	**333**	*i* Pn	**Pn**	**12 03 12.5**	**+0.6**
ZIRJ	**Zirje**	**6.35**	**327**	*e*Pn	**Pn**	**12 03 11.8**	**0.0**
ZIRJ				Sn	**Sn**	**12 04 20.5**	**-4.0**
MORI	**Morici**	**6.50**	**329**	Sn	**Sn**	**12 04 24.9**	**-3.2**
DUGI	**Dugi Otok**	**6.87**	**326**	*e*Pn	**Pn**	**12 03 19.5**	**+0.4**
UDBI	**Udbina**	**7.03**	**332**	*e*Pn	**Pn**	**12 03 23.2**	**+1.9**
NVLJ	**Novalja**	**7.41**	**328**	*e*Pn	**Pn**	**12 03 26.8**	**+0.3**
MLR	**Muntele Rosu**	**8.20**	**29**	Pn	Pn	12 03 42.4	+5.1
	comp=N,0.2nm,0.3s,baz=193,slow=9.8,SNR=2.9						
OBKA	**Obir**	**9.17**	**334**	*e*Pn	**Pn**	**12 03 52.2**	**+1.6**
	comp=N,2.1nm,0.3s						
OBKA				*e*Sn	**Sn**	**12 05 29.1**	**-5.0**
	comp=N,7.2nm,0.6s						
KBA	**Koelnbreinsper**	**10.09**	**331**	*i* Pn	**Pn**	**12 04 05.4**	**+2.0**
	comp=N,0.4nm,0.2s						
KBA				*e*Sn	**Sn**	**12 05 52.7**	**-4.0**
	comp=N,1.2nm,0.3s						
VYHS	**Vyhne**	**10.14**	**354**	*e*SN	**Sn**	**12 05 52.7**	**-5.1**
BRTR	**Keskin Array B**	**10.39**	**79**	Pn	**Pn**	**12 04 09.4**	**+2.0**
	comp=N,0.1nm,0.3s,baz=260,slow=13,SNR=3.1						
MOA	**Molln**	**10.44**	**337**	*e*Pn	**Pn**	**12 04 09.6**	**+1.7**
	comp=N,1.4nm,0.3s						
MOA				*e*Sn	**Sn**	**12 06 00.7**	**-4.4**
	comp=N,3.0nm,0.4s						
SQTA	**Sankt Quirin**	**11.08**	**326**	*i* Pn	**Pn**	**12 04 20.6**	**+3.7**
	comp=N,1.3nm,0.3s						
DAVOX	**Davos/Dischmat**	**11.39**	**321**	Pn	**Pn**	**12 04 23.1**	**+1.9**
	comp=N,0.2nm,0.3s,baz=156,slow=20,SNR=2.3						
DAVOX				Sn	**Sn**	**12 06 25.0**	**-3.6**
	comp=N,0.6nm,0.3s,baz=22,slow=10,SNR=3.1						
GERES	**GERESS Array B**	**11.50**	**337**	Pn	**Pn**	**12 04 23.2**	**+0.7**
	comp=N,0.2nm,0.3s,baz=157,slow=14,SNR=5.6						
GERES				Sn	**Sn**	**12 06 23.3**	**-7.8**
	comp=N,0.3nm,0.3s,baz=160,slow=20,SNR=5.3						
HFS	**Hagfors**	**22.16**	**351**	P	**P**	**12 06 33.9**	**-0.1**
	comp=N,3.4nm,0.9s,baz=153,slow=11,SNR=7.1						
FINES	**FINESS Array B**	**23.33**	**7**	P	**P**	**12 06 45.2**	**-1.1**
	comp=N,2.0nm,0.5s,baz=194,slow=10,SNR=9.0						
NOA	**NORSAR Array B**	**23.37**	**349**	P	**P**	**12 06 47.8**	**+1.0**
	comp=N,0.9nm,0.7s,baz=161,slow=11,SNR=2.8						
KIRV	**Kirov**	**27.52**	**33**	LR	LR	12 19 50.9	
	comp=N,82nm,18.1s,baz=227,slow=40						
TORD	**Torodi Ar. Bea**	**30.14**	**218**	P	**P**	**12 07 49.0**	**+0.5**
	comp=N,0.5nm,0.8s,baz=26,slow=9.3,SNR=2.9						
MKAR	**Makanchi Array**	**45.27**	**59**	P	**P**	**12 09 54.8**	**-1.1**
	comp=N,0.5nm,0.4s,baz=279,slow=7.5,SNR=15						
ZALV	**Zalesovo Beam**	**45.62**	**48**	P	**P**	**12 09 57.0**	**-1.5**
	comp=N,1.2nm,0.3s,baz=284,slow=7.3,SNR=5.6						

*IDC **27** 12:11:06.0±3.8,4˚62S×103˚52E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/48, mbtmp3.6/4, Error ellipse: s-maj=207.4km s-min=25.6km az=53.0*
*DJA **27** 12:11:11.6±0.6, 5˚S±5˚×10˚3E±˚, h34km±13km, M3.6/6, MLv3.6/6*
*NEIC **27** 12:11:13.1±0.7, 4˚69S±0˚09×103˚46E±0˚06, h59km±11km, mb4.3/7, Error ellipse: s-maj=13.5km s-min=7.9km az=180.0*

ISC 27 12:11:09.7±1.0, 5˚16S±0˚08×103˚06E±0˚08, h35km, n26, σ0s99/25, mb3.9/8, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	**Manna**	**0.80**	**353**	P	**Pn**	**12 11 26.0**	**+1.4**
MNAI				S	**Sn**	**12 11 36.2**	**+0.9**
MNAI	**Manna**	**0.80**	**353**	Pn	**Pn**	**12 11 25.8**	**+1.3**
MNAI				Sn	**Sn**	**12 11 36.1**	**+0.9**
LWLI	**Liwa**	**1.01**	**82**	P	**Pn**	**12 11 28.2**	**+0.7**
LWLI				S	**Sn**	**12 11 40.0**	**-0.5**
MDSI	**Maura Dua**	**1.30**	**59**	P	**Pn**	**12 11 32.3**	**+0.9**
MDSI				S	**Sn**	**12 11 47.2**	**-0.4**
KASI	**Kota Agung**	**1.48**	**104**	P	**Pn**	**12 11 35.1**	**+1.2**
KSI	**Kapahiang**	**1.57**	**343**	P	**Pn**	**12 11 36.6**	**+1.4**
KLSI		**1.73**	**74**	P	**Pn**	**12 11 38.2**	**+0.9**
PMBI	**Palembang**	**2.80**	**38**	Pn	Pn	12 11 46.4	-5.7
KRJI	**Kerinci**	**3.44**	**332**	P	**Pn**	**12 12 00.6**	**-0.3**
CISI	**Cisompet, Garu**	**5.29**	**117**	Pn	**Pn**	**12 12 27.8**	**+1.4**
KSM	**Kuching**	**9.79**	**48**	Pn	Pn	12 13 22.9	-5.2
SOEI	**Soe**	**21.52**	**103**	P	**P**	**12 15 54.3**	**-1.8**
SOEI				IAmb	IAmb	12 15 59.3	
	comp=Z,25nm,1.1s						
MTN	**Manton Dam**	**28.74**	**107**	P	**P**	**12 17 03.8**	**-0.4**
MTN				IAmb	IAmb	12 17 15.0	
	comp=Z,13nm,1.1s						
H08S2	**Diego Garcia H**	**30.47**	**264**	T	T	12 49 44.7	
	baz=86						
H08S3	**Diego Garcia H**	**30.48**	**264**	T	T	12 49 46.8	
	baz=86						
H08S1	**Diego Garcia H**	**30.49**	**264**	T	T	12 49 46.4	
	baz=86						
WB0	**Warramunga Arr**	**33.77**	**118**	P	**P**	**12 17 48.5**	**-0.1**
WB0				IAmb	IAmb	12 18 05.5	
	comp=Z,7.4nm,1.4s						
WRA	**Warramunga Arr**	**33.79**	**119**	P	**P**	**12 17 48.8**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=298,slow=9.0,SNR=4.5						
WR0	**Warramunga Arr**	**33.97**	**118**	P	**P**	**12 17 50.3**	**0.0**
AS31	**Alice Springs**	**34.95**	**125**	P	**P**	**12 17 59.2**	**+0.5**
AS31				IAmb	IAmb	12 18 01.6	
	comp=Z,1.3nm,1.4s						
ASAR	**Alice Springs**	**34.95**	**125**	P	**P**	**12 17 59.4**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=294,slow=7.3,SNR=44						
ASAR	**Alice Springs**	**34.95**	**125**	P	**P**	**12 17 59.1**	**+0.4**
STKA	**Stephens Creek**	**44.79**	**131**	P	**P**	**12 19 21.4**	**+1.1**
	comp=Z,0.6nm,0.5s,baz=306,slow=11,SNR=5.1						
STKA	**Stephens Creek**	**44.79**	**131**	P	**P**	**12 19 21.0**	**+0.7**
MKAR	**Makanchi Array**	**54.90**	**343**	P	**P**	**12 20 35.7**	**-1.3**
	comp=Z,0.3nm,0.8s,baz=158,slow=9.1,SNR=3.1						
ABKAR	**Akbulak array**	**65.86**	**331**	P	**P**	**12 21 50.8**	**-0.9**

*IDC **27** 12:13:22.9±1.8, 35˚25N×141˚49E, h0km, mb3.6/5, mb1 3.7/7, mb1mx3.5/57, mbtmp3.6/7, ML2.9/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/41, Error ellipse: s-maj=56.3km s-min=21.6km az=68.0*

*JMA **27** 12:13:26.1±0.1, 35˚24N×141˚25E, h40km±2km, M3.1*

ISC 27 12:13:24.1±2.2, 35˚24N±0˚06×141˚11E±0˚07, h4km±14km, n24, σ1s23/23, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.51**	**336**	P	**Pn**	**12 13 37.6**	**-0.5**
CHOJ				S	**Sn**	**12 13 46.1**	**-1.2**
BSO1	**Boso 1**	**0.59**	**191**	P	**Pn**	**12 13 38.4**	**-0.4**
BSO1				X		12 13 48.1	
BSO3	**Boso 3**	**0.66**	**229**	P	**Pn**	**12 13 40.4**	**+0.4**
BSO3				X		12 13 50.9	
KTR	**Katsuura**	**0.66**	**262**	P	**Pn**	**12 13 40.7**	**+0.5**
KTR				S	**Sn**	**12 13 51.3**	**+0.3**
BSO4	**Boso 4**	**0.68**	**249**	P	**Pn**	**12 13 41.2**	**+0.8**
BSO4				*e*X		12 13 51.6	
JKUC	**kamogawauchiur**	**0.75**	**264**	P	**Pn**	**12 13 41.9**	**+0.4**
JKUC				S	**Sn**	**12 13 52.5**	**-0.8**
JYT	**Yasato**	**1.24**	**323**	P	**Pg**	**12 13 48.6**	**+0.8**
JHO	**Hitachi**	**1.44**	**342**	P	**Pn**	**12 13 50.7**	**-0.3**
JIM2	**Oshima 3**	**1.48**	**250**	P	**Pb**	**12 13 51.1**	**-1.0**
JIM2				S	**Sn**	**12 14 09.4**	**-1.8**
MJAR	**Matsushiro Arr**	**2.69**	**300**	Pn	**Pb**	**12 14 11.4**	**-1.5**
	0.5nm,0.3s,baz=108,slow=12,SNR=22						
MJAR				Sn	**Sb**	**12 14 47.8**	**+1.6**
	0.2nm,0.3s,baz=92,slow=22,SNR=4.2						
MJAR				LR	LR	12 15 24.2	
	comp=Z,121nm,18.3s,baz=100,slow=42						
MAT	**Matsushiro**	**2.69**	**300**	P	**Pb**	**12 14 11.8**	**-1.1**
MAT				S	**Sb**	**12 14 43.6**	**-2.7**
ASAJ	**Asahikawa**	**8.94**	**7**	Pn	**Pn**	**12 15 33.1**	**-0.9**
	0.3nm,0.3s,baz=202,slow=8.5,SNR=5.4						
KSRS	**Korea Array**	**10.87**	**286**	LR	LR	12 20 35.7	
	comp=Z,57nm,18.4s,baz=5.0,slow=39						
H11N2	**WAKE ISLAND Hy**	**27.49**	**117**	T	T	12 48 07.9	
	baz=310,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.50**	**117**	T	T	12 48 07.5	
	baz=310,slow=75						
H11N3	**WAKE ISLAND Hy**	**27.51**	**117**	T	T	12 48 08.4	
	baz=310,slow=75						
H11S3	**WAKE ISLAND Hy**	**28.14**	**120**	T	T	12 48 45.3	
	baz=312,slow=76						
H11S1	**WAKE ISLAND Hy**	**28.14**	**120**	T	T	12 48 53.6	
	baz=312,slow=76						
H11S2	**WAKE ISLAND Hy**	**28.15**	**120**	T	T	12 48 46.6	
	baz=312,slow=76						
SONM	**Songino Array**	**28.62**	**307**	P	**P**	**12 19 23.7**	**+2.1**
	0.3nm,0.4s,baz=101,slow=7.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**42.96**	**314**	P	**P**	**12 21 25.2**	**+1.1**
	0.7nm,0.5s,baz=93,slow=7.4,SNR=2.7						
MKAR	**Makanchi Array**	**44.89**	**304**	P	**P**	**12 21 40.0**	**+0.4**
	0.6nm,0.8s,baz=86,slow=9.0,SNR=5.3						
WRA	**Warramunga Arr**	**55.25**	**188**	P	**P**	**12 22 57.9**	**-0.6**
	0.7nm,0.7s,baz=0.9,slow=7.2,SNR=7.1						
ASAR	**Alice Springs**	**58.98**	**188**	P	**P**	**12 23 25.1**	**+0.2**
	0.2nm,0.6s,baz=12,slow=13,SNR=4.5						

*SKO **27** 12:17:37.1, 41˚17N×19˚34E, h3km*
*PDG **27** 12:17:38.8±0.4, 41˚34N×19˚37E, h14km, ML2.6/11, Error ellipse: s-maj=1.5km s-min=2.2km az=0.0*

ISC 27 12:17:36.4±1.8, 41˚21N±0˚07×19˚35E±0˚06, h4km±11km, n18, σ0s56/35, 1C-1D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.76**	**354**	*e*Pg	**Pg**	**12 17 50.7**	**-0.3**
ULC				*e*Sg	**Sg**	**12 18 01.1**	**+0.3**
DRME	**Dracevica, Mon**	**0.99**	**353**	*e*Pg	**Pg**	**12 17 55.2**	**-0.1**
DRME				*e*Sg	**Sg**	**12 18 08.4**	**+0.3**
OHR	**Ohrid**	**1.09**	**95**	*e*Pg	**Pg**	**12 17 56.6**	**-0.8**
OHR				*i* Sg	**Sg**	**12 18 13.0**	**+1.4**
OHR				*e*Lg	Lg	12 18 13.7	
	comp=N,106nm,1.0s						
OHR				*e*Lg	Lg	12 18 15.1	
	comp=E,64nm,0.5s						
BUM	**Brajici-Budva**	**1.15**	**343**	*e*Pg	**Pg**	**12 17 58.1**	**-0.2**
BUM				*e*Sg	**Sb**	**12 18 13.9**	**-0.1**
TTG	**Podgorica**	**1.22**	**357**	*e*Pg	**Pb**	**12 17 59.7**	**-0.4**
TTG				*e*Sg	**Sb**	**12 18 16.3**	**+0.1**
CEME	**Cevo**	**1.38**	**346**	*e*Pg	**Pn**	**12 18 02.2**	**-0.2**
CEME				*e*Sg	**Sg**	**12 18 21.5**	**+0.9**
HCY	**Herceg Novi**	**1.40**	**333**	*e*Pg	**Pn**	**12 18 02.5**	**-0.1**
HCY				*e*Sg	**Sg**	**12 18 21.8**	**+0.6**
PVY	**Plav**	**1.46**	**18**	*e*Pg	**Pn**	**12 18 03.6**	**0.0**
PVY				*e*Sg	**Sg**	**12 18 23.5**	**+0.3**
NKY	**Niksic**	**1.63**	**351**	⇓ *i* Pg	**Pn**	**12 18 06.2**	**+0.3**
NKY				*e*Sg	**Sg**	**12 18 28.5**	**-0.2**
KOME	**Kolasin**	**1.65**	**4**	*e*Pg	**Pn**	**12 18 06.1**	**-0.1**
KOME				*i* Sg	**Sg**	**12 18 29.0**	**-0.3**
IVA	**Berane**	**1.71**	**13**	*e*Pn	**Pn**	**12 18 07.1**	**+0.1**
IVA				*e*Sn	**Sb**	**12 18 30.3**	**0.0**
DBRK	**Dubrovnik**	**1.72**	**329**	*e*Pn	**Pn**	**12 18 08.3**	**+1.3**
DBRK				Sn	**Sn**	**12 18 29.4**	**0.0**
BRY	**Bratogost**	**1.80**	**341**	⇑ *i* Pn	**Pn**	**12 18 09.4**	**+1.1**
BRY				*i* Sn	**Sb**	**12 18 33.1**	**+0.2**
STON	**Ston**	**2.07**	**324**	*e*Pn	**Pn**	**12 18 12.3**	**+0.4**
STON				Sn	**Sn**	**12 18 37.5**	**-0.6**
PLE	**Pljevlja**	**2.12**	**1**	*e*Pn	**Pn**	**12 18 13.1**	**+0.4**
PLE				*e*Sn	**Sn**	**12 18 40.5**	**+0.9**
STIP	**Stip**	**2.18**	**76**	*i* Pn	**Pb**	**12 18 16.2**	**-0.2**
MAKA	**Makarska**	**2.71**	**321**	*e*Pn	**Pn**	**12 18 20.4**	**-0.2**
MAKA				Sn	**Sn**	**12 18 53.0**	**-0.8**
KIJV	**Kijevo**	**3.54**	**323**	*e*Pn	**Pn**	**12 18 32.7**	**+0.5**
KIJV				Sn	**Sn**	**12 19 14.3**	**-0.2**

*ANF **27** 12:42:36.9±0.2, 33˚63N×116˚74W, h17km±1km, ML3.0/32, Error ellipse: s-maj=1.2km s-min=1.0km az=25.0*
*NEIC **27** 12:42:37.6±1.2, 33˚62N±0˚02×116˚74W±0˚02, h18km±1km, Error ellipse: s-maj=3.4km s-min=2.2km az=171.0*
*PAS **27** 12:42:38.0±1.0, 33˚65N±0˚02×116˚74W±0˚02, h16km±1km, ML3.2/225, Error ellipse: s-maj=2.6km s-min=1.5km az=219.0*
*MEX **27** 12:42:39.3±1.1, 33˚47N×117˚57W, h7km, MD3.8*

ISC 27 12:42:37.6±0.8, 33˚63N±0˚01×116˚74W±0˚01, h18km±1km, n116, σ0s80/178, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRY	**Cary Ranch**	**0.06**	**177**		**Pg**	**12 42 41.1**	**-0.1**
CRY					**Sg**	**12 42 43.4**	**-0.2**
GVDA	**Garner Valley**	**0.07**	**54**		**Pg**	**12 42 40.7**	**-0.6**
GVDA					**Sg**	**12 42 42.8**	**-0.9**
DNR	**Dunn Ranch,Anz**	**0.11**	**123**		**Pg**	**12 42 41.6**	**0.0**
SNDA	**J Saunders Pla**	**0.13**	**125**		**Pg**	**12 42 41.9**	**0.0**
BZNA	**Buzz No.'s Pla**	**0.15**	**155**		**Pg**	**12 42 45.1**	**+3.0**
POB	**Polly Butte**	**0.16**	**291**		**Pb**	**12 42 41.9**	**+0.6**
FRD	**Ford Ranch, An**	**0.18**	**139**		**Pg**	**12 42 42.4**	**0.0**
FRD					**Sg**	**12 42 45.5**	**-0.1**
DGR	**Domenigoni Val**	**0.23**	**276**		**Pb**	**12 42 42.9**	**0.0**
DGR					**Sb**	**12 42 46.3**	**-0.1**
PFO	**Pinyon Flats O**	**0.24**	**94**		**Pb**	**12 42 42.6**	**-0.6**
PFO				Sg	**Sb**	**12 42 46.4**	**-0.5**
PFO	**Pinyon Flats O**	**0.24**	**94**		**Pb**	**12 42 41.4**	**-1.9**
PFO					**Sb**	**12 42 46.4**	**-0.5**
PFO	**Pinyon Flats O**	**0.24**	**94**	P	**Pb**	**12 42 42.7**	**-0.6**
	baz=275,SNR=1000						
PFO				S	**Sb**	**12 42 46.2**	**-0.7**
	baz=275						
XPFO	**Pion Flat**	**0.24**	**94**		**Pb**	**12 42 42.7**	**-0.6**
XPFO				Sg	**Sb**	**12 42 46.4**	**-0.7**
PLM	**Palomar**	**0.29**	**200**		**Pg**	**12 42 44.4**	**+0.2**
DEVC	**Devers**	**0.34**	**24**		**Pg**	**12 42 44.5**	**-0.4**
BBSC	**Beaumont Base**	**0.35**	**326**		**Pg**	**12 42 44.6**	**-0.4**
BBSC					**Sg**	**12 42 50.0**	**-0.3**
MURC	**Murrieta**	**0.38**	**266**		**Pg**	**12 42 45.3**	**-0.3**
MURC					**Sg**	**12 42 50.6**	**-0.4**
MURC	**Murrieta**	**0.38**	**266**	P	**Pg**	**12 42 45.4**	**-0.3**
	baz=85,SNR=304						
MURC				S	**Sg**	**12 42 50.5**	**-0.5**
	baz=85						
EW2	**E Wide Canyon**	**0.42**	**42**		**Pg**	**12 42 45.8**	**-0.5**
PEC	**Perris**	**0.44**	**307**		**Pg**	**12 42 46.0**	**-0.7**
BORC	**Borrego Spring**	**0.45**	**143**		**Pg**	**12 42 46.9**	**+0.1**
BORC					**Sg**	**12 42 53.0**	**0.0**
CFT	**Crafton Hills**	**0.51**	**323**		**Pg**	**12 42 47.5**	**-0.5**
BLAC	**Blackrock camp**	**0.53**	**34**		**Pb**	**12 42 47.7**	**-0.8**
BLAC					**Sg**	**12 42 54.6**	**-0.9**
SME	**Santa Rosa Min**	**0.55**	**291**		**Pb**	**12 42 48.0**	**-0.6**
SVD	**Seven Oaks Dam**	**0.56**	**328**		**Pb**	**12 42 48.3**	**-0.6**

RSBC	**Riverside Bore**	**0.60**	**305**		**Sb**	**12 42 56.6**	**-0.9**
GORC	**Green Oak Ranc**	**0.62**	**221**		**Pb**	**12 42 49.5**	**-0.4**
GORC					**Sb**	**12 42 57.9**	**-0.3**
CTCC	**Cactus City**	**0.63**	**87**		**Pb**	**12 42 49.9**	**-0.1**
CTCC					**Sg**	**12 42 58.7**	**+0.2**
HWB	**Hans Werner Br**	**0.63**	**197**		**Pb**	**12 42 49.6**	**-0.4**
HWB					**Sb**	**12 42 58.2**	**-0.2**
HLNC	**Highland**	**0.63**	**321**		**Pb**	**12 42 49.6**	**-0.5**
BBRC	**Big Bear Solar**	**0.65**	**347**		**Pb**	**12 42 49.8**	**-0.7**
BBRC					**Sb**	**12 42 58.4**	**-0.9**
BBRC	**Big Bear Solar**	**0.65**	**347**	P	**Pb**	**12 42 49.9**	**-0.7**
	baz=167,SNR=191						
BBRC				S	**Sb**	**12 42 58.4**	**-0.9**
	baz=167						
DPP	**Dos Picos Cty**	**0.65**	**195**		**Pb**	**12 42 50.0**	**-0.4**
DPP					**Sb**	**12 42 58.7**	**-0.3**
BTL	**Butler Peak**	**0.66**	**341**		**Pb**	**12 42 50.2**	**-0.6**
SALN	**Salton City**	**0.72**	**119**		**Pg**	**12 42 51.9**	**+0.1**
BELC	**Belle Mtn. Jos**	**0.72**	**59**		**Pb**	**12 42 51.2**	**-0.5**
BELC					**Sb**	**12 43 00.4**	**-1.0**
BELC	**Belle Mtn. Jos**	**0.72**	**59**	P	**Pb**	**12 42 51.2**	**-0.5**
	baz=239,SNR=150						
BELC				S	**Sb**	**12 43 00.7**	**-0.7**
	baz=239						
EML	**El Monte Cty P**	**0.74**	**187**		**Pb**	**12 42 51.6**	**-0.4**
EML					**Sb**	**12 43 01.4**	**-0.3**
FON	**Fontana**	**0.75**	**309**		**Pb**	**12 42 51.3**	**-0.8**
TPC	**Twentynine Pal**	**0.75**	**50**		**Pb**	**12 42 51.5**	**-0.7**
MLSC	**Mira Loma**	**0.78**	**299**		**Pb**	**12 42 52.0**	**-0.7**
MLSC					**Sb**	**12 43 02.1**	**-0.8**
MONP2	**Monument Peak**	**0.78**	**160**		**Pb**	**12 42 52.7**	**-0.1**
MONP2	**Monument Peak**	**0.78**	**160**	P	**Pb**	**12 42 52.7**	**-0.1**
	baz=340,SNR=90						
MONP2				S	**Sb**	**12 43 03.2**	**+0.1**
	baz=340						
109C	**Camp Elliot, M**	**0.80**	**203**		**Pb**	**12 42 52.4**	**-0.6**
109C				Sg	**Sb**	**12 43 02.9**	**-0.5**
109C	**Camp Elliot, M**	**0.80**	**203**	P	**Pb**	**12 42 52.4**	**-0.6**
	baz=22,SNR=32						
109C				S	**Sb**	**12 43 02.9**	**-0.5**
	baz=22						
CBKC	**Canebrake**	**0.83**	**150**		**Pb**	**12 42 53.7**	**+0.1**
CSP	**Cedar Springs**	**0.84**	**323**		**Pb**	**12 42 53.2**	**-0.6**
SS2	**San Sevaine**	**0.86**	**313**		**Pb**	**12 42 53.2**	**-0.7**
CHNC	**Chino**	**0.86**	**296**		**Pb**	**12 42 53.7**	**-0.4**
CHNC					**Sb**	**12 43 05.2**	**-0.2**
SDRC	**San Diego Road**	**0.91**	**191**		**Pb**	**12 42 54.2**	**-0.6**
SDRC					**Sb**	**12 43 06.2**	**-0.3**
BAR	**Barrett**	**0.95**	**176**		**Pb**	**12 42 55.0**	**-0.5**
BAR				Sg	**Sb**	**12 43 07.9**	**+0.2**
FRK	**Frink**	**0.95**	**103**		**Pb**	**12 42 54.4**	**-1.1**
BFSC	**Mount Baldy Ra**	**0.98**	**309**		**Pb**	**12 42 55.0**	**-1.1**
BFSC					**Sb**	**12 43 07.7**	**-0.9**
BFSC	**Mount Baldy Ra**	**0.98**	**309**	P	**Pb**	**12 42 55.0**	**-1.1**
	baz=128,SNR=31						
BFSC				S	**Sb**	**12 43 07.8**	**-0.9**
	baz=128						
CRR	**Carrizo Plain**	**0.98**	**139**		**Pn**	**12 42 56.6**	**+0.1**
SSK	**Sunset Peak**	**0.98**	**307**		**Pb**	**12 42 55.5**	**-0.8**
PSRC	**Puddingstone R**	**1.00**	**298**		**Pb**	**12 42 55.8**	**-0.6**
PSRC					**Sb**	**12 43 08.9**

baz=190
SNCC San Nicolas Is 2.36 262 P Pn 12 43 15.3 -0.1
baz=80
ISA Isabella, Lake 2.48 325 Pn 12 43 17.4 +0.2
ISA Isabella, Lake 2.48 325 P Pn 12 43 17.2 0.0
baz=144,SNR=16
ISA Sb **Sb** 12 43 53.7 +1.8
baz=144
MPMC Manual Prospec 2.50 346 P Pn 12 43 17.5 -0.1
baz=166
113A Mohawk Valley, 2.64 108 Pn 12 43 21.0 +1.7
DAC Darwin (Calif) 2.73 345 Pn 12 43 23.5 +2.7
W13A Hualapai Mount 2.78 57 Pn 12 43 21.6 +0.2
SPIG San Pedro Mart 2.79 157 *i* P Pb 12 43 25.8 -1.4
SPIG *i* S Sb 12 44 01.0 -0.2
SPIG San Pedro Mart 2.79 157 Pb 12 43 25.8 -1.4
CWC Cottonwood Cre 3.01 339 P Pn 12 43 24.8 +0.2
baz=158
Y14A Wickenburg 3.13 83 Pn 12 43 26.6 +0.5
SHPR Sheep Range 3.15 24 Pn 12 43 26.8 +0.3
TPNV Topopah Spring 3.34 7 P Pn 12 43 29.6 +0.5
baz=187
MDPB Devils Postpil 4.43 335 Pn 12 43 46.2 +2.2
X16A Lo Mia Camp, P 4.47 78 Pn 12 43 45.3 +0.6
KNB Kanab 4.66 42 Pn 12 43 48.0 +0.7
CCUT Cedar City 4.79 34 Pn 12 43 49.7 +0.7
R11A Troy Canyon, C 4.80 11 Pn 12 43 50.1 +0.9
WUAZ Wupatki 4.81 65 Pn Pn 12 43 50.8 +1.5
NV11 Mina Array Sit 4.93 347 Pn 12 43 52.6 +1.7
TUC Tucson 5.18 103 Pn Pn 12 43 56.0 +1.8
PSUT Pine Spring 5.42 25 Pn 12 43 59.2 +1.5

*ATH **27** 12:51:42.4, 38°.21N×20°.33E, h9km±3km, ML3.5/6, Error ellipse: s-maj=4.1km s-min=1.3km az=65.0*
*THE **27** 12:51:43.0, 38°.23N×20°.33E, h6km±2km, ML3.3/12, Error ellipse: s-maj=2.2km s-min=0.3km az=63.0*
ISC 27 12:51:43.1±1.3, **38°.23N**±0°.03×**20°.36E**±0°.04, **h11**km±8km, **n41**, σ**0s73**/60, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.28**	**35**	P		**Pg**	**12 51 48.8**	**-0.1**
FSK				S		**Sg**	**12 51 52.9**	**+0.1**
	8μm,0.5s							
FSK	**Fiskardo**	**0.28**	**35**	P		**Pg**	**12 51 48.6**	**-0.3**
FSK				S		**Sg**	**12 51 52.9**	**+0.1**
KFL	**Anninata**	**0.36**	**108**	P		**Pg**	**12 51 50.3**	**0.0**
KFL				S		**Sg**	**12 51 55.8**	**+0.8**
	21μm,0.5s							
KFL	**Anninata**	**0.36**	**108**	P		**Pg**	**12 51 50.3**	**0.0**
KFL				S		**Sg**	**12 51 54.5**	**-0.5**
KFL				AML		AML	12 51 56.1	
	comp=E,58857μm,0.4s							
KFL				AML		AML	12 51 57.4	
	comp=N,24027μm,0.3s							
EVGI	**Lefkada island**	**0.46**	**31**	P		**Pg**	**12 51 51.9**	**-0.2**
EVGI				S		**Sg**	**12 51 59.2**	**+0.9**
LKD2	**Lefkada island**	**0.61**	**23**	P		**Pg**	**12 51 54.6**	**-0.4**
LKD2				S		**Sg**	**12 52 03.1**	**+0.1**
	comp=N,1μm,0.6s							
LKD2	**Lefkada island**	**0.61**	**23**	P		**Pg**	**12 51 54.4**	**-0.6**
LKD2				S		**Sg**	**12 52 03.0**	**-0.1**
LKD2				AML		AML	12 52 10.0	
	comp=N,2144μm,0.4s							
LKD2				AML		AML	12 52 14.2	
	comp=E,2285μm,0.7s							
TSLK	**Tsoukalades, L**	**0.64**	**21**	P		**Pg**	**12 51 55.3**	**-0.3**
TSLK				S		**Sb**	**12 52 05.0**	**-0.3**
	comp=E,2μm,0.6s							
PDO	**Prodromos**	**0.75**	**60**	P		**Pg**	**12 51 57.1**	**-0.5**
PDO				S		**Sb**	**12 52 08.6**	**+0.3**
PVO	**Paravola**	**1.00**	**67**	P		**Pg**	**12 52 02.0**	**-0.4**
PVO				S		**Sn**	**12 52 16.9**	**-0.2**
	comp=E,2μm,0.3s							
PVO	**Paravola**	**1.00**	**67**	P		**Pg**	**12 52 01.9**	**-0.4**
PVO				S		**Sn**	**12 52 16.7**	**-0.3**
PVO				AML		AML	12 52 21.8	
	comp=N,4008μm,0.3s							
PVO				AML		AML	12 52 22.0	
	comp=E,4387μm,0.5s							
DRO	**Drossia**	**1.10**	**104**	P		**Pg**	**12 52 03.6**	**-0.7**
DRO				S		**Sn**	**12 52 19.9**	**+0.2**
	comp=E,2μm,0.5s							
DRO	**Drossia**	**1.10**	**104**	P		**Pg**	**12 52 03.5**	**-0.8**
DRO				AML		AML	12 52 30.1	
	comp=E,5575μm,0.4s							
DRO				AML		AML	12 52 33.4	
	comp=N,4390μm,0.5s							
EFP	**Efpalio**	**1.24**	**80**	P		**Pn**	**12 52 06.1**	**-0.1**
EFP				S		**Sn**	**12 52 23.5**	**+0.6**
	comp=N,1μm,0.5s							
EFP	**Efpalio**	**1.24**	**80**	P		**Pn**	**12 52 05.4**	**-0.8**
AMT	**Artemida-Makis**	**1.27**	**122**	P		**Pg**	**12 52 07.4**	**-0.1**
AMT				S		**Sn**	**12 52 25.4**	**+1.5**
	comp=N,1μm,0.7s							
AMT	**Artemida-Makis**	**1.27**	**122**	P		**Pb**	**12 52 06.7**	**-0.4**
AMT				AML		AML	12 52 35.0	
	comp=N,2542μm,0.6s							
AMT				AML		AML	12 52 37.1	
	comp=E,2377μm,0.7s							
LAKA	**Lakka**	**1.28**	**89**	P		**Pn**	**12 52 06.4**	**-0.5**
LAKA				S		**Sn**	**12 52 25.9**	**+1.9**
	comp=E,1μm,0.5s							
ANX	**Ano Chora**	**1.28**	**73**	P		**Pn**	**12 52 06.1**	**-0.9**
ANX				AML		AML	12 52 31.8	
	comp=N,9938μm,0.6s							
ANX				AML		AML	12 52 32.0	
	comp=E,5568μm,0.6s							
IGT	**Igoumenitsa**	**1.31**	**359**	P		**Pn**	**12 52 06.8**	**-0.4**
IGT				S		**Sg**	**12 52 26.4**	**+1.3**
	comp=E,328nm,0.6s							
IGT	**Igoumenitsa**	**1.31**	**359**	P		**Pb**	**12 52 07.4**	**-0.2**
TRIZ	**Trizonia**	**1.36**	**84**	P		**Pn**	**12 52 07.7**	**-0.2**
TRIZ				S		**Sg**	**12 52 27.9**	**+1.1**
	comp=E,1μm,0.8s							
TRIZ	**Trizonia**	**1.36**	**84**	P		**Pn**	**12 52 07.7**	**-0.2**
ALIK	**Aliki, Aigiali**	**1.38**	**88**	P		**Pn**	**12 52 08.3**	**+0.1**
KALE	**Kalithea**	**1.41**	**83**	P		**Pn**	**12 52 08.5**	**-0.3**
KALE				S		**Sb**	**12 52 27.7**	**+0.2**
	comp=E,780nm,0.8s							
MAKR	**Makrakomi, Fth**	**1.60**	**60**	P		**Pg**	**12 52 13.4**	**-0.3**
PYL	**PYLOS**	**1.73**	**140**	P		**Pb**	**12 52 14.3**	**-0.4**
PYL	**PYLOS**	**1.73**	**140**	P		**Pb**	**12 52 14.1**	**-0.6**
AGG	**Agios Georgios**	**1.74**	**62**	P		**Pb**	**12 52 15.5**	**+0.5**
VLX	**Vlachokerasia**	**1.82**	**117**	P		**Pg**	**12 52 16.9**	**-1.0**
PROD	**Prodromos**	**2.00**	**88**	P		**Pb**	**12 52 19.0**	**-0.5**
LTK	**Loutraki**	**2.07**	**95**	P		**Pb**	**12 52 19.6**	**-1.0**
DID	**Didima**	**2.39**	**107**	P		**Pn**	**12 52 23.4**	**+1.3**
DBRK	**Dubrovnik**	**4.75**	**340**	Sn		**Sn**	**12 53 48.4**	**-1.2**
STON	**Ston**	**5.06**	**337**	*e*Pn		**Pn**	**12 52 59.5**	**+0.6**
STON				Sn		**Sn**	**12 53 55.4**	**-1.9**
MAKA	**Makarska**	**5.66**	**334**	*i* Pn		**Pn**	**12 53 07.7**	**+0.7**
ZIRJ	**Zirje**	**6.49**	**328**	*e*Pn		**Pn**	**12 53 18.6**	**+0.2**
KIJV	**Kijevo**	**6.50**	**334**	*i* Pn		**Pn**	**12 53 19.6**	**+1.0**
MORI	**Morici**	**6.64**	**330**	*e*Pn		**Pn**	**12 53 21.3**	**+0.8**
DUGI	**Dugi Otok**	**7.01**	**327**	*i* Pn		**Pn**	**12 53 26.8**	**+1.1**
NVLJ	**Novalja**	**7.55**	**329**	*e*Pn		**Pn**	**12 53 33.7**	**+0.7**

MAN 27 12:56:28.1, 13°.51N×121°.78E, h16km, mb3.8, ML2.5, MS2.1,1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BOAC	**Boac**	**0.08**	**129**	*e*P		Pg	12 56 32.2	+1.0
BOAC				*e*S		Sg	12 56 35.8	+2.5
LQP	**Lukban**	**0.64**	**339**	⇑*e*P		Pg	12 56 40.7	-0.1
OTRP	**Odiongan**	**1.17**	**168**	*e*P		Pn	12 56 48.1	-1.6
OTRP				*e*S		Sg	12 57 06.0	+0.2
POLP	**Polilio Island**	**1.22**	**7**	*e*P		Pn	12 56 49.8	-0.7
POLP				*e*S		Sn	12 57 06.8	+0.2

*BGR **27** 13:05:46.8±0.9, 38°.21N×21°.42E, h10km, Error ellipse: s-maj=58.9km s-min=14.5km az=59.0*
*BJI **27** 13:05:47.4±0.0, 37°.81N×20°.33E, h15km, mB5.2/26, mb4.5/39, Ms4.9/7, Ms7 4.6/8*
*MOS **27** 13:05:49.7±1.1, 38°.25N×20°.27E, h13km, mb4.8/28, Error ellipse: s-maj=5.5km s-min=3.7km az=75.9*
*IDC **27** 13:05:49.8±0.5, 38°.23N×20°.47E, h0km, mb4.4/24, mb1 4.5/36, mb1mx4.4/57, mbtmp4.3/36, ML3.8/12, MS3.9/31, Ms1 3.9/31, ms1mx3.8/45, Error ellipse: s-maj=12.2km s-min=10.5km az=175.0*
*SKO **27** 13:05:50.0, 38°.27N×20°.32E, h0km*
*MED_RC **27** 13:05:50.0±0.6, 38°.27N×20°.37E, h17km±1km, MW4.6/20, Moment Tensor Solution.Mantle waves: s20,c30; Duration: 1s0 Moment tensor: Scale 10^16^Nm; Mrr0.04±.05; Mθθ0.65±.05; Mφφ-0.70±.05; Mrθ-0.03±.09; Mθφ0.61±.03; Mφr-0.01±.07; Best double couple: M0 0.91000×10^16^ NP1:φ294.00000°, δ88.00000°, λ1.00000°. NP2:φ204.00000°, δ89.00000°, λ178.00000°. Principal axes: T 0.8900, Plg2.0000°, Azm159.0000°; N 0.0400, Plg88.0000°, Azm345.0000°; P -0.9300, Plg0.0000°, Azm249.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*ATH **27** 13:05:50.7, 38°.23N×20°.44E, h11km±1km, ML4.3/9 Error ellipse: s-maj=2.6km s-min=1.0km az=77.0*
*THE **27** 13:05:50.9, 38°.24N×20°.41E, h0km±2km, ML4.1/20, Error ellipse: s-maj=3.0km s-min=0.5km az=253.0*
*NEIC **27** 13:05:51.1±2.0, 38°.25N±0°.04×20°.37E±0°.06, h12km±3km, mb4.6/44, ML4.2(THE), Error ellipse: s-maj=7.5km s-min=5.8km az=73.0*
*PDG **27** 13:05:53.0±0.7, 38°.25N×20°.22E, h31km±2km, ML4.3/13, Error ellipse: s-maj=1.2km s-min=1.3km az=0.0*
ISC 27 13:05:51.3±0.8, **38°.25N**±0°.02×**20°.43E**±0°.02, **h11**km±4km, **n414**, σ1s**65**/486, **mb4.6**/67, **MS4.0**/29, **23C-12D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.14**	**119**	P		**Pg**	**13 05 54.1**	**-0.5**
VLS				S		**Sg**	**13 05 55.9**	**-1.1**
	376μm,0.3s							
VLS	**Valsamata**	**0.14**	**119**	P		**Pg**	**13 05 54.1**	**-0.5**
VLS	**Valsamata**	**0.14**	**119**	P		**Pg**	**13 05 53.5**	**-1.1**
VLS				S		**Sg**	**13 05 56.2**	**-0.7**
VLS				AML		AML	13 05 57.0	
VLS				AML		AML	13 05 57.1	
FSK	**Fiskardo**	**0.24**	**26**	P		**Pg**	**13 05 55.7**	**-0.5**
FSK				S		**Sg**	**13 06 00.1**	**+0.6**
	120μm,0.9s							
FSK	**Fiskardo**	**0.24**	**26**	P		**Pg**	**13 05 56.0**	**-0.2**
FSK				S		**Sg**	**13 05 59.8**	**+0.2**
KFL	**Anninata**	**0.31**	**116**	P		**Pg**	**13 05 56.8**	**-0.7**
KFL				S		**Sg**	**13 06 02.2**	**+0.4**
	79μm,0.7s							
KFL	**Anninata**	**0.31**	**116**	P		**Pg**	**13 05 56.8**	**-0.7**
KFL				S		**Sg**	**13 06 01.9**	**+0.1**
KFL				AML		AML	13 06 06.9	
KFL				AML		AML	13 06 11.1	
VLMS	**Volimes, Zakyn**	**0.41**	**154**	P		**Pg**	**13 05 58.6**	**-0.8**
VLMS				S		**Sg**	**13 06 04.9**	**0.0**
VLMS				AML		AML	13 06 09.4	
	comp=E,61816μm,0.4s							
VLMS				AML		AML	13 06 13.7	
	comp=N,82750μm,0.8s							
EVGI	**Lefkada island**	**0.41**	**25**	P		**Pg**	**13 05 58.8**	**-0.6**
EVGI				S		**Sg**	**13 06 04.7**	**-0.3**
EVGI	**Lefkada island**	**0.41**	**25**	P		**Pg**	**13 05 58.9**	**-0.6**
EVGI				S		**Sg**	**13 06 05.4**	**+0.4**
MGNA	**Meganis**	**0.50**	**34**	P		**Pg**	**13 06 00.2**	**-0.8**
MGNA				S		**Sg**	**13 06 07.5**	**-0.1**
MGNA				AML		AML	13 06 08.8	
	comp=E,84252μm,0.4s							
MGNA				AML		AML	13 06 09.0	
	comp=N,77373μm,0.2s							
LKD2	**Lefkada island**	**0.57**	**18**	P		**Pg**	**13 06 01.5**	**-0.9**
LKD2				S		**Sb**	**13 06 10.9**	**-0.5**
	comp=N,20μm,0.7s							
LKD2	**Lefkada island**	**0.57**	**18**	P		**Pg**	**13 06 01.4**	**-0.9**
LKD2				S		**Sg**	**13 06 10.6**	**+0.6**
ZAK2	**Zakynthos**	**0.59**	**141**	P		**Pg**	**13 06 02.2**	**-0.5**
ZAK2				S		**Sb**	**13 06 12.1**	**+0.3**
TSLK	**Tsoukalades, L**	**0.60**	**17**	P		**Pg**	**13 06 02.1**	**-0.9**
TSLK				S		**Sb**	**13 06 12.5**	**+0.1**
	comp=N,25μm,0.8s							
TSLK	**Tsoukalades, L**	**0.60**	**17**	P		**Pg**	**13 06 02.4**	**-0.6**
TSLK				S		**Sb**	**13 06 12.2**	**-0.1**
PDO	**Prodromos**	**0.69**	**59**	P		**Pg**	**13 06 04.0**	**-0.5**
PDO				S		**Sg**	**13 06 13.6**	**0.0**
PDO	**Prodromos**	**0.69**	**59**	P		**Pg**	**13 06 04.1**	**-0.5**
PDO				S		**Sg**	**13 06 13.5**	**0.0**
RLS	**Riolos of Patr**	**0.84**	**103**	P		**Pg**	**13 06 07.4**	**0.0**
RLS				S		**Sg**	**13 06 18.9**	**+0.6**
	comp=N,10μm,0.7s							
RLS	**Riolos of Patr**	**0.84**	**103**	P		**Pg**	**13 06 06.4**	**-1.0**
PVO	**Paravola**	**0.94**	**66**	P		**Pg**	**13 06 08.8**	**-0.5**
PVO				S		**Sn**	**13 06 24.1**	**+0.4**
	comp=N,18μm,0.5s							
PVO	**Paravola**	**0.94**	**66**	P		**Pg**	**13 06 09.0**	**-0.3**
DRO	**Drossia**	**1.05**	**106**	P		**Pb**	**13 06 10.4**	**-1.1**
DRO				S		**Sn**	**13 06 27.5**	**+0.9**
	comp=N,24μm,0.6s							
DRO	**Drossia**	**1.05**	**106**	P		**Pb**	**13 06 10.8**	**-0.7**
DRO				AML		AML	13 06 36.0	
	comp=E,55817μm,0.6s							
DRO				AML		AML	13 06 37.0	
	comp=N,41199μm,0.6s							
UPR	**University Cam**	**1.07**	**88**	P		**Pb**	**13 06 11.9**	**+0.2**
UPR				S		**Sn**	**13 06 27.6**	**+0.7**
UPR	**University Cam**	**1.07**	**88**	P		**Pb**	**13 06 11.6**	**-0.1**
EFP	**Efpalio**	**1.17**	**81**	P		**Pb**	**13 06 12.2**	**-1.3**
EFP				S		**Sn**	**13 06 31.2**	**+1.6**
	comp=N,12μm,0.8s							
EFP	**Efpalio**	**1.17**	**81**	P		**Pb**	**13 06 12.9**	**-0.7**
EFP				AML		AML	13 06 39.6	
	comp=N,28128μm,0.6s							
EFP				AML		AML	13 06 40.5	
	comp=E,17528μm,1.0s							
LAKA	**Lakka**	**1.22**	**90**	P		**Pn**	**13 06 13.2**	**-1.0**
LAKA				S		**Sn**	**13 06 32.8**	**+2.1**
	comp=E,6μm,0.7s							
LAKA	**Lakka**	**1.22**	**90**	P		**Pn**	**13 06 13.1**	**-1.2**
LAKA				AML		AML	13 06 36.6	
	comp=N,15633μm,0.6s							
LAKA				AML		AML	13 06 45.9	
	comp=E,12578μm,0.8s							
ANX	**Ano Chora**	**1.22**	**73**	P		**Pn**	**13 06 13.4**	**-0.9**
ANX	**Ano Chora**	**1.22**	**73**	P		**Pn**	**13 06 13.6**	**-0.7**
ANX				AML		AML	13 06 38.7	
	comp=N,54730μm,0.6s							
ANX				AML		AML	13 06 42.5	
	comp=E,41642μm,0.7s							
AMT	**Artemida-Makis**	**1.24**	**125**	P		**Pn**	**13 06 13.6**	**-0.9**
AMT				S		**Sn**	**13 06 32.3**	**+1.1**
	comp=E,10μm,0.7s							
AMT	**Artemida-Makis**	**1.24**	**125**	P		**Pb**	**13 06 14.8**	**+0.1**
EVR	**Evrytania**	**1.27**	**58**	P		**Pn**	**13 06 13.9**	**-1.1**
EVR				S		**Sg**	**13 06 33.7**	**+1.5**
	comp=E,8μm,0.8s							
EVR	**Evrytania**	**1.27**	**58**	P		**Pn**	**13 06 14.1**	**-0.9**
IGT	**Igoumenitsa**	**1.29**	**357**	P		**Pn**	**13 06 14.5**	**-0.7**
IGT				S		**Sg**	**13 06 33.4**	**+0.7**
	comp=E,6μm,0.6s							
IGT	**Igoumenitsa**	**1.29**	**357**	P		**Pn**	**13 06 14.5**	**-0.7**
IGT	**Igoumenitsa**	**1.29**	**357**	P		**Pn**	**13 06 14.2**	**-1.0**
SERG	**Sergoula**	**1.29**	**82**	P		**Pn**	**13 06 14.3**	**-0.9**
TRIZ	**Trizonia**	**1.30**	**84**	P		**Pn**	**13 06 14.3**	**-1.0**
TRIZ				S		**Sg**	**13 06 34.1**	**+1.1**
	comp=E,12μm,0.8s							
TRIZ	**Trizonia**	**1.30**	**84**	P		**Pn**	**13 06 14.3**	**-1.0**
ALIK	**Aliki, Aigiali**	**1.32**	**89**	P		**Pn**	**13 06 15.0**	**-0.6**
ALIK				S		**Sg**	**13 06 35.4**	**+1.6**
KALE	**Kalithea**	**1.35**	**83**	P		**Pn**	**13 06 15.1**	**-1.0**
KALE				S		**Sb**	**13 06 34.2**	**+0.3**
	comp=E,6μm,1.0s							
KALE	**Kalithea**	**1.35**	**83**	P		**Pn**	**13 06 15.2**	**-1.0**
KLV	**Kalavryta, Ach**	**1.37**	**98**	P		**Pn**	**13 06 16.6**	**+0.2**
KLV				S		**Sg**	**13 06 36.7**	**+1.3**
KLV	**Kalavryta, Ach**	**1.37**	**98**	P		**Pn**	**13 06 15.7**	**-0.7**
JAN	**Janina**	**1.45**	**13**	P		**Pg**	**13 06 19.1**	**+0.1**
JAN				S		**Sg**	**13 06 38.9**	**+1.1**
	comp=E,6μm,0.9s							
JAN	**Janina**	**1.45**	**13**	P		**Pg**	**13 06 19.1**	**+0.1**
JAN				S		**Sg**	**13 06 38.9**	**+1.1**
JAN	**Janina**	**1.45**	**13**	P		**Pg**	**13 06 19.0**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.54**	**60**	P		**Pb**	**13 06 19.4**	**-0.3**
MAKR				S		**Sb**	**13 06 40.0**	**+0.8**
	comp=E,10μm,1.1s							
MAKR	**Makrakomi, Fth**	**1.54**	**60**	P		**Pb**	**13 06 19.4**	**-0.3**
MAKR				AML		AML	13 06 52.1	
	comp=N,12476μm,0.7s							
MAKR				AML		AML	13 06 54.4	
	comp=E,21772μm,0.6s							
ITM	**Ithomi**	**1.59**	**131**	P		**Pn**	**13 06 19.2**	**-0.2**
ITM				S		**Sb**	**13 06 41.8**	**+1.0**
	comp=E,4μm,1.6s							
ITM	**Ithomi**	**1.59**	**131**	P		**Pn**	**13 06 19.3**	**-0.1**
ITM	**Ithomi**	**1.59**	**131**			**Pn**	**13 06 19.8**	**+0.4**
SRN	**Sarande**	**1.67**	**348**	P		**Pn**	**13 06 20.3**	**-0.1**
SRN				S		**Sg**	**13 06 43.6**	**-1.3**
	comp=E,2μm,1.0s							
AGG	**Agios Georgios**	**1.68**	**62**	P		**Pn**	**13 06 21.0**	**+0.4**
AGG				S		**Sb**	**13 06 43.8**	**+0.5**
	comp=E,5μm,1.1s							
AGG	**Agios Georgios**	**1.68**	**62**	P		**Pn**	**13 06 21.0**	**+0.4**
AGG				S		**Sb**	**13 06 43.8**	**+0.5**
AGG	**Agios Georgios**	**1.68**	**62**	P		**Pb**	**13 06 22.6**	**+0.5**
PYL	**PYLOS**	**1.70**	**142**	P		**Pn**	**13 06 20.6**	**-0.3**
THL	**Klokotos Trika**	**1.81**	**43**	P		**Pb**	**13 06 23.9**	**-0.4**
PROD	**Prodromos**	**1.94**	**89**	P		**Pb**	**13 06 25.8**	**-0.8**
LTK	**Loutraki**	**2.01**	**96**	P		**Pn**	**13 06 26.5**	**+1.4**
LOUT	**Loutraki**	**2.02**	**97**	P		**Pn**	**13 06 27.0**	**-1.1**
LKR	**Lokris**	**2.06**	**78**	P		**Pb**	**13 06 27.7**	**-0.9**
VIL2	**Platees**	**2.23**	**90**	P		**Pb**	**13 06 30.5**	**-1.1**
KZN	**Kozani**	**2.31**	**26**	P		**Pb**	**13 06 32.9**	**0.0**
SCTE	**Santa Cesarea**	**2.38**	**321**			**Pn**	**13 06 29.7**	**-0.5**
LIT	**Litokhoron**	**2.45**	**40**	P		**Pb**	**13 06 34.5**	**-0.8**
MRKA	**Markates**	**2.52**	**79**	P		**Pn**	**13 06 33.7**	**+1.6**
SKIA	**Skiathos**	**2.54**	**68**	P		**Pn**	**13 06 34.2**	**+1.7**
ATH	**Athens Observa**	**2.60**	**95**	P		**Pb**	**13 06 36.4**	**-1.5**
OHR	**Ohrid**	**2.88**	**6**	*i* Pn		**Pn**	**13 06 39.3**	**+2.3**
OHR				*e*Lg		Lg	13 07 38.7	
	comp=N,2μm,1.5s							
OHR				*e*Lg		Lg	13 07 41.4	
	comp=E,1μm,0.8s							
TIP	**Timpagrande**	**3.02**	**289**	⇓P		**Pn**	**13 06 38.6**	**-0.5**
TIP	**Timpagrande**	**3.02**	**289**			**Pn**	**13 06 38.0**	**-1.0**
TIR	**Tirane**	**3.13**	**352**	P		**Pn**	**13 06 40.7**	**+0.2**
TIR	**Tirane**	**3.13**	**352**	⇓P		**Pn**	**13 06 41.2**	**+0.7**
TIR	**Tirane**	**3.13**	**352**			**Pn**	**13 06 40.7**	**+0.2**
CGL1	**Ceglie Messapi**	**3.32**	**317**	*e*Pn		**Pn**	**13 06 42.8**	**-0.3**
TAR1	**Taranto**	**3.34**	**314**	*e*Pn		**Pn**	**13 06 44.8**	**+1.5**
TAR1						Sn	13 07 47.8	+9.4
VAY	**Valandovo**	**3.48**	**28**	*e*Pn		**Pn**	**13 06 49.0**	**+3.6**
VAY				*e*Lg		Lg	13 07 38.3	
	comp=N,583nm,1.1s							
VAY				*e*Lg		Lg	13 07 41.6	
	comp=E,522nm,1.3s							
MASS	**Massafra**	**3.49**	**314**	*e*Pn		**Pn**	**13 06 46.3**	**+0.9**
MASS						Sn	**13 07 51.1**	**+7.8**
CEL	**Celeste**	**3.57**	**272**			**Pn**	**13 06 45.2**	**-1.5**
STIP	**Stip**	**3.70**	**21**	*i* Pn		**Pn**	**13 06 51.3**	**+3.0**
MATE	**Matera**	**3.75**	**311**	⇑P		**Pn**	**13 06 48.7**	**-0.3**
SKO	**Skopje**	**3.80**	**11**	*e*Pn		**Pn**	**13 06 50.0**	**+0.3**
ULC	**Ulcinj**	**3.82**	**347**	⇓*i* Pn		**Pn**	**13 06 49.0**	**-1.1**
ULC				*i* Sn		**Sn**	**13 07 33.6**	**-1.4**
SG1	**Sgolgore (BA)**	**3.89**	**313**	*e*Pn		**Pn**	**13 06 51.3**	**+0.3**
BAI	**Bari**	**3.96**	**317**	*e*Pn		**Pn**	**13 06 52.5**	**+0.6**
DRME	**Dracevica, Mon**	**4.05**	**347**	*e*Pn		**Pn**	**13 06 52.0**	**-1.2**
DRME	**Dracevica, Mon**	**4.05**	**347**	⇓*i* Pn		**Pn**	**13 06 52.9**	**-0.3**
DRME				*i* Sn		**Sn**	**13 07 39.5**	**-1.1**
APE	**Apeiranthos**	**4.21**	**105**	*i* P		**Pn**	**13 06 58.8**	**+3.4**
APE	**Apeiranthos**	**4.21**	**105**	⇑P		**Pn**	**13 07 00.1**	**+4.6**
BUM	**Brajici-Budva**	**4.22**	**344**	⇓*i* Pn		**Pn**	**13 06 54.7**	**-0.8**
BUM				*i* Sn		**Sn**	**13 07 43.3**	**-1.5**
PDG	**Podgorica**	**4.28**	**348**	⇑P		**Pn**	**13 06 56.2**	**-0.1**
PDG	**Podgorica**	**4.28**	**348**	*e*Pn		**Pn**	**13 06 55.5**	**-0.7**
PDG	**Podgorica**	**4.28**	**348**			**Pn**	**13 06 55.6**	**-0.6**
TTG	**Podgorica**	**4.28**	**348**	⇑*i* Pn		**Pn**	**13 06 56.1**	**-0.1**
TTG				*i* Sn		**Sn**	**13 07 45.0**	**-1.1**
ACER	**Acerenza**	**4.30**	**308**			**Pn**	**13 06 56.6**	**-0.1**
PVY	**Plav**	**4.36**	**355**	⇑*i* Pn		**Pn**	**13 06 58.2**	**+0.7**
PVY				*i* Sn		**Sn**	**13 07 47.2**	**-1.2**
SANT	**Santorini**	**4.42**	**113**	Pn		**Pn**	**13 06 59.3**	**+1.0**
CEME	**Cevo**	**4.45**	**345**	*e*Pn		**Pn**	**13 06 59.3**	**+0.6**
CEME				*i* Sn		**Sn**	**13 07 48.7**	**-1.8**
HCY	**Herceg Novi**	**4.45**	**341**	*e*Pn		**Pn**	**13 06 56.8**	**-1.9**
HCY	**Herceg Novi**	**4.45**	**341**	⇓*i* Pn		**Pn**	**13 06 57.9**	**-0.8**
HCY				*i* Sn		**Sn**	**13 07 48.1**	**-2.3**
IDI	**Anoyia**	**4.64**	**128**	Pn		**Pn**	**13 07 01.4**	**+0.1**
	comp=E,0.5nm,0.3s,baz=309,slow=19,SNR=2.2							
IDI				Sn		**Sn**	**13 07 55.3**	**+0.1**
	comp=E,7.1nm,0.3s,baz=309,slow=23,SNR=3.6							
IVA	**Berane**	**4.64**	**355**	⇑*i* Pn		**Pn**	**13 07 02.0**	**+0.7**
IVA				*i* Sn		**Sn**	**13 07 53.5**	**-1.7**
KOME	**Kolasin**	**4.65**	**352**	*e*Pn		**Pn**	**13 07 02.9**	**+1.4**
KOME				*i* Sn		**Sn**	**13 07 54.1**	**-1.4**
NKME	**Niksic**	**4.66**	**346**	⇓*i* Pn		**Pn**	**13 07 01.

GBRS	Gornja Briga	8.40	332	*i* Pn		Pn		13 07 52.4	-0.5	
CRES	Cresnjev	8.43	336	*e*Pn		Pn		13 07 51.6	-1.7	
DOPR	Dopca	8.55	24	⇑P		Pn		13 07 57.8	+2.9	
CEY	Cerknica	8.72	331	*e*Pn		Pn		13 07 55.8	-1.5	
OSSC	Osservatorio P	8.73	310			Pn		13 07 57.3	0.0	
PLOR	Plostina	8.89	29	P		Pn		13 08 02.7	+3.1	
PLOR	Plostina	8.89	29	⇑P		Pn		13 08 02.8	+3.1	
VRI	Vrincioaia	8.94	30	P		Pn		13 08 04.0	+3.8	
LJU	Ljubljana	8.94	333	*e*Pn		Pn		13 07 59.3	-1.0	
TRI	Trieste	8.96	328	P		Pn		13 07 59.2	-1.3	
TRI	Trieste	8.96	328			Pn		13 07 59.2	-1.3	
KEST	Kesra	9.22	258	Pn		Pn		13 08 05.2	+1.0	
	comp=E,0.4nm,0.3s,baz=182,slow=8,SNR=6.3									
KEST				Sn		Sn		13 09 46.1	-1.9	
	comp=E,0.6nm,0.3s,baz=0.0,slow=20,SNR=3.4									
KEST				LR		LR		13 12 33.7		
	comp=E,554nm,19.4s,baz=28,slow=44									
SOKA	Soboth	9.32	336	*e*Pn		Pn		13 08 04.0	-1.6	
	comp=E,53nm,0.6s,SNR=28									
SOKA				*i* Sn		Sn		13 09 44.6	-5.8	
	comp=E,8.1nm,0.6s									
OBKA	Obir	9.33	334	*e*Pn		Pn		13 08 05.3	-0.5	
OBKA				*e*Sn		Sn		13 09 46.8	-3.9	
OBKA	Obir	9.33	334	*e*Pn		Pn		13 08 05.4	-0.3	
	comp=E,16nm,0.3s,SNR=9.4									
OBKA				Sn		Sn		13 09 46.0	-4.7	
	comp=E,36nm,0.6s									
ZCCA	Zocca	9.37	314	Pn		Pn		13 08 06.8	+0.7	
TEOL	Teolo	9.65	320			Pn		13 08 08.3	-1.8	
PSZ	Piszkesteto	9.68	358	P		Pn		13 08 08.5	-1.9	
PSZ	Piszkesteto	9.68	358			Pn		13 08 08.5	-1.9	
ARSA	Arzberg	9.69	340	*e*Pn		Pn		13 08 09.2	-1.4	
ARSA	Arzberg	9.69	340	*e*Pn		Pn		13 08 08.1	-2.5	
	comp=E,9.3nm,0.6s									
ARSA				*e*Sn		Sn		13 09 54.8	-4.6	
	comp=E,4.9nm,0.6s									
BR231	Keskin MP Arra	9.74	77	Pn		Pn		13 08 11.4	0.0	
MYKA	Terra Mystica	9.76	331	*i* Pn		Pn		13 08 10.9	-0.7	
	comp=E,6.1nm,0.3s									
STAL	STALIGIAL	9.84	327			Pn		13 08 11.9	-0.7	
TRPA	Tarpa	10.00	8	⇑P		Pn		13 08 15.8	+1.0	
BUR08	Bucovina Ar. S	10.02	19	Pn		Pn		13 08 16.3	+1.1	
CTI	Castel Tesino	10.16	323	P		Pn		13 08 15.1	-2.0	
CTI	Castel Tesino	10.16	323			Pn		13 08 15.1	-2.0	
MSSA	Maissana	10.21	310	Pn		Pn		13 08 17.7	0.0	
CONA	Conrad Observa	10.24	342	*e*Pn		Pn		13 08 17.5	-0.6	
	comp=E,5.1nm,0.5s									
KBA	Koelnbreinsper	10.25	332	*e*Pn		Pn		13 08 17.2	-1.1	
KBA				*e*Sn		Sn		13 10 08.2	-5.1	
KBA	Koelnbreinsper	10.25	332	*e*Pn		Pn		13 08 17.3	-1.1	
	comp=E,5.1nm,0.5s,SNR=6.4									
KBA				*e*Sn		Sn		13 10 08.1	-5.2	
	comp=E,12nm,0.8s									
ABTA	Abfaltersbach	10.31	328	*i* Pn		Pn		13 08 19.3	+0.2	
	comp=E,20nm,0.5s,SNR=8.6									
ABTA				*e*Sn		Sn		13 10 09.7	-4.9	
	comp=E,14nm,0.6s									
VYHS	Vyhne	10.31	354	*e*P		Pn		13 08 19.6	+0.6	
VYHS				*e*				13 10 08.3		
VYHS	Vyhne	10.31	354	*e*PN		Pn		13 08 19.6	+0.6	
VYHS				*e*SN		Sn		13 10 08.3	-6.2	
BR131	Keskin Array S	10.39	78	P		Pn		13 08 20.8	+0.5	
BR131	Keskin Array S	10.39	78			Pn		13 08 20.8	+0.5	
BRTR	Keskin Array B	10.39	78	P		Pn		13 08 23.0	+2.7	
BRTR	Keskin Array B	10.39	78	Pn		Pn		13 08 22.9	+2.7	
	comp=E,0.2nm,0.3s,baz=255,slow=12,SNR=5.6									
BRTR				LR		LR		13 12 47.5		
	comp=E,521nm,19.1s,baz=242,slow=40									
SALO	Salr	10.42	318			Pn		13 08 19.3	-1.3	
MOA	Molln	10.60	337	*e*Pn		Pn		13 08 23.2	+0.1	
MOA				*e*Sn		Sn		13 10 18.2	-3.5	
MOA	Molln	10.60	337	*i* Pn		Pn		13 08 23.2	+0.1	
	comp=E,16nm,0.5s,SNR=10									
MOA				*e*Sn		Sn		13 10 17.9	-3.8	
	comp=E,5.5nm,0.3s									
KOLS	Kolonicke sedl	10.77	7	*e*P		Pn		13 08 25.5	+0.2	
KOLS	Kolonicke sedl	10.77	7	*e*PN		Pn		13 08 25.5	+0.2	
JAVC	Velka Javorina	10.80	350	*e*PN		Pn		13 08 25.7	0.0	
CSS	Mathiatis	10.87	104	Pn		Pn		13 08 28.2	+1.4	
RJOB	Jochberg	11.01	332	*e*Pn		Pn		13 08 29.9	+1.3	
RJOB				*e*Sn		Sn		13 10 26.6	-5.1	
WTTA	Wattenberg	11.08	327	*e*Pn		Pn		13 08 30.3	+0.5	
WTTA				*e*Sn		Sn		13 10 31.2	-2.6	
WTTA	Wattenberg	11.08	327	*e*Pn		Pn		13 08 30.2	+0.4	
	comp=E,19nm,0.6s,SNR=10									
WTTA				*e*Sn		Sn		13 10 30.8	-3.0	
	comp=E,24nm,0.7s									
WATA	Walderalm	11.17	327	*i* Pn		Pn		13 08 31.5	+0.6	
	comp=E,19nm,0.5s,SNR=10									
WATA				*e*Sn		Sn		13 10 31.1	-4.7	
	comp=E,8.9nm,0.3s									
KRUC	Moravsky	11.20	346	*e*PN		Pn		13 08 31.3	+0.1	
SQTA	Sankt Quirin	11.24	326	*i* Pn		Pn		13 08 32.7	+0.9	
	comp=E,8.1nm,0.4s									
SQTA				*e*Sn		Sn		13 10 33.5	-4.0	
	comp=E,13nm,0.6s									
FUORN	Ofenpass-Fuorn	11.24	321			Pn		13 08 30.9	-1.1	
FETA	Feichten	11.30	324	Pn		Pn		13 08 34.2	+1.4	
	comp=E,6.2nm,0.5s									
FETA				*e*Sn		Sn		13 10 36.2	-3.0	
	comp=E,6.4nm,0.6s									
MOTA	Moosalm	11.38	326	*e*Pn		Pn		13 08 34.2	+0.4	
	comp=E,14nm,0.5s,SNR=5.2									
MOTA				*e*Sn		Sn		13 10 39.5	-1.4	
	comp=E,13nm,0.5s									
VRAC	Vranov	11.40	347	Pn		Pn		13 08 34.5	+0.5	
	comp=E,0.4nm,0.3s,baz=190,slow=12,SNR=5.0									
VRAC				LR		LR		13 13 39.7		
	comp=E,740nm,18.0s,baz=170,slow=41									
VRAC	Vranov	11.40	347	*e*PN		Pn		13 08 34.2	+0.3	
PART	Garmisch-Parte	11.49	327	*e*Pn		Pn		13 08 37.4	+2.1	
DAVOX	Davos/Dischmat	11.54	321	Pn		Pn		13 08 36.2	+0.2	
	comp=E,0.9nm,0.3s,baz=133,slow=18,SNR=12									
DAVOX				Sn		Sn		13 10 41.0	-3.9	
	comp=E,1.1nm,0.3s,baz=12,slow=24,SNR=3.1									
DAVOX				LR		LR		13 14 33.1		
	comp=E,552nm,20.9s,baz=126,slow=45									
RETA	Reutte	11.64	326	*i* Pn		Pn		13 08 38.7	+1.4	
	comp=E,5.4nm,0.5s									
GEC2	GERESS Array S	11.66	337	*e*Pn		Pn		13 08 35.9	-1.7	
GEC2	GERESS Array S	11.66	337			Pn		13 08 35.1	-2.4	
GERES	GERESS Array B	11.66	337	Pn		Pn		13 08 35.8	-1.8	
	comp=E,1.2nm,0.3s,baz=155,slow=13,SNR=36									
GERES				Sn		Sn		13 10 40.4	-7.4	
	comp=E,0.6nm,0.3s,baz=162,slow=27,SNR=4.0									
GERES				LR		LR		13 14 29.3		
	comp=E,955nm,18.6s,baz=158,slow=44									
MORC	Moravsky Berou	11.71	351	P		Pn		13 08 37.0	-1.3	
MORC	Moravsky Berou	11.71	351	*e*PN		Pn		13 08 37.9	-0.4	
MORC	Moravsky Berou	11.71	351			Pn		13 08 37.0	-1.3	
DAVA	Damuels	11.89	323	*e*Pn		Pn		13 08 42.3	+1.4	
	comp=E,4.1nm,0.4s									
DAVA				*e*Sn		Sn		13 10 49.9	-3.8	
	comp=E,18nm,0.5s									
KHC	Kasperske Hory	11.95	338	*i* P		Pn		13 08 40.8	-0.7	
KHC	Kasperske Hory	11.95	338	*e*PN		Pn		13 08 39.3	-2.2	
KHC	Kasperske Hory	11.95	338			Pn		13 08 38.7	-2.8	
WET	Wettzell	12.18	336	*e*Pn		Pn		13 08 44.5	-0.2	
GOPC	GO Pecny, Ondr	12.35	343	*e*P		Pn		13 08 46.6	-0.3	
GOPC	GO Pecny, Ondr	12.35	343	*e*PN		Pn		13 08 46.6	-0.3	
SENIN	Lac Senin/Sane	12.65	314			Pn		13 08 51.4	+0.1	
NORI	Noerdlinger Ri	12.65	329	*e*Pn		Pn		13 08 50.0	-1.0	
GRA1	Grafenberg Arr	13.21	333	Pn		Pn		13 08 58.0	-0.7	
GRF	Grafenberg Arr	13.21	333	P		Pn		13 08 58.0	-0.7	
MMAI	Mount Meron Ar	13.24	109	Pn		Pn		13 08 59.3	0.0	
	comp=E,4.3nm,0.3s,baz=304,slow=10,SNR=3.7									
BFO	Black Forest	13.37	323	P		Pn		13 08 59.6	-1.3	
BFO	Black Forest	13.37	323	Pn		Pn		13 08 59.6	-1.3	
BRG	Berggiesshubel	13.44	342	*e*P		Pn		13 09 00.7	-1.1	
	comp=E,5.1nm,0.8s									
BRG	Berggiesshubel	13.44	342	*e*P		Pn		13 09 00.7	-1.1	
BRG				pmax		pmax				
	comp=E,5.0nm,0.8s									
ECH	Echery	13.87	320	P		Pn		13 09 07.5	-0.2	
ECH	Echery	13.87	320	Pn		Pn		13 09 07.5	-0.2	
MOX	Moxa	13.89	336	P		Pn		13 09 07.8	-0.1	
MOX	Moxa	13.89	336	*e*Pn		Pn		13 09 08.2	+0.3	
AKBB	Malin Array Si	13.93	24	*i* P		Pn		13 09 09.6	+1.1	
CLL	Collm	14.07	341	*e*P		Pn		13 09 01.0	-9.4	
CLL	Collm	14.07	341	*e*PP		P		13 09 17.0	-1.2	
CLL				*i* sPP				13 09 20.8		
TNS	Taunus Mts	14.71	328	*e*Pn		Pn		13 09 19.2	0.0	
EIL	Elat	14.76	121	Pn		Pn		13 09 19.0	-1.0	
	comp=Z,0.5nm,0.3s,baz=330,slow=14,SNR=2.9									
EIL				Sn		Sn		13 11 54.3	-9.2	
	comp=Z,0.4nm,0.3s,baz=315,slow=18,SNR=3.3									
EIL				LR		LR		13 17 33.6		
	comp=Z,174nm,19.4s,baz=292,slow=48									
WLF	Walferdange	15.33	323	PnPn		P		13 09 35.2	+2.9	
SOC	Sochi	15.51	64	*i* P		P		13 09 35.5	+1.2	
SOC				*e*				13 12 30.2		
SOC				pmax		pmax				
	comp=Z,33nm,0.9s									
SOC				MLR		MLR				
	comp=Z,407nm,11.0s									
MEM	Membach	16.05	325	PnPn		P		13 09 44.3	+4.0	
SNF	Seneffe	16.79	322	P		Pn		13 09 46.6	+0.4	
SNF				PnPn		PnPn		13 09 59.0	+3.5	
NACGM	Naroch	17.21	12	*e*		Pn		13 09 50.0	-1.5	
NEY	Neytrino	17.60	66	*i* P		P		13 09 58.9	+1.3	
SHA1	Shidzhatmaz	17.63	65	*i* P		P		13 09 58.2	+0.2	
KIV	Kislovodsk	17.69	64	*e*P		Pn		13 09 57.8	+0.1	
KIV				pmax		pmax				
	comp=Z,42nm,1.0s									
KIV				MLR		MLR				
	comp=Z,313nm,14.0s									
KBZ	Khabaz	17.80	65	P		P		13 10 00.1	+0.5	
	comp=Z,0.2nm,0.3s,baz=292,slow=7.0,SNR=9.3									
KBZ				LR		LR		13 19 01.1		
	comp=Z,198nm,18.6s,baz=266,slow=44									
ZEI	Tsey	18.39	68	*e*P		Pn		13 10 09.9	+3.5	
ZEI				pmax		pmax				
	comp=Z,8.0nm,0.8s									
VORD	Divnogorie	18.43	40	*e*P		Pn		13 10 07.8	+1.3	
VORD				pmax		pmax				
	comp=Z,8.0nm,0.6s									
VSR	Storozhevoye	18.51	40	*e*P		Pn		13 10 07.5	0.0	
VSR				pmax		pmax				
	comp=Z,10.0nm,0.8s									
GNI	Garni	18.93	77	P		Pn		13 10 12.8	0.0	
	comp=Z,2.2nm,0.3s,baz=312,slow=3.8,SNR=8.4									
GNI	Garni	18.93	77	P		P		13 10 12.4	+0.2	
GNI				IAmb		IAmb		13 10 17.9		
	comp=Z,28nm,0.7s									
ESDC	Sonseca Array	19.02	282	P		Pn		13 10 13.1	-0.7	
	comp=Z,0.3nm,0.3s,baz=76,slow=11,SNR=10									
ESDC				LR		LR		13 17 27.7		
	comp=Z,258nm,19.5s,baz=330,slow=37									
ESDC	Sonseca Array	19.02	282	IAmb		IAmb		13 10 21.8		
	comp=Z,2.7nm,1.1s									
PAB	San Pablo	19.32	282	P		P		13 10 15.5	-0.9	
PAB				pmax		pmax				
	comp=Z,30nm,1.4s									
PAB	San Pablo	19.32	282	P		P		13 10 15.5	-0.9	
VRH	Novokhopyorsk	19.82	42	*e*P		Pn		13 10 22.9	-0.4	
VRH				pmax		pmax				
	comp=Z,30nm,1.8s									
OBN	Obninsk	20.09	28	*e*P		P		13 10 24.2	-0.4	
OBN				*e*PPP		PPP		13 10 48.0		
OBN				*e*				13 14 39.5		
OBN				pmax		pmax				
	comp=Z,11nm,1.0s									
OBN				MLR		MLR				
	comp=Z,110nm,8.0s									
OBN	Obninsk	20.09	28	LR		LR		13 18 48.7		
	comp=Z,33nm,20.8s,baz=210,slow=39									
GANJ	Ganja	20.12	75	P		Pn		13 10 27.5	+0.6	
ZKTA	Zakatala	20.34	72	P		Pn		13 10 30.0	+0.5	
VSU	Vasula	20.64	9	*ce*P		P		13 10 28.3	-2.2	
VSU				pmax		pmax				
	comp=Z,118nm,0.6s									
MNGR	Mingechevir, A	20.69	75	P		Pn		13 10 33.7	+0.1	
SEKA	Sheki	20.77	73	P		Pn		13 10 35.4	+0.8	
MOS	Moscow	20.96	28	*e*P		P		13 10 34.2	+0.2	
MOS				*e*				13 10 53.4		
MOS				*e*S		S		13 14 26.8	-0.5	
MOS				pmax		pmax				
	comp=Z,41nm,0.6s									
MDT	Midelt	21.06	263	P		P		13 10 35.2	-0.2	
	comp=Z,3.4nm,0.7s,baz=78,slow=19,SNR=1.9									
MDT				LR		LR		13 18 29.7		
	comp=Z,271nm,20.8s,baz=9.5,slow=36									
LKRN	Lenkeran, Azer	22.16	80	P		P		13 10 49.4	+2.3	
HFS	Hagfors	22.32	351	P		P		13 10 47.8	-0.8	
	comp=Z,20nm,0.7s,baz=156,slow=11,SNR=33									
HFS				LR		LR		13 21 22.8		
	comp=Z,411nm,19.6s,baz=163,slow=42									
KONO	Kongsberg	22.51	346	P		P		13 10 50.0	-0.7	
KONO				pmax		pmax				
	comp=Z,50nm,1.2s									
KONO	Kongsberg	22.51	346	P		P		13 10 50.0	-0.7	
KONO				IAmb		IAmb		13 10 53.7		
	comp=Z,50nm,1.2s									
NC602	NORSAR Array S	23.20	349	P		P		13 10 56.4	-1.4	
EKA	Eskdalemuir Ar	23.33	325	P		P		13 10 59.3	+0.1	
	comp=Z,26nm,0.9s,baz=127,slow=10,SNR=22									
ESK	Eskdalemuir	23.34	325	P		P		13 10 59.5	+0.2	
ESK				pmax		pmax				
	comp=Z,190nm,1.9s									
ESK	Eskdalemuir	23.34	325	P		P		13 10 59.5	+0.2	
NAO01	NORSAR Array S	23.40	348	P		P		13 10 59.2	-0.7	
FINES	FINESS Array B	23.49	7	P		P		13 10 59.3	-1.4	
	comp=Z,14nm,0.7s,baz=173,slow=9.1,SNR=31									
FINES				PcP		PcP		13 14 47.9	+1.8	
	comp=Z,2.1nm,0.7s,baz=158,slow=1.5,SNR=3.7									
FINES				LR		LR		13 22 55.5		
	comp=Z,449nm,20.5s,baz=191,slow=44									
FIA1	FINESS Array S	23.49	7	P		P		13 10 58.9	-1.8	
NC405	NORSAR Array S	23.53	349	P		P		13 10 59.8	-1.4	
NB201	NORSAR Array S	23.54	349	P		P		13 10 59.3	-1.9	
NB2	NORSAR Subarra	23.54	349	P		P		13 11 01.5	+0.2	
	comp=Z,14nm,1.0s,baz=161,slow=10									
NOA	NORSAR Array B	23.54	349	P		P		13 11 00.8	-0.5	
	comp=Z,7.1nm,0.7s,baz=164,slow=9.7,SNR=22									
NOA				LR		LR		13 22 15.4		
	comp=Z,324nm,18.2s,baz=165,slow=42									
NBO00	NORSAR Array S	23.60	348	P		P		13 11 01.1	-0.7	
NC303	NORSAR Array S	23.69	349	P		P		13 11 01.2	-1.5	
NC204	NORSAR Array S	23.83	348	P		P		13 11 04.2	0.0	
SUF	Sumiainen	24.75	6	P		P		13 11 11.9	-0.6	
SUF				pmax		pmax				
	comp=Z,41nm,0.8s									
KLMR	Klimovskoe	25.60	22	*e*P		P		13 11 17.4	-2.8	
KLMR				pmax		pmax				
	comp=Z,26nm,1.5s									
KLMR	Klimovskoe	25.60	22	*e*P		P		13 11 17.5	-2.8	
KLMR				AMP				13 11 30.0		
	comp=Z,26nm,1.5s									
KIRV	Kirov	27.64	33	LR		LR		13 24 27.1		
	comp=Z,229nm,18.5s,baz=244,slow=40									
PRGR	Permogore	28.13	26	*e*P		P		13 11 42.8	-0.2	
PRGR				pmax		pmax				
	comp=Z,13nm,0.8s									
AKTO	Aktyubinsk	29.20	53	P		P		13 11 52.5	-0.1	
	comp=Z,1.5nm,0.6s,baz=265,slow=11,SNR=5.7									
AKTO				LR		LR		13 24 54.4		
	comp=Z,195nm,20.0s,baz=283,slow=39									
GEYT	Alibeck	29.53	79	P		P		13 11 55.2	-0.5	
	comp=Z,2.5nm,0.5s,baz=262,slow=10.0,SNR=5.6									
GEYT	Alibeck	29.53	79	IAmb		IAmb		13 12 00.2		
	comp=Z,2.5nm,0.8s									
TOA0	Torodi Ar. Sit	30.04	219	P		P		13 11 59.9	-0.4	
TORD	Torodi Ar. Bea	30.04	219	P		P		13 11 59.4	-0.9	
	comp=Z,5.0nm,0.9s,baz=40,slow=7.6,SNR=16									
TORD				LR		LR		13 25 35.2		
	comp=Z,168nm,18.5s,baz=0.0,slow=40									
TORD	Torodi Ar. Bea	30.04	219	IAmb		IAmb		13 12 06.8		
	comp=Z,8.2nm,0.7s									
ABKAR	Akbulak array	30.26	56	P		P		13 12 00.7	-1.4	
ABKAR				IAmb		IAmb		13 13 04.5		
	comp=Z,16nm,1.9s									
APA	Apatity	30.26	10	⇓*i* P		P		13 12 13.9	+12	
APA				pmax		pmax				
	comp=Z,4.0nm,0.8s									
APA				MLR		MLR				
	comp=Z,2μm,12.0s									
ARU	Arti	31.05	42	*c i* P		P		13 12 10.3	+1.3	
ARU								13 13 09.3		
ARU				S		S		13 17 14.0	+0.2	
ARU				pmax		pmax				
	comp=Z,6.0nm,1.0s									
ARU	Arti	31.05	42	P		P		13 12 08.7	-0.2	
ARU				IAmb		IAmb		13 12 38.6		
	comp=Z,31nm,2.0s									
ARCES	ARCESS Array B	31.47	3	P		P		13 12 11.8	-0.7	
	comp=Z,7.3nm,0.9s,baz=186,slow=8.1,SNR=11									
ARCES				LR		LR		13 25 53.6		
	comp=Z,250nm,19.4s,baz=178,slow=38									
ARE0	ARCESS Array S	31.47	3	P		P		13 12 12.6	+0.1	
SVE	Sverdlovsk	32.27	42	*e*P		P		13 12 20.5	+0.9	
SVE				pmax		pmax				
	comp=Z,10.0nm,0.6s									
BRVK	Borovoye	37.07	50	P		P		13 13 01.8	+0.7	
BRVK				pmax		pmax				
	comp=Z,3.0nm,0.7s									
BRVK	Borovoye	37.07	50	P		P		13 13 01.8	+0.7	
KK31	Karatay Array	37.83	66	P		P		13 13 07.6	-0.2	
KK31				pmax		pmax				
	comp=Z,7.0nm,0.7s									
KK31	Karatay Array	37.83	66	P		P		13 13 07.6	-0.2	
KK31				IAmb		IAmb		13 13 11.6		
	comp=Z,6.7nm,0.7s									
KKAR	Karatay Array	37.83	66	P		P		13 13 07.5	-0.3	
KKAR				pmax		pmax				
	comp=Z,7.0nm,0.7s									
KKAR	Karatay Array	37.83	66	P		P		13 13 07.5	-0.3	
KKAR				IAmb		IAmb		13 13 11.6		
	comp=Z,6.7nm,0.7s									
DBIC	Dimbokro	38.90	223	P		P		13 13 16.3	-0.6	
DBIC				pmax		pmax				
	comp=Z,20nm,1.7s									
DBIC	Dimbokro	38.90	223	P		P		13 13 16.6	-0.4	
	comp=Z,3.8nm,0.7s,baz=21,slow=8.1,SNR=5.8									
DBIC				LR		LR		13 30 22.7		
	comp=Z,198nm,19.0s,baz=12,slow=38									
DBIC	Dimbokro	38.90	223	P		P		13 13 16.3	-0.6	
DBIC				IAmb		IAmb		13 13 23.7		
	comp=Z,20nm,1.6s									
TIC	Toumodi	39.00	223	*e*P		P		13 13 17.3	-0.6	
TIC	Toumodi	39.00	223	P		P		13 13 17.3	-0.6	
TIC	Toumodi	39.00	223	P		P		13 13 17.3	-0.6	
KIC	Kosan Boka	39.09	222	*e*P		P		13 13 17.7	-0.9	
	comp=Z,5.9nm,0.7s									
KIC	Kosan Boka	39.09	222	P		P		13 13 17.7	-0.9	
LIC	Lamto	39.36	222	*e*P		P		13 13 20.0	-0.8	
	comp=Z,4.0nm,0.3s									
LIC	Lamto	39.36	222	P		P		13 13 20.0	-0.8	
SPA0	Spitsbergen Ar	40.08	359	P		P		13 13 26.2	0.0	
AAK	Ala-Archa	40.80	66	P		P		13 13 32.5	-0.2	
AAK				pmax		pmax				
	comp=Z,9.0nm,1.5s									
AAK	Ala-Archa	40.80	66	P		P		13 13 32.5	-0.2	
KURK	Kurchatov	42.29	53	P		P		13 13 43.2	-1.4	
KURK				pmax		pmax				
	comp=Z,15nm,1.7s									
KURK	Kurchatov	42.29	53	P		P		13 13 43.2	-1.4	
KURK				IAmb		IAmb		13 14 35.6		
	comp=Z,15nm,1.7s									
KSH	Kashi	42.67	70	P		P		13 13 46.0	-2.0	
KSH				PP		PP		13 15 26.8	0.0	
KSH				S		S		13 20 04.8	-6.4	
KSH				SS		SS		13 23 09.5	-12	
KSH				pmax		pmax				
	comp=Z,730nm,5.4s									
KSH				LR		LR				
	comp=Z,450nm,7.6s									
KSH				LR		LR				
	comp=Z,370nm,4.8s									
KSH				LR		LR				
	comp=Z,870nm,8.3s									
KDJ	Kajisay	42.85	66	P		P		13 13 49.6	+0.1	
KDJ				pmax		pmax				
	comp=Z,4.0nm,1.0s									
KDJ	Kajisay	42.85	66	P		P		13 13 49.6	+0.1	
MAKZ	Makanchi	45.11	58	P		P		13 14 07.6	+0.1	
MAKZ				pmax		pmax				
	comp=Z,13nm,1.8s									
MAKZ	Makanchi	45.11	58	P		P		13 14 07.6	+0.1

KMI					pmax	pmax		
	comp=Z,7.0nm,1.6s							
CMAR	**Chiang Mai Arr**	**69.95**	**82**	*i* P	**P**		**13 17 03.5**	**+0.6**
CMAR					pmax	pmax		
	comp=Z,2.0nm,0.7s							
CMAR	**Chiang Mai Arr**	**69.95**	**82**	P	**P**		**13 17 02.0**	**-0.9**
	comp=Z,1.9nm,0.7s,baz=304,slow=7.4,SNR=14							
CMAR				LR	LR		13 55 40.5	
	comp=Z,63nm,19.1s,baz=322,slow=43							
BILL	**Bilibino**	**70.97**	**13**	*e*P	**P**		**13 17 09.1**	**+0.8**
BILL				*e*			13 17 25.8	
BILL				*e*PPP	PPP		13 21 30.0	
BILL				pmax	pmax			
	comp=Z,7.0nm,1.7s							
BILL				MLR	MLR			
	comp=Z,83nm,18.0s							
ENH	**Enshi**	**71.31**	**66**	P	**P**		**13 17 09.8**	**-1.2**
SEY	**Seymchan**	**72.10**	**21**	*i* P	**P**		**13 17 15.7**	**+0.5**
YKA	**Yellowknife Ar**	**73.30**	**340**	P	**P**		**13 17 22.8**	**+0.5**
	comp=Z,1.3nm,0.7s,baz=36,slow=5.3,SNR=17							
KLR	**Kul'dur**	**73.87**	**39**	*i* P	**P**		**13 17 26.6**	**+0.7**
KLR					pmax	pmax		
	comp=Z,5.0nm,0.8s							
CN2	**Changchun**	**73.89**	**47**	*e*P	**P**		**13 17 26.0**	**-0.1**
CN2					pmax	pmax		
	comp=Z,10.0nm,0.6s							
MA2	**Magadan**	**74.26**	**24**	*ce*P	**P**		**13 17 29.1**	**+1.1**
MA2					pmax	pmax		
	comp=Z,11nm,1.7s							
WHN	**Wuhan**	**74.61**	**63**	P	P		13 17 24.5	-6.1
GRNR	**Gornyy**	**75.10**	**36**	⇑*i* P	**P**		**13 17 34.3**	**+1.2**
GRNR					pmax	pmax		
	comp=Z,10.0nm,0.6s							
GRNR					MLR	MLR		
	comp=Z,100nm,11.0s							
ULM	**Lac du Bonnet**	**75.60**	**324**	P	**P**		**13 17 35.3**	**-0.6**
ULM					pmax	pmax		
	comp=Z,12nm,0.9s							
ULM	**Lac du Bonnet**	**75.60**	**324**	P	**P**		**13 17 37.2**	**+1.3**
	comp=Z,8.8nm,0.8s,baz=32,slow=6.3,SNR=17							
ULM	**Lac du Bonnet**	**75.60**	**324**	P	**P**		**13 17 35.3**	**-0.6**
ILAR	**Eielson Array**	**76.83**	**354**	P	**P**		**13 17 44.2**	**+1.5**
	comp=Z,1.6nm,0.9s,baz=360,slow=3.6,SNR=16							
ILAR				LR	LR		13 53 55.3	
	comp=Z,65nm,18.3s,baz=20,slow=38							
NJ2	**Nanjing**	**76.84**	**60**	*e*P	**P**		**13 17 43.8**	**+0.5**
NJ2					pmax	pmax		
	comp=Z,9.0nm,0.5s							
HDA	**Harding Lake**	**77.20**	**354**	P	**P**		**13 17 44.5**	**-0.3**
HDA				IAmb	IAmb		13 17 47.7	
	comp=Z,6.7nm,0.8s							
WRH	**Wood River Hil**	**77.22**	**355**	P	**P**		**13 17 44.5**	**-0.4**
WRH				IAmb	IAmb		13 17 47.5	
	comp=Z,6.8nm,0.8s							
USA0B	**Ussuriysk Arra**	**77.28**	**43**	*i* P	**P**		**13 17 45.6**	**+0.1**
USRK	**Ussuriysk Ar.**	**77.28**	**43**	P	**P**		**13 17 46.5**	**+1.0**
	comp=Z,5.1nm,0.7s,baz=304,slow=4.6,SNR=13							
USRK				LR	LR		13 54 58.8	
	comp=Z,135nm,18.4s,slow=38							
KSRS	**Korea Array**	**79.34**	**51**	P	**P**		**13 17 57.4**	**+0.3**
	comp=Z,1.7nm,0.8s,baz=303,slow=5.5,SNR=4.3							
KSRS				LR	LR		13 58 43.1	
	comp=Z,91nm,18.2s,baz=340,slow=40							
YSS	**Yuzh-Sakhalins**	**80.75**	**36**	*e*P	**P**		**13 18 06.3**	**+1.8**
YSS					pmax	pmax		
	comp=Z,30nm,0.7s							
YSS	**Yuzh-Sakhalins**	**80.75**	**36**	P	**P**		**13 18 05.3**	**+0.8**
PETK	**Petropavlovsk-**	**81.77**	**24**	LR	LR		13 59 11.8	
	comp=Z,148nm,18.6s,baz=53,slow=39							
BDFB	**Brasilia**	**83.48**	**244**	LR	LR		13 57 35.0	
	comp=Z,66nm,18.1s,baz=115,slow=37							
NEW	**Newport**	**85.96**	**333**	P	**P**		**13 18 31.7**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=63,slow=7.2,SNR=7.4							
MJAR	**Matsushiro Arr**	**85.99**	**46**	P	**P**		**13 18 32.6**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=332,slow=5.3,SNR=7.5							
MJAR	**Matsushiro Arr**	**85.99**	**46**	IAmb	IAmb		13 18 34.1	
	comp=Z,1.6nm,0.8s							
PDAR	**Pinedale Array**	**87.45**	**326**	P	**P**		**13 18 39.9**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=69,slow=4.9,SNR=6.7							
PDAR				LR	LR		13 59 59.9	
	comp=Z,98nm,18.6s,baz=39,slow=37							
BMO	**Blue Mountains**	**88.92**	**331**	P	**P**		**13 18 45.6**	**-0.2**
BMO					pmax	pmax		
	comp=Z,3.0nm,0.8s							
BMO	**Blue Mountains**	**88.92**	**331**	P	**P**		**13 18 45.6**	**-0.2**
BMO					IAmb	IAmb	13 18 48.1	
	comp=Z,3.3nm,0.8s							
SRU	**San Rafael Swe**	**90.81**	**324**	P	**P**		**13 18 55.0**	**+0.1**
SRU					pmax	pmax		
	comp=Z,5.0nm,0.8s							
SRU	**San Rafael Swe**	**90.81**	**324**	P	**P**		**13 18 55.0**	**+0.1**
NVAR	**Mina Array Bea**	**94.78**	**329**	P	**P**		**13 19 15.3**	**+2.1**
	comp=Z,0.7nm,0.8s,baz=64,slow=4.1,SNR=6.0							
TXAR	**Lajitas Array**	**94.88**	**313**	P	**P**		**13 19 15.4**	**+1.7**
	comp=Z,0.6nm,0.7s,baz=78,slow=3.5,SNR=10							
TXAR				LR	LR		14 02 51.5	
	comp=Z,28nm,19.3s,baz=0.0,slow=36							
CPUP	**Villa Florida**	**97.02**	**242**	LR	LR		14 04 06.1	
	comp=Z,124nm,19.2s,baz=37,slow=36							
LPAZ	**La Paz**	**98.79**	**256**	LR	LR		14 05 07.5	
	comp=Z,30nm,19.5s,baz=10.0,slow=36							
WRA	**Warramunga Arr**	**120.61**	**92**	PKP	**PKiKP**		**13 24 43.9**	**+0.3**
	comp=Z,0.7nm,1.0s,baz=298,slow=1.8,SNR=5.0							
ASAR	**Alice Springs**	**122.25**	**96**	PKP	**PKPdf**		**13 24 46.0**	**-0.5**
	comp=Z,1.0nm,0.8s,baz=303,slow=1.5,SNR=14							

RSPR 27 13:14:59.5, 17°.96N×67°.11W, h14km±1km, 7C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRPR	**Cabo Rojo, PR**	**0.04**	**354**	⇑*eP*	Pg	13 15 02.4	+0.3
CRPR	**Cabo Rojo, PR**	**0.04**	**354**	*eS*	Sg	13 15 04.5	+0.6
CRPR	**Cabo Rojo, PR**	**0.04**	**354**	⇑*eP*	Pg	13 15 02.4	+0.3
CRPR	**Cabo Rojo, PR**	**0.04**	**354**	*eS*	Sg	13 15 04.4	+0.5
MLPR	**Magueyes Islan**	**0.06**	**83**	⇑*eP*	Pg	13 15 01.7	-0.5
MLPR	**Magueyes Islan**	**0.06**	**83**	*eS*	Sg	13 15 04.0	-0.1
MLPR	**Magueyes Islan**	**0.06**	**83**	⇓*eP*	Pg	13 15 01.6	-0.6
MLPR	**Magueyes Islan**	**0.06**	**83**	*eS*	Sg	13 15 03.9	-0.1
LSP	**Las Mesas**	**0.21**	**5**	⇓*eP*	Pg	13 15 04.4	+0.1
LSP	**Las Mesas**	**0.21**	**5**	*eS*	Sg	13 15 08.0	+0.5
GBPR	**Guanica, Bosqu**	**0.21**	**87**	⇑*eP*	Pg	13 15 04.8	+0.4
GBPR	**Guanica, Bosqu**	**0.21**	**87**	*eS*	Sb	13 15 08.6	-0.5
GBPR	**Guanica, Bosqu**	**0.21**	**87**	⇑*eP*	Pg	13 15 04.7	+0.4
GBPR	**Guanica, Bosqu**	**0.21**	**87**	*eS*	Sb	13 15 08.5	-0.6
AOPR	**Arecibo Observ**	**0.51**	**41**	*eS*	Sg	13 15 15.9	-0.4
AOPR	**Arecibo Observ**	**0.51**	**41**	⇑*eP*	Pg	13 15 08.9	-0.7
AOPR	**Arecibo Observ**	**0.51**	**41**	*eS*	Sg	13 15 15.9	-0.5
AOPR	**Arecibo Observ**	**0.51**	**41**	⇓*eP*	Pg	13 15 08.8	-0.7

*IDC **27** 13:22:25.9±1.5, 38°.28N×20°.35E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.5/34, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=33.0km s-min=26.6km az=115.0*
*ATH **27** 13:22:26.3, 38°.18N×20°.32E, h9km±2km, ML3.4/15, Error ellipse: s-maj=2.5km s-min=1.0km az=69.0*
*NEIC **27** 13:22:27.4±2.8, 38°.16N±0°.04×20°.35E±0°.06, h10km±2km, mb4.1/2, ML3.4(THE), Error ellipse: s-maj=8.6km s-min=6.4km az=287.0*
*THE **27** 13:22:27.2, 38°.20N×20°.35E, h6km±2km, ML3.3/5, Error ellipse: s-maj=2.8km s-min=0.7km az=74.0*

ISC 27 13:22:27.5±0.9, 38°.21N±0°.02×20°.38E±0°.04, h10km±5km, n71, σ0°76/91, mb3.8/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.09**	**110**	P	**Pg**	**13 22 29.6**	**-0.3**
ARG2				S	**Sg**	**13 22 31.4**	**-0.1**
VLS	**Valsamata**	**0.17**	**101**	P	**Pg**	**13 22 30.8**	**-0.3**
VLS				S	**Sg**	**13 22 33.9**	**+0.4**
	52μm,0.2s						
VLS	**Valsamata**	**0.17**	**101**	P	**Pg**	**13 22 30.8**	**-0.3**
VLS				S	**Sg**	**13 22 33.8**	**+0.2**
VLS				AML	AML	13 22 34.0	
VLS				AML	AML	13 22 34.5	
	comp=E,59371μm,0.1s						
FSK	**Fiskardo**	**0.29**	**29**	P	**Pg**	**13 22 33.2**	**-0.1**
FSK				S	**Sg**	**13 22 38.2**	**+1.0**
	comp=E,4μm,0.2s						
FSK	**Fiskardo**	**0.29**	**29**	P	**Pg**	**13 22 33.1**	**-0.1**
FSK				S	**Sg**	**13 22 38.1**	**+1.0**
KFL	**Anninata**	**0.33**	**107**	P	**Pg**	**13 22 34.0**	**-0.2**
KFL				S	**Sg**	**13 22 39.6**	**+1.0**
	comp=E,19μm,0.4s						
KFL	**Anninata**	**0.33**	**107**	P	**Pg**	**13 22 33.9**	**-0.2**
KFL				S	**Sg**	**13 22 39.1**	**+0.5**
KFL				AML	AML	13 22 39.8	
	comp=N,39463μm,0.5s						
KFL				AML	AML	13 22 41.9	
	comp=E,38303μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.40**	**146**	P	**Pg**	**13 22 35.0**	**-0.3**
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**13 22 36.4**	**-0.2**
EVGI				S	**Sb**	**13 22 44.1**	**-0.6**
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**13 22 36.3**	**-0.2**
EVGI				S	**Sb**	**13 22 44.1**	**-0.6**
LKD2	**Lefkada island**	**0.62**	**20**	P	**Pg**	**13 22 39.1**	**-0.4**
LKD2				S	**Sg**	**13 22 47.7**	**+0.1**
	comp=E,2μm,0.6s						
LKD2	**Lefkada island**	**0.62**	**20**	P	**Pg**	**13 22 39.1**	**-0.4**
LKD2				S	**Sg**	**13 22 47.8**	**+0.1**
LKD2				AML	AML	13 22 53.9	
	comp=E,3408μm,0.5s						
LKD2				AML	AML	13 22 57.2	
	comp=N,4622μm,0.6s						
TSLK	**Tsoukalades, L**	**0.65**	**19**	P	**Pg**	**13 22 39.8**	**-0.3**
TSLK				S	**Sg**	**13 22 49.4**	**+0.8**
	comp=N,3μm,0.8s						
TSLK	**Tsoukalades, L**	**0.65**	**19**	P	**Pg**	**13 22 39.8**	**-0.3**
TSLK				S	**Sb**	**13 22 50.0**	**-0.1**
TSLK				AML	AML	13 22 56.9	
	comp=E,6713μm,0.7s						
TSLK				AML	AML	13 22 58.9	
	comp=N,5718μm,0.8s						
PDO	**Prodromos**	**0.74**	**58**	P	**Pg**	**13 22 41.3**	**-0.5**
PDO	**Prodromos**	**0.74**	**58**	P	**Pg**	**13 22 41.4**	**-0.3**
RLS	**Riolos of Patr**	**0.87**	**100**	P	**Pg**	**13 22 43.3**	**-0.9**
RLS				S	**Sb**	**13 22 57.3**	**+1.0**
RLS				AML	AML	13 23 01.4	
	comp=E,2584μm,0.4s						
RLS				AML	AML	13 23 05.1	
	comp=N,3465μm,0.6s						
PVO	**Paravola**	**0.98**	**65**	P	**Pg**	**13 22 46.1**	**-0.4**
PVO				S	**Sn**	**13 23 01.6**	**+0.2**
PVO				AML	AML	13 23 10.2	
	comp=N,6232μm,0.6s						
PVO				AML	AML	13 23 11.8	
	comp=E,4245μm,0.4s						
DRO	**Drossia**	**1.08**	**103**	P	**Pg**	**13 22 47.5**	**-0.7**
DRO				S	**Sn**	**13 23 03.5**	**-0.2**
DRO				AML	AML	13 23 11.5	
	comp=E,6368μm,0.8s						
DRO				AML	AML	13 23 14.1	
	comp=N,5088μm,0.5s						
EFP	**Efpalio**	**1.22**	**79**	P	**Pn**	**13 22 49.5**	**-1.1**
EFP				AML	AML	13 23 14.7	
	comp=E,3151μm,0.7s						
EFP				AML	AML	13 23 19.2	
	comp=N,2368μm,0.8s						
AMT	**Artemida-Makis**	**1.25**	**122**	P	**Pb**	**13 22 51.3**	**+0.1**
AMT				S	**Sn**	**13 23 08.5**	**+0.6**
AMT				AML	AML	13 23 14.9	
	comp=N,4787μm,0.6s						
AMT				AML	AML	13 23 20.8	
	comp=E,3949μm,0.7s						
LAKA	**Lakka**	**1.26**	**88**	P	**Pn**	**13 22 50.3**	**-0.9**
LAKA	**Lakka**	**1.26**	**88**	P	**Pn**	**13 22 50.2**	**-0.9**
LAKA				S	**Sn**	**13 23 08.5**	**+0.4**
LAKA				AML	AML	13 23 19.6	
	comp=N,2014μm,0.6s						
LAKA				AML	AML	13 23 20.2	
	comp=E,1856μm,1.0s						
ANX	**Ano Chora**	**1.27**	**72**	P	**Pn**	**13 22 50.6**	**-0.8**
ANX				S	**Sn**	**13 23 08.7**	**+0.2**
ANX				AML	AML	13 23 17.7	
	comp=E,4732μm,0.5s						
ANX				AML	AML	13 23 17.9	
	comp=N,5751μm,0.7s						
EVR	**Evrytania**	**1.32**	**57**	P	**Pn**	**13 22 52.4**	**+0.3**
EVR				AML	AML	13 23 19.9	
	comp=N,1859μm,1.1s						
EVR				AML	AML	13 23 20.9	
	comp=E,1268μm,1.0s						
IGT	**Igoumenitsa**	**1.32**	**358**	P	**Pn**	**13 22 52.1**	**0.0**
IGT	**Igoumenitsa**	**1.32**	**358**	P	**Pn**	**13 22 51.8**	**-0.3**
SERG	**Sergoula**	**1.33**	**81**	P	**Pn**	**13 22 51.4**	**-0.8**
TRIZ	**Trizonia**	**1.34**	**83**	P	**Pn**	**13 22 51.6**	**-0.7**
KALE	**Kalithea**	**1.39**	**82**	P	**Pn**	**13 22 52.3**	**-0.8**
KALE				AML	AML	13 23 23.3	
	comp=E,1306μm,0.5s						
KALE				AML	AML	13 23 24.4	
	comp=N,1614μm,0.5s						
KLV	**Kalavryta, Ach**	**1.40**	**96**	P	**Pn**	**13 22 53.1**	**-0.1**
KLV				S	**Sg**	**13 23 14.1**	**+1.5**
KLV				AML	AML	13 23 21.2	
	comp=N,1418μm,0.9s						
KLV				AML	AML	13 23 21.6	
	comp=E,1340μm,0.7s						
MAKR	**Makrakomi, Fth**	**1.59**	**59**	P	**Pb**	**13 22 57.5**	**+0.5**
ITM	**Ithomi**	**1.60**	**130**	P	**Pn**	**13 22 56.2**	**+0.4**
ITM	**Ithomi**	**1.60**	**130**		**Pn**	**13 22 55.6**	**-0.3**
PYL	**PYLOS**	**1.70**	**140**	P	**Pb**	**13 22 59.0**	**+0.2**
AGG	**Agios Georgios**	**1.73**	**61**	P	**Pb**	**13 22 59.6**	**+0.2**
AGG	**Agios Georgios**	**1.73**	**61**		**Pb**	**13 22 59.7**	**+0.4**
VLX	**Vlachokerasia**	**1.79**	**117**	P	**Pb**	**13 23 00.9**	**+0.5**
THL	**Klokotos Trika**	**1.86**	**43**	P	**Pb**	**13 23 01.2**	**-0.4**
AXAR	**Agios Charalam**	**1.87**	**72**	P	**Pb**	**13 23 01.5**	**-0.3**
AXAR				AML	AML	13 23 42.8	
	comp=N,3403μm,0.8s						
AXAR				AML	AML	13 23 47.4	
	comp=E,2259μm,1.1s						
KPRO	**Kipourio**	**1.90**	**23**	P	**Pb**	**13 23 02.6**	**+0.2**
PROD	**Prodromos**	**1.98**	**88**	P	**Pb**	**13 23 03.3**	**-0.4**
LTK	**Loutraki**	**2.04**	**94**	P	**Pn**	**13 23 03.1**	**+1.1**
LOUT	**Loutraki**	**2.06**	**95**	P	**Pn**	**13 23 03.2**	**+1.1**
PENT	**Pentalofos**	**2.07**	**16**	P	**Pb**	**13 23 05.2**	**-0.1**
LKR	**Lokris**	**2.10**	**77**	P	**Pb**	**13 23 04.5**	**-1.1**
VIL2	**Platees**	**2.27**	**89**	P	**Pb**	**13 23 07.0**	**-1.6**
DID	**Didima**	**2.36**	**106**	P	**Pb**	**13 23 08.7**	**-1.5**
SCTE	**Santa Cesarea**	**2.38**	**322**	P	**Pn**	**13 23 06.8**	**+0.1**
SCTE	**Santa Cesarea**	**2.38**	**322**		**Pn**	**13 23 06.8**	**+0.1**
LIT	**Litokhoron**	**2.50**	**40**		**Pb**	**13 23 11.4**	**-1.1**
MRKA	**Markates**	**2.56**	**78**	P	**Pn**	**13 23 10.7**	**+1.5**
FNA	**Florina**	**2.68**	**16**	Pn	**Pn**	**13 23 12.6**	**+1.8**
VLY	**Voula,Athens**	**2.72**	**96**	P	**Pn**	**13 23 12.4**	**+1.2**
KTHA	**Kythira Island**	**2.89**	**132**	P	**Pn**	**13 23 15.9**	**+2.2**
TIP	**Timpagrande**	**3.00**	**290**	P	**Pn**	**13 23 15.2**	**0.0**
TIP	**Timpagrande**	**3.00**	**290**		**Pn**	**13 23 15.3**	**+0.2**
TIR	**Tirane**	**3.16**	**353**	Pn	**Pn**	**13 23 18.8**	**+1.5**
ACER	**Acerenza**	**4.29**	**308**	Pn	**Pn**	**13 23 32.8**	**-0.1**
PDG	**Podgorica**	**4.30**	**349**	Pn	**Pn**	**13 23 32.9**	**-0.1**
SANT	**Santorini**	**4.44**	**113**	Pn	**Pn**	**13 23 35.8**	**+0.8**
VTS	**Vitosha**	**4.91**	**25**	Pn	**Pn**	**13 23 43.1**	**+1.6**
SGRT	**San Giovanni R**	**5.02**	**316**	Pn	**Pn**	**13 23 42.5**	**-0.5**
NRCA	**Norcia**	**7.21**	**312**	Pn	**Pn**	**13 24 14.2**	**+1.1**
GERES	**GERESS Array B**	**11.68**	**338**	Pn	**Pn**	**13 25 13.5**	**-0.8**
	comp=E,0.2nm,0.3s,baz=159,slow=14,SNR=4.0						
FINES	**FINESS Array B**	**23.53**		7 P	**P**	**13 27 38.0**	**+0.5**
	comp=E,1.4nm,0.8s,baz=187,slow=9.7,SNR=3.4						
TORD	**Torodi Ar. Bea**	**29.99**	**219**	P	**P**	**13 28 36.6**	**+0.3**
	comp=E,0.8nm,0.7s,baz=32,slow=8.5,SNR=3.7						
MK31	**Makanchi Array**	**45.38**	**58**	P	**P**	**13 30 45.0**	**-1.0**
MK31					IAmb	IAmb	13 31 17.6
	comp=Z,4.9nm,1.9s						
MKAR	**Makanchi Array**	**45.38**	**58**	P	**P**	**13 30 45.3**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=277,slow=6.7,SNR=20						
MKAR	**Makanchi Array**	**45.38**	**58**	P	**P**	**13 30 44.9**	**-1.1**
ZALV	**Zalesovo Beam**	**45.75**	**48**	P	**P**	**13 30 48.5**	**-0.3**
	comp=Z,0.8nm,0.4s,baz=277,slow=7.7,SNR=3.4						

*SJA **27** 13:39:52.5±0.8, 33°.45S×70°.16W, h125km±4km, ML2.3, MW2.8*
*GUC **27** 13:39:53.6±0.8, 33°.36S×70°.00W, h109km±5km, ML2.9*

ISC 27 13:39:53.3±1.4, 33°.45S±0°.04×70°.17W±0°.04, h125km±7km, n43, σ0°67/73, 7C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FCH	**Farellones**	**0.15**	**320**	⇑*iP*	**Pn**	**13 40 10.6**	**-0.3**
FCH				*eS*	**Sn**	**13 40 22.8**	**-1.2**
FCH				IAML		13 40 24.2	
	comp=E,370nm,0.2s						
MT03	**Universidad Ad**	**0.29**	**260**	⇑*iP*	**Pn**	**13 40 11.0**	**+0.1**
MT03				*eS*	**Sn**	**13 40 23.9**	**-0.3**
MT03				IAML		13 40 25.1	
	comp=E,988nm,0.2s						
CLCH	**Cerro Calan**	**0.31**	**279**	IAML		13 40 26.0	
	comp=N,418nm,0.4s						
LMEL	**Las Melosas**	**0.40**	**184**	⇑*iP*	**Pn**	**13 40 11.2**	**-0.3**
LMEL				*eS*	**Sn**	**13 40 25.4**	**+0.1**
MT05	**Renca**	**0.48**	**276**	⇑*iP*	**Pn**	**13 40 11.8**	**+0.1**
MT05				*eS*	**Sn**	**13 40 25.8**	**+0.1**
MT05				IAML		13 40 27.1	
	comp=E,563nm,0.3s						
PEL	**Peldehue**	**0.53**	**305**	⇑*iP*	**Pn**	**13 40 12.2**	**+0.2**
PEL				*eS*	**Sn**	**13 40 26.0**	**-0.1**
PEL				IAML		13 40 26.8	
	comp=N,1μm,0.2s						
PEL	**Peldehue**	**0.53**	**305**	*i* P	**Pn**	**13 40 12.2**	**+0.2**
PEL				*i* S	**Sn**	**13 40 26.0**	**-0.1**
PEL	**Peldehue**	**0.53**	**305**	*i* P	**Pn**	**13 40 12.2**	**+0.2**
PEL				*i* S	**Sn**	**13 40 26.0**	**-0.1**
VA03	**San Esteban**	**0.75**	**335**	⇓*iP*	**Pn**	**13 40 13.4**	**-0.3**
VA03				*eS*	**Sn**	**13 40 28.4**	**-0.7**
VA03				IAML		13 40 31.6	
	comp=E,391nm,0.1s						
ROCH	**El Roble**	**0.85**	**304**	⇑*iP*	**Pn**	**13 40 14.9**	**+0.3**
ROCH				*i* S	**Sn**	**13 40 30.6**	**-0.1**
ROCH				IAML		13 40 32.1	
	comp=N,409nm,0.2s						
ROC1	**El Roble**	**0.85**	**303**	*i* P	**Pn**	**13 40 15.0**	**+0.4**
ROC1				*i* S	**Sn**	**13 40 30.6**	**-0.2**
ROC1	**El Roble**	**0.85**	**303**	*i* P	**Pn**	**13 40 14.6**	**0.0**
ROC1				*i* S	**Sn**	**13 40 30.7**	**-0.2**
MT01	**Popeta**	**0.99**	**245**	⇑*iP*	**Pn**	**13 40 15.6**	**-0.1**
MT01				*i* S	**Sn**	**13 40 31.8**	**-0.9**
MT01				IAML		13 40 33.0	
	comp=N,167nm,0.2s						
AAGR	**Agrelo**	**1.18**	**73**	*i* P	**Pn**	**13 40 17.5**	**-0.2**
AAGR				*i* S	**Sn**	**13 40 36.0**	**-0.1**
AAGR	**Agrelo**	**1.18**	**73**	*i* P	**Pn**	**13 40 17.6**	**-0.1**
ARCO	**CERRO ARCO**	**1.20**	**60**	*i* P	**Pn**	**13 40 18.4**	**+0.5**
ARCO				*i* S	**Sn**	**13 40 36.7**	**+0.1**
ARCO				IAML		13 40 38.3	
	comp=Z,19nm,0.3s						
ARCO	**CERRO ARCO**	**1.20**	**60**	*i* P	**Pn**	**13 40 18.4**	**+0.5**
ARCO				IAML		13 40 38.2	
	comp=Z,19nm,0.3s						
ARCO				*i* S	**Sn**	**13 40 38.2**	**+1.5**
ASAL	**Salagasta**	**1.41**	**53**	*i* P	**Pn**	**13 40 20.4**	**+0.3**
ASAL				*i* S	**Sn**	**13 40 41.5**	**+1.0**
ASAL	**Salagasta**	**1.41**	**53**	*i* P	**Pn**	**13 40 20.4**	**+0.3**
ASAL				*i* S	**Sn**	**13 40 41.5**	**+1.0**
BO02	**Sierra Bellavi**	**1.44**	**200**	*e*P	**Pn**	**13 40 20.9**	**+0.5**
BO02				*eS*	**Sn**	**13 40 42.0**	**+0.9**
COIS	**El Sosneado**	**1.73**	**164**	*i* P	**Pn**	**13 40 24.6**	**+0.9**
RTLS	**Leoncito**	**1.80**	**24**	*i* P	**Pn**	**13 40 26.4**	**+1.5**
RTLS				IAML		13 40 26.4	
	comp=Z,39nm,0.2s						
RTLS				*i* S	**Sn**	**13 40 50.6**	**+1.6**
RTLS	**Leoncito**	**1.80**	**24**	*i* P	**Pn**	**13 40 26.4**	**+1.5**
RTLS				IAML		13 40 26.4	
	comp=Z,39nm,0.2s						
RTLS				*i* S	**Sn**	**13 40 50.6**	**+1.6**
RTCV	**Cerro Valdivia**	**2.10**	**42**	*i* P	**Pn**	**13 40 28.2**	**0.0**
RTCV				*i* S	**Sn**	**13 40 54.5**	**-0.4**
RTCV	**Cerro Valdivia**	**2.10**	**42**	*i* P	**Pn**	**13 40 28.2**	**0.0**
RTCV				*i* S	**Sn**	**13 40 54.5**	**-0.4**
GO05	**Huala**	**2.13**	**223**	*i* P	**Pn**	**13 40 29.0**	**+0.3**
GO05				*eS*	**Sn**	**13 40 55.7**	**-0.1**
GO05	**Huala**	**2.13**	**223**	*i* P	**Pn**	**13 40 29.0**	**+0.3**
GO05				*i* S	**Sn**	**13 40 55.5**	**-0.3**
CO02	**Combarbal**	**2.34**	**342**	*e*P	**Pn**	**13 40 31.8**	**+0.4**
CO02				*eS*	**Sn**	**13 41 00.7**	**+0.1**
CFA	**Coronel Fontan**	**2.46**	**42**	*i* P	**Pn**	**13 40 32.5**	**-0.3**
CFA				*i* S	**Sn**	**13 41 02.0**	**-1.1**
CFA	**Coronel Fontan**	**2.46**	**42**	*i* P	**Pn**	**13 40 32.5**	**-0.3**
CFA				*i* S	**Sn**	**13 41 01.7**	**-1.4**
RTLL	**Cerro Villicun**	**2.55**	**35**	*i* P	**Pn**	**13 40 34.5**	**+0.5**
RTLL				*i* S	**Sn**	**13 41 05.5**	**+0.2**
RTLL	**Cerro Villicun**	**2.55**	**35**	*i* P	**Pn**	**13 40 34.5**	**+0.5**
RTLL				*i* S	**Sn**	**13 41 05.5**	**+0.2**
ACAN	**Cantantal**	**2.77**	**66**	*i* P	**Pn**	**13 40 36.5**	**-0.3**
ACAN	**Cantantal**	**2.77**	**66**	*i* P	**Pn**	**13 40 36.6**	**-0.2**
AMOG	**MOGNA**	**2.88**	**30**	*i* P	**Pn**	**13 40 38.8**	**+0.6**
AM

KLNJ	**Kolanjah**	**5.70**	**309**	*e*Pn	**Pn**	**13 42 19.8**	**+1.1**
KLNJ				*e*		13 43 41.4	
IRAM	**Ramesheh**	**5.72**	**319**	*e*Pn	**Pn**	**13 42 19.7**	**+0.8**
ANAR	**Anarak**	**6.22**	**336**	*e*Pn	**Pn**	**13 42 26.6**	**+0.9**

MAN 27 14:02:10.5, 9.85N×123.76E, h8km, mb4.2, ML3.1, MS2.8, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.51**	**23**	*e*P	Pg	14 02 20.5	+0.1
LLP				*e*S	Sg	14 02 27.6	+0.6
MSLP	**Maasin**	**1.12**	**75**	*e*P	Pg	14 02 30.8	-1.1
MSLP				*e*S	Sn	14 02 47.6	-0.4
GUIM	**Jordan**	**1.39**	**304**	*e*P	Pn	14 02 34.5	-1.7
GUIM				*e*S	Sg	14 02 55.6	+0.4
OCLP	**Ormoc**	**1.46**	**35**	*e*P	Pn	14 02 35.7	-1.4
OCLP				*e*S	Sg	14 02 57.8	+0.4

IDC 27 14:11:19.7±2.8, 1.55N×127.41E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.3/30, mbtmp3.3/3, Error ellipse: s-maj=254.8km s-min=26.2km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.41**	**163**	P	P	14 16 19.3	-0.9
	0.4nm,0.8s,baz=342,slow=11,SNR=4.9						
ASAR	**Alice Springs**	**25.85**	**166**	P	P	14 16 53.9	+0.7
	0.6nm,0.8s,baz=342,slow=11,SNR=9.7						
MKAR	**Makanchi Array**	**59.72**	**326**	P	P	14 21 26.3	-0.1
	0.2nm,0.4s,baz=114,slow=7.0,SNR=5.0						

*THE **27** 14:16:53.4, 38.18N×20.38E, h12km, ML2.6/5, Error ellipse: s-maj=1.4km s-min=0.6km az=246.0*
*ATH **27** 14:16:53.7, 38.21N×20.43E, h14km±2km, ML2.6/4, Error ellipse: s-maj=3.2km s-min=1.3km az=245.0*
ISC 27 14:16:53.9±1.3, 38.21N±0.04×20.43E±0.07, h13km±5km, n34, σ0.941/45, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.05**	**129**	P	**Pg**	**14 16 56.3**	**-0.1**
ARG2				S	**Sg**	**14 16 58.3**	**+0.1**
VLS	**Valsamata**	**0.13**	**106**	P	**Pg**	**14 16 57.1**	**-0.2**
VLS				S	**Sg**	**14 16 59.9**	**+0.2**
	7μm,0.1s						
VLS	**Valsamata**	**0.13**	**106**	P	**Pg**	**14 16 57.1**	**-0.2**
VLS				S	**Sg**	**14 16 59.8**	**+0.1**
VLS				AML	AML	14 17 00.2	
	comp=E,22041μm,0.1s						
VLS				AML	AML	14 17 00.4	
	comp=N,9597μm,0.1s						
FSK	**Fiskardo**	**0.27**	**22**	P	**Pg**	**14 16 59.2**	**-0.3**
FSK				S	**Sg**	**14 17 03.7**	**+0.4**
FSK	**Fiskardo**	**0.27**	**22**	P	**Pg**	**14 16 59.2**	**-0.3**
KFL	**Anninata**	**0.30**	**110**	P	**Pg**	**14 16 59.9**	**-0.1**
KFL				S	**Sg**	**14 17 05.1**	**+0.9**
	comp=N,5μm,0.3s						
KFL	**Anninata**	**0.30**	**110**	P	**Pg**	**14 16 59.9**	**-0.1**
KFL				S	**Sg**	**14 17 04.2**	**+0.1**
KFL				AML	AML	14 17 05.8	
	comp=E,17114μm,0.3s						
KFL				AML	AML	14 17 07.7	
	comp=N,4306μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.38**	**152**	P	**Pg**	**14 17 01.3**	**-0.2**
EVGI	**Lefkada island**	**0.44**	**23**	P	**Pg**	**14 17 02.3**	**-0.4**
EVGI				S	**Sb**	**14 17 09.8**	**-0.3**
EVGI	**Lefkada island**	**0.44**	**23**	P	**Pg**	**14 17 02.2**	**-0.6**
MGNA	**Meganis**	**0.52**	**32**	P	**Pg**	**14 17 03.5**	**-0.8**
LKD2	**Lefkada island**	**0.60**	**17**	P	**Pg**	**14 17 05.8**	**+0.1**
LKD2	**Lefkada island**	**0.60**	**17**	P	**Pg**	**14 17 05.7**	**0.0**
LKD2				AML	AML	14 17 21.8	
	comp=N,493μm,0.2s						
LKD2				AML	AML	14 17 22.2	
	comp=E,793μm,0.5s						
TSLK	**Tsoukalades, L**	**0.64**	**16**	P	**Pg**	**14 17 06.3**	**0.0**
TSLK				S	**Sb**	**14 17 16.8**	**+1.1**
	comp=E,310nm,0.4s						
TSLK	**Tsoukalades, L**	**0.64**	**16**	P	**Pg**	**14 17 06.4**	**0.0**
TSLK				AML	AML	14 17 22.9	
	comp=E,658μm,0.3s						
TSLK				AML	AML	14 17 25.2	
	comp=N,592μm,0.3s						
PDO	**Prodromos**	**0.70**	**57**	P	**Pg**	**14 17 07.3**	**-0.3**
PDO	**Prodromos**	**0.70**	**57**	P	**Pg**	**14 17 07.1**	**-0.5**
RLS	**Riolos of Patr**	**0.83**	**100**	P	**Pg**	**14 17 09.4**	**-0.6**
PVO	**Paravola**	**0.95**	**64**	P	**Pb**	**14 17 12.0**	**-0.2**
PVO				S	**Sn**	**14 17 26.8**	**+0.5**
	comp=N,240nm,0.3s						
PVO	**Paravola**	**0.95**	**64**	P	**Pb**	**14 17 12.0**	**-0.2**
DRO	**Drossia**	**1.04**	**104**	P	**Pb**	**14 17 13.8**	**+0.1**
DRO				S	**Sn**	**14 17 28.5**	**-0.1**
	comp=N,210nm,0.4s						
DRO	**Drossia**	**1.04**	**104**	P	**Pb**	**14 17 13.8**	**+0.1**
EFP	**Efpalio**	**1.18**	**79**	P	**Pb**	**14 17 16.1**	**0.0**
EFP	**Efpalio**	**1.18**	**79**	P	**Pb**	**14 17 16.3**	**+0.3**
AMT	**Artemida-Makis**	**1.22**	**124**	P	**Pg**	**14 17 17.3**	**0.0**
LAKA	**Lakka**	**1.22**	**88**	P	**Pn**	**14 17 16.0**	**-0.6**
LAKA				S	**Sn**	**14 17 33.2**	**+0.2**
LAKA	**Lakka**	**1.22**	**88**	P	**Pn**	**14 17 15.8**	**-0.8**
ANX	**Ano Chora**	**1.23**	**72**	P	**Pn**	**14 17 16.8**	**-0.1**
ANX	**Ano Chora**	**1.23**	**72**	P	**Pg**	**14 17 17.6**	**0.0**
SERG	**Sergoula**	**1.29**	**81**	P	**Pn**	**14 17 17.2**	**-0.5**
IGT	**Igoumenitsa**	**1.32**	**357**	P	**Pb**	**14 17 18.5**	**0.0**
KALE	**Kalithea**	**1.35**	**82**	P	**Pn**	**14 17 18.7**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.55**	**58**	P	**Pg**	**14 17 24.0**	**+0.3**
AGG	**Agios Georgios**	**1.69**	**61**	P	**Pb**	**14 17 24.4**	**-0.5**

*IDC **27** 14:21:31.9±3.9, 38.52N×20.66E, h0km, mb3.8/5, mb1 3.8/7, mb1mx3.5/35, mbtmp3.8/7, ML3.4/2, Error ellipse: s-maj=82.3km s-min=22.4km az=46.0*
*ATH **27** 14:21:32.4, 38.17N×20.39E, h13km±3km, ML3.6/7, Error ellipse: s-maj=3.9km s-min=0.9km az=87.0*
*THE **27** 14:21:33.3, 38.17N×20.41E, h9km±2km, ML3.5/5, Error ellipse: s-maj=2.2km s-min=0.9km az=81.0*
ISC 27 14:21:31.8±1.0, 38.16N±0.03×20.39E±0.05, h17km±5km, n37, σ0.983/59, mb3.9/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.08**	**78**	P	**Pg**	**14 21 35.2**	**+0.1**
ARG2				S	**Sg**	**14 21 36.9**	**-0.4**
VLS	**Valsamata**	**0.16**	**85**	P	**Pb**	**14 21 36.0**	**-0.2**
VLS				S	**Sb**	**14 21 38.7**	**-0.6**
	196μm,0.2s						
VLS	**Valsamata**	**0.16**	**85**	P	**Pb**	**14 21 36.0**	**-0.2**
VLS				S	**Sb**	**14 21 38.7**	**-0.6**
VLS				AML	AML	14 21 38.8	
VLS				AML	AML	14 21 39.0	
KFL	**Anninata**	**0.32**	**100**	P	**Pb**	**14 21 38.6**	**-0.4**
KFL				S	**Sb**	**14 21 43.6**	**-0.2**
	33μm,0.3s						
KFL	**Anninata**	**0.32**	**100**	P	**Pb**	**14 21 38.6**	**-0.4**
KFL				S	**Sb**	**14 21 43.7**	**-0.2**
KFL				AML	AML	14 21 44.1	
	comp=E,61383μm,0.3s						
KFL				AML	AML	14 21 44.2	
	comp=N,71544μm,0.3s						
FSK	**Fiskardo**	**0.33**	**24**	P	**Pb**	**14 21 39.0**	**-0.1**
FSK				S	**Sb**	**14 21 44.0**	**-0.1**
	comp=N,10μm,0.6s						
FSK	**Fiskardo**	**0.33**	**24**	P	**Pb**	**14 21 39.0**	**-0.1**
FSK				S	**Sb**	**14 21 44.1**	**0.0**
FSK				AML	AML	14 21 44.5	
	comp=N,19313μm,0.4s						
FSK				AML	AML	14 21 45.4	
	comp=E,14750μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.36**	**143**	P	**Pb**	**14 21 39.4**	**-0.3**
VLMS				S	**Sb**	**14 21 45.3**	**+0.3**
VLMS				AML	AML	14 21 45.7	
VLMS				AML	AML	14 21 47.5	
	comp=N,73974μm,0.2s						
EVGI	**Lefkada island**	**0.50**	**24**	P	**Pb**	**14 21 42.2**	**0.0**
EVGI				S	**Sb**	**14 21 50.3**	**+1.1**
EVGI	**Lefkada island**	**0.50**	**24**	P	**Pb**	**14 21 42.2**	**0.0**
EVGI				S	**Sb**	**14 21 49.9**	**+0.7**
ZAK2	**Zakynthos**	**0.55**	**133**	P	**Pb**	**14 21 43.2**	**+0.3**
ZAK2				S	**Sn**	**14 21 52.6**	**-0.9**
MGNA	**Meganis**	**0.58**	**32**	P	**Pb**	**14 21 43.4**	**-0.2**
MGNA				S	**Sb**	**14 21 51.6**	**0.0**
MGNA				AML	AML	14 21 55.8	
	comp=N,3663μm,0.3s						
MGNA				AML	AML	14 21 56.0	
	comp=E,5011μm,0.4s						
LKD2	**Lefkada island**	**0.66**	**18**	P	**Pn**	**14 21 46.8**	**+0.4**
TSLK	**Tsoukalades, L**	**0.69**	**17**	P	**Pg**	**14 21 44.8**	**-0.6**
TSLK				AML	AML	14 22 02.6	
	comp=N,4100μm,0.6s						
TSLK				AML	AML	14 22 02.8	
	comp=E,5855μm,0.4s						
PDO	**Prodromos**	**0.76**	**55**	P	**Pb**	**14 21 46.6**	**+0.1**
PDO				S	**Sn**	**14 21 58.2**	**-0.6**
PDO	**Prodromos**	**0.76**	**55**	P	**Pb**	**14 21 46.7**	**+0.1**
RLS	**Riolos of Patr**	**0.85**	**97**	P	**Pn**	**14 21 49.4**	**+0.4**
RLS				S	**Sn**	**14 22 01.3**	**+0.2**
	comp=E,1μm,0.4s						
RLS	**Riolos of Patr**	**0.85**	**97**	P	**Pn**	**14 21 49.0**	**0.0**
PVO	**Paravola**	**1.00**	**63**	P	**Pn**	**14 21 51.2**	**+0.1**
PVO				S	**Sn**	**14 22 06.5**	**+1.8**
	comp=E,3μm,0.3s						
PVO	**Paravola**	**1.00**	**63**	P	**Pn**	**14 21 51.1**	**+0.1**
PVO				S	**Sn**	**14 22 05.4**	**+0.7**
PVO				AML	AML	14 22 07.7	
	comp=E,4987μm,0.3s						
PVO				AML	AML	14 22 12.9	
	comp=N,5508μm,0.4s						
DRO	**Drossia**	**1.06**	**101**	P	**Pn**	**14 21 53.1**	**+1.2**
EFP	**Efpalio**	**1.22**	**77**	P	**Pg**	**14 21 54.7**	**-0.6**
IDI	**Anoyia**	**4.61**	**127**	Pn	**Pn**	**14 22 43.8**	**+3.1**
	comp=N,0.8nm,0.3s,baz=232,slow=18,SNR=3.2						
IDI				Sn	**Sn**	**14 23 33.6**	**-0.3**
	comp=N,2.1nm,0.3s,baz=322,slow=23,SNR=5.5						
DBRK	**Dubrovnik**	**4.82**	**340**	*e*Pn	**Pn**	**14 22 43.8**	**+0.3**
DBRK				Sn	**Sn**	**14 23 38.8**	**0.0**
STON	**Ston**	**5.13**	**337**	*e*Pn	**Pn**	**14 22 47.9**	**+0.1**
STON				Sn	**Sn**	**14 23 45.3**	**-1.3**
ZIRJ	**Zirje**	**6.56**	**328**	*e*Pn	**Pn**	**14 23 07.4**	**0.0**
ZIRJ				Sn	**Sn**	**14 24 20.9**	**-0.9**
KIJV	**Kijevo**	**6.57**	**334**	*e*Pn	**Pn**	**14 23 08.2**	**+0.7**
KIJV				Sn	**Sn**	**14 24 20.7**	**-1.3**
MORI	**Morici**	**6.71**	**330**	*i* Pn	**Pn**	**14 23 10.2**	**+0.7**
MORI				Sn	**Sn**	**14 24 25.0**	**-0.4**
DUGI	**Dugi Otok**	**7.08**	**327**	*i* Pn	**Pn**	**14 23 15.9**	**+1.3**
UDBI	**Udbina**	**7.25**	**333**	*e*Pn	**Pn**	**14 23 18.7**	**+1.8**
NVLJ	**Novalja**	**7.62**	**329**	*e*Pn	**Pn**	**14 23 23.2**	**+1.2**
GERES	**GERESS Array B**	**11.72**	**338**	Pn	**Pn**	**14 24 16.8**	**-1.5**
	comp=N,0.1nm,0.3s,baz=159,slow=16,SNR=2.6						
HFS	**Hagfors**	**22.40**	**351**	P	**P**	**14 26 30.0**	**+0.9**
	comp=N,4.6nm,0.7s,baz=150,slow=12,SNR=12						
FINES	**FINESS Array B**	**23.57**	**7**	P	**P**	**14 26 40.5**	**-0.7**
	comp=N,3.0nm,0.8s,baz=180,slow=11,SNR=9.3						
NOA	**NORSAR Array B**	**23.61**	**349**	P	**P**	**14 26 42.2**	**+0.6**
	comp=N,1.3nm,0.8s,baz=161,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**45.40**	**58**	P	**P**	**14 29 49.1**	**-0.2**
	comp=N,0.5nm,0.5s,baz=278,slow=7.2,SNR=6.2						
ZALV	**Zalesovo Beam**	**45.78**	**48**	P	**P**	**14 29 51.0**	**-1.2**
	comp=N,1.4nm,0.5s,baz=279,slow=10,SNR=5.2						

*IDC **27** 14:35:36.0±2.4, 19.07S×177.46W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.8/35, mbtmp3.9/5, Error ellipse: s-maj=134.6km s-min=29.1km az=153.0*
*NEIC **27** 14:36:31.1±1.7, 20.5S±0.1×177.7W±0.1, h550km±2km, mb4.6/10, Error ellipse: s-maj=28.1km s-min=4.6km az=47.0*
ISC 27 14:36:31.0±1.0, 20.6S±0.2×177.6W±0.2, h550km, n16, σ1.946/16, mb4.0/9, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**18.21**	**193**	P	**P**	**14 40 08.8**	**-1.9**
URZ				IAmb	IAmb	14 40 19.6	
	comp=Z,92nm,1.6s						
BKZ	**Black Stump Fm**	**19.22**	**194**	P	**P**	**14 40 18.2**	**-1.7**
BKZ				IAmb	IAmb	14 40 29.6	
	comp=Z,59nm,1.5s						
QRZ	**Quartz Range**	**21.87**	**200**	P	**P**	**14 40 46.2**	**+2.4**
THZ	**Tophouse**	**22.60**	**199**	P	**P**	**14 40 52.4**	**+2.0**
BBOO	**Buckleboo**	**42.86**	**244**	P	**P**	**14 43 41.0**	**-0.3**
WR0	**Warramunga Arr**	**44.78**	**262**	P	**P**	**14 43 55.8**	**-0.6**
WR0				IAmb	IAmb	14 44 49.9	
	comp=Z,23nm,1.7s						
AS31	**Alice Springs**	**44.87**	**257**	P	**P**	**14 43 56.5**	**-0.5**
ASAR	**Alice Springs**	**44.87**	**257**	P	**P**	**14 43 56.5**	**-0.5**
	comp=Z,3.0nm,0.5s,baz=98,slow=7.5,SNR=67						
WB0	**Warramunga Arr**	**44.95**	**262**	P	**P**	**14 43 56.8**	**-0.9**
WB0				IAmb	IAmb	14 45 37.0	
	comp=Z,17nm,1.6s						
WB2	**Warramunga Arr**	**44.96**	**262**	P	**P**	**14 43 56.6**	**-1.1**
WB2				IAmb	IAmb	14 44 50.3	
	comp=Z,16nm,1.4s						
WRA	**Warramunga Arr**	**44.97**	**262**	P	**P**	**14 43 56.6**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=98,slow=7.6,SNR=14						
FITZ	**Fitzroy Crossi**	**53.40**	**262**	P	**P**	**14 44 60.0**	**0.0**
FITZ				IAmb	IAmb	14 46 43.5	
	comp=Z,18nm,1.4s						
TXAR	**Lajitas Array**	**86.77**	**57**	P	**P**	**14 48 18.2**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=218,slow=5.7,SNR=3.7						
ILAR	**Eielson Array**	**88.30**	**13**	P	**P**	**14 48 22.4**	**-1.4**
	comp=Z,0.4nm,0.9s,baz=201,slow=4.8,SNR=4.4						
ILAR	**Eielson Array**	**88.30**	**13**	P	**P**	**14 48 22.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**90.50**	**289**	P	**P**	**14 48 36.9**	**+1.9**
	comp=Z,0.7nm,0.9s,baz=102,slow=3.0,SNR=4.2						

IDC 27 14:39:24.4±1.7, 2.50N×129.06E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/35, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=102.8km s-min=22.2km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.01**	**146**	Pn	Pn	14 40 27.0	-0.1
	3.8nm,0.3s,baz=330,slow=17,SNR=11						
SIJI				Sn	Sn	14 41 10.7	-4.2
	1.6nm,0.3s,baz=208,slow=22,SNR=9.2						
WRA	**Warramunga Arr**	**22.89**	**167**	P	P	14 44 30.4	+0.5
	0.3nm,0.5s,baz=345,slow=11,SNR=3.4						
ASAR	**Alice Springs**	**26.43**	**170**	P	P	14 45 02.4	-0.7
	0.5nm,0.6s,baz=356,slow=8.1,SNR=4.7						
MKAR	**Makanchi Array**	**59.89**	**325**	P	P	14 49 32.3	+0.1
	0.7nm,0.5s,baz=115,slow=7.9,SNR=16						

*THE **27** 15:00:44.7, 38.19N×20.33E, h7km±1km, ML3.2/11, Error ellipse: s-maj=1.4km s-min=0.3km az=89.0*
*ATH **27** 15:00:44.0, 38.20N×20.36E, h10km±2km, ML3.0/15, Error ellipse: s-maj=2.6km s-min=1.0km az=73.0*
*IDC **27** 15:00:50.2±25.0, 38.99N×20.97E, h0km, mb3.6/2, mb1 3.6/3, mb1mx3.3/27, mbtmp3.5/3, ML3.5/1, Error ellipse: s-maj=504.7km s-min=32.3km az=32.0*
ISC 27 15:00:45.1±1.1, 38.21N±0.03×20.36E±0.04, h8km±6km, n59, σ0.972/86, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.11**	**107**	P	**Pg**	**15 00 47.5**	**0.0**
ARG2				S	**Sg**	**15 00 49.3**	**+0.1**
VLS	**Valsamata**	**0.19**	**100**	P	**Pg**	**15 00 48.6**	**-0.3**
VLS				S	**Sg**	**15 00 51.5**	**0.0**
	24μm,0.2s						
VLS	**Valsamata**	**0.19**	**100**	P	**Pg**	**15 00 48.6**	**-0.3**
VLS				S	**Sg**	**15 00 51.4**	**0.0**
VLS				AML	AML	15 00 51.7	
	comp=N,62157μm,0.3s						
VLS				AML	AML	15 00 52.0	
	comp=E,34284μm,0.1s						
FSK	**Fiskardo**	**0.30**	**33**	P	**Pg**	**15 00 51.0**	**0.0**
FSK				S	**Sg**	**15 00 56.0**	**+1.1**
	comp=E,5μm,0.1s						
FSK	**Fiskardo**	**0.30**	**33**	P	**Pg**	**15 00 50.8**	**-0.1**
FSK				S	**Sg**	**15 00 55.8**	**+0.9**
KFL	**Anninata**	**0.35**	**106**	P	**Pg**	**15 00 51.6**	**-0.4**
KFL				S	**Sg**	**15 00 57.5**	**+0.8**
	comp=E,8μm,0.3s						
KFL	**Anninata**	**0.35**	**106**	P	**Pg**	**15 00 51.6**	**-0.4**
KFL				S	**Sg**	**15 00 57.1**	**+0.4**
KFL				AML	AML	15 00 57.8	
	comp=E,14655μm,0.4s						
KFL				AML	AML	15 00 59.1	
	comp=N,16213μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.41**	**144**	P	**Pg**	**15 00 53.0**	**-0.1**
VLMS				S	**Sg**	**15 00 59.4**	**+0.9**
VLMS				AML	AML	15 01 01.1	
	comp=E,9228μm,0.2s						
VLMS				AML	AML	15 01 02.4	
	comp=N,11895μm,0.4s						
EVGI	**Lefkada island**	**0.47**	**30**	P	**Pg**	**15 00 54.1**	**-0.2**
EVGI				S	**Sb**	**15 01 01.8**	**-1.1**
EVGI	**Lefkada island**	**0.47**	**30**	P	**Pg**	**15 00 54.1**	**-0.2**
EVGI				S	**Sg**	**15 01 01.0**	**+0.5**
LKD2	**Lefkada island**	**0.62**	**22**	P	**Pg**	**15 00 56.7**	**-0.5**
LKD2				S	**Sg**	**15 01 06.0**	**+0.7**
	comp=N,982nm,0.5s						
LKD2	**Lefkada island**	**0.62**	**22**	P	**Pg**	**15 00 56.5**	**-0.6**
LKD2				S	**Sg**	**15 01 04.8**	**-0.5**
LKD2				AML	AML	15 01 11.1	
	comp=N,1913μm,0.4s						
LKD2				AML	AML	15 01 12.8	
	comp=E,1788μm,0.5s						
TSLK	**Tsoukalades, L**	**0.66**	**21**	P	**Pg**	**15 00 57.6**	**-0.2**
TSLK				S	**Sb**	**15 01 08.1**	**-0.1**
	comp=E,1μm,0.8s						
TSLK	**Tsoukalades, L**	**0.66**	**21**	P	**Pg**	**15 00 57.4**	**-0.4**
TSLK				S	**Sg**	**15 01 05.8**	**-0.6**
TSLK				AML	AML	15 01 14.5	
	comp=E,3081μm,0.6s						
TSLK				AML	AML	15 01 14.7	
	comp=N,2666μm,0.9s						
PDO	**Prodromos**	**0.76**	**59**	P	**Pg**	**15 00 59.0**	**-0.6**
PDO				S	**Sb**	**15 01 10.7**	**-0.3**
PDO	**Prodromos**	**0.76**	**59**	P	**Pg**	**15 00 59.2**	**-0.4**
RLS	**Riolos of Patr**	**0.89**	**99**	P	**Pg**	**15 01 01.9**	**-0.2**
RLS	**Riolos of Patr**	**0.89**	**99**	P	**Pg**	**15 01 01.9**	**-0.2**
RLS				AML	AML	15 01 21.6	
	comp=N,1140μm,0.6s						
RLS				AML	AML	15 01 23.1	
	comp=E,1021μm,0.5s						
PVO	**Paravola**	**1.00**	**66**	P	**Pg**	**15 01 04.0**	**-0.4**
PVO				S	**Sb**	**15 01 19.0**	**+0.8**
	comp=E,1μm,0.7s						
PVO	**Paravola**	**1.00**	**66**	P	**Pg**	**15 01 03.5**	**-0.9**
PVO				S	**Sb**	**15 01 19.0**	**+0.8**
PVO				AML	AML	15 01 26.6	
	comp=E,1709μm,0.4s						
PVO				AML	AML	15 01 28.0	
	comp=N,2204μm,0.7s						
DRO	**Drossia**	**1.10**	**103**	P	**Pg**	**15 01 05.3**	**-0.9**
DRO				S	**Sn**	**15 01 22.2**	**0.0**
	comp=N,1μm,0.7s						
DRO	**Drossia**	**1.10**	**103**	P	**Pg**	**15 01 04.9**	**-1.3**
DRO				S	**Sb**	**15 01 21.0**	**+0.2**
DRO				AML	AML	15 01 32.0	
	comp=N,2213μm,0.7s						
DRO				AML	AML	15 01 35.2	
	comp=E,2535μm,1.1s						
EFP	**Efpalio**	**1.24**	**79**	P	**Pn**	**15 01 07.7**	**-1.0**
EFP				S	**Sn**	**15 01 26.4**	**+0.8**
	comp=E,790nm,0.7s						
EFP	**Efpalio**	**1.24**	**79**	P	**Pn**	**15 01 07.5**	**-1.2**
AMT	**Artemida-Makis**	**1.27**	**122**	P	**Pn**	**15 01 08.2**	**-0.9**
AMT				S	**Sn**	**15 01 27.0**	**+0.6**
	comp=E,918nm,0.8s						
AMT	**Artemida-Makis**	**1.27**	**122**	P	**Pn**	**15 01 08.3**	**-0.8**
LAKA	**Lakka**	**1.28**	**88**	P	**Pn**	**15 01 08.2**	**-1.1**
LAKA				S	**Sn**	**15 01 27.3**	**+0.6**
LAKA	**Lakka**	**1.28**	**88**	P	**Pn**	**15 01 08.0**	**-1.3**
LAKA				S	**Sn**	**15 01 27.7**	**+1.0**
LAKA				AML	AML	15 01 37.4	
	comp=N,1047μm,0.7s						
LAKA				AML	AML	15 01 38.0	
	comp=E,694μm,0.7s						
ANX	**Ano Chora**	**1.29**	**72**	P	**Pn**	**15 01 09.1**	**-0.4**
ANX				S	**Sn**	**15 01 27.8**	**+0.8**
	comp=E,1μm,0.7s						
ANX	**Ano Chora**	**1.29**	**72**	P	**Pn**	**15 01 09.4**	**-0.2**
ANX				AML	AML	15 01 35.4	
	comp=E,1899μm,0.6s						
ANX				AML	AML	15 01 36.5	
	comp=N,2346μm,0.8s						
IGT	**Igoumenitsa**	**1.32**	**359**	P	**Pb**	**15 01 10.1**	**-0.1**
IGT	**Igoumenitsa**	**1.32**	**359**	P	**Pn**	**15 01 09.9**	**0.0**
EVR	**Evrytania**	**1.34**	**58**	P	**Pn**	**15 01 10.0**	**-0.2**
EVR				AML	AML	15 01 39.7	
	comp=E,609μm,0.7s						
EVR				AML	AML	15 01 40.2	
	comp=N,684μm,0.7s						
SERG	**Sergoula**	**1.35**	**81**	P	**Pn**	**15 01 09.9**	**-0.4**
SERG	**Sergoula**	**1.35**	**81**	P	**Pn**	**15 01 09.6**	**-0.7**
SERG				AML	AML	15 01 39.0	
	comp=E,840μm,0.6s						
SERG				AML	AML	15 01 43.1	
	comp=N,802μm,0.6s						
TRIZ	**Trizonia**	**1.36**	**83**	P	**Pn**	**15 01 09.6**	**-0.8**
TRIZ				S	**Sb**	**15 01 28.4**	**+0.1**
	comp=N,620nm,0.6s						
TRIZ	**Trizonia**	**1.36**	**83**	P	**Pn**	**15 01 09.6**	**-0.8**
KALE	**Kalithea**	**1.41**	**82**	P	**Pn**	**15 01 10.2**	**-1.0**
KALE	**Kalithea**	**1.41**	**82**	P	**Pn**	**15 01 10.4**	**-0.9**
KALE				AML	AML	15 01 40.0	
	comp=N,762μm,0.7s						
KALE				AML	AML	15 01 41.5	
	comp=E,508μm,0.7s						
KLV	**Kalavryta, Ach**	**1.42**	**96**	P	**Pn**	**15 01 11.1**	**-0.3**
KLV				S	**Sg**	**15 01 31.3**	**+0.4**
KLV	**Kalavryta, Ach**	**1.42**	**96**	P	**Pn**	**15 01 10.9**	**-0.4**
KLV				S	**Sg**	**15 01 32.8**	**+1.9**
KLV				AML	AML	15 01 39.4	
	comp=E,816μm,0.8s						
KLV				AML	AML	15 01 41.5	
	comp=N,626μm,1.0s						
MAKR	**Makrakomi, Fth**	**1.60**	**59**	P	**Pb**	**15 01 15.3**	**+0.3**
ITM	**Ithomi**	**1.61**	**129**	P	**Pb**	**15 01 14.6**	**-0.6**
AGG	**Agios Georgios**	**1.75**	**62**	P	**Pb**	**15 01 17.0**	**-0.4**
AGG				AML	AML	15 01 48.6	
	comp=E,482μm,0.8s						
AGG				AML	AML	15 01 51.6	
	comp=N,545μm,0.8

FSK	**Fiskardo**	**0.33**	**25**	P	**Pg**	**15 05 45.6**	**0.0**
FSK				S	**Sg**	**15 05 50.2**	**+0.2**
	comp=N,3μm,0.2s						
FSK	**Fiskardo**	**0.33**	**25**	P	**Pg**	**15 05 45.4**	**-0.2**
FSK				S	**Sg**	**15 05 49.8**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.36**	**142**	P	**Pg**	**15 05 45.9**	**-0.1**
VLMS				S	**Sg**	**15 05 51.8**	**+1.1**
VLMS				AML	AML	15 05 53.0	
	comp=N,22571μm,0.6s						
VLMS				AML	AML	15 05 53.0	
	comp=E,21900μm,0.3s						
EVGI	**Lefkada island**	**0.51**	**25**	P	**Pg**	**15 05 48.7**	**-0.2**
EVGI				S	**Sg**	**15 05 56.6**	**+1.0**
EVGI	**Lefkada island**	**0.51**	**25**	P	**Pg**	**15 05 48.6**	**-0.3**
EVGI				S	**Sg**	**15 05 55.8**	**+0.2**
LKD2	**Lefkada island**	**0.67**	**19**	P	**Pg**	**15 05 52.0**	**+0.1**
LKD2				AML	AML	15 06 11.1	
	comp=E,867μm,0.5s						
LKD2				AML	AML	15 06 14.8	
	comp=N,1152μm,0.7s						
PDO	**Prodromos**	**0.77**	**55**	P	**Pg**	**15 05 54.0**	**+0.2**
RLS	**Riolos of Patr**	**0.86**	**96**	P	**Pg**	**15 05 54.8**	**-0.8**
RLS				S	**Sb**	**15 06 08.7**	**+0.7**
	comp=N,765nm,0.4s						
RLS	**Riolos of Patr**	**0.86**	**96**	P	**Pg**	**15 05 54.8**	**-0.8**
RLS				S	**Sb**	**15 06 08.0**	**+0.1**
RLS				AML	AML	15 06 11.4	
	comp=E,1642μm,0.4s						
RLS				AML	AML	15 06 14.9	
	comp=N,1388μm,0.7s						
PVO	**Paravola**	**1.01**	**63**	P	**Pg**	**15 05 58.3**	**-0.1**
PVO				S	**Sn**	**15 06 13.6**	**-0.4**
	comp=N,2μm,0.4s						
PVO	**Paravola**	**1.01**	**63**	P	**Pg**	**15 05 58.2**	**-0.2**
DRO	**Drossia**	**1.07**	**101**	P	**Pg**	**15 05 59.0**	**-0.6**
DRO				S	**Sb**	**15 06 14.7**	**+0.7**
	comp=N,2μm,0.6s						
DRO	**Drossia**	**1.07**	**101**	P	**Pg**	**15 05 58.9**	**-0.6**
DRO				S	**Sn**	**15 06 15.1**	**-0.4**
DRO				AML	AML	15 06 25.1	
	comp=N,3051μm,0.5s						
DRO				AML	AML	15 06 25.7	
	comp=E,3488μm,0.6s						
AMT	**Artemida-Makis**	**1.22**	**120**	P	**Pg**	**15 06 02.5**	**0.0**
AMT				S	**Sn**	**15 06 20.2**	**+0.9**
	comp=E,902nm,0.6s						
AMT	**Artemida-Makis**	**1.22**	**120**	P	**Pn**	**15 06 00.8**	**-1.7**
AMT				AML	AML	15 06 30.7	
	comp=N,1754μm,0.5s						
AMT				AML	AML	15 06 31.7	
	comp=E,1740μm,0.6s						
EFP	**Efpalio**	**1.23**	**77**	P	**Pg**	**15 06 03.0**	**+0.4**
EFP				S	**Sn**	**15 06 20.3**	**+0.9**
	comp=E,795nm,0.6s						
EFP	**Efpalio**	**1.23**	**77**	P	**Pn**	**15 06 01.5**	**-1.1**
LAKA	**Lakka**	**1.26**	**86**	P	**Pn**	**15 06 01.9**	**-1.1**
LAKA				S	**Sn**	**15 06 20.9**	**+0.7**
LAKA	**Lakka**	**1.26**	**86**	P	**Pn**	**15 06 01.9**	**-1.1**
ANX	**Ano Chora**	**1.28**	**70**	P	**Pn**	**15 06 03.0**	**-0.5**
ANX				S	**Sn**	**15 06 21.9**	**+1.0**
	comp=E,942nm,0.5s						
ANX	**Ano Chora**	**1.28**	**70**	P	**Pn**	**15 06 02.4**	**-1.1**
ANX				AML	AML	15 06 27.3	
	comp=N,2053μm,0.6s						
ANX				AML	AML	15 06 28.3	
	comp=E,1814μm,0.5s						
SERG	**Sergoula**	**1.34**	**78**	P	**Pb**	**15 06 04.4**	**-0.1**
TRIZ	**Trizonia**	**1.34**	**81**	P	**Pn**	**15 06 03.3**	**-0.9**
TRIZ				S	**Sg**	**15 06 23.8**	**+1.5**
	comp=E,582nm,0.5s						
TRIZ	**Trizonia**	**1.34**	**81**	P	**Pn**	**15 06 03.0**	**-1.2**
EVR	**Evrytania**	**1.35**	**55**	P	**Pn**	**15 06 04.3**	**-0.1**
EVR				AML	AML	15 06 33.4	
	comp=E,404μm,0.7s						
EVR				AML	AML	15 06 34.4	
	comp=N,677μm,0.6s						
IGT	**Igoumenitsa**	**1.37**	**358**	P	**Pn**	**15 06 04.0**	**-0.7**
KLV	**Kalavryta, Ach**	**1.40**	**94**	P	**Pn**	**15 06 04.6**	**-0.4**
KLV				S	**Sg**	**15 06 24.4**	**+0.4**
KLV	**Kalavryta, Ach**	**1.40**	**94**	P	**Pn**	**15 06 04.5**	**-0.4**
KLV				S	**Sg**	**15 06 25.7**	**+1.7**
KLV				AML	AML	15 06 42.2	
	comp=N,486μm,0.6s						
KLV				AML	AML	15 06 42.5	
	comp=E,449μm,0.8s						
PYL	**PYLOS**	**1.66**	**139**	P	**Pn**	**15 06 08.7**	**+0.1**
AGG	**Agios Georgios**	**1.75**	**60**	P	**Pb**	**15 06 11.5**	**0.0**
VLX	**Vlachokerasia**	**1.77**	**116**	P	**Pn**	**15 06 10.6**	**+0.6**
THL	**Klokotos Trika**	**1.90**	**42**	P	**Pb**	**15 06 13.6**	**-0.3**
PROD	**Prodromos**	**1.98**	**86**	P	**Pb**	**15 06 14.5**	**-1.0**
LTK	**Loutraki**	**2.04**	**93**	P	**Pn**	**15 06 14.2**	**+0.4**
DID	**Didima**	**2.35**	**105**	P	**Pb**	**15 06 19.9**	**-1.8**
DID				AML	AML	15 07 05.0	
	comp=N,298μm,0.5s						
DID				AML	AML	15 07 09.0	
	comp=E,392μm,1.1s						
SCTE	**Santa Cesarea**	**2.42**	**323**	P	**Pn**	**15 06 18.7**	**-0.4**
TIP	**Timpagrande**	**3.02**	**291**	P	**Pn**	**15 06 27.3**	**0.0**

*MOS **27** 15:09:40.1±1.7,43.79N×43.11E,h10km,mb3.9/1,Error ellipse: s-maj=7.0km s-min=4.3km az=124.6*
MOS Felt (II-III) at Pyatigorsk.
*NORS **27** 15:09:40.7±0.0,43.68N×43.07E,h6km,MPVA4.7,FELT I=II-III MSK at Pyatigorsk*
ISC 27 15:09:40.7±0.8,**43.71N**±0.02×**43.06E**±0.02,**h15**km±5km,
n78,σ1°**22**/135,**6C-11D**,**Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBZ	**Khabaz**	**0.12**	**277**	*i*	PG	**Pg**	**15 09 44.3**	**+0.2**
KBZ	**Khabaz**	**0.12**	**277**	*i*	Pg	**Pg**	**15 09 44.3**	**+0.2**
KBZ				*i*	Sg	**Sg**	**15 09 46.9**	**+0.5**
KBTC	**Kuba-Taba**	**0.28**	**68**		PG	**Pg**	**15 09 46.2**	**-0.4**
KBTC				*e*	S	**Sg**	**15 09 50.8**	**+0.1**
KBTC	**Kuba-Taba**	**0.28**	**68**	*i*	Pg	**Pg**	**15 09 46.2**	**-0.4**
KBTC				*e*	Sg	**Sg**	**15 09 50.8**	**+0.1**
SHA1	**Shidzhatmaz**	**0.29**	**275**		PG	**Pg**	**15 09 47.2**	**+0.2**
SHA1				*e*	S	**Sg**	**15 09 51.7**	**+0.4**
SHA1	**Shidzhatmaz**	**0.29**	**275**	*i*	Pg	**Pg**	**15 09 47.1**	**+0.1**
SHA1				*i*	Sg	**Sg**	**15 09 51.5**	**+0.2**
BEYR	**Belyy Ugol+**	**0.34**	**330**	*i*	PG	**Pg**	**15 09 47.4**	**-0.4**
BEYR	**Belyy Ugol+**	**0.34**	**330**	*i*	Pg	**Pg**	**15 09 47.4**	**-0.4**
PYA1	**Pyatigorsk**	**0.35**	**5**	*e*	PG	**Pg**	**15 09 47.1**	**-0.8**
PYA1				*e*	S	**Sg**	**15 09 51.8**	**-1.0**
PYA1	**Pyatigorsk**	**0.35**	**5**	*e*	Pg	**Pg**	**15 09 47.1**	**-0.8**
PYA1				*e*	Sg	**Sg**	**15 09 51.8**	**-1.0**
KIV0	**Kislovodsk Arr**	**0.36**	**313**	*i*	Pg	**Pg**	**15 09 47.6**	**-0.4**
KIV0				*i*	Sg	**Sg**	**15 09 53.3**	**+0.2**
KIV	**Kislovodsk**	**0.36**	**312**		PG	**Pg**	**15 09 47.7**	**-0.4**
KIV				*i*	S	**Sg**	**15 09 53.3**	**+0.1**
KIV	**Kislovodsk**	**0.36**	**312**	*i*	Pg	**Pg**	**15 09 47.8**	**-0.4**
NEY	**Neytrino**	**0.53**	**208**		PG	**Pb**	**15 09 51.4**	**-0.3**
NEY				*e*	S	**Sb**	**15 09 58.5**	**-0.6**
NEY	**Neytrino**	**0.53**	**208**	*i*	Pg	**Pb**	**15 09 51.3**	**-0.3**
NEY				*i*	Sg	**Sb**	**15 09 58.2**	**-0.9**
LSNR	**Lesken**	**0.71**	**128**	*e*	PG	**Pb**	**15 09 54.5**	**-0.3**
LSNR				*e*	S	**Sb**	**15 10 05.0**	**+0.7**
LSNR	**Lesken**	**0.71**	**128**	*e*	Pg	**Pg**	**15 09 54.4**	**-0.1**
LSNR				*e*	Sg	**Sb**	**15 10 04.7**	**+0.3**
STDR	**Stavd-Durt**	**0.81**	**115**		PG	**Pb**	**15 09 57.1**	**+0.7**
STDR				*e*	S	**Sn**	**15 10 09.6**	**+0.3**
STDR	**Stavd-Durt**	**0.81**	**115**	*i*	Pg	**Pb**	**15 09 56.9**	**+0.4**
STDR				*e*	Sg	**Sb**	**15 10 07.4**	**+0.3**
PRTR	**Priterechnaya**	**0.89**	**87**	*e*	PG	**Pg**	**15 09 58.0**	**+0.1**
PRTR				*e*	S	**Sb**	**15 10 11.6**	**+2.1**
PRTR	**Priterechnaya**	**0.89**	**87**	*e*	Pg	**Pg**	**15 09 58.0**	**+0.1**
PRTR				*e*	Sg	**Sb**	**15 10 11.1**	**+1.7**
DIGR	**Digorskoe uzhe**	**0.90**	**155**	*e*	PG	**Pg**	**15 09 57.1**	**-1.1**
DIGR				*e*	S	**Sg**	**15 10 08.6**	**-1.4**
DIGR	**Digorskoe uzhe**	**0.90**	**155**	*i*	Pg	**Pg**	**15 09 57.1**	**-1.1**
KORR	**Kora**	**0.97**	**130**	*e*	PG	**Pb**	**15 09 59.1**	**-0.1**
KORR				*e*	S	**Sb**	**15 10 13.0**	**+1.2**
KORR	**Kora**	**0.97**	**130**	*i*	Pg	**Pb**	**15 09 59.1**	**-0.1**
KORR				*e*	Sg	**Sb**	**15 10 12.7**	**+0.9**
ARNR	**Ardon**	**1.04**	**120**		PG	**Pb**	**15 10 01.0**	**+0.6**
ARNR				*e*	S	**Sn**	**15 10 16.0**	**+1.0**
ARNR	**Ardon**	**1.04**	**120**	*i*	Pg	**Pb**	**15 10 01.0**	**+0.6**
ARNR				*e*	Sg	**Sn**	**15 10 15.8**	**+0.8**
ZEI	**Tsey**	**1.11**	**146**	*e*	PG	**Pg**	**15 10 01.0**	**-1.2**
ZEI				*e*	S	**Sg**	**15 10 15.4**	**-1.3**
ZEI	**Tsey**	**1.11**	**146**	*e*	Pg	**Pg**	**15 10 00.8**	**-1.4**
BTKR	**Batakoyurt**	**1.13**	**107**		PG	**Pb**	**15 10 02.5**	**+0.5**
BTKR				*e*	S	**Sn**	**15 10 20.2**	**+2.9**
BTKR	**Batakoyurt**	**1.13**	**107**	*e*	Pg	**Pb**	**15 10 02.5**	**+0.5**
BTKR				*e*	Sg	**Sn**	**15 10 19.5**	**+2.2**
ONI	**Oni**	**1.16**	**165**	P		**Pb**	**15 10 02.5**	**+0.1**
ONI				S		**Sb**	**15 10 17.8**	**+0.5**
ONI	**Oni**	**1.16**	**165**	*i*	PG	**Pb**	**15 10 02.4**	**-0.1**
ONI				*e*	S	**Sb**	**15 10 17.8**	**+0.5**
ONI	**Oni**	**1.16**	**165**	*i*	Pg	**Pb**	**15 10 02.4**	**-0.1**
ONI				*e*	Sg	**Sb**	**15 10 17.8**	**+0.5**
NVNR	**Nevinnomyssk**	**1.20**	**319**		PG	**Pg**	**15 10 03.0**	**-0.7**
NVNR				*i*	S	**Sg**	**15 10 18.9**	**-0.4**
TRKR	**Terskaya**	**1.22**	**89**	*e*	PG	**Pg**	**15 10 03.6**	**-0.5**
TRKR				*e*	S	**Sn**	**15 10 20.9**	**+1.6**
TRKR	**Terskaya**	**1.22**	**89**	*i*	Pg	**Pg**	**15 10 03.5**	**-0.6**
TRKR				*e*	Sg	**Sn**	**15 10 20.6**	**+1.4**
LACR	**Lac**	**1.27**	**134**		PG	**Pg**	**15 10 03.9**	**-1.2**
LACR				*e*	S	**Sg**	**15 10 20.4**	**-1.2**
LACR	**Lac**	**1.27**	**134**	*e*	Pg	**Pg**	**15 10 03.6**	**-1.5**
ARXR	**Arkhyz**	**1.30**	**264**		PG	**Pn**	**15 10 04.9**	**+0.4**
ARXR				*i*	S	**Sg**	**15 10 22.1**	**-0.7**
ARXR	**Arkhyz**	**1.30**	**264**	*i*	Pg	**Pn**	**15 10 04.9**	**+0.4**
ARXR				*i*	Sg	**Sg**	**15 10 22.1**	**-0.7**
GOF	**Gofitskoye**	**1.34**	**360**		PG	**Pn**	**15 10 05.3**	**+0.4**
GOF				*e*	S	**Sb**	**15 10 24.6**	**+2.0**
GOF				pmax	pmax			
	comp=Z,214nm,0.6s							
GOF				smax	smax			
	comp=N,889nm,0.5s							
GOF				smax	smax			
	comp=E,993nm,0.6s							
GOF	**Gofitskoye**	**1.34**	**360**	*e*	Pg	**Pn**	**15 10 05.3**	**+0.4**
GOF				*e*	Sg	**Sb**	**15 10 24.4**	**+1.8**
VLKR	**Vladikavkaz**	**1.36**	**119**	*e*	PG	**Pn**	**15 10 05.9**	**+0.8**
VLKR				*e*	S	**Sn**	**15 10 26.4**	**+3.5**
VLKR	**Vladikavkaz**	**1.36**	**119**	*e*	Pg	**Pn**	**15 10 05.6**	**+0.5**
VLKR				*e*	Sg	**Sn**	**15 10 24.9**	**+2.1**
TKB	**Tkibuli**	**1.36**	**182**	P		**Pg**	**15 10 07.4**	**+0.5**
TKB				S		**Sn**	**15 10 26.1**	**+3.1**
TKB	**Tkibuli**	**1.36**	**182**	PG		**Pg**	**15 10 07.5**	**+0.5**
TKB	**Tkibuli**	**1.36**	**182**	*e*	Pg	**Pg**	**15 10 07.4**	**+0.5**
TKB				*e*	Sg	**Sn**	**15 10 26.1**	**+3.1**
KMGR	**Komgaron**	**1.47**	**116**	*e*	PG	**Pb**	**15 10 07.9**	**+0.1**
KMGR				*e*	S	**Sg**	**15 10 29.6**	**+1.4**
KMGR	**Komgaron**	**1.47**	**116**	*e*	Pg	**Pn**	**15 10 07.9**	**+0.1**
GUDG	**Gudauri**	**1.62**	**140**	P		**Pn**	**15 10 08.7**	**-0.3**
GUDG				S		**Sn**	**15 10 30.2**	**+0.4**
GUDG	**Gudauri**	**1.62**	**140**	*e*	PN	**Pn**	**15 10 08.7**	**-0.3**
GUDG				*e*	S	**Sn**	**15 10 30.6**	**+0.9**
GUDG	**Gudauri**	**1.62**	**140**	*e*	Pn	**Pn**	**15 10 08.7**	**-0.3**
GUDG				*e*	Sg	**Sn**	**15 10 30.6**	**+0.9**
RPOR	**Krasnaya Polya**	**2.02**	**271**	*e*	PN	**Pb**	**15 10 16.9**	**-0.3**
RPOR	**Krasnaya Polya**	**2.02**	**271**	*e*	Pg	**Pb**	**15 10 16.9**	**-0.3**
GROC	**Groznyy**	**2.06**	**103**	*e*	PN	**Pb**	**15 10 18.6**	**+0.9**
GROC				*e*	S	**Sg**	**15 10 47.4**	**+0.5**
GROC	**Groznyy**	**2.06**	**103**	*e*	Pn	**Pn**	**15 10 15.3**	**+0.6**
TRLG	**Trialeti**	**2.31**	**160**	P		**Pg**	**15 10 26.1**	**+1.2**
TRLG				S		**Sg**	**15 10 55.1**	**+0.3**
TRLG	**Trialeti**	**2.31**	**160**	PN		**Pb**	**15 10 21.7**	**-0.4**
AKH	**Akhalkalaki**	**2.33**	**172**	*e*	PN	**Pn**	**15 10 20.6**	**+2.1**
AKH				*e*	S	**Sb**	**15 10 49.3**	**-1.7**
AKH	**Akhalkalaki**	**2.33**	**172**	*e*	Pn	**Pn**	**15 10 20.6**	**+2.1**
AKH				*e*	Sn	**Sb**	**15 10 49.3**	**-1.7**
BATM	**Batumi**	**2.34**	**206**	P		**Pg**	**15 10 25.1**	**-0.3**
BATM	**Batumi**	**2.34**	**206**	*e*	PN	**Pg**	**15 10 24.7**	**-0.8**
BATM				*e*	S	**Sb**	**15 10 51.6**	**+0.5**
BTLR	**Botlikh**	**2.54**	**113**	*e*	PN	**Pn**	**15 10 21.4**	**0.0**
BTLR				*e*	S	**Sb**	**15 10 56.3**	**-0.8**
BTLR	**Botlikh**	**2.54**	**113**	*e*	Pn	**Pn**	**15 10 22.0**	**+0.6**
BTLR				*e*	Sn	**Sn**	**15 10 52.6**	**+0.5**
DBC	**Dubki**	**2.84**	**103**		PN	**Pn**	**15 10 25.1**	**-0.4**
DBC				*e*	S	**Sn**	**15 11 00.0**	**+0.5**
DBC	**Dubki**	**2.84**	**103**	*i*	Pn	**Pn**	**15 10 25.1**	**-0.4**
DBC				*e*	Sn	**Sn**	**15 10 60.0**	**+0.5**
GNBR	**Gunib**	**3.15**	**113**	*e*	PN	**Pn**	**15 10 31.2**	**+1.3**
GNBR				*e*	S	**Sn**	**15 11 11.7**	**+4.4**
GNBR	**Gunib**	**3.15**	**113**	*e*	Pn	**Pn**	**15 10 30.8**	**+0.9**
GNBR				*e*	Sn	**Sn**	**15 11 08.8**	**+1.5**
MAK	**Makhachkala**	**3.33**	**102**	*i*	PN	**Pn**	**15 10 30.6**	**+1.6**
AKT	**Akhty**	**4.11**	**121**	*e*	PN	**Pn**	**15 10 45.1**	**+2.1**
AKT				*e*	S	**Sn**	**15 11 31.4**	**+0.5**
AKT	**Akhty**	**4.11**	**121**	*e*	Pn	**Pn**	**15 10 45.1**	**+2.1**
AKT				*e*	Sn	**Sn**	**15 11 31.4**	**+0.5**
AKTO	**Aktyubinsk**	**12.20**	**51**		PN	**Pn**	**15 12 30.5**	**-3.3**
	comp=E,1.3nm,0.8s							
AKTO					Sn	Sn	15 14 36.9	-13
	comp=E,2.6nm,0.9s							
AB31	**Akbulak array**	**12.88**	**59**		Pn	**Pn**	**15 12 40.1**	**-3.0**
	comp=E,0.2nm,0.3s,baz=238,slow=12,SNR=9.0							
AB31					Sn	Sn	15 14 57.8	-8.3
	comp=E,1.9nm,0.8s,baz=255,slow=19,SNR=4.1							
VAY	**Valandovo**	**15.29**	**268**	*e*	Pn	**Pn**	**15 13 18.9**	**+2.9**
VSU	**Vasula**	**17.90**	**331**	*i*	P	**Pn**	**15 13 47.9**	**-0.9**
VSU				pmax	pmax			
	comp=Z,55nm,1.2s							
KHC	**Kasperske Hory**	**20.95**	**295**	*i*	P	**P**	**15 14 22.3**	**-0.6**
KHC				pmax	pmax			
	comp=Z,6.0nm,1.1s							
KURK	**Kurchatov**	**24.97**	**61**	*i*	P	**P**	**15 15 02.8**	**-0.6**

*IDC **27** 15:12:09.8±3.1,37.84N×19.94E,h0km,mb3.9/6, mb1 3.9/11,mb1mx3.6/38,mbtmpg3.8/11,ML3.8/4, Error ellipse: s-maj=54.7km s-min=19.3km az=41.0*
*THE **27** 15:12:15.6,38.17N×20.36E,h6km±1km,ML3.7/3, Error ellipse: s-maj=2.6km s-min=0.8km az=70.0*
*ATH **27** 15:12:15.4,38.16N×20.42E,h15km±1km,ML3.7/7, Error ellipse: s-maj=3.1km s-min=1.0km az=75.0*
ISC 27 15:12:14.8±1.1,**38.18N**±0.03×**20.33E**±0.05,**h13**km±6km,
n58,σ1°**42**/84,**mb4.0**/6,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.12**	**90**	P		**Pg**	**15 12 18.0**	**-0.1**
ARG2				S		**Sg**	**15 12 19.7**	**-0.7**
VLS	**Valsamata**	**0.20**	**90**	P		**Pg**	**15 12 19.0**	**-0.4**
VLS				S		**Sg**	**15 12 21.5**	**-1.0**
VLS				AML	AML	15 12 21.7		
VLS				AML	AML	15 12 22.3		
FSK	**Fiskardo**	**0.33**	**33**	P		**Pg**	**15 12 22.0**	**+0.4**
FSK				S		**Sb**	**15 12 27.3**	**-0.6**
	29μm,0.3s							
FSK	**Fiskardo**	**0.33**	**33**	P		**Pg**	**15 12 22.1**	**+0.5**
FSK				S		**Sb**	**15 12 27.2**	**-0.6**
KFL	**Anninata**	**0.37**	**101**	P		**Pg**	**15 12 21.7**	**-0.5**
KFL				S		**Sg**	**15 12 26.9**	**-0.3**
	32μm,0.5s							
KFL	**Anninata**	**0.37**	**101**	P		**Pg**	**15 12 21.8**	**-0.5**
KFL				S		**Sg**	**15 12 26.5**	**-0.7**
KFL				AML	AML	15 12 27.0		
	comp=N,59893μm,0.5s							
KFL				AML	AML	15 12 30.8		
	comp=E,65220μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.40**	**139**	P		**Pg**	**15 12 22.7**	**-0.2**
VLMS				S		**Sg**	**15 12 28.2**	**0.0**
VLMS				AML	AML	15 12 28.6		
	comp=E,58997μm,0.5s							
VLMS				AML	AML	15 12 28.8		
	comp=N,84449μm,0.4s							
EVGI	**Lefkada island**	**0.51**	**30**	P		**Pg**	**15 12 25.1**	**+0.2**
EVGI				S		**Sb**	**15 12 32.9**	**-0.1**
EVGI	**Lefkada island**	**0.51**	**30**	P		**Pg**	**15 12 25.2**	**+0.4**
EVGI				S		**Sb**	**15 12 32.9**	**-0.1**
ZAK2	**Zakynthos**	**0.60**	**131**	P		**Pg**	**15 12 26.2**	**-0.3**
ZAK2				S		**Sb**	**15 12 35.8**	**+0.4**
MGNA	**Meganis**	**0.60**	**37**	P		**Pg**	**15 12 26.6**	**+0.1**
MGNA				S		**Sb**	**15 12 35.4**	**0.0**
MGNA				AML	AML	15 12 36.2		
	comp=E,19656μm,0.4s							
MGNA				AML	AML	15 12 38.3		
	comp=N,13489μm,0.4s							
LKD2	**Lefkada island**	**0.66**	**23**	P		**Pb**	**15 12 28.0**	**-0.2**
LKD2				S		**Sb**	**15 12 38.5**	**+1.1**
	comp=N,4μm,0.5s							
LKD2	**Lefkada island**	**0.66**	**23**	P		**Pb**	**15 12 28.0**	**-0.2**
LKD2				S		**Sb**	**15 12 37.5**	**+0.1**
LKD2				AML	AML	15 12 42.5		
	comp=E,9101μm,0.6s							
LKD2				AML	AML	15 12 47.1		
	comp=N,8426μm,0.4s							
TSLK	**Tsoukalades, L**	**0.69**	**21**	P		**Pg**	**15 12 28.4**	**+0.1**
TSLK	**Tsoukalades, L**	**0.69**	**21**	P		**Pg**	**15 12 28.4**	**+0.1**
PDO	**Prodromos**	**0.79**	**58**	P		**Pg**	**15 12 29.8**	**-0.3**
PDO				S		**Sb**	**15 12 41.6**	**+0.6**
PDO	**Prodromos**	**0.79**	**58**	P		**Pg**	**15 12 29.6**	**-0.5**
RLS	**Riolos of Patr**	**0.91**	**97**	P		**Pg**	**15 12 30.9**	**-1.4**
RLS				AML	AML	15 12 49.9		
	comp=N,5073μm,0.4s							
RLS				AML	AML	15 12 55.0		
	comp=E,3948μm,0.5s							
PVO	**Paravola**	**1.04**	**65**	P		**Pg**	**15 12 34.4**	**-0.4**
DRO	**Drossia**	**1.11**	**101**	P		**Pb**	**15 12 34.9**	**-1.0**
UPR	**University Cam**	**1.15**	**84**	P		**Pb**	**15 12 36.6**	**0.0**
EFP	**Efpalio**	**1.26**	**78**	P		**Pb**	**15 12 39.0**	**+0.5**
AMT	**Artemida-Makis**	**1.27**	**120**	P		**Pn**	**15 12 38.0**	**-0.2**
LAKA	**Lakka**	**1.30**	**87**	P		**Pn**	**15 12 38.2**	**-0.5**
LAKA	**Lakka**	**1.30**	**87**	P		**Pn**	**15 12 38.2**	**-0.5**
TRIZ	**Trizonia**	**1.38**	**82**	P		**Pn**	**15 12 39.3**	**-0.6**
KLV	**Kalavryta, Ach**	**1.44**	**95**	P		**Pn**	**15 12 40.4**	**-0.3**
ITM	**Ithomi**	**1.61**	**128**	P		**Pb**	**15 12 44.7**	**+0.2**
ITM				S		**Sg**	**15 13 06.5**	**-0.3**
ITM				AML	AML	15 13 10.2		
	comp=E,2664μm,0.5s							
ITM				AML	AML	15 13 15.0		
	comp=N,3334μm,0.6s							
PYL	**PYLOS**	**1.70**	**138**	P		**Pn**	**15 12 45.1**	**+0.9**
PYL				S		**Sb**	**15 13 08.1**	**+0.8**
AGG	**Agios Georgios**	**1.78**	**61**	P		**Pb**	**15 12 48.1**	**+0.8**
PROD	**Prodromos**	**2.03**	**87**	P		**Pb**	**15 12 51.3**	**-0.2**
LTK	**Loutraki**	**2.09**	**93**	P		**Pn**	**15 12 50.4**	**+0.9**
VIL2	**Platees**	**2.31**	**88**	P		**Pn**	**15 12 55.0**	**+2.3**
OHR	**Ohrid**	**2.95**	**7**	*e*	Pn	**Pn**	**15 13 01.9**	**+0.5**
STIP	**Stip**	**3.79**	**22**	*e*	Pn	**Pn**	**15 13 15.8**	**+2.9**
IDI	**Anoyia**	**4.66**	**127**		Pn	**Pn**	**15 13 23.8**	**-1.2**
	comp=N,0.2nm,0.3s,baz=301,slow=14,SNR=2.2							
IDI					Sn	**Sn**	**15 14 20.0**	**+1.0**
	comp=N,4.1nm,0.3s,baz=89,slow=20,SNR=22							
DBRK	**Dubrovnik**	**4.78**	**340**	*e*	Pn	**Pn**	**15 13 27.1**	**+0.6**
DBRK					Sn	**Sn**	**15 14 21.0**	**-0.8**
STON	**Ston**	**5.10**	**338**	*e*	Pn	**Pn**	**15 13 31.5**	**+0.7**
STON					Sn	**Sn**	**15 14 27.6**	**-1.9**
MAKA	**Makarska**	**5.69**	**335**	*i*	Pn	**Pn**	**15 13 40.1**	**+1.2**
MAKA					Sn	**Sn**	**15 14 42.9**	**-1.2**
ZIRJ	**Zirje**	**6.52**	**329**	*i*	Pn	**Pn**	**15 13 50.7**	**+0.4**
ZIRJ					Sn	**Sn**	**15 15 01.0**	**-3.5**
MORI	**Morici**	**6.67**	**330**	*i*	Pn	**Pn**	**15 13 53.7**	**+1.3**
MORI					Sn	**Sn**	**15 15 07.2**	**-1.0**
DUGI	**Dugi Otok**	**7.04**	**327**	*e*	Pn	**Pn**	**15 13 58.4**	**+0.9**
DUGI					Sn	**Sn**	**15 15 14.4**	**-3.0**
UDBI	**Udbina**	**7.21**	**333**	*i*	Pn	**Pn**	**15 14 02.2**	**+2.2**
NVLJ	**Novalja**	**7.58**	**329**	*e*	Pn	**Pn**	**15 14 05.9**	**+1.0**
MLR	**Muntele Rosu**	**8.42**	**28**		Pn	**Pn**	**15 14 21.5**	**+4.9**
	comp=N,0.8nm,0.3s,baz=154,slow=1.5,SNR=4.2							
SOKA	**Soboth**	**9.35**	**337**	*e*	Pn	**Pn**	**15 14 29.8**	**+0.5**
	comp=N,3.0nm,0.2s							
SOKA				*e*	Sn	**Sn**	**15 16 10.1**	**-4.2**
	comp=N,2.8nm,0.5s							
OBKA	**Obir**	**9.36**	**335**	*e*	Pn	**Pn**	**15 14 31.0**	**+1.6**
	comp=N,3.2nm,0.3s,SNR=7.3							
OBKA				*e*	Sn	**Sn**	**15 16 13.6**	**-0.9**
	comp=N,6.9nm,0.5s							
BRTR	**

BOVS	**Bovan**	**1.40**	**74**	*e*Pg	**Pn**	**15 16 31.2**	**-0.3**
BOVS				*e*Sg	**Sn**	**15 16 49.7**	**-0.8**
BARS	**Barje**	**1.51**	**107**	*e*Pg	**Pb**	**15 16 33.3**	**-0.5**
BARS	**Barje**	**1.51**	**107**	*e*Pg	**Pg**	**15 16 37.3**	**+3.1**
BARS					**Sg**	**15 16 53.8**	**0.0**
BARS				*e*Sg	**Sb**	**15 17 01.0**	**+7.6**
STON	**Ston**	**1.62**	**256**	*i* Pn	**Pb**	**15 16 35.5**	**-0.2**
STON	**Ston**	**1.62**	**256**	*e*Pg	**Pb**	**15 16 35.9**	**+0.2**
STON				*e*Sg	**Sg**	**15 16 57.4**	**0.0**
KUBS	**Kucevo**	**1.74**	**49**	*e*Pg	**Pb**	**15 16 37.8**	**0.0**
ZAGS	**Zajecar**	**1.81**	**72**	*e*Pg	**Pn**	**15 16 37.4**	**+0.2**
ZAGS				*e*Sg	**Sg**	**15 17 02.8**	**-0.7**
FRGS	**Fruska Gora**	**1.88**	**359**	*e*Pg	**Pg**	**15 16 41.6**	**+0.4**
FRGS				*e*Sg	**Sg**	**15 17 06.4**	**+0.8**
FRGS	**Fruska Gora**	**1.88**	**359**	*e*Pn	**Pn**	**15 16 38.6**	**+0.4**
FRGS				*e*Sn	**Sb**	**15 17 03.3**	**-0.8**
MDVR	**Moldovita**	**2.02**	**41**	⇑P	**Pn**	**15 16 39.5**	**-0.6**
ZAPS	**Zavoj**	**2.03**	**89**	*e*Pg	**Pb**	**15 16 42.6**	**-0.1**
ZAPS				*e*Sg	**Sb**	**15 17 08.9**	**+0.5**
BOSS	**Bosilegrad**	**2.08**	**111**	*e*Pg	**Pb**	**15 16 43.7**	**+0.1**
BOSS				*e*Sg	**Sb**	**15 17 09.5**	**-0.4**
HERR	**Herculane**	**2.45**	**48**	⇑P	**Pn**	**15 16 45.5**	**-0.4**
VTS	**Vitosha**	**2.57**	**104**	⇑P	**Pb**	**15 16 49.7**	**-2.3**
KIJV	**Kijevo**	**2.60**	**287**	*e*Pn	**Pb**	**15 16 51.3**	**-1.1**
KIJV				Sn	**Sb**	**15 17 26.8**	**+2.0**
BZS	**Buzias**	**2.66**	**28**	⇓P	**Pn**	**15 16 48.3**	**-0.5**
GZR	**Gura Zlata**	**2.98**	**44**	⇓P	**Pn**	**15 16 52.8**	**-0.5**
MORI	**Morici**	**3.07**	**283**	*e*Pn	**Pb**	**15 16 58.9**	**-1.4**
ZIRJ	**Zirje**	**3.08**	**278**	*i* Pn	**Pb**	**15 17 00.1**	**-0.5**
ZIRJ				Sn	**Sb**	**15 17 40.8**	**+2.2**
DUGI	**Dugi Otok**	**3.55**	**283**	*e*Pn	**Pb**	**15 17 06.6**	**-1.9**

*THE **27** 15:22:22.0, 38.˚19N×20.˚38E, h10km, ML2.8/7, Error ellipse: s-maj=0.7km s-min=0.3km az=79.0*
*ATH **27** 15:22:22.3, 38.˚22N×20.˚45E, h16km±2km, ML2.8/5, Error ellipse: s-maj=2.8km s-min=1.2km az=246.0*
ISC 27 15:22:21.8±1.5, 38.˚21N±0.˚03×20.˚39E±0.˚07, h11km±6km, n40, σ0s50/56, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.09**	**113**	P	**Pg**	**15 22 24.5**	**+0.2**
ARG2				S	**Sg**	**15 22 26.0**	**-0.2**
VLS	**Valsamata**	**0.17**	**102**	P	**Pg**	**15 22 25.5**	**0.0**
VLS				S	**Sg**	**15 22 28.0**	**0.0**
VLS	**Valsamata**	**0.17**	**102**	P	**Pg**	**15 22 25.5**	**0.0**
VLS				S	**Sg**	**15 22 28.1**	**0.0**
VLS				AML	AML	15 22 28.1	
	comp=N,10851μm,0.1s						
VLS				AML	AML	15 22 29.2	
	comp=E,11667μm,0.1s						
FSK	**Fiskardo**	**0.28**	**29**	P	**Pg**	**15 22 27.9**	**+0.3**
FSK				S	**Sg**	**15 22 32.5**	**+1.1**
	comp=E,1μm,0.3s						
FSK	**Fiskardo**	**0.28**	**29**	P	**Pg**	**15 22 27.9**	**+0.3**
KFL	**Anninata**	**0.33**	**108**	P	**Pg**	**15 22 28.6**	**+0.1**
KFL				S	**Sg**	**15 22 33.5**	**+0.5**
	comp=E,4μm,0.4s						
KFL	**Anninata**	**0.33**	**108**	P	**Pg**	**15 22 28.6**	**+0.1**
KFL				S	**Sg**	**15 22 33.5**	**+0.5**
KFL				AML	AML	15 22 35.7	
	comp=E,9312μm,0.4s						
KFL				AML	AML	15 22 36.6	
	comp=N,7935μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.40**	**147**	P	**Pg**	**15 22 30.2**	**+0.5**
VLMS				AML	AML	15 22 37.5	
	comp=E,9279μm,0.2s						
VLMS				AML	AML	15 22 39.9	
	comp=N,9680μm,0.2s						
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**15 22 31.1**	**+0.3**
EVGI				S	**Sb**	**15 22 38.1**	**-0.7**
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**15 22 31.1**	**+0.3**
MGNA	**Meganis**	**0.55**	**36**	P	**Pg**	**15 22 32.4**	**0.0**
MGNA				AML	AML	15 22 41.1	
	comp=N,1484μm,0.2s						
MGNA				AML	AML	15 22 41.7	
	comp=E,1722μm,0.1s						
LKD2	**Lefkada island**	**0.61**	**20**	P	**Pg**	**15 22 33.7**	**0.0**
LKD2	**Lefkada island**	**0.61**	**20**	P	**Pg**	**15 22 33.7**	**0.0**
TSLK	**Tsoukalades, L**	**0.65**	**19**	P	**Pg**	**15 22 34.0**	**-0.3**
PDO	**Prodromos**	**0.74**	**58**	P	**Pg**	**15 22 35.9**	**-0.1**
PDO				S	**Sb**	**15 22 47.6**	**+0.9**
PDO	**Prodromos**	**0.74**	**58**	P	**Pg**	**15 22 36.0**	**-0.1**
RLS	**Riolos of Patr**	**0.87**	**100**	P	**Pg**	**15 22 37.9**	**-0.6**
RLS				S	**Sb**	**15 22 50.2**	**-0.2**
RLS	**Riolos of Patr**	**0.87**	**100**	P	**Pg**	**15 22 38.4**	**-0.1**
RLS				AML	AML	15 22 55.5	
	comp=E,834μm,0.3s						
RLS				AML	AML	15 22 58.0	
	comp=N,673μm,0.5s						
PVO	**Paravola**	**0.98**	**65**	P	**Pb**	**15 22 40.0**	**-0.8**
PVO				S	**Sn**	**15 22 55.8**	**+0.4**
	comp=N,398nm,0.5s						
PVO	**Paravola**	**0.98**	**65**	P	**Pb**	**15 22 40.0**	**-0.8**
DRO	**Drossia**	**1.08**	**104**	P	**Pb**	**15 22 41.9**	**-0.5**
DRO				S	**Sn**	**15 22 58.3**	**+0.5**
	comp=N,712nm,0.4s						
DRO	**Drossia**	**1.08**	**104**	P	**Pb**	**15 22 42.0**	**-0.4**
EFP	**Efpalio**	**1.22**	**79**	P	**Pn**	**15 22 44.0**	**-0.7**
EFP				S	**Sn**	**15 23 01.9**	**+0.8**
	comp=N,270nm,0.5s						
EFP	**Efpalio**	**1.22**	**79**	P	**Pn**	**15 22 43.9**	**-0.7**
AMT	**Artemida-Makis**	**1.25**	**123**	P	**Pn**	**15 22 45.1**	**-0.1**
AMT				S	**Sg**	**15 23 02.0**	**0.0**
	comp=N,340nm,0.7s						
AMT	**Artemida-Makis**	**1.25**	**123**	P	**Pg**	**15 22 46.0**	**+0.3**
LAKA	**Lakka**	**1.25**	**88**	P	**Pn**	**15 22 44.9**	**-0.4**
LAKA				S	**Sg**	**15 23 03.3**	**+1.1**
LAKA	**Lakka**	**1.25**	**88**	P	**Pn**	**15 22 44.9**	**-0.4**
ANX	**Ano Chora**	**1.27**	**72**	P	**Pn**	**15 22 44.5**	**-1.0**
ANX				S	**Sg**	**15 23 03.7**	**+1.2**
	comp=N,368nm,0.6s						
ANX	**Ano Chora**	**1.27**	**72**	P	**Pb**	**15 22 45.8**	**+0.1**
IGT	**Igoumenitsa**	**1.32**	**358**	P	**Pg**	**15 22 47.3**	**+0.2**
SERG	**Sergoula**	**1.33**	**81**	P	**Pn**	**15 22 45.9**	**-0.4**
SERG	**Sergoula**	**1.33**	**81**	P	**Pn**	**15 22 45.9**	**-0.4**
TRIZ	**Trizonia**	**1.34**	**83**	P	**Pn**	**15 22 46.0**	**-0.3**
TRIZ	**Trizonia**	**1.34**	**83**	P	**Pn**	**15 22 46.1**	**-0.3**
KALE	**Kalithea**	**1.39**	**82**	P	**Pn**	**15 22 47.0**	**-0.2**
KALE	**Kalithea**	**1.39**	**82**	P	**Pn**	**15 22 47.0**	**-0.2**
KLV	**Kalavryta, Ach**	**1.40**	**96**	P	**Pb**	**15 22 47.6**	**-0.4**
KLV				S	**Sg**	**15 23 06.8**	**-0.1**
KLV	**Kalavryta, Ach**	**1.40**	**96**	P	**Pb**	**15 22 47.7**	**-0.3**
ITM	**Ithomi**	**1.60**	**130**	P	**Pb**	**15 22 51.3**	**0.0**

VIE 27 15:31:33.5±1.1, 45.˚64N×15.˚55E, h0km, mb1.9/2, ml2.0/3, Error ellipse: s-maj=7.8km s-min=5.6km az=125.0 17 km N of Karlovac Suspected Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OZLJ	**Ozalj**	**0.06**	**249**	*i* Pg	Pg	15 31 35.7	+1.1
OZLJ				Sg	Sg	15 31 37.9	+2.5
PTJ	**Puntijarka**	**0.40**	**47**	*e*Pg	Pg	15 31 41.9	+0.7
PTJ				Sg	Sb	15 31 48.5	-1.9
KALN	**Kalnik**	**0.81**	**52**	*e*Pg	Pg	15 31 49.7	+0.7
KALN				Sg	Sb	15 32 02.4	+0.5
SOKA	**Soboth**	**1.10**	**341**	Pg	Pg	15 31 55.0	+0.3
	1.4nm,0.3s						
SOKA				*e*Sg	Sb	15 32 10.2	-0.2
	4.5nm,0.3s						
OBKA	**Obir**	**1.11**	**322**	*e*Pg	Pb	15 31 55.5	-0.3
	7.7nm,0.4s,SNR=10.0						
OBKA				Sg	Sb	15 32 10.6	-0.3
	22nm,0.6s						
UDBI	**Udbina**	**1.12**	**172**	*e*Pg	Pn	15 31 59.2	+2.7
UDBI				Sg	Sn	15 32 13.1	+0.5
NVLJ	**Novalja**	**1.17**	**204**	*e*Pg	Pn	15 31 58.0	+0.8
NVLJ				Sg	Sn	15 32 16.0	+2.1
MYKA	**Terra Mystica**	**1.66**	**308**	*e*Pg	Pg	15 32 05.5	+0.2
	3.6nm,0.4s						
DUGI	**Dugi Otok**	**1.68**	**192**	*e*Pn	Pg	15 32 06.1	+0.4
DUGI				Sn	Sg	15 32 30.9	+3.4
KIJV	**Kijevo**	**1.74**	**159**	*e*Pn	Pg	15 32 07.6	+0.7
KIJV				Sn	Sg	15 32 33.2	+3.7
MORI	**Morici**	**1.77**	**176**	*e*Pn	Pg	15 32 10.1	+2.6
MORI				Sn	Sg	15 32 34.1	+3.6
ZIRJ	**Zirje**	**1.98**	**178**	*e*Pn	Pg	15 32 12.1	+0.6
ZIRJ				Sn	Sg	15 32 39.0	+1.9

LJU 27 15:32:25.2, 45.˚75N×14.˚86E, h1km, ML0.5, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VISS	**Visnje**	**0.06**	**344**	⇓*i* Pg	Pg	15 32 26.3	-0.1
VISS				*i* Sg	Sg	15 32 27.3	+0.2
	comp=Z,21nm,0.1s						
GBAS	**Gorenja Brezov**	**0.35**	**303**	*e*Pg	Pg	15 32 32.3	+0.4
GBAS				*i* Sg	Sg	15 32 36.9	+0.5

*THE **27** 15:33:41.8, 38.˚15N×20.˚44E, h9km, ML2.8/4, Error ellipse: s-maj=1.2km s-min=0.5km az=61.0*
*ATH **27** 15:33:42.0, 38.˚16N×20.˚47E, h14km±2km, ML2.6/5, Error ellipse: s-maj=2.9km s-min=1.1km az=76.0*
ISC 27 15:33:42.0±1.3, 38.˚17N±0.˚03×20.˚47E±0.˚06, h10km±5km, n27, σ0s55/39, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.02**	**66**	P	**Pg**	**15 33 43.6**	**-0.2**
ARG2				S	**Sg**	**15 33 44.9**	**-0.1**
VLS	**Valsamata**	**0.10**	**86**	P	**Pg**	**15 33 44.6**	**0.0**
VLS				S	**Sg**	**15 33 46.7**	**+0.3**
	8μm,0.1s						
VLS	**Valsamata**	**0.10**	**86**	P	**Pg**	**15 33 44.6**	**0.0**
VLS				S	**Sg**	**15 33 47.0**	**+0.6**
VLS				AML	AML	15 33 47.2	
	comp=E,22341μm,0.1s						
VLS				AML	AML	15 33 47.7	
	comp=N,11621μm,0.1s						
KFL	**Anninata**	**0.26**	**103**	P	**Pg**	**15 33 47.5**	**+0.2**
KFL				S	**Sg**	**15 33 51.4**	**+0.5**
	comp=N,2μm,0.5s						
KFL	**Anninata**	**0.26**	**103**	P	**Pg**	**15 33 47.4**	**+0.2**
KFL				S	**Sg**	**15 33 52.3**	**+1.4**
KFL				AML	AML	15 33 52.9	
	comp=E,6760μm,0.4s						
KFL				AML	AML	15 33 55.2	
	comp=N,2802μm,0.4s						
FSK	**Fiskardo**	**0.30**	**15**	P	**Pg**	**15 33 47.8**	**-0.2**
FSK				S	**Sg**	**15 33 52.8**	**+0.7**
	comp=N,400nm,0.2s						
FSK	**Fiskardo**	**0.30**	**15**	P	**Pg**	**15 33 47.8**	**-0.2**
FSK				S	**Sg**	**15 33 52.7**	**+0.7**
VLMS	**Volimes, Zakyn**	**0.33**	**152**	P	**Pg**	**15 33 48.8**	**+0.2**
VLMS				S	**Sg**	**15 33 54.0**	**+0.9**
VLMS				AML	AML	15 33 54.8	
	comp=E,2050μm,0.2s						
VLMS				AML	AML	15 34 00.4	
	comp=N,2467μm,0.3s						
EVGI	**Lefkada island**	**0.47**	**18**	P	**Pg**	**15 33 51.1**	**-0.2**
EVGI				S	**Sg**	**15 33 58.8**	**+1.3**
EVGI	**Lefkada island**	**0.47**	**18**	P	**Pg**	**15 33 51.1**	**-0.2**
EVGI				S	**Sg**	**15 33 58.8**	**+1.3**
MGNA	**Meganis**	**0.55**	**28**	P	**Pg**	**15 33 52.3**	**-0.3**
MGNA				S	**Sb**	**15 34 01.3**	**-0.3**
MGNA				AML	AML	15 34 01.5	
	comp=E,1230μm,0.3s						
MGNA				AML	AML	15 34 01.6	
	comp=N,874μm,0.2s						
LKD2	**Lefkada island**	**0.64**	**14**	P	**Pg**	**15 33 54.7**	**+0.3**
TSLK	**Tsoukalades, L**	**0.67**	**13**	P	**Pb**	**15 33 55.9**	**+0.1**
PDO	**Prodromos**	**0.71**	**53**	P	**Pg**	**15 33 55.6**	**-0.1**
RLS	**Riolos of Patr**	**0.80**	**98**	P	**Pg**	**15 33 57.2**	**-0.2**
RLS				S	**Sb**	**15 34 08.9**	**+0.1**
PVO	**Paravola**	**0.94**	**62**	P	**Pg**	**15 34 00.3**	**+0.1**
PVO	**Paravola**	**0.94**	**62**	P	**Pg**	**15 34 00.2**	**+0.1**
PVO				AML	AML	15 34 16.8	
	comp=N,797μm,0.3s						
PVO				AML	AML	15 34 17.0	
	comp=E,714μm,0.3s						
DRO	**Drossia**	**1.01**	**102**	P	**Pg**	**15 34 01.0**	**-0.3**
EFP	**Efpalio**	**1.16**	**77**	P	**Pb**	**15 34 03.6**	**-0.6**
AMT	**Artemida-Makis**	**1.17**	**123**	P	**Pg**	**15 34 04.8**	**+0.2**
LAKA	**Lakka**	**1.19**	**86**	P	**Pn**	**15 34 04.1**	**-0.7**
ANX	**Ano Chora**	**1.22**	**69**	P	**Pg**	**15 34 05.5**	**+0.1**
SERG	**Sergoula**	**1.27**	**79**	P	**Pn**	**15 34 05.2**	**-0.8**
TRIZ	**Trizonia**	**1.28**	**81**	P	**Pn**	**15 34 05.4**	**-0.5**
KALE	**Kalithea**	**1.33**	**80**	P	**Pn**	**15 34 06.7**	**-0.1**
KLV	**Kalavryta, Ach**	**1.33**	**95**	P	**Pn**	**15 34 06.6**	**-0.2**
IGT	**Igoumenitsa**	**1.36**	**356**	P	**Pg**	**15 34 08.4**	**+0.2**

MAN 27 15:38:40.8, 9.˚85N×126.˚57E, h1km, mb4.7, ML3.6, MS3.5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.28**	**227**	*e*P	Pg	15 39 05.4	0.0
BUTP				*e*S	Sn	15 39 24.3	+0.5
MSLP	**Maasin**	**1.71**	**280**	*e*P	Pn	15 39 11.1	-0.6
MSLP				*e*S	Sn	15 39 34.4	+0.1
OCLP	**Ormoc**	**2.27**	**302**	*e*P	Pn	15 39 20.0	+0.6
OCLP				*e*S	Sn	15 39 49.6	+1.5
CGP	**Cagayan de Oro**	**2.32**	**233**	⇓*e*P	Pn	15 39 20.3	+0.2
CGP				*e*S	Sb	15 39 51.1	-1.4
BUKP	**Musuan**	**2.46**	**217**	*e*P	Pn	15 39 23.3	+1.2
BUKP				*e*S	Sn	15 39 53.2	+0.3

*ROM **27** 15:39:13.9±0.0, 43.˚447N±0.˚002×12.˚497E±0.˚003, h8km, ML2.4/2, Error ellipse: s-maj=0.2km s-min=0.1km az=215.0*
ISC 27 15:39:14.3±0.8, 43.˚45N±0.˚02×12.˚49E±0.˚02, h7km±5km, n37, σ0s82/69, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.07**	**273**	P	**Pg**	**15 39 16.1**	**-0.2**
ATPI				S	**Sg**	**15 39 17.8**	**+0.3**
ATPI				AML	AML		
	comp=E,6225μm,0.7s						
ATPI				AML	AML		
	comp=E,6220μm,0.7s						
ATPI				AML	AML		
	comp=N,5085μm,0.9s						
ATVO	**AVT- Monte Val**	**0.09**	**224**	*i* P	**Pg**	**15 39 16.5**	**-0.1**
ATVO				S	**Sg**	**15 39 18.2**	**+0.1**
ATVO				AML	AML		
	comp=N,4325μm,0.4s						
ATVO				AML	AML		
	comp=E,4395μm,0.7s						
ATVO				AML	AML		
	comp=N,4330μm,0.4s						
PIEI	**Piela**	**0.09**	**19**	P	**Pg**	**15 39 16.7**	**+0.1**
PIEI				S	**Sg**	**15 39 18.6**	**+0.4**
PIEI				AML	AML		
	comp=E,6200μm,0.4s						
PIEI				AML	AML		
	comp=N,4405μm,0.3s						
ATFO	**Monte Foce - G**	**0.10**	**144**	P	**Pg**	**15 39 16.5**	**-0.2**
ATFO				S	**Sg**	**15 39 18.3**	**0.0**
ATFO				AML	AML		
	comp=N,4550μm,0.1s						
ATFO				AML	AML		
	comp=E,4060μm,0.2s						
ATFO				AML	AML		
	comp=E,4065μm,0.2s						
NARO	**Abbazia di Nar**	**0.17**	**21**	P	**Pg**	**15 39 18.0**	**+0.1**
NARO				S	**Sg**	**15 39 20.9**	**+0.5**
NARO				AML	AML		
	comp=E,938μm,0.8s						
NARO				AML	AML		
	comp=N,891μm,1.2s						
NARO				AML	AML		
	comp=N,892μm,1.2s						
FRON	**Frontone**	**0.18**	**67**	P	**Pg**	**15 39 18.2**	**+0.1**
FRON				S	**Sg**	**15 39 21.5**	**+0.9**
FRON				AML	AML		
	comp=E,1420μm,0.1s						
FRON				AML	AML		
	comp=N,3030μm,0.4s						
MURB	**Monte Urbino**	**0.19**	**173**	P	**Pg**	**15 39 18.5**	**+0.4**
MURB				S	**Sg**	**15 39 21.9**	**+1.2**
MURB				AML	AML		
	comp=N,4340μm,0.3s						
MURB				AML	AML		
	comp=N,4850μm,0.2s						
MURB				AML	AML		
	comp=E,3510μm,0.3s						
MURB				AML	AML		
	comp=N,4345μm,0.3s						
MURB				AML	AML		
	comp=E,3420μm,0.3s						
CDCA	**Citt' di Caste**	**0.19**	**273**	P	**Pg**	**15 39 18.4**	**+0.2**
CDCA				S	**Sg**	**15 39 22.1**	**+1.4**
CDCA				AML	AML		
	comp=E,4980μm,1.6s						
CDCA				AML	AML		
	comp=N,3510μm,0.3s						
CDCA				AML	AML		
	comp=E,1240μm,0.7s						
CDCA				AML	AML		
	comp=N,1287μm,0.5s						
CDCA				AML	AML		
	comp=E,4985μm,1.6s						
CDCA				AML	AML		
	comp=N,3515μm,0.3s						
BADI	**Badiali**	**0.19**	**289**	*i* P	**Pg**	**15 39 18.4**	**+0.2**
BADI				S	**Sg**	**15 39 21.9**	**+1.1**
BADI				AML	AML		
	comp=E,2570μm,0.2s						
BADI				AML	AML		
	comp=N,2135μm,0.5s						
BADI				AML	AML		
	comp=E,2565μm,0.2s						
BADI				AML	AML		
	comp=N,2130μm,0.5s						
SSFR	**Montelago di S**	**0.21**	**93**	P	**Pg**	**15 39 18.9**	**+0.3**
SSFR				S	**Sg**	**15 39 22.5**	**+1.0**
SSFR				AML	AML		
	comp=N,5340μm,0.8s						
SSFR				AML	AML		
	comp=E,6870μm,0.7s						
SSFR				AML	AML		
	comp=E,6245μm,0.7s						
SSFR				AML	AML		
	comp=N,4950μm,1.3s						
SSFR				AML	AML		
	comp=N,5340μm,0.8s						
PE3	**Peglio**	**0.25**	**1**	P	**Pg**	**15 39 19.9**	**+0.6**
FOSV	**Fossato di Vic**	**0.25**	**128**	P	**Pg**	**15 39 19.6**	**+0.3**
FOSV				S	**Sg**	**15 39 23.9**	**+1.3**
FOSV				AML	AML		
	comp=N,1018μm,0.6s						
FOSV				AML	AML		
	comp=E,1180μm,0.5s						
FOSV				AML	AML		
	comp=N,1022μm,0.6s						
MPAG	**Monte Paganucc**	**0.27**	**47**	P	**Pg**	**15 39 19.9**	**+0.3**
MPAG				S	**Sg**	**15 39 24.4**	**+1.2**
MPAG				AML	AML		
	comp=E,634μm,0.3s						
MPAG				AML	AML		
	comp=E,634μm,0.3s						
MPAG				AML	AML		
	comp=N,532μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.27**	**202**	P	**Pg**	**15 39 19.7**	**+0.1**
ATTE				S	**Sg**	**15 39 24.3**	**+1.0**
ATTE				AML	AML		
	comp=E,474μm,1.0s						
ATTE				AML	AML		
	comp=N,551μm,1.6s						
ATTE				AML	AML		
	comp=E,474μm,1.0s						
ATTE				AML	AML		
	comp=N,550μm,1.6s						
PARC	**Parchiule**	**0.27**	**318**	P	**Pg**	**15 39 19.9**	**+0.2**
PARC				S	**Sb**	**15 39 25.0**	**-1.4**
PARC				AML	AML		
	comp=E,1020μm,0.6s						
PARC				AML	AML		
	comp=N,636μm,0.4s						
PARC				AML	AML		
	comp=E,1025μm,0.6s						
ATCC	**AVT- Casa Cast**	**0.28**	**158**	P	**Pg**	**15 39 20.4**	**+0.5**
ATCC				S	**Sb**	**15 39 25.5**	**-1.2**
ATCC				AML	AML		
	comp=N,3330μm,0.3s						
ATCC				AML	AML		
	comp=E,2325μm,0.6s						
ATCC				AML	AML		
	comp=N,3325μm,0.3s						
SSP9	**Sansepolcro**	**0.29**	**296**	P	**Pg**	**15 39 20.3**	**+0.2**
SSP9				S	**Sb**	**15 39 25.8**	**-1.2**
FSSB	**Fossombrone**	**0.32**	**40**	P	**Pg**	**15 39 20.9**	**+0.3**
FSSB				S	**Sb**	**15 39 26.4**	**-1.4**
FSSB				AML	AML		
	comp=E,1155μm,0.3s						
FSSB				AML	AML		
	comp=E,1150μm,0.3s						
FSSB				AML	AML		
	comp=N,1378μm,0.4s						
ARVD	**Arcevia**	**0.33**	**81**	P	**Pg**	**15 39 21.1**	**+0.2**
ARVD				S	**Sb**	**15 39 26.6**	**-1.5**
ARVD				AML	AML		
	comp=E,912μm,0.6s						
ARVD				AML	AML		
	comp=N,810μm,1.6s						
ARVD				AML	AML		
	comp=N,809μm,1.6s						
CPGN	**Carpegna, Ital**	**0.38**	**341**	P	**Pb**	**15 39 22.5**	**-0.9**
CPGN				AML	AML		
	comp=E,352μm,0.7s						
CPGN				AML	AML		
	comp=N,282μm,1.3s						
CPGN				AML	AML		
	comp=N,283μm,1.3s						
CPGN				AML	AML		
	comp=E,353μm,0.7s						
SNTG	**Esanatoglia**	**0.38**	**120**	P	**Pg**	**15 39 21.8**	**+0.1**
SNTG				S	**Sb**	**15 39 28.1**	**-1.4**
SNTG				AML	AML		
	comp=N,724μm,1.1s						
SNTG				AML	AML		
	comp=N,723μm,1.1s						
SNTG				AML	AML		
	comp=E,474μm,0.3s						
CAFI	**Castiglion Fio**	**0.40**	**253**	P	**Pg**	**15 39 22.3**	**+0.1**
CAFI				S	**Sb**	**15 39 28.9**	**-1.2**
CAFI				AML	AML		
	comp=E,355μm,0.6s						
CAFI				AML	AML		
	comp=N,254μm,0.4s						
ASSB	**Assisi San Ben**	**0.42**	**163**	P	**Pg**	**15 39 22.5**	**0.0**
ASSB				S	**Sb**	**15 39 29.5**	**-1.2**
ASSB				AML	AML		
	comp=E,540μm,1.3s						
ASSB				AML	AML		
	comp=N,926μm,0.3s						
CRE	**Caprese Michel**	**0.43**	**294**	P	**Pg**	**15 39 22.9**	**+0.1**
CRE				AML	AML		
	comp=E,256μm,0.4s						
CRE				AML	AML		
	comp=N,280μm,0.3s						
EL6	**Elcito**	**0.46**	**105**	P	**Pg**	**15 39 23.3**	**0.0**
EL6				S	**Sb**	**15 39 30.9**	**-0.9**
EL6				AML	AML		
	comp=E,606μm,0.4s						
EL6				AML	AML		
	comp=N,622μm,0.6s						
EL6				AML	AML		
	comp=N,625μm,0.6s						
EL6				AML	AML		
	comp=E,606μm,0.4s						
CING	**Cingoli**	**0.52**	**98**	P	**Pg**	**15 39 24.5**	**+0.1**
CING				S	**Sb**	**15 39 32.8**	**-0.7**
CING				AML	AML		
	comp=E,229μm,0.3s						
CING				AML	AML		
	comp=N,486μm,0.6s						
CESI	**CESI - Serrava**	**0.54**	**146**	P	**Pg**	**15 39 24.7**	**0.0**
CESI				S	**Sb**	**15 39 33.2**	**-0.8**
CESI				AML	AML		
	comp=N,180μm,0.4s						
CESI				AML	AML		
	comp=E,62μm,1.0s						
FDMO	**Fiordimonte**	**0.60**	**133**	P	**Pg**	**15 39 25.6**	**-0.3**
FDMO				S	**Sb**	**15 39 35.3**	**-0.5**
FDMO				A

MGAB				AML	AML			
	comp=N,704µm,0.2s							
MGAB				AML	AML			
	comp=E,552µm,0.4s							
MGAB				AML	AML			
	comp=N,756µm,0.2s							
MGAB				AML	AML			
	comp=E,513µm,0.4s							
ASQU	**Asqua**	**0.62**	**305**	P	**Pg**	**15 39 26.3**	**0.0**	
ASQU				S	**Sb**	**15 39 35.9**	**-0.5**	
ASQU				AML	AML			
	comp=N,154µm,0.3s							
ASQU				AML	AML			
	comp=E,144µm,1.1s							
SACS	**San Casciano d**	**0.73**	**216**	P	**Pg**	**15 39 28.3**	**-0.2**	
SACS				AML	AML			
	comp=N,304µm,0.7s							
SACS				AML	AML			
	comp=E,254µm,0.8s							
SACS				AML	AML			
	comp=N,310µm,0.7s							
SACS				AML	AML			
	comp=N,305µm,0.7s							
SACS				AML	AML			
	comp=E,287µm,0.8s							
NRCA	**Norcia**	**0.76**	**143**	P	**Pg**	**15 39 28.7**	**-0.4**	
NRCA				S	**Sb**	**15 39 40.0**	**-0.6**	
NRCA				AML	AML			
	comp=E,236µm,0.7s							
NRCA				AML	AML			
	comp=N,291µm,0.4s							
RUFI	**Rufina**	**0.81**	**299**	P	**Pg**	**15 39 29.8**	**-0.2**	
RUFI				S	**Sb**	**15 39 41.5**	**-0.5**	
OSSC	**Osservatorio P**	**0.91**	**275**	P	**Pg**	**15 39 31.8**	**0.0**	
ZIRJ	**Zirje**	**2.30**	**84**	*e*Pn	**Pn**	**15 39 52.7**	**+0.1**	
ZIRJ				Sn	**Sn**	**15 40 21.9**	**+0.7**	
MORI	**Morici**	**2.37**	**79**	*e*Pn	**Pn**	**15 39 54.2**	**+0.6**	
MORI				Sn	**Sb**	**15 40 24.9**	**-1.8**	
KIJV	**Kijevo**	**2.89**	**78**	*e*Pn	**Pn**	**15 40 02.4**	**+1.6**	
KIJV				Sn	**Sb**	**15 40 39.3**	**-2.4**	

TIR **27** *15:39:30.9,38˚.49N×21˚.24E,h5km,Md4.2/7*
IDC **27** *15:39:33.5±0.7,38˚.43N×20˚.48E,h0km,mb4.0/15, mb1 4.0/27,mb1mx3.9/55,mbtmp3.9/27,ML3.8/11, MS3.6/13,Ms1 3.6/13,ms1mx3.3/55,Error ellipse: s-maj=13.5km s-min=11.7km az=1.0*
PDG **27** *15:39:33.7±0.3,38˚.42N×20˚.35E,h12km±1km,MD4.7/2, ML4.5/12,Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
MOS **27** *15:39:33.0±1.4,38˚.32N×20˚.33E,h13km,mb4.4/7,Error ellipse: s-maj=8.3km s-min=4.7km az=81.1*
THE **27** *15:39:34.8,38˚.38N×20˚.39E,h8km±1km,ML4.1/15,Error ellipse: s-maj=1.9km s-min=0.5km az=100.0*
MED_RC **27** *15:39:34.0±0.5,38˚.33N×20˚.46E,h17km±1km,MW4.5/14, Moment Tensor Solution.Mantle waves: s14,c17; Duration: 1s0 Moment tensor: Scale 10¹⁵Nm; Mrr0.68±.45; Mθθ3.04±.36; Mφφ-3.72±.42; Mrθ-1.03±.61; Mθφ4.53±.32; Mφr-1.31±.75; Best double couple: M≈5.92000×10¹⁵ NP1:φs289.00000°,δ74.00000°, λ8.00000°. NP2:φs197.00000°,δ83.00000°,λ164.00000°. Principal axes: T 5.7600, Plg17.0000°, Azm152.0000°; N 0.3100, Plg72.0000°, Azm354.0000°; P -6.0700, Plg6.0000°, Azm244.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
ATH **27** *15:39:34.4,38˚.38N×20˚.42E,h14km, ML4.2/25 Error ellipse: s-maj=1.3km s-min=0.7km az=80.0*
NEIC **27** *15:39:36.3±2.5,38˚.42N±0˚.06×20˚.40E±0˚.05,h17km±4km, mb4.7/21,ML4.2(THE),Error ellipse: s-maj=9.0km s-min=6.2km az=181.0*
BGR **27** *15:39:36.8±0.9,38˚.67N×21˚.06E,h10km,Error ellipse: s-maj=31.1km s-min=10.0km az=57.0*

ISC 27 15:39:34.7±0.8,38˚39N±0˚.02×20˚41E±0˚.02,h10km±5km, n309,σ1°77/396, mb4.2/28, MS3.8/8, 10C-17D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FSK	**Fiskardo**	**0.14**	**60**	P		**Pg**	**15 39 37.5**	**-0.3**
FSK				S		**Sg**	**15 39 39.5**	**-0.5**
	134µm,0.5s							
FSK	**Fiskardo**	**0.14**	**60**	P		**Pg**	**15 39 37.5**	**-0.3**
FSK				S		**Sg**	**15 39 40.0**	**0.0**
ARG2	**Argostoli**	**0.22**	**165**	P		**Pg**	**15 39 39.3**	**0.0**
ARG2				S		**Sg**	**15 39 43.4**	**+1.1**
VLS	**Valsamata**	**0.26**	**147**	P		**Pg**	**15 39 39.5**	**-0.4**
VLS				S		**Sg**	**15 39 43.9**	**+0.5**
	71µm,0.3s							
VLS	**Valsamata**	**0.26**	**147**	P		**Pg**	**15 39 39.5**	**-0.4**
VLS				S		**Sg**	**15 39 43.9**	**+0.5**
VLS	**Valsamata**	**0.26**	**147**	P		**Pg**	**15 39 39.6**	**-0.4**
VLS				S		**Sg**	**15 39 43.8**	**+0.5**
VLS				AML	AML		15 39 45.6	
VLS				AML	AML		15 39 47.5	
EVGI	**Lefkada island**	**0.30**	**40**	P		**Pg**	**15 39 40.8**	**+0.1**
EVGI				S		**Sb**	**15 39 46.0**	**-1.1**
EVGI	**Lefkada island**	**0.30**	**40**	P		**Pg**	**15 39 40.8**	**+0.1**
EVGI				S		**Sg**	**15 39 45.7**	**+1.0**
KFL	**Anninata**	**0.41**	**134**	P		**Pg**	**15 39 42.2**	**-0.5**
KFL				S		**Sb**	**15 39 49.6**	**-0.7**
	70µm,0.5s							
KFL	**Anninata**	**0.41**	**134**	P		**Pg**	**15 39 42.2**	**-0.5**
KFL				S		**Sg**	**15 39 48.6**	**+0.5**
KFL				AML	AML		15 39 49.9	
KFL				AML	AML		15 39 50.4	
LKD2	**Lefkada island**	**0.44**	**26**	P		**Pg**	**15 39 43.3**	**0.0**
LKD2				S		**Sb**	**15 39 51.0**	**-0.3**
	28µm,0.7s							
LKD2	**Lefkada island**	**0.44**	**26**	P		**Pg**	**15 39 43.4**	**0.0**
LKD2				S		**Sb**	**15 39 50.5**	**-0.8**
LKD2				AML	AML		15 39 51.0	
	comp=E,52124µm,0.5s							
LKD2				AML	AML		15 39 51.3	
	comp=N,62349µm,0.8s							
TSLK	**Tsoukalades, L**	**0.47**	**24**	P		**Pg**	**15 39 44.0**	**+0.1**
TSLK				S		**Sb**	**15 39 52.1**	**-0.1**
	comp=N,36µm,0.8s							
TSLK	**Tsoukalades, L**	**0.47**	**24**	P		**Pg**	**15 39 44.1**	**+0.2**
TSLK				S		**Sb**	**15 39 51.5**	**-0.7**
VLMS	**Volimes, Zakyn**	**0.55**	**159**	P		**Pg**	**15 39 45.0**	**-0.4**
VLMS				S		**Sg**	**15 39 53.2**	**+0.5**
VLMS				AML	AML		15 39 54.9	
	comp=N,92848µm,0.3s							
VLMS				AML	AML		15 39 57.0	
	comp=E,82318µm,0.2s							
PDO	**Prodromos**	**0.64**	**71**	P		**Pg**	**15 39 46.6**	**-0.5**
PDO				S		**Sb**	**15 39 57.2**	**+0.3**
PDO	**Prodromos**	**0.64**	**71**	P		**Pg**	**15 39 46.6**	**-0.5**
PDO				S		**Sg**	**15 39 56.1**	**+0.6**
ZAK2	**Zakynthos**	**0.71**	**147**	P		**Pg**	**15 39 48.5**	**0.0**
ZAK2				S		**Sb**	**15 39 59.2**	**+0.1**
RLS	**Riolos of Patr**	**0.89**	**112**	P		**Pg**	**15 39 51.1**	**-0.8**
RLS				S		**Sb**	**15 40 04.8**	**+0.5**
	comp=E,8µm,0.8s							
RLS	**Riolos of Patr**	**0.89**	**112**	P		**Pg**	**15 39 51.1**	**-0.8**
RLS				S		**Sb**	**15 40 04.5**	**+0.2**
RLS				AML	AML		15 40 09.3	
	comp=N,19770µm,1.0s							
RLS				AML	AML		15 40 15.6	
	comp=E,12573µm,0.6s							
PVO	**Paravola**	**0.90**	**75**	P		**Pg**	**15 39 51.7**	**-0.4**
PVO				S		**Sn**	**15 40 06.2**	**-0.3**
	comp=E,13µm,0.8s							
PVO	**Paravola**	**0.90**	**75**	P		**Pg**	**15 39 51.7**	**-0.4**
PVO				AML	AML		15 40 14.3	
	comp=N,25887µm,0.7s							
PVO				AML	AML		15 40 14.9	
	comp=E,27700µm,0.5s							
DRO	**Drossia**	**1.11**	**113**	P		**Pb**	**15 39 55.1**	**-1.0**
DRO				S		**Sn**	**15 40 12.4**	**+0.6**
	comp=E,15µm,0.5s							
DRO	**Drossia**	**1.11**	**113**	P		**Pb**	**15 39 55.1**	**-1.0**
DRO				AML	AML		15 40 18.3	
	comp=N,25969µm,0.5s							
DRO				AML	AML		15 40 18.3	
	comp=E,32060µm,0.5s							
IGT	**Igoumenitsa**	**1.14**	**357**	P		**Pb**	**15 39 56.2**	**-0.3**
IGT				S		**Sn**	**15 40 13.7**	**+1.2**
	comp=E,10µm,0.5s							
IGT	**Igoumenitsa**	**1.14**	**357**	P		**Pb**	**15 39 56.2**	**-0.3**
IGT				S		**Sn**	**15 40 13.7**	**+1.2**
IGT	**Igoumenitsa**	**1.14**	**357**	P		**Pn**	**15 39 57.0**	**+0.2**
IGT				S		**Sn**	**15 40 12.1**	**-0.4**
IGT				AML	AML		15 40 17.1	
	comp=E,23166µm,0.6s							
IGT				AML	AML		15 40 18.1	
	comp=N,15167µm,0.4s							
EFP	**Efpalio**	**1.17**	**88**	P		**Pb**	**15 39 55.6**	**-1.4**
EFP				S		**Sn**	**15 40 13.9**	**+0.7**
	comp=N,20µm,0.7s							
EFP	**Efpalio**	**1.17**	**88**	P		**Pb**	**15 39 55.6**	**-1.4**
EFP				S		**Sn**	**15 40 13.0**	**-0.2**
EFP				AML	AML		15 40 19.2	
	comp=E,45038µm,0.7s							
EFP				AML	AML		15 40 19.5	
	comp=N,29745µm,0.6s							
ANX	**Ano Chora**	**1.20**	**80**	P		**Pb**	**15 39 56.6**	**-1.0**
ANX				S		**Sn**	**15 40 13.8**	**-0.2**
	comp=N,19µm,0.7s							
ANX	**Ano Chora**	**1.20**	**80**	P		**Pb**	**15 39 56.5**	**-1.1**
ANX				AML	AML		15 40 20.4	
	comp=N,42489µm,0.6s							
ANX				AML	AML		15 40 21.4	
	comp=E,34346µm,0.9s							
EVR	**Evrytania**	**1.21**	**64**	P		**Pb**	**15 39 56.8**	**-1.0**
EVR				S		**Sn**	**15 40 14.5**	**+0.2**
	comp=E,7µm,0.9s							
EVR	**Evrytania**	**1.21**	**64**	P		**Pb**	**15 39 56.8**	**-1.0**
EVR				AML	AML		15 40 20.9	
	comp=E,14233µm,0.8s							
EVR				AML	AML		15 40 24.6	
	comp=N,13421µm,1.0s							
LAKA	**Lakka**	**1.24**	**97**	P		**Pn**	**15 39 56.8**	**-1.3**
LAKA				S		**Sn**	**15 40 15.2**	**+0.3**
	comp=N,4µm,1.1s							
LAKA	**Lakka**	**1.24**	**97**	P		**Pn**	**15 39 56.8**	**-1.3**
LAKA				S		**Sn**	**15 40 15.2**	**+0.3**
LAKA				AML	AML		15 40 21.0	
	comp=N,8145µm,1.2s							
LAKA				AML	AML		15 40 27.2	
	comp=E,8774µm,1.0s							
SERG	**Sergoula**	**1.29**	**89**	P		**Pn**	**15 39 57.8**	**-1.1**
SERG				S		**Sg**	**15 40 17.1**	**+0.8**
SERG				AML	AML		15 40 22.2	
	comp=E,16462µm,0.6s							
SERG				AML	AML		15 40 22.4	
	comp=N,15854µm,0.6s							
TRIZ	**Trizonia**	**1.30**	**91**	P		**Pn**	**15 39 57.6**	**-1.4**
TRIZ				S		**Sg**	**15 40 18.2**	**+1.5**
	comp=N,7µm,0.7s							
TRIZ	**Trizonia**	**1.30**	**91**	P		**Pn**	**15 39 57.8**	**-1.1**
TRIZ				S		**Sb**	**15 40 15.7**	**-0.3**
JAN	**Janina**	**1.31**	**15**	P		**Pg**	**15 40 01.0**	**+1.2**
JAN	**Janina**	**1.31**	**15**	P		**Pg**	**15 40 00.4**	**+0.5**
JAN				S		**Sg**	**15 40 17.8**	**+0.9**
JAN				AML	AML		15 40 21.6	
	comp=E,18324µm,0.8s							
JAN				AML	AML		15 40 30.8	
	comp=N,14746µm,0.7s							
AMT	**Artemida-Makis**	**1.34**	**130**	P		**Pb**	**15 39 59.7**	**-0.2**
AMT	**Artemida-Makis**	**1.34**	**130**	P		**Pn**	**15 39 59.4**	**0.0**
AMT				AML	AML		15 40 27.5	
	comp=N,22546µm,0.8s							
AMT				AML	AML		15 40 37.2	
	comp=E,16059µm,0.6s							
KALE	**Kalithea**	**1.36**	**89**	P		**Pn**	**15 39 58.7**	**-1.1**
KALE				AML	AML		15 40 25.4	
	comp=N,19323µm,0.7s							
KALE				AML	AML		15 40 25.5	
	comp=E,9182µm,0.8s							
KLV	**Kalavryta, Ach**	**1.41**	**104**	P		**Pn**	**15 39 59.6**	**-0.9**
KLV				AML	AML		15 40 34.9	
	comp=N,6355µm,1.2s							
KLV				AML	AML		15 40 35.7	
	comp=E,5813µm,0.7s							
MAKR	**Makrakomi, Fth**	**1.48**	**65**	P		**Pn**	**15 40 01.6**	**+0.2**
MAKR				S		**Sg**	**15 40 23.1**	**+0.8**
MAKR				AML	AML		15 40 33.6	
	comp=E,13717µm,0.6s							
MAKR				AML	AML		15 40 34.7	
	comp=N,13077µm,0.9s							
SRN	**Sarande**	**1.52**	**348**	*i* PN		**Pg**	**15 40 04.2**	**+0.3**
SRN				*i* SN		**Sg**	**15 40 26.6**	**+3.0**
AGG	**Agios Georgios**	**1.63**	**67**	P		**Pb**	**15 40 04.6**	**-0.2**
AGG	**Agios Georgios**	**1.63**	**67**	P		**Pn**	**15 40 04.0**	**+0.6**
AGG				AML	AML		15 40 36.9	
	comp=E,8118µm,0.8s							
AGG				AML	AML		15 40 40.9	
	comp=N,5552µm,1.0s							
AGG	**Agios Georgios**	**1.63**	**67**			**Pb**	**15 40 04.6**	**-0.2**
ITM	**Ithomi**	**1.70**	**135**	P		**Pn**	**15 40 05.2**	**+0.8**
ITM	**Ithomi**	**1.70**	**135**			**Pb**	**15 40 05.8**	**-0.4**
THL	**Klokotos Trika**	**1.71**	**46**	P		**Pb**	**15 40 05.8**	**-0.4**
THL				S		**Sg**	**15 40 29.9**	**+0.1**
THL				AML	AML		15 40 35.4	
	comp=E,7055µm,0.6s							
THL				AML	AML		15 40 35.8	
	comp=N,9388µm,0.6s							
KPRO	**Kipourio**	**1.73**	**25**	P		**Pg**	**15 40 07.6**	**-0.2**
AXAR	**Agios Charalam**	**1.80**	**77**	P		**Pb**	**15 40 07.5**	**-0.3**
AXAR				AML	AML		15 40 51.5	
	comp=E,19329µm,0.9s							
AXAR				AML	AML		15 40 56.6	
	comp=N,12266µm,0.9s							
PYL	**PYLOS**	**1.83**	**144**	P		**Pn**	**15 40 07.1**	**+0.9**
PYL				S		**Sb**	**15 40 31.2**	**0.0**
	comp=N,2µm,0.8s							
PYL	**PYLOS**	**1.83**	**144**	P		**Pn**	**15 40 06.7**	**+0.5**
VLX	**Vlachokerasia**	**1.86**	**123**	P		**Pb**	**15 40 08.2**	**-0.6**
VLX				S		**Sb**	**15 40 32.9**	**+0.7**
VLX				AML	AML		15 40 48.9	
	comp=N,7759µm,0.9s							
VLX				AML	AML		15 40 51.5	
	comp=E,11122µm,0.9s							
PENT	**Pentalofos**	**1.89**	**17**	P		**Pb**	**15 40 09.9**	**+0.6**
TPE	**Tepelena**	**1.93**	**351**	*i* PN		**Pb**	**15 40 09.7**	**-0.2**
TPE				*i* SN		**Sg**	**15 40 40.9**	**+4.2**
PROD	**Prodromos**	**1.96**	**93**	P		**Pb**	**15 40 09.8**	**-0.7**
PROD				AML	AML		15 40 42.8	
	comp=N,7298µm,1.0s							
PROD				AML	AML		15 40 46.6	
	comp=E,7648µm,1.1s							
LKR	**Lokris**	**2.04**	**82**	P		**Pb**	**15 40 10.9**	**-1.0**
LTK	**Loutraki**	**2.04**	**100**	P		**Pb**	**15 40 10.6**	**-1.3**
LOUT	**Loutraki**	**2.06**	**101**	P		**Pb**	**15 40 10.9**	**-1.3**
NEST	**Nestorio**	**2.08**	**13**	P		**Pb**	**15 40 12.1**	**-0.5**
KZN	**Kozani**	**2.18**	**28**	P		**Pb**	**15 40 13.5**	**-0.8**
VLO	**Vlora**	**2.19**	**341**	*i* PN		**Pg**	**15 40 16.7**	**0.0**
VLO				*i* SN		**Sg**	**15 40 49.4**	**+4.3**
VIL2	**Platees**	**2.25**	**94**	P		**Pb**	**15 40 14.3**	**-1.1**
VIL2				AML	AML		15 40 59.7	
	comp=E,5973µm,1.2s							
VIL2				AML	AML		15 41 02.3	
	comp=N,4908µm,0.8s							
SCTE	**Santa Cesarea**	**2.26**	**319**	P		**Pn**	**15 40 12.8**	**+0.8**
SCTE	**Santa Cesarea**	**2.26**	**319**			**Pn**	**15 40 12.9**	**+0.8**
LIT	**Litokhoron**	**2.35**	**43**	P		**Pb**	**15 40 15.5**	**-1.6**
LIT	**Litokhoron**	**2.35**	**43**	P		**Pn**	**15 40 14.8**	**+1.4**
LIT	**Litokhoron**	**2.35**	**43**			**Pb**	**15 40 15.5**	**-1.6**
NEO	**Neokhori**	**2.38**	**67**	P		**Pn**	**15 40 15.2**	**+1.4**
NEO				AML	AML		15 40 59.9	
	comp=N,2572µm,1.0s							
NEO				AML	AML		15 41 02.4	
	comp=E,2308µm,1.0s							
XOR	**Xorichti**	**2.38**	**65**	P		**Pn**	**15 40 15.2**	**+1.5**
DID	**Didima**	**2.40**	**111**	P		**Pn**	**15 40 15.5**	**+1.4**
FNA	**Florina**	**2.50**	**17**	P		**Pn**	**15 40 17.3**	**+1.8**
FNA	**Florina**	**2.50**	**17**	P		**Pb**	**15 40 17.6**	**-2.1**
FNA	**Florina**	**2.50**	**17**			**Pn**	**15 40 17.3**	**+1.8**
MRKA	**Markates**	**2.51**	**82**	P		**Pn**	**15 40 16.8**	**+1.2**
SKIA	**Skiathos**	**2.51**	**71**	P		**Pn**	**15 40 17.1**	**+1.6**
VLI	**Veliai**	**2.61**	**129**	P		**Pn**	**15 40 18.3**	**+1.4**
ATH	**Athens Observa**	**2.64**	**98**	P		**Pn**	**15 40 19.0**	**+1.7**
VLY	**Voula,Athens**	**2.72**	**100**	P		**Pn**	**15 40 20.1**	**+1.6**
OHR	**Ohrid**	**2.73**	**6**	*e*Pn		**Pb**	**15 40 21.9**	**-1.7**
OHR				*e*Sn		**Sb**	**15 40 55.4**	**-1.9**
PTL	**Penteli**	**2.74**	**96**	P		**Pn**	**15 40 19.8**	**+1.0**
EREA	**Eretria**	**2.76**	**88**	P		**Pn**	**15 40 20.7**	**+1.6**
AOS	**Alonnisos**	**2.82**	**73**	P		**Pn**	**15 40 21.1**	**+1.3**
TIP	**Timpagrande**	**2.96**	**287**	P		**Pn**	**15 40 24.1**	**+2.2**
TIP	**Timpagrande**	**2.96**	**287**	⇓P		**Pn**	**15 40 23.8**	**+1.9**
TIP	**Timpagrande**	**2.96**	**287**			**Pn**	**15 40 23.4**	**+1.5**
PAIG	**Paliouri**	**2.97**	**58**	P		**Pn**	**15 40 22.8**	**+1.0**
TIR	**Tirane**	**2.98**	**352**	P		**Pn**	**15 40 23.7**	**+1.7**
TIR	**Tirane**	**2.98**	**352**	*i* PN		**Pn**	**15 40 23.7**	**+1.7**
TIR				*i* SN		**Sb**	**15 41 05.0**	**+0.6**
TIR	**Tirane**	**2.98**	**352**	⇓P		**Pn**	**15 40 22.5**	**+0.4**
TIR	**Tirane**	**2.98**	**352**			**Pn**	**15 40 23.7**	**+1.7**
TIR	**Tirane**	**2.98**	**352**			**Pn**	**15 40 23.7**	**+1.7**
GRG	**Griva**	**2.99**	**30**	P		**Pn**	**15 40 23.9**	**+1.8**
KTHA	**Kythira Island**	**3.00**	**134**	P		**Pn**	**15 40 24.9**	**+2.6**
HORT	**Hortiatis**	**3.03**	**42**	P		**Pn**	**15 40 24.4**	**+1.7**
PLG	**Polygyros**	**3.07**	**49**	P		**Pn**	**15 40 24.4**	**+1.1**
KARY	**Karystos**	**3.19**	**95**	P		**Pn**	**15 40 26.7**	**+1.8**
CGL1	**Ceglie Messapi**	**3.20**	**316**	*e*Pn		**Pn**	**15 40 26.0**	**+0.9**
TAR1	**Taranto**	**3.23**	**312**	*e*Pn		**Pn**	**15 40 26.7**	**+1.3**
PHP	**Peshkopia**	**3.29**	**0**	*i* PN		**Pn**	**15 40 28.3**	**+2.0**
PHP				*i* SN		**Sb**	**15 41 11.1**	**-2.2**
SOH	**Sokhos**	**3.32**	**42**	P		**Pn**	**15 40 28.7**	**+1.9**
KNT	**Kendrikon**	**3.36**	**34**	P		**Pn**	**15 40 28.9**	**+1.6**
VAY	**Valandovo**	**3.36**	**29**	*e*Pn		**Pn**	**15 40 30.1**	**+2.8**
MASS	**Massafra**	**3.38**	**313**	*e*Pn		**Pn**	**15 40 28.2**	**+0.7**
ANKY	**Antikythira Is**	**3.42**	**137**	P		**Pn**	**15 40 29.9**	**+1.9**
SERI	**Serifos**	**3.45**	**110**	P		**Pn**	**15 40 29.7**	**+1.2**
NOCI	**Noci**	**3.52**	**314**	P		**Pn**	**15 40 30.4**	**+0.9**
CEL	**Celeste**	**3.56**	**269**			**Pn**	**15 40 30.9**	**+0.9**
STIP	**Stip**	**3.57**	**22**	*e*Pn		**Pb**	**15 40 34.7**	**-3.2**
MATE	**Matera**	**3.65**	**309**	⇓P		**Pn**	**15 40 32.3**	**+1.1**
SKO	**Skopje**	**3.66**	**12**	*e*Pn		**Pn**	**15 40 33.1**	**+1.7**
SKO				*e*Sn		**Sn**	**15 41 16.1**	**+1.5**
PUK	**Puka**	**3.67**	**354**	*i* PN		**Pb**	**15 40 40.3**	**+0.7**
PUK				*i* SN		**Sb**	**15 41 19.3**	**-4.9**
ULC	**Ulcinj**	**3.68**	**346**	⇑*i* Pn		**Pn**	**15 40 31.4**	**-0.2**
ULC				*e*Sn		**Sn**	**15 41 14.8**	**-0.3**
SG1	**Sgolgore (BA)**	**3.78**	**311**	*e*Pn		**Pn**	**15 40 34.0**	**+0.9**
BAI	**Bari**	**3.84**	**316**	*e*Pn		**Pn**	**15 40 34.7**	**+0.8**
DRME	**Dracevica, Mon**	**3.91**	**346**	*e*Pn		**Pn**	**15 40 31.8**	**-2.9**
DRME	**Dracevica, Mon**	**3.91**	**346**	⇓*i* Pn		**Pn**	**15 40 34.0**	**-0.7**
DRME				*e*Sn		**Sn**	**15 41 20.5**	**-0.1**
BCI	**Bajram Curri**	**3.98**	**356**	*i* PN		**Pn**	**15 40 37.5**	**+1.8**
BCI				*i* SN		**Sb**	**15 41 30.7**	**-2.4**
BUM	**Brajici-Budva**	**4.07**	**344**	*e*Pn		**Pn**	**15 40 36.3**	**-0.8**
BUM				*e*Sn		**Sn**	**15 41 24.5**	**-0.4**
PDG	**Podgorica**	**4.13**	**348**	⇓P		**Pn**	**15 40 38.3**	**+0.5**
PDG	**Podgorica**	**4.13**	**348**	⇓S		**Sn**	**15 41 25.3**	**-0.9**
PDG	**Podgorica**	**4.13**	**348**	*e*Pn		**Pn**	**15 40 37.5**	**-0.2**
PDG	**Podgorica**	**4.13**	**348**			**Pn**	**15 40 38.4**	**+0.5**
TTG	**Podgorica**	**4.13**	**348**	*e*Pn		**Pn**	**15 40 37.6**	**-0.2**
TTG				*e*Sn		**Sn**	**15 41 25.6**	**-0.5**
ACER	**Acerenza**	**4.20**	**306**			**Pn**	**15 40 39.2**	**+0.3**
PVY	**Plav**	**4.21**	**355**	*e*Pn		**Pn**	**15 40 39.0**	**-0.1**
PVY				*e*Sn		**Sn**	**15 41 28.6**	**+0.2**
APE	**Apeiranthos**	**4.27**	**106**	⇓P		**Pb**	**15 40 47.2**	**-2.6**
CEME	**Cevo**	**4.30**	**345**	⇓*i* Pn		**Pn**	**15 40 39.5**	**-0.8**
CEME				*i* Sn		**Sn**	**15 41 30.0**	**-0.6**
HCY	**Herceg Novi**	**4.31**	**341**	*e*Pn		**Pn**	**15 40 39.6**	**-0.7**
HCY	**Herceg Novi**	**4.31**	**341**	⇑*i* Pn		**Pn**	**15 40 39.4**	**-0.9**
HCY				*i* Sn		**Sn**	**15 41 29.8**	**-0.8**
IVA	**Berane**	**4.49**	**355**	*e*Pn		**Pn**	**15 40 42.8**	**-0.1**
IVA				*e*Sn		**Sn**	**15 41 34.7**	**-0.5**
KOME	**Kolasin**	**4.51**	**352**	*e*Pn		**Pn**	**15 40 43.7**	**+0.6**
KOME				*e*Sn		**Sn**	**15 41 35.3**	**-0.3**
NKME	**Niksic**	**4.51**	**346**	⇓*i* Pn		**Pn**	**15 40 42.9**	**-0.2**
NKME				*i* Sn		**Sn**	**15 41 34.9**	**-0.7**
NKY	**Niksic**	**4.55**	**347**	⇓*i* Pn		**Pn**	**15 40 43.4**	**-0.3**
NKY				*i* Sn		**Sn**	**15 41 35.7**	**-0.9**
TREB	**Trebinje**	**4.60**	**341**	*e*Pn		**Pn**	**15 40 43.6**	**-0.6**
DBRK	**Dubrovnik**	**4.61**	**339**	*i* Pn		**Pn**	**15 40 43.8**	**-0.6**
DBRK				Sn		**Sn**	**15 41 36.6**	**-1.4**
BRY	**Bratogost**	**4.72**	**343**	*e*Pn		**Pn**	**15 40 45.5**	**-0.7**
BRY	**Bratogost**	**4.72**	**343**	*e*Pn		**Pn**	**15 40 45.4**	**-0.7**
BRY				*e*Sn		**Sn**	**15 41 39.7**	**-1.4**
VTS	**Vitosha**	**4.74**	**26**	P		**Pn**	**15 40 48.0**	**+1.7**
VTS	**Vitosha**	**4.74**	**26**	⇑P		**Pn**	**15 40 47.8**	**+1.5**
VTS	**Vitosha**	**4.74**	**26**			**Pn**	**15 40 48.0**	**+1.7**
IDI	**Anoyia**	**4.74**	**129**	Pn		**Pn**	**15 40 48.1**	**+1.8**
	comp=E,1.6nm,0.3s,baz=292,slow=13,SNR=11							
IDI				Sn		**Sn**	**15 41 43.9**	**+2.5**
	comp=E,6.1nm,0.3s,baz=139,slow=19,SNR=4.9							
IDI				LR		LR	15 43 10.5	
	comp=E,530nm,18.5s,baz=298,slow=46							
VAE	**Valguarnera**	**4.83**	**261**	Pn		**Pn**	**15 40 48.0**	**+0.4**
	comp=E,2.6nm,0.3s,baz=135,slow=13,SNR=3.5							
VAE				Sn		**Sn**	**15 41 46.6**	**+3.0**
	comp=E,11nm,0.3s,baz=197,slow=12,SNR=4.9							
SGRT	**San Giovanni R**	**4.91**	**315**			**Pn**	**15 40 49.2**	**+0.6**
STON	**Ston**	**4.93**	**336**	*e*Pn		**Pn**	**15 40 47.8**	**-1.0**
STON	**Ston**	**4.93**	**336**

ARSA	**Arzberg**	**9.55**	**340**	*e*Pn	**Pn**	**15 41 50.9**	**-1.4**
ARSA				*e*Sn	**Sn**	**15 43 34.8**	**-4.8**
ARSA	**Arzberg**	**9.55**	**340**	*i* Pn	**Pn**	**15 41 51.0**	**-1.2**
	comp=E,3.8nm,0.4s						
ARSA				*e*Sn	**Sn**	**15 43 33.7**	**-5.9**
	comp=E,3.6nm,0.5s						
MYKA	**Terra Mystica**	**9.63**	**331**	*e*Pn	**Pn**	**15 41 53.1**	**-0.2**
	comp=E,4.6nm,0.4s						
MYKA				*e*Sn	**Sn**	**15 43 35.9**	**-5.6**
	comp=E,8.0nm,0.5s						
STAL	**STALIGIAL**	**9.71**	**327**	Pn	**Pn**	**15 41 54.4**	**0.0**
CTI	**Castel Tesino**	**10.03**	**322**	P	**Pn**	**15 41 58.4**	**-0.5**
CTI	**Castel Tesino**	**10.03**	**322**		**Pn**	**15 41 58.4**	**-0.5**
CONA	**Conrad Observa**	**10.09**	**342**	*e*Pn	**Pn**	**15 42 00.3**	**+0.6**
	comp=E,1.3nm,0.4s						
CONA				*e*Sn	**Sn**	**15 43 49.8**	**-3.2**
	comp=E,5.3nm,0.4s						
KBA	**Koelnbreinsper**	**10.11**	**331**	*e*Pn	**Pn**	**15 42 00.7**	**+0.6**
KBA				*e*Sn	**Sn**	**15 43 48.8**	**-4.8**
KBA	**Koelnbreinsper**	**10.11**	**331**	*e*Pn	**Pn**	**15 42 00.1**	**0.0**
	comp=E,4.7nm,0.5s						
KBA				*e*Sn	**Sn**	**15 43 48.8**	**-4.8**
	comp=E,5.6nm,0.3s						
VYHS	**Vyhne**	**10.16**	**354**	*e*P	**Pn**	**15 42 00.5**	**-0.1**
VYHS				*e*		15 43 48.9	
VYHS	**Vyhne**	**10.16**	**354**	*e*PN	**Pn**	**15 42 00.5**	**-0.1**
VYHS				*e*SN	**Sn**	**15 43 48.9**	**-5.7**
MODS	**Modra-Piesok**	**10.23**	**348**	*e*SN	**Sn**	**15 43 49.9**	**-6.4**
BRTR	**Keskin Array B**	**10.37**	**79**	Pn	**Pn**	**15 42 06.3**	**+2.6**
	comp=E,0.3nm,0.3s,baz=260,slow=12,SNR=9.1						
BRTR				LR	LR	15 47 06.0	
	comp=E,81nm,18.7s,baz=244,slow=44						
MOA	**Molln**	**10.46**	**337**	*e*Pn	**Pn**	**15 42 04.8**	**+0.1**
MOA				*e*Sn	**Sn**	**15 43 56.9**	**-5.0**
MOA	**Molln**	**10.46**	**337**	*e*Pn	**Pn**	**15 42 04.6**	**-0.1**
	comp=E,6.0nm,0.3s,SNR=9.7						
MOA				*e*Sn	**Sn**	**15 43 58.2**	**-3.7**
	comp=E,3.2nm,0.3s						
RJOB	**Jochberg**	**10.87**	**332**	*e*Pn	**Pn**	**15 42 10.5**	**+0.2**
RJOB				*e*Sn	**Sn**	**15 44 06.0**	**-6.0**
WTTA	**Wattenberg**	**10.95**	**327**	*e*Pn	**Pn**	**15 42 12.1**	**+0.5**
WTTA				*e*Sn	**Sn**	**15 44 11.1**	**-3.2**
WTTA	**Wattenberg**	**10.95**	**327**	*e*Pn	**Pn**	**15 42 12.9**	**+1.3**
	comp=E,8.3nm,0.4s						
WTTA				Sn	**Sn**	**15 44 11.4**	**-2.8**
	comp=E,25nm,0.6s						
WATA	**Walderalm**	**11.04**	**327**	*e*Pn	**Pn**	**15 42 13.8**	**+1.1**
	comp=E,12nm,0.5s,SNR=5.5						
WATA				*e*Sn	**Sn**	**15 44 14.3**	**-1.9**
	comp=E,15nm,0.8s						
SQTA	**Sankt Quirin**	**11.11**	**326**	*e*Pn	**Pn**	**15 42 15.1**	**+1.5**
	comp=E,6.5nm,0.4s						
SQTA				*e*Sn	**Sn**	**15 44 13.2**	**-4.7**
	comp=E,6.2nm,0.3s						
FUORN	**Ofenpass-Fuorn**	**11.12**	**321**		**Pn**	**15 42 14.4**	**+0.5**
FETA	**Feichten**	**11.18**	**324**	*e*Pn	**Pn**	**15 42 15.8**	**+1.2**
	comp=E,1.5nm,0.3s						
FETA				*e*Sn	**Sn**	**15 44 15.7**	**-4.0**
	comp=E,8.2nm,0.6s						
MOTA	**Moosalm**	**11.25**	**326**	*e*Pn	**Pn**	**15 42 17.1**	**+1.5**
	comp=E,14nm,0.8s,SNR=7.7						
MOTA				*e*Sn	**Sn**	**15 44 19.0**	**-2.4**
	comp=E,14nm,0.6s						
DAVOX	**Davos/Dischmat**	**11.42**	**321**	Pn	**Pn**	**15 42 19.8**	**+1.9**
	comp=E,1.3nm,0.3s,baz=128,slow=22,SNR=6.7						
DAVOX				Sn	**Sn**	**15 44 22.0**	**-3.6**
	comp=E,0.9nm,0.3s,baz=306,slow=19,SNR=3.4						
DAVOX				LR	LR	15 47 33.0	
	comp=E,332nm,21.2s,baz=130,slow=42						
GEC2	**GERESS Array S**	**11.52**	**337**	*e*Pn	**Pn**	**15 42 18.8**	**-0.4**
GEC2				*e*Sn	**Sn**	**15 44 21.6**	**-6.4**
GEC2	**GERESS Array S**	**11.52**	**337**	Pn	**Pn**	**15 42 18.6**	**-0.6**
GERES	**GERESS Array B**	**11.52**	**337**	Pn	**Pn**	**15 42 18.6**	**-0.6**
	comp=E,0.5nm,0.3s,baz=157,slow=14,SNR=15						
GERES				Sn	**Sn**	**15 44 22.1**	**-5.9**
	comp=E,1.2nm,0.3s,baz=152,slow=23,SNR=8.0						
GERES				LR	LR	15 47 56.7	
	comp=E,347nm,19.9s,baz=202,slow=44						
DAVA	**Damuels**	**11.77**	**322**	*e*Sn	**Sn**	**15 44 31.5**	**-2.7**
DAVA	**Damuels**	**11.77**	**322**	*e*Pn	**Pn**	**15 42 23.8**	**+1.1**
	comp=E,1.5nm,0.3s						
DAVA				*e*Sn	**Sn**	**15 44 29.8**	**-4.4**
	comp=E,12nm,0.6s						
KHC	**Kasperske Hory**	**11.81**	**338**	*e*P	**Pn**	**15 42 22.3**	**-0.9**
KHC				*e*		15 44 29.6	
KHC	**Kasperske Hory**	**11.81**	**338**	*e*PN	**Pn**	**15 42 22.3**	**-0.9**
KHC				*e*SN	**Sn**	**15 44 29.6**	**-5.4**
KHC	**Kasperske Hory**	**11.81**	**338**	Pn	**Pn**	**15 42 22.4**	**-0.7**
WET	**Wettzell**	**12.04**	**336**	*e*Pn	**Pn**	**15 42 26.6**	**+0.3**
SENIN	**Lac Senin/Sane**	**12.54**	**314**		**Pn**	**15 42 33.3**	**+0.1**
MMAI	**Mount Meron Ar**	**13.31**	**109**	Pn	**Pn**	**15 42 41.6**	**-2.1**
	comp=E,1.2nm,0.3s,baz=319,slow=15,SNR=2.1						
MOX	**Moxa**	**13.75**	**336**	P	**Pn**	**15 42 49.1**	**-0.5**
MOX	**Moxa**	**13.75**	**336**	*e*Pn	**Pn**	**15 42 50.0**	**+0.3**
AKBB	**Malin Array Si**	**13.80**	**24**	P	**Pn**	**15 42 52.1**	**+1.8**
AKBB	**Malin Array Si**	**13.80**	**24**	Pn	**Pn**	**15 42 52.1**	**+1.8**
EIL	**Elat**	**14.85**	**122**	Pn	**Pn**	**15 43 05.9**	**+1.1**
	comp=E,0.4nm,0.3s,baz=352,slow=17,SNR=3.6						
EIL				Sn	Sn	15 45 36.8	-13
	comp=E,1.2nm,0.3s,baz=72,slow=2.8,SNR=4.7						
EIL				LR	LR	15 51 19.1	
	comp=E,108nm,19.1s,baz=310,slow=48						
SUW	**Suwalki**	**15.74**	**6**	P	**P**	**15 43 20.7**	**+0.4**
SUW				pmax	pmax		
	comp=Z,47nm,1.2s						
SUW	**Suwalki**	**15.74**	**6**	P	**P**	**15 43 20.7**	**+0.4**
SUW				IAmb	IAmb	15 44 00.8	
	comp=Z,47nm,1.2s						
CLF	**Chambon-Foret**	**16.33**	**312**	P	**P**	**15 43 26.5**	**-0.4**
CLF				IAmb	IAmb	15 43 29.5	
	comp=Z,148nm,1.7s						
UCC	**Uccle**	**16.82**	**323**	P	**P**	**15 43 32.0**	**-0.3**
UCC				pmax	pmax		
	comp=Z,29nm,0.5s						
UCC	**Uccle**	**16.82**	**323**		**P**	**15 43 31.9**	**-0.3**
UCC				IAmb	IAmb	15 44 28.8	
	comp=Z,30nm,0.5s						
KBZ	**Khabaz**	**17.75**	**65**	P	**Pn**	**15 43 42.2**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=101,slow=10,SNR=2.5						
GNI	**Garni**	**18.91**	**77**	P	**P**	**15 43 53.9**	**-1.7**
GNI				pmax	pmax		
	comp=Z,26nm,1.2s						
GNI	**Garni**	**18.91**	**77**	P	**P**	**15 43 53.8**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=218,slow=20,SNR=3.1						
GNI				LR	LR	15 52 04.9	
	comp=Z,170nm,20.0s,baz=284,slow=40						
GNI	**Garni**	**18.91**	**77**	IAmb	IAmb	15 43 55.3	
	comp=Z,26nm,1.1s						
ESDC	**Sonseca Array**	**18.97**	**282**	P	**Pn**	**15 43 57.2**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=83,slow=10.0,SNR=3.3						
OBN	**Obninsk**	**19.97**	**28**	*e*P	**P**	**15 44 06.8**	**-0.1**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HFS	**Hagfors**	**22.18**	**351**	P	**P**	**15 44 31.3**	**+0.6**
	comp=Z,4.5nm,0.6s,baz=165,slow=12,SNR=12						
EKA	**Eskdalemuir Ar**	**23.20**	**325**	P	**P**	**15 44 42.1**	**+0.5**
	comp=Z,3.2nm,0.7s,baz=123,slow=7.7,SNR=5.6						
NAO01	**NORSAR Array S**	**23.26**	**348**	P	**P**	**15 44 43.5**	**+1.4**
FINES	**FINESS Array B**	**23.34**	**7**	P	**P**	**15 44 42.4**	**-0.5**
	comp=Z,6.6nm,0.8s,baz=170,slow=10.0,SNR=11						
FINES				LR	LR	15 55 30.4	
	comp=Z,309nm,20.7s,baz=282,slow=41						
NC405	**NORSAR Array S**	**23.39**	**349**	P	**P**	**15 44 42.9**	**-0.5**
NC405				IAmb	IAmb	15 45 38.7	
	comp=Z,118nm,1.8s						
NB201	**NORSAR Array S**	**23.39**	**349**	P	**P**	**15 44 44.8**	**+1.4**
NB2	**NORSAR Subarra**	**23.39**	**349**	P	**P**	**15 44 43.9**	**+0.5**
	comp=Z,6.4nm,1.2s,baz=153,slow=10						
NOA	**NORSAR Array B**	**23.39**	**349**	P	**P**	**15 44 44.0**	**+0.5**
NOA	**NORSAR Array B**	**23.39**	**349**	P	**P**	**15 44 44.0**	**+0.5**
	comp=Z,1.8nm,0.6s,baz=164,slow=11,SNR=4.5						
NOA				LR	LR	15 56 16.1	
	comp=Z,87nm,18.4s,baz=170,slow=43						
NBO00	**NORSAR Array S**	**23.45**	**348**	P	**P**	**15 44 43.2**	**-0.8**
NC303	**NORSAR Array S**	**23.55**	**349**	P	**P**	**15 44 44.9**	**0.0**
NC204	**NORSAR Array S**	**23.69**	**348**	P	**P**	**15 44 46.5**	**+0.1**
NC204				IAmb	IAmb	15 45 07.2	
	comp=Z,156nm,1.9s						
AKTO	**Aktyubinsk**	**29.12**	**53**	P	**P**	**15 45 35.6**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=81,slow=15,SNR=3.9						
AKTO				LR	LR	15 58 11.7	
	comp=Z,111nm,19.8s,baz=318,slow=38						
GEYT	**Alibeck**	**29.52**	**79**	P	**P**	**15 45 39.4**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=263,slow=9.9,SNR=4.9						
GEYT	**Alibeck**	**29.52**	**79**	IAmb	IAmb	15 45 43.9	
	comp=Z,1.4nm,0.6s						

APA	**Apatity**	**30.12**	**10**	*i*P	P	15 45 37.1	-7.1
APA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
APA				MLR	MLR		
	comp=Z,2μm,16.0s						
TORD	**Torodi Ar. Bea**	**30.14**	**219**	P	**P**	**15 45 45.5**	**+0.6**
	comp=Z,1.5nm,0.9s,baz=33,slow=9.0,SNR=6.1						
ARU	**Arti**	**30.96**	**42**	LR	LR	15 59 17.6	
	comp=Z,96nm,19.6s,baz=281,slow=38						
ARCES	**ARCESS Array B**	**31.32**	**3**	P	**P**	**15 45 54.9**	**+0.1**
	comp=Z,5.3nm,1.1s,baz=185,slow=11,SNR=5.1						
BRVK	**Borovoye**	**36.98**	**50**	P	**P**	**15 46 44.6**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
BRVK	**Borovoye**	**36.98**	**50**	P	**P**	**15 46 44.6**	**+0.6**
BRVK				IAmb	IAmb	15 46 53.1	
	comp=Z,6.5nm,1.4s						
KK31	**Karatay Array**	**37.79**	**66**	P	**P**	**15 46 50.8**	**-0.2**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KK31	**Karatay Array**	**37.79**	**66**	P	**P**	**15 46 50.8**	**-0.2**
KKAR	**Karatay Array**	**37.79**	**66**	P	**P**	**15 46 50.8**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	**Karatay Array**	**37.79**	**66**	P	**P**	**15 46 50.8**	**-0.2**
DBIC	**Dimbokro**	**38.99**	**222**	P	**P**	**15 47 02.5**	**+1.2**
	comp=Z,1.5nm,0.6s,baz=38,slow=12,SNR=2.4						
DBIC	**Dimbokro**	**38.99**	**222**	IAmb	IAmb	15 48 05.2	
	comp=Z,21nm,1.8s						
AAK	**Ala-Archa**	**40.75**	**66**	P	**P**	**15 47 16.4**	**+0.5**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.8s						
AAK	**Ala-Archa**	**40.75**	**66**	P	**P**	**15 47 16.4**	**+0.5**
KSH	**Kashi**	**42.63**	**70**	P	**P**	**15 47 32.8**	**+1.4**
KSH				sP	sP	15 47 42.5	+6.8
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,540nm,6.6s						
MK31	**Makanchi Array**	**45.26**	**59**	P	**P**	**15 47 51.3**	**-1.0**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**45.26**	**59**	P	**P**	**15 47 51.3**	**-1.0**
MKAR	**Makanchi Array**	**45.26**	**59**	P	**P**	**15 47 51.7**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=275,slow=7.8,SNR=16						
MKAR				LR	LR	16 10 46.8	
	comp=Z,131nm,18.5s,baz=313,slow=41						
ZAA0	**Zalesovo Array**	**45.61**	**48**	P	**P**	**15 47 54.0**	**-0.8**
ZAA0				IAmb	IAmb	15 47 54.9	
	comp=Z,3.9nm,0.7s						
ZALV	**Zalesovo Beam**	**45.61**	**48**	P	**P**	**15 47 54.4**	**-0.5**
	comp=Z,3.8nm,0.5s,baz=276,slow=8.6,SNR=13						
WMQ	**Urumqi**	**49.73**	**61**	*e*P	**P**	**15 48 29.8**	**+2.7**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,33nm,6.5s						
TSUM	**Tsumeb**	**57.35**	**183**	LR	LR	16 14 56.3	
	comp=Z,62nm,18.6s,baz=331,slow=37						
SONM	**Songino Array**	**60.39**	**51**	P	**P**	**15 49 43.8**	**-0.4**
SONM				pmax	pmax		
	comp=Z,3.0nm,1.5s						
SONM	**Songino Array**	**60.39**	**51**	P	**P**	**15 49 43.7**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=271,slow=8.8,SNR=3.8						
SONM				LR	LR	16 19 48.1	
	comp=Z,130nm,18.1s,baz=334,slow=40						
HHC	**Hu-ho-hao-te**	**66.98**	**55**	*e*P	**P**	**15 50 29.0**	**+1.2**
HHC				pmax	pmax		
	comp=Z,2.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,6.2s						
CMAR	**Chiang Mai Arr**	**69.94**	**82**	P	**P**	**15 50 45.5**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=300,slow=8.2,SNR=5.5						
YKA	**Yellowknife Ar**	**73.16**	**340**	P	**P**	**15 51 06.6**	**+1.5**
	comp=Z,0.4nm,0.8s,baz=33,slow=4.9,SNR=4.2						
KLR	**Kul'dur**	**73.76**	**39**	P	**P**	**15 51 08.8**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=338,slow=6.8,SNR=6.1						
WHN	**Wuhan**	**74.56**	**63**	P	**P**	**15 51 12.0**	**-1.9**
NJ2	**Nanjing**	**76.78**	**60**	*e*P	**P**	**15 51 27.3**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ASAR	**Alice Springs**	**122.28**	**96**	PKP	**PKPdf**	**15 58 30.2**	**0.0**
	comp=Z,0.4nm,0.8s,baz=306,slow=2.2,SNR=3.5						

*IDC **27** 15:41:37.1±2.0, 19.°83S×177.°47W, h540km±23km, mb3.7/6, mb1 3.8/9, mb1mx3.2/39, mbtmp4.6/9, Error ellipse: s-maj=30.6km s-min=19.6km az=144.0*
*NEIC **27** 15:41:38.0±1.8, 19.°7S±0.°1×177.°5W±0.°1, h563km±10km, mb4.8/40, Error ellipse: s-maj=19.3km s-min=11.9km az=130.0*

ISC 27 15:41:37.2±0.6, **19.°6S**±0.°1×**177.°44W**±0.°09, **h550**km, **n57**, σ1§**17**/58, **mb4.7**/23, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.67**	**293**	P	**P**	**15 43 06.7**	**+2.2**
NIUE	**Niue**	**7.12**	**87**	P	**P**	**15 43 28.9**	**+2.5**
AFI	**Afiamalu**	**7.86**	**44**	P	**P**	**15 43 34.6**	**+0.8**
	3.4nm,0.3s,baz=124,slow=4.9,SNR=6.4						
AFI				S	**S**	**15 45 06.2**	**-3.1**
	3.8nm,0.3s,baz=35,slow=24,SNR=9.5						
AFI	**Afiamalu**	**7.86**	**44**	P	**P**	**15 43 34.3**	**+0.5**
SANVU	**Saraoutou**	**15.22**	**283**	P	**P**	**15 44 50.5**	**+1.5**
SANVU				IAmb	IAmb	15 45 19.6	
	comp=Z,18nm,0.8s						
DZM	**Mont Dzumac**	**15.26**	**258**	P	**P**	**15 44 50.3**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=152,slow=12,SNR=3.0						
DZM	**Mont Dzumac**	**15.26**	**258**	P	**P**	**15 44 49.6**	**+0.1**
DZM				IAmb	IAmb	15 44 53.7	
	comp=Z,40nm,1.2s						
OUZ	**Omahuta**	**17.43**	**205**	P	**P**	**15 45 11.7**	**+2.0**
URZ	**Urewera**	**19.16**	**193**	P	**P**	**15 45 24.0**	**-1.5**
	comp=Z,1.5nm,0.3s,baz=283,slow=3.1,SNR=8.9						
URZ	**Urewera**	**19.16**	**193**	IAmb	IAmb	15 45 26.5	
	comp=Z,122nm,1.8s						
BKZ	**Black Stump Fm**	**20.16**	**194**	P	**P**	**15 45 32.4**	**-2.2**
BKZ				IAmb	IAmb	15 46 10.1	
	comp=Z,64nm,1.6s						
QRZ	**Quartz Range**	**22.80**	**200**	P	**P**	**15 45 57.6**	**-0.7**
NNZ	**Nelson**	**22.89**	**198**	P	**P**	**15 45 58.3**	**-0.8**
TUWZ	**Tuamarina**	**22.93**	**197**	P	**P**	**15 45 58.7**	**-0.8**
THZ	**Tophouse**	**23.54**	**198**	P	**P**	**15 46 04.0**	**-0.8**
KHZ	**Kahutara**	**23.96**	**197**	P	**P**	**15 46 07.5**	**-1.0**
KHZ				IAmb	IAmb	15 46 33.8	
	comp=Z,73nm,1.5s						
LTZ	**Lake Taylor**	**24.66**	**198**	P	**P**	**15 46 12.8**	**-2.0**
OXZ	**Oxford**	**25.22**	**198**	P	**P**	**15 46 18.2**	**-1.5**
OXZ				IAmb	IAmb	15 46 22.5	
	comp=Z,33nm,1.4s						
MQZ	**McQueen's Vall**	**25.40**	**197**	P	**P**	**15 46 19.9**	**-1.3**
MQZ				IAmb	IAmb	15 46 56.4	
	comp=Z,81nm,1.7s						
FOZ	**Fox Glacier**	**26.12**	**201**	P	**P**	**15 46 26.9**	**-0.7**
FOZ				IAmb	IAmb	15 46 33.2	
	comp=Z,67nm,1.3s						
WHZ	**Wether Hill Ro**	**28.83**	**201**	P	**P**	**15 46 52.4**	**+1.1**
WHZ				IAmb	IAmb	15 47 43.8	
	comp=Z,44nm,1.5s						
ARMA	**Armidale**	**29.92**	**243**	P	**P**	**15 47 01.5**	**+0.3**
ARMA				IAmb	IAmb	15 48 17.3	
	comp=Z,31nm,1.4s						
CAN	**Canberra**	**33.43**	**235**	P	**P**	**15 47 30.8**	**-0.1**
CAN				IAmb	IAmb	15 47 53.8	
	comp=Z,52nm,1.6s						
CTA	**Charters Tower**	**34.10**	**263**	P	**P**	**15 47 36.6**	**-0.2**
	comp=Z,15nm,0.4s,baz=90,slow=10,SNR=51						
CTAO	**Charters Tower**	**34.10**	**263**	P	**P**	**15 47 36.7**	**0.0**
CTAO				IAmb	IAmb	15 47 37.0	
	comp=Z,18nm,0.5s						
TOO	**Toolangi**	**36.83**	**233**	P	**P**	**15 47 58.7**	**-0.5**
COEN	**Coen**	**38.06**	**272**	P	**P**	**15 48 09.4**	**-0.1**
COEN				IAmb	IAmb	15 48 10.2	
	comp=Z,15nm,0.9s						
STKA	**Stephens Creek**	**38.64**	**243**	P	**P**	**15 48 13.8**	**-0.1**
	comp=Z,2.5nm,0.5s,baz=85,slow=11,SNR=9.9						
STKA	**Stephens Creek**	**38.64**	**243**	P	**P**	**15 48 13.7**	**-0.2**
BBOO	**Buckleboo**	**43.40**	**243**	P	**P**	**15 48 51.2**	**-0.5**
BBOO				IAmb	IAmb	15 48 52.0	
	comp=Z,15nm,0.6s						
JAY	**Jayapura**	**44.28**	**287**	P	**P**	**15 48 59.5**	**+0.8**
	comp=Z,17nm,0.7s,baz=128,slow=19,SNR=2.7						
WR0	**Warramunga Arr**	**45.05**	**261**	P	**P**	**15 49 03.7**	**-1.0**
WB0	**Warramunga Arr**	**45.22**	**261**	P	**P**	**15 49 04.5**	**-1.4**
AS31	**Alice Springs**	**45.23**	**256**	P	**P**	**15 49 05.2**	**-0.8**

ASAR	**Alice Springs**	**45.23**	**256**	P	**P**	**15 49 05.5**	**-0.5**
	comp=Z,8.5nm,0.7s,baz=87,slow=7.9,SNR=175						
ASAR				PcP	**PcP**	**15 50 34.4**	**0.0**
	comp=Z,0.8nm,0.7s,baz=102,slow=4.3,SNR=3.8						
ASAR	**Alice Springs**	**45.23**	**256**	P	**P**	**15 49 05.0**	**-1.0**
WB2	**Warramunga Arr**	**45.23**	**261**	P	**P**	**15 49 04.9**	**-1.1**
WB2				IAmb	IAmb	15 49 06.4	
	comp=Z,33nm,1.4s						
WRAB	**Tennant Creek**	**45.24**	**261**	P	**P**	**15 49 04.8**	**-1.2**
WRA	**Warramunga Arr**	**45.24**	**261**	P	**P**	**15 49 05.2**	**-1.0**
	comp=Z,3.1nm,0.3s,baz=98,slow=7.9,SNR=51						
WRA	**Warramunga Arr**	**45.24**	**261**	P	**P**	**15 49 04.6**	**-1.5**
MTN	**Manton Dam**	**49.68**	**270**	P	**P**	**15 49 38.4**	**-1.0**
MTN				IAmb	IAmb	15 50 05.9	
	comp=Z,55nm,1.6s						
FORT	**Forrest**	**50.12**	**246**	P	**P**	**15 49 41.1**	**-1.2**
FORT				IAmb	IAmb	15 49 42.1	
	comp=Z,18nm,0.7s						
KNRA	**Kununurra**	**51.24**	**265**	P	**P**	**15 49 50.1**	**-0.7**
KNRA				IAmb	IAmb	15 50 05.7	
	comp=Z,68nm,1.9s						
SOEI	**Soe**	**57.00**	**271**	P	**P**	**15 50 31.8**	**+0.3**
SOEI				IAmb	IAmb	15 51 23.0	
	comp=Z,46nm,1.1s						
PSA00	**Pilbara Seismi**	**58.38**	**256**	P	**P**	**15 50 39.7**	**-0.8**
MORW	**Morawa**	**60.64**	**247**	P	**P**	**15 50 54.8**	**-0.7**
MORW				IAmb	IAmb	15 51 11.1	
	comp=Z,97nm,2.0s						
JAGI	**Jajag, Banyuwa**	**66.92**	**269**	P	**P**	**15 51 34.1**	**-1.6**
JAGI				IAmb	IAmb	15 51 47.0	
	comp=Z,113nm,1.9s						
KKM	**Kota Kinabalu**	**70.05**	**284**	P	**P**	**15 51 54.9**	**+0.1**
KKM				IAmb	IAmb	15 52 45.3	
	comp=Z,26nm,1.1s						
QSPA	**South Pole Qui**	**70.43**	**180**	P	**P**	**15 51 57.5**	**+1.3**
UGM	**Wanagama**	**70.51**	**268**	P	**P**	**15 51 57.0**	**-0.5**
SSLB	**Suanglung**	**73.94**	**303**	P	**P**	**15 52 16.2**	**-0.8**
TPUB	**Ta-pu**	**73.95**	**302**	P	**P**	**15 52 16.4**	**-0.8**
YHNB	**Yeheng**	**74.05**	**304**	P	**P**	**15 52 16.7**	**-1.0**
CMAR	**Chiang Mai Arr**	**90.32**	**289**	P	**P**	**15 53 42.1**	**+1.8**
	comp=Z,1.0nm,0.8s,baz=116,slow=2.8,SNR=8.2						
BRTR	**Keskin Array B**	**146.63**	**314**	PKPbc	**PKPbc**	**16 00 18.0**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=161,slow=5.0,SNR=5.6						
GERES	**GERESS Array B**	**149.50**	**345**	PKPbc	**PKiKP**	**16 00 25.8**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=45,slow=3.1,SNR=5.6						
GERES	**GERESS Array B**	**149.50**	**345**		**PKiKP**	**16 00 25.4**	**-0.1**

*THE **27** 15:42:44.9, 38.°39N×20.°47E, h3km±4km, ML3.3/5, Error ellipse: s-maj=4.4km s-min=0.3km az=91.0*
*IDC **27** 15:42:44.4±20.0, 38.°31N±20.°55E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.3/41, mbtmp3.7/4, Error ellipse: s-maj=374.6km s-min=44.2km az=39.0*
*ATH **27** 15:42:44.6, 38.°39N×20.°48E, h1§1km±2km, ML3.4/9, Error ellipse: s-maj=2.4km s-min=0.7km az=283.0*

ISC 27 15:42:45.4±1.0, **38.°39N**±0.°02×**20.°51E**±0.°04, **h6**km±6km, **n32**, σ0§**58**/49, **mb3.7**/4, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.08**	**30**	P	**Pg**	**15 42 47.0**	**-0.3**
FSK				S	**Sg**	**15 42 48.6**	**-0.1**
	31μm,0.1s						
FSK	**Fiskardo**	**0.08**	**30**	P	**Pg**	**15 42 47.0**	**-0.3**
FSK				S	**Sg**	**15 42 49.0**	**+0.3**
ARG2	**Argostoli**	**0.21**	**185**	P	**Pg**	**15 42 49.2**	**-0.3**
ARG2				S	**Sg**	**15 42 52.0**	**-0.3**
VLS	**Valsamata**	**0.22**	**163**	P	**Pg**	**15 42 49.3**	**-0.4**
VLS	**Valsamata**	**0.22**	**163**	P	**Pg**	**15 42 49.3**	**-0.4**
VLS				S	**Sg**	**15 42 53.2**	**+0.6**
VLS				AML	AML	15 42 53.7	
	com

ellipse: s-maj=3.0km s-min=0.8km az=276.0

ISC 27 15:44:15.5±0.9, 38°40N±0″02×20°49E±0″05, h10km±5km, n31, σ0§52/46, mb3.7/4, Geocace

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.09**	**46**	P	**Pg**	**15 44 17.9**	**0.0**
FSK				S	**Sg**	**15 44 19.3**	**-0.4**
	25μm,0.2s						
FSK	**Fiskardo**	**0.09**	**46**	P	**Pg**	**15 44 17.9**	**0.0**
FSK				S	**Sg**	**15 44 19.6**	**-0.1**
ARG2	**Argostoli**	**0.22**	**179**	P	**Pg**	**15 44 20.1**	**0.0**
ARG2				S	**Sg**	**15 44 23.3**	**+0.1**
VLS	**Valsamata**	**0.24**	**160**	P	**Pg**	**15 44 20.3**	**-0.1**
VLS				S	**Sg**	**15 44 24.1**	**+0.4**
	13μm,0.3s						
VLS	**Valsamata**	**0.24**	**160**	P	**Pg**	**15 44 20.3**	**-0.1**
VLS				S	**Sg**	**15 44 23.9**	**+0.2**
VLS				AML	AML	15 44 24.4	
	comp=E,25430μm,0.3s						
VLS				AML	AML	15 44 24.6	
	comp=N,24186μm,0.4s						
EVGI	**Lefkada island**	**0.26**	**31**	P	**Pg**	**15 44 21.0**	**+0.2**
EVGI				S	**Sg**	**15 44 25.0**	**+0.7**
EVGI	**Lefkada island**	**0.26**	**31**	P	**Pg**	**15 44 21.0**	**+0.2**
KFL	**Anninata**	**0.38**	**140**	P	**Pg**	**15 44 22.9**	**-0.1**
KFL				S	**Sg**	**15 44 28.9**	**+1.0**
	comp=N,8μm,0.4s						
KFL	**Anninata**	**0.38**	**140**	P	**Pg**	**15 44 22.9**	**-0.1**
KFL				S	**Sg**	**15 44 28.4**	**+0.4**
KFL				AML	AML	15 44 29.9	
	comp=E,21213μm,0.3s						
KFL				AML	AML	15 44 32.8	
	comp=N,16596μm,0.3s						
LKD2	**Lefkada island**	**0.41**	**19**	P	**Pg**	**15 44 23.5**	**-0.1**
LKD2				S	**Sg**	**15 44 29.9**	**+0.8**
	comp=N,3μm,0.6s						
LKD2	**Lefkada island**	**0.41**	**19**	P	**Pg**	**15 44 23.5**	**-0.1**
LKD2				S	**Sg**	**15 44 29.1**	**0.0**
LKD2				AML	AML	15 44 32.5	
	comp=E,6597μm,0.3s						
LKD2				AML	AML	15 44 37.1	
	comp=N,6940μm,0.4s						
TSLK	**Tsoukalades, L**	**0.44**	**17**	P	**Pg**	**15 44 24.3**	**+0.1**
TSLK				S	**Sg**	**15 44 30.7**	**+0.6**
	comp=N,5μm,0.4s						
TSLK	**Tsoukalades, L**	**0.44**	**17**	P	**Pg**	**15 44 24.3**	**+0.1**
TSLK				S	**Sg**	**15 44 29.8**	**-0.4**
TSLK				AML	AML	15 44 32.9	
	comp=E,7799μm,0.4s						
TSLK				AML	AML	15 44 32.9	
	comp=N,10651μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.54**	**165**	P	**Pg**	**15 44 25.8**	**-0.3**
VLMS				S	**Sg**	**15 44 33.9**	**+0.7**
VLMS				AML	AML	15 44 35.7	
	comp=E,17875μm,0.2s						
VLMS				AML	AML	15 44 38.1	
	comp=N,27183μm,0.3s						
PDO	**Prodromos**	**0.58**	**70**	P	**Pg**	**15 44 26.8**	**0.0**
PDO	**Prodromos**	**0.58**	**70**	P	**Pg**	**15 44 26.9**	**0.0**
ZAK2	**Zakynthos**	**0.69**	**152**	P	**Pg**	**15 44 28.7**	**-0.2**
PVO	**Paravola**	**0.84**	**75**	P	**Pg**	**15 44 31.9**	**+0.1**
PVO	**Paravola**	**0.84**	**75**	P	**Pg**	**15 44 31.9**	**+0.1**
PVO				S	**Sg**	**15 44 43.2**	**+0.4**
PVO				AML	AML	15 44 51.1	
	comp=N,6358μm,0.5s						
RLS	**Riolos of Patr**	**0.85**	**114**	P	**Pg**	**15 44 31.6**	**-0.2**
RLS				S	**Sg**	**15 44 43.5**	**+0.6**
RLS				AML	AML	15 44 51.2	
	comp=E,1750μm,0.6s						
RLS				AML	AML	15 44 53.4	
	comp=N,1973μm,0.7s						
DRO	**Drossia**	**1.06**	**114**	P	**Pg**	**15 44 35.6**	**-0.3**
DRO				S	**Sg**	**15 44 50.4**	**+0.6**
DRO				AML	AML	15 44 57.7	
	comp=E,4744μm,0.3s						
DRO				AML	AML	15 44 58.1	
	comp=N,4855μm,0.5s						
EFP	**Efpalio**	**1.12**	**88**	P	**Pg**	**15 44 36.1**	**-0.9**
ANX	**Ano Chora**	**1.14**	**80**	P	**Pg**	**15 44 37.0**	**-0.5**
SERG	**Sergoula**	**1.23**	**89**	P	**Pg**	**15 44 38.1**	**-1.1**
AMT	**Artemida-Makis**	**1.30**	**131**	P	**Pn**	**15 44 39.8**	**0.0**
GERES	**GERESS Array B**	**11.53**	**337**	Pn	**Pn**	**15 46 59.1**	**-1.1**
	comp=N,0.2nm,0.3s,baz=161,slow=12,SNR=2.2						
OBN	**Obninsk**	**19.94**	**28**	LR	LR	15 57 07.6	
	comp=N,136nm,21.7s,baz=290,slow=37						
HFS	**Hagfors**	**22.18**	**351**	P	**P**	**15 49 11.8**	**+0.3**
	comp=N,3.6nm,1.0s,baz=161,slow=11,SNR=2.9						
FINES	**FINESS Array B**	**23.33**	**7**	P	**P**	**15 49 25.2**	**+1.7**
	comp=N,1.2nm,0.6s,baz=163,slow=10.0,SNR=3.6						
MKAR	**Makanchi Array**	**45.21**	**59**	P	**P**	**15 52 32.3**	**-0.4**
	comp=N,0.3nm,0.5s,baz=279,slow=7.2,SNR=6.6						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**15 52 35.5**	**+0.1**
	comp=N,0.5nm,0.3s,baz=282,slow=6.9,SNR=2.2						

*IDC **27** 15:48:14.7±1.1, 32°06N×142°06E, h0km, mb3.5/5, mb1 3.7/7, mb1mx3.4/48, mbtmp3.6/7, ML2.9/2, MS4.3/1, Ms1 4.3/1, ms1mx2.6/53, Error ellipse: s-maj=37.8km s-min=20.2km az=83.0*

*NEIC **27** 15:48:18.9±0.9, 32°08N±0°08×142°0E±0°1, h30km±8km, mb4.4/6, Error ellipse: s-maj=19.4km s-min=8.3km az=64.0*

ISC 27 15:48:18.7±1.1, 32°1N±0°1×142°0E±0°1, h29km, n21, σ0§45/22, mb3.8/8, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.13**	**300**	Pn	**Pn**	**15 48 51.7**	**-0.7**
MJAR	**Matsushiro Arr**	**5.46**	**326**	Pn	**Pn**	**15 49 38.0**	**-0.1**
	0.1nm,0.3s,baz=140,slow=10,SNR=6.8						
MJAR	**Matsushiro Arr**	**5.46**	**326**		**Pn**	**15 49 37.7**	**-0.5**
MAJO	**Matsushiro**	**5.46**	**326**	Pn	**Pn**	**15 49 38.3**	**+0.1**
MAJO					**Sn**	**15 50 39.8**	**-0.2**
MJB9	**Matsu-Tunnel**	**5.46**	**326**	Pn	**Pn**	**15 49 38.3**	**+0.1**
MJB9					**Sn**	**15 50 41.0**	**+0.9**
ASAJ	**Asahikawa**	**12.03**	**2**	Pn	**Pn**	**15 51 07.7**	**-0.5**
	0.2nm,0.3s,baz=203,slow=14,SNR=6.5						
JKA	**Kamikawa-asahi**	**12.03**	**2**		**Pn**	**15 51 07.7**	**-0.5**
MK31	**Makanchi Array**	**47.31**	**306**	P	**P**	**15 56 49.9**	**+0.2**
MKAR	**Makanchi Array**	**47.31**	**306**	P	**P**	**15 56 50.2**	**+0.5**
	0.7nm,0.7s,baz=92,slow=8.2,SNR=9.2						
MKAR	**Makanchi Array**	**47.31**	**306**	P	**P**	**15 56 49.5**	**-0.2**
MAKZ	**Makanchi**	**47.53**	**306**	P	**P**	**15 56 51.4**	**+0.1**
MAKZ				IAmb	IAmb	15 57 18.8	
	comp=Z,2.2nm,0.9s						
KURK	**Kurchatov**	**49.49**	**312**	P	**P**	**15 57 06.1**	**-0.3**
KURK				IAmb	IAmb	15 57 23.0	
	comp=Z,10nm,1.8s						
KURBB	**Kurchatov Arra**	**49.55**	**311**	P	**P**	**15 57 07.2**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=88,slow=6.9,SNR=11						
LEM	**Lembang**	**50.72**	**226**	LR	LR	16 16 37.1	
	comp=Z,312nm,19.7s,baz=92,slow=34						
WR0	**Warramunga Arr**	**52.23**	**189**	P	**P**	**15 57 27.0**	**-0.2**
WB2	**Warramunga Arr**	**52.24**	**189**	P	**P**	**15 57 27.7**	**+0.4**
WB2				IAmb	IAmb	15 59 22.0	
	comp=Z,8.9nm,1.2s						
WRA	**Warramunga Arr**	**52.24**	**189**	P	**P**	**15 57 27.6**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=4.2,slow=7.5,SNR=8.3						
WRA	**Warramunga Arr**	**52.24**	**189**	P	**P**	**15 57 26.6**	**-0.7**
ILAR	**Eielson Array**	**53.46**	**30**	P	**P**	**15 57 36.1**	**+0.2**
	comp=Z,0.6nm,0.9s,baz=251,slow=5.4,SNR=3.6						
ASAR	**Alice Springs**	**55.97**	**189**	P	**P**	**15 57 54.9**	**+0.4**
	comp=Z,0.3nm,0.9s,baz=22,slow=12,SNR=4.4						
KKAR	**Karatay Array**	**56.15**	**303**	P	**P**	**15 57 55.3**	**-0.5**

*IDC **27** 15:49:17.6±1.0, 32°06N×141°98E, h0km, mb3.7/9, mb1 3.8/11, mb1mx3.6/49, mbtmp3.7/11, ML3.1/2, MS3.9/1, Ms1 3.9/1, ms1mx2.5/60, Error ellipse: s-maj=29.8km s-min=19.3km az=82.0*

*NEIC **27** 15:49:21.7±1.6, 32°2N±0°1×141°9E±0°1, h25km±7km, mb4.7/12, Error ellipse: s-maj=17.3km s-min=14.5km az=121.0*

ISC 27 15:49:22.1±0.9, 32°13N±0°09×141°9E±0°1, h29km, n30, σ1§08/28, mb4.1/12, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.02**	**299**	Pn	**Pn**	**15 49 53.2**	**-0.9**
INU	**Inuyama**	**5.18**	**310**	Pn	**Pn**	**15 50 36.1**	**-1.5**
MJAR	**Matsushiro Arr**	**5.36**	**326**	Pn	**Pn**	**15 50 40.3**	**+0.3**
	0.2nm,0.3s,baz=144,slow=10,SNR=7.0						
MJAR	**Matsushiro Arr**	**5.36**	**326**		**Pn**	**15 50 39.4**	**-0.6**
ASAJ	**Asahikawa**	**11.97**	**2**	Pn	**Pn**	**15 52 08.6**	**-2.1**
	0.3nm,0.3s,baz=202,slow=16,SNR=3.7						
JKA	**Kamikawa-asahi**	**11.97**	**2**		**Pn**	**15 52 08.6**	**-2.1**
YOJ	**Yonaguni jima**	**18.30**	**250**	P	**Pn**	**15 53 33.8**	**0.0**
NACB	**Ninganchiao**	**19.57**	**251**	P	**P**	**15 53 45.4**	**-2.3**
NACB				IAmb	IAmb	15 54 09.9	
	comp=Z,37nm,1.3s						
SONM	**Songino Array**	**31.08**	**311**	P	**P**	**15 55 40.0**	**+2.2**
	comp=Z,0.4nm,0.6s,baz=106,slow=9.1,SNR=3.3						
SONM	**Songino Array**	**31.08**	**311**	IAmb	IAmb	15 55 41.2	
	comp=Z,1.1nm,1.1s						
TNTI	**Ternate**	**34.08**	**207**	P	**P**	**15 56 04.7**	**+0.6**
SBUM	**Sibu**	**40.64**	**229**	P	**P**	**15 57 00.3**	**+0.6**
MK31	**Makanchi Array**	**47.20**	**306**	P	**P**	**15 57 52.2**	**+0.1**
MKAR	**Makanchi Array**	**47.20**	**306**	P	**P**	**15 57 52.4**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=91,slow=9.9,SNR=13						
MKAR	**Makanchi Array**	**47.20**	**306**	P	**P**		
KURK	**Kurchatov**	**49.38**	**312**	P	**P**	**15 57 52.2**	**0.0**
KURK				IAmb	IAmb	**15 58 09.1**	**+0.3**
	comp=Z,12nm,1.9s					15 59 32.2	
KURBB	**Kurchatov Arra**	**49.44**	**311**	P	**P**	**15 58 09.5**	**+0.2**
	comp=Z,1.3nm,0.5s,baz=88,slow=7.0,SNR=18						
WB0	**Warramunga Arr**	**52.11**	**189**	P	**P**	**15 58 28.6**	**-1.0**
WB0				IAmb	IAmb	15 58 29.2	
	comp=Z,16nm,1.5s						
WR0	**Warramunga Arr**	**52.28**	**189**	P	**P**	**15 58 30.0**	**-0.9**
WR0				IAmb	IAmb	16 00 08.9	
	comp=Z,26nm,1.8s						
WB2	**Warramunga Arr**	**52.28**	**189**	P	**P**	**15 58 29.9**	**-1.0**
WRA	**Warramunga Arr**	**52.29**	**189**	P	**P**	**15 58 29.9**	**-1.0**
	comp=Z,0.9nm,0.5s,baz=5.9,slow=7.7,SNR=8.7						
ILAR	**Eielson Array**	**53.46**	**30**	P	**P**	**15 58 39.4**	**+0.2**
	comp=Z,0.1nm,0.5s,baz=258,slow=5.1,SNR=4.1						
BVAR	**Borovoye Array**	**54.25**	**315**	P	**P**	**15 58 45.6**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=95,slow=5.7,SNR=4.1						
ASAR	**Alice Springs**	**56.01**	**189**	P	**P**	**15 58 58.0**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=19,slow=13,SNR=4.7						
KKAR	**Karatay Array**	**56.04**	**303**	P	**P**	**15 58 58.6**	**+0.3**
INK	**Inuvik**	**58.58**	**26**	P	**P**	**15 59 16.7**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=63,slow=6.8,SNR=3.4						
INK				LR	LR	16 29 07.7	
	comp=Z,108nm,19.1s,baz=78,slow=41						
INK	**Inuvik**	**58.58**	**26**	IAmb	IAmb	16 00 58.1	
	comp=Z,20nm,1.9s						
ABKAR	**Akbulak array**	**61.47**	**312**	P	**P**	**15 59 35.7**	**-0.2**
FINES	**FINESS Array B**	**73.34**	**333**	P	**P**	**16 00 50.5**	**-0.2**
	comp=Z,2.1nm,1.0s,baz=38,slow=3.4,SNR=5.6						
FINES	**FINESS Array B**	**73.34**	**333**	P	**P**	**16 00 50.8**	**+0.1**

*THE **27** 15:51:17.4, 38°20N×20°40E, h12km, ML3.5/4, Error ellipse: s-maj=1.2km s-min=0.5km az=243.0*

*ATH **27** 15:51:17.3, 38°20N×20°39E, h13km±4km, ML3.4/4, Error ellipse: s-maj=5.6km s-min=1.1km az=85.0*

ISC 27 15:51:17.3±1.8, 38°20N±0°04×20°41E±0°09, h13km±6km, n17, σ0§41/28, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.06**	**108**	P	**Pg**	**15 51 19.8**	**-0.2**
ARG2				S	**Sg**	**15 51 21.7**	**-0.1**
VLS	**Valsamata**	**0.14**	**98**	P	**Pg**	**15 51 20.8**	**-0.2**
VLS				S	**Sg**	**15 51 23.5**	**+0.1**
VLS	**Valsamata**	**0.14**	**98**	P	**Pg**	**15 51 20.8**	**-0.2**
VLS				S	**Sg**	**15 51 23.6**	**+0.1**
VLS				AML	AML	15 51 23.8	
	comp=E,47549μm,0.1s						
VLS				AML	AML	15 51 23.8	
	comp=N,21607μm,0.1s						
FSK	**Fiskardo**	**0.29**	**24**	P	**Pg**	**15 51 23.2**	**-0.1**
FSK				S	**Sg**	**15 51 27.8**	**+0.4**
	comp=N,10μm,0.2s						
FSK	**Fiskardo**	**0.29**	**24**	P	**Pg**	**15 51 23.3**	**0.0**
FSK				S	**Sg**	**15 51 27.8**	**+0.4**
KFL	**Anninata**	**0.31**	**106**	P	**Pg**	**15 51 23.7**	**0.0**
KFL				S	**Sg**	**15 51 29.0**	**+1.0**
	comp=N,16μm,0.2s						
KFL	**Anninata**	**0.31**	**106**	P	**Pg**	**15 51 23.7**	**0.0**
KFL				S	**Sg**	**15 51 29.0**	**+1.0**
KFL				AML	AML	15 51 30.1	
	comp=E,43091μm,0.3s						
KFL				AML	AML	15 51 30.9	
	comp=N,20247μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.38**	**148**	P	**Pg**	**15 51 25.0**	**+0.1**
VLMS				S	**Sb**	**15 51 31.4**	**-0.2**
VLMS				AML	AML	15 51 32.2	
	comp=E,22553μm,0.2s						
VLMS				AML	AML	15 51 33.3	
	comp=N,18041μm,0.1s						
EVGI	**Lefkada island**	**0.46**	**24**	P	**Pg**	**15 51 26.5**	**0.0**
EVGI				S	**Sg**	**15 51 33.4**	**+0.6**
EVGI	**Lefkada island**	**0.46**	**24**	P	**Pg**	**15 51 26.6**	**0.0**
EVGI				S	**Sg**	**15 51 33.5**	**+0.6**
MGNA	**Meganis**	**0.55**	**33**	P	**Pg**	**15 51 27.6**	**-0.4**
MGNA				AML	AML	15 51 36.9	
	comp=N,3513μm,0.1s						
MGNA				AML	AML	15 51 37.7	
	comp=E,3332μm,0.2s						
TSLK	**Tsoukalades, L**	**0.66**	**17**	P	**Pg**	**15 51 30.3**	**+0.2**
PDO	**Prodromos**	**0.73**	**56**	P	**Pg**	**15 51 31.0**	**-0.5**
PDO	**Prodromos**	**0.73**	**56**	P	**Pg**	**15 51 31.3**	**-0.2**
RLS	**Riolos of Patr**	**0.84**	**99**	P	**Pg**	**15 51 33.4**	**-0.2**
PVO	**Paravola**	**0.97**	**64**	P	**Pb**	**15 51 35.6**	**-0.4**
PVO				S	**Sn**	**15 51 49.9**	**-0.3**
	comp=E,1μm,0.5s						
PVO	**Paravola**	**0.97**	**64**	P	**Pb**	**15 51 36.0**	**0.0**

*ATH **27** 16:00:43.5, 38°16N×20°40E, h14km±5km, ML3.0/2, Error ellipse: s-maj=6.6km s-min=1.5km az=82.0*

*THE **27** 16:00:44.5, 38°18N×20°47E, h13km±1km, ML2.7/3, Error ellipse: s-maj=1.9km s-min=0.8km az=234.0*

ISC 27 16:00:43.3±1.6, 38°19N±0°06×20°5E±0°1, h18km±3km, n13, σ0§53/19, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.03**	**114**	P	**Pg**	**16 00 47.2**	**+0.7**
ARG2				S	**Sg**	**16 00 48.2**	**-0.4**
VLS	**Valsamata**	**0.11**	**97**	P	**Pg**	**16 00 47.2**	**+0.1**
VLS				S	**Sg**	**16 00 49.7**	**+0.1**
	10μm,0.1s						
VLS	**Valsamata**	**0.11**	**97**	P	**Pg**	**16 00 47.3**	**+0.1**
VLS				S	**Sg**	**16 00 49.8**	**+0.1**
VLS				AML	AML	16 00 49.9	
	comp=N,25845μm,0.2s						
VLS				AML	AML	16 00 50.5	
	comp=E,13139μm,0.1s						
KFL	**Anninata**	**0.28**	**107**	P	**Pb**	**16 00 49.8**	**+0.1**
KFL				S	**Sb**	**16 00 54.4**	**+0.4**
	comp=E,3μm,0.3s						
KFL	**Anninata**	**0.28**	**107**	P	**Pb**	**16 00 49.9**	**+0.1**
KFL				S	**Sb**	**16 00 54.4**	**+0.4**
KFL				AML	AML	16 00 55.2	
	comp=E,4757μm,0.3s						
KFL				AML	AML	16 00 55.3	
	comp=N,6754μm,0.3s						
FSK	**Fiskardo**	**0.28**	**18**	P	**Pb**	**16 00 50.3**	**+0.5**
FSK				S	**Sb**	**16 00 55.1**	**+0.9**
	comp=N,1μm,0.3s						
FSK	**Fiskardo**	**0.28**	**18**	P	**Pb**	**16 00 50.3**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.36**	**152**	P	**Pg**	**16 00 50.4**	**-0.4**
EVGI	**Lefkada island**	**0.46**	**21**	P	**Pb**	**16 00 53.2**	**+0.3**
EVGI	**Lefkada island**	**0.46**	**21**	P	**Pb**	**16 00 53.1**	**+0.3**
MGNA	**Meganis**	**0.54**	**30**	P	**Pb**	**16 00 54.7**	**+0.5**
LKD2	**Lefkada island**	**0.62**	**15**	P	**Pn**	**16 00 56.5**	**-0.7**
TSLK	**Tsoukalades, L**	**0.65**	**14**	P	**Pg**	**16 00 55.3**	**-1.0**

MAN 27 16:00:49.5, 6°14N×124°97E, h20km, mb4.0, ML2.8, MS2.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.06**	**202**	*eP*	Pb	16 00 56.2	+2.9
SKMP	**Bagumbayan, Su**	**0.57**	**311**	*eP*	Pb	16 01 01.4	+0.7
SKMP				*eS*	Sn	16 01 12.1	+0.9
DDMP	**Don Marcelino,**	**0.74**	**93**	*eP*	Pb	16 01 03.5	-0.1
DDMP				*eS*	Sn	16 01 16.4	+1.0

*BJI **27** 16:13:59.1±0.0, 8°20S×109°20E, h84km, mB5.1/34, mb4.4/44, Ms4.7/16, Ms7 4.4/17*

*NEIC **27** 16:14:00.8±1.4, 8°05S±0°07×109°29E±0°05, h88km±4km, mb5.0/73, Error ellipse: s-maj=10.1km s-min=6.9km az=191.0*

*DJA **27** 16:14:00.9±0.2, 8°S±3°×10°9E±°, h80km±2km, M4.9/49, mb5.1/49, mB5.3/27, MLv5.5/22, Mw(mB)4.8/27, Mwp5.1/2*

*GCMT **27** 16:14:01.8±0.3, 8°34S±0°02×109°44E±0°02, h93km±2km, MW5.0/84, Moment Tensor Solution. s50,c65; s84,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.64±.12; $M_{\theta\theta}$-4.32±.13; $M_{\phi\phi}$1.68±.17; $M_{r\theta}$-0.36±.10; $M_{r\phi}$1.45±.12; $M_{\theta\phi}$-1.38±.09; Best double couple: M_o4.22000×10^{16} NP1:φ§135.00000°, δ56.00000°, λ139.00000°. NP2: φ§251.00000°, δ57.00000°, λ42.00000°. Principal axes: T 3.7870, Plg51.0000°, Azm103.0000°; N 0.8660, Plg39.0000°, Azm283.0000°; P -4.6520, Plg0.0000°, Azm13.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **27** 16:14:01.5±1.3, 7°91S×109°30E, h107km, mb5.0/16 Error ellipse: s-maj=10.4km s-min=7.0km az=121.8*

*KLM **27** 16:14:01.0, 8°44S×109°20E, h82km, mb5.0*

*IDC **27** 16:14:02.1±1.1, 7°95S×109°37E, h95km±9km, mb4.4/32, mb1 4.5/34, mb1mx4.4/46, mbtmp4.8/34, MS3.9/15, Ms1 3.9/15, ms1mx3.7/45, Error ellipse: s-maj=11.0km s-min=7.6km az=41.0*

ISC 27 16:14:00.3±0.2, 8°15S±0°04×109°25E±0°04, h83km, n580, σ1§57/560, mb4.8/84, 3C, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.87**	**295**	P	**Pn**	**16 14 17.7**	**-0.3**
CMJI				S	**Sn**	**16 14 31.0**	**-0.3**
KPJI	**Karang Pucung**	**0.87**	**339**	P	**Pn**	**16 14 19.8**	**+1.7**
UGM	**Wanagama**	**1.28**	**79**	P	**Pn**	**16 14 23.2**	**+0.1**
UGM				S	**Sn**	**16 14 40.3**	**+0.1**
UGM	**Wanagama**	**1.28**	**79**	P	**Pn**	**16 14 23.2**	**+0.1**
CISI	**Cisompet, Garu**	**1.54**	**293**	P	**Pn**	**16 14 27.3**	**+1.0**
CISI	**Cisompet, Garu**	**1.54**	**293**		**Pn**	**16 14 27.1**	**+0.9**
SMRI	**Semarang**	**1.61**	**47**	P	**Pn**	**16 14 29.2**	**+2.0**
SMRI	**Semarang**	**1.61**	**47**		**Pn**	**16 14 29.4**	**+2.2**
WOJI	**Wonogiri, Jawa**	**1.69**	**79**	P	**Pn**	**16 14 28.2**	**0.0**
PCJI	**Pacitan**	**1.91**	**91**	P	**Pn**	**16 14 31.3**	**+0.2**
PCJI				S	**Sn**	**16 14 54.3**	**-0.2**
LEM	**Lembang**	**2.08**	**309**	P	**Pn**	**16 14 37.0**	**+3.4**
	204nm,0.3s,baz=20,slow=15,SNR=84						
LEM				S	**Sn**	**16 15 01.9**	**+2.9**
	264nm,0.3s,baz=282,slow=18,SNR=6.9						
CNJI	**Cibinong**	**2.26**	**292**	P	**Pn**	**16 14 36.5**	**+0.8**
NGJI	**Ngawi**	**2.33**	**71**	P	**Pn**	**16 14 38.9**	**+2.2**
SKJI	**Sukabumi**	**2.90**	**293**	P	**Pn**	**16 14 46.2**	**+1.8**
DBJI	**Dramaga**	**2.94**	**302**	P	**Pn**	**16 14 47.6**	**+2.6**
GRJI	**Gresik**	**3.43**	**69**	P	**Pn**	**16 14 53.7**	**+2.1**
GMJI	**Gumukmas**	**4.16**	**92**	P	**Pn**	**16 15 04.0**	**+2.6**
KMMI	**Kalianget**	**4.80**	**77**	P	Pn	16 15 21.5	+11
JAGI	**Jajag, Banyuwa**	**4.86**	**94**	P	**Pn**	**16 15 13.6**	**+2.5**
JAGI	**Jajag, Banyuwa**	**4.86**	**94**		**Pn**	**16 15 11.6**	**+0.5**
KASI	**Kota Agung**	**5.39**	**299**	P	**Pn**	**16 15 19.7**	**+1.4**
	1.6nm2μm218nm,1.1s						
TPI	**Tanjungpandan**	**5.59**	**343**	P	Pn	16 15 32.1	+11
KLSI		**5.66**	**307**	P	**Pn**	**16 15 21.3**	**-0.6**
	0.3nm875nm64nm,0.8s						
IGBI	**Denpasar**	**5.87**	**97**	P	**Pn**	**16 15 26.7**	**+1.9**
	4.6nm7μm342nm,1.3s						
SRBI	**Singaraja**	**5.91**	**90**	P	**Pn**	**16 15 28.3**	**+3.0**
	3.6nm5μm356nm,0.7s						
DNP	**Denpasar**	**5.92**	**95**	P	**Pn**	**16 15 28.5**	**+3.0**
	18nm21μm878nm,0.5s						
LWLI	**Liwa**	**6.02**	**301**	P	Pn	16 15 33.7	+6.7
MDSI	**Maura Dua**	**6.22**	**306**	P	**Pn**	**16 15 31.5**	**+2.0**
	0.5nm1μm122nm,1.0s						
MNAI	**Manna**	**7.30**	**301**				
KSI	**Kapahiang**	**7.99**	**304**	P	**Pn**	**16 15 55.5**	**+1.7**
	1.0nm4μm244nm,0.6s						
KBKI	**Kotabaru**	**8.40**	**55**	P	**Pn**	**16 16 01.5**	**+2.1**
	665nm81nm,0.8s						
STKI	**Sintang**	**8.46**	**15**	P	**Pn**	**16 16 03.6**	**+3.4**
	58nm,0.8s						
PLAI	**Plampang**	**8.46**	**95**	P	**Pn**	**16 16 00.7**	**+0.5**
	2μm4μm381nm,0.8s						
KSM	**Kuching**	**9.62**	**6**		**Pn**	**16 16 19.5**	**+3.5**
KSM	**Kuching**	**9.62**	**6**	P	Pn	16 16 22.0	+6.0
PPSI	**Pulau Pagai**	**10.64**	**300**	P	**Pn**	**16 16 28.2**	**-1.7**
	2μm154nm,0.6s						
KAPI	**Kappang**	**10.89**	**74**	P	**Pn**	**16 16 35.6**	**+2.3**
	1.7nm,0.3s,baz=325,slow=7.9,SNR=8.0						
KAPI				LR	LR	16 21 36.5	
	comp=Z,615nm,19.1s,baz=119,slow=42						
KAPI	**Kappang**	**10.89**	**74**		**Pn**	**16 16 35.5**	**+2.2**
SBUM	**Sibu**	**10.94**	**16**		**Pn**	**16 16 34.6**	**+0.6**
SBUM	**Sibu**	**10.94**	**16**	P	Pn	16 16 40.1	+6.0
BKSI	**Bulukumba**	**11.16**	**76**	P	**Pn**	**16 16 39.4**	**+2.4**
	799nm72nm,1.8s						
BNSI	**Bone**	**11.42**	**72**	P	**Pn**	**16 16 43.4**	**+2.9**
	988nm55nm,1.6s						
TTSI	**Tana Toraja**	**11.68**	**65**	P	**Pn**	**16 16 47.9**	**+3.9**
	1μm51nm,1.1s						
SISI	**Saibi**	**12.18**	**303**

DAV **Davao City (W)** 22.22 48 LR LR 16 29 48.4
comp=Z,245nm,18.6s,baz=228,slow=43
BUKP **Musuan** 22.41 45 eP P **16 18 52.8 +0.5**
SWI **Sorong** 23.09 73 P P **16 18 59.9 +0.6**
comp=Z,42nm,0.8s
SIJI **Sorong** 23.10 73 P P **16 18 57.6 -1.8**
comp=Z,22nm,0.6s,baz=276,slow=5.1,SNR=14
KDU **Kakadu** 23.28 103 P P **16 19 00.5 -0.5**
baz=23,SNR=38
BLDU **Ballidu** 23.41 164 P P **16 19 02.9 +0.8**
baz=23,SNR=10
MUN **Mundaring** 24.58 166 P P **16 19 14.9 +2.3**
baz=24,SNR=5.5
WRKA **Warakurna** 24.74 135 P P **16 19 14.4 +0.2**
baz=25,SNR=88
TGY **Tagaytay City** 24.97 28 LR LR 16 30 43.0
comp=Z,251nm,18.5s,baz=250,slow=40
NWAO **Narrogin (SRO)** 25.74 164 P P **16 19 24.5 +1.3**
NWAO pmax pmax
comp=Z,17nm,0.9s
NWAO **Narrogin (SRO)** 25.74 164 P P **16 19 24.5 +1.3**
comp=Z,8.4nm,0.7s,baz=349,slow=7.0,SNR=9.1
NWAO LR LR 16 28 54.8
comp=Z,262nm,22.0s,baz=2.5,slow=34
PBKT **Sadao Pong** 25.89 342 P P **16 19 24.5 -0.1**
WB0 **Warramunga Arr** 26.95 118 P P **16 19 34.1 -0.2**
WB0 IAmb IAmb 16 19 35.8
comp=Z,36nm,0.7s
WRA **Warramunga Arr** 26.97 118 P P **16 19 34.8 +0.4**
comp=Z,29nm,0.7s,baz=289,slow=12,SNR=158
WRA PcP PcP **16 22 54.5 +0.1**
comp=Z,3.1nm,0.5s,baz=308,slow=2.0,SNR=5.3
WRA LR LR 16 29 32.5
comp=Z,123nm,21.1s,baz=30,slow=34
WRA **Warramunga Arr** 26.97 118 IAmb IAmb 16 19 36.5
comp=Z,2.9nm,0.8s
WRAB **Tennant Creek** 26.97 118 P P **16 19 34.7 +0.2**
WRAB pmax pmax
comp=Z,60nm,0.9s
WRAB **Tennant Creek** 26.97 118 P P **16 19 34.7 +0.2**
WRAB IAmb IAmb 16 19 36.2
comp=Z,60nm,0.8s
WB2 **Warramunga Arr** 26.98 118 P P **16 19 34.4 -0.1**
WB2 IAmb IAmb 16 19 36.1
comp=Z,56nm,0.8s
WR0 **Warramunga Arr** 27.15 118 P P **16 19 36.1 +0.1**
ASAR **Alice Springs** 28.21 126 P P **16 19 46.1 +0.6**
comp=Z,45nm,0.6s,baz=304,slow=9.2,SNR=712
ASAR PcP PcP **16 22 57.7 +0.3**
comp=Z,3.8nm,0.5s,baz=318,slow=2.2,SNR=9.1
ASAR LR LR 16 31 32.2
comp=Z,136nm,21.7s,baz=298,slow=37
AS31 **Alice Springs** 28.21 126 P P **16 19 45.5 0.0**
AS31 IAmb IAmb 16 19 47.4
comp=Z,20nm,0.6s
CM31 **Chiang Mai Arr** 28.33 339 P P **16 19 46.6 +0.1**
CMAR **Chiang Mai Arr** 28.33 339 P P **16 19 46.4 -0.1**
comp=Z,2.0nm,0.5s,baz=175,slow=8.9,SNR=21
CMAR PcP PcP **16 22 59.0 +1.4**
comp=Z,1.5nm,0.6s,baz=188,slow=3.3,SNR=5.2
CMAR ScP ScP **16 26 31.9 +0.4**
comp=Z,1.0nm,0.8s,baz=200,slow=3.1,SNR=5.1
CMAR LR LR 16 31 22.6
comp=Z,214nm,18.6s,baz=182,slow=37
FORT **Forrest** 28.56 145 P P **16 19 49.0 +0.5**
baz=28,SNR=13
FORT **Forrest** 28.56 145 P P **16 19 48.6 +0.1**
FORT IAmb IAmb 16 20 26.9
comp=Z,28nm,0.7s
CHTO **Chiang Mai** 28.66 339 P P **16 19 49.0 -0.4**
CHTO pmax pmax
comp=Z,6.0nm,1.0s
CHTO **Chiang Mai** 28.66 339 P P **16 19 49.0 -0.4**
QIS **Mount Isa** 31.82 116 P P **16 20 18.1 +0.7**
baz=32,SNR=19
KMI **Kunming** 33.68 349 P P **16 20 36.0 +2.3**
KMI pP pP 16 20 52.0 -1.1
KMI sP sP 16 21 01.5 -1.2
KMI S S **16 25 52.3 +1.2**
KMI sS sS 16 26 21.3 -3.0
KMI pmax pmax
comp=Z,3.0nm,1.4s
KMI pmax pmax
comp=Z,80nm,5.7s
KMI LR LR
comp=Z,190nm,24.8s
KMI LR LR
comp=Z,360nm,19.1s
KMI LR LR
comp=Z,410nm,17.6s
COEN **Coen** 33.77 103 P P **16 20 34.8 +0.3**
baz=34,SNR=48
COEN **Coen** 33.77 103 P P **16 20 34.5 +0.1**
COEN IAmb IAmb 16 20 35.8
comp=Z,30nm,0.8s
GYA **Guiyang** 34.49 356 eP P 16 20 47.0 +6.3
GYA pmax pmax
comp=Z,10.0nm,0.8s
BBOO **Buckleboo** 34.91 138 P P **16 20 44.1 0.0**
baz=35,SNR=411
BBOO **Buckleboo** 34.91 138 P P **16 20 43.9 -0.2**
MTSU **Mount Surprise** 35.50 110 P P **16 20 51.0 +1.6**
baz=36,SNR=101
H08S2 **Diego Garcia H** 36.40 268 T T 16 59 30.5
baz=92,slow=76
H08S3 **Diego Garcia H** 36.41 268 T T 16 59 03.3
baz=92
H08S1 **Diego Carcia H** 36.42 268 T T 16 59 38.9
baz=92,slow=76
HTT **Hallett** 37.20 137 P P **16 21 04.4 +0.7**
baz=37,SNR=48
PMG **Port Moresby** 37.48 95 iP P **16 21 05.0 -1.2**
PMG pmax pmax
comp=Z,79nm,0.9s
PMG **Port Moresby** 37.48 95 P P **16 21 06.2 0.0**
comp=Z,20nm,0.8s,baz=57,slow=8.3,SNR=6.7
PMG **Port Moresby** 37.48 95 P P **16 21 05.9 -0.3**
PMG IAmb IAmb 16 21 24.0
comp=Z,42nm,1.1s
CTA **Charters Tower** 37.70 112 P P **16 21 09.4 +1.3**
comp=Z,27nm,0.9s,baz=273,slow=10,SNR=15
QLP **Quilpie** 37.90 123 P P **16 21 11.4 +1.6**
baz=38,SNR=19
STKA **Stephens Creek** 38.22 133 P P **16 21 13.2 +0.9**
baz=38,SNR=169
STKA **Stephens Creek** 38.22 133 P P **16 21 13.4 +1.1**
STKA 16 23 25.8
STKA pmax pmax
comp=Z,13nm,0.7s
STKA **Stephens Creek** 38.22 133 P P **16 21 13.2 +0.9**
comp=Z,56nm,0.6s,baz=310,slow=8.0,SNR=278
STKA PcP PcP **16 23 25.8 +0.5**
comp=Z,10nm,0.5s,baz=309,slow=3.8,SNR=5.1
STKA **Stephens Creek** 38.22 133 P P **16 21 13.4 +1.1**
STKA IAmb IAmb 16 21 15.1
comp=Z,13nm,0.7s
CD2 **Chengdu** 39.19 353 eP P **16 21 21.0 +0.6**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,120nm,4.6s
NJ2 **Nanjing** 41.02 12 eP P **16 21 37.3 +1.9**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
ARPS **Mount Arapiles** 41.08 139 P P **16 21 37.2 +1.2**
baz=41,SNR=16
CMSA **Cobar Meteorol** 41.12 130 P P **16 21 37.8 +1.4**
baz=41,SNR=7.5
LSA **Lhasa** 41.47 336 P P **16 21 38.4 -1.4**
LSA pmax pmax
comp=Z,6.0nm,0.9s
LSA **Lhasa** 41.47 336 P P **16 21 38.4 -1.4**
RMQ **Roma** 41.66 121 P P **16 21 42.6 +1.7**
baz=42,SNR=21
XAN **Xi'an** 41.96 360 P P **16 21 43.8 +0.6**
XAN S S **16 27 59.8 +4.0**
XAN pmax pmax
comp=Z,9.0nm,1.0s
XAN LR LR
comp=Z,280nm,16.3s
XAN LR LR
comp=Z,200nm,14.1s
XAN LR LR
comp=Z,350nm,35.8s
XAN **Xi'an** 41.96 360 P P **16 21 41.9 -1.3**
XAN pmax pmax
comp=Z,7.0nm,0.7s

XAN **Xi'an** 41.96 360 P P **16 21 41.9 -1.3**
EIDS **Eidsvold** 43.33 118 P P **16 21 56.2 +1.7**
baz=43,SNR=4.0
EIDS **Eidsvold** 43.33 118 P P **16 21 55.9 +1.4**
TOO **Toolangi** 43.95 137 P P **16 22 01.5 +2.2**
baz=44,SNR=18
TOO **Toolangi** 43.95 137 P P **16 22 01.5 +2.2**
TOO pmax pmax
comp=Z,26nm,1.0s
TOO **Toolangi** 43.95 137 P P **16 22 01.5 +2.2**
TOO IAmb IAmb 16 22 02.8
comp=Z,26nm,1.0s
LZH **Lanzhou** 44.30 354 eP P **16 22 04.8 +2.7**
LZH pP pP 16 22 25.3 +3.1
LZH sP sP 16 22 35.0 +3.4
LZH PP PP **16 23 50.3 +3.3**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,73nm,5.6s
YNG **Young** 44.39 132 P P **16 22 04.3 +1.5**
baz=44,SNR=46
CAN **Canberra** 45.29 133 P P **16 22 11.6 +1.6**
CAN pmax pmax
comp=Z,21nm,0.8s
CAN **Canberra** 45.29 133 P P **16 22 11.6 +1.6**
CAN IAmb IAmb 16 22 12.9
comp=Z,21nm,0.8s
ARMA **Armidale** 45.36 125 P P **16 22 13.1 +2.5**
baz=45,SNR=45
ARMA **Armidale** 45.36 125 P P **16 22 13.0 +2.3**
ARMA IAmb IAmb 16 22 14.3
comp=Z,22nm,0.6s
CNB **Canberra Magne** 45.55 132 P P **16 22 13.5 +1.4**
baz=46,SNR=8.5
JNU **Nakatsue** 45.92 26 P P **16 22 14.8 -0.1**
comp=Z,5.0nm,0.7s,baz=207,slow=6.5,SNR=4.9
JNU **Nakatsue** 45.92 26 P P **16 22 15.2 +0.3**
JNU IAmb IAmb 16 23 24.5
comp=Z,43nm,1.7s
MGCD **Mangrove Creek** 45.98 129 P P **16 22 17.4 +2.0**
baz=46,SNR=6.6
TAU **Tasmania Unive** 48.07 142 P P **16 22 33.4 +1.9**
TAU pmax pmax
comp=Z,54nm,1.3s
TAU **Tasmania Unive** 48.07 142 P P **16 22 33.4 +1.9**
TAU IAmb IAmb 16 22 55.5
comp=Z,54nm,1.3s
BJI **Beijing** 48.38 7 eP P **16 22 33.3 -0.5**
BJI pmax pmax
comp=Z,5.0nm,1.0s
BJI LR LR
comp=Z,190nm,14.2s
BJI LR LR
comp=Z,260nm,15.2s
KSRS **Korea Array** 48.62 20 P P **16 22 36.2 +0.5**
comp=Z,1.0nm,0.8s,baz=191,slow=9.5,SNR=3.5
KSRS LR LR 16 43 44.7
comp=Z,91nm,21.3s,baz=318,slow=37
HHC **Hu-ho-hao-te** 48.80 2 eP P **16 22 38.8 +1.6**
HHC pmax pmax
comp=Z,3.0nm,1.0s
HHC pmax pmax
comp=Z,36nm,5.5s
HNR **Honiara** 50.09 95 P P **16 22 47.2 -0.2**
comp=Z,75nm,0.7s,baz=297,slow=1.3,SNR=7.6
HNR **Honiara** 50.09 95 P P **16 22 47.2 -0.2**
PATS **Pohnpei** 51.14 74 P P **16 22 55.9 +0.6**
baz=51,SNR=3.0
MAJO **Matsushiro** 52.12 30 P P **16 23 02.0 -0.2**
MAJO pmax pmax
comp=Z,47nm,2.0s
MAJO **Matsushiro** 52.12 30 P P **16 23 02.0 -0.2**
MAJO IAmb IAmb 16 23 41.3
comp=Z,47nm,2.0s
MAT **Matsushiro** 52.12 30 P P **16 22 59.5 -2.7**
MJAR **Matsushiro Arr** 52.12 30 P P **16 22 59.8 -2.3**
MJAR pmax pmax
comp=Z,4.0nm,1.1s
MJAR **Matsushiro Arr** 52.12 30 P P **16 22 59.8 -2.3**
comp=Z,2.8nm,0.6s,baz=206,slow=6.9,SNR=9.5
MJAR **Matsushiro Arr** 52.12 30 IAmb IAmb 16 23 02.5
comp=Z,3.6nm,1.1s
MJB9 **Matsu-Tunnel** 52.12 30 P P **16 23 02.0 -0.1**
MJB9 IAmb IAmb 16 23 41.3
comp=Z,47nm,2.0s
NIL **Nilore** 53.81 323 P P **16 23 12.9 -1.8**
NIL pP pP **16 23 34.6 -0.8**
NIL IAmb IAmb 16 23 35.5
comp=Z,19nm,0.9s
WMQ **Urumqi** 55.30 341 eP P **16 23 26.5 +1.2**
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ pmax pmax
comp=Z,27nm,4.9s
SONM **Songino Array** 55.80 358 P P **16 23 28.4 -0.5**
comp=Z,1.2nm,0.5s,baz=176,slow=8.6,SNR=11
SONM PcP PcP **16 24 26.7 -0.3**
comp=Z,1.2nm,0.4s,baz=186,slow=5.8,SNR=4.9
SONM ScP ScP **16 28 19.1 +0.3**
comp=Z,1.6nm,0.7s,baz=171,slow=4.7,SNR=5.5
SONM LR LR 16 51 51.4
comp=Z,107nm,19.3s,baz=154,slow=41
ULN **Ulaanbaatar** 55.81 358 iP P **16 23 27.0 -2.0**
ULN pmax pmax
comp=Z,1.0nm,0.9s
USA0B **Ussuriysk Arra** 56.02 20 iP P **16 23 28.2 -2.2**
USRK **Ussuriysk Ar.** 56.02 20 P P **16 23 28.8 -1.6**
comp=Z,1.2nm,0.5s,baz=197,slow=5.4,SNR=4.9
KSH **Kashi** 56.57 329 P P **16 23 31.5 -3.1**
KSH pP pP 16 23 58.0 +2.6
KSH PP PP **16 25 45.3 +3.9**
KSH S S 16 31 10.0 -10
KSH sS sS 16 31 57.0 +1.3
KSH SS SS **16 35 06.8 -2.3**
KSH pmax pmax
comp=Z,530nm,7.4s
KSH LR LR
comp=Z,250nm,4.7s
KSH LR LR
comp=Z,220nm,5.5s
KSH LR LR
comp=Z,690nm,7.1s
SANVU **Saraoutou** 57.05 103 P P **16 23 39.0 +0.7**
HIA **Hailar** 57.91 8 iP P **16 23 42.2 -1.5**
HIA pmax pmax
comp=Z,14nm,0.9s
KDJ **Kajisay** 58.00 332 P P **16 23 43.6 -1.1**
KDJ pmax pmax
comp=Z,8.0nm,1.1s
KDJ **Kajisay** 58.00 332 P P **16 23 43.6 -1.1**
KDJ IAmb IAmb 16 24 23.1
comp=Z,8.1nm,1.1s
NRN **Naryn** 58.02 331 P P **16 23 44.1 -0.9**
NRN pmax pmax
comp=Z,3.0nm,0.8s
NRN **Naryn** 58.02 331 P P **16 23 44.1 -0.9**
CASY **Casey** 58.05 179 P P **16 23 44.3 0.0**
AAK **Ala-Archa** 59.66 331 P P **16 23 56.2 0.0**
AAK pmax pmax
comp=Z,3.0nm,0.8s
AAK **Ala-Archa** 59.66 331 P P **16 23 56.1 0.0**
BTK **Batken** 59.67 326 P P **16 23 55.4 -0.8**
BTK pmax pmax
comp=Z,6.0nm,1.0s
BTK **Batken** 59.67 326 P P **16 23 55.4 -0.8**
MK31 **Makanchi Array** 59.74 339 P P **16 23 54.5 -1.9**
MK31 pmax pmax
comp=Z,3.0nm,0.6s
MK31 **Makanchi Array** 59.74 339 P P **16 23 54.5 -1.9**
MKAR **Makanchi Array** 59.74 339 P P **16 23 54.7 -1.8**
comp=Z,4.4nm,0.6s,baz=153,slow=7.7,SNR=36
MKAR LR LR 16 55 01.9
comp=Z,91nm,19.8s,baz=244,slow=41
KLR **Kul'dur** 60.45 17 iP P **16 23 58.4 -2.8**
KLR pmax pmax
comp=Z,3.0nm,0.8s
OPO **Ambohidratompo** 61.01 253 P P **16 24 07.8 +1.9**
comp=Z,6.1nm,0.8s,baz=93,slow=7.8,SNR=6.2
YSS **Yuzh-Sakhalins** 62.43 25 P P **16 24 16.0 +1.5**
RPZ **Rata Peaks** 64.14 135 P P **16 24 26.4 +0.3**
KURK **Kurchatov** 64.35 339 P P **16 24 24.9 -2.3**
KURK pmax pmax
comp=Z,7.0nm,1.1s
KURK **Kurchatov** 64.35 339 P P **16 24 24.9 -2.3**

OXZ **Oxford** 64.74 134 P P **16 24 30.3 +0.3**
OXZ IAmb IAmb 16 24 31.8
comp=Z,19nm,0.5s
THZ **Tophouse** 65.03 132 P P **16 24 32.8 +0.8**
ZAA0 **Zalesovo Array** 65.22 344 P P **16 24 34.3 +1.6**
ZAA0 IAmb IAmb 16 25 11.0
comp=Z,26nm,2.0s
ZALV **Zalesovo Beam** 65.22 344 iP P **16 24 30.7 -2.0**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV **Zalesovo Beam** 65.22 344 P P **16 24 30.8 -1.9**
comp=Z,1.4nm,0.5s,baz=175,slow=4.3,SNR=6.5
GEYT **Alibeck** 66.11 318 P P **16 24 38.3 -0.6**
comp=Z,2.4nm,0.5s,baz=126,slow=7.5,SNR=6.1
PKVZ **Pokaka** 66.41 129 P S **16 33 31.5 +6.7**
TWVZ **Taurewa** 66.45 129 P S **16 33 30.6 +5.2**
MTVZ **Mangateitei** 66.52 129 P S **16 33 30.3 +4.0**
FWVZ **Far West T-bar** 66.57 129 P S **16 33 29.5 +2.4**
WTVZ **West Tongariro** 66.57 129 P S **16 33 29.6 +2.7**
NGZ **Ngauruhoe** 66.59 129 P S **16 33 25.1 -2.2**
WHVZ **Whangaehu Hut** 66.60 129 P S **16 33 29.2 +1.7**
KRVZ **Karewarewa** 66.61 129 P S **16 33 29.0 +1.6**
MOVZ **Moawhango** 66.74 129 P S **16 33 27.5 -1.4**
RITZ **Rihia Road** 66.76 129 P S **16 33 28.0 -1.0**
HATZ **Hinemaiaia** 66.93 129 P S **16 33 27.1 -4.0**
MAW **Mawson** 66.93 198 P P **16 24 45.0 +1.5**
baz=67,SNR=8.5
MAW **Mawson** 66.93 198 P P **16 24 44.7 +1.2**
MAW pmax pmax
comp=Z,4.0nm,0.9s
MAW **Mawson** 66.93 198 P P **16 24 44.8 +1.2**
comp=Z,14nm,0.8s,baz=45,slow=6.8,SNR=19
MAW **Mawson** 66.93 198 P P **16 24 44.7 +1.2**
BHHZ **Black Hill Sta** 66.99 129 P S **16 33 25.9 -6.0**
TSZ **Takapari Road** 67.00 130 P S **16 33 33.4 +1.5**
PNHZ **Pukenui** 67.16 130 P S **16 33 30.8 -3.1**
MRHZ **Matea Rd** 67.17 129 P S **16 33 27.5 -6.5**
KRHZ **Kereru** 67.25 130 P S **16 33 27.1 -7.8**
KWHZ **Kaweka Forest** 67.26 129 P S 16 33 25.0 -10
BKZ **Black Stump Fm** 67.28 129 P S 16 33 24.9 -10
BKZ **Black Stump Fm** 67.28 129 P P **16 24 46.5 +0.2**
MUGZ **Murupara** 67.39 128 P S **16 33 33.9 -2.7**
MCHZ **McNeill Hill** 67.47 129 P S 16 33 27.5 -10
MTHZ **Maungataniwha** 67.50 129 P S **16 33 30.0 -8.0**
NMHZ **Naumai** 67.51 129 P S 16 33 28.6 -9.5
PRHZ **Porangahau** 67.54 130 P S **16 33 35.5 -2.8**
RTZ **Ruatahuna** 67.58 128 P S **16 33 33.9 -5.0**
URZ **Urewera** 67.63 128 P S **16 33 38.0 -1.4**
KAHZ **Kahuranaki** 67.66 130 P S **16 33 31.4 -8.4**
ARHZ **Aropaoanui** 67.68 129 P S 16 33 29.8 -10
PXZ **Pawanui** 67.68 130 P S **16 33 34.3 -5.6**
RAHZ **Arahi** 67.70 129 P S **16 33 32.2 -8.0**
SNGZ **Shannon Statio** 67.88 128 P S **16 33 34.8 -7.6**
MWZ **Matawai** 67.97 128 P S **16 33 40.1 -3.4**
ATD **Arta Tunnel** 68.87 286 P P **16 24 57.4 +0.6**
comp=Z,3.6nm,0.5s,baz=288,slow=20,SNR=2.2
BRVK **Borovoye** 69.37 336 P P **16 24 57.8 -1.2**
BRVK pmax pmax
comp=Z,4.0nm,0.7s
BRVK **Borovoye** 69.37 336 P P **16 24 57.8 -1.2**
RAYN **Ar Rayn** 69.75 299 P P **16 25 00.3 -1.8**
RAYN pmax pmax
comp=Z,10.0nm,1.1s
RAYN **Ar Rayn** 69.75 299 P P **16 25 00.3 -1.8**
ABKAR **Akbulak array** 71.55 328 P P **16 25 10.5 -1.8**
ABKAR IAmb IAmb 16 25 12.7
comp=Z,8.3nm,0.6s
YAK **Yakutsk** 71.75 10 iP P **16 25 10.8 -2.5**
YAK pmax pmax
comp=Z,9.0nm,0.9s
YAK **Yakutsk** 71.75 10 P P **16 25 11.5 -1.8**
comp=Z,4.9nm,0.6s,baz=34,slow=1.4,SNR=11
YAK **Yakutsk** 71.75 10 P P **16 25 11.2 -2.1**
YAK IAmb IAmb 16 25 27.3
comp=Z,8.9nm,0.7s
KMBO **Kilima Mbogo** 72.02 271 P P **16 25 14.8 -1.5**
KMBO pmax pmax
comp=Z,9.0nm,1.2s
KMBO **Kilima Mbogo** 72.02 271 P P **16 25 17.5 +1.3**
comp=Z,4.2nm,0.8s,baz=58,slow=9.8,SNR=7.4
KMBO **Kilima Mbogo** 72.02 271 P P **16 25 14.8 -1.5**
AKTO **Aktyubinsk** 73.25 329 LR LR 17 02 58.2
comp=Z,168nm,18.1s,baz=289,slow=40
PETK **Petropavlovsk-** 73.53 28 P P **16 25 23.2 -0.9**
comp=Z,4.1nm,0.6s,baz=194,slow=4.4,SNR=18
VNDA **Vanda** 74.44 170 P P **16 25 29.9 +0.9**
VNDA pmax pmax
comp=Z,45nm,1.6s
VNDA **Vanda** 74.44 170 P P **16 25 30.1 +1.1**
comp=Z,5.1nm,0.4s,baz=322,slow=6.4,SNR=21
VNDA **Vanda** 74.44 170 P P **16 25 29.9 +0.9**
VNDA IAmb IAmb 16 26 17.0
comp=Z,45nm,1.6s
SYO **Syowa Base** 75.20 200⇑ eP P **16 25 33.0 -0.5**
ARU **Arti** 76.62 334 ciP P **16 25 41.1 -0.7**
ARU 16 28 34.0
ARU S S **16 35 19.4 -2.1**
ARU pmax pmax
comp=Z,9.0nm,1.8s
MBAR **Mbarara** 78.54 271 P P **16 25 55.1 +1.5**
MBAR pmax pmax
comp=Z,11nm,1.0s
MBAR **Mbarara** 78.54 271 P P **16 25 55.4 +1.8**
comp=Z,3.4nm,0.2s,baz=97,slow=8.2,SNR=13
MBAR **Mbarara** 78.54 271 P P **16 25 55.1 +1.5**
MBAR IAmb IAmb 16 26 17.4
comp=Z,11nm,0.9s
NEY **Neytrino** 78.93 317 iP P **16 25 53.7 -1.4**
NEY pmax pmax
comp=Z,3.0nm,0.9s
KBZ **Khabaz** 79.00 317 iP P **16 25 51.9 -3.3**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KBZ **Khabaz** 79.00 317 P P **16 25 55.2 0.0**
comp=Z,5.9nm,0.9s,baz=156,slow=4.0,SNR=7.5
SHA1 **Shidzhatmaz** 79.16 317 iP P **16 25 55.0 -1.4**
KIV **Kislovodsk** 79.22 318 eP P **16 25 54.8 -1.8**
KIV pmax pmax
comp=Z,21nm,0.9s
BOSA **Boshof** 80.90 242 P P **16 26 07.1 +1.1**
BOSA pmax pmax
comp=Z,27nm,1.5s
BOSA **Boshof** 80.90 242 P P **16 26 07.3 +1.2**
comp=Z,3.2nm,0.5s,baz=102,slow=4.0,SNR=15
BOSA **Boshof** 80.90 242 P P **16 26 07.1 +1.1**
BOSA IAmb IAmb 16 26 08.4
comp=Z,27nm,1.5s
QSPA **South Pole Qui** 81.84 180 P P **16 26 10.5 +0.3**
QSPA IAmb IAmb 16 26 12.4
comp=Z,21nm,0.9s
KIRV **Kirov** 81.92 333 LR LR 17 07 53.1
comp=Z,165nm,18.9s,baz=239,slow=40
VRH **Novokhopyorsk** 82.61 324 eP P **16 26 12.4 -1.9**
VRH pmax pmax
comp=Z,10.0nm,1.0s
VORD **Divnogorie** 83.95 323 eP P **16 26 19.9 -1.3**
VORD pmax pmax
comp=Z,7.0nm,0.6s
VSR **Storozhevoye** 84.11 324 eP P **16 26 20.0 -2.0**
VSR pmax pmax
comp=Z,10.0nm,0.6s
BR131 **Keskin Array S** 84.25 311 P P **16 26 22.6 -0.6**
BR131 pmax pmax
comp=Z,14nm,1.0s
BR131 **Keskin Array S** 84.25 311 P P **16 26 22.6 -0.6**
BR131 IAmb IAmb 16 26 44.9
comp=Z,14nm,1.0s
BRTR **Keskin Array B** 84.25 311 P P **16 26 23.0 -0.2**
comp=Z,5.8nm,0.7s,baz=141,slow=7.6,SNR=35
BILL **Bilibino** 85.86 18 eP P **16 26 28.4 -2.0**
BILL e 16 29 50.1
BILL ePPP PPP 16 31 40.8
BILL pmax pmax
comp=Z,2.0nm,0.9s
OBN **Obninsk** 86.90 327 eP P **16 26 34.4 -1.4**
OBN e 16 29 57.8
OBN pmax pmax
comp=Z,12nm,0.8s
OBN **Obninsk** 86.90 327 P P **16 26 34.2 -1.5**
comp=Z,4.0nm,0.4s,baz=38,slow=22,SNR=4.3
OBN **Obninsk** 86.90 327 IAmb IAmb 16 26 36.4
comp=Z,18nm,0.8s
KLMR **Klimovskoe** 87.42 333 eP P **16 26 36.5 -1.6**
KLMR pmax pmax

comp=Z,29nm,1.5s
KLMR **Klimovskoe** 87.42 333 *e*P P 16 26 36.6 -1.6
KLMR AMP 16 26 40.3
comp=Z,29nm,1.5s
KARP **Karpathos** 88.30 306 P P 16 26 43.6 +0.6
KARP pP pP 16 27 04.9 -0.4
TSUM **Tsumeb** 88.92 251 P P 16 26 48.0 +1.6
TSUM IAmb IAmb 16 26 49.2
comp=Z,5.9nm,0.9s
SNAA **Sanae** 89.09 197 P P 16 26 47.5 +1.4
SNAA **Sanae** 89.09 197 P P 16 26 47.3 +1.2
SNAA pmax pmax
comp=Z,18nm,0.8s
SNAA **Sanae** 89.09 197 P P 16 26 47.3 +1.2
AKASG **Malin Array Be** 89.98 321 P P 16 26 49.1 -1.4
AKASG pmax pmax
comp=Z,2.0nm,1.1s
AKASG **Malin Array Be** 89.98 321 P P 16 26 49.1 -1.4
comp=Z,26nm,0.3s,baz=88,slow=4.8,SNR=1.4
VNA2 **Neumayer--Watz** 90.74 197 P P 16 26 55.8 +2.1
baz=97,slow=3.8
MLR **Muntele Rosu** 91.08 316 P P 16 26 56.9 +1.0
MLR pmax pmax
comp=Z,47nm,1.7s
MLR **Muntele Rosu** 91.08 316 P P 16 26 56.9 +1.0
comp=Z,2.9nm,0.6s,baz=111,slow=16,SNR=4.5
VNA1 **Neumayer--Stat** 91.12 197 P P 16 26 58.1 +2.7
VNA3 **Neumayer Olymp** 91.24 196 P P 16 26 57.6 +1.5
BUR08 **Bucovina Ar. S** 91.97 318 P P 16 27 00.1 +0.2
BUR08 pP pP 16 27 21.6 -0.7
FINES **FINESS Array B** 93.84 331 P P 16 27 07.8 -0.3
comp=Z,3.5nm,0.8s,baz=116,slow=4.4,SNR=5.3
KOLS **Kolonicke sedl** 94.10 319 *e*P P 16 27 09.9 +0.3
KOLS **Kolonicke sedl** 94.10 319 *e*P P 16 27 09.9 +0.3
ARCES **ARCESS Array B** 95.39 339 P P 16 27 14.9 -0.2
comp=Z,4.8nm,0.9s,baz=108,slow=2.9,SNR=5.1
SPITS **Spitsbergen Ar** 98.52 348 P P 16 27 27.4 -1.7
comp=Z,15nm,1.0s,baz=147,slow=13,SNR=5.4
GERES **GERESS Array B** 99.73 318 P Pdif 16 27 34.2 -0.9
comp=Z,0.3nm,0.5s,baz=126,slow=1.3,SNR=2.6
TORD **Torodi Ar. Bea** 108.83 281 PKIKP PKiKP 16 32 20.5 -0.4
comp=Z,0.7nm,0.9s,baz=101,slow=1.2,SNR=3.0
YKA **Yellowknife Ar** 117.14 21 PKP PKPdf 16 32 35.3 -0.2
comp=Z,1.5nm,0.6s,baz=325,slow=1.5,SNR=20
J04D **Umpqua Nationa** 123.23 43 P PKiKP 16 32 49.0 +0.7
baz=292
M02C **Callahan** 123.39 45 P PKiKP 16 32 49.1 +0.6
baz=291
L04D **Klamath Falls** 123.48 44 P PKiKP 16 32 49.0 +0.3
baz=292
J05D **Fort Rock, OR** 123.80 43 P PKiKP 16 32 50.4 +1.1
baz=293
NVAR **Mina Array Bea** 127.73 47 PKP PKiKP 16 32 57.9 +0.4
comp=Z,1.0nm,0.7s,baz=245,slow=2.6,SNR=8.0
EGMT **Eagleton** 128.38 33 PKiKP 16 32 58.1 -0.1
EGMT **Eagleton** 128.38 33 P PKiKP 16 32 58.6 +0.4
baz=308
CWC **Cottonwood Cre** 128.64 49 P PKiKP 16 33 00.1 +0.9
baz=291
MPMC **Manual Prospec** 129.22 50 P PKiKP 16 33 01.7 +1.2
baz=292
LAO **LASA Array** 131.09 32 P PKiKP 16 33 04.9 +1.1
baz=310
PDAR **Pinedale Array** 131.56 38 PKP PKPdf 16 33 04.3 +0.3
comp=Z,0.4nm,0.6s,baz=117,slow=3.4,SNR=4.4
TMUT **Trail Mountain** 132.33 43 PKPpre 16 32 54.5
ULM **Lac du Bonnet** 133.12 22 PKP PKPdf 16 33 06.9 +0.5
comp=Z,1.4nm,0.5s,baz=66,slow=2.2,SNR=3.4
SCHQ **Schefferville** 133.34 357 PKP PKPdf 16 33 07.2 +0.5
comp=Z,3.2nm,0.7s,baz=320,slow=2.3,SNR=5.2
TXAR **Lajitas Array** 142.60 51 PKiKP PKPpre 16 33 20.1
comp=Z,1.2nm,0.5s,baz=251,slow=1.0,SNR=7.3
WMOK **Wichita Mounta** 143.09 40 P PKPbc 16 33 22.1 -0.2
baz=309
G59A **Clarenceville** 143.15 3 P PKPbc 16 33 22.7 +0.7
baz=356
CPUP **Villa Florida** 143.33 200 PKP PKPbc 16 33 24.2 +1.1
comp=Z,2.3nm,0.5s,baz=133,slow=4.0,SNR=8.4
L48A **N Adams** 144.24 18 P PKPbc 16 33 25.5 +0.1
baz=336
L49A **Milan** 144.28 17 P PKPbc 16 33 25.3 -0.1
baz=338
I60A **Shoreham** 144.38 3 P PKPbc 16 33 26.0 +0.4
baz=356
P43A **Skaggs, Pawnee** 144.42 25 PKPab 16 33 25.6 -0.1
M48A **Edgerton** 144.57 18 PKPab 16 33 26.2 0.0
M48A **Edgerton** 144.57 18 P PKPbc 16 33 26.6 +0.2
baz=336
J57A **Williamstown** 144.58 7 P PKPbc 16 33 26.7 +0.4
baz=351
L50A **Kingsville** 144.60 16 P PKPbc 16 33 26.6 +0.2
baz=339
J58A **Remsen** 144.71 6 P PKPbc 16 33 26.9 +0.1
baz=352
SFIN **Lafayette** 144.75 22 PKPab 16 33 26.8 -0.1
SFIN **Lafayette** 144.75 22 P PKPab 16 33 26.8 -0.1
baz=331
N47A **Urbana** 144.80 20 PKPab 16 33 26.6 -0.4
N47A **Urbana** 144.80 20 P PKPbc 16 33 27.2 0.0
baz=334
M49A **Liberty Center** 144.80 17 P PKPbc 16 33 27.3 +0.2
baz=337
J61A **Chester** 144.91 2 P PKPdf 16 33 27.8 -0.3
baz=357
JCT **Junction City** 144.91 47 PKIKP PKPbc 16 33 28.0 +0.1
JCT **Junction City** 144.91 47 PKPbc 16 33 28.0 +0.1
JCT **Junction City** 144.91 47 P PKPdf 16 33 28.5 -0.1
baz=304
HHAR **Hobbs** 144.92 34 PKPab 16 33 26.7 -1.0
CCM **Cathedral Cave** 144.94 29 PKIKP PKPab 16 33 27.0 -0.6
CCM **Cathedral Cave** 144.94 29 PKPab 16 33 27.0 -0.6
CCM **Cathedral Cave** 144.94 29 P PKPab 16 33 27.3 -0.3
baz=323
K55A **Perry** 144.97 9 P PKPab 16 33 27.2 -0.4
baz=347
K54A **Basiliko Farm,** 144.97 10 P PKPbc 16 33 27.5 -0.2
baz=346
N48A **Decatur** 145.04 19 P PKPbc 16 33 27.9 0.0
baz=335
M50A **Fremont** 145.14 16 PKPbc 16 33 27.5 -0.6
M50A **Fremont** 145.14 16 P PKPbc 16 33 28.0 -0.1
baz=338
MGMO **Mountain Grove** 145.14 31 PKPbc 16 33 27.5 -0.9
K57A **Scipio Center** 145.19 7 P PKPbc 16 33 28.2 -0.2
baz=350
WVNY **West Valley, N** 145.19 10 PKPbc 16 33 27.2 -1.1
ERPA **Erie** 145.20 12 PKPbc 16 33 27.2 -1.2
ERPA **Erie** 145.20 12 P PKPbc 16 33 28.2 -0.2
baz=344
L54A **Sinclairville** 145.22 11 P PKPbc 16 33 28.1 -0.4
baz=345
N49A **Columbus Grove** 145.25 18 PKPbc 16 33 27.8 -0.8
N49A **Columbus Grove** 145.25 18 P PKPbc 16 33 28.2 -0.3
baz=396
L53A **Girard** 145.30 12 P PKPbc 16 33 28.5 -0.2
baz=343
X37A **Clayton** 145.30 37 PKPbc 16 33 28.8 -0.2
P46A **Rosedale** 145.37 23 PKPbc 16 33 28.8 -0.2
FVM **French Village** 145.38 28 PKIKP PKPbc 16 33 28.4 -0.7
FVM **French Village** 145.38 28 PKPbc 16 33 28.4 -0.7
L55A **Hinsdale** 145.43 10 P PKPdf 16 33 28.5 -0.6
baz=346
M52A **Chesterland** 145.44 14 PKPdf 16 33 28.6 -0.5
M52A **Chesterland** 145.44 14 P PKPbc 16 33 29.1 0.0
baz=341
U40A **Yellville** 145.45 32 PKPdf 16 33 28.5 -0.8
U40A **Yellville** 145.45 32 P PKPdf 16 33 29.1 -0.2
baz=319
O48A **Farmland** 145.54 20 P PKPdf 16 33 29.2 -0.1
baz=334
K61A **Williamstown** 145.55 3 P PKPab 16 33 30.3 +0.5
baz=356
L56A **Greenwood** 145.62 9 PKPdf 16 33 28.9 -0.5
L56A **Greenwood** 145.62 9 P PKPdf 16 33 29.3 -0.1
baz=348
WHTX **Lake Whitney,** 145.67 43 P PKPab 16 33 31.6 +1.1
baz=308
N50A **Nevada** 145.69 17 P PKPbc 16 33 29.8 -0.1
baz=338
M53A **WI Miller and** 145.70 13 P PKPdf 16 33 29.6 0.0
baz=342
BINY **Binghamton** 145.78 7 PKPbc 16 33 30.0 -0.2
BINY **Binghamton** 145.78 7 P PKPbc 16 33 30.3 +0.1
baz=351
OLIL **Olney** 145.78 24 PKPdf 16 33 29.9 +0.2
W39A **Magazine** 145.79 35 PKPdf 16 33 29.9 +0.1
baz=317
M54A **Oil Creek Stat** 145.85 12 PKPbc 16 33 30.1 -0.3
M54A **Oil Creek Stat** 145.85 12 P PKPbc 16 33 30.4 -0.1
baz=344
O49A **Covington** 145.87 19 PKPdf 16 33 30.0 +0.2
O49A **Covington** 145.87 19 P PKPbc 16 33 30.7 +0.2
baz=336
L59A **Walton** 145.89 6 PKPdf 16 33 30.2 +0.3
L59A **Walton** 145.89 6 P PKPbc 16 33 30.5 -0.1
baz=352
L58A **Harry Jones Me** 145.94 7 P PKPab 16 33 31.1 -0.2
baz=351
BLO **Bloomington** 146.02 22 PKP2 PKPbc 16 33 30.8 -0.2
BLO **Bloomington** 146.02 22 PKPbc PKPbc 16 33 30.8 -0.2
N52A **McGinn's Farm,** 146.05 15 P PKPbc 16 33 31.1 0.0
baz=340
M55A **Ridgway** 146.07 11 PKPbc PKPbc 16 33 30.6 -0.5
M55A **Ridgway** 146.07 11 P PKPbc 16 33 31.2 0.0
baz=346
O50A **Cable** 146.13 18 P PKPbc 16 33 31.5 +0.2
baz=337
S44A **Carbondale** 146.15 27 PKPbc PKPbc 16 33 31.4 -0.1
M56A **Emporium** 146.16 10 PKPbc PKPbc 16 33 30.9 -0.5
M56A **Emporium** 146.16 10 P PKPbc 16 33 31.4 0.0
baz=347
P48A **Milroy** 146.16 21 PKPbc PKPbc 16 33 31.0 -0.4
P48A **Milroy** 146.16 21 P PKPbc 16 33 31.2 -0.2
baz=333
ACSO **Alum Creek Sta** 146.24 17 PKPbc 16 33 31.2 -0.5
ACSO **Alum Creek Sta** 146.24 17 P PKPbc 16 33 31.5 -0.1
baz=338
P49A **Miami Univ. Ec** 146.34 20 P PKPbc 16 33 31.7 -0.2
baz=335
PBMO **Poplar Bluff** 146.35 29 PKPdf 16 33 31.0 +0.3
833A **Chaparral WMA,** 146.36 50 PKPdf PKPdf 16 33 30.5 -0.5
833A **Chaparral WMA,** 146.36 50 P PKPab 16 33 33.8 +0.5
baz=301
MIAR **Mount Ida** 146.38 35 PKP2 PKPbc 16 33 32.0 -0.3
MIAR **Mount Ida** 146.38 35 PKPbc 16 33 32.0 -0.3
MIAR **Mount Ida** 146.38 35 P PKPbc 16 33 32.5 +0.3
baz=316
O51A **Pataskala** 146.43 17 P PKPbc 16 33 32.3 +0.1
baz=338
M57A **Sunshine Farm,** 146.47 9 PKPbc 16 33 32.0 -0.2
M57A **Sunshine Farm,** 146.47 9 P PKPbc 16 33 32.1 -0.2
baz=348
KSCT **Kent School, K** 146.48 4 PKPbc 16 33 31.6 -0.6
M59A **Waymart** 146.49 6 P PKPbc 16 33 32.5 +0.1
baz=352
Q48A **North Vernon** 146.52 21 P PKPdf 16 33 31.4 +0.5
baz=332
M58A **Price's Panora** 146.53 8 P PKPbc 16 33 32.6 +0.1
baz=350
LCAR **Lake Charles** 146.55 31 PKPbc 16 33 32.2 -0.4
WHAR **Wooly Hollow** 146.55 33 PKPdf 16 33 31.8 +0.6
P50A **Jamestown** 146.57 18 P PKPbc 16 33 32.5 -0.1
baz=336
W41B **Gary Mavity, V** 146.66 33 PKPbc 16 33 32.5 -0.5
O52A **Adamsville** 146.66 16 PKPbc 16 33 32.1 -0.8
O52A **Adamsville** 146.66 16 P PKPdf 16 33 31.7 +0.5
baz=340
N55A **Marion Center** 146.69 11 P PKPbc 16 33 32.6 -0.3
baz=345
PARMO **Parma** 146.77 29 PKPdf 16 33 31.9 +0.5
M60A **Port Jervis** 146.78 5 P PKPbc 16 33 33.1 0.0
baz=353
X40A **Basin Creek Fa** 146.84 35 PKPbc PKPbc 16 33 33.0 -0.5
GO02 **Mina Guanaco** 146.87 182 PKPbc PKPab 16 33 35.5 -0.2
UALR **University of** 146.91 34 PKPdf PKPdf 16 33 31.9 +0.1
P51A **Williamsport** 146.91 18 PKPdf 16 33 32.6 +1.0
P51A **Williamsport** 146.91 18 P PKPbc 16 33 32.8 -0.7
baz=337
WCI **Wyandotte Cave** 146.93 23 PKP2 PKPbc 16 33 33.1 -0.6
WCI **Wyandotte Cave** 146.93 23 PKPbc 16 33 33.1 -0.6
WCI **Wyandotte Cave** 146.93 23 P PKPbc 16 33 33.5 -0.2
baz=331
O54A **Avella** 146.97 14 PKPbc 16 33 33.1 -0.6
O54A **Avella** 146.97 14 P PKPbc 16 33 33.8 0.0
baz=342
N57A **Milroy** 146.97 9 P PKPbc 16 33 33.9 +0.1
baz=348
N58A **Sunbury** 147.02 8 PKPbc 16 33 33.1 -0.7
N58A **Sunbury** 147.02 8 P PKPbc 16 33 33.8 -0.1
baz=349
ODNJ **Ogdensburg** 147.03 5 PKPbc 16 33 33.5 -0.4
SSPA **Standing Stone** 147.03 10 PKPbc 16 33 33.7 -0.2
SSPA **Standing Stone** 147.03 10 P PKPbc 16 33 33.9 0.0
baz=347
P52A **Corning** 147.03 16 P PKPbc 16 33 33.4 -0.5
baz=339
N59A **State Game Lan** 147.07 7 PKPbc 16 33 33.6 -0.5
N59A **State Game Lan** 147.07 7 P PKPbc 16 33 34.4 +0.3
baz=351
PAL **Palisades** 147.16 4 P PKPbc 16 33 34.1 -0.2
baz=354
O55A **Ligonier** 147.18 12 P PKPbc 16 33 34.3 -0.1
baz=344
N60A **Cedar Hill Far** 147.19 6 P PKPbc 16 33 34.6 +0.2
baz=352
Q51A **Peebles** 147.24 18 PKPbc 16 33 33.7 -0.9
Q51A **Peebles** 147.24 18 P PKPbc 16 33 34.1 -0.4
baz=337
O56A **Blue Knob Stat** 147.27 11 PKPbc 16 33 34.3 -0.3
O56A **Blue Knob Stat** 147.27 11 P PKPbc 16 33 34.8 +0.1
baz=346
R49A **Shelbyville** 147.29 21 PKPbc 16 33 33.8 -0.9
R49A **Shelbyville** 147.29 21 P PKPbc 16 33 34.5 -0.2
baz=333
BDFB **Brasilia** 147.35 224 PKP2 PKPbc 16 33 36.6 +1.0
BDFB **Brasilia** 147.35 224 PKPbc PKPab 16 33 36.9 -0.7
comp=Z,9.6nm,0.6s,baz=167,slow=2.6,SNR=11
BDFB **Brasilia** 147.35 224 PKPbc 16 33 36.5 +1.0
P53A **Whipple** 147.37 15 PKPbc 16 33 34.3 -0.6
P53A **Whipple** 147.37 15 P PKPbc 16 33 34.4 -0.5
baz=340
O57A **Amberson** 147.49 10 P PKPbc 16 33 34.5 -0.7
baz=347
P54A **Burton** 147.49 14 P PKPbc 16 33 35.4 +0.2
baz=342
MCWV **Mont Chateau** 147.59 13 PKPdf 16 33 33.9 +1.2
R50A **Paris** 147.60 20 PKPdf 16 33 34.1 +1.3
R50A **Paris** 147.60 20 P PKPbc 16 33 35.0 -0.5
baz=334
O59A **Robesonia** 147.61 8 P PKPbc 16 33 35.3 -0.2
baz=350
T47A **Sharon Grove** 147.68 25 PKPbc 16 33 34.7 -1.1
O58A **Lewisberry** 147.69 9 P PKPbc 16 33 35.7 0.0
baz=348
S49A **Springfield** 147.70 22 P PKPbc 16 33 35.5 -0.3
baz=332
O60A **Telford** 147.70 7 P PKPbc 16 33 35.8 +0.1
baz=351
P55A **Reedsville** 147.74 13 P PKPbc 16 33 35.9 0.0
baz=343
Q53A **Leroy** 147.93 16 P PKPbc 16 33 36.4 -0.1
baz=340
P56A **Dayton Farm, R** 147.95 12 P PKPbc 16 33 36.5 +0.1
baz=345
Q54A **Coxs Mills** 147.99 15 PKPbc 16 33 36.0 -0.6
Q54A **Coxs Mills** 147.99 15 P PKPbc 16 33 36.4 -0.2
baz=341
WVT **Waverly** 148.09 27 PKP2 PKPbc 16 33 36.5 -0.4
WVT **Waverly** 148.09 27 PKPbc 16 33 36.5 -0.4
WVT **Waverly** 148.09 27 P PKPbc 16 33 37.0 +0.1
baz=327
S50A **Richmond** 148.11 21 P PKPbc 16 33 36.6 -0.4
baz=334
P57A **Homestead Farm** 148.13 11 PKPbc 16 33 36.1 -0.8
P57A **Homestead Farm** 148.13 11 P PKPbc 16 33 36.9 -0.1
baz=346
Q55A **Buckhannon** 148.16 14 P PKPbc 16 33 37.3 +0.2
baz=342
P60A **Greenville** 148.17 7 P PKPbc 16 33 37.1 +0.1
baz=351
T49A **Edmonton** 148.20 23 PKPbc 16 33 36.5 -0.7
T49A **Edmonton** 148.20 23 P PKPbc 16 33 36.9 -0.3
baz=332
P58A **Pank, Wackersv** 148.25 10 P PKPbc 16 33 37.5 +0.3
baz=348
P59A **Jarrettsville** 148.27 8 P PKPbc 16 33 37.6 +0.4
baz=349
R53A **Hurricane** 148.30 17 PKPbc 16 33 36.6 -0.8
R53A **Hurricane** 148.30 17 P PKPbc 16 33 37.7 +0.3
baz=339
Q56A **Snyder Ridge,** 148.32 13 PKPbc 16 33 37.0 -0.5
baz=344
Q56A **Snyder Ridge,** 148.32 13 P PKPbc 16 33 37.6 +0.1
baz=344
S51A **Beattyville** 148.42 20 PKPbc 16 33 37.0 -0.8
S51A **Beattyville** 148.42 20 P PKPbc 16 33 37.5 -0.3
baz=335
Q57A **Strasburg** 148.49 11 P PKPbc 16 33 37.9 0.0
baz=345
T50A **Nancy** 148.54 22 P PKPbc 16 33 37.9 -0.2
baz=333
U49A **Red Boiling Sp** 148.62 24 P PKPbc 16 33 38.4 +0.1
baz=331
OXF **Oxford** 148.65 31 PKP2 PKPbc 16 33 38.0 -0.4
OXF **Oxford** 148.65 31 PKPbc 16 33 38.0 -0.4
R54A **Victor** 148.71 16 P PKPbc 16 33 38.5 0.0
baz=340
Q58A **Fox Den Farm,** 148.72 10 P PKPbc 16 33 38.6 +0.1
baz=347
CLTN **Cedars of Leba** 148.76 25 PKPbc 16 33 38.1 -0.6
CLTN pPKPbc 16 34 00.3 -1.5
V48A **Smith Brothers** 148.86 26 PKPbc 16 33 38.4 -0.5
R56A **Bull Pasture M** 148.88 13 P PKPbc 16 33 39.2 +0.2
baz=343
T51A **Gray** 148.91 21 P PKPbc 16 33 39.0 0.0
baz=334
PLAL **Pickwick Lake** 148.92 28 PKPbc 16 33 38.1 -1.0
PLAL pPKPbc 16 34 00.4 -1.8
U50A **Jamestown** 149.07 22 P PKPbc 16 33 39.3 -0.1
baz=332
R57A **Stanardsville** 149.18 12 P PKPbc 16 33 40.0 +0.3
baz=345
V49A **McMinnville** 149.22 25 P PKPbc 16 33 40.0 +0.2
baz=330
R58A **Rapidan** 149.28 11 P PKPbc 16 33 39.9 0.0
baz=346
U51A **La Follette** 149.41 21 P PKiKP 16 33 40.9 -0.6
baz=334
TZTN **Tazewell** 149.43 21 PKPbc 16 33 39.8 -0.6
TZTN **Tazewell** 149.43 21 P PKPbc 16 33 40.6 +0.3
baz=335
S56A **Natural Bridge** 149.54 14 P PKPbc 16 33 40.7 +0.1
baz=343
T54A **Tazewell** 149.59 17 P PKPbc 16 33 40.8 0.0
baz=338
W49A **Belvidere** 149.62 26 P PKPbc 16 33 40.4 -0.5
baz=329
V50A **Pikevile** 149.63 24 P PKPbc 16 33 40.7 -0.1
baz=331
U52A **Thorn Hill** 149.63 20 P PKPbc 16 33 41.0 +0.1
baz=335
R58B **Mineral** 149.63 11 PKPbc 16 33 40.4 -0.3
R58B **Mineral** 149.63 11 P PKPbc 16 33 40.8 0.0
baz=346
SWET **Sewanee** 149.68 25 PKPbc 16 33 40.2 -0.9
T55A **Pulaski** 149.76 16 P PKPbc 16 33 41.2 0.0
baz=340
BLA **Blacksburg** 149.77 15 P PKPbc 16 33 41.3 +0.1
baz=341
V51A **Loudon** 149.80 22 PKPbc 16 33 40.8 -0.5
V51A **Loudon** 149.80 22 P PKPbc 16 33 41.2 0.0
baz=332
X48A **Hartselle** 149.84 27 PKPbc 16 33 40.5 -0.9
S59A **Mechanicsville** 149.93 10 P PKPbc 16 33 41.7 +0.2
baz=347
S58A **Poland Farm, P** 149.94 12 PKPbc 16 33 41.3 -0.2
S58A **Poland Farm, P** 149.94 12 P PKPbc 16 33 41.7 +0.2
baz=346
U54A **Nelsons Funny** 150.01 18 P PKPbc 16 33 42.0 +0.1
baz=338
V52A **Sevierville** 150.04 21 PKPbc 16 33 41.6 -0.3
V52A **Sevierville** 150.04 21 P PKiKP 16 33 42.5 -0.2
baz=334
T56A **Rocky Mt** 150.04 15 P PKPbc 16 33 41.9 +0.1
baz=341
CPCT **Cooper Cave** 150.05 23 PKPbc 16 33 41.6 -0.2
TKL **Tuckaleechee C** 150.14 22 PKP2 PKPbc 16 33 42.0 -0.1
TKL **Tuckaleechee C** 150.14 22 PKPbc 16 33 42.0 -0.1
W51A **Cleveland** 150.21 24 P PKPbc 16 33 42.6 +0.3
baz=331
U55A **TA2, Sparta** 150.26 17 P PKPbc 16 33 42.6 +0.2
baz=339
V53A **Saluda** 150.47 20 PKPbc 16 33 42.5 -0.4
V53A **Saluda** 150.47 20 P PKPbc 16 33 43.3 +0.3
baz=335
T58A **Grand View Acr** 150.48 13 P PKiKP 16 33 43.3 -0.2
baz=344
W52A **Murphy** 150.59 22 PKPbc 16 33 43.0 -0.3
W52A **Murphy** 150.59 22 P PKiKP 16 33 43.6 -0.3
baz=333
U56A **King** 150.59 16 PKPbc 16 33 42.7 -0.5
U56A **King** 150.59 16 P PKPbc 16 33 43.3 +0.2
baz=340
Y49A **Blount Mountai** 150.62 27 PKPbc 16 33 42.9 -0.5
T59A **Double "B" Far** 150.65 11 PKPbc 16 33 43.3 +0.1
T59A **Double "B" Far** 150.65 11 P PKiKP 16 33 43.8 -0.1
baz=346
V54A **Nebo** 150.66 19 P PKPbc 16 33 43.6 +0.2
baz=337
X51A **Calhoun** 150.69 24 PKPbc 16 33 43.4 0.0
X51A **Calhoun** 150.69 24 P PKPbc 16 33 43.7 +0.3
baz=331
U57A **Blanch** 150.78 14 P PKPbc 16 33 43.8 +0.3
baz=342
W53A **Cullowhee** 150.80 21 P PKiKP 16 33 44.4 0.0
baz=334
V55A **Taylorsville** 150.82 18 PKPbc 16 33 43.3 -0.4
V55A **Taylorsville** 150.82 18 P PKPbc 16 33 43.8 +0.1
baz=338
U58A **Oxford** 151.00 13 P PKiKP 16 33 44.5 -0.2
baz=344
LRAL **Lakeview Retre** 151.03 29 PKPbc 16 33 43.9 -0.4
LRAL **Lakeview Retre** 151.03 29 P PKPbc 16 33 44.5 +0.2
baz=325
X52A **Dahlonega** 151.03 23 P PKiKP 16 33 44.8 -0.1
baz=332
BG3 **Lake Jocassee** 151.04 21 PKPbc 16 33 44.1 -0.1
V56A **Mocksville** 151.06 17 P PKPbc 16 33 44.4 +0.1
baz=340
V57A **Coltrane Farms** 151.19 15 P PKPbc 16 33 44.4 -0.1
baz=341
W54A **Cherokee Point** 151.21 20 P PKPbc 16 33 44.6 -0.1
baz=336
X53A **Estanollee** 151.35 22 P PKiKP 16 33 45.5 +0.1
baz=333
Z50A **Ashland** 151.35 27 PKPbc 16 33 44.5 -0.6
Z50A **Ashland** 151.35 27 P PKPbc 16 33 45.1 +0.1
baz=327
KMSC **Kings Mountain** 151.44 18 PKPbc 16 33 44.7 -0.5
KMSC **Kings Mountain** 151.44 18 P PKiKP 16 33 45.5 -0.1
baz=338
PAULI **Pauline** 151.58 19 PKPbc 16 33 44.9 -0.6
Y52A **Lilburn** 151.62 24 PKPbc 16 33 45.8 +0.1
Y52A **Lilburn** 151.62 24 P PKiKP 16 33 46.5 +0.4
baz=332
X54A **Belton** 151.64 20 P PKiKP 16 33 46.2 +0.2
baz=335
V59A **Middlesex** 151.68 13 P PKPbc 16 33 45.7 +0.1
baz=344
Y53A **Monroe** 151.81 23 P PKiKP 16 33 46.6 +0.1
baz=332
W57A **Gilead** 151.82 16 P PKiKP 16 33 46.4 0.0
baz=340
V60A **Jim Taylor Roa** 151.88 11 P PKiKP 16 33 46.6 +0.2
baz=346
X55A **Gracelyn & Ava** 151.96 19 P PKiKP 16 33 46.7 0.0
baz=337
Z52A **Williamson** 152.06 25 P PKiKP 16 33 47.3 +0.4
baz=330
X56A **White Oak** 152.13 18 P PKiKP 16 33 47.0 -0.1
baz=338
Y54A **Tignall** 152.14 22 P PKiKP 16 33 47.4 +0.3
baz=334
250A **Grady** 152.25 29 PKPbc 16 33 47.2 +0.1
GOGA **Godfrey** 152.25 23 PKIKP PKPbc 16 33 46.1 -0.9
GOGA **Godfrey** 152.25 23 PKPbc PKPbc 16 33 46.1 -0.9
GOGA **Godfrey** 152.25 23 P PKiKP 16 33 47.5 +0.1
baz=332
GO01 **Chusmiza** 152.31 183 PKiKP 16 33 49.2 +0.7
Z53A **Monticello** 152.32 24 P PKiKP 16 33 47.6 +0.1
baz=332
Y55A **Saluda** 152.37 20 P PKiKP 16 33 47.8 +0.2
baz=336
152A **Waverly Hall** 152.38 26 PKPbc 16 33 46.3 -1.0
152A **Waverly Hall** 152.38 26 P PKiKP 16 33 47.9 +0.2
baz=329
Z54A **Sparta** 152.65 22 P PKiKP 16 33 48.5 +0.4
baz=333

LPAZ La Paz 155.58 186 PKPab **PKPab 16 34 14.1 +1.9**
comp=Z,4.6nm,0.7s,baz=178,slow=6.3,SNR=14

*THE **27** 16:26:08.0, 38°.21N×20°.36E, h2km±2km, ML2.6/10, Error ellipse: s-maj=2.9km s-min=0.9km az=67.0*
*ATH **27** 16:26:08.5, 38°.22N×20°.42E, h9km±4km, ML2.6/8, Error ellipse: s-maj=4.2km s-min=0.8km az=97.0*
ISC 27 16:26:06.2±1.2, **38°.18N**±0°.04×**20°.29E**±0°.05, **h19**km±2km, **n38**, σ0**°.58**/60, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ARG2	**Argostoli**	**0.15**	**91**	P		**Pg**	**16 26 10.5**	**-0.1**
ARG2				S		**Sb**	**16 26 11.8**	**+1.1**
	32μm,0.2s							
VLS	**Valsamata**	**0.23**	**91**	P		**Pb**	**16 26 11.6**	**+0.1**
VLS				S		**Sb**	**16 26 13.9**	**-1.1**
VLS	**Valsamata**	**0.23**	**91**	P		**Pb**	**16 26 11.6**	**+0.1**
VLS				S		**Sb**	**16 26 13.9**	**-1.1**
VLS				AML		AML	16 26 14.0	
	comp=N,32037μm,0.1s							
VLS				AML		AML	16 26 14.4	
	comp=E,20307μm,0.2s							
FSK	**Fiskardo**	**0.35**	**37**	P		**Pb**	**16 26 13.9**	**0.0**
FSK				S		**Sg**	**16 26 17.6**	**-1.1**
	comp=E,2μm,0.1s							
FSK	**Fiskardo**	**0.35**	**37**	P		**Pb**	**16 26 13.9**	**0.0**
FSK				S		**Sg**	**16 26 18.0**	**-0.7**
KFL	**Anninata**	**0.40**	**100**	P		**Pb**	**16 26 14.7**	**0.0**
KFL				S		**Sg**	**16 26 19.8**	**-0.3**
	comp=E,3μm,0.3s							
KFL	**Anninata**	**0.40**	**100**	P		**Pb**	**16 26 14.7**	**0.0**
KFL				S		**Sg**	**16 26 19.1**	**-1.0**
KFL				AML		AML	16 26 20.4	
	comp=E,9672μm,0.3s							
KFL				AML		AML	16 26 23.5	
	comp=N,4428μm,0.3s							
VLMS	**Volimes, Zakyn**	**0.42**	**136**	P		**Pn**	**16 26 16.5**	**-0.7**
VLMS				S		**Sb**	**16 26 22.0**	**+0.8**
VLMS				AML		AML	16 26 24.7	
	comp=E,2425μm,0.2s							
VLMS				AML		AML	16 26 25.0	
	comp=N,3028μm,0.1s							
EVGI	**Lefkada island**	**0.52**	**33**	P		**Pb**	**16 26 17.1**	**+0.4**
EVGI				S		**Sb**	**16 26 23.9**	**0.0**
	comp=N,720nm,0.2s							
EVGI	**Lefkada island**	**0.52**	**33**	P		**Pb**	**16 26 17.1**	**+0.4**
EVGI				S		**Sb**	**16 26 23.8**	**-0.1**
MGNA	**Meganis**	**0.61**	**39**	P		**Pg**	**16 26 18.4**	**0.0**
MGNA				S		**Sb**	**16 26 25.5**	**-0.9**
MGNA				AML		AML	16 26 27.3	
	comp=N,1295μm,0.3s							
MGNA				AML		AML	16 26 27.4	
	comp=E,1405μm,0.2s							
LKD2	**Lefkada island**	**0.67**	**25**	P		**Pg**	**16 26 19.5**	**0.0**
LKD2				S		**Sg**	**16 26 28.6**	**+0.1**
	comp=E,295nm,0.4s							
LKD2	**Lefkada island**	**0.67**	**25**	P		**Pg**	**16 26 19.5**	**0.0**
LKD2				S		**Sb**	**16 26 27.9**	**-0.2**
LKD2				AML		AML	16 26 35.5	
	comp=E,626μm,0.5s							
LKD2				AML		AML	16 26 37.7	
	comp=N,459μm,0.3s							
TSLK	**Tsoukalades, L**	**0.70**	**24**	P		**Pn**	**16 26 20.5**	**-0.6**
TSLK				S		**Sg**	**16 26 29.7**	**+0.2**
TSLK				AML		AML	16 26 37.1	
	comp=E,575μm,0.5s							
TSLK				AML		AML	16 26 38.9	
	comp=N,714μm,0.4s							
PDO	**Prodromos**	**0.81**	**59**	P		**Pg**	**16 26 22.1**	**0.0**
PDO				S		**Sg**	**16 26 33.4**	**+0.5**
PDO	**Prodromos**	**0.81**	**59**	P		**Pg**	**16 26 22.1**	**0.0**
RLS	**Riolos of Patr**	**0.93**	**97**	P		**Pg**	**16 26 24.4**	**0.0**
RLS				S		**Sn**	**16 26 37.6**	**+0.5**
	comp=N,215nm,0.5s							
RLS	**Riolos of Patr**	**0.93**	**97**	P		**Pg**	**16 26 24.6**	**+0.2**
RLS				S		**Sb**	**16 26 36.2**	**+0.5**
RLS				AML		AML	16 26 39.7	
	comp=N,334μm,0.3s							
RLS				AML		AML	16 26 39.9	
	comp=E,530μm,0.6s							
PVO	**Paravola**	**1.06**	**65**	P		**Pg**	**16 26 26.9**	**+0.1**
PVO				S		**Sg**	**16 26 41.4**	**+0.6**
	comp=E,692nm,0.4s							
PVO	**Paravola**	**1.06**	**65**	P		**Pg**	**16 26 26.7**	**-0.1**
PVO				S		**Sn**	**16 26 40.1**	**-0.2**
PVO				AML		AML	16 26 44.2	
	comp=E,1878μm,0.3s							
PVO				AML		AML	16 26 48.9	
	comp=N,1048μm,0.4s							
DRO	**Drossia**	**1.14**	**101**	P		**Pg**	**16 26 28.4**	**+0.1**
DRO				S		**Sg**	**16 26 44.6**	**+1.3**
	comp=N,400nm,0.4s							
DRO	**Drossia**	**1.14**	**101**	P		**Pg**	**16 26 28.5**	**+0.2**
EFP	**Efpalio**	**1.29**	**79**	P		**Pb**	**16 26 30.4**	**+0.5**
EFP				S		**Sg**	**16 26 49.3**	**+1.2**
	comp=N,220nm,0.5s							
EFP	**Efpalio**	**1.29**	**79**	P		**Pg**	**16 26 30.9**	**-0.3**
LAKA	**Lakka**	**1.33**	**87**	P		**Pg**	**16 26 31.2**	**-0.7**
LAKA				S		**Sg**	**16 26 49.9**	**+0.6**
	comp=N,142nm,0.6s							
LAKA	**Lakka**	**1.33**	**87**	P		**Pg**	**16 26 31.2**	**-0.7**
ANX	**Ano Chora**	**1.34**	**72**	P		**Pg**	**16 26 32.2**	**0.0**
ANX	**Ano Chora**	**1.34**	**72**	P		**Pg**	**16 26 32.0**	**-0.1**
IGT	**Igoumenitsa**	**1.35**	**1**	P		**Pg**	**16 26 33.3**	**+1.0**
EVR	**Evrytania**	**1.40**	**58**	P		**Pg**	**16 26 32.9**	**-0.3**
SERG	**Sergoula**	**1.41**	**80**	P		**Pb**	**16 26 32.4**	**+0.6**
SERG	**Sergoula**	**1.41**	**80**	P		**Pg**	**16 26 32.6**	**-0.8**
TRIZ	**Trizonia**	**1.41**	**82**	P		**Pb**	**16 26 32.2**	**+0.3**
ALIK	**Aliki, Aigiali**	**1.43**	**86**	P		**Pb**	**16 26 32.9**	**+0.6**
KALE	**Kalithea**	**1.47**	**81**	P		**Pb**	**16 26 33.3**	**+0.4**
KLV	**Kalavryta, Ach**	**1.47**	**95**	P		**Pg**	**16 26 34.1**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.66**	**59**	P		**Pg**	**16 26 39.0**	**+0.8**
AGG	**Agios Georgios**	**1.80**	**62**	P		**Pg**	**16 26 41.2**	**+0.3**

*IDC **27** 16:31:07.4±0.5, 11°.83S×165°.24E, h0km, mb4.9/19, mb1 5.1/21, mb1mx4.9/31, mbtmp4.9/21, ML5.6/2, MS4.2/24, Ms1 4.2/24, ms1mx4.0/43, Error ellipse: s-maj=17.9km s-min=14.2km az=104.0*
*BJI **27** 16:31:07.0±0.0, 11°.51S×165°.46E, h7km, mB5.4/41, mb5.1/66, Ms5.3/18, Ms7 5.0/13*
*NEIC **27** 16:31:09.4±1.2, 11°.83S±0°.07×165°.24E±0°.08, h14km±3km, mb5.3/171, Error ellipse: s-maj=11.7km s-min=8.7km az=60.0*
*MOS **27** 16:31:09.7±0.9, 11°.74S×165°.15E, h25km, mb5.1/12, Error ellipse: s-maj=8.3km s-min=7.3km az=77.2*
*GCMT **27** 16:31:12.4±0.2, 11°.91S±0°.01×165°.13E±0°.01, h12km, MW5.2/113, Moment Tensor Solution. s55,c71; s113,c172; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-5.14±.09; Mθθ2.18±.09; Mϕϕ2.96±.08; Mrθ-4.22±.29; Mθϕ-2.46±.07; Mϕr1.71±.32; Best double couple: Mo6.82100×10^16 NP1:ϕs333.00000°, δ27.00000°, λ-62.00000°. NP2:ϕs122.00000°, δ66.00000°, λ-104.00000°. Principal axes: T 6.5450, Plg20.0000°, Azm223.0000°; N 0.5520, Plg12.0000°, Azm128.0000°; P -7.0970, Plg66.0000°, Azm8.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
ISC 27 16:31:12.2±0.3, **11°.88S**±0°.05×**165°.31E**±0°.05, **h35**km, **n427**, σ1**9**/**03**/421, **mb5.2**/130, **MS4.4**/29, **3C-2D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SANVU	**Saraoutou**	**4.00**	**153**			**Pn**	**16 32 11.0**	**0.0**
HNR	**Honiara**	**5.81**	**294**	P		**Pn**	**16 32 33.9**	**-2.0**
HNR							16 33 38.2	
HNR	**Honiara**	**5.81**	**294**	Pn		**Pn**	**16 32 34.6**	**-1.3**
	172nm,0.3s,baz=139,slow=6.7,SNR=111							
HNR				Sn		**Sn**	**16 33 38.2**	**-3.1**
	55nm,0.3s,baz=242,slow=24,SNR=7.5							
HNR				LR		LR	16 34 36.3	
	comp=Z,2μm,21.6s,baz=128,slow=36							
HNR	**Honiara**	**5.81**	**294**	*e*P		**Pn**	**16 32 34.0**	**-2.0**
HNR				*e*S		**Sn**	**16 33 42.0**	**+0.7**
HNR	**Honiara**	**5.81**	**294**			**Pn**	**16 32 33.9**	**-2.0**
DZM	**Mont Dzumac**	**10.19**	**174**	*e*Pn		**Pn**	**16 33 37.0**	**+0.8**
	110nm,0.8s							
DZM				*e*Sn		**Sn**	**16 35 25.9**	**-3.5**
	93nm,1.2s							
DZM				*e*LR		LR	16 36 00.2	
	comp=Z,3μm,24.2s							
DZM	**Mont Dzumac**	**10.19**	**174**	Pn		**Pn**	**16 33 37.0**	**+0.8**
	54nm,0.3s,baz=25,slow=12,SNR=406							
DZM				Sn		**Sn**	**16 35 28.7**	**-0.7**
	3.3nm,0.3s,baz=127,slow=20,SNR=6.5							
DZM				LR		LR	16 37 09.3	
	comp=Z,3μm,18.1s,baz=18,slow=35							
DZM	**Mont Dzumac**	**10.19**	**174**			**Pn**	**16 33 36.9**	**+0.7**
NOUC	**Port Laguerre**	**10.21**	**175**			**Pn**	**16 33 37.2**	**+0.9**
MSVF	**Nonsavu**	**13.62**	**117**	P		**Pn**	**16 34 20.2**	**-2.9**
KRVT	**Keravat (AS076**	**15.15**	**299**	LR		LR	16 40 39.4	
	comp=Z,1μm,19.3s,baz=126,slow=38							
TARA	**Tarawa**	**15.17**	**30**	Pn		**Pn**	**16 34 43.0**	**-0.9**
PMG	**Port Moresby**	**18.01**	**276**	*i* P		**Pn**	**16 35 19.9**	**0.0**
PMG	**Port Moresby**	**18.01**	**276**	LR		LR	16 41 12.0	
	comp=Z,882nm,20.9s,baz=123,slow=34							
EIDS	**Eidsvold**	**19.00**	**223**	P		**Pn**	**16 35 32.8**	**+0.9**
	baz=19,SNR=5.7							
EIDS	**Eidsvold**	**19.00**	**223**	P		**P**	**16 35 31.3**	**+0.3**
PATS	**Pohnpei**	**19.85**	**339**	P		**P**	**16 35 40.9**	**+0.5**
	baz=20,SNR=3.5							
CTA	**Charters Tower**	**20.04**	**244**	P		Pn	16 35 43.5	-1.0
	35nm,0.7s,baz=72,slow=13,SNR=30							
CTA				LR		LR	16 42 09.3	
	comp=Z,833nm,19.4s,baz=64,slow=33							
MANU	**Manus Island**	**20.30**	**297**	P		**P**	**16 35 44.0**	**-1.3**
LHI	**Lord Howe Isla**	**20.38**	**195**	P		**P**	**16 35 46.1**	**+0.1**
LHI				IAmb		IAmb	16 36 43.0	
	comp=Z,411nm,1.9s							
KWAJ	**Kwajalein Atol**	**20.67**	**6**	P		**P**	**16 35 47.2**	**-2.1**
KWAJ				pmax		pmax		
	comp=Z,263nm,1.1s							
KWAJ	**Kwajalein Atol**	**20.67**	**6**	P		**P**	**16 35 47.2**	**-2.1**
MTSU	**Mount Surprise**	**21.20**	**250**	P		**P**	**16 35 55.7**	**+0.7**
	baz=21,SNR=13							
RMQ	**Roma**	**21.31**	**225**	P		**P**	**16 35 57.6**	**+1.5**
	baz=21,SNR=12							
COEN	**Coen**	**21.68**	**262**	P		**P**	**16 36 00.2**	**+0.1**
	baz=22,SNR=8.6							
COEN	**Coen**	**21.68**	**262**	P		**P**	**16 35 59.6**	**-0.5**
ARMA	**Armidale**	**22.39**	**212**	P		**P**	**16 36 08.6**	**+0.8**
	baz=22,SNR=21							
ARMA	**Armidale**	**22.39**	**212**	P		**P**	**16 36 08.2**	**+0.4**
OUZ	**Omahuta**	**24.42**	**163**	P		**P**	**16 36 29.6**	**+2.1**
OUZ				IAmb		IAmb	16 36 43.7	
	comp=Z,75nm,1.1s							
MGCD	**Mangrove Creek**	**24.90**	**209**	P		**P**	**16 36 33.8**	**+1.8**
	baz=25,SNR=5.2							
RIV	**Riverview**	**25.39**	**208**	P		**P**	**16 36 38.6**	**+2.2**
	baz=25,SNR=6.3							
QIS	**Mount Isa**	**26.12**	**247**	P		**P**	**16 36 42.5**	**-0.6**
	baz=26,SNR=17							
CMSA	**Cobar Meteorol**	**26.65**	**220**	P		**P**	**16 36 48.0**	**+0.2**
	baz=27,SNR=40							
YNG	**Young**	**27.12**	**212**	P		**P**	**16 36 53.0**	**+0.9**
	baz=27,SNR=5.1							
CNB	**Canberra Magne**	**27.45**	**209**	P		**P**	**16 36 56.5**	**+1.5**
	baz=28,SNR=8.4							
CAN	**Canberra**	**27.63**	**210**	P		**P**	**16 36 57.3**	**+0.7**
CAN				pmax		pmax		
	comp=Z,155nm,1.9s							
CAN	**Canberra**	**27.63**	**210**	P		**P**	**16 36 57.3**	**+0.7**
CAN				IAmb		IAmb	16 37 01.7	
	comp=Z,155nm,1.9s							
URZ	**Urewera**	**28.31**	**160**	P		**P**	**16 37 04.1**	**+1.6**
	comp=Z,22nm,1.0s,baz=347,slow=18,SNR=4.1							
URZ	**Urewera**	**28.31**	**160**	P		**P**	**16 37 03.8**	**+1.3**
URZ				IAmb		IAmb	16 37 08.4	
	comp=Z,107nm,1.4s							
BKZ	**Black Stump Fm**	**28.94**	**162**	P		**P**	**16 37 09.3**	**+1.1**
STKA	**Stephens Creek**	**29.55**	**224**	P		**P**	**16 37 13.9**	**+0.2**
	baz=30,SNR=19							
STKA	**Stephens Creek**	**29.55**	**224**	P		**P**	**16 37 13.8**	**+0.2**
	comp=Z,8.5nm,0.8s,baz=28,slow=9.1,SNR=24							
STKA				LR		LR	16 48 22.9	
	comp=Z,1μm,19.9s,baz=39,slow=35							
STKA	**Stephens Creek**	**29.55**	**224**	P		**P**	**16 37 13.9**	**+0.2**
H11S2	**WAKE ISLAND Hy**	**30.21**	**3**	T		T	17 09 02.0	
	baz=184,slow=76,SNR=6.6							
H11S3	**WAKE ISLAND Hy**	**30.21**	**3**	T		T	17 09 04.8	
	baz=184,slow=76,SNR=5.7							
H11S1	**WAKE ISLAND Hy**	**30.23**	**3**	T		T	17 09 04.1	
	baz=184,slow=76,SNR=5.9							
TUWZ	**Tuamarina**	**30.39**	**167**	P		**P**	**16 37 22.6**	**+1.6**
WR0	**Warramunga Arr**	**30.62**	**251**	P		**P**	**16 37 22.6**	**-0.8**
BSWZ	**Blackbirch Sta**	**30.65**	**167**	P		**P**	**16 37 24.7**	**+1.4**
MSWZ	**Moikau Station**	**30.69**	**165**	P		**P**	**16 37 24.3**	**+0.6**
WB0	**Warramunga Arr**	**30.72**	**251**	P		**P**	**16 37 23.4**	**-0.8**
WB0				IAmb		IAmb	16 37 27.4	
	comp=Z,36nm,0.9s							
WB2	**Warramunga Arr**	**30.79**	**251**	P		**P**	**16 37 23.6**	**-1.3**
WB2				IAmb		IAmb	16 37 28.0	
	comp=Z,57nm,1.4s							
WRAB	**Tennant Creek**	**30.79**	**251**	P		**P**	**16 37 23.5**	**-1.4**
WRAB				pmax		pmax		
	comp=Z,29nm,1.1s							
WRAB	**Tennant Creek**	**30.79**	**251**	P		**P**	**16 37 23.5**	**-1.4**
WRA	**Warramunga Arr**	**30.80**	**251**	P		**P**	**16 37 23.7**	**-1.3**
	comp=Z,12nm,1.0s,baz=82,slow=8.8,SNR=38							
WRA				PcP		**PcP**	**16 40 22.5**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=75,slow=2.7,SNR=5.7							
WRA				LR		LR	16 49 26.5	
	comp=Z,356nm,18.1s,baz=70,slow=36							
WRA	**Warramunga Arr**	**30.80**	**251**	IAmb		IAmb	16 37 29.2	
	comp=Z,0.6nm,0.9s							
TOO	**Toolangi**	**31.14**	**211**	P		**P**	**16 37 28.8**	**+1.0**
	baz=31,SNR=14							
TOO	**Toolangi**	**31.14**	**211**	P		**P**	**16 37 28.4**	**+0.6**
TOO				pmax		pmax		
	comp=Z,42nm,1.5s							
TOO	**Toolangi**	**31.14**	**211**	P		**P**	**16 37 28.4**	**+0.6**
LTZ	**Lake Taylor**	**31.38**	**170**	P		**P**	**16 37 31.4**	**+1.6**
OXZ	**Oxford**	**31.87**	**171**	P		**P**	**16 37 37.0**	**+3.0**
OXZ				IAmb		IAmb	16 37 39.0	
	comp=Z,56nm,1.2s							
AS31	**Alice Springs**	**32.04**	**244**	P		**P**	**16 37 34.6**	**-1.3**
ASAR	**Alice Springs**	**32.05**	**244**	P		**P**	**16 37 34.2**	**-1.7**
	comp=Z,8.5nm,0.7s,baz=72,slow=9.2,SNR=121							
ASAR				PcP		**PcP**	**16 40 25.6**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=72,slow=2.8,SNR=8.0							
ASAR				LR		LR	16 49 16.2	
	comp=Z,649nm,21.7s,baz=82,slow=34							
KDU	**Kakadu**	**32.09**	**265**	P		**P**	**16 37 35.1**	**-1.2**
	baz=32,SNR=7.6							
RPZ	**Rata Peaks**	**32.11**	**172**	P		**P**	**16 37 36.7**	**+0.6**
	comp=Z,13nm,0.8s,baz=338,slow=3.7,SNR=8.4							
RPZ	**Rata Peaks**	**32.11**	**172**	IAmb		IAmb	16 37 40.7	
	comp=Z,86nm,1.5s							
HTT	**Hallett**	**32.28**	**224**	P		**P**	**16 37 37.9**	**0.0**
	baz=32,SNR=19							
BBOO	**Buckleboo**	**33.95**	**227**	P		**P**	**16 37 51.8**	**-0.6**
	baz=34,SNR=13							
BBOO	**Buckleboo**	**33.95**	**227**	P		**P**	**16 37 51.4**	**-1.0**
KNRA	**Kununurra**	**35.67**	**260**	P		**P**	**16 38 06.6**	**-0.8**
	baz=36,SNR=9.2							
KNRA	**Kununurra**	**35.67**	**260**	P		**P**	**16 38 06.6**	**-0.8**
KNRA				IAmb		IAmb	16 38 10.4	
	comp=Z,35nm,0.8s							
WRKA	**Warakurna**	**37.34**	**244**	P		**P**	**16 38 20.3**	**-1.3**
	baz=37,SNR=24							
FITZ	**Fitzroy Crossi**	**38.76**	**256**	P		**P**	**16 38 32.8**	**-0.8**
	baz=39,SNR=17							
FITZ	**Fitzroy Crossi**	**38.76**	**256**	LR		LR	16 54 04.9	
	comp=Z,508nm,19.4s,baz=80,slow=36							
FITZ	**Fitzroy Crossi**	**38.76**	**256**	P		**P**	**16 38 32.4**	**-1.2**
FORT	**Forrest**	**39.22**	**235**	P		**P**	**16 38 37.6**	**+0.2**
	baz=39,SNR=14							
FORT	**Forrest**	**39.22**	**235**	P		**P**	**16 38 36.6**	**-0.8**
FORT				IAmb		IAmb	16 38 37.9	
	comp=Z,42nm,0.8s							
SANI	**Sanna**	**40.18**	**281**	P		**P**	**16 38 44.4**	**-1.1**
	comp=Z,20nm,1.1s							
PPT	**Papeete**	**43.92**	**103**	LR		LR	16 55 16.7	
	comp=Z,173nm,18.6s,baz=310,slow=33							
PPT2	**Papeete2**	**43.92**	**103**	*e*S		S	16 45 56.2	+11
	comp=Z,162nm,27.5s							
PPT2				*e*LQ		LQ	16 49 52.8	
	comp=Z,1μm,26.5s							
PPT2				*e*LR		LR	16 51 52.7	
	comp=Z,686nm,26.0s							
TBI	**Tubuai**	**44.42**	**111**	*e*LQ		LQ	16 50 00.9	
	comp=Z,622nm,28.5s							
TBI				*e*LR		LR	16 52 02.9	
	comp=Z,389nm,30.5s							
PSA00	**Pilbara Seismi**	**44.46**	**251**	P		**P**	**16 39 19.9**	**-0.5**
PSA00				IAmb		IAmb	16 39 24.9	
	comp=Z,128nm,1.9s							
NWAO	**Narrogin (SRO)**	**48.65**	**236**	LR		LR	17 00 35.8	
	comp=Z,903nm,18.8s,baz=78,slow=36							
MORW	**Morawa**	**48.85**	**242**	P		**P**	**16 39 54.5**	**-0.2**
	baz=49,SNR=6.1							
MORW	**Morawa**	**48.85**	**242**	P		**P**	**16 39 54.1**	**-0.6**
MORW				IAmb		IAmb	16 39 58.8	
	comp=Z,26nm,0.8s							
KKM	**Kota Kinabalu**	**51.97**	**287**	P		**P**	**16 40 18.1**	**-0.4**
KKM				IAmb		IAmb	16 40 19.5	
	comp=Z,64nm,1.2s							
TAOE	**Nuku Hiva Isla**	**53.67**	**92**	*e*LR		LR	16 56 11.4	
	comp=Z,430nm,24.5s							
INU	**Inuyama**	**54.07**	**331**	P		**P**	**16 40 32.7**	**-0.7**
INU				IAmb		IAmb	16 40 34.6	
	comp=Z,55nm,1.4s							
MJAR	**Matsushiro Arr**	**54.51**	**333**	P		**P**	**16 40 35.4**	**-1.3**
	comp=Z,15nm,0.7s,baz=154,slow=8.2,SNR=39							
MJAR				LR		LR	17 04 38.3	
	comp=Z,32nm,18.4s,baz=200,slow=37							
MJAR	**Matsushiro Arr**	**54.51**	**333**	IAmb		IAmb	16 40 36.9	
	comp=Z,7.3nm,0.7s							
MAJO	**Matsushiro**	**54.52**	**333**	P		**P**	**16 40 35.6**	**-1.1**
MAJO				pmax		pmax		
	comp=Z,21nm,0.8s							
MAJO	**Matsushiro**	**54.52**	**333**	P		**P**	**16 40 35.6**	**-1.1**
MAJO				IAmb		IAmb	16 40 36.5	
	comp=Z,21nm,0.8s							
MAT	**Matsushiro**	**54.52**	**333**	P		**P**	**16 40 35.4**	**-1.3**
MAT				S		**S**	**16 48 14.2**	**+0.6**
MJB9	**Matsu-Tunnel**	**54.52**	**333**	P		**P**	**16 40 35.8**	**-0.9**
MJB9				IAmb		IAmb	16 40 36.5	
	comp=Z,21nm,0.8s							
JNU	**Nakatsue**	**55.51**	**325**	P		**P**	**16 40 43.3**	**-0.7**
JNU				IAmb		IAmb	16 40 44.9	
	comp=Z,36nm,0.9s							
LEM	**Lembang**	**57.07**	**270**	LR		LR	17 08 48.1	
	comp=Z,83nm,19.0s,baz=107,slow=40							
TJN	**Taejon**	**59.86**	**325**	*i* P		**P**	**16 41 14.0**	**-0.4**
SSE	**Sheshan**	**60.16**	**316**	P		**P**	**16 41 16.0**	**-0.6**
KSRS	**Korea Array**	**60.33**	**326**	P		**P**	**16 41 17.9**	**+0.2**
	comp=Z,6.9nm,0.9s,baz=137,slow=7.3,SNR=15							
KSRS				LR		LR	17 05 30.0	
	comp=Z,67nm,19.5s,baz=145,slow=34							
KASI	**Kota Agung**	**60.35**	**270**	P		**P**	**16 41 17.4**	**-0.9**
	comp=Z,19nm,1.0s							
YSS	**Yuzh-Sakhalins**	**61.95**	**343**	*i* P		**P**	**16 41 29.4**	**+1.0**
YSS				*e*S		S	16 49 40.6	-10
YSS				pmax		pmax		
	comp=Z,30nm,1.1s							
YSS				pmax		pmax		
	comp=Z,400nm,5.7s							
YSS				MLR		MLR		
	comp=Z,200nm,18.0s							
YSS	**Yuzh-Sakhalins**	**61.95**	**343**	P		**P**	**16 41 28.5**	**+0.1**
NJ2	**Nanjing**	**62.31**	**316**	*e*P		**P**	**16 41 31.3**	**+0.1**
NJ2				pmax		pmax		
	comp=Z,31nm,1.1s							
USA0B	**Ussuriysk Arra**	**63.50**	**334**	*i* P		**P**	**16 41 37.1**	**-1.7**
USRK	**Ussuriysk Ar.**	**63.50**	**334**	P		**P**	**16 41 39.8**	**+1.0**
	comp=Z,8.2nm,0.6s,baz=124,slow=5.6,SNR=15							
USRK				LR		LR	17 08 35.7	
	comp=Z,52nm,19.4s,baz=331,slow=35							
WHN	**Wuhan**	**64.63**	**312**	P		**P**	**16 41 46.5**	**0.0**
WHN				pmax		pmax		
	comp=Z,34nm,0.9s							
MDJ	**Mudanjiang**	**64.89**	**333**	P		**P**	**16 41 48.3**	**+0.4**
MDJ				pmax		pmax		
	comp=Z,23nm,1.3s							
MDJ				pmax		pmax		
	comp=Z,220nm,4.6s							
BKNI	**Bangkinang**	**64.93**	**276**	P		**P**	**16 41 53.4**	**+4.5**
PETK	**Petropavlovsk-**	**65.05**	**355**	P		**P**	**16 41 49.3**	**+0.5**
	comp=Z,6.9nm,0.8s,baz=166,slow=7.2,SNR=6.5							
PETK				LR		LR	17 04 18.6	
	comp=Z,147nm,21.6s,baz=236,slow=31							
TYV	**Tymovskoe**	**65.53**	**344**	*e*P		**P**	**16 41 52.2**	**+0.3**
TYV				pmax		pmax		
	comp=Z,15nm,1.8s							
IPM	**Ipoh**	**65.95**	**280**	P		**P**	**16 41 55.2**	**-0.3**
IPM				IAmb		IAmb	16 41 57.0	
	comp=Z,40nm,1.3s							
CN2	**Changchun**	**66.24**	**330**	*e*P		**P**	**16 41 56.8**	**+0.1**
CN2				pmax		pmax		
	comp=Z,20nm,0.9s							
GRNR	**Gornyy**	**67.28**	**341**	*i* P		**P**	**16 42 04.0**	**+0.8**
GRNR				pmax		pmax		
	comp=Z,20nm,1.2s							
GRNR				MLR		MLR		
	comp=Z,60nm,17.0s							
PSI	**Prapat**	**67.56**	**278**	LR		LR	17 16 25.5	
	comp=Z,68nm,18.4s,baz=138,slow=40							
KLR	**Kul'dur**	**67.65**	**337**	*e*P		**P**	**16 42 04.4**	**-1.2**
KLR				pmax		pmax		
	comp=Z,5.0nm,1.1s							
ENH	**Enshi**	**68.09**	**310**	P		**P**	**16 42 08.2**	**-0.6**
ENH				IAmb		IAmb	16 42 09.6	
	comp=Z,

HIA Hailar 72.88 331 P P 16 42 37.4 -0.2
ZEA Zeya 72.94 337 eP P 16 42 38.6 +0.8
ZEA pmax pmax
comp=N,29nm,1.2s
ZEA pmax pmax
comp=Z,46nm,1.4s
LZH Lanzhou 75.00 313 ⇑P P 16 42 52.3 +1.8
LZH pP pP 16 42 55.3 -4.6
LZH sP sP 16 42 56.8 -6.5
LZH ePP PP 16 45 42.0 +3.2
LZH pmax pmax
comp=Z,26nm,1.3s
LZH pmax pmax
comp=Z,92nm,8.2s
LZH LR LR
comp=Z,200nm,16.2s
LZH LR LR
comp=Z,220nm,16.5s
LZH LR LR
comp=Z,400nm,18.6s
SEY Seymchan 75.25 354 i P P 16 42 49.3 -1.8
GAMB Gambell 77.46 10 P P 16 43 04.1 +0.5
QSPA South Pole Qui 78.13 180 LR LR 17 15 50.3
comp=Z,194nm,18.2s,baz=12,slow=34
QSPA South Pole Qui 78.13 180 P P 16 43 08.4 +0.7
ULN Ulaanbaatar 78.72 324 P P 16 43 11.2 0.0
ULN pmax pmax
comp=Z,12nm,0.9s
ULN Ulaanbaatar 78.72 324 P P 16 43 11.2 0.0
YAK Yakutsk 78.77 344 eP P 16 43 10.5 -0.4
YAK pmax pmax
comp=Z,24nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.4s
YAK pmax pmax
comp=N,12nm,1.3s
YAK Yakutsk 78.77 344 P P 16 43 10.6 -0.3
SONM Songino Array 79.08 324 P P 16 43 13.6 +0.4
comp=N,4.6nm,0.8s,baz=139,slow=6.1,SNR=25
SONM Songino Array 79.08 324 IAmb IAmb 16 43 16.1
comp=Z,5.2nm,0.8s
GTA Gaotai 79.33 314 eP P 16 43 15.8 +1.1
GTA pP PcP 16 43 20.3 -2.5
GTA sP pP 16 43 23.3 -0.8
GTA pmax pmax
comp=Z,20nm,1.2s
ANM Nome 79.39 12 P P 16 43 14.8 +0.5
ANM pmax pmax
comp=Z,28nm,1.3s
ANM Nome 79.39 12 P P 16 43 14.8 +0.5
BILL Bilibino 79.71 0d iP P 16 43 15.9 0.0
BILL e 16 43 23.2
BILL e 16 46 17.7
BILL pmax pmax
comp=Z,37nm,1.0s
BILL Bilibino 79.71 0 P P 16 43 16.1 +0.1
BILL IAmb IAmb 16 43 17.6
comp=Z,45nm,1.0s
TTA Tatalina 80.34 17 P P 16 43 20.6 +1.0
TTA Tatalina 80.34 17 P P 16 43 20.6 +1.0
SUA Susitna One 80.85 20 P P 16 43 22.1 -0.2
BOD Bodaibo 81.10 335 eP P 16 43 22.9 -0.7
BOD pmax pmax
comp=Z,10.0nm,1.7s
PMR Palmer 81.48 20 P P 16 43 25.9 +0.4
PMR pmax pmax
comp=Z,21nm,1.2s
PMR Palmer 81.48 20 P P 16 43 25.9 +0.4
KNK Knik Glacier 81.58 21 P P 16 43 26.6 +0.5
GHO Glory Hole Cre 81.68 20 P P 16 43 26.6 -0.1
GHO IAmb IAmb 16 43 30.0
comp=Z,32nm,1.1s
EYAK Cordova Ski Ar 81.95 22 P P 16 43 28.4 +0.3
ZAK Zakamensk 82.14 325 eP P 16 43 28.8 -0.6
ZAK pmax pmax
comp=Z,8.0nm,1.0s
SCM Sheep Creek Mo 82.26 21 P P 16 43 29.9 +0.1
SCM pmax pmax
comp=Z,34nm,1.0s
SCM Sheep Creek Mo 82.26 21 P P 16 43 29.9 +0.1
SCM IAmb IAmb 16 43 31.2
comp=Z,34nm,1.0s
KTH Kantishna Hill 82.32 18 P P 16 43 30.1 0.0
LSA Lhasa 82.44 302 P P 16 43 31.4 -0.5
LSA pmax pmax
comp=Z,5.0nm,0.9s
LSA Lhasa 82.44 302 P P 16 43 31.4 -0.5
TRF Thorofare Moun 82.44 18 P P 16 43 31.1 +0.3
TRF IAmb IAmb 16 43 44.4
comp=Z,56nm,1.8s
RND Reindeer 82.86 19 P P 16 43 33.0 +0.1
RND pmax pmax
comp=Z,22nm,0.9s
RND Reindeer 82.86 19 P P 16 43 33.0 +0.1
RND IAmb IAmb 16 43 35.0
comp=Z,22nm,0.9s
RDOG Red Dog Mine 82.92 12 P P 16 43 33.1 +0.1
MCK McKinley 83.06 19 P P 16 43 33.8 -0.1
MCK pmax pmax
comp=Z,31nm,1.0s
MCK McKinley 83.06 19 P P 16 43 33.8 -0.1
MCK IAmb IAmb 16 43 36.9
comp=Z,31nm,1.0s
CRQM Cirque 83.07 23 P P 16 43 34.9 +0.8
TGL Tana Glacier 83.18 23 P P 16 43 34.5 -0.1
BWN Browne 83.21 18 P P 16 43 34.7 +0.2
VRDI Verde Repeater 83.25 22 P P 16 43 35.1 +0.1
GLB Gilahina Butte 83.25 22 P P 16 43 35.0 +0.1
MLY Manley 83.46 17 P P 16 43 36.3 +0.5
MLY IAmb IAmb 16 43 39.2
comp=Z,31nm,1.6s
MCARA McCarthy VSAT 83.51 22 P P 16 43 37.0 +0.8
KMRM Mail Ridge 83.53 47 P P 16 43 37.7 +0.8
BALM Baldy 83.54 23 P P 16 43 36.9 +0.4
PAX Paxson 83.67 20 P P 16 43 37.5 +0.4
PAX pmax pmax
comp=Z,33nm,1.4s
PAX Paxson 83.67 20 P P 16 43 37.5 +0.4
PAX IAmb IAmb 16 43 39.9
comp=Z,33nm,1.4s
KHMM Horse Mountain 83.75 46 P P 16 43 39.5 +1.4
MAW Mawson 83.80 202 LR LR 17 15 52.7
comp=Z,93nm,19.8s,baz=66,slow=32
BARN Barnard Glacie 83.82 23 P P 16 43 39.0 +1.0
WRH Wood River Hil 83.85 18 P P 16 43 37.8 0.0
WRH IAmb IAmb 16 43 39.4
comp=Z,15nm,0.8s
KRMB Red Mountain 83.86 45 P P 16 43 40.1 +1.5
KRMB IAmb IAmb 16 43 41.4
comp=Z,30nm,1.5s
CTGM Chitina Glacie 83.89 23 P P 16 43 39.0 +0.7
CCB Clear Creek Bu 84.06 18 P P 16 43 38.8 -0.1
CCB IAmb IAmb 16 43 40.5
comp=Z,18nm,0.7s
MDM Murphy Dome 84.15 18 P P 16 43 39.4 0.0
MDM IAmb IAmb 16 43 41.0
comp=Z,16nm,0.7s
HDA Harding Lake 84.16 19 P P 16 43 39.6 +0.2
HDA Harding Lake 84.16 19 P P 16 43 39.8 +0.4
baz=227
O02D Mt. Diablo Mer 84.17 47 P P 16 43 41.8 +1.7
baz=249
TCOL CIGO, UAF Yank 84.20 18 P P 16 43 39.9 +0.3
baz=226
COLA College 84.20 18 P P 16 43 39.5 -0.1
COLA pmax pmax
comp=Z,40nm,0.8s
COLA College 84.20 18 P P 16 43 39.5 -0.1
MENT Mentasta 84.26 21 P P 16 43 40.8 +0.8
L02E Cave Junction 84.31 45 P P 16 43 41.1 +0.4
baz=248
RIDG Independent Ri 84.40 20 P P 16 43 41.5 +0.8
IL31 84.43 19 P P 16 43 40.4 -0.3
ILAR Eielson Array 84.43 19 P P 16 43 41.0 +0.2
ILAR Eielson Array 84.43 19 P P 16 43 41.0 +0.2
comp=Z,15nm,0.6s,baz=241,slow=5.3,SNR=234
ILAR LR LR 17 14 06.3
comp=Z,178nm,20.8s,baz=266,slow=31
J01E Myrtle Point 84.45 44 P P 16 43 42.7 +1.3
baz=248
K02D Willamette Mer 84.46 44 P P 16 43 42.8 +1.3
baz=248
WDC Whiskeytown Da 84.49 47 P P 16 43 42.3 +0.7
WDC pmax pmax
comp=Z,24nm,1.4s
WDC Whiskeytown Da 84.49 47 P P 16 43 42.3 +0.7
WDC IAmb IAmb 16 43 44.1
comp=Z,24nm,1.4s
POKR Poker Plat Res 84.50 18 P P 16 43 41.2 0.0
baz=226
N02D Trinity Center 84.51 46 P P 16 43 43.2 +1.4
baz=249
M02C Callahan 84.55 46 P P 16 43 43.6 +1.5
baz=249
DOT Dot Lake 84.60 20 P P 16 43 42.4 +0.7
SMMC Simmler 84.63 52 P P 16 43 43.7 +1.2
baz=252
PKM Mcpherson Peak 84.63 53 P P 16 43 44.0 +1.2
baz=252
YBH Yreka Blue Hor 84.78 46 P P 16 43 44.2 +1.0
YBH pmax pmax
comp=Z,22nm,1.2s
YBH Yreka Blue Hor 84.78 46 P P 16 43 44.2 +1.0
YBH IAmb IAmb 16 43 45.7
comp=Z,22nm,1.2s
SCRK Sand Creek 84.84 20 P P 16 43 43.6 +0.6
ORV Oroville 84.88 48 P P 16 43 44.2 +0.5
ORV pmax pmax
comp=Z,22nm,1.3s
ORV Oroville 84.88 48 P P 16 43 44.2 +0.5
ORV IAmb IAmb 16 43 45.6
comp=Z,22nm,1.3s
HUMO Hull Mountain 84.92 45 P P 16 43 44.7 +0.9
HUMO IAmb IAmb 16 43 46.4
comp=Z,19nm,1.1s
O03E Paynes Creek 84.92 47 P P 16 43 44.4 +0.5
baz=250
I03D Drain, OR 85.04 44 P P 16 43 45.5 +1.2
baz=249
AFDM Forest Hills D 85.07 49 P P 16 43 45.0 +0.3
AFDM IAmb IAmb 16 43 46.6
comp=Z,37nm,1.3s
CMB Columbia Colle 85.20 50 P P 16 43 45.1 -0.2
CMB pmax pmax
comp=Z,20nm,1.3s
CMB Columbia Colle 85.20 50 P P 16 43 45.1 -0.2
L04D Klamath Falls 85.23 45 P P 16 43 46.4 +0.9
baz=249
PRP Porcupine Dome 85.36 18 P P 16 43 46.3 +0.7
PRP IAmb IAmb 16 43 49.3
comp=Z,41nm,1.7s
M04C Macdoel 85.40 46 P P 16 43 47.4 +1.0
baz=250
SKAG Skagway 85.47 26 P P 16 43 47.4 +1.3
VES Vestal, Richgr 85.50 52 P P 16 43 47.3 +0.5
baz=252
RUBR Rubicon Trail 85.70 49 P P 16 43 48.8 +0.7
RUBR IAmb IAmb 16 43 56.1
comp=Z,38nm,1.3s
I04A Tendick Farm, 85.71 44 P P 16 43 48.4 +0.6
baz=249
J04D Umpqua Nationa 85.72 44 P P 16 43 49.0 +1.0
baz=250
H04D Lebanon 85.75 43 P P 16 43 48.8 +0.9
baz=249
MWC Mount Wilson 85.81 54 P P 16 43 49.0 +0.3
MWC pmax pmax
comp=Z,40nm,1.4s
MWC Mount Wilson 85.81 54 P P 16 43 49.0 +0.3
MWC IAmb IAmb 16 43 51.3
comp=Z,40nm,1.4s
BEKR Beckworth 85.82 48 P P 16 43 49.0 +0.4
BEKR IAmb IAmb 16 43 50.6
comp=Z,43nm,1.5s
ISA Isabella, Lake 85.91 52 P P 16 43 48.9 -0.1
ISA pmax pmax
comp=Z,28nm,1.4s
ISA Isabella, Lake 85.91 52 P P 16 43 48.9 -0.1
ISA IAmb IAmb 16 43 51.1
comp=Z,28nm,1.4s
ISA Isabella, Lake 85.91 52 P P 16 43 49.7 +0.7
baz=252,SNR=8.7
MDPB Devils Postpil 86.05 50 P P 16 43 49.7 -0.2
MDPB IAmb IAmb 16 43 51.9
comp=Z,38nm,1.3s
EDW2 Edwards Air Fo 86.06 53 P P 16 43 50.6 +1.0
baz=253,SNR=13
WAKR Walker 86.06 50 P P 16 43 50.3 +0.5
WAKR IAmb IAmb 16 43 52.3
comp=Z,33nm,1.3s
PNTR Pine Nut 86.12 49 P P 16 43 50.6 +0.4
PNTR IAmb IAmb 16 43 52.5
comp=Z,41nm,1.4s
BFSC Mount Baldy Ra 86.13 54 P P 16 43 50.8 +0.6
baz=253,SNR=8.6
FYU Fort Yukon 86.16 18 P P 16 43 50.3 +1.0
H04A Detroit Lake 86.18 43 P P 16 43 50.4 +0.3
H04A IAmb IAmb 16 43 51.8
comp=Z,24nm,1.4s
EGAK Eagle 86.30 20 P P 16 43 50.6 +0.5
MURC Murrieta 86.31 55 P P 16 43 51.7 +0.7
baz=253
J05D Fort Rock, OR 86.34 45 P P 16 43 52.1 +1.1
baz=250
YERR Yerington 86.36 49 P P 16 43 51.7 +0.5
K05A Summer Lake 86.39 45 P P 16 43 51.9 +0.6
K05A IAmb IAmb 16 43 53.2
comp=Z,28nm,1.2s
CWC Cottonwood Cre 86.45 52 P P 16 43 52.6 +0.9
baz=253
BAR Barrett 86.47 56 P P 16 43 52.3 +0.5
LRMC Laurel Mtn Rad 86.48 53 P P 16 43 52.9 +1.1
baz=253,SNR=6.3
PAHR Pah Rah Range 86.48 48 P P 16 43 52.3 +0.5
PAHR IAmb IAmb 16 43 54.0
comp=Z,32nm,1.3s
TIN Tinemaha, Big 86.52 51 P P 16 43 52.8 +0.8
baz=252
MOD Modoc Plateau 86.53 46 P P 16 43 52.1 +0.2
MOD IAmb IAmb 16 43 54.0
comp=Z,26nm,1.6s
E04D Cinebar 86.60 41 P P 16 43 53.0 +1.0
baz=249
D03D Eldon 86.62 40 P P 16 43 52.9 +0.8
baz=248
I05D Terrebonne, OR 86.63 44 P P 16 43 53.3 +1.1
baz=250
PINE Pine Mountain 86.71 44 P P 16 43 53.0 +0.1
PINE IAmb IAmb 16 43 55.4
comp=Z,45nm,1.7s
MONP2 Monument Peak 86.73 56 P P 16 43 54.4 +1.1
baz=254,SNR=12
RYN Ryan 86.78 50 P P 16 43 53.2 0.0
RYN IAmb IAmb 16 43 55.5
comp=Z,30nm,1.4s
MPMC Manual Prospec 86.80 52 P P 16 43 54.3 +0.8
baz=253,SNR=10.0
TIXI Tiksi 86.82 349 eP P 16 43 51.6 -0.9
TIXI pmax pmax
comp=Z,6.0nm,1.3s
TIXI Tiksi 86.82 349 P P 16 43 51.8 -0.7
NVAR Mina Array Bea 86.88 50 P P 16 43 54.9 +1.0
comp=Z,4.6nm,0.7s,baz=234,slow=7.5,SNR=35
NVAR LR LR 17 17 30.0
comp=Z,321nm,18.4s,baz=232,slow=32
PFO Pinyon Flats O 86.91 55 P P 16 43 53.4 -0.6
PFO pmax pmax
comp=Z,18nm,1.5s
PFO Pinyon Flats O 86.91 55 P P 16 43 53.4 -0.6
PFO Pinyon Flats O 86.91 55 P P 16 43 54.7 +0.8
baz=254
XPFO Pion Flat 86.91 55 P P 16 43 53.4 -0.6
IKP In-Ko-Pah, Jac 86.92 56 P P 16 43 55.0 +1.0
baz=254
G05D Wamic, OR 86.95 43 P P 16 43 54.3 +0.5
baz=250
NV11 Mina Array Sit 86.99 50 P P 16 43 54.0 -0.3
NV11 IAmb IAmb 16 43 56.5
comp=Z,27nm,1.2s
F05D White Salmon 87.08 42 P P 16 43 55.1 +0.7
baz=250
GSC Goldstone, Bar 87.11 53 P P 16 43 54.6 -0.3
GSC pmax pmax
comp=Z,24nm,1.5s
GSC Goldstone, Bar 87.11 53 P P 16 43 54.6 -0.3
GSC IAmb IAmb 16 43 57.2
comp=Z,24nm,1.4s
GSC Goldstone, Bar 87.11 53 P P 16 43 55.3 +0.4
baz=253,SNR=5.2
LON Longmire 87.15 41 P P 16 43 55.0 +0.2
LON Longmire 87.15 41 P P 16 43 55.0 +0.2
GRAC Grapevine Rang 87.17 51 P P 16 43 56.3 +1.2
baz=253
D05A Enumclaw 87.19 41 P P 16 43 55.5 +0.7
KVN Kaiserville 87.22 49 P P 16 43 55.5 0.0
KVN pmax pmax
comp=Z,22nm,1.3s
KVN Kaiserville 87.22 49 P P 16 43 55.5 0.0
KVN IAmb IAmb 16 43 57.5
comp=Z,22nm,1.3s
SWSC Sam W. Stewart 87.25 56 P P 16 43 56.6 +1.1
baz=254,SNR=6.0
A04D Lummi Island 87.29 39 P P 16 43 56.7 +1.4
baz=249
HEC Hector,Ludlow 87.35 54 P P 16 43 56.8 +0.7
baz=254,SNR=6.1
BELC Belle Mtn. Jos 87.38 55 P P 16 43 57.3 +1.0
baz=254,SNR=8.7
FURC Furnace Creek, 87.40 52 P P 16 43 57.1 +1.0
baz=253
B05A Bryant 87.50 40 P P 16 43 57.5 +1.1
baz=249
SHOC Shoshone, Teco 87.69 53 P P 16 43 58.5 +0.9
baz=254
BC3 Big Chuckawall 87.72 55 P P 16 43 58.8 +0.8
baz=254,SNR=9.9
I07A Izee 87.79 44 P P 16 43 58.4 +0.5
I07A IAmb IAmb 16 44 00.5
comp=Z,34nm,1.6s
TUQ Turquoise Moun 87.84 53 P P 16 43 58.9 +0.4
baz=254
WVOR Wild Horse Val 87.87 46 P P 16 43 58.9 +0.5
WVOR pmax pmax
comp=Z,24nm,1.3s
WVOR Wild Horse Val 87.87 46 P P 16 43 58.9 +0.5
WVOR IAmb IAmb 16 44 00.8
comp=Z,24nm,1.3s
TPNV Topopah Spring 88.01 52 P P 16 43 59.6 +0.3
TPNV pmax pmax
comp=Z,48nm,1.9s
TPNV Topopah Spring 88.01 52 P P 16 43 59.6 +0.3
TPNV Topopah Spring 88.01 52 P P 16 43 60.0 +0.7
baz=254,SNR=8.5
LTY Liberty 88.06 41 P P 16 43 59.7 +0.6
GLA Glamis 88.07 56 P P 16 44 00.3 +0.8
GLA pmax pmax
comp=Z,38nm,1.3s
GLA Glamis 88.07 56 P P 16 44 00.3 +0.8
GLA Glamis 88.07 56 P P 16 44 00.9 +1.4
baz=255,SNR=6.8
IRM Iron Mountain 88.11 55 P P 16 44 00.9 +1.3
baz=254,SNR=19
J08A Circle Bar Ran 88.27 45 P P 16 44 01.0 +0.7
J08A IAmb IAmb 16 44 02.6
comp=Z,15nm,1.0s
E07A Sunnyside 88.36 42 P P 16 44 01.1 +0.6
E07A IAmb IAmb 16 44 03.0
comp=Z,29nm,1.5s
Y12C Blythe 88.50 55 P P 16 44 01.9 +0.5
Y12C Blythe 88.50 55 P P 16 44 02.9 +1.4
baz=255
HAWA Hanford 88.51 42 P P 16 44 02.1 +0.9
HAWA IAmb IAmb 16 44 06.1
comp=Z,19nm,1.3s
G08A Pilot Rock 88.54 43 P P 16 44 02.2 +0.7
G08A IAmb IAmb 16 44 03.8
comp=Z,24nm,1.4s
NEE2 Needles Airpor 88.69 54 P P 16 44 03.4 +1.0
baz=255
SHPR Sheep Range 88.73 52 P P 16 44 03.2 +0.6
SHPR IAmb IAmb 16 44 05.3
comp=Z,25nm,1.3s
EPYK Eagle Plains 88.73 20 P P 16 44 02.2 +0.3
EPYK Eagle Plains 88.73 20 P P 16 44 03.3 +1.5
baz=236
113A Mohawk Valley, 88.86 56 P P 16 44 03.7 +0.6
113A IAmb IAmb 16 44 05.8
comp=Z,17nm,1.2s
R11A Troy Canyon, C 88.90 51 P P 16 44 03.9 +0.4
R11A Troy Canyon, C 88.90 51 P P 16 44 04.3 +0.8
baz=254
PDMCI Parker Dam,Lak 88.95 55 P P 16 44 04.5 +1.0
baz=255,SNR=12
W13A Hualapai Mount 89.36 54 P P 16 44 06.1 +0.3
W13A IAmb IAmb 16 44 08.3
comp=Z,24nm,1.3s
WMQ Urumqi 89.38 315 eP P 16 44 06.0 +0.6
WMQ pP pP 16 44 11.8 -3.1
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ pmax pmax
comp=Z,98nm,5.5s
WMQ LR LR
comp=Z,220nm,19.1s
214A Organ Pipe Nat 89.44 57 P P 16 44 07.0 +1.0
214A IAmb IAmb 16 44 08.9
comp=Z,34nm,1.2s
214A Organ Pipe Nat 89.44 57 P P 16 44 07.6 +1.6
baz=256
E09A Wood Farm, Sta 89.46 42 P P 16 44 06.3 +0.7
E09A IAmb IAmb 16 44 09.0
comp=Z,43nm,1.8s
BMO Blue Mountains 89.52 44 P P 16 44 06.8 +0.7
BMO pmax pmax
comp=Z,42nm,1.7s
BMO Blue Mountains 89.52 44 P P 16 44 06.8 +0.7
BMO IAmb IAmb 16 44 08.4
comp=Z,42nm,1.7s
ELK Elko 89.81 48 P P 16 44 08.2 +0.4
ELK pmax pmax
comp=Z,14nm,1.2s
ELK Elko 89.81 48 P P 16 44 08.2 +0.4
F10A Beach Ranch, E 89.91 43 P P 16 44 08.3 +0.4
F10A IAmb IAmb 16 44 10.1
comp=Z,30nm,1.2s
MFID Camas Ranch 90.13 46 P P 16 44 09.7 +0.7
PSUT Pine Spring 90.26 51 P P 16 44 10.0 +0.1
HSIG 90.30 61 P P 16 44 10.4 +0.4
HSIG IAmb IAmb 16 44 13.1
comp=Z,26nm,1.2s
LCMT Little Creek M 90.34 52 P P 16 44 10.3 +0.1
CCUT Cedar City 90.39 52 P P 16 44 10.9 +0.4
SZCU Shurtz Canyon 90.61 52 P P 16 44 12.0 +0.5
NEW Newport 90.65 41 P P 16 44 11.2 0.0
NEW pmax pmax
comp=Z,48nm,1.9s
NEW Newport 90.65 41 P P 16 44 11.2 0.0
NEW IAmb IAmb 16 44 14.0
comp=Z,48nm,1.9s
NEW Newport 90.65 41 P P 16 44 12.2 +0.9
baz=253
KNB Kanab 90.67 52 P P 16 44 11.6 -0.2
KNB pmax pmax
comp=Z,41nm,1.4s
KNB Kanab 90.67 52 P P 16 44 11.6 -0.2
SYO Syowa Base 90.87 197 eP P 16 44 12.0 +0.2
U15A North Rim 90.94 53 P P 16 44 13.3 +0.1
U15A IAmb IAmb 16 44 16.1
comp=Z,21nm,0.9s
X16A Lo Mia Camp, P 91.14 55 P P 16 44 14.3 +0.2
PKCU Pink Cliffs 91.17 52 P P 16 44 13.9 -0.4
TUC Tucson 91.19 57 P P 16 44 14.9 +0.7
TUC pmax pmax
comp=Z,18nm,1.4s
TUC Tucson 91.19 57 P P 16 44 14.9 +0.7
TUC IAmb IAmb 16 44 17.1
comp=Z,18nm,1.4s
TUC Tucson 91.19 57 P P 16 44 15.7 +1.5
baz=257
MTPU Mount Pierson 91.41 52 P P 16 44 16.9 +1.4
WUAZ Wupatki 91.45 54 P P 16 44 16.4 +1.0
WUAZ IAmb IAmb 16 44 18.2
comp=Z,16nm,1.1s
WUAZ Wupatki 91.45 54 P P 16 44 16.8 +1.4
baz=257
DUG Dugway, Tooele 91.46 49 P P 16 44 16.3 +1.0
DUG pmax pmax
comp=Z,30nm,1.6s
DUG Dugway, Tooele 91.46 49 P P 16 44 16.3 +1.0
DUG IAmb IAmb 16 44 17.8
comp=Z,30nm,1.6s
DUG Dugway, Tooele 91.46 49 P P 16 44 16.2 +1.0
baz=256
BGU Big Grassy Mou 91.48 49 P P 16 44 16.0 +0.6
MSU Marysvale 91.53 51 P P 16 44 17.2 +1.4

MSU	**Marysvale**	**91.53**	**51**	P	**P**		**16 44 17.2**	**+1.4**
NLU	**North Lily Mn**	**91.95**	**50**	P	**P**		**16 44 18.7**	**+1.0**
SPUT	**South Promonto**	**92.00**	**48**	P	**P**		**16 44 18.4**	**+0.6**
319A	**Douglas**	**92.23**	**59**	P	**P**		**16 44 18.9**	**-0.2**
319A				IAmb	IAmb		16 44 21.9	
	comp=Z,26nm,1.2s							
MSO	**Missoula**	**92.33**	**43**	P	**P**		**16 44 19.5**	**+0.4**
	baz=255							
Q16A	**Castle Valley**	**92.39**	**51**	P	**P**		**16 44 19.3**	**-0.5**
W18A	**Petrified Fore**	**92.67**	**55**	P	**P**		**16 44 22.1**	**+1.0**
	baz=258							
DLMT	**Dillon**	**92.87**	**44**	P	**P**		**16 44 21.3**	**-0.4**
LRM	**Limekiln Ridge**	**93.08**	**44**	P	**P**		**16 44 23.4**	**+0.5**
IMW	**Indian Meadow**	**93.68**	**46**	P	**P**		**16 44 25.1**	**-0.6**
YHB	**Horse Butte**	**93.69**	**45**	P	**P**		**16 44 25.1**	**-0.6**
121A	**Cookes Peak, D**	**93.71**	**58**	P	**P**		**16 44 27.2**	**+1.2**
	baz=258							
MK31	**Makanchi Array**	**93.83**	**317**	P	**P**		**16 44 25.4**	**-0.6**
MK31				pmax	pmax			
	comp=Z,7.0nm,0.9s							
MK31	**Makanchi Array**	**93.83**	**317**	P	**P**		**16 44 25.4**	**-0.6**
MKAR	**Makanchi Array**	**93.83**	**317**	P	**P**		**16 44 26.3**	**+0.3**
	comp=Z,6.4nm,0.7s,baz=94,slow=6.4,SNR=85							
ZAA0	**Zalesovo Array**	**93.98**	**324**	P	**P**		**16 44 25.2**	**-1.2**
ZALV	**Zalesovo Beam**	**93.98**	**324**	P	**P**		**16 44 25.8**	**-0.7**
	comp=Z,3.8nm,0.8s,baz=117,slow=3.3,SNR=17							
H17A	**Grant Village**	**94.05**	**46**	P	**P**		**16 44 28.8**	**+1.5**
	baz=258							
MVCO	**Mesa Verde**	**94.08**	**53**	P	**P**		**16 44 27.9**	**+0.2**
	baz=258							
C36M	**Paulatuk**	**94.36**	**20**	P	**P**		**16 44 27.0**	**-0.7**
C36M				IAmb	IAmb		16 44 28.6	
	comp=Z,15nm,1.1s							
C36M	**Paulatuk**	**94.36**	**20**	P	**P**		**16 44 27.9**	**+0.1**
	baz=248							
BW06	**Boulder Array**	**94.42**	**47**	P	**P**		**16 44 28.0**	**-1.1**
BW06	**Boulder Array**	**94.42**	**47**	P	**P**		**16 44 29.7**	**+0.7**
	baz=258							
PDAR	**Pinedale Array**	**94.43**	**47**	P	**P**		**16 44 30.1**	**+1.1**
	comp=Z,1.6nm,0.9s,baz=270,slow=1.5,SNR=11							
PDAR				LR	LR		17 20 03.7	
	comp=Z,126nm,20.8s,baz=311,slow=31							
RLMT	**Red Lodge**	**95.11**	**45**	P	**P**		**16 44 33.8**	**+1.7**
	baz=258							
ANMO	**Albuquerque**	**95.27**	**56**	*i* P	**P**		**16 44 32.6**	**-0.5**
ANMO				pmax	pmax			
	comp=Z,2.0nm,1.0s							
ANMO	**Albuquerque**	**95.27**	**56**	P	**P**		**16 44 34.2**	**+1.2**
	baz=259							
EGMT	**Eagleton**	**95.37**	**42**	P	**P**		**16 44 33.5**	**+0.4**
EGMT				IAmb	IAmb		16 44 35.2	
	comp=Z,19nm,1.3s							
EGMT	**Eagleton**	**95.37**	**42**	P	**P**		**16 44 34.2**	**+1.2**
	baz=258							
S22A	**4UR Ranch, Cre**	**95.49**	**53**	P	**P**		**16 44 35.2**	**+1.1**
	baz=259							
YKA	**Yellowknife Ar**	**95.90**	**27**	P	**P**		**16 44 34.4**	**-0.6**
	comp=Z,4.2nm,0.8s,baz=256,slow=4.8,SNR=46							
YKA				LR	LR		17 22 13.7	
	comp=Z,185nm,19.9s,baz=0.0,slow=32							
SNAA	**Sanae**	**96.26**	**184**	P	**P**		**16 44 38.8**	**+2.0**
SNAA	**Sanae**	**96.26**	**184**	P	**P**		**16 44 37.0**	**+0.3**
SNAA				pmax	pmax			
	comp=Z,10.0nm,1.2s							
SNAA	**Sanae**	**96.26**	**184**	P	**P**		**16 44 37.0**	**+0.3**
SDCO	**Great Sand Dun**	**96.53**	**53**	P	**P**		**16 44 39.1**	**+0.3**
	baz=260							
TXAR	**Lajitas Array**	**96.60**	**62**	P	**P**		**16 44 40.6**	**+1.5**
	comp=Z,1.3nm,0.7s,baz=251,slow=3.8,SNR=6.3							
TXAR				LR	LR		17 23 24.4	
	comp=Z,111nm,18.4s,baz=0.0,slow=32							
KSH	**Kashi**	**96.94**	**309**	P	**P**		**16 44 40.0**	**-0.5**
KSH				sP	pP		16 44 48.3	-1.7
KSH				PP	**PP**		**16 48 38.5**	**+2.1**
KSH				S	**S**		**16 55 58.8**	**-2.0**
KSH				sS	pS		16 56 08.0	-5.0
KSH				SS	**SS**		**17 02 40.8**	**+3.2**
KSH				LR	LR			
	comp=Z,250nm,6.2s							
KSH				LR	LR			
	comp=Z,210nm,5.4s							
KSH				LR	LR			
	comp=Z,550nm,6.2s							
KURK	**Kurchatov**	**97.00**	**320**	*e*P	**P**		**16 44 37.0**	**-3.3**
KURK				pmax	pmax			
	comp=Z,2.0nm,1.3s							
VNA2	**Neumayer--Watz**	**97.24**	**182**	P	**P**		**16 44 39.9**	**-1.1**
	baz=178,slow=3.9							
LAO	**LASA Array**	**97.49**	**44**	P	Pdif		16 44 43.5	+0.7
	baz=261							
BVAR	**Borovoye Array**	**102.34**	**322**	P	**Pdif**		**16 45 03.7**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=101,slow=4.6,SNR=5.8							
T49A	**Edmonton**	**112.31**	**55**	P	**PKiKP**		**16 49 44.6**	**-0.2**
	baz=272							
H47A	**Mio**	**112.82**	**47**	P	**PKiKP**		**16 49 45.9**	**+0.4**
	baz=276							
X51A	**Calhoun**	**112.93**	**57**	P	**PKiKP**		**16 49 46.0**	**-0.1**
	baz=271							
O49A	**Covington**	**113.09**	**51**	P	**PKiKP**		**16 49 46.6**	**+0.4**
	baz=274							
N49A	**Columbus Grove**	**113.16**	**51**	P	**PKiKP**		**16 49 46.9**	**+0.6**
	baz=274							
I48A	**Sherman Twp**	**113.22**	**47**	P	**PKiKP**		**16 49 46.7**	**+0.4**
	baz=276							
J48A	**Bridge Port**	**113.25**	**48**	P	**PKiKP**		**16 49 47.3**	**+0.9**
	baz=276							
S55A	**Lewisburg**	**116.27**	**54**	P	**PKiKP**		**16 49 53.9**	**+1.5**
	baz=275							
E52A	**Mattawa**	**116.44**	**44**	P	**PKiKP**		**16 49 53.9**	**+1.4**
	baz=281							
G53A	**Haliburton**	**116.67**	**45**	P	**PKiKP**		**16 49 53.0**	**0.0**
	baz=280							
J54A	**Appleton**	**116.98**	**47**	P	**PKiKP**		**16 49 53.7**	**+0.1**
	baz=279							
G54A	**Lake Saint Pet**	**117.00**	**45**	P	**PKiKP**		**16 49 54.8**	**+1.2**
	baz=281							
ARCES	**ARCESS Array B**	**117.03**	**345**	PKP	**PKPdf**		**16 49 52.2**	**-0.7**
	comp=Z,1.7nm,0.5s,baz=53,slow=1.6,SNR=18							
J55A	**Hilton**	**117.57**	**47**	P	**PKiKP**		**16 49 56.0**	**+1.3**
	baz=280							
M56A	**Emporium**	**117.59**	**49**	P	**PKiKP**		**16 49 55.8**	**+0.9**
	baz=279							
OBN	**Obninsk**	**121.29**	**328**	*e*PKiKP	**PKPdf**		**16 50 00.0**	**-1.4**
OBN				*e*			16 51 28.9	
OBN				*e*PPP	PPP		16 54 07.3	
OBN				pmax	pmax			
	comp=Z,6.0nm,0.9s							
RAYN	**Ar Rayn**	**121.86**	**290**	PKiKP	**PKPdf**		**16 50 02.5**	**-1.1**
RAYN	**Ar Rayn**	**121.86**	**290**		**PKPdf**		**16 50 02.5**	**-1.1**
FINES	**FINESS Array B**	**122.38**	**338**	PKP	**PKPdf**		**16 50 03.1**	**-0.3**
	comp=Z,2.9nm,0.9s,baz=48,slow=2.8,SNR=5.7							
BOSA	**Boshof**	**124.22**	**223**	PKP	**PKiKP**		**16 50 08.8**	**+0.4**
	comp=Z,2.3nm,0.5s,baz=144,slow=2.9,SNR=9.4							
NOA	**NORSAR Array B**	**127.39**	**344**	PKP	**PKiKP**		**16 50 13.5**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=346,slow=1.9,SNR=3.2							
BRTR	**Keskin Array B**	**129.21**	**312**	PKP	**PKiKP**		**16 50 18.6**	**+0.6**
	comp=Z,1.2nm,0.9s,baz=249,slow=3.4,SNR=4.1							
GERES	**GERESS Array B**	**136.25**	**333**	PKP	**PKPdf**		**16 50 30.6**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=90,slow=1.3,SNR=5.4							
DAVOX	**Davos/Dischmat**	**139.50**	**334**	PKP	**PKPdf**		**16 50 36.9**	**+0.5**
	comp=Z,3.4nm,0.8s,baz=48,slow=3.8,SNR=4.1							
KEST	**Kesra**	**147.81**	**322**	PKPbc	**PKiKP**		**16 50 55.2**	**-0.8**
	comp=Z,19nm,0.9s,baz=200,slow=4.1,SNR=8.7							
KEST	**Kesra**	**147.81**	**322**		**PKPbc**		**16 50 55.0**	**+0.9**
ESDC	**Sonseca Array**	**150.73**	**343**	PKPbc	**PKiKP**		**16 51 02.0**	**+0.1**
	comp=Z,3.8nm,0.7s,baz=15,slow=2.7,SNR=11							
TORD	**Torodi Ar. Bea**	**163.96**	**276**	PKP	**PKPdf**		**16 51 12.7**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=338,slow=3.1,SNR=5.8							
TORD				PKPab	**PKPab**		**16 52 06.3**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=59,slow=5.9,SNR=5.2							

*THE **27** 16:38:40.5,38˚.23N×20˚.35E,h0km±4km,ML3.0/9,Error ellipse: s-maj=5.4km s-min=0.7km az=253.0*
*ATH **27** 16:38:41.0,38˚.25N×20˚.45E,h15km±2km,ML3.0/13,Error ellipse: s-maj=3.4km s-min=1.0km az=253.0*

ISC 27 16:38:39.9±1.1,38˚.23N±0˚.03×20˚.33E±0˚.05,h10km±7km, n47,σ0s88/71,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.14**	**113**	P		**P**	**Pg**	**16 38 43.3**	**+0.3**
ARG2				S		**S**	**Sg**	**16 38 45.0**	**-0.2**
VLS	**Valsamata**	**0.21**	**105**	P		**P**	**Pg**	**16 38 44.2**	**-0.1**
VLS				S		**S**	**Sg**	**16 38 46.8**	**-0.5**
	28μm,0.2s								

VLS	**Valsamata**	**0.21**	**105**	P		**P**	**Pg**	**16 38 44.2**	**-0.1**
VLS				S		**S**	**Sg**	**16 38 46.8**	**-0.5**
VLS				AML		AML		16 38 46.9	
	comp=N,51518μm,0.2s								
VLS				AML		AML		16 38 47.4	
	comp=E,56371μm,0.2s								
FSK	**Fiskardo**	**0.29**	**39**	P		**P**	**Pg**	**16 38 46.0**	**+0.2**
FSK				S		**S**	**Sg**	**16 38 50.1**	**+0.3**
	comp=E,8μm,0.1s								
FSK	**Fiskardo**	**0.29**	**39**	P		**P**	**Pg**	**16 38 46.0**	**+0.2**
FSK				S		**S**	**Sg**	**16 38 50.1**	**+0.3**
KFL	**Anninata**	**0.38**	**108**	P		**P**	**Pg**	**16 38 47.2**	**-0.2**
KFL				S		**S**	**Sg**	**16 38 52.4**	**-0.1**
	comp=E,11μm,0.3s								
KFL	**Anninata**	**0.38**	**108**	P		**P**	**Pg**	**16 38 47.3**	**-0.1**
KFL				S		**S**	**Sg**	**16 38 52.4**	**-0.1**
KFL				AML		AML		16 38 53.0	
	comp=E,30321μm,0.4s								
KFL				AML		AML		16 38 55.2	
	comp=N,12455μm,0.3s								
VLMS	**Volimes, Zakyn**	**0.44**	**143**	P		**P**	**Pg**	**16 38 49.1**	**+0.6**
VLMS				S		**Sb**	**Sb**	**16 38 56.0**	**-0.4**
VLMS				AML		AML		16 38 57.7	
	comp=E,20541μm,0.2s								
VLMS				AML		AML		16 38 58.1	
	comp=N,25204μm,0.2s								
EVGI	**Lefkada island**	**0.47**	**33**	P		**P**	**Pg**	**16 38 49.2**	**+0.2**
EVGI				S		**S**	**Sb**	**16 38 56.2**	**-1.0**
EVGI	**Lefkada island**	**0.47**	**33**	P		**P**	**Pg**	**16 38 49.2**	**+0.2**
MGNA	**Meganis**	**0.56**	**40**	P		**P**	**Pg**	**16 38 50.6**	**-0.2**
MGNA				AML		AML		16 38 59.1	
	comp=E,5706μm,0.2s								
MGNA				AML		AML		16 38 59.3	
	comp=N,3828μm,0.2s								
LKD2	**Lefkada island**	**0.61**	**25**	P		**P**	**Pg**	**16 38 51.8**	**-0.1**
LKD2				S		**S**	**Sb**	**16 39 02.4**	**+0.9**
	comp=N,838nm,0.3s								
LKD2	**Lefkada island**	**0.61**	**25**	P		**P**	**Pg**	**16 38 51.8**	**-0.1**
LKD2				S		**S**	**Sg**	**16 38 59.1**	**-0.8**
LKD2				AML		AML		16 39 07.7	
	comp=N,1399μm,0.4s								
LKD2				AML		AML		16 39 08.6	
	comp=E,1608μm,0.2s								
ZAK2	**Zakynthos**	**0.63**	**134**	P		**P**	**Pg**	**16 38 52.7**	**+0.6**
ZAK2				S		**S**	**Sb**	**16 39 02.6**	**+0.7**
TSLK	**Tsoukalades, L**	**0.65**	**23**	P		**P**	**Pg**	**16 38 52.4**	**0.0**
TSLK				S		**S**	**Sb**	**16 39 03.0**	**+0.6**
	comp=E,1μm,0.4s								
TSLK	**Tsoukalades, L**	**0.65**	**23**	P		**P**	**Pg**	**16 38 52.4**	**0.0**
TSLK				S		**S**	**Sg**	**16 39 01.7**	**+0.7**
TSLK				AML		AML		16 39 07.0	
	comp=N,2970μm,0.4s								
TSLK				AML		AML		16 39 08.6	
	comp=E,2431μm,0.4s								
PDO	**Prodromos**	**0.77**	**61**	P		**P**	**Pg**	**16 38 54.3**	**-0.4**
PDO	**Prodromos**	**0.77**	**61**	P		**P**	**Pg**	**16 38 54.3**	**-0.4**
RLS	**Riolos of Patr**	**0.91**	**101**	P		**P**	**Pg**	**16 38 57.0**	**-0.5**
RLS				S		**S**	**Sn**	**16 39 11.7**	**-0.3**
	comp=E,742nm,0.4s								
RLS	**Riolos of Patr**	**0.91**	**101**	P		**P**	**Pg**	**16 38 56.9**	**-0.5**
RLS				AML		AML		16 39 13.8	
	comp=E,1884μm,0.3s								
RLS				AML		AML		16 39 14.9	
	comp=N,1095μm,0.5s								
PVO	**Paravola**	**1.02**	**67**	P		**P**	**Pg**	**16 38 59.2**	**-0.2**
PVO				S		**S**	**Sn**	**16 39 14.9**	**+0.4**
	comp=N,930nm,0.5s								
PVO	**Paravola**	**1.02**	**67**	P		**P**	**Pg**	**16 38 59.3**	**-0.1**
DRO	**Drossia**	**1.12**	**104**	P		**P**	**Pg**	**16 39 01.0**	**-0.5**
DRO				AML		AML		16 39 26.3	
	comp=N,2953μm,0.5s								
DRO				AML		AML		16 39 27.5	
	comp=E,2241μm,0.3s								
EFP	**Efpalio**	**1.25**	**81**	P		**P**	**Pg**	**16 39 02.6**	**-1.5**
AMT	**Artemida-Makis**	**1.29**	**122**	P		**P**	**Pn**	**16 39 04.2**	**+0.1**
AMT				AML		AML		16 39 32.3	
	comp=N,1313μm,0.5s								
AMT				AML		AML		16 39 35.2	
	comp=E,1128μm,0.5s								
LAKA	**Lakka**	**1.30**	**89**	P		**P**	**Pb**	**16 39 03.5**	**-0.9**
LAKA				AML		AML		16 39 27.9	
	comp=E,581μm,0.6s								
LAKA				AML		AML		16 39 28.5	
	comp=N,652μm,0.4s								
IGT	**Igoumenitsa**	**1.30**	**0**	P		**P**	**Pn**	**16 39 04.8**	**+0.7**
IGT				S		**S**	**Sn**	**16 39 25.0**	**+3.4**
	comp=N,298nm,0.3s								
IGT	**Igoumenitsa**	**1.30**	**0**	P		**P**	**Pn**	**16 39 05.1**	**+1.0**
IGT				AML		AML		16 39 27.3	
	comp=N,743μm,0.3s								
IGT				AML		AML		16 39 34.6	
	comp=E,535μm,0.7s								
ANX	**Ano Chora**	**1.30**	**73**	P		**P**	**Pb**	**16 39 04.5**	**0.0**
ANX				AML		AML		16 39 27.9	
	comp=N,1617μm,0.6s								
ANX				AML		AML		16 39 34.8	
	comp=E,1138μm,0.5s								
SERG	**Sergoula**	**1.37**	**82**	P		**P**	**Pn**	**16 39 04.9**	**-0.2**
SERG				S		**S**	**Sn**	**16 39 26.0**	**+2.7**
	comp=E,378nm,0.6s								
SERG	**Sergoula**	**1.37**	**82**	P		**P**	**Pn**	**16 39 04.9**	**-0.2**
TRIZ	**Trizonia**	**1.38**	**84**	P		**P**	**Pn**	**16 39 04.6**	**-0.6**
KALE	**Kalithea**	**1.43**	**83**	P		**P**	**Pn**	**16 39 05.5**	**-0.5**
KLV	**Kalavryta, Ach**	**1.45**	**97**	P		**P**	**Pn**	**16 39 06.4**	**+0.1**
KLV				AML		AML		16 39 35.8	
	comp=E,390μm,0.5s								
KLV				AML		AML		16 39 39.3	
	comp=N,456μm,0.6s								
DBRK	**Dubrovnik**	**4.74**	**340**	*i* Pn		**Pn**	**Pn**	**16 39 51.3**	**-0.1**
DBRK				Sn			**Sn**	**16 40 44.8**	**-1.5**
STON	**Ston**	**5.05**	**337**	*e*Pn		**Pn**	**Pn**	**16 39 55.8**	**+0.1**
STON				Sn			**Sn**	**16 40 52.4**	**-1.6**
MAKA	**Makarska**	**5.64**	**335**	*e*Pn		**Pn**	**Pn**	**16 40 04.6**	**+0.9**
MAKA				Sn			**Sn**	**16 41 07.5**	**-1.1**
ZIRJ	**Zirje**	**6.47**	**328**	*i* Pn		**Pn**	**Pn**	**16 40 15.3**	**+0.1**
ZIRJ				Sn			**Sn**	**16 41 28.1**	**-1.0**
KIJV	**Kijevo**	**6.48**	**334**	*i* Pn		**Pn**	**Pn**	**16 40 16.1**	**+0.8**
KIJV				Sn			**Sn**	**16 41 28.6**	**-0.8**
MORI	**Morici**	**6.62**	**330**	*e*Pn		**Pn**	**Pn**	**16 40 18.2**	**+1.0**
DUGI	**Dugi Otok**	**7.00**	**327**	*e*Pn		**Pn**	**Pn**	**16 40 23.0**	**+0.6**
DUGI				Sn			**Sn**	**16 41 40.5**	**-1.4**
UDBI	**Udbina**	**7.17**	**333**	*i* Pn		**Pn**	**Pn**	**16 40 26.7**	**+1.9**
NVLJ	**Novalja**	**7.54**	**329**	*e*Pn		**Pn**	**Pn**	**16 40 30.4**	**+0.6**
SOKA	**Soboth**	**9.30**	**337**	*i* Pn		**Pn**	**Pn**	**16 40 54.1**	**0.0**
	comp=N,0.9nm,0.3s								
OBKA	**Obir**	**9.31**	**335**	*e*Pn		**Pn**	**Pn**	**16 40 55.7**	**+1.5**
	comp=N,2.0nm,0.3s								
ARSA	**Arzberg**	**9.68**	**340**	*i* Pn		**Pn**	**Pn**	**16 40 58.9**	**-0.3**
	comp=N,1.0nm,0.2s								
MOA	**Molln**	**10.58**	**337**	*i* Pn		**Pn**	**Pn**	**16 41 13.1**	**+1.5**
	comp=N,1.5nm,0.2s								

ROM 27 16:40:14.1±0.1,43˚.433N±0˚.003×12˚.458E±0˚.005, h6km±1km,ML1.1/3,Error ellipse: s-maj=0.4km s-min=0.2km az=75.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.04**	**294**	P		P	Pg	16 40 15.6	+0.1
ATPI				S		S	Sg	16 40 16.7	+0.1
ATPI				AML		AML			
	comp=N,694μm,0.3s								
ATPI				AML		AML			
	comp=E,306μm,0.2s								
ATVO	**AVT- Monte Val**	**0.06**	**216**	P		P	Pg	16 40 15.9	+0.2
ATVO				S		S	Sg	16 40 17.3	+0.3
ATVO				AML		AML			
	comp=E,242μm,1.4s								
ATVO				AML		AML			
	comp=N,234μm,0.4s								
ATFO	**Monte Foce - G**	**0.11**	**129**	P		P	Pg	16 40 16.7	+0.3
ATFO				S		S	Sg	16 40 18.8	+0.7
ATFO				AML		AML			
	comp=E,105μm,0.3s								
ATFO				AML		AML			
	comp=N,120μm,1.5s								
ATFO				AML		AML			
	comp=N,120μm,1.5s								
ATFO				AML		AML			
	comp=E,105μm,0.3s								
PIEI	**Pieia**	**0.12**	**29**	P		P	Pg	16 40 17.1	+0.5
PIEI				S		S	Sg	16 40 19.5	+1.1
PIEI				AML		AML			
	comp=E,220μm,0.2s								
PIEI				AML		AML			
	comp=N,138μm,0.2s								
BADI	**Badiali**	**0.17**	**296**	P		P	Pg	16 40 18.2	+0.6
BADI				S		S	Sg	16 40 21.4	+1.5
MURB	**Monte Urbino**	**0.18**	**164**	P		P	Pg	16 40 18.3	+0.7
MURB				AML		AML			
	comp=E,138μm,1.1s								
MURB				AML		AML			
	comp=N,140μm,1.4s								
MURB				AML		AML			
	comp=N,140μm,1.4s								
MURB				AML		AML			
	comp=E,138μm,1.1s								
NARO	**Abbazia di Nar**	**0.20**	**27**	P		P	Pg	16 40 18.4	+0.4
NARO				S		S	Sg	16 40 22.0	+1.2
ATCC	**AVT- Casa Cast**	**0.28**	**152**	P		P	Pg	16 40 20.3	+0.7
ATCC				S		S	Sb	16 40 25.4	-1.0
MPAG	**Monte Paganucc**	**0.29**	**48**	P		P	Pg	16 40 20.3	+0.4
EL6	**Elcito**	**0.48**	**102**	S		S	Sb	16 40 32.0	-0.3

*IDC **27** 16:40:25.9±1.3,38˚.33N×20˚.39E,h0km,mb3.8/8, mb1 3.8/11,mb1mx3.6/47,mbtmp3.7/11,ML3.2/3,Error ellipse: s-maj=26.6km s-min=18.1km az=56.0*
*ATH **27** 16:40:26.2,38˚.21N×20˚.31E,h7km±2km,ML3.5/15,Error ellipse: s-maj=2.6km s-min=1.0km az=62.0*
*THE **27** 16:40:27.4,38˚.24N×20˚.35E,h7km±1km,ML3.5/8,Error ellipse: s-maj=1.6km s-min=0.3km az=89.0*
*NEIC **27** 16:40:28.8±3.0,38˚.19N±0˚.06×20˚.36E±0˚.07,h10km±1km, mb4.1/2,ML3.5(THE),Error ellipse: s-maj=11.4km s-min=8.2km az=44.0*

ISC 27 16:40:27.6±1.0,38˚.26N±0˚.02×20˚.37E±0˚.03,h8km±6km, n110,σ1s29/134,mb3.8/9,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.12**	**130**	P		**P**	**Pg**	**16 40 30.2**	**-0.2**
ARG2				S		**S**	**Sg**	**16 40 32.2**	**-0.1**
VLS	**Valsamata**	**0.19**	**115**	P		**P**	**Pg**	**16 40 31.2**	**-0.4**
VLS	**Valsamata**	**0.19**	**115**	P		**P**	**Pg**	**16 40 31.2**	**-0.4**
VLS				S		**S**	**Sg**	**16 40 33.8**	**-0.5**
VLS				AML		AML		16 40 33.9	
	comp=N,93315μm,0.2s								
VLS				AML		AML		16 40 33.9	
	comp=E,94082μm,0.1s								
FSK	**Fiskardo**	**0.25**	**38**	P		**P**	**Pg**	**16 40 32.7**	**+0.1**
FSK				S		**S**	**Sg**	**16 40 36.8**	**+0.7**
	comp=E,15μm,0.3s								
FSK	**Fiskardo**	**0.25**	**38**	P		**P**	**Pg**	**16 40 32.8**	**+0.1**
KFL	**Anninata**	**0.36**	**114**	P		**P**	**Pg**	**16 40 34.2**	**-0.6**
KFL				S		**S**	**Sg**	**16 40 40.0**	**+0.4**
	comp=E,19μm,0.6s								
KFL	**Anninata**	**0.36**	**114**	S		**S**	**Sg**	**16 40 39.9**	**+0.3**
KFL				AML		AML		16 40 40.3	
	comp=E,41891μm,0.5s								
KFL				AML		AML		16 40 42.6	
	comp=N,32436μm,0.7s								
EVGI	**Lefkada island**	**0.43**	**32**	P		**P**	**Pg**	**16 40 36.0**	**+0.1**
EVGI				S		**S**	**Sb**	**16 40 43.2**	**-0.8**
EVGI	**Lefkada island**	**0.43**	**32**	P		**P**	**Pg**	**16 40 36.0**	**+0.1**
EVGI				S		**S**	**Sg**	**16 40 41.9**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.45**	**148**	P		**P**	**Pg**	**16 40 35.1**	**-1.3**
VLMS				AML		AML		16 40 45.3	
	comp=E,11588μm,0.3s								
VLMS				AML		AML		16 40 46.2	
	comp=N,15990μm,0.3s								
LKD2	**Lefkada island**	**0.58**	**23**	P		**P**	**Pg**	**16 40 38.5**	**-0.3**
LKD2				S		**S**	**Sg**	**16 40 47.1**	**+0.8**
LKD2	**Lefkada island**	**0.58**	**23**	P		**P**	**Pg**	**16 40 38.4**	**-0.4**
LKD2				S		**S**	**Sg**	**16 40 47.0**	**+0.6**
LKD2				AML		AML		16 40 54.8	
	comp=N,5479μm,0.5s								
LKD2				AML		AML		16 40 55.1	
	comp=E,4642μm,0.4s								
TSLK	**Tsoukalades, L**	**0.61**	**22**	P		**P**	**Pg**	**16 40 39.3**	**-0.1**
TSLK	**Tsoukalades, L**	**0.61**	**22**	P		**P**	**Pg**	**16 40 39.2**	**-0.1**
TSLK				S		**S**	**Sb**	**16 40 48.8**	**-0.4**
TSLK				AML		AML		16 40 54.4	
	comp=E,5885μm,0.4s								
TSLK				AML		AML		16 40 56.8	
	comp=N,7099μm,0.5s								
ZAK2	**Zakynthos**	**0.63**	**138**	P		**P**	**Pg**	**16 40 39.9**	**+0.1**
PDO	**Prodromos**	**0.73**	**62**	P		**P**	**Pg**	**16 40 41.3**	**-0.3**
PDO	**Prodromos**	**0.73**	**62**	P		**P**	**Pg**	**16 40 41.1**	**-0.5**
PDO				S		**S**	**Sb**	**16 40 52.1**	**-0.4**
RLS	**Riolos of Patr**	**0.89**	**103**	P		**P**	**Pg**	**16 40 43.7**	**-1.0**
RLS	**Riolos of Patr**	**0.89**	**103**	P		**P**	**Pg**	**16 40 43.5**	**-1.

AGG	**Agios Georgios**	**1.72**	**63**	P		**Pb**	**16 40 59.2**	**-0.1**
AGG	**Agios Georgios**	**1.72**	**63**			**Pg**	**16 41 00.1**	**-0.4**
PYL	**PYLOS**	**1.75**	**141**	P		**Pn**	**16 40 58.5**	**+0.4**
VLX	**Vlachokerasia**	**1.82**	**118**	P		**Pb**	**16 41 01.6**	**+0.3**
THL	**Klokotos Trika**	**1.83**	**44**	P		**Pb**	**16 41 00.9**	**-0.4**
THL				AML	AML		16 41 32.5	
	comp=E,1878μm,0.7s							
THL				AML	AML		16 41 33.7	
	comp=N,1314μm,0.8s							
AXAR	**Agios Charalam**	**1.87**	**74**	P		**Pb**	**16 41 02.7**	**+0.7**
AXAR				AML	AML		16 41 37.3	
	comp=E,2555μm,1.2s							
AXAR				AML	AML		16 41 40.5	
	comp=N,3407μm,1.4s							
PROD	**Prodromos**	**2.00**	**89**	P		**Pb**	**16 41 03.1**	**-1.0**
LTK	**Loutraki**	**2.06**	**96**	P		**Pn**	**16 41 03.9**	**+1.3**
LOUT	**Loutraki**	**2.07**	**97**	P		**Pb**	**16 41 04.1**	**-1.4**
LKR	**Lokris**	**2.10**	**78**	P		**Pb**	**16 41 04.9**	**-1.0**
VIL2	**Platees**	**2.29**	**90**	P		**Pb**	**16 41 07.6**	**-1.4**
SCTE	**Santa Cesarea**	**2.34**	**321**	P		**Pn**	**16 41 07.1**	**+0.9**
SCTE	**Santa Cesarea**	**2.34**	**321**			**Pn**	**16 41 07.1**	**+0.9**
DID	**Didima**	**2.39**	**107**	P		**Pb**	**16 41 09.5**	**-1.4**
LIT	**Litokhoron**	**2.47**	**41**			**Pb**	**16 41 11.4**	**-0.9**
VLI	**Veliai**	**2.56**	**126**	P		**Pn**	**16 41 11.3**	**+2.0**
MRKA	**Markates**	**2.57**	**79**	P		**Pn**	**16 41 10.6**	**+1.1**
FNA	**Florina**	**2.64**	**17**	Pn		**Pn**	**16 41 12.6**	**+2.1**
ATHU	**Athens Univers**	**2.71**	**95**	P		**Pn**	**16 41 12.7**	**+1.3**
VLY	**Voula,Athens**	**2.74**	**97**	P		**Pn**	**16 41 12.9**	**+1.1**
EREA	**Eretria**	**2.81**	**86**	P		**Pn**	**16 41 13.9**	**+1.1**
OHR	**Ohrid**	**2.87**	**7**	*e*Pn		**Pb**	**16 41 16.9**	**-2.1**
KTHA	**Kythira Island**	**2.94**	**132**	P		**Pn**	**16 41 16.3**	**+1.8**
TIP	**Timpagrande**	**2.97**	**289**	P		**Pn**	**16 41 15.9**	**+0.9**
TIP	**Timpagrande**	**2.97**	**289**			**Pn**	**16 41 16.4**	**+1.4**
TIR	**Tirane**	**3.11**	**353**	Pn		**Pn**	**16 41 18.8**	**+1.9**
VAY	**Valandovo**	**3.50**	**28**	*e*Pn		**Pb**	**16 41 29.1**	**-0.6**
STIP	**Stip**	**3.71**	**22**	*e*Pn		**Pb**	**16 41 31.5**	**-1.8**
ACER	**Acerenza**	**4.25**	**308**	Pn		**Pn**	**16 41 35.3**	**+2.6**
PDG	**Podgorica**	**4.25**	**349**	Pn		**Pn**	**16 41 34.4**	**+1.8**
IDI	**Anoyia**	**4.69**	**128**	Pn		**Pn**	**16 41 39.4**	**+0.7**
	comp=N,0.5nm,0.3s,baz=300,slow=14,SNR=2.9							
IDI				Sn		**Sn**	**16 42 36.1**	**+2.9**
	comp=N,1.4nm,0.3s,baz=324,slow=17,SNR=4.9							
DBRK	**Dubrovnik**	**4.72**	**340**	*e*Pg		**Pn**	**16 41 36.2**	**-2.8**
DBRK	**Dubrovnik**	**4.72**	**340**	Sn		**Sn**	**16 42 31.8**	**-2.1**
VTS	**Vitosha**	**4.87**	**26**	Pn		**Pn**	**16 41 43.0**	**+1.7**
SGRT	**San Giovanni R**	**4.98**	**316**	Pn		**Pn**	**16 41 43.3**	**+0.7**
STON	**Ston**	**5.04**	**337**	Sn		**Sn**	**16 42 39.2**	**-2.4**
ALN	**Alexandroupoli**	**5.12**	**57**	Pn		**Pn**	**16 41 47.2**	**+2.7**
PAOL	**Paolisi**	**5.26**	**304**	Pn		**Pn**	**16 41 49.7**	**+3.2**
MAKA	**Makarska**	**5.63**	**334**	Sg		**Pn**	**16 41 52.1**	**+0.6**
MAKA	**Makarska**	**5.63**	**334**	Sn		**Sn**	**16 42 53.4**	**-2.8**
KARP	**Karpathos**	**6.08**	**114**	Pn		**Pn**	**16 41 59.7**	**+2.0**
INTR	**Introdacqua**	**6.21**	**309**	Pn		**Pn**	**16 42 02.1**	**+2.6**
KIJV	**Kijevo**	**6.47**	**334**	*i* Pn		**Pn**	**16 42 03.4**	**+0.3**
KIJV				Sn		**Sn**	**16 43 15.6**	**-1.5**
MORI	**Morici**	**6.62**	**329**	*i* Pn		**Pn**	**16 42 05.8**	**+0.7**
DUGI	**Dugi Otok**	**6.99**	**327**	*e*Pn		**Pn**	**16 42 11.9**	**+1.8**
UDBI	**Udbina**	**7.15**	**333**	*e*Pn		**Pn**	**16 42 13.5**	**+1.0**
UDBI				Sn		**Sn**	**16 43 32.1**	**-1.8**
NRCA	**Norcia**	**7.17**	**312**			**Pn**	**16 42 15.4**	**+2.7**
MURB	**Monte Urbino**	**7.77**	**313**	Pn		**Pn**	**16 42 24.4**	**+3.5**
SOKA	**Soboth**	**9.29**	**337**	*i* Pn		**Pn**	**16 42 42.3**	**+0.6**
	comp=N,2.5nm,0.5s							
OBKA	**Obir**	**9.30**	**334**	*e*Pn		**Pn**	**16 42 43.1**	**+1.2**
	comp=N,2.8nm,0.4s							
STAL	**STALIGIAL**	**9.80**	**327**	Pn		**Pn**	**16 42 50.2**	**+1.5**
CTI	**Castel Tesino**	**10.12**	**323**	Pn		**Pn**	**16 42 53.1**	**0.0**
BRTR	**Keskin Array B**	**10.44**	**78**	Pn		**Pn**	**16 43 00.5**	**+2.9**
	comp=N,0.1nm,0.3s,baz=259,slow=12,SNR=3.1							
MOA	**Molln**	**10.57**	**337**	*i* Pn		**Pn**	**16 43 00.3**	**+1.0**
	comp=N,2.0nm,0.3s							
GERES	**GERESS Array B**	**11.63**	**338**	Pn		**Pn**	**16 43 12.6**	**-1.2**
	comp=N,0.1nm,0.3s,baz=159,slow=14,SNR=4.7							
HFS	**Hagfors**	**22.30**	**351**	P		**P**	**16 45 24.5**	**-0.6**
	comp=N,3.6nm,1.0s,baz=152,slow=16,SNR=4.0							
FINES	**FINESS Array B**	**23.48**	**7**	P		**P**	**16 45 36.8**	**-0.6**
	comp=N,2.0nm,0.8s,baz=170,slow=12,SNR=5.7							
NOA	**NORSAR Array B**	**25.52**	**349**	P		**P**	**16 45 36.9**	**-0.8**
	comp=N,0.4nm,0.5s,baz=165,slow=11,SNR=2.8							
TORD	**Torodi Ar. Bea**	**30.02**	**219**	P		**P**	**16 46 37.1**	**+0.2**
	comp=N,0.7nm,0.8s,baz=13,slow=9.2,SNR=3.6							
TORD	**Torodi Ar. Bea**	**30.02**	**219**	IAmb	IAmb		16 46 41.7	
	comp=Z,59nm,0.8s							
ARCES	**ARCESS Array B**	**31.46**	**3**	P		**P**	**16 46 49.7**	**+0.6**
	comp=Z,4.7nm,0.9s,baz=192,slow=12,SNR=2.9							
MK31	**Makanchi Array**	**45.36**	**58**	P		**P**	**16 48 46.8**	**+0.5**
MK31				IAmb	IAmb		16 49 26.6	
	comp=Z,3.7nm,1.6s							
MKAR	**Makanchi Array**	**45.36**	**58**	P		**P**	**16 48 45.3**	**-0.9**
	comp=Z,0.6nm,0.4s,baz=277,slow=7.2,SNR=11							
ZALV	**Zalesovo Beam**	**45.73**	**48**	P		**P**	**16 48 46.7**	**-2.3**
	comp=Z,0.9nm,0.4s,baz=279,slow=11,SNR=3.9							
CMAR	**Chiang Mai Arr**	**70.00**	**82**	P		**P**	**16 51 38.9**	**-1.0**
	comp=Z,0.4nm,0.7s,baz=307,slow=7.0,SNR=5.1							

SJA ***27*** *16:42:29.2±0.5, 19°.81S×64°.26W, h693km±13km, ML5.2, MW5.5*

SCB ***27*** *16:42:29.9±2.3, 19°.42S×64°.54W, h624km±33km, ML5.7/1, Error ellipse: s-maj=14.1km s-min=12.8km az=0.0*

GUC ***27*** *16:42:32.8±1.7, 19°.44S×65°.45W, h660km±32km, mb5.5*

MOS ***27*** *16:42:37.5±1.1, 19°.14S×63°.96W, h602km, mb5.5/10, Error ellipse: s-maj=8.1km s-min=5.0km az=99.8*

NEIC ***27*** *16:42:37.6±1.7, 19°.26S±0°.07×63°.92W±0°.08, h600km±3km, mb5.4/528, Mwb5.6/10, Error ellipse: s-maj=11.6km s-min=10.2km az=86.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr=0.99; Mθθ=0.28; Mφφ=1.27; Mrθ=-1.10; Mθφ=0.04; Mrφ=2.27; Fault plane solution: M=2.78000×10¹⁷ NP1:φs=26.58000°, δ=16.51000°, λ=-41.19000°. NP2:φs=156.58000°, δ=79.21000°, λ=-102.57000°. Principal axes: T 2.7803, Plg33.0000°, Azm257.0000°; N -0.0064, Plg12.0000°, Azm159.0000°; P -2.7739, Plg54.0000°, Azm51.0000°;*

VAO ***27*** *16:42:37.7±0.2, 19°.30S×63°.96W, h594km±3km, mb5.5*

GCMT ***27*** *16:42:38.6±0.2, 19°.24S±0°.02×63°.85W±0°.02, h609km±2km, MW5.6/95, Moment Tensor Solution. s95,c136; Duration: 1s5 Moment tensor: Scale 10¹⁷Nm; Mrr=1.11±.05; Mθθ=0.66±.08; Mφφ=1.77±.08; Mrθ=-1.86±.07; Mθφ=0.09±.08; Mrφ=1.95±.07; Best double couple: M=3.10600×10¹⁷ NP1:φs=28.00000°, δ=25.00000°, λ=-27.00000°. NP2:φs=143.00000°, δ=79.00000°, λ=-112.00000°. Principal axes: T 3.0190, Plg31.0000°, Azm251.0000°; N 0.1760, Plg22.0000°, Azm147.0000°; P -3.1930, Plg51.0000°, Azm28.0000°; nsta1 refers to body waves, cutoff=40s. Triangular moment-rate function*

IDC ***27*** *16:42:38.4±0.4, 19°.23S×63°.93W, h600km±3km, mb4.7/30, mb1 4.8/36, mb1mx4.8/38, mbtmp5.7/36 Error ellipse: s-maj=8.0km s-min=5.9km az=74.0*

OSPL ***27*** *16:42:44.2±0.9, 18°.95S×63°.86W, h693km±999km*

ISC 27 16:42:37.5±0.3, 19°.23S±0°.03×63°.94W±0°.04, h599km±3km, h601km:pP-P, n1791, σ1s10/1920, mb5.4/389, 20C-42D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BS03	**Mojotorillo**	**0.42**	**259**	Pg		**P**	**16 43 47.8**	**-0.6**
BS08	**Valle Grande**	**0.75**	**348**	P		**P**	**16 43 49.0**	**+0.3**
BS06	**Camiri**	**0.90**	**154**	P		**P**	**16 43 49.4**	**+0.9**
MOCB	**Mochara**	**2.56**	**218**	G			16 43 55.3	
MOCB				G			16 44 57.6	
YJA	**Yavi**	**3.28**	**206**	P		**P**	**16 43 57.8**	**-0.9**
YJA	**Yavi**	**3.28**	**206**	*i* P		**P**	**16 43 59.4**	**+0.7**
YJA				IAML			16 45 18.6	
	comp=Z,288nm,1.7s							
HJA	**Humahuaca**	**4.18**	**199**	⇓*i* P		**P**	**16 44 05.1**	**+0.4**
HJA				IAML			16 45 22.5	
	comp=Z,547nm,1.3s							
SIV	**San Ignacio**	**4.23**	**41**	P		**P**	**16 44 06.4**	**+1.7**
	comp=Z,3μm,0.3s,baz=237,slow=6.8							
SIV				S		**S**	**16 45 18.2**	**+2.5**
	baz=91,slow=20,SNR=15							
SIV	**San Ignacio**	**4.23**	**41**	P		**P**	**16 44 09.3**	**+4.6**
BBOE	**La Paz, Chanca**	**4.54**	**301**	P		**P**	**16 44 08.4**	**+0.9**
BBOJ	**La Paz, Jacaqu**	**4.62**	**298**	P		**P**	**16 44 08.8**	**+0.7**
ASTB	**Santa Barbara**	**4.71**	**186**	*i* P		**P**	**16 44 08.4**	**+0.1**
ASTB				IAML			16 45 35.4	
	comp=Z,316nm,1.7s							
LPAZ	**La Paz**	**4.95**	**306**	P		**P**	**16 44 11.2**	**+0.4**
	comp=Z,237nm,0.3s,baz=92,slow=6.0,SNR=4335							
LPAZ				S		**S**	**16 45 24.9**	**-1.8**
	comp=Z,25nm,0.3s,baz=20,slow=22,SNR=16							
LPAZ				ScP		**ScP**	**16 52 37.9**	**+0.6**
	comp=Z,0.9nm,0.3s,baz=131,slow=0.5,SNR=5.2							
LPAZ	**La Paz**	**4.95**	**306**	P		**P**	**16 44 09.8**	**-1.0**
LPAZ				S		**S**	**16 45 22.8**	**-3.9**
LPAZ				AML	AML		16 45 25.8	
	comp=Z,1μm,1.0s							
LPAZ	**La Paz**	**4.95**	**306**	*e*P		**P**	**16 44 11.2**	**+0.4**
LPAZ				*e*S		**S**	**16 45 25.1**	**-1.6**
LPAZ	**La Paz**	**4.95**	**306**	P		**P**	**16 44 11.1**	**+0.3**
GO01	**Chusmiza**	**4.97**	**264**	*e*P		**P**	**16 44 10.4**	**-0.3**
GO01				*e*S		**S**	**16 45 24.6**	**-2.1**
GO01	**Chusmiza**	**4.97**	**264**	P		**P**	**16 44 10.1**	**-0.6**
PB08	**IPOC Station P**	**4.99**	**259**	⇓*e*P		**P**	**16 44 10.6**	**-0.1**
PB08				*e*S		**S**	**16 45 24.8**	**-2.0**
PB08	**IPOC Station P**	**4.99**	**259**	P		**P**	**16 44 08.7**	**-2.0**
BBOB	**La Paz, Bander**	**5.04**	**307**	P		**P**	**16 44 11.3**	**-0.1**
AZAP	**Zapla**	**5.07**	**192**	*i* P		**P**	**16 44 10.3**	**-0.8**
AZAP				IAML			16 45 31.9	
	comp=Z,267nm,2.1s							
BBOD	**La Paz, Gloria**	**5.13**	**300**	P		**P**	**16 44 12.6**	**+0.5**
MNMC	**Minye Minye**	**5.34**	**270**	*i* P		**P**	**16 44 13.1**	**-0.4**
MNMC				*e*S		**S**	**16 45 29.1**	**-2.7**
MNMC	**Minye Minye**	**5.34**	**270**	P		**P**	**16 44 11.1**	**-2.4**
MNMC	**Minye Minye**	**5.34**	**270**	P		**P**	**16 44 12.8**	**-0.6**
BS09	**Huarina**	**5.38**	**304**	P		**P**	**16 44 13.6**	**-0.5**
PB11	**IPOC Station P**	**5.41**	**264**	⇓*e*P		**P**	**16 44 13.2**	**-0.7**
PB11				*e*S		**S**	**16 45 29.2**	**-3.4**
PB11	**IPOC Station P**	**5.41**	**264**	P		**P**	**16 44 12.6**	**-1.3**
PB11	**IPOC Station P**	**5.41**	**264**	P		**P**	**16 44 12.7**	**-1.3**
PB01	**IPOC Station P**	**5.51**	**250**	P		**P**	**16 44 13.9**	**-0.7**
PB09	**IPOC Station P**	**5.58**	**242**	⇓*e*P		**P**	**16 44 15.4**	**+0.2**
PB09				*e*S		**S**	**16 45 33.2**	**-1.9**
PB09	**IPOC Station P**	**5.58**	**242**	*i* P		**P**	**16 44 15.2**	**0.0**
PB09				*i* Sg		**S**	**16 45 33.6**	**-1.6**
LVC	**Limon Verde**	**5.73**	**233**	P		**P**	**16 44 16.2**	**-0.5**
	comp=Z,2μm,0.3s,baz=37,slow=7.7,SNR=4877							
LVC				S		**S**	**16 45 35.5**	**-2.3**
	comp=Z,252nm,0.3s,baz=225,slow=19,SNR=19							
LVC				ScP		**ScP**	**16 52 37.6**	**+0.3**
	comp=Z,1.1nm,0.3s,baz=329,slow=4.6,SNR=6.2							
LVC	**Limon Verde**	**5.73**	**233**	*e*P		**P**	**16 44 16.3**	**-0.5**
LVC				*e*S		**S**	**16 45 35.7**	**-2.0**
PSGC	**Pisagua**	**5.84**	**265**	⇓*e*P		**P**	**16 44 16.6**	**-0.8**
PSGC				*e*S		**S**	**16 45 35.1**	**-4.0**
PSGC	**Pisagua**	**5.84**	**265**	P		**P**	**16 44 16.2**	**-1.2**
PB02	**IPOC Station P**	**5.96**	**249**	⇓*e*P		**P**	**16 44 18.0**	**-0.4**
PB02				*e*S		**S**	**16 45 37.5**	**-3.4**
PB02	**IPOC Station P**	**5.96**	**249**	P		**P**	**16 44 17.2**	**-1.2**
TA01	**Diego Aracena**	**6.02**	**256**	⇓*e*P		**P**	**16 44 17.6**	**-1.1**
TA01				*e*S		**S**	**16 45 37.1**	**-4.4**
PATCX	**Punta Patache**	**6.05**	**254**	⇓*e*P		**P**	**16 44 18.4**	**-0.7**
PATCX				*e*S		**S**	**16 45 38.5**	**-3.7**
PB07	**IPOC Station P**	**6.10**	**245**	⇑*i* P		**P**	**16 44 19.5**	**-0.2**
PB07				*e*S		**S**	**16 45 40.4**	**-2.8**
PB03	**IPOC Station P**	**6.12**	**242**	⇓*e*P		**P**	**16 44 19.3**	**-0.6**
PB03				*e*S		**S**	**16 45 41.5**	**-2.0**
PB06	**IPOC Station P**	**6.29**	**236**	P		**P**	**16 44 19.0**	**-2.3**
PB06	**IPOC Station P**	**6.29**	**236**	*i* P		**P**	**16 44 20.9**	**-0.5**
PB06				*i* Sg		**S**	**16 45 43.3**	**-3.0**
PB04	**IPOC Station P**	**6.57**	**241**	⇑*i* P		**P**	**16 44 23.5**	**-0.3**
PB04				*e*S		**S**	**16 45 48.1**	**-2.7**
PB04	**IPOC Station P**	**6.57**	**241**	P		**P**	**16 44 22.1**	**-1.7**
PB04	**IPOC Station P**	**6.57**	**241**	P		**P**	**16 44 23.1**	**-0.7**
PB04	**IPOC Station P**	**6.57**	**241**	*i* P		**P**	**16 44 23.5**	**-0.3**
PB04				*i* Sg		**S**	**16 45 48.3**	**-2.5**
PB05	**IPOC Station P**	**6.87**	**237**	*i* P		**P**	**16 44 25.9**	**-0.5**
PB05				*i* Sg		**S**	**16 45 52.3**	**-3.2**
PB10	**IPOC Station P**	**7.49**	**234**	P		**P**	**16 44 31.5**	**-0.5**
PB10	**IPOC Station P**	**7.49**	**234**	P		**P**	**16 44 30.9**	**-1.1**
AQDB	**Aquidauana**	**7.86**	**100**	*e*P		**P**	**16 44 36.4**	**+0.9**
AQDB				*e*S		**S**	**16 46 14.4**	**+2.2**
GO02	**Mina Guanaco**	**7.88**	**221**	P		**P**	**16 44 35.7**	**-0.3**
SALV	**Santo Antonio**	**8.54**	**68**	*e*P		**P**	**16 44 43.0**	**+0.9**
SALV				*e*S		**S**	**16 46 25.2**	**+1.1**
PP1B	**Ponte de Pedra**	**8.76**	**81**	*e*P		**P**	**16 44 45.3**	**+1.2**
CYA	**Choya**	**9.32**	**190**	*i* P		**P**	**16 44 47.7**	**-1.8**
CYA				*i* S		**S**	**16 46 31.5**	**-6.4**
CPUP	**Villa Florida**	**9.33**	**140**	P		**P**	**16 44 48.9**	**-0.7**
CPUP	**Villa Florida**	**9.33**	**140**	P		**P**	**16 44 49.2**	**-0.3**
	comp=Z,14nm,0.3s,baz=322,slow=10.0,SNR=288							
CPUP	**Villa Florida**	**9.33**	**140**	*e*P		**P**	**16 44 49.3**	**-0.3**
CPUP	**Villa Florida**	**9.33**	**140**	P		**P**	**16 44 48.9**	**-0.7**
GO03	**Copiap**	**10.13**	**214**	P		**P**	**16 44 56.6**	**-0.9**
VCA	**Vinchina**	**10.23**	**202**	*i* P		**P**	**16 44 58.3**	**-0.3**
VCA				*i* S		**S**	**16 44 54.0**	**-0.5**
SAML	**Samuel**	**10.25**	**4**	P		**P**	**16 44 59.9**	**+1.0**
SAML	**Samuel**	**10.25**	**4**	*e*P		**P**	**16 44 60.0**	**+1.0**
SAML				*e*S		**S**	**16 46 56.4**	**+1.5**
SAML	**Samuel**	**10.25**	**4**	P		**P**	**16 44 59.9**	**+1.0**
ACLC	**CERRO LA CRUZ**	**10.51**	**195**	*i* P		**P**	**16 44 59.8**	**-1.6**
C2SB	**Chapadao do Su**	**10.52**	**89**	*e*P		**P**	**16 45 03.3**	**+1.9**
AGUA	**GUANDACOL**	**11.02**	**201**	*i* P		**P**	**16 45 06.3**	**-0.1**
AGUA				*i* S		**S**	**16 47 07.2**	**-1.4**
TRCB	**Terra Rica**	**11.14**	**111**	*e*P		**P**	**16 45 07.6**	**-0.1**
APLL	**PUNTA DE LOS L**	**11.36**	**191**	*i* P		**P**	**16 45 06.6**	**-3.2**
APLL				*i* S		**S**	**16 47 06.6**	**-8.2**
CLDB	**Colider**	**11.44**	**45**	*e*P		**P**	**16 45 10.3**	**-0.5**
CLDB				*e*S		**S**	**16 47 16.5**	**-0.2**
TCA	**Tanti**	**12.07**	**183**	*i* P		**P**	**16 45 12.9**	**-4.0**
TCA				*i* S		S	16 47 18.5	-9.4
ARAG	**Araguaiana, MT**	**12.10**	**75**	*e*P		**P**	**16 45 17.6**	**+0.3**
PCMB	**Pacaembu**	**12.12**	**103**	*e*P		**P**	**16 45 18.1**	**+0.5**
PTGB	**Pitanga**	**12.29**	**118**	*e*P		**P**	**16 45 19.1**	**-0.2**
PTGB				*e*S		**S**	**16 47 30.5**	**-1.8**
ITQB	**Itaqui**	**12.34**	**149**	*e*P		**P**	**16 45 18.8**	**-0.7**
AMOG	**MOGNA**	**12.36**	**199**	*i* P		**P**	**16 45 19.6**	**-0.3**
AMOG				*i* S		**S**	**16 47 31.4**	**-1.8**
GO04	**Tololo Observa**	**12.54**	**208**	P		**P**	**16 45 21.1**	**-0.8**
RTLL	**Cerro Villicun**	**12.72**	**198**	*i* P		**P**	**16 45 23.3**	**-0.2**
RTLL				*i* S		**S**	**16 47 39.5**	**-0.4**
ITRB	**Iturama**	**12.82**	**94**	*e*P		**P**	**16 45 25.0**	**+0.4**
CFA	**Coronel Fontan**	**12.91**	**197**	P		**P**	**16 45 25.1**	**-0.3**
	comp=Z,118nm,0.3s,baz=18,slow=9.8,SNR=1178							
CFA				S		**S**	**16 47 41.1**	**-2.2**
	comp=Z,29nm,0.3s,baz=276,slow=22,SNR=12							
CFA	**Coronel Fontan**	**12.91**	**197**	*i* P		**P**	**16 45 25.2**	**-0.3**
CFA				*i* S		**S**	**16 47 41.2**	**-2.2**
ZON	**Zonda**	**12.98**	**198**	*i* P		**P**	**16 45 26.1**	**0.0**
ZON				*i* S		**S**	**16 47 44.5**	**-0.2**
RTCV	**Cerro Valdivia**	**13.24**	**197**	*i* P		**P**	**16 45 28.7**	**0.0**
RTCV				*i* S		**S**	**16 47 48.3**	**-1.0**
ACAN	**Cantantal**	**13.31**	**192**	*i* P		**P**	**16 45 27.8**	**-1.6**
ACAN				*i* S		**S**	**16 47 42.9**	**-7.7**
RTLS	**Leoncito**	**13.41**	**200**	*i* P		**P**	**16 45 30.8**	**+0.1**
RTLS				*i* S		**S**	**16 47 57.2**	**+4.4**
ITAB	**Concordia**	**13.46**	**128**	*e*P		**P**	**16 45 29.8**	**-1.2**
ASAL	**Salagasta**	**14.01**	**197**	*i* P		**P**	**16 45 37.0**	**+0.5**
ASAL				*i* S		**S**	**16 48 04.1**	**+1.3**
FRTB	**Fartura**	**14.01**	**109**	*e*P		**P**	**16 45 40.5**	**+0.5**
NNA	**Nana**	**14.36**	**298**	P		**P**		
	comp=Z,48nm,0.3s,baz=135,slow=8.1,SNR=167							
NNA				S		**S**	**16 48 11.5**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=31,slow=22,SNR=5.7							
NNA				ScP		**ScP**	**16 52 48.4**	**+0.4**
	comp=Z,0.8nm,0.3s,baz=105,slow=1.9,SNR=8.8							
NNA	**Nana**	**14.36**	**298**	P		**P**	**16 45 40.4**	**+0.3**
NNA	**Nana**	**14.36**	**298**			**ScP**	**16 52 47.5**	**-0.5**
AAGR	**Agrelo**	**14.47**	**197**	*i* P		**P**	**16 45 41.6**	**+0.8**
BB19B	**Bebedouro**	**14.59**	**100**	*e*P		**P**	**16 45 41.9**	**-0.2**
BB19B				*e*S		**S**	**16 48 13.5**	**+0.6**
IPMB	**Ipameri, GO**	**14.97**	**88**	*e*P		**P**	**16 45 45.7**	**+0.1**
ROC1	**El Roble**	**15.08**	**203**	P		**P**	**16 45 45.8**	**-0.8**
PEL	**Peldehue**	**15.11**	**202**	P		**P**	**16 45 46.2**	**-0.4**
PEL				pmax	pmax			
	comp=Z,1μm,1.4s							
PEL	**Peldehue**	**15.11**	**202**	P		**P**	**16 45 46.2**	**-0.4**
VA01	**Torpederas**	**15.37**	**205**	⇑*i* P		**P**	**16 45 48.3**	**-0.6**
VA01				IAmb	IAmb		16 45 50.0	
	comp=Z,851nm,1.0s							
PLTB	**Pedras Altas**	**15.57**	**145**	*e*P		**P**	**16 45 49.9**	**-1.0**
PLTB				*e*S		**S**	**16 48 27.8**	**-0.8**
CNLB	**Canela**	**15.58**	**133**	*e*P		**P**	**16 45 49.8**	**-1.2**
CNLB				*e*S		**S**	**16 48 28.6**	**-0.2**
LMEL	**Las Melosas**	**15.59**	**200**	⇑*i* P		**P**	**16 45 51.4**	**+0.2**
LMEL				IAmb	IAmb		16 46 00.3	
	comp=N,132nm,1.0s							
BDFB	**Brasilia**	**15.61**	**79**	P		**P**	**16 45 52.2**	**+0.6**
BDFB				pmax	pmax			
	comp=Z,552nm,1.2s							
BDFB	**Brasilia**	**15.61**	**79**	P		**P**	**16 45 52.7**	**+1.1**
	comp=Z,37nm,0.3s,baz=259,slow=11,SNR=175							
BDFB	**Brasilia**	**15.61**	**79**	P		**P**	**16 45 52.2**	**+0.6**
RCLB	**Rio Claro- Sao**	**15.67**	**105**	*e*P		**P**	**16 45 53.2**	**+1.2**
MT01	**Popeta**	**15.96**	**203**	⇑*i* P		**P**	**16 45 53.2**	**-1.2**
MT01				IAmb	IAmb		16 45 55.1	
	comp=Z,408nm,0.5s							
SPB	**Sao Paulo**	**15.97**	**109**	*e*P		**P**	**16 45 54.9**	**+0.2**
SPB				*e*S		**S**	**16 48 36.7**	**+1.3**
SPB	**Sao Paulo**	**15.97**	**109**	P		**P**	**16 45 54.5**	**-0.2**
VAO	**Valinhos**	**16.28**	**106**	*e*P		**P**	**16 45 57.8**	**+0.2**
PEXB	**Peixe**	**16.64**	**67**	*e*P		**P**	**16 46 02.5**	**+1.6**
BO02	**Sierra Bellavi**	**16.64**	**200**	⇑*i* P		**P**	**16 46 00.7**	**0.0**
BO02				IAmb	IAmb		16 46 03.8	
	comp=Z,186nm,0.6s							
GO05	**Huala**	**17.23**	**203**	⇑*i* P		**P**	**16 46 05.2**	**-0.9**
GO05				IAmb	IAmb		16 46 12.4	
	comp=N,146nm,0.9s							
GO05	**Huala**	**17.23**	**203**	P		**P**	**16 46 05.0**	**-1.1**
GO05				IAmb	IAmb		16 46 06.7	
	comp=Z,247nm,1.4s							
PARB	**Paraibuna**	**17.55**	**107**	*e*P		**P**	**16 46 10.6**	**+1.3**
BSCB	**Bom Sucesso**	**18.09**	**99**	*e*P		**P**	**16 46 15.3**	**+1.1**
ATAH	**Atahualpa**	**18.49**	**309**	P		**P**	**16 46 20.9**	**+2.6**
	comp=Z,12nm,0.3s,baz=143,slow=5.9,SNR=91							
ATAH				S		**S**	**16 49 22.5**	**+5.3**
	comp=Z,0.6nm,0.3s,baz=295,slow=19,SNR=4.2							
ATAH				ScP		**ScP**	**16 52 58.3**	**+1.6**
	comp=Z,1.0nm,0.3s,baz=57,slow=1.6,SNR=8.5							
COCH	**Cobquecura**	**18.55**	**203**	⇓*e*P		**P**	**16 46 16.4**	**-1.6**
COCH				IAmb	IAmb		16 46 19.1	
	comp=Z,359nm,1.4s							
BI03	**Tigo**	**19.27**	**203**	⇑*i* P		**P**	**16 46 23.6**	**-1.0**
BI03				IAmb	IAmb		16 46 25.6	
	comp=Z,460nm,0.8s							
VAS01	**Vassouras-RJ**	**19.41**	**103**	*e*P		**P**	**16 46 27.4**	**+1.3**
SJMB	**Sao Joao De

comp=Z,84nm,1.3s
EFI East Falkland 32.70 173 *i* P **P** **16 48 21.4 -0.5**
EFI pmax pmax

comp=Z,46nm,0.9s
EFI East Falkland 32.70 173 P **P** **16 48 22.0 +0.1**
EFI IAmb IAmb 16 48 23.1

comp=Z,95nm,1.1s
SLB Belfond 32.98 5 *e*P **P** **16 48 25.8 +1.0**
SLB Belfond 32.98 5 P **P** **16 48 25.8 +1.0**
SLBI Saint Lucia, B 33.18 5 *e*P **P** **16 48 27.0 +0.6**
SLBI Saint Lucia, B 33.18 5 P **P** **16 48 27.0 +0.6**
FDF Fort de France 33.87 5 P **P** **16 48 32.3 +0.1**
FDF pmax pmax

comp=Z,887nm,0.9s
FDF Fort de France 33.87 5 *e*P **P** **16 48 32.7 +0.5**
FDF Fort de France 33.87 5 P **P** **16 48 32.3 +0.1**
GO10 Punta Arenas 34.30 188 P **P** **16 48 36.3 +0.9**
DLPL La Plaine 34.45 5 P **P** **16 48 37.1 +0.1**
MDPO Dominica; Chan 34.68 4 *e* **P** **16 48 40.2 +1.3**
USHA Ushuaia 35.70 184 P **P** **16 48 47.7 +0.9**
comp=Z,17nm,0.5s,baz=15,slow=7.1,SNR=18
JTS Las Juntas de 35.91 323 P **P** **16 48 51.0 +1.8**
JTS pmax pmax

comp=Z,77nm,1.1s
JTS Las Juntas de 35.91 323 P **P** **16 48 51.2 +2.1**
comp=Z,43nm,0.7s,baz=234,slow=3.1,SNR=32
JTS ScP **ScP** **16 53 49.3 +0.1**

comp=Z,21nm,1.1s,baz=132,slow=23,SNR=5.1
JTS Las Juntas de 35.91 323 P **P** **16 48 51.0 +1.8**
JTS IAmb IAmb 16 48 52.5

comp=Z,77nm,1.1s
SKI Saint Kitts 36.36 2 P **P** **16 48 51.5 -1.3**
SKI pmax pmax

comp=Z,393nm,1.0s
SKI Saint Kitts 36.36 2 *e*P **P** **16 48 50.6 -2.1**
SKI Saint Kitts 36.36 2 P **P** **16 48 51.5 -1.3**
SABA Saba 36.63 1 P **P** **16 48 53.9 -1.1**
ANWB Willy Bob 36.73 3 P **P** **16 48 53.9 -1.9**
CDVI St. Croix 36.76 359 P **P** **16 48 55.1 -0.9**
ICMP Isla Caja de M 36.98 356 P **P** **16 48 57.2 -0.5**
IGPR InterUniversit 37.03 357 P **P** **16 48 57.7 -0.5**
SMRT St. Maarten 37.06 1 *e*P **P** **16 48 56.8 -1.7**
SMRT St. Maarten 37.06 1 P **P** **16 48 56.8 -1.7**
MLPR Magueyes Islan 37.10 355 P **P** **16 48 57.1 -1.7**
MTP Monte Pirata 37.13 357 P **P** **16 48 57.4 -1.7**
OBIP Obispado Ponce 37.14 356 P **P** **16 48 58.1 -1.0**
CRPR Cabo Rojo, PR 37.14 355 P **P** **16 48 58.3 -0.8**
SJG San Juan 37.18 357 P **P** **16 48 58.3 -1.1**
SJG pmax pmax

comp=Z,959nm,1.1s
SJG San Juan 37.18 357 P **P** **16 48 59.1 -0.3**
comp=Z,863nm,1.0s,baz=184,slow=3.8,SNR=86
SJG S **S** **16 54 00.3 -4.5**

comp=Z,71nm,0.9s,baz=51,slow=21,SNR=19
SJG San Juan 37.18 357 P **P** **16 48 58.3 -1.1**
HUMP Col San Antoni 37.19 357 P **P** **16 48 58.2 -1.3**
CBYP Canovanas 37.32 357 P **P** **16 48 59.3 -1.3**
CUPR Culebra, Puert 37.33 358 **PcP** **16 51 03.7 +0.3**
MPR Mayaguez 37.34 355 P **P** **16 49 00.1 -0.6**
ACON Acoyapa 37.40 324 P **P** **16 49 01.8 +0.4**
ACON IAmb IAmb 16 49 03.8

comp=Z,112nm,1.3s
AOPR Arecibo Observ 37.45 356 P **P** **16 49 00.4 -1.3**
EMPR Esperanza - Ma 37.56 356 P **P** **16 49 00.7 -1.9**
AGPR Aguadilla, PR 37.60 355 *i* P **P** **16 49 01.8 -1.0**
AGPR *e*S **S** **16 54 05.1 -5.8**
AGPR IAML 16 54 06.8

comp=Z,71nm,0.8s
AGPR Aguadilla, PR 37.60 355 P **P** **16 49 01.5 -1.3**
PCDR Punta Cana, DR 37.77 353 *i* P **P** **16 49 04.3 +0.2**
PCDR Punta Cana, DR 37.77 353 P **P** **16 49 03.2 -0.9**
SDD Santo Domingo 37.91 351 P **P** **16 49 04.4 -1.0**
BANI BANI 37.92 350 P **P** **16 49 05.5 -0.1**
DR12 Loma Pena Alta 38.16 352 P **P** **16 49 05.8 -1.7**
LGNH Logne 38.46 347 P **P** **16 49 09.2 -0.6**
SDDR Presa de Saban 38.66 349 *i* P **P** **16 49 10.9 -0.6**
SDDR IAML 16 54 38.6

comp=Z,12nm,0.8s
SDDR Presa de Saban 38.66 349 P **P** **16 49 10.0 -1.5**
SDDR IAmb IAmb 16 49 14.6

comp=Z,183nm,0.9s
SC01 Santiago de lo 38.99 350 P **P** **16 49 12.8 -1.3**
MTDJ Mount Denham 39.55 339 P **P** **16 49 18.1 -0.6**
MTDJ IAmb IAmb 16 49 19.3

comp=Z,225nm,0.9s
TGUH Tegucigalpa,Un 40.28 324 P **P** **16 49 22.9 -1.7**
GTBY Guantanamo Bay 40.43 344 *i* P **P** **16 49 25.0 -0.6**
GTBY Guantanamo Bay 40.43 344 P **P** **16 49 24.5 -1.0**
GTBY IAmb IAmb 16 49 25.9

comp=Z,161nm,0.9s
HOPE Hope Point 40.81 156 P **P** **16 49 28.5 +0.4**
HOPE pmax pmax

comp=Z,86nm,0.7s
HOPE Hope Point 40.81 156 P **P** **16 49 28.5 +0.4**
HOPE IAmb IAmb 16 49 29.8

comp=Z,86nm,0.7s
GRTK Grand Turk 41.10 350 P **P** **16 49 30.6 -0.2**
FSCY Frank Sound, G 41.88 335 P **P** **16 49 36.1 -0.8**
RPN Rapa Nui 42.28 251 P **P** **16 49 41.6 +1.5**
RPN pmax pmax

comp=Z,268nm,0.9s
RPN Rapa Nui 42.28 251 P **P** **16 49 41.9 +1.8**
comp=Z,220nm,0.8s,baz=83,slow=3.2,SNR=9.7
RPN Rapa Nui 42.28 251 P **P** **16 49 41.6 +1.5**
APG El Apazote 42.88 321 P **P** **16 49 46.3 +1.1**
comp=Z,22nm,0.5s,baz=190,slow=2.7,SNR=22
CCIG Comitan 44.88 320 P **P** **16 50 00.1 -0.4**
PMSA Palmer Station 45.51 180 P **P** **16 50 05.1 +0.8**
comp=Z,15nm,0.6s,baz=43,slow=11,SNR=8.1
PMSA Palmer Station 45.51 180 *e*P **P** **16 50 05.7 +1.4**
PMSA Palmer Station 45.51 180 P **P** **16 50 04.9 +0.6**
PMSA IAmb IAmb 16 50 30.8

comp=Z,156nm,1.6s
TEIG Tepich 45.90 327 P **P** **16 50 07.7 -0.2**
comp=Z,218nm,0.8s,baz=139,slow=5.8,SNR=126
TEIG PcP **PcP** **16 51 33.2 +1.0**

comp=Z,70nm,0.9s,baz=319,slow=0.6,SNR=6.6
TEIG ScP **ScP** **16 54 29.5 +0.6**

comp=Z,58nm,0.7s,baz=319,slow=0.5,SNR=11
TEIG Tepich 45.90 327 P **P** **16 50 07.2 -0.7**
TEIG Tepich 45.90 327 **ScP** **16 54 29.1 +0.2**
061Z Ochoppi 47.77 339 P **P** **16 50 22.2 +0.4**
061Z Ochoppi 47.77 339 P **P** **16 50 22.4 +0.6**
baz=158
060A Indiantown 48.67 340 P **P** **16 50 29.1 +0.6**
060A Indiantown 48.67 340 P **P** **16 50 29.1 +0.6**
baz=159
ASCN Ascension 49.33 84 P **P** **16 50 34.6 +0.9**
TLIG Tlapa 49.94 315 P **P** **16 50 38.5 +0.3**
DWPF Disney Wildern 50.02 340 P **P** **16 50 38.5 +0.2**
DWPF Disney Wildern 50.02 340 P **P** **16 50 38.7 +0.3**
baz=158
BBSR BB Station 51.32 359 P **P** **16 50 47.9 +0.3**
BBSR IAmb IAmb 16 50 49.0

comp=Z,167nm,0.9s
656A Willston 51.54 339 P **P** **16 50 49.4 0.0**
656A IAmb IAmb 16 50 50.7

comp=Z,115nm,0.8s
SACV Santiago Islan 52.26 52 P **P** **16 50 54.6 -0.2**
SACV IAmb IAmb 16 50 55.9

comp=Z,136nm,1.1s
456A Hilliard 52.63 340 P **P** **16 50 57.6 +0.5**
553A Crawfordville 52.95 338 P **P** **16 50 59.7 +0.3**
TIGA Tifton 53.80 339 P **P** **16 51 05.3 0.0**
TIGA IAmb IAmb 16 51 06.7

comp=Z,254nm,1.2s
TIGA Tifton 53.80 339 P **P** **16 51 05.3 0.0**
baz=157
451A Vernon 53.82 337 P **P** **16 51 05.6 +0.1**
451A IAmb IAmb 16 51 06.8

comp=Z,303nm,1.1s
255A Hazlehurst 53.88 340 P **P** **16 51 06.2 +0.3**
255A IAmb IAmb 16 51 07.6

comp=Z,315nm,0.9s
255A Hazlehurst 53.88 340 P **P** **16 51 06.5 +0.6**
baz=158
158A Hollywood 53.96 343 P **P** **16 51 07.3 +0.8**
baz=161
RGRS Roger Stewart 54.13 343 P **P** **16 51 08.0 +0.4**
157A Early Branch 54.14 342 P **P** **16 51 08.5 +0.8**
baz=160
254A Abbeville 54.16 340 P **P** **16 51 08.1 +0.2**
baz=157
CSU Charleston Sou 54.17 343 P **P** **16 51 08.0 +0.1**

Z59A Georgetown, SC 54.20 344 P **P** **16 51 08.3 +0.2**
baz=162
156A Sylvania 54.26 342 P **P** **16 51 09.1 +0.6**
baz=160
352A Blakely 54.30 338 P **P** **16 51 08.7 -0.2**
352A IAmb IAmb 16 51 09.9

comp=Z,311nm,1.1s
352A Blakely 54.30 338 P **P** **16 51 08.7 -0.2**
baz=155
NHSC New Hope 54.31 343 P **P** **16 51 09.4 +0.5**
NHSC New Hope 54.31 343 P **P** **16 51 09.6 +0.7**
baz=161,SNR=21
Z58A St. Stephen 54.43 344 P **P** **16 51 10.0 +0.3**
baz=162
155A Kite 54.52 341 P **P** **16 51 11.1 +0.7**
baz=158
155A S **S** **16 58 04.4 -1.1**
baz=158
Z57A Bowman 54.63 343 P **P** **16 51 11.8 +0.6**
baz=160
Y60A Bolivia 54.66 345 P **P** **16 51 11.3 0.0**
Y60A Bolivia 54.66 345 P **P** **16 51 11.5 +0.2**
baz=163
252A Lumpkin 54.70 338 P **P** **16 51 11.2 -0.4**
baz=156
154A Montrose 54.72 340 P **P** **16 51 11.9 +0.1**
154A Montrose 54.72 340 P **P** **16 51 12.2 +0.4**
baz=158
Y59A Loris 54.81 345 P **P** **16 51 12.1 -0.3**
Y59A IAmb IAmb 16 51 13.4

comp=Z,229nm,0.9s
Y59A Loris 54.81 345 P **P** **16 51 12.3 -0.1**
baz=163
BRAL Brewton 54.81 336 P **P** **16 51 12.4 -0.1**
BRAL IAmb IAmb 16 51 13.7

comp=Z,375nm,1.1s
BRAL Brewton 54.81 336 P **P** **16 51 12.6 +0.2**
baz=153,SNR=7.9
Z56A Williston 54.85 342 P **P** **16 51 12.7 0.0**
Z56A Williston 54.85 342 P **P** **16 51 13.2 +0.6**
baz=160
Y58A Scranton 54.93 344 P **P** **16 51 13.3 +0.1**
Y58A Scranton 54.93 344 P **P** **16 51 13.6 +0.5**
baz=162
Z55A Blythe 54.98 341 P **P** **16 51 14.3 +0.7**
baz=159
X60A Albert Glenn T 55.15 346 P **P** **16 51 14.9 +0.2**
baz=164
Z54A Sparta 55.21 341 P **P** **16 51 15.6 +0.4**
baz=158
Y57A Sumter 55.23 343 P **P** **16 51 15.3 0.0**
Y57A IAmb IAmb 16 51 16.6

comp=Z,137nm,0.7s
Y57A Sumter 55.23 343 P **P** **16 51 15.7 +0.4**
baz=161
250A Grady 55.23 337 P **P** **16 51 14.6 -0.8**
250A IAmb IAmb 16 51 16.2

comp=Z,337nm,1.0s
Y56A Pelion 55.27 342 P **P** **16 51 16.2 +0.6**
baz=160
X59A McDuffie Farm, 55.30 345 P **P** **16 51 15.8 0.0**
baz=163
152A Waverly Hall 55.30 339 P **P** **16 51 15.1 -0.8**
152A IAmb IAmb 16 51 16.6

comp=Z,148nm,1.1s
152A Waverly Hall 55.30 339 P **P** **16 51 15.6 -0.3**
baz=156
X58A Rowland 55.46 345 P **P** **16 51 16.4 -0.4**
X58A IAmb IAmb 16 51 18.1

comp=Z,232nm,1.1s
X58A Rowland 55.46 345 P **P** **16 51 17.0 +0.1**
baz=162
Z53A Monticello 55.48 340 P **P** **16 51 16.9 -0.2**
baz=157
W61A Ground Anchor 55.51 347 P **P** **16 51 17.5 +0.3**
baz=165
W60A Pink Hill 55.55 346 P **P** **16 51 17.5 0.0**
baz=164
Y55A Saluda 55.56 342 P **P** **16 51 18.1 +0.5**
baz=159
X57A Johnson Farm, 55.57 344 P **P** **16 51 17.8 +0.2**
baz=162
GOGA Godfrey 55.57 340 P **P** **16 51 17.3 -0.4**
GOGA pmax pmax

comp=Z,158nm,1.0s
GOGA Godfrey 55.57 340 P **P** **16 51 17.3 -0.4**
GOGA IAmb IAmb 16 51 18.8

comp=Z,158nm,0.9s
GOGA Godfrey 55.57 340 P **P** **16 51 17.7 +0.1**
baz=158,SNR=54
V62A Hyde County Ai 55.67 348 P **P** **16 51 18.3 0.0**
V62A Hyde County Ai 55.67 348 P **P** **16 51 18.5 +0.1**
baz=166
Z52A Williamson 55.68 339 P **P** **16 51 18.2 -0.2**
baz=156
JSC Jenkinsville 55.71 343 P **P** **16 51 18.8 +0.1**
JSC pmax pmax

comp=Z,149nm,1.0s
JSC Jenkinsville 55.71 343 P **P** **16 51 18.8 +0.1**
JSC IAmb IAmb 16 51 20.2

comp=Z,148nm,1.0s
Y54A Tignall 55.74 341 P **P** **16 51 19.2 +0.4**
baz=158
CNNC Cliffs of the 55.77 346 P **P** **16 51 19.0 0.0**
CNNC IAmb IAmb 16 51 19.5

comp=Z,99nm,0.7s
CNNC Cliffs of the 55.77 346 P **P** **16 51 19.0 0.0**
baz=164
W59A Clinton 55.83 346 P **P** **16 51 19.5 +0.1**
baz=163
BIRD Birdtown, Kers 55.84 344 P **P** **16 51 19.6 +0.1**
BIRD IAmb IAmb 16 51 20.9

comp=Z,282nm,0.9s
X56A White Oak 55.85 343 P **P** **16 51 20.2 +0.6**
baz=160
W58A Raeford 55.88 345 P **P** **16 51 20.0 +0.3**
baz=162
HODGE Hodges 55.96 342 P **P** **16 51 20.6 +0.2**
HODGE IAmb IAmb 16 51 22.1

comp=Z,243nm,1.1s
X55A Gracelyn & Ava 56.00 342 P **P** **16 51 21.2 +0.6**
baz=160
Y53A Monroe 56.02 340 P **P** **16 51 20.9 +0.1**
baz=158
V61A Roper 56.02 348 P **P** **16 51 20.7 0.0**
V61A IAmb IAmb 16 51 21.9

comp=Z,294nm,1.2s
V61A Roper 56.02 348 P **P** **16 51 20.7 0.0**
baz=166
Z51A Franklin 56.05 339 P **P** **16 51 20.5 -0.5**
Z51A IAmb IAmb 16 51 21.8

comp=Z,140nm,1.0s
V60A Jim Taylor Roa 56.14 347 P **P** **16 51 21.3 -0.2**
V60A IAmb IAmb 16 51 22.6

comp=Z,350nm,1.6s
V60A Jim Taylor Roa 56.14 347 P **P** **16 51 21.5 0.0**
baz=165
Y52A Lilburn 56.18 340 P **P** **16 51 21.5 -0.4**
Y52A IAmb IAmb 16 51 22.9

comp=Z,209nm,0.9s
Y52A Lilburn 56.18 340 P **P** **16 51 21.7 -0.2**
baz=157
W57A Gilead 56.19 344 P **P** **16 51 21.7 -0.2**
W57A IAmb IAmb 16 51 23.1

comp=Z,252nm,1.0s
W57A Gilead 56.19 344 P **P** **16 51 22.0 +0.1**
baz=162
Z50A Ashland 56.26 338 P **P** **16 51 21.9 -0.5**
Z50A IAmb IAmb 16 51 23.2

comp=Z,330nm,0.9s
Z50A Ashland 56.26 338 P **P** **16 51 22.2 -0.2**
baz=155
X54A Belton 56.28 342 P **P** **16 51 23.3 +0.7**
baz=159
W56A Indian Trail 56.33 344 P **P** **16 51 23.0 +0.2**
baz=161
V59A Middlesex 56.35 346 P **P** **16 51 23.1 +0.2**
baz=164
PAULI Pauline 56.38 342 P **P** **16 51 23.4 +0.2**
PAULI IAmb IAmb 16 51 24.9

comp=Z,202nm,0.9s
LRAL Lakeview Retre 56.45 337 P **P** **16 51 23.0 -0.8**
LRAL IAmb IAmb 16 51 24.4

comp=Z,179nm,1.0s
LRAL Lakeview Retre 56.45 337 P **P** **16 51 23.4 -0.3**
baz=154,SNR=65
U61A Possum Corner 56.52 348 P **P** **16 51 23.8 -0.3**

U61A Possum Corner 56.52 348 P **P** **16 51 24.4 +0.3**
baz=166
X53A Estanollee 56.52 341 P **P** **16 51 24.5 +0.3**
baz=158
KMSC Kings Mountain 56.54 343 P **P** **16 51 24.3 0.0**
KMSC IAmb IAmb 16 51 25.9

comp=Z,328nm,1.0s
KMSC Kings Mountain 56.54 343 P **P** **16 51 24.9 +0.6**
baz=160
Y51A Rockmart 56.54 339 P **P** **16 51 24.1 -0.3**
baz=156
V58A Windy Hill, Pi 56.58 345 P **P** **16 51 24.5 -0.1**
V58A IAmb IAmb 16 51 25.6

comp=Z,100nm,0.9s
V58A Windy Hill, Pi 56.58 345 P **P** **16 51 24.5 -0.1**
baz=163
W54A Cherokee Point 56.73 342 P **P** **16 51 26.6 +0.9**
baz=159
U60A Pendleton 56.80 347 P **P** **16 51 26.0 +0.1**
baz=165
X52A Dahlonega 56.80 340 P **P** **16 51 26.1 -0.1**
baz=157
U59A Littleton 56.81 347 P **P** **16 51 26.0 -0.1**
U59A IAmb IAmb 16 51 27.3

comp=Z,113nm,0.9s
U59A Littleton 56.81 347 P **P** **16 51 26.1 0.0**
baz=164
V57A Coltrane Farms 56.84 345 P **P** **16 51 26.2 -0.1**
baz=162
BG3 Lake Jocassee 56.87 341 P **P** **16 51 26.9 +0.3**
BG3 IAmb IAmb 16 51 28.3

comp=Z,156nm,0.9s
V56A Mocksville 56.95 344 P **P** **16 51 27.6 +0.5**
baz=161
Y49A Blount Mountai 56.98 338 P **P** **16 51 26.7 -0.7**
Y49A IAmb IAmb 16 51 27.9

comp=Z,307nm,0.8s
U58A Oxford 57.02 346 P **P** **16 51 27.7 +0.1**
baz=164
X51A Calhoun 57.08 339 P **P** **16 51 27.9 -0.2**
X51A IAmb IAmb 16 51 29.1

comp=Z,346nm,0.9s
X51A Calhoun 57.08 339 P **P** **16 51 28.0 0.0**
baz=156
W53A Cullowhee 57.10 341 P **P** **16 51 28.6 +0.3**
baz=158
VBMS Vicksburg 57.14 333 P **P** **16 51 28.2 -0.3**
baz=150
V55A Taylorsville 57.18 343 P **P** **16 51 29.2 +0.5**
V55A IAmb IAmb 16 51 30.5

comp=Z,474nm,0.9s
V55A **S** **16 58 39.0 -0.6**
V55A Taylorsville 57.18 343 P **P** **16 51 29.4 +0.7**
baz=160
U57A Blanch 57.24 345 P **P** **16 51 29.2 +0.1**
baz=163
W52A Murphy 57.27 341 P **P** **16 51 29.2 -0.1**
W52A IAmb IAmb 16 51 30.6

comp=Z,176nm,1.0s
W52A Murphy 57.27 341 P **P** **16 51 29.5 +0.2**
baz=158
V54A Nebo 57.31 343 P **P** **16 51 30.1 +0.5**
baz=160
FPAL Fort Paine 57.31 339 P **P** **16 51 29.0 -0.7**
FPAL IAmb IAmb 16 51 30.3

comp=Z,144nm,0.9s
T60A Surry 57.35 348 P **P** **16 51 29.9 +0.1**
T60A IAmb IAmb 16 51 31.2

comp=Z,371nm,0.9s
T60A Surry 57.35 348 P **P** **16 51 30.2 +0.5**
baz=166
T59A Double "B" Far 57.36 347 P **P** **16 51 29.5 -0.3**
T59A IAmb IAmb 16 51 31.0

comp=Z,138nm,1.1s
T59A Double "B" Far 57.36 347 P **P** **16 51 30.0 +0.2**
baz=165
U56A King 57.42 344 P **P** **16 51 30.8 +0.5**
U56A IAmb IAmb 16 51 32.1

comp=Z,280nm,1.1s
U56A King 57.42 344 P **P** **16 51 31.0 +0.7**
baz=162
V53A Saluda 57.46 342 P **P** **16 51 30.7 +0.1**
V53A IAmb IAmb 16 51 32.1

comp=Z,283nm,1.0s
V53A Saluda 57.46 342 P **P** **16 51 31.0 +0.4**
baz=159
T58A Grand View Acr 57.55 346 P **P** **16 51 31.2 +0.1**
baz=164
W51A Cleveland 57.59 340 P **P** **16 51 31.5 0.0**
baz=157
TKL Tuckaleechee C 57.74 341 P **P** **16 51 32.0 -0.5**
TKL pmax pmax

comp=Z,223nm,0.9s
TKL Tuckaleechee C 57.74 341 P **P** **16 51 32.0 -0.5**
TKL IAmb IAmb 16 51 33.4

comp=Z,223nm,0.9s
X48A Hartselle 57.74 337 P **P** **16 51 32.1 -0.3**
U55A TA2, Sparta 57.74 344 P **P** **16 51 33.0 +0.5**
baz=161
HKT Hockley 57.75 327 P **P** **16 51 32.9 +0.3**
HKT pmax pmax

comp=Z,118nm,1.1s
HKT Hockley 57.75 327 P **P** **16 51 32.9 +0.3**
T57A Hurt 57.77 346 P **P** **16 51 32.4 -0.2**
T57A Hurt 57.77 346 P **P** **16 51 32.8 +0.1**
baz=163
CPCT Cooper Cave 57.78 340 P **P** **16 51 32.3 -0.5**
CPCT IAmb IAmb 16 51 33.7

comp=Z,151nm,0.9s
V52A Sevierville 57.85 341 P **P** **16 51 32.8 -0.4**
V52A IAmb IAmb 16 51 34.2

comp=Z,300nm,1.1s
V52A Sevierville 57.85 341 P **P** **16 51 33.2 -0.1**
baz=158
S60A Water View 57.88 348 P **P** **16 51 33.6 +0.3**
baz=166
U54A Nelsons Funny 57.97 343 P **P** **16 51 34.1 0.0**
U54A Nelsons Funny 57.97 343 P **P** **16 51 34.6 +0.5**
baz=160
T56A Rocky Mt 57.98 345 P **P** **16 51 34.7 +0.6**
baz=162
SWET Sewanee 58.04 339 P **P** **16 51 33.7 -0.8**
SWET IAmb IAmb 16 51 35.2

comp=Z,261nm,1.1s
U53A Fall Branch 58.04 342 P **P** **16 51 34.5 0.0**
baz=159
V51A Loudon 58.05 340 P **P** **16 51 33.7 -0.9**
V51A Loudon 58.05 340 P **P** **16 51 34.3 -0.3**
baz=157
W49A Belvidere 58.06 338 P **P** **16 51 34.3 -0.3**
baz=155
S59A Mechanicsville 58.07 348 P **P** **16 51 34.7 +0.1**
baz=165
S58A Poland Farm, P 58.08 347 P **P** **16 51 33.8 -0.9**
S58A Poland Farm, P 58.08 347 P **P** **16 51 34.7 0.0**
baz=164
V50A Pikevile 58.17 340 P **P** **16 51 35.1 -0.2**
baz=156
R61A Willards 58.25 349 P **P** **16 51 35.0 -0.9**
R61A IAmb IAmb 16 52 13.1

comp=Z,433nm,1.2s
BLA Blacksburg 58.25 345 P **P** **16 51 35.5 -0.4**
BLA pmax pmax

comp=Z,211nm,1.2s
BLA Blacksburg 58.25 345 P **P** **16 51 35.5 -0.4**
BLA IAmb IAmb 16 51 37.8

comp=Z,211nm,1.2s
BLA Blacksburg 58.25 345 P **P** **16 51 36.5 +0.6**
baz=162,SNR=23
T55A Pulaski 58.26 344 P **P** **16 51 36.7 +0.7**
baz=161
U52A Thorn Hill 58.30 342 P **P** **16 51 35.9 -0.4**
baz=158
R58B Mineral 58.38 347 P **P** **16 51 36.4 -0.3**
R58B Mineral 58.38 347 P **P** **16 51 37.1 +0.3**
baz=164
833A Chaparral WMA, 58.40 323 P **P** **16 51 37.7 +0.6**
833A IAmb IAmb 16 51 39.0

comp=Z,166nm,1.1s
833A Chaparral WMA, 58.40 323 P **P** **16 51 37.7 +0.6**
baz=140
T54A Tazewell 58.41 343 P **P** **16 51 37.4 +0.4**
baz=160
R60A Leonardtown, M 58.42 348 P **P** **16 51 37.6 +0.7**
baz=166
S57A Dark Hollow, R 58.42 346 P **P** **16 51 37.0 0.0**
S57A IAmb IAmb 16 51 38.5

comp=Z,163nm,1.4s
S57A **Dark Hollow, R** **58.42 346** P **P** **16 51 37.4 +0.3**
baz=163
R59A **King George, V** **58.45 348** P **P** **16 51 37.6 +0.4**
baz=165
U51A **La Follette** **58.48 341** P **P** **16 51 37.2 -0.3**
baz=158
S56A **Natural Bridge** **58.49 345** P **P** **16 51 37.7 +0.2**
baz=163
TZTN **Tazewell** **58.49 342** P **P** **16 51 37.0 -0.5**
TZTN IAmb IAmb 16 51 38.5
comp=Z,152nm,1.1s
TZTN **Tazewell** **58.49 342** P **P** **16 51 37.4 -0.1**
baz=158,SNR=30
CBN **Corbin Frederi** **58.51 348** P **P** **16 51 37.3 -0.3**
CBN IAmb IAmb 16 51 39.0
comp=Z,192nm,1.2s
CBN **Corbin Frederi** **58.51 348** P **P** **16 51 37.5 0.0**
baz=165
V49A **McMinnville** **58.52 339** P **P** **16 51 37.1 -0.6**
baz=156
PLAL **Pickwick Lake** **58.59 337** P **P** **16 51 37.0 -1.2**
PLAL IAmb IAmb 16 51 38.5
comp=Z,217nm,1.0s
T53A **Wise** **58.60 343** P **P** **16 51 38.5 +0.2**
baz=159
NATX **Nacogdoches** **58.64 329** P **P** **16 51 39.4 +0.9**
NATX IAmb IAmb 16 51 40.9
comp=Z,423nm,1.1s
NATX **Nacogdoches** **58.64 329** P **P** **16 51 39.8 +1.2**
baz=146,SNR=14
OXF **Oxford** **58.68 335** P **P** **16 51 37.7 -1.1**
OXF pmax pmax
comp=Z,444nm,0.9s
OXF **Oxford** **58.68 335** P **P** **16 51 37.7 -1.1**
OXF IAmb IAmb 16 51 39.0
comp=Z,444nm,0.9s
OXF **Oxford** **58.68 335** P **P** **16 51 37.9 -0.9**
baz=152,SNR=45
R58A **Rapidan** **58.73 347** P **P** **16 51 39.4 +0.3**
baz=164
U50A **Jamestown** **58.77 340** P **P** **16 51 38.8 -0.6**
baz=157
S55A **Lewisburg** **58.80 345** P **P** **16 51 40.4 +0.7**
baz=162
V48A **Smith Brothers** **58.82 338** P **P** **16 51 39.1 -0.6**
V48A IAmb IAmb 16 51 40.2
comp=Z,145nm,0.9s
R57A **Stanardsville** **58.84 347** P **P** **16 51 40.4 +0.6**
baz=164
T52A **Hallie** **58.85 342** P **P** **16 51 39.7 -0.1**
T52A IAmb IAmb 16 51 41.0
comp=Z,193nm,1.1s
T52A **Hallie** **58.85 342** P **P** **16 51 39.8 -0.1**
baz=159
CLTN **Cedars of Leba** **58.97 339** P **P** **16 51 39.9 -0.7**
CLTN IAmb IAmb 16 51 41.2
comp=Z,115nm,0.9s
Q60A **Greensboro** **58.99 349** P **P** **16 51 41.2 +0.5**
Q60A IAmb IAmb 16 51 42.8
comp=Z,477nm,1.1s
Q60A **Greensboro** **58.99 349** P **P** **16 51 41.7 +1.0**
baz=167
T51A **Gray** **59.00 341** P **P** **16 51 40.7 -0.2**
baz=158
Q59A **Harwood** **59.01 348** P **P** **16 51 41.4 +0.5**
baz=166
Z41A **Richland Creek** **59.03 332** P **P** **16 51 40.7 -0.4**
Z41A **Richland Creek** **59.03 332** P **P** **16 51 41.1 0.0**
baz=148
S54A **Dingess, Beckl** **59.04 344** P **P** **16 51 41.4 +0.2**
S54A IAmb IAmb 16 51 42.6
comp=Z,339nm,1.1s
S54A **Dingess, Beckl** **59.04 344** P **P** **16 51 41.6 +0.4**
baz=161
CCAR **Cane Creek** **59.14 333** P **P** **16 51 42.1 +0.3**
CCAR IAmb IAmb 16 51 44.1
comp=Z,158nm,0.9s
S53A **Williamson** **59.14 343** P **P** **16 51 42.0 +0.2**
baz=160
R56A **Bull Pasture M** **59.14 346** P **P** **16 51 42.5 +0.6**
baz=163
U49A **Red Boiling Sp** **59.16 340** P **P** **16 51 41.2 -0.8**
baz=156
X43A **Marvell** **59.28 334** P **P** **16 51 42.6 -0.2**
X43A **Marvell** **59.28 334** P **P** **16 51 42.9 +0.1**
baz=150
Q58A **Fox Den Farm,** **59.28 348** P **P** **16 51 43.0 +0.3**
baz=165
R54A **Victor** **59.31 344** P **P** **16 51 43.5 +0.5**
baz=161
435B **Jarrell** **59.32 326** P **P** **16 51 43.1 0.0**
435B **Jarrell** **59.32 326** P **P** **16 51 43.8 +0.6**
baz=143
T50A **Nancy** **59.32 341** P **P** **16 51 42.5 -0.5**
baz=157
S52A **Salyersville** **59.41 342** P **P** **16 51 43.5 -0.1**
baz=159
MET **Memphis--Engin** **59.42 335** P **P** **16 51 43.6 -0.2**
MET IAmb IAmb 16 51 44.3
comp=Z,436nm,1.0s
P61A **Hammonton** **59.47 350** P **P** **16 51 43.8 -0.1**
P61A **Hammonton** **59.47 350** P **P** **16 51 44.6 +0.7**
baz=168
S51A **Beattyville** **59.52 342** P **P** **16 51 43.8 -0.5**
S51A **Beattyville** **59.52 342** P **P** **16 51 44.2 -0.1**
baz=158
WVT **Waverly** **59.52 338** P **P** **16 51 43.1 -1.3**
WVT pmax pmax
comp=Z,268nm,0.9s
WVT **Waverly** **59.52 338** P **P** **16 51 43.1 -1.3**
WVT IAmb IAmb 16 51 44.5
comp=Z,268nm,0.8s
WVT **Waverly** **59.52 338** P **P** **16 51 43.5 -0.9**
baz=154
Q57A **Strasburg** **59.53 347** P **P** **16 51 45.2 +0.8**
baz=164
WLAR **White Oak Lake** **59.53 332** P **P** **16 51 44.6 +0.2**
WLAR IAmb IAmb 16 51 46.1
comp=Z,251nm,0.8s
SDMD **Soldier's Deli** **59.57 348** P **P** **16 51 44.6 0.0**
T49A **Edmonton** **59.62 340** P **P** **16 51 44.2 -0.9**
T49A IAmb IAmb 16 51 45.6
comp=Z,205nm,1.1s
T49A **Edmonton** **59.62 340** P **P** **16 51 44.5 -0.6**
baz=156
P59A **Jarrettsville** **59.69 349** P **P** **16 51 46.3 +0.9**
baz=166
Q56A **Snyder Ridge,** **59.70 346** P **P** **16 51 46.0 +0.4**
Q56A IAmb IAmb 16 51 47.5
comp=Z,120nm,0.8s
Q56A **Snyder Ridge,** **59.70 346** P **P** **16 51 46.5 +0.9**
baz=163
R53A **Hurricane** **59.70 344** P **P** **16 51 45.3 -0.2**
R53A IAmb IAmb 16 51 47.0
comp=Z,292nm,0.9s
R53A **Hurricane** **59.70 344** P **P** **16 51 45.9 +0.3**
baz=160
P58A **Pank, Wackersv** **59.74 348** P **P** **16 51 46.1 +0.4**
baz=165
P60A **Greenville** **59.74 350** P **P** **16 51 45.6 -0.2**
P60A IAmb IAmb 16 51 47.3
comp=Z,162nm,0.9s
P60A **Greenville** **59.74 350** P **P** **16 51 46.2 +0.5**
baz=167
S50A **Richmond** **59.80 341** P **P** **16 51 46.0 -0.2**
baz=158
PSUB **Penn St. - Bra** **59.83 350** P **P** **16 51 46.4 +0.1**
PSUB IAmb IAmb 16 51 48.0
comp=Z,158nm,1.1s
O61A **Allentown** **59.84 351** P **P** **16 51 47.3 +0.9**
baz=168
Q55A **Buckhannon** **59.86 345** P **P** **16 51 47.6 +1.0**
baz=162
P57A **Homestead Farm** **59.87 347** P **P** **16 51 46.6 0.0**
P57A IAmb IAmb 16 51 48.8
comp=Z,127nm,0.8s
P57A **Homestead Farm** **59.87 347** P **P** **16 51 47.6 +1.0**
baz=165
HALT **Halls** **59.89 336** P **P** **16 51 46.0 -0.8**
R52A **Catlettsburg** **59.90 343** P **P** **16 51 46.8 0.0**
baz=160
Q54A **Coxs Mills** **60.03 345** P **P** **16 51 47.5 -0.2**
Q54A **Coxs Mills** **60.03 345** P **P** **16 51 47.8 +0.1**
baz=162
T47A **Sharon Grove** **60.04 339** P **P** **16 51 46.6 -1.1**
T47A IAmb IAmb 16 51 48.0
comp=Z,217nm,0.8s
T47A pP **pP** **16 53 42.0 -1.7**
MVL **Millersville** **60.05 349** P **P** **16 51 48.2 +0.4**
MVL IAmb IAmb 16 51 49.6
comp=Z,129nm,1.0s
P56A **Dayton Farm, R** **60.07 347** P **P** **16 51 48.8 +0.9**
baz=164
X40A **Basin Creek Fa** **60.08 333** P **P** **16 51 47.4 -0.8**
X40A **Basin Creek Fa** **60.08 333** P **P** **16 51 47.3 -0.8**
baz=148
Q53A **Leroy** **60.09 344** P **P** **16 51 48.5 +0.4**
baz=161
UTMT **University of** **60.09 337** P **P** **16 51 47.4 -0.7**
LNXT **Lenox** **60.11 336** P **P** **16 51 47.9 -0.4**
UALR **University of** **60.11 333** P **P** **16 51 47.6 -0.7**
R51A **Hillsboro** **60.13 342** P **P** **16 51 48.3 0.0**
baz=159
S49A **Springfield** **60.17 341** P **P** **16 51 47.7 -0.9**
baz=157
GLAT **Glass** **60.18 337** P **P** **16 51 48.2 -0.6**
GNAR **Gosnell** **60.20 336** P **P** **16 51 48.7 -0.1**
O60A **Telford** **60.20 350** P **P** **16 51 49.4 +0.7**
baz=168
WHTX **Lake Whitney,** **60.21 327** P **P** **16 51 49.0 -0.1**
WHTX **Lake Whitney,** **60.21 327** P **P** **16 51 49.6 +0.5**
baz=143
PEBM **Pemiscott Bayo** **60.27 336** P **P** **16 51 49.2 0.0**
JCT **Junction City** **60.28 324** P **P** **16 51 49.6 0.0**
JCT pmax pmax
comp=Z,59nm,1.0s
JCT **Junction City** **60.28 324** P **P** **16 51 49.5 0.0**
JCT **Junction City** **60.28 324** P **P** **16 51 49.8 +0.3**
baz=140,SNR=15
O58A **Lewisberry** **60.28 349** P **P** **16 51 50.0 +0.7**
baz=166
P55A **Reedsville** **60.29 346** P **P** **16 51 50.1 +0.7**
baz=163
O59A **Robesonia** **60.33 349** P **P** **16 51 50.3 +0.6**
baz=167
R50A **Paris** **60.33 342** P **P** **16 51 49.2 -0.5**
R50A IAmb IAmb 16 51 50.6
comp=Z,260nm,1.2s
R50A **Paris** **60.33 342** P **P** **16 51 49.5 -0.1**
baz=158
PAGS **Pennsylvania G** **60.34 349** P **P** **16 51 49.9 +0.2**
Q52A **Bidwell** **60.38 344** P **P** **16 51 50.1 +0.1**
baz=160
HICK **Hickman** **60.40 337** P **P** **16 51 49.2 -0.9**
HICK IAmb IAmb 16 51 51.2
comp=Z,337nm,0.8s
W41B **Gary Mavity, V** **60.41 333** P **P** **16 51 49.4 -0.9**
W41B **Gary Mavity, V** **60.41 333** P **P** **16 51 49.8 -0.5**
baz=149
BRNJ **Basking Ridge** **60.42 351** P **P** **16 51 50.8 +0.6**
BRNJ IAmb IAmb 16 51 52.3
comp=Z,258nm,1.1s
CPNY **Central Park** **60.44 351** P **P** **16 51 50.5 +0.2**
CPNY IAmb IAmb 16 51 51.9
comp=Z,158nm,0.9s
MCWV **Mont Chateau** **60.44 346** P **P** **16 51 50.6 +0.2**
MCWV **Mont Chateau** **60.44 346** P **P** **16 51 51.2 +0.8**
baz=163,SNR=25
N61A **South Mountain** **60.45 351** P **P** **16 51 51.1 +0.8**
baz=169
MIAR **Mount Ida** **60.46 332** P **P** **16 51 49.9 -0.7**
MIAR pmax pmax
comp=Z,112nm,1.1s
MIAR **Mount Ida** **60.46 332** P **P** **16 51 49.9 -0.7**
MIAR **Mount Ida** **60.46 332** P **P** **16 51 50.1 -0.5**
baz=148,SNR=41
PVMO **Portageville** **60.47 336** P **P** **16 51 50.5 -0.1**
PENMO **Penman** **60.47 336** P **P** **16 51 50.5 -0.1**
O57A **Amberson** **60.50 348** P **P** **16 51 51.7 +0.9**
baz=165
N62A **Caumsett State** **60.51 352** P **P** **16 51 51.2 +0.5**
baz=170
WHAR **Wooly Hollow** **60.53 334** P **P** **16 51 50.3 -0.8**
P54A **Burton** **60.53 345** P **P** **16 51 51.5 +0.4**
baz=162
R49A **Shelbyville** **60.59 341** P **P** **16 51 50.6 -0.8**
R49A **Shelbyville** **60.59 341** P **P** **16 51 50.6 -0.8**
baz=157
PAL **Palisades** **60.64 351** P **P** **16 51 51.7 +0.1**
PAL pmax pmax
comp=Z,215nm,1.0s
PAL **Palisades** **60.64 351** P **P** **16 51 51.7 +0.1**
PAL IAmb IAmb 16 51 53.2
comp=Z,215nm,1.0s
PAL **Palisades** **60.64 351** P **P** **16 51 52.0 +0.4**
baz=169,SNR=17
HENM **Henderson Moun** **60.65 337** P **P** **16 51 51.2 -0.6**
HENM IAmb IAmb 16 51 52.0
comp=Z,291nm,0.8s
P53A **Whipple** **60.65 345** P **P** **16 51 52.0 +0.3**
P53A IAmb IAmb 16 51 53.4
comp=Z,421nm,1.0s
P53A **Whipple** **60.65 345** P **P** **16 51 52.3 +0.6**
baz=161
N60A **Cedar Hill Far** **60.69 350** P **P** **16 51 52.4 +0.4**
baz=168
PARMO **Parma** **60.71 336** P **P** **16 51 51.6 -0.6**
WSPT **Westport, CT** **60.72 352** P **P** **16 51 52.4 +0.3**
WSPT IAmb IAmb 16 51 53.9
comp=Z,182nm,0.9s
LCAR **Lake Charles** **60.73 335** P **P** **16 51 51.4 -0.9**
LCAR IAmb IAmb 16 51 53.0
comp=Z,147nm,1.0s
Q51A **Peebles** **60.74 343** P **P** **16 51 51.8 -0.5**
Q51A IAmb IAmb 16 51 53.3
comp=Z,147nm,1.1s
Q51A **Peebles** **60.74 343** P **P** **16 51 52.1 -0.2**
baz=159
O56A **Blue Knob Stat** **60.74 347** P **P** **16 51 53.3 +0.8**
baz=164
Q50A **Georgetown** **60.75 342** P **P** **16 51 52.2 -0.3**
baz=158
VNA3 **Neumayer Olymp** **60.77 162** P **P** **16 51 52.8 +0.7**
M63A **Gales Ferry** **60.79 353** P **P** **16 51 53.2 +0.6**
baz=171
M65A **Busby, Falmout** **60.80 354** P **P** **16 51 53.2 +0.5**
baz=173
YLE **Yale** **60.81 352** P **P** **16 51 53.1 +0.4**
ODNJ **Ogdensburg** **60.82 351** P **P** **16 51 52.5 -0.3**
ODNJ IAmb IAmb 16 51 54.5
comp=Z,130nm,0.9s
N59A **State Game Lan** **60.84 350** P **P** **16 51 53.2 +0.1**
N59A IAmb IAmb 16 51 55.1
comp=Z,170nm,1.1s
N59A **State Game Lan** **60.84 350** P **P** **16 51 53.9 +0.9**
baz=167
O55A **Ligonier** **60.84 347** P **P** **16 51 53.8 +0.8**
baz=163
M64A **Tiverton** **60.85 354** P **P** **16 51 53.3 +0.3**
baz=172
WCI **Wyandotte Cave** **60.89 340** P **P** **16 51 52.0 -1.4**
WCI pmax pmax
comp=Z,122nm,0.9s
WCI **Wyandotte Cave** **60.89 340** P **P** **16 51 52.0 -1.4**
WCI IAmb IAmb 16 51 53.5
comp=Z,122nm,0.9s
WCI **Wyandotte Cave** **60.89 340** P **P** **16 51 52.4 -1.0**
baz=156
VNA1 **Neumayer--Stat** **60.90 162** P **P** **16 51 54.1 +1.2**
M61A **Granite Spring** **60.92 352** P **P** **16 51 53.8 +0.3**
baz=169
N58A **Sunbury** **60.93 349** P **P** **16 51 53.6 +0.1**
N58A IAmb IAmb 16 51 55.6
comp=Z,288nm,1.0s
N58A **Sunbury** **60.93 349** P **P** **16 51 54.3 +0.7**
baz=166
M62A **Hamden** **60.94 352** P **P** **16 51 54.3 +0.8**
baz=170
SSPA **Standing Stone** **60.96 348** P **P** **16 51 53.9 +0.2**
SSPA IAmb IAmb 16 51 55.7
comp=Z,228nm,1.2s
SSPA **Standing Stone** **60.96 348** P **P** **16 51 54.5 +0.8**
baz=165
P52A **Corning** **60.98 344** P **P** **16 51 53.9 0.0**
baz=160
N57A **Milroy** **61.01 348** P **P** **16 51 54.8 +0.7**
baz=165
PTCN **Pitcairn Islan** **61.02 251** P **P** **16 51 54.0 -0.7**
PTCN IAmb IAmb 16 51 58.0
comp=Z,318nm,1.0s
M60A **Port Jervis** **61.06 351** P **P** **16 51 55.1 +0.7**
baz=168
O54A **Avella** **61.06 346** P **P** **16 51 54.6 +0.1**
O54A IAmb IAmb 16 51 56.0
comp=Z,488nm,1.9s
O54A **Avella** **61.06 346** P **P** **16 51 54.9 +0.4**
baz=162
PBMO **Poplar Bluff** **61.07 336** P **P** **16 51 53.8 -0.7**
P51A **Williamsport** **61.08 343** P **P** **16 51 53.7 -0.9**
P51A IAmb IAmb 16 51 55.4
comp=Z,200nm,1.2s
P51A **Williamsport** **61.08 343** P **P** **16 51 54.1 -0.4**
baz=159
W39A **Magazine** **61.09 332** P **P** **16 51 54.3 -0.4**
W39A **Magazine** **61.09 332** P **P** **16 51 54.8 +0.1**
baz=148
USIN **University of** **61.11 339** P **P** **16 51 52.6 -2.2**
USIN IAmb IAmb 16 51 54.5
comp=Z,159nm,0.8s
Q49A **Aurora** **61.17 341** P **P** **16 51 54.6 -0.5**
baz=157
HPIG **61.18 317** P **P** **16 51 55.8 0.0**
L64A **Middleborough** **61.19 354** P **P** **16 51 56.0 +0.8**
baz=173
L63A **North Scituate** **61.20 353** P **P** **16 51 56.2 +0.9**
baz=172
BRYW **Bryant College** **61.25 354** P **P** **16 51 55.8 +0.2**
VNA2 **Neumayer--Watz** **61.28 162** P **P** **16 51 56.1 +0.6**
baz=296,slow=6.8
KSCT **Kent School, K** **61.29 352** P **P** **16 51 56.5 +0.6**
KSCT IAmb IAmb 16 51 57.1
comp=Z,137nm,0.9s
X37A **Clayton** **61.31 331** P **P** **16 51 55.7 -0.4**
N56A **West Decatur** **61.31 348** P **P** **16 51 56.9 +0.8**
baz=164
N55A **Marion Center** **61.32 347** P **P** **16 51 57.0 +0.8**
baz=164
O53A **New Philadelph** **61.33 345** P **P** **16 51 56.4 +0.3**
baz=161
Q48A **North Vernon** **61.35 341** P **P** **16 51 55.7 -0.6**
baz=156
O52A **Adamsville** **61.35 344** P **P** **16 51 56.0 -0.3**
O52A IAmb IAmb 16 51 57.6
comp=Z,128nm,0.9s
O52A **Adamsville** **61.35 344** P **P** **16 51 56.5 +0.1**
baz=161
M59A **Waymart** **61.40 350** P **P** **16 51 57.5 +0.9**
baz=168
M58A **Price's Panora** **61.41 349** P **P** **16 51 57.9 +1.2**
baz=166
P50A **Jamestown** **61.41 343** P **P** **16 51 56.4 -0.3**
baz=159
S44A **Carbondale** **61.43 337** P **P** **16 51 55.5 -1.4**
S44A IAmb IAmb 16 51 56.9
comp=Z,176nm,1.1s
L62A **Suffield** **61.49 353** P **P** **16 51 57.5 +0.4**
baz=171
M57A **Sunshine Farm,** **61.49 349** P **P** **16 51 57.8 +0.6**
M57A IAmb IAmb 16 51 59.4
comp=Z,276nm,0.9s
M57A **Sunshine Farm,** **61.49 349** P **P** **16 51 58.4 +1.2**
baz=166
O51A **Pataskala** **61.58 344** P **P** **16 51 57.8 -0.1**
baz=160
P49A **Miami Univ. Ec** **61.60 342** P **P** **16 51 57.3 -0.6**
baz=158
BCX **Boston College** **61.62 354** P **P** **16 51 58.5 +0.6**
TX32 **Lajitas Array** **61.64 321** P **P** **16 51 58.6 0.0**
TXAR **Lajitas Array** **61.64 321** P **P** **16 51 59.0 +0.4**
TXAR **Lajitas Array** **61.64 321** P **P** **16 51 59.0 +0.4**
comp=Z,9.2nm,0.8s,baz=147,slow=7.8,SNR=38
TX31 **Lajitas Ar. Si** **61.64 321** P **P** **16 51 58.8 +0.2**
L60A **Shokan** **61.65 351** P **P** **16 51 59.3 +1.1**
baz=169
U40A **Yellville** **61.68 334** P **P** **16 51 57.8 -0.7**
U40A IAmb IAmb 16 51 59.2
comp=Z,122nm,0.9s
U40A **Yellville** **61.68 334** P **P** **16 51 58.3 -0.3**
baz=149
WES **Weston** **61.69 354** P **P** **16 51 58.8 +0.4**
WES pmax pmax
comp=Z,130nm,1.0s
WES **Weston** **61.69 354** P **P** **16 51 58.8 +0.4**
WES IAmb IAmb 16 52 00.1
comp=Z,130nm,1.0s
QUA2 **Belchertown** **61.69 353** P **P** **16 51 59.1 +0.6**
QUA2 IAmb IAmb 16 52 00.7
comp=Z,135nm,0.8s
N54A **Moraine State** **61.72 346** P **P** **16 51 59.1 +0.4**
N54A IAmb IAmb 16 52 00.8
comp=Z,522nm,1.4s
N54A **Moraine State** **61.72 346** P **P** **16 51 59.5 +0.8**
baz=163
P48A **Milroy** **61.75 341** P **P** **16 51 57.8 -1.1**
P48A IAmb IAmb 16 51 59.0
comp=Z,144nm,1.1s
P48A **Milroy** **61.75 341** P **P** **16 51 57.9 -1.0**
baz=157
L61A **Hillsdale 1, H** **61.76 352** P **P** **16 51 59.5 +0.6**
baz=170
ACSO **Alum Creek Sta** **61.76 344** P **P** **16 51 58.7 -0.3**
ACSO IAmb IAmb 16 51 59.9
comp=Z,285nm,0.9s
ACSO **Alum Creek Sta** **61.76 344** P **P** **16 51 58.9 -0.1**
baz=160,SNR=56
N53A **Lisbon** **61.76 346** P **P** **16 51 59.2 +0.2**
N53A IAmb IAmb 16 52 00.6
comp=Z,239nm,1.0s
N53A **Lisbon** **61.76 346** P **P** **16 51 59.5 +0.5**
baz=162
BLO **Bloomington** **61.83 340** P **P** **16 51 58.6 -0.8**
BLO pmax pmax
comp=Z,219nm,0.9s
BLO **Bloomington** **61.83 340** P **P** **16 51 58.6 -0.8**
BLO IAmb IAmb 16 51 59.8
comp=Z,219nm,0.9s
HRV **Adam Dziewonsk** **61.83 354** P **P** **16 51 59.6 +0.2**
HRV pmax pmax
comp=Z,322nm,1.0s
HRV **Adam Dziewonsk** **61.83 354** P **P** **16 51 59.6 +0.2**
HRV IAmb IAmb 16 52 01.3
comp=Z,322nm,0.9s
HRV **Adam Dziewonsk** **61.83 354** P **P** **16 52 00.3 +0.9**
baz=172
M56A **Emporium** **61.83 348** P **P** **16 51 59.9 +0.5**
M56A **Emporium** **61.83 348** P **P** **16 52 00.2 +0.7**
baz=165
ABTX **Abilene, Hawle** **61.85 326** P **P** **16 51 59.5 -0.3**
ABTX **Abilene, Hawle** **61.85 326** P **P** **16 52 00.1 +0.4**
baz=141
O50A **Cable** **61.86 343** P **P** **16 51 59.2 -0.5**
baz=159
L61B **Northampton** **61.90 353** P **P** **16 52 00.4 +0.6**
baz=171
M55A **Ridgway** **61.94 347** P **P** **16 52 00.5 +0.3**
M55A IAmb IAmb 16 52 02.0
comp=Z,353nm,1.1s
M55A **Ridgway** **61.94 347** P **P** **16 52 00.9 +0.7**
baz=164
OLIL **Olney** **61.95 339** P **P** **16 51 58.9 -1.3**
L58A **Harry Jones Me** **61.95 350** P **P** **16 52 01.4 +1.1**
baz=167
L59A **Walton** **61.97 351** P **P** **16 52 00.8 +0.5**
L59A IAmb IAmb 16 52 02.5
comp=Z,303nm,0.9s
L59A **Walton** **61.97 351** P **P** **16 52 01.3 +1.0**
baz=168
N52A **McGinn's Farm,** **61.98 345** P **P** **16 52 00.5 +0.1**
baz=161
K63A **Dunstable** **62.01 354** P **P** **16 52 01.3 +0.8**
baz=172
K62A **Royalston** **62.06 353** P **P** **16 52 01.4 +0.5**
K62A IAmb IAmb 16 52 02.9
comp=Z,235nm,1.0s
K62A **Royalston** **62.06 353** P **P** **16 52 01.6 +0.8**
baz=171
HHAR **Hobbs** **62.08 333** P **P** **16 52 00.4 -0.8**
HHAR IAmb IAmb 16 52 01.7
comp=Z,128nm,0.8s
L57A **Andrews Acres** **62.08 349** P **P** **16 52 02.0 +0.9**
baz=166
O49A **Covington** **62.10 342** P **P** **16 52 00.3 -0.9**
O49A IAmb IAmb 16 52 01.7
comp=Z,200nm,0.9s
O49A **Covington** **62.10 342** P **P** **16 52 00.7 -0.5**
baz=158
MGMO **Mountain Grove** **62.12 335** P **P** **16 52 00.8 -0.6**
MGMO IAmb IAmb 16 52 02.2

		comp=Z,268nm,0.9s					
FVM	FVM	**French Village**	**62.12 337**	P pmax	**P** pmax	**16 52 00.4**	**-1.0**
		comp=Z,249nm,1.3s					
FVM	FVM	**French Village**	**62.12 337**	P IAmb	**P** IAmb	**16 52 00.4** 16 52 01.7	**-1.0**
		comp=Z,250nm,1.3s					
BINY		**Binghamton**	**62.13 350**	P	**P**	**16 52 01.9**	**+0.5**
BINY		**Binghamton** baz=167,SNR=81	**62.13 350**	P	**P**	**16 52 02.5**	**+1.1**
M54A		**Oil Creek Stat**	**62.17 347**	P	**P**	**16 52 01.8**	**+0.2**
M54A		**Oil Creek Stat** baz=163	**62.17 347**	P	**P**	**16 52 02.2**	**+0.6**
K61A		**Williamstown** baz=170	**62.19 352**	P	**P**	**16 52 02.6**	**+0.9**
K60A		**Five Rivers En** baz=169	**62.22 352**	P	**P**	**16 52 02.9**	**+1.0**
N51A	N51A	**Ashland**	**62.25 344**	P IAmb	**P** IAmb	**16 52 01.7** 16 52 03.1	**-0.4**
		comp=Z,254nm,1.1s					
N51A		**Ashland** baz=160	**62.25 344**	P	**P**	**16 52 02.1**	**0.0**
TRY		**Troy**	**62.30 352**	P	**P**	**16 52 03.0**	**+0.6**
N50A		**Nevada** baz=160	**62.31 344**	P	**P**	**16 52 02.2**	**-0.4**
M53A		**WI Miller and** baz=162	**62.33 346**	P	**P**	**16 52 03.1**	**+0.4**
L56A		**Greenwood**	**62.34 349**	P	**P**	**16 52 03.3**	**+0.5**
L56A		**Greenwood** baz=166	**62.34 349**	P	**P**	**16 52 03.6**	**+0.8**
O48A		**Farmland** baz=157	**62.40 342**	P	**P**	**16 52 02.6**	**-0.5**
ALLY		**Alegheny Colle**	**62.41 346**	P	**P**	**16 52 03.3**	**+0.1**
P46A	P46A	**Rosedale**	**62.45 340**	P IAmb	**P** IAmb	**16 52 02.2** 16 52 03.5	**-1.2**
		comp=Z,326nm,1.6s					
W35A		**Tecumseh**	**62.47 330**	P	**P**	**16 52 03.1**	**-0.6**
X34A	X34A	**Smith Ranch, M**	**62.49 329**	P IAmb	**P** IAmb	**16 52 03.4** 16 52 06.2	**-0.4**
		comp=Z,114nm,1.0s					
CCM	CCM	**Cathedral Cave**	**62.50 336**	P pmax	**P** pmax	**16 52 02.9**	**-0.9**
		comp=Z,159nm,1.0s					
CCM	CCM	**Cathedral Cave**	**62.50 336**	P IAmb	**P** IAmb	**16 52 02.9** 16 52 04.1	**-0.9**
		comp=Z,159nm,0.9s					
CCM		**Cathedral Cave** baz=151	**62.50 336**	P	**P**	**16 52 03.0**	**-0.9**
K59A		**Cooperstown** baz=168	**62.51 351**	P	**P**	**16 52 04.9**	**+1.0**
J63A		**Strafford** baz=172	**62.55 354**	P	**P**	**16 52 04.6**	**+0.7**
L55A		**Hinsdale** baz=165	**62.56 348**	P	**P**	**16 52 05.0**	**+0.8**
J62A		**Henniker** baz=172	**62.57 354**	P	**P**	**16 52 05.2**	**+1.1**
M52A	M52A	**Chesterland**	**62.58 345**	P IAmb	**P** IAmb	**16 52 04.3** 16 52 05.6	**0.0**
		comp=Z,168nm,1.0s					
M52A		**Chesterland** baz=161	**62.58 345**	P	**P**	**16 52 04.6**	**+0.3**
M51A		**Elyria** baz=161	**62.59 345**	P	**P**	**16 52 04.4**	**+0.1**
TUL1	TUL1	**Leonard**	**62.59 331**	P IAmb	**P** IAmb	**16 52 04.3** 16 52 05.6	**-0.2**
		comp=Z,153nm,0.9s					
TUL1		**Leonard** baz=146	**62.59 331**	P	**P**	**16 52 04.5**	**+0.1**
K58A		**Earlville**	**62.62 350**	P	**P**	**16 52 05.2**	**+0.6**
K58A		**Earlville** baz=168	**62.62 350**	P	**P**	**16 52 05.5**	**+1.0**
SLM	SLM	**Saint Louis**	**62.62 337**	P pmax	**P** pmax	**16 52 03.4**	**-1.2**
		comp=Z,90nm,1.0s					
SLM	SLM	**Saint Louis**	**62.62 337**	P IAmb	**P** IAmb	**16 52 03.4** 16 52 04.5	**-1.2**
		comp=Z,90nm,1.0s					
L53A		**Girard** baz=163	**62.72 346**	P	**P**	**16 52 05.8**	**+0.6**
N49A		**Columbus Grove**	**62.73 343**	P	**P**	**16 52 04.6**	**-0.7**
N49A		**Columbus Grove** baz=158	**62.73 343**	P	**P**	**16 52 05.0**	**-0.3**
K57A		**Scipio Center** baz=167	**62.73 350**	P	**P**	**16 52 05.6**	**+0.4**
J61A		**Chester** baz=171	**62.77 353**	P	**P**	**16 52 06.4**	**+1.0**
J60A		**Lant Hill Farm** baz=170	**62.77 352**	P	**P**	**16 52 06.3**	**+0.9**
L54A		**Sinclairville** baz=164	**62.79 347**	P	**P**	**16 52 06.4**	**+0.8**
FFD	FFD	**Franklin Falls**	**62.79 354**	P IAmb	**P** IAmb	**16 52 06.4** 16 52 08.3	**+0.8**
		comp=Z,200nm,0.9s					
WVNY		**West Valley, N**	**62.81 348**	P	**P**	**16 52 06.0**	**+0.3**
FNO		**Franklin**	**62.81 330**	P	**P**	**16 52 05.8**	**-0.1**
ERPA		**Erie**	**62.82 347**	P	**P**	**16 52 06.2**	**+0.4**
ERPA		**Erie** baz=163,SNR=107	**62.82 347**	P	**P**	**16 52 06.5**	**+0.7**
K56A		**Middlesex** baz=166	**62.84 349**	P	**P**	**16 52 06.5**	**+0.6**
M50A	M50A	**Fremont**	**62.88 344**	P IAmb	**P** IAmb	**16 52 05.7** 16 52 07.1	**-0.4**
		comp=Z,208nm,0.9s					
M50A		**Fremont** baz=160	**62.88 344**	P	**P**	**16 52 05.9**	**-0.2**
N48A		**Decatur** baz=158	**62.92 342**	P	**P**	**16 52 05.8**	**-0.6**
SNAA		**Sanae**	**62.93 162**	P	**P**	**16 52 06.6**	**+0.4**
SNAA	SNAA	**Sanae**	**62.93 162**	P *PP pmax	**P** **pP** pmax	**16 52 06.6** **16 54 03.3** 	**+0.4** **-0.3**
		comp=Z,66nm,0.9s					
SNAA	SNAA	**Sanae**	**62.93 162**	P pP	**P** **pP**	**16 52 06.8** **16 54 03.3**	**+0.6** **-0.3**
		comp=Z,48nm,0.8s,baz=292,slow=5.7,SNR=125					
		comp=Z,24nm,1.2s,baz=334,slow=4.6,SNR=4.2					
SNAA		**Sanae**	**62.93 162**	P	**P**	**16 52 06.6**	**+0.4**
ACCN	ACCN	**Adirondack Com**	**62.95 352**	P IAmb	**P** IAmb	**16 52 06.8** 16 52 08.0	**+0.3**
		comp=Z,67nm,0.8s					
OKCFA	OKCFA	**Oklahoma City**	**62.96 330**	P IAmb	**P** IAmb	**16 52 06.7** 16 52 08.0	**-0.1**
		comp=Z,190nm,0.8s					
MMNY		**Mt. Morris Dam**	**62.99 348**	P	**P**	**16 52 07.2**	**+0.4**
K55A		**Perry** baz=165	**63.01 348**	P	**P**	**16 52 07.5**	**+0.5**
K54A		**Basiliko Farm,** baz=164	**63.02 348**	P	**P**	**16 52 08.0**	**+0.9**
I64A		**Boothbay** baz=174	**63.06 355**	P	**P**	**16 52 08.4**	**+1.2**
WMOK	WMOK	**Wichita Mounta**	**63.07 328**	P pmax	**P** pmax	**16 52 06.9**	**-0.6**
		comp=Z,75nm,1.2s					
WMOK		**Wichita Mounta**	**63.07 328**	P	**P**	**16 52 06.9**	**-0.6**
WMOK		**Wichita Mounta** baz=143,SNR=40	**63.07 328**	P	**P**	**16 52 07.4**	**-0.2**
HNH		**Hanover**	**63.09 353**	P	**P**	**16 52 08.2**	**+0.7**
SFIN	SFIN	**Lafayette**	**63.10 340**	P IAmb	**P** IAmb	**16 52 06.1** 16 52 07.5	**-1.5**
		comp=Z,205nm,0.9s					
SFIN		**Lafayette** baz=155	**63.10 340**	P	**P**	**16 52 06.6**	**-1.0**
N47A		**Urbana**	**63.13 342**	P	**P**	**16 52 06.8**	**-1.0**
N47A		**Urbana** baz=157	**63.13 342**	P	**P**	**16 52 07.2**	**-0.6**
J59A		**Piesco**	**63.14 351**	P	**P**	**16 52 08.4**	**+0.6**
J59A		**Piesco** baz=169	**63.14 351**	P	**P**	**16 52 09.0**	**+1.2**
J58A	J58A	**Remsen**	**63.15 351**	P IAmb	**P** IAmb	**16 52 08.2** 16 52 09.9	**+0.4**
		comp=Z,355nm,1.1s					
J58A		**Remsen** baz=168	**63.15 351**	P	**P**	**16 52 08.7**	**+0.8**
I62A	I62A	**Tamworth**	**63.16 354**	P IAmb	**P** IAmb	**16 52 08.5** 16 52 10.1	**+0.6**
		comp=Z,176nm,1.1s					
I62A		**Tamworth** baz=172	**63.16 354**	P	**P**	**16 52 08.7**	**+0.8**
M49A		**Liberty Center** baz=159	**63.19 343**	P	**P**	**16 52 07.7**	**-0.4**
P43A		**Skaggs, Pawnee**	**63.26 338**	P	**P**	**16 52 07.3**	**-1.3**
I63A	I63A	**Otisfield**	**63.27 355**	P IAmb	**P** IAmb	**16 52 09.2** 16 52 10.9	**+0.6**
		comp=Z,218nm,0.8s					
I63A		**Otisfield** baz=173	**63.27 355**	P	**P**	**16 52 09.8**	**+1.3**
LIC		**Lamto**	**63.27 72**	*e*P	**P**	**16 52 07.9**	**-1.4**
		comp=Z,200nm,0.6s					
LIC		**Lamto**	**63.27 72**	P	**P**	**16 52 07.9**	**-1.4**
I61A		**Oroboro, Fairl** baz=171	**63.31 353**	P	**P**	**16 52 10.2**	**+1.3**
J57A	J57A	**Williamstown**	**63.31 350**	P IAmb	**P** IAmb	**16 52 08.7** 16 52 10.6	**-0.1**
		comp=Z,343nm,1.1s					
J57A		**Williamstown** baz=167	**63.31 350**	P	**P**	**16 52 09.4**	**+0.5**
J56A		**Wolcott**	**63.32 349**	P	**P**	**16 52 08.9**	**-0.1**
J56A		**Wolcott** baz=166	**63.32 349**	P	**P**	**16 52 09.3**	**+0.3**
O44A	O44A	**Mansfield**	**63.35 339**	P IAmb	**P** IAmb	**16 52 07.6** 16 52 08.9	**-1.5**
		comp=Z,253nm,1.3s					
I60A		**Shoreham** baz=170	**63.35 352**	P	**P**	**16 52 10.0**	**+1.0**
I59A		**Olmsteadville** baz=170	**63.38 352**	P	**P**	**16 52 10.1**	**+0.8**
M48A	M48A	**Edgerton**	**63.41 343**	P IAmb	**P** IAmb	**16 52 08.6** 16 52 10.0	**-0.9**
		comp=Z,260nm,1.1s					
M48A		**Edgerton** baz=158	**63.41 343**	P	**P**	**16 52 08.9**	**-0.6**
L50A		**Kingsville** baz=160	**63.42 344**	P	**P**	**16 52 09.2**	**-0.4**
TIC		**Toumodi**	**63.46 72**	*e*P	**P**	**16 52 08.8**	**-1.7**
		comp=Z,30nm,0.3s					
TIC		**Toumodi**	**63.46 72**	P	**P**	**16 52 08.8**	**-1.7**
TIC		**Toumodi**	**63.46 72**	P	**P**	**16 52 08.8**	**-1.7**
J55A		**Hilton**	**63.48 349**	P	**P**	**16 52 10.1**	**+0.2**
J55A		**Hilton** baz=165	**63.48 349**	P	**P**	**16 52 10.2**	**+0.3**
MEDO		**Medina**	**63.51 348**	P	**P**	**16 52 10.3**	**+0.2**
M47A		**Cromwell** baz=157	**63.55 342**	P	**P**	**16 52 10.1**	**-0.4**
LBNH	LBNH	**Lisbon**	**63.58 354**	P pmax	**P** pmax	**16 52 11.3**	**+0.7**
		comp=Z,242nm,0.9s					
LBNH	LBNH	**Lisbon**	**63.58 354**	P IAmb	**P** IAmb	**16 52 11.3** 16 52 12.8	**+0.7**
		comp=Z,242nm,0.8s					
LBNH		**Lisbon** baz=172,SNR=29	**63.58 354**	P	**P**	**16 52 11.7**	**+1.1**
KIC		**Kosan Boka** comp=Z,634nm,0.8s	**63.59 72**	*e*P	**P**	**16 52 09.9**	**-1.4**
KIC		**Kosan Boka**	**63.59 72**	P	**P**	**16 52 09.9**	**-1.4**
NCB	NCB	**Newcomb**	**63.60 352**	P IAmb	**P** IAmb	**16 52 11.0** 16 52 12.5	**+0.3**
		comp=Z,166nm,1.1s					
K52A		**Tillsonburg** baz=162	**63.61 346**	P	**P**	**16 52 11.2**	**+0.4**
DBIC	DBIC	**Dimbokro** comp=Z,293nm,0.8s,baz=219,slow=6.6,SNR=303 comp=Z,25nm,0.9s,baz=212,slow=8.2,SNR=4.1	**63.62 72**	P pP	**P** **pP**	**16 52 11.9** **16 54 10.3**	**+0.5** **+0.9**
DBIC		**Dimbokro**	**63.62 72**	P	**P**	**16 52 11.5**	**0.0**
J54A		**Appleton**	**63.65 348**	P	**P**	**16 52 11.4**	**+0.4**
J54A		**Appleton** baz=164	**63.65 348**	P	**P**	**16 52 11.5**	**+0.4**
WVL	WVL	**Waterville**	**63.70 355**	P IAmb	**P** IAmb	**16 52 12.1** 16 52 13.5	**+0.8**
		comp=Z,346nm,1.2s					
EMMW	EMMW	**East Machias**	**63.71 357**	P IAmb	**P** IAmb	**16 52 12.1** 16 52 13.4	**+0.7**
		comp=Z,281nm,1.0s					
L49A		**Milan** baz=159	**63.73 344**	P	**P**	**16 52 11.5**	**-0.1**
K51A		**Iona Station** baz=162	**63.74 346**	P	**P**	**16 52 11.7**	**+0.1**
H65A		**Eastbrook** baz=175	**63.74 357**	P	**P**	**16 52 12.5**	**+1.0**
H64A		**Troy** baz=174	**63.75 356**	P	**P**	**16 52 12.4**	**+0.8**
L48A		**N Adams** baz=158	**63.75 343**	P	**P**	**16 52 11.2**	**-0.5**
VT1	VT1	**Waterbury**	**63.77 353**	P IAmb	**P** IAmb	**16 52 12.2** 16 52 13.8	**+0.4**
		comp=Z,149nm,1.2s					
I57A		**Carthage** baz=168	**63.77 351**	P	**P**	**16 52 12.6**	**+0.8**
H66A		**Whiting** baz=176	**63.78 357**	P	**P**	**16 52 12.8**	**+1.0**
H63A		**New Sharon** baz=174	**63.83 355**	P	**P**	**16 52 13.4**	**+1.3**
H62A		**Milan**	**63.84 354**	P	**P**	**16 52 13.0**	**+0.7**
H62A		**Milan** baz=172	**63.84 354**	P	**P**	**16 52 13.3**	**+1.1**
H61A		**Lyndonville** baz=172	**63.88 354**	P	**P**	**16 52 13.6**	**+1.2**
H60A		**Morristown** baz=171	**63.99 353**	P	**P**	**16 52 14.1**	**+1.0**
PECO		**Prince Edward**	**63.99 350**	P	**P**	**16 52 13.6**	**+0.5**
HDIL	HDIL	**Hopedale**	**63.99 339**	P IAmb	**P** IAmb	**16 52 12.2** 16 52 13.2	**-1.1**
		comp=Z,340nm,1.2s					
HDIL		**Hopedale** baz=153,SNR=19	**63.99 339**	P	**P**	**16 52 12.2**	**-1.1**
L47A		**Sherwood** baz=158	**64.00 342**	P	**P**	**16 52 12.7**	**-0.5**
J52A		**Paris** baz=163	**64.00 347**	P	**P**	**16 52 13.7**	**+0.5**
H58A		**Gabriels** baz=169	**64.03 352**	P	**P**	**16 52 14.2**	**+0.7**
K50A		**Casco**	**64.06 345**	P	**P**	**16 52 13.1**	**-0.5**
K50A		**Casco** baz=160	**64.06 345**	P	**P**	**16 52 13.4**	**-0.2**
GGN	GGN	**Saint George**	**64.09 358**	P IAmb	**P** IAmb	**16 52 14.4** 16 52 15.8	**+0.7**
		comp=Z,274nm,0.9s					
H59A		**Cadyville** baz=170	**64.19 352**	P	**P**	**16 52 15.1**	**+0.6**
G65A	G65A	**Princeton**	**64.21 357**	P IAmb	**P** IAmb	**16 52 15.2** 16 52 16.6	**+0.7**
		comp=Z,297nm,0.9s					
G65A		**Princeton** baz=176	**64.21 357**	P	**P**	**16 52 15.5**	**+1.0**
H57A		**Richville** baz=168	**64.24 351**	P	**P**	**16 52 15.4**	**+0.6**
G63A		**Kingsbury** baz=174	**64.25 356**	P	**P**	**16 52 15.7**	**+0.9**
K49A		**Clarkson** baz=160	**64.28 344**	P	**P**	**16 52 14.5**	**-0.5**
LONY		**Lake Ozonia** baz=169	**64.28 352**	P	**P**	**16 52 15.7**	**+0.7**
M44A	M44A	**Midewin, Midew**	**64.32 340**	P IAmb	**P** IAmb	**16 52 14.1** 16 52 15.2	**-1.3**
		comp=Z,116nm,0.9s					
G64A		**Maxfield** baz=175	**64.33 356**	P	**P**	**16 52 16.0**	**+0.8**
L46A		**Eue Claire**	**64.35 342**	P	**P**	**16 52 14.4**	**-1.1**
L46A		**Eue Claire** baz=157	**64.35 342**	P	**P**	**16 52 14.8**	**-0.6**
FRNY	FRNY	**Flat Rock**	**64.36 352**	P IAmb	**P** IAmb	**16 52 15.4** 16 52 16.8	**0.0**
		comp=Z,78nm,0.7s					
GBN	GBN	**Guysborough**	**64.37 2**	P IAmb	**P** IAmb	**16 52 15.5** 16 52 17.0	**0.0**
		comp=Z,106nm,0.8s					
I53A		**Kortright Cn E** baz=164	**64.37 347**	P	**P**	**16 52 15.7**	**+0.2**
MNTX		**Cornudas Mount**	**64.37 321**	P	**P**	**16 52 15.3**	**-0.6**
MNTX		**Cornudas Mount** baz=136,SNR=14	**64.37 321**	P	**P**	**16 52 15.3**	**-0.6**
PKME		**Peaks-Kenny Pk**	**64.37 356**	P	**P**	**16 52 15.8**	**+0.3**
PKME		**Peaks-Kenny Pk** baz=174,SNR=24	**64.37 356**	P	**P**	**16 52 16.3**	**+0.8**
I55A		**Frankford** baz=166	**64.38 349**	P	**P**	**16 52 16.0**	**+0.4**
G62A		**West of Eustis**	**64.42 355**	P	**P**	**16 52 16.5**	**+0.6**
G62A		**West of Eustis** baz=173	**64.42 355**	P	**P**	**16 52 17.0**	**+1.1**
K48A		**Perry** baz=159	**64.47 344**	P	**P**	**16 52 15.8**	**-0.4**
G60A		**Masonville** baz=171	**64.47 353**	P	**P**	**16 52 17.1**	**+0.9**
U32A	U32A	**Winter Ranch,**	**64.48 329**	P IAmb	**P** IAmb	**16 52 16.6** 16 52 18.2	**+0.1**
		comp=Z,170nm,1.2s					
H56A		**Elgin** baz=167	**64.50 350**	P	**P**	**16 52 17.0**	**+0.6**
G59A		**Clarenceville** baz=170	**64.56 353**	P	**P**	**16 52 17.1**	**+0.4**
MSTX	MSTX	**Muleshoe**	**64.56 325**	P IAmb	**P** IAmb	**16 52 17.0** 16 52 18.3	**-0.2**
		comp=Z,130nm,0.8s					
MSTX		**Muleshoe** baz=139	**64.56 325**	P	**P**	**16 52 17.2**	**+0.1**
G61A		**St-Isidore-de-** baz=172	**64.58 354**	P	**P**	**16 52 18.2**	**+1.3**
K47A		**Vermontville** baz=158	**64.58 343**	P	**P**	**16 52 16.3**	**-0.6**
H55A		**Tweed** baz=166	**64.62 350**	P	**P**	**16 52 17.7**	**+0.6**
I51A		**Listowel** baz=162	**64.65 346**	P	**P**	**16 52 17.8**	**+0.4**
DELO	DELO	**Deloro Mine**	**64.66 349**	P IAmb	**P** IAmb	**16 52 17.3** 16 52 18.8	**-0.1**
		comp=Z,162nm,0.9s					
AMTX	AMTX	**Amarillo**	**64.67 326**	P IAmb	**P** IAmb	**16 52 17.4** 16 52 18.9	**-0.3**
		comp=Z,74nm,0.9s					
AMTX		**Amarillo** baz=140	**64.67 326**	P	**P**	**16 52 17.7**	**0.0**
N41A		**Harden Midland**	**64.67 338**	P	**P**	**16 52 16.4**	**-1.1**
I52A		**Shelburne** baz=163	**64.72 347**	P	**P**	**16 52 18.2**	**+0.3**
G58A		**Ormstown** baz=169	**64.73 352**	P	**P**	**16 52 18.5**	**+0.7**
J49A		**Marlette** baz=160	**64.73 345**	P	**P**	**16 52 17.4**	**-0.5**
LMN	LMN	**Caledonia Moun**	**64.78 359**	P IAmb	**P** IAmb	**16 52 18.2** 16 52 19.5	**+0.1**
		comp=Z,287nm,1.1s					
F63A	F63A	**Nahmakanta, Br**	**64.80 356**	P IAmb	**P** IAmb	**16 52 18.4** 16 52 20.3	**+0.1**
		comp=Z,388nm,1.4s					
F63A		**Nahmakanta, Br** baz=175	**64.80 356**	P	**P**	**16 52 19.0**	**+0.8**
G57A		**Newington** baz=168	**64.81 351**	P	**P**	**16 52 19.0**	**+0.7**
K46A		**Dorr** baz=157	**64.82 342**	P	**P**	**16 52 17.5**	**-0.9**
J48A		**Bridge Port**	**64.84 344**	P	**P**	**16 52 18.2**	**-0.3**
J48A		**Bridge Port** baz=159	**64.84 344**	P	**P**	**16 52 18.3**	**-0.3**
H53A		**Bobcaygeon** baz=165	**64.89 348**	P	**P**	**16 52 19.1**	**+0.3**
F64A		**Sherman**	**64.91 357**	P	**P**	**16 52 19.1**	**+0.2**
F64A		**Sherman** baz=175	**64.91 357**	P	**P**	**16 52 19.8**	**+0.9**
L44A	L44A	**Lake County Fo**	**65.00 341**	P IAmb	**P** IAmb	**16 52 18.9** 16 52 19.9	**-0.6**
		comp=Z,209nm,1.0s					
L44A		**Lake County Fo** baz=155	**65.00 341**	P	**P**	**16 52 18.8**	**-0.8**
J47A		**Sunmer**	**65.06 343**	P	**P**	**16 52 19.3**	**-0.6**
J47A		**Sunmer** baz=158	**65.06 343**	P	**P**	**16 52 19.7**	**-0.3**
SADO	SADO	**Sadowa**	**65.19 348**	P IAmb	**P** IAmb	**16 52 20.4** 16 52 21.9	**-0.3**
		comp=Z,275nm,1.1s					
I49A		**Point Hope**	**65.20 345**	P	**P**	**16 52 20.3**	**-0.5**
I49A		**Point Hope** baz=160	**65.20 345**	P	**P**	**16 52 20.5**	**-0.3**
F61A		**St Evariste** baz=173	**65.21 355**	P	**P**	**16 52 21.3**	**+0.5**
H52A		**Wyevale** baz=163	**65.21 348**	P	**P**	**16 52 21.0**	**+0.2**
G55A		**Calabogie** baz=167	**65.22 350**	P	**P**	**16 52 21.3**	**+0.4**
F59A		**Saint Guilaume** baz=171	**65.27 353**	P	**P**	**16 52 21.7**	**+0.6**
F60A		**Warwick** baz=172	**65.30 354**	P	**P**	**16 52 21.6**	**+0.2**
J46A		**Howard City** baz=157	**65.39 343**	P	**P**	**16 52 21.3**	**-0.7**
F58A		**St-Lin Laurent** baz=170	**65.41 352**	P	**P**	**16 52 22.3**	**+0.3**
L42A	L42A	**Oliver, Polo**	**65.41 339**	P IAmb	**P** IAmb	**16 52 21.1** 16 52 22.5	**-1.0**
		comp=Z,164nm,0.9s					
G53A		**Haliburton** baz=165	**65.43 349**	P	**P**	**16 52 22.6**	**+0.4**
E64A		**Bridgewater** baz=176	**65.44 357**	P	**P**	**16 52 23.0**	**+0.9**
F57A		**Harrington** baz=169	**65.47 352**	P	**P**	**16 52 22.8**	**+0.4**
E63A	E63A	**Oxbow**	**65.47 357**	P IAmb	**P** IAmb	**16 52 22.5** 16 52 24.4	**+0.1**
		comp=Z,289nm,1.0s					
E63A		**Oxbow** baz=175	**65.47 357**	P	**P**	**16 52 23.3**	**+0.8**
KSU1		**Kansas State U** baz=146,SNR=34	**65.59 333**	P	**P**	**16 52 23.1**	**-0.2**
G54A		**Lake Saint Pet** baz=165	**65.60 349**	P	**P**	**16 52 23.6**	**+0.3**
K43A		**Burlington**	**65.60 340**	P	**P**	**16 52 22.5**	**-0.8**
E61A		**Lac Etchemin** baz=173	**65.62 355**	P	**P**	**16 52 24.4**	**+1.0**
E60A		**Ste Agathe de** baz=172	**65.64 354**	P	**P**	**16 52 23.9**	**+0.4**
I48A		**Sherman Twp** baz=160	**65.65 345**	P	**P**	**16 52 23.5**	**-0.1**
PQI	PQI	**Presque Isle**	**65.70 357**	P IAmb	**P** IAmb	**16 52 23.9** 16 52 25.6	**+0.2**
		comp=Z,279nm,0.9s					
I47A		**Gladwin**	**65.70 344**	P	**P**	**16 52 23.4**	**-0.5**
I47A		**Gladwin** baz=159	**65.70 344**	P	**P**	**16 52 23.6**	**-0.3**
F55A		**Otter Lake** baz=167	**65.73 351**	P	**P**	**16 52 24.3**	**+0.3**
E58A		**La Victoria** baz=170	**65.84 353**	P	**P**	**16 52 25.2**	**+0.5**
TRQ		**Mont Tremblant**	**65.85 352**	P	**P**	**16 52 24.9**	**0.0**
H07S1		**FLORES T-PHASE**	**65.85 27**	*e*P	**P**	**16 52 25.4**	**+0.4**
E59A		**St. Maurice** baz=171	**65.86 354**	P	**P**	**16 52 25.6**	**+0.8**
I46A		**Reed City** baz=158	**65.88 343**	P	**P**	**16 52 24.5**	**-0.6**
E57A		**Chemin Saint G** baz=169	**65.98 352**	P	**P**	**16 52 26.0**	**+0.4**
L40A	L40A	**Anamosa**	**66.00 338**	P IAmb	**P** IAmb	**16 52 24.9** 16 52 26.4	**-0.9**
		comp=Z,288nm,1.0s					
HSIG			**66.03 315**	P	**P**	**16 52 26.8**	**+0.5**
H48A		**Harrisville**	**66.04 345**	P	**P**	**16 52 25.6**	**-0.4**
H48A		**Harrisville** baz=160	**66.04 345**	P	**P**	**16 52 25.9**	**-0.1**
D63A		**Stockholm** baz=176	**66.07 357**	P	**P**	**16 52 27.0**	**+0.9**
ALGO		**Algonquin Park** baz=165,SNR=30	**66.13 349**	P	**P**	**16 52 26.7**	**+0.2**
D60A		**Saint Jean D'O** baz=173	**66.14 355**	P	**P**	**16 52 27.4**	**+0.9**
H07N1		**FLORES T-PHASE**	**66.15 27**	*e*P	**P**	**16 52 28.0**	**+1.2**
D62A		**Allapoint, All**	**66.17 356**	P	**P**	**16 52 27.0**	**+0.4**
D62A		**Allapoint, All** baz=175	**66.17 356**	P	**P**	**16 52 27.6**	**+0.9**
H47A		**Mio** baz=159	**66.17 344**	P	**P**	**16 52 26.5**	**-0.3**
F52A		**Sundridge** baz=164	**66.21 348**	P	**P**	**16 52 27.2**	**+0.2**
E56A		**St. Veronique** baz=168	**66.23 352**	P	**P**	**16 52 27.5**	**+0.3**
E55A		**Montcerf-Lytto** baz=168	**66.29 351**	P	**P**	**16 52 27.8**	**+0.3**
D59A		**Saint-Raymond** baz=172	**66.31 354**	P	**P**	**16 52 28.3**	**+0.6**
PCAN		**Candelaria** comp=Z,326nm,1.0s	**66.34 30**	*e*P	**P**	**16 52 28.8**	**+0.8**
D61A		**St Aubert, Com** baz=174	**66.36 355**	P	**P**	**16 52 28.8**	**+0.9**
PCED		**Cedros** comp=Z,243nm,0.8s	**66.37 30**	*e*P	**P**	**16 52 27.8**	**-0.4**
H46A		**Fife Lake** baz=158	**66.37 344**	P	**P**	**16 52 27.7**	**-0.4**
121A		**Cookes Peak, D**	**66.40 320**	P	**P**	**16 52 29.6**	**+0.9**
121A		**Cookes Peak, D** baz=134	**66.40 320**	P	**P**	**16 52 30.0**	**+1.3**
PICO		**Pico** comp=Z,319nm,1.2s	**66.40 30**	*e*P	**P**	**16 52 29.9**	**+1.5**
JFWS	JFWS	**Jewell Farm**	**66.42 339**	P pmax	**P** pmax	**16 52 28.0**	**-0.4**
		comp=Z,401nm,1.0s					
JFWS		**Jewell Farm**	**66.42 339**	P	**P**	**16 52 28.0**	**-0.4**
JFWS		**Jewell Farm** baz=153,SNR=46	**66.42 339**	P	**P**	**16 52 28.2**	**-0.2**
E54A		**Lac Daplat, Po** baz=166	**66.45 350**	P	**P**	**16 52 28.7**	**+0.2**
F51A		**Arnstein** baz=164	**66.45 348**	P	**P**	**16 52 28.3**	**-0.2**
E53A		**Dumoine, Ponti**	**66.47 350**	P	**P**	**16 52 28.8**	**+0.2**

baz=166
GLMI Grayling 66.48 344 P P 16 52 28.6 -0.1
GLMI Grayling 66.48 344 P P 16 52 28.6 -0.1
baz=159,SNR=19
D58A Chemin du LacG 66.51 353 P P 16 52 29.6 +0.7
baz=171
319A Douglas 66.52 318 P P 16 52 30.0 +0.6
D57A Chemin Vers le 66.55 353 P P 16 52 29.8 +0.7
baz=170
E52A Mattawa 66.56 349 P P 16 52 29.0 -0.2
baz=165
SCIA State Center 66.59 337 P P 16 52 29.0 -0.5
SCIA State Center 66.59 337 P P 16 52 29.1 -0.3
baz=150,SNR=14
G47A Hillman 66.61 345 P P 16 52 29.5 0.0
baz=160
ROSA Rosais 66.66 30 eP P 16 52 30.4 +0.5
ROSA Rosais 66.66 30 P P 16 52 30.6 +0.7
ROSA IAmb IAmb 16 52 32.6
comp=Z,238nm,1.1s
PMAN Manadas 66.66 30 eP P 16 52 31.2 +1.3
comp=Z,428nm,1.0s
D56A ZEC Mazanza, M 66.69 352 P P 16 52 30.4 +0.4
baz=169
F49A Sandfield 66.74 346 P P 16 52 30.0 -0.2
baz=161
D55A Sainte-Anne-du 66.76 351 P P 16 52 30.7 +0.3
baz=168
CBKS Cedar Bluff 66.78 330 P P 16 52 31.2 +0.5
CBKS pmax pmax
comp=Z,267nm,1.0s
CBKS Cedar Bluff 66.78 330 P P 16 52 31.2 +0.5
CBKS Cedar Bluff 66.78 330 P P 16 52 31.6 +0.9
baz=143,SNR=44
LATQ La Tuque 66.78 353 P P 16 52 30.7 +0.3
LATQ IAmb IAmb 16 52 32.1
comp=Z,118nm,0.9s
LATQ La Tuque 66.78 353 P P 16 52 31.2 +0.7
baz=171,SNR=30
PSMA Santa Maria 66.84 33 eP P 16 52 29.5 -1.6
comp=Z,129nm,1.2s
I42A Draeger Farm, 66.86 341 P P 16 52 30.9 -0.1
PSMN Pico do Norte, 66.88 33 eP P 16 52 31.3 -0.1
comp=Z,103nm,1.2s
F48A Evansville 66.93 346 P P 16 52 31.3 -0.2
baz=161
E51A G1948 Merrick 66.95 348 P P 16 52 31.8 +0.2
baz=164
G45A Suttons Bay 66.96 343 P P 16 52 31.2 -0.4
G45A Suttons Bay 66.96 343 P P 16 52 31.4 -0.2
baz=158
Y22D IRIS PASSCAL I 66.97 322 P P 16 52 33.3 +1.1
baz=136
H43A Windswept, Lux 67.03 342 P P 16 52 31.6 -0.5
D54A Lac Fusel, La 67.06 351 P P 16 52 31.8 -0.4
baz=167
ADH Angra Heroismo 67.08 31 eP P 16 52 34.0 +1.5
comp=Z,362nm,1.2s
PSCM Serra do Cume 67.18 31 eP P 16 52 33.9 +0.8
comp=Z,369nm,0.8s
D52A ZEK Kipawa Sen 67.18 349 P P 16 52 33.3 +0.3
baz=165
CMLA Cha da Macela 67.23 32 eP P 16 52 33.7 +0.2
NVL N'lazarevskaya 67.30 160⇑ iP P 16 52 33.9 +0.5
NVL e 16 52 56.3
NVL e*PP pP 16 54 34.3 +1.2
NVL e 16 55 09.7
NVL ePPP PPP 16 56 54.9
NVL eS S 17 00 41.0 -1.0
NVL eSS SS 17 05 24.2 +6.9
NVL SSS SSS 17 08 39.2
NVL pmax pmax
comp=Z,134nm,1.0s
ANMO Albuquerque 67.33 323 i P P 16 52 34.6 +0.2
ANMO pmax pmax
comp=Z,38nm,1.1s
ANMO Albuquerque 67.33 323 P P 16 52 34.4 0.0
ANMO Albuquerque 67.33 323 P P 16 52 35.4 +1.0
baz=136
I40A Norwalk 67.41 339 P P 16 52 33.9 -0.5
I40A IAmb IAmb 16 52 35.2
comp=Z,104nm,0.7s
BART Pico Bartolome 67.42 33 eP P 16 52 35.3 +0.6
comp=Z,278nm,0.7s
E48A Lockeyer 67.45 346 P P 16 52 34.7 +0.1
baz=161
D51A Lot 18 Range I 67.46 349 P P 16 52 34.7 0.0
baz=164
F45A CMU Biological 67.52 344 P P 16 52 34.9 -0.1
baz=158
E47A Iron Bridge 67.68 346 P P 16 52 35.8 -0.2
baz=160
T25A Trinidad 67.82 326 P P 16 52 37.9 +0.6
T25A Trinidad 67.82 326 P P 16 52 38.5 +1.1
baz=139
E46A Sault Ste Mari 67.84 345 P P 16 52 36.6 -0.4
E46A IAmb IAmb 16 52 37.7
comp=Z,215nm,0.9s
D48A Paudash Townsh 68.03 347 P P 16 52 37.8 -0.3
baz=162
TUC Tucson 68.09 318 P P 16 52 39.6 +0.7
TUC Tucson 68.09 318 P P 16 52 39.6 +0.7
TUC Tucson 68.09 318 P P 16 52 40.1 +1.2
baz=132
VLDQ Val d'Or 68.12 350 P P 16 52 38.7 +0.1
VLDQ IAmb IAmb 16 52 40.2
comp=Z,161nm,0.9s
BGNE Belgrade 68.16 333 P P 16 52 38.8 -0.2
BGNE Belgrade 68.16 333 P P 16 52 39.2 +0.1
baz=145
D46A Sault St. Mari 68.27 345 P P 16 52 38.9 -0.6
baz=160
F42A Maple Grove Fa 68.31 342 P P 16 52 39.3 -0.5
F42A IAmb IAmb 16 52 40.8
comp=Z,103nm,1.1s
KSCO Kaye Shedlock' 68.33 328 P P 16 52 41.4 +1.1
baz=141
PMOZ Porto Moniz, M 68.38 41 eP P 16 52 41.4 +0.7
comp=Z,237nm,1.4s
PMOZ Porto Moniz, M 68.38 41 P P 16 52 41.2 +0.5
DRLN Deer Lake 68.42 5 P P 16 52 40.3 -0.1
E44A Grand Marais A 68.49 344 P P 16 52 40.8 -0.1
E44A Grand Marais A 68.49 344 P P 16 52 41.4 +0.5
baz=158
PMAR Madeira 68.49 42 eP P 16 52 42.2 +0.8
comp=Z,197nm,1.9s
G40A Rib Lake 68.50 340 P P 16 52 40.5 -0.5
G40A IAmb IAmb 16 52 42.1
comp=Z,157nm,1.3s
E43A Lone Tree Farm 68.55 343 P P 16 52 40.6 -0.7
E43A IAmb IAmb 16 52 42.3
comp=Z,203nm,1.1s
SDCO Great Sand Dun 68.85 326 P P 16 52 44.4 +0.7
SDCO Great Sand Dun 68.85 326 P P 16 52 44.8 +1.2
baz=138,SNR=72
LSQQ Lebel-sur-Quev 68.97 351 P P 16 52 43.7 0.0
baz=167
PMPS Porto Santo 69.07 42 eP P 16 52 46.4 +1.7
comp=Z,47nm,0.6s
X18A Snowflake 69.08 321 P P 16 52 45.8 +0.9
PMPST Porto Santo, M 69.09 42 eP P 16 52 46.5 +1.7
comp=Z,391nm,1.6s
214A Organ Pipe Nat 69.15 317 P P 16 52 46.8 +1.5
214A Organ Pipe Nat 69.15 317 P P 16 52 46.8 +1.5
baz=130
SPMN Marine on St. 69.32 339 P P 16 52 45.1 -0.8
SPMN IAmb IAmb 16 52 46.5
comp=Z,222nm,1.1s
SPMN Marine on St. 69.32 339 P P 16 52 45.4 -0.5
baz=151
W18A Petrified Fore 69.36 321 P P 16 52 47.3 +0.6
W18A Petrified Fore 69.36 321 P P 16 52 47.8 +1.2
baz=134
ECSD EROS Data Cent 69.45 335 P P 16 52 46.2 -0.6
ECSD IAmb IAmb 16 52 47.6
comp=Z,192nm,1.1s
ECSD EROS Data Cent 69.45 335 P P 16 52 46.6 -0.2
baz=147,SNR=127
OGNE Ogallala 69.54 330 P P 16 52 47.5 +0.1
OGNE IAmb IAmb 16 52 49.4
comp=Z,104nm,0.9s
OGNE Ogallala 69.54 330 P P 16 52 48.3 +0.8
baz=142,SNR=24
S22A 4UR Ranch, Cre 69.56 325 P P 16 52 48.6 +0.7
S22A 4UR Ranch, Cre 69.56 325 P P 16 52 48.7 +0.8
baz=137
Q24A Divide 69.57 327 P P 16 52 48.8 +0.8
Q24A IAmb IAmb 16 52 50.3
comp=Z,83nm,1.0s
Q24A Divide 69.57 327 P P 16 52 49.0 +1.1
baz=138
MATQ Matagami 69.75 351 P P 16 52 48.1 -0.3
baz=166,SNR=36
X16A Lo Mia Camp, P 69.91 320 P P 16 52 50.9 +1.0
MVCO Mesa Verde 70.10 323 P P 16 52 51.6 +0.5
MVCO IAmb IAmb 16 52 53.5
comp=Z,71nm,1.0s
MVCO Mesa Verde 70.10 323 P P 16 52 52.3 +1.2
baz=135,SNR=37
E38A The Farm, Brul 70.12 340 P P 16 52 50.0 -0.6
E38A IAmb IAmb 16 52 51.5
comp=Z,114nm,1.2s
113A Mohawk Valley, 70.29 317 P P 16 52 53.1 +1.1
ISCO Idaho Springs 70.43 327 P P 16 52 53.9 +0.9
ISCO pmax pmax
comp=Z,61nm,1.1s
ISCO Idaho Springs 70.43 327 P P 16 52 53.9 +0.9
ISCO Idaho Springs 70.43 327 P P 16 52 54.2 +1.2
baz=138,SNR=49
Y14A Wickenburg 70.56 318 P P 16 52 54.9 +1.3
WUAZ Wupatki 70.61 320 P P 16 52 55.4 +1.4
WUAZ Wupatki 70.61 320 P P 16 52 55.8 +1.8
baz=133,SNR=34
SMCO Snowmass 70.68 326 P P 16 52 55.5 +0.8
QSPA South Pole Qui 70.95 180 P P 16 52 56.3 +0.8
QSPA IAmb IAmb 16 52 57.8
comp=Z,62nm,0.6s
SUSD Miller 70.98 334 P P 16 52 55.3 -0.5
SUSD IAmb IAmb 16 52 56.6
comp=Z,203nm,0.8s
SUSD Miller 70.98 334 P P 16 52 55.5 -0.3
baz=145
GLA Glamis 71.16 316 P P 16 52 58.2 +1.1
GLA pmax pmax
comp=Z,36nm,1.1s
GLA Glamis 71.16 316 P P 16 52 58.2 +1.1
GLA Glamis 71.16 316 P P 16 52 58.7 +1.6
baz=129,SNR=8.9
EYMN Ely 71.29 341 P P 16 52 56.9 -0.6
EYMN IAmb IAmb 16 52 58.1
comp=Z,89nm,1.1s
EYMN Ely 71.29 341 P P 16 52 57.0 -0.5
baz=153,SNR=15
Y12C Blythe 71.41 317 P P 16 52 59.3 +0.8
Y12C Blythe 71.41 317 P P 16 52 60.0 +1.5
baz=130
N23A Red Feather La 71.41 328 P P 16 52 59.0 +0.3
N23A Red Feather La 71.41 328 P P 16 52 59.8 +1.1
baz=138
PHWY Pilot Hill 71.47 328 P P 16 52 59.5 +0.5
PDMCI Parker Dam,Lak 71.52 318 P P 16 53 00.5 +1.4
baz=130,SNR=5.8
SWSC Sam W. Stewart 71.73 316 P P 16 53 01.9 +1.5
baz=129
IKP In-Ko-Pah, Jac 71.75 315 P P 16 53 02.2 +1.6
baz=128,SNR=7.8
U15A North Rim 71.77 321 P P 16 53 02.2 +1.3
W13A Hualapai Mount 71.87 319 P P 16 53 02.9 +1.4
BC3 Big Chuckawall 71.95 317 P P 16 53 03.2 +1.5
baz=129,SNR=20
O20A White River Ci 72.05 326 P P 16 53 03.2 +0.9
O20A IAmb IAmb 16 53 04.8
comp=Z,108nm,0.9s
O20A White River Ci 72.05 326 P P 16 53 03.7 +1.4
baz=136
IRM Iron Mountain 72.06 317 P P 16 53 04.0 +1.6
baz=129,SNR=27
MONP2 Monument Peak 72.11 315 P P 16 53 04.4 +1.5
baz=128,SNR=7.9
NEE2 Needles Airpor 72.12 318 P P 16 53 04.1 +1.5
baz=130
BAR Barrett 72.15 315 P P 16 53 03.9 +1.0
TORD Torodi Ar. Bea 72.20 69 P P 16 53 03.7 +0.3
comp=Z,326nm,0.4s,baz=252,slow=5.4,SNR=3101
TORD pP pP 16 55 06.5 +0.8
comp=Z,18nm,0.8s,baz=262,slow=6.3,SNR=3.7
TORD S SKiKP 17 01 36.0 -0.3
comp=Z,2.8nm,0.7s,baz=245,slow=13,SNR=7.6
TORD Torodi Ar. Bea 72.20 69 IAmb IAmb 16 53 04.4
comp=Z,470nm,1.0s
PKCU Pink Cliffs 72.46 321 P P 16 53 06.3 +1.4
D32A Dogwood Acres, 72.47 337 P P 16 53 04.0 -0.3
D32A IAmb IAmb 16 53 05.2
comp=Z,145nm,1.1s
KNB Kanab 72.48 321 P P 16 53 06.6 +1.8
KNB pmax pmax
comp=Z,132nm,1.0s
KNB Kanab 72.48 321 P P 16 53 06.6 +1.8
BELC Belle Mtn. Jos 72.52 317 P P 16 53 06.8 +1.7
baz=129,SNR=8.1
SRU San Rafael Swe 72.57 324 P P 16 53 06.2 +0.9
SRU pmax pmax
comp=Z,79nm,0.9s
SRU San Rafael Swe 72.57 324 P P 16 53 06.2 +0.9
XPFO Pion Flat 72.57 316 P P 16 53 06.7 +1.3
PFO Pinyon Flats O 72.58 316 i P P 16 53 05.9 +0.5
PFO pmax pmax
comp=Z,24nm,1.0s
PFO Pinyon Flats O 72.58 316 P P 16 53 06.8 +1.4
PFO Pinyon Flats O 72.58 316 P P 16 53 07.2 +1.8
baz=128,SNR=8.5
RWWY Rawlins 72.64 327 P P 16 53 06.8 +1.0
RWWY IAmb IAmb 16 53 08.1
comp=Z,88nm,1.0s
LCMT Little Creek M 72.73 321 P P 16 53 07.6 +1.4
TTIG Tnine Tigouga, 72.78 48 P P 16 53 08.4 +1.7
SNR=34
MTPU Mount Pierson 72.79 322 P P 16 53 08.0 +1.1
Q16A Castle Valley 72.80 323 P P 16 53 07.9 +1.2
RSSD Black Hills 72.94 331 P P 16 53 07.6 +0.2
RSSD pmax pmax
comp=Z,56nm,1.1s
RSSD Black Hills 72.94 331 P P 16 53 07.6 +0.2
RSSD Black Hills 72.94 331 P P 16 53 07.8 +0.4
baz=140
P17A Butcher Ranch, 72.94 324 P P 16 53 08.3 +0.9
K22A Casper 73.01 329 P P 16 53 08.2 +0.5
K22A IAmb IAmb 16 53 10.0
comp=Z,112nm,1.4s
K22A Casper 73.01 329 P P 16 53 08.8 +1.0
baz=138
SZCU Shurtz Canyon 73.02 321 P P 16 53 09.1 +1.2
MURC Murrieta 73.06 316 P P 16 53 09.5 +1.5
baz=128
RDMU Red Mountain 73.07 325 P P 16 53 08.9 +0.7
TMUT Trail Mountain 73.08 323 P P 16 53 09.4 +1.1
MSU Marysvale 73.10 322 P P 16 53 09.8 +1.4
MSU Marysvale 73.10 322 P P 16 53 09.8 +1.4
CCUT Cedar City 73.16 321 P P 16 53 10.5 +1.7
HEC Hector,Ludlow 73.25 317 P P 16 53 11.1 +1.9
baz=129,SNR=21
BBRC Big Bear Solar 73.28 316 P P 16 53 11.6 +2.1
baz=128
TUQ Turquoise Moun 73.37 318 P P 16 53 11.3 +1.4
baz=129
OUK Oukaimeden 73.56 48 P P 16 53 13.0 +1.6
SNR=24
SHPR Sheep Range 73.57 319 P P 16 53 12.6 +1.6
SCI2 San Clemente I 73.58 314 P P 16 53 12.7 +1.7
baz=127
RRX Edison Barstow 73.71 317 P P 16 53 13.6 +1.9
baz=128
CIS Catalina Islan 73.75 315 P P 16 53 13.5 +1.6
baz=127
BFSC Mount Baldy Ra 73.75 316 P P 16 53 13.3 +1.2
baz=128,SNR=7.4
SCHQ Schefferville 73.81 358 P P 16 53 12.2 +0.4
comp=Z,133nm,0.8s,baz=187,slow=4.3,SNR=172
SCHQ Schefferville 73.81 358 P P 16 53 12.1 +0.4
SCHQ IAmb IAmb 16 53 13.2
comp=Z,199nm,1.0s
GSC Goldstone, Bar 73.85 317 P P 16 53 13.8 +1.2
GSC pmax pmax
comp=Z,28nm,1.0s
GSC Goldstone, Bar 73.85 317 P P 16 53 13.8 +1.2
GSC Goldstone, Bar 73.85 317 P P 16 53 14.4 +1.9
baz=128,SNR=19
FMP Fort Macarthur 73.85 315 P P 16 53 13.8 +1.4
baz=127
SHOC Shoshone, Teco 73.88 318 P P 16 53 14.0 +1.3
baz=129
MWC Mount Wilson 74.00 316 P P 16 53 14.8 +1.2
MWC pmax pmax
comp=Z,32nm,1.2s
MWC Mount Wilson 74.00 316 P P 16 53 14.8 +1.2
NLU North Lily Min 74.02 323 P P 16 53 14.7 +1.1
MDND Maddock 74.03 336 P P 16 53 13.7 +0.5
MDND Maddock 74.03 336 P P 16 53 13.9 +0.7
baz=145
PASC Pasadena Art C 74.06 316 P P 16 53 15.0 +1.3
PSUT Pine Spring 74.09 321 P P 16 53 15.1 +1.1
JLU Jordanelle 74.12 324 P P 16 53 15.1 +0.9
DECC Green Verdugo 74.20 316 P P 16 53 15.9 +1.4
baz=127
CTU Camp Tracy 74.34 324 P P 16 53 16.4 +1.0
EDW2 Edwards Air Fo 74.36 316 P P 16 53 16.7 +1.3
baz=128,SNR=15
TCUT Toone Canyon 74.45 325 P P 16 53 17.1 +1.1
LRMC Laurel Mtn Rad 74.52 317 P P 16 53 17.9 +1.5
baz=128,SNR=5.7
TPNV Topopah Spring 74.52 319 P P 16 53 17.8 +1.4
TPNV pmax pmax
comp=Z,49nm,1.1s
TPNV Topopah Spring 74.52 319 P P 16 53 17.8 +1.4
TPNV Topopah Spring 74.52 319 P P 16 53 18.4 +2.0
baz=129,SNR=44
ZGR Zagora 74.55 50 P P 16 53 18.0 +1.3
SNR=60
DUG Dugway, Tooele 74.60 323 P P 16 53 17.8 +1.1
DUG pmax pmax
comp=Z,64nm,1.0s
DUG Dugway, Tooele 74.60 323 P P 16 53 17.8 +1.1
DUG IAmb IAmb 16 53 19.4
comp=Z,64nm,1.0s
DUG Dugway, Tooele 74.60 323 P P 16 53 18.3 +1.5
baz=132,SNR=38
BLG Laguna Peak, P 74.60 315 P P 16 53 18.2 +1.5
baz=127
FURC Furnace Creek, 74.61 318 P P 16 53 18.6 +2.0
baz=129,SNR=16
BW06 Boulder Array 74.62 327 P P 16 53 17.3 +0.4
BW06 IAmb IAmb 16 53 18.8
comp=Z,168nm,1.9s
BW06 Boulder Array 74.62 327 P P 16 53 17.6 +0.7
baz=136,SNR=40
PD31 Pinedale Array 74.62 327 P P 16 53 17.4 +0.5
PDAR Pinedale Array 74.62 327 P P 16 53 17.6 +0.7
comp=Z,15nm,0.6s,baz=138,slow=7.2,SNR=64
PDAR pP pP 16 55 22.1 +1.8
comp=Z,13nm,1.1s,baz=134,slow=6.4,SNR=4.1
OSI Osito Audit: C 74.68 316 P P 16 53 18.2 +1.0
OSI Osito Audit: C 74.68 316 P P 16 53 18.3 +1.2
baz=127
ULM Lac du Bonnet 74.71 339 P P 16 53 16.7 -0.2
comp=Z,76nm,0.8s,baz=150,slow=6.0,SNR=132
ULM pP pP 16 55 21.6 +1.2
comp=Z,11nm,0.8s,baz=160,slow=4.7,SNR=4.3
ULM S S 17 02 01.3 -4.2
comp=Z,29nm,1.0s,baz=266,slow=22,SNR=35
ULM Lac du Bonnet 74.71 339 P P 16 53 16.4 -0.5
ULM IAmb IAmb 16 53 17.7
comp=Z,119nm,1.1s
MPMC Manual Prospec 74.75 318 P P 16 53 19.0 +1.3
baz=128,SNR=18
SCZ2 Santa Cruz Isl 74.92 315 P P 16 53 19.8 +1.3
baz=126
TZRR Tazzarine 74.95 49 P P 16 53 20.0 +1.2
SNR=40
R11A Troy Canyon, C 75.01 320 P P 16 53 20.0 +0.9
R11A Troy Canyon, C 75.01 320 P P 16 53 21.0 +1.9
baz=130
ARVC Arvin 75.05 316 P P 16 53 20.9 +1.7
baz=127
AVE Averroes 75.08 46 P P 16 53 20.9 +1.5
SNR=21
ISA Isabella, Lake 75.14 317 P P 16 53 20.9 +1.1
ISA pmax pmax
comp=Z,24nm,1.0s
ISA Isabella, Lake 75.14 317 P P 16 53 20.9 +1.1
ISA Isabella, Lake 75.14 317 P P 16 53 21.5 +1.7
baz=127,SNR=21
SPUT South Promonto 75.15 324 P P 16 53 20.6 +0.8
BGU Big Grassy Mou 75.21 324 P P 16 53 20.8 +0.6
GRAC Grapevine Rang 75.25 318 P P 16 53 22.3 +2.0
baz=128
CWC Cottonwood Cre 75.36 318 P P 16 53 22.7 +1.6
baz=128
AHID Auburn Hatcher 75.43 326 P P 16 53 21.8 +0.4
AHID IAmb IAmb 16 53 23.4
comp=Z,109nm,0.9s
PKM Mcpherson Peak 75.56 315 P P 16 53 24.0 +1.7
baz=126,SNR=15
VES Vestal, Richgr 75.65 317 P P 16 53 23.8 +1.4
baz=127
HVU Hansel Valley 75.65 324 P P 16 53 23.4 +0.8
HVU pmax pmax
comp=Z,55nm,1.0s
HVU Hansel Valley 75.65 324 P P 16 53 23.4 +0.8
SUR Sutherland 75.66 120 P P 16 53 23.7 +0.7
SUR IAmb IAmb 16 53 25.3
comp=Z,106nm,1.1s
ZHG ZHG 75.69 47 P P 16 53 24.0 +1.1
SNR=26
REDW Red Top Meadow 75.72 327 P P 16 53 23.5 +0.5
SNOW Snow King Moun 75.73 327 P P 16 53 23.7 +0.6
TIN Tinemaha, Big 75.83 318 P P 16 53 25.3 +1.7
baz=128
TPAW Teton Pass 75.86 327 P P 16 53 23.7 -0.1
LAO LASA Array 75.89 331 P P 16 53 23.7 +0.1
LAO IAmb IAmb 16 53 25.3
comp=Z,81nm,1.1s
LAO LASA Array 75.89 331 P P 16 53 24.2 +0.6
baz=139,SNR=28
GOLM Goulmima 75.90 49 P P 16 53 26.0 +1.9
SNR=14
MOOW Moose Ponds 75.93 327 P P 16 53 24.6 +0.5
SMMC Simmler 75.93 316 P P 16 53 25.9 +1.8
baz=126,SNR=7.6
IMW Indian Meadow 76.14 327 P P 16 53 26.1 +0.8
IMW IAmb IAmb 16 53 27.6
comp=Z,113nm,0.9s
FLWY Flagg Ranch 76.14 327 P P 16 53 25.9 +0.6
FLWY IAmb IAmb 16 53 27.8
comp=Z,96nm,0.9s
RLMT Red Lodge 76.17 329 P P 16 53 25.8 +0.4
RLMT IAmb IAmb 16 53 27.4
comp=Z,157nm,1.3s
RLMT Red Lodge 76.17 329 P P 16 53 26.4 +1.0
baz=136,SNR=57
TSUM Tsumeb 76.19 106 i P P 16 53 25.1 -0.9
TSUM Tsumeb 76.19 106 i P P 16 53 27.2 +1.1
TSUM Tsumeb 76.19 106 P P 16 53 26.3 +0.2
TSUM IAmb IAmb 16 53 27.9
comp=Z,121nm,0.8s
ARF Arif 76.28 49 P P 16 53 28.0 +1.8
SNR=25
H17A Grant Village 76.30 328 P P 16 53 27.1 +1.0
H17A Grant Village 76.30 328 P P 16 53 27.7 +1.5
baz=135
YPP Pitchstone Pla 76.33 327 P P 16 53 27.0 +0.6
LKWY Lake 76.33 328 P P 16 53 27.2 +0.8
LKWY pmax pmax
comp=Z,44nm,0.9s
LKWY Lake 76.33 328 P P 16 53 27.2 +0.8
YMP Mirror Lake Pl 76.33 328 P P 16 53 27.1 +0.7
ELK Elko 76.35 322 P P 16 53 27.4 +0.9
ELK pmax pmax
comp=Z,35nm,1.0s
ELK Elko 76.35 322 P P 16 53 27.4 +0.9
DGMT Dagmar 76.38 334 P P 16 53 26.8 +0.5
DGMT IAmb IAmb 16 53 28.5
comp=Z,169nm,1.0s
PFVI Vila Bisbo 76.41 42⇓ eP P 16 53 27.9 +1.3
comp=Z,288nm,1.4s
PFVI Vila Bisbo 76.41 42 P P 16 53 27.5 +0.9
PFVI IAmb IAmb 16 53 29.1
comp=Z,174nm,1.0s
YNE Yellowstone No 76.45 328 P P 16 53 27.5 +0.5
MLAC Mammoth, Mammo 76.56 318 P P 16 53 28.6 +0.8
baz=128
YNR Norris Junctio 76.58 328 P P 16 53 28.8 +1.1
MORF Marmelete 76.62 42 eP P 16 53 27.8 0.0
MORF AMb AMB 16 53 30.6
comp=Z,291nm,1.4s
MORF Marmelete 76.62 42⇓ eP P 16 53 28.9 +1.1
comp=Z,294nm,1.3s
MORF Marmelete 76.62 42 eP P 16 53 27.8 0.0
NV11 Mina Array Sit 76.63 319 P P 16 53 28.8 +0.8

YMR **Madison River** 76.69 328 P **P** 16 53 29.4 +1.1
YHH **Holmes Hill** 76.72 328 P **P** 16 53 29.2 +0.7
NVAR **Mina Array Bea** 76.72 319 P **P** 16 53 30.0 +1.4
comp=Z,26nm,1.0s,baz=138,slow=5.2,SNR=109
MDPB **Devils Postpil** 76.72 318 P **P** 16 53 29.5 +0.8
PTEO **Sao Teotonio** 76.72 42⇓*e*P **P** 16 53 30.0 +1.7
comp=Z,453nm,1.2s
MDT **Midelt** 76.75 48 P **P** 16 53 30.2 +1.6
comp=Z,79nm,0.8s,baz=273,slow=3.8,SNR=96
MDT **Midelt** 76.75 48 P **P** 16 53 30.4 +1.6
SNR=69
GCMT **Greycliff** 76.85 329 P **P** 16 53 29.6 +0.6
YHB **Horse Butte** 76.87 328 P **P** 16 53 30.2 +1.0
YHL **Hebgen Lake** 76.93 328 P **P** 16 53 30.8 +1.1
SYO **Syowa Base** 76.95 159⇑*i*P **P** 16 53 28.2 -0.8
SYO **Syowa Base** 76.95 159⇑*i*X P 16 53 34.8 +5.8
SYO **Syowa Base** 76.95 159 *e*SH **S** 17 02 27.0 -2.0
KVN **Kaiserville** 76.98 320 P **P** 16 53 31.0 +1.1
KVN pmax pmax
comp=Z,59nm,1.1s
KVN **Kaiserville** 76.98 320 P **P** 16 53 31.0 +1.1
RYN **Ryan** 76.98 319 P **P** 16 53 31.0 +1.1
PMPB **Monarch Peak** 76.99 316 P **P** 16 53 31.8 +1.9
QLMT **Earthquake Lak** 77.04 327 P **P** 16 53 31.5 +1.3
PBDV **Barranco-do-Ve** 77.05 43⇓*e*P **P** 16 53 31.7 +1.6
comp=Z,236nm,1.4s
LCRM **LCR** 77.06 47 P **P** 16 53 32.0 +1.5
SNR=25
LIS **Lisbon** 77.16 41 *e*P **P** 16 53 30.7 +0.1
LIS AMb AMB 16 53 36.0
comp=Z,279nm,2.0s
LIS **Lisbon** 77.16 41⇓*e*P **P** 16 53 32.2 +1.5
comp=Z,283nm,1.9s
LIS **Lisbon** 77.16 41 *e*P **P** 16 53 30.7 +0.1
PNCL **Nicolau / Gran** 77.19 42⇓*e*P **P** 16 53 32.2 +1.4
comp=Z,127nm,1.9s
PCVE **Castro Verde** 77.21 42⇓*e*P **P** 16 53 32.2 +1.3
comp=Z,148nm,1.6s
PMAFR **Mafra** 77.23 41⇓*e*P **P** 16 53 32.2 +1.2
PVAQ **Vaqueiros** 77.28 43⇓*e*P **P** 16 53 32.8 +1.5
comp=Z,181nm,2.0s
PVAQ **Vaqueiros** 77.28 43 P **P** 16 53 32.5 +1.1
SNR=9.7
PVAQ **Vaqueiros** 77.28 43 P **P** 16 53 32.3 +0.9
PVAQ IAmb IAmb 16 53 35.1
comp=Z,365nm,1.8s
WAKR **Walker** 77.47 319 P **P** 16 53 34.3 +1.7
PBEJ **Beja** 77.55 42⇓*e*P **P** 16 53 34.0 +1.2
comp=Z,139nm,1.5s
YERR **Yerington** 77.64 319 P **P** 16 53 35.1 +1.6
EVO **Evora** 77.76 42⇓*e*P **P** 16 53 34.9 +1.0
comp=Z,128nm,1.9s
MCMT **McKenzie Canyo** 77.77 327 P **P** 16 53 35.3 +1.2
CMB **Columbia Colle** 77.79 318 P **P** 16 53 35.1 +0.9
CMB pmax pmax
comp=Z,19nm,1.3s
CMB **Columbia Colle** 77.79 318 P **P** 16 53 35.1 +0.9
SMIR **Smir Dam** 77.82 45 P **P** 16 53 36.0 +1.7
SNR=11
PNTR **Pine Nut** 77.92 319 P **P** 16 53 36.6 +1.5
PNTR IAmb IAmb 16 53 38.0
comp=Z,89nm,0.8s
PMTG **Montargil** 77.95 41⇓*e*P **P** 16 53 36.0 +1.1
comp=Z,270nm,1.8s
DLMT **Dillon** 78.00 327 P **P** 16 53 36.1 +0.8
VCNR **Virginia City** 78.08 319 P **P** 16 53 36.7 +0.8
PAHR **Pah Rah Range** 78.16 320 P **P** 16 53 37.3 +1.1
PAHR IAmb IAmb 16 53 39.1
comp=Z,81nm,1.0s
PTOM **Tomar** 78.17 41⇓*e*P **P** 16 53 37.1 +1.0
comp=Z,498nm,1.2s
AKLM **AKL** 78.20 47 P **P** 16 53 38.0 +1.5
SNR=13
PESTR **Estremoz** 78.23 42 P **P** 16 53 37.6 +1.2
SNR=14
PESTR **Estremoz** 78.23 42 P **P** 16 53 36.4 0.0
PESTR IAmb IAmb 16 53 38.9
comp=Z,96nm,1.2s
RUBR **Rubicon Trail** 78.25 319 P **P** 16 53 38.2 +1.4
PCAS **Casmilo, Conde** 78.38 40⇓*e*P **P** 16 53 38.2 +1.0
comp=Z,263nm,1.5s
MFID **Camas Ranch** 78.42 324 P **P** 16 53 38.5 +1.0
EGMT **Eagleton** 78.50 331 P **P** 16 53 37.8 0.0
EGMT IAmb IAmb 16 53 39.2
comp=Z,122nm,1.0s
EGMT **Eagleton** 78.50 331 P **P** 16 53 38.1 +0.4
baz=136,SNR=49
COI **Coimbra** 78.52 40 *e*P **P** 16 53 39.2 +1.3
comp=Z,313nm,1.1s
COI **Coimbra** 78.52 40 P **P** 16 53 39.1 +1.2
COI pmax pmax
comp=Z,274nm,1.1s
COI **Coimbra** 78.52 40 P **P** 16 53 39.1 +1.2
COI IAmb IAmb 16 53 40.3
comp=Z,274nm,1.1s
PMRV **Marv??o** 78.68 41⇓*e*P **P** 16 53 39.4 +0.6
comp=Z,78nm,1.1s
AFDM **Forest Hills D** 78.70 318 P **P** 16 53 39.4 +0.5
FIGM **Figuig** 78.78 50 P **P** 16 53 41.0 +1.3
SNR=69
BEKR **Beckworth** 78.86 319 P **P** 16 53 40.8 +0.8
PCBR **Castelo Branco** 78.88 41⇓*e*P **P** 16 53 40.4 +0.6
comp=Z,118nm,1.5s
HORN **Hornachuelos** 79.12 44 P **P** 16 53 41.9 +0.8
SNR=28
PVIS **Viseu** 79.14 40⇓*e*P **P** 16 53 41.8 +0.5
comp=Z,118nm,1.8s
MTE **Manteigas** 79.17 40⇓*e*P **P** 16 53 42.2 +0.8
comp=Z,175nm,1.3s
MTE **Manteigas** 79.17 40 P **P** 16 53 41.8 +0.4
MTE IAmb IAmb 16 53 43.4
comp=Z,116nm,0.9s
GOG **Mont Gurugu** 79.18 47 P **P** 16 53 43.0 +1.3
SNR=11
ORV **Oroville** 79.39 318 P **P** 16 53 43.5 +1.0
ORV pmax pmax
comp=Z,76nm,1.3s
ORV **Oroville** 79.39 318 P **P** 16 53 43.5 +1.0
WVOR **Wild Horse Val** 79.39 322 P **P** 16 53 43.4 +0.8
WVOR pmax pmax
comp=Z,14nm,1.1s
WVOR **Wild Horse Val** 79.39 322 P **P** 16 53 43.4 +0.8
PVRL **Vila Real** 79.59 40 *e*P **P** 16 53 44.5 +0.9
comp=Z,190nm,1.3s
POLO **Lamas de Olo** 79.60 39⇓*e*P **P** 16 53 44.6 +0.9
comp=Z,84nm,1.6s
TAM **Tamanrasset** 79.65 61 P **P** 16 53 44.9 +0.5
TAM pmax pmax
comp=Z,190nm,1.4s
TAM **Tamanrasset** 79.65 61 P **P** 16 53 44.9 +0.5
TAM IAmb IAmb 16 53 46.5
comp=Z,190nm,1.4s
MSO **Missoula** 79.69 328 P **P** 16 53 44.6 +0.5
MSO **Missoula** 79.69 328 P **P** 16 53 44.9 +0.8
baz=133,SNR=21
GDXM **Geysers** 79.78 317 P **P** 16 53 45.6 +1.0
VNDA **Vanda** 79.84 189 P **P** 16 53 45.8 +1.5
VNDA pmax pmax
comp=Z,14nm,0.7s
VNDA **Vanda** 79.84 189 P **P** 16 53 46.4 +2.1
comp=Z,13nm,0.6s,baz=131,slow=5.7,SNR=44
VNDA **Vanda** 79.84 189 P **P** 16 53 45.8 +1.5
J08A **Circle Bar Ran** 79.87 323 P **P** 16 53 46.0 +0.9
J08A IAmb IAmb 16 53 48.4
comp=Z,140nm,1.0s
MVO **Moncorvo** 79.94 40⇓*e*P **P** 16 53 46.4 +0.9
comp=Z,201nm,0.8s
O03E **Paynes Creek** 80.01 319 P **P** 16 53 45.9 0.0
baz=126
MOD **Modoc Plateau** 80.05 321 P **P** 16 53 46.8 +0.6
HOPS **Hopland Field** 80.06 317 P **P** 16 53 46.9 +0.8
BMO **Blue Mountains** 80.16 325 P **P** 16 53 47.0 +0.4
BMO pmax pmax
comp=Z,103nm,1.4s
BMO **Blue Mountains** 80.16 325 P **P** 16 53 47.0 +0.4
BMO IAmb IAmb 16 53 48.9
comp=Z,103nm,1.4s
BOSA **Boshof** 80.35 117 *i*P **P** 16 53 47.1 -1.0
BOSA **Boshof** 80.35 117 P **P** 16 53 47.9 -0.2
BOSA pmax pmax
comp=Z,188nm,1.5s
BOSA **Boshof** 80.35 117 P **P** 16 53 48.1 +0.1
comp=Z,31nm,0.4s,baz=258,slow=4.0,SNR=101
BOSA **Boshof** 80.35 117 *i*P **P** 16 53 48.6 +0.5
BOSA **Boshof** 80.35 117 P **P** 16 53 47.9 -0.2
BOSA IAmb IAmb 16 53 49.3
comp=Z,188nm,1.4s
JTMT **Jette** 80.48 328 P **P** 16 53 48.5 +0.3
PBRG **Braganca** 80.49 40⇓*e*P **P** 16 53 49.3 +1.0
comp=Z,218nm,1.7s
FFC **Flin Flon** 80.50 339 P **P** 16 53 47.7 -0.3
FFC pmax pmax
comp=Z,65nm,1.1s
FFC **Flin Flon** 80.50 339 P **P** 16 53 47.7 -0.3
O02D **Mt. Diablo Mer** 80.55 318 P **P** 16 53 49.2 +0.5
baz=125
WDC **Whiskeytown Da** 80.63 319 P **P** 16 53 48.4 -0.6
WDC pmax pmax
comp=Z,26nm,0.9s
WDC **Whiskeytown Da** 80.63 319 P **P** 16 53 48.4 -0.6
PAB **San Pablo** 80.67 43 P **P** 16 53 49.7 +0.4
PAB pmax pmax
comp=Z,112nm,0.8s
PAB **San Pablo** 80.67 43 P **P** 16 53 49.7 +0.4
PAB IAmb IAmb 16 53 51.3
comp=Z,112nm,0.8s
KCPM **Cahto Peak** 80.78 318 P **P** 16 53 50.9 +1.0
F10A **Beach Ranch, E** 80.83 326 P **P** 16 53 50.5 +0.4
K05A **Summer Lake** 80.89 321 P **P** 16 53 51.4 +0.9
K05A IAmb IAmb 16 53 53.3
comp=Z,155nm,0.9s
M04C **Macdoel** 80.90 320 P **P** 16 53 51.5 +1.0
baz=126
I07A **Izee** 80.91 323 P **P** 16 53 51.4 +0.9
N02D **Trinity Center** 80.96 319 P **P** 16 53 50.9 +0.1
baz=125
ESDC **Sonseca Array** 80.99 43 P **P** 16 53 51.8 +0.9
comp=Z,30nm,0.7s,baz=244,slow=5.0,SNR=94
ESDC **Sonseca Array** 80.99 43 IAmb IAmb 16 53 53.3
comp=Z,162nm,1.5s
ESBB **Sonseca Array** 80.99 43 P **P** 16 53 51.5 +0.6
ESBB IAmb IAmb 16 53 53.2
comp=Z,254nm,1.5s
SESP **Santiago Espad** 81.06 45 P **P** 16 53 51.5 +0.1
SNR=11
IVI **Ivigtut** 81.16 8 P **P** 16 53 51.9 +0.8
KMRM **Mail Ridge** 81.16 318 P **P** 16 53 52.7 +0.9
M02C **Callahan** 81.29 319 P **P** 16 53 52.9 +0.5
baz=125
K04D **Chiloquin, OR** 81.34 321 P **P** 16 53 53.8 +1.0
baz=126
G08A **Pilot Rock** 81.35 324 P **P** 16 53 52.9 +0.2
YBH **Yreka Blue Hor** 81.40 320 P **P** 16 53 52.8 -0.2
YBH pmax pmax
comp=Z,19nm,1.0s
YBH **Yreka Blue Hor** 81.40 320 P **P** 16 53 52.8 -0.2
J05D **Fort Rock, OR** 81.42 322 P **P** 16 53 54.5 +1.3
baz=127
L04D **Klamath Falls** 81.43 320 P **P** 16 53 53.8 +0.5
baz=126
NRS **Narsarsuaq** 81.49 9 P **P** 16 53 53.1 +0.3
NRS pmax pmax
comp=Z,164nm,1.0s
NRS **Narsarsuaq** 81.49 9 *i*P **P** 16 53 53.2 +0.3
comp=Z,156nm,1.0s
NRS **Narsarsuaq** 81.49 9 P **P** 16 53 53.1 +0.3
NRS IAmb IAmb 16 53 54.6
comp=Z,164nm,1.0s
KHMM **Horse Mountain** 81.54 319 P **P** 16 53 54.7 +0.8
PINE **Pine Mountain** 81.55 322 P **P** 16 53 55.2 +1.3
PINE IAmb IAmb 16 53 56.7
comp=Z,95nm,0.9s
FCC **Fort Churchill** 81.58 345 P **P** 16 53 53.2 -0.2
FCC pmax pmax
comp=Z,148nm,1.2s
FCC **Fort Churchill** 81.58 345 P **P** 16 53 53.2 -0.2
FCC IAmb IAmb 16 53 54.8
comp=Z,148nm,1.1s
E09A **Wood Farm, Sta** 81.67 326 P **P** 16 53 54.4 +0.2
JCC **Jacoby Creek,** 81.70 318 P **P** 16 53 55.5 +1.1
J04D **Umpqua Nationa** 81.91 321 P **P** 16 53 56.6 +0.8
baz=126
KRMB **Red Mountain** 82.02 319 P **P** 16 53 57.2 +1.0
HUMO **Hull Mountain** 82.05 320 P **P** 16 53 56.4 +0.2
I05D **Terrebonne, OR** 82.11 322 P **P** 16 53 58.1 +1.5
baz=127
L02E **Cave Junction** 82.19 320 P **P** 16 53 58.1 +1.1
baz=125
NEW **Newport** 82.26 327 P **P** 16 53 56.8 -0.4
NEW pmax pmax
comp=Z,34nm,1.6s
NEW **Newport** 82.26 327 P **P** 16 53 56.8 -0.4
NEW **Newport** 82.26 327 P **P** 16 53 56.7 -0.5
baz=130
HAWA **Hanford** 82.34 325 P **P** 16 53 57.9 +0.4
I04A **Tendick Farm,** 82.41 321 P **P** 16 53 58.2 +0.2
baz=126
K02D **Willamette Mer** 82.53 320 P **P** 16 53 59.9 +1.2
baz=125
KBO **Bosley Butte** 82.60 319 P **P** 16 53 59.9 +0.8
E07A **Sunnyside** 82.62 325 P **P** 16 53 59.9 +0.9
G05D **Wamic, OR** 82.64 323 P **P** 16 54 00.7 +1.6
baz=127
H04A **Detroit Lake** 82.80 322 P **P** 16 54 00.3 +0.4
H04A IAmb IAmb 16 54 01.6
comp=Z,60nm,0.9s
I03D **Drain, OR** 82.91 321 P **P** 16 54 01.4 +0.9
baz=125
J01E **Myrtle Point** 82.96 320 P **P** 16 54 02.0 +1.3
baz=124
H04D **Lebanon** 83.03 322 P **P** 16 54 01.6 +0.6
baz=126
KEBM **Edson Butte** 83.04 320 P **P** 16 54 02.0 +0.8
F05D **White Salmon** 83.10 324 P **P** 16 54 02.2 +0.8
baz=127
COR **Corvallis** 83.40 322 P **P** 16 54 03.9 +1.0
COR pmax pmax
comp=Z,130nm,1.0s
COR **Corvallis** 83.40 322 P **P** 16 54 03.9 +1.0
COR IAmb IAmb 16 54 05.5
comp=Z,130nm,1.0s
I02D **Swisshome** 83.44 321 P **P** 16 54 04.5 +1.5
baz=125
F04A **Amboy** 83.67 323 P **P** 16 54 04.4 +0.2
F04A IAmb IAmb 16 54 05.8
comp=Z,77nm,1.0s
G03D **McMinnville, O** 83.73 322 P **P** 16 54 05.6 +1.1
baz=125
LON **Longmire** 83.81 324 P **P** 16 54 05.0 0.0
LON pmax pmax
comp=Z,23nm,0.9s
LON **Longmire** 83.81 324 P **P** 16 54 05.0 0.0
C06D **Leavenworth** 84.02 325 P **P** 16 54 05.8 0.0
baz=127
F04D **Rainier, OR** 84.09 323 P **P** 16 54 07.4 +1.2
baz=126
E04D **Cinebar** 84.12 324 P **P** 16 54 06.8 +0.4
baz=126
D05A **Enumclaw** 84.17 324 P **P** 16 54 06.9 +0.3
D05A IAmb IAmb 16 54 08.1
comp=Z,108nm,1.1s
F03A **Seaside** 84.32 323 P **P** 16 54 08.5 +1.1
F03A IAmb IAmb 16 54 09.5
comp=Z,91nm,1.0s
D04E **Lakebay** 84.59 324 P **P** 16 54 09.8 +1.2
baz=126
E03A **Lebam** 84.67 323 P **P** 16 54 09.8 +0.7
E03A IAmb IAmb 16 54 11.1
comp=Z,114nm,1.0s
B06A **Marblemount** 84.69 326 P **P** 16 54 08.8 -0.3
B06A IAmb IAmb 16 54 09.9
comp=Z,68nm,0.9s
B05A **Bryant** 84.86 325 P **P** 16 54 09.8 -0.2
baz=126
D03D **Eldon** 84.98 324 P **P** 16 54 11.3 +0.8
baz=126
MAW **Mawson** 85.09 162 P **P** 16 54 11.5 +0.7
MAW pmax pmax
comp=Z,12nm,0.9s
MAW **Mawson** 85.09 162 P **P** 16 54 11.8 +1.0
comp=Z,50nm,0.9s,baz=233,slow=6.3,SNR=57
MAW **Mawson** 85.09 162 P **P** 16 54 11.5 +0.7
A04D **Lummi Island** 85.46 325 P **P** 16 54 13.3 +0.5
baz=126
CKHR **Kef el Ahmar** 85.58 50 P **P** 16 54 15.1 +1.2
MATP **Matopo** 85.65 110 *i*P **P** 16 54 15.4 +0.8
MATP **Matopo** 85.65 110 *i*P **P** 16 54 15.6 +1.0
PGC **Sidney** 85.82 325 P **P** 16 54 14.5 0.0
DFRA **Djebel Bou Aff** 86.08 49 P **P** 16 54 17.7 +1.5
LLLB **Lillooet** 86.15 327 P **P** 16 54 15.7 -0.4
LLLB IAmb IAmb 16 54 17.2
comp=Z,69nm,1.1s
CTEI **Djebel Teioual** 86.24 50 P **P** 16 54 17.7 +0.7
MSNA **Messina** 86.37 112 *i*P **P** 16 54 18.2 +0.3
MSNA **Messina** 86.37 112 *i*P **P** 16 54 19.6 +1.7
CASM **Ain Smara** 86.39 50 P **P** 16 54 18.4 +0.8
SFJD **Kangerlussuaq** 86.55 5 P **P** 16 54 17.6 +0.1
SFJD pmax pmax
comp=Z,73nm,1.3s
SFJD **Kangerlussuaq** 86.55 5 *i*P **P** 16 54 17.8 +0.3
SFJD **Kangerlussuaq** 86.55 5 P **P** 16 54 17.6 +0.1
SFJD IAmb IAmb 16 54 18.6
comp=Z,73nm,1.2s
CKFL **Kef-Lekhel** 86.62 50 P **P** 16 54 19.4 +0.6
CAEH **'Ain El Ouahch** 86.89 49 P **P** 16 54 20.6 +0.7
ANGG **Ammassalik, Gr** 86.92 11 P **P** 16 54 19.3 0.0
ANGG IAmb IAmb 16 54 20.5
comp=Z,111nm,0.9s
CMAH **Djebel Manchou** 87.23 50 P **P** 16 54 21.6 +0.1
JVM **Valle D.L. Mar** 87.36 35 *e*P **P** 16 54 21.6 -0.1
JSA **Saint Aubin** 87.36 35 *e*P **P** 16 54 21.5 -0.2
JSA IAmb IAmb 16 54 22.2
comp=Z,71nm,0.8s
JQE **Queens East** 87.44 35 *e*P **P** 16 54 21.6 -0.5
CAF **Calviac** 87.57 41 *e*P **P** 16 54 22.1 -0.8
CAF pmax pmax
comp=Z,27nm,0.8s
KEST **Kesra** 88.24 51 P **P** 16 54 27.2 +0.9
comp=Z,37nm,0.9s,baz=223,slow=1.8,SNR=18
KEST **Kesra** 88.24 51 P **P** 16 54 26.3 0.0
KEST IAmb IAmb 16 54 28.4
comp=Z,59nm,1.0s
YRC **Rhoscolyn** 88.42 31 *e*P **P** 16 54 25.9 -0.6
MONM **Monmouth** 88.50 33 *e*P **P** 16 54 25.5 -1.5
MONM IAmb IAmb 16 54 27.8
comp=Z,219nm,1.2s
WLF1 **Llynfaes** 88.53 31 *e*P **P** 16 54 26.9 -0.2
WLF1 IAmb IAmb 16 54 27.4
comp=Z,175nm,0.9s
YLL **Llanberis** 88.56 31 *e*P **P** 16 54 25.9 -1.4
WME **Myndd Eilian** 88.64 31 *e*P **P** 16 54 27.1 -0.4
ILULI **Ilulissat** 88.68 5 *i*P **P** 16 54 27.7 +0.3
ILULI pmax pmax
comp=Z,120nm,0.9s
ILULI **Ilulissat** 88.68 5 *i*P **P** 16 54 27.7 +0.3
comp=Z,117nm,0.9s
ILULI **Ilulissat** 88.68 5 P **P** 16 54 27.7 +0.3
CLGH **Cloghs, Cushen** 88.78 29 *e*P **P** 16 54 27.4 -0.8
STRD **Stroud** 88.80 33 *e*P **P** 16 54 26.6 -1.8
STRD IAmb IAmb 16 54 28.0
comp=Z,94nm,0.8s
HLM1 **Long Mynd** 88.84 32 *e*P **P** 16 54 27.9 -0.7
HLM1 IAmb IAmb 16 54 28.0
comp=Z,359nm,1.6s
FOEL **Foel Wylfa** 88.89 32 *e*P **P** 16 54 27.8 -1.0
FOEL IAmb IAmb 16 54 29.2
comp=Z,156nm,1.1s
WOL **Wolverton** 89.03 34 *e*P **P** 16 54 28.6 -0.8
CLF **Chambon-Foret** 89.24 38 P **P** 16 54 30.1 -0.5
SSB **Saint Sauveur** 89.27 41 P **P** 16 54 31.1 +0.3
SSB pmax pmax
comp=Z,39nm,1.0s
SSB **Saint Sauveur** 89.27 41 P **P** 16 54 31.1 +0.3
SSB IAmb IAmb 16 54 32.0
comp=Z,39nm,1.0s
GAL1 **Galloway** 89.30 30 *e*P **P** 16 54 29.6 -1.0
BORG **Borgarnes** 89.86 17 P **P** 16 54 34.3 +1.3
BORG pmax pmax
comp=Z,347nm,1.5s
BORG **Borgarnes** 89.86 17 P **P** 16 54 34.3 +1.3
KESW **Keswick, Cumbr** 89.90 31 *e*P **P** 16 54 32.7 -0.7
LBWR **Ladybower, Pea** 89.92 32 *e*P **P** 16 54 33.1 -0.5
LBWR IAmb IAmb 16 54 34.1
comp=Z,82nm,1.0s
HPK **Haverah Park** 90.27 32 *e*P **P** 16 54 35.0 -0.2
EKA **Eskdalemuir Ar** 90.30 30 P **P** 16 54 34.6 -0.6
comp=Z,2.5nm,0.3s,baz=234,slow=5.8,SNR=17
KPL **Plockton** 90.33 27 *e*P **P** 16 54 33.7 -1.6
BNI **Bardonecchia** 90.50 42 P **P** 16 54 36.9 +0.2
BNI pmax pmax
comp=Z,80nm,1.4s
BNI **Bardonecchia** 90.50 42 P **P** 16 54 36.9 +0.2
BNI IAmb IAmb 16 54 38.6
comp=Z,80nm,1.4s
KAC **Achnashellach** 90.58 27 *e*P **P** 16 54 36.1 -0.5
EDMD **Edmundbyers** 90.59 31 *e*P **P** 16 54 35.9 -0.7
LMK **Market Rasen** 90.65 32 *e*P **P** 16 54 36.3 -0.6
YKA **Yellowknife Ar** 90.68 339 P **P** 16 54 36.9 +0.1
comp=Z,83nm,0.8s,baz=125,slow=4.3,SNR=622
YKA pP **pP** 16 56 48.0 +1.5
comp=Z,32nm,0.8s,baz=127,slow=4.4,SNR=33
YKA PKKP **PKKPdf** 17 11 59.6 +1.3
comp=Z,0.5nm,0.7s,baz=288,slow=2.2,SNR=4.7
LPL **La Plagne** 90.75 42 *e*P **P** 16 54 37.9 0.0
LPL pmax pmax
comp=Z,61nm,1.0s
WACR **West Acre** 90.75 33 *e*P **P** 16 54 36.3 -1.1
WACR IAmb IAmb 16 54 39.4
comp=Z,260nm,1.3s
SENIN **Lac Senin/Sane** 91.48 41 P **P** 16 54 41.2 0.0
SENIN IAmb IAmb 16 54 43.1
comp=Z,79nm,1.6s
DOU **Dourbes** 91.60 37 ⇓P **P** 16 54 41.2 -0.1
comp=Z,55nm,0.0s
SNF **Seneffe** 91.62 36 ⇓P **P** 16 54 41.2 -0.2
comp=Z,34nm,0.8s
UCC **Uccle** 91.80 36 P **P** 16 54 42.0 -0.2
UCC pmax pmax
comp=Z,76nm,0.9s
UCC **Uccle** 91.80 36 P **P** 16 54 42.0 -0.2
BGES **Gesves** 92.01 37 P **P** 16 54 42.7 -0.5
comp=Z,44nm,1.2s
BCLA **Clavier** 92.15 37 P **P** 16 54 43.8 -0.1
BCLA x x 16 54 51.0
BALST **Balsthal** 92.16 40 *e*P **P** 16 54 43.7 -0.4
baz=246,slow=4.6
ECH **Echery** 92.22 39 P **P** 16 54 43.8 -0.5
ECH pmax pmax
comp=Z,48nm,1.2s
ECH **Echery** 92.22 39 P **P** 16 54 43.8 -0.5
ECH IAmb IAmb 16 54 45.2
comp=Z,48nm,1.2s
WLF **Walferdange** 92.29 38 *e*P **P** 16 54 44.8 +0.2
comp=Z,168nm,1.2s,baz=246,slow=4.6
WLF **Walferdange** 92.29 38 P **P** 16 54 44.8 +0.2
comp=Z,107nm,1.2s
BSTI **Sart Tilman** 92.38 37 P **P** 16 54 44.8 -0.1
SULZ **Cheisacher** 92.49 40 *e*P **P** 16 54 45.5 -0.1
baz=246,slow=4.6
BHOU **Houvegnez** 92.52 37 ⇓P **P** 16 54 45.6 0.0
BHOU PcP **PcP** 16 54 46.0 +0.1
BEBN **Eben Emael** 92.54 37 P **P** 16 54 45.6 -0.1
MEM **Membach** 92.64 37 ⇓P **P** 16 54 45.7 -0.4
comp=Z,26nm,1.0s
OSSC **Osservatorio P** 92.81 45 P **P** 16 54 46.7 -0.5
OSSC IAmb IAmb 16 54 49.1
comp=Z,113nm,1.7s
LATE **Laterza** 92.82 46 P **P** 16 54 46.7 -0.5
SLE **Schleitheim** 92.83 40 *e*P **P** 16 54 46.9 -0.3
baz=246,slow=4.6
WILA **Wila** 92.93 41 *e*P **P** 16 54 47.7 0.0
baz=246,slow=4.6
ZCCA **Zocca** 92.97 44 P **P** 16 54 47.6 -0.3
BFO **Black Forest** 92.97 40 P **P** 16 54 47.2 -0.6
BFO pmax pmax
comp=Z,12nm,0.9s
BFO **Black Forest** 92.97 40 *e*P **P** 16 54 47.3 -0.5
comp=Z,20nm,1.0s,baz=246,slow=4.6
BFO **Black Forest** 92.97 40 P **P** 16 54 47.2 -0.6
PLONS **Plons/SG** 93.07 41 *e*P **P** 16 54 48.2 -0.1
baz=246,slow=4.6
SUMG **Summit** 93.17 7 P **P** 16 54 49.0 +0.4
SUMG pmax pmax
comp=Z,64nm,1.0s
SUMG **Summit** 93.17 7 *i*P **P** 16 54 49.4 +0.8
SUMG **Summit** 93.17 7 P **P** 16 54 49.0 +0.4
SUMG IAmb IAmb 16 54 51.3
comp=Z,64nm,1.0s
SALO **Salr** 93.19 43 P **P** 16 54 47.9 -1.0
AHRW **Bad Neuenahr-A** 93.21 37 *e*P **P** 16 54 49.0 +0.2
comp=Z,118nm,1.3s,baz=246,slow=4.6
FUORN **Ofenpass-Fuorn** 93.44 42 P **P** 16 54 49.9 -0.3
FUORN IAmb IAmb 16 54 51.6
comp=Z,62nm,1.0s
DAVA **Damuels** 93.48 41 *e*P **P** 16 54 50.4 +0.1

baz=246,slow=4.6
DAVA Damuels 93.48 41 *i* PcP **P** **16 54 50.5 +0.1**
comp=Z,61nm,1.0s,SNR=11
DAVA *e*PP **PP** **16 58 41.7 -4.1**
comp=Z,29nm,1.2s
STU Stuttgart 93.68 39 P **P** **16 54 50.0 -1.0**
STU pmax pmax
comp=Z,55nm,0.9s
STU Stuttgart 93.68 39 *e*P **P** **16 54 50.6 -0.3**
comp=Z,70nm,1.0s,baz=246,slow=4.6
STU Stuttgart 93.68 39 P **P** **16 54 50.0 -1.0**
BUG Bochum--Univer 93.72 36 *e*P **P** **16 54 51.2 +0.2**
comp=Z,149nm,1.2s,baz=246,slow=4.6
UBR Ueberruh 93.78 41 *e*P **P** **16 54 51.7 +0.1**
comp=Z,98nm,1.3s,baz=246,slow=4.6
NRCA Norcia 93.79 46 P **P** **16 54 51.0 -0.7**
NRCA IAmb IAmb 16 55 00.6
comp=Z,29nm,1.1s
TEOL Teolo 93.83 43 P **P** **16 54 51.3 -0.4**
TNS Taunus Mts 93.86 38 *e*P **P** **16 54 51.8 0.0**
comp=Z,163nm,1.8s,baz=246,slow=4.6
FETA Feichten 93.90 41 *i* PcP **P** **16 54 52.4 +0.2**
comp=Z,78nm,1.0s,SNR=24
INTR Introdacqua 94.02 47 P **P** **16 54 52.4 -0.4**
INTR IAmb IAmb 16 54 53.7
comp=Z,33nm,0.9s
CTI Castel Tesino 94.09 43 P **P** **16 54 52.3 -0.7**
CTI pmax pmax
comp=Z,34nm,0.8s
CTI Castel Tesino 94.09 43 P **P** **16 54 52.3 -0.7**
CTI IAmb IAmb 16 54 53.7
comp=Z,34nm,0.8s
RETA Reutte 94.11 41 *i* PcP **P** **16 54 53.2 +0.2**
comp=Z,59nm,0.9s,SNR=12
RETA *e*PP **PP** **16 58 46.9 -3.6**
comp=Z,30nm,1.3s
MBAR Mbarara 94.23 92 *i* P **P** **16 54 54.1 -0.4**
MBAR pmax pmax
comp=Z,6.0nm,1.3s
MOTA Moosalm 94.26 41 *i* PcP **P** **16 54 53.9 0.0**
comp=Z,120nm,1.2s,SNR=19
MOTA *e*pP **pP** **16 57 04.8 +0.9**
comp=Z,19nm,1.5s
MOTA *e*PP **PP** **16 58 47.6 -4.2**
comp=Z,21nm,1.3s
SQTA Sankt Quirin 94.28 41 *i* PcP **P** **16 54 54.1 +0.2**
comp=Z,133nm,0.7s,SNR=46
SQTA *e*pP **pP** **16 57 05.5 +1.6**
comp=Z,23nm,1.4s
SQTA *e*PP **PP** **16 58 47.3 -4.5**
comp=Z,20nm,1.3s
IBBN Ibbenburen 94.38 36 *e*P **P** **16 54 54.2 +0.2**
comp=Z,128nm,0.9s,baz=246,slow=4.6
WATA Walderalm 94.55 41 *i* PcP **P** **16 54 55.3 +0.1**
comp=Z,71nm,0.8s,SNR=18
WTTA Wattenberg 94.56 41 *e*P **P** **16 54 54.8 -0.5**
baz=246,slow=4.6
WTTA Wattenberg 94.56 41 *i* PcP **P** **16 54 55.6 +0.3**
comp=Z,125nm,0.8s,SNR=34
WTTA *e*pP **pP** **16 57 06.6 +1.3**
comp=Z,29nm,1.3s
WTTA *e*PP **PP** **16 58 49.5 -4.7**
comp=Z,25nm,1.7s
FUR Furstenfeldbru 94.70 41 *e*P **P** **16 54 55.7 +0.1**
comp=Z,158nm,1.6s,baz=246,slow=4.6
ABTA Abfaltersbach 94.91 42 *i* PcP **P** **16 54 56.8 +0.1**
comp=Z,57nm,0.9s,SNR=14
ABTA *i* pP **pP** **16 57 08.4 +1.5**
comp=Z,17nm,1.2s
ABTA *e*PP **PP** **16 58 51.3 -5.4**
comp=Z,20nm,1.3s
TIP Timpagrande 95.01 50 P **P** **16 54 56.5 -0.9**
TIP IAmb IAmb 16 54 57.6
comp=Z,16nm,0.9s
UBBA Unterbreizbach 95.01 38 *e*P **P** **16 54 57.2 +0.4**
comp=Z,54nm,1.5s,baz=246,slow=4.6
GRA1 Grafenberg Arr 95.27 39 P **P** **16 54 58.2 +0.1**
GRA1 IAmb IAmb 16 54 59.6
comp=Z,46nm,1.1s
GRF Grafenberg Arr 95.27 39 P **P** **16 54 58.2 +0.1**
GRF pmax pmax
comp=Z,46nm,1.1s
GRF Grafenberg Arr 95.27 39 *e*P **P** **16 54 58.3 +0.1**
comp=Z,78nm,1.4s,baz=246,slow=4.6
GTTG Gvttingen 95.29 37 *e*P **P** **16 54 58.5 +0.3**
comp=Z,40nm,1.3s,baz=246,slow=4.6
ROBS Robic 95.35 43 *i* P **P** **16 54 58.7 +0.1**
RJOB Jochberg 95.47 41 *e*P **P** **16 54 59.1 -0.1**
comp=Z,38nm,1.5s,baz=246,slow=4.6
KBA Koelnbreinsper 95.56 42 *i* PcP **P** **16 54 59.7 -0.1**
comp=Z,34nm,0.7s,SNR=11
KBA *e*pP **pP** **16 57 12.3 +2.3**
comp=Z,7.9nm,1.3s
KBA *e*PP **PP** **16 58 57.9 -3.9**
comp=Z,8.3nm,1.0s
JAVS Javornik 95.58 43 *i* P **P** **16 54 60.0 +0.2**
MYKA Terra Mystica 95.58 43 *i* PcP **P** **16 55 00.1 +0.4**
comp=Z,45nm,0.7s,SNR=16
MYKA *e*pP **pP** **16 57 12.0 +2.1**
comp=Z,12nm,1.3s
TULEG Thule 95.61 359 P **P** **16 54 59.1 +0.1**
TULEG IAmb IAmb 16 55 00.4
comp=Z,49nm,1.4s
CLZ Clausthal 95.64 37 *e*P **P** **16 55 00.2 +0.3**
comp=Z,43nm,1.2s,baz=246,slow=4.6
RES Resolute Bay 95.76 352 P **P** **16 54 59.8 +0.1**
RES pmax pmax
comp=Z,21nm,1.0s
RES Resolute Bay 95.76 352 P **P** **16 54 59.8 +0.1**
RES IAmb IAmb 16 55 01.1
comp=Z,21nm,0.9s
NRDL Niedersach Rie 95.76 36 *e*P **P** **16 55 00.9 +0.8**
comp=Z,55nm,1.3s,baz=246,slow=4.6
MOX Moxa 95.88 38 P **P** **16 55 01.5 +0.6**
MOX pmax pmax
comp=Z,24nm,1.9s
MOX Moxa 95.88 38 *e*P **P** **16 55 01.3 +0.4**
comp=Z,34nm,1.4s,baz=246,slow=4.6
ROTZ Rotzenmuhle 95.89 39 *e*P **P** **16 55 01.1 +0.2**
comp=Z,44nm,1.7s,baz=246,slow=4.6
MANZ Manzenberg 95.92 39 *e*P **P** **16 55 01.4 +0.3**
comp=Z,32nm,1.3s,baz=246,slow=4.6
ASSE Asse, Remlinge 95.93 37 *e*P **P** **16 55 01.6 +0.6**
comp=Z,113nm,1.6s,baz=246,slow=4.6
WET Wettzell 96.06 40 *e*P **P** **16 55 01.9 +0.1**
comp=Z,42nm,1.1s,baz=246,slow=4.6
OBKA Obir 96.12 43 *e*P **P** **16 55 01.9 -0.2**
baz=246,slow=4.6
OBKA Obir 96.12 43 *i* Pdiff **P** **16 55 02.6 +0.4**
comp=Z,41nm,1.0s,SNR=8.5
OBKA *e*pP **pP** **16 57 13.8 +1.4**
comp=Z,16nm,1.4s
OBKA *e*PP **PP** **16 59 01.2 -4.7**
comp=Z,16nm,1.2s
PLN Plauen 96.14 39 *e*P **P** **16 55 02.4 +0.4**
comp=Z,22nm,1.1s,baz=246,slow=4.6
WERN Wernitzgruen 96.19 39 *e*P **P** **16 55 03.1 +0.8**
comp=Z,32nm,1.1s,baz=246,slow=4.6
GUNZ Gunzen 96.19 39 *e*P **P** **16 55 03.1 +0.8**
comp=Z,39nm,1.6s,baz=246,slow=4.6
NEUB Neuenburg 96.20 38 *e*P **P** **16 55 03.1 +0.8**
comp=Z,83nm,1.6s,baz=246,slow=4.6
NKC Novy Kostel 96.21 39 *e*P **P** **16 55 03.0 +0.6**
NKC Novy Kostel 96.21 39 *e*P **P** **16 55 03.0 +0.6**
TANN Tannenbergstha 96.29 39 *e*P **P** **16 55 03.4 +0.6**
comp=Z,46nm,1.2s,baz=246,slow=4.6
MOA Molln 96.43 42 *i* Pdiff **P** **16 55 03.4 -0.1**
comp=Z,35nm,0.7s,SNR=12
MOA *e*pP **pP** **16 57 15.9 +2.1**
comp=Z,11nm,1.4s
MOA *i* PP **PP** **16 59 04.8 -3.3**
comp=Z,12nm,1.3s
GEC2 GERESS Array S 96.45 40 *e*P **P** **16 55 03.5 0.0**
comp=Z,22nm,1.0s,baz=246,slow=4.6
GEC2 GERESS Array S 96.45 40 P **P** **16 55 03.1 -0.5**
GEC2 IAmb IAmb 16 55 04.5
comp=Z,23nm,1.0s
GERES GERESS Array B 96.45 40 P **P** **16 55 03.4 -0.2**
comp=Z,9.3nm,0.8s,baz=222,slow=3.6,SNR=54
GERES PP **PP** **16 59 06.5 -1.8**
comp=Z,2.0nm,0.9s,baz=248,slow=5.2,SNR=4.0
GERES PKKP **PKKPbc** **17 11 46.0 -0.7**
comp=Z,0.2nm,0.5s,baz=40,slow=1.7,SNR=4.5
BSEG Bad Segeberg 96.46 35 *e*P **P** **16 55 03.3 0.0**
comp=Z,44nm,1.1s,baz=246,slow=4.6
KHC Kasperske Hory 96.48 40 *i* P **P** **16 55 02.2 -1.4**
KHC pmax pmax
comp=Z,33nm,1.1s
KHC Kasperske Hory 96.48 40 *e*P **P** **16 55 03.3 -0.4**
KHC *ex* x 16 55 10.7
KHC Kasperske Hory 96.48 40 P **P** **16 55 03.3 -0.4**
KHC IAmb IAmb 16 55 04.8
comp=Z,14nm,1.3s
SOKA Soboth 96.49 43 *i* Pdiff **P** **16 55 03.8 0.0**
comp=Z,20nm,1.2s,SNR=5.1
MUD Monsted U'grnd 96.89 32 *i* P **P** **16 55 05.7 +0.5**
MUD pmax pmax
comp=Z,46nm,1.0s
MUD Monsted U'grnd 96.89 32 *i* P **P** **16 55 05.7 +0.5**
comp=Z,46nm,1.0s
PBCC Pribram 96.94 40 *e*P **P** **16 55 05.7 +0.1**
CLL Collm 96.95 38 *i* P **P** **16 55 05.8 +0.2**
CLL *e* 16 59 08.0
CLL pmax pmax
comp=Z,23nm,1.1s
CLL Collm 96.95 38 *i* Pdif **P** **16 55 05.8 +0.2**
comp=Z,23nm,1.1s
CLL *e*PP **PP** **16 59 08.0 -3.9**
CLL *e*PKiKP **PKiKP** **16 59 34.0 -3.7**
CLL *e* 16 59 57.0
CLL Collm 96.95 38 *e*P **P** **16 55 05.9 +0.3**
comp=Z,23nm,1.1s,baz=246,slow=4.6
CLL Collm 96.95 38 P **P** **16 55 05.4 -0.2**
CLL IAmb IAmb 16 55 07.1
comp=Z,21nm,1.1s
FBE Freiberg 97.01 38 *e*P **P** **16 55 06.5 +0.7**
comp=Z,18nm,0.9s,baz=246,slow=4.6
ARSA Arzberg 97.01 42 *i* Pdiff Pdif 16 55 05.1 -0.9
comp=Z,8.3nm,0.6s,SNR=7.4
ARSA *e*pP pP 16 57 17.6 +1.2
comp=Z,5.1nm,1.1s
BLY Banja Luka 97.23 45 ⇑P Pdif 16 55 04.0 -3.1
BRG Berggiesshubel 97.34 39 *e*P **P** **16 55 07.4 0.0**
comp=Z,29nm,1.5s
BRG *e*pP **pP** **16 57 13.2 -4.6**
comp=Z,3.0nm,0.9s
BRG *e*PP **PP** **16 59 11.6 -3.3**
comp=Z,37nm,1.9s
BRG Berggiesshubel 97.34 39 *e*P **P** **16 55 07.4 0.0**
BRG *e* 16 59 11.6
BRG pmax pmax
comp=Z,29nm,1.5s
BRG pmax pmax
comp=Z,37nm,1.9s
BRG Berggiesshubel 97.34 39 *e*P **P** **16 55 07.7 +0.4**
comp=Z,29nm,1.5s,baz=246,slow=4.6
PRU Pruhonice 97.38 40 *e*P **P** **16 55 07.8 +0.2**
PRU Pruhonice 97.38 40 *e*P **P** **16 55 07.8 +0.2**
CONA Conrad Observa 97.46 42 *i* Pdiff **P** **16 55 08.3 +0.1**
comp=Z,31nm,1.5s,SNR=6.2
CONA *e*pP **pP** **16 57 19.4 +0.8**
comp=Z,11nm,1.5s
CONA *e*PP **PP** **16 59 09.4 -6.6**
comp=Z,23nm,1.7s
GOPC GO Pecny, Ondr 97.50 40 *e*P **P** **16 55 08.8 +0.7**
GOPC GO Pecny, Ondr 97.50 40 *e*P **P** **16 55 08.8 +0.7**
TREC Trest 97.70 40 *e*P **P** **16 55 09.8 +0.7**
TREC Trest 97.70 40 *e*P **P** **16 55 09.8 +0.7**
RUE Ruedersdorf 97.83 37 *e*P **P** **16 55 09.8 +0.3**
comp=Z,33nm,0.6s,baz=246,slow=4.6
PDG Podgorica 97.89 48 ⇑P **P** **16 55 11.0 +1.0**
PDG Podgorica 97.89 48 P **P** **16 55 10.9 +0.9**
PDG IAmb IAmb 16 55 12.7
comp=Z,25nm,1.1s
KRUC Moravsky 98.18 41 *e*PDIFF **P** **16 55 11.3 +0.1**
ZST Bratislava 98.34 42 *e*P Pdif 16 55 11.2 -0.7
ZST Bratislava 98.34 42 *e*PDIFF Pdif 16 55 11.2 -0.7
VRAC Vranov 98.39 41 ⇑P **P** **16 55 12.5 +0.4**
VRAC Vranov 98.39 41 *e*PDIFF **P** **16 55 12.3 +0.1**
UPC Upice 98.44 39 *e*P **P** **16 55 13.0 +0.6**
UPC Upice 98.44 39 *e*P **P** **16 55 13.0 +0.6**
CHVC Chvalec 98.49 39 *e*P **P** **16 55 12.9 +0.3**
MODS Modra-Piesok 98.50 42 *e*P Pdif 16 55 12.1 -0.6
MODS Modra-Piesok 98.50 42 *e*PDIFF Pdif 16 55 12.0 -0.7
DPC Dobruska-Polom 98.57 40 *e*P **P** **16 55 13.8 +0.8**
DPC Dobruska-Polom 98.57 40 *e*P **P** **16 55 13.8 +0.8**
OSTC Ostas 98.58 39 *e*P **P** **16 55 13.6 +0.6**
KSP Ksiaz 98.72 39 *e*P **P** **16 55 14.3 +0.7**
KSP Ksiaz 98.72 39 *e*PKP **P** **16 55 14.3 +0.7**
KRLC Kraliky 98.76 40 *e*P **P** **16 55 14.8 +0.9**
KRLC Kraliky 98.76 40 *e*P **P** **16 55 14.8 +0.9**
JAVC Velka Javorina 98.91 41 *e*PDIFF **P** **16 55 15.6 +1.0**
URZ Urewera 99.09 224 PKKPbc PKKPbc 17 11 36.7 -2.5
comp=Z,9.7nm,0.8s,baz=260,slow=6.1,SNR=4.5
MORC Moravsky Berou 99.13 40 P **Pdif** **16 55 15.7 +0.3**
MORC pmax pmax
comp=Z,18nm,0.9s
MORC Moravsky Berou 99.13 40 ⇑P **Pdif** **16 55 16.4 +1.0**
MORC Moravsky Berou 99.13 40 **Pdif** **16 55 15.7 +0.3**
MORC IAmb IAmb 16 55 17.2
comp=Z,18nm,0.9s
MORC Moravsky Berou 99.13 40 *e*PDIFF **Pdif** **16 55 16.0 +0.6**
VYHS Vyhne 99.53 42 *e*P **Pdif** **16 55 17.4 +0.2**
VYHS Vyhne 99.53 42 *e*PDIFF **Pdif** **16 55 17.4 +0.2**
DAG Danmarks Havn 99.53 10 *i* P **Pdif** **16 55 16.0 -0.6**
DAG pmax pmax
comp=Z,9.0nm,0.7s
DAG Danmarks Havn 99.53 10 *i* P **Pdif** **16 55 16.0 -0.6**
comp=Z,8.5nm,0.7s
NB2 NORSAR Subarra 99.69 29 P **Pdif** **16 55 18.0 +0.4**
comp=Z,40nm,1.7s,baz=248,slow=4.6
NB2 NORSAR Subarra 99.69 29 P **Pdif** **16 55 18.0 +0.4**
baz=248,slow=4.6
NOA NORSAR Array B 99.69 29 P **Pdif** **16 55 18.4 +0.8**
comp=Z,7.1nm,1.2s,baz=242,slow=4.9,SNR=4.4
LANS Liptovska Anna 100.12 41 *e*P **Pdif** **16 55 21.7 +1.8**
KMBO Kilima Mbogo 100.20 95 P **Pdif** **16 55 23.7 +2.4**
comp=Z,0.9nm,0.4s,baz=116,slow=2.5,SNR=4.2
MDVR Moldovita 100.31 46 ⇑P **Pdif** **16 55 21.4 +0.6**
INK Inuvik 100.45 339 P **Pdif** **16 55 20.5 -0.3**
INK Inuvik 100.45 339 PKKPbc PKKPbc 17 11 34.3 -1.8
comp=Z,3.1nm,0.7s,baz=310,slow=3.0,SNR=9.1
INK Inuvik 100.45 339 **Pdif** **16 55 20.5 -0.3**
BZS Buzias 100.48 45 ⇓P **Pdif** **16 55 22.4 +0.9**
HFS Hagfors 100.50 30 P **Pdif** **16 55 21.1 -0.1**
comp=Z,4.0nm,0.9s,baz=184,slow=5.8,SNR=5.7
OJC Ojcow 100.65 41 *e*P **Pdif** **16 55 22.7 +0.6**
OJC Ojcow 100.65 41 *e*PKP **Pdif** **16 55 22.7 +0.6**
NIE Niedzica 100.72 41 *e*P **Pdif** **16 55 23.8 +1.3**
NIE Niedzica 100.72 41 *e*PKP **Pdif** **16 55 23.8 +1.3**
GZR Gura Zlata 101.20 46 ⇓P **Pdif** **16 55 25.1 +0.3**
DRGR 101.54 44 ⇑P **Pdif** **16 55 26.8 +0.5**
TRPA Tarpa 101.79 43 ⇑P **Pdif** **16 55 27.7 +0.5**
VOIR 102.76 46 ⇑P **Pdif** **16 55 33.1 +1.4**
MLR Muntele Rosu 103.38 46 ⇓P **Pdif** **16 55 34.5 -0.1**
BURAR Bucovina Array 103.40 44 ⇓P **Pdif** **16 55 36.1 +1.6**
HDA Harding Lake 104.18 334 Pdiff **Pdif** **16 55 39.0 +1.5**
baz=105
ILAR Eielson Array 104.25 334 Pdiff **Pdif** **16 55 37.6 -0.2**
comp=Z,0.7nm,0.8s,baz=102,slow=2.8,SNR=6.0
ILAR PKKPbc **PKKPbc** **17 11 22.4 -2.6**
comp=Z,0.6nm,0.7s,baz=290,slow=3.4,SNR=6.3
POKR Poker Plat Res 104.56 334 Pdiff **Pdif** **16 55 40.3 +1.1**
baz=104
AKASG Malin Array Be 106.61 41 PKiKP **PKiKP** **16 59 54.9 -0.3**
comp=Z,1.4nm,0.3s,baz=275,slow=2.8,SNR=4.7
AKASG PKKPbc **PKKPbc** **17 11 17.2 -0.1**
comp=Z,2.7nm,0.4s,baz=66,slow=4.0,SNR=7.3
FINES FINESS Array B 106.70 30 PKiKP **PKiKP** **16 59 55.3 +0.2**
comp=Z,4.6nm,1.1s,baz=202,slow=1.5,SNR=3.0
FINES PP **PP** **17 00 20.5 -2.9**
comp=Z,24nm,1.1s,baz=191,slow=5.8,SNR=10
FINES PKKPbc **PKKPbc** **17 11 16.3 -1.1**
comp=Z,0.8nm,0.4s,baz=84,slow=5.9,SNR=5.2
ARCES ARCESS Array B 107.66 22 PKiKP **PKiKP** **16 59 56.2 -0.5**
comp=Z,2.7nm,0.9s,baz=254,slow=3.3,SNR=4.5
BRTR Keskin Array B 107.73 53 PKiKP **PKiKP** **16 59 58.2 +0.3**
comp=Z,3.1nm,0.9s,baz=164,slow=2.3,SNR=8.9
BRTR PP **PP** **17 00 29.9 -1.8**
comp=Z,8.5nm,1.1s,baz=248,slow=6.5,SNR=8.2
ASF Jabal al Asfar 108.92 62 PKiKP **PKiKP** **17 00 00.5 +0.2**
comp=Z,2.1nm,0.5s,baz=358,slow=0.6,SNR=5.1
OBN Obninsk 111.53 37 *i* PKiKP **PKiKP** **17 00 04.0 -0.3**
OBN *e*PPP PPP 17 03 23.4
OBN pmax pmax
comp=Z,15nm,0.6s
OBN Obninsk 111.53 37 PKiKP **PKiKP** **17 00 04.7 +0.3**
comp=Z,2.6nm,0.4s,baz=211,slow=5.9,SNR=4.0
VSR Storozhevoye 112.92 42 *e*PKiKP **PKiKP** **17 00 05.2 -1.9**
VSR pmax pmax
comp=Z,10.0nm,1.2s
VORD Divnogorie 112.98 42 *e*PKiKP **PKiKP** **17 00 06.5 -0.8**
VORD pmax pmax
comp=Z,9.0nm,0.7s
KLMR Klimovskoe 113.16 31 *i* PKiKP **PKiKP** **17 00 05.4 -1.9**
KLMR pmax pmax
comp=Z,34nm,1.2s
KLMR Klimovskoe 113.16 31 *e*PKiKP **PKiKP** **17 00 05.5 -1.9**
KLMR AMP 17 00 08.6
comp=Z,34nm,1.2s
KLMR *e*PP **PP** **17 01 05.7 -3.4**
VRH Novokhopyorsk 114.52 42 *e*PKiKP PKPdf 17 00 10.0 -0.2
VRH pmax pmax
comp=Z,20nm,1.1s
RAYN Ar Rayn 114.75 72 PKiKP **PKiKP** **17 00 11.8 +0.2**
RAYN Ar Rayn 114.75 72 *i* P **PKiKP** **17 00 12.3 +0.7**
SNR=11
RAYN Ar Rayn 114.75 72 **PKiKP** **17 00 11.8 +0.2**
NEY Neytrino 114.93 51 *i* PKiKP **PKiKP** **17 00 11.7 +0.2**
KIV Kislovodsk 114.95 50 *e*PKiKP **PKiKP** **17 00 11.4 0.0**
KIV pmax pmax
comp=Z,67nm,1.1s
KIV Kislovodsk 114.95 50 P **PKiKP** **17 00 11.8 +0.3**
KIV Kislovodsk 114.95 50 **PKiKP** **17 00 11.4 0.0**
KVAR Kislovodsk Arr 114.95 50 PKP **PKiKP** **17 00 12.4 +1.0**
comp=Z,5.5nm,0.8s,baz=270,slow=20,SNR=5.0
KBZ Khabaz 115.09 50 *i* PKiKP **PKPdf** **17 00 10.9 -0.6**
KBZ Khabaz 115.09 50 PKP **PKiKP** **17 00 12.2 +0.7**
comp=Z,16nm,0.8s,baz=138,slow=0.4,SNR=23
ZEI Tsey 115.77 51 *i* PKiKP **PKiKP** **17 00 13.2 0.0**
ZEI pmax pmax
comp=Z,11nm,0.8s
PRGR Permogore 116.03 30 *e*PKiKP **PKiKP** **17 00 12.8 0.0**
PRGR pmax pmax
comp=Z,25nm,0.9s
GNI Garni 116.25 54 PKP **PKiKP** **17 00 14.6 +0.5**
comp=Z,12nm,0.7s,baz=210,slow=23,SNR=6.2
GNI Garni 116.25 54 P **PKiKP** **17 00 14.4 +0.2**
KIRV Kirov 118.37 33 PKiKP **PKiKP** **17 00 18.0 +0.5**
KIRV Kirov 118.37 33 PKP **PKiKP** **17 00 17.9 +0.5**
comp=Z,12nm,0.5s,baz=288,slow=4.3,SNR=6.3
BILL Bilibino 122.06 340 *e*PKiKP **PKiKP** **17 00 24.7 +0.2**
BILL *e* 17 02 41.4
BILL *e*PPP PPP 17 04 52.6
BILL pmax pmax
comp=Z,15nm,0.9s
STKA Stephens Creek 123.59 206 PKP **PKiKP** **17 00 28.7 0.0**
comp=Z,11nm,0.7s,baz=343,slow=2.5,SNR=5.4
STKA PKKPbc **PKKPbc** **17 10 17.9 -2.2**
comp=Z,3.9nm,0.8s,baz=344,slow=9.9,SNR=5.0
ARU Arti 123.67 34 *i* PKiKP **PKPdf** **17 00 27.7 0.0**
ARU 17 02 20.2
ARU 17 06 42.5
ARU SS SS 17 18 20.2 -3.0
ARU Arti 123.67 34 PKP **PKiKP** **17 00 28.6 +0.6**
comp=Z,9.7nm,0.5s,baz=341,slow=0.5,SNR=42
ARU PP **PP** **17 02 16.3 -4.2**
comp=Z,0.4nm,0.3s,baz=289,slow=7.8,SNR=4.7
ARU PKKPbc **PKKPab** **17 10 17.0 -1.2**
comp=Z,0.9nm,0.5s,baz=111,slow=3.7,SNR=5.2
ARU Arti 123.67 34 **PKiKP** **17 00 28.1 +0.1**
ASUD Al Ashush, Dub 123.79 73 *i* P **PKiKP** **17 00 29.5 +0.3**
SNR=10.0
FAQ Al Faqa, Dubai 124.04 73 P **PKPdf** **17 00 29.4 +0.1**
ALNE Al Ain 124.10 74 *i* P **PKiKP** **17 00 29.8 -0.1**
SNR=11
NAZ Nazwa, Dubai 124.14 72 *i* P **PKPdf** **17 00 29.6 +0.1**
SNR=14
ASHO Ashiyiah 124.46 73 *i* P **PKPdf** **17 00 29.8 -0.4**
SNR=5.9
HATD Hatta, Dubai 124.54 73 *i* P **PKPdf** **17 00 30.0 -0.3**
SNR=12
UOSS Minazif 124.62 73 *i* P **PKPdf** **17 00 29.7 -0.8**
SNR=11
UOSS Minazif 124.62 73 **PKPdf** **17 00 29.5 -1.0**
MSFE Esma-Masafi 124.63 72 *i* P **PKPdf** **17 00 30.2 -0.3**
SNR=8.5
SVE Sverdlovsk 124.64 33 *e*PKiKP **PKiKP** **17 00 30.6 +0.7**
SVE pmax pmax
comp=Z,26nm,1.1s
SHME Shamm 124.69 71 *i* P **PKPdf** **17 00 30.7 0.0**
SNR=21
MDH Madha 124.75 72 *i* P **PKPdf** **17 00 29.9 -0.8**
SNR=6.9
BANOM Banah 124.82 71 *i* P **PKPdf** **17 00 30.6 -0.3**
SNR=8.3
AKTO Aktyubinsk 124.86 41 PKiKP **PKiKP** **17 00 30.6 0.0**
AKTO Aktyubinsk 124.86 41 PKP **PKiKP** **17 00 30.9 +0.3**
comp=Z,20nm,0.7s,baz=171,slow=2.1,SNR=42
AKTO PP **PP** **17 02 24.8 -3.8**
comp=Z,9.7nm,1.1s,baz=281,slow=7.6,SNR=6.8
AB31 Akbulak array 126.34 42 *i* PKiKP **PKiKP** **17 00 33.6 +0.1**
ABKAR Akbulak array 126.34 42 **PKiKP** **17 00 33.6 0.0**
WSAR Wadi Sarin 126.61 75 PKP **PKPdf** **17 00 34.4 +0.1**
comp=Z,47nm,0.8s,baz=251,slow=2.2,SNR=36
WSAR PP **PP** **17 02 40.5 -0.5**
comp=Z,8.5nm,1.1s,baz=329,slow=7.2,SNR=3.8
GEYT Alibeck 126.66 57 PKP **PKiKP** **17 00 34.8 +0.2**
comp=Z,21nm,0.9s,baz=255,slow=5.7,SNR=31
GEYT PP **PP** **17 02 40.0 -0.9**
comp=Z,3.8nm,0.8s,baz=243,slow=4.8,SNR=4.8
GYA0B ALIBECK ARRAY 126.66 57 **PKPdf** **17 00 34.0 -0.1**
TIXI Tiksi 127.04 355 *i* PKiKP **PKPdf** **17 00 33.0 -0.7**
NWAO Narrogin (SRO) 128.12 181 PKP **PKPdf** **17 00 37.1 +0.1**
comp=Z,23nm,0.8s,baz=218,slow=7.4,SNR=5.9
SEY Seymchan 129.75 339 *i* PKiKP **PKPdf** **17 00 39.1 0.0**
HRA Herat 130.20 61 **PKPdf** **17 00 41.0 -0.2**
CTA Charters Tower 130.98 219 PKP **PKiKP** **17 00 43.5 -0.4**
comp=Z,6.2nm,0.8s,baz=135,slow=1.4,SNR=2.7
CTA SKPbc **SKPbc** **17 03 12.1 -0.2**
comp=Z,59nm,0.7s,baz=160,slow=2.3,SNR=19
BRVK Borovoye 131.21 35 PKiKP **PKPdf** **17 00 42.6 +0.4**
BRVK Borovoye 131.21 35 **PKiKP** **17 00 42.8 -0.4**
BVAR Borovoye Array 131.29 35 PKhKP PKPpre 17 00 37.1
comp=Z,1.0nm,0.5s,baz=222,slow=1.8,SNR=7.1
BVAR PKP **PKiKP** **17 00 43.5 +0.1**
comp=Z,7.9nm,0.7s,baz=264,slow=1.5,SNR=41
BVAR SKPbc **SKPbc** **17 03 11.2 -1.0**
comp=Z,13nm,0.9s,baz=279,slow=3.8,SNR=18
PETK Petropavlovsk- 133.39 327 PKHKP PKPpre 17 00 37.5
comp=Z,4.0nm,0.9s,baz=70,slow=2.0,SNR=9.1
PETK PKP **PKiKP** **17 00 47.0 -0.7**
comp=Z,11nm,1.0s,baz=129,slow=2.9,SNR=9.7
PETK SKPbc **SKPbc** **17 03 19.6 +0.2**
comp=Z,43nm,0.9s,baz=104,slow=6.3,SNR=23
ASAR Alice Springs 133.94 203 PKP **PKPdf** **17 00 48.8 +0.4**
comp=Z,18nm,0.7s,baz=147,slow=1.7,SNR=8.3
ASAR SKPbc **SKPbc** **17 03 21.4 -0.8**
comp=Z,15nm,0.7s,baz=143,slow=2.9,SNR=8.6
ASAR PKKP **PKKPdf** **17 10 34.4 -1.0**
comp=Z,0.4nm,0.4s,baz=353,slow=1.7,SNR=9.2
KK31 Karatay Array 135.04 48 *i* PKiKP **PKPdf** **17 00 50.1 +0.4**
KK31 Karatay Array 135.04 48 **PKPdf** **17 00 50.2 +0.5**
KKAR Karatay Array 135.04 48 PKiKP **PKPdf** **17 00 50.3 +0.6**
KKAR Karatay Array 135.04 48 **PKPdf** **17 00 50.3 +0.6**
KBL Kabul 135.78 60 PKiKP **PKPdf** **17 00 51.7 +0.1**
KBL Kabul 135.78 60 **PKPdf** **17 00 51.7 +0.1**
BTK Batken 136.10 52 PKiKP **PKPdf** **17 00 52.3 +0.4**
BTK Batken 136.10 52 PKPdf **PKPdf** **17 00 52.3 +0.4**
YAK Yakutsk 136.20 351 *i* PKiKP **PKPdf** **17 00 51.5 +0.4**
YAK Yakutsk 136.20 351 SKPbc **SKPbc** **17 03 28.1 +0.3**
comp=Z,29nm,0.8s,baz=95,slow=0.4,SNR=32
YAK Yakutsk 136.20 351 PKPpre 17 00 40.8
YAK PKPdf **PKPdf** **17 00 51.6 +0.4**
YAK **SKPbc** **17 03 27.9 +0.2**
KURK Kurchatov 136.86 34 *i* PKiKP **PKPdf** **17 00 52.8 0.0**
KURK Kurchatov 136.86 34 PKPpre 17 00 43.2
KURK **PKiKP** **17 00 53.8 -0.9**
KURK **SKPbc** **17 03 30.9 +0.8**
KURBB Kurchatov Arra 136.87 35 PKhKP PKPpre 17 00 43.2
comp=Z,5.1nm,0.8s,baz=299,slow=2.6,SNR=17
KURBB PKP **PKiKP** **17 00 53.8 -0.9**
comp=Z,27nm,0.9s,baz=302,slow=2.5,SNR=33
KURBB SKPbc **SKPbc** **17 03 30.9 +0.8**
comp=Z,22nm,1.0s,baz=303,slow=3.5,SNR=25
WRA Warramunga Arr 137.14 206 PKP **PKPdf** **17 00 54.9 +0.6**
comp=Z,18nm,0.7s,baz=152,slow=1.8,SNR=3.1
WRA SKPbc **SKPbc** **17 03 31.2 -0.8**
comp=Z,15nm,0.9s,baz=160,slow=2.3,SNR=7.4
EKS2 Erkin-Say 137.46 47 P **SKPbc** **17 03 34.2 +1.9**
SNR=6.8
AML Almayashu 137.58 48 P **SKPbc** **17 03 34.9 +1.8**
SNR=9.4
USP Ospenovka 137.74 46 P **SKPbc** **17 03 34.2 +1.2**
SNR=7.0
ZAA0 Zalesovo Array 137.87 27 PKPpre 17 00 44.1
ZAA0 PKPdf **PKPdf** **17 00 55.2 +0.7**

ZALV Zalesovo Beam 137.87 27 PKhKP PKPpre 17 00 45.6
comp=Z,5.9nm,0.4s,baz=305,slow=4.7,SNR=23
ZALV PKP **PKPdf 17 00 54.9 +0.3**
comp=Z,24nm,0.4s,baz=278,slow=1.6,SNR=34
ZALV pPKP pPKPdf 17 03 14.7 +1.1
comp=Z,7.7nm,0.8s,baz=267,slow=2.6,SNR=5.3
ZALV SKPbc **SKPbc 17 03 33.8 +0.8**
comp=Z,34nm,0.8s,baz=294,slow=4.4,SNR=18
AAK Ala-Archa 137.96 47*c i*PKIKP **PKiKP 17 00 57.2 -0.3**
AAK pmax pmax
comp=Z,59nm,1.3s
AAK Ala-Archa 137.96 47 PKhKP PKPpre 17 00 47.2
comp=Z,9.3nm,0.9s,baz=250,slow=3.8,SNR=15
AAK PKP **PKiKP 17 00 57.0 -0.5**
comp=Z,35nm,0.9s,baz=144,slow=1.7,SNR=29
AAK SKPbc **SKPbc 17 03 35.2 +1.4**
comp=Z,44nm,1.1s,baz=221,slow=2.1,SNR=23
AAK Ala-Archa 137.96 47 *i* P PKPdf 17 00 46.9 -8.4
SNR=14
AAK Ala-Archa 137.96 47 PKPpre 17 00 45.9
AAK PKPdf **PKiKP 17 00 56.7 -0.8**
FRU1 Bishkek 137.99 47 PKIKP **PKPdf 17 00 55.9 +0.7**
FRU1 Bishkek 137.99 47 PKPdf **PKPdf 17 00 55.9 +0.7**
CHMS Chumysh 138.01 46 P **SKPbc 17 03 35.0 +1.3**
SNR=10
UCH Uchtor 138.12 48 P **SKPbc 17 03 36.3 +1.7**
SNR=9.6
PMG Port Moresby 138.17 230 SKPbc **SKPbc 17 03 34.7 -0.4**
comp=Z,32nm,1.1s,baz=95,slow=8.2,SNR=3.0
KBK Karagaybulak 138.27 47 P **SKPbc 17 03 36.7 +2.0**
SNR=11
ULHL Ulahol 139.31 47 P **SKPbc 17 03 39.1 +1.5**
SNR=12
NIL Nilore 139.36 60 PKHKP PKPpre 17 00 48.9
NIL Nilore 139.36 60 PKPpre 17 00 48.9
NRN Naryn 139.44 48 PKHKP PKPpre 17 00 50.8
NRN Naryn 139.44 48 PKPpre 17 00 50.8
KDJ Kajisay 140.00 47 PKIKP **PKPdf 17 00 58.5 -0.5**
KDJ Kajisay 140.00 47 PKPpre 17 00 52.3
KDJ PKPdf **PKPdf 17 00 58.5 -0.5**
MAKZ Makanchi 140.85 38 PKHKP PKPpre 17 00 53.6
MAKZ Makanchi 140.85 38 PKPpre 17 00 53.6
MK31 Makanchi Array 141.04 37 PKHKP PKPpre 17 00 54.9
MK31 Makanchi Array 141.04 37 PKPpre 17 00 54.9
MKAR Makanchi Array 141.04 37 PKhKP PKPpre 17 00 56.2
comp=Z,16nm,0.6s,baz=325,slow=2.3,SNR=187
MKAR SKPbc **SKPbc 17 03 40.5 -1.2**
comp=Z,20nm,0.9s,baz=256,slow=4.9,SNR=11
BOD Bodaibo 141.44 2 *e*PKHKP PKPpre 17 00 56.1
BOD pmax pmax
comp=Z,35nm,1.1s
TYV Tymovskoe 142.07 333 *e*PKHKP PKPpre 17 00 59.1
TYV pmax pmax
comp=Z,39nm,1.0s
KLRI Killari 142.65 85 *e*PKPdf **PKPdf 17 01 01.4 -2.9**
URV Uravakonda 142.72 90 *e*PKPdf **PKPdf 17 01 01.9 -2.5**
NDI New Delhi 143.42 68 *e*P PKPab 17 01 02.0 -2.0
PALK Pallekele 143.68 104 PKIKP PKPbc 17 01 04.6 -0.7
PALK Pallekele 143.68 104 *i* P PKPab 17 01 05.3 -0.1
SNR=15
PALK Pallekele 143.68 104 PKPbc 17 01 04.5 -0.8
HYBB Hyderabad (bro 144.40 87 *e*PKPab PKPbc 17 01 07.5 +0.1
HYB Hyderabad 144.40 87 *i* PKP PKPbc 17 01 07.5 +0.1
HYB *e*pPKP pPKPdf 17 03 30.0 +3.8
SRSP Sriramsagar 144.40 84 *e*PKPab **PKPdf 17 01 06.4 -0.9**
ZEA Zeya 144.49 349 *e*PKIKP PKPbc 17 01 06.8 +0.2
ZEA pmax pmax
comp=N,47nm,1.0s
ZEA pmax pmax
comp=Z,280nm,1.4s
SRLM Srisailam 144.49 89 *e*PKPab **PKPdf 17 01 07.0 -0.5**
YSS Yuzh-Sakhalins 144.77 328 *e*PKIKP **PKPab 17 01 08.6 +0.1**
YSS pmax pmax
comp=Z,80nm,1.0s
YSS Yuzh-Sakhalins 144.77 328 PKPbc 17 01 07.9 +0.3
SKHT Srikalahasti 144.77 93 *e*PKPab PKPbc 17 01 08.6 0.0
MTN Manton Dam 144.83 206 PKPbc 17 01 08.9 +0.2
NJS Nagarjunasagar 144.97 88 *e*PKPab PKPbc 17 01 08.7 -0.4
NGP Nagpur 145.26 80 *e*P **PKPbc 17 01 09.4 -0.5**
RPR Rampur 145.29 84 *e*PKPab **PKPbc 17 01 10.0 0.0**
ADKI Addanki 145.46 90 *e*PKPab **PKPbc 17 01 10.5 0.0**
MOY Mondy 145.53 17 *e*PKIKP **PKPbc 17 01 09.6 -0.3**
MOY pmax pmax
comp=Z,371nm,1.4s
IRK Irkutsk 145.79 13 *e*PKHKP PKPpre 17 01 06.8
IRK pmax pmax
comp=Z,370nm,1.1s
WMQ Urumqi 145.87 38 *e*PKPbc **PKPdf 17 01 08.5 -0.6**
WMQ Urumqi 145.87 38 PKIKP **PKPbc 17 01 10.4 -0.7**
WMQ Urumqi 145.87 38 PKPbc **PKPbc 17 01 10.4 -0.7**
GGR Gangavaram 146.01 86 *e*PKPbc **PKPdf 17 01 10.4 +0.4**
TLY Talaya 146.18 14*d i*PKIKP **PKPbc 17 01 10.7 -0.9**
TLY pmax pmax
comp=Z,1μm,1.7s
TLY Talaya 146.18 14 PKPbc **PKPbc 17 01 11.1 -0.5**
MYLAV Mylavaram 146.25 88 *e*PKPbc **PKPdf 17 01 11.4 +1.1**
PVM Polavaram 147.27 88 *e*PKPbc **PKPdf 17 01 13.6 +1.5**
ZAK Zakamensk 147.30 15 *e*PKIKP **PKPdf 17 01 12.5 +1.2**
ZAK pmax pmax
comp=Z,118nm,1.0s
ERM Erimo 147.69 321 PKP2 **PKiKP 17 01 16.8 -0.4**
ERM Erimo 147.69 321 **PKiKP 17 01 16.8 -0.4**
KOLN Koldanda 149.12 68 *e*P **PKPdf 17 01 15.1 0.0**
comp=Z,288nm,1.0s
TEY Ternei 149.12 331⇓*e*PKHKP PKPpre 17 01 20.0
TEY pmax pmax
comp=Z,200nm,1.7s
TEY pmax pmax
comp=N,10.0nm,1.3s
TEY pmax pmax
comp=Z,100nm,1.2s
DANN Dangsing 149.16 67 *e*P **PKPdf 17 01 16.1 +0.8**
CHLP Challavanipeta 149.73 86 *e*PKPbc **PKPbc 17 01 20.6 -0.9**
HIA Hailar 149.89 355 PKHKP PKPpre 17 01 21.4
HIA 17 01 30.0
HIA Hailar 149.89 355 **PKPdf 17 01 15.7 +0.2**
HIA PKPbc **PKiKP 17 01 21.4 -0.2**
HIA PKPab **PKPab 17 01 29.9 +0.7**
GKN Gorkha 149.99 67 *e*P **PKPdf 17 01 16.6 +0.2**
SOEI Soe 150.08 196 **PKiKP 17 01 23.6 +0.4**
SONM Songino Array 150.41 13 PKP **PKPdf 17 01 17.4 +1.0**
comp=Z,23nm,1.0s,baz=326,slow=0.7,SNR=99
SONM PKPbc **PKiKP 17 01 23.1 +0.3**
comp=Z,160nm,0.8s,baz=297,slow=1.3,SNR=356
SONM PKPab **PKPab 17 01 32.4 +0.8**
comp=Z,53nm,1.0s,baz=316,slow=3.0,SNR=11
SONM pPKPbc **pPKPbc 17 03 40.1 -0.3**
comp=Z,2.5nm,0.7s,baz=299,slow=2.2,SNR=1.9
SONM PP **PP 17 05 01.7 -2.1**
comp=Z,6.2nm,1.0s,baz=25,slow=4.8,SNR=4.2
DMN Daman 150.46 68 *e*P **PKPdf 17 01 17.4 +0.1**
comp=Z,378nm,0.9s
ULN Ulaanbaatar 150.51 12 PKIKP **PKPdf 17 01 17.1 +0.5**
ULN Ulaanbaatar 150.51 12 **PKPdf 17 01 17.1 +0.5**
ULN PKPbc **PKiKP 17 01 23.3 +0.2**
ULN PKPab **PKPab 17 01 33.0 +0.9**
KKN Kakani 150.59 67 *e*P **PKPdf 17 01 17.6 +0.2**
comp=Z,354nm,0.6s
PKIN Phulchoki 150.72 68 *e*P **PKPdf 17 01 17.3 -0.4**
PKI Pulchoki 150.74 68 *e*P **PKPdf 17 01 17.3 -0.2**
GUN Gumba 151.09 67 *e*P **PKPdf 17 01 18.5 +0.2**
JIRN Jiri 151.40 67 *e*P **PKPdf 17 01 18.5 -0.3**
comp=Z,228nm,0.8s
USA0B Ussuriysk Arra 151.76 335 PKIKP **PKiKP 17 01 25.7 +0.1**
USA0B Ussuriysk Arra 151.76 335 **PKiKP 17 01 25.7 +0.1**
USRK Ussuriysk Ar. 151.76 335 PKP **PKPdf 17 01 18.9 +0.5**
comp=Z,6.7nm,1.0s,baz=270,slow=1.9,SNR=5.3
USRK PKPbc **PKiKP 17 01 26.0 +0.4**
comp=Z,48nm,0.8s,baz=330,slow=1.4,SNR=51
USRK PKPab **PKPab 17 01 37.3 0.0**
comp=Z,18nm,0.8s,baz=0.9,slow=3.2,SNR=9.4
USRK pPKPbc **pPKPbc 17 03 43.6 0.0**
comp=Z,8.0nm,0.9s,baz=243,slow=1.7,SNR=4.5
RAMN Ramite 151.88 69 *e*P **PKPdf 17 01 19.3 -0.1**
comp=Z,605nm,0.7s
CISI Cisompet, Garu 152.17 162 **PKPdf 17 01 19.1 -0.9**
CISI PKPbc **PKPbc 17 01 27.2 -0.1**
MDJ Mudanjiang 152.28 339 PKPbc **PKPdf 17 01 19.3 +0.2**
ODAN Odare 152.59 69 *e*P **PKPdf 17 01 20.4 -0.1**
comp=Z,314nm,0.7s
TAPN Taplejung 152.79 67 *e*P **PKPdf 17 01 20.4 -0.4**
comp=Z,87nm,0.5s
LEM Lembang 152.80 161 PKPbc **PKiKP 17 01 29.8 +0.9**
comp=Z,63nm,0.8s,baz=112,slow=8.9,SNR=4.9

MJAR Matsushiro Arr 154.01 316 PKP **PKPdf 17 01 22.8 +0.9**
comp=Z,4.2nm,0.8s,baz=47,slow=0.9,SNR=10.0
MJAR PKPbc **PKiKP 17 01 30.9 +0.4**
comp=Z,5.6nm,0.7s,baz=87,slow=1.5,SNR=8.7
MJAR PKPab **PKPab 17 01 46.8 -0.3**
comp=Z,22nm,1.0s,baz=38,slow=3.0,SNR=16
MAJO Matsushiro 154.01 316 PKP2 **PKPab 17 01 47.3 +0.1**
MAJO Matsushiro 154.01 316 **PKPdf 17 01 21.4 -0.5**
MAJO **PKPab 17 01 47.3 +0.1**
MJB9 Matsu-Tunnel 154.01 316 **PKPdf 17 01 21.5 -0.4**
MJB9 PKPbc **PKiKP 17 01 30.8 +0.3**
MJB9 **PKPab 17 01 47.2 0.0**
CN2 Changchun 154.27 344 *e*PKPbc **PKPdf 17 01 21.8 -0.2**
GSI Gunungsitoli 154.60 132 **PKPdf 17 01 22.5 -0.9**
GSI **PKPab 17 01 52.0 +1.8**
LSA Lhasa 155.10 60 PKP **PKPdf 17 01 25.3 +1.1**
LSA Lhasa 155.10 60 PKIKP PKPdf 17 01 34.8 +11
LSA 17 01 53.4
LSA Lhasa 155.10 60 P **PKPdf 17 01 24.6 +0.4**
LSA Lhasa 155.10 60 PKPdif PKPdf 17 01 34.8 +11
LSA PKPab **PKPab 17 01 53.4 +0.7**
GTA Gaotai 155.48 31 *e*PKP **PKPdf 17 01 24.5 +0.6**
GTA PKPab **PKPab 17 01 54.0 +0.5**
GTA SKKS 17 11 21.5
INU Inuyama 155.49 315 **PKPdf 17 01 24.4 +0.5**
RPSI Rantau Prapat 156.53 132 **PKPdf 17 01 26.2 +0.4**
RPSI **PKPab 17 01 59.8 +1.3**
PSI Prapat 156.60 132 PKP **PKPdf 17 01 26.2 +0.1**
comp=Z,5.6nm,0.5s,baz=181,slow=7.1,SNR=6.3
PSI PKPab **PKPab 17 01 59.8 +0.8**
comp=Z,61nm,0.8s,baz=214,slow=3.1,SNR=23
SHL Shillong 156.80 70 PKIKP **PKPdf 17 01 26.0 -0.1**
SHL Shillong 156.80 70 **PKPdf 17 01 26.0 -0.1**
SHL PKPab **PKPab 17 01 59.5 -0.4**
BTO Baotou 158.08 12 *e*PKP **PKPdf 17 01 25.3 -1.8**
HHC Hu-ho-hao-te 158.11 9 *e*PKP **PKPdf 17 01 28.5 +1.3**
KS19 Wonju Array Si 159.08 333 **PKPdf 17 02 09.9 +1.0**
KSRS Korea Array 159.09 333 PKP **PKPdf 17 01 29.2 +1.0**
comp=Z,10nm,0.9s,baz=68,slow=1.4,SNR=24
KSRS PKPab **PKPab 17 02 10.1 +1.1**
comp=Z,28nm,0.9s,baz=28,slow=4.3,SNR=28
KSRS PP **PP 17 05 54.1 +2.4**
comp=Z,2.2nm,0.8s,baz=13,slow=4.2,SNR=2.8
IPM Ipoh 159.26 133 **PKPdf 17 01 28.6 -0.6**
IPM **PKPab 17 02 10.6 +0.1**
BJI Beijing 159.26 360 PKP **PKPdf 17 01 29.5 +1.2**
BJI PP **PP 17 05 57.0 +4.8**
BJI AMB AMB
comp=Z,270nm,5.7s
BJT Baijiatuan 159.28 360 PKIKP **PKPdf 17 01 29.0 +0.6**
BJT 17 02 08.7
BJT Baijiatuan 159.28 360 **PKPdf 17 01 29.0 +0.6**
BJT **PKPab 17 02 08.7 -1.0**
KULM Kulim 159.57 131 **PKPdf 17 01 29.4 -0.1**
DL2 Dalian 159.81 347 P **PKPab 17 02 12.0 -0.1**
DL2 pmax pmax
comp=Z,69nm,0.8s
LZH Lanzhou 160.06 30⇓PKP **PKPdf 17 01 31.0 +1.4**
LZH pPKP pPKPdf 17 03 47.0 -2.4
LZH sPKP 17 04 44.0
LZH SKKS 17 11 50.0
SBUM Sibu 162.90 167 **PKPdf 17 01 33.5 +0.5**
TIA Tai'an 163.06 357 PKP **PKPdf 17 01 34.0 +1.5**
CM31 Chiang Mai Arr 163.78 90 **PKPdf 17 01 34.2 +0.6**
CM31 **PKPab 17 02 30.1 -0.3**
CMAR Chiang Mai Arr 163.78 90 PKP **PKPdf 17 01 34.1 +0.5**
comp=Z,9.3nm,1.0s,baz=264,slow=1.9,SNR=40
CMAR PKPab **PKPab 17 02 30.6 +0.3**
comp=Z,24nm,0.9s,baz=258,slow=6.1,SNR=42
CMAR PP **PP 17 06 16.6 -1.6**
comp=Z,2.2nm,1.0s,baz=278,slow=6.7,SNR=4.5
CHTO Chiang Mai 163.81 89 PKP2 **PKPab 17 02 30.2 -0.3**
CHTO Chiang Mai 163.81 89 **PKPdf 17 01 33.5 -0.1**
CHTO **PKPab 17 02 30.2 -0.3**
CD2 Chengdu 163.91 41 PKP **PKPdf 17 01 32.0 -1.5**
XAN Xi'an 163.94 22 PKP2 **PKPab 17 02 30.2 -0.2**
XAN Xi'an 163.94 22 **PKPdf 17 01 32.8 -0.6**
XAN **PKPab 17 02 30.2 -0.2**
PBKT Sadao Pong 165.40 98 **PKPdf 17 01 35.0 0.0**
PBKT **PKPab 17 02 37.1 -0.4**
KMI Kunming 166.35 62 PKP **PKPdf 17 01 35.0 -0.9**
KMI Kunming 166.35 62 PKIKP **PKPdf 17 01 34.6 -1.3**
KMI 17 02 41.3
KMI Kunming 166.35 62 **PKPdf 17 01 34.6 -1.3**
KMI **PKPab 17 02 41.3 -0.5**
NJ2 Nanjing 166.99 349 *e*PKP **PKPdf 17 01 36.0 +0.2**
SSE Sheshan 167.31 340 **PKPdf 17 01 36.4 +0.4**
ENH Enshi 167.50 27 **PKPdf 17 01 36.3 0.0**
ENH **PKPab 17 02 45.8 -0.5**
SLVN Son La 168.41 78 **PKPdf 17 01 37.2 0.0**
SLVN **PKPab 17 02 51.1 +0.2**
WHN Wuhan 168.63 7 PKP **PKPdf 17 01 37.5 +0.5**
WHN PKPab **PKPab 17 02 50.5 -0.6**
WHN PP **PP 17 06 38.8 -1.7**
GYA Guiyang 168.75 49 *i* PKP **PKPdf 17 01 38.3 +0.9**
GYA PKPab **PKPab 17 02 52.0 -0.2**
GYA pPKP pPKPdf 17 03 55.8 -1.8
GYA sPKP 17 04 57.3
GYA PP **PP 17 06 43.5 +0.9**
GYA SKKS 17 12 30.0
GYA AMB AMB
comp=Z,200nm,7.4s

*THE **27** 16:50:45.6,38°.14N×20°.39E,h6km±1km, ML2.9/5, Error ellipse: s-maj=1.2km s-min=0.4km az=71.0*
*ATH **27** 16:50:46.1,38°.18N×20°.47E,h13km±3km, ML2.7/10, Error ellipse: s-maj=4.1km s-min=1.2km az=251.0*
ISC 27 16:50:45.7±1.7,**38°.17N**±0°.04×**20°.43E**±0°.08,**h10**km±6km,
n35,σ0§41/44, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.05**	**80**	P	**Pg**	**16 50 47.5**	**-0.1**
ARG2				S	**Sg**	**16 50 49.1**	**+0.1**
38μm,0.1s							
VLS	**Valsamata**	**0.13**	**87**	P	**Pg**	**16 50 48.7**	**0.0**
VLS				S	**Sg**	**16 50 51.0**	**+0.2**
6μm,0.1s							
VLS	**Valsamata**	**0.13**	**87**	P	**Pg**	**16 50 48.6**	**-0.1**
VLS				AML	AML	16 50 51.0	
comp=E,12916μm,0.1s							
VLS				AML	AML	16 50 52.1	
comp=N,10728μm,0.2s							
KFL	**Anninata**	**0.29**	**102**	P	**Pg**	**16 50 51.7**	**+0.2**
KFL				S	**Sg**	**16 50 56.2**	**+0.8**
comp=N,10μm,0.3s							
KFL	**Anninata**	**0.29**	**102**	P	**Pg**	**16 50 51.8**	**+0.2**
KFL				S	**Sg**	**16 50 55.7**	**+0.3**
KFL				AML	AML	16 50 57.1	
comp=E,30501μm,0.3s							
KFL				AML	AML	16 50 57.5	
comp=N,8624μm,0.3s							
FSK	**Fiskardo**	**0.31**	**20**	P	**Pg**	**16 50 52.1**	**+0.2**
FSK				S	**Sg**	**16 50 57.2**	**+1.2**
comp=N,1μm,0.3s							
FSK	**Fiskardo**	**0.31**	**20**	P	**Pg**	**16 50 52.1**	**+0.2**
FSK				S	**Sg**	**16 50 56.5**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.35**	**148**	P	**Pg**	**16 50 52.9**	**+0.3**
VLMS				AML	AML	16 51 04.9	
comp=N,5777μm,0.3s							
VLMS				AML	AML	16 51 05.2	
comp=E,2867μm,0.2s							
EVGI	**Lefkada island**	**0.48**	**21**	P	**Pg**	**16 50 55.4**	**+0.2**
EVGI				S	**Sb**	**16 51 03.1**	**-0.5**
EVGI	**Lefkada island**	**0.48**	**21**	P	**Pg**	**16 50 55.4**	**+0.2**
EVGI				S	**Sg**	**16 51 02.6**	**+1.0**
MGNA	**Meganis**	**0.56**	**30**	P	**Pg**	**16 50 56.6**	**-0.1**
LKD2	**Lefkada island**	**0.64**	**16**	P	**Pg**	**16 50 58.0**	**-0.2**
TSLK	**Tsoukalades, L**	**0.68**	**15**	P	**Pg**	**16 50 58.3**	**-0.6**
PDO	**Prodromos**	**0.73**	**54**	P	**Pg**	**16 50 59.9**	**+0.1**
PDO	**Prodromos**	**0.73**	**54**	P	**Pg**	**16 50 59.8**	**-0.1**
RLS	**Riolos of Patr**	**0.83**	**97**	P	**Pg**	**16 51 01.4**	**-0.3**
RLS				AML	AML	16 51 16.8	
comp=E,439μm,0.6s							
RLS				AML	AML	16 51 22.7	
comp=N,426μm,0.3s							
PVO	**Paravola**	**0.97**	**62**	P	**Pg**	**16 51 04.6**	**+0.2**
PVO				S	**Sn**	**16 51 19.7**	**+0.4**
comp=N,660nm,0.3s							
PVO	**Paravola**	**0.97**	**62**	P	**Pg**	**16 51 04.5**	**+0.1**
PVO				AML	AML	16 51 23.1	
comp=E,1536μm,0.4s							
PVO				AML	AML	16 51 27.3	
comp=N,1172μm,0.6s							
DRO	**Drossia**	**1.03**	**102**	P	**Pg**	**16 51 05.5**	**-0.1**
DRO	**Drossia**	**1.03**	**102**	P	**Pg**	**16 51 05.4**	**-0.1**
DRO				AML	AML	16 51 29.5	
comp=N,1053μm,0.6s							
DRO				AML	AML	16 51 29.7	
comp=E,932μm,0.4s							
EFP	**Efpalio**	**1.19**	**77**	P	**Pb**	**16 51 08.1**	**-0.3**
EFP	**Efpalio**	**1.19**	**77**	P	**Pb**	**16 51 08.0**	**-0.3**
EFP				AML	AML	16 51 31.5	
comp=N,426μm,0.7s							
EFP				AML	AML	16 51 36.1	
comp=E,467μm,0.6s							
AMT	**Artemida-Makis**	**1.20**	**122**	P	**Pg**	**16 51 09.0**	**+0.3**
AMT				AML	AML	16 51 37.2	
comp=E,812μm,1.1s							
AMT				AML	AML	16 51 43.4	
comp=N,500μm,0.8s							
LAKA	**Lakka**	**1.22**	**86**	P	**Pn**	**16 51 08.3**	**-0.6**
LAKA				AML	AML	16 51 32.2	
comp=N,388μm,0.4s							
LAKA				AML	AML	16 51 34.1	
comp=E,321μm,0.8s							
ANX	**Ano Chora**	**1.25**	**70**	P	**Pn**	**16 51 09.3**	**0.0**
ANX	**Ano Chora**	**1.25**	**70**	P	**Pn**	**16 51 09.3**	**0.0**
ANX				AML	AML	16 51 34.4	
comp=N,795μm,0.5s							
ANX				AML	AML	16 51 34.6	
comp=E,845μm,0.5s							
SERG	**Sergoula**	**1.30**	**79**	P	**Pn**	**16 51 09.5**	**-0.6**
SERG	**Sergoula**	**1.30**	**79**	P	**Pn**	**16 51 09.7**	**-0.3**
TRIZ	**Trizonia**	**1.31**	**81**	P	**Pn**	**16 51 09.7**	**-0.4**
TRIZ	**Trizonia**	**1.31**	**81**	P	**Pn**	**16 51 09.7**	**-0.4**
ALIK	**Aliki, Aigiali**	**1.33**	**86**	P	**Pn**	**16 51 10.3**	**0.0**
KLV	**Kalavryta, Ach**	**1.36**	**95**	P	**Pn**	**16 51 11.1**	**+0.2**
KLV	**Kalavryta, Ach**	**1.36**	**95**	P	**Pn**	**16 51 11.2**	**+0.2**
KALE	**Kalithea**	**1.36**	**80**	P	**Pn**	**16 51 10.5**	**-0.5**
KALE	**Kalithea**	**1.36**	**80**	P	**Pn**	**16 51 10.4**	**-0.5**

*SJA **27** 16:51:56.4±0.4,30°.03S×71°.69W,h25km±2km, ML3.4, MW3.7*
*GUC **27** 16:51:59.4±0.7,30°.17S×71°.54W,h31km±50km, ML3.9*
ISC 27 16:51:59.1±2.7,**29°.97S**±0°.09×**71°.7W**±0°.1,**h43**km,**n21,**
σ1§12/30,1C-1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSCH	**La Serena**	**0.43**	**81**	*e*P	**Pn**	**16 52 08.1**	**-1.0**
LSCH				*e*S	**Sn**	**16 52 14.3**	**-2.0**
GO04	**Tololo Observa**	**0.84**	**104**⇓	*i* P	**Pn**	**16 52 13.2**	**-1.6**
GO04				*e*S	**Sn**	**16 52 23.5**	**-2.6**
GO04				IAML		16 52 24.2	
comp=E,7μm,0.3s							
GO03	**Copiap**	**2.71**	**29**	IAML		16 53 27.9	
comp=E,220nm,0.2s							
RTLS	**Leoncito**	**2.78**	**132**	*e*P	**Pn**	**16 52 41.9**	**+0.5**
RTLS				*e*S	**Sn**	**16 53 15.2**	**+1.4**
RTLS				IAML		16 53 20.8	
comp=Z,124nm,0.6s							
AGUA	**GUANDACOL**	**2.87**	**81**	*e*P	**Pn**	**16 52 43.0**	**+0.5**
AMOG	**MOGNA**	**2.96**	**110**	*e*P	**Pn**	**16 52 44.1**	**+0.4**
ROCH	**El Roble**	**3.05**	**168**	*e*P	**Pn**	**16 52 45.0**	**-0.1**
ROCH				*e*S	**Sn**	**16 53 20.3**	**-0.2**
ROCH				IAML		16 53 35.2	
comp=E,273nm,0.5s							
ROC1	**El Roble**	**3.06**	**168**	*e*P	**Pn**	**16 52 45.1**	**0.0**
PEL	**Peldehue**	**3.29**	**164**⇑	*i* P	**Pn**	**16 52 48.4**	**+0.2**
PEL				*i* S	**Sn**	**16 53 25.7**	**-0.4**
PEL				IAML		16 53 40.6	
comp=E,285nm,0.5s							
PEL	**Peldehue**	**3.29**	**164**	*e*P	**Pn**	**16 52 48.4**	**+0.2**
VCA	**Vinchina**	**3.32**	**69**	*e*P	**Pn**	**16 52 49.8**	**+1.0**
VCA				IAML		16 53 40.5	
comp=Z,109nm,0.4s							
RTCV	**Cerro Valdivia**	**3.33**	**125**	*e*P	**Pn**	**16 52 48.8**	**0.0**
MT05	**Renca**	**3.51**	**166**	*e*P	**Pn**	**16 52 52.0**	**+0.7**
MT05				*e*S	**Sn**	**16 53 31.4**	**-0.3**
MT05				IAML		16 53 47.8	
comp=E,362nm,0.5s							
FCH	**Farellones**	**3.56**	**160**	*e*P	**Pn**	**16 52 49.6**	**-2.6**
FCH				*e*S	**Sn**	**16 53 33.7**	**+0.4**
FCH				IAML		16 53 37.5	
comp=N,145nm,0.2s							
ASAL	**Salagasta**	**3.60**	**137**	*e*P	**Pn**	**16 52 52.8**	**+0.2**
MT03	**Universidad Ad**	**3.66**	**164**	*e*P	**Pn**	**16 52 53.9**	**+0.5**
MT03				*e*S	**Sn**	**16 53 34.2**	**-1.2**
MT03				IAML		16 53 39.3	
comp=N,352nm,0.2s							
AAGR	**Agrelo**	**3.98**	**142**	*e*P	**Pn**	**16 52 58.4**	**+0.7**
LMEL	**Las Melosas**	**4.08**	**162**	*e*P	**Pn**	**16 52 59.9**	**+0.8**
LMEL				*e*S	**Sn**	**16 53 46.2**	**+0.5**
ACLC	**CERRO LA CRUZ**	**4.20**	**84**	*e*P	**Pn**	**16 53 01.6**	**+0.8**
ACLC				*e*S	**Sn**	**16 53 50.5**	**+1.7**
ACAN	**Cantantal**	**4.53**	**122**	*e*P	**Pn**	**16 53 06.1**	**+0.9**
APLL	**PUNTA DE LOS L**	**4.53**	**97**	*e*P	**Pn**	**16 53 06.4**	**+1.1**

*IDC **27** 16:53:05.2±1.8,7°.13S×129°.54E,h135km±16km, mb4.1/20, mb1 4.1/22,mb1mx4.0/52,mbtmp4.5/22, Error ellipse: s-maj=16.4km s-min=10.5km az=79.0*
*NEIC **27** 16:53:05.3±1.6,7°.15S±0°.05×129°.53E±0°.06,h138km±6km, mb4.7/30, Error ellipse: s-maj=10.6km s-min=3.9km az=50.0*
*DJA **27** 16:53:06.2±0.2,7°.S±2°×13°.0E±°,h138km±4km, M5.1/20, mb4.8/20,mB5.5/9,MLv5.0/12,MLv5.4/5,Mw(mB)5.0/9*
ISC 27 16:53:05.9±0.4,**7°.26S**±0°.05×**129°.51E**±0°.06,**h150**km,**n92,**
σ1§65/93,mb4.5/36,1C-1D,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**1.92**	**112**	P	**Pn**	**16 53 41.3**	**+1.3**
SAUI	**Saumlaki**	**1.92**	**112**		**Pn**	**16 53 41.5**	**+1.4**
BNDI	**Bandanaira**	**2.75**	**8**	P	**Pn**	**16 53 50.6**	**+0.4**
AAI	**Ambon**	**3.79**	**340**	P	**Pn**	**16 54 04.4**	**+1.0**
MSAI	**Masohi**	**3.93**	**352**	P	**Pn**	**16 54 07.3**	**+2.0**
FAKI	**Fak Fak**	**5.11**	**32**	P	**Pn**	**16 54 18.8**	**-2.0**
1.9nm1.9nm5μm190nm,0.7s							
FAKI	**Fak Fak**	**5.11**	**32**		**Pn**	**16 54 19.1**	**-1.7**
KMPI	**Kaimana, Papua**	**5.50**	**50**	P	**Pn**	**16 54 27.6**	**+1.6**
6.6nm17μm410nm,0.6s							
SOEI	**Soe**	**5.74**	**244**	P	**Pn**	**16 54 30.1**	**+0.8**
4.1nm4.1nm3μm174nm,0.8s							
SOEI	**Soe**	**5.74**	**244**		**Pn**	**16 54 30.1**	**+0.8**
MTN	**Manton Dam**	**5.77**	**164**		**Pn**	**16 54 30.0**	**+0.5**
SANI	**Sanana**	**6.25**	**326**	P	**Pn**	**16 54 38.8**	**+2.8**
0.1nm29nm,0.8s							
SIJI	**Sorong**	**6.59**	**16**	P	**Pn**	**16 54 39.0**	**-1.5**
16nm,0.3s,baz=23,slow=23,SNR=126							
SIJI				S	**Sn**	**16 55 49.5**	**-5.2**
19nm,0.3s,baz=236,slow=23,SNR=11							
SWI	**Sorong**	**6.59**	**15**	P	**Pn**	**16 54 38.9**	**-1.7**
RKPI	**Ransiki, Papua**	**7.37**	**39**	P	**Pn**	**16 54 50.8**	**-0.2**
2.8nm2.8nm7μm213nm,0.4s							
KNRA	**Kununurra**	**8.39**	**185**		**Pn**	**16 55 03.5**	**-1.1**
LUWI	**Luwuk**	**9.13**	**312**	Pn	**Pn**	**16 55 14.1**	**-0.3**
BKSI	**Bulukumba**	**9.53**	**281**	P	**Pn**	**16 55 21.3**	**+1.6**
35nm,0.9s							
FITZ	**Fitzroy Crossi**	**11.41**	**199**	P	**Pn**	**16 55 42.4**	**-2.1**
6.6nm,0.3s,baz=32,slow=11,SNR=84							
FITZ				S	**Sn**	**16 57 43.9**	**-6.8**
5.7nm,0.3s,baz=107,slow=18,SNR=6.9							
FITZ	**

comp=Z,0.8nm,0.3s,baz=335,slow=17,SNR=3.5
ASAR ScP **ScP** **17 04 52.6 0.0**
comp=Z,0.2nm,0.3s,baz=342,slow=1.8,SNR=3.6
PSA00 Pilbara Seismi 17.01 212 P **Pn** **16 56 54.6 -0.4**
PSA00 IAmb IAmb 16 56 57.1
comp=Z,28nm,0.5s
KKM Kota Kinabalu 18.73 315 P **P** **16 57 12.4 -0.9**
KKM IAmb IAmb 16 57 24.0
comp=Z,49nm,0.9s
UGM Wanagama 18.83 267 P **P** **16 57 13.9 -0.5**
STKI Sintang 19.40 291 P **Pn** **16 57 22.8 -0.5**
comp=Z,42nm,0.8s
SBUM Sibu 19.77 299 P **Pn** **16 57 26.8 -0.8**
KPJI Karang Pucung 20.41 268 P Pn 16 57 40.7 +5.5
CTA Charters Tower 20.64 130 P **P** **16 57 34.4 +0.5**
comp=Z,1.4nm,0.3s,baz=348,slow=20,SNR=3.1
KSM Kuching 21.03 294 P **P** **16 57 37.0 -1.0**
KSM IAmb IAmb 16 57 42.9
comp=Z,20nm,0.8s
GIRL Giralia 21.21 222 P **P** **16 57 40.6 +0.7**
LEM Lembang 21.73 270 P **P** **16 57 46.7 +1.0**
comp=Z,30nm,0.6s,baz=26,slow=16,SNR=4.0
FORT Forrest 23.43 183 P **P** **16 58 03.4 +1.8**
BBOO Buckleboo 26.14 167 P **P** **16 58 27.1 +0.9**
BBOO IAmb IAmb 16 59 08.4
comp=Z,14nm,1.1s
STKA Stephens Creek 26.96 157 P **P** **16 58 35.2 +1.7**
comp=Z,4.7nm,0.8s,baz=332,slow=11,SNR=13
STKA Stephens Creek 26.96 157 P **P** **16 58 34.7 +1.2**
MYKOM Kota Tinggi 27.14 288 P **P** **16 58 35.8 +0.5**
MYKOM IAmb IAmb 16 59 05.3
comp=Z,33nm,1.3s
NWAO Narrogin (SRO) 27.96 202 P **P** **16 58 43.8 +1.3**
comp=Z,8.1nm,0.9s,baz=350,slow=18,SNR=4.3
NWAO Narrogin (SRO) 27.96 202 IAmb IAmb 16 59 45.7
comp=Z,36nm,1.3s
IPM Ipoh 30.72 291 P **P** **16 59 08.8 +1.7**
IPM IAmb IAmb 16 59 09.5
comp=Z,10nm,0.9s
KULM Kulim 31.38 293 P **P** **16 59 13.6 +0.8**
KULM IAmb IAmb 17 00 16.9
comp=Z,18nm,1.2s
YULB Yu-li 31.51 345 P **P** **16 59 14.8 +1.0**
TPUB Ta-pu 31.59 344 P **P** **16 59 12.8 -1.7**
RPSI Rantau Prapat 32.08 287 P **P** **16 59 19.4 +0.4**
PSI Prapat 32.12 287 P **P** **16 59 19.4 -0.1**
comp=Z,7.8nm,0.4s,baz=76,slow=6.2,SNR=11
GSI Gunungsitoli 32.98 284 P **P** **16 59 26.0 -0.8**
GSI IAmb IAmb 16 59 27.4
comp=Z,26nm,1.2s
MLSI Meulaboh, Aceh 34.97 288 P **P** **16 59 46.3 +2.3**
comp=Z,37nm,0.8s
SLVN Son La 37.94 319 P **P** **17 00 09.0 -0.1**
SLVN IAmb IAmb 17 00 21.8
comp=Z,19nm,2.0s
CM31 Chiang Mai Arr 39.53 311 P **P** **17 00 22.8 +0.4**
CMAR Chiang Mai Arr 39.53 311 P **P** **17 00 22.7 +0.3**
comp=Z,3.9nm,0.8s,baz=140,slow=7.1,SNR=38
CHTO Chiang Mai 39.74 311 P **P** **17 00 23.9 -0.3**
CHTO IAmb IAmb 17 01 35.2
comp=Z,24nm,1.1s
NJ2 Nanjing 40.40 346 *eP* **P** **17 00 30.0 +0.7**
NJ2 pmax pmax
comp=Z,4.0nm,0.6s
KMI Kunming 41.42 322 P **P** **17 00 41.0 +2.9**
KMI pmax pmax
comp=Z,4.0nm,1.9s
MJAR Matsushiro Arr 44.33 10 P **P** **17 01 00.1 -1.0**
comp=Z,1.8nm,0.5s,baz=186,slow=8.7,SNR=6.8
MAT Matsushiro 44.33 10 P **P** **17 01 00.1 -1.0**
KSRS Korea Array 44.51 358 P **P** **17 01 02.9 +0.5**
comp=Z,0.6nm,0.5s,baz=171,slow=8.5,SNR=4.4
BJI Beijing 48.65 346 *eP* **P** **17 01 37.3 +2.7**
BJI pP **pwP** **17 02 09.0 -2.5**
BJI PcP **PcP** **17 02 58.3 +0.6**
BJI pmax pmax
comp=Z,10.0nm,1.3s
LZH Lanzhou 49.41 332 ||P **P** **17 01 40.3 -0.4**
LZH pP pP 17 02 14.0 +0.4
LZH sP sP 17 02 30.5 +0.8
LZH PP **PP** **17 03 37.5 +1.1**
LZH pmax pmax
comp=Z,24nm,1.3s
LZH pmax pmax
comp=Z,83nm,6.0s
HHC Hu-ho-hao-te 50.64 342 *eP* **P** **17 01 51.0 +1.1**
HHC pmax pmax
comp=Z,4.0nm,1.0s
HHC pmax pmax
comp=Z,73nm,5.5s
CN2 Changchun 50.96 356 *eP* P 17 01 47.0 -5.0
CN2 pmax pmax
comp=Z,30nm,0.9s
SONM Songino Array 58.54 342 P **P** **17 02 47.2 +0.5**
comp=Z,2.1nm,0.6s,baz=166,slow=8.0,SNR=2.1
WMQ Urumqi 63.35 327 *eP* **P** **17 03 20.3 +1.1**
WMQ pmax pmax
comp=Z,25nm,1.3s
WMQ pmax pmax
comp=Z,400nm,7.5s
MKAR Makanchi Array 68.18 327 P **P** **17 03 50.5 +0.5**
comp=Z,5.5nm,0.3s,baz=116,slow=7.9,SNR=27
YAK Yakutsk 69.09 0 P **P** **17 03 55.8 +0.5**
comp=Z,3.7nm,0.4s,baz=159,slow=2.5,SNR=6.3
YAK Yakutsk 69.09 0 IAmb IAmb 17 03 56.5
comp=Z,14nm,0.8s
ZALV Zalesovo Beam 71.60 334 P **P** **17 04 10.8 +0.1**
comp=Z,2.8nm,0.4s,baz=144,slow=6.0,SNR=4.4
KURBB Kurchatov Arra 72.48 329 P **P** **17 04 16.4 +0.4**
comp=Z,3.8nm,0.4s,baz=124,slow=5.3,SNR=29
KURK Kurchatov 72.49 329 P **P** **17 04 16.4 +0.4**
KURK Kurchatov 72.49 329 IAmb IAmb 17 06 03.2
comp=Z,12nm,1.1s
MAW Mawson 74.53 201 P **P** **17 04 30.0 +2.3**
comp=Z,2.7nm,0.7s,baz=86,slow=4.6,SNR=6.6
WSAR Wadi Sarin 75.54 296 P **P** **17 04 35.1 +0.7**
comp=Z,4.2nm,0.4s,baz=155,slow=4.9,SNR=11
BVAR Borovoye Array 78.03 328 P **P** **17 04 48.2 +0.5**
comp=Z,2.7nm,0.7s,baz=132,slow=10,SNR=7.0
GEYT Alibeck 80.01 310 P **P** **17 04 59.5 +0.5**
comp=Z,0.9nm,0.5s,baz=48,slow=2.1,SNR=3.1
ABKAR Akbulak array 82.41 322 P **P** **17 05 10.8 -0.5**
SYO Syowa Base 83.24 201||*e*PcP **PcP** **17 05 20.0 +0.7**
AKTO Aktyubinsk 83.98 322 P **P** **17 05 20.0 +0.7**
comp=Z,2.0nm,0.4s,baz=97,slow=6.7,SNR=6.1
ARU Arti 85.67 328 P **P** **17 05 27.5 -0.1**
comp=Z,2.3nm,0.6s,baz=254,slow=1.2,SNR=7.4
ARU Arti 85.67 328 P **P** **17 05 26.9 -0.6**
ARU IAmb IAmb 17 05 28.8
comp=Z,8.2nm,1.0s
ILAR Eielson Array 93.79 25 P **P** **17 06 05.2 -0.4**
comp=Z,0.9nm,0.8s,baz=257,slow=4.5,SNR=7.9
ARCES ARCESS Array B 101.65 340 P **Pdif** **17 06 40.3 -0.6**
comp=Z,3.4nm,0.8s,baz=74,slow=6.7,SNR=3.0
ARCES PKiKP **PKiKP** **17 11 04.6 +1.0**
comp=Z,7.7nm,1.0s,baz=94,slow=3.6,SNR=3.4
TORD Torodi Ar. Bea 128.38 281 PKP **PKiKP** **17 11 57.0 +0.6**
comp=Z,2.0nm,0.6s,baz=76,slow=1.9,SNR=9.4
DBIC Dimbokro 134.71 272 PKP **PKiKP** **17 12 09.8 +0.5**
comp=Z,1.7nm,0.4s,baz=29,slow=4.7,SNR=6.0
CPUP Villa Florida 145.95 169 PKPbc **PKiKP** **17 12 30.4 -1.5**
comp=Z,3.3nm,0.9s,baz=226,slow=3.7,SNR=5.7
LPAZ La Paz 150.81 143 PKPbc **PKiKP** **17 12 44.6 +1.7**
comp=Z,1.9nm,0.4s,baz=64,slow=3.7,SNR=12

*IDC **27** 17:00:06.5±8.7, 15°.63S×177°.73W, h446km±95km, mb3.1/7, mb1 3.5/7, mb1mx3.2/45, mbtmp3.9/7, Error ellipse: s-maj=37.0km s-min=25.3km az=136.0*
*NEIC **27** 17:00:07.3±1.0, 15°.7S±0°.2×177°.8W±0°.2, h461km±8km, mb4.4/8, Error ellipse: s-maj=34.1km s-min=22.5km az=134.0*

ISC 27 17:00:06.7±0.8, 15°.7S±0°.2×177°.8W±0°.2, h450km, n26, σ0946/25, mb4.0/11, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSVF	**Nonsavu**	**4.51**	**242**	P		**P**	**17 01 26.6**	**+0.1**
WRA	**Warramunga Arr**	**45.68**	**257**	P		**P**	**17 07 46.0**	**-0.1**
	0.5nm,0.3s,baz=93,slow=6.5,SNR=5.8							
WRA	**Warramunga Arr**	**45.68**	**257**	P		**P**	**17 07 45.9**	**-0.2**
AS31	**Alice Springs**	**46.03**	**252**	P		**P**	**17 07 48.7**	**-0.1**
ASAR	**Alice Springs**	**46.03**	**252**	P		**P**	**17 07 49.4**	**+0.7**
	5.5nm,0.6s,baz=85,slow=8.6,SNR=41							
ASAR	**Alice Springs**	**46.03**	**252**	P		**P**	**17 07 48.8**	**+0.1**
NIKH	**Nikolski High**	**68.77**	**6**	P		**P**	**17 10 24.0**	**-0.1**
QSPA	**South Pole Qui**	**74.39**	**180**	P		**P**	**17 10 57.4**	**+0.1**
	1.3nm,1.0s,baz=343,slow=2.9,SNR=5.2							
QSPA	**South Pole Qui**	**74.39**	**180**	P		**P**	**17 10 57.0**	**-0.3**
QSPA				IAmb		IAmb	17 11 46.9	
	comp=Z,24nm,1.9s							
NVAR	**Mina Array Bea**	**77.38**	**44**	P		**P**	**17 11 14.4**	**0.0**
	comp=Z,0.6nm,0.6s,baz=221,slow=7.7,SNR=6.1							
NVAR	**Mina Array Bea**	**77.38**	**44**	P		**P**	**17 11 13.7**	**-0.8**
IMAR	**Indian Mountai**	**83.36**	**10**	P		**P**	**17 11 45.5**	**+0.6**
SCRK	**Sand Creek**	**83.53**	**14**	P		**P**	**17 11 46.1**	**+0.1**
SCRK				IAmb		IAmb	17 14 01.4	
	comp=Z,29nm,1.9s							
IL31		**83.56**	**13**	P		**P**	**17 11 45.2**	**-0.6**
IL31				IAmb		IAmb	17 14 39.3	
	comp=Z,24nm,1.9s							
ILAR	**Eielson Array**	**83.56**	**13**	P		**P**	**17 11 45.5**	**-0.4**
	comp=Z,0.5nm,0.4s,baz=225,slow=5.3,SNR=14							
BILL	**Bilibino**	**84.26**	**354**	P		**P**	**17 11 50.0**	**+0.7**
BILL				IAmb		IAmb	17 13 19.6	
	comp=Z,2.6nm,0.8s							
TXAR	**Lajitas Array**	**84.27**	**58**	P		**P**	**17 11 51.2**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=251,slow=3.8,SNR=3.2							
TXAR	**Lajitas Array**	**84.27**	**58**	P		**P**	**17 11 50.6**	**+0.2**
PDAR	**Pinedale Array**	**85.30**	**43**	P		**P**	**17 11 54.9**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=245,slow=1.9,SNR=2.7							
PDAR	**Pinedale Array**	**85.30**	**43**	P		**P**	**17 11 54.8**	**-0.6**
SMCO	**Snowmass**	**85.55**	**47**	P		**P**	**17 11 57.3**	**+0.4**
SMCO				IAmb		IAmb	17 11 59.5	
	comp=Z,3.4nm,0.6s							
ARCES	**ARCESS Array B**	**124.21**	**350**	PKP		**PKiKP**	**17 18 12.7**	**-0.3**
	comp=Z,8.6nm,1.2s,baz=12,slow=4.6,SNR=4.2							
BRTR	**Keskin Array B**	**143.59**	**317**	PKP		**PKPdf**	**17 18 49.2**	**-0.6**
	comp=Z,1.1nm,0.8s,baz=77,slow=3.1,SNR=4.6							
BRTR	**Keskin Array B**	**143.59**	**317**			PKPbc	17 18 48.4	+0.2
GERES	**GERESS Array B**	**145.59**	**347**	PKPbc		**PKPbc**	**17 18 53.9**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=357,slow=4.9,SNR=3.1							
GERES	**GERESS Array B**	**145.59**	**347**			**PKPbc**	**17 18 53.6**	**-0.4**

IDC 27 17:15:54.5±2.5, 4°.06N×95°.17E, h0km, mb3.4/3, mb1 3.6/5, mb1mx3.3/42, mbtmp3.3/5, ML3.2/2, Error ellipse: s-maj=86.9km s-min=24.4km az=57.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PSI	**Prapat**	**3.95**	**108**	Pn		Pn	17 16 57.5	+1.0
	1.0nm,0.3s,baz=286,slow=18,SNR=3.7							
PSI				Sn		Sb	17 17 53.3	-0.3
	2.5nm,0.3s,baz=32,slow=12,SNR=4.2							
CMAR	**Chiang Mai Arr**	**14.78**	**14**	Pn		Pn	17 19 24.7	-0.3
	0.1nm,0.3s,baz=205,slow=11,SNR=4.7							
H08S2	**Diego Garcia H**	**25.44**	**243**	T		T	17 48 35.9	
	baz=70							
H08S3	**Diego Garcia H**	**25.44**	**243**	T		T	17 48 39.1	
	baz=70							
H08S1	**Diego Garcia H**	**25.45**	**243**	T		T	17 48 35.6	
	baz=70							
MKAR	**Makanchi Array**	**44.01**	**347**	P		P	17 24 03.7	-0.1
	0.2nm,0.7s,baz=142,slow=7.3,SNR=2.2							
WRA	**Warramunga Arr**	**45.28**	**123**	P		P	17 24 13.8	-0.5
	0.2nm,0.4s,baz=303,slow=9.7,SNR=5.0							
ASAR	**Alice Springs**	**46.74**	**128**	P		P	17 24 25.9	+0.1
	0.3nm,0.3s,baz=300,slow=7.2,SNR=28							

*THE **27** 17:22:00.5, 38°.40N×20°.46E, h8km±1km, ML3.2/9, Error ellipse: s-maj=1.1km s-min=0.3km az=261.0*
*ATH **27** 17:22:00.0, 38°.40N×20°.45E, h13km±2km, ML3.1/15, Error ellipse: s-maj=2.3km s-min=0.7km az=39.0*

ISC 27 17:21:59.5±0.9, 38°.41N±0°.02×20°.44E±0°.03, h14km±5km, n50, σ0973/82, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FSK	**Fiskardo**	**0.11**	**62**	P		**Pg**	**17 22 02.8**	**0.0**
FSK				S		**Sg**	**17 22 04.5**	**-0.5**
	14μm,0.4s							
FSK	**Fiskardo**	**0.11**	**62**	P		**Pg**	**17 22 02.8**	**0.0**
FSK				S		**Sg**	**17 22 05.0**	**0.0**
ARG2	**Argostoli**	**0.23**	**170**	P		**Pg**	**17 22 04.9**	**+0.4**
ARG2				S		**Sg**	**17 22 08.2**	**+0.3**
VLS	**Valsamata**	**0.26**	**152**	P		**Pg**	**17 22 05.1**	**+0.1**
VLS				S		**Sg**	**17 22 09.0**	**+0.3**
	10μm,0.5s							
VLS	**Valsamata**	**0.26**	**152**	P		**Pg**	**17 22 05.1**	**+0.1**
VLS				S		**Sg**	**17 22 09.0**	**+0.3**
VLS				AML		AML	17 22 09.4	
	comp=E,16911μm,0.3s							
VLS				AML		AML	17 22 12.7	
	comp=N,19836μm,0.6s							
EVGI	**Lefkada island**	**0.28**	**39**	P		**Pb**	**17 22 05.9**	**-0.3**
EVGI				S		**Sb**	**17 22 10.4**	**-0.3**
EVGI	**Lefkada island**	**0.28**	**39**	P		**Pb**	**17 22 05.9**	**-0.3**
EVGI				S		**Sb**	**17 22 10.5**	**-0.3**
MGNA	**Meganis**	**0.38**	**48**	P		**Pb**	**17 22 07.5**	**-0.4**
MGNA				S		**Sb**	**17 22 13.2**	**-0.4**
KFL	**Anninata**	**0.41**	**137**	P		**Pg**	**17 22 07.7**	**+0.1**
KFL				S		**Sb**	**17 22 14.2**	**-0.3**
	comp=N,5μm,0.4s							
KFL	**Anninata**	**0.41**	**137**	P		**Pg**	**17 22 07.7**	**+0.1**
KFL				S		**Sb**	**17 22 13.8**	**-0.6**
KFL				AML		AML	17 22 14.8	
	comp=N,9655μm,0.5s							
KFL				AML		AML	17 22 15.8	
	comp=E,12011μm,0.3s							
LKD2	**Lefkada island**	**0.42**	**24**	P		**Pb**	**17 22 08.4**	**-0.3**
LKD2				S		**Sb**	**17 22 14.3**	**-0.7**
	comp=E,2μm,0.5s							
LKD2	**Lefkada island**	**0.42**	**24**	P		**Pb**	**17 22 08.4**	**-0.3**
LKD2				S		**Sb**	**17 22 14.7**	**-0.3**
LKD2				AML		AML	17 22 20.6	
	comp=E,3460μm,0.4s							
LKD2				AML		AML	17 22 24.3	
	comp=N,4150μm,0.6s							
TSLK	**Tsoukalades, L**	**0.45**	**22**	P		**Pb**	**17 22 09.2**	**-0.1**
TSLK				S		**Sb**	**17 22 16.3**	**+0.4**
	comp=N,3μm,0.8s							
TSLK	**Tsoukalades, L**	**0.45**	**22**	P		**Pb**	**17 22 09.0**	**-0.2**
TSLK				S		**Sb**	**17 22 15.4**	**-0.4**
TSLK				AML		AML	17 22 17.9	
	comp=E,4098μm,0.4s							
TSLK				AML		AML	17 22 21.1	
	comp=N,5231μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.56**	**161**	P		**Pg**	**17 22 10.5**	**+0.1**
VLMS				S		**Sb**	**17 22 19.1**	**+0.3**
VLMS				AML		AML	17 22 23.1	
	comp=N,23347μm,0.3s							
VLMS				AML		AML	17 22 23.7	
	comp=E,10928μm,0.4s							
PDO	**Prodromos**	**0.62**	**72**	P		**Pb**	**17 22 11.7**	**-0.3**
PDO				S		**Sb**	**17 22 20.0**	**-0.6**
PDO	**Prodromos**	**0.62**	**72**	P		**Pb**	**17 22 11.8**	**-0.3**
PDO				S		**Sb**	**17 22 20.4**	**-0.2**
PVO	**Paravola**	**0.88**	**76**	P		**Pn**	**17 22 16.9**	**-0.5**
PVO				S		**Sn**	**17 22 29.6**	**-0.4**
	comp=E,2μm,0.8s							
PVO	**Paravola**	**0.88**	**76**	P		**Pn**	**17 22 17.0**	**-0.5**
PVO				S		**Sn**	**17 22 29.7**	**-0.3**
PVO				AML		AML	17 22 36.0	
	comp=N,4809μm,0.6s							
PVO				AML		AML	17 22 36.5	
	comp=E,2150μm,0.6s							
RLS	**Riolos of Patr**	**0.88**	**113**	P		**Pb**	**17 22 15.6**	**-1.0**
RLS	**Riolos of Patr**	**0.88**	**113**	P		**Pb**	**17 22 16.3**	**-0.3**
RLS				S		**Sn**	**17 22 29.2**	**-0.9**
RLS				AML		AML	17 22 38.3	
	comp=N,1467μm,0.9s							
RLS				AML		AML	17 22 38.3	
	comp=E,1248μm,0.7s							
DRO	**Drossia**	**1.10**	**114**	P		**Pb**	**17 22 20.1**	**-0.2**
DRO				S		**Sn**	**17 22 36.4**	**+0.8**
	comp=E,1μm,0.5s							
DRO	**Drossia**	**1.10**	**114**	P		**Pg**	**17 22 20.6**	**-0.1**
DRO				S		**Sn**	**17 22 36.3**	**+0.8**
DRO				AML		AML	17 22 44.1	
	comp=N,2480μm,0.5s							
DRO				AML		AML	17 22 48.0	
	comp=E,3092μm,0.5s							
IGT	**Igoumenitsa**	**1.13**	**356**	P		**Pg**	**17 22 21.7**	**+0.5**
IGT				S		**Sn**	**17 22 38.0**	**+1.8**
IGT				AML		AML	17 22 41.7	
	comp=E,1074μm,0.7s							
IGT				AML		AML	17 22 43.9	
	comp=N,849μm,0.4s							
EFP	**Efpalio**	**1.16**	**88**	P		**Pb**	**17 22 21.1**	**-0.1**
EFP				S		**Sg**	**17 22 38.4**	**+1.6**
	comp=N,2μm,0.6s							
EFP	**Efpalio**	**1.16**	**88**	P		**Pb**	**17 22 21.1**	**-0.1**
EFP				AML		AML	17 22 43.9	
	comp=N,3100μm,0.6s							
EFP				AML		AML	17 22 44.1	
	comp=E,3743μm,0.6s							
ANX	**Ano Chora**	**1.18**	**80**	P		**Pg**	**17 22 21.9**	**-0.3**
ANX				S		**Sg**	**17 22 39.5**	**+1.9**
	comp=E,2μm,0.6s							
ANX	**Ano Chora**	**1.18**	**80**	P		**Pg**	**17 22 22.3**	**+0.1**
ANX				AML		AML	17 22 45.2	
	comp=N,3507μm,0.6s							
ANX				AML		AML	17 22 45.5	
	comp=E,3713μm,0.6s							
EVR	**Evrytania**	**1.19**	**64**	P		**Pb**	**17 22 22.0**	**+0.1**
EVR	**Evrytania**	**1.19**	**64**	P		**Pb**	**17 22 22.0**	**+0.1**
EVR				AML		AML	17 22 47.2	
	comp=E,718μm,0.8s							
EVR				AML		AML	17 22 48.1	
	comp=N,635μm,0.7s							
LAKA	**Lakka**	**1.23**	**97**	P		**Pn**	**17 22 22.1**	**-0.1**
LAKA				S		**Sg**	**17 22 40.3**	**+1.3**
LAKA	**Lakka**	**1.23**	**97**	P		**Pb**	**17 22 22.4**	**-0.1**
SERG	**Sergoula**	**1.27**	**89**	P		**Pb**	**17 22 23.1**	**-0.1**
SERG	**Sergoula**	**1.27**	**89**	P		**Pb**	**17 22 23.2**	**0.0**
SERG				AML		AML	17 22 46.7	
	comp=N,2101μm,0.5s							
SERG				AML		AML	17 22 46.9	
	comp=E,1668μm,0.9s							
TRIZ	**Trizonia**	**1.29**	**91**	P		**Pn**	**17 22 23.0**	**0.0**
JAN	**Janina**	**1.29**	**14**	P		**Pg**	**17 22 25.1**	**+0.7**
JAN				AML		AML	17 22 47.4	
	comp=N,1202μm,0.5s							
JAN				AML		AML	17 22 50.1	
	comp=E,1240μm,0.4s							
AMT	**Artemida-Makis**	**1.33**	**131**	P		**Pg**	**17 22 25.3**	**+0.2**
KALE	**Kalithea**	**1.34**	**90**	P		**Pn**	**17 22 23.9**	**+0.1**
KALE	**Kalithea**	**1.34**	**90**	P		**Pb**	**17 22 24.4**	**0.0**
KALE				AML		AML	17 22 50.2	
	comp=N,1847μm,0.7s							
KALE				AML		AML	17 22 51.3	
	comp=E,858μm,0.6s							
KLV	**Kalavryta, Ach**	**1.40**	**104**	P		**Pb**	**17 22 25.0**	**-0.4**
KLV				S		**Sg**	**17 22 44.4**	**-0.1**
KLV	**Kalavryta, Ach**	**1.40**	**104**	P		**Pb**	**17 22 25.3**	**-0.1**
AGG	**Agios Georgios**	**1.60**	**67**	P		**Pg**	**17 22 30.1**	**-0.2**
DBRK	**Dubrovnik**	**4.60**	**338**	*e*Pn		**Pn**	**17 23 09.4**	**+0.8**
DBRK				Sn		**Sn**	**17 24 00.9**	**-1.0**
STON	**Ston**	**4.92**	**336**	*i* Pn		**Pn**	**17 23 11.9**	**-1.1**
STON				Sn		**Sn**	**17 24 07.9**	**-1.8**
MAKA	**Makarska**	**5.52**	**333**	*e*Pn		**Pn**	**17 23 21.8**	**+0.6**
MAKA				Sn		**Sn**	**17 24 23.2**	**-1.2**
KIJV	**Kijevo**	**6.37**	**333**	*e*Pn		**Pn**	**17 23 34.0**	**+1.1**
KIJV				Sn		**Sn**	**17 24 44.1**	**-1.2**
ZIRJ	**Zirje**	**6.37**	**327**	*e*Pn		**Pn**	**17 23 33.4**	**+0.5**
ZIRJ				Sn		**Sn**	**17 24 43.0**	**-2.5**
MORI	**Morici**	**6.52**	**328**	*i* Pn		**Pn**	**17 23 36.6**	**+1.7**
DUGI	**Dugi Otok**	**6.90**	**326**	*e*Pn		**Pn**	**17 23 40.7**	**+0.6**
NVLJ	**Novalja**	**7.43**	**328**	*e*Pn		**Pn**	**17 23 48.6**	**+1.1**

*IDC **27** 17:39:00.2±1.3, 59°.94N×153°.27W, h136km±20km, mb3.8/8, mb1 4.0/12, mb1mx3.5/40, mbtmp4.3/12, Error ellipse: s-maj=22.9km s-min=14.4km az=136.0*
*NEIC **27** 17:39:00.3±2.1, 59°.93N±0°.03×153°.4W±0°.1, h141km±7km, Error ellipse: s-maj=9.5km s-min=4.4km az=77.0*
*AEIC **27** 17:39:02±1.9, 59°.95N±0°.03×153°.3W±0°.1, h143km±6km, ML4.1, mb4.5/5(NEIC), Error ellipse: s-maj=9.5km s-min=4.6km az=79.0*

ISC 27 17:39:01.2±0.5, 59°.97N±0°.06×153°.28W±0°.06, h146km, n95, σ1933/100, mb4.3/15, 1D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RSO	**Redoubt South**	**0.56**	**27**			**Pn**	**17 39 22.4**	**-0.2**
HOM	**Homer**	**0.88**	**110**			**Pn**	**17 39 24.8**	**+0.2**
CNPM	**China Poot**	**1.12**	**112**			**Pn**	**17 39 26.0**	**+0.1**
BRLK	**Bradley Lake**	**1.22**	**99**			**Pn**	**17 39 27.9**	**+0.2**
SVW2	**Sparrevohn**	**1.61**	**316**			**Pn**	**17 39 30.6**	**-1.1**
SEW	**Seward**	**1.92**	**84**			**Pn**	**17 39 35.3**	**+0.2**
SUA	**Susitna One**	**1.95**	**39**			**Pn**	**17 39 35.7**	**+0.2**
RC01	**Rabbit Creek A**	**2.08**	**56**			**Pn**	**17 39 37.4**	**+0.4**
SKT	**Skwentna**	**2.19**	**22**			**Pn**	**17 39 38.2**	**-0.1**
KDAK	**Kodiak Island**	**2.22**	**170**	P		**Pn**	**17 39 36.8**	**-1.9**
	38nm,0.3s,baz=15,slow=6.2,SNR=216							
KDAK				S		**Sn**	**17 40 05.2**	**-2.3**
	347nm,0.3s,baz=128,slow=19,SNR=85							
PMR	**Palmer**	**2.60**	**50**			**Pn**	**17 39 42.2**	**-1.2**
OHAK	**Old Harbor**	**2.75**	**180**	Pn		**Pn**	**17 39 42.9**	**-2.3**
KNK	**Knik Glacier**	**2.78**	**56**			**Pn**	**17 39 44.4**	**-1.2**
GHO	**Glory Hole Cre**	**2.79**	**48**			**Pn**	**17 39 44.9**	**-1.1**
PPLA	**Purkeypile**	**2.98**	**10**			**Pn**	**17 39 49.0**	**+0.8**
SML	**Sawmill**	**3.04**	**51**	Pn		**Pn**	**17 39 48.0**	**-0.9**
GLI	**Glacier Island**	**3.20**	**71**			**Pn**	**17 39 50.4**	**-0.5**
TTA	**Tatalina**	**3.25**	**337**			**Pn**	**17 39 50.5**	**-1.1**
HIN	**Hinchinbrook I**	**3.41**	**80**	Pn		**Pn**	**17 39 53.9**	**+0.2**
SII	**Sitkinak Islan**	**3.45**	**188**	Pn		**Pn**	**17 39 51.8**	**-2.5**
SCM	**Sheep Creek Mo**	**3.46**	**55**			**Pn**	**17 39 53.5**	**-0.7**
FID	**Port Fidalgo**	**3.47**	**74**			**Pn**	**17 39 54.1**	**-0.3**
MID	**Middleton Isla**	**3.56**	**96**	Pn		**Pn**	**17 39 55.3**	**-0.1**
KTH	**Kantishna Hill**	**3.77**	**16**			**Pn**	**17 39 57.6**	**-0.7**
TRF	**Thorofare Moun**	**3.77**	**21**			**Pn**	**17 39 58.0**	**-0.5**
EYAK	**Cordova Ski Ar**	**3.79**	**78**			**Pn**	**17 39 58.5**	**0.0**
RND	**Reindeer**	**4.04**	**29**			**Pn**	**17 40 01.3**	**-0.6**
DHY	**Denali Highway**	**4.21**	**40**			**Pn**	**17 40 03.5**	**-0.6**
BPAW	**Bear Paw Mtn.**	**4.28**	**14**			**Pn**	**17 40 04.2**	**-0.8**
MCK	**McKinley**	**4.30**	**27**			**Pn**	**17 40 04.7**	**-0.5**
RAGM	**Ragged Mountai**	**4.32**	**81**	Pn		**Pn**	**17 40 03.2**	**-2.3**
CHIR	**Chirikof Islan**	**4.34**	**198**	Pn		**Pn**	**17 40 03.2**	**-2.6**
BWN	**Browne**	**4.58**	**21**			**Pn**	**17 40 08.5**	**-0.4**
PAX	**Paxson**	**4.80**	**48**			**Pn**	**17 40 11.5**	**-0.4**
GLB	**Gilahina Butte**	**4.88

SEY	**Seymchan**	**25.49**	**300**	P		**P**		**17 44 16.4**	**+1.0**
	0.9nm,0.6s,baz=92,slow=7.4,SNR=4.3								
PETK	**Petropavlovsk-**	**27.33**	**277**	P		**P**		**17 44 32.2**	**+0.1**
	12nm,1.1s,baz=70,slow=12,SNR=6.7								
SCHQ	**Schefferville**	**43.70**	**57**	P		**P**		**17 46 51.4**	**+0.3**
	1.4nm,0.4s,baz=297,slow=7.2,SNR=7.3								
MAT	**Matsushiro**	**48.65**	**273**	P		**P**		**17 47 29.2**	**-0.9**
CN2	**Changchun**	**49.36**	**289**	*e*P		**P**		**17 47 35.3**	**0.0**
CN2				pmax		pmax			
	comp=Z,20nm,0.6s								
KSRS	**Korea Array**	**53.05**	**282**	P		**P**		**17 48 03.6**	**+0.7**
	comp=Z,2.6nm,0.6s,baz=42,slow=7.1,SNR=9.3								
SONM	**Songino Array**	**54.70**	**306**	P		**P**		**17 48 15.0**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=44,slow=6.0,SNR=13								
SONM				PcP		**PcP**		**17 49 15.9**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=35,slow=2.1,SNR=4.2								
ZAA0	**Zalesovo Array**	**57.32**	**323**	P		**P**		**17 48 33.5**	**+0.3**
ZAA0				IAmb		IAmb		17 48 34.0	
	comp=Z,6.6nm,0.5s								
ZALV	**Zalesovo Beam**	**57.32**	**323**	P		**P**		**17 48 33.5**	**+0.3**
	comp=Z,8.6nm,0.5s,baz=33,slow=6.5,SNR=28								
NJ2	**Nanjing**	**61.81**	**286**	*e*P		**P**		**17 49 04.5**	**+0.2**
NJ2				pmax		pmax			
	comp=Z,7.0nm,0.8s								
MK31	**Makanchi Array**	**64.37**	**321**	P		**P**		**17 49 20.1**	**-0.9**
MK31				IAmb		IAmb		17 50 27.3	
	comp=Z,7.5nm,2.0s								
MKAR	**Makanchi Array**	**64.37**	**321**	P		**P**		**17 49 20.4**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=37,slow=6.8,SNR=22								
XAN	**Xi'an**	**64.86**	**295**	P		**P**		**17 49 23.5**	**-0.9**
XAN				pP		sP		17 50 11.5	-3.6
XAN				pmax		pmax			
	comp=Z,4.0nm,1.5s								
WMQ	**Urumqi**	**65.19**	**316**	*e*P		**P**		**17 49 30.3**	**+3.9**
WHN	**Wuhan**	**65.22**	**288**	P		**P**		**17 49 24.8**	**-1.9**
LZH	**Lanzhou**	**65.42**	**300**	⇓P		**P**		**17 49 28.3**	**+0.1**
LZH				pP		pP		17 50 03.5	+0.3
LZH				sP		sP		17 50 19.3	+0.3
LZH				PP		**PP**		**17 51 56.5**	**+3.1**
LZH				pmax		pmax			
	comp=Z,19nm,1.3s								
LZH				pmax		pmax			
	comp=Z,46nm,7.6s								
ABKAR	**Akbulak array**	**67.84**	**337**	P		**P**		**17 49 42.7**	**-0.3**
ABKAR				IAmb		IAmb		17 51 15.8	
	comp=Z,11nm,2.0s								
JTS	**Las Juntas de**	**70.35**	**104**	P		**P**		**17 49 60.0**	**+0.9**
SLVN	**Son La**	**77.96**	**292**	P		**P**		**17 50 43.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**82.75**	**294**	P		**P**		**17 51 08.3**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=7.0,slow=5.6,SNR=7.1								

GCG ***27*** *17:42:42.6±0.3, 15°.60N×89°.13W, h50km, MD3.6*
SNET 27 17:42:53.4±1.0, 13°.28N×90°.10W, h32km±8km, ML2.8, 2C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FAME	**Alcalda de S**	**0.57**	**9**	⇑*e*P		Pb	17 43 04.2	-0.8
FAME				*e*S		Sn	17 43 13.8	+0.2
CEVE	**Cerro Verde**	**0.72**	**40**	*e*P		Pb	17 43 08.4	+0.7
CEVE				*e*S		Sn	17 43 19.4	+1.8
CEVE				IAML			17 43 22.7	
	comp=Z,387nm,0.2s							
SBLS	**San Blas**	**0.73**	**40**	*e*P		Pb	17 43 08.1	+0.2
SBLS				*e*S		Sn	17 43 19.1	+1.3
RTR	**El Retiro**	**0.76**	**36**	*e*P		Pb	17 43 08.8	+0.5
SNJE	**San Jose**	**0.76**	**39**	*e*P		Pb	17 43 08.6	+0.2
IXG	**Ixpaco**	**0.95**	**340**	*e*P		Pb	17 43 13.3	+1.8
PCG	**Pacaya**	**1.21**	**336**	*e*P		Pn	17 43 11.3	-3.1
MTO3	**Montecristo**	**1.33**	**33**	⇑*i*P		Pn	17 43 16.6	+0.7
FUG	**Fuego 3**	**1.37**	**328**	*e*P		Pn	17 43 14.7	-1.7
FUG				*e*S		Sb	17 43 39.8	+4.0

ATH ***27*** *17:47:44.7, 38°.39N×20°.48E, h16km±2km, ML3.3/17, Error ellipse: s-maj=2.2km s-min=0.8km az=68.0*
THE ***27*** *17:47:45.1, 38°.39N×20°.43E, h8km, ML3.3/13, Error ellipse: s-maj=1.4km s-min=0.7km az=264.0*
ISC 27 17:47:44.5±0.9, 38°.40N±0°.02×20°.44E±0°.03, h12km±5km, n53, σ1≠03/87, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.12**	**59**	P		**Pg**	**17 47 47.5**	**-0.1**
FSK				S		**Sg**	**17 47 49.3**	**-0.5**
	27μm,0.1s							
FSK	**Fiskardo**	**0.12**	**59**	P		**Pg**	**17 47 47.5**	**-0.1**
FSK				S		**Sg**	**17 47 49.4**	**-0.5**
ARG2	**Argostoli**	**0.22**	**170**	P		**Pg**	**17 47 49.7**	**+0.4**
ARG2				S		**Sg**	**17 47 53.1**	**+0.6**
VLS	**Valsamata**	**0.25**	**151**	P		**Pg**	**17 47 49.9**	**+0.1**
VLS				S		**Sg**	**17 47 54.0**	**+0.7**
	7μm,0.3s							
VLS	**Valsamata**	**0.25**	**151**	P		**Pg**	**17 47 49.5**	**-0.3**
VLS				S		**Sg**	**17 47 53.4**	**+0.1**
VLS				AML	AML		17 47 55.1	
	comp=E,15589μm,0.2s							
VLS				AML	AML		17 47 59.2	
	comp=N,13649μm,0.4s							
EVGI	**Lefkada island**	**0.28**	**38**	P		**Pg**	**17 47 50.8**	**+0.4**
EVGI				S		**Sg**	**17 47 55.4**	**+1.2**
EVGI	**Lefkada island**	**0.28**	**38**	P		**Pg**	**17 47 50.7**	**+0.4**
EVGI				S		**Sg**	**17 47 55.3**	**+1.0**
MGNA	**Meganis**	**0.38**	**47**	P		**Pg**	**17 47 52.2**	**+0.1**
MGNA				S		**Sg**	**17 47 57.4**	**+0.3**
MGNA				AML	AML		17 47 58.4	
	comp=N,13845μm,0.1s							
MGNA				AML	AML		17 47 58.5	
	comp=E,16580μm,0.2s							
KFL	**Anninata**	**0.40**	**136**	P		**Pg**	**17 47 52.4**	**-0.1**
KFL				S		**Sb**	**17 47 59.2**	**-0.4**
	comp=E,9μm,0.2s							
KFL	**Anninata**	**0.40**	**136**	P		**Pg**	**17 47 52.5**	**0.0**
KFL				S		**Sg**	**17 47 58.6**	**+0.8**
KFL				AML	AML		17 47 59.5	
	comp=E,19907μm,0.4s							
KFL				AML	AML		17 47 59.9	
	comp=N,16892μm,0.2s							
LKD2	**Lefkada island**	**0.43**	**24**	P		**Pg**	**17 47 53.1**	**+0.1**
LKD2				S		**Sb**	**17 48 00.2**	**-0.2**
	comp=N,3μm,0.5s							
LKD2	**Lefkada island**	**0.43**	**24**	P		**Pg**	**17 47 53.2**	**+0.2**
LKD2				S		**Sb**	**17 48 00.0**	**-0.4**
LKD2				AML	AML		17 48 00.3	
	comp=E,5314μm,0.4s							
LKD2				AML	AML		17 48 03.6	
	comp=N,7027μm,0.3s							
TSLK	**Tsoukalades, L**	**0.46**	**22**	P		**Pg**	**17 47 54.0**	**+0.4**
TSLK				S		**Sb**	**17 48 01.2**	**-0.1**
	comp=N,5μm,0.5s							
TSLK	**Tsoukalades, L**	**0.46**	**22**	P		**Pg**	**17 47 54.0**	**+0.4**
TSLK				S		**Sg**	**17 48 00.4**	**+0.7**
TSLK				AML	AML		17 48 02.6	
	comp=E,8221μm,0.3s							
TSLK				AML	AML		17 48 05.5	
	comp=N,10142μm,0.7s							
VLMS	**Volimes, Zakyn**	**0.55**	**161**	P		**Pg**	**17 47 55.4**	**+0.1**
VLMS				S		**Sb**	**17 48 03.6**	**-0.4**
VLMS				AML	AML		17 48 07.8	
	comp=N,19863μm,0.3s							
VLMS				AML	AML		17 48 09.3	
	comp=E,8941μm,0.3s							
PDO	**Prodromos**	**0.62**	**71**	P		**Pg**	**17 47 56.6**	**0.0**
PDO				S		**Sb**	**17 48 06.2**	**+0.3**
PDO	**Prodromos**	**0.62**	**71**	P		**Pg**	**17 47 56.5**	**-0.1**
ZAK2	**Zakynthos**	**0.71**	**149**	P		**Pg**	**17 47 58.6**	**+0.3**
ZAK2				S		**Sb**	**17 48 09.8**	**+1.3**
RLS	**Riolos of Patr**	**0.88**	**112**	P		**Pg**	**17 48 01.0**	**-0.5**
RLS				S		**Sn**	**17 48 15.1**	**-0.3**
	comp=E,888nm,0.5s							
RLS	**Riolos of Patr**	**0.88**	**112**	P		**Pg**	**17 48 01.0**	**-0.5**
RLS				S		**Sb**	**17 48 13.3**	**-0.1**
RLS				AML	AML		17 48 22.8	
	comp=N,1905μm,0.6s							
RLS				AML	AML		17 48 24.3	
	comp=E,1584μm,0.4s							
PVO	**Paravola**	**0.88**	**75**	P		**Pg**	**17 48 01.4**	**-0.2**
PVO				S		**Sn**	**17 48 15.4**	**-0.1**
	comp=E,2μm,0.6s							
PVO	**Paravola**	**0.88**	**75**	P		**Pg**	**17 48 01.5**	**-0.1**
PVO				AML	AML		17 48 20.3	
	comp=E,4328μm,0.5s							
PVO				AML	AML		17 48 20.6	
	comp=N,4584μm,0.6s							
DRO	**Drossia**	**1.10**	**114**	P		**Pb**	**17 48 04.8**	**-0.7**
DRO				S		**Sn**	**17 48 21.4**	**+0.5**
	comp=N,3μm,0.4s							
DRO	**Drossia**	**1.10**	**114**	P		**Pb**	**17 48 05.0**	**-0.4**
DRO				AML	AML		17 48 27.8	
	comp=E,5201μm,0.4s							
DRO				AML	AML		17 48 27.9	
	comp=N,5172μm,0.6s							
IGT	**Igoumenitsa**	**1.14**	**356**	P		**Pg**	**17 48 07.1**	**+0.7**
IGT				S		**Sn**	**17 48 24.0**	**+2.2**
	comp=N,878nm,0.5s							
IGT	**Igoumenitsa**	**1.14**	**356**	P		**Pb**	**17 48 06.1**	**0.0**
IGT				S		**Sn**	**17 48 23.0**	**+1.3**
IGT				AML	AML		17 48 26.4	
	comp=E,2294μm,0.7s							
IGT				AML	AML		17 48 27.8	
	comp=N,1136μm,0.2s							
EFP	**Efpalio**	**1.15**	**88**	P		**Pb**	**17 48 05.5**	**-0.9**
EFP				S		**Sn**	**17 48 23.8**	**+1.6**
	comp=N,3μm,0.6s							
EFP	**Efpalio**	**1.15**	**88**	P		**Pb**	**17 48 05.5**	**-0.9**
EFP				AML	AML		17 48 29.0	
	comp=N,4977μm,0.4s							
EFP				AML	AML		17 48 29.2	
	comp=E,6350μm,0.5s							
ANX	**Ano Chora**	**1.18**	**80**	P		**Pb**	**17 48 06.4**	**-0.5**
ANX				S		**Sn**	**17 48 23.8**	**+0.8**
	comp=E,2μm,0.6s							
ANX	**Ano Chora**	**1.18**	**80**	P		**Pb**	**17 48 06.4**	**-0.5**
ANX				AML	AML		17 48 29.8	
	comp=N,3154μm,0.6s							
ANX				AML	AML		17 48 30.1	
	comp=E,4546μm,0.6s							
EVR	**Evrytania**	**1.19**	**64**	P		**Pb**	**17 48 06.6**	**-0.5**
EVR				AML	AML		17 48 31.4	
	comp=N,1179μm,0.7s							
EVR				AML	AML		17 48 34.6	
	comp=E,1256μm,0.5s							
LAKA	**Lakka**	**1.22**	**97**	P		**Pn**	**17 48 06.7**	**-0.7**
LAKA				AML	AML		17 48 30.2	
	comp=N,1152μm,0.8s							
LAKA				AML	AML		17 48 33.5	
	comp=E,1069μm,0.7s							
SERG	**Sergoula**	**1.27**	**89**	P		**Pn**	**17 48 07.5**	**-0.7**
SERG				S		**Sg**	**17 48 26.3**	**+0.8**
SERG	**Sergoula**	**1.27**	**89**	P		**Pn**	**17 48 07.7**	**-0.5**
SERG				AML	AML		17 48 31.3	
	comp=N,3003μm,0.6s							
SERG				AML	AML		17 48 31.5	
	comp=E,2813μm,0.8s							
TRIZ	**Trizonia**	**1.29**	**91**	P		**Pn**	**17 48 07.8**	**-0.5**
TRIZ				S		**Sg**	**17 48 27.8**	**+1.8**
	comp=E,1μm,0.4s							
JAN	**Janina**	**1.30**	**14**	P		**Pg**	**17 48 10.0**	**+0.5**
JAN				AML	AML		17 48 30.9	
	comp=E,1486μm,0.5s							
JAN				AML	AML		17 48 31.5	
	comp=N,1910μm,0.4s							
AMT	**Artemida-Makis**	**1.33**	**130**	P		**Pb**	**17 48 09.6**	**+0.2**
KALE	**Kalithea**	**1.34**	**90**	P		**Pn**	**17 48 08.8**	**-0.3**
KALE				AML	AML		17 48 34.8	
	comp=N,2520μm,0.7s							
KALE				AML	AML		17 48 34.8	
	comp=E,1121μm,0.5s							
KLV	**Kalavryta, Ach**	**1.40**	**104**	P		**Pn**	**17 48 10.0**	**+0.1**
KLV				S		**Sg**	**17 48 30.8**	**+1.3**
	comp=E,358nm,0.5s							
KLV	**Kalavryta, Ach**	**1.40**	**104**	P		**Pn**	**17 48 09.9**	**0.0**
ITM	**Ithomi**	**1.70**	**135**	P		**Pn**	**17 48 14.9**	**+1.0**
PYL	**PYLOS**	**1.82**	**145**	P		**Pb**	**17 48 17.0**	**-0.8**
VLX	**Vlachokerasia**	**1.85**	**123**	P		**Pb**	**17 48 18.4**	**+0.1**
SCTE	**Santa Cesarea**	**2.27**	**318**	P		**Pn**	**17 48 23.0**	**+1.2**
SG1	**Sgolgore (BA)**	**3.79**	**311**	*e*Pn		**Pn**	**17 48 44.8**	**+2.0**
SG1				Sn		**Sn**	**17 49 28.0**	**+0.7**
DBRK	**Dubrovnik**	**4.61**	**338**	*i* Pn		**Pn**	**17 48 54.0**	**0.0**
DBRK				Sn		**Sn**	**17 49 46.0**	**-1.4**
STON	**Ston**	**4.93**	**336**	*e*Pn		**Pn**	**17 48 58.1**	**-0.2**
STON				Sn		**Sn**	**17 49 52.0**	**-3.3**
MAKA	**Makarska**	**5.53**	**333**	*e*Pn		**Pn**	**17 49 06.9**	**+0.3**
KIJV	**Kijevo**	**6.37**	**333**	*e*Pn		**Pn**	**17 49 18.4**	**+0.2**
ZIRJ	**Zirje**	**6.38**	**327**	*i* Pn		**Pn**	**17 49 18.2**	**0.0**
ZIRJ				Sn		**Sn**	**17 50 27.1**	**-3.9**
MORI	**Morici**	**6.52**	**328**	*e*Pn		**Pn**	**17 49 21.3**	**+1.1**
MORI				Sn		**Sn**	**17 50 32.2**	**-2.4**
DUGI	**Dugi Otok**	**6.90**	**326**	*e*Pn		**Pn**	**17 49 25.8**	**+0.3**
NVLJ	**Novalja**	**7.44**	**328**	*i* Pn		**Pn**	**17 49 33.5**	**+0.7**
NVLJ				Sn		**Sn**	**17 50 53.1**	**-4.0**

YARS 27 17:56:03.2±0.0, 67°.34N×124°.85E, h15km, mb5.1/1, ML2.5/2, Northern and central Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
TIXI	**Tiksi**	**4.56**	**16**	*e*Pn		Pn	17 57 12.6	+1.0
TIXI				*e*Pg		Pb	17 57 25.5	+2.7
	1.8nm,0.6s							
TIXI				*e*Sn		Sn	17 58 04.8	+0.7
TIXI				*e*Sg		Sg	17 58 25.8	-3.5
	7.4nm,0.2s							
DEPR	**Deputatskiy**	**5.94**	**63**	*e*Pn		Pn	17 57 31.6	+1.2
DEPR				*e*Pg		Pb	17 57 50.3	+4.1
	3.4nm,0.3s							
DEPR				*e*Sn		Sn	17 58 38.5	+0.5
DEPR				*e*Sn		Sn	17 58 38.5	+0.5
DEPR				*e*Sg		Sg	17 59 08.9	-4.6
	5.1nm,0.5s							
MOMR	**Moma**	**7.27**	**88**	*e*Pn		Pn	17 57 50.3	+1.5
MOMR				*e*Pg		Pb	17 58 14.6	+5.6
	2.9nm,0.4s							
MOMR				*e*Sn		Sn	17 59 11.3	+0.4
MOMR				*e*Sn		Sn	17 59 11.3	+0.4
MOMR				*e*Sg		Sg	17 59 50.8	-5.5
	6.6nm,0.6s							

IDC ***27*** *17:56:54.3±24.0, 37°.72N×19°.67E, h0km, mb3.8/3, mb1 3.7/4, mb1mx3.3/40, mbtmp3.6/4, ML3.4/1, MS4.0/1, Ms1 4.1/1, ms1mx2.9/45, Error ellipse: s-maj=460.8km s-min=34.0km az=38.0*
ATH ***27*** *17:57:02.0, 38°.36N×20°.40E, h9km±1km, ML3.4/20, Error ellipse: s-maj=2.0km s-min=0.9km az=75.0*
THE ***27*** *17:57:02.0, 38°.38N×20°.34E, h7km±1km, ML3.4/15, Error ellipse: s-maj=1.6km s-min=0.8km az=260.0*
ISC 27 17:57:03.4±0.8, 38°.36N±0°.01×20°.45E±0°.03, h18km±1km, n74, σ1≠08/106, mb3.9/3, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.13**	**43**	P		**Pb**	**17 57 05.3**	**-0.7**
FSK				S		**Sb**	**17 57 07.5**	**-0.2**
	26μm,0.3s							
FSK	**Fiskardo**	**0.13**	**43**	P		**Pb**	**17 57 05.4**	**-0.7**
FSK				S		**Sb**	**17 57 07.4**	**-0.2**
ARG2	**Argostoli**	**0.19**	**170**	P		**Pb**	**17 57 07.2**	**-0.4**
ARG2				S		**Sg**	**17 57 10.8**	**-0.5**
VLS	**Valsamata**	**0.22**	**148**	P		**Pb**	**17 57 07.4**	**-1.0**
VLS				S		**Sb**	**17 57 11.5**	**-0.2**
	17μm,0.3s							
VLS	**Valsamata**	**0.22**	**148**	P		**Pb**	**17 57 07.3**	**-1.1**
VLS				S		**Sb**	**17 57 10.3**	**-1.4**
VLS				AML	AML		17 57 11.8	
	comp=E,34061μm,0.4s							
VLS				AML	AML		17 57 13.5	
	comp=N,32261μm,0.2s							
EVGI	**Lefkada island**	**0.31**	**32**	P		**Pg**	**17 57 08.9**	**-1.2**
EVGI				S		**Sg**	**17 57 13.8**	**-0.8**
EVGI	**Lefkada island**	**0.31**	**32**	P		**Pg**	**17 57 08.8**	**-1.3**
EVGI				S		**Sg**	**17 57 13.7**	**-0.9**
KFL	**Anninata**	**0.37**	**133**	P		**Pg**	**17 57 10.2**	**-0.9**
KFL				S		**Sb**	**17 57 16.7**	**-0.2**
	comp=N,14μm,0.3s							
KFL	**Anninata**	**0.37**	**133**	P		**Pg**	**17 57 10.0**	**-1.1**
KFL				S		**Sg**	**17 57 15.8**	**-0.5**
KFL				AML	AML		17 57 17.7	
	comp=E,36102μm,0.3s							
KFL				AML	AML		17 57 20.1	
	comp=N,20189μm,0.3s							
LKD2	**Lefkada island**	**0.46**	**21**	P		**Pg**	**17 57 11.2**	**-1.5**
LKD2				S		**Sg**	**17 57 18.7**	**-0.4**
	comp=N,4μm,0.8s							
LKD2	**Lefkada island**	**0.46**	**21**	P		**Pg**	**17 57 11.0**	**-1.7**
LKD2				S		**Sg**	**17 57 18.6**	**-0.4**
LKD2				AML	AML		17 57 18.8	
	comp=E,6526μm,0.6s							
LKD2				AML	AML		17 57 19.1	
	comp=N,9991μm,0.8s							
TSLK	**Tsoukalades, L**	**0.49**	**19**	P		**Pg**	**17 57 11.8**	**-1.5**
TSLK				S		**Sg**	**17 57 20.1**	**+0.1**
	comp=N,6μm,0.7s							
TSLK	**Tsoukalades, L**	**0.49**	**19**	P		**Pg**	**17 57 11.8**	**-1.5**
TSLK				S		**Sg**	**17 57 19.1**	**-0.9**
TSLK				AML	AML		17 57 23.0	
	comp=N,13347μm,0.7s							
TSLK				AML	AML		17 57 24.9	
	comp=E,11321μm,0.8s							
VLMS	**Volimes, Zakyn**	**0.51**	**160**	P		**Pg**	**17 57 12.8**	**-1.0**
VLMS				S		**Sg**	**17 57 20.3**	**-0.3**
VLMS				AML	AML		17 57 22.4	
	comp=N,21209μm,0.5s							
VLMS				AML	AML		17 57 26.6	
	comp=E,17251μm,0.4s							
PDO	**Prodromos**	**0.62**	**68**	P		**Pb**	**17 57 14.6**	**-1.1**
PDO				S		**Sn**	**17 57 25.6**	**-1.2**
PDO	**Prodromos**	**0.62**	**68**	P		**Pb**	**17 57 14.5**	**-1.2**
ZAK2	**Zakynthos**	**0.68**	**148**	P		**Pg**	**17 57 16.5**	**-0.2**
ZAK2				S		**Sn**	**17 57 27.2**	**-0.8**
RLS	**Riolos of Patr**	**0.86**	**110**	P		**Pb**	**17 57 19.3**	**-0.4**
RLS				S		**Sn**	**17 57 33.1**	**+0.5**
	comp=E,808nm,0.6s							
RLS	**Riolos of Patr**	**0.86**	**110**	P		**Pb**	**17 57 19.3**	**-0.4**
RLS				S		**Sg**	**17 57 31.3**	**-0.2**
RLS				AML	AML		17 57 38.1	
	comp=N,1900μm,0.4s							
RLS				AML	AML		17 57 43.4	
	comp=E,1393μm,0.5s							
PVO	**Paravola**	**0.89**	**73**	P		**Pb**	**17 57 19.6**	**-0.6**
PVO				S		**Sn**	**17 57 34.9**	**+1.7**
	comp=E,3μm,0.7s							
PVO	**Paravola**	**0.89**	**73**	P		**Pb**	**17 57 19.6**	**-0.6**
PVO				S		**Sb**	**17 57 31.6**	**0.0**
PVO				AML	AML		17 57 37.0	
	comp=N,6293μm,0.8s							
PVO				AML	AML		17 57 43.6	
	comp=E,4972μm,0.6s							
DRO	**Drossia**	**1.08**	**112**	P		**Pb**	**17 57 23.2**	**-0.3**
DRO				S		**Sg**	**17 57 40.5**	**+2.1**
	comp=E,2μm,0.5s							
DRO	**Drossia**	**1.08**	**112**	P		**Pb**	**17 57 22.9**	**-0.5**
DRO				S		**Sg**	**17 57 38.2**	**-0.2**
DRO				AML	AML		17 57 46.7	
	comp=E,4193μm,0.5s							
DRO				AML	AML		17 57 53.7	
	comp=N,4206μm,0.4s							
EFP	**Efpalio**	**1.15**	**86**	P		**Pn**	**17 57 23.7**	**-0.8**
EFP				S		**Sg**	**17 57 41.5**	**+0.9**
	comp=N,2μm,0.6s							
EFP	**Efpalio**	**1.15**	**86**	P		**Pn**	**17 57 23.4**	**-1.0**
EFP				S		**Sg**	**17 57 41.6**	**+0.9**
EFP				AML	AML		17 57 47.1	
	comp=N,3748μm,0.6s							
EFP				AML	AML		17 57 47.8	
	comp=E,5756μm,0.6s							
IGT	**Igoumenitsa**	**1.17**	**356**	P		**Pn**	**17 57 24.2**	**-0.6**
IGT				S		**Sn**	**17 57 40.4**	**0.0**
	comp=E,970nm,0.5s							
IGT	**Igoumenitsa**	**1.17**	**356**	P		**Pn**	**17 57 23.4**	**-1.4**
IGT				AML	AML		17 57 45.6	
	comp=E,2148μm,0.7s							
IGT				AML	AML		17 57 47.0	
	comp=N,1738μm,0.4s							
ANX	**Ano Chora**	**1.18**	**78**	P		**Pn**	**17 57 24.1**	**-0.9**
ANX				S		**Sg**	**17 57 43.9**	**+2.2**
	comp=N,2μm,0.6s							
ANX	**Ano Chora**	**1.18**	**78**	P		**Pn**	**17 57 24.0**	**-1.1**
ANX				S		**Sg**	**17 57 41.4**	**-0.3**
ANX				AML	AML		17 57 48.3	
	comp=N,5678μm,0.6s							
ANX				AML	AML		17 57 49.2	
	comp=E,3270μm,0.6s							
EVR	**Evrytania**	**1.20**	**62**	P		**Pn**	**17 57 24.7**	**-0.6**
EVR				S		**Sg**	**17 57 44.1**	**+1.7**
	comp=E,822nm,0.8s							
EVR	**Evrytania**	**1.20**	**62**	P		**Pn**	**17 57 24.6**	**-0.8**
EVR				AML	AML		17 57 48.7	
	comp=N,1896μm,0.8s							
EVR				AML	AML		17 57 52.4	
	comp=E,1484μm,0.8s							
LAKA	**Lakka**	**1.21**	**95**	P		**Pn**	**17 57 24.9**	**-0.5**
LAKA				S		**Sg**	**17 57 44.6**	**+1.9**
	comp=E,638nm,0.9s							
LAKA	**Lakka**	**1.21**	**95**	P		**Pb**	**17 57 25.5**	**-0.3**
LAKA				S		**Sg**	**17 57 43.7**	**+1.0**
LAKA				AML	AML		17 57 53.4	
	comp=E,1221μm,0.9s							
LAKA				AML	AML		17 57 56.1	
	comp=N,1300μm,0.9s							
SERG	**Sergoula**	**1.27**	**87**	P		**Pn**	**17 57 25.7**	**-0.5**
SERG				S		**Sg**	**17 57 46.2**	**+1.8**
	comp=N,1μm,0.7s							
SERG	**Sergoula**	**1.27**	**87**	P		**Pn**	**17 57 25.8**	**-0.3**
SERG				AML	AML		17 57 50.1	
	comp=E,3224μm,0.8s							
SERG				AML	AML		17 57 51.0	
	comp=N,2556μm,0.5s							
TRIZ	**Trizonia**	**1.28**	**89**	P		**Pn**	**17 57 25.7**	**-0.6**
TRIZ				S		**Sg**	**17 57 46.0**	**+1.2**
	comp=N,1μm,0.6s							
TRIZ	**Trizonia**	**1.28**	**89**	P		**Pn**	**17 57 25.6**	**-0.7**
AMT	**Artemida-Makis**	**1.30**	**129**	P		**Pn**	**17 57 26.7**	**+0.1**
AMT				AML	AML		17 57 58.3	
	comp=N,2564μm,0.5s							
AMT				AML	AML		17 58 03.2	
	comp=E,2298μm,1.1s							
JAN	**Janina**	**1.33**	**14**	P		**Pb**	**17 57 28.0**	**+0.2**
KALE	**Kalithea**	**1.33**	**88**	P		**Pn**	**17 57 26.7**	**-0.4**
KALE				AML	AML		17 57 56.4	
	comp=E,1392μm,0.6s							
KALE				AML	AML

	comp=N,0.8nm,0.3s								
GERES	**GERESS Array B**	**11.56**	**337**	Pn		**Pn**	**17 59 46.5**	**-0.9**	
	comp=N,0.1nm,0.3s,baz=155,slow=14,SNR=2.9								
FINES	**FINESS Array B**	**23.37**	**7**	P		**P**	**18 02 12.1**	**+1.5**	
	comp=N,3.2nm,0.9s,baz=183,slow=12,SNR=4.9								
ARCES	**ARCESS Array B**	**31.35**	**3**	LR		LR	18 19 12.0		
	comp=N,282nm,19.2s,baz=281,slow=42								
MKAR	**Makanchi Array**	**45.26**	**59**	P		**P**	**18 05 19.8**	**+0.2**	
	comp=N,0.2nm,0.4s,baz=277,slow=7.6,SNR=8.8								
ZALV	**Zalesovo Beam**	**45.61**	**48**	P		**P**	**18 05 23.1**	**+0.9**	
	comp=N,1.5nm,0.6s,baz=271,slow=9.8,SNR=6.1								

*THE **27** 18:08:37.2,38°.12N×20°.32E,h4km±1km,ML3.0/13, Error ellipse: s-maj=1.8km s-min=1.0km az=59.0*
*ATH **27** 18:08:38.2,38°.18N×20°.46E,h19km±2km,ML2.9/15, Error ellipse: s-maj=3.0km s-min=1.3km az=240.0*

ISC 27 18:08:36.9±1.1,38°.14N±0°.04×20°.32E±0°.04,h14km±6km, n50,σ0°.94/76,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARG2	**Argostoli**	**0.14**	**72**	P		**Pg**	**18 08 40.8**	**+0.3**
ARG2				S		**Sg**	**18 08 42.3**	**-0.7**
VLS	**Valsamata**	**0.22**	**79**	P		**Pg**	**18 08 41.7**	**-0.1**
VLS				S		**Sg**	**18 08 44.4**	**-0.7**
	23μm,0.1s							
VLS	**Valsamata**	**0.22**	**79**	P		**Pg**	**18 08 41.7**	**-0.1**
VLS				S		**Sg**	**18 08 44.4**	**-0.7**
VLS				AML		AML	18 08 44.7	
	comp=E,52265μm,0.1s							
VLS				AML		AML	18 08 44.7	
	comp=N,35917μm,0.1s							
KFL	**Anninata**	**0.37**	**94**	P		**Pg**	**18 08 44.4**	**0.0**
KFL				S		**Sb**	**18 08 49.9**	**-1.1**
	comp=N,11μm,0.4s							
KFL	**Anninata**	**0.37**	**94**	P		**Pg**	**18 08 44.5**	**0.0**
KFL				S		**Sg**	**18 08 49.4**	**-0.1**
KFL				AML		AML	18 08 50.9	
	comp=N,28967μm,0.4s							
KFL				AML		AML	18 08 51.6	
	comp=E,15900μm,0.4s							
FSK	**Fiskardo**	**0.38**	**31**	P		**Pg**	**18 08 44.8**	**+0.3**
FSK				S		**Sg**	**18 08 50.1**	**+0.4**
	comp=E,12μm,0.2s							
FSK	**Fiskardo**	**0.38**	**31**	P		**Pg**	**18 08 44.8**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.38**	**133**	P		**Pg**	**18 08 45.2**	**+0.7**
VLMS				AML		AML	18 08 51.7	
	comp=N,20192μm,0.2s							
VLMS				AML		AML	18 08 52.2	
	comp=E,23541μm,0.2s							
EVGI	**Lefkada island**	**0.55**	**29**	P		**Pg**	**18 08 47.8**	**0.0**
EVGI				S		**Sb**	**18 08 55.9**	**-0.3**
EVGI	**Lefkada island**	**0.55**	**29**	P		**Pg**	**18 08 47.8**	**0.0**
EVGI				S		**Sg**	**18 08 54.3**	**-0.8**
ZAK2	**Zakynthos**	**0.58**	**127**	P		**Pg**	**18 08 47.3**	**-0.9**
ZAK2				S		**Sb**	**18 08 56.6**	**-0.2**
MGNA	**Meganis**	**0.64**	**35**	P		**Pg**	**18 08 49.1**	**-0.3**
MGNA				AML		AML	18 08 58.5	
	comp=N,3280μm,0.3s							
MGNA				AML		AML	18 08 58.6	
	comp=E,7501μm,0.2s							
LKD2	**Lefkada island**	**0.70**	**22**	P		**Pg**	**18 08 50.6**	**0.0**
LKD2				AML		AML	18 09 07.6	
	comp=E,1599μm,0.5s							
LKD2				AML		AML	18 09 09.4	
	comp=N,1538μm,0.3s							
TSLK	**Tsoukalades, L**	**0.74**	**21**	P		**Pg**	**18 08 51.2**	**-0.1**
TSLK				S		**Sb**	**18 09 02.1**	**+0.6**
	comp=N,1μm,0.6s							
TSLK	**Tsoukalades, L**	**0.74**	**21**	P		**Pg**	**18 08 51.5**	**+0.2**
TSLK				AML		AML	18 09 08.8	
	comp=E,2111μm,0.4s							
TSLK				AML		AML	18 09 10.1	
	comp=N,2684μm,0.5s							
PDO	**Prodromos**	**0.82**	**56**	P		**Pg**	**18 08 52.4**	**-0.5**
PDO	**Prodromos**	**0.82**	**56**	P		**Pg**	**18 08 52.4**	**-0.5**
RLS	**Riolos of Patr**	**0.91**	**95**	P		**Pg**	**18 08 53.9**	**-0.6**
RLS				S		**Sn**	**18 09 07.4**	**-0.8**
	comp=N,800nm,0.7s							
RLS	**Riolos of Patr**	**0.91**	**95**	P		**Pg**	**18 08 53.8**	**-0.6**
RLS				AML		AML	18 09 09.8	
	comp=E,1648μm,0.7s							
RLS				AML		AML	18 09 15.1	
	comp=N,1624μm,0.6s							
PVO	**Paravola**	**1.06**	**63**	P		**Pg**	**18 08 57.0**	**-0.4**
PVO				S		**Sn**	**18 09 12.8**	**+0.7**
PVO	**Paravola**	**1.06**	**63**	P		**Pg**	**18 08 57.1**	**-0.4**
DRO	**Drossia**	**1.11**	**99**	P		**Pb**	**18 08 57.8**	**-0.2**
DRO				S		**Sn**	**18 09 15.5**	**+2.2**
	comp=N,1μm,0.4s							
DRO	**Drossia**	**1.11**	**99**	P		**Pb**	**18 08 57.8**	**-0.2**
AMT	**Artemida-Makis**	**1.26**	**118**	P		**Pg**	**18 09 01.7**	**+0.6**
AMT				AML		AML	18 09 30.3	
	comp=E,1786μm,0.6s							
AMT				AML		AML	18 09 31.4	
	comp=N,1632μm,0.7s							
EFP	**Efpalio**	**1.28**	**76**	P		**Pn**	**18 09 00.0**	**-0.4**
EFP				S		**Sn**	**18 09 18.1**	**+0.7**
	comp=N,478nm,0.6s							
EFP	**Efpalio**	**1.28**	**76**	P		**Pn**	**18 09 00.1**	**-0.4**
EFP				AML		AML	18 09 24.1	
	comp=E,873μm,0.7s							
EFP				AML		AML	18 09 25.2	
	comp=N,966μm,0.5s							
LAKA	**Lakka**	**1.31**	**85**	P		**Pn**	**18 09 00.8**	**-0.1**
LAKA				S		**Sg**	**18 09 21.4**	**+2.1**
	comp=N,278nm,0.6s							
LAKA	**Lakka**	**1.31**	**85**	P		**Pn**	**18 09 00.8**	**-0.1**
LAKA				AML		AML	18 09 27.3	
	comp=N,566μm,0.4s							
LAKA				AML		AML	18 09 27.9	
	comp=E,531μm,0.6s							
ANX	**Ano Chora**	**1.34**	**70**	P		**Pn**	**18 09 01.5**	**+0.2**
ANX				S		**Sg**	**18 09 20.9**	**+0.7**
	comp=E,775nm,0.7s							
ANX	**Ano Chora**	**1.34**	**70**	P		**Pn**	**18 09 01.4**	**0.0**
ANX				AML		AML	18 09 26.8	
	comp=E,1499μm,0.5s							
ANX				AML		AML	18 09 27.1	
	comp=N,1664μm,0.9s							
IGT	**Igoumenitsa**	**1.40**	**0**	P		**Pb**	**18 09 03.7**	**+0.9**
IGT				S		**Sg**	**18 09 23.6**	**+1.7**
	comp=N,192nm,0.3s							
IGT	**Igoumenitsa**	**1.40**	**0**	P		**Pb**	**18 09 03.7**	**+0.9**
IGT				AML		AML	18 09 28.5	
	comp=E,356μm,0.4s							
IGT				AML		AML	18 09 29.1	
	comp=N,409μm,0.3s							
SERG	**Sergoula**	**1.40**	**78**	P		**Pn**	**18 09 02.0**	**0.0**
SERG				S		**Sg**	**18 09 21.8**	**-0.1**
	comp=N,508nm,0.6s							
SERG	**Sergoula**	**1.40**	**78**	P		**Pn**	**18 09 02.1**	**+0.1**
TRIZ	**Trizonia**	**1.40**	**80**	P		**Pn**	**18 09 02.0**	**0.0**
TRIZ				S		**Sg**	**18 09 21.1**	**-1.0**
	comp=N,418nm,0.6s							
TRIZ	**Trizonia**	**1.40**	**80**	P		**Pn**	**18 09 02.0**	**0.0**
EVR	**Evrytania**	**1.41**	**56**	P		**Pn**	**18 09 02.5**	**+0.3**
EVR				AML		AML	18 09 31.5	
	comp=N,496μm,0.8s							
EVR				AML		AML	18 09 34.2	
	comp=E,403μm,0.6s							
ALIK	**Aliki, Aigiali**	**1.42**	**84**	P		**Pb**	**18 09 03.0**	**-0.2**
ALIK				S		**Sg**	**18 09 24.2**	**+1.6**
KLV	**Kalavryta, Ach**	**1.45**	**93**	P		**Pn**	**18 09 03.4**	**+0.6**
KLV				S		**Sg**	**18 09 24.6**	**+1.0**
	comp=E,212nm,0.8s							
KLV	**Kalavryta, Ach**	**1.45**	**93**	P		**Pn**	**18 09 03.4**	**+0.6**
KLV				AML		AML	18 09 41.4	
	comp=N,410μm,0.8s							
KLV				AML		AML	18 09 42.9	
	comp=E,433μm,0.8s							
KALE	**Kalithea**	**1.46**	**79**	P		**Pn**	**18 09 03.0**	**+0.1**
KALE	**Kalithea**	**1.46**	**79**	P		**Pn**	**18 09 02.9**	**+0.1**
KALE				AML		AML	18 09 32.7	
	comp=N,505μm,0.5s							
KALE				AML		AML	18 09 38.2	
	comp=E,533μm,0.8s							
DBRK	**Dubrovnik**	**4.82**	**341**	*e*Pn		**Pn**	**18 09 49.7**	**+0.6**
DBRK				Sn		**Sn**	**18 10 43.8**	**-0.9**
STON	**Ston**	**5.13**	**338**	*i* Pn		**Pn**	**18 09 53.3**	**0.0**
STON				Sn		**Sn**	**18 10 49.6**	**-2.7**
MAKA	**Makarska**	**5.72**	**335**	*e*Pn		**Pn**	**18 10 01.9**	**+0.4**
MAKA				Sn		**Sn**	**18 11 04.7**	**-2.2**
ZIRJ	**Zirje**	**6.55**	**329**	*e*Pn		**Pn**	**18 10 13.3**	**+0.5**
ZIRJ				Sn		**Sn**	**18 11 23.9**	**-3.4**
KIJV	**Kijevo**	**6.57**	**334**	*i* Pn		**Pn**	**18 10 14.3**	**+1.2**
KIJV				Sn		**Sn**	**18 11 26.2**	**-1.6**
MORI	**Morici**	**6.70**	**330**	*i* Pn		**Pn**	**18 10 16.4**	**+1.5**
DUGI	**Dugi Otok**	**7.07**	**327**	*e*Pn		**Pn**	**18 10 21.1**	**+1.1**
NVLJ	**Novalja**	**7.62**	**329**	*e*Pn		**Pn**	**18 10 28.7**	**+1.3**

MAN 27 18:32:42.2,9°.95N×124°.00E,h33km,mb3.8,ML2.6,MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.36**	**354**	*e*P		Pn	18 32 52.6	+1.3
LLP				*i* S		Sn	18 32 59.0	+1.9
MSLP	**Maasin**	**0.86**	**78**	*e*P		Pn	18 32 57.7	-0.3
MSLP				*e*S		Sb	18 33 10.2	+0.1

*IDC **27** 18:35:26.9±1.6,39°.41N×140°.21E,h153km±16km,mb3.1/7, mb1 3.3/9,mb1mx3.1/51,mbtmp3.5/9,MS3.1/1,Ms1 3.1/1, ms1mx2.3/13,Error ellipse: s-maj=24.7km s-min=13.4km az=113.0*
*JMA **27** 18:35:28.3±0.1,39°.41N×140°.15E,h163km±1km,M3.5*

ISC 27 18:35:28.2±0.8,39°.44N±0°.05×140°.12E±0°.07,h166km±6km, n27,σ0°.91/38,mb3.3/7,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JYW	**Yuwa**	**0.12**	**34**	P		**Pn**	**18 35 50.4**	**+0.1**
JYW				S		**Sn**	**18 36 07.7**	**+0.5**
JRG	**Rokugo**	**0.40**	**97**	P		**Pn**	**18 35 50.9**	**-0.1**
JRG				S		**Sn**	**18 36 08.1**	**-0.2**
JYYZ	**Yamagatayuza**	**0.45**	**200**	P		**Pn**	**18 35 51.4**	**+0.2**
JYK	**Kaneyama**	**0.56**	**161**	P		**Pn**	**18 35 51.2**	**-0.5**
JYK				S		**Sn**	**18 36 08.8**	**-0.8**
JAH	**Hinai**	**0.84**	**28**	P		**Pn**	**18 35 53.8**	**+0.5**
JAH				*e*S		**Sn**	**18 36 13.0**	**+0.3**
JOM	**Ohasama**	**0.91**	**88**	P		**Pn**	**18 35 53.8**	**0.0**
JOM				S		**Sn**	**18 36 13.0**	**-0.4**
JYA	**Atsumi**	**0.91**	**201**	P		**Pn**	**18 35 53.5**	**-0.3**
JYA				S		**Sn**	**18 36 12.5**	**-1.0**
JMK	**Ichinoseki**	**0.98**	**120**	P		**Pn**	**18 35 54.0**	**-0.4**
JMK				S		**Sn**	**18 36 13.5**	**-0.9**
JOU	**Okura**	**1.16**	**158**	P		**Pn**	**18 35 55.7**	**-0.2**
JAW	**Awa shima**	**1.20**	**215**	P		**Pn**	**18 35 55.7**	**-0.5**
JAW				*e*S		**Sn**	**18 36 16.7**	**-0.9**
JYS	**Shirataka**	**1.22**	**182**	S		**Sn**	**18 36 18.3**	**+0.2**
JANG	**Nango**	**1.42**	**49**	P		**Pn**	**18 35 58.3**	**+0.1**
JANG				*e*S		**Sn**	**18 36 21.0**	**-0.3**
JNS	**Sasagawa**	**1.74**	**202**	P		**Pn**	**18 36 01.0**	**-0.5**
JFT	**Otama**	**1.93**	**175**	P		**Pn**	**18 36 03.3**	**-0.3**
JSD	**Sado**	**2.02**	**227**	P		**Pn**	**18 36 04.1**	**-0.5**
JSD				*e*S		**Sn**	**18 36 31.2**	**-1.5**
JOT	**Ohata**	**2.06**	**20**	P		**Pn**	**18 36 05.5**	**+0.5**
MAT	**Matsushiro**	**3.27**	**208**	P		**Pn**	**18 36 19.0**	**-0.6**
MAT				S		**Sn**	**18 37 01.2**	**+1.7**
MJAR	**Matsushiro Arr**	**3.27**	**208**	P		**Pn**	**18 36 19.2**	**-0.4**
	0.6nm,0.3s,baz=19,slow=14,SNR=36							
ASAJ	**Asahikawa**	**5.02**	**21**	P		**Pn**	**18 36 41.1**	**-1.0**
	2.7nm,0.3s,baz=231,slow=11,SNR=45							
ASAJ				S		**Sn**	**18 37 37.1**	**-2.9**
	1.0nm,0.3s,baz=223,slow=19,SNR=2.9							
PETK	**Petropavlovsk-**	**18.22**	**36**	LR		LR	18 48 09.9	
	comp=Z,50nm,18.4s,baz=59,slow=42							
ZALV	**Zalesovo Beam**	**39.56**	**310**	P		**P**	**18 42 42.9**	**0.0**
	0.5nm,0.3s,baz=85,slow=8.2,SNR=2.5							
CMAR	**Chiang Mai Arr**	**41.21**	**252**	P		**P**	**18 42 58.0**	**+1.2**
	0.2nm,0.6s,baz=43,slow=7.8,SNR=4.1							
MKAR	**Makanchi Array**	**42.01**	**300**	P		**P**	**18 43 03.2**	**+0.1**
	0.2nm,0.7s,baz=82,slow=10,SNR=3.2							
WRA	**Warramunga Arr**	**59.32**	**186**	P		**P**	**18 45 11.2**	**-1.5**
	0.7nm,0.8s,baz=5.4,slow=7.2,SNR=5.8							
ASAR	**Alice Springs**	**63.05**	**186**	P		**P**	**18 45 37.0**	**-0.8**
	0.3nm,0.7s,baz=360,slow=6.3,SNR=7.8							
NVAR	**Mina Array Bea**	**74.36**	**53**	P		**P**	**18 46 49.4**	**+1.5**
	0.4nm,0.7s,baz=293,slow=5.5,SNR=2.8							
PDAR	**Pinedale Array**	**76.70**	**45**	P		**P**	**18 47 01.9**	**+0.8**
	0.3nm,0.5s,baz=80,slow=1.7,SNR=4.5							

UCR 27 18:35:53.8±1.6,9°.48N×84°.89W,h18km±5km,MD4.0, 3C-9D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JTS	**Las Juntas de**	**0.80**	**356**	*i* P		Pb	18 36 08.1	-1.3
JTS				*e*S		Sb	18 36 18.7	-1.2
LCR2	**La Lucha 2**	**0.91**	**74**	*e*P		Pb	18 36 09.8	-1.5
LCR2				*e*S		Sb	18 36 23.1	-0.1
HDC	**Heredia**	**0.92**	**56**	*i* P		Pb	18 36 10.4	-1.0
HDC				*e*S		Sb	18 36 22.7	-0.7
SJS	**Escuela Geolog**	**0.94**	**61**	*e*P		Pb	18 36 10.7	-1.0
SJS				*e*S		Sn	18 36 25.5	0.0
PLVR	**Palo Verde**	**0.97**	**332**	*e*P		Pb	18 36 11.4	-0.9
PLVR				*e*S		Sb	18 36 25.2	+0.3
ARE1	**Arenal 1**	**0.99**	**10**	*i* P		Pb	18 36 11.7	-0.8
ARE1				*e*S		Sb	18 36 25.5	+0.4
FORC	**Fortuna**	**1.00**	**13**	*i* P		Pb	18 36 11.5	-1.1
CEDE	**Laguna Cedeo**	**1.01**	**10**	*i* P		Pb	18 36 12.1	-0.8
EDDO	**Dominical**	**1.04**	**103**	*e*P		Pb	18 36 12.2	-1.1
EDDO				*e*S		Sb	18 36 26.8	+0.2
AMAS	**Alto Masis**	**1.12**	**355**	*i* P		Pn	18 36 13.7	-1.2
AMAS				*i* S		Sb	18 36 29.2	-0.1
ACAL	**Aguas Claras**	**1.15**	**353**	*i* P		Pn	18 36 14.2	-1.0
CUI	**Cuipilapa**	**1.20**	**347**	*e*P		Pn	18 36 14.9	-0.8
CUI				*e*S		Sb	18 36 31.1	-0.2
COLC	**Colonia**	**1.21**	**345**	*i* P		Pn	18 36 15.0	-1.0
CVTR	**Volcan Turrial**	**1.24**	**64**	*e*P		Pn	18 36 15.8	-0.9
CVTR				*e*S		Sg	18 36 34.3	+0.3
LIM1	**Limonal**	**1.26**	**344**	*i* P		Pn	18 36 15.9	-0.7
GUAB	**Guayabo de Bag**	**1.26**	**345**	*i* P		Pn	18 36 15.8	-0.9
EDLM	**Las Mercedes**	**1.30**	**99**	*e*P		Pn	18 36 15.8	-1.4
NY14	**Universidad de**	**1.32**	**331**	*i* P		Pn	18 36 17.4	0.0
BUEV	**Buena Vista**	**1.40**	**339**	*e*P		Pn	18 36 18.2	-0.4
EDPN	**Palmar Norte**	**1.51**	**110**	*e*P		Pn	18 36 18.7	-1.3
EDPN						Pb	18 36 19.2	-2.1
EDPN				*e*S		Sn	18 36 38.5	-0.7
EDBA	**Buenos Aires**	**1.63**	**101**	*e*P		Pn	18 36 20.9	-0.8
ACON	**Acoyapa**	**2.48**	**354**	*e*P		Pn	18 36 33.4	-0.1

*IDC **27** 18:45:41.9±1.1,38°.46N×20°.62E,h0km,mb3.7/8, mb1 3.8/12,mb1mx3.6/39,mbtmp3.7/12,ML3.8/3,MS3.9/1, Ms1 3.9/1,ms1mx2.7/41,Error ellipse: s-maj=23.5km s-min=17.8km az=23.0*
*PDG **27** 18:45:42.4±0.4,38°.43N×20°.40E,h9km±1km,ML3.5/13, Error ellipse: s-maj=1.0km s-min=1.0km az=90.0*
*THE **27** 18:45:43.1,38°.39N×20°.43E,h11km±1km,ML3.5/8,Error ellipse: s-maj=1.3km s-min=0.6km az=93.0*
*ATH **27** 18:45:43.1,38°.38N×20°.49E,h12km±2km,ML3.4/20,Error ellipse: s-maj=2.5km s-min=0.8km az=284.0*

ISC 27 18:45:43.5±0.7,38°.39N±0°.02×20°.50E±0°.03,h12km±4km, n92,σ0°.91/131,mb3.7/8,5C-4D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FSK	**Fiskardo**	**0.08**	**36**	P		**Pg**	**18 45 45.5**	**-0.6**
FSK				S		**Sg**	**18 45 47.7**	**-0.3**
	50μm,0.4s							
FSK	**Fiskardo**	**0.08**	**36**	P		**Pg**	**18 45 45.6**	**-0.5**
FSK				S		**Sg**	**18 45 47.7**	**-0.3**
ARG2	**Argostoli**	**0.21**	**183**	P		**Pg**	**18 45 47.7**	**-0.3**
ARG2				S		**Sg**	**18 45 51.6**	**+0.5**
	54μm,0.3s							
VLS	**Valsamata**	**0.23**	**162**	P		**Pg**	**18 45 47.8**	**-0.5**
VLS				S		**Sb**	**18 45 52.2**	**+0.7**
	20μm,0.6s							
VLS	**Valsamata**	**0.23**	**162**	P		**Pg**	**18 45 47.8**	**-0.5**
VLS				S		**Sg**	**18 45 51.8**	**+0.2**
VLS				AML		AML	18 45 56.1	
	comp=N,46520μm,0.6s							
VLS				AML		AML	18 45 58.6	
	comp=E,28779μm,0.5s							
EVGI	**Lefkada island**	**0.26**	**28**	P		**Pg**	**18 45 48.9**	**0.0**
EVGI				S		**Sg**	**18 45 53.2**	**+0.7**
EVGI	**Lefkada island**	**0.26**	**28**	P		**Pg**	**18 45 48.8**	**0.0**
EVGI				S		**Sg**	**18 45 53.8**	**+1.3**
MGNA	**Meganis**	**0.35**	**41**	P		**Pg**	**18 45 50.4**	**-0.1**
MGNA				S		**Sb**	**18 45 56.4**	**-0.7**
MGNA				AML		AML	18 45 58.5	
	comp=N,25104μm,0.4s							
MGNA				AML		AML	18 45 58.8	
	comp=E,22626μm,0.4s							
KFL	**Anninata**	**0.36**	**141**	P		**Pg**	**18 45 50.5**	**-0.2**
KFL				S		**Sb**	**18 45 57.1**	**-0.4**
	comp=E,20μm,0.5s							
KFL	**Anninata**	**0.36**	**141**	P		**Pg**	**18 45 50.5**	**-0.2**
KFL				S		**Sg**	**18 45 55.8**	**+0.3**
KFL				AML		AML	18 46 00.7	
	comp=E,39091μm,0.4s							
KFL				AML		AML	18 46 00.8	
	comp=N,41908μm,0.7s							
LKD2	**Lefkada island**	**0.41**	**17**	P		**Pg**	**18 45 51.6**	**-0.1**
LKD2				S		**Sb**	**18 45 58.8**	**-0.3**
	comp=N,4μm,0.8s							
LKD2	**Lefkada island**	**0.41**	**17**	P		**Pg**	**18 45 51.5**	**-0.3**
LKD2				S		**Sg**	**18 45 57.0**	**-0.3**
LKD2				AML		AML	18 46 00.8	
	comp=E,6700μm,0.5s							
LKD2				AML		AML	18 46 07.3	
	comp=N,8921μm,1.1s							
TSLK	**Tsoukalades, L**	**0.45**	**16**	P		**Pg**	**18 45 52.4**	**0.0**
TSLK	**Tsoukalades, L**	**0.45**	**16**	P		**Pg**	**18 45 52.3**	**-0.1**
TSLK				S		**Sg**	**18 45 59.0**	**+0.7**
TSLK				AML		AML	18 46 03.3	
	comp=N,14712μm,0.5s							
TSLK				AML		AML	18 46 03.8	
	comp=E,11192μm,0.6s							
VLMS	**Volimes, Zakyn**	**0.53**	**166**	P		**Pg**	**18 45 53.3**	**-0.5**
VLMS				S		**Sb**	**18 46 01.4**	**-1.1**
VLMS				AML		AML	18 46 07.8	
	comp=N,23446μm,0.5s							
VLMS				AML		AML	18 46 11.5	
	comp=E,13395μm,0.7s							
PDO	**Prodromos**	**0.57**	**69**	P		**Pg**	**18 45 54.8**	**+0.1**
PDO				S		**Sb**	**18 46 05.0**	**+1.3**
PDO	**Prodromos**	**0.57**	**69**	P		**Pg**	**18 45 54.8**	**+0.1**
ZAK2	**Zakynthos**	**0.68**	**152**	P		**Pb**	**18 45 56.7**	**-0.6**
ZAK2				S		**Sb**	**18 46 06.1**	**-0.6**
	comp=E,30μm,0.6s							
RLS	**Riolos of Patr**	**0.83**	**113**	P		**Pg**	**18 45 59.0**	**-0.5**
RLS				S		**Sn**	**18 46 12.1**	**-1.1**
	comp=E,2μm,0.6s							
RLS	**Riolos of Patr**	**0.83**	**113**	P		**Pg**	**18 45 59.0**	**-0.5**
RLS				S		**Sb**	**18 46 11.2**	**+0.2**
RLS				AML		AML	18 46 21.8	
	comp=N,3296μm,0.5s							
RLS				AML		AML	18 46 26.8	
	comp=E,2094μm,1.0s							
PVO	**Paravola**	**0.83**	**74**	P		**Pb**	**18 45 59.8**	**-0.2**
PVO				S		**Sn**	**18 46 13.3**	**-0.1**
	comp=E,2μm,0.5s							
PVO	**Paravola**	**0.83**	**74**	P		**Pb**	**18 45 59.7**	**-0.3**
PVO				S		**Sb**	**18 46 11.6**	**+0.5**
PVO				AML		AML	18 46 19.8	
	comp=E,5415μm,0.4s							
PVO				AML		AML	18 46 19.8	
	comp=N,4245μm,0.5s							
DRO	**Drossia**	**1.05**	**114**	P		**Pb**	**18 46 03.3**	**-0.4**
DRO	**Drossia**	**1.05**	**114**	P		**Pb**	**18 46 03.2**	**-0.4**
DRO				AML		AML	18 46 26.1	
	comp=N,6586μm,0.5s							
DRO				AML		AML	18 46 27.1	
	comp=E,10676μm,0.4s							
EFP	**Efpalio**	**1.10**	**88**	P		**Pb**	**18 46 03.7**	**-0.8**
EFP	**Efpalio**	**1.10**	**88**	P		**Pb**	**18 46 03.8**	**-0.8**
EFP				AML		AML	18 46 27.9	
	comp=N,5066μm,0.5s							
EFP				AML		AML	18 46 30.2	
	comp=E,3864μm,0.7s							
ANX	**Ano Chora**	**1.13**	**79**	P		**Pb**	**18 46 04.7**	**-0.4**
ANX	**Ano Chora**	**1.13**	**79**	P		**Pb**	**18 46 04.8**	**-0.4**
ANX				AML		AML	18 46 29.5	
	comp=E,6272μm,0.5s							
ANX				AML		AML	18 46 31.4	
	comp=N,3437μm,0.6s							
IGT	**Igoumenitsa**	**1.15**	**353**	P		**Pb**	**18 46 04.4**	**-0.9**
IGT	**Igoumenitsa**	**1.15**	**353**	P		**Pb**	**18 46 04.6**	**-0.7**
IGT				AML		AML	18 46 28.4	
	comp=N,2158μm,0.4s							
IGT				AML		AML	18 46 31.9	
	comp=E,2089μm,0.7s							
EVR	**Evrytania**	**1.15**	**63**	P		**Pb**	**18 46 04.7**	**-0.7**
EVR				S		**Sn**	**18 46 21.6**	**+0.2**
EVR				AML		AML	18 46 33.6	
	comp=N,1819μm,0.7s							
EVR				AML		AML	18 46 37.4	
	comp=E,2252μm,0.7s							
LAKA	**Lakka**	**1.17**	**97**	P		**Pb**	**18 46 04.8**	**-0.9**
SERG	**Sergoula**	**1.22**	**89**	P		**Pn**	**18 46 06.0**	**-0.5**
SERG	**Sergoula**	**1.22**	**89**	P		**Pn**	**18 46 06.0**	**-0.5**
SERG				AML		AML	18 46 30.4	
	comp=E,2998μm,0.8s							
SERG				AML		AML	18 46 31.4	
	comp=N,3245μm,0.4s							
TRIZ	**Trizonia**	**1.24**	**91**	P		**Pn**	**18 46 05.9**	**-0.7**
AMT	**Artemida-Makis**	**1.28**	**132**	P		**Pg**	**18 46 08.1**	**-0.1**
AMT				AML		AML	18 46 36.3	
	comp=E,5639μm,0.7s							
AMT				AML		AML	18

STON				Sn		**Sn**	18 47 51.9	**-3.0**
UPM	**Unac-Piva**	**4.96**	**346**	*i* Pn		**Pn**	**18 46 57.8**	**-0.2**
UPM				*i* Sn		**Sn**	**18 47 54.1**	**-1.2**
PLE	**Pljevlja**	**5.00**	**351**	*i* Pn		**Pn**	**18 46 58.6**	**0.0**
PLE				*i* Sn		**Sn**	**18 47 55.7**	**-0.7**
MAKA	**Makarska**	**5.56**	**333**	*e*Pn		**Pn**	**18 47 05.7**	**-0.3**
MAKA				Sn		**Sn**	**18 48 07.6**	**-2.2**
KIJV	**Kijevo**	**6.40**	**332**	*e*Pn		**Pn**	**18 47 17.0**	**-0.6**
ZIRJ	**Zirje**	**6.41**	**327**	*i* Pn		**Pn**	**18 47 16.4**	**-1.3**
ZIRJ				Sn		**Sn**	**18 48 28.3**	**-2.5**
MORI	**Morici**	**6.56**	**328**	*e*Pn		**Pn**	**18 47 19.4**	**-0.3**
DUGI	**Dugi Otok**	**6.94**	**325**	*e*Pn		**Pn**	**18 47 25.0**	**0.0**
UDBI	**Udbina**	**7.09**	**331**	*i* Pn		**Pn**	**18 47 27.6**	**+0.5**
NVLJ	**Novalja**	**7.47**	**327**	*e*Pn		**Pn**	**18 47 32.1**	**-0.2**
MLR	**Muntele Rosu**	**8.17**	**28**	Pn		Pn	18 47 48.6	+6.6
	comp=N,0.4nm,0.3s,baz=223,slow=12,SNR=8.0							
SOKA	**Soboth**	**9.21**	**336**	*e*Pn		**Pn**	**18 47 56.3**	**+0.1**
	comp=N,3.7nm,0.4s,SNR=6.7							
OBKA	**Obir**	**9.22**	**333**	*e*Pn		**Pn**	**18 47 57.7**	**+1.3**
	comp=N,3.8nm,0.5s							
BRTR	**Keskin Array B**	**10.31**	**78**	Pn		**Pn**	**18 48 12.4**	**+1.0**
	comp=N,0.0nm,0.3s,baz=257,slow=13,SNR=2.4							
MOA	**Molln**	**10.49**	**336**	*i* Pn		**Pn**	**18 48 13.8**	**+0.1**
	comp=N,1.7nm,0.4s							
WATA	**Walderalm**	**11.07**	**327**	*e*Pn		**Pn**	**18 48 24.5**	**+2.7**
	comp=N,2.2nm,0.3s							
SQTA	**Sankt Quirin**	**11.15**	**325**	*i* Pn		**Pn**	**18 48 24.9**	**+2.2**
	comp=N,1.5nm,0.4s							
MOTA	**Moosalm**	**11.29**	**325**	*e*Pn		**Pn**	**18 48 25.9**	**+1.1**
	comp=N,2.5nm,0.6s							
DAVOX	**Davos/Dischmat**	**11.46**	**320**	Pn		**Pn**	**18 48 27.8**	**+0.7**
	comp=N,0.1nm,0.3s,baz=138,slow=12,SNR=3.3							
GERES	**GERESS Array B**	**11.55**	**322**	Pn		**Pn**	**18 48 27.8**	**-0.5**
	comp=N,0.2nm,0.3s,baz=141,slow=13,SNR=3.5							
ESDC	**Sonseca Array**	**19.04**	**282**	P		**Pn**	**18 50 07.4**	**+1.2**
	comp=N,0.2nm,0.3s,baz=69,slow=10,SNR=6.8							
HFS	**Hagfors**	**22.19**	**351**	P		**P**	**18 50 39.3**	**0.0**
	comp=N,2.8nm,0.8s,baz=170,slow=11,SNR=7.7							
FINES	**FINESS Array B**	**23.34**	**7**	P		**P**	**18 50 51.2**	**-0.1**
	comp=N,2.4nm,0.7s,baz=184,slow=8.4,SNR=6.0							
FINES				LR		LR	19 01 18.5	
	comp=N,319nm,21.8s,baz=246,slow=40							
NOA	**NORSAR Array B**	**23.41**	**349**	P		**P**	**18 50 52.0**	**-0.1**
	comp=N,0.7nm,0.6s,baz=157,slow=11,SNR=3.5							
GEYT	**Alibeck**	**29.45**	**79**	P		**P**	**18 51 46.3**	**-0.9**
	comp=N,0.8nm,0.6s,baz=282,slow=8.7,SNR=3.8							
TORD	**Torodi Ar. Bea**	**30.19**	**219**	P		**P**	**18 51 54.3**	**+0.5**
	comp=N,0.7nm,0.8s,baz=42,slow=8.5,SNR=3.6							
MKAR	**Makanchi Array**	**45.20**	**59**	P		**P**	**18 53 59.8**	**-0.5**
	comp=N,0.4nm,0.4s,baz=280,slow=7.7,SNR=18							
ZALV	**Zalesovo Beam**	**45.56**	**48**	P		**P**	**18 54 02.0**	**-1.0**
	comp=N,1.7nm,0.4s,baz=272,slow=8.2,SNR=8.9							
CMAR	**Chiang Mai Arr**	**69.88**	**82**	P		**P**	**18 56 54.9**	**+0.3**
	comp=N,0.3nm,0.6s,baz=313,slow=7.3,SNR=3.4							

*NEIC **27** 18:54:57.3±0.5, 15°.9S×0°.8×171°.7W±0°.3, h24km±10km, mb4.6/9, Error ellipse: s-maj=126.0km s-min=27.1km az=162.0*

IDC 27 18:54:51.8±46.0, 15°.29S×171°.58W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.8/29, mbtmp4.2/3, MS3.4/1, Ms1 3.3/1, ms1mx2.7/30, Error ellipse: s-maj=904.0km s-min=184.0km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**45.62**	**240**	P		P	19 03 14.4	+0.3
	1.1nm,0.4s,baz=90,slow=10,SNR=6.3							
STKA				LR		LR	19 19 21.5	
	comp=Z,43nm,18.1s,baz=212,slow=32							
STKA	**Stephens Creek**	**45.62**	**240**	P		P	19 03 13.1	-1.0
BBOO	**Buckleboo**	**50.39**	**240**	P		P	19 03 51.7	+0.6
WR0	**Warramunga Arr**	**51.39**	**257**	P		P	19 03 58.1	-0.7
WR0				IAmb		IAmb	19 04 23.9	
	comp=Z,13nm,1.5s							
WB0	**Warramunga Arr**	**51.54**	**257**	P		P	19 03 59.6	-0.4
WB0				IAmb		IAmb	19 04 16.4	
	comp=Z,8.6nm,1.3s							
WB2	**Warramunga Arr**	**51.57**	**257**	P		P	19 03 59.7	-0.5
WB2				IAmb		IAmb	19 04 24.4	
	comp=Z,10nm,1.1s							
WRAB	**Tennant Creek**	**51.57**	**257**	P		P	19 03 59.7	-0.4
WRAB				IAmb		IAmb	19 04 10.8	
	comp=Z,11nm,1.4s							
WRA	**Warramunga Arr**	**51.58**	**257**	P		P	19 03 59.7	-0.5
	comp=Z,0.5nm,0.3s,baz=95,slow=7.1,SNR=11							
WRA	**Warramunga Arr**	**51.58**	**257**	P		P	19 03 59.7	-0.5
AS31	**Alice Springs**	**51.82**	**252**	P		P	19 04 02.0	0.0
ASAR	**Alice Springs**	**51.82**	**252**	P		P	19 04 01.9	-0.1
	comp=Z,5.5nm,0.5s,baz=89,slow=8.1,SNR=238							
ASAR	**Alice Springs**	**51.82**	**252**	P		P	19 04 01.3	-0.7
FITZ	**Fitzroy Crossi**	**59.95**	**258**	P		P	19 05 03.9	+3.5

*THE **27** 18:56:42.9, 38°.21N×20°.47E, h14km, ML2.6/6, Error ellipse: s-maj=1.2km s-min=0.5km az=243.0*
*ATH **27** 18:56:42.8, 38°.21N×20°.50E, h16km±2km, ML2.6/8, Error ellipse: s-maj=3.4km s-min=1.3km az=243.0*

ISC 27 18:56:42.4±1.4, 38°.20N±0°.04×20°.46E±0°.07, h17km±6km, n27, σ0°.29/37, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
ARG2	**Argostoli**	**0.03**	**138**	P		**Pg**	**18 56 45.5**	**+0.1**
ARG2				S		**Sg**	**18 56 47.4**	**0.0**
	29μm,0.2s							
VLS	**Valsamata**	**0.10**	**103**	P		**Pg**	**18 56 45.9**	**-0.1**
VLS				S		**Sg**	**18 56 48.2**	**-0.2**
	6μm,0.1s							
VLS	**Valsamata**	**0.10**	**103**	P		**Pg**	**18 56 45.9**	**-0.1**
VLS				S		**Sg**	**18 56 48.1**	**-0.2**
VLS				AML		AML	18 56 48.2	
	comp=N,7779μm,0.2s							
VLS				AML		AML	18 56 48.4	
	comp=E,13112μm,0.1s							
FSK	**Fiskardo**	**0.27**	**17**	P		**Pg**	**18 56 48.3**	**0.0**
FSK				S		**Sg**	**18 56 52.7**	**+0.3**
	comp=E,2μm,0.3s							
FSK	**Fiskardo**	**0.27**	**17**	P		**Pg**	**18 56 48.4**	**0.0**
KFL	**Anninata**	**0.27**	**110**	P		**Pg**	**18 56 48.4**	**0.0**
KFL				S		**Sg**	**18 56 52.7**	**+0.2**
	comp=E,5μm,0.2s							
KFL	**Anninata**	**0.27**	**110**	P		**Pg**	**18 56 48.4**	**0.0**
KFL				S		**Sg**	**18 56 52.6**	**+0.2**
KFL				AML		AML	18 56 52.9	
	comp=N,10437μm,0.2s							
KFL				AML		AML	18 56 54.5	
	comp=E,9052μm,0.2s							
VLMS	**Volimes, Zakyn**	**0.36**	**154**	P		**Pg**	**18 56 50.0**	**0.0**
VLMS				AML		AML	18 56 59.5	
	comp=E,2193μm,0.3s							
VLMS				AML		AML	18 57 16.5	
	comp=N,2615μm,0.5s							
EVGI	**Lefkada island**	**0.45**	**20**	P		**Pg**	**18 56 51.3**	**-0.1**
EVGI				S		**Sb**	**18 56 58.1**	**-0.2**
EVGI	**Lefkada island**	**0.45**	**20**	P		**Pg**	**18 56 51.3**	**-0.1**
MGNA	**Meganis**	**0.52**	**30**	P		**Pg**	**18 56 52.6**	**-0.2**
MGNA				AML		AML	18 57 00.6	
	comp=N,1258μm,0.2s							
MGNA				AML		AML	18 57 00.8	
	comp=E,1642μm,0.3s							
LKD2	**Lefkada island**	**0.61**	**15**	P		**Pg**	**18 56 54.6**	**+0.1**
LKD2				AML		AML	18 57 11.7	
	comp=N,479μm,0.3s							
LKD2				AML		AML	18 57 12.0	
	comp=E,664μm,0.3s							
TSLK	**Tsoukalades, L**	**0.64**	**14**	P		**Pg**	**18 56 54.8**	**-0.2**
TSLK				AML		AML	18 57 11.3	
	comp=E,685μm,0.3s							
TSLK				AML		AML	18 57 13.2	
	comp=N,690μm,0.6s							
PDO	**Prodromos**	**0.69**	**55**	P		**Pg**	**18 56 55.6**	**-0.4**
PDO				S		**Sb**	**18 57 06.3**	**+1.0**
PDO	**Prodromos**	**0.69**	**55**	P		**Pg**	**18 56 55.3**	**-0.7**
RLS	**Riolos of Patr**	**0.81**	**100**	P		**Pg**	**18 56 58.0**	**-0.1**
RLS				S		**Sn**	**18 57 10.4**	**-0.2**
	comp=N,115nm,0.5s							
RLS	**Riolos of Patr**	**0.81**	**100**	P		**Pg**	**18 56 57.8**	**-0.3**
PVO	**Paravola**	**0.93**	**63**	P		**Pb**	**18 57 00.2**	**+0.1**
PVO				S		**Sg**	**18 57 13.3**	**+0.5**
	comp=N,222nm,0.3s							
PVO	**Paravola**	**0.93**	**63**	P		**Pb**	**18 57 00.2**	**+0.1**
DRO	**Drossia**	**1.02**	**104**	P		**Pg**	**18 57 02.2**	**+0.1**
DRO				AML		AML	18 57 22.0	
	comp=N,554μm,0.7s							
DRO				AML		AML	18 57 25.2	
	comp=E,643μm,0.5s							
EFP	**Efpalio**	**1.16**	**78**	P		**Pb**	**18 57 03.9**	**-0.1**
AMT	**Artemida-Makis**	**1.19**	**124**	P		**Pg**	**18 57 05.3**	**-0.1**
LAKA	**Lakka**	**1.20**	**88**	P		**Pn**	**18 57 04.2**	**-0.3**
ANX	**Ano Chora**	**1.21**	**71**	P		**Pg**	**18 57 06.2**	**+0.3**
ANX				AML		AML	18 57 29.2	
	comp=E,485μm,0.6s							
ANX				AML		AML	18 57 29.5	
	comp=N,559μm,0.5s							
SERG	**Sergoula**	**1.27**	**80**	P		**Pn**	**18 57 05.5**	**0.0**
TRIZ	**Trizonia**	**1.28**	**82**	P		**Pn**	**18 57 05.3**	**-0.2**
KALE	**Kalithea**	**1.33**	**81**	P		**Pg**	**18 57 07.9**	**-0.2**

MAN 27 19:00:52.4, 9.67N×123.79E, h32km, mb4.0, ML2.8, MS2.5, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.66**	**15**	*e*P		Pb	19 01 06.2	+0.6
LLP				*i* S		Sn	19 01 15.8	+0.9
MSLP	**Maasin**	**1.15**	**66**	*e*P		Pb	19 01 17.6	+3.9
MSLP				*e*S		Sb	19 01 35.6	+7.3
DCPH	**Dipolog City**	**1.17**	**202**	*e*P		Sb	19 01 31.8	+2.9
GUIM	**Jordan**	**1.52**	**309**	*e*P		Pn	19 01 17.4	0.0
GUIM				*e*S		Sn	19 01 34.0	-2.1
OCLP	**Ormoc**	**1.59**	**30**	*e*P		Pb	19 01 22.4	+1.2
OCLP				*e*S		Sb	19 01 44.1	+3.2

BEO 27 19:07:23.2±0.6, 43°.32N×19°.89E, h0km, ML1.4/7, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
IVAS	**Ivanjica**	**0.32**	**37**	*e*Pg		Pg	19 07 27.3	-2.0
IVAS				*e*Sg		Sg	19 07 32.5	-0.9
BBLS	**Lazići**	**0.65**	**327**	*e*Pg		Pg	19 07 33.8	-1.8
BBLS				*e*Sg		Sg	19 07 43.8	-0.2
DIVS	**Divibare**	**0.78**	**6**	*e*Pg		Pg	19 07 38.6	+0.5
DIVS				*e*Sg		Sg	19 07 47.5	-0.7
GRUS	**Gruza**	**0.82**	**46**	*e*Pg		Pg	19 07 38.4	-0.6
GRUS				*e*Sg		Sg	19 07 49.6	-0.1
TRUS	**Trudelj**	**0.97**	**22**	*e*Pg		Pg	19 07 41.9	0.0
TRUS				*e*Sg		Sg	19 07 54.3	-0.2
BOVS	**Bovan**	**1.36**	**76**	*e*Pg		Pg	19 07 48.6	-0.6
BOVS				*e*Sg		Sg	19 08 06.3	-0.6
BARS	**Barje**	**1.50**	**109**	*e*Pg		Pn	19 07 49.4	-2.0
BARS				*e*Sg		Sg	19 08 10.8	-0.6

*JMA **27** 19:22:08.5±0.1, 40°.36N×142°.08E, h51km±1km, M3.5*
JMA Felt I J1.
*IDC **27** 19:22:09.9±2.3, 40°.42N×142°.02E, h71km±23km, mb3.2/5, mb1 3.3/8, mb1mx3.1/45, mbtmp3.4/8, Error ellipse: s-maj=31.1km s-min=16.6km az=94.0*

ISC 27 19:22:08.4±1.1, 40°.38N±0°.04×142°.02E±0°.08, h52km±8km, n24, σ0°.87/27, mb3.5/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
JKEN	**Kujiedanarisaw**	**0.29**	**234**	P		**Pn**	**19 22 17.9**	**+0.2**
JKEN				S		**Sn**	**19 22 24.4**	**+0.2**
JANG	**Nango**	**0.38**	**270**	P		**Pn**	**19 22 18.9**	**+0.4**
JANG				S		**Sn**	**19 22 26.2**	**+0.4**
JTH	**Tanohata**	**0.45**	**195**	P		**Pn**	**19 22 19.2**	**-0.1**
JTH				S		**Sn**	**19 22 26.7**	**-0.4**
JKZ	**Kuzumaki**	**0.66**	**234**	P		**Pn**	**19 22 22.3**	**+0.5**
JKZ				S		**Sn**	**19 22 31.9**	**+0.5**
JARK	**Aomorirokkasho**	**0.80**	**322**	P		**Pn**	**19 22 23.7**	**+0.2**
JARK				S		**Sn**	**19 22 34.6**	**0.0**
JTM	**Tenmabayashi**	**0.83**	**300**	P		**Pn**	**19 22 24.2**	**+0.3**
JTM				S		**Sn**	**19 22 35.5**	**+0.2**
JOM	**Ohasama**	**1.06**	**212**	P		**Pn**	**19 22 27.5**	**+0.5**
JOM				S		**Sn**	**19 22 40.9**	**+0.1**
JAH	**Hinai**	**1.07**	**260**	P		**Pn**	**19 22 27.9**	**+0.7**
JAH				S		**Sn**	**19 22 42.2**	**+1.1**
JOT	**Ohata**	**1.24**	**324**	P		**Pn**	**19 22 29.6**	**+0.1**
JRG	**Rokugo**	**1.45**	**228**	P		**Pn**	**19 22 33.3**	**+1.1**
ASAJ	**Asahikawa**	**3.76**	**6**	P		**Pn**	**19 23 05.3**	**+1.4**
	3.5nm,0.3s,baz=213,slow=9.5,SNR=45							
ASAJ				S		**Sn**	**19 23 47.9**	**+1.1**
	0.9nm,0.3s,baz=60,slow=20,SNR=3.4							
MJAR	**Matsushiro Arr**	**4.86**	**219**	P		**Pn**	**19 23 21.7**	**+2.7**
	0.1nm,0.3s,baz=32,slow=15,SNR=6.9							
USRK	**Ussuriysk Ar.**	**8.36**	**300**	P		**Pn**	**19 24 06.3**	**-0.6**
	baz=102,slow=15,SNR=4.8							
SONM	**Songino Array**	**26.46**	**298**	P		**P**	**19 27 40.3**	**-0.3**
	0.1nm,0.3s,baz=81,slow=9.1,SNR=3.2							
H11N2	**WAKE ISLAND Hy**	**29.61**	**127**	T		T	19 59 03.3	
	baz=318,slow=75,SNR=22							
H11N1	**WAKE ISLAND Hy**	**29.62**	**127**	T		T	19 59 01.8	
	baz=318,slow=75,SNR=18							
H11N3	**WAKE ISLAND Hy**	**29.63**	**127**	T		T	19 59 02.6	
	baz=318,slow=75,SNR=12							
H11S1	**WAKE ISLAND Hy**	**30.43**	**129**	T		T	20 00 31.0	
	baz=322,slow=76,SNR=8.0							
H11S3	**WAKE ISLAND Hy**	**30.43**	**129**	T		T	20 00 32.8	
	baz=322,slow=76,SNR=7.5							
H11S2	**WAKE ISLAND Hy**	**30.44**	**129**	T		T	20 00 28.6	
	baz=322,slow=76,SNR=5.1							
ZALV	**Zalesovo Beam**	**40.08**	**309**	P		**P**	**19 29 37.8**	**-0.7**
	0.8nm,0.4s,baz=93,slow=7.9,SNR=4.4							
MKAR	**Makanchi Array**	**42.82**	**299**	P		**P**	**19 30 00.6**	**-0.5**
	0.4nm,0.7s,baz=66,slow=10.0,SNR=9.0							
WRA	**Warramunga Arr**	**60.43**	**188**	P		**P**	**19 32 12.5**	**-0.1**
	0.5nm,1.0s,baz=3.3,slow=7.2,SNR=2.8							
ASAR	**Alice Springs**	**64.16**	**188**	P		**P**	**19 32 36.4**	**-1.1**
	0.5nm,0.9s,baz=7.8,slow=7.5,SNR=3.4							

*MOS **27** 19:23:27.6±1.3, 38°.32N×20°.23E, h12km, mb4.5/6, Error ellipse: s-maj=8.3km s-min=5.4km az=75.0*
*IDC **27** 19:23:28.4±0.8, 38°.50N×20°.55E, h0km, mb4.0/13, mb1 4.0/20, mb1mx3.8/44, mbtmp3.9/20, ML4.2/5, MS3.2/5, Ms1 3.2/5, ms1mx2.9/45, Error ellipse: s-maj=17.0km s-min=13.3km az=34.0*
*ATH **27** 19:23:28.9, 38°.39N×20°.46E, h15km±2km, ML3.8/17, Error ellipse: s-maj=2.0km s-min=0.8km az=78.0*
*THE **27** 19:23:29.2, 38°.39N×20°.43E, h8km±1km, ML3.8/13, Error ellipse: s-maj=1.2km s-min=0.3km az=100.0*
*PDG **27** 19:23:30.1±0.4, 38°.48N×20°.41E, h13km±1km, ML4.0/14, Error ellipse: s-maj=1.0km s-min=0.9km az=90.0*
*NEIC **27** 19:23:31.1±2.1, 38°.42N±0°.03×20°.45E±0°.06, h14km±4km, Error ellipse: s-maj=7.2km s-min=3.6km az=70.0*

ISC 27 19:23:29.6±0.8, 38°.40N±0°.02×20°.47E±0°.03, h9km±5km, n235, σ1°.44/281, mb4.2/23, 20C-15D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
FSK	**Fiskardo**	**0.09**	**52**	P		**Pg**	**19 23 31.6**	**-0.4**
FSK				S		**Sg**	**19 23 33.8**	**+0.2**
	65μm,0.7s							
FSK	**Fiskardo**	**0.09**	**52**	⇓Pd0			19 23 31.6	
FSK				S		**Sg**	**19 23 34.4**	**+0.7**
ARG2	**Argostoli**	**0.23**	**177**	P		**Pg**	**19 23 33.7**	**-0.5**
ARG2				S		**Sg**	**19 23 37.7**	**+0.4**
VLS	**Valsamata**	**0.24**	**157**	P		**Pg**	**19 23 33.9**	**-0.7**
VLS				S		**Sg**	**19 23 37.7**	**-0.2**
	35μm,0.5s							
VLS	**Valsamata**	**0.24**	**157**	⇑Pc0			19 23 33.8	
VLS				S		**Sg**	**19 23 38.1**	**+0.2**
VLS				AML		AML	19 23 41.4	
	comp=N,81091μm,0.4s							
VLS				AML		AML	19 23 44.1	
	comp=E,57671μm,0.5s							
EVGI	**Lefkada island**	**0.26**	**34**	P		**Pg**	**19 23 34.9**	**0.0**
EVGI				S		**Sg**	**19 23 39.6**	**+1.2**
EVGI	**Lefkada island**	**0.26**	**34**	⇓Pd0			19 23 35.0	
EVGI				S		**Sg**	**19 23 39.8**	**+1.4**
MGNA	**Meganis**	**0.36**	**45**	⇓Pd0			19 23 36.4	
MGNA				S		**Sb**	**19 23 42.4**	**-1.4**
MGNA				AML		AML	19 23 44.2	
	comp=E,36527μm,0.3s							
MGNA				AML		AML	19 23 44.4	
	comp=N,45957μm,0.3s							
KFL	**Anninata**	**0.39**	**140**	P		**Pg**	**19 23 36.6**	**-0.6**
KFL				S		**Sg**	**19 23 43.2**	**+0.9**
	comp=N,30μm,0.3s							
KFL	**Anninata**	**0.39**	**140**	⇑Pc0			19 23 36.5	
KFL				S		**Sg**	**19 23 42.8**	**+0.5**
KFL				AML		AML	19 23 44.9	
	comp=E,78772μm,0.3s							
KFL				AML		AML	19 23 47.1	
	comp=N,44185μm,0.3s							
LKD2	**Lefkada island**	**0.41**	**21**	P		**Pg**	**19 23 37.2**	**-0.5**
LKD2				S		**Sb**	**19 23 44.5**	**-1.0**
	comp=N,11μm,0.7s							
LKD2	**Lefkada island**	**0.41**	**21**	⇓Pd0			19 23 37.5	
LKD2				S		**Sb**	**19 23 43.7**	**-1.8**
LKD2				AML		AML	19 23 46.3	
	comp=E,24253μm,0.6s							
LKD2				AML		AML	19 23 48.1	
	comp=N,19622μm,0.8s							
TSLK	**Tsoukalades, L**	**0.45**	**19**	P		**Pg**	**19 23 38.5**	**+0.2**
TSLK				S		**Sb**	**19 23 45.0**	**-1.4**
	comp=N,15μm,0.6s							
TSLK	**Tsoukalades, L**	**0.45**	**19**	P		**Pg**	**19 23 38.3**	**0.0**
TSLK				S		**Sb**	**19 23 44.8**	**-1.6**
VLMS	**Volimes, Zakyn**	**0.55**	**164**	⇑Pc0			19 23 39.3	
VLMS				S		**Sg**	**19 23 47.6**	**+0.2**
VLMS				AML		AML	19 23 51.8	
	comp=E,40440μm,0.2s							
VLMS				AML		AML	19 23 51.9	
	comp=N,45304μm,0.3s							
PDO	**Prodromos**	**0.59**	**71**	P		**Pg**	**19 23 40.3**	**-0.8**
PDO				S		**Sb**	**19 23 50.5**	**-0.1**
PDO	**Prodromos**	**0.59**	**71**	P		**Pg**	**19 23 40.6**	**-0.5**
ZAK2	**Zakynthos**	**0.70**	**151**	P		**Pg**	**19 23 42.9**	**-0.2**
PVO	**Paravola**	**0.85**	**75**	P		**Pg**	**19 23 46.0**	**-0.1**
PVO				S		**Sn**	**19 23 59.8**	**-0.6**
	comp=N,8μm,0.5s							
PVO	**Paravola**	**0.85**	**75**	P		**Pg**	**19 23 46.0**	**-0.1**
PVO				S		**Sb**	**19 23 58.2**	**0.0**
PVO				AML		AML	19 24 07.4	
	comp=N,15509μm,0.5s							
PVO				AML		AML	19 24 07.9	
	comp=E,16678μm,0.5s							
RLS	**Riolos of Patr**	**0.86**	**113**	P		**Pg**	**19 23 45.4**	**-0.7**
RLS				S		**Sn**	**19 23 59.2**	**-1.3**
	comp=E,4μm,0.5s							
RLS	**Riolos of Patr**	**0.86**	**113**	P		**Pg**	**19 23 45.5**	**-0.6**
RLS				AML		AML	19 24 06.6	
	comp=N,7306μm,0.6s							
RLS				AML		AML	19 24 09.8	
	comp=E,7380μm,0.5s							
DRO	**Drossia**	**1.08**	**114**	P		**Pg**	**19 23 49.6**	**-0.7**
DRO				S		**Sn**	**19 24 05.8**	**-0.1**
	comp=E,9μm,0.4s							
DRO	**Drossia**	**1.08**	**114**	P		**Pg**	**19 23 49.6**	**-0.7**
DRO				AML		AML	19 24 14.0	
	comp=E,20270μm,0.4s							
DRO				AML		AML	19 24 14.4	
	comp=N,16459μm,0.4s							
EFP	**Efpalio**	**1.13**	**88**	P		**Pb**	**19 23 50.0**	**-1.2**
EFP				S		**Sn**	**19 24 08.1**	**+0.9**
	comp=N,9μm,0.6s							
EFP	**Efpalio**	**1.13**	**88**	P		**Pb**	**19 23 50.0**	**-1.2**
EFP				S		**Sn**	**19 24 07.0**	**-0.1**
EFP				AML		AML	19 24 15.0	
	comp=E,17319μm,0.6s							
EFP				AML		AML	19 24 15.2	
	comp=N,19336μm,0.5s							
IGT	**Igoumenitsa**	**1.13**	**355**	P		**Pb**	**19 23 50.5**	**-0.8**
IGT				S		**Sn**	**19 24 07.7**	**+0.4**
	comp=N,3μm,0.6s							
IGT	**Igoumenitsa**	**1.13**	**355**	P		**Pb**	**19 23 50.6**	**-0.8**
IGT				S		**Sn**	**19 24 07.0**	**-0.3**
IGT				AML		AML	19 24 13.2	
	comp=N,4129μm,0.5s							
IGT				AML		AML	19 24 15.6	
	comp=E,7548μm,0.5s							
ANX	**Ano Chora**	**1.15**	**80**	P		**Pb**	**19 23 50.6**	**-1.2**
ANX				S		**Sn**	**19 24 08.8**	**+0.8**
	comp=E,5μm,0.5s							
ANX	**Ano Chora**	**1.15**	**80**	P		**Pb**	**19 23 50.7**	**-1.0**
EVR	**Evrytania**	**1.17**	**64**	P		**Pb**	**19 23 50.8**	**-1.2**
EVR				S		**Sn**	**19 24 09.7**	**+1.4**
	comp=E,2μm,0.8s							
EVR	**Evrytania**	**1.17**	**64**	P		**Pb**	**19 23 50.8**	**-1.2**
EVR				S		**Sn**	**19 24 07.9**	**-0.4**
EVR				AML		AML	19 24 15.8	
	comp=E,4328μm,1.0s							
EVR				AML		AML	19 24 19.8	
	comp=N,4189μm,0.5s							
LAKA	**Lakka**	**1.20**	**97**	P		**Pb**	**19 23 51.1**	**-1.4**
LAKA				S		**Sn**	**19 24 09.4**	**+0.5**
LAKA	**Lakka**	**1.20**	**97**	P		**Pb**	**19 23 51.4**	**-1.1**
SERG	**Sergoula**	**1.25**	**89**	P		**Pn**	**19 23 52.0**	**-1.2**
SERG				S		**Sn**	**19 24 10.2**	**+0.1**
SERG	**Sergoula**	**1.25**	**89**	P		**Pn**	**19 23 52.2**	**-1.0**
SERG				AML		AML	19 24 18.4	
	comp=E,9473μm,0.6s							
SERG				AML		AML	19 24 19.7

BAI	**Bari**	**3.87**	**315**	*e*Pn	**Pn**	**19 24 30.2**	**+1.0**
DRME	**Dracevica, Mon**	**3.91**	**346**	*e*Pn	**Pn**	**19 24 29.5**	**-0.2**
DRME	**Dracevica, Mon**	**3.91**	**346**	⇓*i*Pn	**Pn**	**19 24 30.2**	**+0.5**
DRME				*e*Sn	**Sn**	**19 25 15.1**	**-0.6**
KKB	**Krupnik**	**4.00**	**29**	*e*P	**Pn**	**19 24 34.1**	**+3.1**
BUM	**Brajici-Budva**	**4.08**	**343**	⇓*i*Pn	**Pn**	**19 24 31.9**	**-0.2**
BUM				*e*Sn	**Sn**	**19 25 19.3**	**-0.7**
PDG	**Podgorica**	**4.13**	**347**	⇑P	**Pn**	**19 24 34.3**	**+1.5**
PDG	**Podgorica**	**4.13**	**347**	*e*Pn	**Pn**	**19 24 33.4**	**+0.6**
PDG	**Podgorica**	**4.13**	**347**		**Pn**	**19 24 33.2**	**+0.4**
TTG	**Podgorica**	**4.13**	**347**	⇓*i*Pn	**Pn**	**19 24 33.1**	**+0.3**
TTG				*i*Sn	**Sn**	**19 25 21.2**	**0.0**
PVY	**Plav**	**4.20**	**355**	⇑*i*Pn	**Pn**	**19 24 34.2**	**+0.2**
PVY				*e*Sn	**Sn**	**19 25 22.7**	**-0.6**
ACER	**Acerenza**	**4.23**	**306**		**Pn**	**19 24 35.1**	**+0.8**
CEME	**Cevo**	**4.30**	**345**	⇓*i*Pn	**Pn**	**19 24 35.1**	**-0.2**
CEME				*e*Sn	**Sn**	**19 25 25.0**	**-0.7**
HCY	**Herceg Novi**	**4.31**	**340**	*e*Pn	**Pn**	**19 24 32.8**	**-2.5**
HCY	**Herceg Novi**	**4.31**	**340**	⇑*i*Pn	**Pn**	**19 24 35.4**	**+0.1**
HCY				*e*Sn	**Sn**	**19 25 25.0**	**-0.7**
IVA	**Berane**	**4.49**	**355**	⇓*i*Pn	**Pn**	**19 24 37.9**	**+0.1**
IVA				*e*Sn	**Sn**	**19 25 29.8**	**-0.3**
KOME	**Kolasin**	**4.50**	**351**	⇓*i*Pn	**Pn**	**19 24 38.5**	**+0.5**
KOME				*e*Sn	**Sn**	**19 25 30.2**	**-0.3**
NKME	**Niksic**	**4.51**	**346**	⇑*i*Pn	**Pn**	**19 24 38.2**	**+0.1**
NKME				*e*Sn	**Sn**	**19 25 30.1**	**-0.6**
NKY	**Niksic**	**4.55**	**346**	⇓*i*Pn	**Pn**	**19 24 39.0**	**+0.3**
NKY				*i*Sn	**Sn**	**19 25 30.3**	**-1.4**
TREB	**Trebinje**	**4.60**	**340**	*e*Pn	**Pn**	**19 24 38.1**	**-1.2**
DBRK	**Dubrovnik**	**4.61**	**338**	*e*Pn	**Pn**	**19 24 39.1**	**-0.4**
DBRK				Sn	**Sn**	**19 25 31.3**	**-1.9**
VTS	**Vitosha**	**4.71**	**26**	P	**Pn**	**19 24 42.3**	**+1.4**
VTS	**Vitosha**	**4.71**	**26**	⇑P	**Pn**	**19 24 42.9**	**+2.0**
VTS	**Vitosha**	**4.71**	**26**	*e*P	**Pn**	**19 24 43.6**	**+2.7**
VTS	**Vitosha**	**4.71**	**26**		**Pn**	**19 24 42.3**	**+1.4**
IDI	**Anoyia**	**4.71**	**130**	Pn	**Pn**	**19 24 41.5**	**+0.6**
	comp=N,0.4nm,0.3s,baz=297,slow=18,SNR=4.8						
IDI				Sn	**Sn**	**19 25 37.0**	**+1.2**
	comp=N,2.4nm,0.3s,baz=45,slow=20,SNR=5.1						
IDI				LR	LR	19 27 24.4	
	comp=N,84nm,18.9s,baz=309,slow=50						
BRY	**Bratogost**	**4.73**	**343**	*e*Pn	**Pn**	**19 24 40.1**	**-1.1**
BRY	**Bratogost**	**4.73**	**343**	⇑*i*Pn	**Pn**	**19 24 41.4**	**+0.2**
BRY				*e*Sn	**Sn**	**19 25 35.2**	**-1.0**
VAE	**Valguarnera**	**4.88**	**261**	Pn	**Pn**	**19 24 43.9**	**+0.7**
	comp=N,0.6nm,0.3s,baz=190,slow=11,SNR=3.1						
VAE				Sn	**Sn**	**19 25 41.5**	**+1.7**
	comp=N,4.6nm,0.3s,baz=159,slow=16,SNR=3.9						
SGRT	**San Giovanni R**	**4.93**	**314**		**Pn**	**19 24 43.8**	**-0.2**
STON	**Ston**	**4.94**	**336**	*e*Pn	**Pn**	**19 24 43.0**	**-0.9**
STON				Sn	**Sn**	**19 25 39.0**	**-2.0**
STON	**Ston**	**4.94**	**336**	*e*Pn	**Pn**	**19 24 41.9**	**-2.0**
UPM	**Unac-Piva**	**4.94**	**347**	*e*Pn	**Pn**	**19 24 43.5**	**-0.6**
UPM	**Unac-Piva**	**4.94**	**347**	⇑*i*Pn	**Pn**	**19 24 44.6**	**+0.5**
UPM				*e*Sn	**Sn**	**19 25 40.6**	**-0.9**
ALN	**Alexandroupoli**	**4.97**	**58**	P	**Pn**	**19 24 46.2**	**+1.8**
ALN	**Alexandroupoli**	**4.97**	**58**	Pn	**Pn**	**19 24 46.2**	**+1.8**
PLE	**Pljevlja**	**4.99**	**351**	⇑*i*Pn	**Pn**	**19 24 45.3**	**+0.3**
PLE				*e*Sn	**Sn**	**19 25 41.6**	**-1.0**
PAOL	**Paolisi**	**5.25**	**302**		**Pn**	**19 24 49.3**	**+1.0**
RUDO	**Rudo**	**5.28**	**351**	*e*Pn	**Pn**	**19 24 48.1**	**-0.5**
BBLS	**Lazići**	**5.52**	**352**	*e*Pn	**Pn**	**19 24 51.4**	**-0.6**
MAKA	**Makarska**	**5.54**	**333**	*e*Pn	**Pn**	**19 24 52.0**	**-0.1**
MAKA				Sn	**Sn**	**19 25 53.8**	**-2.0**
CORL	**Corleone**	**5.67**	**267**	Pn	**Pn**	**19 24 55.0**	**+1.0**
DIVS	**Divibare**	**5.70**	**357**	*e*Pn	**Pn**	**19 24 53.9**	**-0.6**
CLTB	**Caltabellotta**	**5.79**	**264**	Pn	**Pn**	**19 24 57.1**	**+1.4**
HAPS	**Han Pijesak,BI**	**5.79**	**349**	*e*Pn	**Pn**	**19 24 53.7**	**-2.1**
PLVB	**Pleven**	**5.89**	**31**	⇓P	**Pn**	**19 24 59.8**	**+2.9**
KARP	**Karpathos**	**6.07**	**116**	Pn	**Pn**	**19 25 02.2**	**+2.7**
ELND	**Elena**	**6.11**	**41**	⇑P	**Pn**	**19 25 02.7**	**+2.7**
INTR	**Introdacqua**	**6.18**	**308**		**Pn**	**19 25 01.9**	**+0.8**
KIJV	**Kijevo**	**6.38**	**333**	*i*Pn	**Pn**	**19 25 03.3**	**-0.4**
ZIRJ	**Zirje**	**6.39**	**327**	*i*Pn	**Pn**	**19 25 02.5**	**-1.3**
MDVR	**Moldovita**	**6.44**	**8**	⇓P	**Pn**	**19 25 07.2**	**+2.6**
MGRS	**Mrkonjic Grad**	**6.52**	**338**	*e*Pn	**Pn**	**19 25 06.0**	**+0.2**
MORI	**Morici**	**6.53**	**328**	*e*Pn	**Pn**	**19 25 05.6**	**-0.3**
MORI				Sn	**Sn**	**19 26 17.3**	**-3.2**
FRGS	**Fruska Gora**	**6.77**	**356**	*e*Pn	**Pn**	**19 25 07.6**	**-1.5**
BLY	**Banja Luka**	**6.80**	**340**	⇑P	**Pn**	**19 25 10.4**	**+0.9**
BLY	**Banja Luka**	**6.80**	**340**	*e*Pn	**Pn**	**19 25 10.2**	**+0.7**
BLY	**Banja Luka**	**6.80**	**340**	Pn	**Pn**	**19 25 10.7**	**+1.2**
DUGI	**Dugi Otok**	**6.91**	**326**	*i*Pn	**Pn**	**19 25 10.9**	**-0.2**
UDBI	**Udbina**	**7.07**	**332**	*e*Pn	**Pn**	**19 25 13.8**	**+0.6**
NRCA	**Norcia**	**7.13**	**311**		**Pn**	**19 25 15.5**	**+1.3**
GZR	**Gura Zlata**	**7.19**	**13**	⇑P	**Pn**	**19 25 17.1**	**+2.2**
BZS	**Buzias**	**7.26**	**6**	⇑P	**Pn**	**19 25 19.3**	**+3.5**
NVLJ	**Novalja**	**7.45**	**327**	*e*Pn	**Pn**	**19 25 18.0**	**-0.4**
ELL	**Elmali**	**7.67**	**100**	P	**Pn**	**19 25 25.0**	**+3.3**
ELL	**Elmali**	**7.67**	**100**	Pn	**Pn**	**19 25 25.0**	**+3.3**
MURB	**Monte Urbino**	**7.74**	**311**	Pn	**Pn**	**19 25 24.1**	**+1.7**
VOIR		**7.81**	**24**	P	Pn	19 25 28.0	+4.5
VOIR		**7.81**	**24**	⇑P	**Pn**	**19 25 27.5**	**+4.0**
MORH	**Mrgy, Hungar**	**7.92**	**351**	*e*Pn	**Pn**	**19 25 24.7**	**-0.2**
OZLJ	**Ozalj**	**8.11**	**334**	*e*Pn	**Pn**	**19 25 28.1**	**+0.6**
MLR	**Muntele Rosu**	**8.17**	**28**	P	**Pn**	**19 25 31.3**	**+2.9**
MLR	**Muntele Rosu**	**8.17**	**28**	Pn	Pn	19 25 33.6	+5.1
	comp=N,0.5nm,0.3s,baz=225,slow=13,SNR=12						
MLR				LR	LR	19 29 28.5	
	comp=N,256nm,18.3s,baz=296,slow=45						
MLR	**Muntele Rosu**	**8.17**	**28**	⇑P	Pn	19 25 33.0	+4.6
MLR	**Muntele Rosu**	**8.17**	**28**		**Pn**	**19 25 31.3**	**+2.9**
PTJ	**Puntijarka**	**8.21**	**337**	*e*Pn	**Pn**	**19 25 28.9**	**0.0**
KALN	**Kalnik**	**8.28**	**340**	*e*Pn	**Pn**	**19 25 28.6**	**-1.2**
CRES	**Cresnjev**	**8.30**	**335**	*e*Pn	**Pn**	**19 25 28.2**	**-1.9**
CEY	**Cerknica**	**8.60**	**330**	*e*Pn	**Pn**	**19 25 33.5**	**-0.7**
PLOR	**Plostina**	**8.71**	**340**	⇓P	**Pn**	**19 25 40.6**	**+4.4**
TRI	**Trieste**	**8.84**	**328**	P	**Pn**	**19 25 38.3**	**+0.8**
TRI	**Trieste**	**8.84**	**328**	Pn	**Pn**	**19 25 38.3**	**+0.8**
SOKA	**Soboth**	**9.19**	**336**	*i*Pn	**Pn**	**19 25 40.9**	**-1.4**
	comp=N,6.4nm,0.4s,SNR=14						
SOKA				*e*Sn	**Sn**	**19 27 21.9**	**-4.0**
	comp=N,3.5nm,0.7s						
OBKA	**Obir**	**9.20**	**334**	*e*Pn	**Pn**	**19 25 43.8**	**+1.3**
	comp=N,2.2nm,0.3s						
OBKA				*e*Sn	**Sn**	**19 27 23.2**	**-3.0**
	comp=N,13nm,0.7s						
TEOL	**Teolo**	**9.55**	**319**	Pn	**Pn**	**19 25 46.8**	**-0.5**
ARSA	**Arzberg**	**9.56**	**339**	*i*Pn	**Pn**	**19 25 46.6**	**-0.8**
	comp=N,2.4nm,0.4s						
MYKA	**Terra Mystica**	**9.64**	**331**	*i*Pn	**Pn**	**19 25 49.3**	**+0.8**
	comp=N,2.3nm,0.4s						
MYKA				*e*Sn	**Sn**	**19 27 34.0**	**-2.9**
	comp=N,2.3nm,0.5s						
CTI	**Castel Tesino**	**10.05**	**322**	P	**Pn**	**19 25 52.9**	**-1.3**
CTI	**Castel Tesino**	**10.05**	**322**		**Pn**	**19 25 52.9**	**-1.3**
KBA	**Koelnbreinsper**	**10.12**	**331**	*e*Pn	**Pn**	**19 25 56.7**	**+1.4**
	comp=N,3.3nm,0.5s						
KBA				*e*Sn	**Sn**	**19 27 45.1**	**-3.9**
	comp=N,3.7nm,0.7s						
VYHS	**Vyhne**	**10.16**	**354**	*e*P	**Pn**	**19 25 55.0**	**-0.5**
VYHS				*e*		19 27 43.5	
VYHS	**Vyhne**	**10.16**	**354**	*e*PN	**Pn**	**19 25 55.0**	**-0.5**
VYHS				*e*SN	**Sn**	**19 27 43.5**	**-6.0**
ABTA	**Abfaltersbach**	**10.19**	**327**	*e*Pn	**Pn**	**19 25 56.6**	**+0.6**
	comp=N,2.5nm,0.5s						
ABTA				*e*Sn	**Sn**	**19 27 46.7**	**-3.7**
	comp=N,5.3nm,0.6s						
BR131	**Keskin Array S**	**10.33**	**79**	P	Pn	19 26 02.8	+4.8
BR131	**Keskin Array S**	**10.33**	**79**	Pn	Pn	19 26 02.8	+4.7
BRTR	**Keskin Array B**	**10.33**	**79**	Pn	**Pn**	**19 26 01.2**	**+3.2**
	comp=N,0.1nm,0.3s,baz=261,slow=13,SNR=3.6						
BRTR				LR	LR	19 30 09.5	
	comp=N,122nm,19.7s,baz=282,slow=39						
MOA	**Molln**	**10.47**	**336**	*e*Pn	**Pn**	**19 25 59.6**	**-0.2**
	comp=N,2.0nm,0.2s,SNR=6.3						
MOA				*e*Sn	**Sn**	**19 27 53.8**	**-3.4**
	comp=N,1.6nm,0.4s						
CSS	**Mathiatis**	**10.88**	**104**	Pn	**Pn**	**19 26 08.0**	**+2.5**
WTTA	**Wattenberg**	**10.97**	**327**	*e*Pn	**Pn**	**19 26 08.4**	**+1.6**
	comp=N,4.0nm,0.4s						
WTTA				Sn	**Sn**	**19 28 07.1**	**-2.5**
	comp=N,6.9nm,0.7s						
WATA	**Walderalm**	**11.05**	**327**	*e*Pn	**Pn**	**19 26 10.2**	**+2.4**
	comp=N,5.0nm,0.4s,SNR=5.4						
WATA				*i*Sn	**Sn**	**19 28 09.5**	**-2.1**
	comp=N,2.4nm,0.3s						
SQTA	**Sankt Quirin**	**11.12**	**325**	*i*Pn	**Pn**	**19 26 10.7**	**+1.8**
	comp=N,3.1nm,0.4s						
FUORN	**Ofenpass-Fuorn**	**11.13**	**321**		**Pn**	**19 26 08.9**	**-0.2**
FETA	**Feichten**	**11.20**	**323**	*e*Pn	**Pn**	**19 26 12.2**	**+2.4**
	comp=N,0.7nm,0.4s						
FETA				*i*Sn	**Sn**	**19 28 14.2**	**-1.0**
	comp=N,1.8nm,0.6s						
MOTA	**Moosalm**	**11.26**	**325**	*e*Pn	**Pn**	**19 26 12.5**	**+1.7**
	comp=N,3.5nm,0.4s						
MOTA				*e*Sn	**Sn**	**19 28 14.3**	**-2.6**
	comp=N,1.5nm,0.4s						
DAVOX	**Davos/Dischmat**	**11.44**	**320**	P	**Pn**	**19 26 13.0**	**-0.2**
DAVOX	**Davos/Dischmat**	**11.44**	**320**	Pn	**Pn**	**19 26 13.0**	**-0.2**
	comp=N,0.3nm,0.3s,baz=158,slow=18,SNR=3.0						
GERES	**GERESS Array B**	**11.53**	**337**	Pn	**Pn**	**19 26 14.2**	**-0.2**
	comp=N,0.6nm,0.3s,baz=155,slow=13,SNR=16						
KHC	**Kasperske Hory**	**11.82**	**337**	*e*P	**Pn**	**19 26 18.5**	**+0.2**
KHC	**Kasperske Hory**	**11.82**	**337**	*e*P	**Pn**	**19 26 18.5**	**+0.2**
MMAI	**Mount Meron Ar**	**13.27**	**109**	Pn	**Pn**	**19 26 35.4**	**-2.8**
	comp=N,0.8nm,0.3s,baz=302,slow=14,SNR=4.4						
AKASG	**Malin Array Be**	**13.77**	**24**	Pn	**Pn**	**19 26 43.4**	**-1.5**
	comp=N,1.6nm,0.3s,baz=210,slow=11,SNR=3.2						
EIL	**Elat**	**14.82**	**122**	Pn	**Pn**	**19 27 00.1**	**+0.7**
	comp=N,0.3nm,0.3s,baz=330,slow=14,SNR=4.0						
EIL				LR	LR	19 34 42.9	
	comp=N,54nm,18.8s,baz=338,slow=46						
ESDC	**Sonseca Array**	**19.01**	**281**	P	**P**	**19 27 52.1**	**+0.5**
	comp=N,0.5nm,0.3s,baz=78,slow=12,SNR=6.9						
ESDC	**Sonseca Array**	**19.01**	**281**	IAmb	IAmb	19 27 53.7	
	comp=Z,5.7nm,1.7s						
OBN	**Obninsk**	**19.94**	**28**	*e*P	**Pn**	**19 28 03.1**	**-0.2**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HFS	**Hagfors**	**22.17**	**351**	P	**P**	**19 28 25.4**	**-0.2**
	comp=Z,3.3nm,0.5s,baz=156,slow=11,SNR=24						
EKA	**Eskdalemuir Ar**	**23.22**	**324**	P	**P**	**19 28 37.0**	**+0.3**
EKA	**Eskdalemuir Ar**	**23.22**	**324**	P	**P**	**19 28 37.0**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=124,slow=11,SNR=4.9						
FINES	**FINESS Array B**	**23.33**	**7**	P	**P**	**19 28 36.1**	**-1.7**
	comp=Z,4.6nm,0.8s,baz=178,slow=9.5,SNR=15						
FIA1	**FINESS Array S**	**23.33**	**7**	P	**P**	**19 28 38.0**	**+0.3**
FIA1				IAmb	IAmb	19 29 24.9	
	comp=Z,81nm,1.7s						
NC405	**NORSAR Array S**	**23.38**	**349**	P	**P**	**19 28 39.4**	**+1.1**
NB2	**NORSAR Subarra**	**23.39**	**349**	P	**P**	**19 28 38.8**	**+0.4**
	comp=Z,0.7nm,0.4s,baz=161,slow=10						
NOA	**NORSAR Array B**	**23.39**	**349**	P	**P**	**19 28 38.0**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=163,slow=9.6,SNR=5.2						
NBO00	**NORSAR Array S**	**23.45**	**348**	P	**P**	**19 28 40.5**	**+1.5**
NC303	**NORSAR Array S**	**23.54**	**349**	P	**P**	**19 28 41.2**	**+1.3**
NC204	**NORSAR Array S**	**23.68**	**348**	P	**P**	**19 28 43.4**	**+2.1**
NC204				IAmb	IAmb	19 29 06.1	
	comp=Z,129nm,1.6s						
RAYN	**Ar Rayn**	**25.98**	**118**	P	**P**	**19 29 03.7**	**+0.9**
RAYN				pmax	pmax		
	comp=Z,15nm,1.8s						
RAYN	**Ar Rayn**	**25.98**	**118**	P	**P**	**19 29 03.7**	**+0.9**
RAYN				IAmb	IAmb	19 29 05.1	
	comp=Z,15nm,1.8s						
AKTO	**Aktyubinsk**	**29.08**	**53**	P	**P**	**19 29 30.0**	**-0.2**
AKTO	**Aktyubinsk**	**29.08**	**53**	P	**P**	**19 29 30.0**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=231,slow=6.5,SNR=3.7						
GEYT	**Alibeck**	**29.47**	**79**	P	**P**	**19 29 34.0**	**+0.1**
	comp=Z,2.2nm,0.5s,baz=270,slow=7.4,SNR=7.4						
GEYT	**Alibeck**	**29.47**	**79**	IAmb	IAmb	19 29 36.2	
	comp=Z,1.9nm,0.6s						
GYA0B	**ALIBECK ARRAY**	**29.47**	**79**	P	**P**	**19 29 34.9**	**+1.1**
TORD	**Torodi Ar. Bea**	**30.18**	**219**	P	**P**	**19 29 41.0**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=27,slow=9.0,SNR=4.8						
ARCES	**ARCESS Array B**	**31.31**	**3**	P	**P**	**19 29 48.2**	**-1.5**
	comp=Z,4.0nm,1.1s,baz=178,slow=7.2,SNR=5.0						
KK31	**Karatay Array**	**37.74**	**67**	P	**P**	**19 30 46.2**	**+0.5**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KK31	**Karatay Array**	**37.74**	**67**	P	**P**	**19 30 46.2**	**+0.5**
KK31				IAmb	IAmb	19 30 48.0	
	comp=Z,4.6nm,0.7s						
KKAR	**Karatay Array**	**37.74**	**67**	P	**P**	**19 30 46.4**	**+0.7**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KKAR	**Karatay Array**	**37.74**	**67**	P	**P**	**19 30 46.4**	**+0.7**
KKAR				IAmb	IAmb	19 30 48.0	
	comp=Z,4.6nm,0.7s						
BTK	**Batken**	**38.61**	**71**	P	**P**	**19 30 54.0**	**+0.8**
BTK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BTK	**Batken**	**38.61**	**71**	P	**P**	**19 30 54.0**	**+0.8**
DBIC	**Dimbokro**	**39.03**	**222**	LR	LR	19 47 54.4	
	comp=Z,108nm,18.3s,baz=344,slow=38						
ARSB	**Arslanbob**	**39.91**	**69**	P	**P**	**19 31 05.0**	**+1.0**
ARSB				IAmb	IAmb	19 31 33.9	
	comp=Z,15nm,1.8s						
AAK	**Ala-Archa**	**40.70**	**66**	P	**P**	**19 31 11.6**	**+1.0**
AAK	**Ala-Archa**	**40.70**	**66**	P	**P**	**19 31 11.6**	**+1.0**
AAK				IAmb	IAmb	19 31 26.9	
	comp=Z,16nm,1.9s						
MK31	**Makanchi Array**	**45.22**	**59**	P	**P**	**19 31 46.1**	**-0.9**
MK31				pmax	pmax		
	comp=Z,6.0nm,1.9s						
MK31	**Makanchi Array**	**45.22**	**59**	P	**P**	**19 31 46.1**	**-0.9**
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**	**19 31 45.8**	**-1.1**
	comp=Z,1.3nm,0.4s,baz=281,slow=6.8,SNR=41						
ZAA0	**Zalesovo Array**	**45.57**	**48**	P	**P**	**19 31 48.7**	**-0.9**
ZAA0				IAmb	IAmb	19 31 52.1	
	comp=Z,3.5nm,0.8s						
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**19 31 48.7**	**-0.9**
	comp=Z,4.1nm,0.4s,baz=276,slow=8.7,SNR=19						
SONM	**Songino Array**	**60.34**	**51**	P	**P**	**19 33 38.7**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=286,slow=9.6,SNR=4.6						
SONM	**Songino Array**	**60.34**	**51**	IAmb	IAmb	19 33 41.5	
	comp=Z,1.2nm,1.1s						
CMAR	**Chiang Mai Arr**	**69.90**	**82**	P	**P**	**19 34 39.4**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=309,slow=5.7,SNR=7.4						
PDAR	**Pinedale Array**	**87.34**	**326**	P	**P**	**19 36 18.7**	**+1.4**
	comp=Z,0.2nm,0.6s,baz=51,slow=7.1,SNR=2.5						
WRA	**Warramunga Arr**	**120.59**	**92**	PKP	**PKiKP**	**19 42 22.8**	**+0.6**
	comp=Z,0.6nm,0.9s,baz=328,slow=1.6,SNR=3.5						
ASAR	**Alice Springs**	**122.24**	**96**	PKP	**PKiKP**	**19 42 26.1**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=292,slow=2.0,SNR=3.7						

TAP 27 20:05:42.1,25.17N×121.56E,h1km,ML1.3,1C-2D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YM05	**YM05**	**0.01**	**146**	⇓*i*P	Pg	20 05 42.6	+0.2
	baz=145						
YM05				*i*S	Sg	20 05 43.0	+0.3
	baz=145						
YM03	**YM03**	**0.02**	**287**	P	Pg	20 05 42.7	+0.2
	baz=286						
YM03				S	Sg	20 05 43.1	+0.3
	baz=286						
YM11	**YM11**	**0.02**	**120**	⇓P	Pg	20 05 42.8	+0.3
	baz=120						
YM11				S	Sg	20 05 43.2	+0.4
	baz=120						
YM10	**YM10**	**0.02**	**172**	⇑*i*P	Pg	20 05 42.7	+0.2
	baz=171						
YM10				*i*S	Sg	20 05 43.2	+0.3
	baz=171						
YM04	**YM04**	**0.03**	**224**	P	Pg	20 05 42.8	+0.2
	baz=222						
YM04				S	Sg	20 05 43.3	+0.3
	baz=222						
YM01	**YM01**	**0.03**	**158**	*i*P	Pg	20 05 43.0	+0.3
	baz=158						
YM01				*i*S	Sg	20 05 43.8	+0.7
	baz=158						
YM08	**YM08**	**0.03**	**64**	*i*P	Pg	20 05 43.1	+0.4
	baz=65						
YM08				S	Sg	20 05 43.7	+0.6
	baz=65						
ANP	**Anpu**	**0.04**	**290**	P	Pg	20 05 42.9	+0.1
	baz=287						
ANP				S	Sg	20 05 43.7	+0.3
	baz=287						
TWY	**Chenhua**	**0.11**	**20**	P	Pg	20 05 45.3	+1.1
	baz=25						
TWY				S	Sg	20 05 47.5	+2.0
	baz=25						
TWS1	**Kuangyinshan**	**0.15**	**240**	*i*P	Pg	20 05 46.3	+1.4
	baz=239						
TWS1				S	Sg	20 05 49.4	+2.6
	baz=239						
WFSB	**Wu-fen Shan**	**0.23**	**117**	*e*P	Pg	20 05 47.9	+1.5
	baz=116						
WFSB				*e*S	Sg	20 05 52.2	+2.9
	baz=116						
TIPB	**Shuangxi**	**0.32**	**130**	*e*P	Pb	20 05 49.6	-0.9
	baz=129						

JMA 27 20:06:08.4±0.2,24.91N×123.47E,h23km,M1.5, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.61**	**223**	P	Pb	20 06 20.3	-0.1
YOJ				S	Sb	20 06 28.6	0.0
IRIF	**Iriomote-Funau**	**0.62**	**157**	P	Pb	20 06 20.2	-0.4
IRIF				*e*S	Sb	20 06 29.2	+0.3
JYNG	**Yonagunijimaku**	**0.66**	**226**	P	Pb	20 06 21.0	-0.3
JYNG				*e*S	Sb	20 06 29.8	-0.2
JIJ	**Ishigaki jima**	**0.82**	**131**	P	Pb	20 06 23.3	-0.7
JIJ				S	Sb	20 06 33.7	-0.9
JISG	**Ishigakijimahi**	**0.83**	**113**	P	Pb	20 06 24.0	-0.1
JISG				S	Sb	20 06 35.0	+0.1
JKRS	**Kuro-shima**	**0.83**	**144**	P	Pb	20 06 24.1	-0.1
JKRS				S	Sb	20 06 35.3	+0.4

SOME 27 20:11:25.5,40.42N×81.23E,h5km

NNC 27 20:11:28.1±2.5,42.15N×83.34E,h0km,mb3.0,mpv2.7, 1C-3D,Error ellipse: s-maj=21.3km s-min=11.7km az=152.0,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.03**	**291**	*e*P	Pn	20 12 20.1	+2.6
	5.3nm,0.3s						
SHLS				*e*S	Sb	20 12 59.5	-1.3
	21nm,0.4s						
PDGK	**Podgornoye**	**3.07**	**294**	⇑Pg	Pb	20 12 24.0	+0.2
	0.7nm,0.3s						
PDGK				⇓Lg	Lg	20 13 06.4	
	16nm,0.9s						
SATY	**Saty**	**3.75**	**286**	*e*P	Pn	20 12 28.3	+0.8
	3.1nm,0.2s						
SATY				*e*S	Sn	20 13 13.5	+1.1
	5.9nm,0.4s						
ARXS	**Arharly**	**4.53**	**299**	*e*P	Pb	20 12 49.5	+1.0
	0.8nm,0.3s						
ARXS				*e*S	Sg	20 13 49.8	-3.9
	3.5nm,0.5s						
MK31	**Makanchi Array**	**4.70**	**351**	Pn	Pn	20 12 40.8	+0.4
	0.4nm,0.7s,baz=188,slow=4.7,SNR=4.7						
MK31				Pg	Pb	20 12 53.7	+2.2
	2.7nm,0.8s,baz=167,slow=16,SNR=13						
MK31				⇓Lg	Lg	20 13 57.5	
	1.9nm,0.5s,baz=159,slow=27,SNR=7.3						
MAKZ	**Makanchi**	**4.76**	**349**	⇓Lg	Lg	20 13 59.0	
	3.8nm,1.1s						

MAN 27 20:11:43.4,9.58N×123.44E,h23km,mb3.9,ML2.6,MS2.3, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.90**	**35**	*e*P	Pb	20 11 59.8	-0.5
LLP				*e*S	Sb	20 12 09.3	-2.6
MSLP	**Maasin**	**1.50**	**68**	*e*P	Pn	20 12 08.6	-0.4
MSLP				*e*S	Sn	20 12 28.1	+0.3

*IDC 27 20:12:40.6±0.8,14.09N×93.06E

GEN ***27*** *20:13:28.5, 43˚.80N×7˚.51E, h9km±1km, MI1.9*
ROM ***27*** *20:13:28.9±0.3, 43˚.86N±0˚.02×7˚.52E±0˚.01, h10km±1km, ML2.1/8, Error ellipse: s-maj=2.3km s-min=0.6km az=198.0*
LDG ***27*** *20:13:29.0±0.1, 43˚.83N×7˚.51E, h2km, Md2.9/3, Ml2.6/24, Error ellipse: s-maj=1.3km s-min=1.0km az=149.0*
STR ***27*** *20:13:29.1±0.5, 44˚.N±2˚×±˚, h0km±4km, MLv2.3/6*
ISC 27 20:13:28.3±0.8, 43.87N±0˚.02×7.53E±0˚.02, h14km±4km, n69, σ1§28/127, Near south coast of France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBF	**Sospel**	**0.07**	**268**	*e*Pg	**Pg**	**20 13 30.2**	**-1.1**
SBF				*e*Sg	**Sg**	**20 13 31.1**	**-2.1**
	3μm,0.2s						
ESCA	**l'Escarene**	**0.12**	**253**	Pg	**Pg**	**20 13 31.2**	**-0.6**
ESCA				Sg	**Sg**	**20 13 33.0**	**-1.0**
SAOF	**Saorge**	**0.12**	**8**	Pg	**Pg**	**20 13 32.0**	**+0.2**
SAOF				Sg	**Sg**	**20 13 34.5**	**+0.3**
SAOF	**Saorge**	**0.12**	**8**	P	**Pg**	**20 13 32.0**	**+0.2**
SAOF				S	**Sg**	**20 13 34.9**	**+0.7**
SAOF				AML	AML		
	comp=E,906μm,0.8s						
SAOF				AML	AML		
	comp=N,890μm,1.4s						
SAOF				AML	AML		
	comp=E,906μm,0.8s						
NEGI	**Seborga**	**0.13**	**98**	*i* P	**Pg**	**20 13 32.0**	**+0.2**
NEGI				S	**Sg**	**20 13 35.1**	**+0.9**
NEGI				AML	AML		
	comp=E,1815μm,0.5s						
NEGI				AML	AML		
	comp=N,1620μm,0.2s						
NEGI	**Seborga**	**0.13**	**98**	P	**Pg**	**20 13 32.0**	**+0.2**
NEGI				S	**Sg**	**20 13 34.5**	**+0.3**
TURF	**col de Turini**	**0.15**	**317**	Pg	**Pg**	**20 13 32.3**	**0.0**
TURF				Sg	**Sg**	**20 13 35.1**	**+0.2**
MON	**Monaco**	**0.15**	**210**	Pg	**Pg**	**20 13 32.0**	**-0.2**
MON				Sg	**Sg**	**20 13 34.4**	**-0.4**
IMI	**Imperia**	**0.27**	**80**	P	**Pg**	**20 13 34.6**	**+0.6**
IMI				S	**Sg**	**20 13 39.5**	**+1.6**
IMI				AML	AML		
	comp=E,444μm,1.4s						
IMI				AML	AML		
	comp=N,726μm,0.5s						
IMI				AML	AML		
	comp=N,726μm,0.5s						
IMI	**Imperia**	**0.27**	**80**	P	**Pg**	**20 13 34.6**	**+0.6**
IMI				S	**Sg**	**20 13 39.0**	**+1.1**
ENR	**Entracque**	**0.37**	**347**	P	**Pb**	**20 13 36.9**	**+0.3**
ENR				S	**Sb**	**20 13 42.6**	**+0.3**
ENR				AML	AML		
	comp=E,304μm,1.2s						
ENR				AML	AML		
	comp=N,369μm,0.2s						
ENR				AML	AML		
	comp=N,370μm,0.2s						
ENR				AML	AML		
	comp=E,304μm,1.2s						
ENR	**Entracque**	**0.37**	**347**	P	**Pb**	**20 13 37.0**	**+0.3**
ENR				S	**Sb**	**20 13 42.5**	**+0.2**
STV	**Sant Anna di V**	**0.41**	**339**	P	**Pb**	**20 13 37.4**	**+0.1**
STV				S	**Sb**	**20 13 43.4**	**-0.1**
STV				AML	AML		
	comp=E,301μm,0.2s						
STV				AML	AML		
	comp=N,360μm,1.5s						
STV	**Sant Anna di V**	**0.41**	**339**	P	**Pb**	**20 13 37.4**	**+0.1**
STV				S	**Sb**	**20 13 43.3**	**-0.1**
GBOS	**Grotte di Boss**	**0.44**	**30**	P	**Pb**	**20 13 38.2**	**+0.4**
GBOS				S	**Sb**	**20 13 45.0**	**+0.8**
GBOS	**Grotte di Boss**	**0.44**	**30**	P	**Pb**	**20 13 38.1**	**+0.4**
GBOS				S	**Sb**	**20 13 44.8**	**+0.6**
CALF	**Calern**	**0.46**	**256**	Pg	**Pb**	**20 13 38.0**	**-0.1**
CALF				Sg	**Sg**	**20 13 44.5**	**+1.0**
RORO	**Rocca Rossa**	**0.46**	**57**	P	**Pb**	**20 13 38.5**	**+0.4**
RORO				S	**Sb**	**20 13 45.5**	**+0.7**
RORO				AML	AML		
	comp=E,410μm,0.1s						
RORO				AML	AML		
	comp=N,378μm,0.6s						
RORO	**Rocca Rossa**	**0.46**	**57**	P	**Pb**	**20 13 38.5**	**+0.4**
RORO				S	**Sb**	**20 13 45.2**	**+0.4**
ISO	**Isola**	**0.47**	**313**	Pg	**Pb**	**20 13 38.4**	**+0.1**
ISO				Sg	**Sb**	**20 13 45.1**	**-0.1**
FINB	**Finale Ligure**	**0.65**	**61**	P	**Pn**	**20 13 42.3**	**-0.8**
FINB				S	**Sn**	**20 13 51.7**	**-1.4**
FINB				AML	AML		
	comp=E,256μm,0.3s						
FINB				AML	AML		
	comp=N,284μm,1.3s						
DOI	**San Damiano**	**0.67**	**342**	P	**Pb**	**20 13 42.4**	**+0.6**
DOI				S	**Sb**	**20 13 52.2**	**+1.3**
DOI				AML	AML		
	comp=N,186μm,0.2s						
DOI				AML	AML		
	comp=E,223μm,1.5s						
FRF	**La Foret Royal**	**0.71**	**245**	*e*Pg	**Pg**	**20 13 42.2**	**+0.1**
FRF	**La Foret Royal**	**0.71**	**245**	*e*P	**Pb**	**20 13 42.8**	**+0.4**
FRF	**La Foret Royal**	**0.71**	**245**	*e*Pn	**Pn**	**20 13 44.4**	**+0.6**
FRF				*e*Sg	**Sg**	**20 13 51.8**	**+0.3**
	comp=E,77nm,0.3s						
QLNO	**Quiliano**	**0.74**	**52**	P	**Pn**	**20 13 43.9**	**-0.5**
QLNO				S	**Sn**	**20 13 54.3**	**-1.2**
QLNO				AML	AML		
	comp=N,191μm,0.9s						
QLNO				AML	AML		
	comp=E,222μm,1.3s						
SURF	**Saint Ours**	**0.80**	**320**	Pg	**Pb**	**20 13 44.7**	**+0.6**
SURF				Sg	**Sb**	**20 13 56.2**	**+1.3**
LMR	**La Mourre**	**0.91**	**235**	*e*Pg	**Pg**	**20 13 45.8**	**-0.1**
LMR	**La Mourre**	**0.91**	**235**	*e*P	**Pn**	**20 13 47.0**	**+0.4**
LMR				*e*Sn	**Sb**	**20 13 59.0**	**+1.2**
	comp=E,43nm,0.2s						
OGDI	**Digne**	**0.92**	**286**	Pg	**Pn**	**20 13 48.3**	**+1.4**
OGAG	**Argentiere**	**0.93**	**310**	Pg	**Pn**	**20 13 51.7**	**+4.8**
PCP	**Piancastagn**	**0.99**	**47**	AML	AML		
	comp=E,227μm,0.7s						
PCP				AML	AML		
	comp=N,156μm,0.9s						
BHB	**Bricherasio**	**0.99**	**349**	P	**Pb**	**20 13 47.2**	**-0.1**
BHB				S	**Sb**	**20 14 00.8**	**+0.6**
BHB	**Bricherasio**	**0.99**	**349**	P	**Pb**	**20 13 46.9**	**-0.4**
BHB				S	**Sb**	**20 14 00.2**	**0.0**
MBDF	**Montbardon**	**1.02**	**328**	*e*Pn	**Pn**	**20 13 48.8**	**+0.5**
MBDF	**Montbardon**	**1.02**	**328**	*e*P	**Pn**	**20 13 50.6**	**+2.3**
MBDF				*e*Sg	**Sb**	**20 14 01.9**	**+0.8**
	comp=N,23nm,0.3s						
MBDF				*e*Sn	**Sn**	**20 14 03.9**	**+1.5**
BLAF	**les Blancs**	**1.08**	**275**	Pg	**Pn**	**20 13 50.0**	**+1.1**
BLAF				Sg	**Sn**	**20 14 04.7**	**+1.0**
RRL	**Rocca Remolon**	**1.18**	**334**	P	**Pn**	**20 13 51.6**	**+1.1**
MLYF	**Mely**	**1.28**	**276**	Pg	**Pg**	**20 13 53.9**	**+0.9**
MLYF				Sg	**Sn**	**20 14 11.2**	**+2.4**
ARTF	**Artigues**	**1.28**	**258**	Pg	**Pg**	**20 13 53.5**	**+0.5**
ARTF				Sg	**Sn**	**20 14 10.6**	**+1.9**
BNI	**Bardonecchia**	**1.33**	**333**	P	**Pg**	**20 13 54.2**	**+0.3**
BSTF	**la Bastide-des**	**1.36**	**271**	Pg	**Pg**	**20 13 55.5**	**+1.0**
BSTF				Sg	**Sg**	**20 14 14.1**	**+1.8**
SMRF	**Simiane la Rot**	**1.42**	**275**	*e*P	**Pg**	**20 13 55.4**	**-0.1**
SMRF				*e*Sg	**Sn**	**20 14 13.0**	**+0.9**
	comp=N,164nm,0.3s						
RUSF	**Rustrel**	**1.48**	**274**	Pn	**Pg**	**20 13 56.8**	**0.0**
RUSF				Pg	**Pb**	**20 13 57.9**	**+2.3**
RUSF				Sg	**Sg**	**20 14 16.9**	**+0.9**
ORIF	**Oris-en-Rattie**	**1.58**	**312**	*e*Pg	**Pg**	**20 13 58.6**	**-0.1**
ORIF				*e*Sg	**Sg**	**20 14 19.5**	**+0.2**
	comp=N,27nm,0.3s						
GDM	**Grand'Maison**	**1.68**	**323**	Pg	**Pg**	**20 14 01.4**	**+0.9**
GDM				Sg	**Sg**	**20 14 23.8**	**+1.5**
PGF	**Pioggiola**	**1.70**	**140**	*e*Pn	**Pn**	**20 13 56.5**	**-1.0**
PGF				*e*Sn	**Sn**	**20 14 16.9**	**-2.2**
	comp=N,8.6nm,0.2s						
LPG	**La Plagne**	**1.73**	**341**	*e*P	**Pg**	**20 14 01.3**	**-0.1**
LPG	**La Plagne**	**1.73**	**341**	*e*Pg	**Pg**	**20 14 02.9**	**+1.5**
LPG				*e*Sn	**Sn**	**20 14 20.1**	**+0.1**
	comp=N,2.9nm,0.3s						
LPG				*e*Sg	**Sg**	**20 14 24.7**	**+0.9**
	comp=N,18nm,0.4s						
LPL	**La Plagne**	**1.75**	**341**	*e*Pn	**Pb**	**20 14 00.0**	**-0.2**
LPL	**La Plagne**	**1.75**	**341**	*e*P	**Pg**	**20 14 01.8**	**0.0**
LPL	**La Plagne**	**1.75**	**341**	*e*Pg	**Pg**	**20 14 03.1**	**+1.3**
LPL				*e*Sg	**Sg**	**20 14 25.3**	**+0.8**
	comp=N,22nm,0.5s						
VIVF	**Saint-Julien-l**	**2.28**	**297**	*e*Pn	**Pn**	**20 14 06.1**	**+0.7**
VIVF	**Saint-Julien-l**	**2.28**	**297**	*e*P	**Pb**	**20 14 08.0**	**-1.1**
VIVF	**Saint-Julien-l**	**2.28**	**297**	*e*Pg	**Pg**	**20 14 10.9**	**-1.0**
VIVF				*e*Sn	**Sn**	**20 14 32.4**	**-0.9**
	comp=N,3.3nm,0.1s						
VIVF				*e*Sg	**Sg**	**20 14 40.4**	**-1.1**
	comp=N,16nm,0.3s						
LASF	**Ste Croix**	**2.66**	**276**	*e*Pn	**Pn**	**20 14 11.2**	**+0.5**
LASF	**Ste Croix**	**2.66**	**276**	*e*Pg	**Pg**	**20 14 17.7**	**-1.6**
LASF				*e*Sn	**Sn**	**20 14 41.2**	**-1.5**
	comp=N,3.6nm,0.3s						
LASF				*e*Sg	**Sg**	**20 14 52.1**	**-1.7**
	comp=N,2.1nm,0.2s						
CABF	**La Chapelle**	**2.93**	**340**	*e*P	**Pb**	**20 14 17.6**	**-2.7**
CABF	**La Chapelle**	**2.93**	**340**	*e*Pg	**Pg**	**20 14 24.4**	**0.0**
CABF				*e*Sn	**Sn**	**20 14 48.3**	**-1.1**
	comp=N,2.0nm,0.4s						
SMF	**Signal de Mont**	**3.81**	**318**	*e*Pn	**Pn**	**20 14 27.0**	**+0.5**
SMF	**Signal de Mont**	**3.81**	**318**	*e*Pg	**Pg**	**20 14 40.1**	**-1.1**
SMF				*e*Sn	**Sn**	**20 15 09.7**	**-1.3**
SMF				*e*Sg	**Sg**	**20 15 28.7**	**-1.9**
	comp=N,1.1nm,0.3s						
HINF	**Hinteralfeld**	**3.98**	**353**	*e*P	**Pn**	**20 14 32.9**	**+4.1**
HINF				*e*Sn	**Sn**	**20 15 14.2**	**-1.1**
	comp=N,0.8nm,0.2s						
AVF	**Avril sur Loir**	**4.15**	**316**	*e*Pg	**Pg**	**20 14 46.0**	**-1.8**
AVF				*e*Sg	**Sg**	**20 15 39.0**	**-2.5**
	comp=N,0.4nm,0.2s						
HAU	**Haudompre**	**4.22**	**349**	*e*P	**Pn**	**20 14 35.3**	**+3.1**
HAU				*e*Sn	**Sn**	**20 15 19.9**	**-1.3**
	comp=N,5.1nm,0.4s						
BGF	**Bois d'Agland**	**4.27**	**311**	*e*Pg	**Pg**	**20 14 48.1**	**-1.9**
BGF				*e*Sg	**Sg**	**20 15 42.7**	**-2.5**
	comp=N,1.7nm,0.3s						
LOR	**Lormes**	**4.27**	**324**	*e*Pg	**Pg**	**20 14 48.7**	**-1.3**
	baz=147						
LOR				*e*Sn	**Sn**	**20 15 20.5**	**-1.9**
	comp=N,0.9nm,0.2s						
LOR				*e*Sg	**Sg**	**20 15 43.1**	**-2.2**
	comp=N,0.9nm,0.3s						
SSF	**Saint Saulge**	**4.27**	**320**	*e*Pn	**Pn**	**20 14 33.3**	**+0.5**
SSF				*e*Sn	**Sn**	**20 15 20.7**	**-1.7**
SSF				*e*Sg	**Sg**	**20 15 43.1**	**-2.2**
	comp=N,1.0nm,0.3s						
CDF	**Champ du Feu**	**4.55**	**358**	*e*Pn	**Pn**	**20 14 37.8**	**+1.1**
CDF				*e*Sn	**Sn**	**20 15 28.1**	**-1.3**
	comp=N,1.0nm,0.3s						
SFTF	**Sexfontaines**	**4.67**	**339**	*e*Pg	**Pg**	**20 14 56.0**	**-1.8**
	baz=160						

NIED ***27*** *20:25:00, 36˚.40N×141˚.10E, h35km, Mw4.5 Best double couple: M○5.84000×10^15 NP1:φ○19.00000°, δ74.00000°, λ89.00000°. NP2:φ○203.00000°, δ16.00000°, λ94.00000°.*
IDC ***27*** *20:25:23.3±0.6, 36˚.25N×141˚.10E, h0km, mb4.4/24, mb1 4.4/31, mb1mx4.3/70, mbtmp4.3/31, ML3.4/5, MS3.7/11, Ms1 3.7/11, ms1mx3.4/51, Error ellipse: s-maj=14.7km s-min=13.0km az=126.0*
BJI ***27*** *20:25:25.2±0.0, 36˚.10N×141˚.15E, h33km, mB5.0/35, mb4.6/52, Ms4.4/23, Ms7 4.2/20*
MOS ***27*** *20:25:27.7±0.9, 36˚.59N×141˚.04E, h30km, mb4.9/18, Error ellipse: s-maj=7.1km s-min=4.7km az=104.5*
JMA ***27*** *20:25:28.5±0.1, 36˚.31N×141˚.08E, h47km±2km, M4.3*
JMA Felt II J1.
NEIC ***27*** *20:25:29.2±1.4, 36˚.36N±0˚.06×141˚.09E±0˚.08, h36km±6km, mb4.7/51, Error ellipse: s-maj=10.0km s-min=8.9km az=129.0*
BGR ***27*** *20:25:33.4±0.0, 37˚.17N×141˚.51E, h43km, mb4.9*
ISC 27 20:25:27.0±0.6, 36.26N±0˚.04×141.27E±0˚.04, h28km±3km, h28km:pP-P, n236, σ1§72/253, mb4.7/88, MS3.9/10, 6C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.56**	**279**	P	**Pb**	**20 25 38.5**	**+0.2**
JHYU				S	**Sb**	**20 25 45.4**	**-0.6**
CHOJ	**Chosi**	**0.65**	**211**	P	**Pn**	**20 25 41.1**	**+0.8**
CHOJ				S	**Sb**	**20 25 49.8**	**+1.3**
JHO	**Hitachi**	**0.67**	**302**	P	**Pb**	**20 25 39.4**	**-0.7**
JIHU	**Itakohorinouch**	**0.67**	**244**	P	**Pn**	**20 25 41.1**	**+0.5**
JIHU				S	**Sb**	**20 25 49.9**	**+0.7**
JYT	**Yasato**	**0.87**	**268**	P	**Pn**	**20 25 42.3**	**-1.1**
JSMT	**Sammumatsuo**	**0.91**	**228**	P	**Pn**	**20 25 44.5**	**+0.6**
JSMT				S	**Sn**	**20 25 56.1**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.92**	**336**	P	**Pn**	**20 25 43.5**	**-0.7**
ONAJ				S	**Sn**	**20 25 53.8**	**-2.8**
JFK	**Kawauchi**	**1.15**	**344**	P	**Pn**	**20 25 46.7**	**-0.6**
JFK				*e*S	**Sn**	**20 25 59.7**	**-2.4**
JFT	**Otama**	**1.46**	**329**	P	**Pn**	**20 25 52.1**	**+0.5**
JFT				S	**Sn**	**20 26 08.7**	**-1.1**
JAG	**Ashikaga**	**1.48**	**277**	P	**Pn**	**20 25 50.9**	**-0.9**
JAG				*e*S	**Sn**	**20 26 07.4**	**-2.8**
JKT	**Katashina**	**1.71**	**288**	P	**Pn**	**20 25 54.8**	**-0.2**
MJAR	**Matsushiro Arr**	**2.49**	**277**	Pn	**Pn**	**20 26 04.7**	**-1.0**
	9.4nm,0.3s,baz=110,slow=9.7,SNR=498						
MJAR				Sn	**Sn**	**20 26 35.3**	**+0.2**
	5.1nm,0.3s,baz=240,slow=16,SNR=6.1						
MJAR				LR	LR	20 27 18.4	
	comp=Z,1μm,18.7s,baz=95,slow=50						
MAJO	**Matsushiro**	**2.49**	**277**	*d* iP	**Pn**	**20 26 05.5**	**-0.2**
MAJO	**Matsushiro**	**2.49**	**277**		**Pn**	**20 26 05.8**	**+0.1**
MAT	**Matsushiro**	**2.49**	**277**	P	**Pn**	**20 26 05.7**	**0.0**
MAT				S	**Sn**	**20 26 32.3**	**-2.9**
MJB9	**Matsu-Tunnel**	**2.49**	**277**		**Pn**	**20 26 06.0**	**+0.3**
JHJ2	**Mitsune**	**3.36**	**201**	Pn	**Pn**	**20 26 19.7**	**+2.1**
INU	**Inuyama**	**3.58**	**257**		**Pn**	**20 26 22.5**	**+1.9**
ERM	**Erimo**	**5.93**	**14**	*i* P	**Pn**	**20 26 52.9**	**0.0**
ERM	**Erimo**	**5.93**	**14**	Pn	**Pn**	**20 26 53.7**	**+0.8**
NMR	**Nemuro--Hokkai**	**7.88**	**24**	*e*P	**Pn**	**20 27 18.5**	**-1.2**
NMR				*e*S	**Sn**	**20 28 40.2**	**-7.8**
ASAJ	**Asahikawa**	**7.91**	**7**	Pn	**Pn**	**20 27 19.4**	**-0.7**
	3.6nm,0.3s,baz=235,slow=7.9,SNR=28						
ASAJ				LR	LR	20 30 45.5	
	comp=Z,160nm,19.7s,baz=166,slow=41						
JKA	**Kamikawa-asahi**	**7.91**	**7**		**Pn**	**20 27 19.4**	**-0.7**
GLVR	**Golovnino**	**8.15**	**22**	*e*P	**Pn**	**20 27 23.5**	**+0.1**
GLVR				*e*S	**Sn**	**20 28 49.1**	**-5.4**
GLVR				pmax	pmax		
	comp=Z,106nm,0.5s						
GRPR	**Tuman**	**8.46**	**23**	*e*P	**Pn**	**20 27 28.2**	**+0.6**
GRPR				*e*S	**Sn**	**20 28 56.6**	**-5.4**
GRPR				pmax	pmax		
	comp=Z,72nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**8.52**	**23**	*e*P	**Pn**	**20 27 28.1**	**-0.4**
YUK				*e*S	**Sn**	**20 28 57.5**	**-6.1**
YUK				pmax	pmax		
	comp=Z,74nm,0.6s						
SHO	**Shikotan**	**8.71**	**28**	*e*P	**Pn**	**20 27 29.2**	**-1.9**
SHO				*e*S	Sn	20 28 58.1	-10
SHO				pmax	pmax		
	comp=Z,16nm,0.4s						
JNU	**Nakatsue**	**9.11**	**253**	Pn	**Pn**	**20 27 35.5**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=166,slow=15,SNR=1.9						
JNU				LR	LR	20 31 31.4	
	comp=Z,684nm,18.5s,baz=72,slow=41						
JNU	**Nakatsue**	**9.11**	**253**		**Pn**	**20 27 36.4**	**-0.3**
JCJ	**Chichijima**	**9.17**	**175**	Pn	**Pn**	**20 27 37.0**	**-0.4**
	comp=Z,10nm,0.3s,baz=306,slow=14,SNR=4.0						
MSHR	**Mys Shultsa**	**10.05**	**312**	*i* P	**Pn**	**20 27 48.3**	**-1.1**
KUR	**Kuril'sk**	**10.26**	**27**	*e*P	**Pn**	**20 27 50.7**	**-1.6**
KUR				*e*S	Sn	20 29 37.0	-9.3
USRK	**Ussuriysk Ar.**	**10.64**	**321**	Pn	**Pn**	**20 27 56.6**	**-0.8**
	baz=149,slow=43,SNR=2.6						
USRK				LR	LR	20 31 53.8	
	comp=Z,418nm,18.0s,baz=128,slow=37						
USA0B	**Ussuriysk Arra**	**10.64**	**321**	*i* P	**Pn**	**20 27 57.3**	**-0.2**
USA0B	**Ussuriysk Arra**	**10.64**	**321**		**Pn**	**20 27 60.0**	**+2.5**
YSS	**Yuzh-Sakhalins**	**10.74**	**5**	*e*P	**Pn**	**20 27 56.8**	**-2.1**
YSS				MLR	MLR		
	comp=Z,400nm,18.0s						
KSRS	**Korea Array**	**10.77**	**280**	Pn	**Pn**	**20 27 58.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=227,slow=25,SNR=2.9						
KSRS				LR	LR	20 31 44.4	
	comp=Z,417nm,21.8s,slow=36						
TJN	**Taejon**	**11.22**	**275**	*i* P	**Pn**	**20 28 05.1**	**-0.4**
MDJ	**Mudanjiang**	**12.19**	**317**	P	Pn	20 28 24.8	+6.1
MDJ				pmax	pmax		
	comp=Z,28nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,160nm,3.6s						
CN2	**Changchun**	**14.26**	**307**	*e*P	**P**	**20 28 54.0**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KLR	**Kul'dur**	**14.71**	**335**	*i* P	**Pn**	**20 28 51.9**	**-1.2**
KLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLR	**Kul'dur**	**14.71**	**335**	Pn	**Pn**	**20 28 50.6**	**-2.5**
	comp=Z,0.1nm,0.3s,baz=138,slow=15,SNR=4.5						
KLR				LR	LR	20 34 23.8	
	comp=Z,249nm,18.6s,baz=148,slow=37						
GRNR	**Gornyy**	**14.92**	**348**	⇓ *i* P	**Pn**	**20 28 53.5**	**-2.4**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DL2	**Dalian**	**15.80**	**286**	P	**P**	**20 29 11.0**	**0.0**
DL2				*e*S	**Sn**	**20 32 07.0**	**+5.4**
DL2				pmax	pmax		
	comp=Z,28nm,0.7s						
DL2				LR	LR		
	comp=Z,520nm,16.0s						
DL2				LR	LR		
	comp=Z,710nm,15.7s						
DL2				LR	LR		
	comp=Z,710nm,16.6s						
NJ2	**Nanjing**	**19.01**	**264**	*e*P	**Pn**	**20 29 47.3**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ZEA	**Zeya**	**20.03**	**335**	*e*P	**P**	**20 29 56.0**	**-1.5**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
BJI	**Beijing**	**20.07**	**288**	*e*P	**P**	**20 29 56.5**	**-1.6**
BJI				pmax	pmax		
	comp=Z,140nm,3.2s						
BJI				LR	LR		
	comp=Z,220nm,7.4s						
BJI				LR	LR		
	comp=Z,220nm,9.5s						
BJT	**Baijiatuau**	**20.08**	**288**	P	**P**	**20 29 57.1**	**-1.1**
BJT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BJT	**Baijiatuau**	**20.08**	**288**	P	**P**	**20 29 57.1**	**-1.1**
HIA	**Hailar**	**20.38**	**316**	P	**P**	**20 30 00.9**	**-0.5**
HIA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HIA	**Hailar**	**20.38**	**316**	P	**P**	**20 30 00.9**	**-0.5**
PETK	**Petropavlovsk-**	**20.41**	**29**	LR	LR	20 38 16.8	
	comp=Z,70nm,19.0s,baz=240,slow=38						
TIY	**Taiyuan**	**23.05**	**282**	*e*P	**P**	**20 30 35.5**	**+5.4**
TIY				S	**S**	**20 34 34.5**	**-4.7**
TIY				SS	**SnSn**	**20 35 16.0**	**+3.5**
TIY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIY				pmax	pmax		
	comp=Z,200nm,3.5s						
TIY				LR	LR		
	comp=N,250nm,8.3s						
TIY				LR	LR		
	comp=E,250nm,6.2s						
TIY				LR	LR		
	comp=Z,380nm,13.4s						
WHN	**Wuhan**	**23.15**	**264**	P	**P**	**20 30 30.0**	**-1.1**
HHC	**Hu-ho-hao-te**	**23.62**	**290**	*e*P	**P**	**20 30 33.5**	**-2.3**
HHC				pmax	pmax		
	comp=Z,50nm,4.3s						
MA2	**Magadan**	**24.13**	**12**	P	**P**	**20 30 41.2**	**+0.9**
MA2				pmax	pmax		
	comp=Z,13nm,0.9s						
MA2	**Magadan**	**24.13**	**12**	P	**P**	**20 30 41.2**	**+0.9**
MA2				IAmb	IAmb	20 30 44.0	
	comp=Z,13nm,0.9s						
XAN	**Xi'an**	**26.48**	**275**	P	**P**	**20 31 00.8**	**-1.1**
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN				LR	LR		
	comp=Z,130nm,18.4s						
XAN				LR	LR		
	comp=Z,220nm,19.5s						
XAN	**Xi'an**	**26.48**	**275**	P	**P**	**20 31 01.2**	**-0.7**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN	**Xi'an**	**26.48**	**275**	P	**P**	**20 31 01.2**	**-0.7**
YAK	**Yakutsk**	**26.80**	**348**	*c i* P	**P**	**20 31 03.7**	**-0.7**
YAK				*e*PP	**pP**	**20 31 12.7**	**+0.4**
YAK				*e*PPP	PPP	20 31 56.4	
YAK				*e*S	**S**	**20 35 42.3**	**+3.8**
YAK				*e*SS	**SnSn**	**20 36 55.0**	**+11**
YAK				*e*		20 42 00.7	
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.2s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				smax	smax		
	comp=N,14nm,1.5s						
YAK	**Yakutsk**	**26.80**	**348**	P	**P**	**20 31 04.0**	**-0.4**
	comp=N,12nm,0.7s,baz=178,slow=2.2,SNR=16						
YAK	**Yakutsk**	**26.80**	**348**	P	**P**	**20 31 04.0**	**-0.4**
YAK				IAmb	IAmb	20 31 05.9	
	comp=Z,30nm,1.0s						
ENH	**Enshi**	**27.16**	**267**	P	**P**	**20 31 06.8**	**-1.3**
ENH				IAmb	IAmb	20 31 07.6	
	comp=Z,18nm,0.8s						
SEY	**Seymchan**	**27.57**	**11**	*i* P	**P**	**20 31 10.7**	**-0.6**
SEY	**Seymchan**	**27.57**	**11**	P	**P**	**20 31 12.4**	**+1.1**
	comp=Z,9.2nm,0.9s,baz=201,slow=9.5,SNR=23						
ULN	**Ulaanbaatar**	**27.70**	**305**	P	**P**	**20 31 11.5**	**-1.4**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ULN	**Ulaanbaatar**	**27.70**	**305**	P	**P**	**20 31 11.5**	**-1.4**
H11N2	**WAKE ISLAND Hy**	**27.86**	**119**	T	T	21 00 54.6	
	baz=313,slow=75						
H11N1	**WAKE ISLAND Hy**	**27.87**	**119**	T	T	21 00 55.0	
	baz=313,slow=75						
H11N3	**WAKE ISLAND Hy**	**27.88**	**119**	T

KMI pP pP 20 32 26.0 +2.8
KMI sP sP 20 32 30.3 +3.9
KMI S **S** **20 37 41.5 -2.4**
KMI SS **SnSn** **20 39 57.5 -0.5**
KMI pmax pmax
comp=Z,6.0nm,1.2s
KMI pmax pmax
comp=Z,45nm,4.0s
KMI LR LR
comp=Z,140nm,23.1s
KMI LR LR
comp=Z,220nm,23.9s
KMI LR LR
comp=Z,260nm,27.9s
BILL Bilibino 34.80 16 *e*P **P** **20 32 16.1 +1.2**
BILL pmax pmax
comp=Z,3.0nm,0.9s
TIXI Tiksi 36.04 353 *ce*P **P** **20 32 25.4 -0.1**
TIXI pmax pmax
comp=Z,2.0nm,1.0s
TIXI Tiksi 36.04 353 P **P** **20 32 25.0 -0.5**
comp=Z,2.0nm,0.8s,baz=151,slow=7.5,SNR=7.7
TIXI Tiksi 36.04 353 P **P** **20 32 25.1 -0.5**
SANI Sanana 40.69 204 P **P** **20 33 00.7 -4.4**
comp=Z,37nm,0.8s
PBKT Sadao Pong 40.71 252 P **P** **20 33 05.7 +0.4**
PBKT IAmb IAmb 20 33 06.8
comp=Z,8.1nm,0.9s
CHTO Chiang Mai 41.00 256 P **P** **20 33 07.6 -0.1**
CHTO pmax pmax
comp=Z,7.0nm,1.5s
CHTO Chiang Mai 41.00 256 P **P** **20 33 07.6 -0.1**
WMQ Urumqi 41.09 298 *e*P **P** **20 33 09.5 +1.1**
WMQ pP sP 20 33 20.8 +1.1
WMQ pmax pmax
comp=Z,16nm,1.1s
WMQ pmax pmax
comp=Z,250nm,6.1s
WMQ LR LR
comp=Z,160nm,29.1s
CMAR Chiang Mai Arr 41.20 256 *ce*P **P** **20 33 09.3 -0.1**
CMAR pmax pmax
comp=Z,1.0nm,0.3s
CMAR Chiang Mai Arr 41.20 256 P **P** **20 33 08.3 -1.0**
comp=Z,1.2nm,0.3s,baz=38,slow=8.4,SNR=11
LSA Lhasa 42.17 276 P **P** **20 33 17.2 -0.6**
LSA pmax pmax
comp=Z,6.0nm,1.0s
LSA Lhasa 42.17 276 P **P** **20 33 17.2 -0.6**
ZAA0 Zalesovo Array 42.36 313 P **P** **20 33 18.0 -0.4**
ZAA0 IAmb IAmb 20 33 19.0
comp=Z,12nm,0.7s
ZALV Zalesovo Beam 42.36 313 P **P** **20 33 18.4 -0.1**
comp=Z,9.6nm,0.6s,baz=94,slow=6.9,SNR=45
ZALV LR LR 20 52 09.9
comp=Z,116nm,21.1s,baz=16,slow=38
RDOG Red Dog Mine 44.25 26 P **P** **20 33 35.9 +2.4**
RDOG IAmb IAmb 20 33 39.1
comp=Z,5.9nm,0.6s
MK31 Makanchi Array 44.44 303 P **P** **20 33 35.2 -0.2**
MK31 pmax pmax
comp=Z,6.0nm,0.9s
MK31 Makanchi Array 44.44 303 P **P** **20 33 35.2 -0.2**
MKAR Makanchi Array 44.44 303 *ce*P **P** **20 33 35.5 +0.1**
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR Makanchi Array 44.44 303 P **P** **20 33 35.4 0.0**
comp=Z,3.8nm,0.7s,baz=88,slow=9.7,SNR=35
MAKZ Makanchi 44.65 303 P **P** **20 33 36.7 -0.3**
MAKZ pmax pmax
comp=Z,6.0nm,1.0s
MAKZ Makanchi 44.65 303 P **P** **20 33 36.7 -0.3**
KURK Kurchatov 46.32 309 P **P** **20 33 49.6 -0.6**
KURK pmax pmax
comp=Z,30nm,0.8s
KURK Kurchatov 46.32 309 P **P** **20 33 49.6 -0.6**
ODAN Odare 46.35 274 *e*P **P** **20 33 50.8 -0.3**
RAMN Ramite 46.95 275 *e*P **P** **20 33 55.6 -0.2**
comp=Z,74nm,1.0s
JIRN Jiri 46.98 276 *e*P **P** **20 33 56.4 +0.3**
comp=Z,86nm,0.9s
PDGK Podgornoye 47.04 299 *i*P **P** **20 33 55.4 -0.7**
PDGK pmax pmax
comp=Z,18nm,0.9s
GUN Gumba 47.12 276 *e*P **P** **20 33 57.4 +0.2**
PKI Pulchoki 47.64 276 *e*P **P** **20 34 00.8 -0.4**
comp=Z,30nm,0.9s
PKIN Phulchoki 47.65 276 *e*P **P** **20 34 00.8 -0.4**
comp=Z,20nm,0.9s
KKN Kakani 47.66 276 *e*P **P** **20 34 01.2 0.0**
comp=Z,45nm,1.0s
DMN Daman 47.87 276 *e*P **P** **20 34 02.7 -0.2**
comp=Z,30nm,1.0s
PRZ Przheval'sk 48.02 298 P **P** **20 34 04.8 +1.0**
PRZ pmax pmax
comp=Z,24nm,1.0s
PRZ Przheval'sk 48.02 298 P **P** **20 34 04.8 +1.0**
GKN Gorkha 48.08 277 *e*P **P** **20 34 04.4 0.0**
comp=Z,154nm,1.1s
BRLK Bradley Lake 48.54 39 P **P** **20 34 11.0 +3.7**
MLY Manley 48.57 32 P **P** **20 34 10.4 +2.9**
MLY IAmb IAmb 20 34 11.2
comp=Z,6.0nm,1.0s
DANN Dangsing 48.64 278 *e*P **P** **20 34 09.0 +0.1**
comp=Z,135nm,0.9s
KOLN Koldanda 49.01 277 *e*P **P** **20 34 11.9 +0.2**
comp=Z,48nm,1.1s
NEA Nenana 49.27 32 **S** **20 41 15.6 -1.3**
NRN Naryn 50.03 297 P **P** **20 34 18.8 -0.6**
NRN pmax pmax
comp=Z,6.0nm,1.0s
NRN Naryn 50.03 297 P **P** **20 34 18.8 -0.6**
NRN IAmb IAmb 20 34 20.7
comp=Z,5.5nm,0.9s
IL31 50.21 32 P **P** **20 34 20.9 +1.0**
IL31 IAmb IAmb 20 34 22.5
comp=Z,8.5nm,1.0s
ILAR Eielson Array 50.21 32 P **P** **20 34 21.8 +1.8**
comp=Z,3.5nm,0.8s,baz=271,slow=6.5,SNR=33
KSH Kashi 50.62 295 P **P** **20 34 27.8 +4.1**
KSH pP sP 20 34 36.5 +1.3
KSH PP **PP** **20 36 24.0 +4.5**
KSH S **S** **20 41 38.3 +1.6**
KSH sS sS 20 41 58.0 +7.6
KSH SS **SS** **20 45 12.3 +1.5**
KSH pmax pmax
comp=Z,29nm,1.0s
KSH pmax pmax
comp=Z,550nm,6.9s
KSH LR LR
comp=Z,360nm,4.8s
KSH LR LR
comp=Z,260nm,6.6s
KSH LR LR
comp=Z,450nm,6.7s
AAK Ala-Archa 50.76 299 *i*P **P** **20 34 24.1 -0.6**
AAK pmax pmax
comp=Z,5.0nm,1.0s
AAK Ala-Archa 50.76 299 P **P** **20 34 24.7 0.0**
comp=Z,3.4nm,0.7s,baz=103,slow=4.0,SNR=16
AAK Ala-Archa 50.76 299 P **P** **20 34 24.6 -0.1**
AAK IAmb IAmb 20 34 27.5
comp=Z,3.9nm,0.8s
BRVK Borovoye 51.07 313 P **P** **20 34 26.3 -0.4**
BRVK IAmb IAmb 20 34 27.5
comp=Z,9.5nm,0.9s
RAGM Ragged Mountai 51.58 38 **S** **20 41 51.5 +2.3**
PWJI Pagerwojo 52.03 218 P **P** **20 34 32.3 -1.9**
comp=Z,41nm,0.8s
KLSI 53.17 228 P **P** **20 34 42.5 -0.2**
comp=Z,9.0nm,1.5s
GSI Gunungsitoli 53.31 239 P **P** **20 34 41.2 -2.5**
GSI pP **pP** **20 34 50.7 -1.4**
comp=Z,40nm,1.1s
GSI Gunungsitoli 53.31 239 P **P** **20 34 44.4 +0.7**
MDSI Maura Dua 53.35 229 P **P** **20 34 40.6 -3.4**
KK31 Karatay Array 53.42 301 P **P** **20 34 44.2 -0.1**
KK31 pmax pmax
comp=Z,16nm,1.1s
KK31 Karatay Array 53.42 301 P **P** **20 34 44.2 -0.1**
KKAR Karatay Array 53.42 301 P **P** **20 34 44.2 -0.1**
KKAR pmax pmax
comp=Z,16nm,1.1s
KKAR Karatay Array 53.42 301 P **P** **20 34 44.2 -0.1**

EPYK Eagle Plains 54.25 29 P **P** **20 34 52.6 +2.5**
NIL Nilore 54.75 289 P **P** **20 34 54.6 +0.4**
NIL pmax pmax
comp=Z,14nm,1.3s
NIL Nilore 54.75 289 P **P** **20 34 54.5 +0.4**
NIL IAmb IAmb 20 34 55.5
comp=Z,14nm,1.2s
INK Inuvik 55.13 27 P **P** **20 34 58.2 +2.0**
comp=Z,4.1nm,0.8s,baz=276,slow=6.8,SNR=10
INK Inuvik 55.13 27 P **P** **20 34 58.3 +2.0**
INK IAmb IAmb 20 34 59.1
comp=Z,4.9nm,0.9s
SVE Sverdlovsk 55.65 319 *e*P **P** **20 35 00.6 +0.3**
SVE pmax pmax
comp=Z,14nm,1.0s
WRA Warramunga Arr 56.28 188 P **P** **20 35 04.9 -0.1**
comp=Z,2.6nm,0.8s,baz=5.9,slow=7.2,SNR=11
ARU Arti 56.87 319 *c i*P **P** **20 35 08.6 -0.3**
ARU PPP PPP 20 38 29.6
ARU S **S** **20 42 59.9 -0.6**
ARU pmax pmax
comp=Z,22nm,1.1s
ARU Arti 56.87 319 P **P** **20 35 08.6 -0.3**
KBL Kabul 57.59 291 P **P** **20 35 13.8 -0.8**
KBL pmax pmax
comp=Z,9.0nm,1.4s
KBL Kabul 57.59 291 P **P** **20 35 13.8 -0.8**
KBL IAmb IAmb 20 35 15.0
comp=Z,9.3nm,1.4s
C36M Paulatuk 58.18 25 P **P** **20 35 19.0 +1.1**
C36M IAmb IAmb 20 35 20.4
comp=Z,9.3nm,1.1s
ABKAR Akbulak array 58.35 310 P **P** **20 35 18.7 -0.8**
ABKAR IAmb IAmb 20 35 20.1
comp=Z,8.7nm,0.9s
ASAR Alice Springs 60.01 188 P **P** **20 35 31.6 +0.5**
comp=Z,1.8nm,0.8s,baz=11,slow=6.8,SNR=12
KIRV Kirov 60.80 323 LR LR 21 03 40.0
comp=Z,96nm,18.5s,baz=252,slow=38
NOR Nord 61.82 356 *i*P **P** **20 35 43.1 +0.3**
HRA Herat 62.73 294 P **P** **20 35 50.1 +0.2**
HRA IAmb IAmb 20 35 51.3
comp=Z,5.0nm,0.9s
RES Resolute Bay 63.38 14 P **P** **20 35 54.4 +1.2**
RES pmax pmax
comp=Z,11nm,1.1s
RES Resolute Bay 63.38 14 P **P** **20 35 53.9 +0.7**
comp=Z,7.9nm,1.1s,baz=308,slow=6.9,SNR=14
RES Resolute Bay 63.38 14 P **P** **20 35 54.4 +1.2**
RES IAmb IAmb 20 35 55.1
comp=Z,11nm,1.1s
GEYT Alibeck 64.11 299 P **P** **20 35 57.5 -1.2**
comp=Z,1.9nm,0.7s,baz=46,slow=8.5,SNR=5.2
YKA Yellowknife Ar 64.53 30 P **P** **20 36 02.2 +1.2**
comp=Z,1.8nm,0.8s,baz=300,slow=6.8,SNR=14
ARCES ARCESS Array B 64.68 339 P **P** **20 36 02.3 +0.4**
comp=Z,2.9nm,0.9s,baz=62,slow=6.4,SNR=2.8
DAG Danmarks Havn 66.53 355 *i*P **P** **20 36 13.9 +0.2**
DAG pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 66.53 355 *i*P **P** **20 36 13.9 +0.2**
comp=Z,6.0nm,0.9s
OBN Obninsk 68.65 323 *e*P **P** **20 36 26.4 -1.0**
OBN *e* 20 36 51.3
OBN pmax pmax
comp=Z,5.0nm,0.9s
FINES FINESS Array B 69.45 332 *i*P **P** **20 36 32.4 +0.2**
FINES pmax pmax
comp=Z,6.0nm,0.9s
FINES FINESS Array B 69.45 332 P **P** **20 36 32.0 -0.2**
comp=Z,5.6nm,0.8s,baz=55,slow=7.2,SNR=8.5
KBZ Khabaz 71.32 311 *i*P **P** **20 36 43.3 -0.7**
KBZ pmax pmax
comp=Z,4.0nm,0.9s
KBZ Khabaz 71.32 311 P **P** **20 36 43.9 -0.1**
comp=Z,4.0nm,0.8s,baz=23,slow=4.6,SNR=7.5
KIV Kislovodsk 71.33 311 *e*P **P** **20 36 44.6 +0.4**
KIV pmax pmax
comp=Z,31nm,1.1s
SUMG Summit 71.46 360 *i*P **P** **20 36 45.9 +1.0**
SUMG Summit 71.46 360 *i*P **P** **20 36 45.9 +1.0**
GNI Garni 72.08 307 *i*P **P** **20 36 50.1 +1.2**
GNI pmax pmax
comp=Z,35nm,1.3s
LRM Limekiln Ridge 74.78 44 P **P** **20 37 06.4 +1.6**
AKASG Malin Array Be 74.84 322 P **P** **20 37 04.3 -0.4**
comp=Z,2.7nm,0.4s,baz=46,slow=6.2,SNR=1.7
AKASG Malin Array Be 74.84 322 IAmb IAmb 20 37 05.5
comp=Z,2.5nm,0.8s
AKBB Malin Array Si 74.84 322 *i*P **P** **20 37 03.8 -0.9**
AKBB pmax pmax
comp=Z,8.0nm,0.9s
NB2 NORSAR Subarra 74.86 337 P **P** **20 37 04.5 -0.2**
comp=Z,1.6nm,0.6s,baz=41,slow=5.9
NOA NORSAR Array B 74.86 337 P **P** **20 37 04.8 +0.1**
comp=Z,3.7nm,0.8s,baz=39,slow=5.8,SNR=8.9
KVN Kaiserville 75.32 52 P **P** **20 37 10.0 +2.1**
KVN pmax pmax
comp=Z,4.0nm,1.0s
KVN Kaiserville 75.32 52 P **P** **20 37 10.0 +2.1**
R11A Troy Canyon, C 77.33 52 P **P** **20 37 21.7 +2.3**
R11A IAmb IAmb 20 37 35.4
comp=Z,7.6nm,1.5s
PDAR Pinedale Array 78.29 45 P **P** **20 37 26.4 +1.6**
comp=Z,0.6nm,0.5s,baz=278,slow=1.3,SNR=7.7
BUR08 Bucovina Ar. S 78.84 322 P **P** **20 37 27.8 +0.3**
BRTR Keskin Array B 79.28 312 *ce*P **P** **20 37 31.0 +0.9**
BRTR pmax pmax
comp=Z,2.0nm,0.9s
BRTR Keskin Array B 79.28 312 P **P** **20 37 30.2 +0.2**
comp=Z,2.2nm,0.9s,baz=101,slow=6.4,SNR=8.2
KOLS Kolonicke sedl 79.38 324 *e*P **P** **20 37 31.1 +0.8**
KOLS Kolonicke sedl 79.38 324 *e*P **P** **20 37 31.1 +0.8**
OJC Ojcow 79.62 326 P **P** **20 37 32.1 +0.6**
OJC pmax pmax
comp=Z,12nm,1.1s
OJC Ojcow 79.62 326 P **P** **20 37 32.1 +0.6**
OJC IAmb IAmb 20 37 33.0
comp=Z,12nm,1.1s
RDMU Red Mountain 79.66 47 P **P** **20 37 34.5 +2.3**
SRU San Rafael Swe 80.01 49 P **P** **20 37 36.0 +1.9**
SRU pmax pmax
comp=Z,4.0nm,0.9s
SRU San Rafael Swe 80.01 49 P **P** **20 37 36.0 +1.9**
RAYN Ar Rayn 80.84 292 P **P** **20 37 38.6 -0.1**
RAYN pmax pmax
comp=Z,8.0nm,1.0s
RAYN Ar Rayn 80.84 292 P **P** **20 37 38.6 -0.1**
RAYN IAmb IAmb 20 37 39.7
comp=Z,8.3nm,0.9s
VYHS Vyhne 81.30 325 *e*P **P** **20 37 41.1 +0.5**
VYHS Vyhne 81.30 325 *e*P **P** **20 37 41.1 +0.5**
BRG Berggiesshubel 81.66 329 *e*PKP **P** **20 37 42.8 +0.4**
comp=Z,10.0nm,1.0s
BRG Berggiesshubel 81.66 329 *e*P **P** **20 37 42.8 +0.4**
BRG pmax pmax
comp=Z,10.0nm,1.0s
CLL Collm 81.71 330 *e*P **P** **20 37 43.0 +0.3**
CLL *e* 20 37 55.0
CLL pmax pmax
comp=Z,10.0nm,1.0s
CLL Collm 81.71 330 *e*P **P** **20 37 43.0 +0.3**
comp=Z,10.0nm,1.0s
CLL *e*(sP) **sP** **20 37 55.0 +0.4**
CLL *e* 20 38 07.0
CLL Collm 81.71 330 *e*P **P** **20 37 42.7 +0.1**
baz=38,slow=5.2
CLL Collm 81.71 330 P **P** **20 37 42.8 +0.1**
CLL IAmb IAmb 20 37 43.6
comp=Z,6.9nm,0.8s
FBE Freiberg 81.86 330 *e*P **P** **20 37 44.3 +0.8**
baz=38,slow=5.2
FBE *e*pP **sP** **20 37 56.6 +1.2**
SMOL Smolenice 81.92 326 *e*P **P** **20 37 45.1 +1.2**
SMOL Smolenice 81.92 326 *e*P **P** **20 37 45.1 +1.2**
MODW Modelwitz 82.21 330 *e*pP pP 20 37 58.3 +4.3
CLZ Clausthal 82.33 332 *e*P **P** **20 37 46.4 +0.4**
baz=38,slow=5.2
SCHF Schoenfels 82.44 330 *e*pP pP 20 37 59.9 +4.6
GUNZ Gunzen 82.71 330 *e*P **P** **20 37 48.5 +0.5**
baz=38,slow=5.2
GUNZ *e*pP **sP** **20 38 01.3 +1.4**
WERN Wernitzgruen 82.75 330 *e*P **P** **20 37 48.7 +0.5**
baz=38,slow=5.2
MOX Moxa 82.78 330 *e*P **P** **20 37 48.8 +0.4**
baz=38,slow=5.2
214A Organ Pipe Nat 83.01 55 P **P** **20 37 50.2 +0.3**
MANZ Manzenberg 83.09 330 *e*P **P** **20 37 50.4 +0.4**
baz=38,slow=5.2
KHC Kasperske Hory 83.14 328 *i*P **P** **20 37 49.8 -0.5**
KHC pmax pmax
comp=Z,10.0nm,1.0s
KHC Kasperske Hory 83.14 328 *e*P **P** **20 37 50.0 -0.3**
KHC *ex* x 20 38 03.0
KHC Kasperske Hory 83.14 328 P **P** **20 37 50.7 +0.4**
VTS Vitosha 83.29 319 P **P** **20 37 52.2 +0.9**
VTS pmax pmax
comp=Z,4.0nm,0.9s
VTS Vitosha 83.29 319 P **P** **20 37 52.2 +0.9**
VTS IAmb IAmb 20 37 53.2
comp=Z,4.4nm,0.9s
GEC2 GERESS Array S 83.31 328 *e*P **P** **20 37 51.3 +0.1**
baz=38,slow=5.2
GERES GERESS Array B 83.31 328 P **P** **20 37 51.2 0.0**
comp=Z,1.8nm,0.7s,baz=36,slow=5.3,SNR=14
GRF Grafenberg Arr 83.68 330 *e*P **P** **20 37 54.1 +1.0**
comp=Z,6.8nm,0.9s,baz=38,slow=5.2
AHRW Bad Neuenahr-A 84.61 333 *e*P **P** **20 37 58.5 +0.9**
baz=38,slow=5.2
KBA Koelnbreinsper 84.82 327 *e*P **P** **20 37 59.6 +0.6**
baz=38,slow=5.2
PDG Podgorica 85.49 321 P **P** **20 38 01.5 -0.8**
BFO Black Forest 85.92 331 *e*P **P** **20 38 04.3 -0.1**
baz=38,slow=5.2
DAVA Damuels 86.13 329 *e*P **P** **20 38 06.1 +0.6**
baz=38,slow=5.2
TXAR Lajitas Array 90.68 52 P **P** **20 38 29.7 +2.2**
comp=Z,0.5nm,0.6s,baz=289,slow=2.8,SNR=4.9
N53A Lisbon 94.12 31 pP 20 38 51.7 0.0
TORD Torodi Ar. Bea 117.79 314 PKP **PKPdf** **20 44 10.4 -0.8**
comp=Z,0.4nm,0.7s,baz=225,slow=1.2,SNR=3.1
LPAZ La Paz 147.18 60 PKPbc **PKPbc** **20 45 09.8 +1.0**
comp=Z,2.1nm,0.8s,baz=22,slow=5.4,SNR=6.5

NCEDC ***27*** *20:26:41±0.9, 35°.600N±0°.007×120°.852W±0°.008, h8km±2km, Md2.3/78, Error ellipse: s-maj=1.4km s-min=0.4km az=219.0*
NEIC 27 20:26:41.0±0.8, 35°.601N±0°.007×120°.856W±0°.009, h13km±2km, Error ellipse: s-maj=1.4km s-min=0.4km az=222.0, Central California

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAMR	**Ramage Ranch**	**0.04**	**341**			Pg	20 26 42.9	-0.6
BLDC	**Black Mountain**	**0.08**	**212**			Pg	20 26 43.2	-0.6
BLDC	**Black Mountain**	**0.08**	**212**			Pg	20 26 45.1	+1.3
ARDC	**Alexander Ranc**	**0.17**	**216**			Pg	20 26 44.7	-0.3
PANM	**San Antonio Re**	**0.18**	**347**			Pg	20 26 45.2	-0.1
PCBM	**Cambria**	**0.19**	**244**			Pg	20 26 45.1	-0.1
PTAM	**Tassajara Cree**	**0.24**	**150**			Pg	20 26 46.0	-0.2
PHCM	**Hearst Castle**	**0.26**	**289**			Pg	20 26 46.6	+0.2
PHSB	**Hesperia Broad**	**0.28**	**324**			Pg	20 26 46.6	-0.2
EFD	**Emergency Oper**	**0.30**	**159**			Pg	20 26 47.1	-0.1
LSDC	**Los Osos Digit**	**0.30**	**178**			Pg	20 26 47.7	+0.5
PPO	**Portuguese Can**	**0.33**	**36**			Pg	20 26 48.1	+0.4
PWKM	**Work Ranch**	**0.35**	**53**			Pg	20 26 48.4	+0.3
VPDC	**Valencia Peak**	**0.36**	**182**			Pg	20 26 48.7	+0.4
VPDC						Sb	20 26 54.5	-0.3
DPD	**Davis Peak**	**0.37**	**171**			Pg	20 26 48.8	+0.4
TCHL	**Shandon**	**0.38**	**77**			Pg	20 26 48.9	+0.3
TCHL						Sb	20 26 55.0	-0.4
DCD	**Diablo Creek**	**0.39**	**178**			Pg	20 26 48.9	+0.2
PVCM	**Vineyard Canyo**	**0.41**	**39**			Pg	20 26 49.2	0.0
PCMM	**Cholame Hills**	**0.42**	**61**			Pg	20 26 49.5	+0.2
TSCN	**Private Proper**	**0.42**	**98**			Pg	20 26 49.6	+0.3
PSAM	**San Ardo**	**0.42**	**356**			Pg	20 26 49.4	0.0
PKD	**Bear Valley Ra**	**0.43**	**37**			Pg	20 26 49.2	-0.2
PKLM	**Kerr Lake**	**0.45**	**68**			Pg	20 26 50.0	+0.1
GHC	**Gold Hill**	**0.47**	**61**			Pg	20 26 50.2	-0.1
TRAM	**Private Proper**	**0.48**	**81**			Pg	20 26 50.6	+0.1
PSNM	**Stone Corral**	**0.49**	**68**			Pg	20 26 50.6	0.0
PAGB	**Antelope Grade**	**0.51**	**75**			Pg	20 26 50.8	-0.3
PAPM	**Alder Peak**	**0.52**	**307**			Pg	20 26 50.9	-0.3
THIS	**South End of C**	**0.53**	**76**			Pg	20 26 51.3	0.0
PTRM	**Twissleman Ran**	**0.53**	**84**			Pg	20 26 51.2	-0.1
PSRM	**Scobie Ranch**	**0.53**	**61**			Pg	20 26 51.4	-0.1
CTM	**Castle Mountai**	**0.54**	**52**			Pg	20 26 51.9	+0.3
PMRM	**Maxey Ranch**	**0.54**	**70**			Pg	20 26 51.4	-0.1
PCCM	**Crazy Canyon**	**0.55**	**333**			Pg	20 26 52.5	+0.1
PMPB	**Monarch Peak**	**0.61**	**4**			Pb	20 26 52.8	-0.3
PBPM	**Bitterwater Pu**	**0.63**	**92**			Pg	20 26 53.4	0.0
LRC	**Lone Oak Road**	**0.66**	**347**			Pg	20 26 53.6	-0.2
PMLM	**Mount Lospe**	**0.73**	**164**			Pb	20 26 55.9	+0.3
PARM	**Anticline Ridg**	**0.77**	**33**			Pb	20 26 56.8	+0.6
BAPM	**Anderson Peak**	**0.86**	**312**			Pg	20 26 57.0	-0.7
BSGM	**Shirttail Gulc**	**0.87**	**338**			Pg	20 26 57.6	-0.3
BSMM	**Soledad Missio**	**0.91**	**329**			Pg	20 26 58.2	-0.4
BBNM	**San Benito**	**0.92**	**349**			Pg	20 26 58.8	0.0
HAST	**Hastings Reser**	**0.97**	**325**			Pb	20 26 58.9	-0.7
BBGB	**Big Mountain B**	**0.99**	**351**			Pb	20 27 00.0	0.0
BJCM	**Johnson Can.**	**1.04**	**335**			Pb	20 26 59.9	-0.9
BAVM	**Antelope Valle**	**1.05**	**352**			Pb	20 27 00.9	-0.2
BEMM	**Emmet**	**1.08**	**350**			Pb	20 27 01.1	-0.4
SCZ	**Santa Cruz**	**1.09**	**336**			Pb	20 27 00.5	-1.1
BEHM	**Elkhorn Ranch**	**1.09**	**346**			Pb	20 27 01.5	-0.2
BPCNC	**Pine Canyon**	**1.15**	**327**			Pb	20 27 01.8	-1.0
BCGM	**Cienega Road**	**1.17**	**341**			Pn	20 27 02.6	-0.5
BSRM	**Salinas Radio**	**1.19**	**333**			Pn	20 27 02.0	-1.3
BVYM	**Vineyard**	**1.23**	**339**			Pn	20 27 03.0	-0.9
SAO	**San Andreas Ge**	**1.25**	**338**	Pn		Pn	20 27 03.1	-1.1
FRP	**Fremont Peak**	**1.26**	**336**			Pn	20 27 03.0	-1.3
ISA	**Isabella, Lake**	**1.94**	**87**	Pn		Pn	20 27 12.7	-1.0
MDPB	**Devils Postpil**	**2.48**	**35**	Pn		Pn	20 27 21.4	+0.1
OMMB	**Old Mammoth Mi**	**2.50**	**36**	Pn		Pn	20 27 20.7	-0.9

NIED ***27*** *20:26:00, 36°.40N×141°.20E, h41km, Mw4.1 Best double couple: M0 1.85000×10^15 NP1:φ±22.00000°, δ67.00000°, λ78.00000°. NP2:φ±230.00000°, δ26.00000°, λ115.00000°.*
IDC ***27*** *20:26:40.5±0.9, 36°.11N×141°.31E, h0km, mb4.2/13, mb1 4.3/15, mb1mx4.0/65, mbtmp4.1/15, ML2.7/2, Error ellipse: s-maj=23.9km s-min=21.8km az=49.0*
NEIC ***27*** *20:26:46.3±1.2, 36°.1N±0°.1×141°.3E±0°.1, h45km±9km, mb4.5/7, Error ellipse: s-maj=19.3km s-min=14.7km az=189.0*
JMA ***27*** *20:26:47.7±0.1, 36°.32N×141°.09E, h46km±2km, M4.0*
JMA Felt II J1.
ISC 27 20:26:45.8±1.4, 36°.34N±0°.04×141°.26E±0°.07, h30km±9km, n50, σ1°.913/54, mb4.2/16, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	**0.54**	**271**	P		**Pn**	**20 26 57.8**	**+0.3**
JHYU				*e*S		**Sb**	**20 27 04.7**	**+0.1**
JHO	**Hitachi**	**0.62**	**297**	P		**Pn**	**20 26 58.7**	**+0.1**
JHO				*e*S		**Sb**	**20 27 06.5**	**-0.3**
JIHU	**Itakohorinouch**	**0.70**	**238**	P		**Pn**	**20 27 00.3**	**+0.7**
JIHU				*e*S		**Sb**	**20 27 09.3**	**+0.4**
CHOJ	**Chosi**	**0.71**	**207**	P		**Pn**	**20 27 00.4**	**+0.6**
CHOJ				S		**Sb**	**20 27 09.2**	**0.0**
ONAJ	**Iwakimizuishiy**	**0.85**	**334**	P		**Pn**	**20 27 02.6**	**+0.8**
ONAJ				*e*S		**Sn**	**20 27 13.1**	**-0.2**
JYT	**Yasato**	**0.87**	**263**	P		**Pn**	**20 27 01.7**	**-0.7**
JSMT	**Sammumatsuo**	**0.95**	**224**	P		**Pn**	**20 27 04.5**	**+1.4**
JSMT				*e*S		**Sb**	**20 27 15.8**	**-0.3**
JFK	**Kawauchi**	**1.07**	**343**	P		**Pb**	**20 27 05.9**	**0.0**
JFK				*e*S		**Sn**	**20 27 18.8**	**0.0**
JFT	**Otama**	**1.39**	**328**	P		**Pb**	**20 27 11.4**	**+0.1**
JFT				*e*S		**Sb**	**20 27 27.8**	**-0.9**
JAG	**Ashikaga**	**1.46**	**274**	P		**Pn**	**20 27 10.6**	**+0.5**
JMM	**Marumori**	**1.57**	**346**	P		**Pb**	**20 27 13.7**	**-0.6**
JMM				*e*S		**Sb**	**20 27 32.1**	**-1.7**
JFY	**Yanaizu**	**1.64**	**311**	P		**Pb**	**20 27 14.2**	**-1.3**
JKT	**Katashina**	**1.68**	**286**	P		**Pn**	**20 27 14.3**	**+1.1**
MJAR	**Matsushiro Arr**	**2.47**	**276**	Pn		**Pn**	**20 27 24.4**	**+0.4**
	9.5nm,0.3s,baz=284,slow=30,SNR=6.3							
MJAR				Sn		**Sn**	**20 27 54.3**	**+1.2**
	1.6nm,0.3s,baz=91,slow=12,SNR=2.5							
MJAR	**Matsushiro Arr**	**2.47**	**276**			**Pn**	**20 27 24.3**	**+0.3**
MAT	**Matsushiro**	**2.47**	**276**	P		**Pn**	**20 27 25.6**	**+1.6**
MAT				S		**Sn**	**20 27 50.7**	**-2.5**
USRK	**Ussuriysk Ar.**	**10.57**	**321**	Pn		**Pn**	**20 29 16.8**	**+1.6**
	baz=137,slow=14,SNR=2.2							

H11N2	WAKE ISLAND Hy baz=313	27.90	119	T		T		21 02 34.5
H11N1	WAKE ISLAND Hy baz=313	27.91	119	T		T		21 02 41.0
H11N3	WAKE ISLAND Hy baz=313	27.92	119	T		T		21 02 29.6
SONM	Songino Array 2.6nm,0.7s,baz=106,slow=9.1,SNR=7.9	28.08	305	P		P		20 32 35.2 +0.5
SONM	Songino Array	28.08	305	P		P		20 32 34.7 0.0
H11S1	WAKE ISLAND Hy baz=314	28.59	122	T		T		21 02 57.4
H11S3	WAKE ISLAND Hy baz=314	28.59	122	T		T		21 03 00.5
H11S2	WAKE ISLAND Hy baz=314	28.61	122	T		T		21 03 00.1
ZAA0	Zalesovo Array	42.30	313	P		P		20 34 37.1 +0.6
ZAA0	comp=Z,5.1nm,0.6s			IAmb		IAmb		20 34 38.1
ZALV	Zalesovo Beam comp=Z,5.2nm,0.5s,baz=97,slow=7.1,SNR=9.7	42.30	313	P		P		20 34 37.5 +1.0
ZALV	Zalesovo Beam	42.30	313	P		P		20 34 37.0 +0.5
MKAR	Makanchi Array comp=Z,2.3nm,0.7s,baz=86,slow=14,SNR=7.1	44.39	303	P		P		20 34 55.4 +1.9
MKAR	Makanchi Array	44.39	303	P		P		20 34 53.9 +0.4
KURK	Kurchatov	46.27	309	P		P		20 35 08.5 +0.2
KURK	comp=Z,12nm,0.7s			IAmb		IAmb		20 35 09.7
KURBB	Kurchatov Arra comp=Z,14nm,0.5s,baz=82,slow=7.6,SNR=11	46.34	308	P		P		20 35 09.0 +0.2
ILAR	Eielson Array comp=Z,1.4nm,0.8s,baz=254,slow=6.4,SNR=2.9	50.15	32	P		P		20 35 40.4 +2.3
ILAR	Eielson Array	50.15	32	P		P		20 35 38.0 -0.1
AAK	Ala-Archa comp=Z,1.5nm,0.5s,baz=252,slow=3.2,SNR=2.6	50.72	299	P		P		20 35 42.1 -0.7
AAK	Ala-Archa	50.72	299	P		P		20 35 41.8 -1.1
RAGM	Ragged Mountai	51.53	38			pP		20 36 02.1 +4.7
INK	Inuvik comp=Z,1.1nm,0.5s,baz=75,slow=0.8,SNR=3.6	55.06	27	P		P		20 36 16.2 +1.9
INK	Inuvik	55.06	27	P		P		20 36 14.3 0.0
INK	comp=Z,6.2nm,1.4s			IAmb		IAmb		20 37 06.6
WRA	Warramunga Arr comp=Z,1.2nm,0.7s,baz=4.2,slow=7.6,SNR=1.1	56.35	188	P		P		20 36 22.1 -2.0
ABKAR	Akbulak array	58.30	310	P		P		20 36 38.6 +1.0
ABKAR	comp=Z,3.4nm,1.0s			IAmb		IAmb		20 36 39.2
ASAR	Alice Springs comp=Z,0.6nm,0.7s,baz=13,slow=10,SNR=1.4	60.08	188	P		P		20 36 48.2 -1.9
ASAR	Alice Springs	60.08	188	P		P		20 36 47.1 -3.1
YKA	Yellowknife Ar comp=Z,0.8nm,0.9s,baz=301,slow=6.3,SNR=2.6	64.47	30	P		P		20 37 18.9 -0.2
FINES	FINESS Array B comp=Z,3.0nm,0.9s,baz=64,slow=8.7,SNR=2.0	69.37	332	P		P		20 37 49.4 -0.9
NOA	NORSAR Array B comp=Z,1.9nm,0.8s,baz=40,slow=5.8,SNR=3.1	74.78	337	P		P		20 38 22.0 -0.8
CLL	Collm	81.64	330	*e*P		P		20 39 02.0 +1.2
GERES	GERESS Array B comp=Z,0.7nm,0.5s,baz=36,slow=6.0,SNR=5.5	83.24	328	P		P		20 39 10.0 +0.6
TZTN	Tazewell	96.41	35	P		P		20 40 11.6 -0.4
TORD	Torodi Ar. Bea comp=Z,0.9nm,0.9s,baz=18,slow=4.1,SNR=3.0	117.73	314	PKP		PKPdf		20 45 28.6 -1.0

SNET ***27*** *20:27:25.4±1.4, 13°.38N×89°.71W, h63km±12km, ML3.2*
GCG ***27*** *20:27:28.3±0.3, 13°.27N×89°.96W, h10km±6km, MD3.8*

ISC 27 20:27:26.0±2.0, 13°.3N±0°.1×89°.66W±0°.04, h26km±13km, n17, σ1§01/25, El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CEVE	Cerro Verde	0.57	4	*e*P			Pb	20 27 38.5	+0.8
CEVE				*e*S			Sn	20 27 48.2	+0.7
CEVE	comp=Z,5μm,0.3s			IAML				20 27 49.5	
SBLS	San Blas	0.58	4	*e*P			Pb	20 27 38.6	+0.7
SNJE	San Jose	0.61	5	*e*P			Pb	20 27 38.9	+0.6
RTR	El Retiro	0.64	1	*e*P			Pb	20 27 39.6	+0.8
CUSC	Alcaldia de Cu	0.66	45	*e*P			Pb	20 27 38.7	-0.4
CUSC				*e*S			Sn	20 27 49.9	+0.4
CUSC	comp=Z,2μm,0.4s			IAML				20 27 51.9	
FAME	Alcalda de S	0.68	330	*e*P			Pb	20 27 37.0	-2.2
FAME				*e*S			Sb	20 27 47.2	-1.1
FAME	comp=Z,360nm,0.3s			IAML				20 27 50.6	
LFU	La Fuente	0.72	47	*e*P			Pb	20 27 40.3	+0.2
PAVA	Las Pavas	0.84	57	*e*P			Pn	20 27 41.9	-0.4
PAVA				*e*S			Sn	20 27 54.8	+0.8
PAVA	comp=Z,637nm,0.5s			IAML				20 28 02.7	
COEG	Centro de Oper	0.84	64	*e*P			Pn	20 27 42.0	-0.4
COEG				*e*S			Sb	20 27 54.0	+0.8
COEG	comp=Z,622nm,0.3s			IAML				20 27 56.8	
TECA	Tecapa	1.15	78	*e*P			Pn	20 27 46.2	-0.5
MTG3	Montecristo	1.18	14	*i*P			Pn	20 27 45.5	-1.6
MTO3				*e*S			Sn	20 28 00.3	-2.1
MTO3	comp=Z,126nm,0.4s			IAML				20 28 01.9	
IXG	Ixpaco	1.19	320	*e*P			Pn	20 27 47.4	+0.2
PACA	Pacayal	1.32	81	*e*P			Pn	20 27 48.5	-0.5
NBG	Las Nubes	1.48	333	*e*P			Pb	20 27 53.2	+0.1
NBG				*e*S			Sb	20 28 12.8	+1.2
FUG	Fuego 3	1.65	316	*e*P			Pn	20 27 54.3	+0.8
FUG				*e*S			Sn	20 28 14.7	+0.7
LCND	La Caada	1.73	88	*e*P			Pn	20 27 54.0	-0.4
STG3	Santiaguito 3,	2.35	308	*e*P			Pn	20 28 04.2	+1.0
STG3				*e*S			Sn	20 28 31.9	+0.6

IDC ***27*** *20:30:27.0±1.7, 20°.08S×178°.10W, h556km±19km, mb3.7/20, mb1 3.8/23, mb1mx3.6/46, mbtmp4.6/23, Error ellipse: s-maj=16.8km s-min=11.9km az=137.0*
NEIC ***27*** *20:30:28.6±1.5, 20°.1S±0°.1×178°.1W±0°.1, h578km±8km, mb4.6/32, Error ellipse: s-maj=21.9km s-min=17.1km az=144.0*

ISC 27 20:30:27.6±0.5, 20°.03S±0°.10×178°.09W±0°.08, h569km, n155, σ1§01/153, mb4.3/33, 8C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.31	301	P			P	20 31 55.1	+1.8
NIUE	Niue	7.75	84	P			P	20 32 24.7	+1.2
AFI	Afiamalu 23nm,0.3s,baz=281,slow=5.2,SNR=20	8.57	46	P			P	20 32 30.7	-1.0
AFI				S			S	20 34 08.3	-5.0
AFI	3.1nm,0.3s,baz=299,slow=19,SNR=2.6 Afiamalu	8.57	46	P			P	20 32 30.9	-0.8
DZM	Mont Dzumac 0.8nm,0.3s,baz=52,slow=14,SNR=3.6	14.59	259	P			P	20 33 32.1	-0.6
DZM	Mont Dzumac	14.59	259	P			P	20 33 31.7	-1.0
SANVU	Saraoutou	14.73	286	P			P	20 33 33.5	-0.7
OUZ	Omahuta	16.82	204	P			P	20 33 56.1	+2.4
MXZ	Matakaoa Point	17.75	189	P			P	20 34 02.3	+0.1
MXZ	Matakaoa Point	17.75	189	P			P	20 34 01.1	-1.0
WMGZ	Waiomatatini S	17.99	189	P			P	20 34 05.4	+0.2
HAZ	Te Kaha	18.03	191	P			P	20 34 04.4	-0.3
PKGZ	Pakihiroa	18.11	190	P			P	20 34 06.5	+1.0
RUGZ	Raukumara Rang	18.25	191	P			P	20 34 06.1	-0.8
PUZ	Puketiti	18.26	189	P			P	20 34 07.3	+0.5
TGRZ	Tauranga	18.31	194	P			P	20 34 10.7	+3.4
URZ	Urewera 10.0nm,0.3s,baz=319,slow=3.2,SNR=37	18.64	192	P			P	20 34 08.1	-2.2
URZ	Urewera	18.64	192	P			P	20 34 08.1	-2.2
URZ	Urewera	18.64	192	P			P	20 34 08.4	-1.8
MUGZ	Murupara	18.92	193	P			P	20 34 12.3	-0.6
RAHZ	Arahi	19.28	191	P			P	20 34 16.1	0.0
BKZ	Black Stump Fm	19.64	193	P			P	20 34 17.4	-2.0
BKZ	comp=Z,33nm,1.2s			IAmb			IAmb	20 34 23.1	
MSWZ	Moikau Station	22.06	193	P			P	20 34 40.2	-1.0
BHW	Baring Head	22.14	194	P			P	20 34 40.5	-1.3
PLWZ	Palliser	22.21	193	P			P	20 34 41.1	-1.4
QRZ	Quartz Range	22.23	199	P			P	20 34 42.7	+0.1
THZ	Tophouse	22.98	197	P			P	20 34 48.2	-1.1
KHZ	Kahutara	23.42	196	P			P	20 34 51.6	-1.5
KHZ	comp=Z,16nm,0.9s			IAmb			IAmb	20 35 07.0	
LTZ	Lake Taylor	24.10	198	P			P	20 34 57.2	-2.0
LTZ	comp=Z,19nm,1.1s			IAmb			IAmb	20 35 11.6	
RPZ	Rata Peaks comp=Z,7.3nm,0.7s,baz=18,slow=6.4,SNR=4.8	25.31	199	P			P	20 35 10.1	+0.2
RPZ	Rata Peaks	25.31	199	IAmb			IAmb	20 35 27.0	
FOZ	Fox Glacier comp=Z,16nm,1.0s	25.54	201	P			P	20 35 11.9	+0.1
FOZ				IAmb			IAmb	20 35 14.9	
WKZ	Wanaka comp=Z,22nm,0.8s	26.95	201	P			P	20 35 23.6	-0.8
WKZ				IAmb			IAmb	20 35 36.1	
MLZ	Mavora Lakes comp=Z,3.7nm,0.5s	27.73	201	P			P	20 35 31.4	+0.2
DCZ	Deep Cove	28.15	202	P			P	20 35 35.4	+0.7
DCZ	comp=Z,27nm,1.0s			IAmb			IAmb	20 35 36.9	
WHZ	Wether Hill Ro	28.25	201	P			P	20 35 36.4	+0.8
TOO	Toolangi	36.11	233	P			P	20 36 42.2	-0.3
TOO	comp=Z,5.8nm,0.6s			IAmb			IAmb	20 36 43.5	
STKA	Stephens Creek comp=Z,4.5nm,0.7s,baz=84,slow=10,SNR=12	37.92	244	P			P	20 36 57.4	+0.1
STKA	Stephens Creek	37.92	244	P			P	20 36 57.7	+0.3
BBOO	Buckleboo	42.69	243	P			P	20 37 35.1	-0.1
BBOO	comp=Z,25nm,1.3s			IAmb			IAmb	20 37 36.0	
JAY	Jayapura comp=Z,49nm,0.5s,baz=150,slow=3.5,SNR=12	43.82	288	P			P	20 37 44.8	+0.4
WR0	Warramunga Arr	44.40	262	P			P	20 37 48.4	-0.4
AS31	Alice Springs	44.55	256	P			P	20 37 49.9	+0.1
ASAR	Alice Springs comp=Z,1.9nm,0.5s,baz=86,slow=7.8,SNR=23	44.55	256	P			P	20 37 50.0	+0.1
ASAR				PcP			PcP	20 39 19.8	-0.8
ASAR	comp=Z,2.1nm,0.7s,baz=94,slow=5.9,SNR=8.1			S			S	20 43 42.8	-2.1
WB0	comp=Z,2.8nm,0.9s,baz=90,slow=15,SNR=12 Warramunga Arr	44.56	262	P			P	20 37 49.0	-0.9
WB2	Warramunga Arr	44.58	262	P			P	20 37 49.5	-0.6
WRA	Warramunga Arr comp=Z,1.7nm,0.3s,baz=96,slow=7.8,SNR=38	44.59	262	P			P	20 37 49.7	-0.5
WRA				S			S	20 43 41.8	-3.6
WRA	comp=Z,2.0nm,0.8s,baz=99,slow=12,SNR=7.6 Warramunga Arr	44.59	262	IAmb			IAmb	20 37 49.9	
KNRA	comp=Z,0.2nm,0.6s Kununurra	50.61	266	P			P	20 38 35.1	-0.1
KNRA	comp=Z,10nm,0.9s			IAmb			IAmb	20 38 35.7	
FITZ	Fitzroy Crossi	53.01	262	P			P	20 38 52.5	+0.1
SIJI	Sorong comp=Z,25nm,0.8s,baz=92,slow=6.0,SNR=5.2	53.04	285	P			P	20 38 52.6	-0.1
MJAR	Matsushiro Arr comp=Z,7.7nm,0.5s,baz=137,slow=5.6,SNR=26	69.78	324	P			P	20 40 41.3	-0.1
MJAR	Matsushiro Arr comp=Z,3.5nm,0.5s	69.78	324	IAmb			IAmb	20 40 42.0	
MAT	Matsushiro	69.78	324	P			P	20 40 41.4	-0.1
JKA	Kamikawa-asahi	73.27	332	P			P	20 41 03.1	+1.6
ASAJ	Asahikawa comp=Z,16nm,0.7s,baz=164,slow=3.7,SNR=9.0	73.27	332	P			P	20 41 03.1	+1.6
PETK	Petropavlovsk- comp=Z,7.7nm,0.7s,baz=133,slow=6.6,SNR=11	75.80	345	P			P	20 41 15.6	+0.1
KSRS	Korea Array comp=Z,1.7nm,0.5s,baz=129,slow=5.9,SNR=7.6	76.48	319	P			P	20 41 20.8	+1.1
USRK	Ussuriysk Ar. comp=Z,6.7nm,0.7s,baz=133,slow=3.0,SNR=10	78.53	326	P			P	20 41 31.7	+1.2
YBH	Yreka Blue Hor comp=Z,0.7nm,0.4s,baz=184,slow=5.9,SNR=3.6	79.97	39	P			P	20 41 39.3	+0.9
YBH	Yreka Blue Hor comp=Z,3.8nm,1.2s	79.97	39	IAmb			IAmb	20 41 47.3	
NVAR	Mina Array Bea comp=Z,0.7nm,0.7s,baz=224,slow=9.0,SNR=6.2	80.74	43	P			P	20 41 44.3	+1.7
KLR	Kul'dur comp=Z,1.8nm,0.7s,baz=90,slow=2.0,SNR=6.2	82.08	329	P			P	20 41 49.9	+1.0
ENH	Enshi	85.71	304	P			P	20 42 07.2	-0.1
ENH	comp=Z,8.7nm,0.8s			IAmb			IAmb	20 42 09.0	
SEY	Seymchan comp=Z,6.8nm,0.6s,baz=149,slow=5.5,SNR=28	85.90	347	P			P	20 42 07.6	+0.3
TXAR	Lajitas Array comp=Z,0.3nm,0.7s,baz=218,slow=7.9,SNR=6.1	86.87	57	P			P	20 42 15.1	+2.2
TXAR	Lajitas Array	86.87	57	P			P	20 42 12.8	0.0
PBKT	Sadao Pong	87.39	289	P			P	20 42 16.9	+1.5
PBKT	comp=Z,4.4nm,1.0s			IAmb			IAmb	20 42 17.8	
HDA	Harding Lake comp=Z,5.7nm,0.6s	87.54	13	P			P	20 42 15.2	+0.1
HDA				IAmb			IAmb	20 42 15.8	
XAN	Xi'an comp=Z,8.4nm,0.7s	87.78	307	P			P	20 42 18.0	+1.1
XAN				IAmb			IAmb	20 42 18.7	
ILAR	Eielson Array comp=Z,1.5nm,0.6s,baz=214,slow=5.3,SNR=22	87.87	13	P			P	20 42 16.3	-0.3
PDAR	Pinedale Array comp=Z,0.5nm,0.6s,baz=236,slow=0.5,SNR=4.3	88.67	43	P			P	20 42 22.0	+0.8
PDAR	Pinedale Array	88.67	43	P			P	20 42 21.9	+0.8
CMAR	Chiang Mai Arr comp=Z,2.9nm,0.8s,baz=120,slow=3.0,SNR=22	89.88	290	P			P	20 42 28.3	+1.3
CHTO	Chiang Mai	90.01	290	P			P	20 42 28.4	+0.8
CHTO	comp=Z,5.5nm,0.7s			IAmb			IAmb	20 42 29.5	
SONM	Songino Array comp=Z,0.3nm,0.5s,baz=123,slow=4.3,SNR=5.4	95.34	319	P			P	20 42 51.4	-0.1
SONM	Songino Array	95.34	319	P			P	20 42 51.2	-0.3
MKAR	Makanchi Array comp=Z,0.6nm,0.6s,baz=83,slow=0.4,SNR=12	110.81	314	PKiKP			PKiKP	20 47 55.4	-1.0
ARCES	ARCESS Array B comp=Z,1.1nm,0.8s,baz=5.7,slow=0.9,SNR=12	128.44	350	PKP			PKPdf	20 48 29.5	0.0
FINES	FINESS Array B comp=Z,4.5nm,1.0s,baz=11,slow=2.8,SNR=5.7	135.30	344	PKhKP			PKPpre	20 48 37.9	
FINES				PKP			PKPdf	20 48 43.0	+0.4
HFS	comp=Z,2.1nm,0.8s,baz=48,slow=2.1,SNR=6.0 Hagfors comp=Z,2.5nm,0.4s,baz=72,slow=4.7,SNR=15	139.06	351	PKhKP			PKPpre	20 48 40.8	
AKASG	Malin Array Be comp=Z,3.8nm,0.3s,baz=44,slow=4.2,SNR=3.2	142.56	331	PKhKP			PKPpre	20 48 52.5	
AKASG	Malin Array Be	142.56	331	PKPpre			PKPpre	20 48 51.3	
AKBB	Malin Array Si	142.56	331	P			PKPdf	20 48 52.6	-3.5
EKA	Eskdalemuir Ar comp=Z,3.7nm,0.8s,baz=330,slow=2.9,SNR=5.8	144.54	5	PKP			PKPdf	20 48 59.2	-0.2
SORM	Soroca	144.76	329	⇑P			PKPdf	20 49 00.2	+0.2
MBAR	Mbarara	145.10	237	PKPbc			PKPab	20 49 03.5	-0.4
MILM	comp=Z,2.7nm,0.5s,baz=45,slow=4.3,SNR=4.0 Milestii Mici	145.35	327	⇑P			PKPbc	20 49 02.1	-0.2
BSEG	Bad Segeberg baz=17,slow=2.4	145.54	351	*e*PKPbc			PKPab	20 49 03.6	-0.6
VASR	Vaslui	146.06	327	⇑P			PKPbc	20 49 05.1	+0.7
BR131	Keskin Array S	146.46	313				PKPbc	20 49 05.6	-0.3
BRTR	Keskin Array B comp=Z,3.5nm,0.6s,baz=125,slow=2.9,SNR=20	146.46	313	PKPbc			PKPbc	20 49 05.8	-0.2
BRTR	Keskin Array B	146.46	313				PKPbc	20 49 05.6	-0.3
ASF	Jabal al Asfar comp=Z,2.5nm,0.6s,baz=82,slow=7.5,SNR=5.2	146.48	298	PKPbc			PKPbc	20 49 06.4	+0.3
BUR08	Bucovina Ar. S	146.60	331				PKPbc	20 49 06.7	+0.7
TESR	Tescani	146.72	328	⇑P			PKPbc	20 49 06.2	0.0
TRPA	Tarpa	147.38	334	⇓P			PKPbc	20 49 08.1	+0.3
OSTC	Ostas	147.50	343	*e*PKP			PKPbc	20 49 08.8	+0.7
MMAI	Mount Meron Ar comp=Z,3.7nm,0.5s,baz=73,slow=3.9,SNR=16	147.51	300	PKPbc			PKPbc	20 49 09.3	+0.5
CLZ	Clausthal baz=17,slow=2.4	147.56	350	*e*PKPbc			PKPbc	20 49 08.8	+0.5
CLL	Collm comp=Z,13nm,0.6s	147.59	347	⇓*i*PKPbc			PKPbc	20 49 08.5	+0.2
CLL				*i* PKPab			PKPab	20 49 12.3	-0.2
CLL	comp=Z,6.0nm,0.8s Collm baz=17,slow=2.4	147.59	347	*e*PKPbc			PKPbc	20 49 08.6	+0.3
CLL	Collm	147.59	347				PKPbc	20 49 08.8	+0.5
DPC	Dobruska-Polom	147.65	343	*e*PKP			PKPbc	20 49 09.3	+0.7
DPC				*ex*			x	20 49 13.8	
BRG	Berggiesshubel comp=Z,5.5nm,0.6s	147.78	346	*i* PKP			PKPbc	20 49 09.1	+0.3
BRG				*e*				20 49 13.3	
BRG	comp=Z,7.6nm,1.0s Berggiesshubel baz=17,slow=2.4	147.78	346	*e*PKPbc			PKPbc	20 49 09.3	+0.5
MLR	Muntele Rosu comp=Z,3.3nm,0.5s,baz=337,slow=7.7,SNR=7.5	147.78	327	PKPbc			PKPbc	20 49 08.5	-0.6
MLR	Muntele Rosu	147.78	327				PKPdf	20 49 05.3	-0.1
FBE	Freiberg baz=17,slow=2.4	147.87	346	*e*PKPbc			PKPbc	20 49 09.7	+0.6
NEUB	Neuenburg baz=17,slow=2.4	147.93	348	*e*PKPbc			PKPbc	20 49 09.8	+0.6
VOIR		148.27	328	⇓P			PKPbc	20 49 10.6	+0.3
PRU	Pruhonice	148.46	344	*e*PKP			PKPbc	20 49 10.9	+0.4
PRU				*ex*			x	20 49 16.8	
GOPC	GO Pecny, Ondr	148.46	344	*e*PKP			PKPbc	20 49 11.0	+0.4
MOX	Moxa baz=17,slow=2.4	148.50	348	*e*PKPbc			PKPbc	20 49 11.1	+0.5
VRAC	Vranov	148.51	341	⇓P			PKPab	20 49 16.7	+0.4
ARR	Arges	148.52	329	⇓P			PKiKP	20 49 12.3	+0.3
PLN	Plauen baz=17,slow=2.4	148.54	347	*e*PKPbc			PKPbc	20 49 11.1	+0.4
TANN	Tannenbergstha baz=17,slow=2.4	148.54	347	*e*PKPbc			PKPbc	20 49 11.3	+0.5
EIL	Elat comp=Z,2.9nm,0.6s,baz=236,slow=7.3,SNR=3.8	148.61	294	PKPbc			PKPbc	20 49 11.6	0.0
UBBA	Unterbreizbach baz=17,slow=2.4	148.61	350	*e*PKPbc			PKiKP	20 49 11.5	-0.3
GUNZ	Gunzen baz=17,slow=2.4	148.62	347	*e*PKPbc			PKiKP	20 49 11.6	-0.5
WERN	Wernitzgruen baz=17,slow=2.4	148.68	347	*e*PKPbc			PKiKP	20 49 11.9	-0.3
TREC	Trest	148.84	343	*e*PKP			PKPbc	20 49 11.9	+0.4
LEF	Lefka	148.85	305	⇑P			PKPbc	20 49 11.6	-0.3
MANZ	Manzenberg baz=17,slow=2.4	149.02	347	*e*PKPbc			PKiKP	20 49 12.5	-0.3
ROTZ	Rotzenmuhle baz=17,slow=2.4	149.21	347	*e*PKPbc			PKiKP	20 49 13.0	-0.2
SIRR	Siria	149.22	333	⇓P			PKPbc	20 49 12.7	+0.2
GZR	Gura Zlata	149.39	330	⇑P			PKPbc	20 49 13.1	0.0
TNS	Taunus Mts baz=17,slow=2.4	149.43	352	*e*PKPbc			PKiKP	20 49 13.5	-0.2
GRF	Grafenberg Arr baz=17,slow=2.4	149.48	348	*e*PKPbc			PKiKP	20 49 14.3	+0.5
KHC	Kasperske Hory	149.49	345	*e*PKP			PKiKP	20 49 13.6	-0.3
KHC				*ex*			x	20 49 20.5	
KHC	Kasperske Hory	149.49	345				PKiKP	20 49 13.5	-0.3
GEC2	GERESS Array S baz=17,slow=2.4	149.72	344	*e*PKPbc			PKPbc	20 49 14.0	+0.2
GERES	GERESS Array B comp=Z,2.2nm,0.6s,baz=25,slow=2,SNR=19	149.72	344	PKPbc			PKPbc	20 49 13.8	+0.1
BZS	Buzias	149.74	332	⇑P			PKPbc	20 49 13.9	+0.1
PLVB	Pleven	149.93	326	⇑P			PKPbc	20 49 14.0	-0.3
HERR	Herculane	149.94	330	⇓P			PKPbc	20 49 14.2	0.0
CONA	Conrad Observa comp=Z,2.5nm,0.5s	149.96	341	*i* PKiKP			PKiKP	20 49 14.7	-0.2
WLF	Walferdange baz=17,slow=2.4	150.24	354	*e*PKPbc			PKiKP	20 49 16.2	+0.8
MDVR	Moldovita	150.34	331	⇓P			PKPbc	20 49 15.2	-0.1
MOA	Molln comp=Z,1.5nm,0.4s	150.49	343	*e*PKiKP			PKPbc	20 49 15.3	-0.2
RJOB	Jochberg baz=17,slow=2.4	150.98	345	*e*PKPbc			PKPbc	20 49 16.7	0.0
VTS	Vitosha	151.19	326	⇓P			PKPbc	20 49 17.3	-0.2
BFO	Black Forest baz=17,slow=2.4	151.29	351	*e*PKPbc			PKPbc	20 49 17.1	-0.2
SOKA	Soboth comp=Z,0.7nm,0.4s	151.33	341	*e*PKPbc			PKPbc	20 49 16.9	-0.6
KBA	Koelnbreinsper comp=Z,2.1nm,0.6s	151.45	344	*e*PKPbc			PKPbc	20 49 17.2	-0.7
UBR	Ueberruh baz=17,slow=2.4	151.62	348	*e*PKPbc			PKPbc	20 49 18.1	0.0
WATA	Walderalm comp=Z,1.4nm,0.3s	151.64	346	*i* PKiKP			PKPbc	20 49 18.1	-0.2
RETA	Reutte comp=Z,0.6nm,0.3s	151.68	347	*i* PKiKP			PKPbc	20 49 18.2	0.0
WTTA	Wattenberg comp=Z,3.9nm,0.3s,SNR=5.6	151.70	346	*i* PKiKP			PKPbc	20 49 18.5	0.0
MYKA	Terra Mystica comp=Z,2.5nm,0.4s	151.78	343	*e*PKPbc			PKPbc	20 49 17.4	-1.1
SQTA	Sankt Quirin comp=Z,2.1nm,0.6s	151.84	347	*i* PKiKP			PKPbc	20 49 18.6	0.0
ABTA	Abfaltersbach comp=Z,4.4nm,0.5s,SNR=4.7	151.97	344	*i* PKiKP			PKPbc	20 49 18.4	-0.5
FETA	Feichten comp=Z,1.2nm,0.5s	152.13	347	*i* PKiKP			PKPbc	20 49 18.8	-0.6
DAVOX	Davos/Dischmat comp=Z,2.0nm,0.3s,baz=257,slow=6.5,SNR=9.4	152.53	348	PKPbc			PKPbc	20 49 20.2	-0.1

IDC ***27*** *20:30:48.7±5.0, 51°.97N×178°.37E, h118km±46km, mb3.3/10, mb1 3.6/12, mb1mx3.3/76, mbtmp3.8/12, Error ellipse: s-maj=30.1km s-min=15.5km az=178.0*
NEIC ***27*** *20:30:48.4±1.6, 52°.0N±0°.2×178°.3E±0°.09, h117km±8km, Error ellipse: s-maj=24.1km s-min=7.2km az=189.0*
AEIC ***27*** *20:30:49.2±2.3, 52°.3N±0°.2×178°.4E±0°.09, h126km±6km, ML3.4/16, Error ellipse: s-maj=22.8km s-min=6.8km az=191.0*

ISC 27 20:30:48.4±0.8, 52°.1N±0°.2×178°.3E±0°.05, h113km, n33, σ1§04/32, mb3.6/10, Rat Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	1.81	98				Pn	20 31 20.1	+1.1
GALAA							Sn	20 31 43.9	+1.5
GAEA	Gareloi East	1.82	98				Pn	20 31 19.6	+0.4
TASE	Tanaga Southea	2.25	94				Pn	20 31 24.9	+0.3
TASE							Sn	20 31 53.1	+0.7
TAFP	Tanaga Falls P	2.27	93				Pn	20 31 25.3	+0.3
TAFP							Sn	20 31 53.2	+0.3
SMY	Shemya	2.69	286				Pn	20 31 30.1	-0.2
SMY							Sn	20 32 03.3	+0.8
KIMD

FSK	**Fiskardo**	**0.22**	**38**	P		**Pb**	**20 40 17.7**	**-0.6**
FSK				S		**Sb**	**20 40 21.5**	**-0.2**
	71µm,0.3s							
FSK	**Fiskardo**	**0.22**	**38**	P		**Pb**	**20 40 17.7**	**-0.6**
FSK				S		**Sb**	**20 40 21.4**	**-0.3**
KFL	**Anninata**	**0.36**	**119**	P		**Pg**	**20 40 19.7**	**-1.0**
KFL				S		**Sg**	**20 40 25.6**	**-0.2**
	172µm,0.4s							
KFL	**Anninata**	**0.36**	**119**	P		**Pg**	**20 40 19.7**	**-1.0**
KFL				S		**Sg**	**20 40 25.2**	**-0.7**
KFL				AML	AML		20 40 25.9	
KFL				AML	AML		20 40 26.2	
EVGI	**Lefkada island**	**0.39**	**32**	P		**Pg**	**20 40 20.7**	**-0.7**
EVGI				S		**Sg**	**20 40 27.2**	**+0.3**
EVGI	**Lefkada island**	**0.39**	**32**	P		**Pg**	**20 40 20.7**	**-0.7**
EVGI				S		**Sg**	**20 40 26.2**	**-0.7**
VLMS	**Volimes, Zakyn**	**0.46**	**152**	P		**Pg**	**20 40 21.4**	**-1.1**
VLMS				S		**Sg**	**20 40 28.7**	**-0.2**
VLMS				AML	AML		20 40 29.8	
VLMS				AML	AML		20 40 31.5	
LKD2	**Lefkada island**	**0.54**	**22**	P		**Pg**	**20 40 23.1**	**-1.0**
LKD2				S		**Sg**	**20 40 31.2**	**-0.3**
	6µm,0.7s							
LKD2	**Lefkada island**	**0.54**	**22**	P		**Pg**	**20 40 23.1**	**-1.0**
LKD2				S		**Sg**	**20 40 30.9**	**-0.6**
LKD2				AML	AML		20 40 34.1	
	comp=E,8446µm,0.3s							
LKD2				AML	AML		20 40 37.9	
	comp=N,13975µm,0.7s							
TSLK	**Tsoukalades, L**	**0.58**	**21**	P		**Pb**	**20 40 23.8**	**-0.9**
TSLK				S		**Sb**	**20 40 33.1**	**+0.6**
	comp=N,9µm,0.8s							
TSLK	**Tsoukalades, L**	**0.58**	**21**	P		**Pb**	**20 40 23.7**	**-0.9**
TSLK				AML	AML		20 40 40.9	
	comp=E,14958µm,0.6s							
TSLK				AML	AML		20 40 41.5	
	comp=N,20546µm,0.7s							
ZAK2	**Zakynthos**	**0.64**	**141**	P		**Pb**	**20 40 25.1**	**-0.6**
PDO	**Prodromos**	**0.70**	**63**	P		**Pb**	**20 40 25.8**	**-0.9**
PDO				S		**Sg**	**20 40 36.9**	**+0.7**
	comp=N,18µm,0.5s							
PDO	**Prodromos**	**0.70**	**63**	P		**Pb**	**20 40 25.8**	**-0.9**
PDO				AML	AML		20 40 41.4	
	comp=N,26555µm,0.4s							
PDO				AML	AML		20 40 46.0	
	comp=E,24162µm,0.6s							
RLS	**Riolos of Patr**	**0.88**	**105**	P		**Pb**	**20 40 28.9**	**-0.9**
RLS				S		**Sg**	**20 40 42.3**	**+0.4**
	comp=E,8µm,0.6s							
RLS	**Riolos of Patr**	**0.88**	**105**	P		**Pb**	**20 40 28.8**	**-1.1**
RLS				S		**Sb**	**20 40 40.1**	**-1.0**
RLS				AML	AML		20 40 46.1	
	comp=N,17511µm,0.7s							
RLS				AML	AML		20 40 48.0	
	comp=E,15256µm,0.6s							
PVO	**Paravola**	**0.95**	**69**	P		**Pb**	**20 40 30.8**	**-0.3**
PVO				S		**Sn**	**20 40 45.4**	**+0.8**
	comp=E,6µm,0.4s							
PVO	**Paravola**	**0.95**	**69**	P		**Pb**	**20 40 30.8**	**-0.3**
PVO				AML	AML		20 40 52.0	
	comp=E,12660µm,0.3s							
PVO				AML	AML		20 40 53.5	
	comp=N,11100µm,0.5s							
DRO	**Drossia**	**1.09**	**107**	P		**Pb**	**20 40 32.4**	**-1.1**
UPR	**University Cam**	**1.10**	**90**	P		**Pn**	**20 40 31.7**	**-1.9**
EFP	**Efpalio**	**1.20**	**83**	P		**Pn**	**20 40 34.2**	**-0.8**
ANX	**Ano Chora**	**1.24**	**75**	P		**Pn**	**20 40 35.1**	**-0.6**
IGT	**Igoumenitsa**	**1.25**	**358**	P		**Pb**	**20 40 36.0**	**-0.2**
IGT				S		**Sg**	**20 40 54.3**	**+0.7**
	comp=N,2µm,0.8s							
IGT	**Igoumenitsa**	**1.25**	**358**	P		**Pn**	**20 40 35.8**	**+0.1**
LAKA	**Lakka**	**1.25**	**92**	P		**Pn**	**20 40 35.3**	**-0.5**
LAKA				AML	AML		20 40 59.5	
	comp=E,5552µm,0.6s							
LAKA				AML	AML		20 41 04.4	
	comp=N,8828µm,0.7s							
EVR	**Evrytania**	**1.28**	**60**	P		**Pn**	**20 40 35.9**	**-0.3**
AMT	**Artemida-Makis**	**1.28**	**125**	P		**Pn**	**20 40 36.0**	**-0.2**
SERG	**Sergoula**	**1.31**	**84**	P		**Pn**	**20 40 36.2**	**-0.4**
TRIZ	**Trizonia**	**1.32**	**86**	P		**Pn**	**20 40 36.4**	**-0.3**
KALE	**Kalithea**	**1.38**	**85**	P		**Pn**	**20 40 37.2**	**-0.3**
KALE				AML	AML		20 41 05.2	
	comp=N,6705µm,0.4s							
KALE				AML	AML		20 41 05.7	
	comp=E,4250µm,0.7s							
KLV	**Kalavryta, Ach**	**1.41**	**99**	P		**Pn**	**20 40 37.8**	**-0.1**
KLV				S		**Sg**	**20 40 57.8**	**-0.9**
KLV				AML	AML		20 41 07.0	
	comp=N,4513µm,0.7s							
KLV				AML	AML		20 41 08.4	
	comp=E,5053µm,0.5s							
JAN	**Janina**	**1.42**	**14**	P		**Pb**	**20 40 39.6**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.54**	**61**	P		**Pb**	**20 40 40.9**	**-0.3**
MAKR				AML	AML		20 41 09.3	
	comp=N,5742µm,0.8s							
MAKR				AML	AML		20 41 13.6	
	comp=E,8226µm,1.1s							
ITM	**Ithomi**	**1.64**	**132**	P		**Pb**	**20 40 42.0**	**-0.9**
ITM				AML	AML		20 41 15.1	
	comp=N,5802µm,0.7s							
ITM				AML	AML		20 41 20.0	
	comp=E,5118µm,0.9s							
ITM	**Ithomi**	**1.64**	**132**			**Pb**	**20 40 42.0**	**-0.9**
AGG	**Agios Georgios**	**1.69**	**64**	P		**Pb**	**20 40 43.6**	**-0.1**
AGG	**Agios Georgios**	**1.69**	**64**			**Pb**	**20 40 43.6**	**-2.1**
THL	**Klokotos Trika**	**1.80**	**44**	P		**Pb**	**20 40 45.3**	**-0.2**
VLX	**Vlachokerasia**	**1.82**	**120**	P		**Pb**	**20 40 45.6**	**-0.4**
PROD	**Prodromos**	**1.98**	**90**	P		**Pb**	**20 40 48.1**	**-0.5**
PROD				AML	AML		20 41 23.8	
	comp=E,3277µm,0.6s							
PROD				AML	AML		20 41 25.2	
	comp=N,2683µm,0.6s							
LTK	**Loutraki**	**2.05**	**97**	P		**Pb**	**20 40 49.0**	**-0.8**
LOUT	**Loutraki**	**2.06**	**97**	P		**Pb**	**20 40 49.1**	**-0.9**
VIL2	**Platees**	**2.27**	**91**	P		**Pb**	**20 40 52.2**	**-1.3**
SCTE	**Santa Cesarea**	**2.33**	**321**			**Pn**	**20 40 51.2**	**+0.7**
NEO	**Neokhori**	**2.44**	**64**	P		**Pn**	**20 40 53.9**	**+1.9**
LIT	**Litokhoron**	**2.44**	**41**			**Pn**	**20 40 54.5**	**-2.0**
MRKA	**Markates**	**2.54**	**80**	P		**Pn**	**20 40 55.7**	**+2.2**
FNA	**Florina**	**2.61**	**17**			**Pn**	**20 40 56.0**	**+1.5**
EREA	**Eretria**	**2.79**	**86**	P		**Pn**	**20 40 59.3**	**+2.4**
OHR	**Ohrid**	**2.84**	**6**	*i* Pn		**Pn**	**20 41 00.4**	**+2.8**
TIP	**Timpagrande**	**2.98**	**289**	⇑P		**Pn**	**20 41 00.8**	**+1.3**
TIP	**Timpagrande**	**2.98**	**289**			**Pn**	**20 41 00.3**	**+0.8**
TIR	**Tirane**	**3.09**	**353**			**Pn**	**20 41 02.4**	**+1.4**
KARY	**Karystos**	**3.20**	**93**	P		**Pn**	**20 41 03.8**	**+1.3**
CGL1	**Ceglie Messapi**	**3.27**	**317**	*e*Pn		**Pn**	**20 41 04.4**	**+0.9**
TAR1	**Taranto**	**3.29**	**314**	*e*Pn		**Pn**	**20 41 05.2**	**+1.5**
MASS	**Massafra**	**3.44**	**314**	*e*Pn		**Pn**	**20 41 06.4**	**+0.6**
VAY	**Valandovo**	**3.46**	**28**	*e*P		**Pn**	**20 41 09.1**	**+3.0**
VAY	**Valandovo**	**3.46**	**28**	*i* Pn		**Pn**	**20 41 09.1**	**+3.0**
CEL	**Celeste**	**3.54**	**271**			**Pn**	**20 41 07.6**	**+0.4**
STIP	**Stip**	**3.67**	**21**	*i* Pn		**Pn**	**20 41 13.1**	**+4.1**
MATE	**Matera**	**3.70**	**311**	⇓P		**Pn**	**20 41 10.1**	**+0.7**
SKO	**Skopje**	**3.77**	**12**	*e*Pn		**Pb**	**20 41 20.5**	**+1.4**
ULC	**Ulcinj**	**3.78**	**347**	⇓*i* Pn		**Pn**	**20 41 09.8**	**-0.7**
ULC				*e*Sn		**Sn**	**20 41 54.8**	**+0.3**
SG1	**Sgolgore (BA)**	**3.84**	**313**	*e*Pn		**Pn**	**20 41 12.3**	**+1.0**
SG1				Sn		**Sn**	**20 41 55.2**	**-0.8**
BAI	**Bari**	**3.91**	**317**	*e*Pn		**Pn**	**20 41 12.8**	**+0.6**
DRME	**Dracevica, Mon**	**4.00**	**347**	*e*Pn		**Pn**	**20 41 13.3**	**-0.3**
DRME	**Dracevica, Mon**	**4.00**	**347**	*e*Pn		**Pn**	**20 41 13.4**	**-0.2**
DRME				*e*Sn		**Sn**	**20 41 59.6**	**-0.4**
BUM	**Brajici-Budva**	**4.17**	**345**	*e*Pn		**Pn**	**20 41 14.8**	**-1.1**
BUM				*e*Sn		**Sn**	**20 42 03.5**	**-0.7**
MMB	**Musomiste**	**4.18**	**37**	*e*P		**Pb**	**20 41 22.0**	**-4.1**
PDG	**Podgorica**	**4.23**	**349**	⇓P		**Pn**	**20 41 17.0**	**+0.4**
PDG	**Podgorica**	**4.23**	**349**	*e*Pn		**Pn**	**20 41 16.5**	**-0.1**
PDG	**Podgorica**	**4.23**	**349**			**Pn**	**20 41 16.6**	**-0.1**
TTG	**Podgorica**	**4.23**	**349**	*e*Pn		**Pn**	**20 41 16.2**	**-0.5**
TTG				*e*Sn		**Sn**	**20 42 05.1**	**-0.4**
ACER	**Acerenza**	**4.25**	**307**			**Pn**	**20 41 17.9**	**+0.8**
PVY	**Plav**	**4.32**	**356**	⇑*i* Pn		**Pn**	**20 41 18.4**	**+0.4**
PVY				*e*Sn		**Sn**	**20 42 07.7**	**-0.2**
CEME	**Cevo**	**4.40**	**346**	⇓*i* Pn		**Pn**	**20 41 18.3**	**-0.8**
CEME				*e*Sn		**Sn**	**20 42 09.3**	**-0.6**
HCY	**Herceg Novi**	**4.40**	**341**	*e*Pn		**Pn**	**20 41 18.0**	**-1.1**
HCY	**Herceg Novi**	**4.40**	**341**	*e*Pn		**Pn**	**20 41 17.8**	**-1.3**
HCY				*e*Sn		**Sn**	**20 42 09.3**	**-0.5**
SANT	**Santorini**	**4.47**	**114**	Pn		**Pn**	**20 41 16.7**	**-3.3**
IVA	**Berane**	**4.60**	**355**	⇑*i* Pn		**Pn**	**20 41 22.3**	**+0.5**
IVA				*e*Sn		**Sn**	**20 42 14.8**	**0.0**
KOME	**Kolasin**	**4.61**	**352**	⇓*i* Pn		**Pn**	**20 41 22.3**	**+0.3**
KOME				*e*Sn		**Sn**	**20 42 14.3**	**-0.8**
NKME	**Niksic**	**4.61**	**347**	⇑*i* Pn		**Pn**	**20 41 21.5**	**-0.4**
NKME				*e*Sn		**Sn**	**20 42 13.8**	**-1.2**
NKY	**Niksic**	**4.65**	**347**	⇓*i* Pn		**Pn**	**20 41 21.2**	**-1.3**
NKY				*i* Sn		**Sn**	**20 42 14.8**	**-1.2**
IDI	**Anoyia**	**4.69**	**128**	Pn		**Pn**	**20 41 25.0**	**+1.9**
	comp=N,1.7nm,0.3s,baz=310,slow=14,SNR=8.8							
IDI				Sn		**Sn**	**20 42 16.4**	**-0.6**
	comp=N,3.7nm,0.3s,baz=108,slow=20,SNR=4.4							
TREB	**Trebinje**	**4.69**	**341**	*e*Pn		**Pn**	**20 41 22.0**	**-1.0**
DBRK	**Dubrovnik**	**4.70**	**339**	*i* Pn		**Pn**	**20 41 22.1**	**-1.1**
DBRK				Sn		**Sn**	**20 42 15.8**	**-1.4**
VAE	**Valguarnera**	**4.80**	**262**	Pn		**Pn**	**20 41 25.9**	**+1.3**
	comp=N,1.2nm,0.3s,baz=49,slow=9.3,SNR=5.0							
VAE				Sn		**Sn**	**20 42 17.8**	**-2.0**
	comp=N,4.0nm,0.3s,baz=307,slow=20,SNR=2.9							
BRY	**Bratogost**	**4.82**	**344**	*e*Pn		**Pn**	**20 41 24.1**	**-0.8**
BRY	**Bratogost**	**4.82**	**344**	*e*Pn		**Pn**	**20 41 23.8**	**-1.1**
BRY				*e*Sn		**Sn**	**20 42 19.3**	**-1.1**
VTS	**Vitosha**	**4.84**	**26**	⇓P		**Pn**	**20 41 28.7**	**+3.5**
VTS	**Vitosha**	**4.84**	**26**	*e*P		Pb	20 41 31.6	-5.9
VTS	**Vitosha**	**4.84**	**26**			**Pn**	**20 41 26.6**	**+1.4**
SGRT	**San Giovanni R**	**4.97**	**316**			**Pn**	**20 41 27.2**	**+0.2**
STON	**Ston**	**5.02**	**337**	*i* Pn		**Pn**	**20 41 27.0**	**-0.5**
STON				Sn		**Sn**	**20 42 23.3**	**-1.7**
STON	**Ston**	**5.02**	**337**	*e*Pn		**Pn**	**20 41 26.3**	**-1.2**
UPM	**Unac-Piva**	**5.04**	**348**	*e*Pn		**Pn**	**20 41 28.2**	**+0.2**
UPM	**Unac-Piva**	**5.04**	**348**	⇑*i* Pn		**Pn**	**20 41 27.3**	**-0.7**
UPM				*e*Sn		**Sn**	**20 42 24.5**	**-1.3**
ALN	**Alexandroupoli**	**5.09**	**57**	Pn		**Pn**	**20 41 29.9**	**+1.5**
PLE	**Pljevlja**	**5.10**	**352**	*e*Pn		**Pn**	**20 41 28.6**	**-0.1**
PLE				*e*Sn		**Sn**	**20 42 26.4**	**-0.7**
PAOL	**Paolisi**	**5.26**	**303**			**Pn**	**20 41 29.6**	**-1.3**
RUDO	**Rudo**	**5.38**	**352**	*e*Pn		**Pn**	**20 41 32.0**	**-0.5**
CORL	**Corleone**	**5.61**	**268**	Pn		**Pn**	**20 41 35.0**	**-0.7**
MAKA	**Makarska**	**5.61**	**334**	*e*Pn		**Pn**	**20 41 35.4**	**-0.2**
MAKA				Sn		**Sn**	**20 42 36.6**	**-3.0**
BBLS	**Lazići**	**5.62**	**353**	*e*Pn		**Pn**	**20 41 36.0**	**+0.1**
CLTB	**Caltabellotta**	**5.72**	**265**	Pn		**Pn**	**20 41 37.9**	**+0.7**
DIVS	**Divibare**	**5.82**	**357**	*e*Pn		**Pn**	**20 41 38.2**	**-0.3**
HAPS	**Han Pijesak,Bl**	**5.90**	**350**	*e*Pn		**Pn**	**20 41 38.5**	**-1.2**
KARP	**Karpathos**	**6.07**	**115**	Pn		**Pn**	**20 41 43.9**	**+1.9**
INTR	**Introdacqua**	**6.21**	**309**			**Pn**	**20 41 46.2**	**+2.3**
ELND	**Elena**	**6.24**	**40**	⇑P		**Pn**	**20 41 48.3**	**+4.0**
ZIRJ	**Zirje**	**6.46**	**328**	*e*Pn		**Pn**	**20 41 46.4**	**-0.8**
ZIRJ				Sn		**Sn**	**20 42 56.3**	**-4.1**
KIJV	**Kijevo**	**6.46**	**334**	*i* Pn		**Pn**	**20 41 47.6**	**+0.3**
MDVR	**Moldovita**	**6.57**	**8**	⇑P		**Pn**	**20 41 48.8**	**0.0**
MORI	**Morici**	**6.60**	**329**	*i* Pn		**Pn**	**20 41 49.7**	**+0.5**
MORI				Sn		**Sn**	**20 43 01.6**	**-2.3**
MGRS	**Mrkonjic Grad**	**6.61**	**339**	*e*Pn		**Pn**	**20 41 49.8**	**+0.4**
FRGS	**Fruska Gora**	**6.88**	**357**	*e*Pn		**Pn**	**20 41 50.2**	**-2.9**
BLY	**Banja Luka**	**6.89**	**341**	*e*Pn		**Pn**	**20 41 53.1**	**-0.1**
DUGI	**Dugi Otok**	**6.98**	**326**	Sn		**Sn**	**20 43 10.4**	**-2.8**
UDBI	**Udbina**	**7.14**	**332**	Sn		**Sn**	**20 43 15.7**	**-1.7**
GZR	**Gura Zlata**	**7.32**	**13**	⇑P		**Pn**	**20 42 00.4**	**+1.2**
BZS	**Buzias**	**7.38**	**7**	⇑P		**Pn**	**20 41 59.3**	**-0.7**
NVLJ	**Novalja**	**7.52**	**328**	*i* Pn		**Pn**	**20 42 01.9**	**+0.1**
NVLJ				Sn		**Sn**	**20 43 22.7**	**-3.8**
MURB	**Monte Urbino**	**7.77**	**312**	Pn		**Pn**	**20 42 06.9**	**+1.6**
VOIR		**7.95**	**24**	⇑P		**Pn**	**20 42 10.7**	**+2.9**
MORH	**Mrgy, Hungar**	**8.03**	**351**	*e*Pn		**Pn**	**20 42 07.1**	**-1.7**
BOJS	**Bojanci**	**8.17**	**334**	*i* Pn		**Pn**	**20 42 11.1**	**+0.4**
BOJS				*e*Sn		**Sn**	**20 43 38.5**	**-3.9**
OZLJ	**Ozalj**	**8.19**	**335**	*e*Pn		**Pn**	**20 42 11.3**	**+0.3**
PTJ	**Puntijarka**	**8.29**	**338**	*e*Pn		**Pn**	**20 42 10.4**	**-2.2**
MLR	**Muntele Rosu**	**8.30**	**28**	Pn		**Pn**	**20 42 17.0**	**+4.3**
	comp=N,0.2nm,0.3s,baz=135,slow=17,SNR=5.0							
MLR	**Muntele Rosu**	**8.30**	**28**	⇓P		Pn	20 42 17.6	+4.9
MLR	**Muntele Rosu**	**8.30**	**28**	Pn		**Pn**	**20 42 16.8**	**+4.1**
KALN	**Kalnik**	**8.37**	**341**	*i* Pn		**Pn**	**20 42 11.8**	**-1.7**
CRES	**Cresnjev**	**8.38**	**336**	*e*Pn		**Pn**	**20 42 12.8**	**-0.8**
CEY	**Cerknica**	**8.67**	**331**	*e*Pn		**Pn**	**20 42 17.6**	**0.0**
PLOR	**Plostina**	**8.88**	**30**	⇑P		Pn	20 42 25.7	+5.2
LJU	**Ljubljana**	**8.89**	**333**	*e*Pn		**Pn**	**20 42 20.6**	**0.0**
TRI	**Trieste**	**8.91**	**329**	Pn		**Pn**	**20 42 20.4**	**-0.5**
VRI	**Vrincioaia**	**8.92**	**30**	⇓P		**Pn**	**20 42 25.7**	**+4.7**
KEST	**Kesra**	**9.20**	**257**	Pn		**Pn**	**20 42 26.4**	**+1.4**
	comp=N,0.3nm,0.3s,baz=8.2,slow=8.4,SNR=5.5							
KEST				Sn		**Sn**	**20 44 04.5**	**-3.5**
	comp=N,0.2nm,0.3s,baz=240,slow=20,SNR=3.3							
SOKA	**Soboth**	**9.27**	**336**	*e*Pn		**Pn**	**20 42 25.1**	**-0.8**
	comp=N,6.5nm,0.4s,SNR=13							
SOKA				*i* Sn		**Sn**	**20 44 04.4**	**-5.4**
	comp=N,4.4nm,0.7s							
OBKA	**Obir**	**9.28**	**334**	*e*Pn		**Pn**	**20 42 26.8**	**+0.7**
	comp=N,2.7nm,0.3s,SNR=7.0							
OBKA				*e*Sn		**Sn**	**20 44 06.5**	**-3.5**
	comp=N,16nm,0.6s							
VLC	**Villacollemand**	**9.55**	**311**			**Pn**	**20 42 32.3**	**+2.6**
TEOL	**Teolo**	**9.61**	**320**	Pn		**Pn**	**20 42 29.9**	**-0.5**
ARSA	**Arzberg**	**9.65**	**340**	*e*Pn		**Pn**	**20 42 30.3**	**-0.7**
	comp=N,1.9nm,0.4s							
CTI	**Castel Tesino**	**10.11**	**323**			**Pn**	**20 42 36.8**	**-0.7**
KBA	**Koelnbreinsper**	**10.20**	**332**	*e*Pn		**Pn**	**20 42 38.7**	**-0.1**
	comp=N,1.1nm,0.3s							
KBA				*e*Sn		**Sn**	**20 44 28.4**	**-4.2**
	comp=N,4.1nm,0.4s							
ABTA	**Abfaltersbach**	**10.26**	**328**	*e*Pn		**Pn**	**20 42 39.2**	**-0.2**
	comp=N,2.5nm,0.4s							
ABTA				Sn		**Sn**	**20 44 29.0**	**-5.0**
	comp=N,8.4nm,0.6s							
VYHS	**Vyhne**	**10.27**	**354**	*e*PN		**Pn**	**20 42 39.7**	**+0.2**
VYHS				*e*SN		**Sn**	**20 44 31.2**	**-2.9**
BRTR	**Keskin Array B**	**10.41**	**78**	Pn		**Pn**	**20 42 46.1**	**+4.5**
	comp=N,0.1nm,0.3s,baz=266,slow=11,SNR=3.5							
BRTR				LR		LR	20 46 47.5	
	comp=N,63nm,21.4s,baz=274,slow=38							
MOA	**Molln**	**10.55**	**337**	*i* Pn		**Pn**	**20 42 43.4**	**0.0**
	comp=N,3.0nm,0.3s,SNR=7.4							
WTTA	**Wattenberg**	**11.03**	**327**	*i* Pn		**Pn**	**20 42 50.5**	**+0.3**
	comp=N,2.7nm,0.4s							
WTTA				Sn		**Sn**	**20 44 51.6**	**-1.5**
	comp=N,12nm,0.6s							
WATA	**Walderalm**	**11.12**	**327**	*e*Pn		**Pn**	**20 42 51.8**	**+0.5**
	comp=N,5.7nm,0.6s,SNR=4.5							
WATA				*e*Sn		**Sn**	**20 44 51.4**	**-3.7**
	comp=N,8.2nm,0.6s							
FUORN	**Ofenpass-Fuorn**	**11.19**	**321**	Pn		**Pn**	**20 42 50.6**	**-1.7**
FETA	**Feichten**	**11.25**	**324**	*e*Pn		**Pn**	**20 42 55.6**	**+2.5**
	comp=N,2.0nm,0.7s							
FETA				*e*Sn		**Sn**	**20 44 57.2**	**-1.3**
	comp=N,3.2nm,0.6s							
MOTA	**Moosalm**	**11.33**	**326**	*e*Pn		**Pn**	**20 42 55.5**	**+1.4**
	comp=N,4.4nm,0.6s							
MOTA				*e*Sn		**Sn**	**20 44 58.8**	**-1.5**
	comp=N,7.3nm,0.8s							
DAVOX	**Davos/Dischmat**	**11.49**	**321**	Pn		**Pn**	**20 42 55.3**	**-1.1**
	comp=N,0.2nm,0.3s,baz=144,slow=14,SNR=3.6							
DAVOX				Sn		**Sn**	**20 45 01.7**	**-2.5**
	comp=N,0.3nm,0.3s,baz=330,slow=20,SNR=3.6							
RETA	**Reutte**	**11.59**	**326**	*e*Pn		**Pn**	**20 42 59.6**	**+2.0**
	comp=N,1.3nm,0.5s							
RETA				*e*Sn		**Sn**	**20 45 05.4**	**-1.1**
	comp=N,3.4nm,0.6s							
GEC2	**GERESS Array S**	**11.61**	**338**	Pn		**Pn**	**20 42 54.9**	**-3.1**
GERES	**GERESS Array B**	**11.61**	**338**	Pn		**Pn**	**20 42 56.5**	**-1.5**
	comp=N,0.2nm,0.3s,baz=156,slow=14,SNR=9.9							
GERES				Sn		**Sn**	**20 45 01.8**	**-5.3**
	comp=N,0.4nm,0.3s,baz=150,slow=23,SNR=4.4							
GERES				LR		LR	20 48 40.2	
	comp=N,170nm,20.6s,baz=202,slow=44							
KHC	**Kasperske Hory**	**11.90**	**338**	*e*PN		**Pn**	**20 43 01.0**	**-0.9**
KHC				*e*SN		**Sn**	**20 45 12.7**	**-1.5**
SENIN	**Lac Senin/Sane**	**12.60**	**314**	Pn		**Pn**	**20 43 11.9**	**+0.3**
MMAI	**Mount Meron Ar**	**13.29**	**109**	Pn		**Pn**	**20 43 19.2**	**-1.7**
	comp=N,0.7nm,0.3s,baz=304,slow=16,SNR=3.9							
MMAI				Sn		**Sn**	**20 45 43.9**	**-4.3**
	comp=N,0.9nm,0.3s,baz=138,slow=16,SNR=3.5							
GNI	**Garni**	**18.95**	**77**	P		**Pn**	**20 44 34.9**	**+0.8**
	comp=N,0.3nm,0.3s,baz=282,slow=9.3,SNR=4.0							
HFS	**Hagfors**	**22.28**	**351**	P		**P**	**20 45 08.2**	**-0.9**
	comp=N,2.9nm,0.7s,baz=144,slow=11,SNR=11							
EKA	**Eskdalemuir Ar**	**23.28**	**325**	P		**P**	**20 45 19.3**	**-0.3**
	comp=N,2.9nm,0.8s,baz=135,slow=7.5,SNR=3.7							
FINES	**FINESS Array B**	**23.45**	**7**	P		**P**	**20 45 19.9**	**-1.3**
	comp=N,3.2nm,0.7s,baz=180,slow=8.4,SNR=10							
NC405	**NORSAR Array S**	**23.49**	**349**	P		**P**	**20 45 22.5**	**+0.9**
NC405				IAmb		IAmb	20 46 11.1	
	comp=Z,27nm,1.2s							
NB201	**NORSAR Array S**	**23.49**	**349**	P		**P**	**20 45 22.5**	**+0.9**
NB2	**NORSAR Subarra**	**23.49**	**349**	P		**P**	**20 45 23.7**	**+2.0**
	comp=Z,2.9nm,0.9s,baz=160,slow=9.3							
NOA	**NORSAR Array B**	**23.49**	**349**	P		**P**	**20 45 21.2**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=155,slow=9.4,SNR=7.9							
NOA				LR		LR	20 55 44.3	
	comp=Z,100nm,21.0s,baz=255,slow=40							
AKTO	**Aktyubinsk**	**29.20**	**53**	LR		LR	21 00 59.1	
	comp=Z,116nm,18.2s,baz=344,slow=43							
GEYT	**Alibeck**	**29.55**	**79**	P		**P**	**20 46 17.6**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=282,slow=10,SNR=5.0							
GEYT	**Alibeck**	**29.55**	**79**	IAmb		IAmb	20 46 21.5	
	comp=Z,1.1nm,0.6s							
TORD	**Torodi Ar. Bea**	**30.05**	**219**	P		**P**	**20 46 22.0**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=30,slow=10,SNR=9.4							
ARCES	**ARCESS Array B**	**31.43**	**3**	P		**P**	**20 46 31.7**	**-1.3**
	comp=Z,5.6nm,1.1s,baz=189,slow=11,SNR=2.5							
DBIC	**Dimbokro**	**38.90**	**222**	P		**P**	**20 47 40.8**	**+3.0**
	comp=Z,1.9nm,0.8s,baz=35,slow=8.9,SNR=3.4							
DBIC	**Dimbokro**	**38.90**	**222**	IAmb		IAmb	20 47 47.1	
	comp=Z,9.5nm,1.4s							
MK31	**Makanchi Array**	**45.33**	**58**	P		**P**	**20 48 29.9**	**-0.1**
MKAR	**Makanchi Array**	**45.33**	**58**	P		**P**	**20 48 29.7**	**-0.3**
	comp=Z,1.6nm,0.6s,baz=282,slow=7.0,SNR=16							
ZAA0	**Zalesovo Array**	**45.70**	**48**	P		**P**	**20 48 32.8**	**+0.1**
ZAA0				IAmb		IAmb	20 48 36.5	
	comp=Z,3.5nm,0.8s							
ZALV	**Zalesovo Beam**	**45.70**	**48**	P		**P**	**20 48 32.3**	**-0.4**
	comp=Z,3.8nm,0.7s,baz=279,slow=7.6,SNR=13							
SONM	**Songino Array**	**60.47**	**51**	P		**P**	**20 50 23.2**	**+1.4**
	comp=Z,0.3nm,0.8s,baz=265,slow=6.2,SNR=3.6							
CMAR	**Chiang Mai Arr**	**69.97**	**82**	P		**P**	**20 51 25.4**	**+1.7**
	comp=Z,0.3nm,0.6s,baz

MTN	**Manton Dam**	**47.49**	**275**	P	**P**	**20 53 04.5**	**-1.1**
MTN				IAmb	IAmb	20 53 21.2	
	comp=Z,32nm,1.4s						
KNRA	**Kununurra**	**48.71**	**270**	P	**P**	**20 53 14.4**	**-0.2**
KNRA				IAmb	IAmb	20 53 15.2	
	comp=Z,25nm,0.9s						
OBL	**Observatory Le**	**49.50**	**31**	P	**P**	**20 53 20.4**	**-0.2**
FITZ	**Fitzroy Crossi**	**50.83**	**266**	P	**P**	**20 53 30.4**	**+0.1**
	comp=Z,8.9nm,0.6s,baz=103,slow=7.0,SNR=24						
FITZ	**Fitzroy Crossi**	**50.83**	**266**	P	**P**	**20 53 30.3**	**-0.1**
SIJI	**Sorong**	**52.52**	**289**	P	**P**	**20 53 42.3**	**-0.3**
	comp=Z,35nm,0.7s,baz=102,slow=8.2,SNR=7.8						
PSA00	**Pilbara Seismi**	**55.15**	**260**	P	**P**	**20 54 00.2**	**-0.9**
PSA00				IAmb	IAmb	20 54 17.8	
	comp=Z,87nm,1.6s						
NWAO	**Narrogin (SRO)**	**55.17**	**246**	P	**P**	**20 54 00.4**	**-0.7**
NWAO				IAmb	IAmb	20 55 22.5	
	comp=Z,48nm,1.4s						
NWAO	**Narrogin (SRO)**	**55.17**	**246**	P	**P**	**20 54 00.5**	**-0.7**
NWAO				IAmb	IAmb	20 55 22.5	
	comp=Z,65nm,1.5s						
MORW	**Morawa**	**56.83**	**250**	P	**P**	**20 54 12.0**	**-0.6**
MORW				IAmb	IAmb	20 54 21.3	
	comp=Z,86nm,1.6s						
JAGI	**Jajag, Banyuwa**	**64.60**	**272**	P	**P**	**20 55 02.5**	**-1.6**
JAGI				IAmb	IAmb	20 56 47.4	
	comp=Z,30nm,1.2s						
QSPA	**South Pole Qui**	**65.99**	**180**	P	**P**	**20 55 12.7**	**+0.6**
	comp=Z,3.7nm,0.6s,baz=4.0,slow=0.7,SNR=19						
QSPA	**South Pole Qui**	**65.99**	**180**	P	**P**	**20 55 12.5**	**+0.4**
UGM	**Wanagama**	**68.12**	**271**	P	**P**	**20 55 25.1**	**-1.0**
KKM	**Kota Kinabalu**	**68.98**	**287**	P	**P**	**20 55 29.6**	**-1.7**
KKM				IAmb	IAmb	20 56 29.3	
	comp=Z,33nm,1.2s						
MJAR	**Matsushiro Arr**	**72.07**	**326**	P	**P**	**20 55 48.3**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=146,slow=7.3,SNR=3.9						
KSM	**Kuching**	**72.16**	**280**	P	**P**	**20 55 49.4**	**-0.6**
KSM				IAmb	IAmb	20 55 50.5	
	comp=Z,11nm,0.7s						
KSRS	**Korea Array**	**78.41**	**320**	P	**P**	**20 56 24.9**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=123,slow=4.5,SNR=4.1						
PETK	**Petropavlovsk-**	**79.30**	**347**	P	**P**	**20 56 28.9**	**+0.2**
	comp=Z,3.7nm,0.9s,baz=116,slow=6.6,SNR=3.3						
PETK	**Petropavlovsk-**	**79.30**	**347**	P	**P**	**20 56 28.8**	**+0.1**
IPM	**Ipoh**	**81.81**	**279**	P	**P**	**20 56 42.0**	**-0.7**
IPM				IAmb	IAmb	20 57 10.9	
	comp=Z,27nm,1.4s						
SYO	**Syowa Base**	**82.83**	**193**	*e*P	**P**	**20 56 46.0**	**-0.8**
KRMB	**Red Mountain**	**83.40**	**39**	P	**P**	**20 56 52.0**	**+1.8**
KRMB				IAmb	IAmb	20 59 56.7	
	comp=Z,34nm,1.8s						
GSI	**Gunungsitoli**	**83.63**	**274**	P	**P**	**20 56 52.6**	**+0.7**
GSI				IAmb	IAmb	20 57 40.7	
	comp=Z,16nm,1.2s						
SNAA	**Sanae**	**84.47**	**179**	P	**P**	**20 56 54.1**	**-1.0**
SNAA	**Sanae**	**84.47**	**179**	P	**P**	**20 56 54.3**	**-0.7**
VNA3	**Neumayer Olymp**	**84.68**	**177**	P	**P**	**20 56 56.1**	**+0.1**
NVAR	**Mina Array Bea**	**84.88**	**44**	P	**P**	**20 56 57.2**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=228,slow=8.3,SNR=4.6						
VNA2	**Neumayer--Watz**	**85.09**	**178**	P	**P**	**20 56 57.7**	**-0.3**
	baz=192,slow=3.6						
VNA1	**Neumayer--Stat**	**85.33**	**177**	P	**P**	**20 56 58.3**	**-0.8**
TPNV	**Topopah Spring**	**85.35**	**46**	P	**P**	**20 56 59.8**	**-0.2**
KVN	**Kaiserville**	**85.37**	**44**	P	**P**	**20 56 60.0**	**-0.1**
I07A	**Izee**	**87.53**	**39**	P	**P**	**20 57 10.1**	**0.0**
CMAR	**Chiang Mai Arr**	**89.61**	**290**	P	**P**	**20 57 21.8**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=141,slow=3.2,SNR=10						
TX31	**Lajitas Ar. Si**	**90.52**	**58**	P	**P**	**20 57 24.5**	**+0.2**
TX32	**Lajitas Array**	**90.52**	**58**	P	**P**	**20 57 25.3**	**+1.0**
TXAR	**Lajitas Array**	**90.52**	**58**	P	**P**	**20 57 25.2**	**+1.0**
	comp=Z,1.8nm,0.7s,baz=213,slow=6.9,SNR=14						
TXAR	**Lajitas Array**	**90.52**	**58**	P	**P**	**20 57 25.4**	**+1.1**
ILAR	**Eielson Array**	**92.22**	**14**	P	**P**	**20 57 30.5**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=219,slow=5.5,SNR=3.6						
MKAR	**Makanchi Array**	**112.30**	**313**	PKiKP	**PKiKP**	**21 02 53.0**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=48,slow=2.1,SNR=3.8						
ARCES	**ARCESS Array B**	**132.08**	**348**	PKP	**PKPdf**	**21 03 31.2**	**-0.1**
	comp=Z,5.5nm,1.1s,baz=37,slow=2.3,SNR=4.0						
HFS	**Hagfors**	**142.74**	**349**	PKhKP	PKPpre	21 03 47.5	
	comp=Z,1.7nm,0.5s,baz=64,slow=3.4,SNR=15						
AKASG	**Malin Array Be**	**145.15**	**327**	PKPbc	**PKPdf**	**21 03 55.6**	**0.0**
	comp=Z,3.4nm,0.4s,baz=41,slow=4.5,SNR=2.3						
BRTR	**Keskin Array B**	**147.71**	**307**	PKPbc	**PKPbc**	**21 04 04.1**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=102,slow=1.8,SNR=3.1						
MMAI	**Mount Meron Ar**	**147.80**	**294**	PKPbc	**PKPbc**	**21 04 05.0**	**+0.6**
	comp=Z,1.7nm,0.4s,baz=86,slow=5.9,SNR=6.9						
EKA	**Eskdalemuir Ar**	**148.71**	**4**	PKPbc	**PKPbc**	**21 04 04.8**	**-1.1**
	comp=Z,1.1nm,0.7s,baz=350,slow=2.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**168.99**	**189**	PKPab	**PKPab**	**21 05 39.9**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=164,slow=5.3,SNR=3.1						

*THE **27** 20:50:40.0,38˚.20N×20˚.33E,h6km±3km,ML2.9/7,Error ellipse: s-maj=3.5km s-min=0.5km az=103.0*
*ATH **27** 20:50:40.3,38˚.21N×20˚.38E,h14km±4km,ML2.7/8,Error ellipse: s-maj=4.3km s-min=1.3km az=88.0*
ISC 27 20:50:40.2±1.6,**38˚.21N**±0˚.04×**20˚.36E**±0˚.08,**h11**km±7km,
n27,σ0°**39**/37,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.11**	**108**	P	**Pg**	**20 50 43.0**	**0.0**
ARG2				S	**Sg**	**20 50 44.7**	**-0.3**
	26μm,0.3s						
VLS	**Valsamata**	**0.19**	**101**	P	**Pg**	**20 50 44.0**	**-0.2**
VLS				S	**Sg**	**20 50 46.9**	**-0.1**
	13μm,0.1s						
VLS	**Valsamata**	**0.19**	**101**	P	**Pg**	**20 50 44.0**	**-0.2**
VLS				S	**Sg**	**20 50 46.9**	**-0.1**
VLS				AML	AML	20 50 47.1	
	comp=N,28275μm,0.1s						
VLS				AML	AML	20 50 47.1	
	comp=E,24278μm,0.1s						
FSK	**Fiskardo**	**0.29**	**33**	P	**Pg**	**20 50 46.2**	**+0.1**
FSK				S	**Sg**	**20 50 50.6**	**+0.5**
	comp=E,3μm,0.4s						
FSK	**Fiskardo**	**0.29**	**33**	P	**Pg**	**20 50 46.3**	**+0.2**
KFL	**Anninata**	**0.35**	**107**	P	**Pg**	**20 50 47.2**	**0.0**
KFL				S	**Sg**	**20 50 52.7**	**+0.7**
	comp=E,3μm,0.4s						
KFL	**Anninata**	**0.35**	**107**	P	**Pg**	**20 50 47.3**	**+0.1**
KFL				AML	AML	20 50 53.0	
	comp=N,4571μm,0.4s						
KFL				AML	AML	20 50 57.2	
	comp=E,5788μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.41**	**144**	P	**Pg**	**20 50 48.5**	**+0.2**
VLMS				AML	AML	20 50 57.4	
	comp=E,4665μm,0.2s						
VLMS				AML	AML	20 50 58.1	
	comp=N,4964μm,0.3s						
EVGI	**Lefkada island**	**0.47**	**30**	P	**Pg**	**20 50 49.4**	**0.0**
EVGI				S	**Sb**	**20 50 56.8**	**-0.6**
EVGI	**Lefkada island**	**0.47**	**30**	P	**Pg**	**20 50 49.4**	**0.0**
EVGI				S	**Sg**	**20 50 56.6**	**+1.0**
MGNA	**Meganis**	**0.56**	**37**	P	**Pg**	**20 50 50.7**	**-0.3**
MGNA				AML	AML	20 50 59.6	
	comp=N,4233μm,0.4s						
MGNA				AML	AML	20 50 59.8	
	comp=E,4465μm,0.4s						
LKD2	**Lefkada island**	**0.62**	**22**	P	**Pg**	**20 50 51.9**	**-0.4**
LKD2				S	**Sg**	**20 51 01.0**	**+0.5**
	comp=E,478nm,0.5s						
LKD2	**Lefkada island**	**0.62**	**22**	P	**Pg**	**20 50 51.8**	**-0.4**
LKD2				AML	AML	20 51 07.4	
	comp=N,946μm,0.6s						
LKD2				AML	AML	20 51 07.8	
	comp=E,906μm,0.5s						
TSLK	**Tsoukalades, L**	**0.66**	**21**	P	**Pg**	**20 50 52.6**	**-0.3**
TSLK				S	**Sb**	**20 51 02.8**	**+0.1**
	comp=E,558nm,0.5s						
TSLK	**Tsoukalades, L**	**0.66**	**21**	P	**Pg**	**20 50 52.6**	**-0.3**
TSLK				AML	AML	20 51 05.9	
	comp=N,1052μm,0.3s						
TSLK				AML	AML	20 51 09.4	
	comp=E,989μm,0.5s						
PDO	**Prodromos**	**0.75**	**59**	P	**Pg**	**20 50 54.3**	**-0.5**
PDO				S	**Sb**	**20 51 06.2**	**+0.6**
	comp=E,930nm,0.5s						
PDO	**Prodromos**	**0.75**	**59**	P	**Pg**	**20 50 54.7**	**-0.1**
RLS	**Riolos of Patr**	**0.89**	**100**	P	**Pg**	**20 50 57.1**	**-0.1**
PVO	**Paravola**	**1.00**	**66**	P	**Pg**	**20 50 59.3**	**-0.2**
PVO				AML	AML	20 51 18.4	
	comp=N,798μm,0.8s						
PVO				AML	AML	20 51 21.5	
	comp=E,814μm,0.3s						
DRO	**Drossia**	**1.10**	**103**	P	**Pg**	**20 51 01.2**	**-0.1**
EFP	**Efpalio**	**1.24**	**80**	P	**Pn**	**20 51 02.4**	**-1.0**
LAKA	**Lakka**	**1.28**	**88**	P	**Pn**	**20 51 03.7**	**-0.3**
ANX	**Ano Chora**	**1.28**	**72**	P	**Pg**	**20 51 04.8**	**-0.1**
IGT	**Igoumenitsa**	**1.32**	**359**	P	**Pb**	**20 51 05.2**	**+0.2**
SERG	**Sergoula**	**1.35**	**81**	P	**Pn**	**20 51 04.8**	**-0.2**
TRIZ	**Trizonia**	**1.36**	**83**	P	**Pn**	**20 51 04.9**	**-0.2**
KALE	**Kalithea**	**1.41**	**82**	P	**Pn**	**20 51 05.8**	**-0.1**
KALE				AML	AML	20 51 35.0	
	comp=E,234μm,0.4s						
KALE				AML	AML	20 51 40.5	
	comp=N,234μm,0.4s						

*IDC **27** 20:59:00.6±4.0,38˚.41N×20˚.57E,h0km,mb3.8/6,mb1 3.8/8,mb1mx3.4/60,mbtmp3.7/8,ML3.1/2,Error ellipse: s-maj=86.3km s-min=21.8km az=45.0*
*THE **27** 20:59:01.6,38˚.15N×20˚.38E,h8km±1km,ML3.5/5,Error ellipse: s-maj=1.8km s-min=0.5km az=78.0*
*ATH **27** 20:59:01.6,38˚.15N×20˚.43E,h16km±1km,ML3.3/10,Error ellipse: s-maj=2.0km s-min=0.7km az=76.0*
ISC 27 20:59:01.2±0.8,**38˚.17N**±0˚.03×**20˚.41E**±0˚.04,**h16**km±4km,
n75,σ1°**05**/100,**mb3.9**/6,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.06**	**84**	P	**Pg**	**20 59 04.2**	**-0.1**
ARG2				S	**Sg**	**20 59 05.5**	**-0.8**
VLS	**Valsamata**	**0.14**	**88**	P	**Pg**	**20 59 05.0**	**-0.1**
VLS				S	**Sg**	**20 59 07.6**	**-0.2**
	34μm,0.2s						
VLS	**Valsamata**	**0.14**	**88**	P	**Pg**	**20 59 05.1**	**-0.1**
VLS				S	**Sg**	**20 59 07.6**	**-0.2**
VLS				AML	AML	20 59 07.8	
	comp=N,81457μm,0.3s						
VLS				AML	AML	20 59 08.5	
	comp=E,54604μm,0.1s						
KFL	**Anninata**	**0.30**	**102**	P	**Pg**	**20 59 07.7**	**0.0**
KFL				S	**Sb**	**20 59 12.6**	**-0.5**
	comp=E,19μm,0.3s						
KFL	**Anninata**	**0.30**	**102**	P	**Pg**	**20 59 07.8**	**0.0**
KFL				S	**Sg**	**20 59 11.3**	**-0.8**
KFL				AML	AML	20 59 13.8	
	comp=E,34454μm,0.3s						
KFL				AML	AML	20 59 14.2	
	comp=N,43020μm,0.3s						
FSK	**Fiskardo**	**0.31**	**23**	P	**Pg**	**20 59 08.1**	**+0.3**
FSK				S	**Sb**	**20 59 13.5**	**+0.2**
	comp=N,11μm,0.6s						
FSK	**Fiskardo**	**0.31**	**23**	P	**Pg**	**20 59 08.2**	**+0.3**
FSK				S	**Sb**	**20 59 13.7**	**+0.4**
VLMS	**Volimes, Zakyn**	**0.36**	**146**	P	**Pg**	**20 59 08.6**	**0.0**
VLMS				S	**Sg**	**20 59 13.8**	**+0.2**
VLMS				AML	AML	20 59 14.6	
	comp=E,64190μm,0.2s						
VLMS				AML	AML	20 59 15.9	
	comp=N,27904μm,0.2s						
EVGI	**Lefkada island**	**0.49**	**23**	P	**Pg**	**20 59 11.2**	**+0.2**
EVGI				S	**Sb**	**20 59 19.1**	**+0.7**
EVGI	**Lefkada island**	**0.49**	**23**	P	**Pg**	**20 59 11.3**	**+0.2**
EVGI				S	**Sb**	**20 59 19.0**	**+0.5**
ZAK2	**Zakynthos**	**0.54**	**135**	P	**Pg**	**20 59 12.3**	**+0.3**
ZAK2				S	**Sb**	**20 59 20.9**	**+0.9**
MGNA	**Meganis**	**0.57**	**32**	P	**Pg**	**20 59 12.6**	**+0.1**
MGNA				S	**Sb**	**20 59 21.5**	**+0.8**
MGNA				AML	AML	20 59 22.1	
	comp=E,5346μm,0.2s						
MGNA				AML	AML	20 59 24.9	
	comp=N,4298μm,0.5s						
LKD2	**Lefkada island**	**0.65**	**17**	P	**Pg**	**20 59 14.3**	**+0.3**
LKD2				S	**Sb**	**20 59 24.4**	**+1.4**
	comp=N,2μm,0.7s						
LKD2	**Lefkada island**	**0.65**	**17**	P	**Pg**	**20 59 14.3**	**+0.3**
LKD2				S	**Sb**	**20 59 24.3**	**+1.4**
LKD2				AML	AML	20 59 29.5	
	comp=N,2284μm,0.3s						
LKD2				AML	AML	20 59 29.7	
	comp=E,3135μm,0.6s						
TSLK	**Tsoukalades, L**	**0.68**	**16**	P	**Pg**	**20 59 14.8**	**+0.2**
TSLK	**Tsoukalades, L**	**0.68**	**16**	P	**Pg**	**20 59 15.0**	**+0.4**
TSLK				S	**Sb**	**20 59 24.8**	**+0.8**
TSLK				AML	AML	20 59 32.2	
	comp=E,3028μm,0.3s						
TSLK				AML	AML	20 59 34.3	
	comp=N,3057μm,0.4s						
PDO	**Prodromos**	**0.74**	**55**	P	**Pg**	**20 59 15.8**	**+0.1**
PDO				S	**Sn**	**20 59 27.9**	**-0.1**
	comp=N,4μm,0.6s						
PDO	**Prodromos**	**0.74**	**55**	P	**Pg**	**20 59 15.8**	**+0.1**
PDO				S	**Sb**	**20 59 27.0**	**+1.3**
PDO				AML	AML	20 59 36.3	
	comp=N,5416μm,0.3s						
PDO				AML	AML	20 59 37.8	
	comp=E,5443μm,0.6s						
RLS	**Riolos of Patr**	**0.84**	**97**	P	**Pg**	**20 59 17.1**	**-0.5**
RLS	**Riolos of Patr**	**0.84**	**97**	P	**Pg**	**20 59 17.2**	**-0.4**
RLS				S	**Sg**	**20 59 28.5**	**-0.2**
RLS				AML	AML	20 59 35.1	
	comp=E,2124μm,0.5s						
RLS				AML	AML	20 59 36.7	
	comp=N,1762μm,0.6s						
PVO	**Paravola**	**0.98**	**63**	P	**Pb**	**20 59 20.4**	**+0.5**
PVO	**Paravola**	**0.98**	**63**	P	**Pb**	**20 59 20.5**	**+0.5**
DRO	**Drossia**	**1.05**	**102**	P	**Pg**	**20 59 21.2**	**-0.4**
DRO				AML	AML	20 59 41.9	
	comp=N,3233μm,0.4s						
DRO				AML	AML	20 59 45.1	
	comp=E,4096μm,0.4s						
UPR	**University Cam**	**1.09**	**84**	P	**Pn**	**20 59 22.8**	**+0.9**
EFP	**Efpalio**	**1.20**	**77**	P	**Pg**	**20 59 23.2**	**-1.3**
AMT	**Artemida-Makis**	**1.21**	**121**	P	**Pn**	**20 59 24.7**	**+1.2**
AMT	**Artemida-Makis**	**1.21**	**121**	P	**Pn**	**20 59 25.2**	**+1.6**
LAKA	**Lakka**	**1.24**	**86**	P	**Pb**	**20 59 24.0**	**-0.3**
LAKA	**Lakka**	**1.24**	**86**	P	**Pb**	**20 59 24.0**	**-0.3**
ANX	**Ano Chora**	**1.26**	**70**	P	**Pn**	**20 59 25.7**	**+1.4**
ANX				AML	AML	20 59 53.9	
	comp=N,2409μm,0.5s						
ANX				AML	AML	21 00 00.7	
	comp=E,2467μm,0.6s						
TRIZ	**Trizonia**	**1.32**	**81**	P	**Pn**	**20 59 24.9**	**-0.1**
EVR	**Evrytania**	**1.32**	**55**	P	**Pn**	**20 59 25.8**	**+0.6**
EVR	**Evrytania**	**1.32**	**55**	P	**Pn**	**20 59 25.8**	**+0.6**
IGT	**Igoumenitsa**	**1.36**	**357**	P	**Pg**	**20 59 28.1**	**+0.6**
KALE	**Kalithea**	**1.38**	**80**	P	**Pn**	**20 59 26.3**	**+0.4**
KALE	**Kalithea**	**1.38**	**80**	P	**Pg**	**20 59 27.5**	**-0.3**
KLV	**Kalavryta, Ach**	**1.38**	**95**	P	**Pn**	**20 59 26.7**	**+0.8**
KLV	**Kalavryta, Ach**	**1.38**	**95**	P	**Pn**	**20 59 26.1**	**+0.2**
ITM	**Ithomi**	**1.56**	**129**	P	**Pn**	**20 59 30.2**	**+0.5**
MAKR	**Makrakomi, Fth**	**1.59**	**58**	P	**Pg**	**20 59 32.3**	**+0.5**
KASA	**Kassiopi**	**1.61**	**347**	P	**Pn**	**20 59 31.1**	**+2.0**
PYL	**PYLOS**	**1.66**	**140**	P	**Pn**	**20 59 31.1**	**+1.4**
AGG	**Agios Georgios**	**1.73**	**60**	P	**Pb**	**20 59 33.3**	**+0.6**
VLX	**Vlachokerasia**	**1.75**	**117**	P	**Pb**	**20 59 33.3**	**+0.2**
AXAR	**Agios Charalam**	**1.86**	**71**	P	**Pb**	**20 59 35.5**	**+0.6**
THL	**Klokotos Trika**	**1.87**	**41**	P	**Pn**	**20 59 34.6**	**+2.0**
KPRO	**Kipourio**	**1.93**	**22**	P	**Pb**	**20 59 36.5**	**+0.4**
PROD	**Prodromos**	**1.96**	**87**	P	**Pb**	**20 59 36.4**	**-0.2**
LTK	**Loutraki**	**2.02**	**93**	P	**Pb**	**20 59 37.2**	**-0.5**
LOUT	**Loutraki**	**2.03**	**94**	P	**Pb**	**20 59 37.2**	**-0.6**
LKR	**Lokris**	**2.09**	**76**	P	**Pb**	**20 59 38.6**	**-0.2**
VIL2	**Platees**	**2.25**	**88**	P	**Pn**	**20 59 40.3**	**+2.5**
NEST	**Nestorio**	**2.29**	**12**	P	**Pb**	**20 59 41.9**	**-0.5**
DID	**Didima**	**2.33**	**106**	P	**Pn**	**20 59 41.5**	**+2.5**
NEO	**Neokhori**	**2.47**	**62**	P	**Pn**	**20 59 43.6**	**+2.6**
XOR	**Xorichti**	**2.48**	**60**	P	**Pn**	**20 59 44.2**	**-1.2**
LIT	**Litokhoron**	**2.52**	**39**	P	**Pb**	**20 59 45.0**	**-1.0**
MRKA	**Markates**	**2.55**	**77**	P	**Pn**	**20 59 44.5**	**+2.5**
IDI	**Anoyia**	**4.61**	**127**	Pn	**Pn**	**21 00 12.9**	**+2.6**
	comp=E,0.2nm,0.3s,baz=300,slow=16,SNR=4.7						
IDI				Sn	**Sn**	**21 01 04.1**	**+0.6**
	comp=E,1.3nm,0.3s,baz=306,slow=21,SNR=6.5						
DBRK	**Dubrovnik**	**4.81**	**340**	*e*Pn	**Pn**	**21 00 13.0**	**-0.1**
DBRK				Sn	**Sn**	**21 01 07.0**	**-1.5**
STON	**Ston**	**5.13**	**337**	*e*Pn	**Pn**	**21 00 17.0**	**-0.3**
STON				Sn	**Sn**	**21 01 11.9**	**-4.3**
MAKA	**Makarska**	**5.72**	**334**	*e*Pn	**Pn**	**21 00 26.1**	**+0.6**
ZIRJ	**Zirje**	**6.56**	**328**	*e*Pn	**Pn**	**21 00 36.8**	**-0.2**
ZIRJ				Sn	**Sn**	**21 01 49.4**	**-2.0**
KIJV	**Kijevo**	**6.56**	**334**	*i*Pn	**Pn**	**21 00 37.8**	**+0.6**
KIJV				Sn	**Sn**	**21 01 49.9**	**-1.7**
MORI	**Morici**	**6.71**	**329**	*e*Pn	**Pn**	**21 00 39.7**	**+0.6**
DUGI	**Dugi Otok**	**7.08**	**327**	*e*Pn	**Pn**	**21 00 45.4**	**+1.2**
DUGI				Sn	**Sn**	**21 02 04.0**	**-0.3**
UDBI	**Udbina**	**7.25**	**333**	*e*Pn	**Pn**	**21 00 47.5**	**+1.0**
NVLJ	**Novalja**	**7.62**	**329**	*e*Pn	**Pn**	**21 00 51.8**	**+0.2**
NVLJ				Sn	**Sn**	**21 02 16.2**	**-1.3**
GERES	**GERESS Array B**	**11.72**	**338**	Pn	**Pn**	**21 01 47.7**	**-0.1**
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=2.7						
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**21 03 58.9**	**+0.2**
	comp=E,7.5nm,1.0s,baz=163,slow=10,SNR=3.6						
FINES	**FINESS Array B**	**23.56**	**7**	P	**P**	**21 04 11.3**	**+0.6**
	comp=E,1.7nm,0.8s,baz=172,slow=11,SNR=3.8						
NOA	**NORSAR Array B**	**23.61**	**349**	P	**P**	**21 04 10.7**	**-0.5**
	comp=E,0.7nm,0.8s,baz=157,slow=9.1,SNR=2.3						
ARCES	**ARCESS Array B**	**31.54**	**3**	P	**P**	**21 05 21.6**	**-0.8**
	comp=E,3.3nm,0.9s,baz=184,slow=9.6,SNR=3.3						
MKAR	**Makanchi Array**	**45.38**	**58**	P	**P**	**21 07 18.5**	**-0.3**
	comp=E,0.4nm,0.4s,baz=271,slow=7.4,SNR=13						
ZALV	**Zalesovo Beam**	**45.76**	**48**	P	**P**	**21 07 21.0**	**-0.6**
	comp=E,0.9nm,0.4s,baz=271,slow=9.2,SNR=4.4						

*THE **27** 21:04:51.9,38˚.18N×20˚.42E,h12km±1km,ML3.4/3,Error ellipse: s-maj=1.9km s-min=0.5km az=75.0*
*ATH **27** 21:04:51.6,38˚.16N×20˚.43E,h15km±1km,ML3.0/11,Error ellipse: s-maj=1.6km s-min=0.9km az=72.0*
ISC 27 21:04:51.9±1.2,**38˚.17N**±0˚.03×**20˚.44E**±0˚.05,**h14**km±5km,
n45,σ0°**53**/63,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.04**	**73**	P	**Pg**	**21 04 54.2**	**-0.3**
VLS	**Valsamata**	**0.12**	**85**	P	**Pg**	**21 04 55.1**	**-0.2**
VLS				S	**Sg**	**21 04 57.6**	**0.0**
	42μm,0.1s						
VLS	**Valsamata**	**0.12**	**85**	P	**Pg**	**21 04 55.1**	**-0.2**
VLS				S	**Sg**	**21 04 57.7**	**+0.1**
VLS				AML	AML	21 04 57.9	
VLS				AML	AML	21 04 58.4	
	comp=E,53767μm,0.1s						
KFL	**Anninata**	**0.28**	**102**	P	**Pg**	**21 04 57.7**	**-0.1**
KFL				S	**Sg**	**21 05 02.5**	**+0.7**
	comp=E,14μm,0.3s						
KFL	**Anninata**	**0.28**	**102**	P	**Pg**	**21 04 57.8**	**0.0**
KFL				S	**Sg**	**21 05 02.6**	**+0.7**
KFL				AML	AML	21 05 03.2	
	comp=N,29006μm,0.2s						
KFL				AML	AML	21 05 03.2	
	comp=E,26807μm,0.4s						
FSK	**Fiskardo**	**0.31**	**18**	P	**Pg**	**21 04 58.0**	**-0.3**
FSK				S	**Sg**	**21 05 02.7**	**0.0**
	comp=E,4μm,0.5s						
FSK	**Fiskardo**	**0.31**	**18**	P	**Pg**	**21 04 58.1**	**-0.3**
FSK				S	**Sg**	**21 05 02.4**	**-0.3**
VLMS	**Volimes, Zakyn**	**0.34**	**149**	P	**Pg**	**21 04 58.7**	**-0.2**
VLMS				S	**Sb**	**21 05 04.4**	**-0.5**
VLMS				AML	AML	21 05 04.9	
	comp=E,39151μm,0.2s						
VLMS				AML	AML	21 05 06.6	
	comp=N,17731μm,0.3s						
EVGI	**Lefkada island**	**0.48**	**20**	P	**Pg**	**21 05 01.0**	**-0.5**
EVGI				S	**Sb**	**21 05 08.5**	**-0.7**
EVGI	**Lefkada island**	**0.48**	**20**	P	**Pg**	**21 05 01.0**	**-0.5**
ZAK2	**Zakynthos**	**0.52**	**136**	P	**Pg**	**21 05 02.3**	**0.0**
ZAK2				S	**Sb**	**21 05 11.0**	**+0.7**
MGNA	**Meganis**	**0.56**	**29**	P	**Pg**	**21 05 02.4**	**-0.6**
MGNA				S	**Sb**	**21 05 11.3**	**0.0**
LKD2	**Lefkada island**	**0.64**	**15**	P	**Pg**	**21 05 04.1**	**-0.4**
LKD2	**Lefkada island**	**0.64**	**15**	P	**Pb**	**21 05 05.2**	**+0.3**
LKD2				AML	AML	21 05 21.0	
	comp=N,1359μm,0.4s						
LKD2				AML	AML	21 05 21.6	
	comp=E,1072μm,0.5s						
TSLK	**Tsoukalades, L**	**0.68**	**14**	P	**Pb**	**21 05 05.5**	**0.0**
PDO	**Prodromos**	**0.72**	**53**	P	**Pg**	**21 05 05.2**	**-0.9**
PDO				S	**Sg**	**21 05 15.5**	**-0.1**
PDO				AML	AML	21 05 25.7	
	comp=E,2699μm,0.4s						
PDO				AML	AML	21 05 26.7	
	comp=N,3338μm,0.4s						
RLS	**Riolos of Patr**	**0.81**	**97**	P	**Pg**	**21 05 07

CUR				Sg		**Sb**	**21 09 59.2**	**+0.5**	
ULGR	**Ulagan, Altay**	**2.20**	**264**	Pg		**Pb**	**21 09 33.5**	**-0.5**	
ULGR				Sg		**Sb**	**21 10 01.5**	**+0.3**	
VEH	**Verkhnyaya Baz**	**2.44**	**345**	Pg		**Pb**	**21 09 36.1**	**-1.8**	
VEH				Sg		**Sg**	**21 10 10.7**	**-1.5**	
AKAR	**Aktash**	**2.48**	**258**	Pg		**Pb**	**21 09 38.4**	**-0.2**	
AKAR				Sg		**Sg**	**21 10 11.5**	**-2.0**	
CHBI	**Chibit, Altay**	**2.55**	**258**	Pg		**Pn**	**21 09 37.2**	**+1.7**	
CHBI				Sg		**Sg**	**21 10 14.3**	**-1.6**	
ARTR	**Artybash**	**2.73**	**291**	Pg		**Pb**	**21 09 42.1**	**-0.7**	
ARTR				Sg		**Sb**	**21 10 18.0**	**+1.7**	
ABNR	**Abakan**	**2.82**	**0**	Pg		**Pb**	**21 09 46.0**	**+1.7**	
ABNR				Sg		**Sg**	**21 10 22.0**	**-2.4**	
DGZ	**Jazzator, Alta**	**2.82**	**246**	Pg		**Pn**	**21 09 41.3**	**+2.1**	
DGZ				Sg		**Sb**	**21 10 21.8**	**+2.8**	
TASR	**Tashtagol**	**2.86**	**312**	Pg		**Pb**	**21 09 46.4**	**+1.4**	
TASR				Sg		**Sg**	**21 10 24.3**	**-1.5**	
LUZB	**Luzhba, Kemero**	**3.15**	**332**	Pg		**Pg**	**21 09 53.1**	**-1.3**	
LUZB				Sg		**Sg**	**21 10 31.8**	**-3.3**	
TDJR	**Todzha**	**3.29**	**61**	Pg		**Pb**	**21 09 50.1**	**-2.3**	
TDJR				Sg		**Sb**	**21 10 32.6**	**+0.1**	
TUNR	**Tungur**	**3.32**	**259**	Pg		**Pb**	**21 09 53.0**	**+0.1**	
TUNR				Sg		**Sg**	**21 10 37.9**	**-2.6**	
ELDR	**Elanda**	**3.36**	**277**	Pg		**Pb**	**21 09 54.6**	**+1.0**	
ELDR				Sg		**Sg**	**21 10 39.9**	**-2.0**	
GALT	**Gorno-Altaysk,**	**3.57**	**289**	Pg		**Pb**	**21 09 59.2**	**+2.1**	
GALT				Sg		**Sg**	**21 10 46.5**	**-2.0**	
ELT	**Eltsovka**	**3.96**	**308**	Pg		**Pb**	**21 10 04.7**	**+1.0**	
ELT				Sg		**Sg**	**21 10 57.1**	**-3.8**	
MINR	**Mina**	**4.34**	**22**	Pg		**Pb**	**21 10 11.5**	**+1.2**	
MINR				Sg		**Sg**	**21 11 13.3**	**+0.1**	
ORY	**Orie**	**4.67**	**27**	Pg		**Pb**	**21 10 17.6**	**+1.7**	
ORY				Sg		**Sg**	**21 11 19.9**	**-3.9**	
SALR	**Pechorkino, Sa**	**4.93**	**318**	Pg		**Pb**	**21 10 23.9**	**+3.5**	
SALR				Sg		**Sg**	**21 11 29.6**	**-2.6**	
ZAA0	**Zalesovo Array**	**5.04**	**310**	⇑Pg		**Pb**	**21 10 24.0**	**+1.7**	
	0.4nm,0.9s								
ZAA0				⇑Lg		Lg	21 11 32.5		
	1.4nm,0.7s								
ZALV	**Zalesovo Beam**	**5.04**	**310**	Pn		**Pn**	**21 10 11.4**	**+1.8**	
	0.3nm,0.3s,baz=127,slow=16,SNR=4.0								
ZALV				Lg		Lg	21 11 33.9		
	1.8nm,0.3s,baz=127,slow=26,SNR=9.7								
ORL	**Orlik**	**5.48**	**69**	Pg		**Pb**	**21 10 30.9**	**+1.2**	
ORL				Sg		**Sb**	**21 11 39.0**	**+3.5**	
GZLN	**Zheleznogorsk**	**5.66**	**14**	Pg		**Pb**	**21 10 35.1**	**+2.5**	
GZLN				Sg		**Sg**	**21 11 50.2**	**-5.2**	
MOY	**Mondy**	**6.07**	**79**	Pg		**Pb**	**21 10 42.4**	**+2.6**	
MOY				Sg		**Sb**	**21 11 58.8**	**+6.3**	
BSTK	**Bystrovka, Nov**	**6.45**	**308**	Sg		**Sg**	**21 12 18.8**	**-2.0**	
MK31	**Makanchi Array**	**7.28**	**239**	⇓Pn		**Pn**	**21 10 40.5**	**+0.1**	
	0.2nm,0.2s,baz=52,slow=16,SNR=41								
MK31				⇑Pg		Pb	21 11 05.4	+5.0	
	0.8nm,0.4s,baz=72,slow=9.8,SNR=6.1								
MK31				⇓Lg		Lg	21 12 41.3		
	3.5nm,0.6s,baz=55,slow=27,SNR=5.9								
MKAR	**Makanchi Array**	**7.28**	**239**	Pn		**Pn**	**21 10 40.9**	**+0.5**	
	0.5nm,0.3s,baz=52,slow=17,SNR=40								
MAKZ	**Makanchi**	**7.45**	**240**	⇓Pn		**Pn**	**21 10 42.1**	**-0.5**	
	4.2nm,1.5s								
MAKZ				⇓Pg		**Pb**	**21 11 07.4**	**+4.2**	
	4.4nm,1.4s								
MAKZ				⇑Lg		Lg	21 12 46.6		
	5.3nm,0.8s								
KURK	**Kurchatov**	**8.10**	**274**	⇑Lg		Lg	21 13 07.9		
	9.9nm,1.0s								
KURBB	**Kurchatov Arra**	**8.16**	**273**	Pn		**Pn**	**21 10 53.8**	**+1.4**	
	0.1nm,0.3s,baz=87,slow=15,SNR=9.6								
SONM	**Songino Array**	**10.26**	**102**	Pn		**Pn**	**21 11 18.6**	**-2.7**	
	0.0nm,0.3s,baz=295,slow=14,SNR=2.4								

*THE **27** 21:22:55.7,38°.22N×20°.35E,h0km±2km,ML3.2/10, Error ellipse: s-maj=3.3km s-min=0.4km az=247.0*
*ATH **27** 21:22:56.0,38°.22N×20°.41E,h14km±1km,ML3.1/7, Error ellipse: s-maj=3.1km s-min=0.9km az=82.0*
ISC 27 21:22:55.2±1.1,38°.22N±0°.03×20°.33E±0°.04,h11km±6km, n43,σ0°95/65,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.13**	**110**	P		**Pg**	**21 22 58.3**	**0.0**
ARG2				S		**Sg**	**21 23 00.0**	**-0.5**
VLS	**Valsamata**	**0.21**	**102**	P		**Pg**	**21 22 59.4**	**-0.2**
VLS				S		**Sg**	**21 23 02.3**	**-0.3**
	42μm,0.2s							
VLS	**Valsamata**	**0.21**	**102**	P		**Pg**	**21 22 59.4**	**-0.2**
VLS				S		**Sg**	**21 23 02.2**	**-0.3**
VLS				AML	AML		21 23 02.5	
VLS				AML	AML		21 23 03.0	
	comp=E,58305μm,0.2s							
FSK	**Fiskardo**	**0.30**	**37**	P		**Pg**	**21 23 01.6**	**+0.3**
FSK				S		**Sg**	**21 23 05.9**	**+0.6**
	comp=E,6μm,0.4s							
FSK	**Fiskardo**	**0.30**	**37**	P		**Pg**	**21 23 01.6**	**+0.3**
FSK				S		**Sg**	**21 23 06.0**	**+0.8**
KFL	**Anninata**	**0.38**	**107**	P		**Pg**	**21 23 02.6**	**0.0**
KFL				S		**Sg**	**21 23 08.2**	**+0.5**
	comp=E,11μm,0.4s							
KFL	**Anninata**	**0.38**	**107**	P		**Pg**	**21 23 02.7**	**0.0**
KFL				S		**Sg**	**21 23 07.6**	**0.0**
KFL				AML	AML		21 23 08.6	
	comp=E,27162μm,0.4s							
KFL				AML	AML		21 23 09.9	
	comp=N,18315μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.43**	**143**	P		**Pg**	**21 23 04.2**	**+0.4**
VLMS				S		**Sg**	**21 23 10.3**	**+0.8**
VLMS				AML	AML		21 23 12.7	
	comp=E,10395μm,0.2s							
VLMS				AML	AML		21 23 13.6	
	comp=N,13356μm,0.5s							
EVGI	**Lefkada island**	**0.47**	**32**	P		**Pg**	**21 23 04.7**	**+0.2**
EVGI				S		**Sb**	**21 23 12.0**	**-0.6**
EVGI	**Lefkada island**	**0.47**	**32**	P		**Pg**	**21 23 04.7**	**+0.2**
EVGI				S		**Sg**	**21 23 11.5**	**+0.8**
LKD2	**Lefkada island**	**0.62**	**24**	P		**Pg**	**21 23 07.7**	**+0.4**
LKD2				S		**Sb**	**21 23 16.9**	**0.0**
	comp=N,1μm,0.3s							
ZAK2	**Zakynthos**	**0.62**	**134**	P		**Pg**	**21 23 07.9**	**+0.6**
TSLK	**Tsoukalades, L**	**0.65**	**23**	P		**Pg**	**21 23 07.8**	**-0.1**
TSLK				S		**Sb**	**21 23 17.8**	**0.0**
	comp=N,2μm,0.4s							
TSLK	**Tsoukalades, L**	**0.65**	**23**	P		**Pg**	**21 23 07.9**	**0.0**
PDO	**Prodromos**	**0.77**	**60**	P		**Pg**	**21 23 09.6**	**-0.4**
PDO				S		**Sb**	**21 23 21.4**	**+0.4**
	comp=N,3μm,0.4s							
PDO	**Prodromos**	**0.77**	**60**	P		**Pg**	**21 23 09.8**	**-0.3**
RLS	**Riolos of Patr**	**0.91**	**100**	P		**Pg**	**21 23 12.6**	**-0.1**
RLS	**Riolos of Patr**	**0.91**	**100**	P		**Pg**	**21 23 12.3**	**-0.4**
RLS				AML	AML		21 23 29.9	
	comp=N,1462μm,0.4s							
RLS				AML	AML		21 23 30.9	
	comp=E,1312μm,0.5s							
PVO	**Paravola**	**1.02**	**67**	P		**Pg**	**21 23 14.5**	**-0.3**
PVO				S		**Sn**	**21 23 30.5**	**+0.8**
	comp=E,1μm,0.5s							
DRO	**Drossia**	**1.12**	**103**	P		**Pg**	**21 23 16.0**	**-0.8**
EFP	**Efpalio**	**1.25**	**80**	P		**Pb**	**21 23 18.0**	**-0.8**
AMT	**Artemida-Makis**	**1.29**	**122**	P		**Pn**	**21 23 19.5**	**+0.3**
AMT	**Artemida-Makis**	**1.29**	**122**	P		**Pn**	**21 23 19.1**	**-0.1**
LAKA	**Lakka**	**1.30**	**89**	P		**Pn**	**21 23 19.0**	**-0.3**
LAKA				S		**Sn**	**21 23 38.5**	**+1.8**
	comp=E,625nm,0.5s							
LAKA	**Lakka**	**1.30**	**89**	P		**Pn**	**21 23 18.9**	**-0.3**
LAKA				AML	AML		21 23 40.1	
	comp=N,1479μm,0.3s							
LAKA				AML	AML		21 23 41.5	
	comp=E,1264μm,0.5s							
ANX	**Ano Chora**	**1.30**	**73**	P		**Pn**	**21 23 20.0**	**+0.5**
ANX	**Ano Chora**	**1.30**	**73**	P		**Pn**	**21 23 19.9**	**+0.5**
SERG	**Sergoula**	**1.37**	**81**	P		**Pn**	**21 23 20.8**	**+0.5**
TRIZ	**Trizonia**	**1.38**	**83**	P		**Pn**	**21 23 19.8**	**-0.6**
KALE	**Kalithea**	**1.43**	**83**	P		**Pn**	**21 23 21.1**	**-0.1**
KALE				AML	AML		21 23 47.6	
	comp=N,920μm,0.7s							
KALE				AML	AML		21 23 54.4	
	comp=E,830μm,0.6s							
KLV	**Kalavryta, Ach**	**1.44**	**97**	P		**Pn**	**21 23 21.8**	**+0.4**
KLV				S		**Sg**	**21 23 43.1**	**+1.4**
	comp=E,345nm,0.7s							
KLV	**Kalavryta, Ach**	**1.44**	**97**	P		**Pn**	**21 23 21.5**	**+0.1**
KLV				AML	AML		21 23 48.9	
	comp=E,685μm,0.7s							
KLV				AML	AML		21 23 53.3	
	comp=N,589μm,0.6s							
ITM	**Ithomi**	**1.64**	**129**	P		**Pn**	**21 23 24.8**	**+0.8**
ITM	**Ithomi**	**1.64**	**129**	P		**Pn**	**21 23 25.1**	**+1.1**
DBRK	**Dubrovnik**	**4.75**	**340**	*i* Pn		**Pn**	**21 24 07.1**	**+0.4**
DBRK				Sn		**Sn**	**21 25 00.2**	**-1.4**
STON	**Ston**	**5.06**	**337**	*e*Pn		**Pn**	**21 24 11.3**	**+0.3**
STON				Sn		**Sn**	**21 25 07.1**	**-2.3**
MAKA	**Makarska**	**5.65**	**335**	*e*Pn		**Pn**	**21 24 20.6**	**+1.5**
ZIRJ	**Zirje**	**6.48**	**328**	*e*Pn		**Pn**	**21 24 30.5**	**0.0**
ZIRJ				Sn		**Sn**	**21 25 42.4**	**-2.1**
KLUV	**Kijevo**	**6.49**	**334**	*e*Pn		**Pn**	**21 24 31.8**	**+1.1**
KLUV				Sn		**Sn**	**21 25 43.1**	**-1.7**
MORI	**Morici**	**6.63**	**330**	*e*Pn		**Pn**	**21 24 33.8**	**+1.2**
MORI				Sn		**Sn**	**21 25 46.1**	**-2.1**
DUGI	**Dugi Otok**	**7.00**	**327**	*e*Pn		**Pn**	**21 24 39.5**	**+1.7**
UDBI	**Udbina**	**7.17**	**333**	*e*Pn		**Pn**	**21 24 42.4**	**+2.3**
NVLJ	**Novalja**	**7.55**	**329**	*e*Pn		**Pn**	**21 24 47.8**	**+2.7**
NVLJ				Sn		**Sn**	**21 26 10.4**	**-0.2**

MAN 27 21:29:35.1,9°.78N×123°.82E,h25km,mb4.3,ML3.1,MS2.9, 3C,Negros

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.56**	**15**	⇑*i*P		Pn	21 29 47.4	-0.1
LLP				*i* S		Sn	21 29 57.0	+1.1
MSLP	**Maasin**	**1.09**	**71**	*e*P		Pb	21 29 58.7	+3.5
MSLP				*e*S		Sb	21 30 17.3	+8.3
DCPH	**Dipolog City**	**1.27**	**201**	⇑*e*P		Sn	21 30 13.2	-0.4
GUIM	**Jordan**	**1.47**	**305**	*e*P		Pn	21 29 59.7	-0.4
GUIM				*e*S		Sn	21 30 19.0	+0.5
OCLP	**Ormoc**	**1.49**	**32**	*e*P		Pb	21 30 03.4	+1.3
OCLP				*e*S		Sb	21 30 26.6	+6.0
PAGZ	**Pagadian**	**1.96**	**193**	*e*P		Pn	21 30 07.5	+0.7
PAGZ				*e*S		Sn	21 30 31.5	+0.8
RCP	**Roxas**	**2.06**	**329**	⇑*e*P		Pb	21 30 11.8	-0.1

*THE **27** 21:31:55.4,38°.20N×20°.43E,h12km,ML3.1/9, Error ellipse: s-maj=1.4km s-min=0.4km az=253.0*
*ATH **27** 21:31:55.5,38°.19N×20°.51E,h16km±1km,ML2.8/15, Error ellipse: s-maj=1.8km s-min=0.6km az=246.0*
ISC 27 21:31:55.6±1.0,38°.20N±0°.02×20°.49E±0°.04,h13km±5km, n43,σ0°40/70,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.02**	**191**	P		**Pg**	**21 31 57.8**	**-0.2**
ARG2				S		**Sg**	**21 31 59.5**	**-0.1**
VLS	**Valsamata**	**0.08**	**108**	P		**Pg**	**21 31 58.4**	**-0.1**
VLS				S		**Sg**	**21 32 00.7**	**+0.3**
	40μm,0.1s							
VLS	**Valsamata**	**0.08**	**108**	P		**Pg**	**21 31 58.4**	**-0.1**
VLS				S		**Sg**	**21 32 00.7**	**+0.3**
VLS				AML	AML		21 32 00.8	
	comp=N,70680μm,0.2s							
VLS				AML	AML		21 32 01.0	
	comp=E,76828μm,0.1s							
KFL	**Anninata**	**0.25**	**111**	P		**Pg**	**21 32 01.1**	**+0.1**
KFL				S		**Sb**	**21 32 05.8**	**-0.5**
	comp=E,11μm,0.2s							
KFL	**Anninata**	**0.25**	**111**	P		**Pg**	**21 32 01.1**	**+0.1**
KFL				S		**Sg**	**21 32 04.5**	**-0.1**
KFL				AML	AML		21 32 06.3	
	comp=N,25811μm,0.2s							
KFL				AML	AML		21 32 07.0	
	comp=E,17695μm,0.3s							
FSK	**Fiskardo**	**0.26**	**12**	P		**Pg**	**21 32 01.3**	**+0.1**
FSK				S		**Sb**	**21 32 06.0**	**-0.7**
	comp=E,5μm,0.2s							
FSK	**Fiskardo**	**0.26**	**12**	P		**Pg**	**21 32 01.3**	**+0.1**
FSK				S		**Sg**	**21 32 05.1**	**+0.1**
VLMS	**Volimes, Zakyn**	**0.35**	**158**	P		**Pg**	**21 32 02.4**	**-0.3**
VLMS				S		**Sg**	**21 32 07.9**	**+0.4**
VLMS				AML	AML		21 32 09.0	
	comp=E,11992μm,0.1s							
VLMS				AML	AML		21 32 10.3	
	comp=N,12597μm,0.1s							
EVGI	**Lefkada island**	**0.44**	**17**	P		**Pg**	**21 32 04.2**	**-0.2**
EVGI				S		**Sb**	**21 32 11.6**	**-0.1**
EVGI	**Lefkada island**	**0.44**	**17**	P		**Pg**	**21 32 04.2**	**-0.2**
EVGI				S		**Sg**	**21 32 11.1**	**+0.9**
MGNA	**Meganis**	**0.51**	**27**	P		**Pg**	**21 32 05.3**	**-0.4**
MGNA				S		**Sb**	**21 32 13.5**	**-0.2**
MGNA				AML	AML		21 32 14.3	
	comp=E,4086μm,0.3s							
MGNA				AML	AML		21 32 14.5	
	comp=N,2445μm,0.1s							
ZAK2	**Zakynthos**	**0.52**	**142**	P		**Pg**	**21 32 05.9**	**0.0**
ZAK2				S		**Sb**	**21 32 14.9**	**+0.8**
LKD2	**Lefkada island**	**0.60**	**12**	P		**Pg**	**21 32 06.8**	**-0.6**
LKD2				S		**Sg**	**21 32 15.6**	**+0.2**
	comp=N,495nm,0.3s							
LKD2	**Lefkada island**	**0.60**	**12**	P		**Pg**	**21 32 07.3**	**-0.2**
LKD2				S		**Sg**	**21 32 15.4**	**0.0**
LKD2				AML	AML		21 32 23.2	
	comp=E,958μm,0.3s							
LKD2				AML	AML		21 32 23.9	
	comp=N,971μm,0.2s							
TSLK	**Tsoukalades, L**	**0.64**	**11**	P		**Pg**	**21 32 07.8**	**-0.3**
TSLK				S		**Sb**	**21 32 17.6**	**+0.2**
	comp=N,595nm,0.4s							
TSLK	**Tsoukalades, L**	**0.64**	**11**	P		**Pg**	**21 32 08.0**	**-0.1**
TSLK				S		**Sb**	**21 32 17.3**	**-0.1**
TSLK				AML	AML		21 32 24.4	
TSLK				AML	AML		21 32 24.8	
PDO	**Prodromos**	**0.67**	**54**	P		**Pg**	**21 32 08.5**	**-0.2**
PDO	**Prodromos**	**0.67**	**54**	P		**Pg**	**21 32 08.7**	**0.0**
RLS	**Riolos of Patr**	**0.78**	**100**	P		**Pg**	**21 32 10.3**	**-0.5**
RLS	**Riolos of Patr**	**0.78**	**100**	P		**Pg**	**21 32 10.1**	**-0.7**
RLS				S		**Sg**	**21 32 20.9**	**-0.1**
RLS				AML	AML		21 32 26.0	
	comp=N,682μm,0.2s							
RLS				AML	AML		21 32 28.1	
	comp=E,422μm,0.3s							
PVO	**Paravola**	**0.91**	**63**	P		**Pb**	**21 32 13.2**	**-0.1**
PVO				S		**Sn**	**21 32 27.9**	**+0.8**
	comp=E,690nm,0.4s							
PVO	**Paravola**	**0.91**	**63**	P		**Pb**	**21 32 13.1**	**-0.2**
PVO				S		**Sg**	**21 32 25.7**	**+0.5**
PVO				AML	AML		21 32 33.9	
	comp=E,950μm,0.7s							
PVO				AML	AML		21 32 35.8	
	comp=N,1186μm,0.4s							
DRO	**Drossia**	**0.99**	**104**	P		**Pb**	**21 32 14.5**	**-0.2**
DRO				S		**Sb**	**21 32 27.7**	**0.0**
DRO				AML	AML		21 32 34.1	
	comp=N,1259μm,0.3s							
DRO				AML	AML		21 32 34.3	
	comp=E,1488μm,0.4s							
EFP	**Efpalio**	**1.13**	**78**	P		**Pb**	**21 32 16.6**	**-0.4**
AMT	**Artemida-Makis**	**1.17**	**124**	P		**Pn**	**21 32 17.3**	**-0.4**
AMT	**Artemida-Makis**	**1.17**	**124**	P		**Pn**	**21 32 17.4**	**-0.3**
AMT				S		**Sb**	**21 32 33.1**	**+0.3**
AMT				AML	AML		21 32 44.1	
	comp=E,508μm,0.5s							
AMT				AML	AML		21 32 45.4	
	comp=N,482μm,0.5s							
LAKA	**Lakka**	**1.17**	**88**	P		**Pn**	**21 32 17.2**	**-0.5**
LAKA				S		**Sg**	**21 32 34.7**	**+1.3**
	comp=N,195nm,0.6s							
LAKA	**Lakka**	**1.17**	**88**	P		**Pn**	**21 32 17.2**	**-0.5**
LAKA				S		**Sn**	**21 32 33.8**	**+0.2**
LAKA				AML	AML		21 32 44.4	
	comp=N,414μm,0.8s							
LAKA				AML	AML		21 32 46.7	
	comp=E,426μm,0.6s							
ANX	**Ano Chora**	**1.19**	**70**	P		**Pn**	**21 32 17.7**	**-0.3**
ANX	**Ano Chora**	**1.19**	**70**	P		**Pn**	**21 32 17.7**	**-0.3**
ANX				S		**Sg**	**21 32 34.6**	**+0.5**
ANX				AML	AML		21 32 42.8	
	comp=E,1303μm,0.6s							
ANX				AML	AML		21 32 45.0	
	comp=N,873μm,0.8s							
SERG	**Sergoula**	**1.25**	**80**	P		**Pn**	**21 32 18.2**	**-0.6**
SERG	**Sergoula**	**1.25**	**80**	P		**Pn**	**21 32 18.5**	**-0.3**
SERG				S		**Sn**	**21 32 35.7**	**+0.2**
SERG				AML	AML		21 32 46.3	
	comp=E,494μm,0.5s							
SERG				AML	AML		21 32 47.5	
	comp=N,653μm,0.5s							
TRIZ	**Trizonia**	**1.25**	**82**	P		**Pn**	**21 32 18.4**	**-0.4**
TRIZ	**Trizonia**	**1.25**	**82**	P		**Pn**	**21 32 18.5**	**-0.4**
EVR	**Evrytania**	**1.25**	**55**	P		**Pn**	**21 32 18.9**	**0.0**
KALE	**Kalithea**	**1.31**	**81**	P		**Pn**	**21 32 19.2**	**-0.4**
KALE	**Kalithea**	**1.31**	**81**	P		**Pn**	**21 32 19.3**	**-0.4**
KLV	**Kalavryta, Ach**	**1.32**	**96**	P		**Pn**	**21 32 19.9**	**+0.2**
KLV	**Kalavryta, Ach**	**1.32**	**96**	P		**Pn**	**21 32 20.0**	**+0.2**
KLV				S		**Sg**	**21 32 38.0**	**-0.1**
KLV				AML	AML		21 32 45.8	
	comp=E,269μm,0.4s							
KLV				AML	AML		21 32 49.9	
	comp=N,250μm,0.5s							
IGT	**Igoumenitsa**	**1.33**	**355**	P		**Pg**	**21 32 21.2**	**-0.1**
IGT				S		**Sg**	**21 32 39.7**	**+1.0**
IGT				AML	AML		21 32 46.9	
	comp=E,456μm,0.5s							
IGT				AML	AML		21 32 47.5	
	comp=N,244μm,0.5s							
MAKR	**Makrakomi, Fth**	**1.52**	**57**	P		**Pb**	**21 32 23.7**	**0.0**
ITM	**Ithomi**	**1.53**	**131**	P		**Pb**	**21 32 23.7**	**-0.1**
PYL	**PYLOS**	**1.64**	**142**	P		**Pb**	**21 32 25.8**	**+0.1**

*IDC **27** 21:37:10.7±0.5, 14°.04N×120°.68E,h115km±5km,mb3.9/18, mb1 4.0/18,mb1mx3.9/34,mbtmp4.2/18,MS3.2/2, Ms1 3.2/2,ms1mx2.8/36, Error ellipse: s-maj=18.2km s-min=14.0km az=76.0*
*MAN **27** 21:37:10.1, 14°.03N×120°.33E,h98km,mb5.2, ML4.2, MS4.4*
MAN Intensity II - Tagaytay City; Indang Cavite; Malabon City; Intensity I - Quezon City.
*NEIC **27** 21:37:11.6±2.6, 14°.11N±0°.06×120°.62E±0°.04, h121km±3km,mb4.5/31, Error ellipse: s-maj=9.2km s-min=5.2km az=195.0*
*DJA **27** 21:37:13.7±1.0, 14°.4N±4°.×12°.1E±°, h136km±9km, M4.5/12, mb4.5/12,mB4.5/1, Mw(mB)3.6/1*
ISC 27 21:37:11.4±0.6,14°.13N±0°.04×120°.47E±0°.05,h112km±5km, n119,σ1§56/133,mb4.5/54,§5C-7D,Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.45**	**209**	*e*P		**Pn**	**21 37 25.6**	**-2.6**
LUBP				*e*S		**Sn**	**21 37 38.4**	**-2.3**
TGY	**Tagaytay City**	**0.46**	**93**	P		**Pn**	**21 37 27.7**	**-0.5**
	3μm,0.3s,baz=47,slow=0.4,SNR=147							
TGY				S		**Sn**	**21 37 40.6**	**-0.3**
	12μm,0.3s,baz=45,slow=23,SNR=74							
TGY	**Tagaytay City**	**0.46**	**93**	*e*P		**Pn**	**21 37 27.3**	**-0.9**
TGY				*i* S		**Sn**	**21 37 41.6**	**+0.6**
LQP	**Lukban**	**1.04**	**91**	⇑*i*P		**Pn**	**21 37 33.0**	**-0.4**
LQP				*i* S		**Sn**	**21 37 49.5**	**-0.5**
BOAC	**Boac**	**1.49**	**116**	*e*P		**Pn**	**21 37 38.1**	**-0.1**
BOAC				*e*S		**Sn**	**21 37 58.9**	**+0.3**
POLP	**Polilio Island**	**1.55**	**67**	*e*P		**Pn**	**21 37 39.2**	**+0.4**
POLP				*e*S		**Sn**	**21 38 01.1**	**+1.4**
PCPH	**Palayan**	**1.55**	**23**	⇓*e*P		**Pn**	**21 37 37.7**	**-1.2**
SCZP	**Santa Cruz**	**1.73**	**342**	*e*P		**Pn**	**21 37 40.4**	**-0.6**
SCZP				*e*S		**Sn**	**21 38 02.7**	**-1.0**
GQP	**Guinayangan**	**1.93**	**96**	⇓*i*P		**Pn**	**21 37 44.2**	**+0.7**
GQP				*i* S		Sn	21 38 17.9	+10
BOLP	**Bolinao**	**2.31**	**347**	*e*P		**Pn**	**21 37 47.7**	**-0.7**
CAUP	**Cauayan**	**3.09**	**25**	*e*P		**Pn**	**21 37 59.4**	**+0.8**
CAUP				*e*S		Sn	21 38 52.0	+17
RCP	**Roxas**	**3.38**	**139**	⇑*e*P		**Pn**	**21 38 02.4**	**-0.1**
SZP	**Santa**	**3.41**	**360**			**Pn**	**21 38 04.5**	**+1.7**
SZP						**Sn**	**21 38 40.9**	**-1.7**
PALP	**Palanan**	**3.48**	**33**	*e*P		**Pn**	**21 38 03.4**	**-0.4**
PALP				*e*S		**Sn**	**21 38 45.2**	**+1.0**
PVCP	**Virac**	**3.62**	**98**	*e*P		**Pn**	**21 38 05.7**	**0.0**
PVCP				*e*S		Pn	21 38 20.3	+15
SIPP	**Brgy, Tapao**	**3.78**	**360**	⇓*e*P		Pn	21 38 00.4	-7.4
SIPP				*e*S		Sn	21 39 06.8	+15
APYP	**Conner**	**3.79**	**11**	*e*P		**Pn**	**21 38 09.1**	**+1.2**
APYP				*e*S		**Sn**	**21 38 55.1**	**+3.3**
DAV	**Davao City (W)**	**8.62**	**144**	LR		LR	21 42 59.5	
	comp=Z,146nm,20.3s,baz=311,slow=41							
TWG	**Pinlang**	**8.67**	**4**	Pn		**Pn**	**21 39 13.1**	**-0.8**
TWG						**Sn**	**21 40 43.1**	**-6.8**
KKM	**Kota Kinabalu**	**9.05**	**208**	Pn		**Pn**	**21 39 22.2**	**+2.9**
KKM						**Sn**	**21 40 57.4**	**-2.2**
YULB	**Yu-li**	**9.25**	**5**	Pn		**Pn**	**21 39 19.6**	**-2.3**
SSLB	**Suanglung**	**9.62**	**3**	Pn		**Pn**	**21 39 27.2**	**+0.3**
KNMB	**Chin-men Tao**	**10.47**	**350**	Pn		**Pn**	**21 39 39.0**	**+0.7**
QIZ	**Qiongzhong**	**11.29**	**

	comp=Z,17nm,0.6s							
ODAN	**Odare**	**33.37**	**298**	*e*P		**P**	**21 43 40.5**	**+1.2**
	comp=Z,47nm,0.6s							
RAMN	**Ramite**	**34.07**	**297**	*e*P		**P**	**21 43 46.9**	**+1.4**
	comp=Z,40nm,0.7s							
JIRN	**Jiri**	**34.61**	**298**	*e*P		**P**	**21 43 51.5**	**+1.2**
	comp=Z,81nm,0.6s							
GUN	**Gumba**	**34.94**	**299**	*e*P		**P**	**21 43 54.3**	**+1.2**
	comp=Z,80nm,0.7s							
PKI	**Pulchoki**	**35.25**	**298**	*e*P		**P**	**21 43 56.2**	**+0.4**
	comp=Z,28nm,0.6s							
PKIN	**Phulchoki**	**35.27**	**298**	*e*P		**P**	**21 43 56.0**	**+0.2**
	comp=Z,24nm,0.6s							
KKN	**Kakani**	**35.42**	**298**	*e*P		**P**	**21 43 57.6**	**+0.5**
	comp=Z,27nm,0.7s							
ULN	**Ulaanbaatar**	**35.44**	**344**	P		**P**	**21 43 56.8**	**-0.1**
DMN	**Daman**	**35.52**	**298**	*e*P		**P**	**21 43 58.7**	**+0.7**
SONM	**Songino Array**	**35.59**	**344**	P		**P**	**21 43 58.6**	**+0.5**
	comp=Z,22nm,0.6s,baz=162,slow=10,SNR=193							
GKN	**Gorkha**	**36.03**	**298**	*e*P		**P**	**21 44 02.6**	**+0.4**
	comp=Z,28nm,0.7s							
WRA	**Warramunga Arr**	**36.50**	**158**	P		**P**	**21 44 03.6**	**-2.4**
	comp=Z,0.5nm,0.5s,baz=337,slow=9.4,SNR=5.5							
WRA	**Warramunga Arr**	**36.50**	**158**	IAmb		IAmb	21 44 12.8	
	comp=Z,0.2nm,1.1s							
KOLN	**Koldanda**	**36.86**	**298**	*e*P		**P**	**21 44 09.9**	**+0.6**
	comp=Z,14nm,0.8s							
DANN	**Dangsing**	**36.86**	**299**	*e*P		**P**	**21 44 09.8**	**+0.4**
	comp=Z,42nm,0.7s							
ASAR	**Alice Springs**	**39.79**	**161**	P		**P**	**21 44 31.9**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=338,slow=6.5,SNR=11							
ASAR	**Alice Springs**	**39.79**	**161**	P		**P**	**21 44 30.9**	**-2.7**
WMQ	**Urumqi**	**40.73**	**323**	*e*P		**P**	**21 44 42.8**	**+1.6**
WMQ				pmax		pmax		
	comp=Z,13nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,190nm,6.3s							
MKAR	**Makanchi Array**	**45.56**	**324**	P		**P**	**21 45 21.0**	**+1.0**
	comp=Z,3.0nm,0.7s,baz=129,slow=9.0,SNR=44							
MKAR				PcP		**PcP**	**21 46 56.5**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=103,slow=5.5,SNR=5.2							
MAKZ	**Makanchi**	**45.75**	**323**	P		**P**	**21 45 21.3**	**-0.1**
MAKZ				IAmb		IAmb	21 45 23.0	
	comp=Z,4.0nm,0.7s							
KSH	**Kashi**	**46.45**	**312**	P		**P**	**21 45 30.5**	**+3.3**
KSH				pP		sP	21 46 02.5	-2.6
KSH				pmax		pmax		
	comp=Z,21nm,1.0s							
KSH				pmax		pmax		
	comp=Z,620nm,5.4s							
NRN	**Naryn**	**47.12**	**314**	P		**P**	**21 45 33.6**	**+1.0**
NRN				IAmb		IAmb	21 45 35.2	
	comp=Z,12nm,1.0s							
KZA	**Kyzart**	**47.88**	**315**	P		**P**	**21 45 40.8**	**+2.1**
	SNR=8.2							
KBK	**Karagaybulak**	**48.30**	**315**	P		**P**	**21 45 43.5**	**+1.9**
	SNR=10							
UCH	**Uchtor**	**48.45**	**314**	P		**P**	**21 45 45.0**	**+2.0**
	SNR=19							
CHMS	**Chumysh**	**48.57**	**316**	P		**P**	**21 45 45.0**	**+1.6**
	SNR=7.9							
ZAA0	**Zalesovo Array**	**48.58**	**333**	P		**P**	**21 45 42.4**	**-0.9**
ZAA0				IAmb		IAmb	21 45 44.1	
	comp=Z,8.4nm,1.2s							
ZALV	**Zalesovo Beam**	**48.58**	**333**	P		**P**	**21 45 43.2**	**0.0**
	comp=Z,2.7nm,0.5s,baz=122,slow=7.2,SNR=14							
FRU1	**Bishkek**	**48.58**	**315**	P		**P**	**21 45 44.1**	**+0.6**
FRU1				IAmb		IAmb	21 45 46.1	
	comp=Z,12nm,1.0s							
AAK	**Ala-Archa**	**48.61**	**315**	P		**P**	**21 45 45.9**	**+2.0**
	SNR=5.2							
AAK	**Ala-Archa**	**48.61**	**315**	P		**P**	**21 45 44.5**	**+0.6**
AAK				IAmb		IAmb	21 45 47.3	
	comp=Z,4.9nm,1.0s							
PETK	**Petropavlovsk-**	**48.76**	**29**	P		**P**	**21 45 44.3**	**-0.4**
	comp=Z,3.8nm,0.7s,baz=184,slow=5.9,SNR=4.1							
USP	**Ospenovka**	**48.84**	**316**	P		**P**	**21 45 46.9**	**+1.3**
	SNR=9.9							
AML	**Almayashu**	**48.98**	**314**	P		**P**	**21 45 48.9**	**+1.8**
	SNR=12							
EKS2	**Erkin-Say**	**49.11**	**315**	P		**P**	**21 45 49.4**	**+1.7**
	SNR=14							
KURK	**Kurchatov**	**49.71**	**326**	P		**P**	**21 45 52.9**	**+0.9**
KK31	**Karatay Array**	**51.52**	**314**	P		**P**	**21 46 06.7**	**+1.0**
KK31				IAmb		IAmb	21 46 07.5	
	comp=Z,11nm,0.8s							
KK31				PcP		**PcP**	**21 47 18.8**	**+0.5**
KKAR	**Karatay Array**	**51.52**	**314**	P		**P**	**21 46 06.8**	**+1.1**
KKAR				IAmb		IAmb	21 46 07.5	
	comp=Z,11nm,0.8s							
BRVK	**Borovoye**	**55.37**	**326**	P		**P**	**21 46 34.5**	**+0.8**
HRA	**Herat**	**56.02**	**302**	P		**P**	**21 46 38.7**	**-0.2**
HRA				IAmb		IAmb	21 46 40.4	
	comp=Z,3.1nm,0.9s							
TIXI	**Tiksi**	**57.72**	**3**	P		**P**	**21 46 48.4**	**-1.6**
TIXI				IAmb		IAmb	21 46 48.9	
	comp=Z,2.6nm,0.7s							
GEYT	**Alibeck**	**59.70**	**306**	P		**P**	**21 47 05.7**	**+1.3**
	comp=Z,3.9nm,0.8s,baz=100,slow=5.0,SNR=9.7							
ARU	**Arti**	**62.91**	**327**	P		**P**	**21 47 24.3**	**-1.2**
RAYN	**Ar Rayn**	**70.90**	**290**	P		**P**	**21 48 15.7**	**-1.2**
RAYN				IAmb		IAmb	21 48 18.2	
	comp=Z,6.2nm,0.9s							
KLMR	**Klimovskoe**	**73.37**	**330**	*e*P		**P**	**21 48 27.8**	**-3.0**
KLMR				AMP			21 48 30.9	
	comp=Z,21nm,1.2s							
ILAR	**Eielson Array**	**78.47**	**26**	P		**P**	**21 48 57.9**	**-1.8**
	comp=Z,0.4nm,0.8s,baz=264,slow=8.8,SNR=4.5							
ARCES	**ARCESS Array B**	**78.61**	**339**	P		**P**	**21 49 00.1**	**-0.3**
	comp=Z,5.0nm,0.9s,baz=60,slow=4.8,SNR=4.6							
ARCES	**ARCESS Array B**	**78.61**	**339**	P		**P**	**21 48 59.7**	**-0.7**
BRTR	**Keskin Array B**	**78.71**	**308**	P		**P**	**21 49 01.8**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=133,slow=4.2,SNR=7.2							
FINES	**FINESS Array B**	**79.81**	**331**	P		**P**	**21 49 06.3**	**-0.7**
	comp=Z,3.7nm,0.9s,baz=55,slow=4.9,SNR=13							
TESR	**Tescani**	**82.49**	**316**	⇑P		**P**	**21 49 21.3**	**-0.2**
VRI	**Vrincioaia**	**82.57**	**315**	⇓P		**P**	**21 49 21.7**	**-0.3**
BURAR	**Bucovina Array**	**83.19**	**317**	⇓P		**P**	**21 49 25.3**	**0.0**
BUR08	**Bucovina Ar. S**	**83.20**	**317**	P		**P**	**21 49 25.6**	**+0.2**
BUR08				IAmb		IAmb	21 49 27.2	
	comp=Z,16nm,1.4s							
VOIR		**83.82**	**315**	⇓P		**P**	**21 49 28.5**	**0.0**
KOLS	**Kolonicke sedl**	**84.77**	**319**	*e*P		**P**	**21 49 35.3**	**+2.1**
CRVS	**Cervenica-Dubn**	**85.30**	**319**	*e*P		**P**	**21 49 36.5**	**+0.7**
VTS	**Vitosha**	**85.79**	**313**	⇓P		**P**	**21 49 38.4**	**-0.2**
OJC	**Ojcow**	**85.96**	**321**	P		**P**	**21 49 38.8**	**-0.2**
OJC				IAmb		IAmb	21 49 39.8	
	comp=Z,8.6nm,0.8s							
NB2	**NORSAR Subarra**	**86.78**	**333**	P		**P**	**21 49 41.3**	**-1.6**
	comp=Z,21nm,1.2s,baz=68,slow=5.1							
NB2	**NORSAR Subarra**	**86.78**	**333**	P		**P**	**21 49 41.3**	**-1.6**
	baz=68,slow=5.1							
NOA	**NORSAR Array B**	**86.78**	**333**	P		**P**	**21 49 41.6**	**-1.3**
	comp=Z,4.0nm,0.8s,baz=68,slow=4.7,SNR=10							
GERES	**GERESS Array B**	**90.16**	**321**	P		**P**	**21 49 58.8**	**-0.4**
	comp=Z,1.2nm,0.8s,baz=74,slow=4.7,SNR=8.6							
YKA	**Yellowknife Ar**	**92.47**	**22**	P		**P**	**21 50 08.9**	**-0.6**
	comp=Z,2.4nm,0.8s,baz=308,slow=4.5,SNR=25							

IDC 27 21:55:23.2±17.0, 28.09N×139.77E, h500km±190km, mb2.7/4, mb1 2.9/4, mb1mx2.6/25, mbtmp3.6/4, Error ellipse: s-maj=175.6km s-min=20.7km az=72.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**32.52**	**316**	P		P	P	22 01 11.8	-0.3
	0.2nm,0.4s,baz=127,slow=7.5,SNR=4.1								
WRA	**Warramunga Arr**	**48.03**	**187**	P		P	P	22 03 16.4	-0.1
	0.8nm,0.9s,baz=1.5,slow=5.1,SNR=6.6								
MKAR	**Makanchi Array**	**48.19**	**309**	P		P	P	22 03 17.6	+0.1
	0.2nm,0.4s,baz=87,slow=10,SNR=9.1								
FINES	**FINESS Array B**	**76.11**	**333**	P		P	P	22 06 18.7	0.0
	1.7nm,0.9s,baz=69,slow=4.6,SNR=5.7								

PDG ***27*** *21:57:23.9±0.3, 43.13N×17.97E, h11km, MD3.1/2, ML2.9/14, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
BEO ***27*** *21:57:24.5±0.3, 43.13N×18.03E, h0km, ML2.7/10*
RHSSO ***27*** *21:57:24.9±0.2, 43.13N×18.00E, h6km±2km, ML2.9/15*
PRU ***27*** *21:57:26.3±0.0, 43.22N×18.09E, h0km*
ISC 27 21:57:24.5±1.1, 43.14N±0.02×18.02E±0.02, h3km±9km, n84, σ0.89/147, 7C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.36**	**221**	*i* Pg			**Pg**	**21 57 31.2**	**-0.1**
STON						Sg	**Sg**	**21 57 36.5**	**+0.5**
STON	**Ston**	**0.36**	**221**	*e*Pg			**Pg**	**21 57 31.3**	**-0.1**
STON						*e*Sg	**Sg**	**21 57 35.1**	**-0.9**
STON	**Ston**	**0.36**	**221**	⇑*i*Pg			**Pg**	**21 57 31.2**	**-0.1**
STON						*e*Sg	**Sg**	**21 57 36.7**	**+0.7**
BRY	**Bratogost**	**0.45**	**122**	⇑*i*Pg			**Pg**	**21 57 33.2**	**+0.1**
BRY						*e*Sg	**Sg**	**21 57 40.5**	**+1.5**
BRY	**Bratogost**	**0.45**	**122**	*e*Pg			**Pg**	**21 57 32.9**	**-0.2**
BRY						*e*Sg	**Sb**	**21 57 40.9**	**-1.3**
DBRK	**Dubrovnik**	**0.48**	**169**	*e*Pg			**Pg**	**21 57 33.4**	**-0.3**
DBRK						Sg	**Sb**	**21 57 41.7**	**-1.2**
TREB	**Trebinje**	**0.49**	**150**	*e*Pg			**Pg**	**21 57 33.5**	**-0.3**
TREB						*e*Sg	**Sg**	**21 57 38.9**	**-1.2**
TREB	**Trebinje**	**0.49**	**150**	⇑*i*Pg			**Pg**	**21 57 33.5**	**-0.3**
TREB						*e*Sg	**Sb**	**21 57 41.8**	**-1.4**
UPM	**Unac-Piva**	**0.65**	**84**	*e*Pg			**Pg**	**21 57 36.8**	**-0.2**
UPM						*e*Sg	**Sb**	**21 57 46.8**	**-1.3**
UPM	**Unac-Piva**	**0.65**	**84**	*e*Pg			**Pg**	**21 57 36.7**	**-0.2**
UPM						*e*Sg	**Sb**	**21 57 47.8**	**-0.3**
MAKA	**Makarska**	**0.75**	**282**	*i* Pg			**Pg**	**21 57 38.3**	**-0.5**
MAKA						Sg	**Sb**	**21 57 50.5**	**-0.2**
HCY	**Herceg Novi**	**0.77**	**153**	*e*Pg			**Pg**	**21 57 38.4**	**-0.9**
HCY						*e*Sg	**Sg**	**21 57 49.9**	**+0.5**
HCY	**Herceg Novi**	**0.77**	**153**	*e*Pg			**Pg**	**21 57 38.2**	**-1.1**
HCY						*e*Sg	**Sb**	**21 57 50.7**	**-0.8**
NKME	**Niksic**	**0.78**	**118**	*e*Pg			**Pg**	**21 57 39.0**	**-0.4**
NKME						*e*Sg	**Sb**	**21 57 51.7**	**0.0**
NKY	**Niksic**	**0.78**	**114**	*e*Pg			**Pg**	**21 57 39.6**	**+0.1**
NKY						*e*Sg	**Sb**	**21 57 52.0**	**+0.1**
CEME	**Cevo**	**0.89**	**132**	*e*Pg			**Pg**	**21 57 40.7**	**-0.8**
CEME						*e*Sg	**Sb**	**21 57 55.0**	**+0.2**
PLE	**Pljevlja**	**1.02**	**79**	*e*Pg			**Pg**	**21 57 43.5**	**-0.5**
PLE						*e*Sg	**Sn**	**21 58 00.4**	**-0.2**
BUM	**Brajici-Budva**	**1.06**	**142**	*e*Pg			**Pg**	**21 57 43.7**	**-1.0**
BUM						*e*Sg	**Sb**	**21 58 00.5**	**+0.8**
RUDO	**Rudo**	**1.09**	**64**	⇑*i*Pg			**Pg**	**21 57 44.7**	**-0.8**
RUDO						*e*Sg	**Sb**	**21 58 00.7**	**0.0**
KOME	**Kolasin**	**1.13**	**104**	*e*Pg			**Pg**	**21 57 45.8**	**-0.4**
KOME						*e*Sg	**Sn**	**21 58 03.9**	**+0.5**
PDG	**Podgorica**	**1.15**	**128**	*e*Pg			**Pg**	**21 57 46.4**	**-0.2**
PDG						*e*Sg	**Sg**	**21 58 00.7**	**-0.8**
PDG	**Podgorica**	**1.15**	**128**	⇓*i*Pg			**Pg**	**21 57 45.6**	**-1.0**
PDG						*e*Sg	**Sb**	**21 58 02.4**	**+0.1**
TTG	**Podgorica**	**1.15**	**128**	*e*Pg			**Pg**	**21 57 45.8**	**-0.8**
TTG						*e*Sg	**Sn**	**21 58 04.0**	**+0.3**
HAPS	**Han Pijesak,Bl**	**1.16**	**35**	*e*Pg			**Pg**	**21 57 46.5**	**-0.3**
HAPS						*e*Sg	**Sg**	**21 58 00.1**	**-1.6**
HAPS	**Han Pijesak,Bl**	**1.16**	**35**	*e*Pg			**Pg**	**21 57 46.3**	**-0.5**
HAPS						*e*Sg	**Sg**	**21 58 01.9**	**0.0**
BBLS	**Lazići**	**1.24**	**54**	*e*Pg			**Pg**	**21 57 47.7**	**-0.6**
BBLS						*e*Sg	**Sg**	**21 58 04.5**	**+0.1**
BBLS	**Lazići**	**1.24**	**54**	⇓*i*Pg			**Pg**	**21 57 46.9**	**-1.4**
BBLS						*e*Sg	**Sb**	**21 58 05.0**	**0.0**
DRME	**Dracevica, Mon**	**1.28**	**138**	⇓*i*Pg			**Pg**	**21 57 48.5**	**-0.5**
DRME						*e*Sg	**Sb**	**21 58 06.3**	**+0.2**
DRME	**Dracevica, Mon**	**1.28**	**138**	*e*Pg			**Pg**	**21 57 48.2**	**-0.8**
DRME						*e*Sg	**Sn**	**21 58 08.2**	**+1.3**
IVA	**Berane**	**1.40**	**100**	*e*Pg			**Pn**	**21 57 50.7**	**-0.3**
IVA						*e*Sg	**Sn**	**21 58 12.2**	**+2.2**
MGRS	**Mrkonjic Grad**	**1.45**	**332**	⇑*i*Pg			**Pn**	**21 57 51.2**	**-0.4**
MGRS						*e*Sg	**Sn**	**21 58 11.2**	**+0.1**
KIJV	**Kijevo**	**1.46**	**307**	*e*Pn			**Pn**	**21 57 51.9**	**+0.1**
KIJV						Sn	**Sn**	**21 58 12.3**	**+1.0**
ULC	**Ulcinj**	**1.48**	**142**	*e*Pg			**Pn**	**21 57 51.5**	**-0.5**
ULC						*e*Sg	**Sg**	**21 58 13.4**	**+1.3**
PVY	**Plav**	**1.52**	**110**	⇓*i*Pg			**Pb**	**21 57 53.2**	**-0.3**
PVY						*i* Sg	**Sg**	**21 58 15.3**	**+1.8**
DOB	**Doboj**	**1.59**	**2**	*e*Pg			**Pn**	**21 57 53.9**	**+0.3**
IVAS	**Ivanjica**	**1.61**	**74**	*e*Pg			**Pn**	**21 57 53.5**	**-0.4**
BLY	**Banja Luka**	**1.72**	**340**	*e*Pg			**Pn**	**21 57 55.7**	**+0.4**
BLY						*e*Sg	**Sg**	**21 58 20.9**	**+1.2**
BLY	**Banja Luka**	**1.72**	**340**	⇑*i*Pn			**Pn**	**21 57 55.3**	**0.0**
BLY						*e*Sn	**Sn**	**21 58 17.9**	**+0.2**
DIVS	**Divibare**	**1.72**	**56**	*e*Pn			**Pn**	**21 57 55.0**	**-0.4**
DIVS						*e*Sg	**Sb**	**21 58 18.5**	**-0.4**
DIVS	**Divibare**	**1.72**	**56**	⇑*i*Pn			**Pn**	**21 57 54.8**	**-0.6**
DIVS						*e*Sn	**Sn**	**21 58 18.3**	**+0.4**
TEKS	**Tekeris**	**1.78**	**37**	*e*Pn			**Pn**	**21 57 55.7**	**-0.4**
TEKS						*e*Sg	**Sb**	**21 58 20.7**	**+0.2**
TEKS	**Tekeris**	**1.78**	**37**	*e*Pn			**Pn**	**21 57 55.8**	**-0.4**
TEKS						*e*Sn	**Sn**	**21 58 19.8**	**+0.5**
ZIRJ	**Zirje**	**1.81**	**287**	*i* Pn			**Pn**	**21 57 55.4**	**-0.1**
ZIRJ						Sn	**Sn**	**21 58 20.1**	**+0.2**
MORI	**Morici**	**1.83**	**294**	*e*Pn			**Pn**	**21 57 57.7**	**+0.8**
MORI						Sn	**Sb**	**21 58 22.0**	**+0.1**
TRUS	**Trudelj**	**2.04**	**57**	*e*Pg			**Pb**	**21 58 02.7**	**+0.5**
GRUS	**Gruza**	**2.10**	**68**	*e*Pn			**Pn**	**21 58 00.3**	**-0.2**
UDBI	**Udbina**	**2.14**	**311**	*e*Pn			**Pb**	**21 58 03.1**	**-0.9**
UDBI						Sn	**Sb**	**21 58 32.0**	**+1.1**
TIR	**Tirane**	**2.25**	**142**	*e*Pn			**Pn**	**21 58 02.6**	**0.0**
SELS	**Selova**	**2.27**	**87**	*e*Pn			**Pn**	**21 58 03.0**	**+0.2**
DUGI	**Dugi Otok**	**2.32**	**293**	*i* Pn			**Pn**	**21 58 04.5**	**+1.0**
FRGS	**Fruska Gora**	**2.39**	**32**	*e*Pn			**Pn**	**21 58 05.1**	**+0.5**
FRGS	**Fruska Gora**	**2.39**	**32**	*e*Sn			**Sn**	**21 58 34.9**	**+0.5**
NVLJ	**Novalja**	**2.69**	**303**	*e*Pn			**Pn**	**21 58 09.2**	**+0.6**
NVLJ						Sn	**Sb**	**21 58 45.6**	**-0.9**
BOVS	**Bovan**	**2.73**	**78**	*e*Pn			**Pn**	**21 58 09.1**	**-0.1**
SKO	**Skopje**	**2.78**	**114**	*i* Pn			**Pb**	**21 58 14.9**	**+0.1**
BARS	**Barje**	**2.80**	**95**	*e*Pn			**Pn**	**21 58 10.7**	**+0.5**
BARS	**Barje**	**2.80**	**95**	*e*Pn			**Pb**	**21 58 14.0**	**-1.2**
ZAG	**Zagreb**	**3.06**	**332**	*e*Pn			**Pn**	**21 58 14.1**	**+0.4**
ZAG						Sn	**Sn**	**21 58 51.6**	**+1.0**
OZLJ	**Ozalj**	**3.08**	**324**	*i* Pn			**Pn**	**21 58 15.3**	**+1.3**
BOJS	**Bojanci**	**3.09**	**321**	*i* Pn			**Pn**	**21 58 15.1**	**+1.0**
BOJS						*i* Sn	**Sn**	**21 58 52.6**	**+1.1**
PTJ	**Puntijarka**	**3.13**	**333**	*i* Pn			**Pn**	**21 58 15.2**	**+0.4**
PTJ						Sn	**Sn**	**21 58 52.8**	**+0.1**
ZAGS	**Zajecar**	**3.14**	**76**	*e*Pn			**Pn**	**21 58 14.1**	**-0.7**
KALN	**Kalnik**	**3.19**	**340**	*e*Pn			**Pn**	**21 58 15.5**	**-0.1**
KALN						Sn	**Sn**	**21 58 53.8**	**-0.4**
CRES	**Cresnjev**	**3.25**	**327**	*e*Pn			**Pn**	**21 58 16.8**	**+0.4**
CRES						*e*Sn	**Sn**	**21 58 54.6**	**-1.0**
BOSS	**Bosilegrad**	**3.34**	**100**	*e*Pn			**Pn**	**21 58 18.2**	**+0.6**
RIY	**Rijeka**	**3.35**	**312**	*e*Sn			**Sn**	**21 58 56.7**	**-1.3**
ZAPS	**Zavoj**	**3.38**	**86**	*e*Pn			**Pn**	**21 58 19.3**	**+1.2**
STIP	**Stip**	**3.41**	**114**	*i* Pn			**Pn**	**21 58 21.1**	**+2.6**
BEHE	**Becsehely**	**3.45**	**346**	*e*Pn			**Pn**	**21 58 19.3**	**+0.3**
BEHE						*e*Sn	**Sn**	**21 58 59.5**	**-0.8**
CEY	**Cerknica**	**3.66**	**317**	*e*Pn			**Pn**	**21 58 22.2**	**+0.2**
CEY						*e*Sn	**Sn**	**21 59 04.3**	**-1.3**
VTS	**Vitosha**	**3.87**	**96**	*e*Pn			**Pn**	**21 58 25.3**	**+0.3**
SOKA	**Soboth**	**4.13**	**330**	*e*Pn			**Pn**	**21 58 28.8**	**+0.4**
	6.7nm,0.3s,SNR=23								
SOKA				*i* Sn			**Sn**	**21 59 15.9**	**-1.3**
	11nm,0.5s								
OBKA	**Obir**	**4.18**	**325**	*i* Pn			**Pn**	**21 58 30.7**	**+1.6**
	1.6nm,0.2s								
OBKA				*e*Sn			**Sn**	**21 59 19.5**	**+1.0**
	3.8nm,0.3s								
ARSA	**Arzberg**	**4.47**	**338**	*e*Pn			**Pn**	**21 58 33.8**	**+0.6**
	7.2nm,0.3s,SNR=5.4								
ARSA				*e*Sn			**Sn**	**21 59 24.7**	**-1.0**
	1.6nm,0.3s								
CONA	**Conrad Observa**	**5.02**	**343**	*e*Pn			**Pn**	**21 58 41.3**	**+0.5**
	0.7nm,0.2s								
CONA				*e*Sn			**Sn**	**21 59 39.1**	**-0.2**
	3.3nm,0.4s								
LTVH	**Ltavrtes, Hu**	**5.05**	**31**	Sn			**Sg**	**22 00 10.3**	**+3.6**
KBA	**Koelnbreinsper**	**5.14**	**322**	*i* Pn			**Pn**	**21 58 44.1**	**+1.6**
	0.9nm,0.2s								
KBA				*i* Sn			**Sn**	**21 59 41.4**	**-1.1**
	3.1nm,0.4s								
ABTA	**Abfaltersbach**	**5.32**	**315**	*i* Pn			**Pn**	**21 58 46.2**	**+1.4**
	0.4nm,0.1s								
ABTA				*e*Sn			**Sn**	**21 59 46.1**	**-0.6**
	1.1nm,0.2s								
VYHS	**Vyhne**	**5.39**	**6**	*e*PN			**Pn**	**21 58 45.2**	**-0.5**
VYHS				*e*SN			**Sn**	**21 59 47.7**	**-0.5**
MOA	**Molln**	**5.40**	**332**	*e*Pn			**Pn**	**21 58 47.3**	**+1.4**
	3.7nm,0.3s,SNR=8.8								
MOA				*e*Sn			**Sn**	**21 59 47.4**	**-1.1**
	11nm,0.6s								
WTTA	**Wattenberg**	**6.11**	**315**	*e*Pn			**Pn**	**21 58 56.3**	**+0.5**
	1.6nm,0.2s								
WTTA				*e*Sn			**Sn**	**22 00 05.9**	**-0.4**
	1.4nm,0.3s								
WATA	**Walderalm**	**6.19**	**315**	*i* Pn			**Pn**	**21 58 57.8**	**+1.0**
	1.8nm,0.2s								
WATA				*e*Sn			**Sn**	**22 00 08.1**	**-0.1**
	3.8nm,0.4s								
SQTA	**Sankt Quirin**	**6.31**	**313**	*i* Pn			**Pn**	**21 58 59.8**	**+1.4**
	0.6nm,0.2s								
SQTA				*e*Sn			**Sn**	**22 00 11.2**	**+0.1**
	3.0nm,0.4s								
KHC	**Kasperske Hory**	**6.74**	**334**	*e*PN			**Pn**	**21 59 04.9**	**+0.6**
KHC				*e*SN			**Sn**	**22 00 19.1**	**-2.4**

SJA ***27*** *22:15:18.4±0.6, 35.13S×72.53W, h37km±41km, ML3.9, MW3.7*
GUC ***27*** *22:15:27.8±0.7, 34.79S×71.59W, h44km±6km, ML3.9*
NEIC ***27*** *22:15:27.3±3.0, 34.66S±0.06×72.2W±0.2, h54km±5km, Error ellipse: s-maj=25.2km s-min=7.4km az=100.0*
IDC ***27*** *22:15:31.9±3.5, 34.79S×71.31W, h68km±24km, mb3.8/4, mb1 3.8/7, mb1mx3.6/33, mbtmp4.0/7, MS3.2/4, Ms1 3.3/4, ms1mx3.0/24, Error ellipse: s-maj=75.3km s-min=22.9km az=97.0*
ISC 27 22:15:28.3±0.8, 34.80S±0.05×71.76W±0.06, h57km±7km, n49, σ1.9/58, mb4.1/4, 9C-5D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GO05	**Huala**	**0.26**	**214**	⇓*e*P			**Pn**	**22 15 37.8**	**0.0**
GO05				*e*S			**Sn**	**22 15 44.7**	**+0.1**
GO05				IAML				22 15 46.2	
	comp=N,8μm,0.1s								
GO05	**Huala**	**0.26**	**214**				**Pn**	**22 15 37.8**	**0.0**
GO05	**Huala**	**0.26**	**214**	*e*P			**Pn**	**22 15 38.1**	**+0.3**
BO02	**Sierra Bellavi**	**0.80**	**90**	⇑*i*P			**Pn**	**22 15 42.3**	**-1.4**
BO02				*e*S			**Sn**	**22 15 52.6**	**-2.5**
BO02				IAML				22 15 56.6	
	comp=E,9μm,0.2s								
MT01	**Popeta**	**1.02**	**24**	⇑*i*P			**Pn**	**22 15 46.4**	**-0.1**
MT01				*e*S			**Sn**	**22 16 00.1**	**+0.2**
MT01				IAML				22 16 02.9	
	comp=E,7μm,0.3s								
ANTU	**Antumapu**	**1.54**	**38**	⇑*i*P			**Pn**	**22 15 53.6**	**+0.2**
ANTU				*e*S			**Sn**	**22 16 12.9**	**+0.5**
LMEL	**Las Melosas**	**1.60**	**54**	⇑*i*P			**Pn**	**22 15 54.3**	**-0.1**
LMEL				*e*S			**Sn**	**22 16 14.3**	**+0.2**
LMEL				IAML				22 16 15.5	
	comp=N,3μm,0.3s								
MT05	**Renca**	**1.64**	**31**	⇑*i*P			**P

53µm,0.4s
FSK Fiskardo 0.13 59 P **Pg 22 23 12.3 -0.2**
FSK Fiskardo 0.13 59 **Pg 22 23 12.4 -0.2**
FSK **Sg 22 23 14.5 +0.1**
ARG2 Argostoli 0.22 167 P **Pg 22 23 14.3 0.0**
ARG2 S **Sg 22 23 17.2 0.0**
ARG2 Argostoli 0.22 167 **Pg 22 23 14.3 0.0**
ARG2 **Sg 22 23 17.2 0.0**
VLS Valsamata 0.25 149 P **Pg 22 23 14.3 -0.6**
VLS S **Sg 22 23 18.2 -0.1**
49µm,0.5s
VLS Valsamata 0.25 149 P **Pg 22 23 14.6 -0.3**
VLS S **Sg 22 23 18.5 +0.3**
VLS AML AML 22 23 18.8
comp=E,92012µm,0.3s
VLS AML AML 22 23 22.0
comp=N,99250µm,0.5s
VLS Valsamata 0.25 149 **Pg 22 23 14.3 -0.6**
VLS **Sg 22 23 18.2 -0.1**
EVGI Lefkada island 0.29 39 P **Pg 22 23 15.6 0.0**
EVGI S **Sg 22 23 20.0 +0.5**
EVGI Lefkada island 0.29 39 P **Pg 22 23 15.7 0.0**
EVGI Lefkada island 0.29 39 **Pg 22 23 15.6 0.0**
EVGI **Sg 22 23 20.0 +0.5**
MGNA Meganis 0.39 48 **Pg 22 23 17.0 -0.5**
KFL Anninata 0.40 135 P **Pg 22 23 17.2 -0.6**
KFL S **Sg 22 23 23.1 +0.1**
comp=N,46µm,0.4s
KFL Anninata 0.40 135 P **Pg 22 23 17.1 -0.6**
KFL S **Sg 22 23 23.3 +0.2**
KFL AML AML 22 23 26.1
KFL AML AML 22 23 26.3
comp=N,75878µm,0.4s
KFL Anninata 0.40 135 **Pg 22 23 17.2 -0.6**
KFL **Sg 22 23 23.1 +0.1**
LKD2 Lefkada island 0.43 25 P **Pg 22 23 18.2 -0.2**
LKD2 S **Sg 22 23 24.3 +0.2**
comp=N,11µm,0.8s
LKD2 Lefkada island 0.43 25 P **Pg 22 23 18.2 -0.2**
LKD2 S **Sg 22 23 24.1 0.0**
LKD2 AML AML 22 23 26.2
comp=N,25430µm,0.8s
LKD2 AML AML 22 23 27.1
comp=E,16824µm,0.5s
LKD2 Lefkada island 0.43 25 **Pg 22 23 18.2 -0.2**
LKD2 **Sg 22 23 24.3 +0.2**
TSLK Tsoukalades, L 0.47 23 P **Pg 22 23 18.9 -0.1**
TSLK S **Sg 22 23 25.4 +0.3**
comp=E,19µm,0.9s
TSLK Tsoukalades, L 0.47 23 P **Pg 22 23 18.9 -0.1**
TSLK S **Sg 22 23 25.7 +0.7**
TSLK AML AML 22 23 31.9
comp=E,43737µm,0.9s
TSLK AML AML 22 23 32.2
comp=N,31134µm,0.6s
TSLK Tsoukalades, L 0.47 23 **Pg 22 23 18.9 -0.1**
VLMS Volimes, Zakyn 0.55 160 P **Pg 22 23 20.0 -0.6**
VLMS S **Sg 22 23 27.2 -0.5**
VLMS AML AML 22 23 29.5
comp=N,92955µm,0.5s
VLMS AML AML 22 23 31.5
comp=E,39116µm,0.3s
PDO Prodromos 0.63 71 P **Pg 22 23 21.4 -0.7**
PDO S **Sg 22 23 30.6 +0.3**
comp=E,24µm,0.7s
PDO Prodromos 0.63 71 P **Pg 22 23 21.5 -0.5**
PDO S **Sg 22 23 30.9 +0.6**
PDO AML AML 22 23 36.8
comp=N,35936µm,0.7s
PDO AML AML 22 23 38.4
comp=E,33611µm,0.6s
ZAK2 Zakynthos 0.71 148 P **Pg 22 23 23.4 -0.2**
RLS Riolos of Patr 0.89 112 P **Pg 22 23 25.8 -1.2**
RLS Riolos of Patr 0.89 112 P **Pg 22 23 25.8 -1.2**
RLS AML AML 22 23 48.3
comp=N,10414µm,1.3s
RLS AML AML 22 23 49.8
comp=E,8945µm,0.7s
RLS Riolos of Patr 0.89 112 **Pg 22 23 26.3 -0.6**
PVO Paravola 0.89 75 P **Pg 22 23 26.6 -0.5**
PVO S **Sg 22 23 39.4 +0.7**
comp=E,9µm,0.6s
PVO Paravola 0.89 75 P **Pg 22 23 26.6 -0.5**
PVO S **Sg 22 23 39.3 +0.7**
PVO AML AML 22 23 44.0
comp=N,23036µm,0.6s
PVO AML AML 22 23 45.0
comp=E,14456µm,0.7s
PVO Paravola 0.89 75 **Pg 22 23 26.6 -0.5**
UPR University Cam 1.08 95 P **Pg 22 23 29.4 -1.2**
DRO Drossia 1.11 113 P **Pg 22 23 30.1 -1.1**
DRO Drossia 1.11 113 P **Pg 22 23 29.8 -1.3**
DRO AML AML 22 23 53.3
comp=E,16920µm,0.5s
DRO AML AML 22 23 56.0
comp=N,17062µm,0.5s
DRO Drossia 1.11 113 **Pg 22 23 30.3 -0.9**
IGT Igoumenitsa 1.14 356 P **Pb 22 23 31.8 -0.2**
IGT Igoumenitsa 1.14 356 P **Pg 22 23 31.0 -0.8**
IGT S **Sb 22 23 47.0 -0.2**
IGT AML AML 22 23 54.1
comp=N,3453µm,0.6s
IGT AML AML 22 23 57.6
comp=E,6207µm,0.7s
IGT Igoumenitsa 1.14 356 **Pn 22 23 32.8 +0.4**
EFP Efpalio 1.17 88 P **Pg 22 23 30.6 -1.7**
EFP Efpalio 1.17 88 P **Pg 22 23 30.7 -1.7**
EFP S **Sb 22 23 48.0 +0.1**
EFP AML AML 22 23 54.2
comp=E,22748µm,0.7s
EFP AML AML 22 23 55.4
comp=N,16941µm,0.8s
EFP Efpalio 1.17 88 **Pg 22 23 31.1 -1.2**
ANX Ano Chora 1.19 80 P **Pg 22 23 31.4 -1.4**
ANX AML AML 22 23 55.4
comp=N,30118µm,0.5s
ANX AML AML 22 23 56.5
comp=E,17033µm,1.2s
ANX Ano Chora 1.19 80 **Pg 22 23 31.9 -0.9**
EVR Evrytania 1.20 64 P **Pg 22 23 31.4 -1.6**
EVR Evrytania 1.20 64 **Pg 22 23 31.6 -1.4**
LAKA Lakka 1.23 97 P **Pg 22 23 31.9 -1.7**
LAKA Lakka 1.23 97 P **Pg 22 23 31.7 -1.9**
LAKA S **Sg 22 23 49.7 +0.1**
LAKA AML AML 22 23 57.0
comp=N,8774µm,0.6s
LAKA AML AML 22 24 00.6
comp=E,7595µm,0.8s
LAKA Lakka 1.23 97 **Pg 22 23 32.2 -1.4**
SERG Sergoula 1.28 89 P **Pn 22 23 32.7 -1.7**
SERG Sergoula 1.28 89 P **Pn 22 23 32.7 -1.7**
SERG S **Sg 22 23 51.2 0.0**
SERG AML AML 22 23 57.3
comp=E,13158µm,0.6s
SERG AML AML 22 23 57.6
comp=N,12427µm,0.5s
SERG Sergoula 1.28 89 **Pn 22 23 33.0 -1.4**
TRIZ Trizonia 1.30 91 P **Pn 22 23 32.9 -1.7**
TRIZ Trizonia 1.30 91 P **Pn 22 23 32.7 -1.8**
JAN Janina 1.30 15 P **Pn 22 23 34.6 -0.1**
JAN S **Sn 22 23 52.6 +0.1**
JAN AML AML 22 23 59.7
comp=E,8513µm,0.7s
JAN AML AML 22 24 04.7
comp=N,5000µm,0.5s
AMT Artemida-Makis 1.33 130 P **Pn 22 23 33.9 -1.2**
AMT Artemida-Makis 1.33 130 P **Pn 22 23 34.8 -0.3**
AMT Artemida-Makis 1.33 130 **Pg 22 23 35.5 +0.1**
KALE Kalithea 1.35 90 P **Pn 22 23 33.8 -1.6**
KALE Kalithea 1.35 90 P **Pn 22 23 33.6 -1.8**
KALE AML AML 22 24 00.4
comp=N,11541µm,0.6s
KALE AML AML 22 24 02.1
comp=E,7062µm,0.8s
KALE Kalithea 1.35 90 **Pn 22 23 33.9 -1.4**
KLV Kalavryta, Ach 1.41 104 P **Pn 22 23 34.6 -1.5**
KLV Kalavryta, Ach 1.41 104 P **Pn 22 23 34.6 -1.5**
KLV S **Sb 22 23 54.4 -0.4**
KLV AML AML 22 24 03.7
comp=N,3322µm,0.5s
KLV AML AML 22 24 12.5
comp=E,4022µm,0.9s
MAKR Makrakomi, Fth 1.47 65 P **Pn 22 23 36.5 -0.6**
MAKR AML AML 22 24 05.7
comp=E,9597µm,0.8s
MAKR AML AML 22 24 08.8
comp=N,9764µm,0.7s
AGG Agios Georgios 1.62 67 P **Pn 22 23 39.0 -0.1**
AGG AML AML 22 24 11.7
comp=E,4979µm,1.1s
AGG AML AML 22 24 13.1
comp=N,3581µm,0.6s
AGG Agios Georgios 1.62 67 **Pn 22 23 39.1 +0.1**
ITM Ithomi 1.70 135 P **Pn 22 23 40.2 +0.1**
ITM AML AML 22 24 11.6
comp=E,3649µm,1.5s
ITM AML AML 22 24 15.8
comp=N,3794µm,0.5s
ITM Ithomi 1.70 135 **Pb 22 23 41.0 -0.6**
THL Klokotos Trika 1.70 46 P **Pn 22 23 40.0 -0.2**
KPRO Kipourio 1.72 25 P **Pb 22 23 41.8 -0.2**
KPRO AML AML 22 24 14.2
comp=E,5120µm,0.9s
KPRO AML AML 22 24 18.3
comp=N,5492µm,1.0s
AXAR Agios Charalam 1.79 77 P **Pb 22 23 43.0 -0.2**
AXAR AML AML 22 24 21.6
comp=E,11066µm,1.3s
AXAR AML AML 22 24 22.2
comp=N,11385µm,1.2s
PYL PYLOS 1.83 145 P **Pn 22 23 41.5 -0.4**
PYL PYLOS 1.83 145 P **Pn 22 23 41.6 -0.2**
PROD Prodromos 1.95 93 P **Pb 22 23 45.0 -0.9**
PROD AML AML 22 24 21.1
comp=N,4858µm,0.8s
PROD AML AML 22 24 22.7
comp=E,4563µm,0.8s
LKR Lokris 2.04 82 P **Pn 22 23 45.2 +0.5**
LTK Loutraki 2.04 100 P **Pn 22 23 45.3 +0.5**
LOUT Loutraki 2.05 101 P **Pb 22 23 46.3 -1.3**
NEST Nestorio 2.08 13 P **Pb 22 23 47.5 -0.6**
KZN Kozani 2.18 28 P **Pn 22 23 48.0 +1.2**
VIL2 Platees 2.25 94 P **Pb 22 23 49.5 -1.5**
SCTE Santa Cesarea 2.26 318 **Pn 22 23 48.8 +0.9**
LIT Litokhoron 2.34 43 **Pb 22 23 50.9 -1.6**
NEO Neokhori 2.37 67 P **Pn 22 23 50.2 +0.8**
NEO AML AML 22 24 36.0
comp=E,1386µm,0.6s
NEO AML AML 22 24 37.6
comp=N,1384µm,0.5s
DID Didima 2.39 111 P **Pn 22 23 50.5 +0.8**
FNA Florina 2.50 17 Pn **Pn 22 23 52.7 +1.5**
SKIA Skiathos 2.50 71 P **Pn 22 23 52.3 +1.2**
MRKA Markates 2.50 82 P **Pn 22 23 52.0 +0.9**
OHR Ohrid 2.73 6 *i* Pn **Pb 22 23 57.1 -2.1**
PTL Penteli 2.73 96 P **Pn 22 23 55.1 +0.8**
EREA Eretria 2.76 88 P **Pn 22 23 55.8 +1.1**
PAIG Paliouri 2.96 58 P **Pn 22 23 57.8 +0.3**
TIP Timpagrande 2.97 286 ⇑P **Pn 22 24 00.1 +2.4**
TIP Timpagrande 2.97 286 **Pn 22 23 59.1 +1.5**
TIR Tirane 2.98 352 ⇑P **Pn 22 23 58.8 +1.1**
TIR Tirane 2.98 352 **Pn 22 23 58.4 +0.6**
KTHA Kythira Island 3.00 135 P **Pn 22 23 58.1 +0.1**
PLG Polygyros 3.06 49 P **Pn 22 23 59.0 +0.1**
CGL1 Ceglie Messapi 3.21 316 *e*Pn **Pn 22 24 01.1 +0.2**
VAY Valandovo 3.36 29 *i* Pn **Pn 22 24 04.3 +1.4**
MASS Massafra 3.38 312 *e*Pn **Pn 22 24 03.2 0.0**
STIP Stip 3.56 22 *i* Pn **Pb 22 24 09.7 -3.7**
CEL Celeste 3.56 269 **Pn 22 24 06.6 +0.8**
MATE Matera 3.65 309 ⇑P **Pn 22 24 07.0 +0.1**
SKO Skopje 3.66 12 *i* Pn **Pg 22 24 20.2 +0.2**
ULC Ulcinj 3.68 346 *e*Pn **Pn 22 24 06.4 -1.0**
ULC *e*Sn **Sn 22 24 50.6 -0.4**
SG1 Sgolgore (BA) 3.79 311 *e*Pn **Pn 22 24 09.2 +0.4**
BAI Bari 3.85 316 *e*Pn **Pn 22 24 09.6 0.0**
DRME Dracevica, Mon 3.91 346 *e*Pn **Pn 22 24 10.3 -0.1**
DRME Dracevica, Mon 3.91 346 ⇑*i* Pn **Pn 22 24 10.0 -0.4**
DRME *e*Sn **Sn 22 24 56.2 -0.4**
BUM Brajici-Budva 4.07 344 ⇓*i* Pn **Pn 22 24 12.2 -0.6**
BUM *e*Sn **Sn 22 24 59.8 -1.0**
PDG Podgorica 4.13 348 ⇑P **Pn 22 24 14.5 +1.0**
PDG Podgorica 4.13 348 *e*Pn **Pn 22 24 13.7 +0.2**
PDG Podgorica 4.13 348 **Pn 22 24 13.5 0.0**
PDG **Sn 22 24 59.9 -2.2**
TTG Podgorica 4.13 348 *e*Pn **Pn 22 24 12.8 -0.7**
TTG *e*Sn **Sn 22 25 01.5 -0.6**
ACER Acerenza 4.21 306 **Pn 22 24 15.2 +0.6**
PVY Plav 4.21 355 *e*Pn **Pn 22 24 14.4 -0.4**
PVY *e*Sn **Sn 22 25 03.8 -0.5**
CEME Cevo 4.30 345 *e*Pn **Pn 22 24 15.2 -0.8**
CEME *e*Sn **Sn 22 25 06.2 -0.3**
HCY Herceg Novi 4.31 341 *e*Pn **Pn 22 24 14.5 -1.5**
HCY Herceg Novi 4.31 341 *e*Pn **Pn 22 24 14.5 -1.5**
HCY *e*Sn **Sn 22 25 05.7 -0.8**
SANT Santorini 4.49 115 **Pn 22 24 21.7 +3.2**
IVA Berane 4.49 355 *e*Pn **Pn 22 24 18.3 -0.3**
IVA *e*Sn **Sn 22 25 11.1 -0.1**
KOME Kolasin 4.50 351 *e*Pn **Pn 22 24 17.6 -0.1**
KOME *e*Sn **Sn 22 25 10.4 -1.1**
NKME Niksic 4.51 346 *e*Pn **Pn 22 24 18.3 -0.5**
NKME *e*Sn **Sn 22 25 10.5 -1.1**
NKY Niksic 4.55 347 ⇑*i* Pn **Pn 22 24 18.8 -0.6**
NKY *e*Sn **Sn 22 25 12.0 -0.6**
TREB Trebinje 4.60 341 *e*Pn **Pn 22 24 18.8 -1.2**
DBRK Dubrovnik 4.61 339 *e*Pn **Pn 22 24 18.6 -1.5**
DBRK Sn **Sn 22 25 09.7 -4.2**
BRY Bratogost 4.72 343 *e*Pn **Pn 22 24 19.7 -2.1**
BRY Bratogost 4.72 343 *e*Pn **Pn 22 24 20.6 -1.2**
BRY *e*Sn **Sn 22 25 15.6 -1.4**
VTS Vitosha 4.73 26 **Pn 22 24 22.7 +0.7**
VTS **Sn 22 25 14.4 -2.8**
IDI Anoyia 4.74 130 Pn **Pn 22 24 24.0 +2.1**
comp=N,0.7nm,0.3s,baz=262,slow=8.4,SNR=6.6
IDI Sn **Sn 22 25 20.7 +3.4**
comp=N,3.6nm,0.3s,baz=135,slow=23,SNR=13
VAE Valguarnera 4.84 261 Pn **Pn 22 24 24.7 +1.4**
comp=N,0.5nm,0.3s,baz=160,slow=16,SNR=3.2
SGRT San Giovanni R 4.91 315 **Pn 22 24 24.6 +0.2**
STON Ston 4.93 336 *i* Pn **Pn 22 24 23.2 -1.3**
STON Sn **Sn 22 25 17.8 -4.0**
STON Ston 4.93 336 *e*Pn **Pn 22 24 22.5 -2.0**
UPM Unac-Piva 4.94 347 *e*Pn **Pn 22 24 24.5 -0.3**
UPM Unac-Piva 4.94 347 *e*Pn **Pn 22 24 24.3 -0.5**
UPM *e*Sn **Sn 22 25 21.0 -1.4**
ALN Alexandroupoli 5.01 58 **Pn 22 24 25.1 -0.4**
PAOL Paolisi 5.23 302 **Pn 22 24 29.9 +1.2**
RUDO Rudo 5.28 352 *e*Pn **Pn 22 24 28.3 -1.0**
WDD Wied Dalam 5.36 243 Pn **Pn 22 24 28.6 -1.8**
WDD **Sn 22 25 26.3 -6.2**
BBLS Lazići 5.52 352 *e*Pn **Pn 22 24 33.0 +0.3**
MAKA Makarska 5.53 333 *i* Pn **Pn 22 24 31.8 -0.9**
MAKA Sn **Sn 22 25 33.8 -2.7**
CORL Corleone 5.63 267 Pn **Pn 22 24 34.8 +0.6**
DIVS Divibare 5.71 357 *e*Pn **Pn 22 24 34.1 -1.2**
HAPS Han Pijesak,Bl 5.79 349 *e*Pn **Pn 22 24 34.9 -1.6**
PLVB Pleven 5.92 31 ⇓P **Pn 22 24 40.8 +2.7**
KARP Karpathos 6.10 116 Pn **Pn 22 24 42.4 +1.8**
ELND Elena 6.14 41 ⇑P **Pn 22 24 42.1 +1.0**
INTR Introdacqua 6.16 308 **Pn 22 24 43.9 +2.4**
INTR **Sn 22 25 53.7 +1.4**
KIJV Kijevo 6.37 333 *e*Pn **Pn 22 24 43.4 -0.9**
KIJV Sn **Sn 22 25 54.5 -2.9**
ZIRJ Zirje 6.38 327 *e*Pn **Pn 22 24 43.1 -1.3**
ZIRJ Sn **Sn 22 25 53.3 -4.1**
MGRS Mrkonjic Grad 6.52 338 *e*Pn **Pn 22 24 44.5 -1.9**
MORI Morici 6.52 328 *e*Pn **Pn 22 24 45.7 -0.7**
FRGS Fruska Gora 6.77 356 *e*Pn **Pn 22 24 47.8 -2.1**
BLY Banja Luka 6.80 340 ⇓P **Pn 22 24 50.6 +0.5**
BLY Banja Luka 6.80 340 *e*Pn **Pn 22 24 48.8 -1.4**
BLY Banja Luka 6.80 340 **Pn 22 24 50.5 +0.4**
DUGI Dugi Otok 6.90 326 *e*Pn **Pn 22 24 50.8 -0.8**
DUGI Sn **Sn 22 26 07.4 -3.0**
UDBI Udbina 7.05 332 *i* Pn **Pn 22 24 53.8 0.0**
UDBI Sn **Sn 22 26 12.4 -1.9**
GZR Gura Zlata 7.21 13 ⇑P **Pn 22 24 57.5 +1.6**
BZS Buzias 7.27 7 ⇑P **Pn 22 24 56.5 -0.2**
NVLJ Novalja 7.44 328 *i* Pn **Pn 22 24 57.8 -1.1**
NVLJ Sn **Sn 22 26 20.1 -3.5**
ELL Elmali 7.71 99 Pn Pn 22 25 08.6 +5.8
MURB Monte Urbino 7.71 312 Pn **Pn 22 25 05.6 +2.8**
VOIR 7.84 25 ⇑P **Pn 22 25 06.5 +2.0**
MORH Mrgy, Hungar 7.93 351 *e*Pn **Pn 22 25 03.6 -2.0**
OZLJ Ozalj 8.10 335 *i* Pn **Pn 22 25 07.2 -0.8**
MLR Muntele Rosu 8.20 28 Pn **Pn 22 25 12.6 +3.1**
comp=N,0.3nm,0.3s,baz=267,slow=17,SNR=8.7
MLR Muntele Rosu 8.20 28 ⇑P **Pn 22 25 11.9 +2.4**
MLR Muntele Rosu 8.20 28 Pn **Pn 22 25 13.2 +3.7**
CRES Cresnjev 8.29 335 *e*Pn **Pn 22 25 08.9 -1.8**
CEY Cerknica 8.59 331 *e*Pn **Pn 22 25 13.9 -0.8**
OSSC Osservatorio P 8.63 309 Pn **Pn 22 25 17.4 +2.1**
OZUR 8.66 26 ⇑P **Pn 22 25 18.3 +2.5**
PLOR Plostina 8.77 30 ⇑P **Pn 22 25 19.5 +2.2**
LJU Ljubljana 8.80 332 *e*Pn **Pn 22 25 16.4 -1.3**
VRI Vrincioaia 8.81 30 ⇑P **Pn 22 25 21.5 +3.7**
TRI Trieste 8.83 328 Pn **Pn 22 25 17.2 -0.7**
SOKA Soboth 9.18 336 *i* Pn **Pn 22 25 21.7 -1.3**
comp=N,8.1nm,0.6s,SNR=14
SOKA *e*Sn **Sn 22 27 02.0 -4.6**
comp=N,4.1nm,0.6s
OBKA Obir 9.20 334 *e*Pn **Pn 22 25 24.2 +1.0**
comp=N,2.0nm,0.2s
OBKA *e*Sn **Sn 22 27 05.4 -1.6**
comp=N,9.2nm,0.5s
KEST Kesra 9.24 257 LR LR 22 29 33.1
comp=N,132nm,19.5s,baz=136,slow=41
VLC Villacollemand 9.50 311 Pn **Pn 22 25 29.0 +1.8**
ARSA Arzberg 9.55 339 *e*Pn **Pn 22 25 29.3 +1.3**
comp=N,1.1nm,0.3s
MYKA Terra Mystica 9.63 331 *e*Pn **Pn 22 25 29.9 +0.9**
comp=N,1.6nm,0.4s
CTI Castel Tesino 10.04 322 **Pn 22 25 33.5 -1.2**
CTI Sn **Sn 22 27 23.7 -3.9**
KBA Koelnbreinsper 10.12 331 Pn **Pn 22 25 37.7 +1.9**
comp=N,1.7nm,0.3s
KBA Sn **Sn 22 27 26.1 -3.6**
comp=N,5.8nm,0.8s
VYHS Vyhne 10.16 354 *e*SN **Sn 22 27 23.4 -7.1**
ABTA Abfaltersbach 10.18 328 *e*Pn **Pn 22 25 37.0 +0.4**
comp=N,4.1nm,0.8s,SNR=4.7
ABTA *e*Sn **Sn 22 27 27.8 -3.2**
comp=N,14nm,1.0s
BRTR Keskin Array B 10.37 79 Pn Pn 22 25 44.6 +5.3
comp=N,0.2nm,0.3s,baz=257,slow=11,SNR=7.2
BRTR LR LR 22 30 32.3
comp=N,78nm,19.3s,baz=248,slow=42
BRTR Keskin Array B 10.37 79 **Pn 22 25 43.8 +4.5**
MOA Molln 10.46 337 *e*Pn **Pn 22 25 40.6 +0.1**
comp=N,4.0nm,0.7s
CSS Mathiatis 10.92 104 Pn **Pn 22 25 46.5 -0.2**
WTTA Wattenberg 10.96 327 *e*Pn **Pn 22 25 46.7 -0.6**
comp=N,2.7nm,0.6s
WTTA *e*Sn **Sn 22 27 47.8 -2.4**
comp=N,11nm,1.0s
WATA Walderalm 11.04 327 ⇓*i* Pn **Pn 22 25 50.0 +1.6**
comp=N,5.2nm,0.5s,SNR=4.2
WATA *e*Sn **Sn 22 27 50.1 -2.1**
comp=N,8.3nm,0.6s
SQTA Sankt Quirin 11.11 325 *e*Pn **Pn 22 25 50.0 +0.6**
comp=N,3.6nm,0.7s
SQTA *e*Sn **Sn 22 27 50.0 -4.0**
comp=N,4.9nm,0.7s
FUORN Ofenpass-Fuorn 11.12 321 Pn **Pn 22 25 50.7 +1.1**
FUORN **Sn 22 27 52.6 -1.8**
FETA Feichten 11.18 324 Pn Pn 22 25 57.5 +7.1
comp=N,0.4nm,0.3s
FETA *e*Sn **Sn 22 27 53.7 -2.0**
comp=N,4.5nm,0.9s
MOTA Moosalm 11.25 326 *e*Pn **Pn 22 25 53.0 +1.6**
comp=N,7.1nm,0.8s,SNR=5.1
MOTA *e*Sn **Sn 22 27 56.2 -1.2**
comp=N,5.4nm,0.6s
DAVOX Davos/Dischmat 11.42 321 Pn **Pn 22 25 55.0 +1.3**
comp=N,0.5nm,0.3s,baz=137,slow=17,SNR=7.2
GERES GERESS Array B 11.52 337 Pn **Pn 22 25 54.4 -0.6**
comp=N,0.2nm,0.3s,baz=158,slow=14,SNR=11
GERES Sn **Sn 22 27 58.4 -5.5**
comp=N,0.2nm,0.3s,baz=153,slow=22,SNR=3.2
GERES GERESS Array B 11.52 337 Pn **Pn 22 25 55.0 +0.1**
KHC Kasperske Hory 11.81 338 *e*PN **Pn 22 25 57.7 -1.2**
KHC *e*SN **Sn 22 28 09.2 -1.8**
KHC Kasperske Hory 11.81 338 Pn **Pn 22 25 59.0 +0.1**
SENIN Lac Senin/Sane 12.54 314 Pn **Pn 22 26 10.4 +1.3**
SENIN **Sn 22 28 25.1 -4.0**
MMAI Mount Meron Ar 13.30 109 Pn **Pn 22 26 17.8 -1.5**
comp=N,0.5nm,0.3s,baz=311,slow=11,SNR=2.9
GNI Garni 18.90 77 LR LR 22 36 10.6
comp=N,108nm,18.4s,baz=312,slow=41
ESBB Sonseca Array 18.98 282 P **Pn 22 27 33.4 +0.7**
ESDC Sonseca Array 18.98 282 P **Pn 22 27 32.9 +0.2**
comp=N,0.2nm,0.3s,baz=74,slow=11,SNR=15
HFS Hagfors 22.18 351 P **P 22 28 06.7 +0.3**
comp=N,7.0nm,0.8s,baz=170,slow=9.8,SNR=9.5
NC602 NORSAR Array S 23.05 349 P **P 22 28 15.3 -0.4**
NC602 IAmb IAmb 22 28 31.4
comp=Z,6.5nm,0.9s
EKA Eskdalemuir Ar 23.21 325 P **P 22 28 17.4 +0.1**
comp=Z,6.3nm,1.0s,baz=124,slow=8.9,SNR=5.5
FINES FINESS Array B 23.34 7 P **P 22 28 17.5 -1.2**
comp=Z,2.0nm,0.6s,baz=180,slow=11,SNR=11
FINES FINESS Array B 23.34 7 P **P 22 28 17.6 -1.0**
FIA1 FINESS Array S 23.34 7 P **P 22 28 17.9 -0.8**
FIA1 IAmb IAmb 22 28 35.0
comp=Z,9.6nm,0.9s
NC405 NORSAR Array S 23.39 349 P **P 22 28 17.6 -1.6**
NB2 NORSAR Subarra 23.39 349 P **P 22 28 18.8 -0.4**
comp=Z,3.4nm,0.9s,baz=160,slow=10
NOA NORSAR Array B 23.39 349 P **P 22 28 19.2 -0.1**
comp=Z,0.5nm,0.6s,baz=160,slow=9.8,SNR=4.5
NOA LR LR 22 39 42.6
comp=Z,63nm,21.4s,baz=275,slow=42
NC303 NORSAR Array S 23.55 349 P **P 22 28 20.4 -0.3**
NC303 IAmb IAmb 22 28 31.5
comp=Z,4.8nm,0.9s
GEYT Alibeck 29.51 79 P **P 22 29 15.3 +0.3**
comp=Z,1.4nm,0.5s,baz=264,slow=8.8,SNR=4.5
TORD Torodi Ar. Bea 30.15 219 P **P 22 29 20.3 -0.4**
comp=Z,1.2nm,0.8s,baz=32,slow=10,SNR=7.0
ABKAR Akbulak array 30.18 56 P **P 22 29 19.7 -1.1**
BRVK Borovoye 36.98 50 P **P 22 30 20.3 +0.5**
BRVK IAmb IAmb 22 30 21.5
comp=Z,3.5nm,0.9s
KK31 Karatay Array 37.78 66 P **P 22 30 26.9 +0.1**
KK31 IAmb IAmb 22 30 28.9
comp=Z,4.2nm,0.7s
KKAR Karatay Array 37.78 66 IAmb IAmb 22 30 28.9
comp=Z,4.2nm,0.7s
DBIC Dimbokro 39.00 222 P **P 22 30 37.4 +0.2**
comp=Z,1.8nm,0.8s,baz=82,slow=9.1,SNR=3.2
DBIC Dimbokro 39.00 222 IAmb IAmb 22 30 43.7
comp=Z,3.0nm,0.8s
KSH Kashi 42.62 70 P **P 22 31 06.5 -0.6**
KSH PP **PP 22 32 50.8 +5.0**
KSH pmax pmax
comp=Z,250nm,4.0s
MK31 Makanchi Array 45.25 59 P **P 22 31 27.4 -0.7**
MKAR Makanchi Array 45.25 59 P **P 22 31 26.6 -1.5**
comp=Z,1.2nm,0.5s,baz=278,slow=7.5,SNR=33
ZAA0 Zalesovo Array 45.60 48 P **P 22 31 30.0 -0.7**
ZALV Zalesovo Beam 45.60 48 P **P 22 31 29.2 -1.4**
comp=Z,7.8nm,0.9s,baz=281,slow=8.3,SNR=21
WMQ Urumqi 49.72 61 *e*P **P 22 32 06.0 +3.1**
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ pmax pmax
comp=Z,88nm,4.7s
SCHQ Schefferville 58.25 317 P **P 22 33 05.6 +0.6**
comp=Z,3.6nm,0.9s,baz=34,slow=7.0,SNR=3.8
SCHQ Schefferville 58.25 317 IAmb IAmb 22 33 07.1
comp=Z,8.8nm,1.1s
SONM Songino Array 60.38 51 P **P 22 33 20.3 +0.3**
comp=Z,0.6nm,0.9s,baz=257,slow=5.9,SNR=5.1
LZH Lanzhou 64.17 63 *e*P **P 22 33 43.5 -2.1**
LZH pP pP 22 33 45.5 -2.1
LZH sP sP 22 33 46.5 -1.8
LZH *e*PP **PP 22 36 06.8 +0.4**
LZH pmax pmax
comp=Z,16nm,1.3s
LZH pmax pmax
comp=Z,49nm,7.6s
LZH LR LR
comp=N,100nm,15.6s
LZH LR LR
comp=E,120nm,15.4s
LZH LR LR
comp=Z,180nm,18.2s
HHC Hu-ho-hao-te 66.98 55 *e*P **P 22 34 05.3 +1.7**
HHC pmax pmax
comp=Z,2.0nm,1.1s
HHC pmax pmax
comp=Z,95nm,6.5s
YKA Yellowknife Ar 73.16 340 P **P 22 34 41.8 +0.8**

comp=Z,0.1nm,0.4s,baz=38,slow=5.3,SNR=3.5
KLR Kul'dur 73.76 39 P **P** **22 34 45.7 +1.0**
comp=Z,1.0nm,0.6s,baz=300,slow=8.1,SNR=5.3

*MEX **27** 22:27:43.9±1.2, 15°.57N×91°.63W, h4km±32km, MD3.1*
*GCG **27** 22:27:46.0±0.5, 14°.90N×91°.79W, h96km±7km, MD3.7*
ISC 27 22:27:41.6±1.1, 15°.59N±0°.07×91°.61W±0°.09, h10km, n5, σ1°92/9, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
CCIG	**Comitan**	**0.86**	**323**	*i* P		**Pg**	**22 27 59.1**	**+1.0**
CCIG				*i* S		**Sg**	**22 28 10.8**	**+1.4**
STG3	**Santiaguito 3,**	**0.88**	**178**	*e*P		**Pg**	**22 28 00.7**	**+2.2**
FUG	**Fuego 3**	**1.35**	**147**	*e*P		**Pn**	**22 28 06.8**	**+0.1**
FUG				*e*S		**Sb**	**22 28 23.5**	**-1.1**
PCIG		**1.56**	**274**	*i* P		**Pn**	**22 28 09.0**	**-0.3**
PCIG				*i* S		**Sn**	**22 28 27.1**	**-2.5**
IXG	**Ixpaco**	**1.81**	**141**	*e*P		**Pn**	**22 28 12.9**	**0.0**
IXG				*e*S		**Sn**	**22 28 33.4**	**-2.5**

*ATH **27** 22:37:47.0, 38°.37N×20°.41E, h18km±1km, ML3.4/14, Error ellipse: s-maj=1.8km s-min=0.8km az=84.0*
*THE **27** 22:37:48.1, 38°.38N×20°.46E, h1km±1km, ML3.2/6, Error ellipse: s-maj=1.9km s-min=0.4km az=271.0*
*PDG **27** 22:37:50.2±0.2, 38°.60N×20°.24E, h3km±1km, ML3.6/13, Error ellipse: s-maj=2.0km s-min=0.8km az=90.0*
ISC 27 22:37:47.3±0.9, 38°.40N±0°.02×20°.44E±0°.03, h10km±6km, n67, σ1°25/105, 6C-7D, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
FSK	**Fiskardo**	**0.12**	**57**	P		**Pg**	**22 37 49.7**	**-0.5**
FSK				S		**Sg**	**22 37 52.1**	**-0.2**
	10μm,0.4s							
FSK	**Fiskardo**	**0.12**	**57**	P		**Pg**	**22 37 49.7**	**-0.5**
ARG2	**Argostoli**	**0.22**	**169**	P		**Pg**	**22 37 52.2**	**+0.3**
ARG2				S		**Sg**	**22 37 55.2**	**+0.3**
VLS	**Valsamata**	**0.25**	**151**	P		**Pg**	**22 37 52.7**	**+0.3**
VLS				S		**Sg**	**22 37 55.9**	**+0.1**
	12μm,0.4s							
VLS	**Valsamata**	**0.25**	**151**	P		**Pg**	**22 37 52.7**	**+0.3**
VLS				S		**Sg**	**22 37 56.6**	**+0.8**
VLS				AML	AML		22 37 56.8	
	comp=E,16670μm,0.3s							
VLS				AML	AML		22 38 00.1	
	comp=N,30927μm,0.4s							
EVGI	**Lefkada island**	**0.28**	**37**	P		**Pg**	**22 37 53.8**	**+0.7**
EVGI				S		**Sg**	**22 37 58.2**	**+1.2**
EVGI	**Lefkada island**	**0.28**	**37**	P		**Pg**	**22 37 53.7**	**+0.6**
EVGI				S		**Sb**	**22 37 58.8**	**-0.5**
MGNA	**Meganis**	**0.38**	**47**	P		**Pg**	**22 37 55.2**	**+0.4**
MGNA				S		**Sb**	**22 38 01.8**	**-0.3**
MGNA				AML	AML		22 38 02.2	
	comp=N,7634μm,0.2s							
MGNA				AML	AML		22 38 06.8	
	comp=E,5589μm,0.3s							
KFL	**Anninata**	**0.40**	**136**	P		**Pg**	**22 37 55.3**	**+0.2**
KFL				S		**Sg**	**22 38 01.2**	**+0.8**
	comp=E,9μm,0.3s							
KFL	**Anninata**	**0.40**	**136**	P		**Pg**	**22 37 55.4**	**+0.2**
KFL				S		**Sg**	**22 38 01.3**	**+0.8**
KFL				AML	AML		22 38 03.6	
	comp=E,22576μm,0.4s							
KFL				AML	AML		22 38 06.9	
	comp=N,14365μm,0.5s							
LKD2	**Lefkada island**	**0.43**	**24**	P		**Pg**	**22 37 56.5**	**+0.7**
LKD2				S		**Sb**	**22 38 03.0**	**-0.5**
	comp=N,3μm,0.8s							
LKD2	**Lefkada island**	**0.43**	**24**	P		**Pg**	**22 37 56.3**	**+0.5**
LKD2				S		**Sg**	**22 38 02.5**	**+1.0**
LKD2				AML	AML		22 38 04.0	
	comp=E,3862μm,0.8s							
LKD2				AML	AML		22 38 04.4	
	comp=N,6746μm,0.8s							
TSLK	**Tsoukalades, L**	**0.46**	**22**	P		**Pg**	**22 37 57.1**	**+0.7**
TSLK				S		**Sb**	**22 38 04.1**	**-0.3**
	comp=N,4μm,0.8s							
TSLK	**Tsoukalades, L**	**0.46**	**22**	P		**Pg**	**22 37 56.9**	**+0.5**
TSLK				S		**Sb**	**22 38 04.2**	**-0.3**
TSLK				AML	AML		22 38 09.6	
	comp=E,10001μm,0.9s							
TSLK				AML	AML		22 38 10.4	
	comp=N,7605μm,0.5s							
VLMS	**Volimes, Zakyn**	**0.55**	**161**	P		**Pg**	**22 37 58.1**	**+0.2**
VLMS				S		**Sg**	**22 38 04.8**	**-0.4**
VLMS				AML	AML		22 38 09.7	
	comp=N,21647μm,0.3s							
VLMS				AML	AML		22 38 09.8	
	comp=E,13262μm,0.3s							
PDO	**Prodromos**	**0.62**	**71**	P		**Pg**	**22 37 59.7**	**+0.3**
PDO	**Prodromos**	**0.62**	**71**	P		**Pg**	**22 37 59.6**	**+0.3**
PDO				S		**Sb**	**22 38 08.9**	**-0.1**
PDO				AML	AML		22 38 14.8	
	comp=N,6978μm,0.3s							
PDO				AML	AML		22 38 16.3	
	comp=E,8746μm,0.4s							
RLS	**Riolos of Patr**	**0.88**	**112**	P		**Pg**	**22 38 04.3**	**0.0**
RLS				S		**Sg**	**22 38 15.9**	**+0.2**
RLS				AML	AML		22 38 25.5	
	comp=E,1723μm,1.0s							
RLS				AML	AML		22 38 26.6	
	comp=N,2016μm,0.6s							
PVO	**Paravola**	**0.88**	**75**	P		**Pb**	**22 38 04.9**	**+0.2**
PVO	**Paravola**	**0.88**	**75**	P		**Pb**	**22 38 04.9**	**+0.2**
PVO				S		**Sb**	**22 38 17.6**	**+1.1**
PVO				AML	AML		22 38 24.4	
	comp=N,4768μm,0.7s							
PVO				AML	AML		22 38 30.9	
	comp=E,4268μm,0.6s							
UPR	**University Cam**	**1.07**	**96**	P		**Pn**	**22 38 08.3**	**+0.1**
DRO	**Drossia**	**1.10**	**113**	P		**Pb**	**22 38 08.2**	**-0.2**
DRO				S		**Sn**	**22 38 24.2**	**+0.3**
DRO				AML	AML		22 38 31.4	
	comp=E,3842μm,0.6s							
DRO				AML	AML		22 38 34.2	
	comp=N,4105μm,0.5s							
IGT	**Igoumenitsa**	**1.14**	**356**	P		**Pb**	**22 38 08.4**	**-0.7**
EFP	**Efpalio**	**1.16**	**88**	P		**Pb**	**22 38 09.1**	**-0.3**
EFP				AML	AML		22 38 32.0	
	comp=N,3818μm,0.7s							
EFP				AML	AML		22 38 32.9	
	comp=E,4890μm,0.7s							
ANX	**Ano Chora**	**1.18**	**80**	P		**Pb**	**22 38 09.9**	**+0.1**
ANX				AML	AML		22 38 33.7	
	comp=N,5777μm,0.6s							
ANX				AML	AML		22 38 33.9	
	comp=E,4041μm,0.6s							
EVR	**Evrytania**	**1.20**	**64**	P		**Pn**	**22 38 09.5**	**-0.7**
LAKA	**Lakka**	**1.22**	**97**	P		**Pn**	**22 38 09.7**	**-0.7**
SERG	**Sergoula**	**1.27**	**89**	P		**Pb**	**22 38 11.3**	**0.0**
SERG				S		**Sg**	**22 38 29.3**	**+1.0**
SERG				AML	AML		22 38 35.5	
	comp=E,2597μm,0.8s							
SERG				AML	AML		22 38 36.8	
	comp=N,2533μm,0.7s							
TRIZ	**Trizonia**	**1.29**	**91**	P		**Pn**	**22 38 11.0**	**-0.2**
JAN	**Janina**	**1.30**	**14**	P		**Pg**	**22 38 12.8**	**+0.5**
AMT	**Artemida-Makis**	**1.32**	**130**	P		**Pn**	**22 38 11.8**	**0.0**
AMT				AML	AML		22 38 44.7	
	comp=E,2882μm,0.7s							
AMT				AML	AML		22 38 47.6	
	comp=N,2432μm,0.5s							
KALE	**Kalithea**	**1.34**	**90**	P		**Pn**	**22 38 11.7**	**-0.3**
KLV	**Kalavryta, Ach**	**1.40**	**104**	P		**Pn**	**22 38 13.0**	**+0.2**
KASA	**Kassiopi**	**1.41**	**344**	P		**Pb**	**22 38 13.9**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.46**	**65**	P		**Pg**	**22 38 15.7**	**+0.3**
AGG	**Agios Georgios**	**1.61**	**67**	P		**Pg**	**22 38 17.9**	**-0.3**
ITM	**Ithomi**	**1.69**	**135**	P		**Pb**	**22 38 18.5**	**0.0**
THL	**Klokotos Trika**	**1.70**	**46**	P		**Pb**	**22 38 18.0**	**-0.6**
KPRO	**Kipourio**	**1.72**	**25**	P		**Pb**	**22 38 18.3**	**-0.7**
AXAR	**Agios Charalam**	**1.78**	**77**	P		**Pn**	**22 38 18.7**	**+0.6**
PYL	**PYLOS**	**1.82**	**145**	P		**Pb**	**22 38 20.1**	**-0.6**
VLX	**Vlachokerasia**	**1.85**	**123**	P		**Pn**	**22 38 19.6**	**+0.5**
LTK	**Loutraki**	**2.03**	**100**	P		**Pn**	**22 38 21.8**	**+0.3**
OHR	**Ohrid**	**2.73**	**6**	*i* Pn		**Pg**	**22 38 38.3**	**-1.3**
VAY	**Valandovo**	**3.35**	**29**	*i* Pn		**Pb**	**22 38 43.4**	**-3.4**
STIP	**Stip**	**3.56**	**22**	*i* Pn		**Pb**	**22 38 47.9**	**-2.4**
ULC	**Ulcinj**	**3.68**	**346**	⇓*i* Pn		**Pn**	**22 38 45.3**	**+1.1**
ULC				*e*Sn		**Sn**	**22 39 28.8**	**+1.2**
SG1	**Sgolgore (BA)**	**3.79**	**311**	*e*Pn		**Pn**	**22 38 48.0**	**+2.2**
BAI	**Bari**	**3.85**	**316**	*e*Pn		**Pn**	**22 38 49.4**	**+2.9**
DRME	**Dracevica, Mon**	**3.91**	**346**	⇓*i* Pn		**Pn**	**22 38 49.1**	**+1.8**
DRME				*e*Sn		**Sn**	**22 39 34.0**	**+0.8**
BUM	**Brajici-Budva**	**4.08**	**344**	⇑*i* Pn		**Pn**	**22 38 51.3**	**+1.6**
BUM				*e*Sn		**Sn**	**22 39 38.6**	**+1.1**
TTG	**Podgorica**	**4.13**	**348**	⇑*i* Pn		**Pn**	**22 38 51.8**	**+1.4**
TTG				*e*Sn		**Sn**	**22 39 39.3**	**+0.6**
PVY	**Plav**	**4.21**	**355**	⇓*i* Pn		**Pn**	**22 38 54.2**	**+2.6**
PVY				*e*Sn		**Sn**	**22 39 42.0**	**+1.1**
CEME	**Cevo**	**4.31**	**345**	⇑*i* Pn		**Pn**	**22 38 54.7**	**+1.8**
CEME				*e*Sn		**Sn**	**22 39 43.5**	**+0.4**
HCY	**Herceg Novi**	**4.31**	**341**	⇓*i* Pn		**Pn**	**22 38 53.7**	**+0.8**
HCY				*e*Sn		**Sn**	**22 39 43.3**	**+0.1**
IVA	**Berane**	**4.49**	**355**	⇑*i* Pn		**Pn**	**22 38 57.3**	**+1.9**
IVA				*e*Sn		**Sn**	**22 39 49.2**	**+1.5**
KOME	**Kolasin**	**4.51**	**351**	⇑*i* Pn		**Pn**	**22 38 58.0**	**+2.4**
KOME				*e*Sn		**Sn**	**22 39 49.2**	**+1.1**
NKME	**Niksic**	**4.51**	**346**	⇓*i* Pn		**Pn**	**22 38 57.5**	**+1.8**
NKME				*e*Sn		**Sn**	**22 39 48.6**	**+0.4**
NKY	**Niksic**	**4.55**	**346**	⇑*i* Pn		**Pn**	**22 38 57.8**	**+1.6**
NKY				*e*Sn		**Sn**	**22 39 49.8**	**+0.6**
DBRK	**Dubrovnik**	**4.61**	**339**	*e*Pn		**Pn**	**22 38 57.2**	**+0.2**
DBRK				Sn		**Sn**	**22 39 47.6**	**-3.0**
BRY	**Bratogost**	**4.73**	**343**	⇓*i* Pn		**Pn**	**22 39 00.3**	**+1.6**
BRY				*e*Sn		**Sn**	**22 39 53.8**	**+0.2**
STON	**Ston**	**4.93**	**336**	*e*Pn		**Pn**	**22 39 01.5**	**+0.1**
STON				Sn		**Sn**	**22 39 54.8**	**-3.6**
UPM	**Unac-Piva**	**4.94**	**347**	⇓*i* Pn		**Pn**	**22 39 03.6**	**+1.9**
UPM				*e*Sn		**Sn**	**22 39 59.1**	**+0.1**
KIJV	**Kijevo**	**6.38**	**333**	*i* Pn		**Pn**	**22 39 21.6**	**+0.4**
KIJV				Sn		**Sn**	**22 40 32.3**	**-1.7**
MORI	**Morici**	**6.53**	**328**	*i* Pn		**Pn**	**22 39 23.8**	**+0.5**
MORI				Sn		**Sn**	**22 40 33.8**	**-3.9**
UDBI	**Udbina**	**7.06**	**332**	*e*Pn		**Pn**	**22 39 32.1**	**+1.4**
UDBI				Sn		**Sn**	**22 40 48.3**	**-2.7**
NVLJ	**Novalja**	**7.44**	**328**	*e*Pn		**Pn**	**22 39 36.7**	**+0.9**
NVLJ				Sn		**Sn**	**22 40 57.1**	**-3.1**

MAN 27 22:52:43.2, 9°.87N×123°.81E, h5km, mb4.3, ML3.1, MS2.9, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
LLP	**Lapu-Lapu**	**0.47**	**19**	⇓*e*P		Pg	22 52 52.5	+0.3
LLP				*e*S		Sg	22 52 59.7	+1.3
MSLP	**Maasin**	**1.06**	**76**	*e*P		Pg	22 53 03.6	-0.1
MSLP				*e*S		Sn	22 53 19.8	-0.3
OCLP	**Ormoc**	**1.41**	**34**	*e*P		Pn	22 53 08.8	-0.8
OCLP				*e*S		Sg	22 53 28.6	0.0
GUIM	**Jordan**	**1.42**	**302**	*e*P		Pn	22 53 09.4	-0.3
GUIM				*e*S		Sn	22 53 28.7	0.0
PAGZ	**Pagadian**	**2.05**	**192**	*e*P		Pn	22 53 18.1	-0.3
PAGZ				*e*S		Sn	22 53 45.7	+1.2

PDG 27 23:00:38.7±0.1, 40°.22N×20°.05E, h0km±11km, ML3.0/13, 7C-4D, Error ellipse: s-maj=13.8km s-min=4.7km az=90.0, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
ULC	**Ulcinj**	**1.85**	**341**	⇑*i* Pn		Pb	23 01 12.6	-0.8
ULC				*i* Sn		Sg	23 01 39.6	+1.5
DRME	**Dracevica, Mon**	**2.07**	**342**	⇓*i* Pn		Pb	23 01 16.0	-1.2
DRME				*e*Sn		Sg	23 01 45.0	-0.3
BUM	**Brajici-Budva**	**2.26**	**338**	⇓*i* Pn		Pn	23 01 18.3	+0.9
BUM				*i* Sn		Sb	23 01 49.7	+0.8
TTG	**Podgorica**	**2.29**	**345**	*e*Pn		Pn	23 01 18.8	+1.1
TTG				*e*Sn		Sb	23 01 50.0	+0.2
PVY	**Plav**	**2.38**	**358**	⇑*i* Pn		Pn	23 01 20.0	+0.9
PVY				*e*Sn		Sb	23 01 52.7	+0.3
CEME	**Cevo**	**2.48**	**340**	⇑*i* Pn		Pn	23 01 21.2	+0.8
CEME				*e*Sn		Sb	23 01 54.8	-0.5
HCY	**Herceg Novi**	**2.52**	**333**	⇓*i* Pn		Pn	23 01 21.9	+1.0
HCY				*i* Sn		Sb	23 01 55.9	-0.4
IVA	**Berane**	**2.66**	**358**	*e*Pn		Pn	23 01 23.8	+0.9
IVA				*e*Sn		Sb	23 01 59.4	-1.0
KOME	**Kolasin**	**2.66**	**352**	⇑*i* Pn		Pn	23 01 24.3	+1.4
KOME				*e*Sn		Sb	23 01 59.2	-1.4
NKME	**Niksic**	**2.68**	**342**	⇓*i* Pn		Pn	23 01 24.2	+1.1
NKME				*e*Sn		Sb	23 01 59.5	-1.5
NKY	**Niksic**	**2.71**	**343**	⇑*i* Pn		Pn	23 01 24.7	+1.0
NKY				*i* Sn		Sb	23 02 00.3	-1.7
BRY	**Bratogost**	**2.91**	**338**	⇑*i* Pn		Pn	23 01 27.4	+1.0
BRY				*e*Sn		Sb	23 02 05.3	-2.5
UPM	**Unac-Piva**	**3.10**	**344**	⇑*i* Pn		Pn	23 01 30.5	+1.4
UPM				*e*Sn		Sn	23 02 09.8	+2.8

*SKO **27** 23:01:06.5, 41°.19N×19°.92E, h42km*
TIR 27 23:01:06.0, 41°.21N×19°.90E, h29km, Md2.6/6, Albania

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
TIR	**Tirane**	**0.14**	**349**	*i* PG		Pb	23 01 11.9	+0.3
TIR				*i* SG		Sb	23 01 16.6	+1.3
PHP	**Peshkopia**	**0.62**	**40**	*i* PG		Pn	23 01 19.6	+0.6
PHP				*i* SG		Sn	23 01 28.7	+0.6
OHR	**Ohrid**	**0.69**	**98**	*e*Pg		Pn	23 01 22.4	+2.6
OHR				*i* Sg		Sn	23 01 33.2	+3.6
OHR				*e*Lg		Lg	23 01 36.2	
	comp=N,36nm,0.3s							
OHR				*e*Lg		Lg	23 01 36.8	
	comp=E,56nm,0.6s							
VLO	**Vlora**	**0.80**	**203**	*i* PG		Pb	23 01 22.7	+1.3
VLO				*i* SG		Sn	23 01 36.4	+4.1
PUK	**Puka**	**0.83**	**360**	*i* PG		Pb	23 01 23.9	+1.9
PUK				*i* SG		Sn	23 01 36.3	+2.1
TPE	**Tepelena**	**0.92**	**175**	*i* PG		Pb	23 01 25.1	+1.8
TPE				*i* SG		Sb	23 01 38.7	+3.5
BCI	**Bajram Curri**	**1.16**	**6**	*i* PN		Pb	23 01 29.7	+2.2
BCI				*i* SN		Sb	23 01 46.6	+4.3
SKO	**Skopje**	**1.38**	**56**	*e*Pg		Pb	23 01 34.2	+3.0
SKO				*e*Sg		Sb	23 01 53.3	+4.7
STIP	**Stip**	**1.79**	**74**	*i* Pg		Pb	23 01 41.3	+3.2
STIP				*i* Sg		Sb	23 02 06.7	+6.7

*SJA **27** 23:17:01.8±0.9, 21°.67S×68°.40W, h133km±6km, ML3.2, MW3.4*
*IDC **27** 23:17:02.8±0.9, 21°.76S×68°.16W, h119km±12km, mb3.5/4, mb1 3.6/6, mb1mx3.4/26, mbtmp3.8/6, Error ellipse: s-maj=27.5km s-min=21.3km az=132.0*
*GUC **27** 23:17:02.7±0.8, 21°.69S×68°.48W, h130km±4km, ML3.4*
ISC 27 23:17:03.3±0.8, 21°.69S±0°.03×68°.41W±0°.06, h129km±7km, n45, σ0°.94/78, mb3.8/4, 13C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
PB09	**IPOC Station P**	**0.78**	**262**	⇓*i* P		**Pn**	**23 17 24.2**	**-0.2**
PB09				*i* S		**Sn**	**23 17 40.0**	**-0.4**
PB09	**IPOC Station P**	**0.78**	**262**	*i* P		**Pn**	**23 17 24.2**	**-0.2**
PB09				*e*S		**Sn**	**23 17 40.7**	**+0.3**
PB09				IAML			23 17 41.5	
	comp=Z,450nm,0.3s							
LVC	**Limon Verde**	**1.03**	**207**	*e*P		**Pn**	**23 17 26.2**	**-0.5**
LVC				*e*S		**Sn**	**23 17 43.8**	**-0.7**
LVC	**Limon Verde**	**1.03**	**207**	P		**Pn**	**23 17 26.2**	**-0.5**
	comp=Z,139nm,0.3s,baz=32,slow=8.2,SNR=16							
LVC						**Sn**	**23 17 43.9**	**-0.7**
	comp=Z,53nm,0.3s,baz=251,slow=20,SNR=38							
LVC	**Limon Verde**	**1.03**	**207**	*i* P		**Pn**	**23 17 26.3**	**-0.5**
LVC				*e*S		**Sn**	**23 17 44.4**	**-0.1**
PB01	**IPOC Station P**	**1.20**	**302**	⇑*i* P		**Pn**	**23 17 27.6**	**-0.5**
PB01				*i* S		**Sn**	**23 17 46.4**	**-0.6**
PB01				IAML			23 17 48.7	
	comp=E,960nm,0.3s							
PB03	**IPOC Station P**	**1.30**	**254**	⇑*i* P		**Pn**	**23 17 28.8**	**-0.4**
PB03				*i* S		**Sn**	**23 17 48.4**	**-0.6**
PB03				IAML			23 17 50.0	
	comp=E,472nm,0.2s							
PB03	**IPOC Station P**	**1.30**	**254**	*e*P		**Pn**	**23 17 28.9**	**-0.4**
PB03				*e*S		**Sn**	**23 17 48.2**	**-0.4**
PB07	**IPOC Station P**	**1.38**	**268**	⇑*i* P		**Pn**	**23 17 29.6**	**-0.5**
PB07				*i* S		**Sn**	**23 17 50.0**	**-0.5**
PB07				IAML			23 17 55.2	
	comp=N,651nm,0.3s							
PB07	**IPOC Station P**	**1.38**	**268**	*e*P		**Pn**	**23 17 29.7**	**-0.5**
PB07				*e*S		**Sn**	**23 17 50.3**	**-0.2**
PB02	**IPOC Station P**	**1.44**	**285**	⇑*i* P		**Pn**	**23 17 30.2**	**-0.5**
PB02				*i* S		**Sn**	**23 17 51.0**	**-0.6**
PB02				IAML			23 17 52.8	
	comp=E,1μm,0.3s							
PB02	**IPOC Station P**	**1.44**	**285**	*e*P		**Pn**	**23 17 30.2**	**-0.5**
PB02				*e*S		**Sn**	**23 17 51.5**	**0.0**
PB06	**IPOC Station P**	**1.48**	**227**	⇑*i* P		**Pn**	**23 17 31.0**	**-0.2**
PB06				*i* S		**Sn**	**23 17 52.6**	**+0.1**
PB06				IAML			23 17 54.9	
	comp=N,464nm,0.3s							
PB06	**IPOC Station P**	**1.48**	**227**	*i* P		**Pn**	**23 17 31.1**	**-0.2**
PB06				*e*S		**Sn**	**23 17 52.9**	**+0.3**
PB06				IAML			23 17 57.5	
	comp=Z,252nm,0.3s							
PB08	**IPOC Station P**	**1.69**	**336**	⇑*i* P		**Pn**	**23 17 34.6**	**+0.7**
PB08				*i* S		**Sn**	**23 17 57.9**	**+0.6**
PB08				IAML			23 18 00.6	
	comp=E,195nm,0.2s							
PB08	**IPOC Station P**	**1.69**	**336**	*e*P		**Pn**	**23 17 34.7**	**+0.7**
PB08				*e*S		**Sn**	**23 17 58.7**	**+1.4**
PB04	**IPOC Station P**	**1.74**	**248**	⇓*i* P		**Pn**	**23 17 33.6**	**-0.6**
PB04				*i* S		**Sn**	**23 17 57.6**	**-0.2**
PB04				IAML			23 18 06.1	
	comp=N,332nm,0.4s							
PB04	**IPOC Station P**	**1.74**	**248**	*i* P		**Pn**	**23 17 33.6**	**-0.6**
PB04				*e*S		**Sn**	**23 17 58.4**	**+0.6**
PB04				IAML			23 18 04.1	
	comp=Z,239nm,0.1s							
PB15	**IPOC Station P**	**1.80**	**213**	⇑*i* P		**Pn**	**23 17 35.0**	**0.0**
PB15				*i* S		**Sn**	**23 17 59.9**	**+0.6**
PB15	**IPOC Station P**	**1.80**	**213**	*i* P		**Pn**	**23 17 35.2**	**+0.2**
PB15				*e*S		**Sn**	**23 18 00.3**	**+1.0**
PATCX	**Punta Patache**	**1.84**	**298**	⇑*i* P		**Pn**	**23 17 35.1**	**-0.3**
PATCX				*i* S		**Sn**	**23 17 59.2**	**-0.8**
PATCX				IAML			23 18 01.7	
	comp=N,847nm,0.3s							
PATCX	**Punta Patache**	**1.84**	**298**	*e*P		**Pn**	**23 17 35.3**	**-0.1**
PATCX				*e*S		**Sn**	**23 17 59.4**	**-0.5**
TA01	**Diego Aracena**	**2.00**	**304**	⇑*i* P		**Pn**	**23 17 36.5**	**-0.6**
TA01				*i* S		**Sn**	**23 18 01.9**	**-1.2**
TA01				IAML			23 18 05.6	
	comp=E,437nm,0.4s							
PB05	**IPOC Station P**	**2.02**	**235**	⇑*i* P		**Pn**	**23 17 36.9**	**-0.7**
PB05				*i* S		**Sn**	**23 18 03.1**	**-0.8**
PB05				IAML			23 18 11.1	
	comp=N,162nm,0.2s							
PB05	**IPOC Station P**	**2.02**	**235**	*i* P		**Pn**	**23 17 37.0**	**-0.6**
PB05				*e*P		**Pn**	**23 17 37.2**	**-0.4**
PB05				*e*S		**Sn**	**23 18 03.5**	**-0.4**
GO01	**Chusmiza**	**2.14**	**340**	⇑*i* P		**Pn**	**23 17 39.6**	**+0.1**
GO01				*e*S		**Sn**	**23 18 07.5**	**+0.3**
GO01				IAML			23 18 12.1	
	comp=N,216nm,0.3s							
PB11	**IPOC Station P**	**2.25**	**328**	*i* P		**Pn**	**23 17 40.1**	**-0.3**
PB11				*i* S		**Sn**	**23 18 08.1**	**-0.8**
PB11				IAML			23 18 14.2	
	comp=E,295nm,0.2s							
PB11	**IPOC Station P**	**2.25**	**328**	*e*P		**Pn**	**23 17 40.1**	**-0.3**
PB11				*e*S		**Sn**	**23 18 08.0**	**-1.0**
PSGC	**Pisagua**	**2.63**	**322**	⇑*i* P		**Pn**	**23 17 43.9**	**-1.4**
PSGC				*i* S		**Sn**	**23 18 15.9**	**-1.6**
PSGC				IAML			23 18 22.9	
	comp=E,116nm,0.6s							
PSGCX	**Pisagua**	**2.63**	**322**	*e*P		**Pn**	**23 17 43.1**	**-2.2**
PSGCX				*e*S		**Sn**	**23 18 16.2**	**-1.3**
PB10	**IPOC Station P**	**2.69**	**227**	⇑*i* P		**Pn**	**23 17 45.4**	**-0.5**
PB10				*i* S		**Sn**	**23 18 16.9**	**-1.7**
PB10				IAML			23 18 31.2	
	comp=N,74nm,0.4s							
PB10	**IPOC Station P**	**2.69**	**227**	*i* P		**Pn**	**23 17 45.7**	**-0.2**
PB10				IAML			23 17 49.9	
	comp=Z,42nm,0.3s							
YJA	**Yavi**	**2.73**	**101**	*e*P		**Pn**	**23 17 47.1**	**+0.3**
MNMC	**Minye Minye**	**2.78**	**336**	*e*P		**Pn**	**23 17 47.2**	**-0.2**
MNMC				*i* S		**Sn**	**23 18 21.6**	**+0.4**
MNMC				IAML			23 18 30.4	
	comp=N,243nm,0.2s							
MNMCX	**Minye Minye**	**2.78**	**336**	*e*P		**Pn**	**23 17 47.4**	**+0.1**
MNMCX				*e*S		**Sn**	**23 18 20.2**	**-1.0**
HJA	**Humahuaca**	**3.16**	**119**	*e*P		**Pn**	**23 17 52.5**	**+0.3**
LPAZ	**La Paz**	**5.38**	**3**	P		**Pn**	**23 18 24.0**	**+1.9**
	comp=N,0.6nm,0.3s,baz=142,slow=6.4,SNR=11							
GO03	**Copiap**	**6.11**	**195**	*i* P		**Pn**	**23 18 28.5**	**-2.8**
GO04	**Tololo Observa**	**8.71**	**194**	*i* P	

ABL	**Mount Abel**	0.75	232			**Pg**	23 35 47.8	-0.4
PYR	**Pyramid**	0.77	195			**Pg**	23 35 47.9	-0.6
TOW	**Tower One**	0.77	50			**Pg**	23 35 48.4	-0.2
SBB	**Saddle Back Bu**	0.83	138			**Sg**	23 36 00.1	-0.4
BCW	**Bitter Crk WRg**	0.84	244			**Pg**	23 35 49.2	-0.7
VPEM	**Volcano Peak E**	0.84	41			**Pg**	23 35 49.3	-0.6
VPEM						**Sg**	23 36 00.7	-0.2
RVCM	**Rose Valley Ce**	0.85	35			**Pg**	23 35 49.4	-0.6
JRC2	**Joshua Ridge**	0.87	40			**Sg**	23 36 01.4	-0.4
LRRC	**Littlerock Res**	0.87	154			**Pg**	23 35 49.7	-0.7
HYS	**Haystack Butte**	0.88	120			**Pg**	23 35 49.7	-0.8
CLC	**China Lake**	0.89	55			**Pg**	23 35 49.9	-0.8
CLC						**Sg**	23 36 01.5	-0.8
SPG2	**Springville 2**	0.91	346			**Pg**	23 35 50.3	-0.8
SPG2						**Sg**	23 36 02.0	-1.1
WCSM	**Coso Springs S**	0.93	40			**Pg**	23 35 50.8	-0.6
IR2C	**Iron Canyon**	0.93	175			**Pg**	23 35 50.6	-0.8
CCCA	**Chr Cany lake**	0.95	77			**Pg**	23 35 51.2	-0.6
MFS	**McCloud Flat S**	0.96	33			**Pg**	23 35 51.5	-0.6
RYS	**Reyes Peak**	0.97	227			**Pg**	23 35 51.8	-0.5
HOLC	**Holcomb Ridge**	1.01	148			**Pb**	23 35 52.2	-0.6
CHFC	**Chilao Flat St**	1.05	158			**Pb**	23 35 52.8	-0.8
CHFC						**Sb**	23 36 06.7	-0.6
DECC	**Green Verdugo**	1.07	173			**Pb**	23 35 53.4	-0.4
DECC	**Green Verdugo** baz=353,SNR=21	1.07	173	P		**Pb**	23 35 53.3	-0.5
BLKC	**Black Mountain**	1.07	102			**Pb**	23 35 53.4	-0.4
MPMC	**Manual Prospec**	1.10	47			**Pb**	23 35 54.0	-0.6
MPMC						**Sb**	23 36 08.6	-0.3
MPMC	**Manual Prospec** baz=228,SNR=156	1.10	47	P		**Pb**	23 35 54.0	-0.6
MPMC	baz=228			S		**Sb**	23 36 08.5	-0.4
CARC	**Carrizo Plain**	1.11	270			**Pb**	23 35 53.9	-0.6
XTL	**Crystal Lake,**	1.14	153			**Pb**	23 35 54.4	-0.8
MWC	**Mount Wilson**	1.15	162			**Pb**	23 35 54.5	-0.7
MWC	**Mount Wilson**	1.15	162			**Pb**	23 35 54.6	-0.6
MWC					Sg	**Sb**	23 36 09.0	-1.0
ADO	**Adelanto Recei**	1.16	131			**Pg**	23 35 56.4	+0.6
PKM	**Mcpherson Peak**	1.16	249			**Pb**	23 35 54.9	-0.6
PKM	**Mcpherson Peak** baz=68,SNR=19	1.16	249	P		**Pb**	23 35 54.8	-0.7
PKM	baz=68			S		**Sb**	23 36 10.5	-0.1
PASC	**Pasadena Art C**	1.17	167			**Pb**	23 35 54.6	-0.8
PASC	**Pasadena Art C**	1.17	167			**Pb**	23 35 55.1	-0.4
PASC						**Sb**	23 36 10.8	+0.3
CWC	**Cottonwood Cre**	1.17	17			**Pb**	23 35 55.1	-0.6
CWC	**Cottonwood Cre** baz=197	1.17	17	P		**Pb**	23 35 55.1	-0.6
CWC	baz=197			S		**Sb**	23 36 10.3	-0.6
SMMC	**Simmler**	1.23	270			**Pb**	23 35 55.7	-0.7
SMMC	**Simmler** baz=90,SNR=39	1.23	270	P		**Pn**	23 35 55.7	-0.7
SMMC	baz=90			S		**Sb**	23 36 12.6	+0.3
VOG	**Valley Oaks Go**	1.24	325			**Pn**	23 35 56.0	-0.4
VOG	**Valley Oaks Go** baz=144,SNR=10	1.24	325	P		**Pn**	23 35 56.0	-0.4
VOG	baz=144			S		**Sb**	23 36 12.3	-0.2
BFSC	**Mount Baldy Ra** baz=328,SNR=75	1.27	147	P		**Pn**	23 35 56.8	-0.2
BFSC	baz=328			S		**Sb**	23 36 13.7	0.0
BLG	**Laguna Peak, P** baz=21,SNR=18	1.29	202	P		**Pn**	23 35 57.4	+0.2
BLG	baz=21			S		**Sn**	23 36 15.0	+0.7
RRX	**Edison Barstow** baz=290,SNR=9.8	1.30	109	P		**Pn**	23 35 57.4	0.0
RRX	baz=290			Sg		**Sg**	23 36 16.1	+0.6
SBC	**Santa Barbara** baz=48	1.33	229	S		**Sn**	23 36 16.0	+0.9
GSC	**Goldstone, Bar**	1.38	90			**Pn**	23 35 58.1	-0.4
GSC	**Goldstone, Bar** baz=271,SNR=174	1.38	90	P		**Pn**	23 35 58.1	-0.4
GSC	baz=271			Sg		**Sg**	23 36 18.5	+0.5
PAGB	**Antelope Grade**	1.49	287			**Pn**	23 35 59.8	-0.2
ALV	**Alvord Mountai**	1.55	99			**Pn**	23 36 00.6	-0.1
FMP	**Fort Macarthur** baz=354	1.61	174	S		**Sb**	23 36 23.2	+0.1
SCZ2	**Santa Cruz Isl** baz=35	1.62	216	S		**Sn**	23 36 23.3	+0.9
BBRC	**Big Bear Solar** baz=310,SNR=11	1.67	129	Pb		**Pb**	23 36 04.2	+0.1
BBRC	baz=310			Sb		**Sb**	23 36 26.3	+1.2
TIN	**Tinemaha, Big** baz=187	1.75	7	Pg		**Pb**	23 36 05.8	+0.3
TIN	baz=187			Sg		**Sg**	23 36 30.2	+0.4
FURC	**Furnace Creek,** baz=230,SNR=37	1.75	49	Pg		**Pb**	23 36 06.3	+0.9
PEC	**Perris**	1.79	142			**Pn**	23 36 04.4	+0.3
HEC	**Hector,Ludlow** baz=286,SNR=74	1.83	105	P		**Pn**	23 36 04.3	-0.4
SHOC	**Shoshone, Teco** baz=253,SNR=20	1.90	71	P		**Pn**	23 36 05.0	-0.5
CIS	**Catalina Islan** baz=356	1.91	178	Sb		**Sg**	23 36 33.8	-1.0
GRAC	**Grapevine Rang** baz=209	1.91	28	Pg		**Pb**	23 36 09.0	+0.8
MURC	**Murrieta** baz=328	2.02	148	Sb		**Sb**	23 36 36.6	+1.6
PMPB	**Monarch Peak**	2.08	296			**Pn**	23 36 08.4	+0.3
TUQ	**Turquoise Moun** baz=267,SNR=36	2.10	86	P		**Pn**	23 36 08.0	-0.4
SNCC	**San Nicolas Is** baz=22	2.23	203	S		**Sn**	23 36 38.2	+0.8
MLAC	**Mammoth, Mammo** baz=173,SNR=51	2.33	353	Pb		**Pb**	23 36 14.7	-0.7
PFO	**Pinyon Flats O**	2.39	135			**Pn**	23 36 12.4	0.0
PFO	**Pinyon Flats O** baz=316,SNR=15	2.39	135	P		**Pn**	23 36 12.4	0.0
PFO	baz=316			Sb		**Sb**	23 36 47.6	+1.8
XPFO	**Pion Flat**	2.39	135			**Pn**	23 36 12.5	0.0
XPFO				Pg		**Pb**	23 36 17.8	+1.4
XPFO	**Pion Flat**	2.39	135			**Pn**	23 36 13.9	+1.5
BELC	**Belle Mtn. Jos** baz=303,SNR=14	2.44	122	P		**Pn**	23 36 12.6	-0.5
BELC	baz=303			Sb		**Sb**	23 36 49.8	+2.6
TPNV	**Topopah Spring**	2.44	47			**Pn**	23 36 13.1	0.0
109C	**Camp Elliot, M**	2.68	154			**Pn**	23 36 17.9	+1.7
109C	**Camp Elliot, M** baz=335	2.68	154	Sb		**Sb**	23 36 56.3	+2.3
SAO	**San Andreas Ge**	2.80	302			**Pn**	23 36 18.9	+1.1
MONP2	**Monument Peak** baz=325,SNR=6.5	2.96	144	P		**Pn**	23 36 20.7	+0.4
MONP2	baz=325			Sb		**Sb**	23 37 03.8	+1.4
IRM	**Iron Mountain** baz=294,SNR=6.0	2.99	112	P		**Pn**	23 36 20.0	-0.6
BC3	**Big Chuckawall** baz=304,SNR=7.1	3.01	123	P		**Pn**	23 36 20.4	-0.4
CMB	**Columbia Colle**	3.11	331			**Pn**	23 36 22.9	+0.6
CMB						**Sn**	23 36 54.9	-4.4
NVAR	**Mina Array Bea**	3.11	3			**Pn**	23 36 24.2	+1.8
NV11	**Mina Array Sit**	3.12	5			**Pn**	23 36 24.0	+1.5
NV11				Pg		**Pb**	23 36 31.1	+2.2
NEE2	**Needles Airpor** baz=281	3.23	99	P		**Pn**	23 36 23.0	-0.8
SWSC	**Sam W. Stewart** baz=317,SNR=6.6	3.25	136	P		**Pn**	23 36 24.0	-0.1
KVN	**Kaiserville**	3.74	5			**Pn**	23 36 33.1	+2.0
KVN				Pg		**Pb**	23 36 41.7	+2.2
W13A	**Hualapai Mount**	3.78	92			**Pn**	23 36 31.6	0.0
GLA	**Glamis**	3.79	126	Pn		**Pn**	23 36 31.1	-0.4
VCNR	**Virginia City**	4.08	347			**Pn**	23 36 38.1	+2.4
VCNR				Sn		**Sn**	23 37 21.1	-2.2
AFDM	**Forest Hills D**	4.13	332			**Pn**	23 36 36.8	+0.6
PAHR	**Pah Rah Range**	4.44	351			**Pn**	23 36 41.3	+0.7
PAHR				Pg		**Pb**	23 36 54.2	+2.8
LCMT	**Little Creek M**	4.57	67	Pn		**Pn**	23 36 43.5	+1.1
CCUT	**Cedar City**	4.70	60	Pn		**Pn**	23 36 45.8	+1.6
Y14A	**Wickenburg**	4.73	105			**Pn**	23 36 44.2	-0.3
Y14A				Pg		**Pg**	23 37 00.8	-3.3
Y14A						**Sn**	23 37 38.6	-0.6
BEKR	**Beckworth**	4.78	342			**Pn**	23 36 49.4	+4.1
KNB	**Kanab**	4.89	68	Pn		**Pn**	23 36 48.8	+1.9
PSUT	**Pine Spring**	4.91	48	Pn		**Pn**	23 36 48.9	+1.7
HOPS	**Hopland Field**	5.18	316	Pn		**Pn**	23 36 50.2	-0.5
214A	**Organ Pipe Nat**	5.80	124	Pn		**Pn**	23 36 59.4	+0.2
WUAZ	**Wupatki**	5.82	86	Pn		**Pn**	23 37 02.0	+2.5
X16A	**Lo Mia Camp, P**	5.87	97	Pn		**Pn**	23 37 00.7	+0.5
ELK	**Elko**	6.00	24	Pn		**Pn**	23 37 04.8	+2.7
DUG	**Dugway, Tooele**	6.63	41	Pn		**Pn**	23 37 13.3	+2.7
MOD	**Modoc Plateau**	6.73	348	Pn		**Pn**	23 37 09.8	-2.3
TUC	**Tucson**	7.08	113	Pn		**Pn**	23 37 16.5	-0.3
TCUT	**Toone Canyon**	8.04	42	Pn		**Pn**	23 37 31.1	+0.9
HWUT	**Hardware Ranch**	8.30	39			**Pn**	23 37 32.4	-1.3

BEO ***28*** *00:03:29.1±0.5, 45°.17N×16°.92E, h0km, ML4.1/14*
PDG ***28*** *00:03:31.7±0.8, 45°.00N×17°.14E, h11km±1km, MD4.1/8, ML4.0/13, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
LDG ***28*** *00:03:31.1±0.1, 45°.04N×17°.06E, h2km, Ml4.0/31, Error ellipse: s-maj=3.5km s-min=2.1km az=32.0*
NEIC ***28*** *00:03:32.5±2.0, 45°.00N±0°.04×17°.12E±0°.06, h9km±5km, mb4.2/5, Mwr3.9/11, ML4.2/1(BUC), ML4.2(VIE), Error ellipse: s-maj=7.3km s-min=3.9km az=47.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr=0.18; Mθθ=0.90; Mϕϕ 1.08; Mrθ=-0.17; Mθϕ=-0.17; Mϕr=-0.09; Fault plane solution: M0 1.03000×10¹⁵ NP1: ϕs39.20000°, δ83.04000°, λ=-11.83000°. NP2:ϕs130.65000°, δ 78.25000°, λ=-172.89000°. Principal axes: T 1.0989, Plg3.0000°, Azm85.0000°; N -0.1431, Plg76.0000°, Azm189.0000°; P -0.9559, Plg13.0000°, Azm355.0000°;*
PRU ***28*** *00:03:32.7±0.0, 45°.01N×17°.23E, h5km, M4.2*
RHSSO ***28*** *00:03:32.2±0.2, 44°.99N×17°.13E, h3km±1km, ML4.2/17*
BGR ***28*** *00:03:33.6±0.6, 44°.92N×17°.12E, h10km, ML4.4, Error ellipse: s-maj=16.7km s-min=10.0km az=56.0*
IDC ***28*** *00:03:34.3±3.4, 45°.05N×17°.11E, h18km±23km, mb3.4/5, mb1 3.7/12, mb1mx3.5/40, mbtmpg3.6/12, ML4.1/8, MS3.1/4, Ms1 3.1/4, ms1mx2.8/32, Error ellipse: s-maj=14.3km s-min=9.7km az=54.0*

ISC 28 00:03:32.0±1.0, 44°.99N±0°.01×17°.05E±0°.02, h6km±7km, n349, σ1§99/504, mb3.6/7, 19C-36D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BLY	**Banja Luka**	**0.26**	**159**	*e*Pg		**Pg**	**00 03 36.7**	**-0.4**
BLY					eSg	**Sg**	00 03 40.9	+0.4
BLY	**Banja Luka**	**0.26**	**159**	⇑P		**Pg**	**00 03 36.6**	**-0.4**
BLY				⇑S		**Sg**	00 03 39.7	-0.8
BLY	**Banja Luka**	**0.26**	**159**	⇓*i* Pg		**Pg**	**00 03 36.5**	**-0.6**
BLY					eSg	**Sg**	00 03 40.1	-0.4
BLY	**Banja Luka**	**0.26**	**159**			**Pg**	**00 03 36.6**	**-0.4**
MGRS	**Mrkonjic Grad**	**0.57**	**178**	⇓*i* Pg		**Pg**	**00 03 43.0**	**0.0**
MGRS					eSg	**Sg**	00 03 51.1	+0.6
DOB	**Doboj**	**0.79**	**109**	*e*Pg		**Pg**	**00 03 45.3**	**-1.9**
DOB					eSg	**Sb**	00 03 58.3	-0.8
DOB	**Doboj**	**0.79**	**109**	⇓*i* Pg		**Pg**	**00 03 45.1**	**-2.1**
DOB					eSg	**Sg**	00 03 56.1	-1.3
UDBI	**Udbina**	**1.03**	**244**	*i* Pg		**Pg**	**00 03 51.7**	**-0.1**
UDBI					Sg	**Sg**	00 04 06.4	+1.3
KIJV	**Kijevo**	**1.09**	**205**	*e*Pg		**Pg**	**00 03 52.5**	**-0.4**
ZAG	**Zagreb**	**1.12**	**319**	*i* Pg		**Pb**	**00 03 54.3**	**+0.4**
ZAG					Sg	**Sn**	00 04 10.0	-0.1
ZAG	**Zagreb**	**1.12**	**319**	⇓*i* Pg		**Pg**	**00 03 53.9**	**+0.3**
ZAG					eSg	**Sb**	00 04 09.2	+0.5
PTJ	**Puntijarka**	**1.19**	**321**	*i* Pg		**Pg**	**00 03 55.1**	**+0.2**
PTJ					Sg	**Sg**	00 04 10.9	+0.5
KALN	**Kalnik**	**1.22**	**340**	*e*Pg		**Pn**	**00 03 56.4**	**+0.8**
KALN					Sg	**Sn**	00 04 13.1	+0.7
OZLJ	**Ozalj**	**1.28**	**300**	*i* Pg		**Pn**	**00 03 56.4**	**0.0**
CRES	**Cresnjev**	**1.40**	**307**	⇓*i* Pg		**Pn**	**00 03 58.1**	**0.0**
CRES					eSg	**Sg**	00 04 18.6	+1.6
MORI	**Morici**	**1.48**	**221**	*i* Pn		**Pb**	**00 04 00.5**	**+0.6**
BEHE	**Becsehely**	**1.49**	**353**	⇓*i* Pg		**Pn**	**00 03 59.7**	**+0.3**
BEHE					eSg	**Sg**	00 04 20.1	+0.1
NVLJ	**Novalja**	**1.61**	**255**	*i* Pn		**Pn**	**00 04 01.5**	**+0.6**
NVLJ					Sn	**Sg**	00 04 24.8	+1.0
HAPS	**Han Pijesak,Bl**	**1.63**	**123**	*e*Pn		**Pn**	**00 04 00.1**	**-1.3**
HAPS					eSg	**Sg**	00 04 25.4	+1.0
HAPS	**Han Pijesak,Bl**	**1.63**	**123**	⇓*i* Pn		**Pn**	**00 04 00.0**	**-1.3**
HAPS					eSg	**Sn**	00 04 22.2	-0.5
MORH	**Mrgy, Hungar**	**1.66**	**42**	*e*Pn		**Pn**	**00 04 00.5**	**-1.1**
MORH					eSn	**Sn**	00 04 22.8	-0.4
ZIRJ	**Zirje**	**1.67**	**218**	*e*Pn		**Pb**	**00 04 03.1**	**-0.1**
ZIRJ					Sn	**Sg**	00 04 26.0	+0.2
MAKA	**Makarska**	**1.70**	**181**	*i* Pn		**Pb**	**00 04 03.2**	**-0.4**
MAKA					Sn	**Sg**	00 04 27.4	+0.7
DUGI	**Dugi Otok**	**1.74**	**236**	*i* Pn		**Pb**	**00 04 04.4**	**0.0**
DUGI					Sn	**Sb**	00 04 27.6	+1.1
TEKS	**Tekeris**	**1.82**	**103**	*e*Pn		**Pn**	**00 04 03.1**	**-0.8**
TEKS					eSn	**Sb**	00 04 28.4	-0.3
TEKS	**Tekeris**	**1.82**	**103**	*e*Pn		**Pn**	**00 04 02.8**	**-1.1**
TEKS					eSn	**Sn**	00 04 26.8	-0.4
RIY	**Rijeka**	**1.85**	**281**	*e*Pn		**Pn**	**00 04 05.2**	**+1.0**
RIY					Sn	**Sb**	00 04 31.0	+1.4
RIY	**Rijeka**	**1.85**	**281**	⇓*i* Pn		**Pn**	**00 04 05.7**	**+1.5**
RIY					eSn	**Sb**	00 04 29.8	+0.2
FRGS	**Fruska Gora**	**1.96**	**84**	*e*Pn		**Pn**	**00 04 03.6**	**-2.2**
FRGS					eSn	**Sb**	00 04 31.7	-1.2
FRGS	**Fruska Gora**	**1.96**	**84**	*e*Sn		**Sn**	**00 04 30.1**	**-0.7**
CEY	**Cerknica**	**2.00**	**293**	*e*Pn		**Pn**	**00 04 07.1**	**+0.8**
CEY					eSn	**Sn**	00 04 33.1	+1.5
TIH	**Tihany**	**2.00**	**17**	*e*Pn		**Pn**	**00 04 07.4**	**+1.1**
BBLS	**Lazići**	**2.03**	**123**	*e*Pn		**Pn**	**00 04 06.1**	**-0.7**
BBLS					eSn	**Sg**	00 04 35.6	-1.5
BBLS	**Lazići**	**2.03**	**123**	⇑*i* Pn		**Pn**	**00 04 06.2**	**-0.6**
BBLS					eSn	**Sn**	00 04 31.8	-0.6
LJU	**Ljubljana**	**2.06**	**302**	*e*Pn		**Pn**	**00 04 07.5**	**+0.3**
LJU					eSn	**Sn**	00 04 35.0	+1.7
RUDO	**Rudo**	**2.16**	**129**	*e*Sn		**Sn**	**00 04 34.8**	**-0.8**
STON	**Ston**	**2.17**	**167**	*i* Pn		**Pn**	**00 04 09.8**	**+1.2**
STON					Sn	**Sb**	00 04 38.5	-0.2
STON	**Ston**	**2.17**	**167**	*e*Pn		**Pn**	**00 04 09.7**	**+1.1**
STON					eSn	**Sb**	00 04 38.5	-0.2
STON	**Ston**	**2.17**	**167**	⇓*i* Pn		**Pn**	**00 04 09.5**	**+0.9**
STON					eSn	**Sn**	00 04 36.1	+0.3
SOKA	**Soboth** 95nm,0.3s,SNR=53	**2.20**	**321**	*e*Pn		**Pn**	**00 04 09.2**	**0.0**
SOKA	386nm,0.5s				Sn	**Sb**	00 04 41.4	+1.6
SOKA	**Soboth**	**2.20**	**321**			**Pn**	**00 04 09.2**	**0.0**
SOKA						**Sb**	00 04 41.4	+1.6
UPM	**Unac-Piva**	**2.23**	**143**	*e*Pn		**Pn**	**00 04 09.9**	**+0.2**
UPM					eSn	**Sn**	00 04 37.6	0.0
UPM	**Unac-Piva**	**2.23**	**143**	⇓*i* Pn		**Pn**	**00 04 09.7**	**0.0**
UPM					*i* Sn	**Sn**	00 04 38.7	+1.1
DIVS	**Divibare**	**2.28**	**112**	*e*Pn		**Pn**	**00 04 09.5**	**-0.8**
DIVS					eSn	**Sb**	00 04 42.2	0.0
DIVS	**Divibare**	**2.28**	**112**	⇑*i* Pn		**Pn**	**00 04 09.2**	**-1.1**
DIVS					eSn	**Sn**	00 04 38.6	-0.2
OBKA	**Obir**	**2.32**	**312**	*e*Pn		**Pn**	**00 04 11.1**	**+0.3**
OBKA					eSg	**Sg**	00 04 47.2	+0.7
OBKA	**Obir**	**2.32**	**312**	*e*Pn		**Pn**	**00 04 11.1**	**+0.3**
OBKA					eSg	**Sg**	00 04 47.2	+0.7
OBKA	**Obir** 39nm,0.4s,SNR=15	**2.32**	**312**	*e*Pn		**Pn**	**00 04 11.2**	**+0.3**
OBKA	429nm,0.3s				Sn	**Sb**	00 04 43.9	+0.7
OBKA	**Obir**	**2.32**	**312**			**Pn**	**00 04 11.2**	**+0.3**
OBKA						**Sb**	00 04 43.9	+0.7
BRY	**Bratogost**	**2.35**	**152**	*e*Pn		**Pn**	**00 04 11.2**	**-0.1**
BRY					eSn	**Sn**	00 04 40.2	-0.3
BRY	**Bratogost**	**2.35**	**152**	⇓*i* Pn		**Pn**	**00 04 11.1**	**-0.2**
BRY					*i* Sn	**Sn**	00 04 41.5	+1.0
PLE	**Pljevlja**	**2.36**	**134**	⇓*i* Pn		**Pn**	**00 04 11.5**	**+0.1**
PLE					*i* Sn	**Sn**	00 04 42.0	+1.2
TRI	**Trieste**	**2.43**	**288**			**Pn**	**00 04 13.2**	**+1.0**
BEO	**Beograd**	**2.44**	**93**	*e*Pn		**Pn**	**00 04 10.6**	**-1.7**
DBRK	**Dubrovnik**	**2.45**	**161**	*e*Pn		**Pn**	**00 04 13.9**	**+1.4**
TREB	**Trebinje**	**2.46**	**157**	*e*Pn		**Pn**	**00 04 13.7**	**+1.1**
TREB					eSn	**Sb**	00 04 46.5	-0.6
TREB	**Trebinje**	**2.46**	**157**	*e*Pn		**Pn**	**00 04 13.6**	**+1.0**
TREB					eSn	**Sn**	00 04 44.0	+1.0
ARSA	**Arzberg**	**2.50**	**335**	*e*Pn		**Pn**	**00 04 13.7**	**+0.4**
ARSA	**Arzberg**	**2.50**	**335**	*e*Pn		**Pn**	**00 04 13.7**	**+0.4**
ARSA	**Arzberg** 106nm,0.4s,SNR=46	**2.50**	**335**	*e*Pn		**Pn**	**00 04 13.6**	**+0.4**
ARSA	119nm,0.4s				Sn	**Sn**	00 04 45.8	+1.8
ARSA	**Arzberg**	**2.50**	**335**			**Pn**	**00 04 13.6**	**+0.4**
ARSA						**Sn**	00 04 45.8	+1.8
TRUS	**Trudelj**	**2.52**	**107**	*e*Pn		**Pn**	**00 04 13.0**	**-0.4**
TRUS					eSn	**Sb**	00 04 47.2	-1.6
NKY	**Niksic**	**2.59**	**146**	⇑*i* Pn		**Pn**	**00 04 15.0**	**+0.5**
NKY					*i* Sn	**Sn**	00 04 47.9	+1.5
NKME	**Niksic**	**2.61**	**148**	⇑*i* Pn		**Pn**	**00 04 15.2**	**+0.4**
NKME					eSn	**Sn**	00 04 48.1	+1.2
IVAS	**Ivanjica**	**2.64**	**121**	*e*Pn		**Pn**	**00 04 14.4**	**-0.8**
IVAS					eSn	**Sb**	00 04 51.4	-0.9
HCY	**Herceg Novi**	**2.75**	**157**	*e*Pn		**Pn**	**00 04 17.6**	**+1.0**
HCY					eSn	**Sn**	00 04 50.1	0.0
HCY	**Herceg Novi**	**2.75**	**157**	⇑*i* Pn		**Pn**	**00 04 17.1**	**+0.5**
HCY					*i* Sn	**Sn**	00 04 51.5	+1.4
KOME	**Kolasin**	**2.78**	**139**	⇓*i* Pn		**Pn**	**00 04 17.0**	**-0.2**
KOME					eSn	**Sn**	00 04 52.1	+1.0
CEME	**Cevo**	**2.79**	**150**	⇓*i* Pn		**Pn**	**00 04 18.5**	**+1.2**
CEME					eSn	**Sn**	00 04 52.7	+1.4
BUD	**Budapest**	**2.85**	**28**	*e*Pn		**Pg**	**00 04 27.4**	**+0.9**
GRUS	**Gruza**	**2.85**	**111**	*e*Pn		**Pn**	**00 04 17.8**	**-0.2**
GRUS					eSn	**Sn**	00 04 54.8	+2.3
MYKA	**Terra Mystica** 7.6nm,0.2s,SNR=17	**2.89**	**306**	*e*Pn		**Pn**	**00 04 20.0**	**+1.3**
MYKA	197nm,0.5s				eSn	**Sn**	00 04 56.5	+2.6
MYKA	**Terra Mystica**	**2.89**	**306**			**Pn**	**00 04 20.0**	**+1.3**
MYKA						**Sn**	00 04 56.5	+2.6
BANR	**Banloc**	**2.92**	**81**	⇓P		**Pn**	**00 04 17.8**	**-1.1**
BANR	**Banloc**	**2.92**	**81**			**Pn**	**00 04 17.8**	**-1.1**
IVA	**Berane**	**2.95**	**135**	⇓*i* Pn		**Pn**	**00 04 19.6**	**+0.1**
IVA					*i* Sn	**Sn**	00 04 55.6	+0.4
BUM	**Brajici-Budva**	**3.00**	**153**	⇓*i* Pn		**Pn**	**00 04 20.7**	**+0.5**
BUM					*i* Sn	**Sn**	00 04 57.1	+0.6
PDG	**Podgorica**	**3.02**	**147**	*e*Pn		**Pn**	**00 04 21.7**	**+1.4**
PDG	**Podgorica**	**3.02**	**147**	⇓P		**Pn**	**00 04 20.8**	**+0.5**
PDG	**Podgorica**	**3.02**	**147**	⇓S		**Sn**	**00 04 58.1**	**+1.3**
PDG	**Podgorica**	**3.02**	**147**	*e*Pn		**Pn**	**00 04 20.5**	**+0.3**
PDG					eSn	**Sn**	00 04 57.1	+0.4
PDG	**Podgorica**	**3.02**	**147**			**Pn**	**00 04 20.8**	**+0.5**
PDG						**Sn**	00 04 58.0	+1.3
TTG	**Podgorica**	**3.02**	**147**	⇓*i* Pn		**Pn**	**00 04 20.6**	**+0.3**
TTG					*i* Sn	**Sn**	00 04 57.6	+0.9
CONA	**Conrad Observa** 206nm,0.3s,SNR=211	**3.05**	**345**	*i* Pn		**Pn**	**00 04 21.4**	**+0.5**
CONA	192nm,0.6s				eSg	**Sg**	00 05 12.8	+2.8
CONA	**Conrad Observa**	**3.05**	**345**			**Pn**	**00 04 21.4**	**+0.5**
PVY	**Plav**	**3.19**	**138**	⇑*i* Pn		**Pn**	**00 04 22.9**	**+0.1**
PVY					*i* Sn	**Sn**	00 05 01.9	+0.7
DRME	**Dracevica, Mon**	**3.20**	**150**	*e*Pn		**Pn**	**00 04 23.4**	**+0.5**
DRME					eSn	**Sn**	00 05 00.9	-0.4
DRME	**Dracevica, Mon**	**3.20**	**150**	⇓*i* Pn		**Pn**	**00 04 23.7**	**+0.8**
DRME					eSn	**Sn**	00 05 02.3	+1.0
ZST	**Bratislava**	**3.21**	**1**	*e*PN		**Pn**	**00 04 21.9**	**-1.0**
ZST					eSN	**Sn**	00 04 57.8	-3.7
ZST					eSG	**Sg**	00 05 18.6	+3.6
ZST					eLG	Lg	00 05 28.0	
BZS	**Buzias**	**3.28**	**77**	⇑P		**Pn**	**00 04 22.6**	**-1.4**
BZS	**Buzias**	**3.28

	6.8nm,0.2s							
WTTA				*i* Sn	**Sn**	**00 05 31.9 +0.8**		
	97nm,0.5s							
WTTA	**Wattenberg**	**4.40**	**303**		**Pn**	**00 04 41.2 +1.8**		
WTTA					**Sn**	**00 05 31.9 +0.8**		
OSSC	**Osservatorio P**	**4.42**	**253**		**Pn**	**00 04 40.3 +0.7**		
TREC	**Trest**	**4.44**	**347**	*e*PN	**Pn**	**00 04 40.1 +0.2**		
TREC				*e*SN	**Sn**	**00 05 31.5 -0.3**		
WATA	**Walderalm**	**4.47**	**304**	*i* Pn	**Pn**	**00 04 42.5 +2.1**		
	6.5nm,0.2s,SNR=7.7							
WATA				*e*Sn	**Sn**	**00 05 33.8 +1.1**		
	98nm,0.6s							
WATA	**Walderalm**	**4.47**	**304**		**Pn**	**00 04 42.5 +2.1**		
WATA					**Sn**	**00 05 33.8 +1.1**		
LANS	**Liptovska Anna**	**4.48**	**21**	*e*PN	**Pn**	**00 04 41.2 +0.8**		
LANS				*e*SG	**Sg**	**00 06 01.2 +5.4**		
LANS				*e*LG	Lg	00 06 10.3		
LATE	**Laterza**	**4.48**	**240**		**Pn**	**00 04 41.1 +0.6**		
GEC2	**GERESS Array S**	**4.49**	**330**	*e*Pn	**Pn**	**00 04 41.5 +0.9**		
GEC2				*e*Sn	**Sn**	**00 05 32.6 -0.6**		
GEC2	**GERESS Array S**	**4.49**	**330**	*e*Pn	**Pn**	**00 04 41.5 +0.9**		
GEC2				*e*Sn	**Sn**	**00 05 32.6 -0.6**		
GERES	**GERESS Array B**	**4.49**	**330**	Pn	**Pn**	**00 04 41.5 +0.9**		
	28nm,0.3s,baz=150,slow=14,SNR=636							
GERES				Sn	**Sn**	**00 05 31.8 -1.4**		
	17nm,0.3s,baz=141,slow=24,SNR=5.6							
GERES				Lg	Lg	00 05 54.7		
	8.1nm,0.3s,baz=150,slow=30,SNR=9.8							
GERES	**GERESS Array B**	**4.49**	**330**		**Pn**	**00 04 41.2 +0.6**		
BAIL	**Bailesti**	**4.61**	**100**	⇑P	**Pn**	**00 04 41.9 -0.2**		
BAIL	**Bailesti**	**4.61**	**100**		**Pn**	**00 04 41.9 -0.2**		
SQTA	**Sankt Quirin**	**4.64**	**301**	*i* Pn	**Pn**	**00 04 45.0 +2.4**		
	6.6nm,0.2s							
SQTA				*e*Sn	**Sn**	**00 05 38.6 +1.7**		
	40nm,0.4s							
SQTA	**Sankt Quirin**	**4.64**	**301**		**Pn**	**00 04 45.0 +2.4**		
SQTA					**Sn**	**00 05 38.6 +1.7**		
SALO	**Salr**	**4.65**	**280**		**Pn**	**00 04 43.5 +0.7**		
BOSS	**Bosilegrad**	**4.66**	**120**	*e*Pn	**Pn**	**00 04 42.4 -0.5**		
OHR	**Ohrid**	**4.75**	**143**	*e*Pn	**Pn**	**00 04 47.2 +3.0**		
MOTA	**Moosalm**	**4.76**	**302**	*i* Pn	**Pn**	**00 04 45.9 +1.6**		
	3.2nm,0.2s,SNR=14							
MOTA				*e*Sn	**Sn**	**00 05 42.6 +2.7**		
	49nm,0.5s							
MOTA	**Moosalm**	**4.76**	**302**		**Pn**	**00 04 45.9 +1.6**		
MOTA					**Sn**	**00 05 42.6 +2.7**		
KHC	**Kasperske Hory**	**4.77**	**331**	*e*PN	**Pn**	**00 04 45.5 +1.0**		
KHC	**Kasperske Hory**	**4.77**	**331**		**Pn**	**00 04 45.5 +1.0**		
PRMA	**PARMA**	**4.79**	**270**		**Pn**	**00 04 45.6 +0.8**		
MORC	**Moravsky Berou**	**4.80**	**4**	⇓P	**Pn**	**00 04 45.4 +0.5**		
MORC	**Moravsky Berou**	**4.80**	**4**	*e*PN	**Pn**	**00 04 45.4 +0.5**		
MORC				*e*SN	**Sn**	**00 05 38.7 -2.1**		
MORC	**Moravsky Berou**	**4.80**	**4**		**Pn**	**00 04 45.3 +0.5**		
MORC	**Moravsky Berou**	**4.80**	**4**		**Pn**	**00 04 45.4 +0.5**		
PART	**Garmisch-Parte**	**4.82**	**303**	*e*Pn	**Pn**	**00 04 47.0 +1.9**		
PART	**Garmisch-Parte**	**4.82**	**303**	*e*Pn	**Pn**	**00 04 47.0 +1.9**		
VLC	**Villacollemand**	**4.83**	**262**		**Pn**	**00 04 46.5 +1.2**		
FETA	**Feichten**	**4.85**	**297**	*i* Pn	**Pn**	**00 04 48.9 +3.2**		
	5.0nm,0.3s							
FETA				Sn	**Sg**	**00 06 03.3 -4.4**		
	57nm,0.8s							
FETA	**Feichten**	**4.85**	**297**		**Pn**	**00 04 48.9 +3.2**		
CJR	**Cluj-Napoca**	**4.89**	**67**	⇑P	**Pn**	**00 04 46.6 +0.5**		
CJR	**Cluj-Napoca**	**4.89**	**67**		**Pn**	**00 04 46.6 +0.5**		
OKC	**Ostrava-Krasne**	**4.91**	**8**	*e*PN	**Pn**	**00 04 45.7 -0.6**		
OKC				*e*SN	**Sn**	**00 05 41.4 -1.9**		
TRPA	**Tarpa**	**4.92**	**48**	⇑P	**Pn**	**00 04 46.6 +0.2**		
TRPA	**Tarpa**	**4.92**	**48**		**Pn**	**00 04 46.6 +0.2**		
CRVS	**Cervenica-Dubn**	**4.94**	**36**	*e*PN	**Pn**	**00 04 47.6 +0.8**		
CRVS				*e*PG	**Pg**	**00 05 05.6 -1.1**		
CRVS				*e*SG	**Sg**	**00 06 11.7 +1.0**		
CRVS				*e*LG	Lg	00 06 25.1		
NIE	**Niedzica**	**4.95**	**25**	*e*Pn	**Pn**	**00 04 49.1 +2.1**		
NIE				*e*Sn	**Sn**	**00 05 43.7 -0.8**		
CASP	**Castiglione de**	**4.98**	**246**	Pn	**Pn**	**00 04 47.0 -0.4**		
STIP	**Stip**	**4.99**	**130**	*e*Pn	**Pn**	**00 04 47.4 0.0**		
FUORN	**Ofenpass-Fuorn**	**5.02**	**291**		**Pn**	**00 04 50.5 +2.5**		
SCTE	**Santa Cesarea**	**5.02**	**167**	Pn	**Pn**	**00 04 45.7 -2.2**		
RETA	**Reutte**	**5.03**	**302**	*e*Pn	**Pn**	**00 04 50.8 +2.8**		
	5.8nm,0.3s							
RETA				*i* Sn	**Sn**	**00 05 46.7 +0.3**		
	22nm,0.3s							
RETA	**Reutte**	**5.03**	**302**		**Pn**	**00 04 50.8 +2.8**		
RETA					**Sn**	**00 05 46.7 +0.3**		
WET	**Wettzell**	**5.04**	**327**	*e*Pn	**Pn**	**00 04 48.9 +0.8**		
WET	**Wettzell**	**5.04**	**327**	*e*Pn	**Pn**	**00 04 48.9 +0.8**		
VTS	**Vitosha**	**5.06**	**116**	⇑P	**Pn**	**00 04 48.0 -0.6**		
VTS	**Vitosha**	**5.06**	**116**	*i* P	**Pn**	**00 04 48.1 -0.5**		
VTS	**Vitosha**	**5.06**	**116**		**Pn**	**00 04 48.0 -0.6**		
KRLC	**Kraliky**	**5.09**	**358**	*e*PN	**Pn**	**00 04 49.4 +0.5**		
KRLC				*e*SN	**Sn**	**00 05 46.1 -1.9**		
FUR	**Furstenfeldbru**	**5.09**	**311**	*e*Pn	**Pn**	**00 04 49.0 +0.7**		
FUR				*e*Sn	**Sn**	**00 05 47.0 -1.0**		
FUR	**Furstenfeldbru**	**5.09**	**311**	*e*Pn	**Pn**	**00 04 49.6 +0.7**		
FUR				*e*Sn	**Sn**	**00 05 47.0 -1.0**		
PBCC	**Pribram**	**5.14**	**337**	*e*PN	**Pn**	**00 04 50.2 +0.7**		
GOPC	**GO Pecny, Ondr**	**5.16**	**344**	*e*PN	**Pn**	**00 04 50.4 +0.6**		
GOPC				*e*SN	**Sn**	**00 05 49.3 -0.3**		
FNA	**Florina**	**5.27**	**141**		**Pn**	**00 04 50.3 -1.0**		
STHS	**Stebnicka Huta**	**5.27**	**31**	*e*PN	**Pn**	**00 04 52.0 +0.7**		
OBER	**Oberstdorf**	**5.28**	**300**	*e*Pn	**Pn**	**00 04 53.7 +2.2**		
OBER	**Oberstdorf**	**5.28**	**300**	*e*Pn	**Pn**	**00 04 53.7 +2.2**		
PRU	**Pruhonice**	**5.28**	**342**	*e*PN	**Pn**	**00 04 51.9 +0.5**		
PRU				*e*SN	**Sn**	**00 05 52.0 -0.6**		
DAVOX	**Davos/Dischmat**	**5.32**	**292**	Pn	**Pn**	**00 04 54.9 +2.8**		
	2.0nm,0.3s,baz=32,slow=3.3,SNR=32							
KOLS	**Kolonicke sedl**	**5.32**	**40**	*e*PN	**Pn**	**00 04 54.8 +2.8**		
KOLS				*e*PG	Pg	00 05 19.6 +5.7		
KOLS				*e*SG	**Sg**	**00 06 27.8 +4.9**		
KOLS				*e*LG	Lg	00 06 40.3		
ARR	**Arges**	**5.37**	**83**	⇓P	**Pn**	**00 04 53.7 +0.9**		
PRA	**Prague**	**5.38**	**342**	*e*PN	**Pn**	**00 04 53.7 +0.9**		
PRA				*e*SN	**Sn**	**00 05 54.3 -0.8**		
DPC	**Dobruska-Polom**	**5.39**	**355**	*e*PN	**Pn**	**00 04 53.2 +0.3**		
KKB	**Krupnik**	**5.39**	**123**	*i* P	**Pn**	**00 04 53.7 +0.8**		
MSSA	**Maissana**	**5.42**	**266**		**Pn**	**00 04 54.6 +1.2**		
VAY	**Valandovo**	**5.45**	**130**	*e*Pn	**Pn**	**00 04 54.1 +0.3**		
VAY	**Valandovo**	**5.45**	**130**	*e*Pn	**Pn**	**00 04 54.1 +0.3**		
DAVA	**Damuels**	**5.49**	**297**	*e*Pn	**Pn**	**00 04 56.5 +2.1**		
DAVA	**Damuels**	**5.49**	**297**	*e*Pn	**Pn**	**00 04 56.5 +2.1**		
DAVA	**Damuels**	**5.49**	**297**	*i* Pn	**Pn**	**00 04 56.5 +2.1**		
	4.0nm,0.2s							
DAVA				*e*Sn	**Sn**	**00 06 03.8 +5.9**		
	50nm,0.6s							
DAVA	**Damuels**	**5.49**	**297**		**Pn**	**00 04 56.5 +2.1**		
DAVA					**Sn**	**00 06 03.8 +5.9**		
UBR	**Ueberruh**	**5.51**	**302**	*e*Pn	**Pn**	**00 04 55.6 +1.0**		
UBR	**Ueberruh**	**5.51**	**302**	*e*Pn	**Pn**	**00 04 55.6 +1.0**		
OJC	**Ojcow**	**5.55**	**19**	*e*Pn	**Pn**	**00 04 55.8 +0.7**		
OJC				*e*Sn	**Sn**	**00 05 58.3 -0.9**		
OJC	**Ojcow**	**5.55**	**19**		**Pn**	**00 04 55.2 +0.1**		
UPC	**Upice**	**5.57**	**353**	*e*PN	**Pn**	**00 04 55.4 +0.1**		
OSTC	**Ostas**	**5.60**	**355**	*e*PN	**Pn**	**00 04 56.5 +0.7**		
OSTC				*e*SN	**Sn**	**00 05 59.1 -1.3**		
CHVC	**Chvalec**	**5.64**	**354**	*e*PN	**Pn**	**00 04 56.4 0.0**		
CHVC				*e*SN	**Sn**	**00 06 00.4 -1.1**		
VOIR		**5.67**	**83**	⇑P	**Pn**	**00 04 59.2 +2.3**		
NORI	**Noerdlinger Ri**	**5.77**	**313**	*e*Pn	**Pn**	**00 04 58.1 -0.1**		
NORI	**Noerdlinger Ri**	**5.77**	**313**	*e*Pn	**Pn**	**00 04 58.1 -0.1**		
PVCC	**Panska Ves**	**5.79**	**344**	*e*PN	**Pn**	**00 04 58.8 +0.4**		
ROTZ	**Rotzenmuhle**	**5.80**	**327**	*e*PN	**Pn**	**00 04 58.8 +0.2**		
ROTZ				*e*Sn	**Sn**	**00 06 01.5 -3.9**		
ROTZ	**Rotzenmuhle**	**5.80**	**327**	*e*Pn	**Pn**	**00 04 58.8 +0.2**		
ROTZ				*e*Sn	**Sn**	**00 06 01.5 -3.9**		
TIP	**Timpagrande**	**5.81**	**182**	⇑P	**Pn**	**00 04 59.1 +0.4**		
TIP	**Timpagrande**	**5.81**	**182**		**Pn**	**00 04 55.5 -3.3**		
KSP	**Ksiaz**	**5.88**	**355**	*e*Pn	**Pn**	**00 05 00.3 +0.6**		
KSP				*e*Sn	**Sn**	**00 06 08.6 +1.3**		
COPA	**Copaceanca**	**5.90**	**95**	⇑P	**Pn**	**00 04 59.1 -0.7**		
COPA	**Copaceanca**	**5.90**	**95**		**Pn**	**00 04 59.1 -0.7**		
MMB	**Musomiste**	**5.94**	**123**	*i* P	**Pn**	**00 05 01.1 +0.6**		
MMB				S	Sn	00 05 58.1 -11		
DOPR	**Dopca**	**5.94**	**78**	⇓P	**Pn**	**00 05 00.4 -0.2**		
DOPR	**Dopca**	**5.94**	**78**		**Pn**	**00 05 00.4 -0.2**		
MANZ	**Manzenberg**	**6.02**	**328**	*e*Pn	**Pn**	**00 05 01.9 +0.4**		
MANZ				*e*Sn	**Sn**	**00 06 07.7 -3.0**		
MANZ	**Manzenberg**	**6.02**	**328**	*e*Pn	**Pn**	**00 05 01.9 +0.4**		
MANZ				*e*Sn	**Sn**	**00 06 07.7 -3.0**		
KWP	**Kalwaria Pacla**	**6.03**	**38**	Pn	**Pn**	**00 05 00.5 -1.2**		
NKC	**Novy Kostel**	**6.10**	**331**	*e*PN	**Pn**	**00 05 03.0 +0.3**		
NKC				*e*SN	**Sn**	**00 06 10.6 -2.1**		
NKC				*e*SG	**Sg**	**00 06 48.3 +0.6**		
GRF	**Grafenberg Arr**	**6.15**	**322**	*e*Pn	**Pn**	**00 05 03.1 -0.3**		
GRF	**Grafenberg Arr**	**6.15**	**322**	*e*Pn	**Pn**	**00 05 03.1 -0.3**		
PVL	**Pavlikeni**	**6.22**	**104**	*i* P	**Pn**	**00 05 02.9 -1.4**		
BURAR	**Bucovina Array**	**6.24**	**62**	⇓P	**Pn**	**00 05 05.2 +0.6**		
BURAR	**Bucovina Array**	**6.24**	**62**		**Pn**	**00 05 07.3 +2.7**		
BURAR	**Bucovina Array**	**6.24**	**62**		**Pn**	**00 05 05.2 +0.6**		
BUR08	**Bucovina Ar. S**	**6.24**	**62**		**Pn**	**00 05 05.6 +0.9**		
BRG	**Berggiesshubel**	**6.25**	**342**	PN	**Pn**	**00 05 04.8 +0.2**		
BRG				PG	**Pg**	**00 05 30.4 -1.2**		
BRG				SG	**Sg**	**00 06 50.8 -1.6**		
	41nm,0.9s							
MLR	**Muntele Rosu**	**6.30**	**82**	Pn	**Pn**	**00 05 06.5 +1.0**		
	0.5nm,0.3s,baz=282,slow=4.7,SNR=16							
MLR	**Muntele Rosu**	**6.30**	**82**	⇓P	**Pn**	**00 05 06.1 +0.6**		
MLR	**Muntele Rosu**	**6.30**	**82**		**Pn**	**00 05 06.0 +0.4**		
PGF	**Pioggiola**	**6.32**	**250**	*e*P	**Pn**	**00 05 06.1 +0.3**		
PGF				*e*Sn	**Sn**	**00 06 12.6 -5.7**		
	15nm,0.5s							
SZH	**Strazhica**	**6.62**	**102**	*i* P	**Pn**	**00 05 08.9 -0.9**		
ELND	**Elena**	**6.69**	**105**	⇓P	**Pn**	**00 05 09.5 -1.3**		
ELND	**Elena**	**6.69**	**105**		**Pn**	**00 05 09.5 -1.3**		
MOX	**Moxa**	**6.74**	**329**	*e*Pn	**Pn**	**00 05 12.5 +1.0**		
MOX				*e*Sn	**Sn**	**00 06 25.6 -2.8**		
MOX	**Moxa**	**6.74**	**329**	*e*Pn	**Pn**	**00 05 12.5 +1.0**		
MOX				*e*Sn	**Sn**	**00 06 25.6 -2.8**		
BFO	**Black Forest**	**6.87**	**302**	*e*Pn	**Pn**	**00 05 13.2 0.0**		
BFO				*e*Sn	**Sn**	**00 06 27.2 -4.5**		
BFO	**Black Forest**	**6.87**	**302**	*e*Pn	**Pn**	**00 05 13.2 0.0**		
BFO				*e*Sn	**Sn**	**00 06 27.2 -4.5**		
BFO	**Black Forest**	**6.87**	**302**		**Pn**	**00 05 13.3 0.0**		
CLL	**Collm**	**6.88**	**338**	*e*Pn	**Pn**	**00 05 14.0 +0.7**		
CLL				*e*		00 05 20.0		
CLL				*e*Pg	**Pg**	**00 05 44.0 +0.3**		
CLL				*e*Sn	**Sn**	**00 06 29.0 -2.8**		
CLL				*e*		00 06 55.0		
CLL				*e*Sg	**Sg**	**00 07 09.0 -3.7**		
	comp=Z,86nm,1.3s							
CLL	**Collm**	**6.88**	**338**		**Pn**	**00 05 13.3 0.0**		
SENIN	**Lac Senin/Sane**	**6.97**	**285**		**Pn**	**00 05 17.9 +3.0**		
SBF	**Sospel**	**6.98**	**264**	*e*P	**Pn**	**00 05 14.6 -0.2**		
SBF				*e*Sn	**Sn**	**00 06 28.1 -6.4**		
	comp=Z,47nm,0.5s							
LPG	**La Plagne**	**7.29**	**278**	*e*P	**Pn**	**00 05 20.8 +1.5**		
LPG				*e*Sn	**Sn**	**00 06 35.1 -7.3**		
	comp=Z,50nm,0.5s							
LPL	**La Plagne**	**7.30**	**278**	*e*P	**Pn**	**00 05 19.6 +0.2**		
	SNR=2.8							
LPL				*e*Sn	**Sn**	**00 06 36.4 -6.3**		
	comp=Z,39nm,0.4s							
MBDF	**Montbardon**	**7.31**	**272**	*e*P	**Pn**	**00 05 17.0 -2.4**		
	SNR=2.7							
MBDF				*e*Sn	**Sn**	**00 06 35.5 -7.3**		
	comp=Z,37nm,0.6s							
BNI	**Bardonecchia**	**7.35**	**274**		**Pn**	**00 05 19.9 -0.1**		
ECH	**Echery**	**7.54**	**299**	Pn	**Pn**	**00 05 23.2 +0.8**		
CDF	**Champ du Feu**	**7.54**	**300**	*e*P	**Pn**	**00 05 22.6 +0.1**		
CDF				*e*Sg	**Sg**	**00 07 26.8 -7.2**		
	comp=Z,60nm,1.1s							
HINF	**Hinteralfeld**	**7.59**	**295**	*e*P	**Pn**	**00 05 25.2 +2.0**		
	SNR=1.3							
HINF				*e*Sn	**Sn**	**00 06 42.7 -6.9**		
	comp=Z,40nm,0.5s							
HINF				*e*Sg	**Sg**	**00 07 28.6 -7.1**		
	comp=Z,50nm,0.9s							
FRF	**La Foret Royal**	**7.60**	**263**	*e*P	**Pn**	**00 05 23.0 -0.3**		
FRF				*e*Sn	**Sn**	**00 06 42.8 -7.0**		
	comp=Z,18nm,0.4s							
LMR	**La Mourre**	**7.76**	**261**	*e*P	**Pn**	**00 05 25.1 -0.3**		
LMR				*e*Sn	**Sn**	**00 06 46.2 -7.4**		
	comp=Z,13nm,0.4s							
ALN	**Alexandroupoli**	**7.76**	**119**	Pn	**Pn**	**00 05 25.6 +0.2**		
TNS	**Taunus Mts**	**7.82**	**315**	*e*Pn	**Pn**	**00 05 27.2 +0.8**		
TNS				*e*Sn	**Sn**	**00 06 49.1 -6.1**		
TNS	**Taunus Mts**	**7.82**	**315**	*e*Pn	**Pn**	**00 05 27.2 +0.8**		
TNS				*e*Sn	**Sn**	**00 06 49.1 -6.1**		
CABF	**La Chapelle**	**7.83**	**286**	*e*P	**Pn**	**00 05 28.9 +2.4**		
	SNR=3.6							
CABF				*e*Sn	**Sn**	**00 06 47.5 -8.0**		
CABF				*e*Sg	Sg	00 07 33.9 -9.4		
	comp=Z,93nm,1.1s							
ORIF	**Oris-en-Rattie**	**7.93**	**273**	*e*P	**Pn**	**00 05 28.5 +0.7**		
	SNR=4.0							
ORIF				*e*Sn	**Sn**	**00 06 50.1 -7.7**		
	comp=Z,35nm,0.5s							
CLTB	**Caltabellotta**	**7.95**	**203**	Pn	**Pn**	**00 05 30.5 +2.4**		
HAU	**Haudompre**	**7.98**	**296**	*e*P	**Pn**	**00 05 28.0 -0.5**		
	SNR=2.0							
HAU				*e*Sn	**Sn**	**00 06 51.7 -7.3**		
	comp=Z,37nm,0.5s							
SMRF	**Simiane la Rot**	**8.27**	**267**	*e*P	**Pn**	**00 05 32.9 +0.4**		
	SNR=2.3							
SMRF				*e*Sn	**Sn**	**00 06 58.3 -7.9**		
	comp=Z,9.0nm,0.5s							
PAGF	**Fort de Pagny**	**8.55**	**299**	*e*P	**Pn**	**00 05 39.4 +3.1**		
PAGF	**Fort de Pagny**	**8.55**	**299**	*e*Pg	Pg	00 06 08.7 -7.0		
PAGF				*e*Sg	**Sg**	**00 07 58.5 -7.9**		
	comp=Z,9.4nm,0.5s							
WLF	**Walferdange**	**8.75**	**306**	Pn	**Pn**	**00 05 40.2 +1.1**		
VIVF	**Saint-Julien-l**	**8.79**	**273**	*e*P	**Pn**	**00 05 40.0 +0.4**		
	SNR=2.8							
VIVF				*e*Sn	**Sn**	**00 07 10.7 -8.2**		
	comp=Z,8.1nm,0.5s							
SSB	**Saint Sauveur**	**8.85**	**276**		**Pn**	**00 05 41.0 +0.5**		
SFTF	**Sexfontaines**	**8.87**	**296**	*e*P	**Pn**	**00 05 42.8 +2.1**		
	baz=115							
SFTF	**Sexfontaines**	**8.87**	**296**	*e*Pg	Pg	00 06 15.2 -6.6		
SFTF				*e*Sn	**Sn**	**00 07 12.6 -8.4**		
MEZF	**Maizieres J'vi**	**8.96**	**297**	*e*P	**Pn**	**00 05 45.5 +3.7**		
	baz=117,SNR=1.4							
MEZF				*e*Sn	Sn	00 07 14.4 -8.6		
MEM	**Membach**	**9.31**	**311**	Pn	**Pn**	**00 05 48.4 +1.6**		
MEM				pPg		00 06 31.9		
SMF	**Signal de Mont**	**9.37**	**285**	*e*P	**Pn**	**00 05 48.6 +1.0**		
	SNR=1.2							
SMF				*e*Sn	Sn	00 07 24.3 -9.0		
	comp=Z,15nm,0.7s							
LOR	**Lormes**	**9.44**	**289**	*e*P	**Pn**	**00 05 49.5 +1.0**		
	baz=109,SNR=2.5							
LOR				*e*Sn	Sn	00 07 26.0 -8.9		
	comp=Z,7.1nm,0.4s							
LOR				*e*Sg		00 08 26.7		
	comp=Z,4.3nm,0.5s							
LASF	**Ste Croix**	**9.47**	**269**	*e*Pn	**Pn**	**00 05 47.5 -1.4**		
	SNR=1.1							
LASF				*e*Sn	Sn	00 07 27.1 -8.6		
	comp=Z,11nm,0.7s							
BSTI	**Sart Tilman**	**9.54**	**310**	Pn	**Pn**	**00 05 52.4 +2.6**		
SSF	**Saint Saulge**	**9.65**	**287**	*e*P	**Pn**	**00 05 53.5 +2.1**		
	SNR=1.1							
SSF				*e*Sn	Sn	00 07 31.0 -9.0		
	comp=Z,8.8nm,0.6s							
SSF				*e*Sg		00 08 32.7		
	comp=Z,4.4nm,0.6s							
GIVF	**Givet**	**9.72**	**306**	*e*P	**Pn**	**00 05 55.0 +2.7**		
GIVF				*e*Sn	Sn	00 07 32.2 -9.5		
	comp=Z,4.4nm,0.3s							
AVF	**Avril sur Loir**	**9.72**	**286**	*e*P	**Pn**	**00 05 53.4 +1.1**		
AVF				*e*Sn	Sn	00 07 32.8 -9.0		
	comp=Z,2.4nm,0.5s							
BMRD	**Maredsous**	**9.84**	**307**	Pn	**Pn**	**00 05 55.9 +2.0**		
DOU	**Dourbes**	**9.85**	**306**	Pn	**Pn**	**00 05 56.3 +2.2**		
SUW	**Suwalki**	**9.87**	**22**	Pn	**Pn**	**00 05 55.6 +1.3**		
BGF	**Bois d'Agland**	**10.05**	**284**	*e*P	**Pn**	**00 05 59.7 +2.8**		
	SNR=2.1							
BGF				*e*Sn	Sn	00 07 41.3 -8.6		
	comp=Z,16nm,0.6s							
BAIF	**Baives**	**10.05**	**305**	*e*P	**Pn**	**00 05 59.1 +2.2**		
HYF	**Humbligny**	**10.26**	**288**	*e*P	**Pn**	**00 06 02.4 +2.6**		
TCF	**Toulx Ste Croi**	**10.48**	**282**	*e*P	**Pn**	**00 06 03.9 +1.2**		
	SNR=2.6							
TCF				*e*Sn	Sn	00 07 49.5 -11		
	comp=Z,13nm,0.6s							
CAF	**Calviac**	**10.63**	**275**	*e*P	**Pn**	**00 06 06.1 +1.3**		
	SNR=2.1							
CAF				*e*Sn	Sn	00 07 54.5 -10		
	comp=Z,3.1nm,0.4s							
MTLF	**Montolieu**	**10.79**	**266**	*e*P	**Pn**	**00 06 08.9 +2.0**		
LFF	**La Frestale**	**11.56**	**276**	*e*P	**Pn**	**00 06 20.1 +2.6**		
LFF				*e*Sn	Sn	00 08 16.9 -10		
	comp=Z,16nm,0.7s							
SJPF	**Ste Jean**	**13.28**	**268**	*e*P	**Pn**	**00 06 44.2 +3.1**		
	SNR=2.2							
HFS	**Hagfors**	**15.30**	**354**	Pn	**Pn**	**00 07 09.7 +1.3**		
	comp=Z,0.2nm,0.3s,baz=130,slow=10,SNR=4.7							
ESDC	**Sonseca Array**	**16.41**	**258**	Pn	**P**	**00 07 25.6 -0.1**		
	comp=Z,0.4nm,0.3s,baz=66,slow=12,SNR=7.7							
ESDC	**Sonseca Array**	**16.41**	**258**	Pn	**Pn**	**00 07 22.4 -0.5**		
NOA	**NORSAR Array B**	**16.45**	**350**	LR	LR	00 14 38.8		
	comp=Z,74nm,20.8s,baz=265,slow=40							
EKA	**Eskdalemuir Ar**	**16.52**	**316**	Pn	**P**	**00 07 26.1 -0.6**		
	baz=124,slow=14,SNR=3.5							
NC204	**NORSAR Array S**	**16.73**	**349**		**Pn**	**00 07 25.6 -1.2**		
FINES	**FINESS Array B**	**17.32**	**15**	P	**P**	**00 07 34.9 -0.7**		
	comp=Z,0.4nm,0.3s,baz=192,slow=11,SNR=14							
FINES	**FINESS Array B**	**17.32**	**15**		**Pn**	**00 07 33.5 -0.6**		
FIA1	**FINESS Array S**	**17.32**	**15**	Pn	**Pn**	**00 07 34.0 -0.1**		
FIA1				IAmb	IAmb	00 07 44.0		
	comp=Z,29nm,1.4s							
MMAI	**Mount Meron Ar**	**18.56**	**124**	P	**Pn**	**00 07 51.1 +1.4**		
	comp=Z,0.4nm,0.3s,baz=321,slow=11,SNR=3.9							
MMAI				LR	LR	00 15 37.5		
	comp=Z,43nm,20.6s,baz=20,slow=39							
AKTO	**Aktyubinsk**	**27.83**	**64**	LR	LR	00 21 55.7		
	comp=Z,81nm,18.0s,baz=322,slow=40							
TORD	**Torodi Ar. Bea**	**34.33**	**207**	P	**P**	**00 10 19.1 -0.3**		
	comp=Z,0.8nm,0.9s,baz=14,slow=12,SNR=3.7							
TORD	**Torodi Ar. Bea**	**34.33**	**207**	IAmb	IAmb	00 10 22.9		
	comp=Z,7.9nm,0.7s							
BRVK	**Borovoye**	**35.10**	**57**	P	**P**	**00 10 25.1 -0.7**		
BRVK				IAmb	IAmb	00 10 30.9		
	comp=Z,1.7nm,0.6s							
DBIC	**Dimbokro**	**42.67**	**213**	P	**P**	**00 11 30.6 +1.0**		
	comp=Z,1.6nm,0.8s,baz=32,slow=10,SNR=4.3							
DBIC	**Dimbokro**	**42.67**	**213**	P	**P**	**00 11 29.8 +0.3**		
DBIC				IAmb	IAmb	00 11 43.1		
	comp=Z,8.3nm,1.3s							
KSH	**Kashi**	**43.12**	**76**	P	**P**	**00 11 32.3 -0.9**		
KSH				sP	sP	00 11 40.5 +4.5		
KSH				pmax	pmax			
	comp=Z,490nm,6.1s							
MKAR	**Makanchi Array**	**44.26**	**63**	P	**P**	**00 11 41.1 -1.1**		
	comp=Z,0.4nm,0.6s,baz=281,slow=7.3,SNR=5.7							
MKAR	**Makanchi Array**	**44.26**	**63**	P	**P**	**00 11

COEN						IAmb	IAmb	00 45 15.1	
	comp=Z,35nm,1.1s								
STKA	**Stephens Creek**	**27.30**	**240**		P		**P**	**00 45 19.7**	**+2.0**
	comp=Z,7.8nm,0.8s,baz=77,slow=10.0,SNR=9.2								
STKA					LR		LR	00 55 33.7	
	comp=Z,416nm,18.1s,baz=68,slow=35								
STKA	**Stephens Creek**	**27.30**	**240**		P		**P**	**00 45 17.2**	**-0.5**
RAR	**Rarotonga**	**28.81**	**97**		LR		LR	00 54 27.1	
	comp=Z,167nm,21.5s,baz=260,slow=31								
BBOO	**Buckleboo**	**32.06**	**241**		P		**P**	**00 45 59.3**	**-0.6**
WR0	**Warramunga Arr**	**32.66**	**265**		P		**P**	**00 46 04.3**	**-1.1**
WR0					IAmb		IAmb	00 46 11.2	
	comp=Z,11nm,1.1s								
WB0	**Warramunga Arr**	**32.82**	**265**		P		**P**	**00 46 06.4**	**-0.4**
WB0					IAmb		IAmb	00 46 12.6	
	comp=Z,14nm,1.0s								
WRA	**Warramunga Arr**	**32.85**	**265**		P		**P**	**00 46 06.7**	**-0.3**
	comp=Z,2.8nm,0.8s,baz=95,slow=8.0,SNR=5.9								
WRA					LR		LR	00 59 46.9	
	comp=Z,428nm,18.6s,baz=110,slow=37								
AS31	**Alice Springs**	**32.97**	**258**		P		**P**	**00 46 06.8**	**-1.3**
AS31					IAmb		IAmb	00 46 14.6	
	comp=Z,6.2nm,0.8s								
ASAR	**Alice Springs**	**32.97**	**258**		P		**P**	**00 46 08.0**	**-0.1**
	comp=Z,6.6nm,0.6s,baz=85,slow=9.1,SNR=52								
ASAR					LR		LR	00 59 57.9	
	comp=Z,350nm,18.6s,baz=97,slow=37								
ASAR	**Alice Springs**	**32.97**	**258**		P		**P**	**00 46 05.6**	**-2.4**
MTN	**Manton Dam**	**37.36**	**276**		P		**P**	**00 46 45.7**	**-0.2**
TBI	**Tubuai**	**38.19**	**102**		*e*S		S	00 52 34.9	-9.2
	comp=Z,136nm,32.2s								
TBI					*e*LR		LR	00 57 08.9	
	comp=Z,390nm,32.0s								
PPT2	**Papeete2**	**38.83**	**93**		*e*S		S	00 52 45.4	-8.7
	comp=Z,112nm,28.5s								
PPT2					*e*LR		LR	00 57 23.7	
	comp=Z,574nm,26.5s								
PPT	**Papeete**	**38.83**	**93**		LR		LR	00 59 02.8	
	comp=Z,170nm,20.0s,baz=241,slow=30								
KNRA	**Kununurra**	**38.84**	**270**		P		**P**	**00 46 57.6**	**-0.7**
KNRA					IAmb		IAmb	00 47 04.6	
	comp=Z,22nm,0.9s								
FITZ	**Fitzroy Crossi**	**41.27**	**266**		P		**P**	**00 47 19.1**	**+0.7**
FITZ					IAmb		IAmb	00 47 25.5	
	comp=Z,15nm,1.0s								
PSAD2	**Pilbara Seismi**	**45.97**	**259**		P		**P**	**00 47 55.6**	**-0.7**
PSAD2					IAmb		IAmb	00 48 02.9	
	comp=Z,13nm,0.9s								
PSAA2	**Pilbara Seismi**	**46.09**	**259**		P		**P**	**00 47 54.5**	**-2.8**
PSAC3	**Pilbara Seismi**	**46.10**	**259**		P		**P**	**00 47 57.6**	**+0.2**
PSAD1	**Pilbara Seismi**	**46.12**	**260**		P		**P**	**00 47 55.4**	**-2.1**
KCP	**Kidapawan**	**51.41**	**298**	⇓	*e*P		**P**	**00 48 38.0**	**-0.3**
VNDA	**Vanda**	**57.16**	**182**		LR		LR	01 09 44.9	
	comp=Z,149nm,20.7s,baz=18,slow=32								
CISI	**Cisompet, Garu**	**60.80**	**273**		P		P	00 49 54.4	+9.0
MJAR	**Matsushiro Arr**	**63.95**	**332**		LR		LR	01 15 12.6	
	comp=Z,37nm,21.7s,baz=45,slow=34								
KSRS	**Korea Array**	**69.64**	**326**		LR		LR	01 18 21.5	
	comp=Z,49nm,19.3s,baz=332,slow=34								
PETK	**Petropavlovsk-**	**74.02**	**353**		LR		LR	01 16 16.6	
	comp=Z,162nm,21.3s,baz=65,slow=30								
MAW	**Mawson**	**77.30**	**202**		LR		LR	01 21 12.9	
	comp=Z,73nm,21.0s,baz=61,slow=32								
XAN	**Xi'an**	**79.08**	**313**		P		P	00 51 43.5	+6.3
XAN					pmax		pmax		
	comp=Z,6.0nm,2.9s								
CMAR	**Chiang Mai Arr**	**79.16**	**294**		P		**P**	**00 51 39.8**	**+1.8**
	comp=Z,2.8nm,0.8s,baz=135,slow=4.2,SNR=18								
GTA	**Gaotai**	**88.11**	**313**		*e*P		P	00 52 28.3	+4.8
GTA					pP		pwP	00 52 34.3	-1.9
GTA					sP		sP	00 52 38.0	0.0
GTA					pmax		pmax		
	comp=Z,3.0nm,1.3s								
SONM	**Songino Array**	**88.33**	**323**		P		**P**	**00 52 26.0**	**+1.6**
	comp=Z,1.4nm,0.9s,baz=139,slow=4.5,SNR=8.3								
SONM					LR		LR	01 32 12.7	
	comp=Z,108nm,18.5s,baz=86,slow=36								
NVAR	**Mina Array Bea**	**89.55**	**48**		P		**P**	**00 52 32.7**	**+2.3**
	comp=Z,3.1nm,1.1s,baz=222,slow=6.7,SNR=12								
NVAR					LR		LR	01 27 22.8	
	comp=Z,68nm,18.4s,baz=312,slow=32								
TPNV	**Topopah Spring**	**90.36**	**50**		P		**P**	**00 52 37.4**	**+3.2**
TPNV					IAmb		IAmb	00 52 39.6	
	comp=Z,3.6nm,0.9s								
214A	**Organ Pipe Nat**	**90.87**	**56**		P		**P**	**00 52 38.6**	**+2.1**
SHPR	**Sheep Range**	**90.96**	**51**		P		**P**	**00 52 39.8**	**+2.8**
SHPR					IAmb		IAmb	00 52 41.2	
	comp=Z,2.7nm,1.1s								
WVOR	**Wild Horse Val**	**91.12**	**45**		P		**P**	**00 52 39.2**	**+1.6**
W13A	**Hualapai Mount**	**91.32**	**53**		P		**P**	**00 52 39.7**	**+0.9**
W13A					IAmb		IAmb	00 52 43.8	
	comp=Z,2.4nm,1.0s								
ILAR	**Eielson Array**	**91.41**	**17**		P		**P**	**00 52 40.5**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=235,slow=6.3,SNR=3.1								
ILAR					LR		LR	01 26 15.6	
	comp=Z,72nm,20.0s,baz=238,slow=31								
ILAR	**Eielson Array**	**91.41**	**17**		P		**P**	**00 52 40.3**	**+2.1**
CCUT	**Cedar City**	**92.70**	**51**		P		**P**	**00 52 46.2**	**+1.0**
U15A	**North Rim**	**93.04**	**52**		P		**P**	**00 52 47.9**	**+1.1**
U15A					IAmb		IAmb	00 52 59.4	
	comp=Z,2.4nm,1.0s								
GOPC	**GO Pecny, Ondr**	**144.42**	**332**		*e*PKP		**PKiKP**	**00 59 11.4**	**-1.0**
PRU	**Pruhonice**	**144.47**	**332**		*e*PKP		**PKiKP**	**00 59 10.3**	**-2.2**
NKC	**Novy Kostel**	**145.18**	**334**		*e*PKP		**PKiKP**	**00 59 13.7**	**-0.3**
CONA	**Conrad Observa**	**145.31**	**328**		*e*PKiKP		**PKiKP**	**00 59 14.4**	**0.0**
	comp=Z,12nm,0.9s								
KHC	**Kasperske Hory**	**145.53**	**332**		*e*PKP		**PKiKP**	**00 59 14.1**	**-0.6**
KHC					*ex*		x	00 59 25.6	
KHC					*ex*		x	00 59 34.1	
GERES	**GERESS Array B**	**145.68**	**331**		PKPbc		**PKPab**	**00 59 11.5**	**-0.3**
	comp=Z,4.2nm,1.0s,baz=36,slow=5.4,SNR=4.2								
ARSA	**Arzberg**	**145.93**	**328**		*e*pPKPdf		**PKPdf**	**00 59 17.2**	**+5.7**
	comp=Z,4.1nm,1.1s								
KBA	**Koelnbreinsper**	**147.12**	**329**		*e*pPKPdf		**PKPdf**	**00 59 19.1**	**+5.5**
	comp=Z,9.1nm,1.1s								
SQTA	**Sankt Quirin**	**148.01**	**331**		*e*pPKPbc		PKPdf	00 59 24.8	+10
	comp=Z,8.0nm,1.2s								
FUORN	**Ofenpass-Fuorn**	**148.89**	**332**				**PKPbc**	**00 59 17.3**	**-3.3**

*THE **28** 00:52:09.5, 38°.22N×20°.35E, h7$^{km}_{\pm}$2km, ML2.7/9, Error ellipse: s-maj=2.5km s-min=0.5km az=94.0*
*ATH **28** 00:52:10.4, 38°.23N×20°.49E, h15$^{km}_{\pm}$1km, ML2.8/9, Error ellipse: s-maj=2.6km s-min=1.0km az=256.0*
ISC 28 00:52:09.1±1.1, 38°.21N±0°.03×20°.36E±0°.04, h12$^{km}_{\pm}$6km, n47, σ0°78/70, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.10**	**110**	P	**Pg**	**00 52 12.2**	**+0.2**
ARG2				S	**Sg**	**00 52 14.2**	**+0.2**
VLS	**Valsamata**	**0.18**	**102**	P	**Pg**	**00 52 13.1**	**-0.1**
VLS				S	**Sg**	**00 52 16.0**	**0.0**
VLS	**Valsamata**	**0.18**	**102**	P	**Pg**	**00 52 13.1**	**-0.1**
VLS				S	**Sg**	**00 52 15.9**	**0.0**
FSK	**Fiskardo**	**0.29**	**32**	P	**Pg**	**00 52 15.2**	**+0.1**
FSK				S	**Sg**	**00 52 19.6**	**+0.5**
FSK	**Fiskardo**	**0.29**	**32**	P	**Pg**	**00 52 15.1**	**+0.1**
FSK				S	**Sg**	**00 52 19.7**	**+0.6**
FSK				AML	AML	00 52 19.8	
	comp=N,6501μm,0.2s						
FSK				AML	AML	00 52 20.2	
	comp=E,16554μm,0.2s						
KFL	**Anninata**	**0.35**	**107**	P	**Pg**	**00 52 16.0**	**-0.2**
KFL				S	**Sg**	**00 52 21.5**	**+0.6**
KFL	**Anninata**	**0.35**	**107**	P	**Pg**	**00 52 15.8**	**-0.3**
KFL				S	**Sg**	**00 52 20.8**	**-0.1**
VLMS	**Volimes, Zakyn**	**0.41**	**145**	P	**Pg**	**00 52 17.8**	**+0.5**
VLMS				S	**Sb**	**00 52 24.6**	**0.0**
VLMS				AML	AML	00 52 24.7	
	comp=E,13895μm,0.2s						
VLMS				AML	AML	00 52 25.3	
	comp=N,11070μm,0.2s						
EVGI	**Lefkada island**	**0.47**	**29**	P	**Pg**	**00 52 18.4**	**+0.1**
EVGI				S	**Sb**	**00 52 25.6**	**-0.6**
EVGI	**Lefkada island**	**0.47**	**29**	P	**Pg**	**00 52 18.5**	**+0.2**
EVGI				S	**Sg**	**00 52 25.1**	**+0.6**
ZAK2	**Zakynthos**	**0.60**	**135**	P	**Pg**	**00 52 21.2**	**+0.4**
ZAK2				S	**Sb**	**00 52 30.9**	**+0.9**
LKD2	**Lefkada island**	**0.62**	**22**	P	**Pg**	**00 52 21.6**	**+0.4**
LKD2				S	**Sg**	**00 52 29.9**	**+0.5**
	comp=N,498nm,0.7s						
LKD2	**Lefkada island**	**0.62**	**22**	P	**Pg**	**00 52 21.4**	**+0.2**
TSLK	**Tsoukalades, L**	**0.65**	**20**	P	**Pg**	**00 52 22.0**	**+0.2**
TSLK				S	**Sb**	**00 52 32.2**	**+0.7**
	comp=N,628nm,0.4s						
TSLK	**Tsoukalades, L**	**0.65**	**20**	P	**Pg**	**00 52 21.4**	**-0.5**
TSLK				S	**Sb**	**00 52 31.7**	**+0.2**
PDO	**Prodromos**	**0.75**	**59**	P	**Pg**	**00 52 23.0**	**-0.7**
PDO				S	**Sb**	**00 52 34.7**	**+0.4**
	comp=N,2μm,0.3s						
PDO	**Prodromos**	**0.75**	**59**	P	**Pg**	**00 52 23.2**	**-0.4**
PDO				AML	AML	00 52 37.8	
	comp=N,2459μm,0.3s						
PDO				AML	AML	00 52 38.8	
	comp=E,1846μm,0.3s						
RLS	**Riolos of Patr**	**0.88**	**100**	P	**Pg**	**00 52 25.4**	**-0.8**
RLS				S	**Sn**	**00 52 40.1**	**-0.1**
	comp=E,362nm,0.6s						
RLS	**Riolos of Patr**	**0.88**	**100**	P	**Pg**	**00 52 25.5**	**-0.8**
RLS				AML	AML	00 52 42.7	
	comp=E,540μm,0.3s						
RLS				AML	AML	00 52 44.0	
	comp=N,832μm,0.3s						
PVO	**Paravola**	**1.00**	**66**	P	**Pg**	**00 52 28.0**	**-0.4**
PVO				S	**Sn**	**00 52 43.8**	**+0.8**
	comp=N,795nm,0.3s						
PVO	**Paravola**	**1.00**	**66**	P	**Pg**	**00 52 28.0**	**-0.4**
PVO				AML	AML	00 52 44.9	
	comp=E,1651μm,0.3s						
PVO				AML	AML	00 52 48.7	
	comp=N,1453μm,0.4s						
DRO	**Drossia**	**1.09**	**103**	P	**Pb**	**00 52 29.2**	**-0.8**
DRO				S	**Sn**	**00 52 47.2**	**+1.8**
	comp=N,732nm,0.4s						
DRO	**Drossia**	**1.09**	**103**	P	**Pb**	**00 52 29.2**	**-0.8**
DRO				AML	AML	00 52 52.3	
	comp=E,1477μm,0.4s						
DRO				AML	AML	00 52 55.6	
	comp=N,1406μm,0.4s						
EFP	**Efpalio**	**1.23**	**80**	P	**Pb**	**00 52 31.3**	**-1.0**
EFP				S	**Sn**	**00 52 50.7**	**+2.0**
	comp=N,412nm,0.8s						
EFP	**Efpalio**	**1.23**	**80**	P	**Pb**	**00 52 31.1**	**-1.2**
EFP				AML	AML	00 52 55.8	
	comp=E,843μm,0.6s						
EFP				AML	AML	00 53 02.3	
	comp=N,694μm,0.5s						
LAKA	**Lakka**	**1.27**	**88**	P	**Pn**	**00 52 32.1**	**-0.7**
LAKA				S	**Sn**	**00 52 50.7**	**+0.9**
	comp=N,202nm,0.7s						
ANX	**Ano Chora**	**1.28**	**72**	P	**Pn**	**00 52 32.7**	**-0.2**
ANX	**Ano Chora**	**1.28**	**72**	P	**Pn**	**00 52 32.7**	**-0.2**
IGT	**Igoumenitsa**	**1.32**	**359**	P	**Pg**	**00 52 35.1**	**+0.6**
IGT				AML	AML	00 53 01.8	
	comp=N,182μm,0.6s						
IGT				AML	AML	00 53 05.2	
	comp=E,253μm,0.5s						
EVR	**Evrytania**	**1.33**	**58**	P	**Pn**	**00 52 33.2**	**-0.5**
EVR				AML	AML	00 53 05.9	
	comp=E,275μm,0.4s						
EVR				AML	AML	00 53 08.2	
	comp=N,280μm,0.7s						
SERG	**Sergoula**	**1.35**	**81**	P	**Pn**	**00 52 33.1**	**-0.7**
SERG	**Sergoula**	**1.35**	**81**	P	**Pn**	**00 52 33.1**	**-0.7**
TRIZ	**Trizonia**	**1.35**	**83**	P	**Pn**	**00 52 33.3**	**-0.6**
TRIZ	**Trizonia**	**1.35**	**83**	P	**Pn**	**00 52 33.3**	**-0.6**
ALIK	**Aliki, Aigiali**	**1.38**	**88**	P	**Pg**	**00 52 33.9**	**-0.3**
ALIK				S	**Sg**	**00 52 54.5**	**+1.0**
KALE	**Kalithea**	**1.41**	**82**	P	**Pn**	**00 52 34.1**	**-0.6**
KLV	**Kalavryta, Ach**	**1.42**	**96**	P	**Pn**	**00 52 34.9**	**+0.1**
KLV				S	**Sg**	**00 52 56.5**	**+1.7**
	comp=N,112nm,0.4s						
KLV	**Kalavryta, Ach**	**1.42**	**96**	P	**Pn**	**00 52 34.8**	**-0.1**
AGG	**Agios Georgios**	**1.74**	**62**	P	**Pb**	**00 52 41.6**	**+0.6**
LTK	**Loutraki**	**2.06**	**95**	P	**Pb**	**00 52 45.5**	**-1.1**
LKR	**Lokris**	**2.12**	**77**	P	**Pb**	**00 52 46.4**	**-1.0**
MAKA	**Makarska**	**5.67**	**334**	Sn	**Sn**	**00 54 35.8**	**-2.3**
ZIRJ	**Zirje**	**6.50**	**328**	*e*Pn	**Pn**	**00 53 44.5**	**-0.2**
KIJV	**Kijevo**	**6.51**	**334**	*e*Pn	**Pn**	**00 53 45.6**	**+0.8**
KIJV				Sn	**Sn**	**00 54 57.4**	**-1.5**
MORI	**Morici**	**6.65**	**330**	*i* Pn	**Pn**	**00 53 47.0**	**+0.3**
UDBI	**Udbina**	**7.19**	**333**	*e*Pn	**Pn**	**00 53 55.7**	**+1.5**
NVLJ	**Novalja**	**7.57**	**329**	*e*Pn	**Pn**	**00 53 59.0**	**-0.2**

MAN 28 01:03:00.6, 9°.94N×122°.04E, h1^{km}, mb4.7, ML3.6, MS3.5, 3D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAP	**San Jose, Anti**	**0.81**	**353**	⇓ *e*P	Pn	01 03 20.2	+1.0
JAP				*e*S	Sn	01 03 40.9	+9.0
GUIM	**Jordan**	**0.87**	**38**	*e*P	Pg	01 03 17.9	+0.5
GUIM				*e*S	Sn	01 03 33.3	-0.1
RCP	**Roxas**	**1.75**	**23**	⇓ *e*P	Pg	01 03 34.9	+0.6
RCP				*e*S	Sg	01 04 00.5	+3.5
DCPH	**Dipolog City**	**1.87**	**136**	⇓ *e*P	Pn	01 03 33.9	+0.1
LLP	**Lapu-Lapu**	**1.93**	**79**	*e*P	Pg	01 03 39.8	+2.0
LLP				*e*S	Sn	01 04 00.1	+0.5
OTRP	**Odiongan**	**2.41**	**360**	*e*P	Pn	01 03 41.9	+0.7
PAGZ	**Pagadian**	**2.46**	**147**	*e*P	Pn	01 03 42.1	+0.1
PAGZ				*e*S	Sn	01 04 14.2	+1.5
MSLP	**Maasin**	**2.78**	**86**	*e*P	Pn	01 03 46.8	+0.5
MSLP				*e*S	Sn	01 04 21.9	+1.3

*SJA **28** 01:04:39.8±1.0, 21°.79S×68°.52W, h136$^{km}_{\pm}$11^{km}, ML3.1, MW3.2*
*GUC **28** 01:04:41.0±0.8, 21°.80S×68°.55W, h125$^{km}_{\pm}$4km, ML3.2*
ISC 28 01:04:41.3±1.5, 21°.80S±0°.04×68°.56W±0°.06, h130$^{km}_{\pm}$11km, n28, σ0°80/47, 12C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.64**	**270**	*i* P	**Pn**	**01 05 01.5**	**0.0**
PB09				*e*S	**Sn**	**01 05 16.3**	**-0.4**
PB09				IAML		01 05 19.8	
	comp=E,411nm,0.5s						
PB09	**IPOC Station P**	**0.64**	**270**	*i* P	**Pn**	**01 05 01.5**	**0.0**
PB09				*e*S	**Sn**	**01 05 17.4**	**+0.7**
PB09				IAML		01 05 18.6	
	comp=Z,574nm,0.9s						
LVC	**Limon Verde**	**0.87**	**202**	*e*P	**Pn**	**01 05 02.8**	**-0.7**
LVC				*e*S	**Sn**	**01 05 19.4**	**-1.0**
LVC	**Limon Verde**	**0.87**	**202**	⇓ *i*P	**Pn**	**01 05 02.9**	**-0.7**
PB03	**IPOC Station P**	**1.14**	**257**	⇑ *i*P	**Pn**	**01 05 05.8**	**0.0**
PB03				*i* S	**Sn**	**01 05 24.3**	**0.0**
PB03				IAML		01 05 25.1	
	comp=E,373nm,0.4s						
PB01	**IPOC Station P**	**1.15**	**311**	⇑ *i*P	**Pn**	**01 05 05.6**	**-0.2**
PB01				*i* S	**Sn**	**01 05 24.2**	**-0.2**
PB01				IAML		01 05 26.3	
	comp=N,434nm,0.3s						
PB07	**IPOC Station P**	**1.24**	**273**	⇑ *i*P	**Pn**	**01 05 06.8**	**0.0**
PB07				*i* S	**Sn**	**01 05 26.7**	**+0.5**
PB07				IAML		01 05 28.6	
	comp=E,525nm,0.2s						
PB06	**IPOC Station P**	**1.30**	**226**	⇑ *i*P	**Pn**	**01 05 07.5**	**+0.1**
PB06				IAML		01 05 28.5	
	comp=N,219nm,0.1s						
PB06				IAML		01 05 31.3	
	comp=E,231nm,0.1s						
PB02	**IPOC Station P**	**1.33**	**291**	⇑ *i*P	**Pn**	**01 05 07.8**	**0.0**
PB02				*i* S	**Sn**	**01 05 27.9**	**0.0**
PB02				IAML		01 05 30.5	
	comp=N,734nm,0.3s						
PB04	**IPOC Station P**	**1.57**	**250**	⇑ *i*P	**Pn**	**01 05 10.4**	**+0.1**
PB04				*i* S	**Sn**	**01 05 33.0**	**+0.4**
PB04				IAML		01 05 36.7	
	comp=N,214nm,0.3s						
PB04	**IPOC Station P**	**1.57**	**250**	*i* P	**Pn**	**01 05 10.5**	**+0.1**
PB04				*e*S	**Sn**	**01 05 33.8**	**+1.2**
PB04				IAML		01 05 40.5	
	comp=Z,154nm,0.5s						
PB15	**IPOC Station P**	**1.63**	**211**	⇑ *i*P	**Pn**	**01 05 11.4**	**+0.2**
PB15				*i* S	**Sn**	**01 05 35.0**	**+1.0**
PB15	**IPOC Station P**	**1.63**	**211**	*i* P	**Pn**	**01 05 11.7**	**+0.5**
PB15				*e*S	**Sn**	**01 05 36.0**	**+2.0**
PB08	**IPOC Station P**	**1.74**	**341**	⇑ *i*P	**Pn**	**01 05 13.4**	**+0.7**
PB08				*i* S	**Sn**	**01 05 37.5**	**+0.9**
PB08				IAML		01 05 39.8	
	comp=E,147nm,0.3s						
PATCX	**Punta Patache**	**1.78**	**303**	*e*P	**Pn**	**01 05 12.9**	**+0.1**
PATCX				*i* S	**Sn**	**01 05 36.9**	**+0.1**
PATCX				IAML		01 05 40.0	
	comp=E,410nm,0.2s						
PB05	**IPOC Station P**	**1.85**	**235**	⇑ *i*P	**Pn**	**01 05 13.5**	**0.0**
PB05				*i* S	**Sn**	**01 05 39.1**	**+0.8**
PB05	**IPOC Station P**	**1.85**	**235**	*i* P	**Pn**	**01 05 13.6**	**0.0**
TA01	**Diego Aracena**	**1.95**	**309**	*e*P	**Pn**	**01 05 14.5**	**-0.2**
TA01				*i* S	**Sn**	**01 05 39.9**	**-0.4**
TA01				IAML		01 05 42.4	
	comp=E,204nm,0.2s						
GO01	**Chusmiza**	**2.21**	**344**	⇓ *i*P	**Pn**	**01 05 18.6**	**+0.2**
GO01				*i* S	**Sn**	**01 05 47.5**	**+0.8**
GO01				IAML		01 05 52.4	
	comp=N,195nm,0.1s						
PB11	**IPOC Station P**	**2.28**	**333**	⇑ *i*P	**Pn**	**01 05 18.7**	**-0.2**
PB11				*i* S	**Sn**	**01 05 47.7**	**-0.1**
PB11				IAML		01 05 52.4	
	comp=E,218nm,0.3s						
PB10	**IPOC Station P**	**2.51**	**227**	⇑ *i*P	**Pn**	**01 05 21.8**	**+0.1**
PB10	**IPOC Station P**	**2.51**	**227**	*i* P	**Pn**	**01 05 21.8**	**+0.1**
PB10				IAML		01 05 26.6	
	comp=Z,24nm,0.3s						
PB10				*e*S	Sn	01 06 02.5	+10
PSGC	**Pisagua**	**2.64**	**326**	⇑ *i*P	**Pn**	**01 05 22.2**	**-1.3**
PSGC				*i* S	**Sn**	**01 05 54.6**	**-1.2**
MNMC	**Minye Minye**	**2.83**	**340**	⇓ *i*P	**Pn**	**01 05 26.1**	**0.0**
MNMC				*i* S	**Sn**	**01 06 01.8**	**+1.3**
YJA	**Yavi**	**2.85**	**98**	⇑ *i*P	**Pn**	**01 05 26.1**	**-0.3**
HJA	**Humahuaca**	**3.23**	**116**	*i* P	**Pn**	**01 05 31.9**	**+0.6**
PB14	**IPOC Station P**	**3.28**	**211**	*i* P	**Pn**	**01 05 31.7**	**-0.3**
AMOG	**MOGNA**	**9.10**	**180**	*i* P	**Pn**	**01 06 46.5**	**-3.1**

*NEIC **28** 01:05:54.0±1.3, 38°.23N±0°.04×20°.39E±0°.05, h4$^{km}_{\pm}$2km, Error ellipse: s-maj=6.6km s-min=5.1km az=221.0*
*IDC **28** 01:05:54.2±0.9, 38°.36N×20°.46E, h0^{km}, mb4.0/9, mb1 3.9/16, mb1mx3.8/39, mbtmp3.9/16, ML3.2/7, MS3.4/4, Ms1 3.4/4, ms1mx2.9/52, Error ellipse: s-maj=17.9km s-min=14.6km az=17.0*
*ATH **28** 01:05:55.8, 38°.25N×20°.44E, h15$^{km}_{\pm}$1km, ML4.0/16, Error ellipse: s-maj=2.3km s-min=1.0km az=75.0*
*PDG **28** 01:05:55.4±0.2, 38°.26N×20°.37E, h18^{km}, ML3.9/14, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*THE **28** 01:05:56.8, 38°.29N×20°.48E, h7$^{km}_{\pm}$1km, ML4.1/12, Error ellipse: s-maj=1.5km s-min=0.3km az=244.0*
ISC 28 01:05:55.9±0.8, 38°.28N±0°.02×20°.44E±0°.03, h14$^{km}_{\pm}$4km, n180, σ1°$48/241, mb4.0/11, MS3.8/3, 11C-6D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.11**	**159**	P	**Pg**	**01 05 59.0**	**-0.1**
ARG2				S	**Sg**	**01 06 01.0**	**-0.3**
VLS	**Valsamata**	**0.16**	**131**	P	**Pg**	**01 05 59.7**	**-0.1**
VLS				S	**Sg**	**01 06 02.4**	**-0.1**
	366μm,0.3s						
VLS	**Valsamata**	**0.16**	**131**	P	**Pg**	**01 05 59.7**	**-0.1**
VLS				S	**Sg**	**01 06 02.4**	**-0.1**
FSK	**Fiskardo**	**0.20**	**30**	P	**Pg**	**01 06 00.9**	**+0.5**
FSK				S	**Sg**	**01 06 03.4**	**-0.1**
	53μm,0.2s						
FSK	**Fiskardo**	**0.20**	**30**	P	**Pg**	**01 06 00.9**	**+0.5**
FSK				S	**Sb**	**01 06 04.8**	**-0.3**
KFL	**Anninata**	**0.33**	**122**	P	**Pg**	**01 06 02.6**	**0.0**
KFL				S	**Sg**	**01 06 07.7**	**+0.6**
	173μm,0.4s						
KFL	**Anninata**	**0.33**	**122**	P	**Pg**	**01 06 02.7**	**+0.1**
KFL				S	**Sb**	**01 06 08.1**	**-0.5**
KFL				AML	AML	01 06 08.4	
KFL				AML	AML	01 06 08.6	
EVGI	**Lefkada island**	**0.38**	**27**	P	**Pg**	**01 06 03.9**	**+0.4**
EVGI				S	**Sg**	**01 06 08.7**	**0.0**
EVGI	**Lefkada island**	**0.38**	**27**	P	**Pb**	**01 06 04.1**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.44**	**156**	P	**Pg**	**01 06 04.6**	**-0.1**
VLMS				S	**Sg**	**01 06 10.7**	**0.0**
VLMS				AML	AML	01 06 12.3	
VLMS				AML	AML	01 06 12.5	
MGNA	**Meganis**	**0.47**	**37**	P	**Pg**	**01 06 05.1**	**0.0**
MGNA				S	**Sb**	**01 06 13.2**	**+0.6**
MGNA				AML	AML	01 06 13.5	
	comp=N,34848μm,0.2s						
MGNA				AML	AML	01 06 13.6	
	comp=E,32405μm,0.4s						
LKD2	**Lefkada island**	**0.53**	**19**	P	**Pg**	**01 06 06.4**	**0.0**
LKD2				S	**Sb**	**01 06 14.4**	**-0.3**
	comp=E,8μm,0.7s						
LKD2	**Lefkada island**	**0.53**	**19**	P	**Pg**	**01 06 06.4**	**0.0**
LKD2				S	**Sb**	**01 06 15.4**	**+0.7**
LKD2	

	comp=N,11818µm,0.5s								
KALE						AML	AML	01 06 53.7	
	comp=E,5762µm,1.1s								
KLV	**Kalavryta, Ach**	**1.37**	**100**		P		**Pn**	**01 06 20.8**	**+0.1**
KLV	**Kalavryta, Ach**	**1.37**	**100**		P		**Pb**	**01 06 21.0**	**-0.4**
JAN	**Janina**	**1.41**	**13**		P		**Pg**	**01 06 23.3**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.52**	**61**		P		**Pb**	**01 06 24.2**	**+0.4**
ITM	**Ithomi**	**1.62**	**133**		P		**Pb**	**01 06 24.9**	**-0.6**
ITM	**Ithomi**	**1.62**	**133**				**Pn**	**01 06 23.3**	**-0.7**
ITM						Sn		**Sn**	**01 06 44.5**	**-0.2**
AGG	**Agios Georgios**	**1.66**	**63**		P		**Pb**	**01 06 26.5**	**+0.3**
AGG						AML	AML	01 06 57.7	
	comp=N,5286µm,0.6s								
AGG						AML	AML	01 07 00.1	
	comp=E,4775µm,0.9s								
AGG	**Agios Georgios**	**1.66**	**63**				**Pn**	**01 06 24.4**	**-0.3**
AGG						Sn		**Sg**	**01 06 48.3**	**-1.0**
PYL	**PYLOS**	**1.73**	**143**		P		**Pn**	**01 06 26.4**	**+0.9**
THL	**Klokotos Trika**	**1.78**	**43**		P		**Pb**	**01 06 28.9**	**+0.6**
VLX	**Vlachokerasia**	**1.79**	**120**		P		**Pb**	**01 06 29.5**	**+1.0**
VLX						AML	AML	01 07 03.5	
	comp=N,5548µm,0.6s								
VLX						AML	AML	01 07 06.2	
	comp=E,12266µm,0.7s								
KPRO	**Kipourio**	**1.82**	**23**		P		**Pg**	**01 06 30.0**	**-0.7**
PROD	**Prodromos**	**1.94**	**90**		P		**Pb**	**01 06 30.9**	**-0.1**
PENT	**Pentalofos**	**1.99**	**16**		P		**Pb**	**01 06 32.2**	**+0.3**
LOUT	**Loutraki**	**2.02**	**98**		P		**Pb**	**01 06 32.0**	**-0.5**
LKR	**Lokris**	**2.05**	**79**		P		**Pb**	**01 06 32.6**	**-0.2**
LRSO	**Larissa Observ**	**2.06**	**47**		P		**Pb**	**01 06 32.9**	**-0.2**
KZN	**Kozani**	**2.27**	**27**		P		**Pb**	**01 06 36.3**	**-0.5**
SCTE	**Santa Cesarea**	**2.35**	**320**		P		**Pn**	**01 06 35.3**	**+1.2**
SCTE	**Santa Cesarea**	**2.35**	**320**				**Pn**	**01 06 33.5**	**-0.6**
SCTE						Sn		**Sb**	**01 07 04.8**	**-2.2**
NEO	**Neokhori**	**2.41**	**64**		P		**Pb**	**01 06 37.7**	**-1.3**
LIT	**Litokhoron**	**2.42**	**41**				**Pn**	**01 06 34.3**	**-0.8**
MRKA	**Markates**	**2.51**	**79**		P		**Pb**	**01 06 38.7**	**-2.0**
SKIA	**Skiathos**	**2.53**	**69**		P		**Pb**	**01 06 39.3**	**-1.7**
FNA	**Florina**	**2.60**	**16**				**Pn**	**01 06 37.5**	**-0.1**
KTHA	**Kythira Island**	**2.91**	**133**		P		**Pb**	**01 06 44.9**	**-2.7**
TIP	**Timpagrande**	**3.01**	**288**				**Pn**	**01 06 42.7**	**-0.6**
TIR	**Tirane**	**3.09**	**352**				**Pn**	**01 06 43.6**	**-0.7**
CGL1	**Ceglie Messapi**	**3.29**	**317**	⇑	*i*	Pn	**Pn**	**01 06 48.2**	**+1.1**
TAR1	**Taranto**	**3.31**	**314**		*e*	Pn	**Pn**	**01 06 48.8**	**+1.5**
VAY	**Valandovo**	**3.45**	**28**		*i*	P	**Pn**	**01 06 50.3**	**+1.1**
VAY						S		**Sn**	**01 07 28.9**	**-1.0**
MASS	**Massafra**	**3.46**	**314**	⇑	*i*	Pn	**Pn**	**01 06 50.4**	**+1.0**
MASS						Sn		**Sn**	**01 07 31.4**	**+1.2**
CEL	**Celeste**	**3.57**	**271**				**Pn**	**01 06 49.5**	**-1.5**
MATE	**Matera**	**3.73**	**310**	⇑	P		**Pn**	**01 06 54.1**	**+1.0**
SKO	**Skopje**	**3.76**	**11**		*e*	Pn	**Pb**	**01 07 04.6**	**+2.5**
ULC	**Ulcinj**	**3.79**	**346**		*e*	Pn	**Pn**	**01 06 54.1**	**+0.2**
ULC						eSn		**Sn**	**01 07 38.6**	**+0.3**
SG1	**Sgolgore (BA)**	**3.87**	**312**	⇓	*i*	Pn	**Pn**	**01 06 56.3**	**+1.3**
SG1						Sn		**Sn**	**01 07 39.5**	**-0.7**
BAI	**Bari**	**3.93**	**317**	⇑	*i*	Pn	**Pn**	**01 06 56.9**	**+1.1**
DRME	**Dracevica, Mon**	**4.01**	**347**		*e*	Pn	**Pn**	**01 06 57.5**	**+0.5**
DRME	**Dracevica, Mon**	**4.01**	**347**		*e*	Pn	**Pn**	**01 06 57.9**	**+0.9**
DRME						eSn		**Sn**	**01 07 44.7**	**+0.9**
KKB	**Krupnik**	**4.12**	**29**		*i*	P	**Pn**	**01 07 00.3**	**+1.9**
KKB						eS		**Sn**	**01 07 45.6**	**-0.7**
MMB	**Musomiste**	**4.16**	**36**		*i*	P	**Pb**	**01 07 05.0**	**-3.9**
BUM	**Brajici-Budva**	**4.18**	**344**	⇑	*i*	Pn	**Pn**	**01 06 59.8**	**+0.5**
BUM						eSn		**Sn**	**01 07 48.6**	**+0.5**
APE	**Apeiranthos**	**4.22**	**105**	⇑	P		**Pn**	**01 07 03.8**	**+3.9**
PDG	**Podgorica**	**4.24**	**348**	⇓	P		**Pn**	**01 07 01.0**	**+1.0**
PDG	**Podgorica**	**4.24**	**348**		*e*	Pn	**Pn**	**01 07 00.9**	**+0.9**
PDG	**Podgorica**	**4.24**	**348**				**Pn**	**01 07 00.1**	**+0.1**
PDG						Sn		**Sn**	**01 07 51.0**	**+1.7**
TTG	**Podgorica**	**4.24**	**348**		*e*	Pn	**Pn**	**01 07 00.9**	**+0.9**
TTG						eSn		**Sn**	**01 07 50.3**	**+1.0**
ACER	**Acerenza**	**4.28**	**307**				**Pn**	**01 07 00.2**	**-0.4**
ACER						Sn		**Sn**	**01 07 50.3**	**-0.1**
PVY	**Plav**	**4.32**	**355**		*e*	Pn	**Pn**	**01 07 03.0**	**+1.7**
PVY						eSn		**Sn**	**01 07 52.1**	**+0.5**
CEME	**Cevo**	**4.41**	**345**		*e*	Pn	**Pn**	**01 07 02.9**	**+0.4**
CEME						eSn		**Sn**	**01 07 54.0**	**+0.3**
HCY	**Herceg Novi**	**4.42**	**341**		*e*	Pn	**Pn**	**01 07 01.8**	**-0.7**
HCY	**Herceg Novi**	**4.42**	**341**		*e*	Pn	**Pn**	**01 07 02.3**	**-0.2**
HCY						eSn		**Sn**	**01 07 53.5**	**-0.2**
SANT	**Santorini**	**4.44**	**114**	⇑	P		Pn	01 07 07.7	+4.9
IVA	**Berane**	**4.60**	**355**		*e*	Pn	**Pn**	**01 07 06.1**	**+1.0**
IVA						eSn		**Sn**	**01 07 58.7**	**+0.3**
KOME	**Kolasin**	**4.62**	**352**		*e*	Pn	**Pn**	**01 07 06.1**	**+0.8**
KOME						eSn		**Sn**	**01 07 59.6**	**+0.8**
NKME	**Niksic**	**4.62**	**346**		*e*	Pn	**Pn**	**01 07 05.8**	**+0.5**
NKME						eSn		**Sn**	**01 07 59.1**	**+0.3**
NKY	**Niksic**	**4.66**	**347**		*e*	Pn	**Pn**	**01 07 06.2**	**+0.3**
NKY						eSn		**Sn**	**01 07 59.7**	**-0.1**
IDI	**Anoyia**	**4.66**	**129**		Pn		Pn	01 07 07.5	+1.6
	comp=E,1.2nm,0.3s,baz=328,slow=11,SNR=16								
IDI						Sn		**Sn**	**01 08 04.5**	**+4.6**
	comp=E,9.8nm,0.3s,baz=311,slow=22,SNR=8.5								
TREB	**Trebinje**	**4.71**	**341**		*e*	Pn	**Pn**	**01 07 05.2**	**-1.3**
DBRK	**Dubrovnik**	**4.71**	**339**		*e*	Pn	**Pn**	**01 07 06.3**	**-0.3**
DBRK						Sn		**Sn**	**01 07 59.7**	**-1.4**
VTS	**Vitosha**	**4.83**	**25**	⇑	P		**Pn**	**01 07 10.0**	**+1.7**
VTS	**Vitosha**	**4.83**	**25**		*i*	P	**Pn**	**01 07 10.1**	**+1.8**
VTS	**Vitosha**	**4.83**	**25**				**Pn**	**01 07 08.2**	**-0.1**
VTS						Sn		**Sn**	**01 08 06.9**	**+2.8**
BRY	**Bratogost**	**4.83**	**343**		*e*	Pn	**Pn**	**01 07 07.3**	**-1.1**
BRY	**Bratogost**	**4.83**	**343**		*e*	Pn	**Pn**	**01 07 08.2**	**-0.2**
BRY						eSn		**Sn**	**01 08 03.5**	**-0.7**
VAE	**Valguarnera**	**4.83**	**262**		Pn		**Pn**	**01 07 09.5**	**+1.2**
	comp=E,1.2nm,0.3s,baz=153,slow=2.5,SNR=5.1								
VAE						Sn		**Sn**	**01 08 09.5**	**+5.4**
	comp=E,2.8nm,0.3s,baz=8.1,slow=21,SNR=5.7								
SGRT	**San Giovanni R**	**5.00**	**315**				**Pn**	**01 07 10.3**	**-0.3**
STON	**Ston**	**5.03**	**336**		*e*	Pn	**Pn**	**01 07 10.8**	**-0.1**
STON						Sn		**Sn**	**01 08 07.2**	**-1.7**
STON	**Ston**	**5.03**	**336**		*e*	Pn	**Pn**	**01 07 10.5**	**-0.4**
UPM	**Unac-Piva**	**5.05**	**347**		*e*	Pn	**Pn**	**01 07 12.4**	**+1.0**
UPM	**Unac-Piva**	**5.05**	**347**		*e*	Pn	**Pn**	**01 07 11.8**	**+0.4**
UPM						eSn		**Sn**	**01 08 09.6**	**0.0**
PLE	**Pljevlja**	**5.10**	**351**		*e*	Pn	**Pn**	**01 07 13.0**	**+0.9**
PLE						eSn		**Sn**	**01 08 10.6**	**-0.2**
PAOL	**Paolisi**	**5.29**	**303**				**Pn**	**01 07 14.4**	**-0.2**
WDD	**Wied Dalam**	**5.32**	**244**				**Pn**	**01 07 14.6**	**-0.3**
WDD						Sn		**Sn**	**01 08 13.5**	**-2.5**
RUDO	**Rudo**	**5.39**	**352**		*e*	Pn	**Pn**	**01 07 14.6**	**-1.3**
MAKA	**Makarska**	**5.63**	**334**		*e*	Pn	**Pn**	**01 07 19.4**	**+0.3**
MAKA						Sn		**Sn**	**01 08 21.2**	**-2.4**
BBLS	**Lazići**	**5.63**	**352**		*e*	Pn	**Pn**	**01 07 19.7**	**+0.4**
DIVS	**Divibare**	**5.82**	**357**		*e*	Pn	**Pn**	**01 07 21.9**	**+0.1**
HAPS	**Han Pijesak,BI**	**5.90**	**350**		*e*	Pn	**Pn**	**01 07 22.5**	**-0.5**
INTR	**Introdacqua**	**6.24**	**309**				**Pn**	**01 07 27.2**	**-0.3**
KIJV	**Kijevo**	**6.47**	**333**		*i*	Pn	**Pn**	**01 07 31.4**	**+0.6**
KIJV						Sn		**Sn**	**01 08 43.1**	**-1.4**
ZIRJ	**Zirje**	**6.47**	**327**		*e*	Pn	**Pn**	**01 07 30.8**	**+0.1**
ZIRJ						Sn		**Sn**	**01 08 42.5**	**-1.9**
MORI	**Morici**	**6.62**	**329**		*i*	Pn	**Pn**	**01 07 34.0**	**+1.2**
MGRS	**Mrkonjic Grad**	**6.62**	**339**		*e*	Pn	**Pn**	**01 07 33.9**	**+1.0**
HERR	**Herculane**	**6.76**	**12**	⇑	P		**Pn**	**01 07 36.1**	**+1.5**
FRGS	**Fruska Gora**	**6.88**	**356**		*e*	Pn	Pn	01 07 30.8	-5.6
BLY	**Banja Luka**	**6.90**	**340**	⇓	P		**Pn**	**01 07 37.1**	**+0.4**
BLY	**Banja Luka**	**6.90**	**340**		*e*	Pn	**Pn**	**01 07 34.3**	**-2.4**
BLY	**Banja Luka**	**6.90**	**340**				**Pn**	**01 07 36.8**	**+0.1**
DUGI	**Dugi Otok**	**7.00**	**326**		*e*	Pn	**Pn**	**01 07 38.9**	**+1.0**
UDBI	**Udbina**	**7.16**	**332**		*e*	Pn	**Pn**	**01 07 41.7**	**+1.5**
NRCA	**Norcia**	**7.19**	**312**				**Pn**	**01 07 40.2**	**-0.5**
GZR	**Gura Zlata**	**7.32**	**13**	⇑	P		**Pn**	**01 07 43.6**	**+1.2**
BZS	**Buzias**	**7.38**	**6**	⇑	P		**Pn**	**01 07 44.7**	**+1.5**
NVLJ	**Novalja**	**7.54**	**328**		*e*	Pn	**Pn**	**01 07 45.9**	**+0.6**
VOIR		**7.93**	**24**	⇓	P		**Pn**	**01 07 53.3**	**+2.4**
MORH	**Mrgy, Hungar**	**8.04**	**351**		*e*	Pn	**Pn**	**01 07 51.5**	**-0.7**
MLR	**Muntele Rosu**	**8.29**	**28**		Pn		Pn	01 08 01.2	+5.4
	comp=E,0.2nm,0.3s,baz=230,slow=9.8,SNR=11								
MLR	**Muntele Rosu**	**8.29**	**28**				**Pn**	**01 07 54.1**	**-1.7**
CRES	**Cresnjev**	**8.39**	**335**		*e*	Pn	**Pn**	**01 07 56.8**	**-0.3**
CEY	**Cerknica**	**8.69**	**331**		*e*	Pn	**Pn**	**01 08 01.7**	**+0.6**
PLOR	**Plostina**	**8.86**	**29**	⇓	P		**Pn**	**01 08 07.9**	**+4.4**
VRI	**Vrincioaia**	**8.90**	**30**	⇓	P		**Pn**	**01 08 06.1**	**+2.0**
LJU	**Ljubljana**	**8.91**	**332**		*e*	Pn	**Pn**	**01 08 03.5**	**-0.6**
KEST	**Kesra**	**9.23**	**257**		Pn		**Pn**	**01 08 09.6**	**+0.9**
	comp=E,0.2nm,0.3s,baz=61,slow=7.2,SNR=4.7								
SOKA	**Soboth**	**9.29**	**336**		*i*	Pn	**Pn**	**01 08 09.0**	**-0.4**
	comp=E,8.2nm,0.5s,SNR=19								
SOKA						eSn		**Sn**	**01 09 48.0**	**-5.7**
	comp=E,3.4nm,0.6s								
OBKA	**Obir**	**9.30**	**334**		*e*	Pn	**Pn**	**01 08 10.2**	**+0.6**
	comp=E,1.0nm,0.2s								
OBKA						eSn		**Sn**	**01 09 50.7**	**-3.3**
	comp=E,5.2nm,0.5s								
ARSA	**Arzberg**	**9.66**	**340**		*e*	Pn	**Pn**	**01 08 15.6**	**+1.2**
	comp=E,1.0nm,0.3s								
MYKA	**Terra Mystica**	**9.73**	**331**		*e*	Pn	**Pn**	**01 08 17.8**	**+2.3**
	comp=E,1.7nm,0.5s								
CTI	**Castel Tesino**	**10.13**	**323**				**Pn**	**01 08 20.4**	**-0.5**
KBA	**Koelnbreinsper**	**10.22**	**332**		*e*	Pn	**Pn**	**01 08 23.4**	**+1.2**
	comp=E,2.5nm,0.5s								
KBA						eSn		**Sn**	**01 10 13.3**	**-3.4**
	comp=E,1.8nm,0.3s								
VYHS	**Vyhne**	**10.27**	**354**		*e*	Pn	**Pn**	**01 08 23.5**	**+0.7**
VYHS					*e*	PG		01 09 11.5	
VYHS					*e*	SN	**Sn**	**01 10 11.9**	**-5.9**
ABTA	**Abfaltersbach**	**10.28**	**328**		*e*	Pn	**Pn**	**01 08 23.9**	**+0.9**
	comp=E,3.3nm,0.4s								
ABTA						Sn		**Sn**	**01 10 15.5**	**-2.5**
	comp=E,8.9nm,0.8s								
BRTR	**Keskin Array B**	**10.38**	**78**		Pn		**Pn**	**01 08 28.7**	**+4.3**
	comp=E,0.1nm,0.3s,baz=262,slow=12,SNR=8.3								
BRTR						LR		01 12 29.1	
	comp=E,59nm,19.4s,baz=246,slow=38								
BRTR	**Keskin Array B**	**10.38**	**78**				**Pn**	**01 08 23.6**	**-0.9**
MOA	**Molln**	**10.57**	**337**		*e*	Pn	**Pn**	**01 08 28.2**	**+1.3**
	comp=E,4.4nm,0.5s,SNR=5.8								
MOA						*i* Sn		**Sn**	**01 10 20.9**	**-4.2**
	comp=E,3.2nm,0.5s								
WTTA	**Wattenberg**	**11.05**	**327**		*i*	Pn	**Pn**	**01 08 35.4**	**+1.7**
	comp=E,6.5nm,0.6s								
WTTA						*i* Sn		**Sn**	**01 10 36.4**	**-0.8**
	comp=E,8.1nm,0.7s								
WATA	**Walderalm**	**11.13**	**327**		*e*	Pn	**Pn**	**01 08 36.1**	**+1.3**
	comp=E,4.5nm,0.5s								
SQTA	**Sankt Quirin**	**11.21**	**326**		*i*	Pn	**Pn**	**01 08 37.7**	**+1.9**
	comp=E,1.5nm,0.4s								
FETA	**Feichten**	**11.28**	**324**		Pn		Pn	01 08 41.9	+5.2
	comp=E,2.2nm,0.6s								
FETA						eSn		**Sn**	**01 10 41.3**	**-1.2**
	comp=E,2.1nm,0.6s								
MOTA	**Moosalm**	**11.35**	**326**		*e*	Pn	**Pn**	**01 08 39.9**	**+2.2**
	comp=E,2.3nm,0.4s								
MOTA						eSn		**Sn**	**01 10 43.5**	**-0.9**
	comp=E,4.1nm,0.6s								
RETA	**Reutte**	**11.61**	**325**		*e*	Pn	**Pn**	**01 08 44.1**	**+2.9**
	comp=E,0.6nm,0.3s								
RETA						*i* Sn		**Sn**	**01 10 47.8**	**-2.8**
	comp=E,1.3nm,0.4s								
GERES	**GERESS Array B**	**11.63**	**337**		Pn		**Pn**	**01 08 41.0**	**-0.5**
	comp=E,0.2nm,0.3s,baz=155,slow=13,SNR=9.4								
GERES						Sn		**Sn**	**01 10 45.5**	**-5.5**
	comp=E,0.3nm,0.3s,baz=153,slow=24,SNR=4.9								
GERES	**GERESS Array B**	**11.63**	**337**				**Pn**	**01 08 41.3**	**-0.2**
KHC	**Kasperske Hory**	**11.92**	**338**		*e*	PN	**Pn**	**01 08 45.5**	**+0.1**
KHC						eSN	**Sn**	**01 10 52.2**	**-5.9**
MMAI	**Mount Meron Ar**	**13.26**	**109**		Pn		**Pn**	**01 09 02.5**	**-1.3**
	comp=E,0.8nm,0.3s,baz=299,slow=10,SNR=6.0								
GNI	**Garni**	**18.91**	**77**		Pn		**Pn**	**01 10 19.1**	**+2.1**
	comp=E,0.4nm,0.3s,baz=340,slow=5.1,SNR=9.7								
GNI	**Garni**	**18.91**	**77**		P		**Pn**	**01 10 17.3**	**+0.3**
GNI						IAmb	IAmb	01 10 23.1	
	comp=Z,9.9nm,0.8s								
HFS	**Hagfors**	**22.29**	**351**		P		**P**	**01 10 53.3**	**+0.8**
	comp=Z,4.8nm,0.9s,baz=170,slow=12,SNR=9.0								
FINES	**FINESS Array B**	**23.45**	**7**		P		**P**	**01 11 04.3**	**-0.3**
	comp=Z,6.9nm,1.0s,baz=181,slow=9.2,SNR=7.7								
NB2	**NORSAR Subarra**	**23.50**	**349**		P		**P**	**01 11 06.7**	**+1.5**
	comp=Z,15nm,1.4s,baz=157,slow=10								
NOA	**NORSAR Array B**	**23.50**	**349**		P		**P**	**01 11 05.5**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=158,slow=7.9,SNR=4.7								
NOA						LR	LR	01 20 42.1	
	comp=Z,63nm,21.7s,baz=10.0,slow=38								
GEYT	**Alibeck**	**29.52**	**79**		P		**P**	**01 12 00.1**	**+0.2**
	comp=Z,1.3nm,0.4s,baz=262,slow=8.2,SNR=3.8								
TORD	**Torodi Ar. Bea**	**30.07**	**219**		P		**P**	**01 12 05.4**	**+0.6**
	comp=Z,1.9nm,1.0s,baz=29,slow=9.1,SNR=6.9								
TORD	**Torodi Ar. Bea**	**30.07**	**219**		P		**P**	**01 12 03.6**	**-1.2**
KKAR	**Karatay Array**	**37.81**	**66**		P		**P**	**01 13 11.5**	**-0.4**
MK31	**Makanchi Array**	**45.30**	**58**		P		**P**	**01 14 12.6**	**-0.6**
MK31						IAmb	IAmb	01 14 16.8	
	comp=Z,1.1nm,0.8s								
MKAR	**Makanchi Array**	**45.30**	**58**		P		**P**	**01 14 13.2**	**0.0**
	comp=Z,1.0nm,0.4s,baz=278,slow=6.4,SNR=41								
MKAR						LR	LR	01 36 08.3	
	comp=Z,101nm,18.2s,baz=320,slow=40								
MKAR	**Makanchi Array**	**45.30**	**58**		P		**P**	**01 14 12.7**	**-0.5**
ZAA0	**Zalesovo Array**	**45.67**	**48**		P		**P**	**01 14 15.6**	**-0.3**
ZAA0						IAmb	IAmb	01 14 24.4	
	comp=Z,2.7nm,0.6s								
ZALV	**Zalesovo Beam**	**45.67**	**48**		P		**P**	**01 14 14.8**	**-1.2**
	comp=Z,2.0nm,0.4s,baz=274,slow=8.9,SNR=9.7								
ZALV						LR	LR	01 35 24.1	
	comp=Z,110nm,20.6s,baz=356,slow=39								
ZALV	**Zalesovo Beam**	**45.67**	**48**		P		**P**	**01 14 15.6**	**-0.3**
SONM	**Songino Array**	**60.44**	**51**		P		**P**	**01 16 05.6**	**+0.5**
	comp=Z,0.6nm,0.9s,baz=287,slow=6.2,SNR=4.1								
CMAR	**Chiang Mai Arr**	**69.94**	**82**		P		**P**	**01 17 07.3**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=314,slow=8.1,SNR=4.6								

*IDC **28** 01:17:12.9±1.4, 38.3°N×20.3°E, h0km, mb3.8/4, mb1 3.7/6, mb1mx3.4/39, mbtmp3.6/6, ML3.4/2, Error ellipse: s-maj=28.3km s-min=21.5km az=67.0*
*ATH **28** 01:17:13.7, 38.1°N×20.3°E, h7km±2km, ML3.3/21, Error ellipse: s-maj=3.3km s-min=1.3km az=72.0*
*THE **28** 01:17:14.5, 38.2°N×20.4°E, h7km±1km, ML3.4/13, Error ellipse: s-maj=1.6km s-min=0.4km az=104.0*
*PDG **28** 01:17:15.0±0.3, 38.4°N×20.1°E, h1km±11km, ML3.6/13, Error ellipse: s-maj=2.1km s-min=0.8km az=90.0*
ISC 28 01:17:13.9±1.0, 38.2°N±0.03×20.3°E±0.04, h9km±6km, n71, σ0°80/102, mb3.9/4, 9C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.10**	**114**	P	**Pg**	**01 17 16.7**	**+0.4**
ARG2				S	**Sg**	**01 17 18.1**	**+0.1**
VLS	**Valsamata**	**0.17**	**104**	P	**Pg**	**01 17 17.7**	**+0.1**
VLS				S	**Sg**	**01 17 19.6**	**-0.5**
	47µm,0.1s						
VLS	**Valsamata**	**0.17**	**104**	P	**Pg**	**01 17 17.7**	**+0.1**
VLS				AML	AML	01 17 20.4	
	comp=N,95411µm,0.2s						
VLS				AML	AML	01 17 20.8	
	comp=E,89718µm,0.1s						
FSK	**Fiskardo**	**0.28**	**32**	P	**Pg**	**01 17 19.9**	**+0.3**
FSK				S	**Sg**	**01 17 23.9**	**+0.5**
	comp=E,10µm,0.5s						
FSK	**Fiskardo**	**0.28**	**32**	P	**Pg**	**01 17 19.9**	**+0.3**
KFL	**Anninata**	**0.34**	**108**	P	**Pg**	**01 17 20.8**	**+0.1**
KFL				S	**Sg**	**01 17 25.5**	**+0.2**
	comp=E,14µm,0.4s						
KFL	**Anninata**	**0.34**	**108**	P	**Pg**	**01 17 20.8**	**+0.1**
KFL				AML	AML	01 17 28.6	
	comp=E,34382µm,0.4s						
KFL				AML	AML	01 17 28.9	
	comp=N,22044µm,0.4s						
VLMS	**Volimes, Zakyn**	**0.41**	**146**	P	**Pg**	**01 17 22.2**	**+0.2**
VLMS				AML	AML	01 17 38.8	
	comp=E,12935µm,0.3s						
VLMS				AML	AML	01 17 39.1	
	comp=N,17548µm,0.5s						
EVGI	**Lefkada island**	**0.46**	**29**	P	**Pg**	**01 17 23.1**	**+0.3**
EVGI				S	**Sb**	**01 17 30.4**	**-0.8**
	comp=N,4µm,0.2s						
EVGI	**Lefkada island**	**0.46**	**29**	P	**Pg**	**01 17 23.2**	**+0.3**
EVGI				S	**Sb**	**01 17 30.3**	**-0.9**
MGNA	**Meganis**	**0.55**	**37**	P	**Pg**	**01 17 24.4**	**-0.1**
MGNA				AML	AML	01 17 33.4	
	comp=N,5817µm,0.4s						
MGNA				AML	AML	01 17 33.6	
	comp=E,8613µm,0.3s						
ZAK2	**Zakynthos**	**0.60**	**136**	P	**Pg**	**01 17 26.1**	**+0.6**
ZAK2				S	**Sg**	**01 17 33.9**	**+0.6**
LKD2	**Lefkada island**	**0.61**	**21**	P	**Pg**	**01 17 25.6**	**-0.1**
LKD2				S	**Sb**	**01 17 34.9**	**-0.7**
	comp=E,2µm,0.5s						
LKD2	**Lefkada island**	**0.61**	**21**	P	**Pg**	**01 17 25.7**	**-0.1**
LKD2				S	**Sb**	**01 17 34.8**	**-0.7**
LKD2				AML	AML	01 17 41.1	
	comp=N,3219µm,0.7s						
LKD2				AML	AML	01 17 42.7	
	comp=E,3236µm,0.4s						
TSLK	**Tsoukalades, L**	**0.64**	**20**	P	**Pg**	**01 17 26.3**	**-0.1**
TSLK				S	**Sg**	**01 17 35.5**	**+0.7**
	comp=E,2µm,0.6s						
TSLK	**Tsoukalades, L**	**0.64**	**20**	P	**Pg**	**01 17 26.5**	**+0.1**
TSLK				AML	AML	01 17 44.9	
	comp=E,4722µm,0.7s						
TSLK				AML	AML	01 17 45.1	
	comp=N,4515µm,0.5s						
PDO	**Prodromos**	**0.74**	**59**	P	**Pg**	**01 17 28.0**	**-0.2**
PDO				S	**Sb**	**01 17 39.0**	**-0.3**
	comp=N,5µm,0.5s						
PDO	**Prodromos**	**0.74**	**59**	P	**Pg**	**01 17 28.2**	**0.0**
PDO				S	**Sb**	**01 17 39.4**	**+0.2**
PDO				AML	AML	01 17 44.4	
	comp=E,7065µm,0.5s						
PDO				AML	AML	01 17 45.1	
	comp=N,6856µm,0.4s						
RLS	**Riolos of Patr**	**0.88**	**100**	P	**Pg**	**01 17 30.3**	**-0.5**
RLS				S	**Sb**	**01 17 43.5**	**+0.4**
	comp=N,928nm,0.8s						
RLS	**Riolos of Patr**	**0.88**	**100**	P	**Pg**	**01 17 30.4**	**-0.5**
RLS				AML	AML	01 17 49.0	
	comp=N,1653µm,0.4s						
RLS				AML	AML	01 17 54.6	
	comp=E,2050µm,0.9s						
PVO	**Paravola**	**0.99**	**66**	P	**Pg**	**01 17 32.9**	**0.0**
PVO	**Paravola**	**0.99**	**66**	P	**Pb**	**01 17 33.1**	**-0.2**
PVO				AML	AML	01 17 54.4	
	comp=N,5431µm,0.6s						
PVO				AML	AML	01 17 57.9	
	comp=E,5520µm,0.5s						
DRO	**Drossia**	**1.09**	**104**	P	**Pg**	**01 17 34.4**	**-0.4**
DRO				S	**Sb**	**01 17 49.7**	**+0.4**
	comp=E,2µm,0.5s						
DRO	**Drossia**	**1.09**	**104**	P	**Pg**	**01 17 34.1**	**-0.7**
DRO				AML	AML	01 17 57.3	
	comp=E,5259µm,0.6s						
DRO				AML	AML	01 18 04.0	
	comp=N,4175µm,0.5s						
UPR	**University Cam**	**1.11**	**86**	P		**Pn**	**01 17 35.8**	**+0.1**
EFP	**Efpalio**	**1.22**	**80**	P		**Pb**	**01 17 36.3**	**-0.9**
EFP				AML	AML	01 18 00.9	
	comp=N,1892µm,0.6s						

region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.33**	**308**	Pn	**Pn**	**01 40 43.7**	**+0.9**
RABL				Sn	**Sn**	**01 41 19.5**	**-2.0**
KRVT	**Keravat (AS076**	**3.37**	**305**	P	**Pn**	**01 40 44.5**	**+1.2**
	22nm,0.3s,baz=79,slow=18,SNR=5.0						
HNR	**Honiara**	**6.00**	**122**	P	**Pn**	**01 41 19.5**	**+0.5**
	24nm,0.3s,baz=270,slow=16,SNR=4.8						
HNR				LR	LR	01 43 23.7	
	comp=Z,131nm,21.9s,baz=332,slow=35						
HNR	**Honiara**	**6.00**	**122**		**Pn**	**01 41 18.7**	**-0.2**
HNR				Sn	**Sn**	**01 42 25.8**	**-0.5**
PMG	**Port Moresby**	**8.17**	**247**	P	**Pn**	**01 41 48.6**	**+0.1**
	16nm,0.3s,baz=45,slow=9.5,SNR=20						
PMG				LR	LR	01 44 41.0	
	comp=Z,170nm,21.3s,baz=10.0,slow=35						
PMG	**Port Moresby**	**8.17**	**247**		**Pn**	**01 41 47.4**	**-1.1**
PATS	**Pohnpei**	**13.49**	**15**	Pn	**Pn**	**01 42 56.3**	**-3.9**
NOUC	**Port Laguerre**	**19.27**	**146**		**P**	**01 44 09.9**	**+0.2**
NOUC				IAmb	IAmb	01 44 11.2	
	comp=Z,27nm,0.8s						
DZM	**Mont Dzumac**	**19.33**	**145**	P	**P**	**01 44 12.0**	**+1.5**
	comp=Z,1.8nm,0.3s,baz=259,slow=9.0,SNR=14						
DZM				LR	LR	01 49 52.7	
	comp=Z,156nm,19.2s,baz=254,slow=31						
DZM	**Mont Dzumac**	**19.33**	**145**	P	**P**	**01 44 09.5**	**-0.9**
DZM				IAmb	IAmb	01 44 12.2	
	comp=Z,16nm,0.9s						
GUMO	**Guam**	**22.05**	**334**	LR	LR	01 53 27.0	
	comp=Z,50nm,18.5s,baz=88,slow=37						
WR0	**Warramunga Arr**	**23.91**	**233**	P	**P**	**01 44 58.8**	**+1.1**
WR0				IAmb	IAmb	01 45 17.3	
	comp=Z,16nm,1.0s						
WB0	**Warramunga Arr**	**23.93**	**234**	P	**P**	**01 44 58.6**	**+0.8**
WB0				IAmb	IAmb	01 45 00.3	
	comp=Z,9.7nm,0.7s						
WRAB	**Tennant Creek**	**24.05**	**234**	P	**P**	**01 44 57.0**	**-2.0**
WRAB				IAmb	IAmb	01 45 01.4	
	comp=Z,9.4nm,0.8s						
WRA	**Warramunga Arr**	**24.06**	**234**	P	**P**	**01 45 00.6**	**+1.5**
	comp=Z,6.7nm,0.6s,baz=57,slow=9.4,SNR=21						
WRA				LR	LR	01 53 57.3	
	comp=Z,57nm,19.0s,baz=50,slow=35						
WRA	**Warramunga Arr**	**24.06**	**234**	P	**P**	**01 44 57.0**	**-2.0**
MTN	**Manton Dam**	**24.20**	**253**	P	**P**	**01 45 00.3**	**-0.1**
MTN				IAmb	IAmb	01 45 14.1	
	comp=Z,19nm,1.1s						
AS31	**Alice Springs**	**26.50**	**227**	P	**P**	**01 45 21.1**	**0.0**
ASAR	**Alice Springs**	**26.50**	**227**	P	**P**	**01 45 21.8**	**+0.7**
	comp=Z,4.4nm,0.6s,baz=58,slow=8.8,SNR=34						
ASAR				PcP	**PcP**	**01 48 44.7**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=60,slow=2.2,SNR=5.4						
ASAR	**Alice Springs**	**26.50**	**227**	P	**P**	**01 45 20.3**	**-0.8**
KNRA	**Kununurra**	**27.17**	**248**	P	**P**	**01 45 26.1**	**-1.1**
KNRA				IAmb	IAmb	01 45 30.8	
	comp=Z,9.9nm,0.8s						
STKA	**Stephens Creek**	**28.30**	**204**	P	**P**	**01 45 37.1**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=32,slow=13,SNR=5.0						
STKA				LR	LR	01 55 39.8	
	comp=Z,56nm,20.6s,baz=26,slow=33						
STKA	**Stephens Creek**	**28.30**	**204**	P	**P**	**01 45 37.2**	**+0.1**
FITZ	**Fitzroy Crossi**	**30.76**	**245**	P	**P**	**01 45 58.3**	**-0.7**
FITZ				IAmb	IAmb	01 46 08.6	
	comp=Z,4.4nm,0.8s						
BBOO	**Buckleboo**	**31.64**	**211**	P	**P**	**01 46 04.0**	**-2.5**
BBOO				IAmb	IAmb	01 46 06.7	
	comp=Z,7.2nm,1.0s						
FORT	**Forrest**	**34.97**	**222**	P	**P**	**01 46 34.9**	**-0.6**
TAU	**Tasmania Unive**	**37.08**	**189**	P	**P**	**01 46 52.9**	**-0.5**
URZ	**Urewera**	**37.74**	**151**	P	**P**	**01 46 58.5**	**-0.5**
BKZ	**Black Stump Fm**	**38.16**	**152**	P	**P**	**01 47 02.7**	**+0.1**
THZ	**Tophouse**	**38.84**	**158**	P	**P**	**01 47 08.6**	**+0.3**
THZ				IAmb	IAmb	01 47 23.7	
	comp=Z,12nm,0.9s						
BHW	**Baring Head**	**39.30**	**156**	P	**P**	**01 47 10.8**	**-1.2**
PETK	**Petropavlovsk-**	**59.21**	**2**	P	**P**	**01 49 46.9**	**+3.5**
	comp=Z,4.4nm,0.6s,baz=181,slow=7.4,SNR=4.0						
PETK	**Petropavlovsk-**	**59.21**	**2**	P	**P**	**01 49 42.9**	**-0.5**
CMAR	**Chiang Mai Arr**	**60.29**	**295**	P	**P**	**01 49 53.3**	**+1.8**
	comp=Z,9.5nm,0.7s,baz=124,slow=5.4,SNR=28						
SONM	**Songino Array**	**68.62**	**327**	P	**P**	**01 50 46.3**	**+0.9**
	comp=Z,0.7nm,0.6s,baz=129,slow=5.1,SNR=6.8						
SONM	**Songino Array**	**68.62**	**327**	P	**P**	**01 50 45.2**	**-0.2**
SEY	**Seymchan**	**69.03**	**359**	P	**P**	**01 50 48.4**	**+1.0**
	comp=Z,2.1nm,0.9s,baz=173,slow=5.7,SNR=3.6						
BILL	**Bilibino**	**74.58**	**4**	P	**P**	**01 51 21.1**	**+0.5**
BILL				IAmb	IAmb	01 51 24.3	
	comp=Z,5.5nm,0.8s						
KNK	**Knik Glacier**	**80.39**	**24**	P	**P**	**01 51 53.3**	**+0.1**
KNK				IAmb	IAmb	01 51 55.4	
	comp=Z,12nm,1.1s						
KTH	**Kantishna Hill**	**80.64**	**22**	P	**P**	**01 51 53.0**	**-1.4**
TRF	**Thorofare Moun**	**80.81**	**22**	P	**P**	**01 51 54.9**	**-0.6**
TRF				IAmb	IAmb	01 52 01.0	
	comp=Z,4.7nm,1.0s						
MK31	**Makanchi Array**	**82.73**	**319**	P	**P**	**01 52 06.1**	**+0.4**
MKAR	**Makanchi Array**	**82.73**	**319**	P	**P**	**01 52 05.8**	**+0.1**
	comp=Z,2.0nm,0.6s,baz=99,slow=5.5,SNR=28						
ILAR	**Eielson Array**	**82.78**	**22**	P	**P**	**01 52 05.5**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=238,slow=5.1,SNR=20						
ILAR	**Eielson Array**	**82.78**	**22**	P	**P**	**01 52 04.4**	**-1.2**
MAKZ	**Makanchi**	**82.94**	**319**	P	**P**	**01 52 07.2**	**+0.4**
ZALV	**Zalesovo Beam**	**83.47**	**326**	P	**P**	**01 52 08.7**	**-0.7**
	comp=Z,1.6nm,0.4s,baz=101,slow=6.1,SNR=9.2						
ZALV	**Zalesovo Beam**	**83.47**	**326**	P	**P**	**01 52 08.0**	**-1.4**
QSPA	**South Pole Qui**	**83.70**	**180**	P	**P**	**01 52 10.4**	**-0.1**
MAW	**Mawson**	**84.98**	**203**	P	**P**	**01 52 18.3**	**+1.6**
	comp=Z,5.2nm,0.5s,baz=108,slow=5.9,SNR=11						
NVAR	**Mina Array Bea**	**91.44**	**52**	P	**P**	**01 52 50.3**	**+1.8**
	comp=Z,1.7nm,0.9s,baz=251,slow=6.6,SNR=8.9						
NEW	**Newport**	**93.36**	**42**	LR	LR	02 34 41.0	
	comp=Z,30nm,18.8s,baz=312,slow=35						
YKA	**Yellowknife Ar**	**95.80**	**28**	P	**P**	**01 53 08.2**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=266,slow=4.5,SNR=8.9						
PDAR	**Pinedale Array**	**98.37**	**48**	P	**P**	**01 53 20.7**	**+0.6**
	comp=Z,0.5nm,1.0s,baz=214,slow=3.1,SNR=3.1						
PDAR	**Pinedale Array**	**98.37**	**48**	P	**P**	**01 53 20.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**152.63**	**286**	PKPbc	**PKPbc**	**01 59 38.8**	**-0.2**
	comp=Z,1.5nm,0.7s,baz=64,slow=2.0,SNR=10						
TORD	**Torodi Ar. Bea**	**152.63**	**286**		**PKPbc**	**01 59 37.7**	**-1.3**

*GCG **28** 01:48:54.0±0.8, 15°.54N×93°.03W, h25km±999km, MD4.1*
*MEX **28** 01:48:54.7±1.1, 15°.33N×93°.00W, h97km±8km, MD3.6*
ISC 28 01:48:55.9±1.9, **15°.41N**±0°.08×**93°.04W**±0°.09, **h80**km±14km, **n9**, σ1°**17**/15, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.35**	**330**	*e*P	**Pn**	**01 49 08.5**	**0.0**
PCIG				*e*S	**Sn**	**01 49 19.3**	**+1.5**
THIG		**0.89**	**123**	*e*P	**Pn**	**01 49 12.5**	**-1.2**
THIG				*e*S	**Sn**	**01 49 25.8**	**-1.2**
CCIG	**Comitan**	**1.23**	**45**	*e*P	**Pn**	**01 49 17.7**	**-0.2**
CCIG				*e*S	**Sn**	**01 49 34.9**	**+0.3**
TGIG		**1.37**	**357**	*e*P	**Pn**	**01 49 18.6**	**-1.0**
TGIG				*e*S	**Sn**	**01 49 37.1**	**-0.3**
STG3	**Santiaguito 3,**	**1.58**	**116**	*e*P	**Pn**	**01 49 21.0**	**-1.4**
ERG	**Entre ros, C**	**1.71**	**124**	*e*P	**Pn**	**01 49 23.5**	**-0.5**
FUG	**Fuego 3**	**2.33**	**114**	*e*P	**Pn**	**01 49 32.3**	**0.0**
FUG				*e*S	**Sn**	**01 50 02.0**	**+1.8**
CMIG	**Matias Romero**	**2.44**	**314**	*e*P	**Pn**	**01 49 33.4**	**-0.3**
IXG	**Ixpaco**	**2.79**	**116**	*e*P	**Pn**	**01 49 38.7**	**0.0**
IXG				*e*S	**Sn**	**01 50 13.2**	**+1.7**

*ATH **28** 01:55:19.7, 38°.28N×20°.35E, h5km±2km, ML3.2/20, Error ellipse: s-maj=2.3km s-min=0.7km az=83.0*
*THE **28** 01:55:20.8, 38°.31N×20°.41E, h2km±33km, ML3.3/9, Error ellipse: s-maj=33.2km s-min=0.5km az=0.0*
ISC 28 01:55:19.4±1.1, **38°.28N**±0°.03×**20°.31E**±0°.04, **h10**km±8km, **n56**, σ1°**19**/81, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.24**	**114**	P	**Pg**	**01 55 24.9**	**+0.6**
VLS				S	**Sg**	**01 55 26.8**	**-0.8**
	16μm,0.2s						
VLS	**Valsamata**	**0.24**	**114**	P	**Pg**	**01 55 24.4**	**0.0**
VLS				AML	AML	01 55 26.9	
	comp=N,37263μm,0.2s						
VLS				AML	AML	01 55 27.2	
	comp=E,23640μm,0.1s						
FSK	**Fiskardo**	**0.27**	**47**	P	**Pg**	**01 55 24.9**	**0.0**
FSK				S	**Sg**	**01 55 27.1**	**-1.4**
	comp=E,28μm,0.5s						
FSK	**Fiskardo**	**0.27**	**47**	P	**Pg**	**01 55 24.9**	**0.0**
KFL	**Anninata**	**0.41**	**114**	P	**Pg**	**01 55 27.1**	**-0.4**
KFL				S	**Sg**	**01 55 33.3**	**+0.4**
	comp=E,6μm,0.3s						
KFL	**Anninata**	**0.41**	**114**	P	**Pg**	**01 55 27.1**	**-0.4**
KFL				S	**Sg**	**01 55 32.6**	**-0.3**
KFL				AML	AML	01 55 36.6	
	comp=E,13550μm,0.4s						
KFL				AML	AML	01 55 37.2	
	comp=N,9660μm,0.2s						
EVGI	**Lefkada island**	**0.44**	**38**	P	**Pg**	**01 55 28.0**	**0.0**
EVGI				S	**Sg**	**01 55 32.9**	**-0.9**
	comp=N,3μm,0.4s						
EVGI	**Lefkada island**	**0.44**	**38**	P	**Pg**	**01 55 28.2**	**+0.2**
EVGI				S	**Sg**	**01 55 33.2**	**-0.6**
VLMS	**Volimes, Zakyn**	**0.49**	**145**	P	**Pg**	**01 55 28.7**	**-0.2**
VLMS				S	**Sg**	**01 55 35.6**	**+0.3**
VLMS				AML	AML	01 55 43.7	
	comp=N,16182μm,0.4s						
VLMS				AML	AML	01 55 43.9	
	comp=E,8627μm,0.3s						
LKD2	**Lefkada island**	**0.58**	**28**	P	**Pg**	**01 55 30.6**	**-0.1**
LKD2				S	**Sg**	**01 55 37.8**	**-0.5**
	comp=E,2μm,0.5s						
LKD2	**Lefkada island**	**0.58**	**28**	P	**Pg**	**01 55 30.8**	**+0.1**
LKD2				S	**Sg**	**01 55 38.0**	**-0.3**
LKD2				AML	AML	01 55 38.9	
	comp=E,4836μm,0.6s						
LKD2				AML	AML	01 55 41.3	
	comp=N,4789μm,0.6s						
TSLK	**Tsoukalades, L**	**0.61**	**26**	P	**Pg**	**01 55 31.3**	**+0.1**
TSLK				S	**Sg**	**01 55 39.1**	**-0.2**
	comp=N,4μm,0.6s						
TSLK	**Tsoukalades, L**	**0.61**	**26**	P	**Pg**	**01 55 31.3**	**+0.1**
TSLK				S	**Sg**	**01 55 39.1**	**-0.2**
TSLK				AML	AML	01 55 40.2	
	comp=N,8918μm,0.4s						
TSLK				AML	AML	01 55 40.6	
	comp=E,4674μm,0.4s						
ZAK2	**Zakynthos**	**0.67**	**136**	P	**Pg**	**01 55 32.3**	**-0.1**
ZAK2				S	**Sb**	**01 55 42.8**	**+0.1**
PDO	**Prodromos**	**0.76**	**65**	P	**Pg**	**01 55 33.8**	**-0.2**
PDO				S	**Sg**	**01 55 43.3**	**-0.6**
	comp=E,3μm,0.5s						
PDO	**Prodromos**	**0.76**	**65**	P	**Pg**	**01 55 33.8**	**-0.2**
PDO				S	**Sg**	**01 55 43.9**	**+0.1**
PDO				AML	AML	01 55 47.9	
	comp=N,3691μm,0.6s						
PDO				AML	AML	01 55 49.6	
	comp=E,3529μm,0.6s						
RLS	**Riolos of Patr**	**0.94**	**103**	P	**Pg**	**01 55 37.1**	**-0.3**
RLS	**Riolos of Patr**	**0.94**	**103**	P	**Pg**	**01 55 36.9**	**-0.6**
RLS				S	**Sb**	**01 55 50.0**	**-0.3**
RLS				AML	AML	01 56 00.1	
	comp=N,1896μm,0.9s						
RLS				AML	AML	01 56 02.4	
	comp=E,1425μm,0.7s						
PVO	**Paravola**	**1.01**	**70**	P	**Pg**	**01 55 38.8**	**-0.1**
PVO	**Paravola**	**1.01**	**70**	P	**Pg**	**01 55 38.3**	**-0.6**
PVO				AML	AML	01 55 57.6	
	comp=E,2364μm,0.5s						
PVO				AML	AML	01 55 59.9	
	comp=N,4300μm,0.7s						
DRO	**Drossia**	**1.15**	**106**	P	**Pg**	**01 55 41.0**	**-0.5**
DRO	**Drossia**	**1.15**	**106**	P	**Pg**	**01 55 41.2**	**-0.3**
DRO				S	**Sb**	**01 55 56.3**	**-0.1**
DRO				AML	AML	01 56 04.4	
	comp=E,1622μm,1.0s						
DRO				AML	AML	01 56 06.0	
	comp=N,4405μm,0.6s						
IGT	**Igoumenitsa**	**1.25**	**1**	P	**Pg**	**01 55 43.8**	**+0.3**
IGT				S	**Sn**	**01 56 02.0**	**+1.9**
	comp=N,992nm,0.5s						
IGT	**Igoumenitsa**	**1.25**	**1**	P	**Pg**	**01 55 43.3**	**-0.2**
IGT				AML	AML	01 56 04.0	
	comp=E,2193μm,0.6s						
IGT				AML	AML	01 56 05.0	
	comp=N,1746μm,0.4s						
EFP	**Efpalio**	**1.26**	**83**	P	**Pg**	**01 55 42.9**	**-0.8**
EFP				S	**Sb**	**01 55 59.8**	**+0.1**
EFP				AML	AML	01 56 06.0	
	comp=E,5011μm,0.6s						
EFP				AML	AML	01 56 06.3	
	comp=N,3381μm,0.5s						
ANX	**Ano Chora**	**1.30**	**75**	P	**Pg**	**01 55 43.9**	**-0.6**
LAKA	**Lakka**	**1.31**	**91**	P	**Pg**	**01 55 43.6**	**-1.0**
LAKA				AML	AML	01 56 04.6	
	comp=N,869μm,0.5s						
LAKA				AML	AML	01 56 04.8	
	comp=E,824μm,0.6s						
AMT	**Artemida-Makis**	**1.33**	**124**	P	**Pg**	**01 55 43.8**	**-1.2**
EVR	**Evrytania**	**1.33**	**61**	P	**Pg**	**01 55 44.3**	**-0.8**
EVR				AML	AML	01 56 07.7	
	comp=E,998μm,0.8s						
SERG	**Sergoula**	**1.38**	**84**	P	**Pg**	**01 55 45.0**	**-0.8**
TRIZ	**Trizonia**	**1.39**	**86**	P	**Pn**	**01 55 45.0**	**+0.1**
TRIZ				S	**Sn**	**01 56 04.4**	**+1.1**
JAN	**Janina**	**1.44**	**17**	P	**Pn**	**01 55 46.2**	**+0.5**
JAN				AML	AML	01 56 09.1	
	comp=N,1641μm,0.5s						
JAN				AML	AML	01 56 09.6	
	comp=E,1839μm,0.5s						
KALE	**Kalithea**	**1.44**	**85**	P	**Pn**	**01 55 46.6**	**+0.9**
KALE				AML	AML	01 56 11.6	
	comp=E,1051μm,0.7s						
KALE				AML	AML	01 56 12.2	
	comp=N,2269μm,0.8s						
KLV	**Kalavryta, Ach**	**1.47**	**99**	P	**Pn**	**01 55 46.5**	**+0.4**
KLV				S	**Sn**	**01 56 06.2**	**+0.8**
KLV				AML	AML	01 56 08.9	
	comp=N,773μm,0.5s						
KLV				AML	AML	01 56 13.5	
	comp=E,760μm,0.7s						
MAKR	**Makrakomi, Fth**	**1.60**	**62**	P	**Pb**	**01 55 49.2**	**0.0**
ITM	**Ithomi**	**1.68**	**130**	P	**Pb**	**01 55 50.8**	**+0.3**
AGG	**Agios Georgios**	**1.75**	**64**	P	**Pb**	**01 55 52.0**	**+0.4**
THL	**Klokotos Trika**	**1.85**	**45**	P	**Pb**	**01 55 53.9**	**+0.5**
THL				AML	AML	01 56 22.3	
	comp=E,640μm,0.6s						
THL				AML	AML	01 56 26.1	
	comp=N,743μm,0.7s						
KPRO	**Kipourio**	**1.86**	**26**	P	**Pb**	**01 55 54.4**	**+0.7**
AXAR	**Agios Charalam**	**1.90**	**74**	P	**Pb**	**01 55 55.0**	**+0.7**
AXAR				AML	AML	01 56 33.1	
	comp=N,1133μm,0.5s						
AXAR				AML	AML	01 56 35.0	
	comp=E,1786μm,1.0s						
PROD	**Prodromos**	**2.04**	**90**	P	**Pb**	**01 55 56.3**	**-0.3**
PROD				AML	AML	01 56 29.7	
	comp=N,794μm,1.0s						
PROD				AML	AML	01 56 34.4	
	comp=E,754μm,0.7s						
LKR	**Lokris**	**2.14**	**79**	P	**Pb**	**01 55 57.7**	**-0.7**
LKR				AML	AML	01 56 31.9	
	comp=N,337μm,1.1s						
LKR				AML	AML	01 56 32.0	
	comp=E,210μm,0.4s						
KZN	**Kozani**	**2.32**	**29**	P	**Pb**	**01 56 00.6**	**-0.8**
VIL2	**Platees**	**2.33**	**91**	P	**Pb**	**01 56 00.9**	**-0.7**
NEO	**Neokhori**	**2.50**	**65**	P	**Pb**	**01 56 03.0**	**-1.4**
OHR	**Ohrid**	**2.85**	**7**	*e*Pn	**Pn**	**01 56 06.2**	**+1.0**
VAY	**Valandovo**	**3.50**	**29**	*e*Pn	**Pb**	**01 56 20.4**	**-1.1**
STIP	**Stip**	**3.70**	**22**	*e*Pn	**Pn**	**01 56 21.0**	**+4.3**
DBRK	**Dubrovnik**	**4.69**	**340**	*e*Pn	**Pn**	**01 56 31.6**	**+1.3**
DBRK				Sn	**Sn**	**01 57 23.9**	**-0.9**
STON	**Ston**	**5.00**	**337**	*e*Pn	**Pn**	**01 56 34.2**	**-0.3**
STON				Sn	**Sn**	**01 57 29.8**	**-2.7**
MAKA	**Makarska**	**5.59**	**335**	*i* Pn	**Pn**	**01 56 44.8**	**+2.1**
MAKA				Sn	**Sn**	**01 57 45.4**	**-1.7**
ZIRJ	**Zirje**	**6.43**	**328**	*e*Pn	**Pn**	**01 56 55.6**	**+1.4**
ZIRJ				Sn	**Sn**	**01 58 03.4**	**-4.2**
KIJV	**Kijevo**	**6.44**	**334**	*i* Pn	**Pn**	**01 56 56.4**	**+2.1**
MORI	**Morici**	**6.58**	**330**	*e*Pn	**Pn**	**01 56 58.4**	**+2.2**
MORI				Sn	**Sn**	**01 58 09.2**	**-2.1**
UDBI	**Udbina**	**7.12**	**333**	*e*Pn	**Pn**	**01 57 06.8**	**+3.1**
NVLJ	**Novalja**	**7.49**	**329**	*e*Pn	**Pn**	**01 57 10.8**	**+2.1**

*THE **28** 02:02:48.6, 38°.39N×20°.45E, h9km±1km, ML3.2/5, Error ellipse: s-maj=1.2km s-min=0.3km az=93.0*

*ATH **28** 02:02:48.9, 38°.38N×20°.52E, h8km±3km, ML3.1/23, Error ellipse: s-maj=3.2km s-min=0.9km az=278.0*
ISC 28 02:02:48.0±0.9, **38°.39N**±0°.02×**20°.45E**±0°.04, **h14**km±5km, **n56**, σ0°**87**/73, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.11**	**52**	P	**Pg**	**02 02 51.1**	**-0.2**
FSK				S	**Sg**	**02 02 53.2**	**-0.3**
	26μm,0.3s						
FSK	**Fiskardo**	**0.11**	**52**	P	**Pg**	**02 02 51.0**	**-0.2**
FSK				S	**Sg**	**02 02 52.6**	**-0.9**
ARG2	**Argostoli**	**0.21**	**172**	P	**Pg**	**02 02 52.9**	**+0.1**
ARG2				S	**Sg**	**02 02 56.5**	**+0.6**
VLS	**Valsamata**	**0.24**	**153**	P	**Pg**	**02 02 53.2**	**0.0**
VLS				S	**Sg**	**02 02 57.0**	**+0.3**
	8μm,0.2s						
VLS	**Valsamata**	**0.24**	**153**	P	**Pg**	**02 02 53.2**	**0.0**
VLS				S	**Sg**	**02 02 57.0**	**+0.3**
VLS				AML	AML	02 02 59.7	
	comp=E,13138μm,0.1s						
VLS				AML	AML	02 02 59.8	
	comp=N,19535μm,0.4s						
EVGI	**Lefkada island**	**0.28**	**35**	P	**Pg**	**02 02 54.3**	**+0.4**
EVGI				S	**Sg**	**02 02 59.1**	**+1.1**
EVGI	**Lefkada island**	**0.28**	**35**	P	**Pg**	**02 02 54.4**	**+0.4**
EVGI				S	**Sg**	**02 02 58.9**	**+0.9**
MGNA	**Meganis**	**0.38**	**45**	P	**Pg**	**02 02 55.8**	**+0.1**
MGNA				S	**Sg**	**02 03 01.5**	**+0.7**
MGNA				AML	AML	02 03 02.5	
	comp=N,35299μm,0.4s						
MGNA				AML	AML	02 03 02.7	
	comp=E,32027μm,0.4s						
KFL	**Anninata**	**0.39**	**136**	P	**Pg**	**02 02 55.9**	**+0.1**
KFL				S	**Sb**	**02 03 02.2**	**-0.3**
	comp=E,9μm,0.3s						
KFL	**Anninata**	**0.39**	**136**	P	**Pg**	**02 02 55.8**	**+0.1**
KFL				AML	AML	02 03 04.1	
	comp=E,21844μm,0.3s						
KFL				AML	AML	02 03 04.1	
	comp=N,12926μm,0.3s						
LKD2	**Lefkada island**	**0.43**	**22**	P	**Pg**	**02 02 56.9**	**+0.3**
LKD2				S	**Sg**	**02 03 03.6**	**+1.1**
	comp=N,2μm,0.6s						
LKD2	**Lefkada island**	**0.43**	**22**	P	**Pg**	**02 02 56.9**	**+0.3**
LKD2				S	**Sg**	**02 03 03.6**	**+1.1**
LKD2				AML	AML	02 03 09.2	
	comp=E,5154μm,0.6s						
LKD2				AML	AML	02 03 11.6	
	comp=N,5115μm,0.5s						
TSLK	**Tsoukalades, L**	**0.46**	**20**	P	**Pg**	**02 02 57.6**	**+0.4**
TSLK				S	**Sg**	**02 03 04.7**	**+1.2**
	comp=N,4μm,0.8s						
TSLK	**Tsoukalades, L**	**0.46**	**20**	P	**Pg**	**02 02 57.7**	**+0.5**
TSLK				S	**Sg**	**02 03 04.7**	**+1.2**
TSLK				AML	AML	02 03 09.3	
	comp=N,8393μm,0.7s						
TSLK				AML	AML	02 03 10.4	
	comp=E,7127μm,0.6s						
VLMS	**Volimes, Zakyn**	**0.54**	**162**	P	**Pg**	**02 02 58.8**	**+0.1**
VLMS				AML	AML	02 03 08.0	
	comp=N,14970μm,0.5s						
VLMS				AML	AML	02 03 13.3	
	comp=E,8386μm,0.5s						
PDO	**Prodromos**	**0.61**	**70**	P	**Pg**	**02 02 59.9**	**-0.1**
PDO	**Prodromos**	**0.61**	**70**	P	**Pg**	**02 03 00.2**	**+0.2**
PDO				AML	AML	02 03 13.4	
	comp=E,5251μm,0.5s						
PDO				AML	AML	02 03 22.4	
	comp=N,3736μm,0.4s						
ZAK2	**Zakynthos**	**0.70**	**149**	P	**Pg**	**02 03 01.7**	**+0.1**
RLS	**Riolos of Patr**	**0.87**	**112**	P	**Pg**	**02 03 04.9**	**+0.1**
RLS	**Riolos of Patr**	**0.87**	**112**	P	**Pg**	**02 03 04.2**	**-0.6**
RLS				AML	AML	02 03 26.6	
	comp=N,2142μm,0.5s						
RLS				AML	AML	02 03 27.6	
	comp=E,1566μm,0.5s						
PVO	**Paravola**	**0.87**	**75**	P	**Pg**	**02 03 05.2**	**+0.2**
PVO	**Paravola**	**0.87**	**75**	P	**Pg**	**02 03 05.2**	**+0.2**
PVO				AML	AML	02 03 26.2	
	comp=E,3276μm,0.4s						
PVO				AML	AML	02 03 27.6	
	comp=N,1956μm,1.8s						
DRO	**Drossia**	**1.08**	**113**	P	**Pg**	**02 03 09.0**	**+0.1**
DRO	**Drossia**	**1.08**	**113**	P	**Pg**	**02 03 08.9**	**-0.1**
DRO				AML	AML	02 03 31.7	
	comp=E,4472μm,0.4s						
DRO				AML	AML	02 03 33.0	
	comp=N,3684μm,0.4s						
EFP	**Efpalio**	**1.14**	**88**	P	**Pg**	**02 03 09.2**	**-0.9**
EFP	**Efpalio**	**1.14**	**88**	P	**Pg**	**02 03 09.3**	**-0.8**
EFP				AML	AML	02 03 32.5	
	comp=E,3118μm,0.8s						
EFP				AML	AML	02 03 35.5	
	comp=N,2271μm,0.6s						
ANX	**Ano Chora**	**1.17**	**80**	P	**Pg**	**02 03 10.3**	**-0.3**
ANX	**Ano Chora**	**1.17**	**80**	P	**Pg**	**02 03 10.1**	**-0.5**
ANX				AML	AML	02 03 38.4	
	comp=N,2599μm,0.5s						
ANX				AML	AML	02 03 38.7	
	comp=E,3850μm,0.6s						
EVR	**Evrytania**	**1.19**	**63**	P	**Pg**	**02 03 10.4**	**-0.5**
EVR				AML	AML	02 03 37.9	
	comp=N,1240μm,0.7s						
EVR				AML	AML	02 03 37.9	
	comp=E,848μm,0.6s			

DBRK	**Dubrovnik**	**4.62**	**338**	*i* Pn		**Pn**	**02 03 57.5**	**+0.1**
DBRK				Sn		**Sn**	**02 04 49.5**	**-1.3**
STON	**Ston**	**4.94**	**336**	*e*Pn		**Pn**	**02 04 02.1**	**+0.3**
STON				Sn		**Sn**	**02 04 56.3**	**-2.4**
MAKA	**Makarska**	**5.54**	**333**	*e*Pn		**Pn**	**02 04 10.8**	**+0.8**
KIJV	**Kijevo**	**6.38**	**333**	*e*Pn		**Pn**	**02 04 22.7**	**+1.1**
KIJV				Sn		**Sn**	**02 05 34.0**	**-0.3**
ZIRJ	**Zirje**	**6.39**	**327**	*e*Pn		**Pn**	**02 04 22.2**	**+0.5**
ZIRJ				Sn		**Sn**	**02 05 31.9**	**-2.6**
MORI	**Morici**	**6.54**	**328**	*e*Pn		**Pn**	**02 04 24.6**	**+0.9**
DUGI	**Dugi Otok**	**6.92**	**326**	*e*Pn		**Pn**	**02 04 29.6**	**+0.7**
NVLJ	**Novalja**	**7.45**	**328**	*i* Pn		**Pn**	**02 04 38.1**	**+1.8**

*ATH **28** 02:08:27.2, 37°.79N×21°.00E, h15km±2km, ML2.3/13, Error ellipse: s-maj=2.2km s-min=0.9km az=325.0*

THE 28 02:08:21.1, 38°.11N×20°.38E, h16km±1km, ML2.1/7, Error ellipse: s-maj=2.4km s-min=0.8km az=75.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
ARG2	**Argostoli**	**0.12**	**50**	P	Pg	02	08	24.5	-0.2
ARG2				S	Sb	02	08	27.3	-0.1
	3μm,0.1s								
VLS	**Valsamata**	**0.18**	**67**	P	Pg	02	08	25.8	+0.2
VLS				S	Sg	02	08	28.9	+0.2
	1μm,0.1s								
VLMS	**Volimes, Zakyn**	**0.32**	**135**	P	Pn	02	08	33.2	+2.1
VLMS				S	Sn	02	08	37.7	+0.2
VLMS				AML	AML	02	08	40.8	
	comp=E,2661μm,0.1s								
VLMS				AML	AML	02	08	42.6	
	comp=N,3573μm,0.4s								
KFL	**Anninata**	**0.33**	**89**	P	Pb	02	08	28.5	0.0
KFL				S	Sb	02	08	33.4	-0.1
	comp=N,930nm,0.3s								
KFL	**Anninata**	**0.33**	**89**	P	Pn	02	08	34.6	+3.4
KFL				S	Sn	02	08	40.3	+2.8
KFL				AML	AML	02	08	42.8	
	comp=N,1278μm,0.4s								
KFL				AML	AML	02	08	44.3	
	comp=E,2073μm,0.3s								
FSK	**Fiskardo**	**0.38**	**22**	P	Pg	02	08	29.2	+0.2
FSK				S	Sg	02	08	34.5	+0.2
	comp=E,65nm,0.1s								
ZAK2	**Zakynthos**	**0.52**	**127**	P	Pg	02	08	31.4	-0.1
ZAK2				S	Sg	02	08	38.5	+0.1
	comp=E,7μm,0.2s								
EVGI	**Lefkada island**	**0.56**	**23**	P	Pg	02	08	32.2	0.0
EVGI				S	Sg	02	08	39.9	+0.2
LKD2	**Lefkada island**	**0.72**	**18**	P	Pg	02	08	34.0	-1.2
LKD2				S	Sb	02	08	45.4	+0.5
	comp=E,150nm,0.3s								
LKD2	**Lefkada island**	**0.72**	**18**	P	Pn	02	08	45.9	+9.3
TSLK	**Tsoukalades, L**	**0.75**	**17**	P	Pg	02	08	35.4	-0.4
TSLK				S	Sn	02	08	47.0	-1.1
	comp=E,100nm,0.5s								
PDO	**Prodromos**	**0.80**	**52**	P	Pb	02	08	35.9	-0.8
PDO	**Prodromos**	**0.80**	**52**	P	Pn	02	08	42.7	+5.0
PDO				S	Sn	02	08	54.9	+5.6
PDO				AML	AML	02	08	57.8	
	comp=E,689μm,0.3s								
PDO				AML	AML	02	08	58.0	
	comp=N,940μm,0.2s								
RLS	**Riolos of Patr**	**0.86**	**93**	P	Pb	02	08	36.0	-1.7
RLS				S	Sb	02	08	42.5	-6.4
RLS				AML	AML	02	08	44.5	
	comp=E,1361μm,0.2s								
RLS				AML	AML	02	08	44.6	
	comp=N,1353μm,0.3s								
PVO	**Paravola**	**1.04**	**60**	P	Pg	02	08	44.9	+3.7
PVO				S	Sn	02	08	57.8	+2.7
PVO				AML	AML	02	09	04.5	
	comp=N,307μm,0.5s								
PVO				AML	AML	02	09	04.6	
	comp=E,272μm,0.2s								
DRO	**Drossia**	**1.06**	**98**	P	Pb	02	08	38.4	-2.7
DRO				S	Sb	02	08	47.2	-7.6
DRO				AML	AML	02	08	49.4	
	comp=E,2549μm,0.3s								
DRO				AML	AML	02	08	51.0	
	comp=N,1457μm,0.3s								
UPR	**University Cam**	**1.12**	**80**	P	Pg	02	08	42.9	0.0
UPR				S	Sb	02	08	54.2	-2.3
AMT	**Artemida-Makis**	**1.20**	**118**	P	Pn	02	08	39.6	-3.6
AMT				S	Sb	02	08	48.0	-11
AMT				AML	AML	02	08	50.5	
	comp=E,384μm,0.4s								
AMT				AML	AML	02	08	51.0	
	comp=N,532μm,0.5s								
EFP	**Efpalio**	**1.25**	**75**	P	Pg	02	08	45.2	0.0
EFP				S	Sb	02	08	59.1	-0.9
EFP				AML	AML	02	09	01.0	
	comp=N,281μm,0.6s								
EFP				AML	AML	02	09	02.5	
	comp=E,208μm,0.2s								
LAKA	**Lakka**	**1.27**	**83**	P	Pn	02	08	44.2	0.0
LAKA				S	Sb	02	08	56.6	-4.1
LAKA				AML	AML	02	09	01.5	
	comp=E,107μm,0.3s								
LAKA				AML	AML	02	09	01.9	
	comp=N,173μm,0.4s								
ANX	**Ano Chora**	**1.31**	**68**	P	Pg	02	08	47.4	+1.0
ANX				S	Sg	02	09	02.9	-0.5
ANX				AML	AML	02	09	04.7	
	comp=E,275μm,0.6s								
ANX				AML	AML	02	09	05.0	
	comp=N,231μm,0.6s								
SERG	**Sergoula**	**1.36**	**76**	P	Pb	02	08	46.2	+0.1
SERG				AML	AML	02	09	03.8	
	comp=N,270μm,0.2s								
SERG				AML	AML	02	09	05.5	
	comp=E,201μm,0.4s								
TRIZ	**Trizonia**	**1.36**	**78**	P	Pb	02	08	45.8	-0.4
TRIZ				S	Sn	02	09	01.1	-2.0
EVR	**Evrytania**	**1.39**	**54**	P	Pg	02	08	51.2	+3.4
KLV	**Kalavryta, Ach**	**1.40**	**92**	P	Pn	02	08	45.2	-0.8
KLV				AML	AML	02	09	02.2	
	comp=N,152μm,0.4s								
KLV				AML	AML	02	09	04.1	
	comp=E,119μm,0.2s								
KALE	**Kalithea**	**1.42**	**78**	P	Pb	02	08	47.1	0.0
KALE				S	Sn	02	09	03.3	-1.3
KALE				AML	AML	02	09	05.5	
	comp=E,202μm,0.2s								
KALE				AML	AML	02	09	05.9	
	comp=N,298μm,0.3s								
ITM	**Ithomi**	**1.54**	**126**	P	Pn	02	08	45.4	-2.4
PYL	**PYLOS**	**1.62**	**138**	P	Pn	02	08	47.8	-1.2
MAKR	**Makrakomi, Fth**	**1.65**	**56**	P	Pg	02	08	56.0	+3.2
AXAR	**Agios Charalam**	**1.91**	**69**	P	Pg	02	08	57.9	+0.2
THL	**Klokotos Trika**	**1.94**	**41**	P	Pg	02	09	02.2	+3.9
PROD	**Prodromos**	**2.00**	**85**	P	Pb	02	08	57.1	+0.1
LKR	**Lokris**	**2.13**	**74**	P	Pb	02	08	59.7	+0.4
VIL2	**Platees**	**2.28**	**86**	P	Pb	02	09	00.7	-1.2

*VIE **28** 02:11:40.7±0.7, 49°.66N×18°.58E, h0km, mb1.8/2, ml2.6/4, Error ellipse: s-maj=5.3km s-min=3.4km az=87.0 31 km SE of Ostrava Suspected Mining induced.*

*IPEC **28** 02:11:41.5±0.2, 49°.85N×18°.58E, h0km, ML2.2/4, Error ellipse: s-maj=1.6km s-min=1.1km az=151.0*

*PRU **28** 02:11:41.8±0.0, 49°.80N×18°.51E, h0km, Mining Induced Event Csm, E=3.3e+05*

ISC 28 02:11:40.6±0.8, 49°.80N±0°.03×18°.53E±0°.02, h0km, n37, σ0s76/71, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
OKC	**Ostrava-Krasne**	**0.25**	**279**	*e*PG	**Pg**	**02**	**11**	**47.3**	**+1.9**
OKC				*e*SG	**Sg**	**02**	**11**	**50.7**	**+2.1**
	comp=Z,106nm,0.5s								
MORC	**Moravsky Berou**	**0.64**	**268**	*e*PG	**Pb**	**02**	**11**	**54.5**	**-0.2**
MORC				*e*SG	**Sg**	**02**	**12**	**02.2**	**+1.1**
MORC	**Moravsky Berou**	**0.64**	**268**	*e*Pg	**Pb**	**02**	**11**	**54.5**	**-0.2**
	baz=83								
MORC				*e*Sg	**Sg**	**02**	**12**	**02.1**	**+1.0**
	52nm,0.2s,baz=83								
LANS	**Liptovska Anna**	**0.89**	**136**	*e*PG	**Pb**	**02**	**11**	**58.8**	**-0.2**
LANS				*e*SG	**Sb**	**02**	**12**	**11.7**	**+0.2**
LANS				*e*LG	Lg	02	12	16.2	
OJC	**Ojcow**	**0.92**	**62**	*e*Pg	**Pg**	**02**	**11**	**58.2**	**0.0**
OJC				*e*Sg	**Sg**	**02**	**12**	**10.3**	**+0.2**
JAVC	**Velka Javorina**	**1.10**	**211**	*e*PG	**Pn**	**02**	**12**	**03.9**	**+0.6**
JAVC				*e*SG	**Sb**	**02**	**12**	**18.0**	**+0.6**
JAVC	**Velka Javorina**	**1.10**	**211**	*e*Pg	**Pn**	**02**	**12**	**03.9**	**+0.6**
	baz=30								
JAVC				*e*Sg	**Sb**	**02**	**12**	**17.9**	**+0.6**
	19nm,0.5s,baz=30								
KRLC	**Kraliky**	**1.16**	**284**	*e*PG	**Pg**	**02**	**12**	**02.7**	**-0.1**
KRLC				*e*SG	**Sb**	**02**	**12**	**18.8**	**-0.4**
	comp=Z,68nm,0.2s								
NIE	**Niedzica**	**1.21**	**108**	*e*Pg	**Pb**	**02**	**12**	**04.4**	**-0.1**
NIE				*e*Sg	**Sn**	**02**	**12**	**22.6**	**+0.6**
VYHS	**Vyhne**	**1.32**	**171**	*e*PG	**Pn**	**02**	**12**	**06.6**	**+0.3**
VYHS				*e*SG	**Sb**	**02**	**12**	**24.1**	**+0.3**
VRAC	**Vranov**	**1.35**	**249**	*e*PG	**Pb**	**02**	**12**	**07.3**	**+0.5**
VRAC				*e*SG	**Sn**	**02**	**12**	**25.3**	**-0.1**
VRAC	**Vranov**	**1.35**	**249**	*e*Pg	**Pb**	**02**	**12**	**07.3**	**+0.5**
	baz=66								
VRAC				*e*Sg	**Sn**	**02**	**12**	**25.3**	**-0.1**
	40nm,0.3s,baz=66								
SMOL	**Smolenice**	**1.48**	**210**	*e*PG	**Pg**	**02**	**12**	**08.7**	**-0.2**
SMOL				*e*SG	**Sg**	**02**	**12**	**27.3**	**-0.7**
SMOL				*e*LG	Lg	02	12	35.5	
DPC	**Dobruska-Polom**	**1.52**	**292**	*e*PG	**Pb**	**02**	**12**	**09.3**	**-0.4**
DPC				*e*SG	**Sn**	**02**	**12**	**29.6**	**-0.1**
	comp=Z,30nm,0.3s								
KRUC	**Moravsky**	**1.58**	**243**	*e*PG	**Pg**	**02**	**12**	**10.7**	**-0.1**
KRUC				*e*SG	**Sg**	**02**	**12**	**32.3**	**+1.1**
KRUC	**Moravsky**	**1.58**	**243**	*e*Pg	**Pg**	**02**	**12**	**10.7**	**-0.1**
	baz=60								
KRUC				*e*Sg	**Sg**	**02**	**12**	**32.3**	**+1.1**
	23nm,0.2s,baz=60								
MODS	**Modra-Piesok**	**1.65**	**210**	*e*PG	**Pn**	**02**	**12**	**10.6**	**-0.2**
MODS				*e*SG	**Sn**	**02**	**12**	**32.7**	**0.0**
OSTC	**Ostas**	**1.67**	**298**	*e*PG	**Pg**	**02**	**12**	**12.2**	**-0.3**
OSTC				*e*SG	**Sg**	**02**	**12**	**34.6**	**+0.4**
	comp=Z,38nm,0.9s								
UPC	**Upice**	**1.77**	**295**	*e*PG	**Pb**	**02**	**12**	**13.7**	**-0.1**
UPC				*e*SG	**Sg**	**02**	**12**	**37.6**	**+0.3**
	comp=Z,20nm,0.6s								
KSP	**Ksiaz**	**1.77**	**307**	*e*Pb	**Pn**	**02**	**12**	**12.5**	**0.0**
KSP				*e*Pg	**Pg**	**02**	**12**	**14.5**	**-0.1**
KSP				*e*Sb	**Sn**	**02**	**12**	**35.8**	**0.0**
KSP				*e*Sg	**Sg**	**02**	**12**	**38.0**	**+0.5**
CHVC	**Chvalec**	**1.77**	**297**	*e*PG	**Pb**	**02**	**12**	**13.7**	**-0.3**
CHVC				*e*SG	**Sg**	**02**	**12**	**38.8**	**+1.2**
	comp=Z,21nm,0.4s								
STHS	**Stebnicka Huta**	**1.81**	**101**	*e*PN	**Pg**	**02**	**12**	**15.1**	**-0.1**
STHS				*e*SN	**Sg**	**02**	**12**	**38.8**	**+0.2**
STHS				*e*LG	Lg	02	12	47.7	
KECS	**Kecovo**	**1.84**	**135**	*e*PN	**Pn**	**02**	**12**	**13.7**	**+0.3**
KECS				*e*SN	**Sn**	**02**	**12**	**36.5**	**-0.9**
KECS				*e*LG	Lg	02	12	42.1	
TREC	**Trest**	**2.04**	**257**	*e*PG	**Pb**	**02**	**12**	**18.9**	**+0.3**
TREC				*e*SG	**Sg**	**02**	**12**	**46.1**	**-0.1**
	comp=Z,16nm,0.2s								
CRVS	**Cervenica-Dubn**	**2.12**	**114**	*e*PG	**Pg**	**02**	**12**	**21.0**	**-0.2**
GOPC	**GO Pecny, Ondr**	**2.42**	**274**	*e*PG	**Pg**	**02**	**12**	**26.5**	**-0.5**
GOPC				*e*SG	**Sg**	**02**	**12**	**57.9**	**-0.5**
	comp=Z,9.8nm,0.5s								
CONA	**Conrad Observa**	**2.57**	**224**	Pn	**Pn**	**02**	**12**	**24.0**	**+0.5**
	0.8nm,0.2s								
CONA				Sn	**Sn**	**02**	**12**	**53.6**	**-2.0**
	1.7nm,0.2s								
PRU	**Pruhonice**	**2.58**	**276**	*e*SG	**Sg**	**02**	**13**	**02.7**	**-0.9**
	comp=Z,8.7nm,0.4s								
KOLS	**Kolonicke sedl**	**2.60**	**108**	*e*PG	**Pg**	**02**	**12**	**30.7**	**+0.4**
PVCC	**Panska Ves**	**2.65**	**287**	*e*PG	**Pg**	**02**	**12**	**30.9**	**-0.4**
PVCC				*e*SG	**Sg**	**02**	**13**	**05.2**	**-0.4**
	comp=Z,18nm,0.4s								
PRA	**Prague**	**2.66**	**277**	*e*SG	**Sg**	**02**	**13**	**05.8**	**-0.2**
	comp=Z,25nm,0.9s								
PBCC	**Pribram**	**2.94**	**269**	*e*SG	**Sg**	**02**	**13**	**16.2**	**+1.1**
BRG	**Berggiesshubel**	**3.13**	**292**	PG	**Pg**	**02**	**12**	**38.9**	**-1.6**
BRG				SG	**Sg**	**02**	**13**	**19.6**	**-1.5**
	7.7nm,0.4s								
KHC	**Kasperske Hory**	**3.30**	**260**	*e*PN	**Pn**	**02**	**12**	**34.7**	**+1.2**
KHC				*e*PG	**Pg**	**02**	**12**	**42.5**	**-1.3**
KHC				*e*SG	**Sg**	**02**	**13**	**26.3**	**-0.2**
	comp=Z,7.3nm,0.4s								
MOA	**Molln**	**3.43**	**237**	*i* Pn	**Pn**	**02**	**12**	**34.7**	**-0.5**
	0.1nm,0.1s								
MOA				*e*Pg	**Pg**	**02**	**12**	**44.6**	**-1.6**
	0.5nm,0.2s								
MOA				*i* Sn	**Sn**	**02**	**13**	**16.0**	**-0.6**
	0.7nm,0.2s								
CLL	**Collm**	**3.83**	**295**	*e*Sg	**Sg**	**02**	**13**	**43.0**	**-0.7**
	comp=Z,8.0nm,0.7s								
NKC	**Novy Kostel**	**3.94**	**279**	*e*SG	**Sg**	**02**	**13**	**47.5**	**+0.2**

ATH 28 02:15:36.3, 38°.21N×20°.43E, h12km±3km, ML2.2/3, Error ellipse: s-maj=4.1km s-min=1.0km az=87.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
VLS	**Valsamata**	**0.13**	**104**	P	Pg	02	15	39.5	-0.1
VLS				S	Sg	02	15	41.8	-0.2
FSK	**Fiskardo**	**0.27**	**23**	P	Pg	02	15	41.6	-0.3
FSK				S	Sb	02	15	46.7	-0.9
FSK				AML	AML	02	15	46.8	
	comp=N,1267μm,0.2s								
FSK				AML	AML	02	15	46.9	
	comp=E,3070μm,0.2s								
KFL	**Anninata**	**0.30**	**109**	P	Pg	02	15	42.2	-0.2
KFL				S	Sg	02	15	47.1	+0.5
VLMS	**Volimes, Zakyn**	**0.38**	**151**	P	Pg	02	15	43.8	-0.1
VLMS				S	Sb	02	15	50.1	-0.7
VLMS				AML	AML	02	15	50.7	
	comp=E,1413μm,0.1s								
VLMS				AML	AML	02	15	51.2	
	comp=N,1632μm,0.1s								
EVGI	**Lefkada island**	**0.45**	**24**	P	Pg	02	15	45.1	0.0
EVGI				S	Sb	02	15	52.3	-0.5
LKD2	**Lefkada island**	**0.61**	**17**	P	Pg	02	15	48.1	0.0
LKD2				S	Sg	02	15	55.6	-0.5
TSLK	**Tsoukalades, L**	**0.64**	**16**	P	Pg	02	15	48.9	+0.2
TSLK				S	Sg	02	15	56.7	-0.5
PDO	**Prodromos**	**0.71**	**57**	P	Pg	02	15	49.7	-0.4
PDO				S	Sg	02	15	59.7	+0.3
PDO				AML	AML	02	16	01.2	
	comp=E,282μm,0.3s								
PDO				AML	AML	02	16	08.9	
	comp=N,274μm,0.3s								
PVO	**Paravola**	**0.95**	**65**	P	Pg	02	15	54.4	-0.3
DRO	**Drossia**	**1.05**	**104**	P	Pn	02	15	56.9	+0.1
EFP	**Efpalio**	**1.19**	**79**	P	Pn	02	15	57.6	-1.0

*CNRM **28** 02:36:57.5±1.8, 35°.62N×4°.94W, h197km±19km, Error ellipse: s-maj=16.0km s-min=4.6km az=76.0*

*IGIL **28** 02:37:05.8, 35°.79N×4°.68W, h15km, ML2.3*

*SFS **28** 02:37:07.0, 35°.78N×4°.68W, ML3.1, ALBORAN OESTE*

*INMG **28** 02:37:07.1±1.4, 35°.81N×4°.73W, h78km±5km, ML2.3, Error ellipse: s-maj=5.0km s-min=2.8km az=177.0*

*MDD **28** 02:37:07.2±0.9, 35°.82N×4°.66W, h93km±7km, mb2.7/14, Error ellipse: s-maj=9.1km s-min=4.7km az=167.0, PRXIMO*

ISC 28 02:37:04.2±1.4, 35°.76N±0°.04×4°.66W±0°.03, h110km±8km, n53, σ1s57/100, 2C-4D, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CEU	**Ceuta**	**0.60**	**283**	*e*P	**Pn**	**02**	**37**	**23.5**	**+1.9**
CEU				*e*S	**Sn**	**02**	**37**	**33.9**	**-0.9**
CEU	**Ceuta**	**0.60**	**283**	P	**Pn**	**02**	**37**	**23.5**	**+1.9**
CEU				S	**Sn**	**02**	**37**	**33.9**	**-0.9**
EMIJ	**Mijas**	**0.80**	**353**	⇑P	**Pn**	**02**	**37**	**23.3**	**-0.2**
	8.2nm,0.1s,SNR=18								
EMIJ				S	**Sn**	**02**	**37**	**35.8**	**-2.2**
	15nm,0.1s,SNR=13								
EMAL	**Malaga-Limoner**	**1.01**	**10**	⇓P	**Pn**	**02**	**37**	**25.9**	**+0.4**
EMAL				*e*S	**Sn**	**02**	**37**	**40.2**	**-1.3**
EMAL	**Malaga-Limoner**	**1.01**	**10**	P	**Pn**	**02**	**37**	**25.9**	**+0.4**
EMAL				S	**Sn**	**02**	**37**	**40.2**	**-1.3**
ELGU	**Los Guajares,**	**1.38**	**37**	P	**Pn**	**02**	**37**	**29.8**	**+0.1**
	6.8nm,0.1s,SNR=7.9								
ELGU				S	**Sn**	**02**	**37**	**47.4**	**-1.5**
	6.4nm,0.1s,SNR=7.9								
EGOR	**Sierra Gorda,**	**1.41**	**18**	P	**Pn**	**02**	**37**	**31.3**	**+1.2**
	0.9nm,1.1s,SNR=7.9								
EGOR				S	**Sn**	**02**	**37**	**49.5**	**-0.2**
	11nm,5.4s,SNR=7.9								
ESPR	**Espera**	**1.47**	**319**	⇓P	**Pn**	**02**	**37**	**32.4**	**+1.8**
	1.9nm,0.1s,SNR=18								
ESPR				S	**Sn**	**02**	**37**	**50.1**	**-0.5**
	4.9nm,0.3s,SNR=5.6								
EBER	**Berja**	**1.82**	**51**	P	**Pn**	**02**	**37**	**35.7**	**+0.6**
	0.6nm,0.2s,SNR=7.9								
EBER				S	**Sn**	**02**	**37**	**58.7**	**+0.1**
	7.9nm,0.5s,SNR=7.9								
HORN	**Hornachuelos**	**2.13**	**347**	P	**Pn**	**02**	**37**	**40.0**	**+1.2**
HORN				S	**Sn**	**02**	**38**	**09.6**	**+4.3**
ECAB	**El Cabril**	**2.39**	**345**	P	**Pn**	**02**	**37**	**43.1**	**+1.0**
	1.6nm,0.1s,SNR=52								
ECAB				S	**Sn**	**02**	**38**	**09.7**	**-1.5**
	8.7nm,0.1s,SNR=19								
EADA	**Adamuz**	**2.40**	**2**	⇓P	**Pn**	**02**	**37**	**43.9**	**+1.6**
	4.5nm,0.0s,SNR=18								
EADA				S	**Sn**	**02**	**38**	**10.4**	**-1.1**
	14nm,0.1s								
EQES	**Quesada**	**2.40**	**32**	P	**Pn**	**02**	**37**	**44.3**	**+1.9**
	0.6nm,0.1s,SNR=7.9								
EQES				S	**Sn**	**02**	**38**	**11.2**	**-0.5**
	1.7nm,0.1s,SNR=7.9								
EMIN	**Mina Concepcio**	**2.57**	**322**	P	**Pn**	**02**	**37**	**45.6**	**+1.1**
	3.5nm,0.1s,SNR=58								
EMIN				S	**Sn**	**02**	**38**	**13.8**	**-1.7**
	8.3nm,0.1s,SNR=13								
EGRO	**El Granado**	**2.88**	**309**	P	**Pn**	**02**	**37**	**49.5**	**+1.0**
	2.1nm,0.1s,SNR=7.9								
EGRO				S	**Sn**	**02**	**38**	**21.1**	**-1.6**
	8.9nm,0.1s,SNR=11								
MD31	**MD31**	**2.89**	**182**	P	Pn	02	37	43.5	-5.4
MD31				S	**Sn**	**02**	**38**	**21.6**	**-1.6**
MDT	**Midelt**	**2.94**	**179**	P	Pn	02	37	44.0	-5.6
MDT				S	**Sn**	**02**	**38**	**22.8**	**-1.6**
PVAQ	**Vaqueiros**	**2.96**	**304**	*e*P	**Pn**	**02**	**37**	**50.5**	**+0.9**
PVAQ				*e*S	**Sn**	**02**	**38**	**23.0**	**-1.6**
PVAQ				A	A	02	38	25.1	
	8.9nm,0.4s								
PVAQ	**Vaqueiros**	**2.96**	**304**	P	**Pn**	**02**	**37**	**50.5**	**+0.9**
PVAQ				S	**Sn**	**02**	**38**	**23.0**	**-1.6**
	8.9nm,0.4s								
PBDV	**Barranco-do-Ve**	**3.02**	**300**	*e*P	**Pn**	**02**	**37**	**51.5**	**+1.0**
PBDV				*e*S	**Sn**	**02**	**38**	**24.8**	**-1.4**
PBDV				A	A	02	38	27.2	
	3.1nm,0.3s								
PBDV	**Barranco-do-Ve**	**3.02**	**300**	P	**Pn**	**02**	**37**	**51.5**	**+1.0**
PBDV				S	**Sn**	**02**	**38**	**24.8**	**-1.4**
	3.1nm,0.3s								
PBAR	**Barrancos**	**3.07**	**322**	*e*P	**Pn**	**02**	**37**	**52.3**	**+1.2**
PBAR				*e*S	**Sn**	**02**	**38**	**26.0**	**-1.3**
PBAR	**Barrancos**	**3.07**	**322**	P	**Pn**	**02**	**37**	**52.3**	**+1.2**
PBAR				S	**Sn**	**02**	**38**	**26.0**	**-1.3**
PCVE	**Castro Verde**	**3.29**	**305**	*e*P	**Pn**	**02**	**37**	**55.1**	**+1.0**
PCVE				*e*S	**Sn**	**02**	**38**	**30.7**	**-1.9**
PCVE				A	A	02	38	33.3	
	5.8nm,0.4s								
PCVE	**Castro Verde**	**3.29**	**305**	P	**Pn**	**02**	**37**	**55.1**	**+1.0**
PCVE				S	**Sn**	**02**	**38**	**30.7**	**-1.9**
	5.8nm,0.4s								
PBEJ	**Beja**	**3.42**	**312**	*e*P	**Pn**	**02**	**37**	**57.0**	**+1.2**
PBEJ				*e*S	**Sn**	**02**	**38**	**34.1**	**-1.5**
PBEJ				A	A	02	38	35.0	
	3.5nm,0.4s								
PBEJ	**Beja**	**3.42**	**312**	P	**Pn**	**02**	**37**	**57.0**	**+1.2**
PBEJ				S	**Sn**	**02**	**38**	**34.1**	**-1.5**
	1.8nm,0.4s								
EBAD	**Badajoz**	**3.53**	**329**	⇑P	**Pn**	**02**	**37**	**58.7**	**+1.5**
	2.6nm,0.1s,SNR=18								
EBAD				S	**Sn**	**02**	**38**	**36.8**	**-1.4**
	3.4nm,0.0s,SNR=8.6								
MORF	**Marmelete**	**3.56**	**297**	*e*P	**Pn**	**02**	**37**	**58.6**	**+0.9**
MORF				*e*S	**Sn**	**02**	**38**	**37.3**	**-1.8**
MORF				AML	AML	02	38	38.6	
	comp=N,8.2nm,0.3s								
MORF	**Marmelete**	**3.56**	**297**	*e*P	**Pn**	**02**	**37**	**58.7**	**+0.9**
MORF				*e*S	**Sn**	**02**	**38**	**37.6**	**-1.5**
MORF				A	A	02	38	39.1	
	comp=N,6.6nm,0.1s								
MORF	**Marmelete**	**3.56**	**297**	P	**Pn**	**02**	**37**	**58.7**	**+0.9**
MORF				S	**Sn**	**02**	**38**	**37.6**	**-1.5**
	comp=N,6.6nm,0.1s								
PFVI	**Vila Bisbo**	**3.63**	**293**	*e*P	**Pn**	**02**	**37**	**59.6**	**+

TAFP					Sn		02 50 00.8	+1.3
KIMD	**Kanaga Island**	**1.73**	**71**		**Pn**		**02 49 46.9**	**-0.8**
KIMD					Sn		02 50 09.8	+1.2
KICM	**Kanaga Island**	**1.81**	**67**		**Pn**		**02 49 48.6**	**-0.1**
KIKV	**Kanaga Island**	**1.81**	**68**		**Pn**		**02 49 48.8**	**+0.1**
KIKV					Sn		02 50 12.4	+1.9
KIWB	**Kanaga Island**	**1.81**	**69**		**Pn**		**02 49 48.1**	**-0.6**
KIWB				Sn	**Sn**		**02 50 09.4**	**-1.1**
KIRH	**Kanaga Island**	**1.86**	**68**		**Pn**		**02 49 49.9**	**+0.4**
ADK	**Adak**	**2.10**	**71**		**Pn**		**02 49 51.3**	**-1.3**
ADK				Sn	**Sn**		**02 50 16.8**	**-0.6**
ADAG	**Mount Adagdak**	**2.17**	**69**		**Pn**		**02 49 53.5**	**-0.2**
GSTD	**Great Sitkin T**	**2.47**	**69**		**Pn**		**02 49 58.7**	**+0.9**
GSTD					Lg		02 50 30.4	
GSMY	**Great Sitkin M**	**2.52**	**70**		**Pn**		**02 49 58.2**	**-0.2**
GSTR	**Great Sitkin T**	**2.53**	**69**		**Pn**		**02 49 58.1**	**-0.5**
GSTR					**Sn**		**02 50 27.8**	**-0.3**
GSIG	**Igitkin Island**	**2.58**	**72**		**Pn**		**02 49 59.2**	**-0.1**
ATKA	**Atka Island**	**3.67**	**72**		**Sn**		**02 50 58.0**	**+2.0**
ATKA	**Atka Island**	**3.67**	**72**		**Pn**		**02 50 13.6**	**-0.4**
KOWE	**Korovin West**	**3.67**	**70**		**Pn**		**02 50 15.1**	**+0.8**
UNV	**Unalaska Valle**	**8.56**	**67**	Pn	**Pn**		**02 51 20.9**	**-0.2**
KTH	**Kantishna Hill**	**19.67**	**40**	P	**P**		**02 53 44.5**	**0.0**
IMAR	**Indian Mountai**	**19.85**	**32**	P	**P**		**02 53 46.4**	**0.0**
GHO	**Glory Hole Cre**	**19.87**	**46**	P	**P**		**02 53 46.8**	**+0.1**
GHO				IAmb	IAmb		02 53 49.6	
	comp=Z,13nm,1.1s							
BPAW	**Bear Paw Mtn.**	**19.88**	**39**	P	**P**		**02 53 46.8**	**0.0**
BPAW				IAmb	IAmb		02 53 51.7	
	comp=Z,4.6nm,0.9s							
MLY	**Manley**	**20.41**	**36**	P	**P**		**02 53 52.1**	**-0.5**
RND	**Reindeer**	**20.46**	**42**	P	**P**		**02 53 52.2**	**-0.9**
RND				IAmb	IAmb		02 53 57.0	
	comp=Z,2.6nm,0.7s							
DHY	**Denali Highway**	**20.97**	**43**	P	**P**		**02 53 58.6**	**0.0**
PAX	**Paxson**	**21.76**	**44**	P	**P**		**02 54 07.2**	**+0.1**
PAX				IAmb	IAmb		02 54 14.2	
	comp=Z,3.5nm,0.8s							
ILAR	**Eielson Array**	**21.78**	**39**	P	**P**		**02 54 05.5**	**-1.7**
	comp=Z,0.4nm,0.8s,baz=232,slow=7.1,SNR=6.7							
ILAR	**Eielson Array**	**21.78**	**39**	P	**P**		**02 54 07.1**	**0.0**
GLB	**Gilahina Butte**	**22.15**	**49**	P	**P**		**02 54 09.4**	**-1.9**
GLB				IAmb	IAmb		02 54 13.3	
	comp=Z,5.2nm,0.8s							
VRDI	**Verde Repeater**	**22.28**	**49**	P	**P**		**02 54 12.2**	**-0.6**
VRDI				IAmb	IAmb		02 54 14.7	
	comp=Z,6.3nm,0.9s							
SCRK	**Sand Creek**	**22.69**	**42**	P	**P**		**02 54 14.7**	**-2.5**
BCAR	**Beaver Creek A**	**23.41**	**45**	P	**P**		**02 54 23.4**	**-0.8**
BMAR	**Burnt Mountain**	**23.73**	**34**	P	**P**		**02 54 26.6**	**-0.5**
YKA	**Yellowknife Ar**	**35.82**	**46**	P	**P**		**02 56 13.7**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=280,slow=7.9,SNR=17							
YHH	**Holmes Hill**	**45.07**	**70**	P	**P**		**02 57 30.7**	**-0.4**
SONM	**Songino Array**	**46.10**	**296**	P	**P**		**02 57 40.2**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=76,slow=9.2,SNR=3.8							
SONM	**Songino Array**	**46.10**	**296**	P	**P**		**02 57 38.5**	**-0.5**
PDAR	**Pinedale Array**	**47.00**	**71**	P	**P**		**02 57 46.2**	**0.0**
	comp=Z,1.0nm,0.5s,baz=312,slow=3.3,SNR=11							
TXAR	**Lajitas Array**	**59.35**	**80**	P	**P**		**02 59 16.8**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=289,slow=3.8,SNR=3.4							
TXAR	**Lajitas Array**	**59.35**	**80**	P	**P**		**02 59 16.6**	**-0.3**
MK31	**Makanchi Array**	**59.59**	**308**	P	**P**		**02 59 17.8**	**-0.5**
MK31				IAmb	IAmb		02 59 19.6	
	comp=Z,0.9nm,0.7s							
MKAR	**Makanchi Array**	**59.59**	**308**	P	**P**		**02 59 18.7**	**+0.4**
	comp=Z,1.0nm,0.5s,baz=50,slow=6.3,SNR=19							
MKAR	**Makanchi Array**	**59.59**	**308**	P	**P**		**02 59 18.9**	**+0.6**
FINES	**FINESS Array B**	**65.77**	**347**	P	**P**		**02 59 58.7**	**-0.4**
	comp=Z,1.9nm,0.7s,baz=46,slow=8.0,SNR=4.1							
FINES	**FINESS Array B**	**65.77**	**347**	P	**P**		**02 59 59.0**	**-0.1**
NOA	**NORSAR Array B**	**67.72**	**354**	P	**P**		**03 00 12.2**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=13,slow=5.2,SNR=4.3							
BOSA	**Boshof**	**150.56**	**311**	PKPbc	**PKiKP**		**03 09 07.9**	**+1.1**
	comp=Z,2.2nm,0.8s,baz=104,slow=4.2,SNR=3.6							

*NEIC **28** 02:56:37.4±0.5,24.0°S±0.2°×179.5°W±0.3°,h478km±30km, mb4.5/16, Error ellipse: s-maj=42.3km s-min=22.5km az=103.0*
*IDC **28** 02:56:39.4±3.3,23.67°S×179.79°W,h475km±45km, mb3.2/6, mb1 3.5/8, mb1mx3.3/41, mbtmp4.1/8, Error ellipse: s-maj=52.3km s-min=18.9km az=152.0*
ISC 28 02:56:40.0±0.8,24.1°S±0.1×179.5°W±0.2,h512km,n30, σ1°37/30,mb4.3/11,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**12.47**	**37**	P	**P**	**02 59 22.0**	**-1.8**
	4.1nm,0.3s,baz=359,slow=4.5,SNR=4.7						
AFI	**Afiamalu**	**12.47**	**37**	P	**P**	**02 59 21.0**	**-2.8**
URZ	**Urewera**	**14.43**	**191**	P	**P**	**02 59 46.8**	**+2.9**
	2.4nm,0.3s,baz=274,slow=2.0,SNR=11						
URZ	**Urewera**	**14.43**	**191**	P	**P**	**02 59 42.6**	**-1.3**
BKZ	**Black Stump Fm**	**15.43**	**192**	P	**P**	**02 59 52.0**	**-2.4**
BKZ				IAmb	IAmb	03 00 01.4	
	comp=Z,7.2nm,0.9s						
BFZ	**Birch Farm**	**16.94**	**191**	P	**P**	**03 00 08.2**	**-1.6**
MSWZ	**Moikau Station**	**17.84**	**193**	P	**P**	**03 00 17.8**	**-0.4**
BHW	**Baring Head**	**17.91**	**194**	P	**P**	**03 00 18.5**	**-0.3**
QRZ	**Quartz Range**	**17.99**	**200**	P	**P**	**03 00 19.4**	**-0.1**
NNZ	**Nelson**	**18.10**	**197**	P	**P**	**03 00 19.9**	**-0.6**
THZ	**Tophouse**	**18.74**	**198**	P	**P**	**03 00 26.6**	**+0.1**
THZ				IAmb	IAmb	03 00 30.2	
	comp=Z,11nm,0.8s						
KHZ	**Kahutara**	**19.18**	**196**	P	**P**	**03 00 30.2**	**-0.1**
KHZ				IAmb	IAmb	03 00 30.8	
	comp=Z,20nm,1.1s						
LTZ	**Lake Taylor**	**19.86**	**198**	P	**P**	**03 00 36.8**	**+0.2**
LTZ				IAmb	IAmb	03 00 40.1	
	comp=Z,16nm,0.9s						
FOZ	**Fox Glacier**	**21.30**	**202**	P	**P**	**03 00 49.4**	**-0.2**
FOZ				IAmb	IAmb	03 01 03.0	
	comp=Z,18nm,1.0s						
MLZ	**Mavora Lakes**	**23.50**	**202**	P	**P**	**03 01 08.9**	**-0.4**
DCZ	**Deep Cove**	**23.93**	**204**	P	**P**	**03 01 12.7**	**-0.4**
DCZ				IAmb	IAmb	03 01 20.4	
	comp=Z,18nm,1.2s						
EIDS	**Eidsvold**	**26.72**	**261**	P	**P**	**03 01 36.9**	**-1.2**
STKA	**Stephens Creek**	**35.07**	**248**	P	**P**	**03 02 51.4**	**+1.6**
	comp=Z,0.5nm,0.4s,baz=100,slow=8.3,SNR=3.0						
BBOO	**Buckleboo**	**39.78**	**247**	P	**P**	**03 03 28.1**	**-0.3**
ASAR	**Alice Springs**	**42.44**	**261**	P	**P**	**03 03 50.1**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=97,slow=6.9,SNR=20						
ASAR	**Alice Springs**	**42.44**	**261**	P	**P**	**03 03 49.5**	**-0.2**
WR0	**Warramunga Arr**	**42.65**	**266**	P	**P**	**03 03 50.8**	**-0.6**
WB0	**Warramunga Arr**	**42.83**	**266**	P	**P**	**03 03 52.6**	**-0.2**
WB0				IAmb	IAmb	03 03 53.5	
	comp=Z,7.2nm,0.7s						
WRA	**Warramunga Arr**	**42.84**	**266**	P	**P**	**03 03 53.0**	**+0.1**
	comp=Z,5.5nm,0.6s,baz=103,slow=8.1,SNR=8.2						
WRA	**Warramunga Arr**	**42.84**	**266**	P	**P**	**03 03 52.8**	**-0.1**
FORT	**Forrest**	**46.67**	**250**	P	**P**	**03 04 21.3**	**-0.9**
FORT				IAmb	IAmb	03 04 35.5	
	comp=Z,30nm,1.0s						
KNRA	**Kununurra**	**49.13**	**270**	P	**P**	**03 04 40.5**	**-0.4**
KNRA				IAmb	IAmb	03 04 56.9	
	comp=Z,20nm,1.1s						
NVAR	**Mina Array Bea**	**84.57**	**44**	P	**P**	**03 08 22.1**	**+2.8**
	comp=Z,0.3nm,0.6s,baz=224,slow=7.3,SNR=3.8						
ILAR	**Eielson Array**	**92.09**	**13**	P	**P**	**03 08 54.1**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=225,slow=5.5,SNR=4.0						
PDAR	**Pinedale Array**	**92.51**	**44**	P	**P**	**03 08 59.0**	**+2.6**
	comp=Z,0.5nm,0.9s,baz=197,slow=5.4,SNR=3.7						

*THE **28** 02:58:00.8,38.31N×20.41E,h9km±2km, ML2.9/3, Error ellipse: s-maj=2.2km s-min=0.4km az=202.0*
*ATH **28** 02:58:00.0,38.29N×20.34E,h6km±2km, ML2.4/16, Error ellipse: s-maj=2.7km s-min=0.8km az=87.0*
ISC 28 02:57:59.3±1.5,38°28N±0.03°×20°30E±0.06,h13km±8km, n38,σ0°38/53,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.18**	**125**	P	**Pg**	**02 58 04.0**	**+0.5**
ARG2				S	**Sg**	**02 58 06.3**	**0.0**
VLS	**Valsamata**	**0.25**	**115**	P	**Pg**	**02 58 04.6**	**-0.1**
VLS				S	**Sg**	**02 58 07.7**	**-0.6**
	4µm,0.1s						
VLS	**Valsamata**	**0.25**	**115**	P	**Pg**	**02 58 04.6**	**-0.1**
VLS				S	**Sg**	**02 58 07.7**	**-0.6**
VLS				AML	AML	02 58 07.8	
	comp=N,6943µm,0.2s						
VLS				AML	AML	02 58 08.5	
	comp=E,7862µm,0.1s						
FSK	**Fiskardo**	**0.27**	**50**	P	**Pg**	**02 58 05.0**	**0.0**
FSK	**Fiskardo**	**0.27**	**50**	P	**Pg**	**02 58 05.0**	**0.0**
KFL	**Anninata**	**0.42**	**114**	P	**Pg**	**02 58 07.5**	**-0.2**
KFL				S	**Sg**	**02 58 13.2**	**-0.2**
	comp=E,3µm,0.4s						
KFL	**Anninata**	**0.42**	**114**	P	**Pg**	**02 58 07.6**	**-0.1**
KFL				S	**Sg**	**02 58 13.4**	**-0.1**
KFL				AML	AML	02 58 13.6	
	comp=N,4681µm,0.4s						
KFL				AML	AML	02 58 13.8	
	comp=E,8997µm,0.3s						
EVGI	**Lefkada island**	**0.44**	**40**	P	**Pg**	**02 58 08.0**	**0.0**
EVGI				S	**Sg**	**02 58 13.3**	**-0.7**
EVGI	**Lefkada island**	**0.44**	**40**	P	**Pg**	**02 58 08.1**	**0.0**
EVGI				S	**Sg**	**02 58 14.2**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.50**	**145**	P	**Pb**	**02 58 09.6**	**-0.3**
VLMS				S	**Sg**	**02 58 16.1**	**+0.3**
VLMS				AML	AML	02 58 18.0	
	comp=E,6072µm,0.3s						
VLMS				AML	AML	02 58 19.5	
	comp=N,5361µm,0.2s						
LKD2	**Lefkada island**	**0.58**	**29**	P	**Pb**	**02 58 11.0**	**-0.3**
LKD2				S	**Sg**	**02 58 18.2**	**-0.2**
LKD2				AML	AML	02 58 23.9	
	comp=E,415µm,0.2s						
LKD2				AML	AML	02 58 24.8	
	comp=N,336µm,0.2s						
TSLK	**Tsoukalades, L**	**0.61**	**27**	P	**Pg**	**02 58 11.3**	**0.0**
TSLK	**Tsoukalades, L**	**0.61**	**27**	P	**Pg**	**02 58 11.2**	**0.0**
TSLK				S	**Sg**	**02 58 19.0**	**-0.3**
TSLK				AML	AML	02 58 24.8	
	comp=N,529µm,0.4s						
TSLK				AML	AML	02 58 26.8	
	comp=E,489µm,0.3s						
PDO	**Prodromos**	**0.76**	**65**	P	**Pg**	**02 58 13.6**	**-0.5**
PDO	**Prodromos**	**0.76**	**65**	P	**Pg**	**02 58 13.6**	**-0.5**
PDO				S	**Sg**	**02 58 24.2**	**0.0**
PDO				AML	AML	02 58 26.2	
	comp=E,1404µm,0.5s						
PDO				AML	AML	02 58 26.2	
	comp=N,1446µm,0.6s						
RLS	**Riolos of Patr**	**0.95**	**103**	P	**Pg**	**02 58 17.9**	**+0.3**
RLS				S	**Sb**	**02 58 30.1**	**+0.1**
RLS				AML	AML	02 58 37.2	
	comp=N,294µm,0.3s						
RLS				AML	AML	02 58 39.3	
	comp=E,261µm,0.6s						
PVO	**Paravola**	**1.02**	**71**	P	**Pb**	**02 58 18.4**	**-0.4**
PVO				S	**Sb**	**02 58 32.2**	**+0.1**
PVO				AML	AML	02 58 34.6	
	comp=E,870µm,0.4s						
PVO				AML	AML	02 58 34.8	
	comp=N,706µm,0.8s						
DRO	**Drossia**	**1.16**	**106**	P	**Pg**	**02 58 21.7**	**+0.1**
DRO				AML	AML	02 58 44.0	
	comp=N,436µm,0.5s						
DRO				AML	AML	02 58 46.0	
	comp=E,486µm,0.5s						
EFP	**Efpalio**	**1.27**	**83**	P	**Pg**	**02 58 23.6**	**-0.2**
EFP				S	**Sg**	**02 58 40.4**	**+0.1**
EFP				AML	AML	02 58 46.2	
	comp=E,351µm,0.5s						
EFP				AML	AML	02 58 46.5	
	comp=N,313µm,0.4s						
ANX	**Ano Chora**	**1.31**	**76**	P	**Pg**	**02 58 24.7**	**+0.2**
ANX				S	**Sg**	**02 58 42.1**	**+0.5**
ANX				AML	AML	02 58 47.6	
	comp=E,329µm,0.7s						
ANX				AML	AML	02 58 47.7	
	comp=N,331µm,0.4s						
EVR	**Evrytania**	**1.34**	**61**	P	**Pb**	**02 58 24.1**	**-0.2**
EVR				AML	AML	02 58 50.7	
	comp=E,150µm,0.4s						
EVR				AML	AML	02 58 52.6	
	comp=N,146µm,0.6s						
AMT	**Artemida-Makis**	**1.34**	**123**	P	**Pb**	**02 58 24.6**	**+0.3**
SERG	**Sergoula**	**1.39**	**84**	P	**Pg**	**02 58 25.6**	**-0.4**
SERG				AML	AML	02 58 48.5	
	comp=N,201µm,0.4s						
SERG				AML	AML	02 58 49.3	
	comp=E,252µm,0.5s						
TRIZ	**Trizonia**	**1.40**	**86**	P	**Pb**	**02 58 25.7**	**+0.5**
JAN	**Janina**	**1.44**	**17**	P	**Pb**	**02 58 26.2**	**+0.2**
JAN				AML	AML	02 58 53.6	
	comp=N,96µm,0.2s						
JAN				AML	AML	02 58 54.0	
	comp=E,152µm,0.4s						
KALE	**Kalithea**	**1.45**	**85**	P	**Pg**	**02 58 26.9**	**-0.3**
KLV	**Kalavryta, Ach**	**1.48**	**99**	P	**Pb**	**02 58 26.3**	**-0.3**
KLV				AML	AML	02 58 48.7	
	comp=E,87µm,0.3s						
KLV				AML	AML	02 58 52.1	
	comp=N,125µm,0.3s						
MAKR	**Makrakomi, Fth**	**1.61**	**63**	P	**Pb**	**02 58 29.4**	**+0.6**
ITM	**Ithomi**	**1.70**	**130**	P	**Pg**	**02 58 31.4**	**-0.5**
AGG	**Agios Georgios**	**1.75**	**64**	P	**Pg**	**02 58 33.2**	**+0.2**
AGG				AML	AML	02 59 01.3	
	comp=E,110µm,0.8s						
AGG				AML	AML	02 59 02.6	
	comp=N,111µm,0.4s						
PYL	**PYLOS**	**1.80**	**140**	P	**Pg**	**02 58 33.6**	**-0.2**
THL	**Klokotos Trika**	**1.85**	**46**	P	**Pb**	**02 58 33.6**	**+0.7**
KPRO	**Kipourio**	**1.86**	**26**	P	**Pg**	**02 58 34.5**	**-0.6**
AXAR	**Agios Charalam**	**1.91**	**75**	P	**Pb**	**02 58 34.6**	**+0.6**
PENT	**Pentalofos**	**2.02**	**19**	P	**Pb**	**02 58 36.6**	**+0.7**
PROD	**Prodromos**	**2.05**	**90**	P	**Pb**	**02 58 36.8**	**+0.5**
NEST	**Nestorio**	**2.21**	**15**	P	**Pb**	**02 58 39.4**	**+0.3**
LIT	**Litokhoron**	**2.49**	**42**	P	**Pb**	**02 58 43.4**	**-0.4**

*IDC **28** 03:04:32.6±2.9, 14.75N×93.77W, h0km, mb3.8/3, mb1 3.9/7, mb1mx3.7/45, mbtmp3.6/7, ML3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.3/36, Error ellipse: s-maj=58.4km s-min=27.1km az=24.0*
*MEX **28** 03:04:33.8±0.5, 14.33N×93.88W, h16km±16km, MD3.9*
*NEIC **28** 03:04:34.4±1.0, 14.64N±0.02°×93.83W±0.07, h20km±13km, Error ellipse: s-maj=9.5km s-min=2.9km az=103.0*
*GCG **28** 03:04:35.4±0.4, 15.28N×93.65W, h31km, MD4.3*
ISC 28 03:04:31.1±2.3,14.55N±0.07°×93.86W±0.06,h2km±12km, n22,σ1°06/33,mb4.0/3,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.30**	**28**	*eP*	**Pg**	**03 04 56.5**	**+0.4**
PCIG				*eS*	**Sg**	**03 05 14.2**	**+1.2**
PCIG		**1.30**	**28**		**Pg**	**03 04 56.5**	**+0.4**
PCIG					**Sg**	**03 05 14.2**	**+1.2**
STG3	**Santiaguito 3,**	**2.22**	**86**	*eP*	**Pn**	**03 05 08.9**	**-0.3**
TGIG		**2.32**	**18**	*eP*	**Pb**	**03 05 11.9**	**-1.9**
TGIG				*i* S	**Sb**	**03 05 40.9**	**-2.0**
TGIG		**2.32**	**18**		**Pb**	**03 05 11.9**	**-1.9**
TGIG					**Sb**	**03 05 40.9**	**-2.0**
CCIG	**Comitan**	**2.39**	**44**	*eP*	**Pn**	**03 05 12.3**	**+0.8**
CCIG				*i* S	**Sn**	**03 05 42.1**	**+0.7**
CCIG	**Comitan**	**2.39**	**44**		**Pb**	**03 05 14.2**	**-0.8**
CCIG				Sn	**Sb**	**03 05 45.2**	**+0.3**
CMIG	**Matias Romero**	**2.71**	**339**	Pn	**Pn**	**03 05 16.1**	**+0.4**
	5.3nm,0.3s,baz=148,slow=11,SNR=53						
CMIG				Sn	**Sn**	**03 05 48.6**	**-0.5**
	13nm,0.3s,baz=85,slow=9.4,SNR=9.5						
CMIG	**Matias Romero**	**2.71**	**339**	*eP*	**Pn**	**03 05 16.1**	**+0.4**
CMIG				*i* S	**Sn**	**03 05 50.0**	**+0.9**
CMIG	**Matias Romero**	**2.71**	**339**		**Pn**	**03 05 16.1**	**+0.4**
CMIG					**Sn**	**03 05 50.0**	**+0.9**
FUG	**Fuego 3**	**2.92**	**92**	*eP*	**Pn**	**03 05 19.1**	**+0.3**
FUG				*eS*	**Sn**	**03 05 53.5**	**-1.1**
PCG	**Pacaya**	**3.15**	**93**	*eP*	**Pn**	**03 05 23.1**	**+1.1**
APG	**El Apazote**	**3.31**	**82**	Pn	**Pn**	**03 05 24.8**	**+0.6**
	4.4nm,0.3s,baz=205,slow=22,SNR=28						
IXG	**Ixpaco**	**3.33**	**96**	*eP*	**Pn**	**03 05 24.1**	**-0.3**
TEIG	**Tepich**	**7.76**	**43**	Pn	**Pn**	**03 06 24.3**	**-0.8**
	4.3nm,0.3s,baz=288,slow=0.0,SNR=18						
TEIG				LR	LR	03 09 48.2	
	comp=Z,116nm,21.7s,baz=230,slow=42						
TEIG	**Tepich**	**7.76**	**43**		**Pn**	**03 06 24.7**	**-0.5**
TEIG				Sn	**Sn**	**03 07 55.7**	**+2.1**
NATX	**Nacogdoches**	**17.14**	**358**	Pn	**Pn**	**03 08 31.8**	**-0.1**
NATX				IAmb	IAmb	03 08 51.7	
	comp=Z,16nm,1.0s						
TX32	**Lajitas Array**	**17.28**	**330**	Pn	**P**	**03 08 35.1**	**-0.2**
TX32				IAmb	IAmb	03 08 47.1	
	comp=Z,27nm,2.0s						
TXAR	**Lajitas Array**	**17.28**	**330**	P	**Pn**	**03 08 33.3**	**-0.4**
	comp=Z,0.0nm,0.3s,baz=112,slow=7.0,SNR=2.9						
YKA	**Yellowknife Ar**	**50.09**	**348**	P	**P**	**03 13 27.4**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=156,slow=7.2,SNR=37						
INK	**Inuvik**	**59.41**	**344**	P	**P**	**03 14 35.4**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=115,slow=4.8,SNR=7.8						
ILAR	**Eielson Array**	**61.63**	**337**	P	**P**	**03 14 51.0**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=173,slow=5.0,SNR=7.7						

*HLW **28** 03:19:17.2,28.50N×34.65E,h3km±2km, Md2.9, Ml3.3*
*SGS **28** 03:19:18,28.58N×34.49E,h19km, Ml3.2*
ISC 28 03:19:18.2±1.1,28.55N±0.05×34.57E±0.05,h15km,n11, σ0°69/13,Egypt

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSHS		**0.32**	**140**	P	**Pb**	**03 19 26.2**	**+0.6**
HAQS	**Haql**	**0.59**	**31**	P	**Pg**	**03 19 29.8**	**-0.1**
HAQS				S	**Sb**	**03 19 38.7**	**+0.2**
HBST	**Basata**	**0.69**	**12**	P	**Pg**	**03 19 31.0**	**-0.6**
	baz=6.0						
HBST				S	**Sb**	**03 19 41.1**	**0.0**
	baz=6.0						
KRABS	**KRABS**	**0.75**	**126**	P	**Pn**	**03 19 33.5**	**-0.7**
JLOS		**0.83**	**77**	P	**Pb**	**03 19 34.6**	**+0.1**
HHRG	**Al Ghardaqah**	**1.59**	**214**	P	**Pb**	**03 19 47.1**	**-0.2**
	baz=213						
HHRG				AMP		03 20 00.0	
	baz=213						
ZNM	**Zenema**	**1.70**	**300**	P	**Pb**	**03 19 48.2**	**-1.0**
	baz=300						
ZAF	**Zafarana**	**1.92**	**293**	P	**Pn**	**03 19 50.9**	**+0.6**
	baz=294						
SUZ	**Suez**	**1.99**	**311**	P	**Pn**	**03 19 52.4**	**+1.0**
	baz=311						
HHAG	**Hagoal**	**2.57**	**304**	P	**Pn**	**03 20 00.2**	**+0.8**
	baz=304						
KOT	**Kottamia**	**2.76**	**301**	P	**Pn**	**03 20 02.7**	**+0.7**
	baz=301						

*IDC **28** 03:44:04.7±4.7,42.05N×82.18E,h0km,mb4.2/1, mb1 3.6/4,mb1mx3.3/47,mbtmp3.5/4,ML2.7/2,MS2.8/1, Ms1 2.8/1,ms1mx2.5/42,Error ellipse: s-maj=89.7km s-min=36.2km az=106.0*
*NNC **28** 03:44:07.7±2.2,42.12N×82.46E,h0km,mb4.0,mpv3.6, Error ellipse: s-maj=17.9km s-min=9.6km az=160.0*
*SOME **28** 03:44:09.4,41.57N×81.98E,h20km*
ISC 28 03:44:06.3±1.9,41.89N±0.10×82.28E±0.06,h14km,n38, σ1°99/52,5C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.44**	**302**	*eP*	**Pb**	**03 44 50.0**	**0.0**
	106nm,0.3s						
SHLS				*eS*	**Sb**	**03 45 19.2**	**-0.7**
	154nm,0.5s						
SHLS	**Shalkode**	**2.44**	**302**	Pg	**Pb**	**03 44 50.0**	**0.0**
	106nm,0.3s						
SHLS				Lg	Lg	03 45 19.2	
	154nm,0.5s						
PDGK	**Podgornoye**	**2.51**	**306**	Pg	**Pg**	**03 44 54.0**	**-0.4**
	8.0nm,0.3s						
PDGK				Lg	Lg	03 45 26.2	
	51nm,0.7s						
PDGK	**Podgornoye**	**2.51**	**306**	⇑Pn	**Pb**	**03 44 49.9**	**-1.3**
	8.2nm,0.3s						
PDGK				⇓Lg	Lg	03 45 26.4	
	120nm,0.8s						
UZB	**Uzunbulak**	**2.71**	**299**	*eP*	**Pg**	**03 44 57.0**	**-1.3**
	9.8nm,0.5s						
UZB				*eS*	**Sg**	**03 45 31.2**	**-2.3**
	48nm,1.0s						
UZB	**Uzunbulak**	**2.71**	**299**	Pg	**Pg**	**03 44 57.0**	**-1.3**
	9.8nm,0.5s						
UZB				Lg	Lg	03 45 31.2	
	48nm,1.0s						
KPKS	**Kokpek**	**3.08**	**302**	*eP*	**Pb**	**03 45 03.4**	**+2.4**
	20nm,0.2s						
KPKS				*eS*	**Sg**	**03 45 42.4**	**-2.9**
	58nm,0.5s						
SATY	**Saty**	**3.09**	**294**	*eP*	**Pb**	**03 45 02.7**	**+1.5**
	18nm,0.3s						
SATY				*eS*	**Sb**	**03 45 41.1**	**+2.3**
	67nm,0.4s						
SATY	**Saty**	**3.09**	**294**	Pg	**Pb**	**03 45 02.7**	**+1.5**
	18nm,0.3s						
SATY				Lg	Lg	03 45 41.1	
	67nm,0.4s						
ZHN	**Zhinishke**	**3.11**	**296**	*eP*	**Pb**	**03 45 02.7**	**+1.2**
	5.2nm,0.2s						
ZHN				*eS*	**Sb**	**03 45 41.0**	**+1.7**
	12nm,0.3s						
ZHN	**Zhinishke**	**3.11**	**296**	Pg	**Pb**	**03 45 02.7**	**+1.2**
	5.2nm,0.2s						
ZHN				Lg	Lg	03 45 41.0	
	12nm,0.3s						
ARXS	**Arharly**	**4.00**	**307**	*eP*	**Pg**	**03 45 22.6**	**-0.3**
	4.2nm,0.6s						
ARXS				*eS*	**Sg**	**03 46 15.3**	**+0.5**
	26nm,0.4s						
ARXS	**Arharly**	**4.00**	**

KST	**Kastek**	**4.81**	**286**		Pg	**Pb**	**03 45 34.8**	**+4.4**
	5.7nm,0.5s								
KST					Lg	Lg	03 46 36.3		
	21nm,1.2s								
MK31	**Makanchi Array**	**4.90**	**0**	⇑	Pn	**Pn**	**03 45 18.7**	**-0.9**
	0.4nm,0.3s,baz=179,slow=12								
MK31				⇑	Pg	**Pb**	**03 45 31.7**	**-0.3**
	1.3nm,0.3s,baz=171,slow=15								
MK31				⇑	Lg	Lg	03 46 33.6		
	14nm,0.6s,baz=175,slow=29								
MKAR	**Makanchi Array**	**4.90**	**0**		Pn	**Pn**	**03 45 19.0**	**-0.6**
	0.6nm,0.3s,baz=186,slow=13,SNR=34								
MKAR					Pg	**Pb**	**03 45 32.6**	**+0.6**
	2.0nm,0.3s,baz=170,slow=16,SNR=20								
MKAR					Lg	Lg	03 46 34.4		
	1.4nm,0.3s,baz=175,slow=29,SNR=6.3								
MAKZ	**Makanchi**	**4.92**	**358**	⇓	Pn	**Pn**	**03 45 18.4**	**-1.4**
	1.3nm,0.3s								
MAKZ				⇓	Sn	**Sn**	**03 46 17.9**	**+1.3**
	2.0nm,0.4s								
MAKZ				⇑	Lg	Lg	03 46 36.5		
	3.4nm,0.5s								
AAK	**Ala-Archa**	**5.82**	**280**		Lg	Lg	03 47 15.8		
	0.2nm,0.3s,baz=222,slow=20,SNR=3.1								
AAK	**Ala-Archa**	**5.82**	**280**		Pg	**Pg**	**03 45 57.0**	**-0.7**
	3.8nm,1.0s								
AAK					Lg	Lg	03 47 14.3		
	7.4nm,0.9s								
KURBB	**Kurchatov Arra**	**9.11**	**345**		Pn	**Pn**	**03 46 15.4**	**-1.8**
	0.1nm,0.3s,baz=167,slow=12,SNR=3.9								
ZALV	**Zalesovo Beam**	**12.19**	**7**		Pn	**Pn**	**03 46 58.9**	**-0.4**
	baz=183,slow=14,SNR=3.6								
WSAR	**Wadi Sarin**	**27.11**	**234**		LR	LR	04 02 54.1		
	comp=Z,21nm,19.5s,baz=320,slow=42								
ARCES	**ARCESS Array B**	**39.95**	**333**		P	**P**	**03 51 38.8**	**-0.9**
	3.6nm,0.9s,baz=94,slow=8.5,SNR=4.5								

*IDC **28** 04:04:31.4±1.2,38°.54N×20°.38E,h0km,mb3.8/7,*
mb1 3.8/10,mb1mx3.6/38,mbtmp3.8/10,ML3.3/3,Error
ellipse: s-maj=24.7km s-min=15.6km az=54.0
*THE **28** 04:04:32.4,38°.41N×20°.43E,h15km,ML3.9/8,Error*
ellipse: s-maj=1.0km s-min=0.3km az=270.0
*ATH **28** 04:04:32.5,38°.40N×20°.48E,h18km±1km,ML3.7/17,Error*
ellipse: s-maj=1.7km s-min=0.7km az=329.0
*PDG **28** 04:04:33.4±0.2,38°.53N×20°.35E,h15km±1km,ML3.8/14,*
Error ellipse: s-maj=1.8km s-min=0.8km az=90.0

ISC 28 04:04:32.3±0.9,38°.43N±0°.02×20°.40E±0°.03,h11km±6km,
n146,σ1s30/194,mb3.8/7,13C-14D,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.13**	**75**	P	**Pg**	**04 04 34.9**	**-0.6**
ARG2	**Argostoli**	**0.26**	**165**	P	**Pg**	**04 04 37.7**	**+0.2**
ARG2				S	**Sg**	**04 04 41.6**	**+0.5**
EVGI	**Lefkada island**	**0.28**	**45**	P	**Pg**	**04 04 37.9**	**-0.1**
EVGI				S	**Sg**	**04 04 42.7**	**+0.8**
VLS	**Valsamata**	**0.29**	**149**	P	**Pg**	**04 04 38.0**	**-0.2**
VLS				S	**Sg**	**04 04 42.1**	**0.0**
VLS				AML	AML	04 04 42.5	
	comp=E,51374μm,0.4s						
VLS				AML	AML	04 04 42.6	
	comp=N,53411μm,0.4s						
MGNA	**Meganis**	**0.38**	**53**	P	**Pg**	**04 04 39.4**	**-0.5**
MGNA				S	**Sg**	**04 04 45.3**	**+0.2**
MGNA				AML	AML	04 04 46.6	
	comp=N,14797μm,0.3s						
MGNA				AML	AML	04 04 46.9	
	comp=E,17622μm,0.4s						
LKD2	**Lefkada island**	**0.41**	**29**	P	**Pg**	**04 04 40.5**	**0.0**
LKD2				S	**Sb**	**04 04 47.4**	**-0.6**
	comp=E,12μm,0.8s						
LKD2	**Lefkada island**	**0.41**	**29**	P	**Pg**	**04 04 40.5**	**0.0**
LKD2				S	**Sg**	**04 04 46.5**	**+0.5**
LKD2				AML	AML	04 04 47.9	
	comp=N,29212μm,0.7s						
LKD2				AML	AML	04 04 48.2	
	comp=E,19337μm,0.6s						
KFL	**Anninata**	**0.44**	**136**	P	**Pg**	**04 04 40.4**	**-0.5**
KFL				S	**Sg**	**04 04 47.2**	**+0.5**
	comp=E,23μm,0.5s						
KFL	**Anninata**	**0.44**	**136**	P	**Pg**	**04 04 40.5**	**-0.4**
KFL				S	**Sg**	**04 04 46.4**	**-0.3**
KFL				AML	AML	04 04 47.7	
	comp=N,49029μm,0.5s						
KFL				AML	AML	04 04 52.6	
	comp=E,53298μm,0.4s						
TSLK	**Tsoukalades, L**	**0.45**	**26**	P	**Pg**	**04 04 41.3**	**+0.2**
TSLK				S	**Sb**	**04 04 47.9**	**-0.9**
	comp=E,16μm,0.8s						
TSLK	**Tsoukalades, L**	**0.45**	**26**	P	**Pg**	**04 04 41.5**	**+0.4**
TSLK				S	**Sb**	**04 04 48.1**	**-0.8**
TSLK				AML	AML	04 04 51.1	
	comp=N,28907μm,0.7s						
TSLK				AML	AML	04 04 52.2	
	comp=E,30500μm,0.8s						
VLMS	**Volimes, Zakyn**	**0.58**	**159**	P	**Pg**	**04 04 43.0**	**-0.7**
VLMS				S	**Sg**	**04 04 51.5**	**+0.1**
VLMS				AML	AML	04 04 53.1	
	comp=N,57009μm,0.5s						
VLMS				AML	AML	04 04 54.9	
	comp=E,35102μm,0.4s						
PDO	**Prodromos**	**0.64**	**74**	P	**Pg**	**04 04 44.0**	**-0.7**
PDO				S	**Sb**	**04 04 53.8**	**-0.5**
	comp=E,16μm,0.5s						
PDO	**Prodromos**	**0.64**	**74**	P	**Pg**	**04 04 44.1**	**-0.5**
PDO				S	**Sg**	**04 04 52.8**	**-0.3**
PDO				AML	AML	04 04 58.9	
	comp=N,30065μm,0.5s						
PDO				AML	AML	04 04 59.8	
	comp=E,15455μm,0.6s						
ZAK2	**Zakynthos**	**0.75**	**148**	P	**Pg**	**04 04 46.5**	**-0.2**
PVO	**Paravola**	**0.90**	**77**	P	**Pg**	**04 04 49.1**	**-0.6**
PVO				S	**Sg**	**04 05 01.5**	**0.0**
	comp=E,6μm,0.7s						
PVO	**Paravola**	**0.90**	**77**	P	**Pg**	**04 04 49.2**	**-0.5**
PVO				S	**Sg**	**04 05 01.0**	**-0.5**
PVO				AML	AML	04 05 05.4	
	comp=N,11731μm,0.8s						
PVO				AML	AML	04 05 09.4	
	comp=E,13683μm,0.6s						
RLS	**Riolos of Patr**	**0.92**	**113**	P	**Pg**	**04 04 48.9**	**-1.0**
RLS	**Riolos of Patr**	**0.92**	**113**	P	**Pg**	**04 04 49.0**	**-0.9**
RLS				S	**Sg**	**04 05 00.2**	**-1.6**
RLS				AML	AML	04 05 09.0	
	comp=E,4013μm,0.6s						
RLS				AML	AML	04 05 11.0	
	comp=N,7198μm,0.9s						
DRO	**Drossia**	**1.13**	**114**	P	**Pb**	**04 04 52.6**	**-1.3**
DRO				S	**Sb**	**04 05 07.5**	**-1.1**
DRO				AML	AML	04 05 19.9	
	comp=E,10427μm,0.5s						
DRO				AML	AML	04 05 24.3	
	comp=N,10962μm,0.5s						
EFP	**Efpalio**	**1.18**	**89**	P	**Pb**	**04 04 53.2**	**-1.5**
EFP	**Efpalio**	**1.18**	**89**	P	**Pb**	**04 04 53.6**	**-1.1**
EFP				S	**Sb**	**04 05 09.2**	**-0.8**
EFP				AML	AML	04 05 16.7	
	comp=E,13203μm,0.6s						
EFP				AML	AML	04 05 19.4	
	comp=N,16935μm,0.7s						
ANX	**Ano Chora**	**1.20**	**81**	P	**Pn**	**04 04 54.2**	**-0.9**
ANX	**Ano Chora**	**1.20**	**81**	P	**Pn**	**04 04 54.6**	**-0.5**
ANX				S	**Sb**	**04 05 10.2**	**-0.5**
ANX				AML	AML	04 05 21.5	
	comp=N,12357μm,0.7s						
ANX				AML	AML	04 05 22.8	
	comp=E,9478μm,0.6s						
EVR	**Evrytania**	**1.21**	**66**	P	**Pn**	**04 04 53.8**	**-1.3**
EVR	**Evrytania**	**1.21**	**66**	P	**Pn**	**04 04 54.2**	**-0.9**
EVR				S	**Sb**	**04 05 10.3**	**-0.5**
EVR				AML	AML	04 05 20.3	
	comp=N,4100μm,0.7s						
EVR				AML	AML	04 05 25.6	
	comp=E,3156μm,1.1s						
LAKA	**Lakka**	**1.25**	**98**	P	**Pn**	**04 04 54.5**	**-1.2**
LAKA	**Lakka**	**1.25**	**98**	P	**Pn**	**04 04 54.6**	**-1.2**
LAKA				S	**Sb**	**04 05 11.4**	**-0.7**
LAKA				AML	AML	04 05 18.2	
	comp=E,3053μm,0.8s						
LAKA				AML	AML	04 05 19.5	
	comp=N,4796μm,0.7s						
JAN	**Janina**	**1.28**	**16**	P	**Pn**	**04 04 55.6**	**-0.5**
JAN	**Janina**	**1.28**	**16**	P	**Pg**	**04 04 57.2**	**+0.3**
SERG	**Sergoula**	**1.30**	**90**	P	**Pn**	**04 04 55.6**	**-0.8**
SERG	**Sergoula**	**1.30**	**90**	P	**Pn**	**04 04 55.8**	**-0.6**
SERG				S	**Sb**	**04 05 12.9**	**-0.5**
SERG				AML	AML	04 05 20.9	
	comp=E,7231μm,0.7s						
SERG				AML	AML	04 05 22.3	
	comp=N,8802μm,0.7s						
TRIZ	**Trizonia**	**1.31**	**92**	P	**Pn**	**04 04 53.7**	**-2.8**
TRIZ	**Trizonia**	**1.31**	**92**	P	**Pn**	**04 04 56.0**	**-0.5**
ALIK	**Aliki, Aigiali**	**1.35**	**96**	P	**Pn**	**04 04 55.5**	**-1.6**
AMT	**Artemida-Makis**	**1.36**	**130**	P	**Pn**	**04 04 54.8**	**-2.4**
AMT	**Artemida-Makis**	**1.36**	**130**	P	**Pn**	**04 04 56.7**	**-0.6**
AMT				S	**Sn**	**04 05 15.2**	**-0.1**
AMT				AML	AML	04 05 28.2	
	comp=N,10422μm,0.7s						
AMT				AML	AML	04 05 28.8	
	comp=E,14003μm,0.8s						
KALE	**Kalithea**	**1.37**	**91**	P	**Pn**	**04 04 56.1**	**-1.2**
KALE	**Kalithea**	**1.37**	**91**	P	**Pn**	**04 04 57.0**	**-0.3**
KLV	**Kalavryta, Ach**	**1.43**	**105**	P	**Pn**	**04 04 57.5**	**-0.6**
KLV	**Kalavryta, Ach**	**1.43**	**105**	P	**Pn**	**04 04 57.6**	**-0.6**
KLV				S	**Sn**	**04 05 16.5**	**-0.4**
KLV				AML	AML	04 05 25.0	
	comp=N,2075μm,0.6s						
KLV				AML	AML	04 05 29.5	
	comp=E,3099μm,0.7s						
MAKR	**Makrakomi, Fth**	**1.48**	**66**	P	**Pn**	**04 04 58.6**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.48**	**66**	P	**Pb**	**04 04 59.3**	**-0.4**
SRN	**Sarande**	**1.49**	**348**	P	**Pn**	**04 04 58.6**	**-0.3**
AGG	**Agios Georgios**	**1.62**	**68**	P	**Pn**	**04 05 01.0**	**+0.2**
AGG	**Agios Georgios**	**1.62**	**68**	P	**Pb**	**04 05 01.8**	**-0.4**
ITM	**Ithomi**	**1.73**	**135**	P	**Pn**	**04 05 01.0**	**-1.3**
ITM	**Ithomi**	**1.73**	**135**	P	**Pn**	**04 05 03.0**	**+0.7**
PENT	**Pentalofos**	**1.86**	**18**	P	**Pb**	**04 05 06.0**	**-0.3**
PYL	**PYLOS**	**1.86**	**145**	P	**Pb**	**04 05 05.4**	**-0.8**
VLX	**Vlachokerasia**	**1.89**	**123**	P	**Pn**	**04 05 05.1**	**+0.6**
VLX	**Vlachokerasia**	**1.89**	**123**	P	**Pb**	**04 05 05.6**	**-1.1**
TPE	**Tepelena**	**1.89**	**351**	P	**Pb**	**04 05 06.4**	**-0.4**
LKR	**Lokris**	**2.05**	**83**	P	**Pn**	**04 05 07.6**	**+1.0**
NEST	**Nestorio**	**2.05**	**14**	P	**Pb**	**04 05 09.0**	**-0.6**
LTK	**Loutraki**	**2.06**	**100**	P	**Pb**	**04 05 08.8**	**-0.9**
LOUT	**Loutraki**	**2.07**	**101**	P	**Pb**	**04 05 09.7**	**-0.2**
KZN	**Kozani**	**2.16**	**29**	P	**Pn**	**04 05 09.6**	**+1.4**
VILL	**Villia**	**2.31**	**96**	P	**Pn**	**04 05 08.9**	**-1.3**
LIT	**Litokhoron**	**2.33**	**43**	P	**Pb**	**04 05 13.0**	**-1.3**
XOR	**Xorichti**	**2.37**	**66**	P	**Pn**	**04 05 12.9**	**+1.8**
NEO	**Neokhori**	**2.37**	**67**	P	**Pn**	**04 05 10.7**	**-0.4**
DID	**Didima**	**2.42**	**111**	P	**Pn**	**04 05 10.7**	**-1.1**
OHR	**Ohrid**	**2.70**	**6**	*e*Pn	**Pb**	**04 05 19.2**	**-1.4**
PTL	**Penteli**	**2.75**	**97**	P	**Pn**	**04 05 16.6**	**+0.3**
EREA	**Eretria**	**2.77**	**89**	P	**Pn**	**04 05 16.5**	**-0.1**
TIP	**Timpagrande**	**2.94**	**286**	P	**Pn**	**04 05 18.3**	**-0.7**
TIP	**Timpagrande**	**2.94**	**286**	⇓P	**Pn**	**04 05 21.8**	**+2.8**
TIR	**Tirane**	**2.95**	**352**	⇓P	**Pn**	**04 05 21.5**	**+2.5**
GRG	**Griva**	**2.96**	**31**	P	**Pn**	**04 05 19.5**	**+0.3**
CGL1	**Ceglie Messapi**	**3.17**	**315**	*e*Pn	**Pn**	**04 05 23.5**	**+1.4**
VALY	**Valandovo**	**3.34**	**29**	*e*Pn	**Pn**	**04 05 26.1**	**+1.7**
STIP	**Stip**	**3.54**	**22**	*e*Pn	**Pn**	**04 05 30.9**	**+3.7**
MATE	**Matera**	**3.62**	**309**	⇓P	**Pn**	**04 05 30.0**	**+1.8**
SKO	**Skopje**	**3.63**	**12**	*e*Pn	**Pg**	**04 05 39.2**	**-2.6**
ULC	**Ulcinj**	**3.64**	**346**	⇑*i*Pn	**Pn**	**04 05 29.0**	**+0.4**
ULC				*e*Sn	**Sn**	**04 06 11.5**	**-0.1**
SG1	**Sgolgore (BA)**	**3.75**	**311**	*e*Pn	**Pn**	**04 05 31.5**	**+1.4**
SG1				Sn	**Sn**	**04 06 15.4**	**+1.2**
BAI	**Bari**	**3.81**	**316**	*e*Pn	**Pn**	**04 05 32.8**	**+1.9**
BAI				Sn	**Sn**	**04 06 15.3**	**-0.4**
DRME	**Dracevica, Mon**	**3.87**	**346**	⇑*i*Pn	**Pn**	**04 05 32.1**	**+0.4**
DRME				*e*Sn	**Sn**	**04 06 17.2**	**+0.1**
BUM	**Brajici-Budva**	**4.04**	**344**	⇓*i*Pn	**Pn**	**04 05 34.5**	**+0.4**
BUM				*e*Sn	**Sn**	**04 06 21.1**	**-0.3**
PDG	**Podgorica**	**4.10**	**348**	⇑P	**Pn**	**04 05 35.8**	**+1.0**
PDG	**Podgorica**	**4.10**	**348**	*e*Pn	**Pn**	**04 05 35.1**	**+0.3**
TTG	**Podgorica**	**4.10**	**348**	*e*Pn	**Pn**	**04 05 35.2**	**+0.4**
TTG				*e*Sn	**Sn**	**04 06 22.3**	**-0.3**
PVY	**Plav**	**4.18**	**356**	⇑*i*Pn	**Pn**	**04 05 37.2**	**+1.2**
PVY				*e*Sn	**Sn**	**04 06 24.3**	**-0.6**
CEME	**Cevo**	**4.27**	**345**	⇓*i*Pn	**Pn**	**04 05 37.5**	**+0.3**
CEME				*e*Sn	**Sn**	**04 06 26.7**	**-0.4**
HCY	**Herceg Novi**	**4.27**	**341**	*e*Pn	**Pn**	**04 05 36.8**	**-0.4**
HCY	**Herceg Novi**	**4.27**	**341**	⇑*i*Pn	**Pn**	**04 05 37.3**	**+0.1**
HCY				*e*Sn	**Sn**	**04 06 27.1**	**0.0**
APE	**Apeiranthos**	**4.28**	**107**	⇓P	**Pn**	**04 05 41.9**	**+4.5**
IVA	**Berane**	**4.46**	**355**	⇑*i*Pn	**Pn**	**04 05 40.7**	**+0.8**
IVA				*e*Sn	**Sn**	**04 06 31.7**	**-0.1**
KOME	**Kolasin**	**4.47**	**352**	⇓*i*Pn	**Pn**	**04 05 40.7**	**+0.7**
KOME				*e*Sn	**Sn**	**04 06 31.6**	**-0.5**
NKME	**Niksic**	**4.48**	**346**	⇑*i*Pn	**Pn**	**04 05 41.0**	**+0.9**
NKME				*e*Sn	**Sn**	**04 06 31.3**	**-0.8**
NKY	**Niksic**	**4.51**	**347**	⇑*i*Pn	**Pn**	**04 05 41.3**	**+0.7**
NKY				*e*Sn	**Sn**	**04 06 32.5**	**-0.6**
TRB	**Trebinje**	**4.56**	**341**	*e*Pn	**Pn**	**04 05 40.2**	**-0.6**
DBRK	**Dubrovnik**	**4.58**	**339**	*e*Pn	**Pn**	**04 05 41.2**	**-0.1**
DBRK				Sn	**Sn**	**04 06 34.0**	**-0.5**
BRY	**Bratogost**	**4.69**	**343**	*e*Pn	**Pn**	**04 05 43.0**	**-0.1**
BRY	**Bratogost**	**4.69**	**343**	⇑*i*Pn	**Pn**	**04 05 43.3**	**+0.2**
BRY				*e*Sn	**Sn**	**04 06 36.8**	**-0.7**
VTS	**Vitosha**	**4.71**	**26**	⇑P	**Pn**	**04 05 45.4**	**+2.0**
IDI	**Anoyia**	**4.77**	**130**	Pn	**Pn**	**04 05 46.8**	**+2.7**
	comp=E,0.4nm,0.3s,baz=312,slow=14,SNR=4.2						
IDI				Sn	**Sn**	**04 06 43.8**	**+4.4**
	comp=E,2.8nm,0.3s,baz=183,slow=23,SNR=8.2						
STON	**Ston**	**4.89**	**336**	*e*Pn	**Pn**	**04 05 45.7**	**0.0**
STON				Sn	**Sn**	**04 06 41.1**	**-1.2**
STON	**Ston**	**4.89**	**336**	*e*Pn	**Pn**	**04 05 44.8**	**-0.9**
UPM	**Unac-Piva**	**4.91**	**347**	⇓*i*Pn	**Pn**	**04 05 46.6**	**+0.5**
UPM				*e*Sn	**Sn**	**04 06 42.3**	**-0.6**
PLE	**Pljevlja**	**4.96**	**351**	⇓*i*Pn	**Pn**	**04 05 47.8**	**+1.0**
PLE				*e*Sn	**Sn**	**04 06 43.6**	**-0.5**
RUDO	**Rudo**	**5.25**	**352**	*e*Pn	**Pn**	**04 05 50.4**	**-0.2**
BBLS	**Lazići**	**5.49**	**352**	*e*Pn	**Pn**	**04 05 54.4**	**+0.4**
MAKA	**Makarska**	**5.49**	**333**	*e*Pn	**Pn**	**04 05 54.4**	**+0.5**
MAKA				Sn	**Sn**	**04 06 55.7**	**-1.3**
DIVS	**Divibare**	**5.68**	**357**	*e*Pn	**Pn**	**04 05 56.1**	**-0.5**
HAPS	**Han Pijesak,BI**	**5.76**	**350**	*e*Pn	**Pn**	**04 05 57.1**	**-0.7**
ELND	**Elena**	**6.13**	**41**	⇑P	**Pn**	**04 06 03.3**	**+0.7**
KIJV	**Kijevo**	**6.34**	**333**	*e*Pn	**Pn**	**04 06 05.1**	**-0.5**
KIJV				Sn	**Sn**	**04 07 17.8**	**-0.1**
ZIRJ	**Zirje**	**6.34**	**327**	*e*Pn	**Pn**	**04 06 05.5**	**-0.1**
ZIRJ				Sn	**Sn**	**04 07 15.2**	**-2.7**
MGRS	**Mrkonjic Grad**	**6.49**	**338**	*e*Pn	**Pn**	**04 06 07.8**	**+0.2**
MORI	**Morici**	**6.49**	**328**	*i* Pn	**Pn**	**04 06 08.6**	**+0.9**
MORI				Sn	**Sn**	**04 07 19.7**	**-1.8**
FRGS	**Fruska Gora**	**6.74**	**356**	*e*Pn	**Pn**	**04 06 09.0**	**-1.1**
BLY	**Banja Luka**	**6.76**	**340**	⇑P	**Pn**	**04 06 09.0**	**-2.4**
BLY	**Banja Luka**	**6.76**	**340**	*e*Pn	**Pn**	**04 06 12.1**	**+0.7**
UDBI	**Udbina**	**7.02**	**332**	*e*Pn	**Pn**	**04 06 16.5**	**+1.5**
GZR	**Gura Zlata**	**7.18**	**14**	⇓P	**Pn**	**04 06 18.8**	**+1.5**
BZS	**Buzias**	**7.24**	**7**	⇓P	**Pn**	**04 06 22.2**	**+4.2**
NVLJ	**Novalja**	**7.40**	**328**	*e*Pn	**Pn**	**04 06 20.9**	**+0.7**
VOIR		**7.81**	**25**	⇑P	**Pn**	**04 06 30.5**	**+4.6**
MORH	**Mrgy, Hungar**	**7.89**	**351**	*e*Pn	**Pn**	**04 06 28.5**	**+1.6**
BOJS	**Bojanci**	**8.04**	**333**	*e*Pn	**Pn**	**04 06 29.9**	**+0.9**
MLR	**Muntele Rosu**	**8.18**	**29**	⇓P	Pn	**04 06 36.1**	**+5.2**
GBRS	**Gornja Briga**	**8.23**	**331**	*i* Pn	**Pn**	**04 06 32.6**	**+1.0**
CRES	**Cresnjev**	**8.26**	**335**	*e*Pn	**Pn**	**04 06 31.7**	**-0.2**
CEY	**Cerknica**	**8.55**	**331**	*e*Pn	**Pn**	**04 06 35.9**	**-0.1**
PLOR	**Plostina**	**8.75**	**30**	⇓P	Pn	**04 06 45.5**	**+6.8**
LJU	**Ljubljana**	**8.77**	**332**	*e*Pn	**Pn**	**04 06 39.2**	**+0.3**
VRI	**Vrincioaia**	**8.79**	**30**	⇓P	Pn	**04 06 45.3**	**+6.0**
SOKA	**Soboth**	**9.15**	**336**	*i* Pn	**Pn**	**04 06 43.9**	**-0.3**
	comp=E,4.6nm,0.5s,SNR=7.8						
SOKA				Sn	**Sn**	**04 08 22.7**	**-4.4**
	comp=E,2.7nm,0.6s						
OBKA	**Obir**	**9.16**	**334**	*e*Pn	**Pn**	**04 06 45.5**	**+1.2**
	comp=E,3.6nm,0.5s						
OBKA				Sn	**Sn**	**04 08 25.6**	**-1.8**
	comp=E,7.5nm,0.6s						
VYHS	**Vyhne**	**10.13**	**354**	*e*SN	**Sn**	**04 08 48.5**	**-2.6**
ABTA	**Abfaltersbach**	**10.14**	**328**	*e*Pn	**Pn**	**04 06 57.4**	**-0.4**
	comp=E,1.6nm,0.6s						
ABTA				*e*Sn	**Sn**	**04 08 50.6**	**-1.0**
	comp=E,3.8nm,0.6s						
BRTR	**Keskin Array B**	**10.38**	**79**	Pn	Pn	04 07 06.3	+5.2
	comp=E,0.1nm,0.3s,baz=259,slow=11,SNR=4.7						
MOA	**Molln**	**10.43**	**337**	*e*Pn	**Pn**	**04 07 01.5**	**-0.1**
	comp=E,3.0nm,0.5s,SNR=4.4						
SQTA	**Sankt Quirin**	**11.08**	**325**	*e*Pn	**Pn**	**04 07 12.3**	**+1.7**
	comp=E,1.7nm,0.3s						
SQTA				*e*Sn	**Sn**	**04 09 13.4**	**-1.1**
	comp=E,2.4nm,0.3s						
MOTA	**Moosalm**	**11.22**	**326**	*e*Pn	**Pn**	**04 07 14.3**	**+1.7**
MOTA				*e*Sn	**Sn**	**04 09 17.8**	**-0.2**
	comp=E,6.5nm,0.7s						
GERES	**GERESS Array B**	**11.49**	**337**	Pn	**Pn**	**04 07 14.7**	**-1.5**
	comp=E,0.2nm,0.3s,baz=155,slow=14,SNR=7.7						
GERES				Sn	**Sn**	**04 09 19.8**	**-4.6**
	comp=E,0.2nm,0.3s,baz=149,slow=22,SNR=2.5						
KHC	**Kasperske Hory**	**11.78**	**338**	*e*PN	**Pn**	**04 07 20.5**	**+0.4**
HFS	**Hagfors**	**22.14**	**351**	P	**P**	**04 09 28.4**	**+0.7**
	comp=E,3.0nm,0.6s,baz=157,slow=9.6,SNR=11						
EKA	**Eskdalemuir Ar**	**23.17**	**325**	P	**P**	**04 09 40.0**	**+1.4**
	comp=E,1.6nm,0.6s,baz=123,slow=9.4,SNR=5.4						
FINES	**FINESS Array B**	**23.31**	**7**	P	**P**	**04 09 40.5**	**+0.5**
	comp=E,1.9nm,0.6s,baz=173,slow=11,SNR=10.0						
NOA	**NORSAR Array B**	**23.36**	**349**	P	**P**	**04 09 41.8**	**+1.3**
	comp=E,0.9nm,0.8s,baz=162,slow=10,SNR=3.6						
TORD	**Torodi Ar. Bea**	**30.16**	**218**	P	**P**	**04 10 43.3**	**+0.9**
	comp=E,0.8nm,0.8s,baz=26,slow=8.1,SNR=4.6						
MKAR	**Makanchi Array**	**45.25**	**59**	P	**P**	**04 12 48.8**	**-0.8**
	comp=E,0.7nm,0.5s,baz=282,slow=6.3,SNR=11						
ZALV	**Zalesovo Beam**	**45.60**	**48**	P	**P**	**04 12 51.9**	**-0.2**
	comp=E,2.3nm,0.5s,baz=276,slow=8.5,SNR=11						

*IDC **28** 04:39:11.7±1.6,8°.07S×109°.02E,h0km,mb3.8/6,*
mb1 4.0/7,mb1mx3.8/31,mbtmp3.8/7,ML3.8/1,MS2.6/1,
Ms1 2.6/1,ms1mx2.3/35,Error ellipse: s-maj=85.3km
s-min=18.3km az=50.0
*DJA **28** 04:39:19.8±1.2,8°.5S±9°×10°9E±°,h24km±10km,M4.2/10,*
MLv4.2/10
*NEIC **28** 04:39:21.7±1.7,8°.1S±0°.2×109°.20E±0°.04,h86km±9km,*
mb4.0/8,Error ellipse: s-maj=25.0km s-min=4.0km
az=189.0

ISC 28 04:39:21.0±0.9,8°.25S±0°.10×109°.20E±0°.04,h74km±10km,
n34,σ1s06/39,mb3.7/8,Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	**Cimerak**	**0.87**	**302**	P	**Pn**	**04 39 38.2**	**0.0**
CMJI				S	**Sn**	**04 39 50.4**	**-0.6**
KPJI	**Karang Pucung**	**0.95**	**344**	P	**Pn**	**04 39 40.5**	**+1.4**
UGM	**Wanagama**	**1.36**	**76**	P	**Pn**	**04 39 43.9**	**-0.4**
UGM				S	**Sn**	**04 40 00.9**	**-0.9**
UGM	**Wanagama**	**1.36**	**76**		**Pn**	**04 39 44.3**	**0.0**
UGM				Sn	**Sn**	**04 40 00.6**	**-1.2**
CISI	**Cisompet, Garu**	**1.53**	**297**	P	**Pn**	**04 39 47.0**	**+0.4**
CISI				S	**Sn**	**04 40 06.1**	**+0.2**
CISI	**Cisompet, Garu**	**1.53**	**297**		**Pn**	**04 39 47.1**	**+0.5**
CISI				Sn	**Sn**	**04 40 05.0**	**-1.0**
SMRI	**Semarang**	**1.72**	**46**	P	**Pn**	**04 39 50.8**	**+1.7**
SMRI	**Semarang**	**1.72**	**46**		**Pn**	**04 39 50.3**	**+1.2**
WOJI	**Wonogiri, Jawa**	**1.76**	**77**	P	**Pn**	**04 39 48.7**	**-0.9**
PCJI	**Pacitan**	**1.96**	**88**	P	**Pn**	**04 39 52.2**	**-0.1**
PCJI				S	**Sn**	**04 40 15.4**	**-0.7**
CNJI	**Cibinong**	**2.25**	**294**	P	**Pn**	**04 39 56.8**	**+0.6**
NGJI	**Ngawi**	**2.41**	**69**	P	**Pn**	**04 39 59.4**	**+1.1**
UWJI	**Ujung Watu**	**2.52**	**44**	P	**Pn**	**04 40 00.8**	**+1.0**
PWJI	**Pagerwojo**	**2.59**	**85**	P	**Pn**	**04 40 00.5**	**-0.3**
GRJI	**Gresik**	**3.52**	**68**	P	**Pn**	**04 40 14.5**	**+1.1**
JAGI	**Jajag, Banyuwa

MKAR	**Makanchi Array**	**59.73**	**339**	P	**P**	**04 58 04.7**	**-1.5**
ABKAR	**Akbulak array**	**71.53**	**328**	P	**P**	**04 59 20.5**	**-1.4**
CSS	**Mathiatis**	**83.21**	**307**	P	**P**	**05 00 25.4**	**-2.1**
BRTR	**Keskin Array B**	**84.21**	**311**	P	**P**	**05 00 33.6**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=126,slow=6.9,SNR=3.8						
BRTR	**Keskin Array B**	**84.21**	**311**	P	**P**	**05 00 31.9**	**-0.8**

RSNC 28 05:12:15.4±1.1, 9.70N×74.76W, h25km±3km, ML3.5, Mw3.6, 5C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SJCC	**San Jacinto, C**	**0.46**	**295**	⇑*i*P	Pb	05 12 23.8	-1.1
SJCC				*e*S	Sb	05 12 31.6	+0.1
SJCC				*i*		05 12 33.2	
	comp=Z,3μm,0.2s						
ARGC	**Ariguani, Magd**	**0.53**	**73**	⇑*i*P	Pb	05 12 25.8	-0.4
ARGC				*e*S	Sb	05 12 33.4	0.0
ARGC				*i*		05 12 37.0	
	comp=Z,2μm,0.3s						
SMLC	**San Martn de**	**1.12**	**143**	*e*P	Pn	05 12 33.8	-1.8
SMLC				*e*S	Sn	05 12 49.0	-1.3
SMLC				*i*		05 12 51.6	
	comp=Z,775nm,0.6s						
CODC	**Agustn Codazz**	**1.32**	**80**	⇑*i*P	Pn	05 12 37.1	-1.1
CODC				*e*S	Sn	05 12 54.3	-0.7
CODC				*i*		05 12 57.9	
	comp=Z,452nm,0.4s						
CCODA	**Codazzi, Cesar**	**1.32**	**80**	⇑*i*P	Pn	05 12 37.0	-1.3
CCODA				*e*S	Sn	05 12 54.1	-1.0
CCODA				*i*		05 12 57.9	
	comp=Z,736nm,0.4s						
SMRC	**Santa Marta, M**	**1.55**	**20**	*e*P	Pn	05 12 40.1	-1.3
SMRC				*e*S	Sn	05 13 00.3	-0.4
SMRC				*i*		05 13 02.5	
	comp=Z,312nm,0.2s						
SMRC	**Santa Marta, M**	**1.55**	**20**	*e*P	Pn	05 12 40.0	-1.4
SMRC				*e*S	Sn	05 13 00.4	-0.3
SMRC				*i*		05 13 06.7	
	comp=Z,314nm,0.6s						
OCAC	**Ocana**	**2.03**	**135**	⇑*i*P	Pn	05 12 47.5	-0.7
OCAC				*e*S	Sn	05 13 12.5	-0.4
OCAC				*i*		05 13 16.3	
	comp=Z,534nm,0.5s						
ZARC	**Zaragoza, Cauc**	**2.20**	**183**	*e*P	Pn	05 12 49.3	-1.1
ZARC				*e*S	Sn	05 13 15.7	-1.1
ZARC				*i*		05 13 22.7	
	comp=Z,237nm,0.7s						
DBBC	**Dabeiba**	**3.03**	**208**	*e*P	Pn	05 13 03.1	+1.2
DBBC				*i*		05 14 15.1	
	comp=Z,82nm,0.6s						
PAMC	**Pamplona, Colo**	**3.11**	**139**	*e*P	Pn	05 13 03.3	-0.1
PAMC				*e*S	Sn	05 13 41.4	+1.5
PAMC				*i*		05 13 53.0	
	comp=Z,306nm,0.9s						
PTBC	**PUERTO BERRIO,**	**3.16**	**175**	*e*P	Pn	05 13 03.1	-0.5
PTBC				*e*S	Sn	05 13 38.8	-1.6
PTBC				*i*		05 13 50.8	
	comp=Z,134nm,0.6s						
URIC	**Uribia, Colomb**	**3.37**	**54**	*e*P	Pn	05 13 04.9	-1.6
URIC				*e*S	Sn	05 13 44.4	-1.4
URIC				*i*		05 13 57.1	
	comp=Z,210nm,0.6s						
BARC	**Barichara**	**3.46**	**153**	*e*P	Pn	05 13 07.6	-0.4
BARC				*e*S	Sn	05 13 49.2	+0.8
BARC				*i*		05 14 05.9	
	comp=Z,581nm,0.9s						
HELC	**Santa Helena**	**3.57**	**192**	*e*P	Pn	05 13 08.8	-0.8
HELC				*e*S	Sn	05 13 48.7	-2.5
HELC				*i*		05 14 15.2	
	comp=Z,80nm,0.8s						
CBOC	**Ciudad Bolivar**	**4.01**	**198**	*e*P	Pn	05 13 15.9	+0.5
CBOC				*i*		05 14 31.7	
	comp=Z,40nm,1.4s						
SPBC	**San Pablo de B**	**4.08**	**170**	*e*P	Pn	05 13 15.1	-1.2
SPBC				*i*		05 14 25.6	
	comp=Z,46nm,0.6s						
SOCV	**Socops**	**4.11**	**110**	*e*P	Pn	05 13 16.7	0.0
SOCV				*e*S	Sn	05 14 00.6	-3.4
NORC	**Norcasia**	**4.11**	**182**	*e*P	Pn	05 13 16.5	-0.2
NORC				*i*		05 14 20.3	
	comp=Z,40nm,0.9s						
RUSC	**La Rusia**	**4.13**	**156**	*e*P	Pn	05 13 17.6	+0.2
RUSC				*e*S	Sn	05 14 05.0	-0.2
RUSC				*i*		05 14 27.0	
	comp=Z,103nm,1.1s						
DABV	**Dabajuro**	**4.24**	**73**	*e*P	Pn	05 13 18.3	-0.1
DABV				*e*S	Sn	05 14 05.5	-1.6
TAMC	**Tame, Arauca**	**4.38**	**138**	*e*P	Pn	05 13 20.4	0.0
TAMC				*e*S	Sn	05 14 09.2	-1.5
TAMC				*i*		05 14 41.8	
	comp=Z,74nm,2.4s						
GUY2C	**Guyana, Caldas**	**4.49**	**188**	*e*P	Pn	05 13 21.8	-0.5
GUY2C				*i*		05 14 41.3	
	comp=Z,67nm,0.8s						
RREF	**El Recreo**	**4.80**	**187**	*e*P	Pn	05 13 27.0	+0.2
RREF				*i*		05 14 54.6	
	comp=Z,59nm,0.8s						
CHIC	**Chingaza**	**5.14**	**168**	*e*P	Pn	05 13 32.9	+1.6
CHIC				*e*S	Sn	05 14 28.6	-1.4
CHIC				*i*		05 15 01.6	
	comp=Z,24nm,0.8s						
ELOV	**Elorza**	**5.87**	**117**	*e*P	Pn	05 13 39.9	-1.0

BGR ***28*** *05:12:49.4±0.8, 38.06N×21.15E, h10km, Error ellipse: s-maj=30.0km s-min=8.9km az=57.0*

MOS ***28*** *05:12:52.6±1.2, 38.25N×20.37E, h13km, mb4.8/31, Error ellipse: s-maj=5.5km s-min=3.3km az=76.0*

IDC ***28*** *05:12:52.5±0.5, 38.30N×20.48E, h0km, mb4.5/27, mb1 4.5/36, mb1mx4.4/52, mbtmp4.4/36, ML4.1/8, MS3.4/12, Ms1 3.4/12, ms1mx3.2/56, Error ellipse: s-maj=12.4km s-min=10.7km az=174.0*

ATH ***28*** *05:12:53.9, 38.21N×20.38E, h13km±1km, ML4.3/33, Error ellipse: s-maj=2.5km s-min=1.2km az=70.0*

PDG ***28*** *05:12:53.4±0.3, 38.32N×20.29E, h9km±1km, MD4.7/1, ML4.5/12, Error ellipse: s-maj=2.0km s-min=0.8km az=90.0*

MED_RC ***28*** *05:12:54.0±0.5, 38.24N×20.40E, h10km, MW4.3/8, Moment Tensor Solution. Mantle waves: s8,c10; Duration: 1s0 Moment tensor: Scale 10^15 Nm; Mrr 1.43±.25; Mθθ 0.40±.25; Mφφ -1.03±.22; Mrθ 1.64±.77; Mrφ 2.43±.15; Mθφ 0.68±.79; Best double couple: Mo 3.27000×10^15 NP1: φs 355.00000°, δ 55.00000°, λ 152.00000°. NP2: φs 102.00000°, δ 68.00000°, λ 39.00000°. Principal axes: T 3.2900, Plg 43.0000°, Azm 323.0000°; N -0.0500, Plg 46.0000°, Azm 128.0000°; P -3.2400, Plg 8.0000°, Azm 226.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*

SKO ***28*** *05:12:54.0, 38.24N×20.37E, h0km*

THE ***28*** *05:12:54.5, 38.25N×20.40E, h10km±1km, ML4.5/11, Error ellipse: s-maj=1.6km s-min=0.5km az=229.0*

NEIC ***28*** *05:12:54.5±2.7, 38.22N±0.05×20.38E±0.05, h10km±1km, mb4.7/54, ML4.5(THE), Error ellipse: s-maj=8.1km s-min=6.3km az=343.0*

HLW ***28*** *05:13:07.1, 37.29N×21.42E, h10km±9km, Md4.6, Ml4.8*

ISC 28 05:12:54.6±0.7, 38.24N±0.02×20.42E±0.02, h15km±4km, n671, σ1§68/766, mb4.6/72, MS3.6/11, 42C-11D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.08**	**141**	P	**Pg**	**05 12 57.4**	**-0.2**
ARG2				S	**Sg**	**05 12 59.3**	**-0.3**
VLS	**Valsamata**	**0.15**	**116**	P	**Pg**	**05 12 58.1**	**-0.4**
VLS				S	**Sg**	**05 13 00.5**	**-0.5**
	769μm,0.7s						
VLS	**Valsamata**	**0.15**	**116**	P	**Pg**	**05 12 58.1**	**-0.4**
VLS				S	**Sg**	**05 13 00.5**	**-0.5**
VLS	**Valsamata**	**0.15**	**116**	P	**Pg**	**05 12 58.0**	**-0.4**
VLS	**Valsamata**	**0.15**	**116**	P	**Pg**	**05 12 58.0**	**-0.4**
VLS	**Valsamata**	**0.15**	**116**	P	**Pg**	**05 12 58.0**	**-0.4**
VLS				AML	AML		
VLS				AML	AML		
VLS				AML	AML		
VLS				AML	AML		
VLS				AML	AML		
KFL	**Anninata**	**0.32**	**115**	P	**Pg**	**05 13 00.8**	**-0.4**
KFL				S	**Sg**	**05 13 05.4**	**-0.3**
	287μm,0.4s						
KFL	**Anninata**	**0.32**	**115**	P	**Pg**	**05 13 00.8**	**-0.4**
VLMS	**Volimes, Zakyn**	**0.41**	**152**	P	**Pg**	**05 13 02.4**	**-0.4**
VLMS				AML	AML	05 13 09.3	
VLMS				AML	AML	05 13 10.3	
EVGI	**Lefkada island**	**0.42**	**26**	P	**Pg**	**05 13 03.1**	**0.0**
EVGI	**Lefkada island**	**0.42**	**26**	P	**Pg**	**05 13 03.1**	**0.0**
MGNA	**Meganis**	**0.51**	**35**	P	**Pg**	**05 13 04.4**	**-0.2**
MGNA				AML	AML	05 13 17.2	
	comp=E,59346μm,0.4s						
MGNA				AML	AML	05 13 17.6	
	comp=N,35204μm,0.5s						
LKD2	**Lefkada island**	**0.58**	**19**	P	**Pg**	**05 13 05.6**	**-0.3**
LKD2				S	**Sg**	**05 13 13.0**	**-0.6**
	comp=N,28μm,0.5s						
LKD2	**Lefkada island**	**0.58**	**19**	P	**Pg**	**05 13 05.6**	**-0.3**
LKD2				AML	AML	05 13 21.7	
	comp=E,57519μm,0.6s						
LKD2				AML	AML	05 13 22.9	
	comp=N,55050μm,0.3s						
ZAK2	**Zakynthos**	**0.59**	**140**	P	**Pg**	**05 13 05.6**	**-0.6**
ZAK2				S	**Sb**	**05 13 15.8**	**+1.0**
	comp=N,174μm,0.4s						
TSLK	**Tsoukalades, L**	**0.61**	**17**	P	**Pg**	**05 13 06.3**	**-0.3**
TSLK				S	**Sg**	**05 13 14.7**	**0.0**
	comp=N,37μm,0.4s						
TSLK	**Tsoukalades, L**	**0.61**	**17**	P	**Pg**	**05 13 06.6**	**0.0**
TSLK				S	**Sb**	**05 13 15.8**	**+0.4**
TSLK				AML	AML	05 13 22.7	
	comp=E,82211μm,0.3s						
TSLK				AML	AML	05 13 25.2	
	comp=N,65186μm,0.4s						
PDO	**Prodromos**	**0.70**	**59**	P	**Pg**	**05 13 07.6**	**-0.6**
PDO				S	**Sb**	**05 13 18.9**	**+1.0**
	comp=N,64μm,0.5s						
PDO	**Prodromos**	**0.70**	**59**	P	**Pg**	**05 13 07.6**	**-0.6**
PDO				S	**Sb**	**05 13 18.9**	**+1.0**
PDO				AML	AML	05 13 26.2	
	comp=N,94090μm,0.4s						
PDO				AML	AML	05 13 28.7	
	comp=E,84561μm,0.7s						
RLS	**Riolos of Patr**	**0.84**	**102**	P	**Pb**	**05 13 10.0**	**-1.0**
RLS	**Riolos of Patr**	**0.84**	**102**	P	**Pb**	**05 13 10.1**	**-0.8**
RLS				S	**Sg**	**05 13 22.7**	**+0.7**
RLS				AML	AML	05 13 29.3	
	comp=E,19542μm,0.5s						
RLS				AML	AML	05 13 33.9	
	comp=N,20968μm,0.5s						
PVO	**Paravola**	**0.94**	**66**	P	**Pb**	**05 13 12.5**	**-0.2**
PVO				S	**Sn**	**05 13 27.0**	**+0.4**
	comp=N,41μm,0.5s						
PVO	**Paravola**	**0.94**	**66**	P	**Pb**	**05 13 12.5**	**-0.2**
PVO				AML	AML	05 13 28.3	
	comp=E,74942μm,0.4s						
PVO				AML	AML	05 13 32.5	
	comp=N,86989μm,0.6s						
DRO	**Drossia**	**1.06**	**105**	P	**Pb**	**05 13 13.9**	**-0.7**
DRO				S	**Sn**	**05 13 30.5**	**+1.1**
	comp=N,19μm,0.3s						
DRO	**Drossia**	**1.06**	**105**	P	**Pb**	**05 13 14.5**	**-0.1**
DRO				AML	AML	05 13 37.3	
	comp=N,44038μm,0.4s						
DRO				AML	AML	05 13 45.8	
	comp=E,32600μm,0.4s						
UPR	**University Cam**	**1.07**	**87**	P	**Pg**	**05 13 16.1**	**+0.8**
EFP	**Efpalio**	**1.18**	**81**	P	**Pn**	**05 13 16.2**	**-0.4**
EFP	**Efpalio**	**1.18**	**81**	P	**Pn**	**05 13 16.4**	**-0.2**
EFP				AML	AML	05 13 38.9	
	comp=N,25322μm,0.6s						
EFP				AML	AML	05 13 40.6	
	comp=E,30781μm,0.8s						
LAKA	**Lakka**	**1.23**	**90**	P	**Pn**	**05 13 16.4**	**-0.9**
LAKA				S	**Sg**	**05 13 35.4**	**+1.2**
	comp=E,7μm,0.6s						
LAKA	**Lakka**	**1.23**	**90**	P	**Pn**	**05 13 16.4**	**-0.9**
LAKA				S	**Sg**	**05 13 35.5**	**+1.2**
LAKA				AML	AML	05 13 41.9	
	comp=E,14375μm,0.8s						
LAKA				AML	AML	05 13 43.4	
	comp=N,14554μm,0.5s						
ANX	**Ano Chora**	**1.23**	**73**	P	**Pb**	**05 13 17.5**	**-0.1**
ANX	**Ano Chora**	**1.23**	**73**	P	**Pg**	**05 13 18.3**	**+0.1**
ANX				AML	AML	05 13 41.0	
	comp=N,49390μm,0.6s						
ANX				AML	AML	05 13 46.3	
	comp=E,36653μm,0.6s						
AMT	**Artemida-Makis**	**1.24**	**124**	P	**Pg**	**05 13 18.1**	**-0.3**
AMT				AML	AML	05 13 51.1	
	comp=E,32291μm,0.7s						
AMT				AML	AML	05 13 55.8	
	comp=N,32342μm,0.7s						
EVR	**Evrytania**	**1.28**	**58**	P	**Pb**	**05 13 18.4**	**0.0**
EVR				S	**Sg**	**05 13 36.8**	**+0.9**
EVR				AML	AML	05 13 47.6	
	comp=E,15400μm,0.7s						
EVR				AML	AML	05 13 48.3	
	comp=N,18346μm,0.8s						
SERG	**Sergoula**	**1.30**	**82**	P	**Pn**	**05 13 18.1**	**-0.1**
SERG				S	**Sg**	**05 13 37.2**	**+0.7**
	comp=N,11μm,0.8s						
SERG	**Sergoula**	**1.30**	**82**	P	**Pg**	**05 13 19.2**	**-0.3**
SERG				AML	AML	05 13 42.2	
	comp=Z,13161μm,0.5s						
SERG				AML	AML	05 13 42.5	
	comp=E,23256μm,0.7s						
TRIZ	**Trizonia**	**1.30**	**84**	P	**Pn**	**05 13 17.8**	**-0.4**
ALIK	**Aliki, Aigiali**	**1.33**	**89**	P	**Pn**	**05 13 18.4**	**-0.2**
KALE	**Kalithea**	**1.36**	**83**	P	**Pn**	**05 13 18.8**	**-0.3**
KALE	**Kalithea**	**1.36**	**83**	P	**Pn**	**05 13 18.9**	**-0.3**
KALE				AML	AML	05 13 50.5	
	comp=E,9019μm,0.6s						
KALE				AML	AML	05 13 51.1	
	comp=N,17132μm,0.6s						
KLV	**Kalavryta, Ach**	**1.38**	**98**	P	**Pb**	**05 13 19.8**	**-0.3**
KLV				S	**Sg**	**05 13 38.3**	**-0.7**
	comp=N,3μm,0.7s						
KLV	**Kalavryta, Ach**	**1.38**	**98**	P	**Pb**	**05 13 19.9**	**-0.3**
KLV				S	**Sg**	**05 13 39.6**	**+0.5**
KLV				AML	AML	05 13 53.8	
	comp=E,6778μm,0.8s						
KLV				AML	AML	05 13 57.6	
	comp=N,8112μm,0.6s						
KLV	**Kalavryta, Ach**	**1.38**	**98**	P	**Pb**	**05 13 19.8**	**-0.3**
JAN	**Janina**	**1.45**	**13**	P	**Pb**	**05 13 21.9**	**+0.5**
JAN				S	**Sg**	**05 13 41.4**	**0.0**
JAN				AML	AML	05 13 48.1	
	comp=N,18735μm,0.4s						
JAN				AML	AML	05 13 48.2	
	comp=E,31007μm,0.4s						
MAKR	**Makrakomi, Fth**	**1.54**	**60**	P	**Pg**	**05 13 25.1**	**+0.9**
ITM	**Ithomi**	**1.60**	**131**	P	**Pb**	**05 13 23.1**	**-0.7**
ITM	**Ithomi**	**1.60**	**131**	P	**Pb**	**05 13 23.9**	**+0.1**
ITM				AML	AML	05 13 58.2	
	comp=E,9504μm,0.6s						
ITM				AML	AML	05 14 12.3	
	comp=N,7589μm,0.8s						
ITM	**Ithomi**	**1.60**	**131**		**Pb**	**05 13 23.3**	**-0.5**
AGG	**Agios Georgios**	**1.69**	**62**	P	**Pg**	**05 13 26.5**	**-0.5**
AGG				S	**Sg**	**05 13 48.0**	**-0.9**
AGG	**Agios Georgios**	**1.69**	**62**	P	**Pg**	**05 13 26.4**	**-0.5**
AGG				AML	AML	05 13 58.8	
	comp=N,13665μm,0.7s						
AGG				AML	AML	05 13 59.6	
	comp=E,16028μm,0.8s						
AGG	**Agios Georgios**	**1.69**	**62**	Pn	**Pg**	**05 13 26.4**	**-0.5**
AGG				Sn	**Sg**	**05 13 48.0**	**-0.9**
PYL	**PYLOS**	**1.71**	**142**	P	**Pn**	**05 13 24.2**	**+0.4**
PYL				AML	AML	05 13 59.0	
	comp=N,4787μm,0.6s						
PYL				AML	AML	05 14 03.3	
	comp=E,5413μm,0.8s						
VLX	**Vlachokerasia**	**1.78**	**119**	P	**Pb**	**05 13 27.4**	**+0.4**
VLX				AML	AML	05 14 03.6	
	comp=E,9164μm,0.5s						
VLX				AML	AML	05 14 21.5	
	comp=N,11415μm,0.8s						
THL	**Klokotos Trika**	**1.81**	**43**	P	**Pb**	**05 13 28.1**	**+0.6**
THL				AML	AML	05 13 58.2	
	comp=E,11220μm,0.5s						
THL				AML	AML	05 13 58.6	
	comp=N,12018μm,0.6s						
AXAR	**Agios Charalam**	**1.83**	**73**	P	**Pg**	**05 13 29.2**	**-0.6**
AXAR				AML	AML	05 14 10.4	
	comp=N,24684μm,0.7s						
AXAR				AML	AML	05 14 13.2	
	comp=E,22484μm,1.1s						
KPRO	**Kipourio**	**1.86**	**23**	P	**Pb**	**05 13 29.0**	**+0.6**
KPRO				AML	AML	05 14 05.8	
	comp=E,15530μm,1.0s						
KPRO				AML	AML	05 14 08.2	
	comp=N,19649μm,1.4s						
PROD	**Prodromos**	**1.95**	**89**	P	**Pb**	**05 13 29.3**	**-0.6**
PROD				AML	AML	05 14 05.1	
	comp=E,7490μm,0.8s						
PROD				AML	AML	05 14 08.5	
	comp=N,8638μm,0.6s						
LTK	**Loutraki**	**2.02**	**95**	P	**Pb**	**05 13 30.1**	**-1.0**
LTK				AML	AML	05 14 06.4	
	comp=E,5018μm,0.5s						
LTK				AML	AML	05 14 13.8	
	comp=N,4431μm,0.6s						
LOUT	**Loutraki**	**2.03**	**96**	P	**Pb**	**05 13 29.9**	**-1.3**
PENT	**Pentalofos**	**2.03**	**16**	P	**Pb**	**05 13 31.4**	**+0.1**
PENT				AML	AML	05 14 11.1	
	comp=E,4134μm,0.6s						
PENT				AML	AML	05 14 13.5	
	comp=N,10895μm,0.6s						
LKR	**Lokris**	**2.06**	**78**	P	**Pb**	**05 13 31.0**	**-0.8**
LKR				AML	AML	05 14 09.9	
	comp=E,3275μm,0.8s						
LKR				AML	AML	05 14 12.6	
	comp=N,4873μm,0.5s						
NEST	**Nestorio**	**2.22**	**12**	P	**Pb**	**05 13 34.2**	**-0.3**
VIL2	**Platees**	**2.24**	**90**	P	**Pb**	**05 13 33.9**	**-0.9**
KZN	**Kozani**	**2.31**	**27**	P	**Pb**	**05 13 35.2**	**-0.8**
KZN				S	**Sb**	**05 14 04.8**	**+0.3**
KZN				AML	AML	05 14 16.3	
	comp=E,7003μm,0.6s						
KZN				AML	AML	05 14 16.7	
	comp=N,5163μm,0.7s						
DID	**Didima**	**2.35**	**107**	P	**Pb**	**05 13 35.3**	**-1.3**
DID				AML	AML	05 14 20.5	
	comp=N,6338μm,0.7s						
DID				AML	AML	05 14 28.8	
	comp=E,6609μm,0.7s						
SCTE	**Santa Cesarea**	**2.38**	**321**	P	**Pn**	**05 13 34.0**	**+1.0**
SCTE				S	**Sn**	**05 14 01.9**	**-0.1**
SCTE				AML	AML		
	comp=E,3195μm,0.3s						
SCTE				AML	AML		
	comp=N,3825μm,1.1s						
SCTE	**Santa Cesarea**	**2.38**	**321**	P	**Pn**	**05 13 34.0**	**+1.0**
SCTE	**Santa Cesarea**	**2.38**	**321**		**Pn**	**05 13 34.0**	**+1.0**
SCTE				Sn	**Sn**	**05 14 03.4**	**+1.5**
NEO	**Neokhori**	**2.43**	**63**	P	**Pn**	**05 13 35.8**	**+1.9**
NEO				AML	AML	05 14 15.6	
	comp=N,4893μm,0.5s						
NEO				AML	AML	05 14 22.1	
	comp=E,3394μm,0.7s						
XOR	**Xorichti**	**2.44**	**62**	P	**Pb**	**05 13 36.3**	**-1.8**
LIT	**Litokhoron**	**2.46**	**40**	P	**Pb**	**05 13 36.9**	**-1.6**
LIT	**Litokhoron**	**2.46**	**40**	P	**Pb**	**05 13 38.0**	**-0.5**
LIT	**Litokhoron**	**2.46**	**40**		**Pb**	**05 13 36.9**	**-1.6**
VLI	**Veliai**	**2.51**	**126**	P	**Pb**	**05 13 38.6**	**-0.8**
MRKA	**Markates**	**2.53**	**78**	P	**Pn**	**05 13 36.9**	**+1.8**
MRKA				AML	AML	05 14 26.7	
	comp=N,2966μm,0.7s						
MRKA				AML	AML	05 14 32.3	
	comp=E,2288μm,0.7s						
SKIA	**Skiathos**	**2.55**	**68**	P	**Pn**	**05 13 37.4**	**+1.9**
ATH	**Athens Observa**	**2.61**	**95**	P	**Pn**	**05 13 37.8**	**+1.5**
FNA	**Florina**	**2.64**	**16**	P	**Pn**	**05 13 39.2**	**+2.4**
FNA	**Florina**	**2.64**	**16**	P	**Pn**	**05 13 38.8**	**+2.1**
FNA	**Florina**	**2.64**	**16**		**Pn**	**05 13 39.2**	**+2.4**
ATHU	**Athens Univers**	**2.67**	**95**	P	**Pn**	**05 13 38.9**	**+1.8**
VLY	**Voula,Athens**	**2.69**	**97**	P	**Pn**	**05 13 39.2**	**+1.9**
PTL	**Penteli**	**2.72**	**93**	P	**Pn**	**05 13 39.6**	**+1.7**
PTL				AML	AML	05 14 14.6	
	comp=N,2560μm,1.2s						
PTL				AML	AML	05 14 33.9	
	comp=E,2925μm,0.8s						
EREA	**Eretria**	**2.77**	**85**	P	**Pn**	**05 13 40.2**	**+1.8**
AOS	**Alonnisos**	**2.86**	**70**	P	**Pn**	**05 13 41.3**	**+1.6**
OHR	**Ohrid**	**2.88**	**6**	*e*Pn	**Pn**	**05 13 42.6**	**+2.6**
OHR				eLg	Lg	05 14 38.4	
	comp=E,1μm,0.6s						
OHR				eLg	Lg	05 14 42.0	
	comp=N,1μm,1.2s						
KTHA	**Kythira Island**	**2.89**	**132**	P	**Pn**	**05 13 42.7**	**+2.6**
TIP	**Timpagrande**	**3.01**	**289**	P	**Pn**	**05 13 42.7**	**+0.8**
TIP	**Timpagrande**	**3.01**	**289**	⇑P	**Pn**	**05 13 42.7**	**+0.8**
TIP	**Timpagrande**	**3.01**	**289**	P	**Pn**	**05 13 42.8**	**+0.9**
TIP				S	**Sn**	**05 14 17.0**	**-0.8**
TIP				AML	AML		
	comp=E,415μm,0.7s						
TIP				AML	AML		
	comp=E,493μm,0.7s						
TIP				AML	AML		
	comp=N,559μm,0.6s						
TIP				AML	AML		
	comp=N,450μm,0.6s						
TIP	**Timpagrande**	**3.01**	**289**	P	**Pn**	**05 13 42.8**	**+0.9**
TIP	**Timpagrande**	**3.01**	**289**		**Pn**	**05 13 42.7**	**+0.8**
TIP				Sn	**Sn**	**05 14 18.9**	**+1.1**
SERS	**Sersale**	**3.03**	**286**	P	**Pn**	**05 13 42.9**	**+0.8**
SERS	**Sersale**	**3.03**	**286**	P	**Pn**	**05 13 42.9**	**+0.8**
SERS				S	**Sn**	**05 14 17.2**	**-1.0**
SERS				AML	AML		
	comp=E,918μm,0.7s						
SERS				AML	AML		
	comp=E,1124μm,0.7s						
SERS				AML	AML		
	comp=N,775μm,0.7s						
SERS				AML	AML		
	comp=N,1013μm,0.6s						
MESG	**Mesagne**	**3.08**	**320**	P	**Pn**	**05 13 43.6**	**+1.0**
MESG	**Mesagne**	**3.08**	**320**	P	**Pn**	**05 13 43.6**	**+1.0**
MESG				AML	AML		
	comp=E,3015μm,0.7s						
MESG				AML	AML		
	comp=N,3245μm,0.6s						
PIPA	**Pietrapaola**	**3.08**	**295**	P	**Pn**	**05 13 43.5**	**+0.8**
PIPA				S	**Sn**	**05 14 20.1**	**+0.9**
PIPA				AML	AML		
	comp=E,1195μm,0.6s						
PIPA				AML	AML		
	comp=N,1108μm,0.5s						
PIPA				AML	AML		
	comp=E,1195μm,0.6s						
PIPA				AML	AML		
	comp=N,1103μm,0.5s						
PIPA	**Pietrapaola**	**3.08**	**295**	P	**Pn**	**05 13 43.5**	**+0.8**
GRG	**Griva**	**3.11**	**29**	P	**Pn**	**05 13 44.7**	**+1.5**
TIR	**Tirane**	**3.13**	**352**	P	**Pn**	**05 13 44.9**	**+1.5**
TIR	**Tirane**	**3.13**	**352**	P	**Pn**	**05 13 44.8**	**+1.4**
TIR	**Tirane**	**3.13**	**352**	⇑P	**Pn**	**05 13 44.8**	**+1.4**
TIR	**Tirane**	**3.13**	**352**	P	**Pn**	**05 13 44.9**	**+1.5**
TIR				AML	AML		
	comp=N,2670μm,0.6s						
TIR				AML	AML		
	comp=E,2180μm,1.2s						
TIR	**Tirane**	**3.13**	**352**	P	**Pn**	**05 13 44.9**	**+1.5**
TIR	**Tirane**	**3.13**	**352**		**Pn**	**05 13 44.9**	**+1.5**
HORT	**Hortiatis**	**3.14**	**41**	P	**Pn**	**05 13 45.5**	**+2.0**
PLAC	**Placanica**	**3.14**	**275**	P	**Pn**	**05 13 44.3**	**+0.7**
PLAC	**Placanica**

CGL1	Ceglie Messapi	3.32 317	⇑	*i*Pn	Pn	05 13 46.7	+0.7
TAR1	Taranto	3.33 314	⇑	*i*Pn	Pn	05 13 46.8	+0.6
TAR1				Sn	Sn	05 14 26.2	+0.7
CAR1	CAROLEI	3.44 288		P	Pn	05 13 49.4	+1.6
CAR1	CAROLEI	3.44 288		P	Pn	05 13 49.4	+1.6
CAR1				S	Sn	05 14 28.4	+0.1
CAR1				AML	AML		
	comp=E,2190µm,0.6s						
CAR1				AML	AML		
	comp=N,1800µm,0.6s						
SOI	Samo	3.45 269		P	Pn	05 13 48.1	+0.3
SOI	Samo	3.45 269		P	Pn	05 13 48.1	+0.3
SOI				AML	AML		
	comp=E,758µm,0.5s						
SOI				AML	AML		
	comp=N,536µm,0.7s						
MASS	Massafra	3.48 314	⇓	*i*Pn	Pn	05 13 49.1	+0.8
KNT	Kendrikon	3.49 32		P	Pn	05 13 50.5	+2.2
VAY	Valandovo	3.49 28		*e*Pn	Pn	05 13 49.5	+1.2
VAY				*e*Lg	Lg	05 14 32.2	
	comp=E,527nm,1.1s						
VAY				*e*Lg	Lg	05 14 36.0	
	comp=N,294nm,0.7s						
MPAZ	Palizzi	3.50 267		P	Pn	05 13 48.5	+0.1
MPAZ	Palizzi	3.50 267		P	Pn	05 13 48.5	+0.1
MPAZ				AML	AML		
	comp=E,1320µm,0.6s						
MPAZ				AML	AML		
	comp=N,1285µm,0.8s						
CEL	Celeste	3.56 272			Pn	05 13 50.0	+0.6
SALB	San Lorenzo Be	3.57 298		P	Pn	05 13 51.3	+1.8
SALB	San Lorenzo Be	3.57 298		P	Pn	05 13 51.3	+1.8
SALB				S	Sn	05 14 32.5	+1.0
SALB				AML	AML		
	comp=N,538µm,0.9s						
SALB				AML	AML		
	comp=E,784µm,1.6s						
SALB				AML	AML		
	comp=N,534µm,0.9s						
SALB				AML	AML		
	comp=E,680µm,0.7s						
JOPP	Joppolo	3.58 277		P	Pn	05 13 50.6	+0.9
JOPP				AML	AML		
	comp=E,950µm,0.8s						
JOPP				AML	AML		
	comp=N,784µm,0.5s						
JOPP	Joppolo	3.58 277		P	Pn	05 13 50.6	+0.9
ORI	Oriolo Calabro	3.58 302		P	Pn	05 13 51.0	+1.4
ORI				S	Sn	05 14 30.9	-0.8
ORI				AML	AML		
	comp=N,2530µm,0.5s						
ORI				AML	AML		
	comp=E,2115µm,0.5s						
ORI	Oriolo Calabro	3.58 302		P	Pn	05 13 51.0	+1.4
GMB	Gambarie	3.62 270		P	Pn	05 13 50.4	+0.2
GMB				S	Sn	05 14 30.4	-2.3
GMB				AML	AML		
	comp=N,4615µm,1.2s						
GMB				AML	AML		
	comp=E,6155µm,0.9s						
GMB	Gambarie	3.62 270		P	Pn	05 13 50.4	+0.2
NOCI	Noci	3.63 315		P	Pn	05 13 51.2	+0.9
NOCI	Noci	3.63 315		P	Pn	05 13 51.2	+0.9
NOCI				S	Sn	05 14 31.8	-1.2
NOCI				AML	AML		
	comp=N,2145µm,0.5s						
NOCI				AML	AML		
	comp=E,2225µm,0.6s						
MSCL	Scilla	3.65 271		P	Pn	05 13 51.0	+0.4
MSCL	Scilla	3.65 271		P	Pn	05 13 51.0	+0.4
MSCL				AML	AML		
	comp=E,2290µm,0.5s						
MSCL				AML	AML		
	comp=N,2600µm,0.7s						
STIP	Stip	3.71 21		*e*Pn	Pn	05 13 54.6	+3.3
MATE	Matera	3.75 311	⇑	P	Pn	05 13 52.1	+0.2
MATE	Matera	3.75 311		P	Pn	05 13 52.8	+0.9
MATE				AML	AML		
	comp=N,1185µm,1.0s						
MATE				AML	AML		
	comp=E,1320µm,0.6s						
MATE	Matera	3.75 311		P	Pn	05 13 52.8	+0.9
SKO	Skopje	3.81 12		*e*Pn	Pn	05 13 54.1	+1.4
PUK	Puka	3.82 354		P	Pn	05 13 53.9	+0.9
PUK				AML	AML		
	comp=N,438µm,0.5s						
PUK				AML	AML		
	comp=E,242µm,1.4s						
PUK	Puka	3.82 354		P	Pn	05 13 53.9	+0.9
ULC	Ulcinj	3.83 347	⇓	*i*Pn	Pn	05 13 51.9	-1.1
ULC				*i*Sn	Sn	05 14 37.0	-0.7
T0721	Laino Castello	3.85 297		P	Pn	05 13 56.2	+2.9
T0721				AML	AML		
	comp=N,1235µm,1.1s						
T0721				AML	AML		
	comp=E,1480µm,1.0s						
T0721	Laino Castello	3.85 297		P	Pn	05 13 56.2	+2.9
MSRU	Castanea	3.87 272		P	Pn	05 13 53.8	+0.2
MIGL	Miglionico	3.88 309		P	Pn	05 13 55.0	+1.2
MIGL				AML	AML		
	comp=E,4015µm,0.6s						
MIGL				AML	AML		
	comp=N,4475µm,0.8s						
MIGL	Miglionico	3.88 309		P	Pn	05 13 55.0	+1.2
SG1	Sgolgore (BA)	3.89 313	⇓	*i*Pn	Pn	05 13 54.6	+0.8
SG1				Sn	Sn	05 14 38.5	-0.7
SCHR	S. Chirico Rap	3.90 301		P	Pn	05 13 56.6	+2.5
SCHR	S. Chirico Rap	3.90 301		P	Pn	05 13 56.6	+2.5
SCHR				AML	AML		
	comp=E,604µm,0.5s						
SCHR				AML	AML		
	comp=N,612µm,1.2s						
BAI	Bari	3.96 317	⇑	*i*Pn	Pn	05 13 55.3	+0.6
AMUR	Altamura	3.97 313		P	Pn	05 13 55.7	+0.7
AMUR				AML	AML		
	comp=E,1125µm,0.5s						
AMUR				AML	AML		
	comp=N,1375µm,1.6s						
AMUR	Altamura	3.97 313		P	Pn	05 13 55.7	+0.7
SIRI	Monte Sirino -	4.03 300		P	Pn	05 13 58.0	+2.1
SIRI				S	Sn	05 14 46.0	+3.1
SIRI				AML	AML		
	comp=E,652µm,1.1s						
SIRI				AML	AML		
	comp=E,671µm,1.1s						
SIRI				AML	AML		
	comp=N,721µm,0.3s						
SIRI				AML	AML		
	comp=N,726µm,0.4s						
DRME	Dracevica, Mon	4.05 347		*e*Pn	Pn	05 13 56.4	+0.3
DRME	Dracevica, Mon	4.05 347	⇓	*i*Pn	Pn	05 13 56.0	-0.1
DRME				*i*Sn	Sn	05 14 42.7	-0.6
MCSR	Castroreale	4.08 269		P	Pn	05 13 55.7	-0.8
MCSR				S	Sn	05 14 43.0	-1.1
MCSR				AML	AML		
	comp=E,3175µm,0.3s						
MCSR				AML	AML		
	comp=N,2735µm,0.9s						
MCSR	Castroreale	4.08 269		P	Pn	05 13 55.7	-0.8
MILZ	Milazzo	4.09 272		P	Pn	05 13 55.1	-1.4
MILZ				AML	AML		
	comp=N,1264µm,1.6s						
MILZ				AML	AML		
	comp=E,1830µm,0.4s						
MILZ	Milazzo	4.09 272		P	Pn	05 13 55.1	-1.4
IST3	Stromboli F	4.11 279		P	Pn	05 13 57.4	+0.5
IST3	Stromboli F	4.11 279		P	Pn	05 13 57.4	+0.5
IST3				AML	AML		
	comp=E,1225µm,1.4s						
IST3				AML	AML		
	comp=N,1390µm,0.4s						
MTSN	Montesano sull	4.15 301		P	Pn	05 13 59.3	+1.8
MTSN	Montesano sull	4.15 301		P	Pn	05 13 59.3	+1.8
MTSN				AML	AML		
	comp=E,748µm,1.2s						
MTSN				AML	AML		
	comp=N,824µm,0.5s						
NOV	Novara	4.17 269		P	Pn	05 13 58.4	+0.6
NOV				AML	AML		
	comp=N,1335µm,1.5s						
NOV				AML	AML		
	comp=E,1815µm,1.5s						
NOV	Novara	4.17 269		P	Pn	05 13 58.4	+0.6
BUM	Brajici-Budva	4.22 344		*e*Pn	Pn	05 13 57.8	-0.6
BUM				*i*Sn	Sn	05 14 46.7	-0.8
APE	Apeiranthos	4.22 105		*i*P	Pn	05 13 59.2	+0.8
APE	Apeiranthos	4.22 105	⇑	P	Pn	05 14 02.5	+4.1
AGST	Augusta-Monte	4.23 258		P	Pn	05 13 56.2	-2.3
PDG	Podgorica	4.28 348	⇓	P	Pn	05 13 59.6	+0.4
PDG	Podgorica	4.28 348		P	Pn	05 13 59.7	+0.6
PDG				AML	AML		
	comp=E,842µm,1.6s						
PDG				AML	AML		
	comp=N,706µm,1.0s						
PDG				AML	AML		
	comp=N,562µm,1.0s						
PDG				AML	AML		
	comp=E,668µm,1.6s						
PDG	Podgorica	4.28 348		*e*Pn	Pn	05 13 59.4	+0.3
PDG	Podgorica	4.28 348			Pn	05 13 59.3	+0.1
PDG				Sn	Sn	05 14 47.5	-1.3
TTG	Podgorica	4.28 348		*e*Pn	Pn	05 13 59.0	-0.1
TTG				*e*Sn	Sn	05 14 48.7	-0.1
VPL	Vulcano Piano	4.28 274		P	Pn	05 13 59.1	-0.2
VPL	Vulcano Piano	4.28 274		P	Pn	05 13 59.1	-0.2
VPL				AML	AML		
	comp=E,2960µm,0.5s						
VPL				AML	AML		
	comp=N,3010µm,0.4s						
SLCN	Sala Consilina	4.29 301		P	Pn	05 14 01.3	+1.8
SLCN	Sala Consilina	4.29 301		P	Pn	05 14 01.3	+1.8
ACER	Acerenza	4.30 308		P	Pn	05 14 00.8	+1.3
ACER				S	Sn	05 14 50.0	+0.6
ACER				AML	AML		
	comp=E,2805µm,0.9s						
ACER				AML	AML		
	comp=N,2530µm,1.0s						
ACER				AML	AML		
	comp=E,2840µm,0.9s						
ACER				AML	AML		
	comp=N,2480µm,1.0s						
ACER	Acerenza	4.30 308		P	Pn	05 14 00.8	+1.3
ACER	Acerenza	4.30 308		S	Sn	05 14 50.0	+0.6
ACER	Acerenza	4.30 308			Pn	05 14 00.3	+0.9
ACER				Sn	Sn	05 14 49.0	-0.3
MRVN	Minervino Murg	4.31 312		P	Pn	05 14 00.6	+0.9
MRVN				AML	AML		
	comp=E,786µm,0.8s						
MRVN				AML	AML		
	comp=N,602µm,0.9s						
MRVN	Minervino Murg	4.31 312		P	Pn	05 14 00.6	+0.9
PVY	Plav	4.36 356	⇑	*i*Pn	Pn	05 14 00.5	0.0
PVY				*i*Sn	Sn	05 14 50.8	-0.3
PALZ	Palazzo San Ge	4.38 309		P	Pn	05 14 01.4	+0.9
PALZ	Palazzo San Ge	4.38 309		P	Pn	05 14 01.4	+0.9
PALZ				AML	AML		
	comp=N,2100µm,1.3s						
PALZ				AML	AML		
	comp=E,2550µm,0.9s						
MUCR	Ucria	4.38 269		P	Pn	05 14 01.5	+0.9
MUCR				AML	AML		
	comp=N,1004µm,0.4s						
MUCR				AML	AML		
	comp=E,773µm,0.7s						
MUCR	Ucria	4.38 269		P	Pn	05 14 01.5	+0.9
SSY	Sortino	4.38 257		P	Pn	05 13 58.4	-2.2
SSY	Sortino	4.38 257		P	Pn	05 13 58.4	-2.2
HAVL	Avola	4.40 255		P	Pn	05 13 59.0	-1.9
HAVL	Avola	4.40 255		P	Pn	05 13 59.0	-1.9
EPZF	Pizzo Felice	4.41 266		P	Pn	05 14 01.1	0.0
EPZF				AML	AML		
	comp=E,1395µm,0.5s						
EPZF				AML	AML		
	comp=N,1600µm,1.5s						
EPZF	Pizzo Felice	4.41 266		P	Pn	05 14 01.1	0.0
SANT	Santorini	4.43 113		Pn	Pn	05 14 03.5	+2.2
CEME	Cevo	4.45 346	⇓	*i*Pn	Pn	05 14 00.5	-1.1
CEME				*i*Sn	Sn	05 14 52.7	-0.5
HCY	Herceg Novi	4.45 341		*e*Pn	Pn	05 14 00.9	-0.7
HCY	Herceg Novi	4.45 341	⇑	*i*Pn	Pn	05 14 00.7	-0.9
HCY				*i*Sn	Sn	05 14 52.2	-0.9
CMPR	Campora	4.48 299		P	Pn	05 14 02.9	+0.9
CMPR	Campora	4.48 299		P	Pn	05 14 02.9	+0.9
HLNI	Lentini	4.49 260		P	Pn	05 13 60.0	-2.0
HLNI	Lentini	4.49 260		P	Pn	05 13 60.0	-2.0
HLNI				AML	AML		
	comp=E,1575µm,0.6s						
HLNI				AML	AML		
	comp=N,1515µm,0.9s						
MCPD	Capo d'Orlando	4.49 270		P	Pn	05 14 03.3	+1.2
MCPD	Capo d'Orlando	4.49 270		P	Pn	05 14 03.3	+1.2
MCPD				AML	AML		
	comp=E,852µm,0.6s						
MCPD				AML	AML		
	comp=N,851µm,0.3s						
HPAC	Pachino	4.50 252		P	Pn	05 14 01.9	-0.3
HPAC				AML	AML		
	comp=E,2140µm,1.1s						
HPAC				AML	AML		
	comp=N,2085µm,0.5s						
HPAC	Pachino	4.50 252		P	Pn	05 14 01.9	-0.3
MEU	Monte Lauro	4.50 257		P	Pn	05 14 01.1	-1.2
MRLC	Muro Lucano	4.57 305		P	Pn	05 14 04.9	+1.7
MRLC				AML	AML		
	comp=N,456µm,0.5s						
MRLC				AML	AML		
	comp=E,430µm,1.5s						
MRLC				AML	AML		
	comp=N,451µm,0.5s						
MRLC				AML	AML		
	comp=E,439µm,1.4s						
MRLC	Muro Lucano	4.57 305		P	Pn	05 14 04.9	+1.7
IVA	Berane	4.64 355	⇑	*i*Pn	Pn	05 14 04.5	+0.2
IVA				*i*Sn	Sn	05 14 57.7	-0.2
IDI	Anoyia	4.64 128		Pn	Pn	05 14 06.1	+1.8
	comp=E,3.5nm,0.3s,baz=272,slow=5.5,SNR=12						
IDI				Sn	Sn	05 14 58.9	+0.9
	comp=E,19nm,0.3s,baz=138,slow=24,SNR=11						
HVZN	Vizzini	4.65 259		P	Pn	05 14 02.6	-1.7
HVZN				AML	AML		
	comp=E,12850µm,0.5s						
HVZN				AML	AML		
	comp=N,11250µm,0.8s						
HVZN	Vizzini	4.65 259		P	Pn	05 14 02.6	-1.7
KOME	Kolasin	4.66 352	⇑	*i*Pn	Pn	05 14 04.3	-0.1
KOME				*i*Sn	Sn	05 14 57.5	-0.8
NKME	Niksic	4.66 347	⇑	*i*Pn	Pn	05 14 04.7	+0.3
NKME				*e*Sn	Sn	05 14 57.0	-1.2
GALF	Gagliano Caste	4.66 265		P	Pn	05 14 05.1	+0.7
GALF				AML	AML		
	comp=E,748µm,1.6s						
GALF				AML	AML		
	comp=N,676µm,0.6s						
GALF	Gagliano Caste	4.66 265		P	Pn	05 14 05.1	+0.7
HMDC	Modica	4.66 256		P	Pn	05 14 03.6	-0.9
HMDC				AML	AML		
	comp=E,1845µm,1.0s						
HMDC				AML	AML		
	comp=N,1835µm,1.1s						
HMDC	Modica	4.66 256		P	Pn	05 14 03.6	-0.9
NKY	Niksic	4.69 347	⇓	*i*Pn	Pn	05 14 04.4	-0.6
NKY				*i*Sn	Sn	05 14 58.2	-1.0
CAGR	Agira	4.72 264		P	Pn	05 14 06.2	+0.8
CAGR				AML	AML		
	comp=N,1140µm,1.5s						
CAGR				AML	AML		
	comp=E,1225µm,0.6s						
CAGR	Agira	4.72 264		P	Pn	05 14 06.2	+0.8
TREB	Trebinje	4.74 341		*e*Pn	Pn	05 14 04.6	-0.9
DBRK	Dubrovnik	4.75 339		*i*Pn	Pn	05 14 05.0	-0.7
DBRK				Sn	Sn	05 14 57.7	-2.8
VAE	Valguarnera	4.82 263		Pn	Pn	05 14 07.8	+1.1
	comp=E,4.8nm,0.3s,baz=163,slow=21,SNR=5.3						
VAE				Sn	Sn	05 15 03.3	+1.1
	comp=E,32nm,0.3s,baz=326,slow=6.2,SNR=8.5						
SNAL	S. Angelo Dei	4.84 305		P	Pn	05 14 07.4	+0.5
SGTA	Sant Agata di	4.85 308		P	Pn	05 14 09.2	+2.1
SGTA	Sant Agata di	4.85 308		P	Pn	05 14 09.2	+2.1
SGTA				AML	AML		
	comp=N,650µm,0.8s						
SGTA				AML	AML		
	comp=N,618µm,0.9s						
SGTA				AML	AML		
	comp=E,830µm,0.4s						
SGTA				AML	AML		
	comp=E,809µm,0.4s						
VTS	Vitosha	4.87 25		P	Pn	05 14 08.4	+0.9
VTS						05 15 03.9	
VTS	Vitosha	4.87 25	⇓	P	Pn	05 14 09.4	+2.0
VTS	Vitosha	4.87 25		P	Pn	05 14 09.1	+1.7
VTS				S	Sn	05 15 04.2	+0.6
VTS	Vitosha	4.87 25		P	Pn	05 14 09.1	+1.7
VTS	Vitosha	4.87 25		P	Pn	05 14 08.4	+0.9
VTS				Sn	Sn	05 15 03.9	+0.2
BRY	Bratogost	4.87 343		*e*Pn	Pn	05 14 06.8	-0.6
BRY	Bratogost	4.87 343	⇑	*i*Pn	Pn	05 14 06.1	-1.3
BRY				*i*Sn	Sn	05 15 02.4	-1.2
CAFE	Carife	4.87 306		P	Pn	05 14 09.4	+1.9
RDO	Rodhopi	4.90 52		P	Pn	05 14 09.6	+1.9
MSAG	Monte S. Angel	4.90 316		P	Pn	05 14 08.5	+0.7
MSAG	Monte S. Angel	4.90 316		P	Pn	05 14 08.5	+0.7
SGRT	San Giovanni R	5.02 316		P	Pn	05 14 10.1	+0.6
SGRT	San Giovanni R	5.02 316			Pn	05 14 10.1	+0.6
SGRT				Sn	Sn	05 15 05.3	-2.0
STON	Ston	5.07 337		*e*Pn	Pn	05 14 09.5	-0.5
STON				Sn	Sn	05 15 05.9	-2.3
STON	Ston	5.07 337		P	Pn	05 14 08.7	-1.2
STON	Ston	5.07 337		P	Pn	05 14 08.7	-1.2
STON	Ston	5.07 337		*e*Pn	Pn	05 14 08.8	-1.2
UPM	Unac-Piva	5.09 347		*e*Pn	Pn	05 14 10.8	+0.3
UPM	Unac-Piva	5.09 347		*e*Pn	Pn	05 14 09.7	-0.8
UPM				*i*Sn	Sn	05 15 07.0	-2.1
ALN	Alexandroupoli	5.09 57		P	Pn	05 14 11.7	+1.4
ALN	Alexandroupoli	5.09 57				05 14 11.7	+1.4
MRB1	Monte Rocchett	5.09 306		P	Pn	05 14 13.4	+2.9
PLE	Pljevlja	5.14 352	⇑	*i*Pn	Pn	05 14 10.5	-0.7
PLE				*i*Sn	Sn	05 15 09.6	-0.7
CLTA	Licata	5.24 260		P	Pn	05 14 12.4	0.0
CLTA	Licata	5.24 260		P	Pn	05 14 12.4	0.0
WDD	Wied Dalam	5.29 245		P	Pn	05 14 12.8	+0.3
WDD	Wied Dalam	5.29 245		P	Pn	05 14 12.8	+0.3
WDD	Wied Dalam	5.29 245			Pn	05 14 13.0	-0.1
WDD				Sn	Sn	05 15 11.1	-2.7
PAOL	Paolisi	5.31 303		P	Pn	05 14 16.8	+3.4
PAOL	Paolisi	5.31 303		P	Pn	05 14 16.8	+3.4
PAOL	Paolisi	5.31 303			Pn	05 14 15.6	+2.2
MELA	Melanico ??? S	5.34 312		P	Pn	05 14 15.3	+1.6
GATE	Gambatesa	5.35 309		P	Pn	05 14 17.1	+3.1
RUDO	Rudo	5.43 352		*e*Pn	Pn	05 14 14.6	-0.4
CIGN	Sant'Elia a Pi	5.44 311		P	Pn	05 14 17.1	+2.0
BSSO	Busso	5.56 308		P	Pn	05 14 19.4	+2.4
CORL	Corleone	5.63 269			Pn	05 14 18.9	+1.1
MAKA	Makarska	5.66 334		*i*Pn	Pn	05 14 18.2	0.0
MAKA				Sn	Sn	05 15 19.6	-3.3
BBLS	Lazići	5.67 353		*e*Pn	Pn	05 14 17.6	-0.8
TRIV	Trivento	5.72 310		P	Pn	05 14 21.3	+2.3
CLTB	Caltabellotta	5.74 266			Pn	05 14 22.0	+2.7
FRES	Fresagrandinar	5.77 312		P	Pn	05 14 21.7	+2.0
FRES	Fresagrandinar	5.77 312		P	Pn	05 14 21.7	+2.0
DIVS	Divibare	5.86 357		*e*Pn	Pn	05 14 20.5	-0.5
HAPS	Han Pijesak,Bl	5.94 350		*e*Pn	Pn	05 14 20.9	-1.3
CERA	Filignano	5.95 306		P	Pn	05 14 24.9	+2.7
KARP	Karpathos	6.03 114			Pn	05 14 24.9	+1.5
PLVB	Pleven	6.05 30	⇑	P	Pn	05 14 25.8	+2.4
LPEL	Lama dei Pelig	6.11 310		P	Pn	05 14 24.8	+0.4
CAFR	Castel Frentan	6.12 312		P	Pn	05 14 26.8	+2.3
CAFR	Castel Frentan	6.12 312		P	Pn	05 14 26.8	+2.3
INTR	Introdacqua	6.25 309		P	Pn	05 14 28.8	+2.4
INTR	Introdacqua	6.25 309		P	Pn	05 14 28.8	+2.4
INTR	Introdacqua	6.25 309			Pn	05 14 28.9	+2.5
ELND	Elena	6.25 40	⇓	P	Pn	05 14 28.2	+1.8
TEKS	Tekeris	6.34 354		*e*Pn	Pn	05 14 26.9	-0.6
VVLD	Villa Vallelon	6.35 307		P	Pn	05 14 29.8	+2.1
VVLD	Villa Vallelon	6.35 307		P	Pn	05 14 29.8	+2.1
ZIRJ	Zirje	6.50 328		*e*Pn	Pn	05 14 29.0	-0.3
ZIRJ				Sn	Sn	05 15 39.6	-4.0
KIJV	Kijevo	6.51 334		*i*Pn	Pn	05 14 30.1	+0.3
KIJV				Sn	Sn	05 15 41.3	-2.4
VCEL	Villa Celiera	6.52 312		P	Pn	05 14 32.2	+2.2
LATB	Latina	6.59 302		P	Pn	05 14 31.4	+0.5
FAGN	Fagnano	6.59 310		P	Pn	05 14 33.5	+2.4
MDVR	Moldovita	6.61 8	⇓	P	Pn	05 14 31.2	0.0
MORI	Morici	6.65 329		*e*Pn	Pn	05 14 32.0	+0.2
MGRS	Mrkonjic Grad	6.66 339		*e*Pn	Pn	05 14 32.5	+0.6
DOB	Doboj	6.71 346		*e*Pn	Pn	05 14 30.4	-2.2
AQU	L'Aquila	6.76 310		*e*Pn	Pn	05 14 35.6	+2.3
T0104	Madonna delle	6.80 309		P	Pn	05 14 37.3	+3.5
HERR	Herculane	6.80 12	⇑	P	Pn	05 14 34.6	+0.8
CAMP	Campotosto	6.86 311		P	Pn	05 14 37.2	+2.4
GUMA	Gualdo di Mace	6.89 316		P	Pn	05 14 41.7	+6.6
COPA	Copaceanca	6.91 30	⇑	P	Pn	05 14 36.1	+0.8
FRGS	Fruska Gora	6.92 356		*e*Pn	Pn	05 14 33.4	-2.1
BLY	Banja Luka	6.94 341	⇑	P	Pn	05 14 35.7	0.0
BLY	Banja Luka	6.94 341		P	Pn	05 14 36.0	+0.3
BLY	Banja Luka	6.94 341		P	Pn	05 14 36.0	+0.3
BLY	Banja Luka	6.94 341		*e*Pn	Pn	05 14 35.6	-0.1
BLY	Banja Luka	6.94 341			Pn	05 14 35.7	0.0
OFFI	Offida	6.95 315		P	Pn	05 14 38.4	+2.6
DUGI	Dugi Otok	7.03 327		*e*Pn	Pn	05 14 37.0	0.0
DUGI				Sn	Sn	05 15 54.0	-2.5
UDBI	Udbina	7.19 332		*e*Pn	Pn	05 14 40.4	+1.2
NRCA	Norcia	7.21 312		P	Pn	05 14 41.9	+2.4
NRCA	Norcia	7.21 312			Pn	05 14 41.4	+1.9
FDMO	Fiordimonte	7.35 313		P	Pn	05 14 43.1	+1.7
GZR	Gura Zlata	7.36 13	⇑	P	Pn	05 14 41.8	+0.2
GZR	Gura Zlata	7.36 13	⇑	P	Pn	05 14 41.8	+0.2
CESX	Cesi	7.40 309		P	Pn	05 14 45.2	+3.1
BZS	Buzias	7.42 7	⇑	P	Pn	05 14 43.1	+0.7
BZS	Buzias	7.42 7	⇑	P	Pn	05 14 43.1	+0.7
CESI	CESI - Serrava	7.44 312		P	Pn	05 14 45.2	+2.6
CESI	CESI - Serrava	7.44 312		P	Pn	05 14 45.2	+2.6
CING	Cingoli	7.50 315		P	Pn	05 14 44.6	+1.1
CING	Cingoli	7.50 315		P	Pn	05 14 44.6	+1.1
EL6	Elcito	7.53 315		P	Pn	05 14 45.1	+1.3
NVLJ	Novalja	7.57 328		*i*Pn	Pn	05 14 44.6	+0.3
SNTG	Esanatoglia	7.57 314		P	Pn	05 14 46.0	+1.6
SNTG	Esanatoglia	7.57 314		P	Pn	05 14 46.0	+1.6
ATCC	AVT- Casa Cast	7.70 312		P	Pn	05 14 48.8	+2.6
ATCC	AVT- Casa Cast	7.70 312		P	Pn	05 14 48.8	+2.6
ARVD	Arcevia	7.72 315		P	Pn	05 14 47.7	+1.2
ARR	Arges	7.78 22	⇑	P	Pn	05 14 48.2	+0.9
MTUR	Matau	7.79 25	⇑	P	Pn	05 14 49.8	+2.3
MTUR	Matau	7.79 25	⇑	P	Pn	05 14 49.8	+2.3
SLUM	Salum	7.80 148		P	Pn	05 14 44.0	-3.6
	baz=150						
SLUM				AMP		05 16 00.0	
	baz=150						
MURB	Monte Urbino	7.81 312		P	Pn	05 14 50.5	+2.8
MURB	Monte Urbino	7.81 312		P	Pn	05 14 50.5	+2.8
MURB	Monte Urbino	7.81 312			Pn	05 14 49.1	+1.3
ATFO	Monte Foce - G	7.85 313		P	Pn	05 14 50.0	+1.8
ATFO	Monte Foce - G	7.85 313		P	Pn	05 14 50.0	+1.8
MGAB	Montegabbione	7.86 309		P	Pn	05 14 51.4	+3.1
FRON	Frontone	7.86 315		P	Pn	05 14 49.4	+1.0
FRON	Frontone	7.86 315		P	Pn	05 14 49.4	+1.0
ATTE	AVT- Monte Tez	7.88 311		P	Pn	05 14

MLR	Muntele Rosu	8.33	28			Pn		05 14 57.2	+2.3	
PTJ	Puntijarka	8.34	338	*i*	Pn	Pn		05 14 54.1	-0.9	
RIY	Rijeka	8.35	330	*e*	Pn	Pn		05 14 55.6	+0.5	
CRE	Caprese Michel	8.36	313		P	Pn		05 14 57.5	+2.1	
GBRS	Gornja Briga	8.40	332	*i*	Pn	Pn		05 14 56.3	+0.5	
GCIS	Gornji Cirnik	8.41	336	*e*	Pn	Pn		05 14 55.0	-0.9	
KALN	Kalnik	8.41	341	*i*	Pn	Pn		05 14 54.5	-1.5	
CRES	Cresnjev	8.43	336	*e*	Pn	Pn		05 14 55.6	-0.6	
CRES				*e*	Sn	Sn		05 16 25.1	-5.9	
	comp=Z,51nm,0.4s									
CRES	Cresnjev	8.43	336	*e*	Pn	Pn		05 14 55.7	-0.5	
DOPA	Dopca	8.55	24	‖	P	Pn		05 14 59.9	+2.0	
CASP	Castiglione de	8.58	305		Pn	Pn		05 15 00.4	+2.2	
TIRR	Tirgusor	8.64	42		P	Pn		05 15 01.1	+2.1	
TIRR	Tirgusor	8.64	42	⇑	P	Pn		05 15 00.8	+1.8	
TIRR	Tirgusor	8.64	42		Pn	Pn		05 15 01.1	+2.1	
MDUB	Mudurnu	8.64	72		Pn	Pn		05 15 00.1	+1.0	
BEHE	Becsehely	8.65	343	*e*	Pn	Pn		05 14 58.2	-1.0	
CEY	Cerknica	8.72	331	*e*	Pn	Pn		05 15 00.2	+0.1	
OSSC	Osservatorio P	8.72	310			Pn		05 15 03.3	+3.1	
RUFI	Rufina	8.75	313		P	Pn		05 15 02.8	+2.2	
RUFI	Rufina	8.75	313		P	Pn		05 15 02.8	+2.2	
OZUR		8.80	25	⇑	P	Pn		05 15 03.8	+2.5	
PLOR	Plostina	8.90	29	⇑	P	Pn		05 15 05.4	+2.8	
PLOR	Plostina	8.90	29	⇑	P	Pn		05 15 05.4	+2.8	
LJU	Ljubljana	8.94	333	*e*	Pn	Pn		05 15 03.2	+0.1	
VRI	Vrincioaia	8.94	30	⇑	P	Pn		05 15 06.1	+2.9	
VRI	Vrincioaia	8.94	30	⇑	P	Pn		05 15 06.1	+2.9	
TRI	Trieste	8.95	329		P	Pn		05 15 02.8	-0.5	
TRI								05 16 39.7		
TRI	Trieste	8.95	329			Pn		05 15 02.8	-0.5	
TRI					Sn	Sn		05 16 39.7	-4.2	
KEST	Kesra	9.21	258		Pn	Pn		05 15 07.3	+0.3	
	comp=Z,0.9nm,0.3s,baz=4.9,slow=6.9,SNR=12									
KEST					LR	LR		05 19 44.9		
	comp=Z,149nm,18.9s,baz=320,slow=44									
KEST	Kesra	9.21	258		Pn	Pn		05 15 07.0	+0.1	
SOKA	Soboth	9.32	336	*e*	Pn	Pn		05 15 07.7	-0.7	
	comp=Z,30nm,0.4s,SNR=32									
SOKA				*i*	Sn	Sn		05 16 46.5	-6.5	
	comp=Z,4.1nm,0.3s									
OBKA	Obir	9.33	334	*e*	Pn	Pn		05 15 08.8	+0.1	
OBKA					*e*Sn	Sn		05 16 51.6	-1.8	
OBKA	Obir	9.33	334	*e*	Pn	Pn		05 15 08.7	+0.1	
	comp=Z,18nm,0.3s,SNR=42									
OBKA					*e*Sn	Sn		05 16 50.4	-2.9	
	comp=Z,25nm,0.4s									
ZCCA	Zocca	9.36	314			Pn		05 15 12.1	+3.1	
VLC	Villacollemand	9.60	311		Pn	Pn		05 15 14.3	+2.1	
PSZ	Piszkesteto	9.68	358			Pn		05 15 15.0	+1.7	
PSZ					Sn	Sn		05 16 58.8	-3.1	
ARSA	Arzberg	9.69	340	*e*	Pn	Pn		05 15 12.9	-0.6	
ARSA				*e*	Sn	Sn		05 16 57.8	-4.3	
ARSA	Arzberg	9.69	340	*e*	Pn	Pn		05 15 12.8	-0.6	
	comp=Z,10nm,0.3s									
ARSA				*i*	Sn	Sn		05 16 56.6	-5.5	
	comp=Z,5.7nm,0.5s									
MYKA	Terra Mystica	9.76	331	*e*	Pn	Pn		05 15 14.2	-0.3	
	comp=Z,3.4nm,0.2s,SNR=5.9									
MYKA				*e*	Sn	Sn		05 17 01.4	-2.5	
	comp=Z,7.5nm,0.4s									
SWA2		9.90	154		P	Pn		05 15 13.6	-2.8	
	baz=156									
SWA2					S	Sn		05 16 45.9	-21	
	baz=156									
PRMA	PARMA	9.99	314			Pn		05 15 18.8	+1.2	
BURAR	Bucovina Array	10.00	19	⇑	P	Pn		05 15 18.2	+0.4	
BURAR	Bucovina Array	10.00	19	⇑	P	Pn		05 15 18.2	+0.4	
BURAR	Bucovina Array	10.00	19		Pn	Pn		05 15 19.2	+1.4	
TRPA	Tarpa	10.00	8	⇑	P	Pn		05 15 17.7	0.0	
BUR08	Bucovina Ar. S	10.03	19			Pn		05 15 20.1	+1.9	
CTI	Castel Tesino	10.16	323		P	Pn		05 15 19.5	-0.4	
CTI	Castel Tesino	10.16	323			Pn		05 15 19.5	-0.4	
MSSA	Maissana	10.20	310			Pn		05 15 23.1	+2.6	
CONA	Conrad Observa	10.24	342	*e*	Pn	Pn		05 15 21.4	+0.4	
	comp=Z,2.0nm,0.3s									
ZST	Bratislava	10.24	347	*e*	SN	Sn		05 17 07.9	-7.5	
KBA	Koelnbreinsper	10.25	332	*e*	Pn	Pn		05 15 21.1	-0.1	
KBA				*e*	Sn	Sn		05 17 10.7	-5.2	
KBA	Koelnbreinsper	10.25	332	*e*	Pn	Pn		05 15 21.2	-0.1	
	comp=Z,11nm,0.3s,SNR=7.9									
KBA				*e*	Sn	Sn		05 17 10.8	-5.2	
	comp=Z,9.4nm,0.4s									
ABTA	Abfaltersbach	10.31	328	*e*	Pn	Pn		05 15 21.9	-0.1	
	comp=Z,7.4nm,0.3s,SNR=9.8									
ABTA				*e*	Sn	Sn		05 17 13.4	-3.8	
	comp=Z,41nm,0.9s									
VYHS	Vyhne	10.31	354	*e*	P	Pn		05 15 21.7	-0.3	
VYHS				*e*				05 17 12.8		
VYHS	Vyhne	10.31	354	*e*	PN	Pn		05 15 21.6	-0.4	
VYHS				*e*	PG			05 16 07.3		
VYHS				*e*	SN	Sn		05 17 12.8	-4.5	
MODS	Modra-Piesok	10.38	348	*e*	P	Pn		05 15 23.0	+0.1	
MODS				*e*				05 17 12.8		
MODS	Modra-Piesok	10.38	348	*e*	PN	Pn		05 15 23.0	+0.1	
MODS				*e*	SN	Sn		05 17 12.8	-6.2	
BR131	Keskin Array S	10.40	78		P	Pn		05 15 26.3	+3.0	
BR131	Keskin Array S	10.40	78			Pn		05 15 26.3	+3.0	
BRTR	Keskin Array B	10.40	78		P	Pn		05 15 24.5	+1.2	
BRTR	Keskin Array B	10.40	78		Pn	Pn		05 15 26.9	+3.6	
	comp=Z,0.4nm,0.3s,baz=257,slow=12,SNR=16									
BRTR	Keskin Array B	10.40	78		Pn	Pn		05 15 24.4	+1.2	
SALO	Salr	10.42	318			Pn		05 15 23.4	-0.1	
UZH	Uzhgorod	10.47	7	*e*	P	Pn		05 15 28.7	+4.6	
MOA	Molln	10.60	337	*e*	PN	Pn		05 15 25.9	0.0	
MOA				*e*	Sn	Sn		05 17 20.1	-4.2	
MOA	Molln	10.60	337	*e*	PN	Pn		05 15 25.7	-0.2	
	comp=Z,22nm,0.3s,SNR=47									
MOA				*e*	Sn	Sn		05 17 20.0	-4.4	
	comp=Z,7.6nm,0.3s									
CRVS	Cervenica-Dubn	10.68	4	*e*	P	Pn		05 15 27.2	+0.2	
CRVS	Cervenica-Dubn	10.68	4	*e*	PN	Pn		05 15 27.2	+0.2	
CRVS				*e*	PG			05 16 20.3		
KIS	Kishinev	10.71	33	*e*	P	Pn		05 15 24.0	-3.4	
KIS					LRM	MLR		05 20 28.0		
	comp=Z,900nm,12.0s									
KIS	Kishinev	10.71	33	*e*	P	Pn		05 15 24.0	-3.4	
KIS				*e*				05 17 28.0		
KOLS	Kolonicke sedl	10.77	7	*e*	P	Pn		05 15 28.9	+0.7	
KOLS				*e*				05 17 23.2		
KOLS	Kolonicke sedl	10.77	7	*e*	PN	Pn		05 15 28.9	+0.7	
KOLS				*e*	SN	Sn		05 17 23.2	-5.3	
RJOB	Jochberg	11.00	332	*e*	Pn	Pn		05 15 32.0	+0.5	
RJOB				*e*	Sn	Sn		05 17 30.6	-3.7	
WTTA	Wattenberg	11.08	327	*e*	Pn	Pn		05 15 33.7	+1.1	
WTTA				*e*	Sn	Sn		05 17 33.5	-2.9	
WTTA	Wattenberg	11.08	327	*i*	Pn	Pn		05 15 33.5	+0.8	
	comp=Z,9.5nm,0.3s,SNR=7.2									
WTTA				*e*	Sn	Sn		05 17 34.5	-1.9	
	comp=Z,9.0nm,0.3s									
WATA	Walderalm	11.16	327	*i*	Pn	Pn		05 15 35.2	+1.4	
	comp=Z,14nm,0.2s,SNR=6.3									
WATA				*e*	Sn	Sn		05 17 36.3	-2.0	
	comp=Z,13nm,0.3s									
SQTA	Sankt Quirin	11.23	326	*i*	Pn	Pn		05 15 36.1	+1.4	
	comp=Z,5.3nm,0.2s,SNR=5.1									
SQTA				*e*	Sn	Sn		05 17 38.0	-2.0	
	comp=Z,7.0nm,0.3s									
FUORN	Ofenpass-Fuorn	11.24	321			Pn		05 15 35.4	+0.6	
FUORN						Sn		05 17 40.9	+0.7	
FETA	Feichten	11.30	324	*e*	Pn	Pn		05 15 36.4	+0.7	
	comp=Z,0.9nm,0.2s,SNR=6.3									
FETA				*e*	Sn	Sn		05 17 38.0	-3.7	
	comp=Z,3.2nm,0.3s									
MOTA	Moosalm	11.38	326	*i*	Pn	Pn		05 15 38.0	+1.3	
	comp=Z,13nm,0.5s,SNR=14									
MOTA				*e*	Sn	Sn		05 17 42.0	-1.6	
	comp=Z,11nm,0.4s									
VRAC	Vranov	11.40	347		LR	LR		05 21 23.1		
	comp=Z,357nm,18.9s,baz=170,slow=45									
DAVOX	Davos/Dischmat	11.54	321		Pn	Pn		05 15 39.9	+1.0	
	comp=Z,2.2nm,0.3s,baz=134,slow=17,SNR=19									
GEC2	GERESS Array S	11.66	338	*e*	Pn	Pn		05 15 39.6	-0.9	
GEC2	GERESS Array S	11.66	338			Pn		05 15 39.8	-0.7	
GERES	GERESS Array B	11.66	338		P	Pn		05 15 39.9	-0.6	
GERES	GERESS Array B	11.66	338		Pn	Pn		05 15 39.4	-1.1	
	comp=Z,2.3nm,0.3s,baz=161,slow=14,SNR=42									
GERES					LR	LR		05 21 22.8		
	comp=Z,1.9nm,0.3s,baz=154,slow=24,SNR=7.9									
GERES					Sn	Sn		05 17 45.8	-4.6	
	comp=Z,287nm,18.7s,baz=60,slow=44									
GERES	GERESS Array B	11.66	338			Pn		05 15 39.9	-0.6	
DAVA	Damuels	11.89	323	*e*	Pn	Pn		05 15 45.2	+1.4	
DAVA				*e*	Sn	Sn		05 17 52.7	-3.5	
DAVA	Damuels	11.89	323	*e*	Pn	Pn		05 15 45.1	+1.4	
	comp=Z,4.7nm,0.3s,SNR=5.4									
DAVA				*e*	Sn	Sn		05 17 52.7	-3.5	
	comp=Z,23nm,0.5s									
KHC	Kasperske Hory	11.95	338	*e*	P	Pn		05 15 43.5	-0.9	
KHC				*e*				05 17 51.2		
KHC	Kasperske Hory	11.95	338	*e*	PN	Pn		05 15 43.5	-0.9	
KHC				*e*	SN	Sn		05 17 51.2	-6.2	
KHC	Kasperske Hory	11.95	338			Pn		05 15 43.3	-1.1	
HNAT	Natroun	12.05	132		P	Pn		05 15 43.4	-2.4	
	baz=132									
KRLC	Kraliky	12.11	349	*e*	P	Pn		05 15 47.1	+0.5	
KRLC	Kraliky	12.11	349	*e*	PN	Pn		05 15 47.1	+0.5	
WET	Wettzell	12.18	336	*e*	Pn	Pn		05 15 47.8	+0.2	
BNI	Bardonecchia	12.32	308		P	Pn		05 15 52.2	+2.7	
BNI	Bardonecchia	12.32	308		Pn	Pn		05 15 52.2	+2.7	
PRU	Pruhonice	12.47	342	*e*	P	Pn		05 15 51.1	-0.4	
PRU	Pruhonice	12.47	342	*e*	PN	Pn		05 15 51.1	-0.4	
SENIN	Lac Senin/Sane	12.64	314			Pn		05 15 54.8	+0.7	
SENIN						Sn		05 18 13.4	-1.2	
NORI	Noerdlinger Ri	12.65	329	*e*	Pn	Pn		05 15 52.7	-1.2	
ROTZ	Rotzenmuhle	12.94	336	*e*	Pn	Pn		05 15 57.5	-0.3	
MANZ	Manzenberg	13.16	336	*e*	Pn	Pn		05 16 00.7	-0.2	
NBNS	Bani Suef	13.20	133		P	Pn		05 15 59.6	-1.9	
	baz=133									
GRA1	Grafenberg Arr	13.21	333		Pn	Pn		05 16 00.9	-0.7	
GRF	Grafenberg Arr	13.21	333		P	Pn		05 16 00.9	-0.7	
MMAI	Mount Meron Ar	13.25	109		Pn	Pn		05 15 58.4	-3.9	
	comp=Z,1.7nm,0.3s,baz=301,slow=11,SNR=3.4									
MMAI					LR	LR		05 22 44.4		
	comp=Z,60nm,20.1s,baz=240,slow=45									
NKC	Novy Kostel	13.27	337	*e*	P	Pn		05 16 02.3	-0.1	
NKC	Novy Kostel	13.27	337	*e*	PN	Pn		05 16 02.3	-0.1	
BFO	Black Forest	13.37	323		P	Pn		05 16 05.1	+1.3	
BFO	Black Forest	13.37	323		Pn	Pn		05 16 05.1	+1.3	
ECH	Echery	13.87	320		P	Pn		05 16 10.1	-0.4	
ECH	Echery	13.87	320		Pn	Pn		05 16 10.1	-0.4	
MOX	Moxa	13.89	336		P	Pn		05 16 11.3	+0.5	
MOX	Moxa	13.89	336		Pn	Pn		05 16 11.0	+0.2	
AKASG	Malin Array Be	13.94	24		P	Pn		05 16 15.0	+3.6	
AKASG	Malin Array Be	13.94	24		Pn	Pn		05 16 15.0	+3.6	
AKBB	Malin Array Si	13.94	24		P	Pn		05 16 12.9	+1.5	
AKBB	Malin Array Si	13.94	24			Pn		05 16 12.9	+1.5	
CLL	Collm	14.07	341	*e*	P	P		05 16 21.0	-0.1	
CLL	Collm	14.07	341	*e*	PP	P		05 16 21.0	-0.1	
CLL				*e*	SPP			05 16 27.0		
CLL				*e*				05 17 19.0		
ANN	Anapa	14.32	57	*e*	P	Pn		05 16 13.2	-3.5	
ANN				*e*	S	Sn		05 18 52.9	-2.2	
ANN					pmax	pmax				
	comp=Z,71nm,1.4s									
WLF	Walferdange	15.33	323		PnPn	P		05 16 38.2	+3.2	
SOC	Sochi	15.52	64	*e*	P	P		05 16 36.1	-1.1	
SOC				*e*				05 19 23.0		
SOC					pmax	pmax				
	comp=Z,25nm,1.2s									
DOU	Dourbes	16.37	321		pP	pP		05 16 49.0	-1.6	
NEY	Neytrino	17.61	66	*i*	P	P		05 17 00.4	-0.1	
SHA1	Shidzhatmaz	17.64	65	*i*	P	Pn		05 17 00.4	+0.4	
KIV	Kislovodsk	17.70	64	*e*	P	Pn		05 17 00.0	-0.6	
KIV					pmax	pmax				
	comp=Z,47nm,1.0s									
KBZ	Khabaz	17.81	65	*i*	P	Pn		05 17 01.1	-0.7	
KBZ	Khabaz	17.81	65		Pn	P		05 17 04.3	+1.8	
	comp=Z,0.5nm,0.3s,baz=271,slow=9.6,SNR=21									
AKH	Akhalkalaki	17.99	73	⇑	P	P		05 17 06.9	+2.2	
ZEI	Tsey	18.40	68	*e*	P	Pn		05 17 10.4	+1.1	
ZEI				*e*	pmax	pmax				
	comp=Z,11nm,0.5s									
VORD	Divnogorie	18.43	40	*e*	P	P		05 17 08.5	-0.8	
VORD				*e*	pmax	pmax				
	comp=Z,10.0nm,0.9s									
VSR	Storozhevoye	18.52	40	*e*	P	P		05 17 09.4	-0.9	
VSR				*e*	pmax	pmax				
	comp=Z,10.0nm,0.5s									
GNI	Garni	18.93	77		P	Pn		05 17 16.8	+1.0	
GNI				*e*	pmax	pmax				
	comp=Z,23nm,0.9s									
GNI	Garni	18.93	77		Pn	Pn		05 17 16.7	+1.0	
	comp=Z,1.6nm,0.3s,baz=341,slow=7.0,SNR=6.0									
GNI					LR	LR		05 24 42.5		
	comp=Z,102nm,19.3s,baz=281,slow=38									
GNI	Garni	18.93	77		P	Pn		05 17 16.8	+1.0	
ESBB	Sonseca Array	19.01	282			Pn		05 17 17.3	+0.7	
ESDC	Sonseca Array	19.01	282		P	Pn		05 17 16.4	-0.2	
	comp=Z,0.3nm,0.3s,baz=78,slow=11,SNR=4.4									
ESDC	Sonseca Array	19.01	282		lAmb	lAmb		05 17 25.5		
	comp=Z,2.2nm,1.1s									
PAB	San Pablo	19.31	282		P	Pn		05 17 20.3	0.0	
PAB					pmax	pmax				
	comp=Z,39nm,1.5s									
PAB	San Pablo	19.31	282			Pn		05 17 20.2	0.0	
PAB					lAmb	lAmb		05 17 22.3		
	comp=Z,39nm,1.4s									
VRH	Novokhopyorsk	19.83	42	*e*	P	P		05 17 24.7	+0.1	
VRH					pmax	pmax				
	comp=Z,20nm,0.4s									
TAM	Tamanrasset	20.00	224		P	Pn		05 17 29.6	+0.9	
TAM					pmax	pmax				
	comp=Z,5.0nm,1.0s									
TAM	Tamanrasset	20.00	224		P	Pn		05 17 29.6	+0.9	
OBN	Obninsk	20.10	28	*i*	P	P		05 17 26.0	-1.5	
OBN				*i*				05 17 41.4		
OBN				*i*				05 17 57.2		
OBN					pmax	pmax				
	comp=Z,16nm,0.9s									
OBN					MLR	MLR				
	comp=Z,288nm,13.0s									
OBN	Obninsk	20.10	28		LR	LR		05 27 03.0		
	comp=Z,33nm,18.6s,baz=166,slow=42									
GNBR	Gunib	20.62	70	*i*	P	P		05 17 34.5	+1.1	
VSU	Vasula	20.65	9		P	P		05 17 31.4	-2.0	
VSU					pmax	pmax				
	comp=Z,183nm,0.7s									
STRD	Stroud	20.82	318	*e*	P	Pn		05 17 38.3	+0.5	
STRD					lAmb	lAmb		05 17 40.9		
	comp=Z,68nm,0.6s									
CWF	Charnwood Fore	20.91	321	*e*	P	P		05 17 37.4	+1.1	
MOS	Moscow	20.97	28	*e*	P	P		05 17 34.0	-2.9	
MOS				*e*	S	S		05 21 18.3	-12	
MOS					pmax	pmax				
	comp=Z,31nm,0.8s									
MDT	Midelt	21.05	263		LR	LR		05 25 58.8		
	comp=Z,120nm,18.9s,baz=360,slow=37									
MONM	Monmouth	21.19	317	*e*	P	P		05 17 42.9	+3.5	
MONM					lAmb	lAmb		05 17 45.8		
	comp=Z,134nm,1.5s									
MCH1	Michaelchurch	21.38	318	*e*	P	P		05 17 43.9	+2.5	
LBWR	Ladybower, Pea	21.50	322	*e*	P	P		05 17 44.3	+1.6	
HLM1	Long Mynd	21.59	319	*e*	P	P		05 17 44.7	+1.0	
HPK	Haverah Park	21.79	323	*e*	P	P		05 17 48.3	+2.6	
FOEL	Foel Wylfa	21.95	319	*e*	P	P		05 17 48.7	+1.2	
FOEL					lAmb	lAmb		05 17 51.9		
	comp=Z,56nm,0.8s									
HFS	Hagfors	22.32	351		P	P		05 17 51.3	-0.1	
	comp=Z,12nm,0.7s,baz=156,slow=11,SNR=47									
NC602	NORSAR Array S	23.20	349		P	P		05 17 59.8	-0.8	
NC602					lAmb	lAmb		05 18 11.1		
	comp=Z,17nm,0.8s									
EKA	Eskdalemuir Ar	23.33	325		P	P		05 18 01.7	-0.3	
	comp=Z,22nm,0.9s,baz=128,slow=10,SNR=20									
ESK	Eskdalemuir	23.34	325	*e*	P	P		05 18 02.7	+0.6	
ESK					lAmb	lAmb		05 18 03.8		
	comp=Z,51nm,1.2s									
ESK	Eskdalemuir	23.34	325		P	P		05 18 02.3	+0.2	
ESK					pmax	pmax				
	comp=Z,65nm,1.3s									
ESK	Eskdalemuir	23.34	325		P	P		05 18 02.3	+0.2	
NAO01	NORSAR Array S	23.41	348		P	P		05 18 03.3	+0.6	
FINES	FINESS Array B	23.49	7	*i*	P	P		05 18 02.2	-1.3	
FINES					pmax	pmax				
	comp=Z,7.0nm,0.7s									
FINES	FINESS Array B	23.49	7		P	P		05 18 02.0	-1.6	
	comp=Z,7.3nm,0.7s,baz=173,slow=9.7,SNR=25									
FINES	FINESS Array B	23.49	7		P	P		05 18 02.5	-1.1	
FIA1	FINESS Array S	23.49	7		P	P		05 18 02.9	-0.6	
FIA1					lAmb	lAmb		05 18 08.7		
	comp=Z,19nm,0.8s									
NC405	NORSAR Array S	23.54	349		P	P		05 18 04.0	0.0	
NB2	NORSAR Subarra	23.54	349		P	P		05 18 03.5	-0.6	
	comp=Z,9.0nm,0.8s,baz=155,slow=11									
NOA	NORSAR Array B	23.54	349		P	P		05 18 03.4	-0.6	
	comp=Z,5.0nm,0.8s,baz=170,slow=8.6,SNR=13									
NOA					LR	LR		05 27 58.1		
	comp=Z,72nm,21.5s,baz=285,slow=39									
EBL	Broad Law	23.55	326	*e*	P	P		05 18 05.5	+1.3	
NBO00	NORSAR Array S	23.60	348		P	P		05 18 04.8	+0.1	
NC303	NORSAR Array S	23.69	349		P	P		05 18 04.5	-1.0	
NC303					lAmb	lAmb		05 18 08.9		
	comp=Z,36nm,1.4s									
NC204	NORSAR Array S	23.84	348		P	P		05 18 06.5	-0.4	
INVG	Invergeldie, C	24.39	326	*e*	P	P		05 18 13.6	+1.4	
KLMR	Klimovskoe	25.61	22	*e*	P	P		05 18 21.9	-1.1	
KLMR					pmax	pmax				
	comp=Z,21nm,0.9s									
KLMR	Klimovskoe	25.61	22	*e*	P	P		05 18 21.9	-1.1	
KLMR					AMP			05 18 24.0		
	comp=Z,21nm,0.9s									
KIRV	Kirov	27.64	33		P	P		05 18 40.2	-1.2	
	comp=Z,11nm,0.7s,baz=249,slow=2.5,SNR=4.3									
KIRV					LR	LR		05 30 39.2		
	comp=Z,159nm,20.1s,baz=54,slow=39									
PRGR	Permogore	28.14	26	*e*	P	P		05 18 42.0	-3.8	
PRGR					pmax	pmax				
	comp=Z,11nm,0.6s									
AKTO	Aktyubinsk	29.20	53		P	P		05 18 54.8	-0.6	
	comp=Z,2.3nm,0.4s,baz=228,slow=3.9,SNR=14									
GEYT	Alibeck	29.54	79		P	P		05 18 58.6	0.0	
	comp=Z,3.7nm,0.5s,baz=268,slow=8.9,SNR=7.2									
GEYT	Alibeck	29.54	79		P	P		05 18 58.9	+0.3	
TOA0	Torodi Ar. Sit	30.03	219		P	P		05 19 03.3	+0.3	
TOA0					lAmb	lAmb		05 19 03.9		
	comp=Z,5.7nm,0.7s									
TORD	Torodi Ar. Bea	30.03	219		P	P		05 19 02.9	-0.2	
	comp=Z,5.7nm,0.7s,baz=30,slow=9.5,SNR=42									
TORD					LR	LR		05 32 25.8		
	comp=Z,103nm,18.0s,baz=355,slow=39									
TORD	Torodi Ar. Bea	30.03	219		lAmb	lAmb		05 19 03.9		
	comp=Z,3.8nm,0.8s									
ABKAR	Akbulak array	30.27	56		P	P		05 19 04.0	-0.9	
ARU	Arti	31.06	42	*c*	P	P		05 19 10.7	-1.1	
ARU								05 20 09.2		
ARU					S	S		05 24 19.1	+2.8	
ARU					SS	SnSn		05 26 03.9	+6.6	
ARU					pmax	pmax				
	comp=Z,16nm,1.5s									
ARU	Arti	31.06	42		P	P		05 19 10.8	-1.1	
	comp=Z,2.7nm,0.4s,baz=267,slow=3.9,SNR=11									
ARU	Arti	31.06	42		P	P		05 19 10.9	-0.9	
ARU					lAmb	lAmb		05 19 11.3		
	comp=Z,6.6nm,0.5s									
ARCES	ARCESS Array B	31.47	3		P	P		05 19 14.8	-0.5	
	comp=Z,1.9nm,0.5s,baz=193,slow=9.4,SNR=13									
ARCES	ARCESS Array B	31.47	3		P	P		05 19 14.4	-0.9	
UOSS	Minazif	33.03	103		P	P		05 19 29.4	0.0	
UOSS					lAmb	lAmb		05 19 47.0		
	comp=Z,5.8nm,0.8s									

RES					pmax	pmax			
	comp=Z,7.0nm,1.5s								
RES	**Resolute Bay**	**59.69**	**344**		P	**P**	**05 22 59.4**	**+1.6**
RES					IAmb	IAmb	05 23 04.0		
	comp=Z,7.2nm,1.5s								
GTA	**Gaotai**	**59.86**	**62**	*e*P	**P**		**05 22 57.5**	**-2.3**
GTA					pP	pP	05 23 01.8	-2.8	
GTA					sP	sP	05 23 04.8	-1.6	
GTA					pmax	pmax			
	comp=Z,1.0nm,0.8s								
BOD	**Bodaibo**	**60.37**	**38**	*e*P	**P**		**05 23 01.7**	**-1.1**	
BOD					pmax	pmax			
	comp=Z,6.0nm,0.9s								
SONM	**Songino Array**	**60.48**	**51**	P	**P**		**05 23 03.4**	**-0.5**	
	comp=Z,2.5nm,0.7s,baz=279,slow=8.5,SNR=21								
SONM	**Songino Array**	**60.48**	**51**	P	**P**		**05 23 03.4**	**-0.5**	
ULN	**Ulaanbaatar**	**60.86**	**50**	P	**P**		**05 23 06.5**	**0.0**	
ULN					pmax	pmax			
	comp=Z,3.0nm,0.8s								
ULN	**Ulaanbaatar**	**60.86**	**50**	P	**P**		**05 23 06.5**	**0.0**	
ULN					IAmb	IAmb	05 23 07.0		
	comp=Z,3.4nm,0.8s								
LZH	**Lanzhou**	**64.24**	**63**	*e*P	**P**		**05 23 28.8**	**-0.5**	
LZH					pP	pP	05 23 32.0	-2.1	
LZH					sP	sP	05 23 33.5	-2.4	
LZH					*e*PP	**PP**	**05 25 52.0**	**+1.7**	
LZH					pmax	pmax			
	comp=Z,17nm,1.3s								
LZH					pmax	pmax			
	comp=Z,65nm,7.4s								
LZH					LR	LR			
	comp=N,170nm,15.3s								
LZH					LR	LR			
	comp=E,170nm,15.4s								
LZH					LR	LR			
	comp=Z,270nm,18.0s								
YAK	**Yakutsk**	**65.09**	**29**	*e*P	**P**		**05 23 33.6**	**-0.6**	
YAK					pmax	pmax			
	comp=Z,17nm,0.7s								
BOSA	**Boshof**	**66.66**	**175**	P	**P**		**05 23 45.8**	**+1.0**	
	comp=Z,1.5nm,0.5s,baz=7.3,slow=5.8,SNR=5.2								
BOSA					LR	LR	05 54 20.1		
	comp=Z,46nm,18.4s,baz=328,slow=37								
HHC	**Hu-ho-hao-te**	**67.06**	**55**	*e*P	**P**		**05 23 46.5**	**-0.9**	
HHC					pmax	pmax			
	comp=Z,3.0nm,0.6s								
HHC					pmax	pmax			
	comp=Z,64nm,6.4s								
XAN	**Xi'an**	**68.86**	**63**	P	**P**		**05 23 58.0**	**-0.7**	
XAN					pP	pP	05 25 26.5	+83	
XAN					pmax	pmax			
	comp=Z,7.0nm,0.7s								
XAN	**Xi'an**	**68.86**	**63**	P	**P**		**05 23 58.5**	**-0.2**	
XAN					pmax	pmax			
	comp=Z,5.0nm,0.7s								
XAN	**Xi'an**	**68.86**	**63**	P	**P**		**05 23 58.5**	**-0.2**	
XAN					IAmb	IAmb	05 23 59.4		
	comp=Z,4.9nm,0.7s								
CMAR	**Chiang Mai Arr**	**69.96**	**82**	*i* P	**P**		**05 24 04.5**	**-1.2**	
CMAR					pmax	pmax			
	comp=Z,1.0nm,0.3s								
CMAR	**Chiang Mai Arr**	**69.96**	**82**	P	**P**		**05 24 04.8**	**-0.9**	
	comp=Z,1.1nm,0.3s,baz=302,slow=7.1,SNR=7.0								
SADO	**Sadowa**	**70.16**	**312**	P	**P**		**05 24 07.6**	**+1.2**	
BILL	**Bilibino**	**70.97**	**13**	*i* P	**P**		**05 24 10.2**	**-0.8**	
BILL				*i*			05 24 33.9		
BILL				*i*			05 26 45.1		
BILL					pmax	pmax			
	comp=Z,3.0nm,0.9s								
BILL					MLR	MLR			
	comp=Z,141nm,15.0s								
SEY	**Seymchan**	**72.10**	**21**	*i* P	**P**		**05 24 18.0**	**+0.1**	
YKA	**Yellowknife Ar**	**73.30**	**340**	P	**P**		**05 24 25.6**	**+0.6**	
	comp=Z,1.1nm,0.6s,baz=33,slow=5.5,SNR=28								
KLR	**Kul'dur**	**73.87**	**39**	*i* P	**P**		**05 24 27.5**	**-1.2**	
KLR					pmax	pmax			
	comp=Z,8.0nm,1.0s								
EPYK	**Eagle Plains**	**74.24**	**351**	P	**P**		**05 24 31.5**	**+0.9**	
MA2	**Magadan**	**74.27**	**24**	*i* P	**P**		**05 24 30.7**	**-0.1**	
MA2					pmax	pmax			
	comp=Z,6.0nm,0.9s								
MA2	**Magadan**	**74.27**	**24**	P	**P**		**05 24 32.0**	**+1.2**	
MA2					IAmb	IAmb	05 24 32.1		
	comp=Z,12nm,1.2s								
ULM	**Lac du Bonnet**	**75.60**	**324**	P	**P**		**05 24 39.6**	**+0.9**	
	comp=Z,2.7nm,0.6s,baz=44,slow=7.4,SNR=7.5								
ULM	**Lac du Bonnet**	**75.60**	**324**	IAmb	IAmb		05 24 40.2		
	comp=Z,5.3nm,0.9s								
IMAR	**Indian Mountai**	**76.01**	**358**	P	**P**		**05 24 42.2**	**+1.5**	
ILAR	**Eielson Array**	**76.84**	**354**	P	**P**		**05 24 46.5**	**+1.0**	
	comp=Z,1.3nm,0.9s,baz=357,slow=4.0,SNR=11								
NJ2	**Nanjing**	**76.85**	**60**	*e*P	**P**		**05 24 45.8**	**-0.3**	
NJ2					pmax	pmax			
	comp=Z,8.0nm,0.7s								
WRH	**Wood River Hil**	**77.22**	**355**	P	**P**		**05 24 48.6**	**+1.0**	
WRH					IAmb	IAmb	05 24 49.2		
	comp=Z,7.2nm,0.9s								
USRK	**Ussuriysk Ar.**	**77.29**	**43**	P	**P**		**05 24 48.5**	**+0.2**	
USRK	**Ussuriysk Ar.**	**77.29**	**43**	P	**P**		**05 24 48.2**	**-0.1**	
	comp=Z,1.8nm,0.4s,baz=297,slow=4.3,SNR=7.1								
USRK	**Ussuriysk Ar.**	**77.29**	**43**	P	**P**		**05 24 48.5**	**+0.2**	
SCRK	**Sand Creek**	**77.37**	**353**	P	**P**		**05 24 50.5**	**+1.9**	
ANM	**Nome**	**77.43**	**3**	P	**P**		**05 24 49.9**	**+1.1**	
ANM					pmax	pmax			
	comp=Z,3.0nm,0.9s								
ANM	**Nome**	**77.43**	**3**	P	**P**		**05 24 49.9**	**+1.1**	
ANM					IAmb	IAmb	05 24 51.2		
	comp=Z,3.5nm,0.9s								
BPAW	**Bear Paw Mtn.**	**77.77**	**356**	P	**P**		**05 24 51.8**	**+1.1**	
BPAW					IAmb	IAmb	05 25 09.8		
	comp=Z,9.2nm,1.5s								
BCAR	**Beaver Creek A**	**78.03**	**352**	P	**P**		**05 24 53.7**	**+1.5**	
DHY	**Denali Highway**	**78.55**	**354**	P	**P**		**05 24 56.2**	**+1.0**	
DHY					IAmb	IAmb	05 24 56.8		
	comp=Z,4.3nm,0.7s								
PPLA	**Purkeypile**	**79.03**	**357**	P	**P**		**05 24 59.2**	**+1.3**	
PPLA					IAmb	IAmb	05 25 11.1		
	comp=Z,12nm,1.2s								
KSAR	**Wonju Array Be**	**79.33**	**51**	P	**P**		**05 24 59.6**	**-0.2**	
KSAR	**Wonju Array Be**	**79.33**	**51**	P	**P**		**05 24 59.5**	**-0.2**	
KSRS	**Korea Array**	**79.35**	**51**	P	**P**		**05 24 59.7**	**-0.2**	
	comp=Z,3.0nm,0.6s,baz=308,slow=5.0,SNR=11								
ECSD	**EROS Data Cent**	**80.49**	**319**	P	**P**		**05 25 07.0**	**+1.0**	
ECSD					IAmb	IAmb	05 25 07.4		
	comp=Z,3.9nm,0.5s								
YSS	**Yuzh-Sakhalins**	**80.76**	**36**	*e*P	**P**		**05 25 05.2**	**-2.1**	
YSS					MLR	MLR			
	comp=Z,600nm,13.0s								
EGMT	**Eagleton**	**83.35**	**329**	P	**P**		**05 25 22.6**	**+1.6**	
JTMT	**Jette**	**85.35**	**331**	P	**P**		**05 25 33.1**	**+1.9**	
YNE	**Yellowstone No**	**85.86**	**327**	P	**P**		**05 25 34.6**	**+0.6**	
NEW	**Newport**	**85.96**	**333**	P	**P**		**05 25 34.8**	**+0.7**	
NEW					pmax	pmax			
	comp=Z,3.0nm,1.4s								
NEW	**Newport**	**85.96**	**333**	P	**P**		**05 25 34.8**	**+0.7**	
BMO	**Blue Mountains**	**88.92**	**331**	P	**P**		**05 25 48.7**	**+0.1**	
BMO					pmax	pmax			
	comp=Z,5.0nm,1.3s								
BMO	**Blue Mountains**	**88.92**	**331**	P	**P**		**05 25 48.7**	**+0.1**	
BMO					IAmb	IAmb	05 25 51.1		
	comp=Z,5.1nm,1.3s								
SRU	**San Rafael Swe**	**90.81**	**324**	P	**P**		**05 25 58.3**	**+0.7**	
SRU					pmax	pmax			
	comp=Z,3.0nm,0.6s								
SRU	**San Rafael Swe**	**90.81**	**324**	P	**P**		**05 25 58.3**	**+0.7**	
TXAR	**Lajitas Array**	**94.87**	**313**	P	**P**		**05 26 17.5**	**+1.1**	
	comp=Z,0.4nm,0.6s,baz=59,slow=6.1,SNR=4.8								
ASAR	**Alice Springs**	**122.26**	**96**	PKP		**PKPdf**	**05 31 49.0**	**-0.2**	
	comp=Z,0.3nm,0.3s,baz=311,slow=1.8,SNR=4.4								

TAP 28 05:14:58.2,24°.12N×121°.62E,h8km,ML1.1,1D,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.05**	**209**	P	Pg	05 15 00.3	+0.4
	baz=200						
NACB	**Ninganchiao**	**0.06**	**335**	⇓P	Pg	05 15 00.5	+0.4
	baz=335						
HWA	**Hwalien**	**0.14**	**186**	*e*P	Pg	05 15 02.0	+0.7
	baz=182						
ETLH	**Xiulin Townshi**	**0.15**	**304**	*e*P	Pg	05 15 02.3	+0.8
	baz=303						
WHF	**Hehuan Shan**	**0.33**	**274**	*e*P	Pb	05 15 05.7	-0.8
	baz=273						
WHF				*e*S	Sg	05 15 10.5	+1.3
	baz=273						
NANB	**Nanao**	**0.33**	**21**	*e*P	Pb	05 15 05.6	-0.7
	baz=21						
ESL	**Shilin**	**0.35**	**209**	*e*P	Pg	05 15 05.2	+0.1
	baz=208						
NNSH	**Datong**	**0.38**	**325**	*e*P	Pb	05 15 07.1	-0.1
	baz=324						
CHGB	**Renai**	**0.41**	**262**	*e*P	Pg	05 15 07.1	+0.7
	baz=261						
TWT	**Tachien**	**0.43**	**288**	*e*P	Pb	05 15 08.4	+0.3
	baz=286						
OWD	**Renai**	**0.44**	**248**	*e*P	Pb	05 15 08.1	-0.2
	baz=247						
TDCB	**Techi**	**0.44**	**287**	*e*P	Pb	05 15 07.9	-0.5
	baz=287						
VWDT	**VWDT**	**0.57**	**230**	*e*P	Pb	05 15 10.6	+0.1
	baz=230						
YHNB	**Yeheng**	**0.59**	**338**	*e*P	Pb	05 15 10.6	-0.2
	baz=337						
WHP	**Taichung City**	**0.64**	**284**	*e*P	Pb	05 15 11.9	+0.3
	baz=284						
SSLB	**Suanglung**	**0.69**	**242**	*e*P	Pb	05 15 12.3	-0.3
	baz=241						

TAP 28 05:15:00.3,24°.12N×121°.59E,h7km,ML1.5,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.04**	**177**	*e*P	Pg	05 15 02.4	+0.6
	baz=166						
TWD				S	Sg	05 15 03.8	+0.8
	baz=166						
TWD	**Chiawan**	**0.04**	**177**	*e*S	Pg	05 15 01.9	+0.1
	baz=200						
NACB	**Ninganchiao**	**0.05**	**1**	*e*P	Pg	05 15 02.0	0.0
NACB				S	Sg	05 15 04.0	+0.8
NACB	**Ninganchiao**	**0.05**	**1**	*e*S	Pg	05 15 02.1	+0.1
	baz=335						
ETLH	**Xiulin Townshi**	**0.13**	**310**	*e*P	Pg	05 15 03.9	+0.7
	baz=309						
ETLH				*e*S	Sg	05 15 06.8	+1.5
	baz=309						
WHF	**Hehuan Shan**	**0.30**	**274**	*e*P	Pg	05 15 07.1	+0.7
	baz=274						
NANB	**Nanao**	**0.34**	**25**	*e*P	Pg	05 15 07.5	+0.5
	baz=24						
ESL	**Shilin**	**0.34**	**206**	*e*P	Pg	05 15 07.7	+0.7
	baz=204						
NNSB	**Datong**	**0.36**	**328**	*e*P	Pb	05 15 08.8	-0.4
	baz=327						
NNSH	**Datong**	**0.36**	**328**	*e*P	Pb	05 15 08.7	-0.4
	baz=327						
NNS	**Nan Shan**	**0.38**	**328**	*e*P	Pg	05 15 08.2	+0.4
	baz=328						
CHGB	**Renai**	**0.39**	**261**	*e*P	Pg	05 15 08.8	+0.8
	baz=260						
CHGB				*e*S	Sb	05 15 15.4	-0.6
	baz=260						
TWT	**Tachien**	**0.40**	**289**	*e*P	Pb	05 15 09.7	-0.2
	baz=287						
OWD	**Renai**	**0.42**	**247**	*e*P	Pb	05 15 09.9	-0.2
	baz=246						
TDCB	**Techi**	**0.42**	**288**	*e*P	Pb	05 15 09.8	-0.4
	baz=288						
TWC	**Suao**	**0.54**	**26**	*e*P	Pb	05 15 11.5	-0.6
	baz=26						
VWDT	**VWDT**	**0.55**	**229**	*e*P	Pg	05 15 11.4	+0.4
	baz=228						
YHNB	**Yeheng**	**0.58**	**340**	*e*P	Pb	05 15 12.3	-0.6
	baz=339						
YHNB				*e*S	Sg	05 15 20.1	+0.9
	baz=339						
WHP	**Taichung City**	**0.61**	**285**	*e*P	Pb	05 15 13.5	+0.1
	baz=284						
NWLT	**Wulai**	**0.66**	**353**	*e*P	Pb	05 15 13.9	-0.3
	baz=352						
SSLB	**Suanglung**	**0.67**	**241**	*e*P	Pg	05 15 13.7	+0.4
	baz=240						
YULB	**Yu-li**	**0.78**	**201**	*e*P	Pb	05 15 15.8	-0.4
	baz=200						
TIPB	**Shuangxi**	**0.87**	**14**	*e*P	Pb	05 15 17.6	-0.2
	baz=13						

*NAO **28** 05:16:02.0±1.7,67°.70N×33°.77E,ML1.8*
HEL 28 05:16:01.0±0.6,67°.61N×34°.16E,h0km,ML1.6, Explosion,Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APZ9	**Apatity**	**0.29**	**262**	Pg	Pg	05 16 05.3	-1.2
APZ9				Lg	Lg	05 16 08.6	
APZ9	**Apatity**	**0.29**	**262**	Pg	Pg	05 16 05.3	-1.2
APZ9				Sg	Sg	05 16 08.6	-1.7
APA0	**Apatity Array**	**0.45**	**270**	Pg	Pg	05 16 07.9	-1.6
	baz=86,slow=16						
APA0				Lg	Lg	05 16 12.0	
	baz=50,slow=37						
APA0	**Apatity Array**	**0.45**	**270**	Pg	Pg	05 16 07.9	-1.6
	baz=86,slow=16						
APA0				Sg	Sg	05 16 12.0	-3.3
	baz=50,slow=37						
VRF	**Varrio**	**1.74**	**277**	PG	Pn	05 16 32.1	-0.3
VRF				MSG		05 16 53.1	
	comp=Z,3.0nm,0.2s						
VRF				SG	Sn	05 16 53.6	-1.7
KU6	**Riekki**	**2.32**	**229**	PG	Pb	05 16 42.3	-1.4
	baz=44						
KU6				MSG		05 17 09.7	
	comp=Z,3.6nm,0.2s						
KU6				SG	Sb	05 17 12.0	-0.8
KEV	**Kevo**	**3.38**	**313**	Pn	Pn	05 16 52.2	-2.7
KEV				Sn	Sn	05 17 31.7	-4.0
KEV				Lg	Lg	05 17 41.7	
KEV	**Kevo**	**3.38**	**313**	*e*P	Pn	05 16 53.1	-1.8
KEV				*e*S	Sn	05 17 31.7	-4.0
ARA0	**ARCESS Array S**	**3.71**	**305**	Pn	Pn	05 16 58.8	-0.7
	baz=122,slow=16						
ARA0				Sn	Sn	05 17 40.4	-3.5
	baz=118,slow=28						
ARA0				Lg	Lg	05 17 53.5	
	baz=107,slow=37						
ARA0	**ARCESS Array S**	**3.71**	**305**	Pn	Pn	05 16 58.8	-0.7
	baz=122,slow=16						
ARA0				Sn	Sn	05 17 40.4	-3.5
	baz=118,slow=28						
ARA0				Sg	Sb	05 17 53.5	+0.6
	baz=107,slow=37						
ARE0	**ARCESS Array S**	**3.71**	**305**	PN	Pn	05 16 58.8	-0.7
	baz=116						
ARE0				SN	Sn	05 17 42.7	-1.3
ARE0	**ARCESS Array S**	**3.71**	**305**	*e*P	Pn	05 16 58.2	-1.3
ARE0				*e*S	Sn	05 17 41.5	-2.4
KTK1	**Kautokeino**	**4.29**	**294**	*e*P	Pn	05 17 05.2	-2.2
KTK1				*e*S	Sn	05 17 53.8	-4.3
KTK1				IAML		05 18 11.4	
	comp=Z,2.9nm,0.6s						
KALU	**Kalix**	**4.63**	**253**	SG	Sg	05 18 24.6	-4.9

*SJA **28** 05:22:14.9±0.8,36°.42S×74°.34W,h10km,ML3.2,MW3.3*
*GUC **28** 05:22:23.7±0.9,36°.88S×73°.50W,h12km±4km,ML3.2*
ISC 28 05:22:17.9±2.6,36°.81S±0°.05×73°.6W±0°.1,h9km±14km,n17,s19°87/24,1D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.42**	**95**	⇓*i*P	**Pn**	**05 22 29.8**	**-0.2**
CCSP				*i* S	**Sb**	**05 22 34.0**	**+0.2**
CCSP				IAML		05 22 34.7	
	comp=N,9μm,0.2s						
CCHI	**Chillan**	**1.26**	**81**	*e*P	**Pg**	**05 22 43.1**	**+1.0**
CCHI				*i* S	**Sn**	**05 22 59.3**	**+0.6**
CCHI				IAML		05 23 01.3	
	comp=E,899nm,0.3s						
CCHI	**Chillan**	**1.26**	**81**	*e*P	**Pg**	**05 22 43.0**	**+1.0**
GO05	**Huala**	**2.26**	**38**	*e*P	**Pn**	**05 22 56.3**	**+0.8**
GO05				*i* S	**Sn**	**05 23 21.8**	**-1.6**
GO05				IAML		05 23 37.9	
	comp=N,244nm,0.6s						
GO05	**Huala**	**2.26**	**38**	*i* P	**Pn**	**05 22 57.0**	**+1.6**
GO05				*e*S	**Sb**	**05 23 27.9**	**+0.9**
CANA	**Caviahue**	**2.31**	**119**	*e*P	**Pg**	**05 23 00.8**	**-1.4**
CANA				IAML		05 23 50.2	
	comp=Z,59nm,1.0s						
CANA				IAML		05 23 58.3	
	comp=Z,52nm,0.6s						
LC01	**Cunco**	**2.50**	**147**	*e*P	**Pb**	**05 23 03.4**	**+0.4**
LC01				*i* S	**Sb**	**05 23 32.7**	**-1.3**
LC01				IAML		05 23 42.1	
	comp=N,113nm,0.5s						
BO02	**Sierra Bellavi**	**3.06**	**50**	*e*P	**Pn**	**05 23 08.6**	**+2.1**
BO02				*i* S	**Sn**	**05 23 44.9**	**+1.5**
EDS3	**Malargue**	**3.57**	**74**	*i* P	**Pb**	**05 23 20.9**	**-0.4**
COIS	**El Sosneado**	**3.68**	**64**	*i* P	**Pb**	**05 23 19.6**	**-3.6**
LMEL	**Las Melosas**	**4.07**	**44**	*e*P	**Pn**	**05 23 22.5**	**+2.1**
LMEL				*i* S	**Sn**	**05 24 06.0**	**-2.2**
AAGR	**Agrelo**	**5.41**	**48**	*i* P	**Pn**	**05 23 42.8**	**+3.9**
ASAL	**Salagasta**	**5.77**	**45**	*i* P	**Pn**	**05 23 46.8**	**+3.0**
ASAL				IAML		05 25 28.5	
	comp=Z,10nm,1.4s						
RTLL	**Cerro Villicun**	**6.94**	**40**	*i* P	**Pn**	**05 24 01.0**	**+1.3**
RTLL				IAML		05 26 34.0	
	comp=Z,6.0nm,0.7s						
RTLL				IAML		05 26 34.0	
	comp=Z,6.0nm,0.7s						
AMOG	**MOGNA**	**7.24**	**38**	*i* P	**Pn**	**05 24 04.9**	**+0.9**
AMOG				IAML		05 26 30.5	
	comp=Z,3.0nm,0.2s						
APLL	**PUNTA DE LOS L**	**8.71**	**45**	*i* P	**Pn**	**05 24 23.5**	**-0.6**
CYA	**Choya**	**10.63**	**41**	*i* P	**Pn**	**05 24 49.5**	**-0.8**

*TAP **28** 05:24:58.0,24°.90N×122°.26E,h13km,ML2.7,C*
*JMA **28** 05:24:58.3±0.1,24°.78N×122°.25E,h0km,M2.3*
ISC 28 05:24:58.3±1.0,24°.85N±0°.03×122°.28E±0°.02,h12km±9km, n49,σ8°39/65,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.30**	**301**	⇑*i*P	**Pg**	**05 25 04.1**	**-0.3**
	baz=287						
TWB1				*i* S	**Sg**	**05 25 08.2**	**-0.5**
	baz=287						
EOS1	**EOS1**	**0.33**	**204**	P	**Pb**	**05 25 05.9**	**-0.1**
	baz=212						
EOS1				S	**Sb**	**05 25 11.7**	**+0.4**
	baz=212						
NTC	**Toucheng**	**0.41**	**271**	*e*P	**Pb**	**05 25 07.2**	**-0.2**
	baz=262						
TIPB	**Shuangxi**	**0.43**	**287**	P	**Pg**	**05 25 06.7**	**0.0**
	baz=279						
TIPB				S	**Sg**	**05 25 12.5**	**0.0**
	baz=279						
TWC	**Suao**	**0.46**	**238**	*e*P	**Pg**	**05 25 07.0**	**-0.2**
	baz=223						
WFSB	**Wu-fen Shan**	**0.50**	**296**	*e*P	**Pg**	**05 25 08.4**	**+0.3**
	baz=289						
WFSB				S	**Sg**	**05 25 15.0**	**+0.3**
	baz=289						
TWE	**Neicheng**	**0.57**	**257**	P	**Pg**	**05 25 09.7**	**+0.3**
	baz=240						
TWE				*e*S	**Sb**	**05 25 18.2**	**0.0**
	baz=240						
SLBB	**Yuanshan**	**0.59**	**261**	*e*P	**Pb**	**05 25 10.6**	**0.0**
	baz=245						
NANB	**Nanao**	**0.64**	**229**	P	**Pg**	**05 25 10.6**	**-0.1**
	baz=215						
NANB				*e*S	**Sb**	**05 25 20.7**	**+0.5**
	baz=215						
TWA	**Mucha**	**0.64**	**282**	*e*P	**Pb**	**05 25 11.3**	**-0.2**
	baz=277						
ENA	**Nanau**	**0.64**	**229**	*e*P	**Pg**	**05 25 10.6**	**-0.1**
	baz=217						
ENTT	**Nioudou**	**0.68**	**252**	*e*P	**Pg**	**05 25 10.4**	**-1.0**
	baz=238						
NHDH	**Xindian Distri**	**0.69**	**280**	*e*P	**Pb**	**05 25 12.4**	**+0.2**
	baz=266						
YM01	**YM01**	**0.70**	**295**	*e*P	**Pg**	**05 25 12.0**	**0.0**
	baz=290						
YM01				*e*S	**Sb**	**05 25 21.7**	**-0.6**
	baz=290						
NWLT	**Wulai**	**0.71**	**264**	*e*P	**Pb**	**05 25 12.6**	**+0.1**
	baz=259						
NWLT				*e*S	**Sb**	**05 25 23.0**	**+0.8**
	baz=259						
YM08	**YM08**	**0.71**	**299**	*e*P	**Pg**	**05 25 11.9**	**-0.1**
	baz=294						
YM08				*e*S	**Sg**	**05 25 21.5**	**+0.2**
	baz=294						
YM11	**YM11**	**0.71**	**296**	*e*P	**Pb**	**05 25 12.4**	**-0.3**
	baz=292						
YM05	**YM05**	**0.72**	**296**	*e*P	**Pg**	**05 25 12.3**	**+0.2**
	baz=292						
TATO	**Taipei**	**0.73**	**280**	*e*P	**Pg**	**05 25 12.5**	**+0.2**
	baz=275						
JYNG	**Yonagunijimaku**	**0.73**	**123**	P	**Pg**	**05 25 12.5**	**+0.1**
JYNG				S	**Sg**	**05 25 22.5**	**+0.6**
NDT	**Datong Townshi**	**0.74**	**251**	*e*P	**Pb**	**05 25 13.2**	**+0.1**
	baz=246						
YM04	**YM04**	**0.74**	**294**	*e*P	**Pg**	**05 25 12.4**	**-0.1**
	baz=290						
TWY	**Chenhua**	**0.75**	**305**	*e*P	**Pg**	**05 25 12.8**	**0.0**
	baz=288						
TWY				*e*S	**Sg**	**05 25 22.8**	**+0.3**
	baz=288						
ANP	**Anpu**	**0.76**	**296**	*e*P	**Pb**	**05 25 13.3**	**-0.2**
	baz=292						
YOJ	**Yonaguni jima**	**0.77**	**120**	P	**Pg**	**05 25 13.6**	**+0.4**
	baz=110						
YOJ				*e*S	**Sb**	**05 25 24.2**	**0.0**
	baz=110						
YOJ	**Yonaguni jima**	**0.77**	**120**	P	**Pg**	**05 25 13.2**	**0.0**
YOJ				S	**Sb**	**05 25 24.1**	**0.0**
PCYT	**Pengchaiyu**	**0.80**	**347**	*e*P	**Pg**	**05 25 13.9**	**+0.2**
	baz=347						
YHNB	**Yeheng**	**0.84**	**258**	P	**Pb**	**05 25 14.8**	**-0.1**
	baz=264						
NSK	**Sanguang**	**0.85**	**258**	*e*P	**Pg**	**05 25 14.5**	**-0.3**
	baz=262						
NNSB	**Datong**	**0.91**	**243**	*e*P	**Pb**	**05 25 16.3**	**+0.1**
	baz=230						
NNSB				S	**Sb**	**05 25 28.9**	**+0.5**
	baz=230						
NNSH	**Datong**	**0.91**	**243**	*e*P	**Pb**	**05 25 16.2**	**+0.1**
	baz=230						
NACB	**Ninganchiao**	**0.92**	**223**	*e*P	**Pg**	**05 25 15.4**	**-0.5**
	baz=220						
NACB				*e*S	**Sg**	**05 25 27.2**	**-0.6**
	baz=220						
NNS	**Nan Shan**	**0.92**	**244**	*e*P	**Pb**	**05 25 16.1**	**-0.1**
	baz=230						
NNS				*e*S	**Sb**	**05 25 29.0**	**+0.6**
	baz=230						
ETLH	**Xiulin Townshi**	**0.97**	**229**	*e*P	**Pg**	**05 25 16.7**	**-0.2**
	baz=214						
TWD	**Chiawan**	**0.98**	**219**	*e*P	**Pn**	**05 25 18.3**	**+0.4**
	baz=216						
WHF	**Hehuan Shan**	**1.16**	**233

TWB1	**Santiao Chiao** baz=285	**0.28**	**284**	P	Pb	05 25 16.6	+0.1
TWB1	baz=285			S	Sb	05 25 20.7	-0.2
EOS1	**EOS1** baz=215	**0.42**	**200**	P	Pg	05 25 18.6	0.0
EOS1	baz=215			*e*S	Sg	05 25 24.2	-0.2
TIPB	**Shuangxi** baz=275	**0.42**	**274**	*e*P	Pb	05 25 19.5	+0.5
TIPB	baz=275			*e*S	Sb	05 25 25.4	+0.3
WFSB	**Wu-fen Shan** baz=287	**0.48**	**286**	*e*P	Pb	05 25 20.7	+0.8
TWC	**Suao** baz=223	**0.52**	**230**	*e*P	Pg	05 25 20.2	-0.3
ILA	**Ilan** baz=252	**0.52**	**250**	*e*P	Pg	05 25 20.3	-0.3
TWE	**Neicheng** baz=240	**0.60**	**249**	*e*P	Pg	05 25 22.2	+0.1
YM01	**YM01** baz=288	**0.68**	**288**	*e*P	Pg	05 25 23.6	+0.1
YM05	**YM05** baz=289	**0.69**	**289**	*e*P	Pn	05 25 24.9	-0.1
TWY	**Chenhua** baz=298	**0.71**	**298**	*e*P	Pb	05 25 23.6	-0.3
NANB	**Nanao** baz=219	**0.71**	**224**	*e*P	Pb	05 25 23.0	-0.9
NANB	baz=219			*e*S	Sg	05 25 33.8	+0.3
YM04	**YM04** baz=288	**0.71**	**287**	*e*P	Pn	05 25 24.8	-0.5
ENTT	**Nioudou** baz=238	**0.72**	**246**	*e*P	Pg	05 25 24.6	+0.3
ANP	**Anpu** baz=290	**0.74**	**289**	*e*P	Pn	05 25 25.4	-0.3
NDT	**Datong Townshi** baz=240	**0.78**	**245**	*e*P	Pn	05 25 25.9	-0.3
YOJ	**Yonaguni jima** baz=115	**0.81**	**126**	*e*P	Pg	05 25 26.0	0.0
YOJ	baz=115			*e*S	Sb	05 25 36.2	-0.1
NSK	**Sanguang** baz=262	**0.89**	**253**	*e*P	Pg	05 25 27.5	+0.1
NNSH	**Datong** baz=231	**0.97**	**238**	*e*P	Pb	05 25 28.3	-0.2
NNSH	**Datong** baz=230	**0.97**	**238**	*e*S	Pb	05 25 28.6	+0.2
NACB	**Ninganchiao** baz=212	**0.99**	**220**	*e*P	Pb	05 25 27.9	-0.9

MOS ***28*** *05:33:15.6±1.0, 42°.08N×142°.99E, h55km, mb4.4/1, Error ellipse: s-maj=21.3km s-min=11.3km az=59.4*
SKHL ***28*** *05:33:18.6±0.6, 42°.30N×143°.10E, h73km±3km, mb4.8/4*
JMA ***28*** *05:33:19.3±0.1, 42°.32N×143°.04E, h51km±1km, M3.5*
JMA Felt I J1.
IDC ***28*** *05:33:23.9±5.6, 42°.62N×142°.86E, h89km±33km, mb3.4/8, mb1 3.6/8, mb1mx3.4/34, mbtmp3.7/8, MS3.2/1, Ms1 3.2/1, ms1mx2.4/38, Error ellipse: s-maj=71.7km s-min=18.4km az=174.0*

ISC 28 05:33:18.6±0.8, 42°.24N±0°.07×143°.08E±0°.04, h56km±6km, n43, σ0°89/54, mb3.7/8, 4C-4D, Hokkaido region

Code	Station Name	Δ°	Az°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTHR	**Tokachihiroo**	**0.17**	**73**	⇑P	**Pn**	**05 33 27.6**	**+0.1**
JTHR				*e*S	**Sn**	**05 33 34.1**	**+0.3**
JEM	**Erimo**	**0.23**	**166**	⇑P	**Pn**	**05 33 28.7**	**+0.9**
JNBK	**Urakawa-nobuka**	**0.25**	**279**	⇓P	**Pn**	**05 33 27.7**	**-0.2**
JNBK				*e*S	**Sn**	**05 33 34.6**	**0.0**
JCH	**Churui**	**0.43**	**29**	⇑P	**Pn**	**05 33 29.3**	**-0.2**
JCH				*e*S	**Sn**	**05 33 37.0**	**-0.4**
JSHD	**Hidakashinhida**	**0.49**	**290**	⇓P	**Pn**	**05 33 30.1**	**0.0**
JBT2	**Biratori 2**	**0.75**	**316**	⇓P	**Pn**	**05 33 33.0**	**-0.3**
JOB	**Onbets**	**0.86**	**40**	⇑P	**Pn**	**05 33 35.4**	**+0.7**
JOB				*e*S	**Sn**	**05 33 47.7**	**+1.1**
JIAM	**Iburiatsuma**	**0.94**	**294**	P	**Pn**	**05 33 36.8**	**+1.1**
JFR	**Furan**	**0.99**	**339**	⇓P	**Pn**	**05 33 35.0**	**-1.4**
JAR	**Ashorobuto**	**1.17**	**25**	P	**Pn**	**05 33 38.3**	**-0.5**
JAR				*e*S	**Sn**	**05 33 52.8**	**-1.0**
JEW	**Eniwo**	**1.35**	**297**	P	**Pn**	**05 33 41.5**	**+0.4**
JAB	**Ashibetsu**	**1.41**	**334**	P	**Pn**	**05 33 42.5**	**+0.5**
JAK	**Akkeshi**	**1.41**	**57**	P	**Pn**	**05 33 42.0**	**0.0**
JAK				*e*S	**Sn**	**05 34 00.2**	**+0.7**
JKA	**Kamikawa-asahi**	**1.91**	**350**	*e*P	**Pn**	**05 33 49.3**	**+0.6**
ASAJ	**Asahikawa** 47nm,0.3s,baz=209,slow=12,SNR=47	**1.91**	**349**	P	**Pn**	**05 33 49.3**	**+0.6**
ASAJ	comp=Z,74nm,20.1s,baz=45,slow=45			LR	LR	05 34 32.1	
NMR	**Nemuro--Hokkai**	**2.25**	**59**	*e*PN	**Pn**	**05 33 52.6**	**-0.8**
NMR				*e*S	**Sn**	**05 34 18.6**	**-1.4**
NMR	**Nemuro--Hokkai**	**2.25**	**59**	*e*P	**Pn**	**05 33 52.6**	**-0.8**
NMR				*e*S	**Sn**	**05 34 18.6**	**-1.4**
GLVR	**Golovnino**	**2.33**	**49**	*e*PN	**Pn**	**05 33 55.1**	**+0.6**
GLVR				*e*S	**Sn**	**05 34 22.9**	**+0.9**
GLVR	comp=Z,270nm,0.1s			pmax	pmax		
GLVR	comp=N,2μm,0.3s			smax	smax		
GLVR	comp=E,2μm,0.3s			smax	smax		
GLVR	**Golovnino**	**2.33**	**49**	*e*P	**Pn**	**05 33 55.1**	**+0.6**
GLVR	comp=E,270nm,0.5s			AMB	AMB	05 33 55.7	
GLVR				*e*S	**Sn**	**05 34 22.9**	**+0.9**
GLVR	comp=E,2μm,0.7s			A	A	05 34 24.5	
GLVR	comp=E,2μm,0.7s			A	A	05 34 24.5	
GRPR	**Tuman**	**2.63**	**47**	*e*PN	**Pn**	**05 33 59.6**	**+0.9**
GRPR				*e*S	**Sn**	**05 34 29.3**	**-0.1**
GRPR	comp=Z,109nm,0.2s			pmax	pmax		
GRPR	comp=N,526nm,0.4s			smax	smax		
GRPR	comp=E,245nm,0.3s			smax	smax		
GRPR	**Tuman**	**2.63**	**47**	*e*P	**Pn**	**05 33 59.6**	**+0.9**
GRPR	comp=E,110nm,0.3s			AMB	AMB	05 34 03.3	
GRPR				*e*S	**Sn**	**05 34 29.3**	**-0.1**
GRPR	comp=E,530nm,0.4s			A	A	05 34 39.0	
GRPR	comp=E,250nm,0.4s			A	A	05 34 39.0	
YUK	**Yuzh-Kuril'sk**	**2.71**	**48**	*e*PN	**Pn**	**05 34 00.8**	**+1.1**
YUK				*e*S	**Sn**	**05 34 32.0**	**+0.7**
YUK	comp=Z,107nm,0.1s			pmax	pmax		
YUK	comp=E,83nm,0.1s			smax	smax		
YUK	comp=N,432nm,0.4s			smax	smax		
YUK	**Yuzh-Kuril'sk**	**2.71**	**48**	*e*P	**Pn**	**05 34 00.8**	**+1.1**
YUK	comp=N,110nm,0.3s			AMB	AMB	05 34 01.7	
YUK				*e*S	**Sn**	**05 34 32.0**	**+0.7**
YUK	comp=N,430nm,0.4s			A	A	05 34 34.0	
YUK	comp=N,130nm,0.4s			A	A	05 34 34.0	
SHO	**Shikotan**	**3.19**	**58**	*e*PN	**Pn**	**05 34 05.9**	**-0.4**
SHO				*e*S	**Sn**	**05 34 41.2**	**-1.9**
SHO	comp=Z,44nm,0.2s			pmax	pmax		
SHO	comp=E,65nm,0.1s			smax	smax		
SHO	comp=N,158nm,0.2s			smax	smax		
SHO	**Shikotan**	**3.19**	**58**	*e*P	**Pn**	**05 34 05.9**	**-0.4**
SHO	comp=N,50nm,0.2s			AMB	AMB	05 34 09.2	
SHO				*e*S	**Sn**	**05 34 41.2**	**-1.9**
SHO	comp=N,160nm,0.2s			A	A	05 34 43.2	
SHO	comp=N,70nm,0.2s			A	A	05 34 43.2	
KUR	**Kuril'sk**	**4.58**	**48**	*e*P	**Pn**	**05 34 26.4**	**+1.1**
KUR				*e*S	**Sn**	**05 35 17.4**	**+0.3**
KUR	comp=N,180nm,1.0s			A	A	05 35 29.9	
YSS	**Yuzh-Sakhalins**	**4.72**	**357**	*e*P	**Pn**	**05 34 29.1**	**+1.9**
SONM	**Songino Array**	**26.34**	**295**	P	**P**	**05 38 49.0**	**-0.4**
SONM	**Songino Array** comp=N,0.8nm,0.5s,baz=76,slow=8.7,SNR=8.6	**26.34**	**295**	P	**P**	**05 38 49.0**	**-0.4**
H11N2	**WAKE ISLAND Hy 30.15** baz=324,slow=75,SNR=39	**131**		T	T	06 10 59.5	
H11N1	**WAKE ISLAND Hy 30.16** baz=324,slow=75,SNR=53	**131**		T	T	06 10 59.3	
H11N3	**WAKE ISLAND Hy 30.17** baz=324,slow=75,SNR=50	**131**		T	T	06 11 01.0	
H11S1	**WAKE ISLAND Hy 31.03** baz=325,slow=76,SNR=66	**132**		T	T	06 12 06.2	
H11S3	**WAKE ISLAND Hy 31.03** baz=325,slow=76,SNR=66	**133**		T	T	06 12 07.5	
H11S2	**WAKE ISLAND Hy 31.04** baz=325,slow=76,SNR=57	**132**		T	T	06 12 00.1	
ZALV	**Zalesovo Beam** comp=N,1.3nm,0.4s,baz=94,slow=7.0,SNR=7.2	**39.54**	**308**	P	**P**	**05 40 43.0**	**-0.8**
MKAR	**Makanchi Array** comp=N,0.9nm,0.6s,baz=81,slow=9.9,SNR=13	**42.64**	**298**	P	**P**	**05 41 08.8**	**-0.6**
MKAR	comp=N,0.3nm,0.7s,baz=72,slow=4.7,SNR=3.1			PcP	**PcP**	**05 43 00.1**	**-0.4**
ILAR	**Eielson Array** comp=N,0.3nm,0.8s,baz=260,slow=5.3,SNR=3.9	**44.45**	**35**	P	**P**	**05 41 23.8**	**+0.1**
INK	**Inuvik** comp=N,0.3nm,0.4s,baz=280,slow=5.0,SNR=3.6	**49.19**	**29**	P	**P**	**05 42 00.6**	**0.0**
FINES	**FINESS Array B** comp=N,1.6nm,0.4s,baz=59,slow=7.8,SNR=21	**64.82**	**332**	P	**P**	**05 43 49.8**	**-1.3**
WSAR	**Wadi Sarin** comp=N,18nm,20.4s,baz=355,slow=38	**70.80**	**284**	LR	LR	06 17 59.7	
NVAR	**Mina Array Bea** comp=N,0.3nm,0.6s,baz=262,slow=6.3,SNR=2.9	**70.90**	**55**	P	**P**	**05 44 31.3**	**+1.3**
TXAR	**Lajitas Array** comp=N,0.3nm,0.6s,baz=291,slow=5.7,SNR=2.7	**85.96**	**54**	P	**P**	**05 45 53.9**	**+0.9**

IDC ***28*** *05:45:16.8±1.1, 16°.33N×122°.59E, h0km, mb4.0/9, mb1 4.2/9, mb1mx3.8/51, mbtmp4.0/9, Error ellipse: s-maj=142.9km s-min=17.3km az=67.0*
MAN ***28*** *05:45:20.5, 16°.29N×122°.43E, h23km, mb5.1, ML4.1, MS4.3*
MAN Intensity II - Dilasag Aurora; Intensity I - Casiguran Aurora.

ISC 28 05:45:18.1±1.6, 16°.30N±0°.03×122°.46E±0°.05, h6km±10km, n30, σ1°17/40, mb3.9/9, 2C-2D, Luzon

Code	Station Name	Δ°	Az°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.76**	**357**	*e*P	**Pn**	**05 45 35.7**	**+0.3**
PALP				*e*S	**Sn**	**05 45 46.8**	**-0.4**
CAUP	**Cauayan**	**0.89**	**317**	*e*P	**Pb**	**05 45 36.2**	**+0.3**
CAUP				*e*S	**Sn**	**05 45 49.9**	**-0.4**
BALP	**Baler**	**1.01**	**237**	*e*P	**Pg**	**05 45 37.1**	**-0.5**
BALP				*e*S	**Sb**	**05 45 53.0**	**+1.4**
PCPH	**Palayan**	**1.50**	**241**	⇓*i*p	**Pn**	**05 45 45.9**	**+0.4**
PCPH				*i* S	**Sn**	**05 46 05.9**	**+0.5**
POLP	**Polilio Island**	**1.64**	**198**	*e*P	**Pn**	**05 45 47.2**	**-0.2**
POLP				*e*S	**Sn**	**05 46 08.2**	**-0.6**
SMPP	**San Manuel, Pa**	**1.72**	**265**	*e*P	**Pn**	**05 45 47.7**	**-0.8**
SMPP				*e*S	**Sn**	**05 46 10.3**	**-0.5**
APYP	**Conner**	**1.94**	**323**	*e*P	**Pn**	**05 45 52.3**	**+0.7**
APYP				*e*S	**Sn**	**05 46 15.6**	**-0.8**
SGCP	**Mt. Cagua**	**1.98**	**348**	*e*P	**Pn**	**05 45 52.9**	**+0.9**
SGCP				*e*S	**Sg**	**05 46 22.9**	**+1.4**
LQP	**Lukban**	**2.35**	**202**	⇑*e*P	**Pn**	**05 45 58.4**	**+1.0**
LQP				*i* S	**Sb**	**05 46 30.6**	**+0.4**
GQP	**Guinayangan**	**2.38**	**180**	⇓*e*P	**Pn**	**05 45 59.3**	**+1.7**
GQP				*i* S	**Sn**	**05 46 27.1**	**0.0**
BOLP	**Bolinao**	**2.45**	**272**	*e*P	**Pb**	**05 46 01.5**	**-1.0**
BOLP				*e*S	**Sb**	**05 46 33.8**	**+0.8**
SCZP	**Santa Cruz**	**2.51**	**258**	*e*P	**Pn**	**05 46 00.8**	**+1.5**
SCZP				*e*S	**Sb**	**05 46 37.8**	**+3.2**
SIPP	**Brgy, Tapao**	**2.51**	**310**	⇓*e*P	**Pb**	**05 46 02.1**	**-1.4**
SIPP				*e*S	**Sg**	**05 46 39.7**	**+1.1**
TGY	**Tagaytay City** 92nm,0.3s,baz=194,slow=20,SNR=2.4	**2.63**	**214**	Pn	**Pb**	**05 46 06.1**	**+0.4**
TGY	134nm,0.3s,baz=133,slow=0.9,SNR=5.1			Sn	**Sn**	**05 46 36.5**	**+3.0**
LUBP	**Lubang**	**3.33**	**220**	*e*P	**Pn**	**05 46 09.1**	**-1.5**
LUBP				*e*S	**Sg**	**05 47 03.3**	**-1.7**
SONM	**Songino Array** 0.5nm,0.6s,baz=164,slow=9.6,SNR=5.2	**34.12**	**341**	P	**P**	**05 52 04.4**	**+0.6**
WRA	**Warramunga Arr** 3.9nm,1.0s,baz=344,slow=9.5,SNR=8.1	**37.86**	**162**	P	**P**	**05 52 35.3**	**-0.5**
ASAR	**Alice Springs** 1.5nm,0.7s,baz=0.1,slow=8.2,SNR=13	**41.26**	**164**	P	**P**	**05 53 04.2**	**-0.1**
H11S3	**WAKE ISLAND Hy 42.18** baz=274,slow=75,SNR=104	**80**		T	T	06 38 24.6	
H11S1	**WAKE ISLAND Hy 42.20** baz=274,slow=75,SNR=123	**80**		T	T	06 38 25.3	
H11S2	**WAKE ISLAND Hy 42.20** baz=274,slow=75,SNR=128	**80**		T	T	06 38 29.1	
H11N1	**WAKE ISLAND Hy 42.30** baz=274,slow=75,SNR=68	**78**		T	T	06 38 33.0	
H11N2	**WAKE ISLAND Hy 42.31** baz=274,slow=75,SNR=75	**78**		T	T	06 38 37.5	
H11N3	**WAKE ISLAND Hy 42.32** baz=274,slow=75,SNR=59	**78**		T	T	06 38 38.5	
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=119,slow=8.5,SNR=7.2	**45.02**	**321**	P	**P**	**05 53 34.6**	**+0.1**
MKAR	0.4nm,0.7s,baz=105,slow=5.7,SNR=3.4			PcP	**PcP**	**05 55 15.8**	**+0.3**
ZALV	**Zalesovo Beam** 0.7nm,0.6s,baz=126,slow=7.3,SNR=3.0	**47.59**	**331**	P	**P**	**05 53 54.5**	**0.0**
KURBB	**Kurchatov Arra** 2.3nm,0.7s,baz=121,slow=8.1,SNR=15	**49.04**	**324**	P	**P**	**05 54 05.7**	**-0.1**
ARCES	**ARCESS Array B** 5.6nm,1.0s,baz=82,slow=7.6,SNR=4.2	**77.28**	**339**	P	**P**	**05 57 13.3**	**+0.3**
FINES	**FINESS Array B** 4.5nm,1.1s,baz=46,slow=5.5,SNR=7.6	**78.86**	**331**	P	**P**	**05 57 21.6**	**-0.2**
NOA	**NORSAR Array B** 0.8nm,0.8s,baz=66,slow=6.2,SNR=3.3	**85.74**	**333**	P	**P**	**05 57 55.9**	**-2.1**

BJI ***28*** *05:50:56.5±0.0, 5°.68S×154°.38E, h23km, mB5.1/30, mb5.0/49, Ms4.9/15, Ms7 4.6/13*
DJA ***28*** *05:50:58.3±2.6, 6°.5±7°×15°.4E±°, h15km±18km, M5.4/7, mb4.8/7, mB6.2/2, MLv5.7/1, Mw(mB)5.9/2*
IDC ***28*** *05:51:00.1±5.8, 5°.75S×154°.18E, h33km±43km, mb4.3/21, mb1 4.4/22, mb1mx4.2/48, mbtmp4.5/22, ML3.5/2, MS3.9/19, Ms1 3.9/19, ms1mx3.8/29, Error ellipse: s-maj=21.0km s-min=13.6km az=85.0*
NEIC ***28*** *05:51:03.4±1.4, 5°.77S±0°.08×154°.09E±0°.09, h59km±7km, mb4.8/48, Error ellipse: s-maj=13.6km s-min=11.8km az=98.0*

ISC 28 05:51:02.4±0.4, 5°.81S±0°.06×154°.15E±0°.07, h48km, n133, σ1°28/132, mb4.7/49, MS4.0/21, 1C-1D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	Az°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**2.55**	**309**	Pn	**Pn**	**05 51 44.2**	**+2.9**
KRVT	**Keravat (AS076** 31nm,0.3s,baz=98,slow=3.3,SNR=10	**2.59**	**305**	Pn	**Pn**	**05 51 42.5**	**+0.7**
KRVT	367nm,0.3s,baz=88,slow=13,SNR=5.5			Lg	Lg	05 52 21.8	
HNR	**Honiara** comp=Z,1μm,20.0s,baz=286,slow=38	**6.78**	**122**	LR	LR	05 55 15.4	
PMG	**Port Moresby** 19nm,0.3s,baz=58,slow=5.1,SNR=31	**7.79**	**242**	Pn	**Pn**	**05 52 52.8**	**-0.5**
PMG	5.3nm,0.3s,baz=282,slow=23,SNR=13			Sn	**Sn**	**05 54 21.4**	**+1.2**
PMG	comp=Z,1μm,21.7s,baz=36,slow=37			LR	LR	05 55 47.6	
PMG	**Port Moresby**	**7.79**	**242**		**Pn**	**05 52 53.2**	**-0.1**
PMG				Sn	**Sn**	**05 54 20.7**	**+0.4**
PATS	**Pohnpei**	**13.23**	**18**	Pn	**Pn**	**05 54 06.9**	**-0.9**
COEN	**Coen**	**13.50**	**232**	Pn	**Pn**	**05 54 11.6**	**+0.2**
JAY	**Jayapura** comp=Z,282nm,18.8s,baz=260,slow=41	**13.80**	**283**	LR	LR	06 00 22.5	
CTA	**Charters Tower** 0.3nm,0.3s,baz=35,slow=19,SNR=4.3	**16.13**	**208**	Pn	**Pn**	**05 54 46.6**	**+0.6**
NOUC	**Port Laguerre** comp=Z,70nm,1.3s	**20.01**	**145**	P	**P**	**05 55 32.2**	**+1.0**
NOUC				IAmb	IAmb	05 55 38.3	
DZM	**Mont Dzumac** comp=Z,7.1nm,0.3s	**20.06**	**145**	*e*Pn	Pn	05 55 33.0	-1.0
DZM	comp=Z,793nm,27.1s			*e*LR	LR	06 00 18.8	
DZM	**Mont Dzumac** comp=Z,8.3nm,0.4s,baz=255,slow=9.3,SNR=16	**20.06**	**145**	P	**P**	**05 55 32.4**	**+0.5**
DZM	comp=Z,474nm,19.3s,baz=296,slow=34			LR	LR	06 02 33.3	
DZM	**Mont Dzumac**	**20.06**	**145**	P	**P**	**05 55 33.0**	**+1.0**
DZM				IAmb	IAmb	05 55 51.0	
GUMO	**Guam** comp=Z,55nm,1.1s	**21.37**	**335**	LR	LR	06 02 49.8	
WR0	**Warramunga Arr** comp=Z,193nm,18.7s,baz=126,slow=33	**23.69**	**232**	P	**P**	**05 56 09.2**	**-0.8**
WR0	comp=Z,26nm,1.1s			IAmb	IAmb	05 56 28.7	
WB0	**Warramunga Arr**	**23.70**	**232**	P	**P**	**05 56 09.4**	**-0.6**
MTN	**Manton Dam**	**23.75**	**251**	P	**P**	**05 56 10.3**	**-0.2**
MTN	comp=Z,64nm,1.4s			IAmb	IAmb	05 56 11.0	
WRAB	**Tennant Creek**	**23.82**	**232**	P	**P**	**05 56 10.6**	**-0.6**
WRA	**Warramunga Arr** comp=Z,2.0nm,0.5s,baz=56,slow=9.9,SNR=12	**23.84**	**232**	P	**P**	**05 56 10.2**	**-1.2**
WRA	comp=Z,2.3nm,0.4s,baz=54,slow=2.6,SNR=4.9			PcP	**PcP**	**05 59 53.4**	**-0.4**
WRA	**Warramunga Arr**	**23.84**	**232**	P	**P**	**05 56 10.4**	**-0.9**
AS31	**Alice Springs**	**26.36**	**226**	P	**P**	**05 56 33.6**	**-0.7**
ASAR	**Alice Springs** comp=Z,7.3nm,0.8s,baz=56,slow=9.3,SNR=27	**26.36**	**226**	P	**P**	**05 56 33.6**	**-0.7**
ASAR	comp=Z,6.4nm,0.8s,baz=60,slow=2.4,SNR=16			PcP	**PcP**	**05 59 59.0**	**-0.3**
ASAR				pPcP		06 00 08.8	
ASAR	comp=Z,4.1nm,0.9s,baz=61,slow=3.0,SNR=6.3			LR	LR	06 06 56.1	
ASAR	**Alice Springs** comp=Z,519nm,20.1s,baz=94,slow=36	**26.36**	**226**	P	**P**	**05 56 32.7**	**-1.5**
KNRA	**Kununurra**	**26.77**	**246**	P	**P**	**05 56 37.3**	**-0.6**
KNRA	comp=Z,32nm,1.4s			IAmb	IAmb	05 56 50.3	
H11S3	**WAKE ISLAND Hy 27.13** baz=208,slow=76,SNR=54	**27**		T	T	06 25 02.7	
H11S2	**WAKE ISLAND Hy 27.14** baz=208,slow=76,SNR=51	**27**		T	T	06 25 00.4	
H11S1	**WAKE ISLAND Hy 27.15** baz=208,slow=76,SNR=60	**27**		T	T	06 25 03.3	
STKA	**Stephens Creek** comp=Z,2.7nm,0.9s,baz=37,slow=10,SNR=2.5	**28.47**	**203**	P	**P**	**05 56 52.1**	**-0.9**
STKA	comp=Z,2.9nm,0.8s,baz=80,slow=6.0,SNR=2.9			PcP	**PcP**	**06 00 03.9**	**-0.3**
STKA	**Stephens Creek**	**28.47**	**203**	P	**P**	**05 56 53.1**	**+0.1**
FITZ	**Fitzroy Crossi**	**30.39**	**244**	P	**P**	**05 57 08.9**	**-1.3**
FITZ	comp=Z,15nm,1.1s			IAmb	IAmb	05 57 25.5	
DAV	**Davao City (W)** comp=Z,171nm,20.6s,baz=147,slow=32	**31.25**	**294**	LR	LR	06 07 53.3	
BNSI	**Bone**	**33.94**	**271**	P	**P**	**05 57 42.7**	**+1.3**
HAZ	**Te Kaha**	**38.39**	**149**	P	**P**	**05 58 21.0**	**+1.9**
URZ	**Urewera**	**38.44**	**150**	P	**P**	**05 58 20.9**	**+1.4**
RUGZ	**Raukumara Rang**	**38.50**	**150**	P	**P**	**05 58 21.5**	**+1.3**
TRVZ	**Turoa**	**38.53**	**153**	P	**P**	05 58 27.1	+6.5
MWZ	**Matawai**	**38.71**	**150**	P	**P**	**05 58 23.4**	**+1.6**
BKZ	**Black Stump Fm**	**38.86**	**152**	P	**P**	**05 58 23.4**	**+0.3**
BKZ	**Black Stump Fm**	**38.86**	**152**	P	**P**	**05 58 23.7**	**+0.6**
PUZ	**Puketiti**	**38.87**	**149**	P	**P**	**05 58 24.1**	**+0.9**
BHHZ	**Black Hill Sta**	**38.92**	**153**	P	**P**	**05 58 25.9**	**+2.3**
RAHZ	**Arahi**	**38.95**	**151**	P	**P**	**05 58 25.6**	**+1.8**
TKGZ	**Te Karaka**	**38.95**	**150**	P	**P**	**05 58 25.1**	**+1.3**
NMHZ	**Naumai**	**38.95**	**152**	P	**P**	**05 58 25.7**	**+1.7**
RIGZ	**Rimuhau**	**39.11**	**150**	P	**P**	**05 58 26.8**	**+1.6**
KRHZ	**Kereru**	**39.19**	**152**	P	**P**	**05 58 26.4**	**+0.6**
KAHZ	**Kahuranaki**	**39.54**	**152**	P	**P**	**05 58 29.4**	**+0.6**
TUWZ	**Tuamarina**	**39.62**	**156**	P	**P**	**05 58 29.5**	**+0.1**
SNZO	**South Karori**	**39.83**	**156**	P	**P**	**05 58 31.2**	**+0.2**
BSWZ	**Blackbirch Sta**	**39.84**	**157**	P	**P**	**05 58 31.5**	**+0.4**
LTZ	**Lake Taylor**	**40.16**	**159**	P	**P**	**05 58 34.8**	**+0.9**
LTZ	comp=Z,14nm,0.9s			IAmb	IAmb	05 58 35.4	
KHZ	**Kahutara**	**40.31**	**158**	P	**P**	**05 58 34.8**	**-0.2**
KHZ	comp=Z,15nm,0.9s			IAmb	IAmb	05 58 47.2	
RPZ	**Rata Peaks** comp=Z,16nm,0.9s,baz=33,slow=5.8,SNR=6.2	**40.58**	**161**	P	**P**	**05 58 36.7**	**-0.6**
RPZ	**Rata Peaks**	**40.58**	**161**	P	**P**	**05 58 38.7**	**+1.4**
RPZ	comp=Z,18nm,1.0s			IAmb	IAmb	05 58 52.7	
NACB	**Ninganchiao**	**43.54**	**314**	P	**P**	**05 58 60.0**	**-1.7**
NACB	comp=Z,30nm,1.2s			IAmb	IAmb	05 59 14.2	
SSLB	**Suanglung**	**43.76**	**314**	P	**P**	**05 59 01.4**	**-2.0**
SSLB	comp=Z,22nm,1.3s			IAmb	IAmb	05 59 15.0	
JNU	**Nakatsue** comp=Z,8.6nm,0.4s,baz=109,slow=3.1,SNR=7.1	**44.58**	**332**	P	**P**	**05 59 08.5**	**-1.4**
JNU	**Nakatsue**	**44.58**	**332**	P	**P**	**05 59 08.7**	**-1.2**
MJAR	**Matsushiro Arr** comp=Z,46nm,18.0s,baz=95,slow=37	**44.70**	**342**	LR	LR	06 18 11.1	
KSRS	**Korea Array** comp=Z,4.3nm,0.8s,baz=150,slow=8.8,SNR=9.6	**49.51**	**332**	P	**P**	**05 59 46.7**	**-1.5**
KSRS	comp=Z,32nm,19.6s,baz=148,slow=35			LR	LR	06 19 33.5	
NJ2	**Nanjing**	**50.48**	**320**	*e*P	**P**	**05 59 56.0**	**+0.3**
NJ2	comp=Z,12nm,0.5s			pmax	pmax		
WHN	**Wuhan**	**52.51**	**316**	⇓P	**P**	**06 00 11.3**	**+0.4**
USRK	**Ussuriysk Ar.** comp=Z,3.2nm,0.4s,baz=151,slow=5.4,SNR=12	**53.64**	**340**	P	**P**	**06 00 18.2**	**-0.8**
USRK	comp=Z,83nm,21.1s,baz=140,slow=32			LR	LR	06 19 49.5	
PPT2	**Papeete2** comp=Z,72nm,23.0s	**56.14**	**107**	*e*S	**S**	**06 08 28.2**	**+4.3**
PPT2	comp=Z,143nm,25.8s			*e*LR	LR	06 17 00.4	
SLVN	**Son La**	**56.17**	**300**	P	**P**	**06 00 37.3**	**-0.4**
SLVN	comp=Z,10nm,1.0s			IAmb	IAmb	06 00 48.3	
TBI	**Tubuai** comp=Z,290nm,29.0s	**56.92**	**114**	*e*LR	LR	06 17 28.3	
KLR	**Kul'dur** comp=Z,5.6nm,0.8s,baz=144,slow=3.7,SNR=16	**58.20**	**343**	P	**P**	**06 00 50.5**	**-1.0**
XAN	**Xi'an**	**58.28**	**316**	P	**P**	**06 00 51.8**	**-0.6**
XAN	comp=Z,25nm,1.4s			pmax	pmax		
XAN	comp=Z,180nm,30.4s			LR	LR		
XAN	comp=Z,160nm,26.0s			LR	LR		
XAN	comp=Z,160nm,21.7s			LR	LR		
KMI	**Kunming**	**58.66**	**304**	P	**P**	**06 00 56.5**	**+1.0**
KMI				pP	pP	06 01 05.3	-3.2
KMI	comp=Z,16nm,1.4s			pmax	pmax		
PETK	**Petropavlovsk-** comp=Z,2.6nm,0.5s,baz=166,slow=7.9,SNR=8.3	**58.77**	**3**	P	**P**	**06 00 55.4**	**0.0**
PETK	comp=Z,132nm,20.9s,baz=232,slow=31			LR	LR	06 21 31.4	
PETK	**Petropavlovsk-**	**58.77**	**3**	P	**P**	**06 00 55.1**	**-0.3**
CMAR	**Chiang Mai Arr** comp=Z,8.2nm,0.7s,baz=115,slow=5.2,SNR=46	**59.52**	**295**	P	**P**	**06 01 01.9**	**+0.6**
CMAR				pP	**pP**	**06 01 11.1**	**-3.4**
CMAR	comp=Z,14nm,0.9s,baz=110,slow=5.4,SNR=11			LR	LR	06 24 50.8	
HHC	**Hu-ho-hao-te** comp=Z,36nm,21.4s,baz=101,slow=34	**60.65**	**324**	*e*P	**P**	**06 01 10

ODAN	**Odare**	**72.21**	**300**	*eP*	**P**	**06 02 23.2**	**+0.1**
	comp=Z,62nm,1.0s							
RAMN	**Ramite**	**72.92**	**300**	*eP*	**P**	**06 02 27.2**	**-0.1**
	comp=Z,6.4nm,0.4s							
JIRN	**Jiri**	**73.46**	**301**	*eP*	**P**	**06 02 30.6**	**-0.1**
GUN	**Gumba**	**73.79**	**301**	*eP*	**P**	**06 02 32.3**	**-0.3**
	comp=Z,40nm,1.0s							
PKI	**Pulchoki**	**74.10**	**301**	*eP*	**P**	**06 02 33.7**	**-0.7**
	comp=Z,54nm,1.3s							
PKIN	**Phulchoki**	**74.11**	**301**	*eP*	**P**	**06 02 33.4**	**-1.0**
	comp=Z,27nm,0.9s							
KKN	**Kakani**	**74.27**	**301**	*eP*	**P**	**06 02 34.7**	**-0.6**
	comp=Z,17nm,0.7s							
DMN	**Daman**	**74.37**	**301**	*eP*	**P**	**06 02 35.8**	**-0.1**
	comp=Z,67nm,1.1s							
GKN	**Gorkha**	**74.88**	**301**	*eP*	**P**	**06 02 38.3**	**-0.4**
KOLN	**Koldanda**	**75.70**	**300**	*eP*	**P**	**06 02 42.7**	**-0.8**
	comp=Z,70nm,1.0s							
DANN	**Dangsing**	**75.71**	**301**	*eP*	**P**	**06 02 42.5**	**-1.2**
	comp=Z,24nm,0.6s							
WMQ	**Urumqi**	**77.39**	**317**	*eP*	**P**	**06 02 53.3**	**+0.7**
WMQ				pP	PcP	06 03 01.5	-1.4
WMQ				sP	pP	06 03 04.3	-1.9
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s							
WMQ				pmax	pmax		
	comp=Z,140nm,4.5s							
WMQ				LR	LR			
	comp=Z,94nm,23.9s							
SUA	**Susitna One**	**79.33**	**24**	P	**P**	**06 03 03.0**	**+0.1**
RC01	**Rabbit Creek A**	**79.53**	**24**	P	**P**	**06 03 04.5**	**+0.6**
PPLA	**Purkeypile**	**79.59**	**22**	P	**P**	**06 03 04.9**	**+0.5**
PPLA				IAmb	IAmb	06 03 23.1		
	comp=Z,25nm,1.4s							
PMR	**Palmer**	**80.05**	**24**	P	**P**	**06 03 06.6**	**-0.1**
PMR				IAmb	IAmb	06 03 12.5		
	comp=Z,5.4nm,0.8s							
GHO	**Glory Hole Cre**	**80.23**	**24**	P	**P**	**06 03 07.1**	**-0.6**
GHO				IAmb	IAmb	06 03 08.0		
	comp=Z,13nm,1.2s							
KTH	**Kantishna Hill**	**80.44**	**22**	P	**P**	**06 03 09.4**	**+0.6**
SML	**Sawmill**	**80.49**	**24**	P	**P**	**06 03 09.2**	**+0.1**
SML				IAmb	IAmb	06 03 17.9		
	comp=Z,29nm,1.5s							
TRF	**Thorofare Moun**	**80.62**	**22**	P	**P**	**06 03 10.1**	**+0.2**
TRF				IAmb	IAmb	06 03 26.5		
	comp=Z,15nm,1.3s							
BPAW	**Bear Paw Mtn.**	**80.73**	**21**	P	**P**	**06 03 11.7**	**+1.4**
IMAR	**Indian Mountai**	**80.89**	**19**	P	**P**	**06 03 10.3**	**-0.8**
SCM	**Sheep Creek Mo**	**80.91**	**24**	P	**P**	**06 03 12.4**	**+1.1**
RND	**Reindeer**	**81.14**	**22**	P	**P**	**06 03 13.9**	**+1.3**
RND				IAmb	IAmb	06 03 16.1		
	comp=Z,14nm,1.5s							
MCK	**McKinley**	**81.28**	**22**	P	**P**	**06 03 12.5**	**-0.8**
MCK				IAmb	IAmb	06 03 28.1		
	comp=Z,16nm,1.3s							
MLY	**Manley**	**81.35**	**21**	P	**P**	**06 03 13.5**	**-0.1**
MLY				IAmb	IAmb	06 03 17.3		
	comp=Z,6.9nm,0.5s							
MK31	**Makanchi Array**	**81.97**	**319**	P	**P**	**06 03 16.6**	**-0.6**
MKAR	**Makanchi Array**	**81.97**	**319**	P	**P**	**06 03 16.7**	**-0.6**
	comp=Z,2.1nm,0.5s,baz=95,slow=7.7,SNR=28							
MKAR				LR	LR	06 39 27.5		
	comp=Z,74nm,20.1s,baz=304,slow=36							
CCB	**Clear Creek Bu**	**82.19**	**22**	P	**P**	**06 03 19.1**	**+1.1**
HDA	**Harding Lake**	**82.38**	**22**	P	**P**	**06 03 18.9**	**-0.1**
IL31		**82.59**	**22**	P	**P**	**06 03 20.4**	**+0.4**
ILAR	**Eielson Array**	**82.59**	**22**	P	**P**	**06 03 17.9**	**-2.2**
	comp=Z,2.6nm,0.5s,baz=245,slow=4.9,SNR=37							
ILAR				LR	LR	06 37 11.2		
	comp=Z,183nm,18.8s,baz=239,slow=34							
ILAR	**Eielson Array**	**82.59**	**22**	P	**P**	**06 03 19.2**	**-0.8**
BALM	**Baldy**	**82.64**	**26**	P	**P**	**06 03 20.2**	**-0.3**
BALM				IAmb	IAmb	06 03 38.2		
	comp=Z,17nm,1.3s							
ZALV	**Zalesovo Beam**	**82.74**	**326**	P	**P**	**06 03 19.7**	**-1.3**
	comp=Z,2.7nm,0.4s,baz=112,slow=5.7,SNR=8.8							
ZALV				LR	LR	06 39 43.3		
	comp=Z,38nm,21.1s,baz=336,slow=35							
ZALV	**Zalesovo Beam**	**82.74**	**326**	P	**P**	**06 03 20.0**	**-1.1**
CTGM	**Chitina Glacie**	**83.05**	**26**	P	**P**	**06 03 22.6**	**-0.1**
CTGM				IAmb	IAmb	06 03 24.4		
	comp=Z,20nm,1.3s							
SCRK	**Sand Creek**	**83.30**	**23**	P	**P**	**06 03 24.6**	**+0.7**
QSPA	**South Pole Qui**	**84.15**	**180**	P	**P**	**06 03 27.9**	**-0.4**
KSH	**Kashi**	**84.61**	**310**	P	**P**	**06 03 32.8**	**+1.6**
KSH				pP	PcP	06 03 39.0	+4.4
KSH				PP	**PP**	**06 06 48.5**	**+1.1**
KSH				S	**S**	**06 13 58.8**	**+3.7**
KSH				sS	pS	06 14 10.3	-1.7
KSH				SS	**SS**	**06 19 33.0**	**+5.7**
KSH				pmax	pmax		
	comp=Z,33nm,1.0s							
KSH				LR	LR			
	comp=Z,250nm,4.6s							
KSH				LR	LR			
	comp=Z,330nm,7.5s							
KSH				LR	LR			
	comp=Z,470nm,6.0s							
BMAR	**Burnt Mountain**	**84.73**	**20**	P	**P**	**06 03 31.1**	**+0.1**
MAW	**Mawson**	**85.16**	**203**	P	**P**	**06 03 33.1**	**-0.1**
	comp=Z,4.0nm,1.0s,baz=103,slow=5.9,SNR=3.6							
MAW				LR	LR	06 38 47.9		
	comp=Z,47nm,19.5s,baz=64,slow=34							
KURK	**Kurchatov**	**85.39**	**322**	P	**P**	**06 03 33.3**	**-1.3**
KURK				IAmb	IAmb	06 03 47.5		
	comp=Z,6.5nm,1.1s							
KURBB	**Kurchatov Arra**	**85.42**	**322**	P	**P**	**06 03 33.5**	**-1.3**
	comp=Z,1.3nm,0.5s,baz=104,slow=4.3,SNR=10							
AAK	**Ala-Archa**	**86.33**	**313**	P	**P**	**06 03 40.0**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=173,slow=5.1,SNR=6.7							
BVAR	**Borovoye Array**	**90.85**	**323**	P	**P**	**06 03 58.5**	**-2.2**
	comp=Z,1.6nm,0.4s,baz=122,slow=5.4,SNR=9.2							
NVAR	**Mina Array Bea**	**91.65**	**52**	P	**P**	**06 04 04.7**	**-0.3**
	comp=Z,1.2nm,0.8s,baz=249,slow=6.2,SNR=4.9							
NVAR				LR	LR	06 38 19.6		
	comp=Z,97nm,19.7s,baz=310,slow=31							
YKA	**Yellowknife Ar**	**95.69**	**28**	P	**P**	**06 04 21.4**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=269,slow=4.2,SNR=3.5							
PDAR	**Pinedale Array**	**98.53**	**48**	LR	LR	06 42 01.5		
	comp=Z,172nm,21.9s,baz=292,slow=31							
GERES	**GERESS Array B**	**125.61**	**329**	PKP	**PKiKP**	**06 09 59.4**	**+0.3**
	comp=Z,0.7nm,0.5s,baz=90,slow=2.4,SNR=5.8							
TORD	**Torodi Ar. Bea**	**151.89**	**287**	PKPbc	**PKPbc**	**06 10 52.1**	**-1.1**
	comp=Z,7.5nm,0.8s,baz=74,slow=2.5,SNR=38							
TORD				pPKPbc	**pPKPdf**	**06 11 01.4**	**+0.5**
	comp=Z,18nm,1.0s,baz=65,slow=3.1,SNR=23							
KIC	**Kosan Boka**	**159.00**	**273**	*eP*	**PKPab**	**06 11 31.4**	**-1.5**
	comp=Z,83nm,1.9s							
TIC	**Toumodi**	**159.28**	**273**	*eP*	**PKPab**	**06 11 32.6**	**-1.5**
LIC	**Lamto**	**159.29**	**272**	*eP*	**PKPab**	**06 11 32.8**	**-1.3**
	comp=Z,20nm,1.4s							

IDC 28 06:18:40.2±8.8, 32°27S×179°63W, h312km±96km, mb3.2/2, mb1 3.5/3, mb1mx3.2/25, mbtmp3.9/3, Error ellipse: s-maj=107.2km s-min=39.1km az=1.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.54**	**203**	P	Pn	06 20 17.1	+0.9
	0.5nm,0.3s,baz=265,slow=3.1,SNR=11						
URZ				S	S	06 21 33.1	-0.7
	3.6nm,0.3s,baz=174,slow=23,SNR=15						
ASAR	**Alice Springs**	**41.66**	**270**	P	P	06 25 59.3	+0.2
	1.4nm,0.7s,baz=105,slow=7.3,SNR=14						
WRA	**Warramunga Arr**	**42.82**	**275**	P	P	06 26 08.0	-0.5
	0.9nm,0.3s,baz=111,slow=8.1,SNR=7.9						
FINES	**FINESS Array B**	**146.38**	**338**	PKPbc	PKPbc	06 37 43.0	-0.9
	1.6nm,0.5s,baz=57,slow=3.6,SNR=19						

MAN 28 06:37:59.2, 16°23N×122°46E, h26km, mb4.8, ML3.7, MS3.7, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.82**	**357**	*eP*	Pb	06 38 14.2	-0.7
CAUP	**Cauayan**	**0.94**	**319**	*eP*	Pn	06 38 15.4	-1.2
CAUP				*eS*	Sb	06 38 29.0	+0.2
BALP	**Baler**	**0.98**	**240**	*eP*	Pn	06 38 16.7	-0.6
BALP				*eS*	Sn	06 38 30.9	+0.5
PCPH	**Palayan**	**1.48**	**243**↑	*eP*	Pb	06 38 35.1	+9.2
SMPP	**San Manuel, Pa**	**1.71**	**267**	*eP*	Pn	06 38 26.8	-0.6
SMPP				*eS*	Sn	06 38 49.0	+0.5
APYP	**Conner**	**2.00**	**324**	*eP*	Pn	06 38 31.3	+0.1
APYP				*eS*	Sn	06 38 56.6	+1.3
LQP	**Lukban**	**2.29**	**203**↑	*eP*	Pb	06 38 44.8	+4.9
LQP				*i* S	Sb	06 39 10.7	+2.8
BOLP	**Bolinao**	**2.45**	**274**	*eP*	Pn	06 38 35.2	-2.3
BOLP				*eS*	Sn	06 39 09.5	+2.8

KRSC 28 06:40:22.7±2.5, 49°49N×156°94E, h41km±32km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.31**	**337**	*eP*	Pn	06 40 44.7	+0.2
SKR				*eS*	Sn	06 41 00.3	-0.4
PAU	**Pauzhetka**	**1.98**	**358**	*eP*	Pn	06 40 56.1	+2.4
PAU				*eS*	Sn	06 41 20.5	+3.2
KDTR	**Khodutka, Kamc**	**2.44**	**17**	*eP*	Pn	06 41 03.3	+3.4
KDTR				*eS*	Sn	06 41 33.1	+4.7
MTVR	**Mutnovka**	**3.10**	**14**	*eP*	Pn	06 41 13.2	+4.0
RUS	**Russkaya**	**3.12**	**18**	*eP*	Pn	06 41 12.5	+3.3
RUS				*eS*	Sn	06 41 49.0	+3.9
GRL	**Gorelyy**	**3.15**	**13**	*eS*	Sn	06 41 52.1	+5.8
DALK	**Dalny**	**3.73**	**17**	*eP*	Pn	06 41 21.8	+4.2
DALK				*eS*	Sn	06 42 05.5	+5.2
UGLR	**Uglovaya**	**3.91**	**17**	*eP*	Pn	06 41 25.0	+4.7
AVH	**Avacha**	**3.95**	**16**	*eP*	Pn	06 41 25.9	+5.1
AVH				*eS*	Sn	06 42 13.3	+7.5
SMAR	**Somma**	**3.96**	**16**	*eP*	Pn	06 41 26.8	+5.8
NLC	**Nalytchevo**	**3.99**	**21**	*eS*	Sn	06 42 09.8	+3.2
SDLR	**Sedlovina**	**3.99**	**17**	*eP*	Pn	06 41 25.0	+3.7
KRX	**Arik**	**4.02**	**15**	*eP*	Pn	06 41 26.5	+4.6
KRX				*eS*	Sn	06 42 14.6	+6.8
SPN	**Mys Shipunski**	**4.10**	**27**	*eS*	Sn	06 42 14.0	+4.5
MKZ	**Mys Kozlova**	**5.88**	**28**	*eP*	Pn	06 41 50.5	+3.4
MKZ				*eS*	Sn	06 42 56.2	+3.1

SSNC 28 06:47:27.7±3.5, 18°95N×80°99W, h46km±235km, MD3.5, ML2.9, MW3.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MGV	**Manicaragua**	**3.29**	**16**	*eP*	Pn	06 48 14.7	-2.0
MGV				*eS*	Sn	06 48 52.0	-2.5
MGV				IAML		06 48 56.0	
	comp=N,22nm,0.1s						
MGV				IAML		06 48 56.2	
	comp=E,22nm,0.2s						
LMGC	**Las Mercedes**	**3.92**	**73**	*eP*	Pn	06 48 24.9	-0.4
LMGC				*eS*	Sn	06 49 07.7	-2.3
LMGC				IAML		06 49 13.6	
	comp=N,7.9nm,0.1s						
LMGC				IAML		06 49 14.4	
	comp=E,9.3nm,0.1s						
SOR	**Soroa**	**4.27**	**334**	*eP*	Pn	06 48 28.9	-1.3
SOR				*eS*	Sn	06 49 16.0	-2.8
SOR				IAML		06 49 20.2	
	comp=N,7.1nm,0.3s						
SOR				IAML		06 49 20.9	
	comp=E,9.8nm,0.2s						
RCC	**Rio Carpintero**	**5.10**	**77**	*eP*	Pn	06 48 42.0	+0.4
RCC				*eS*	Sn	06 49 36.1	-3.1
GTMO	**Guantanamo**	**5.63**	**77**	*eP*	Pn	06 48 50.2	+1.4
GTMO				*eS*	Sn	06 49 52.3	+0.1

*IDC **28** 06:54:33.5±0.9, 16°25N×122°35E, h0km, mb3.9/8, mb1 4.1/8, mb1mx3.8/52, mbtmp3.9/8, Error ellipse: s-maj=80.8km s-min=18.5km az=66.0*
*MAN **28** 06:54:36.4, 16°23N×122°45E, h19km, mb4.9, ML3.8, MS3.8*
ISC 28 06:54:37.8±1.3, 16°25N±0°03×122°32E±0°05, h28km±10km, n30, σ1°99/32, mb4.0/8, 3C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PALP	**Palanan**	**0.81**	**7**	*eP*	**Pb**	**06 54 51.9**	**-1.5**
PALP				*eS*	**Sn**	**06 55 05.0**	**+0.5**
CAUP	**Cauayan**	**0.84**	**325**	*eP*	**Pb**	**06 54 53.2**	**-0.6**
CAUP				*eS*	**Sn**	**06 55 06.0**	**+0.9**
BALP	**Baler**	**0.88**	**235**	*eP*	**Pn**	**06 54 53.5**	**-0.9**
BALP				*eS*	**Sn**	**06 55 08.2**	**+1.9**
PCPH	**Palayan**	**1.37**	**240**↑	*eP*	**Pb**	**06 55 02.1**	**-0.6**
POLP	**Polilio Island**	**1.56**	**194**	*eP*	**Pn**	**06 55 03.1**	**-0.6**
POLP				*eS*	**Sn**	**06 55 24.3**	**+1.2**
SMPP	**San Manuel, Pa**	**1.58**	**266**	*eP*	**Pb**	**06 55 05.3**	**-1.1**
SMPP				*eS*	**Sb**	**06 55 27.2**	**+1.1**
APYP	**Conner**	**1.90**	**327**	*eP*	**Pn**	**06 55 05.1**	**-3.3**
APYP				*eS*	**Sn**	**06 55 31.3**	**-0.2**
SGCP	**Mt. Cagua**	**1.99**	**352**	*eP*	**Pn**	**06 55 10.0**	**+0.3**
SGCP				*eS*	**Sb**	**06 55 40.2**	**+2.3**
LQP	**Lukban**	**2.26**	**200**↑	*eP*	**Pn**	**06 55 12.8**	**-0.8**
LQP				*eS*	**Sb**	**06 55 44.5**	**-1.3**
BOLP	**Bolinao**	**2.32**	**273**	*eP*	**Pb**	**06 55 17.3**	**-1.7**
BOLP				*eS*	**Sb**	**06 55 48.5**	**+1.3**
GQP	**Guinayangan**	**2.34**	**177**↓	*iP*	**Pn**	**06 55 13.7**	**-0.8**
GQP				*i* S	**Sn**	**06 55 42.9**	**+0.7**
LLP	**Lapu-Lapu**	**6.11**	**165**	*eP*	**Sn**	**06 57 08.8**	**-6.6**
LLP				*eS*	Sb	06 57 27.3	-9.1
MSLP	**Maasin**	**6.56**	**158**	*eS*	**Sn**	**06 57 30.8**	**+4.2**
DCPH	**Dipolog City**	**7.69**	**172**↑	*eP*	Pb	06 56 57.1	+6.6
CGP	**Cagayan de Oro**	**8.09**	**163**↓	*eP*	Pb	06 57 03.7	+6.3
PAGZ	**Pagadian**	**8.42**	**173**	*eP*	**Pb**	**06 57 06.2**	**+3.3**
WRA	**Warramunga Arr**	**37.86**	**161**	P	**P**	**07 01 52.0**	**-0.5**
	3.1nm,1.1s,baz=227,slow=6.5,SNR=6.4						
ASAR	**Alice Springs**	**41.26**	**164**	P	**P**	**07 02 20.6**	**-0.2**
	0.7nm,0.6s,baz=352,slow=7.8,SNR=9.7						
H11S3	**WAKE ISLAND Hy**	**42.32**	**80**	T	T	07 47 46.2	
	baz=274,slow=74,SNR=32						
H11S1	**WAKE ISLAND Hy**	**42.33**	**80**	T	T	07 47 41.7	
	baz=274,slow=74,SNR=22						
H11S2	**WAKE ISLAND Hy**	**42.34**	**80**	T	T	07 47 43.8	
	baz=274,slow=74,SNR=42						
H11N1	**WAKE ISLAND Hy**	**42.44**	**78**	T	T	07 47 51.3	
	baz=274,slow=75,SNR=19						
H11N2	**WAKE ISLAND Hy**	**42.45**	**78**	T	T	07 47 50.5	
	baz=274,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**42.46**	**78**	T	T	07 47 52.2	
	baz=274,slow=75,SNR=11						
MKAR	**Makanchi Array**	**44.98**	**321**	P	**P**	**07 02 51.3**	**+0.7**
	0.6nm,0.7s,baz=113,slow=9.5,SNR=5.7						
ZALV	**Zalesovo Beam**	**47.56**	**331**	P	**P**	**07 03 10.3**	**-0.5**
	1.0nm,0.7s,baz=122,slow=7.0,SNR=3.2						
KURBB	**Kurchatov Arra**	**49.00**	**324**	P	**P**	**07 03 22.3**	**+0.4**
	1.8nm,0.8s,baz=121,slow=8.0,SNR=10.0						
ARCES	**ARCESS Array B**	**77.27**	**339**	P	**P**	**07 06 29.5**	**+0.2**
	4.0nm,0.9s,baz=64,slow=4.2,SNR=4.6						
FINES	**FINESS Array B**	**78.83**	**331**	P	**P**	**07 06 37.7**	**-0.3**
	1.6nm,0.8s,baz=46,slow=5.5,SNR=7.8						
YKA	**Yellowknife Ar**	**89.83**	**23**	P	**P**	**07 07 34.4**	**+0.6**
	0.2nm,0.7s,baz=304,slow=4.3,SNR=4.6						

MAN 28 06:56:44.6, 9°04N×123°80E, h18km, mb4.7, ML3.6, MS3.6, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CGP	**Cagayan de Oro**	**1.05**	**123**	*eS*	Sn	06 57 18.8	+0.1
PAGZ	**Pagadian**	**1.25**	**199**	*eS*	Sg	06 57 24.5	-0.8
MSLP	**Maasin**	**1.51**	**44**	*eP*	Pn	06 57 09.4	-1.3
BUKP	**Musuan**	**1.69**	**133**	*eP*	Pn	06 57 12.8	-0.6
BUKP				*eS*	Sg	06 57 38.4	-1.0
GUIM	**Jordan**	**1.98**	**323**	*eP*	Pn	06 57 13.9	-3.4
GUIM				*eS*	Sn	06 57 40.2	-1.5
KCP	**Kidapawan**	**2.38**	**148**↑	*iP*	Pb	06 57 27.8	+0.7
KCP				*i* S	Sg	06 58 03.0	+1.6
SKMP	**Bagumbayan, Su**	**2.61**	**164**	*eP*	Pn	06 57 26.0	+0.1
SKMP				*eS*	Sn	06 57 58.7	+1.6

*ATH **28** 07:06:02.2, 38°18N×20°44E, h15km±2km, ML2.7/6, Error ellipse: s-maj=3.4km s-min=1.4km az=259.0*
*THE **28** 07:06:02.0, 38°16N×20°38E, h10km±1km, ML2.8/4, Error ellipse: s-maj=1.3km s-min=0.7km az=90.0*
ISC 28 07:06:02.2±1.7, 38°18N±0°04×20°42E±0°09, h13km±5km, n24, σ0°39/34, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.06**	**88**	P	**Pg**	**07 06 04.7**	**0.0**
ARG2				S	**Sg**	**07 06 06.1**	**-0.4**
	21μm,0.1s						
VLS	**Valsamata**	**0.14**	**90**	P	**Pg**	**07 06 05.6**	**0.0**
VLS				S	**Sg**	**07 06 08.4**	**+0.3**
VLS	**Valsamata**	**0.14**	**90**	P	**Pg**	**07 06 05.7**	**0.0**
VLS				S	**Sg**	**07 06 08.3**	**+0.2**
VLS				AML	AML	07 06 08.5	
	comp=E,9536μm,0.2s						
VLS				AML	AML	07 06 09.1	
	comp=N,5424μm,0.1s						
KFL	**Anninata**	**0.30**	**103**	P	**Pg**	**07 06 08.4**	**0.0**
KFL				S	**Sb**	**07 06 13.7**	**-0.6**
	comp=N,4μm,0.4s						
KFL	**Anninata**	**0.30**	**103**	P	**Pg**	**07 06 08.4**	**0.0**
KFL				S	**Sg**	**07 06 12.9**	**+0.4**
KFL				AML	AML	07 06 14.5	
	comp=N,5512μm,0.4s						
KFL				AML	AML	07 06 14.7	
	comp=E,9817μm,0.3s						
FSK	**Fiskardo**	**0.30**	**22**	P	**Pg**	**07 06 08.5**	**+0.1**
FSK				S	**Sg**	**07 06 13.7**	**+1.0**
	comp=E,2μm,0.2s						
FSK	**Fiskardo**	**0.30**	**22**	P	**Pg**	**07 06 08.6**	**+0.1**
FSK				S	**Sg**	**07 06 12.9**	**+0.2**
VLMS	**Volimes, Zakyn**	**0.36**	**147**	P	**Pg**	**07 06 09.2**	**-0.2**
VLMS				S	**Sg**	**07 06 14.9**	**+0.6**
VLMS				AML	AML	07 06 15.9	
	comp=N,12525μm,0.2s						
VLMS				AML	AML	07 06 16.4	
	comp=E,7622μm,0.2s						
MGNA	**Meganis**	**0.56**	**31**	P	**Pg**	**07 06 12.7**	**-0.5**
MGNA				S	**Sb**	**07 06 21.8**	**0.0**
MGNA				AML	AML	07 06 22.4	
	comp=E,1538μm,0.1s						
MGNA				AML	AML	07 06 22.5	
	comp=N,974μm,0.4s						
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	**07 06 16.2**	**-0.3**
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	**07 06 16.2**	**-0.3**
RLS	**Riolos of Patr**	**0.84**	**98**	P	**Pg**	**07 06 18.1**	**-0.3**
PVO	**Paravola**	**0.97**	**63**	P	**Pb**	**07 06 20.8**	**-0.1**
PVO				S	**Sn**	**07 06 35.7**	**+0.4**
	comp=N,270nm,0.4s						
PVO	**Paravola**	**0.97**	**63**	P	**Pb**	**07 06 20.6**	**-0.4**
PVO				AML	AML	07 06 42.8	
	comp=E,644μm,0.4s						
PVO				AML	AML	07 06 43.3	
	comp=N,497μm,0.4s						
DRO	**Drossia**	**1.04**	**102**	P	**Pb**	**07 06 22.0**	**-0.2**
EFP	**Efpalio**	**1.20**	**78**	P	**Pn**	**07 06 24.2**	**-0.4**
AMT	**Artemida-Makis**	**1.21**	**122**	P	**Pg**	**07 06 26.1**	**+0.6**
LAKA	**Lakka**	**1.23**	**87**	P	**Pn**	**07 06 24.7**	**-0.5**
ANX	**Ano Chora**	**1.25**	**70**	P	**Pg**	**07 06 26.2**	**-0.1**
ANX				AML	AML	07 06 50.2	
	comp=N,452μm,0.5s						
ANX				AML	AML	07 06 50.6	
	comp=E,271μm,0.8s						
SERG	**Sergoula**	**1.31**	**79**	P	**Pg**	**07 06 27.4**	**0.0**
TRIZ	**Trizonia**	**1.32**	**81**	P	**Pn**	**07 06 25.9**	**-0.4**
KLV	**Kalavryta, Ach**	**1.37**	**95**	P	**Pn**	**07 06 27.3**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.58**	**58**	P	**Pg**	**07 06 33.1**	**+0.5**
AGG	**Agios Georgios**	**1.72**	**60**	P	**Pb**	**07 06 34.2**	**+0.5**

*ATH **28** 07:20:03.0, 38°23N×20°42E, h19km±1km, ML3.3/9, Error ellipse: s-maj=2.6km s-min=1.1km az=84.0*
*THE **28** 07:20:03.5, 38°20N×20°42E, h14km, ML3.4/4, Error ellipse: s-maj=1.5km s-min=0.7km az=256.0*
ISC 28 07:20:03.0±1.0, 38°22N±0°03×20°41E±0°04, h18km±3km, n50, σ0°91/66, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.08**	**127**	P	**Pg**	**07 20 06.5**	**+0.1**
ARG2				S	**Sg**	**07 20 08.3**	**-0.4**
	68μm,0.1s						
VLS	**Valsamata**	**0.15**	**108**	P	**Pg**	**07 20 07.1**	**-0.1**
VLS				S	**Sb**	**07 20 09.6**	**+0.5**
VLS	**Valsamata**	**0.15**	**108**	P	**Pg**	**07 20 07.1**	**-0.1**
VLS				S	**Sg**	**07 20 09.8**	**-0.3**
VLS				AML	AML	07 20 09.9	
VLS				AML	AML	07 20 10.5	
	comp=E,84597μm,0.1s						
KFL	**Anninata**	**0.32**	**111**	P	**Pg**	**07 20 09.9**	**+0.1**
KFL				S	**Sg**	**07 20 14.2**	**-0.3**
	comp=E,24μm,0.4s						
KFL	**Anninata**	**0.32**	**111**	P	**Pg**	**07 20 09.9**	**+0.1**
KFL				S	**Sb**	**07 20 14.9**	**-0.1**
KFL				AML	AML	07 20 15.1	
	comp=N,40868μm,0.5s						
KFL				AML	AML	07 20 15.4	
	comp=E,56713μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.40**	**150**	P	**Pg**	**07 20 11.2**	**0.0**
VLMS				S	**Sb**	**07 20 18.0**	**+0.6**
VLMS				AML	AML	07 20 18.7	
	comp=E,39544μm,0.2s						
VLMS				AML	AML	07 20 19.7	
	comp=N,32958μm,0.2s						
EVGI	**Lefkada island**	**0.44**	**26**	P	**Pg**	**07 20 12.1**	**+0.2**
EVGI				S	**Sb**	**07 20 18.8**	**+0.2**
EVGI	**Lefkada island**	**0.44**	**26**	P	**Pg**	**07 20 12.2**	**+0.2**
EVGI				S	**Sb**	**07 20 19.0**	**+0.4**
LKD2	**

DBRK	**Dubrovnik**	**4.76**	**339**	*e*Pn		**Pn**	07 21 13.5	**-0.3**
DBRK				Sn		**Sn**	07 22 07.0	**-1.6**
STON	**Ston**	**5.08**	**337**	*e*Pn		**Pn**	07 21 19.0	**+0.9**
STON				Sn		**Sn**	07 22 13.2	**-3.2**
MAKA	**Makarska**	**5.68**	**334**	*i* Pn		**Pn**	07 21 26.9	**+0.6**
ZIRJ	**Zirje**	**6.51**	**328**	*e*Pn		**Pn**	07 21 38.1	**+0.2**
KIJV	**Kijevo**	**6.52**	**334**	*e*Pn		**Pn**	07 21 39.0	**+1.0**
KIJV				Sn		**Sn**	07 22 49.9	**-1.9**
MORI	**Morici**	**6.66**	**329**	*e*Pn		**Pn**	07 21 41.1	**+1.2**
MORI				Sn		**Sn**	07 22 54.1	**-1.2**
DUGI	**Dugi Otok**	**7.04**	**327**	*e*Pn		**Pn**	07 21 45.9	**+0.9**
UDBI	**Udbina**	**7.20**	**332**	*e*Pn		**Pn**	07 21 49.6	**+2.2**
NVLJ	**Novalja**	**7.58**	**328**	*e*Pn		**Pn**	07 21 53.9	**+1.5**

NNC 28 07:30:27.0±1.0, 50°06.0′N×78°64.6′E, h10km±10km, mb3.5, mpv3.2, 9C-7D, Error ellipse: s-maj=10.1km s-min=6.6km az=53.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**0.57**	**353**	⇑P	Pb	07 30 38.8	-0.4
	39nm,0.3s						
KURBB				⇑S	Sb	07 30 47.7	+0.2
	74nm,0.5s						
KURK	**Kurchatov**	**0.66**	**359**	⇑P	Pb	07 30 40.2	-0.4
	14nm,0.3s						
KURK				⇓S	Sb	07 30 50.2	+0.2
	31nm,0.5s						
SEM	**Semipalatinsk**	**1.09**	**71**	P	Pg	07 30 47.9	0.0
	5.3nm,0.1s						
SEM				S	Sb	07 31 03.0	+0.5
	106nm,0.4s						
BRZS	**Berezniki**	**3.85**	**271**	Pg	Pb	07 31 36.9	+1.9
	16nm,0.2s						
BRZS				Lg	Lg	07 32 26.9	
	8.7nm,0.3s						
MAKZ	**Makanchi**	**3.94**	**144**	⇓Pn	Pn	07 31 29.8	+2.2
	0.6nm,0.5s						
MAKZ				⇑Pg	Pb	07 31 36.7	+0.2
	2.0nm,0.5s						
MAKZ				⇓Lg	Lg	07 32 30.7	
	12nm,0.6s						
MK31	**Makanchi Array**	**4.07**	**142**	⇑Pn	Pn	07 31 31.5	+2.1
	0.2nm,0.3s,baz=328,slow=11						
MK31				⇓Pg	Pb	07 31 39.9	+1.1
	2.5nm,0.5s,baz=339,slow=16						
MK31				⇑Lg	Lg	07 32 34.6	
	7.3nm,0.4s,baz=330,slow=29						
KAPS	**Kapalarasan**	**4.80**	**174**	Pg	Pb	07 31 54.5	+3.2
	1.3nm,0.4s						
KAPS				Lg	Lg	07 32 56.9	
	11nm,0.5s						
ZSN	**Zaisan**	**4.87**	**120**	Pg	Pb	07 31 51.9	-0.6
	1.7nm,0.2s						
ZSN				Lg	Lg	07 32 55.2	
	10nm,0.5s						
BVB5	**Borovoye Array**	**5.96**	**303**	⇑Pn	Pn	07 31 56.5	+1.2
BVB5				⇓Sn	Sn	07 33 03.2	-0.4
BVB5				⇑Lg	Lg	07 33 41.2	
BRVK	**Borovoye**	**6.02**	**303**	⇓Pn	Pn	07 31 52.9	-3.2
	4.1nm,1.1s						
BRVK				⇓Sn	Sn	07 33 05.8	+0.8
	1.5nm,0.5s						
BRVK				⇑Lg	Lg	07 33 40.1	
	2.8nm,0.9s						

NNC 28 07:51:18.2±10.0, 36°81N×70°60E, h76km±223km, mb3.5, mpv3.9, 5C-1D, Error ellipse: s-maj=78.8km s-min=69.1km az=178.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.29**	**359**	⇓P	Pn	07 52 49.9	+1.6
	2.4nm,0.3s,baz=179,slow=13						
KK31				⇑S	Sn	07 54 01.6	+2.8
	2.0nm,0.3s,baz=186,slow=25						
AAK	**Ala-Archa**	**6.55**	**26**	P	Pn	07 52 50.7	-1.3
	4.0nm,0.3s						
AAK				S	Sn	07 54 03.3	-2.0
	3.8nm,0.7s						
AB31	**Akbulak array**	**14.66**	**331**	⇑P	Pn	07 54 42.2	+0.8
	0.3nm,0.3s						
AB31				⇑S	Sn	07 57 20.2	-2.4
	1.7nm,0.7s						
AKTO	**Aktyubinsk**	**16.35**	**330**	⇑P	Pn	07 55 03.7	+0.8
	1.6nm,0.8s						
AKTO				⇑S	Sn	07 58 04.8	+1.1
	1.7nm,0.8s						

*IDC **28** 07:54:16.8±1.1, 47°.53S×165°.40E, h0km, mb4.4/3, mb1 4.6/5, mb1mx4.2/36, mbtmp4.5/5, ML4.3/2, MS3.9/9, Ms1 3.9/9, ms1mx3.7/20, Error ellipse: s-maj=43.0km s-min=22.8km az=174.0*

*NEIC **28** 07:54:17.6±1.4, 47°.69S±0°.07×165°.3E±0°.1, h11km±3km, mb4.6/17, ML5.2(WEL), Error ellipse: s-maj=13.2km s-min=8.4km az=122.0*

ISC 28 07:54:20.5±1.2, 47°.74S±0°.07×165°.42E±0°.07, h28km±8km, n160, σ1s28/159, mb4.8/12, MS3.8/9, 2C, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYZ	**Puysegur Point**	**1.79**	**29**	P	**Pn**	**07 54 47.9**	**-1.6**
PYZ				S	**Sn**	**07 55 11.2**	**0.0**
PYZ	**Puysegur Point**	**1.79**	**29**		**Pn**	**07 54 48.0**	**-1.5**
PYZ				Sn	**Sn**	**07 55 11.3**	**0.0**
APZ	**The Paps**	**1.97**	**64**	P	**Pn**	**07 54 51.2**	**-0.8**
APZ				S	**Sn**	**07 55 15.6**	**-0.1**
WHZ	**Wether Hill Ro**	**2.53**	**44**	P	**Pn**	**07 54 58.9**	**-0.8**
WHZ				S	**Sn**	**07 55 30.2**	**+0.7**
WHZ	**Wether Hill Ro**	**2.53**	**44**		**Pn**	**07 54 58.9**	**-0.8**
WHZ				Sn	**Sn**	**07 55 29.5**	**-0.1**
DCZ	**Deep Cove**	**2.57**	**28**	P	**Pn**	**07 54 58.9**	**-1.2**
DCZ	**Deep Cove**	**2.57**	**28**		**Pn**	**07 54 58.7**	**-1.4**
DCZ				Sn	**Sn**	**07 55 30.5**	**+0.1**
SYZ	**Scrubby Hill**	**2.81**	**66**	P	**Pn**	**07 55 03.6**	**+0.2**
MLZ	**Mavora Lakes**	**3.01**	**39**	P	**Pn**	**07 55 06.4**	**+0.1**
MLZ				S	**Sn**	**07 55 42.7**	**+1.2**
MLZ	**Mavora Lakes**	**3.01**	**39**		**Pn**	**07 55 06.2**	**-0.1**
MLZ				Sn	**Sn**	**07 55 42.1**	**+0.6**
TUZ	**Tuapeka**	**3.40**	**60**	P	**Pn**	**07 55 11.5**	**0.0**
MSZ	**Milford Sound**	**3.52**	**31**	P	**Pn**	**07 55 14.2**	**+0.9**
EAZ	**Earnscleugh**	**3.67**	**48**	P	**Pn**	**07 55 15.0**	**-0.3**
WKZ	**Wanaka**	**3.83**	**42**	P	**Pn**	**07 55 18.4**	**+0.8**
WKZ				S	**Sn**	**07 56 02.8**	**+1.1**
WKZ	**Wanaka**	**3.83**	**42**		**Pn**	**07 55 17.8**	**+0.2**
WKZ				Sn	**Sn**	**07 56 02.2**	**+0.5**
HHSZ	**Highcliff Hill**	**4.01**	**64**	P	**Pn**	**07 55 20.2**	**+0.2**
JCZ	**Jackson Bay**	**4.35**	**34**	P	**Pn**	**07 55 25.7**	**+1.0**
ODZ	**Otahua Downs**	**4.51**	**55**	P	**Pn**	**07 55 24.9**	**-1.9**
ODZ	**Otahua Downs**	**4.51**	**55**		**Pn**	**07 55 25.1**	**-1.7**
LBZ	**Lake Benmore**	**4.71**	**46**	P	**Pn**	**07 55 27.8**	**-1.9**
LBZ	**Lake Benmore**	**4.71**	**46**		**Pn**	**07 55 28.1**	**-1.6**
FOZ	**Fox Glacier**	**5.21**	**38**	P	**Pn**	**07 55 36.6**	**+0.1**
FOZ				S	**Sn**	**07 56 35.3**	**-0.2**
FOZ	**Fox Glacier**	**5.21**	**38**		**Pn**	**07 55 36.2**	**-0.3**
RPZ	**Rata Peaks**	**5.63**	**46**	Pn	**Pn**	**07 55 40.0**	**-2.3**
	8.6nm,0.3s,baz=240,slow=6.4,SNR=22						
RPZ				Sn	**Sn**	**07 56 44.9**	**-1.1**
	46nm,0.3s,baz=28,slow=17,SNR=8.5						
RPZ				LR	LR	07 58 07.2	
	comp=Z,2μm,19.7s,baz=198,slow=42						
RPZ	**Rata Peaks**	**5.63**	**46**	P	**Pn**	**07 55 40.6**	**-1.7**
RPZ	**Rata Peaks**	**5.63**	**46**		**Pn**	**07 55 40.7**	**-1.6**
RPZ					**Sn**	**07 56 45.7**	**-0.3**
WVZ	**Waitaha Valley**	**5.98**	**41**	P	**Pn**	**07 55 46.7**	**-0.2**
OXZ	**Oxford**	**6.41**	**49**	P	**Pn**	**07 55 53.0**	**+0.2**
OXZ	**Oxford**	**6.41**	**49**		**Pn**	**07 55 51.6**	**-1.3**
MQZ	**McQueen's Vall**	**6.47**	**54**	P	**Pn**	**07 55 51.5**	**-2.2**
MQZ	**McQueen's Vall**	**6.47**	**54**		**Pn**	**07 55 51.8**	**-1.9**
AKCZ	**Akaroa Harbour**	**6.50**	**56**	P	**Pn**	**07 55 53.4**	**-0.9**
INZ	**Inchbonnie**	**6.57**	**43**	P	**Pn**	**07 55 54.3**	**-0.8**
OKCZ	**Okains Bay**	**6.68**	**56**	P	**Pn**	**07 55 56.2**	**-0.5**
AMCZ	**Amberley**	**6.83**	**51**	P	**Pn**	**07 56 00.7**	**+2.0**
LTZ	**Lake Taylor**	**6.92**	**47**	P	**Pn**	**07 56 00.0**	**0.0**
LTZ	**Lake Taylor**	**6.92**	**47**		**Pn**	**07 55 59.1**	**-0.9**
GVZ	**Greta Valley S**	**7.17**	**51**	P	**Pn**	**07 56 04.1**	**+0.7**
DSZ	**Denniston Nort**	**7.52**	**40**	P	**Pn**	**07 56 06.6**	**-1.5**
DSZ				S	**Sn**	**07 57 29.0**	**-3.4**
KHZ	**Kahutara**	**7.83**	**50**	P	**Pn**	**07 56 10.9**	**-1.4**
KHZ	**Kahutara**	**7.83**	**50**		**Pn**	**07 56 10.3**	**-2.0**
MCQ	**Macquarie Isla**	**7.90**	**209**		**Pn**	**07 56 12.2**	**-1.0**
THZ	**Tophouse**	**8.00**	**44**	P	**Pn**	**07 56 14.0**	**-0.8**
BSWZ	**Blackbirch Sta**	**8.51**	**48**	P	**Pn**	**07 56 24.1**	**+2.4**
BSWZ	**Blackbirch Sta**	**8.51**	**48**		**Pn**	**07 56 21.5**	**-0.2**
BSWZ					**Sn**	**07 57 56.6**	**-0.1**
QRZ	**Quartz Range**	**8.58**	**39**	P	**Pn**	**07 56 21.9**	**-0.8**
QRZ	**Quartz Range**	**8.58**	**39**		**Pn**	**07 56 21.7**	**-1.0**
NNZ	**Nelson**	**8.65**	**44**	P	**Pn**	**07 56 24.3**	**+0.7**
NNZ	**Nelson**	**8.65**	**44**		**Pn**	**07 56 22.1**	**-1.5**
CMWZ	**Cape Campbell**	**8.66**	**49**	P	**Pn**	**07 56 27.5**	**+3.7**
TUWZ	**Tuamarina**	**8.76**	**47**	P	**Pn**	**07 56 26.4**	**+1.3**
TUWZ	**Tuamarina**	**8.76**	**47**		**Pn**	**07 56 24.8**	**-0.3**
TCW	**Tory Channel**	**9.09**	**47**	P	**Pn**	**07 56 31.1**	**+1.5**
DUWZ	**D'Urville Isla**	**9.23**	**44**	P	**Pn**	**07 56 31.8**	**+0.2**
SNZO	**South Karori**	**9.23**	**49**		**Pn**	**07 56 31.2**	**-0.3**
BHW	**Baring Head**	**9.24**	**50**	P	**Pn**	**07 56 33.3**	**+1.5**
PLWZ	**Palliser**	**9.33**	**52**	P	**Pn**	**07 56 34.5**	**+1.5**
MSWZ	**Moikau Station**	**9.44**	**52**	P	**Pn**	**07 56 35.4**	**+1.0**
MSWZ	**Moikau Station**	**9.44**	**52**		**Pn**	**07 56 33.9**	**-0.6**
CAW	**Cannon Point**	**9.56**	**50**	P	**Pn**	**07 56 36.6**	**+0.4**
KIW	**Kapiti Island**	**9.66**	**48**	P	**Pn**	**07 56 38.2**	**+0.6**
MTW	**Mount Morrison**	**9.75**	**51**	P	**Pn**	**07 56 39.7**	**+0.9**
OGWZ	**Otaki Gorge**	**9.83**	**49**	P	**Pn**	**07 56 40.1**	**+0.2**
HOWZ	**Holdsworth Sta**	**9.95**	**50**	P	**Pn**	**07 56 41.7**	**+0.2**
TMWZ	**Te Maipa**	**9.99**	**52**	P	**Pn**	**07 56 43.2**	**+1.0**
MRZ	**Mangatainoka R**	**10.15**	**50**	P	**Pn**	**07 56 44.6**	**+0.3**
NMEZ	**Namu Road**	**10.33**	**39**	P	**Pn**	**07 56 47.7**	**+1.0**
NBEZ	**Newall Road No**	**10.45**	**39**	P	**Pn**	**07 56 48.3**	**0.0**
KHEZ	**Kahui Hut**	**10.49**	**40**	P	**Pn**	**07 56 48.7**	**-0.2**
PREZ	**Palmer Road**	**10.51**	**40**	P	**Pn**	**07 56 49.7**	**+0.5**
LREZ	**Lake Rotokare**	**10.52**	**41**	P	**Pn**	**07 56 50.3**	**+1.0**
WAZ	**Wanganui**	**10.55**	**44**	P	**Pn**	**07 56 51.3**	**+1.5**
PKE	**Pukeiti**	**10.56**	**39**	P	**Pn**	**07 56 50.1**	**+0.2**
DVHZ	**Dannevirke**	**10.72**	**50**	P	**Pn**	**07 56 51.7**	**-0.4**
VRZ	**Vera Road**	**10.96**	**42**	P	**Pn**	**07 56 55.4**	**+0.1**
PKVZ	**Pokaka**	**11.09**	**44**	P	**Pn**	**07 56 59.3**	**+2.1**
MOVZ	**Moawhango**	**11.19**	**46**	P	**Pn**	**07 56 59.2**	**+0.6**
FWVZ	**Far West T-bar**	**11.22**	**45**	P	**Pn**	**07 57 00.7**	**+1.7**
BHHZ	**Black Hill Sta**	**11.28**	**47**	P	**Pn**	**07 57 00.4**	**+0.7**
KRHZ	**Kereru**	**11.32**	**48**	P	**Pn**	**07 57 01.2**	**+1.0**
WTVZ	**West Tongariro**	**11.35**	**44**	P	**Pn**	**07 57 00.1**	**-0.6**
HIZ	**Hauiti**	**11.50**	**40**	P	**Pn**	**07 57 01.6**	**-1.2**
HIZ	**Hauiti**	**11.50**	**40**		**Pn**	**07 57 01.1**	**-1.7**
KWHZ	**Kaweka Forest**	**11.51**	**48**	P	**Pn**	**07 57 04.1**	**+1.2**
BKZ	**Black Stump Fm**	**11.74**	**47**	P	Pn	07 57 10.9	+4.8
BKZ	**Black Stump Fm**	**11.74**	**47**		**Pn**	**07 57 04.6**	**-1.4**
NMHZ	**Naumai**	**11.95**	**48**	P	**Pn**	**07 57 08.2**	**-0.7**
TOZ	**Tahuroa Road**	**12.43**	**40**	P	**Pn**	**07 57 18.1**	**+2.6**
AWAZ	**Awhitu Peninsu**	**12.64**	**36**	P	**Pn**	**07 57 18.4**	**+0.1**
WTAZ	**Waiatarua**	**12.73**	**35**	P	**Pn**	**07 57 19.8**	**+0.2**
URZ	**Urewera**	**12.75**	**46**	Pn	**Pn**	**07 57 15.7**	**-4.1**
	1.6nm,0.3s,baz=235,slow=10,SNR=9.0						
URZ				LR	LR	08 03 06.5	
	comp=Z,2μm,19.2s,baz=234,slow=42						
URZ	**Urewera**	**12.75**	**46**	P	**Pn**	**07 57 17.8**	**-1.9**
MKAZ	**Moumakai**	**12.82**	**38**	P	**Pn**	**07 57 20.0**	**-0.7**
MWZ	**Matawai**	**12.90**	**48**	P	**Pn**	**07 57 22.1**	**+0.3**
MBAZ	**Motutapu North**	**13.00**	**36**	P	**Pn**	**07 57 23.9**	**+0.6**
WIAZ	**Waiheke Island**	**13.08**	**37**	P	**Pn**	**07 57 23.8**	**-0.4**
RUGZ	**Raukumara Rang**	**13.26**	**47**	P	**Pn**	**07 57 25.5**	**-1.3**
HAZ	**Te Kaha**	**13.47**	**47**	P	**Pn**	**07 57 28.7**	**-0.9**
WCZ	**Waipu Caves**	**13.52**	**33**	P	**Pn**	**07 57 30.2**	**-0.1**
TAU	**Tasmania Unive**	**13.61**	**284**	Pn	Pn	07 57 26.4	-5.1
WMGZ	**Waiomatatini S**	**13.74**	**49**	P	**Pn**	**07 57 31.5**	**-1.8**
MXZ	**Matakaoa Point**	**13.88**	**48**	P	**Pn**	**07 57 34.9**	**-0.3**
OUZ	**Omahuta**	**13.91**	**29**	P	**Pn**	**07 57 35.7**	**+0.1**
OUZ	**Omahuta**	**13.91**	**29**		**Pn**	**07 57 34.7**	**-1.0**
CAN	**Canberra**	**17.42**	**309**		**Pn**	**07 58 19.2**	**-2.1**
TOO	**Toolangi**	**17.79**	**298**		**Pn**	**07 58 25.1**	**-0.8**
TOO				IAmb	IAmb	07 58 36.9	
	comp=Z,29nm,1.1s						
ARMA	**Armidale**	**20.29**	**324**	P	**P**	**07 58 52.5**	**-1.5**
ARMA				IAmb	IAmb	07 58 55.7	
	comp=Z,19nm,1.1s						
RAO	**Raoul Island**	**22.51**	**41**	LR	LR	08 08 50.4	
	comp=Z,566nm,18.5s,baz=186,slow=39						
STKA	**Stephens Creek**	**24.06**	**303**	P	**P**	**07 59 34.2**	**+0.9**
	comp=Z,2.7nm,0.7s,baz=136,slow=13,SNR=5.5						
STKA				LR	LR	08 08 09.6	
	comp=Z,86nm,18.8s,slow=35						
STKA	**Stephens Creek**	**24.06**	**303**	P	**P**	**07 59 32.7**	**-0.5**
EIDS	**Eidsvold**	**25.04**	**328**	P	**P**	**07 59 41.1**	**-1.0**
EIDS				IAmb	IAmb	07 59 51.0	
	comp=Z,14nm,0.9s						
DZM	**Mont Dzumac**	**25.62**	**2**	*e*P	**P**	**07 59 49.8**	**+2.3**
	comp=Z,199nm,1.4s						
DZM				*e*LR	LR	08 06 11.6	
	comp=Z,313nm,25.6s						
DZM	**Mont Dzumac**	**25.62**	**2**	LR	LR	08 08 14.1	
	comp=Z,144nm,19.1s,baz=204,slow=33						
DZM	**Mont Dzumac**	**25.62**	**2**	P	**P**	**07 59 46.7**	**-0.8**
AS31	**Alice Springs**	**34.70**	**303**	P	**P**	**08 01 06.6**	**-1.3**
ASAR	**Alice Springs**	**34.70**	**303**	P	**P**	**08 01 06.8**	**-1.1**
	comp=Z,8.3nm,0.7s,baz=135,slow=7.9,SNR=87						
ASAR				LR	LR	08 14 04.2	
	comp=Z,137nm,18.5s,baz=150,slow=34						
WB2	**Warramunga Arr**	**37.43**	**307**	P	**P**	**08 01 29.5**	**-1.7**
WB2				IAmb	IAmb	08 01 44.4	
	comp=Z,27nm,1.5s						
WRA	**Warramunga Arr**	**37.44**	**307**	P	**P**	**08 01 29.6**	**-1.7**
	comp=Z,5.1nm,0.7s,baz=141,slow=8.2,SNR=20						
H01W1	**Cape Leeuwin H**	**39.88**	**270**	T	T	08 44 14.8	
	baz=125,slow=75,SNR=82						
H01W2	**Cape Leeuwin H**	**39.90**	**270**	T	T	08 44 10.2	
	baz=125,slow=75,SNR=89						
H01W3	**Cape Leeuwin H**	**39.90**	**270**	T	T	08 44 15.4	
	baz=125,slow=75,SNR=118						
PMG	**Port Moresby**	**41.21**	**332**	P	**P**	**08 02 01.8**	**-0.9**
QSPA	**South Pole Qui**	**42.39**	**180**	P	P	08 02 14.8	+2.8
FITZ	**Fitzroy Crossi**	**43.84**	**299**	P	**P**	**08 02 23.5**	**-0.6**
FITZ				IAmb	IAmb	08 02 35.3	
	comp=Z,26nm,1.4s						
KNRA	**Kununurra**	**43.97**	**304**	P	**P**	**08 02 24.3**	**-0.8**
KNRA				IAmb	IAmb	08 02 37.7	
	comp=Z,17nm,1.1s						
MTN	**Manton Dam**	**45.02**	**309**	P	**P**	**08 02 32.0**	**-1.5**
MBWA	**Marble Bar**	**45.18**	**290**	P	**P**	**08 02 33.9**	**-0.9**
MBWA				IAmb	IAmb	08 02 50.8	
	comp=Z,12nm,1.0s						
PPT2	**Papeete2**	**47.40**	**66**	*e*LR	LR	08 16 08.9	
	comp=Z,248nm,30.8s						
PPT	**Papeete**	**47.42**	**66**	LR	LR	08 19 19.0	
	comp=Z,108nm,20.2s,baz=232,slow=32						
MANU	**Manus Island**	**48.12**	**335**	P	**P**	**08 02 57.9**	**0.0**
SYO	**Syowa Base**	**56.92**	**200‖**	*e*P	**P**	**08 04 02.2**	**-0.1**
SYO	**Syowa Base**	**56.92**	**200‖**	*e*pP	pP	08 04 07.0	-3.3
SNAA	**Sanae**	**60.61**	**184**	P	**P**	**08 04 28.4**	**+0.4**
SNAA				IAmb	IAmb	08 04 40.8	
	comp=Z,6.3nm,1.1s						
PMSA	**Palmer Station**	**61.40**	**158**	LR	LR	08 26 24.5	
	comp=Z,150nm,18.8s,baz=180,slow=31						
H08S2	**Diego Garcia H**	**86.37**	**263**	T	T	09 42 08.4	
	baz=137,slow=76,SNR=15						
H08S1	**Diego Garcia H**	**86.38**	**263**	T	T	09 42 13.4	
	baz=137,slow=76,SNR=9.8						
H08S3	**Diego Garcia H**	**86.39**	**263**	T	T	09 42 09.1	
	baz=137,slow=76,SNR=25						
H08N1	**Diego Garcia H**	**88.31**	**263**	T	T	09 44 41.2	
	baz=144,slow=76,SNR=24						
H08N3	**Diego Garcia H**	**88.33**	**262**	T	T	09 44 30.2	
	baz=144,slow=76,SNR=17						
H08N2	**Diego Garcia H**	**88.34**	**263**	T	T	09 44 31.9	
	baz=144,slow=76,SNR=16						
CMAR	**Chiang Mai Arr**	**88.65**	**299**	LR	LR	08 49 42.4	
	comp=Z,14nm,18.1s,baz=15,slow=38						
NJ2	**Nanjing**	**89.75**	**322**	*e*P	**P**	**08 07 18.3**	**+2.6**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LZH	**Lanzhou**	**99.93**	**314**	*e*P	**Pdif**	**08 08 03.3**	**+0.9**
LZH				pP	pP	08 08 11.3	+0.5
LZH				sP	sP	08 08 12.5	-1.2
LZH				*e*PP	**PP**	**08 12 11.5**	**+3.4**
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,52nm,5.5s						
LZH				LR	LR		
	comp=N,98nm,17.3s						
LZH				LR	LR		
	comp=E,100nm,17.5s						
LZH				LR	LR		
	comp=Z,160nm,19.7s						
HHC	**Hu-ho-hao-te**	**100.29**	**321**	*e*P	**Pdif**	**08 08 08.0**	**+4.1**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,51nm,6.3s						
KSH	**Kashi**	**117.55**	**299**	PKP	**PKPdf**	**08 13 00.8**	**-2.4**
KSH				sPKP		08 13 16.0	
KSH				PP	**PP**	**08 14 18.5**	**+2.2**
KSH				AMB	AMB		
	comp=Z,430nm,5.9s						
ILAR	**Eielson Array**	**118.16**	**21**	PKP	**PKPdf**	**08 13 03.2**	**-0.1**
	comp=Z,0.9nm,1.1s,baz=294,slow=4.7,SNR=4.9						
KKAR	**Karatay Array**	**123.00**	**300**		**PKPdf**	**08 13 13.1**	**-0.3**
KURBB	**Kurchatov Arra**	**123.06**	**311**	PKP	**PKPdf**	**08 13 13.1**	**-0.1**
	comp=Z,0.7nm,0.8s,baz=82,slow=1.9,SNR=6.1						
YKA	**Yellowknife Ar**	**126.79**	**35**	PKP	**PKPdf**	**08 13 19.5**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=258,slow=1.3,SNR=7.2						
BR131	**Keskin Array S**	**144.74**	**275**		**PKPdf**	**08 13 53.9**	**-0.3**
BRTR	**Keskin Array B**	**144.74**	**275**	PKP	PKPbc	08 13 53.4	+0.2
	comp=Z,2.3nm,0.8s,baz=134,slow=4.1,SNR=11						
BRTR	**Keskin Array B**	**144.74**	**275**		**PKPdf**	**08 13 53.6**	**-0.5**
FRB	**Frobisher Bay**	**146.87**	**41**	PKPbc	**PKPab**	**08 14 00.2**	**0.0**
	comp=Z,5.9nm,0.8s,baz=271,slow=2.9,SNR=7.6						
SPITS	**Spitsbergen Ar**	**147.28**	**349**	PKPbc	**PKPbc**	**08 14 00.1**	**+0.5**
	comp=Z,22nm,0.9s,baz=126,slow=8.4,SNR=8.2						
ARCES	**ARCESS Array B**	**150.73**	**332**	PKPbc	**PKiKP**	**08 14 09.6**	**+0.4**
	comp=Z,4.5nm,0.7s,baz=57,slow=4.5,SNR=7.6						
ARCES	**ARCESS Array B**	**150.73**	**332**		**PKiKP**	**08 14 09.2**	**+0.1**
AKASG	**Malin Array Be**	**151.55**	**293**		**PKPbc**	**08 14 10.9**	**-0.1**
MLR	**Muntele Rosu**	**152.29**	**281**	PKPbc	**PKiKP**	**08 14 13.4**	**+0.2**
	comp=Z,2.0nm,0.7s,baz=169,slow=5.2,SNR=3.7						
FINES	**FINESS Array B**	**153.27**	**316**	PKPbc	**PKiKP**	**08 14 15.1**	**+0.5**
	comp=Z,2.2nm,0.7s,baz=180,slow=1.1,SNR=3.5						
FINES	**FINESS Array B**	**153.27**	**316**	PKPdf	**PKPdf**	**08 14 08.2**	**+1.3**
FINES					**PKiKP**	**08 14 14.9**	**+0.4**
FINES				PKPab	**sPKPbc**	**08 14 26.9**	**+1.2**

ISK 28 08:06:14.3, 36°.99N×35°.96E, h2km, ML1.8/2, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEYT	**Ceyhan**	**0.17**	**277**	PG	Pg	08 06 18.1	+0.6
CEYT				SG	Sg	08 06 21.5	+1.8
YURE	**YUREGIR**	**0.31**	**238**	PG	Pb	08 06 21.5	-1.0
YURE				SG	Sb	08 06 26.4	-1.6
KOZT	**Kozan**	**0.50**	**348**	PG	Pb	08 06 25.2	-0.7
TAHT	**Tahtakopru-Hat**	**0.64**	**163**	PG	Pb	08 06 27.8	-0.4
TAHT				SG	Sb	08 06 37.4	-0.2

*MOS **28** 08:07:07.9±1.3, 38°.05N×20°.26E, h15km, mb4.5/14, Error ellipse: s-maj=7.0km s-min=4.4km az=72.5*

*PDG **28** 08:07:09.3±0.2, 38°.13N×20°.33E, h22km±2km, ML4.2/14, Error ellipse: s-maj=2.3km s-min=0.9km az=90.0*

*NEIC **28** 08:07:10.6±2.4, 38°.20N±0°.03×20°.41E±0°.03, h10km±1km, Error ellipse: s-maj=5.8km s-min=3.2km az=44.0*

*THE **28** 08:07:11.0, 38°.20N×20°.44E, h15km, ML4.2/11, Error ellipse: s-maj=1.1km s-min=0.4km az=254.0*

*ATH **28** 08:07:11.6, 38°.21N×20°.55E, h15km, ML4.0/13, Error ellipse: s-maj=1.9km s-min=0.9km az=256.0*

*IDC **28** 08:07:12.7±4.6, 38°.29N×20°.46E, h27km±33km, mb4.0/17, mb1 4.1/25, mb1mx3.9/64, mbtmp4.1/25, ML4.1/6, Error ellipse: s-maj=14.2km s-min=12.3km az=23.0*

**ISC 28 08:07:11.4±0.6, 38°.21N±0°.02×20°.45E±0°.03, h17km±3km, n320, σ1s45/403, mb4.

UPR	**University Cam**	**1.05**	**86**	P		**Pb**	**08 07 31.1**	**0.0**
EFP	**Efpalio**	**1.17**	**79**	P		**Pn**	**08 07 31.7**	**-1.1**
EFP				AML	AML		08 07 55.1	
	comp=E,16729µm,0.6s							
EFP				AML	AML		08 07 57.4	
	comp=N,10618µm,0.4s							
LAKA	**Lakka**	**1.21**	**88**	P		**Pn**	**08 07 32.8**	**-0.7**
LAKA				AML	AML		08 08 00.5	
	comp=E,7547µm,0.6s							
LAKA				AML	AML		08 08 01.2	
	comp=N,8707µm,0.7s							
AMT	**Artemida-Makis**	**1.21**	**124**	P		**Pn**	**08 07 32.7**	**-0.8**
AMT				S		**Sn**	**08 07 49.5**	**+0.1**
	comp=N,7µm,0.6s							
AMT	**Artemida-Makis**	**1.21**	**124**	P		**Pn**	**08 07 33.4**	**-0.1**
AMT				AML	AML		08 07 58.9	
	comp=E,12384µm,0.5s							
AMT				AML	AML		08 08 02.1	
	comp=N,12926µm,0.8s							
AMT	**Artemida-Makis**	**1.21**	**124**			**Pn**	**08 07 32.7**	**-0.8**
AMT						**Sn**	**08 07 49.5**	**+0.1**
ANX	**Ano Chora**	**1.22**	**71**	P		**Pn**	**08 07 33.1**	**-0.6**
ANX				AML	AML		08 08 01.6	
	comp=E,18572µm,0.6s							
ANX				AML	AML		08 08 02.0	
	comp=N,33531µm,0.6s							
EVR	**Evrytania**	**1.28**	**56**	P		**Pn**	**08 07 34.1**	**-0.4**
EVR				AML	AML		08 08 04.6	
	comp=N,4045µm,0.7s							
EVR				AML	AML		08 08 06.2	
	comp=E,6392µm,0.8s							
TRIZ	**Trizonia**	**1.29**	**83**	P		**Pn**	**08 07 33.8**	**-0.7**
KALE	**Kalithea**	**1.34**	**82**	P		**Pn**	**08 07 34.8**	**-0.6**
KALE				AML	AML		08 08 00.7	
	comp=E,5966µm,0.5s							
KALE				AML	AML		08 08 02.5	
	comp=N,10082µm,0.6s							
KLV	**Kalavryta, Ach**	**1.35**	**97**	P		**Pn**	**08 07 34.9**	**-0.6**
JAN	**Janina**	**1.48**	**12**	P		**Pg**	**08 07 41.6**	**+1.7**
JAN	**Janina**	**1.48**	**12**	P		**Pb**	**08 07 39.0**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.54**	**58**	P		**Pb**	**08 07 39.1**	**-0.4**
ITM	**Ithomi**	**1.56**	**131**	P		**Pb**	**08 07 39.2**	**-0.6**
ITM	**Ithomi**	**1.56**	**131**			**Pb**	**08 07 39.7**	**-0.6**
DLFA	**Delphi**	**1.63**	**80**	P		**Pn**	**08 07 41.6**	**+0.6**
PYL	**PYLOS**	**1.67**	**142**	P		**Pn**	**08 07 40.5**	**+0.7**
AGG	**Agios Georgios**	**1.68**	**61**	P		**Pb**	**08 07 41.4**	**-0.5**
AGG	**Agios Georgios**	**1.68**	**61**	P		**Pb**	**08 07 41.7**	**-0.2**
AGG	**Agios Georgios**	**1.68**	**61**			**Pb**	**08 07 41.4**	**-0.5**
VLX	**Vlachokerasia**	**1.75**	**118**	P		**Pb**	**08 07 42.9**	**-0.1**
AXAR	**Agios Charalam**	**1.82**	**72**	P		**Pb**	**08 07 44.4**	**+0.1**
THL	**Klokotos Trika**	**1.82**	**42**	P		**Pb**	**08 07 44.5**	**+0.2**
KPRO	**Kipourio**	**1.88**	**22**	P		**Pb**	**08 07 45.9**	**+0.6**
PROD	**Prodromos**	**1.93**	**88**	P		**Pb**	**08 07 45.3**	**-0.8**
LTK	**Loutraki**	**2.00**	**95**	P		**Pb**	**08 07 46.1**	**-1.1**
LOUT	**Loutraki**	**2.00**	**96**	P		**Pb**	**08 07 46.1**	**-1.2**
LKR	**Lokris**	**2.05**	**77**	P		**Pb**	**08 07 47.0**	**-1.1**
PENT	**Pentalofos**	**2.05**	**15**	P		**Pb**	**08 07 47.8**	**-0.5**
VIL2	**Platees**	**2.22**	**89**	P		**Pb**	**08 07 49.4**	**-1.7**
NEST	**Nestorio**	**2.25**	**12**	P		**Pb**	**08 07 50.6**	**-1.0**
DID	**Didima**	**2.32**	**107**	P		**Pn**	**08 07 50.1**	**+1.3**
KZN	**Kozani**	**2.33**	**26**	P		**Pb**	**08 07 52.0**	**-0.6**
KZN	**Kozani**	**2.33**	**26**	P		**Pb**	**08 07 51.6**	**-1.4**
SCTE	**Santa Cesarea**	**2.41**	**321**			**Pn**	**08 07 50.3**	**+0.2**
SCTE					Sn	**Sn**	**08 08 19.3**	**+0.1**
NEO	**Neokhori**	**2.43**	**62**	P		**Pn**	**08 07 52.3**	**+2.0**
XOR	**Xorichti**	**2.43**	**61**	P		**Pn**	**08 07 52.0**	**+1.7**
LIT	**Litokhoron**	**2.46**	**39**	P		**Pn**	**08 07 52.9**	**+2.1**
LIT	**Litokhoron**	**2.46**	**39**	P		**Pb**	**08 07 53.7**	**-1.6**
LIT	**Litokhoron**	**2.46**	**39**				**08 07 52.9**	**+2.1**
MRKA	**Markates**	**2.51**	**78**	P		**Pn**	**08 07 53.1**	**+1.6**
SKIA	**Skiathos**	**2.55**	**67**	P		**Pn**	**08 07 53.8**	**+1.9**
ATHU	**Athens Univers**	**2.64**	**94**	P		**Pn**	**08 07 54.6**	**+1.3**
FNA	**Florina**	**2.67**	**15**	P		**Pn**	**08 07 55.3**	**+1.7**
FNA							08 08 27.6	
FNA	**Florina**	**2.67**	**15**	P		**Pn**	**08 07 55.8**	**+2.2**
FNA	**Florina**	**2.67**	**15**			**Pn**	**08 07 55.2**	**+1.7**
FNA					Sn	**Sn**	**08 08 27.6**	**+2.1**
AOS	**Alonnisos**	**2.85**	**69**	P		**Pn**	**08 07 57.8**	**+1.8**
OHR	**Ohrid**	**2.91**	**5**	*i* Pn		**Pn**	**08 07 59.3**	**+2.4**
PAIG	**Paliouri**	**3.04**	**55**	P		**Pn**	**08 07 59.8**	**+1.2**
TIP	**Timpagrande**	**3.04**	**290**	⇓P		**Pn**	**08 07 59.7**	**+0.9**
TIP	**Timpagrande**	**3.04**	**290**	⇑S		**Sn**	**08 08 36.2**	**+1.3**
TIP	**Timpagrande**	**3.04**	**290**			**Pn**	**08 07 59.2**	**+0.4**
TIP					Sn	**Sn**	**08 08 34.9**	**+0.1**
GRG	**Griva**	**3.13**	**28**	P		**Pn**	**08 08 01.4**	**+1.5**
HORT	**Hortiatis**	**3.15**	**40**	P		**Pn**	**08 08 01.7**	**+1.5**
TIR	**Tirane**	**3.16**	**352**	P		**Pn**	**08 08 00.7**	**+0.3**
TIR				S		**Sn**	**08 08 36.2**	**-1.5**
TIR	**Tirane**	**3.16**	**352**	⇑P		**Pn**	**08 08 00.7**	**+0.3**
TIR	**Tirane**	**3.16**	**352**			**Pn**	**08 08 01.1**	**+0.8**
TIR					Sn	**Sn**	**08 08 40.2**	**+2.5**
CGL1	**Ceglie Messapi**	**3.35**	**318**	⇑*i* Pn		**Pn**	**08 08 03.4**	**+0.4**
CGL1					Sn	**Sn**	**08 08 42.3**	**-0.1**
TAR1	**Taranto**	**3.37**	**314**	⇑*i* Pn		**Pn**	**08 08 03.6**	**+0.4**
TAR1					Sn	**Sn**	**08 08 44.1**	**+1.4**
SOH	**Sokhos**	**3.44**	**40**	P		**Pn**	**08 07 59.9**	**+2.4**
KNT	**Kendrikon**	**3.50**	**32**	P		**Pn**	**08 08 06.4**	**+1.5**
VAY	**Valandovo**	**3.51**	**27**	*i* Pn		**Pn**	**08 08 07.8**	**+2.7**
MASS	**Massafra**	**3.52**	**314**	⇓*i* Pn		**Pn**	**08 08 05.9**	**+0.6**
CEL	**Celeste**	**3.59**	**272**			**Pn**	**08 08 06.7**	**+0.5**
CEL					Sn	**Sn**	**08 08 46.9**	**-1.3**
STIP	**Stip**	**3.73**	**20**	*i* Pn		**Pn**	**08 08 11.4**	**+3.3**
SRS	**Serrai**	**3.78**	**39**	P		**Pn**	**08 08 10.4**	**+1.5**
MATE	**Matera**	**3.79**	**311**	⇓P		**Pn**	**08 08 09.5**	**+0.6**
MATE	**Matera**	**3.79**	**311**	⇓S		**Sn**	**08 08 52.9**	**-0.1**
SKO	**Skopje**	**3.83**	**11**	*i* Pn		**Pn**	**08 08 11.1**	**+1.6**
ULC	**Ulcinj**	**3.86**	**347**	*e*Pn		**Pn**	**08 08 09.4**	**-0.6**
ULC					eSn	**Sn**	**08 08 55.0**	**+0.1**
SG1	**Sgolgore (BA)**	**3.92**	**313**	⇓*i* Pn		**Pn**	**08 08 11.5**	**+0.7**
SG1					Sn	**Sn**	**08 08 54.3**	**-2.1**
BAI	**Bari**	**3.99**	**317**	⇓*i* Pn		**Pn**	**08 08 12.3**	**+0.6**
BAI					Sn	**Sn**	**08 08 58.3**	**+0.2**
DRME	**Dracevica, Mon**	**4.09**	**347**	*e*Pn		**Pn**	**08 08 12.9**	**-0.1**
DRME	**Dracevica, Mon**	**4.09**	**347**	*e*Pn		**Pn**	**08 08 13.1**	**+0.1**
DRME					eSn	**Sn**	**08 09 00.8**	**+0.4**
APE	**Apeiranthos**	**4.19**	**104**	⇓*e*P		**Pn**	**08 08 15.2**	**+0.7**
APE	**Apeiranthos**	**4.19**	**104**	⇓P		**Pn**	**08 08 15.3**	**+0.7**
BUM	**Brajici-Budva**	**4.25**	**344**	*e*Pn		**Pn**	**08 08 15.0**	**-0.4**
BUM					eSn	**Sn**	**08 09 04.4**	**-0.3**
PDG	**Podgorica**	**4.31**	**348**	⇓P		**Pn**	**08 08 16.4**	**+0.3**
PDG	**Podgorica**	**4.31**	**348**	⇑S		**Sn**	**08 09 04.8**	**-1.1**
PDG	**Podgorica**	**4.31**	**348**	*e*Pn		**Pn**	**08 08 15.4**	**-0.7**
PDG	**Podgorica**	**4.31**	**348**			**Pn**	**08 08 16.3**	**+0.2**
PDG					Sn	**Sn**	**08 09 04.2**	**-1.7**
TTG	**Podgorica**	**4.31**	**348**	*e*Pn		**Pn**	**08 08 15.7**	**-0.4**
TTG					eSn	**Sn**	**08 09 06.0**	**+0.1**
ACER	**Acerenza**	**4.33**	**308**			**Pn**	**08 08 17.3**	**+0.8**
ACER					Sn	**Sn**	**08 09 07.2**	**+0.7**
PVY	**Plav**	**4.39**	**355**	⇑*i* Pn		**Pn**	**08 08 18.2**	**+0.8**
PVY					eSn	**Sn**	**08 09 08.7**	**+0.5**
SANT	**Santorini**	**4.40**	**113**		Pn	**Pn**	**08 08 18.1**	**+0.7**
SANT					Sn	**Sn**	**08 09 09.7**	**+1.6**
CEME	**Cevo**	**4.49**	**345**	*e*Pn		**Pn**	**08 08 17.8**	**-0.8**
CEME					eSn	**Sn**	**08 09 10.1**	**-0.2**
HCY	**Herceg Novi**	**4.49**	**341**	*e*Pn		**Pn**	**08 08 17.3**	**-1.2**
HCY	**Herceg Novi**	**4.49**	**341**	*e*Pn		**Pn**	**08 08 17.8**	**-0.7**
HCY					eSn	**Sn**	**08 09 10.3**	**0.0**
IDI	**Anoyia**	**4.61**	**128**	Pn		**Pn**	**08 08 22.6**	**+2.3**
	comp=N,2.2nm,0.3s,baz=309,slow=14,SNR=8.5							
IDI					Sn	**Sn**	**08 09 12.8**	**-0.6**
	comp=N,7.8nm,0.3s,baz=93,slow=20,SNR=5.9							
IVA	**Berane**	**4.67**	**355**	⇑*i* Pn		**Pn**	**08 08 21.6**	**+0.4**
IVA					eSn	**Sn**	**08 09 15.0**	**0.0**
KOME	**Kolasin**	**4.69**	**352**	*e*Pn		**Pn**	**08 08 21.5**	**+0.1**
KOME					eSn	**Sn**	**08 09 15.6**	**+0.2**
NKME	**Niksic**	**4.69**	**346**	*e*Pn		**Pn**	**08 08 21.2**	**-0.2**
NKME					eSn	**Sn**	**08 09 15.5**	**+0.1**
NKY	**Niksic**	**4.73**	**347**	*e*Pn		**Pn**	**08 08 21.5**	**-0.5**
NKY					eSn	**Sn**	**08 09 15.8**	**-0.6**
TREB	**Trebinje**	**4.78**	**341**	*e*Pn		**Pn**	**08 08 21.6**	**-0.9**
DBRK	**Dubrovnik**	**4.79**	**339**	*e*Pn		**Pn**	**08 08 22.0**	**-0.7**
DBRK					Sn	**Sn**	**08 09 16.5**	**-1.2**
VTS	**Vitosha**	**4.89**	**25**	⇑P		**Pn**	**08 08 24.8**	**+0.6**
VTS	**Vitosha**	**4.89**	**25**	⇑S		**Sn**	**08 09 17.7**	**-2.7**
VTS	**Vitosha**	**4.89**	**25**			**Pn**	**08 08 25.4**	**+1.2**
VTS					Sn	**Sn**	**08 09 21.3**	**+0.9**
BRY	**Bratogost**	**4.91**	**343**	*e*Pn		**Pn**	**08 08 23.9**	**-0.5**
BRY	**Bratogost**	**4.91**	**343**	*e*Pn		**Pn**	**08 08 23.7**	**-0.7**
BRY					eSn	**Sn**	**08 09 20.4**	**-0.4**
SGRT	**San Giovanni R**	**5.06**	**316**			**Pn**	**08 08 26.8**	**+0.3**
SGRT					Sn	**Sn**	**08 09 21.4**	**-3.1**

ALN	**Alexandroupoli**	**5.09**	**56**	P		**Pn**	**08 08 28.0**	**+1.2**
ALN	**Alexandroupoli**	**5.09**	**56**	Pn		**Pn**	**08 08 28.0**	**+1.2**
STON	**Ston**	**5.10**	**337**	*e*Pn		**Pn**	**08 08 26.3**	**-0.8**
STON					Sn	**Sn**	**08 09 23.0**	**-2.5**
STON	**Ston**	**5.10**	**337**	*e*Pn		**Pn**	**08 08 26.2**	**-0.8**
UPM	**Unac-Piva**	**5.12**	**347**	*e*Pn		**Pn**	**08 08 27.3**	**-0.1**
UPM	**Unac-Piva**	**5.12**	**347**	*e*Pn		**Pn**	**08 08 27.5**	**+0.1**
UPM					eSn	**Sn**	**08 09 25.9**	**-0.3**
PLE	**Pljevlja**	**5.18**	**351**	*e*Pn		**Pn**	**08 08 27.9**	**-0.2**
PLE					eSn	**Sn**	**08 09 27.3**	**-0.1**
WDD	**Wied Dalam**	**5.30**	**245**	Pn		**Pn**	**08 08 29.2**	**-0.5**
WDD					Sn	**Sn**	**08 09 27.8**	**-2.6**
PAOL	**Paolisi**	**5.34**	**304**			**Pn**	**08 08 32.0**	**+1.7**
PAOL					Sn	**Sn**	**08 09 33.1**	**+1.6**
RUDO	**Rudo**	**5.46**	**352**	*e*Pn		**Pn**	**08 08 31.8**	**-0.2**
CORL	**Corleone**	**5.65**	**269**	Pn		**Pn**	**08 08 35.0**	**+0.4**
BLKB	**Belogradchik**	**5.66**	**17**	⇑S		**Sn**	**08 09 38.0**	**-1.4**
MAKA	**Makarska**	**5.70**	**334**	*e*Pn		**Pn**	**08 08 35.1**	**-0.1**
BBLS	**Lazići**	**5.70**	**352**	*e*Pn		**Pn**	**08 08 34.1**	**-1.2**
CLTB	**Caltabellotta**	**5.76**	**266**	Pn		**Pn**	**08 08 36.8**	**+0.7**
DIVS	**Divibare**	**5.89**	**357**	*e*Pn		**Pn**	**08 08 36.9**	**-1.0**
HAPS	**Han Pijesak,Bl**	**5.98**	**350**	*e*Pn		**Pn**	**08 08 37.5**	**-1.6**
KARP	**Karpathos**	**6.00**	**114**			**Pn**	**08 08 40.9**	**+1.5**
PLVB	**Pleven**	**6.06**	**30**	⇑P		**Pn**	**08 08 39.1**	**-1.1**
INTR	**Introdacqua**	**6.29**	**309**			**Pn**	**08 08 45.2**	**+1.8**
TEKS	**Tekeris**	**6.37**	**354**	*e*Pn		**Pn**	**08 08 43.6**	**-0.8**
ZIRJ	**Zirje**	**6.54**	**328**	*e*Pn		**Pn**	**08 08 46.0**	**-0.7**
ZIRJ					Sn	**Sn**	**08 09 56.3**	**-4.5**
KIJV	**Kijevo**	**6.54**	**333**	*e*Pn		**Pn**	**08 08 46.8**	**0.0**
MDVR	**Moldovita**	**6.63**	**8**	⇑P		**Pn**	**08 08 47.7**	**-0.4**
MORI	**Morici**	**6.69**	**329**	*e*Pn		**Pn**	**08 08 48.8**	**0.0**
MORI					Sn	**Sn**	**08 10 01.3**	**-3.2**
MGRS	**Mrkonjic Grad**	**6.70**	**339**	*e*Pn		**Pn**	**08 08 49.3**	**+0.4**
AQU	**L'Aquila**	**6.79**	**310**	*e*Pn		**Pn**	**08 08 52.5**	**+2.2**
FRGS	**Fruska Gora**	**6.96**	**356**	*e*Pn		**Pn**	**08 08 50.3**	**-2.2**
BLY	**Banja Luka**	**6.97**	**340**	*e*Pn		**Pn**	**08 08 52.4**	**-0.3**
BLY	**Banja Luka**	**6.97**	**340**			**Pn**	**08 08 52.9**	**+0.2**
DUGI	**Dugi Otok**	**7.06**	**327**	*e*Pn		**Pn**	**08 08 54.5**	**+0.6**
DUGI					Sn	**Sn**	**08 10 10.6**	**-3.2**
UDBI	**Udbina**	**7.22**	**332**	*i* Pn		**Pn**	**08 08 57.5**	**+1.3**
GZR	**Gura Zlata**	**7.38**	**13**	⇓P		**Pn**	**08 08 58.4**	**0.0**
GZR	**Gura Zlata**	**7.38**	**13**	⇑S		**Sn**	**08 10 18.0**	**-3.7**
BZS	**Buzias**	**7.45**	**6**	⇑P		**Pn**	**08 08 58.0**	**-1.2**
BZS	**Buzias**	**7.45**	**6**	⇑S		**Sn**	**08 10 17.1**	**-6.1**
NVLJ	**Novalja**	**7.60**	**328**	*e*Pn		**Pn**	**08 09 01.1**	**-0.2**
LATE	**Laterza**	**7.92**	**306**	Pn		**Pn**	**08 09 06.4**	**+0.6**
ISR	**Istrita**	**8.27**	**32**	⇓P		**Pn**	**08 09 10.0**	**-0.5**
OZLJ	**Ozalj**	**8.28**	**335**	*i* Pn		**Pn**	**08 09 09.9**	**-0.7**
MLR	**Muntele Rosu**	**8.35**	**28**	Pn		**Pn**	**08 09 14.4**	**+2.8**
	comp=N,0.6nm,0.3s,baz=242,slow=11,SNR=8.2							
MLR	**Muntele Rosu**	**8.35**	**28**	⇑P		**Pn**	**08 09 10.1**	**-1.5**
MLR	**Muntele Rosu**	**8.35**	**28**			**Pn**	**08 09 13.0**	**+1.3**
RIY	**Rijeka**	**8.39**	**330**	*e*Pn		**Pn**	**08 09 12.2**	**+0.1**
GBRS	**Gornja Briga**	**8.43**	**332**	*i* Pn		**Pn**	**08 09 13.1**	**+0.4**
CRES	**Cresnjev**	**8.46**	**336**	*e*Pn		**Pn**	**08 09 12.4**	**-0.7**
CRES	**Cresnjev**	**8.46**	**336**	*e*Pn		**Pn**	**08 09 11.9**	**-1.3**
CEY	**Cerknica**	**8.75**	**331**	*e*Pn		**Pn**	**08 09 16.2**	**-0.9**
OSSC	**Osservatorio P**	**8.76**	**310**	Pn		**Pn**	**08 09 18.0**	**+0.8**
GBAS	**Gorenja Brezov**	**8.91**	**332**	*e*Pn		**Pn**	**08 09 19.1**	**-0.2**
PLOR	**Plostina**	**8.92**	**29**	⇓P		**Pn**	**08 09 17.4**	**-2.0**
VRI	**Vrincioaia**	**8.96**	**29**	P		**Pn**	**08 09 23.4**	**+3.5**
VRI	**Vrincioaia**	**8.96**	**29**	⇑P		**Pn**	**08 09 20.4**	**+0.4**
LJU	**Ljubljana**	**8.97**	**333**	*e*Pn		**Pn**	**08 09 20.1**	**0.0**
TRI	**Trieste**	**8.99**	**329**	P		**Pn**	**08 09 20.6**	**+0.3**
TRI	**Trieste**	**8.99**	**329**	Pn		**Pn**	**08 09 20.6**	**+0.3**
KEST	**Kesta**	**9.22**	**258**	Pn		**Pn**	**08 09 23.3**	**-0.4**
SOKA	**Soboth**	**9.36**	**336**	*e*Pn		**Pn**	**08 09 24.4**	**-1.1**
	comp=N,12nm,0.3s,SNR=16							
OBKA	**Obir**	**9.37**	**334**	*i* Pn		**Pn**	**08 09 26.4**	**+0.8**
	comp=N,11nm,0.4s,SNR=9.1							
OBKA					eSn	**Sn**	**08 11 07.1**	**-3.4**
	comp=N,14nm,0.3s							
ZCCA	**Zocca**	**9.40**	**314**	Pn		**Pn**	**08 09 27.0**	**+1.0**
VLC	**Villacollemand**	**9.63**	**311**	Pn		**Pn**	**08 09 30.4**	**+1.3**
PSZ	**Piszkesteto**	**9.71**	**358**	P		**Pn**	**08 09 31.3**	**+1.0**
PSZ	**Piszkesteto**	**9.71**	**358**	Pn		**Pn**	**08 09 31.3**	**+1.0**
ARSA	**Arzberg**	**9.73**	**340**	*e*Pn		**Pn**	**08 09 29.9**	**-0.6**
	comp=N,4.4nm,0.3s							
MYKA	**Terra Mystica**	**9.80**	**331**	*e*Pn		**Pn**	**08 09 31.3**	**-0.2**
	comp=N,3.5nm,0.3s							
MYKA					*i* Sn	**Sn**	**08 11 18.7**	**-2.4**
	comp=N,1.6nm,0.2s							
STAL	**STALIGIAL**	**9.87**	**327**			**Pn**	**08 09 31.6**	**-0.8**
CTI	**Castel Tesino**	**10.19**	**323**	P		**Pn**	**08 09 36.6**	**-0.3**
CTI	**Castel Tesino**	**10.19**	**323**			**Pn**	**08 09 36.6**	**-0.3**
MSSA	**Maissana**	**10.24**	**310**	Pn		**Pn**	**08 09 38.9**	**+1.4**
KBA	**Koelnbreinsper**	**10.29**	**332**	*e*Pn		**Pn**	**08 09 37.7**	**-0.5**
	comp=N,3.5nm,0.4s							
KBA					eSn	**Sn**	**08 11 29.6**	**-3.6**
	comp=N,4.2nm,0.5s							
VYHS	**Vyhne**	**10.34**	**354**	*e*P		**Pn**	**08 09 38.7**	**-0.2**
VYHS				*e*			08 11 30.7	
VYHS	**Vyhne**	**10.34**	**354**	*e*PN		**Pn**	**08 09 38.7**	**-0.2**
VYHS					eSN	**Sn**	**08 11 30.7**	**-3.7**
BR131	**Keskin Array S**	**10.38**	**78**	P		**Pn**	**08 09 41.5**	**+2.0**
BR131	**Keskin Array S**	**10.38**	**78**			**Pn**	**08 09 41.5**	**+2.0**
BRTR	**Keskin Array B**	**10.38**	**78**	P		**Pn**	**08 09 41.6**	**+2.0**
BRTR	**Keskin Array B**	**10.38**	**78**	Pn		**Pn**	**08 09 42.6**	**+3.0**
	comp=N,0.1nm,0.3s,baz=258,slow=14,SNR=3.3							
BRTR	**Keskin Array B**	**10.38**	**78**	Pn		**Pn**	**08 09 41.6**	**+2.0**
MODS	**Modra-Piesok**	**10.41**	**348**	*e*SN		**Sn**	**08 11 29.5**	**-6.6**
SALO	**Salr**	**10.46**	**318**			**Pn**	**08 09 40.4**	**0.0**
MOA	**Molln**	**10.64**	**337**	*e*Pn		**Pn**	**08 09 42.9**	**-0.1**
	comp=N,9.3nm,0.3s							
MOA					eSn	**Sn**	**08 11 37.6**	**-4.0**
	comp=N,1.9nm,0.3s							
CSS	**Mathiatis**	**10.85**	**103**	Pn		**Pn**	**08 09 46.1**	**+0.2**
WTTA	**Wattenberg**	**11.12**	**327**	*e*Pn		**Pn**	**08 09 51.0**	**+1.4**
	comp=N,4.2nm,0.3s,SNR=4.5							
WTTA					*i* Sn	**Sn**	**08 11 49.3**	**-4.3**
	comp=N,6.1nm,0.4s							
WATA	**Walderalm**	**11.20**	**327**	*i* Pn		**Pn**	**08 09 52.0**	**+1.3**
	comp=N,4.6nm,0.3s							
WATA					eSn	**Sn**	**08 11 54.1**	**-1.4**
	comp=N,9.8nm,0.5s							
SQTA	**Sankt Quirin**	**11.27**	**326**	*i* Pn		**Pn**	**08 09 53.3**	**+1.6**
	comp=N,3.1nm,0.3s							
SQTA					eSn	**Sn**	**08 11 54.4**	**-2.9**
	comp=N,6.0nm,0.4s							
FUORN	**Ofenpass-Fuorn**	**11.27**	**321**	Pn		**Pn**	**08 09 52.3**	**+0.5**
FETA	**Feichten**	**11.34**	**324**	*e*Pn		**Pn**	**08 09 54.2**	**+1.5**
	comp=N,3.2nm,0.7s							
FETA					eSn	**Sn**	**08 11 55.6**	**-3.4**
	comp=N,2.3nm,0.5s							
MOTA	**Moosalm**	**11.41**	**326**	*e*Pn		**Pn**	**08 09 54.7**	**+1.0**
	comp=N,8.1nm,0.6s,SNR=6.0							
MOTA					eSn	**Sn**	**08 11 59.8**	**-1.0**
	comp=N,3.4nm,0.4s							
DAVOX	**Davos/Dischmat**	**11.57**	**321**	Pn		**Pn**	**08 09 56.3**	**+0.5**
	comp=N,1.3nm,0.3s,baz=153,slow=22,SNR=7.5							
RETA	**Reutte**	**11.67**	**326**	*e*Pn		**Pn**	**08 09 58.5**	**+1.3**
	comp=N,1.1nm,0.3s							
GEC2	**GERESS Array S**	**11.70**	**337**	Pn		**Pn**	**08 09 57.4**	**0.0**
GERES	**GERESS Array B**	**11.70**	**337**	Pn		**Pn**	**08 09 56.1**	**-1.3**
	comp=N,0.6nm,0.3s,baz=155,slow=14,SNR=11							
GERES					Sn	**Sn**	**08 12 02.0**	**-5.5**
	comp=N,0.7nm,0.3s,baz=152,slow=23,SNR=5.0							
GERES	**GERESS Array B**	**11.70**	**337**	Pn		**Pn**	**08 09 56.4**	**-1.1**
KHC	**Kasperske Hory**	**11.99**	**338**	*e*P		**Pn**	**08 10 01.8**	**+0.4**
KHC				*e*			08 12 09.5	
KHC	**Kasperske Hory**	**11.99**	**338**	*e*PN		**Pn**	**08 10 01.8**	**+0.4**
KHC					eSN	**Sn**	**08 12 09.5**	**-5.1**
SENIN	**Lac Senin/Sane**	**12.68**	**314**			**Pn**	**08 10 10.5**	**-0.5**
SENIN						**Sn**	**08 12 31.1**	**-0.8**
BFO	**Black Forest**	**13.41**	**323**	P		**Pn**	**08 10 21.5**	**+0.7**
BFO	**Black Forest**	**13.41**	**323**	Pn		**Pn**	**08 10 21.4**	**+0.7**
ECH	**Echery**	**13.90**	**320**	P		**Pn**	**08 10 27.4**	**-0.2**
ECH	**Echery**	**13.90**	**320**	Pn		**Pn**	**08 10 27.4**	**-0.2**
AKBB	**Malin Array Si**	**13.96**	**24**	P		**Pn**	**08 10 30.3**	**+2.1**
AKBB	**Malin Array Si**	**13.96**	**24**	Pn		**Pn**	**08 10 30.3**	**+2.1**
CLL	**Collm**	**14.11**	**341**	*e*P		**Pn**	**08 10 28.0**	**-2.3**
CLL	**Collm**	**14.11**	**341**	*e*PP		**P**	**08 10 40.0**	**+2.1**
ANN	**Anapa**	**14.31**	**57**	*e*P		**Pn**	**08 10 32.0**	**-1.1**
ANN				*e*	S	**Sn**	**08 13 13.4**	**+2.0**
ANN					pmax	pmax		
	comp=Z,55nm,1.1s							
WLF	**Walferdange**	**15.37**	**323**	PnPn		**P**	**08 10 55.1**	**+3.3**
SUW	**Suwalki**	**15.91**	**6**	P		**P**	**08 10 57.8**	**-0.1**
SUW	**Suwalki**	**15.91**	**6**	P		**P**	**08 10 56.9**	**-1.0**
NEY	**Neytrino**	**17.60**	**66**	⇓*e*P		**P**	**08 11 19.6**	**+2.8**
NEY					pmax	pmax		
	comp=Z,2.0nm,0.8s							

KIV	**Kislovodsk**	**17.70**	**64**	*e*P		**P**	**08 11 19.5**	**+1.7**
KIV					pmax	pmax		
	comp=Z,50nm,1.0s							
KBZ	**Khabaz**	**17.80**	**65**	⇓*e*P		**P**	**08 11 19.8**	**+0.9**
KBZ					pmax	pmax		
	comp=Z,8.0nm,1.0s							
KBZ	**Khabaz**	**17.80**	**65**	Pn		**P**	**08 11 20.3**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=281,slow=8.2,SNR=8.6							
PYA1	**Pyatigorsk**	**18.01**	**64**	P		**P**	**08 11 22.8**	**+1.6**
ZEI	**Tsey**	**18.39**	**68**	*e*P		**Pn**	**08 11 26.1**	**+0.4**
ZEI					pmax	pmax		
	comp=Z,5.0nm,0.6s							
GNI	**Garni**	**18.92**	**77**	P		**P**	**08 11 31.3**	**-0.1**
GNI					pmax	pmax		
	comp=Z,33nm,1.2s						

	comp=Z,15nm,1.3s								
LZH						pmax	pmax		
	comp=Z,76nm,5.6s								
YAK	**Yakutsk**	**65.11**	**29**	*eP*		**P**		**08 17 50.8**	**+0.2**
YAK					pmax	pmax			
	comp=Z,6.0nm,0.5s								
HHC	**Hu-ho-hao-te**	**67.06**	**55**	*eP*		**P**		**08 18 05.5**	**+1.7**
HHC					pmax	pmax			
	comp=Z,1.0nm,0.7s								
HHC					pmax	pmax			
	comp=Z,56nm,6.2s								
CMAR	**Chiang Mai Arr**	**69.94**	**82**	P		**P**		**08 18 21.1**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=306,slow=9.1,SNR=7.1								
SLVN	**Son La**	**72.15**	**77**	P		**P**		**08 18 34.8**	**-0.6**
SLVN					IAmb	IAmb		08 18 36.3	
	comp=Z,4.9nm,1.3s								
YKA	**Yellowknife Ar**	**73.34**	**340**	P		**P**		**08 18 42.4**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=33,slow=5.1,SNR=8.9								
KLR	**Kul'dur**	**73.88**	**39**	⇑*eP*		**P**		**08 18 45.5**	**+0.4**
KLR					pmax	pmax			
	comp=Z,2.0nm,0.8s								
KLR	**Kul'dur**	**73.88**	**39**	P		**P**		**08 18 45.2**	**+0.1**
	comp=Z,2.8nm,0.8s,baz=312,slow=7.5,SNR=7.4								
IMAR	**Indian Mountai**	**76.04**	**358**	P		**P**		**08 18 58.6**	**+1.3**

*IDC **28** 08:07:59.2±0.8, 4.°37S×35.°78E, h11km±5km, mb4.1/4, mb1 4.2/5, mb1mx3.7/44, mbtmp4.2/5, ML4.5/2, MS3.7/6, Ms1 3.7/6, ms1mx3.2/43, Error ellipse: s-maj=23.6km s-min=12.8km az=117.0*

*NEIC **28** 08:08:00.2±2.0, 4.°43S±0.°09×35.°74E±0.°04, h10km±2km, mb4.3/14, Error ellipse: s-maj=14.6km s-min=6.5km az=174.0*

ISC 28 08:07:59.6±0.6, 4.°47S±0.°05×35.°72E±0.°06, h10km, n43, σ1§27/44, mb4.2/17, MS3.7/5, Tanzania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**3.65**	**25**	Pn	**Pn**	**08 08 55.2**	**-1.3**
	7.3nm,0.3s,baz=202,slow=16,SNR=103						
KMBO				Pg	**Pb**	**08 09 04.3**	**-0.1**
	32nm,0.3s,baz=204,slow=19,SNR=41						
KMBO				Sn	**Sn**	**08 09 39.4**	**-0.4**
	39nm,0.3s,baz=270,slow=20,SNR=3.1						
KMBO				Lg	Lg	08 09 50.0	
	65nm,0.3s,baz=272,slow=18,SNR=16						
KMBO	**Kilima Mbogo**	**3.65**	**25**		**Pn**	**08 08 55.3**	**-1.2**
KMBO					**Pb**	**08 09 04.4**	**-0.1**
KMBO				Sn	**Sn**	**08 09 38.5**	**-1.3**
MBAR	**Mbarara**	**6.29**	**307**	Pn	**Pn**	**08 09 33.1**	**+0.4**
	62nm,0.3s,baz=132,slow=16,SNR=25						
MBAR				Sn	**Sn**	**08 10 43.4**	**-1.3**
	62nm,0.3s,baz=29,slow=22,SNR=5.9						
MBAR				Lg	Lg	08 11 18.7	
	182nm,0.3s,baz=329,slow=23,SNR=13						
MBAR	**Mbarara**	**6.29**	**307**	*eP*	**Pn**	**08 09 35.3**	**+2.7**
MBAR				*eS*	**Sg**	**08 11 19.8**	**-1.8**
MBAR	**Mbarara**	**6.29**	**307**		**Pn**	**08 09 33.0**	**+0.4**
MBAR				Sn	**Sn**	**08 10 43.9**	**-0.8**
ITZ	**Itezhi-Tezhi**	**14.72**	**220**	*i* S	S	08 15 34.5	+64
MATP	**Matopo**	**17.35**	**203**	P	**Pn**	**08 12 00.7**	**-1.5**
	0.2nm,0.3s,baz=24,slow=14,SNR=9.9						
MATP				Lg	Lg	08 16 55.1	
	0.6nm,0.3s,baz=281,slow=22,SNR=6.4						
MATP				LR	LR	08 18 57.9	
	comp=Z,117nm,18.8s,baz=20,slow=38						
MATP	**Matopo**	**17.35**	**203**	*i* P	**Pn**	**08 11 58.2**	**-4.0**
MATP				*i* S	**Sn**	**08 15 23.8**	**-0.6**
ATD	**Arta Tunnel**	**17.40**	**24**	Pn	**Pn**	**08 12 02.6**	**-0.2**
ATD				IAmb	IAmb	08 12 09.8	
	comp=Z,25nm,1.2s						
ABPO	**Ambohimpanom**	**18.31**	**143**	P	**P**	**08 12 15.1**	**+0.8**
TSUM	**Tsumeb**	**22.98**	**229**	P	**P**	**08 13 04.4**	**-0.4**
	comp=Z,4.2nm,1.0s,baz=47,slow=10,SNR=4.7						
TSUM				LR	LR	08 22 26.4	
	comp=Z,249nm,18.4s,baz=333,slow=38						
TSUM	**Tsumeb**	**22.98**	**229**	*i* P	P	08 13 14.5	+10
TSUM				*i* S	Sn	08 17 44.6	+13
TSUM	**Tsumeb**	**22.98**	**229**	P	**P**	**08 13 04.3**	**-0.4**
SOCY	**Socotra**	**24.57**	**47**	P	**P**	**08 13 22.3**	**+2.2**
SOCY				IAmb	IAmb	08 13 25.3	
	comp=Z,9.0nm,0.8s						
BOSA	**Boshof**	**25.99**	**201**	P	**P**	**08 13 33.3**	**+0.4**
	comp=Z,9.9nm,0.8s,baz=13,slow=11,SNR=7.7						
BOSA				pP	**pP**	**08 13 36.9**	**+0.4**
	comp=Z,9.9nm,0.8s,baz=9.4,slow=10,SNR=7.3						
BOSA				LR	LR	08 24 02.2	
	comp=Z,90nm,18.1s,baz=16,slow=37						
BOSA	**Boshof**	**25.99**	**201**	P	**P**	**08 13 33.2**	**+0.3**
SUR	**Sutherland**	**31.08**	**205**	P	**P**	**08 14 18.3**	**-0.1**
TORD	**Torodi Ar. Bea**	**38.05**	**295**	LR	LR	08 32 11.3	
	comp=Z,68nm,20.3s,baz=345,slow=38						
BRTR	**Keskin Array B**	**44.01**	**358**	pP	pP	08 16 11.8	+0.5
	comp=Z,0.9nm,0.8s,baz=184,slow=9.6,SNR=2.8						
BRTR	**Keskin Array B**	**44.01**	**358**	P	**P**	**08 16 07.7**	**+0.1**
BTK	**Batken**	**54.79**	**33**	P	**P**	**08 17 29.3**	**-0.7**
BTK				IAmb	IAmb	08 17 35.7	
	comp=Z,2.9nm,1.1s						
GERES	**GERESS Array B**	**56.46**	**343**	pP	**P**	**08 17 42.8**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=142,slow=11,SNR=2.1						
GERES	**GERESS Array B**	**56.46**	**343**	P	**P**	**08 17 42.6**	**+0.8**
KK31	**Karatay Array**	**56.84**	**30**	P	**P**	**08 17 45.6**	**+1.1**
KK31				IAmb	IAmb	08 17 48.6	
	comp=Z,3.2nm,1.1s						
KKAR	**Karatay Array**	**56.84**	**30**	P	**P**	**08 17 45.0**	**+0.6**
ESDC	**Sonseca Array**	**57.11**	**324**	pP	pP	08 17 48.5	-1.8
	comp=Z,0.4nm,0.4s,baz=128,slow=8.4,SNR=2.3						
AKTO	**Aktyubinsk**	**57.96**	**17**	pP	pP	08 17 55.4	-0.5
	comp=Z,1.6nm,0.7s,baz=216,slow=8.7,SNR=4.4						
MAKZ	**Makanchi**	**65.33**	**33**	P	**P**	**08 18 43.4**	**+1.2**
MAKZ				IAmb	IAmb	08 18 44.9	
	comp=Z,2.9nm,1.0s						
MK31	**Makanchi Array**	**65.50**	**33**	P	**P**	**08 18 44.6**	**+1.4**
MK31				IAmb	IAmb	08 18 46.0	
	comp=Z,1.4nm,0.8s						
MKAR	**Makanchi Array**	**65.50**	**33**	P	**P**	**08 18 42.1**	**-1.1**
	comp=Z,1.7nm,0.9s,baz=225,slow=5.1,SNR=6.1						
MKAR				pP	**pP**	**08 18 45.3**	**-1.6**
	comp=Z,1.7nm,0.9s,baz=222,slow=7.8,SNR=9.2						
MKAR	**Makanchi Array**	**65.50**	**33**	P	**P**	**08 18 44.5**	**+1.3**
KURBB	**Kurchatov Arra**	**66.03**	**28**	P	**P**	**08 18 44.9**	**-1.6**
	comp=Z,1.3nm,0.8s,baz=232,slow=6.8,SNR=2.6						
KURBB				pP	**pP**	**08 18 49.1**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=229,slow=7.2,SNR=8.9						
KURK	**Kurchatov**	**66.13**	**28**	P	**P**	**08 18 48.0**	**+0.8**
KURK				IAmb	IAmb	08 18 50.5	
	comp=Z,3.4nm,1.2s						
FINES	**FINESS Array B**	**66.14**	**355**	pP	pP	08 18 50.3	-0.5
	comp=Z,4.4nm,0.8s,baz=170,slow=8.5,SNR=4.0						
FINES	**FINESS Array B**	**66.14**	**355**	P	**P**	**08 18 48.2**	**+1.2**
FIA1	**FINESS Array S**	**66.14**	**355**	P	**P**	**08 18 48.1**	**+1.1**
ZAA0	**Zalesovo Array**	**71.12**	**28**	P	**P**	**08 19 18.5**	**+0.3**
ZALV	**Zalesovo Beam**	**71.12**	**28**	pP	**P**	**08 19 19.9**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=256,slow=5.6,SNR=3.1						
ZALV	**Zalesovo Beam**	**71.12**	**28**	P	**P**	**08 19 18.6**	**+0.3**
RCBR	**Riachuelo**	**71.31**	**265**	LR	LR	08 46 04.0	
	comp=Z,91nm,20.6s,baz=48,slow=32						
SNAA	**Sanae**	**71.34**	**192**	LR	LR	08 47 03.9	
	comp=Z,82nm,18.8s,baz=81,slow=33						
SONM	**Songino Array**	**80.49**	**40**	pP	pP	08 20 15.8	-0.2
	comp=Z,0.8nm,0.6s,baz=256,slow=6.0,SNR=3.5						
SONM	**Songino Array**	**80.49**	**40**	P	**P**	**08 20 13.2**	**+1.0**

NNC 28 08:14:18.7±3.7, 52.°36N×75.°54E, h0km, mb2.9, mpv2.5, 6C-3D, Error ellipse: s-maj=88.9km s-min=16.1km az=27.0, Suspected Mining explosion., Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**2.53**	**129**	⇑*eP*	Pb	08 15 03.3	-1.7
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**2.53**	**129**	⇓Pn	Pn	08 15 02.6	+1.5
	comp=Z,2.1nm,0.9s						
KURK				⇑Sn	Sn	08 15 31.2	-1.3
	comp=Z,1.7nm,0.6s						
KURBB	**Kurchatov Arra**	**2.56**	**132**	P	Pn	08 15 02.5	+1.2
	comp=Z,1.6nm,0.7s,baz=281,slow=8.8,SNR=14						
KURBB	**Kurchatov Arra**	**2.56**	**132**	⇓Pn	Pn	08 15 02.0	+0.7
	comp=Z,4.2nm,0.9s						
KURBB				⇑Sn	Sb	08 15 35.7	-1.6
	comp=Z,3.5nm,0.5s,baz=314,slow=28						
BVB5	**Borovoye Array**	**3.22**	**284**	⇑Pg	Pb	08 15 14.8	-1.9
BVB5				⇓Lg	Lg	08 16 04.1	
BRVK	**Borovoye**	**3.27**	**284**	⇑Pg	Pb	08 15 17.7	+0.1
	comp=Z,1.2nm,0.8s						
BRVK				⇑Lg	Lg	08 16 03.8	
	comp=Z,2.4nm,1.0s						

*ATH **28** 08:26:24.8, 38.°23N×20.°50E, h13km±2km, ML3.0/3, Error ellipse: s-maj=2.9km s-min=0.9km az=257.0*

*THE **28** 08:26:24.7, 38.°22N×20.°48E, h13km, ML2.7/4, Error ellipse: s-maj=1.1km s-min=0.3km az=248.0*

ISC 28 08:26:24.3±1.4, 38.°22N±0.°03×20.°47E±0.°07, h15km±6km, n18, σ0§26/32, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.04**	**165**	P	**Pg**	**08 26 27.1**	**0.0**
ARG2				S	**Sg**	**08 26 28.9**	**0.0**
KEF1	**Kardakata, Kep**	**0.06**	**357**	P	**Pg**	**08 26 27.3**	**0.0**
KEF1				S	**Sg**	**08 26 28.8**	**-0.3**
VLS	**Valsamata**	**0.10**	**114**	P	**Pg**	**08 26 27.7**	**0.0**
VLS				S	**Sg**	**08 26 30.0**	**+0.2**
VLS	**Valsamata**	**0.10**	**114**	P	**Pg**	**08 26 27.7**	**0.0**
VLS				S	**Sg**	**08 26 29.6**	**-0.2**
VLS				AML	AML	08 26 30.1	
	comp=N,59603μm,0.2s						
VLS				AML	AML	08 26 30.9	
	comp=E,35765μm,0.1s						
FSK	**Fiskardo**	**0.25**	**16**	P	**Pg**	**08 26 29.9**	**+0.1**
FSK				S	**Sg**	**08 26 34.1**	**+0.6**
	comp=E,5μm,0.2s						
FSK	**Fiskardo**	**0.25**	**16**	P	**Pg**	**08 26 29.9**	**+0.1**
FSK				S	**Sg**	**08 26 33.3**	**-0.3**
KFL	**Anninata**	**0.27**	**114**	P	**Pg**	**08 26 30.4**	**+0.3**
KFL				S	**Sg**	**08 26 34.2**	**+0.1**
	comp=E,5μm,0.3s						
KFL	**Anninata**	**0.27**	**114**	P	**Pg**	**08 26 30.2**	**+0.1**
KFL				S	**Sg**	**08 26 34.1**	**0.0**
KFL				AML	AML	08 26 35.6	
	comp=E,8340μm,0.3s						
KFL				AML	AML	08 26 35.6	
	comp=N,13403μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.37**	**156**	P	**Pg**	**08 26 32.0**	**+0.1**
VLMS				S	**Sg**	**08 26 37.5**	**+0.4**
VLMS				AML	AML	08 26 39.3	
	comp=E,3164μm,0.1s						
VLMS				AML	AML	08 26 40.2	
	comp=N,3275μm,0.2s						
EVGI	**Lefkada island**	**0.43**	**20**	P	**Pg**	**08 26 32.9**	**0.0**
EVGI				S	**Sb**	**08 26 39.7**	**-0.1**
EVGI	**Lefkada island**	**0.43**	**20**	P	**Pg**	**08 26 32.9**	**0.0**
EVGI				S	**Sg**	**08 26 38.2**	**-0.5**
MGNA	**Meganis**	**0.50**	**30**	P	**Pg**	**08 26 34.3**	**0.0**
MGNA				S	**Sg**	**08 26 41.4**	**+0.3**
LKD2	**Lefkada island**	**0.59**	**14**	P	**Pg**	**08 26 35.9**	**0.0**
LKD2				S	**Sb**	**08 26 44.8**	**+0.4**
	comp=N,350nm,0.2s						
TSLK	**Tsoukalades, L**	**0.62**	**13**	P	**Pg**	**08 26 36.6**	**+0.1**
TSLK				S	**Sb**	**08 26 45.9**	**+0.5**
	comp=N,538nm,0.3s						
TSLK	**Tsoukalades, L**	**0.62**	**13**	P	**Pg**	**08 26 36.5**	**0.0**
RLS	**Riolos of Patr**	**0.80**	**101**	P	**Pg**	**08 26 39.4**	**-0.4**
PVO	**Paravola**	**0.92**	**64**	P	**Pg**	**08 26 42.3**	**+0.2**
LAKA	**Lakka**	**1.19**	**89**	P	**Pn**	**08 26 46.0**	**-0.3**

*NIED **28** 08:35:00, 35.°90N×141.°00E, h41km, Mw4.1 Best double couple: M0 1.49000×10^15 NP1:φs 168.00000°, δ80.00000°, λ-82.00000°. NP2:φs 310.00000°, δ13.00000°, λ-127.00000°.*

*IDC **28** 08:35:24.2±0.7, 35.°87N×140.°93E, h0km, mb3.9/11, mb1 4.2/14, mb1mx4.0/43, mbtmp4.0/14, ML3.9/3, MS3.5/5, Ms1 3.5/5, ms1mx3.1/47, Error ellipse: s-maj=19.2km s-min=17.2km az=90.0*

*JMA **28** 08:35:28.7±0.1, 35.°94N×140.°87E, h38km±2km, M3.6*

JMA Felt I J1.

*NEIC **28** 08:35:29.2±1.4, 35.°93N±0.°05×140.°99E±0.°07, h35km±7km, mb4.3/16, Error ellipse: s-maj=8.7km s-min=7.3km az=83.0*

ISC 28 08:35:28.3±1.4, 35.°96N±0.°03×140.°92E±0.°05, h27km±10km, n71, σ0§92/71, mb4.2/19, MS3.6/4, 3C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**0.26**	**192**	⇓P	**Pn**	**08 35 35.9**	**-0.5**
CHOJ				*eS*	**Sn**	**08 35 41.2**	**-0.3**
JIHU	**Itakohorinouch**	**0.32**	**271**	⇓P	**Pn**	**08 35 37.1**	**-0.2**
JIHU				*eS*	**Sn**	**08 35 43.2**	**+0.1**
JHYU	**Hitachinakayam**	**0.47**	**325**	⇑P	**Pn**	**08 35 39.0**	**-0.3**
JHYU				*eS*	**Sn**	**08 35 46.5**	**-0.2**
JSMT	**Sammumatsuo**	**0.50**	**231**	⇓P	**Pn**	**08 35 39.2**	**-0.5**
JSMT				*eS*	**Sn**	**08 35 47.3**	**-0.1**
JYT	**Yasato**	**0.65**	**295**	⇑P	**Pb**	**08 35 40.7**	**-0.4**
JYT				*eS*	**Sb**	**08 35 49.5**	**-0.2**
JHO	**Hitachi**	**0.71**	**336**	⇑P	**Pb**	**08 35 42.2**	**+0.1**
JHO				*eS*	**Sn**	**08 35 52.5**	**-0.2**
BSO4	**Boso 4**	**1.08**	**206**	P	**Pb**	**08 35 49.4**	**+1.2**
BSO3	**Boso 3**	**1.20**	**196**	P	**Pb**	**08 35 50.5**	**+0.2**
MJAR	**Matsushiro Arr**	**2.27**	**286**	Pn	**Pn**	**08 36 04.5**	**+0.5**
	3.9nm,0.3s,baz=86,slow=10,SNR=62						
MAJO	**Matsushiro**	**2.27**	**286**		**Pn**	**08 36 04.9**	**+0.8**
MAJO				Sn	**Sn**	**08 36 30.4**	**-0.9**
MAT	**Matsushiro**	**2.27**	**286**	P	**Pn**	**08 36 04.8**	**+0.7**
MAT				S	**Sn**	**08 36 26.9**	**-4.4**
MJB9	**Matsu-Tunnel**	**2.27**	**286**		**Pn**	**08 36 05.1**	**+0.9**
MJB9				Sn	**Sn**	**08 36 30.4**	**-0.9**
JHJ2	**Mitsune**	**2.98**	**198**	Pn	**Pn**	**08 36 13.8**	**0.0**
JHJ2				Sn	**Sn**	**08 36 47.9**	**-0.8**
INU	**Inuyama**	**3.24**	**260**		**Pn**	**08 36 19.8**	**+2.4**
INU				Sn	**Sn**	**08 36 55.2**	**+0.1**
ERM	**Erimo**	**6.29**	**15**	Pn	**Pn**	**08 36 58.7**	**-0.6**
ERM				Sn	**Sn**	**08 38 10.1**	**-0.2**
JKA	**Kamikawa-asahi**	**8.25**	**8**		**Pn**	**08 37 25.5**	**-0.6**
ASAJ	**Asahikawa**	**8.25**	**8**	Pn	**Pn**	**08 37 25.5**	**-0.6**
	1.7nm,0.3s,baz=205,slow=20,SNR=5.7						
JNU	**Nakatsue**	**8.76**	**254**	LR	LR	08 41 18.9	
	comp=Z,236nm,18.8s,baz=15,slow=41						
JNU	**Nakatsue**	**8.76**	**254**	Pn	**Pn**	**08 37 34.5**	**+1.3**
JCJ	**Chichijima**	**8.90**	**173**	Pn	**Pn**	**08 37 32.8**	**-2.4**
	14nm,0.3s,baz=299,slow=17,SNR=6.7						
KS19	**Wonju Array Si**	**10.59**	**282**	Pn	**Pn**	**08 37 59.6**	**+1.3**
HIA	**Hailar**	**20.40**	**317**	P	Pn	08 40 04.2	-1.1
PETK	**Petropavlovsk-**	**20.82**	**29**	P	**P**	**08 40 07.5**	**0.0**
MA2	**Magadan**	**24.49**	**12**	P	**P**	**08 40 45.8**	**+0.8**
MA2				IAmb	IAmb	08 40 59.1	
	comp=Z,5.6nm,0.8s						
ENH	**Enshi**	**26.86**	**267**	P	**P**	**08 41 07.7**	**+0.8**
ENH				IAmb	IAmb	08 41 11.3	
	comp=Z,7.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**27.96**	**118**	T	T	09 10 22.5	
	baz=311,slow=75,SNR=90						
H11N1	**WAKE ISLAND Hy**	**27.97**	**118**	T	T	09 10 13.6	
	baz=311,slow=75,SNR=56						
H11N3	**WAKE ISLAND Hy**	**27.98**	**118**	T	T	09 10 15.5	
	baz=311,slow=75,SNR=87						
SONM	**Songino Array**	**28.07**	**306**	P	**P**	**08 41 17.5**	**-0.2**
	comp=Z,1.3nm,1.0s,baz=109,slow=8.6,SNR=3.5						
SONM	**Songino Array**	**28.07**	**306**	P	**P**	**08 41 17.5**	**-0.2**
H11S1	**WAKE ISLAND Hy**	**28.63**	**121**	T	T	09 11 11.5	
	baz=312,slow=75,SNR=61						
H11S3	**WAKE ISLAND Hy**	**28.63**	**121**	T	T	09 11 11.6	
	baz=312,slow=75,SNR=57						
H11S2	**WAKE ISLAND Hy**	**28.65**	**121**	T	T	09 11 03.9	
	baz=312,slow=75,SNR=36						
CMAR	**Chiang Mai Arr**	**40.85**	**256**	LR	LR	09 01 13.0	
	comp=Z,49nm,19.1s,baz=66,slow=38						
WMQ	**Urumqi**	**40.98**	**298**	P	**P**	**08 43 09.9**	**+1.0**
WMQ				IAmb	IAmb	08 43 20.6	
	comp=Z,9.9nm,1.1s						
ZALV	**Zalesovo Beam**	**42.35**	**313**	P	**P**	**08 43 19.9**	**0.0**
	comp=Z,0.9nm,0.5s,baz=108,slow=5.7,SNR=4.4						
ZALV	**Zalesovo Beam**	**42.35**	**313**	P	**P**	**08 43 21.2**	**+1.3**
MK31	**Makanchi Array**	**44.36**	**303**	P	**P**	**08 43 36.1**	**-0.2**
MKAR	**Makanchi Array**	**44.36**	**303**	P	**P**	**08 43 36.3**	**0.0**
	comp=Z,2.8nm,0.8s,baz=90,slow=9.6,SNR=23						
MKAR	**Makanchi Array**	**44.36**	**303**	P	**P**	**08 43 36.5**	**+0.2**
MAKZ	**Makanchi**	**44.57**	**303**	P	**P**	**08 43 38.3**	**+0.3**
KURK	**Kurchatov**	**46.29**	**309**	P	**P**	**08 43 51.3**	**-0.1**
KURK				IAmb	IAmb	08 43 52.4	
	comp=Z,5.5nm,0.9s						
IMAR	**Indian Mountai**	**47.78**	**30**	P	**P**	**08 44 03.4**	**+0.5**
ILAR	**Eielson Array**	**50.61**	**32**	P	**P**	**08 44 25.1**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=267,slow=5.9,SNR=18						
ILAR	**Eielson Array**	**50.61**	**32**	P	**P**	**08 44 24.6**	**0.0**
AAK	**Ala-Archa**	**50.66**	**299**	LR	LR	09 05 50.9	
	comp=Z,82nm,19.6s,baz=330,slow=36						
INK	**Inuvik**	**55.52**	**27**	P	**P**	**08 45 01.2**	**+0.6**
INK				IAmb	IAmb	08 45 02.4	
	comp=Z,3.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**55.68**	**198**	P	**P**	**08 45 01.3**	**-0.9**
WB2	**Warramunga Arr**	**55.94**	**187**	P	**P**	**08 45 03.3**	**-0.9**
WRA	**Warramunga Arr**	**55.94**	**187**	P	**P**	**08 45 02.9**	**-1.3**
	comp=Z,1.2nm,0.5s,baz=4.1,slow=7.8,SNR=11						
WRA	**Warramunga Arr**	**55.94**	**187**	P	**P**	**08 45 02.8**	**-1.4**
ABKAR	**Akbulak array**	**58.33**	**311**	P	**P**	**08 45 20.9**	**+0.1**
ABKAR				IAmb	IAmb	08 45 21.4	
	comp=Z,3.0nm,1.1s						
ABKAR	**Akbulak array**	**58.33**	**311**	P	**P**	**08 45 20.6**	**-0.2**
C36M	**Paulatuk**	**58.57**	**24**	P	**P**	**08 45 22.5**	**+0.4**
C36M				IAmb	IAmb	08 45 23.9	
	comp=Z,2.1nm,0.7s						
AS31	**Alice Springs**	**59.67**	**187**	P	**P**	**08 45 31.0**	**+0.7**
AS31				IAmb	IAmb	08 45 46.7	
	comp=Z,2.1nm,1.3s						
ASAR	**Alice Springs**	**59.67**	**187**	P	**P**	**08 45 29.9**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=6.6,slow=7.5,SNR=8.4						
ASAR	**Alice Springs**	**59.67**	**187**	P	**P**	**08 45 30.1**	**-0.3**
EIDS	**Eidsvold**	**61.75**	**170**	P	**P**	**08 45 44.0**	**-0.3**
YKA	**Yellowknife Ar**	**64.94**	**30**	P	**P**	**08 46 05.6**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=303,slow=6.9,SNR=12						
AFI	**Afiamalu**	**66.76**	**129**	LR	LR	09 09 42.6	
	comp=Z,22nm,21.9s,baz=59,slow=31						
FINES	**FINESS Array B**	**69.58**	**332**	P	**P**	**08 46 35.1**	**+0.5**
	comp=Z,3.6nm,0.9s,baz=26,slow=4.9,SNR=4.6						
FINES	**FINESS Array B**	**69.58**	**332**	P	**P**	**08 46 34.8**	**+0.2**
NVAR	**Mina Array Bea**	**75.95**	**53**	P	**P**	**08 47 14.2**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=283,slow=6.0,SNR=5.0						
NVAR	**Mina Array Bea**	**75.95**	**53**	P	**P**	**08 47 12.3**	**-0.8**
PDAR	**Pinedale Array**	**78.70**	**45**	P	**P**	**08 47 28.9**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=265,slow=1.7,SNR=9.4						
PDAR	**Pinedale Array**	**78.70**	**45**	P	**P**	**08 47 27.6**	**-0.9**
GERES	**GERESS Array B**	**83.41**	**328**	LR	LR	09 26 00.9	
	comp=Z,38nm,21.6s,baz=314,slow=36						
TXAR	**Lajitas Array**	**91.09**	**52**	P	**P**	**08 48 31.2**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=315,slow=3.8,SNR=6.4						
TXAR	**Lajitas Array**	**91.09**	**52**	P	**P**	**08 48 30.7**	**-0.2**
LPAZ	**La Paz**	**147.57**	**60**	PKPbc	**PKPbc**	**08 55 11.6**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=17,slow=2.5,SNR=7.2						
LPAZ	**La Paz**	**147.57**	**60**		**PKPbc**	**08 55 11.3**	**-0.1**

*PDG **28** 08:36:41.9±0.2, 38.°15N×20.°26E, h11km, ML3.9/13, Error ellipse: s-maj=0.7km s-min=0.7km az=90.0*

*IDC **28** 08:36:43.1±0.8, 38.°20N×20.°42E, h0km, mb4.0/12, mb1 4.1/16, mb1mx3.9/42, mbtmp4.0/16, ML3.6/4, MS2.9/1, Ms1 2.9/1, ms1mx2.6/35, Error ellipse: s-maj=18.2km s-min=14.5km az=75.0*

*ATH **28** 08:36:43.7, 38.°19N×20.°43E, h9km±2km, ML3.9/10, Error ellipse: s-maj=2.8km s-min=1.0km az=74.0*

*THE **28** 08:36:44.2, 38.°21N×20.°41E, h3km±3km, ML3.9/12, Error ellipse: s-maj=3.2km s-min=0.4km az=118.0*

*NEIC **28** 08:36:44.3±3.0, 38.°19N±0.°04×20.°34E±0.°04, h10km±1km, Error ellipse: s-maj=6.3km s-min=4.7km az=6.0*

ISC 28 08:36:44.0±0.8, 38.°21N±0.°02×20.°40E±0.°03, h6km±5km, n177, σ1§34/246, mb4.2/15, 8C-11D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.08**	**118**	P	**Pg**	**08 36 45.7**	**-0.1**
ARG2				S	**Sg**	**08 36 46.9**	**-0.2**
ARG2	**Argostoli**	**0.08**	**118**		**Pg**	**08 36 45.7**	**-0.1**
KEF1	**Kardakata, Kep**	**0.08**	**41**	P	**Pg**	**08 36 46.0**	**+0.1**
KEF1				S	**Sg**	**08 36 47.2**	**-0.1**
VLS	**Valsamata**	**0.15**	**104**	P	**Pg**	**08 36 46.9**	**-0.2**
VLS				S	**Sg**	**08 36 49.3**	**+0.1**
	157μm,0.2s						
VLS	**Valsamata**	**0.15**	**104**	P	**Pg**	**08 36 47.0**	**-0.2**
VLS				S	**Sg**	**08 36 49.2**	**-0.1**
VLS				AML	A

DRO					AML	AML	08 37 23.1	
	comp=N,15222µm,0.4s							
DRO					AML	AML	08 37 24.4	
	comp=E,12603µm,0.3s							
DRO	**Drossia**	**1.07**	**104**		**Pg**		**08 37 03.5**	**-0.9**
DRO					**Sb**		**08 37 19.6**	**+0.6**
EFP	**Efpalio**	**1.20**	**79**	P	**Pg**		**08 37 05.6**	**-1.5**
EFP				AML	AML		08 37 30.6	
	comp=N,8772µm,0.4s							
EFP				AML	AML		08 37 34.8	
	comp=E,9398µm,0.6s							
AMT	**Artemida-Makis**	**1.24**	**123**	P	**Pb**		**08 37 07.4**	**-0.3**
AMT				S	**Sn**		**08 37 24.9**	**+0.1**
	comp=E,4µm,0.6s							
AMT	**Artemida-Makis**	**1.24**	**123**	P	**Pb**		**08 37 06.6**	**-1.2**
AMT				AML	AML		08 37 38.2	
	comp=N,8787µm,0.5s							
AMT				AML	AML		08 37 43.4	
	comp=E,7598µm,0.7s							
AMT	**Artemida-Makis**	**1.24**	**123**		**Pb**		**08 37 07.4**	**-0.3**
AMT					**Sn**		**08 37 24.9**	**+0.1**
LAKA	**Lakka**	**1.24**	**88**	P	**Pb**		**08 37 06.5**	**-1.3**
ANX	**Ano Chora**	**1.25**	**72**	P	**Pn**		**08 37 06.7**	**-1.3**
ANX				AML	AML		08 37 31.7	
	comp=N,17477µm,0.7s							
ANX				AML	AML		08 37 35.9	
	comp=E,11235µm,0.5s							
EVR	**Evrytania**	**1.31**	**57**	P	**Pn**		**08 37 08.0**	**-0.8**
SERG	**Sergoula**	**1.32**	**81**	P	**Pn**		**08 37 07.6**	**-1.3**
TRIZ	**Trizonia**	**1.32**	**83**	P	**Pn**		**08 37 07.6**	**-1.3**
KALE	**Kalithea**	**1.38**	**82**	P	**Pn**		**08 37 08.5**	**-1.2**
KLV	**Kalavryta, Ach**	**1.39**	**97**	P	**Pn**		**08 37 09.2**	**-0.7**
KLV	**Kalavryta, Ach**	**1.39**	**97**	P	**Pn**		**08 37 08.9**	**-1.0**
KLV	**Kalavryta, Ach**	**1.39**	**97**		**Pn**		**08 37 09.2**	**-0.7**
MAKR	**Makrakomi, Fth**	**1.57**	**59**	P	**Pn**		**08 37 12.7**	**+0.3**
ITM	**Ithomi**	**1.59**	**130**	P	**Pn**		**08 37 12.3**	**-0.3**
ITM	**Ithomi**	**1.59**	**130**		**Pn**		**08 37 12.5**	**-0.2**
ITM				Sn	**Sg**		**08 37 37.0**	**+2.0**
AGG	**Agios Georgios**	**1.71**	**61**		**Pb**		**08 37 16.3**	**+0.4**
AGG				Sn	**Sg**		**08 37 40.9**	**+1.8**
AXAR	**Agios Charalam**	**1.86**	**72**	P	**Pb**		**08 37 18.2**	**0.0**
PROD	**Prodromos**	**1.97**	**88**	P	**Pb**		**08 37 19.4**	**-0.8**
VIL2	**Platees**	**2.26**	**89**	P	**Pb**		**08 37 23.9**	**-1.3**
SCTE	**Santa Cesarea**	**2.39**	**322**		**Pn**		**08 37 24.0**	**+0.4**
SCTE				Sn	**Sn**		**08 37 53.0**	**-0.2**
LIT	**Litokhoron**	**2.49**	**40**		**Pb**		**08 37 27.5**	**-1.5**
LIT					**Sb**		**08 37 59.7**	**-0.2**
FNA	**Florina**	**2.67**	**16**		**Pn**		**08 37 29.1**	**+1.5**
FNA					**Sb**		**08 38 04.9**	**-0.5**
OHR	**Ohrid**	**2.91**	**6**	*i* Pn	**Pn**		**08 37 32.7**	**+1.9**
TIP	**Timpagrande**	**3.01**	**290**	⇑P	**Pn**		**08 37 32.8**	**+0.6**
TIP	**Timpagrande**	**3.01**	**290**	⇑S	**Sn**		**08 38 09.8**	**+1.3**
TIP	**Timpagrande**	**3.01**	**290**		**Pn**		**08 37 32.4**	**+0.2**
TIP				Sn	**Sn**		**08 38 09.6**	**+1.1**
TIR	**Tirane**	**3.16**	**353**	⇓P	**Pn**		**08 37 34.1**	**-0.1**
TIR	**Tirane**	**3.16**	**353**	⇑S	**Sn**		**08 38 10.1**	**-2.0**
TIR	**Tirane**	**3.16**	**353**		**Pn**		**08 37 35.0**	**+0.8**
TIR				Sn	**Sn**		**08 38 14.3**	**+2.2**
CGL1	**Ceglie Messapi**	**3.33**	**318**	⇑*i*Pn	**Pn**		**08 37 36.6**	**+0.1**
MASS	**Massafra**	**3.49**	**315**	*e*Pn	**Pn**		**08 37 39.0**	**+0.3**
VAY	**Valandovo**	**3.52**	**28**	*i* Pn	**Pn**		**08 37 40.8**	**+1.6**
CEL	**Celeste**	**3.55**	**272**		**Pn**		**08 37 38.4**	**-1.2**
CEL				Sn	**Sn**		**08 38 20.6**	**-1.2**
STIP	**Stip**	**3.74**	**21**	*i* Pn	**Pn**		**08 37 46.1**	**+4.0**
MATE	**Matera**	**3.75**	**312**	⇓P	**Pn**		**08 37 41.5**	**-0.8**
MATE	**Matera**	**3.75**	**312**	⇓S	**Sn**		**08 38 26.1**	**-0.7**
ULC	**Ulcinj**	**3.85**	**347**	*e*Pn	**Pn**		**08 37 42.8**	**-0.9**
ULC				*e*Sn	**Sn**		**08 38 29.1**	**-0.1**
SG1	**Sgolgore (BA)**	**3.89**	**314**	*e*Pn	**Pn**		**08 37 44.9**	**+0.6**
BAI	**Bari**	**3.97**	**318**	*e*Pn	**Pn**		**08 37 45.9**	**+0.7**
DRME	**Dracevica, Mon**	**4.08**	**347**	*e*Pn	**Pn**		**08 37 45.9**	**-0.9**
DRME				*e*Sn	**Sn**		**08 38 34.9**	**+0.1**
APE	**Apeiranthos**	**4.23**	**104**	⇑P	**Pn**		**08 37 50.4**	**+1.5**
APE	**Apeiranthos**	**4.23**	**104**	⇓S	**Sn**		**08 38 41.9**	**+3.3**
BUM	**Brajici-Budva**	**4.24**	**345**	*e*Pn	**Pn**		**08 37 47.0**	**-2.1**
BUM				*e*Sn	**Sn**		**08 38 38.9**	**0.0**
ACER	**Acerenza**	**4.30**	**308**		**Pn**		**08 37 50.3**	**+0.4**
ACER				Sn	**Sn**		**08 38 40.6**	**+0.3**
PDG	**Podgorica**	**4.30**	**349**	⇓P	**Pn**		**08 37 50.4**	**+0.5**
PDG	**Podgorica**	**4.30**	**349**	⇓S	**Sn**		**08 38 38.0**	**-2.3**
PDG	**Podgorica**	**4.30**	**349**		**Pn**		**08 37 50.4**	**+0.5**
PDG				Sn	**Sn**		**08 38 39.8**	**-0.5**
TTG	**Podgorica**	**4.30**	**349**	*e*Pn	**Pn**		**08 37 49.2**	**-0.6**
TTG				*i* Sn	**Sn**		**08 38 40.3**	**0.0**
PVY	**Plav**	**4.39**	**356**	*e*Pn	**Pn**		**08 37 50.5**	**-0.7**
PVY				*e*Sn	**Sn**		**08 38 43.9**	**+0.7**
SANT	**Santorini**	**4.43**	**113**	Pn	**Pn**		**08 37 53.7**	**+2.0**
HCY	**Herceg Novi**	**4.47**	**342**	*e*Pn	**Pn**		**08 37 51.2**	**-1.0**
HCY				*e*Sn	**Sn**		**08 38 44.1**	**-0.4**
CEME	**Cevo**	**4.47**	**346**	*e*Pn	**Pn**		**08 37 51.6**	**-0.7**
CEME				*e*Sn	**Sn**		**08 38 44.2**	**-0.4**
IDI	**Anoyia**	**4.64**	**128**	Pn	**Pn**		**08 37 55.6**	**+1.0**
	comp=E,1.0nm,0.3s,baz=323,slow=14,SNR=4.7							
IDI				Sn	**Sn**		**08 38 49.0**	**+0.3**
	comp=E,4.2nm,0.3s,baz=82,slow=19,SNR=4.0							
IVA	**Berane**	**4.67**	**355**	*e*Pn	**Pn**		**08 37 54.6**	**-0.4**
IVA				*e*Sn	**Sn**		**08 38 49.5**	**0.0**
KOME	**Kolasin**	**4.68**	**352**	*e*Pn	**Pn**		**08 37 54.9**	**-0.3**
KOME				*e*Sn	**Sn**		**08 38 50.0**	**+0.2**
NKME	**Niksic**	**4.68**	**347**	*e*Pn	**Pn**		**08 37 54.2**	**-0.9**
NKME				*e*Sn	**Sn**		**08 38 49.8**	**+0.1**
NKY	**Niksic**	**4.72**	**347**	*e*Pn	**Pn**		**08 37 55.3**	**-0.4**
NKY				*e*Sn	**Sn**		**08 38 50.3**	**-0.4**
DBRK	**Dubrovnik**	**4.77**	**340**	*e*Pn	**Pn**		**08 37 55.2**	**-1.2**
DBRK				Sn	**Sn**		**08 38 48.4**	**-3.5**
BRY	**Bratogost**	**4.89**	**344**	*e*Pn	**Pn**		**08 37 57.1**	**-1.0**
BRY				*e*Sn	**Sn**		**08 38 54.6**	**-0.5**
VTS	**Vitosha**	**4.90**	**25**	⇓P	**Pn**		**08 37 59.2**	**+1.0**
VTS	**Vitosha**	**4.90**	**25**		**Pn**		**08 37 59.4**	**+1.2**
SGRT	**San Giovanni R**	**5.03**	**316**		**Pn**		**08 37 59.9**	**0.0**
SGRT				Sn	**Sn**		**08 38 54.9**	**-3.5**
STON	**Ston**	**5.09**	**337**	*i* Pn	**Pn**		**08 37 59.8**	**-0.9**
STON				Sn	**Sn**		**08 38 55.4**	**-4.2**
UPM	**Unac-Piva**	**5.11**	**348**	*e*Pn	**Pn**		**08 38 00.7**	**-0.5**
UPM				*e*Sn	**Sn**		**08 39 00.1**	**-0.5**
ALN	**Alexandroupoli**	**5.12**	**57**	Pn	**Pn**		**08 38 02.7**	**+1.6**
PLE	**Pljevlja**	**5.17**	**352**	*e*Pn	**Pn**		**08 38 01.8**	**-0.1**
PLE				*e*Sn	**Sn**		**08 39 01.7**	**-0.1**
WDD	**Wied Dalam**	**5.27**	**245**	Pn	**Pn**		**08 38 02.0**	**-1.1**
WDD				Sn	**Sn**		**08 39 01.1**	**-3.0**
PAOL	**Paolisi**	**5.31**	**304**		**Pn**		**08 38 03.6**	**-0.1**
BLKB	**Belogradchik**	**5.67**	**17**	⇓S	**Sn**		**08 39 08.7**	**-5.4**
MAKA	**Makarska**	**5.68**	**334**	*e*Pn	**Pn**		**08 38 07.5**	**-1.3**
MAKA				Sn	**Sn**		**08 39 10.6**	**-3.7**
CLTB	**Caltabellotta**	**5.72**	**266**	Pn	**Pn**		**08 38 08.1**	**-1.3**
KARP	**Karpathos**	**6.04**	**114**	Pn	**Pn**		**08 38 15.5**	**+1.8**
INTR	**Introdacqua**	**6.26**	**309**		**Pn**		**08 38 18.9**	**+2.0**
ELND	**Elena**	**6.29**	**40**	⇑P	**Pn**		**08 38 17.0**	**-0.2**
ZIRJ	**Zirje**	**6.52**	**328**	*i* Pn	**Pn**		**08 38 19.3**	**-1.0**
ZIRJ				Sn	**Sn**		**08 39 31.0**	**-3.9**
KIJV	**Kijevo**	**6.52**	**334**	*i* Pn	**Pn**		**08 38 20.2**	**-0.2**
KIJV				Sn	**Sn**		**08 39 32.2**	**-2.9**
MORI	**Morici**	**6.67**	**329**	*e*Pn	**Pn**		**08 38 22.1**	**-0.2**
MORI				Sn	**Sn**		**08 39 35.9**	**-2.7**
BLV	**Banja Luka**	**6.96**	**341**	⇑P	**Pn**		**08 38 24.9**	**-1.5**
DUGI	**Dugi Otok**	**7.04**	**327**	*e*Pn	**Pn**		**08 38 28.1**	**+0.6**
UDBI	**Udbina**	**7.21**	**333**	*e*Pn	**Pn**		**08 38 30.5**	**+0.7**
NRCA	**Norcia**	**7.22**	**312**		**Pn**		**08 38 31.5**	**+1.5**
NRCA				Sn	**Sn**		**08 39 50.3**	**-2.0**
GZR	**Gura Zlata**	**7.39**	**13**	⇑P	**Pn**		**08 38 32.7**	**+0.4**
BZS	**Buzias**	**7.45**	**7**	⇓P	**Pn**		**08 38 33.6**	**+0.5**
NVLJ	**Novalja**	**7.58**	**329**	*e*Pn	**Pn**		**08 38 34.1**	**-0.7**
MURB	**Monte Urbino**	**7.82**	**313**	Pn	**Pn**		**08 38 39.9**	**+1.6**
MURB				Sn	**Sn**		**08 40 08.0**	**+1.0**
MLR	**Muntele Rosu**	**8.36**	**28**	Pn	**Pn**		**08 38 48.8**	**+3.0**
	comp=E,0.2nm,0.3s,baz=185,slow=1.0,SNR=12							
MLR	**Muntele Rosu**	**8.36**	**28**	⇓P	**Pn**		**08 38 47.1**	**+1.3**
TRI	**Trieste**	**8.97**	**329**	Pn	**Pn**		**08 38 54.0**	**+0.1**
VRI	**Vrincioaia**	**8.98**	**30**	⇓P	**Pn**		**08 38 55.0**	**+1.0**
KEST	**Kesra**	**9.19**	**258**	Pn	**Pn**		**08 38 57.3**	**+0.3**
SOKA	**Soboth**	**9.34**	**337**	*e*Pn	**Pn**		**08 38 58.4**	**-0.6**
	comp=E,4.2nm,0.3s,SNR=5.7							
OBKA	**Obir**	**9.35**	**334**	*e*Pn	**Pn**		**08 38 59.5**	**+0.2**
	comp=E,3.4nm,0.2s							
TEOL	**Teolo**	**9.66**	**320**	Pn	**Pn**		**08 39 04.4**	**+0.9**
ARSA	**Arzberg**	**9.71**	**340**	*e*Pn	**Pn**		**08 39 04.6**	**+0.4**
	comp=E,1.8nm,0.3s							
MYKA	**Terra Mystica**	**9.78**	**331**	*e*Pn	**Pn**		**08 39 06.2**	**+1.2**
	comp=E,2.7nm,0.3s							
CTI	**Castel Tesino**	**10.17**	**323**		**Pn**		**08 39 10.4**	**-0.1**
ABTA	**Abfaltersbach**	**10.32**	**328**	*e*Pn	**Pn**		**08 39 12.9**	**+0.4**
	comp=E,1.6nm,0.3s							
ABTA				*e*Sn	**Sn**		**08 41 08.2**	**-0.3**
	comp=E,1.7nm,0.3s							
VYHS	**Vyhne**	**10.34**	**354**	*e*PN	**Pn**		**08 39 13.5**	**+0.8**
BR131	**Keskin Array S**	**10.42**	**78**	Pn	**Pn**		**08 39 18.4**	**+4.4**
BRTR	**Keskin Array B**	**10.42**	**78**	Pn	Pn		08 39 19.3	+5.3
	comp=E,0.2nm,0.3s,baz=256,slow=13,SNR=6.0							
BRTR					LR	LR	08 43 53.2	
	comp=E,73nm,20.6s,baz=233,slow=41							
BRTR	**Keskin Array B**	**10.42**	**78**		**Pn**		**08 39 18.2**	**+4.2**
MOA	**Molln**	**10.62**	**337**	*e*Pn	**Pn**		**08 39 17.4**	**+0.8**
	comp=E,3.6nm,0.3s,SNR=4.8							
WTTA	**Wattenberg**	**11.10**	**327**	*e*Pn	**Pn**		**08 39 25.7**	**+2.5**
	comp=E,4.7nm,0.4s							
WTTA				*e*Sn	**Sn**		**08 41 24.0**	**-3.7**
	comp=E,3.3nm,0.4s							
FUORN	**Ofenpass-Fuorn**	**11.25**	**322**	Pn	**Pn**		**08 39 26.3**	**+0.9**
MOTA	**Moosalm**	**11.39**	**326**	*e*Pn	**Pn**		**08 39 28.4**	**+1.2**
	comp=E,1.2nm,0.2s							
MOTA				*e*Sn	**Sn**		**08 41 33.5**	**-1.3**
	comp=E,2.6nm,0.4s							
GEC2	**GERESS Array S**	**11.68**	**338**	Pn	**Pn**		**08 39 30.9**	**-0.2**
GERES	**GERESS Array B**	**11.68**	**338**	Pn	**Pn**		**08 39 31.1**	**0.0**
	comp=E,0.5nm,0.3s,baz=158,slow=14,SNR=9.6							
GERES				Sn	**Sn**		**08 41 35.8**	**-6.0**
	comp=E,0.3nm,0.3s,baz=153,slow=22,SNR=4.1							
GERES	**GERESS Array B**	**11.68**	**338**		**Pn**		**08 39 30.8**	**-0.3**
KHC	**Kasperske Hory**	**11.97**	**338**	*e*PN	**Pn**		**08 39 34.6**	**-0.5**
KHC	**Kasperske Hory**	**11.97**	**338**	Pn	**Pn**		**08 39 34.4**	**-0.6**
SENIN	**Lac Senin/Sane**	**12.65**	**314**	Pn	**Pn**		**08 39 45.2**	**+0.7**
AKASG	**Malin Array Be**	**13.97**	**24**	Pn	**P**		**08 40 06.6**	**-3.9**
CLL	**Collm**	**14.10**	**341**	*es*PP			08 40 15.0	
CLF	**Chambon-Foret**	**16.44**	**312**	Pn	**Pn**		**08 40 35.8**	**+0.7**
KIV	**Kislovodsk**	**17.73**	**64**	P	**P**		**08 40 54.0**	**+1.7**
KIV				IAmb	IAmb		08 40 58.2	
	comp=Z,28nm,1.5s							
GNI	**Garni**	**18.96**	**77**		**Pn**		**08 41 07.1**	**+0.6**
GNI				IAmb	IAmb		08 41 09.8	
	comp=Z,18nm,1.1s							
ESBB	**Sonseca Array**	**19.00**	**282**	P	**P**		**08 41 06.4**	**+0.2**
HFS	**Hagfors**	**22.35**	**351**	P	**P**		**08 41 42.3**	**0.0**
	comp=E,1.1nm,0.8s,baz=159,slow=8.9,SNR=9.4							
NC602	**NORSAR Array S**	**23.22**	**349**	P	**P**		**08 41 52.4**	**+1.0**
EKA	**Eskdalemuir Ar**	**23.34**	**325**	P	**P**		**08 41 53.1**	**+0.4**
	comp=Z,8.9nm,0.9s,baz=125,slow=10,SNR=7.5							
FINES	**FINESS Array B**	**23.52**	**7**	P	**P**		**08 41 53.1**	**-1.3**
	comp=Z,4.2nm,0.7s,baz=171,slow=9.6,SNR=12							
FIA1	**FINESS Array S**	**23.52**	**7**	P	**P**		**08 41 54.3**	**-0.2**
FIA1				IAmb	IAmb		08 42 02.7	
	comp=Z,14nm,1.1s							
NB2	**NORSAR Subarra**	**23.56**	**349**	P	**P**		**08 41 54.5**	**-0.4**
	comp=Z,9.0nm,1.2s,baz=159,slow=9.3							
NOA	**NORSAR Array B**	**23.56**	**349**	P	**P**		**08 41 55.4**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=169,slow=8.7,SNR=5.3							
TOA0	**Torodi Ar. Sit**	**30.00**	**219**	P	**P**		**08 42 52.7**	**-0.7**
TOA0				IAmb	IAmb		08 42 58.3	
	comp=Z,3.5nm,1.1s							
TORD	**Torodi Ar. Bea**	**30.00**	**219**	P	**P**		**08 42 52.4**	**-1.0**
	comp=Z,1.5nm,0.9s,baz=35,slow=8.1,SNR=7.1							
ABKAR	**Akbulak array**	**30.30**	**56**	P	**P**		**08 42 55.1**	**-0.7**
ABKAR	**Akbulak array**	**30.30**	**56**	P	**P**		**08 42 56.0**	**+0.3**
BRVK	**Borovoye**	**37.10**	**50**	P	**P**		**08 43 55.6**	**+0.7**
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**		**08 45 01.5**	**-1.4**
	comp=Z,1.9nm,0.5s,baz=273,slow=7.2,SNR=40							
ZAA0	**Zalesovo Array**	**45.74**	**48**	P	**P**		**08 45 05.0**	**-0.7**
ZAA0				IAmb	IAmb		08 45 05.2	
	comp=Z,5.1nm,0.8s							
ZALV	**Zalesovo Beam**	**45.74**	**48**	P	**P**		**08 45 04.5**	**-1.2**
	comp=Z,4.6nm,0.6s,baz=276,slow=8.8,SNR=12							
ZALV	**Zalesovo Beam**	**45.74**	**48**	P	**P**		**08 45 04.2**	**-1.4**
MATP	**Matopo**	**58.82**	**171**	P	**P**		**08 46 43.5**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=350,slow=4.2,SNR=3.0							
SONM	**Songino Array**	**60.51**	**51**	P	**P**		**08 46 54.3**	**-0.5**
	comp=Z,1.2nm,0.8s,baz=286,slow=7.6,SNR=8.0							
SONM	**Songino Array**	**60.51**	**51**	P	**P**		**08 46 54.6**	**-0.2**
YKA	**Yellowknife Ar**	**73.32**	**340**	P	**P**		**08 48 16.9**	**+1.0**
	comp=Z,0.8nm,1.0s,baz=32,slow=6.1,SNR=7.0							
ULM	**Lac du Bonnet**	**75.61**	**324**	P	**P**		**08 48 30.9**	**+1.4**
	comp=Z,2.2nm,0.8s,baz=55,slow=4.1,SNR=4.9							
ILAR	**Eielson Array**	**76.86**	**354**	P	**P**		**08 48 38.5**	**+2.2**
	comp=Z,0.6nm,0.9s,baz=3.7,slow=5.9,SNR=6.0							

*IDC **28** 08:37:32.8±0.8, 35°.37S×14°.64W, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.0/25, mbtmp4.2/8, MS3.9/8, Ms1 3.9/8, ms1mx3.6/26, Error ellipse: s-maj=22.9km s-min=18.6km az=1.0*

*NEIC **28** 08:37:34.4±1.6, 35°.2S±0°.1×14°.66W±0°.04, h10km±1km, mb4.7/18, Error ellipse: s-maj=17.9km s-min=4.9km az=168.0*

ISC 28 08:37:34.1±0.5, **35°.3S**±0°.1×**14°.62W**±0°.09, **h10**km, **n52,**
σ0**8**8/39, **mb4.5**/18, **MS3.9**/8, **Tristan da Cunha region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
H09N1	**TRISTAN DA CUN**	**2.56**	**134**		Pn		**Pn**	**08 38 14.3**	**-1.4**
	SNR=23								
H09N1					T		T	08 41 07.9	
	SNR=99								
H09W1	**TRISTAN DA CUN**	**2.57**	**135**		Pn		**Pn**	**08 38 14.4**	**-1.4**
	SNR=123								
H09W1					T		T	08 41 07.2	
	SNR=232								
SHEL	**Horse Pasture**	**20.84**	**25**		P		**P**	**08 42 13.8**	**-2.3**
H10S2	**ASCENSION HYDR**	**26.22**	**360**		T		T	09 10 13.1	
	baz=180,slow=74,SNR=294								
H10S3	**ASCENSION HYDR**	**26.23**	**360**		T		T	09 10 13.5	
	baz=40,slow=74,SNR=288								
H10N1	**ASCENSION HYDR**	**27.33**	**0**		T		T	09 11 37.3	
	baz=190,slow=79,SNR=5.1								
H10N3	**ASCENSION HYDR**	**27.34**	**0**		T		T	09 11 37.4	
	baz=190,slow=79,SNR=59								
H10N2	**ASCENSION HYDR**	**27.35**	**0**		T		T	09 11 37.4	
	baz=190,slow=79,SNR=18								
SUR	**Sutherland**	**29.47**	**95**		LR		LR	08 52 04.3	
	comp=Z,192nm,21.6s,baz=252,slow=30								
TSUM	**Tsumeb**	**32.63**	**69**		P		**P**	**08 44 06.1**	**-0.3**
TSUM					IAmb		IAmb	08 44 06.9	
	comp=Z,5.1nm,1.1s								
BOSA	**Boshof**	**34.31**	**90**		LR		LR	08 55 07.9	
	comp=Z,150nm,22.0s,baz=232,slow=31								
BDFB	**Brasilia**	**35.71**	**295**		LR		LR	08 56 46.9	
	comp=Z,193nm,18.7s,baz=121,slow=32								
BDFB	**Brasilia**	**35.71**	**295**		P		**P**	**08 44 33.0**	**-0.1**
CPUP	**Villa Florida**	**37.52**	**272**		LR		LR	08 56 46.9	
	comp=Z,68nm,20.6s,baz=137,slow=31								
MATP	**Matopo**	**40.57**	**80**		P		**P**	**08 45 15.4**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=246,slow=11,SNR=5.8								
LIC	**Lamto**	**42.28**	**14**	*e*P			**P**	**08 45 28.0**	**0.0**
	comp=Z,32nm,0.9s								
KIC	**Kosan Boka**	**42.48**	**15**	*e*P			**P**	**08 45 29.6**	**+0.1**
	comp=Z,31nm,0.9s								
TIC	**Toumodi**	**42.69**	**14**	*e*P			**P**	**08 45 31.2**	**-0.1**
	comp=Z,1.9nm,0.2s								
DBIC	**Dimbokro**	**42.75**	**14**	P			**P**	**08 45 31.4**	**-0.3**
	comp=Z,6.3nm,0.9s,baz=173,slow=9.8,SNR=5.8								
DBIC	**Dimbokro**	**42.75**	**14**	P			**P**	**08 45 30.8**	**-0.9**
DBIC					IAmb		IAmb	08 45 32.8	
	comp=Z,18nm,1.2s								
PLCA	**Paso Flores**	**43.77**	**246**	P			**P**	**08 45 39.5**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=130,slow=3.2,SNR=4.1								
PLCA	**Paso Flores**	**43.77**	**246**	P			**P**	**08 45 40.8**	**+0.9**
CFA	**Coronel Fontan**	**44.44**	**259**	P			**P**	**08 45 44.7**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=81,slow=8.4,SNR=5.4								
SIV	**San Ignacio**	**45.62**	**283**	P			**P**	**08 45 55.6**	**+0.8**
	comp=Z,3.1nm,1.0s,baz=132,slow=8.3,SNR=10								
GO01	**Chusmiza**	**50.27**	**273**	P			**P**	**08 46 31.0**	**-0.4**
GO01					IAmb		IAmb	08 46 33.5	
	comp=Z,11nm,0.9s								
TOA0	**Torodi Ar. Sit**	**50.61**	**21**	P			**P**	**08 46 33.1**	**-0.2**
TOA0					IAmb		IAmb	08 46 34.4	
	comp=Z,12nm,0.9s								
TORD	**Torodi Ar. Bea**	**50.61**	**21**	P			**P**	**08 46 33.2**	**-0.1**
	comp=Z,9.8nm,1.0s,baz=199,slow=7.8,SNR=35								
TORD	**Torodi Ar. Bea**	**50.61**	**21**	P			**P**	**08 46 32.8**	**-0.5**
LPAZ	**La Paz**	**51.14**	**277**	LR			LR	09 07 59.1	
	comp=Z,94nm,19.1s,baz=321,slow=36								
LPAZ	**La Paz**	**51.14**	**277**	P			**P**	**08 46 37.2**	**-1.0**
SAML	**Samuel**	**51.42**	**289**	P			**P**	**08 46 39.4**	**-0.2**
SAML					IAmb		IAmb	08 46 41.5	
	comp=Z,5.3nm,0.9s								
MBAR	**Mbarara**	**54.50**	**61**	P			**P**	**08 47 02.6**	**+0.1**
MBAR					IAmb		IAmb	08 47 21.3	
	comp=Z,8.1nm,1.2s								
QSPA	**South Pole Qui**	**54.94**	**180**	P			**P**	**08 47 06.1**	**+1.0**
QSPA					IAmb		IAmb	08 47 18.5	
	comp=Z,16nm,1.4s								
TAM	**Tamanrasset**	**60.85**	**21**	P			**P**	**08 47 47.2**	**+0.3**
TAM					IAmb		IAmb	08 47 49.0	
	comp=Z,5.2nm,1.1s								
FLOC	**Florencia**	**67.66**	**289**	P			**P**	**08 48 31.1**	**-0.6**
SDV	**Santo Domingo**	**68.69**	**298**	P			**P**	**08 48 38.1**	**-0.2**
ROSC	**El Rosal**	**68.72**	**293**	LR			LR	09 17 21.4	
	comp=Z,241nm,18.9s,baz=162,slow=35								
ESDC	**Sonseca Array**	**75.25**	**8**	P			**P**	**08 49 18.0**	**+1.0**
	comp=Z,2.0nm,0.9s,baz=176,slow=4.7,SNR=5.3								
ESDC	**Sonseca Array**	**75.25**	**8**	P			**P**	**08 49 17.3**	**+0.3**
MANT	**Manisa**	**83.60**	**33**	P			**P**	**08 50 03.2**	**+0.5**
BRTR	**Keskin Array B**	**86.92**	**35**	P			**P**	**08 50 20.8**	**+1.6**
	comp=Z,1.6nm,1.0s,baz=344,slow=4.0,SNR=4.4								
BRTR	**Keskin Array B**	**86.92**	**35**	P			**P**	**08 50 19.5**	**+0.3**
HFS	**Hagfors**	**97.92**	**14**	LR			LR	09 32 52.3	
	comp=Z,83nm,19.5s,baz=328,slow=34								
GEYT	**Alibeck**	**99.22**	**50**	LR			LR	09 35 21.6	
	comp=Z,45nm,18.8s,baz=300,slow=35								
YKA	**Yellowknife Ar**	**125.13**	**326**	PKP			**PKPdf**	**08 56 33.5**	**-0.4**
	comp=Z,0.9nm,1.0s,baz=79,slow=1.6,SNR=6.4								
INK	**Inuvik**	**132.93**	**334**	PKP			**PKPdf**	**08 56 48.4**	**-0.1**
	comp=Z,1.2nm,1.0s,baz=204,slow=3.7,SNR=3.7								
INK	**Inuvik**	**132.93**	**334**				**PKPdf**	**08 56 48.9**	**+0.3**
BMAR	**Burnt Mountain**	**137.19**	**334**				**PKPdf**	**08 56 55.4**	**-1.3**
ILAR	**Eielson Array**	**139.08**	**331**	PKP			**PKPdf**	**08 57 00.9**	**+0.8**
	com

FSK				S		Sg	08 52 51.8	+0.8
	comp=E,5μm,0.2s							
FSK	**Fiskardo**	**0.34**	**32**	P		**Pg**	**08 52 46.4**	**-0.1**
FSK				S		**Sg**	**08 52 51.6**	**+0.6**
KFL	**Anninata**	**0.36**	**100**	P		**Pg**	**08 52 46.9**	**-0.2**
KFL				S		**Sg**	**08 52 52.7**	**+0.8**
	comp=E,6μm,0.3s							
KFL	**Anninata**	**0.36**	**100**	P		**Pg**	**08 52 46.8**	**-0.2**
KFL				S		**Sg**	**08 52 52.0**	**+0.1**
KFL				AML	AML		08 52 54.4	
	comp=N,11291μm,0.3s							
KFL				AML	AML		08 52 54.7	
	comp=E,12019μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.40**	**139**	P		**Pg**	**08 52 47.7**	**+0.1**
VLMS				S		**Sg**	**08 52 53.5**	**+0.7**
VLMS				AML	AML		08 52 54.9	
	comp=E,14284μm,0.3s							
VLMS				AML	AML		08 52 58.0	
	comp=N,10372μm,0.3s							
EVGI	**Lefkada island**	**0.51**	**30**	P		**Pg**	**08 52 49.7**	**-0.2**
EVGI				S		**Sg**	**08 52 57.7**	**+1.1**
EVGI	**Lefkada island**	**0.51**	**30**	P		**Pg**	**08 52 49.6**	**-0.2**
EVGI				S		**Sg**	**08 52 56.7**	**+0.1**
MGNA	**Meganis**	**0.60**	**37**	P		**Pg**	**08 52 51.0**	**-0.5**
MGNA				S		**Sg**	**08 52 59.1**	**-0.3**
MGNA				AML	AML		08 53 00.8	
	comp=E,5630μm,0.3s							
MGNA				AML	AML		08 53 00.9	
	comp=N,6068μm,0.2s							
LKD2	**Lefkada island**	**0.67**	**22**	P		**Pg**	**08 52 52.2**	**-0.5**
LKD2				S		**Sb**	**08 53 02.7**	**-0.3**
	comp=N,800nm,0.3s							
LKD2	**Lefkada island**	**0.67**	**22**	P		**Pg**	**08 52 52.2**	**-0.5**
LKD2				S		**Sg**	**08 53 01.4**	**-0.1**
LKD2				AML	AML		08 53 07.7	
	comp=N,1974μm,0.3s							
LKD2				AML	AML		08 53 10.5	
	comp=E,1010μm,0.3s							
TSLK	**Tsoukalades, L**	**0.70**	**21**	P		**Pg**	**08 52 53.0**	**-0.3**
TSLK				S		**Sb**	**08 53 03.5**	**-0.5**
	comp=E,878nm,0.5s							
TSLK	**Tsoukalades, L**	**0.70**	**21**	P		**Pg**	**08 52 53.0**	**-0.3**
TSLK				S		**Sg**	**08 53 02.8**	**+0.3**
PDO	**Prodromos**	**0.79**	**57**	P		**Pg**	**08 52 54.6**	**-0.6**
PDO	**Prodromos**	**0.79**	**57**	P		**Pg**	**08 52 54.5**	**-0.6**
PDO				AML	AML		08 53 17.5	
	comp=N,1636μm,0.4s							
PDO				AML	AML		08 53 17.6	
	comp=E,1610μm,0.4s							
RLS	**Riolos of Patr**	**0.90**	**97**	P		**Pg**	**08 52 57.0**	**-0.2**
RLS	**Riolos of Patr**	**0.90**	**97**	P		**Pg**	**08 52 56.9**	**-0.2**
RLS				AML	AML		08 53 19.4	
	comp=E,859μm,0.8s							
RLS				AML	AML		08 53 19.8	
	comp=N,808μm,0.6s							
PVO	**Paravola**	**1.04**	**64**	P		**Pg**	**08 52 59.3**	**-0.5**
PVO	**Paravola**	**1.04**	**64**	P		**Pg**	**08 52 59.2**	**-0.6**
PVO				AML	AML		08 53 21.8	
	comp=N,1859μm,0.4s							
PVO				AML	AML		08 53 23.5	
	comp=E,1899μm,0.4s							
DRO	**Drossia**	**1.11**	**101**	P		**Pg**	**08 53 00.5**	**-0.7**
DRO	**Drossia**	**1.11**	**101**	P		**Pg**	**08 53 00.5**	**-0.7**
DRO				AML	AML		08 53 26.9	
	comp=E,1999μm,0.5s							
DRO				AML	AML		08 53 29.9	
	comp=N,1765μm,0.6s							
EFP	**Efpalio**	**1.26**	**78**	P		**Pn**	**08 53 02.7**	**-1.0**
EFP	**Efpalio**	**1.26**	**78**	P		**Pn**	**08 53 03.7**	**0.0**
EFP				AML	AML		08 53 27.7	
	comp=E,1033μm,0.5s							
EFP				AML	AML		08 53 29.1	
	comp=N,1289μm,0.5s							
AMT	**Artemida-Makis**	**1.26**	**120**	P		**Pn**	**08 53 03.0**	**-0.7**
AMT				AML	AML		08 53 35.2	
	comp=E,844μm,0.6s							
AMT				AML	AML		08 53 35.3	
	comp=N,1387μm,0.6s							
LAKA	**Lakka**	**1.30**	**87**	P		**Pn**	**08 53 03.4**	**-0.8**
LAKA	**Lakka**	**1.30**	**87**	P		**Pn**	**08 53 03.7**	**-0.5**
LAKA				S		**Sb**	**08 53 21.5**	**+0.2**
LAKA				AML	AML		08 53 25.0	
	comp=N,730μm,0.4s							
LAKA				AML	AML		08 53 31.0	
	comp=E,631μm,0.8s							
ANX	**Ano Chora**	**1.32**	**71**	P		**Pn**	**08 53 04.6**	**0.0**
ANX	**Ano Chora**	**1.32**	**71**	P		**Pn**	**08 53 04.6**	**0.0**
ANX				AML	AML		08 53 32.7	
	comp=N,1178μm,0.7s							
ANX				AML	AML		08 53 35.3	
	comp=E,1246μm,0.5s							
EVR	**Evrytania**	**1.38**	**57**	P		**Pn**	**08 53 05.7**	**+0.4**
EVR				AML	AML		08 53 32.2	
	comp=E,380μm,0.7s							
EVR				AML	AML		08 53 40.0	
	comp=N,352μm,0.6s							
SERG	**Sergoula**	**1.38**	**79**	P		**Pn**	**08 53 04.3**	**-1.0**
SERG	**Sergoula**	**1.38**	**79**	P		**Pn**	**08 53 05.0**	**-0.3**
SERG				AML	AML		08 53 35.3	
	comp=N,950μm,0.5s							
SERG				AML	AML		08 53 38.9	
	comp=E,574μm,0.4s							
TRIZ	**Trizonia**	**1.38**	**82**	P		**Pn**	**08 53 04.7**	**-0.6**
KALE	**Kalithea**	**1.44**	**81**	P		**Pb**	**08 53 06.7**	**-0.2**
KALE				AML	AML		08 53 36.7	
	comp=N,565μm,0.5s							
KALE				AML	AML		08 53 37.0	
	comp=E,435μm,0.5s							
KLV	**Kalavryta, Ach**	**1.44**	**95**	P		**Pn**	**08 53 06.6**	**+0.4**
KLV	**Kalavryta, Ach**	**1.44**	**95**	P		**Pb**	**08 53 06.7**	**-0.2**
KLV				AML	AML		08 53 32.2	
	comp=N,325μm,0.9s							
KLV				AML	AML		08 53 42.0	
	comp=E,400μm,0.7s							
ITM	**Ithomi**	**1.61**	**128**	P		**Pb**	**08 53 09.4**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.64**	**59**	P		**Pg**	**08 53 10.9**	**-0.4**
MAKR				AML	AML		08 53 45.8	
	comp=E,685μm,0.4s							
MAKR				AML	AML		08 53 49.6	
	comp=N,463μm,0.5s							
PYL	**PYLOS**	**1.70**	**138**	P		**Pb**	**08 53 11.1**	**-0.1**
AGG	**Agios Georgios**	**1.78**	**61**	P		**Pb**	**08 53 13.2**	**+0.5**
AGG				AML	AML		08 53 49.5	
	comp=N,343μm,0.5s							
AGG				AML	AML		08 53 51.8	
	comp=E,252μm,0.9s							
VLX	**Vlachokerasia**	**1.81**	**116**	P		**Pg**	**08 53 14.2**	**-0.3**
THL	**Klokotos Trika**	**1.91**	**43**	P		**Pb**	**08 53 14.7**	**-0.2**
THL				AML	AML		08 53 46.8	
	comp=N,210μm,0.6s							
THL				AML	AML		08 53 52.1	
	comp=E,288μm,0.5s							
AXAR	**Agios Charalam**	**1.92**	**71**	P		**Pb**	**08 53 15.4**	**+0.4**
AXAR				AML	AML		08 53 54.2	
	comp=E,651μm,0.4s							
AXAR				AML	AML		08 53 56.7	
	comp=N,766μm,1.0s							
PROD	**Prodromos**	**2.02**	**87**	P		**Pb**	**08 53 16.6**	**-0.3**
PROD				AML	AML		08 53 51.6	
	comp=E,302μm,0.6s							
PROD				AML	AML		08 53 53.0	
	comp=N,336μm,0.8s							
LTK	**Loutraki**	**2.08**	**93**	P		**Pn**	**08 53 16.2**	**+1.2**
PENT	**Pentalofos**	**2.11**	**17**	P		**Pb**	**08 53 18.3**	**-0.2**
VIL2	**Platees**	**2.31**	**88**	P		**Pn**	**08 53 19.9**	**+1.7**
MRKA	**Markates**	**2.61**	**77**	P		**Pn**	**08 53 24.0**	**+1.8**

*PAS **28** 08:58:04.9±1.9,34.°40N±0.°01×119.°92W±0.°02,h11km±1km, ML2.3/58, Error ellipse: s-maj=2.8km s-min=1.9km az=107.0*

NEIC 28 08:58:04.5±0.8,34.°41N±0.°02×119.°92W±0.°01,h17km±2km, Error ellipse: s-maj=2.8km s-min=1.4km az=189.0, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYP	**Santa Ynez Pea**	**0.13**	**337**		Pg	08 58 07.7	-0.9
SBC	**Santa Barbara**	**0.17**	**78**		Pg	08 58 08.6	-0.3
SBC					Sg	08 58 11.9	0.0
FIGC	**Figueroa Mtn.**	**0.33**	**350**		Pg	08 58 11.2	-0.3
SCZ2	**Santa Cruz Isl**	**0.47**	**150**		Pg	08 58 13.7	-0.3
SCZ2					Sb	08 58 21.0	-0.1
PKM	**Mcpherson Peak**	**0.49**	**10**		Pg	08 58 14.0	-0.5
GATR	**Gnd/Air Tx Cnt**	**0.51**	**287**		Pb	08 58 15.1	+0.1
BSM	**San Miguel Isl**	**0.51**	**224**		Pg	08 58 14.8	0.0
BSM					Sg	08 58 21.4	-0.2
RYS	**Reyes Peak**	**0.52**	**63**		Pg	08 58 15.1	0.0
STCC	**Santa Clara**	**0.61**	**99**		Pb	08 58 17.4	+0.6
BCW	**Bitter Crk WRg**	**0.68**	**38**		Pg	08 58 17.6	-0.2
ABL	**Mount Abel**	**0.73**	**52**		Pg	08 58 18.4	-0.4
MPI	**Mount Pinos, F**	**0.76**	**57**		Pg	08 58 19.1	-0.2
MPI					Sg	08 58 29.2	-0.2
BLG	**Laguna Peak, P**	**0.77**	**113**		Pb	08 58 18.7	-0.7
CARC	**Carrizo Plain**	**0.90**	**4**		Pb	08 58 21.6	-0.2
BTPC	**Burnt Peak**	**1.14**	**76**		Pn	08 58 25.1	-0.8
THC	**Tehachapi Micr**	**1.15**	**64**		Pn	08 58 25.3	-0.7
BAKC	**Calstate**	**1.15**	**35**		Pn	08 58 24.9	-0.9
PAGB	**Antelope Grade**	**1.35**	**348**		Pb	08 58 29.0	-0.4
LEOC	**Leona Valley**	**1.35**	**80**		Pn	08 58 28.5	-0.2
PASC	**Pasadena Art C**	**1.45**	**99**	Pn	Pn	08 58 29.4	-0.6
MWC	**Mount Wilson**	**1.55**	**96**		Pn	08 58 31.3	-0.2
XTL	**Crystal Lake,**	**1.70**	**93**		Pn	08 58 33.5	-0.2
ISA	**Isabella, Lake**	**1.73**	**43**		Pn	08 58 34.1	+0.3
ISA				Sn	Sb	08 58 56.6	-0.6
PMPB	**Monarch Peak**	**1.95**	**338**	Pn	Pb	08 58 38.8	-0.7
SRTC	**Snort**	**2.19**	**54**		Pb	08 58 43.6	-0.2
GSC	**Goldstone, Bar**	**2.71**	**70**		Pn	08 58 47.8	+0.4
PFO	**Pinyon Flats O**	**2.98**	**104**	Pn	Pn	08 58 51.2	0.0
XPFO	**Pion Flat**	**2.98**	**104**	Pn	Pn	08 58 51.2	0.0
BAR	**Barrett**	**3.21**	**122**	Pn	Pn	08 58 54.0	-0.3
OMMB	**Old Mammoth Mi**	**3.29**	**13**	Pn	Pn	08 58 56.2	+0.7
MDPB	**Devils Postpil**	**3.29**	**12**	Pn	Pn	08 58 56.2	+0.6

*IDC **28** 09:07:26.4±13.0,24.°69S×178.°77W,h460km±63km, mb3.8/3,mb1 3.9/5,mb1mx3.4/22,mbtmp4.6/5, Error ellipse: s-maj=205.1km s-min=51.7km az=61.0*

*NEIC **28** 09:07:35.6±0.8,25.°4S±0.°1×179.°9W±0.°2,h468km±16km, mb4.4/20, Error ellipse: s-maj=24.1km s-min=12.9km az=67.0*

ISC 28 09:07:35.9±0.9,25.°38S±0.°08×179.°9W±0.°1,h465km,n29, σ0s94/31,mb4.3/10,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.85**	**345**	P	**P**	**09 09 30.1**	**-0.1**
DZM	**Mont Dzumac**	**12.94**	**282**	P	**P**	**09 10 25.2**	**+0.2**
	0.3nm,0.3s,baz=141,slow=13,SNR=2.5						
URZ	**Urewera**	**13.09**	**190**	P	**P**	**09 10 26.2**	**0.0**
	0.5nm,0.3s,baz=131,slow=20,SNR=4.5						
URZ				S	**S**	**09 12 45.7**	**-1.0**
	0.5nm,0.3s,baz=34,slow=3.6,SNR=4.4						
URZ	**Urewera**	**13.09**	**190**	P	**P**	**09 10 25.9**	**-0.3**
URZ				S	**S**	**09 12 45.5**	**-1.2**
AFI	**Afiamalu**	**13.73**	**35**	P	**P**	**09 10 33.0**	**-0.5**
QRZ	**Quartz Range**	**16.65**	**200**	P	**P**	**09 11 04.9**	**+0.9**
NNZ	**Nelson**	**16.75**	**198**	P	**P**	**09 11 05.0**	**-0.1**
TUWZ	**Tuamarina**	**16.80**	**196**	P	**P**	**09 11 05.0**	**-0.7**
THZ	**Tophouse**	**17.39**	**198**	P	**P**	**09 11 12.3**	**+0.5**
THZ				IAmb	IAmb	09 11 20.5	
	comp=Z,9.7nm,1.0s						
KHZ	**Kahutara**	**17.83**	**196**	P	**P**	**09 11 16.2**	**0.0**
KHZ				IAmb	IAmb	09 11 21.9	
	comp=Z,16nm,1.2s						
LTZ	**Lake Taylor**	**18.51**	**198**	P	**P**	**09 11 21.0**	**-1.8**
LTZ				IAmb	IAmb	09 11 31.6	
	comp=Z,16nm,1.5s						
OXZ	**Oxford**	**19.08**	**198**	P	**P**	**09 11 26.0**	**-1.9**
OXZ				IAmb	IAmb	09 11 26.1	
	comp=Z,19nm,1.3s						
ARMA	**Armidale**	**25.63**	**252**	P	**P**	**09 12 24.9**	**-2.3**
ARMA				IAmb	IAmb	09 12 41.7	
	comp=Z,23nm,1.5s						
EIDS	**Eidsvold**	**26.21**	**264**	P	**P**	**09 12 32.6**	**+0.4**
EIDS				IAmb	IAmb	09 12 33.3	
	comp=Z,9.4nm,0.8s						
TOO	**Toolangi**	**31.75**	**239**	P	**P**	**09 13 21.2**	**+0.7**
TOO				IAmb	IAmb	09 13 22.5	
	comp=Z,14nm,1.2s						
STKA	**Stephens Creek**	**34.29**	**250**	P	**P**	**09 13 42.5**	**+0.3**
	comp=Z,3.7nm,0.4s,baz=96,slow=11,SNR=32						
STKA	**Stephens Creek**	**34.29**	**250**	P	**P**	**09 13 42.0**	**-0.1**
COEN	**Coen**	**36.47**	**281**	P	**P**	**09 14 01.3**	**+0.6**
COEN				IAmb	IAmb	09 14 08.9	
	comp=Z,16nm,1.3s						
BBOO	**Buckleboo**	**38.98**	**249**	P	**P**	**09 14 20.4**	**-0.6**
BBOO				IAmb	IAmb	09 14 32.0	
	comp=Z,28nm,1.4s						
AS31	**Alice Springs**	**41.91**	**262**	P	**P**	**09 14 44.3**	**-0.4**
ASAR	**Alice Springs**	**41.91**	**262**	P	**P**	**09 14 44.2**	**-0.5**
	comp=Z,4.7nm,0.4s,baz=91,slow=7.6,SNR=125						
WR0	**Warramunga Arr**	**42.24**	**268**	P	**P**	**09 14 46.6**	**-0.8**
WR0				IAmb	IAmb	09 15 00.2	
	comp=Z,18nm,1.4s						
WB2	**Warramunga Arr**	**42.41**	**268**	P	**P**	**09 14 48.1**	**-0.6**
WRAB	**Tennant Creek**	**42.42**	**268**	P	**P**	**09 14 48.0**	**-0.7**
WB0	**Warramunga Arr**	**42.42**	**268**	P	**P**	**09 14 48.2**	**-0.7**
WB0				IAmb	IAmb	09 14 48.7	
	comp=Z,10nm,0.8s						
WRA	**Warramunga Arr**	**42.42**	**268**	P	**P**	**09 14 47.9**	**-0.9**
	comp=Z,5.2nm,0.4s,baz=104,slow=7.7,SNR=34						
WRA	**Warramunga Arr**	**42.42**	**268**	P	**P**	**09 14 48.3**	**-0.5**
KNRA	**Kununurra**	**48.80**	**271**	P	**P**	**09 15 37.4**	**-0.4**
QSPA	**South Pole Qui**	**64.71**	**180**	P	**P**	**09 17 28.8**	**+1.9**

ROM 28 09:20:05.7±0.1,42.°783N±0.°003×13.°017E±0.°005, h10km,ML1.9/5,Error ellipse: s-maj=0.4km s-min=0.2km az=102.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.09**	**55**	P	Pg	09 20 08.8	+0.5
NRCA				S	Sg	09 20 10.6	+0.4
NRCA				AML	AML		
	comp=N,3535μm,0.1s						
NRCA				AML	AML		
	comp=E,6250μm,0.2s						
NRCA				AML	AML		
	comp=E,6250μm,0.1s						
NRCA				AML	AML		
	comp=N,3125μm,0.1s						
NRCA				AML	AML		
	comp=E,6625μm,0.2s						
FEMA	**Monte Fema**	**0.18**	**8**	P	Pg	09 20 10.3	+0.6
FEMA				S	Sg	09 20 13.4	+0.9
CESI	**CESI - Serrava**	**0.24**	**340**	P	Pg	09 20 11.3	+0.6
CESI				S	Sg	09 20 15.3	+1.3
CESI				AML	AML		
	comp=N,119μm,0.1s						
CESI				AML	AML		
	comp=N,120μm,0.1s						
CESI				AML	AML		
	comp=E,101μm,0.3s						
FDMO	**Fiordimonte**	**0.26**	**12**	P	Pg	09 20 11.7	+0.6
FDMO				S	Sb	09 20 15.8	-1.2
FDMO				AML	AML		
	comp=E,558μm,0.2s						
FDMO				AML	AML		
	comp=N,443μm,0.2s						
ARRO	**Arrone**	**0.28**	**222**	P	Pg	09 20 11.9	+0.6
ARRO				S	Sg	09 20 16.2	+1.2
ARRO				AML	AML		
	comp=N,134μm,1.6s						
ARRO				AML	AML		
	comp=E,148μm,0.8s						
ARRO				AML	AML		
	comp=N,134μm,1.6s						
ARRO				AML	AML		
	comp=E,148μm,0.8s						
MOMA	**Monte Martano**	**0.33**	**274**	P	Pg	09 20 12.8	+0.5
MOMA				S	Sb	09 20 18.1	-1.0
MOMA				AML	AML		
	comp=N,173μm,0.2s						
MOMA				AML	AML		
	comp=E,168μm,1.6s						
MOMA				AML	AML		
	comp=N,172μm,0.2s						
CESX	**Cesi**	**0.36**	**242**	P	Pg	09 20 13.3	+0.3
CESX				S	Sb	09 20 19.3	-0.8
ASSB	**Assisi San Ben**	**0.37**	**315**	P	Pg	09 20 13.5	+0.4
ASSB				S	Sb	09 20 19.6	-0.6
CAMP	**Campotosto**	**0.38**	**130**	P	Pg	09 20 13.8	+0.5
SNTG	**Esanatoglia**	**0.47**	**353**	P	Pg	09 20 15.4	+0.3
SNTG				S	Sb	09 20 22.7	-0.6
T0104	**Madonna delle**	**0.48**	**151**	P	Pg	09 20 15.7	+0.5
EL6	**Elcito**	**0.55**	**6**	P	Pg	09 20 16.7	+0.2
EL6				S	Sg	09 20 24.4	+0.7
EL6				AML	AML		
	comp=E,314μm,1.6s						
EL6				AML	AML		
	comp=N,405μm,1.6s						
EL6				AML	AML		
	comp=E,306μm,1.6s						
EL6				AML	AML		
	comp=N,402μm,1.6s						

*IDC **28** 09:20:22.1±0.7,38.°22N×20.°42E,h0km,mb3.9/15, mb1 4.1/25,mb1mx4.0/44,mbtmp3.9/25,ML3.7/11,MS2.6/1, Ms1 2.6/1,ms1mx2.4/62, Error ellipse: s-maj=14.2km s-min=12.5km az=3.0*

*MOS **28** 09:20:22.0±1.2,38.°23N×20.°22E,h12km,mb4.3/10, Error ellipse: s-maj=7.3km s-min=5.2km az=65.2*

*PDG **28** 09:20:22.9±0.2,38.°22N×20.°28E,h14km±1km,ML4.1/14, Error ellipse: s-maj=1.7km s-min=0.7km az=90.0*

*NEIC **28** 09:20:23.9±2.5,38.°25N±0.°05×20.°26E±0.°04,h10km±2km, Error ellipse: s-maj=7.5km s-min=3.2km az=207.0*

*ATH **28** 09:20:23.2,38.°22N×20.°37E,h12km±1km,ML3.9/8, Error ellipse: s-maj=2.5km s-min=1.0km az=74.0*

*THE **28** 09:20:24.0,38.°22N×20.°38E,h9km±1km,ML4.1/10, Error ellipse: s-maj=1.2km s-min=0.4km az=108.0*

ISC 28 09:20:22.7±1.1,38.°24N±0.°02×20.°29E±0.°03,h5km±7km, n227,σ1s56/295,mb4.2/26,15C-6D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF1	**Kardakata, Kep**	**0.15**	**75**	P	**Pg**	**09 20 26.4**	**+0.8**
ARG2	**Argostoli**	**0.17**	**112**	P	**Pg**	**09 20 26.2**	**+0.2**
ARG2				S	**Sg**	**09 20 28.3**	**+0.1**
VLS	**Valsamata**	**0.24**	**105**	P	**Pg**	**09 20 27.2**	**-0.2**
VLS				S	**Sg**	**09 20 30.2**	**-0.4**
	173μm,0.2s						
VLS	**Valsamata**	**0.24**	**105**	P	**Pg**	**09 20 27.2**	**-0.2**
VLS				S	**Sg**	**09 20 30.2**	**-0.4**
VLS	**Valsamata**	**0.24**	**105**	P	**Pg**	**09 20 27.2**	**-0.2**
VLS				S	**Sg**	**09 20 30.1**	**-0.5**
VLS				AML	AML	09 20 30.4	
VLS				AML	AML	09 20 30.4	
KFL	**Anninata**	**0.41**	**108**	P	**Pg**	**09 20 30.5**	**-0.1**
KFL				S	**Sg**	**09 20 35.6**	**-0.4**
	129μm,0.3s						
KFL	**Anninata**	**0.41**	**108**	P	**Pg**	**09 20 30.2**	**-0.5**
KFL				S	**Sg**	**09 20 35.8**	**-0.2**
KFL				AML	AML	09 20 36.3	
KFL				AML	AML	09 20 37.9	
VLMS	**Volimes, Zakyn**	**0.47**	**141**	P	**Pg**	**09 20 31.6**	**-0.1**
VLMS				S	**Sg**	**09 20 37.8**	**+0.1**
VLMS				AML	AML	09 20 39.9	
	comp=E,59734μm,0.2s						
VLMS				AML	AML	09 20 40.1	
	comp=N,59342μm,0.3s						
EVGI	**Lefkada island**	**0.48**	**37**	P	**Pb**	**09 20 32.9**	**-0.7**
EVGI				S	**Sb**	**09 20 40.3**	**-0.6**
EVGI	**Lefkada island**	**0.48**	**37**	P	**Pb**	**09 20 32.9**	**-0.7**
MGNA	**Meganis**	**0.57**	**43**	P	**Pg**	**09 20 34.3**	**+0.6**
MGNA				S	**Sg**	**09 20 41.1**	**-0.1**
MGNA				AML	AML	09 20 43.2	
	comp=N,27418μm,0.3s						
MGNA				AML	AML	09 20 43.4	
	comp=E,42054μm,0.3s						
LKD2	**Lefkada island**	**0.62**	**27**	P	**Pg**	**09 20 35.4**	**+0.8**
LKD2				S	**Sb**	**09 20 44.6**	**-0.5**
	comp=E,12μm,0.5s						
LKD2	**Lefkada island**	**0.62**	**27**	P	**Pg**	**09 20 35.2**	**+0.6**
LKD2				S	**Sg**	**09 20 42.9**	**+0.3**
LKD2				AML	AML	09 20 52.1	
	comp=E,23419μm,0.5s						
LKD2				AML	AML	09 20 52.9	
	comp=N,23969μm,0.5s						
TSLK	**Tsoukalades, L**	**0.65**	**26**	P	**Pb**	**09 20 36.2**	**-0.3**
TSLK				S	**Sb**	**09 20 45.5**	**-0.4**
	comp=N,10μm,0.5s						
TSLK	**Tsoukalades, L**	**0.65**	**26**	P	**Pg**	**09 20 35.8**	**+0.6**
TSLK				S	**Sb**	**09 20 44.9**	**-1.0**
ZAK2	**Zakynthos**	**0.66**	**133**	P	**Pg**	**09 20 35.8**	**+0.5**
ZAK2				S	**Sg**	**09 20 44.3**	**+0.4**
PDO	**Prodromos**	**0.79**	**63**	P	**Pg**	**09 20 37.7**	**-0.1**
PDO				S	**Sb**	**09 20 48.7**	**-1.1**
PDO	**Prodromos**	**0.79**	**63**	P	**Pg**	**09 20 37.8**	**-0.1**
RLS	**Riolos of Patr**	**0.94**	**101**	P	**Pg**	**09 20 39.8**	**-0.9**
RLS				S	**Sg**	**09 20 53.1**	**+0.1**
	comp=N,6μm,0.6s						
RLS	**Riolos of Patr**	**0.94**	**101**	P	**Pg**	**09 20 39.9**	**-0.9**
RLS				AML	AML	09 20 55.7	
	comp=E,13826μm,0.7s						
RLS				AML	AML	09 21 02.8	
	comp=N,10257μm,0.4s						
PVO	**Paravola**	**1.04**	**68**	P	**Pg**	**09 20 42.5**	**-0.1**
PVO				S	**Sb**	**09 20 57.0**	**-0.1**
	comp=N,12μm,0.8s						
PVO	**Paravola**	**1.04**	**68**	P	**Pg**	**09 20 42.4**	**-0.3**
DRO	**Drossia**	**1.16**	**104**	P	**Pg**	**09 20 44.0**	**-0.8**
DRO				S	**Sb**	**09 20 59.9**	**-0.5**
	comp=N,9μm,0.5s						
AMT	**Artemida-Makis**	**1.32**	**122**	P	**Pn**	**09 20 47.0**	**-0.9**
AMT				S	**Sb**	**09 21 04.9**	**-0.4**
	comp=N,6μm,0.6s						
AMT	**Artemida-Makis**	**1.32**	**122**	P	**Pn**	**09 20 47.2**	**-0.6**
ANX	**Ano Chora**	**1.33**	**74**	P	**Pn**	**09 20 47.0**	**-1.0**
LAKA	**Lakka**	**1.33**	**89**	P	**Pn**	**09 20 46.7**	**-1.2**
LAKA				AML	AML	09 21 09.1	
	comp=E,7144μm,0.5s						
LAKA				AML	AML	09 21 11.1	
	comp=N,5558μm,0.4s						
EVR	**Evrytania**	**1.37**	**60**	P	**Pn**	**09 20 47.6**	**-0.9**
EVR				AML	AML	09 21 16.4	
	comp=E,4627μm,0.9s						
EVR				AML	AML	09 21 18.8	
	comp=N,6863μm,0.7s						
TRIZ	**Trizonia**	**1.41**	**84**	P	**Pn**	**09 20 47.9**	**-1.1**
KALE	**Kalithea**	**1.46**	**83**	P	**Pn**	**09 20 48.7**	**-1.1**
KLV	**Kalavryta, Ach**	**1.48**	**97**	P	**Pn**	**09 20 49.0**	**-1.0**
JAN	**Janina**	**1.48**	**17**	P	**Pn**	**09 20 50.4**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.64**	**61**	P	**Pn**	**09 20 52.5**	**+0.4**
ITM	**Ithomi**	**1.67**	**129**	P	**Pn**	**09 20 52.6**	**0.0**
ITM	**Ithomi**	**1.67**	**129**		**Pn**	**09 20 53.0**	**+0.3**
ITM					**Sn**	**09 21 14.3**	**-0.2**
DLFA	**Delphi**	**1.75**	**81**	P	**Pb**	**09 20 54.4**	**-0.9**
AGG	**Agios Georgios**	**1.78**	**63**	P	**Pb**	**09 20

CGL1	**Ceglie Messapi**	**3.25**	**319**	⇑	*i*Pn	**Pn**	**09 21 16.3**	**+2.0**
TAR1	**Taranto**	**3.26**	**315**		*e*Pn	**Pn**	**09 21 17.0**	**+2.5**
SKY	**Skiros Island**	**3.40**	**78**		P	**Pn**	**09 21 17.7**	**+1.3**
MASS	**Massafra**	**3.41**	**315**		*e*Pn	**Pn**	**09 21 19.4**	**+2.8**
CEL	**Celeste**	**3.46**	**272**			**Pn**	**09 21 17.3**	**0.0**
CEL					Sn	**Sn**	**09 21 57.9**	**-0.8**
VAY	**Valandovo**	**3.54**	**29**		*i*Pn	**Pn**	**09 21 19.9**	**+1.6**
MATE	**Matera**	**3.67**	**312**		⇑P	**Pn**	**09 21 22.0**	**+1.9**
STIP	**Stip**	**3.75**	**22**		*i*Pn	**Pn**	**09 21 24.7**	**+3.6**
ULC	**Ulcinj**	**3.81**	**348**		*e*Pn	**Pn**	**09 21 22.9**	**+0.9**
ULC					*e*Sn	**Sn**	**09 22 08.6**	**+1.5**
SG1	**Sgolgore (BA)**	**3.81**	**314**		*e*Pn	**Pn**	**09 21 24.6**	**+2.5**
SG1					Sn	**Sn**	**09 22 08.8**	**+1.5**
BAI	**Bari**	**3.89**	**318**		*e*Pn	**Pn**	**09 21 25.1**	**+2.0**
DRME	**Dracevica, Mon**	**4.03**	**348**		*e*Pn	**Pn**	**09 21 25.5**	**+0.4**
DRME					*e*Sn	**Sn**	**09 22 13.5**	**+0.8**
BUM	**Brajici-Budva**	**4.20**	**346**		*e*Pn	**Pn**	**09 21 28.3**	**+0.9**
BUM					*e*Sn	**Sn**	**09 22 17.4**	**+0.6**
ACER	**Acerenza**	**4.22**	**308**			**Pn**	**09 21 28.4**	**+0.7**
ACER					Sn	**Sn**	**09 22 18.9**	**+1.6**
PDG	**Podgorica**	**4.26**	**350**		⇑P	**Pn**	**09 21 29.4**	**+1.2**
PDG	**Podgorica**	**4.26**	**350**		⇑S	**Sn**	**09 22 17.4**	**-0.8**
PDG	**Podgorica**	**4.26**	**350**			**Pn**	**09 21 30.2**	**+2.0**
PDG					Sn	**Sn**	**09 22 18.2**	**-0.1**
TTG	**Podgorica**	**4.26**	**350**		*e*Pn	**Pn**	**09 21 29.2**	**+1.0**
TTG					*e*Sn	**Sn**	**09 22 19.6**	**+1.3**
APE	**Apeiranthos**	**4.32**	**104**	⇑	*e*P	**Pn**	**09 21 30.8**	**+1.7**
APE	**Apeiranthos**	**4.32**	**104**	⇑	P	**Pn**	**09 21 33.6**	**+4.5**
PVY	**Plav**	**4.36**	**357**		*e*Pn	**Pn**	**09 21 30.2**	**+0.5**
PVY					*e*Sn	**Sn**	**09 22 21.6**	**+0.7**
HCY	**Herceg Novi**	**4.42**	**342**		*e*Pn	**Pn**	**09 21 31.0**	**+0.6**
HCY					*e*Sn	**Sn**	**09 22 22.7**	**+0.4**
CEME	**Cevo**	**4.43**	**347**		*e*Pn	**Pn**	**09 21 31.4**	**+0.8**
CEME					*e*Sn	**Sn**	**09 22 23.1**	**+0.6**
NKME	**Niksic**	**4.64**	**348**		*e*Pn	**Pn**	**09 21 34.3**	**+0.9**
NKME					*e*Sn	**Sn**	**09 22 28.4**	**+0.8**
IVA	**Berane**	**4.64**	**356**		*e*Pn	**Pn**	**09 21 34.1**	**+0.6**
IVA					*e*Sn	**Sn**	**09 22 28.2**	**+0.5**
KOME	**Kolasin**	**4.64**	**353**		*e*Pn	**Pn**	**09 21 34.2**	**+0.6**
KOME					*e*Sn	**Sn**	**09 22 28.2**	**+0.3**
NKY	**Niksic**	**4.67**	**348**		*e*Pn	**Pn**	**09 21 34.5**	**+0.5**
NKY					*e*Sn	**Sn**	**09 22 28.6**	**-0.1**
VAE	**Valguarnera**	**4.71**	**263**		Pn	**Pn**	**09 21 36.8**	**+2.3**
	comp=N,1.7nm,0.3s,baz=80,slow=12,SNR=2.8							
VAE					Sn	**Sn**	**09 22 33.5**	**+3.8**
	comp=N,4.1nm,0.3s,baz=251,slow=13,SNR=1.8							
DBRK	**Dubrovnik**	**4.72**	**340**		*e*Pn	**Pn**	**09 21 35.5**	**+1.0**
DBRK					Sn	**Sn**	**09 22 28.9**	**-0.6**
IDI	**Anoyia**	**4.72**	**127**		Pn	**Pn**	**09 21 35.0**	**+0.4**
	comp=N,0.6nm,0.3s,baz=324,slow=14,SNR=5.4							
IDI					Sn	**Sn**	**09 22 30.6**	**+0.8**
	comp=N,5.1nm,0.3s,baz=256,slow=17,SNR=5.7							
IDI					LR	LR	09 23 57.9	
	comp=N,60nm,18.3s,baz=276,slow=47							
BRY	**Bratogost**	**4.84**	**345**		*e*Pn	**Pn**	**09 21 36.9**	**+0.5**
BRY					*e*Sn	**Sn**	**09 22 33.0**	**+0.1**
VTS	**Vitosha**	**4.92**	**26**		P	**Pn**	**09 21 38.5**	**+1.1**
VTS					S	**Sn**	**09 22 35.7**	**+1.0**
VTS	**Vitosha**	**4.92**	**26**	⇑	P	**Pn**	**09 21 37.8**	**+0.5**
VTS	**Vitosha**	**4.92**	**26**	⇑	S	**Sn**	**09 22 34.3**	**-0.3**
VTS	**Vitosha**	**4.92**	**26**			**Pn**	**09 21 39.2**	**+1.9**
VTS					Sn	**Sn**	**09 22 35.7**	**+1.0**
SGRT	**San Giovanni R**	**4.95**	**317**			**Pn**	**09 21 39.9**	**+2.1**
SGRT					Sn	**Sn**	**09 22 34.0**	**-1.5**
STON	**Ston**	**5.03**	**338**		*e*Pn	**Pn**	**09 21 39.6**	**+0.8**
STON					Sn	**Sn**	**09 22 35.4**	**-1.8**
UPM	**Unac-Piva**	**5.07**	**348**		*e*Pn	**Pn**	**09 21 40.4**	**+0.9**
UPM					*e*Sn	**Sn**	**09 22 38.3**	**-0.2**
PLE	**Pljevlja**	**5.13**	**353**		*e*Pn	**Pn**	**09 21 41.5**	**+1.2**
PLE					*e*Sn	**Sn**	**09 22 40.5**	**+0.6**
ALN	**Alexandroupoli**	**5.18**	**57**		P	**Pn**	**09 21 41.6**	**+0.8**
ALN	**Alexandroupoli**	**5.18**	**57**		Pn	**Pn**	**09 21 41.6**	**+0.8**
WDD	**Wied Dalam**	**5.20**	**244**		Pn	**Pn**	**09 21 42.1**	**+1.0**
WDD					Sn	**Sn**	**09 22 38.2**	**-3.2**
PAOL	**Paolisi**	**5.22**	**304**			**Pn**	**09 21 41.5**	**0.0**
PAOL					Sn	**Sn**	**09 22 41.6**	**-0.5**
CORL	**Corleone**	**5.53**	**269**		Pn	**Pn**	**09 21 46.9**	**+1.2**
MAKA	**Makarska**	**5.62**	**335**		*i*Pn	**Pn**	**09 21 48.5**	**+1.7**
KARP	**Karpathos**	**6.12**	**114**		Pn	**Pn**	**09 21 54.7**	**+0.8**
INTR	**Introdacqua**	**6.18**	**310**			**Pn**	**09 21 55.1**	**+0.5**
ELND	**Elena**	**6.32**	**40**	⇑	P	**Pn**	**09 21 58.1**	**+1.5**
ZIRJ	**Zirje**	**6.45**	**328**		*e*Pn	**Pn**	**09 21 58.9**	**+0.6**
ZIRJ					Sn	**Sn**	**09 23 09.6**	**-2.7**
KIJV	**Kijevo**	**6.46**	**334**		*i*Pn	**Pn**	**09 22 00.1**	**+1.6**
KIJV					Sn	**Sn**	**09 23 10.9**	**-1.7**
MORI	**Morici**	**6.60**	**330**		*e*Pn	**Pn**	**09 22 01.6**	**+1.2**
HERR	**Herculane**	**6.82**	**13**	⇑	P	**Pn**	**09 22 05.0**	**+1.6**
BLY	**Banja Luka**	**6.91**	**341**		Pn	**Pn**	**09 22 04.4**	**-0.1**
DUGI	**Dugi Otok**	**6.97**	**327**		*e*Pn	**Pn**	**09 22 06.7**	**+1.3**
UDBI	**Udbina**	**7.14**	**333**		*e*Pn	**Pn**	**09 22 10.4**	**+2.6**
GZR	**Gura Zlata**	**7.38**	**14**	⇑	P	**Pn**	**09 22 12.2**	**+1.0**
NVLJ	**Novalja**	**7.52**	**329**		*e*Pn	**Pn**	**09 22 14.3**	**+1.4**
MURB	**Monte Urbino**	**7.74**	**313**		Pn	**Pn**	**09 22 15.2**	**-0.9**
ELL	**Elmali**	**7.79**	**98**		P	**Pn**	**09 22 18.8**	**+2.0**
ELL	**Elmali**	**7.79**	**98**			**Pn**	**09 22 18.8**	**+2.0**
GBRS	**Gornja Briga**	**8.35**	**332**		*i*Pn	**Pn**	**09 22 25.9**	**+1.4**
MLR	**Muntele Rosu**	**8.38**	**28**		Pn	**Pn**	**09 22 25.7**	**+0.8**
	comp=N,0.3nm,0.3s,baz=217,slow=15,SNR=2.5							
MLR					Sn	**Sn**	**09 24 00.7**	**+0.7**
	comp=N,0.2nm,0.3s,baz=113,slow=21,SNR=0.7							
MLR	**Muntele Rosu**	**8.38**	**28**	⇑	P	**Pn**	**09 22 26.4**	**+1.5**
MLR	**Muntele Rosu**	**8.38**	**28**			**Pn**	**09 22 25.4**	**+0.5**
CRES	**Cresnjev**	**8.39**	**336**		*i*Pn	**Pn**	**09 22 26.2**	**+1.3**
OSSC	**Osservatorio P**	**8.65**	**310**		Pn	**Pn**	**09 22 28.9**	**+0.4**
OSSC					Sn	**Sn**	**09 24 04.6**	**-1.7**
TRI	**Trieste**	**8.90**	**329**		P	**Pn**	**09 22 32.8**	**+0.9**
TRI							09 22 12.1	
TRI	**Trieste**	**8.90**	**329**		Pn	**Pn**	**09 22 32.8**	**+0.9**
TRI					Sn	**Sn**	**09 24 12.1**	**-0.5**
VRI	**Vrincioaia**	**9.00**	**30**		P	**Pn**	**09 22 34.6**	**+1.4**
SOKA	**Soboth**	**9.28**	**337**		Pn	**Pn**	**09 22 38.2**	**+1.0**
	comp=N,6.5nm,0.3s,SNR=5.3							
OBKA	**Obir**	**9.29**	**335**		*e*Pn	**Pn**	**09 22 39.2**	**+1.9**
	comp=N,2.4nm,0.3s							
OBKA					*e*Sn	**Sn**	**09 24 18.8**	**-3.4**
	comp=N,11nm,0.4s							
TEOL	**Teolo**	**9.59**	**321**		Pn	**Pn**	**09 22 42.2**	**+0.9**
TEOL						**Sn**	**09 24 22.3**	**-7.2**
ARSA	**Arzberg**	**9.66**	**340**		*e*Pn	**Pn**	**09 22 43.5**	**+1.1**
	comp=N,1.4nm,0.3s							
BURAR	**Bucovina Array**	**10.04**	**19**		P	**Pn**	**09 22 48.4**	**+0.8**
BURAR	**Bucovina Array**	**10.04**	**19**		Pn	**Pn**	**09 22 48.4**	**+0.8**
CTI	**Castel Tesino**	**10.10**	**323**		P	**Pn**	**09 22 48.2**	**-0.2**
CTI	**Castel Tesino**	**10.10**	**323**			**Pn**	**09 22 48.2**	**-0.2**
MSSA	**Maissana**	**10.13**	**310**		Pn	**Pn**	**09 22 48.3**	**-0.5**
VYHS	**Vyhne**	**10.30**	**355**		*e*P	**Pn**	**09 22 55.3**	**+4.2**
VYHS					*e*		09 24 41.8	
VYHS	**Vyhne**	**10.30**	**355**		*e*PN	**Pn**	**09 22 55.3**	**+4.2**
VYHS					*e*SN	**Sn**	**09 24 41.8**	**-5.2**
SALO	**Salr**	**10.35**	**319**		Pn	**Pn**	**09 22 51.3**	**-0.5**
BR131	**Keskin Array S**	**10.50**	**78**		P	**Pn**	**09 22 56.4**	**+2.4**
BR131	**Keskin Array S**	**10.50**	**78**		Pn	**Pn**	**09 22 56.4**	**+2.4**
BRTR	**Keskin Array B**	**10.50**	**78**		*i*P	**Pn**	**09 22 57.7**	**+3.8**
BRTR					pmax	pmax		
	comp=Z,1.0nm,0.6s							
BRTR	**Keskin Array B**	**10.50**	**78**		Pn	**Pn**	**09 22 56.9**	**+3.0**
	comp=Z,0.3nm,0.3s,baz=266,slow=12,SNR=7.2							
BRTR	**Keskin Array B**	**10.50**	**78**		Pn	**Pn**	**09 22 56.2**	**+2.2**
MOA	**Molln**	**10.56**	**337**		*i*Pn	**Pn**	**09 22 56.7**	**+1.9**
	comp=Z,4.9nm,0.3s							
MOA					*e*Sn	**Sn**	**09 24 50.7**	**-2.7**
	comp=Z,1.4nm,0.2s							
WTTA	**Wattenberg**	**11.03**	**328**		*e*Pn	**Pn**	**09 23 04.2**	**+2.9**
	comp=Z,1.8nm,0.2s							
WTTA					*e*Sn	**Sn**	**09 25 01.9**	**-3.1**
	comp=Z,6.2nm,0.4s							
FUORN	**Ofenpass-Fuorn**	**11.18**	**322**		Pn	**Pn**	**09 23 02.7**	**-0.6**
SQTA	**Sankt Quirin**	**11.18**	**326**		*e*Pn	**Pn**	**09 23 05.8**	**+2.6**
	comp=Z,1.7nm,0.2s							
MOTA	**Moosalm**	**11.32**	**326**		*i*Pn	**Pn**	**09 23 06.0**	**+0.8**
	comp=Z,0.5nm,0.1s							
MOTA					*i*Sn	**Sn**	**09 25 10.7**	**-1.5**
	comp=Z,1μm,0.0s							
DAVOX	**Davos/Dischmat**	**11.47**	**321**		Pn	**Pn**	**09 23 08.9**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=144,slow=19,SNR=3.2							
DAVOX					Sn	**Sn**	**09 25 11.6**	**-4.3**
	comp=Z,0.3nm,0.3s,baz=146,slow=22,SNR=1.4							
GERES	**GERESS Array B**	**11.62**	**338**		Pn	**Pn**	**09 23 10.9**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=160,slow=14,SNR=6.9							
GERES					Sn	**Sn**	**09 25 13.6**	**-5.9**
	comp=Z,0.3nm,0.3s,baz=160,slow=24,SNR=3.7							
GERES	**GERESS Array B**	**11.62**	**338**		Pn	**Pn**	**09 23 10.7**	**+1.4**
KHC	**Kasperske Hory**	**11.92**	**338**		*e*P	**Pn**	**09 23 12.0**	**-1.2**
KHC					*e*		09 25 20.5	
KHC	**Kasperske Hory**	**11.92**	**338**		*e*PN	**Pn**	**09 23 12.0**	**-1.2**
KHC					*e*SN	**Sn**	**09 25 20.5**	**-6.0**
KHC	**Kasperske Hory**	**11.92**	**338**		Pn	**Pn**	**09 23 12.9**	**-0.3**
SENIN	**Lac Senin/Sane**	**12.57**	**314**		Pn	**Pn**	**09 23 23.0**	**+0.6**
MMAI	**Mount Meron Ar**	**13.35**	**108**		Pn	**Pn**	**09 23 32.9**	**0.0**
	comp=Z,1.4nm,0.3s,baz=291,slow=9.1,SNR=3.9							
AKASG	**Malin Array Be**	**13.98**	**24**		P	**Pn**	**09 23 42.1**	**+0.8**
AKASG	**Malin Array Be**	**13.98**	**24**		Pn	**Pn**	**09 23 40.8**	**-0.6**
	comp=Z,0.9nm,0.3s,baz=209,slow=9.4,SNR=1.5							
AKASG	**Malin Array Be**	**13.98**	**24**		P	**Pn**	**09 23 42.1**	**+0.8**
CLL	**Collm**	**14.04**	**341**		*e*P	**P**	**09 23 47.0**	**-3.2**
CLL	**Collm**	**14.04**	**341**		*es*P	**P**	**09 23 47.0**	**-3.2**
NEY	**Neytrino**	**17.70**	**66**	⇓	*e*P	**P**	**09 24 33.3**	**+2.3**
NEY					pmax	pmax		
	comp=Z,2.0nm,0.9s							
KIV	**Kislovodsk**	**17.80**	**64**		*e*P	**P**	**09 24 33.0**	**+1.0**
KIV					pmax	pmax		
	comp=Z,37nm,1.1s							
KIV					MLR	MLR		
	comp=Z,124nm,14.0s							
KBZ	**Khabaz**	**17.91**	**65**		*ce*P	**P**	**09 24 34.3**	**+1.3**
KBZ					pmax	pmax		
	comp=Z,10.0nm,0.9s							
KBZ	**Khabaz**	**17.91**	**65**		P	**Pn**	**09 24 31.9**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=286,slow=7.7,SNR=10							
PYA1	**Pyatigorsk**	**18.11**	**64**		*i*P	**P**	**09 24 37.1**	**+1.8**
ZEI	**Tsey**	**18.50**	**68**		*e*P	**Pn**	**09 24 41.1**	**+1.2**
ZEI					pmax	pmax		
	comp=Z,6.0nm,0.6s							
ESDC	**Sonseca Array**	**18.91**	**282**		P	**Pn**	**09 24 45.7**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=77,slow=10,SNR=4.5							
GNI	**Garni**	**19.03**	**77**		P	**P**	**09 24 44.9**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=307,slow=5.1,SNR=5.3							
GNI	**Garni**	**19.03**	**77**		P	**P**	**09 24 44.7**	**-1.0**
GNI					lAmb	lAmb	09 24 48.2	
	comp=Z,20nm,0.8s							
OBN	**Obninsk**	**20.15**	**28**		*i*P	**Pn**	09 24 59.2	-0.2
OBN					pmax	pmax		
	comp=Z,7.0nm,1.3s							
VSU	**Vasula**	**20.67**	**10**	⇓	*e*P	Pn	09 25 04.5	-0.9
HFS	**Hagfors**	**22.31**	**351**		P	**P**	**09 25 21.5**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=161,slow=11,SNR=8.2							
EKA	**Eskdalemuir Ar**	**23.27**	**325**		P	**P**	**09 25 32.4**	**+1.5**
	comp=Z,1.4nm,0.6s,baz=145,slow=10,SNR=3.9							
FINES	**FINESS Array B**	**23.51**	**7**		*i*P	**P**	**09 25 32.2**	**-1.0**
FINES					pmax	pmax		
	comp=Z,3.0nm,0.8s							
FINES	**FINESS Array B**	**23.51**	**7**		P	**P**	**09 25 32.5**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=173,slow=12,SNR=12							
FINES	**FINESS Array B**	**23.51**	**7**		P	**P**	**09 25 33.0**	**-0.3**
FIA1	**FINESS Array S**	**23.51**	**7**		P	**P**	**09 25 33.2**	**0.0**
FIA1					lAmb	lAmb	09 25 39.6	
	comp=Z,14nm,1.1s							
NB2	**NORSAR Subarra**	**23.52**	**349**		P	**P**	**09 25 35.1**	**+1.6**
	comp=Z,2.2nm,1.0s,baz=154,slow=11							
NOA	**NORSAR Array B**	**23.52**	**349**		P	**P**	**09 25 34.2**	**+0.7**
	comp=Z,0.9nm,0.9s,baz=157,slow=10,SNR=2.6							
GEYT	**Alibeck**	**29.64**	**79**		P	**P**	**09 26 28.0**	**-1.1**
TORD	**Torodi Ar. Bea**	**29.96**	**218**		P	**P**	**09 26 32.3**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=26,slow=10.0,SNR=7.2							
ABKAR	**Akbulak array**	**30.36**	**56**		P	**P**	**09 26 34.5**	**-0.7**
ABKAR	**Akbulak array**	**30.36**	**56**		P	**P**	**09 26 34.7**	**-0.6**
ABKAR					lAmb	lAmb	09 26 41.9	
	comp=Z,1.2nm,0.8s							
ARCES	**ARCESS Array B**	**31.48**	**4**		P	**P**	**09 26 44.7**	**-0.2**
	comp=Z,6.1nm,1.1s,baz=188,slow=7.3,SNR=3.9							
KK31	**Karatay Array**	**37.94**	**66**		P	**P**	**09 27 41.2**	**+0.2**
KK31					pmax	pmax		
	comp=Z,4.0nm,0.5s							
KK31	**Karatay Array**	**37.94**	**66**		P	**P**	**09 27 41.2**	**+0.2**
KK31					lAmb	lAmb	09 27 43.0	
	comp=Z,3.9nm,0.5s							
KKAR	**Karatay Array**	**37.94**	**66**		P	**P**	**09 27 40.1**	**-0.9**
KKAR					pmax	pmax		
	comp=Z,4.0nm,0.5s							
KKAR	**Karatay Array**	**37.94**	**66**		P	**P**	**09 27 40.1**	**-0.9**
KKAR	**Karatay Array**	**37.94**	**66**		P	**P**	**09 27 41.2**	**+0.1**
KKAR					lAmb	lAmb	09 27 43.0	
	comp=Z,3.9nm,0.5s							
AAK	**Ala-Archa**	**40.90**	**66**	⇓	*e*P	**P**	**09 28 05.9**	**0.0**
AAK					pmax	pmax		
	comp=Z,1.0nm,0.4s							
BOOM	**Boomskoye usch**	**41.97**	**66**		P	**P**	**09 28 15.3**	**+0.5**
BOOM					pmax	pmax		
	comp=Z,5.0nm,1.0s							
BOOM	**Boomskoye usch**	**41.97**	**66**		P	**P**	**09 28 15.3**	**+0.5**
KSH	**Kashi**	**42.77**	**70**		P	**P**	**09 28 20.5**	**-0.8**
KSH					sP	sP	09 28 29.0	+6.1
KSH					pmax	pmax		
	comp=Z,550nm,5.2s							
MK31	**Makanchi Array**	**45.42**	**58**		P	**P**	**09 28 41.5**	**-0.8**
MK31					pmax	pmax		
	comp=Z,4.0nm,0.5s							
MK31	**Makanchi Array**	**45.42**	**58**		P	**P**	**09 28 41.5**	**-0.8**
MKAR	**Makanchi Array**	**45.42**	**58**		P	**P**	**09 28 41.5**	**-0.8**
	comp=Z,4.6nm,0.5s,baz=277,slow=7.3,SNR=36							
MKAR					PcP	**PcP**	**09 30 21.8**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=282,slow=4.5,SNR=1.7							
MKAR	**Makanchi Array**	**45.42**	**58**		P	**P**	**09 28 41.7**	**-0.6**
ZAA0	**Zalesovo Array**	**45.78**	**48**		P	**P**	**09 28 44.5**	**-0.5**
ZALV	**Zalesovo Beam**	**45.78**	**48**		P	**P**	**09 28 44.5**	**-0.5**
ZALV	**Zalesovo Beam**	**45.78**	**48**		P	**P**	**09 28 44.1**	**-0.9**
	comp=Z,5.6nm,0.5s,baz=274,slow=8.5,SNR=21							
ZALV	**Zalesovo Beam**	**45.78**	**48**		P	**P**	**09 28 44.5**	**-0.5**
WMQ	**Urumqi**	**49.89**	**61**		*e*P	**P**	**09 29 19.8**	**+2.7**
WMQ					pmax	pmax		
	comp=Z,10.0nm,0.7s							
WMQ					pmax	pmax		
	comp=Z,100nm,4.5s							
SCHQ	**Schefferville**	**58.29**	**317**		P	**P**	**09 30 19.4**	**+1.2**
	comp=Z,3.2nm,1.1s,baz=77,slow=18,SNR=3.2							
SCHQ	**Schefferville**	**58.29**	**317**		P	**P**	**09 30 19.2**	**+1.0**
SCHQ					lAmb	lAmb	09 30 31.0	
	comp=Z,2.7nm,0.9s							
SONM	**Songino Array**	**60.56**	**51**		P	**P**	**09 30 33.6**	**-0.5**
SONM					pmax	pmax		
	comp=Z,1.0nm,1.0s							
SONM	**Songino Array**	**60.56**	**51**		P	**P**	**09 30 33.4**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=289,slow=9.4,SNR=4.8							
SONM	**Songino Array**	**60.56**	**51**		P	**P**	**09 30 33.6**	**-0.5**
LZH	**Lanzhou**	**64.34**	**63**		*e*P	**P**	**09 30 59.8**	**+0.2**
LZH					pP	sP	09 31 03.0	+1.7
LZH					sP	pP	09 31 04.5	+3.6
LZH					*e*PP	**PP**	**09 33 23.0**	**+2.3**
LZH					pmax	pmax		
	comp=Z,16nm,1.3s							
LZH					pmax	pmax		
	comp=Z,62nm,7.5s							
LZH					LR	LR		
	comp=N,150nm,15.6s							
LZH					LR	LR		
	comp=E,170nm,15.5s							
LZH					LR	LR		
	comp=Z,250nm,18.3s							
HHC	**Hu-ho-hao-te**	**67.15**	**55**		*e*P	**P**	**09 31 18.5**	**+0.9**
HHC					pmax	pmax		
	comp=Z,4.0nm,0.6s							
HHC					pmax	pmax		
	comp=Z,38nm,6.2s							
CMAR	**Chiang Mai Arr**	**70.06**	**82**		*i*P	**P**	**09 31 35.0**	**-1.0**
CMAR					pmax	pmax		
	comp=Z,1.0nm,0.5s							
CMAR	**Chiang Mai Arr**	**70.06**	**82**		P	**P**	**09 31 34.5**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=310,slow=7.9,SNR=4.5							
YKA	**Yellowknife Ar**	**73.27**	**340**		P	**P**	**09 31 55.2**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=29,slow=5.0,SNR=4.7							
KLR	**Kul'dur**	**73.94**	**39**	⇓	*e*P	**P**	**09 31 59.4**	**+0.6**
KLR					pmax	pmax		
	comp=Z,4.0nm,1.4s							
ILAR	**Eielson Array**	**76.83**	**354**		P	**P**	**09 32 16.6**	**+1.5**
	comp=Z,0.3nm,0.7s,baz=5.7,slow=4.5,SNR=3.5							
NJ2	**Nanjing**	**76.94**	**60**		*e*P	**P**	**09 32 16.0**	**-0.3**
NJ2					pmax	pmax		
	comp=Z,7.0nm,0.5s							
USRK	**Ussuriysk Ar.**	**77.36**	**43**		P	**P**	**09 32 18.4**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=311,slow=3.1,SNR=4.0							
PDAR	**Pinedale Array**	**87.39**	**326**		P	**P**	**09 33 11.7**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=38,slow=4.6,SNR=2.9							
ASAR	**Alice Springs**	**122.36**	**96**		PKP	**PKPdf**	**09 39 18.9**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=308,slow=1.8,SNR=3.2							

*NNC **28** 09:20:53.7±7.0, 53.82N×90.04E, h0km, mb3.5, mpv3.2,*

Error ellipse: s-maj=52.5km s-min=36.7km az=53.0
ASRS 28 09:20:42.3, 53.79N×91.01E, M2.1, 11C-3D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZAA0	**Zalesovo Array**	**3.67**	**275**	⇑	Pg	Pb	09 21 49.8	+1.8
	2.5nm,1.2s							
ZAA0				⇓	Lg	Lg	09 22 35.8	
	6.4nm,1.1s							
KURK	**Kurchatov**	**8.20**	**253**	⇑	Pn	Pn	09 22 45.8	+3.4
	2.6nm,0.8s							
KURK				⇑	Sn	Sn	09 24 17.4	+1.6
	7.2nm,1.2s							
KURK				⇑	Lg	Lg	09 24 57.2	
	18nm,1.2s							
KURBB	**Kurchatov Arra**	**8.30**	**253**	⇓	Pn	Pn	09 22 46.2	+2.4
	3.8nm,1.2s							
KURBB				⇑	Sn	Sn	09 24 18.5	+0.5
	23nm,1.4s							
KURBB				⇑	Lg	Lg	09 24 59.1	
	47nm,1.1s							
MK31	**Makanchi Array**	**8.95**	**222**	⇑	Pn	Pn	09 22 59.1	+6.3
	0.8nm,0.6s,baz=28,slow=13							
MK31				⇑	Sn	Sn	09 24 36.5	+2.3
	2.2nm,0.8s							
MK31				⇓	Lg	Lg	09 25 24.3	
	7.6nm,0.9s,baz=22,slow=28							
MAKZ	**Makanchi**	**9.06**	**223**	⇑	Pn	Pn	09 23 02.3	+8.0
	0.9nm,0.8s							
MAKZ				⇑	Sn	Sn	09 24 38.8	+1.9
	1.0nm,0.6s							
MAKZ				⇑	Lg	Lg	09 25 29.8	
	2.9nm,0.8s							

IDC 28 09:27:32.4±2.5, 23.95S×177.49W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.6/23, mbtmp3.6/2, MS3.1/2, Ms1 3.1/2, ms1mx2.8/25, Error ellipse: s-maj=97.3km s-min=54.2km az=13.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PPT	**Papeete**	**26.84**	**82**		LR	LR	09 41 01.8	
	comp=Z,34nm,20.6s,baz=350,slow=30							
STKA	**Stephens Creek**	**36.83**	**248**		LR	LR	09 47 18.9	
	comp=Z,46nm,21.2s,slow=32							
ASAR	**Alice Springs**	**44.29

comp=N,0.1nm,0.3s,baz=154,slow=14,SNR=2.5
HFS Hagfors 22.36 351 P P 09 36 02.6 -0.4
comp=N,5.3nm,0.9s,baz=163,slow=15,SNR=3.4
FINES FINESS Array B 23.56 7 P P 09 36 15.6 +0.3
comp=N,6.9nm,1.1s,baz=163,slow=10,SNR=3.8
NOA NORSAR Array B 23.58 349 P P 09 36 15.4 -0.2
comp=N,0.3nm,0.5s,baz=154,slow=11,SNR=2.6
ARCES ARCESS Array B 31.53 3 P P 09 37 27.1 +0.1
comp=N,2.1nm,0.8s,baz=195,slow=10,SNR=2.6
MKAR Makanchi Array 45.44 58 P P 09 39 24.2 +0.2
comp=N,0.8nm,0.5s,baz=273,slow=6.6,SNR=14
ZALV Zalesovo Beam 45.81 48 P P 09 39 26.6 -0.1
comp=N,2.0nm,0.6s,baz=272,slow=8.7,SNR=8.5

*SNET **28** 09:39:16.7±0.8, 13°.11N×90°.32W, h17km±2km, ML4.2*
*UCR **28** 09:39:16.7±0.8, 13°.11N×90°.32W, h18km±2km, ML4.1, mb4.2(NEIC)*
*INET **28** 09:39:17.1, 13°.09N×90°.36W, h20km, ML3.9*
*NEIC **28** 09:39:17.4±2.8, 13°.03N±0°.07×90°.41W±0°.06, h45km±7km, mb4.2/35, Md4.2/20(MEX), Md4.2(SNET), Error ellipse: s-maj=10.8km s-min=6.8km az=213.0*
*MEX **28** 09:39:17.4±0.4, 12°.85N×90°.69W, h15km, MD4.2*
*GCG **28** 09:39:21.7±0.7, 13°.46N×90°.53W, h28km±10km, MD4.4*
*IDC **28** 09:39:22.4±2.2, 13°.48N×89°.89W, h72km±17km, mb3.6/8, mb1 3.9/11, mb1mx3.6/42, mbtmp4.0/11, MS3.3/5, Ms1 3.3/5, ms1mx3.0/35, Error ellipse: s-maj=33.3km s-min=14.3km az=52.0*
ISC 28 09:39:16.9±1.4, 13°.04N±0°.06×90°.41W±0°.03, h40km±12km, n124, σ1§20/163, mb4.2/21, MS3.3/4, 1C-5D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SBLS	**San Blas**	**1.11**	**44**	*eP*		**Pn**	**09 39 35.2**	**-0.9**
SBLS	**San Blas**	**1.11**	**44**	*eP*		**Pn**	**09 39 35.2**	**-0.9**
IXG	**Ixpaco**	**1.13**	**359**	*iP*		**Pn**	**09 39 35.7**	**-0.7**
RTR	**El Retiro**	**1.13**	**41**	*eP*		**Pn**	**09 39 35.6**	**-0.8**
RTR	**El Retiro**	**1.13**	**41**	*eP*		**Pn**	**09 39 35.6**	**-0.8**
SNJE	**San Jose**	**1.14**	**44**	*eP*		**Pn**	**09 39 35.6**	**-0.9**
SNJE	**San Jose**	**1.14**	**44**	*eP*		**Pn**	**09 39 35.6**	**-0.9**
UNIC	**Universidad Ca**	**1.26**	**42**	*eP*		**Pn**	**09 39 37.1**	**-0.9**
UNIC				IAML			09 39 38.8	
	comp=Z,2μm,0.3s							
UNIC				*eS*		**Sn**	**09 39 52.8**	**-1.0**
UNIC	**Universidad Ca**	**1.26**	**42**	*eP*		**Pn**	**09 39 37.1**	**-0.9**
UNIC				IAML			09 39 38.8	
	comp=Z,2μm,0.3s							
UNIC				*eS*		**Sn**	**09 39 52.8**	**-1.0**
BOQS	**Boqueron**	**1.30**	**58**	*eP*		**Pn**	**09 39 38.3**	**-0.5**
BOQS				*eS*		**Sn**	**09 39 54.9**	**-0.2**
SNET	**Serv Nac Est T**	**1.32**	**61**	*eP*		**Pn**	**09 39 38.0**	**-0.9**
SNET				*eS*		**Sn**	**09 39 54.7**	**-0.6**
SNET				IAML			09 40 02.2	
	comp=Z,5μm,0.3s							
SNET	**Serv Nac Est T**	**1.32**	**61**	*eP*		**Pn**	**09 39 38.0**	**-0.9**
SNET				*eS*		**Sn**	**09 39 54.7**	**-0.6**
SNET				IAML			09 40 02.2	
	comp=Z,5μm,0.3s							
SNET	**Serv Nac Est T**	**1.32**	**61**			**Pn**	**09 39 38.1**	**-0.8**
SNET				Sn		**Sn**	**09 39 54.7**	**-0.6**
UEES	**Universidad Ev**	**1.33**	**59**	*eP*		**Pn**	**09 39 38.2**	**-0.8**
UEES				*eS*		**Sn**	**09 39 54.6**	**-0.9**
UEES				IAML			09 40 01.0	
	comp=Z,6μm,0.2s							
UEES	**Universidad Ev**	**1.33**	**59**	*eP*		**Pn**	**09 39 38.2**	**-0.8**
UEES				*eS*		**Sn**	**09 39 54.6**	**-0.9**
UEES				IAML			09 40 01.0	
	comp=Z,6μm,0.2s							
UTEC	**Universidad Te**	**1.35**	**61**	*eP*		**Pn**	**09 39 38.8**	**-0.6**
UTEC	**Universidad Te**	**1.35**	**61**	*eP*		**Pn**	**09 39 38.8**	**-0.6**
OPAM	**Oficina de Pla**	**1.36**	**60**	*eP*		**Pn**	**09 39 38.8**	**-0.6**
OPAM				*eS*		**Sn**	**09 39 56.4**	**+0.1**
OPAM	**Oficina de Pla**	**1.36**	**60**	*eP*		**Pn**	**09 39 38.8**	**-0.6**
OPAM				*eS*		**Sn**	**09 39 56.4**	**+0.1**
UESS	**Universidad de**	**1.36**	**60**	*eP*		**Pn**	**09 39 38.9**	**-0.5**
UESS	**Universidad de**	**1.36**	**60**	*eP*		**Pn**	**09 39 38.9**	**-0.5**
UDBS	**Universidad Do**	**1.40**	**61**	*eP*		**Pn**	**09 39 39.5**	**-0.4**
UDBS				*eS*		**Sn**	**09 39 57.3**	**0.0**
UDBS	**Universidad Do**	**1.40**	**61**	*eP*		**Pn**	**09 39 39.5**	**-0.4**
UDBS				*eS*		**Sn**	**09 39 57.3**	**0.0**
AEIL	**Aeropuerto Ilo**	**1.42**	**62**	*eP*		**Pn**	**09 39 40.5**	**+0.2**
AEIL				*eS*		**Sn**	**09 39 57.8**	**0.0**
AEIL				IAML			09 40 05.3	
	comp=Z,8μm,0.3s							
LFRS	**El Faro**	**1.44**	**66**	*eP*		**Pn**	**09 39 39.8**	**-0.7**
LFU	**La Fuente**	**1.45**	**61**	*eP*		**Pn**	**09 39 40.4**	**-0.2**
LFU	**La Fuente**	**1.45**	**61**	*eP*		**Pn**	**09 39 40.4**	**-0.2**
FUG	**Fuego 3**	**1.46**	**344**	*eP*		**Pn**	**09 39 40.4**	**-0.5**
LBRS	**Las Brisas**	**1.50**	**62**	*eP*		**Pn**	**09 39 40.9**	**-0.5**
NBG	**Las Nubes**	**1.54**	**2**	*eP*		**Pn**	**09 39 43.0**	**+0.9**
PAVA	**Las Pavas**	**1.59**	**65**	*eP*		**Pn**	**09 39 42.4**	**-0.2**
PAVA				IAML			09 40 09.4	
	comp=Z,3μm,0.3s							
PAVA	**Las Pavas**	**1.59**	**65**	*eP*		**Pn**	**09 39 42.4**	**-0.2**
PAVA				IAML			09 40 09.4	
	comp=Z,3μm,0.3s							
COEG	**Centro de Oper**	**1.60**	**69**	*eP*		**Pn**	**09 39 42.6**	**-0.1**
COEG				IAML			09 40 08.2	
	comp=Z,4μm,0.5s							
UESV	**Universidad de**	**1.69**	**69**	*eP*		**Pn**	**09 39 44.0**	**0.0**
UESV				*eS*		**Sn**	**09 40 04.7**	**+0.2**
UESV	**Universidad de**	**1.69**	**69**	*eP*		**Pn**	**09 39 44.0**	**0.0**
UESV				*eS*		**Sn**	**09 40 04.7**	**+0.2**
MTO3	**Montecristo**	**1.69**	**37**	*eP*		**Pn**	**09 39 44.1**	**-0.1**
MTO3				*eS*		**Sn**	**09 40 05.8**	**+1.0**
MTO3	**Montecristo**	**1.69**	**37**	*eP*		**Pn**	**09 39 44.1**	**-0.1**
MTO3				*eS*		**Sn**	**09 40 05.8**	**+1.0**
ERG	**Entre ros, C**	**1.79**	**321**	*eP*		**Pn**	**09 39 45.5**	**+0.2**
LLGN	**La Laguna**	**1.81**	**52**	*eP*		**Pn**	**09 39 45.5**	**-0.2**
LLGN				*eS*		**Sn**	**09 40 08.3**	**+0.8**
LLGN	**La Laguna**	**1.81**	**52**	*eP*		**Pn**	**09 39 45.5**	**-0.2**
LLGN				*eS*		**Sn**	**09 40 08.3**	**+0.8**
ALJI	**Alcalda de J**	**1.82**	**81**	*eP*		**Pn**	**09 39 44.7**	**-1.0**
ALJI				*eS*		**Sn**	**09 40 07.7**	**+0.2**
COEB	**Comit de Eme**	**1.89**	**76**	*eP*		**Pn**	**09 39 46.5**	**-0.3**
COEB				*eS*		**Sn**	**09 40 10.3**	**+0.9**
TECA	**Tecapa**	**1.92**	**76**	*eP*		**Pn**	**09 39 47.0**	**-0.2**
TECA				*eS*		**Sn**	**09 40 11.3**	**+1.1**
TECA	**Tecapa**	**1.92**	**76**	*eP*		**Pn**	**09 39 47.0**	**-0.2**
TECA				*eS*		**Sn**	**09 40 11.3**	**+1.1**
APG	**El Apazote**	**1.95**	**359**	*P*		**Pn**	**09 39 48.2**	**+0.5**
	comp=Z,158nm,0.3s,baz=134,slow=8.1,SNR=1735							
APG				*S*		**Sn**	**09 40 12.9**	**+1.7**
	comp=Z,63nm,0.3s,baz=298,slow=13,SNR=5.4							
STG3	**Santiaguito 3,**	**2.00**	**326**	*eP*		**Pn**	**09 39 48.5**	**+0.1**
JUCU	**Jucuarįn**	**2.12**	**84**	*eP*		**Pn**	**09 39 49.6**	**-0.3**
JUCU				*eS*		**Sn**	**09 40 16.5**	**+1.4**
JUCU				IAML			09 40 24.0	
	comp=Z,2μm,0.3s							
MRL	**Marmol**	**2.15**	**19**	*eP*		**Pn**	**09 39 51.6**	**+1.1**
FAGO	**Alcalda de S**	**2.34**	**74**	*eP*		**Pn**	**09 39 52.5**	**-0.3**
LCND	**La Caada**	**2.47**	**83**	*eP*		**Pn**	**09 39 54.9**	**+0.3**
LCND				IAML			09 40 32.8	
	comp=Z,2μm,0.3s							
LCND	**La Caada**	**2.47**	**83**	*eP*		**Pn**	**09 39 54.9**	**+0.3**
LCND				IAML			09 40 32.8	
	comp=Z,2μm,0.3s							
THIG		**2.58**	**316**	*eP*		**Pn**	**09 39 55.8**	**-0.4**
THIG				*i* S		**Sn**	**09 40 25.1**	**-1.3**
THIG		**2.58**	**316**			**Pn**	**09 39 55.8**	**-0.4**
THIG						**Sn**	**09 40 25.1**	**-1.3**
TGUH	**Tegucigalpa,Un**	**3.22**	**71**			**Pn**	**09 40 05.4**	**+0.4**
CCIG	**Comitan**	**3.63**	**333**	*eP*		**Pn**	**09 40 12.3**	**+1.5**
CCIG				*i* S		**Sn**	**09 40 53.9**	**+1.5**
CCIG	**Comitan**	**3.63**	**333**			**Pn**	**09 40 12.9**	**+2.1**
CCIG				Sn		**Sn**	**09 40 50.1**	**-2.4**
CCIG	**Comitan**	**3.63**	**333**			**Pn**	**09 40 12.3**	**+1.5**
CCIG						**Sn**	**09 40 53.9**	**+1.5**
PCIG		**3.80**	**315**	*eP*		**Pn**	**09 40 12.9**	**+0.1**
PCIG				*i* S		**Sn**	**09 40 54.8**	**-1.5**
PCIG		**3.80**	**315**			**Pn**	**09 40 12.9**	**+0.1**
PCIG						**Sn**	**09 40 54.8**	**-1.5**
ESTN	**Estel**	**3.94**	**89**			**Pn**	**09 40 15.0**	**+0.1**
TGIG		**4.55**	**325**	*i* P		**Pn**	**09 40 23.0**	**-0.2**
TGIG				*i* S		**Sn**	**09 41 15.3**	**+0.4**
TGIG		**4.55**	**325**			**Pn**	**09 40 23.0**	**-0.2**
TGIG						**Sn**	**09 41 15.3**	**+0.4**
ACON	**Acoyapa**	**5.23**	**101**			**Pn**	**09 40 32.3**	**-0.3**
CMIG	**Matias Romero**	**5.91**	**314**	*P*		**Pn**	**09 40 41.8**	**0.0**
	comp=Z,2.1nm,0.3s,baz=115,slow=10,SNR=23							
CMIG				*S*		**Sn**	**09 41 45.9**	**-2.4**
	comp=Z,1.8nm,0.3s,baz=280,slow=21,SNR=6.1							
CMIG				LR		LR	09 43 28.9	
	comp=Z,174nm,21.1s,baz=125,slow=41							
CMIG	**Matias Romero**	**5.91**	**314**	*eP*		**Pn**	**09 40 42.1**	**+0.2**
CMIG				*i* S		**Sn**	**09 41 47.5**	**-0.9**
CMIG	**Matias Romero**	**5.91**	**314**			**Pn**	**09 40 42.1**	**+0.2**
CMIG						**Sn**	**09 41 47.5**	**-0.9**
JTS	**Las Juntas de**	**6.01**	**116**	*P*		**Pn**	**09 40 45.5**	**+2.2**
	comp=Z,1.4nm,0.3s,baz=352,slow=23,SNR=11							
JTS				*S*		**Sn**	**09 41 47.6**	**-3.2**
	comp=Z,1.3nm,0.3s,baz=184,slow=22,SNR=1.1							
JTS	**Las Juntas de**	**6.01**	**116**			**Pn**	**09 40 45.6**	**+2.3**
JTS				Sn		**Sn**	**09 41 49.1**	**-1.8**
TEIG	**Tepich**	**7.43**	**16**	*P*		**Pn**	**09 41 02.6**	**-0.3**
	comp=Z,6.7nm,0.3s,baz=137,slow=0.5,SNR=57							
TEIG	**Tepich**	**7.43**	**16**			**Pn**	**09 41 04.3**	**+1.4**
SDV	**Santo Domingo**	**19.85**	**100**	*P*		**P**	**09 43 43.7**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=299,slow=10.0,SNR=4.1							
SDV	**Santo Domingo**	**19.85**	**100**	*P*		**P**	**09 43 44.9**	**0.0**
SDV				IAmb		IAmb	09 43 58.4	
	comp=Z,4.1nm,0.7s							
TX31	**Lajitas Ar. Si**	**20.36**	**325**	*P*		**P**	**09 43 51.4**	**+1.3**
TX32	**Lajitas Array**	**20.36**	**325**	*P*		Pn	09 43 51.8	-0.6
TXAR	**Lajitas Array**	**20.36**	**325**	*P*		Pn	09 43 52.7	+0.3
	comp=Z,2.4nm,0.7s,baz=150,slow=12,SNR=29							
TXAR				PcP		**PcP**	**09 48 04.1**	**+1.9**
	comp=Z,0.2nm,0.6s,baz=145,slow=3.3,SNR=3.4							
TXAR	**Lajitas Array**	**20.36**	**325**	*P*		Pn	09 43 52.3	-0.1
Z50A	**Ashland**	**20.54**	**11**	*P*		**P**	**09 43 52.5**	**+0.6**
Z50A				IAmb		IAmb	09 44 05.8	
	comp=Z,11nm,1.2s							
Y49A	**Blount Mountai**	**21.04**	**9**	*P*		**P**	**09 43 58.6**	**+1.2**
Y49A				IAmb		IAmb	09 44 16.5	
	comp=Z,21nm,1.5s							
X48A	**Hartselle**	**21.54**	**8**	*P*		**P**	**09 44 03.5**	**+0.9**
X48A				IAmb		IAmb	09 44 20.3	
	comp=Z,17nm,1.4s							
MIAR	**Mount Ida**	**21.60**	**353**	*P*		**P**	**09 44 04.2**	**+0.9**
PLAL	**Pickwick Lake**	**21.95**	**5**	*P*		**P**	**09 44 07.1**	**0.0**
SWET	**Sewanee**	**22.45**	**10**	*P*		**P**	**09 44 12.2**	**-0.3**
SWET				IAmb		IAmb	09 44 15.9	
	comp=Z,5.8nm,0.9s							
CPCT	**Cooper Cave**	**22.94**	**12**	*P*		**P**	**09 44 17.3**	**-0.4**
FNO	**Franklin**	**23.00**	**345**	*P*		**P**	**09 44 18.0**	**-0.3**
WVT	**Waverly**	**23.11**	**5**	*P*		**P**	**09 44 19.9**	**+0.6**
MNTX	**Cornudas Mount**	**23.11**	**326**	*P*		**P**	**09 44 20.8**	**+1.3**
MNTX				IAmb		IAmb	09 44 21.8	
	comp=Z,6.7nm,0.8s							
TKL	**Tuckaleechee C**	**23.30**	**14**	*P*		**P**	**09 44 19.0**	**-2.2**
	comp=Z,3.6nm,0.7s,baz=183,slow=8.9,SNR=4.5							
TKL				LR		LR	09 53 50.5	
	comp=Z,58nm,18.9s,baz=181,slow=38							
TKL	**Tuckaleechee C**	**23.30**	**14**	*P*		**P**	**09 44 20.9**	**-0.4**
TKL				IAmb		IAmb	09 44 34.0	
	comp=Z,15nm,1.4s							
T47A	**Sharon Grove**	**24.03**	**7**	*P*		**P**	**09 44 27.3**	**-0.8**
T49A	**Edmonton**	**24.36**	**9**	*P*		**P**	**09 44 30.8**	**-0.3**
U54A	**Nelsons Funny**	**24.62**	**17**	*P*		**P**	**09 44 33.8**	**+0.1**
U54A				IAmb		IAmb	09 44 39.0	
	comp=Z,6.3nm,0.9s							
V58A	**Windy Hill, Pi**	**24.84**	**22**	*P*		**P**	**09 44 34.7**	**-0.8**
121A	**Cookes Peak, D**	**25.09**	**324**	*P*		**P**	**09 44 38.6**	**+0.5**
319A	**Douglas**	**25.19**	**319**	*P*		**P**	**09 44 38.6**	**-0.2**
319A				IAmb		IAmb	09 44 49.9	
	comp=Z,5.2nm,0.6s							
WCI	**Wyandotte Cave**	**25.35**	**8**	*P*		**P**	**09 44 39.1**	**-1.0**
WCI				IAmb		IAmb	09 44 40.1	
	comp=Z,8.3nm,0.8s							
L40A	**Anamosa**	**28.93**	**359**	*P*		**P**	**09 45 10.1**	**-2.1**
L40A				IAmb		IAmb	09 45 16.4	
	comp=Z,4.3nm,0.8s							
WUAZ	**Wupatki**	**29.30**	**323**	*P*		**P**	**09 45 18.2**	**+2.4**
WUAZ				IAmb		IAmb	09 45 19.4	
	comp=Z,5.3nm,0.9s							
ECSD	**EROS Data Cent**	**31.05**	**351**	*P*		**P**	**09 45 30.5**	**-0.5**
KNB	**Kanab**	**31.18**	**324**	*P*		**P**	**09 45 35.8**	**+3.4**
MTPU	**Mount Pierson**	**31.55**	**326**	*P*		**P**	**09 45 38.0**	**+2.1**
PDAR	**Pinedale Array**	**33.94**	**334**	*P*		**P**	**09 45 57.3**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=134,slow=10,SNR=2.4							
PDAR				PcP		**PcP**	**09 48 34.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=122,slow=3.3,SNR=4.1							
PDAR				LR		LR	10 02 42.5	
	comp=Z,74nm,18.7s,baz=47,slow=42							
REDW	**Red Top Meadow**	**34.98**	**334**	*P*		**P**	**09 46 07.7**	**+2.2**
REDW				IAmb		IAmb	09 46 24.7	
	comp=Z,5.0nm,1.3s							
NV11	**Mina Array Sit**	**35.30**	**321**	*P*		**P**	**09 46 10.0**	**+1.7**
NVAR	**Mina Array Bea**	**35.38**	**321**	*P*		**P**	**09 46 12.0**	**+2.9**
	comp=Z,4.2nm,0.8s,baz=134,slow=7.6,SNR=31							
NVAR				PcP		**PcP**	**09 48 40.3**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=123,slow=3.3,SNR=8.3							
NVAR				LR		LR	10 03 00.1	
	comp=Z,36nm,22.0s,baz=110,slow=40							
NVAR	**Mina Array Bea**	**35.38**	**321**	*P*		**P**	**09 46 11.9**	**+2.8**
MDPB	**Devils Postpil**	**35.39**	**319**	*P*		**P**	**09 46 11.9**	**+2.7**
MDPB				IAmb		IAmb	09 46 13.8	
	comp=Z,3.8nm,1.0s							
KVN	**Kaiserville**	**35.65**	**322**	*P*		**P**	**09 46 14.2**	**+2.9**
KVN				IAmb		IAmb	09 46 14.9	
	comp=Z,4.7nm,1.1s							
ULM	**Lac du Bonnet**	**37.37**	**354**	*P*		**P**	**09 46 23.4**	**-2.2**
	comp=Z,1.1nm,0.5s,baz=178,slow=9.9,SNR=3.3							
LRM	**Limekiln Ridge**	**37.63**	**335**	*P*		P	09 46 35.6	+7.4
EGMT	**Eagleton**	**38.42**	**339**	*P*		**P**	**09 46 35.5**	**+0.9**
MOD	**Modoc Plateau**	**38.75**	**324**	*P*		**P**	**09 46 39.4**	**+1.9**
MOD				IAmb		IAmb	09 46 40.0	
	comp=Z,3.3nm,1.2s							
F10A	**Beach Ranch, E**	**39.89**	**331**	*P*		**P**	**09 46 48.4**	**+1.4**
F10A				IAmb		IAmb	09 46 49.3	
	comp=Z,3.8nm,0.8s							
PINE	**Pine Mountain**	**40.31**	**325**	*P*		**P**	**09 46 51.5**	**+0.9**
SIV	**San Ignacio**	**40.91**	**134**	*P*		**P**	**09 46 57.3**	**+1.6**
	comp=Z,1.7nm,0.8s,baz=310,slow=10,SNR=7.4							
SIV				PcP		**PcP**	**09 48 56.7**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=304,slow=11,SNR=3.3							
NEW	**Newport**	**41.54**	**333**	LR		LR	10 08 36.7	
	comp=Z,77nm,18.6s,baz=40,slow=42							
SCHQ	**Schefferville**	**45.60**	**19**	*P*		**P**	**09 47 30.5**	**-2.5**
	comp=Z,2.0nm,0.5s,baz=231,slow=17,SNR=9.4							
YKA	**Yellowknife Ar**	**52.32**	**346**	*P*		**P**	**09 48 23.8**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=149,slow=7.8,SNR=21							
YKA				PcP		**PcP**	**09 49 35.5**	**+0.5**
	comp=Z,0.3nm,0.7s,baz=153,slow=4.2,SNR=3.9							
RAGM	**Ragged Mountai**	**61.49**	**333**			**PcP**	**09 50 08.6**	**-2.4**
KSRS	**Korea Array**	**118.20**	**326**	PKP		**PKiKP**	**09 58 02.1**	**+1.9**
	comp=Z,0.7nm,0.6s,baz=11,slow=2.2,SNR=2.8							
MKAR	**Makanchi Array**	**120.08**	**6**	PKP		**PKiKP**	**09 58 03.7**	**+0.1**
	comp=Z,0.1nm,0.4s,baz=343,slow=2.4,SNR=2.5							
KSH	**Kashi**	**126.20**	**13**	*e*PKP		**PKPdf**	**09 58 13.0**	**-2.6**
KSH				sPKP			09 58 31.3	
LZH	**Lanzhou**	**129.32**	**345**	*e*PKP		**PKPdf**	**09 58 19.8**	**-1.9**
LZH				pPKP		pPKPdf	09 58 33.5	-0.3
LZH				sPKP			09 58 38.5	
WRA	**Warramunga Arr**	**136.64**	**255**	PKP		**PKiKP**	**09 58 37.0**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=89,slow=0.6,SNR=3.4							
CMAR	**Chiang Mai Arr**	**147.37**	**343**	PKPbc		**PKPbc**	**09 58 56.9**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=330,slow=3.7,SNR=11							

MAN 28 09:50:51.3, 9°.98N×124°.16E, h17km, mb4.5, ML3.4, MS3.3, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.39**	**330**	*i* P		Pg	09 50 59.4	+0.1
LLP				*i* S		Sg	09 51 04.8	+0.2
MSLP	**Maasin**	**0.70**	**77**	*eP*		Pg	09 51 05.3	+0.1
MSLP				*eS*		Sn	09 51 17.4	+0.4
GUIM	**Jordan**	**1.67**	**293**	*eP*		Pn	09 51 19.9	+0.1
GUIM				*eS*		Sb	09 51 41.7	-0.8
BUKP	**Musuan**	**2.27**	**157**	*eP*		Pn	09 51 28.8	+0.8
BUKP				*eS*		Sn	09 51 56.3	+0.6

*IDC **28** 09:55:44.9±1.3, 24°.44S×179°.97W, h518km±12km, mb3.5/15, mb1 3.7/17, mb1mx3.5/40, mbtmp4.3/17, Error ellipse: s-maj=18.2km s-min=11.0km az=159.0*
*NEIC **28** 09:55:45.5±1.3, 24°.32S±0°.10×179°.99E±0°.04, h528km±6km, mb4.4/46, Error ellipse: s-maj=14.6km s-min=3.0km az=197.0*
ISC 28 09:55:43.4±0.4, 24°.32S±0°.05×179°.92W±0°.07, h505km, n162, σ1§38/172, mb4.2/34, 4C-3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**5.22**	**160**	*P*		**P**	**09 57 15.5**	**+2.9**
RAO				*S*		**S**	**09 58 29.6**	**+4.0**
GLKZ	**Green Lake**	**5.23**	**160**	*P*		**P**	**09 57 12.7**	**0.0**
GLKZ				*S*		**S**	**09 58 27.3**	**+1.6**
MSVF	**Nonsavu**	**6.83**	**344**	*P*		**P**	**09 57 29.2**	**+0.9**
NIUE	**Niue**	**10.66**	**63**	*P*		P	09 58 14.2	+6.4
DZM	**Mont Dzumac**	**12.74**	**277**	*P*		**P**	**09 58 32.6**	**+2.6**
	1.6nm,0.3s,baz=84,slow=18,SNR=15							
DZM	**Mont Dzumac**	**12.74**	**277**	*P*		**P**	**09 58 31.4**	**+1.5**
NOUC	**Port Laguerre**	**12.86**	**277**	*P*		**P**	**09 58 34.0**	**+2.9**
AFI	**Afiamalu**	**12.90**	**38**	*P*		P	09 58 26.9	-4.8
	0.8nm,0.3s,baz=234,slow=19,SNR=2.2							
AFI				*S*		S	10 00 38.1	-12
	0.6nm,0.3s,baz=160,slow=12,SNR=2.4							
AFI	**Afiamalu**	**12.90**	**38**	*P*		**P**	**09 58 31.1**	**-0.6**
KUZ	**Kuaotunu**	**12.93**	**196**	*P*		**P**	**09 58 35.6**	**+3.9**
MXZ	**Matakaoa Point**	**13.28**	**186**	*P*		P	09 58 39.7	+4.3
MXZ	**Matakaoa Point**	**13.28**	**186**	*P*		P	09 58 39.7	+4.3
WMGZ	**Waiomatatini S**	**13.53**	**186**	*P*		**P**	**09 58 41.3**	**+3.4**
WMGZ				*S*		**S**	**10 00 59.0**	**-2.8**
HAZ	**Te Kaha**	**13.53**	**188**	*P*		**P**	**09 58 39.3**	**+1.3**
HAZ				*S*		**S**	**10 00 57.9**	**-4.0**
PKGZ	**Pakihiroa**	**13.63**	**187**	*P*		**P**	**09 58 41.8**	**+2.7**
RUGZ	**Raukumara Rang**	**13.75**	**188**	*P*		**P**	**09 58 42.1**	**+1.7**
PUZ	**Puketiti**	**13.79**	**186**	*P*		**P**	**09 58 42.6**	**+1.8**
PUZ				*S*		**S**	**10 01 00.3**	**-6.7**
URZ	**Urewera**	**14.12**	**190**	*P*		**P**	**09 58 43.4**	**-0.7**
	2.8nm,0.3s,baz=332,slow=6.0,SNR=17							
URZ				*S*		**S**	**10 01 11.4**	**-1.7**
	1.3nm,0.3s,baz=37,slow=13,SNR=2.0							
URZ	**Urewera**	**14.12**	**190**	*P*		**P**	**09 58 43.5**	**-0.7**
URZ				*S*		**S**	**10 01 13.6**	**+0.4**
URZ	**Urewera**	**14.12**	**190**	*P*		**P**	**09 58 45.1**	**+0.9**
URZ				*S*		**S**	**10 01 12.4**	**-0.7**
MWZ	**Matawai**	**14.13**	**188**	*P*		**P**	**09 58 45.5**	**+1.2**
TKGZ	**Te Karaka**	**14.20**	**187**	*P*		**P**	**09 58 47.3**	**+2.3**
CNGZ	**Carnagh Statio**	**14.21**	**186**	*P*		**P**	**09 58 47.5**	**+2.5**
MUGZ	**Murupara**	**14.39**	**190**	*P*		**P**	**09 58 47.6**	**+0.7**
RIGZ	**Rimuhau**	**14.47**	**187**	*P*		**P**	**09 58 45.7**	**-2.2**
TLZ	**Tolley Road**	**14.49**	**194**	*P*		**P**	**09 58 51.5**	**+3.5**
SANVU	**Saraoutou**	**14.98**	**304**	*P*		**P**	**09 58 52.2**	**-1.2**
BKZ	**Black Stump Fm**	**15.11**	**191**	*P*		**P**	**09 58 53.9**	**-0.6**
BKZ	**Black Stump Fm**	**15.11**	**191**	*P*		**P**	**09 58 54.3**	**-0.2**
BKZ				IAmb		IAmb	09 58 56.1	
	comp=Z,20nm,1.2s							
KWHZ	**Kaweka Forest**	**15.37**	**191**	*P*		**P**	**09 58 57.2**	**-0.1**
TRVZ	**Turoa**	**15.41**	**193**	*P*		P	09 59 05.6	+7.7
VRZ	**Vera Road**	**15.43**	**196**	*P*		**P**	**09 59 01.3**	**+3.4**
BHHZ	**Black Hill Sta**	**15.50**	**192**

HSIG					IAmb	IAmb	10 07 26.9		
	comp=Z,4.8nm,0.8s								
NVAR	**Mina Array Bea**	**85.01**	**44**	P	**P**		**10 07 26.5**	**+1.0**	
	comp=Z,1.1nm,0.8s,baz=224,slow=8.7,SNR=9.5								
NVAR	**Mina Array Bea**	**85.01**	**44**	P	**P**		**10 07 26.0**	**+0.5**	
TPNV	**Topopah Spring**	**85.47**	**46**	P	**P**		**10 07 27.9**	**+0.2**	
PINE	**Pine Mountain**	**86.68**	**38**	P	**P**		**10 07 33.5**	**+0.2**	
PINE					IAmb	IAmb	10 07 35.4		
	comp=Z,7.5nm,1.0s								
319A	**Douglas**	**87.34**	**54**	P	**P**		**10 07 37.2**	**+0.6**	
319A					IAmb	IAmb	10 07 39.2		
	comp=Z,4.9nm,0.8s								
X16A	**Lo Mia Camp, P**	**87.35**	**50**	P	**P**		**10 07 37.9**	**+1.2**	
I07A	**Izee**	**87.67**	**39**	P	**P**		**10 07 39.1**	**+1.2**	
I07A					IAmb	IAmb	10 07 40.1		
	comp=Z,4.8nm,1.0s								
U15A	**North Rim**	**87.83**	**48**	P	**P**		**10 07 39.5**	**+0.4**	
PLCA	**Paso Flores**	**87.92**	**134**	P	**P**		**10 07 38.5**	**-0.8**	
	comp=Z,1.0nm,0.9s,baz=259,slow=10,SNR=3.3								
PLCA	**Paso Flores**	**87.92**	**134**	P	**P**		**10 07 38.6**	**-0.7**	
PLCA					IAmb	IAmb	10 07 51.0		
	comp=Z,7.9nm,1.4s								
ELK	**Elko**	**88.28**	**43**	P	**P**		**10 07 41.7**	**+0.7**	
	comp=Z,0.6nm,0.5s,baz=243,slow=4.5,SNR=4.5								
ELK	**Elko**	**88.28**	**43**	P	**P**		**10 07 41.5**	**+0.6**	
G08A	**Pilot Rock**	**88.72**	**38**	P	**P**		**10 07 42.9**	**+0.1**	
G08A					IAmb	IAmb	10 07 44.7		
	comp=Z,7.0nm,1.3s								
CMAR	**Chiang Mai Arr**	**89.74**	**290**	P	**P**		**10 07 49.5**	**+1.5**	
	comp=Z,0.6nm,0.3s,baz=132,slow=4.0,SNR=3.0								
TMUT	**Trail Mountain**	**90.08**	**46**	P	**P**		**10 07 49.1**	**-0.3**	
SRU	**San Rafael Swe**	**90.44**	**47**	P	**P**		**10 07 50.9**	**-0.1**	
TX31	**Lajitas Ar. Si**	**90.59**	**58**	P	**P**		**10 07 52.7**	**+0.9**	
TX31					IAmb	IAmb	10 07 53.8		
	comp=Z,1.7nm,0.8s								
TX32	**Lajitas Array**	**90.59**	**58**	P	**P**		**10 07 53.1**	**+1.3**	
TXAR	**Lajitas Array**	**90.60**	**58**	P	**P**		**10 07 53.0**	**+1.2**	
	comp=Z,2.0nm,0.7s,baz=213,slow=6.6,SNR=27								
TXAR	**Lajitas Array**	**90.60**	**58**	P	**P**		**10 07 53.2**	**+1.4**	
HHC	**Hu-ho-hao-te**	**90.77**	**315**	*eP*	**P**		**10 07 52.0**	**-0.3**	
HHC					pmax	pmax			
	comp=Z,4.0nm,0.7s								
HHC					pmax	pmax			
	comp=Z,140nm,5.7s								
ILAR	**Eielson Array**	**92.42**	**14**	P	**P**		**10 07 58.6**	**-0.7**	
	comp=Z,0.5nm,0.7s,baz=220,slow=5.5,SNR=7.4								
ILAR	**Eielson Array**	**92.42**	**14**	P	**P**		**10 07 58.9**	**-0.4**	
PDAR	**Pinedale Array**	**92.95**	**44**	P	**P**		**10 08 02.9**	**+0.4**	
	comp=Z,0.6nm,0.7s,baz=213,slow=3.3,SNR=7.2								
PDAR	**Pinedale Array**	**92.95**	**44**	P	**P**		**10 08 02.6**	**+0.1**	
INK	**Inuvik**	**98.42**	**16**	P	Pdif		10 08 26.0	-0.2	
	comp=Z,0.7nm,0.6s,baz=229,slow=3.9,SNR=4.0								
INK	**Inuvik**	**98.42**	**16**		Pdif		10 08 26.2	0.0	
YKA	**Yellowknife Ar**	**100.71**	**25**	P	**Pdif**		**10 08 36.6**	**+0.1**	
	comp=Z,0.2nm,0.8s,baz=239,slow=4.9,SNR=3.2								
ZALV	**Zalesovo Beam**	**112.32**	**320**	PKiKP	**PKiKP**		**10 13 20.4**	**-0.7**	
	comp=Z,0.6nm,0.3s,baz=86,slow=4.6,SNR=4.0								
MKAR	**Makanchi Array**	**112.49**	**313**	PKiKP	**PKiKP**		**10 13 20.7**	**-1.1**	
	comp=Z,0.3nm,0.4s,baz=107,slow=0.7,SNR=5.1								
MKAR	**Makanchi Array**	**112.49**	**313**		**PKiKP**		**10 13 21.0**	**-0.8**	
KURK	**Kurchatov**	**115.56**	**316**		**PKPdf**		**10 13 26.4**	**-1.0**	
KSH	**Kashi**	**115.57**	**304**	*e*PKP	**PKPdf**		**10 13 26.0**	**-2.0**	
KURBB	**Kurchatov Arra**	**115.60**	**316**	PKP	**PKPdf**		**10 13 26.5**	**-1.0**	
	comp=Z,0.8nm,0.5s,baz=96,slow=2.2,SNR=10								
KK31	**Karatay Array**	**120.17**	**307**		**PKPdf**		**10 13 36.2**	**-0.5**	
KKAR	**Karatay Array**	**120.17**	**307**		**PKPdf**		**10 13 36.1**	**-0.6**	
KKAR	**Karatay Array**	**120.17**	**307**		**PKPdf**		**10 13 36.5**	**-0.2**	
BVAR	**Borovoye Array**	**120.80**	**319**	PKP	**PKPdf**		**10 13 36.9**	**-0.6**	
	comp=Z,1.4nm,0.4s,baz=97,slow=1.8,SNR=9.3								
BOSA	**Boshof**	**122.05**	**206**	PKP	**PKPdf**		**10 13 40.5**	**-0.5**	
BOSA				SKP			10 16 26.7		
	comp=Z,1.4nm,0.7s,baz=147,slow=1.7,SNR=2.8								
ARCES	**ARCESS Array B**	**132.31**	**348**	PKP	**PKPdf**		**10 13 59.5**	**+0.4**	
	comp=Z,1.5nm,0.6s,baz=57,slow=2.3,SNR=11								
FINES	**FINESS Array B**	**138.87**	**341**	PKhKP	PKPpre		10 14 01.5		
	comp=Z,2.6nm,0.9s,baz=46,slow=5.5,SNR=8.0								
FINES				PKP	**PKiKP**		**10 14 13.1**	**-0.6**	
	comp=Z,1.6nm,0.4s,baz=62,slow=3.3,SNR=10								
FINES				SKPbc	**SKPbc**		**10 16 58.6**	**0.0**	
	comp=Z,1.9nm,0.9s,baz=20,slow=6.1,SNR=5.3								
GNI	**Garni**	**139.50**	**304**		**PKPdf**		**10 14 12.7**	**-0.8**	
NB2	**NORSAR Subarra**	**142.51**	**351**	PKP	**PKPdf**		**10 14 14.2**	**-3.8**	
	comp=Z,0.9nm,0.7s,baz=10,slow=3.2								
NOA	**NORSAR Array B**	**142.51**	**351**	PKhKP	PKPpre		10 14 13.9		
	comp=Z,1.9nm,0.8s,baz=17,slow=4.6,SNR=4.3								
AKASG	**Malin Array Be**	**145.36**	**327**	PKPbc	**PKPdf**		**10 14 23.6**	**+0.4**	
	comp=Z,3.3nm,0.3s,baz=45,slow=4.2,SNR=1.7								
AKASG	**Malin Array Be**	**145.36**	**327**	PKPbc	**PKPbc**		**10 14 24.0**	**-0.3**	
SORM	**Soroca**	**147.38**	**324**	⇓P	**PKPbc**		**10 14 29.8**	**-0.1**	
BR131	**Keskin Array S**	**147.89**	**307**	PKPdf	**PKPdf**		**10 14 26.0**	**-2.0**	
BR131					**PKPbc**		**10 14 30.3**	**-1.5**	
BRTR	**Keskin Array B**	**147.89**	**307**	PKPbc	**PKPbc**		**10 14 31.6**	**-0.1**	
	comp=Z,2.6nm,0.8s,baz=148,slow=4.7,SNR=12								
BRTR				PKPab	**PKPab**		**10 14 36.6**	**+0.5**	
	comp=Z,1.7nm,0.6s,baz=97,slow=2.8,SNR=7.8								
BRTR	**Keskin Array B**	**147.89**	**307**		**PKPbc**		**10 14 30.2**	**-1.5**	
BRTR					**PKPab**		**10 14 36.4**	**+0.3**	
KWP	**Kalwaria Pacla**	**149.17**	**331**		**PKPbc**		**10 14 34.5**	**+0.1**	
CFR	**Carcaliu**	**149.20**	**319**	⇑P	**PKPbc**		**10 14 34.9**	**+0.3**	
TOPG	**Topolog**	**149.22**	**319**	⇓P	**PKiKP**		**10 14 35.5**	**-0.1**	
BUR08	**Bucovina Ar. S**	**149.35**	**326**		**PKPbc**		**10 14 34.3**	**-0.7**	
BURAR	**Bucovina Array**	**149.36**	**326**		**PKPbc**		**10 14 34.7**	**-0.3**	
TIRR	**Tirgusor**	**149.42**	**318**	⇓P	**PKPbc**		**10 14 34.5**	**-0.6**	
HARR	**Harsova**	**149.59**	**319**	⇑P	**PKPbc**		**10 14 32.9**	**-2.6**	
KOLS	**Kolonicke sedl**	**149.87**	**330**	*e*PKP	**PKiKP**		**10 14 37.5**	**+0.7**	
CRVS	**Cervenica-Dubn**	**150.26**	**331**	*e*PKP	**PKiKP**		**10 14 38.2**	**+0.6**	
LANS	**Liptovska Anna**	**150.92**	**333**	*e*PKP	**PKiKP**		**10 14 40.0**	**+1.0**	
CLL	**Collm**	**151.28**	**343**	⇑*i*PKPbc	**PKiKP**		**10 14 39.6**	**0.0**	
	comp=Z,12nm,0.7s								
VYHS	**Vyhne**	**151.69**	**333**	*e*PKP	**PKiKP**		**10 14 40.9**	**+0.3**	
ELND	**Elena**	**151.79**	**317**	⇑P	**PKPbc**		**10 14 40.2**	**-0.4**	
GERES	**GERESS Array B**	**153.28**	**340**	PKPbc	**PKPbc**		**10 14 43.7**	**-0.2**	
	comp=Z,0.5nm,0.5s,baz=1.9,slow=2.9,SNR=3.6								
GERES	**GERESS Array B**	**153.28**	**340**		**PKPbc**		**10 14 43.3**	**-0.6**	
TORD	**Torodi Ar. Bea**	**168.78**	**188**	PKP	**PKPdf**		**10 14 51.8**	**-1.1**	
	comp=Z,0.4nm,0.6s,baz=236,slow=0.8,SNR=3.0								
TORD				PKPab	**PKPab**		**10 16 06.3**	**-0.3**	
	comp=Z,1.0nm,0.6s,baz=172,slow=4.2,SNR=5.5								

JMA ***28*** *10:08:52.7±0.1,23.99N×121.74E,h58km±2km,M2.7*
TAP ***28*** *10:08:53.4,24.03N×121.74E,h60km,ML3.5,B*
ISC 28 10:08:53.9±1.2,24.03N±0.02×121.78E±0.02,h55km±5km,
n124,σ0.87/215,7C-24D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.17**	**251**	P		**Pn**	**10 09 03.1**	**+0.5**
	baz=246							
HWA				*e*S		**Sn**	**10 09 10.4**	**+1.7**
	baz=246							
TWD	**Chiawan**	**0.17**	**286**	⇓*i*P		**Pn**	**10 09 02.7**	**+0.1**
	baz=294							
TWD				S		**Sn**	**10 09 09.6**	**+0.7**
	baz=294							
ENLB	**Shoufeng**	**0.21**	**232**	P		**Pn**	**10 09 02.2**	**-0.6**
	baz=224							
ENLB				*e*S		**Sn**	**10 09 10.0**	**+0.8**
	baz=224							
NACB	**Ninganchiao**	**0.22**	**310**	⇓P		**Pn**	**10 09 02.9**	**-0.1**
	baz=306							
NACB				S		**Sn**	**10 09 09.4**	**0.0**
	baz=306							
ETLH	**Xiulin Townshi**	**0.32**	**303**	⇓P		**Pn**	**10 09 03.6**	**-0.2**
	baz=302							
ETLH				*e*S		**Sn**	**10 09 10.8**	**-0.2**
	baz=302							
ESL	**Shilin**	**0.38**	**236**	⇓*i*P		**Pn**	**10 09 03.8**	**-0.5**
	baz=242							
ESL				*e*S		**Sn**	**10 09 11.2**	**-0.5**
	baz=242							
NANB	**Nanao**	**0.40**	**356**	⇓*i*P		**Pn**	**10 09 04.4**	**0.0**
	baz=1.0							
NANB				*e*S		**Sn**	**10 09 12.4**	**+0.5**
	baz=1.0							
ENA	**Nanau**	**0.40**	**355**	⇓*i*P		**Pn**	**10 09 04.4**	**0.0**
	baz=1.0							
ENA				*e*S		**Sn**	**10 09 12.8**	**+0.8**
	baz=1.0							
EGFH	**Guangfu**	**0.48**	**222**	*e*P		**Pn**	**10 09 04.8**	**-0.6**
	baz=229							
EGFH				*e*S		**Sn**	**10 09 12.9**	**-0.7**
	baz=229							
WHF	**Hehuan Shan**	**0.48**	**284**	⇓*i*P		**Pn**	**10 09 05.5**	**-0.3**
	baz=282							
WHF				S		**Sn**	**10 09 13.9**	**-0.4**
	baz=282							
NNSB	**Datong**	**0.54**	**318**	⇓P		**Pn**	**10 09 05.9**	**-0.2**
	baz=326							
NNSB				S		**Sn**	**10 09 14.5**	**-0.3**
	baz=326							
NNSH	**Datong**	**0.54**	**318**	⇓*i*P		**Pn**	**10 09 05.9**	**-0.2**
	baz=323							
NNSH				*e*S		**Sn**	**10 09 14.2**	**-0.6**
	baz=323							
NNS	**Nan Shan**	**0.55**	**318**	⇓*i*P		**Pn**	**10 09 06.0**	**-0.2**
	baz=326							
NNS				S		**Sn**	**10 09 14.8**	**-0.3**
	baz=326							
CHGB	**Renai**	**0.55**	**273**	⇓P		**Pn**	**10 09 06.4**	**+0.1**
	baz=274							
CHGB				S		**Sn**	**10 09 14.9**	**-0.4**
	baz=274							
OWD	**Renai**	**0.56**	**262**	*e*P		**Pn**	**10 09 06.2**	**-0.1**
	baz=257							
OWD				S		**Sn**	**10 09 14.8**	**-0.4**
	baz=257							
TWC	**Suao**	**0.58**	**6**	⇓*i*P		**Pn**	**10 09 06.8**	**+0.4**
	baz=15							
TWC				S		**Sn**	**10 09 16.4**	**+1.0**
	baz=15							
TWT	**Tachien**	**0.59**	**292**	⇓P		**Pn**	**10 09 07.1**	**+0.3**
	baz=293							
TWT				S		**Sn**	**10 09 16.4**	**+0.3**
	baz=293							
EOS1	**EOS1**	**0.61**	**32**	*e*P		**Pn**	**10 09 07.6**	**+0.9**
	baz=44							
EOS1				*e*S		**Sn**	**10 09 18.0**	**+2.1**
	baz=44							
TDCB	**Techi**	**0.61**	**291**	⇓P		**Pn**	**10 09 07.1**	**+0.2**
	baz=293							
TDCB				S		**Sn**	**10 09 16.1**	**-0.2**
	baz=293							
NDT	**Datong Townshi**	**0.62**	**337**	⇓P		**Pn**	**10 09 06.8**	**-0.1**
	baz=340							
NDT				*e*S		**Sn**	**10 09 16.1**	**-0.2**
	baz=340							
HGSD	**Ruisui**	**0.63**	**211**	⇑P		**Pn**	**10 09 07.3**	**+0.3**
	baz=218							
HGSD				*e*S		**Sn**	**10 09 17.5**	**+1.0**
	baz=218							
ENTT	**Nioudou**	**0.64**	**342**	⇓*i*P		**Pn**	**10 09 07.0**	**-0.1**
	baz=342							
ENTT				S		**Sn**	**10 09 16.9**	**+0.2**
	baz=342							
VWDT	**VWDT**	**0.65**	**245**	⇑P		**Pn**	**10 09 07.3**	**+0.1**
	baz=241							
VWDT				*e*S		**Sn**	**10 09 16.8**	**-0.1**
	baz=241							
EHY	**Hungye**	**0.67**	**219**	*e*P		**Pn**	**10 09 06.5**	**-1.0**
	baz=223							
TWE	**Neicheng**	**0.69**	**352**	⇓P		**Pn**	**10 09 07.8**	**0.0**
	baz=347							
TWE				*e*S		**Sn**	**10 09 18.8**	**+0.9**
	baz=347							
SLBB	**Yuanshan**	**0.73**	**350**	P		**Pn**	**10 09 08.5**	**+0.2**
	baz=347							
SLBB				*e*S		**Sn**	**10 09 19.4**	**+0.6**
	baz=347							
YHNB	**Yeheng**	**0.73**	**330**	⇓P		**Pn**	**10 09 08.4**	**0.0**
	baz=339							
YHNB				S		**Sn**	**10 09 18.4**	**-0.5**
	baz=339							
NSK	**Sanguang**	**0.75**	**329**	⇓*i*P		**Pn**	**10 09 08.4**	**-0.1**
	baz=338							
NSK				*e*S		**Sn**	**10 09 18.8**	**-0.5**
	baz=338							
YULB	**Yu-li**	**0.78**	**215**	P		**Pn**	**10 09 07.6**	**-1.3**
	baz=220							
DPDB	**Guoxing**	**0.78**	**270**	P		**Pn**	**10 09 09.3**	**+0.3**
	baz=277							
DPDB				S		**Sn**	**10 09 20.6**	**+0.6**
	baz=277							
NWLT	**Wulai**	**0.78**	**341**	⇓*e*P		**Pn**	**10 09 08.9**	**-0.1**
	baz=337							
NWLT				*e*S		**Sn**	**10 09 19.6**	**-0.5**
	baz=337							
SSLB	**Suanglung**	**0.79**	**252**	⇑P		**Pn**	**10 09 08.9**	**-0.2**
	baz=252							
SSLB				*e*S		**Sn**	**10 09 20.2**	**0.0**
	baz=252							
WHP	**Taichung City**	**0.80**	**288**	*e*P		**Pn**	**10 09 09.8**	**+0.5**
	baz=289							
WHP				*e*S		**Sn**	**10 09 21.0**	**+0.6**
	baz=289							
TWF1	**Yuli**	**0.81**	**213**	⇑*i*P		**Pn**	**10 09 08.1**	**-1.2**
	baz=218							
SMLT	**Sun Moon Lake**	**0.82**	**260**	*e*P		**Pn**	**10 09 09.6**	**+0.1**
	baz=260							
SMLT				*e*S		**Sn**	**10 09 21.6**	**+0.7**
	baz=260							
NTC	**Toucheng**	**0.82**	**3**	⇓P		**Pn**	**10 09 10.0**	**+0.6**
	baz=16							
NTC				*e*S		**Sn**	**10 09 21.4**	**+0.7**
	baz=16							
TYC	**Yuchr**	**0.85**	**262**	*e*P		**Pn**	**10 09 10.0**	**+0.1**
	baz=258							
WHYT	**Xinyi Township**	**0.91**	**249**	*e*P		**Pn**	**10 09 11.2**	**+0.5**
	baz=241							
WHYT				*e*S		**Sn**	**10 09 23.8**	**+0.8**
	baz=241							
LIOB	**Emei**	**0.93**	**311**	⇓*e*P		**Pn**	**10 09 11.3**	**+0.4**
	baz=314							
LIOB				*e*S		**Sn**	**10 09 24.5**	**+1.2**
	baz=314							
NSTT	**Nanjuang**	**0.93**	**310**	*e*P		**Pn**	**10 09 11.4**	**+0.5**
	baz=312							
NSTT				S		**Sn**	**10 09 24.2**	**+1.0**
	baz=312							
YUS	**Yu-Shan**	**0.93**	**235**	P		**Pn**	**10 09 11.2**	**-0.1**
	baz=234							
TIPB	**Shuangxi**	**0.94**	**3**	⇓*i*P		**Pn**	**10 09 11.5**	**+0.5**
	baz=359							
TIPB				S		**Sn**	**10 09 24.6**	**+1.0**
	baz=359							
FULB	**Fuli**	**0.94**	**208**	*e*P		**Pn**	**10 09 10.5**	**-0.5**
	baz=214							
FULB				*e*S		**Sn**	**10 09 24.1**	**+0.5**
	baz=214							
WLTB	**Daxi**	**0.95**	**330**	*e*P		**Pn**	**10 09 11.4**	**+0.3**
	baz=335							
WLTB				*e*S		**Sn**	**10 09 24.6**	**+0.9**
	baz=335							
NHDH	**Xindian Distri**	**0.96**	**346**	*e*P		**Pn**	**10 09 11.1**	**-0.1**
	baz=341							
NHDH				*e*S		**Sn**	**10 09 23.9**	**-0.1**
	baz=341							
TWA	**Mucha**	**0.96**	**349**	*e*P		**Pn**	**10 09 11.6**	**+0.3**
	baz=342							
TWA				*e*S		**Sn**	**10 09 24.7**	**+0.6**
	baz=342							
TWQ1	**Liyutan**	**0.97**	**289**	P		**Pn**	**10 09 11.6**	**+0.2**
	baz=291							
TWQ1				S		**Sn**	**10 09 24.9**	**+0.5**
	baz=291							
TATO	**Taipei**	**0.98**	**344**	*e*P		**Pn**	**10 09 11.1**	**-0.4**
	baz=347							
TATO				*e*S		**Sn**	**10 09 24.4**	**0.0**
	baz=347							
WJS	**Zhushan**	**0.98**	**258**	*e*P		**Pn**	**10 09 12.5**	**+0.9**
	baz=258							
WJS				*e*S		**Sn**	**10 09 26.5**	**+1.8**
	baz=258							
TWB1	**Santiao Chiao**	**0.99**	**11**	⇓P		**Pn**	**10 09 11.9**	**+0.3**
	baz=13							
TWB1				*e*S		**Sn**	**10 09 25.0**	**+0.3**
	baz=13							
CHKT	**Chengkung**	**1.00**	**202**	*e*P		**Pn**	**10 09 11.5**	**-0.3**
	baz=192							
CHKT				*e*S		**Sn**	**10 09 24.2**	**-0.8**
	baz=192							
NSY	**Sanyi**	**1.01**	**293**	*e*P		**Pn**	**10 09 12.3**	**+0.4**
	baz=294							
NSY				*e*S		**Sn**	**10 09 26.1**	**+0.9**
	baz=294							
WNT	**Mingjian**	**1.01**	**262**	*e*P		**Pn**	**10 09 12.8**	**+0.8**
	baz=262							
WNT				*e*S		**Sn**	**10 09 27.2**	**+2.0**
	baz=262							
TCU	**Taichung**	**1.01**	**277**	*e*P		**Pn**	**10 09 12.2**	**+0.2**
	baz=278							
TCU				*e*S		**Sn**	**10 09 26.6**	**+1.3**
	baz=278							
ALS	**Alishan**	**1.03**	**240**	⇑*e*P		**Pn**	**10 09 12.8**	**+0.3**
	baz=234							
ALS				*e*S		**Sn**	**10 09 26.7**	**+0.5**
	baz=234							
NMLH	**Miaoli**	**1.03**	**299**	*e*P		**Pn**	**10 09 12.5**	**+0.3**
	baz=290							
NMLH				*e*S		**Sn**	**10 09 26.5**	**+0.8**
	baz=290							
NWF	**Wu-fen Shan**	**1.03**	**0**	*e*P		**Pn**	**10 09 12.6**	**+0.2**
	baz=350							
NWF				*e*S		**Sn**	**10 09 27.1**	**+1.2**
	baz=350							
WFSB	**Wu-fen Shan**	**1.03**	**0**	*e*P		**Pn**	**10 09 12.5**	**+0.2**
	baz=350							
WFSB				*e*S		**Sn**	**10 09 27.2**	**+1.4**
	baz=350							
SBCB	**Hsinchu**	**1.05**	**316**	*e*P		**Pn**	**10 09 12.4**	**-0.1**
	baz=329							
SBCB				*e*S		**Sn**	**10 09 26.8**	**+0.7**
	baz=329							
PTSB	**Yuanli**	**1.06**	**293**	*e*P		**Pn**	**10 09 12.7**	**0.0**
	baz=295							
PTSB				*e*S		**Sn**	**10 09 26.9**	**+0.3**
	baz=295							
NCUH	**Zhongli**	**1.08**	**330**	*e*P		**Pn**	**10 09 12.9**	**0.0**
	baz=332							
NCU	**National Centr**	**1.08**	**330**	*e*P		**Pn**	**10 09 13.1**	**+0.2**
	baz=332							
NCU				*e*S		**Sn**	**10 09 27.1**	**+0.2**
	baz=332							
WDJ	**Dajia District**	**1.09**	**287**	*e*P		**Pn**	**10 09 13.1**	**+0.2**
	baz=288							
WDJ				*e*S		**Sn**	**10 09 27.5**	**+0.5**
	baz=288							
ELDTW	**Lidau**	**1.09**	**220**	*e*P		**Pn**	**10 09 12.2**	**-0.9**
	baz=216							
CHN5	**Tsauling**	**1.10**	**247**	⇑*e*P		**Pn**	**10 09 13.5**	**+0.3**
	baz=240							
CHN5				*e*S		**Sn**	**10 09 28.8**	**+1.3**
	baz=240							
TWS1	**Kuangyinshan**	**1.11**	**343**	*e*P		**Pn**	**10 09 13.5**	**+0.2**
	baz=345							
TWS1				*e*S		**Sn**	**10 09 27.9**	**+0.2**
	baz=345							
WCHH	**Zhanghua**	**1.12**	**273**	*e*P		**Pn**	**10 09 13.4**	**+0.1**
	baz=273							
WCHH				*e*S		**Sn**	**10 09 29.5**	**+1.7**
	baz=273							
YM01	**YM01**	**1.13**	**350**	*e*P		**Pn**	**10 09 13.4**	**-0.2**
	baz=343							
YM01				*e*S		**Sn**	**10 09 27.8**	**-0.3**
	baz=343							
YM10	**YM10**	**1.14**	**350**	*e*P		**Pn**	**10 09 13.2**	**-0.5**
	baz=343							
YM04	**YM04**	**1.14**	**349**	*e*P		**Pn**	**10 09 13.3**	**-0.3**
	baz=351							
YM04				*e*S		**Sn**	**10 09 26.8**	**-1.5**
	baz=351							
JYNG	**Yonaguni jima**	**1.14**	**68**	P		**Pn**	**10 09 13.8**	**+0.1**
JYNG						S	**10 09 28.8**	**+0.4**
YM05	**YM05**	**1.14**	**350**	*e*P		**Pn**	**10 09 13.5**	**-0.3**
	baz=342							
YM11	**YM11**	**1.15**	**351**	*e*P		**Pn**	**10 09 13.0**	**-0.8**
	baz=342							
YM03	**YM03**	**1.16**	**349**	*e*P		**Pn**	**10 09 13.6**	**-0.5**
	baz=342							
YM08	**YM08**	**1.16**	**352**	*e*P		**Pn**	**10 09 13.2**	**-0.8**
	baz=343							
WGK	**Gukeng**	**1.17**	**253**	*e*P		**Pn**	**10 09 14.8**	**+0.8**
	baz=244							
WGK				*e*S		**Sn**	**10 09 30.6**	**+1.7**
	baz=244							
ANP	**Anpu**	**1.17**	**348**	*e*P		**Pn**	**10 09 14.6**	**+0.4**
	baz=351							
WDLH	**Douliu**	**1.19**	**254**	*e*P		**Pn**	**10 09 14.7**	**+0.4**
	baz=245							
WDLH				*e*S		**Sn**	**10 09 31.2**	**+1.8**
	baz=245							
YOJ	**Yonaguni jima**	**1.20**	**69**	P		**Pn**	**10 09 14.6**	**+0.1**
	baz=69							
YOJ				*e*S		**Sn**	**10 09 29.9**	**+0.1**
	baz=69							
YOJ	**Yonaguni jima**	**1.20**	**69**	P		**Pn**	**10 09 14.6**	**+0.1**
YOJ				*e*S		**Sn**	**10 09 30.2**	**+0.4**
STYT	**Tauyuan**	**1.28**	**228**	*e*P		**Pn**	**10 09 16.2**	**+0.7**
	baz=226							
STYT				*e*S		**Sn**	**10 09 32.6**	**+1.0**
	baz=226							
CHN4	**Tsaushan**	**1.28**	**238**	*e*P		**Pn**	**10 09 16.2**	**+0.6**
	baz=238							
CHN4				*e*S		**Sn**	**10 09 33.8**	**+2.0**
	baz=238							
TPUB	**Ta-pu**	**1.28**	**236**	P		**Pn**	**10 09 15.8**	**+0.2**
	baz=227							
TPUB				*e*S		**Sn**	**10 09 32.7**	**+1.0**
	baz=227							
CHN2	**Minshiung**	**1.29**	**248**	*e*P		**Pn**	**10 09 16.8**	**+1.1**
	baz=240							
CHN2				*e*S		**Sn**	**10 09 34.5**	**+2.5**
	baz=240							
RLNB	**Erlin**	**1.31**	**264**	*e*P		**Pn**	**10 09 16.1**	**+0.2**

JKRS	**Kuro-shima**	**2.05**	**84**	P		**Pn**	**10 09 26.6**	**+0.6**
JKRS				S		**Sn**	**10 09 51.4**	**+1.0**
PHUB	**P'eng-hu**	**2.09**	**256**	*eP*		**Pn**	**10 09 25.3**	**-1.2**
	baz=269							
PHUB				*eS*		**Sn**	**10 09 49.7**	**-1.7**
	baz=269							
PNG	**Penghu**	**2.09**	**258**	*eP*		**Pn**	**10 09 25.4**	**-1.2**
	baz=258							
WDGT	**Dungji**	**2.09**	**249**	*eP*		**Pn**	**10 09 26.1**	**-0.5**
	baz=248							
JIJ	**Ishigaki jima**	**2.18**	**81**	P		**Pn**	**10 09 27.7**	**-0.1**
JIJ				S		**Sn**	**10 09 53.0**	**-0.7**
VCHM	**Qimei**	**2.31**	**250**	*eP*		**Pn**	**10 09 28.9**	**-0.6**
	baz=249							
VWUC	**VWUC**	**2.33**	**295**	*eP*		**Pn**	**10 09 28.5**	**-1.3**
	baz=286							
PTTC	**Pingtan**	**2.34**	**309**	*eP*		**Pn**	**10 09 28.5**	**-1.5**
	baz=311							
JISG	**Ishigakijimahi**	**2.38**	**76**	P		**Pn**	**10 09 30.3**	**-0.1**
JISG				*eS*		**Sn**	**10 09 57.7**	**-0.7**
PTMZ	**Houxiangcun**	**2.62**	**293⇑**	*eP*		**Pn**	**10 09 32.6**	**-1.2**
	baz=285							
MATB	**Ma-tsu**	**2.69**	**322**	*eP*		**Pn**	**10 09 33.2**	**-1.5**
	baz=333							
JTJ	**Tarama**	**2.73**	**77**	P		**Pn**	**10 09 35.6**	**+0.3**
JTJ				*eS*		**Sn**	**10 10 07.0**	**-0.2**
KNM	**Kinmen**	**3.08**	**278**	*eP*		**Pn**	**10 09 40.3**	**+0.2**
	baz=279							
LYJJ	**Jianjiangzhen**	**3.10**	**324**	*eP*		**Pn**	**10 09 38.7**	**-1.7**
	baz=336							
KNMB	**Chin-men Tao**	**3.12**	**279**	*eP*		**Pn**	**10 09 39.2**	**-1.5**
	baz=280							
XPSS	**Dashiqiu**	**3.22**	**334**	*eP*		**Pn**	**10 09 40.6**	**-1.4**
	baz=336							
MHZQ	**Yeshan**	**3.23**	**310**	*eP*		**Pn**	**10 09 40.9**	**-1.3**
	baz=313							
AXDP	**Jialang**	**3.58**	**285**	*eP*		**Pn**	**10 09 45.6**	**-1.3**
	baz=287							
ZPLA	**Ao Xicun**	**3.69**	**269**	*eP*		**Pn**	**10 09 46.7**	**-1.7**
	baz=269							

*IDC **28** 10:09:36.3±2.2, 11°.80N×90°.37W, h0km, mb3.3/2, mb1 3.8/7, mb1mx3.6/34, mbtmp3.7/7, ML3.4/5, MS2.8/2, Ms1 2.8/2, ms1mx2.5/23, Error ellipse: s-maj=54.6km s-min=22.7km az=40.0*
*INET **28** 10:09:38.7, 11°.93N×90°.26W, h15km, ML3.6*
*UCR **28** 10:09:39.0±1.0, 11°.86N×90°.18W, h35km±999km, ML3.7*
*SNET **28** 10:09:39.0±1.1, 11°.88N×90°.19W, h35km±999km, ML3.8*
*GCG **28** 10:09:40.0±0.7, 12°.16N×90°.56W, h0km±135km, MD4.1*
ISC 28 10:09:42.1±1.3, 11°.97N±0°.08×90°.20W±0°.06, h35km, n42, σ1°65/62, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**1.94**	**17**	*eP*	**Pn**	**10 10 11.1**	**-1.7**
SBLS				*eS*	**Sn**	**10 10 36.8**	**+0.7**
SBLS	**San Blas**	**1.94**	**17**	*eP*	**Pn**	**10 10 11.1**	**-1.7**
SBLS				*eS*	**Sn**	**10 10 36.8**	**+0.7**
SNET	**Serv Nac Est T**	**1.95**	**29**	*eP*	**Pn**	**10 10 11.0**	**-1.8**
SNET				*eS*	**Sn**	**10 10 35.6**	**-0.5**
SNET				IAML		10 10 41.1	
	comp=Z,731nm,0.3s						
SNET	**Serv Nac Est T**	**1.95**	**29**	*eP*	**Pn**	**10 10 11.0**	**-1.8**
SNET				*eS*	**Sn**	**10 10 35.6**	**-0.5**
SNET				IAML		10 10 41.1	
	comp=Z,731nm,0.3s						
BOQS	**Boqueron**	**1.97**	**27**	*eP*	**Pn**	**10 10 11.7**	**-1.5**
BOQS				*eS*	**Sn**	**10 10 36.8**	**0.0**
UEES	**Universidad Ev**	**1.97**	**28**	*eP*	**Pn**	**10 10 11.5**	**-1.6**
UEES				*eS*	**Sn**	**10 10 37.4**	**+0.8**
UEES				IAML		10 10 42.7	
	comp=Z,656nm,0.4s						
UEES	**Universidad Ev**	**1.97**	**28**	*eP*	**Pn**	**10 10 11.5**	**-1.6**
UEES				*eS*	**Sn**	**10 10 37.4**	**+0.8**
UEES				IAML		10 10 42.7	
	comp=Z,656nm,0.4s						
SNJE	**San Jose**	**1.97**	**17**	*eP*	**Pn**	**10 10 11.8**	**-1.5**
SNJE				*eS*	**Sn**	**10 10 36.5**	**-0.3**
SNJE	**San Jose**	**1.97**	**17**	*eP*	**Pn**	**10 10 11.8**	**-1.5**
SNJE				*eS*	**Sn**	**10 10 36.5**	**-0.3**
LFRS	**El Faro**	**1.98**	**34**	*eP*	**Pn**	**10 10 11.4**	**-1.9**
LFRS				*eS*	**Sn**	**10 10 37.0**	**+0.1**
OPAM	**Oficina de Pla**	**1.98**	**29**	*eP*	**Pn**	**10 10 11.7**	**-1.7**
OPAM				*eS*	**Sn**	**10 10 37.2**	**+0.2**
OPAM				IAML		10 10 43.3	
	comp=Z,825nm,0.2s						
OPAM	**Oficina de Pla**	**1.98**	**29**	*eP*	**Pn**	**10 10 11.7**	**-1.7**
OPAM				*eS*	**Sn**	**10 10 37.2**	**+0.2**
OPAM				IAML		10 10 43.3	
	comp=Z,825nm,0.2s						
RTR	**El Retiro**	**1.99**	**16**	*eP*	**Pn**	**10 10 12.1**	**-1.4**
RTR				*eS*	**Sn**	**10 10 38.5**	**+1.3**
RTR	**El Retiro**	**1.99**	**16**	*eP*	**Pn**	**10 10 12.1**	**-1.4**
RTR				*eS*	**Sn**	**10 10 38.5**	**+1.3**
LFU	**La Fuente**	**2.06**	**31**	*eP*	**Pn**	**10 10 13.2**	**-1.2**
LFU	**La Fuente**	**2.06**	**31**	*eP*	**Pn**	**10 10 13.2**	**-1.2**
COEG	**Centro de Oper**	**2.08**	**38**	*eP*	**Pn**	**10 10 12.4**	**-2.2**
ALJI	**Alcalda de J**	**2.08**	**50**	*eP*	**Pn**	**10 10 12.5**	**-2.1**
LBRS	**Las Brisas**	**2.09**	**33**	*eP*	**Pn**	**10 10 13.3**	**-1.4**
PAVA	**Las Pavas**	**2.12**	**35**	*eP*	**Pn**	**10 10 13.4**	**-1.8**
PAVA	**Las Pavas**	**2.12**	**35**	*eP*	**Pn**	**10 10 13.4**	**-1.8**
IXG	**Ixpaco**	**2.20**	**354**	*eP*	**Pn**	**10 10 14.9**	**-1.5**
COEB	**Comit de Eme**	**2.23**	**47**	*eP*	**Pn**	**10 10 14.6**	**-2.1**
TECA	**Tecapa**	**2.24**	**47**	*eP*	**Pn**	**10 10 14.9**	**-2.1**
TECA	**Tecapa**	**2.24**	**47**	*eP*	**Pn**	**10 10 14.9**	**-2.1**
JUCU	**Jucuarįn**	**2.29**	**56**	*eP*	**Pn**	**10 10 14.8**	**-2.7**
FUG	**Fuego 3**	**2.54**	**346**	*eP*	**Pn**	**10 10 19.5**	**-1.5**
FUG				*eS*	**Sn**	**10 10 50.3**	**-0.5**
MTO3	**Montecristo**	**2.55**	**19**	*eP*	**Pn**	**10 10 20.2**	**-1.0**
MTO3	**Montecristo**	**2.55**	**19**	*eP*	**Pn**	**10 10 20.2**	**-1.0**
NBG	**Las Nubes**	**2.60**	**357**	*eP*	**Pn**	**10 10 22.1**	**+0.1**
LCND	**La Caada**	**2.62**	**59**	*eP*	**Pn**	**10 10 19.4**	**-2.5**
LCND				*eS*	**Sn**	**10 10 51.1**	**-1.4**
LCND	**La Caada**	**2.62**	**59**	*eP*	**Pn**	**10 10 19.4**	**-2.5**
LCND				*eS*	**Sn**	**10 10 51.1**	**-1.4**
FAGO	**Alcalda de S**	**2.66**	**50**	*eP*	**Pn**	**10 10 21.0**	**-1.6**
APG	**El Apazote**	**3.02**	**355**	Pn	**Pn**	**10 10 27.2**	**-0.6**
	comp=Z,12nm,0.3s,baz=183,slow=19,SNR=111						
APG				Sn	**Sn**	**10 11 03.2**	**+0.3**
	comp=Z,11nm,0.3s,baz=111,slow=22,SNR=10						
APG				LR	LR	10 11 38.7	
	comp=Z,136nm,20.3s,baz=208,slow=38						
STG3	**Santiaguito 3,**	**3.03**	**334**	*eP*	**Pn**	**10 10 25.6**	**-2.2**
JTS	**Las Juntas de**	**5.42**	**107**	Pn	**Pn**	**10 10 59.8**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=308,slow=12,SNR=8.6						
JTS				Sn	**Sn**	**10 12 00.6**	**-1.0**
	comp=Z,1.8nm,0.3s,baz=141,slow=23,SNR=7.4						
CMIG	**Matias Romero**	**6.81**	**319**	Pn	**Pn**	**10 11 18.1**	**-1.6**
	comp=Z,0.4nm,0.3s,baz=138,slow=11,SNR=12						
CMIG				Sn	**Sn**	**10 12 30.1**	**-6.0**
	comp=Z,0.4nm,0.3s,baz=114,slow=9.9,SNR=2.3						
TEIG	**Tepich**	**8.41**	**12**	Pn	**Pn**	**10 11 42.0**	**+0.4**
	comp=Z,2.8nm,0.3s,baz=139,slow=14,SNR=25						
TEIG				LR	LR	10 15 31.7	
	comp=Z,76nm,19.5s,baz=49,slow=41						
SDV	**Santo Domingo**	**19.48**	**97**	P	**P**	**10 14 07.4**	**+0.9**
	comp=Z,0.2nm,0.3s,baz=282,slow=9.0,SNR=3.7						
TXAR	**Lajitas Array**	**21.35**	**326**	P	**P**	**10 14 27.5**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=153,slow=13,SNR=8.1						
TORD	**Torodi Ar. Bea**	**89.14**	**77**	P	**P**	**10 22 36.2**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=270,slow=3.6,SNR=2.6						
CMAR	**Chiang Mai Arr**	**148.44**	**343**	PKPbc	**PKPdf**	**10 29 23.6**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=35,slow=3.3,SNR=2.9						

*THE **28** 10:12:13.8, 38°.24N×20°.35E, h11km±1km, ML2.7/4, Error ellipse: s-maj=1.9km s-min=0.6km az=245.0*
*ATH **28** 10:12:14.5, 38°.27N×20°.41E, h10km±4km, ML2.7/3, Error ellipse: s-maj=4.3km s-min=1.2km az=137.0*
ISC 28 10:12:13.3±1.5, 38°.26N±0°.04×20°.34E±0°.08, h14km±7km, n20, σ0°76/29, 4C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.14**	**125**	P	**Pg**	**10 12 17.3**	**+0.3**
ARG2				S	**Sg**	**10 12 19.2**	**-0.3**
KEF2	**Argostoli. Kep**	**0.15**	**129**	P	**Pg**	**10 12 17.3**	**+0.2**
KEF2				S	**Sg**	**10 12 19.5**	**-0.2**
VLS	**Valsamata**	**0.21**	**113**	P	**Pg**	**10 12 18.0**	**-0.1**
VLS				S	**Sg**	**10 12 20.9**	**-0.5**
	4µm,0.0s						
VLS	**Valsamata**	**0.21**	**113**	P	**Pg**	**10 12 18.0**	**-0.1**
VLS				S	**Sg**	**10 12 20.9**	**-0.5**
KFL	**Anninata**	**0.39**	**113**	P	**Pg**	**10 12 21.1**	**0.0**
KFL				S	**Sg**	**10 12 26.6**	**+0.2**
	3µm,0.3s						
KFL	**Anninata**	**0.39**	**113**	P	**Pg**	**10 12 20.9**	**-0.2**
KFL				S	**Sg**	**10 12 26.0**	**-0.3**
EVGI	**Lefkada island**	**0.44**	**35**	P	**Pg**	**10 12 22.5**	**+0.4**
EVGI				S	**Sg**	**10 12 29.0**	**+1.0**
EVGI	**Lefkada island**	**0.44**	**35**	P	**Pg**	**10 12 22.4**	**+0.4**
VLMS	**Volimes, Zakyn**	**0.46**	**146**	P	**Pg**	**10 12 23.1**	**+0.6**
VLMS				S	**Sb**	**10 12 29.6**	**-0.4**
VLMS				AML	AML	10 12 30.6	
	comp=N,8934µm,0.4s						
VLMS				AML	AML	10 12 32.0	
	comp=E,5586µm,0.2s						
LKD2	**Lefkada island**	**0.58**	**25**	P	**Pg**	**10 12 24.9**	**+0.1**
LKD2				S	**Sb**	**10 12 34.5**	**+1.0**
	comp=E,455nm,0.8s						
LKD2	**Lefkada island**	**0.58**	**25**	P	**Pg**	**10 12 25.2**	**+0.4**
LKD2				AML	AML	10 12 41.3	
	comp=E,659µm,0.2s						
LKD2				AML	AML	10 12 43.1	
	comp=N,870µm,0.4s						
PDO	**Prodromos**	**0.74**	**63**	P	**Pg**	**10 12 27.6**	**-0.3**
PDO	**Prodromos**	**0.74**	**63**	P	**Pg**	**10 12 27.5**	**-0.3**
PDO				S	**Sg**	**10 12 37.7**	**+0.1**
PDO				AML	AML	10 12 39.9	
	comp=E,1266µm,0.4s						
PDO				AML	AML	10 12 40.5	
	comp=N,1478µm,0.3s						
PVO	**Paravola**	**1.00**	**69**	P	**Pg**	**10 12 32.5**	**-0.1**
PVO				S	**Sn**	**10 12 47.8**	**+1.0**
	comp=N,435nm,0.5s						
ARR	**Arges**	**7.79**	**23**	⇑P	**Pg**	**10 14 39.4**	**-3.0**
VOIR		**7.98**	**25**	⇑P	Pb	10 14 37.8	+6.4
MLR	**Muntele Rosu**	**8.34**	**28**	⇑P	**Pb**	**10 14 37.8**	**+0.2**
TLCR		**9.38**	**40**	⇓P	Pn	10 14 34.1	+6.1
TRPA	**Tarpa**	**9.99**	**9**	⇓P	**Pn**	**10 14 36.9**	**+0.5**
BURAR	**Bucovina Array**	**10.01**	**19**	⇑P	**Pn**	**10 14 36.3**	**-0.4**

*ATH **28** 10:20:24.4, 38°.18N×20°.41E, h16km±1km, ML3.4/9, Error ellipse: s-maj=2.7km s-min=1.2km az=76.0*
*THE **28** 10:20:24.1, 38°.15N×20°.34E, h2km±14km, ML3.2/5, Error ellipse: s-maj=14.2km s-min=0.4km az=80.0*
*IDC **28** 10:20:27.7±17.0, 38°.88N×20°.67E, h0km, mb3.8/2, mb1 3.6/3, mb1mx3.3/28, mbtmp3.6/3, ML2.6/1, Error ellipse: s-maj=369.7km s-min=84.1km az=22.0*
ISC 28 10:20:25.4±1.1, 38°.20N±0°.03×20°.45E±0°.06, h10km±5km, n38, σ0°74/50, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.04**	**125**	P	**Pg**	**10 20 28.0**	**-0.5**
ARG2				S	**Sg**	**10 20 28.2**	**-0.5**
KEF1	**Kardakata, Kep**	**0.08**	**13**	P	**Pg**	**10 20 27.8**	**0.0**
KEF1				S	**Sg**	**10 20 29.7**	**+0.2**
VLS	**Valsamata**	**0.11**	**102**	P	**Pg**	**10 20 28.0**	**-0.2**
VLS				S	**Sg**	**10 20 30.5**	**+0.2**
	28µm,0.2s						
VLS	**Valsamata**	**0.11**	**102**	P	**Pg**	**10 20 28.0**	**-0.2**
VLS				S	**Sg**	**10 20 30.5**	**+0.2**
VLS				AML	AML	10 20 30.7	
	comp=N,63600µm,0.2s						
VLS				AML	AML	10 20 31.2	
	comp=E,44723µm,0.1s						
KFL	**Anninata**	**0.28**	**109**	P	**Pg**	**10 20 30.9**	**-0.2**
KFL				S	**Sb**	**10 20 36.2**	**-1.1**
	comp=E,12µm,0.4s						
KFL	**Anninata**	**0.28**	**109**	P	**Pg**	**10 20 31.0**	**-0.2**
KFL				S	**Sg**	**10 20 35.7**	**+0.8**
KFL				AML	AML	10 20 36.5	
	comp=E,22791µm,0.4s						
KFL				AML	AML	10 20 38.7	
	comp=N,23886µm,0.5s						
VLMS	**Volimes, Zakyn**	**0.36**	**152**	P	**Pg**	**10 20 31.8**	**-0.8**
VLMS				S	**Sg**	**10 20 37.7**	**+0.2**
VLMS				AML	AML	10 20 40.1	
	comp=N,24292µm,0.4s						
VLMS				AML	AML	10 20 42.8	
	comp=E,14688µm,0.5s						
EVGI	**Lefkada island**	**0.45**	**21**	P	**Pg**	**10 20 34.1**	**-0.1**
EVGI				S	**Sb**	**10 20 42.1**	**-0.1**
EVGI	**Lefkada island**	**0.45**	**21**	P	**Pg**	**10 20 32.6**	**-1.7**
MGNA	**Meganis**	**0.53**	**31**	P	**Pg**	**10 20 35.0**	**-0.7**
MGNA				S	**Sb**	**10 20 43.6**	**-0.8**
MGNA				AML	AML	10 20 45.1	
	comp=N,12437µm,0.3s						
MGNA				AML	AML	10 20 45.3	
	comp=E,16375µm,0.4s						
LKD2	**Lefkada island**	**0.61**	**16**	P	**Pg**	**10 20 37.0**	**-0.2**
LKD2				S	**Sb**	**10 20 47.2**	**+0.4**
	comp=E,1µm,0.3s						
LKD2	**Lefkada island**	**0.61**	**16**	P	**Pg**	**10 20 37.1**	**-0.1**
TSLK	**Tsoukalades, L**	**0.65**	**15**	P	**Pg**	**10 20 37.3**	**-0.6**
TSLK				S	**Sb**	**10 20 47.9**	**+0.1**
	comp=E,2µm,0.6s						
TSLK	**Tsoukalades, L**	**0.65**	**15**	P	**Pg**	**10 20 37.3**	**-0.6**
PDO	**Prodromos**	**0.70**	**55**	P	**Pg**	**10 20 39.0**	**+0.1**
PDO	**Prodromos**	**0.70**	**55**	P	**Pg**	**10 20 39.0**	**+0.1**
RLS	**Riolos of Patr**	**0.82**	**100**	P	**Pg**	**10 20 40.5**	**-0.6**
RLS				S	**Sn**	**10 20 54.0**	**-1.0**
	comp=E,840nm,0.6s						
RLS	**Riolos of Patr**	**0.82**	**100**	P	**Pg**	**10 20 40.7**	**-0.4**
RLS				AML	AML	10 20 59.9	
	comp=E,1598µm,0.4s						
RLS				AML	AML	10 21 00.9	
	comp=N,1807µm,0.7s						
PVO	**Paravola**	**0.94**	**64**	P	**Pg**	**10 20 43.5**	**0.0**
PVO	**Paravola**	**0.94**	**64**	P	**Pg**	**10 20 43.5**	**0.0**
DRO	**Drossia**	**1.03**	**104**	P	**Pg**	**10 20 45.0**	**-0.1**
DRO	**Drossia**	**1.03**	**104**	P	**Pg**	**10 20 44.3**	**-0.8**
DRO				AML	AML	10 21 09.1	
	comp=N,3326µm,0.4s						
DRO				AML	AML	10 21 11.0	
	comp=E,4270µm,0.4s						
EFP	**Efpalio**	**1.17**	**78**	P	**Pb**	**10 20 47.0**	**-0.6**
EFP	**Efpalio**	**1.17**	**78**	P	**Pb**	**10 20 47.0**	**-0.6**
AMT	**Artemida-Makis**	**1.20**	**123**	P	**Pg**	**10 20 48.1**	**-0.3**
AMT				AML	AML	10 21 11.3	
	comp=N,2714µm,0.7s						
AMT				AML	AML	10 21 12.5	
	comp=E,3102µm,0.6s						
LAKA	**Lakka**	**1.21**	**88**	P	**Pn**	**10 20 47.4**	**-0.9**
ANX	**Ano Chora**	**1.22**	**71**	P	**Pn**	**10 20 48.4**	**-0.2**
ANX				AML	AML	10 21 14.2	
	comp=N,3749µm,0.6s						
ANX				AML	AML	10 21 14.5	
	comp=E,4086µm,0.6s						
SERG	**Sergoula**	**1.28**	**80**	P	**Pn**	**10 20 48.6**	**-0.8**
SERG	**Sergoula**	**1.28**	**80**	P	**Pn**	**10 20 48.6**	**-0.8**
TRIZ	**Trizonia**	**1.29**	**82**	P	**Pn**	**10 20 48.7**	**-0.7**
TRIZ	**Trizonia**	**1.29**	**82**	P	**Pn**	**10 20 48.7**	**-0.7**
KALE	**Kalithea**	**1.34**	**81**	P	**Pn**	**10 20 49.7**	**-0.6**
KLV	**Kalavryta, Ach**	**1.35**	**96**	P	**Pb**	**10 20 50.4**	**-0.4**
KLV				AML	AML	10 21 18.2	
	comp=E,836µm,0.7s						
KLV				AML	AML	10 21 18.8	
	comp=N,673µm,0.7s						
ITM	**Ithomi**	**1.55**	**131**	P	**Pn**	**10 20 53.4**	**+0.3**
PYL	**PYLOS**	**1.66**	**141**	P	**Pn**	**10 20 54.9**	**+0.4**
BRTR	**Keskin Array B**	**10.39**	**77**	Pn	**Pn**	**10 22 57.6**	**+3.1**
	comp=N,0.1nm,0.3s,baz=273,slow=15,SNR=2.5						
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**10 28 42.9**	**-0.6**
	comp=N,0.5nm,0.5s,baz=274,slow=7.3,SNR=2.7						
ZALV	**Zalesovo Beam**	**45.72**	**48**	P	**P**	**10 28 46.0**	**-0.3**
	comp=N,0.9nm,0.5s,baz=273,slow=7.9,SNR=4.7						

MAN 28 10:23:59.9, 9°.91N×123°.82E, h7km, mb4.4, ML3.3, MS3.1, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.43**	**20**	*eP*	Pg	10 24 08.9	+0.5
MSLP	**Maasin**	**1.05**	**77**	*eP*	Pg	10 24 20.1	0.0
MSLP				*eS*	Sn	10 24 35.6	-0.4
GUIM	**Jordan**	**1.41**	**301**	*eP*	Pn	10 24 25.5	-0.5
GUIM				*eS*	Sn	10 24 44.9	+0.1

IDC 28 10:27:54.2±353.0, 53°.74N×43°.51E, h0km, Error ellipse: s-maj=147.5km s-min=86.9km az=134.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.68**	**312**	*i*		10 55 30.0	
	baz=127,slow=340,SNR=2.2						
I31KZ	**AKTYUBINSK INF**	**9.55**	**105**	*i*		11 26 00.0	
	baz=299,slow=385,SNR=10						
I46RU	**ZALESOVO INFRA**	**24.13**	**73**	*i*		12 57 40.0	
	baz=278,slow=339,SNR=1.5						
I18DK	**QAANAAQ INFRAS**	**42.71**	**343**	*i*		15 09 40.0	
	baz=49,slow=337,SNR=1.7						

MAN 28 10:33:27.3, 16°.24N×122°.44E, h20km, mb5.0, ML3.9, MS4.1, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.82**	**359**	*eP*	Pb	10 33 42.5	-0.3
PALP				*eS*	Sn	10 33 55.1	0.0
CAUP	**Cauayan**	**0.91**	**320**	*eP*	Pb	10 33 43.6	-0.8
CAUP				*eS*	Sn	10 33 57.6	0.0
BALP	**Baler**	**0.97**	**239**	*eP*	Pb	10 33 44.7	-0.7
BALP				*eS*	Sb	10 33 58.2	+0.4
POLP	**Polilio Island**	**1.58**	**198**	*eP*	Pn	10 33 54.5	+0.3
POLP				*eS*	Sb	10 34 14.9	-0.5
SMPP	**San Manuel, Pa**	**1.69**	**267**	*eP*	Pn	10 33 55.8	0.0
SMPP				*eS*	Sn	10 34 17.6	+0.7
APYP	**Conner**	**1.98**	**325**	*eP*	Pn	10 33 59.6	-0.1
APYP				*eS*	Sn	10 34 24.9	+1.1
LQP	**Lukban**	**2.29**	**202⇑**	*eP*	Pn	10 34 05.5	+1.4
LQP				*i S*	Sb	10 34 38.6	+2.5
GQP	**Guinayangan**	**2.32**	**180⇓**	*eP*	Pn	10 34 03.4	-1.1
GQP				*i S*	Sn	10 34 34.0	+1.6
BOLP	**Bolinao**	**2.43**	**274**	*eP*	Pn	10 34 06.9	+1.1

*ATH **28** 10:36:06.9, 38°.26N×20°.44E, h15km±3km, ML3.0/3, Error ellipse: s-maj=3.8km s-min=1.1km az=107.0*
*THE **28** 10:36:07.0, 38°.24N×20°.41E, h11km, ML2.9/4, Error ellipse: s-maj=0.8km s-min=0.3km az=254.0*
ISC 28 10:36:06.6±1.6, 38°.25N±0°.03×20°.41E±0°.08, h14km±6km, n16, σ0°36/29, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.10**	**140**	P	**Pg**	**10 36 09.6**	**-0.1**
ARG2				S	**Sg**	**10 36 11.4**	**-0.3**
VLS	**Valsamata**	**0.16**	**118**	P	**Pg**	**10 36 10.5**	**-0.1**
VLS				S	**Sg**	**10 36 13.2**	**-0.1**
VLS	**Valsamata**	**0.16**	**118**	P	**Pg**	**10 36 10.5**	**-0.1**
VLS				S	**Sg**	**10 36 13.1**	**-0.1**
FSK	**Fiskardo**	**0.24**	**30**	P	**Pg**	**10 36 12.0**	**+0.2**
FSK				S	**Pg**	**10 36 16.0**	**+0.7**
	5µm,0.2s						
FSK	**Fiskardo**	**0.24**	**30**	P	**Pg**	**10 36 11.9**	**+0.2**
FSK				S	**Sg**	**10 36 15.6**	**+0.3**
FSK				AML	AML	10 36 16.2	
	comp=N,10551µm,0.2s						
FSK				AML	AML	10 36 16.4	
	comp=E,10968µm,0.1s						
KFL	**Anninata**	**0.33**	**115**	P	**Pg**	**10 36 13.5**	**+0.1**
KFL				S	**Sg**	**10 36 18.5**	**+0.5**
	comp=E,8µm,0.3s						
KFL	**Anninata**	**0.33**	**115**	P	**Pg**	**10 36 13.5**	**+0.1**
KFL				S	**Sg**	**10 36 18.4**	**+0.4**
EVGI	**Lefkada island**	**0.42**	**28**	P	**Pg**	**10 36 15.0**	**+0.1**
EVGI				S	**Sb**	**10 36 21.6**	**-0.3**
EVGI	**Lefkada island**	**0.42**	**28**	P	**Pg**	**10 36 15.0**	**+0.1**
EVGI				S	**Sg**	**10 36 20.6**	**0.0**
VLMS	**Volimes, Zakyn**	**0.43**	**152**	P	**Pg**	**10 36 15.0**	**-0.1**
VLMS				S	**Sg**	**10 36 21.3**	**+0.4**
VLMS				AML	AML	10 36 23.4	
	comp=E,7669µm,0.2s						
VLMS				AML	AML	10 36 24.2	
	comp=N,5244µm,0.3s						
PDO	**Prodromos**	**0.70**	**60**	P	**Pg**	**10 36 19.9**	**-0.3**
PDO				S	**Sg**	**10 36 28.5**	**-0.9**
PDO				AML	AML	10 36 32.2	
	comp=E,3243µm,0.6s						
PDO				AML	AML	10 36 33.1	
	comp=N,2935µm,0.3s						
RLS	**Riolos of Patr**	**0.86**	**103**	P	**Pg**	**10 36 23.2**	**0.0**
PVO	**Paravola**	**0.95**	**67**	P	**Pg**	**10 36 24.7**	**-0.2**
EFP	**Efpalio**	**1.19**	**81**	P	**Pn**	**10 36 28.8**	**0.0**
EFP				S	**Sn**	**10 36 45.4**	**+0.6**
	comp=N,410nm,0.5s						
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**10 36 29.4**	**-0.1**
LAKA				S	**Sg**	**10 36 47.0**	**+0.5**
	comp=N,265nm,0.6s						
EVR	**Evrytania**	**1.28**	**58**	P	**Pn**	**10 36 29.9**	**-0.3**

IDC 28 10:44:07.4±478.0, 54°.27N×43°.36E, h0km, Error ellipse: s-maj=179.9km s-min=95.7km az=127.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**4.27**	**308**	*i*		11 11 17.1	
	baz=126,slow=340						
I31KZ	**AKTYUBINSK INF**	**9.78**	**107**	*i*		11 44 48.8	
	baz=305,slow=331,SNR=9.6						
I18DK	**QAANAAQ INFRAS**	**42.18**

MRKS	**Merke**	**2.71**	**110**	Pg	Pb	11 06 38.2	+0.6	
	8.2nm,0.4s							
MRKS				Lg	Lg	11 07 15.4		
	15nm,0.5s							
BTLS	**Baital**	**3.35**	**65**	Pg	Pg	11 06 51.9	-0.5	
	11nm,0.5s							
BTLS				Lg	Lg	11 07 38.9		
	7.0nm,0.4s							
SGDS	**Sogindy**	**3.55**	**92**	Pg	Pb	11 06 53.1	+1.2	
SGDS				Lg	Lg	11 07 41.0		
AAK	**Ala-Archa**	**3.62**	**106**	Pg	Pb	11 06 53.9	+0.7	
	4.0nm,0.5s							
AAK				Lg	Lg	11 07 44.5		
	3.3nm,0.6s							
DGS	**Degeres**	**4.40**	**94**	Pg	Pg	11 07 10.5	-2.0	
	4.2nm,0.5s							
DGS				Lg	Lg	11 08 10.1		
	15nm,0.6s							
KST	**Kastek**	**4.57**	**96**	Pg	Pb	11 07 12.4	+3.0	
	5.0nm,0.5s							
KST				Lg	Lg	11 08 13.5		
	6.8nm,0.7s							
KTBS	**Karatobe**	**5.02**	**88**	Pg	Pb	11 07 19.9	+3.0	
	3.0nm,0.5s							
KTBS				Lg	Lg	11 08 27.0		
	12nm,0.5s							
IZV	**Izvestkoviy**	**5.04**	**95**	Pg	Pg	11 07 21.3	-3.5	
	3.3nm,0.6s							
IZV				Lg	Lg	11 08 28.8		
	9.5nm,0.5s							
ARXS	**Arharly**	**5.84**	**82**	Pg	Pg	11 07 36.9	-3.3	
	1.4nm,0.4s							
ARXS				Lg	Lg	11 08 55.3		
	4.7nm,0.5s							

NEIC ***28*** *11:12:23.7±1.3,24.˚42S±0.˚09×179.˚8W±0.˚1, h481km±6km, mb4.7/52, Error ellipse: s-maj=16.2km s-min=12.5km az=109.0*

IDC ***28*** *11:12:23.8±1.3,24.˚44S×179.˚70W, h479km±13km, mb3.7/13, mb1 4.0/16, mb1mx3.9/22, mbtmp4.6/16, Error ellipse: s-maj=18.8km s-min=13.6km az=125.0*

ISC 28 11:12:24.7±0.3, 24.˚34S±0.˚05×179.˚77W±0.˚06, h490km, n213, σ1§64/236, mb4.7/38, 5C, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.16**	**162**	P	**P**	**11 13 50.1**	**-2.3**
	40nm,0.3s,baz=288,slow=20,SNR=2.3						
RAO				S	**S**	**11 15 04.2**	**0.0**
	89nm,0.3s,baz=86,slow=24,SNR=2.0						
RAO	**Raoul Island**	**5.16**	**162**	P	**P**	**11 13 50.8**	**-1.7**
RAO					**S**	**11 15 01.0**	**-3.3**
GLKZ	**Green Lake**	**5.17**	**162**	P	**P**	**11 13 53.0**	**+0.5**
GLKZ				S	**S**	**11 15 03.9**	**-0.5**
MSVF	**Nonsavu**	**6.88**	**342**	P	**P**	**11 14 12.6**	**+3.0**
NIUE	**Niue**	**10.54**	**62**	P	**P**	**11 14 47.8**	**0.0**
OUZ	**Omahuta**	**12.27**	**206**	P	**P**	**11 15 04.5**	**-1.5**
AFI	**Afiamalu**	**12.83**	**37**	P	**P**	**11 15 11.3**	**-0.9**
	15nm,0.3s,baz=219,slow=7.5,SNR=12						
AFI				S	**S**	**11 17 26.6**	**-3.8**
	1.3nm,0.3s,baz=168,slow=20,SNR=3.3						
AFI	**Afiamalu**	**12.83**	**37**	P	**P**	**11 15 10.9**	**-1.4**
AFI					**S**	**11 17 30.1**	**-0.4**
DZM	**Mont Dzumac**	**12.88**	**277**	P	**P**	**11 15 15.7**	**+2.9**
	1.7nm,0.3s,baz=60,slow=16,SNR=10						
DZM	**Mont Dzumac**	**12.88**	**277**	P	**P**	**11 15 08.6**	**-4.2**
KUZ	**Kuaotunu**	**12.96**	**196**	P	**P**	**11 15 15.5**	**+2.2**
NOUC	**Port Laguerre**	**13.00**	**277**	P	**P**	**11 15 13.8**	**-0.2**
WIAZ	**Waiheke Island**	**13.16**	**198**	P	**P**	**11 15 18.2**	**+2.7**
MBAZ	**Motutapu North**	**13.21**	**199**	P	**P**	**11 15 19.0**	**+3.0**
MXZ	**Matakaoa Point**	**13.28**	**187**	P	**P**	**11 15 17.0**	**+0.3**
MXZ	**Matakaoa Point**	**13.28**	**187**	P	**P**	**11 15 14.6**	**-2.2**
ETAZ	**East Tamaki Re**	**13.37**	**199**	P	**P**	**11 15 20.5**	**+2.8**
MKAZ	**Moumakai**	**13.45**	**198**	P	**P**	**11 15 20.9**	**+2.5**
WTAZ	**Waiatarua**	**13.46**	**200**	P	**P**	**11 15 21.3**	**+2.7**
KBAZ	**Karaka Road Bo**	**13.51**	**199**	P	**P**	**11 15 21.9**	**+2.7**
WMGZ	**Waiomatatini S**	**13.53**	**186**	P	**P**	**11 15 20.3**	**+1.0**
AWAZ	**Awhitu Peninsu**	**13.56**	**199**	P	**P**	**11 15 22.0**	**+2.3**
PKGZ	**Pakihiroa**	**13.63**	**187**	P	**P**	**11 15 21.5**	**+1.1**
RUGZ	**Raukumara Rang**	**13.76**	**189**	P	**P**	**11 15 22.5**	**+0.7**
PUZ	**Puketiti**	**13.79**	**187**	P	**P**	**11 15 22.2**	**+0.1**
URZ	**Urewera**	**14.13**	**190**	P	**P**	**11 15 23.7**	**-2.0**
	9.7nm,0.3s,baz=276,slow=3.3,SNR=44						
URZ				S	**S**	**11 17 50.8**	**-4.2**
	0.6nm,0.3s,baz=18,slow=16,SNR=3.6						
URZ	**Urewera**	**14.13**	**190**	P	**P**	**11 15 24.0**	**-1.6**
URZ	**Urewera**	**14.13**	**190**	P	**P**	**11 15 23.9**	**-1.8**
URZ					**S**	**11 17 55.7**	**+0.7**
TKGZ	**Te Karaka**	**14.20**	**188**	P	**P**	**11 15 27.4**	**+1.0**
RRRZ	**Republican Roa**	**14.31**	**192**	P	**P**	11 15 33.3	+5.7
MUGZ	**Murupara**	**14.40**	**191**	P	**P**	**11 15 26.5**	**-2.0**
GRRZ	**Galatos Road**	**14.40**	**193**	P	**P**	11 15 34.6	+6.0
RIGZ	**Rimuhau**	**14.47**	**188**	P	**P**	**11 15 28.7**	**-0.7**
RTZ	**Ruatahuna**	**14.50**	**190**	P	**S**	**11 18 09.0**	**+6.8**
ALRZ	**Allen Road**	**14.56**	**192**	P	**P**	**11 15 33.0**	**+2.8**
KUZ	**Kaahu Road**	**14.58**	**194**	P	**P**	11 15 36.1	+5.4
SNGZ	**Shannon Statio**	**14.60**	**189**	P	**P**	**11 15 33.9**	**+3.2**
PRGZ	**Paritu Road**	**14.67**	**187**	P	**P**	**11 15 35.0**	**+3.6**
MTHZ	**Maungataniwha**	**14.75**	**190**	P	**P**	**11 15 32.8**	**+0.5**
MTHZ	**Maungataniwha**	**14.75**	**190**	P	**S**	**11 18 11.0**	**+3.9**
RAHZ	**Arahi**	**14.77**	**190**	P	**P**	**11 15 35.0**	**+2.5**
RAHZ	**Arahi**	**14.77**	**190**	P	**S**	**11 18 11.1**	**+3.6**
MRHZ	**Matea Rd**	**14.81**	**192**	P	**P**	**11 15 33.7**	**+0.8**
HIZ	**Hauiti**	**14.85**	**197**	P	P	11 15 37.2	+3.9
HIZ	**Hauiti**	**14.85**	**197**	P	**P**	**11 15 32.4**	**-0.9**
MHGZ	**Mahia Peninsul**	**14.90**	**187**	P	P	11 15 37.6	+3.8
HATZ	**Hinemaiaia**	**14.93**	**193**	P	**P**	**11 15 34.6**	**+0.5**
NMHZ	**Naumai**	**14.99**	**190**	P	**P**	**11 15 36.7**	**+1.8**
KATZ	**Kakaramea**	**15.09**	**194**	P	**P**	**11 15 39.5**	**+3.5**
SANVU	**Saraoutou**	**15.11**	**303**	P	**P**	**11 15 36.0**	**-0.3**
SANVU				IAmb	IAmb	11 15 37.5	
	comp=Z,43nm,1.4s						
BKZ	**Black Stump Fm**	**15.12**	**191**	P	**S**	**11 18 15.5**	**+1.4**
BKZ	**Black Stump Fm**	**15.12**	**191**	P	**P**	**11 15 33.9**	**-2.3**
ARHZ	**Aropaoanui**	**15.13**	**190**	P	**P**	**11 15 39.0**	**+2.8**
KRVZ	**Karewarewa**	**15.21**	**194**	P	**P**	**11 15 41.0**	**+3.7**
TWVZ	**Taurewa**	**15.24**	**194**	P	**P**	**11 15 40.2**	**+2.7**
WTVZ	**West Tongariro**	**15.25**	**194**	P	**P**	**11 15 39.1**	**+1.5**
NGZ	**Ngauruhoe**	**15.30**	**194**	P	**P**	**11 15 41.1**	**+2.9**
MCHZ	**McNeill Hill**	**15.35**	**190**	P	**P**	**11 15 37.3**	**-1.3**
MCHZ	**McNeill Hill**	**15.35**	**190**	P	**S**	**11 18 20.5**	**+1.9**
TUVZ	**Tukino**	**15.38**	**194**	P	**P**	**11 15 41.5**	**+2.6**
KWHZ	**Kaweka Forest**	**15.38**	**191**	P	**P**	**11 15 38.5**	**-0.4**
KWHZ	**Kaweka Forest**	**15.38**	**191**	P	**S**	**11 18 16.8**	**-2.4**
MOVZ	**Moawhango**	**15.49**	**193**	P	**P**	**11 15 41.0**	**+0.9**
BHHZ	**Black Hill Sta**	**15.51**	**192**	P	**P**	**11 15 37.9**	**-2.3**
BHHZ	**Black Hill Sta**	**15.51**	**192**	P	**S**	**11 18 21.5**	**-0.3**
KRHZ	**Kereru**	**15.60**	**191**	P	**P**	**11 15 41.8**	**+0.6**
KRHZ	**Kereru**	**15.60**	**191**	P	**S**	**11 18 23.6**	**+0.1**
DREZ	**Durham Road**	**15.66**	**198**	P	S	11 18 34.5	+10
KAHZ	**Kahuranaki**	**15.67**	**190**	P	**S**	**11 18 26.8**	**+2.1**
PXZ	**Pawanui**	**15.90**	**189**	P	**S**	**11 18 27.2**	**-1.8**
WPHZ	**Waipukurau**	**16.00**	**191**	P	**S**	**11 18 31.7**	**+0.8**
DVHZ	**Dannevirke**	**16.27**	**191**	P	**S**	**11 18 36.7**	**+0.6**
BFZ	**Birch Farm**	**16.63**	**191**	P	**S**	**11 18 40.2**	**-2.3**
BFZ	**Birch Farm**	**16.63**	**191**	P	**P**	**11 15 49.1**	**-3.0**
MRZ	**Mangatainoka R**	**16.73**	**192**	P	**S**	**11 18 43.8**	**-0.5**
MSWZ	**Moikau Station**	**17.53**	**193**	P	**P**	**11 15 58.5**	**-2.5**
SNZO	**South Karori**	**17.54**	**194**	P	**P**	**11 15 58.8**	**-2.2**
BHW	**Baring Head**	**17.60**	**193**	P	**P**	**11 15 59.9**	**-1.7**
QRZ	**Quartz Range**	**17.66**	**200**	P	**P**	**11 16 02.3**	**+0.1**
PLWZ	**Palliser**	**17.68**	**192**	P	**P**	**11 16 00.8**	**-1.6**
NNZ	**Nelson**	**17.78**	**197**	P	**P**	**11 16 01.1**	**-2.1**
NNZ				IAmb	IAmb	11 16 04.0	
	comp=Z,27nm,1.0s						
TUWZ	**Tuamarina**	**17.83**	**196**	P	**P**	**11 16 01.9**	**-1.9**
CMWZ	**Cape Campbell**	**18.07**	**195**	P	**P**	**11 16 04.8**	**-1.2**
BSWZ	**Blackbirch Sta**	**18.12**	**195**	P	**P**	**11 16 04.8**	**-1.6**
THZ	**Tophouse**	**18.41**	**198**	P	**P**	**11 16 08.0**	**-1.2**
THZ				S	**S**	**11 19 09.8**	**-2.6**
KHZ	**Kahutara**	**18.86**	**195**	P	**P**	**11 16 11.8**	**-1.5**
KHZ				IAmb	IAmb	11 16 12.9	
	comp=Z,25nm,0.9s						
LTZ	**Lake Taylor**	**19.53**	**198**	P	**P**	**11 16 18.1**	**-1.3**
OXZ	**Oxford**	**20.10**	**198**	P	**P**	**11 16 23.8**	**-0.8**
MQZ	**McQueen's Vall**	**20.29**	**196**	P	**P**	**11 16 25.2**	**-1.1**
MQZ				IAmb	IAmb	11 16 30.9	
	comp=Z,29nm,1.3s						
RPZ	**Rata Peaks**	**20.74**	**199**	P	**P**	**11 16 29.2**	**-1.1**
	comp=Z,34nm,0.5s,baz=208,slow=0.9,SNR=34						
RPZ	**Rata Peaks**	**20.74**	**199**	P	**P**	**11 16 29.3**	**-1.1**
FOZ	**Fox Glacier**	**20.97**	**202**	P	**P**	**11 16 31.6**	**-0.8**
FOZ				IAmb	IAmb	11 16 40.6	
	comp=Z,46nm,1.3s						
LBZ	**Lake Benmore**	**21.61**	**200**	P	**P**	**11 16 36.4**	**-1.9**
LBZ				IAmb	IAmb	11 16 39.1	
	comp=Z,34nm,1.5s						
ODZ	**Otahua Downs**	**22.07**	**198**	P	**P**	**11 16 41.3**	**-1.1**
WKZ	**Wanaka**	**22.38**	**201**	P	**P**	**11 16 43.7**	**-1.6**
WKZ				IAmb	IAmb	11 16 54.5	
	comp=Z,20nm,1.0s						
MLZ	**Mavora Lakes**	**23.16**	**202**	P	**P**	**11 16 51.8**	**-0.5**
MLZ				IAmb	IAmb	11 16 54.5	
	comp=Z,23nm,1.3s						
DCZ	**Deep Cove**	**23.59**	**203**	P	**P**	**11 16 55.3**	**-0.7**
DCZ				IAmb	IAmb	11 17 10.9	
	comp=Z,37nm,1.4s						
WHZ	**Wether Hill Ro**	**23.68**	**202**	P	**P**	**11 16 56.4**	**-0.4**
WHZ				IAmb	IAmb	11 16 59.2	
	comp=Z,37nm,1.1s						
ARMA	**Armidale**	**26.07**	**250**	P	**P**	**11 17 16.9**	**-1.5**
EIDS	**Eidsvold**	**26.45**	**262**	P	**P**	**11 17 21.5**	**-0.2**
EIDS				IAmb	IAmb	11 17 22.9	
	comp=Z,23nm,1.2s						
CAN	**Canberra**	**29.11**	**241**	P	**P**	**11 17 46.3**	**+1.4**
TOO	**Toolangi**	**32.39**	**238**	P	**P**	**11 18 14.6**	**+1.4**
STKA	**Stephens Creek**	**34.76**	**249**	P	**P**	**11 18 33.8**	**+0.6**
	comp=Z,5.0nm,0.5s,baz=93,slow=11,SNR=25						
STKA	**Stephens Creek**	**34.76**	**249**	P	**P**	**11 18 33.9**	**+0.6**
PMG	**Port Moresby**	**34.84**	**290**	P	**P**	**11 18 34.4**	**+0.3**
COEN	**Coen**	**36.40**	**280**	P	**P**	**11 18 48.0**	**+0.9**
BBOO	**Buckleboo**	**39.47**	**247**	P	**P**	**11 19 11.5**	**-0.5**
BBOO				IAmb	IAmb	11 19 28.0	
	comp=Z,52nm,1.4s						
AS31	**Alice Springs**	**42.18**	**261**	P	**P**	**11 19 33.6**	**-0.3**
ASAR	**Alice Springs**	**42.18**	**261**	P	**P**	**11 19 33.5**	**-0.3**
	comp=Z,9.3nm,0.8s,baz=94,slow=6.7,SNR=251						
ASAR				PcP	**PcP**	**11 21 17.1**	**+0.1**
	comp=Z,0.7nm,0.7s,baz=91,slow=5.6,SNR=4.1						
ASAR				ScP	**ScP**	**11 24 22.1**	**+1.4**
	comp=Z,1.2nm,1.0s,baz=109,slow=4.5,SNR=3.5						
ASAR				S	**S**	**11 25 13.3**	**-4.7**
	comp=Z,0.6nm,0.7s,baz=97,slow=15,SNR=3.1						
ASAR	**Alice Springs**	**42.18**	**261**	P	**P**	**11 19 33.2**	**-0.6**
WR0	**Warramunga Arr**	**42.41**	**267**	P	**P**	**11 19 35.1**	**-0.6**
WR0				IAmb	IAmb	11 19 35.8	
	comp=Z,31nm,1.3s						
WB2	**Warramunga Arr**	**42.58**	**267**	P	**P**	**11 19 36.2**	**-0.8**
WB2				IAmb	IAmb	11 19 37.2	
	comp=Z,22nm,0.6s						
WRAB	**Tennant Creek**	**42.59**	**267**	P	**P**	**11 19 36.4**	**-0.7**
WRAB				IAmb	IAmb	11 19 37.2	
	comp=Z,31nm,1.1s						
WB0	**Warramunga Arr**	**42.59**	**267**	P	**P**	**11 19 36.4**	**-0.6**
WB0				IAmb	IAmb	11 19 37.2	
	comp=Z,26nm,0.7s						
WRA	**Warramunga Arr**	**42.59**	**267**	P	**P**	**11 19 36.6**	**-0.6**
	comp=Z,14nm,0.4s,baz=98,slow=8.4,SNR=134						
WRA				PcP	**PcP**	**11 21 18.4**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=98,slow=5.5,SNR=4.4						
WRA				ScP	**ScP**	**11 24 23.8**	**+1.4**
	comp=Z,3.8nm,0.9s,baz=95,slow=4.0,SNR=8.8						
WRA				S	**S**	**11 25 18.5**	**-5.5**
	comp=Z,1.3nm,0.9s,baz=99,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**42.59**	**267**	P	**P**	**11 19 35.4**	**-1.7**
FORT	**Forrest**	**46.36**	**250**	P	**P**	**11 20 05.2**	**-0.9**
MTN	**Manton Dam**	**47.70**	**275**	P	**P**	**11 20 15.4**	**-1.1**
MTN				IAmb	IAmb	11 20 15.6	
	comp=Z,49nm,1.4s						
KNRA	**Kununurra**	**48.90**	**270**	P	**P**	**11 20 25.4**	**0.0**
FAKI	**Fak Fak**	**50.92**	**287**	P	**P**	**11 20 39.8**	**-0.5**
FAKI				IAmb	IAmb	11 20 45.1	
	comp=Z,49nm,1.1s						
FITZ	**Fitzroy Crossi**	**51.01**	**266**	P	**P**	**11 20 40.9**	**0.0**
FITZ				IAmb	IAmb	11 20 42.5	
	comp=Z,16nm,0.7s						
VNDA	**Vanda**	**53.96**	**185**	P	**P**	**11 21 02.6**	**+1.5**
NWAO	**Narrogin (SRO)**	**55.25**	**246**	P	**P**	**11 21 10.6**	**-0.4**
NWAO				IAmb	IAmb	11 21 26.4	
	comp=Z,28nm,1.1s						
PSA00	**Pilbara Seismi**	**55.30**	**260**	P	**P**	**11 21 10.7**	**-0.8**
MORW	**Morawa**	**56.93**	**250**	P	**P**	**11 21 22.4**	**-0.3**
QSPA	**South Pole Qui**	**65.74**	**180**	P	**P**	**11 22 21.7**	**+1.6**
QSPA				IAmb	IAmb	11 22 22.7	
	comp=Z,14nm,0.8s						
KKM	**Kota Kinabalu**	**69.24**	**287**	P	**P**	**11 22 43.0**	**+0.5**
KKM				IAmb	IAmb	11 22 43.1	
	comp=Z,22nm,0.7s						
MJAR	**Matsushiro Arr**	**72.38**	**326**	P	**P**	**11 23 00.6**	**+0.2**
	comp=Z,5.2nm,0.8s,baz=146,slow=5.9,SNR=9.4						
MJAR	**Matsushiro Arr**	**72.38**	**326**	P	**P**	**11 23 00.9**	**+0.5**
MAT	**Matsushiro**	**72.38**	**326**	P	**P**	**11 23 00.6**	**+0.2**
KSM	**Kuching**	**72.39**	**280**	P	**P**	**11 23 00.6**	**-0.4**
KSM				IAmb	IAmb	11 23 01.8	
	comp=Z,27nm,0.8s						
ADK	**Adak**	**75.94**	**2**	P	**P**	**11 23 20.9**	**+0.7**
ADK				IAmb	IAmb	11 23 37.9	
	comp=Z,48nm,1.3s						
MAW	**Mawson**	**77.41**	**200**	P	**P**	**11 23 29.2**	**+1.0**
UNV	**Unalaska Valle**	**78.70**	**8**	P	**P**	**11 23 35.4**	**+0.2**
KSRS	**Korea Array**	**78.72**	**320**	P	**P**	**11 23 36.7**	**+1.1**
	comp=Z,2.9nm,0.6s,baz=128,slow=5.8,SNR=12						
PEA0B	**Petropavlovsk-**	**79.58**	**346**	P	**P**	**11 23 40.4**	**+0.5**
PEA0B				IAmb	IAmb	11 23 51.4	
	comp=Z,42nm,1.2s						
PETK	**Petropavlovsk-**	**79.58**	**346**	P	**P**	**11 23 40.8**	**+0.9**
	comp=Z,5.3nm,0.6s,baz=124,slow=7.2,SNR=7.3						
PETK	**Petropavlovsk-**	**79.58**	**346**	P	**P**	**11 23 40.5**	**+0.6**
NJ2	**Nanjing**	**81.11**	**311**	*eP*	**P**	**11 23 49.5**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
USRK	**Ussuriysk Ar.**	**81.25**	**327**	P	**P**	**11 23 50.0**	**+1.3**
	comp=Z,4.0nm,0.6s,baz=148,slow=4.2,SNR=9.7						
USRK	**Ussuriysk Ar.**	**81.25**	**327**	P	**P**	**11 23 49.9**	**+1.1**
SNAA	**Sanae**	**84.22**	**179**	P	**P**	**11 24 03.1**	**-0.5**
SNAA	**Sanae**	**84.22**	**179**	P	**P**	**11 24 03.4**	**-0.2**
VNA3	**Neumayer Olymp**	**84.42**	**177**	P	**P**	**11 24 04.3**	**-0.2**
TIA	**Tai'an**	**84.69**	**314**	P	**P**	**11 24 07.8**	**+1.5**
TIA				pmax	pmax		
	comp=Z,16nm,0.8s						
VNA2	**Neumayer--Watz**	**84.84**	**177**	P	**P**	**11 24 07.2**	**+0.6**
	baz=184,slow=4.1						
BJI	**Beijing**	**87.50**	**316**	*eP*	**P**	**11 24 20.5**	**+0.9**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN	**Xi'an**	**89.18**	**308**	P	**P**	**11 24 28.5**	**+0.8**
XAN				pP	pwP	11 26 19.8	-1.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**89.18**	**308**	P	**P**	**11 24 27.8**	**+0.1**
XAN				IAmb	IAmb	11 24 29.7	
	comp=Z,7.3nm,0.8s						
CMAR	**Chiang Mai Arr**	**89.88**	**290**	P	**P**	**11 24 32.1**	**+0.9**
	comp=Z,2.5nm,0.8s,baz=139,slow=3.6,SNR=16						
TXAR	**Lajitas Array**	**90.48**	**58**	P	**P**	**11 24 34.6**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=216,slow=5.6,SNR=2.9						
TXAR	**Lajitas Array**	**90.48**	**58**	P	**P**	**11 24 32.8**	**-1.1**
HHC	**Hu-ho-hao-te**	**90.88**	**315**	*eP*	**P**	**11 24 30.8**	**-4.7**
HHC	**Hu-ho-hao-te**	**90.88**	**315**	*eP*	**P**	**11 24 37.8**	**+2.3**
HHC				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,25nm,5.5s						
HHC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HHC				pmax	pmax		
	comp=Z,67nm,6.6s						
ILAR	**Eielson Array**	**92.41**	**13**	P	**P**	**11 24 41.3**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=225,slow=5.2,SNR=7.8						
PDAR	**Pinedale Array**	**92.86**	**44**	P	**P**	**11 24 45.2**	**+0.4**
	comp=Z,0.2nm,0.6s,baz=249,slow=7.5,SNR=2.5						
LZH	**Lanzhou**	**93.81**	**308**	P	**P**	**11 24 46.0**	**-3.2**
LZH				pP	pP	11 26 37.0	-0.9
LZH				sP	sP	11 27 26.3	-0.8
LZH				PP	**PP**	**11 28 42.5**	**-0.8**
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,79nm,6.3s						
SONM	**Songino Array**	**97.58**	**319**	P	**P**	**11 25 05.9**	**0.0**
	comp=Z,0.3nm,0.3s,baz=120,slow=2.2,SNR=3.0						
SONM				PP	**PP**	**11 29 15.4**	**+3.7**
	comp=Z,0.6nm,0.9s,baz=104,slow=6.1,SNR=3.8						
MKAR	**Makanchi Array**	**112.61**	**313**	PKiKP	**PKiKP**	**11 30 03.9**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=97,slow=0.7,SNR=6.1						
KK31	**Karatay Array**	**120.30**	**307**		**PKiKP**	**11 30 19.6**	**-0.2**
KKAR	**Karatay Array**	**120.30**	**307**		**PKiKP**	**11 30 19.5**	**-0.3**
KKAR	**Karatay Array**	**120.30**	**307**		**PKiKP**	**11 30 19.7**	**-0.1**
BVAR	**Borovoye Array**	**120.91**	**319**	PKP	**PKPdf**	**11 30 20.2**	**-0.3**
	comp=Z,1.8nm,0.5s,baz=112,slow=4.0,SNR=8.2						
AKTO	**Aktyubinsk**	**128.76**	**316**	PKP	**PKPdf**	**11 30 35.5**	**-0.1**
	comp=Z,1.5nm,0.5s,baz=45,slow=6.2,SNR=4.4						
ARCES	**ARCESS Array B**	**132.36**	**348**	PKP	**PKiKP**	**11 30 42.4**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=42,slow=2.8,SNR=5.9						
ARCES	**ARCESS Array B**	**132.36**	**348**		**PKiKP**	**11 30 42.8**	**-0.3**
FINES	**FINESS Array B**	**138.93**	**341**	PKhKP	PKPpre	11 30 45.7	
	comp=Z,1.3nm,0.6s,baz=29,slow=4.4,SNR=9.3						
FINES				PKP	**PKPdf**	**11 30 55.0**	**+0.8**
	comp=Z,1.7nm,0.4s,baz=29,slow=3.2,SNR=9.6						
FINES				SKPbc	**SKPbc**	**11 33 42.2**	**-0.5**
	comp=Z,2.8nm,0.7s,baz=48,slow=2.8,SNR=6.5						
NB2	**NORSAR Subarra**	**142.55**	**351**	PKP	**PKPdf**	**11 30 57.9**	**-2.9**
	comp=Z,1.8nm,1.0s,baz=13,slow=3.0						
NOA	**NORSAR Array B**	**142.55**	**351**	PKhKP	PKPpre	11 30 57.3	
	comp=Z,1.3nm,0.7s,baz=16,slow=4.6,SNR=4.0						
HFS	**Hagfors**	**143.02**	**349**	PKhKP	PKPpre	11 30 59.0	
	comp=Z,1.1nm,0.4s,baz=64,slow=3.4,SNR=68						
AKASG	**Malin Array Be**	**145.46**	**327**	PKPbc	**PKPbc**	**11 31 06.7**	**-0.5**
	comp=Z,3.2nm,0.3s,baz=46,slow=4.4,SNR=2.8						
ASF	**Jabal al Asfar**	**146.90**	**292**	PKPbc	**PKPbc**	**11 31 11.9**	**-0.2**
	comp=Z,4.6nm,0.6s,baz=121,slow=2.4,SNR=4.3						
BR131	**Keskin Array S**	**148.01**	**307**		**PKPbc**	**11 31 14.1**	**-0.7**
BR131				PKPab	**PKPab**	**11 31 20.2**	**+0.8**
BRTR	**Keskin Array B**	**148.01**	**307**	PKPbc	**PKPbc**	**11 31 14.7**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=141,slow=4.7,SNR=18						
BRTR				PKPab	**PKPab**	**11 31 19.7**	**+0.4**
	comp=Z,5.1nm,0.6s,baz=98,slow=2.8,SNR=20						
BRTR	**Keskin Array B**	**148.01**	**307**		**PKPbc**	**11 31 14.5**	**-0.3**
BRTR				PKPab	**PKPab**	**11 31 20.1**	**+0.8**
MMAI	**Mount Meron Ar**	**148.08**	**294**	PKPbc	**PKiKP**	**11 31 15.9**	**-0.5**
	comp=Z,11nm,0.6s,baz=78,slow=6.1,SNR=12						
ANTO	**Ankara**	**148.58**	**307**	PKPbc	**PKPbc**	**11 31 16.3**	**+0.2**
EIL	**Elat**	**148.69**	**287**	PKPbc	**PKPbc**	**11 31 16.1**	**-0.5**
	comp=Z,4.8nm,0.7s,baz=147,slow=2.5,SNR=3.7						
EKA	**Eskdalemuir Ar**	**148.94**	**4**	PKPbc	**PKPbc**	**11 31 15.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=343,slow=2.4,SNR=3.6						
BUR08	**Bucovina Ar. S**	**149.44**	**326**		**PKiKP**	**11 31 19.0**	**+0.1**
BUR08				PKPab	**PKPab**	**11 31 23.7**	**-1.1**
MDUB	**Mudurnu**	**149.51**	**309**		**PKPbc**	**11 31 18.1**	**-0.3**
MLR	**Muntele Rosu**	**150.39**	**322**	PKPbc	**PKPbc**	**11 31 19.7**	**-0.7**
	comp=Z,2.0nm,0.4s,baz=277,slow=4.2,SNR=4.8						
MLR	**Muntele Rosu**	**150.39**	**322**		**PKiKP**	**11 31 20.3**	**-0.5**
MLR				PKPab	**PKPab**	**11 31 28.6**	**-0.4**
LANS	**Liptovska Anna**	**151.00**	**334**	*e*PKP	**PKiKP**	**11 31 23.2**	**+1.3**
OSTC	**Ostas**	**151.05**	**339**	*e*PKP	**PKiKP**	**11 31 22.2**	**+0.3**
DPC	**Dobruska-Polom**

ISC 28 11:23:49.5±1.4, 38°23N±0.03×20°39E±0.07, h15km±6km, n37, σ0s37/57, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.09**	**126**	P	**Pg**	**11 23 53.0**	**+0.3**
ARG2				S	**Sg**	**11 23 54.7**	**-0.1**
VLS	**Valsamata**	**0.17**	**110**	P	**Pg**	**11 23 53.7**	**0.0**
VLS				S	**Sg**	**11 23 56.2**	**-0.3**
	34μm,0.1s						
VLS	**Valsamata**	**0.17**	**110**	P	**Pg**	**11 23 53.7**	**0.0**
VLS				S	**Sg**	**11 23 56.2**	**-0.3**
VLS				AML	AML	11 23 56.6	
	comp=E,76438μm,0.1s						
VLS				AML	AML	11 23 56.6	
	comp=N,50818μm,0.1s						
FSK	**Fiskardo**	**0.26**	**31**	P	**Pg**	**11 23 55.5**	**+0.3**
FSK				S	**Sg**	**11 23 59.2**	**+0.2**
	comp=N,10μm,0.2s						
FSK	**Fiskardo**	**0.26**	**31**	P	**Pg**	**11 23 55.4**	**+0.3**
FSK				S	**Sg**	**11 23 59.3**	**+0.2**
KFL	**Anninata**	**0.34**	**111**	P	**Pg**	**11 23 56.6**	**+0.1**
KFL				S	**Sg**	**11 24 01.4**	**+0.2**
	comp=N,15μm,0.3s						
KFL	**Anninata**	**0.34**	**111**	P	**Pg**	**11 23 56.4**	**-0.1**
KFL				S	**Sg**	**11 24 01.4**	**+0.2**
KFL				AML	AML	11 24 02.2	
	comp=E,35089μm,0.3s						
KFL				AML	AML	11 24 02.5	
	comp=N,23630μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.42**	**149**	P	**Pb**	**11 23 58.5**	**-0.1**
VLMS				S	**Sb**	**11 24 04.5**	**-0.2**
VLMS				AML	AML	11 24 06.5	
	comp=E,12832μm,0.1s						
VLMS				AML	AML	11 24 07.4	
	comp=N,13806μm,0.2s						
EVGI	**Lefkada island**	**0.44**	**28**	P	**Pg**	**11 23 57.5**	**-0.8**
EVGI				S	**Sb**	**11 24 05.0**	**-0.3**
EVGI	**Lefkada island**	**0.44**	**28**	P	**Pg**	**11 23 57.7**	**-0.7**
EVGI				S	**Sb**	**11 24 05.1**	**-0.2**
MGNA	**Meganis**	**0.53**	**37**	P	**Pg**	**11 23 59.8**	**-0.2**
MGNA				S	**Sg**	**11 24 06.9**	**-0.1**
MGNA				AML	AML	11 24 07.9	
	comp=N,4081μm,0.2s						
MGNA				AML	AML	11 24 07.9	
	comp=E,2689μm,0.1s						
LKD2	**Lefkada island**	**0.59**	**21**	P	**Pg**	**11 24 01.2**	**0.0**
LKD2				S	**Sg**	**11 24 09.2**	**+0.1**
	comp=E,988nm,0.5s						
LKD2	**Lefkada island**	**0.59**	**21**	P	**Pg**	**11 24 01.2**	**0.0**
LKD2				S	**Sg**	**11 24 08.8**	**-0.3**
LKD2				AML	AML	11 24 17.8	
	comp=N,2196μm,0.5s						
LKD2				AML	AML	11 24 18.1	
	comp=E,1657μm,0.5s						
TSLK	**Tsoukalades, L**	**0.63**	**19**	P	**Pg**	**11 24 02.1**	**+0.3**
TSLK				S	**Sb**	**11 24 11.6**	**+0.9**
	comp=E,1μm,0.4s						
TSLK	**Tsoukalades, L**	**0.63**	**19**	P	**Pg**	**11 24 02.1**	**+0.3**
PDO	**Prodromos**	**0.72**	**59**	P	**Pg**	**11 24 03.3**	**-0.3**
PDO				S	**Sb**	**11 24 14.5**	**+1.1**
PDO	**Prodromos**	**0.72**	**59**	P	**Pg**	**11 24 03.3**	**-0.3**
PDO				S	**Sb**	**11 24 13.2**	**-0.3**
RLS	**Riolos of Patr**	**0.87**	**101**	P	**Pb**	**11 24 05.7**	**-0.5**
RLS				S	**Sn**	**11 24 19.3**	**-0.1**
	comp=E,608nm,0.4s						
RLS	**Riolos of Patr**	**0.87**	**101**	P	**Pb**	**11 24 05.7**	**-0.5**
RLS				S	**Sb**	**11 24 17.4**	**-0.1**
PVO	**Paravola**	**0.97**	**66**	P	**Pg**	**11 24 08.2**	**-0.1**
PVO				S	**Sn**	**11 24 22.7**	**+0.7**
	comp=E,2μm,0.3s						
PVO	**Paravola**	**0.97**	**66**	P	**Pg**	**11 24 08.1**	**-0.1**
PVO				AML	AML	11 24 24.3	
	comp=N,3826μm,0.3s						
PVO				AML	AML	11 24 24.4	
	comp=E,5316μm,0.3s						
DRO	**Drossia**	**1.08**	**105**	P	**Pb**	**11 24 09.6**	**-0.3**
DRO	**Drossia**	**1.08**	**105**	P	**Pb**	**11 24 09.5**	**-0.3**
EFP	**Efpalio**	**1.21**	**80**	P	**Pn**	**11 24 11.3**	**-0.5**
EFP	**Efpalio**	**1.21**	**80**	P	**Pn**	**11 24 11.3**	**-0.5**
EFP				AML	AML	11 24 40.4	
	comp=E,1105μm,0.5s						
EFP				AML	AML	11 24 41.4	
	comp=N,679μm,0.4s						
LAKA	**Lakka**	**1.25**	**89**	P	**Pn**	**11 24 12.5**	**+0.1**
LAKA				S	**Sg**	**11 24 31.0**	**+1.1**
	comp=N,322nm,0.4s						
LAKA	**Lakka**	**1.25**	**89**	P	**Pn**	**11 24 12.3**	**-0.1**
LAKA				AML	AML	11 24 36.8	
	comp=E,744μm,0.5s						
LAKA				AML	AML	11 24 37.3	
	comp=N,643μm,0.4s						
ANX	**Ano Chora**	**1.25**	**73**	P	**Pn**	**11 24 12.6**	**+0.1**
ANX	**Ano Chora**	**1.25**	**73**	P	**Pn**	**11 24 12.5**	**-0.1**
SERG	**Sergoula**	**1.32**	**82**	P	**Pn**	**11 24 13.6**	**+0.2**
SERG	**Sergoula**	**1.32**	**82**	P	**Pn**	**11 24 13.6**	**+0.2**
SERG				AML	AML	11 24 40.8	
	comp=E,996μm,0.6s						
SERG				AML	AML	11 24 42.7	
	comp=N,1085μm,0.3s						
TRIZ	**Trizonia**	**1.33**	**84**	P	**Pn**	**11 24 13.4**	**-0.1**
TRIZ	**Trizonia**	**1.33**	**84**	P	**Pn**	**11 24 13.4**	**-0.1**
KALE	**Kalithea**	**1.39**	**83**	P	**Pn**	**11 24 14.3**	**+0.1**
KALE	**Kalithea**	**1.39**	**83**	P	**Pn**	**11 24 14.4**	**+0.1**
KLV	**Kalavryta, Ach**	**1.40**	**97**	P	**Pb**	**11 24 15.1**	**-0.2**
KLV	**Kalavryta, Ach**	**1.40**	**97**	P	**Pb**	**11 24 15.2**	**-0.2**

*THE **28** 11:30:27.1, 38°.17N×20°.39E, h11km, ML3.2/6, Error ellipse: s-maj=1.3km s-min=0.6km az=237.0*
*IDC **28** 11:30:27.1±2.9, 38°.59N×20°.82E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.3/45, mbtmp3.4/5, ML3.3/2, Error ellipse: s-maj=79.8km s-min=26.3km az=48.0*
*ATH **28** 11:30:27.2, 38°.18N×20°.43E, h11km±1km, ML3.2/19, Error ellipse: s-maj=2.2km s-min=0.9km az=75.0*

ISC 28 11:30:27.0±0.9, 38°18N±0.03×20°42E±0.05, h15km±4km, n60, σ0s82/80, mb3.6/3, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.05**	**86**	P	**Pg**	**11 30 30.0**	**+0.1**
ARG2				S	**Sg**	**11 30 31.8**	**0.0**
	115μm,0.2s						
VLS	**Valsamata**	**0.13**	**89**	P	**Pg**	**11 30 30.8**	**0.0**
VLS				S	**Sg**	**11 30 33.2**	**0.0**
VLS	**Valsamata**	**0.13**	**89**	P	**Pg**	**11 30 30.4**	**-0.4**
VLS				S	**Sg**	**11 30 32.7**	**-0.5**
VLS				AML	AML	11 30 33.4	
VLS				AML	AML	11 30 33.5	
KFL	**Anninata**	**0.29**	**103**	P	**Pg**	**11 30 33.3**	**0.0**
KFL				S	**Sb**	**11 30 38.1**	**-0.6**
KFL	**Anninata**	**0.29**	**103**	P	**Pg**	**11 30 33.3**	**0.0**
KFL				S	**Sg**	**11 30 37.5**	**0.0**
KFL				AML	AML	11 30 38.7	
KFL				AML	AML	11 30 38.8	
FSK	**Fiskardo**	**0.30**	**21**	P	**Pg**	**11 30 33.4**	**-0.1**
FSK				S	**Sg**	**11 30 38.0**	**+0.2**
	4μm,0.4s						
FSK	**Fiskardo**	**0.30**	**21**	P	**Pg**	**11 30 33.3**	**-0.1**
FSK				S	**Sg**	**11 30 37.6**	**-0.2**
VLMS	**Volimes, Zakyn**	**0.35**	**148**	P	**Pg**	**11 30 34.1**	**-0.2**
VLMS				S	**Sg**	**11 30 39.7**	**+0.5**
VLMS				AML	AML	11 30 40.7	
	comp=N,43987μm,0.1s						
VLMS				AML	AML	11 30 41.2	
	comp=E,34314μm,0.2s						
EVGI	**Lefkada island**	**0.48**	**22**	P	**Pb**	**11 30 37.0**	**-0.2**
EVGI				S	**Sb**	**11 30 44.0**	**-0.1**
EVGI	**Lefkada island**	**0.48**	**22**	P	**Pg**	**11 30 36.5**	**-0.1**
EVGI				S	**Sg**	**11 30 43.1**	**0.0**
MGNA	**Meganis**	**0.56**	**31**	P	**Pg**	**11 30 38.1**	**0.0**
MGNA				S	**Sb**	**11 30 45.8**	**-0.6**
MGNA				AML	AML	11 30 50.9	
	comp=E,4798μm,0.4s						
MGNA				AML	AML	11 30 51.1	
	comp=N,3191μm,0.3s						
LKD2	**Lefkada island**	**0.64**	**17**	P	**Pg**	**11 30 39.7**	**+0.1**
LKD2				S	**Sb**	**11 30 49.5**	**+0.8**
	comp=N,1μm,0.7s						
LKD2	**Lefkada island**	**0.64**	**17**	P	**Pg**	**11 30 39.4**	**-0.3**
LKD2				AML	AML	11 30 57.1	
	comp=E,2927μm,0.5s						
LKD2				AML	AML	11 30 57.2	
	comp=N,2709μm,0.3s						
TSLK	**Tsoukalades, L**	**0.67**	**16**	P	**Pg**	**11 30 39.2**	**-1.1**
TSLK	**Tsoukalades, L**	**0.67**	**16**	P	**Pg**	**11 30 39.9**	**-0.4**
PDO	**Prodromos**	**0.73**	**54**	P	**Pg**	**11 30 41.2**	**-0.1**
PDO	**Prodromos**	**0.73**	**54**	P	**Pg**	**11 30 41.0**	**-0.3**
PDO				AML	AML	11 31 00.2	
	comp=N,5936μm,0.3s						
PDO				AML	AML	11 31 01.4	
	comp=E,3040μm,0.5s						
RLS	**Riolos of Patr**	**0.83**	**98**	P	**Pg**	**11 30 42.6**	**-0.6**
RLS				S	**Sn**	**11 30 56.4**	**+0.3**
RLS	**Riolos of Patr**	**0.83**	**98**	P	**Pg**	**11 30 42.5**	**-0.6**
RLS				S	**Sb**	**11 30 54.8**	**+0.6**
RLS				AML	AML	11 30 58.2	
	comp=E,1500μm,0.4s						
RLS				AML	AML	11 31 00.1	
	comp=N,3017μm,0.7s						
PVO	**Paravola**	**0.97**	**63**	P	**Pg**	**11 30 45.8**	**-0.1**
PVO				S	**Sn**	**11 31 01.1**	**+1.5**
	comp=N,2μm,0.4s						
PVO	**Paravola**	**0.97**	**63**	P	**Pg**	**11 30 45.7**	**-0.1**
PVO				AML	AML	11 31 06.4	
	comp=N,2787μm,0.5s						
PVO				AML	AML	11 31 07.1	
	comp=E,3441μm,0.6s						
DRO	**Drossia**	**1.04**	**102**	P	**Pg**	**11 30 47.1**	**-0.1**
DRO				S	**Sn**	**11 31 02.7**	**+1.4**
	comp=E,2μm,0.2s						
DRO	**Drossia**	**1.04**	**102**	P	**Pg**	**11 30 47.0**	**-0.1**
DRO				S	**Sn**	**11 31 01.4**	**+0.1**
DRO				AML	AML	11 31 17.5	
	comp=N,2259μm,0.4s						
EFP	**Efpalio**	**1.19**	**77**	P	**Pn**	**11 30 48.9**	**-0.2**
EFP	**Efpalio**	**1.19**	**77**	P	**Pb**	**11 30 49.7**	**+0.3**
EFP				AML	AML	11 31 13.0	
	comp=E,1518μm,0.3s						
EFP				AML	AML	11 31 15.3	
	comp=N,1711μm,0.3s						
AMT	**Artemida-Makis**	**1.20**	**122**	P	**Pg**	**11 30 50.5**	**+0.3**
AMT				AML	AML	11 31 15.0	
	comp=N,2160μm,0.5s						
AMT				AML	AML	11 31 16.8	
	comp=E,1997μm,0.6s						
LAKA	**Lakka**	**1.23**	**86**	P	**Pn**	**11 30 49.6**	**0.0**
LAKA	**Lakka**	**1.23**	**86**	P	**Pn**	**11 30 49.6**	**0.0**
LAKA				S	**Sg**	**11 31 07.1**	**+0.4**
LAKA				AML	AML	11 31 14.1	
	comp=N,1143μm,0.5s						
LAKA				AML	AML	11 31 14.1	
	comp=E,923μm,0.6s						
ANX	**Ano Chora**	**1.25**	**70**	P	**Pb**	**11 30 50.6**	**+0.3**
ANX				S	**Sg**	**11 31 09.0**	**+1.6**
	comp=E,1μm,0.6s						
ANX	**Ano Chora**	**1.25**	**70**	P	**Pg**	**11 30 50.9**	**-0.2**
ANX				AML	AML	11 31 14.6	
	comp=N,2502μm,0.6s						
ANX				AML	AML	11 31 17.1	
	comp=E,2436μm,0.7s						
SERG	**Sergoula**	**1.31**	**79**	P	**Pn**	**11 30 50.9**	**+0.2**
SERG	**Sergoula**	**1.31**	**79**	P	**Pn**	**11 30 51.1**	**+0.4**
SERG				AML	AML	11 31 17.1	
	comp=E,876μm,0.3s						
SERG				AML	AML	11 31 19.2	
	comp=N,1444μm,0.4s						
TRIZ	**Trizonia**	**1.31**	**81**	P	**Pn**	**11 30 50.7**	**-0.1**
TRIZ	**Trizonia**	**1.31**	**81**	P	**Pn**	**11 30 50.9**	**+0.1**
EVR	**Evrytania**	**1.31**	**55**	P	**Pb**	**11 30 51.7**	**+0.2**
EVR				AML	AML	11 31 20.9	
	comp=E,885μm,0.7s						
EVR				AML	AML	11 31 24.5	
	comp=N,673μm,0.7s						
KALE	**Kalithea**	**1.37**	**80**	P	**Pb**	**11 30 52.8**	**+0.5**
KLV	**Kalavryta, Ach**	**1.37**	**95**	P	**Pn**	**11 30 52.1**	**+0.5**
KLV	**Kalavryta, Ach**	**1.37**	**95**	P	**Pn**	**11 30 52.1**	**+0.5**
KLV				AML	AML	11 31 18.8	
	comp=E,626μm,0.5s						
KLV				AML	AML	11 31 23.4	
	comp=N,584μm,0.5s						
ITM	**Ithomi**	**1.55**	**129**	P	**Pb**	**11 30 55.7**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.58**	**57**	P	**Pg**	**11 30 56.9**	**-0.5**
MAKR				AML	AML	11 31 29.2	
	comp=E,1593μm,0.5s						
MAKR				AML	AML	11 31 33.8	
	comp=N,771μm,0.5s						
PYL	**PYLOS**	**1.65**	**140**	P	**Pb**	**11 30 57.8**	**+0.7**
AGG	**Agios Georgios**	**1.72**	**60**	P	**Pg**	**11 30 59.3**	**-0.8**
AGG				AML	AML	11 31 34.5	
	comp=N,610μm,0.7s						
AGG				AML	AML	11 31 36.2	
	comp=E,454μm,0.5s						
VLX	**Vlachokerasia**	**1.75**	**117**	P	**Pg**	**11 31 00.2**	**-0.4**
AXAR	**Agios Charalam**	**1.85**	**71**	P	**Pb**	**11 31 01.4**	**+0.8**
AXAR				AML	AML	11 31 39.0	
	comp=E,1016μm,0.4s						
AXAR				AML	AML	11 31 39.3	
	comp=N,1308μm,0.6s						
KPRO	**Kipourio**	**1.92**	**22**	P	**Pb**	**11 31 02.4**	**+0.6**
PROD	**Prodromos**	**1.95**	**87**	P	**Pb**	**11 31 02.2**	**-0.1**
LOUT	**Loutraki**	**2.02**	**95**	P	**Pb**	**11 31 03.1**	**-0.3**
LKR	**Lokris**	**2.08**	**76**	P	**Pb**	**11 31 03.5**	**-0.9**
VIL2	**Platees**	**2.24**	**88**	P	**Pb**	**11 31 06.7**	**-0.5**
DID	**Didima**	**2.33**	**106**	P	**Pb**	**11 31 07.9**	**-0.6**
VLI	**Veliai**	**2.47**	**125**	P	**Pb**	**11 31 10.4**	**-0.7**
MRKA	**Markates**	**2.54**	**77**	P	**Pb**	**11 31 10.6**	**-1.8**
SKIA	**Skiathos**	**2.58**	**66**	P	**Pn**	**11 31 10.7**	**+2.4**
VLY	**Voula,Athens**	**2.68**	**96**	P	**Pb**	**11 31 12.6**	**-2.2**
AOS	**Alonnisos**	**2.88**	**69**	P	**Pn**	**11 31 15.1**	**+2.7**
IDI	**Anoyia**	**4.60**	**127**	Pn	**Pn**	**11 31 38.3**	**+2.3**
	comp=N,0.5nm,0.3s,baz=295,slow=14,SNR=1.8						
IDI				Sn	**Sn**	**11 32 27.9**	**-1.3**
	comp=N,0.6nm,0.3s,baz=303,slow=20,SNR=2.1						
GERES	**GERESS Array B**	**11.72**	**338**	Pn	**Pn**	**11 33 14.1**	**+0.4**
	comp=N,0.1nm,0.3s,baz=159,slow=12,SNR=1.8						
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**11 35 22.2**	**-2.4**
	comp=N,2.9nm,0.8s,baz=174,slow=16,SNR=1.2						
MKAR	**Makanchi Array**	**45.37**	**58**	P	**P**	**11 38 43.9**	**-0.8**
	comp=N,0.3nm,0.4s,baz=282,slow=8.0,SNR=2.5						
YKA	**Yellowknife Ar**	**73.37**	**340**	P	**P**	**11 41 57.9**	**+0.1**
	comp=N,0.1nm,0.5s,baz=26,slow=5.3,SNR=2.0						

*IDC **28** 11:30:44.7±10.0, 40°.12N×142°.67E, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.2/53, mbtmp3.4/3, ML2.2/1, Error ellipse: s-maj=246.3km s-min=73.3km az=164.0*
*JMA **28** 11:31:01.8, 38°.91N×142°.07E, h56km±1km, M3.4*
JMA Felt I J1.

ISC 28 11:31:01.2±1.7, 38°.89N±0.05×142°.1E±0.1, h53km±12km, n21, σ0s73/23, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.41**	**297**	P	**Pn**	**11 31 12.1**	**+0.5**
OFUJ				S	**Sn**	**11 31 19.3**	**+0.2**
JKMT	**Kesennumamotoy**	**0.53**	**261**	P	**Pn**	**11 31 13.1**	**+0.2**
JKMT				S	**Sn**	**11 31 21.0**	**-0.3**
JMK	**Ichinoseki**	**0.72**	**275**	P	**Pn**	**11 31 15.4**	**+0.2**
JMK				S	**Sn**	**11 31 25.1**	**-0.4**
JIO	**Ouri**	**0.76**	**235**	P	**Pn**	**11 31 15.9**	**+0.2**
JIO				S	**Sn**	**11 31 25.8**	**-0.6**
JOM	**Ohasama**	**0.88**	**312**	P	**Pn**	**11 31 17.5**	**+0.2**
JOM				S	**Sn**	**11 31 29.0**	**-0.2**
JOU	**Okura**	**1.27**	**246**	P	**Pn**	**11 31 22.5**	**-0.1**
JRG	**Rokugo**	**1.27**	**294**	P	**Pn**	**11 31 22.6**	**0.0**
JRG				S	**Sn**	**11 31 38.5**	**-0.1**
JYK	**Kaneyama**	**1.39**	**272**	P	**Pn**	**11 31 24.2**	**0.0**
JMM	**Marumori**	**1.47**	**226**	P	**Pn**	**11 31 25.2**	**-0.1**
JMM				S	**Sn**	**11 31 43.4**	**-0.1**
JANG	**Nango**	**1.56**	**342**	P	**Pn**	**11 31 27.2**	**+0.7**
JAH	**Hinai**	**1.74**	**319**	P	**Pn**	**11 31 29.6**	**+0.7**
JYS	**Shirataka**	**1.76**	**248**	P	**Pn**	**11 31 29.9**	**+0.7**
JYS				S	**Sn**	**11 31 51.0**	**+0.5**
MJAR	**Matsushiro Arr**	**3.90**	**234**	Pn	**Pn**	**11 32 01.1**	**+2.5**
	0.1nm,0.3s,baz=42,slow=14,SNR=5.8						
H11N2	**WAKE ISLAND Hy**	**28.67**	**125**	T	T	12 07 21.7	
	baz=318,slow=76,SNR=29						
H11N1	**WAKE ISLAND Hy**	**28.68**	**125**	T	T	12 07 30.5	
	baz=318,slow=76,SNR=27						
H11N3	**WAKE ISLAND Hy**	**28.69**	**125**	T	T	12 07 31.5	
	baz=318,slow=76,SNR=31						
H11S1	**WAKE ISLAND Hy**	**29.45**	**127**	T	T	12 08 19.6	
	baz=319,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**29.45**	**127**	T	T	12 08 16.2	
	baz=319,slow=76,SNR=18						
H11S2	**WAKE ISLAND Hy**	**29.46**	**127**	T	T	12 08 17.8	
	baz=319,slow=76,SNR=12						
WRA	**Warramunga Arr**	**58.98**	**189**	P	**P**	**11 40 54.2**	**-1.1**
	0.4nm,0.4s,baz=6.1,slow=7.0,SNR=5.4						
ASAR	**Alice Springs**	**62.71**	**188**	P	**P**	**11 41 20.3**	**-0.3**
	0.4nm,0.8s,baz=4.0,slow=6.2,SNR=4.7						

GCMT 28 11:38:50.0±0.4, 65°.36S±0.02×178°.91E±0.06, h31km±2km, MW5.0/69, Moment Tensor Solution. s17,c18; s69,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.84±.37; $M_{\theta\theta}$1.43±.20; $M_{\phi\phi}$-3.27±.23; $M_{r\theta}$-2.80±.32; $M_{\theta\phi}$0.22±.12; $M_{\phi r}$0.45±.26; Best double couple: M_o3.91000×10^{16} NP1:ϕ_s210.00000°,δ51.00000°, λ148.00000°. NP2:ϕ_s321.00000°,δ66.00000°,λ44.00000°. Principal axes: T 4.4470, Plg47.0000°, Azm182.0000°; N -1.0720, Plg41.0000°, Azm344.0000°; P -3.3740, Plg9.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBI	**Tubuai**	**46.70**	**41**	*e*LR	LR	11 59 54.0	
	comp=Z,248nm,26.0s						
TVO	**Taravao**	**52.05**	**40**	*e*T	T	12 43 29.6	
	3.3nm,0.3s						
TAOE	**Nuku Hiva Isla**	**63.14**	**47**	*e*LR	LR	12 07 34.9	
	comp=Z,244nm,24.8s						

ROM 28 11:40:56.1±0.1, 43°.397N±0.004×12°.502E±0.005, h8km, ML1.9/12 Error ellipse: s-maj=0.4km s-min=0.2km az=45.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**121**	P	Pg	11 40 58.1	+0.1
ATFO				S	Sg	11 40 59.4	+0.1
ATFO				AML	AML		
	comp=N,4815μm,0.2s						
ATFO				AML	AML		
	comp=E,4515μm,0.2s						
ATVO	**AVT- Monte Val**	**0.07**	**258**	P	Pg	11 40 58.3	+0.2
ATVO				AML	AML		
	comp=N,1610μm,0.3s						
ATVO				AML	AML		
	comp=E,1820μm,0.4s						
ATPI	**Pietralunga -**	**0.09**	**307**	P	Pg	11 40 58.8	+0.4
ATPI				AML	AML		
	comp=N,854μm,0.4s						
ATPI				AML	AML		
	comp=E,476μm,1.4s						
MURB	**Monte Urbino**	**0.14**	**173**	P	Pg	11 40 59.6	+0.6
MURB				AML	AML		
	comp=E,1310μm,0.3s						
MURB				AML	AML		
	comp=E,1425μm,0.3s						
MURB				AML	AML		
	comp=E,1306μm,0.3s						
MURB				AML	AML		
	comp=N,1240μm,1.5s						
MURB				AML	AML		
	comp=E,1420μm,0.3s						
MURB				AML	AML		
	comp=N,1360μm,0.9s						
PIEI	**Pieia**	**0.14**	**10**	P	Pg	11 40 59.9	+0.7
PIEI				AML	AML		
	comp=E,742μm,1.1s						
PIEI				AML	AML		
	comp=N,604μm,1.2s						
ATMI	**Monte Miggiano**	**0.18**	**250**	S	Sg	11 41 05.0	+2.6
FRON	**Frontone**	**0.20**	**53**	P	Pg	11 41 00.9	+0.6
FRON				AML	AML		
	comp=E,251μm,1.6s						
FRON				AML	AML		
	comp=N,470μm,0.7s						
SSFR	**Montelago di S**	**0.21**	**79**	P	Pg	11 41 00.9	+0.5
SSFR				AML	AML		
	comp=N,828μm,1.6s						
SSFR				AML	AML		
	comp=E,566μm,0.9s						
SSFR				AML	AML		
	comp=E,606μm,0.2s						
SSFR				AML	AML		
	comp=N,822μm,1.6s						
FOSV	**Fossato di Vic**	**0.21**	**118**	P	Pg	11 41 01.0	+0.5
BADI	**Badiali**	**0.22**	**301**	P	Pg	11 41 01.2	+0.7
BADI				S	Sg	11 41 05.3	+1.7
BADI				AML	AML		
	comp=E,810μm,0.6s						
BADI				AML	AML		
	comp=N,608μm,0.6s						
NARO	**Abbazia di Nar**	**0.22**	**15**	P	Pg	11 41 01.2	+0.6
ATTE	**AVT- Monte Tez**	**0.23**	**209**	P	Pg	11 41 01.1	+0.5
ATTE				AML	AML		
	comp=E,274μm,0.4s						
ATTE				AML	AML		
	comp=N,188μm,1.5s						
ATCC	**AVT- Casa Cast**	**0.23**	**155**	P	Pg	11 41 01.6	+0.8
ATCC				S	Sg	11 41 06.2	+2.2
ATCC				AML	AML		
	comp=E,612μm,0.1s						
ATCC				AML	AML		
	comp=N,570μm,0.3s						
PARC	**Parchiule**	**0.32**	**323**	P	Pb	11 41 03.3	-0.8
PARC	**Parchiule**	**0.32**	**323**	P	Pb	11 41 03.4	-0.7
PARC				S	Sb	11 41 10.0	+0.5
SNTG	**Esanatoglia**	**0.35**	**114**	P	Pg	11 41 03.6	+0.6
SNTG				AML	AML		
	comp=E,237μm,1.3s						
SNTG				AML	AML		
	comp=N,296μm,0.2s						
ASSB	**Assisi San Ben**	**0.37**	**162**	P	Pg	11 41 03.9	+0.4
EL6	**Elcito**	**0.44**	**99**	P	Pg	11 41 05.3	+0.6
EL6				AML	AML		
	comp=N,418μm,1.6s						
EL6				AML	AML		
	comp=E,508μm,1.6s						
MGAB	**Montegabbione**	**0.56**	**211**	P	Pg	11 41 07.5	+0.5
MGAB				AML	AML		
	comp=N,148μm,1.2s						
MGAB				AML	AML		
	comp=E,160μm,0.3s						
MGAB	**Montegabbione**	**0.56**	**211**	P	Pg	11 41 07.5	+0.5
MGAB				S	Sb	11 41 17.0	+0.5
MGAB				AML	AML		
	comp=E,160μm,0.3s						
MGAB				AML	AML		
	comp=N,148μm,1.2s						
CIMA	**Civitanova Mar**	**0.86**	**96**	P	Pb	11 41 13.5	+0.2
CIMA	**Civitanova Mar**	**0.86**	**96**	P	Pb	11 41 13.5	+0.2
CIMA	**Civitanova Mar**	**0.86**	**96**	P	Pb	11 41 13.5	+0.2

ROM 28 11:40:58.2±0.1, 43°.399N±0.004×12°.504E±0.006, h8km, ML1.9/8, Error ellipse: s-maj=0.4km s-min=0.3km az=58.0, Central Italy

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

MURB					AML	AML		
	comp=E,1306μm,0.3s							
MURB					AML	AML		
	comp=N,1240μm,1.5s							
MURB					AML	AML		
	comp=E,1420μm,0.3s							
MURB					AML	AML		
	comp=N,1360μm,0.9s							
MURB	**Monte Urbino**	**0.14**	**174**		S	Pg	11 41 02.1	+0.9
PIEI	**Pieia**	**0.14**	**9**		P	Pg	11 41 02.0	+0.8
PIEI					S	Sg	11 41 04.6	+1.3
PIEI					AML	AML		
	comp=E,742μm,1.1s							
PIEI					AML	AML		
	comp=N,604μm,1.2s							
FRON	**Frontone**	**0.20**	**54**		P	Pg	11 41 02.8	+0.5
FRON					S	Sg	11 41 06.5	+1.4
SSFR	**Montelago di S**	**0.21**	**79**		P	Pg	11 41 02.9	+0.5
SSFR					AML	AML		
	comp=E,566μm,0.9s							
SSFR					AML	AML		
	comp=N,827μm,1.6s							
SSFR					AML	AML		
	comp=E,566μm,0.9s							
SSFR					AML	AML		
	comp=N,828μm,1.6s							
SSFR					AML	AML		
	comp=E,606μm,0.2s							
SSFR					AML	AML		
	comp=N,822μm,1.6s							
FOSV	**Fossato di Vic**	**0.21**	**119**		P	Pg	11 41 03.0	+0.4
BADI	**Badiali**	**0.22**	**301**		P	Pg	11 41 03.2	+0.6
BADI					S	Sg	11 41 07.2	+1.6
BADI					AML	AML		
	comp=E,810μm,0.6s							
BADI					AML	AML		
	comp=N,608μm,0.6s							
NARO	**Abbazia di Nar**	**0.22**	**15**		P	Pg	11 41 03.0	+0.4
NARO					S	Sg	11 41 07.5	+1.9
ATTE	**AVT- Monte Tez**	**0.23**	**209**		P	Pg	11 41 03.9	+1.1
ATTE					S	Sg	11 41 07.5	+1.6
ATTE					AML	AML		
	comp=E,275μm,0.4s							
ATTE					AML	AML		
	comp=N,188μm,1.5s							
ATTE					AML	AML		
	comp=E,274μm,0.4s							
ATCC	**AVT- Casa Cast**	**0.23**	**155**		P	Pg	11 41 04.1	+1.2
ATCC					S	Sg	11 41 07.9	+1.9
ATCC					AML	AML		
	comp=N,570μm,0.3s							
ATCC					AML	AML		
	comp=E,612μm,0.1s							
SNTG	**Esanatoglia**	**0.35**	**114**		P	Pg	11 41 05.8	+0.7
SNTG					S	Sb	11 41 11.3	-1.0
SNTG					AML	AML		
	comp=N,296μm,0.2s							
SNTG					AML	AML		
	comp=E,237μm,1.3s							
ASSB	**Assisi San Ben**	**0.37**	**162**		P	Pb	11 41 06.8	-0.3
ASSB					S	Sb	11 41 12.1	-1.0
EL6	**Elcito**	**0.44**	**99**		AML	AML		
	comp=E,507μm,1.6s							
EL6					AML	AML		
	comp=N,416μm,1.6s							

BJI ***28*** *11:41:38.8±0.0,39°.75N×75°.39E,h10km,ML3.5/5*
KRNET ***28*** *11:41:38.0±0.1,39°.64N×75°.33E,mb4.0*
SOME ***28*** *11:41:39.9,39°.87N×75°.42E,h5km*
NNC ***28*** *11:41:45.3±3.0,40°.07N×75°.40E,h0km,mb4.2,mpv4.0,*
Error ellipse: s-maj=25.0km s-min=16.6km az=161.0
ISC 28 11:41:41.2±0.9,39°.85N±0°.04×75°.40E±0°.03,h10km,n63,
σ1§98/100,20C-21D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSH	**Kashi**	**0.56**	**127**	Pg		**Pg**	**11 41 50.5**	**-1.5**
KSH				Sg		**Sb**	**11 41 59.5**	**-1.7**
KSH				smax		smax		
	comp=N,2μm,0.6s							
KSH				smax		smax		
	comp=E,2μm,0.6s							
NRN	**Naryn**	**1.65**	**16**	⇓*i*P		**Pn**	**11 42 10.5**	**0.0**
	baz=15							
NRN				⇓*i*S		**Sb**	**11 42 33.5**	**+0.7**
	baz=15							
ARLS	**Aral**	**2.17**	**338**	⇑*e*P		**Pb**	**11 42 19.0**	**-1.7**
	baz=42							
ARLS				⇑*i*S		**Sb**	**11 42 47.4**	**-0.3**
	baz=42							
ARSB	**Arslanbob**	**2.36**	**309**	⇑*e*P		**Pn**	**11 42 20.5**	**+0.4**
	baz=14							
ARSB				⇑*i*S		**Sn**	**11 42 48.5**	**-0.7**
	baz=14							
UCH	**Uchtor**	**2.47**	**345**	⇓*i*P		**Pn**	**11 42 23.6**	**+1.7**
	baz=47							
UCH				⇓*i*S		**Sb**	**11 42 55.1**	**-1.5**
	baz=47							
UCH	**Uchtor**	**2.47**	**345**	P		**Pb**	**11 42 24.0**	**-2.0**
	SNR=35							
ULHL	**Ulahol**	**2.48**	**15**	⇓*i*P		**Pn**	**11 42 22.9**	**+1.1**
	baz=15							
ULHL				⇓*i*S		**Sb**	**11 42 55.1**	**-1.5**
	baz=15							
ULHL	**Ulahol**	**2.48**	**15**	P		**Pb**	**11 42 25.9**	**-0.1**
	SNR=13							
ANR	**Andizhan**	**2.49**	**292**	P		**Pb**	**11 42 26.2**	**+0.1**
ANR				S		**Sg**	**11 42 59.6**	**-1.7**
AML	**Almayashu**	**2.62**	**331**	⇓*i*P		**Pn**	**11 42 25.3**	**+1.4**
	baz=34							
AML				⇓*i*S		**Sn**	**11 42 58.4**	**+2.4**
	baz=34							
AML	**Almayashu**	**2.62**	**331**	P		**Pn**	**11 42 25.4**	**+1.4**
	SNR=28							
KDJ	**Kajisay**	**2.65**	**30**	⇑*i*P		**Pn**	**11 42 24.6**	**+0.4**
	baz=29							
KDJ				⇑*i*S		**Sn**	**11 42 58.1**	**+1.7**
	baz=29							
BOOM	**Boomskoye usch**	**2.67**	**9**	⇓*i*P		**Pn**	**11 42 25.7**	**+1.2**
	baz=9.0							
BOOM				⇓*i*S		**Sb**	**11 42 59.9**	**-2.2**
	baz=9.0							
KBK	**Karagaybulak**	**2.82**	**353**	⇓*i*P		**Pn**	**11 42 28.1**	**+1.5**
	baz=55							
KBK				⇓*i*S		**Sb**	**11 43 04.1**	**-2.5**
	baz=55							
KBK	**Karagaybulak**	**2.82**	**353**	P		**Pn**	**11 42 28.8**	**+2.2**
	SNR=38							
AAK	**Ala-Archa**	**2.87**	**347**	⇑*i*P		**Pn**	**11 42 28.9**	**+1.7**
	baz=48							
AAK				⇑*i*S		**Sb**	**11 43 05.4**	**-2.4**
	baz=48							
AAK	**Ala-Archa**	**2.87**	**347**	P		**Pn**	**11 42 29.6**	**+2.5**
	SNR=46							
AAK	**Ala-Archa**	**2.87**	**347**	⇓Pn		**Pn**	**11 42 29.7**	**+2.5**
	52nm,0.6s							
AAK				⇓Lg		Lg	11 43 08.5	
	84nm,0.9s							
FRG	**Fergana**	**2.90**	**289**	P		**Pn**	**11 42 29.2**	**+1.7**
FRG				S		**Sn**	**11 43 04.3**	**+1.8**
FRU1	**Bishkek**	**3.01**	**349**	⇑*i*P		**Pn**	**11 42 30.4**	**+1.3**
	baz=51							
FRU1				⇑*i*S		**Sn**	**11 43 08.1**	**+2.8**
	baz=51							
EKS2	**Erkin-Say**	**3.06**	**337**	⇑*i*P		**Pn**	**11 42 31.3**	**+1.5**
	baz=39							
EKS2				⇑*i*S		**Sn**	**11 43 09.8**	**+3.2**
	baz=39							
EKS2	**Erkin-Say**	**3.06**	**337**	P		**Pn**	**11 42 31.4**	**+1.6**
	SNR=13							
CHMS	**Chumysh**	**3.18**	**351**	⇓*i*P		**Pn**	**11 42 33.1**	**+1.7**
	baz=53							
CHMS				⇓*i*S		**Sn**	**11 43 12.3**	**+2.9**
	baz=53							
CHMS	**Chumysh**	**3.18**	**351**	P		**Pn**	**11 42 33.7**	**+2.3**
	SNR=32							
KST	**Kastek**	**3.22**	**7**	*e*P		**Pg**	**11 42 41.1**	**-1.8**
KST	65nm,0.4s			*e*S		**Sg**	**11 43 25.0**	**+0.4**
	146nm,0.7s							
IZV	**Izvestkoviy**	**3.31**	**16**	*e*P		**Pb**	**11 42 41.4**	**+1.2**
	46nm,0.6s							
IZV				*e*S		**Sg**	**11 43 26.3**	**-1.3**
	79nm,0.7s							
IZV	**Izvestkoviy**	**3.31**	**16**	Pg		**Pb**	**11 42 41.4**	**+1.2**
	46nm,0.6s							
IZV				Lg		Lg	11 43 26.3	
	79nm,0.7s							
MRKS	**Merke**	**3.32**	**331**	*e*P		**Pb**	**11 42 42.1**	**+1.8**
	8.1nm,0.3s							
MRKS				*e*S		**Sg**	**11 43 27.6**	**-0.4**
	29nm,0.6s							
MRKS	**Merke**	**3.32**	**331**	Pg		**Pb**	**11 42 42.1**	**+1.8**
	18nm,0.5s							
MRKS				Lg		Lg	11 43 27.6	
	29nm,0.6s							
MTBS	**Maitube**	**3.37**	**13**	*e*P		**Pg**	**11 42 43.4**	**-2.3**
	9.9nm,0.5s							
MTBS				*e*S		**Sg**	**11 43 29.1**	**-0.2**
	37nm,0.4s							
TNSS	**Tian-Shan**	**3.39**	**20**	*e*P		**Pb**	**11 42 43.3**	**+1.6**
	39nm,0.4s							
TNSS				*e*S		**Sg**	**11 43 29.5**	**-0.6**
	51nm,0.7s							
TNSS	**Tian-Shan**	**3.39**	**20**	Pg		**Pb**	**11 42 43.3**	**+1.6**
	39nm,0.4s							
TNSS				Lg		Lg	11 43 29.5	
	51nm,0.7s							
ANVS	**Anan'yevo**	**3.39**	**30**	⇓*e*P		**Pn**	**11 42 35.3**	**+0.9**
	baz=29							
ANVS				⇓*i*S		**Sn**	**11 43 16.3**	**+1.5**
	baz=29							
DGS	**Degeres**	**3.40**	**5**	*e*P		**Pb**	**11 42 43.1**	**+1.5**
	31nm,0.4s							
DGS				*e*S		**Sg**	**11 43 29.0**	**-1.5**
	59nm,0.6s							
DGS	**Degeres**	**3.40**	**5**	Pg		**Pb**	**11 42 43.1**	**+1.5**
	31nm,0.4s							
DGS				Lg		Lg	11 43 29.5	
	59nm,0.6s							
PRZ	**Przheval'sk**	**3.47**	**40**	⇓*e*P		**Pn**	**11 42 35.9**	**+0.4**
	baz=38							
PRZ				⇓*i*S		**Sn**	**11 43 17.4**	**+0.6**
	baz=38							
USP	**Ospenovka**	**3.48**	**349**	⇑*i*P		**Pn**	**11 42 37.3**	**+1.8**
	baz=51							
USP				⇑*i*S		**Sn**	**11 43 19.3**	**+2.6**
	baz=51							
USP	**Ospenovka**	**3.48**	**349**	P		**Pn**	**11 42 37.5**	**+2.0**
	SNR=29							
MDOK	**Medeo**	**3.53**	**20**	*e*P		**Pb**	**11 42 45.8**	**+1.9**
	10nm,0.4s							
MDOK				*e*S		**Sg**	**11 43 33.1**	**-1.6**
	88nm,0.9s							
MDOK	**Medeo**	**3.53**	**20**	Pn		**Pn**	**11 42 38.9**	**+2.6**
	20nm,0.8s							
MDOK				Lg		Lg	11 43 32.3	
	87nm,1.2s							
AAA	**Alma-Ata**	**3.54**	**18**	*e*P		**Pg**	**11 42 46.7**	**-2.4**
	27nm,0.1s							
AAA				*e*S		**Sg**	**11 43 35.0**	**0.0**
	85nm,0.8s							
AAA	**Alma-Ata**	**3.54**	**18**	Pg		**Pg**	**11 42 46.7**	**-2.4**
	27nm,0.1s							
AAA				Lg		Lg	11 43 35.0	
	85nm,0.8s							
KNDC	**Almaty**	**3.56**	**19**	⇑Pn		**Pb**	**11 42 43.0**	**-1.4**
	38nm,0.7s							
KNDC				⇑Lg		Lg	11 43 32.2	
	264nm,0.9s							
KOTS	**Kotyrbulak**	**3.62**	**20**	*e*P		**Pb**	**11 42 47.5**	**+2.1**
	42nm,0.4s							
KOTS				*e*S		**Sg**	**11 43 36.4**	**-1.0**
	271nm,0.6s							
KOTS	**Kotyrbulak**	**3.62**	**20**	Pg		**Pb**	**11 42 47.5**	**+2.1**
	42nm,0.4s							
KOTS				Lg		Lg	11 43 36.4	
	271nm,0.6s							
SGDS	**Sogindy**	**3.64**	**351**	P		**Pb**	**11 42 47.3**	**+1.6**
SATY	**Saty**	**3.92**	**34**	*e*P		**Pb**	**11 42 51.9**	**+1.3**
	28nm,0.5s							
SATY				*e*S		**Sg**	**11 43 44.1**	**-3.1**
	75nm,0.7s							
SATY	**Saty**	**3.92**	**34**	Pg		**Pb**	**11 42 51.9**	**+1.3**
	28nm,0.5s							
SATY				Lg		Lg	11 43 44.5	
	75nm,0.7s							
KTBS	**Karatobe**	**3.98**	**14**	*e*P		**Pb**	**11 42 53.2**	**+1.8**
	28nm,0.5s							
KTBS				*e*S		**Sg**	**11 43 46.1**	**-2.8**
	82nm,0.6s							
KTBS	**Karatobe**	**3.98**	**14**	Pg		**Pb**	**11 42 53.2**	**+1.8**
	28nm,0.5s							
KTBS				Lg		Lg	11 43 46.1	
	82nm,0.6s							
KUU	**Kurty**	**4.10**	**10**	*e*P		**Pb**	**11 42 55.9**	**+2.4**
	17nm,1.1s							
KUU				*e*S		**Sg**	**11 43 50.6**	**-2.3**
	72nm,1.1s							
CHKK	**Chushkaly**	**4.17**	**16**	*e*P		**Pb**	**11 42 57.5**	**+2.8**
	6.8nm,0.7s							
CHKK				*e*S		**Sg**	**11 43 53.2**	**-2.0**
	89nm,0.7s							
KURS	**Kuram**	**4.19**	**29**	*e*P		**Pb**	**11 42 56.9**	**+1.9**
	9.8nm,0.7s							
KURS				*e*S		**Sg**	**11 43 52.2**	**-3.4**
	29nm,0.7s							
UZB	**Uzynbulak**	**4.27**	**38**	*e*P		**Pb**	**11 42 57.4**	**+0.9**
	12nm,0.7s							
UZB				*e*S		**Sg**	**11 43 53.3**	**-5.1**
	32nm,0.8s							
UZB	**Uzynbulak**	**4.27**	**38**	Pg		**Pb**	**11 42 57.4**	**+0.9**
	12nm,0.7s							
UZB				Lg		Lg	11 43 53.3	
	32nm,0.8s							
KPKS	**Kokpek**	**4.37**	**33**	*e*P		**Pb**	**11 42 59.8**	**+1.6**
	23nm,0.7s							
KPKS				*e*S		**Sg**	**11 43 57.7**	**-3.9**
	58nm,0.6s							
SHLS	**Shalkode**	**4.50**	**41**	*e*P		**Pg**	**11 43 06.4**	**-1.0**
	14nm,0.6s							
SHLS				*e*S		**Sg**	**11 44 09.1**	**+3.5**
	56nm,0.6s							
SHLS	**Shalkode**	**4.50**	**41**	Pg		**Pg**	**11 43 06.4**	**-1.0**
	14nm,0.6s							
SHLS				Lg		Lg	11 44 09.5	
	56nm,0.6s							
PDGK	**Podgornoye**	**4.64**	**40**	Pg		**Pb**	**11 43 03.8**	**+1.1**
PDGK				Lg		Lg	11 44 04.3	
	25nm,0.6s							
PDGK	**Podgornoye**	**4.64**	**40**	⇓Pn		Pn	11 42 55.9	+4.5
	11nm,0.8s							
PDGK				⇑Lg		Lg	11 44 10.4	
	49nm,0.7s							
KK31	**Karatay Array**	**4.90**	**313**	⇑Pn		**Pn**	**11 42 54.9**	**-0.1**
	0.8nm,0.5s,baz=111,slow=10							
KK31				⇑Pg		**Pb**	**11 43 09.9**	**+2.7**
	1.6nm,0.3s,baz=194,slow=17							
KK31				⇑Lg		Lg	11 44 11.8	
	11nm,0.4s,baz=112,slow=23							
BTLS	**Baital**	**5.28**	**350**	*e*P		**Pb**	**11 43 17.1**	**+3.5**
	1.2nm,0.5s							
BTLS				*e*S		**Sg**	**11 44 26.8**	**-4.0**
	12nm,0.7s							
WMQ	**Urumqi**	**10.00**	**63**	*e*P		**Pn**	**11 44 06.8**	**+1.9**

DDA ***28*** *11:42:42.5,41°.66N×44°.06E,h16km±2km,ML2.0*
TIF ***28*** *11:42:42.5,41°.65N×44°.07E,h17km±1km*
NORS ***28*** *11:42:43.0±0.0,41°.65N×44°.15E,h2km,MPVA3.4*
ISC 28 11:42:43.4±1.0,41°.58N±0°.03×44°.10E±0°.02,h23km±10km,
n27,σ1§13/54,Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KZRT	**Kazreti**	**0.30**	**131**	P		**Pb**	**11 42 50.6**	**+0.3**
KZRT				S		**Sb**	**11 42 55.8**	**+0.7**
KZRT	**Kazreti**	**0.30**	**131**	*i* P		**Pb**	**11 42 50.4**	**+0.1**
KZRT				*i* S		**Sb**	**11 42 55.6**	**+0.5**
AKH	**Akhalkalaki**	**0.48**	**249**	P		**Pb**	**11 42 53.1**	**-0.3**
AKH				S		**Sb**	**11 42 59.8**	**-0.4**
BGD	**Bogdanovka**	**0.49**	**230**	P		**Pb**	**11 42 53.6**	**+0.1**
BGD				S		**Sb**	**11 43 00.8**	**+0.4**
TBLG	**Delisi**	**0.50**	**73**	P		**Pb**	**11 42 53.3**	**-0.3**
TBLG				S		**Sb**	**11 43 00.7**	**+0.1**
TBLG	**Delisi**	**0.50**	**73**	*i* P		**Pb**	**11 42 52.8**	**-0.8**
TBLG				*i* S		**Sb**	**11 42 59.8**	**-0.8**
BTNK	**Botanikuri**	**0.54**	**79**	P		**Pb**	**11 42 53.9**	**-0.3**
BTNK				S		**Sn**	**11 43 02.3**	**-1.7**
BTNK	**Botanikuri**	**0.54**	**79**	*i* P		**Pb**	**11 42 53.3**	**-0.9**
BTNK				*i* S		**Sb**	**11 43 01.8**	**+0.2**
BTNK				IAML			11 43 03.0	
BTNK	comp=N,91nm,0.1s			IAML			11 43 07.0	
GUDG	**Gudauri**	**0.93**	**18**	P		**Pn**	**11 42 59.2**	**-2.0**
GUDG	comp=E,48nm,0.1s			S		**Sb**	**11 43 11.6**	**-1.3**
DGRG	**David-gareji**	**0.97**	**97**	*i* P		**Pb**	**11 43 02.2**	**+0.7**
DGRG				*i* S		**Sn**	**11 43 16.4**	**+1.7**
EAK	**Akyaka**	**0.97**	**203**	*i* P		**Pb**	**11 43 01.8**	**+0.1**
EAK	comp=E,88nm,0.3s			IAML			11 43 16.0	
EAK				*i* S		**Sn**	**11 43 16.2**	**+1.4**
EAK	comp=N,43nm,0.3s			IAML			11 43 18.0	
EPOS	**Posof**	**1.03**	**266**	*i* P		**Pn**	**11 43 02.1**	**-0.4**
EPOS				*i* S		**Sb**	**11 43 14.8**	**-1.0**
ONI	**Oni**	**1.11**	**335**	P		**Pn**	**11 43 03.0**	**-0.7**
ONI				S		**Sn**	**11 43 17.3**	**-1.0**
TKB	**Tkibuli**	**1.12**	**313**	P		**Pn**	**11 43 03.1**	**-0.6**
TKB				S		**Sn**	**11 43 17.7**	**-0.8**
ZEI	**Tsey**	**1.21**	**353**	*i* Pg		**Pn**	**11 43 05.1**	**-0.1**
ZEI				*e*Sg		**Sb**	**11 43 21.3**	**+0.2**
LACR	**Lac**	**1.25**	**7**	*i* Pg		**Pn**	**11 43 05.1**	**-0.5**
LACR				*e*Sg		**Sn**	**11 43 21.6**	**-0.1**
DIGR	**Digorskoe uzhe**	**1.37**	**344**	*e*Pg		**Pb**	**11 43 08.1**	**-0.4**
DIGR				*e*Sg		**Sb**	**11 43 26.0**	**+0.3**
KORR	**Kora**	**1.50**	**359**	*e*Pg		**Pb**	**11 43 10.7**	**+0.1**
KORR				*e*Sg		**Sb**	**11 43 32.2**	**+2.9**
LSNR	**Lesken**	**1.71**	**353**	*e*Pg		**Pb**	**11 43 13.8**	**-0.3**
LSNR				*e*Sg		**Sb**	**11 43 37.3**	**+2.2**
DAGI	**Agillar**	**1.72**	**254**	*i* P		**Pb**	**11 43 14.1**	**-0.2**
DAGI				*i* S		**Sb**	**11 43 36.7**	**+1.1**
DAGI	comp=E,6.4nm,0.4s			IAML			11 43 39.0	
BATM	**Batumi**	**1.80**	**271**	P		**Pb**	**11 43 15.4**	**-0.3**
BATM				S		**Sb**	**11 43 38.3**	**+0.5**
BATM	**Batumi**	**1.80**	**271**	*i* P		**Pb**	**11 43 14.6**	**-1.1**
BATM				*i* S		**Sb**	**11 43 37.8**	**0.0**
BTKR	**Batakoyurt**	**1.82**	**10**	*e*Pg		**Pb**	**11 43 17.7**	**+1.7**
BTKR				*e*Sg		**Sb**	**11 43 42.1**	**+3.7**
DBOC	**Borcka**	**1.84**	**263**	*i* P		**Pb**	**11 43 15.6**	**-0.8**
DBOC				*i* S		**Sb**	**11 43 39.5**	**+0.5**
DBOC	comp=E,13nm,0.7s			IAML			11 43 41.0	
DBAD	**Bademkaya**	**1.90**	**253**	*i* P		**Pb**	**11 43 17.4**	**0.0**
DBAD				*i* S		**Sb**	**11 43 41.9**	**+1.3**
DBAD	comp=E,21nm,0.5s			IAML			11 43 42.0	
DDEM	**Demirkent**	**1.90**	**249**	*i* P		**Pb**	**11 43 17.4**	**0.0**
DDEM				*i* S		**Sb**	**11 43 42.9**	**+2.2**
DDEM	comp=N,31nm,0.5s			IAML			11 43 43.0	
NEY	**Neytrino**	**1.95**	**329**	*e*Pg		**Pb**	**11 43 18.9**	**+0.6**
NEY				*e*Sg		**Sb**	**11 43 43.2**	**+0.9**

NIED ***28*** *11:49:00,27°.00N×127°.10E,h89km,Mw4.9 Best double couple: M0 2.44000×10^16 NP1:φs225.00000°,δ78.00000°, λ122.00000°. NP2:φs334.00000°,δ34.00000°,λ23.00000°.*
BGR ***28*** *11:49:00.1±0.0,26°.32N×128°.11E,h33km,mb5.4*
BJI ***28*** *11:49:06.2±0.0,26°.59N×127°.37E,h95km,mB4.9/52, mb5.0/71*
IDC ***28*** *11:49:11.6±0.4,27°.03N×127°.18E,h102km±3km,mb4.5/38, mb1 4.6/40,mb1mx4.5/51,mbtmp4.8/40,MS3.7/18, Ms1 3.7/18,ms1mx3.5/41,Error ellipse: s-maj=10.8km s-min=6.3km az=33.0*
JMA ***28*** *11:49:11.8±0.2,26°.95N×127°.09E,h94km±2km,M4.7*
JMA Felt II J1.
NEIC ***28*** *11:49:11.6±1.6,26°.90N±0°.07×127°.08E±0°.06, h100km±4km,mb5.1/146,Error ellipse: s-maj=9.9km s-min=7.4km az=169.0*
GCMT ***28*** *11:49:12.6±0.3,26°.88N±0°.02×127°.13E±0°.02, h115km±3km,MW4.9/106,Moment Tensor Solution. s31,c36; s106,c159; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr 1.03±.12; Mθθ 1.08±.13; Mφφ -2.10±.13; Mrθ -2.22±.08; Mrφ -0.38±.13; Mθφ -1.55±.08; Best double couple: M0 3.27800×10^16 NP1:φs332.00000°,δ32.00000°, λ20.00000°. NP2:φs225.00000°,δ80.00000°,λ120.00000°. Principal axes: T 3.4070, Plg47.0000°, Azm167.0000°; N -0.2480, Plg30.0000°, Azm39.0000°; P -3.1490, Plg28.0000°, Azm292.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
MOS ***28*** *11:49:12.2±1.0,26°.97N×127°.05E,h117km,mb5.0/48 Error ellipse: s-maj=7.4km s-min=4.5km az=109.0*
ISC 28 11:49:11.5±0.4,26°.95N±0°.03×127°.09E±0°.03,h99km±3km,
h100km:pP-P,n530,σ1§28/576,mb5.1/194,31C-22D,
Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAGN	**Aguni-jima**	**0.39**	**159**	⇓P		**Pn**	**11 49 26.3**	**-0.2**
JAGN				S		**Sn**	**11 49 37.3**	**-0.3**
JKE	**Kume jima 2**	**0.68**	**203**	⇓P		**Pn**	**11 49 28.6**	**-0.1**
JKE				S		**Sn**	**11 49 40.8**	**-0.7**
JIH	**Iheya**	**0.79**	**84**	⇓P		**Pn**	**11 49 30.0**	**+0.3**
JIH				S		**Sn**	**11 49 43.3**	**-0.1**
JNTH	**Nagotoyohara**	**0.94**	**117**	⇓P		**Pn**	**11 49 31.3**	**+0.1**
JNTH				S		**Sn**	**11 49 45.2**	**-0.9**
JJT3	**Tamagusuku3**	**1.02**	**142**	⇓P		**Pn**	**11 49 32.7**	**+0.6**
JJT3				S		**Sn**	**11 49 48.4**	**+0.8**
JOW	**Kunigami**	**1.07**	**96**	⇓P		**Pn**	**11 49 32.7**	**+0.1**
JOW				S		**Sn**	**11 49 47.7**	**-0.9**
JOW	**Kunigami**	**1.07**	**96**	P		**Pn**	**11 49 33.0**	**+0.4**
JOW	212nm,0.3s,baz=100,slow=17,SNR=9015 2μm,0.3s,baz=151,slow=12,SNR=77			S		**Sn**	**11 49 47.7**	**-0.9**
JYRO	**Yoronjima**	**1.22**	**86**	⇓P		**Pn**	**11 49 34.4**	**0.0**
JYRO				S		**Sn**	**11 49 50.7**	**-0.9**
JOKE	**Okinoerabujima**	**1.39**	**72**	⇓P		**Pn**	**11 49 36.3**	**0.0**
JOKE				S		**Sn**	**11 49 54.8**	**-0.4**
JTK	**Tokunoshima**	**1.86**	**63**	⇓P		**Pn**	**11 49 42.1**	**-0.1**
JTK				S		**Sn**	**11 50 04.8**	**-0.8**
JAMN	**Amaminishikomi**	**2.26**	**55**	⇓P		**Pn**	**11 49 47.1**	**-0.3**
JAMN				S		**Sn**	**11 50 13.8**	**-1.1**
YOJ	**Yonaguni jima**	**4.43**	**237**	P		**Pn**	**11 50 16.3**	**-0.2**
YOJ				SN		**Sn**	**11 51 05.8**	**-1.2**
YOJ	**Yonaguni jima**	**4.43**	**237**			**Pn**	**11 50 16.7**	**+0.2**
YOJ				Sn		**Sn**	**11 51 05.6**	**-1.4**
TATO	**Taipei**	**5.41**	**250**			**Pn**	**11 50 32.8**	**+3.1**
TATO				Sn		**Sn**	**11 51 27.6**	**-3.1**
YHNB	**Yeheng**	**5.62**	**247**			**Pn**	**11 50 34.7**	**+1.9**
YHNB				Sn		**Sn**	**11 51 37.3**	**+1.2**
NACB	**Ninganchiao**	**5.68**	**242**			**Pn**	**11 50 32.6**	**-0.8**
NACB				Sn		**Sn**	**11 51 33.5**	**-3.8**
YULB	**Yu-li**	**6.33**	**237**			**Pn**	**11 50 39.5**	**-2.8**
YULB				Sn		**Sn**	**11 51 48.4**	**-4.8**
SSLB	**Suanglung**	**6.38**	**242**			**Pn**	**11 50 41.8**	**-1.2**
SSLB				Sn		**Sn**	**11 51 51.3**	**-3.1**
SSE	**Sheshan**	**6.61**	**310**	P		**Pn**	**11 50 47.8**	**+1.7**
SSE				S		**Sn**	**11 52 01.8**	**+1.

NJ2 LR LR
comp=E,1µm,4.0s
NJ2 LR LR
comp=Z,1µm,4.0s
TJN Taejon 9.40 1⇑ *i*P **Pn** **11 51 27.1 +3.1**
KSAR Wonju Array Be 10.48 3 P **Pn** **11 51 39.9 +1.2**
KSAR Wonju Array Be 10.48 3 **Pn** **11 51 39.9 +1.2**
KSRS Korea Array 10.50 4 P **Pn** **11 51 42.1 +3.2**
0.3nm,0.3s,baz=179,slow=14,SNR=32
KSRS LR LR 11 55 52.9
comp=Z,156nm,21.1s,baz=180,slow=39
KS19 Wonju Array Si 10.54 3 **Pn** **11 51 40.8 +1.3**
WHN Wuhan 11.73 291 ⇓P **Pn** **11 51 56.8 +1.2**
WHN pmax pmax
comp=Z,220nm,1.1s
WHN pmax pmax
comp=Z,950nm,2.6s
WHN LR LR
comp=N,3µm,6.0s
WHN LR LR
comp=E,3µm,5.3s
WHN LR LR
comp=Z,1µm,8.8s
INU Inuyama 11.93 43 **Pn** **11 51 59.1 +0.9**
TIA Tai'an 12.54 320 P **Pn** **11 52 08.8 +2.5**
TIA pmax pmax
comp=Z,27nm,1.1s
TIA pmax pmax
comp=Z,260nm,6.0s
TIA LR LR
comp=N,340nm,7.5s
TIA LR LR
comp=E,400nm,5.9s
TIA LR LR
comp=Z,350nm,6.2s
JHJ2 Mitsune 12.62 58 Pn **Pn** **11 52 07.3 -0.1**
DL2 Dalian 12.77 340 P **P** **11 52 15.3 -1.1**
DL2 S **S** **11 54 42.0 -7.0**
DL2 pmax pmax
comp=Z,170nm,0.9s
DL2 pmax pmax
comp=Z,330nm,4.2s
DL2 LR LR
comp=N,310nm,11.9s
DL2 LR LR
comp=E,430nm,12.3s
DL2 LR LR
comp=Z,400nm,10.9s
MAJO Matsushiro 13.44 42⇓ *e*P **Pn** **11 52 19.7 +1.5**
MAJO pmax pmax
comp=Z,49nm,1.9s
MAJO Matsushiro 13.44 42 Pn **Pn** **11 52 19.1 +0.9**
MAT Matsushiro 13.44 42 P **Pn** **11 52 18.9 +0.7**
MJAR Matsushiro Arr 13.45 42 P **Pn** **11 52 20.0 +1.8**
MJAR Matsushiro Arr 13.45 42 P **Pn** **11 52 16.8 -1.4**
comp=Z,0.2nm,0.3s,baz=245,slow=13,SNR=12
MJAR LR LR 11 57 56.3
comp=Z,99nm,20.6s,baz=50,slow=39
MJAR Matsushiro Arr 13.45 42 Pn **Pn** **11 52 20.0 +1.8**
MJB9 Matsu-Tunnel 13.45 42 Pn **Pn** **11 52 19.3 +1.1**
JCJ Chichijima 13.46 86 P **Pn** **11 52 18.6 +0.1**
comp=Z,11nm,0.3s,baz=103,slow=22,SNR=7.9
TGY Tagaytay City 14.01 205 P **P** **11 52 28.8 -1.7**
comp=Z,71nm,0.3s,baz=90,slow=14,SNR=2.8
ENH Enshi 15.81 286 P **P** **11 52 51.0 +0.8**
BJT Baijiatuau 15.88 328 P **P** **11 52 52.6 +1.6**
BJT pmax pmax
comp=Z,37nm,0.7s
BJT Baijiatuau 15.88 328 P **P** **11 52 52.5 +1.6**
BJI Beijing 15.90 328 P **P** **11 52 51.5 +0.4**
BJI S **S** **11 55 49.5 -3.4**
BJI pmax pmax
comp=Z,33nm,1.2s
BJI pmax pmax
comp=Z,360nm,4.2s
TIY Taiyuan 16.36 315 *e*P **P** **11 52 58.0 +1.6**
TIY sP **sP** **11 53 24.5 -3.0**
TIY pmax pmax
comp=Z,33nm,0.4s
TIY pmax pmax
comp=Z,400nm,4.4s
TIY LR LR
comp=Z,280nm,11.9s
TIY LR LR
comp=Z,270nm,5.4s
TIY LR LR
comp=Z,270nm,6.3s
CN2 Changchun 16.87 356 *e*P **P** **11 53 04.0 +2.2**
CN2 *e*S **Sn** **11 56 06.0 -2.6**
CN2 pmax pmax
comp=Z,50nm,1.2s
CN2 pmax pmax
comp=Z,340nm,5.0s
CN2 LR LR
comp=Z,380nm,7.0s
CN2 LR LR
comp=Z,590nm,7.0s
CN2 LR LR
comp=Z,330nm,8.0s
XAN Xi'an 17.16 299 P **P** **11 53 05.8 +0.5**
XAN pP pP 11 53 21.5 -2.3
XAN pmax pmax
comp=Z,89nm,1.1s
XAN pmax pmax
comp=Z,520nm,2.8s
XAN LR LR
comp=Z,580nm,14.1s
XAN LR LR
comp=Z,390nm,16.3s
XAN LR LR
comp=Z,330nm,16.2s
XAN Xi'an 17.16 299 P **P** **11 53 07.1 +1.9**
XAN pmax pmax
comp=Z,82nm,0.9s
XAN Xi'an 17.16 299 P **P** **11 53 07.1 +1.9**
XAN IAmb IAmb 11 53 09.5
comp=Z,82nm,0.9s
USRK Ussuriysk Ar. 17.66 12 P **Pn** **11 53 11.2 +0.2**
USRK Ussuriysk Ar. 17.66 12 P **P** **11 53 09.9 -0.7**
baz=200,slow=9.6,SNR=3.0
USRK LR LR 11 59 44.8
comp=Z,90nm,18.5s,slow=36
USRK Ussuriysk Ar. 17.66 12 P **Pn** **11 53 11.2 +0.2**
GYA Guiyang 18.25 273⇑ *i*P **Pn** **11 53 20.5 +2.0**
GYA pP pP 11 53 35.8 -0.2
GYA PP PnPn 11 53 39.5 +5.9
GYA sP **sP** 11 53 49.5 +1.2
GYA S **S** **11 56 40.0 -1.2**
GYA pmax pmax
comp=Z,30nm,0.9s
GYA pmax pmax
comp=Z,150nm,4.8s
HHC Hu-ho-hao-te 18.89 321 *e*P **Pn** **11 53 26.5 +0.7**
HHC S **S** **11 56 49.8 -3.8**
HHC pmax pmax
comp=Z,29nm,1.3s
HHC pmax pmax
comp=Z,210nm,6.1s
HHC LR LR
comp=Z,200nm,18.1s
HHC LR LR
comp=Z,140nm,16.8s
HHC LR LR
comp=Z,230nm,16.9s
KCP Kidapawan 19.92 186⇑ *i*P **P** **11 53 35.9 +0.4**
CD2 Chengdu 20.79 286 P **P** **11 53 43.8 -1.0**
CD2 pP pP 11 54 03.0 -0.7
CD2 sP sP 11 54 15.0 -1.0
CD2 S **S** **11 57 29.5 -1.8**
CD2 sS sS 11 58 02.0 -0.6
CD2 pmax pmax
comp=Z,150nm,0.8s
CD2 pmax pmax
comp=Z,130nm,3.3s
CD2 LR LR
comp=Z,830nm,8.0s
CD2 LR LR
comp=Z,480nm,9.2s
CD2 LR LR
comp=Z,570nm,7.8s
ASAJ Asahikawa 21.22 32 P **P** **11 53 48.0 -1.2**
ASAJ Asahikawa 21.22 32 P **P** **11 53 48.0 -1.2**
comp=Z,16nm,1.1s,baz=226,slow=18,SNR=4.0
JKA Kamikawa-asahi 21.22 32 P **P** **11 53 48.0 -1.2**
LZH Lanzhou 21.77 300 ⇓P **P** **11 53 55.5 +0.2**
LZH pP pP 11 54 16.5 +2.1
LZH PP **sP** **11 54 25.0 -1.8**
LZH S **S** **11 57 44.8 -5.6**
LZH SS **SnSn** **11 58 30.3 +6.2**
LZH pmax pmax
comp=Z,60nm,1.1s
LZH pmax pmax
comp=Z,210nm,5.0s
LZH LR LR
comp=Z,620nm,12.0s
LZH LR LR
comp=Z,370nm,12.5s
LZH LR LR
comp=Z,480nm,13.1s
SLVN Son La 21.86 260 P **P** **11 53 56.4 0.0**
KMI Kunming 21.95 271 P **P** **11 54 00.0 +2.6**
KMI pP pP 11 54 19.0 +2.6
KMI sP sP 11 54 29.3 +0.6
KMI pmax pmax
comp=Z,17nm,1.0s
KLR Kul'dur 22.54 8⇑ *e*P **P** **11 54 04.4 +1.3**
KLR pmax pmax
comp=Z,4.0nm,1.0s
KLR Kul'dur 22.54 8 P **P** **11 54 00.6 -2.5**
comp=Z,1.0nm,0.3s,baz=182,slow=12,SNR=6.0
KLR PcP **PcP** **11 57 52.2 -0.9**
comp=Z,0.9nm,0.7s,baz=252,slow=3.2,SNR=2.3
KKM Kota Kinabalu 23.23 208 P **P** **11 54 10.9 +0.7**
KKM IAmb IAmb 11 54 12.3
comp=Z,87nm,1.2s
YSS Yuzh-Sakhalins 23.49 28 *e*P P 11 54 26.6 +14
GTA Gaotai 25.88 306 *e*P **P** **11 54 33.0 -1.2**
GTA pP pP 11 54 54.3 -1.4
GTA sP sP 11 55 05.8 -1.4
GTA pmax pmax
comp=Z,78nm,7.6s
GTA LR LR
comp=Z,480nm,9.2s
GTA LR LR
comp=Z,720nm,14.3s
GTA LR LR
comp=Z,270nm,9.5s
ULN Ulaanbaatar 26.11 328 P **P** **11 54 36.6 +0.5**
ULN pmax pmax
comp=Z,51nm,0.7s
ULN Ulaanbaatar 26.11 328 P **P** **11 54 36.6 +0.5**
ULN IAmb IAmb 11 54 39.9
comp=Z,51nm,0.7s
PBKT Sadao Pong 26.31 252 P **P** **11 54 38.6 +0.6**
PBKT IAmb IAmb 11 54 40.2
comp=Z,60nm,0.9s
SONM Songino Array 26.40 328 P **P** **11 54 39.0 +0.3**
SONM pmax pmax
comp=Z,58nm,1.0s
SONM Songino Array 26.40 328 P **P** **11 54 38.5 -0.2**
comp=Z,43nm,0.6s,baz=143,slow=10,SNR=94
SONM pP **pwP** **11 55 02.3 0.0**
comp=Z,53nm,0.9s,baz=136,slow=11,SNR=9.2
SONM PcP **PcP** **11 57 59.7 -2.1**
comp=Z,1.1nm,0.6s,baz=151,slow=3.3,SNR=4.7
SONM ScP **ScP** **12 01 31.8 -0.8**
comp=Z,1.7nm,0.8s,baz=152,slow=3.8,SNR=11
SONM LR LR 12 07 06.3
comp=Z,119nm,19.5s,baz=162,slow=41
SONM Songino Array 26.40 328 P **P** **11 54 39.0 +0.3**
ZEA Zeya 26.76 0 *e*P P 11 54 55.1 +13
ZEA MLR MLR
comp=Z,200nm,12.0s
MRSI Marisa 26.78 191 P **P** **11 54 41.7 -0.6**
comp=Z,84nm,1.2s
CHTO Chiang Mai 27.12 259 P **P** **11 54 46.3 +1.0**
CHTO pmax pmax
comp=Z,17nm,0.8s
CHTO Chiang Mai 27.12 259 P **P** **11 54 46.3 +1.0**
CMAR Chiang Mai Arr 27.25 258 P **P** **11 54 46.8 +0.2**
comp=Z,4.5nm,0.7s,baz=60,slow=7.3,SNR=34
CMAR PcP **PcP** **11 58 03.9 -0.3**
comp=Z,1.2nm,0.3s,baz=356,slow=1.4,SNR=6.3
CMAR ScP **ScP** **12 01 36.2 +0.6**
comp=Z,1.1nm,0.5s,baz=45,slow=1.1,SNR=7.6
MPSI Mapaga 27.35 196 P **P** **11 54 48.9 +1.6**
comp=Z,39nm,1.1s
APSI Ampana 28.19 192 P **P** **11 54 53.9 -0.9**
comp=Z,460nmcomp=Z,29nm,1.0s
SBUM Sibu 28.22 213 P **P** **11 54 55.8 +0.6**
SBUM Sibu 28.22 213 P **P** **11 54 56.0 +0.9**
SANI Sanana 28.85 182 P **P** **11 55 00.0 -0.7**
comp=Z,87nm,1.1s
ZAK Zakamensk 29.64 329 *e*P **P** **11 55 06.5 -1.0**
ZAK pmax pmax
comp=Z,9.0nm,1.5s
KSM Kuching 30.02 215 P **P** **11 55 12.2 +1.2**
KSM IAmb IAmb 11 55 13.1
comp=Z,41nm,1.1s
FAKI Fak Fak 30.11 170 P **P** **11 55 11.1 -0.7**
FAKI IAmb IAmb 11 55 12.6
comp=Z,45nm,0.7s
TLY Talaya 30.39 331 P **P** **11 55 14.2 +0.2**
TLY pmax pmax
comp=Z,18nm,0.9s
TLY Talaya 30.39 331 LR LR 12 08 35.8
comp=Z,128nm,19.8s,baz=144,slow=38
TLY Talaya 30.39 331 P **P** **11 55 14.2 +0.2**
AAI Ambon 30.48 178 P **P** **11 55 15.2 +0.1**
comp=Z,62nm,1.4s
MOY Mondy 31.57 328 *e*P **P** **11 55 24.0 -0.6**
MOY *e* 11 55 49.8
MOY pmax pmax
comp=Z,13nm,1.6s
KULM Kulim 33.15 234 P **P** **11 55 39.9 +1.2**
KULM IAmb IAmb 11 56 28.8
comp=Z,32nm,1.4s
KULM Kulim 33.15 234 P **P** **11 55 39.0 +0.4**
IPM Ipoh 33.44 233 P **P** **11 55 41.5 +0.3**
IPM IAmb IAmb 11 55 42.6
comp=Z,20nm,0.8s
IPM Ipoh 33.44 233 P **P** **11 55 42.0 +0.8**
PETK Petropavlovsk- 34.63 33 LR LR 12 09 28.5
comp=Z,54nm,21.4s,baz=61,slow=35
TAPN Taplejung 34.94 280 *e*P **P** **11 55 54.2 -0.2**
comp=Z,23nm,0.5s
ODAN Odare 35.30 279 *e*P **P** **11 55 57.1 -0.3**
comp=Z,121nm,0.6s
WMQ Urumqi 35.87 308 *e*P **P** **11 56 02.0 +0.2**
WMQ pP pP 11 56 23.5 -0.5
WMQ sP sP 11 56 38.0 +2.7
WMQ PP **PnPn** **11 57 26.5 +1.2**
WMQ pmax pmax
comp=Z,37nm,0.9s
WMQ pmax pmax
comp=Z,240nm,4.9s
WMQ LR LR
comp=Z,320nm,15.5s
WMQ LR LR
comp=Z,450nm,15.1s
WMQ LR LR
comp=Z,200nm,17.9s
WMQ Urumqi 35.87 308 P **P** **11 56 01.4 -0.5**
WMQ pmax pmax
comp=Z,31nm,0.7s
WMQ Urumqi 35.87 308 P **P** **11 56 01.4 -0.5**
RAMN Ramite 35.98 279 *e*P **P** **11 56 02.6 -0.6**
comp=Z,22nm,0.6s
JIRN Jiri 36.23 281 *e*P **P** **11 56 05.1 -0.4**
comp=Z,16nm,0.3s
GUN Gumba 36.46 281 *e*P **P** **11 56 07.3 -0.1**
comp=Z,42nm,0.5s
MA2 Magadan 36.48 20 LR LR 12 12 06.0
comp=Z,46nm,18.0s,baz=237,slow=38
PLAI Plampang 36.69 196 P **P** **11 56 09.3 +0.3**
comp=Z,83nm,1.4s
PKI Pulchoki 36.93 281 *e*P **P** **11 56 10.7 -0.7**
comp=Z,33nm,0.6s
PKIN Phulchoki 36.94 281 *e*P **P** **11 56 10.7 -0.7**
comp=Z,24nm,0.5s
MLSI Meulaboh, Aceh 36.98 238 P **P** **11 56 11.8 +0.3**
comp=Z,58nm,0.7s
KKN Kakani 37.01 281 *e*P **P** **11 56 11.4 -0.5**
comp=Z,39nm,0.5s
H11N1 WAKE ISLAND Hy 37.14 93 T T 12 34 25.2
baz=291
H11N2 WAKE ISLAND Hy 37.14 93 T T 12 34 33.7
baz=291,slow=74
H11N3 WAKE ISLAND Hy 37.15 93 T T 12 34 41.5
baz=291,slow=74
DMN Daman 37.19 281 *e*P **P** **11 56 12.9 -0.6**
comp=Z,35nm,0.9s
H11S3 WAKE ISLAND Hy 37.36 95 T T 12 35 01.9
baz=286
H11S1 WAKE ISLAND Hy 37.37 95 T T 12 34 54.1
baz=286
H11S2 WAKE ISLAND Hy 37.38 95 T T 12 35 08.1
baz=286
GKN Gorkha 37.54 282 *e*P **P** **11 56 16.0 -0.3**
comp=Z,62nm,0.6s
WOJI Wonogiri, Jawa 37.96 207 P **P** **11 56 20.4 +0.7**
comp=Z,29nm,1.1s
GSI Gunungsitoli 38.11 233 P **P** **11 56 20.7 -0.3**
comp=Z,2µmcomp=Z,20nm,1.1s
KLSI 38.17 218 P **P** **11 56 22.6 +1.1**
comp=Z,12nm,1.1s
DANN Dangsing 38.25 282 *e*P **P** **11 56 22.0 -0.5**
comp=Z,128nm,0.7s
MDSI Maura Dua 38.30 219 P **P** **11 56 24.0 +1.4**
comp=Z,16nm,1.0s
KPJI Karang Pucung 38.35 210 P **P** **11 56 24.2 +1.2**
comp=Z,61nm,1.0s
KOLN Koldanda 38.48 281 *e*P **P** **11 56 24.1 -0.2**
comp=Z,93nm,0.9s
DBJI Dramaga 38.69 214 P **P** **11 56 25.4 -0.5**
comp=Z,13µmcomp=Z,48nm,0.6s
LWLI Liwa 38.81 218 P **P** **11 56 27.4 +0.4**
SISI Saibi 38.96 228 P **P** **11 56 27.5 -0.6**
comp=Z,11nm,0.9s
MTN Manton Dam 39.75 174 P **P** **11 56 33.9 -0.7**
MK31 Makanchi Array 40.29 312 P **P** **11 56 38.7 -0.2**
MK31 pmax pmax
comp=Z,25nm,0.8s
MK31 Makanchi Array 40.29 312 P **P** **11 56 38.7 -0.2**
MK31 IAmb IAmb 11 56 39.6
comp=Z,25nm,0.8s
MKAR Makanchi Array 40.29 312 P **P** **11 56 38.5 -0.5**
comp=Z,42nm,0.7s,baz=100,slow=10,SNR=365
MKAR PcP **PcP** **11 58 40.4 -0.3**
comp=Z,5.3nm,0.7s,baz=94,slow=3.6,SNR=6.6
MKAR ScP **ScP** **12 02 20.7 -0.2**
comp=Z,2.3nm,0.8s,baz=100,slow=3.6,SNR=12
MKAR Makanchi Array 40.29 312 P **P** **11 56 38.7 -0.2**
MAKZ Makanchi 40.51 311 P **P** **11 56 40.7 +0.1**
MAKZ pmax pmax
comp=Z,40nm,1.0s
MAKZ Makanchi 40.51 311 P **P** **11 56 40.7 +0.1**
MAKZ IAmb IAmb 11 56 41.7
comp=Z,40nm,1.0s
PMG Port Moresby 41.05 149 P **P** **11 56 45.9 +0.5**
PMG pmax pmax
comp=Z,132nm,1.7s
PMG Port Moresby 41.05 149 P **P** **11 56 45.9 +0.5**
ZAA0 Zalesovo Array 41.06 323 P **P** **11 56 45.0 0.0**
ZALV Zalesovo Beam 41.06 323 *i*P **P** **11 56 44.4 -0.6**
ZALV pmax pmax
comp=Z,41nm,0.5s
ZALV Zalesovo Beam 41.06 323 P **P** **11 56 44.6 -0.4**
comp=Z,41nm,0.5s,baz=111,slow=7.8,SNR=159
ZALV pP **pwP** **11 57 09.1 -0.6**
comp=Z,19nm,0.6s,baz=109,slow=7.8,SNR=6.9
ZALV PcP **PcP** **11 58 41.3 -1.6**
comp=Z,2.0nm,0.3s,baz=112,slow=4.3,SNR=4.3
ZALV ScP **ScP** **12 02 22.0 -1.6**
comp=Z,1.5nm,0.7s,baz=123,slow=4.0,SNR=5.3
ZALV LR LR 12 15 57.0
comp=Z,86nm,19.3s,baz=146,slow=39
ZALV Zalesovo Beam 41.06 323 P **P** **11 56 45.0 0.0**
KNRA Kununurra 42.40 178 P **P** **11 56 56.0 -0.3**
KDJ Kajisay 43.20 304 P **P** **11 57 02.8 -0.1**
KDJ pmax pmax
comp=Z,80nm,1.1s
KDJ Kajisay 43.20 304 P **P** **11 57 02.8 -0.1**
COEN Coen 43.56 157 P **P** **11 57 06.5 +0.8**
KURK Kurchatov 43.59 316 *de*P **P** **11 57 05.0 -0.6**
KURK pmax pmax
comp=Z,44nm,1.3s
KURK Kurchatov 43.59 316 P **P** **11 57 05.3 -0.3**
KURK IAmb IAmb 11 57 06.5
comp=Z,30nm,0.9s
ULHL Ulahol 43.91 304 P **P** **11 57 09.0 +0.4**
SNR=8.0
KSH Kashi 44.01 300 P **P** **11 57 13.0 +3.6**
KSH pP pwP 11 57 36.5 +2.1
KSH S **S** **12 03 42.0 +7.8**
KSH pmax pmax
comp=Z,34nm,0.8s
KSH pmax pmax
comp=Z,450nm,4.6s
KSH LR LR
comp=Z,970nm,8.5s
KSH LR LR
comp=Z,440nm,5.8s
KSH LR LR
comp=Z,620nm,5.9s
NRN Naryn 44.05 303 P **P** **11 57 10.7 +0.9**
NRN pmax pmax
comp=Z,42nm,0.9s
NRN Naryn 44.05 303 P **P** **11 57 10.7 +0.9**
NRN IAmb IAmb 11 57 37.1
comp=Z,42nm,0.9s
TIXI Tiksi 44.75 1⇑ *e*P **P** **11 57 15.0 +0.5**
TIXI pmax pmax
comp=Z,4.0nm,1.4s
TIXI Tiksi 44.75 1 LR LR 12 16 19.7
comp=Z,120nm,21.4s,baz=184,slow=36
FITZ Fitzroy Crossi 44.80 182 P **P** **11 57 15.7 +0.2**
FITZ IAmb IAmb 11 57 16.6
comp=Z,21nm,0.8s
KBK Karagaybulak 44.89 304 P **P** **11 57 17.4 +1.1**
SNR=15
CHMS Chumysh 45.05 305 P **P** **11 57 18.2 +0.8**
SNR=11
UCH Uchtor 45.19 304 P **P** **11 57 20.2 +1.1**
SNR=35
AAK Ala-Archa 45.22 304 P **P** **11 57 19.6 +0.6**
AAK pmax pmax
comp=Z,22nm,1.1s
AAK Ala-Archa 45.22 304 P **P** **11 57 18.9 0.0**
comp=Z,2.3nm,0.4s,baz=85,slow=5.2,SNR=15
AAK pP **pP** **11 57 41.8 -0.1**
comp=Z,13nm,1.0s,baz=90,slow=5.2,SNR=9.2
AAK PcP **PcP** **11 58 57.8 +0.4**
comp=Z,3.1nm,0.5s,baz=87,slow=3.7,SNR=4.9
AAK ScP **ScP** **12 02 41.0 0.0**
comp=Z,1.3nm,0.7s,baz=159,slow=8.5,SNR=4.5
AAK Ala-Archa 45.22 304 P **P** **11 57 19.2 +0.3**
SNR=6.4
AAK Ala-Archa 45.22 304 P **P** **11 57 19.6 +0.6**
USP Ospenovka 45.25 305 P pP 11 57 45.4 +3.5
SNR=11
EKS2 Erkin-Say 45.75 304 P **P** **11 57 23.2 +0.1**
SNR=5.1
AML Almayashu 45.79 304 P **P** **11 57 24.5 +0.8**
SNR=8.9
ARSB Arslanbob 46.31 302 P **P** **11 57 27.9 +0.4**
NIL Nilore 46.53 292 P **P** **11 57 29.0 -0.2**
NIL pmax pmax
comp=Z,25nm,0.6s
NIL Nilore 46.53 292 P **P** **11 57 29.0 -0.2**
NIL IAmb IAmb 11 57 30.1
comp=Z,25nm,0.6s
WRAB Tennant Creek 47.13 171 *c i*P **P** **11 57 33.9 0.0**
WRAB pmax pmax
comp=Z,78nm,1.3s
WRAB Tennant Creek 47.13 171 P **P** **11 57 34.1 +0.3**
WRA Warramunga Arr 47.14 171 P **P** **11 57 33.7 -0.2**
WRA pmax pmax
comp=Z,4.0nm,0.9s
WRA Warramunga Arr 47.14 171 P **P** **11 57 34.0 +0.1**
comp=Z,37nm,0.8s,baz=354,slow=8.8,SNR=139
WRA PcP **PcP** **11 59 03.8 -0.3**
comp=Z,2.9nm,0.9s,baz=348,slow=4.8,SNR=2.5
WRA Warramunga Arr 47.14 171 P **P** **11 57 33.7 -0.2**
WB2 Warramunga Arr 47.14 171 P **P** **11 57 34.2 +0.2**
WR0 Warramunga Arr 47.19 170 P **P** **11 57 34.4 +0.1**
BILL Bilibino 47.32 19 *i*P **P** **11 57 36.1 +1.3**
BILL *i* 11 59 03.7
BILL pmax pmax
comp=Z,4.0nm,1.2s
BTK Batken 47.98 301 P **P** **11 57 40.7 +0.3**
BTK pmax pmax
comp=Z,37nm,1.7s
BTK Batken 47.98 301 P **P** **11 57 40.6 +0.3**
BTK IAmb IAmb 11 58 07.5
comp=Z,36nm,1.6s
KK31 Karatay Array 48.16 305 P **P** **11 57 41.9 +0.2**
KK31 pmax pmax

comp=Z,35nm,1.1s
KK31 Karatay Array 48.16 305 P **P** **11 57 41.9 +0.2**
KK31 IAmb IAmb 11 58 09.8
comp=Z,35nm,1.1s
KKAR Karatay Array 48.16 305 P **P** **11 57 42.4 +0.8**
KKAR PcP **PcP** **11 59 08.3 +0.6**
KKAR Karatay Array 48.16 305 P **P** **11 57 42.2 +0.5**
KKAR IAmb IAmb 11 58 09.8
comp=Z,35nm,1.1s
KKAR PcP **PcP** **11 59 08.2 +0.6**
PSAD1 Pilbara Seismi 48.63 189 P **P** **11 57 45.5 +0.1**
PSAD1 IAmb IAmb 11 57 46.7
comp=Z,22nm,0.9s
PSAC1 Pilbara Seismi 48.71 189 P **P** **11 57 45.5 -0.5**
PSAC1 IAmb IAmb 11 57 46.8
comp=Z,51nm,1.2s
PSAB2 Pilbara Seismi 48.72 189 P **P** **11 57 44.9 -1.2**
PSAC2 Pilbara Seismi 48.72 189 P **P** **11 57 45.5 -0.6**
PSAC2 IAmb IAmb 11 57 46.9
comp=Z,49nm,1.2s
PSAA2 Pilbara Seismi 48.73 189 P **P** **11 57 44.9 -1.2**
PSAA2 IAmb IAmb 11 57 47.0
comp=Z,59nm,1.3s
PSAB1 Pilbara Seismi 48.74 189 P **P** **11 57 45.9 -0.3**
PSAB1 IAmb IAmb 11 57 47.0
comp=Z,36nm,1.2s
PSA00 Pilbara Seismi 48.74 189 P **P** **11 57 45.5 -0.7**
PSA00 IAmb IAmb 11 57 47.0
comp=Z,50nm,1.3s
PSA00 Pilbara Seismi 48.74 189 P **P** **11 57 45.3 -1.0**
PSA00 IAmb IAmb 11 57 50.7
comp=Z,11nm,0.7s
PSAA3 Pilbara Seismi 48.75 189 P **P** **11 57 46.0 -0.3**
PSAA3 IAmb IAmb 11 57 47.0
comp=Z,46nm,1.4s
PSAA1 Pilbara Seismi 48.75 189 P **P** **11 57 45.5 -0.8**
PSAA1 IAmb IAmb 11 57 47.0
comp=Z,43nm,1.2s
PSAB3 Pilbara Seismi 48.76 189 P **P** **11 57 46.2 -0.2**
PSAB3 IAmb IAmb 11 57 47.1
comp=Z,43nm,1.2s
PSAC3 Pilbara Seismi 48.79 189 P **P** **11 57 45.6 -1.1**
PSAC3 IAmb IAmb 11 57 47.5
comp=Z,40nm,1.4s
BVAR Borovoye Array 49.06 318 P **P** **11 57 47.8 -0.6**
comp=Z,4.4nm,0.3s,baz=100,slow=8.8,SNR=47
BVAR pP **pwP** **11 58 12.9 -0.8**
comp=Z,8.4nm,0.8s,baz=88,slow=8.8,SNR=5.3
BVAR PcP **PcP** **11 59 10.6 0.0**
comp=Z,7.6nm,0.7s,baz=108,slow=4.6,SNR=6.4
BVAR ScP **ScP** **12 02 55.6 -1.1**
comp=Z,2.2nm,0.9s,baz=90,slow=2.2,SNR=4.8
BRVK Borovoye 49.13 318 P **P** **11 57 49.1 +0.2**
BRVK pmax pmax
comp=Z,30nm,1.1s
BRVK Borovoye 49.13 318 P **P** **11 57 49.1 +0.2**
BRVK IAmb IAmb 11 58 15.9
comp=Z,30nm,1.1s
KBL Kabul 49.88 294 P **P** **11 57 55.7 +0.5**
KBL pmax pmax
comp=Z,176nm,1.9s
KBL Kabul 49.88 294 P **P** **11 57 55.7 +0.5**
AS31 Alice Springs 50.75 172 P **P** **11 58 02.1 +0.6**
ASAR Alice Springs 50.75 172 P **P** **11 58 01.9 +0.4**
comp=Z,22nm,0.8s,baz=358,slow=14,SNR=132
ASAR pP **pP** **11 58 27.4 +2.2**
comp=Z,3.7nm,0.6s,baz=1.6,slow=11,SNR=2.1
ASAR PcP **PcP** **11 59 17.1 -0.1**
comp=Z,7.5nm,0.8s,baz=356,slow=3.4,SNR=7.6
ASAR LR LR 12 19 03.4
comp=Z,50nm,20.4s,baz=319,slow=35
SVE Sverdlovsk 55.07 322 *eP* **P** **11 58 32.6 -0.2**
SVE pmax pmax
comp=Z,26nm,1.2s
ABKAR Akbulak array 55.41 313 P **P** **11 58 35.1 -0.3**
ABKAR IAmb IAmb 11 58 37.1
comp=Z,14nm,0.6s
ABKAR Akbulak array 55.41 313 P **P** **11 58 35.1 -0.3**
ARU Arti 56.20 322 *d iP* **P** **11 58 40.4 -0.5**
ARU 12 00 44.9
ARU S **S** **12 06 23.0 +0.4**
ARU SS **SS** **12 10 15.2 +5.1**
ARU pmax pmax
comp=Z,20nm,1.1s
ARU Arti 56.20 322 P **P** **11 58 40.4 -0.5**
comp=Z,1.9nm,0.3s,baz=123,slow=5.6,SNR=11
ARU LR LR 12 25 08.8
comp=Z,156nm,19.3s,baz=104,slow=38
ARU Arti 56.20 322 P **P** **11 58 39.4 -1.5**
ARU IAmb IAmb 11 59 08.6
comp=Z,17nm,1.0s
ANM Nome 56.37 29 P **P** **11 58 43.5 +1.5**
ANM pmax pmax
comp=Z,30nm,1.3s
ANM Nome 56.37 29 P **P** **11 58 43.5 +1.5**
ANM IAmb IAmb 11 58 44.3
comp=Z,30nm,1.3s
AKTO Aktyubinsk 56.60 314 P **P** **11 58 44.1 +0.2**
comp=Z,2.3nm,0.5s,baz=71,slow=8.7,SNR=6.9
AKTO pP **pwP** **11 59 09.7 -0.2**
comp=Z,5.3nm,0.9s,baz=77,slow=11,SNR=4.4
SANVU Saraoutou 57.39 132 P **P** **11 58 50.0 +0.2**
FORT Forrest 57.41 179 P **P** **11 58 50.3 +0.6**
GEYT Alibeck 58.05 300 P **P** **11 58 54.7 +0.4**
comp=Z,8.3nm,0.8s,baz=82,slow=3.3,SNR=16
GEYT PcP **PcP** **11 59 44.8 -0.4**
comp=Z,2.9nm,0.6s,baz=93,slow=2.9,SNR=3.8
GEYT LR LR 12 29 32.5
comp=Z,118nm,19.5s,baz=160,slow=42
GEYT Alibeck 58.05 300 P **P** **11 58 55.3 +1.0**
BBOO Buckleboo 60.04 171 P **P** **11 59 08.0 +0.1**
STKA Stephens Creek 60.11 166 P **P** **11 59 08.8 +0.4**
comp=Z,27nm,0.8s,baz=346,slow=7.1,SNR=40
STKA LR LR 12 25 42.9
comp=Z,41nm,20.1s,baz=6.2,slow=36
STKA Stephens Creek 60.11 166 P **P** **11 59 08.8 +0.4**
NWAO Narrogin (SRO) 60.28 190 P **P** **11 59 10.4 +0.9**
NWAO pmax pmax
comp=Z,63nm,1.3s
NWAO Narrogin (SRO) 60.28 190 P **P** **11 59 10.4 +0.9**
NWAO Narrogin (SRO) 60.28 190 P **P** **11 59 07.5 -2.0**
NWAO IAmb IAmb 11 59 11.1
comp=Z,73nm,1.2s
SVW2 Sparrevohn 60.72 33 P **P** **11 59 13.6 +1.3**
SVW2 IAmb IAmb 11 59 15.2
comp=Z,30nm,1.5s
KIRV Kirov 61.06 324 P **P** **11 59 14.0 -0.6**
comp=Z,9.6nm,0.5s,baz=86,slow=7.7,SNR=3.7
IMAR Indian Mountai 61.32 27 P **P** **11 59 15.8 -0.4**
WSAR Wadi Sarin 61.42 283 P **P** **11 59 17.9 +0.2**
comp=Z,20nm,0.9s,baz=105,slow=7.9,SNR=16
ARMA Armidale 61.69 156 P **P** **11 59 20.3 +1.1**
ARMA IAmb IAmb 11 59 20.8
comp=Z,14nm,0.9s
DZM Mont Dzumac 61.85 138 *e*LR LR 11 59 02.1
comp=Z,500nm,23.6s
DZM Mont Dzumac 61.85 138 *e*LR LR 12 17 10.3
comp=Z,153nm,28.7s
RSO Redoubt South 62.15 34 P **P** **11 59 24.0 +1.8**
PPLA Purkeypile 62.19 31 P **P** **11 59 23.6 +1.3**
PPLA IAmb IAmb 12 00 37.5
comp=Z,44nm,1.6s
KDAK Kodiak Island 62.55 37 P **P** **11 59 25.5 +0.9**
KDAK pmax pmax
comp=Z,306nm,2.0s
KDAK Kodiak Island 62.55 37 P **P** **11 59 25.5 +0.9**
SKT Skwentna 62.58 32 P **P** **11 59 24.3 -0.5**
SKT IAmb IAmb 11 59 26.2
comp=Z,38nm,1.8s
BPAW Bear Paw Mtn. 62.61 29 P **P** **11 59 26.4 +1.4**
BPAW IAmb IAmb 11 59 27.0
comp=Z,26nm,1.4s
MLY Manley 62.63 28 P **P** **11 59 26.3 +1.2**
MLY IAmb IAmb 11 59 27.2
comp=Z,31nm,1.4s
KTH Kantishna Hill 62.69 30 P **P** **11 59 26.7 +1.1**
KTH IAmb IAmb 11 59 28.3
comp=Z,38nm,1.6s
TRF Thorofare Moun 62.99 30 P **P** **11 59 26.4 -1.2**
TRF IAmb IAmb 12 00 23.1
comp=Z,52nm,1.8s
SUA Susitna One 63.01 32 P **P** **11 59 29.2 +1.5**
SUA IAmb IAmb 11 59 29.8
comp=Z,25nm,1.1s
CNPM China Poot 63.02 34 P **P** **11 59 29.5 +1.7**

BWN Browne 63.27 29 P **P** **11 59 29.2 -0.1**
MCK McKinley 63.55 30 P **P** **11 59 31.1 -0.1**
MCK pmax pmax
comp=Z,13nm,0.8s
MCK McKinley 63.55 30 P **P** **11 59 31.1 -0.1**
RND Reindeer 63.63 30 P **P** **11 59 32.3 +0.5**
RND pmax pmax
comp=Z,24nm,0.8s
RND Reindeer 63.63 30 P **P** **11 59 32.2 +0.5**
RND IAmb IAmb 11 59 32.9
comp=Z,24nm,0.8s
MDM Murphy Dome 63.70 28 P **P** **11 59 31.3 -0.8**
MDM IAmb IAmb 11 59 34.1
comp=Z,24nm,0.7s
PMR Palmer 63.76 32 P **P** **11 59 32.5 0.0**
PMR pmax pmax
comp=Z,63nm,1.8s
PMR Palmer 63.76 32 P **P** **11 59 32.5 0.0**
PMR IAmb IAmb 11 59 57.6
comp=Z,63nm,1.8s
WRH Wood River Hil 63.82 29 P **P** **11 59 34.1 +1.2**
SEW Seward 63.83 34 P **P** **11 59 33.3 +0.3**
GHO Glory Hole Cre 63.83 32 P **P** **11 59 33.5 +0.4**
GHO IAmb IAmb 11 59 54.8
comp=Z,66nm,1.8s
TCOL CIGO, UAF Yank 63.87 28 P **P** **11 59 34.4 +1.2**
baz=278
COLA College 63.87 28 P **P** **11 59 32.5 -0.7**
COLA pmax pmax
comp=Z,9.0nm,0.6s
COLA College 63.87 28 P **P** **11 59 32.5 -0.7**
CCB Clear Creek Bu 63.92 29 P **P** **11 59 34.2 +0.7**
POKR Poker Flat Res 64.01 28 P **P** **11 59 34.9 +0.8**
baz=278
SML Sawmill 64.11 32 P **P** **11 59 35.2 +0.4**
SML IAmb IAmb 12 00 59.9
comp=Z,48nm,1.6s
KNK Knik Glacier 64.11 32 P **P** **11 59 35.4 +0.6**
IL31 64.29 28 P **P** **11 59 36.0 +0.1**
ILAR Eielson Array 64.29 28 P **P** **11 59 35.7 -0.3**
ILAR Eielson Array 64.29 28 P **P** **11 59 35.6 -0.4**
comp=Z,1.5nm,0.5s,baz=257,slow=4.1,SNR=41
HDA Harding Lake 64.32 29 P **P** **11 59 36.0 -0.2**
HDA Harding Lake 64.32 29 P **P** **11 59 36.1 -0.1**
baz=279
DHY Denali Highway 64.34 30 P **P** **11 59 36.6 +0.1**
SCM Sheep Creek Mo 64.57 32 P **P** **11 59 38.2 +0.3**
SCM pmax pmax
comp=Z,25nm,0.9s
SCM Sheep Creek Mo 64.57 32 P **P** **11 59 38.2 +0.3**
SCM IAmb IAmb 12 00 11.1
comp=Z,25nm,0.9s
FYU Fort Yukon 64.69 26 P **P** **11 59 40.3 +1.8**
FYU IAmb IAmb 11 59 42.1
comp=Z,51nm,1.6s
PRP Porcupine Dome 64.74 27 P **P** **11 59 39.7 +0.7**
BMAR Burnt Mountain 64.80 25 P **P** **11 59 41.3 +2.0**
FID Port Fidalgo 65.17 33 P **P** **11 59 42.8 +1.0**
PAX Paxson 65.22 30 P **P** **11 59 43.0 +0.9**
PAX pmax pmax
comp=Z,40nm,2.0s
PAX Paxson 65.22 30 P **P** **11 59 43.0 +0.9**
PAX IAmb IAmb 11 59 46.4
comp=Z,40nm,2.0s
CAN Canberra 65.31 160 P **P** **11 59 44.7 +1.8**
CAN pmax pmax
comp=Z,36nm,1.0s
CAN Canberra 65.31 160 P **P** **11 59 44.7 +1.8**
CAN IAmb IAmb 11 59 45.7
comp=Z,36nm,1.0s
RIDG Independent Ri 65.35 29 P **P** **11 59 43.7 +0.8**
SCRK Sand Creek 65.67 29 P **P** **11 59 45.4 +0.2**
SCRK IAmb IAmb 11 59 46.3
comp=Z,38nm,1.6s
KLMR Klimovskoe 65.69 328 *eP* **P** **11 59 40.9 -4.2**
KLMR pmax pmax
comp=Z,11nm,0.9s
KLMR Klimovskoe 65.69 328 *eP* **P** **11 59 40.9 -4.2**
KLMR AMP 11 59 45.8
comp=Z,11nm,0.9s
DOT Dot Lake 65.71 29 P **P** **11 59 45.8 +0.5**
MENT Mentasta 66.01 30 P **P** **11 59 48.7 +1.5**
GLB Gilahina Butte 66.30 32 P **P** **11 59 49.9 +0.8**
MSVF Nonsavu 66.46 126 P **P** **11 59 52.3 +1.6**
MSVF pmax pmax
comp=Z,38nm,1.0s
MSVF Nonsavu 66.46 126 P **P** **11 59 52.3 +1.6**
MSVF IAmb IAmb 11 59 53.5
comp=Z,38nm,0.9s
TOO Toolangi 66.47 164 P **P** **11 59 51.4 +1.1**
TOO pmax pmax
comp=Z,54nm,1.5s
TOO Toolangi 66.47 164 P **P** **11 59 51.4 +1.1**
TOO IAmb IAmb 11 59 52.8
comp=Z,54nm,1.4s
VRDI Verde Repeater 66.51 32 P **P** **11 59 51.8 +1.2**
VRDI IAmb IAmb 11 59 57.6
comp=Z,37nm,1.7s
MCARA McCarthy VSAT 66.68 32 P **P** **11 59 52.7 +1.3**
MCARA IAmb IAmb 11 59 54.1
comp=Z,21nm,1.1s
APA Apatity 66.78 335 ⇑*iP* P 12 00 01.0 +9.1
APA pmax pmax
comp=Z,9.0nm,0.9s
BCAR Beaver Creek A 66.84 30 P **P** **11 59 53.6 +1.1**
TGL Tana Glacier 66.92 32 P **P** **11 59 53.0 0.0**
TGL IAmb IAmb 12 01 29.3
comp=Z,31nm,1.2s
BALM Baldy 67.08 32 P **P** **11 59 55.1 +1.0**
BALM IAmb IAmb 12 01 34.3
comp=Z,77nm,2.0s
BARN Barnard Glacie 67.40 32 P **P** **11 59 55.6 -0.6**
GOF Gofitskoye 67.44 310 ⇑*eP* **P** **11 59 57.4 +0.9**
GOF pmax pmax
comp=Z,46nm,0.8s
ZEI Tsey 67.47 308 *eP* **P** **11 59 56.0 -1.1**
ZEI pmax pmax
comp=Z,17nm,0.9s
CTGM Chitina Glacie 67.58 32 P **P** **11 59 58.0 +0.7**
CTGM IAmb IAmb 12 01 21.0
comp=Z,54nm,1.6s
GNI Garni 67.62 305 *ceP* **P** **11 59 59.1 +1.1**
GNI pmax pmax
comp=Z,42nm,1.3s
KBZ Khabaz 67.91 309 P **P** **11 59 59.7 +0.3**
comp=Z,24nm,0.9s,baz=83,slow=5.0,SNR=38
KBZ LR LR 12 32 11.8
comp=Z,98nm,21.5s,baz=72,slow=38
SPA0 Spitsbergen Ar 67.92 348 P **P** **11 59 59.3 +0.4**
SPA0 IAmb IAmb 12 01 32.3
comp=Z,41nm,1.2s
SPITS Spitsbergen Ar 67.92 348 P **P** **11 59 58.8 -0.2**
comp=Z,4.4nm,0.7s,baz=103,slow=3.1,SNR=4.0
SPITS pP **pP** **12 00 24.1 +0.5**
comp=Z,2.2nm,0.4s,baz=108,slow=9.3,SNR=2.9
KVAR Kislovodsk Arr 67.99 309 P **P** **12 00 01.0 +0.9**
comp=Z,9.4nm,0.9s,baz=262,slow=22,SNR=7.3
EPYK Eagle Plains 68.06 26 P **P** **12 00 01.0 +0.9**
EPYK IAmb IAmb 12 00 01.3
comp=Z,20nm,0.8s
EPYK Eagle Plains 68.06 26 P **P** **12 00 00.8 +0.7**
baz=287
AKH Akhalkalaki 68.16 306 ⇑P **P** **12 00 02.8 +1.4**
NEY Neytrino 68.17 306 ⇓*eP* **P** **12 00 03.1 +1.7**
NEY pmax pmax
comp=Z,4.0nm,0.9s
INK Inuvik 68.63 23 P **P** **12 00 04.3 +0.8**
INK pmax pmax
comp=Z,27nm,1.2s
INK Inuvik 68.63 23 P **P** **12 00 04.3 +0.8**
INK IAmb IAmb 12 00 05.2
comp=Z,27nm,1.1s
OBN Obninsk 68.63 322 *i* P **P** **12 00 02.4 -1.4**
OBN *i* 12 00 27.0
OBN *i* *PP **pwP** **12 00 32.4 +1.9**
OBN pmax pmax
comp=Z,11nm,1.1s
ARCES ARCESS Array B 68.96 338 P **P** **12 00 04.8 -0.8**
comp=Z,2.7nm,0.7s,baz=76,slow=6.3,SNR=7.9
ARCES pP **PcP** **12 00 29.1 -0.2**
comp=Z,4.7nm,0.6s,baz=91,slow=3.8,SNR=4.3
ARCES LR LR 12 35 38.7
comp=Z,107nm,18.1s,baz=326,slow=40
ARCES ARCESS Array B 68.96 338 P **P** **12 00 04.6 -1.0**
ARCES PcP **pP** **12 00 29.8 -0.5**

SOCY Socotra 69.62 274 P **P** **12 00 09.3 -1.3**
NOR Nord 70.12 355 *i* P **P** **12 00 12.4 -0.2**
SOC Sochi 70.16 309 *eP* **P** **12 00 10.0 -3.4**
SOC pmax pmax
comp=Z,32nm,0.9s
WHY Whitehorse 70.68 31 P **P** **12 00 17.9 +1.5**
C36M Paulatuk 71.39 21 P **P** **12 00 20.7 +0.3**
C36M IAmb IAmb 12 00 21.5
comp=Z,77nm,1.6s
C36M Paulatuk 71.39 21 P **P** **12 00 20.6 +0.3**
baz=297
FIA1 FINESS Array S 71.73 330 P **P** **12 00 20.7 -1.8**
FIA1 IAmb IAmb 12 00 53.6
comp=Z,29nm,1.1s
FINES FINESS Array B 71.73 330 P **P** **12 00 22.4 -0.2**
comp=Z,7.9nm,0.7s,baz=62,slow=5.6,SNR=28
VSU Vasula 72.59 327 ⇓*iP* **P** **12 00 28.1 +0.4**
VSU pmax pmax
comp=Z,48nm,0.8s
RAYN Ar Rayn 72.61 288 P **P** **12 00 28.2 -0.4**
RAYN pmax pmax
comp=Z,21nm,1.0s
RAYN Ar Rayn 72.61 288 P **P** **12 00 28.2 -0.4**
SIM Simferopol' 73.47 312 *eP* **P** **12 00 33.4 +0.2**
SIM pmax pmax
comp=Z,18nm,1.0s
NACGM Naroch 73.99 324 *e* **P** **12 00 35.0 -1.0**
AKASG Malin Array Be 74.32 319 *i* P **P** **12 00 38.7 +0.7**
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 74.32 319 P **P** **12 00 37.1 -0.9**
comp=Z,4.0nm,0.4s,baz=59,slow=6.6,SNR=4.1
AKBB Malin Array Si 74.32 319 P **P** **12 00 37.8 -0.2**
AKBB pmax pmax
comp=Z,17nm,1.1s
AKBB Malin Array Si 74.32 319 P **P** **12 00 37.8 -0.2**
DAG Danmarks Havn 74.41 352 *i* P **P** **12 00 37.0 -1.1**
DAG pmax pmax
comp=Z,9.0nm,0.8s
DAG Danmarks Havn 74.41 352 *i* P **P** **12 00 37.0 -1.1**
comp=Z,8.7nm,0.8s
RES Resolute Bay 75.03 11 P **P** **12 00 41.9 +0.2**
RES pmax pmax
comp=Z,16nm,0.8s
RES Resolute Bay 75.03 11 P **P** **12 00 41.9 +0.2**
BR131 Keskin Array S 75.78 307 P **P** **12 00 46.8 -0.1**
BR131 pmax pmax
comp=Z,21nm,0.8s
BR131 Keskin Array S 75.78 307 P **P** **12 00 46.8 -0.1**
BR131 IAmb IAmb 12 00 47.7
comp=Z,21nm,0.8s
BRTR Keskin Array B 75.78 307 P **P** **12 00 47.0 +0.1**
BRTR Keskin Array B 75.78 307 P **P** **12 00 47.0 +0.1**
comp=Z,17nm,0.7s,baz=98,slow=5.1,SNR=73
BRTR Keskin Array B 75.78 307 P **P** **12 00 46.4 -0.5**
SORM Soroca 75.88 317 ⇑P **P** **12 00 46.2 -0.8**
TULEG Thule 76.28 4 P **P** **12 00 48.3 -0.5**
ASF Jabal al Asfar 76.33 299 P **P** **12 00 50.5 +0.5**
comp=Z,6.8nm,0.9s,baz=37,slow=1.4,SNR=5.4
TLCR 76.83 314 ⇑P **P** **12 00 52.4 -0.1**
MMAI Mount Meron Ar 77.15 301 P **P** **12 00 55.1 +0.5**
comp=Z,6.1nm,0.8s,baz=77,slow=6.5,SNR=3.7
TOPG Topolog 77.24 314 ⇑P **P** **12 00 55.1 +0.3**
CFR Carcaliu 77.26 314 ⇑P **P** **12 00 54.4 -0.5**
TIRR Tirgusor 77.39 313 ⇓P **P** **12 00 55.3 -0.3**
JMIC Jan Mayen 77.47 346 P **P** **12 00 55.0 -0.6**
comp=Z,86nm,0.5s,baz=166,slow=4.2,SNR=3.1
HARR Harsova 77.61 314 ⇑P **P** **12 00 57.2 +0.4**
TESR Tescani 77.62 316 ⇑P **P** **12 00 56.9 0.0**
HFS Hagfors 77.71 332 P **P** **12 00 56.3 -0.8**
comp=Z,2.8nm,0.3s,baz=87,slow=5.3,SNR=28
VRI Vrincioaia 77.86 315 ⇑P **P** **12 00 58.8 +0.5**
PLOR Plostina 77.91 315 ⇑P **P** **12 00 58.7 +0.1**
CSS Mathiatis 77.93 303 P **P** **12 00 58.3 -0.6**
CSS IAmb IAmb 12 00 59.5
comp=Z,21nm,0.7s
NC405 NORSAR Array S 77.97 333 P **P** **12 00 58.5 -0.1**
BUR08 Bucovina Ar. S 78.01 317 P **P** **12 00 59.8 +0.6**
BISRR Bisoca 78.01 315 ⇑P **P** **12 01 00.4 +1.2**
BURAR Bucovina Array 78.01 317 ⇑P **P** **12 00 59.4 +0.2**
BURAR Bucovina Array 78.01 317 P **P** **12 00 59.4 +0.2**
NB201 NORSAR Array S 78.18 333 P **P** **12 00 59.7 0.0**
NB2 NORSAR Subarra 78.22 333 P **P** **12 00 59.6 -0.4**
comp=Z,4.0nm,0.5s,baz=54,slow=5.6
NOA NORSAR Array B 78.22 333 P **P** **12 00 59.4 -0.6**
comp=Z,5.9nm,0.6s,baz=53,slow=5.7,SNR=23
NOA LR LR 12 38 43.5
comp=Z,101nm,18.2s,baz=60,slow=38
NC204 NORSAR Array S 78.26 334 P **P** **12 01 00.1 -0.1**
NC602 NORSAR Array S 78.26 333 P **P** **12 00 59.9 -0.2**
YKA Yellowknife Ar 78.31 25 P **P** **12 01 00.7 +0.3**
comp=Z,2.7nm,0.5s,baz=303,slow=5.7,SNR=40
YKA PKKPbc **PKKPbc** **12 19 56.0 -2.4**
comp=Z,0.4nm,1.0s,baz=124,slow=2.2,SNR=3.8
NBO00 NORSAR Array S 78.39 334 P **P** **12 00 59.9 -1.0**
MLR Muntele Rosu 78.52 315 P **P** **12 01 01.9 -0.1**
comp=Z,3.8nm,0.5s,baz=20,slow=2.4,SNR=10
MLR Muntele Rosu 78.52 315 ⇓P **P** **12 01 02.8 +0.8**
DOPR Dopca 78.65 316 ⇑P **P** **12 01 03.4 +0.8**
KOLS Kolonicke sedl 79.14 320 *eP* **P** **12 01 05.9 +0.7**
KOLS Kolonicke sedl 79.14 320 *eP* **P** **12 01 05.9 +0.7**
TRPA Tarpa 79.37 319 ⇑P **P** **12 01 07.1 +0.6**
ARR Arges 79.39 316 ⇑P **P** **12 01 07.5 +0.7**
CRVS Cervenica-Dubn 79.63 320 *eP* **P** **12 01 08.5 +0.6**
CRVS Cervenica-Dubn 79.63 320 *eP* **P** **12 01 08.5 +0.6**
ELL Elmali 79.69 306 P **P** **12 01 08.4 -0.2**
ELL Elmali 79.69 306 P **P** **12 01 08.4 -0.2**
ELND Elena 79.72 313 ⇑P **P** **12 01 08.7 +0.2**
DRGR 79.91 317 P **P** **12 01 10.3 +0.8**
OJC Ojcow 79.92 321 *eP* **P** **12 01 09.9 +0.5**
OJC Ojcow 79.92 321 *eP* **P** **12 01 09.9 +0.5**
OJC Ojcow 79.92 321 P **P** **12 01 09.9 +0.5**
SUMG Summit 80.25 356 *i* P **P** **12 01 11.8 +0.6**
SUMG pmax pmax
comp=Z,81nm,0.8s
SUMG Summit 80.25 356 *i* P **P** **12 01 11.8 +0.6**
comp=Z,81nm,0.8s
SUMG Summit 80.25 356 P **P** **12 01 11.9 +0.7**
SUMG IAmb IAmb 12 01 12.8
comp=Z,32nm,0.8s
NNZ Nelson 80.25 146 P **P** **12 01 10.8 -0.3**
BKZ Black Stump Fm 80.33 143 P **P** **12 01 12.8 +1.1**
BKZ IAmb IAmb 12 02 13.5
comp=Z,49nm,1.4s
GZR Gura Zlata 80.54 316 ⇓P **P** **12 01 13.0 +0.1**
LANS Liptovska Anna 80.64 321 *eP* **P** **12 01 14.5 +1.1**
LANS pmax pmax
comp=Z,3.0nm,1.2s
LANS Liptovska Anna 80.64 321 *eP* **P** **12 01 14.5 +1.1**
SIRR Siria 80.80 317 ⇑P **P** **12 01 14.6 +0.3**
PUNG Punghina 80.98 315 ⇑P **P** **12 01 16.0 +0.9**
HERR Herculane 81.01 316 ⇓P **P** **12 01 15.5 +0.2**
RPZ Rata Peaks 81.06 149 P **P** **12 01 15.0 -0.4**
comp=Z,22nm,1.0s,baz=12,slow=2.2,SNR=6.9
RPZ Rata Peaks 81.06 149 P **P** **12 01 15.6 +0.2**
RPZ IAmb IAmb 12 01 16.5
comp=Z,39nm,1.2s
BZS Buzias 81.14 317 ⇑P **P** **12 01 15.7 -0.3**
KHZ Kahutara 81.23 147 P **P** **12 01 15.2 -1.0**
KHZ IAmb IAmb 12 02 42.8
comp=Z,99nm,2.0s
VYHS Vyhne 81.34 320 *eP* **P** **12 01 17.6 +0.6**
VYHS pmax pmax
comp=Z,23nm,1.3s
VYHS Vyhne 81.34 320 *eP* **P** **12 01 17.6 +0.6**
MORC Moravsky Berou 81.39 322 ⇑P **P** **12 01 17.9 +0.5**
MORC Moravsky Berou 81.39 322 *eP* **P** **12 01 17.4 0.0**
KSP Ksiaz 81.51 323 *eP* **P** **12 01 18.7 +0.8**
KSP Ksiaz 81.51 323 *eP* **P** **12 01 18.7 +0.8**
VTS Vitosha 81.58 314 P **P** **12 01 19.6 +1.0**
VTS pmax pmax
comp=Z,23nm,1.0s
VTS Vitosha 81.58 314 ⇑P **P** **12 01 19.5 +1.0**
VTS Vitosha 81.58 314 P **P** **12 01 19.6 +1.0**
VTS IAmb IAmb 12 01 20.2
comp=Z,23nm,1.0s
KRLC Kraliky 81.65 322 *eP* **P** **12 01 19.0 +0.3**
KRLC Kraliky 81.65 322 *eP* **P** **12 01 19.0 +0.3**
DPC Dobruska-Polom 81.75 323 *eP* **P** **12 01 19.9 +0.7**
DPC Dobruska-Polom 81.75 323 *eP* **P** **12 01 19.9 +0.7**
CHVC Chvalec 81.77 323 *eP* **P** **12 01 21.3 +2.0**
JAVC Velka Javorina 81.81 321 *eP* **P** **12 01 21.1 +1.5**
UPC Upice 81.84 323 *eP* **P** **12 01 20.0 +0.4**

UPC	**Upice**	81.84	323	*e*P	P	12 01 20.0	+0.4
SMOL	**Smolenice**	82.12	321	*e*P	P	12 01 22.0	+0.8
SMOL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SMOL	**Smolenice**	82.12	321	*e*P	P	12 01 22.0	+0.8
VRAC	**Vranov**	82.17	322	P	P	12 01 21.2	-0.1
	comp=Z,10.0nm,0.7s,baz=64,slow=2.8,SNR=8.7						
VRAC	**Vranov**	82.17	322	⇑P	P	12 01 21.4	0.0
VRAC	**Vranov**	82.17	322	*e*P	P	12 01 22.0	+0.6
MODS	**Modra-Piesok**	82.28	321	*e*P	P	12 01 21.9	-0.1
MODS				pmax	pmax		
	comp=Z,19nm,1.3s						
MODS	**Modra-Piesok**	82.28	321	*e*P	P	12 01 21.9	-0.1
KRUC	**Moravsky**	82.41	322	*e*P	P	12 01 22.9	+0.3
MORH	**Mrgy, Hungar**	82.63	318	*e*P	P	12 01 23.8	0.0
BRG	**Berggiesshubel**	82.73	324	*e*P	P	12 01 24.6	+0.3
	comp=Z,8.4nm,1.2s						
BRG	**Berggiesshubel**	82.73	324	*e*P	P	12 01 24.6	+0.3
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BSEG	**Bad Segeberg**	82.77	328	*e*P	P	12 01 25.1	+0.8
	comp=Z,21nm,0.8s,baz=53,slow=5.0						
MPLH	**Magyarpolny**	82.77	320	*e*P	P	12 01 26.1	+1.6
TREC	**Trest**	82.78	322	*e*P	P	12 01 26.2	+1.6
TREC	**Trest**	82.78	322	*e*P	P	12 01 26.2	+1.6
GOPC	**GO Pecny, Ondr**	82.82	323	*e*P	P	12 01 26.1	+1.3
GOPC	**GO Pecny, Ondr**	82.82	323	*e*P	P	12 01 26.1	+1.3
PRU	**Pruhonice**	82.91	323	*e*P	P	12 01 26.5	+1.3
PRU	**Pruhonice**	82.91	323	*e*P	P	12 01 26.5	+1.3
CLL	**Collm**	82.98	325	*i* P	P	12 01 25.8	+0.3
CLL				pmax	pmax		
	comp=Z,12nm,0.8s						
CLL	**Collm**	82.98	325	*i* P	P	12 01 25.8	+0.3
	comp=Z,12nm,0.8s						
CLL	**Collm**	82.98	325	*e*P	P	12 01 25.7	+0.3
	comp=Z,12nm,0.8s,baz=53,slow=5.0						
CLL	**Collm**	82.98	325	P	P	12 01 25.6	+0.1
FBE	**Freiberg**	83.01	324	*e*P	P	12 01 26.5	+0.8
	comp=Z,12nm,1.0s,baz=53,slow=5.0						
LIT	**Litokhoron**	83.30	312	P	P	12 01 27.0	-0.4
LIT				pmax	pmax		
	comp=Z,45nm,1.5s						
LIT	**Litokhoron**	83.30	312	P	P	12 01 27.0	-0.4
LIT				IAmb	IAmb	12 01 29.2	
	comp=Z,45nm,1.5s						
CONA	**Conrad Observa**	83.32	321	*e*PcP	P	12 01 28.2	+0.7
	comp=Z,12nm,0.9s						
NEUB	**Neuenburg**	83.66	325	*e*P	P	12 01 30.2	+1.2
	comp=Z,40nm,1.4s,baz=53,slow=5.0						
ASSE	**Asse, Remlinge**	83.67	326	*e*P	P	12 01 29.1	+0.1
	comp=Z,49nm,1.7s,baz=53,slow=5.0						
FNA	**Florina**	83.70	313	P	P	12 01 28.7	-0.8
FNA				pmax	pmax		
	comp=Z,15nm,0.9s						
FNA	**Florina**	83.70	313	P	P	12 01 28.7	-0.8
NRDL	**Niedersach Rie**	83.73	327	*e*P	P	12 01 29.8	+0.5
	comp=Z,15nm,1.1s,baz=53,slow=5.0						
TANN	**Tannenbergstha**	83.77	324	*e*P	P	12 01 30.3	+0.6
	comp=Z,35nm,1.5s,baz=53,slow=5.0						
GUNZ	**Gunzen**	83.87	324	*e*P	P	12 01 30.8	+0.7
	comp=Z,58nm,1.8s,baz=53,slow=5.0						
NKC	**Novy Kostel**	83.88	324	*e*P	P	12 01 31.9	+1.7
NKC	**Novy Kostel**	83.88	324	*e*P	P	12 01 31.9	+1.7
PLN	**Plauen**	83.89	324	*e*P	P	12 01 30.6	+0.4
	comp=Z,25nm,1.5s,baz=53,slow=5.0						
WERN	**Wernitzgruen**	83.89	324	*e*P	P	12 01 31.3	+1.0
	comp=Z,23nm,1.1s,baz=53,slow=5.0						
KHC	**Kasperske Hory**	83.91	323	*e*P	P	12 01 25.6	-4.8
KHC	**Kasperske Hory**	83.91	323	*e*P	P	12 01 25.6	-4.8
AGG	**Agios Georgios**	83.94	311	P	P	12 01 29.5	-1.3
AGG				pmax	pmax		
	comp=Z,24nm,0.9s						
AGG	**Agios Georgios**	83.94	311	P	P	12 01 29.5	-1.3
AGG				IAmb	IAmb	12 01 30.0	
	comp=Z,24nm,0.9s						
IDI	**Anoyia**	83.97	306	P	P	12 01 29.8	-1.2
	comp=Z,12nm,0.4s,baz=62,slow=6.1,SNR=11						
CLZ	**Clausthal**	84.00	326	*e*P	P	12 01 31.6	+0.8
	comp=Z,50nm,1.0s,baz=53,slow=5.0						
GEC2	**GERESS Array S**	84.01	322	*e*P	P	12 01 32.0	+1.0
	comp=Z,14nm,1.1s,baz=53,slow=5.0						
GEC2	**GERESS Array S**	84.01	322	P	P	12 01 30.6	-0.4
GERES	**GERESS Array B**	84.01	322	P	P	12 01 31.1	+0.1
GERES	**GERESS Array B**	84.01	322	P	P	12 01 31.0	0.0
	comp=Z,5.6nm,0.7s,baz=46,slow=5.8,SNR=28						
GERES				LR	LR	12 42 32.9	
	comp=Z,96nm,19.8s,baz=62,slow=38						
GERES	**GERESS Array B**	84.01	322	P	P	12 01 31.1	+0.1
MOX	**Moxa**	84.08	325	*e*P	P	12 01 31.7	+0.6
	comp=Z,11nm,1.2s,baz=53,slow=5.0						
MANZ	**Manzenberg**	84.20	324	*e*P	P	12 01 32.6	+0.7
	comp=Z,23nm,1.1s,baz=53,slow=5.0						
MOA	**Molln**	84.26	321	*e*P	P	12 01 33.0	+0.8
	comp=Z,326nm,4.6s,baz=53,slow=5.0						
MOA	**Molln**	84.26	321	*e*PcP	P	12 01 33.1	+1.0
	comp=Z,12nm,1.7s						
ROTZ	**Rotzenmuhle**	84.28	324	*e*P	P	12 01 33.1	+0.9
	comp=Z,46nm,1.4s,baz=53,slow=5.0						
GTTG	**Gvttingen**	84.38	326	*e*P	P	12 01 33.7	+1.0
	comp=Z,46nm,1.1s,baz=53,slow=5.0						
B08A	**Colville Reser**	84.39	38	P	P	12 01 33.5	+0.6
SOKA	**Soboth**	84.48	320	*e*PcP	P	12 01 33.6	+0.2
	comp=Z,5.7nm,0.9s						
GRF	**Grafenberg Arr**	84.84	324	*e*P	P	12 01 35.8	+0.7
	comp=Z,47nm,1.2s,baz=53,slow=5.0						
OBKA	**Obir**	84.85	320	*e*P	P	12 01 35.8	+0.5
	comp=Z,29nm,1.4s,baz=53,slow=5.0						
IBBN	**Ibbenburen**	84.99	327	*e*P	P	12 01 36.4	+0.7
	comp=Z,60nm,1.1s,baz=53,slow=5.0						
ITM	**Ithomi**	85.13	309	P	P	12 01 35.9	-0.9
RJOB	**Jochberg**	85.14	322	*e*P	P	12 01 37.4	+0.7
	comp=Z,27nm,1.1s,baz=53,slow=5.0						
KBA	**Koelnbreinsper**	85.21	321	*e*PcP	P	12 01 37.0	-0.1
	comp=Z,13nm,1.3s						
NEW	**Newport**	85.65	37	P	P	12 01 40.6	+1.4
	baz=306						
FUR	**Furstenfeldbru**	85.72	323	*e*P	P	12 01 40.4	+1.0
	comp=Z,67nm,1.2s,baz=53,slow=5.0						
BUG	**Bochum--Univer**	85.77	327	*e*P	P	12 01 40.5	+0.9
	comp=Z,34nm,1.2s,baz=53,slow=5.0						
ABTA	**Abfaltersbach**	85.87	321	*e*P	P	12 01 39.8	-0.6
	comp=Z,25nm,1.3s						
TNS	**Taunus Mts**	85.95	326	*e*P	P	12 01 41.1	+0.5
	comp=Z,21nm,1.3s,baz=53,slow=5.0						
WATA	**Walderalm**	86.04	322	*e*PcP	P	12 01 41.0	-0.2
	comp=Z,16nm,1.0s						
WTTA	**Wattenberg**	86.05	322	*e*P	P	12 01 41.2	-0.1
	comp=Z,34nm,1.2s,baz=53,slow=5.0						
WTTA	**Wattenberg**	86.05	322	*e*PcP	P	12 01 41.3	-0.1
	comp=Z,33nm,1.3s						
L04D	**Klamath Falls**	86.08	44	P	P	12 01 43.1	+1.5
	baz=303						
J05D	**Fort Rock, OR**	86.15	43	P	P	12 01 43.3	+1.5
	baz=304						
MOTA	**Moosalm**	86.30	322	*e*PcP	P	12 01 42.3	-0.2
	comp=Z,19nm,1.3s						
SQTA	**Sankt Quirin**	86.31	322	*e*PcP	P	12 01 42.5	-0.1
	comp=Z,12nm,0.9s						
RETA	**Reutte**	86.40	322	*e*PcP	P	12 01 42.6	-0.3
	comp=Z,11nm,1.3s						
UBR	**Ueberruh**	86.64	323	*e*P	P	12 01 44.6	+0.5
	comp=Z,46nm,1.2s,baz=53,slow=5.0						
FETA	**Feichten**	86.70	322	*e*PcP	P	12 01 44.5	0.0
	comp=Z,16nm,1.3s						
DAVA	**Damuels**	87.00	323	*e*P	P	12 01 45.5	-0.4
	comp=Z,44nm,1.7s,baz=53,slow=5.0						
DAVA	**Damuels**	87.00	323	*e*PcP	P	12 01 45.8	-0.1
	comp=Z,18nm,1.1s						
FUORN	**Ofenpass-Fuorn**	87.19	322	P	P	12 01 46.9	-0.1
FUORN				IAmb	IAmb	12 01 48.3	
	comp=Z,17nm,0.9s						
DAVOX	**Davos/Dischmat**	87.31	322	P	P	12 01 46.9	-0.5
	comp=Z,7.5nm,0.6s,baz=322,slow=0.7,SNR=12						
WLF	**Walferdange**	87.45	326	*e*P	P	12 01 48.4	+0.6
	comp=Z,16nm,0.9s,baz=53,slow=5.0						
NRCA	**Norcia**	87.79	318	P	P	12 01 49.0	-0.8
FCC	**Fort Churchill**	88.02	20	P	P	12 01 50.6	+0.3
FCC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FCC	**Fort Churchill**	88.02	20	P	P	12 01 50.6	+0.3
FFC	**Flin Flon**	88.40	26	P	P	12 01 52.4	+0.1
FFC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
FFC	**Flin Flon**	88.40	26	P	P	12 01 52.4	+0.1
EGMT	**Eagleton**	89.64	34	P	P	12 01 59.8	+1.5
	baz=312						

NVAR	**Mina Array Bea**	90.74	46	P	P	12 02 03.6	-0.2
	comp=Z,1.1nm,0.9s,baz=316,slow=5.0,SNR=5.6						
H17A	**Grant Village**	91.61	37	P	P	12 02 11.8	+4.0
	baz=311						
RLMT	**Red Lodge**	91.82	36	P	P	12 02 09.1	+0.4
RLMT	**Red Lodge**	91.82	36	P	P	12 02 10.4	+1.7
	baz=312						
PPT	**Papeete**	92.09	109	LR	LR	12 33 29.9	
	comp=Z,48nm,21.7s,slow=29						
PPT2	**Papeete2**	92.10	109	*e*LR	LR	12 02 29.9	
	comp=Z,240nm,25.0s						
PPT2	**Papeete2**	92.10	109	*e*LR	LR	12 31 26.2	
	comp=Z,232nm,33.2s						
LAO	**LASA Array**	92.30	34	P	P	12 02 11.1	+0.4
	baz=314						
R11A	**Troy Canyon, C**	92.50	44	P	P	12 02 13.0	+1.1
	baz=308						
PDAR	**Pinedale Array**	93.24	38	P	P	12 02 15.4	+0.1
	comp=Z,0.3nm,0.4s,baz=341,slow=1.9,SNR=7.6						
PDAR				PKKPbc	PKKPdf	12 19 21.4	+1.2
	comp=Z,0.3nm,0.8s,baz=142,slow=4.6,SNR=4.1						
PDAR	**Pinedale Array**	93.24	38	P	P	12 02 14.8	-0.5
TBI	**Tubuai**	94.83	114	*e*LR	LR	12 32 45.7	
	comp=Z,113nm,34.2s						
SCHQ	**Schefferville**	97.68	8	P	P	12 02 34.2	-0.8
	comp=Z,2.2nm,0.8s,baz=39,slow=6.5,SNR=2.6						
SCHQ	**Schefferville**	97.68	8	P	P	12 02 34.4	-0.5
ESDC	**Sonseca Array**	99.54	324	P	Pdif	12 02 42.9	-0.8
	comp=Z,0.1nm,0.3s,baz=30,slow=4.2,SNR=4.2						
TORD	**Torodi Ar. Bea**	113.69	300	PKiKP	PKiKP	12 07 38.3	-0.8
	comp=Z,1.0nm,0.7s,baz=35,slow=2.0,SNR=5.2						
SYO	**Syowa Base**	113.98	203	⇑*e*X	PKiKP	12 07 33.7	-4.3
QSPA	**South Pole Qui**	116.72	180		PKiKP	12 07 43.5	0.0
DBIC	**Dimbokro**	122.72	299	PKIKP	PKiKP	12 07 56.6	-0.1
DBIC	**Dimbokro**	122.72	299	PKP	PKPdf	12 07 56.1	-0.4
	comp=Z,2.8nm,0.7s,baz=113,slow=1.2,SNR=5.7						
DBIC	**Dimbokro**	122.72	299		PKiKP	12 07 56.6	-0.1
KIC	**Kosan Boka**	122.82	298	*e*P	PKPdf	12 07 56.6	-0.1
	comp=Z,4.0nm,0.5s						
TIC	**Tumodi**	122.87	299	*e*P	PKPdf	12 07 56.6	-0.2
LIC	**Lamto**	123.13	298	*e*P	PKiKP	12 07 58.9	+1.4
	comp=Z,7.7nm,0.5s						
SNAA	**Sanae**	127.51	198	PKPdf	PKPdf	12 08 04.2	+0.2
VNA2	**Neumayer--Watz**	129.15	198	PKPdf	PKiKP	12 08 08.0	+0.2
	baz=60,slow=1.3						
VNA3	**Neumayer Olymp**	129.56	197	PKPdf	PKiKP	12 08 09.1	+0.4
SDV	**Santo Domingo**	140.45	28	PKP	PKPdf	12 08 30.8	+0.7
	comp=Z,5.9nm,0.7s,baz=359,slow=3.3,SNR=8.0						
ATAH	**Atahualpa**	148.79	55	PKPbc	PKPbc	12 08 49.0	+0.3
	comp=Z,5.4nm,0.6s,baz=356,slow=6.7,SNR=3.9						

BKK ***28*** *12:01:45.8±1.0,24˚N±7˚×10˚2E±˚, h0km,M5.5/7, mB5.4/6, mb5.4/6, MLv6.0/7, Mw(mB)4.8/6*

IDC ***28*** *12:01:58.9±0.6,22˚55N×101˚21E, h0km, mb4.1/19, mb1 4.2/21, mb1mx4.0/56, mbtmp4.1/21, ML4.2/2, MS3.8/13, Ms1 3.8/13, ms1mx3.5/44, Error ellipse: s-maj=19.6km s-min=12.4km az=74.0*

BJI ***28*** *12:01:59.1±0.0,22˚51N×101˚17E, h7km, mB4.8/27, mb4.3/42, ML4.7/8, Ms4.7/54, Ms7 4.3/43*

MOS ***28*** *12:02:00.6±1.6,22˚64N×101˚24E, h20km, mb4.7/18, Error ellipse: s-maj=13.0km s-min=7.8km az=113.9*

NEIC ***28*** *12:02:00.5±2.3,22˚58N±0˚04×101˚27E±0˚05, h10km±1km, mb4.5/29, Error ellipse: s-maj=7.6km s-min=5.0km az=115.0*

ISC 28 12:01:59.8±0.3, 22˚50N±0˚03×101˚27E±0˚04, h10km, n167, σ1§99/178, mb4.4/44, MS3.8/18, 5C-4D, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLVN	**Son La**	2.71	115		**Pn**	12 02 44.4	+0.8
SLVN				Sn	**Sn**	12 03 18.6	+2.2
KMI	**Kunming**	2.94	27	Pn	**Pn**	12 02 48.0	+1.1
KMI				Pg	**Pg**	12 02 55.0	-1.3
KMI				Sn	**Sn**	12 03 23.5	+1.1
KMI				Sg	**Sg**	12 03 34.3	-0.2
KMI				LR	LR		
	comp=N,7μm,4.3s						
KMI				LR	LR		
	comp=E,9μm,4.6s						
KMI				LR	LR		
	comp=Z,2μm,7.0s						
KMI	**Kunming**	2.94	27	Pn	**Pn**	12 02 48.0	+1.1
KMI				Sn	**Sn**	12 03 22.7	+0.3
PHRA	**Phrae**	4.09	194	P	**Pn**	12 03 05.8	+3.3
PHRA				S	**Sg**	12 04 06.6	-4.8
CMMT	**Chiang Mai**	4.26	211	P	**Pn**	12 03 07.9	+3.0
CMMT				S	**Sg**	12 04 13.0	-3.7
CHTO	**Chiang Mai**	4.26	211	P	**Pn**	12 03 06.9	+2.1
CHTO				S	**Sb**	12 04 03.4	-3.0
CHTO	**Chiang Mai**	4.26	211		**Pn**	12 03 05.7	+0.9
CHTO				Sn	**Sn**	12 03 53.2	-1.4
CM31	**Chiang Mai Arr**	4.57	209	Pn	**Pn**	12 03 12.3	+3.2
CM31					**Sb**	12 04 18.5	+3.1
CMAR	**Chiang Mai Arr**	4.57	209	Pn	**Pn**	12 03 10.1	+1.0
	2.7nm,0.3s,baz=19,slow=12,SNR=31						
CMAR				Pg	**Pg**	12 03 25.8	-1.6
	9.0nm,0.3s,baz=26,slow=17,SNR=58						
CMAR				Lg	Lg	12 04 24.5	
	21nm,0.3s,baz=24,slow=30,SNR=10						
UTTA	**Uttaradit**	4.78	188	P	**Pn**	12 03 10.1	-1.7
MHMT	**Maesarieng**	5.32	217	P	Pn	12 03 22.9	+3.6
MHMT				S	**Sb**	12 04 41.2	+4.4
PBKT	**Sadao Pong**	5.90	183		**Pn**	12 03 28.8	+1.4
PBKT	**Sadao Pong**	5.90	183	P	**Pn**	12 03 29.0	+1.6
SKNT	**Sakolnakorn**	6.06	155	P	**Pn**	12 03 30.9	+1.3
GYA	**Guiyang**	6.30	50	Pn	**Pn**	12 03 34.0	+1.0
GYA				Sn	**Sn**	12 04 50.0	+4.8
GYA				Sg	**Sg**	12 05 17.0	-5.3
GYA				smax	smax		
	comp=N,420nm,1.4s						
GYA				smax	smax		
	comp=E,390nm,0.8s						
GYA				LR	LR		
	comp=N,4μm,8.6s						
GYA				LR	LR		
	comp=E,5μm,8.2s						
GYA				LR	LR		
	comp=Z,2μm,10.2s						
CHAI	**Chaiyaphum**	6.59	174	P	**Pn**	12 03 37.6	+0.6
UBPT	**Khong Chiam**	8.21	150		**Pn**	12 04 01.7	+2.7
UBPT	**Khong Chiam**	8.21	150	P	**Pn**	12 04 01.1	+2.0
CD2	**Chengdu**	8.67	14	⇑*i*Pn	**Pn**	12 04 06.0	+0.6
CD2				Pg	Pg	12 04 51.3	+5.4
CD2				Sn	**Sn**	12 05 44.3	+1.0
CD2				Sg	**Sg**	12 06 43.5	+5.3
CD2				smax	smax		
	comp=N,170nm,1.6s						
CD2				smax	smax		
	comp=E,170nm,1.7s						
CD2	**Chengdu**	8.67	14	P	**Pn**	12 04 05.5	+0.1
CD2				S	Sn	12 05 52.8	+9.5
CD2				pmax	pmax		
	comp=E,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=E,130nm,3.3s						
CD2				LR	LR		
	comp=E,3μm,7.1s						
CD2				LR	LR		
	comp=E,8μm,9.0s						
CD2				LR	LR		
	comp=E,2μm,7.3s						
QIZ	**Qiongzhong**	8.73	112	P	**Pn**	12 04 07.0	+0.7
QIZ				pmax	pmax		
	comp=E,13nm,0.7s						
QIZ				pmax	pmax		
	comp=E,240nm,4.5s						
QIZ				LR	LR		
	comp=E,2μm,9.8s						
QIZ				LR	LR		
	comp=E,2μm,10.5s						
QIZ				LR	LR		
	comp=E,1μm,14.5s						
QIZ	**Qiongzhong**	8.73	112		**Pn**	12 04 07.0	+0.7
SHL	**Shillong**	9.10	291	P	**Pn**	12 04 10.6	-0.9
SHL	**Shillong**	9.10	291		**Pn**	12 04 10.6	-0.9
ENH	**Enshi**	10.69	42		**Pn**	12 04 34.1	+1.0
LSA	**Lhasa**	11.57	310	P	**Pn**	12 04 48.0	+2.4
LSA	**Lhasa**	11.57	310	P	**Pn**	12 04 47.6	+2.0
LSA	**Lhasa**	11.57	310		**Pn**	12 04 48.0	+2.4
TAPN	**Taplejung**	13.21	294	*e*P	**Pn**	12 05 07.2	-0.7
	comp=E,19nm,0.4s						

XAN	**Xi'an**	13.32	29	P	**Pn**	12 05 07.3	-1.8
XAN				pP	P	12 05 11.3	-7.6
XAN				S	**Sn**	12 07 33.5	-3.9
XAN				pmax	pmax		
	comp=E,9.0nm,0.7s						
XAN				LR	LR		
	comp=E,3μm,12.2s						
XAN				LR	LR		
	comp=E,4μm,10.4s						
XAN				LR	LR		
	comp=E,950nm,11.2s						
XAN	**Xi'an**	13.32	29		**Pn**	12 05 07.5	-1.7
ODAN	**Odare**	13.34	292	*e*P	**Pn**	12 05 08.4	-1.2
	comp=E,66nm,0.9s						
LZH	**Lanzhou**	13.73	9	*e*P	**Pn**	12 05 14.0	-0.7
LZH				pP	P	12 05 16.3	-7.2
LZH				PP	**PnPn**	12 05 27.5	+4.7
LZH				SS	**S**	12 08 03.3	-6.9
LZH				pmax	pmax		
	comp=E,19nm,1.1s						
LZH				pmax	pmax		
	comp=E,65nm,4.6s						
LZH				LR	LR		
	comp=E,710nm,12.5s						
LZH				LR	LR		
	comp=E,2μm,12.5s						
RAMN	**Ramite**	14.04	291	*e*P	**Pn**	12 05 18.0	-1.2
	comp=E,14nm,0.4s						
WHN	**Wuhan**	14.18	53	P	**Pn**	12 05 21.0	+0.2
WHN				S	**Sn**	12 07 55.0	-3.3
WHN				LR	LR		
	comp=E,4μm,7.8s						
WHN				LR	LR		
	comp=E,2μm,7.7s						
JIRN	**Jiri**	14.59	294	*e*P	**Pn**	12 05 26.0	-0.8
	comp=E,18nm,0.3s						
GUN	**Gumba**	14.93	294	*e*P	**Pn**	12 05 30.7	-0.7
	comp=E,71nm,0.6s						
PKI	**Pulchoki**	15.23	293	*e*P	**Pn**	12 05 33.9	-1.5
	comp=E,31nm,0.5s						
PKIN	**Phulchoki**	15.24	293	*e*P	**Pn**	12 05 34.3	-1.2
	comp=E,24nm,0.5s						
KKN	**Kakani**	15.40	293	*e*P	**Pn**	12 05 36.8	-0.7
	comp=E,58nm,0.6s						
DMN	**Daman**	15.50	292	*e*P	**Pn**	12 05 37.3	-1.6
	comp=E,88nm,0.9s						
GKN	**Gorkha**	16.01	293	*e*P	**Pn**	12 05 44.4	-0.9
	comp=E,113nm,1.0s						
QZH	**Quanzhou**	16.05	78	*e*P	**P**	12 05 48.5	-0.7
QZH				LR	LR		
	comp=E,1μm,6.4s						
QZH				LR	LR		
	comp=E,370nm,4.5s						
QZH				LR	LR		
	comp=E,1μm,6.4s						
KOLN	**Koldanda**	16.83	292	*e*P	**Pn**	12 05 54.8	-1.1
DANN	**Dangsing**	16.85	294	*e*P	**Pn**	12 05 55.3	-0.9
	comp=E,126nm,1.3s						
GTA	**Gaotai**	16.91	356	*e*P	**P**	12 05 57.0	-1.7
GTA				pP	pP	12 06 01.3	-0.6
GTA				sP	sP	12 06 04.5	+1.1
GTA				pmax	pmax		
	comp=E,270nm,6.7s						
GTA				LR	LR		
	comp=E,480nm,9.2s						
GTA				LR	LR		
	comp=E,720nm,12.1s						
GTA				LR	LR		
	comp=E,340nm,8.3s						
TIY	**Taiyuan**	17.96	30	*e*P	**Pn**	12 06 09.0	-0.7
TIY				PP	sP	12 06 24.3	+9.3
TIY				SS	S	12 09 49.3	+13
TIY				pmax	pmax		
	comp=E,4.0nm,0.5s						
TIY				pmax	pmax		
	comp=E,140nm,4.5s						
TIY				LR	LR		
	comp=E,3μm,11.9s						
TIY				LR	LR		
	comp=E,3μm,10.8s						
TIY				LR	LR		
	comp=E,1μm,10.5s						
NJ2	**Nanjing**	18.28	55	*e*P	**P**	12 06 14.0	+0.2
NJ2				pmax	pmax		
	comp=E,5.0nm,0.5s						
NJ2				LR	LR		
	comp=E,3μm,11.8s						
NJ2				LR	LR		
	comp=E,2μm,11.6s						
NJ2				LR	LR		
	comp=E,2μm,10.9s						
TIA	**Tai'an**	19.40	42	P	**Pn**	12 06 30.5	+3.3
TIA				pmax	pmax		
	comp=E,6.0nm,1.4s						
TIA				LR	LR		
	comp=E,880nm,10.2s						
TIA				LR	LR		
	comp=E,1μm,10.1s						
TIA				LR	LR		
	comp=E,500nm,7.5s						
BTO	**Baotou**	19.52	20	*e*P	**Pn**	12 06 29.0	+0.4
TPTI		19.53	192	P	**Pn**	12 06 28.1	-0.7
	comp=E,4.5nm,0.9s						
PSI	**Prapat**	19.71	187	P	**Pn**	12 06 33.5	+2.4
PSI	**Prapat**	19.71	187	P	**Pn**	12 06 31.9	+0.8
	comp=E,0.7nm,0.3s,baz=56,slow=5.2,SNR=8.6						
RPSI	**Rantau Prapat**	19.81	187	P	**Pn**	12 06 31.9	-0.3
RPSI				IAmb	IAmb	12 06 38.4	
	comp=Z,23nm,1.0s						
RPSI	**Rantau Prapat**	19.81	187	P	**Pn**	12 06 31.9	-0.3
HHC	**Hu-ho-hao-te**	20.26	23	*e*P	**P**	12 06 36.0	+0.5
HHC				S	**S**	12 10 16.0	-6.8
HHC				pmax	pmax		
	comp=Z,48nm,5.4s						
HHC				LR	LR		
	comp=Z,440nm,16.2s						
HHC				LR	LR		
	comp=Z,780nm,14.0s						
HHC				LR	LR		
	comp=Z,470nm,15.6s						
GSI	**Gunungs

KSH PP **PnPn** **12 08 31.5 +1.7**
KSH S **S** **12 12 20.5 -5.4**
KSH sS sS 12 12 33.3 +1.6
KSH SS **SnSn** **12 13 43.0 +8.1**
KSH pmax pmax
comp=Z,330nm,6.7s
KSH LR LR
comp=Z,340nm,5.9s
KSH LR LR
comp=Z,370nm,5.3s
KSH LR LR
comp=Z,420nm,9.7s
DAV Davao City (W) 28.00 119 LR LR 12 18 53.4
comp=Z,163nm,21.1s,baz=312,slow=36
KDJ Kajisay 28.08 320 P **P** **12 07 51.5 -0.3**
KDJ pmax pmax
comp=Z,7.0nm,1.0s
KDJ Kajisay 28.08 320 P **P** **12 07 51.5 -0.3**
KDJ IAmb IAmb 12 08 04.7
comp=Z,14nm,1.4s
JNU Nakatsue 28.16 61 LR LR 12 19 49.5
comp=Z,125nm,21.6s,baz=250,slow=38
MK31 Makanchi Array 28.68 332 P **P** **12 07 57.0 0.0**
MK31 pmax pmax
comp=Z,5.0nm,0.9s
MK31 Makanchi Array 28.68 332 P **P** **12 07 58.0 +1.0**
MK31 IAmb IAmb 12 08 07.2
comp=Z,4.7nm,0.9s
MKAR Makanchi Array 28.68 332 P **P** **12 07 58.1 +1.1**
comp=Z,4.0nm,0.6s,baz=141,slow=9.5,SNR=37
MKAR Makanchi Array 28.68 332 P **P** **12 07 56.9 -0.1**
TLY Talaya 29.19 3 LR LR 12 21 28.6
comp=Z,144nm,21.5s,baz=156,slow=40
LEM Lembang 29.80 167 LR LR 12 19 54.2
comp=Z,139nm,20.1s,baz=260,slow=36
AAK Ala-Archa 30.00 318⇑ *eP* **P** **12 08 11.1 +2.2**
AAK pmax pmax
comp=Z,7.0nm,1.7s
AAK Ala-Archa 30.00 318 P **P** **12 08 08.7 -0.2**
comp=Z,2.0nm,0.8s,baz=140,slow=6.0,SNR=6.5
AAK Ala-Archa 30.00 318 P **P** **12 08 09.6 +0.8**
HIA Hailar 30.46 24⇑ *eP* **P** **12 08 10.0 -2.6**
HIA pmax pmax
comp=Z,8.0nm,0.5s
KKAR Karatay Array 32.74 316 P **P** **12 08 33.5 +0.6**
KKAR Karatay Array 32.74 316 P **P** **12 08 32.9 0.0**
KAPI Kappang 32.78 144 LR LR 12 22 55.8
comp=Z,104nm,19.0s,baz=119,slow=38
KURBB Kurchatov Arra 33.22 333 P **P** **12 08 37.1 +0.2**
comp=Z,0.8nm,0.8s,baz=131,slow=9.0,SNR=6.4
KURK Kurchatov 33.25 333⇓ *eP* **P** **12 08 39.0 +1.8**
KURK pmax pmax
comp=Z,3.0nm,0.8s
KURK Kurchatov 33.25 333 P **P** **12 08 38.0 +0.8**
KURK IAmb IAmb 12 08 46.5
comp=Z,7.5nm,1.2s
JAGI Jajag, Banyuwa 33.27 156 P **P** **12 08 38.4 +0.8**
USRK Ussuriysk Ar. 33.27 42 LR LR 12 22 24.3
comp=Z,308nm,20.6s,baz=219,slow=37
ZAA0 Zalesovo Array 33.78 342 P **P** **12 08 42.5 +0.8**
ZAA0 IAmb IAmb 12 08 47.6
comp=Z,3.7nm,0.7s
ZALV Zalesovo Beam 33.78 342 *i* P **P** **12 08 44.4 +2.7**
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 33.78 342 P **P** **12 08 42.1 +0.4**
comp=Z,4.1nm,0.7s,baz=153,slow=9.8,SNR=9.6
ZALV Zalesovo Beam 33.78 342 P **P** **12 08 42.4 +0.7**
MJAR Matsushiro Arr 34.84 58 LR LR 12 22 55.0
comp=Z,139nm,18.7s,baz=260,slow=36
KLR Kul'dur 35.93 35 LR LR 12 23 56.9
comp=Z,170nm,21.4s,baz=227,slow=37
BVAR Borovoye Array 38.50 330 P **P** **12 09 22.5 +0.3**
comp=Z,0.9nm,0.5s,baz=137,slow=11,SNR=7.1
BVAR PcP **PcP** **12 11 37.6 +2.7**
comp=Z,0.9nm,0.6s,baz=145,slow=5.3,SNR=3.7
BRVK Borovoye 38.57 330 P **P** **12 09 21.2 -1.5**
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BRVK Borovoye 38.57 330 P **P** **12 09 21.5 -1.2**
WSAR Wadi Sarin 39.19 280 LR LR 12 29 25.1
comp=Z,75nm,18.6s,baz=106,slow=42
ERM Erimo 39.94 51 P **P** **12 09 33.4 -0.9**
ERM Erimo 39.94 51 P **P** **12 09 33.4 -0.9**
GEYT Alibeck 39.97 303 P **P** **12 09 35.9 +1.2**
comp=Z,4.3nm,0.8s,baz=120,slow=8.5,SNR=3.5
GEYT Alibeck 39.97 303 P **P** **12 09 34.7 0.0**
ASAJ Asahikawa 40.17 48 P **P** **12 09 37.7 +1.4**
comp=Z,16nm,1.1s,baz=244,slow=8.6,SNR=3.5
JKA Kamikawa-asahi 40.18 48 P **P** **12 09 37.7 +1.4**
ABKAR Akbulak array 42.06 320 P **P** **12 09 52.7 +1.0**
ABKAR Akbulak array 42.06 320 P **P** **12 09 52.8 +1.2**
ABKAR IAmb IAmb 12 09 57.4
comp=Z,5.0nm,1.0s
AKTO Aktyubinsk 43.68 321 P **P** **12 10 04.2 -0.6**
comp=Z,2.4nm,0.9s,baz=113,slow=7.7,SNR=3.4
AKTO LR LR 12 28 58.8
comp=Z,120nm,21.1s,baz=114,slow=37
YAK Yakutsk 44.03 19 *eP* **P** **12 10 07.8 +0.4**
YAK pmax pmax
comp=Z,4.0nm,0.6s
SVE Sverdlovsk 45.28 330 *eP* P 12 10 26.5 +9.0
FITZ Fitzroy Crossi 46.86 147 LR LR 12 32 46.5
comp=Z,48nm,18.8s,baz=330,slow=39
GNI Garni 50.56 304⇓ *eP* **P** **12 11 01.1 +2.2**
GNI pmax pmax
comp=Z,66nm,1.6s
RAYN Ar Rayn 51.06 283 P **P** **12 11 01.4 -1.3**
RAYN pmax pmax
comp=Z,6.0nm,1.0s
RAYN Ar Rayn 51.06 283 P **P** **12 11 01.4 -1.3**
RAYN IAmb IAmb 12 11 05.3
comp=Z,5.7nm,1.0s
ZEI Tsey 51.34 307 *eP* **P** **12 11 06.7 +1.9**
ZEI pmax pmax
comp=Z,5.0nm,0.8s
TIXI Tiksi 51.65 11⇓ *eP* **P** **12 11 07.5 +1.2**
TIXI pmax pmax
comp=Z,4.0nm,2.1s
TIXI Tiksi 51.65 11 P **P** **12 11 06.1 -0.2**
comp=Z,1.5nm,0.5s,baz=194,slow=12,SNR=4.2
TIXI Tiksi 51.65 11 P **P** **12 11 06.8 +0.4**
NEY Neytrino 52.24 308⇑ *eP* **P** **12 11 13.4 +2.0**
NEY pmax pmax
comp=Z,1.0nm,0.8s
KIV Kislovodsk 52.31 309 *eP* **P** **12 11 12.7 +0.8**
KIV pmax pmax
comp=Z,28nm,1.0s
KIV MLR MLR
comp=Z,205nm,17.0s
WRAB Tennant Creek 53.12 140⇑ *eP* P 12 11 22.8 +4.8
WRAB pmax pmax
comp=Z,5.0nm,0.8s
WRAB Tennant Creek 53.12 140 P **P** **12 11 18.6 +0.6**
WRAB IAmb IAmb 12 11 27.7
comp=Z,7.5nm,1.1s
WRA Warramunga Arr 53.12 140 *i* P **P** **12 11 22.1 +4.1**
WRA pmax pmax
comp=Z,4.0nm,0.7s
WRA Warramunga Arr 53.12 140 P **P** **12 11 19.2 +1.2**
comp=Z,3.7nm,0.7s,baz=332,slow=8.0,SNR=18
WRA Warramunga Arr 53.12 140 P **P** **12 11 17.1 -0.9**
WB2 Warramunga Arr 53.13 140 P **P** **12 11 18.1 +0.1**
WB2 IAmb IAmb 12 11 27.6
comp=Z,6.1nm,0.8s
WR0 Warramunga Arr 53.26 140 P **P** **12 11 20.4 +1.5**
WR0 IAmb IAmb 12 11 25.1
comp=Z,6.7nm,0.8s
ASAR Alice Springs 55.79 143 P **P** **12 11 38.7 +1.4**
comp=Z,2.0nm,0.8s,baz=327,slow=6.5,SNR=14
ASAR PcP **PcP** **12 12 37.3 +0.9**
comp=Z,1.3nm,0.8s,baz=326,slow=4.2,SNR=2.4
ASAR Alice Springs 55.79 143 P **P** **12 11 37.4 0.0**
ASAR **PcP** **12 12 36.6 +0.1**
KLMR Klimovskoe 56.91 329 *eP* **P** **12 11 44.0 -0.8**
KLMR pmax pmax
comp=Z,19nm,1.5s
KLMR Klimovskoe 56.91 329 *eP* **P** **12 11 44.0 -0.8**
KLMR AMP 12 11 57.1
comp=Z,19nm,1.5s
OBN Obninsk 57.42 322 *i* P **P** **12 11 50.5 +2.0**
OBN *i* 12 13 57.4
OBN pmax pmax
comp=Z,5.0nm,0.7s
BRTR Keskin Array B 59.09 304 *i* P P 12 12 06.0 +5.3
BRTR pmax pmax
comp=Z,1.0nm,0.7s
BRTR Keskin Array B 59.09 304 P **P** **12 12 00.6 -0.1**
comp=Z,0.6nm,0.8s,baz=69,slow=9.9,SNR=3.3
BILL Bilibino 60.03 23 *i* P **P** **12 12 04.1 -2.4**
BILL *i* 12 12 52.9
BILL *i* 12 14 18.9
BILL pmax pmax
comp=Z,1.0nm,1.0s
BILL MLR MLR
comp=Z,141nm,15.0s
AKASG Malin Array Be 61.65 317 P **P** **12 12 17.1 -0.7**
comp=Z,26nm,0.3s,baz=81,slow=6.4,SNR=1.9
AKBB Malin Array Si 61.65 317 P **P** **12 12 17.6 -0.1**
FINES FINESS Array B 63.43 329 P **P** **12 12 29.7 +0.2**
comp=Z,2.2nm,0.8s,baz=60,slow=8.5,SNR=3.0
ARCES ARCESS Array B 64.14 338 P **P** **12 12 33.8 -0.4**
comp=Z,2.8nm,0.9s,baz=82,slow=6.5,SNR=4.4
ARCES ARCESS Array B 64.14 338 P **P** **12 12 33.1 -1.0**
NB2 NORSAR Subarra 70.61 329 P **P** **12 13 14.2 -1.1**
comp=Z,6.7nm,1.2s,baz=78,slow=6.2
NOA NORSAR Array B 70.61 329 P **P** **12 13 14.4 -0.9**
comp=Z,1.5nm,0.7s,baz=78,slow=6.2,SNR=5.8
NC204 NORSAR Array S 70.78 329 P **P** **12 13 15.7 -0.6**
GERES GERESS Array B 71.85 316 P **P** **12 13 22.7 -0.4**
comp=Z,0.9nm,0.7s,baz=62,slow=4.8,SNR=3.6
IMAR Indian Mountai 75.57 24 P **P** **12 13 44.8 +0.4**
BPAW Bear Paw Mtn. 77.41 25 P **P** **12 13 55.4 +0.4**
PPLA Purkeypile 77.43 27 P **P** **12 13 55.5 +0.3**
TRF Thorofare Moun 77.97 26 P **P** **12 13 58.8 +0.5**
BMAR Burnt Mountain 78.18 21 P **P** **12 14 00.4 +1.2**
ILAR Eielson Array 78.68 24 P **P** **12 14 01.1 -0.9**
comp=Z,0.2nm,0.5s,baz=284,slow=5.1,SNR=5.2
ILAR Eielson Array 78.68 24 P **P** **12 14 00.6 -1.4**
PMR Palmer 79.30 27 P **P** **12 14 05.2 -0.2**
PMR IAmb IAmb 12 14 22.6
comp=Z,9.9nm,1.2s
INK Inuvik 81.09 18 P **P** **12 14 15.2 +0.3**
INK pmax pmax
comp=Z,7.0nm,1.4s
INK Inuvik 81.09 18 P **P** **12 14 15.2 +0.3**
BCAR Beaver Creek A 81.50 24 P **P** **12 14 18.1 +0.8**
C36M Paulatuk 82.82 15 P **P** **12 14 24.2 +0.3**
C36M IAmb IAmb 12 14 33.5
comp=Z,6.2nm,1.1s
YKA Yellowknife Ar 90.63 16 *i* P **P** **12 15 02.7 +0.4**
YKA Yellowknife Ar 90.63 16 P **P** **12 15 02.6 +0.3**
comp=Z,0.2nm,0.7s,baz=331,slow=5.0,SNR=4.0
TKL Tuckaleechee C 121.97 5 PKP **PKiKP** **12 20 55.5 +0.4**
comp=Z,3.5nm,1.0s,baz=10,slow=11,SNR=2.4
TXAR Lajitas Array 123.15 26 PKP **PKiKP** **12 20 57.2 -0.6**
comp=Z,0.2nm,0.5s,baz=158,slow=1.0,SNR=2.9
TXAR Lajitas Array 123.15 26 **PKiKP** **12 20 57.2 -0.6**
SDV Santo Domingo 147.82 345 PKPbc **PKPbc** **12 21 45.0 -1.2**
comp=Z,1.7nm,0.5s,baz=0.0,slow=5.1,SNR=2.0

*IDC **28** 12:06:32.9±1.1,31°.57N×96°.71E,h0km,mb3.6/7, mb1 3.7/9,mb1mx3.5/48,mbtmp3.5/9,ML3.3/2,MS3.7/1, Ms1 3.7/1,ms1mx2.8/38,Error ellipse: s-maj=55.4km s-min=19.2km az=56.0*
*BJI **28** 12:06:35.6±0.0,31°.41N×96°.51E,h8km,ML3.4/5, Ms7 3.3/1*
ISC 28 12:06:34.4±1.0,31°.5N±0°.1×96°.6E±0°.1,h10km,n23, σ1ş77/24,mb3.7/6,Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
LSA	**Lhasa**	**5.05**	**251**	Pn	**Pn**	**12 07 53.5**	**+2.7**
LSA				Sn	**Sn**	**12 08 50.5**	**+1.0**
LSA				smax	smax		
	comp=N,41nm,1.1s						
LSA				smax	smax		
	comp=E,48nm,0.7s						
TAPN	**Taplejung**	**8.81**	**244**	*eP*	**Pn**	**12 08 42.2**	**0.0**
	12nm,0.3s						
ODAN	**Odare**	**9.31**	**242**	*eP*	**Pn**	**12 08 48.6**	**-0.3**
	54nm,0.7s						
JIRN	**Jiri**	**9.86**	**250**	*eP*	**Pn**	**12 08 55.6**	**-1.1**
	18nm,0.3s						
RAMN	**Ramite**	**9.87**	**245**	*eP*	**Pn**	**12 08 56.6**	**0.0**
	26nm,0.4s						
GUN	**Gumba**	**10.01**	**252**	*eP*	**Pn**	**12 08 57.0**	**-1.7**
	18nm,0.2s						
PKI	**Pulchoki**	**10.53**	**251**	*eP*	**Pn**	**12 09 04.1**	**-1.7**
	15nm,0.4s						
PKIN	**Phulchoki**	**10.54**	**251**	*eP*	**Pn**	**12 09 04.0**	**-1.8**
	12nm,0.3s						
KKN	**Kakani**	**10.54**	**252**	*eP*	**Pn**	**12 09 04.1**	**-1.8**
	15nm,0.3s						
DMN	**Daman**	**10.76**	**252**	*eP*	**Pn**	**12 09 07.2**	**-1.6**
	9.8nm,0.4s						
GKN	**Gorkha**	**10.99**	**255**	*eP*	**Pn**	**12 09 08.9**	**-3.0**
	10.0nm,0.2s						
DANN	**Dangsing**	**11.60**	**258**	*eP*	**Pn**	**12 09 16.6**	**-3.8**
	23nm,0.4s						
KOLN	**Koldanda**	**11.93**	**255**	*eP*	**Pn**	**12 09 21.7**	**-3.1**
	17nm,0.5s						
WMQ	**Urumqi**	**14.17**	**333**	*eP*	**Pn**	**12 09 57.3**	**+2.0**
SONM	**Songino Array**	**17.93**	**22**	P	**Pn**	**12 10 43.7**	**-0.2**
	0.1nm,0.3s,baz=210,slow=12,SNR=4.2						
MKAR	**Makanchi Array**	**18.84**	**328**	P	**P**	**12 10 53.9**	**-0.6**
	0.1nm,0.3s,baz=136,slow=12,SNR=1.0						
MKAR				LR	LR	12 19 46.0	
	comp=Z,218nm,20.1s,baz=147,slow=42						
AAK	**Ala-Archa**	**20.80**	**308**	P	**P**	**12 11 15.5**	**-0.6**
	0.9nm,0.6s,baz=79,slow=8.5,SNR=1.4						
KURBB	**Kurchatov Arra**	**23.36**	**330**	P	**P**	**12 11 42.6**	**-0.3**
	1.1nm,0.6s,baz=143,slow=10,SNR=5.4						
BVAR	**Borovoye Array**	**28.69**	**326**	P	**P**	**12 12 32.2**	**+0.7**
	0.5nm,0.5s,baz=113,slow=10.0,SNR=2.1						
ARCES	**ARCESS Array B**	**54.27**	**336**	P	**P**	**12 16 00.8**	**+0.6**
	3.5nm,0.9s,baz=91,slow=9.0,SNR=2.1						
WRA	**Warramunga Arr**	**62.65**	**140**	P	**P**	**12 16 59.5**	**+0.2**
	0.5nm,0.7s,baz=337,slow=6.4,SNR=2.4						
ASAR	**Alice Springs**	**65.44**	**142**	P	**P**	**12 17 18.0**	**+0.3**
	0.3nm,0.4s,baz=327,slow=6.6,SNR=7.1						
YKA	**Yellowknife Ar**	**83.02**	**14**	P	**P**	**12 18 58.0**	**-1.6**
	0.1nm,0.5s,baz=329,slow=5.4,SNR=2.1						

*INET **28** 12:07:16.8, 12°.04N×88°.31W,h7km,ML3.6*
SNET 28 12:07:23.0±0.6, 12°.20N×88°.31W,h18km±5km,ML2.9,Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
JUCU	**Jucuarįn**	**1.05**	**3**	*eP*	Pb	12 07 42.1	-0.5
JUCU				*eS*	Sn	12 07 56.8	-0.3
JUCU				IAML		12 08 12.0	
	comp=Z,225nm,0.4s						
LCND	**La Caada**	**1.18**	**20**	*eP*	Pn	12 07 43.3	-1.2
LCND				*eS*	Sn	12 08 00.1	0.0
LCND				IAML		12 08 07.3	
	comp=Z,295nm,0.3s						
TECA	**Tecapa**	**1.30**	**352**	*eP*	Pn	12 07 46.5	+0.1
TECA				*eS*	Sg	12 08 04.8	-0.5
FAGO	**Alcalda de S**	**1.50**	**8**	*eP*	Pn	12 07 49.0	-0.1

*PRU **28** 12:15:09.5±0.0, 43°.26N×20°.20E, h0km*
*PDG **28** 12:15:09.7±0.2, 43°.24N×19°.86E, h10km,MD3.1/5, ML3.1/13, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*BEO **28** 12:15:10.7±0.2, 43°.24N×19°.93E, h0km, ML3.1/17*
*RHSSO **28** 12:15:10.1±0.4, 43°.25N×19°.88E, h3km±2km, MD3.2/12*
*TIR **28** 12:15:11.3, 43°.12N×19°.73E, h29km, Md3.7/4*
ISC 28 12:15:09.4±1.0, 43°.23N±0°.01×19°.92E±0°.01, h4km±9km, n113, σ1ş35/170, 27C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
IVA	**Berane**	**0.36**	**183**	*eP*	**Pg**	**12 15 17.1**	**+0.8**
IVA				*eS*	**Sg**	**12 15 22.5**	**+1.5**
IVAS	**Ivanjica**	**0.38**	**26**	*eP*	**Pg**	**12 15 16.5**	**-0.3**
IVAS				*eS*	**Sg**	**12 15 21.5**	**-0.3**
PLE	**Pljevlja**	**0.40**	**284**	*eP*	**Pg**	**12 15 16.7**	**-0.4**
PLE				*eS*	**Sg**	**12 15 21.7**	**-0.7**
KOME	**Kolasin**	**0.48**	**218**	*eP*	**Pg**	**12 15 18.5**	**-0.1**
KOME				*eS*	**Sg**	**12 15 25.7**	**+0.8**
RUDO	**Rudo**	**0.56**	**314**	*eS*	**Sg**	**12 15 27.2**	**-0.1**
PVY	**Plav**	**0.64**	**177**	*eP*	**Pg**	**12 15 21.6**	**0.0**
PVY				*eS*	**Sb**	**12 15 32.1**	**-0.3**
BBLS	**Lazi?i**	**0.74**	**330**	*eP*	**Pg**	**12 15 22.7**	**-0.8**
BBLS				*eS*	**Sg**	**12 15 32.8**	**-0.3**
UPM	**Unac-Piva**	**0.74**	**268**	*eP*	**Pg**	**12 15 23.5**	**-0.1**
UPM				*eS*	**Sg**	**12 15 32.7**	**-0.6**
UPM	**Unac-Piva**	**0.74**	**268**⇑	*iPg*	**Pg**	**12 15 22.8**	**-0.8**
UPM				*eS*	**Sg**	**12 15 33.0**	**-0.3**
NKY	**Niksic**	**0.80**	**239**	*eP*	**Pg**	**12 15 23.7**	**-1.0**
NKY				*eS*	**Sg**	**12 15 35.3**	**+0.3**
NKME	**Niksic**	**0.85**	**237**	*eP*	**Pg**	**12 15 25.0**	**-0.6**
NKME				*eS*	**Sg**	**12 15 37.1**	**+0.5**
DIVS	**Divibare**	**0.87**	**3**	*eP*	**Pg**	**12 15 25.6**	**-0.4**
DIVS				*eS*	**Sg**	**12 15 37.7**	**+0.4**
DIVS	**Divibare**	**0.87**	**3**⇓	*iPg*	**Pg**	**12 15 25.4**	**-0.6**
DIVS				*eS*	**Sg**	**12 15 37.5**	**+0.2**
BCI	**Bajram Curri**	**0.87**	**173**	*i* PG	**Pg**	**12 15 26.3**	**+0.2**
BCI				*i* SG	**Sb**	**12 15 38.3**	**-0.8**
GRUS	**Gruza**	**0.88**	**41**	*eP*	**Pg**	**12 15 26.6**	**-0.5**
GRUS				*eS*	**Sg**	**12 15 37.9**	**+0.4**
SELS	**Selova**	**0.88**	**90**	*eP*	**Pg**	**12 15 26.4**	**+0.3**
SELS				*eS*	**Sb**	**12 15 38.2**	**-1.0**
PDG	**Podgorica**	**0.94**	**212**	*eP*	**Pg**	**12 15 27.3**	**0.0**
PDG				*eS*	**Sb**	**12 15 40.8**	**-0.2**
PDG	**Podgorica**	**0.94**	**212**⇑	P	**Pg**	**12 15 27.4**	**+0.1**
PDG	**Podgorica**	**0.94**	**212**⇑	S	**Sb**	**12 15 40.2**	**-0.8**
PDG	**Podgorica**	**0.94**	**212**⇓	*iPg*	**Pg**	**12 15 26.7**	**-0.6**
PDG				*eS*	**Sg**	**12 15 39.5**	**0.0**
TTG	**Podgorica**	**0.94**	**212**	*eP*	**Pg**	**12 15 26.5**	**-0.8**
TTG				*i* Sg	**Sb**	**12 15 40.7**	**-0.2**
CEME	**Cevo**	**1.01**	**227**	*eP*	**Pg**	**12 15 27.7**	**-0.9**
CEME				*eS*	**Sb**	**12 15 42.7**	**-0.3**
TRUS	**Trudelj**	**1.05**	**19**	*eP*	**Pg**	**12 15 28.0**	**-0.3**
TRUS				*eS*	**Sb**	**12 15 43.6**	**-0.7**
BRY	**Bratogost**	**1.06**	**252**⇑	*iPg*	**Pg**	**12 15 28.9**	**-0.9**
BRY				*eS*	**Sg**	**12 15 43.1**	**-0.5**
BRY	**Bratogost**	**1.06**	**252**	*eP*	**Pg**	**12 15 28.4**	**-1.4**
BRY				*eS*	**Sb**	**12 15 44.2**	**-0.6**
HAPS	**Han Pijesak,Bl**	**1.11**	**321**	*eP*	**Pg**	**12 15 30.6**	**0.0**
HAPS				*eS*	**Sg**	**12 15 45.3**	**+0.3**
HAPS	**Han Pijesak,Bl**	**1.11**	**321**	*eP*	**Pg**	**12 15 28.4**	**-2.2**
HAPS				*eS*	**Sg**	**12 15 43.7**	**-1.3**
DRME	**Dracevica, Mon**	**1.18**	**208**	*eP*	**Pg**	**12 15 31.4**	**-0.5**
DRME				*eS*	**Sg**	**12 15 47.2**	**+0.1**
DRME	**Dracevica, Mon**	**1.18**	**208**	*eP*	**Pg**	**12 15 31.7**	**-0.2**
DRME				*eS*	**Sn**	**12 15 49.2**	**+0.1**
PUK	**Puka**	**1.19**	**181**	*i* PN	**Pn**	**12 15 33.1**	**+0.2**
PUK				*i* SN	**Sn**	**12 15 48.5**	**-0.9**
BUM	**Brajici-Budva**	**1.20**	**219**	*eP*	**Pg**	**12 15 31.4**	**-0.9**
BUM				*eS*	**Sn**	**12 15 49.6**	**-0.1**
TREB	**Trebinje**	**1.26**	**247**	*eP*	**Pn**	**12 15 33.0**	**-0.8**
TREB				*eS*	**Sn**	**12 15 50.9**	**-0.3**
TREB	**Trebinje**	**1.26**	**247**⇑	*iPg*	**Pn**	**12 15 32.6**	**-1.2**
TREB				*eS*	**Sb**	**12 15 49.8**	**-0.5**
HCY	**Herceg Novi**	**1.31**	**234**	*eP*	**Pn**	**12 15 33.5**	**-0.9**
HCY	**Herceg Novi**	**1.31**	**234**	*eP*	**Pn**	**12 15 33.5**	**-0.9**
HCY				*eS*	**Sn**	**12 15 53.3**	**+0.9**
TEKS	**Tekeris**	**1.35**	**348**	*eP*	**Pg**	**12 15 35.6**	**+0.4**
TEKS				*eS*	**Sn**	**12 15 54.3**	**+0.9**
TEKS	**Tekeris**	**1.35**	**348**	*eP*	**Pn**	**12 15 34.2**	**-0.8**
TEKS				*eS*	**Sb**	**12 15 52.6**	**-0.2**
BOVS	**Bovan**	**1.36**	**72**	*eP*	**Pg**	**12 15 35.4**	**0.0**
BOVS				*eS*	**Sn**	**12 15 53.7**	**+0.1**
ULC	**Ulcinj**	**1.36**	**202**	*eP*	**Pn**	**12 15 34.9**	**-0.3**
ULC				*eS*	**Sn**	**12 15 55.8**	**+2.1**
SVIS	**Svilajnac**	**1.40**	**42**	*eP*	**Pn**	**12 15 35.2**	**-0.4**
SVIS				*eS*	**Sg**	**12 15 55.3**	**+1.1**
DBRK	**Dubrovnik**	**1.42**	**247**	*ePn*	**Pn**	**12 15 35.4**	**-0.6**
DBRK				Sg	**Sg**	**12 15 56.0**	**+1.0**
BARS	**Barje**	**1.45**	**106**	*eP*	**Pg**	**12 15 37.7**	**+0.6**
BARS	**Barje**	**1.45**	**106**	*eP*	**Pg**	**12 15 41.7**	**+4.6**
BARS				*eS*	**Sg**	**12 15 57.1**	**+1.2**
BARS				*eS*	Sb	12 16 05.9	+10
PHP	**Peshkopia**	**1.59**	**166**	*i* PN	**Pn**	**12 15 33.9**	**-4.4**
PHP				*i* SN	**Sg**	**12 16 00.6**	**+0.1**
BEO	**Beograd**	**1.63**	**14**	*eP*	**Pb**	**12 15 40.0**	**+0.1**
BEO				*eS*	**Sb**	**12 16 00.7**	**-0.1**
STON	**Ston**	**1.67**	**258**	*i* Pn	**Pn**	**12 15 39.6**	**+0.3**
STON				Sn	**Sg**	**12 16 03.5**	**+0.6**
STON	**Ston**	**1.67**	**258**	*eP*	**Pg**	**12 15 42.1**	**+0.8**
STON				*eS*	**Sg**	**12 16 03.7**	**+0.8**
STON	**Ston**	**1.67**	**258**	*ePn*	**Pn**	**12 15 39.2**	**-0.1**
STON				*eSn*	**Sb**	**12 16 01.6**	**-0.3**
KUBS	**Kucevo**	**1.73**	**46**	*eP*	**Pg**	**12 15 41.7**	**-0.1**
KUBS				*eS*	**Sg**	**12 16 05.6**	**+0.6**
TIR	**Tirane**	**1.88**	**181**	*eP*	**Pg**	**12 15 44.2**	**-0.1**
TIR				*eS*	**Sg**	**12 16 12.0**	**+2.2**
TIR	**Tirane**	**1.88**	**181**	*i* PN	**Pb**	**12 15 43.8**	**-0.5**
TIR				*i* SN	**Sb**	**12 16 07.5**	**-0.6**
TIR	**Tirane**	**1.88**	**181**⇑	P	**Pn**	**12 15 39.8**	**-2.5**
TIR	**Tirane**	**1.88**	**181**⇓	S	**Sg**	**12 16 13.8**	**+4.0**
FRGS	**Fruska Gora**	**1.93**	**358**	*eP*	**Pg**	**12 15 45.3**	**+0.2**
FRGS				*eS*	**Sg**	**12 16 11.9**	**+0.6**
FRGS	**Fruska Gora**	**1.93**	**358**	*eSn*	**Sn**	**12 16 07.9**	**+0.2**
ZAPS	**Zavoj**	**1.98**	**88**	*eP*	**Pb**	**12 15 45.3**	**-0.7**
ZAPS				*eS*	**Sg**	**12 16 14.3**	**+1.3**
DOB	**Doboj**	**2.00**	**319**	*ePn*	**Pn**	**12 15 44.2**	**+0.4**
MDVR	**Moldovita**	**2.02**	**39**	⇓P	**Pg**	**12 15 48.1**	**+0.1**
BOSS	**Bosilegrad**	**2.02**	**110**	*eP*	**Pb**	**12 15 45.3**	**-1.3**
BOSS				*eS*	**Sg**	**12 16 13.7**	**-0.5**
BLKB	**Belogradchik**	**2.04**	**78**⇑	S	**Sg**	**12 16 15.4**	**+0.4**
OHR	**Ohrid**	**2.22**	**163**	*i* Pn	**Pb**	**12 15 49.6**	**-0.5**
STIP	**Stip**	**2.27**	**132**	*i* Pn	**Pb**	**12 15 49.5**	**-1.5**
BANR	**Banloc**	**2.32**	**22**	⇑P	**Pb**	**12 15 50.1**	**-1.5**
MGRS	**Mrkonjic Grad**	**2.37**	**301**	*ePn*	**Pn**	**12 15 50.0**	**+1.0**
MGRS				*eSn*	**Sn**	**12 16 18.6**	**0.0**
PUNG	**Punghina**	**2.42**	**63**	⇑P	**Pb**	**12 15 51.4**	**-2.0**
PUNG	**Punghina**	**2.42**	**63**	⇑S	**Sg**	**12 16 28.6**	**+1.5**
HERR	**Herculane**	**2.44**	**47**	⇓P	**Pn**	**12 15 50.4**	**+0.4**
BLY	**Banja Luka**	**2.49**	**308**	⇑P	**Pb**	**12 15 55.6**	**+0.9**
BLY	**Banja Luka**	**2.49**	**308**	⇓S	**Sg**	**12 16 35.4**	**+6.1**
BLY	**Banja Luka**	**2.49**	**308**⇓	*i*Pn	**Pn**	**12 15 51.0**	**+0.3**
BLY				*eSn*	**Sn**	**12 16 21.9**	**+0.4**
VTS	**Vitosha**	**2.51**	**103**	⇑P	**Pn**	**12 15 51.0**	**0.0**
VTS	**Vitosha**	**2.51**	**103**	⇓S	**Sg**	**12 16 28.0**	**-2.0**
VTS	**Vitosha**	**2.51**	**103**	*i* P	**Pn**	**12 15 52.0**	**+0.9**
VTS				*eS*	**Sb**	**12 16 24.4**	**-2.0**
VTS				*eS*	**Sg**	**12 16 36.9**	**+6.9**
KIJV	**Kijevo**	**2.67**	**288**	*ePn*	**Pn**	**12 15 54.2**	**+1.0**
BZS	**Buzias**	**2.68**	**26**	⇑P	**Pn**	**12 15 53.2**	**0.0**
BZS	**Buzias**	**2.68**	**26**	⇑S	**Sg**	**12 16 35.2**	**0.0**
KKB	**Krupnik**	**2.71**	**119**	*eP*	Pn	12 15 44.2	-9.4
VAY	**Valandovo**	**2.74**	**133**	*i* Pn	**Pg**	**12 16 02.0**	**+0.2**
SRE	**Strehaia**	**2.77**	**58**	⇑P	**Pg**	**12 16 02.1**	**-0.3**
SRE	**Strehaia**	**2.77**	**58**	⇑S	**Sg**	**12 16 39.3**	**+0.9**
GZR	**

CONA	**Conrad Observa**	**5.49**	**330**	*i* Pn		**Pn**	**12 16 33.3**	**+1.3**
	0.7nm,0.2s							
CONA				*e*Sn		**Sn**	**12 17 36.9**	**+1.3**
	1.8nm,0.3s							
WTTA	**Wattenberg**	**7.10**	**307**	*e*Pn		**Pn**	**12 16 54.9**	**+0.7**
	1.4nm,0.2s							
WTTA				*e*Sn		**Sn**	**12 18 17.6**	**+2.2**
	8.5nm,0.7s							
KHC	**Kasperske Hory**	**7.36**	**325**	*e*PN		**Pn**	**12 17 00.0**	**+2.4**

*ATH **28** 12:21:14.9,38°.23N×20°.44E,h20km±2km,ML3.4/3,Error ellipse: s-maj=2.8km s-min=1.0km az=88.0*
*THE **28** 12:21:15.5,38°.23N×20°.42E,h11km,ML3.1/8,Error ellipse: s-maj=0.6km s-min=0.2km az=245.0*
ISC 28 12:21:15.2±1.3,38°.23N±0°.03×20°.42E±0°.07,h16km±5km, n34,σ0°29/53,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARG2	**Argostoli**	**0.07**	**133**	P		**Pg**	**12 21 18.3**	**+0.1**
ARG2				S		**Sg**	**12 21 19.8**	**-0.4**
KEF2	**Argostoli. Kep**	**0.08**	**141**	P		**Pg**	**12 21 19.0**	**+0.7**
VLS	**Valsamata**	**0.14**	**110**	P		**Pg**	**12 21 18.7**	**-0.3**
VLS				S		**Sg**	**12 21 21.3**	**-0.3**
	23μm,0.1s							
VLS	**Valsamata**	**0.14**	**110**	P		**Pg**	**12 21 18.8**	**-0.3**
VLS				S		**Sg**	**12 21 21.3**	**-0.3**
VLS				AML	AML		12 21 22.3	
	comp=E,65677μm,0.1s							
VLS				AML	AML		12 21 22.5	
	comp=N,34883μm,0.1s							
FSK	**Fiskardo**	**0.26**	**25**	P		**Pg**	**12 21 20.8**	**0.0**
FSK				S		**Sg**	**12 21 24.6**	**0.0**
	comp=N,11μm,0.2s							
FSK	**Fiskardo**	**0.26**	**25**	P		**Pg**	**12 21 20.8**	**0.0**
FSK				S		**Sg**	**12 21 24.6**	**0.0**
KFL	**Anninata**	**0.31**	**112**	P		**Pg**	**12 21 21.5**	**-0.2**
KFL				S		**Sg**	**12 21 26.6**	**+0.5**
	comp=N,8μm,0.2s							
KFL	**Anninata**	**0.31**	**112**	P		**Pg**	**12 21 21.5**	**-0.2**
KFL				S		**Sg**	**12 21 26.2**	**0.0**
KFL				AML	AML		12 21 27.2	
	comp=E,18055μm,0.3s							
KFL				AML	AML		12 21 27.3	
	comp=N,13039μm,0.2s							
VLMS	**Volimes, Zakyn**	**0.40**	**152**	P		**Pg**	**12 21 22.8**	**-0.4**
VLMS				S		**Sg**	**12 21 28.7**	**0.0**
VLMS				AML	AML		12 21 30.4	
	comp=E,13605μm,0.2s							
VLMS				AML	AML		12 21 33.7	
	comp=N,11671μm,0.3s							
EVGI	**Lefkada island**	**0.43**	**25**	P		**Pg**	**12 21 23.8**	**-0.1**
EVGI				S		**Sg**	**12 21 30.1**	**+0.2**
EVGI	**Lefkada island**	**0.43**	**25**	P		**Pg**	**12 21 23.8**	**-0.1**
EVGI				S		**Sg**	**12 21 30.0**	**+0.1**
MGNA	**Meganis**	**0.52**	**34**	P		**Pg**	**12 21 25.1**	**-0.4**
MGNA				S		**Sg**	**12 21 32.4**	**0.0**
LKD2	**Lefkada island**	**0.59**	**18**	P		**Pg**	**12 21 26.8**	**-0.1**
LKD2	**Lefkada island**	**0.59**	**18**	P		**Pg**	**12 21 26.5**	**-0.4**
LKD2				S		**Sb**	**12 21 35.0**	**-0.3**
TSLK	**Tsoukalades, L**	**0.62**	**17**	P		**Pg**	**12 21 27.2**	**-0.3**
TSLK				S		**Sb**	**12 21 36.5**	**+0.2**
	comp=N,925nm,0.2s							
TSLK	**Tsoukalades, L**	**0.62**	**17**	P		**Pg**	**12 21 27.1**	**-0.3**
TSLK				S		**Sg**	**12 21 35.8**	**0.0**
PDO	**Prodromos**	**0.70**	**58**	P		**Pg**	**12 21 28.7**	**-0.2**
PDO				S		**Sb**	**12 21 39.3**	**+0.8**
	comp=N,1μm,0.4s							
PDO	**Prodromos**	**0.70**	**58**	P		**Pg**	**12 21 28.7**	**-0.2**
RLS	**Riolos of Patr**	**0.84**	**101**	P		**Pb**	**12 21 31.3**	**-0.1**
RLS	**Riolos of Patr**	**0.84**	**101**	P		**Pb**	**12 21 30.9**	**-0.4**
PVO	**Paravola**	**0.95**	**65**	P		**Pg**	**12 21 33.4**	**-0.2**
PVO				S		**Sn**	**12 21 47.5**	**+0.4**
	comp=N,678nm,0.4s							
PVO	**Paravola**	**0.95**	**65**	P		**Pg**	**12 21 33.4**	**-0.2**
DRO	**Drossia**	**1.05**	**105**	P		**Pn**	**12 21 35.3**	**0.0**
DRO				S		**Sn**	**12 21 50.4**	**+0.7**
	comp=N,585nm,0.4s							
DRO	**Drossia**	**1.05**	**105**	P		**Pb**	**12 21 35.0**	**0.0**
EFP	**Efpalio**	**1.18**	**80**	P		**Pn**	**12 21 37.0**	**-0.1**
EFP	**Efpalio**	**1.18**	**80**	P		**Pn**	**12 21 36.9**	**-0.1**
LAKA	**Lakka**	**1.22**	**89**	P		**Pn**	**12 21 37.7**	**0.0**
LAKA				S		**Sg**	**12 21 54.5**	**-0.3**
ANX	**Ano Chora**	**1.23**	**72**	P		**Pb**	**12 21 38.2**	**0.0**
EVR	**Evrytania**	**1.29**	**57**	P		**Pb**	**12 21 38.9**	**-0.2**
EVR				S		**Sg**	**12 21 56.8**	**0.0**
SERG	**Sergoula**	**1.30**	**81**	P		**Pb**	**12 21 39.1**	**-0.1**
TRIZ	**Trizonia**	**1.30**	**83**	P		**Pb**	**12 21 39.0**	**-0.3**
ALIK	**Aliki, Aigiali**	**1.33**	**88**	P		**Pb**	**12 21 39.5**	**-0.2**
KALE	**Kalithea**	**1.36**	**83**	P		**Pn**	**12 21 39.6**	**0.0**
KLV	**Kalavryta, Ach**	**1.37**	**97**	P		**Pb**	**12 21 40.2**	**-0.3**

*THE **28** 12:38:47.9,38°.17N×20°.32E,h9km±1km,ML2.4/5,Error ellipse: s-maj=1.9km s-min=0.3km az=81.0*
*ATH **28** 12:38:49.0,38°.20N×20°.42E,h9km±2km,ML2.6/9,Error ellipse: s-maj=2.6km s-min=0.9km az=28.0*
ISC 28 12:38:48.9±1.5,38°.20N±0°.03×20°.41E±0°.07,h11km±5km, n36,σ0°44/52,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARG2	**Argostoli**	**0.06**	**106**	P		**Pg**	**12 38 50.9**	**-0.2**
KEF1	**Kardakata, Kep**	**0.09**	**28**	P		**Pg**	**12 38 51.4**	**-0.1**
KEF1				S		**Sg**	**12 38 52.9**	**-0.5**
VLS	**Valsamata**	**0.14**	**97**	P		**Pg**	**12 38 52.0**	**-0.1**
VLS	**Valsamata**	**0.14**	**97**	P		**Pg**	**12 38 52.0**	**-0.1**
VLS				S		**Sg**	**12 38 54.5**	**0.0**
VLS				AML	AML		12 38 54.5	
	comp=E,6039μm,0.2s							
VLS				AML	AML		12 38 59.6	
	comp=N,7451μm,0.3s							
FSK	**Fiskardo**	**0.29**	**24**	P		**Pg**	**12 38 54.7**	**-0.1**
FSK				S		**Sg**	**12 38 59.4**	**+0.7**
	comp=N,1μm,0.2s							
FSK	**Fiskardo**	**0.29**	**24**	P		**Pg**	**12 38 54.7**	**-0.1**
FSK				S		**Sg**	**12 38 59.1**	**+0.4**
KFL	**Anninata**	**0.31**	**106**	P		**Pg**	**12 38 55.0**	**-0.1**
KFL				S		**Sb**	**12 39 00.8**	**-0.6**
KFL	**Anninata**	**0.31**	**106**	P		**Pg**	**12 38 55.0**	**-0.1**
KFL				S		**Sg**	**12 38 59.4**	**+0.2**
KFL				AML	AML		12 39 00.6	
	comp=E,5882μm,0.4s							
KFL				AML	AML		12 39 04.9	
	comp=N,4418μm,0.3s							
VLMS	**Volimes, Zakyn**	**0.37**	**148**	P		**Pg**	**12 38 56.5**	**+0.2**
VLMS				S		**Sg**	**12 39 01.8**	**+0.6**
VLMS				AML	AML		12 39 08.8	
	comp=N,3745μm,0.5s							
VLMS				AML	AML		12 39 11.3	
	comp=E,1961μm,0.3s							
EVGI	**Lefkada island**	**0.47**	**24**	P		**Pg**	**12 38 57.8**	**-0.2**
EVGI				S		**Sb**	**12 39 05.4**	**-0.6**
EVGI	**Lefkada island**	**0.47**	**24**	P		**Pg**	**12 38 57.9**	**-0.2**
EVGI				S		**Sg**	**12 39 04.6**	**+0.4**
MGNA	**Meganis**	**0.55**	**33**	P		**Pg**	**12 38 58.9**	**-0.7**
MGNA				AML	AML		12 39 08.1	
	comp=E,4678μm,0.2s							
MGNA				AML	AML		12 39 08.3	
	comp=N,3165μm,0.2s							
LKD2	**Lefkada island**	**0.62**	**18**	P		**Pg**	**12 39 00.5**	**-0.5**
LKD2				S		**Sb**	**12 39 10.4**	**-0.2**
	comp=N,280nm,0.3s							
LKD2	**Lefkada island**	**0.62**	**18**	P		**Pg**	**12 39 01.0**	**0.0**
LKD2				S		**Sg**	**12 39 09.8**	**+0.6**
TSLK	**Tsoukalades, L**	**0.66**	**17**	P		**Pg**	**12 39 01.1**	**-0.5**
TSLK				S		**Sb**	**12 39 11.5**	**0.0**
	comp=N,350nm,0.4s							
TSLK	**Tsoukalades, L**	**0.66**	**17**	P		**Pg**	**12 39 01.2**	**-0.4**
TSLK				S		**Sg**	**12 39 10.5**	**+0.3**
PDO	**Prodromos**	**0.73**	**56**	P		**Pg**	**12 39 02.8**	**-0.1**
RLS	**Riolos of Patr**	**0.84**	**99**	P		**Pg**	**12 39 04.8**	**-0.3**
RLS				S		**Sn**	**12 39 18.4**	**-0.6**
	comp=N,190nm,0.3s							
RLS	**Riolos of Patr**	**0.84**	**99**	P		**Pg**	**12 39 04.6**	**-0.5**
PVO	**Paravola**	**0.97**	**64**	P		**Pg**	**12 39 07.3**	**-0.2**
PVO				S		**Sn**	**12 39 22.6**	**+0.4**
	comp=N,510nm,0.3s							
PVO	**Paravola**	**0.97**	**64**	P		**Pg**	**12 39 07.5**	**-0.1**
PVO				AML	AML		12 39 24.8	
	comp=N,878μm,0.3s							
PVO				AML	AML		12 39 25.2	
	comp=E,1102μm,0.3s							
DRO	**Drossia**	**1.05**	**103**	P		**Pg**	**12 39 08.4**	**-0.7**
DRO	**Drossia**	**1.05**	**103**	P		**Pg**	**12 39 08.5**	**-0.6**
DRO				AML	AML		12 39 33.4	
	comp=N,707μm,0.3s							
DRO				AML	AML		12 39 36.9	
	comp=E,772μm,0.7s							
EFP	**Efpalio**	**1.20**	**78**	P		**Pn**	**12 39 11.3**	**-0.3**
EFP				AML	AML		12 39 36.0	
	comp=N,552μm,0.5s							
EFP				AML	AML		12 39 36.9	
	comp=E,294μm,0.3s							
LAKA	**Lakka**	**1.23**	**87**	P		**Pn**	**12 39 11.3**	**-0.8**
LAKA	**Lakka**	**1.23**	**87**	P		**Pn**	**12 39 11.7**	**-0.5**
LAKA				S		**Sb**	**12 39 28.7**	**+0.5**
ANX	**Ano Chora**	**1.25**	**71**	P		**Pg**	**12 39 13.0**	**+0.1**
ANX				AML	AML		12 39 36.3	
	comp=N,537μm,0.5s							
ANX				AML	AML		12 39 37.1	
	comp=E,316μm,0.3s							
EVR	**Evrytania**	**1.31**	**56**	P		**Pg**	**12 39 14.0**	**0.0**
SERG	**Sergoula**	**1.31**	**80**	P		**Pn**	**12 39 13.4**	**+0.3**
SERG				AML	AML		12 39 38.9	
	comp=N,373μm,0.5s							
SERG				AML	AML		12 39 45.5	
	comp=E,320μm,0.4s							
TRIZ	**Trizonia**	**1.32**	**82**	P		**Pn**	**12 39 12.4**	**-0.8**
TRIZ	**Trizonia**	**1.32**	**82**	P		**Pn**	**12 39 12.8**	**-0.4**
KALE	**Kalithea**	**1.37**	**81**	P		**Pb**	**12 39 14.8**	**+0.2**
KLV	**Kalavryta, Ach**	**1.38**	**96**	P		**Pn**	**12 39 14.2**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.57**	**58**	P		**Pg**	**12 39 19.3**	**+0.2**
AGG	**Agios Georgios**	**1.71**	**61**	P		**Pg**	**12 39 21.5**	**-0.3**
AXAR	**Agios Charalam**	**1.85**	**71**	P		**Pb**	**12 39 23.7**	**+1.0**

IDC 28 12:38:48.4±3.6,26°.80N×44°.70W,h0km,mb3.6/5, mb1 3.9/5,mb1mx3.6/36,mbtmp3.6/5,MS3.6/3,Ms1 3.6/3, ms1mx3.1/26,Error ellipse: s-maj=113.0km s-min=31.5km az=1.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DBIC	**Dimbokro**	**42.83**	**111**	LR		LR	13 01 16.5	
	comp=Z,75nm,18.5s,baz=334,slow=32							
H10N2	**ASCENSION HYDR**	**45.20**	**135**	T		T	13 34 37.5	
	baz=320,slow=75,SNR=146							
H10N3	**ASCENSION HYDR**	**45.20**	**135**	T		T	13 34 37.5	
	baz=320,slow=75,SNR=170							
H10N1	**ASCENSION HYDR**	**45.22**	**135**	T		T	13 34 38.9	
	baz=320,slow=75,SNR=223							
H10S3	**ASCENSION HYDR**	**45.96**	**137**	T		T	13 35 34.7	
	baz=319,slow=74,SNR=96							
H10S2	**ASCENSION HYDR**	**45.98**	**137**	T		T	13 35 36.4	
	baz=261,slow=74,SNR=116							
TXAR	**Lajitas Array**	**51.62**	**287**	P		P	12 47 56.5	-0.5
	0.4nm,0.8s,baz=77,slow=8.4,SNR=3.6							
PDAR	**Pinedale Array**	**54.33**	**305**	P		P	12 48 17.3	+0.3
	0.8nm,0.8s,baz=88,slow=8.0,SNR=8.4							
PDAR				LR		LR	13 11 35.2	
	comp=Z,36nm,18.2s,baz=340,slow=36							
YKA	**Yellowknife Ar**	**57.33**	**329**	P		P	12 48 37.6	-0.3
	0.4nm,0.8s,baz=94,slow=7.5,SNR=7.2							
NVAR	**Mina Az Bea**	**61.59**	**301**	LR		LR	13 14 24.5	
	comp=Z,69nm,19.9s,baz=335,slow=35							
BRTR	**Keskin Array B**	**64.86**	**57**	P		P	12 49 29.6	0.0
	0.6nm,1.0s,baz=286,slow=5.8,SNR=2.8							
ILAR	**Eielson Array**	**71.08**	**334**	P		P	12 50 08.2	+0.1
	0.6nm,0.9s,baz=69,slow=4.9,SNR=5.0							

IDC 28 12:57:53.7±4.6,6°.28S×151°.92E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/35,mbtmp3.4/3,Error ellipse: s-maj=157.6km s-min=38.6km az=111.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.82**	**230**	P		P	13 02 47.6	-0.2
	1.1nm,1.0s,baz=59,slow=9.4,SNR=1.4							
ASAR	**Alice Springs**	**24.48**	**223**	P		P	13 03 15.1	+0.3
	0.5nm,0.9s,baz=56,slow=9.4,SNR=2.3							
MKAR	**Makanchi Array**	**80.86**	**319**	P		P	13 10 09.3	-0.4
	0.6nm,0.6s,baz=104,slow=7,SNR=6.0							
TORD	**Torodi Ar. Bea**	**149.89**	**285**	PKPbc		PKPbc	13 17 47.1	+0.1
	0.3nm,0.6s,baz=57,slow=1.8,SNR=1.5							

*IDC **28** 13:01:02.3±0.8,0°.18N×125°.84E,h0km,mb4.0/9, mb1 4.0/10,mb1mx3.8/41,mbtmp4.0/10,ML3.5/1,Error ellipse: s-maj=40.4km s-min=15.3km az=71.0*
*DJA **28** 13:01:07.4±1.2,0°.N±2°×12°.6E±°,h30km±11km,M4.1/8, mb4.4/2,MLv4.0/8*
*NEIC **28** 13:01:09.9±2.0,0°.20N±0°.03×126°.11E±0°.07,h64km±9km, mb4.3/17,Error ellipse: s-maj=10.5km s-min=3.8km az=108.0*
ISC 28 13:01:08.3±0.5,0°.25N±0°.05×126°.07E±0°.04,h44km,n47, σ1ş22/51,mb4.2/15,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TNTI	**Ternate**	**1.40**	**68**	P		**Pn**	**13 01 32.1**	**+0.8**
TNTI				S		**Sn**	**13 01 49.8**	**+1.2**
TNTI	**Ternate**	**1.40**	**68**			**Pn**	**13 01 30.4**	**-1.0**
LBMI	**Labuha**	**1.68**	**122**	P		**Pn**	**13 01 35.3**	**+0.1**
KMSI	**Cibinong**	**2.12**	**279**	P		**Pn**	**13 01 40.7**	**-0.5**
KMSI				S		**Sn**	**13 02 06.3**	**0.0**
SANI	**Sanana**	**2.28**	**182**	P		**Pn**	**13 01 43.1**	**-0.4**
SANI				S		**Sn**	**13 02 11.4**	**+1.0**
LUWI	**Luwuk**	**3.54**	**249**	P		**Pn**	**13 02 01.5**	**+0.7**
LUWI	**Luwuk**	**3.54**	**249**			**Pn**	**13 02 02.5**	**+1.7**
MRSI	**Marisa**	**4.14**	**273**	P		**Pn**	**13 02 08.3**	**-0.7**
APSI	**Ampana**	**4.57**	**255**	P		**Pn**	**13 02 13.9**	**-1.0**
SIJI	**Sorong**	**5.31**	**102**	Pn		**Pn**	**13 02 27.4**	**+2.2**
	1.5nm,0.3s,baz=205,slow=22,SNR=6.2							
FAKI	**Fak Fak**	**6.93**	**117**	Pn		**Pn**	**13 02 48.4**	**+1.0**
KAPI	**Kappang**	**8.20**	**230**	Pn		**Pn**	**13 03 07.0**	**+2.3**
MTN	**Manton Dam**	**13.94**	**159**	Pn		**Pn**	**13 04 23.6**	**+0.2**
SBUM	**Sibu**	**14.02**	**279**	Pn		**Pn**	**13 04 27.3**	**+2.8**
JAGI	**Jajag, Banyuwa**	**14.70**	**234**	P		**Pn**	**13 04 31.0**	**-2.6**
	41nm,1.4s							
JAGI	**Jajag, Banyuwa**	**14.70**	**234**	Pn		**Pn**	**13 04 35.8**	**+2.2**
KNRA	**Kununurra**	**16.04**	**171**	Pn		**Pn**	**13 04 51.5**	**+0.5**
KNRA				IAmb	IAmb		13 05 43.9	
	comp=Z,56nm,1.6s							
FITZ	**Fitzroy Crossi**	**18.23**	**181**	P		**Pn**	**13 05 18.5**	**+0.2**
WB0	**Warramunga Arr**	**21.50**	**158**	P		**Pn**	**13 05 52.1**	**-1.4**
WB0				IAmb	IAmb		13 05 58.4	
	comp=Z,12nm,0.8s							
WRAB	**Tennant Creek**	**21.63**	**158**	P		**Pn**	**13 05 54.2**	**-0.8**
WRAB				IAmb	IAmb		13 05 59.1	
	comp=Z,13nm,1.1s							
WRA	**Warramunga Arr**	**21.64**	**158**	P		**P**	**13 05 54.4**	**-0.7**
	comp=Z,5.3nm,0.8s,baz=340,slow=11,SNR=26							
WRA	**Warramunga Arr**	**21.64**	**158**	P		**P**	**13 05 54.8**	**-0.2**
WB2	**Warramunga Arr**	**21.64**	**158**	P		**P**	**13 05 54.4**	**-0.7**
WR0	**Warramunga Arr**	**21.73**	**158**	P		**P**	**13 05 55.1**	**-0.9**
WR0				IAmb	IAmb		13 06 07.6	
	comp=Z,17nm,1.4s							
COEN	**Coen**	**22.05**	**130**	P		**P**	**13 05 58.5**	**-1.0**
TWG	**Pinlang**	**22.96**	**348**	P		**P**	**13 06 08.9**	**-0.1**
AS31	**Alice Springs**	**24.96**	**163**	P		**P**	**13 06 27.5**	**-0.3**
ASAR	**Alice Springs**	**24.96**	**163**	P		**P**	**13 06 27.9**	**0.0**
	comp=Z,1.0nm,0.4s,baz=342,slow=11,SNR=38							
ASAR				PcP		**PcP**	**13 10 02.3**	**-0.3**
	comp=Z,1.0nm,1.1s,baz=349,slow=1.7,SNR=4.4							
ASAR	**Alice Springs**	**24.96**	**163**	P		**P**	**13 06 28.5**	**+0.6**
NWAO	**Narrogin (SRO)**	**34.03**	**193**	P		**P**	**13 07 44.6**	**-3.6**
STKA	**Stephens Creek**	**35.17**	**157**	P		**P**	**13 07 58.3**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=331,slow=11,SNR=3.3							
STKA	**Stephens Creek**	**35.17**	**157**	P		**P**	**13 07 58.1**	**0.0**
STKA				IAmb	IAmb		13 08 60.0	
	comp=Z,7.2nm,1.9s							
KSRS	**Korea Array**	**37.06**	**2**	P		**P**	**13 08 14.2**	**0.0**
	comp=Z,0.5nm,0.6s,baz=182,slow=9.1,SNR=3.2							
USRK	**Ussuriysk Ar.**	**44.08**	**6**	P		**P**	**13 09 13.5**	**+1.5**
	comp=Z,1.6nm,0.6s,baz=195,slow=6.3,SNR=4.9							
SONM	**Songino Array**	**50.39**	**343**	P		**P**	**13 10 02.5**	**+1.1**
	comp=Z,0.5nm,0.4s,baz=166,slow=7.4,SNR=4.7							
PETK	**Petropavlovsk-**	**58.88**	**22**	P		**P**	**13 11 02.2**	**-0.4**
	comp=Z,4.2nm,1.0s,baz=202,slow=6.0,SNR=4.3							
MK31	**Makanchi Array**	**60.06**	**327**	P		**P**	**13 11 09.8**	**-1.1**
MK31				IAmb	IAmb		13 11 13.2	
	comp=Z,1.8nm,0.9s							
MKAR	**Makanchi Array**	**60.06**	**327**	P		**P**	**13 11 10.1**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=128,slow=7.9,SNR=12							
MKAR	**Makanchi Array**	**60.06**	**327**	P		**P**	**13 11 09.8**	**-1.1**
ZALV	**Zalesovo Beam**	**63.40**	**334**	P		**P**	**13 11 34.2**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=126,slow=5.1,SNR=5.1							
ZALV	**Zalesovo Beam**	**63.40**	**334**	P		**P**	**13 11 33.6**	**+0.5**
KURK	**Kurchatov**	**64.33**	**329**	P		**P**	**13 11 38.7**	**-0.7**
KURK				IAmb	IAmb		13 11 42.2	
	comp=Z,5.1nm,1.0s							
KK31	**Karatay Array**	**65.35**	**318**	P		**P**	**13 11 45.5**	**-0.7**
KKAR	**Karatay Array**	**65.35**	**318**	P		**P**	**13 11 45.9**	**-0.3**
CASY	**Casey**	**67.30**	**187**	P		**P**	**13 11 59.5**	**+1.2**
BRVK	**Borovoye**	**69.95**	**328**	P		**P**	**13 12 14.8**	**-0.2**
BRVK				IAmb	IAmb		13 14 39.4	
	comp=Z,12nm,1.9s							
ABKAR	**Akbulak array**	**74.43**	**322**	P		**P**	**13 12 40.6**	**-1.2**

*TIR **28** 13:11:56.1,41°.04N×21°.18E,h8km,Md2.9/5*
*SKO **28** 13:11:57.9,41°.03N×21°.15E,h6km*
*THE **28** 13:11:57.9,40°.98N×21°.10E,h4km±11km,ML2.8/3,Error ellipse: s-maj=11.2km s-min=0.4km az=104.0*
*ATH **28** 13:11:57.6,40°.98N×21°.10E,h19km±1km,ML2.7/6,Error ellipse: s-maj=3.3km s-min=1.6km az=135.0*
*PDG **28** 13:11:58.3±0.2,40°.86N×21°.14E,h7km,ML2.8/12,Error ellipse: s-maj=0.8km s-min=0.5km az=90.0*
ISC 28 13:11:58.1±0.9,40°.97N±0°.02×21°.09E±0°.02,h10km±8km, n49,σ1ş42/82,6C-8D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OHR	**Ohrid**	**0.26**	**303**	*i* Pg		**Pg**	**13 12 03.5**	**0.0**
OHR				*i* Sg		**Sg**	**13 12 07.5**	**+0.5**
OHR				*e*Lg		Lg	13 12 08.3	
	comp=E,2μm,0.4s							
OHR				*e*Lg		Lg	13 12 08.8	
	comp=N,658nm,0.3s							
FNA	**Florina**	**0.29**	**131**	P		**Pg**	**13 12 03.8**	**-0.1**
FNA				S		**Sg**	**13 12 07.7**	**0.0**
	comp=N,5μm,0.2s							
FNA	**Florina**	**0.29**	**131**	*i* PG		**Pg**	**13 12 03.8**	**-0.1**
FNA				*i* SG		**Sg**	**13 12 07.8**	**0.0**
FNA	**Florina**	**0.29**	**131**	P		**Pg**	**13 12 03.8**	**-0.1**
FNA				S		**Sg**	**13 12 07.9**	**+0.1**
FNA				AML	AML		13 12 08.5	
	comp=N,9816μm,0.2s							
FNA				AML	AML		13 12 10.4	
	comp=E,11826μm,0.4s							
NEST	**Nestorio**	**0.56**	**183**	P		**Pg**	**13 12 08.9**	**-0.1**
NEST				S		**Sg**	**13 12 16.8**	**+0.5**
	comp=E,1μm,0.3s							
NEST	**Nestorio**	**0.56**	**183**	P		**Pg**	**13 12 08.8**	**-0.2**
NEST				S		**Sb**	**13 12 17.5**	**-0.6**
NEST				AML	AML		13 12 18.2	
	comp=N,2550μm,0.3s							
NEST				AML	AML		13 12 19.4	
	comp=E,3115μm,0.3s							
KZN	**Kozani**	**0.84**	**142**	P		**Pg**	**13 12 13.8**	**-0.6**
KZN				S		**Sb**	**13 12 26.1**	**-0.3**
	comp=E,380nm,0.5s							
KZN	**Kozani**	**0.84**	**142**	P		**Pg**	**13 12 14.1**	**-0.3**
KZN				S		**Sb**	**13 12 26.4**	**0.0**
KZN				AML	AML		13 12 30.0	
	comp=E,841μm,0.6s							
KZN				AML	AML		13 12 31.1	
	comp=N,681μm,0.3s							
PHP	**Peshkopia**	**0.86**	**326**	P		**Pg**	**13 12 13.6**	**-1.2**
PHP				S		**Sb**	**13 12 26.7**	**-0.3**
PHP	**Peshkopia**	**0.86**	**326**	*i* PG		**Pg**	**13 12 13.4**	**-1.4**
PHP				*i* SG		**Sb**	**13 12 26.7**	**-0.3**
GRG	**Griva**	**0.99**	**90**	P		**Pg**	**13 12 16.4**	**-0.8**
GRG	**Griva**	**0.99**	**90**	P		**Pg**	**13 12 16.0**	**-1.2**
GRG				S		**Sg**	**13 12 30.2**	**0.0**
GRG				AML	AML		13 12 37.7	
	comp=E,658μm,0.5s							
GRG				AML	AML		13 12 37.9	
	comp=N,500μm,0.6s							
TIR	**Tirane**	**1.00**	**293**	*i* PN		**Pg**	**13 12 15.7**	**-1.6**
TIR				*i* SN		**Sn**	**13 12 32.9**	**+0.5**
TIR	**Tirane**	**1.00**	**293**	⇑S		**Sn**	**13 12 34.2**	**+1.7**
SKO	**Skopje**	**1.03**	**15**	*e*Pg		**Pg**	**13 12 16.2**	**-1.8**
SKO				*i* Sg		**Sb**	**13 12 31.6**	**-0.2**
KPRO	**Kipourio**	**1.04**	**168**	P		**Pg**	**13 12 17.2**	**-0.9**
KPRO	**Kipourio**	**1.04**	**168**	P		**Pg**	**13 12 17.1**	**-1.0**
KPRO				S		**Sb**	**13 12 32.6**	**+0.7**
KPRO				AML	AML		13 12 38.0	
	comp=E,720μm,0.3s							
KPRO				AML	AML		13 12 40.1	
	comp=N,983μm,0.5s							
STIP	**Stip**	**1.10**	**48**	*i* Pg		**Pn**	**

WHZ				S	Sn	13 43 38.7	-0.1	
PYZ	**Puysegur Point**	**1.15**	**187**	P	Pb	13 43 22.9	-0.3	
PYZ				S	Sb	13 43 36.7	-1.3	
WKZ	**Wanaka**	**1.53**	**83**	P	Pb	13 43 29.8	+0.2	
WKZ				S	Sg	13 43 50.1	-0.4	
JCZ	**Jackson Bay**	**1.66**	**56**	P	Pn	13 43 28.7	-1.6	
EAZ	**Earnscleugh**	**1.73**	**98**	P	Pb	13 43 32.8	-0.2	
APZ	**The Paps**	**1.96**	**157**	P	Pb	13 43 35.8	-1.2	
TUZ	**Tuapeka**	**2.14**	**117**	P	Pn	13 43 38.3	+1.4	
TUZ				S	Sn	13 44 03.6	+0.2	
SYZ	**Scrubby Hill**	**2.18**	**135**	P	Pn	13 43 38.4	+0.9	
SYZ				S	Sn	13 44 04.9	+0.5	
LBZ	**Lake Benmore**	**2.44**	**76**	P	Pn	13 43 41.0	0.0	
FOZ	**Fox Glacier**	**2.58**	**56**	P	Pn	13 43 41.5	-1.5	
ODZ	**Otahua Downs**	**2.66**	**92**	P	Pn	13 43 44.4	+0.3	
HHSZ	**Highcliff Hill**	**2.75**	**109**	P	Pn	13 43 46.3	+1.0	
RPZ	**Rata Peaks**	**3.26**	**68**	P	Pn	13 43 51.4	-1.0	
WVZ	**Waitaha Valley**	**3.39**	**56**	P	Pn	13 43 51.8	-2.3	
INZ	**Inchbonnie**	**4.02**	**57**	P	Pn	13 44 00.5	-2.2	
OXZ	**Oxford**	**4.08**	**67**	P	Pn	13 44 03.7	+0.1	
MQZ	**McQueen's Vall**	**4.34**	**74**	P	Pn	13 44 07.6	+0.5	
LTZ	**Lake Taylor**	**4.49**	**62**	P	Pn	13 44 10.0	+0.8	
DSZ	**Denniston Nort**	**4.86**	**49**	P	Pn	13 44 11.8	-2.5	
GVZ	**Greta Valley S**	**4.89**	**67**	P	Pn	13 44 16.5	+1.8	
THZ	**Tophouse**	**5.46**	**55**	P	Pn	13 44 21.5	-1.2	
QRZ	**Quartz Range**	**5.90**	**47**	P	Pn	13 44 26.4	-2.2	

*IDC **28** 13:48:10.8±1.6, 16°.85S×179°.05W, h524km±22km, mb3.3/10, mb1 3.6/11, mb1mx3.3/43, mbtmp4.2/11, Error ellipse: s-maj=41.0km s-min=11.4km az=152.0*
*NEIC **28** 13:48:11.2±2.3, 18°.1S±0°.2×178°.4W±0°.1, h564km±9km, mb4.8/28, Error ellipse: s-maj=25.3km s-min=15.9km az=148.0*

ISC 28 13:48:12.3±0.6, 18°.0S±0°.1×178°.32W±0°.10, h579km, n61, σ1$31/61, mb4.7/18, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.47**	**274**	P	**P**	**13 49 34.1**	**+1.3**
AFI	**Afiamalu**	**7.50**	**58**	P	**P**	**13 50 05.0**	**-1.3**
	5.2nm,0.3s,baz=26,slow=3.7,SNR=9.1						
AFI				S	**S**	**13 51 35.8**	**-3.8**
	1.5nm,0.3s,baz=22,slow=19,SNR=3.5						
SANVU	**Saraoutou**	**14.10**	**278**	P	**P**	**13 51 10.7**	**-1.8**
DZM	**Mont Dzumac**	**14.88**	**252**	P	**P**	**13 51 17.6**	**-2.4**
NOUC	**Port Laguerre**	**15.01**	**252**	P	**P**	**13 51 19.6**	**-1.6**
OUZ	**Omahuta**	**18.58**	**201**	P	**P**	**13 51 56.5**	**+2.6**
URZ	**Urewera**	**20.56**	**190**	P	**P**	**13 52 08.8**	**+1.0**
BKZ	**Black Stump Fm**	**21.55**	**191**	P	**P**	**13 52 18.5**	**-2.3**
BKZ				IAmb	IAmb	13 52 22.1	
	comp=Z,52nm,1.6s						
MSWZ	**Moikau Station**	**23.96**	**192**	P	**P**	**13 52 41.6**	**-0.6**
SNZO	**South Karori**	**23.98**	**193**	P	**P**	**13 52 41.3**	**-1.0**
QRZ	**Quartz Range**	**24.06**	**197**	P	**P**	**13 52 43.9**	**+0.9**
QRZ	**Quartz Range**	**24.06**	**197**	P	**P**	**13 52 43.7**	**+0.6**
PLWZ	**Palliser**	**24.11**	**192**	P	**P**	**13 52 43.1**	**-0.5**
NNZ	**Nelson**	**24.20**	**195**	P	**P**	**13 52 44.7**	**+0.5**
NNZ	**Nelson**	**24.20**	**195**	P	**P**	**13 52 43.0**	**-1.3**
CMWZ	**Cape Campbell**	**24.50**	**194**	P	**P**	**13 52 46.2**	**-0.7**
THZ	**Tophouse**	**24.83**	**196**	P	**P**	**13 52 50.1**	**+0.1**
THZ	**Tophouse**	**24.83**	**196**	P	**P**	**13 52 49.1**	**-0.8**
THZ				IAmb	IAmb	13 53 11.0	
	comp=Z,39nm,1.5s						
DSZ	**Denniston Nort**	**25.11**	**198**	P	**P**	**13 52 52.8**	**+0.4**
KHZ	**Kahutara**	**25.29**	**194**	P	**P**	**13 52 53.6**	**-0.3**
KHZ	**Kahutara**	**25.29**	**194**	P	**P**	**13 52 52.6**	**-1.3**
GVZ	**Greta Valley S**	**25.93**	**195**	P	**P**	**13 52 58.8**	**-0.8**
LTZ	**Lake Taylor**	**25.95**	**196**	P	**P**	**13 52 59.0**	**-0.8**
LTZ	**Lake Taylor**	**25.95**	**196**	P	**P**	**13 52 58.0**	**-1.8**
INZ	**Inchbonnie**	**26.12**	**197**	P	**P**	**13 53 00.5**	**-0.7**
OXZ	**Oxford**	**26.52**	**196**	P	**P**	**13 53 04.3**	**-0.4**
OXZ	**Oxford**	**26.52**	**196**	P	**P**	**13 53 03.5**	**-1.2**
WVZ	**Waitaha Valley**	**26.65**	**198**	P	**P**	**13 53 05.7**	**-0.1**
MQZ	**McQueen's Vall**	**26.72**	**195**	P	**P**	**13 53 05.4**	**-1.0**
RPZ	**Rata Peaks**	**27.14**	**197**	P	**P**	**13 53 08.1**	**-2.1**
RPZ				IAmb	IAmb	13 53 18.8	
	comp=Z,36nm,1.4s						
FOZ	**Fox Glacier**	**27.34**	**199**	P	**P**	**13 53 11.8**	**0.0**
LBZ	**Lake Benmore**	**28.01**	**198**	P	**P**	**13 53 15.7**	**-2.0**
LBZ				IAmb	IAmb	13 53 22.9	
	comp=Z,31nm,1.5s						
ODZ	**Otahua Downs**	**28.48**	**197**	P	**P**	**13 53 20.5**	**-1.3**
ODZ				IAmb	IAmb	13 54 17.1	
	comp=Z,60nm,1.9s						
WKZ	**Wanaka**	**28.76**	**199**	P	**P**	**13 53 22.8**	**-1.4**
WKZ				IAmb	IAmb	13 53 37.2	
	comp=Z,45nm,1.5s						
EIDS	**Eidsvold**	**29.31**	**250**	P	**P**	**13 53 28.9**	**-0.4**
MLZ	**Mavora Lakes**	**29.52**	**200**	P	**P**	**13 53 31.1**	**+0.3**
MLZ				IAmb	IAmb	13 53 32.4	
	comp=Z,44nm,1.4s						
DCZ	**Deep Cove**	**29.93**	**201**	P	**P**	**13 53 34.2**	**0.0**
ARMA	**Armidale**	**29.96**	**240**	P	**P**	**13 53 35.2**	**+0.2**
WHZ	**Wether Hill Ro**	**30.05**	**199**	P	**P**	**13 53 35.4**	**0.0**
WHZ				IAmb	IAmb	13 54 49.0	
	comp=Z,41nm,1.4s						
CAN	**Canberra**	**33.71**	**233**	P	**P**	**13 54 07.3**	**+0.6**
CAN				IAmb	IAmb	13 55 29.5	
	comp=Z,28nm,1.3s						
TOO	**Toolangi**	**37.17**	**231**	P	**P**	**13 54 35.8**	**+0.6**
COEN	**Coen**	**37.19**	**271**	P	**P**	**13 54 36.1**	**+0.4**
STKA	**Stephens Creek**	**38.65**	**241**	P	**P**	**13 54 47.9**	**+0.6**
	comp=Z,10nm,0.7s,baz=88,slow=10,SNR=18						
STKA	**Stephens Creek**	**38.65**	**241**	P	**P**	**13 54 47.7**	**+0.4**
WRA	**Warramunga Arr**	**44.70**	**260**	P	**P**	**13 55 34.2**	**-0.9**
	comp=Z,3.5nm,0.7s,baz=95,slow=7.0,SNR=24						
WRA	**Warramunga Arr**	**44.70**	**260**	P	**P**	**13 55 33.8**	**-1.3**
AS31	**Alice Springs**	**44.84**	**254**	P	**P**	**13 55 36.0**	**-0.2**
ASAR	**Alice Springs**	**44.85**	**254**	P	**P**	**13 55 36.0**	**-0.2**
	comp=Z,22nm,0.7s,baz=87,slow=9.6,SNR=352						
ASAR	**Alice Springs**	**44.85**	**254**	P	**P**	**13 55 35.2**	**-0.9**
FITZ	**Fitzroy Crossi**	**53.10**	**261**	P	**P**	**13 56 36.2**	**-0.8**
	comp=Z,1.5nm,0.5s,baz=95,slow=7.1,SNR=4.1						
NVAR	**Mina Array Bea**	**79.44**	**44**	P	**P**	**13 59 21.3**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=235,slow=5.9,SNR=5.9						
ILAR	**Eielson Array**	**85.97**	**13**	P	**P**	**13 59 51.1**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=220,slow=5.0,SNR=15						
TXAR	**Lajitas Array**	**85.98**	**58**	P	**P**	**13 59 55.5**	**+3.0**
	comp=Z,0.8nm,0.7s,baz=225,slow=5.1,SNR=7.8						
PDAR	**Pinedale Array**	**87.37**	**43**	P	**P**	**14 00 00.2**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=184,slow=3.6,SNR=7.3						
PDAR	**Pinedale Array**	**87.37**	**43**	P	**P**	**13 59 59.9**	**+1.1**
VNA3	**Neumayer Olymp**	**90.63**	**176**	P	**P**	**14 00 13.7**	**+0.5**
VNA2	**Neumayer--Watz**	**91.07**	**177**	P	**P**	**14 00 16.6**	**+1.3**
YKA	**Yellowknife Ar**	**94.39**	**25**	P	**P**	**14 00 31.0**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=233,slow=4.6,SNR=4.6						
FINES	**FINESS Array B**	**133.32**	**344**	PKP	**PKiKP**	**14 06 24.1**	**+0.2**
	comp=Z,3.6nm,1.0s,baz=34,slow=7.6,SNR=3.9						
BRTR	**Keskin Array B**	**144.92**	**315**	PKP	PKPbc	14 06 45.6	+0.3
	comp=Z,0.4nm,0.5s,baz=82,slow=2.2,SNR=2.6						
GERES	**GERESS Array B**	**147.74**	**345**	PKPbc	**PKPbc**	**14 06 52.4**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=66,slow=3.2,SNR=4.4						

*KRSC **28** 13:52:45.0±1.1, 53°.46N×161°.13E, h43km±19km, ML4.3*
*MOS **28** 13:52:47.7±0.9, 53°.52N×160°.89E, h57km, mb4.1/1, Error ellipse: s-maj=8.0km s-min=4.3km az=79.1*
*IDC **28** 13:52:51.4±1.8, 53°.70N×160°.74E, h67km±16km, mb3.4/16, mb1 3.6/19, mb1mx3.5/43, mbtmp3.7/19, MS2.7/1, Ms1 2.7/1, ms1mx2.4/32, Error ellipse: s-maj=18.6km s-min=11.7km az=148.0*

ISC 28 13:52:44.7±1.3, 53°.54N±0°.03×161°.03E±0°.04, h16km±7km, n108, σ1$38/149, mb3.8/17, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.75**	**234**	PN	**Pn**	**13 53 00.5**	**-0.1**
SPN				S	**Sg**	**13 53 10.2**	**+1.0**
SPN	**Mys Shipunski**	**0.75**	**234**	*e*P	**Pn**	**13 53 00.5**	**-0.1**
SPN				*e*S	**Sg**	**13 53 10.2**	**+1.0**
KII	**Karymskiy**	**1.06**	**299**	PN	**Pg**	**13 53 05.5**	**+0.2**
KII	**Karymskiy**	**1.06**	**299**	*e*P	**Pg**	**13 53 05.5**	**+0.2**
NLC	**Nalytchevo**	**1.07**	**251**	PN	**Pg**	**13 53 05.5**	**0.0**
NLC				S	**Sn**	**13 53 19.3**	**-0.3**
NLC	**Nalytchevo**	**1.07**	**251**	*e*P	**Pg**	**13 53 05.5**	**0.0**
NLC				*e*S	**Sn**	**13 53 19.3**	**-0.3**
MKZ	**Mys Kozlova**	**1.10**	**22**	PN	**Pn**	**13 53 05.8**	**+0.4**
MKZ				S	**Sb**	**13 53 19.3**	**-0.2**
MKZ	**Mys Kozlova**	**1.10**	**22**	*i* P	**Pn**	**13 53 05.8**	**+0.4**
MKZ				*e*S	**Sb**	**13 53 19.3**	**-0.2**
SDLR	**Sedlovina**	**1.31**	**259**	PN	**Pb**	**13 53 09.4**	**+0.4**
SDLR	**Sedlovina**	**1.31**	**259**	*i* P	**Pb**	**13 53 09.4**	**+0.4**
SMAR	**Somma**	**1.36**	**259**	PN	**Pb**	**13 53 10.1**	**+0.2**
SMAR				S	**Sb**	**13 53 27.3**	**+0.1**
SMAR	**Somma**	**1.36**	**259**	*i* P	**Pb**	**13 53 10.1**	**+0.2**
SMAR				*e*S	**Sb**	**13 53 27.3**	**+0.1**
UGLR	**Uglovaya**	**1.36**	**257**	PN	**Pb**	**13 53 10.3**	**+0.4**
UGLR				S	**Sb**	**13 53 27.7**	**+0.6**
UGLR	**Uglovaya**	**1.36**	**257**	*e*P	**Pb**	**13 53 10.3**	**+0.4**
UGLR				*e*S	**Sb**	**13 53 27.7**	**+0.6**
KRER	**Koryakskii**	**1.39**	**261**	PN	**Pb**	**13 53 10.8**	**+0.5**
KRER				S	**Sg**	**13 53 28.8**	**-0.7**
KRER	**Koryakskii**	**1.39**	**261**	*e*P	**Pb**	**13 53 10.8**	**+0.5**
KRER				*e*S	**Sg**	**13 53 28.8**	**-0.7**
AVH	**Avacha**	**1.40**	**260**	PN	**Pb**	**13 53 10.9**	**+0.4**
AVH				S	**Sg**	**13 53 29.1**	**-0.8**
AVH	**Avacha**	**1.40**	**260**	*e*P	**Pb**	**13 53 10.9**	**+0.4**
AVH				*e*S	**Sg**	**13 53 29.1**	**-0.8**
KRX	**Arik**	**1.44**	**264**	PN	**Pb**	**13 53 11.2**	**+0.1**
KRX				S	**Sb**	**13 53 29.6**	**+0.4**
KRX	**Arik**	**1.44**	**264**	*e*P	**Pb**	**13 53 11.2**	**+0.1**
KRX				*e*S	**Sb**	**13 53 29.6**	**+0.4**
KOK	**Koryaka**	**1.45**	**261**	PN	**Pb**	**13 53 11.5**	**+0.1**
KOK	**Koryaka**	**1.45**	**261**	*e*P	**Pb**	**13 53 11.5**	**+0.1**
DALK	**Dalny**	**1.46**	**251**	PN	**Pb**	**13 53 11.0**	**-0.4**
DALK				S	**Sn**	**13 53 27.7**	**-1.4**
DALK	**Dalny**	**1.46**	**251**	*e*P	**Pb**	**13 53 11.0**	**-0.4**
DALK				*e*S	**Sn**	**13 53 27.7**	**-1.4**
PET	**Petropavlovsk**	**1.52**	**251**	*e*PN	**Pb**	**13 53 11.9**	**-0.5**
PET				*e*S	**Sb**	**13 53 32.0**	**+0.6**
PET				pmax	pmax		
	comp=Z,161nm,0.4s						
PET				smax	smax		
	comp=N,818nm,0.5s						
PET				smax	smax		
	comp=E,930nm,0.5s						
KZV	**Kizimen**	**1.64**	**345**	PN	**Pb**	**13 53 14.9**	**+0.3**
KZV				S	**Sb**	**13 53 35.0**	**0.0**
KZV	**Kizimen**	**1.64**	**345**	*e*P	**Pb**	**13 53 14.9**	**+0.3**
KZV				*e*S	**Sb**	**13 53 35.0**	**0.0**
TUMR	**Tumrok**	**1.82**	**344**	PN	**Pb**	**13 53 17.8**	**0.0**
TUMR				S	**Sb**	**13 53 40.1**	**-0.3**
TUMR	**Tumrok**	**1.82**	**344**	*e*P	**Pb**	**13 53 17.8**	**0.0**
TUMR				*e*S	**Sb**	**13 53 40.1**	**-0.3**
RUS	**Russkaya**	**1.88**	**235**	PN	**Pn**	**13 53 16.5**	**+0.3**
RUS				S	**Sn**	**13 53 38.4**	**-1.1**
RUS	**Russkaya**	**1.88**	**235**	*e*P	**Pn**	**13 53 16.5**	**+0.3**
RUS				*e*S	**Sn**	**13 53 38.4**	**-1.1**
KRMR	**Karymshinskiy**	**1.88**	**249**	PN	**Pn**	**13 53 16.6**	**+0.4**
KRMR				S	**Sn**	**13 53 39.3**	**-0.3**
KRMR	**Karymshinskiy**	**1.88**	**249**	*e*P	**Pn**	**13 53 16.6**	**+0.4**
KRMR				*e*S	**Sn**	**13 53 39.3**	**-0.3**
MTVR	**Mutnovka**	**2.02**	**240**	PN	**Pn**	**13 53 19.1**	**+0.9**
MTVR	**Mutnovka**	**2.02**	**240**	*e*P	**Pn**	**13 53 19.1**	**+0.9**
GRL	**Gorelyy**	**2.04**	**242**	PN	**Pn**	**13 53 19.8**	**+1.3**
GRL				S	**Sn**	**13 53 44.9**	**+1.3**
GRL	**Gorelyy**	**2.04**	**242**	*e*P	**Pn**	**13 53 19.8**	**+1.3**
GRL				*e*S	**Sn**	**13 53 44.9**	**+1.3**
PETK	**Petropavlovsk-**	**2.04**	**259**	P	**Pb**	**13 53 20.1**	**-1.3**
	comp=E,31nm,0.3s,baz=78,slow=19,SNR=267						
PETK				S	**Sb**	**13 53 45.8**	**-0.8**
	comp=E,35nm,0.3s,baz=300,slow=35,SNR=9.7						
ASAK	**Asacha**	**2.22**	**240**	PN	**Pn**	**13 53 22.5**	**+1.6**
ASAK				S	**Sn**	**13 53 49.6**	**+1.6**
ASAK	**Asacha**	**2.22**	**240**	*e*P	**Pn**	**13 53 22.5**	**+1.6**
ASAK				*e*S	**Sn**	**13 53 49.6**	**+1.6**
KMNR	**Kamenistaya**	**2.27**	**349**	PN	**Pb**	**13 53 25.0**	**-0.4**
KMNR	**Kamenistaya**	**2.27**	**349**	*e*P	**Pb**	**13 53 25.0**	**-0.4**
APC	**Apacha**	**2.41**	**257**	PN	**Pb**	**13 53 25.9**	**-1.7**
APC				S	**Sn**	**13 53 54.5**	**+2.0**
APC	**Apacha**	**2.41**	**257**	*e*P	**Pb**	**13 53 25.9**	**-1.7**
APC				*e*S	**Sn**	**13 53 54.5**	**+2.0**
BZGR	**Bezymyannyi-Gr**	**2.42**	**356**	PN	**Pb**	**13 53 26.7**	**-1.1**
BZGR	**Bezymyannyi-Gr**	**2.42**	**356**	*e*P	**Pb**	**13 53 26.7**	**-1.1**
KIRR	**Kirishev**	**2.45**	**351**	PN	**Pb**	**13 53 27.1**	**-1.4**
KIRR				S	**Sb**	**13 53 57.0**	**-1.5**
KIRR	**Kirishev**	**2.45**	**351**	*e*P	**Pb**	**13 53 27.1**	**-1.4**
KIRR				*e*S	**Sb**	**13 53 57.0**	**-1.5**
KPT	**Kopyto**	**2.48**	**349**	PN	**Pb**	**13 53 27.5**	**-1.4**
KPT	**Kopyto**	**2.48**	**349**	*e*P	**Pb**	**13 53 27.5**	**-1.4**
ZLN	**Zelenaya**	**2.49**	**357**	PN	**Pb**	**13 53 28.0**	**-1.1**
ZLN				S	**Sb**	**13 53 58.3**	**-1.2**
ZLN	**Zelenaya**	**2.49**	**357**	*e*P	**Pb**	**13 53 28.0**	**-1.1**
ZLN				*e*S	**Sb**	**13 53 58.3**	**-1.2**
KDTR	**Khodutka, Kamc**	**2.50**	**227**	PN	**Pn**	**13 53 25.7**	**+1.1**
KDTR				S	**Sn**	**13 53 55.4**	**+0.7**
KDTR	**Khodutka, Kamc**	**2.50**	**227**	*e*P	**Pn**	**13 53 25.7**	**+1.1**
KDTR				*e*S	**Sn**	**13 53 55.4**	**+0.7**
CIRR	**Tsirk**	**2.59**	**357**	PN	**Pb**	**13 53 29.7**	**-1.1**
CIRR	**Tsirk**	**2.59**	**357**	*e*P	**Pb**	**13 53 29.7**	**-1.1**
KOZ	**Kozyrevsk**	**2.61**	**346**	PN	**Pb**	**13 53 29.0**	**-2.2**
KOZ	**Kozyrevsk**	**2.61**	**346**	*e*P	**Pb**	**13 53 29.0**	**-2.2**
KRSR	**Krestovskiy**	**2.70**	**354**	PN	**Pb**	**13 53 30.6**	**-2.1**
KRSR	**Krestovskiy**	**2.70**	**354**	*e*P	**Pb**	**13 53 30.6**	**-2.1**
ESO	**Esso**	**2.75**	**331**	PN	**Pn**	**13 53 30.3**	**+2.2**
ESO	**Esso**	**2.75**	**331**	*e*P	**Pn**	**13 53 30.3**	**+2.2**
KLY	**Klyuchi**	**2.79**	**356**	PN	**Pb**	**13 53 31.5**	**-2.6**
KLY				S	**Sn**	**13 54 03.9**	**+2.0**
KLY	**Klyuchi**	**2.79**	**356**	*e*P	**Pb**	**13 53 31.5**	**-2.6**
KLY				*e*S	**Sn**	**13 54 03.9**	**+2.0**
KBTR	**Krutoberegovo**	**2.87**	**20**	PN	**Pn**	**13 53 32.3**	**+2.5**
KBTR				S	**Sn**	**13 54 06.5**	**+2.6**
KBTR	**Krutoberegovo**	**2.87**	**20**	*e*P	**Pn**	**13 53 32.3**	**+2.5**
KBTR				*e*S	**Sn**	**13 54 06.5**	**+2.6**
SRDR	**Sredinnyy**	**2.89**	**345**	PN	**Pn**	**13 53 32.6**	**+2.5**
SRDR	**Sredinnyy**	**2.89**	**345**	*e*P	**Pn**	**13 53 32.6**	**+2.5**
KBG	**Krutoberegovo**	**2.89**	**19**	PN	**Pb**	**13 53 35.4**	**-0.4**
KBG	**Krutoberegovo**	**2.89**	**19**	*e*P	**Pb**	**13 53 35.4**	**-0.4**
BDR	**Baidarnaya**	**3.04**	**2**	PN	**Pb**	**13 53 37.1**	**-1.3**
BDR	**Baidarnaya**	**3.04**	**2**	*e*P	**Pb**	**13 53 37.1**	**-1.3**
SRKR	**Sorokina**	**3.12**	**1**	PN	**Pn**	**13 53 36.4**	**+3.1**
SRKR	**Sorokina**	**3.12**	**1**	*e*P	**Pn**	**13 53 36.4**	**+3.1**
PAU	**Pauzhetka**	**3.31**	**233**	PN	**Pn**	**13 53 39.2**	**+3.4**
PAU	**Pauzhetka**	**3.31**	**233**	*e*P	**Pn**	**13 53 39.2**	**+3.4**
BKI	**Bering**	**3.34**	**58**	PN	**Pn**	**13 53 37.5**	**+1.3**
BKI	**Bering**	**3.34**	**58**	*e*P	**Pn**	**13 53 37.5**	**+1.3**
BKI				*e*S	**Sn**	**13 54 12.6**	**-2.8**
SKR	**Severo-Kuril's**	**4.16**	**229**	*e*PN	**Pn**	**13 53 50.0**	**+2.5**
SKR				*e*S	**Sn**	**13 54 36.3**	**+0.5**
SKR				pmax	pmax		
	comp=Z,27nm,0.9s						
SKR				smax	smax		
	comp=E,106nm,0.8s						
SKR				smax	smax		
	comp=N,132nm,0.8s						
SKR	**Severo-Kuril's**	**4.16**	**229**	*e*P	**Pn**	**13 53 50.0**	**+2.5**
MA2	**Magadan**	**8.28**	**321**	P	**Pn**	**13 54 46.1**	**+2.0**
	comp=N,0.5nm,0.3s,baz=131,slow=11,SNR=7.7						
MA2				LR	LR	13 58 07.7	
	comp=N,51nm,21.3s,baz=138,slow=39						
YAK	**Yakutsk**	**18.58**	**310**	P	**P**	**13 57 00.2**	**-0.5**
	comp=N,0.1nm,0.3s,baz=297,slow=0.5,SNR=11						
KLR	**Kul'dur**	**18.70**	**269**	P	**Pn**	**13 57 02.4**	**-0.2**
	comp=N,0.2nm,0.3s,baz=71,slow=8.5,SNR=6.2						
MJAR	**Matsuhiro Arr**	**23.26**	**232**	P	**P**	**13 57 52.4**	**+1.1**
	comp=N,2.1nm,0.5s,baz=26,slow=8.4,SNR=5.7						
BOD	**Bodaibo**	**26.43**	**298**	*e*P	**P**	**13 58 18.0**	**-2.3**
BOD				pmax	pmax		
	comp=Z,6.0nm,2.0s						
ILAR	**Eielson Array**	**28.10**	**46**	P	**P**	**13 58 35.4**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=257,slow=8.2,SNR=4.8						
INK	**Inuvik**	**33.17**	**38**	P	**P**	**13 59 20.4**	**+0.5**
	comp=Z,0.5nm,0.4s,baz=242,slow=5.4,SNR=5.3						
H11N2	**WAKE ISLAND Hy**	**34.05**	**170**	T	T	14 35 50.4	
	baz=354,slow=76,SNR=133						
H11N3	**WAKE ISLAND Hy**	**34.06**	**170**	T	T	14 35 48.1	
	baz=354,slow=76,SNR=95						
H11N1	**WAKE ISLAND Hy**	**34.06**	**170**	T	T	14 35 58.7	
	baz=354,slow=76,SNR=127						
SONM	**Songino Array**	**34.34**	**283**	P	**P**	**13 59 28.5**	**-2.1**
	comp=Z,0.3nm,0.4s,baz=102,slow=12,SNR=3.4						
SONM				PcP	**PcP**	**14 02 06.1**	**0.0**
	comp=Z,0.6nm,0.5s,baz=105,slow=2.5,SNR=4.2						
H11S1	**WAKE ISLAND Hy**	**35.24**	**171**	T	T	14 37 21.5	
	baz=352,slow=76,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	**35.25**	**171**	T	T	14 37 17.2	
	baz=352,slow=76,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**35.26**	**171**	T	T	14 37 20.3	
	baz=352,slow=76,SNR=4.6						
YKA	**Yellowknife Ar**	**42.45**	**43**	P	**P**	**14 00 39.1**	**+0.7**
	comp=Z,0.2nm,0.5s,baz=298,slow=8.4,SNR=3.3						
MKAR	**Makanchi Array**	**48.47**	**296**	P	**P**	**14 01 23.4**	**-2.8**
	comp=Z,0.3nm,0.4s,baz=55,slow=6.1,SNR=10						
ARCES	**ARCESS Array B**	**53.04**	**342**	P	**P**	**14 01 59.0**	**-1.3**
ARCES	**ARCESS Array B**	**53.04**	**342**	P	**P**	**14 01 59.0**	**-1.3**
	comp=Z,1.3nm,0.5s,baz=39,slow=8.0,SNR=8.1						
NVAR	**Mina Array Bea**	**55.06**	**71**	P	**P**	**14 02 17.4**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=287,slow=6.4,SNR=2.7						
PDAR	**Pinedale Array**	**56.82**	**62**	P	**P**	**14 02 29.9**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=350,slow=4.7,SNR=2.7						
CMAR	**Chiang Mai Arr**	**58.82**	**259**	P	**P**	**14 02 43.4**	**+1.0**
	comp=Z,0.8nm,0.5s,baz=27,slow=6.6,SNR=7.1						
FINES	**FINESS Array B**	**59.93**	**337**	P	**P**	**14 02 48.9**	**-0.5**
	comp=Z,2.7nm,0.4s,baz=32,slow=7.9,SNR=21						
NB2	**NORSAR Subarra**	**63.27**	**344**	P	**P**	**14 03 11.3**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=20,slow=6.9						
NOA	**NORSAR Array B**	**63.27**	**344**	P	**P**	**14 03 11.4**	**-0.6**
	comp=Z,1.1nm,0.6s,baz=21,slow=6.6,SNR=4.9						
TXAR	**Lajitas Array**	**69.95**	**68**	P	**P**	**14 03 56.9**	**+1.6**
	comp=Z,0.5nm,0.9s,baz=322,slow=4.1,SNR=3.2						
BRTR	**Keskin Array B**	**76.63**	**321**	P	**P**	**14 04 33.9**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=20,slow=4.6,SNR=2.5						
WRA	**Warramunga Arr**	**76.72**	**206**	P	**P**	**14 04 34.7**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=22,slow=6.2,SNR=4.2						
ASAR	**Alice Springs**	**80.40**	**205**	P	**P**	**14 04 55.7**	**+0.6**
	comp=Z,0.9nm,1.0s,baz=14,slow=5.0,SNR=5.6						

*IDC **28** 13:54:50.6±1.0, 0°.41S×123°.48E, h0km, mb3.6/6, mb1 3.9/7, mb1mx3.6/31, mbtmp3.7/7, ML4.0/1, MS3.4/2, Ms1 3.4/2, ms1mx2.8/30, Error ellipse: s-maj=39.9km s-min=18.2km az=70.0*
*DJA **28** 13:54:54.3±0.2, 0°.5S±3°×12°.3E±°, h10km, M4.5/13, mb4.7/4, MLv4.4/13*
*NEIC **28** 13:54:54.7±2.1, 0°.47S±0°.07×123°.32E±0°.07, h31km±8km, mb4.5/10, Error ellipse: s-maj=11.5km s-min=8.4km az=145.0*

ISC 28 13:54:56.6±0.6, 0°.46S±0°.05×123°.35E±0°.05, h54km, n36, σ1$65/40, mb3.9/10, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUWI	**Luwuk**	**0.82**	**225**	P	**Pn**	**13 55 09.7**	**-2.3**
LUWI				S	**Sn**	**13 55 20.4**	**-2.9**
LUWI	**Luwuk**	**0.

*JMA **28** 14:12:00.7±0.2,24.°93N×122.°34E, h0km,M2.2*
*TAP **28** 14:12:02.0,24.°92N×122.°32E, h14km, ML2.6, C*
ISC 28 14:12:01.6±1.2,24.°92N±0.°03×122.°34E±0.°03, h9km±13km, n41, σ0ş48/75, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.33**	**286**	P	**Pb**	**14 12 09.1**	**-0.6**
	baz=278						
TWB1				S	**Sb**	**14 12 13.9**	**-1.1**
	baz=278						
EOS1	**EOS1**	**0.41**	**207**	*e*P	**Pb**	**14 12 10.7**	**-0.3**
	baz=218						
EOS1				S	**Sb**	**14 12 17.5**	**+0.1**
	baz=218						
NTC	**Toucheng**	**0.47**	**262**	*e*P	**Pb**	**14 12 11.7**	**-0.3**
	baz=273						
NTC				S	**Sb**	**14 12 19.3**	**+0.3**
	baz=273						
TIPB	**Shuangxi**	**0.47**	**277**	*e*P	**Pb**	**14 12 11.7**	**-0.4**
	baz=276						
TIPB				*e*S	**Sb**	**14 12 18.1**	**-0.9**
	baz=276						
NWF	**Wu-fen Shan**	**0.53**	**287**	*e*P	**Pb**	**14 12 13.1**	**0.0**
	baz=287						
NWF				*e*S	**Sb**	**14 12 20.9**	**+0.1**
	baz=287						
WFSB	**Wu-fen Shan**	**0.53**	**287**	*e*P	**Pb**	**14 12 13.2**	**+0.1**
	baz=287						
WFSB				*e*S	**Sb**	**14 12 20.8**	**0.0**
	baz=287						
TWE	**Neicheng**	**0.64**	**252**	*e*P	**Pb**	**14 12 14.6**	**-0.3**
	baz=241						
TWE				S	**Sb**	**14 12 23.7**	**-0.3**
	baz=241						
SLBB	**Yuanshan**	**0.66**	**256**	*e*P	**Pb**	**14 12 15.3**	**+0.1**
	baz=246						
TWA	**Mucha**	**0.69**	**275**	P	**Pb**	**14 12 16.1**	**+0.3**
	baz=275						
TWA				S	**Sb**	**14 12 25.6**	**+0.2**
	baz=275						
JYNG	**Yonagunijimaku**	**0.72**	**130**	P	**Pg**	**14 12 15.2**	**-0.4**
JYNG				*e*S	**Sg**	**14 12 25.6**	**+0.6**
NANB	**Nanao**	**0.72**	**228**	P	**Pb**	**14 12 16.0**	**-0.4**
	baz=218						
NANB				*e*S	**Sg**	**14 12 25.4**	**+0.4**
	baz=218						
ENA	**Nanau**	**0.73**	**228**	*e*P	**Pb**	**14 12 15.9**	**-0.5**
	baz=218						
ENA				S	**Sb**	**14 12 25.9**	**-0.7**
	baz=218						
YM08	**YM08**	**0.73**	**292**	*e*P	**Pb**	**14 12 16.5**	**0.0**
	baz=292						
YM08				*e*S	**Sb**	**14 12 26.8**	**+0.2**
	baz=292						
YM01	**YM01**	**0.73**	**288**	*e*P	**Pb**	**14 12 16.6**	**+0.1**
	baz=288						
YM01				*e*S	**Sb**	**14 12 26.7**	**0.0**
	baz=288						
YM11	**YM11**	**0.73**	**290**	*e*P	**Pn**	**14 12 17.3**	**-0.9**
	baz=290						
YM11				*e*S	**Sb**	**14 12 27.5**	**+0.7**
	baz=290						
NHDH	**Xindian Distri**	**0.74**	**274**	*e*P	**Pn**	**14 12 17.6**	**-0.6**
	baz=273						
NHDH				*e*S	**Sb**	**14 12 27.2**	**+0.4**
	baz=273						
YM05	**YM05**	**0.74**	**289**	*e*P	**Pb**	**14 12 16.7**	**0.0**
	baz=289						
YM05				*e*S	**Sb**	**14 12 27.2**	**+0.2**
	baz=289						
YM10	**YM10**	**0.74**	**289**	*e*P	**Pn**	**14 12 17.5**	**-0.8**
	baz=288						
YM10				*e*S	**Sb**	**14 12 26.8**	**-0.2**
	baz=288						
PCYT	**Pengchaiyu**	**0.75**	**341**	*e*P	**Pb**	**14 12 16.9**	**+0.1**
	baz=342						
ENTT	**Nioudou**	**0.75**	**249**	P	**Pb**	**14 12 16.8**	**-0.1**
	baz=248						
ENTT				S	**Sb**	**14 12 28.2**	**+0.9**
	baz=248						
TWY	**Chenhua**	**0.76**	**298**	*e*P	**Pb**	**14 12 16.9**	**-0.1**
	baz=298						
TWY				*e*S	**Sb**	**14 12 28.4**	**+1.0**
	baz=298						
YM04	**YM04**	**0.76**	**288**	*e*P	**Pb**	**14 12 17.5**	**+0.5**
	baz=288						
YM04				*e*S	**Sb**	**14 12 27.5**	**0.0**
	baz=288						
YOJ	**Yonaguni jima**	**0.76**	**126**	*e*P	**Pg**	**14 12 16.2**	**-0.1**
	baz=116						
YOJ	**Yonaguni jima**	**0.76**	**126**	P	**Pg**	**14 12 15.5**	**-0.8**
YOJ				*e*S	**Sg**	**14 12 26.4**	**+0.1**
YM03	**YM03**	**0.77**	**290**	*e*P	**Pn**	**14 12 17.9**	**-0.8**
	baz=277						
YM03				*e*S	**Sb**	**14 12 28.9**	**+1.1**
	baz=277						
NWLT	**Wulai**	**0.77**	**260**	P	**Pb**	**14 12 17.0**	**-0.2**
	baz=259						
NWLT				S	**Sb**	**14 12 27.9**	**+0.1**
	baz=259						
TATO	**Taipei**	**0.77**	**274**	*e*S	**Sb**	**14 12 27.9**	**+0.1**
	baz=274						
ANP	**Anpu**	**0.79**	**290**	*e*P	**Pb**	**14 12 17.9**	**+0.4**
	baz=290						
NDT	**Datong Townshi**	**0.81**	**247**	P	**Pb**	**14 12 18.2**	**+0.3**
	baz=247						
NDT				*e*S	**Sb**	**14 12 29.4**	**+0.4**
	baz=247						
YHNB	**Yeheng**	**0.91**	**254**	*e*P	**Pb**	**14 12 19.6**	**+0.1**
	baz=254						
YHNB				*e*S	**Sb**	**14 12 31.8**	**+0.1**
	baz=254						
NSK	**Sanguang**	**0.92**	**255**	P	**Pb**	**14 12 19.7**	**-0.1**
	baz=255						
NSK				S	**Sb**	**14 12 31.9**	**-0.3**
	baz=255						
NNSB	**Datong**	**0.99**	**241**	*e*P	**Pb**	**14 12 21.0**	**-0.1**
	baz=231						
NNSB				S	**Sb**	**14 12 34.2**	**-0.2**
	baz=231						
NNSH	**Datong**	**0.99**	**241**	P	**Pb**	**14 12 20.8**	**-0.2**
	baz=232						
NNSH				*e*S	**Sb**	**14 12 34.9**	**+0.6**
	baz=232						
NNS	**Nan Shan**	**1.00**	**242**	P	**Pb**	**14 12 21.1**	**-0.1**
	baz=232						
NNS				S	**Sb**	**14 12 35.1**	**+0.7**
	baz=232						
NACB	**Ninganchiao**	**1.00**	**223**	P	**Pg**	**14 12 20.5**	**-0.4**
	baz=222						
NACB				*e*S	**Sg**	**14 12 33.9**	**-0.1**
	baz=222						
ETLH	**Xiulin Townshi**	**1.05**	**228**	*e*P	**Pn**	**14 12 22.6**	**0.0**
	baz=217						
ETLH				*e*S	**Sb**	**14 12 36.7**	**+0.8**
	baz=217						
WHP	**Taichung City**	**1.42**	**244**	*e*P	**Pg**	**14 12 29.3**	**+0.4**
	baz=244						
WHP				*e*S	**Sg**	**14 12 48.5**	**+1.2**
	baz=244						
OWD	**Renai**	**1.43**	**228**	*e*P	**Pn**	**14 12 27.9**	**+0.1**
	baz=228						
OWD				*e*S	**Sg**	**14 12 47.9**	**+0.3**
	baz=228						
HATJ	**Hateruma jima**	**1.59**	**122**	P	**Pn**	**14 12 30.1**	**+0.2**
HATJ				*e*S	**Sg**	**14 12 52.4**	**-0.3**
JKRS	**Kuro-shima**	**1.67**	**114**	P	**Pn**	**14 12 31.1**	**+0.1**
JIJ	**Ishigaki jima**	**1.73**	**108**	P	**Pn**	**14 12 32.6**	**+0.7**

*IDC **28** 14:26:04.5±2.2,1.°27S×128.°66E, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.4/37, mbtmp3.6/3, ML3.9/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/25, Error ellipse: s-maj=145.1km s-min=27.2km az=68.0*
*NEIC **28** 14:26:10.3±1.0, 1.°4S±0.°4×128.°6E±0.°9, h46km±17km, mb4.4/9, Error ellipse: s-maj=146.0km s-min=10.1km az=67.0*
ISC 28 14:26:09.2±2.7, 1.°4S±0.°6×12.°8E±.°, h35km, n16, σ0ş74/14, mb3.6/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**8.90**	**341**	LR	LR	14 31 20.4	
	comp=Z,164nm,21.4s,baz=314,slow=36						
WB0	**Warramunga Arr**	**19.15**	**163**	P	**P**	**14 30 30.0**	**+0.3**
WRAB	**Tennant Creek**	**19.29**	**163**	P	**P**	**14 30 31.7**	**+0.4**
WRAB				IAmb	IAmb	14 30 44.5	
	comp=Z,43nm,1.9s						
WRA	**Warramunga Arr**	**19.30**	**163**	P	**Pn**	**14 30 31.9**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=344,slow=12,SNR=16						
WRA	**Warramunga Arr**	**19.30**	**163**	P	**P**	**14 30 30.7**	**-0.7**
WB2	**Warramunga Arr**	**19.30**	**163**	P	**Pn**	**14 30 31.9**	**-0.7**
WB2				IAmb	IAmb	14 30 33.6	
	comp=Z,46nm,1.9s						
WR0	**Warramunga Arr**	**19.38**	**163**	P	**P**	**14 30 32.5**	**+0.3**
WR0				IAmb	IAmb	14 31 09.5	
	comp=Z,37nm,2.0s						
LEM	**Lembang**	**21.46**	**255**	LR	LR	14 40 18.4	
	comp=Z,38nm,19.1s,baz=16,slow=39						
AS31	**Alice Springs**	**22.75**	**167**	P	**P**	**14 31 09.5**	**+1.0**
ASAR	**Alice Springs**	**22.75**	**167**	P	**P**	**14 31 09.6**	**+1.0**
	comp=Z,0.7nm,0.3s,baz=344,slow=11,SNR=27						
ASAR	**Alice Springs**	**22.75**	**167**	P	**P**	**14 31 09.7**	**+1.1**
MK31	**Makanchi Array**	**62.74**	**326**	P	**P**	**14 36 31.4**	**+0.4**
MK31				IAmb	IAmb	14 37 37.0	
	comp=Z,6.5nm,1.9s						
MKAR	**Makanchi Array**	**62.74**	**326**	P	**P**	**14 36 31.6**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=118,slow=5.5,SNR=3.8						
MKAR	**Makanchi Array**	**62.74**	**326**	P	**P**	**14 36 31.3**	**+0.4**
MAKZ	**Makanchi**	**62.93**	**326**	P	**P**	**14 36 32.1**	**-0.1**
KBL	**Kabul**	**66.04**	**309**	P	**P**	**14 36 52.4**	**-0.6**

*IDC **28** 14:29:23.7±29.0, 37.°27N×19.°59E, h0km, mb3.8/3, mb1 3.7/4, mb1mx3.3/39, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=567.1km s-min=39.7km az=38.0*
*THE **28** 14:29:35.7, 38.°36N×20.°46E, h10km, ML3.5/11, Error ellipse: s-maj=0.7km s-min=0.2km az=268.0*
*ATH **28** 14:29:36.1, 38.°37N×20.°55E, h12km±1km, ML3.3/27, Error ellipse: s-maj=1.5km s-min=0.7km az=261.0*
ISC 28 14:29:35.3±0.8, 38.°36N±0.°02×20.°45E±0.°03, h13km±5km, n84, σ0ş92/112, mb3.8/3, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.13**	**42**	P	**Pg**	**14 29 38.3**	**-0.4**
FSK				S	**Sg**	**14 29 40.4**	**-0.6**
	41μm,0.4s						
ARG2	**Argostoli**	**0.19**	**171**	P	**Pg**	**14 29 39.5**	**0.0**
ARG2				S	**Sg**	**14 29 42.7**	**+0.3**
CHV1	**Chavriata, Kef**	**0.19**	**197**	P	**Pg**	**14 29 39.6**	**+0.1**
CHV1				S	**Sg**	**14 29 43.2**	**+0.8**
KEF2	**Argostoli. Kep**	**0.20**	**172**	P	**Pg**	**14 29 39.6**	**-0.1**
KEF2				S	**Sg**	**14 29 42.2**	**-0.5**
VLS	**Valsamata**	**0.21**	**149**	P	**Pg**	**14 29 39.8**	**-0.2**
VLS				S	**Sg**	**14 29 43.1**	**-0.1**
VLS	**Valsamata**	**0.21**	**149**	P	**Pg**	**14 29 39.8**	**-0.2**
VLS				S	**Sg**	**14 29 43.5**	**+0.3**
VLS				AML	AML	14 29 44.2	
	comp=N,23705μm,0.3s						
VLS				AML	AML	14 29 47.0	
	comp=E,23530μm,0.1s						
EVGI	**Lefkada island**	**0.30**	**32**	P	**Pg**	**14 29 41.6**	**0.0**
EVGI				S	**Sg**	**14 29 46.3**	**+0.5**
EVGI	**Lefkada island**	**0.30**	**32**	P	**Pg**	**14 29 41.5**	**0.0**
EVGI				S	**Sg**	**14 29 46.0**	**+0.3**
KFL	**Anninata**	**0.37**	**134**	P	**Pg**	**14 29 42.6**	**-0.1**
KFL				S	**Sg**	**14 29 47.8**	**+0.2**
	comp=E,14μm,0.3s						
KFL	**Anninata**	**0.37**	**134**	P	**Pg**	**14 29 42.6**	**-0.1**
KFL				S	**Sg**	**14 29 47.8**	**+0.2**
KFL				AML	AML	14 29 50.7	
	comp=N,27915μm,0.3s						
KFL				AML	AML	14 29 51.0	
	comp=E,28926μm,0.3s						
MGNA	**Meganis**	**0.40**	**42**	P	**Pg**	**14 29 42.8**	**-0.4**
MGNA				S	**Sg**	**14 29 48.5**	**0.0**
MGNA				AML	AML	14 29 49.8	
	comp=N,25665μm,0.3s						
MGNA				AML	AML	14 29 50.0	
	comp=E,26735μm,0.3s						
LKD2	**Lefkada island**	**0.46**	**21**	P	**Pg**	**14 29 44.1**	**-0.2**
LKD2				S	**Sg**	**14 29 51.2**	**+0.8**
	comp=E,5μm,0.3s						
LKD2	**Lefkada island**	**0.46**	**21**	P	**Pg**	**14 29 44.2**	**-0.1**
LKD2				S	**Sg**	**14 29 51.1**	**+0.6**
LKD2				AML	AML	14 29 53.6	
	comp=N,10855μm,0.3s						
LKD2				AML	AML	14 29 54.4	
	comp=E,10376μm,0.2s						
TSLK	**Tsoukalades, L**	**0.49**	**19**	P	**Pg**	**14 29 44.9**	**0.0**
TSLK				S	**Sg**	**14 29 52.3**	**+0.8**
	comp=E,8μm,0.6s						
TSLK	**Tsoukalades, L**	**0.49**	**19**	P	**Pg**	**14 29 44.9**	**0.0**
TSLK				S	**Sg**	**14 29 51.9**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.51**	**161**	P	**Pg**	**14 29 45.4**	**0.0**
VLMS				S	**Sg**	**14 29 52.4**	**+0.2**
VLMS				AML	AML	14 29 56.8	
	comp=N,20577μm,0.2s						
VLMS				AML	AML	14 29 59.0	
	comp=E,13429μm,0.4s						
PDO	**Prodromos**	**0.62**	**67**	P	**Pg**	**14 29 47.1**	**-0.3**
PDO				S	**Sb**	**14 29 56.6**	**-0.1**
	comp=E,5μm,0.4s						
PDO	**Prodromos**	**0.62**	**67**	P	**Pg**	**14 29 47.2**	**-0.3**
RLS	**Riolos of Patr**	**0.86**	**111**	P	**Pg**	**14 29 51.6**	**-0.3**
RLS				S	**Sb**	**14 30 04.2**	**+0.8**
	comp=E,1μm,0.4s						
RLS	**Riolos of Patr**	**0.86**	**111**	P	**Pg**	**14 29 51.3**	**-0.5**
RLS				S	**Sg**	**14 30 02.1**	**-1.0**
RLS				AML	AML	14 30 12.3	
	comp=E,2364μm,0.4s						
RLS				AML	AML	14 30 12.8	
	comp=N,2882μm,0.5s						
PVO	**Paravola**	**0.88**	**73**	P	**Pg**	**14 29 52.2**	**-0.1**
PVO				S	**Sb**	**14 30 05.1**	**+1.0**
	comp=N,3μm,0.5s						
PVO	**Paravola**	**0.88**	**73**	P	**Pg**	**14 29 52.2**	**-0.1**
PVO				AML	AML	14 30 10.5	
	comp=N,5088μm,0.5s						
PVO				AML	AML	14 30 13.2	
	comp=E,5584μm,0.6s						
DRO	**Drossia**	**1.07**	**112**	P	**Pg**	**14 29 55.4**	**-0.6**
DRO				S	**Sn**	**14 30 11.0**	**+0.1**
	comp=E,4μm,0.5s						
DRO	**Drossia**	**1.07**	**112**	P	**Pg**	**14 29 55.3**	**-0.6**
DRO				AML	AML	14 30 18.0	
	comp=N,7693μm,0.4s						
DRO				AML	AML	14 30 18.6	
	comp=E,7318μm,0.6s						
EFP	**Efpalio**	**1.15**	**86**	P	**Pb**	**14 29 56.4**	**-0.6**
EFP				S	**Sn**	**14 30 13.2**	**+0.6**
	comp=E,2μm,0.9s						
EFP	**Efpalio**	**1.15**	**86**	P	**Pb**	**14 29 55.9**	**-1.0**
EFP				AML	AML	14 30 23.1	
	comp=N,4553μm,0.7s						
EFP				AML	AML	14 30 23.9	
	comp=E,3614μm,0.6s						
ANX	**Ano Chora**	**1.18**	**78**	P	**Pb**	**14 29 56.9**	**-0.6**
ANX	**Ano Chora**	**1.18**	**78**	P	**Pb**	**14 29 57.0**	**-0.6**
ANX				AML	AML	14 30 20.7	
	comp=N,6327μm,0.6s						
ANX				AML	AML	14 30 22.7	
	comp=E,3943μm,0.5s						
EVR	**Evrytania**	**1.20**	**62**	P	**Pb**	**14 29 57.2**	**-0.7**
EVR	**Evrytania**	**1.20**	**62**	P	**Pb**	**14 29 57.3**	**-0.6**
EVR				AML	AML	14 30 23.9	
	comp=E,2068μm,0.6s						
EVR				AML	AML	14 30 26.5	
	comp=N,1601μm,1.0s						
LAKA	**Lakka**	**1.21**	**95**	P	**Pb**	**14 29 57.4**	**-0.7**
LAKA				S	**Sg**	**14 30 14.5**	**+0.2**
LAKA	**Lakka**	**1.21**	**95**	P	**Pb**	**14 29 57.1**	**-0.9**
LAKA				S	**Sb**	**14 30 13.6**	**0.0**
LAKA				AML	AML	14 30 22.8	
	comp=N,1395μm,1.0s						
LAKA				AML	AML	14 30 28.8	
	comp=E,1316μm,1.0s						
SERG	**Sergoula**	**1.26**	**87**	P	**Pn**	**14 29 58.1**	**-0.6**
SERG	**Sergoula**	**1.26**	**87**	P	**Pn**	**14 29 58.3**	**-0.4**
SERG				AML	AML	14 30 22.6	
	comp=E,2414μm,0.6s						
SERG				AML	AML	14 30 28.5	
	comp=N,2177μm,0.4s						
TRIZ	**Trizonia**	**1.27**	**89**	P	**Pn**	**14 29 58.1**	**-0.7**
TRIZ	**Trizonia**	**1.27**	**89**	P	**Pn**	**14 29 58.4**	**-0.4**
AMT	**Artemida-Makis**	**1.29**	**129**	P	**Pn**	**14 29 58.9**	**-0.2**
AMT	**Artemida-Makis**	**1.29**	**129**	P	**Pg**	**14 30 00.2**	**0.0**
AMT				AML	AML	14 30 29.5	
	comp=E,2400μm,0.5s						
AMT				AML	AML	14 30 30.5	
	comp=N,3100μm,0.6s						
ALIK	**Aliki, Aigiali**	**1.31**	**94**	P	**Pn**	**14 29 59.2**	**-0.1**
KALE	**Kalithea**	**1.33**	**88**	P	**Pn**	**14 29 59.0**	**-0.6**
KALE	**Kalithea**	**1.33**	**88**	P	**Pn**	**14 29 59.2**	**-0.4**
KALE				AML	AML	14 30 31.2	
	comp=E,1791μm,1.0s						
KALE				AML	AML	14 30 31.5	
	comp=N,2245μm,0.7s						
JAN	**Janina**	**1.33**	**13**	P	**Pn**	**14 29 59.9**	**+0.3**
JAN	**Janina**	**1.33**	**13**	P	**Pg**	**14 30 01.3**	**+0.4**
JAN				AML	AML	14 30 23.4	
	comp=E,3464μm,0.5s						
JAN				AML	AML	14 30 23.5	
	comp=N,3225μm,0.5s						
KLV	**Kalavryta, Ach**	**1.38**	**103**	P	**Pn**	**14 30 00.1**	**-0.2**
KLV				S	**Sb**	**14 30 18.7**	**+0.2**
	comp=N,402nm,0.6s						
KLV	**Kalavryta, Ach**	**1.38**	**103**	P	**Pn**	**14 30 00.1**	**-0.2**
KLV				AML	AML	14 30 31.1	
	comp=E,1181μm,1.1s						
KLV				AML	AML	14 30 33.3	
	comp=N,1083μm,0.9s						
KASA	**Kassiopi**	**1.44**	**344**	P	**Pg**	**14 30 03.3**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.47**	**63**	P	**Pn**	**14 30 01.6**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.47**	**63**	P	**Pn**	**14 30 02.3**	**+0.8**
MAKR				AML	AML	14 30 33.4	
	comp=N,1717μm,1.1s						
MAKR				AML	AML	14 30 35.3	
	comp=E,1993μm,0.4s						
AGG	**Agios Georgios**	**1.61**	**65**	P	**Pb**	**14 30 04.8**	**-0.1**
AGG				AML	AML	14 30 38.6	
	comp=E,1359μm,1.2s						
AGG				AML	AML	14 30 38.7	
	comp=N,1288μm,0.6s						
ITM	**Ithomi**	**1.66**	**135**	P	**Pb**	**14 30 06.0**	**+0.2**
THL	**Klokotos Trika**	**1.71**	**45**	P	**Pb**	**14 30 06.9**	**+0.3**
THL				AML	AML	14 30 38.1	
	comp=N,1144μm,0.6s						
THL				AML	AML	14 30 39.4	
	comp=E,1391μm,0.9s						
KPRO	**Kipourio**	**1.74**	**24**	P	**Pb**	**14 30 08.4**	**+1.2**
KPRO				AML	AML	14 30 38.5	
	comp=E,1893μm,0.9s						
KPRO				AML	AML	14 30 44.4	
	comp=N,1817μm,0.7s						
AXAR	**Agios Charalam**	**1.78**	**76**	P	**Pb**	**14 30 08.1**	**+0.4**
AXAR				AML	AML	14 30 47.7	
	comp=N,2582μm,1.0s						
AXAR				AML	AML	14 30 51.8	
	comp=E,3596μm,1.4s						
PYL	**PYLOS**	**1.79**	**145**	P	**Pb**	**14 30 07.8**	**-0.2**
VLX	**Vlachokerasia**	**1.82**	**122**	P	**Pb**	**14 30 08.9**	**+0.4**
VLX				AML	AML	14 30 41.6	
	comp=E,1653μm,0.5s						
VLX				AML	AML	14 30 48.0	
	comp=N,1669μm,0.6s						
PENT	**Pentalofos**	**1.91**	**16**	P	**Pb**	**14 30 10.6**	**+0.6**
PROD	**Prodromos**	**1.93**	**92**	P	**Pb**	**14 30 09.9**	**-0.4**
PROD				AML	AML	14 30 43.3	
	comp=N,949μm,0.5s						
PROD				AML	AML	14 30 49.0	
	comp=E,845μm,0.7s						
LTK	**Loutraki**	**2.01**	**99**	P	**Pb**	**14 30 11.3**	**-0.4**
LKR	**Lokris**	**2.02**	**81**	P	**Pb**	**14 30 11.1**	**-0.8**
LOUT	**Loutraki**	**2.02**	**100**	P	**Pb**	**14 30 11.4**	**-0.5**
NEST	**Nestorio**	**2.10**	**13**	P	**Pb**	**14 30 13.5**	**+0.1**
NEST				AML	AML	14 30 47.8	
	comp=N,565μm,0.5s						
NEST				AML	AML	14 30 52.9	
	comp=E,772μm,0.9s						
VIL2	**Platees**	**2.22**	**93**	P	**Pb**	**14 30 14.6**	**-0.8**
LIT	**Litokhoron**	**2.35**	**42**	P	**Pn**	**14 30 15.8**	**+2.2**
LIT				AML	AML	14 30 57.3	
	comp=E,508μm,0.7s						
LIT				AML	AML	14 31 04.3	
	comp=N,502μm,0.9s						
DID	**Didima**	**2.36**	**110**	P	**Pn**	**14 30 15.9**	**+2.1**
XOR	**Xorichti**	**2.36**	**64**	P	**Pn**	**14 30 15.7**	**+1.8**
MRKA	**Markates**	**2.48**	**81**	P	**Pn**	**14 30 17.9**	**+2.4**
SKIA	**Skiathos**	**2.49**	**70**	P	**Pn**	**14 30 17.6**	**+2.1**
VLY	**Voula,Athens**	**2.69**	**100**	P	**Pn**	**14 30 20.3**	**+2.0**
EREA	**Eretria**	**2.74**	**88**	P	**Pn**	**14 30 20.9**	**+2.0**
OHR	**Ohrid**	**2.76**	**5**	*e*Pn	**Pb**	**14 30 22.8**	**-1.7**
AOS	**Alonnisos**	**2.80**	**72**	P	**Pn**	**14 30 22.1**	**+2.3**
VAY	**Valandovo**	**3.38**	**28**	*e*Pn	**Pb**	**14 30 32.9**	**-2.1**
STIP	**Stip**	**3.58**	**21**	*e*Pn	**Pb**	**14 30 36.2**	**-2.3**
DBRK	**Dubrovnik**	**4.65**	**339**	*e*Pn	**Pn**	**14 30 45.8**	**+0.6**
DBRK				Sn	**Sn**	**14 31 36.5**	**-2.5**
STON	**Ston**	**4.97**	**336**	*i* Pn	**Pn**	**14 30 48.9**	**-0.7**
STON				Sn	**Sn**	**14 31 44.1**	**-2.8**
KIJV	**Kijevo**	**6.41**	**333**	*e*Pn	**Pn**	**14 31 09.9**	**+0.5**
KIJV				Sn	**Sn**	**14 32 21.6**	**-0.9**
ZIRJ	**Zirje**	**6.42**	**327**	*e*Pn	**Pn**	**14 31 08.6**	**-0.8**
MORI	**Morici**	**6.56**	**328**	*e*Pn	**Pn**	**14 31 11.6**	**+0.1**
DUGI	**Dugi Otok**	**6.94**	**326**	*i* Pn	**Pn**	**14 31 17.2**	**+0.5**
NVLJ	**Novalja**	**7.48**	**328**	*e*Pn	**Pn**	**14 31 24.3**	**+0.2**
GERES	**GERESS Array B**	**11.56**	**337**	Pn	**Pn**	**14 32 22.0**	**+2.0**
	comp=N,0.2nm,0.3s,baz=160,slow=15,SNR=2.4						
FINES	**FINESS Array B**	**23.37**	**7**	P	**P**	**14 34 44.5**	**+1.1**
	comp=N,2.8nm,0.9s,baz=208,slow=7.7,SNR=3.8						
MKAR	**Makanchi Array**	**45.25**	**59**	P	**P**	**14 37 51.6**	**-0.8**
	comp=N,0.3nm,0.5s,baz=292,slow=6.4,SNR=3.6						
ZALV	**Zalesovo Beam**	**45.61**	**48**	P	**P**	**14 37 55.2**	**+0.2**
	comp=N,1.0nm,0.4s,baz=275,slow=7.7,SNR=4.6						

*IDC **28** 14:31:00.3±8.4, 36.°71N×71.°29E, h106km±59km, mb3.5/1, mb1 3.4/7, mb1mx3.0/41, mbtmp3.8/7, Error ellipse: s-maj=73.3km s-min=50.2km az=165.0*
*NNC **28** 14:31:02.4±11.0, 37.°08N×70.°43E, h81km±229km, mb3.7, mpv3.8, Error ellipse: s-maj=83.0km s-min=68.3km az=5.0*
ISC 28 14:31:02.8±2.2, 37.°1N±0.°2×70.°7E±0.°1, h100km, n17, σ1ş88/22, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.52**	**24**	P	**Pn**	**14 32 22.9**	**0.0**
	SNR=43						
UCH	**Uchtor**	**5.89**	**29**	P	**Pn**	**14 32 27.8**	**-0.2**
	SNR=8.2						
KK31	**Karatay Array**	**6.00**	**359**	⇑P	**Pn**	**14 32 30.5**	**+1.6**
	2.8nm,0.3s,baz=181,slow=13						
KK31				⇑S	**Sn**	**14 33 39.1**	**+2.9**
	7.6nm,0.5s,baz=187,slow=26						
EKS2	**Erkin-Say**	**6.03**	**22**	P	**Pn**	**14 32 30.4**	**+0.9**
	SNR=18						
AAK	**Ala-Archa**	**6.24**	**27**	P	**Pn**	**14 32 32.7**	**+0.3**
	2.6nm,0.3s,baz=177,slow=6.1,SNR=45						
AAK				S	**Sn**	**14 33 44.9**	**+2.5**
	0.6nm,0.3s,baz=149,slow=23,SNR=7.8						
**A

ellipse: s-maj=7.2km s-min=4.7km az=73.3
*NEIC **28** 14:49:33.7±3.1,38°.25N±0°.06×20°.44E±0°.06,h10km±1km, mb4.5/14,ML4.1(THE),Error ellipse: s-maj=10.5km s-min=7.8km az=192.0*
*PDG **28** 14:49:33.3±0.2,38°.20N×20°.41E,h23km,ML4.2/14,Error ellipse: s-maj=0.5km s-min=0.4km az=90.0*
*ATH **28** 14:49:33.7,38°.21N×20°.46E,h18km,ML4.0/27,Error ellipse: s-maj=1.7km s-min=0.8km az=70.0*
*THE **28** 14:49:34.8,38°.23N×20°.49E,h12km,ML4.1/10,Error ellipse: s-maj=0.7km s-min=0.3km az=241.0*
*TIR **28** 14:49:35.2,38°.46N×20°.16E,h12km,Md4.2/12*
*IDC **28** 14:49:37.7±1.7,38°.25N×20°.45E,h50km±17km,mb3.8/12, mb1 4.0/19,mb1mx3.8/38,mbtmp4.0/19,ML3.6/7,MS3.1/2, Ms1 3.2/2,ms1mx2.7/38,Error ellipse: s-maj=17.4km s-min=15.2km az=22.0*

ISC 28 14:49:34.3±0.6,38°23N±0°.02×20°44E±0°.03,h16km±4km, n333,σ1§52/404,mb4.2/27,13C-10D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.07**	**221**	P	**Pg**	**14 49 37.4**	**0.0**
CHV1				S	**Sg**	**14 49 39.9**	**+0.5**
ARG2	**Argostoli**	**0.07**	**145**	P	**Pg**	**14 49 37.2**	**-0.2**
ARG2				S	**Sg**	**14 49 38.8**	**-0.6**
KEF2	**Argostoli. Kep**	**0.08**	**151**	P	**Pg**	**14 49 37.3**	**-0.2**
KEF2				S	**Sg**	**14 49 39.6**	**0.0**
VLS	**Valsamata**	**0.13**	**115**	P	**Pg**	**14 49 37.7**	**-0.4**
VLS				S	**Sg**	**14 49 39.3**	**-1.3**
	264μm,0.2s						
VLS	**Valsamata**	**0.13**	**115**	P	**Pg**	**14 49 37.4**	**-0.7**
VLS	**Valsamata**	**0.13**	**115**	P	**Pg**	**14 49 37.5**	**-0.7**
VLS				S	**Sg**	**14 49 40.1**	**-0.5**
VLS				AML	AML	14 49 40.4	
VLS				AML	AML	14 49 40.5	
FSK	**Fiskardo**	**0.24**	**23**	P	**Pg**	**14 49 39.9**	**+0.1**
FSK				S	**Sg**	**14 49 42.9**	**-0.6**
	50μm,0.2s						
FSK	**Fiskardo**	**0.24**	**23**	P	**Pg**	**14 49 39.8**	**0.0**
FSK				S	**Sg**	**14 49 43.9**	**+0.4**
KFL	**Anninata**	**0.30**	**114**	P	**Pg**	**14 49 40.1**	**-0.6**
KFL				S	**Sg**	**14 49 44.2**	**-0.9**
	183μm,0.2s						
KFL	**Anninata**	**0.30**	**114**	P	**Pg**	**14 49 40.2**	**-0.5**
KFL				S	**Sg**	**14 49 44.8**	**-0.3**
KFL				AML	AML	14 49 45.3	
KFL				AML	AML	14 49 45.7	
VLMS	**Volimes, Zakyn**	**0.40**	**154**	P	**Pg**	**14 49 41.7**	**-0.7**
VLMS				S	**Sg**	**14 49 47.2**	**-0.7**
VLMS				AML	AML	14 49 51.8	
VLMS				AML	AML	14 49 53.5	
EVGI	**Lefkada island**	**0.42**	**24**	P	**Pg**	**14 49 42.7**	**-0.2**
EVGI	**Lefkada island**	**0.42**	**24**	P	**Pg**	**14 49 42.7**	**-0.2**
EVGI				S	**Sb**	**14 49 49.3**	**-0.3**
MGNA	**Meganis**	**0.50**	**33**	P	**Pg**	**14 49 43.8**	**-0.5**
MGNA				S	**Sg**	**14 49 51.3**	**+0.2**
MGNA				AML	AML	14 49 52.0	
	comp=N,30724μm,0.5s						
MGNA				AML	AML	14 49 52.6	
	comp=E,40833μm,0.2s						
LKD2	**Lefkada island**	**0.58**	**17**	P	**Pg**	**14 49 45.4**	**-0.4**
LKD2				S	**Sb**	**14 49 54.4**	**+0.3**
	comp=E,10μm,0.4s						
LKD2	**Lefkada island**	**0.58**	**17**	P	**Pg**	**14 49 45.4**	**-0.4**
LKD2				AML	AML	14 50 01.6	
	comp=E,23705μm,0.5s						
LKD2				AML	AML	14 50 04.0	
	comp=N,16782μm,0.4s						
TSLK	**Tsoukalades, L**	**0.61**	**16**	P	**Pg**	**14 49 46.1**	**-0.3**
TSLK				S	**Sb**	**14 49 55.5**	**+0.4**
	comp=N,11μm,0.6s						
TSLK	**Tsoukalades, L**	**0.61**	**16**	P	**Pg**	**14 49 46.1**	**-0.3**
TSLK				S	**Sb**	**14 49 55.3**	**+0.3**
PDO	**Prodromos**	**0.69**	**58**	P	**Pg**	**14 49 47.4**	**-0.4**
PDO				AML	AML	14 50 02.2	
	comp=N,42666μm,0.4s						
PDO				AML	AML	14 50 04.5	
	comp=E,43819μm,0.6s						
RLS	**Riolos of Patr**	**0.83**	**102**	P	**Pb**	**14 49 49.2**	**-1.1**
RLS				S	**Sg**	**14 50 01.4**	**0.0**
	comp=E,7μm,0.5s						
RLS	**Riolos of Patr**	**0.83**	**102**	P	**Pb**	**14 49 49.3**	**-1.1**
RLS				AML	AML	14 50 08.0	
	comp=E,13911μm,0.5s						
RLS				AML	AML	14 50 08.3	
	comp=N,14245μm,0.5s						
PVO	**Paravola**	**0.94**	**66**	P	**Pb**	**14 49 51.9**	**-0.2**
PVO				S	**Sg**	**14 50 05.2**	**+0.5**
	comp=N,18μm,0.4s						
PVO	**Paravola**	**0.94**	**66**	P	**Pb**	**14 49 52.0**	**-0.2**
PVO				AML	AML	14 50 07.7	
	comp=N,37953μm,0.4s						
PVO				AML	AML	14 50 12.7	
	comp=E,35266μm,0.5s						
DRO	**Drossia**	**1.04**	**105**	P	**Pb**	**14 49 53.2**	**-0.8**
DRO				S	**Sn**	**14 50 08.4**	**-0.1**
	comp=E,12μm,0.5s						
DRO	**Drossia**	**1.04**	**105**	P	**Pb**	**14 49 53.0**	**-1.0**
UPR	**University Cam**	**1.06**	**87**	P	**Pb**	**14 49 54.0**	**-0.3**
UPR	**University Cam**	**1.06**	**87**	P	**Pb**	**14 49 54.0**	**-0.3**
EFP	**Efpalio**	**1.17**	**80**	P	**Pn**	**14 49 55.3**	**-0.7**
EFP	**Efpalio**	**1.17**	**80**	P	**Pn**	**14 49 55.1**	**-0.9**
EFP				AML	AML	14 50 19.2	
	comp=E,15858μm,0.5s						
EFP				AML	AML	14 50 19.9	
	comp=N,16331μm,0.4s						
LAKA	**Lakka**	**1.21**	**89**	P	**Pn**	**14 49 55.9**	**-0.7**
LAKA				S	**Sb**	**14 50 12.4**	**+0.1**
LAKA	**Lakka**	**1.21**	**89**	P	**Pn**	**14 49 55.9**	**-0.7**
LAKA				S	**Sg**	**14 50 13.3**	**-0.3**
LAKA				AML	AML	14 50 22.5	
	comp=N,6052μm,0.7s						
LAKA				AML	AML	14 50 29.0	
	comp=E,5136μm,0.9s						
ANX	**Ano Chora**	**1.22**	**72**	P	**Pn**	**14 49 56.6**	**-0.1**
ANX	**Ano Chora**	**1.22**	**72**	P	**Pn**	**14 49 56.7**	**-0.1**
ANX				AML	AML	14 50 19.4	
	comp=E,24054μm,0.6s						
ANX				AML	AML	14 50 19.7	
	comp=N,28292μm,0.5s						
AMT	**Artemida-Makis**	**1.23**	**124**	P	**Pb**	**14 49 57.0**	**-0.1**
AMT	**Artemida-Makis**	**1.23**	**124**	P	**Pb**	**14 49 57.0**	**-0.1**
AMT				AML	AML	14 50 21.7	
	comp=E,14807μm,0.7s						
AMT				AML	AML	14 50 24.6	
	comp=N,16032μm,0.6s						
EVR	**Evrytania**	**1.27**	**57**	P	**Pn**	**14 49 57.2**	**-0.3**
EVR	**Evrytania**	**1.27**	**57**	P	**Pn**	**14 49 57.5**	**0.0**
EVR				AML	AML	14 50 22.6	
	comp=E,5928μm,0.8s						
EVR				AML	AML	14 50 22.6	
	comp=N,9413μm,1.0s						
SERG	**Sergoula**	**1.28**	**82**	P	**Pn**	**14 49 57.3**	**-0.3**
SERG	**Sergoula**	**1.28**	**82**	P	**Pn**	**14 49 57.5**	**-0.2**
SERG				AML	AML	14 50 22.0	
	comp=N,9180μm,0.4s						
SERG				AML	AML	14 50 22.4	
	comp=E,7710μm,0.4s						
TRIZ	**Trizonia**	**1.29**	**84**	P	**Pn**	**14 49 57.1**	**-0.5**
TRIZ	**Trizonia**	**1.29**	**84**	P	**Pn**	**14 49 57.1**	**-0.5**
ALIK	**Aliki, Aigiali**	**1.32**	**88**	P	**Pn**	**14 49 57.7**	**-0.3**
KALE	**Kalithea**	**1.35**	**83**	P	**Pn**	**14 49 57.9**	**-0.6**
KALE	**Kalithea**	**1.35**	**83**	P	**Pn**	**14 49 58.0**	**-0.5**
KALE				AML	AML	14 50 25.0	
	comp=N,7814μm,0.4s						
KALE				AML	AML	14 50 25.4	
	comp=E,5818μm,0.3s						
KLV	**Kalavryta, Ach**	**1.36**	**97**	P	**Pn**	**14 49 58.6**	**-0.1**
KLV	**Kalavryta, Ach**	**1.36**	**97**	P	**Pn**	**14 49 58.7**	**-0.1**
KLV				AML	AML	14 50 26.6	
	comp=N,3639μm,0.7s						
KLV				AML	AML	14 50 30.5	
	comp=E,4232μm,0.5s						
JAN	**Janina**	**1.46**	**13**	P	**Pn**	**14 50 00.1**	**+0.1**
JAN				S	**Sb**	**14 50 20.2**	**+0.9**
	comp=E,4μm,0.4s						
JAN	**Janina**	**1.46**	**13**	P	**Pb**	**14 50 01.6**	**+0.5**
JAN	**Janina**	**1.46**	**13**	P	**Pb**	**14 50 01.6**	**+0.5**
JAN				AML	AML	14 50 25.9	
	comp=N,6764μm,0.4s						
JAN				AML	AML	14 50 31.1	
	comp=E,8907μm,0.4s						
MAKR	**Makrakomi, Fth**	**1.54**	**59**	P	**Pb**	**14 50 02.5**	**0.0**
MAKR				AML	AML	14 50 31.7	
	comp=E,11267μm,0.3s						
MAKR				AML	AML	14 50 34.5	
	comp=N,12132μm,0.8s						
KASA	**Kassiopi**	**1.56**	**346**	P	**Pb**	**14 50 02.7**	**-0.1**
KASA				AML	AML	14 50 28.2	
	comp=N,6711μm,0.5s						
KASA				AML	AML	14 50 31.1	
	comp=E,8604μm,0.3s						
ITM	**Ithomi**	**1.58**	**131**	P	**Pb**	**14 50 02.9**	**-0.3**
ITM				AML	AML	14 50 37.7	
	comp=E,3400μm,0.6s						
ITM				AML	AML	14 50 39.5	
	comp=N,3204μm,0.4s						
ITM	**Ithomi**	**1.58**	**131**		**Pb**	**14 50 02.7**	**-0.4**
DLFA	**Delphi**	**1.64**	**81**	P	**Pb**	**14 50 04.0**	**-0.1**
AGG	**Agios Georgios**	**1.68**	**61**	P	**Pb**	**14 50 04.9**	**+0.1**
AGG	**Agios Georgios**	**1.68**	**61**	P	**Pb**	**14 50 04.7**	**-0.1**
AGG				AML	AML	14 50 31.6	
	comp=N,4805μm,0.9s						
AGG				AML	AML	14 50 36.9	
	comp=E,4037μm,0.5s						
AGG	**Agios Georgios**	**1.68**	**61**		**Pb**	**14 50 04.9**	**+0.1**
SRN	**Sarande**	**1.68**	**348**	P	**Pn**	**14 50 03.7**	**+0.7**
SRN	**Sarande**	**1.68**	**348**	*i* PN	**Pn**	**14 50 03.8**	**+0.9**
SRN				*i* SN	**Sn**	**14 50 22.6**	**-1.6**
PYL	**PYLOS**	**1.69**	**142**	P	**Pn**	**14 50 03.6**	**+0.4**
VLX	**Vlachokerasia**	**1.76**	**119**	P	**Pb**	**14 50 06.1**	**-0.2**
THL	**Klokotos Trika**	**1.81**	**42**	P	**Pb**	**14 50 07.1**	**+0.1**
THL				AML	AML	14 50 36.4	
	comp=N,4875μm,0.9s						
THL				AML	AML	14 50 37.6	
	comp=E,6012μm,0.8s						
AXAR	**Agios Charalam**	**1.82**	**72**	P	**Pb**	**14 50 06.7**	**-0.6**
AXAR				AML	AML	14 50 41.1	
	comp=E,8056μm,0.9s						
AXAR				AML	AML	14 50 48.0	
	comp=N,11535μm,0.8s						
KPRO	**Kipourio**	**1.86**	**22**	P	**Pb**	**14 50 07.8**	**-0.2**
KPRO				AML	AML	14 50 42.5	
	comp=E,4446μm,0.5s						
KPRO				AML	AML	14 50 45.2	
	comp=N,5329μm,0.5s						
PROD	**Prodromos**	**1.94**	**89**	P	**Pb**	**14 50 08.1**	**-1.2**
PROD				AML	AML	14 50 46.5	
	comp=E,3439μm,0.5s						
PROD				AML	AML	14 50 46.5	
	comp=N,3115μm,0.7s						
LTK	**Loutraki**	**2.00**	**95**	P	**Pb**	**14 50 08.9**	**-1.4**
LOUT	**Loutraki**	**2.02**	**96**	P	**Pn**	**14 50 09.0**	**+1.3**
PENT	**Pentalofos**	**2.03**	**15**	P	**Pb**	**14 50 10.7**	**-0.2**
LKR	**Lokris**	**2.05**	**78**	P	**Pb**	**14 50 09.9**	**-1.2**
TPE	**Tepelena**	**2.08**	**351**	P	**Pn**	**14 50 09.3**	**+0.7**
TPE	**Tepelena**	**2.08**	**351**	*i* PN	**Pn**	**14 50 09.9**	**+1.3**
TPE				*i* SN	**Sn**	**14 50 35.3**	**+1.1**
NEST	**Nestorio**	**2.23**	**12**	P	**Pb**	**14 50 13.2**	**-1.0**
VIL2	**Platees**	**2.23**	**90**	P	**Pb**	**14 50 12.5**	**-1.7**
KZN	**Kozani**	**2.31**	**26**	P	**Pn**	**14 50 12.1**	**+0.3**
KZN	**Kozani**	**2.31**	**26**	P	**Pb**	**14 50 14.2**	**-1.5**
KZN	**Kozani**	**2.31**	**26**	P	**Pb**	**14 50 14.0**	**-1.7**
KZN				AML	AML	14 50 55.4	
	comp=E,2336μm,0.4s						
KZN				AML	AML	14 51 02.3	
	comp=N,1610μm,0.7s						
DID	**Didima**	**2.33**	**107**	P	**Pn**	**14 50 12.9**	**+0.9**
DID				AML	AML	14 50 57.8	
	comp=N,4132μm,0.7s						
DID				AML	AML	14 50 58.9	
	comp=E,2712μm,0.6s						
VLO	**Vlora**	**2.35**	**342**	*i* PN	**Pn**	**14 50 12.5**	**+0.4**
VLO				*i* SN	**Sn**	**14 50 41.8**	**+1.1**
SCTE	**Santa Cesarea**	**2.39**	**321**	P	**Pn**	**14 50 13.8**	**+1.1**
SCTE	**Santa Cesarea**	**2.39**	**321**			**14 50 13.4**	**+0.6**
NEO	**Neokhori**	**2.43**	**63**	P	**Pn**	**14 50 14.9**	**+1.6**
XOR	**Xorichti**	**2.43**	**61**	P	**Pn**	**14 50 15.0**	**+1.6**
LIT	**Litokhoron**	**2.45**	**40**	P	**Pb**	**14 50 16.1**	**-1.9**
LIT	**Litokhoron**	**2.45**	**40**	P	**Pb**	**14 50 16.1**	**-1.9**
LIT	**Litokhoron**	**2.45**	**40**		**Pb**	**14 50 16.1**	**-1.9**
VLI	**Veliai**	**2.50**	**127**	P	**Pb**	**14 50 16.6**	**-2.2**
MRKA	**Markates**	**2.52**	**78**	P	**Pn**	**14 50 16.0**	**+1.5**
SKIA	**Skiathos**	**2.54**	**68**	P	**Pn**	**14 50 16.7**	**+1.8**
YDRA	**Hydra**	**2.56**	**109**	P	**Pn**	**14 50 16.2**	**+1.2**
ATH	**Athens Observa**	**2.60**	**95**	P	**Pn**	**14 50 17.4**	**+1.8**
ATH	**Athens Observa**	**2.60**	**95**	P	**Pn**	**14 50 17.1**	**+1.5**
FNA	**Florina**	**2.65**	**16**	P	**Pn**	**14 50 18.0**	**+1.6**
FNA	**Florina**	**2.65**	**16**	P	**Pn**	**14 50 18.3**	**+1.9**
FNA	**Florina**	**2.65**	**16**		**Pn**	**14 50 18.0**	**+1.6**
ATHU	**Athens Univers**	**2.65**	**95**	P	**Pn**	**14 50 17.7**	**+1.3**
VLY	**Voula,Athens**	**2.68**	**97**	P	**Pn**	**14 50 18.1**	**+1.4**
PTL	**Penteli**	**2.71**	**93**	P	**Pn**	**14 50 18.4**	**+1.3**
EREA	**Eretria**	**2.75**	**85**	P	**Pn**	**14 50 19.4**	**+1.6**
ALNA	**Alonissos**	**2.83**	**70**	P	**Pn**	**14 50 20.2**	**+1.3**
AOS	**Alonnisos**	**2.85**	**70**	P	**Pn**	**14 50 20.2**	**+1.1**
KTHA	**Kythira Island**	**2.88**	**133**	P	**Pn**	**14 50 21.5**	**+2.0**
OHR	**Ohrid**	**2.89**	**5**	*i* Pn	**Pn**	**14 50 22.1**	**+2.4**
TIP	**Timpagrande**	**3.03**	**289**	P	**Pn**	**14 50 22.8**	**+1.2**
TIP	**Timpagrande**	**3.03**	**289**	⇑P	**Pn**	**14 50 22.6**	**+1.0**
TIP	**Timpagrande**	**3.03**	**289**	⇓S	**Sn**	**14 50 59.8**	**+2.2**
TIP	**Timpagrande**	**3.03**	**289**		**Pn**	**14 50 22.4**	**+0.8**
PAIG	**Paliouri**	**3.04**	**55**	P	**Pn**	**14 50 22.8**	**+1.1**
GRI2	**Griva**	**3.11**	**29**	P	**Pn**	**14 50 24.1**	**+1.4**
HORT	**Hortiatis**	**3.13**	**40**	P	**Pn**	**14 50 24.3**	**+1.2**
TIR	**Tirane**	**3.14**	**352**	P	**Pn**	**14 50 24.2**	**+1.1**
TIR				S	**Sn**	**14 51 02.7**	**+2.5**
TIR	**Tirane**	**3.14**	**352**	*i* PN	**Pb**	**14 50 29.3**	**-0.4**
TIR				*i* SN	**Sn**	**14 51 02.7**	**+2.5**
TIR	**Tirane**	**3.14**	**352**	P	**Pn**	**14 50 24.1**	**+1.1**
TIR	**Tirane**	**3.14**	**352**	⇑P	**Pn**	**14 50 23.4**	**+0.3**
TIR	**Tirane**	**3.14**	**352**	⇓S	**Sn**	**14 50 59.9**	**-0.3**
TIR	**Tirane**	**3.14**	**352**		**Pn**	**14 50 24.1**	**+1.1**
KARY	**Karystos**	**3.16**	**92**	P	**Pn**	**14 50 24.4**	**+1.0**
CGL1	**Ceglie Messapi**	**3.33**	**317**	*e*Pn	**Pn**	**14 50 26.1**	**+0.4**
TAR1	**Taranto**	**3.35**	**314**	*e*Pn	**Pn**	**14 50 26.8**	**+0.9**
SOH	**Sokhos**	**3.43**	**40**	P	**Pn**	**14 50 29.4**	**+2.3**
PHP	**Peshkopia**	**3.45**	**0**	*i* PN	**Pn**	**14 50 28.8**	**+1.5**
PHP				*i* SN	**Sn**	**14 51 10.9**	**+3.0**
KNT	**Kendrikon**	**3.49**	**32**	P	**Pn**	**14 50 29.3**	**+1.4**
VAY	**Valandovo**	**3.49**	**27**	*i* Pn	**Pn**	**14 50 29.2**	**+1.3**
MASS	**Massafra**	**3.50**	**314**	*e*Pn	**Pn**	**14 50 28.7**	**+0.7**
MASS					Sn	**Sn**	**14 51 09.0**	**-0.1**
CEL	**Celeste**	**3.58**	**272**	Pn	**Pn**	**14 50 29.0**	**-0.1**
NOCI	**Noci**	**3.65**	**315**	P	**Pn**	**14 50 30.9**	**+0.8**
STIP	**Stip**	**3.71**	**21**	*i* Pn	**Pn**	**14 50 33.7**	**+2.8**
MATE	**Matera**	**3.76**	**311**	⇓P	**Pn**	**14 50 33.2**	**+1.6**
SRS	**Serrai**	**3.77**	**39**	P	**Pn**	**14 50 33.2**	**+1.4**
SKO	**Skopje**	**3.81**	**11**	*i* Pn	**Pn**	**14 50 33.5**	**+1.2**
PUK	**Puka**	**3.83**	**354**	*i* PN	**Pn**	**14 50 33.5**	**+0.9**
PUK				*i* SN	**Sn**	**14 51 20.1**	**+2.9**
ULC	**Ulcinj**	**3.84**	**347**	*e*Pn	**Pn**	**14 50 32.6**	**-0.1**
ULC				*e*Sn	**Sn**	**14 51 17.8**	**+0.4**
SG1	**Sgolgore (BA)**	**3.90**	**313**	*e*Pn	**Pn**	**14 50 34.2**	**+0.6**
SG1				Sn	**Sn**	**14 51 18.4**	**-0.6**
IMMV	**Iera Moni Meta**	**3.97**	**133**	P	**Pn**	**14 50 35.8**	**+1.3**
BAI	**Bari**	**3.97**	**317**	*e*Pn	**Pn**	**14 50 35.1**	**+0.6**
DRME	**Dracevica, Mon**	**4.06**	**347**	*e*Pn	**Pn**	**14 50 36.1**	**+0.3**
DRME	**Dracevica, Mon**	**4.06**	**347**	*e*Pn	**Pn**	**14 50 36.1**	**+0.3**
DRME	**Dracevica, Mon**	**4.06**	**347**	*e*Pn	**Pn**	**14 50 36.1**	**+0.3**
DRME				*e*Sn	**Sn**	**14 51 23.2**	**+0.2**
VAM	**Vamos**	**4.13**	**132**	P	**Pn**	**14 50 37.9**	**+1.2**
BCI	**Bajram Curri**	**4.14**	**356**	*i* PN		15 50 38.4	
BCI				*i* SN		15 51 27.8	
KAVA	**Kavala**	**4.18**	**47**	P	**Pn**	**14 50 38.9**	**+1.5**
APE	**Apeiranthos**	**4.21**	**104**	P	**Pn**	**14 50 39.0**	**+1.2**
APE				S	**Sn**	**14 51 30.6**	**+4.0**
APE	**Apeiranthos**	**4.21**	**104**	⇑P	**Pn**	**14 50 41.5**	**+3.7**
BUM	**Brajici-Budva**	**4.23**	**344**	*e*Pn	**Pn**	**14 50 38.2**	**+0.1**
BUM				*e*Sn	**Sn**	**14 51 27.5**	**+0.3**
PDG	**Podgorica**	**4.29**	**348**	⇑P	**Pn**	**14 50 39.2**	**+0.4**
PDG	**Podgorica**	**4.29**	**348**	⇓S	**Sn**	**14 51 29.0**	**+0.5**
PDG	**Podgorica**	**4.29**	**348**	*e*Pn	**Pn**	**14 50 38.6**	**-0.2**
PDG	**Podgorica**	**4.29**	**348**	*e*Pn	**Pn**	**14 50 38.6**	**-0.2**
PDG	**Podgorica**	**4.29**	**348**		**Pn**	**14 50 38.5**	**-0.4**
TTG	**Podgorica**	**4.29**	**348**	*e*Pn	**Pn**	**14 50 38.8**	**0.0**
TTG				*e*Sn	**Sn**	**14 51 28.7**	**+0.2**
ACER	**Acerenza**	**4.31**	**308**		**Pn**	**14 50 40.1**	**+0.9**
SIGR	**SIGRI**	**4.35**	**75**	P	**Pn**	**14 50 41.5**	**+1.9**
PVY	**Plav**	**4.37**	**355**	*e*Pn	**Pn**	**14 50 40.3**	**+0.2**
PVY				*e*Sn	**Sn**	**14 51 30.7**	**-0.1**
SANT	**Santorini**	**4.41**	**113**	Pn	**Pn**	**14 50 42.4**	**+1.7**
CEME	**Cevo**	**4.46**	**345**	*e*Pn	**Pn**	**14 50 41.1**	**-0.2**
CEME				*e*Sn	**Sn**	**14 51 32.7**	**-0.2**
HCY	**Herceg Novi**	**4.46**	**341**	*e*Pn	**Pn**	**14 50 40.5**	**-0.8**
HCY	**Herceg Novi**	**4.46**	**341**	*e*Pn	**Pn**	**14 50 40.5**	**-0.8**
HCY	**Herceg Novi**	**4.46**	**341**	*e*Pn	**Pn**	**14 50 40.5**	**-0.8**
HCY				*e*Sn	**Sn**	**14 51 32.5**	**-0.3**
IDI	**Anoyia**	**4.63**	**128**	P	**Pn**	**14 50 43.6**	**0.0**
	comp=E,0.6nm,0.3s,baz=322,slow=17,SNR=4.5						
IDI				S	**Sn**	**14 51 35.0**	**-2.0**
	comp=E,9.5nm,0.3s,baz=83,slow=19,SNR=8.8						
IDI				LR	LR	14 52 39.7	
	comp=E,171nm,18.9s,baz=266,slow=39						
IVA	**Berane**	**4.65**	**355**	*e*Pn	**Pn**	**14 50 44.1**	**+0.2**
IVA				*e*Sn	**Sn**	**14 51 37.7**	**+0.1**
KOME	**Kolasin**	**4.67**	**352**	*e*Pn	**Pn**	**14 50 44.5**	**+0.4**
KOME				*e*Sn	**Sn**	**14 51 37.8**	**-0.1**
NKME	**Niksic**	**4.67**	**346**	*e*Pn	**Pn**	**14 50 44.1**	**0.0**
NKME				*e*Sn	**Sn**	**14 51 38.1**	**+0.2**
NKY	**Niksic**	**4.70**	**347**	*e*Pn	**Pn**	**14 50 44.7**	**0.0**
NKY				*e*Sn	**Sn**	**14 51 38.6**	**-0.4**
TREB	**Trebinje**	**4.75**	**341**	*e*Pn	**Pn**	**14 50 44.2**	**-1.0**
TREB	**Trebinje**	**4.75**	**341**	*e*Pn	**Pn**	**14 50 44.2**	**-1.0**
DBRK	**Dubrovnik**	**4.76**	**339**	*e*Pn	**Pn**	**14 50 44.8**	**-0.5**
DBRK				Sn	**Sn**	**14 51 37.2**	**-3.0**
VAE	**Valguarnera**	**4.83**	**263**	P	**Pn**	**14 50 48.5**	**+2.2**
	comp=E,2.1nm,0.3s,baz=37,slow=10,SNR=1.9						
VAE				S	**Sn**	**14 51 44.5**	**+2.5**
	comp=E,3.4nm,0.3s,baz=223,slow=19,SNR=3.2						
VTS	**Vitosha**	**4.87**	**25**	P	**Pn**	**14 50 47.6**	**+0.6**
VTS				S	**Sn**	**14 51 43.8**	**+0.7**
VTS	**Vitosha**	**4.87**	**25**	⇑P	**Pn**	**14 50 47.6**	**+0.6**
VTS	**Vitosha**	**4.87**	**25**		**Pn**	**14 50 47.9**	**+0.9**
BRY	**Bratogost**	**4.88**	**343**	*e*Pn	**Pn**	**14 50 46.6**	**-0.5**
BRY	**Bratogost**	**4.88**	**343**	*e*Pn	**Pn**	**14 50 46.6**	**-0.5**
BRY	**Bratogost**	**4.88**	**343**	*e*Pn	**Pn**	**14 50 47.0**	**-0.1**
BRY				*e*Sn	**Sn**	**14 51 42.7**	**-0.7**
SGRT	**San Giovanni R**	**5.04**	**316**		**Pn**	**14 50 49.1**	**-0.1**
STON	**Ston**	**5.08**	**337**	*e*Pn	**Pn**	**14 50 49.3**	**-0.4**
STON				Sn	**Sn**	**14 51 45.0**	**-3.0**
STON	**Ston**	**5.08**	**337**	*e*Pn	**Pn**	**14 50 48.5**	**-1.2**
STON	**Ston**	**5.08**	**337**	*e*Pn	**Pn**	**14 50 48.5**	**-1.2**
ALN	**Alexandroupoli**	**5.08**	**57**	P	**Pn**	**14 50 50.7**	**+0.9**
ALN	**Alexandroupoli**	**5.08**	**57**	Pn	**Pn**	**14 50 50.7**	**+0.9**
UPM	**Unac-Piva**	**5.10**	**347**	*e*Pn	**Pn**	**14 50 50.6**	**+0.4**
UPM	**Unac-Piva**	**5.10**	**347**	*e*Pn	**Pn**	**14 50 50.6**	**+0.4**
UPM	**Unac-Piva**	**5.10**	**347**	*e*Pn	**Pn**	**14 50 50.1**	**-0.1**
UPM				*e*Sn	**Sn**	**14 51 47.9**	**-0.9**
PLE	**Pljevlja**	**5.15**	**351**	*e*Pn	**Pn**	**14 50 50.9**	**+0.1**
PLE				*e*Sn	**Sn**	**14 51 49.3**	**-0.7**
WDD	**Wied Dalam**	**5.30**	**245**	Pn	**Pn**	**14 50 52.9**	**+0.1**
PAOL	**Paolisi**	**5.32**	**303**		**Pn**	**14 50 55.1**	**+2.0**
RUDO	**Rudo**	**5.44**	**352**	*e*Pn	**Pn**	**14 50 54.3**	**-0.4**
RUDO	**Rudo**	**5.44**	**352**	*e*Pn	**Pn**	**14 50 54.3**	**-0.4**
CORL	**Corleone**	**5.64**	**269**	Pn	**Pn**	**14 50 58.3**	**+0.8**
MAKA	**Makarska**	**5.68**	**334**	*e*Pn	**Pn**	**14 50 57.8**	**-0.1**
MAKA				Sn	**Sn**	**14 51 59.6**	**-3.1**
BBLS	**Lazići**	**5.68**	**352**	*e*Pn	**Pn**	**14 50 58.1**	**+0.1**
BBLS	**Lazići**	**5.68**	**352**	*e*Pn	**Pn**	**14 50 58.1**	**+0.1**
CLTB	**Caltabellotta**	**5.75**	**266**	Pn	**Pn**	**14 51 00.4**	**+1.3**
DIVS	**Divibare**	**5.87**	**357**	*e*Pn	**Pn**	**14 50 59.9**	**-0.7**
DIVS	**Divibare**	**5.87**	**357**	*e*Pn	**Pn**	**14 50 59.9**	**-0.7**
HAPS	**Han Pijesak,Bl**	**5.95**	**350**	*e*Pn	**Pn**	**14 51 00.6**	**-1.2**
HAPS	**Han Pijesak,Bl**	**5.95**	**350**	*e*Pn	**Pn**	**14 51 00.6**	**-1.2**
PLVB	**Pleven**	**6.05**	**

WATA	**Walderalm**	**11.18**	**327**	*i* Pn		**Pn**	**14 52 15.2**	**+1.7**
	comp=E,2.9nm,0.2s							
WATA				*i* Sn		**Sn**	**14 54 15.1**	**-3.0**
	comp=E,5.2nm,0.3s							
SQTA	**Sankt Quirin**	**11.25**	**326**	*i* Pn		**Pn**	**14 52 16.8**	**+2.4**
	comp=E,4.0nm,0.3s							
SQTA				*e*Sn		**Sn**	**14 54 15.8**	**-4.0**
	comp=E,3.0nm,0.3s							
FUORN	**Ofenpass-Fuorn**	**11.25**	**321**	Pn		**Pn**	**14 52 15.6**	**+1.0**
MOTA	**Moosalm**	**11.39**	**326**	*e*Pn		**Pn**	**14 52 17.9**	**+1.6**
	comp=E,4.1nm,0.4s,SNR=5.0							
MOTA				*i* Sn		**Sn**	**14 54 22.1**	**-1.3**
	comp=E,2.6nm,0.3s							
DAVOX	**Davos/Dischmat**	**11.55**	**321**	P		**Pn**	**14 52 21.3**	**+2.7**
	comp=E,0.9nm,0.3s,baz=123,slow=10,SNR=3.1							
DAVOX				S		**Sn**	**14 54 24.2**	**-3.1**
	comp=E,0.6nm,0.3s,baz=311,slow=20,SNR=3.7							
GEC2	**GERESS Array S**	**11.67**	**337**	Pn		**Pn**	**14 52 19.7**	**-0.5**
GERES	**GERESS Array B**	**11.67**	**337**	P		**Pn**	**14 52 19.8**	**-0.5**
	comp=E,0.7nm,0.3s,baz=156,slow=14,SNR=13							
GERES				S		**Sn**	**14 54 24.1**	**-6.0**
	comp=E,0.3nm,0.3s,baz=163,slow=24,SNR=4.0							
GERES	**GERESS Array B**	**11.67**	**337**	Pn		**Pn**	**14 52 19.6**	**-0.6**
KHC	**Kasperske Hory**	**11.96**	**338**	*e*P		**Pn**	**14 52 22.7**	**-1.4**
KHC				*e*			14 54 31.0	
KHC	**Kasperske Hory**	**11.96**	**338**	*e*PN		**Pn**	**14 52 22.7**	**-1.4**
KHC				*e*SN		**Sn**	**14 54 31.0**	**-6.2**
KHC	**Kasperske Hory**	**11.96**	**338**	Pn		**Pn**	**14 52 22.6**	**-1.5**
SENIN	**Lac Senin/Sane**	**12.66**	**314**	Pn		**Pn**	**14 52 34.5**	**+0.7**
ECH	**Echery**	**13.88**	**320**	P		**Pn**	**14 52 51.4**	**+1.1**
ECH	**Echery**	**13.88**	**320**	Pn		**Pn**	**14 52 51.4**	**+1.1**
KIV	**Kislovodsk**	**17.70**	**64**	*e*P		**P**	**14 53 41.5**	**+0.6**
KIV				pmax	pmax			
	comp=Z,20nm,1.0s							
KBZ	**Khabaz**	**17.80**	**65**	P		**P**	**14 53 42.9**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=276,slow=11,SNR=8.4							
GOF	**Gofitskoye**	**18.19**	**61**⇑	*e*P		**P**	**14 53 49.9**	**+3.7**
ZEI	**Tsey**	**18.39**	**68**	*e*P		**Pn**	**14 53 49.6**	**+0.9**
ZEI				pmax	pmax			
	comp=Z,3.0nm,0.5s							
OBN	**Obninsk**	**20.10**	**28**	*e*P		Pn	14 54 09.7	+0.8
OBN				pmax	pmax			
	comp=Z,7.0nm,0.4s							
VSU	**Vasula**	**20.65**	**9**	*de*P		**P**	**14 54 13.1**	**+0.1**
VSU				pmax	pmax			
	comp=Z,105nm,0.8s							
HFS	**Hagfors**	**22.34**	**351**	P		**P**	**14 54 31.2**	**+0.1**
	comp=Z,10nm,0.8s,baz=163,slow=11,SNR=27							
NC602	**NORSAR Array S**	**23.21**	**349**	P		**P**	**14 54 39.4**	**-0.8**
EKA	**Eskdalemuir Ar**	**23.34**	**325**	P		**P**	**14 54 41.6**	**0.0**
	comp=Z,5.0nm,0.9s,baz=125,slow=10,SNR=5.1							
NAO01	**NORSAR Array S**	**23.42**	**348**	P		**P**	**14 54 42.8**	**+0.5**
FINES	**FINESS Array B**	**23.50**	**7**	*i* P		**P**	**14 54 41.2**	**-1.9**
FINES				pmax	pmax			
	comp=Z,5.0nm,0.8s							
FINES	**FINESS Array B**	**23.50**	**7**	P		**P**	**14 54 41.3**	**-1.8**
	comp=Z,5.0nm,0.8s,baz=174,slow=11,SNR=20							
FIA1	**FINESS Array S**	**23.50**	**7**	P		**P**	**14 54 41.4**	**-1.7**
NC405	**NORSAR Array S**	**23.55**	**349**	P		**P**	**14 54 42.7**	**-0.9**
NC405				IAmb	IAmb		14 54 53.4	
	comp=Z,53nm,1.3s							
NB201	**NORSAR Array S**	**23.55**	**349**	P		**P**	**14 54 42.8**	**-0.9**
NB2	**NORSAR Subarra**	**23.55**	**349**	P		**P**	**14 54 43.7**	**0.0**
	comp=Z,1.8nm,0.6s,baz=159,slow=9.3							
NOA	**NORSAR Array B**	**23.55**	**349**	P		**P**	**14 54 42.6**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=154,slow=9.9,SNR=8.8							
NOA				LR		LR	15 06 00.3	
	comp=Z,53nm,18.2s,baz=310,slow=42							
NC303	**NORSAR Array S**	**23.70**	**349**	P		**P**	**14 54 44.5**	**-0.7**
SUF	**Sumiainen**	**24.76**	**6**	P		**P**	**14 54 54.5**	**-0.4**
SUF				pmax	pmax			
	comp=Z,17nm,2.2s							
GEYT	**Alibeck**	**29.53**	**79**	P		**P**	**14 55 37.5**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=280,slow=8.7,SNR=4.0							
GEYT	**Alibeck**	**29.53**	**79**	P		**P**	**14 55 37.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**30.03**	**219**	P		**P**	**14 55 42.6**	**0.0**
	comp=Z,1.6nm,0.9s,baz=32,slow=8.2,SNR=7.4							
ABKAR	**Akbulak array**	**30.27**	**56**	P		**P**	**14 55 43.1**	**-1.2**
ABKAR	**Akbulak array**	**30.27**	**56**	P		**P**	**14 55 43.2**	**-1.2**
ABKAR				IAmb	IAmb		14 56 35.9	
	comp=Z,8.1nm,1.9s							
ARCES	**ARCESS Array B**	**31.48**	**3**	P		**P**	**14 55 54.0**	**-0.8**
ARCES	**ARCESS Array B**	**31.48**	**3**	P		**P**	**14 55 53.8**	**-1.1**
	comp=Z,3.0nm,0.9s,baz=192,slow=10,SNR=7.8							
ARCES	**ARCESS Array B**	**31.48**	**3**	P		**P**	**14 55 54.0**	**-0.8**
KK31	**Karatay Array**	**37.83**	**66**	P		**P**	**14 56 48.9**	**-1.2**
KK31				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KK31	**Karatay Array**	**37.83**	**66**	P		**P**	**14 56 48.9**	**-1.2**
KKAR	**Karatay Array**	**37.83**	**66**	P		**P**	**14 56 49.3**	**-0.8**
KKAR				pmax	pmax			
	comp=Z,2.0nm,0.6s							
KKAR	**Karatay Array**	**37.83**	**66**	P		**P**	**14 56 48.6**	**-1.4**
KKAR	**Karatay Array**	**37.83**	**66**	P		**P**	**14 56 49.3**	**-0.8**
KKAR				IAmb	IAmb		14 56 52.6	
	comp=Z,2.1nm,0.6s							
AAK	**Ala-Archa**	**40.80**	**66**⇑	*e*P		**P**	**14 57 17.9**	**+2.9**
AAK				pmax	pmax			
	comp=Z,1.0nm,0.8s							
KURK	**Kurchatov**	**42.30**	**53**⇑	*e*P		**P**	**14 57 27.8**	**+0.9**
KURK				pmax	pmax			
	comp=Z,1.0nm,0.7s							
KSH	**Kashi**	**42.67**	**70**	P		**P**	**14 57 29.8**	**-0.5**
KSH				PP		**PP**	**14 59 11.5**	**+2.4**
KSH				pmax	pmax			
	comp=Z,250nm,4.4s							
MK31	**Makanchi Array**	**45.33**	**58**	P		**P**	**14 57 49.9**	**-1.5**
MK31				pmax	pmax			
	comp=Z,10.0nm,1.9s							
MK31	**Makanchi Array**	**45.33**	**58**	P		**P**	**14 57 49.9**	**-1.5**
MK31				IAmb	IAmb		14 58 21.9	
	comp=Z,9.7nm,1.9s							
MKAR	**Makanchi Array**	**45.33**	**58**	P		**P**	**14 57 50.5**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=278,slow=7.6,SNR=35							
MKAR	**Makanchi Array**	**45.33**	**58**	P		**P**	**14 57 50.0**	**-1.4**
ZAA0	**Zalesovo Array**	**45.70**	**48**	P		**P**	**14 57 53.0**	**-1.2**
ZAA0				IAmb	IAmb		14 57 54.2	
	comp=Z,3.8nm,0.6s							
ZALV	**Zalesovo Beam**	**45.70**	**48**	P		**P**	**14 57 53.4**	**-0.8**
	comp=Z,3.3nm,0.4s,baz=275,slow=8.7,SNR=21							
ZALV	**Zalesovo Beam**	**45.70**	**48**	P		**P**	**14 57 53.0**	**-1.2**
WMQ	**Urumqi**	**49.79**	**61**	*e*P		**P**	**14 58 29.0**	**+2.8**
WMQ				pmax	pmax			
	comp=Z,9.0nm,0.9s							
WMQ				pmax	pmax			
	comp=Z,42nm,4.9s							
TLY	**Talaya**	**57.30**	**47**⇓	*e*P		**P**	**14 59 21.6**	**+0.5**
TLY				pmax	pmax			
	comp=Z,5.0nm,2.4s							
SONM	**Songino Array**	**60.47**	**51**	P		**P**	**14 59 42.6**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=285,slow=9.7,SNR=6.6							
LZH	**Lanzhou**	**64.24**	**63**	*e*P		**P**	**15 00 10.5**	**+1.8**
LZH				pP		pP	15 00 14.5	+0.5
LZH				sP		sP	15 00 17.3	+1.4
LZH				*e*PP		**PP**	**15 02 33.8**	**+4.0**
LZH				pmax	pmax			
	comp=Z,15nm,1.3s							
LZH				pmax	pmax			
	comp=Z,56nm,7.4s							
LZH				LR		LR		
	comp=N,130nm,15.4s							
LZH				LR		LR		
	comp=E,130nm,15.3s							
LZH				LR		LR		
	comp=Z,220nm,18.0s							
YAK	**Yakutsk**	**65.09**	**29**	*e*P		**P**	**15 00 12.7**	**-0.9**
YAK				pmax	pmax			
	comp=Z,11nm,2.3s							
HHC	**Hu-ho-hao-te**	**67.06**	**55**	*e*P		**P**	**15 00 27.8**	**+1.0**
HHC				pmax	pmax			
	comp=Z,3.0nm,0.5s							
HHC				pmax	pmax			
	comp=Z,24nm,6.4s							
CMAR	**Chiang Mai Arr**	**69.95**	**82**	P		**P**	**15 00 43.6**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=304,slow=8.0,SNR=8.8							
YKA	**Yellowknife Ar**	**73.31**	**340**	P		**P**	**15 01 04.0**	**-0.6**
YKA	**Yellowknife Ar**	**73.31**	**340**	P		**P**	**15 01 04.0**	**-0.6**
	comp=Z,0.2nm,0.6s,baz=25,slow=5.3,SNR=4.0							
KLR	**Kul'dur**	**73.87**	**39**⇑	*e*P		**P**	**15 01 08.1**	**0.0**
NJ2	**Nanjing**	**76.84**	**60**	*e*P		**P**	**15 01 26.0**	**+0.5**
NJ2				pmax	pmax			
	comp=Z,5.0nm,0.5s							
ASAR	**Alice Springs**	**122.24**	**96**	PKP		**PKPdf**	**15 08 26.8**	**-1.8**
	comp=Z,0.5nm,0.9s,baz=336,slow=2.0,SNR=3.2							

IDC 28 14:54:53.8±5.5,5°17S×132°43E,h0km,mb3.5/1, mb1 3.5/3,mb1mx3.3/17,mbtmp3.3/3,ML3.0/2,Error ellipse: s-maj=357.2km s-min=31.6km az=75.0,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.80**	**173**	Pn	Pn	14 58 24.0	-0.5
	0.1nm,0.3s,baz=353,slow=13,SNR=5.2						
WRA				Sn	Sn	15 00 53.0	-16
	0.1nm,0.3s,baz=348,slow=21,SNR=5.2						
ASAR	**Alice Springs**	**18.44**	**176**	P	Pn	14 59 11.0	-0.1
	0.0nm,0.3s,baz=352,slow=10,SNR=4.2						
MKAR	**Makanchi Array**	**68.07**	**325**	P	P	15 05 55.4	0.0
	0.5nm,1.0s,baz=139,slow=5.3,SNR=3.2						

*IDC **28** 15:13:18.7±0.7,38°26N×20°57E,h0km,mb3.8/14, mb1 3.9/22,mb1mx3.8/45,mbtmp3.8/22,ML3.5/6,MS3.3/4, Ms1 3.3/4,ms1mx2.7/54,Error ellipse: s-maj=15.0km s-min=13.8km az=167.0*

*PDG **28** 15:13:19.5±0.5,38°25N×20°33E,h4km±1km,ML4.0/14, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*

*THE **28** 15:13:20.9,38°22N×20°44E,h11km,ML3.8/9,Error ellipse: s-maj=0.6km s-min=0.2km az=227.0*

*NEIC **28** 15:13:20.5±2.3,38°19N±0°05×20°43E±0°06,h12km±4km, mb4.2/11,ML3.8(THE),Error ellipse: s-maj=7.9km s-min=6.2km az=202.0*

*ATH **28** 15:13:20.6,38°22N×20°46E,h14km,ML3.7/29,Error ellipse: s-maj=1.6km s-min=0.8km az=255.0*

ISC 28 15:13:20.6±0.6,38°22N±0°02×20°44E±0°02,h13km±3km, n203,σ18°27/241,mb3.9/16,19C-10D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.05**	**231**	P	**Pg**	**15 13 23.1**	**0.0**
ARG2	**Argostoli**	**0.06**	**134**	P	**Pg**	**15 13 23.1**	**0.0**
ARG2				S	**Sg**	**15 13 24.5**	**-0.4**
KEF1	**Kardakata, Kep**	**0.07**	**25**	P	**Pg**	**15 13 23.1**	**-0.1**
KEF1				S	**Sg**	**15 13 24.9**	**-0.2**
KEF2	**Argostoli. Kep**	**0.07**	**142**	P	**Pg**	**15 13 23.3**	**+0.1**
KEF2				S	**Sg**	**15 13 25.2**	**+0.1**
VLS	**Valsamata**	**0.13**	**108**	P	**Pg**	**15 13 23.9**	**0.0**
VLS				S	**Sg**	**15 13 25.9**	**-0.4**
	113μm,0.2s						
VLS	**Valsamata**	**0.13**	**108**	P	**Pg**	**15 13 24.0**	**0.0**
VLS				S	**Sg**	**15 13 26.4**	**+0.1**
VLS				AML	AML	15 13 26.5	
VLS				AML	AML	15 13 26.9	
FSK	**Fiskardo**	**0.26**	**22**	P	**Pg**	**15 13 26.1**	**+0.1**
FSK				S	**Sg**	**15 13 30.0**	**+0.2**
	28μm,0.3s						
FSK	**Fiskardo**	**0.26**	**22**	P	**Pg**	**15 13 26.2**	**+0.1**
FSK				S	**Sg**	**15 13 30.3**	**+0.5**
KFL	**Anninata**	**0.30**	**111**	P	**Pg**	**15 13 26.8**	**+0.1**
KFL				S	**Sg**	**15 13 31.3**	**+0.5**
	141μm,0.3s						
KFL	**Anninata**	**0.30**	**111**	P	**Pg**	**15 13 26.9**	**+0.2**
KFL				S	**Sg**	**15 13 31.4**	**+0.5**
KFL				AML	AML	15 13 32.3	
KFL				AML	AML	15 13 33.8	
VLMS	**Volimes, Zakyn**	**0.39**	**152**	P	**Pg**	**15 13 28.6**	**+0.3**
VLMS				S	**Sg**	**15 13 34.2**	**+0.7**
VLMS				AML	AML	15 13 35.4	
VLMS				AML	AML	15 13 35.9	
EVGI	**Lefkada island**	**0.44**	**23**	P	**Pg**	**15 13 29.3**	**0.0**
EVGI				S	**Sg**	**15 13 35.8**	**+0.6**
EVGI	**Lefkada island**	**0.44**	**23**	P	**Pg**	**15 13 29.1**	**-0.1**
EVGI				S	**Sg**	**15 13 35.8**	**+0.6**
MGNA	**Meganis**	**0.52**	**32**	P	**Pg**	**15 13 30.4**	**-0.4**
MGNA				S	**Sg**	**15 13 38.1**	**+0.4**
MGNA				AML	AML	15 13 38.8	
	comp=E,17498μm,0.4s						
MGNA				AML	AML	15 13 39.0	
	comp=N,9842μm,0.2s						
LKD2	**Lefkada island**	**0.60**	**17**	P	**Pg**	**15 13 32.0**	**-0.3**
LKD2	**Lefkada island**	**0.60**	**17**	P	**Pg**	**15 13 31.9**	**-0.3**
LKD2				AML	AML	15 13 48.7	
	comp=N,13685μm,0.4s						
LKD2				AML	AML	15 13 49.0	
	comp=E,13273μm,0.5s						
TSLK	**Tsoukalades, L**	**0.63**	**16**	P	**Pg**	**15 13 32.6**	**-0.3**
TSLK	**Tsoukalades, L**	**0.63**	**16**	P	**Pg**	**15 13 32.3**	**-0.6**
PDO	**Prodromos**	**0.70**	**57**	P	**Pg**	**15 13 34.0**	**-0.2**
PDO				S	**Sb**	**15 13 44.5**	**+0.3**
	comp=E,13μm,0.6s						
PDO	**Prodromos**	**0.70**	**57**	P	**Pg**	**15 13 34.0**	**-0.2**
PDO				S	**Sb**	**15 13 43.7**	**-0.5**
PDO				AML	AML	15 13 51.7	
	comp=N,18372μm,0.4s						
PDO				AML	AML	15 13 53.2	
	comp=E,18507μm,0.6s						
RLS	**Riolos of Patr**	**0.83**	**101**	P	**Pg**	**15 13 36.1**	**-0.5**
RLS				S	**Sb**	**15 13 48.6**	**+0.8**
	comp=E,4μm,0.5s						
RLS	**Riolos of Patr**	**0.83**	**101**	P	**Pg**	**15 13 36.2**	**-0.5**
RLS				S	**Sb**	**15 13 48.1**	**+0.3**
RLS				AML	AML	15 13 57.3	
	comp=E,8779μm,0.6s						
RLS				AML	AML	15 13 58.2	
	comp=N,7656μm,0.5s						
PVO	**Paravola**	**0.94**	**65**	P	**Pg**	**15 13 38.8**	**0.0**
PVO				S	**Sn**	**15 13 52.1**	**-0.8**
	comp=N,9μm,0.5s						
PVO	**Paravola**	**0.94**	**65**	P	**Pg**	**15 13 38.8**	**0.0**
PVO				AML	AML	15 14 00.6	
	comp=N,13934μm,0.6s						
PVO				AML	AML	15 14 04.5	
	comp=E,19551μm,0.5s						
DRO	**Drossia**	**1.04**	**104**	P	**Pb**	**15 13 40.1**	**-0.3**
DRO	**Drossia**	**1.04**	**104**	P	**Pb**	**15 13 39.9**	**-0.5**
DRO				AML	AML	15 14 01.3	
	comp=E,16526μm,0.8s						
DRO				AML	AML	15 14 04.2	
	comp=N,20342μm,0.4s						
UPR	**University Cam**	**1.07**	**86**	P	**Pg**	**15 13 41.2**	**+0.1**
EFP	**Efpalio**	**1.18**	**79**	P	**Pn**	**15 13 41.9**	**-0.7**
EFP	**Efpalio**	**1.18**	**79**	P	**Pn**	**15 13 41.9**	**-0.7**
EFP				AML	AML	15 14 06.6	
	comp=E,7020μm,0.7s						
EFP				AML	AML	15 14 11.2	
	comp=N,5987μm,0.7s						
LAKA	**Lakka**	**1.22**	**88**	P	**Pn**	**15 13 42.8**	**-0.5**
LAKA				S	**Sg**	**15 14 00.0**	**+0.2**
	comp=N,2μm,0.6s						
LAKA	**Lakka**	**1.22**	**88**	P	**Pn**	**15 13 42.9**	**-0.3**
LAKA				S	**Sn**	**15 13 59.5**	**-0.1**
LAKA				AML	AML	15 14 06.9	
	comp=E,6012μm,0.4s						
LAKA				AML	AML	15 14 08.3	
	comp=N,4344μm,0.8s						
AMT	**Artemida-Makis**	**1.22**	**124**	P	**Pn**	**15 13 43.1**	**-0.2**
AMT	**Artemida-Makis**	**1.22**	**124**	P	**Pb**	**15 13 43.3**	**-0.2**
AMT				AML	AML	15 14 15.0	
	comp=E,8652μm,0.5s						
AMT				AML	AML	15 14 15.3	
	comp=N,10026μm,0.5s						
ANX	**Ano Chora**	**1.23**	**72**	P	**Pn**	**15 13 43.0**	**-0.5**
ANX	**Ano Chora**	**1.23**	**72**	P	**Pb**	**15 13 43.6**	**0.0**
ANX				AML	AML	15 14 07.8	
	comp=N,10243μm,0.4s						
ANX				AML	AML	15 14 08.9	
	comp=E,9678μm,0.5s						
EVR	**Evrytania**	**1.28**	**57**	P	**Pn**	**15 13 44.1**	**-0.2**
EVR	**Evrytania**	**1.28**	**57**	P	**Pn**	**15 13 44.2**	**0.0**
EVR				S	**Sg**	**15 14 02.5**	**+0.5**
EVR				AML	AML	15 14 12.0	
	comp=E,3670μm,0.6s						
EVR				AML	AML	15 14 16.3	
	comp=N,4168μm,0.7s						
SERG	**Sergoula**	**1.29**	**81**	P	**Pn**	**15 13 43.9**	**-0.4**
SERG	**Sergoula**	**1.29**	**81**	P	**Pn**	**15 13 44.1**	**-0.2**
SERG				AML	AML	15 14 14.2	
	comp=N,6461μm,0.5s						
SERG				AML	AML	15 14 16.4	
	comp=E,6210μm,0.5s						
TRIZ	**Trizonia**	**1.30**	**83**	P	**Pn**	**15 13 43.8**	**-0.5**
TRIZ				S	**Sg**	**15 14 02.1**	**-0.3**
	comp=E,3μm,0.6s						
TRIZ	**Trizonia**	**1.30**	**83**	P	**Pn**	**15 13 43.9**	**-0.4**
ALIK	**Aliki, Aigiali**	**1.32**	**88**	P	**Pn**	**15 13 44.6**	**-0.1**
KALE	**Kalithea**	**1.35**	**82**	P	**Pn**	**15 13 44.7**	**-0.5**
KALE	**Kalithea**	**1.35**	**82**	P	**Pn**	**15 13 45.0**	**-0.1**
KALE				AML	AML	15 14 14.5	
	comp=N,5375μm,0.7s						
KALE				AML	AML	15 14 17.9	
	comp=E,3176μm,0.5s						
KLV	**Kalavryta, Ach**	**1.36**	**97**	P	**Pn**	**15 13 45.3**	**0.0**
KLV	**Kalavryta, Ach**	**1.36**	**97**	P	**Pb**	**15 13 45.7**	**-0.3**
KLV				AML	AML	15 14 13.5	
	comp=E,3430μm,0.7s						
KLV				AML	AML	15 14 17.6	
	comp=N,3016μm,1.0s						
JAN	**Janina**	**1.47**	**13**	P	**Pg**	**15 13 48.9**	**0.0**
MAKR	**Makrakomi, Fth**	**1.55**	**59**	P	**Pb**	**15 13 49.1**	**+0.1**
MAKR				AML	AML	15 14 21.7	
	comp=N,3536μm,0.8s						
MAKR				AML	AML	15 14 23.6	
	comp=E,5428μm,0.8s						
ITM	**Ithomi**	**1.57**	**131**	P	**Pn**	**15 13 48.5**	**+0.3**
ITM	**Ithomi**	**1.57**	**131**	P	**Pb**	**15 13 49.5**	**0.0**
ITM				AML	AML	15 14 20.7	
	comp=N,2430μm,0.6s						
ITM				AML	AML	15 14 25.1	
	comp=E,2335μm,0.4s						
ITM	**Ithomi**	**1.57**	**131**		**Pb**	**15 13 49.3**	**-0.2**
KASA	**Kassiopi**	**1.57**	**346**	P	**Pb**	**15 13 49.8**	**+0.2**
DLFA	**Delphi**	**1.64**	**80**	P	**Pg**	**15 13 51.4**	**-0.7**
PYL	**PYLOS**	**1.68**	**141**	P	**Pn**	**15 13 49.8**	**+0.2**
PYL	**PYLOS**	**1.68**	**141**	P	**Pb**	**15 13 50.6**	**-0.7**
AGG	**Agios Georgios**	**1.69**	**61**	P	**Pg**	**15 13 52.7**	**-0.2**
AGG				AML	AML	15 14 22.8	
	comp=E,2342μm,0.5s						
AGG				AML	AML	15 14 26.1	
	comp=N,4119μm,0.6s						
AGG	**Agios Georgios**	**1.69**	**61**		**Pg**	**15 13 52.4**	**-0.6**
VLX	**Vlachokerasia**	**1.76**	**118**	P	**Pb**	**15 13 53.2**	**+0.5**
VLX				AML	AML	15 14 27.6	
	comp=E,3445μm,0.9s						
VLX				AML	AML	15 14 31.3	
	comp=N,4052μm,0.6s						
THAL	**Thalero**	**1.77**	**95**	P	**Pn**	**15 13 50.8**	**0.0**
THAL	**Thalero**	**1.77**	**95**	P	**Pb**	**15 13 52.4**	**-0.3**
THL	**Klokotos Trika**	**1.82**	**42**	P	**Pb**	**15 13 54.0**	**+0.2**
THL				AML	AML	15 14 27.7	
	comp=N,1963μm,0.8s						
THL				AML	AML	15 14 31.1	
	comp=E,1972μm,0.9s						
AXAR	**Agios Charalam**	**1.83**	**72**	P	**Pb**	**15 13 54.3**	**+0.5**
AXAR				AML	AML	15 14 32.2	
	comp=N,6580μm,0.8s						
AXAR				AML	AML	15 14 34.5	
	comp=E,3848μm,0.4s						
KPRO	**Kipourio**	**1.88**	**22**	P	**Pb**	**15 13 55.1**	**+0.3**
KPRO				AML	AML	15 14 32.9	
	comp=E,2114μm,0.9s						
KPRO				AML	AML	15 14 34.3	
	comp=N,2338μm,0.9s						
PROD	**Prodromos**	**1.94**	**88**	P	**Pb**	**15 13 55.7**	**-0.1**
PROD				AML	AML	15 14 28.6	
	comp=E,3149μm,0.5s						
PROD				AML	AML	15 14 33.2	
	comp=N,1844μm,0.7s						
LTK	**Loutraki**	**2.01**	**95**	P	**Pb**	**15 13 56.4**	**-0.5**
LOUT	**Loutraki**	**2.02**	**96**	P	**Pb**	**15 13 56.3**	**-0.8**
PENT	**Pentalofos**	**2.05**	**15**	P	**Pb**	**15 13 57.4**	**-0.3**
LKR	**Lokris**	**2.06**	**77**	P	**Pb**	**15 13 56.9**	**-0.9**
LKR				AML	AML	15 14 26.4	
	comp=E,1404μm,0.3s						
LKR				AML	AML	15 14 33.5	
	comp=N,1104μm,0.4s						
VIL2	**Platees**	**2.23**	**89**	P	**Pb**	**15 13 59.6**	**-1.1**
NEST	**Nestorio**	**2.25**	**12**	P	**Pb**	**15 14 00.5**	**-0.5**
NEST				AML	AML	15 14 45.8	
	comp=N,630μm,0.9s						
NEST				AML	AML	15 14 48.1	
	comp=E,782μm,0.7s						
DID	**Didima**	**2.33**	**107**	P	**Pb**	**15 14 01.2**	**-1.2**
DID				AML	AML	15 14 41.5	
	comp=N,1674μm,0.6s						
DID				AML	AML	15 14 46.2	
	comp=E,1460μm,0.4s						
KZN	**Kozani**	**2.33**	**26**	P	**Pb**	**15 14 01.2**	**-1.2**
SCTE	**Santa Cesarea**	**2.40**	**321**		**Pn**	**15 13 59.1**	**-0.5**
NEO	**Neokhori**	**2.44**	**63**	P	**Pb**	**15 14 02.3**	**-1.9**
XOR	**Xorichti**	**2.44**	**61**	P	**Pb**	**15 14 02.1**	**-2.2**
LIT	**Litokhoron**	**2.47**	**40**	P	**Pb**	**15 14 02.9**	**-1.9**
LIT				AML	AML	15 14 47.0	
	comp=E,911μm,0.5s						
LIT				AML	AML	15 14 49.1	
	comp=N,1022μm,0.5s						
LIT	**Litokhoron**	**2.47**	**40**		**Pb**	**15 14 02.8**	**-1.9**
VLI	**Veliai**	**2.49**	**126**	P	**Pb**	**15 14 03.1**	**-2.0**
MRKA	**Markates**	**2.52**	**78**	P	**Pn**	**15 14 03.1**	**+1.9**
SKIA	**Skiathos**	**2.55**	**67**	P	**Pn**	**15 14 03.6**	**+2.0**
ATHU	**Athens Univers**	**2.65**	**94**	P	**Pn**	**15 14 05.1**	**+2.1**
FNA	**Florina**	**2.66**	**16**	P	**Pn**	**15 14 05.1**	**+1.9**
FNA	**Florina**	**2.66**	**16**			**15 14 04.7**	**+1.5**
VLY	**Voula,Athens**	**2.68**	**97**	P	**Pn**	**15 14 05.1**	**+1.8**
PTL	**Penteli**	**2.71**	**93**	P	**Pn**	**15 14 05.4**	**+1.5**
EREA	**Eretria**	**2.76**	**85**	P	**Pb**	**15 14 07.1**	**-2.6**
AOS	**Alonnisos**	**2.86**	**69**	P	**Pn**	**15 14 07.6**	**+1.7**
KTHA	**Kythira Island

SGRT	San Giovanni R	5.05	316			Pn	15 14 36.2	+0.2
STON	Ston	5.09	337	*e*Pn		Pn	15 14 36.0	-0.5
STON				Sn		Sn	15 15 31.6	-3.6
ALN	Alexandroupoli	5.09	57	Pn		Pn	15 14 38.2	+1.7
UPM	Unac-Piva	5.11	347	⇑*i*Pn		Pn	15 14 37.7	+0.7
UPM				*i* Sn		Sn	15 15 37.2	+1.2
PLE	Pljevlja	5.17	351	⇑*i*Pn		Pn	15 14 38.3	+0.6
PLE				*i* Sn		Sn	15 15 38.1	+0.9
WDD	Wied Dalam	5.29	245	Pn		Pn	15 14 38.8	-0.5
PAOL	Paolisi	5.33	304			Pn	15 14 41.4	+1.5
CORL	Corleone	5.64	269	Pn		Pn	15 14 43.6	-0.4
MAKA	Makarska	5.69	334	*e*Pn		Pn	15 14 44.9	+0.2
MAKA				Sn		Sn	15 15 47.3	-2.5
INTR	Introdacqua	6.28	309	Pn		Pn	15 14 54.9	+2.1
ZIRJ	Zirje	6.53	328	*i* Pn		Pn	15 14 55.1	-1.1
ZIRJ				Sn		Sn	15 16 06.1	-4.5
KIJV	Kijevo	6.53	334	*e*Pn		Pn	15 14 56.4	+0.1
BLY	Banja Luka	6.97	341	Pn		Pn	15 15 04.7	+2.4
DUGI	Dugi Otok	7.05	327	*i* Pn		Pn	15 15 03.5	+0.1
UDBI	Udbina	7.22	332	*e*Pn		Pn	15 15 06.5	+0.7
NRCA	Norcia	7.23	312			Pn	15 15 07.8	+1.8
GZR	Gura Zlata	7.38	13	⇑P		Pn	15 15 08.4	+0.4
BZS	Buzias	7.45	6	⇑P		Pn	15 15 08.8	0.0
NVLJ	Novalja	7.59	328	*i* Pn		Pn	15 15 10.7	-0.2
MURB	Monte Urbino	7.84	313	Pn		Pn	15 15 16.3	+2.0
VOIR		7.99	24	⇓P		Pn	15 15 17.6	+1.2
MLR	Muntele Rosu	8.35	28	Pn		Pn	15 15 19.9	-1.4
	comp=N,0.4nm,0.3s,baz=259,slow=16,SNR=1.8							
MLR	Muntele Rosu	8.35	28	⇑P		Pn	15 15 23.6	+2.3
CASP	Castiglione de	8.60	305	Pn		Pn	15 15 24.4	-0.2
KEST	Kesra	9.27	258	Pn		Pn	15 15 33.4	+0.2
SOKA	Soboth	9.35	336	*e*Pn		Pn	15 15 34.0	-1.0
	comp=N,2.5nm,0.2s							
OBKA	Obir	9.36	334	Pn		Pn	15 15 35.2	+0.1
	comp=N,4.5nm,0.3s							
TEOL	Teolo	9.68	320	Pn		Pn	15 15 41.0	+1.6
MYKA	Terra Mystica	9.79	331	*e*Pn		Pn	15 15 42.2	+1.2
	comp=N,1.4nm,0.3s							
CTI	Castel Tesino	10.18	323			Pn	15 15 45.3	-1.2
MSSA	Maissana	10.23	310	Pn		Pn	15 15 49.7	+2.7
KBA	Koelnbreinsper	10.28	332	Pn		Pn	15 15 47.0	-0.7
	comp=N,1.1nm,0.3s							
VYHS	Vyhne	10.34	354	*e*SN		Sn	15 17 37.5	-6.6
BRTR	Keskin Array B	10.39	78	Pn		Pn	15 15 51.6	+2.3
	comp=N,0.1nm,0.3s,baz=261,slow=11,SNR=3.1							
MOA	Molln	10.63	337	*e*Pn		Pn	15 15 52.9	+0.4
	comp=N,3.3nm,0.3s							
WTTA	Wattenberg	11.11	327	Pn		Pn	15 16 01.5	+2.3
	comp=N,2.1nm,0.3s							
FUORN	Ofenpass-Fuorn	11.26	321	Pn		Pn	15 16 02.1	+0.8
DAVOX	Davos/Dischmat	11.56	321	Pn		Pn	15 16 06.1	+0.7
	comp=N,0.4nm,0.3s,baz=139,slow=19,SNR=2.4							
GERES	GERESS Array B	11.69	338	Pn		Pn	15 16 07.3	+0.3
	comp=N,0.4nm,0.3s,baz=167,slow=13,SNR=5.8							
KHC	Kasperske Hory	11.98	338	*e*PN		Pn	15 16 18.5	+7.6
SENIN	Lac Senin/Sane	12.67	314	Pn		Pn	15 16 21.0	+0.4
ASF	Jabal al Asfar	14.74	109	LR		LR	15 25 13.5	
	comp=N,128nm,18.4s,baz=37,slow=49							
KBZ	Khabaz	17.81	65	P		P	15 17 28.4	-0.4
	comp=N,0.1nm,0.3s,baz=271,slow=8.8,SNR=6.1							
GNI	Garni	18.93	77	P		P	15 17 41.3	0.0
GNI				IAmb		IAmb	15 17 47.4	
	comp=Z,15nm,0.9s							
ESDC	Sonseca Array	19.02	282	P		Pn	15 17 44.4	+1.5
	comp=Z,1.0nm,0.3s,baz=67,slow=11,SNR=6.9							
HFS	Hagfors	22.35	351	P		P	15 18 17.5	-0.5
	comp=Z,2.5nm,0.6s,baz=161,slow=9.4,SNR=7.9							
FINES	FINESS Array B	23.52	7	P		P	15 18 28.6	-1.4
	comp=Z,1.0nm,0.5s,baz=176,slow=12,SNR=5.7							
NOA	NORSAR Array B	23.57	349	P		P	15 18 32.3	+1.8
	comp=Z,1.3nm,0.8s,baz=165,slow=12,SNR=2.7							
TORD	Torodi Ar. Bea	30.02	219	P		P	15 19 29.6	+0.5
	comp=Z,2.0nm,1.0s,baz=26,slow=8.6,SNR=6.2							
TORD	Torodi Ar. Bea	30.02	219	P		P	15 19 29.0	-0.2
ABKAR	Akbulak array	30.28	56	P		P	15 19 31.2	0.0
ARCES	ARCESS Array B	31.50	3	P		P	15 19 41.3	-0.4
	comp=Z,2.2nm,0.9s,baz=186,slow=10,SNR=5.7							
JMIC	Jan Mayen	36.10	344	LR		LR	15 36 31.1	
	comp=Z,66nm,18.1s,baz=92,slow=39							
KK31	Karatay Array	37.84	66	P		P	15 20 36.9	0.0
KKAR	Karatay Array	37.84	66	P		P	15 20 36.2	-0.6
KKAR	Karatay Array	37.84	66	P		P	15 20 37.8	+0.9
KKAR				IAmb		IAmb	15 20 39.3	
	comp=Z,3.9nm,1.1s							
DBIC	Dimbokro	38.88	223	P		P	15 20 45.5	-0.2
	comp=Z,1.3nm,0.5s,baz=357,slow=4.8,SNR=3.8							
DBIC	Dimbokro	38.88	223	P		P	15 20 45.4	-0.3
AAK	Ala-Archa	40.80	66	P		P	15 21 02.1	+0.3
	comp=Z,1.2nm,0.6s,baz=248,slow=5.4							
AAK	Ala-Archa	40.80	66	P		P	15 21 02.8	+1.0
AAK				IAmb		IAmb	15 21 07.5	
	comp=Z,8.1nm,1.7s							
KURBB	Kurchatov Arra	42.26	54	P		P	15 21 12.5	-0.9
	comp=Z,4.0nm,0.3s,baz=272,slow=8.5,SNR=2.9							
KURK	Kurchatov	42.31	53	P		P	15 21 12.5	-1.3
MK31	Makanchi Array	45.34	58	P		P	15 21 37.1	-1.1
MK31				IAmb		IAmb	15 21 38.1	
	comp=Z,1.5nm,0.5s							
MKAR	Makanchi Array	45.34	58	P		P	15 21 37.6	-0.7
	comp=Z,1.4nm,0.4s,baz=276,slow=7.5,SNR=40							
MKAR	Makanchi Array	45.34	58	P		P	15 21 37.3	-0.9
ZAA0	Zalesovo Array	45.72	48	P		P	15 21 39.8	-1.3
ZALV	Zalesovo Beam	45.72	48	P		P	15 21 40.3	-0.7
	comp=Z,3.6nm,0.5s,baz=274,slow=8.9,SNR=19							
ZALV	Zalesovo Beam	45.72	48	P		P	15 21 40.2	-0.9
SONM	Songino Array	60.48	51	P		P	15 23 29.4	-0.7
	comp=Z,0.6nm,0.8s,baz=270,slow=8.9,SNR=4.7							
CMAR	Chiang Mai Arr	69.95	82	P		P	15 24 31.1	-0.7
	comp=Z,0.4nm,0.7s,baz=306,slow=7.2,SNR=6.3							
YKA	Yellowknife Ar	73.33	340	P		P	15 24 52.0	+0.6
	comp=Z,0.1nm,0.4s,baz=36,slow=4.9,SNR=2.8							
USRK	Ussuriysk Ar.	77.30	43	P		P	15 25 14.2	-0.4
	comp=Z,0.4nm,0.3s,baz=294,slow=4.1,SNR=4.5							
ASAJ	Asahikawa	82.80	38	LR		LR	16 05 28.1	
	comp=Z,37nm,19.1s,baz=121,slow=38							
ASAR	Alice Springs	122.24	96	PKP		PKPdf	15 32 15.2	-0.3
	comp=Z,0.4nm,0.8s,baz=308,slow=1.6,SNR=3.1							

*THE **28** 15:18:49.2,38˚.39N×20˚.46E,h11km,ML3.3/7,Error ellipse: s-maj=1.0km s-min=0.3km az=274.0*
*ATH **28** 15:18:49.6,38˚.38N×20˚.52E,h9km±1km,ML3.2/23,Error ellipse: s-maj=1.7km s-min=0.8km az=273.0*
*IDC **28** 15:19:16.0±72.0,40˚.76N×23˚.86E,h0km,mb3.6/3, mb1 3.7/3,mb1mx3.2/38,mbtmp3.7/3,Error ellipse: s-maj=1311.0km s-min=61.3km az=46.0*

ISC 28 15:18:49.4±0.9,38˚.39N±0˚.02×20˚.50E±0˚.04,h10km±5km, n65,σ0°77/84,mb3.8/3,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FSK	Fiskardo	0.09	33	P	Pg	15 18 51.6	-0.2
FSK	Fiskardo	0.09	33	P	Pg	15 18 51.6	-0.2
FSK				S	Sg	15 18 53.6	+0.1
ARG2	Argostoli	0.21	183	P	Pg	15 18 53.6	-0.1
ARG2				S	Sg	15 18 56.9	+0.3
VLS	Valsamata	0.22	162	P	Pg	15 18 53.8	-0.1
VLS	Valsamata	0.22	162	P	Pg	15 18 53.9	-0.1
VLS				S	Sg	15 18 57.5	+0.4
VLS				AML	AML	15 18 58.1	
	comp=E,16658μm,0.2s						
VLS				AML	AML	15 18 58.2	
	comp=N,28087μm,0.4s						
KEF2	Argostoli. Kep	0.22	183	P	Pg	15 18 53.8	-0.2
KEF2				S	Sg	15 18 57.2	+0.1
CHV1	Chavriata, Kef	0.23	205	P	Pg	15 18 53.7	-0.3
CHV1				S	Sg	15 18 57.6	+0.5
EVGI	Lefkada island	0.26	27	P	Pg	15 18 54.8	+0.1
EVGI				S	Sg	15 18 59.3	+1.0
EVGI	Lefkada island	0.26	27	P	Pg	15 18 54.8	+0.1
EVGI				S	Sg	15 18 59.0	+0.7
MGNA	Meganis	0.35	40	P	Pg	15 18 56.4	0.0
MGNA				S	Sg	15 19 01.6	+0.5
MGNA				AML	AML	15 19 03.2	
	comp=N,8606μm,0.1s						
MGNA				AML	AML	15 19 03.4	
	comp=E,9817μm,0.3s						
KFL	Anninata	0.36	141	P	Pg	15 18 56.5	+0.1
KFL				S	Sb	15 19 02.9	-0.6
	comp=E,10μm,0.4s						
KFL	Anninata	0.36	141	P	Pg	15 18 56.5	+0.1
KFL				S	Sg	15 19 01.8	+0.6
KFL				AML	AML	15 19 07.4	
	comp=N,20107μm,0.4s						
KFL				AML	AML	15 19 08.4	
	comp=E,20218μm,0.4s						
LKD2	Lefkada island	0.42	17	P	Pg	15 18 57.3	-0.4
LKD2	Lefkada island	0.42	17	P	Pg	15 18 57.3	-0.4
LKD2				AML	AML	15 19 09.9	
	comp=E,3584μm,0.5s						
LKD2				AML	AML	15 19 11.5	
	comp=N,4987μm,0.6s						
TSLK	Tsoukalades, L	0.45	15	P	Pg	15 18 58.0	-0.2
TSLK	Tsoukalades, L	0.45	15	P	Pg	15 18 58.1	-0.2
TSLK				S	Sg	15 19 04.9	+0.6
VLMS	Volimes, Zakyn	0.53	166	P	Pg	15 18 59.4	-0.2
VLMS				S	Sg	15 19 07.2	+0.7
VLMS				AML	AML	15 19 10.9	
	comp=N,19591μm,0.3s						
VLMS				AML	AML	15 19 16.2	
	comp=E,11891μm,0.3s						
PDO	Prodromos	0.57	68	P	Pg	15 19 00.7	+0.2
PDO				S	Sb	15 19 09.1	-0.7
	comp=E,5μm,0.7s						
PDO	Prodromos	0.57	68	P	Pg	15 19 00.7	+0.2
PDO				S	Sg	15 19 08.3	+0.2
PDO				AML	AML	15 19 15.9	
	comp=N,8680μm,0.8s						
PDO				AML	AML	15 19 16.8	
	comp=E,6865μm,0.5s						
RLS	Riolos of Patr	0.83	113	P	Pg	15 19 05.1	-0.2
RLS	Riolos of Patr	0.83	113	P	Pg	15 19 05.1	-0.2
PVO	Paravola	0.83	74	P	Pb	15 19 05.9	0.0
PVO	Paravola	0.83	74	P	Pb	15 19 06.0	0.0
PVO				AML	AML	15 19 25.3	
	comp=N,4370μm,0.5s						
PVO				AML	AML	15 19 25.8	
	comp=E,3321μm,0.5s						
DRO	Drossia	1.05	114	P	Pg	15 19 08.9	-0.6
DRO				S	Sn	15 19 25.3	+0.5
	comp=E,2μm,0.5s						
DRO	Drossia	1.05	114	P	Pg	15 19 08.9	-0.6
DRO				AML	AML	15 19 32.5	
	comp=E,3930μm,0.4s						
DRO				AML	AML	15 19 32.6	
	comp=N,3648μm,0.5s						
EFP	Efpalio	1.10	88	P	Pg	15 19 09.9	-0.7
EFP				S	Sn	15 19 26.5	+0.3
	comp=N,2μm,0.5s						
EFP	Efpalio	1.10	88	P	Pg	15 19 09.7	-0.9
EFP				AML	AML	15 19 33.8	
	comp=N,4040μm,0.5s						
EFP				AML	AML	15 19 34.0	
	comp=E,4306μm,0.6s						
ANX	Ano Chora	1.13	79	P	Pg	15 19 10.5	-0.6
ANX	Ano Chora	1.13	79	P	Pg	15 19 10.7	-0.4
ANX				AML	AML	15 19 34.5	
	comp=N,5605μm,0.6s						
ANX				AML	AML	15 19 36.5	
	comp=E,3051μm,0.6s						
EVR	Evrytania	1.15	62	P	Pg	15 19 10.7	-0.8
EVR				S	Sn	15 19 27.7	+0.2
	comp=E,462nm,0.6s						
EVR	Evrytania	1.15	62	P	Pg	15 19 10.9	-0.6
EVR				AML	AML	15 19 39.6	
	comp=N,1071μm,0.7s						
EVR				AML	AML	15 19 42.1	
	comp=E,966μm,0.6s						
LAKA	Lakka	1.17	97	P	Pb	15 19 10.9	-0.8
LAKA				S	Sn	15 19 27.8	-0.1
	comp=E,540nm,0.7s						
LAKA	Lakka	1.17	97	P	Pb	15 19 11.2	-0.5
LAKA				S	Sn	15 19 27.5	-0.4
LAKA				AML	AML	15 19 34.9	
	comp=E,1061μm,0.8s						
LAKA				AML	AML	15 19 36.1	
	comp=N,1256μm,0.6s						
SERG	Sergoula	1.22	88	P	Pb	15 19 11.7	-0.9
SERG	Sergoula	1.22	88	P	Pb	15 19 11.7	-0.9
SERG				AML	AML	15 19 36.1	
	comp=N,3275μm,0.5s						
SERG				AML	AML	15 19 36.4	
	comp=E,2736μm,0.6s						
TRIZ	Trizonia	1.23	91	P	Pn	15 19 11.8	-0.8
TRIZ	Trizonia	1.23	91	P	Pn	15 19 11.9	-0.8
ALIK	Aliki, Aigiali	1.27	95	P	Pn	15 19 12.8	-0.4
AMT	Artemida-Makis	1.28	131	P	Pn	15 19 13.2	-0.1
AMT	Artemida-Makis	1.28	131	P	Pg	15 19 14.2	+0.2
AMT				AML	AML	15 19 48.7	
	comp=N,1906μm,0.8s						
AMT				AML	AML	15 19 50.5	
	comp=E,1833μm,0.7s						
KALE	Kalithea	1.29	89	P	Pn	15 19 12.7	-0.8
KALE	Kalithea	1.29	89	P	Pn	15 19 13.0	-0.4
KALE				AML	AML	15 19 39.6	
	comp=N,2475μm,0.7s						
KALE				AML	AML	15 19 39.6	
	comp=E,1310μm,0.6s						
JAN	Janina	1.30	12	P	Pg	15 19 14.4	+0.1
JAN				AML	AML	15 19 38.6	
	comp=E,1812μm,0.7s						
JAN				AML	AML	15 19 42.4	
	comp=N,817μm,0.4s						
KLV	Kalavryta, Ach	1.34	104	P	Pn	15 19 13.7	-0.5
KLV	Kalavryta, Ach	1.34	104	P	Pn	15 19 14.0	-0.2
KLV				AML	AML	15 19 41.4	
	comp=E,655μm,0.5s						
KLV				AML	AML	15 19 44.2	
	comp=N,814μm,0.6s						
MAKR	Makrakomi, Fth	1.42	63	P	Pb	15 19 16.1	+0.2
MAKR				AML	AML	15 19 47.8	
	comp=N,1394μm,0.7s						
MAKR				AML	AML	15 19 48.4	
	comp=E,2192μm,0.9s						
AGG	Agios Georgios	1.56	66	P	Pb	15 19 18.4	-0.1
AGG				AML	AML	15 19 51.8	
	comp=E,995μm,0.9s						
AGG				AML	AML	15 19 53.6	
	comp=N,700μm,1.1s						
ITM	Ithomi	1.65	136	P	Pb	15 19 19.7	-0.2
THL	Klokotos Trika	1.67	45	P	Pg	15 19 20.9	-0.4
THL				AML	AML	15 19 51.5	
	comp=N,881μm,0.7s						
THL				AML	AML	15 19 53.8	
	comp=E,751μm,0.8s						
KPRO	Kipourio	1.70	23	P	Pg	15 19 22.0	-0.1
AXAR	Agios Charalam	1.73	77	P	Pg	15 19 22.5	-0.1
AXAR				AML	AML	15 19 56.9	
	comp=N,2665μm,0.6s						
AXAR				AML	AML	15 20 00.8	
	comp=E,1620μm,1.0s						
VLX	Vlachokerasia	1.80	124	P	Pb	15 19 23.1	+0.6
VLX				AML	AML	15 19 58.5	
	comp=N,1251μm,0.7s						
VLX				AML	AML	15 19 59.5	
	comp=E,1319μm,0.7s						
PENT	Pentalofos	1.87	15	P	Pg	15 19 24.6	-0.7
PROD	Prodromos	1.89	93	P	Pb	15 19 24.4	+0.4
PROD				AML	AML	15 20 00.2	
	comp=N,774μm,0.7s						
PROD				AML	AML	15 20 01.9	
	comp=E,950μm,0.7s						
LTK	Loutraki	1.98	100	P	Pb	15 19 24.9	-0.5
LKR	Lokris	1.98	82	P	Pb	15 19 25.0	-0.4
VIL2	Platees	2.18	94	P	Pb	15 19 28.5	-0.5
DID	Didima	2.33	111	P	Pb	15 19 29.9	-1.6
MRKA	Markates	2.44	82	P	Pn	15 19 31.3	+2.0
OHR	Ohrid	2.73	5	*e*Pn	Pb	15 19 37.0	-1.3
VAY	Valandovo	3.33	28	*e*Pn	Pn	15 19 44.8	+3.2
STIP	Stip	3.55	21	*e*Pn	Pb	15 19 48.8	-3.5
FINES	FINESS Array B	23.34	7	P	P	15 23 57.9	+0.4
	comp=E,2.5nm,0.9s,baz=177,slow=11,SNR=5.1						
MKAR	Makanchi Array	45.20	59	P	P	15 27 06.5	-0.1
	comp=E,0.2nm,0.3s,baz=268,slow=7.5,SNR=5.6						
ZALV	Zalesovo Beam	45.56	48	P	P	15 27 09.7	+0.5
	comp=E,0.9nm,0.4s,baz=280,slow=9.7,SNR=4.8						

MAN 28 15:26:06.3,6˚.35N×126˚.09E,h34km,mb4.2,ML3.0,MS2.7, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.44	237	*e*P	Pn	15 26 17.2	+0.8
DDMP				*e*S	Sn	15 26 25.4	+2.3
MATI	Mati	0.62	16	*e*P	Pb	15 26 19.9	+1.0
MATI				*e*S	Sb	15 26 28.8	+1.4
GSPH	General Santos	1.16	257⇓	*e*P	Pb	15 26 36.2	+8.3
SKMP	Bagumbayan, Su	1.54	276	*e*P	Pn	15 26 31.5	+0.1
SKMP				*e*S	Sn	15 26 51.1	+0.8

*ATH **28** 15:35:26.9,38˚.15N×20˚.36E,h16km±1km,ML2.7/8,Error ellipse: s-maj=1.9km s-min=0.9km az=81.0*
*THE **28** 15:35:27.5,38˚.16N×20˚.38E,h12km,ML2.6/7,Error ellipse: s-maj=1.1km s-min=0.6km az=235.0*

ISC 28 15:35:27.2±1.3,38˚.16N±0˚.03×20˚.37E±0˚.06,h14km±5km, n34,σ0°40/57,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	Chavriata, Kef	0.03	25	P	Pg	15 35 29.8	0.0
CHV1				S	Sg	15 35 31.4	-0.1
KEF2	Argostoli. Kep	0.10	85	P	Pg	15 35 30.3	0.0
KEF2				S	Sg	15 35 32.2	-0.2
ARG2	Argostoli	0.10	77	P	Pg	15 35 30.3	0.0
ARG2				S	Sg	15 35 32.2	-0.2
VLS	Valsamata	0.18	83	P	Pg	15 35 31.3	-0.1
VLS				S	Sg	15 35 34.0	-0.3
	6μm,0.1s						
VLS	Valsamata	0.18	83	P	Pg	15 35 31.3	-0.1
VLS				S	Sg	15 35 34.2	-0.1
VLS				AML	AML	15 35 34.3	
	comp=N,8603μm,0.1s						
VLS				AML	AML	15 35 34.7	
	comp=E,14726μm,0.1s						
KFL	Anninata	0.34	98	P	Pg	15 35 34.0	-0.1
KFL				S	Sg	15 35 38.9	+0.1
	comp=E,4μm,0.3s						
KFL	Anninata	0.34	98	P	Pg	15 35 34.0	-0.1
KFL				S	Sg	15 35 39.3	+0.5
KFL				AML	AML	15 35 40.4	
	comp=E,8776μm,0.3s						
KFL				AML	AML	15 35 41.3	
	comp=N,8038μm,0.3s						
FSK	Fiskardo	0.34	27	P	Pg	15 35 34.2	0.0
FSK				S	Sg	15 35 39.5	+0.6
FSK	Fiskardo	0.34	27	P	Pg	15 35 34.2	0.0
FSK				S	Sg	15 35 39.6	+0.6
VLMS	Volimes, Zakyn	0.36	140	P	Pg	15 35 34.8	+0.1
VLMS				S	Sg	15 35 39.8	+0.1
VLMS				AML	AML	15 35 41.4	
	comp=N,14387μm,0.3s						
VLMS				AML	AML	15 35 41.8	
	comp=E,11697μm,0.2s						
EVGI	Lefkada island	0.52	26	P	Pg	15 35 37.2	-0.2
EVGI				S	Sb	15 35 45.1	-0.4
	comp=E,1μm,0.1s						
EVGI	Lefkada island	0.52	26	P	Pg	15 35 37.2	-0.2
EVGI				S	Sb	15 35 45.2	-0.2
MGNA	Meganis	0.60	34	P	Pg	15 35 38.6	-0.4
MGNA				S	Sb	15 35 47.6	-0.2
MGNA				AML	AML	15 35 48.1	
	comp=E,3048μm,0.2s						
MGNA				AML	AML	15 35 48.3	
	comp=N,2012μm,0.2s						
LKD2	Lefkada island	0.67	20	P	Pg	15 35 39.7	-0.7
LKD2				S	Sb	15 35 50.2	+0.2
	comp=N,322nm,0.6s						
LKD2	Lefkada island	0.67	20	P	Pg	15 35 39.9	-0.5
LKD2				AML	AML	15 35 56.3	
	comp=E,710μm,0.5s						
LKD2				AML	AML	15 35 56.6	
	comp=N,534μm,0.3s						
TSLK	Tsoukalades, L	0.70	19	P	Pg	15 35 40.6	-0.4
TSLK				S	Sb	15 35 51.1	+0.2
TSLK	Tsoukalades, L	0.70	19	P	Pg	15 35 40.5	-0.5
TSLK				S	Sg	15 35 50.5	+0.2
PDO	Prodromos	0.78	55	P	Pg	15 35 41.9	-0.5
PDO				S	Sb	15 35 53.1	+0.1
PDO	Prodromos	0.78	55	P	Pg	15 35 42.0	-0.4
PDO				S	Sb	15 35 53.6	+0.6
RLS	Riolos of Patr	0.87	96	P	Pg	15 35 43.5	-0.7
RLS				S	Sn	15 35 56.9	-0.7
	comp=N,188nm,0.7s						
RLS	Riolos of Patr	0.87	96	P	Pg	15 35 43.5	-0.7
RLS				S	Sb	15 35 56.1	+0.4
RLS				AML	AML	15 35 59.3	
	comp=N,332μm,0.5s						
RLS				AML	AML	15 36 00.0	
	comp=E,386μm,0.4s						
PVO	Paravola	1.02	63	P	Pb	15 35 46.7	0.0
PVO				S	Sn	15 36 02.5	+1.3
	comp=E,388nm,0.4s						
PVO	Paravola	1.02	63	P	Pb	15 35 46.7	0.0
PVO				S	Sn	15 36 01.1	-0.1
PVO				AML	AML	15 36 03.5	
	comp=N,502μm,0.5s						
PVO				AML	AML	15 36 03.5	
	comp=E,1026μm,0.3s						
DRO	Drossia	1.08	100	P	Pb	15 35 47.6	-0.1
AMT	Artemida-Makis	1.23	120	P	Pn	15 35 50.1	+0.1
EFP	Efpalio	1.24	77	P	Pn	15 35 49.9	-0.2
LAKA	Lakka	1.27	86	P	Pn	15 35 50.5	-0.1
ANX	Ano Chora	1.30	70	P	Pn	15 35 50.7	-0.3
ANX				S	Sg	15 36 10.1	+1.0
	comp=E,215nm,0.5s						
ANX	Ano Chora	1.30	70	P	Pb	15 35 51.7	+0.2
SERG	Sergoula	1.35	79	P	Pn	15 35 52.1	+0.3
SERG				AML	AML	15 36 17.2	
	comp=E,245μm,0.7s						
SERG				AML	AML	15 36 20.2	
	comp=N,257μm,0.4s						
EVR	Evrytania	1.36	56	P	Pg	15 35 53.2	-0.3
KLV	Kalavryta, Ach	1.41	94	P	Pb	15 35 53.1	-0.3
KALE	Kalithea	1.42	80	P	Pb	15 35 53.3	-0.1
ITM	Ithomi	1.58	128	P	Pb	15 35 56.3	+0.1

*TAP **28** 15:39:46.6,24˚.32N×122˚.05E,h19km,ML3.0,B*
*JMA **28** 15:39:46.2,24˚.29N×122˚.07E,h17km±3km,M2.9*

ISC 28 15:39:46.2±0.9,24˚.30N±0˚.02×122˚.08E±0˚.02,h17km±7km, n67,σ0°55/123,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.25	10	*i* P	Pb

baz=306
SLBB Yuanshan 0.61 318 *e*P Pg 15 39 58.4 +0.1
baz=319
SLBB S Sb 15 40 07.0 +0.2
baz=319
NNSB Datong 0.65 282 *i* P Pg 15 39 59.2 +0.2
baz=288
NNSB S Sg 15 40 07.6 -0.1
baz=288
NNSH Datong 0.65 282 *e*P Pg 15 39 59.2 +0.1
baz=285
NNSH S Sg 15 40 07.7 0.0
baz=285
NNS Nan Shan 0.66 282 P Pg 15 39 59.4 +0.1
baz=288
NNS S Sg 15 40 08.2 +0.1
baz=288
TIPB Shuangxi 0.71 341 *e*P Pg 15 40 00.1 0.0
baz=343
TIPB S Sb 15 40 09.1 -0.5
baz=343
NWLT Wulai 0.71 312 P Pg 15 40 00.3 +0.1
baz=308
NWLT S Sb 15 40 09.1 -0.5
baz=308
TWB1 Santiao Chiao 0.71 353 P Pg 15 40 00.3 +0.1
baz=348
TWB1 S Sg 15 40 10.1 +0.5
baz=348
YHNB Yeheng 0.74 300 P Pg 15 40 01.0 +0.2
baz=305
YHNB S Sg 15 40 10.2 -0.4
baz=305
NSK Sanguang 0.76 300 P Pg 15 40 01.1 0.0
baz=304
NSK *e*S Sb 15 40 10.5 -0.6
baz=304
WHF Hehuan Shan 0.76 259 P Pg 15 40 01.1 -0.1
baz=264
WHF S Sg 15 40 12.0 +0.7
baz=264
ESL Shilin 0.77 231 *e*P Pn 15 40 01.7 -0.5
baz=227
ESL *e*S Sn 15 40 12.8 -0.6
baz=227
JYNG Yonagunijimaku 0.80 79 P Pb 15 40 01.5 -0.2
JYNG *e*S Sb 15 40 12.3 +0.1
NWF Wu-fen Shan 0.82 340 *e*P Pg 15 40 02.0 -0.1
baz=333
NWF *e*S Sg 15 40 13.4 +0.5
baz=333
TWA Mucha 0.82 326 P Pn 15 40 02.6 -0.4
baz=336
TWA *e*S Sg 15 40 13.4 +0.5
baz=336
WFSB Wu-fen Shan 0.82 340 P Pn 15 40 02.8 -0.2
baz=335
WFSB *e*S Sn 15 40 13.8 -0.8
baz=335
TWT Tachien 0.83 267 P Pn 15 40 03.5 +0.3
baz=271
TWT S Sn 15 40 14.3 -0.9
baz=271
NHDH Xindian Distri 0.83 323 P Pn 15 40 03.0 -0.2
baz=315
NHDH *e*S Sg 15 40 13.2 -0.3
baz=315
TDCB Techi 0.84 267 *e*P Pg 15 40 02.8 +0.1
baz=271
TDCB *e*S Sg 15 40 13.8 -0.1
baz=271
YOJ Yonaguni jima 0.86 79 *e*P Pb 15 40 03.0 +0.3
baz=72
YOJ *e*S Sg 15 40 15.3 +0.9
baz=72
YOJ Yonaguni jima 0.86 79 P Pb 15 40 02.5 -0.2
YOJ *e*S Sb 15 40 14.7 +0.7
CHGB Renai 0.86 254 P Pn 15 40 03.3 -0.4
baz=252
CHGB *e*S Sn 15 40 16.2 +0.1
baz=252
TAP1 Taipei 0.90 325 *e*P Pn 15 40 04.1 +0.1
baz=318
TAP1 *e*S Sg 15 40 15.5 0.0
baz=318
OWD Renai 0.90 248 P Pb 15 40 03.1 -0.3
baz=245
OWD *e*S Sn 15 40 16.3 -0.5
baz=245
WLTB Daxi 0.94 306 *e*S Sn 15 40 17.3 -0.2
baz=307
YM01 YM01 0.96 331 P Pg 15 40 05.7 +0.7
baz=339
YM01 *e*S Sg 15 40 17.5 -0.1
baz=339
YM10 YM10 0.97 331 *e*P Pg 15 40 05.8 +0.6
baz=333
YM11 YM11 0.98 332 *e*P Pg 15 40 05.9 +0.7
baz=325
YM05 YM05 0.98 332 P Pg 15 40 05.8 +0.5
baz=339
YM05 *e*S Sn 15 40 18.7 -0.1
baz=339
YM04 YM04 0.98 330 P Pg 15 40 05.8 +0.5
baz=338
YM04 *e*S Sn 15 40 19.1 +0.3
baz=338
YM08 YM08 0.99 333 P Pg 15 40 05.9 +0.5
baz=335
YM08 *e*S Sg 15 40 18.2 -0.3
baz=335
TWS1 Kuangyinshan 1.00 323 *e*P Pg 15 40 07.1 +1.5
baz=318
TWS1 *e*S Sn 15 40 19.1 -0.1
baz=318
HGSD Ruisui 1.00 217 *e*P Pb 15 40 05.3 +0.1
baz=199
YM03 YM03 1.00 331 *e*P Pg 15 40 05.8 +0.1
baz=333
VWDT VWDT 1.02 238 *e*P Pg 15 40 05.9 0.0
baz=224
VWDT *e*S Sn 15 40 19.7 +0.1
baz=224
ANP Anpu 1.02 330 P Pg 15 40 06.3 +0.3
baz=333
LIOB Emei 1.03 290 P Pg 15 40 07.5 +1.3
baz=293
LIOB S Sn 15 40 20.6 +0.7
baz=293
NTST Danshui 1.04 326 *e*P Pg 15 40 06.9 +0.6
baz=328
WHP Taichung City 1.04 269 P Pg 15 40 06.3 0.0
baz=268
WHP S Sn 15 40 20.4 +0.2
baz=268
NSTT Nanjuang 1.04 289 P Pg 15 40 07.1 +0.7
baz=293
NSTT S Sn 15 40 20.4 +0.3
baz=293
EHY Hungye 1.05 222 *e*P Pn 15 40 06.1 -0.1
baz=218
EHY *e*S Sg 15 40 21.4 +1.0
baz=218
TWY Chenhua 1.07 336 *e*P Pg 15 40 06.9 0.0
baz=337
TWY *e*S Sg 15 40 21.6 +0.7
baz=337
DPDB Guoxing 1.09 256 P Pg 15 40 07.8 +0.6
baz=246
DPDB *e*S Sg 15 40 23.2 +1.7
baz=246
SSLB Suanglung 1.15 244 *e*P Pb 15 40 07.8 +0.2
baz=242
SSLB *e*S Sg 15 40 23.5 0.0
baz=242
YULB Yu-li 1.15 219 *e*P Pn 15 40 07.1 -0.5
baz=214
SMLT Sun Moon Lake 1.16 249 P Pg 15 40 08.6 0.0
baz=237
SMLT *e*S Sg 15 40 24.2 +0.4
baz=237
TWF1 Yuli 1.19 217 *e*P Pg 15 40 08.8 -0.3
baz=231
TYC Yuchr 1.19 251 *e*P Pb 15 40 08.4 +0.1
baz=241
TYC *e*S Sg 15 40 24.8 +0.2
baz=241
TWQ1 Liyutan 1.20 273 *e*P Pg 15 40 09.8 +0.5
baz=272
TWQ1 *e*S Sg 15 40 26.7 +1.7
baz=272
IRIF Iriomote-Funau 1.50 88 P Pn 15 40 11.9 -0.5
IRIF *e*S Sn 15 40 30.4 -1.2
HATJ Hateruma jima 1.59 98 P Pn 15 40 13.7 +0.1
JKRS Kuro-shima 1.76 92 P Pn 15 40 16.0 +0.1
JKRS *e*S Sn 15 40 37.7 -0.2
JIJ Ishigaki jima 1.88 88 P Pn 15 40 16.9 -0.7
JIJ *e*S Sn 15 40 39.8 -1.1
JISG Ishigakijimahi 2.05 82 P Pn 15 40 19.3 -0.6
JISG *e*S Sn 15 40 43.9 -1.2
JTJ Tarama 2.41 81 P Pn 15 40 25.1 +0.2
JTJ S Sn 15 40 54.3 +0.3
JIRB Irabujima 2.86 79 P Pn 15 40 31.2 +0.1

*THE **28** 15:42:51.6, 38°.23N×20°.37E, h13km±1km, ML3.0/5, Error ellipse: s-maj=1.8km s-min=0.6km az=238.0*
*ATH **28** 15:42:51.4, 38°.22N×20°.37E, h15km±1km, ML3.0/5, Error ellipse: s-maj=1.7km s-min=0.7km az=75.0*
ISC 28 15:42:50.8±1.0, 38°.22N±0°.03×20°.33E±0°.05, h18km±4km, n37, σ0°83/54, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.06**	**130**	P	**Pg**	**15 42 54.3**	**+0.3**
CHV1				S	**Sg**	**15 42 56.4**	**+0.2**
KEF1	**Kardakata, Kep**	**0.13**	**64**	P	**Pg**	**15 42 54.6**	**-0.1**
KEF1				S	**Sg**	**15 42 56.9**	**-0.4**
ARG2	**Argostoli**	**0.14**	**108**	P	**Pg**	**15 42 54.8**	**0.0**
ARG2				S	**Sg**	**15 42 57.2**	**-0.3**
KEF2	**Argostoli. Kep**	**0.14**	**113**	P	**Pg**	**15 42 54.9**	**0.0**
KEF2				S	**Sg**	**15 42 57.4**	**-0.2**
VLS	**Valsamata**	**0.21**	**102**	P	**Pg**	**15 42 55.6**	**-0.3**
VLS				S	**Sg**	**15 42 58.8**	**-0.6**
	13μm,0.2s						
VLS	**Valsamata**	**0.21**	**102**	P	**Pg**	**15 42 55.6**	**-0.3**
VLS				S	**Sg**	**15 42 58.7**	**-0.6**
VLS				AML	AML	15 42 58.9	
	comp=N,22158μm,0.3s						
VLS				AML	AML	15 42 59.2	
	comp=E,27740μm,0.1s						
KFL	**Anninata**	**0.38**	**107**	P	**Pg**	**15 42 58.4**	**-0.3**
KFL				S	**Sg**	**15 43 03.8**	**-0.3**
	comp=E,6μm,0.3s						
KFL	**Anninata**	**0.38**	**107**	P	**Pg**	**15 42 58.4**	**-0.3**
KFL				S	**Sg**	**15 43 03.7**	**-0.3**
KFL				AML	AML	15 43 04.2	
	comp=N,8049μm,0.4s						
KFL				AML	AML	15 43 04.4	
	comp=E,16013μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.43**	**142**	P	**Pg**	**15 42 59.4**	**-0.3**
VLMS				S	**Sb**	**15 43 06.4**	**+0.2**
VLMS				AML	AML	15 43 11.8	
	comp=N,7842μm,0.3s						
VLMS				AML	AML	15 43 12.8	
	comp=E,4976μm,0.3s						
EVGI	**Lefkada island**	**0.48**	**33**	P	**Pg**	**15 43 00.1**	**-0.3**
EVGI				S	**Sg**	**15 43 07.0**	**+0.1**
EVGI	**Lefkada island**	**0.48**	**33**	P	**Pg**	**15 42 59.9**	**-0.5**
EVGI				S	**Sb**	**15 43 07.3**	**-0.1**
LKD2	**Lefkada island**	**0.62**	**25**	P	**Pg**	**15 43 02.6**	**-0.5**
LKD2				S	**Sb**	**15 43 12.0**	**+0.4**
	comp=E,962nm,0.6s						
LKD2	**Lefkada island**	**0.62**	**25**	P	**Pg**	**15 43 02.7**	**-0.5**
LKD2				S	**Sb**	**15 43 12.4**	**+0.7**
LKD2				AML	AML	15 43 18.3	
	comp=E,1722μm,0.3s						
LKD2				AML	AML	15 43 19.0	
	comp=N,1795μm,0.3s						
TSLK	**Tsoukalades, L**	**0.66**	**23**	P	**Pg**	**15 43 03.3**	**-0.4**
TSLK				S	**Sb**	**15 43 13.4**	**+0.9**
	comp=N,1μm,0.6s						
TSLK	**Tsoukalades, L**	**0.66**	**23**	P	**Pg**	**15 43 03.4**	**-0.4**
RLS	**Rios of Patr**	**0.92**	**100**	P	**Pg**	**15 43 08.6**	**0.0**
PVO	**Paravola**	**1.02**	**67**	P	**Pb**	**15 43 10.1**	**+0.1**
PVO				S	**Sn**	**15 43 25.4**	**+1.2**
	comp=N,735nm,0.6s						
PVO	**Paravola**	**1.02**	**67**	P	**Pb**	**15 43 10.2**	**+0.3**
PVO				AML	AML	15 43 30.1	
	comp=E,1610μm,0.5s						
PVO				AML	AML	15 43 31.5	
	comp=N,1110μm,0.8s						
DRO	**Drossia**	**1.13**	**103**	P	**Pn**	**15 43 12.3**	**+0.7**
EFP	**Efpalio**	**1.26**	**80**	P	**Pg**	**15 43 14.8**	**-0.3**
LAKA	**Lakka**	**1.30**	**89**	P	**Pn**	**15 43 14.3**	**+0.2**
ANX	**Ano Chora**	**1.31**	**73**	P	**Pb**	**15 43 15.5**	**+0.6**
EVR	**Evrytania**	**1.35**	**59**	P	**Pg**	**15 43 17.0**	**+0.1**
SERG	**Sergoula**	**1.38**	**81**	P	**Pb**	**15 43 16.3**	**+0.3**
TRIZ	**Trizonia**	**1.38**	**83**	P	**Pn**	**15 43 16.0**	**+0.8**
KLV	**Kalavryta, Ach**	**1.45**	**96**	P	**Pb**	**15 43 17.4**	**+0.1**
JAN	**Janina**	**1.49**	**16**	P	**Pg**	**15 43 20.1**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.62**	**60**	P	**Pg**	**15 43 22.1**	**+0.1**
AGG	**Agios Georgios**	**1.76**	**62**	P	**Pg**	**15 43 24.0**	**-0.7**
VIL2	**Platees**	**2.32**	**89**	P	**Pb**	**15 43 30.7**	**-1.4**
DBRK	**Dubrovnik**	**4.74**	**340**	*e*Pn	**Pn**	**15 44 02.0**	**+0.6**
DBRK				Sn	**Sn**	**15 44 54.6**	**-1.4**
STON	**Ston**	**5.06**	**338**	*e*Pn	**Pn**	**15 44 05.6**	**-0.1**
STON				Sn	**Sn**	**15 45 00.3**	**-3.4**
ZIRJ	**Zirje**	**6.48**	**328**	*e*Pn	**Pn**	**15 44 25.1**	**-0.1**
KIJV	**Kijevo**	**6.49**	**334**	*e*Pn	**Pn**	**15 44 26.2**	**+0.8**
MORI	**Morici**	**6.63**	**330**	*e*Pn	**Pn**	**15 44 28.7**	**+1.4**
DUGI	**Dugi Otok**	**7.00**	**327**	*i* Pn	**Pn**	**15 44 34.3**	**+1.8**
UDBI	**Udbina**	**7.17**	**333**	*i* Pn	**Pn**	**15 44 36.8**	**+2.0**

*JMA **28** 15:45:01.5±0.2, 32°.18N×138°.27E, h373km, M3.7*
*NEIC **28** 15:45:01.9±1.1, 32°.01N±0°.08×138°.0E±0°.1, h348km±8km, mb4.1/23, Error ellipse: s-maj=13.7km s-min=11.9km az=70.0*
*IDC **28** 15:45:02.0±1.1, 32°.05N×138°.10E, h347km±10km, mb3.1/14, mb1 3.3/20, mb1mx3.2/35, mbtmp3.9/20, Error ellipse: s-maj=16.0km s-min=11.1km az=78.0*
ISC 28 15:45:02.1±0.6, 32°.10N±0°.06×138°.21E±0°.06, h350km, n88, σ1°55/98, mb3.7/24, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.37**	**74**	P	**Pn**	**15 45 51.4**	**+1.9**
JHJ2	**Mitsune**	**1.69**	**53**	P	**Pn**	**15 45 53.6**	**+2.3**
JHJ2	**Mitsune**	**1.69**	**53**	Pn	**Pn**	**15 45 53.0**	**+1.8**
TK02	**Tokai 2**	**1.88**	**349**	P	**Pn**	**15 45 54.3**	**+2.1**
TTO2	**TONANKAI O.B.S**	**1.91**	**329**	P	**Pn**	**15 45 54.6**	**+2.3**
TTO1	**TONANKAI O.B.S**	**1.93**	**322**	P	**Pn**	**15 45 54.4**	**+1.9**
JIE	**Ise**	**2.61**	**332**	P	**Pn**	**15 45 59.6**	**+1.7**
JIE				S	*e*S	**15 45 41.9**	**-1.0**
JKN2	**Miekihoku**	**2.68**	**323**	P	**Pn**	**15 45 59.7**	**+1.2**
JTNC	**Tanabenakahech**	**2.77**	**309**	P	**Pn**	**15 46 00.3**	**+0.9**
HMMJ	**Hamamatsu 2**	**2.78**	**352**	P	**Pn**	**15 46 00.4**	**+1.0**
HMMJ				*e*S	**S**	**15 46 46.5**	**+1.0**
JWY	**Kouya**	**3.04**	**315**	P	**Pn**	**15 46 03.4**	**+1.6**
JOD2	**Odawara 2**	**3.24**	**13**	P	**Pn**	**15 46 04.7**	**+1.2**
JAO	**Obara**	**3.26**	**346**	P	**Pn**	**15 46 05.6**	**+1.9**
JAO				*e*S	**S**	**15 46 54.9**	**+1.5**
JNY	**Yasuok**	**3.26**	**355**	*e*S	**S**	**15 46 55.4**	**+1.8**
BSO3	**Boso 3**	**3.31**	**35**	S	**S**	**15 46 53.5**	**-0.3**
JEG	**Eigenji**	**3.38**	**334**	P	**Pn**	**15 46 06.8**	**+1.9**
BSO4	**Boso 4**	**3.39**	**31**	P	**Pn**	**15 46 05.3**	**+0.5**
BSO4				*e*S	**S**	**15 46 53.9**	**-1.5**
INU	**Inuyama**	**3.39**	**343**		**Pn**	**15 46 06.5**	**+1.5**
JYN	**Shimob**	**3.40**	**5**	P	**Pn**	**15 46 07.1**	**+2.0**
BSO1	**Boso 1**	**3.44**	**42**	P	**Pn**	**15 46 05.2**	**+0.4**
BSO1				*e*S	**S**	**15 46 54.4**	**-1.2**
JAI	**Aioi**	**3.58**	**299**	P	**Pn**	**15 46 07.6**	**+0.8**
JYTA	**Yamagatataniai**	**3.69**	**341**	P	**Pn**	**15 46 09.1**	**+1.2**
JHU	**Hanno**	**3.85**	**13**	P	**Pn**	**15 46 09.8**	**+0.4**
JHU				*e*S	**S**	**15 47 01.8**	**-2.0**
JWT	**Wachi**	**3.94**	**324**	P	**Pn**	**15 46 11.6**	**+1.2**
JRY	**Ryogami san**	**3.95**	**8**	P	**Pn**	**15 46 11.7**	**+1.2**
JMN	**Monobe**	**3.98**	**295**	P	**Pn**	**15 46 11.9**	**+1.0**
MJAR	**Matsushiro Arr**	**4.43**	**0**	P	**Pn**	**15 46 16.0**	**+0.5**
	0.5nm,0.3s,baz=170,slow=12,SNR=58						
MJAR				S	**S**	**15 47 15.8**	**+1.0**
	0.2nm,0.3s,baz=156,slow=19,SNR=4.5						
MJAR	**Matsushiro Arr**	**4.43**	**0**		**Pn**	**15 46 17.7**	**+2.3**
MAJO	**Matsushiro**	**4.43**	**0**		**Pn**	**15 46 14.9**	**-0.5**
MAT	**Matsushiro**	**4.43**	**0**	P	**Pn**	**15 46 16.6**	**+1.1**
MAT				S	**S**	**15 47 13.1**	**-1.7**
JYT	**Yasato**	**4.43**	**21**	P	**Pn**	**15 46 14.4**	**-1.1**
JYT				S	**S**	**15 47 09.5**	**-5.3**
MJB9	**Matsu-Tunnel**	**4.43**	**360**		**Pn**	**15 46 15.5**	**0.0**
JAG	**Ashikaga**	**4.44**	**13**	P	**Pn**	**15 46 15.1**	**-0.4**
JAG				S	**S**	**15 47 10.7**	**-4.1**
JTO	**Tosashimizu**	**4.63**	**281**	P	**Pn**	**15 46 18.1**	**+0.5**
JHO	**Hitachi**	**4.91**	**23**	P	**Pn**	**15 46 19.5**	**-1.0**
JFK	**Kawauchi**	**5.70**	**22**	S	**S**	**15 47 34.3**	**-5.8**
JCJ	**Chichijima**	**6.07**	**144**	P	**Pn**	**15 46 32.8**	**-1.0**
	5.1nm,0.3s,baz=296,slow=21,SNR=3.9						
JCJ				S	**S**	**15 47 43.6**	**-4.5**
	21nm,0.3s,baz=267,slow=23,SNR=12						
JNU	**Nakatsue**	**6.27**	**281**	P	**Pn**	**15 46 35.6**	**-0.4**
	0.2nm,0.3s,baz=114,slow=5.1,SNR=3.5						
JNU	**Nakatsue**	**6.27**	**281**		**Pn**	**15 46 35.1**	**-0.8**
KSRS	**Korea Array**	**10.00**	**305**	P	**Pn**	**15 47 20.3**	**+0.4**
	0.1nm,0.3s,baz=118,slow=13,SNR=5.0						
KSAR	**Wonju Array Be**	**10.02**	**305**	Pn	**Pn**	**15 47 18.3**	**-1.9**
USRK	**Ussuriysk Ar.**	**13.03**	**340**	P	**P**	**15 47 54.8**	**0.0**
	baz=163,slow=10,SNR=3.5						
SSLB	**Suanglung**	**17.33**	**246**	P	**P**	**15 48 41.2**	**-0.8**
KLR	**Kul'dur**	**17.79**	**346**	P	**P**	**15 48 46.5**	**-0.1**
	0.2nm,0.3s,baz=286,slow=6.9,SNR=6.4						
TPUB	**Ta-pu**	**17.84**	**245**	P	**P**	**15 48 48.0**	**+0.5**
XAN	**Xi'an**	**24.58**	**282**	P	**P**	**15 49 50.2**	**-1.4**
ULN	**Ulaanbaatar**	**28.35**	**313**	P	**P**	**15 50 24.6**	**-0.4**
ULN				IAmb	IAmb	15 50 26.2	
	comp=Z,4.1nm,0.9s						
SONM	**Songino Array**	**28.75**	**312**	P	**P**	**15 50 28.4**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=111,slow=7.3,SNR=6.6						
SONM	**Songino Array**	**28.75**	**312**	P	**P**	**15 50 28.1**	**-0.5**
ZAA0	**Zalesovo Array**	**43.47**	**316**	P	**P**	**15 52 31.0**	**-0.6**
ZAA0				IAmb	IAmb	15 53 31.2	
	comp=Z,11nm,1.9s						
ZALV	**Zalesovo Beam**	**43.47**	**316**	P	**P**	**15 52 31.5**	**-0.1**
	comp=Z,1.3nm,0.3s,baz=88,slow=7.4,SNR=7.3						
ZALV	**Zalesovo Beam**	**43.47**	**316**	P	**P**	**15 52 30.8**	**-0.8**
MK31	**Makanchi Array**	**44.68**	**306**	P	**P**	**15 52 40.6**	**-0.7**
MKAR	**Makanchi Array**	**44.68**	**306**	P	**P**	**15 52 40.9**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=90,slow=9.8,SNR=24						
MKAR	**Makanchi Array**	**44.68**	**306**	P	**P**	**15 52 40.7**	**-0.6**
MAKZ	**Makanchi**	**44.90**	**306**	P	**P**	**15 52 42.5**	**-0.5**
MAKZ				IAmb	IAmb	15 54 21.8	
	comp=Z,12nm,1.9s						
KURK	**Kurchatov**	**47.05**	**311**	P	**P**	**15 52 58.7**	**-0.8**
KNRA	**Kununurra**	**48.36**	**192**	P	**P**	**15 53 09.2**	**-0.6**
WRA	**Warramunga Arr**	**51.88**	**185**	P	**P**	**15 53 35.2**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=359,slow=5.0,SNR=3.6						
WR0	**Warramunga Arr**	**51.88**	**184**	P	**P**	**15 53 35.5**	**-0.5**
WR0				IAmb	IAmb	15 53 58.0	
	comp=Z,25nm,1.7s						
IMAR	**Indian Mountai**	**52.24**	**29**	P	**P**	**15 53 39.9**	**+1.9**
KDAK	**Kodiak Island**	**52.56**	**39**	P	**P**	**15 53 41.8**	**+1.3**
PPLA	**Purkeypile**	**52.73**	**33**	P	**P**	**15 53 44.2**	**+2.4**
PPLA				IAmb	IAmb	15 54 09.6	
	comp=Z,19nm,1.4s						
BPAW	**Bear Paw Mtn.**	**53.30**	**31**	P	**P**	**15 53 48.7**	**+2.9**
BPAW				IAmb	IAmb	15 53 49.1	
	comp=Z,22nm,1.9s						
KK31	**Karatay Array**	**53.42**	**302**	P	**P**	**15 53 46.5**	**-0.5**
KKAR	**Karatay Array**	**53.42**	**302**	P	**P**	**15 53 46.3**	**-0.6**
KKAR	**Karatay Array**	**53.42**	**302**	P	**P**	**15 53 46.5**	**-0.5**
KKAR				IAmb	IAmb	15 53 47.3	
	comp=Z,2.7nm,0.8s						
ILAR	**Eielson Array**	**55.07**	**30**	P	**P**	**15 53 58.8**	**+0.4**
	comp=Z,0.6nm,1.0s,baz=284,slow=6.8,SNR=4.7						
ILAR	**Eielson Array**	**55.07**	**30**	P	**P**	**15 53 59.4**	**+1.0**
ASAR	**Alice Springs**	**55.60**	**185**	P	**P**	**15 54 02.9**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=24,slow=12,SNR=4.9						
ASAR	**Alice Springs**	**55.60**	**185**	P	**P**	**15 54 02.0**	**-0.6**
ARU	**Arti**	**58.37**	**320**	P	**P**	**15 54 21.0**	**-0.4**
ARU				IAmb	IAmb	15 54 35.2	
	comp=Z,17nm,1.7s						
ABKAR	**Akbulak array**	**59.16**	**312**	P	**P**	**15 54 26.6**	**-0.5**
ABKAR				IAmb	IAmb	15 54 27.2	
	comp=Z,3.4nm,0.5s						
ABKAR	**Akbulak array**	**59.16**	**312**	P	**P**	**15 54 26.5**	**-0.5**
INK	**Inuvik**	**59.97**	**25**	P	**P**	**15 54 32.6**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=269,slow=4.7,SNR=3.3						
INK	**Inuvik**	**59.97**	**25**	IAmb	IAmb	15 56 43.9	
	comp=Z,16nm,1.9s						
ARCES	**ARCESS Array B**	**67.67**	**339**	P	**P**	**15 55 22.4**	**+0.5**
	comp=Z,7.0nm,1.1s,baz=61,slow=7.3,SNR=2.9						
YKA	**Yellowknife Ar**	**69.39**	**28**	P	**P**	**15 55 33.6**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=299,slow=6.5,SNR=5.4						
FINES	**FINESS Array B**	**71.93**	**332**	P	**P**	**15 55 47.7**	**0.0**
	comp=Z,0.8nm,0.5s,baz=59,slow=4.9,SNR=8.3						
FINES	**FINESS Array B**	**71.93**	**332**	P	**P**	**15 55 47.4**	**-0.3**
KBZ	**Khabaz**	**72.10**	**311**	P	**P**	**15 55 49.4**	**+0.4**
	comp=Z,1.6nm,1.0s,baz=45,slow=1.8,SNR=5.0						
AKASG	**Malin Array Be**	**76.55**	**322**	P	**P**	**15 56 14.8**	**+0.5**
	comp=Z,2.2nm,0.3s,baz=52,slow=5.8,SNR=1.5						
BRTR	**Keskin Array B**	**80.09**	**311**	P	**P**	**15 56 34.1**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=129,slow=3.5,SNR=4.7						
NVAR	**Mina Array Bea**	**80.11**	**51**	P	**P**	**15 56 36.5**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=292,slow=4.7,SNR=3.7						
KWP	**Kalwaria Pacla**	**80.55**	**323**	P	**P**	**15 56 35.6**	**-0.4**
LKWY	**Lake**	**81.46**	**42**	P	**P**	**15 56 42.5**	**+1.2**
LKWY				IAmb	IAmb	15 57 15.5	
	comp=Z,5.5nm,0.8s						
GERES	**GERESS Array B**	**85.44**	**327**	P	**P**	**15 57 00.2**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=44,slow=3.0,SNR=2.5						
GERES	**GERESS Array B**	**85.44**	**327**	P	**P**	**15 56 59.9**	**-1.1**

*IDC **28** 15:46:06.7±2.4, 4°.25N×127°.55E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.3/34, mbtmp3.5/4, Error ellipse: s-maj=223.1km s-min=21.3km az=67.0*
ISC 28 15:46:12.1±1.6, 4°.2N±0°.3×127°.8E±0°.3, h35km, n7, σ3°41/9, mb3.6/4, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**2.85**	**312**	*e*P	**Pn**	**15 46 54.6**	**-0.6**
DDMP				*e*S	**Sn**	**15 47 25.1**	**-3.2**
KCP	**Kidapawan**	**3.92**	**316**	*i* S	**Sn**	**15 48 01.4**	**+6.6**
SKMP	**Bagumbayan, Su**	**4.02**	**306**	*e*P	**Pn**	**15 47 13.2**	**+2.0**
SKMP				*e*S	**Sn**	**15 47 54.8**	**-2.3**
WRA	**Warramunga Arr**	**24.81**	**165**	P	**P**	**15 51 31.9**	**+0.7**
	0.6nm,0.6s,baz=344,slow=9.9,SNR=3.4						
ASAR	**Alice Springs**	**28.30**	**168**	P	**P**	**15 52 03.4**	**+0.7**
	0.3nm,0.7s,baz=351,slow=6.6,SNR=3.9						
MKAR	**Makanchi Array**	**57.82**	**325**	P	**P**	**15 55 58.6**	**-1.6**
	0.3nm,0.3s,baz=113,slow=7.9,SNR=9.1						
KURBB	**Kurchatov Arra**	**61.96**	**327**	P	**P**	**15 56 26.9**	**-1.7**
	0.3nm,0.3s,baz=124,slow=7.0,SNR=4.5						

MAN 28 15:58:09.4, 13°.61N×120°.53E, h25km, mb4.8, ML3.7, MS3.7, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.30**	**294**	*e*P	Pn	15 58 18.3	+0.1
LUBP				*e*S	Sn	15 58 25.1	+1.3
TGY	**Tagaytay City**	**0.63**	**39**	*e*P	Pb	15 58 21.9	0.0
TGY				*e*S	Sb	15 58 29.7	-0.6
SJMP	**San Jose**	**1.28**	**153**	*e*P	Pn	15 58 31.6	-0.1
SJMP				*e*S	Sn	15 58 48.3	+0.2
BOAC	**Boac**	**1.29**	**97**	*e*P	Pn	15 58 29.1	-2.7
BOAC				*e*S	Sn	15 58 46.6	-1.7
BUSP	**Coron**	**1.63**	**191**	*e*P	Pn	15 58 37.2	+0.6
BUSP				*e*S	Sn	15 58 57.8	+1.1
POLP	**Polilio Island**	**1.76**	**51**	*e*P	Pn	15 58 38.2	-0.2
POLP				*e*S	Sn	15 59 01.3	+1.3
OTRP	**Odiongan**	**1.91**	**130**	*e*P	Pn	15 58 39.1	-1.4
OTRP				*e*S	Sn	15 59 03.7	0.0
ENPP	**El Nido**	**2.62**	**204**	*e*P	Pn	15 58 49.9	-0.3
ENPP				*e*S	Sn	15 59 19.4	-1.8

ROM 28 16:02:44.9±0.0, 43°.393N±0°.003×12°.497E±0°.004, h9km, ML2.0/16, Error ellipse: s-maj=0.3km s-min=0.2km az=232.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATFO	**Monte Foce - G**	**0.06**	**116**	P	Pg	16 02 47.0	+0.1
ATFO				S	Sg	16 02 48.3	-0.1
ATFO				AML	AML		
	comp=E,6920μm,0.5s						
ATFO				AML	AML		
	comp=N,8745μm,1.1s						
ATFO				AML	AML

ATVO				AML	AML		
	comp=E,2330μm,0.4s						
ATVO				AML	AML		
	comp=N,1470μm,0.4s						
ATPI	**Pietralunga -**	**0.09**	**310**	P	Pg	16 02 47.7	+0.4
ATPI				S	Sg	16 02 49.4	+0.5
ATPI				AML	AML		
	comp=E,944μm,1.6s						
ATPI				AML	AML		
	comp=N,1365μm,0.5s						
ATPI				AML	AML		
	comp=E,942μm,1.6s						
ATPI				AML	AML		
	comp=E,941μm,1.6s						
ATPI				AML	AML		
	comp=N,1370μm,0.5s						
ATPI				AML	AML		
	comp=E,940μm,1.6s						
MURB	**Monte Urbino**	**0.13**	**171**	P	Pg	16 02 48.5	+0.7
MURB				S	Sg	16 02 51.2	+1.3
MURB				AML	AML		
	comp=E,1260μm,1.4s						
MURB				AML	AML		
	comp=N,1540μm,0.2s						
MURB				AML	AML		
	comp=E,1440μm,0.2s						
MURB				AML	AML		
	comp=E,1265μm,1.3s						
MURB				AML	AML		
	comp=N,1535μm,0.2s						
MURB				AML	AML		
	comp=N,1665μm,0.2s						
MURB				AML	AML		
	comp=E,1260μm,1.3s						
MURB				AML	AML		
	comp=E,1435μm,0.2s						
PIEI	**Pieia**	**0.15**	**11**	P	Pg	16 02 48.7	+0.6
PIEI				S	Sg	16 02 51.7	+1.4
PIEI				AML	AML		
	comp=E,1022μm,0.3s						
PIEI				AML	AML		
	comp=N,681μm,0.3s						
PIEI				AML	AML		
	comp=E,1022μm,0.3s						
ATMI	**Monte Miggiano**	**0.18**	**251**	AML	AML		
	comp=E,798μm,0.7s						
ATMI				AML	AML		
	comp=N,596μm,0.2s						
ATMI				AML	AML		
	comp=N,596μm,0.2s						
CDCA	**Citt' di Caste**	**0.20**	**289**	AML	AML		
	comp=N,2810μm,0.4s						
CDCA				AML	AML		
FRON	**Frontone**	**0.21**	**53**	P	Pg	16 02 49.8	+0.6
FRON				S	Sg	16 02 53.5	+1.3
FRON				AML	AML		
	comp=N,626μm,0.7s						
FRON				AML	AML		
	comp=E,398μm,0.7s						
SSFR	**Montelago di S**	**0.21**	**78**	P	Pg	16 02 49.9	+0.6
SSFR				S	Sg	16 02 53.7	+1.4
SSFR				AML	AML		
	comp=N,676μm,0.2s						
SSFR				AML	AML		
	comp=E,1145μm,0.2s						
FOSV	**Fossato di Vic**	**0.22**	**117**	P	Pg	16 02 49.7	+0.4
FOSV				S	Sg	16 02 53.8	+1.4
FOSV				AML	AML		
	comp=E,246μm,1.2s						
FOSV				AML	AML		
	comp=N,263μm,1.4s						
FOSV				AML	AML		
	comp=E,246μm,1.2s						
FOSV				AML	AML		
	comp=N,264μm,1.4s						
FOSV				AML	AML		
	comp=E,246μm,1.2s						
BADI	**Badiali**	**0.22**	**302**	P	Pg	16 02 50.2	+0.8
BADI				S	Sg	16 02 54.0	+1.6
BADI				AML	AML		
	comp=E,1154μm,0.2s						
BADI				AML	AML		
	comp=N,1304μm,0.3s						
BADI				AML	AML		
	comp=E,1155μm,0.2s						
BADI				AML	AML		
	comp=N,1300μm,0.3s						
ATTE	**AVT- Monte Tez**	**0.22**	**208**	AML	AML		
	comp=E,400μm,0.3s						
ATTE				AML	AML		
	comp=N,232μm,0.4s						
ATTE				AML	AML		
	comp=E,400μm,0.3s						
NARO	**Abbazia di Nar**	**0.23**	**16**	P	Pg	16 02 50.1	+0.6
NARO				S	Sg	16 02 53.9	+1.3
NARO				AML	AML		
	comp=E,243μm,1.1s						
NARO				AML	AML		
	comp=N,158μm,0.4s						
ATCC	**AVT- Casa Cast**	**0.23**	**153**	P	Pg	16 02 50.5	+0.9
ATCC				S	Sg	16 02 55.0	+2.2
ATCC				AML	AML		
	comp=N,966μm,0.2s						
ATCC				AML	AML		
	comp=N,964μm,0.2s						
ATCC				AML	AML		
	comp=E,740μm,0.9s						
PE3	**Peglio**	**0.30**	**360**	P	Pb	16 02 52.3	-0.3
PE3				S	Sb	16 02 57.4	-0.3
PE3				AML	AML		
	comp=E,308μm,1.1s						
PE3				AML	AML		
	comp=N,390μm,1.4s						
MPAG	**Monte Paganucc**	**0.30**	**39**	P	Pg	16 02 51.5	+0.5
MPAG				S	Sb	16 02 56.7	-1.0
PARC	**Parchiule**	**0.32**	**324**	P	Pg	16 02 52.0	+0.8
PARC				S	Sb	16 02 57.4	-0.7
PARC				AML	AML		
	comp=E,290μm,0.2s						
PARC				AML	AML		
	comp=E,290μm,0.2s						
PARC				AML	AML		
	comp=N,235μm,0.2s						
ARVD	**Arcevia**	**0.34**	**72**	P	Pg	16 02 52.2	+0.5
ARVD				S	Sb	16 02 58.2	-0.6
SNTG	**Esanatoglia**	**0.35**	**113**	P	Pg	16 02 52.3	+0.5
SNTG				S	Sb	16 02 58.4	-0.7
SNTG				AML	AML		
	comp=N,486μm,0.3s						
SNTG				AML	AML		
	comp=E,264μm,1.3s						
FSSB	**Fossombrone**	**0.36**	**34**	P	Pg	16 02 52.7	+0.6
FSSB				S	Sb	16 02 58.9	-0.5
FSSB				AML	AML		
	comp=E,324μm,0.2s						
FSSB				AML	AML		
	comp=N,250μm,0.4s						
FSSB				AML	AML		
	comp=E,324μm,0.2s						
FSSB				AML	AML		
	comp=N,249μm,0.4s						
ASSB	**Assisi San Ben**	**0.37**	**161**	P	Pg	16 02 52.9	+0.7
ASSB				S	Sb	16 02 58.5	-1.1
CAFI	**Castiglion Fio**	**0.39**	**261**	P	Pb	16 02 53.4	-0.7
CAFI				S	Sb	16 02 59.1	-1.2
CAFI				AML	AML		
	comp=E,144μm,0.2s						
CAFI				AML	AML		
	comp=N,98μm,0.4s						
CAFI				AML	AML		
	comp=N,98μm,0.4s						
EL6	**Elcito**	**0.45**	**98**	P	Pg	16 02 54.1	+0.5
EL6				S	Sb	16 03 01.3	-0.6
CRE	**Caprese Michel**	**0.46**	**300**	AML	AML		
	comp=N,260μm,0.3s						
CRE				AML	AML		
	comp=E,208μm,0.3s						
CESI	**CESI - Serrava**	**0.49**	**142**	P	Pg	16 02 54.9	+0.5
CESI				S	Sb	16 03 02.9	-0.1

ROM 28 16:03:07.3±0.3, 43°389N±0°004×12°48E±0°01, h9km±2km, Md0.7/2, Error ellipse: s-maj=1.0km s-min=0.6km az=264.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATVO	**AVT- Monte Val**	**0.05**	**262**	P	Pg	16 03 09.5	+0.2
ATVO				S	Sg	16 03 10.9	+0.2
ATVO				END			
ATPI	**Pietralunga -**	**0.08**	**318**	P	Pg	16 03 10.0	+0.3
ATPI				S	Sg	16 03 11.8	+0.5
ATPI				END			
MURB	**Monte Urbino**	**0.13**	**165**	P	Pg	16 03 10.9	+0.5
MURB				S	Sg	16 03 13.5	+1.1
PIEI	**Pieia**	**0.15**	**16**	P	Pg	16 03 11.3	+0.6
PIEI				S	Sg	16 03 14.2	+1.2
SSFR	**Montelago di S**	**0.23**	**78**	P	Pg	16 03 12.3	+0.3
SENI	**Senigallia**	**0.63**	**60**	S	Sn	16 03 34.0	+1.3
MCIV	**Monte Civitell**	**0.85**	**224**	P	Pn	16 03 28.0	+2.5
GUMA	**Gualdo di Mace**	**1.11**	**107**	S	Sg	16 03 35.0	-8.2

*ATH **28** 16:03:25.4, 38°.23N×20°.44E, h16km±1km, ML2.7/5, Error ellipse: s-maj=1.7km s-min=1.0km az=258.0*
*THE **28** 16:03:26.1, 38°.22N×20°.46E, h13km, ML3.1/2, Error ellipse: s-maj=1.0km s-min=0.4km az=234.0*
ISC 28 16:03:25.6±1.0, 38°.22N±0°.03×20°.45E±0°.05, h16km±5km, n30, σ0°37/46, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.05**	**143**	P	**Pg**	**16 03 28.4**	**-0.1**
ARG2				S	**Sg**	**16 03 30.2**	**-0.2**
KEF2	**Argostoli. Kep**	**0.06**	**151**	P	**Pg**	**16 03 28.5**	**-0.1**
KEF2				S	**Sg**	**16 03 30.2**	**-0.4**
KEF1	**Kardakata, Kep**	**0.06**	**15**	P	**Pg**	**16 03 28.5**	**-0.2**
KEF1				S	**Sg**	**16 03 30.4**	**-0.2**
CHV1	**Chavriata, Kef**	**0.06**	**238**	P	**Pg**	**16 03 28.6**	**-0.1**
CHV1				S	**Sg**	**16 03 30.6**	**0.0**
KEF3	**Kipouria, Keph**	**0.08**	**260**	P	**Pg**	**16 03 28.6**	**-0.2**
KEF3				S	**Sg**	**16 03 30.7**	**-0.2**
VLS	**Valsamata**	**0.12**	**110**	P	**Pg**	**16 03 29.1**	**-0.2**
VLS				S	**Sg**	**16 03 31.5**	**-0.1**
	19μm,0.0s						
VLS	**Valsamata**	**0.12**	**110**	P	**Pg**	**16 03 29.1**	**-0.2**
VLS				S	**Sg**	**16 03 31.5**	**-0.1**
VLS				AML	AML	16 03 31.9	
	comp=N,25946μm,0.1s						
VLS				AML	AML	16 03 32.0	
	comp=E,42648μm,0.1s						
FSK	**Fiskardo**	**0.26**	**20**	P	**Pg**	**16 03 31.3**	**0.0**
FSK				S	**Sg**	**16 03 35.4**	**+0.3**
KFL	**Anninata**	**0.29**	**112**	P	**Pg**	**16 03 31.8**	**0.0**
KFL				S	**Sg**	**16 03 36.1**	**+0.2**
	comp=E,3μm,0.2s						
KFL	**Anninata**	**0.29**	**112**	P	**Pg**	**16 03 31.9**	**0.0**
KFL				S	**Sg**	**16 03 36.2**	**+0.2**
KFL				AML	AML	16 03 37.3	
	comp=E,9584μm,0.3s						
KFL				AML	AML	16 03 37.6	
	comp=N,4108μm,0.2s						
VLMS	**Volímes, Zakyn**	**0.38**	**154**	P	**Pg**	**16 03 33.4**	**0.0**
VLMS				S	**Sb**	**16 03 39.6**	**-0.1**
VLMS				AML	AML	16 03 40.9	
	comp=E,4540μm,0.1s						
VLMS				AML	AML	16 03 44.7	
	comp=N,3566μm,0.4s						
EVGI	**Lefkada island**	**0.43**	**22**	P	**Pg**	**16 03 34.1**	**-0.3**
EVGI				S	**Sb**	**16 03 41.0**	**-0.3**
EVGI	**Lefkada island**	**0.43**	**22**	P	**Pg**	**16 03 34.1**	**-0.3**
EVGI				S	**Sb**	**16 03 41.2**	**-0.1**
MGNA	**Meganis**	**0.51**	**31**	P	**Pg**	**16 03 35.4**	**-0.5**
MGNA				S	**Sg**	**16 03 42.1**	**+0.6**
LKD2	**Lefkada island**	**0.59**	**16**	P	**Pg**	**16 03 36.9**	**-0.5**
LKD2				S	**Sg**	**16 03 45.4**	**+0.1**
LKD2				AML	AML	16 03 53.0	
	comp=E,616μm,0.2s						
LKD2				AML	AML	16 03 53.4	
	comp=N,592μm,0.4s						
TSLK	**Tsoukalades, L**	**0.63**	**15**	P	**Pg**	**16 03 37.7**	**-0.3**
TSLK				S	**Sb**	**16 03 47.8**	**+0.9**
TSLK	**Tsoukalades, L**	**0.63**	**15**	P	**Pg**	**16 03 37.4**	**-0.7**
RLS	**Riolos of Patr**	**0.82**	**101**	P	**Pg**	**16 03 40.9**	**-0.6**
PVO	**Paravola**	**0.93**	**64**	P	**Pb**	**16 03 43.7**	**+0.2**
PVO	**Paravola**	**0.93**	**64**	P	**Pb**	**16 03 43.6**	**+0.2**
PVO				AML	AML	16 04 03.8	
	comp=E,544μm,0.5s						
PVO				AML	AML	16 04 04.9	
	comp=N,411μm,0.3s						
DRO	**Drossia**	**1.03**	**105**	P	**Pb**	**16 03 45.4**	**+0.3**
DRO	**Drossia**	**1.03**	**105**	P	**Pb**	**16 03 44.4**	**-0.7**
LAKA	**Lakka**	**1.20**	**88**	P	**Pn**	**16 03 47.8**	**-0.1**
ANX	**Ano Chora**	**1.22**	**72**	P	**Pn**	**16 03 48.2**	**+0.1**
SERG	**Sergoula**	**1.28**	**81**	P	**Pb**	**16 03 50.0**	**+0.6**
TRIZ	**Trizonia**	**1.28**	**83**	P	**Pn**	**16 03 49.0**	**0.0**
KALE	**Kalithea**	**1.34**	**82**	P	**Pb**	**16 03 51.0**	**+0.5**
KLV	**Kalavryta, Ach**	**1.35**	**97**	P	**Pb**	**16 03 50.7**	**0.0**
ITM	**Ithomi**	**1.56**	**131**	P	**Pg**	**16 03 55.3**	**-0.4**
AGG	**Agios Georgios**	**1.68**	**61**	P	**Pb**	**16 03 57.2**	**+1.0**

*THE **28** 16:05:20.6, 37°.50N×23°.63E, h7km±99km, Error ellipse: s-maj=99.0km s-min=14.7km az=88.0*
ATH 28 16:05:55.4, 38°.22N×20°.43E, h14km±1km, ML2.4/8, Error ellipse: s-maj=1.6km s-min=0.8km az=238.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.05**	**228**	P	Pg	16 05 58.1	+0.1
ARG2	**Argostoli**	**0.06**	**133**	P	Pg	16 05 59.4	+1.3
KEF3	**Kipouria, Keph**	**0.07**	**256**	P	Pg	16 05 58.2	0.0
KEF3				S	Sg	16 06 00.0	0.0
KEF2	**Argostoli. Kep**	**0.07**	**141**	P	Pg	16 05 58.1	-0.1
KEF2				S	Sg	16 05 59.8	-0.2
VLS	**Valsamata**	**0.13**	**109**	P	Pg	16 05 58.9	0.0
VLS	**Valsamata**	**0.13**	**109**	P	Pg	16 05 58.7	-0.3
VLS				S	Sg	16 06 01.1	-0.2
VLS				AML	AML	16 06 01.2	
	comp=N,13439μm,0.1s						
VLS				AML	AML	16 06 01.3	
	comp=E,15045μm,0.1s						
FSK	**Fiskardo**	**0.26**	**23**	P	Pn	16 06 05.1	+0.2
FSK	**Fiskardo**	**0.26**	**23**	P	Pg	16 06 00.8	-0.2
FSK				S	Sg	16 06 05.1	+0.4
KFL	**Anninata**	**0.30**	**111**	P	Pb	16 06 02.7	+0.1
KFL	**Anninata**	**0.30**	**111**	P	Pg	16 06 04	-0.2
KFL				S	Sg	16 06 06.5	+0.6
KFL				AML	AML	16 06 06.8	
	comp=E,11007μm,0.3s						
KFL				AML	AML	16 06 07.3	
	comp=N,3827μm,0.2s						
VLMS	**Volímes, Zakyn**	**0.39**	**152**	P	Pg	16 06 03.1	-0.2
VLMS				S	Sb	16 06 09.3	-0.7
VLMS				AML	AML	16 06 10.2	
	comp=E,1695μm,0.1s						
VLMS				AML	AML	16 06 13.7	
	comp=N,2678μm,0.4s						
EVGI	**Lefkada island**	**0.44**	**24**	P	Pn	16 06 11.1	+3.7
EVGI	**Lefkada island**	**0.44**	**24**	P	Pg	16 06 03.8	-0.4
EVGI				S	Sb	16 06 10.8	-0.6
MGNA	**Meganis**	**0.52**	**33**	P	Pg	16 06 05.1	-0.6
MGNA				S	Sg	16 06 12.3	-0.3
MGNA				AML	AML	16 06 13.6	
	comp=E,517μm,0.1s						
MGNA				AML	AML	16 06 13.7	
	comp=N,682μm,0.2s						
LKD2	**Lefkada island**	**0.60**	**17**	P	Pg	16 06 06.9	-0.2
LKD2				S	Sg	16 06 15.5	+0.4
TSLK	**Tsoukalades, L**	**0.63**	**16**	P	Pg	16 06 07.7	0.0
TSLK				S	Sb	16 06 16.6	-0.3
PDO	**Prodromos**	**0.70**	**57**	P	Pg	16 06 08.6	-0.5
PDO				S	Sg	16 06 18.1	-0.2
PDO				AML	AML	16 06 19.8	
	comp=E,558μm,0.3s						
PDO				AML	AML	16 06 21.4	
	comp=N,619μm,0.3s						
RLS	**Riolos of Patr**	**0.83**	**101**	P	Pg	16 06 11.5	-0.1
PVO	**Paravola**	**0.95**	**65**	P	Pb	16 06 13.3	-0.4
PVO				S	Sg	16 06 26.7	+0.5
PVO				AML	AML	16 06 28.8	
	comp=E,682μm,0.3s						
PVO				AML	AML	16 06 29.4	
	comp=N,350μm,0.3s						
DRO	**Drossia**	**1.04**	**104**	P	Pb	16 06 14.6	-0.7
DRO				AML	AML	16 06 38.9	
	comp=E,467μm,0.4s						
DRO				AML	AML	16 06 39.3	
	comp=N,298μm,0.4s						
EFP	**Efpalio**	**1.18**	**79**	P	Pg	16 06 18.5	+0.4
EFP				AML	AML	16 06 39.4	
	comp=N,159μm,0.6s						
EFP				AML	AML	16 06 40.4	
	comp=E,208μm,0.5s						
LAKA	**Lakka**	**1.22**	**89**	P	Pn	16 06 17.6	-0.5
ANX	**Ano Chora**	**1.23**	**72**	P	Pb	16 06 18.4	-0.1
EVR	**Evrytania**	**1.28**	**57**	P	Pb	16 06 19.8	+0.3
SERG	**Sergoula**	**1.29**	**81**	P	Pb	16 06 19.5	-0.1
TRIZ	**Trizonia**	**1.30**	**83**	P	Pn	16 06 19.6	0.0
KALE	**Kalithea**	**1.35**	**82**	P	Pb	16 06 20.5	-0.2
KLV	**Kalavryta, Ach**	**1.37**	**97**	P	Pb	16 06 21.2	+0.3
MAKR	**Makrakomi, Fth**	**1.55**	**59**	P	Pg	16 06 25.0	-0.2
ITM	**Ithomi**	**1.58**	**131**	P	Pg	16 06 25.5	-0.2
PENT	**Pentalofos**	**2.05**	**15**	P	Pb	16 06 31.9	-0.7
NEST	**Nestorio**	**2.24**	**12**	P	Pb	16 06 34.9	-1.0

*IDC **28** 16:14:26.3±3.8, 24°.30N×111°.85W, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.7/39, mbtmp3.5/6, ML3.2/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/34, Error ellipse: s-maj=75.8km s-min=13.8km az=26.0*
*NEIC **28** 16:14:27.6±2.2, 24°.3N±0°.1×111°.80W±0°.08, h10km±2km, mb4.0/8, Md4.1/8(MEX), Error ellipse: s-maj=19.3km s-min=10.6km az=208.0*
*MEX **28** 16:14:31.4±0.7, 24°.45N×111°.80W, h30km, MD4.1*
ISC 28 16:14:29.5±1.4, 24°.5N±0°.1×111°.6W±0°.1, h10km, n32, σ1°76/35, mb3.9/4, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	**La Paz**	**1.25**	**106**	Pg	**Pb**	**16 14 53.2**	**-0.1**
	115nm,0.3s,baz=279,slow=5.4,SNR=29						
LPIG				Lg	Lg	16 15 11.2	
	246nm,0.3s,baz=274,slow=16,SNR=23						
LPIG	**La Paz**	**1.25**	**106**	*i* P	**Pn**	**16 14 52.9**	**-0.2**
LPIG				*i* S	**Sn**	**16 15 10.4**	**+0.3**
LPIG	**La Paz**	**1.25**	**106**		**Pn**	**16 14 52.9**	**-0.2**
LPIG					**Sn**	**16 15 10.4**	**+0.3**
SRIG	**Santa Rosalia**	**2.90**	**349**	Pn	**Pn**	**16 15 13.5**	**-2.4**
GUYB	**Guaymas**	**3.49**	**11**	*i* P	**Pn**	**16 15 23.0**	**-0.9**
GUYB				*i* S	**Sn**	**16 16 03.1**	**-2.2**
HSIG		**4.58**	**7**	Pn	**Pn**	**16 15 41.4**	**+2.5**
HPIG		**5.92**	**64**		**Pn**	**16 15 58.8**	**+1.3**
319A	**Douglas**	**7.20**	**16**	Pn	**Pn**	**16 16 15.4**	**+0.4**
214A	**Organ Pipe Nat**	**7.54**	**352**	Pn	**Pn**	**16 16 19.7**	**0.0**
TUC	**Tucson**	**7.86**	**5**		**Pn**	**16 16 24.4**	**+0.4**
121A	**Cookes Peak, D**	**8.72**	**22**	Pn	**Pn**	**16 16 38.8**	**+2.8**
X18A	**Snowflake**	**10.14**	**8**	Pn	**Pn**	**16 16 57.3**	**+1.9**
WUAZ	**Wupatki**	**11.02**	**1**		**Pn**	**16 17 10.5**	**+3.0**
U15A	**North Rim**	**11.94**	**357**	Pn	**Pn**	**16 17 24.3**	**+4.2**
LCMT	**Little Creek M**	**12.59**	**354**	Pn	**Pn**	**16 17 30.1**	**+1.2**
MSU	**Marysvale**	**14.02**	**358**	P	**P**	**16 17 57.9**	**+1.4**
TCRU	**Three Creeks R**	**14.12**	**357**	Pn	**Pn**	**16 17 51.4**	**+1.5**
NV11	**Mina Array Sit**	**15.00**	**340**	P	**P**	**16 18 09.2**	**+2.0**
NV11				IAmb	IAmb	16 18 10.2	
	comp=Z,5.0nm,0.9s						
NVAR	**Mina Array Bea**	**15.04**	**339**	Pn	**Pn**	**16 18 04.7**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=163,slow=14,SNR=3.5						
NVAR	**Mina Array Bea**	**15.04**	**339**		**Pn**	**16 18 04.4**	**+2.1**
NVAR				P	**P**	**16 18 09.6**	**+1.7**
KVN	**Kaiserville**	**15.55**	**341**	P	**P**	**16 18 15.2**	**+1.8**
YERR	**Yerington**	**15.86**	**338**	P	**P**	**16 18 18.6**	**+1.8**
YERR				IAmb	IAmb	16 18 20.5	
	comp=Z,9.7nm,0.9s						
PNTR	**Pine Nut**	**16.07**	**337**	P	**P**	**16 18 21.1**	**+1.8**
PNTR				IAmb	IAmb	16 18 23.9	
	comp=Z,9.5nm,1.1s						
RDMU	**Red Mountain**	**16.16**	**6**	P	**P**	**16 18 20.2**	**-0.1**
PDAR	**Pinedale Array**	**18.34**	**5**	P	**Pn**	**16 18 44.8**	**+0.5**
	baz=188,slow=11,SNR=4.2						
342A	**Flagon Creek P**	**18.38**	**64**	P	**Pn**	**16 18 44.2**	**-0.4**
342A				IAmb	IAmb	16 19 19.3	
	comp=Z,73nm,1.6s						
NEW	**Newport**	**24.15**	**351**	P	**P**	**16 19 45.8**	**0.0**
	comp=Z,2.0nm,0.6s,baz=171,slow=11,SNR=4.6						
NEW	**Newport**	**24.15**	**351**	P	**P**	**16 19 46.7**	**+0.9**
NEW				IAmb	IAmb	16 19 47.7	
	comp=Z,6.6nm,1.2s						
TKL	**Tuckaleechee C**	**26.48**	**59**	LR	LR	16 30 33.6	
	comp=Z,95nm,18.5s,baz=1.5,slow=36						
YKA	**Yellowknife Ar**	**38.08**	**358**	P	**P**	**16 21 45.6**	**-2.5**
	comp=Z,0.3nm,0.9s,baz=181,slow=9.0,SNR=4.0						
INK	**Inuvik**	**45.85**	**349**	P	**P**	**16 22 50.6**	**-0.9**
	comp=Z,1.6nm,1.0s,baz=149,slow=5.9,SNR=3.4						
ILAR	**Eielson Array**	**46.30**	**340**	P	**P**	**16 22 54.0**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=152,slow=7.0,SNR=6.8						

*IDC **28** 16:16:28.3±0.8, 36°.22N×58°.11E, h0km, mb3.9/17, mb1 4.1/21, mb1mx3.9/43, mbtmp4.0/21, ML4.0/4, MS3.5/19, Ms1 3.5/19, ms1mx3.3/43, Error ellipse: s-maj=13.2km s-min=12.4km az=96.0*
*THR **28** 16:16:30.7±0.3, 36°.33N×58°.27E, h14km±9km, ML4.5*
*TEH **28** 16:16:30.2, 36°.37N×58°.29E, h10km, ML4.5*
*NEIC **28** 16:16:30.1±2.8, 36°.35N±0°.06×58°.27E±0°.08, h9km±4km, Error ellipse: s-maj=10.0km s-min=7.9km az=66.0*
*NNC **28** 16:16:31.3±21.0, 37°.24N×56°.32E, h0km, mb4.5, Error ellipse: s-maj=226.7km s-min=107.4km az=174.0*
*MOS **28** 16:16:32.0±1.8, 36°.42N×58°.30E, h33km, mb4.4/9, Error ellipse: s-maj=5.5km s-min=4.9km az=128.2*
ISC 28 16:16:30.2±0.4, 36°.43N±0°.03×58°.33E±0°.03, h8km, n235, σ1°87/227, mb4.3/37, MS3.5/16, 20C-8D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRD	**Kardeh**	**0.38**	**23**	*e*Pg	Pn	16 16 51.3	+9.1
IKRD				*e*		16 17 09.6	
IAKL	**Akhelmad**	**0.38**	**63**	*e*Pg	**Pb**	**16 16 39.4**	**0.0**
IAKL				*e*Sg	**Sb**	**16 16 45.9**	**+0.2**
IPAY	**Payeh**	**0.54**	**87**	*e*Pg	**Pb**	**16 16 41.5**	**-0.5**
IPAY				*e*		16 16 50.8	
ISFR	**Sfrayin**	**0.68**	**337**	*e*Pg	**Pb**	**16 16 44.8**	**+0.3**
ISFR				*e*Sg	**Sb**	**16 16 54.9**	**+0.7**
ISFR				*e*		16 16 56.1	
IMOG	**Moghan**	**0.87**	**111**	*e*Pg	**Pg**	**16 16 47.1**	**+0.1**
IMOG				*e*		16 16 59.9	
IEMG	**Emamgholi**	**1.02**	**14**	*e*Pg	**Pb**	**16 16 51.1**	**+0.8**
IEMG				*e*		16 17 11.8	
IMYA	**Miami**	**1.43**	**93**	*e*Pg	**Pg**	**16 16 57.7**	**+0.1**
IMYA				*e*		16 17 22.4	
BJRD	**Bojnurd**	**1.47**	**330**	*e*Pg	**Pg**	**16 16 58.8**	**+0.4**
BJRD	**Bojnurd**	**1.47**	**330**	*e*Pg	**Pg**	**16 16 58.8**	**+0.4**
BJRD				*e*Sg	**Sg**	**16 17 19.4**	**+1.9**
GEYT	**Alibeck**	**1.51**	**354**	Pg	**Pg**	**16 17 00.7**	**+1.6**
	432nm,0.3s,baz=173,slow=16,SNR=1660						
GEYT				Lg	Lg	16 17 22.3	
	1μm,0.3s,baz=168,slow=40,SNR=28						
GEYT	**Alibeck**	**1.51**	**354**		**Pg**	**16 16 59.5**	**+0.3**
GYA0B	**ALIBECK ARRAY**	**1.51**	**354**	⇓P	**Pg**	**16 17 00.3**	**+1.1**
GYA0B				⇓S	**Sg**	**16 17 21.4**	**+2.7**
GYA0B	**ALIBECK ARRAY**	**1.51**	**354**		**Pg**	**16 17 00.2**	**+1.1**
ASHT	**Ashkhabad**	**1.51**	**2**	P	**Pg**	**16 17 01.1**	**+1.9**
ASHT	**Ashkhabad**	**1.51**	**2**		**Pg**	**16 17 01.1**	**+1.9**
JRKH	**Jarkhoshk**	**1.71**	**107**	*e*Pn	**Pb**	**16 17 01.9**	**-0.1**
JRKH				*e*		16 17 32.3	
SHRO	**Shahrood**	**1.93**	**258**	*e*Pn	**Pn**	**16 17 04.1**	**+0.7**
SHRO	**Shahrood**	**1.93**	**258**	*e*Pn	**Pn**	**16 17 04.1**	**+0.7**
SHRO				IAML		16 17 33.8	
	comp=E,6μm,0.6s						
IMND	**Minoodasht**	**2.49**	**290**	*e*Pn	**Pn**	**16 17 12.5**	**+1.5**
TNSJ	**Nastanj**	**2.83**	**210**	*e*Pn	**Pn**	**16 17 16.7**	**+0.9**
TABS	**Tabas**	**2.94**	**200**	*e*Pn	**Pn**	**16 17

ILAS	**Lasjerd**	**4.48**	**258**	*e*Pn		**Pn**	**16 17 40.0**	**+1.3**
IFIR	**Firoozkooh**	**4.59**	**262**	*e*Pn		**Pn**	**16 17 41.4**	**+1.3**
IPRN	**Peran**	**4.84**	**270**	*e*Pn		**Pn**	**16 17 44.8**	**+1.3**
ANAR	**Anarak**	**4.98**	**231**	*e*Pn		**Pn**	**16 17 45.0**	**-0.3**
YZKH	**Yazd**	**5.08**	**219**	*e*Pn		**Pn**	**16 17 47.2**	**+0.6**
YZKH	**Yazd**	**5.08**	**219**	*e*Pn		**Pn**	**16 17 47.2**	**+0.6**
YZKH				IAML			16 19 24.1	
	comp=E,176nm,0.6s							
IDMV	**Damavand**	**5.18**	**262**	*e*Pn		**Pn**	**16 17 49.0**	**+0.8**
NHDN	**Nehbandan**	**5.22**	**164**	*e*Pn		**Pn**	**16 17 50.2**	**+1.5**
ICHK	**Chekchek**	**5.29**	**219**	*e*Pn		**Pn**	**16 17 50.6**	**+0.9**
IBAF	**Bafgh**	**5.34**	**206**	*e*Pn		**Pn**	**16 17 52.0**	**+1.6**
IVRN	**Varamin**	**5.56**	**257**	*e*Pn		**Pn**	**16 17 54.0**	**+0.7**
KRSH	**Karshahi**	**5.63**	**246**	*e*Pn		**Pn**	**16 17 54.9**	**+0.5**
IHSB	**Hasanabad**	**5.81**	**262**	*e*Pn		**Pn**	**16 17 57.6**	**+0.8**
ISAD	**Sadrabad**	**5.92**	**222**	*e*Pn		**Pn**	**16 18 00.1**	**+1.6**
GHVR	**GHOM**	**6.06**	**253**	*e*Pn		**Pn**	**16 18 01.6**	**+1.4**
GHVR	**GHOM**	**6.06**	**253**	*e*Pn		**Pn**	**16 18 01.6**	**+1.4**
IZEF	**Zefreh**	**6.07**	**236**	*e*Pn		**Pn**	**16 18 01.4**	**+0.9**
IQOM	**Qom**	**6.12**	**257**	*e*Pn		**Pn**	**16 18 01.6**	**+0.4**
QALM	**Alamut, Qazvin**	**6.20**	**272**	*e*Pn		**Pn**	**16 18 03.7**	**+1.5**
KHGB	**Koh Gabri**	**6.23**	**195**	*e*Pn		**Pn**	**16 18 05.1**	**+2.4**
QAM	**Ghamsar**	**6.24**	**247**	*e*Pn		**Pn**	**16 18 03.7**	**+0.9**
IKLH	**Kolahrood**	**6.36**	**243**	*e*Pn		**Pn**	**16 18 05.4**	**+1.0**
TVBK	**TV Kerman**	**6.56**	**192**	*e*Pn		**Pn**	**16 18 09.8**	**+2.6**
CHMN	**Cheshme madani**	**6.58**	**186**	*e*Pn		**Pn**	**16 18 09.1**	**+1.5**
IRAM	**Ramesheh**	**6.75**	**229**	*e*Pn		**Pn**	**16 18 10.0**	**+0.2**
IRAZ	**Razeghan**	**6.89**	**264**	*e*Pn		**Pn**	**16 18 12.0**	**+0.2**
QABG	**Abgarm-Qazvin**	**7.12**	**267**	*e*Pn		**Pn**	**16 18 15.9**	**+1.0**
IPIR	**Pirpir**	**7.18**	**241**	*e*Pn		**Pn**	**16 18 17.9**	**+2.1**
ROKH	**ROKH**	**7.28**	**238**	*e*Pn		**Pn**	**16 18 18.5**	**+1.5**
KHMZ	**Khomeyn**	**7.37**	**251**	*e*Pn		**Pn**	**16 18 19.2**	**+0.9**
KHMZ	**Khomeyn**	**7.37**	**251**	*e*Pn		**Pn**	**16 18 19.2**	**+0.9**
KLNJ	**Kolanjah**	**7.79**	**228**	*e*Pn		**Pn**	**16 18 26.8**	**+2.6**
IKMR	**Kamar-syah**	**8.67**	**253**	*e*Pn		**Pn**	**16 18 37.9**	**+2.0**
IDOB	**Doab**	**8.73**	**255**	*e*Pn		**Pn**	**16 18 39.1**	**+2.2**
KBL	**Kabul**	**8.94**	**99**	P		**Pn**	**16 18 41.5**	**+1.7**
GENO	**Geno**	**9.18**	**192**	*e*Pn		**Pn**	**16 18 45.5**	**+2.4**
IHRS	**Heris**	**9.19**	**285**	*e*Pn		**Pn**	**16 18 43.4**	**+0.2**
AKT	**Akhty**	**9.68**	**305**	*e*P		**Pn**	**16 18 49.6**	**-0.2**
AKT				*e*S		**Sn**	**16 20 39.4**	**+0.7**
AKT				pmax	pmax			
	comp=Z,39nm,0.6s							
AKT				smax	smax			
	comp=N,25nm,0.6s							
AKT				smax	smax			
	comp=E,35nm,0.6s							
TAS	**Tashkent**	**9.85**	**57**	P		**Pn**	**16 18 53.6**	**+1.6**
IDHR	**Dehrash**	**9.88**	**263**	*e*Pn		**Pn**	**16 18 54.4**	**+1.7**
SEKA	**Sheki**	**9.91**	**302**	P		**Pn**	**16 18 52.9**	**-0.1**
GANJ	**Ganja**	**10.31**	**298**	P		**Pn**	**16 18 57.4**	**-1.0**
BTK	**Batken**	**10.47**	**66**	P		**Pn**	**16 19 01.1**	**+0.5**
BTK	**Batken**	**10.47**	**66**			**Pn**	**16 19 01.1**	**+0.5**
ZKTA	**Zakatala**	**10.49**	**303**	P		**Pn**	**16 19 00.9**	**+0.1**
NAX	**Nakhchivan**	**10.52**	**289**	P		**Pn**	**16 19 01.6**	**+0.2**
GNI	**Garni**	**11.31**	**293**	P		**Pn**	**16 19 12.4**	**+0.2**
GNI	**Garni**	**11.31**	**293**			**Pn**	**16 19 12.4**	**+0.2**
KK31	**Karatay Array**	**11.50**	**51**	P		**Pn**	**16 19 14.3**	**-0.3**
KK31	**Karatay Array**	**11.50**	**51**			**Pn**	**16 19 14.3**	**-0.3**
KKAR	**Karatay Array**	**11.50**	**51**	P		**Pn**	**16 19 14.7**	**+0.1**
KKAR	**Karatay Array**	**11.50**	**51**			**Pn**	**16 19 14.7**	**+0.1**
KKAR	**Karatay Array**	**11.50**	**51**			**Pn**	**16 19 14.2**	**-0.4**
UOSS	**Minazif**	**11.59**	**190**			**Pn**	**16 19 14.4**	**-1.5**
NIL	**Nilore**	**12.54**	**98**	P		**Pn**	**16 19 29.8**	**+0.9**
NIL	**Nilore**	**12.54**	**98**			**Pn**	**16 19 29.8**	**+0.9**
AKH	**Akhalkalaki**	**12.58**	**298**	P		**Pn**	**16 19 29.3**	**-0.3**
AKH	**Akhalkalaki**	**12.58**	**298**			**Pn**	**16 19 29.2**	**-0.3**
ZEI	**Tsey**	**12.81**	**304**	*e*P		**Pn**	**16 19 31.8**	**-0.9**
ZEI				pmax	pmax			
	comp=Z,9.0nm,0.6s							
AB31	**Akbulak array**	**12.88**	**5**	P		Pn	16 19 28.9	-4.5
AB31				S		**Sn**	**16 21 49.4**	**-7.5**
AB31	**Akbulak array**	**12.88**	**5**	⇓P		Pn	16 19 28.9	-4.5
	comp=Z,4.1nm,0.6s,baz=212,slow=18							
AB31				⇓S		**Sn**	**16 21 49.4**	**-7.5**
	comp=Z,26nm,0.7s,baz=217,slow=25							
ABKAR	**Akbulak array**	**12.88**	**5**			**Pn**	**16 19 32.0**	**-1.4**
ABKAR	**Akbulak array**	**12.88**	**5**			**Pn**	**16 19 32.4**	**-1.0**
WSAR	**Wadi Sarin**	**13.14**	**179**	Pn		**Pn**	**16 19 33.4**	**-3.8**
	comp=Z,0.1nm,0.3s,baz=345,slow=16,SNR=2.8							
AML	**Almayashu**	**13.19**	**60**	P		**Pn**	**16 19 38.1**	**0.0**
	SNR=15							
EKS2	**Erkin-Say**	**13.44**	**58**	P		**Pn**	**16 19 41.1**	**-0.2**
	SNR=13							
NEY	**Neytrino**	**13.79**	**304**	⇓*e*P		**Pn**	**16 19 47.7**	**+1.7**
NEY				pmax	pmax			
	comp=Z,1.0nm,0.6s							
UCH	**Uchtor**	**13.79**	**60**	P		**Pn**	**16 19 46.6**	**+0.2**
	SNR=7.3							
KBZ	**Khabaz**	**13.88**	**306**	Pn		**Pn**	**16 19 44.2**	**-2.9**
	comp=Z,0.5nm,0.3s,baz=135,slow=9.6,SNR=14							
KBZ				LR		LR	16 27 08.4	
	comp=Z,69nm,18.1s,baz=111,slow=46							
AAK	**Ala-Archa**	**13.92**	**59**	Pn		**Pn**	**16 19 48.5**	**+0.7**
	comp=Z,1.7nm,0.3s,baz=150,slow=2.5,SNR=25							
AAK				Sn		**Sn**	**16 22 20.1**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=108,slow=13,SNR=3.0							
AAK				LR		LR	16 25 52.6	
	comp=Z,144nm,20.3s,baz=248,slow=40							
AAK	**Ala-Archa**	**13.92**	**59**	P		**Pn**	**16 19 48.6**	**+0.7**
	SNR=13							
AAK	**Ala-Archa**	**13.92**	**59**			**Pn**	**16 19 48.0**	**+0.1**
AKTO	**Aktyubinsk**	**14.01**	**359**	Pn		**Pn**	**16 19 46.9**	**-2.0**
	comp=Z,0.8nm,0.3s,baz=179,slow=14,SNR=12							
AKTO				Sn		Sn	16 22 15.7	-8.7
	comp=Z,0.3nm,0.3s,baz=112,slow=19,SNR=2.6							
AKTO				LR		LR	16 26 11.1	
	comp=Z,286nm,18.6s,baz=168,slow=41							
AKTO	**Aktyubinsk**	**14.01**	**359**	⇑P		Pn	16 19 42.3	-6.5
	comp=Z,7.2nm,0.8s							
AKTO				⇑S		Sn	16 22 13.1	-11
	comp=Z,28nm,0.9s							
FRU1	**Bishkek**	**14.08**	**58**	P		**Pn**	**16 19 51.1**	**+1.1**
FRU1	**Bishkek**	**14.08**	**58**	Pn		**Pn**	**16 19 51.1**	**+1.1**
KVAR	**Kislovodsk Arr**	**14.11**	**307**	Pn		**Pn**	**16 19 48.4**	**-1.9**
	baz=73,slow=19,SNR=8.4							
KIV	**Kislovodsk**	**14.11**	**307**	*e*P		**Pn**	**16 19 48.4**	**-2.0**
KIV				*e*S		**Sn**	**16 22 25.2**	**-2.1**
KIV				pmax	pmax			
	comp=Z,48nm,1.0s							
KIV				MLR	MLR			
	comp=Z,89nm,12.0s							
KIV	**Kislovodsk**	**14.11**	**307**			**Pn**	**16 19 48.0**	**-2.4**
KBK	**Karagaybulak**	**14.24**	**59**	P		**Pn**	**16 19 52.0**	**-0.2**
	SNR=14							
KSH	**Kashi**	**14.25**	**72**	P		**Pn**	**16 19 50.5**	**-1.9**
KSH				PP		**PnPn**	**16 20 01.5**	**+1.2**
KSH				S		Sn	16 21 38.5	-52
KSH				SS		**SnSn**	**16 22 45.3**	**+2.2**
KSH				pmax	pmax			
	comp=Z,18nm,0.5s							
KSH				pmax	pmax			
	comp=Z,470nm,5.7s							
KSH				LR	LR			
	comp=N,590nm,5.9s							
KSH				LR	LR			
	comp=E,410nm,7.0s							
KSH				LR	LR			
	comp=Z,440nm,6.6s							
GOF	**Gofitskoye**	**14.43**	**311**	⇑*e*P		**Pn**	**16 19 55.6**	**+1.0**
GOF				pmax	pmax			
	comp=Z,42nm,1.5s							
NRN	**Naryn**	**14.63**	**65**	P		**Pn**	**16 19 56.5**	**-1.2**
NRN	**Naryn**	**14.63**	**65**			**Pn**	**16 19 56.5**	**-1.2**
BOOM	**Boomskoye usch**	**14.88**	**61**	P		**Pn**	**16 20 00.4**	**-0.6**
BOOM	**Boomskoye usch**	**14.88**	**61**			**Pn**	**16 20 00.4**	**-0.6**
KDJ	**Kajisay**	**15.66**	**63**	P		**Pn**	**16 20 10.9**	**-0.4**
KDJ				pmax	pmax			
	comp=Z,15nm,0.8s							
KDJ	**Kajisay**	**15.66**	**63**			**Pn**	**16 20 10.9**	**-0.4**
KDJ				IAmb	IAmb		16 20 16.2	
	comp=Z,15nm,0.8s							
SMLA	**Simla**	**16.52**	**103**	*e*P		**P**	**16 20 25.1**	**+0.3**
PRZ	**Przheval'sk**	**16.62**	**63**	P		**P**	**16 20 27.5**	**+1.3**
PRZ				pmax	pmax			
	comp=Z,22nm,1.0s							
PRZ	**Przheval'sk**	**16.62**	**63**	P		**P**	**16 20 27.5**	**+1.3**
PRZ				IAmb	IAmb		16 20 35.9	
	comp=Z,22nm,0.9s							
GAZ	**Gaziantep**	**16.93**	**279**	P		**P**	**16 20 29.1**	**-0.4**
RAYN	**Ar Rayn**	**16.97**	**224**	P		**Pn**	**16 20 26.7**	**-1.4**
RAYN				pmax	pmax			
	comp=Z,12nm,1.1s							
RAYN	**Ar Rayn**	**16.97**	**224**			**Pn**	**16 20 26.7**	**-1.4**
ANN	**Anapa**	**17.90**	**304**	*e*P		**Pn**	**16 20 38.5**	**-0.9**
ANN				*e*S		**Sn**	**16 23 58.0**	**-1.1**
ANN				pmax	pmax			
	comp=Z,76nm,1.5s							
ASF	**Jabal al Asfar**	**18.20**	**263**	P		**P**	**16 20 45.2**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=26,slow=20,SNR=3.7							
BRVK	**Borovoye**	**18.63**	**23**	P		**P**	**16 20 48.3**	**+0.3**
BRVK				pmax	pmax			
	comp=Z,9.0nm,0.8s							
BRVK	**Borovoye**	**18.63**	**23**	P		**P**	**16 20 48.3**	**+0.3**
BVAR	**Borovoye Array**	**18.63**	**23**	P		**P**	**16 20 48.4**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=207,slow=6.8,SNR=31							
BVAR				S		**Sn**	**16 24 06.6**	**-10**
	comp=Z,0.3nm,0.3s,baz=206,slow=43,SNR=3.5							
VRH	**Novokhopyorsk**	**18.96**	**326**	*e*P		Pn	16 20 59.6	+7.4
VRH				pmax	pmax			
	comp=Z,30nm,1.8s							
MMAI	**Mount Meron Ar**	**19.14**	**266**	LR		LR	16 29 21.6	
	comp=Z,89nm,19.8s,baz=60,slow=41							
BR131	**Keskin Array S**	**19.70**	**287**	P		**P**	**16 21 00.0**	**-0.1**
BR131				pmax	pmax			
	comp=Z,9.0nm,1.2s							
BR131	**Keskin Array S**	**19.70**	**287**	P		**P**	**16 20 60.0**	**-0.1**
BRTR	**Keskin Array B**	**19.70**	**287**	*i* P		**Pn**	**16 21 01.6**	**+0.1**
BRTR				pmax	pmax			
	comp=Z,4.0nm,0.9s							
BRTR	**Keskin Array B**	**19.70**	**287**	P		**Pn**	**16 21 01.6**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=95,slow=14,SNR=16							
BRTR				LR		LR	16 29 08.8	
	comp=Z,60nm,21.7s,baz=58,slow=39							
BRTR	**Keskin Array B**	**19.70**	**287**	P		**P**	**16 21 00.8**	**+0.8**
ARU	**Arti**	**20.01**	**0**	*c i* P		**P**	**16 21 04.1**	**+1.0**
ARU							16 21 17.7	
ARU				S		**S**	**16 24 49.2**	**+1.1**
ARU				SS		**SnSn**	**16 25 05.2**	**+0.9**
ARU				pmax	pmax			
	comp=Z,14nm,1.5s							
ARU	**Arti**	**20.01**	**0**	P		**P**	**16 21 04.0**	**+0.9**
	comp=Z,1.2nm,0.5s,baz=157,slow=8.2,SNR=8.2							
ARU				S		S	16 24 35.7	-12
	comp=Z,0.4nm,0.3s,baz=184,slow=19,SNR=2.2							
ARU				LR		LR	16 29 35.1	
	comp=Z,125nm,18.1s,baz=205,slow=39							
ARU	**Arti**	**20.01**	**0**	P		**P**	**16 21 03.6**	**+0.5**
ARU				IAmb	IAmb		16 21 18.1	
	comp=Z,8.8nm,0.9s							
VSR	**Storozhevoye**	**20.15**	**323**	*e*P		**P**	**16 21 04.4**	**-0.3**
VSR				pmax	pmax			
	comp=Z,30nm,0.6s							
SIM	**Simferopol'**	**20.18**	**302**	*e*P		Pn	16 21 06.4	-0.6
SIM				pmax	pmax			
	comp=Z,41nm,1.0s							
KURBB	**Kurchatov Arra**	**20.30**	**39**	P		Pn	16 21 08.4	+0.1
	comp=Z,1.8nm,0.5s,baz=235,slow=12,SNR=9.9							
KURK	**Kurchatov**	**20.40**	**39**	P		Pn	16 21 09.3	-0.2
KURK				pmax	pmax			
	comp=Z,7.0nm,0.8s							
KURK	**Kurchatov**	**20.40**	**39**	P		Pn	16 21 09.3	-0.2
KURK				IAmb	IAmb		16 21 20.5	
	comp=Z,7.0nm,0.8s							
MAKZ	**Makanchi**	**20.42**	**52**	P		Pn	16 21 09.6	-0.2
MAKZ				pmax	pmax			
	comp=Z,8.0nm,1.0s							
MAKZ	**Makanchi**	**20.42**	**52**	P		Pn	16 21 09.6	-0.2
MAKZ				IAmb	IAmb		16 21 29.2	
	comp=Z,8.1nm,0.9s							
SVE	**Sverdlovsk**	**20.47**	**4**	*e*P		Pn	16 21 10.7	+0.5
SVE				*e*S		**S**	**16 24 53.8**	**-3.3**
SVE				pmax	pmax			
	comp=Z,18nm,1.5s							
MK31	**Makanchi Array**	**20.62**	**52**	P		Pn	16 21 11.7	-0.4
MK31				pmax	pmax			
	comp=Z,5.0nm,0.9s							
MK31	**Makanchi Array**	**20.62**	**52**	P		Pn	16 21 11.7	-0.4
MKAR	**Makanchi Array**	**20.62**	**52**	P		Pn	16 21 12.0	-0.1
MKAR	**Makanchi Array**	**20.62**	**52**	P		Pn	16 21 11.9	-0.1
	comp=Z,2.6nm,0.7s,baz=244,slow=10,SNR=29							
MKAR				LR		LR	16 29 47.8	
	comp=Z,62nm,20.6s,baz=264,slow=38							
MKAR	**Makanchi Array**	**20.62**	**52**	P		Pn	16 21 11.6	-0.5
EIL	**Elat**	**20.70**	**258**	P		**P**	**16 21 07.2**	**-3.6**
	comp=Z,1.0nm,0.5s,baz=42,slow=7.5,SNR=2.4							
EIL				LR		LR	16 30 30.6	
	comp=Z,279nm,18.6s,baz=67,slow=41							
ELL	**Elmali**	**22.80**	**279**	P		**P**	**16 21 35.0**	**+1.6**
ELL	**Elmali**	**22.80**	**279**	P		**P**	**16 21 35.0**	**+1.6**
DANN	**Dangsing**	**22.89**	**103**	*e*P		**P**	**16 21 35.8**	**+1.2**
	comp=Z,48nm,0.8s							
KIRV	**Kirov**	**22.93**	**348**	P		**P**	**16 21 34.4**	**0.0**
	comp=Z,6.1nm,0.6s,baz=148,slow=19,SNR=2.8							
KIRV				LR		LR	16 33 05.7	
	comp=Z,133nm,18.1s,baz=215,slow=43							
WMQ	**Urumqi**	**23.55**	**63**	*e*P		**P**	**16 21 43.3**	**+2.3**
WMQ				pmax	pmax			
	comp=Z,12nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,84nm,4.5s							
WMQ				LR	LR			
	comp=N,330nm,8.5s							
WMQ				LR	LR			
	comp=E,280nm,10.1s							
WMQ				LR	LR			
	comp=Z,87nm,14.9s							
MANT	**Manisa**	**23.68**	**284**	P		**P**	**16 21 42.2**	**-0.3**
GKN	**Gorkha**	**23.73**	**103**	*e*P		**P**	**16 21 43.9**	**+0.9**
	comp=Z,21nm,0.7s							
MOS	**Moscow**	**23.90**	**330**	*e*P		P	16 21 36.0	-8.2
OBN	**Obninsk**	**23.90**	**328**	*i* P		**P**	**16 21 45.0**	**+0.8**
OBN				*i*			16 22 18.1	
OBN				*i*			16 25 29.6	
OBN				pmax	pmax			
	comp=Z,14nm,1.5s							
OBN				MLR	MLR			
	comp=Z,100nm,13.0s							
OBN	**Obninsk**	**23.90**	**328**	P		**P**	**16 21 43.4**	**-0.7**
	comp=Z,2.4nm,0.5s,baz=261,slow=2.9,SNR=4.8							
OBN	**Obninsk**	**23.90**	**328**	IAmb		IAmb	16 21 46.6	
	comp=Z,15nm,0.7s							
TOPG	**Topolog**	**24.14**	**300**	⇑P		**P**	**16 21 52.5**	**+6.0**
DMN	**Daman**	**24.28**	**104**	*e*P		**P**	**16 21 49.0**	**+0.7**
	comp=Z,26nm,0.9s							
KKN	**Kakani**	**24.34**	**103**	*e*P		**P**	**16 21 50.7**	**+1.9**
	comp=Z,19nm,0.8s							
PKIN	**Phulchoki**	**24.53**	**103**	*e*P		**P**	**16 21 52.6**	**+2.0**
	comp=Z,9.6nm,0.6s							
PKI	**Puhoki**	**24.54**	**103**	*e*P		**P**	**16 21 52.7**	**+2.0**
	comp=Z,41nm,1.1s							
GUN	**Gumba**	**24.75**	**102**	*e*P		**P**	**16 21 55.5**	**+2.8**
	comp=Z,42nm,0.8s							
SORM	**Soroca**	**24.92**	**307**	⇑P		**P**	**16 21 54.1**	**+0.6**
SORM	**Soroca**	**24.92**	**307**	⇑P		**P**	**16 21 54.1**	**+0.6**
JIRN	**Jiri**	**25.11**	**102**	*e*P		**P**	**16 21 58.9**	**+3.0**
	comp=Z,22nm,0.7s							
AKASG	**Malin Array Be**	**25.26**	**314**	P		**P**	**16 21 56.7**	**+0.1**
AKASG				pmax	pmax			
	comp=Z,3.0nm,1.0s							
AKASG	**Malin Array Be**	**25.26**	**314**	P		**P**	**16 21 56.1**	**-0.6**
	comp=Z,9.4nm,0.7s,baz=110,slow=8.4,SNR=2.0							
AKASG	**Malin Array Be**	**25.26**	**314**	P		**P**	**16 21 56.7**	**+0.1**
AKBB	**Malin Array Si**	**25.26**	**314**	P		**P**	**16 21 56.7**	**+0.1**
AKBB				pmax	pmax			
	comp=Z,22nm,1.3s							
AKBB	**Malin Array Si**	**25.26**	**314**	P		**P**	**16 21 56.7**	**+0.1**
AKBB				IAmb	IAmb		16 22 24.8	
	comp=Z,22nm,1.2s							
ZAA0	**Zalesovo Array**	**25.37**	**38**	P		**P**	**16 21 58.2**	**+0.6**
ZAA0				IAmb	IAmb		16 22 30.0	
	comp=Z,3.9nm,0.8s							
ZALV	**Zalesovo Beam**	**25.37**	**38**	P		**P**	**16 21 59.0**	**+1.5**
	comp=Z,1.8nm,0.5s,baz=240,slow=8.9,SNR=8.3							
ZALV				LR		LR	16 33 42.8	
	comp=Z,39nm,21.8s,baz=192,slow=40							
ZALV	**Zalesovo Beam**	**25.37**	**38**	P		**P**	**16 21 58.5**	**+0.9**
VRI	**Vrincioaia**	**25.46**	**302**	⇑P		**P**	**16 22 00.7**	**+2.2**
VRI	**Vrincioaia**	**25.46**	**302**	⇑P		**P**	**16 22 00.7**	**+2.2**
PLOR	**Plostina**	**25.51**	**302**	⇑P		**P**	**16 22 01.3**	**+2.3**
PLOR	**Plostina**	**25.51**	**302**	⇑P		**P**	**16 22 01.3**	**+2.3**
TESR	**Tescani**	**25.64**	**303**	⇑P		**P**	**16 22 03.2**	**+3.0**
MLR	**Muntele Rosu**	**25.94**	**301**	⇑P		**P**	**16 22 06.3**	**+3.3**
MLR	**Muntele Rosu**	**25.94**	**301**	P		**P**	**16 22 05.5**	**+2.5**
	comp=Z,4.9nm,0.8s,baz=257,slow=5.5,SNR=11							
MLR	**Muntele Rosu**	**25.94**	**301**	⇑P		**P**	**16 22 06.3**	**+3.3**
DOPR	**Dopca**	**26.40**	**301**	⇑P		P	16 21 59.0	-8.1
ODAN	**Odare**	**26.43**	**103**	*e*P		**P**	**16 22 09.4**	**+1.7**
	comp=Z,58nm,0.9s							
TAPN	**Taplejung**	**26.45**	**102**	*e*P		**P**	**16 22 10.4**	**+2.4**
VOIR		**26.55**	**300**	⇑P		**P**	**16 22 11.9**	**+3.4**
VOIR		**26.55**	**300**	⇑P		**P**	**16 22 11.9**	**+3.4**
BURAR	**Bucovina Array**	**26.83**	**305**	⇓P		**P**	**16 22 04.4**	**-6.6**
BURAR	**Bucovina Array**	**26.83**	**305**	⇓P		**P**	**16 22 04.4**	**-6.6**
BURAR	**Bucovina Array**	**26.83**	**305**	P		**P**	**16 22 10.7**	**-0.3**
ARR	**Arges**	**26.83**	**300**	⇑P		P	16 22 01.9	-9.1
KLMR	**Klimovskoe**	**27.22**	**340**	*e*P		**P**	**16 22 13.6**	**-0.6**
KLMR				pmax	pmax			
	comp=Z,18nm,1.2s							
KLMR	**Klimovskoe**	**27.22**	**340**	*e*P		**P**	**16 22 13.7**	**-0.5**
KLMR				AMP			16 22 16.6	
	comp=Z,18nm,1.2s							
KLMR				LQ	LQ		16 31 57.1	
KLMR				LQ	LQ		16 31 57.1	
KLMR				LR	LR		16 34 35.7	
ATD	**Arta Tunnel**	**28.46**	**213**	LR	LR		16 35 13.0	
	comp=Z,79nm,21.7s,baz=12,slow=40							
VSU	**Vasula**	**30.23**	**327**	⇓*e*P		**P**	**16 22 41.8**	**+0.8**
FIA1	**FINESS Array S**	**32.20**	**331**	P		**P**	**16 22 59.4**	**+1.0**
FIA1				IAmb	IAmb		16 23 58.9	
	comp=Z,67nm,1.6s							
FINES	**FINESS Array B**	**32.20**	**331**	P		**P**	**16 22 59.7**	**+1.4**
	comp=Z,4.7nm,0.6s,baz=126,slow=8.8,SNR=22							
FINES				LR		LR	16 38 36.1	
	comp=Z,170nm,18.9s,baz=140,slow=41							
FINES	**FINESS Array B**	**32.20**	**331**	P		**P**	**16 22 59.3**	**+1.0**
GTA	**Gaotai**	**32.66**	**72**	*e*P		P	16 23 10.0	+7.2
GTA				pP		sP	16 23 14.3	+7.3
GTA				sP		pP	16 23 17.8	+12
GTA				pmax	pmax			
	comp=Z,2.0nm,0.8s							
LZH	**Lanzhou**	**36.44**	**77**	*e*P		**P**	**16 23 33.5**	**-2.1**
LZH				pP		pP	16 23 35.8	-2.8
LZH				sP		sP	16 23 37.0	-2.8
LZH				*e*PP		**PnPn**	**16 24 57.5**	**-0.3**
LZH				pmax	pmax			
	comp=Z,17nm,1.0s							
LZH				pmax	pmax			
	comp=Z,52nm,5.2s							
ULN	**Ulaanbaatar**	**37.31**	**57**	⇑*e*P		**P**	**16 23 45.2**	**+2.3**
ULN				pmax	pmax			
	comp=Z,4.0nm,1.3s							
ARCES	**ARCESS Array B**	**37.65**	**342**	P		**P**	**16 23 45.3**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=140,slow=7.1,SNR=3.5							
ARCES				LR		LR	16 41 23.6	
	comp=Z,306nm,18.7s,baz=152,slow=40							
NC405	**NORSAR Array S**	**38.20**	**325**	P		**P**	**16 23 50.4**	**+0.3**
NC303	**NORSAR Array S**	**38.40**	**325**	P		**P**	**16 23 52.5**	**+0.8**
NB2	**NORSAR Subarra**	**38.41**	**325**	P		**P**	**16 23 52.2**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=109,slow=8.6							
NOA	**NORSAR Array B**	**38.41**	**325**	P		**P**	**16 23 52.3**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=110,slow=8.1,SNR=8.8							
NOA				LR		LR	16 40 51.2	
	comp=Z,50nm,18.2s,baz=125,slow=38							
NC204	**NORSAR Array S**	**38.69**	**325**	P		**P**	**16 23 53.2**	**-1.1**
KMI	**Kunming**	**39.47**	**94**	P		**P**	**16 24 05.0**	**+3.6**
KMI				pmax	pmax			
	comp=Z,9.0nm,0.9s							
CHTO	**Chiang Mai**	**39.69**	**105**	P		**P**	**16 24 02.3**	**-0.7**
CHTO			

GRAC	**Grapevine Rang**	**2.57**	**264**	P	**Pn**	**16 20 54.4**	**+1.1**
	baz=82,SNR=45						
GRAC				S	**Sb**	**16 21 28.1**	**-1.4**
	baz=82						
NEE2	**Needles Airpor**	**2.58**	**188**	P	**Pn**	**16 20 53.4**	**-0.1**
	baz=8.7						
NEE2				S	**Sn**	**16 21 25.5**	**+0.3**
	baz=8.7						
Q16A	**Castle Valley**	**2.85**	**55**		**Pn**	**16 20 58.3**	**+0.9**
WUAZ	**Wupatki**	**2.89**	**128**	Sb	**Sb**	**16 21 39.0**	**0.0**
	baz=310						
GSC	**Goldstone, Bar**	**2.93**	**227**		**Pn**	**16 20 59.3**	**+0.9**
GSC	**Goldstone, Bar**	**2.93**	**227**	P	**Pn**	**16 20 59.3**	**+0.9**
	baz=46,SNR=25						
DAC	**Darwin (Calif)**	**2.94**	**250**		**Pn**	**16 21 00.3**	**+1.8**
MPMC	**Manual Prospec**	**2.95**	**246**	P	**Pn**	**16 20 59.5**	**+0.8**
	baz=64						
HEC	**Hector,Ludlow**	**3.05**	**216**	P	**Pn**	**16 21 00.4**	**+0.4**
	baz=35,SNR=15						
TMUT	**Trail Mountain**	**3.05**	**49**		**Pn**	**16 21 01.4**	**+1.2**
DUG	**Dugway, Tooele**	**3.05**	**20**		**Pn**	**16 21 01.5**	**+1.4**
NLU	**North Lily Min**	**3.10**	**31**	Pn	**Pn**	**16 21 02.3**	**+1.5**
TIN	**Tinemaha, Big**	**3.25**	**266**	S	**Sb**	**16 21 45.2**	**-4.0**
	baz=84						
IRM	**Iron Mountain**	**3.26**	**194**	P	**Pn**	**16 21 03.0**	**+0.1**
	baz=14,SNR=16						
NV11	**Mina Array Sit**	**3.34**	**290**		**Pn**	**16 21 04.4**	**+0.4**
LRMC	**Laurel Mtn Rad**	**3.38**	**238**	P	**Pn**	**16 21 05.1**	**+0.6**
	baz=56,SNR=11						
SRU	**San Rafael Swe**	**3.38**	**57**		**Pn**	**16 21 06.3**	**+1.6**
P17A	**Butcher Ranch,**	**3.44**	**51**		**Pn**	**16 21 06.3**	**+0.8**
NVAR	**Mina Array Bea**	**3.45**	**290**	Pn	**Pn**	**16 21 06.0**	**+0.4**
	4.6nm,0.3s,baz=117,slow=14,SNR=82						
NVAR				Pg	**Pb**	**16 21 11.8**	**-0.8**
	49nm,0.3s,baz=123,slow=14,SNR=102						
NVAR				Lg	Lg	16 21 58.1	
	8.7nm,0.3s,baz=105,slow=30,SNR=2.4						
NVAR	**Mina Array Bea**	**3.45**	**290**		**Pn**	**16 21 04.8**	**-0.7**
ELK	**Elko**	**3.51**	**347**	Pn	**Pn**	**16 21 06.7**	**+0.2**
	4.3nm,0.3s,baz=174,slow=10,SNR=72						
ELK				Pg	**Pb**	**16 21 14.5**	**+0.7**
	17nm,0.3s,baz=183,slow=14,SNR=46						
ELK				Lg	Lg	16 21 59.8	
	11nm,0.3s,baz=225,slow=19,SNR=4.0						
ELK				LR	LR	16 22 47.6	
	comp=Z,96nm,18.5s,baz=174,slow=45						
ELK	**Elko**	**3.51**	**347**		**Pn**	**16 21 06.4**	**-0.1**
Y14A	**Wickenburg**	**3.51**	**164**	Pn	**Pn**	**16 21 07.2**	**+0.9**
KVN	**Kaiserville**	**3.54**	**300**		**Pn**	**16 21 07.7**	**+0.9**
Y12C	**Blythe**	**3.58**	**185**		**Pn**	**16 21 07.1**	**-0.1**
Y12C	**Blythe**	**3.58**	**185**	P	**Pn**	**16 21 07.7**	**+0.5**
	baz=5.0						
BELC	**Belle Mtn. Jos**	**3.64**	**205**	P	**Pn**	**16 21 08.6**	**+0.5**
	baz=24,SNR=13						
X16A	**Lo Mia Camp, P**	**3.66**	**142**		**Pn**	**16 21 10.5**	**+2.1**
RYN	**Ryan**	**3.67**	**292**		**Pn**	**16 21 09.0**	**+0.4**
BGU	**Big Grassy Mou**	**3.70**	**14**		**Pn**	**16 21 09.9**	**+0.9**
MLAC	**Mammoth, Mammo**	**3.72**	**276**	P	**Pn**	**16 21 10.7**	**+1.4**
	baz=93						
BC3	**Big Chuckawall**	**3.81**	**196**	P	**Pn**	**16 21 11.0**	**+0.5**
	baz=16,SNR=8.2						
ISA	**Isabella, Lake**	**3.84**	**246**		**Pn**	**16 21 11.6**	**+0.8**
OMMB	**Old Mammoth Mi**	**3.85**	**276**		**Pn**	**16 21 11.9**	**+0.7**
CTU	**Camp Tracy**	**3.85**	**29**	Pn	**Pn**	**16 21 12.2**	**+1.1**
JLU	**Jordanelle**	**3.90**	**32**		**Pn**	**16 21 12.6**	**+0.8**
MDPB	**Devils Postpil**	**3.91**	**276**		**Pn**	**16 21 13.2**	**+1.2**
XPFO	**Pion Flat**	**4.15**	**207**		**Pn**	**16 21 15.3**	**+0.1**
PFO	**Pinyon Flats O**	**4.15**	**207**	Pn	**Pn**	**16 21 15.9**	**+0.8**
	2.4nm,0.3s,baz=16,slow=17,SNR=23						
PFO				Pg	**Pg**	**16 21 29.6**	**-0.9**
	5.4nm,0.3s,baz=40,slow=15,SNR=13						
PFO				Lg	Lg	16 22 20.1	
	4.4nm,0.3s,baz=330,slow=23,SNR=8.9						
PFO				LR	LR	16 22 56.4	
	comp=Z,113nm,20.3s,baz=296,slow=40						
PFO	**Pinyon Flats O**	**4.15**	**207**		**Pn**	**16 21 15.4**	**+0.2**
PFO	**Pinyon Flats O**	**4.15**	**207**	P	**Pn**	**16 21 15.6**	**+0.5**
	baz=26,SNR=12						
SPUT	**South Promonto**	**4.19**	**18**	Pn	**Pn**	**16 21 16.4**	**+0.6**
W18A	**Petrified Fore**	**4.21**	**120**	Pn	**Pn**	**16 21 15.6**	**-0.5**
GLA	**Glamis**	**4.30**	**187**		**Pn**	**16 21 17.6**	**+0.5**
YERR	**Yerington**	**4.32**	**294**		**Pn**	**16 21 17.8**	**+0.2**
WAKR	**Walker**	**4.32**	**287**		**Pn**	**16 21 17.9**	**+0.3**
TCUT	**Toone Canyon**	**4.35**	**29**		**Pn**	**16 21 18.4**	**+0.3**
X18A	**Snowflake**	**4.42**	**128**		**Pb**	**16 21 31.3**	**+2.0**
MWC	**Mount Wilson**	**4.42**	**227**		**Pn**	**16 21 19.2**	**+0.3**
MVCO	**Mesa Verde**	**4.53**	**90**		**Pn**	**16 21 20.6**	**+0.2**
PNTR	**Pine Nut**	**4.62**	**294**		**Pn**	**16 21 21.9**	**+0.7**
PAHR	**Pah Rah Range**	**4.72**	**302**		**Pn**	**16 21 23.8**	**+0.7**
VCNR	**Virginia City**	**4.73**	**296**	Pn	**Pn**	**16 21 23.6**	**+0.3**
MONP2	**Monument Peak**	**4.79**	**203**	P	**Pn**	**16 21 24.9**	**+0.8**
	baz=22						
RDMU	**Red Mountain**	**4.83**	**47**		**Pn**	**16 21 24.9**	**+0.3**
CMB	**Columbia Colle**	**4.98**	**280**	Pn	**Pn**	**16 21 27.3**	**+0.8**
109C	**Camp Elliot, M**	**5.04**	**209**	Pn	**Pn**	**16 21 27.9**	**+0.6**
BAR	**Barrett**	**5.07**	**205**		**Pn**	**16 21 28.6**	**+0.9**
BEKR	**Beckworth**	**5.47**	**300**		**Pn**	**16 21 33.6**	**+0.3**
214A	**Organ Pipe Nat**	**5.48**	**168**	Pn	**Pn**	**16 21 33.9**	**+0.6**
AFDM	**Forest Hills D**	**5.60**	**289**	Pn	**Pn**	**16 21 34.7**	**-0.3**
TUC	**Tucson**	**5.73**	**150**		**Pn**	**16 21 37.3**	**+0.5**
S22A	**4UR Ranch, Cre**	**5.85**	**84**		**Pn**	**16 21 39.1**	**+0.5**
AHID	**Auburn Hatcher**	**5.92**	**23**		**Pn**	**16 21 39.0**	**-0.5**
SMCO	**Snowmass**	**5.96**	**70**		**Pn**	**16 21 39.1**	**-1.2**
MFID	**Camas Ranch**	**6.21**	**349**		**Pn**	**16 21 43.4**	**+0.2**
PD31	**Pinedale Array**	**6.48**	**32**		**Pn**	**16 21 47.4**	**+0.1**
PDAR	**Pinedale Array**	**6.48**	**32**	Pn	**Pn**	**16 21 50.5**	**+3.3**
	0.5nm,0.3s,baz=227,slow=10,SNR=21						
PDAR				Pg	Pb	16 22 09.0	+4.6
	1.1nm,0.3s,baz=212,slow=17,SNR=12						
PDAR				Lg	Lg	16 23 34.1	
	1.9nm,0.3s,baz=215,slow=25,SNR=6.6						
PDAR	**Pinedale Array**	**6.48**	**32**		**Pn**	**16 21 47.1**	**-0.2**
REDW	**Red Top Meadow**	**6.54**	**22**	Pn	**Pn**	**16 21 47.6**	**-0.5**
TPAW	**Teton Pass**	**6.63**	**21**		**Pn**	**16 21 49.0**	**-0.3**
ANMO	**Albuquerque**	**6.68**	**109**	Pn	**Pn**	**16 21 52.5**	**+2.5**
	0.4nm,0.3s,baz=295,slow=10,SNR=5.4						
ANMO				Pg	Pg	16 22 14.0	-4.9
	1.4nm,0.3s,baz=291,slow=14,SNR=7.7						
ANMO				Lg	Lg	16 23 33.2	
	1.5nm,0.3s,baz=243,slow=15,SNR=3.1						
ANMO	**Albuquerque**	**6.68**	**109**	Pn	**Pn**	**16 21 48.9**	**-1.1**
J08A	**Circle Bar Ran**	**6.86**	**333**		**Pn**	**16 21 52.6**	**+0.3**
SDCO	**Great Sand Dun**	**6.91**	**84**	Pn	**Pn**	**16 21 53.3**	**+0.1**
SDCO	**Great Sand Dun**	**6.91**	**84**	P	**Pn**	**16 21 51.6**	**-1.5**
	baz=269						
MOOW	**Moose Ponds**	**6.92**	**21**		**Pn**	**16 21 54.4**	**+1.0**
IMW	**Indian Meadow**	**7.01**	**20**		**Pn**	**16 21 54.8**	**+0.3**
FLWY	**Flagg Ranch**	**7.24**	**20**		**Pn**	**16 21 57.7**	**0.0**
N23A	**Red Feather La**	**7.32**	**58**	Pn	**Pn**	**16 21 58.0**	**-0.8**
K05A	**Summer Lake**	**7.46**	**318**		**Pn**	**16 21 59.9**	**-0.7**
YHH	**Holmes Hill**	**7.86**	**18**		**Pn**	**16 22 05.9**	**-0.4**
BMO	**Blue Mountains**	**7.88**	**344**	Pn	**Pn**	**16 22 08.9**	**+2.6**
K22A	**Casper**	**7.92**	**45**	Pn	**Pn**	**16 22 06.8**	**-0.1**
YBH	**Yreka Blue Hor**	**7.93**	**306**	Pn	**Pn**	**16 22 09.6**	**+2.6**
	0.1nm,0.3s,baz=141,slow=14,SNR=3.6						
YBH				Lg	Lg	16 24 19.7	
	0.0nm,0.3s,baz=342,slow=20,SNR=2.7						
YBH				LR	LR	16 25 22.6	
	comp=Z,153nm,18.1s,baz=160,slow=40						
YNE	**Yellowstone No**	**8.29**	**21**	Pn	**Pn**	**16 22 11.5**	**-0.6**
F10A	**Beach Ranch, E**	**8.93**	**346**		**Pn**	**16 22 20.4**	**-0.4**
RSSD	**Black Hills**	**10.25**	**45**		**Pn**	**16 22 39.1**	**+0.1**
NEW	**Newport**	**11.14**	**350**	Lg	Lg	16 25 58.8	
	0.2nm,0.3s,baz=48,slow=16,SNR=1.9						
ULM	**Lac du Bonnet**	**18.41**	**40**	P	**Pn**	**16 24 27.0**	**+0.1**
	0.1nm,0.3s,baz=225,slow=11,SNR=3.3						
ULM	**Lac du Bonnet**	**18.41**	**40**	IAmb	IAmb	16 25 19.3	
	comp=Z,16nm,1.9s						
YKA	**Yellowknife Ar**	**25.19**	**360**	P	**P**	**16 25 39.0**	**+1.8**
	comp=Z,0.1nm,0.5s,baz=181,slow=9.0,SNR=4.0						
ILAR	**Eielson Array**	**33.59**	**335**	P	**P**	**16 26 50.8**	**-1.1**
	comp=Z,0.6nm,1.1s,baz=153,slow=8.1,SNR=3.1						

PRU 28 16:20:49.2±0.0, 50.16N×19.13E, h0km, 1C, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.43**	**82**	*e*Pg	Pg	16 20 57.1	-0.4
OJC				*e*Sg	Sg	16 21 03.1	0.0
OKC	**Ostrava-Krasne**	**0.71**	**243**	*e*PG	Pg	16 21 02.9	+0.1
OKC				*e*SG	Sg	16 21 13.1	+1.1
	comp=Z,17nm,0.6s						
LANS	**Liptovska Anna**	**1.03**	**168**	*e*PG	Pg	16 21 08.3	-0.7
LANS				*e*SG	Sg	16 21 22.0	-0.4
LANS				*e*LG	Lg	16 21 23.2	
NIE	**Niedzica**	**1.06**	**134**	*e*Pg	Pg	16 21 09.2	-0.3
NIE				*e*Sg	Sg	16 21 23.3	+0.1
MORC	**Moravsky Berou**	**1.09**	**250**	↑P	Pg	16 21 09.9	-0.3
MORC	**Moravsky Berou**	**1.09**	**250**	*e*PG	Pg	16 21 10.5	+0.3
MORC				*e*SG	Sg	16 21 24.2	-0.1
KRLC	**Kraliky**	**1.51**	**268**	*e*PG	Pn	16 21 16.0	-1.6
KRLC				*e*SG	Sg	16 21 37.6	-0.2
	comp=Z,14nm,0.5s						
STHS	**Stebnicka Huta**	**1.56**	**118**	*e*PN	Pn	16 21 17.5	-0.7
STHS				*e*SN	Sn	16 21 38.8	-0.3
STHS				*e*LG	Lg	16 21 47.2	
JAVC	**Velka Javorina**	**1.61**	**217**	*e*PN	Pn	16 21 19.0	0.0
JAVC				*e*SG	Sb	16 21 40.8	0.0
VYHS	**Vyhne**	**1.68**	**187**	*e*PN	Pn	16 21 18.4	-1.4
VYHS				*e*SN	Sn	16 21 39.9	-2.1
DPC	**Dobruska-Polom**	**1.81**	**277**	*e*PG	Pb	16 21 22.6	-0.7
DPC				*e*SG	Sg	16 21 47.1	-0.3
	comp=Z,13nm,0.6s						
VRAC	**Vranov**	**1.85**	**244**	*e*PN	Pn	16 21 22.1	-0.1
VRAC				*e*SG	Sg	16 21 48.2	-0.5
KECS	**Kecovo**	**1.90**	**152**	*e*PN	Pn	16 21 20.8	-2.0
KECS				*e*SN	Sn	16 21 45.0	-2.4
KECS				*e*LG	Lg	16 21 53.4	
OSTC	**Ostas**	**1.91**	**283**	*e*PG	Pb	16 21 24.0	-0.9
OSTC				*e*SG	Sg	16 21 50.6	+0.1
	comp=Z,7.9nm,0.7s						
CHVC	**Chvalec**	**2.02**	**283**	*e*PG	Pb	16 21 26.2	-0.5
CHVC				*e*SG	Sg	16 21 54.0	+0.1
UPC	**Upice**	**2.03**	**281**	*e*SG	Sg	16 21 54.6	+0.3
	comp=Z,20nm,1.3s						
KRUC	**Moravsky**	**2.09**	**239**	*e*PN	Pn	16 21 25.4	-0.1
KRUC				*e*SG	Sb	16 21 55.1	+0.6
GOPC	**GO Pecny, Ondr**	**2.81**	**267**	*e*SG	Sg	16 22 18.7	-0.8
	comp=Z,5.4nm,0.7s						
PVCC	**Panska Ves**	**2.94**	**279**	*e*SG	Sg	16 22 23.3	-0.5
	comp=Z,9.7nm,0.3s						
PRU	**Pruhonice**	**2.96**	**268**	*e*SG	Sg	16 22 22.9	-1.4
BRG	**Berggiesshubel**	**3.39**	**284**	SG	Sg	16 22 39.8	+1.9
	4.0nm,0.8s						
KHC	**Kasperske Hory**	**3.75**	**256**	*e*SG	Sg	16 22 47.9	-1.8

*REN **28** 16:46:43.9±0.9, 37.33N±0.01×114.13W±0.04, h8km, 6km, Error ellipse: s-maj=4.4km s-min=1.1km az=111.0*
*UUSS **28** 16:46:43.7±1.1, 37.33N±0.02×114.11W±0.03, h11km±5km, ML2.5/5, Error ellipse: s-maj=4.3km s-min=1.4km az=121.0*
NEIC 28 16:46:44.1±0.7, 37.29N±0.02×114.09W±0.04, h17km±3km, Error ellipse: s-maj=5.3km s-min=2.7km az=121.0, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ICU	**Indian Springs**	**0.20**	**137**		Pg	16 46 48.9	-0.2
ICU					Sg	16 46 52.5	+0.1
CCUT	**Cedar City**	**0.63**	**66**		Pg	16 46 56.4	-0.3
CCUT	**Cedar City**	**0.63**	**66**		Sb	16 47 05.4	-0.1
LCMT	**Little Creek M**	**0.73**	**112**		Pg	16 46 59.0	+0.5
LCMT	**Little Creek M**	**0.73**	**112**		Sg	16 47 08.5	+0.3
SZCU	**Shurtz Canyon**	**0.85**	**69**	Pg	Pb	16 47 00.2	-0.4
KNB	**Kanab**	**1.05**	**105**		Pn	16 47 04.0	-0.1
SHPR	**Sheep Range**	**1.16**	**228**	Pn	Pn	16 47 05.5	-0.2
PSUT	**Pine Spring**	**1.25**	**9**		Sb	16 47 23.1	-0.2
PSUT	**Pine Spring**	**1.25**	**9**	Pn	Pn	16 47 06.8	-0.2
R11A	**Troy Canyon, C**	**1.58**	**312**	Pn	Pb	16 47 12.3	-0.6
TCRU	**Three Creeks R**	**1.85**	**44**	Pn	Pn	16 47 14.5	-0.7
MSU	**Marysvale**	**1.94**	**51**	Pn	Pn	16 47 17.1	+0.6
ELK	**Elko**	**3.56**	**346**	Pn	Pn	16 47 38.8	+0.1
KVN	**Kaiserville**	**3.61**	**300**	Pn	Pn	16 47 39.4	0.0

*THE **28** 16:55:28.8, 37.85N×21.01E, h15km, ML3.0/5, Error ellipse: s-maj=0.9km s-min=0.4km az=226.0*
*ATH **28** 16:55:28.3, 37.85N×21.03E, h17km±2km, ML2.9/5, Error ellipse: s-maj=2.7km s-min=0.5km az=271.0*
ISC 28 16:55:28.5±0.9, 37.86N±0.03×21.03E±0.02, h16km±8km, n43, σ0s40/54, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAK2	**Zakynthos**	**0.12**	**234**	P	**Pb**	**16 55 32.4**	**0.0**
VLMS	**Volimes, Zakyn**	**0.29**	**274**	P	**Pg**	**16 55 34.7**	**+0.1**
VLMS				S	**Sg**	**16 55 39.2**	**+0.4**
VLMS				AML	AML	16 55 40.9	
	comp=N,7199μm,0.2s						
VLMS				AML	AML	16 55 42.7	
	comp=E,5385μm,0.2s						
KFL	**Anninata**	**0.31**	**323**	P	**Pg**	**16 55 34.9**	**-0.2**
KFL	**Anninata**	**0.31**	**323**	P	**Pg**	**16 55 34.8**	**-0.3**
KFL				S	**Sg**	**16 55 40.2**	**+0.5**
KFL				AML	AML	16 55 48.7	
	comp=N,5580μm,0.4s						
KFL				AML	AML	16 55 51.0	
	comp=E,4495μm,0.3s						
RLS	**Riolos of Patr**	**0.40**	**60**	P	**Pg**	**16 55 36.5**	**-0.2**
RLS	**Riolos of Patr**	**0.40**	**60**	P	**Pg**	**16 55 36.0**	**-0.7**
RLS				S	**Sg**	**16 55 42.6**	**+0.4**
RLS				AML	AML	16 55 48.5	
	comp=E,4364μm,0.4s						
RLS				AML	AML	16 55 49.5	
	comp=N,4812μm,0.5s						
VLS	**Valsamata**	**0.47**	**313**	P	**Pg**	**16 55 37.6**	**-0.3**
VLS				S	**Sb**	**16 55 45.1**	**0.0**
VLS	**Valsamata**	**0.47**	**313**	P	**Pg**	**16 55 37.8**	**-0.1**
KEF2	**Argostoli. Kep**	**0.52**	**306**	P	**Pg**	**16 55 38.7**	**-0.2**
DRO	**Drossia**	**0.55**	**80**	P	**Pg**	**16 55 39.5**	**+0.1**
DRO				S	**Sb**	**16 55 48.4**	**+0.9**
	comp=N,4μm,0.4s						
DRO	**Drossia**	**0.55**	**80**	P	**Pg**	**16 55 38.6**	**-0.8**
DRO				S	**Sg**	**16 55 46.9**	**+0.2**
DRO				AML	AML	16 55 53.8	
	comp=N,6866μm,0.4s						
DRO				AML	AML	16 55 57.7	
	comp=E,7426μm,0.4s						
AMT	**Artemida-Makis**	**0.63**	**121**	P	**Pg**	**16 55 40.7**	**-0.2**
AMT	**Artemida-Makis**	**0.63**	**121**	P	**Pg**	**16 55 40.7**	**-0.2**
FSK	**Fiskardo**	**0.70**	**329**	P	**Pg**	**16 55 42.1**	**-0.1**
FSK	**Fiskardo**	**0.70**	**329**	P	**Pg**	**16 55 42.2**	**-0.1**
PDO	**Prodromos**	**0.75**	**10**	P	**Pg**	**16 55 43.1**	**0.0**
PDO				S	**Sb**	**16 55 54.3**	**+1.1**
	comp=E,2μm,0.4s						
PDO	**Prodromos**	**0.75**	**10**	P	**Pg**	**16 55 43.2**	**0.0**
PDO				S	**Sb**	**16 55 53.6**	**+0.4**
PDO				AML	AML	16 56 02.1	
	comp=E,2760μm,0.5s						
PDO				AML	AML	16 56 05.2	
	comp=N,3583μm,0.3s						
EVGI	**Lefkada island**	**0.81**	**339**	P	**Pg**	**16 55 44.5**	**+0.1**
LAKA	**Lakka**	**0.84**	**63**	P	**Pb**	**16 55 44.8**	**0.0**
LAKA				S	**Sn**	**16 55 57.4**	**-0.5**
	comp=N,570nm,0.7s						
LAKA	**Lakka**	**0.84**	**63**	P	**Pb**	**16 55 44.6**	**-0.2**
PVO	**Paravola**	**0.85**	**27**	P	**Pg**	**16 55 45.2**	**+0.1**
PVO	**Paravola**	**0.85**	**27**	P	**Pg**	**16 55 45.2**	**+0.1**
EFP	**Efpalio**	**0.90**	**50**	P	**Pb**	**16 55 45.8**	**+0.1**
EFP				S	**Sn**	**16 55 58.8**	**-0.3**
	comp=N,762nm,0.5s						
EFP	**Efpalio**	**0.90**	**50**	P	**Pb**	**16 55 45.6**	**-0.1**
KLV	**Kalavryta, Ach**	**0.91**	**78**	P	**Pb**	**16 55 45.5**	**-0.4**
KLV	**Kalavryta, Ach**	**0.91**	**78**	P	**Pb**	**16 55 45.2**	**-0.7**
ALIK	**Aliki, Aigiali**	**0.95**	**65**	P	**Pg**	**16 55 46.9**	**0.0**
TRIZ	**Trizonia**	**0.97**	**58**	P	**Pb**	**16 55 46.8**	**-0.2**
TRIZ	**Trizonia**	**0.97**	**58**	P	**Pb**	**16 55 46.7**	**-0.2**
LKD2	**Lefkada island**	**0.97**	**343**	P	**Pb**	**16 55 46.4**	**-0.6**
LKD2	**Lefkada island**	**0.97**	**343**	P	**Pb**	**16 55 46.2**	**-0.8**
SERG	**Sergoula**	**0.98**	**55**	P	**Pb**	**16 55 47.1**	**-0.1**
SERG	**Sergoula**	**0.98**	**55**	P	**Pb**	**16 55 47.4**	**+0.2**
ITM	**Ithomi**	**0.99**	**133**	P	**Pb**	**16 55 47.3**	**+0.1**
ITM	**Ithomi**	**0.99**	**133**	P	**Pb**	**16 55 47.4**	**+0.1**
TSLK	**Tsoukalades, L**	**1.01**	**343**	P	**Pb**	**16 55 47.1**	**-0.5**
TSLK	**Tsoukalades, L**	**1.01**	**343**	P	**Pb**	**16 55 47.1**	**-0.5**
ANX	**Ano Chora**	**1.02**	**44**	P	**Pb**	**16 55 47.8**	**0.0**
ANX				S	**Sn**	**16 56 02.8**	**+0.5**
	comp=N,878nm,0.5s						
ANX	**Ano Chora**	**1.02**	**44**	P	**Pb**	**16 55 47.9**	**0.0**
KALE	**Kalithea**	**1.03**	**59**	P	**Pb**	**16 55 47.8**	**-0.2**
KALE	**Kalithea**	**1.03**	**59**	P	**Pb**	**16 55 47.7**	**-0.3**
PYL	**PYLOS**	**1.12**	**149**	P	**Pn**	**16 55 49.5**	**0.0**
VLX	**Vlachokerasia**	**1.18**	**114**	P	**Pn**	**16 55 49.8**	**-0.6**

*IDC **28** 16:57:35.2±1.3, 0.26S×123.99E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.4/33, mbtmp3.6/4, Error ellipse: s-maj=89.2km s-min=26.6km az=72.0*
*DJA **28** 16:57:40.9±1.2, 0.3S±3.3×12.4E±.3, h16km±11km, M4.0/11, mB4.2/1, mb4.1/4, MLv4.0/11, Mw(mB)3.3/1*
ISC 28 16:57:41.0±0.9, 0.19S±0.06×124.55E±0.05, h35km, n15, σ1s94/17, mb3.8/4, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.95**	**323**	P	**Pn**	**16 57 58.3**	**+0.4**
KMSI				S	**Sn**	**16 58 11.2**	**+1.0**
LUWI	**Luwuk**	**1.97**	**245**	P	**Pn**	**16 58 13.2**	**+1.3**
LUWI				S	**Sn**	**16 58 36.5**	**+1.2**
SANI	**Sanana**	**2.34**	**142**	P	**Pn**	**16 58 13.6**	**-3.4**
MRSI	**Marisa**	**2.69**	**284**	P	**Pn**	**16 58 20.1**	**-1.7**
LBMI	**Labuha**	**2.98**	**99**	P	**Pn**	**16 58 29.5**	**+3.6**
APSI	**Ampana**	**2.99**	**256**	P	**Pn**	**16 58 28.0**	**+2.1**
MPSI	**Mapaga**	**4.68**	**276**	P	Pn	16 58 54.2	+5.0
MSAI	**Masohi**	**5.38**	**126**	P	**Pn**	**16 59 00.4**	**+1.5**
	0.1nm237nm9.3nm,0.7s						
TTSI	**Tana Toraja**	**5.51**	**239**	P	**Pn**	**16 59 02.0**	**+1.4**
	0.1nm32nm,0.8s						
SPSI	**Sidrap Palu**	**6.07**	**232**	P	**Pn**	**16 59 10.0**	**+1.7**
	0.1nm19nm,0.7s						
BNSI	**Bone**	**6.10**	**227**	P	**Pn**	**16 59 09.4**	**+0.7**
ASAR	**Alice Springs**	**25.04**	**159**	P	**P**	**17 03 03.4**	**+1.3**
	0.6nm,1.0s,baz=341,slow=14,SNR=2.7						
ASAR				PcP	**PcP**	**17 06 35.2**	**-1.3**
	0.2nm,0.5s,baz=347,slow=2.0,SNR=4.3						
USRK	**Ussuriysk Ar.**	**44.69**	**8**	P	**P**	**17 05 50.9**	**+0.3**
	0.7nm,0.4s,baz=188,slow=6.8,SNR=5.4						
SONM	**Songino Array**	**50.38**	**344**	P	**P**	**17 06 34.4**	**-0.4**
	0.6nm,0.7s,baz=169,slow=8.2,SNR=2.8						
MKAR	**Makanchi Array**	**59.60**	**328**	P	**P**	**17 07 39.1**	**-2.3**
	0.3nm,0.4s,baz=124,slow=8.2,SNR=9.1						

LDG 28 16:59:16.9±0.1, 44.54N×2.67E, h4km, Md1.9/2, Ml1.9/10, Error ellipse: s-maj=1.0km s-min=0.9km az=99.0, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAF	**Calviac**	**0.58**	**312**	*e*Pg	Pg	16 59 28.0	0.0
CAF	**Calviac**	**0.58**	**312**	*e*Pn	Pb	16 59 30.1	+0.5
CAF				*e*Sg	Sg	16 59 35.5	0.0
	4.1nm,0.2s						
LASF	**Ste Croix**	**0.97**	**118**	*e*Pg	Pg	16 59 35.2	-0.3
LASF				*e*Sg	Sg	16 59 47.7	-0.4
	2.6nm,0.2s						
RJF	**Les Rejaudoux**	**1.12**	**313**	*e*Pg	Pg	16 59 37.9	-0.4
RJF				*e*Sg	Sg	16 59 52.3	-0.6
	6.2nm,0.2s						
MTLF	**Montolieu**	**1.24**	**195**	*e*Pg	Pg	16 59 39.6	-1.1
MTLF				*e*Sg	Sg	16 59 55.8	-1.0
	2.2nm,0.2s						
LFF	**La Frestale**	**1.43**	**287**	*e*Pg	Pn	16 59 43.7	+0.1
LFF				*e*Sg	Sb	17 00 02.4	-0.3
	3.3nm,0.2s						
VIVF	**Saint-Julien-l**	**1.47**	**77**	*e*Pg	Pn	16 59 44.2	+0.1
VIVF				*e*Sg	Sb	17 00 03.2	-0.5
	1.3nm,0.2s						
TCF	**Toulx Ste Croi**	**1.78**	**350**	*e*Pn	Pn	16 59 46.5	-1.9
TCF	**Toulx Ste Croi**	**1.78**	**350**	*e*Pg	Pb	16 59 50.

LKD2				S	Sg	17 10 44.2	+0.8	
LKD2				AML	AML	17 10 48.1		
	comp=E,750μm,0.4s							
LKD2				AML	AML	17 10 49.2		
	comp=N,653μm,0.4s							
TSLK	**Tsoukalades, L**	**0.59**	**19**	P	**Pg**	**17 10 36.2**	**-0.4**	
TSLK				S	**Sg**	**17 10 45.1**	**+0.8**	
	comp=N,310nm,0.4s							
TSLK	**Tsoukalades, L**	**0.59**	**19**	P	**Pg**	**17 10 36.3**	**-0.3**	
TSLK				S	**Sb**	**17 10 45.4**	**-0.6**	
TSLK				AML	AML	17 10 47.7		
	comp=N,816μm,0.2s							
TSLK				AML	AML	17 10 48.6		
	comp=E,776μm,0.3s							
PDO	**Prodromos**	**0.69**	**61**	P	**Pg**	**17 10 38.6**	**0.0**	
PDO				S	**Sb**	**17 10 48.6**	**-0.4**	
PDO	**Prodromos**	**0.69**	**61**	P	**Pg**	**17 10 38.2**	**-0.4**	
PDO				S	**Sb**	**17 10 48.7**	**-0.3**	
PDO				AML	AML	17 10 50.4		
	comp=E,1955μm,0.5s							
PDO				AML	AML	17 10 51.2		
	comp=N,1929μm,0.3s							
RLS	**Riolos of Patr**	**0.86**	**104**	P	**Pg**	**17 10 41.4**	**-0.3**	
PVO	**Paravola**	**0.95**	**68**	P	**Pg**	**17 10 43.3**	**-0.1**	
PVO	**Paravola**	**0.95**	**68**	P	**Pg**	**17 10 43.3**	**-0.1**	
PVO				S	**Sb**	**17 10 56.4**	**+0.2**	
PVO				AML	AML	17 11 03.4		
	comp=E,949μm,0.4s							
PVO				AML	AML	17 11 03.4		
	comp=N,700μm,0.3s							
DRO	**Drossia**	**1.08**	**107**	P	**Pg**	**17 10 45.3**	**-0.6**	
DRO				S	**Sb**	**17 11 00.5**	**+0.5**	
DRO				AML	AML	17 11 09.7		
	comp=N,572μm,0.5s							
DRO				AML	AML	17 11 12.2		
	comp=E,739μm,0.4s							
EFP	**Efpalio**	**1.19**	**82**	P	**Pb**	**17 10 47.1**	**-0.7**	
ANX	**Ano Chora**	**1.23**	**74**	P	**Pn**	**17 10 48.6**	**0.0**	
ANX				S	**Sn**	**17 11 05.7**	**+0.3**	
ANX				AML	AML	17 11 12.2		
	comp=E,868μm,0.5s							
ANX				AML	AML	17 11 12.9		
	comp=N,809μm,0.5s							
LAKA	**Lakka**	**1.24**	**91**	P	**Pn**	**17 10 48.0**	**-0.5**	
AMT	**Artemida-Makis**	**1.27**	**125**	P	**Pn**	**17 10 49.1**	**+0.2**	
EVR	**Evrytania**	**1.27**	**59**	P	**Pn**	**17 10 49.2**	**+0.1**	
SERG	**Sergoula**	**1.31**	**83**	P	**Pn**	**17 10 49.8**	**+0.3**	
TRIZ	**Trizonia**	**1.31**	**85**	P	**Pn**	**17 10 49.4**	**-0.2**	
KALE	**Kalithea**	**1.37**	**84**	P	**Pn**	**17 10 50.4**	**0.0**	
KLV	**Kalavryta, Ach**	**1.39**	**99**	P	**Pn**	**17 10 51.0**	**+0.3**	
KLV	**Kalavryta, Ach**	**1.39**	**99**	P	**Pn**	**17 10 51.0**	**+0.3**	
ITM	**Ithomi**	**1.62**	**132**	P	**Pb**	**17 10 55.2**	**0.0**	

*ATH **28** 17:33:07.2,38°.27N×20°.39E,h16$^{km}_{\pm 2}$, ML2.6/8, Error ellipse: s-maj=2.3km s-min=0.8km az=251.0*
*THE **28** 17:33:08.1,38°.28N×20°.41E,h9$^{km}_{\pm 1}$, ML2.8/5, Error ellipse: s-maj=1.2km s-min=0.5km az=234.0*

ISC 28 17:33:07.6±1.0,**38°.28N**±0°.02×**20°.41E**±0°.05,**h13**$^{km}_{\pm 6}$,
n32,σ0°**38**/51,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.09**	**212**	P	**Pg**	**17 33 10.3**	**-0.1**
KEF3				S	**Sg**	**17 33 13.0**	**+0.6**
CHV1	**Chavriata, Kef**	**0.10**	**192**	P	**Pg**	**17 33 10.5**	**0.0**
CHV1				S	**Sg**	**17 33 12.8**	**+0.3**
	20μm,0.5s						
ARG2	**Argostoli**	**0.12**	**147**	P	**Pg**	**17 33 10.7**	**-0.1**
ARG2				S	**Sg**	**17 33 13.1**	**+0.1**
	12μm,0.4s						
KEF2	**Argostoli. Kep**	**0.13**	**151**	P	**Pg**	**17 33 10.7**	**-0.2**
KEF2				S	**Sg**	**17 33 13.4**	**+0.2**
VLS	**Valsamata**	**0.18**	**125**	P	**Pg**	**17 33 11.3**	**-0.4**
VLS				S	**Sg**	**17 33 14.3**	**-0.2**
	4μm,0.3s						
VLS	**Valsamata**	**0.18**	**125**	P	**Pg**	**17 33 11.3**	**-0.4**
VLS				S	**Sg**	**17 33 14.4**	**-0.1**
VLS				AML	AML	17 33 16.1	
	comp=E,5051μm,0.3s						
VLS				AML	AML	17 33 16.8	
	comp=N,6566μm,0.5s						
FSK	**Fiskardo**	**0.22**	**34**	P	**Pg**	**17 33 12.1**	**-0.3**
FSK				S	**Sg**	**17 33 15.6**	**0.0**
	comp=N,2μm,0.3s						
FSK	**Fiskardo**	**0.22**	**34**	P	**Pg**	**17 33 12.0**	**-0.3**
FSK				S	**Sg**	**17 33 15.7**	**+0.1**
KFL	**Anninata**	**0.34**	**119**	P	**Pg**	**17 33 14.4**	**-0.2**
KFL				S	**Sg**	**17 33 20.2**	**+0.9**
	comp=N,2μm,0.4s						
KFL	**Anninata**	**0.34**	**119**	P	**Pg**	**17 33 14.4**	**-0.2**
KFL				S	**Sg**	**17 33 20.1**	**+0.9**
KFL				AML	AML	17 33 21.8	
	comp=E,5531μm,0.3s						
KFL				AML	AML	17 33 25.7	
	comp=N,2337μm,0.4s						
EVGI	**Lefkada island**	**0.39**	**30**	P	**Pg**	**17 33 15.5**	**-0.1**
EVGI				S	**Sb**	**17 33 21.9**	**-0.6**
EVGI	**Lefkada island**	**0.39**	**30**	P	**Pg**	**17 33 15.4**	**-0.1**
EVGI				S	**Sb**	**17 33 21.8**	**-0.6**
VLMS	**Volimes, Zakyn**	**0.45**	**153**	P	**Pg**	**17 33 16.5**	**0.0**
VLMS				S	**Sb**	**17 33 23.4**	**-0.6**
VLMS				AML	AML	17 33 26.4	
	comp=N,5537μm,0.3s						
VLMS				AML	AML	17 33 27.6	
	comp=E,2415μm,0.3s						
LKD2	**Lefkada island**	**0.55**	**21**	P	**Pg**	**17 33 18.6**	**+0.2**
LKD2	**Lefkada island**	**0.55**	**21**	P	**Pg**	**17 33 18.3**	**-0.1**
LKD2				S	**Sg**	**17 33 26.2**	**+0.6**
LKD2				AML	AML	17 33 35.4	
	comp=E,647μm,0.5s						
LKD2				AML	AML	17 33 35.7	
	comp=N,761μm,0.6s						
TSLK	**Tsoukalades, L**	**0.58**	**20**	P	**Pg**	**17 33 18.7**	**-0.3**
TSLK	**Tsoukalades, L**	**0.58**	**20**	P	**Pg**	**17 33 18.7**	**-0.3**
TSLK				S	**Sb**	**17 33 27.6**	**-0.3**
TSLK				AML	AML	17 33 32.3	
	comp=E,760μm,0.3s						
TSLK				AML	AML	17 33 34.3	
	comp=N,797μm,0.4s						
PDO	**Prodromos**	**0.69**	**62**	P	**Pg**	**17 33 20.8**	**-0.3**
PDO				S	**Sb**	**17 33 31.4**	**+0.4**
PDO	**Prodromos**	**0.69**	**62**	P	**Pg**	**17 33 20.7**	**-0.3**
PDO				S	**Sb**	**17 33 31.2**	**+0.2**
PDO				AML	AML	17 33 33.1	
	comp=E,1443μm,0.6s						
PDO				AML	AML	17 33 34.6	
	comp=N,1900μm,0.3s						
RLS	**Riolos of Patr**	**0.86**	**104**	P	**Pg**	**17 33 23.7**	**-0.6**
RLS				S	**Sb**	**17 33 36.3**	**+0.3**
RLS				AML	AML	17 33 44.7	
	comp=E,319μm,0.6s						
RLS				AML	AML	17 33 47.0	
	comp=N,263μm,0.6s						
PVO	**Paravola**	**0.94**	**69**	P	**Pg**	**17 33 25.7**	**-0.1**
PVO	**Paravola**	**0.94**	**69**	P	**Pg**	**17 33 25.8**	**-0.1**
PVO				S	**Sb**	**17 33 39.0**	**+0.8**
PVO				AML	AML	17 33 44.1	
	comp=N,578μm,0.4s						
PVO				AML	AML	17 33 47.6	
	comp=E,986μm,0.4s						
DRO	**Drossia**	**1.08**	**107**	P	**Pb**	**17 33 27.9**	**-0.3**
EFP	**Efpalio**	**1.19**	**82**	P	**Pn**	**17 33 29.4**	**-0.6**
ANX	**Ano Chora**	**1.23**	**75**	P	**Pb**	**17 33 30.9**	**+0.1**
ANX	**Ano Chora**	**1.23**	**75**	P	**Pb**	**17 33 30.8**	**+0.1**
LAKA	**Lakka**	**1.24**	**91**	P	**Pn**	**17 33 30.2**	**-0.5**
EVR	**Evrytania**	**1.27**	**59**	P	**Pn**	**17 33 31.5**	**+0.3**
SERG	**Sergoula**	**1.30**	**84**	P	**Pn**	**17 33 31.7**	**+0.1**
KALE	**Kalithea**	**1.37**	**85**	P	**Pb**	**17 33 33.3**	**+0.2**
KLV	**Kalavryta, Ach**	**1.39**	**99**	P	**Pn**	**17 33 32.9**	**0.0**
KLV	**Kalavryta, Ach**	**1.39**	**99**	P	**Pn**	**17 33 33.1**	**+0.2**

*ATH **28** 17:45:03.8,38°.18N×20°.39E,h9$^{km}_{\pm 2}$, ML2.6/3, Error ellipse: s-maj=3.3km s-min=1.3km az=89.0*
*THE **28** 17:45:04.2,38°.18N×20°.41E,h7^{km}, ML2.8/4, Error ellipse: s-maj=1.0km s-min=0.5km az=220.0*

ISC 28 17:45:03.9±1.5,**38°.18N**±0°.04×**20°.40E**±0°.05,**h9**$^{km}_{\pm 6}$,
n15,σ0°**42**/25,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.02**	**268**	P	**Pg**	**17 45 05.5**	**0.0**
CHV1				S	**Sg**	**17 45 06.7**	**0.0**
	61μm,0.1s						
ARG2	**Argostoli**	**0.07**	**95**	P	**Pg**	**17 45 06.0**	**0.0**
ARG2				S	**Sg**	**17 45 07.4**	**0.0**
	14μm,0.1s						
KEF2	**Argostoli. Kep**	**0.07**	**106**	P	**Pg**	**17 45 06.0**	**0.0**
KEF2				S	**Sg**	**17 45 07.5**	**0.0**
VLS	**Valsamata**	**0.15**	**93**	P	**Pg**	**17 45 07.1**	**-0.1**
VLS				S	**Sg**	**17 45 09.4**	**0.0**
	6μm,0.1s						
VLS	**Valsamata**	**0.15**	**93**	P	**Pg**	**17 45 07.1**	**-0.1**
VLS				S	**Sg**	**17 45 09.4**	**0.0**
VLS				AML	AML	17 45 09.8	
	comp=E,15143μm,0.1s						
VLS				AML	AML	17 45 10.1	
	comp=N,9096μm,0.2s						
KFL	**Anninata**	**0.31**	**104**	P	**Pg**	**17 45 10.1**	**0.0**
KFL				S	**Sg**	**17 45 15.0**	**+0.7**
	comp=N,2μm,0.4s						
KFL	**Anninata**	**0.31**	**104**	P	**Pg**	**17 45 10.2**	**0.0**
KFL				S	**Sg**	**17 45 14.8**	**+0.5**
KFL				AML	AML	17 45 15.6	
	comp=E,5484μm,0.4s						
KFL				AML	AML	17 45 17.9	
	comp=N,2540μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.37**	**146**	P	**Pg**	**17 45 11.2**	**0.0**
VLMS				S	**Sg**	**17 45 16.5**	**+0.4**
VLMS				AML	AML	17 45 18.6	
	comp=E,1865μm,0.3s						
VLMS				AML	AML	17 45 19.1	
	comp=N,2132μm,0.3s						
EVGI	**Lefkada island**	**0.48**	**24**	P	**Pg**	**17 45 13.1**	**-0.2**
EVGI				S	**Sg**	**17 45 20.8**	**+1.2**
EVGI	**Lefkada island**	**0.48**	**24**	P	**Pg**	**17 45 13.1**	**-0.2**
EVGI				S	**Sg**	**17 45 20.4**	**+0.7**
LKD2	**Lefkada island**	**0.64**	**18**	P	**Pg**	**17 45 15.9**	**-0.4**
PDO	**Prodromos**	**0.74**	**56**	P	**Pg**	**17 45 17.6**	**-0.6**
RLS	**Riolos of Patr**	**0.85**	**98**	P	**Pg**	**17 45 19.9**	**-0.3**
PVO	**Paravola**	**0.98**	**64**	P	**Pg**	**17 45 22.5**	**-0.3**
KLV	**Kalavryta, Ach**	**1.39**	**95**	P	**Pn**	**17 45 29.3**	**-0.2**

*UPP **28** 18:08:54.3±0.1, 67°.08N×20°.92E, h0^{km}, ML2.1, Explosion*
*NAO **28** 18:08:55.4±0.8, 67°.08N×21°.11E, ML2.5*
*HEL **28** 18:08:55.1±0.1, 67°.09N×20°.92E, h0^{km}, ML2.1, ML2.1(UPP), Explosion*
*IDC **28** 18:08:56.6±1.0, 66°.95N×21°.73E, h0^{km}, mb1 2.7/3, mb1mx2.6/40, mbtmp2.6/3, ML1.9/3, Error ellipse: s-maj=11.9km s-min=5.3km az=137.0*
*BER **28** 18:08:57.5±2.4, 66°.97N×21°.31E, h0^{km}, ML1.8, ML2.5(NAO), Suspected explosion*

ISC 28 18:08:53.8±0.8,**67°.05N**±0°.03×**20°.91E**±0°.02,**h0**^{km},**n60**,
σ1°**57**/82,**Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.15**	**298**	*i* P	**Pg**	**18 08 57.4**	**+0.7**
DUNU				*i* S	**Sg**	**18 08 59.6**	**+1.1**
DUNU	**Dundret**	**0.15**	**298**	P	**Pg**	**18 08 57.4**	**+0.7**
DUNU				S	**Sg**	**18 08 59.6**	**+1.1**
MASU	**Masugnsbyn**	**0.59**	**46**	*i* P	**Pg**	**18 09 05.2**	**+0.1**
MASU	**Masugnsbyn**	**0.59**	**46**	P	**Pg**	**18 09 05.2**	**+0.1**
RATU	**Laukkuluspa**	**0.93**	**327**	*e*P	**Pg**	**18 09 11.2**	**-0.4**
RATU	**Laukkuluspa**	**0.93**	**327**	P	**Pg**	**18 09 11.2**	**-0.4**
KUA	**Kurravaara**	**0.93**	**347**	*e*P	**Pg**	**18 09 11.2**	**-0.4**
KUA				*e*S	**Sb**	**18 09 24.0**	**-1.7**
KUA	**Kurravaara**	**0.93**	**347**	P	**Pg**	**18 09 11.2**	**-0.4**
KUA				S	**Sb**	**18 09 24.0**	**-1.7**
LANU	**Lannavaara**	**1.08**	**22**	*e*P	**Pg**	**18 09 13.9**	**-0.7**
LANU	**Lannavaara**	**1.08**	**22**	P	**Pg**	**18 09 14.3**	**-0.3**
KALU	**Kalix**	**1.55**	**139**	*e*P	**Pn**	**18 09 22.7**	**+0.1**
KALU	**Kalix**	**1.55**	**139**	P	**Pn**	**18 09 22.8**	**+0.1**
SJUU	**Sjulsmark**	**1.58**	**169**	*e*P	**Pn**	**18 09 23.5**	**+0.5**
SJUU	**Sjulsmark**	**1.58**	**169**	P	**Pn**	**18 09 23.5**	**+0.5**
LILU	**Lilltraesk**	**1.83**	**194**	*e*P	**Pn**	**18 09 27.5**	**+1.1**
LILU	**Lilltraesk**	**1.83**	**194**	P	**Pn**	**18 09 27.5**	**+1.1**
KIF	**Kilpisjarvi**	**1.96**	**359**	Pn	**Pg**	**18 09 30.5**	**-0.8**
KIF				Sn	**Sg**	**18 09 56.6**	**-0.1**
KIF	**Kilpisjarvi**	**1.96**	**359**	*e*PG	**Pb**	**18 09 30.0**	**-0.3**
KIF				MSG		18 09 53.2	
	comp=Z,18nm,0.2s						
KIF				*e*SG	**Sg**	**18 09 56.9**	**+0.1**
KIF	**Kilpisjarvi**	**1.96**	**359**	*e*P	**Pg**	**18 09 30.5**	**-0.8**
KIF				*e*S	**Sg**	**18 09 56.8**	**+0.1**
KTK1	**Kautokeino**	**2.15**	**23**	Pn	**Pb**	**18 09 33.3**	**-0.3**
KTK1				Sn	**Sb**	**18 10 00.2**	**-0.7**
KTK1	**Kautokeino**	**2.15**	**23**	*e*P	**Pb**	**18 09 33.3**	**-0.3**
KTK1				*e*S	**Sb**	**18 09 59.3**	**-1.6**
KTK1				IAML		18 10 17.5	
	comp=Z,11nm,0.3s						
I37NO	**I37NO**	**2.21**	**338**	*i*		18 23 20.0	
	baz=149,slow=322,SNR=5.2						
SGF	**Sodankyl**	**2.22**	**77**	*e*P	**Pn**	**18 09 32.9**	**+1.1**
SGF				*e*		18 10 07.1	
STEI	**Steigen**	**2.35**	**295**	Pn	**Pb**	**18 09 36.9**	**-0.1**
STEI				Sn	**Sg**	**18 10 08.4**	**-0.8**
STEI	**Steigen**	**2.35**	**295**	*e*P	**Pb**	**18 09 36.8**	**-0.2**
STEI				*e*S	**Sg**	**18 10 08.5**	**-0.8**
STEI				IAML		18 10 10.0	
	comp=Z,8.1nm,0.6s						
BURU	**Burvik**	**2.49**	**175**	*e*P	**Pn**	**18 09 37.2**	**+1.7**
	baz=360						
BURU	**Burvik**	**2.49**	**175**	P	**Pn**	**18 09 37.2**	**+1.7**
TRO	**Tromso**	**2.69**	**345**	*e*P	**Pb**	**18 09 41.9**	**-0.9**
TRO				*e*S	**Sb**	**18 10 13.8**	**-2.5**
TRO				IAML		18 10 30.2	
	comp=Z,7.9nm,0.2s						
MOR8	**Moi Rana**	**2.73**	**254**	Pn	**Pn**	**18 09 41.5**	**+2.7**
MOR8				Sn	**Sb**	**18 10 15.4**	**-1.9**
MOR8	**Moi Rana**	**2.73**	**254**	*e*P	**Pb**	**18 09 41.8**	**-1.6**
MOR8				*e*S	**Sn**	**18 10 11.1**	**-1.3**
MOR8				IAML		18 10 24.4	
	comp=Z,9.6nm,0.2s						
OUL	**Oulu**	**2.84**	**132**	*e*P	**Pn**	**18 09 42.2**	**+1.9**
OBF0	**Syolatti, Pyha**	**2.91**	**150**	*e*PB	**Pn**	**18 09 45.7**	**+4.4**
	baz=333						
LOF	**Lofoten**	**3.02**	**294**	*e*P	**Pb**	**18 09 48.1**	**-0.3**
LOF				*e*S	**Sb**	**18 10 23.3**	**-2.4**
LOF				IAML		18 10 47.0	
	comp=Z,8.5nm,0.6s						
ARA0	**ARCESS Array S**	**3.02**	**32**	Pn	**Pn**	**18 09 43.4**	**+0.5**
	baz=210,slow=14						
ARA0				Sn	**Sn**	**18 10 21.2**	**+1.5**
	baz=211,slow=28						
ARA0	**ARCESS Array S**	**3.02**	**32**	Pn	**Pn**	**18 09 43.4**	**+0.5**
	baz=210,slow=14						
ARA0				Sn	**Sn**	**18 10 21.2**	**+1.5**
	baz=211,slow=28						
ARCES	**ARCESS Array B**	**3.02**	**32**	Pn	**Pn**	**18 09 43.8**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=209,slow=14,SNR=25						
ARCES				Sn	**Sn**	**18 10 21.4**	**+1.7**
	comp=Z,0.9nm,0.3s,baz=211,slow=24,SNR=7.5						
ARCES				Lg	Lg	18 10 31.7	
	comp=Z,1.2nm,0.3s,baz=212,slow=26,SNR=6.6						
ARE0	**ARCESS Array S**	**3.02**	**32**	*e*P	**Pn**	**18 09 43.4**	**+0.5**
	baz=209						
ARE0				*e*SB	**Sb**	**18 10 23.3**	**-2.6**
OUF	**Merijarvi**	**3.13**	**148**	*e*P	**Pn**	**18 09 46.2**	**+2.0**
	baz=340						
OUF				MSG		18 10 26.6	
	comp=Z,3.3nm,0.2s						
KONS	**Konsvik**	**3.13**	**263**	*e*P	**Pb**	**18 09 47.9**	**-2.4**
KONS				IAML		18 10 44.6	
	comp=Z,6.7nm,0.2s						
UMAU	**Umeaa**	**3.19**	**182**	*e*P	**Pn**	**18 09 47.4**	**+2.3**
STOK	**Stokkvaagen**	**3.22**	**261**	*e*P	**Pb**	**18 09 49.7**	**-2.1**
VRF	**Varrio**	**3.43**	**74**	*e*PB	**Pb**	**18 09 54.4**	**-1.0**
KEV	**Kevo**	**3.53**	**37**	Pn	**Pn**	**18 09 49.7**	**-0.1**
KEV	**Kevo**	**3.53**	**37**	*e*P	**Pn**	**18 09 50.5**	**+0.7**
KEV				*e*		18 10 26.2	
KEV	**Kevo**	**3.53**	**37**	*e*P	**Pn**	**18 09 50.5**	**+0.7**
KU6	**Riekki**	**3.74**	**102**	*e*P	**Pn**	**18 09 54.7**	**+2.0**
	baz=299						
HAMF	**Hammerfest**	**3.75**	**14**	*e*P	**Pn**	**18 09 55.8**	**+3.0**
HAMF				*e*S	**Sn**	**18 10 38.8**	**+1.4**
HAMF				IAML		18 11 05.7	
	comp=Z,5.4nm,0.2s						
HUSU	**Husum**	**3.79**	**192**	*e*S	**Sn**	**18 10 40.0**	**+1.4**
VAF	**Ylistaro**	**4.10**	**169**	*e*P	**Pn**	**18 09 59.5**	**+1.9**
NSS	**Namsos**	**4.47**	**240**	*e*P	**Pn**	**18 10 07.2**	**+4.6**
NSS				IAML		18 11 15.0	
	comp=Z,7.5nm,0.9s						
APA0	**Apatity Array**	**4.71**	**78**	Pn	**Pn**	**18 10 05.1**	**-0.9**
	baz=267,slow=11						
APA0	**Apatity Array**	**4.71**	**78**	Pn	**Pn**	**18 10 05.1**	**-0.9**
	baz=267,slow=11						
FIA0	**FINESS Array S**	**6.06**	**156**	Pn	**Pn**	**18 10 26.4**	**+1.8**
	baz=347,slow=14						
FIA0				Sn	**Sn**	**18 11 37.3**	**+2.7**
	baz=345,slow=22						
FIA0	**FINESS Array S**	**6.06**	**156**	Pn	**Pn**	**18 10 26.4**	**+1.8**
	baz=347,slow=14						
FINES	**FINESS Array B**	**6.06**	**156**	Pn	**Pn**	**18 10 26.4**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=338,slow=10,SNR=1.2						
FINES				Sn	**Sn**	**18 11 31.4**	**-3.2**
	comp=Z,0.1nm,0.3s,baz=356,slow=20,SNR=1.5						
NOA	**NORSAR Array B**	**7.37**	**220**	Pn	**Pn**	**18 10 45.1**	**+2.5**
	comp=Z,0.0nm,0.3s,baz=29,slow=12,SNR=1.7						
NOA				Sn	**Sn**	**18 12 07.8**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=50,slow=13,SNR=1.6						
NRA0	**NORESS Array S**	**7.56**	**217**	Pn	**Pn**	**18 10 46.0**	**+0.9**
NRA0	**NORESS Array S**	**7.56**	**217**	Pn	**Pn**	**18 10 46.0**	**+0.9**
HFS	**Hagfors**	**7.65**	**208**	Pn	**Pn**	**18 10 46.8**	**+0.4**
HFS	**Hagfors**	**7.65**	**208**	Pn	**Pn**	**18 10 46.8**	**+0.4**

*NEIC **28** 18:17:15.1±2.8, 60°.2S±0°.1×26°.8W±0°.3, h32$^{km}_{\pm 3}$, mb4.5/8, Error ellipse: s-maj=26.8km s-min=16.8km az=57.0*
*IDC **28** 18:17:25.5±9.5, 59°.99S×27°.24W, h115$^{km}_{\pm 84}$, mb3.7/5, mb1 3.8/5, mb1mx3.5/29, mbtmp4.1/5, MS3.4/1, Ms1 3.4/1, ms1mx2.9/16, Error ellipse: s-maj=41.7km s-min=21.9km az=64.0*

ISC 28 18:17:15.7±0.6,**60°.2S**±0°.1×**26°.8W**±0°.2,**h34**^{km},**n29**,
σ2°**21**/28,**mb4.2/8**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.96**	**152**	P	**Pn**	**18 20 20.2**	**+3.1**
VNA3	**Neumayer Olymp**	**13.09**	**155**	P	**Pn**	**18 20 21.0**	**+2.1**
VNA3				S	Sn	18 22 35.7	-7.2
VNA2	**Neumayer--Watz**	**13.36**	**152**	P	**Pn**	**18 20 24.6**	**+2.1**
	baz=306,slow=14						
VNA2				S	**Sn**	**18 22 44.3**	**-5.3**
	baz=313,slow=22						
SNAA	**Sanae**	**14.96**	**150**	P	**Pn**	**18 20 47.1**	**+2.8**
SNAA				S	**Sn**	**18 23 23.1**	**-5.5**
SNAA	**Sanae**	**14.96**	**150**	P	**Pn**	**18 20 46.4**	**+2.1**
	1.6nm,0.3s,baz=315,slow=15,SNR=148						
SNAA				S	Sn	18 23 16.9	-12
	0.1nm,0.3s,baz=299,slow=19,SNR=2.9						
SNAA	**Sanae**	**14.96**	**150**	P	**Pn**	**18 20 46.7**	**+2.3**
SNAA				Sn	Sn	18 23 17.5	-11
PMSA	**Palmer Station**	**17.63**	**239**	P	P	18 21 28.2	+9.3
	1.6nm,0.3s,baz=91,slow=8.5,SNR=9.3						
PMSA				LR	LR	18 27 36.2	
	comp=Z,108nm,18.7s,baz=208,slow=35						
PMSA	**Palmer Station**	**17.63**	**239**	P	P	18 21 26.7	+7.8
PMSA				IAmb	IAmb	18 21 45.6	
	comp=Z,23nm,1.0s						
QSPA	**South Pole Qui**	**30.07**	**180**	P	**P**	**18 23 25.3**	**+3.9**
	comp=Z,0.8nm,0.6s,baz=180,slow=3.0,SNR=7.8						
CFA	**Coronel Fontan**	**39.52**	**297**	P	**P**	**18 24 42.2**	**-0.8**
	comp=Z,1.5nm,0.3s,baz=150,slow=14,SNR=4.8						
CPUP	**Villa Florida**	**39.78**	**315**	P	**P**	**18 24 44.7**	**-0.4**
	comp=Z,1.6nm,0.4s,baz=138,slow=2.9,SNR=3.5						
CPUP	**Villa Florida**	**39.78**	**315**	P	**P**	**18 24 44.6**	**-0.5**
GO04	**Tololo Observa**	**41.88**	**296**	P	**P**	**18 25 03.3**	**+0.6**
GO04				IAmb	IAmb	18 25 27.9	
	comp=Z,21nm,1.3s						
GO02	**Mina Guanaco**	**45.68**	**301**	P	**P**	**18 25 32.2**	**-1.2**
PB01	**IPOC Station P**	**49.27**	**303**	P	**P**	**18 26 00.8**	**-0.2**
PB01				IAmb	IAmb	18 26 03.9	
	comp=Z,5.5nm,1.3s						
SIV	**San Ignacio**	**50.62**	**316**	P	**P**	**18 26 09.9**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=150,slow=8.1,SNR=5.9						
TOA0	**Torodi Ar. Sit**	**76.56**	**29**	P	**P**	**18 29 03.2**	**+0.9**
TOA0				IAmb	IAmb	18 29 32.4	
	comp=Z,8.5nm,1.6s						
TORD	**Torodi Ar. Bea**	**76.56**	**29**	P	**P**	**18 29 03.0**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=197,slow=6.3,SNR=10						
TORD	**Torodi Ar. Bea**	**76.56**	**29**	P	**P**	**18 29 02.7**	**+0.5**
THZ	**Tophouse**	**77.14**	**195**	P	**P**	**18 29 04.9**	**-0.6**
CMAR	**Chiang Mai Arr**	**123.35**	**113**	PKP	**PKPdf**	**18 36 08.6**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=243,slow=2.9,SNR=3.3						
ZALV	**Zalesovo Beam**	**143.84**	**69**	PKP	**PKPab**	**18 36 43.6**	**+0.6**
	comp=Z,1.1nm,0.3s,baz=228,slow=4.2,SNR=6.7						
ZALV	**Zalesovo Beam**	**143.84**	**69**		PKPpre	18 36 42.6	
INK	**Inuvik**	**149.03**	**316**	PKPbc	**PKPbc**	**18 36 56.5**	**-1.9**
	comp=Z,0.8nm,0.5s,baz=162,slow=0.5,SNR=3.1						
INK	**Inuvik**	**149.03**	**316**		**PKPbc**	**18 36 56.8**	**-1.5**
SONM	**Songino Array**	**150.52**	**93**	PKPbc	**PKPbc**	**18 37 02.7**	**-0.1**
	comp=

PB07	**IPOC Station P**	**3.05**	**295**	⇑*iP*		**Pn**	**18 19 15.5**	**+0.7**
PB07				*i* S		**S**	**18 19 51.7**	**-1.7**
PB07				IAML			18 19 52.5	
	comp=N,1μm,0.3s							
PB04	**IPOC Station P**	**3.08**	**282**	⇑*iP*		**Pn**	**18 19 15.6**	**+0.4**
PB04				*i* S		**S**	**18 19 52.0**	**-2.0**
PB04				IAML			18 19 57.0	
	comp=N,704nm,0.2s							
PB04	**IPOC Station P**	**3.08**	**282**			**Pn**	**18 19 15.5**	**+0.4**
PB04				Sn		**S**	**18 19 53.0**	**-1.0**
PB01	**IPOC Station P**	**3.11**	**309**	*eP*		**Pn**	**18 19 16.3**	**+0.9**
PB01				*i* S		**S**	**18 19 53.7**	**-0.9**
PB01				IAML			18 19 55.7	
	comp=N,769nm,0.2s							
PB01	**IPOC Station P**	**3.11**	**309**			**Pn**	**18 19 15.9**	**+0.5**
PB01				Sn		**S**	**18 19 54.2**	**-0.4**
GO02	**Mina Guanaco**	**3.24**	**229**	⇑*iP*		**Pn**	**18 19 18.4**	**+1.2**
GO02				*i* S		**S**	**18 19 58.3**	**+0.4**
GO02	**Mina Guanaco**	**3.24**	**229**			**Pn**	**18 19 18.1**	**+0.9**
GO02				Sn		**S**	**18 19 58.6**	**+0.8**
PB02	**IPOC Station P**	**3.26**	**301**	*eP*		**Pn**	**18 19 17.7**	**+0.4**
PB02				*i* S		**S**	**18 19 55.4**	**-2.4**
PB02				IAML			18 20 00.8	
	comp=E,775nm,0.3s							
PB10	**IPOC Station P**	**3.39**	**261**	⇑*iP*		**Pn**	**18 19 19.2**	**+0.5**
PB10				*i* S		**S**	**18 19 57.4**	**-3.2**
PB10				IAML			18 20 01.4	
	comp=E,315nm,0.3s							
PB10	**IPOC Station P**	**3.39**	**261**			**Pn**	**18 19 19.2**	**+0.5**
PB08	**IPOC Station P**	**3.56**	**324**	⇓*iP*		**Pn**	**18 19 23.0**	**+1.7**
PB08				*i* S		**S**	**18 20 05.4**	**+0.3**
PB08	**IPOC Station P**	**3.56**	**324**	*eP*		**Pn**	**18 19 22.5**	**+1.2**
PB14	**IPOC Station P**	**3.58**	**243**	⇑*iP*		**Pn**	**18 19 22.0**	**+0.7**
PB14	**IPOC Station P**	**3.58**	**243**	*eP*		**Pn**	**18 19 21.4**	**+0.1**
PB14				*eS*		**S**	**18 20 03.6**	**-1.6**
PATCX	**Punta Patache**	**3.74**	**306**	*eP*		**Pn**	**18 19 23.1**	**-0.1**
PATCX				*eS*		**S**	**18 20 05.4**	**-3.1**
TA01	**Diego Aracena**	**3.91**	**308**	*eP*		**Pn**	**18 19 25.0**	**-0.2**
TA01				*eS*		**S**	**18 20 08.6**	**-3.7**
GO01	**Chusmiza**	**3.97**	**327**			**Pn**	**18 19 27.3**	**+0.7**
PB11	**IPOC Station P**	**4.15**	**321**	Pn		**Pn**	**18 19 28.2**	**+0.2**
MNMC	**Minye Minye**	**4.63**	**327**			**Pn**	**18 19 34.8**	**+0.1**
GO03	**Copiap**	**5.45**	**213**			**Pn**	**18 19 44.0**	**-1.0**
VCA	**Vinchina**	**5.80**	**191**	*eP*		**Pn**	**18 19 49.5**	**-0.1**
ACLC	**CERRO LA CRUZ**	**6.36**	**180**	*eP*		**Pn**	**18 19 56.9**	**-0.2**
AGUA	**GUANDACOL**	**6.58**	**192**	*eP*		**Pn**	**18 19 59.2**	**-0.6**
LPAZ	**La Paz**	**6.81**	**350**	P		**Pn**	**18 20 04.7**	**+1.3**
	comp=E,4.1nm,0.3s,baz=160,slow=6.2,SNR=38							
LPAZ				S		**S**	**18 21 21.5**	**+0.6**
	comp=E,0.2nm,0.3s,baz=352,slow=7.1,SNR=6.3							
LPAZ	**La Paz**	**6.81**	**350**	*eP*		**Pn**	**18 20 04.8**	**+1.4**
LPAZ	**La Paz**	**6.81**	**350**			**Pn**	**18 20 04.3**	**+0.9**
LPAZ						**S**	**18 21 19.6**	**-1.4**
APLL	**PUNTA DE LOS L**	**7.34**	**177**	*eP*		**Pn**	**18 20 09.5**	**-0.2**
GO04	**Tololo Observa**	**7.92**	**205**			**Pn**	**18 20 19.4**	**-2.0**
CFA	**Coronel Fontan**	**8.62**	**188**	P		**Pn**	**18 20 26.4**	**0.0**
	comp=E,1.9nm,0.3s,baz=40,slow=16,SNR=20							
CFA				S		**S**	**18 21 57.3**	**-5.7**
	comp=E,2.0nm,0.3s,baz=314,slow=21,SNR=7.0							
SIV	**San Ignacio**	**8.90**	**39**	P		**Pn**	**18 20 28.5**	**-1.9**
	comp=E,1.1nm,0.3s,baz=251,slow=11,SNR=124							
SIV				S		**S**	**18 22 03.8**	**-6.2**
	comp=E,0.2nm,0.3s,baz=307,slow=20,SNR=3.5							
CPUP	**Villa Florida**	**9.30**	**113**	*eP*		**Pn**	**18 20 38.9**	**+3.5**
CPUP	**Villa Florida**	**9.30**	**113**	Pn		**Pn**	**18 20 32.6**	**-2.8**
AQDB	**Aquidauana**	**10.72**	**78**	*eP*		**Pn**	**18 20 55.1**	**+1.2**
ITQB	**Itaqui**	**11.34**	**128**	*eP*		**P**	**18 21 05.3**	**-2.9**
PP1B	**Ponte de Pedra**	**12.51**	**67**	*eP*		**Pn**	**18 21 15.3**	**-1.6**
SALV	**Santo Antonio**	**12.73**	**58**	*eP*		**Pn**	**18 21 19.9**	**+0.2**
TRCB	**Terra Rica**	**13.15**	**92**	*eP*		**P**	**18 21 27.9**	**-0.7**
PTGB	**Pitanga**	**13.68**	**100**	*eP*		**P**	**18 21 34.5**	**+0.1**
C2SB	**Chapadao do Su**	**13.81**	**75**	*eP*		**P**	**18 21 35.8**	**0.0**
SAML	**Samuel**	**14.45**	**15**	*eP*		**Pn**	**18 21 40.9**	**-0.5**
SAML	**Samuel**	**14.45**	**15**			**Pn**	**18 21 39.8**	**-1.6**
PCMB	**Pacaembu**	**14.55**	**87**	*eP*		**P**	**18 21 45.4**	**+1.4**
CNLB	**Canela**	**15.70**	**117**	*eP*		**Pn**	**18 21 59.3**	**+2.7**
ITRB	**Iturama**	**15.76**	**81**	*eP*		**Pn**	**18 21 58.2**	**+0.9**
FRTB	**Fartura**	**15.95**	**95**	*eP*		**Pn**	**18 22 01.5**	**+1.9**
ARAG	**Araguaiana, MT**	**15.99**	**66**	*eP*		**Pn**	**18 22 00.9**	**+0.8**
CLDB	**Colider**	**16.09**	**43**	*eP*		**Pn**	**18 22 00.8**	**-0.5**
BB19B	**Bebedouro**	**17.15**	**87**	*eP*		**Pn**	**18 22 14.9**	**+0.8**
RCLB	**Rio Claro- Sao**	**17.88**	**92**	*eP*		**Pn**	**18 22 22.6**	**0.0**
SPB	**Sao Paulo**	**17.89**	**96**	*eP*		**Pn**	**18 22 23.3**	**-0.5**
PLCA	**Paso Flores**	**17.91**	**189**	P		**Pn**	**18 22 23.1**	**+0.3**
	comp=E,0.2nm,0.3s,baz=30,slow=12,SNR=7.6							
PLCA	**Paso Flores**	**17.91**	**189**	*eP*		**Pn**	**18 22 23.6**	**+0.7**
PLCA	**Paso Flores**	**17.91**	**189**	P		**Pn**	**18 22 22.8**	**-0.1**
IPMB	**Ipameri, GO**	**18.21**	**77**	*eP*		**Pn**	**18 22 25.7**	**-0.8**
VAO	**Valinhos**	**18.36**	**94**	*eP*		**Pn**	**18 22 26.8**	**-1.4**
BDFB	**Brasilia**	**19.27**	**71**	P		**P**	**18 22 36.5**	**+0.6**
	comp=E,1.3nm,0.3s,baz=239,slow=12,SNR=20							
BDFB	**Brasilia**	**19.27**	**71**	P		**P**	**18 22 36.3**	**+0.3**
BDFB				IAmb		IAmb	18 22 38.0	
	comp=Z,27nm,1.0s							
PARB	**Paraibuna**	**19.57**	**95**	*eP*		**Pn**	**18 22 41.3**	**-1.3**
BSCB	**Bom Sucesso**	**20.61**	**89**	*eP*		**P**	**18 22 51.8**	**+1.5**
PEXB	**Peixe**	**20.77**	**62**	*eP*		**P**	**18 22 51.8**	**-0.2**
VAS01	**Vassouras-RJ**	**21.66**	**93**	*eP*		**P**	**18 23 02.8**	**+1.5**
JANB	**Januaria**	**22.76**	**74**	*eP*		**P**	**18 23 11.3**	**-0.5**
SMTB	**Santa Maria do**	**23.27**	**56**	*eP*		**P**	**18 23 16.5**	**+0.2**
SJMB	**Sao Joao De Ma**	**24.40**	**85**	*eP*		**P**	**18 23 26.7**	**0.0**
RUSC	**La Rusia**	**29.38**	**347**	P		**P**	**18 24 11.3**	**-0.3**
TOSP	**Speyside**	**34.69**	**11**	P		**P**	**18 24 57.9**	**+0.6**
TOSP				IAmb		IAmb	18 25 03.9	
	comp=Z,67nm,1.0s							
GRGR	**Grenville**	**35.33**	**9**	P		**P**	**18 25 03.6**	**+0.8**
FDF	**Fort de France**	**37.96**	**9**	P		**P**	**18 25 24.5**	**-0.6**
SNAA	**Sanae**	**60.23**	**161**	P		**P**	**18 28 15.3**	**+1.9**
	comp=Z,1.4nm,0.9s,baz=289,slow=12,SNR=4.1							
SNAA	**Sanae**	**60.23**	**161**	P		**P**	**18 28 14.8**	**+1.4**
R55A	**Marlinton**	**62.24**	**348**	P		**P**	**18 28 27.2**	**-0.1**
R55A				IAmb		IAmb	18 28 29.1	
	comp=Z,6.5nm,0.8s							
LCAR	**Lake Charles**	**63.10**	**338**	P		**P**	**18 28 34.1**	**+1.2**
LCAR				IAmb		IAmb	18 29 00.8	
	comp=Z,5.5nm,1.4s							
QSPA	**South Pole Qui**	**67.17**	**180**	P		**P**	**18 29 00.5**	**+1.6**
QSPA				IAmb		IAmb	18 29 06.3	
	comp=Z,11nm,1.6s							
TOA0	**Torodi Ar. Sit**	**76.14**	**69**	P		**P**	**18 29 52.4**	**-0.7**
TOA0				IAmb		IAmb	18 30 17.4	
	comp=Z,8.1nm,1.5s							
TORD	**Torodi Ar. Bea**	**76.14**	**69**	P		**P**	**18 29 52.7**	**-0.4**
	comp=Z,1.4nm,0.4s,baz=264,slow=5.8,SNR=11							
TORD	**Torodi Ar. Bea**	**76.14**	**69**	P		**P**	**18 29 51.7**	**-1.4**
PDAR	**Pinedale Array**	**76.37**	**329**	P		**P**	**18 29 56.2**	**+2.2**
	comp=Z,0.2nm,0.5s,baz=148,slow=4.1,SNR=2.7							
PDAR	**Pinedale Array**	**76.37**	**329**	P		**P**	**18 29 54.7**	**+0.6**
YKA	**Yellowknife Ar**	**93.25**	**340**	P		**P**	**18 31 19.1**	**+1.1**
	comp=Z,0.1nm,0.4s,baz=126,slow=5.2,SNR=3.0							
WRA	**Warramunga Arr**	**152.52**	**208**	PKP		**PKiKP**	**18 37 19.5**	**0.0**
	comp=Z,1.3nm,1.1s,baz=152,slow=1.9,SNR=5.4							
MKAR	**Makanchi Array**	**145.72**	**39**	PKPbc		**PKiKP**	**18 37 43.7**	**-1.9**
	comp=Z,1.2nm,0.6s,baz=332,slow=2.2,SNR=17							
MKAR	**Makanchi Array**	**145.72**	**39**			**PKiKP**	**18 37 43.2**	**-2.4**

*THE **28** 18:25:15.1,38°.21N×20°.41E,h9km,ML3.3/5,Error ellipse: s-maj=0.8km s-min=0.3km az=199.0*
*ATH **28** 18:25:15.0,38°.20N×20°.43E,h15km±1km,ML3.0/9,Error ellipse: s-maj=1.7km s-min=1.0km az=258.0*
ISC 28 18:25:14.9±1.0,**38°.21N**±0°.02×**20°.42E**±0°.04,**h13**km±5km, **n56**,σ0°.54/76,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.04**	**233**	P	**Pg**	**18 25 16.5**	**-0.8**
KEF3	**Kipouria, Keph**	**0.06**	**267**	P	**Pg**	**18 25 17.8**	**+0.4**
KEF3				S	**Sg**	**18 25 19.7**	**+0.5**
ARG2	**Argostoli**	**0.06**	**117**	P	**Pg**	**18 25 17.0**	**-0.4**
ARG2				S	**Sg**	**18 25 19.1**	**-0.1**
	43μm,0.1s						
KEF2	**Argostoli. Kep**	**0.07**	**127**	P	**Pg**	**18 25 17.8**	**+0.3**
KEF2				S	**Sg**	**18 25 19.8**	**+0.4**
VLS	**Valsamata**	**0.14**	**102**	P	**Pg**	**18 25 18.6**	**+0.2**
VLS				S	**Sg**	**18 25 20.7**	**-0.2**
	19μm,0.1s						
VLS	**Valsamata**	**0.14**	**102**	P	**Pg**	**18 25 18.6**	**+0.2**
VLS				S	**Sg**	**18 25 21.0**	**+0.2**
VLS				AML	AML	18 25 21.5	
	comp=E,45400μm,0.1s						
VLS				AML	AML	18 25 21.5	
	comp=N,28279μm,0.1s						
FSK	**Fiskardo**	**0.28**	**24**	P	**Pg**	**18 25 20.9**	**+0.2**
FSK				S	**Sg**	**18 25 24.9**	**+0.3**
	comp=N,5μm,0.2s						
FSK	**Fiskardo**	**0.28**	**24**	P	**Pg**	**18 25 21.0**	**+0.2**
FSK				S	**Sg**	**18 25 25.2**	**+0.6**
KFL	**Anninata**	**0.31**	**108**	P	**Pg**	**18 25 21.4**	**+0.2**
KFL				S	**Sg**	**18 25 25.9**	**+0.5**
	comp=N,12μm,0.3s						
KFL	**Anninata**	**0.31**	**108**	P	**Pg**	**18 25 21.6**	**+0.3**
KFL				S	**Sg**	**18 25 25.9**	**+0.5**
KFL				AML	AML	18 25 27.2	
	comp=E,37244μm,0.4s						
KFL				AML	AML	18 25 27.2	
	comp=N,11501μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.38**	**150**	P	**Pg**	**18 25 22.7**	**+0.2**
VLMS				S	**Sg**	**18 25 28.6**	**+0.9**
VLMS				AML	AML	18 25 29.9	
	comp=E,39590μm,0.4s						
VLMS				AML	AML	18 25 30.1	
	comp=N,37192μm,0.2s						
EVGI	**Lefkada island**	**0.45**	**24**	P	**Pg**	**18 25 23.8**	**-0.1**
EVGI				S	**Sg**	**18 25 30.2**	**+0.2**
EVGI	**Lefkada island**	**0.45**	**24**	P	**Pg**	**18 25 23.9**	**-0.1**
EVGI				S	**Sb**	**18 25 30.9**	**-0.6**
MGNA	**Meganis**	**0.54**	**33**	P	**Pg**	**18 25 25.0**	**-0.5**
MGNA				S	**Sg**	**18 25 33.3**	**+0.7**
MGNA				AML	AML	18 25 33.8	
	comp=E,5038μm,0.1s						
MGNA				AML	AML	18 25 34.3	
	comp=N,4163μm,0.1s						
ZAK2	**Zakynthos**	**0.56**	**138**	P	**Pg**	**18 25 26.4**	**+0.4**
LKD2	**Lefkada island**	**0.61**	**18**	P	**Pg**	**18 25 26.7**	**-0.2**
LKD2	**Lefkada island**	**0.61**	**18**	P	**Pg**	**18 25 26.4**	**-0.5**
LKD2				AML	AML	18 25 43.5	
	comp=E,1336μm,0.2s						
LKD2				AML	AML	18 25 44.5	
	comp=N,1154μm,0.4s						
AST1	**Astakos**	**0.62**	**57**	P	**Pg**	**18 25 27.0**	**-0.1**
AST1				S	**Sg**	**18 25 35.9**	**+0.5**
KRI1	**kERI**	**0.63**	**150**	P	**Pg**	**18 25 26.9**	**-0.3**
KRI1				S	**Sb**	**18 25 36.7**	**+0.2**
TSLK	**Tsoukalades, L**	**0.65**	**17**	P	**Pg**	**18 25 27.2**	**-0.3**
TSLK	**Tsoukalades, L**	**0.65**	**17**	P	**Pg**	**18 25 27.2**	**-0.3**
PDO	**Prodromos**	**0.72**	**57**	P	**Pg**	**18 25 28.7**	**-0.2**
PDO				S	**Sb**	**18 25 39.3**	**+0.2**
PDO	**Prodromos**	**0.72**	**57**	P	**Pg**	**18 25 28.9**	**+0.1**
PDO				S	**Sg**	**18 25 38.6**	**+0.3**
PDO				AML	AML	18 25 41.7	
	comp=N,2557μm,0.3s						
PDO				AML	AML	18 25 43.2	
	comp=E,2474μm,0.3s						
RLS	**Riolos of Patr**	**0.84**	**100**	P	**Pg**	**18 25 30.7**	**-0.5**
RLS	**Riolos of Patr**	**0.84**	**100**	P	**Pg**	**18 25 30.7**	**-0.5**
PVO	**Paravola**	**0.96**	**64**	P	**Pg**	**18 25 33.5**	**0.0**
PVO				S	**Sn**	**18 25 47.5**	**-0.2**
	comp=E,1μm,0.4s						
PVO	**Paravola**	**0.96**	**64**	P	**Pg**	**18 25 33.4**	**0.0**
PVO				AML	AML	18 25 49.7	
	comp=N,2016μm,0.4s						
PVO				AML	AML	18 25 54.1	
	comp=E,2039μm,0.4s						
DRO	**Drossia**	**1.05**	**104**	P	**Pb**	**18 25 34.6**	**-0.4**
DRO	**Drossia**	**1.05**	**104**	P	**Pb**	**18 25 34.5**	**-0.4**
EFP	**Efpalio**	**1.19**	**79**	P	**Pn**	**18 25 36.8**	**-0.5**
EFP	**Efpalio**	**1.19**	**79**	P	**Pn**	**18 25 36.8**	**-0.5**
AMT	**Artemida-Makis**	**1.22**	**123**	P	**Pn**	**18 25 37.9**	**+0.1**
AMT	**Artemida-Makis**	**1.22**	**123**	P	**Pg**	**18 25 38.5**	**+0.1**
LAKA	**Lakka**	**1.23**	**88**	P	**Pn**	**18 25 37.5**	**-0.4**
LAKA				S	**Sg**	**18 25 55.3**	**+0.7**
LAKA	**Lakka**	**1.23**	**88**	P	**Pn**	**18 25 37.6**	**-0.3**
LAKA				S	**Sg**	**18 25 55.0**	**+0.5**
ANX	**Ano Chora**	**1.24**	**71**	P	**Pn**	**18 25 38.1**	**0.0**
ANX	**Ano Chora**	**1.24**	**71**	P	**Pn**	**18 25 38.2**	**0.0**
ANX				AML	AML	18 26 08.6	
	comp=E,685μm,0.6s						
ANX				AML	AML	18 26 08.8	
	comp=N,901μm,0.6s						
SERG	**Sergoula**	**1.30**	**80**	P	**Pn**	**18 25 38.7**	**-0.2**
SERG	**Sergoula**	**1.30**	**80**	P	**Pn**	**18 25 38.9**	**-0.1**
SERG				AML	AML	18 26 04.6	
	comp=N,525μm,0.4s						
SERG				AML	AML	18 26 05.1	
	comp=E,565μm,0.3s						
TRIZ	**Trizonia**	**1.31**	**82**	P	**Pn**	**18 25 38.7**	**-0.2**
TRIZ	**Trizonia**	**1.31**	**82**	P	**Pn**	**18 25 38.8**	**-0.2**
ALIK	**Aliki, Aigiali**	**1.33**	**87**	P	**Pn**	**18 25 39.3**	**0.0**
KALE	**Kalithea**	**1.37**	**82**	P	**Pn**	**18 25 39.6**	**-0.2**
KLV	**Kalavryta, Ach**	**1.38**	**96**	P	**Pn**	**18 25 40.0**	**+0.1**
KLV	**Kalavryta, Ach**	**1.38**	**96**	P	**Pn**	**18 25 40.2**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.56**	**58**	P	**Pg**	**18 25 44.7**	**-0.3**
ITM	**Ithomi**	**1.57**	**130**	P	**Pb**	**18 25 44.1**	**+0.2**
AGG	**Agios Georgios**	**1.70**	**61**	P	**Pb**	**18 25 46.9**	**+0.7**
THL	**Klokotos Trika**	**1.84**	**42**	P	**Pb**	**18 25 49.0**	**+0.5**
AXAR	**Agios Charalam**	**1.84**	**72**	P	**Pb**	**18 25 48.8**	**+0.3**
PROD	**Prodromos**	**1.96**	**88**	P	**Pb**	**18 25 49.5**	**-0.9**
LTK	**Loutraki**	**2.02**	**94**	P	**Pb**	**18 25 50.4**	**-1.1**
LKR	**Lokris**	**2.07**	**77**	P	**Pb**	**18 25 51.5**	**-1.0**
VIL2	**Platees**	**2.24**	**89**	P	**Pb**	**18 25 54.2**	**-1.2**
DID	**Didima**	**2.34**	**107**	P	**Pb**	**18 25 55.3**	**-1.7**
MRKA	**Markates**	**2.54**	**78**	P	**Pn**	**18 25 58.0**	**+2.1**

IDC 28 18:32:30.1±21.0,**13°.53S**×**166°.00E**,**h322**km±270km, **mb3.2/4,mb1 3.4/5,mb1mx3.1/36,mbtmp3.9/5,Error ellipse: s-maj=278.6km s-min=30.7km az=157.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.50**	**177**	P	Pn	18 34 29.9	-0.2
	0.9nm,0.3s,baz=352,slow=16,SNR=7.0						
DZM				S	S	18 36 01.6	-6.1
	baz=99,slow=17,SNR=1.7						
WRA	**Warramunga Arr**	**30.94**	**254**	P	P	18 38 18.4	+0.1
	1.7nm,1.0s,baz=83,slow=8.1,SNR=3.4						
ASAR	**Alice Springs**	**31.97**	**247**	P	P	18 38 27.1	-0.1
	0.6nm,0.7s,baz=76,slow=9.4,SNR=5.3						
ILAR	**Eielson Array**	**85.78**	**18**	P	P	18 44 33.3	+0.2
	0.5nm,0.6s,baz=240,slow=5.3,SNR=9.6						
MKAR	**Makanchi Array**	**95.49**	**317**	P	P	18 45 18.1	-0.6
	0.2nm,0.7s,baz=113,slow=5.6,SNR=3.5						

IDC 28 18:33:58.1±548.0,**66°.97N**×**44°.35E**,**h0**km,**Error ellipse: s-maj=241.7km s-min=58.2km az=113.0,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I37NO	**I37NO**	**9.84**	**294**	*i*		19 28 40.0	
	baz=90,slow=327,SNR=0.4						
I31KZ	**AKTYUBINSK INF**	**17.99**	**151**	*i*		20 23 00.0	
	baz=339,slow=338,SNR=1.0						
I18DK	**QAANAAQ INFRAS**	**30.37**	**337**	*i*		21 44 30.0	
	baz=44,slow=340,SNR=1.2						

ROM 28 18:38:02.2±0.3,**43°.401N**±0°.005×**12°.500E**±0°.010, **h8**km±1km,**ML0.9/1,Error ellipse: s-maj=0.8km s-min=0.3km az=84.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.06**	**123**	P	Pg	18 38 04.5	+0.3
ATFO				S	Sg	18 38 05.8	+0.2
ATVO	**AVT- Monte Val**	**0.07**	**255**	P	Pg	18 38 04.5	+0.3
ATVO				S	Sg	18 38 05.9	+0.2
ATPI	**Pietralunga -**	**0.09**	**305**	P	Pg	18 38 04.9	+0.4
ATPI				S	Sg	18 38 06.7	+0.5
ATPI				AML	AML		
	comp=N,93μm,1.6s						
ATPI				AML	AML		
	comp=E,107μm,1.6s						
ATPI				AML	AML		
	comp=E,107μm,1.6s						
PIEI	**Pieia**	**0.14**	**11**	P	Pg	18 38 06.1	+0.8
PIEI				S	Sg	18 38 08.7	+1.3
MURB	**Monte Urbino**	**0.14**	**172**	P	Pg	18 38 05.7	+0.4
MURB				S	Sg	18 38 08.6	+1.2
NARO	**Abbazia di Nar**	**0.22**	**16**	P	Pg	18 38 06.7	0.0
NARO				S	Sg	18 38 11.0	+1.3
FEMA	**Monte Fema**	**0.59**	**137**	S	Sg	18 38 22.0	+0.5
ARRO	**Arrone**	**0.84**	**167**	P	Pg	18 38 17.4	-1.0

*RHSSO **28** 18:38:31.6±0.4,43°.28N×19°.83E,h7km±2km,ML2.0/8*
BEO 28 18:38:32.3±0.2,**43°.21N**×**19°.92E**,**h0**km,**ML2.0**/10,**4C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.06**	**37**	*e*Pg	Pg	18 38 33.4	-0.1
SJES				*e*Sg	Sg	18 38 35.0	+0.7
IVAS	**Ivanjica**	**0.40**	**25**	*e*Pg	Pg	18 38 38.2	-1.8
IVAS				*e*Sg	Sg	18 38 43.2	-2.0
RUDO	**Rudo**	**0.57**	**315**	⇑*i*Pg	Pg	18 38 39.6	-3.7
RUDO				*e*Sg	Sg	18 38 47.0	-3.7
UPM	**Unac-Piva**	**0.74**	**270**	⇑*i*Pg	Pg	18 38 44.5	-2.0
UPM				*e*Sg	Sg	18 38 53.7	-2.5
BBLS	**Lazići**	**0.75**	**330**	*e*Pg	Pg	18 38 44.4	-2.4
BBLS				*e*Sg	Sg	18 38 56.0	-0.5
BBLS	**Lazići**	**0.75**	**330**	*e*Pg	Pg	18 38 44.1	-2.7
BBLS				*e*Sg	Sg	18 38 53.3	-3.2
DIVS	**Divibare**	**0.89**	**3**	*e*Pg	Pg	18 38 47.5	-1.8
DIVS				*e*Sg	Sg	18 39 01.6	+0.8
DIVS	**Divibare**	**0.89**	**3**	*e*Pg	Pg	18 38 46.8	-2.5
DIVS				*e*Sg	Sg	18 38 58.7	-2.1
GRUS	**Gruza**	**0.89**	**40**	*e*Pg	Pg	18 38 49.4	+0.1
GRUS				*e*Sg	Sg	18 39 01.0	+0.1
PDG	**Podgorica**	**0.92**	**212**	*e*Pg	Pg	18 38 48.5	-1.5
PDG				*e*Sg	Sg	18 39 02.3	+0.4
PDG	**Podgorica**	**0.92**	**212**	*e*Pg	Pg	18 38 48.2	-1.8
PDG				*e*Sg	Sg	18 39 01.9	0.0
BRY	**Bratogost**	**1.06**	**253**	*e*Pg	Pg	18 38 50.1	-2.5
BRY				*e*Sg	Sg	18 39 04.1	-2.2
TRUS	**Trudelj**	**1.07**	**19**	*e*Pg	Pg	18 38 52.7	-0.1
TRUS	**Trudelj**	**1.07**	**19**	*e*Pg	Pg	18 38 52.8	0.0
TRUS				*e*Sg	Sg	18 39 05.1	-1.6
HAPS	**Han Pijesak,Bl**	**1.12**	**321**	⇑*i*Pg	Pg	18 38 49.6	-4.2
HAPS				*e*Sg	Sg	18 39 04.3	-4.1
DRME	**Dracevica, Mon**	**1.16**	**208**	*e*Pg	Pg	18 38 53.0	-1.5
DRME				*e*Sg	Sg	18 39 09.3	-0.2
TREB	**Trebinje**	**1.25**	**247**	*e*Pg	Pg	18 38 54.5	-1.9
TREB				*e*Sg	Sg	18 39 11.9	-0.7
TREB	**Trebinje**	**1.25**	**247**	⇑*i*Pg	Pg	18 38 54.2	-2.2
TREB				*e*Sg	Sg	18 39 11.2	-1.4
BOVS	**Bovan**	**1.37**	**71**	*e*Pg	Pg	18 38 56.2	-2.3
BOVS				*e*Sg	Sg	18 39 15.3	-0.9
TEKS	**Tekeris**	**1.37**	**348**	*e*Sg	Pg	18 38 57.8	-0.7
TEKS	**Tekeris**	**1.37**	**348**	*e*Pg	Sg	18 39 16.3	+0.1
TEKS	**Tekeris**	**1.37**	**348**	*e*Pg	Pg	18 38 54.6	-3.9
TEKS				*e*Sg	Sg	18 39 12.9	-3.3
DBRK	**Dubrovnik**	**1.41**	**248**	*e*Pn	Pn	18 38 57.1	-2.2
DBRK				Sn	Sn	18 39 18.9	+0.3
BARS	**Barje**	**1.44**	**105**	*e*Pg	Pn	18 38 57.7	-2.0
BARS				*e*Sg	Sg	18 39 18.5	-0.2
BARS				*e*Sg	Sn	18 39 27.6	+8.2
STON	**Ston**	**1.66**	**259**	*e*Pn	Pn	18 39 01.6	-1.1
STON				Sn	Sb	18 39 25.0	-0.2
STON	**Ston**	**1.66**	**259**	*e*Pg	Pn	18 39 02.2	-0.5
STON				*e*Sg	Sn	18 39 25.0	+0.3
STON	**Ston**	**1.66**	**259**	*e*Pn	Pn	18 39 00.0	-2.7
STON				*e*Sn	Sn	18 39 22.1	-2.6
ZAGS	**Zajecar**	**1.79**	**70**	*e*Sg	Sb	18 39 28.9	+0.1
FRGS	**Fruska Gora**	**1.95**	**358**	*e*Pn	Pn

CUI	**Cuipilapa**	**1.53**	**318**	*i* P	**Pn**	**18 59 08.1**	**+0.3**
CUI				*e*S	**Sb**	**18 59 28.6**	**-0.7**
HORNC	**Hornillas**	**1.58**	**319**	*i* P	**Pn**	**18 59 09.0**	**+0.5**
BRU2	**Volcan**	**1.59**	**116**	*e*P	**Pn**	**18 59 08.8**	**+0.1**
LIM1	**Limonal**	**1.61**	**317**	*i* P	**Pn**	**18 59 10.0**	**+1.0**
NY14	**Universidad de**	**1.78**	**309**	*i* P	**Pn**	**18 59 12.8**	**+1.6**
BUEV	**Buena Vista**	**1.79**	**316**	*e*P	**Pn**	**18 59 12.9**	**+1.5**
GB1A	**Borinquen Arri**	**1.80**	**316**	*e*P	**Pn**	**18 59 12.6**	**+1.1**
CHGR2	**Aguacate**	**2.04**	**106**	*e*P	**Pn**	**18 59 14.5**	**-0.4**
CHGR2				*e*S	**Sn**	**18 59 40.0**	**+0.7**

MEX ***28*** *19:04:33.7±0.5, 14°.05N×91°.98W, h15km, MD3.6*
GCG ***28*** *19:04:35.7±0.3, 15°.19N×91°.39W, h38km±200km, MD3.2*
ISC 28 19:04:32.9±2.7, 14°.1N±0°.2×91°.93W±0°.09, h35km, n5, σ0§67/8, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STG3	**Santiaguito 3,**	**0.69**	**30**	*e*P		**Pn**	**19 04 47.0**	**+0.5**
FUG	**Fuego 3**	**1.11**	**72**	*e*P		**Pn**	**19 04 52.5**	**+0.3**
FUG				*e*S		**Sn**	**19 05 05.5**	**-0.8**
PCG	**Pacaya**	**1.32**	**77**	*e*P		**Pn**	**19 04 55.4**	**+0.3**
PCIG		**2.02**	**322**	*e*P		**Pn**	**19 05 04.9**	**+0.5**
PCIG				*e*S		**Sn**	**19 05 27.6**	**-0.8**
CCIG	**Comitan**	**2.17**	**355**	*i* P		**Pn**	**19 05 06.6**	**-0.2**
CCIG				*i* S		**Sn**	**19 05 32.9**	**+0.4**

IDC ***28*** *19:12:10.5±0.6, 38°.48N×20°.44E, h0km, mb4.0/22, mb1 4.0/32, mb1mx3.9/66, mbtmp4.0/32, ML3.7/11, MS3.6/26, Ms1 3.6/26, ms1mx3.5/48, Error ellipse: s-maj=12.7km s-min=11.2km az=152.0*
TIR ***28*** *19:12:10.3, 38°.43N×20°.30E, h12km, Md4.6/7*
MOS ***28*** *19:12:10.1±1.4, 38°.43N×20°.34E, h13km, mb4.5/9, Error ellipse: s-maj=6.6km s-min=4.1km az=82.7*
PDG ***28*** *19:12:11.1±0.5, 38°.44N×20°.41E, h9km±1km, MD4.6/6, ML4.5/13, Error ellipse: s-maj=0.9km s-min=0.9km az=0.0*
ATH ***28*** *19:12:11.8, 38°.41N×20°.50E, h11km, ML4.1/39, Error ellipse: s-maj=1.1km s-min=0.6km az=273.0*
MED_RC ***28*** *19:12:11.0±0.4, 38°.41N×20°.40E, h18km±2km, MW4.4/15, Moment Tensor Solution.Mantle waves: s15,c21; Duration: 1§0 Moment tensor: Scale 10^15 Nm; Mrr=0.02±.54; Mθθ=2.28±.40; Mϕϕ=-2.26±.47; Mrθ=-0.15±.54; Mθϕ=4.77±.36; Mϕr=2.12±.71; Best double couple: M=5.69000×10^15 NP1=ϕs=282.00000°, δ=68.00000°, λ=-3.00000°. NP2=ϕs=13.00000°, δ=87.00000°, λ=-158.00000°. Principal axes: T 5.5900, Plg13.0000°, Azm146.0000°; N 0.2000, Plg68.0000°, Azm19.0000°; P -5.7900, Plg17.0000°, Azm240.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
NEIC ***28*** *19:12:12.7±2.8, 38°.43N±0°.05×20°.39E±0°.06, h20km±4km Error ellipse: s-maj=7.8km s-min=6.9km az=198.0, Moment Tensor Solution. Moment tensor: Scale 10^15 Nm; Mrr=2.04; Mθθ=2.70; Mϕϕ=-0.66; Mrθ=-1.49; Mθϕ=2.68; Mϕr=2.26; Fault plane solution: M0=4.53000×10^15 NP1: ϕs=205.73000°, δ=58.36000°, λ=-146.81000°. NP2: ϕs=96.79000°, δ=62.22000°, λ=-36.36000°. Principal axes: T 4.1953, Plg2.0000°, Azm152.0000°; N 0.5998, Plg45.0000°, Azm244.0000°; P -4.7951, Plg44.0000°, Azm60.0000°;*
THE ***28*** *19:12:12.2, 38°.41N×20°.49E, h6km±1km, ML4.4/15 Error ellipse: s-maj=1.6km s-min=0.2km az=268.0*
BGR ***28*** *19:12:13.6±1.1, 38°.66N×20°.97E, h10km, Error ellipse: s-maj=47.8km s-min=14.5km az=51.0*
ISC 28 19:12:11.3±0.7, 38°.42N±0°.01×20°.40E±0°.02, h12km±4km, n414, σ1§70/494, mb4.2/43, MS3.6/19, 27C-15D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FSK	**Fiskardo**	**0.13**	**74**	P		**Pg**	**19 12 13.7**	**-0.8**
FSK	**Fiskardo**	**0.13**	**74**	P		**Pg**	**19 12 13.8**	**-0.8**
FSK				S		**Sg**	**19 12 15.8**	**-1.0**
KEF1	**Kardakata, Kep**	**0.15**	**160**	P		**Pg**	**19 12 14.8**	**0.0**
KEF1				S		**Sg**	**19 12 17.5**	**+0.1**
KEF3	**Kipouria, Keph**	**0.22**	**191**	P		**Pg**	**19 12 16.5**	**+0.5**
KEF3				S		**Sg**	**19 12 20.6**	**+1.4**
CHV1	**Chavriata, Kef**	**0.24**	**184**	P		**Pb**	**19 12 17.2**	**-0.4**
CHV1				S		**Sg**	**19 12 20.9**	**+1.2**
	326μm,0.3s							
ARG2	**Argostoli**	**0.25**	**165**	P		**Pg**	**19 12 16.5**	**0.0**
ARG2				S		**Sg**	**19 12 20.3**	**+0.3**
	311μm,0.3s							
KEF2	**Argostoli. Kep**	**0.27**	**165**	P		**Pg**	**19 12 16.7**	**0.0**
KEF2				S		**Sg**	**19 12 20.5**	**+0.1**
EVGl	**Lefkada island**	**0.28**	**45**	P		**Pg**	**19 12 16.9**	**-0.2**
EVGl	**Lefkada island**	**0.28**	**45**	P		**Pg**	**19 12 16.8**	**-0.2**
EVGl				S		**Sg**	**19 12 21.2**	**+0.3**
VLS	**Valsamata**	**0.29**	**149**	P		**Pg**	**19 12 16.8**	**-0.4**
VLS				S		**Sg**	**19 12 20.9**	**-0.2**
VLS	**Valsamata**	**0.29**	**149**	P		**Pg**	**19 12 16.8**	**-0.4**
VLS				S		**Sg**	**19 12 20.9**	**-0.2**
VLS	**Valsamata**	**0.29**	**149**	P		**Pg**	**19 12 16.7**	**-0.4**
VLS				S		**Sg**	**19 12 20.6**	**-0.5**
VLS				AML	AML		19 12 23.8	
VLS				AML	AML		19 12 25.2	
MGNA	**Meganis**	**0.38**	**53**	P		**Pg**	**19 12 18.4**	**-0.5**
MGNA				S		**Sg**	**19 12 23.8**	**-0.3**
MGNA				AML	AML		19 12 25.7	
	comp=E,80594μm,0.4s							
MGNA				AML	AML		19 12 26.4	
LKD2	**Lefkada island**	**0.42**	**29**	P		**Pg**	**19 12 19.8**	**+0.3**
LKD2				S		**Sb**	**19 12 26.1**	**-0.8**
	comp=E,44μm,0.5s							
LKD2	**Lefkada island**	**0.42**	**29**	P		**Pg**	**19 12 19.4**	**-0.1**
LKD2				S		**Sb**	**19 12 26.0**	**-0.9**
LKD2				AML	AML		19 12 27.4	
	comp=N,94710μm,0.5s							
LKD2				AML	AML		19 12 27.6	
	comp=E,83732μm,0.5s							
KFL	**Anninata**	**0.44**	**136**	P		**Pg**	**19 12 19.4**	**-0.5**
KFL				S		**Sg**	**19 12 25.0**	**-0.7**
	comp=E,87μm,0.3s							
KFL	**Anninata**	**0.44**	**136**	P		**Pg**	**19 12 19.3**	**-0.5**
KFL				S		**Sg**	**19 12 24.8**	**-0.9**
KFL				AML	AML		19 12 27.1	
KFL				AML	AML		19 12 27.2	
TSLK	**Tsoukalades, L**	**0.45**	**26**	P		**Pg**	**19 12 20.4**	**+0.3**
TSLK				S		**Sb**	**19 12 27.0**	**-0.8**
	comp=E,65μm,0.7s							
TSLK	**Tsoukalades, L**	**0.45**	**26**	P		**Pg**	**19 12 20.3**	**+0.3**
TSLK				S		**Sb**	**19 12 26.8**	**-0.9**
AST1	**Astakos**	**0.55**	**77**	P		**Pg**	**19 12 21.6**	**-0.4**
AST1				S		**Sg**	**19 12 28.8**	**-0.5**
	comp=E,54μm,0.2s							
VLMS	**Volimes, Zakyn**	**0.58**	**159**	P		**Pg**	**19 12 22.2**	**-0.4**
VLMS				S		**Sg**	**19 12 30.2**	**-0.1**
VLMS				AML	AML		19 12 32.5	
VLMS				AML	AML		19 12 35.4	
	comp=E,59002μm,0.2s							
PDO	**Prodromos**	**0.64**	**74**	P		**Pg**	**19 12 23.1**	**-0.6**
PDO				S		**Sg**	**19 12 32.0**	**-0.1**
	comp=E,46μm,0.5s							
PDO	**Prodromos**	**0.64**	**74**	P		**Pg**	**19 12 23.0**	**-0.7**
PDO				S		**Sg**	**19 12 31.2**	**-0.9**
PDO				AML	AML		19 12 35.2	
	comp=E,48087μm,0.5s							
PDO				AML	AML		19 12 38.2	
	comp=N,82235μm,0.6s							
ZAK2	**Zakynthos**	**0.75**	**148**	P		**Pg**	**19 12 25.5**	**-0.2**
ZAK2				S		**Sg**	**19 12 35.5**	**0.0**
	comp=N,116μm,0.5s							
KRI1	**kERI**	**0.83**	**157**	P		**Pg**	**19 12 26.7**	**-0.5**
KRI1				S		**Sb**	**19 12 38.9**	**+0.2**
PVO	**Paravola**	**0.90**	**77**	P		**Pg**	**19 12 28.2**	**-0.4**
PVO				S		**Sg**	**19 12 39.8**	**-0.7**
	comp=N,18μm,0.5s							
PVO	**Paravola**	**0.90**	**77**	P		**Pg**	**19 12 28.3**	**-0.4**
PVO				AML	AML		19 12 46.7	
	comp=E,29451μm,0.5s							
PVO				AML	AML		19 12 50.1	
	comp=N,41803μm,0.6s							
RLS	**Riolos of Patr**	**0.91**	**113**	P		**Pg**	**19 12 28.1**	**-0.8**
RLS	**Riolos of Patr**	**0.91**	**113**	P		**Pg**	**19 12 27.8**	**-1.1**
RLS				AML	AML		19 12 50.2	
	comp=N,23540μm,1.1s							
RLS				AML	AML		19 12 50.3	
	comp=E,12350μm,0.6s							
UPR	**University Cam**	**1.10**	**97**	P		**Pg**	**19 12 32.1**	**-0.3**
DRO	**Drossia**	**1.13**	**114**	P		**Pb**	**19 12 32.2**	**-0.6**
DRO	**Drossia**	**1.13**	**114**	P		**Pb**	**19 12 31.5**	**-1.3**
DRO				AML	AML		19 12 55.3	
	comp=N,41480μm,0.4s							
DRO				AML	AML		19 12 55.8	
	comp=E,33435μm,0.3s							
EFP	**Efpalio**	**1.18**	**89**	P		**Pb**	**19 12 32.5**	**-1.1**
EFP				S		**Sn**	**19 12 49.5**	**-0.1**
	comp=E,22μm,0.6s							
EFP	**Efpalio**	**1.18**	**89**	P		**Pb**	**19 12 32.2**	**-1.5**
EFP				AML	AML		19 12 55.8	
	comp=N,44494μm,0.6s							
EFP				AML	AML		19 12 56.6	
	comp=E,41326μm,0.5s							
ANX	**Ano Chora**	**1.20**	**81**	P		**Pb**	**19 12 33.2**	**-0.9**
ANX				S		**Sn**	**19 12 49.8**	**-0.6**
	comp=E,15μm,0.6s							
ANX	**Ano Chora**	**1.20**	**81**	P		**Pb**	**19 12 33.2**	**-0.9**
ANX				AML	AML		19 12 57.0	
	comp=E,25397μm,0.6s							
ANX				AML	AML		19 12 59.4	
	comp=N,34186μm,0.6s							
EVR	**Evrytania**	**1.21**	**65**	P		**Pb**	**19 12 33.6**	**-0.5**
EVR	**Evrytania**	**1.21**	**65**	P		**Pb**	**19 12 33.1**	**-1.0**
EVR				AML	AML		19 12 59.0	
	comp=E,6924μm,0.5s							
EVR				AML	AML		19 13 01.2	
	comp=N,14028μm,0.8s							
LAKA	**Lakka**	**1.25**	**98**	P		**Pn**	**19 12 34.0**	**-0.7**
LAKA				S		**Sg**	**19 12 51.9**	**+0.3**
	comp=N,6μm,0.6s							
LAKA	**Lakka**	**1.25**	**98**	P		**Pn**	**19 12 33.8**	**-0.9**
LAKA				S		**Sb**	**19 12 50.4**	**-0.6**
LAKA				AML	AML		19 13 00.0	
	comp=N,13314μm,0.7s							
LAKA				AML	AML		19 13 02.2	
	comp=E,12108μm,0.9s							
JAN	**Janina**	**1.28**	**16**	P		**Pg**	**19 12 36.3**	**+0.4**
JAN				S		**Sg**	**19 12 54.1**	**+1.6**
	comp=E,9μm,0.7s							
JAN	**Janina**	**1.28**	**16**	P		**Pg**	**19 12 36.3**	**+0.4**
JAN				S		**Sg**	**19 12 54.1**	**+1.6**
JAN	**Janina**	**1.28**	**16**	P		**Pg**	**19 12 36.6**	**+0.8**
JAN				AML	AML		19 12 57.9	
	comp=E,21984μm,0.9s							
JAN				AML	AML		19 12 59.8	
	comp=N,15921μm,0.4s							
SERG	**Sergoula**	**1.30**	**90**	P		**Pn**	**19 12 34.8**	**-0.5**
SERG				S		**Sg**	**19 12 52.6**	**-0.5**
	comp=N,14μm,0.5s							
SERG	**Sergoula**	**1.30**	**90**	P		**Pn**	**19 12 34.5**	**-0.8**
SERG				AML	AML		19 12 58.9	
	comp=E,23849μm,0.5s							
SERG				AML	AML		19 12 59.2	
	comp=N,32155μm,0.5s							
TRIZ	**Trizonia**	**1.31**	**92**	P		**Pn**	**19 12 34.8**	**-0.6**
TRIZ				S		**Sg**	**19 12 53.4**	**-0.2**
	comp=N,11μm,0.7s							
TRIZ	**Trizonia**	**1.31**	**92**	P		**Pn**	**19 12 34.3**	**-1.1**
AMT	**Artemida-Makis**	**1.36**	**130**	P		**Pn**	**19 12 36.2**	**0.0**
AMT	**Artemida-Makis**	**1.36**	**130**	P		**Pb**	**19 12 36.5**	**-0.3**
AMT				AML	AML		19 13 11.2	
	comp=N,23677μm,1.0s							
AMT				AML	AML		19 13 14.2	
	comp=E,14356μm,0.6s							
KALE	**Kalithea**	**1.36**	**91**	P		**Pn**	**19 12 35.9**	**-0.3**
KALE	**Kalithea**	**1.36**	**91**	P		**Pn**	**19 12 35.7**	**-0.5**
KALE				AML	AML		19 13 03.9	
	comp=N,19109μm,0.6s							
KALE				AML	AML		19 13 04.9	
	comp=E,12554μm,1.0s							
KASA	**Kassiopi**	**1.37**	**345**	P		**Pg**	**19 12 38.5**	**+0.9**
KASA				AML	AML		19 13 01.3	
	comp=E,14335μm,0.4s							
KASA				AML	AML		19 13 06.2	
	comp=N,11243μm,1.2s							
KLV	**Kalavryta, Ach**	**1.43**	**105**	P		**Pn**	**19 12 36.4**	**-0.7**
KLV				AML	AML		19 13 06.0	
	comp=E,7434μm,0.7s							
KLV				AML	AML		19 13 09.0	
	comp=N,6902μm,0.6s							
MAKR	**Makrakomi, Fth**	**1.48**	**66**	P		**Pb**	**19 12 38.2**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.48**	**66**	P		**Pb**	**19 12 38.4**	**-0.2**
MAKR				AML	AML		19 13 08.6	
	comp=N,17635μm,0.8s							
MAKR				AML	AML		19 13 13.6	
	comp=E,12556μm,0.7s							
SRN	**Sarande**	**1.49**	**348**	P		**Pb**	**19 12 39.2**	**+0.4**
SRN	**Sarande**	**1.49**	**348**	*i* PN		**Pg**	**19 12 40.0**	**+0.1**
SRN				*i* SN		**Sg**	**19 12 59.4**	**+0.2**
AGG	**Agios Georgios**	**1.62**	**68**	P		**Pb**	**19 12 40.6**	**-0.6**
AGG	**Agios Georgios**	**1.62**	**68**	P		**Pb**	**19 12 40.8**	**-0.4**
AGG				AML	AML		19 13 11.2	
	comp=E,9894μm,0.8s							
AGG				AML	AML		19 13 13.4	
	comp=N,6494μm,0.5s							
AGG	**Agios Georgios**	**1.62**	**68**			**Pb**	**19 12 40.6**	**-0.6**
DLFA	**Delphi**	**1.65**	**87**	P		**Pb**	**19 12 40.7**	**-0.9**
DLFA				AML	AML		19 13 12.7	
	comp=E,8958μm,0.9s							
DLFA				AML	AML		19 13 14.6	
	comp=N,5036μm,0.9s							
THL	**Klokotos Trika**	**1.70**	**47**	P		**Pb**	**19 12 42.3**	**-0.1**
THL				AML	AML		19 13 13.2	
	comp=E,9971μm,0.6s							
THL				AML	AML		19 13 17.8	
	comp=N,7072μm,0.6s							
KPRO	**Kipourio**	**1.70**	**26**	P		**Pg**	**19 12 44.1**	**+0.2**
KPRO				AML	AML		19 13 13.3	
	comp=E,12770μm,0.7s							
KPRO				AML	AML		19 13 14.8	
	comp=N,9770μm,0.6s							
ITM	**Ithomi**	**1.73**	**135**	P		**Pb**	**19 12 42.9**	**-0.1**
ITM				AML	AML		19 13 13.8	
	comp=E,7258μm,1.1s							
ITM				AML	AML		19 13 20.7	
	comp=N,10908μm,0.7s							
ITM	**Ithomi**	**1.73**	**135**			**Pb**	**19 12 43.1**	**+0.1**
AXAR	**Agios Charalam**	**1.80**	**78**	P		**Pg**	**19 12 44.7**	**-1.1**
AXAR				AML	AML		19 13 17.6	
	comp=N,18400μm,1.0s							
AXAR				AML	AML		19 13 18.1	
	comp=E,16389μm,0.9s							
THAL	**Thalero**	**1.82**	**102**	P		**Pb**	**19 12 43.9**	**-0.6**
PYL	**PYLOS**	**1.86**	**145**	P		**Pb**	**19 12 44.3**	**-0.9**
PYL				AML	AML		19 13 24.3	
	comp=N,3596μm,0.7s							
PYL				AML	AML		19 13 24.6	
	comp=E,4909μm,0.9s							
PENT	**Pentalofos**	**1.86**	**18**	P		**Pg**	**19 12 46.5**	**-0.4**
PENT				AML	AML		19 13 18.3	
	comp=E,8697μm,1.2s							
PENT				AML	AML		19 13 20.1	
	comp=N,6223μm,0.8s							
VLX	**Vlachokerasia**	**1.89**	**123**	P		**Pb**	**19 12 46.0**	**+0.4**
VLX				AML	AML		19 13 22.1	
	comp=N,12538μm,0.6s							
VLX				AML	AML		19 13 26.0	
	comp=E,8204μm,0.5s							
TPE	**Tepelena**	**1.89**	**351**	*i* PN		**Pb**	**19 12 46.0**	**+0.2**
TPE				*i* SN		**Sg**	**19 13 11.5**	**-0.6**
PROD	**Prodromos**	**1.97**	**94**	P		**Pb**	**19 12 46.9**	**-0.2**
PROD				AML	AML		19 13 21.6	
	comp=N,8831μm,0.9s							
PROD				AML	AML		19 13 22.5	
	comp=E,8223μm,0.9s							
LKR	**Lokris**	**2.05**	**83**	P		**Pb**	**19 12 47.7**	**-0.7**
LKR				AML	AML		19 13 21.6	
	comp=N,3973μm,0.5s							
LKR				AML	AML		19 13 24.5	
	comp=E,2971μm,0.8s							
NEST	**Nestorio**	**2.05**	**14**	P		**Pb**	**19 12 49.1**	**+0.5**
LTK	**Loutraki**	**2.06**	**100**	P		**Pb**	**19 12 47.7**	**-0.9**
LOUT	**Loutraki**	**2.07**	**101**	P		**Pb**	**19 12 47.8**	**-1.0**
KZN	**Kozani**	**2.16**	**29**	P		**Pb**	**19 12 50.2**	**-0.1**
KZN				AML	AML		19 13 27.2	
	comp=E,4833μm,0.6s							
KZN				AML	AML		19 13 27.7	
	comp=N,4126μm,0.9s							
VLO	**Vlora**	**2.16**	**341**	*i* PN		**Pb**	**19 12 49.4**	**-1.0**
VLO				*i* SN		**Sb**	**19 13 18.9**	**+1.9**
SCTE	**Santa Cesarea**	**2.23**	**318**	P		**Pb**	**19 12 49.9**	**-1.5**
SCTE	**Santa Cesarea**	**2.23**	**318**			**Pn**	**19 12 49.6**	**+1.6**
VIL2	**Platees**	**2.26**	**94**	P		**Pb**	**19 12 51.4**	**-0.7**
VIL2				AML	AML		19 13 34.3	
	comp=N,5014μm,0.7s							
VIL2				AML	AML		19 13 37.3	
	comp=E,6715μm,0.8s							
LIT	**Litokhoron**	**2.33**	**43**	P		**Pb**	**19 12 52.7**	**-0.6**
LIT	**Litokhoron**	**2.33**	**43**	P		**Pb**	**19 12 52.4**	**-0.8**
LIT				AML	AML		19 13 30.8	
	comp=E,3560μm,0.8s							
LIT				AML	AML		19 13 33.4	
	comp=N,4196μm,0.7s							
LIT	**Litokhoron**	**2.33**	**43**			**Pb**	**19 12 52.7**	**-0.6**
NEO	**Neokhori**	**2.37**	**67**	P		**Pb**	**19 12 52.5**	**-1.4**
XOR	**Xorichti**	**2.37**	**66**	P		**Pb**	**19 12 52.1**	**-1.8**
XOR				AML	AML		19 13 38.9	
	comp=E,3367μm,1.0s							
XOR				AML	AML		19 13 40.3	
	comp=N,5196μm,0.9s							
DID	**Didima**	**2.42**	**111**	P		**Pb**	**19 12 52.6**	**-2.1**
DID				AML	AML		19 13 37.6	
	comp=N,4669μm,0.6s							
DID				AML	AML		19 13 38.8	
	comp=E,4909μm,1.3s							
FNA	**Florina**	**2.47**	**17**	P		**Pb**	**19 12 53.6**	**-2.1**
FNA	**Florina**	**2.47**	**17**	P		**Pb**	**19 12 54.2**	**-1.5**
FNA	**Florina**	**2.47**	**17**			**Pb**	**19 12 53.6**	**-2.1**
SKIA	**Skiathos**	**2.51**	**72**	P		**Pb**	**19 12 53.9**	**-2.4**
MRKA	**Markates**	**2.51**	**83**	P		**Pb**	**19 12 53.9**	**-2.4**
MRKA				AML	AML		19 13 34.3	
	comp=N,2911μm,0.9s							
MRKA				AML	AML		19 13 42.9	
	comp=E,2122μm,0.9s							
VLI	**Veliai**	**2.64**	**129**	P		**Pb**	**19 12 57.3**	**-1.1**
ATH	**Athens Observa**	**2.65**	**99**	P		**Pn**	**19 12 55.8**	**+2.0**
ATH				AML	AML		19 13 49.5	
	comp=E,3080μm,1.1s							
ATH				AML	AML		19 13 51.0	
	comp=N,3377μm,0.8s							
OHR	**Ohrid**	**2.70**	**6**	*i* Pn		**Pb**	**19 12 57.7**	**-1.9**
VLY	**Voula,Athens**	**2.73**	**101**	P		**Pn**	**19 12 56.7**	**+1.7**
PTL	**Penteli**	**2.75**	**97**	P		**Pn**	**19 12 57.0**	**+1.7**
EREA	**Eretria**	**2.77**	**89**	P		**Pn**	**19 12 57.4**	**+1.9**
EREA				AML	AML		19 13 47.3	
	comp=E,2474μm,0.8s							
EREA				AML	AML		19 13 52.3	
	comp=N,2118μm,0.9s							
AOS	**Alonnisos**	**2.82**	**74**	P		**Pn**	**19 12 58.0**	**+1.8**
TIP	**Timpagrande**	**2.94**	**286**	P		**Pb**	**19 13 01.3**	**-2.4**
TIP	**Timpagrande**	**2.94**	**286**	⇓P		**Pb**	**19 13 01.6**	**-2.1**
TIP	**Timpagrande**	**2.94**	**286**	⇓S		**Sn**	**19 13 35.9**	**+2.6**
TIP	**Timpagrande**	**2.94**	**286**			**Pn**	**19 13 00.2**	**+2.2**
TIR	**Tirane**	**2.95**	**352**	P		**Pn**	**19 12 59.8**	**+1.8**
TIR				S		**Sn**	**19 13 34.4**	**+1.1**
TIR	**Tirane**	**2.95**	**352**	*i* PN		**Pn**	**19 13 00.6**	**+2.7**
TIR				*i* SN		**Sn**	**19 13 38.8**	**+5.5**
TIR	**Tirane**	**2.95**	**352**	P		**Pn**	**19 13 00.8**	**+2.8**
TIR	**Tirane**	**2.95**	**352**	⇓P		**Pn**	**19 13 00.3**	**+2.3**
TIR	**Tirane**	**2.95**	**352**			**Pn**	**19 12 59.8**	**+1.8**
PAIG	**Paliouri**	**2.96**	**58**	P		**Pn**	**19 12 59.5**	**+1.4**
GRG	**Griva**	**2.96**	**31**	P		**Pn**	**19 13 00.7**	**+2.0**
HORT	**Hortiatis**	**3.01**	**43**	P		**Pn**	**19 13 00.9**	**+2.1**
KTHA	**Kythira Island**	**3.03**	**135**	P		**Pn**	**19 13 01.4**	**+2.4**
PLG	**Polygyros**	**3.06**	**49**	P		**Pn**	**19 13 01.3**	**+1.9**
CGL1	**Ceglie Messapi**	**3.17**	**315**	*e*Pn		**Pn**	**19 13 02.7**	**+1.6**
TAR1	**Taranto**	**3.20**	**312**	*e*Pn		**Pn**	**19 13 02.9**	**+1.5**
KARY	**Karystos**	**3.20**	**96**	P		**Pn**	**19 13 03.6**	**+2.2**
PHP	**Peshkopia**	**3.26**	**1**	*i* PN		**Pn**	**19 13 04.5**	**+2.2**
PHP				*i* SN		**Sb**	**19 13 47.5**	**-1.2**
SOH	**Sokhos**	**3.31**	**43**	P		**Pn**	**19 13 05.6**	**+2.7**
VAY	**Valandovo**	**3.34**	**29**	P		**Pb**	**19 13 06.8**	**-3.6**
VAY	**Valandovo**	**3.34**	**29**	*i* Pn		**Pn**	**19 13 05.3**	**+2.0**
KNT	**Kendrikon**	**3.34**	**34**	P		**Pn**	**19 13 05.4**	**+2.0**
MASS	**Massafra**	**3.35**	**312**	*e*Pn		**Pn**	**19 13 05.1**	**+1.6**
NOCI	**Noci**	**3.50**	**314**	P		**Pn**	**19 13 07.2**	**+1.7**
STIP	**Stip**	**3.54**	**22**	*i* Pn		**Pb**	**19 13 10.2**	**-3.7**
CEL	**Celeste**	**3.55**	**269**			**Pn**	**19 13 07.1**	**+0.9**
MATE	**Matera**	**3.62**	**309**	⇑P		**Pn**	**19 13 10.7**	**+3.5**
MATE	**Matera**	**3.62**	**309**	⇓S		**Sb**	**19 13 55.1**	**-4.0**
SKO	**Skopje**	**3.63**	**12**	*i* Pn		**Pn**	**19 13 10.5**	**+3.1**
PUK	**Puka**	**3.64**	**354**	*i* PN		**Pn**	**19 13 08.3**	**+0.8**
PUK				*i* SN		**Sn**	**19 13 53.0**	**+2.6**
SRS	**Serrai**	**3.64**	**41**	P		**Pn**	**19 13 09.7**	**+2.2**
ULC	**Ulcinj**	**3.65**	**346**	*i* Pn		**Pn**	**19 13 08.0**	**+0.4**
ULC				*i* Sn		**Sn**	**19 13 52.5**	**+2.0**
SG1	**Sgolgore (BA)**	**3.75**	**311**	*e*Pn		**Pn**	**19 13 11.2**	**+2.2**
BAI	**Bari**	**3.81**	**316**	*e*Pn		**Pn**	**19 13 11.9**	**+2.1**
DRME	**Dracevica, Mon**	**3.87**	**346**	*e*Pn		**Pn**	**19 13 11.2**	**+0.6**
DRME	**Dracevica, Mon**	**3.87**	**346**	⇓i Pn		**Pn**	**19 13 11.8**	**+1.2**
DRME				*e*Sn		**Sn**	**19 13 58.2**	**+2.1**
BCI	**Bajram Curri**	**3.95**	**356**	*i* PN		**Pn**	**19 13 14.1**	**+2.4**
BCI				*i* SN		**Sn**	**19 14 02.2**	**+4.2**
KKB	**Krupnik**	**4.01**	**30**	P		**Pn**	**19 13 15.2**	**+2.7**
BUM	**Brajici-Budva**	**4.04**	**344**	⇓i Pn		**Pn**	**19 13 13.7**	**+0.7**
BUM				*i* Sn		**Sn**	**19 14 02.2**	**+1.9**
MMR	**Musomiste**	**4.06**	**38**	P		**Pn**	**19 13 15.8**	**+2.5**
**KAVA

DIVS	Divibare	5.68	357	ePn		Pn	19 13 36.0	+0.5	
CLTB	Caltabellotta	5.74	264			Pn	19 13 36.9	+0.5	
HAPS	Han Pijesak,BI	5.76	350	ePn		Pn	19 13 36.4	-0.3	
KARP	Karpathos	6.12	116	Pn		Pn	19 13 39.5	-2.1	
ELND	Elena	6.13	41	⇑P		Pn	19 13 41.0	-0.6	
INTR	Introdacqua	6.13	308			Pn	19 13 42.6	+0.9	
TEKS	Tekeris	6.16	354	ePn		Pn	19 13 42.0	0.0	
KIJV	Kijevo	6.34	333	ePn		Pn	19 13 45.4	+0.9	
ZIRJ	Zirje	6.34	327	ePn		Pn	19 13 44.7	+0.1	
ZIRJ				Sn		Sn	19 14 54.3	-2.6	
MGRS	Mrkonjic Grad	6.49	338	ePn		Pn	19 13 48.0	+1.4	
MORI	Morici	6.49	328	ePn		Pn	19 13 47.5	+0.9	
HERR	Herculane	6.63	13	⇑P		Pn	19 13 49.8	+1.3	
AQU	L'Aquila	6.63	309	P		Pn	19 13 50.2	+1.6	
AQU	L'Aquila	6.63	309	ePn		Pn	19 13 52.1	+3.5	
AQU	L'Aquila	6.63	309	Pn		Pn	19 13 50.2	+1.6	
FRGS	Fruska Gora	6.74	356	ePn		Pn	19 13 49.4	-0.7	
BLY	Banja Luka	6.76	340	⇑P		Pn	19 13 51.8	+1.4	
BLY	Banja Luka	6.76	340	⇑S		Sn	19 15 06.4	-0.9	
BLY	Banja Luka	6.76	340	ePn		Pn	19 13 51.3	+1.0	
BLY	Banja Luka	6.76	340			Pn	19 13 51.3	+1.0	
DUGI	Dugi Otok	6.87	326	ePn		Pn	19 13 52.9	+1.1	
UDBI	Udbina	7.02	332	ePn		Pn	19 13 55.5	+1.6	
NRCA	Norcia	7.08	311			Pn	19 13 56.2	+1.4	
GZR	Gura Zlata	7.19	13	⇑P		Pn	19 13 57.6	+1.4	
BZS	Buzias	7.24	7	⇑P		Pn	19 13 58.7	+1.8	
NVLJ	Novalja	7.41	328	ePn		Pn	19 14 00.3	+1.2	
ARR	Arges	7.62	23	⇑P		Pn	19 14 02.7	+0.5	
MURB	Monte Urbino	7.68	311			Pn	19 14 04.9	+1.9	
ELL	Elmali	7.73	100	P		Pn	19 14 04.7	+0.9	
ELL	Elmali	7.73	100			Pn	19 14 04.7	+0.9	
VOIN		7.82	25	⇑P		Pn	19 14 06.2	+1.3	
OZLJ	Ozalj	8.07	335	ePn		Pn	19 14 08.7	+0.5	
ZAG	Zagreb	8.09	338	ePn		Pn	19 14 09.4	+0.8	
PTJ	Puntijarka	8.17	338	ePn		Pn	19 14 09.6	-0.1	
MLR	Muntele Rosu	8.18	29	Pn		Pn	19 14 11.9	+2.0	
	comp=N,0.1nm,0.3s,baz=286,slow=20,SNR=3.6								
MLR				Sn		Sn	19 15 42.4	+0.2	
	baz=318,slow=18,SNR=1.8								
MLR	Muntele Rosu	8.18	29	⇑P		Pn	19 14 09.2	-0.7	
MLR	Muntele Rosu	8.18	29			Pn	19 14 12.3	+2.4	
RIY	Rijeka	8.19	329	ePn		Pn	19 14 10.6	+0.8	
GBRS	Gornja Briga	8.23	331	*i* Pn		Pn	19 14 11.4	+0.9	
KALN	Kalnik	8.24	340	ePn		Pn	19 14 09.8	-0.8	
CRES	Cresnjev	8.26	335	ePn		Pn	19 14 10.8	-0.1	
DOPA	Dopca	8.40	25	⇑P		Pn	19 14 13.0	+0.2	
CASP	Castiglione de	8.46	304	Pn		Pn	19 14 18.3	+4.6	
BEHE	Becsehely	8.47	343	ePn		Pn	19 14 13.5	-0.3	
TIRR	Tirgusor	8.51	42	P		Pn	19 14 14.0	-0.4	
TIRR	Tirgusor	8.51	42	Pn		Pn	19 14 13.9	-0.4	
CEY	Cerknica	8.55	331	ePn		Pn	19 14 15.8	+0.9	
OSSC	Osservatorio P	8.60	309	Pn		Pn	19 14 16.3	+0.8	
PLOR	Plostina	8.75	30	P		Pn	19 14 18.6	+1.0	
PLOR	Plostina	8.75	30	⇑P		Pn	19 14 18.6	+1.0	
LJU	Ljubljana	8.77	332	ePn		Pn	19 14 18.2	+0.3	
TRI	Trieste	8.79	328	P		Pn	19 14 18.3	+0.1	
TRI	Trieste	8.79	328			Pn	19 14 18.3	+0.1	
VRI	Vrincioaia	8.79	30	P		Pn	19 14 18.6	+0.4	
VRI	Vrincioaia	8.79	30	⇓P		Pn	19 14 18.7	+0.4	
SOKA	Soboth	9.15	336	ePn		Pn	19 14 23.0	-0.1	
	comp=N,12nm,0.3s,SNR=25								
SOKA				eSn		Sn	19 16 01.6	-4.5	
	comp=N,22nm,0.7s								
OBKA	Obir	9.16	334	ePn		Pn	19 14 24.4	+1.1	
OBKA				eSn		Sn	19 16 00.6	-5.8	
OBKA	Obir	9.16	334	ePn		Pn	19 14 24.5	+1.2	
	comp=N,6.4nm,0.2s								
OBKA				Sn		Sn	19 16 03.4	-3.0	
	comp=N,34nm,0.6s								
ZCCA	Zocca	9.23	313	Pn		Pn	19 14 25.6	+1.3	
KEST	Kesra	9.23	256	Pn		Pn	19 14 26.1	+1.8	
	comp=N,0.6nm,0.3s,baz=48,slow=15,SNR=7.9								
KEST				Sn		Sn	19 16 05.2	-3.1	
	comp=N,0.1nm,0.3s,baz=315,slow=16,SNR=2.3								
KEST				LR		LR	19 18 39.4		
	comp=N,223nm,20.9s,baz=254,slow=42								
KEST	Kesra	9.23	256	Pn		Pn	19 14 25.1	+0.7	
PSZ	Piszkesteto	9.50	358	P		Pn	19 14 28.2	+0.3	
PSZ	Piszkesteto	9.50	358	Pn		Pn	19 14 28.2	+0.3	
TEOL	Teolo	9.51	320	Pn		Pn	19 14 28.2	+0.3	
TEOL						Sn	19 16 09.4	-5.3	
ARSA	Arzberg	9.52	339	ePn		Pn	19 14 28.2	+0.1	
ARSA	Arzberg	9.52	339	ePn		Pn	19 14 28.1	-0.1	
	comp=N,2.2nm,0.3s								
MYKA	Terra Mystica	9.60	331	ePn		Pn	19 14 30.0	+0.8	
	comp=N,3.8nm,0.3s								
MYKA				Sn		Sn	19 16 14.4	-2.6	
	comp=N,14nm,0.6s								
STAL	STALIGIAL	9.68	326	Pn		Pn	19 14 29.3	-1.0	
BURAR	Bucovina Array	9.84	19	P		Pn	19 14 33.2	+0.6	
BURAR	Bucovina Array	9.84	19	Pn		Pn	19 14 33.1	+0.6	
BUR08	Bucovina Ar. S	9.86	19	Pn		Pn	19 14 31.7	-1.2	
CTI	Castel Tesino	10.00	322	P		Pn	19 14 34.3	-0.5	
CTI	Castel Tesino	10.00	322			Pn	19 14 34.3	-0.5	
ZST	Bratislava	10.06	347	eSN		Sn	19 16 20.9	-7.3	
CONA	Conrad Observa	10.06	342	ePn		Pn	19 14 36.2	+0.5	
	comp=N,0.7nm,0.2s								
MSSA	Maissana	10.07	309	Pn		Pn	19 14 35.2	-0.6	
KBA	Koelnbreinsper	10.08	331	ePn		Pn	19 14 36.9	+0.9	
KBA				eSn		Sn	19 16 24.9	-4.2	
KBA	Koelnbreinsper	10.08	331	ePn		Pn	19 14 36.9	+0.9	
	comp=N,2.9nm,0.3s,SNR=9.2								
VYHS	Vyhne	10.13	354	*e*P		Pn	19 14 37.3	+0.8	
VYHS				*e*			19 16 28.0		
VYHS	Vyhne	10.13	354	*e*PN		Pn	19 14 37.3	+0.8	
VYHS				*e*SN		Sn	19 16 28.0	-2.0	
ABTA	Abfaltersbach	10.14	328	ePn		Pn	19 14 37.3	+0.5	
	comp=N,2.5nm,0.4s,SNR=6.0								
ABTA				Sn		Sn	19 16 26.1	-4.4	
	comp=N,31nm,0.7s								
MODS	Modra-Piesok	10.20	348	eSN		Sn	19 16 25.3	-6.5	
SALO	Salr	10.27	318	Pn		Pn	19 14 39.0	+0.5	
SALO						Sn	19 16 30.6	-3.0	
BR131	Keskin Array S	10.38	79	P		Pn	19 14 40.2	+0.2	
BR131	Keskin Array S	10.38	79	Pn		Pn	19 14 40.2	+0.2	
BRTR	Keskin Array B	10.38	79	P		Pn	19 14 40.0	0.0	
BRTR	Keskin Array B	10.38	79	Pn		Pn	19 14 44.8	+4.7	
	comp=N,0.3nm,0.3s,baz=258,slow=13,SNR=6.7								
BRTR				LR		LR	19 19 34.8		
	comp=N,232nm,18.9s,baz=245,slow=43								
BRTR	Keskin Array B	10.38	79	Pn		Pn	19 14 40.0	0.0	
MOA	Molln	10.43	337	ePn		Pn	19 14 41.2	+0.6	
MOA				eSn		Sn	19 16 34.2	-5.2	
MOA	Molln	10.43	337	ePn		Pn	19 14 41.3	+0.6	
	comp=N,4.5nm,0.3s,SNR=19								
MOA				eSn		Sn	19 16 34.8	-2.6	
	comp=N,10.0nm,0.5s								
ILGA	Ilgaz	10.59	71	Pn		Pn	19 14 42.9	-0.1	
RJOB	Jochberg	10.84	332	ePn		Pn	19 14 47.6	+1.3	
RJOB				eSn		Sn	19 16 44.4	-3.0	
WTTA	Wattenberg	10.92	327	ePn		Pn	19 14 48.7	+1.2	
WTTA				eSn		Sn	19 16 47.0	-2.7	
WTTA	Wattenberg	10.92	327	Sn		Pn	19 14 48.8	+1.2	
	comp=N,6.3nm,0.4s								
WTTA				eSn		Sn	19 16 46.5	-3.2	
	comp=N,35nm,0.6s								
CSS	Mathiatis	10.94	104	Pn		Pn	19 14 46.8	-0.8	
WATA	Walderalm	11.00	327	ePn		Pn	19 14 50.0	+1.4	
	comp=N,2.9nm,0.2s,SNR=6.0								
WATA				Sn		Sn	19 16 48.6	-3.0	
	comp=N,38nm,0.8s								
SQTA	Sankt Quirin	11.08	325	ePn		Pn	19 14 51.0	+1.4	
	comp=N,5.6nm,0.3s								
SQTA				Sn		Sn	19 16 51.2	-2.2	
	comp=N,19nm,0.5s								
FUORN	Ofenpass-Fuorn	11.09	321	Pn		Pn	19 14 51.1	+1.3	
FUORN						Sn	19 16 48.7	-5.1	
FETA	Feichten	11.15	324	ePn		Pn	19 14 53.1	+2.5	
	comp=N,1.3nm,0.4s								
FETA				Sn		Sn	19 16 53.3	-1.9	
	comp=N,9.7nm,0.6s								
MOTA	Moosalm	11.22	326	ePn		Pn	19 14 53.3	+1.8	
	comp=N,13nm,0.6s,SNR=13								
MOTA				Sn		Sn	19 16 54.8	-2.1	
	comp=N,16nm,0.6s								
VRAC	Vranov	11.22	347	Pn		Pn	19 14 46.5	-5.0	
	comp=N,0.3nm,0.3s,baz=27,slow=18,SNR=2.3								
VRAC				LR		LR	19 20 31.0		
	comp=N,501nm,19.2s,baz=168,slow=45								
DAVOX	Davos/Dischmat	11.39	321	Pn		Pn	19 14 56.1	+2.2	
	comp=N,1.5nm,0.3s,baz=120,slow=16,SNR=12								
DAVOX				Sn		Sn	19 16 57.7	-3.4	
	comp=N,1.8nm,0.3s,baz=225,slow=21,SNR=6.3								
DAVOX				LR		LR	19 21 16.7		
	comp=N,172nm,21.2s,baz=104,slow=48								
GEC2	GERESS Array S	11.49	337	ePn		Pn	19 14 56.0	+0.9	
GEC2	GERESS Array S	11.49	337	Pn		Pn	19 14 54.9	-0.2	
GERES	GERESS Array B	11.49	337	Pn		Pn	19 14 54.7	-0.5	
	comp=N,0.7nm,0.3s,baz=155,slow=13,SNR=19								
GERES				Sn		Sn	19 16 57.8	-5.6	
	comp=N,0.8nm,0.3s,baz=155,slow=24,SNR=7.3								
GERES				LR		LR	19 20 47.7		
	comp=N,86nm,18.8s,baz=144,slow=45								
GERES	GERESS Array B	11.49	337			Pn	19 14 54.5	-0.7	
MORC	Moravsky Berou	11.53	351	P		Pn	19 14 54.9	-0.8	
MORC	Moravsky Berou	11.53	351	Pn		Pn	19 14 54.9	-0.8	
DAVA	Damuels	11.74	322	eSn		Sn	19 17 06.0	-3.7	
DAVA	Damuels	11.74	322	Pn		Pn	19 14 59.8	+1.1	
	comp=N,4.2nm,0.3s								
DAVA				Sn		Sn	19 17 06.8	-2.9	
	comp=N,10nm,0.5s								
KHC	Kasperske Hory	11.78	338	*e*P		Pn	19 14 59.2	+0.1	
KHC				*e*			19 17 05.9		
KHC	Kasperske Hory	11.78	338	*e*PN		Pn	19 14 59.2	+0.1	
KHC				*e*SN		Sn	19 17 05.9	-4.5	
KHC	Kasperske Hory	11.78	338			Pn	19 14 57.6	-1.4	
UBR	Ueberruh	11.92	324	eSn		Sn	19 17 11.7	-2.2	
BNI	Bardonecchia	12.20	307	P		Pn	19 15 05.7	+0.8	
BNI	Bardonecchia	12.20	307	Pn		Pn	19 15 05.7	+0.8	
SENIN	Lac Senin/Sane	12.51	314			Pn	19 15 10.8	+1.6	
SENIN						Sn	19 17 23.2	-5.4	
STU	Stuttgart	13.13	326	P		Pn	19 15 17.0	-0.6	
STU	Stuttgart	13.13	326	Pn		Pn	19 15 17.0	-0.6	
BFO	Black Forest	13.22	322	P		Pn	19 15 17.6	-1.2	
BFO	Black Forest	13.22	322	Pn		Pn	19 15 17.6	-1.2	
BRG	Berggiesshubel	13.26	342	*e*(P)		Pn	19 15 22.4	+3.1	
	comp=N,30nm,2.1s								
BRG	Berggiesshubel	13.26	342	*e*P		Pn	19 15 22.4	+3.1	
BRG				pmax		pmax			
	comp=Z,30nm,2.1s								
MMAI	Mount Meron Ar	13.32	109	Pn		Pn	19 15 17.0	-3.3	
	comp=Z,1.6nm,0.3s,baz=308,slow=12,SNR=12								
MMAI				Sn		Sn	19 17 42.6	-5.9	
	comp=Z,1.1nm,0.3s,baz=293,slow=28,SNR=4.2								
ECH	Echery	13.72	320	Pn		Pn	19 15 24.7	-0.9	
ECH						Sn	19 17 52.6	-5.2	
AKASG	Malin Array Be	13.78	24	Pn		Pn	19 15 27.1	+0.8	
	comp=Z,0.5nm,0.3s,baz=213,slow=12,SNR=1.2								
CLL	Collm	13.90	340	*e*P		P	19 15 33.0	-3.2	
CLL	Collm	13.90	340	*e*(P)		P	19 15 33.0	-3.2	
ASF	Jabal al Asfar	14.84	110	Pn		P	19 15 48.3	+1.5	
	comp=Z,0.3nm,0.3s,baz=247,slow=7.7,SNR=3.5								
ASF				Sn		Sn	19 18 23.9	-1.4	
	comp=Z,0.2nm,0.3s,baz=252,slow=20,SNR=2.9								
EIL	Elat	14.88	122	Pn		Pn	19 15 43.9	+2.4	
	comp=Z,0.5nm,0.3s,baz=236,slow=7.3,SNR=4.9								
EIL				Sn		Sn	19 18 13.8	-12	
	comp=Z,1.1nm,0.3s,baz=128,slow=19,SNR=4.5								
EIL				LR		LR	19 23 54.8		
	comp=Z,98nm,19.0s,baz=314,slow=47								
NEY	Neytrino	17.55	67	⇑*e*P		P	19 16 20.5	+3.6	
NEY				pmax		pmax			
	comp=Z,3.0nm,1.3s								
KIV	Kislovodsk	17.64	65	*e*P		P	19 16 20.6	+2.7	
KIV				pmax		pmax			
	comp=Z,11nm,1.0s								
KIV				MLR		MLR			
	comp=Z,81nm,14.0s								
KBZ	Khabaz	17.75	65	P		P	19 16 19.8	+0.8	
	comp=Z,0.1nm,0.3s,baz=270,slow=13,SNR=2.2								
KBZ				LR		LR	19 25 26.5		
	comp=Z,54nm,21.0s,baz=228,slow=45								
ZEI	Tsey	18.35	69	*e*P		P	19 16 33.3	+7.5	
ZEI				pmax		pmax			
	comp=Z,4.0nm,0.8s								
ESDC	Sonseca Array	18.96	281	P		Pn	19 16 35.1	+2.1	
	comp=Z,0.4nm,0.3s,baz=71,slow=10,SNR=6.0								
VRH	Novokhopyorsk	19.71	43	*e*P		Pn	19 16 44.3	+2.5	
VRH				pmax		pmax			
	comp=Z,10.0nm,1.0s								
OBN	Obninsk	19.95	28	⇑*i*P		Pn	19 16 43.9	-0.8	
OBN				pmax		pmax			
	comp=Z,7.0nm,1.1s								
OBN				MLR		MLR			
	comp=Z,174nm,16.0s								
VSU	Vasula	20.47	10	⇑*e*P		Pn	19 16 51.0	+0.2	
VSU				pmax		pmax			
	comp=Z,39nm,0.5s								
MDT	Midelt	21.06	262	LR		LR	19 27 17.2		
	comp=Z,104nm,18.1s,baz=142,slow=43								
HFS	Hagfors	22.14	351	P		P	19 17 06.8	+0.1	
	comp=Z,6.9nm,0.5s,baz=176,slow=11,SNR=21								
HFS				LR		LR	19 28 15.7		
	comp=Z,195nm,18.4s,baz=167,slow=44								
NC602	NORSAR Array S	23.02	349	P		P	19 17 15.2	-0.7	
EKA	Eskdalemuir Ar	23.17	325	P		P	19 17 18.8	+1.3	
	comp=Z,3.8nm,0.7s,baz=122,slow=9.3,SNR=8.5								
ESK	Eskdalemuir	23.18	324	P		P	19 17 16.1	-1.5	
ESK				pmax		pmax			
	comp=Z,236nm,2.0s								
ESK	Eskdalemuir	23.18	324	P		P	19 17 16.1	-1.5	
NAO01	NORSAR Array S	23.23	348	P		P	19 17 17.7	-0.3	
FINES	FINESS Array B	23.32	7	P		P	19 17 18.6	-0.3	
FINES	FINESS Array B	23.32	7	P		P	19 17 18.4	-0.5	
	comp=Z,4.1nm,0.5s,baz=180,slow=11,SNR=23								
FINES				LR		LR	19 28 44.6		
	comp=Z,214nm,18.0s,baz=201,slow=43								
FINES	FINESS Array B	23.32	7	P		P	19 17 18.6	-0.3	
FIA1	FINESS Array S	23.32	7	P		P	19 17 17.0	-1.9	
FIA1				IAmb		IAmb	19 17 31.8		
	comp=Z,117nm,1.9s								
NC405	NORSAR Array S	23.35	349	P		P	19 17 19.4	+0.1	
NB201	NORSAR Array S	23.36	349	P		P	19 17 19.2	-0.2	
NB2	NORSAR Subarra	23.36	349	P		P	19 17 20.8	+1.4	
	comp=Z,3.5nm,0.7s,baz=154,slow=11								
NOA	NORSAR Array B	23.36	349	P		P	19 17 19.0	-0.4	
	comp=Z,0.6nm,0.5s,baz=156,slow=12,SNR=10								
NOA				LR		LR	19 28 14.6		
	comp=Z,171nm,20.0s,baz=170,slow=41								
NC303	NORSAR Array S	23.51	349	P		P	19 17 21.2	+0.3	
NC204	NORSAR Array S	23.65	348	P		P	19 17 22.6	+0.3	
KLMR	Klimovskoe	25.45	22	*e*P		P	19 17 38.8	+0.1	
KLMR				pmax		pmax			
	comp=Z,12nm,1.1s								
KLMR	Klimovskoe	25.45	22	*e*P		P	19 17 38.9	+0.2	
KLMR				AMP			19 17 40.0		
	comp=Z,12nm,1.1s								
KIRV	Kirov	27.50	33	LR		LR	19 29 39.4		
	comp=Z,246nm,19.4s,baz=194,slow=38								
PRGR	Permogore	27.98	26	*e*P		P	19 18 01.0	-0.5	
PRGR				pmax		pmax			
	comp=Z,12nm,1.2s								
AKTO	Aktyubinsk	29.11	53	P		P	19 18 11.7	-0.1	
	comp=Z,0.4nm,0.3s,baz=240,slow=14,SNR=3.4								
AKTO				LR		LR	19 31 18.2		
	comp=Z,68nm,18.4s,baz=279,slow=40								
GEYT	Alibeck	29.52	79	P		P	19 18 15.8	+0.2	
	comp=Z,1.6nm,0.4s,baz=291,slow=8.0,SNR=6.6								
GEYT				LR		LR	19 32 52.1		
	comp=Z,70nm,19.6s,baz=175,slow=42								
GEYT	Alibeck	29.52	79	P		P	19 18 15.8	+0.2	
GYA0B	ALIBECK ARRAY	29.52	79	P		P	19 18 16.4	+0.8	
GYA0B				IAmb		IAmb	19 18 40.9		
	comp=Z,3.7nm,0.8s								
TOA0	Torodi Ar. Sit	30.16	218	P		P	19 18 22.5	+1.2	
TOA0				IAmb		IAmb	19 19 07.3		
	comp=Z,20nm,1.8s								
TORD	Torodi Ar. Bea	30.16	218	P		P	19 18 22.6	+1.3	
	comp=Z,2.6nm,0.8s,baz=33,slow=9.5,SNR=13								
TORD				LR		LR	19 33 08.5		
	comp=Z,108nm,19.1s,baz=0.0,slow=42								
TORD	Torodi Ar. Bea	30.16	218	P		P	19 18 21.3	-0.1	
ABKAR	Akbulak array	30.18	56	P		P	19 18 20.8	-0.5	
ABKAR	Akbulak array	30.18	56	P		P	19 18 21.0	-0.2	
ABKAR				IAmb		IAmb	19 19 09.5		
	comp=Z,8.8nm,1.8s								
ARU	Arti	30.94	42	LR		LR	19 32 16.7		
	comp=Z,130nm,19.8s,baz=245,slow=39								
ARCES	ARCESS Array B	31.29	3	P		P	19 18 30.4	-0.4	
	comp=Z,2.8nm,0.9s,baz=191,slow=9.2,SNR=6.0								
ARCES				LR		LR	19 32 59.9		
	comp=Z,91nm,21.2s,baz=206,slow=40								
ARCES	ARCESS Array B	31.29	3	P		P	19 18 33.5	+2.6	
UOSS	Minazif	33.08	103	P		P	19 18 46.7	-0.3	
UOSS				IAmb		IAmb	19 19 12.4		
	comp=Z,8.3nm,1.2s								
BVAR	Borovoye Array	37.03	50	P		P	19 19 21.4	+0.6	
	comp=Z,0.6nm,0.5s,baz=263,slow=7.0,SNR=4.6								
ROSA	Rosais	37.67	286	P		P	19 19 23.8	-2.6	
KK31	Karatay Array	37.78	67	P		P	19 19 26.1	-1.2	
KK31				pmax		pmax			
	comp=Z,5.0nm,1.3s								
KK31	Karatay Array	37.78	67	P		P	19 19 26.1	-1.2	
KKAR	Karatay Array	37.78	67	P		P	19 19 26.9	-0.4	
KKAR				pmax		pmax			
	comp=Z,5.0nm,1.3s								
KKAR	Karatay Array	37.78	67	P		P	19 19 26.9	-0.4	
KKAR	Karatay Array	37.78	67	P		P	19 19 26.1	-1.2	
KKAR				IAmb		IAmb	19 19 33.0		
	comp=Z,4.9nm,1.2s								
DBIC	Dimbokro	39.01	222	P		P	19 19 38.7	+0.9	
DBIC				pmax		pmax			
	comp=Z,15nm,1.3s								
DBIC	Dimbokro	39.01	222	P		P	19 19 38.2	+0.4	
	comp=Z,3.6nm,0.7s,baz=8.5,slow=11,SNR=6.4								
DBIC				LR		LR	19 36 48.1		
	comp=Z,132nm,19.1s,baz=6.0,slow=38								
DBIC	Dimbokro	39.01	222	P		P	19 19 38.7	+0.9	
DBIC				IAmb		IAmb	19 20 45.5		
	comp=Z,15nm,1.3s								
TIC	Toumodi	39.12	223	*e*P		P	19 19 40.0	+1.3	
KIC	Kosan Boka	39.21	222	*e*P		P	19 19 40.9	+1.4	
	comp=Z,7.8nm,0.7s								
LIC	Lamto	39.48	222	*e*P		P	19 19 43.1	+1.4	
	comp=Z,15nm,0.6s								
SPITS	Spitsbergen Ar	39.90	359	P		P	19 19 45.1	+0.5	
	comp=Z,4.4nm,0.7s,baz=178,slow=10,SNR=3.8								
AAK	Ala-Archa	40.74	66	⇓*e*P		P	19 19 56.0	+3.8	
AAK				pmax		pmax			
	comp=Z,2.0nm,1.0s								
AAK	Ala-Archa	40.74	66	P		P	19 19 52.8	+0.6	
	comp=Z,0.4nm,0.5s,baz=240,slow=8.1,SNR=2.5								
AAK	Ala-Archa	40.74	66	P		P	19 19 53.1	+0.9	
KURBB	Kurchatov Arra	42.16	54	P		P	19 20 03.8	+0.4	
	comp=Z,0.4nm,0.5s,baz=286,slow=9.8,SNR=6.2								
KURK	Kurchatov	42.20	54	P		P	19 20 03.5	-0.3	
KURK				pmax		pmax			
	comp=Z,9.0nm,1.7s								
KURK	Kurchatov	42.20	54	P		P	19 20 03.5	-0.3	
KURK				IAmb		IAmb	19 20 05.3		
	comp=Z,8.8nm,1.6s								
KSH	Kashi	42.63	70	P		P	19 20 07.0	-0.6	
KSH				pmax		pmax			
	comp=Z,250nm,5.7s								
MK31	Makanchi Array	45.25	59	P		P	19 20 27.7	-0.8	
MK31				pmax		pmax			
	comp=Z,2.0nm,1.2s								
MK31	Makanchi Array	45.25	59	P		P	19 20 27.7	-0.8	
MKAR	Makanchi Array	45.25	59	*i* P		P	19 20 28.5	0.0	
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.4s								
MKAR	Makanchi Array	45.25	59	P		P	19 20 28.1	-0.4	
	comp=Z,1.0nm,0.4s,baz=280,slow=7.5,SNR=19								
MKAR				LR		LR	19 43 24.2		
	comp=Z,55nm,19.2s,baz=296,slow=42								
ZAA0	Zalesovo Array	45.60	48	P		P	19 20 29.9	-1.2	
ZAA0				IAmb		IAmb	19 20 34.0		
	comp=Z,4.2nm,0.7s								
ZALV	Zalesovo Beam	45.60	48	*i* P		P	19 20 31.1	+0.1	
ZALV				pmax		pmax			

AGPR					Sn	19 14 56.6	+1.4		
LSP	**Las Mesas**	1.47	90	*e*P	Pn	19 14 36.8	-0.4		
LSP	**Las Mesas**	1.47	90		Pn	19 14 36.8	-0.4		
MLPR	**Magueyes Islan**	1.52	98	*e*P	Pn	19 14 36.7	-1.2		
MLPR	**Magueyes Islan**	1.52	98	*e*S	Sn	19 14 56.5	-0.1		
MLPR	**Magueyes Islan**	1.52	98		Pn	19 14 36.7	-1.2		
MLPR					Sn	19 14 56.5	-0.1		
BANI	**BANI**	1.66	277		Pn	19 14 39.0	-0.8		
BANI					Sn	19 15 04.7	+4.6		
GBPR	**Guanica, Bosqu**	1.68	97	*e*P	Pn	19 14 39.4	-0.6		
GBPR	**Guanica, Bosqu**	1.68	97	*e*S	Sn	19 15 00.7	+0.3		
GBPR	**Guanica, Bosqu**	1.68	97		Pn	19 14 39.4	-0.6		
GBPR					Sn	19 15 00.7	+0.3		
AOPR	**Arecibo Observ**	1.79	85	*e*P	Pn	19 14 41.4	-0.1		
AOPR	**Arecibo Observ**	1.79	85	*e*S	Pn	19 15 04.1	+1.0		
AOPR	**Arecibo Observ**	1.79	85		Pn	19 14 41.4	-0.1		
AOPR					Sn	19 15 04.1	+1.0		
OBIP	**Obispado Ponce**	1.93	94	*e*P	Pn	19 14 42.6	-0.8		
OBIP	**Obispado Ponce**	1.93	94	*e*S	Sn	19 15 07.2	+0.7		
OBIP	**Obispado Ponce**	1.93	94		Pn	19 14 42.6	-0.8		
OBIP					Sn	19 15 07.2	+0.7		
CELP	**Cerrillos**	1.95	93	*e*P	Pn	19 14 42.6	-1.1		
CELP	**Cerrillos**	1.95	93		Pn	19 14 42.6	-1.1		
EMPR	**Esperanza - Ma**	2.01	82	*e*P	Pn	19 14 44.0	-0.5		
EMPR	**Esperanza - Ma**	2.01	82	*e*S	Sn	19 15 09.0	+0.5		
EMPR	**Esperanza - Ma**	2.01	82		Pn	19 14 44.0	-0.5		
EMPR					Sn	19 15 09.0	+0.5		
ICMP	**Isla Caja de M**	2.02	98	Pn	Pn	19 14 43.6	-1.1		
SJG	**San Juan**	2.36	92	Pn	Pn	19 14 49.2	0.0		
SJG					Sn	19 15 19.3	+2.3		
IGPR	**InterUniversit**	2.41	95	*e*P	Pn	19 14 49.7	-0.2		
IGPR	**InterUniversit**	2.41	95	*e*S	Sn	19 15 19.6	+1.4		
IGPR	**InterUniversit**	2.41	95		Pn	19 14 49.4	-0.6		
PDPR	**Patillas Dam,**	2.48	94	Pn	Pn	19 14 48.6	-2.3		
CBYP	**Canovanas**	2.63	88	*e*P	Pn	19 14 52.6	-0.6		
CBYP	**Canovanas**	2.63	88		Pn	19 14 52.6	-0.6		
HUMP	**Col San Antoni**	2.64	91	*e*P	Pn	19 14 53.2	+0.1		
HUMP	**Col San Antoni**	2.64	91	*e*S	Sn	19 15 24.8	+0.8		
HUMP	**Col San Antoni**	2.64	91		Pn	19 14 53.2	+0.1		
HUMP					Sn	19 15 24.8	+0.8		
SDDR	**Presa de Saban**	2.64	288		Pn	19 14 53.0	-0.2		
MTP	**Monte Pirata**	2.92	91	*e*P	Pn	19 14 56.6	-0.4		
MTP	**Monte Pirata**	2.92	91	*e*S	Sn	19 15 31.8	+0.8		
MTP	**Monte Pirata**	2.92	91		Pn	19 14 56.6	-0.4		
MTP					Sn	19 15 31.8	+0.8		
GRTK	**Grand Turk**	4.06	325	Pn	Pn	19 15 10.6	-2.0		

*THE **28** 19:15:42.8, 38.41N×20.49E, h5km±2km, ML3.8/10, Error ellipse: s-maj=2.5km s-min=0.4km az=34.0*
*ATH **28** 19:15:42.4, 38.43N×20.46E, h9km±1km, ML3.7/21, Error ellipse: s-maj=1.7km s-min=0.6km az=268.0*
*IDC **28** 19:15:48.2±2.6, 38.44N×20.45E, h62km±29km, mb3.4/10, mb1 3.5/13, mb1mx3.2/60, mbtmp3.6/13, ML2.8/3, Error ellipse: s-maj=20.7km s-min=17.2km az=154.0*
ISC 28 19:15:42.3±0.8, 38.42N±0.02×20.44E±0.03, h10km±5km, n58, σ1§02/83, mb3.7/10, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.10**	**70**	P	**Pg**	**19 15 44.5**	**-0.4**
FSK				S	**Sg**	**19 15 45.9**	**-0.9**
	47μm,0.3s						
FSK	**Fiskardo**	**0.10**	**70**	P	**Pg**	**19 15 44.6**	**-0.4**
FSK				S	**Sg**	**19 15 46.2**	**-0.6**
KEF1	**Kardakata, Kep**	**0.15**	**171**	P	**Pg**	**19 15 45.6**	**0.0**
KEF1				S	**Sg**	**19 15 48.3**	**+0.4**
KEF1				AML	AML	19 15 48.6	
KEF1				AML	AML	19 15 50.6	
KEF3	**Kipouria, Keph**	**0.23**	**199**	P	**Pg**	**19 15 47.3**	**+0.2**
KEF3				S	**Sg**	**19 15 50.5**	**+0.2**
KEF3				AML	AML	19 15 52.6	
KEF3				AML	AML	19 15 52.9	
CHV1	**Chavriata, Kef**	**0.24**	**191**	P	**Pg**	**19 15 47.3**	**0.0**
CHV1				S	**Sg**	**19 15 51.5**	**+0.8**
	61μm,0.3s						
ARG2	**Argostoli**	**0.25**	**172**	P	**Pg**	**19 15 46.8**	**-0.5**
ARG2				S	**Sg**	**19 15 51.2**	**+0.5**
	94μm,0.3s						
EVGI	**Lefkada island**	**0.26**	**40**	P	**Pg**	**19 15 47.5**	**-0.1**
EVGI				S	**Sg**	**19 15 50.8**	**-0.3**
EVGI	**Lefkada island**	**0.26**	**40**	P	**Pg**	**19 15 47.8**	**+0.2**
EVGI				S	**Sg**	**19 15 50.8**	**-0.3**
KEF2	**Argostoli. Kep**	**0.26**	**172**	P	**Pg**	**19 15 47.5**	**0.0**
KEF2				S	**Sg**	**19 15 51.6**	**+0.4**
KEF2				AML	AML	19 15 52.7	
KEF2				AML	AML	19 15 52.7	
VLS	**Valsamata**	**0.27**	**155**	P	**Pg**	**19 15 47.5**	**-0.3**
VLS				S	**Sg**	**19 15 51.2**	**-0.3**
	20μm,0.3s						
VLS	**Valsamata**	**0.27**	**155**	P	**Pg**	**19 15 47.5**	**-0.3**
VLS				S	**Sg**	**19 15 51.8**	**+0.3**
VLS				AML	AML	19 15 52.2	
	comp=E,43481μm,0.3s						
VLS				AML	AML	19 15 53.9	
	comp=N,36746μm,0.3s						
LKD2	**Lefkada island**	**0.40**	**25**	P	**Pg**	**19 15 50.3**	**+0.1**
LKD2				S	**Sg**	**19 15 56.2**	**+0.7**
	comp=N,8μm,0.6s						
LKD2	**Lefkada island**	**0.40**	**25**	P	**Pg**	**19 15 50.3**	**+0.1**
LKD2				S	**Sg**	**19 15 55.6**	**0.0**
LKD2				AML	AML	19 15 57.8	
	comp=N,13989μm,0.4s						
LKD2				AML	AML	19 15 58.1	
	comp=E,16770μm,0.6s						
KFL	**Anninata**	**0.41**	**139**	P	**Pg**	**19 15 50.0**	**-0.4**
KFL				S	**Sg**	**19 15 55.3**	**-0.6**
	comp=E,23μm,0.3s						
KFL	**Anninata**	**0.41**	**139**	P	**Pg**	**19 15 50.1**	**-0.3**
KFL				S	**Sg**	**19 15 56.3**	**+0.3**
KFL				AML	AML	19 15 57.6	
	comp=N,45983μm,0.3s						
KFL				AML	AML	19 15 59.5	
	comp=E,47596μm,0.4s						
TSLK	**Tsoukalades, L**	**0.43**	**23**	P	**Pg**	**19 15 51.0**	**+0.2**
TSLK				S	**Sg**	**19 15 57.7**	**+1.2**
	comp=E,11μm,0.8s						
TSLK	**Tsoukalades, L**	**0.43**	**23**	P	**Pg**	**19 15 51.1**	**+0.2**
TSLK				S	**Sg**	**19 15 56.8**	**+0.3**
TSLK				AML	AML	19 15 59.6	
	comp=E,19911μm,0.6s						
TSLK				AML	AML	19 16 01.5	
	comp=N,22782μm,0.8s						
AST1	**Astakos**	**0.52**	**77**	P	**Pg**	**19 15 52.5**	**+0.1**
AST1				S	**Sg**	**19 15 59.7**	**+0.4**
	comp=N,15μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.57**	**162**	P	**Pg**	**19 15 53.3**	**-0.1**
VLMS				S	**Sg**	**19 16 01.5**	**+0.6**
VLMS				AML	AML	19 16 04.0	
	comp=E,32246μm,0.2s						
VLMS				AML	AML	19 16 05.0	
	comp=N,50062μm,0.4s						
PDO	**Prodromos**	**0.61**	**73**	P	**Pg**	**19 15 53.8**	**-0.2**
PDO				S	**Sg**	**19 16 01.9**	**-0.1**
PDO	**Prodromos**	**0.61**	**73**	P	**Pg**	**19 15 53.9**	**-0.2**
PDO				S	**Sg**	**19 16 02.2**	**+0.2**
PDO				AML	AML	19 16 05.1	
	comp=E,11019μm,0.4s						
PDO				AML	AML	19 16 08.7	
	comp=N,13751μm,0.4s						
ZAK2	**Zakynthos**	**0.73**	**150**	P	**Pg**	**19 15 56.3**	**-0.1**
ZAK2				S	**Sg**	**19 16 06.8**	**+0.9**
	comp=N,29μm,0.5s						
KRI1	**kERI**	**0.82**	**159**	P	**Pg**	**19 15 57.0**	**-1.0**
KRI1				S	**Sg**	**19 16 08.9**	**+0.2**
	comp=N,11μm,0.3s						
PVO	**Paravola**	**0.87**	**77**	P	**Pg**	**19 15 59.0**	**0.0**
PVO				AML	AML	19 16 13.8	
	comp=N,10536μm,0.3s						
PVO				AML	AML	19 16 14.8	
	comp=E,6292μm,0.3s						
RLS	**Riolos of Patr**	**0.89**	**114**	P	**Pg**	**19 15 58.9**	**-0.4**
RLS				AML	AML	19 16 17.8	
	comp=N,3046μm,0.5s						
RLS				AML	AML	19 16 20.8	
	comp=E,3401μm,0.9s						
DRO	**Drossia**	**1.10**	**115**	P	**Pg**	**19 16 02.6**	**-0.9**
DRO				AML	AML	19 16 24.3	
	comp=E,6549μm,0.4s						
DRO				AML	AML	19 16 25.9	
	comp=N,8929μm,0.5s						

EFP	**Efpalio**	**1.15**	**89**	P	**Pb**	**19 16 03.7**	**-0.5**		
EFP				AML	AML	19 16 26.9			
	comp=N,9387μm,0.5s								
EFP				AML	AML	19 16 27.1			
	comp=E,8573μm,0.6s								
ANX	**Ano Chora**	**1.17**	**81**	P	**Pg**	**19 16 04.2**	**-0.6**		
ANX				AML	AML	19 16 27.5			
	comp=E,5549μm,0.4s								
ANX				AML	AML	19 16 30.0			
	comp=N,9147μm,0.5s								
EVR	**Evrytania**	**1.18**	**65**	P	**Pg**	**19 16 03.9**	**-1.0**		
EVR				AML	AML	19 16 29.9			
	comp=E,1892μm,0.4s								
EVR				AML	AML	19 16 33.5			
	comp=N,1779μm,0.9s								
LAKA	**Lakka**	**1.22**	**98**	P	**Pb**	**19 16 05.1**	**-0.4**		
LAKA				AML	AML	19 16 28.5			
	comp=N,3081μm,0.5s								
LAKA				AML	AML	19 16 30.7			
	comp=E,2610μm,0.6s								
SERG	**Sergoula**	**1.27**	**90**	P	**Pn**	**19 16 05.6**	**-0.4**		
SERG				AML	AML	19 16 29.7			
	comp=N,8090μm,0.6s								
SERG				AML	AML	19 16 32.1			
	comp=E,6696μm,0.5s								
JAN	**Janina**	**1.27**	**14**	P	**Pn**	**19 16 05.9**	**-0.2**		
TRIZ	**Trizonia**	**1.28**	**92**	P	**Pn**	**19 16 05.7**	**-0.5**		
KALE	**Kalithea**	**1.33**	**91**	P	**Pn**	**19 16 06.7**	**-0.3**		
KALE				S	**Sg**	**19 16 25.5**	**+0.3**		
KALE				AML	AML	19 16 34.5			
	comp=N,5927μm,0.6s								
KALE				AML	AML	19 16 35.5			
	comp=E,3628μm,0.8s								
AMT	**Artemida-Makis**	**1.34**	**131**	P	**Pn**	**19 16 07.3**	**+0.3**		
KLV	**Kalavryta, Ach**	**1.40**	**105**	P	**Pn**	**19 16 07.7**	**-0.1**		
MAKR	**Makrakomi, Fth**	**1.45**	**65**	P	**Pn**	**19 16 09.2**	**+0.7**		
MAKR				AML	AML	19 16 39.2			
	comp=N,3461μm,1.0s								
MAKR				AML	AML	19 16 40.5			
	comp=E,5236μm,0.3s								
AXAR	**Agios Charalam**	**1.77**	**78**	P	**Pb**	**19 16 14.7**	**-0.1**		
AXAR				AML	AML	19 16 49.2			
	comp=N,4357μm,0.9s								
AXAR				AML	AML	19 16 50.2			
	comp=E,3937μm,0.5s								
PROD	**Prodromos**	**1.94**	**94**	P	**Pb**	**19 16 17.8**	**+0.1**		
LOUT	**Loutraki**	**2.04**	**102**	P	**Pb**	**19 16 19.0**	**-0.4**		
VIL2	**Platees**	**2.23**	**95**	P	**Pb**	**19 16 22.3**	**-0.4**		
OHR	**Ohrid**	**2.70**	**6**	*e*Pn	**Pb**	**19 16 29.2**	**-1.4**		
STIP	**Stip**	**3.53**	**22**	*e*Pn	**Pn**	**19 16 40.6**	**+3.4**		
IDI	**Anoyia**	**4.75**	**130**	P	**Pn**	**19 16 57.9**	**+4.0**		
	comp=E,0.3nm,0.3s,baz=18,slow=20,SNR=1.1								
IDI				S	**Sn**	**19 17 48.5**	**-0.5**		
	comp=E,0.9nm,0.3s,baz=336,slow=18,SNR=1.8								
VAE	**Valguarnera**	**4.86**	**261**	S	**Sn**	**19 17 48.2**	**-3.5**		
	comp=E,3.6nm,0.3s,baz=288,slow=19,SNR=2.2								
MLR	**Muntele Rosu**	**8.16**	**28**	P	**Pn**	**19 17 44.9**	**+4.1**		
	comp=E,0.1nm,0.3s,baz=323,slow=20,SNR=1.3								
BRTR	**Keskin Array B**	**10.34**	**79**	P	**Pn**	**19 18 12.4**	**+1.7**		
	comp=E,0.1nm,0.3s,baz=264,slow=11,SNR=2.3								
DAVOX	**Davos/Dischmat**	**11.41**	**320**	S	**Sn**	**19 20 30.9**	**-1.9**		
	comp=E,0.1nm,0.3s,baz=336,slow=20,SNR=2.6								
MDT	**Midelt**	**21.09**	**262**	P	**P**	**19 20 28.3**	**+1.4**		
	comp=E,3.8nm,0.7s,baz=70,slow=5.9,SNR=4.4								
HFS	**Hagfors**	**22.15**	**351**	P	**P**	**19 20 38.1**	**+0.2**		
	comp=E,2.3nm,0.6s,baz=163,slow=11,SNR=1.7								
EKA	**Eskdalemuir Ar**	**23.19**	**324**	P	**P**	**19 20 48.9**	**0.0**		
	comp=E,2.8nm,0.8s,baz=127,slow=11,SNR=3.0								
FINES	**FINESS Array B**	**23.31**	**7**	P	**P**	**19 20 50.1**	**0.0**		
	comp=E,1.0nm,0.5s,baz=186,slow=7.7,SNR=4.0								
NOA	**NORSAR Array B**	**23.36**	**349**	P	**P**	**19 20 51.1**	**+0.4**		
	comp=E,0.2nm,0.5s,baz=164,slow=10,SNR=2.4								
GEYT	**Alibeck**	**29.49**	**79**	P	**P**	**19 21 45.9**	**-0.6**		
	comp=E,1.0nm,0.6s,baz=285,slow=8.2,SNR=2.9								
TORD	**Torodi Ar. Bea**	**30.18**	**219**	P	**P**	**19 21 52.6**	**-0.2**		
	comp=E,0.2nm,0.5s,baz=73,slow=36,SNR=3.3								
KURBB	**Kurchatov Arra**	**42.13**	**54**	P	**P**	**19 23 34.7**	**+0.3**		
	comp=E,0.3nm,0.7s,baz=285,slow=9.3,SNR=2.4								
MKAR	**Makanchi Array**	**45.23**	**59**	P	**P**	**19 23 59.0**	**-0.5**		
	comp=E,0.4nm,0.5s,baz=275,slow=7.1,SNR=4.7								
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**19 24 01.9**	**-0.2**		
	comp=E,1.9nm,0.5s,baz=278,slow=9.1,SNR=7.4								

*IDC **28** 19:26:02.2±1.1, 26.93N×140.66E, h348km±12km, mb3.2/8, mb1 3.3/11, mb1mx3.0/45, mbtmp3.9/11, Error ellipse: s-maj=34.2km s-min=12.4km az=80.0*
*JMA **28** 19:26:03.8±0.1, 27.28N×141.17E, h345km±2km, M4.1*
ISC 28 19:26:02.2±0.8, 27.16N±0.08×141.0E±0.1, h350km, n22, σ2§02/28, mb3.5/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.09**	**93**	P	**Pn**	**19 26 48.9**	**+0.6**
JCJ	**Chichijima**	**1.09**	**93**	P	**Pn**	**19 26 49.1**	**+0.8**
	13nm,0.3s,baz=306,slow=23,SNR=14						
JCJ				S	**S**	**19 27 23.2**	**-2.0**
	112nm,0.3s,baz=278,slow=22,SNR=15						
JHH2	**Haha-jima-NKT2**	**1.20**	**116**	P	**Pn**	**19 26 49.7**	**+0.8**
JHH2				S	**S**	**19 27 25.7**	**-0.5**
JHJ2	**Mitsune**	**6.01**	**351**	*e*S	**S**	**19 28 45.6**	**-1.2**
BSO3	**Boso 3**	**7.63**	**357**	*e*S	**S**	**19 29 18.8**	**-1.9**
BSO4	**Boso 4**	**7.83**	**356**	*e*S	**S**	**19 29 23.6**	**-1.7**
JOD2	**Odawara 2**	**8.24**	**349**	P	**P**	**19 28 01.2**	**-0.8**
JOD2				*e*S	**S**	**19 29 32.3**	**-2.1**
JHU	**Hanno**	**8.78**	**351**	S	**S**	**19 29 41.5**	**-4.9**
JRY	**Ryogami san**	**9.00**	**349**	P	**Pn**	**19 28 09.5**	**+1.3**
JRY				S	**S**	**19 29 48.5**	**-2.7**
JYT	**Yasato**	**9.06**	**356**	P	**Pn**	**19 28 10.0**	**+1.1**
JYT				*e*S	**S**	**19 29 48.7**	**-3.8**
MJAR	**Matsushiro Arr**	**9.64**	**347**	P	**Pn**	**19 28 16.8**	**+1.0**
	0.1nm,0.3s,baz=134,slow=22,SNR=5.5						
JNU	**Nakatsue**	**10.56**	**307**	P	**Pn**	**19 28 27.6**	**+0.7**
	0.2nm,0.3s,baz=136,slow=8.9,SNR=3.4						
KSRS	**Korea Array**	**15.05**	**316**	P	**Pn**	**19 29 22.2**	**+2.7**
	0.3nm,0.3s,baz=131,slow=12,SNR=12						
USRK	**Ussuriysk Ar.**	**18.48**	**339**	P	**P**	**19 29 55.8**	**+1.7**
	baz=164,slow=11,SNR=8.2						
KLR	**Kul'dur**	**23.16**	**345**	P	**P**	**19 30 41.0**	**+2.3**
	0.8nm,0.4s,baz=174,slow=8.8,SNR=6.9						
WRA	**Warramunga Arr**	**47.26**	**189**	P	**P**	**19 33 59.9**	**-1.8**
	1.3nm,0.3s,baz=6.7,slow=9.0,SNR=29						
MKAR	**Makanchi Array**	**49.60**	**310**	P	**P**	**19 34 18.4**	**-0.7**
	0.4nm,0.7s,baz=87,slow=10,SNR=5.2						
MKAR				ScP	**ScP**	**19 38 56.2**	**0.0**
	0.4nm,0.7s,baz=82,slow=4.0,SNR=3.9						
ASAR	**Alice Springs**	**50.99**	**188**	P	**P**	**19 34 27.6**	**-2.0**
	0.5nm,0.6s,baz=0.3,slow=6.6,SNR=9.4						
YKA	**Yellowknife Ar**	**72.60**	**28**	P	**P**	**19 36 54.9**	**+3.1**
	0.3nm,0.5s,baz=297,slow=6.1,SNR=3.1						
FINES	**FINESS Array B**	**77.41**	**333**	P	**P**	**19 37 19.4**	**+0.3**
	0.6nm,0.4s,baz=46,slow=8.0,SNR=6.5						
HFS	**Hagfors**	**82.93**	**336**	P	**P**	**19 37 48.2**	**-0.1**
	0.6nm,0.4s,baz=63,slow=0.6,SNR=4.5						
NOA	**NORSAR Array B**	**83.15**	**338**	P	**P**	**19 37 49.5**	**0.0**
	0.9nm,0.7s,baz=49,slow=4.8,SNR=3.2						

*IDC **28** 19:30:35.3±1.2, 56.66N×34.28W, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/39, mbtmp3.6/6, MS3.3/2, Ms1 3.4/2, ms1mx2.9/32, Error ellipse: s-maj=45.1km s-min=21.8km az=22.0*
*NEIC **28** 19:30:37.4±1.5, 56.6N±0.2×34.3W±0.2, h16km±3km, mb4.5/5, Error ellipse: s-maj=23.8km s-min=13.0km az=200.0*
ISC 28 19:30:37.0±0.9, 56.5N±0.2×34.2W±0.1, h10km, n20, σ1§35/18, mb3.9/9, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**7.44**	**313**	Pn	**Pn**	**19 32 28.5**	**+3.1**
NOA	**NORSAR Array B**	**23.59**	**60**	LR	LR	19 42 55.4	
	comp=Z,41nm,18.8s,baz=275,slow=31						
ESDC	**Sonseca Array**	**26.00**	**118**	LR	LR	19 43 51.4	
	comp=Z,90nm,19.0s,baz=345,slow=30						
ESDC	**Sonseca Array**	**26.00**	**118**	P	**P**	**19 36 11.0**	**+1.1**
ARCES	**ARCESS Array B**	**28.66**	**39**	P	**P**	**19 36 32.4**	**-1.0**
ARE0	**ARCESS Array S**	**28.66**	**39**	P	**P**	**19 36 32.8**	**-0.6**
ARE0				IAmb	IAmb	19 36 33.1	
	comp=Z,8.6nm,1.9s						
YKA	**Yellowknife Ar**	**38.73**	**313**	P	**P**	**19 38 00.0**	**-0.6**
	comp=Z,0.2nm,0.7s,baz=65,slow=9.4,SNR=3.8						
BRTR	**Keskin Array B**	**46.29**	**81**	P	**P**	**19 39 04.2**	**+1.6**
	comp=Z,1.2nm,0.8s,baz=326,slow=4.1,SNR=4.8						
PDAR	**Pinedale Array**	**48.21**	**287**	P	**P**	**19 39 16.2**	**-1.4**
	comp=Z,0.3nm,0.7s,baz=32,slow=7.4,SNR=2.9						
PDAR	**Pinedale Array**	**48.21**	**287**	P	**P**	**19 39 16.1**	**-1.6**
ILAR	**Eielson Array**	**48.67**	**328**	P	**P**	**19 39 19.9**	**-0.7**
	comp=Z,1.0nm,0.8s,baz=37,slow=6.0,SNR=6.9						
ILAR	**Eielson Array**	**48.67**	**328**	P	**P**	**19 39 19.2**	**-1.4**
BPAW	**Bear Paw Mtn.**	**50.35**	**329**	P	**P**	**19 39 33.7**	**+0.2**
BPAW				IAmb	IAmb	19 39 50.0	
	comp=Z,25nm,2.0s						
TORD	**Torodi Ar. Bea**	**51.28**	**133**	P	**P**	**19 39 41.5**	**+0.5**
	comp=Z,1.3nm,1.0s,baz=347,slow=6.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**51.28**	**133**	P	**P**	**19 39 41.0**	**0.0**
ABKAR	**Akbulak array**	**52.95**	**55**	P	**P**	**19 39 53.3**	**+0.2**
MK31	**Makanchi Array**	**64.22**	**43**	P	**P**	**19 41 11.2**	**-0.5**
MK31				IAmb	IAmb	19 41 21.8	
	comp=Z,6.2nm,1.9s						
MKAR	**Makanchi Array**	**64.22**	**43**	P	**P**	**19 41 09.8**	**-1.9**
	comp=Z,0.6nm,0.7s,baz=340,slow=6.4,SNR=7.5						
MKAR	**Makanchi Array**	**64.22**	**43**	P	**P**	**19 41 10.9**	**-0.8**
ASAR	**Alice Springs**	**146.05**	**20**	PKPbc	**PKPdf**	**19 50 15.3**	**-0.6**
	comp=Z,1.0nm,0.9s,baz=338,slow=2.1,SNR=4.9						

WEL 28 19:36:37.4, 41°S±2°×17°6E±°, h32km±3km, M2.2/13, ML2.2/12, MLv2.2/13, Error ellipse: s-maj=0.0km s-min=0.0km az=68.5, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIWZ	**Tintock**	**0.12**	**175**	P	P	19 36 43.5	+0.3
PRWZ	**Pori Road**	**0.13**	**36**	P	Pn	19 36 43.6	+0.3
MRZ	**Mangatainoka R**	**0.22**	**270**	P	Pb	19 36 44.3	+0.2
POWZ	**Post Office Ro**	**0.28**	**343**	P	Pn	19 36 45.1	-0.2
BFZ	**Birch Farm**	**0.28**	**94**	P	Pn	19 36 45.4	0.0
HOWZ	**Holdsworth Sta**	**0.36**	**229**	P	Pn	19 36 46.4	-0.1
DVHZ	**Dannevirke**	**0.42**	**32**	P	Pb	19 36 47.1	+0.2
TMWZ	**Te Maipa**	**0.45**	**178**	P	Pb	19 36 47.3	+0.2
OGWZ	**Otaki Gorge**	**0.56**	**253**	P	Pn	19 36 49.4	+0.2
TSZ	**Takapari Road**	**0.60**	**6**	P	Pn	19 36 53.2	+3.4
PRHZ	**Porangahau**	**0.70**	**56**	P	Pb	19 36 51.9	+0.6
CAW	**Cannon Point**	**0.76**	**234**	P	Pb	19 36 52.6	+0.4
KIW	**Kapiti Island**	**0.76**	**254**	P	Pb	19 36 52.8	+0.6
PKVZ	**Pokaka**	**1.43**	**343**	P	Pb	19 37 06.0	+2.5
DSZ	**Denniston Nort**	**3.25**	**249**	P	Pn	19 37 26.6	+0.3

WEL 28 19:37:10.7, 38.7S±0.7×177.7E±0.7, h19km±1km, M3.3/65, ML3.9/14, MLv3.3/65, Error ellipse: s-maj=0.0km s-min=0.0km az=54.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIGZ	**Rimuhau**	**0.07**	**142**	P	Pg	19 37 14.8	+0.4
RIGZ	**Rimuhau**	**0.07**	**142**	P	Pg	19 37 14.8	+0.3
RIGZ				S	Sg	19 37 18.8	+1.9
TKGZ	**Te Karaka**	**0.24**	**27**	P	Pg	19 37 16.9	+0.5
TKGZ	**Te Karaka**	**0.24**	**27**	P	Pg	19 37 17.0	+0.6
TKGZ				S	Sg	19 37 22.4	+2.1
RAGZ	**Rawiri**	**0.28**	**304**	P	Pg	19 37 18.0	+0.9
RAGZ				S	Sg	19 37 22.8	+1.4
PRGZ	**Paritu Road**	**0.30**	**153**	P	Pb	19 37 18.4	+0.8
SNGZ	**Shannon Statio**	**0.32**	**246**	P	Pb	19 37 18.2	+0.4
SNGZ	**Shannon Statio**	**0.32**	**246**	P	Pb	19 37 18.1	+0.3
SNGZ				S	Sb	19 37 24.4	+1.9
MWZ	**Matawai**	**0.35**	**336**	P	Pb	19 37 18.5	+0.1
MWZ	**Matawai**	**0.35**	**336**	P	Pb	19 37 18.5	+0.2
MWZ				S	Sb	19 37 24.3	+0.8
KNZ	**Kokohu**	**0.37**	**184**	P	Pb	19 37 19.1	+0.4
KNZ				S	Sb	19 37 25.9	+1.8
CNGZ	**Carnagh Statio**	**0.43**	**67**	P	Pn	19 37 21.1	-0.7
CNGZ	**Carnagh Statio**	**0.43**	**67**	P	Pn	19 37 20.8	-1.0
MHGZ	**Mahia Peninsul**	**0.52**	**163**	P	Pg	19 37 21.6	+0.3
RAHZ	**Arahi**	**0.55**	**241**	P	Pg	19 37 22.5	+0.6
RA

0.2nm,0.5s,baz=122,slow=7.8,SNR=6.0

*IDC **28** 19:48:58.2±4.6, 23°.36N×94°.31E, h73km±46km, mb3.2/2, mb1 3.2/3, mb1mx2.9/29, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=87.4km s-min=23.0km az=59.0*

ISC 28 19:48:57.2±0.9, 22°.6N±0°.3×93°.3E±0°.3, h100km, n13, σ2s38/19, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.70**	**127**	P	**Pn**	**19 50 31.5**	**-1.6**
	0.3nm,0.3s,baz=310,slow=13,SNR=6.7						
CMAR				S	**Sn**	**19 51 45.4**	**-2.7**
	0.3nm,0.3s,baz=322,slow=25,SNR=5.9						
ODAN	**Odare**	**6.84**	**309**	*e*Pn	**Pn**	**19 50 36.9**	**+1.7**
ODAN				*e*Sn	**Sn**	**19 51 49.7**	**-2.1**
	42nm,0.2s						
TAPN	**Taplejung**	**6.93**	**314**	*e*Pn	**Pn**	**19 50 39.2**	**+2.7**
TAPN				*e*Sn	**Sn**	**19 51 52.6**	**-1.4**
	52nm,0.3s						
JIRN	**Jiri**	**8.18**	**309**	*e*Pn	**Pn**	**19 50 54.7**	**+1.2**
JIRN				*e*Sn	**Sn**	**19 52 21.3**	**-3.1**
	65nm,0.2s						
GUN	**Gumba**	**8.55**	**310**	*e*Pn	**Pn**	**19 51 00.7**	**+2.2**
PKI	**Pulchoki**	**8.70**	**306**	*e*Pn	**Pn**	**19 51 02.6**	**+2.1**
PKIN	**Phulchoki**	**8.71**	**306**	*e*Pn	**Pn**	**19 51 02.6**	**+2.0**
PKIN				*e*Sn	**Sn**	**19 52 33.9**	**-3.4**
	20nm,0.3s						
KKN	**Kakani**	**8.91**	**307**	*e*Pn	**Pn**	**19 51 05.8**	**+2.4**
KKN				*e*Sn	**Sn**	**19 52 39.3**	**-2.8**
DMN	**Daman**	**8.95**	**305**	*e*Pn	**Pn**	**19 51 05.0**	**+1.2**
GKN	**Gorkha**	**9.51**	**306**	*e*Pn	**Pn**	**19 51 12.7**	**+1.3**
DANN	**Dangsing**	**10.35**	**305**	*e*Pn	**Pn**	**19 51 24.3**	**+1.4**
MKAR	**Makanchi Array**	**25.71**	**342**	P	**P**	**19 54 17.9**	**-0.2**
	1.0nm,0.7s,baz=147,slow=10,SNR=15						
ASAR	**Alice Springs**	**60.61**	**137**	P	**P**	**19 59 01.0**	**+3.2**
	0.4nm,0.9s,baz=318,slow=6.6,SNR=3.4						

*SJA **28** 19:52:56.0±0.5, 20°.99S×67°.27W, h222km±6km, ML2.9, MW2.9*
*GUC **28** 19:52:57.6±0.6, 20°.92S×67°.66W, h228km±7km, ML3.3*

ISC 28 19:52:56.6±1.9, 20°.96S±0°.05×67°.34W±0°.05, h212km±17km, n25, σ0s94/42, 8C-4D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB08	**IPOC Station P**	**1.88**	**295**	⇑*i* P	**Pn**	**19 53 35.9**	**+0.6**
PB08				*i* S	**S**	**19 54 05.5**	**+0.5**
PB08				IAML		19 54 08.0	
	comp=E,69nm,0.2s						
PB09	**IPOC Station P**	**1.96**	**244**	*e*P	**Pn**	**19 53 37.1**	**+1.3**
PB09				*e*S	**S**	**19 54 06.6**	**+0.6**
PB09	**IPOC Station P**	**1.96**	**244**	*i* P	**Pn**	**19 53 36.8**	**+1.0**
PB01	**IPOC Station P**	**2.01**	**267**	⇑*i* P	**Pn**	**19 53 36.4**	**+0.2**
PB01				*i* S	**S**	**19 54 05.8**	**-0.8**
PB01				IAML		19 54 07.7	
	comp=N,91nm,0.1s						
YJA	**Yavi**	**2.09**	**126**	⇓*i* P	**Pn**	**19 53 37.6**	**+0.2**
YJA				*i* Sg	**S**	**19 54 08.9**	**+0.1**
YJA				IAML		19 54 10.6	
	comp=Z,27nm,0.4s						
GO01	**Chusmiza**	**2.16**	**306**	⇑*i* P	**Pn**	**19 53 38.5**	**+0.3**
GO01				*i* S	**S**	**19 54 10.3**	**+0.2**
PB02	**IPOC Station P**	**2.41**	**261**	*e*P	**Pn**	**19 53 40.8**	**+0.3**
PB02				*i* S	**S**	**19 54 13.0**	**-1.2**
PB02				IAML		19 54 14.2	
	comp=E,107nm,0.4s						
PB11	**IPOC Station P**	**2.48**	**298**	⇑*i* P	**Pn**	**19 53 41.1**	**-0.1**
PB11				*i* S	**S**	**19 54 14.4**	**-1.1**
PB07	**IPOC Station P**	**2.49**	**252**	⇓*i* P	**Pn**	**19 53 42.2**	**+0.8**
PB07				*i* S	**S**	**19 54 14.8**	**-1.0**
PB07				IAML		19 54 15.1	
	comp=N,104nm,0.3s						
PB03	**IPOC Station P**	**2.49**	**244**	*e*P	**Pn**	**19 53 42.0**	**+0.6**
PATCX	**Punta Patache**	**2.63**	**272**	*e*P	**Pn**	**19 53 42.8**	**0.0**
PATCX				*i* S	**S**	**19 54 16.8**	**-1.6**
PATCX				IAML		19 54 19.1	
	comp=N,96nm,0.6s						
TA01	**Diego Aracena**	**2.69**	**278**	*e*P	**Pn**	**19 53 43.0**	**-0.3**
TA01				*i* S	**S**	**19 54 17.1**	**-2.3**
PB06	**IPOC Station P**	**2.71**	**230**	⇓*i* P	**Pn**	**19 53 44.5**	**+0.8**
PB06				*i* S	**S**	**19 54 20.3**	**+0.2**
PB06				IAML		19 54 21.3	
	comp=E,53nm,0.3s						
PB06	**IPOC Station P**	**2.71**	**230**	*i* P	**Pn**	**19 53 45.0**	**+1.3**
MNMC	**Minye Minye**	**2.79**	**310**	⇑*i* P	**Pn**	**19 53 45.3**	**+0.4**
MNMC				*i* S	**S**	**19 54 21.7**	**-0.4**
HJA	**Humahuaca**	**2.87**	**142**	*i* P	**Pn**	**19 53 46.0**	**+0.2**
HJA				*i* Sg	**S**	**19 54 22.8**	**-1.0**
HJA				IAML		19 54 25.0	
	comp=Z,37nm,0.6s						
PSGC	**Pisagua**	**2.94**	**297**	⇑*i* P	**Pn**	**19 53 45.8**	**-0.6**
PSGC				*i* S	**S**	**19 54 22.8**	**-2.0**
PB15	**IPOC Station P**	**2.99**	**221**	⇑*i* P	**Pn**	**19 53 48.8**	**+1.8**
PB15				*i* S	**S**	**19 54 26.7**	**+0.8**
PB15	**IPOC Station P**	**2.99**	**221**	*i* P	**Pn**	**19 53 47.6**	**+0.7**
PB15				*i* Sg	**S**	**19 54 25.7**	**-0.3**
PB05	**IPOC Station P**	**3.26**	**234**	*i* P	**Pn**	**19 53 50.8**	**+0.8**
PB16	**IPOC Station P**	**3.31**	**322**	⇑*i* P	**Pn**	**19 53 52.1**	**+0.9**
PB16				*i* S	**S**	**19 54 34.2**	**+0.8**
AZAP	**Zapla**	**3.87**	**148**	*i* P	**Pn**	**19 53 57.5**	**0.0**
PB10	**IPOC Station P**	**3.92**	**229**	*i* P	**Pn**	**19 53 58.5**	**+0.7**
LPAZ	**La Paz**	**4.71**	**351**	⇓*i* P	**Pn**	**19 54 09.0**	**+0.8**
APLL	**PUNTA DE LOS L**	**9.43**	**176**	*i* P	**Pn**	**19 55 07.5**	**-0.8**

*NEIC **28** 20:08:43.7±1.6, 16°.19S±0°.08×173°.9W±0°.1, h64km±5km, mb4.6/6, Error ellipse: s-maj=14.9km s-min=11.5km az=101.0*
*IDC **28** 20:08:44.0±3.6, 15°.95S×174°.10W, h58km±30km, mb3.6/9, mb1 4.0/10, mb1mx3.7/40, mbtmp3.9/10, ML3.9/1, MS2.6/1, Ms1 2.6/1, ms1mx2.4/34, Error ellipse: s-maj=91.6km s-min=16.1km az=147.0*

ISC 28 20:08:43.4±0.6, 16°20S±0°.07×173°.79W±0°.08, h64km, n25, σ1s75/28, mb3.9/11, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.99**	**41**	P	**Pn**	**20 09 29.6**	**+1.1**
	16nm,0.3s,baz=215,slow=3.9,SNR=9.9						
AFI				S	**Sn**	**20 10 00.1**	**-3.1**
	76nm,0.3s,baz=47,slow=22,SNR=24						
AFI				LR	LR	20 10 27.0	
	comp=Z,111nm,21.9s,baz=38,slow=34						
AFI	**Afiamalu**	**2.99**	**41**		**Pn**	**20 09 29.6**	**+1.1**
AFI					**Sn**	**20 09 59.4**	**-3.9**
NIUE	**Niue**	**4.66**	**128**		**Pn**	**20 09 53.1**	**+1.7**
NIUE				Sn	**Sn**	**20 10 40.5**	**-3.7**
RAR	**Rarotonga**	**14.18**	**113**	Pn	**Pn**	**20 12 02.6**	**+1.5**
COEN	**Coen**	**41.56**	**267**	P	**P**	**20 16 26.1**	**+0.9**
STKA	**Stephens Creek**	**43.32**	**241**	P	**P**	**20 16 39.0**	**-0.3**
	1.4nm,0.5s,baz=76,slow=17,SNR=7.0						
STKA	**Stephens Creek**	**43.32**	**241**	P	**P**	**20 16 38.8**	**-0.5**
BBOO	**Buckleboo**	**48.09**	**240**	P	**P**	**20 17 16.4**	**-0.6**
WB0	**Warramunga Arr**	**49.27**	**258**	P	**P**	**20 17 25.9**	**-0.3**
WB0				IAmb	IAmb	20 17 28.5	
	comp=Z,26nm,1.8s						
WRA	**Warramunga Arr**	**49.30**	**257**	P	**P**	**20 17 25.8**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=94,slow=7.2,SNR=6.9						
AS31	**Alice Springs**	**49.51**	**253**	P	**P**	**20 17 27.4**	**-0.6**
AS31				IAmb	IAmb	20 17 46.4	
	comp=Z,3.8nm,1.5s						
ASAR	**Alice Springs**	**49.51**	**253**	P	**P**	**20 17 27.4**	**-0.7**
	comp=Z,2.9nm,0.6s,baz=88,slow=8.3,SNR=40						
ASAR	**Alice Springs**	**49.51**	**253**	P	**P**	**20 17 26.8**	**-1.2**
YBH	**Yreka Blue Hor**	**74.45**	**37**	P	**P**	**20 20 16.7**	**+1.7**
	comp=Z,3.0nm,0.9s,baz=153,slow=6.8,SNR=4.6						
YBH	**Yreka Blue Hor**	**74.45**	**37**	P	**P**	**20 20 16.5**	**+1.5**
YBH				IAmb	IAmb	20 20 33.3	
	comp=Z,11nm,1.6s						
NVAR	**Mina Array Bea**	**75.17**	**42**	P	**P**	**20 20 20.7**	**+1.4**
	comp=Z,0.6nm,0.7s,baz=236,slow=10,SNR=5.3						
NVAR	**Mina Array Bea**	**75.17**	**42**	P	**P**	**20 20 20.4**	**+1.1**
TXAR	**Lajitas Array**	**81.36**	**56**	P	**P**	**20 20 55.8**	**+2.1**
	comp=Z,0.7nm,0.8s,baz=233,slow=4.1,SNR=2.6						
PDAR	**Pinedale Array**	**83.10**	**42**	P	**P**	**20 21 03.2**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=204,slow=3.2,SNR=8.3						
PDAR	**Pinedale Array**	**83.10**	**42**	P	**P**	**20 21 02.5**	**-0.1**
ILAR	**Eielson Array**	**83.29**	**11**	P	**P**	**20 21 02.6**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=236,slow=5.7,SNR=6.3						
ILAR	**Eielson Array**	**83.29**	**11**	P	**P**	**20 21 01.6**	**-1.1**
YKA	**Yellowknife Ar**	**90.97**	**24**	P	**P**	**20 21 40.9**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=236,slow=3.9,SNR=3.8						
SYO	**Syowa Base**	**91.75**	**191**	⇑*e*P	**P**	**20 21 40.4**	**-3.3**
BRTR	**Keskin Array B**	**146.53**	**320**	PKPbc	**PKPbc**	**20 28 18.0**	**0.0**
	comp=Z,0.5nm,0.7s,baz=48,slow=1.5,SNR=2.8						

MAN 28 20:09:01.9, 9°.66N×123°.63E, h1km, mb4.6, ML3.4, MS3.3, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LLP	**Lapu-Lapu**	**0.73**	**27**	*e*P	Pg	20 09 15.7	-0.2
LLP				*e*S	Sg	20 09 26.1	+0.7
MSLP	**Maasin**	**1.30**	**69**	*e*P	Pg	20 09 25.9	-1.0
MSLP				*e*S	Sn	20 09 44.9	-0.4
GUIM	**Jordan**	**1.40**	**313**	*e*P	Pn	20 09 28.4	-0.2
GUIM				*e*S	Sn	20 09 48.0	+0.3
OCLP	**Ormoc**	**1.68**	**35**	*e*P	Pn	20 09 32.6	+0.1
OCLP				*e*S	Sg	20 09 56.1	0.0

*THE **28** 20:11:38.6, 38°.23N×20°.38E, h11km±1km, ML3.1/9, Error ellipse: s-maj=1.2km s-min=0.5km az=229.0*
*ATH **28** 20:11:38.4, 38°.24N×20°.40E, h14km±2km, ML2.9/6, Error ellipse: s-maj=2.9km s-min=1.0km az=250.0*

ISC 28 20:11:38.4±1.1, 38°.23N±0°.03×20°.39E±0°.05, h14km±5km, n34, σ0s38/53, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.04**	**230**	P	**Pg**	**20 11 40.9**	**-0.1**
KEF3				S	**Sg**	**20 11 42.5**	**-0.1**
CHV1	**Chavriata, Kef**	**0.05**	**187**	P	**Pg**	**20 11 40.9**	**-0.1**
CHV1				S	**Sg**	**20 11 42.7**	**0.0**
	48μm,0.4s						
ARG2	**Argostoli**	**0.09**	**124**	P	**Pg**	**20 11 41.4**	**0.0**
ARG2				S	**Sg**	**20 11 43.2**	**-0.2**
	21μm,0.2s						
KEF2	**Argostoli. Kep**	**0.10**	**130**	P	**Pg**	**20 11 41.5**	**0.0**
KEF2				S	**Sg**	**20 11 43.6**	**0.0**
VLS	**Valsamata**	**0.17**	**108**	P	**Pg**	**20 11 42.2**	**-0.2**
VLS				S	**Sg**	**20 11 44.9**	**-0.3**
	5μm,0.3s						
VLS	**Valsamata**	**0.17**	**108**	P	**Pg**	**20 11 42.2**	**-0.2**
VLS				S	**Sg**	**20 11 44.9**	**-0.3**
VLS				AML	AML	20 11 45.1	
	comp=N,11844μm,0.4s						
VLS				AML	AML	20 11 45.5	
	comp=E,7067μm,0.2s						
FSK	**Fiskardo**	**0.27**	**31**	P	**Pg**	**20 11 44.0**	**0.0**
FSK				S	**Sg**	**20 11 48.3**	**+0.4**
	comp=E,5μm,0.2s						
FSK	**Fiskardo**	**0.27**	**31**	P	**Pg**	**20 11 44.0**	**0.0**
FSK				S	**Sg**	**20 11 47.9**	**0.0**
KFL	**Anninata**	**0.34**	**111**	P	**Pg**	**20 11 45.2**	**-0.1**
KFL				S	**Sg**	**20 11 50.5**	**+0.6**
	comp=E,2μm,0.3s						
KFL	**Anninata**	**0.34**	**111**	P	**Pg**	**20 11 45.2**	**-0.1**
KFL				S	**Sg**	**20 11 50.6**	**+0.7**
KFL				AML	AML	20 11 51.2	
	comp=E,6102μm,0.4s						
KFL				AML	AML	20 11 53.4	
	comp=N,3853μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.41**	**148**	P	**Pg**	**20 11 47.0**	**+0.3**
VLMS				S	**Sb**	**20 11 53.1**	**-0.5**
VLMS				AML	AML	20 11 54.3	
	comp=E,3173μm,0.5s						
VLMS				AML	AML	20 11 54.7	
	comp=N,6002μm,0.4s						
EVGI	**Lefkada island**	**0.44**	**28**	P	**Pg**	**20 11 47.2**	**0.0**
EVGI				S	**Sb**	**20 11 54.0**	**-0.5**
EVGI	**Lefkada island**	**0.44**	**28**	P	**Pg**	**20 11 47.0**	**-0.2**
EVGI				S	**Sg**	**20 11 53.1**	**-0.1**
MGNA	**Meganis**	**0.53**	**36**	P	**Pg**	**20 11 48.5**	**-0.4**
MGNA				S	**Sb**	**20 11 56.6**	**-0.4**
MGNA				AML	AML	20 11 56.9	
	comp=N,2396μm,0.3s						
MGNA				AML	AML	20 11 57.1	
	comp=E,2864μm,0.1s						
LKD2	**Lefkada island**	**0.60**	**21**	P	**Pg**	**20 11 50.2**	**+0.1**
LKD2	**Lefkada island**	**0.60**	**21**	P	**Pg**	**20 11 49.6**	**-0.5**
TSLK	**Tsoukalades, L**	**0.63**	**19**	P	**Pg**	**20 11 50.7**	**0.0**
TSLK	**Tsoukalades, L**	**0.63**	**19**	P	**Pg**	**20 11 50.1**	**-0.6**
AST1	**Astakos**	**0.63**	**60**	P	**Pg**	**20 11 50.6**	**-0.1**
AST1				S	**Sb**	**20 12 00.7**	**+0.8**
	comp=E,2μm,0.2s						
PDO	**Prodromos**	**0.72**	**59**	P	**Pg**	**20 11 52.2**	**-0.3**
PDO				S	**Sb**	**20 12 03.6**	**+1.0**
	comp=E,2μm,0.4s						
PDO	**Prodromos**	**0.72**	**59**	P	**Pg**	**20 11 52.0**	**-0.5**
PDO				S	**Sg**	**20 12 01.4**	**-0.6**
PDO				AML	AML	20 12 04.5	
	comp=E,2830μm,0.5s						
PDO				AML	AML	20 12 05.3	
	comp=N,2563μm,0.3s						
RLS	**Riolos of Patr**	**0.87**	**101**	P	**Pg**	**20 11 54.6**	**-0.5**
RLS				S	**Sn**	**20 12 08.3**	**-0.3**
	comp=N,252nm,0.6s						
RLS	**Riolos of Patr**	**0.87**	**101**	P	**Pg**	**20 11 54.6**	**-0.5**
PVO	**Paravola**	**0.97**	**66**	P	**Pb**	**20 11 57.1**	**+0.1**
PVO				S	**Sn**	**20 12 11.8**	**+0.6**
	comp=N,1μm,0.3s						
PVO	**Paravola**	**0.97**	**66**	P	**Pb**	**20 11 57.1**	**+0.1**
PVO				AML	AML	20 12 14.0	
	comp=E,2536μm,0.3s						
PVO				AML	AML	20 12 14.1	
	comp=N,1504μm,0.3s						
DRO	**Drossia**	**1.08**	**104**	P	**Pb**	**20 11 58.1**	**-0.7**
EFP	**Efpalio**	**1.21**	**80**	P	**Pn**	**20 12 00.9**	**+0.1**
LAKA	**Lakka**	**1.25**	**89**	P	**Pn**	**20 12 01.5**	**0.0**
ANX	**Ano Chora**	**1.26**	**73**	P	**Pb**	**20 12 02.1**	**+0.2**
EVR	**Evrytania**	**1.31**	**58**	P	**Pg**	**20 12 03.4**	**-0.2**
SERG	**Sergoula**	**1.32**	**82**	P	**Pn**	**20 12 02.5**	**0.0**
TRIZ	**Trizonia**	**1.33**	**84**	P	**Pn**	**20 12 02.7**	**+0.2**
KALE	**Kalithea**	**1.39**	**83**	P	**Pb**	**20 12 04.4**	**+0.2**
KLV	**Kalavryta, Ach**	**1.40**	**97**	P	**Pn**	**20 12 04.0**	**+0.4**

*IDC **28** 20:11:47.1±0.8, 6°.63N×72°.84W, h166km±9km, mb3.4/7, mb1 3.7/10, mb1mx3.4/41, mbtmp4.0/10, Error ellipse: s-maj=28.5km s-min=7.8km az=134.0*
*NEIC **28** 20:11:47.8±2.4, 6°.83N±0°.08×73°.04W±0°.09, h155km±6km, mb4.2/23, Error ellipse: s-maj=15.8km s-min=8.8km az=130.0*
*RSNC **28** 20:11:49.0±0.8, 6°.81N×73°.15W, h149km±3km, ML3.9, Mw3.8*
*FUNV **28** 20:11:51.0, 6°.74N×72°.76W, h163km, MW3.5*

ISC 28 20:11:47.3±0.6, 6°.86N±0°.03×73°.06W±0°.03, h155km±5km, n104, σ1s49/140, mb4.1/16, 3C-10D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.29**	**206**	⇓*i* P	**Pn**	**20 12 09.1**	**+0.3**
BARC				*e*S	**Sn**	**20 12 24.3**	**-0.9**
BARC				*i*		20 12 26.7	
	comp=Z,4μm,0.3s						
PAMC	**Pamplona, Colo**	**0.60**	**36**	⇓*i* P	**Pn**	**20 12 11.8**	**+1.5**
PAMC				*e*S	**Sn**	**20 12 29.1**	**+1.1**
PAMC				*i*		20 12 32.5	
	comp=Z,713nm,0.6s						
BRRC	**Barranca, Sant**	**0.70**	**291**	*e*P	**Pn**	**20 12 10.9**	**+0.6**
BRRC				*e*S	**Sn**	**20 12 27.7**	**-0.3**
BRRC				*i*		20 12 32.1	
	comp=Z,670nm,0.2s						
RUSC	**La Rusia**	**0.96**	**182**	⇑*i* P	**Pn**	**20 12 12.9**	**+0.1**
RUSC				*e*S	**Sn**	**20 12 31.4**	**-0.9**
RUSC				*i*		20 12 32.8	
	comp=Z,774nm,0.3s						
RUSC	**La Rusia**	**0.96**	**182**		**Pn**	**20 12 12.8**	**+0.1**
TAMC	**Tame, Arauca**	**1.32**	**108**	⇑*i* P	**Pn**	**20 12 17.3**	**+1.8**
TAMC				*e*S	**Sn**	**20 12 39.0**	**+1.9**
TAMC				*i*		20 12 48.5	
	comp=Z,478nm,1.1s						
OCAC	**Ocana**	**1.40**	**349**	*e*P	**Pn**	**20 12 17.5**	**+1.0**
OCAC				*e*S	**Sn**	**20 12 39.3**	**+0.4**
OCAC				*i*		20 12 42.3	
	comp=Z,855nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.43**	**257**	*e*P	**Pn**	**20 12 16.0**	**-0.5**
PTBC				*e*S	**Sn**	**20 12 37.0**	**-2.0**
PTBC				*i*		20 12 44.1	
	comp=Z,815nm,0.4s						
SPBC	**San Pablo de B**	**1.56**	**220**	*e*P	**Pn**	**20 12 17.9**	**-0.1**
SPBC				*e*S	**Sn**	**20 12 40.2**	**-1.5**
SPBC				*i*		20 12 41.3	
	comp=Z,960nm,0.2s						
ZARC	**Zaragoza, Cauc**	**1.90**	**290**	*e*P	**Pn**	**20 12 21.8**	**+0.2**
ZARC				*e*S	**Sn**	**20 12 47.3**	**-0.7**
ZARC				*i*		20 12 52.6	
	comp=Z,794nm,0.3s						
SMLC	**San Martn de**	**2.18**	**333**	⇓*e*P	**Pn**	**20 12 25.6**	**+0.7**
SMLC				*e*S	**Sn**	**20 12 53.9**	**0.0**
SMLC				*i*		20 12 56.0	
	comp=Z,521nm,0.4s						
NORC	**Norcasia**	**2.21**	**235**	*e*P	**Pn**	**20 12 24.9**	**-0.4**
NORC				*e*S	**Sn**	**20 12 52.8**	**-1.8**
NORC				*i*		20 12 58.3	
	comp=Z,782nm,0.5s						
CHIC	**Chingaza**	**2.31**	**197**	⇑*e*P	**Pn**	**20 12 26.8**	**0.0**
CHIC				*e*S	**Sn**	**20 12 56.3**	**-1.0**
CHIC				*i*		20 13 00.6	
	comp=Z,308nm,0.6s						
ROSC	**El Rosal**	**2.36**	**212**	P	**Pn**	**20 12 28.9**	**+1.4**
	comp=Z,189nm,0.3s,baz=42,slow=19,SNR=210						
ROSC				S	**Sn**	**20 12 58.0**	**-0.4**
	comp=Z,191nm,0.3s,baz=116,slow=14,SNR=10						
ROSC	**El Rosal**	**2.36**	**212**	*e*P	**Pn**	**20 12 28.8**	**+1.4**
ROSC				*e*S	**Sn**	**20 12 57.5**	**-0.9**
ROSC				*i*		20 13 06.9	
	comp=Z,1μm,0.3s						
CVER	**Cruz Verde, Cu**	**2.53**	**204**	*e*P	**Pn**	**20 12 30.4**	**+0.9**
CVER				*i*		20 13 11.9	
	comp=Z,5μm,0.4s						
HELC	**Santa Helena**	**2.54**	**255**	*e*P	**Pn**	**20 12 29.6**	**+0.1**
HELC				*e*S	**Sn**	**20 13 01.8**	**-0.4**
HELC				*i*		20 13 09.2	
	comp=Z,405nm,0.5s						
VIGV	**El Vigia**	**2.59**	**40**	⇓*i* P	**Pn**	**20 12 31.4**	**+1.6**
VIGV				*e*S	**Sn**	**20 13 02.2**	**-0.5**
SOCV	**Socops**	**2.60**	**57**	⇓*e*P	**Pn**	**20 12 31.3**	**+1.4**
SOCV				*e*S	**Sn**	**20 13 00.6**	**-2.4**
UREC	**San Jos de Ur**	**2.61**	**290**	*e*P	**Pn**	**20 12 29.0**	**-1.1**
UREC				*e*S	**Sn**	**20 13 00.1**	**-3.1**
UREC				*i*		20 13 11.5	
	comp=Z,437nm,0.2s						
PTGC	**Puerto Gaitan,**	**2.79**	**161**	*e*P	**Pn**	**20 12 32.1**	**-0.3**
PTGC				*e*S	**Sn**	**20 13 05.5**	**-1.7**
PTGC				*i*		20 13 17.2	
	comp=Z,209nm,0.3s						
VILC	**Villavicencio,**	**2.80**	**193**	*e*P	**Pn**	**20 12 32.2**	**-0.3**
VILC				*e*S	**Sn**	**20 13 07.3**	**-0.2**
VILC				*i*		20 13 10.6	
	comp=Z,496nm,0.3s						
GUY2C	**Guyana, Caldas**	**2.81**	**235**	*e*P	**Pn**	**20 12 33.0**	**0.0**
GUY2C				*e*S	**Sn**	**20 13 06.9**	**-1.3**
GUY2C				*i*		20 13 15.3	
	comp=Z,889nm,0.5s						
CODC	**Agustn Codazz**	**3.08**	**353**	*e*P	**Pn**	**20 12 36.9**	**+0.9**
CODC				*e*S	**Sn**	**20 13 14.5**	**+0.8**
CODC				*i*		20 13 21.2	
	comp=Z,127nm,0.7s						
CBOC	**Ciudad Bolivar**	**3.10**	**252**	*e*P	**Pn**	**20 12 36.6**	**+0.2**
CBOC				*i*		20 13 27.6	
	comp=Z,161nm,0.4s						
SDV	**Santo Domingo**	**3.13**	**50**	P	**Pn**	**20 12 38.5**	**+1.8**
	comp=Z,92nm,0.3s,baz=218,slow=10,SNR=308						
SDV				S	**Sn**	**20 13 15.2**	**+0.1**
	comp=Z,19nm,0.3s,baz=46,slow=20,SNR=9.6						
SDV	**Santo Domingo**	**3.13**	**50**	*e*P	**Pn**	**20 12 38.0**	**+1.3**
SDV				*e*S	**Sn**	**20 13 13.3**	**-1.8**
SDV	**Santo Domingo**	**3.13**	**50**		**Pn**	**20 12 38.1**	**+1.3**
DBBC	**Dabeiba**	**3.14**	**273**	⇓*i* P	**Pn**	**20 12 36.6**	**-0.1**
DBBC				*e*S	**Sn**	**20 13 13.1**	**-1.8**
DBBC				*i*		20 13 15.0	
	comp=Z,350nm,0.8s						
ARGC	**Ariguani, Magd**	**3.21**	**339**	*e*P	**Pn**	**20 12 39.3**	**+1.8**
ARGC				*i*		20 13 25.5	
	comp=Z,163nm,0.2s						
PRAC	**Prado**	**3.61**	**210**	*e*P	**Pn**	**20 12 42.1**	**-0.7**
PRAC				*e*S	**Sn**	**20 13 24.3**	**-1.6**
PRAC				*i*		20 13 29.1	
	comp=Z,518nm,0.6s						
ORTC	**Ortega, Tolima**	**3.65**	**217**	*e*P	**Pn**	**20 12 43.2**	**0.0**
ORTC				*e*S	**Sn**	**20 13 26.6**	**-0.1**
ORTC				*i*		20 13 32.0	
	comp=Z,368nm,0.2s						
SJCC	**San Jacinto, C**	**3.68**	**325**	*e*P	**Pn**	**20 12 42.9**	**-0.8**
SJCC				*e*S	**Sn**	**20 13 24.7**	**-2.8**
SJCC				*i*		20 13 38.7	
	comp=Z,119nm,0.4s						
PLMC	**San Jos del P**	**3.75**	**239**	*e*P	**Pn**	**20 12 44.9**	**+0.3**
PLMC				*i*		20 13 33.4	
	comp=Z,250nm,0.2s						
QARV	**Quebrada Arrib**	**4.17**	**37**	⇓*i* P	**Pn**	**20 12 51.4**	**+1.4**
QARV				*e*S	**Sn**	**20 13 36.4**	**-2.4**
GUVC	**San Jose del G**	**4.30**	**174**	*e*P	**Pn**	**20 12 51.7**	**0.0**
GUVC				*e*S	**Sn**	**20 13 42.2**	**+0.3**
GUVC				*i*		20 13 46.2	
	comp=Z,289nm,0.2s						
YOTC	**Yotoco, Valle**	**4

U40A	**Yellville**	**34.50**	**331**	P	**P**		**20 18 21.9**	**+1.2**
U40A				IAmb	IAmb		20 18 23.1	
	comp=Z,6.1nm,0.9s							
CCM	**Cathedral Cave**	**35.17**	**335**	P	**P**		**20 18 27.4**	**+1.1**
SFIN	**Lafayette**	**35.67**	**341**	P	**P**		**20 18 32.1**	**+1.6**
TXAR	**Lajitas Array**	**36.49**	**312**	P	**P**		**20 18 39.1**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=121,slow=8.8,SNR=2.1							
TX31	**Lajitas Ar. Si**	**36.49**	**312**	P	**P**		**20 18 39.2**	**+1.4**
TX31				IAmb	IAmb		20 19 15.7	
	comp=Z,5.7nm,1.6s							
TX32	**Lajitas Array**	**36.49**	**312**	P	**P**		**20 18 39.2**	**+1.4**
TX32				IAmb	IAmb		20 19 02.2	
	comp=Z,4.6nm,1.5s							
WMOK	**Wichita Mounta**	**36.49**	**323**	P	**P**		20 18 42.7	+5.0
ECSD	**EROS Data Cent**	**42.15**	**334**	P	**P**		**20 19 24.6**	**+0.1**
ECSD				IAmb	IAmb		20 19 54.4	
	comp=Z,6.9nm,1.5s							
SDCO	**Great Sand Dun**	**42.56**	**321**	P	**P**		**20 19 30.6**	**+2.4**
EYMN	**Ely**	**43.86**	**342**	P	**P**		**20 19 38.8**	**+0.7**
EYMN				IAmb	IAmb		20 19 39.4	
	comp=Z,5.9nm,0.7s							
ULM	**Lac du Bonnet**	**47.28**	**340**	P	**P**		**20 20 05.1**	**+0.2**
	comp=Z,2.4nm,0.5s,baz=152,slow=9.6,SNR=6.3							
ULM	**Lac du Bonnet**	**47.28**	**340**	P	**P**		**20 20 05.1**	**+0.2**
ULM				IAmb	IAmb		20 20 06.2	
	comp=Z,15nm,1.6s							
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**		**20 20 12.4**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=129,slow=8.7,SNR=3.8							
PDAR	**Pinedale Array**	**48.09**	**324**	P	**P**		**20 20 11.5**	**-0.1**
DGMT	**Dagmar**	**49.15**	**333**	P	**P**		**20 20 19.8**	**+0.5**
BGU	**Big Grassy Mou**	**49.16**	**320**	P	**P**		**20 20 20.7**	**+0.9**
REDW	**Red Top Meadow**	**49.20**	**324**	P	**P**		**20 20 20.0**	**-0.1**
REDW				IAmb	IAmb		20 20 22.0	
	comp=Z,2.0nm,0.7s							
IMW	**Indian Meadow**	**49.58**	**324**	P	**P**		**20 20 24.6**	**+1.6**
YHB	**Horse Butte**	**50.23**	**325**	P	**P**		**20 20 29.2**	**+1.4**
MCMT	**McKenzie Canyo**	**51.23**	**324**	P	**P**		**20 20 35.9**	**+0.5**
FFC	**Flin Flon**	**53.08**	**339**	P	**P**		**20 20 48.5**	**+0.1**
FFC				IAmb	IAmb		20 20 50.6	
	comp=Z,7.7nm,1.4s							
WVOR	**Wild Horse Val**	**53.55**	**319**	P	**P**		**20 20 53.5**	**+1.2**
I07A	**Izee**	**54.88**	**320**	P	**P**		**20 21 02.9**	**+0.9**
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**		**20 21 59.5**	**+0.4**
	comp=Z,1.2nm,0.5s,baz=134,slow=6.6,SNR=36							
INK	**Inuvik**	**73.02**	**340**	P	**P**		**20 22 59.9**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=127,slow=5.1,SNR=3.9							
ILAR	**Eielson Array**	**76.96**	**335**	P	**P**		**20 23 22.3**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=87,slow=4.1,SNR=3.6							
ILAR	**Eielson Array**	**76.96**	**335**	P	**P**		**20 23 21.6**	**-0.9**
MKAR	**Makanchi Array**	**122.27**	**20**	PKP	**PKPdf**		**20 30 22.8**	**-1.3**
	comp=Z,0.2nm,0.8s,baz=285,slow=2.5,SNR=2.7							
ASAR	**Alice Springs**	**149.18**	**234**	PKPbc	**PKPbc**		**20 31 16.5**	**-1.8**
	comp=Z,0.2nm,0.5s,baz=119,slow=3.5,SNR=3.1							

*IDC **28** 20:23:58.8±3.2, 33°.20S×179°.25W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/29, mbtmp3.7/3, ML3.7/1, MS3.3/1, Ms1 3.3/1, ms1mx2.6/22, Error ellipse: s-maj=73.3km s-min=46.9km az=112.0*

*NEIC **28** 20:24:05.0±2.5, 33°.9S±0°.1×178°.9W±0°.2, h66km±4km, mb4.6/2, Error ellipse: s-maj=25.6km s-min=17.0km az=128.0*

ISC 28 20:24:02.1±1.6, 33°.7S±0°.1×178°.8W±0°.2, h41km, n40, σ2s71/39, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.55**	**210**	P	**Pn**	**20 25 12.4**	**+4.0**
MXZ	**Matakaoa Point**	**4.55**	**210**	Pn	**Pn**	**20 25 10.6**	**+2.2**
WMGZ	**Waiomatatini S**	**4.73**	**208**	P	Pn	20 25 16.0	+5.1
PKGZ	**Pakihiroa**	**4.93**	**210**	P	**Pn**	**20 25 17.1**	**+3.5**
HAZ	**Te Kaha**	**4.95**	**213**	P	**Pn**	**20 25 18.1**	**+4.3**
PUZ	**Puketiti**	**5.01**	**207**	P	**Pn**	**20 25 18.7**	**+3.9**
RUGZ	**Raukumara Rang**	**5.16**	**212**	P	**Pn**	**20 25 20.0**	**+3.1**
TKGZ	**Te Karaka**	**5.49**	**209**	P	**Pn**	**20 25 25.2**	**+3.9**
MWZ	**Matawai**	**5.54**	**211**	P	**Pn**	**20 25 26.2**	**+4.2**
URZ	**Urewera**	**5.66**	**215**	Pn	**Pn**	**20 25 26.5**	**+2.8**
	2.2nm,0.3s,baz=60,slow=8.1,SNR=14						
URZ				Sn	**Sn**	**20 26 27.9**	**+0.5**
	3.3nm,0.3s,baz=241,slow=19,SNR=4.3						
URZ	**Urewera**	**5.66**	**215**	P	**Pn**	**20 25 26.5**	**+2.8**
URZ	**Urewera**	**5.66**	**215**	Pn	**Pn**	**20 25 26.2**	**+2.5**
URZ					**Sn**	**20 26 24.9**	**-2.5**
RIGZ	**Rimuhau**	**5.76**	**208**	P	**Pn**	**20 25 28.9**	**+4.0**
SNGZ	**Shannon Statio**	**5.99**	**210**	P	**Pn**	**20 25 32.3**	**+4.1**
RTZ	**Ruatahuna**	**6.01**	**213**	P	**Pn**	**20 25 31.6**	**+3.1**
TOZ	**Tahuroa Road**	**6.16**	**227**	P	Pn	20 25 38.7	+8.2
OUZ	**Omahuta**	**6.46**	**254**	Pn	**Pn**	**20 25 36.2**	**+1.6**
BKZ	**Black Stump Fm**	**6.68**	**213**	P	**Pn**	**20 25 40.4**	**+2.7**
BKZ	**Black Stump Fm**	**6.68**	**213**	Pn	**Pn**	**20 25 40.1**	**+2.5**
HIZ	**Hauiti**	**7.06**	**225**	Pn	**Pn**	**20 25 44.2**	**+1.4**
BFZ	**Birch Farm**	**8.05**	**208**	Pn	**Pn**	**20 25 55.5**	**-0.8**
MSWZ	**Moikau Station**	**9.07**	**210**	Pn	**Pn**	**20 26 06.4**	**-4.0**
PLWZ	**Palliser**	**9.20**	**209**	Pn	**Pn**	**20 26 08.6**	**-3.6**
SNZO	**South Karori**	**9.22**	**212**	Pn	**Pn**	**20 26 10.2**	**-2.1**
BHW	**Baring Head**	**9.22**	**211**	Pn	**Pn**	**20 26 13.0**	**+0.6**
TUWZ	**Tuamarina**	**9.66**	**214**	Pn	**Pn**	**20 26 18.3**	**-0.1**
NNZ	**Nelson**	**9.77**	**217**	Pn	**Pn**	**20 26 19.3**	**-0.7**
CMWZ	**Cape Campbell**	**9.79**	**212**	Pn	**Pn**	**20 26 16.0**	**-4.2**
QRZ	**Quartz Range**	**9.94**	**221**	Pn	**Pn**	**20 26 21.2**	**-1.1**
THZ	**Tophouse**	**10.42**	**217**	Pn	**Pn**	**20 26 29.6**	**+0.7**
KHZ	**Kahutara**	**10.62**	**212**	Pn	**Pn**	**20 26 29.9**	**-1.7**
OXZ	**Oxford**	**12.02**	**214**	Pn	**Pn**	**20 26 49.7**	**-1.1**
DZM	**Mont Dzumac**	**17.38**	**308**	LR	LR	20 33 21.6	
	comp=Z,90nm,18.9s,baz=232,slow=34						
ASAR	**Alice Springs**	**42.35**	**271**	P	**P**	**20 31 51.8**	**-0.7**
	0.3nm,0.6s,baz=112,slow=8.2,SNR=2.5						
ASAR	**Alice Springs**	**42.35**	**271**	P	**P**	**20 31 50.5**	**-2.0**
WR0	**Warramunga Arr**	**43.46**	**276**		**P**	**20 32 02.2**	**+0.9**
WR0				IAmb	IAmb	20 32 28.2	
	comp=Z,18nm,1.6s						
WRA	**Warramunga Arr**	**43.64**	**276**	P	**P**	**20 32 01.8**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=117,slow=7.6,SNR=2.2						
WB0	**Warramunga Arr**	**43.67**	**276**	P	**P**	**20 32 04.1**	**+1.0**
WB0				IAmb	IAmb	20 32 32.1	
	comp=Z,13nm,1.4s						
FINES	**FINESS Array B**	**147.91**	**338**	PKPbc	**PKiKP**	**20 43 42.9**	**-0.9**
	comp=Z,3.2nm,0.9s,baz=36,slow=5.2,SNR=3.6						
FINES	**FINESS Array B**	**147.91**	**338**		**PKPbc**	**20 43 42.3**	**+0.3**

*IDC **28** 20:31:19.7±0.7, 38°.46N×20°.45E, h0km, mb4.0/10, mb1 4.0/20, mb1mx3.8/59, mbtmp3.9/20, ML3.7/9, MS3.2/7, Ms1 3.2/7, ms1mx2.9/64, Error ellipse: s-maj=12.4km s-min=11.9km az=10.0*

*PDG **28** 20:31:20.8±0.8, 38°.45N×20°.32E, h2km±1km, ML4.1/14, Error ellipse: s-maj=1.2km s-min=1.2km az=90.0*

*THE **28** 20:31:21.1, 38°.41N×20°.43E, h13km±1km, ML4.1/13, Error ellipse: s-maj=1.2km s-min=0.4km az=276.0*

*NEIC **28** 20:31:21.6±2.6, 38°.45N±0°.04×20°.42E±0°.05, h10km±1km, mb4.5/22, Mwr4.0/18, ML4.0(THE), Error ellipse: s-maj=9.1km s-min=2.9km az=227.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=0.50; $M_{\theta\theta}$=0.05; $M_{\phi\phi}$=0.45; $M_{r\theta}$=-1.09; $M_{\theta\phi}$=-0.68; $M_{r\phi}$=0.30; Fault plane solution: M_0=1.40000×10^{15} NP1:ϕ_s358.55000°, δ30.11000°, λ-25.02000°. NP2:ϕ_s110.54000°, δ77.75000°, λ-117.73000°. Principal axes: T 1.4336, Plg27.0000°, Azm222.0000°; N -0.0677, Plg27.0000°, Azm117.0000°; P -1.3659, Plg50.0000°, Azm350.0000°;*

*ATH **28** 20:31:21.3, 38°.41N×20°.49E, h11km, ML3.9/37 Error ellipse: s-maj=1.2km s-min=0.6km az=267.0*

ISC 28 20:31:21.5±0.7, 38°.43N±0°.02×20°.46E±0°.02, h12km±4km, n262, σ1s54/317, mb4.2/19, 19C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.24**	**201**	P	**Pg**	**20 31 25.9**	**-0.7**
KEF3				S	**Sg**	**20 31 29.7**	**-0.3**
KEF3				AML	AML	20 31 30.6	
KEF3				AML	AML	20 31 33.0	
EVGI	**Lefkada island**	**0.25**	**39**	P	**Pg**	**20 31 26.4**	**-0.4**
EVGI				S	**Sb**	**20 31 31.1**	**+0.8**
EVGI	**Lefkada island**	**0.25**	**39**	P	**Pg**	**20 31 26.3**	**-0.4**
EVGI				S	**Sg**	**20 31 30.3**	**0.0**
ARG2	**Argostoli**	**0.25**	**175**	P	**Pg**	**20 31 26.0**	**-0.8**
ARG2				S	**Sg**	**20 31 30.2**	**-0.1**
	123μm,0.4s						
CHV1	**Chavriata, Kef**	**0.25**	**194**	P	**Pg**	**20 31 26.2**	**-0.6**
CHV1				S	**Sg**	**20 31 30.7**	**+0.4**
	112μm,0.6s						
KEF2	**Argostoli. Kep**	**0.26**	**175**	P	**Pg**	**20 31 26.2**	**-0.8**
KEF2				S	**Sg**	**20 31 30.6**	**0.0**
KEF2				AML	AML	20 31 37.6	
KEF2				AML	AML	20 31 38.2	
VLS	**Valsamata**	**0.27**	**157**	P	**Pg**	**20 31 26.2**	**-1.0**
VLS				S	**Sg**	**20 31 30.5**	**-0.4**
	35μm,0.4s						
VLS	**Valsamata**	**0.27**	**157**	P	**Pg**	**20 31 26.1**	**-1.0**
VLS				S	**Sg**	**20 31 30.3**	**-0.6**
VLS				AML	AML	20 31 30.9	
	comp=E,71413μm,0.3s						
VLS				AML	AML	20 31 38.1	
	comp=N,66700μm,0.6s						
MGNA	**Meganis**	**0.35**	**49**	P	**Pg**	**20 31 27.7**	**-0.8**
MGNA				AML	AML	20 31 34.3	
	comp=E,34760μm,0.5s						
MGNA				AML	AML	20 31 35.7	
	comp=N,35410μm,0.4s						
LKD2	**Lefkada island**	**0.39**	**23**	P	**Pg**	**20 31 28.9**	**-0.5**
LKD2				S	**Sb**	**20 31 35.6**	**-0.8**
	comp=N,21μm,0.7s						
LKD2	**Lefkada island**	**0.39**	**23**	P	**Pg**	**20 31 29.0**	**-0.5**
LKD2				S	**Sg**	**20 31 34.7**	**+0.1**
LKD2				AML	AML	20 31 38.7	
	comp=N,49423μm,0.7s						
LKD2				AML	AML	20 31 45.4	
	comp=E,34473μm,0.8s						
KFL	**Anninata**	**0.41**	**141**	P	**Pg**	**20 31 28.8**	**-0.9**
KFL				S	**Sg**	**20 31 35.0**	**-0.2**
	comp=E,42μm,0.3s						
KFL	**Anninata**	**0.41**	**141**	P	**Pg**	**20 31 28.8**	**-0.9**
KFL				S	**Sg**	**20 31 34.6**	**-0.6**
KFL				AML	AML	20 31 37.2	
	comp=E,89226μm,0.3s						
KFL				AML	AML	20 31 37.8	
	comp=N,76102μm,0.3s						
TSLK	**Tsoukalades, L**	**0.42**	**21**	P	**Pg**	**20 31 29.7**	**-0.3**
TSLK				S	**Sb**	**20 31 37.3**	**0.0**
	comp=N,26μm,0.9s						
TSLK	**Tsoukalades, L**	**0.42**	**21**	P	**Pg**	**20 31 29.6**	**-0.3**
TSLK				S	**Sb**	**20 31 36.5**	**-0.8**
AST1	**Astakos**	**0.51**	**77**	P	**Pg**	**20 31 31.0**	**-0.5**
AST1				S	**Sb**	**20 31 39.7**	**0.0**
	comp=N,31μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.57**	**164**	P	**Pg**	**20 31 31.6**	**-1.1**
PDO	**Prodromos**	**0.59**	**73**	P	**Pg**	**20 31 32.3**	**-0.8**
PDO				S	**Sb**	**20 31 42.2**	**0.0**
	comp=N,21μm,0.6s						
PDO	**Prodromos**	**0.59**	**73**	P	**Pg**	**20 31 32.5**	**-0.6**
PDO				S	**Sg**	**20 31 40.6**	**-0.3**
ZAK2	**Zakynthos**	**0.73**	**151**	P	**Pg**	**20 31 35.1**	**-0.5**
KRI1	**kERI**	**0.82**	**160**	P	**Pg**	**20 31 36.0**	**-1.3**
KRI1				S	**Sb**	**20 31 48.9**	**+0.4**
	comp=N,18μm,0.7s						
PVO	**Paravola**	**0.86**	**77**	P	**Pg**	**20 31 37.5**	**-0.6**
PVO				S	**Sn**	**20 31 51.2**	**-0.6**
	comp=N,12μm,0.6s						
PVO	**Paravola**	**0.86**	**77**	P	**Pg**	**20 31 37.5**	**-0.6**
PVO				AML	AML	20 31 56.7	
	comp=N,27867μm,0.6s						
PVO				AML	AML	20 32 00.9	
	comp=E,20101μm,0.7s						
RLS	**Riolos of Patr**	**0.88**	**115**	P	**Pg**	**20 31 37.8**	**-0.6**
RLS				S	**Sb**	**20 31 51.1**	**+0.9**
	comp=E,4μm,0.7s						
RLS	**Riolos of Patr**	**0.88**	**115**	P	**Pg**	**20 31 37.6**	**-0.8**
RLS				AML	AML	20 31 57.7	
	comp=N,9854μm,0.8s						
RLS				AML	AML	20 31 59.8	
	comp=E,7587μm,0.7s						
DRO	**Drossia**	**1.09**	**115**	P	**Pb**	**20 31 41.6**	**-0.8**
DRO	**Drossia**	**1.09**	**115**	P	**Pb**	**20 31 41.5**	**-0.9**
DRO				AML	AML	20 32 04.7	
	comp=N,17350μm,0.6s						
DRO				AML	AML	20 32 08.4	
	comp=E,20922μm,0.6s						
EFP	**Efpalio**	**1.14**	**90**	P	**Pb**	**20 31 41.7**	**-1.4**
EFP				S	**Sn**	**20 31 59.4**	**+0.7**
	comp=E,12μm,0.7s						
EFP	**Efpalio**	**1.14**	**90**	P	**Pb**	**20 31 42.0**	**-1.0**
EFP				AML	AML	20 32 07.3	
	comp=N,27337μm,0.7s						
EFP				AML	AML	20 32 07.6	
	comp=E,18174μm,0.7s						
ANX	**Ano Chora**	**1.16**	**81**	P	**Pb**	**20 31 43.0**	**-0.5**
ANX	**Ano Chora**	**1.16**	**81**	P	**Pb**	**20 31 42.6**	**-0.9**
ANX				AML	AML	20 32 09.4	
	comp=N,14370μm,0.6s						
ANX				AML	AML	20 32 09.6	
	comp=E,12621μm,0.5s						
EVR	**Evrytania**	**1.17**	**65**	P	**Pb**	**20 31 42.6**	**-1.1**
EVR				AML	AML	20 32 10.6	
	comp=N,7129μm,0.9s						
EVR				AML	AML	20 32 13.3	
	comp=E,7327μm,0.7s						
LAKA	**Lakka**	**1.21**	**98**	P	**Pn**	**20 31 43.2**	**-1.0**
LAKA				AML	AML	20 32 08.9	
	comp=N,5588μm,0.5s						
LAKA				AML	AML	20 32 09.2	
	comp=E,8082μm,0.7s						
SERG	**Sergoula**	**1.26**	**90**	P	**Pn**	**20 31 44.1**	**-0.8**
SERG				S	**Sb**	**20 32 01.4**	**+0.2**
	comp=E,7μm,0.6s						
SERG	**Sergoula**	**1.26**	**90**	P	**Pn**	**20 31 44.0**	**-0.8**
SERG				AML	AML	20 32 10.2	
	comp=N,12731μm,0.6s						
SERG				AML	AML	20 32 11.2	
	comp=E,14291μm,0.6s						
JAN	**Janina**	**1.26**	**14**	P	**Pg**	**20 31 45.5**	**-0.4**
JAN				AML	AML	20 32 09.1	
	comp=E,22172μm,0.8s						
JAN				AML	AML	20 32 13.6	
	comp=N,6305μm,0.8s						
TRIZ	**Trizonia**	**1.27**	**92**	P	**Pn**	**20 31 44.0**	**-1.0**
TRIZ	**Trizonia**	**1.27**	**92**	P	**Pn**	**20 31 44.0**	**-1.0**
KALE	**Kalithea**	**1.32**	**91**	P	**Pn**	**20 31 45.0**	**-0.8**
KALE				AML	AML	20 32 13.7	
	comp=N,13114μm,0.7s						
KALE				AML	AML	20 32 13.9	
	comp=E,7470μm,0.7s						
AMT	**Artemida-Makis**	**1.33**	**132**	P	**Pn**	**20 31 46.2**	**+0.3**
AMT				AML	AML	20 32 14.8	
	comp=E,18870μm,0.8s						
AMT				AML	AML	20 32 15.2	
	comp=N,16655μm,0.8s						
KASA	**Kassiopi**	**1.38**	**343**	P	**Pg**	**20 31 47.5**	**-0.5**
KASA				AML	AML	20 32 11.9	
	comp=E,6887μm,1.0s						
KASA				AML	AML	20 32 14.0	
	comp=N,5652μm,0.6s						
KLV	**Kalavryta, Ach**	**1.39**	**106**	P	**Pn**	**20 31 46.0**	**-0.7**
KLV	**Kalavryta, Ach**	**1.39**	**106**	P	**Pn**	**20 31 46.0**	**-0.7**
KLV				AML	AML	20 32 17.2	
	comp=N,4090μm,0.7s						
KLV				AML	AML	20 32 18.1	
	comp=E,5565μm,1.0s						
MAKR	**Makrakomi, Fth**	**1.43**	**65**	P	**Pb**	**20 31 47.8**	**-0.4**
AGG	**Agios Georgios**	**1.58**	**67**	P	**Pb**	**20 31 50.3**	**-0.4**
AGG	**Agios Georgios**	**1.58**	**67**		**Pb**	**20 31 50.0**	**-0.6**
THL	**Klokotos Trika**	**1.66**	**46**	P	**Pg**	**20 31 52.6**	**-0.8**
THL				AML	AML	20 32 24.2	
	comp=N,5572μm,0.8s						
THL				AML	AML	20 32 24.6	
	comp=E,6500μm,0.8s						
KPRO	**Kipourio**	**1.68**	**24**	P	**Pb**	**20 31 52.7**	**+0.4**
KPRO				AML	AML	20 32 25.1	
	comp=N,7978μm,0.8s						
KPRO				AML	AML	20 32 26.0	
	comp=E,8804μm,0.8s						
ITM	**Ithomi**	**1.71**	**137**	P	**Pb**	**20 31 52.5**	**-0.2**
ITM	**Ithomi**	**1.71**	**137**		**Pb**	**20 31 52.8**	**0.0**
AXAR	**Agios Charalam**	**1.76**	**78**	P	**Pb**	**20 31 54.0**	**+0.3**
AXAR				AML	AML	20 32 29.1	
	comp=N,12978μm,0.7s						
AXAR				AML	AML	20 32 35.0	
	comp=E,10440μm,0.8s						
PENT	**Pentalofos**	**1.84**	**16**	P	**Pb**	**20 31 55.7**	**+0.5**
PENT				AML	AML	20 32 30.5	
	comp=E,3608μm,0.7s						
PENT				AML	AML	20 32 34.9	
	comp=N,3925μm,0.9s						
VLX	**Vlachokerasia**	**1.85**	**124**	P	**Pb**	**20 31 55.1**	**-0.2**
VLX				AML	AML	20 32 27.0	
	comp=N,6378μm,0.8s						
VLX				AML	AML	20 32 35.1	
	comp=E,8292μm,0.8s						
PROD	**Prodromos**	**1.93**	**94**	P	**Pb**	**20 31 55.7**	**-0.9**
PROD				AML	AML	20 32 28.7	
	comp=E,5086μm,0.7s						
PROD				AML	AML	20 32 34.4	
	comp=N,4696μm,0.8s						
LKR	**Lokris**	**2.00**	**83**	P	**Pb**	**20 31 57.2**	**-0.7**
LKR				AML	AML	20 32 33.0	
	comp=N,2508μm,1.0s						
LKR				AML	AML	20 32 35.1	
	comp=E,1615μm,0.7s						
LTK	**Loutraki**	**2.02**	**101**	P	**Pb**	**20 31 56.9**	**-1.2**
LTK				AML	AML	20 32 39.7	
	comp=N,2724μm,0.8s						
LTK				AML	AML	20 32 40.1	
	comp=E,3590μm,0.8s						
LOUT	**Loutraki**	**2.03**	**102**	P	**Pb**	**20 31 57.7**	**-0.6**
LOUT				AML	AML	20 32 36.7	
	comp=N,490μm,0.8s						
LOUT				AML	AML	20 32 45.4	
	comp=E,506μm,0.8s						
NEST	**Nestorio**	**2.04**	**13**	P	**Pb**	**20 31 58.2**	**-0.2**
NEST				AML	AML	20 32 38.5	
	comp=N,2653μm,0.8s						
NEST				AML	AML	20 32 39.5	
	comp=E,3030μm,0.8s						
KZN	**Kozani**	**2.13**	**28**	P	**Pb**	**20 31 59.3**	**-0.8**
KZN				AML	AML	20 32 34.7	
	comp=E,2391μm,0.8s						
KZN				AML	AML	20 32 35.2	
	comp=N,1857μm,0.7s						
VIL2	**Platees**	**2.22**	**95**	P	**Pb**	**20 32 00.4**	**-1.1**
SCTE	**Santa Cesarea**	**2.25**	**317**		**Pn**	**20 31 58.8**	**+0.2**
LIT	**Litokhoron**	**2.30**	**43**	P	**Pb**	**20 32 01.6**	**-1.2**
LIT				AML	AML	20 32 45.8	
	comp=E,2659μm,0.9s						
LIT				AML	AML	20 32 46.9	
	comp=N,1802μm,1.0s						
LIT	**Litokhoron**	**2.30**	**43**		**Pb**	**20 32 01.4**	**-1.5**
NEO	**Neokhori**	**2.33**	**67**	P	**Pn**	**20 32 01.6**	**-1.9**
XOR	**Xorichti**	**2.33**	**65**	P	**Pn**	**20 32 01.4**	**+1.7**
XOR				AML	AML	20 32 54.1	
	comp=N,2279μm,1.0s						
XOR				AML	AML	20 32 59.1	
	comp=E,1237μm,1.4s						
DID	**Didima**	**2.38**	**112**	P	**Pn**	**20 32 02.0**	**+1.6**
DID				AML	AML	20 32 44.3	
	comp=E,3079μm,0.5s						
DID				AML	AML	20 32 47.2	
	comp=N,2713μm,0.7s						
FNA	**Florina**	**2.46**	**16**	P	**Pb**	**20 32 03.7**	**-1.9**
FNA	**Florina**	**2.46**	**16**		**Pb**	**20 32 03.6**	**-2.0**
SKIA	**Skiathos**	**2.46**	**72**	P	**Pn**	**20 32 03.2**	**+1.8**
MRKA	**Markates**	**2.47**	**83**	P	**Pn**	**20 32 03.1**	**+1.6**
MRKA				AML	AML	20 32 51.4	
	comp=N,2728μm,1.1s						
MRKA				AML	AML	20 32 52.0	
	comp=E,1343μm,1.0s						
VLI	**Veliai**	**2.61**	**130**	P	**Pb**	**20 32 06.0**	**-2.1**
VLI				AML	AML	20 32 56.1	
	comp=E,2989μm,1.1s						
VLI				AML	AML	20 33 13.4	
	comp=N,4001μm,1.1s						
ATH	**Athens Observa**	**2.61**	**99**	P	**Pn**	**20 32 05.3**	**+1.9**
ATH				AML	AML	20 32 58.9	
	comp=N,2117μm,1.6s						
ATH				AML	AML	20 32 59.6	
	comp=E,2262μm,0.9s						
OHR	**Ohrid**	**2.69**	**5**	*e*Pn	**Pb**	**20 32 07.0**	**-2.7**
VLY	**Voula,Athens**	**2.69**	**101**	P	**Pn**	**20 32 06.3**	**+1.7**
PTL	**Penteli**	**2.71**	**97**	P	**Pn**	**20 32 06.8**	**+2.0**
AOS	**Alonnisos**	**2.77**	**73**	P	**Pn**	**20 32 07.3**	**+1.6**
TIR	**Tirane**	**2.95**	**351**	⇑P	**Pn**	**20 32 09.9**	**+1.7**
TIR	**Tirane**	**2.95**	**351**	⇑S	**Sb**	**20 32 52.3**	**+2.3**
TIR	**Tirane**	**2.95**	**351**		**Pn**	**20 32 09.8**	**+1.7**
TIP	**Timpagrande**	**2.99**	**286**	⇑P	**Pn**	**20 32 11.3**	**+2.6**
TIP	**Timpagrande**	**2.99**	**286**	⇑S	**Sn**	**20 32 46.2**	**+1.8**
TIP	**Timpagrande**	**2.99**	**286**		**Pn**	**20 32 09.5**	**+0.8**
KTHA	**Kythira Island**	**3.00**	**135**	P	**Pn**	**20 32 10.9**	**+2.1**
VAY	**Valandovo**	**3.31**	**29**	*e*Pn	**Pn**	**20 32 14.3**	**+1.2**
STIP	**Stip**	**3.52**	**22**	*e*Pn	**Pb**	**20 32 20.0**	**-3.8**
CEL	**Celeste**	**3.59**	**269**		**Pn**	**20 32 17.6**	**+0.6**
SKO	**Skopje**	**3.62**	**12**	*e*Pn	**Pn**	**20 32 18.0**	**+0.7**
MATE	**Matera**	**3.65**	**309**	⇑P	**Pn**	**20 32 19.4**	**+1.7**
MATE	**Matera**	**3.65**	**309**	⇓S	**Sb**	**20 33 12.1**	**+1.9**
ULC	**Ulcinj**	**3.65**	**346**	*e*Pn	**Pn**	**20 32 17.4**	**-0.4**
ULC				*e*Sn	**Sn**	**20 33 03.1**	**+2.3**
DRME	**Dracevica, Mon**	**3.88**	**346**	*e*Pn	**Pn**	**20 32 20.9**	**0.0**
DRME	**Dracevica, Mon**	**3.88**	**346**	*e*Pn	**Pn**	**20 32 21.2**	**+0.3**
DRME				*e*Sn	**Sn**	**20 33 08.1**	**+1.8**
BUM	**Brajici-Budva**	**4.05**	**343**	*e*Pn	**Pn**	**20 32 22.9**	**-0.4**
BUM				*e*Sn	**Sn**	**20 33 12.1**	**+1.5**
PDG	**Podgorica**	**4.10**	**347**	⇑P	**Pn**	**20 32 24.4**	**+0.5**
PDG	**Podgorica**	**4.10**	**347

BLY	**Banja Luka**	**6.78**	**340**	⇑P	**Pn**	**20 33 01.6**	**+0.9**
BLY	**Banja Luka**	**6.78**	**340**	⇑S	**Sn**	**20 34 14.7**	**-3.0**
BLY	**Banja Luka**	**6.78**	**340**	*e*Pn	**Pn**	**20 33 00.8**	**+0.1**
BLY	**Banja Luka**	**6.78**	**340**	Pn	**Pn**	**20 33 00.9**	**+0.3**
DUGI	**Dugi Otok**	**6.89**	**326**	*e*Pn	**Pn**	**20 33 01.9**	**-0.3**
UDBI	**Udbina**	**7.04**	**331**	*i* Pn	**Pn**	**20 33 05.1**	**+0.7**
NRCA	**Norcia**	**7.11**	**311**		**Pn**	**20 33 06.3**	**+0.9**
GZR	**Gura Zlata**	**7.17**	**13**	⇑P	**Pn**	**20 33 07.5**	**+1.3**
BZS	**Buzias**	**7.24**	**6**	⇑P	**Pn**	**20 33 09.1**	**+2.1**
NVLJ	**Novalja**	**7.42**	**327**	*e*Pn	**Pn**	**20 33 09.7**	**+0.2**
NVLJ				Sn	**Sn**	**20 34 30.1**	**-3.5**
ARR	**Arges**	**7.60**	**23**	⇓P	**Pn**	**20 33 14.2**	**+2.2**
ELL	**Elmali**	**7.69**	**100**	Pn	**Pn**	**20 33 13.7**	**+0.4**
MURB	**Monte Urbino**	**7.71**	**311**	Pn	**Pn**	**20 33 13.6**	**0.0**
VOIR		**7.79**	**25**	⇓P	**Pn**	**20 33 17.6**	**+2.9**
LATE	**Laterza**	**7.80**	**305**	Pn	**Pn**	**20 33 13.6**	**-1.3**
OZLJ	**Ozalj**	**8.08**	**334**	*i* Pn	**Pn**	**20 33 18.4**	**-0.1**
MLR	**Muntele Rosu**	**8.15**	**28**	Pn	**Pn**	**20 33 22.4**	**+2.7**
	comp=E,0.3nm,0.3s,baz=251,slow=11,SNR=12						
MLR	**Muntele Rosu**	**8.15**	**28**	⇑P	**Pn**	**20 33 23.7**	**+4.0**
MLR	**Muntele Rosu**	**8.15**	**28**		**Pn**	**20 33 21.6**	**+1.9**
GBRS	**Gornja Briga**	**8.25**	**331**	*e*Pn	**Pn**	**20 33 21.1**	**+0.2**
CRES	**Cresnjev**	**8.27**	**335**	*e*Pn	**Pn**	**20 33 20.1**	**-1.1**
DOPR	**Dopca**	**8.37**	**24**	⇑P	**Pn**	**20 33 26.4**	**+3.7**
TIRR	**Tirgusor**	**8.48**	**42**	Pn	**Pn**	**20 33 25.5**	**+1.4**
CASP	**Castiglione de**	**8.50**	**304**	Pn	**Pn**	**20 33 24.0**	**-0.3**
MDUB	**Mudurnu**	**8.56**	**73**	Pn	**Pn**	**20 33 26.2**	**+1.0**
CEY	**Cerknica**	**8.57**	**330**	*e*Pn	**Pn**	**20 33 25.2**	**-0.1**
PLOR	**Plostina**	**8.72**	**30**	⇑P	**Pn**	**20 33 30.8**	**+3.4**
VRI	**Vrincioaia**	**8.77**	**30**	⇑P	**Pn**	**20 33 32.0**	**+4.0**
LJU	**Ljubljana**	**8.79**	**332**	*e*Pn	**Pn**	**20 33 27.4**	**-0.9**
TRI	**Trieste**	**8.81**	**328**	Pn	**Pn**	**20 33 28.6**	**0.0**
SOKA	**Soboth**	**9.16**	**336**	Pn	**Pn**	**20 33 32.4**	**-1.1**
	comp=E,7.4nm,0.6s,SNR=11						
SOKA				Sn	**Sn**	**20 35 11.6**	**-4.9**
	comp=E,9.5nm,0.7s						
OBKA	**Obir**	**9.18**	**334**	*e*Pn	**Pn**	**20 33 34.2**	**+0.6**
	comp=E,0.8nm,0.2s						
OBKA				Sn	**Sn**	**20 35 15.1**	**-1.8**
	comp=E,39nm,0.8s						
KEST	**Kesra**	**9.28**	**257**	Pn	**Pn**	**20 33 35.2**	**+0.1**
	comp=E,0.1nm,0.3s,baz=22,slow=8.9,SNR=3.0						
KEST				Sn	**Sn**	**20 35 21.8**	**+2.4**
	comp=E,0.1nm,0.3s,baz=270,slow=20,SNR=3.1						
KEST				LR	LR	20 38 19.4	
	comp=E,108nm,18.2s,baz=213,slow=45						
KEST	**Kesra**	**9.28**	**257**	Pn	**Pn**	**20 33 34.1**	**-1.0**
PSZ	**Piszkesteto**	**9.49**	**358**	Pn	**Pn**	**20 33 37.4**	**-0.6**
VLC	**Villacollemand**	**9.49**	**310**	Pn	**Pn**	**20 33 36.8**	**-1.2**
TEOL	**Teolo**	**9.53**	**319**	Pn	**Pn**	**20 33 37.6**	**-0.8**
TEOL					**Sn**	**20 35 19.0**	**-6.4**
MYKA	**Terra Mystica**	**9.61**	**331**	Pn	**Pn**	**20 33 40.1**	**+0.4**
	comp=E,3.0nm,0.4s						
STAL	**STALIGIAL**	**9.70**	**326**	Pn	**Pn**	**20 33 39.5**	**-1.3**
BURAR	**Bucovina Array**	**9.82**	**19**	Pn	**Pn**	**20 33 42.6**	**+0.1**
PRMA	**PARMA**	**9.88**	**313**	Pn	**Pn**	**20 33 42.3**	**-1.0**
CTI	**Castel Tesino**	**10.03**	**322**		**Pn**	**20 33 44.4**	**-1.0**
CTI					**Sn**	**20 35 33.3**	**-4.4**
KBA	**Koelnbreinsper**	**10.10**	**331**	Pn	**Pn**	**20 33 46.5**	**+0.1**
	comp=E,2.7nm,0.5s						
KBA				Sn	**Sn**	**20 35 35.3**	**-4.3**
	comp=E,10nm,1.0s						
MSSA	**Maissana**	**10.11**	**309**	Pn	**Pn**	**20 33 45.3**	**-1.1**
VYHS	**Vyhne**	**10.13**	**354**	*e*PN	**Pn**	**20 33 45.9**	**-0.8**
VYHS				*e*PG		20 34 36.2	
VYHS				*e*SN	**Sn**	**20 35 36.3**	**-3.9**
ABTA	**Abfaltersbach**	**10.16**	**327**	Pn	**Pn**	**20 33 46.5**	**-0.7**
	comp=E,2.9nm,0.6s						
MODS	**Modra-Piesok**	**10.21**	**348**	*e*SN	**Sn**	**20 35 37.3**	**-4.7**
BR131	**Keskin Array S**	**10.33**	**79**		**Pn**	**20 33 50.5**	**+0.9**
BRTR	**Keskin Array B**	**10.33**	**79**	Pn	**Pn**	**20 33 53.2**	**+3.6**
	comp=E,0.2nm,0.3s,baz=257,slow=12,SNR=6.1						
BRTR				LR	LR	20 38 26.5	
	comp=E,120nm,19.4s,baz=242,slow=41						
BRTR	**Keskin Array B**	**10.33**	**79**	Pn	**Pn**	**20 33 50.8**	**+1.2**
MOA	**Molln**	**10.44**	**336**	*e*Pn	**Pn**	**20 33 50.2**	**-0.8**
	comp=E,3.9nm,0.5s						
MOA				Sn	**Sn**	**20 35 44.5**	**-3.3**
	comp=E,4.7nm,0.7s						
CSS	**Mathiatis**	**10.90**	**105**	Pn	**Pn**	**20 33 57.3**	**0.0**
WTTA	**Wattenberg**	**10.94**	**327**	Pn	**Pn**	**20 33 58.3**	**+0.3**
	comp=E,2.1nm,0.5s						
WATA	**Walderalm**	**11.02**	**327**	Pn	**Pn**	**20 33 58.0**	**-1.0**
	comp=E,3.2nm,0.6s						
WATA				Sn	**Sn**	**20 36 00.4**	**-1.9**
	comp=E,18nm,0.7s						
SQTA	**Sankt Quirin**	**11.10**	**325**	*e*Pn	**Pn**	**20 34 01.3**	**+1.3**
	comp=E,3.0nm,0.6s						
SQTA				Sn	**Sn**	**20 36 01.2**	**-2.8**
	comp=E,9.3nm,0.7s						
FUORN	**Ofenpass-Fuorn**	**11.11**	**321**	Pn	**Pn**	**20 34 01.2**	**+0.9**
FETA	**Feichten**	**11.17**	**323**	Pn	**Pn**	**20 34 03.8**	**+2.8**
	comp=E,2.0nm,0.5s						
VRAC	**Vranov**	**11.23**	**347**	LR	LR	20 39 40.0	
	comp=E,187nm,18.3s,baz=174,slow=45						
MOTA	**Moosalm**	**11.24**	**325**	Pn	**Pn**	**20 34 01.9**	**-0.1**
	comp=E,6.2nm,0.7s,SNR=4.8						
MOTA				Sn	**Sn**	**20 36 07.1**	**-0.4**
	comp=E,8.1nm,0.8s						
KWP	**Kalwaria Pacla**	**11.32**	**7**	Pn	**Pn**	**20 34 04.9**	**+2.0**
DAVOX	**Davos/Dischmat**	**11.41**	**320**	Pn	**Pn**	**20 34 05.2**	**+0.9**
	comp=E,0.2nm,0.3s,baz=137,slow=17,SNR=3.2						
DAVOX				Sn	**Sn**	**20 36 11.4**	**-0.4**
	comp=E,0.5nm,0.3s,baz=342,slow=21,SNR=6.9						
DAVOX				LR	LR	20 39 53.7	
	comp=E,142nm,21.1s,baz=130,slow=45						
GEC2	**GERESS Array S**	**11.50**	**337**	Pn	**Pn**	**20 34 05.6**	**+0.1**
GERES	**GERESS Array B**	**11.50**	**337**	Pn	**Pn**	**20 34 04.8**	**-0.7**
	comp=E,0.1nm,0.3s,baz=156,slow=13,SNR=7.5						
GERES				Sn	**Sn**	**20 36 10.8**	**-3.0**
	comp=E,0.3nm,0.3s,baz=153,slow=24,SNR=4.9						
GERES				LR	LR	20 40 03.2	
	comp=E,61nm,20.0s,baz=151,slow=46						
GERES	**GERESS Array B**	**11.50**	**337**	Pn	**Pn**	**20 34 04.4**	**-1.1**
MORC	**Moravsky Berou**	**11.54**	**351**	Pn	**Pn**	**20 34 05.7**	**-0.3**
KHC	**Kasperske Hory**	**11.79**	**337**	*e*PN	**Pn**	**20 34 09.9**	**-0.5**
KHC				*e*SN	**Sn**	**20 36 16.4**	**-4.5**
KHC	**Kasperske Hory**	**11.79**	**337**	Pn	**Pn**	**20 34 09.9**	**+0.5**
OJC	**Ojcow**	**11.80**	**358**	Pn	**Pn**	**20 34 10.8**	**+1.3**
BNI	**Bardonecchia**	**12.23**	**307**	Pn	**Pn**	**20 34 16.2**	**+0.7**
SENIN	**Lac Senin/Sane**	**12.54**	**313**	Pn	**Pn**	**20 34 21.5**	**+1.7**
MMAI	**Mount Meron Ar**	**13.29**	**109**	Pn	**Pn**	**20 34 29.6**	**-0.3**
	comp=E,0.6nm,0.3s,baz=284,slow=12,SNR=4.3						
ECH	**Echery**	**13.74**	**320**	Pn	**Pn**	**20 34 37.0**	**+0.9**
AKASG	**Malin Array Be**	**13.76**	**24**	Pn	**Pn**	**20 34 35.8**	**-0.4**
	comp=E,1.6nm,0.3s,baz=210,slow=12,SNR=1.6						
AKASG	**Malin Array Be**	**13.76**	**24**		**Pn**	**20 34 36.0**	**-0.2**
EIL	**Elat**	**14.84**	**122**	Pn	**Pn**	**20 34 51.9**	**+0.8**
	comp=E,0.3nm,0.3s,baz=333,slow=18,SNR=3.4						
EIL				Sn	**Sn**	**20 37 29.3**	**-6.1**
	comp=E,0.4nm,0.3s,baz=306,slow=19,SNR=3.8						
SUW	**Suwalki**	**15.70**	**6**	P	**Pn**	**20 35 03.5**	**+1.3**
SUW				IAmb	IAmb	20 35 15.6	
	comp=E,41nm,0.6s						
KBZ	**Khabaz**	**17.71**	**65**	P	**P**	**20 35 31.0**	**+2.4**
ESDC	**Sonseca Array**	**19.00**	**281**	P	**Pn**	**20 35 43.2**	**-0.5**
	comp=E,0.1nm,0.3s,baz=75,slow=11,SNR=10.0						
ESDC	**Sonseca Array**	**19.00**	**281**	P	**Pn**	**20 35 43.5**	**-0.2**
HFS	**Hagfors**	**22.15**	**351**	P	**P**	**20 36 16.8**	**0.0**
	comp=E,4.2nm,0.6s,baz=164,slow=12,SNR=12						
KONO	**Kongsberg**	**22.34**	**345**	P	**P**	**20 36 17.9**	**-1.0**
NC602	**NORSAR Array S**	**23.02**	**349**	P	**P**	**20 36 26.6**	**+0.5**
EKA	**Eskdalemuir Ar**	**23.20**	**324**	P	**P**	**20 36 28.1**	**+0.2**
	comp=E,1.8nm,0.7s,baz=127,slow=9.6,SNR=3.8						
NAO01	**NORSAR Array S**	**23.23**	**348**	P	**P**	**20 36 28.6**	**+0.4**
FINES	**FINESS Array B**	**23.30**	**7**	P	**P**	**20 36 28.9**	**0.0**
	comp=E,4.3nm,0.6s,baz=176,slow=10.0,SNR=23						
FINES	**FINESS Array B**	**23.30**	**7**	P	**P**	**20 36 27.5**	**-1.4**
FIA1	**FINESS Array S**	**23.31**	**7**	P	**P**	**20 36 28.2**	**-0.8**
FIA1				IAmb	IAmb	20 36 41.6	
	comp=E,60nm,1.8s						
NC405	**NORSAR Array S**	**23.36**	**349**	P	**P**	**20 36 28.8**	**-0.7**
NB201	**NORSAR Array S**	**23.36**	**349**	P	**P**	**20 36 28.7**	**-0.9**
NB2	**NORSAR Subarra**	**23.36**	**349**	P	**P**	**20 36 30.3**	**+0.7**
	comp=E,5.3nm,1.2s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	**23.36**	**349**	P	**P**	**20 36 29.5**	**-0.1**
	comp=E,2.3nm,0.9s,baz=157,slow=10,SNR=4.8						
NC303	**NORSAR Array S**	**23.52**	**349**		**P**	**20 36 31.0**	**-0.1**
GEYT	**Alibeck**	**29.48**	**79**	P	**P**	**20 37 26.2**	**+0.9**
	comp=E,1.1nm,0.5s,baz=280,slow=8.9,SNR=3.7						
GEYT	**Alibeck**	**29.48**	**79**	P	**P**	**20 37 26.4**	**+1.0**
ASHT	**Ashkhabad**	**29.68**	**79**	P	**P**	**20 37 26.8**	**-0.3**
ABKAR	**Akbulak array**	**30.14**	**56**	P	**P**	**20 37 30.7**	**-0.3**
ABKAR	**Akbulak array**	**30.14**	**56**	P	**P**	**20 37 31.4**	**+0.4**
ABKAR				IAmb	IAmb	20 37 55.9	
	comp=E,4.4nm,1.6s						
TOA0	**Torodi Ar. Sit**	**30.19**	**219**	P	**P**	**20 37 32.5**	**+0.8**
TOA0				IAmb	IAmb	20 37 41.3	
	comp=E,12nm,1.8s						
TORD	**Torodi Ar. Bea**	**30.19**	**219**	P	**P**	**20 37 32.1**	**+0.3**
	comp=E,1.9nm,0.7s,baz=33,slow=9.0,SNR=12						
TORD	**Torodi Ar. Bea**	**30.19**	**219**	P	**P**	**20 37 31.4**	**-0.3**
ARU	**Arti**	**30.91**	**42**	LR	LR	20 50 36.5	
	comp=E,73nm,21.2s,baz=334,slow=38						
KK31	**Karatay Array**	**37.74**	**67**	P	**P**	**20 38 37.2**	**+0.2**
KK31				IAmb	IAmb	20 38 39.1	
	comp=E,2.7nm,0.6s						
KKAR	**Karatay Array**	**37.74**	**67**	P	**P**	**20 38 37.0**	**-0.1**
KKAR	**Karatay Array**	**37.74**	**67**	P	**P**	**20 38 37.4**	**+0.3**
KKAR				IAmb	IAmb	20 38 39.1	
	comp=E,2.7nm,0.6s						
DBIC	**Dimbokro**	**39.04**	**222**	P	**P**	**20 38 48.7**	**+0.5**
	comp=E,2.4nm,0.7s,baz=25,slow=7.9,SNR=3.9						
DBIC	**Dimbokro**	**39.04**	**222**	P	**P**	**20 38 47.8**	**-0.4**
DBIC				IAmb	IAmb	20 39 14.0	
	comp=E,16nm,1.6s						
SOCY	**Socotra**	**39.65**	**122**	P	**P**	**20 38 51.8**	**-1.5**
SOCY				IAmb	IAmb	20 38 56.7	
	comp=E,10nm,1.0s						
SPA0	**Spitsbergen Ar**	**39.90**	**359**	P	**P**	**20 38 54.2**	**-0.5**
KSH	**Kashi**	**42.59**	**70**	P	**P**	**20 39 17.5**	**+0.1**
KSH				pP	sP	20 39 25.0	+2.7
KSH				pmax	pmax		
	comp=E,540nm,5.5s						
MK31	**Makanchi Array**	**45.21**	**59**	P	**P**	**20 39 37.2**	**-1.1**
MKAR	**Makanchi Array**	**45.21**	**59**	P	**P**	**20 39 37.6**	**-0.7**
	comp=E,1.0nm,0.5s,baz=278,slow=7.5,SNR=19						
MKAR	**Makanchi Array**	**45.21**	**59**	P	**P**	**20 39 37.0**	**-1.3**
ZAA0	**Zalesovo Array**	**45.56**	**48**	P	**P**	**20 39 39.7**	**-1.2**
ZAA0				IAmb	IAmb	20 39 44.0	
	comp=E,2.7nm,0.7s						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**20 39 40.3**	**-0.6**
	comp=E,1.9nm,0.3s,baz=276,slow=8.5,SNR=13						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**20 39 39.6**	**-1.3**
WMQ	**Urumqi**	**49.68**	**61**	*e*P	**P**	**20 40 16.0**	**+2.8**
WMQ				pmax	pmax		
	comp=E,9.0nm,0.9s						
WMQ				pmax	pmax		
	comp=E,97nm,3.9s						
SCHQ	**Schefferville**	**58.24**	**317**	P	**P**	**20 41 16.0**	**+0.5**
LZH	**Lanzhou**	**64.14**	**63**	*e*P	**P**	**20 41 54.8**	**-1.1**
LZH				pP	sP	20 42 00.5	-0.4
LZH				sP	pP	20 42 03.0	+3.1
LZH				*e*PP	**PP**	**20 44 18.0**	**+1.3**
LZH				pmax	pmax		
	comp=E,16nm,1.3s						
LZH				pmax	pmax		
	comp=E,75nm,6.6s						
LZH				LR	LR		
	comp=N,120nm,15.6s						
LZH				LR	LR		
	comp=E,130nm,15.4s						
LZH				LR	LR		
	comp=Z,220nm,18.2s						
HHC	**Hu-ho-hao-te**	**66.93**	**56**	*e*P	**P**	**20 42 15.3**	**+1.4**
HHC				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,51nm,5.8s						
CMAR	**Chiang Mai Arr**	**69.90**	**82**	P	**P**	**20 42 31.2**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=302,slow=7.4,SNR=3.3						
NJ2	**Nanjing**	**76.73**	**60**	*e*P	**P**	**20 43 13.5**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						

MOS ***28*** *20:34:03.6±1.1,56˚.60N×34˚.43W,h13km,mb4.9/14, MS4.5/7,Error ellipse: s-maj=8.6km s-min=6.0km az=89.3*

BJI ***28*** *20:34:04.0±0.0,56˚.80N×34˚.30W,h10km,mB5.3/18, mb4.8/25,Ms5.2/10,Ms7 4.9/3*

IDC ***28*** *20:34:04.5±0.4,56˚.65N×34˚.39W,h0km,mb4.2/33, mb1 4.3/37,mb1mx4.2/59,mbtmp4.2/37,ML3.1/4,MS4.3/39, Ms1 4.3/39,ms1mx4.2/60,Error ellipse: s-maj=12.8km s-min=9.7km az=2.0*

NEIC ***28*** *20:34:04.1±1.9,56˚.61N±0˚.07×34˚.3W±0˚.1,h6km±2km, mb5.0/263,Error ellipse: s-maj=10.3km s-min=8.4km az=187.0*

GCMT ***28*** *20:34:07.1±0.2,56˚.70N±0˚.02×34˚.29W±0˚.02,h12km, MW5.0/121,Moment Tensor Solution. s36,c41; s121,c178; Duration: 0 Moment tensor: Scale 1016Nm; Mrr=4.05±.09; Mθθ 0.87±.10; Mϕϕ 3.18±.07; Mrθ 1.67±.36; Mθϕ 0.39±.07; Mϕr-0.03±.31; Best double couple: Mo 3.91000×1016 NP1:ϕs 354.00000°, δ45.00000°, λ-114.00000°. NP2:ϕs 207.00000°, δ50.00000°, λ-67.00000°. Principal axes: T 3.2550, Plg2.0000°, Azm281.0000°; N 1.3070, Plg17.0000°, Azm12.0000°; P -4.5660, Plg73.0000°, Azm184.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 20:34:04.0±1.9, 56˚.65N±0˚.05×34˚.34W±0˚.04, h3km±11km, n701,σ1§23/681, mb5.0/191, MS4.5/58, 8C-6D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**7.30**	**313**	P		**Pn**	**20 35 50.3**	**-1.1**
NRS	**Narsarsuaq**	**7.30**	**313**	Pn		**Pn**	**20 35 50.3**	**-1.1**
IVI	**Ivigtut**	**8.48**	**308**	Pn		**Pn**	**20 36 08.0**	**+0.3**
ANGG	**Ammassalik, Gr**	**9.14**	**351**	Pn		**Pn**	**20 36 15.0**	**-1.5**
BORG	**Borgarnes**	**10.30**	**33**	Pn		**Pn**	**20 36 32.5**	**0.0**
	0.1nm,0.3s,baz=190,slow=18,SNR=1.6							
BORG				Sn		**Sn**	**20 38 23.2**	**-5.1**
	0.4nm,0.3s,baz=78,slow=20,SNR=5.1							
BORG				LR		LR	20 39 25.1	
	comp=Z,3μm,18.2s,baz=248,slow=31							
BORG	**Borgarnes**	**10.30**	**33**			**Pn**	**20 36 32.3**	**-0.2**
BORG						**Sn**	**20 38 25.4**	**-3.0**
SFJD	**Kangerlussuaq**	**12.86**	**330**	P		**Pn**	**20 37 07.1**	**-0.4**
SFJD	**Kangerlussuaq**	**12.86**	**330**	LR		LR	20 41 17.7	
	comp=Z,2μm,18.6s,baz=140,slow=34							
SFJD	**Kangerlussuaq**	**12.86**	**330**	Pn		**Pn**	**20 37 07.1**	**-0.4**
ILULI	**Ilulissat**	**14.65**	**336**	P		**Pn**	**20 37 31.3**	**-0.6**
ILULI	**Ilulissat**	**14.65**	**336**	Pn		**Pn**	**20 37 31.3**	**-0.6**
SCO	**Scoresbysund**	**14.89**	**16**	P		**Pn**	**20 37 38.3**	**-2.7**
SCO	**Scoresbysund**	**14.89**	**16**	Pn		**Pn**	**20 37 38.3**	**-2.7**
DRLN	**Deer Lake**	**15.75**	**252**	Pn		**Pn**	**20 37 46.5**	**0.0**
DRLN				IAmb		IAmb	20 37 47.2	
	comp=Z,148nm,1.6s							
SUMG	**Summit**	**16.08**	**356**	P		**Pn**	**20 37 50.4**	**-0.8**
SUMG				pmax		pmax		
	comp=Z,70nm,1.2s							
SUMG	**Summit**	**16.08**	**356**	*i* P		**Pn**	**20 37 50.0**	**-1.2**
SUMG	**Summit**	**16.08**	**356**			**Pn**	**20 37 50.4**	**-0.8**
ESK	**Eskdalemuir**	**17.40**	**81**	P		**Pn**	**20 38 06.4**	**-1.1**
ESK				pmax		pmax		
	comp=Z,91nm,1.6s							
ESK	**Eskdalemuir**	**17.40**	**81**	Pn		**Pn**	**20 38 06.4**	**-1.1**
EKA	**Eskdalemuir Ar**	**17.42**	**81**	P		**P**	**20 38 08.7**	**-0.4**
	baz=284,slow=9.9,SNR=3.0							
EKA				LR		LR	20 43 42.4	
	comp=Z,2μm,18.8s,baz=285,slow=33							
JMIC	**Jan Mayen**	**18.10**	**27**	LR		LR	20 43 37.1	
	comp=Z,1μm,19.3s,baz=232,slow=32							
FRB	**Frobisher Bay**	**18.23**	**307**	P		**P**	**20 38 18.1**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=98,slow=13,SNR=8.6							
FRB				LR		LR	20 43 59.5	
	comp=Z,1μm,20.7s,baz=79,slow=33							
SCHQ	**Schefferville**	**18.30**	**278**	P		**P**	**20 38 18.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=72,slow=12,SNR=11							
SCHQ				LR		LR	20 44 17.2	
	comp=Z,1μm,18.1s,baz=77,slow=34							
SCHQ	**Schefferville**	**18.30**	**278**	P		**Pn**	**20 38 17.9**	**-0.7**
CMLA	**Cha da Macela**	**19.79**	**159**	P		**P**	**20 38 32.6**	**-2.7**
CMLA				pmax		pmax		
	comp=Z,168nm,1.0s							
CMLA	**Cha da Macela**	**19.79**	**159**	P		**P**	**20 38 32.6**	**-2.7**
GBN	**Guysborough**	**20.31**	**248**	P		**P**	**20 38 40.2**	**-0.7**
GBN				IAmb		IAmb	20 38 54.9	
	comp=Z,164nm,1.7s							
DAG	**Danmarks Havn**	**20.98**	**10**	*i* P		Pn	20 38 51.0	+0.5
DAG	**Danmarks Havn**	**20.98**	**10**	*i* P		Pn	20 38 51.0	+0.5
LMN	**Caledonia Moun**	**21.73**	**253**	P		**P**	**20 38 55.8**	**-0.4**
D63A	**Stockholm**	**22.75**	**259**	P		**P**	**20 39 05.4**	**-1.8**
	baz=53,SNR=5.3							
PQI	**Presque Isle**	**22.93**	**259**	P		**P**	**20 39 08.3**	**-0.7**
PQI				IAmb		IAmb	20 39 17.1	
	comp=Z,127nm,1.9s							
E64A	**Bridgewater**	**22.99**	**258**	P		**P**	**20 39 08.4**	**-1.1**
	baz=51							
D62A	**Allapoint, All**	**23.24**	**261**	P		**P**	**20 39 11.1**	**-1.1**
D62A	**Allapoint, All**	**23.24**	**261**	P		**P**	**20 39 13.1**	**+0.9**
	baz=53,SNR=6.8							
GGN	**Saint George**	**23.29**	**254**	P		**P**	**20 39 09.1**	**-3.7**
E63A	**Oxbow**	**23.30**	**259**	P		**P**	**20 39 12.2**	**-0.7**
E63A				IAmb		IAmb	20 39 30.1	
	comp=Z,110nm,1.9s							
E63A	**Oxbow**	**23.30**	**259**	P		**P**	**20 39 13.5**	**+0.6**
	baz=52							
NAO01	**NORSAR Array S**	**23.46**	**61**	P		**P**	**20 39 13.0**	**-1.3**
TULEG	**Thule**	**23.50**	**341**	P		**P**	**20 39 14.3**	**-0.2**
TULEG				IAmb		IAmb	20 39 27.4	
	comp=Z,112nm,1.7s							
COI	**Coimbra**	**23.58**	**123**	P		**P**	**20 39 15.7**	**0.0**
COI				pmax		pmax		
	comp=Z,228nm,1.7s							
COI	**Coimbra**	**23.58**	**123**	P		**P**	**20 39 15.7**	**0.0**
NB2	**NORSAR Subarra**	**23.58**	**60**	P		**P**	**20 39 17.2**	**+1.6**
	comp=Z,3.5nm,1.0s,baz=278,slow=10							
NOA	**NORSAR Array B**	**23.58**	**60**	P		**P**	**20 39 16.2**	**+0.7**
	comp=Z,2.7nm,1.1s,baz=289,slow=8.9,SNR=3.1							
F64A	**Sherman**	**23.62**	**257**	P		**P**	**20 39 15.7**	**-0.3**
F64A				IAmb		IAmb	20 39 19.1	
	comp=Z,54nm,1.1s							
F64A	**Sherman**	**23.62**	**257**	P		**P**	**20 39 16.2**	**+0.2**
	baz=51							
NB201	**NORSAR Array S**	**23.62**	**60**	P		**P**	**20 39 16.4**	**+0.5**
G65A	**Princeton**	**23.62**	**255**	P		**P**	**20 39 14.8**	**-1.2**
G65A				IAmb		IAmb	20 39 18.4	
	comp=Z,118nm,1.9s							
NC602	**NORSAR Array S**	**23.80**	**61**	P		**P**	**20 39 17.6**	**0.0**
NC405	**NORSAR Array S**	**23.81**	**60**	P		**P**	**20 39 17.2**	**-0.5**
NC405				IAmb		IAmb	20 39 38.3	
	comp=Z,69nm,1.4s							
F63A	**Nahmakanta, Br**	**24.12**	**258**	P		**P**	**20 39 19.4**	**-1.5**
F63A	**Nahmakanta, Br**	**24.12**	**258**	P		**P**	**20 39 21.1**	**+0.2**
	baz=50							
G64A	**Maxfield**	**24.23**	**257**	P		**P**	**20 39 22.3**	**+0.5**
	baz=50							
E61A	**Lac Etchemin**	**24.42**	**261**	P		**P**	**20 39 23.5**	**-0.1**
	baz=52							
PKME	**Peaks-Kenny Pk**	**24.51**	**257**	P		**P**	**20 39 23.2**	**-1.2**
	baz=50							
G63A	**Kingsbury**	**24.78**	**257**	P		**P**	**20 39 26.5**	**-0.3**
	baz=50							
H64A	**Troy**	**24.88**	**256**	P		**P**	**20 39 27.7**	**0.0**
	baz=49							
SSF	**Saint Saulge**	**24.96**	**96**	*e*P		**P**	**20 39 30.3**	**+1.8**
SSF				pmax		pmax		
	comp=Z,53nm,1.4s							
HFS	**Hagfors**	**24.96**	**62**	P		**P**	**20 39 29.5**	**+1.2**
	comp=Z,8.0nm,1.0s,baz=294,slow=11,SNR=3.3							
HFS				LR		LR	20 48 10.4	
	comp=Z,615nm,18.6s,baz=278,slow=34							
F61A	**St Evariste**	**24.98**	**260**	P		**P**	**20 39 28.3**	**-0.3**
	baz=51							
PESTR	**Estremoz**	**25.04**	**124**	P		**P**	**20 39 27.9**	**-1.3**
PESTR

PVCC **Panska Ves** 29.14 81 AMS AMS 20 51 30.0
comp=Z,1µm,18.5s
PRA **Prague** 29.30 82 AMS AMS 20 53 40.0
comp=Z,1µm,12.4s
KHC **Kasperske Hory** 29.34 84 ⇓ *e*P P 20 40 11.0 +3.2
KHC pmax pmax
comp=Z,25nm,1.7s
KHC **Kasperske Hory** 29.34 84 AMS AMS 20 52 40.0
comp=Z,1µm,13.6s
PRU **Pruhonice** 29.40 82 AMS AMS 20 51 40.0
comp=Z,1µm,12.4s
GERES **GERESS Array B** 29.56 85 P P 20 40 12.6 +2.8
GERES **GERESS Array B** 29.56 85 P P 20 40 13.8 +3.9
comp=Z,0.8nm,0.8s,baz=308,slow=9.5,SNR=3.8
GERES LR LR 20 51 38.0
comp=Z,611nm,18.1s,baz=304,slow=36
GERES **GERESS Array B** 29.56 85 P P 20 40 12.6 +2.8
GOPC **GO Pecny, Ondr** 29.58 82 AMS AMS 20 51 00.0
comp=Z,1µm,22.3s
G53A **Haliburton** 29.70 266 P P 20 40 09.1 -1.9
baz=51
CHVC **Chvalec** 29.91 80 AMS AMS 20 52 10.0
comp=Z,2µm,20.9s
UPC **Upice** 29.93 80 AMS AMS 20 52 10.0
comp=Z,2µm,18.4s
OSTC **Ostas** 30.02 80 AMS AMS 20 52 20.0
comp=Z,2µm,20.9s
DPC **Dobruska-Polom** 30.18 80 AMS AMS 20 52 20.0
comp=Z,1µm,18.6s
TREC **Trest** 30.30 83 AMS AMS 20 51 40.0
comp=Z,1µm,23.9s
FINES **FINESS Array B** 30.44 56 P P 20 40 16.8 -0.6
FINES **FINESS Array B** 30.44 56 P P 20 40 18.7 +1.3
comp=Z,3.7nm,0.8s,baz=308,slow=9.4,SNR=4.0
FINES LR LR 20 51 46.4
comp=Z,282nm,19.2s,baz=302,slow=35
FINES **FINESS Array B** 30.44 56 P P 20 40 16.8 -0.6
KRLC **Kraliky** 30.58 80 AMS AMS 20 52 30.0
comp=Z,1µm,17.7s
VRAC **Vranov** 30.89 82 LR LR 20 52 44.2
comp=Z,1µm,18.9s,baz=298,slow=36
FCC **Fort Churchill** 31.08 299 P P 20 40 22.7 -0.3
FCC pmax pmax
comp=Z,27nm,1.5s
FCC **Fort Churchill** 31.08 299 P P 20 40 22.7 -0.3
FCC IAmb IAmb 20 40 32.6
comp=Z,27nm,1.5s
O60A **Telford** 31.17 256 P P 20 40 23.3 -0.6
baz=44
MDT **Midelt** 31.41 127 P P 20 40 27.8 +1.6
comp=Z,6.1nm,1.1s,baz=290,slow=8.4,SNR=3.6
MDT LR LR 20 51 28.9
comp=Z,216nm,20.5s,baz=342,slow=33
E47A **Iron Bridge** 31.45 272 P P 20 40 25.6 -0.8
baz=53
OKC **Ostrava-Krasne** 31.45 80 AMS AMS 20 53 10.0
comp=Z,2µm,18.1s
L55A **Hinsdale** 31.51 262 P P 20 40 26.0 -1.1
baz=47
O59A **Robesonia** 31.59 257 P P 20 40 26.4 -1.3
baz=45
APA **Apatity** 31.78 42 ⇓ *i*P P 20 40 25.7 -3.4
APA pmax pmax
comp=Z,5.0nm,1.2s
E46A **Sault Ste Mari** 32.07 273 P P 20 40 31.8 0.0
E46A IAmb IAmb 20 40 52.1
comp=Z,33nm,1.2s
P59A **Jarrettsville** 32.23 256 P P 20 40 31.9 -1.3
baz=44
LANS **Liptovska Anna** 32.55 80 *e*P P 20 40 36.6 +0.5
LANS **Liptovska Anna** 32.55 80 *e*P P 20 40 36.6 +0.5
VYHS **Vyhne** 32.58 81 *e*P P 20 40 37.3 +1.0
VYHS **Vyhne** 32.58 81 *e*P P 20 40 37.3 +1.0
L53A **Girard** 32.67 263 P P 20 40 35.5 -1.7
baz=47
P58A **Pank, Wackersv** 32.78 257 P P 20 40 35.4 -2.7
baz=44
ALLY **Alegheny Colle** 32.81 263 P P 20 40 37.9 -0.5
ALLY IAmb IAmb 20 40 46.1
comp=Z,19nm,0.7s
N54A **Moraine State** 33.20 262 P P 20 40 39.0 -2.8
baz=46
M53A **WI Miller and** 33.25 263 P P 20 40 39.1 -3.1
baz=47
Q58A **Fox Den Farm,** 33.38 257 P P 20 40 43.8 +0.4
baz=44
N53A **Lisbon** 33.77 262 P P 20 40 47.1 +0.3
O54A **Avella** 33.95 261 P P 20 40 47.4 -1.0
O54A IAmb IAmb 20 40 52.8
comp=Z,41nm,1.3s
KOLS **Kolonicke sedl** 34.19 78 *e*P P 20 40 55.0 +4.6
KOLS **Kolonicke sedl** 34.19 78 *e* P 20 40 55.0 +4.6
R57A **Stanardsville** 34.30 257 P P 20 40 50.9 -0.5
baz=43
Q55A **Buckhannon** 34.63 259 P P 20 40 53.2 -1.1
baz=44
R56A **Bull Pasture M** 34.69 258 P P 20 40 54.3 -0.6
baz=43
O52A **Adamsville** 34.80 262 P P 20 40 54.0 -1.7
baz=46
K47A **Vermontville** 34.80 268 P P 20 40 55.0 -0.6
baz=48
TRPA **Tarpa** 34.80 79 ⇑ P P 20 40 54.9 -0.7
U60A **Pendleton** 34.92 253 P P 20 40 56.1 -0.7
baz=41
P53A **Whipple** 35.00 261 P P 20 40 56.3 -1.1
P53A IAmb IAmb 20 41 02.2
comp=Z,44nm,1.4s
P53A **Whipple** 35.00 261 P P 20 40 56.8 -0.5
baz=45
N50A **Nevada** 35.06 264 P P 20 40 57.4 -0.6
baz=46
EYMN **Ely** 35.07 281 P P 20 40 58.4 +0.5
EYMN IAmb IAmb 20 41 01.6
comp=Z,39nm,1.2s
V61A **Roper** 35.13 252 P P 20 40 56.9 -1.7
baz=40
O51A **Pataskala** 35.20 263 P P 20 40 59.1 0.0
baz=46
ACSO **Alum Creek Sta** 35.34 263 P P 20 40 59.9 -0.5
ACSO IAmb IAmb 20 41 04.5
comp=Z,35nm,1.1s
ACSO **Alum Creek Sta** 35.34 263 P P 20 41 00.4 0.0
baz=46
M48A **Edgerton** 35.44 267 P P 20 41 01.4 +0.2
baz=47
N49A **Columbus Grove** 35.53 265 P P 20 41 02.1 +0.2
N49A **Columbus Grove** 35.53 265 P P 20 41 01.9 0.0
baz=47
T57A **Hurt** 35.65 256 P P 20 41 02.2 -0.8
baz=42
O50A **Cable** 35.75 264 P P 20 41 04.3 +0.4
baz=46
BZS **Buzias** 35.82 84 ⇑ P P 20 41 10.4 +6.0
Q52A **Bidwell** 35.85 261 P P 20 41 04.2 -0.6
baz=44
E38A **The Farm, Brul** 35.90 279 P P 20 41 05.2 0.0
P51A **Williamsport** 35.91 263 P P 20 41 04.2 -1.0
P51A IAmb IAmb 20 41 09.3
comp=Z,30nm,1.3s
KEST **Kesra** 35.94 107 P P 20 41 07.1 +1.5
comp=Z,5.5nm,0.8s,baz=271,slow=14,SNR=3.6
KEST LR LR 20 54 57.0
comp=Z,392nm,18.7s,baz=283,slow=35
KEST **Kesra** 35.94 107 P P 20 41 06.8 +1.2
KEST IAmb IAmb 20 41 29.7
comp=Z,42nm,1.6s
V59A **Middlesex** 36.03 253 P P 20 41 07.3 +1.0
baz=41
N48A **Decatur** 36.03 266 P P 20 41 06.0 -0.3
baz=47
T56A **Rocky Mt** 36.04 257 P P 20 41 07.3 +0.9
baz=42
ULM **Lac du Bonnet** 36.09 287 P P 20 41 06.6 0.0
ULM pmax pmax
comp=Z,24nm,1.4s
ULM **Lac du Bonnet** 36.09 287 P P 20 41 06.9 +0.3
comp=Z,6.6nm,1.1s,baz=48,slow=9.5,SNR=6.5
ULM LR LR 20 54 25.2
comp=Z,844nm,20.5s,baz=82,slow=34
ULM **Lac du Bonnet** 36.09 287 P P 20 41 06.6 0.0
ULM IAmb IAmb 20 41 08.8
comp=Z,24nm,1.4s
U57A **Blanch** 36.11 255 P P 20 41 05.9 -1.0
baz=42
O49A **Covington** 36.12 265 P P 20 41 08.5 +1.5
O49A **Covington** 36.12 265 P P 20 41 07.0 0.0
baz=46,SNR=5.3
P50A **Jamestown** 36.23 263 P P 20 41 07.7 -0.3
baz=45
N47A **Urbana** 36.39 267 P P 20 41 09.0 -0.3
baz=47
Q51A **Peebles** 36.39 262 P P 20 41 07.6 -1.7
Q51A **Peebles** 36.39 262 P P 20 41 09.4 0.0
baz=45
V58A **Windy Hill, Pi** 36.47 254 P P 20 41 08.6 -1.5
V58A **Windy Hill, Pi** 36.47 254 P P 20 41 10.5 +0.4
baz=41
O48A **Farmland** 36.52 265 P P 20 41 10.7 +0.2
baz=46
BURAR **Bucovina Array** 36.56 78 P P 20 41 11.6 +0.7
BURAR **Bucovina Array** 36.56 78 ⇑ P P 20 41 09.6 -1.2
BURAR **Bucovina Array** 36.56 78 P P 20 41 09.7 -1.2
GZR **Gura Zlata** 36.60 83 ⇓ P P 20 41 19.0 +7.9
KLMR **Klimovskoe** 36.67 52 *e*P P 20 41 11.8 +0.3
KLMR *e* 20 42 34.9
KLMR pmax pmax
comp=Z,42nm,1.2s
KLMR **Klimovskoe** 36.67 52 *e*P P 20 41 11.9 +0.4
comp=Z,42nm,1.2s
KLMR AMP 20 41 15.6
KLMR *e*PP PP 20 42 34.9 +0.3
KLMR LQ LQ 20 53 27.2
KLMR LQ LQ 20 53 27.2
KLMR LR LR 20 54 03.2
FFC **Flin Flon** 36.78 296 P P 20 41 11.8 -0.7
FFC pmax pmax
comp=Z,20nm,1.5s
FFC **Flin Flon** 36.78 296 P P 20 41 11.8 -0.7
P49A **Miami Univ. Ec** 36.78 264 P P 20 41 12.1 -0.6
baz=45
X60A **Albert Glenn T** 36.80 252 P P 20 41 12.7 -0.2
baz=40
AKASG **Malin Array Be** 36.89 72 P P 20 41 13.3 -0.2
AKASG pmax pmax
comp=Z,2.0nm,1.1s
AKASG **Malin Array Be** 36.89 72 P P 20 41 14.2 +0.6
comp=Z,25nm,0.3s,baz=307,slow=8.5,SNR=2.8
AKASG LR LR 20 56 20.7
comp=Z,432nm,20.0s,baz=290,slow=36
AKASG **Malin Array Be** 36.89 72 P P 20 41 13.3 -0.2
AKKB **Malin Array Si** 36.89 72 P P 20 41 12.8 -0.7
AKBB pmax pmax
comp=Z,9.0nm,1.1s
AKBB **Malin Array Si** 36.89 72 P P 20 41 12.8 -0.7
U55A **TA2, Sparta** 36.98 257 P P 20 41 14.7 +0.2
baz=42
R51A **Hillsboro** 37.04 262 P P 20 41 15.5 +0.6
baz=44
W58A **Raeford** 37.12 254 P P 20 41 15.7 +0.2
baz=40
P48A **Milroy** 37.23 265 P P 20 41 15.8 -0.6
P48A IAmb IAmb 20 41 20.0
comp=Z,56nm,1.6s
P48A **Milroy** 37.23 265 P P 20 41 16.4 0.0
baz=45
SPMN **Marine on St.** 37.45 278 P P 20 41 17.4 -0.9
SPMN IAmb IAmb 20 41 22.1
comp=Z,28nm,1.2s
SPMN **Marine on St.** 37.45 278 P P 20 41 18.9 +0.6
baz=51
R50A **Paris** 37.46 262 P P 20 41 17.8 -0.6
R50A **Paris** 37.46 262 P P 20 41 17.0 -1.5
baz=44
SFIN **Lafayette** 37.51 267 P P 20 41 17.7 -1.1
SFIN IAmb IAmb 20 41 22.9
comp=Z,59nm,1.4s
SFIN **Lafayette** 37.51 267 P P 20 41 18.5 -0.4
baz=46,SNR=5.6
X58A **Rowland** 37.53 253 P P 20 41 18.5 -0.6
baz=40
T52A **Hallie** 37.58 260 P P 20 41 19.1 -0.4
T52A IAmb IAmb 20 41 29.8
comp=Z,25nm,0.9s
DOPR **Dopca** 37.66 80 ⇑ P P 20 41 19.6 -0.6
Q48A **North Vernon** 37.77 264 P P 20 41 21.4 +0.4
baz=45
VOIR 37.81 81 ⇑ P P 20 41 27.5 +6.1
L42A **Oliver, Polo** 37.82 271 P P 20 41 21.0 -0.4
L42A IAmb IAmb 20 41 25.5
comp=Z,29nm,1.1s
U53A **Fall Branch** 37.91 259 P P 20 41 22.0 -0.3
baz=42
V54A **Nebo** 38.00 257 P P 20 41 22.8 -0.3
baz=42
OBN **Obninsk** 38.18 61 *i* P P 20 41 27.8 +3.5
OBN *i* 20 42 52.9
OBN pmax pmax
comp=Z,8.0nm,1.3s
OBN MLR MLR
comp=Z,231nm,14.0s
OBN **Obninsk** 38.18 61 LR LR 20 56 22.2
comp=Z,126nm,18.8s,baz=343,slow=35
TZTN **Tazewell** 38.30 260 P P 20 41 25.2 -0.4
TZTN IAmb IAmb 20 41 29.5
comp=Z,26nm,1.1s
TZTN **Tazewell** 38.30 260 P P 20 41 25.9 +0.3
baz=42
U52A **Thorn Hill** 38.31 259 P P 20 41 26.3 +0.5
baz=42
S49A **Springfield** 38.34 263 P P 20 41 27.1 +1.1
baz=44
X56A **White Oak** 38.48 255 P P 20 41 27.2 +0.1
baz=40
V53A **Saluda** 38.55 258 P P 20 41 26.7 -1.0
V53A **Saluda** 38.55 258 P P 20 41 28.5 +0.7
baz=42
YKA **Yellowknife Ar** 38.59 313 P P 20 41 28.2 +0.5
comp=Z,3.3nm,1.0s,baz=61,slow=8.8,SNR=21
YKA PcP PcP 20 43 39.8 -0.1
comp=Z,1.3nm,0.8s,baz=59,slow=3.0,SNR=10.0
YKA LR LR 20 55 46.3
comp=Z,549nm,21.2s,baz=0.0,slow=34
HDIL **Hopedale** 38.60 269 P P 20 41 29.1 +1.0
baz=46
L40A **Anamosa** 38.64 273 P P 20 41 29.4 +1.0
W54A **Cherokee Point** 38.65 257 P P 20 41 29.7 +1.2
baz=41,SNR=5.5
T50A **Nancy** 38.65 261 P P 20 41 29.1 +0.5
baz=43
U51A **La Follette** 38.68 260 P P 20 41 29.0 +0.2
baz=42
JSC **Jenkinsville** 38.76 255 P P 20 41 29.7 +0.2
JSC pmax pmax
comp=Z,25nm,1.4s
JSC **Jenkinsville** 38.76 255 P P 20 41 29.7 +0.2
X55A **Gracelyn & Ava** 38.82 256 P P 20 41 30.3 +0.4
baz=40
V52A **Sevierville** 38.84 259 P P 20 41 25.9 -4.2
V52A IAmb IAmb 20 41 34.3
comp=Z,60nm,1.8s
PRGR **Permogore** 38.89 49 *e*P P 20 41 22.1 -8.1
PRGR pmax pmax
comp=Z,15nm,1.5s
T49A **Edmonton** 38.97 262 P P 20 41 29.1 -2.2
T49A **Edmonton** 38.97 262 P P 20 41 30.9 -0.3
baz=43
TKL **Tuckaleechee C** 39.08 259 P P 20 41 29.3 -2.9
TKL pmax pmax
comp=Z,8.0nm,0.6s
TKL **Tuckaleechee C** 39.08 259 LR LR 20 56 45.9
comp=Z,1000nm,18.7s,baz=45,slow=35
TKL **Tuckaleechee C** 39.08 259 P P 20 41 29.3 -2.9
NHSC **New Hope** 39.09 253 P P 20 41 31.1 -1.1
W53A **Cullowhee** 39.11 258 P P 20 41 32.4 -0.1
baz=41
BG3 **Lake Jocassee** 39.12 257 P P 20 41 30.6 -1.9
V51A **Loudon** 39.28 260 P P 20 41 32.1 -1.8
V51A **Loudon** 39.28 260 P P 20 41 35.0 +1.1
baz=42,SNR=5.1
N41A **Harden Midland** 39.36 271 P P 20 41 33.5 -0.9
N41A IAmb IAmb 20 41 39.3
comp=Z,74nm,1.4s
P43A **Skaggs, Pawnee** 39.36 269 P P 20 41 33.4 -1.0
P43A IAmb IAmb 20 41 38.5
comp=Z,52nm,1.5s
MDND **Maddock** 39.48 286 P P 20 41 35.9 +0.5
baz=52
U49A **Red Boiling Sp** 39.54 262 P P 20 41 35.6 -0.3
baz=43
CPCT **Cooper Cave** 39.64 259 P P 20 41 36.1 -0.7
CPCT IAmb IAmb 20 41 41.3
comp=Z,48nm,1.3s
X53A **Estanollee** 39.69 257 P P 20 41 36.7 -0.5
baz=41
V50A **Pikevile** 39.79 260 P P 20 41 38.6 +0.5
baz=42,SNR=6.1
Y54A **Tignall** 39.85 256 P P 20 41 39.4 +0.9
baz=40
T47A **Sharon Grove** 39.92 263 P P 20 41 38.2 -0.9
X52A **Dahlonega** 39.93 258 P P 20 41 39.3 0.0
baz=41
W51A **Cleveland** 39.98 259 P P 20 41 40.5 +0.8
baz=42
V49A **McMinnville** 40.16 261 P P 20 41 40.8 -0.3
baz=42
Y53A **Monroe** 40.33 257 P P 20 41 42.9 +0.3
baz=40
Z54A **Sparta** 40.41 256 P P 20 41 44.4 +1.2
baz=40
X51A **Calhoun** 40.48 259 P P 20 41 45.0 +1.2
baz=41
ECSD **EROS Data Cent** 40.49 279 P P 20 41 44.4 +0.6
ECSD IAmb IAmb 20 41 48.1
comp=Z,44nm,1.4s
ECSD **EROS Data Cent** 40.49 279 P P 20 41 44.7 +0.9
baz=49,SNR=12
SWET **Sewanee** 40.58 261 P P 20 41 44.2 -0.5
Y52A **Lilburn** 40.58 257 P P 20 41 43.5 -1.1
Y52A IAmb IAmb 20 41 49.5
comp=Z,55nm,1.6s
Y52A **Lilburn** 40.58 257 P P 20 41 45.5 +0.8
baz=40
S44A **Carbondale** 40.59 266 P P 20 41 43.8 -0.9
S44A IAmb IAmb 20 41 48.6
comp=Z,32nm,0.9s
GOGA **Godfrey** 40.61 256 P P 20 41 43.5 -1.4
GOGA pmax pmax
comp=Z,26nm,1.2s
GOGA **Godfrey** 40.61 256 P P 20 41 43.5 -1.4
GOGA **Godfrey** 40.61 256 P P 20 41 45.2 +0.3
baz=40
AGG **Agios Georgios** 40.61 91 P P 20 41 42.6 -2.3
AGG pmax pmax
comp=Z,24nm,0.8s
AGG **Agios Georgios** 40.61 91 P P 20 41 42.6 -2.3
AGG IAmb IAmb 20 41 43.9
comp=Z,24nm,0.8s
V48A **Smith Brothers** 40.68 262 P P 20 41 43.1 -2.3
155A **Kite** 40.68 255 P P 20 41 45.8 +0.4
baz=39
Z53A **Monticello** 40.77 256 P P 20 41 46.5 +0.3
baz=40,SNR=5.4
W49A **Belvidere** 40.83 261 P P 20 41 46.7 0.0
baz=42
FPAL **Fort Paine** 40.91 260 P P 20 41 45.0 -2.4
WVT **Waverly** 40.94 263 P P 20 41 45.8 -1.8
WVT pmax pmax
comp=Z,29nm,1.5s
WVT **Waverly** 40.94 263 P P 20 41 45.8 -1.8
WVT **Waverly** 40.94 263 P P 20 41 48.1 +0.5
baz=43
Y51A **Rockmart** 41.10 258 P P 20 41 50.0 +1.1
baz=41
Z52A **Williamson** 41.29 257 P P 20 41 51.6 +1.2
baz=40,SNR=5.1
CCM **Cathedral Cave** 41.43 268 P P 20 41 50.5 -1.0
CCM pmax pmax
comp=Z,39nm,1.4s
CCM **Cathedral Cave** 41.43 268 P P 20 41 50.5 -1.0
CCM IAmb IAmb 20 41 55.4
comp=Z,39nm,1.4s
CCM **Cathedral Cave** 41.43 268 P P 20 41 52.6 +1.0
baz=44
DGMT **Dagmar** 41.52 289 P P 20 41 50.8 -1.4
DGMT IAmb IAmb 20 41 56.7
comp=Z,37nm,1.2s
DGMT **Dagmar** 41.52 289 P P 20 41 54.1 +1.9
baz=52
254A **Abbeville** 41.64 255 P P 20 41 54.3 +1.0
baz=39
X48A **Hartselle** 41.76 261 P P 20 41 53.1 -1.2
152A **Waverly Hall** 41.85 257 P P 20 41 53.4 -1.7
152A IAmb IAmb 20 41 59.4
comp=Z,62nm,1.8s
152A **Waverly Hall** 41.85 257 P P 20 41 56.3 +1.2
baz=40
PBMO **Poplar Bluff** 41.90 266 P P 20 41 54.9 -0.5
PBMO IAmb IAmb 20 41 59.2
comp=Z,45nm,1.1s
PLAL **Pickwick Lake** 41.92 262 P P 20 41 55.7 0.0
PLAL IAmb IAmb 20 41 59.3
comp=Z,34nm,1.5s
Z50A **Ashland** 42.05 259 P P 20 41 56.2 -0.6
baz=40
KIRV **Kirov** 42.13 51 P P 20 41 58.7 +1.6
comp=Z,5.6nm,0.5s,baz=317,slow=7.6,SNR=3.8
INK **Inuvik** 42.18 327 P P 20 41 56.7 -0.6
INK pmax pmax
comp=Z,16nm,1.3s
INK **Inuvik** 42.18 327 P P 20 41 58.4 +1.0
comp=Z,4.1nm,1.1s,baz=49,slow=9.1,SNR=6.2
INK LR LR 20 58 53.7
comp=Z,358nm,18.5s,baz=42,slow=35
INK **Inuvik** 42.18 327 P P 20 41 56.7 -0.6
252A **Lumpkin** 42.38 256 P P 20 41 59.4 +0.1
baz=39
MGMO **Mountain Grove** 42.64 268 P P 20 42 00.4 -1.1
MGMO IAmb IAmb 20 42 05.4
comp=Z,43nm,1.4s
LRAL **Lakeview Retre** 42.80 259 P P 20 42 02.7 -0.2
LRAL **Lakeview Retre** 42.80 259 P P 20 42 02.5 -0.3
baz=40
LCAR **Lake Charles** 42.81 266 P P 20 42 02.5 -0.4
OXF **Oxford** 43.01 263 P P 20 42 03.4 -1.1
OXF pmax pmax
comp=Z,102nm,1.2s
OXF **Oxford** 43.01 263 P P 20 42 03.4 -1.1
OXF **Oxford** 43.01 263 P P 20 42 04.1 -0.3
baz=42,SNR=6.7
250A **Grady** 43.22 258 P P 20 42 05.5 -0.7
U40A **Yellville** 43.54 268 P P 20 42 08.1 -0.7
U40A IAmb IAmb 20 42 13.5
comp=Z,52nm,1.5s
U40A **Yellville** 43.54 268 P P 20 42 09.5 +0.7
baz=43,SNR=9.5
LAO **LASA Array** 43.71 289 P P 20 42 09.1 -1.0
LAO IAmb IAmb 20 42 14.9
comp=Z,36nm,1.1s
LAO **LASA Array** 43.71 289 P P 20 42 11.0 +0.9
baz=49,SNR=5.4
WHAR **Wooly Hollow** 44.01 266 P P 20 42 11.5 -1.1
WHAR IAmb IAmb 20 42 16.2
comp=Z,54nm,1.5s
W41B **Gary Mavity, V** 44.08 266 P P 20 42 12.6 -0.5
W41B IAmb IAmb 20 42 16.8
comp=Z,56nm,1.5s
W41B **Gary Mavity, V** 44.08 266 P P 20 42 14.1 +1.0
baz=42,SNR=6.7
HHAR **Hobbs** 44.20 269 P P 20 42 12.0 -2.0
RSSD **Black Hills** 44.25 285 P P 20 42 15.1 +0.5
baz=48
EGMT **Eagleton** 44.67 292 P P 20 42 17.5 -0.3
EGMT **Eagleton** 44.67 292 P P 20 42 19.2 +1.4
baz=50,SNR=7.6
ANN **Anapa** 44.89 73 *e*P P 20 42 12.0 -7.5
ANN *e**PP pP 20 42 14.9 -4.8
ANN *e*S S 20 48 45.2 -12
ANN pmax pmax
comp=Z,40nm,1.1s
ANN MLR MLR
comp=E,357nm,15.0s
ANN MLR MLR
comp=N,472nm,15.0s
ANN MLR MLR
comp=Z,647nm,15.0s
W39A **Magazine** 44.91 268 P P 20 42 19.5 -0.2
W39A **Magazine** 44.91 268 P P 20 42 21.0 +1.3
baz=42,SNR=7.1
X40A **Basin Creek Fa** 44.91 266 P P 20 42 18.0 -1.8
X40A IAmb IAmb 20 42 23.2
comp=Z,20nm,1.0s
X40A **Basin Creek Fa** 44.91 266 P P 20 42 20.5 +0.8
baz=42,SNR=6.3
MIAR **Mount Ida** 45.27 267 P P 20 42 21.7 -0.9
MIAR pmax pmax
comp=Z,58nm,1.5s
MIAR **Mount Ida** 45.27 267 P P 20 42 21.7 -0.9

MIAR	Mount Ida		45.27	267	P		P	20 42 23.9	+1.3
	baz=42,SNR=10								
OGNE	Ogallala		45.33	280	P		P	20 42 24.6	+1.5
	baz=46								
VBMS	Vicksburg		45.34	262	P		P	20 42 20.9	-2.3
TUL1	Leonard		45.49	270	P		P	20 42 22.6	-1.7
TUL1	Leonard		45.49	270	P		P	20 42 25.7	+1.4
	baz=43								
CBKS	Cedar Bluff		45.57	276	P		P	20 42 25.9	+0.8
	baz=45								
Z41A	Richland Creek		45.81	265	P		P	20 42 28.3	+1.5
	baz=41								
BMAR	Burnt Mountain		45.95	330	P		P	20 42 27.3	-0.5
344A	Westbrook Farm		46.04	261	P		P	20 42 27.6	-1.1
BR131	Keskin Array S		46.34	81	P		P	20 42 29.5	-1.7
BR131					pmax		pmax		
	comp=Z,10.0nm,1.4s								
BR131	Keskin Array S		46.34	81	P		P	20 42 29.5	-1.7
BRTR	Keskin Array B		46.34	81	*i* P		P	20 42 34.5	+3.3
BRTR					pmax		pmax		
	comp=Z,3.0nm,0.8s								
BRTR	Keskin Array B		46.34	81	P		P	20 42 33.4	+2.2
	comp=Z,2.5nm,0.8s,baz=314,slow=5.1,SNR=13								
BRTR					PcP		PcP	20 44 05.9	-0.4
	comp=Z,1.4nm,1.0s,baz=270,slow=0.6,SNR=3.6								
BRTR					LR		LR	21 04 37.7	
	comp=Z,120nm,18.0s,baz=298,slow=40								
BRTR	Keskin Array B		46.34	81	P		P	20 42 30.0	-1.2
RLMT	Red Lodge		46.34	289	P		P	20 42 30.5	-0.8
RLMT	Red Lodge		46.34	289	P		P	20 42 32.2	+1.0
	baz=48,SNR=14								
K22A	Casper		46.58	285	P		P	20 42 32.7	-0.3
K22A					IAmb		IAmb	20 42 42.4	
	comp=Z,24nm,1.3s								
K22A	Casper		46.58	285	P		P	20 42 34.4	+1.3
	baz=46								
W35A	Tecumseh		46.64	270	P		P	20 42 32.8	-0.7
FYU	Fort Yukon		46.74	329	P		P	20 42 34.0	+0.2
EGAK	Eagle		46.79	326	P		P	20 42 34.5	+0.3
YNE	Yellowstone No		46.80	289	P		P	20 42 34.7	-0.2
SOC	Sochi		46.92	73	*e*P		P	20 42 35.4	-0.1
SOC					*e*			20 44 32.5	
SOC					*e*	PPP	PPP	20 45 11.0	
SOC					*e*S		S	20 49 27.0	0.0
SOC					MLR		MLR		
	comp=Z,607nm,19.0s								
KSCO	Kaye Shedlock'		47.02	278	P		P	20 42 37.5	+1.0
KSCO	Kaye Shedlock'		47.02	278	P		P	20 42 37.6	+1.0
	baz=44								
YMP	Mirror Lake Pl		47.06	289	P		P	20 42 38.0	+0.9
JTMT	Jette		47.14	295	P		P	20 42 39.0	+1.6
JTMT					IAmb		IAmb	20 42 40.4	
	comp=Z,12nm,1.2s								
ARU	Arti		47.34	49	*d i* P		P	20 42 39.0	+0.4
ARU								20 44 29.3	
ARU					PPP		PPP	20 45 13.2	
ARU					S		S	20 49 32.7	+0.1
ARU					SS		SS	20 52 58.1	-1.3
ARU					pmax		pmax		
	comp=Z,16nm,1.2s								
ARU	Arti		47.34	49	P		P	20 42 39.2	+0.6
	comp=Z,1.3nm,0.7s,baz=303,slow=6.1,SNR=8.4								
ARU	Arti		47.34	49	P		P	20 42 38.3	-0.3
YHH	Holmes Hill		47.39	290	P		P	20 42 40.6	+1.1
N23A	Red Feather La		47.49	283	P		P	20 42 40.9	+0.6
N23A	Red Feather La		47.49	283	P		P	20 42 40.5	+0.1
	baz=45								
H17A	Grant Village		47.52	289	P		P	20 42 43.8	+3.3
	baz=47,SNR=5.1								
YHL	Hebgen Lake		47.52	290	P		P	20 42 42.2	+1.6
PRP	Porcupine Dome		47.58	328	P		P	20 42 40.5	0.0
PRP					IAmb		IAmb	20 42 51.4	
	comp=Z,19nm,1.3s								
X34A	Smith Ranch, M		47.58	270	P		P	20 42 40.3	-0.5
MSO	Missoula		47.59	294	P		P	20 42 40.6	-0.2
MSO	Missoula		47.59	294	P		P	20 42 42.5	+1.7
	baz=47								
YHB	Horse Butte		47.59	290	P		P	20 42 41.3	+0.2
COLD	Coldfoot		47.62	332	P		P	20 42 39.5	-1.2
GOF	Gofitskoye		47.65	69‖	*e*P		P	20 42 47.6	+6.4
GOF					pmax		pmax		
	comp=Z,21nm,0.9s								
QLMT	Earthquake Lak		47.66	290	P		P	20 42 42.5	+0.9
SVE	Sverdlovsk		47.93	48	*e*P		P	20 42 44.7	+1.5
WMOK	Wichita Mounta		48.00	271	P		P	20 42 43.7	-0.4
WMOK					pmax		pmax		
	comp=Z,37nm,1.3s								
WMOK	Wichita Mounta		48.00	271	P		P	20 42 43.7	-0.4
WMOK	Wichita Mounta		48.00	271	P		P	20 42 46.4	+2.3
	baz=42,SNR=16								
IMW	Indian Meadow		48.05	289	P		P	20 42 44.1	-0.5
MOOW	Moose Ponds		48.05	289	P		P	20 42 43.9	-0.7
ISCO	Idaho Springs		48.08	281	P		P	20 42 44.6	-0.4
ISCO					pmax		pmax		
	comp=Z,18nm,1.1s								
ISCO	Idaho Springs		48.08	281	P		P	20 42 44.6	-0.4
ISCO					IAmb		IAmb	20 42 49.6	
	comp=Z,18nm,1.1s								
ISCO	Idaho Springs		48.08	281	P		P	20 42 46.3	+1.3
	baz=45,SNR=8.3								
BW06	Boulder Array		48.11	287	P		P	20 42 43.8	-1.3
BW06					IAmb		IAmb	20 42 47.9	
	comp=Z,13nm,1.4s								
BW06	Boulder Array		48.11	287	P		P	20 42 45.5	+0.4
	baz=46								
PD31	Pinedale Array		48.11	287	P		P	20 42 44.0	-1.1
PD31					IAmb		IAmb	20 42 47.8	
	comp=Z,14nm,1.4s								
PDAR	Pinedale Array		48.11	287	P		P	20 42 45.4	+0.3
	comp=Z,1.3nm,0.6s,baz=63,slow=7.3,SNR=16								
PDAR					LR		LR	21 01 53.0	
	comp=Z,779nm,19.6s,baz=34,slow=35								
PDAR	Pinedale Array		48.11	287	P		P	20 42 43.1	-2.0
BCAR	Beaver Creek A		48.18	324	P		P	20 42 45.4	+0.2
SCRK	Sand Creek		48.23	326	P		P	20 42 46.1	+0.5
KIV	Kislovodsk		48.23	71	*e*P		P	20 42 49.3	+3.5
KIV					pmax		pmax		
	comp=Z,20nm,1.1s								
KIV					MLR		MLR		
	comp=Z,801nm,16.0s								
TPAW	Teton Pass		48.34	289	P		P	20 42 46.6	-0.3
TPAW					IAmb		IAmb	20 42 49.6	
	comp=Z,15nm,1.3s								
REDW	Red Top Meadow		48.37	288	P		P	20 42 47.3	+0.2
REDW					IAmb		IAmb	20 42 58.7	
	comp=Z,21nm,1.5s								
MCMT	McKenzie Canyo		48.40	291	P		P	20 42 48.5	+1.2
POKR	Poker Plat Res		48.42	329	P		P	20 42 48.9	+1.9
	baz=43,SNR=9.7								
Q24A	Divide		48.43	280	P		P	20 42 47.5	-0.2
Q24A					IAmb		IAmb	20 42 51.6	
	comp=Z,18nm,1.4s								
Q24A	Divide		48.43	280	P		P	20 42 48.1	+0.4
	baz=44,SNR=5.2								
DOT	Dot Lake		48.49	326	P		P	20 42 49.3	+1.9
DOT					IAmb		IAmb	20 42 58.5	
	comp=Z,30nm,1.4s								
KBZ	Khabaz		48.49	71	P		P	20 42 49.8	+2.1
	comp=Z,1.5nm,0.9s								
KBZ					LR		LR	21 04 15.0	
	comp=Z,250nm,18.1s,slow=37								
IL31			48.52	328	P		P	20 42 48.5	+0.9
IL31					PcP		PcP	20 44 14.2	+0.8
ILAR	Eielson Array		48.52	328	P		P	20 42 47.4	-0.3
ILAR								20 44 14.3	
ILAR	Eielson Array		48.52	328	P		P	20 42 49.0	+1.3
	comp=Z,5.6nm,0.8s,baz=37,slow=6.6,SNR=41								
ILAR					PcP		PcP	20 44 13.4	0.0
	comp=Z,2.2nm,0.8s,baz=354,slow=2.4,SNR=6.1								
ILAR					LR		LR	21 03 30.7	
	comp=Z,225nm,18.7s,baz=55,slow=36								
ILAR	Eielson Array		48.52	328	P		P	20 42 47.4	-0.3
ILAR					PcP		PcP	20 44 14.3	+0.9
RIDG	Independent Ri		48.66	326	P		P	20 42 50.2	+1.4
RIDG					IAmb		IAmb	20 43 00.0	
	comp=Z,24nm,1.2s								
MDM	Murphy Dome		48.77	329	P		P	20 42 51.0	+1.5
HDA	Harding Lake		48.80	328	P		P	20 42 51.0	+1.2
HDA	Harding Lake		48.80	328	P		P	20 42 50.1	+0.2
	baz=43,SNR=9.8								
CCB	Clear Creek Bu		48.88	328	P		P	20 42 51.3	+1.0
CCB					IAmb		IAmb	20 43 00.0	
	comp=Z,14nm,1.2s								
C09A	Chrisman Ranch		49.08	297	P		P	20 42 53.2	+1.0
C09A					IAmb		IAmb	20 42 55.4	
	comp=Z,25nm,1.4s								
WRH	Wood River Hil		49.09	328	P		P	20 42 53.5	+1.5
WRH					IAmb		IAmb	20 43 01.8	
	comp=Z,14nm,1.1s								
B08A	Colville Reser		49.21	299	P		P	20 42 53.0	-0.2
B08A					IAmb		IAmb	20 42 56.5	
	comp=Z,26nm,1.4s								
O20A	White River Ci		49.26	284	P		P	20 42 54.3	+0.4
O20A					IAmb		IAmb	20 43 01.9	
	comp=Z,19nm,1.4s								
O20A	White River Ci		49.26	284	P		P	20 42 54.4	+0.5
	baz=44								
SMCO	Snowmass		49.26	282	P		P	20 42 54.6	+0.4
SMCO					IAmb		IAmb	20 43 05.9	
	comp=Z,23nm,1.4s								
NEA	Nenana		49.29	329	P		P	20 42 55.4	+1.8
WHTX	Lake Whitney,		49.33	268	P		P	20 42 54.1	-0.2
T25A	Trinidad		49.34	278	P		P	20 42 55.2	+0.6
T25A	Trinidad		49.34	278	P		P	20 42 56.0	+1.4
	baz=43,SNR=11								
MLY	Manley		49.42	330	P		P	20 42 55.2	+0.6
PAX	Paxson		49.42	326	P		P	20 42 56.0	+1.3
PAX					pmax		pmax		
	comp=Z,21nm,1.4s								
PAX	Paxson		49.42	326	P		P	20 42 56.0	+1.3
PAX					IAmb		IAmb	20 43 05.7	
	comp=Z,22nm,1.4s								
IMAR	Indian Mountai		49.49	332	P		P	20 42 55.4	+0.3
SDCO	Great Sand Dun		49.49	279	P		P	20 42 56.0	+0.1
SDCO	Great Sand Dun		49.49	279	P		P	20 42 56.3	+0.5
	baz=43,SNR=9.2								
AMTX	Amarillo		49.50	274	P		P	20 42 54.7	-1.0
AMTX	Amarillo		49.50	274	P		P	20 42 56.1	+0.5
	baz=42								
BARN	Barnard Glacie		49.58	322	P		P	20 42 55.2	-0.8
RDMU	Red Mountain		49.66	285	P		P	20 42 55.5	-1.5
BWN	Browne		49.71	329	P		P	20 42 58.0	+1.2
F10A	Beach Ranch, E		49.83	295	P		P	20 42 59.0	+1.0
MCK	McKinley		49.89	328	P		P	20 42 58.9	+0.7
MCK					pmax		pmax		
	comp=Z,33nm,1.2s								
MCK	McKinley		49.89	328	P		P	20 42 58.9	+0.7
MCK					IAmb		IAmb	20 43 08.7	
	comp=Z,33nm,1.2s								
DHY	Denali Highway		49.92	327	P		P	20 42 59.7	+1.1
DHY					IAmb		IAmb	20 43 09.4	
	comp=Z,19nm,1.2s								
RDOG	Red Dog Mine		49.98	337	P		P	20 42 58.3	-0.5
RDOG					IAmb		IAmb	20 43 12.1	
	comp=Z,26nm,1.2s								
HWUT	Hardware Ranch		49.98	287	P		P	20 42 59.2	-0.2
HKT	Hockley		50.00	265	P		P	20 42 59.5	+0.2
HKT					pmax		pmax		
	comp=Z,72nm,2.0s								
HKT	Hockley		50.00	265	P		P	20 42 59.5	+0.2
ABTX	Abilene, Hawle		50.06	270	P		P	20 42 59.7	-0.2
ABTX					IAmb		IAmb	20 43 03.2	
	comp=Z,26nm,1.3s								
ABTX	Abilene, Hawle		50.06	270	P		P	20 43 00.5	+0.7
	baz=41								
RND	Reindeer		50.11	328	P		P	20 43 00.4	+0.4
RND					pmax		pmax		
	comp=Z,17nm,1.0s								
RND	Reindeer		50.11	328	P		P	20 43 00.4	+0.4
RND					IAmb		IAmb	20 43 10.6	
	comp=Z,17nm,1.0s								
TGL	Tana Glacier		50.20	323	P		P	20 43 02.7	+2.1
BPAW	Bear Paw Mtn.		50.20	329	P		P	20 43 01.1	+0.6
BPAW					IAmb		IAmb	20 43 10.9	
	comp=Z,26nm,1.3s								
S22A	4UR Ranch, Cre		50.22	280	P		P	20 43 01.8	+0.5
S22A					IAmb		IAmb	20 43 17.2	
	comp=Z,22nm,1.5s								
S22A	4UR Ranch, Cre		50.22	280	P		P	20 43 02.1	+0.7
	baz=43,SNR=6.1								
TCUT	Toone Canyon		50.25	287	P		P	20 43 00.9	-0.6
CRQM	Cirque		50.30	323	P		P	20 43 03.5	+2.0
TRF	Thorofare Moun		50.50	328	P		P	20 43 03.3	+0.3
TRF					IAmb		IAmb	20 43 16.2	
	comp=Z,25nm,1.0s								
KTH	Kantishna Hill		50.60	329	P		P	20 43 05.1	+1.5
KTH					IAmb		IAmb	20 43 18.8	
	comp=Z,31nm,1.3s								
LTY	Liberty		50.63	298	P		P	20 43 04.0	0.0
LTY					IAmb		IAmb	20 43 06.5	
	comp=Z,25nm,1.4s								
JLU	Jordanelle		50.64	286	P		P	20 43 04.1	-0.3
BMO	Blue Mountains		50.65	294	P		P	20 43 03.9	-0.4
BMO					pmax		pmax		
	comp=Z,9.0nm,1.2s								
BMO	Blue Mountains		50.65	294	P		P	20 43 03.9	-0.4
SPUT	South Promonto		50.66	288	P		P	20 43 04.6	+0.1
MSTX	Muleshoe		50.78	274	P		P	20 43 06.0	+0.6
MSTX	Muleshoe		50.78	274	P		P	20 43 05.0	-0.4
	baz=42								
MFID	Camas Ranch		50.92	292	P		P	20 43 07.2	+0.9
MPU	Maple Canyon		51.16	286	P		P	20 43 08.4	+0.1
G08A	Pilot Rock		51.17	296	P		P	20 43 08.7	+0.4
SML	Sawmill		51.17	326	P		P	20 43 08.9	+0.9
AKTO	Aktyubinsk		51.22	55	P		P	20 43 09.8	+1.5
	comp=Z,2.7nm,0.6s,baz=298,slow=7.2,SNR=12								
BGU	Big Grassy Mou		51.24	289	P		P	20 43 09.7	+0.8
TOA0	Torodi Ar. Sit		51.42	133	P		P	20 43 09.2	-1.1
TORD	Torodi Ar. Bea		51.42	133	P		P	20 43 10.4	+0.2
	comp=Z,5.3nm,0.9s,baz=335,slow=6.4,SNR=14								
TORD					LR		LR	21 02 36.9	
	comp=Z,262nm,20.9s,baz=345,slow=33								
TORD	Torodi Ar. Bea		51.42	133	P		P	20 43 08.6	-1.6
NLU	North Lily Min		51.44	286	P		P	20 43 09.9	-0.6
TIXI	Tiksi		51.45	7‖	*e*P		P	20 43 11.3	+1.5
TIXI					pmax		pmax		
	comp=Z,15nm,1.8s								
TIXI	Tiksi		51.45	7	P		P	20 43 11.4	+1.6
	comp=Z,4.4nm,0.8s,baz=3.8,slow=5.9,SNR=13								
TIXI	Tiksi		51.45	7	P		P	20 43 10.4	+0.6
TIXI					IAmb		IAmb	20 43 13.3	
	comp=Z,34nm,1.9s								
TMUT	Trail Mountain		51.45	285	P		P	20 43 11.5	+0.8
PPLA	Purkeypile		51.48	329	P		P	20 43 10.7	+0.4
MVCO	Mesa Verde		51.51	281	P		P	20 43 12.7	+1.7
MVCO					IAmb		IAmb	20 43 25.4	
	comp=Z,36nm,1.4s								
MVCO	Mesa Verde		51.51	281	P		P	20 43 10.7	-0.4
	baz=43								
PMR	Palmer		51.59	326	P		P	20 43 13.2	+2.3
PMR					pmax		pmax		
	comp=Z,46nm,1.5s								
PMR	Palmer		51.59	326	P		P	20 43 13.2	+2.3
PMR					IAmb		IAmb	20 43 21.8	
	comp=Z,46nm,1.5s								
DUG	Dugway, Tooele		51.65	287	P		P	20 43 13.1	+1.2
DUG					pmax		pmax		
	comp=Z,9.0nm,1.3s								
DUG	Dugway, Tooele		51.65	287	P		P	20 43 13.1	+1.2
DUG	Dugway, Tooele		51.65	287	P		P	20 43 12.9	+0.9
	baz=44								
Q16A	Castle Valley		51.71	285	P		P	20 43 13.8	+1.4
JCT	Junction City		51.78	269	P		P	20 43 12.5	-0.3
JCT					pmax		pmax		
	comp=Z,65nm,1.6s								
JCT	Junction City		51.78	269	P		P	20 43 12.5	-0.3
JCT	Junction City		51.78	269	P		P	20 43 13.0	+0.1
	baz=40,SNR=6.3								
SKT	Skwentna		52.01	328	P		P	20 43 14.3	+0.2
SKT					IAmb		IAmb	20 43 24.2	
	comp=Z,37nm,1.3s								
ANMO	Albuquerque		52.07	278‖	*e*P		P	20 43 17.7	+2.5
ANMO					pmax		pmax		
	comp=Z,12nm,1.3s								
ANMO	Albuquerque		52.07	278	P		P	20 43 17.0	+1.8
RC01	Rabbit Creek A		52.16	326	P		P	20 43 17.1	+1.9
RC01					IAmb		IAmb	20 43 30.7	
	comp=Z,36nm,1.2s								
SUA	Susitna One		52.18	327	P		P	20 43 17.0	+1.5
J08A	Circle Bar Ran		52.31	294	P		P	20 43 16.8	0.0
ELK	Elko		52.53	289	P		P	20 43 18.8	+0.2
ELK					pmax		pmax		
	comp=Z,14nm,1.3s								
ELK	Elko		52.53	289	P		P	20 43 18.8	+0.2
MSU	Marysvale		52.54	285	P		P	20 43 18.0	-0.7
MSU	Marysvale		52.54	285	P		P	20 43 18.0	-0.7
MTPU	Mount Pierson		52.89	285	P		P	20 43 22.3	+0.9
ABKAR	Akbulak array		52.93	55	P		P	20 43 21.3	+0.2
ABKAR					PcP		PcP	20 44 30.4	+0.4
ABKAR	Akbulak array		52.93	55	P		P	20 43 20.7	-0.4
ABKAR					IAmb		IAmb	20 43 25.4	
	comp=Z,42nm,2.0s								
ABKAR					PcP		PcP	20 44 30.5	+0.5
WVOR	Wild Horse Val		53.06	293	P		P	20 43 23.2	+0.9
WVOR					pmax		pmax		
	comp=Z,17nm,1.2s								
WVOR	Wild Horse Val		53.06	293	P		P	20 43 23.1	+0.9
WVOR					IAmb		IAmb	20 43 32.5	
	comp=Z,17nm,1.2s								
833A	Chaparral WMA,		53.22	266	P		P	20 43 22.9	-0.6
	baz=39								
PINE	Pine Mountain		53.23	296	P		P	20 43 23.5	-0.2
PINE					IAmb		IAmb	20 43 27.7	
	comp=Z,30nm,1.3s								
PKCU	Pink Cliffs		53.40	284	P		P	20 43 25.4	+0.3
PSUT	Pine Spring		53.42	286	P		P	20 43 25.4	+0.3
W18A	Petrified Fore		53.73	280	P		P	20 43 28.1	+0.6
	baz=42								
J05D	Fort Rock, OR		53.75	295	P		P	20 43 28.4	+1.0
	baz=43,SNR=7.5								
CCUT	Cedar City		53.88	285	P		P	20 43 29.3	+0.8
MNTX	Cornudas Mount		53.93	274	P		P	20 43 28.4	-0.3
MNTX					IAmb		IAmb	20 43 32.2	
	comp=Z,23nm,1.4s								
MNTX	Cornudas Mount		53.93	274	P		P	20 43 29.3	+0.6
	baz=40,SNR=8.2								
I04A	Tendick Farm,		53.96	296	P		P	20 43 29.0	+0.2
	baz=43								
K05A	Summer Lake		53.99	295	P		P	20 43 29.7	+0.5
KNB	Kanab		53.99	284	P		P	20 43 29.4	+0.1
KNB					pmax		pmax		
	comp=Z,27nm,1.5s								
KNB	Kanab		53.99	284	P		P	20 43 29.4	+0.1
U15A	North Rim		54.14	283	P		P	20 43 30.7	+0.2
LCMT	Little Creek M		54.22	284	P		P	20 43 30.8	-0.1
J04D	Umpqua Nationa		54.22	296	P		P	20 43 31.0	+0.1
	baz=43								
MOD	Modoc Plateau		54.29	293	P		P	20 43 31.4	0.0
MOD					IAmb		IAmb	20 43 35.1	
	comp=Z,14nm,1.1s								
WUAZ	Wupatki		54.32	282	P		P	20 43 30.0	-1.8
WUAZ					IAmb		IAmb	20 43 35.9	
	comp=Z,18nm,1.3s								
WUAZ	Wupatki		54.32	282	P		P	20 43 32.9	+1.2
	baz=42,SNR=7.5								
I02D	Swisshome		54.44	298	P		P	20 43 31.7	-0.5
	baz=43								
R11A	Troy Canyon, C		54.47	287	P		P	20 43 33.5	+0.7
R11A	Troy Canyon, C		54.47	287	P		P	20 43 33.8	+1.1
	baz=42,SNR=7.0								
121A	Cookes Peak, D		54.62	277	P		P	20 43 34.3	+0.4
121A					IAmb		IAmb	20 43 38.4	
	comp=Z,25nm,1.3s								
121A	Cookes Peak, D		54.62	277	P		P	20 43 35.7	+1.8
	baz=40,SNR=6.9								
BILL	Bilibino		54.70	351	*i* P		P	20 43 33.7	-0.1
BILL					*i*			20 44 35.3	
BILL					pmax		pmax		
	comp=Z,4.0nm,1.2s								
BILL					MLR		MLR		
	comp=Z,304nm,20.0s								
TX31	Lajitas Ar. Si		54.79	271	P		P	20 43 33.8	-1.3
TX31					IAmb		IAmb	20 43 48.6	
	comp=Z,40nm,2.0s								
TX32	Lajitas Array		54.79	271	P		P	20 43 34.6	-0.5
TX32					IAmb		IAmb	20 43 48.6	
	comp=Z,41nm,2.0s								
TXAR	Lajitas Array		54.79	271	P		P	20 43 34.1	-1.0
TXAR	Lajitas Array		54.79	271	P		P	20 43 36.0	+0.9
	comp=Z,2.0nm,0.9s,baz=46,slow=5.4,SNR=14								
TXAR					LR		LR	21 06 33.9	
	comp=Z,291nm,18.4s,baz=0.0,slow=36								
TXAR	Lajitas Array		54.79	271	P		P	20 43 34.0	-1.0
TIC	Toumodi		54.95	144	*e*P		P	20 43 44.2	+7.9
DBIC	Dimbokro		54.98	143	P		P	20 43 36.0	-0.5
DBIC					pmax		pmax		
	comp=Z,12nm,1.1s								
DBIC	Dimbokro		54.98	143	P		P	20 43 36.3	-0.1
	comp=Z,6.2nm,0.9s,baz=342,slow=9.6,SNR=6.3								
DBIC					LR		LR	21 03 46.1	
	comp=Z,289nm,21.9s,baz=336,slow=32								
DBIC	Dimbokro		54.98	143	P		P	20 43 36.0	-0.5
M04C	Macdoel		55.16	294	P		P	20 43 37.5	-0.1
	baz=42								
J01E	Myrtle Point		55.18	297	P		P	20 43 37.4	-0.2
	baz=42								
X16A	Lo Mia Camp, P		55.19	281	P		P	20 43 38.7	+0.7
KVN	Kaiserville		55.27	290	P		P	20 43 39.5	+1.0
KVN					pmax		pmax		
	comp=Z,19nm,1.0s								
KVN	Kaiserville		55.27	290	P		P	20 43 39.5	+1.0
KVN					IAmb		IAmb	20 43 42.4	
	comp=Z,19nm,1.0s								
KIC	Kosan Boka		55.31	143	*e*P		P	20 43 40.3	+1.5
	comp=Z,25nm,1.2s								
LIC	Lamto		55.35	144	*e*P		P	20 43 40.6	+1.5
	comp=Z,41nm,1.1s								
PAHR	Pah Rah Range		55.44	291	P		P	20 43 41.2	+1.4
PAHR					IAmb		IAmb	20 43 44.1	
	comp=Z,28nm,1.2s								
SHPR	Sheep Range		55.62	285	P		P	20 43 38.8	-2.3
NV11	Mina Array Sit		55.76	289	P		P	20 43 43.0	+1.0
RYN	Ryan		55.80	290	P		P	20 43 42.3	-0.1
BEKR	Beckworth		55.83	292	P		P

ISA IAmb IAmb 20 44 02.6
comp=Z,25nm,1.7s
ISA Isabella, Lake 58.01 287 P **P** **20 43 59.2 +1.2**
baz=40
GLA Glamis 58.05 283 P **P** **20 43 59.8 +1.6**
baz=40
EDW2 Edwards Air Fo 58.35 286 P **P** **20 44 01.8 +1.5**
baz=40,SNR=7.3
XPFO Pion Flat 58.50 284 P **P** **20 44 00.8 -0.6**
XPFO IAmb IAmb 20 44 05.8
comp=Z,16nm,1.3s
PFO Pinyon Flats O 58.50 284 P **P** **20 44 00.4 -1.1**
PFO pmax pmax
comp=Z,18nm,1.4s
PFO Pinyon Flats O 58.50 284 P **P** **20 44 00.4 -1.1**
PFO IAmb IAmb 20 44 05.8
comp=Z,18nm,1.4s
PFO Pinyon Flats O 58.50 284 P **P** **20 44 02.4 +0.9**
baz=40
MONP2 Monument Peak 59.03 284 P **P** **20 44 07.0 +1.7**
baz=40
HSIG 59.05 277 P **P** **20 44 04.6 -0.5**
IKP In-Ko-Pah, Jac 59.05 283 P **P** **20 44 06.3 +1.0**
baz=40
ZALV Zalesovo Beam 59.11 37 P **P** **20 44 04.7 -0.6**
ZALV Zalesovo Beam 59.11 37 P **P** **20 44 05.3 0.0**
comp=Z,0.3nm,0.4s,baz=328,slow=10,SNR=2.6
ZALV Zalesovo Beam 59.11 37 P **P** **20 44 04.7 -0.6**
PKM Mcpherson Peak 59.31 288 P **P** **20 44 07.4 +0.2**
baz=40
BAR Barrett 59.33 284 P **P** **20 44 08.2 +1.1**
BAR IAmb IAmb 20 44 11.6
comp=Z,16nm,1.4s
ZAIG Zacatecas 59.35 265 P **P** **20 44 08.1 +0.4**
ZAIG IAmb IAmb 20 44 12.6
comp=Z,26nm,1.6s
KURK Kurchatov 59.57 43 P **P** **20 44 08.3 -0.2**
KURK pmax pmax
comp=Z,36nm,1.9s
KURK Kurchatov 59.57 43 P **P** **20 44 08.3 -0.2**
KURK IAmb IAmb 20 44 11.0
comp=Z,36nm,1.9s
GEYT Alibeck 60.55 65 P **P** **20 44 17.5 +2.0**
comp=Z,2.8nm,0.8s,baz=344,slow=8.3,SNR=3.6
GEYT Alibeck 60.55 65 P **P** **20 44 16.7 +1.2**
ROSC El Rosal 60.55 227 P **P** **20 44 18.7 +2.6**
comp=Z,9.3nm,0.3s,baz=12,slow=5.7,SNR=10
ROSC LR LR 21 07 41.4
comp=Z,120nm,21.6s,baz=8.0,slow=33
ROSC El Rosal 60.55 227 P **P** **20 44 14.5 -1.6**
SEY Seymchan 60.64 356⇓ *e*P **P** **20 44 16.7 +1.1**
SEY Seymchan 60.64 356 P **P** **20 44 17.6 +2.0**
comp=Z,5.1nm,0.9s,baz=105,slow=5.1,SNR=4.3
TLIG Tlapa 61.37 258 **P** **20 44 21.2 -0.2**
RCBR Riachuelo 62.27 182 P **P** **20 44 25.9 -1.3**
RCBR pmax pmax
comp=Z,37nm,1.1s
RCBR Riachuelo 62.27 182 P **P** **20 44 25.9 -1.3**
KK31 Karatay Array 62.36 53 P **P** **20 44 26.1 -1.5**
KK31 pmax pmax
comp=Z,28nm,2.0s
KK31 Karatay Array 62.36 53 P **P** **20 44 26.1 -1.5**
KK31 IAmb IAmb 20 44 32.2
comp=Z,28nm,1.9s
KKAR Karatay Array 62.36 53 P **P** **20 44 26.2 -1.4**
KKAR pmax pmax
comp=Z,28nm,2.0s
KKAR Karatay Array 62.36 53 P **P** **20 44 27.1 -0.5**
KKAR Karatay Array 62.36 53 P **P** **20 44 26.2 -1.4**
KKAR IAmb IAmb 20 44 32.2
comp=Z,28nm,1.9s
MAKZ Makanchi 64.04 43 P **P** **20 44 38.7 0.0**
MAKZ pmax pmax
comp=Z,24nm,1.7s
MAKZ Makanchi 64.04 43 P **P** **20 44 38.7 0.0**
MAKZ IAmb IAmb 20 44 41.6
comp=Z,24nm,1.7s
MA2 Magadan 64.05 357⇓ *e*P **P** **20 44 38.7 +0.2**
MA2 pmax pmax
comp=Z,10.0nm,1.3s
MA2 Magadan 64.05 357 LR LR 21 11 15.1
comp=Z,86nm,20.0s,baz=33,slow=35
MK31 Makanchi Array 64.17 43 P **P** **20 44 39.2 -0.4**
MK31 pmax pmax
comp=Z,18nm,1.8s
MK31 Makanchi Array 64.17 43 P **P** **20 44 39.2 -0.4**
MK31 IAmb IAmb 20 44 42.2
comp=Z,18nm,1.8s
MKAR Makanchi Array 64.17 43 *i* P **P** **20 44 40.2 +0.6**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 64.17 43 P **P** **20 44 39.9 +0.3**
comp=Z,1.6nm,0.6s,baz=335,slow=5.3,SNR=20
MKAR LR LR 21 12 52.4
comp=Z,127nm,18.5s,baz=319,slow=36
MKAR Makanchi Array 64.17 43 P **P** **20 44 39.3 -0.3**
AAK Ala-Archa 64.47 51 P **P** **20 44 41.4 -0.3**
AAK pmax pmax
comp=Z,24nm,1.7s
AAK Ala-Archa 64.47 51 P **P** **20 44 41.4 -0.3**
AAK IAmb IAmb 20 44 45.9
comp=Z,24nm,1.7s
ARSB Arslanbob 64.88 53 P **P** **20 44 43.7 -0.7**
BTK Batken 64.94 55 P **P** **20 44 45.1 +0.4**
BTK pmax pmax
comp=Z,12nm,1.0s
BTK Batken 64.94 55 P **P** **20 44 45.1 +0.4**
BTK IAmb IAmb 20 44 54.0
comp=Z,12nm,1.0s
KDJ Kajisay 66.02 49 P **P** **20 44 51.4 -0.4**
KDJ pmax pmax
comp=Z,8.0nm,1.1s
KDJ Kajisay 66.02 49 P **P** **20 44 51.4 -0.4**
KDJ IAmb IAmb 20 44 56.5
comp=Z,8.0nm,1.1s
NRN Naryn 66.09 50 P **P** **20 44 53.3 +0.8**
NRN pmax pmax
comp=Z,24nm,1.8s
NRN Naryn 66.09 50 P **P** **20 44 53.3 +0.8**
NRN IAmb IAmb 20 44 58.0
comp=Z,24nm,1.8s
PRZ Przheval'sk 66.23 48 P **P** **20 44 52.0 -1.2**
PRZ pmax pmax
comp=Z,32nm,2.0s
PRZ Przheval'sk 66.23 48 P **P** **20 44 52.0 -1.2**
PRZ IAmb IAmb 20 44 57.3
comp=Z,32nm,2.0s
OTAV Otavalo 66.42 229 P **P** **20 44 53.5 -1.5**
OTAV pmax pmax
comp=Z,21nm,1.5s
OTAV Otavalo 66.42 229 P **P** **20 44 53.5 -1.5**
OTAV IAmb IAmb 20 44 59.2
comp=Z,21nm,1.4s
KSH Kashi 67.67 52 P **P** **20 45 05.8 +3.5**
KSH PP **PP** **20 47 34.0 +3.2**
KSH S **S** **20 54 02.0 +1.9**
KSH ScS **SKiKP** **20 54 57.8 -2.5**
KSH pmax pmax
comp=Z,24nm,0.9s
KSH LR LR
comp=Z,210nm,4.9s
KSH LR LR
comp=Z,220nm,5.2s
KBL Kabul 68.59 60 P **P** **20 45 07.3 -1.0**
KBL pmax pmax
comp=Z,16nm,1.6s
KBL Kabul 68.59 60 P **P** **20 45 07.3 -1.0**
KBL IAmb IAmb 20 45 12.7
comp=Z,16nm,1.6s
WMQ Urumqi 68.71 41 *e*P **P** **20 45 12.3 +3.6**
WMQ sP pwP 20 45 19.5 +7.9
WMQ pmax pmax
comp=Z,10.0nm,1.3s
WMQ pmax pmax
comp=Z,100nm,4.3s
WMQ LR LR
comp=Z,290nm,16.5s
WMQ Urumqi 68.71 41 P **P** **20 45 08.6 -0.1**
WMQ pmax pmax
comp=Z,14nm,1.3s
WMQ Urumqi 68.71 41 P **P** **20 45 08.6 -0.1**
WMQ IAmb IAmb 20 45 13.4
comp=Z,14nm,1.3s
SAML Samuel 69.56 211 P **P** **20 45 13.4 -0.7**
SAML pmax pmax
comp=Z,18nm,1.9s
SAML Samuel 69.56 211 P **P** **20 45 13.3 -0.7**
SAML IAmb IAmb 20 45 16.4
comp=Z,18nm,1.9s
UOSS Minazif 69.82 75 P **P** **20 45 15.0 -0.8**
UOSS IAmb IAmb 20 45 26.3
comp=Z,18nm,1.2s
PETK Petropavlovsk- 70.16 352 LR LR 21 16 52.5
comp=Z,96nm,19.4s,baz=59,slow=37
SONM Songino Array 70.86 27 LR LR 21 18 34.9
comp=Z,178nm,20.1s,baz=324,slow=38
NIL Nilore 71.30 57 P **P** **20 45 23.9 -0.8**
NIL pmax pmax
comp=Z,11nm,1.0s
NIL Nilore 71.30 57 P **P** **20 45 23.9 -0.8**
NIL IAmb IAmb 20 45 31.7
comp=Z,11nm,1.0s
GRNR Gornyy 72.67 6 *e*P P 20 45 25.8 -6.9
GRNR MLR MLR
comp=Z,270nm,14.0s
BDFB Brasilia 72.92 194 P **P** **20 45 34.3 -0.2**
BDFB pmax pmax
comp=Z,17nm,1.3s
BDFB Brasilia 72.92 194 P **P** **20 45 36.6 +2.1**
comp=Z,2.1nm,0.6s,baz=11,slow=8.5,SNR=4.8
BDFB LR LR 21 12 24.1
comp=Z,159nm,19.4s,baz=296,slow=32
BDFB Brasilia 72.92 194 P **P** **20 45 34.2 -0.2**
BDFB IAmb IAmb 20 45 37.3
comp=Z,17nm,1.3s
NNA Nana 76.92 223 P **P** **20 45 57.3 -0.3**
NNA pmax pmax
comp=Z,35nm,1.4s
NNA Nana 76.92 223 P **P** **20 45 57.3 -0.3**
MBAR Mbarara 77.05 111 P **P** **20 45 57.9 -0.7**
MBAR pmax pmax
comp=Z,5.0nm,1.2s
MBAR Mbarara 77.05 111 P **P** **20 45 57.9 -0.7**
LPAZ La Paz 77.97 213 P **P** **20 46 02.8 -1.3**
LPAZ pmax pmax
comp=Z,14nm,1.5s
LPAZ La Paz 77.97 213 P **P** **20 46 04.4 +0.3**
comp=Z,1.9nm,0.9s,baz=23,slow=9.8,SNR=5.5
LPAZ LR LR 21 18 17.0
comp=Z,76nm,20.8s,baz=334,slow=34
LPAZ La Paz 77.97 213 P **P** **20 46 02.8 -1.3**
HHC Hu-ho-hao-te 78.69 26 *e*P **P** **20 46 06.8 -0.6**
HHC pmax pmax
comp=Z,4.0nm,0.8s
HHC pmax pmax
comp=Z,45nm,6.5s
SOCY Socotra 79.01 85 P **P** **20 46 07.2 -2.3**
SOCY IAmb IAmb 20 46 09.9
comp=Z,22nm,1.2s
DANN Dangsing 80.53 52 *e*P **P** **20 46 18.6 +0.8**
KMBO Kilima Mbogo 80.90 106 LR LR 21 24 07.5
comp=Z,81nm,18.7s,baz=275,slow=37
LZH Lanzhou 81.06 33 *e*P **P** **20 46 19.8 -0.6**
LZH pP pwP 20 46 25.0 +1.7
LZH *e*PP **PP** **20 49 26.0 +1.6**
LZH pmax pmax
comp=Z,24nm,1.3s
LZH pmax pmax
comp=Z,130nm,6.2s
LZH LR LR
comp=Z,140nm,17.0s
LZH LR LR
comp=Z,140nm,17.1s
MNMC Minye Minye 81.09 214 P **P** **20 46 20.5 -0.2**
MNMC IAmb IAmb 20 46 24.0
comp=Z,16nm,1.2s
GKN Gorkha 81.21 52 *e*P **P** **20 46 22.4 +1.1**
GO01 Chusmiza 81.48 213 P **P** **20 46 23.9 +0.9**
GO01 IAmb IAmb 20 46 26.3
comp=Z,18nm,1.2s
KKN Kakani 81.67 51 *e*P **P** **20 46 24.7 +0.9**
comp=Z,15nm,0.7s
PB11 IPOC Station P 81.70 213 P **P** **20 46 22.6 -1.1**
DMN Daman 81.76 51 *e*P **P** **20 46 25.7 +1.4**
comp=Z,36nm,1.1s
GUN Gumba 81.83 51 *e*P **P** **20 46 26.4 +1.6**
comp=Z,23nm,1.0s
PKIN Phulchoki 81.91 51 *e*P **P** **20 46 26.5 +1.4**
PKI Pulchoki 81.92 51 *e*P **P** **20 46 27.2 +1.9**
comp=Z,13nm,1.1s
JIRN Jiri 82.18 50 *e*P **P** **20 46 28.0 +1.3**
comp=Z,31nm,0.8s
RAMN Ramite 82.97 50 *e*P **P** **20 46 33.6 +2.9**
TAPN Taplejung 83.09 49 *e*P **P** **20 46 34.1 +2.7**
ODAN Odare 83.39 50 *e*P **P** **20 46 36.0 +3.2**
LVC Limon Verde 84.17 212 P **P** **20 46 36.5 -0.2**
LVC pmax pmax
comp=Z,14nm,1.0s
LVC Limon Verde 84.17 212 P **P** **20 46 36.5 -0.2**
LVC IAmb IAmb 20 46 40.8
comp=Z,14nm,1.0s
CPUP Villa Florida 84.92 201 P **P** **20 46 39.2 -0.7**
CPUP pmax pmax
comp=Z,5.0nm,1.0s
CPUP Villa Florida 84.92 201 P **P** **20 46 40.3 +0.3**
comp=Z,1.5nm,0.4s,baz=22,slow=2.3,SNR=5.1
CPUP LR LR 21 21 42.2
comp=Z,74nm,18.3s,baz=3.5,slow=34
CPUP Villa Florida 84.92 201 P **P** **20 46 39.2 -0.7**
KSRS Korea Array 85.06 14 P **P** **20 46 42.0 +1.2**
comp=Z,1.2nm,0.8s,baz=336,slow=5.6,SNR=4.1
KSRS LR LR 21 24 35.1
comp=Z,71nm,21.6s,baz=348,slow=36
CD2 Chengdu 85.83 35 *e*P **P** **20 46 42.5 -2.3**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
NJ2 Nanjing 88.76 23 *e*P **P** **20 46 58.3 -0.6**
NJ2 pmax pmax
comp=Z,4.0nm,0.5s
CMAR Chiang Mai Arr 95.57 44 P **P** **20 47 30.6 0.0**
comp=Z,0.2nm,0.4s,baz=336,slow=5.9,SNR=2.7
TAOE Nuku Hiva Isla 106.03 278 *e*LR LR 21 23 16.8
comp=Z,312nm,27.6s
PPT2 Papeete2 118.36 281 *e*LR LR 21 28 58.2
comp=Z,274nm,22.5s
TBI Tubuai 122.96 277 *e*LR LR 21 30 58.6
comp=Z,194nm,27.8s
PMSA Palmer Station 123.20 195 **PKPdf** **20 52 58.7 -1.8**
VNA2 Neumayer--Watz 128.71 169 PKPdf **PKPdf** **20 53 11.1 +0.1**
baz=334,slow=4.3
SNAA Sanae 129.93 168 PKPdf **PKiKP** **20 53 15.8 +1.7**
SNAA Sanae 129.93 168 PKIKP **PKPdf** **20 53 13.1 -0.2**
SNAA Sanae 129.93 168 **PKPdf** **20 53 13.1 -0.2**
DZM Mont Dzumac 142.23 328 *e*LR LR 21 40 02.7
comp=Z,182nm,23.9s
ASAR Alice Springs 145.95 19 PKP2 **PKPdf** **20 53 43.6 -0.5**
ASAR Alice Springs 145.95 19 PKPbc **PKPbc** **20 53 44.4 -0.4**
comp=Z,2.4nm,0.7s,baz=347,slow=2.2,SNR=18
ASAR Alice Springs 145.95 19 **PKPdf** **20 53 43.6 -0.5**
QSPA South Pole Qui 146.54 180 **PKPbc** **20 53 45.6 +0.3**

IDC ***28*** *20:37:47.9±0.5, 37.°12N×144.°88E, h0km, mb4.5/35, mb1 4.6/42, mb1mx4.5/61, mbtmp4.5/42, ML4.3/6, MS3.4/11, Ms1 3.4/11, ms1mx3.1/63, Error ellipse: s-maj=12.8km s-min=11.0km az=121.0*
BJI ***28*** *20:37:48.3±0.0, 37.°50N×144.°76E, h5km, mB5.0/42, mb4.6/63, Ms4.4/36, Ms7 4.1/30*
NEIC ***28*** *20:37:51.9±1.6, 37.°09N±0.°05×144.°82E±0.°08, h28km±3km, mb4.9/251, Error ellipse: s-maj=8.8km s-min=7.5km az=76.0*
MOS ***28*** *20:37:51.2±0.9, 37.°56N×144.°72E, h21km, mb4.9/16, Error ellipse: s-maj=5.9km s-min=3.9km az=100.5*
JMA ***28*** *20:37:52.9±0.2, 37.°31N×144.°55E, h47km, M5.2*
ISC 28 20:37:49.0±0.9, 37.°19N±0.°03×144.°88E±0.°04, h10km±5km, n673, σ1$74/722, mb4.9/194, **MS4.0**/13, **30C-9D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JIKH	**Ishinomakikobu**	**2.93**	**294**	⇑P	**Pn**	**20 38 34.5**	**-1.1**
JIKH				S	**Sn**	**20 39 05.0**	**-5.8**
JIO	**Ouri**	**3.07**	**295**	⇑P	**Pn**	**20 38 36.4**	**-1.1**
JIO				*e*S	**Sn**	**20 39 09.0**	**-5.2**
JKMT	**Kesennumamotoy**	**3.14**	**302**	⇑P	**Pn**	**20 38 37.3**	**-1.2**
JKMT				S	**Sn**	**20 39 10.3**	**-5.7**
OFUJ	**Ofunato**	**3.16**	**308**	⇑P	**Pn**	**20 38 37.4**	**-1.4**
OFUJ				*e*S	**Sn**	**20 39 10.6**	**-5.9**
JFK	**Kawauchi**	**3.20**	**274**	⇑P	**Pn**	**20 38 38.1**	**-1.3**
JFK				*e*S	**Sn**	**20 39 12.0**	**-5.6**
JMST	**Minamisoumatoc**	**3.22**	**281**	⇑P	**Pn**	**20 38 38.2**	**-1.4**
JMM	**Marumori**	**3.32**	**283**	P	**Pn**	**20 38 39.7**	**-1.2**
JMK	**Ichinoseki**	**3.38**	**302**	⇑P	**Pn**	**20 38 40.8**	**-1.0**
JMK				S	**Sn**	**20 39 16.9**	**-5.1**
MIYJ	**Miyakonagasawa**	**3.38**	**316**	⇑P	**Pn**	**20 38 40.3**	**-1.6**
JHO	**Hitachi**	**3.50**	**262**	⇑P	**Pn**	**20 38 42.0**	**-1.5**
JOU	**Okura**	**3.54**	**291**	⇑P	**Pn**	**20 38 43.6**	**-0.4**
JOU				*e*S	**Sn**	**20 39 21.9**	**-4.1**
JHYU	**Hitachinakayam**	**3.55**	**257**	⇑P	**Pn**	**20 38 43.1**	**-1.0**
JHYU				S	**Sn**	**20 39 19.9**	**-6.2**
JOM	**Ohasama**	**3.63**	**310**	⇑P	**Pn**	**20 38 44.3**	**-0.9**
JOM				*e*S	**Sn**	**20 39 23.0**	**-5.1**
JFT	**Otama**	**3.63**	**277**	⇑P	**Pn**	**20 38 45.2**	**-0.1**
JFT				S	**Sn**	**20 39 23.9**	**-4.4**
JIHU	**Itakohorinouch**	**3.71**	**252**	P	**Pn**	**20 38 45.7**	**-0.6**
JYK	**Kaneyama**	**3.96**	**297**	⇑P	**Pn**	**20 38 49.4**	**-0.4**
JYK				*e*S	**Sn**	**20 39 31.7**	**-4.7**
JSB	**Shiboa**	**3.97**	**268**	P	**Pn**	**20 38 50.7**	**+0.7**
JRG	**Rokugo**	**4.00**	**305**	⇑P	**Pn**	**20 38 49.8**	**-0.6**
JRG				*e*S	**Sn**	**20 39 32.2**	**-5.1**
BSO1	**Boso 1**	**4.05**	**233**	⇓P	**Pn**	**20 38 49.3**	**-1.2**
BSO1				*e*S	**Sn**	**20 39 34.7**	**-3.1**
BSO3	**Boso 3**	**4.27**	**237**	P	**Pn**	**20 38 53.0**	**-0.8**
BSO4	**Boso 4**	**4.28**	**241**	P	**Pn**	**20 38 53.4**	**-0.7**
JKUC	**kamogawauchiur**	**4.29**	**243**	P	**Pn**	**20 38 53.8**	**-0.6**
JAG	**Ashikaga**	**4.42**	**262**	⇑P	**Pn**	**20 38 55.2**	**-0.9**
JNS	**Sasagawa**	**4.46**	**280**	P	**Pn**	**20 38 56.6**	**-0.1**
JAH	**Hinai**	**4.47**	**313**	P	**Pn**	**20 38 56.5**	**-0.3**
JAH				S	**Sn**	**20 39 44.4**	**-4.5**
JKT	**Katashina**	**4.53**	**266**	P	**Pn**	**20 38 57.5**	**-0.2**
JTM	**Tenmabayashi**	**4.66**	**322**	P	**Pn**	**20 38 58.6**	**-0.8**
JTM				S	**Sn**	**20 39 46.5**	**-7.0**
JHK	**Hiroka**	**4.68**	**272**	⇑P	**Pn**	**20 38 59.5**	**-0.2**
JSGW	**Sagamiharawaka**	**4.84**	**253**	P	**Pn**	**20 39 01.6**	**-0.3**
JRY	**Ryogami san**	**4.95**	**258**	⇑P	**Pn**	**20 39 02.4**	**-1.0**
JRY				S	**Sn**	**20 39 54.3**	**-6.4**
ERM	**Erimo**	**5.00**	**345**	*ce*P	**Pn**	**20 39 02.8**	**-1.3**
ERM	**Erimo**	**5.00**	**345**		**Pn**	**20 39 02.7**	**-1.3**
JGK	**Kuni**	**5.04**	**265**	⇑P	**Pn**	**20 39 05.1**	**+0.4**
JIM2	**Oshima 3**	**5.06**	**242**	P	**Pn**	**20 39 02.7**	**-2.2**
JOD2	**Odawara 2**	**5.06**	**249**	P	**Pn**	**20 39 03.8**	**-1.1**
JOD2				*e*S	**Sn**	**20 39 58.0**	**-5.4**
JOT	**Ohata**	**5.13**	**326**	P	**Pn**	**20 39 05.4**	**-0.5**
JOT				*e*S	**Sn**	**20 39 59.5**	**-5.7**
JSD	**Sado**	**5.32**	**281**	P	**Pn**	**20 39 08.4**	**-0.1**
JYN	**Shimob**	**5.38**	**254**	P	**Pn**	**20 39 09.1**	**-0.3**
MJAR	**Matsushiro Arr**	**5.38**	**265**	Pn	**Pn**	**20 39 09.6**	**+0.2**
MJAR				Sn	**Sn**	**20 40 08.3**	**-3.2**
	8.1nm,0.3s,baz=102,slow=11,SNR=381						
MJAR				LR	LR	20 41 35.5	
	1.3nm,0.3s,baz=79,slow=31,SNR=4.6						
	comp=Z,399nm,18.0s,baz=100,slow=42						
MJAR	**Matsushiro Arr**	**5.38**	**265**		**Pn**	**20 39 08.8**	**-0.7**
MJAR					**Sn**	**20 40 10.7**	**-0.8**
MAJO	**Matsushiro**	**5.39**	**265**	P	**Pn**	**20 39 09.5**	**+0.1**
MAJO	**Matsushiro**	**5.39**	**265**		**Pn**	**20 39 09.5**	**+0.1**
MAT	**Matsushiro**	**5.39**	**265**	P	**Pn**	**20 39 10.0**	**+0.6**
MAT	**Matsushiro**	**5.39**	**265**	P	**Pn**	**20 39 10.0**	**+0.6**
MAT				S	**Sn**	**20 40 08.2**	**-3.3**
MJB9	**Matsu-Tunnel**	**5.39**	**265**		**Pn**	**20 39 09.9**	**+0.4**
JIZS	**Izushimoda**	**5.45**	**245**	P	**Pn**	**20 39 08.5**	**-1.8**
JNG	**Nsakai**	**5.49**	**264**	P	**Pn**	**20 39 11.2**	**+0.2**
JCH	**Churui**	**5.54**	**348**	P	**Pn**	**20 39 09.5**	**-2.0**
JCH				S	**Sn**	**20 40 08.2**	**-7.1**
JKB	**Kayabe**	**5.55**	**329**	P	**Pn**	**20 39 10.8**	**-0.9**
JHJ2	**Mitsune**	**5.81**	**227**	P	**Pn**	**20 39 13.1**	**-2.1**
JHJ2				S	**Sn**	**20 40 17.0**	**-4.8**
JHJ2	**Mitsune**	**5.81**	**227**		**Pn**	**20 39 13.1**	**-2.1**
JHJ2					**Sn**	**20 40 15.8**	**-6.0**
JNY	**Yasuok**	**5.95**	**254**	P	**Pn**	**20 39 17.9**	**+0.6**
JAR	**Ashorobuto**	**6.16**	**352**	P	**Pn**	**20 39 17.2**	**-2.8**
JYZW	**Yoshizawa**	**6.18**	**251**	P	**Pn**	**20 39 20.4**	**+0.1**
NEM2	**Nemuro 2**	**6.21**	**6**	P	**Pn**	**20 39 17.5**	**-3.1**
NEM2				S	**Sn**	**20 40 23.2**	**-8.4**
NMR	**Nemuro--Hokkai**	**6.21**	**6**	⇓*i*P	**Pn**	**20 39 17.5**	**-3.2**
NMR				*i* S	**Sn**	**20 40 22.7**	**-9.0**
JOSM	**Okushiri--Mats**	**6.42**	**321**	P	**Pn**	**20 39 23.0**	**-0.6**
GLVR	**Golovnino**	**6.56**	**4**	*e*P	**Pn**	**20 39 22.2**	**-3.3**
GLVR				*e*S	Sn	20 40 31.2	-9.2
GLVR				pmax	pmax		
	comp=Z,150nm,0.1s						
GLVR				MLR	MLR		
	comp=Z,6μm,15.0s						
GLVR				MLR	MLR		
	comp=N,1μm,10.0s						
INU	**Inuyama**	**6.61**	**256**		**Pn**	**20 39 25.9**	**-0.3**
JTKR	**Abashiri--Toko**	**6.81**	**354**	P	**Pn**	**20 39 27.3**	**-1.7**
JTKR				S	**Sn**	**20 40 38.7**	**-7.9**
GRPR	**Tuman**	**6.83**	**5**	*e*P	**Pn**	**20 39 25.9**	**-3.3**
GRPR				*e*S	Sn	20 40 37.4	-10
GRPR				pmax	pmax		
	comp=Z,332nm,0.4s						
GRPR				pmax	pmax		
	comp=E,125nm,0.2s						
GRPR				pmax	pmax		
	comp=N,174nm,0.5s						
SHO	**Shikotan**	**6.84**	**12**⇑ *i*P		**Pn**	**20 39 25.5**	**-3.8**
SHO				*i* S	Sn	20 40 37.6	-10
SHO				pmax	pmax		
	comp=Z,153nm,0.8s						
SHO				pmax	pmax		
	comp=E,52nm,0.4s						
SHO				pmax	pmax		
	comp=N,71nm,0.3s						
SHO				MLR	MLR		
	comp=Z,178nm,13.0s						
SHO				MLR	MLR		
	comp=E,172nm,8.0s						
YUK	**Yuzh-Kuril'sk**	**6.88**	**6**	*e*P	**Pn**	**20 39 26.7**	**-3.2**
YUK				*e*S	Sn	20 40 38.5	-10
YUK				pmax	pmax		
	comp=N,75nm,0.3s						
YUK				pmax	pmax		
	comp=Z,460nm,0.3s						
YUK				pmax	pmax		
	comp=E,70nm,0.2s						
YUK				MLR	MLR		
	comp=Z,154nm,10.0s						
JHR	**Hokuryu**	**6.97**	**341**	P	**Pn**	**20 39 31.3**	**+0.1**
JHR				*e*S	**Sn**	**20 40 44.9**	**-5.6**
JKA	**Kamikawa-asahi**	**7.13**	**347**		**Pn**	**20 39 32.5**	**-0.8**
JKA					**Sn**	**20 40 49.9**	**-4.5**
ASAJ	**Asahikawa**	**7.13**	**347**	Pn	**Pn**	**20 39 32.5**	**-0.9**
	comp=Z,12nm,0.3s,baz=218,slow=10,SNR=21						
ASAJ				Sn	**Sn**	**20 40 49.9**	**-4.6**
	comp=Z,2.4nm,0.3s,baz=285,slow=20,SNR=3.0						
TTO1	**TONANKAI O.B.S**	**7.50**	**244**	P	**Pn**	**20 39 38.4**	**+0.2**
JTNC	**Tanabenakahech**	**8.27**	**249**	P	**Pn**	**20 39 48.7**	**-0.3**
KUR	**Kuril'sk**	**8.35**	**15**	*e*P	**Pn**	**20 39 48.8**	**-1.2**
KUR				*e*S	**Sn**	**20 41 16.9**	**-7.4**
KUR				MLR	MLR		
	comp=Z,159nm,12.0s						
JWK2	**Keihoku**	**8.42**	**346**	P	**Pn**	**20 39 51.9**	**+0.8**
JHS	**Saijyo**	**9.77**	**261**	P	**Pn**	**20 40 10.2**	**+0.7**
YSS	**Yuzh-Sakhalins**	**9.88**	**352**	*e*P	**Pn**	**20 40 10.9**	**-0.1**
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				MLR	MLR		
	comp=Z,2μm,13.0s						
YSS	**Yuzh-Sakhalins**	**9.88**	**352**		**Pn**	**20 40 11.0**	**-0.1**
TEY	**Ternei**	**10.02**	**324**⇑ *i*P		**Pn**	**20 40 12.4**	**-0.5**
TEY				pmax	pmax		
	comp=N,190nm,0.8s						
TEY				pmax	pmax		
	comp=E,170nm,0.8s						
TEY				pmax	pmax		
	comp=Z,210nm,0.8s						
JCJ	**Chichijima**	**10.32**	**194**	Pn	**Pn**	**20 40 14.4**	**-2.7**
	comp=Z,13nm,0.3s,baz=84,slow=22,SNR=12						
JCJ				Sn	Sn	20 42 00.4	-12
	comp=Z,26nm,0.3s,baz=292,slow=23,SNR=12						
JCJ				LR	LR	20 43 31.3	
	comp=Z,26nm,18.5s,baz=347,slow=34						
VLA	**Vladivostok**	**11.57**	**305**⇑ *i*P		**Pn**	**20 40 33.7**	**-0.4**
MSHR	**Mys Shultsa**	**11.83**	**301**⇓ *e*P		**Pn**	**20 40 38.8**	**+1.1**
USA0B	**Ussuriysk Arra**	**12.02**	**310**	P	**Pn**	**20 40 40.0**	**-0.3**
USA0B	**Ussuriysk Arra**	**12.02**	**310**		**Pn**	**20 40 40.0**	**-0.3**
USRK	**Ussuriysk Ar.**	**12.02**	**310**	P	**Pn**	**20 40 40.2**	**-0.2**
USRK	**Ussuriysk Ar.**	**12.02**	**310**	Pn	**Pn**	**20 40 40.8**	**+0.4**
	baz=117,slow=14,SNR=41						
USRK				LR	LR	20 45 21.9	
	comp=Z,293nm,18.6s,baz=99,slow=38						

USRK Ussuriysk Ar. 12.02 310 Pn 20 40 40.2 -0.2
JNU Nakatsue 12.15 255 Pn Pn 20 40 42.6 +0.4
comp=Z,0.9nm,0.3s,baz=62,slow=5.9,SNR=11
JNU LR LR 20 46 09.2
comp=Z,201nm,18.7s,baz=97,slow=41
JNU Nakatsue 12.15 255 Pn 20 40 40.9 -1.3
KSRS Korea Array 13.50 276 Pn Pn 20 41 02.1 +1.6
comp=Z,0.6nm,0.3s,baz=87,slow=14,SNR=40
KSRS LR LR 20 46 18.7
comp=Z,252nm,18.6s,baz=86,slow=38
KSAR Wonju Array Be 13.53 276 P Pn 20 41 00.1 -0.9
KSAR Wonju Array Be 13.53 276 Pn 20 41 00.1 -0.9
KS19 Wonju Array Si 13.54 276 Pn 20 41 01.3 +0.2
MDJ Mudanjiang 13.72 307 P Pn 20 41 04.3 +0.7
MDJ pmax pmax
comp=Z,49nm,0.7s
MDJ pmax pmax
comp=Z,450nm,4.9s
MDJ Mudanjiang 13.72 307 Pn 20 41 03.1 -0.5
INCN Inchon 14.52 277 P Pn 20 41 14.3 -0.3
INCN Inchon 14.52 277 Pn 20 41 14.3 -0.3
GRNR Gornyy 14.86 339⇓ *i*P Pn 20 41 14.5 -4.6
GRNR *e*S Sn **20 43 58.1 -5.7**
GRNR pmax pmax
comp=Z,8.0nm,0.8s
GRNR smax smax
comp=N,10.0nm,0.5s
GRNR MLR MLR
comp=Z,280nm,12.0s
KLR Kul'dur 15.35 326⇑ *e*P Pn 20 41 24.5 -1.1
KLR pmax pmax
comp=Z,16nm,1.5s
KLR Kul'dur 15.35 326 Pn Pn 20 41 24.0 -1.6
comp=Z,0.2nm,0.3s,baz=131,slow=12,SNR=14
KLR LR LR 20 46 55.2
comp=Z,114nm,21.6s,baz=134,slow=36
CN2 Changchun 16.17 300 *e*P Pn 20 41 31.3 -5.0
CN2 pmax pmax
comp=Z,10.0nm,1.0s
JOW Kunigami 17.43 238 P Pn 20 41 50.3 -2.1
PEA0B Petropavlovsk- 18.26 25 P Pn 20 42 01.3 -1.1
PEA0B pmax pmax
comp=Z,99nm,1.6s
PEA0B Petropavlovsk- 18.26 25 P Pn 20 42 01.3 -1.1
PETK Petropavlovsk- 18.26 25 P Pn 20 42 02.2 -0.2
comp=Z,0.0nm,0.3s,baz=212,slow=11,SNR=2.8
PETK LR LR 20 50 38.8
comp=Z,81nm,18.5s,baz=240,slow=42
PETK Petropavlovsk- 18.26 25 P Pn 20 42 00.8 -1.6
DL2 Dalian 18.39 282 *e*P Pn 20 41 55.8 -8.2
DL2 *e*S Sn 20 45 16.3 -13
DL2 pmax pmax
comp=Z,47nm,1.2s
DL2 LR LR
comp=N,310nm,13.4s
DL2 LR LR
comp=E,370nm,12.8s
DL2 LR LR
comp=Z,310nm,16.6s
PET Petropavlovsk 18.53 27 P P 20 42 03.8 -1.6
PET pmax pmax
comp=Z,67nm,1.6s
PET Petropavlovsk 18.53 27 P P 20 42 03.8 -1.6
ZEA Zeya 20.56 329 *e*P P 20 42 28.1 +0.4
ZEA pmax pmax
comp=N,42nm,0.8s
ZEA pmax pmax
comp=E,31nm,0.8s
ZEA pmax pmax
comp=Z,49nm,0.9s
HIA Hailar 21.82 312 P P 20 42 39.2 -2.1
HIA pmax pmax
comp=Z,16nm,0.9s
HIA Hailar 21.82 312 P P 20 42 39.2 -2.1
NJ2 Nanjing 21.99 264 *e*P P 20 42 42.3 -0.9
NJ2 pmax pmax
comp=Z,9.0nm,0.5s
TIA Tai'an 22.25 276 P P 20 42 46.0 0.0
TIA pmax pmax
comp=Z,9.0nm,1.1s
BJI Beijing 22.57 286 *e*P P 20 42 49.5 +0.2
BJI S S **20 46 58.5 +1.8**
BJI pmax pmax
comp=Z,11nm,0.7s
BJI LR LR
comp=Z,220nm,4.5s
BJI LR LR
comp=Z,260nm,4.8s
BJT Baijiatuau 22.57 286 P P 20 42 48.3 -1.1
BJT pmax pmax
comp=Z,13nm,1.1s
BJT Baijiatuau 22.57 286 P P 20 42 48.3 -1.1
YOJ Yonaguni jima 22.60 242 P P 20 42 47.1 -2.7
YOJ pmax pmax
comp=Z,110nm,1.3s
YOJ Yonaguni jima 22.60 242 P P 20 42 47.1 -2.7
MA2 Magadan 22.72 8⇓ *e*P P 20 42 50.4 -0.4
MA2 pmax pmax
comp=Z,12nm,1.3s
MA2 Magadan 22.72 8 LR LR 20 51 38.7
comp=Z,65nm,20.0s,baz=203,slow=36
MA2 Magadan 22.72 8 P P 20 42 50.0 -0.8
TATO Taipei 23.37 245 P P 20 42 55.2 -2.6
YHNB Yeheng 23.64 245 P P 20 42 58.7 -1.8
YHNB IAmb IAmb 20 43 20.0
comp=Z,62nm,1.5s
NACB Ninganchiao 23.78 244 P P 20 43 01.5 -0.3
TCU Taichung 24.46 245 P P 20 43 00.9 -7.2
TCU pmax pmax
comp=Z,43nm,1.6s
H11N2 WAKE ISLAND Hy 25.92 126 T T 21 10 21.2
baz=317,slow=76,SNR=473
H11N1 WAKE ISLAND Hy 25.93 126 T T 21 10 14.7
baz=317,slow=76,SNR=360
H11N3 WAKE ISLAND Hy 25.94 126 T T 21 10 20.5
baz=317,slow=76,SNR=467
HHC Hu-ho-hao-te 26.05 288 *e*P P 20 43 23.3 +0.7
HHC S S **20 47 52.5 -1.2**
HHC pmax pmax
comp=Z,2.0nm,0.7s
HHC pmax pmax
comp=Z,59nm,5.7s
HHC LR LR
comp=Z,170nm,18.2s
HHC LR LR
comp=Z,180nm,17.6s
HHC LR LR
comp=Z,180nm,10.2s
WHN Wuhan 26.13 264 P P 20 43 23.5 +0.3
WHN LR LR
comp=Z,550nm,14.5s
SEY Seymchan 26.18 8 P P 20 43 24.7 +1.3
comp=Z,5.5nm,0.9s,baz=191,slow=6.8,SNR=14
YAK Yakutsk 26.61 344 *e*P P 20 43 28.7 +1.5
YAK *e**PP **pwP 20 43 39.3 +3.3**
YAK *e*S S **20 48 01.2 -0.5**
YAK *e*SSS SSS 20 49 18.4
YAK pmax pmax
comp=Z,21nm,1.0s
YAK pmax pmax
comp=N,11nm,1.0s
YAK pmax pmax
comp=E,3.0nm,1.1s
YAK smax smax
comp=E,197nm,3.8s
YAK smax smax
comp=N,102nm,3.5s
YAK Yakutsk 26.61 344 P P 20 43 28.3 +1.1
comp=N,4.0nm,0.4s,baz=152,slow=1.9,SNR=7.0
YAK Yakutsk 26.61 344 P P 20 43 27.2 0.0
YAK IAmb IAmb 20 43 40.5
comp=Z,31nm,0.7s
H11S1 WAKE ISLAND Hy 26.70 128 T T 21 11 11.2
baz=319,slow=76,SNR=135
H11S3 WAKE ISLAND Hy 26.70 128 T T 21 11 11.5
baz=319,slow=76,SNR=128
H11S2 WAKE ISLAND Hy 26.71 128 T T 21 11 10.3
baz=319,slow=76,SNR=142
BOD Bodaibo 28.93 325 *e*P P 20 43 54.5 +6.5
BOD pmax pmax
comp=Z,18nm,0.8s
XAN Xi'an 29.29 275 P P 20 43 55.5 +3.9
XAN S S 20 48 53.5 +8.8
XAN pmax pmax
comp=Z,10.0nm,0.8s
XAN LR LR
comp=Z,130nm,10.8s
XAN LR LR
comp=Z,200nm,14.6s
XAN LR LR
comp=Z,170nm,16.3s
XAN Xi'an 29.29 275 P P 20 43 52.1 +0.5
XAN pmax pmax
comp=Z,8.0nm,0.7s
XAN Xi'an 29.29 275 P P 20 43 52.1 +0.5
ULN Ulaanbaatar 29.57 303 P P 20 43 54.3 +0.2
ULN pmax pmax
comp=Z,7.0nm,0.8s
ULN Ulaanbaatar 29.57 303 P P 20 43 54.3 +0.2
SONM Songino Array 30.01 303 P P 20 43 57.7 -0.3
SONM pmax pmax
comp=Z,5.0nm,1.1s
SONM Songino Array 30.01 303 P P 20 43 58.4 +0.5
comp=Z,2.1nm,0.7s,baz=102,slow=8.6,SNR=3.2
SONM LR LR 20 56 10.6
comp=Z,113nm,19.0s,baz=228,slow=37
SONM Songino Array 30.01 303 P P 20 43 57.6 -0.3
ENH Enshi 30.11 267 P P 20 43 59.9 +1.1
ENH IAmb IAmb 20 44 06.0
comp=Z,20nm,0.9s
KIWB Kanaga Island 30.39 49 P P 20 44 00.8 -0.3
ADK Adak 30.68 49 P P 20 44 03.5 -0.1
ADK pmax pmax
comp=Z,89nm,1.4s
ADK Adak 30.68 49 P P 20 44 03.5 -0.1
TLY Talaya 32.34 310 *e*P P 20 44 24.7 +6.4
TLY pmax pmax
comp=Z,7.0nm,0.6s
TLY Talaya 32.34 310 P P 20 44 18.0 -0.3
TLY IAmb IAmb 20 44 28.7
comp=Z,23nm,1.8s
ZAK Zakamensk 32.36 307 *e*P P 20 44 22.8 +4.2
ZAK pmax pmax
comp=Z,7.0nm,1.0s
LZH Lanzhou 32.76 281 *e*P P 20 44 21.5 -0.9
LZH PP **PnPn 20 45 27.0 -3.5**
LZH pmax pmax
comp=Z,62nm,5.4s
LZH LR LR
comp=Z,290nm,12.6s
LZH LR LR
comp=Z,320nm,13.2s
LZH LR LR
comp=Z,290nm,15.1s
BILL Bilibino 33.14 15 *e*P P 20 44 23.1 -2.0
BILL pmax pmax
comp=Z,4.0nm,1.1s
GYA Guiyang 33.98 263⇑ *i*P P 20 44 35.5 +2.5
GYA pmax pmax
comp=Z,10.0nm,0.7s
CD2 Chengdu 34.44 272 P P 20 44 36.5 -0.4
CD2 S **S 20 50 05.8 +0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 pmax pmax
comp=Z,100nm,7.1s
CD2 LR LR
comp=Z,300nm,14.7s
CD2 LR LR
comp=Z,280nm,8.6s
GTA Gaotai 35.16 288 *e*P P 20 44 44.5 +1.4
GTA pP pwP 20 44 48.8 -2.9
GTA sP sP 20 44 52.0 +7.1
GTA pmax pmax
comp=Z,43nm,5.4s
GTA LR LR
comp=Z,100nm,10.8s
GTA LR LR
comp=Z,220nm,14.9s
GTA LR LR
comp=Z,240nm,15.2s
TIXI Tiksi 35.51 351⇑ *e*P P 20 44 45.6 +0.1
TIXI pmax pmax
comp=Z,7.0nm,1.4s
TIXI Tiksi 35.51 351 P P 20 44 45.7 +0.1
comp=Z,1.1nm,0.4s,baz=168,slow=4.9,SNR=4.5
TIXI PcP **PcP 20 47 14.8 +0.3**
comp=Z,3.9nm,1.1s,baz=109,slow=4.4,SNR=4.4
TIXI Tiksi 35.51 351 P P 20 44 45.1 -0.4
KMI Kunming 37.73 264 P P 20 45 08.0 +2.7
KMI pmax pmax
comp=Z,7.0nm,1.2s
KMI Kunming 37.73 264 P P 20 45 05.3 0.0
KMI pmax pmax
comp=Z,14nm,1.1s
KMI Kunming 37.73 264 P P 20 45 05.3 0.0
KMI IAmb IAmb 20 45 17.2
comp=Z,14nm,1.1s
SLVN Son La 38.76 258 P P 20 45 14.7 +0.9
TNTI Ternate 39.68 208 P P 20 45 21.2 -0.3
TNTI IAmb IAmb 20 45 22.8
comp=Z,40nm,1.1s
ANM Nome 40.03 31 P P 20 45 25.9 +2.1
ANM pmax pmax
comp=Z,13nm,1.0s
ANM Nome 40.03 31 P P 20 45 25.9 +2.1
FAKI Fak Fak 41.60 199 P P 20 45 35.5 -1.7
RDOG Red Dog Mine 42.13 26 P P 20 45 40.3 -0.8
LUWI Luwuk 43.20 213 P P 20 45 49.1 -1.2
WMQ Urumqi 43.23 297 *e*P P 20 45 52.0 +1.6
WMQ pP sP 20 45 55.5 +3.2
WMQ sP pwP 20 46 01.5 +2.4
WMQ pmax pmax
comp=Z,18nm,0.9s
WMQ pmax pmax
comp=Z,130nm,5.1s
WMQ LR LR
comp=Z,260nm,14.3s
WMQ LR LR
comp=Z,260nm,14.1s
WMQ LR LR
comp=Z,200nm,20.7s
SVW2 Sparrevohn 43.72 37 P P 20 45 54.7 +0.7
SVW2 IAmb IAmb 20 46 31.7
comp=Z,25nm,1.0s
PBKT Sadao Pong 43.75 254 P P 20 45 54.7 0.0
ZAA0 Zalesovo Array 43.86 312 P P 20 45 55.2 0.0
ZAA0 PcP **PcP 20 47 41.0 -0.4**
ZALV Zalesovo Beam 43.86 312 P P 20 45 55.9 +0.6
comp=Z,1.8nm,0.6s,baz=87,slow=6.8,SNR=6.8
ZALV PcP **PcP 20 47 41.1 -0.3**
comp=Z,1.6nm,0.5s,baz=90,slow=3.9,SNR=4.1
CHTO Chiang Mai 44.02 258 P P 20 45 55.1 -1.9
CHTO pmax pmax
comp=Z,11nm,1.0s
CHTO Chiang Mai 44.02 258 P P 20 45 55.1 -1.9
CM31 Chiang Mai Arr 44.23 258 P P 20 45 58.2 -0.4
CMAR Chiang Mai Arr 44.23 258 P P 20 46 00.1 +1.5
comp=Z,1.1nm,0.8s,baz=45,slow=6.4,SNR=12
CMAR LR LR 21 05 14.0
comp=Z,38nm,20.6s,baz=48,slow=37
LSA Lhasa 44.95 277 P P 20 46 05.7 +0.9
LSA pmax pmax
comp=Z,5.0nm,0.8s
LSA Lhasa 44.95 277 P P 20 46 05.7 +0.9
JOHN Johnston Islan 44.95 104 P P 20 46 02.6 -1.8
RSO Redoubt South 45.06 38 P P 20 46 03.7 -1.3
IMAR Indian Mountai 45.11 30 P P 20 46 05.8 +0.7
IMAR PcP **PcP 20 47 46.9 +1.4**
IMAR PP **PP 20 47 57.9 +7.6**
KDAK Kodiak Island 45.13 42 P P 20 46 05.9 +0.6
comp=Z,30nm,1.0s,baz=329,slow=5.9,SNR=6.1
KDAK Kodiak Island 45.13 42 P P 20 46 05.3 0.0
KDAK PcP **PcP 20 47 46.4 +0.7**
PPLA Purkeypile 45.46 35 P P 20 46 09.9 +1.8
PPLA IAmb IAmb 20 46 44.0
comp=Z,27nm,1.4s
PPLA PcP **PcP 20 47 47.6 +0.7**
SKT Skwentna 45.71 36 P P 20 46 10.5 +0.6
SKT IAmb IAmb 20 46 31.7
comp=Z,32nm,1.8s
SBUM Sibu 45.79 229 P P 20 46 11.6 +0.6
KTH Kantishna Hill 46.07 34 P P 20 46 14.0 +1.2
KTH IAmb IAmb 20 46 40.5
comp=Z,31nm,1.7s
SUA Susitna One 46.07 37 P P 20 46 13.3 +0.4
SUA IAmb IAmb 20 46 24.8
comp=Z,11nm,0.9s
SUA PcP **PcP 20 47 49.4 +0.4**
BPAW Bear Paw Mtn. 46.08 33 P P 20 46 14.1 +1.3
MLY Manley 46.25 32 P P 20 46 15.4 +1.3
MLY PcP **PcP 20 47 50.7 +1.2**
MLY PP **PP 20 48 01.5 -1.0**
MK31 Makanchi Array 46.38 303 P P 20 46 14.5 -0.9
MK31 pmax pmax
comp=Z,8.0nm,0.8s
MK31 Makanchi Array 46.38 303 P P 20 46 14.5 -0.9
MK31 IAmb IAmb 20 46 27.8
comp=Z,7.9nm,0.8s
MKAR Makanchi Array 46.38 303 P P 20 46 16.1 +0.7
comp=Z,6.9nm,1.0s,baz=86,slow=8.9,SNR=18
MKAR Makanchi Array 46.38 303 P P 20 46 15.6 +0.2
MAKZ Makanchi 46.58 303 P P 20 46 17.5 +0.5
MAKZ pmax pmax
comp=Z,8.0nm,0.8s
MAKZ Makanchi 46.58 303 P P 20 46 17.4 +0.5
MAKZ IAmb IAmb 20 46 29.6
comp=Z,8.0nm,0.8s
COLD Coldfoot 46.67 29 P P 20 46 18.9 +1.5
PMR Palmer 46.85 37 P P 20 46 19.6 +0.8
PMR pmax pmax
comp=Z,31nm,1.6s
PMR Palmer 46.85 37 P P 20 46 19.6 +0.8
PMR IAmb IAmb 20 46 39.4
comp=Z,31nm,1.6s
NEA Nenana 46.93 33 P P 20 46 20.3 +0.8
NEA IAmb IAmb 20 46 32.5
comp=Z,13nm,1.0s
GHO Glory Hole Cre 46.94 37 P P 20 46 19.5 -0.2
GHO IAmb IAmb 20 46 31.9
comp=Z,15nm,1.0s
MCK McKinley 46.96 34 P P 20 46 19.7 -0.1
MCK pmax pmax
comp=Z,10.0nm,1.0s
MCK McKinley 46.96 34 P P 20 46 19.7 -0.1
MCK IAmb IAmb 20 46 32.1
comp=Z,10.0nm,1.0s
RND Reindeer 46.99 34 P P 20 46 20.3 +0.2
RND 20 47 52.8
RND pmax pmax
comp=Z,10.0nm,1.0s
RND Reindeer 46.99 34 P P 20 46 20.3 +0.2
RND IAmb IAmb 20 46 32.5
comp=Z,10nm,1.0s
RND PcP **PcP 20 47 52.8 +0.6**
KNK Knik Glacier 47.17 37 P P 20 46 22.5 +1.1
KNK IAmb IAmb 20 46 34.2
comp=Z,7.7nm,0.8s
KNK PcP **PcP 20 47 53.8 +1.0**
SML Sawmill 47.23 36 P P 20 46 22.0 +0.1
SML IAmb IAmb 20 46 31.5
comp=Z,28nm,1.4s
SML PcP **PcP 20 47 53.9 +0.9**
MDM Murphy Dome 47.31 32 P P 20 46 22.9 +0.5
MDM IAmb IAmb 20 46 25.1
comp=Z,9.2nm,0.8s
WRH Wood River Hil 47.35 33 P P 20 46 23.9 +1.2
WRH IAmb IAmb 20 46 28.7
comp=Z,22nm,1.8s
WRH PcP **PcP 20 47 53.8 +0.4**
CCB Clear Creek Bu 47.48 33 P P 20 46 25.1 +1.4
CCB PcP **PcP 20 47 52.4 -1.4**
POKR Poker Plat Res 47.65 32 P P 20 46 26.8 +1.7
baz=268
DHY Denali Highway 47.66 35 P P 20 46 26.2 +0.8
DHY IAmb IAmb 20 46 36.8
comp=Z,29nm,1.8s
DHY PcP **PcP 20 47 55.8 +1.1**
SCM Sheep Creek Mo 47.70 36 P P 20 46 26.6 +1.0
SCM 20 47 55.3
SCM pmax pmax
comp=Z,28nm,1.3s
SCM Sheep Creek Mo 47.70 36 P P 20 46 26.6 +1.0
SCM PcP **PcP 20 47 55.3 +0.6**
KSM Kuching 47.72 230 P P 20 46 25.8 -0.4
HDA Harding Lake 47.85 33 P P 20 46 27.3 +0.6
HDA IAmb IAmb 20 46 38.4
comp=Z,8.1nm,0.8s
HDA Harding Lake 47.85 33 P P 20 46 27.6 +1.0
baz=270
IL31 47.88 32 P P 20 46 27.5 +0.7
ILAR Eielson Array 47.88 32 P P 20 46 27.2 +0.4
ILAR 20 47 55.0
ILAR Eielson Array 47.88 32 P P 20 46 27.8 +0.9
comp=Z,3.7nm,0.7s,baz=257,slow=6.4,SNR=46
ILAR Eielson Array 47.88 32 P P 20 46 27.2 +0.4
ILAR PcP **PcP 20 47 55.0 -0.3**
KURK Kurchatov 48.01 308 P P 20 46 28.5 +0.5
KURK pmax pmax
comp=Z,13nm,0.7s
KURK Kurchatov 48.01 308 P P 20 46 28.5 +0.5
KURK IAmb IAmb 20 46 42.6
comp=Z,13nm,0.7s
FID Port Fidalgo 48.16 38 P P 20 46 29.2 +0.1
HIN Hinchinbrook I 48.17 38 P P 20 46 30.1 +1.0
PRP Porcupine Dome 48.46 31 P P 20 46 33.3 +1.8
HNR Honiara 48.48 160 LR LR 21 04 35.4
comp=Z,55nm,20.2s,baz=300,slow=33
EYAK Cordova Ski Ar 48.53 38 P P 20 46 33.7 +1.9
RIDG Independent Ri 48.78 34 P P 20 46 33.6 -0.2
RIDG IAmb IAmb 20 46 43.0
comp=Z,23nm,1.6s
RIDG PcP **PcP 20 47 59.5 +0.9**
BMAR Burnt Mountain 48.86 29 P P 20 46 36.5 +2.1
DOT Dot Lake 49.13 34 P P 20 46 37.0 +0.4
DOT PcP **PcP 20 47 58.2 -1.7**
SCRK Sand Creek 49.15 33 P P 20 46 37.7 +0.8
SCRK PcP **PcP 20 48 00.5 +0.5**
GLB Gilahina Butte 49.40 37 P P 20 46 40.0 +1.3
GLB IAmb IAmb 20 46 52.8
comp=Z,17nm,1.3s
VRDI Verde Repeater 49.59 37 P P 20 46 41.7 +1.4
VRDI IAmb IAmb 20 46 53.1
comp=Z,10.0nm,1.0s
MCARA McCarthy VSAT 49.78 37 P P 20 46 42.6 +1.1
MCARA IAmb IAmb 20 46 54.6
comp=Z,16nm,0.8s
MCARA PcP **PcP 20 48 03.7 +1.5**
CRQM Cirque 49.79 38 P P 20 46 43.5 +1.7
TGL Tana Glacier 49.94 38 P P 20 46 43.3 +0.4
BALM Baldy 50.15 37 P P 20 46 44.8 +0.4
BALM IAmb IAmb 20 46 57.0
comp=Z,11nm,0.9s
PRZ Przheval'sk 50.15 298 P P 20 46 42.9 -1.9
PRZ PcP **PcP 20 48 02.9 -1.3**
BCAR Beaver Creek A 50.20 35 P P 20 46 45.8 +1.1
BCAR PcP **PcP 20 48 05.3 +1.6**
BARN Barnard Glacie 50.47 37 P P 20 46 48.5 +1.5
BARN PcP **PcP 20 48 06.9 +1.9**
SOEI Soe 50.54 207 P P 20 46 47.6 -0.3
CTGM Chitina Glacie 50.64 37 P P 20 46 49.0 +0.8
CTGM IAmb IAmb 20 47 01.0
comp=Z,10nm,0.9s
CTGM PcP **PcP 20 48 07.6 +2.0**
COEN Coen 50.90 182 P P 20 46 50.2 -0.2
KDJ Kajisay 51.12 298 P P 20 46 53.1 +0.9
KDJ pmax pmax
comp=Z,9.0nm,1.3s
KDJ Kajisay 51.12 298 P P 20 46 53.0 +0.9
KULM Kulim 51.32 243 P P 20 46 53.8 +0.2
MTN Manton Dam 51.42 197 P P 20 46 53.0 -1.3
YKU2 Yakutat 51.68 39 P P 20 46 55.7 -0.1
EPYK Eagle Plains 52.01 30 P P 20 46 59.1 +0.8
EPYK IAmb IAmb 20 47 11.5
comp=Z,20nm,1.1s
EPYK Eagle Plains 52.01 30 P P 20 46 59.7 +1.5
baz=277
NRN Naryn 52.18 297 P P 20 47 01.0 +0.8
NRN pmax pmax
comp=Z,4.0nm,1.0s
NRN Naryn 52.18 297 P P 20 47 01.0 +0.8
BRVK Borovoye 52.56 313 P P 20 47 02.1 -0.3
BRVK pmax pmax
comp=Z,7.0nm,0.9s
BRVK Borovoye 52.56 313 P P 20 47 02.1 -0.3
FRU1 Bishkek 52.69 299 P P 20 47 04.0 +0.3
FRU1 pmax pmax
comp=Z,8.0nm,0.7s
FRU1 Bishkek 52.69 299 P P 20 47 04.0 +0.3
FRU1 IAmb IAmb 20 47 15.6
comp=Z,7.6nm,0.7s
AAK Ala-Archa 52.84 299⇑ *i*P P 20 47 06.0 +1.1
AAK pmax pmax
comp=Z,7.0nm,1.7s
AAK Ala-Archa 52.84 299 P P 20 47 04.6 -0.3

KSH Kashi 52.86 295 P P 20 47 10.3 +5.3
KSH PP **PP** **20 49 11.5 +7.2**
KSH S **S** **20 54 39.3 +5.4**
KSH SS **SS** **20 58 16.5 +4.1**
KSH pmax pmax
comp=Z,14nm,0.6s
KSH pmax pmax
comp=Z,280nm,5.6s
KSH LR LR
comp=Z,140nm,5.9s
KSH LR LR
comp=Z,200nm,4.5s
INK Inuvik 52.98 27 P **P** **20 47 06.3 +1.0**
INK pmax pmax
comp=Z,8.0nm,1.0s
INK Inuvik 52.98 27 P **P** **20 47 06.9 +1.6**
comp=Z,5.9nm,0.8s,baz=293,slow=7.7,SNR=15
INK Inuvik 52.98 27 P **P** **20 47 06.3 +1.0**
KHLH Kahului Airpor 53.03 91 P **P** **20 47 06.4 +0.1**
WHY Whitehorse 53.81 37 P **P** **20 47 11.3 -0.4**
WHY IAmb IAmb 20 47 25.5
comp=Z,34nm,1.7s
SKAG Skagway 53.86 38 P **P** **20 47 12.5 +0.6**
SKAG IAmb IAmb 20 47 25.3
comp=Z,13nm,1.2s
LHMI Lhok Sumawe 54.03 246 P **P** **20 47 12.2 -1.5**
HPAH Hawaii Prepara 54.06 91 P **P** **20 47 13.3 -0.7**
PSI Prapat 54.28 242 P **P** **20 47 14.0 -1.7**
PSI pmax pmax
comp=Z,9.0nm,1.0s
BESE Bessie Mountai 54.31 39 P **P** **20 47 16.6 +1.3**
BESE IAmb IAmb 20 47 53.7
comp=Z,20nm,1.2s
ARSB Arslanbob 54.35 298 P **P** **20 47 15.8 -0.2**
ARSB IAmb IAmb 20 47 37.6
comp=Z,22nm,1.2s
RPSI Rantau Prapat 54.36 242 P **P** **20 47 14.0 -2.1**
RPSI IAmb IAmb 20 47 17.3
comp=Z,9.4nm,1.0s
MWH Moku'aweowe 54.43 92 P **P** **20 47 16.4 -0.9**
SMRI Semarang 54.52 224 P **P** **20 47 16.9 -0.4**
BKNI Bangkinang 54.59 238 P **P** **20 47 16.9 -0.9**
SBLHI Steaming Bluff 54.73 91 P **P** **20 47 18.8 -0.2**
KNRA Kununurra 54.73 199 P **P** **20 47 18.7 0.0**
KK31 Karatay Array 55.43 301 P **P** **20 47 23.5 -0.1**
KK31 pmax pmax
comp=Z,12nm,1.3s
KK31 Karatay Array 55.43 301 P **P** **20 47 23.5 -0.1**
KK31 IAmb IAmb 20 47 27.6
comp=Z,12nm,1.3s
KKAR Karatay Array 55.43 301 P **P** **20 47 23.5 -0.1**
KKAR pmax pmax
comp=Z,12nm,1.3s
KKAR Karatay Array 55.43 301 P **P** **20 47 23.6 0.0**
KKAR Karatay Array 55.43 301 P **P** **20 47 23.5 -0.1**
KKAR IAmb IAmb 20 47 27.6
comp=Z,12nm,1.3s
C36M Paulatuk 56.12 25 P **P** **20 47 28.8 +0.7**
C36M Paulatuk 56.12 25 P **P** **20 47 28.8 +0.7**
baz=286
GSI Gunungsitoli 56.29 242 P **P** **20 47 29.5 -0.5**
SANVU Saraoutou 56.42 154 P **P** **20 47 31.1 +0.3**
SVE Sverdlovsk 56.85 319 *eP* **P** **20 47 34.9 +1.4**
SVE pmax pmax
comp=Z,11nm,0.8s
NIL Nilore 57.18 290 P **P** **20 47 36.9 +0.6**
NIL pmax pmax
comp=Z,9.0nm,0.7s
NIL Nilore 57.18 290 P **P** **20 47 36.9 +0.6**
NIL IAmb IAmb 20 47 48.8
comp=Z,9.3nm,0.7s
WB0 Warramunga Arr 57.51 192 P **P** **20 47 37.3 -1.2**
WR0 Warramunga Arr 57.67 192 P **P** **20 47 38.6 -1.0**
WR0 IAmb IAmb 20 47 39.8
comp=Z,15nm,0.8s
WRAB Tennant Creek 57.67 192 ⇓ *i* P **P** **20 47 38.8 -0.9**
WRAB pmax pmax
comp=Z,25nm,0.9s
WRAB Tennant Creek 57.67 192 P **P** **20 47 38.5 -1.2**
WB2 Warramunga Arr 57.68 192 P **P** **20 47 38.6 -1.1**
WRA Warramunga Arr 57.69 192 P **P** **20 47 37.5 -2.3**
WRA 20 48 33.1
WRA pmax pmax
comp=Z,1.0nm,0.8s
WRA Warramunga Arr 57.69 192 P **P** **20 47 39.1 -0.7**
comp=Z,16nm,0.7s,baz=11,slow=7.4,SNR=23
WRA PcP **PcP** **20 48 33.0 +0.3**
comp=Z,3.2nm,0.7s,baz=0.1,slow=3.6,SNR=4.6
WRA Warramunga Arr 57.69 192 P **P** **20 47 37.5 -2.3**
WRA PcP **PcP** **20 48 33.1 +0.4**
FITZ Fitzroy Crossi 57.90 202 P **P** **20 47 41.2 -0.1**
FITZ IAmb IAmb 20 47 44.1
comp=Z,28nm,1.4s
ARU Arti 58.06 319 *d* *i* P **P** **20 47 42.8 +0.8**
ARU 20 48 32.3
ARU 20 49 47.9
ARU S **S** **20 55 46.3 +3.6**
ARU SS **SS** **20 59 34.7 +1.3**
ARU pmax pmax
comp=Z,12nm,1.1s
ARU Arti 58.06 319 P **P** **20 47 42.9 +0.8**
comp=Z,1.9nm,0.7s,baz=53,slow=5.5,SNR=7.1
ARU Arti 58.06 319 P **P** **20 47 41.5 -0.6**
ARU IAmb IAmb 20 47 46.4
comp=Z,12nm,1.1s
KBL Kabul 59.93 292 P **P** **20 47 55.0 -0.7**
KBL pmax pmax
comp=Z,5.0nm,1.0s
KBL Kabul 59.93 292 P **P** **20 47 55.0 -0.7**
ABKAR Akbulak array 59.94 311 P **P** **20 47 54.8 -0.4**
ABKAR Akbulak array 59.94 311 P **P** **20 47 55.2 0.0**
ABKAR IAmb IAmb 20 48 13.4
comp=Z,14nm,1.4s
AKTO Aktyubinsk 60.62 313 P **P** **20 48 00.7 +0.9**
comp=Z,6.1nm,0.8s,baz=71,slow=12,SNR=16
KBS Kingsbay 60.97 351 P **P** **20 48 03.1 +1.3**
KBS pmax pmax
comp=Z,59nm,1.6s
KBS Kingsbay 60.97 351 P **P** **20 48 03.1 +1.3**
NOR Nord 61.06 357 *i* P **P** **20 48 02.6 +0.2**
NOR *i* 20 48 12.8
AS31 Alice Springs 61.40 191 P **P** **20 48 04.5 -0.9**
ASAR Alice Springs 61.41 191 P **P** **20 48 05.0 -0.4**
comp=Z,9.3nm,0.8s,baz=6.4,slow=7.1,SNR=84
ASAR PcP **PcP** **20 48 48.0 +0.5**
comp=Z,1.9nm,0.7s,baz=14,slow=4.8,SNR=4.4
ASAR Alice Springs 61.41 191 P **P** **20 48 04.3 -1.1**
ASAR PcP **PcP** **20 48 47.3 -0.2**
RES Resolute Bay 61.74 15 P **P** **20 48 07.1 0.0**
RES pmax pmax
comp=Z,9.0nm,1.0s
RES Resolute Bay 61.74 15 P **P** **20 48 07.9 +0.8**
comp=Z,4.9nm,0.7s,baz=310,slow=6.8,SNR=22
RES Resolute Bay 61.74 15 P **P** **20 48 07.1 0.0**
RES IAmb IAmb 20 48 19.2
comp=Z,9.4nm,0.9s
KIRV Kirov 61.78 324 P **P** **20 48 08.5 +1.0**
comp=Z,5.7nm,0.7s,baz=291,slow=3.8,SNR=3.6
YKA Yellowknife Ar 62.27 31 P **P** **20 48 11.4 +0.6**
comp=Z,2.5nm,0.8s,baz=300,slow=6.7,SNR=19
YKA PcP **PcP** **20 48 51.2 +0.7**
comp=Z,1.8nm,0.7s,baz=299,slow=3.7,SNR=8.5
NOUC Port Laguerre 62.34 158 P **P** **20 48 13.5 +1.9**
DZM Mont Dzumac 62.35 157 P **P** **20 48 13.7 +1.9**
EIDS Eidsvold 62.50 174 P **P** **20 48 13.2 +0.5**
PSAD1 Pilbara Seismi 62.93 206 P **P** **20 48 15.5 -0.1**
MSVF Nonsavu 62.94 144 P **P** **20 48 14.8 -1.1**
MSVF pmax pmax
comp=Z,30nm,1.3s
MSVF Nonsavu 62.94 144 P **P** **20 48 14.8 -1.1**
PSAC2 Pilbara Seismi 63.00 206 P **P** **20 48 15.6 -0.5**
PSAC1 Pilbara Seismi 63.01 206 P **P** **20 48 15.7 -0.5**
PSAC1 IAmb IAmb 20 48 53.7
comp=Z,18nm,1.2s
PSAB2 Pilbara Seismi 63.01 206 P **P** **20 48 15.8 -0.3**
PSAA2 Pilbara Seismi 63.02 206 P **P** **20 48 15.6 -0.6**
PSAA2 IAmb IAmb 20 48 16.5
comp=Z,11nm,1.0s
PSA00 Pilbara Seismi 63.03 206 P **P** **20 48 15.9 -0.3**
PSA00 IAmb IAmb 20 48 37.7
comp=Z,12nm,1.1s
PSAD2 Pilbara Seismi 63.03 206 P **P** **20 48 15.4 -0.9**
PSAA3 Pilbara Seismi 63.03 206 P **P** **20 48 14.9 -1.5**
PSAA3 IAmb IAmb 20 48 43.1
comp=Z,18nm,1.4s
PSAB1 Pilbara Seismi 63.04 206 P **P** **20 48 15.3 -1.0**
PSAB1 IAmb IAmb 20 48 16.7
comp=Z,14nm,1.1s
APA Apatity 63.67 337 ⇑ *i* P **P** **20 48 21.6 +1.6**
APA pmax pmax
comp=Z,7.0nm,1.1s
APA MLR MLR
comp=Z,400nm,16.0s
D03D Eldon 64.95 48 P **P** **20 48 30.5 +1.8**
baz=298
HRA Herat 64.97 295 P **P** **20 48 29.7 +0.3**
KLMR Klimovskoe 65.08 329 *eP* **P** **20 48 32.3 +2.9**
KLMR pmax pmax
comp=Z,13nm,1.5s
KLMR Klimovskoe 65.08 329 *eP* **P** **20 48 32.3 +2.9**
KLMR AMP 20 48 38.7
comp=Z,13nm,1.5s
E04D Cinebar 65.73 49 P **P** **20 48 36.2 +2.4**
baz=299
DAG Danmarks Havn 65.84 356 *i* P **P** **20 48 34.1 +0.1**
DAG *i* 20 48 44.5
DAG Danmarks Havn 65.84 356 *i* P **P** **20 48 34.1 +0.1**
DAG *i* 20 48 44.5
C06D Leavenworth 66.06 47 P **P** **20 48 37.8 +1.8**
baz=299
GEYT Alibeck 66.17 300 P **P** **20 48 37.4 +0.6**
comp=Z,4.0nm,0.8s,baz=329,slow=1.7,SNR=6.7
GEYT Alibeck 66.17 300 P **P** **20 48 36.6 -0.2**
B08A Colville Reser 66.75 46 P **P** **20 48 41.3 +0.9**
B08A IAmb IAmb 20 48 43.1
comp=Z,19nm,1.4s
I04A Tendick Farm, 67.19 52 P **P** **20 48 45.2 +1.9**
baz=300
I05D Terrebonne, OR 67.58 51 P **P** **20 48 47.6 +1.8**
baz=300
C09A Chrisman Ranch 67.65 46 P **P** **20 48 47.1 +1.0**
L04D Klamath Falls 68.05 53 P **P** **20 48 50.7 +1.8**
baz=301
NEW Newport 68.07 46 P **P** **20 48 50.4 +1.7**
baz=302
PINE Pine Mountain 68.11 51 P **P** **20 48 51.2 +1.9**
M02C Callahan 68.12 54 P **P** **20 48 51.2 +2.0**
baz=301
J05D Fort Rock, OR 68.18 52 P **P** **20 48 51.5 +1.8**
baz=301
E09A Wood Farm, Sta 68.39 48 P **P** **20 48 52.0 +1.3**
E09A IAmb IAmb 20 48 53.6
comp=Z,17nm,1.4s
N02D Trinity Center 68.43 54 P **P** **20 48 52.7 +1.5**
baz=301
K05A Summer Lake 68.69 52 P **P** **20 48 55.0 +2.1**
STKA Stephens Creek 68.78 183 P **P** **20 48 52.8 -0.3**
STKA pmax pmax
comp=Z,2.0nm,1.4s
STKA Stephens Creek 68.78 183 P **P** **20 48 53.1 0.0**
comp=Z,1.8nm,0.5s,baz=20,slow=5.1,SNR=8.8
STKA Stephens Creek 68.78 183 P **P** **20 48 52.8 -0.3**
O02D Mt. Diablo Mer 68.79 55 P **P** **20 48 55.3 +1.9**
baz=301
VRH Novokhopyorsk 69.30 319 *eP* **P** **20 48 55.7 -0.6**
VRH pmax pmax
comp=Z,20nm,1.7s
O03E Paynes Creek 69.37 55 P **P** **20 48 58.8 +1.8**
baz=302
OBN Obninsk 69.61 324 *i* P **P** **20 48 57.3 -0.8**
OBN *i* 20 49 17.5
OBN pmax pmax
comp=Z,6.0nm,1.0s
BMO Blue Mountains 69.77 49 P **P** **20 49 00.9 +1.4**
BMO pmax pmax
comp=Z,10.0nm,1.3s
BMO Blue Mountains 69.77 49 P **P** **20 49 00.9 +1.4**
BMO IAmb IAmb 20 49 02.4
comp=Z,10nm,1.3s
J08A Circle Bar Ran 69.86 51 P **P** **20 49 01.4 +1.3**
J08A IAmb IAmb 20 49 03.3
comp=Z,17nm,1.3s
FINES FINESS Array B 69.94 333 P **P** **20 49 00.5 +0.4**
FINES FINESS Array B 69.94 333 P **P** **20 49 00.7 +0.6**
comp=Z,2.7nm,0.7s,baz=40,slow=7.4,SNR=6.3
FINES FINESS Array B 69.94 333 P **P** **20 49 00.5 +0.4**
JTMT Jette 69.95 45 P **P** **20 49 02.4 +1.8**
JTMT IAmb IAmb 20 49 03.4
comp=Z,13nm,1.2s
ORV Oroville 69.96 55 P **P** **20 49 01.3 +0.7**
ORV pmax pmax
comp=Z,28nm,1.8s
ORV Oroville 69.96 55 P **P** **20 49 01.3 +0.7**
ORV IAmb IAmb 20 49 03.0
comp=Z,28nm,1.8s
SUMG Summit 70.51 1 P **P** **20 49 04.6 +0.8**
SUMG pmax pmax
comp=Z,12nm,0.8s
SUMG Summit 70.51 1 P **P** **20 49 04.6 +0.8**
SUMG IAmb IAmb 20 49 16.5
comp=Z,12nm,0.8s
BEKR Beckworth 70.54 54 P **P** **20 49 05.3 +0.9**
BEKR IAmb IAmb 20 49 07.1
comp=Z,17nm,1.6s
VSR Storozhevoye 70.61 320 *eP* **P** **20 49 03.7 -0.7**
VSR pmax pmax
comp=Z,10.0nm,1.0s
AFDM Forest Hills D 70.63 56 P **P** **20 49 05.7 +1.0**
MSO Missoula 70.66 46 P **P** **20 49 05.2 +0.3**
MSO IAmb IAmb 20 49 09.7
comp=Z,15nm,1.3s
MSO Missoula 70.66 46 P **P** **20 49 06.1 +1.2**
baz=304
PAHR Pah Rah Range 71.25 54 P **P** **20 49 09.6 +0.9**
PAHR IAmb IAmb 20 49 11.5
comp=Z,22nm,1.6s
MFID Camas Ranch 71.45 49 P **P** **20 49 10.4 +0.7**
CMB Columbia Colle 71.51 56 P **P** **20 49 11.7 +1.6**
CMB pmax pmax
comp=Z,8.0nm,1.0s
CMB Columbia Colle 71.51 56 P **P** **20 49 11.7 +1.6**
YERR Yerington 71.74 55 P **P** **20 49 13.5 +1.8**
YERR IAmb IAmb 20 49 14.8
comp=Z,12nm,1.2s
WAKR Walker 71.88 55 P **P** **20 49 14.5 +1.9**
GOF Gofitskoye 72.03 313 ⇑ *eP* **P** **20 49 14.4 +1.3**
GOF pmax pmax
comp=Z,15nm,0.7s
FFC Flin Flon 72.05 34 P **P** **20 49 13.6 +0.6**
FFC pmax pmax
comp=Z,11nm,1.2s
FFC Flin Flon 72.05 34 P **P** **20 49 13.6 +0.6**
FFC IAmb IAmb 20 49 15.1
comp=Z,11nm,1.1s
DLMT Dillon 72.26 46 P **P** **20 49 16.4 +1.7**
DLMT IAmb IAmb 20 49 17.3
comp=Z,9.8nm,0.8s
EGMT Eagleton 72.30 43 P **P** **20 49 15.4 +0.7**
EGMT IAmb IAmb 20 49 17.0
comp=Z,17nm,1.1s
EGMT Eagleton 72.30 43 P **P** **20 49 15.9 +1.1**
baz=306,SNR=5.3
RYN Ryan 72.41 55 P **P** **20 49 16.4 +0.8**
RYN IAmb IAmb 20 49 18.8
comp=Z,11nm,1.3s
MCMT McKenzie Canyo 72.42 47 P **P** **20 49 15.7 0.0**
KVN Kaiserville 72.45 54 P **P** **20 49 17.8 +1.9**
KVN pmax pmax
comp=Z,19nm,1.3s
KVN Kaiserville 72.45 54 P **P** **20 49 17.8 +1.9**
KVN IAmb IAmb 20 49 19.6
comp=Z,19nm,1.3s
FCC Fort Churchill 72.60 28 P **P** **20 49 16.5 +0.3**
FCC pmax pmax
comp=Z,11nm,1.2s
FCC Fort Churchill 72.60 28 P **P** **20 49 16.5 +0.3**
FCC IAmb IAmb 20 49 17.0
comp=Z,11nm,1.2s
OMMB Old Mammoth Mi 72.65 56 P **P** **20 49 17.8 +0.4**
NVAR Mina Array Bea 72.66 55 P **P** **20 49 19.0 +1.8**
comp=Z,2.8nm,0.6s,baz=292,slow=6.0,SNR=17
NVAR Mina Array Bea 72.66 55 P **P** **20 49 18.6 +1.4**
NV11 Mina Array Sit 72.75 55 P **P** **20 49 19.3 +1.6**
KVAR Kislovodsk Arr 72.87 312 P **P** **20 49 19.9 +1.7**
comp=Z,8.5nm,1.0s,baz=278,slow=23,SNR=5.7
KIV Kislovodsk 72.87 312 *eP* **P** **20 49 20.0 +1.8**
KIV pmax pmax
comp=Z,46nm,1.0s
KIV Kislovodsk 72.87 312 P **P** **20 49 19.3 +1.0**
KIV IAmb IAmb 20 49 31.8
comp=Z,14nm,0.9s
KBZ Khabaz 72.88 312 P **P** **20 49 19.5 +1.4**
comp=Z,7.5nm,0.9s,baz=112,slow=1.0,SNR=13
QLMT Earthquake Lak 73.24 46 P **P** **20 49 21.9 +1.4**
ELK Elko 73.31 51 P **P** **20 49 22.9 +1.8**
ELK pmax pmax
comp=Z,10.0nm,1.5s
ELK Elko 73.31 51 P **P** **20 49 22.9 +1.8**
YHL Hebgen Lake 73.37 46 P **P** **20 49 23.0 +1.5**
YHB Horse Butte 73.42 46 P **P** **20 49 22.6 +0.9**
YHH Holmes Hill 73.60 46 P **P** **20 49 24.2 +1.4**
YMR Madison River 73.60 46 P **P** **20 49 23.9 +1.2**
YNR Norris Junctio 73.74 46 P **P** **20 49 25.8 +2.3**
CWC Cottonwood Cre 73.92 56 P **P** **20 49 25.5 +0.9**
baz=304
YPP Pitchstone Pla 73.93 46 P **P** **20 49 26.7 +1.9**
H17A Grant Village 73.99 46 P **P** **20 49 27.8 +2.8**
H17A Grant Village 73.99 46 P **P** **20 49 28.1 +3.1**
baz=307,SNR=20
LKWY Lake 73.99 46 IAmb IAmb 20 49 29.4
comp=Z,16nm,1.1s
IMW Indian Meadow 74.08 47 P **P** **20 49 27.4 +1.8**
IMW IAmb IAmb 20 49 29.0
comp=Z,16nm,0.9s
GRAC Grapevine Rang 74.08 56 P **P** **20 49 27.0 +1.6**
baz=305
ISA Isabella, Lake 74.09 57 P **P** **20 49 26.4 +0.8**
ISA pmax pmax
comp=Z,17nm,1.7s
ISA Isabella, Lake 74.09 57 P **P** **20 49 26.4 +0.8**
ISA IAmb IAmb 20 49 28.2
comp=Z,17nm,1.7s
ISA Isabella, Lake 74.09 57 P **P** **20 49 26.0 +0.4**
baz=304
FLWY Flagg Ranch 74.10 47 P **P** **20 49 27.6 +1.9**
FLWY IAmb IAmb 20 49 30.1
comp=Z,21nm,1.2s
MOOW Moose Ponds 74.28 47 P **P** **20 49 28.1 +1.5**
MOOW IAmb IAmb 20 49 30.0
comp=Z,12nm,1.1s
RLMT Red Lodge 74.30 45 P **P** **20 49 28.1 +1.4**
RLMT IAmb IAmb 20 49 29.9
comp=Z,27nm,1.6s
RLMT Red Lodge 74.30 45 P **P** **20 49 27.9 +1.1**
baz=307,SNR=7.0
TPAW Teton Pass 74.31 47 P **P** **20 49 27.6 +0.7**
TPAW IAmb IAmb 20 49 29.3
comp=Z,32nm,1.5s
REDW Red Top Meadow 74.44 47 P **P** **20 49 29.0 +1.3**
REDW IAmb IAmb 20 49 30.8
comp=Z,14nm,1.1s
R11A Troy Canyon, C 74.47 54 P **P** **20 49 29.0 +1.1**
R11A Troy Canyon, C 74.47 54 P **P** **20 49 29.2 +1.4**
baz=305,SNR=16
MPMC Manual Prospec 74.53 56 P **P** **20 49 29.2 +1.0**
baz=305,SNR=8.1
BLG Laguna Peak, P 74.57 59 P **P** **20 49 29.5 +1.2**
baz=305
BGU Big Grassy Mou 74.58 50 P **P** **20 49 30.3 +1.9**
AHID Auburn Hatcher 74.65 48 P **P** **20 49 30.2 +1.3**
LRMC Laurel Mtn Rad 74.73 57 P **P** **20 49 29.9 +0.6**
baz=305,SNR=8.3
SOC Sochi 74.83 313 *eP* **P** **20 49 31.0 +1.4**
SOC *e* 20 52 14.7
SOC *e* PPP PPP 20 54 01.3
SOC *eS* **S** **20 59 11.2 +4.8**
SOC *e* SSS SSS 21 07 10.7
SOC pmax pmax
comp=Z,62nm,0.9s
TPNV Topopah Spring 74.84 55 P **P** **20 49 31.3 +1.3**
TPNV pmax pmax
comp=Z,9.0nm,0.8s
TPNV Topopah Spring 74.84 55 P **P** **20 49 31.3 +1.3**
TPNV IAmb IAmb 20 49 32.8
comp=Z,8.7nm,0.8s
TPNV Topopah Spring 74.84 55 P **P** **20 49 31.2 +1.3**
baz=305,SNR=9.3
EDW2 Edwards Air Fo 74.86 58 P **P** **20 49 31.5 +1.5**
baz=305,SNR=7.4
DGMT Dagmar 74.97 40 P **P** **20 49 31.3 +1.0**
baz=310
LAO LASA Array 75.02 42 P **P** **20 49 31.8 +1.0**
LAO IAmb IAmb 20 49 33.4
comp=Z,19nm,1.0s
LAO LASA Array 75.02 42 P **P** **20 49 31.4 +0.7**
baz=309
HFS Hagfors 75.06 337 P **P** **20 49 31.4 +0.9**
comp=Z,8.7nm,0.9s,baz=72,slow=4.8,SNR=14
HWUT Hardware Ranch 75.06 49 P **P** **20 49 32.4 +1.2**
HWUT IAmb IAmb 20 49 34.9
comp=Z,18nm,1.3s
NB2 NORSAR Subarra 75.08 339 P **P** **20 49 30.9 +0.1**
comp=Z,2.6nm,0.5s,baz=35,slow=5.9
NOA NORSAR Array B 75.08 339 P **P** **20 49 31.5 +0.7**
comp=Z,3.1nm,0.6s,baz=44,slow=4.6,SNR=9.5
DUG Dugway, Tooele 75.14 51 P **P** **20 49 33.0 +1.4**
DUG pmax pmax
comp=Z,11nm,1.0s
DUG Dugway, Tooele 75.14 51 P **P** **20 49 33.0 +1.4**
DUG IAmb IAmb 20 49 34.6
comp=Z,11nm,0.9s
DUG Dugway, Tooele 75.14 51 P **P** **20 49 33.2 +1.5**
baz=306,SNR=9.5
MWC Mount Wilson 75.19 58 P **P** **20 49 32.6 +0.5**
MWC pmax pmax
comp=Z,35nm,1.7s
MWC Mount Wilson 75.19 58 P **P** **20 49 32.6 +0.5**
GSC Goldstone, Bar 75.42 57 P **P** **20 49 34.1 +0.8**
GSC pmax pmax
comp=Z,11nm,1.2s
GSC Goldstone, Bar 75.42 57 P **P** **20 49 34.0 +0.8**
GSC IAmb IAmb 20 49 35.9
comp=Z,11nm,1.2s
GSC Goldstone, Bar 75.42 57 P **P** **20 49 34.1 +0.8**
baz=305
CIS Catalina Islan 75.42 59 P **P** **20 49 34.6 +1.4**
baz=305
TCUT Toone Canyon 75.45 49 P **P** **20 49 35.3 +1.8**
BFSC Mount Baldy Ra 75.46 58 P **P** **20 49 34.9 +1.4**
baz=305
PSUT Pine Spring 75.46 53 P **P** **20 49 35.1 +1.5**
BW06 Boulder Array 75.56 47 P **P** **20 49 34.7 +0.6**
BW06 Boulder Array 75.56 47 P **P** **20 49 35.0 +0.9**
baz=308,SNR=5.7
PD31 Pinedale Array 75.56 47 P **P** **20 49 34.9 +0.7**
PDAR Pinedale Array 75.56 47 P **P** **20 49 35.5 +1.3**
comp=Z,3.7nm,0.7s,baz=283,slow=2.0,SNR=34
PDAR Pinedale Array 75.56 47 P **P** **20 49 34.7 +0.6**
SCI2 San Clemente I 75.57 60 P **P** **20 49 34.8 +0.8**
baz=305
JLU Jordanelle 75.73 50 P **P** **20 49 35.3 +0.1**
NLU North Lily Min 75.74 51 P **P** **20 49 36.0 +0.9**
SHPR Sheep Range 75.81 55 P **P** **20 49 35.1 -0.5**
SHPR IAmb IAmb 20 49 38.6
comp=Z,14nm,1.3s
AKASG Malin Array Be 75.84 324 P **P** **20 49 35.4 +0.2**
AKASG pmax pmax
comp=Z,3.0nm,1.2s
AKASG Malin Array Be 75.84 324 P **P** **20 49 35.6 +0.4**
comp=Z,4.0nm,0.4s,baz=45,slow=6.1,SNR=2.9
AKASG Malin Array Be 75.84 324 P **P** **20 49 35.4 +0.2**
AKBB Malin Array Si 75.84 324 P **P** **20 49 35.4 +0.2**
AKBB pmax pmax
comp=Z,14nm,1.2s
AKBB Malin Array Si 75.84 324 P **P** **20 49 35.4 +0.2**
AKBB IAmb IAmb 20 49 36.5
comp=Z,14nm,1.1s
TUQ Turquoise Moun 75.93 56 P **P** **20 49 37.4 +1.2**
baz=306,SNR=9.0
FRB Frobisher Bay 75.96 15 P **P** **20 49 35.9 +0.2**
comp=Z,3.3nm,0.7s,baz=344,slow=7.8,SNR=6.5
MPU Maple Canyon 75.97 50 P **P** **20 49 36.1 -0.3**
HEC Hector,Ludlow 76.01 57 P **P** **20 49 37.4 +0.8**
baz=306,SNR=6.4
MURC Murrieta 76.14 58 P **P** **20 49 38.0 +0.7**
baz=306
SUW Suwalki 76.22 329 P **P** **20 49 37.6 +0.3**
SUW pmax pmax
comp=Z,21nm,0.7s
SUW Suwalki 76.22 329 P **P** **20 49 37.6 +0.3**
TCRU Three Creeks R 76.31 52 P **P** **20 49 39.3 +0.8**
CCUT Cedar City 76.36 53 P **P** **20 49 39.4 +0.7**
SZCU Shurtz Canyon 76.50 53 P **P** **20 49 40.0 +0.4**
MSU Marysvale 76.53 52 P **P** **20 49 41.1 +1.4**

MSU	**Marysvale**	**76.53**	**52**	P	**P**	**20 49 41.1 +1.4**	
PFO	**Pinyon Flats O**	**76.63**	**58**	P	**P**	**20 49 41.2 +1.0**	
PFO				pmax	pmax		
	comp=Z,13nm,1.2s						
PFO	**Pinyon Flats O**	**76.63**	**58**	P	**P**	**20 49 41.2 +1.0**	
PFO				IAmb	IAmb	20 49 42.7	
	comp=Z,13nm,1.2s						
PFO	**Pinyon Flats O**	**76.63**	**58**	P	**P**	**20 49 40.8 +0.6**	
	baz=306,SNR=5.3						
XPFO	**Pion Flat**	**76.63**	**58**	P	**P**	**20 49 40.8 +0.6**	
XPFO				IAmb	IAmb	20 49 42.7	
	comp=Z,13nm,1.2s						
TMUT	**Trail Mountain**	**76.67**	**51**	P	**P**	**20 49 40.6 0.0**	
BELC	**Belle Mtn. Jos**	**76.72**	**57**	P	**P**	**20 49 41.1 +0.3**	
	baz=306						
LCMT	**Little Creek M**	**76.75**	**54**	P	**P**	**20 49 42.1 +1.2**	
MTPU	**Mount Pierson**	**76.81**	**52**	P	**P**	**20 49 43.4 +1.9**	
P17A	**Butcher Ranch,**	**76.85**	**50**	P	**P**	**20 49 41.9 +0.5**	
RDMU	**Red Mountain**	**76.89**	**49**	P	**P**	**20 49 43.5 +1.8**	
Q16A	**Castle Valley**	**76.92**	**51**	P	**P**	**20 49 43.7 +1.8**	
KNB	**Kanab**	**77.02**	**53**	P	**P**	**20 49 43.6 +1.1**	
KNB				pmax	pmax		
	comp=Z,20nm,1.1s						
KNB	**Kanab**	**77.02**	**53**	P	**P**	**20 49 43.6 +1.1**	
BAR	**Barrett**	**77.03**	**59**	P	**P**	**20 49 43.2 +0.8**	
BAR				IAmb	IAmb	20 49 44.7	
	comp=Z,9.7nm,1.1s						
MONP2	**Monument Peak**	**77.08**	**59**	P	**P**	**20 49 42.9 0.0**	
	baz=306						
IRM	**Iron Mountain**	**77.20**	**57**	P	**P**	**20 49 43.8 +0.5**	
	baz=306,SNR=6.1						
SRU	**San Rafael Swe**	**77.20**	**51**	P	**P**	**20 49 45.0 +1.5**	
SRU				pmax	pmax		
	comp=Z,25nm,0.8s						
SRU	**San Rafael Swe**	**77.20**	**51**	P	**P**	**20 49 45.0 +1.5**	
BC3	**Big Chuckawall**	**77.28**	**57**	P	**P**	**20 49 44.7 +0.8**	
	baz=306,SNR=6.3						
K22A	**Casper**	**77.39**	**46**	P	**P**	**20 49 45.1 +0.7**	
K22A				IAmb	IAmb	20 49 46.6	
	comp=Z,15nm,0.9s						
K22A	**Casper**	**77.39**	**46**	P	**P**	**20 49 44.8 +0.4**	
	baz=309						
IKP	**In-Ko-Pah, Jac**	**77.43**	**59**	P	**P**	**20 49 45.6 +0.9**	
	baz=306						
W13A	**Hualapai Mount**	**77.47**	**55**	P	**P**	**20 49 46.1 +1.0**	
U15A	**North Rim**	**77.71**	**54**	P	**P**	**20 49 47.4 +1.0**	
U15A				IAmb	IAmb	20 49 49.6	
	comp=Z,11nm,0.8s						
PDMCI	**Parker Dam,Lak**	**77.78**	**56**	P	**P**	**20 49 47.7 +1.2**	
	baz=307						
ULM	**Lac du Bonnet**	**77.82**	**35**	P	**P**	**20 49 46.3 -0.1**	
ULM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ULM	**Lac du Bonnet**	**77.82**	**35**	P	**P**	**20 49 46.8 +0.3**	
	comp=Z,1.1nm,0.7s,baz=304,slow=9.2,SNR=6.8						
ULM	**Lac du Bonnet**	**77.82**	**35**	P	**P**	**20 49 46.3 -0.1**	
RSSD	**Black Hills**	**77.84**	**43**	P	**P**	**20 49 46.8 -0.2**	
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RSSD	**Black Hills**	**77.84**	**43**	P	**P**	**20 49 46.8 -0.2**	
RSSD	**Black Hills**	**77.84**	**43**	P	**P**	**20 49 47.8 +0.8**	
	baz=310						
Y12C	**Blythe**	**77.85**	**57**	P	**P**	**20 49 48.1 +1.2**	
	baz=307						
O20A	**White River Ci**	**77.96**	**49**	P	**P**	**20 49 48.9 +1.3**	
O20A				IAmb	IAmb	20 49 50.0	
	comp=Z,19nm,1.1s						
O20A	**White River Ci**	**77.96**	**49**	P	**P**	**20 49 48.4 +0.8**	
	baz=309						
SORM	**Soroca**	**78.00**	**322**	⇑P	**P**	**20 49 47.9 +0.5**	
GLA	**Glamis**	**78.06**	**58**	P	**P**	**20 49 49.5 +1.3**	
GLA				pmax	pmax		
	comp=Z,14nm,0.9s						
GLA	**Glamis**	**78.06**	**58**	P	**P**	**20 49 49.5 +1.3**	
GLA				IAmb	IAmb	20 49 50.9	
	comp=Z,14nm,0.9s						
GLA	**Glamis**	**78.06**	**58**	P	**P**	**20 49 49.4 +1.3**	
	baz=307						
N23A	**Red Feather La**	**78.84**	**47**	P	**P**	**20 49 53.9 +1.3**	
N23A				IAmb	IAmb	20 49 55.5	
	comp=Z,17nm,1.0s						
N23A	**Red Feather La**	**78.84**	**47**	P	**P**	**20 49 53.8 +1.2**	
	baz=310						
WUAZ	**Wupatki**	**78.86**	**54**	P	**P**	**20 49 54.1 +1.4**	
	baz=308						
SMCO	**Snowmass**	**79.32**	**49**	P	**P**	**20 49 56.3 +0.8**	
SMCO				IAmb	IAmb	20 49 58.1	
	comp=Z,12nm,1.2s						
KWP	**Kalwaria Pacla**	**79.58**	**326**	P	**P**	**20 49 56.4 +0.2**	
KWP				pmax	pmax		
	comp=Z,34nm,1.1s						
KWP	**Kalwaria Pacla**	**79.58**	**326**	*e*P	**P**	**20 49 57.9 +1.7**	
KWP	**Kalwaria Pacla**	**79.58**	**326**	P	**P**	**20 49 56.4 +0.2**	
MVCO	**Mesa Verde**	**79.63**	**51**	P	**P**	**20 49 57.2 +0.2**	
MVCO				IAmb	IAmb	20 49 59.1	
	comp=Z,7.7nm,0.8s						
MVCO	**Mesa Verde**	**79.63**	**51**	P	**P**	**20 49 57.8 +0.8**	
	baz=309						
ISCO	**Idaho Springs**	**79.73**	**48**	P	**P**	**20 49 58.8 +1.2**	
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ISCO	**Idaho Springs**	**79.73**	**48**	P	**P**	**20 49 58.8 +1.2**	
ISCO	**Idaho Springs**	**79.73**	**48**	P	**P**	**20 49 58.5 +0.9**	
	baz=310						
BUR08	**Bucovina Ar. S**	**79.86**	**323**	P	**P**	**20 49 58.7 +0.9**	
BUR08				IAmb	IAmb	20 50 00.2	
	comp=Z,16nm,1.4s						
BURAR	**Bucovina Array**	**79.87**	**323**	P	**P**	**20 49 58.7 +0.8**	
BURAR	**Bucovina Array**	**79.87**	**323**	⇓P	**P**	**20 49 57.9 0.0**	
BURAR	**Bucovina Array**	**79.87**	**323**	P	**P**	**20 49 58.2 +0.3**	
214A	**Organ Pipe Nat**	**80.08**	**57**	P	**P**	**20 50 00.6 +1.3**	
214A				IAmb	IAmb	20 50 01.9	
	comp=Z,15nm,1.2s						
214A	**Organ Pipe Nat**	**80.08**	**57**	P	**P**	**20 50 00.6 +1.3**	
	baz=308						
W18A	**Petrified Fore**	**80.16**	**53**	P	**P**	**20 50 01.1 +1.4**	
	baz=309						
KOLS	**Kolonicke sedl**	**80.29**	**326**	*e*P	**P**	**20 50 01.0 +1.0**	
KOLS	**Kolonicke sedl**	**80.29**	**326**	*e*P	**P**	**20 50 01.0 +1.0**	
S22A	**4UR Ranch, Cre**	**80.32**	**50**	P	**P**	**20 50 01.8 +1.1**	
S22A				IAmb	IAmb	20 50 03.9	
	comp=Z,13nm,1.1s						
S22A	**4UR Ranch, Cre**	**80.32**	**50**	P	**P**	**20 50 02.5 +1.8**	
	baz=310						
OJC	**Ojcow**	**80.42**	**328**	P	**P**	**20 50 01.3 +0.6**	
OJC				pmax	pmax		
	comp=Z,16nm,1.2s						
OJC	**Ojcow**	**80.42**	**328**	P	**P**	**20 50 01.3 +0.6**	
OJC				IAmb	IAmb	20 50 13.1	
	comp=Z,16nm,1.2s						
Q24A	**Divide**	**80.55**	**48**	P	**P**	**20 50 03.0 +1.0**	
	baz=311						
BRTR	**Keskin Array B**	**80.79**	**313**	*i* P	**P**	**20 50 04.0 +0.9**	
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRTR	**Keskin Array B**	**80.79**	**313**	P	**P**	**20 50 03.9 +0.8**	
	comp=Z,1.5nm,0.7s,baz=76,slow=5.2,SNR=9.4						
BRTR	**Keskin Array B**	**80.79**	**313**	P	**P**	**20 50 03.1 +0.1**	
OGNE	**Ogallala**	**81.05**	**45**	P	**P**	**20 50 05.5 +1.2**	
	baz=312						
SDCO	**Great Sand Dun**	**81.12**	**49**	P	**P**	**20 50 06.0 +0.9**	
SDCO				IAmb	IAmb	20 50 07.8	
	comp=Z,13nm,1.4s						
SDCO	**Great Sand Dun**	**81.12**	**49**	P	**P**	**20 50 05.9 +0.8**	
	baz=310						
TUC	**Tucson**	**81.22**	**56**	P	**P**	**20 50 06.5 +1.1**	
TUC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TUC	**Tucson**	**81.22**	**56**	P	**P**	**20 50 06.5 +1.1**	
TUC	**Tucson**	**81.22**	**56**	P	**P**	**20 50 06.6 +1.1**	
	baz=309						
LANS	**Liptovska Anna**	**81.36**	**327**	*e*P	**P**	**20 50 07.3 +1.5**	
LANS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LANS	**Liptovska Anna**	**81.36**	**327**	*e*P	**P**	**20 50 07.3 +1.5**	
OKC	**Ostrava-Krasne**	**81.41**	**328**	AMS	AMS	21 30 30.0	
	comp=Z,1μm,16.5s						
OSTC	**Ostas**	**81.64**	**330**	AMS	AMS	21 30 10.0	
	comp=Z,1μm,9.0s						
CHVC	**Chvalec**	**81.69**	**330**	AMS	AMS	21 28 40.0	
	comp=Z,2μm,21.3s						
DPC	**Dobruska-Polom**	**81.76**	**330**	AMS	AMS	21 29 40.0	
	comp=Z,1μm,13.1s						
UPC	**Upice**	**81.77**	**330**	AMS	AMS	21 29 10.0	
	comp=Z,1μm,20.9s						
KRLC	**Kraliky**	**81.79**	**329**	AMS	AMS	21 29 50.0	
	comp=Z,1μm,21.5s						
KSCO	**Kaye Shedlock'**	**82.00**	**47**	P	**P**	**20 50 10.4 +0.9**	
	baz=312						
ECSD	**EROS Data Cent**	**82.05**	**40**	P	**P**	**20 50 09.8 +0.3**	
ECSD				IAmb	IAmb	20 50 13.5	
	comp=Z,21nm,1.6s						
ECSD	**EROS Data Cent**	**82.05**	**40**	P	**P**	**20 50 10.1 +0.6**	
	baz=315						
VYHS	**Vyhne**	**82.14**	**327**	*e*P	**P**	**20 50 11.1 +1.3**	
VYHS	**Vyhne**	**82.14**	**327**	*e*P	**P**	**20 50 11.1 +1.3**	
T25A	**Trinidad**	**82.18**	**49**	P	**P**	**20 50 11.6 +1.0**	
T25A				IAmb	IAmb	20 50 13.2	
	comp=Z,15nm,0.9s						
T25A	**Trinidad**	**82.18**	**49**	P	**P**	**20 50 11.8 +1.3**	
	baz=311						
CLL	**Collm**	**82.30**	**332**	*i* P	**P**	**20 50 11.2 +0.6**	
CLL				*e*		20 50 22.0	
CLL				pmax	pmax		
	comp=Z,11nm,1.0s						
CLL	**Collm**	**82.30**	**332**	*i* P	**P**	**20 50 11.2 +0.6**	
	comp=Z,11nm,1.0s						
CLL				*e*pP	**pwP**	**20 50 22.0 +2.4**	
PVCC	**Panska Ves**	**82.32**	**331**	AMS	AMS	21 29 00.0	
	comp=Z,1μm,16.3s						
ANMO	**Albuquerque**	**82.34**	**52**	P	**P**	**20 50 12.6 +1.2**	
ANMO				pmax	pmax		
	comp=Z,14nm,1.3s						
ANMO	**Albuquerque**	**82.34**	**52**	P	**P**	**20 50 12.6 +1.2**	
ANMO				IAmb	IAmb	20 50 14.4	
	comp=Z,14nm,1.2s						
ANMO	**Albuquerque**	**82.34**	**52**	P	**P**	**20 50 12.7 +1.3**	
	baz=310						
E38A	**The Farm, Brul**	**82.44**	**35**	P	**P**	**20 50 10.6 -0.9**	
E38A				IAmb	IAmb	20 50 12.9	
	comp=Z,21nm,1.2s						
VRAC	**Vranov**	**82.46**	**329**	P	**P**	**20 50 12.0 +0.5**	
	comp=Z,1.0nm,0.3s,baz=233,slow=0.6,SNR=4.4						
TUWZ	**Tuamarina**	**82.64**	**158**	P	**P**	**20 50 10.4 -1.7**	
GOPC	**GO Pecny, Ondr**	**82.72**	**330**	AMS	AMS	21 27 20.0	
	comp=Z,1μm,23.0s						
PRA	**Prague**	**82.74**	**330**	AMS	AMS	21 31 10.0	
	comp=Z,1μm,9.1s						
PRU	**Pruhonice**	**82.76**	**330**	*e*P	**P**	**20 50 13.9 +0.9**	
PRU				MLR	MLR		
	comp=Z,1μm,11.6s						
PRU	**Pruhonice**	**82.76**	**330**	*e*P	**P**	**20 50 13.9 +0.9**	
PRU				AMS	AMS	21 28 30.0	
	comp=Z,1μm,11.6s						
319A	**Douglas**	**82.80**	**56**	P	**P**	**20 50 14.8 +1.0**	
319A				IAmb	IAmb	20 50 16.3	
	comp=Z,16nm,0.9s						
BGNE	**Belgrade**	**82.87**	**43**	P	**P**	**20 50 14.4 +0.6**	
	baz=314						
TREC	**Trest**	**82.92**	**329**	AMS	AMS	21 28 40.0	
	comp=Z,1μm,22.6s						
121A	**Cookes Peak, D**	**83.05**	**54**	P	**P**	**20 50 16.1 +1.0**	
121A	**Cookes Peak, D**	**83.05**	**54**	P	**P**	**20 50 16.2 +1.1**	
	baz=310						
KHC	**Kasperske Hory**	**83.82**	**330**	⇓*e*P	**P**	**20 50 19.4 +0.8**	
KHC				pmax	pmax		
	comp=Z,20nm,1.6s						
KHC	**Kasperske Hory**	**83.82**	**330**	*e*P	**P**	**20 50 19.2 +0.6**	
KHC				*ex*	x	20 50 30.3	
KHC				AMS	AMS	21 30 00.0	
	comp=Z,2μm,8.7s						
EKA	**Eskdalemuir Ar**	**83.87**	**342**	P	**P**	**20 50 19.4 +0.8**	
	comp=Z,3.0nm,0.8s,baz=32,slow=4.6,SNR=4.4						
GERES	**GERESS Array B**	**84.00**	**330**	P	**P**	**20 50 19.1 -0.5**	
GERES	**GERESS Array B**	**84.00**	**330**	P	**P**	**20 50 19.8 +0.2**	
	comp=Z,0.8nm,0.7s,baz=72,slow=4.3,SNR=5.0						
GERES	**GERESS Array B**	**84.00**	**330**	P	**P**	**20 50 19.1 -0.5**	
G40A	**Rib Lake**	**84.07**	**36**	P	**P**	**20 50 19.6 -0.3**	
G40A				IAmb	IAmb	20 50 29.6	
	comp=Z,22nm,1.6s						
MMAI	**Mount Meron Ar**	**84.11**	**307**	P	**P**	**20 50 21.0 +0.6**	
	comp=Z,2.6nm,0.6s,baz=42,slow=3.9,SNR=4.2						
CSS	**Mathiatis**	**84.12**	**310**	P	**P**	**20 50 20.0 -0.4**	
LBZ	**Lake Benmore**	**84.37**	**162**	P	**P**	**20 50 21.4 +0.4**	
SCHQ	**Schefferville**	**84.39**	**18**	P	**P**	**20 50 21.9 +0.6**	
	comp=Z,2.9nm,0.7s,baz=5.8,slow=7.2,SNR=4.7						
SCHQ	**Schefferville**	**84.39**	**18**	P	**P**	**20 50 21.9 +0.6**	
MNTX	**Cornudas Mount**	**85.14**	**54**	P	**P**	**20 50 25.9 +0.3**	
MNTX				IAmb	IAmb	20 50 27.7	
	comp=Z,8.0nm,0.9s						
MNTX	**Cornudas Mount**	**85.14**	**54**	P	**P**	**20 50 26.5 +1.0**	
	baz=311						
AMTX	**Amarillo**	**85.33**	**49**	P	**P**	**20 50 27.1 +0.6**	
AMTX	**Amarillo**	**85.33**	**49**	P	**P**	**20 50 27.6 +1.1**	
	baz=313						
D46A	**Sault St. Mari**	**85.52**	**31**	P	**P**	**20 50 26.2 -1.0**	
	baz=323						
MATQ	**Matagami**	**85.62**	**26**	P	**P**	**20 50 26.6 -1.0**	
	baz=327						
D47A	**Chapleau**	**85.77**	**31**	P	**P**	**20 50 28.3 -0.2**	
	baz=324						
E47A	**Iron Bridge**	**86.19**	**31**	P	**P**	**20 50 29.9 -0.6**	
	baz=324						
WMOK	**Wichita Mounta**	**87.16**	**48**	P	**P**	**20 50 36.3 +0.8**	
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
WMOK	**Wichita Mounta**	**87.16**	**48**	P	**P**	**20 50 36.3 +0.8**	
WMOK				IAmb	IAmb	20 50 37.5	
	comp=Z,7.5nm,1.2s						
TX31	**Lajitas Ar. Si**	**87.81**	**54**	P	**P**	**20 50 39.1 +0.3**	
TX31				IAmb	IAmb	20 50 40.7	
	comp=Z,5.2nm,0.8s						
TX32	**Lajitas Array**	**87.81**	**54**	P	**P**	**20 50 39.3 +0.5**	
TX32				IAmb	IAmb	20 50 40.7	
	comp=Z,5.3nm,0.7s						
TXAR	**Lajitas Array**	**87.81**	**54**	P	**P**	**20 50 39.7 +0.9**	
	comp=Z,4.2nm,0.6s,baz=306,slow=3.3,SNR=35						
TXAR	**Lajitas Array**	**87.81**	**54**	P	**P**	**20 50 39.4 +0.6**	
HDIL	**Hopedale**	**88.07**	**38**	P	**P**	**20 50 40.3 +0.5**	
	baz=320						
E54A	**Lac Daplat, Po**	**88.59**	**28**	P	**P**	**20 50 41.6 -0.4**	
	baz=328						
J49A	**Marlette**	**88.73**	**33**	P	**P**	**20 50 43.0 +0.2**	
	baz=324						
K48A	**Perry**	**88.75**	**34**	P	**P**	**20 50 42.9 0.0**	
	baz=323						
L47A	**Sherwood**	**88.92**	**35**	P	**P**	**20 50 43.7 0.0**	
	baz=322						
D56A	**ZEC Mizanza, M**	**88.94**	**26**	P	**P**	**20 50 43.5 -0.2**	
	baz=330						
CCM	**Cathedral Cave**	**88.97**	**41**	P	**P**	**20 50 44.2 +0.2**	
CCM				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CCM	**Cathedral Cave**	**88.97**	**41**	P	**P**	**20 50 44.2 +0.2**	
CCM				IAmb	IAmb	20 50 45.5	
	comp=Z,9.7nm,1.1s						
CCM	**Cathedral Cave**	**88.97**	**41**	P	**P**	**20 50 44.0 0.0**	
	baz=319						
M47A	**Cromwell**	**89.21**	**36**	P	**P**	**20 50 45.2 +0.2**	
	baz=322						
D57A	**Chemin Vers le**	**89.26**	**25**	P	**P**	**20 50 45.3 +0.1**	
	baz=330						
SFIN	**Lafayette**	**89.28**	**37**	P	**P**	**20 50 45.4 0.0**	
	baz=321						
L48A	**N Adams**	**89.29**	**34**	P	**P**	**20 50 45.4 -0.1**	
	baz=323						
U40A	**Yellville**	**89.37**	**43**	P	**P**	**20 50 46.0 0.0**	
U40A	**Yellville**	**89.37**	**43**	P	**P**	**20 50 46.1 +0.2**	
	baz=318						
L49A	**Milan**	**89.46**	**34**	P	**P**	**20 50 46.5 +0.3**	
	baz=323						
JCT	**Junction City**	**89.49**	**51**	P	**P**	**20 50 47.0 +0.3**	
	baz=314						
N47A	**Urbana**	**89.55**	**36**	P	**P**	**20 50 47.0 +0.3**	
	baz=322						
E57A	**Chemin Saint G**	**89.70**	**26**	P	**P**	**20 50 47.4 +0.1**	
	baz=330						
N48A	**Decatur**	**89.88**	**35**	P	**P**	**20 50 48.4 +0.1**	
	baz=322						
E58A	**La Victoria**	**90.03**	**25**	P	**P**	**20 50 49.1 +0.2**	
	baz=330						
N49A	**Columbus Grove**	**90.22**	**35**	P	**P**	**20 50 50.3 +0.5**	
	baz=323						
MIAR	**Mount Ida**	**90.30**	**45**	P	**P**	**20 50 51.0 +0.7**	
MIAR				pmax	pmax		
	comp=Z,14nm,1.2s						
MIAR	**Mount Ida**	**90.30**	**45**	P	**P**	**20 50 51.0 +0.7**	
MIAR	**Mount Ida**	**90.30**	**45**	P	**P**	**20 50 50.5 +0.2**	
	baz=317						
O48A	**Farmland**	**90.30**	**36**	P	**P**	**20 50 50.2 0.0**	
	baz=322						
D60A	**Saint Jean D'O**	**90.34**	**24**	P	**P**	**20 50 50.3 +0.1**	
	baz=332						
G57A	**Newington**	**90.53**	**27**	P	**P**	**20 50 51.3 +0.1**	
	baz=329						
W41B	**Gary Mavity, V**	**90.57**	**43**	P	**P**	**20 50 51.6 +0.1**	
	baz=318						
O49A	**Covington**	**90.73**	**35**	P	**P**	**20 50 52.4 +0.1**	
	baz=323						
D62A	**Allapoint, All**	**90.77**	**22**	P	**P**	**20 50 52.5 +0.2**	
	baz=334						
P48A	**Milroy**	**90.80**	**37**	P	**P**	**20 50 53.0 +0.5**	
	baz=322						
G58A	**Ormstown**	**90.82**	**26**	P	**P**	**20 50 52.7 +0.2**	
	baz=330						
H57A	**Richville**	**90.93**	**28**	P	**P**	**20 50 53.4 +0.3**	
	baz=329						
L53A	**Girard**	**91.11**	**32**	P	**P**	**20 50 54.0 +0.1**	
	baz=326						
F61A	**St Evariste**	**91.14**	**24**	P	**P**	**20 50 54.2 +0.2**	
	baz=332						
ACSO	**Alum Creek Sta**	**91.32**	**35**	P	**P**	**20 50 55.3 +0.3**	
	baz=324						
N54A	**Moraine State**	**92.04**	**32**	P	**P**	**20 50 58.6 +0.3**	
	baz=326						
F64A	**Sherman**	**92.08**	**23**	P	**P**	**20 50 59.0 +0.6**	
	baz=334						
WVT	**Waverly**	**92.20**	**40**	P	**P**	**20 50 59.5 +0.4**	
	baz=321						
L57A	**Andrews Acres**	**92.47**	**30**	P	**P**	**20 50 59.7 -0.5**	
	baz=328						
K59A	**Cooperstown**	**92.58**	**28**	P	**P**	**20 51 00.9 +0.1**	
	baz=329						
OXF	**Oxford**	**92.61**	**42**	P	**P**	**20 51 00.2 -0.8**	
	baz=320						
N56A	**West Decatur**	**92.79**	**31**	P	**P**	**20 51 01.9 +0.1**	
	baz=327						
M57A	**Sunshine Farm,**	**92.92**	**30**	P	**P**	**20 51 02.8 +0.5**	
	baz=328						
U49A	**Red Boiling Sp**	**92.94**	**39**	P	**P**	**20 51 03.1 +0.6**	
	baz=322						
O55A	**Ligonier**	**92.96**	**32**	P	**P**	**20 51 02.8 +0.3**	
	baz=326						
W49A	**Belvidere**	**93.79**	**40**	P	**P**	**20 51 06.2 -0.3**	
	baz=322						
SNAA	**Sanae**	**141.68**	**196**	PKPdf	**PKPdf**	**20 57 13.3 -6.3**	
VNA2	**Neumayer--Watz**	**143.21**	**195**	PKPdf	PKPbc	20 57 18.6 -0.6	
	baz=83,slow=2.0						
VNA3	**Neumayer Olymp**	**143.40**	**193**	PKPdf	PKPab	20 57 19.0 +0.3	
VNA1	**Neumayer--Stat**	**143.60**	**195**	PKPdf	PKPbc	20 57 20.6 +0.3	
PB11	**IPOC Station P**	**145.28**	**70**		**PKPbc**	**20 57 26.9 -0.4**	
GO01	**Chusmiza**	**145.56**	**69**		**PKPdf**	**20 57 27.4 -1.1**	
GO04	**Tololo Observa**	**149.63**	**87**	PKPbc	**PKPbc**	**20 57 39.4 +0.1**	
PLCA	**Paso Flores**	**152.34**	**108**	PKPbc	**PKiKP**	**20 57 45.4 0.0**	
	comp=Z,1.4nm,0.5s,baz=302,slow=2.9,SNR=5.1						
PLCA	**Paso Flores**	**152.34**	**108**		**PKiKP**	**20 57 46.0 +0.7**	

TAP 28 20:42:32.2,24°.03N×121°.75E,h55km,ML2.0,1D,C,
Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.14**	**250**	P			Pn	20 42 41.0	+0.3
HWA	baz=248			*e*S			Sn	20 42 47.7	+0.7
TWD	**Chiawan**	**0.15**	**291**	P			Pn	20 42 41.5	+0.6
TWD	baz=292			*e*S			Sn	20 42 47.5	+0.4
NACB	**Ninganchiao**	**0.21**	**316**	⇓P			Pn	20 42 41.4	+0.3
NACB	baz=315			S			Sn	20 42 48.3	+0.8
ETLH	**Xiulin Townshi**	**0.31**	**306**	P			Pn	20 42 42.2	+0.2
ETLH	baz=306			*e*S			Sn	20 42 49.3	+0.3
ESL	**Shilin**	**0.36**	**234**	P			Pn	20 42 42.3	0.0
ESL	baz=233			S			Sn	20 42 49.6	-0.1
ENA	**Nanau**	**0.40**	**359**	*i* P			Pn	20 42 43.0	+0.3
ENA	baz=359			*i* S			Sn	20 42 51.7	+1.3
NANB	**Nanao**	**0.40**	**360**	*i* P			Pn	20 42 43.1	+0.3
NANB	baz=359			*i* S			Sn	20 42 51.3	+1.0
WHF	**Hehuan Shan**	**0.46**	**285**	P			Pn	20 42 44.1	+0.3
WHF	baz=284			*i* S			Sn	20 42 52.5	+0.3
EGFH	**Guangfu**	**0.46**	**220**	*e*P			Pn	20 42 43.2	-0.2
EGFH	baz=219			S			Sn	20 42 52.3	+0.8
NNSH	**Datong**	**0.52**	**320**	*e*P			Pn	20 42 44.4	+0.2
NNSH	baz=319			*e*S			Sn	20 42 53.0	+0.1
NNSB	**Datong**	**0.52**	**320**	P			Pn	20 42 44.5	+0.3
NNSB	baz=319			S			Sn	20 42 53.2	+0.3
CHGB	**Renai**	**0.53**	**274**	P			Pn	20 42 45.4	+1.0
CHGB	baz=273			*e*S			Sn	20 42 53.7	+0.6
OWD	**Renai**	**0.53**	**262**	*e*P			Pn	20 42 44.4	+0.1
OWD	baz=262			*e*S			Sn	20 42 53.4	+0.3
NNS	**Nan Shan**	**0.54**	**320**	P			Pn	20 42 44.7	+0.3
NNS	baz=320			S			Sn	20 42 53.7	+0.5
TWC	**Suao**	**0.59**	**9**	*e*P			Pn	20 42 45.0	+0.2
TWC	baz=9.0			S			Sn	20 42 55.1	+1.2
TDCB	**Techi**	**0.59**	**293**	*e*P			Pn	20 42 45.5	+0.5
TDCB	baz=292			*e*S			Sn	20 42 55.0	+0.8
HGSD	**Ruisui**	**0.61**	**210**	P			Pn	20 42 46.1	+1.0
NDT	**Datong Townshi**	**0.61**	**339**	P			Pn	20 42 45.4	+0.2
NDT	baz=339			S			Sn	20 42 55.3	+0.8
VWDT	**VWDT**	**0.62**	**244**	*e*P			Pn	20 42 46.0	+0.8
VWDT	baz=244			*e*S			Sn	20 42 55.7	+1.0
EOS1	**EOS1**	**0.62**	**33**	*e*P			Pn	20 42 46.5	+1.2
EOS1	baz=33			*e*S			Sn	20 42 56.2	+1.6
ENTT	**Nioudou**	**0.63**	**345**	*i* P			Pn	20 42 45.7	+0.3
ENTT	baz=345			*i* S			Sn	20 42 55.5	+0.6
**EH

YULB	**Yu-li**	**0.76**	**214**	P		Sn	20 43 06.0	+8.3
SSLB	**Suanglung**	**0.77**	**252**	*e*P		Pn	20 42 48.1	+1.0
	baz=251							
SSLB				S		Sn	20 42 59.1	+1.2
	baz=251							
WHP	**Taichung City**	**0.78**	**289**	P		Pn	20 42 48.6	+1.4
	baz=288							
WHP				*e*S		Sn	20 42 59.2	+1.0
	baz=288							
NWLT	**Wulai**	**0.78**	**343**	*e*P		Pn	20 42 48.2	+0.9
	baz=343							
NWLT				*e*S		Sn	20 42 59.0	+0.8
	baz=343							
TWF1	**Yuli**	**0.79**	**212**	*e*P		Pn	20 42 46.5	-0.8
	baz=211							
TWF1				*e*S		Sn	20 42 58.5	+0.1
	baz=211							
TYC	**Yuchr**	**0.83**	**262**	P		Pn	20 42 48.6	+0.8
	baz=261							
TYC				S		Sn	20 43 00.9	+1.6
	baz=261							
WHYT	**Xinyi Township**	**0.89**	**248**	P		Pn	20 42 50.1	+1.5
	baz=248							
WHYT				*e*S		Sn	20 43 02.5	+1.8
	baz=248							
YUS	**Yu-Shan**	**0.91**	**234**	*e*P		Pn	20 42 49.8	+0.5
	baz=233							
YUS				*e*S		Sn	20 43 02.6	+0.8
	baz=233							
LIOB	**Emei**	**0.91**	**313**	*e*P		Pn	20 42 49.1	+0.2
	baz=312							
LIOB				*e*S		Sn	20 43 02.4	+1.1
	baz=312							
NSTT	**Nanjuang**	**0.91**	**311**	P		Pn	20 42 49.5	+0.6
	baz=311							
NSTT				*e*S		Sn	20 43 02.1	+0.8
	baz=311							
FULB	**Fuli**	**0.93**	**207**	*e*P		Pn	20 42 49.7	+0.6
	baz=207							
FULB				*e*S		Sn	20 43 02.2	+0.6
	baz=207							
WLTB	**Daxi**	**0.94**	**331**	*e*S		Sn	20 43 03.5	+1.6
	baz=331							
TIPB	**Shuangxi**	**0.94**	**4**	*e*P		Pn	20 42 50.0	+0.6
	baz=4.0							
TIPB				*e*S		Sn	20 43 03.5	+1.4
	baz=4.0							
NSY	**Sanyi**	**0.98**	**293**	P		Pn	20 42 50.0	+0.1
	baz=293							
WNT	**Mingjian**	**0.99**	**262**	*e*P		Pn	20 42 51.0	+1.1
	baz=261							
WNT				*e*S		Sn	20 43 04.0	+1.0
	baz=261							
TWB1	**Santiao Chiao**	**1.00**	**12**	*e*P		Pn	20 42 50.5	+0.4
	baz=12							
TWB1				*e*S		Sn	20 43 04.5	+1.3
	baz=12							
ALS	**Alishan**	**1.01**	**240**	*e*P		Pn	20 42 51.4	+1.0
	baz=239							
ALS				*e*S		Sn	20 43 04.8	+0.9
	baz=239							
CHN5	**Tsauling**	**1.07**	**247**	*e*P		Pn	20 42 51.8	+0.6
	baz=246							
CHN5				*e*S		Sn	20 43 06.2	+1.0
	baz=246							
ELDTW	**Lidau**	**1.07**	**219**	*e*P		Pn	20 42 51.1	0.0
	baz=218							
ELDTW				*e*S		Sn	20 43 05.1	-0.1
	baz=218							
TWS1	**Kuangyinshan**	**1.11**	**344**	*e*P		Pn	20 42 52.7	+1.2
	baz=344							
TWS1				*e*S		Sn	20 43 06.9	+1.0
	baz=344							
YM03	**YM03**	**1.16**	**350**	*e*P		Pn	20 42 52.6	+0.3
	baz=350							
STYT	**Tauyuan**	**1.25**	**227**	*e*P		Pn	20 42 54.4	+0.8
	baz=226							
STYT				*e*S		Sn	20 43 10.6	+1.2
	baz=226							
CHN4	**Tsaushan**	**1.26**	**238**	*e*P		Pn	20 42 54.9	+1.4
	baz=237							
CHN4				*e*S		Sn	20 43 10.7	+1.3
	baz=237							
TPUB	**Ta-pu**	**1.26**	**235**	*e*P		Pn	20 42 53.8	+0.3
	baz=234							
TPUB				*e*S		Sn	20 43 10.8	+1.4
	baz=234							
TPUB	**Ta-pu**	**1.26**	**235**	P		Sn	20 43 11.3	+1.8
TPUB				IAmb		IAmb	20 43 46.1	
	comp=Z,40nm,1.2s							
RLNB	**Erlin**	**1.28**	**264**	*e*S		Sn	20 43 11.3	+1.3
	baz=263							
WTP	**Ta-pu**	**1.30**	**234**	*e*S		Sn	20 43 11.5	+0.9
	baz=233							
TWG	**Pinlang**	**1.35**	**208**	P		Sn	20 43 12.1	+0.4

*ATH **28** 20:47:52.5, 38°.39N×20°.50E, h13km±1km, ML3.9/29, Error ellipse: s-maj=1.5km s-min=0.7km az=269.0*
*PDG **28** 20:47:52.6±0.4, 38°.39N×20°.42E, h2km±1km, ML4.1/14, Error ellipse: s-maj=0.9km s-min=1.1km az=0.0*
*THE **28** 20:47:52.4, 38°.41N×20°.43E, h9km±2km, ML3.9/7, Error ellipse: s-maj=2.3km s-min=0.4km az=266.0*
*IDC **28** 20:47:57.9±2.2, 38°.48N×20°.39E, h53km±23km, mb3.6/7, mb1 3.8/13, mb1mx3.5/50, mbtmp3.8/13, ML3.5/7, Error ellipse: s-maj=21.7km s-min=18.9km az=67.0*
*NEIC **28** 20:47:57.0±3.3, 38°.46N±0°.07×20°.40E±0°.06, h52km±13km, Error ellipse: s-maj=10.5km s-min=6.7km az=200.0*
ISC 28 20:47:52.3±0.8,**38°.40N**±0°.02×**20°.42E**±0°.02,**h10**km±5km, **n175**,σ**2**s**05**/216,**mb4.1**/10,**23C-13D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res
				Op	ISC		ISC
FSK	**Fiskardo**	**0.13**	**62**	P	**Pg**	**20 47 54.9**	**-0.5**
FSK				S	**Sg**	**20 47 56.8**	**-0.7**
	95μm,0.2s						
FSK	**Fiskardo**	**0.13**	**62**	P	**Pg**	**20 47 54.9**	**-0.5**
KEF3	**Kipouria, Keph**	**0.20**	**196**	P	**Pg**	**20 47 57.0**	**+0.4**
KEF3				S	**Sg**	**20 48 00.3**	**+0.8**
KEF3				AML	AML	20 48 01.4	
KEF3				AML	AML	20 48 01.8	
CHV1	**Chavriata, Kef**	**0.22**	**188**	P	**Pg**	**20 47 57.3**	**+0.5**
CHV1				S	**Sg**	**20 48 01.1**	**+1.2**
ARG2	**Argostoli**	**0.23**	**166**	P	**Pg**	**20 47 57.0**	**0.0**
ARG2				S	**Sg**	**20 48 00.9**	**+0.7**
KEF2	**Argostoli. Kep**	**0.24**	**167**	P	**Pg**	**20 47 57.2**	**0.0**
KEF2				S	**Sg**	**20 48 00.6**	**+0.1**
KEF2				AML	AML	20 48 01.7	
KEF2				AML	AML	20 48 02.1	
VLS	**Valsamata**	**0.26**	**149**	P	**Pg**	**20 47 57.2**	**-0.4**
VLS				S	**Sg**	**20 48 01.4**	**+0.2**
VLS	**Valsamata**	**0.26**	**149**	P	**Pg**	**20 47 57.3**	**-0.4**
VLS				S	**Sg**	**20 48 00.6**	**-0.5**
EVGI	**Lefkada island**	**0.29**	**40**	P	**Pg**	**20 47 58.1**	**-0.1**
EVGI				S	**Sg**	**20 48 02.8**	**+0.7**
EVGI	**Lefkada island**	**0.29**	**40**	P	**Pg**	**20 47 58.2**	**-0.1**
EVGI				S	**Sg**	**20 48 02.3**	**+0.2**
MGNA	**Meganis**	**0.39**	**49**	P	**Pg**	**20 47 59.5**	**-0.5**
MGNA				S	**Sg**	**20 48 05.3**	**+0.2**
MGNA				AML	AML	20 48 06.1	
	comp=N,93286μm,0.4s						
MGNA				AML	AML	20 48 06.3	
	comp=E,56833μm,0.5s						
KFL	**Anninata**	**0.41**	**135**	P	**Pg**	**20 47 59.8**	**-0.6**
KFL				S	**Sg**	**20 48 06.7**	**+0.9**
	comp=E,33μm,0.4s						
KFL	**Anninata**	**0.41**	**135**	P	**Pg**	**20 47 59.7**	**-0.6**
KFL				S	**Sg**	**20 48 05.4**	**-0.5**
KFL				AML	AML	20 48 07.2	
	comp=E,71227μm,0.4s						
KFL				AML	AML	20 48 10.1	
	comp=N,58880μm,0.4s						
LKD2	**Lefkada island**	**0.43**	**26**	P	**Pg**	**20 48 00.7**	**-0.1**
LKD2				S	**Sg**	**20 48 06.8**	**+0.2**
	comp=N,15μm,0.6s						
LKD2	**Lefkada island**	**0.43**	**26**	P	**Pg**	**20 48 00.7**	**-0.1**
LKD2				S	**Sg**	**20 48 07.1**	**+0.5**
LKD2				AML	AML	20 48 07.9	
	comp=E,23668μm,0.7s						
LKD2				AML	AML	20 48 14.4	
	comp=N,33013μm,0.5s						
TSLK	**Tsoukalades, L**	**0.46**	**24**	P	**Pg**	**20 48 01.5**	**+0.1**
TSLK				S	**Sg**	**20 48 07.7**	**+0.1**
	comp=N,19μm,0.8s						
TSLK	**Tsoukalades, L**	**0.46**	**24**	P	**Pg**	**20 48 01.4**	**0.0**
TSLK				S	**Sg**	**20 48 07.8**	**+0.3**
AST1	**Astakos**	**0.55**	**75**	P	**Pg**	**20 48 02.5**	**-0.4**
AST1				S	**Sb**	**20 48 10.9**	**-0.9**
VLMS	**Volimes, Zakyn**	**0.56**	**160**	P	**Pg**	**20 48 02.6**	**-0.5**
PDO	**Prodromos**	**0.63**	**71**	P	**Pg**	**20 48 03.9**	**-0.7**
PDO				S	**Sb**	**20 48 13.6**	**-0.7**
	comp=N,22μm,0.5s						
PDO	**Prodromos**	**0.63**	**71**	P	**Pg**	**20 48 03.8**	**-0.7**
ZAK2	**Zakynthos**	**0.72**	**148**	P	**Pg**	**20 48 05.9**	**-0.3**
KRI1	**kERI**	**0.80**	**157**	P	**Pg**	**20 48 06.8**	**-0.9**
KRI1				S	**Sb**	**20 48 19.7**	**+0.6**
RLS	**Riolos of Patr**	**0.89**	**112**	P	**Pg**	**20 48 08.5**	**-1.0**
RLS				S	**Sb**	**20 48 22.1**	**+0.3**
	comp=N,5μm,0.6s						
RLS	**Riolos of Patr**	**0.89**	**112**	P	**Pg**	**20 48 08.4**	**-1.2**
RLS				AML	AML	20 48 30.5	
	comp=N,13718μm,1.0s						
RLS				AML	AML	20 48 30.6	
	comp=E,9144μm,0.7s						
PVO	**Paravola**	**0.90**	**76**	P	**Pg**	**20 48 09.0**	**-0.6**
PVO				S	**Sn**	**20 48 22.7**	**-1.2**
	comp=E,13μm,0.6s						
PVO	**Paravola**	**0.90**	**76**	P	**Pg**	**20 48 09.0**	**-0.6**
PVO				AML	AML	20 48 27.9	
	comp=E,20081μm,0.7s						
PVO				AML	AML	20 48 28.3	
	comp=N,30303μm,0.6s						
DRO	**Drossia**	**1.11**	**113**	P	**Pb**	**20 48 12.2**	**-1.4**
DRO				AML	AML	20 48 35.0	
	comp=E,28955μm,0.5s						
DRO				AML	AML	20 48 36.4	
	comp=N,28575μm,0.6s						
EFP	**Efpalio**	**1.17**	**88**	P	**Pb**	**20 48 13.1**	**-1.4**
EFP				AML	AML	20 48 36.3	
	comp=E,35966μm,0.7s						
EFP				AML	AML	20 48 36.7	
	comp=N,26976μm,0.5s						
ANX	**Ano Chora**	**1.20**	**80**	P	**Pb**	**20 48 13.8**	**-1.3**
ANX				AML	AML	20 48 37.5	
	comp=N,27235μm,0.5s						
ANX				AML	AML	20 48 37.7	
	comp=E,23100μm,0.6s						
EVR	**Evrytania**	**1.21**	**64**	P	**Pb**	**20 48 14.0**	**-1.2**
EVR				AML	AML	20 48 37.8	
	comp=E,5585μm,0.9s						
EVR				AML	AML	20 48 37.9	
	comp=N,6133μm,0.8s						
LAKA	**Lakka**	**1.24**	**97**	P	**Pn**	**20 48 14.3**	**-1.4**
LAKA				AML	AML	20 48 37.9	
	comp=N,7989μm,0.7s						
LAKA				AML	AML	20 48 46.5	
	comp=E,6281μm,0.6s						
SERG	**Sergoula**	**1.29**	**89**	P	**Pn**	**20 48 15.2**	**-1.1**
SERG				AML	AML	20 48 39.0	
	comp=N,18318μm,0.5s						
SERG				AML	AML	20 48 39.2	
	comp=E,13698μm,0.8s						
JAN	**Janina**	**1.30**	**15**	P	**Pg**	**20 48 17.6**	**+0.4**
JAN				AML	AML	20 48 39.2	
	comp=N,9352μm,0.5s						
JAN				AML	AML	20 48 40.2	
	comp=E,7169μm,0.4s						
TRIZ	**Trizonia**	**1.30**	**91**	P	**Pn**	**20 48 15.2**	**-1.2**
AMT	**Artemida-Makis**	**1.34**	**130**	P	**Pn**	**20 48 16.6**	**-0.4**
AMT				AML	AML	20 48 48.1	
	comp=E,16521μm,0.7s						
AMT				AML	AML	20 48 49.4	
	comp=N,13362μm,0.6s						
KALE	**Kalithea**	**1.35**	**90**	P	**Pn**	**20 48 16.3**	**-1.0**
KALE				AML	AML	20 48 42.5	
	comp=N,17431μm,0.6s						
KALE				AML	AML	20 48 42.6	
	comp=E,7037μm,0.6s						
KASA	**Kassiopi**	**1.40**	**345**	P	**Pg**	**20 48 19.8**	**+0.6**
KASA				AML	AML	20 48 45.7	
	comp=N,3788μm,0.6s						
KASA				AML	AML	20 48 46.6	
	comp=E,4209μm,0.7s						
KLV	**Kalavryta, Ach**	**1.41**	**104**	P	**Pn**	**20 48 17.3**	**-0.8**
MAKR	**Makrakomi, Fth**	**1.47**	**65**	P	**Pn**	**20 48 19.2**	**+0.3**
MAKR				AML	AML	20 48 50.7	
	comp=N,6364μm,0.9s						
MAKR				AML	AML	20 48 51.3	
	comp=E,11896μm,0.5s						
AGG	**Agios Georgios**	**1.62**	**67**	P	**Pn**	**20 48 21.3**	**+0.4**
AGG				AML	AML	20 48 53.8	
	comp=E,4800μm,0.6s						
AGG				AML	AML	20 48 55.7	
	comp=N,3244μm,0.6s						
AGG	**Agios Georgios**	**1.62**	**67**		**Pb**	**20 48 22.0**	**-0.3**
THL	**Klokotos Trika**	**1.70**	**46**	P	**Pb**	**20 48 23.7**	**0.0**
THL				AML	AML	20 48 55.6	
	comp=E,5465μm,0.6s						
THL				AML	AML	20 48 56.1	
	comp=N,5243μm,0.7s						
ITM	**Ithomi**	**1.71**	**135**	P	**Pn**	**20 48 22.7**	**+0.6**
ITM	**Ithomi**	**1.71**	**135**		**Pb**	**20 48 23.8**	**0.0**
KPRO	**Kipourio**	**1.72**	**25**	P	**Pb**	**20 48 24.1**	**+0.1**
KPRO				AML	AML	20 48 57.1	
	comp=E,4935μm,0.5s						
KPRO				AML	AML	20 48 59.7	
	comp=N,4694μm,0.6s						
AXAR	**Agios Charalam**	**1.79**	**78**	P	**Pb**	**20 48 25.0**	**-0.3**
AXAR				AML	AML	20 49 03.9	
	comp=E,9492μm,0.7s						
AXAR				AML	AML	20 49 12.3	
	comp=N,10558μm,0.8s						
PENT	**Pentalofos**	**1.88**	**17**	P	**Pb**	**20 48 26.8**	**+0.1**
PENT				AML	AML	20 49 02.9	
	comp=E,2195μm,0.6s						
PENT				AML	AML	20 49 10.4	
	comp=N,2168μm,0.8s						
PROD	**Prodromos**	**1.96**	**93**	P	**Pb**	**20 48 27.2**	**-0.8**
PROD				AML	AML	20 48 59.8	
	comp=N,3844μm,1.2s						
PROD				AML	AML	20 49 04.8	
	comp=E,5270μm,0.8s						
LKR	**Lokris**	**2.04**	**82**	P	**Pb**	**20 48 28.6**	**-0.8**
LKR				AML	AML	20 49 02.3	
	comp=N,2696μm,0.7s						
LKR				AML	AML	20 49 02.3	
	comp=E,1703μm,0.6s						
LTK	**Loutraki**	**2.04**	**100**	P	**Pb**	**20 48 28.3**	**-1.2**
LTK				AML	AML	20 49 06.5	
	comp=E,2216μm,0.7s						
LTK				AML	AML	20 49 12.1	
	comp=N,2129μm,0.6s						
LOUT	**Loutraki**	**2.06**	**101**	P	**Pb**	**20 48 28.7**	**-1.0**
KZN	**Kozani**	**2.17**	**28**	P	**Pb**	**20 48 30.9**	**-0.9**
KZN				AML	AML	20 49 05.1	
	comp=N,1432μm,0.7s						
KZN				AML	AML	20 49 10.9	
	comp=E,2538μm,0.8s						
VIL2	**Platees**	**2.25**	**94**	P	**Pb**	**20 48 31.5**	**-1.5**
VIL2				AML	AML	20 49 15.9	
	comp=N,2756μm,0.7s						
VIL2				AML	AML	20 49 21.9	
	comp=E,3930μm,1.2s						
SCTE	**Santa Cesarea**	**2.26**	**318**		**Pn**	**20 48 30.6**	**+0.9**
LIT	**Litokhoron**	**2.34**	**43**		**Pb**	**20 48 34.9**	**+0.3**
FNA	**Florina**	**2.49**	**17**		**Pb**	**20 48 35.0**	**-2.2**
MRKA	**Markates**	**2.50**	**82**	P	**Pn**	**20 48 33.9**	**+0.9**
ATHU	**Athens Univers**	**2.69**	**98**	P	**Pn**	**20 48 36.9**	**+1.3**
VLY	**Voula,Athens**	**2.72**	**101**	P	**Pn**	**20 48 37.3**	**+1.3**
OHR	**Ohrid**	**2.73**	**6**	*e*Pn	**Pn**	**20 48 37.6**	**+1.5**
TIP	**Timpagrande**	**2.96**	**286**	⇑P	**Pb**	**20 48 43.1**	**-2.1**
TIP	**Timpagrande**	**2.96**	**286**	⇑S	**Sb**	**20 49 20.5**	**-1.0**
TIP	**Timpagrande**	**2.96**	**286**		**Pn**	**20 48 41.4**	**+2.0**
TIR	**Tirane**	**2.98**	**352**	⇑P	**Pn**	**20 48 41.4**	**+1.9**
TIR	**Tirane**	**2.98**	**352**	⇑S	**Sn**	**20 49 16.9**	**+1.6**
TIR	**Tirane**	**2.98**	**352**		**Pn**	**20 48 40.3**	**+0.8**
VAY	**Valandovo**	**3.35**	**29**	*e*Pn	**Pb**	**20 48 48.8**	**-3.1**
STIP	**Stip**	**3.56**	**22**	*e*Pn	**Pn**	**20 48 51.2**	**+3.6**
CEL	**Celeste**	**3.56**	**269**		**Pn**	**20 48 48.4**	**+0.8**
MATE	**Matera**	**3.65**	**309**	⇑P	**Pn**	**20 48 51.8**	**+3.1**
MATE	**Matera**	**3.65**	**309**	⇑S	**Sg**	**20 49 53.4**	**+4.0**
ULC	**Ulcinj**	**3.67**	**346**	⇑*i*Pn	**Pn**	**20 48 51.5**	**+2.4**
ULC				*e*Sn	**Sn**	**20 49 36.8**	**+4.3**
DRME	**Dracevica, Mon**	**3.90**	**346**	⇓*i*Pn	**Pn**	**20 48 54.6**	**+2.4**
DRME				*e*Sn	**Sn**	**20 49 42.6**	**+4.6**
BUM	**Brajici-Budva**	**4.07**	**344**	⇑*i*Pn	**Pn**	**20 48 57.5**	**+2.9**
BUM				*e*Sn	**Sn**	**20 49 46.6**	**+4.3**
PDG	**Podgorica**	**4.12**	**348**	⇑P	**Pn**	**20 48 56.9**	**+1.6**
PDG	**Podgorica**	**4.12**	**348**	⇑S	**Sn**	**20 49 43.1**	**-0.4**
PDG	**Podgorica**	**4.12**	**348**		**Pn**	**20 48 55.8**	**+0.6**
TTG	**Podgorica**	**4.12**	**348**	⇓*i*Pn	**Pn**	**20 48 58.7**	**+3.4**
TTG				*i* Sn	**Sn**	**20 49 48.1**	**+4.6**
ACER	**Acerenza**	**4.20**	**306**		**Pn**	**20 48 58.3**	**+1.9**
PVY	**Plav**	**4.21**	**355**	⇑*i*Pn	**Pn**	**20 48 59.4**	**+2.8**
PVY				*i* Sn	**Sn**	**20 49 50.3**	**+4.5**
APE	**Apeiranthos**	**4.26**	**107**	⇑P	**Pb**	**20 49 07.9**	**+0.5**
APE	**Apeiranthos**	**4.26**	**107**	⇓S	**Sn**	**20 49 47.4**	**+0.3**
CEME	**Cevo**	**4.30**	**345**	⇓*i*Pn	**Pn**	**20 49 00.8**	**+3.0**
CEME				*e*Sn	**Sn**	**20 49 51.9**	**+3.9**
HCY	**Herceg Novi**	**4.30**	**341**	⇓*i*Pn	**Pn**	**20 49 00.0**	**+2.2**
HCY				*e*Sn	**Sn**	**20 49 51.6**	**+3.6**
IVA	**Berane**	**4.49**	**355**	⇑*i*Pn	**Pn**	**20 49 03.3**	**+2.9**
IVA				*i* Sn	**Sn**	**20 49 57.2**	**+4.6**
KOME	**Kolasin**	**4.50**	**352**	⇓*i*Pn	**Pn**	**20 49 02.8**	**+2.2**
KOME				*e*Sn	**Sn**	**20 49 56.2**	**+3.2**
NKME	**Niksic**	**4.50**	**346**	*e*Pn	**Pn**	**20 49 03.5**	**+2.9**
NKME				*e*Sn	**Sn**	**20 49 56.8**	**+3.8**
NKY	**Niksic**	**4.54**	**347**	⇓*i*Pn	**Pn**	**20 49 04.3**	**+3.2**
NKY				*i* Sn	**Sn**	**20 49 58.4**	**+4.4**
BRY	**Bratogost**	**4.72**	**343**	⇑*i*Pn	**Pn**	**20 49 06.5**	**+2.9**
BRY				*i* Sn	**Sn**	**20 50 02.8**	**+4.4**
VTS	**Vitosha**	**4.73**	**26**	⇑P	**Pn**	**20 49 07.3**	**+3.6**
VTS	**Vitosha**	**4.73**	**26**	⇑S	**Sn**	**20 50 00.3**	**+1.6**
VTS	**Vitosha**	**4.73**	**26**		**Pn**	**20 49 05.0**	**+1.3**
IDI	**Anoyia**	**4.74**	**130**	P	**Pn**	**20 49 07.4**	**+3.5**
	comp=E,0.8nm,0.3s,baz=315,slow=16,SNR=3.4						
IDI				S	**Sn**	**20 49 57.9**	**-1.1**
	comp=E,2.1nm,0.3s,baz=228,slow=15,SNR=2.9						
VAE	**Valguarnera**	**4.84**	**261**	S	**Sn**	**20 49 59.4**	**-1.9**
	comp=E,1.2nm,0.3s,baz=177,slow=19,SNR=2.3						
SGRT	**San Giovanni R**	**4.91**	**315**	Pn	**Pn**	**20 49 06.7**	**+0.6**
STON	**Ston**	**4.92**	**336**	*e*Pn	**Pn**	**20 49 05.8**	**-0.4**
STON				Sn	**Sn**	**20 50 00.6**	**-2.7**
UPM	**Unac-Piva**	**4.94**	**347**	⇓*i*Pn	**Pn**	**20 49 09.0**	**+2.4**
UPM				*e*Sn	**Sn**	**20 50 06.6**	**+2.8**
PLE	**Pljevlja**	**4.99**	**351**	⇓*i*Pn	**Pn**	**20 49 10.1**	**+2.8**
PLE				*e*Sn	**Sn**	**20 50 07.3**	**+2.3**
ALN	**Alexandroupoli**	**5.01**	**58**	Pn	**Pn**	**20 49 08.1**	**+0.7**
PAOL	**Paolisi**	**5.22**	**302**		**Pn**	**20 49 11.9**	**+1.5**
MAKA	**Makarska**	**5.52**	**333**	*i* Pn	**Pn**	**20 49 14.3**	**-0.1**
MAKA				Sn	**Sn**	**20 50 16.6**	**-1.4**
CORL	**Corleone**	**5.63**	**267**	Pn	**Pn**	**20 49 19.6**	**+3.6**
CLTB	**Caltabellotta**	**5.75**	**264**	Pn	**Pn**	**20 49 21.5**	**+3.8**
KARP	**Karpathos**	**6.10**	**116**	Pn	**Pn**	**20 49 25.9**	**+3.4**
ELND	**Elena**	**6.14**	**41**	⇑P	**Pn**	**20 49 27.7**	**+4.7**
INTR	**Introdacqua**	**6.15**	**308**		**Pn**	**20 49 26.1**	**+2.8**
KIJV	**Kijevo**	**6.37**	**333**	*i* Pn	**Pn**	**20 49 26.1**	**0.0**
KIJV				Sn	**Sn**	**20 50 35.8**	**-3.0**
ZIRJ	**Zirje**	**6.37**	**327**	*i* Pn	**Pn**	**20 49 25.4**	**-0.7**
ZIRJ				Sn	**Sn**	**20 50 34.6**	**-4.3**
MORI	**Morici**	**6.52**	**328**	*e*Pn	**Pn**	**20 49 28.4**	**+0.2**
AQU	**L'Aquila**	**6.66**	**309**	Pn	**Pn**	**20 49 32.8**	**+2.7**
BLY	**Banja Luka**	**6.79**	**340**	⇑P	**Pn**	**20 49 34.9**	**+3.0**
BLY	**Banja Luka**	**6.79**	**340**	⇑S	**Sn**	**20 50 47.0**	**-2.3**
BLY	**Banja Luka**	**6.79**	**340**	Pn	**Pn**	**20 49 32.3**	**+0.3**
DUGI	**Dugi Otok**	**6.89**	**326**	*e*Pn	**Pn**	**20 49 33.1**	**-0.2**
UDBI	**Udbina**	**7.05**	**332**	*e*Pn	**Pn**	**20 49 36.6**	**+1.1**
NRCA	**Norcia**	**7.10**	**311**		**Pn**	**20 49 36.2**	**-0.1**
GZR	**Gura Zlata**	**7.21**	**13**	⇑P	**Pn**	**20 49 40.6**	**+2.9**
BZS	**Buzias**	**7.27**	**7**	⇓P	Pn	20 49 44.1	+5.7
NVLJ	**Novalja**	**7.43**	**328**	*e*Pn	**Pn**	**20 49 41.3**	**+0.6**
ARR	**Arges**	**7.64**	**23**	⇑P	**Pn**	**20 49 46.1**	**+2.4**
ELL	**Elmali**	**7.71**	**99**	Pn	**Pn**	20 49 51.7	+7.0
VOIR		**7.83**	**25**	⇑P	**Pn**	**20 49 49.0**	**+2.7**
MLR	**Muntele Rosu**	**8.19**	**28**	P	**Pn**	**20 49 55.1**	**+3.8**
MLR	**Muntele Rosu**	**8.19**	**28**	P	**Pn**	**20 49 55.1**	**+3.8**
	comp=E,0.2nm,0.3s,baz=202,slow=9.4,SNR=7.7						
MLR	**Muntele Rosu**	**8.19**	**28**	⇓P	Pn	20 49 56.2	+4.9
DOPR	**Dopca**	**8.41**	**24**	⇓P	**Pn**	**20 49 57.1**	**+2.9**
CASP	**Castiglione de**	**8.49**	**304**	Pn	**Pn**	**20 49 55.9**	**+0.7**
PLOR	**Plostina**	**8.77**	**30**	⇑P	**Pn**	**20 50 03.1**	**+4.1**
VRI	**Vrincioaia**	**8.81**	**30**	⇓P	**Pn**	**20 50 04.0**	**+4.4**
TRI	**Trieste**	**8.82**	**328**		**Pn**	**20 49 59.0**	**-0.8**
SOKA	**Soboth**	**9.18**	**336**	*e*Pn	**Pn**	**20 50 04.2**	**-0.5**
	comp=E,9.7nm,0.8s,SNR=10						
SOKA				*e*Sn	**Sn**	**20 51 43.3**	**-4.8**
	comp=E,4.3nm,0.6s						
OBKA	**Obir**	**9.19**	**334**	*e*Pn	**Pn**	**20 50 06.3**	**+1.4**
	comp=E,5.3nm,0.5s						
OBKA				Sn	**Sn**	**20 51 44.2**	**-4.2**
	comp=E,7.9nm,0.7s						
ZCCA	**Zocca**	**9.26**	**313**	Pn	**Pn**	**20 50 08.2**	**+2.4**
PSZ	**Piszkesteto**	**9.52**	**358**	P	**Pn**	**20 50 10.6**	**+1.1**
PSZ	**Piszkesteto**	**9.52**	**358**	Pn	**Pn**	**20 50 10.6**	**+1.1**
TEOL	**Teolo**	**9.53**	**320**		**Pn**	**20 50 09.3**	**-0.2**
CTI	**Castel Tesino**	**10.03**	**322**		**Pn**	**20 50 15.7**	**-0.8**
KBA	**Koelnbreinsper**	**10.11**	**331**	*e*Pn	**Pn**	**20 50 18.4**	**+0.8**
	comp=E,1.9nm,0.5s						
ABTA	**Abfaltersbach**	**10.17**	**328**	Pn	**Pn**	**20 50 17.5**	**-0.8**
	comp=E,1.8nm,0.4s						
BRTR	**Keskin Array B**	**10.37**	**79**	P	**Pn**	**20 50 25.0**	**+3.9**
	comp=E,0.1nm,0.3s,baz=264,slow=12,SN

Ms1 3.9/18, ms1mx3.6/57, Error ellipse: s-maj=18.5km s-min=12.1km az=5.0

*GCMT **28** 20:48:00.3±0.3, 56°44N±0°05×34°07W±0°06, h12km±2km, MW4.9/76, Moment Tensor Solution. s16,c16; s76,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.43±.19; $M_{\theta\theta}$0.23±.12; $M_{\phi\phi}$1.20±.12; $M_{r\theta}$-1.80±.55; $M_{r\phi}$-0.47±.08; $M_{\theta\phi}$-1.36±.40; Best double couple: $M_0$2.45900×10^{16} NP1:ϕ_s162.00000°, δ21.00000°, λ-143.00000°. NP2: ϕ_s37.00000°, δ78.00000°, λ-73.00000°. Principal axes: T 1.8740, Plg31.0000°, Azm113.0000°; N 1.1710, Plg17.0000°, Azm213.0000°; P -3.0440, Plg54.0000°, Azm327.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **28** 20:48:01.3±1.3, 56°66N±0°09×34°2W±0°1, h17km±4km, mb4.8/131 Error ellipse: s-maj=13.2km s-min=10.8km az=184.0*

ISC 28 20:48:02.2±0.4, 56°68N±0°07×34°29W±0°05, h22km, n260, σ1§15/259, mb4.8/118, MS4.0/17, 5C-5D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res	ISC
NRS	**Narsarsuaq**	**7.30**	**313**	P	Pn	**Pn**	**20 49 50.4**	**+3.0**	
NRS	**Narsarsuaq**	**7.30**	**313**	Pn	Pn	**Pn**	**20 49 50.4**	**+3.0**	
IVI	**Ivigtut**	**8.48**	**308**	Pn	Pn	**Pn**	**20 50 04.0**	**+0.5**	
ANGG	**Ammassalik, Gr**	**9.11**	**351**	Pn	Pn	**Pn**	**20 50 09.7**	**-2.4**	
BORG	**Borgarnes**	**10.26**	**33**	P	Pn	**Pn**	**20 50 27.3**	**-0.6**	
BORG	**Borgarnes**	**10.26**	**33**	Pn	Pn	**Pn**	**20 50 27.0**	**-0.9**	
	0.2nm,0.3s,baz=212,slow=6.7,SNR=2.2								
BORG				Sn	Sn	**Sn**	**20 52 16.7**	**-5.3**	
	0.3nm,0.3s,baz=348,slow=9.3,SNR=2.8								
BORG				LR	LR		20 53 26.3		
	comp=Z,2μm,18.4s,baz=248,slow=32								
BORG	**Borgarnes**	**10.26**	**33**	Pn	Pn	**Pn**	**20 50 27.3**	**-0.6**	
SFJD	**Kangerlussuaq**	**12.85**	**330**	LR	LR		20 55 12.2		
	comp=Z,407nm,19.2s,baz=146,slow=34								
SUMG	**Summit**	**16.05**	**355**	P	Pn	**Pn**	**20 51 45.4**	**-1.2**	
SUMG				pmax	pmax				
	comp=Z,157nm,2.0s								
SUMG	**Summit**	**16.05**	**355**			**Pn**	**20 51 45.4**	**-1.2**	
SUMG				IAmb	IAmb		20 51 59.0		
	comp=Z,157nm,2.0s								
EKA	**Eskdalemuir Ar**	**17.39**	**81**	P	P	**P**	**20 52 04.1**	**-0.2**	
	baz=288,slow=9.5,SNR=2.9								
JMIC	**Jan Mayen**	**18.06**	**27**	LR	LR		20 57 09.6		
	comp=Z,211nm,18.3s,baz=58,slow=30								
FRB	**Frobisher Bay**	**18.23**	**307**	P	Pn	**Pn**	**20 52 10.1**	**-3.4**	
	comp=Z,0.0nm,0.3s,baz=102,slow=12,SNR=4.3								
FRB				LR	LR		20 57 42.3		
	comp=Z,353nm,21.5s,baz=82,slow=32								
SCHQ	**Schefferville**	**18.32**	**278**	P	P	**P**	**20 52 13.2**	**-1.3**	
	comp=Z,0.1nm,0.3s,baz=74,slow=15,SNR=3.8								
SCHQ				LR	LR		20 58 02.9		
	comp=Z,398nm,20.2s,baz=56,slow=33								
SCHQ	**Schefferville**	**18.32**	**278**	P	P	**P**	**20 52 12.9**	**-1.7**	
PQI	**Presque Isle**	**22.96**	**259**	P	P	**P**	**20 53 03.3**	**-1.5**	
PQI				IAmb	IAmb		20 53 05.1		
	comp=Z,37nm,1.2s								
MFF	**Saint Martin d**	**23.23**	**101**	*e*P	P	**P**	**20 53 09.0**	**+1.5**	
MFF				pmax	pmax				
	comp=Z,199nm,2.1s								
D62A	**Allapoint, All**	**23.27**	**260**	P	P	**P**	**20 53 08.2**	**+0.3**	
D62A				IAmb	IAmb		20 53 14.1		
	comp=Z,45nm,1.4s								
E63A	**Oxbow**	**23.33**	**258**	P	P	**P**	**20 53 07.1**	**-1.5**	
TULEG	**Thule**	**23.48**	**341**	P	P	**P**	**20 53 10.8**	**+1.1**	
TULEG				IAmb	IAmb		20 53 46.3		
	comp=Z,24nm,1.0s								
NOA	**NORSAR Array B**	**23.55**	**60**	P	P	**P**	**20 53 11.4**	**+0.7**	
	comp=Z,2.7nm,0.9s,baz=290,slow=9.2,SNR=4.7								
F64A	**Sherman**	**23.65**	**257**	P	P	**P**	**20 53 13.0**	**+1.3**	
F64A				IAmb	IAmb		20 53 16.6		
	comp=Z,37nm,1.3s								
NC602	**NORSAR Array S**	**23.76**	**61**	P	P	**P**	**20 53 11.1**	**-1.5**	
EMMW	**East Machias**	**23.92**	**254**	P	P	**P**	**20 53 12.3**	**-1.9**	
F63A	**Nahmakanta, Br**	**24.16**	**258**	P	P	**P**	**20 53 12.9**	**-3.5**	
PKME	**Peaks-Kenny Pk**	**24.54**	**257**	P	P	**P**	**20 53 19.9**	**0.0**	
LFF	**La Frestale**	**24.77**	**103**	*e*P	P	**P**	**20 53 19.4**	**-2.6**	
LFF				pmax	pmax				
	comp=Z,49nm,1.5s								
SSF	**Saint Saulge**	**24.94**	**96**	*e*P	P	**P**	**20 53 25.8**	**+2.2**	
SSF				pmax	pmax				
	comp=Z,40nm,1.4s								
G62A	**West of Eustis**	**25.24**	**259**	P	P	**P**	**20 53 25.2**	**-1.1**	
G62A				IAmb	IAmb		20 53 28.9		
	comp=Z,22nm,1.0s								
PFVI	**Vila Bisbo**	**25.91**	**128**	P	P	**P**	**20 53 31.1**	**-1.3**	
ESDC	**Sonseca Array**	**26.11**	**118**	P	P	**P**	**20 53 35.2**	**+0.8**	
	comp=Z,0.9nm,0.8s,baz=324,slow=8.5,SNR=3.7								
ESDC				LR	LR		21 02 31.0		
	comp=Z,287nm,18.0s,baz=325,slow=33								
ESDC	**Sonseca Array**	**26.11**	**118**	P	P	**P**	**20 53 34.3**	**0.0**	
ECH	**Echery**	**26.28**	**91**	P	P	**P**	**20 53 34.7**	**-1.1**	
ECH				pmax	pmax				
	comp=Z,48nm,1.7s								
ECH	**Echery**	**26.28**	**91**	P	P	**P**	**20 53 34.7**	**-1.1**	
ECH				IAmb	IAmb		20 53 40.2		
	comp=Z,48nm,1.7s								
ARCES	**ARCESS Array B**	**28.56**	**39**	P	P	**P**	**20 53 56.0**	**0.0**	
ARCES	**ARCESS Array B**	**28.56**	**39**	P	P	**P**	**20 53 55.9**	**0.0**	
	comp=Z,1.8nm,0.6s,baz=270,slow=7.3,SNR=8.8								
DAVOX	**Davos/Dischmat**	**28.62**	**91**	LR	LR		21 03 30.0		
	comp=Z,382nm,19.4s,baz=288,slow=32								
GERES	**GERESS Array B**	**29.54**	**85**	LR	LR		21 04 55.1		
	comp=Z,251nm,18.2s,baz=322,slow=34								
FINES	**FINESS Array B**	**30.41**	**56**	P	P	**P**	**20 54 12.8**	**+0.5**	
	comp=Z,3.6nm,0.8s,baz=280,slow=9.7,SNR=3.6								
FINES				LR	LR		21 04 42.6		
	comp=Z,379nm,21.6s,baz=356,slow=33								
FINES	**FINESS Array B**	**30.41**	**56**	P	P	**P**	**20 54 12.2**	**-0.1**	
VRAC	**Vranov**	**30.87**	**82**	LR	LR		21 07 02.8		
	comp=Z,255nm,18.1s,baz=327,slow=37								
FCC	**Fort Churchill**	**31.08**	**299**	P	P	**P**	**20 54 19.2**	**+0.9**	
FCC				pmax	pmax				
	comp=Z,15nm,1.5s								
FCC	**Fort Churchill**	**31.08**	**299**	P	P	**P**	**20 54 19.2**	**+0.9**	
FCC				IAmb	IAmb		20 54 23.6		
	comp=Z,15nm,1.4s								
MDT	**Midelt**	**31.40**	**127**	LR	LR		21 05 10.7		
	comp=Z,129nm,19.7s,baz=333,slow=33								
APA	**Apatity**	**31.74**	**42**	*i*P	P		20 54 14.2	-10	
APA				pmax	pmax				
	comp=Z,4.0nm,0.9s								
APA				MLR	MLR				
	comp=Z,600nm,13.0s								
VYHS	**Vyhne**	**32.55**	**82**	*e*P	P	**P**	**20 54 30.2**	**-1.1**	
VYHS	**Vyhne**	**32.55**	**82**	*e*P	P	**P**	**20 54 30.2**	**-1.1**	
EYMN	**Ely**	**35.09**	**281**	P	P	**P**	**20 54 53.7**	**+0.4**	
EYMN				IAmb	IAmb		20 54 56.0		
	comp=Z,18nm,1.1s								
ULM	**Lac du Bonnet**	**36.10**	**287**	P	P	**P**	**20 55 00.6**	**-1.4**	
ULM				pmax	pmax				
	comp=Z,44nm,2.0s								
ULM	**Lac du Bonnet**	**36.10**	**287**	P	P	**P**	**20 55 00.9**	**-1.1**	
	comp=Z,2.7nm,0.9s,baz=47,slow=7.9,SNR=4.1								
ULM				LR	LR		21 08 20.7		
	comp=Z,234nm,21.2s,baz=80,slow=34								
ULM	**Lac du Bonnet**	**36.10**	**287**	P	P	**P**	**20 55 00.6**	**-1.4**	
O49A	**Covington**	**36.15**	**265**	P	P	**P**	**20 55 00.9**	**-1.7**	
O49A				IAmb	IAmb		20 55 05.5		
	comp=Z,11nm,0.9s								
S54A	**Dingess, Beckl**	**36.20**	**259**	P	P	**P**	**20 55 03.5**	**+0.5**	
KLMR	**Klimovskoe**	**36.63**	**52**	*e*P	P	**P**	**20 55 06.5**	**+0.1**	
KLMR				pmax	pmax				
	comp=Z,34nm,1.4s								
KLMR	**Klimovskoe**	**36.63**	**52**	*e*P	P	**P**	**20 55 06.6**	**+0.1**	
KLMR				AMP			20 55 20.7		
	comp=Z,34nm,1.4s								
AKASG	**Malin Array Be**	**36.86**	**72**	P	P	**P**	**20 55 07.9**	**-0.6**	
AKASG				pmax	pmax				
	comp=Z,2.0nm,1.0s								
AKASG	**Malin Array Be**	**36.86**	**72**	P	P	**P**	**20 55 08.0**	**-0.5**	
	comp=Z,2.2nm,0.3s,baz=316,slow=7.9,SNR=1.9								
AKASG	**Malin Array Be**	**36.86**	**72**	P	P	**P**	**20 55 07.8**	**-0.6**	
AKBB	**Malin Array Si**	**36.86**	**72**	P	P	**P**	**20 55 07.3**	**-1.2**	
AKBB				pmax	pmax				
	comp=Z,7.0nm,1.0s								
AKBB	**Malin Array Si**	**36.86**	**72**	P	P	**P**	**20 55 07.3**	**-1.2**	
OBN	**Obninsk**	**38.14**	**62**	*i* P	P	**P**	**20 55 20.1**	**+0.9**	
OBN				*i*			20 56 46.7		
OBN				*i*			20 57 35.1		
OBN				pmax	pmax				
	comp=Z,6.0nm,1.3s								
OBN				MLR	MLR				
	comp=Z,178nm,15.0s								
MLR	**Muntele Rosu**	**38.24**	**81**	LR	LR		21 12 02.6		
	comp=Z,304nm,18.1s,baz=294,slow=38								
YKA	**Yellowknife Ar**	**38.58**	**313**	P	P	**P**	**20 55 23.0**	**+0.1**	
	comp=Z,1.8nm,0.9s,baz=58,slow=8.9,SNR=10								
YKA				PcP	PcP		**20 57 34.0**	**-0.8**	
	comp=Z,1.7nm,0.8s,baz=54,slow=3.2,SNR=13								
YKA				LR	LR		21 09 27.2		
	comp=Z,208nm,18.4s,baz=0.0,slow=33								
WCI	**Wyandotte Cave**	**38.60**	**264**	P	P	**P**	**20 55 21.5**	**-1.9**	
WCI				pmax	pmax				
	comp=Z,10.0nm,0.8s								
WCI	**Wyandotte Cave**	**38.60**	**264**	P	P	**P**	**20 55 21.4**	**-1.9**	
V51A	**Loudon**	**39.31**	**260**	P	P	**P**	**20 55 28.8**	**-0.6**	
V51A				IAmb	IAmb		20 55 31.0		
	comp=Z,32nm,1.6s								
T47A	**Sharon Grove**	**39.95**	**263**	P	P	**P**	**20 55 34.7**	**+0.1**	
ECSD	**EROS Data Cent**	**40.51**	**279**	P	P	**P**	**20 55 40.0**	**+0.8**	
S44A	**Carbondale**	**40.62**	**266**	P	P	**P**	**20 55 40.0**	**-0.1**	
S44A				IAmb	IAmb		20 55 43.1		
	comp=Z,18nm,0.8s								
PBMO	**Poplar Bluff**	**41.92**	**266**	P	P	**P**	**20 55 50.9**	**0.0**	
PBMO				IAmb	IAmb		20 55 60.0		
	comp=Z,18nm,1.1s								
INK	**Inuvik**	**42.16**	**327**	P	P	**P**	**20 55 52.7**	**+0.3**	
INK				pmax	pmax				
	comp=Z,12nm,1.5s								
INK	**Inuvik**	**42.16**	**327**	P	P	**P**	**20 55 52.9**	**+0.5**	
	comp=Z,3.7nm,1.0s,baz=131,slow=7.0,SNR=3.2								
INK	**Inuvik**	**42.16**	**327**	P	P	**P**	**20 55 52.7**	**+0.3**	
LRAL	**Lakeview Retre**	**42.83**	**259**	P	P	**P**	**20 55 59.4**	**+1.1**	
OXF	**Oxford**	**43.03**	**263**	P	P	**P**	**20 55 59.6**	**-0.3**	
OXF				pmax	pmax				
	comp=Z,28nm,1.0s								
OXF	**Oxford**	**43.03**	**263**	P	P	**P**	**20 55 59.6**	**-0.3**	
OXF				IAmb	IAmb		20 56 01.7		
	comp=Z,28nm,1.0s								
U40A	**Yellville**	**43.57**	**268**	P	P	**P**	**20 56 04.8**	**+0.6**	
U40A				IAmb	IAmb		20 56 10.1		
	comp=Z,28nm,1.6s								
LAO	**LASA Array**	**43.72**	**289**	P	P	**P**	**20 56 05.8**	**+0.4**	
LAO				IAmb	IAmb		20 56 08.7		
	comp=Z,16nm,0.9s								
HHAR	**Hobbs**	**44.22**	**269**	P	P	**P**	**20 56 09.6**	**+0.1**	
HHAR				IAmb	IAmb		20 56 14.8		
	comp=Z,35nm,1.9s								
EPYK	**Eagle Plains**	**44.33**	**326**	P	P	**P**	**20 56 09.7**	**-0.3**	
EPYK				IAmb	IAmb		20 56 41.3		
	comp=Z,26nm,1.5s								
TAM	**Tamanrasset**	**44.57**	**123**	P	P	**P**	**20 56 13.1**	**+0.6**	
TAM				pmax	pmax				
	comp=Z,3.0nm,1.0s								
TAM	**Tamanrasset**	**44.57**	**123**	P	P	**P**	**20 56 13.1**	**+0.6**	
EGMT	**Eagleton**	**44.68**	**292**	P	P	**P**	**20 56 13.5**	**+0.4**	
EGMT				IAmb	IAmb		20 56 16.4		
	comp=Z,11nm,1.1s								
W39A	**Magazine**	**44.93**	**268**	P	P	**P**	**20 56 16.2**	**+1.0**	
W39A				IAmb	IAmb		20 56 20.8		
	comp=Z,17nm,1.2s								
X40A	**Basin Creek Fa**	**44.93**	**266**	P	P	**P**	**20 56 14.8**	**-0.3**	
X40A				IAmb	IAmb		20 56 23.4		
	comp=Z,8.7nm,0.8s								
MIAR	**Mount Ida**	**45.30**	**267**	P	P	**P**	**20 56 18.2**	**+0.1**	
MIAR				pmax	pmax				
	comp=Z,32nm,1.7s								
MIAR	**Mount Ida**	**45.30**	**267**	P	P	**P**	**20 56 18.1**	**+0.1**	
BMAR	**Burnt Mountain**	**45.94**	**330**	P	P	**P**	**20 56 23.0**	**+0.2**	
BR131	**Keskin Array S**	**46.31**	**81**	P	P	**P**	**20 56 25.6**	**-0.6**	
BR131				pmax	pmax				
	comp=Z,3.0nm,0.9s								
BR131	**Keskin Array S**	**46.31**	**81**	P	P	**P**	**20 56 25.6**	**-0.6**	
BRTR	**Keskin Array B**	**46.31**	**81**	*c*eP	P	**P**	**20 56 27.8**	**+1.6**	
BRTR				pmax	pmax				
	comp=Z,2.0nm,0.8s								
BRTR	**Keskin Array B**	**46.31**	**81**	P	P	**P**	**20 56 27.6**	**+1.4**	
	comp=Z,1.8nm,0.8s,baz=314,slow=4.9,SNR=8.6								
BRTR				PcP	PcP		**20 58 01.6**	**+0.5**	
	comp=Z,0.9nm,0.8s,baz=116,slow=2.9,SNR=3.6								
BRTR				LR	LR		21 16 01.4		
	comp=Z,46nm,21.6s,baz=310,slow=36								
BRTR	**Keskin Array B**	**46.31**	**81**	P	P	**P**	**20 56 26.7**	**+0.5**	
RLMT	**Red Lodge**	**46.35**	**289**	P	P	**P**	**20 56 28.0**	**+1.4**	
RLMT				IAmb	IAmb		20 56 30.1		
	comp=Z,12nm,1.4s								
FYU	**Fort Yukon**	**46.73**	**329**	P	P	**P**	**20 56 31.4**	**+2.4**	
YNE	**Yellowstone No**	**46.81**	**289**	P	P	**P**	**20 56 30.6**	**+0.4**	
ARU	**Arti**	**47.30**	**49**	*d*iP	P	**P**	**20 56 34.5**	**+1.0**	
ARU							20 58 23.4		
ARU				S	S		**21 03 31.4**	**+6.0**	
ARU				pmax	pmax				
	comp=Z,13nm,1.0s								
ARU	**Arti**	**47.30**	**49**	P	P	**P**	**20 56 33.5**	**0.0**	
ARU				IAmb	IAmb		20 56 35.3		
	comp=Z,11nm,0.9s								
H17A	**Grant Village**	**47.53**	**289**	P	P	**P**	**20 56 36.5**	**+0.7**	
YHL	**Hebgen Lake**	**47.53**	**290**	P	P	**P**	**20 56 37.0**	**+1.2**	
PRP	**Porcupine Dome**	**47.56**	**328**	P	P	**P**	**20 56 36.4**	**+0.8**	
PRP				IAmb	IAmb		20 56 41.4		
	comp=Z,7.1nm,0.9s								
WMOK	**Wichita Mounta**	**48.03**	**271**	P	P	**P**	**20 56 39.9**	**+0.4**	
WMOK				pmax	pmax				
	comp=Z,10.0nm,1.1s								
WMOK	**Wichita Mounta**	**48.03**	**271**	P	P	**P**	**20 56 39.9**	**+0.4**	
WMOK				IAmb	IAmb		20 56 41.8		
	comp=Z,9.9nm,1.1s								
ISCO	**Idaho Springs**	**48.10**	**281**	P	P	**P**	**20 56 40.7**	**+0.4**	
ISCO				pmax	pmax				
	comp=Z,8.0nm,0.9s								
ISCO	**Idaho Springs**	**48.10**	**281**	P	P	**P**	**20 56 40.7**	**+0.4**	
ISCO				IAmb	IAmb		20 56 43.4		
	comp=Z,7.7nm,0.9s								
PD31	**Pinedale Array**	**48.12**	**287**	P	P	**P**	**20 56 39.9**	**-0.5**	
PDAR	**Pinedale Array**	**48.12**	**287**	P	P	**P**	**20 56 39.3**	**-1.1**	
	comp=Z,1.3nm,0.8s,baz=62,slow=6.9,SNR=9.5								
PDAR				LR	LR		21 15 38.3		
	comp=Z,224nm,20.0s,baz=36,slow=34								
PDAR	**Pinedale Array**	**48.12**	**287**	P	P	**P**	**20 56 39.6**	**-0.8**	
BCAR	**Beaver Creek A**	**48.17**	**324**	P	P	**P**	**20 56 40.6**	**+0.4**	
KIV	**Kislovodsk**	**48.19**	**71**	*e*P	P	**P**	**20 56 40.2**	**-0.5**	
KIV				pmax	pmax				
	comp=Z,21nm,1.1s								
KVAR	**Kislovodsk Arr**	**48.20**	**71**	LR	LR		21 17 23.5		
	comp=Z,128nm,18.1s,baz=247,slow=36								
SCRK	**Sand Creek**	**48.21**	**326**	P	P	**P**	**20 56 41.5**	**+0.8**	
MCMT	**McKenzie Canyo**	**48.41**	**291**	P	P	**P**	**20 56 43.3**	**+0.7**	
KBZ	**Khabaz**	**48.46**	**71**	P	P	**P**	**20 56 45.1**	**+2.5**	
	comp=Z,2.0nm,1.0s,baz=311,slow=9.8,SNR=3.7								
DOT	**Dot Lake**	**48.47**	**326**	P	P	**P**	**20 56 43.1**	**+0.5**	
DOT				IAmb	IAmb		20 56 48.5		
	comp=Z,11nm,1.1s								
IL31		**48.50**	**328**	P	P	**P**	**20 56 43.0**	**+0.3**	
IL31				IAmb	IAmb		20 56 48.4		
	comp=Z,11nm,1.1s								
ILAR	**Eielson Array**	**48.50**	**328**	P	P	**P**	**20 56 43.5**	**+0.8**	
	comp=Z,6.3nm,0.9s,baz=40,slow=6.2,SNR=48								
ILAR				PcP	PcP		**20 58 08.3**	**0.0**	
	comp=Z,2.6nm,0.9s,baz=6.7,slow=2.7,SNR=6.4								
ILAR	**Eielson Array**	**48.50**	**328**	P	P	**P**	**20 56 43.0**	**+0.3**	
ILAR						**PcP**	**20 58 07.6**	**-0.8**	
RIDG	**Independent Ri**	**48.65**	**326**	P	P	**P**	**20 56 45.0**	**+1.1**	
MDM	**Murphy Dome**	**48.75**	**329**	P	P	**P**	**20 56 45.2**	**+0.5**	
HDA	**Harding Lake**	**48.79**	**328**	P	P	**P**	**20 56 45.4**	**+0.5**	
HDA				IAmb	IAmb		20 56 48.6		
	comp=Z,12nm,0.8s								
CCB	**Clear Creek Bu**	**48.86**	**328**	P	P	**P**	**20 56 45.6**	**+0.1**	
CCB				IAmb	IAmb		20 56 54.4		
	comp=Z,15nm,1.4s								
MENT	**Mentasta**	**48.88**	**325**	P	P	**P**	**20 56 45.6**	**-0.1**	
WRH	**Wood River Hil**	**49.08**	**328**	P	P	**P**	**20 56 47.7**	**+0.6**	
WRH				IAmb	IAmb		20 57 01.0		
	comp=Z,12nm,1.2s								
C09A	**Chrisman Ranch**	**49.09**	**297**	P	P	**P**	**20 56 47.2**	**-0.2**	
C09A				IAmb	IAmb		20 56 49.3		
	comp=Z,8.5nm,0.9s								
B08A	**Colville Reser**	**49.22**	**299**	P	P	**P**	**20 56 48.2**	**-0.3**	
SMCO	**Snowmass**	**49.28**	**282**	P	P	**P**	**20 56 48.8**	**-0.7**	
MLY	**Manley**	**49.40**	**330**	P	P	**P**	**20 56 49.6**	**-0.1**	
MLY				IAmb	IAmb		20 56 58.9		
	comp=Z,9.0nm,1.1s								
PAX	**Paxson**	**49.41**	**326**	P	P	**P**	**20 56 50.4**	**+0.6**	
PAX				pmax	pmax				
	comp=Z,9.0nm,1.1s								
PAX	**Paxson**	**49.41**	**326**	P	P	**P**	**20 56 50.4**	**+0.6**	
PAX				IAmb	IAmb		20 57 00.1		
	comp=Z,9.5nm,1.1s								
IMAR	**Indian Mountai**	**49.47**	**332**	P	P	**P**	**20 56 50.3**	**+0.1**	
AMTX	**Amarillo**	**49.52**	**274**	P	P	**P**	**20 56 51.9**	**+0.9**	
RDMU	**Red Mountain**	**49.68**	**285**	P	P	**P**	**20 56 52.1**	**-0.2**	
BWN	**Browne**	**49.70**	**329**	P	P	**P**	**20 56 51.5**	**-0.4**	
F10A	**Beach Ranch, E**	**49.84**	**295**	P	P	**P**	**20 56 53.8**	**+0.5**	
MCK	**McKinley**	**49.88**	**328**	P	P	**P**	**20 56 53.8**	**+0.5**	
MCK				pmax	pmax				
	comp=Z,17nm,1.1s								
MCK	**McKinley**	**49.88**	**328**	P	P	**P**	**20 56 53.8**	**+0.5**	
DHY	**Denali Highway**	**49.91**	**327**	P	P	**P**	**20 56 55.5**	**+1.8**	
DHY				IAmb	IAmb		20 56 56.6		
	comp=Z,13nm,1.1s								
E09A	**Wood Farm, Sta**	**49.91**	**296**	P	P	**P**	**20 56 53.2**	**-0.6**	
E09A				IAmb	IAmb		20 57 12.1		
	comp=Z,15nm,1.8s								
RDOG	**Red Dog Mine**	**49.96**	**337**	P	P	**P**	**20 56 52.7**	**-1.1**	
RDOG				IAmb	IAmb		20 57 03.5		
	comp=Z,14nm,1.0s								
HWUT	**Hardware Ranch**	**50.00**	**287**	P	P	**P**	**20 56 54.8**	**+0.1**	
HKT	**Hockley**	**50.02**	**265**	P	P	**P**	**20 56 54.6**	**-0.1**	
HKT				pmax	pmax				
	comp=Z,13nm,1.2s								
HKT	**Hockley**	**50.02**	**265**	P	P	**P**	**20 56 54.6**	**-0.1**	
HKT				IAmb	IAmb		20 57 01.6		
	comp=Z,13nm,1.1s								
ABTX	**Abilene, Hawle**	**50.08**	**270**	P	P	**P**	**20 56 55.7**	**+0.4**	
GAZ	**Gaziantep**	**50.09**	**81**	P	P	**P**	**20 56 54.4**	**-0.9**	
RND	**Reindeer**	**50.10**	**328**	P	P	**P**	**20 56 55.4**	**+0.4**	
RND				pmax	pmax				
	comp=Z,9.0nm,1.0s								
RND	**Reindeer**	**50.10**	**328**	P	P	**P**	**20 56 55.4**	**+0.4**	
RND				IAmb	IAmb		20 57 05.0		
	comp=Z,9.2nm,1.0s								
BPAW	**Bear Paw Mtn.**	**50.19**	**329**	P	P	**P**	**20 56 55.8**	**+0.1**	
BPAW				IAmb	IAmb		20 57 05.5		
	comp=Z,18nm,1.4s								
TGL	**Tana Glacier**	**50.19**	**323**	P	P	**P**	**20 56 55.0**	**-0.7**	
S22A	**4UR Ranch, Cre**	**50.24**	**280**	P	P	**P**	**20 56 55.9**	**-0.7**	
CRQM	**Cirque**	**50.29**	**323**	P	P	**P**	**20 56 56.4**	**-0.2**	
TRF	**Thorofare Moun**	**50.49**	**328**	P	P	**P**	**20 56 57.7**	**-0.3**	
KTH	**Kantishna Hill**	**50.59**	**329**	P	P	**P**	**20 56 58.6**	**-0.1**	
KTH				IAmb	IAmb		20 57 08.4		
	comp=Z,21nm,1.2s								
BMO	**Blue Mountains**	**50.66**	**294**	P	P	**P**	**20 56 58.8**	**-0.8**	
BMO				pmax	pmax				
	comp=Z,7.0nm,1.3s								
BMO	**Blue Mountains**	**50.66**	**294**	P	P	**P**	**20 56 58.8**	**-0.8**	
SPUT	**South Promonto**	**50.67**	**288**	P	P	**P**	**20 56 59.1**	**-0.7**	
SML	**Sawmill**	**51.16**	**326**	P	P	**P**	**20 57 03.8**	**+0.7**	
MPU	**Maple Canyon**	**51.17**	**286**	P	P	**P**	**20 57 03.9**	**+0.3**	
AKTO	**Aktyubinsk**	**51.18**	**55**	P	P	**P**	**20 57 04.3**	**+1.1**	
	comp=Z,6.3nm,0.8s,baz=320,slow=7.0,SNR=17								
TIXI	**Tiksi**	**51.41**	**7**	*e*P	P	**P**	**20 57 05.9**	**+1.2**	
TIXI				pmax	pmax				
	comp=Z,6.0nm,0.8s								
TIXI	**Tiksi**	**51.41**	**7**	P	P	**P**	**20 57 05.0**	**+0.3**	
TOA0	**Torodi Ar. Sit**	**51.43**	**133**	P	P	**P**	**20 57 04.7**	**-0.8**	
TORD	**Torodi Ar. Bea**	**51.43**	**133**	P	P	**P**	**20 57 04.9**	**-0.6**	
	comp=Z,3.7nm,0.9s,baz=338,slow=6.0,SNR=13								
NLU	**North Lily Min**	**51.45**	**286**	P	P	**P**	**20 57 06.6**	**+0.9**	
JCT	**Junction City**	**51.80**	**269**	P	P	**P**	**20 57 07.5**	**-0.7**	
JCT				pmax	pmax				
	comp=Z,30nm,1.4s								
JCT	**Junction City**	**51.80**	**269**	P	P	**P**	**20 57 07.5**	**-0.7**	
SKT	**Skwentna**	**51.99**	**328**	P	P	**P**	**20 57 09

SEY	**Seymchan**	**60.61**	**357**	*eP*	**P**	**20 58 11.2**	**+0.7**
KKAR	**Karatay Array**	**62.32**	**53**	P	**P**	**20 58 21.2**	**-1.3**
KKAR	**Karatay Array**	**62.32**	**53**	P	**P**	**20 58 21.1**	**-1.3**
MAKZ	**Makanchi**	**64.00**	**43**	P	**P**	**20 58 33.2**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,23nm,1.8s						
MAKZ	**Makanchi**	**64.00**	**43**	P	**P**	**20 58 33.2**	**-0.4**
MA2	**Magadan**	**64.02**	**357**	*eP*	**P**	**20 58 36.8**	**+3.4**
MA2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MK31	**Makanchi Array**	**64.14**	**43**	P	**P**	**20 58 33.8**	**-0.7**
MK31				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MK31	**Makanchi Array**	**64.14**	**43**	P	**P**	**20 58 33.8**	**-0.7**
MKAR	**Makanchi Array**	**64.14**	**43**	P	**P**	**20 58 34.9**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=332,slow=5.9,SNR=14						
MKAR	**Makanchi Array**	**64.14**	**43**	P	**P**	**20 58 34.3**	**-0.1**
AAK	**Ala-Archa**	**64.43**	**51**	*iP*	**P**	**20 58 38.5**	**+1.9**
AAK				pmax	pmax		
	comp=Z,13nm,2.5s						
AAK	**Ala-Archa**	**64.43**	**51**	P	**P**	**20 58 36.7**	**+0.2**
AAK				IAmb	IAmb	20 58 39.4	
	comp=Z,9.5nm,1.3s						
ARSB	**Arslanbob**	**64.84**	**53**	P	**P**	**20 58 39.5**	**+0.2**
ARSB				IAmb	IAmb	20 58 43.1	
	comp=Z,9.7nm,1.2s						
BTK	**Batken**	**64.90**	**55**	P	**P**	**20 58 40.4**	**+0.8**
BTK				pmax	pmax		
	comp=Z,12nm,1.0s						
BTK	**Batken**	**64.90**	**55**	P	**P**	**20 58 40.4**	**+0.8**
NRN	**Naryn**	**66.06**	**51**	P	**P**	**20 58 46.7**	**-0.7**
NRN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NRN	**Naryn**	**66.06**	**51**	P	**P**	**20 58 46.6**	**-0.7**
KSH	**Kashi**	**67.63**	**52**	P	**P**	**20 59 00.3**	**+3.2**
KSH				sP	pwP	20 59 06.3	-0.2
KSH				S	**S**	**21 07 50.5**	**-2.3**
KSH				pmax	pmax		
	comp=Z,21nm,0.8s						
KSH				pmax	pmax		
	comp=Z,230nm,4.8s						
KBL	**Kabul**	**68.56**	**60**	P	**P**	**20 59 03.3**	**+0.1**
KBL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBL	**Kabul**	**68.56**	**60**	P	**P**	**20 59 03.3**	**+0.1**
KBL				IAmb	IAmb	20 59 05.2	
	comp=Z,6.2nm,1.1s						
WMQ	**Urumqi**	**68.67**	**41**	*eP*	**P**	**20 59 06.0**	**+2.5**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,68nm,4.7s						
UOSS	**Minazif**	**69.79**	**75**	P	**P**	**20 59 10.0**	**-0.7**
SONM	**Songino Array**	**70.82**	**27**	P	**P**	**20 59 16.2**	**-0.6**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**70.82**	**27**	P	**P**	**20 59 16.9**	**+0.1**
	comp=Z,1.2nm,0.9s,baz=20,slow=6.3,SNR=3.3						
SONM	**Songino Array**	**70.82**	**27**	P	**P**	**20 59 16.2**	**-0.6**
ULN	**Ulaanbaatar**	**70.95**	**26**	*eP*	**P**	**20 59 19.0**	**+1.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NIL	**Nilore**	**71.27**	**57**	P	**P**	**20 59 19.9**	**+0.3**
NIL				pmax	pmax		
	comp=Z,11nm,1.0s						
NIL	**Nilore**	**71.27**	**57**	P	**P**	**20 59 19.9**	**+0.3**
NIL				IAmb	IAmb	20 59 21.3	
	comp=Z,11nm,0.9s						
GTA	**Gaotai**	**76.72**	**35**	P	**P**	**20 59 51.5**	**0.0**
GTA				pP	pP	20 59 56.0	-2.0
GTA				sP	sP	20 59 59.3	-1.1
GTA				pmax	pmax		
	comp=Z,230nm,6.0s						
GTA				LR	LR		
	comp=Z,170nm,13.7s						
GTA				LR	LR		
	comp=Z,150nm,13.3s						
GTA				LR	LR		
	comp=Z,200nm,14.9s						
DANN	**Dangsing**	**80.49**	**52**	*eP*	**P**	**21 00 13.3**	**+0.6**
	comp=Z,14nm,0.9s						
LZH	**Lanzhou**	**81.02**	**33**	*eP*	**P**	**21 00 14.5**	**-0.7**
LZH				pP	PcP	21 00 19.3	-2.3
LZH				sP	pP	21 00 21.8	+0.1
LZH				*ePP*	**PP**	**21 03 20.5**	**+1.2**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,6.5s						
LZH				LR	LR		
	comp=Z,130nm,17.2s						
LZH				LR	LR		
	comp=Z,140nm,17.3s						
LZH				LR	LR		
	comp=Z,180nm,19.5s						
GKN	**Gorkha**	**81.17**	**52**	*eP*	**P**	**21 00 16.6**	**+0.5**
	comp=Z,19nm,0.9s						
KKN	**Kakani**	**81.64**	**51**	*eP*	**P**	**21 00 19.3**	**+0.6**
	comp=Z,30nm,0.9s						
DMN	**Daman**	**81.72**	**51**	*eP*	**P**	**21 00 19.9**	**+0.7**
	comp=Z,31nm,1.1s						
GUN	**Gumba**	**81.79**	**51**	*eP*	**P**	**21 00 20.3**	**+0.7**
	comp=Z,26nm,0.9s						
PKIN	**Phulchoki**	**81.87**	**51**	*eP*	**P**	**21 00 20.5**	**+0.5**
	comp=Z,10.0nm,1.0s						
PKI	**Pulchoki**	**81.88**	**51**	*eP*	**P**	**21 00 20.4**	**+0.3**
	comp=Z,12nm,1.0s						
JIRN	**Jiri**	**82.14**	**51**	*eP*	**P**	**21 00 22.3**	**+0.8**
	comp=Z,42nm,0.8s						
RAMN	**Ramite**	**82.93**	**51**	*eP*	**P**	**21 00 25.9**	**+0.4**
	comp=Z,25nm,0.9s						
ODAN	**Odare**	**83.35**	**50**	*eP*	**P**	**21 00 28.0**	**+0.4**
	comp=Z,18nm,0.9s						
XAN	**Xi'an**	**84.40**	**30**	P	**P**	**21 00 36.0**	**+3.3**
XAN				pP	sP	21 00 40.8	-0.8
XAN				LR	LR		
	comp=Z,170nm,14.6s						
XAN				LR	LR		
	comp=Z,140nm,19.5s						
XAN				LR	LR		
	comp=Z,160nm,15.2s						
CPUP	**Villa Florida**	**84.96**	**201**	P	**P**	**21 00 35.1**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=18,slow=6.6,SNR=4.0						
CPUP	**Villa Florida**	**84.96**	**201**	P	**P**	**21 00 34.4**	**-0.8**
KSRS	**Korea Array**	**85.02**	**14**	P	**P**	**21 00 35.9**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=2.4,slow=5.9,SNR=6.0						
KSAR	**Wonju Array Be**	**85.03**	**14**	P	**P**	**21 00 35.0**	**-0.7**
SHL	**Shillong**	**86.35**	**47**	P	**P**	**21 00 41.3**	**-1.4**
SHL				IAmb	IAmb	21 00 48.0	
	comp=Z,8.2nm,1.2s						
NJ2	**Nanjing**	**88.72**	**23**	*eP*	**P**	**21 00 53.0**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**95.53**	**44**	P	**P**	**21 01 26.0**	**+0.5**
	comp=Z,1.3nm,1.0s,baz=317,slow=5.9,SNR=5.9						
ASAR	**Alice Springs**	**145.91**	**20**	PKPbc	**PKPbc**	**21 07 38.9**	**-0.8**
	comp=Z,4.8nm,0.9s,baz=348,slow=2.6,SNR=23						

*IDC **28** 20:54:16.0±1.3,56°48N×34°40W,h0km,mb3.6/6, mb1 3.8/6,mb1mx3.5/52,mbtmp3.6/6,Error ellipse: s-maj=42.1km s-min=23.9km az=18.0*

ISC 28 20:54:17.5±1.1,56°5N±0°3×34°4W±0°2,h10km,n7,σ0s52/7, mb3.8/6,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKA	**Yellowknife Ar**	**38.67**	**313**	P	**P**	**21 01 40.3**	**-0.5**
	0.3nm,0.8s,baz=59,slow=9.2,SNR=2.7						
PDAR	**Pinedale Array**	**48.11**	**287**	P	**P**	**21 02 57.8**	**+0.4**
	0.4nm,0.8s,baz=64,slow=12,SNR=2.8						
ILAR	**Eielson Array**	**48.64**	**328**	P	**P**	**21 03 00.9**	**0.0**
	0.8nm,0.8s,baz=44,slow=6.1,SNR=11						
TORD	**Torodi Ar. Bea**	**51.34**	**133**	P	**P**	**21 03 21.8**	**-0.2**
	1.2nm,1.0s,baz=350,slow=9.5,SNR=3.9						
AKTO	**Aktyubinsk**	**51.37**	**55**	P	**P**	**21 03 22.4**	**+0.6**
	1.1nm,0.6s,baz=333,slow=6.8,SNR=5.7						
MKAR	**Makanchi Array**	**64.35**	**43**	P	**P**	**21 04 52.5**	**-0.5**
	0.4nm,0.7s,baz=332,slow=5.3,SNR=7.8						
ASAR	**Alice Springs**	**146.14**	**19**	PKPbc	**PKPdf**	**21 13 56.7**	**+0.1**
	0.7nm,0.8s,baz=336,slow=2.0,SNR=4.2						

*IDC **28** 20:56:53.5±1.6,58°86S×25°06W,h0km,mb3.9/1, mb1 3.9/1,mb1mx3.6/23,mbtmp3.9/1,Error ellipse: s-maj=92.3km s-min=62.2km az=145.0*

*NEIC **28** 20:56:59.6±1.1,58°8S±0°2×25°0W±0°8,h40km±5km, mb4.3/4,Error ellipse: s-maj=56.5km s-min=24.2km az=82.0*

ISC 28 20:56:55.5±1.0,58°9S±0°1×24°5W±0°3,h10km,n16, σ2s11/17,mb4.5/3,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.64**	**157**	P	**Pn**	**21 00 11.6**	**+2.9**
VNA3	**Neumayer Olymp**	**13.86**	**160**	P	**Pn**	**21 00 13.8**	**+2.1**
VNA3				S	Sn	21 02 35.4	-10
VNA2	**Neumayer--Watz**	**14.04**	**157**	P	**Pn**	**21 00 16.1**	**+1.9**
	baz=321,slow=14						
VNA2				S	**Sn**	**21 02 45.1**	**-4.7**
	baz=322,slow=25						
SNAA	**Sanae**	**15.58**	**154**	P	**Pn**	**21 00 37.0**	**+2.1**
SNAA	**Sanae**	**15.58**	**154**		**Pn**	**21 00 37.0**	**+2.1**
SNAA				IAmb	IAmb	21 00 52.6	
	comp=Z,2.8nm,0.6s						
QSPA	**South Pole Qui**	**31.40**	**180**	P	**P**	**21 03 17.8**	**+1.5**
QSPA				IAmb	IAmb	21 03 33.2	
	comp=Z,9.8nm,1.6s						
TOA0	**Torodi Ar. Sit**	**74.84**	**26**	P	**P**	**21 08 36.3**	**+0.4**
TOA0				IAmb	IAmb	21 09 02.5	
	comp=Z,11nm,1.6s						
TORD	**Torodi Ar. Bea**	**74.84**	**26**	P	**P**	**21 08 36.5**	**+0.5**
	comp=Z,0.7nm,0.5s,baz=201,slow=6.6,SNR=10						
TORD	**Torodi Ar. Bea**	**74.84**	**26**	P	**P**	**21 08 36.6**	**+0.6**
YKA	**Yellowknife Ar**	**139.21**	**315**	PKP	**PKPdf**	**21 16 18.6**	**-2.4**
	comp=Z,0.4nm,0.5s,baz=139,slow=1.9,SNR=8.7						
INK	**Inuvik**	**148.88**	**317**	PKPbc	**PKPbc**	**21 16 40.2**	**-1.4**
	comp=Z,1.6nm,0.5s,baz=124,slow=3.6,SNR=7.6						
CTGM	**Chitina Glacie**	**149.35**	**301**	PKPbc	**PKPbc**	**21 16 42.2**	**-1.0**
SONM	**Songino Array**	**149.37**	**89**	PKPbc	**PKPbc**	**21 16 43.7**	**0.0**
	comp=Z,0.6nm,0.5s,baz=248,slow=1.6,SNR=2.6						
DOT	**Dot Lake**	**151.52**	**306**	PKPbc	**PKPbc**	**21 16 47.7**	**-0.5**
ILAR	**Eielson Array**	**153.03**	**307**	PKPbc	**PKPbc**	**21 16 50.7**	**-0.8**
	comp=Z,0.9nm,0.7s,baz=126,slow=2.2,SNR=16						
ILAR	**Eielson Array**	**153.03**	**307**		**PKPbc**	**21 16 50.0**	**-1.5**

*IDC **28** 20:58:46.1±1.1,56°52N×34°39W,h0km,mb3.8/8, mb1 4.0/8,mb1mx3.6/63,mbtmp3.8/8,Error ellipse: s-maj=36.3km s-min=17.6km az=13.0*

*NEIC **28** 20:58:48.3±0.8,56°5N±0°2×34°5W±0°1,h16km±5km, mb4.6/25,Error ellipse: s-maj=24.6km s-min=7.9km az=189.0*

ISC 28 20:58:47.2±0.9,56°4N±0°2×34°54W±0°09,h10km,n47, σ0s81/47,mb4.5/20,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**7.37**	**314**	Pn	**Pn**	**21 00 35.3**	**+0.7**
NB201	**NORSAR Array S**	**23.82**	**60**	P	**P**	**21 04 00.8**	**+0.8**
BURAR	**Bucovina Array**	**36.71**	**78**	P	**P**	**21 05 54.6**	**+0.3**
AKASG	**Malin Array Be**	**37.07**	**71**	P	**P**	**21 05 55.0**	**-2.0**
	1.3nm,0.3s,baz=309,slow=8.7,SNR=2.7						
YKA	**Yellowknife Ar**	**38.65**	**313**	P	**P**	**21 06 09.7**	**-0.6**
	2.9nm,0.9s,baz=60,slow=9.0,SNR=5.9						
BMAR	**Burnt Mountain**	**46.08**	**330**	P	**P**	**21 07 11.0**	**+0.3**
BR131	**Keskin Array S**	**46.48**	**81**	P	**P**	**21 07 14.7**	**+0.4**
BR131				IAmb	IAmb	21 07 22.2	
	comp=Z,8.3nm,1.7s						
BRTR	**Keskin Array B**	**46.48**	**81**	P	**P**	**21 07 15.2**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=306,slow=4.4,SNR=4.7						
BRTR	**Keskin Array B**	**46.48**	**81**	P	**P**	**21 07 14.5**	**+0.2**
N23A	**Red Feather La**	**47.42**	**283**		**S**	**21 14 13.4**	**-2.7**
PRP	**Porcupine Dome**	**47.70**	**328**	P	**P**	**21 07 24.2**	**+0.7**
PRP				IAmb	IAmb	21 07 41.9	
	comp=Z,14nm,1.8s						
PDAR	**Pinedale Array**	**48.06**	**287**	P	**P**	**21 07 27.3**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=54,slow=4.6,SNR=3.9						
PDAR	**Pinedale Array**	**48.06**	**287**	P	**P**	**21 07 26.6**	**-0.1**
BCAR	**Beaver Creek A**	**48.29**	**324**	P	**P**	**21 07 28.7**	**+0.7**
SCRK	**Sand Creek**	**48.34**	**326**	P	**P**	**21 07 28.8**	**+0.3**
SCRK				IAmb	IAmb	21 07 47.7	
	comp=Z,7.2nm,1.2s						
MCMT	**McKenzie Canyo**	**48.37**	**291**	P	**P**	**21 07 31.1**	**+2.0**
KIV	**Kislovodsk**	**48.40**	**70**	P	**P**	**21 07 28.8**	**-0.4**
KIV				IAmb	IAmb	21 07 56.6	
	comp=Z,6.4nm,1.1s						
IL31		**48.63**	**328**	P	**P**	**21 07 30.8**	**+0.3**
IL31				IAmb	IAmb	21 07 38.2	
	comp=Z,10.0nm,1.5s						
ILAR	**Eielson Array**	**48.63**	**328**	P	**P**	**21 07 31.3**	**+0.7**
	comp=Z,1.8nm,0.9s,baz=40,slow=5.9,SNR=19						
ILAR	**Eielson Array**	**48.63**	**328**	P	**P**	**21 07 31.2**	**+0.6**
MDM	**Murphy Dome**	**48.89**	**329**	P	**P**	**21 07 32.9**	**+0.3**
MDM				IAmb	IAmb	21 07 48.1	
	comp=Z,9.9nm,1.2s						
HDA	**Harding Lake**	**48.92**	**328**	P	**P**	**21 07 33.1**	**+0.4**
MLY	**Manley**	**49.54**	**330**	P	**P**	**21 07 38.0**	**+0.4**
IMAR	**Indian Mountai**	**49.62**	**332**	P	**P**	**21 07 38.5**	**+0.3**
BWN	**Browne**	**49.83**	**329**	P	**P**	**21 07 40.3**	**+0.5**
TOA0	**Torodi Ar. Sit**	**51.37**	**133**	P	**P**	**21 07 52.2**	**+0.3**
TOA0				IAmb	IAmb	21 07 53.9	
	comp=Z,5.9nm,1.2s						
TORD	**Torodi Ar. Bea**	**51.37**	**133**	P	**P**	**21 07 52.0**	**+0.2**
	comp=Z,2.7nm,1.0s,baz=340,slow=6.8,SNR=8.3						
TORD	**Torodi Ar. Bea**	**51.37**	**133**	P	**P**	**21 07 51.9**	**0.0**
AKTO	**Aktyubinsk**	**51.43**	**55**	P	**P**	**21 07 52.3**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=318,slow=7.3,SNR=6.4						
SKT	**Skwentna**	**52.12**	**328**	P	**P**	**21 07 57.3**	**+0.3**
SUA	**Susitna One**	**52.29**	**327**	P	**P**	**21 07 58.0**	**-0.3**
WVOR	**Wild Horse Val**	**53.03**	**293**	P	**P**	**21 08 05.3**	**+1.1**
WVOR				IAmb	IAmb	21 08 42.1	
	comp=Z,14nm,1.9s						
ABKAR	**Akbulak array**	**53.14**	**55**	P	**P**	**21 08 04.6**	**-0.1**
BRVK	**Borovoye**	**54.74**	**46**	P	**P**	**21 08 15.7**	**-0.6**
BRVK				IAmb	IAmb	21 08 24.8	
	comp=Z,11nm,1.8s						
KVN	**Kaiserville**	**55.23**	**290**	P	**P**	**21 08 21.3**	**+0.9**
NVAR	**Mina Array Bea**	**55.80**	**289**	P	**P**	**21 08 25.6**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=52,slow=5.8,SNR=3.6						
NVAR	**Mina Array Bea**	**55.80**	**289**	P	**P**	**21 08 24.8**	**+0.3**
KURK	**Kurchatov**	**59.79**	**43**	P	**P**	**21 08 51.4**	**-0.6**
MK31	**Makanchi Array**	**64.40**	**43**	P	**P**	**21 09 21.9**	**-1.2**
MKAR	**Makanchi Array**	**64.40**	**43**	P	**P**	**21 09 22.6**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=331,slow=6.1,SNR=15						
AAK	**Ala-Archa**	**64.68**	**51**	P	**P**	**21 09 25.3**	**+0.2**
ARSB	**Arslanbob**	**65.09**	**52**	P	**P**	**21 09 27.5**	**-0.3**
ARSB				IAmb	IAmb	21 09 29.2	
	comp=Z,4.5nm,1.1s						
BTK	**Batken**	**65.15**	**55**	P	**P**	**21 09 28.1**	**-0.1**
BTK				IAmb	IAmb	21 09 38.2	
	comp=Z,5.2nm,1.1s						
NRN	**Naryn**	**66.31**	**50**	P	**P**	**21 09 36.8**	**+0.9**
NIL	**Nilore**	**71.51**	**57**	P	**P**	**21 10 08.0**	**0.0**
NIL				IAmb	IAmb	21 10 09.2	
	comp=Z,6.9nm,1.1s						
ASAR	**Alice Springs**	**146.18**	**19**	PKPbc	**PKPdf**	**21 18 26.5**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=360,slow=2.9,SNR=6.9						
ASAR	**Alice Springs**	**146.18**	**19**		**PKPdf**	**21 18 26.1**	**-0.3**

*ATH **28** 21:06:13.7,38°22N×20°41E,h11km±2km,ML2.6/3,Error ellipse: s-maj=3.1km s-min=1.3km az=253.0*

*THE **28** 21:06:13.9,38°21N×20°41E,h9km±1km,ML2.8/5,Error ellipse: s-maj=1.2km s-min=0.4km az=225.0*

ISC 28 21:06:13.7±1.2,38°21N±0°03×20°40E±0°05,h10km±6km, n19,σ0s41/33,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.03**	**216**	P	**Pg**	**21 06 15.6**	**0.0**
CHV1				S	**Sg**	**21 06 17.0**	**+0.1**
	26μm,0.2s						
KEF3	**Kipouria, Keph**	**0.04**	**264**	P	**Pg**	**21 06 15.8**	**+0.1**
KEF3				S	**Sg**	**21 06 17.3**	**+0.2**
ARG2	**Argostoli**	**0.07**	**114**	P	**Pg**	**21 06 16.0**	**0.0**
ARG2				S	**Sg**	**21 06 17.5**	**-0.1**
	24μm,0.1s						
KEF2	**Argostoli. Kep**	**0.08**	**123**	P	**Pg**	**21 06 16.2**	**+0.1**
KEF2				S	**Sg**	**21 06 17.9**	**+0.2**
VLS	**Valsamata**	**0.15**	**102**	P	**Pg**	**21 06 17.0**	**-0.1**
VLS				S	**Sg**	**21 06 19.2**	**-0.3**
	4μm,0.1s						
VLS	**Valsamata**	**0.15**	**102**	P	**Pg**	**21 06 17.0**	**-0.1**
VLS				S	**Sg**	**21 06 19.4**	**0.0**
VLS				AML	AML	21 06 19.6	
	comp=N,6346μm,0.1s						
VLS				AML	AML	21 06 19.7	
	comp=E,7024μm,0.1s						
FSK	**Fiskardo**	**0.28**	**26**	P	**Pg**	**21 06 19.3**	**-0.1**
FSK				S	**Sg**	**21 06 23.4**	**+0.2**
	comp=E,1μm,0.1s						
FSK	**Fiskardo**	**0.28**	**26**	P	**Pg**	**21 06 19.4**	**-0.1**
FSK				S	**Sg**	**21 06 24.0**	**+0.8**
KFL	**Anninata**	**0.32**	**108**	P	**Pg**	**21 06 20.0**	**-0.1**
KFL				S	**Sg**	**21 06 25.0**	**+0.7**
	comp=E,2μm,0.4s						
KFL	**Anninata**	**0.32**	**108**	P	**Pg**	**21 06 20.1**	**0.0**
KFL				S	**Sg**	**21 06 25.3**	**+0.9**
KFL				AML	AML	21 06 25.7	
	comp=E,4707μm,0.3s						
KFL				AML	AML	21 06 27.9	
	comp=N,2841μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.39**	**148**	P	**Pg**	**21 06 21.9**	**+0.5**
VLMS				S	**Sb**	**21 06 27.9**	**-0.7**
VLMS				AML	AML	21 06 32.4	
	comp=N,1618μm,0.2s						
VLMS				AML	AML	21 06 34.6	
	comp=E,1685μm,0.3s						
EVGI	**Lefkada island**	**0.46**	**26**	P	**Pg**	**21 06 22.4**	**-0.2**
EVGI				S	**Sg**	**21 06 29.4**	**+0.7**
EVGI	**Lefkada island**	**0.46**	**26**	P	**Pg**	**21 06 22.5**	**-0.2**
EVGI				S	**Sg**	**21 06 29.5**	**+0.7**
RLS	**Riolos of Patr**	**0.85**	**100**	P	**Pg**	**21 06 29.8**	**-0.3**
RLS				S	**Sb**	**21 06 42.2**	**+0.2**
LAKA	**Lakka**	**1.24**	**88**	P	**Pn**	**21 06 36.6**	**-0.5**
TRIZ	**Trizonia**	**1.32**	**83**	P	**Pn**	**21 06 37.5**	**-0.7**
KALE	**Kalithea**	**1.38**	**82**	P	**Pn**	**21 06 39.3**	**+0.3**
KLV	**Kalavryta, Ach**	**1.39**	**96**	P	**Pn**	**21 06 39.2**	**+0.1**
ITM	**Ithomi**	**1.58**	**130**	P	**Pg**	**21 06 44.1**	**0.0**

IDC 28 21:07:06.2±2.0,6°94S×150°94E,h0km,mb3.5/4, mb1 3.9/5,mb1mx3.5/40,mbtmp3.7/5,ML3.8/1,Error ellipse: s-maj=85.6km s-min=20.8km az=122.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**2.83**	**22**	Pn	Pn	21 07 54.1	+1.3
	16nm,0.3s,baz=241,slow=19,SNR=2.6						
KRVT				Sn	Sn	21 08 28.8	+1.1
	33nm,0.3s,baz=136,slow=23,SNR=6.3						
WRA	**Warramunga Arr**	**20.65**	**230**	P	P	21 11 47.7	-0.1
	0.9nm,0.3s,baz=55,slow=10,SNR=14						
ASAR	**Alice Springs**	**23.33**	**223**	P	P	21 12 16.5	+0.2
	0.5nm,0.7s,baz=58,slow=9.0,SNR=6.1						
MKAR	**Makanchi Array**	**80.73**	**320**	P	P	21 19 21.3	-0.3
	0.2nm,0.6s,baz=110,slow=6.5,SNR=2.5						
ILAR	**Eielson Array**	**84.83**	**22**	P	P	21 19 42.1	-0.3
	0.8nm,0.8s,baz=242,slow=5.0,SNR=6.6						
TORD	**Torodi Ar. Bea**	**149.12**	**284**	PKPbc	PKPbc	21 26 57.4	-0.3
	0.9nm,0.9s,baz=88,slow=1.8,SNR=4.3						

*IDC **28** 21:08:34.0±1.1,38°50N×20°52E,h0km,mb3.6/8, mb1 3.7/15,mb1mx3.5/64,mbtmp3.6/15,ML3.2/7,Error ellipse: s-maj=19.5km s-min=16.0km az=38.0*

*ATH **28** 21:08:35.4,38°41N×20°50E,h15km±1km,ML3.6/27,Error ellipse: s-maj=1.6km s-min=0.6km az=269.0*

*THE **28** 21:08:35.5,38°41N×20°46E,h13km,ML3.7/14,Error ellipse: s-maj=0.9km s-min=0.3km az=280.0*

*PDG **28** 21:08:36.3±0.1,38°57N×19°73E,h0km±11km,ML3.8/14, Error ellipse: s-maj=1.1km s-min=0.5km az=90.0*

ISC 28 21:08:35.5±0.8,38°42N±0°02×20°49E±0°02,h14km±5km, n128,σ1s59/181,mb3.6/8,22C-7D,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.24**	**181**	P	**Pg**	**21 08 40.3**	**-0.3**
ARG2				S	**Sg**	**21 08 44.2**	**+0.2**
	119μm,0.3s						
KEF3	**Kipouria, Keph**	**0.24**	**208**	P	**Pg**	**21 08 40.2**	**-0.5**
KEF3				S	**Sg**	**21 08 44.5**	**+0.3**
KEF3				AML	AML	21 08 45.5	
KEF3				AML	AML	21 08 45.7	
EVGI	**Lefkada island**	**0.24**	**32**	P	**Pg**	**21 08 40.7**	**-0.1**
EVGI				S	**Sb**	**21 08 45.1**	**-0.8**
EVGI	**Lefkada island**	**0.24**	**32**	P	**Pg**	**21 08 40.6**	**-0.1**
EVGI				S	**Sg**	**21 08 44.9**	**+0.6**
CHV1	**Chavriata, Kef**	**0.25**	**201**	P	**Pg**	**21 08 40.4**	**-0.4**
CHV1				S	**Sg**	**21 08 45.0**	**+0.7**
KEF2	**Argostoli. Kep**	**0.25**	**181**	P	**Pg**	**21 08 40.5**	**-0.4**
KEF2				S	**Sg**	**21 08 44.9**	**+0.5**
KEF2				AML	AML	21 08 45.2	
KEF2				AML	AML	21 08 45.6	
VLS	**Valsamata**	**0.25**	**162**	P	**Pg**	**21 08 40.5**	**-0.3**
VLS				S	**Sg**	**21 08 44.6**	**+0.1**
	18μm,0.3s						
VLS	**Valsamata**	**0.25**	**162**	P	**Pg**	**21 08 40.5**	**-0.3**
VLS				S	**Sg**	**21 08 44.2**	**-0.2**
VLS				AML	AML	21 08 45.1	
	comp=E,35513μm,0.3s						
VLS				AML	AML	21 08 46.8	
	comp=N,34461μm,0.2s						
MGNA	**Meganis**	**0.34**	**44**	P	**Pg**	**21 08 42.2**	**-0.1**
MGNA				S	**Sg**	**21 08 47.4**	**+0.4**
MGNA				AML	AML	21 08 49.1	
	comp=E,13526μm,0.3s						
MGNA				AML	AML	21 08 49.4	
	comp=N,23454μm,0.3s						
KFL	**Anninata**	**0.38**	**143**	P	**Pg**	**21 08 43.0**	**-0.2**
KFL				S	**Sb**	**21 08 49.5**	**-0.4**
	comp=N,20μm,0.3s						
KFL	**Anninata**	**0.38**	**143**	P	**P

comp=N,12128µm,0.7s
EFP AML AML 21 09 22.2
comp=E,7431µm,0.7s
ANX Ano Chora 1.14 81 P **Pb** **21 08 56.8 -0.2**
ANX S **Sn** **21 09 13.7 +1.1**
comp=E,4µm,0.6s
ANX Ano Chora 1.14 81 P **Pb** **21 08 56.5 -0.5**
ANX AML AML 21 09 23.9
comp=N,8064µm,0.6s
ANX AML AML 21 09 25.2
comp=E,6531µm,0.7s
EVR Evrytania 1.15 64 P **Pb** **21 08 56.9 -0.3**
EVR Evrytania 1.15 64 P **Pb** **21 08 56.8 -0.4**
EVR AML AML 21 09 29.0
comp=N,2319µm,0.8s
EVR AML AML 21 09 32.5
comp=E,2732µm,0.7s
LAKA Lakka 1.18 98 P **Pn** **21 08 57.1 -0.6**
LAKA S **Sn** **21 09 13.7 0.0**
LAKA Lakka 1.18 98 P **Pn** **21 08 56.9 -0.8**
LAKA AML AML 21 09 23.5
comp=N,3448µm,0.6s
LAKA AML AML 21 09 25.6
comp=E,2945µm,1.1s
SERG Sergoula 1.23 90 P **Pn** **21 08 58.1 -0.3**
SERG S **Sg** **21 09 15.9 +0.7**
comp=E,3µm,0.6s
SERG Sergoula 1.23 90 P **Pn** **21 08 58.0 -0.3**
SERG AML AML 21 09 24.8
comp=N,7741µm,0.7s
SERG AML AML 21 09 25.0
comp=E,5244µm,0.6s
TRIZ Trizonia 1.24 92 P **Pn** **21 08 58.3 -0.2**
TRIZ S **Sn** **21 09 15.1 0.0**
comp=E,3µm,0.5s
TRIZ Trizonia 1.24 92 P **Pn** **21 08 58.3 -0.2**
JAN Janina 1.27 13 P **Pg** **21 08 59.9 -0.1**
JAN AML AML 21 09 24.2
comp=N,3138µm,0.6s
JAN AML AML 21 09 24.3
comp=E,3826µm,0.7s
KALE Kalithea 1.29 91 P **Pn** **21 08 59.0 -0.3**
KALE S **Sg** **21 09 17.4 +0.1**
comp=E,3µm,0.9s
KALE Kalithea 1.29 91 P **Pn** **21 08 59.1 -0.3**
KALE AML AML 21 09 28.3
comp=N,6386µm,0.6s
KALE AML AML 21 09 28.4
comp=E,4645µm,1.1s
AMT Artemida-Makis 1.30 132 P **Pn** **21 08 59.3 -0.1**
AMT Artemida-Makis 1.30 132 P **Pb** **21 09 00.1 +0.2**
AMT AML AML 21 09 30.8
comp=N,6158µm,1.0s
AMT AML AML 21 09 39.1
comp=E,4773µm,0.6s
KLV Kalavryta, Ach 1.36 105 P **Pn** **21 09 00.1 -0.1**
KLV AML AML 21 09 29.6
comp=E,1722µm,0.5s
KLV AML AML 21 09 32.6
comp=N,2144µm,1.0s
KASA Kassiopi 1.40 342 P **Pg** **21 09 02.0 -0.4**
MAKR Makrakomi, Fth 1.42 65 P **Pb** **21 09 01.8 0.0**
MAKR AML AML 21 09 36.5
comp=N,3176µm,0.6s
MAKR AML AML 21 09 37.3
comp=E,2849µm,0.5s
AGG Agios Georgios 1.56 67 P **Pb** **21 09 04.3 +0.1**
AGG AML AML 21 09 36.5
comp=E,1956µm,0.9s
AGG AML AML 21 09 42.2
comp=N,1742µm,1.0s
THL Klokotos Trika 1.65 45 P **Pb** **21 09 06.3 +0.5**
THL AML AML 21 09 37.7
comp=E,1910µm,0.6s
THL AML AML 21 09 38.0
comp=N,2244µm,0.6s
ITM Ithomi 1.68 137 P **Pb** **21 09 06.2 0.0**
PROD Prodromos 1.90 94 P **Pb** **21 09 09.8 -0.2**
PROD AML AML 21 09 45.0
comp=N,2503µm,0.8s
PROD AML AML 21 09 46.0
comp=E,2425µm,0.7s
LKR Lokris 1.98 82 P **Pb** **21 09 10.6 -0.8**
LKR AML AML 21 09 48.4
comp=N,958µm,0.5s
LKR AML AML 21 09 56.9
comp=E,822µm,0.9s
LTK Loutraki 1.99 101 P **Pb** **21 09 11.2 -0.3**
LOUT Loutraki 2.00 102 P **Pb** **21 09 11.3 -0.4**
LOUT AML AML 21 09 54.1
comp=E,256µm,0.7s
LOUT AML AML 21 10 02.6
comp=N,218µm,0.8s
VIL2 Platees 2.19 94 P **Pb** **21 09 14.6 -0.4**
VIL2 AML AML 21 09 57.7
comp=N,1540µm,0.8s
VIL2 AML AML 21 10 00.8
comp=E,2301µm,0.8s
DID Didima 2.35 112 P **Pn** **21 09 15.7 +1.9**
EREA Eretria 2.70 89 P **Pn** **21 09 21.1 +2.5**
EREA AML AML 21 10 20.6
comp=E,665µm,1.5s
EREA AML AML 21 10 21.7
comp=N,550µm,0.8s
OHR Ohrid 2.70 5 *e*Pn **Pb** **21 09 21.6 -2.2**
TIR Tirane 2.97 351 ⇓P **Pn** **21 09 22.9 +0.6**
TIR Tirane 2.97 351 ⇓S **Sn** **21 10 00.2 +2.5**
TIP Timpagrande 3.02 286 ⇑P **Pn** **21 09 25.1 +2.1**
TIP Timpagrande 3.02 286 ⇑S **Sn** **21 10 01.3 +2.3**
VAY Valandovo 3.31 28 *e*Pn **Pb** **21 09 32.1 -2.0**
STIP Stip 3.52 21 *e*Pn **Pn** **21 09 33.7 +3.8**
ULC Ulcinj 3.67 345 ⇑*i*Pn **Pn** **21 09 31.6 -0.4**
ULC *i* Sn **Sn** **21 10 14.6 -0.5**
MATE Matera 3.68 308 ⇑P **Pn** **21 09 33.3 +1.3**
MATE Matera 3.68 308 ⇓S **Sg** **21 10 39.5 +5.8**
SG1 Sgolgore (BA) 3.81 311 *e*Pn **Pn** **21 09 35.1 +1.2**
DRME Dracevica, Mon 3.90 346 ⇑*i*Pn **Pn** **21 09 35.0 0.0**
DRME *e*Sn **Sn** **21 10 20.1 -0.5**
BUM Brajici-Budva 4.07 343 ⇑*i*Pn **Pn** **21 09 36.9 -0.6**
BUM *i* Sn **Sn** **21 10 23.4 -1.5**
PDG Podgorica 4.12 347 ⇑P **Pn** **21 09 38.4 +0.3**
PDG Podgorica 4.12 347 ⇑S **Sn** **21 10 20.5 -5.6**
TTG Podgorica 4.12 347 ⇑*i*Pn **Pn** **21 09 38.4 +0.3**
TTG *i* Sn **Sn** **21 10 26.0 -0.1**
PVY Plav 4.20 355 ⇑*i*Pn **Pn** **21 09 40.3 +1.1**
PVY *e*Sn **Sn** **21 10 29.0 +0.9**
APE Apeiranthos 4.21 107 ⇓P **Pg** **21 09 55.1 -1.1**
APE Apeiranthos 4.21 107 ⇑S **Sb** **21 10 39.7 -0.6**
CEME Cevo 4.30 344 ⇑*i*Pn **Pn** **21 09 40.1 -0.5**
CEME *e*Sn **Sn** **21 10 29.3 -1.3**
HCY Herceg Novi 4.31 340 ⇑*i*Pn **Pn** **21 09 39.9 -0.8**
HCY *i* Sn **Sn** **21 10 28.5 -2.2**
IVA Berane 4.48 354 *e*Pn **Pn** **21 09 44.0 +0.9**
IVA *e*Sn **Sn** **21 10 35.7 +0.7**
KOME Kolasin 4.49 351 *e*Pn **Pn** **21 09 43.8 +0.5**
KOME *e*Sn **Sn** **21 10 35.6 +0.2**
NKME Niksic 4.50 345 *e*Pn **Pn** **21 09 43.6 +0.2**
NKME *e*Sn **Sn** **21 10 34.5 -1.1**
NKY Niksic 4.54 346 *e*Pn **Pn** **21 09 43.6 -0.4**
NKY *e*Sn **Sn** **21 10 35.4 -1.2**
DBRK Dubrovnik 4.61 338 *e*Pn **Pn** **21 09 45.3 +0.4**
DBRK Sn **Sn** **21 10 35.6 -2.5**
VTS Vitosha 4.69 26 ⇑P **Pn** **21 09 49.0 +3.0**
VTS Vitosha 4.69 26 ⇑S **Sn** **21 10 40.6 +0.2**
IDI Anoyia 4.71 130 Pn **Pn** **21 09 48.8 +2.6**
comp=N,0.6nm,0.3s,baz=303,slow=17,SNR=3.0
IDI Sn **Sn** **21 10 45.0 +4.3**
comp=N,2.4nm,0.3s,baz=351,slow=19,SNR=4.3
BRY Bratogost 4.72 342 ⇑*i*Pn **Pn** **21 09 45.8 -0.7**
BRY *e*Sn **Sn** **21 10 39.0 -2.1**
VAE Valguarnera 4.90 261 Pn **Pn** **21 09 53.1 +4.3**
comp=N,0.8nm,0.3s,baz=59,slow=9.5,SNR=2.8
VAE Sn **Sn** **21 10 44.3 -1.0**
comp=N,1.3nm,0.3s,baz=180,slow=20,SNR=2.5
STON Ston 4.93 335 *i* Pn **Pn** **21 09 48.2 -1.0**
STON Sn **Sn** **21 10 43.6 -2.4**
UPM Unac-Piva 4.93 346 ⇓*i*Pn **Pn** **21 09 49.2 -0.2**
UPM *e*Sn **Sn** **21 10 45.0 -1.4**
PLE Pljevlja 4.98 351 *e*Pn **Pn** **21 09 50.7 +0.7**
PLE *e*Sn **Sn** **21 10 47.3 -0.2**
MAKA Makarska 5.53 333 *e*Pn **Pn** **21 09 57.5 0.0**
ELND Elena 6.09 41 ⇑P Pn 21 10 10.3 +5.2
KIJV Kijevo 6.38 332 *e*Pn **Pn** **21 10 09.2 +0.1**
KIJV Sn **Sn** **21 11 19.7 -2.1**

ZIRJ Zirje 6.39 327 *e*Pn **Pn** **21 10 08.4 -0.8**
ZIRJ Sn **Sn** **21 11 19.1 -2.8**
MORI Morici 6.53 328 *e*Pn **Pn** **21 10 11.2 0.0**
MORI Sn **Sn** **21 11 23.3 -2.2**
BLY Banja Luka 6.80 340 ⇑P **Pn** **21 10 14.6 -0.2**
DUGI Dugi Otok 6.92 325 *e*Pn **Pn** **21 10 16.4 -0.1**
UDBI Udbina 7.06 331 *i* Pn **Pn** **21 10 19.5 +0.9**
UDBI Sn **Sn** **21 11 37.1 -1.6**
GZR Gura Zlata 7.18 13 ⇑P **Pn** **21 10 21.7 +1.6**
BZS Buzias 7.25 6 ⇑P **Pn** **21 10 21.3 +0.4**
NVLJ Novalja 7.45 327 Sn **Sn** **21 11 45.0 -3.1**
ARR Arges 7.60 23 ⇑P **Pn** **21 10 29.5 +3.6**
VOIR 7.79 24 ⇓P **Pn** **21 10 31.4 +2.8**
MLR Muntele Rosu 8.15 28 Pn **Pn** **21 10 35.9 +2.4**
comp=N,0.1nm,0.3s,baz=299,slow=19,SNR=3.1
MLR Muntele Rosu 8.15 28 ⇑P **Pn** **21 10 37.3 +3.7**
PLOR Plostina 8.72 30 ⇓P **Pn** **21 10 45.3 +4.0**
SOKA Soboth 9.19 336 *e*Pn **Pn** **21 10 46.9 -0.8**
comp=N,3.9nm,0.7s
SOKA *e*Sn **Sn** **21 12 25.7 -5.2**
comp=N,3.5nm,0.6s
OBKA Obir 9.20 333 *e*Pn **Pn** **21 10 48.1 +0.2**
comp=N,1.2nm,0.3s
OBKA Sn **Sn** **21 12 29.7 -1.5**
comp=N,5.2nm,0.5s
KEST Kesra 9.30 257 Pn **Pn** **21 10 51.3 +2.0**
comp=N,0.2nm,0.3s,baz=27,slow=14,SNR=3.6
KBA Koelnbreinsper 10.12 331 Pn **Pn** **21 11 00.4 -0.2**
comp=N,0.7nm,0.3s
KBA Sn **Sn** **21 12 50.3 -3.8**
comp=N,2.2nm,0.8s
BRTR Keskin Array B 10.31 79 Pn **Pn** **21 11 06.2 +3.0**
comp=N,0.1nm,0.3s,baz=256,slow=12,SNR=3.0
MOA Molln 10.47 336 Pn **Pn** **21 11 05.6 +0.5**
comp=N,1.3nm,0.4s
MOA Sn **Sn** **21 12 58.2 -4.0**
comp=N,1.4nm,0.4s
WTTA Wattenberg 10.97 327 Pn **Pn** **21 11 12.0 -0.2**
comp=N,1.3nm,0.3s
WATA Walderalm 11.05 327 Pn **Pn** **21 11 14.5 +1.2**
comp=N,2.4nm,0.5s
SQTA Sankt Quirin 11.12 325 Pn **Pn** **21 11 16.5 +2.2**
comp=N,0.8nm,0.2s
MOTA Moosalm 11.27 325 Pn **Pn** **21 11 16.4 +0.2**
comp=N,0.8nm,0.3s
DAVOX Davos/Dischmat 11.44 320 Pn **Pn** **21 11 18.6 0.0**
comp=N,0.1nm,0.3s,baz=144,slow=19,SNR=1.9
DAVOX Sn **Sn** **21 13 24.0 -2.3**
comp=N,0.2nm,0.3s,baz=303,slow=16,SNR=3.1
GERES GERESS Array B 11.52 337 Pn **Pn** **21 11 19.6 -0.1**
comp=N,0.2nm,0.3s,baz=157,slow=13,SNR=5.5
GERES Sn **Sn** **21 13 22.1 -6.1**
comp=N,0.2nm,0.3s,baz=154,slow=25,SNR=5.8
MMAI Mount Meron Ar 13.26 109 Pn **Pn** **21 11 41.6 -1.8**
comp=N,0.3nm,0.3s,baz=301,slow=11,SNR=2.8
HFS Hagfors 22.16 351 P **P** **21 13 31.1 +0.2**
comp=N,7.0nm,1.0s,baz=170,slow=10.0,SNR=4.8
EKA Eskdalemuir Ar 23.22 324 P **P** **21 13 42.9 +0.9**
comp=N,2.3nm,0.8s,baz=126,slow=9.7,SNR=4.7
FINES FINESS Array B 23.32 7 P **P** **21 13 41.0 -1.9**
comp=N,0.9nm,0.4s,baz=166,slow=12,SNR=8.5
NOA NORSAR Array B 23.38 349 P **P** **21 13 42.5 -1.1**
comp=N,1.4nm,0.8s,baz=162,slow=9.3,SNR=3.5
TORD Torodi Ar. Bea 30.20 219 P **P** **21 14 46.3 +0.7**
comp=N,0.4nm,0.7s,baz=28,slow=9.5,SNR=3.4
KURBB Kurchatov Arra 42.11 54 P **P** **21 16 27.6 +0.5**
comp=N,0.1nm,0.4s,baz=282,slow=9.6,SNR=2.4
MKAR Makanchi Array 45.20 59 P **P** **21 16 51.9 -0.1**
comp=N,0.3nm,0.4s,baz=279,slow=7.2,SNR=11
ZALV Zalesovo Beam 45.55 48 P **P** **21 16 53.8 -0.9**
comp=N,1.4nm,0.4s,baz=272,slow=8.4,SNR=8.5

*MOS **28** 21:11:28.7≈1.2,56˚.63N×34˚.46W,h12km,mb4.7/14,Error ellipse: s-maj=11.8km s-min=7.7km az=74.7*
*IDC **28** 21:11:29.1≈0.6,56˚.58N×34˚.37W,h0km,mb4.1/29, mb1 4.2/32,mb1mx4.1/59,mbtmp4.1/32,ML3.2/3,MS4.2/39, Ms1 4.2/39,ms1mx4.1/49,Error ellipse: s-maj=18.2km s-min=10.6km az=9.0*
*NEIC **28** 21:11:29.6≈1.9,56˚.70N±0˚.08×34˚.4W±0˚.1,h10km±1km, mb4.8/92,Error ellipse: s-maj=13.9km s-min=11.7km az=185.0*
*GCMT **28** 21:11:31.6≈0.2,56˚.69N±0˚.02×34˚.24W±0˚.02,h12km, MW5.0/116,Moment Tensor Solution. s40,c44; s116,c174; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.45±.08; Mθθ0.25±.09; Mϕϕ3.20±.06; Mrθ0.47±.33; Mθϕ0.28±.07; Mϕr-1.12±.26; Best double couple: Mo3.54800×10¹⁶ NP1:ϕs193.00000°,δ37.00000°, λ-77.00000°. NP2:ϕs357.00000°,δ55.00000°, λ-100.00000°. Principal axes: T 3.3960, Plg9.0000°, Azm94.0000°; N 0.3050, Plg8.0000°, Azm2.0000°; P -3.7000, Plg78.0000°, Azm232.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 21:11:30.4≈0.4,56.75N±0˚.06×34.47W±0˚.05,h10km,n184,
σ1ˢ58/140,mb4.7/95,MS4.2/43,4C-5D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
IVI	**Ivigtut**	**8.37**	**308**	Pn		**Pn**		**21 13 34.2**	**+2.7**
IVI						**Sn**		**21 15 02.6**	**-3.3**
ANGG	**Ammassalik, Gr**	**9.03**	**352**	Pn		**Pn**		**21 13 39.9**	**-0.7**
ANGG						**Sn**		**21 15 13.8**	**-8.3**
BORG	**Borgarnes**	**10.26**	**33**	Pn		Pn		21 14 03.5	+6.1
	1.3nm,0.3s,baz=240,slow=4.8,SNR=8.1								
BORG						**Sn**		**21 15 47.4**	**-5.0**
	0.3nm,0.3s,baz=291,slow=8.6,SNR=4.4								
BORG				LR		LR		21 16 50.0	
	comp=Z,3µm,19.8s,baz=249,slow=31								
BORG	**Borgarnes**	**10.26**	**33**			**Pn**		**21 14 01.6**	**+4.1**
SFJD	**Kangerlussuaq**	**12.74**	**330**	LR		LR		21 18 42.8	
	comp=Z,2µm,18.7s,baz=140,slow=34								
SUMG	**Summit**	**15.98**	**356**	P		**Pn**		**21 15 15.2**	**-0.1**
SUMG				pmax		pmax			
	comp=Z,74nm,1.7s								
SUMG	**Summit**	**15.98**	**356**	*i* P		**Pn**		**21 15 15.2**	**-0.1**
SUMG	**Summit**	**15.98**	**356**			**Pn**		**21 15 15.2**	**-0.1**
EKA	**Eskdalemuir Ar**	**17.47**	**81**	P		**Pn**		**21 15 33.0**	**-0.9**
	baz=268,slow=14,SNR=3.0								
EKA				LR		LR		21 21 07.4	
	comp=Z,2µm,18.5s,baz=290,slow=33								
JMIC	**Jan Mayen**	**18.05**	**28**	LR		LR		21 21 02.1	
	comp=Z,998nm,19.7s,baz=238,slow=32								
FRB	**Frobisher Bay**	**18.12**	**307**	P		**P**		**21 15 43.8**	**+1.7**
	comp=Z,0.4nm,0.3s,baz=101,slow=10,SNR=8.4								
SCHQ	**Schefferville**	**18.21**	**278**	P		**P**		**21 15 43.8**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=107,slow=6.8,SNR=5.4								
SCHQ				LR		LR		21 21 42.6	
	comp=Z,1µm,18.4s,baz=80,slow=34								
SCHQ	**Schefferville**	**18.21**	**278**	P		**P**		**21 15 44.2**	**+0.9**
DAG	**Danmarks Havn**	**20.90**	**10**	P		Pn		21 16 15.6	+0.7
DAG	**Danmarks Havn**	**20.90**	**10**	*i* P		Pn		21 16 17.7	+2.8
F64A	**Sherman**	**23.57**	**257**	P		**P**		**21 16 41.2**	**+0.4**
F64A				IAmb		IAmb		21 16 49.6	
	comp=Z,43nm,1.2s								
NOA	**NORSAR Array B**	**23.60**	**60**	P		**P**		**21 16 41.1**	**0.0**
	comp=Z,2.7nm,0.8s,baz=290,slow=9.6,SNR=4.5								
NOA				LR		LR		21 24 24.5	
	comp=Z,522nm,21.8s,baz=280,slow=33								
HFS	**Hagfors**	**24.98**	**62**	P		**P**		**21 16 54.8**	**+1.0**
	comp=Z,8.6nm,1.0s,baz=277,slow=11,SNR=3.7								
HFS				LR		LR		21 25 35.0	
	comp=Z,589nm,18.4s,baz=280,slow=34								
G62A	**West of Eustis**	**25.16**	**258**	P		**P**		**21 16 55.2**	**-0.3**
G62A				IAmb		IAmb		21 17 14.8	
	comp=Z,60nm,1.6s								
ESDC	**Sonseca Array**	**26.23**	**118**	P		**P**		**21 17 04.3**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=317,slow=7.4,SNR=3.6								
ESDC				LR		LR		21 25 36.4	
	comp=Z,690nm,18.3s,baz=320,slow=32								
ESDC	**Sonseca Array**	**26.23**	**118**	P		**P**		**21 17 03.2**	**-2.1**
KBS	**Kingsbay**	**26.84**	**18**	P		**P**		**21 17 08.8**	**-1.7**
KBS				pmax		pmax			
	comp=Z,35nm,1.2s								
KBS	**Kingsbay**	**26.84**	**18**	P		**P**		**21 17 08.8**	**-1.7**
KBS				IAmb		IAmb		21 17 15.3	
	comp=Z,35nm,1.2s								
BFO	**Black Forest**	**26.96**	**90**	P		**P**		**21 17 10.7**	**-1.2**
BFO				pmax		pmax			
	comp=Z,24nm,1.5s								
BFO	**Black Forest**	**26.96**	**90**	P		**P**		**21 17 10.7**	**-1.2**
MOX	**Moxa**	**27.52**	**83**	P		**P**		**21 17 17.7**	**+0.9**
MOX				pmax		pmax			

comp=Z,8.0nm,1.4s
ARCES ARCESS Array B 28.57 40 P **P** **21 17 27.3 +1.2**
comp=Z,2.0nm,0.8s,baz=262,slow=7.2,SNR=6.0
ARCES LR LR 21 26 43.4
comp=Z,487nm,18.1s,baz=255,slow=32
DAVOX Davos/Dischmat 28.72 91 LR LR 21 28 30.7
comp=Z,1µm,18.8s,baz=332,slow=36
RES Resolute Bay 28.74 331 P **P** **21 17 28.8 +1.3**
RES pmax pmax
comp=Z,18nm,2.0s
RES Resolute Bay 28.74 331 P **P** **21 17 29.1 +1.7**
comp=Z,0.7nm,0.6s,baz=168,slow=9.0,SNR=6.2
RES LR LR 21 28 42.0
comp=Z,245nm,18.8s,baz=118,slow=36
RES Resolute Bay 28.74 331 P **P** **21 17 28.8 +1.3**
GERES GERESS Array B 29.63 85 P **P** **21 17 36.5 +0.8**
comp=Z,0.8nm,0.8s,baz=316,slow=4.1,SNR=4.2
GERES GERESS Array B 29.63 85 P **P** **21 17 34.0 -1.7**
DPC Dobruska-Polom 30.24 80 P **P** **21 17 42.0 +1.0**
FINES FINESS Array B 30.45 56 P **P** **21 17 42.6 -0.1**
comp=Z,3.6nm,0.8s,baz=262,slow=9.4,SNR=4.2
FINES LR LR 21 28 37.1
comp=Z,222nm,21.4s,baz=280,slow=34
FINES FINESS Array B 30.45 56 P **P** **21 17 41.2 -1.5**
VRAC Vranov 30.95 82 LR LR 21 29 50.2
comp=Z,932nm,20.4s,baz=330,slow=36
FCC Fort Churchill 30.97 299 P **P** **21 17 46.6 -0.7**
FCC pmax pmax
comp=Z,26nm,1.8s
FCC Fort Churchill 30.97 299 P **P** **21 17 46.6 -0.7**
FCC IAmb IAmb 21 17 53.0
comp=Z,26nm,1.8s
NIE Niedzica 32.90 79 P **P** **21 18 05.7 +1.2**
NIE pmax pmax
comp=Z,3.0nm,1.5s
J48A Bridge Port 33.65 268 P **P** **21 18 08.8 -2.1**
J47A Sunmer 34.26 269 P **P** **21 18 16.7 +0.5**
ULM Lac du Bonnet 35.99 286 P **P** **21 18 30.5 -0.6**
ULM pmax pmax
comp=Z,32nm,1.9s
ULM Lac du Bonnet 35.99 286 P **P** **21 18 31.8 +0.7**
comp=Z,2.1nm,0.8s,baz=40,slow=7.4,SNR=4.0
ULM LR LR 21 31 50.5
comp=Z,751nm,20.6s,baz=75,slow=34
ULM Lac du Bonnet 35.99 286 P **P** **21 18 30.5 -0.6**
ULM IAmb IAmb 21 18 42.8
comp=Z,32nm,1.9s
KEST Kesra 36.03 107 LR LR 21 31 45.9
comp=Z,335nm,18.7s,baz=256,slow=34
KLMR Klimovskoe 36.67 52 *e*P **P** **21 18 35.5 -1.2**
KLMR pmax pmax
comp=Z,28nm,1.3s
KLMR Klimovskoe 36.67 52 *e*P **P** **21 18 35.5 -1.2**
KLMR AMP 21 18 48.4
comp=Z,28nm,1.3s
KLMR LR LR 21 31 24.7
AKASG Malin Array Be 36.93 72 P **P** **21 18 37.7 -1.4**
AKASG pmax pmax
comp=Z,2.0nm,1.0s
AKASG Malin Array Be 36.93 72 P **P** **21 18 38.9 -0.2**
comp=Z,1.7nm,0.3s,baz=307,slow=8.5,SNR=1.8
AKASG LR LR 21 33 55.9
comp=Z,394nm,20.0s,baz=275,slow=36
AKASG Malin Array Be 36.93 72 P **P** **21 18 37.7 -1.4**
AKBB Malin Array Si 36.93 72 P **P** **21 18 37.4 -1.7**
AKBB pmax pmax
comp=Z,9.0nm,1.1s
AKBB Malin Array Si 36.93 72 P **P** **21 18 37.4 -1.7**
OBN Obninsk 38.19 61 *i* P **P** **21 18 48.8 -0.9**
OBN *i* 21 20 16.1
OBN pmax pmax
comp=Z,9.0nm,1.2s
OBN MLR MLR
comp=Z,212nm,14.0s
TZTN Tazewell 38.25 259 P **P** **21 18 48.8 -1.6**
YKA Yellowknife Ar 38.47 313 P **P** **21 18 53.2 +1.3**
comp=Z,1.4nm,0.8s,baz=60,slow=8.8,SNR=13
YKA PcP **PcP** **21 21 04.6 -0.1**
comp=Z,1.0nm,0.8s,baz=51,slow=3.2,SNR=8.0
YKA LR LR 21 34 26.0
comp=Z,431nm,18.0s,baz=0.0,slow=36
ECSD EROS Data Cent 40.41 279 P **P** **21 19 08.5 +0.1**
ECSD IAmb IAmb 21 19 15.0
comp=Z,26nm,1.6s
S44A Carbondale 40.52 266 P **P** **21 19 08.6 -0.8**
S44A IAmb IAmb 21 19 19.2
comp=Z,24nm,1.1s
CCM Cathedral Cave 41.36 268 P **P** **21 19 14.5 -1.8**
CCM pmax pmax
comp=Z,17nm,1.1s
CCM Cathedral Cave 41.36 268 P **P** **21 19 14.5 -1.8**
CCM IAmb IAmb 21 19 20.0
comp=Z,17nm,1.1s
INK Inuvik 42.06 327 P **P** **21 19 21.5 -0.1**
INK pmax pmax
comp=Z,12nm,1.4s
INK Inuvik 42.06 327 P **P** **21 19 22.6 +1.0**
comp=Z,3.7nm,1.1s,baz=44,slow=8.1,SNR=5.0
INK Inuvik 42.06 327 P **P** **21 19 21.4 -0.1**
LCAR Lake Charles 42.75 266 P **P** **21 19 27.2 -0.4**
OXF Oxford 42.95 263 P **P** **21 19 28.1 -1.1**
OXF pmax pmax
comp=Z,53nm,1.1s
OXF Oxford 42.95 263 P **P** **21 19 28.1 -1.1**
U40A Yellville 43.47 268 IAmb IAmb 21 19 43.2
comp=Z,20nm,1.4s
LAO LASA Array 43.61 289 IAmb IAmb 21 19 44.8
comp=Z,22nm,1.1s
W41B Gary Mavity, V 44.01 266 P **P** **21 19 38.1 +0.3**
EPYK Eagle Plains 44.22 326 IAmb IAmb 21 19 48.4
comp=Z,32nm,1.4s
EGMT Eagleton 44.56 292 IAmb IAmb 21 19 52.4
comp=Z,14nm,1.1s
TAM Tamanrasset 44.69 123 P **P** **21 19 42.6 -0.9**
TAM pmax pmax
comp=Z,8.0nm,1.4s
TAM Tamanrasset 44.69 123 P **P** **21 19 42.6 -0.9**
X40A Basin Creek Fa 44.84 266 IAmb IAmb 21 19 53.7
comp=Z,11nm,0.9s
TUL1 Leonard 45.42 270 IAmb IAmb 21 19 53.8
comp=Z,20nm,1.1s
RLMT Red Lodge 46.24 289 IAmb IAmb 21 20 06.1
comp=Z,12nm,1.3s
BR131 Keskin Array S 46.39 81 P **P** **21 19 56.6 -0.3**
BR131 pmax pmax
comp=Z,18nm,1.9s
BR131 Keskin Array S 46.39 81 P **P** **21 19 56.6 -0.3**
BR131 IAmb IAmb 21 20 39.5
comp=Z,18nm,1.9s
BRTR Keskin Array B 46.39 81 P **P** **21 19 57.8 +0.9**
comp=Z,2.4nm,0.9s,baz=325,slow=4.5,SNR=9.7
BRTR LR LR 21 41 53.4
comp=Z,90nm,18.3s,baz=307,slow=39
EGAK Eagle 46.66 326 P **P** **21 19 57.9 -0.7**
SOC Sochi 46.97 73 *e*P **P** **21 20 04.5 +3.4**
SOC *e*S **S** **21 26 57.5 +5.4**
SOC *e*SSS SSS 21 31 19.2
SOC pmax pmax
comp=Z,58nm,1.1s
SOC MLR MLR
comp=Z,637nm,19.0s
JTMT Jette 47.03 295 P **P** **21 20 01.8 0.0**
JTMT IAmb IAmb 21 20 05.9
comp=Z,14nm,1.5s
ARU Arti 47.33 49*c* *i*P **P** **21 20 04.9 +1.1**
ARU 21 22 00.8
ARU S **S** **21 27 00.8 +3.8**
ARU pmax pmax
comp=Z,13nm,1.0s
ARU Arti 47.33 49 P **P** **21 20 04.5 +0.7**
comp=Z,3.0nm,0.8s,baz=308,slow=7.0,SNR=15
ARU Arti 47.33 49 P **P** **21 20 02.1 -1.7**
ARU IAmb IAmb 21 20 05.8
comp=Z,13nm,1.0s
N23A Red Feather La 47.40 282 IAmb IAmb 21 20 14.5
comp=Z,10nm,1.1s
PRP Porcupine Dome 47.46 328 IAmb IAmb 21 20 16.8
comp=Z,111nm,1.0s
SVE Sverdlovsk 47.92 48 *e*P **P** **21 20 09.1 +0.7**
WMOK Wichita Mounta 47.93 271 IAmb IAmb 21 20 17.9
comp=Z,17nm,1.2s
PDAR Pinedale Array 48.01 287 P **P** **21 20 10.5 +0.9**
comp=Z,1.0nm,0.8s,baz=66,slow=8.3,SNR=7.6
PDAR LR LR 21 39 18.3
comp=Z,686nm,19.4s,baz=37,slow=35
NEW Newport 48.09 297 LR LR 21 39 29.2

comp=Z,958nm,18.2s,baz=46,slow=35
SCRK Sand Creek 48.10 326 P **P** 21 20 09.6 -0.3
KIV Kislovodsk 48.26 71 *eP* **P** 21 20 13.9 +2.6
KIV pmax pmax
comp=Z,16nm,1.1s
KIV MLR MLR
comp=Z,718nm,16.0s
IL31 48.40 328 IAmb IAmb 21 20 23.9
comp=Z,16nm,1.1s
ILAR Eielson Array 48.40 328 P **P** 21 20 13.8 +1.9
comp=Z,5.4nm,0.9s,baz=40,slow=6.1,SNR=28
ILAR PcP **PcP** 21 21 38.3 +0.2
comp=Z,1.8nm,0.8s,baz=4.7,slow=3.1,SNR=6.0
ILAR LR LR 21 40 46.7
comp=Z,273nm,18.9s,baz=64,slow=36
ILAR Eielson Array 48.40 328 P **P** 21 20 13.0 +1.1
KBZ Khabaz 48.53 71 P **P** 21 20 13.6 +0.4
comp=Z,2.2nm,0.9s,baz=305,slow=8.9,SNR=4.3
KBZ LR LR 21 41 40.4
comp=Z,225nm,18.6s,slow=37
HDA Harding Lake 48.68 328 IAmb IAmb 21 20 22.9
comp=Z,8.5nm,0.8s
CCB Clear Creek Bu 48.76 328 IAmb IAmb 21 20 24.4
comp=Z,10nm,1.2s
WRH Wood River Hil 48.97 328 P **P** 21 20 17.0 +0.6
WRH IAmb IAmb 21 20 26.5
comp=Z,8.5nm,1.0s
C09A Chrisman Ranch 48.97 297 IAmb IAmb 21 20 26.2
comp=Z,18nm,1.6s
B08A Colville Reser 49.10 298 IAmb IAmb 21 20 26.5
comp=Z,9.8nm,1.1s
T25A Trinidad 49.26 278 IAmb IAmb 21 20 29.6
comp=Z,11nm,1.1s
MCK McKinley 49.77 328 IAmb IAmb 21 20 33.3
comp=Z,17nm,1.1s
RDOG Red Dog Mine 49.86 337 IAmb IAmb 21 20 36.2
comp=Z,18nm,1.1s
BPAW Bear Paw Mtn. 50.08 329 IAmb IAmb 21 20 35.0
comp=Z,22nm,1.5s
KTH Kantishna Hill 50.48 329 IAmb IAmb 21 20 37.9
comp=Z,20nm,1.2s
BMO Blue Mountains 50.55 294 P **P** 21 20 28.4 -0.4
BMO pmax pmax
comp=Z,7.0nm,1.2s
BMO Blue Mountains 50.55 294 P **P** 21 20 28.4 -0.4
MSTX Muleshoe 50.70 274 IAmb IAmb 21 20 40.5
comp=Z,20nm,1.2s
AKTO Aktyubinsk 51.22 55 P **P** 21 20 34.7 +1.1
comp=Z,5.5nm,0.9s,baz=308,slow=7.9,SNR=16
TIXI Tiksi 51.36 7 *iP* **P** 21 20 35.6 +1.2
TIXI pmax pmax
comp=Z,5.0nm,1.0s
TIXI Tiksi 51.36 7 P **P** 21 20 35.7 +1.3
comp=Z,3.2nm,0.7s,baz=358,slow=6.2,SNR=11
TIXI Tiksi 51.36 7 P **P** 21 20 34.0 -0.4
TIXI IAmb IAmb 21 20 38.1
comp=Z,25nm,1.8s
TOA0 Torodi Ar. Sit 51.55 133 P **P** 21 20 34.5 -1.9
TOA0 IAmb IAmb 21 20 38.5
comp=Z,14nm,1.3s
TORD Torodi Ar. Bea 51.55 133 P **P** 21 20 35.2 -1.2
comp=Z,5.6nm,0.9s,baz=339,slow=7.6,SNR=23
TORD LR LR 21 40 12.5
comp=Z,246nm,20.3s,baz=355,slow=34
JCT Junction City 51.71 268 IAmb IAmb 21 20 46.7
comp=Z,13nm,0.9s
SKT Skwentna 51.88 328 IAmb IAmb 21 20 42.1
comp=Z,16nm,1.0s
ANMO Albuquerque 51.99 277 *eP* **P** 21 20 41.8 +2.0
ANMO pmax pmax
comp=Z,3.0nm,1.4s
MMAI Mount Meron Ar 52.27 86 LR LR 21 45 26.0
comp=Z,218nm,18.1s,baz=340,slow=39
WUAZ Wupatki 54.23 282 IAmb IAmb 21 21 06.6
comp=Z,15nm,1.5s
BRVK Borovoye 54.50 46 P **P** 21 20 57.0 -0.8
BRVK pmax pmax
comp=Z,7.0nm,1.0s
BRVK Borovoye 54.50 46 P **P** 21 20 57.0 -0.8
BVAR Borovoye Array 54.56 46 P **P** 21 20 59.2 +0.9
comp=Z,6.4nm,0.8s,baz=319,slow=6.5,SNR=44
EIL Elat 54.58 89 LR LR 21 47 17.0
comp=Z,60nm,19.5s,baz=312,slow=39
BILL Bilibino 54.59 351 *eP* **P** 21 20 59.3 +1.1
BILL pmax pmax
comp=Z,12nm,2.5s
TXAR Lajitas Array 54.72 271 P **P** 21 21 01.0 +1.2
comp=Z,1.9nm,1.1s,baz=28,slow=5.7,SNR=6.3
DBIC Dimbokro 55.11 143 P **P** 21 21 01.3 -1.3
DBIC pmax pmax
comp=Z,34nm,1.8s
DBIC Dimbokro 55.11 143 P **P** 21 21 01.3 -1.3
comp=Z,4.5nm,0.8s,baz=355,slow=5.3,SNR=6.6
DBIC LR LR 21 42 00.4
comp=Z,240nm,18.8s,baz=336,slow=33
DBIC Dimbokro 55.11 143 IAmb IAmb 21 21 03.9
comp=Z,34nm,1.8s
KVN Kaiserville 55.16 289 IAmb IAmb 21 21 12.9
comp=Z,14nm,1.1s
PAHR Pah Rah Range 55.34 291 IAmb IAmb 21 21 14.7
comp=Z,12nm,1.2s
NVAR Mina Array Bea 55.73 289 P **P** 21 21 08.4 +1.2
comp=Z,0.7nm,0.7s,baz=79,slow=6.7,SNR=2.0
NVAR LR LR 21 44 05.9
comp=Z,556nm,19.7s,baz=9.5,slow=35
NVAR Mina Array Bea 55.73 289 P **P** 21 21 07.1 -0.1
TUC Tucson 56.34 279 P **P** 21 21 11.0 -0.4
TUC pmax pmax
comp=Z,5.0nm,1.2s
TUC Tucson 56.34 279 P **P** 21 21 11.0 -0.4
ZALV Zalesovo Beam 59.08 37 P **P** 21 21 31.5 +1.3
comp=Z,0.3nm,0.2s,baz=333,slow=8.8,SNR=3.1
ZALV LR LR 21 48 40.2
comp=Z,71nm,18.2s,baz=310,slow=38
ZALV Zalesovo Beam 59.08 37 P **P** 21 21 30.6 +0.4
KURK Kurchatov 59.54 43 *deP* **P** 21 21 34.5 +1.0
KURK pmax pmax
comp=Z,8.0nm,1.0s
KURK Kurchatov 59.54 43 P **P** 21 21 32.0 -1.5
KURK IAmb IAmb 21 21 40.0
comp=Z,6.8nm,0.9s
KURBB Kurchatov Arra 59.59 43 P **P** 21 21 34.0 +0.2
comp=Z,4.2nm,0.9s,baz=322,slow=7.2,SNR=25
SEY Seymchan 60.53 356 *eP* **P** 21 21 41.7 +1.6
SEY Seymchan 60.53 356 P **P** 21 21 42.0 +1.8
comp=Z,3.7nm,1.0s,baz=359,slow=7.7,SNR=5.3
GEYT Alibeck 60.58 65 LR LR 21 49 04.2
comp=Z,174nm,18.2s,baz=215,slow=37
YAK Yakutsk 60.91 8 *eP* **P** 21 21 42.7 0.0
YAK pmax pmax
comp=Z,4.0nm,1.0s
MA2 Magadan 63.95 357 *eP* **P** 21 22 04.6 +1.5
MA2 pmax pmax
comp=Z,21nm,2.5s
MAKZ Makanchi 64.02 43 P **P** 21 22 02.9 -0.9
MAKZ pmax pmax
comp=Z,6.0nm,1.1s
MAKZ Makanchi 64.02 43 P **P** 21 22 02.9 -0.9
MKAR Makanchi Array 64.15 43 *ceP* **P** 21 22 05.4 +0.7
MKAR pmax pmax
comp=Z,3.0nm,0.9s
MKAR Makanchi Array 64.15 43 P **P** 21 22 05.2 +0.5
comp=Z,3.1nm,0.9s,baz=336,slow=5.6,SNR=27
MKAR LR LR 21 49 14.4
comp=Z,107nm,18.9s,baz=313,slow=35
AAK Ala-Archa 64.46 51 P **P** 21 22 05.9 -1.0
AAK pmax pmax
comp=Z,10.0nm,1.4s
AAK Ala-Archa 64.46 51 P **P** 21 22 07.6 +0.7
comp=Z,4.0nm,1.0s,baz=319,slow=4.5,SNR=8.6
AAK Ala-Archa 64.46 51 P **P** 21 22 05.9 -1.0
AAK IAmb IAmb 21 22 10.6
comp=Z,10.0nm,1.4s
KDJ Kajisay 66.01 49 IAmb IAmb 21 22 19.2
comp=Z,6.2nm,1.0s
KBL Kabul 68.61 60 P **P** 21 22 32.1 -1.5
KBL pmax pmax
comp=Z,6.0nm,1.1s
KBL Kabul 68.61 60 P **P** 21 22 32.1 -1.5
WMQ Urumqi 68.68 41 *eP* **P** 21 22 36.8 +3.1
WMQ pmax pmax
comp=Z,7.0nm,1.5s
WMQ pmax pmax
comp=Z,190nm,4.7s
WMQ LR LR
comp=N,420nm,24.5s
WMQ LR LR
comp=Z,200nm,24.5s
UOSS Minazif 69.87 75 P **P** 21 22 39.4 -1.9
UOSS IAmb IAmb 21 22 41.8
comp=Z,8.8nm,0.9s
PETK Petropavlovsk- 70.05 352 LR LR 21 54 46.5
comp=Z,91nm,18.1s,baz=60,slow=37
SONM Songino Array 70.80 27 P **P** 21 22 46.4 -0.4
SONM pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 70.80 27 P **P** 21 22 47.2 +0.4
comp=Z,1.1nm,0.7s,baz=307,slow=5.4,SNR=3.9
SONM LR LR 21 55 59.5
comp=Z,107nm,19.1s,baz=316,slow=38
SONM Songino Array 70.80 27 P **P** 21 22 46.4 -0.4
NIL Nilore 71.31 57 P **P** 21 22 50.0 0.0
NIL pmax pmax
comp=Z,15nm,1.1s
NIL Nilore 71.31 57 P **P** 21 22 50.0 0.0
WSAR Wadi Sarin 72.54 74 LR LR 21 58 00.5
comp=Z,98nm,20.0s,baz=339,slow=38
BDFB Brasilia 73.00 194 LR LR 21 49 59.3
comp=Z,132nm,18.2s,baz=303,slow=32
ATD Arta Tunnel 73.48 94 LR LR 21 55 05.8
comp=Z,45nm,20.5s,baz=17,slow=36
KLR Kul'dur 73.77 9 *eP* **P** 21 23 04.1 -0.3
KLR pmax pmax
comp=Z,16nm,1.9s
GTA Gaotai 76.72 35 *eP* **P** 21 23 22.0 +0.3
GTA pP pwP 21 23 26.0 -1.1
GTA sP PcP 21 23 29.5 -3.5
GTA pmax pmax
comp=Z,2.0nm,0.8s
LPAZ La Paz 78.01 213 LR LR 21 57 42.3
comp=Z,33nm,18.0s,baz=340,slow=36
HHC Hu-ho-hao-te 78.63 26 *eP* **P** 21 23 33.3 +1.0
HHC pmax pmax
comp=Z,4.0nm,0.7s
HHC pmax pmax
comp=Z,51nm,6.9s
LZH Lanzhou 81.02 33 *eP* **P** 21 23 45.8 +0.4
LZH pP PcP 21 23 51.0 -0.8
LZH sP pwP 21 23 53.3 +2.5
LZH *e*PP PKiKP 21 29 52.0 +41
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,75nm,5.5s
LZH LR LR
comp=N,130nm,17.2s
LZH LR LR
comp=E,140nm,17.1s
LZH LR LR
comp=Z,180nm,19.6s
XAN Xi'an 84.39 30 P **P** 21 24 03.8 +1.0
XAN pP pwP 21 24 15.5 +7.3
XAN pmax pmax
comp=Z,3.0nm,1.3s
XAN LR LR
comp=N,170nm,21.7s
XAN LR LR
comp=E,170nm,16.3s
XAN LR LR
comp=Z,250nm,19.5s
KSRS Korea Array 84.98 14 LR LR 22 02 00.5
comp=Z,45nm,21.3s,baz=332,slow=36
CPUP Villa Florida 84.99 200 LR LR 21 57 16.2
comp=Z,88nm,21.2s,baz=18,slow=32
NJ2 Nanjing 88.70 22 *eP* **P** 21 24 24.3 +0.5
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
CMAR Chiang Mai Arr 95.55 44 *i* P **P** 21 24 57.0 +1.2
CMAR Chiang Mai Arr 95.55 44 P **P** 21 24 55.5 -0.2
comp=Z,0.3nm,0.7s,baz=327,slow=5.1,SNR=4.4
BOSA Boshof 98.82 130 LR LR 22 08 45.7
comp=Z,126nm,18.8s,baz=320,slow=35
PPT2 Papeete2 118.27 281 *e*LR LR 22 07 00.5
comp=Z,260nm,22.2s
TBI Tubuai 122.88 277 *e*LR LR 22 09 06.2
comp=Z,176nm,38.5s
DZM Mont Dzumac 142.11 327 *e*LR LR 22 17 58.2
comp=Z,193nm,24.5s
ASAR Alice Springs 145.88 19 PKPbc **PKPab** 21 31 09.4 -0.8
comp=Z,3.0nm,0.8s,baz=354,slow=2.7,SNR=16
QSPA South Pole Qui 146.64 180 **PKPab** 21 31 11.5 -0.4

*IDC **28** 21:13:00.3±549.0, **66°.75N×44°.18E, h0km, Error ellipse: s-maj=240.9km s-min=74.7km az=114.0, Baltic States-Belarus-Northwestern Russia*

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I37NO	**I37NO**	**9.87**	**295**	*i*		22 07 09.8	
	baz=91,slow=331						
I31KZ	**AKTYUBINSK INF**	**17.83**	**150**	*i*		23 01 00.0	
	baz=338,slow=337,SNR=1.0						
I18DK	**QAANAAQ INFRAS**	**30.55**	**337**	*i*		00 25 00.0	
	baz=44,slow=340,SNR=1.8						

*IDC **28** 21:16:50.4±1.3, 56°.60N×34°.14W, h0km, mb3.6/9, mb1 3.7/9, mb1mx3.5/46, mbtmp3.6/9, Error ellipse: s-maj=39.5km s-min=20.8km az=12.0*

ISC 28 21:16:51.9±1.2, 56°.6N±0°.2×34°.1W±0°.2, h10km, n9, σ0s87/9, mb3.8/9, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YKA	**Yellowknife Ar**	**38.69**	**313**	P		**P**	**21 24 14.6**	**-0.7**
	0.2nm,0.7s,baz=56,slow=9.4,SNR=3.1						
BRTR	**Keskin Array B**	**46.24**	**81**	P		**P**	**21 25 15.9**	**-1.2**
	0.4nm,0.5s,baz=327,slow=10,SNR=4.1						
ILAR	**Eielson Array**	**48.60**	**328**	P		**P**	**21 25 34.8**	**-0.3**
	0.7nm,0.8s,baz=42,slow=5.8,SNR=7.4						
AKTO	**Aktyubinsk**	**51.15**	**55**	P		**P**	**21 25 55.6**	**+1.1**
	1.3nm,0.7s,baz=315,slow=5.7,SNR=5.0						
TORD	**Torodi Ar. Bea**	**51.32**	**133**	P		**P**	**21 25 56.4**	**+0.1**
	0.7nm,0.9s,baz=343,slow=7.7,SNR=3.1						
BVAR	**Borovoye Array**	**54.53**	**46**	P		**P**	**21 26 20.3**	**+0.8**
	1.1nm,0.7s,baz=324,slow=7.3,SNR=10						
NVAR	**Mina Array Bea**	**55.95**	**289**	P		**P**	**21 26 30.9**	**+0.7**
	0.3nm,0.5s,baz=41,slow=7.3,SNR=2.8						
KURBB	**Kurchatov Arra**	**59.56**	**43**	P		**P**	**21 26 54.9**	**-0.3**
	0.8nm,0.7s,baz=326,slow=7.1,SNR=4.0						
MKAR	**Makanchi Array**	**64.13**	**43**	P		**P**	**21 27 26.3**	**+0.3**
	0.4nm,0.6s,baz=332,slow=5.8,SNR=5.0						

ISC 28 21:24:03.4±0.9, 50°.24N±0°.05×18°.78E±0°.03, h0km, n15, σ0s61/28, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.57**	**226**	*e*PG		**Pg**	**21 24 14.4**	**0.0**
OKC				*e*SG		**Sg**	**21 24 22.0**	**+0.2**
OJC	**Ojcow**	**0.65**	**91**	*e*Pg		**Pg**	**21 24 15.5**	**-0.4**
OJC				*e*Sg		**Sg**	**21 24 24.1**	**-0.2**
MORC	**Moravsky Berou**	**0.92**	**241**	*e*PG		**Pg**	**21 24 21.3**	**+0.2**
MORC				*e*SG		**Sg**	**21 24 33.2**	**+0.1**
LANS	**Liptovska Anna**	**1.18**	**158**	*e*PG		**Pg**	**21 24 26.2**	**+0.3**
LANS				*e*SG		**Sb**	**21 24 42.3**	**-0.1**
LANS				*e*LG		Lg	21 24 44.4	
NIE	**Niedzica**	**1.28**	**129**	*e*Pg		**Pg**	**21 24 28.1**	**+0.2**
NIE				*e*Sg		**Sb**	**21 24 45.8**	**+0.4**
KRLC	**Kraliky**	**1.30**	**264**	*e*PG		**Pg**	**21 24 27.2**	**-1.0**
KRLC				*e*SG		**Sg**	**21 24 45.0**	**-0.1**
DPC	**Dobruska-Polom**	**1.58**	**275**	*e*PG		**Pn**	**21 24 32.6**	**-0.1**
DPC				*e*SG		**Sn**	**21 24 54.2**	**+0.3**
OSTC	**Ostas**	**1.67**	**282**	*e*PG		**Pn**	**21 24 33.4**	**-0.6**
OSTC				*e*SG		**Sg**	**21 24 57.6**	**+0.5**
VRAC	**Vranov**	**1.70**	**238**	*e*PN		**Pn**	**21 24 34.5**	**+0.2**
VRAC				*e*SG		**Sb**	**21 24 57.4**	**0.0**
KSP	**Ksiaz**	**1.70**	**292**	*e*Pg		**Pb**	**21 24 35.5**	**0.0**
KSP				*e*Sg		**Sb**	**21 24 58.1**	**+0.6**
VYHS	**Vyhne**	**1.75**	**179**	*e*PN		**Pn**	**21 24 34.5**	**-0.4**
VYHS				*e*SN		**Sn**	**21 24 57.6**	**-0.3**
CHVC	**Chvalec**	**1.78**	**282**	*e*PG		**Pn**	**21 24 36.4**	**+1.0**
CHVC				*e*SG		**Sg**	**21 25 01.7**	**+1.1**
KRUC	**Moravsky**	**1.95**	**234**	*e*PN		**Pn**	**21 24 38.1**	**+0.4**
KRUC				*e*SG		**Sb**	**21 25 05.1**	**+0.5**
GOPC	**GO Pecny, Ondr**	**2.59**	**264**	*e*SG		**Sg**	**21 25 25.7**	**-1.0**
KHC	**Kasperske Hory**	**3.56**	**254**	*e*SG		**Sg**	**21 25 56.0**	**-1.6**

*IDC **28** 21:30:33.2±2.5, 4°.81S×133°.86E, h0km, mb3.5/2, mb1 3.8/6, mb1mx3.6/35, mbtmp3.6/6, ML3.6/3, Error ellipse: s-maj=79.2km s-min=24.6km az=76.0*

ISC 28 21:30:37.1±1.5, 5°.01S±0°.07×133°.5E±0°.2, h28km, n6, σ3s29/10, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**4.68**	**332**	Pn		**Pn**	**21 31 45.0**	**-0.9**
	1.5nm,0.3s,baz=131,slow=19,SNR=5.8						
SIJI				Sn		**Sn**	**21 32 35.6**	**-3.7**
	1.0nm,0.3s,baz=308,slow=19,SNR=3.2						
WRA	**Warramunga Arr**	**14.87**	**177**	Pn		**Pn**	**21 34 07.9**	**+2.4**
	baz=358,slow=12,SNR=2.7						
WRA				Sn		**Sn**	**21 36 44.7**	**-4.7**
	0.2nm,0.3s,baz=350,slow=25,SNR=3.5						
FITZ	**Fitzroy Crossi**	**15.11**	**210**	Pn		**Pn**	**21 34 10.7**	**+2.0**
	0.3nm,0.3s,baz=30,slow=10,SNR=8.6						
FITZ				Sn		**Sn**	**21 36 55.0**	**-0.2**
	0.2nm,0.3s,baz=195,slow=18,SNR=3.7						
ASAR	**Alice Springs**	**18.55**	**179**	P		**Pn**	**21 34 54.2**	**+2.0**
	0.3nm,0.3s,baz=6.1,slow=12,SNR=18						
ASAR				S		**Sn**	**21 38 14.4**	**-4.5**
	0.1nm,0.3s,baz=1.7,slow=27,SNR=3.2						
CMAR	**Chiang Mai Arr**	**41.28**	**305**	P		**P**	**21 38 22.2**	**+1.9**
	0.2nm,0.3s,baz=133,slow=6.6,SNR=4.3						
MKAR	**Makanchi Array**	**68.54**	**325**	P		**P**	**21 41 38.2**	**+1.0**
	0.3nm,0.5s,baz=121,slow=7.9,SNR=6.6						

*IDC **28** 21:33:31.1±0.6, 56°.57N×34°.38W, h0km, mb4.0/26, mb1 4.2/30, mb1mx4.1/60, mbtmp4.0/30, ML3.2/4, MS4.0/42, Ms1 4.0/42, ms1mx3.9/57, Error ellipse: s-maj=17.9km s-min=10.4km az=5.0*

*MOS **28** 21:33:31.3±0.8, 56°.62N×34°.39W, h11km, mb4.7/4, Error ellipse: s-maj=14.0km s-min=8.4km az=77.5*

*NEIC **28** 21:33:32.8±2.2, 56°.57N±0°.08×34°.4W±0°.1, h10km±1km, mb4.7/80, Error ellipse: s-maj=14.4km s-min=11.6km az=155.0*

*GCMT **28** 21:33:32.8±0.2, 56°.69N±0°.04×34°.35W±0°.04, h12km, MW4.8/96, Moment Tensor Solution. s20,c22; s96,c117; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr=-2.42±.09; Mθθ=0.90±.12; Mφφ=1.52±.06; Mrθ=0.87±.47; Mrφ=0.25±.07; Mθφ=0.84±.33; Best double couple: M=2.33300×10^16 NP1:φs=18.00000°, δ=31.00000°, λ=-102.00000°. NP2: φs=212.00000°, δ=60.00000°, λ=-83.00000°. Principal axes: T 1.8980, Plg=15.0000°, Azm=297.0000°; N 0.8660, Plg=6.0000°, Azm=29.0000°; P -2.7680, Plg=74.0000°, Azm=141.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 28 21:33:32.8±0.4, 56°.59N±0°.07×34°.36W±0°.05, h10km, n153, σ1s61/119, mb4.6/71, MS4.0/39, 1C-2D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**7.34**	**313**	P		**Pn**	**21 35 24.4**	**+4.5**
NRS	**Narsarsuaq**	**7.34**	**313**	Pn		**Pn**	**21 35 24.4**	**+4.5**
ANGG	**Ammassalik, Gr**	**9.20**	**351**	Pn		**Pn**	**21 35 43.2**	**-2.2**
ANGG						Sn	21 37 17.1	-12
BORG	**Borgarnes**	**10.36**	**33**	Pn		**Pn**	**21 36 02.6**	**+1.3**
	0.4nm,0.3s,baz=217,slow=5.1,SNR=4.7						
BORG				Sn		**Sn**	**21 37 49.1**	**-8.2**
	0.3nm,0.3s,baz=180,slow=20,SNR=3.2						
BORG				LR		LR	21 38 59.4	
	comp=Z,3μm,18.6s,baz=237,slow=32						
BORG	**Borgarnes**	**10.36**	**33**	Pn		**Pn**	**21 36 05.6**	**+4.3**
SFJD	**Kangerlussuaq**	**12.91**	**330**	LR		LR	21 40 43.6	
	comp=Z,982nm,18.5s,baz=140,slow=34						
DRLN	**Deer Lake**	**15.71**	**252**	Pn		**Pn**	**21 37 13.6**	**-0.4**
SUMG	**Summit**	**16.15**	**356**	P		**Pn**	**21 37 18.6**	**-1.2**
SUMG				pmax	pmax			
	comp=Z,65nm,1.8s						
SUMG	**Summit**	**16.15**	**356**	P		**Pn**	**21 37 18.6**	**-1.2**
EKA	**Eskdalemuir Ar**	**17.44**	**81**	P		**Pn**	**21 37 36.5**	**+0.6**
	baz=281,slow=9.3,SNR=3.8						
JMIC	**Jan Mayen**	**18.16**	**27**	LR		LR	21 43 03.5	
	comp=Z,594nm,19.0s,baz=222,slow=32						
FRB	**Frobisher Bay**	**18.26**	**307**	P		**Pn**	**21 37 45.3**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=102,slow=11,SNR=5.9						
FRB				LR		LR	21 43 25.7	
	comp=Z,513nm,21.3s,baz=100,slow=33						
SCHQ	**Schefferville**	**18.29**	**278**	P		**Pn**	**21 37 46.1**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=85,slow=8.9,SNR=6.4						
SCHQ				LR		LR	21 43 34.7	
	comp=Z,833nm,19.2s,baz=64,slow=33						
SCHQ	**Schefferville**	**18.29**	**278**	P		**P**	**21 37 47.5**	**+1.0**
DAG	**Danmarks Havn**	**21.05**	**10**	P		**P**	**21 38 16.3**	**-0.1**
LMN	**Caledonia Moun**	**21.70**	**253**	P		**P**	**21 38 23.6**	**0.0**
LMN				IAmb	IAmb		21 39 20.9	
	comp=Z,60nm,1.5s						
D62A	**Allapoint, All**	**23.22**	**261**	P		**P**	**21 38 42.1**	**+2.4**
D62A				IAmb	IAmb		21 38 56.6	
	comp=Z,20nm,1.1s						
F64A	**Sherman**	**23.59**	**257**	P		**P**	**21 38 42.4**	**-1.1**
NOA	**NORSAR Array B**	**23.63**	**60**	P		**P**	**21 38 43.6**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=311,slow=8.3,SNR=3.5						
NOA				LR		LR	21 46 26.2	
	comp=Z,304nm,21.1s,baz=275,slow=33						
HFS	**Hagfors**	**25.01**	**62**	P		**P**	**21 38 55.8**	**-0.7**
	comp=Z,3.7nm,0.9s,baz=208,slow=4.9,SNR=2.6						
HFS				LR		LR	21 46 42.9	
	comp=Z,382nm,21.9s,baz=283,slow=32						
G62A	**West of Eustis**	**25.18**	**259**	P		**P**	**21 38 58.9**	**+0.7**
ESDC	**Sonseca Array**	**26.10**	**117**	P		**P**	**21 39 04.9**	**-1.7**
	comp=Z,0.2nm,0.3s,baz=316,slow=7.8,SNR=2.8						
ESDC				LR		LR	21 47 38.5	
	comp=Z,427nm,18.6s,baz=320,slow=32						
ESDC	**Sonseca Array**	**26.10**	**117**	IAmb		IAmb	21 39 12.4	
	comp=Z,8.6nm,1.6s						
RGN	**Rugen**	**26.61**	**74**	P		**P**	**21 39 12.0**	**+1.1**
SPITS	**Spitsbergen Ar**	**27.46**	**20**	LR		LR	21 47 43.9	
	comp=Z,149nm,18.7s,baz=190,slow=31						
SFS	**San Fernando**	**27.60**	**125**	P		**P**	**21 39 19.7**	**-0.3**
SFS	**San Fernando**	**27.60**	**125**	P		**P**	**21 39 19.7**	**-0.3**
CLL	**Collm**	**27.91**	**81**	*e*P		**P**	**21 39 27.0**	**+4.3**
CLL	**Collm**	**27.91**	**81**	*e*pP		**P**	**21 39 27.0**	**+4.3**
DAVOX	**Davos/Dischmat**	**28.65**	**91**	LR		LR	21 50 22.9	
	comp=Z,858nm,18.9s,baz=293,slow=35						
ARCES	**ARCESS Array B**	**28.66**	**39**	P		**P**	**21 39 28.6**	**-0.6**
ARCES	**ARCESS Array B**	**28.66**	**39**	P		**P**	**21 39 28.3**	**-0.9**
	comp=Z,2.8nm,0.8s,baz=256,slow=8.4,SNR=6.6						
ARCES				LR		LR	21 48 36.0	
	comp=Z,312nm,19.3s,baz=296,slow=32						
ARCES	**ARCESS Array B**	**28.66**	**39**	P		**P**	**21 39 28.6**	**-0.6**
ARE0	**ARCESS Array S**	**28.66**	**39**	P		**P**	**21 39 28.4**	**-0.8**
RES	**Resolute Bay**	**28.91**	**331**	LR		LR	21 49 31.4	
	comp=Z,233nm,21.0s,baz=68,slow=33						
GERES	**GERESS Array B**	**29.58**	**84**	P		**P**	**21 39 38.9**	**+1.2**
GERES	**GERESS Array B**	**29.58**	**84**	P		**P**	**21 39 38.0**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=304,slow=9.4,SNR=3.1						
GERES				LR		LR	21 50 55.4	
	comp=Z,343nm,18.2s,baz=330,slow=35						
GERES	**GERESS Array B**	**29.58**	**84**	P		**P**	**21 39 38.9**	**+1.2**
DPC	**Dobruska-Polom**	**30.21**	**80**	P		**P**	**21 39 43.9**	**+0.7**
FINES	**FINESS Array B**	**30.49**	**55**	P		**P**	**21 39 45.0**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=310,slow=7.2,SNR=4.7						
FINES				LR		LR	21 50 28.7	
	comp=Z,255nm,19.7s,baz=254,slow=33						
FCC	**Fort Churchill**	**31.10**	**299**	P		**P**	**21 39 51.5**	**+0.7**
FCC				pmax	pmax			
	comp=Z,8.0nm,1.1s						
FCC	**Fort Churchill**	**31.10**	**299**	P		**P**	**21 39 51.5**	**+0.7**
MDT	**Midelt**	**31.38**	**127**	LR		LR	21 50 45.6	
	comp=Z,97nm,20.3s,baz=331,slow=33						
KEST	**Kesra**	**35.93**	**107**	LR		LR	21 54 15.4	
	comp=Z,227nm,18.4s,baz=307,slow=35						
ULM	**Lac du Bonnet**	**36.09**	**287**	P		**P**	**21 40 33.0**	**-1.4**
ULM				pmax	pmax			
	comp=Z,11nm,1.5s						
ULM	**Lac du Bonnet**	**36.09**	**287**	P		**P**	**21 40 33.0**	**-1.4**
	comp=Z,2.1nm,0.8s,baz=79,slow=9.1,SNR=3.7						
ULM				LR		LR	21 53 41.2	
	comp=Z,404nm,22.0s,baz=78,slow=34						
KLMR	**Klimovskoe**	**36.72**	**52**	*e*P		**P**	**21 40 39.3**	**-0.3**
KLMR				pmax	pmax			
	comp=Z,25nm,1.4s						
KLMR	**Klimovskoe**	**36.72**	**52**	*e*P		**P**	**21 40 39.4**	**-0.2**
KLMR				AMP			21 40 44.3	
	comp=Z,25nm,1.4s						
AKASG	**Malin Array Be**	**36.93**	**71**	P		**P**	**21 40 39.7**	**-1.8**
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.9s						
AKASG	**Malin Array Be**	**36.93**	**71**	P		**P**	**21 40 39.7**	**-1.8**

	comp=Z,26nm,0.3s,baz=305,slow=8.2,SNR=1.8							
AKASG					LR	LR	21 55 57.4	
	comp=Z,229nm,19.6s,baz=315,slow=36							
AKASG	**Malin Array Be**	**36.93**	**71**		IAmb	IAmb	21 40 43.0	
	comp=Z,1.3nm,0.8s							
VAE	**Valguarnera**	**37.36**	**100**		LR	LR	21 54 24.2	
	comp=Z,267nm,18.3s,baz=341,slow=34							
MLR	**Muntele Rosu**	**38.29**	**80**		LR	LR	21 56 59.5	
	comp=Z,506nm,19.0s,baz=304,slow=37							
YKA	**Yellowknife Ar**	**38.62**	**313**		P	**P**	**21 40 55.7**	**0.0**
	comp=Z,1.2nm,0.8s,baz=60,slow=9.0,SNR=11							
YKA					PcP	**PcP**	**21 43 06.5**	**-1.1**
	comp=Z,1.2nm,0.7s,baz=52,slow=3.2,SNR=11							
YKA					LR	LR	21 56 18.1	
	comp=Z,282nm,18.4s,baz=0.0,slow=35							
ECSD	**EROS Data Cent**	**40.49**	**279**		P	**P**	**21 41 12.7**	**+1.2**
KIRV	**Kirov**	**42.18**	**51**		LR	LR	21 57 43.4	
	comp=Z,123nm,18.4s,baz=70,slow=34							
INK	**Inuvik**	**42.23**	**327**		P	**P**	**21 41 25.1**	**-0.3**
INK					pmax	pmax		
	comp=Z,22nm,1.9s							
INK	**Inuvik**	**42.23**	**327**		P	**P**	**21 41 25.1**	**-0.3**
	comp=Z,1.9nm,1.1s,baz=45,slow=7.1,SNR=3.5							
INK					PcP	**PcP**	**21 43 18.5**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=17,slow=3.4,SNR=3.7							
INK					LR	LR	21 57 16.4	
	comp=Z,171nm,18.2s,baz=61,slow=34							
INK	**Inuvik**	**42.23**	**327**		IAmb	IAmb	21 42 28.8	
	comp=Z,22nm,1.9s							
LCAR	**Lake Charles**	**42.80**	**266**		P	**P**	**21 41 27.7**	**-2.7**
LCAR					IAmb	IAmb	21 41 46.2	
	comp=Z,21nm,1.6s							
U40A	**Yellville**	**43.53**	**268**		P	**P**	**21 41 37.3**	**+0.9**
U40A					IAmb	IAmb	21 41 41.6	
	comp=Z,28nm,1.5s							
LAO	**LASA Array**	**43.72**	**289**		P	**P**	**21 41 40.3**	**+2.5**
LAO					IAmb	IAmb	21 41 46.3	
	comp=Z,16nm,1.1s							
GRTK	**Grand Turk**	**44.24**	**233**		P	**P**	**21 41 39.3**	**-2.8**
EPYK	**Eagle Plains**	**44.39**	**326**		P	**P**	**21 41 42.0**	**-0.9**
EPYK					IAmb	IAmb	21 42 08.2	
	comp=Z,20nm,1.6s							
X40A	**Basin Creek Fa**	**44.89**	**266**		P	**P**	**21 41 47.5**	**+0.2**
X40A					IAmb	IAmb	21 42 04.0	
	comp=Z,20nm,1.4s							
RLMT	**Red Lodge**	**46.35**	**289**		P	**P**	**21 42 00.0**	**+1.1**
RLMT					IAmb	IAmb	21 42 10.4	
	comp=Z,21nm,1.9s							
BR131	**Keskin Array S**	**46.36**	**81**		P	**P**	**21 41 59.9**	**+0.9**
BR131					pmax	pmax		
	comp=Z,16nm,2.0s							
BR131	**Keskin Array S**	**46.36**	**81**		P	**P**	**21 41 59.9**	**+0.9**
BR131					IAmb	IAmb	21 42 09.5	
	comp=Z,16nm,2.0s							
BRTR	**Keskin Array B**	**46.36**	**81**	*i*	P	**P**	**21 42 00.2**	**+1.2**
BRTR					pmax	pmax		
	comp=Z,2.0nm,0.7s							
BRTR	**Keskin Array B**	**46.36**	**81**		P	**P**	**21 41 59.9**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=316,slow=5.3,SNR=8.3							
BRTR					LR	LR	22 03 55.1	
	comp=Z,56nm,18.1s,baz=298,slow=39							
W35A	**Tecumseh**	**46.63**	**270**		P	**P**	**21 42 01.0**	**-0.1**
YNE	**Yellowstone No**	**46.81**	**290**		P	**P**	**21 42 03.6**	**+1.0**
FNO	**Franklin**	**46.85**	**271**		P	**P**	**21 42 02.9**	**+0.2**
ARU	**Arti**	**47.39**	**49**	*d*	P	**P**	**21 42 06.4**	**-0.3**
ARU							21 43 56.5	
ARU					S	**S**	**21 49 02.8**	**+2.5**
ARU					pmax	pmax		
	comp=Z,24nm,1.9s							
ARU	**Arti**	**47.39**	**49**		P	**P**	**21 42 06.9**	**+0.2**
H17A	**Grant Village**	**47.53**	**289**		P	**P**	**21 42 08.2**	**0.0**
H17A					IAmb	IAmb	21 43 44.4	
	comp=Z,12nm,1.6s							
PRP	**Porcupine Dome**	**47.63**	**328**		IAmb	IAmb	21 42 13.9	
	comp=Z,4.5nm,0.8s							
COLD	**Coldfoot**	**47.67**	**332**		IAmb	IAmb	21 42 13.3	
	comp=Z,6.5nm,1.2s							
WMOK	**Wichita Mounta**	**47.99**	**271**		IAmb	IAmb	21 42 16.1	
	comp=Z,11nm,1.2s							
ISCO	**Idaho Springs**	**48.08**	**281**		P	**P**	**21 42 13.3**	**+0.6**
ISCO					pmax	pmax		
	comp=Z,5.0nm,0.9s							
ISCO	**Idaho Springs**	**48.08**	**281**		P	**P**	**21 42 13.3**	**+0.6**
ISCO					IAmb	IAmb	21 42 18.4	
	comp=Z,5.0nm,0.8s							
PD31	**Pinedale Array**	**48.11**	**287**		P	**P**	**21 42 12.4**	**-0.4**
PD31					IAmb	IAmb	21 42 50.3	
	comp=Z,16nm,1.9s							
PDAR	**Pinedale Array**	**48.11**	**287**		P	**P**	**21 42 12.7**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=56,slow=8.0,SNR=7.5							
PDAR					LR	LR	22 01 29.1	
	comp=Z,345nm,18.7s,baz=40,slow=35							
NEW	**Newport**	**48.22**	**297**		P	**P**	**21 42 13.2**	**-0.1**
NEW					pmax	pmax		
	comp=Z,11nm,1.6s							
NEW	**Newport**	**48.22**	**297**		P	**P**	**21 42 13.2**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=21,slow=8.6,SNR=2.7							
NEW	**Newport**	**48.22**	**297**		IAmb	IAmb	21 42 16.3	
	comp=Z,11nm,1.6s							
SCRK	**Sand Creek**	**48.27**	**326**		P	**P**	**21 42 14.4**	**+0.8**
SCRK					IAmb	IAmb	21 42 16.3	
	comp=Z,8.2nm,0.8s							
MCMT	**McKenzie Canyo**	**48.41**	**291**		P	**P**	**21 42 14.6**	**-0.4**
KBZ	**Khabaz**	**48.53**	**71**		P	**P**	**21 42 17.3**	**+1.7**
	comp=Z,1.1nm,0.7s							
KBZ					LR	LR	22 03 32.5	
	comp=Z,146nm,18.6s,slow=37							
IL31		**48.56**	**328**		P	**P**	**21 42 15.6**	**-0.1**
ILAR	**Eielson Array**	**48.56**	**328**		P	**P**	**21 42 15.9**	**+0.2**
	comp=Z,4.3nm,0.8s,baz=39,slow=6.3,SNR=48							
ILAR					PcP	**PcP**	**21 43 40.4**	**-0.8**
	comp=Z,1.5nm,0.7s,baz=6.1,slow=3.1,SNR=9.0							
ILAR					LR	LR	22 01 09.0	
	comp=Z,181nm,18.7s,baz=64,slow=34							
ILAR	**Eielson Array**	**48.56**	**328**		P	**P**	**21 42 16.1**	**+0.5**
WRH	**Wood River Hil**	**49.14**	**328**		IAmb	IAmb	21 42 21.9	
	comp=Z,4.8nm,0.8s							
T25A	**Trinidad**	**49.34**	**278**		IAmb	IAmb	21 42 27.2	
	comp=Z,10.0nm,1.2s							
MLY	**Manley**	**49.47**	**330**		IAmb	IAmb	21 42 25.1	
	comp=Z,5.3nm,0.8s							
AMTX	**Amarillo**	**49.49**	**274**		IAmb	IAmb	21 42 32.2	
	comp=Z,11nm,0.9s							
MCK	**McKinley**	**49.94**	**328**		IAmb	IAmb	21 42 33.5	
	comp=Z,8.6nm,0.9s							
HWUT	**Hardware Ranch**	**49.99**	**287**		IAmb	IAmb	21 42 33.9	
	comp=Z,9.2nm,1.3s							
RDOG	**Red Dog Mine**	**50.04**	**337**		IAmb	IAmb	21 42 35.3	
	comp=Z,28nm,1.8s							
RND	**Reindeer**	**50.16**	**328**		IAmb	IAmb	21 42 37.0	
	comp=Z,9.3nm,0.9s							
MSTX	**Muleshoe**	**50.77**	**274**		IAmb	IAmb	21 42 36.9	
	comp=Z,13nm,1.2s							
AKTO	**Aktyubinsk**	**51.26**	**55**		P	**P**	**21 42 36.4**	**0.0**
	comp=Z,4.5nm,0.7s,baz=316,slow=7.0,SNR=19							
AKTO					LR	LR	22 03 46.8	
	comp=Z,162nm,18.0s,baz=311,slow=35							
TOA0	**Torodi Ar. Sit**	**51.39**	**133**		P	**P**	**21 42 37.5**	**-0.2**
TORD	**Torodi Ar. Bea**	**51.39**	**133**		P	**P**	**21 42 37.3**	**-0.4**
	comp=Z,2.7nm,0.7s,baz=338,slow=7.5,SNR=14							
TORD					LR	LR	22 02 25.4	
	comp=Z,168nm,21.0s,baz=355,slow=34							
TIXI	**Tiksi**	**51.52**	**7**	*eP*		**P**	**21 42 38.2**	**+0.3**
TIXI	**Tiksi**	**51.52**	**7**	P		**P**	**21 42 38.2**	**+0.3**
TIXI					PcP	**PcP**	**21 43 50.9**	**-0.9**
SKT	**Skwentna**	**52.05**	**328**		IAmb	IAmb	21 42 43.3	
	comp=Z,9.0nm,0.9s							
ELK	**Elko**	**52.54**	**289**		IAmb	IAmb	21 44 19.1	
	comp=Z,7.0nm,0.9s							
ABKAR	**Akbulak array**	**52.98**	**55**		P	**P**	**21 42 49.7**	**+0.6**
EIL	**Elat**	**54.52**	**89**		LR	LR	22 06 37.6	
	comp=Z,68nm,21.7s,baz=320,slow=36							
BRVK	**Borovoye**	**54.57**	**46**		P	**P**	**21 43 01.0**	**+0.3**
BRVK					pmax	pmax		
	comp=Z,5.0nm,1.0s							
BRVK	**Borovoye**	**54.57**	**46**		P	**P**	**21 43 01.0**	**+0.3**
TXAR	**Lajitas Array**	**54.78**	**271**		P	**P**	**21 43 03.4**	**+0.7**
	comp=Z,1.3nm,0.9s,baz=37,slow=8.5,SNR=6.1							
TXAR					LR	LR	22 06 01.0	
	comp=Z,142nm,19.0s,baz=0.0,slow=36							
TXAR	**Lajitas Array**	**54.78**	**271**		P	**P**	**21 43 02.0**	**-0.7**
DBIC	**Dimbokro**	**54.94**	**143**		P	**P**	**21 43 03.7**	**-0.1**
DBIC					pmax	pmax		
	comp=Z,23nm,1.6s							
DBIC	**Dimbokro**	**54.94**	**143**		P	**P**	**21 43 03.6**	**-0.1**
	comp=Z,4.1nm,0.7s,baz=330,slow=8.2,SNR=7.5							
DBIC					LR	LR	22 04 02.7	
	comp=Z,177nm,19.4s,baz=344,slow=33							
KVN	**Kaiserville**	**55.27**	**290**		IAmb	IAmb	21 43 08.8	
	comp=Z,5.8nm,0.9s							
PAHR	**Pah Rah Range**	**55.45**	**291**		IAmb	IAmb	21 43 18.2	
	comp=Z,9.1nm,1.2s							
RYN	**Ryan**	**55.81**	**290**		IAmb	IAmb	21 44 46.4	
	comp=Z,7.9nm,1.0s							
NVAR	**Mina Array Bea**	**55.84**	**289**		P	**P**	**21 43 10.1**	**-0.3**
	comp=Z,1.4nm,0.7s,baz=55,slow=5.7,SNR=8.5							
NVAR					LR	LR	22 05 57.4	
	comp=Z,352nm,19.5s,baz=11,slow=35							
ZALV	**Zalesovo Beam**	**59.17**	**37**		P	**P**	**21 43 33.4**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=318,slow=4.1,SNR=2.6							
ROSC	**El Rosal**	**60.50**	**227**		LR	LR	22 07 21.7	
	comp=Z,68nm,21.3s,baz=128,slow=34							
GEYT	**Alibeck**	**60.59**	**65**		P	**P**	**21 43 44.1**	**+0.7**
	comp=Z,1.2nm,0.8s,baz=312,slow=7.3,SNR=2.5							
GEYT					LR	LR	22 11 26.2	
	comp=Z,72nm,19.6s,baz=70,slow=38							
SEY	**Seymchan**	**60.70**	**356**	*eP*		**P**	**21 43 44.8**	**+1.1**
MAKZ	**Makanchi**	**64.10**	**43**		P	**P**	**21 44 06.6**	**-0.1**
MAKZ					pmax	pmax		
	comp=Z,5.0nm,1.3s							
MAKZ	**Makanchi**	**64.10**	**43**		P	**P**	**21 44 06.6**	**-0.1**
MAKZ					IAmb	IAmb	21 44 09.0	
	comp=Z,5.4nm,1.2s							
MK31	**Makanchi Array**	**64.23**	**43**		IAmb	IAmb	21 44 28.3	
	comp=Z,13nm,1.9s							
MKAR	**Makanchi Array**	**64.23**	**43**		P	**P**	**21 44 07.6**	**0.0**
	comp=Z,1.7nm,0.7s,baz=330,slow=6.8,SNR=19							
MKAR					LR	LR	22 09 30.7	
	comp=Z,63nm,18.5s,baz=304,slow=34							
AAK	**Ala-Archa**	**64.52**	**51**		P	**P**	**21 44 10.9**	**+1.2**
AAK					pmax	pmax		
	comp=Z,19nm,1.9s							
AAK	**Ala-Archa**	**64.52**	**51**		LR	LR	22 11 27.2	
	comp=Z,144nm,18.0s,baz=314,slow=35							
AAK	**Ala-Archa**	**64.52**	**51**		P	**P**	**21 44 10.9**	**+1.2**
NRN	**Naryn**	**66.15**	**50**		IAmb	IAmb	21 44 36.7	
	comp=Z,11nm,1.7s							
KSH	**Kashi**	**67.72**	**52**		P	**P**	**21 44 32.8**	**+2.6**
KSH					PP	**PP**	**21 47 00.5**	**+1.5**
KSH					S	**S**	**21 53 24.3**	**-3.3**
KSH					sS	sS	21 53 36.0	+4.2
KSH	**Kashi**	**67.72**	**52**		SS	SS	21 57 46.3	-1.5
KSH					pmax	pmax		
	comp=Z,44nm,1.3s							
KSH					pmax	pmax		
	comp=Z,210nm,3.9s							
KSH					LR	LR		
	comp=N,180nm,5.4s							
KSH					LR	LR		
	comp=E,190nm,4.8s							
KSH					LR	LR		
	comp=Z,360nm,8.2s							
WMQ	**Urumqi**	**68.76**	**41**	*eP*		**P**	**21 44 39.5**	**+2.8**
WMQ					pmax	pmax		
	comp=Z,8.0nm,1.3s							
WMQ					pmax	pmax		
	comp=Z,59nm,4.3s							
WMQ					LR	LR		
	comp=N,220nm,22.9s							
WMQ					LR	LR		
	comp=Z,110nm,20.3s							
PETK	**Petropavlovsk-**	**70.22**	**352**		LR	LR	22 16 07.5	
	comp=Z,61nm,19.9s,baz=59,slow=36							
SONM	**Songino Array**	**70.92**	**27**		P	**P**	**21 44 50.0**	**+0.1**
	comp=Z,8.8nm,0.6s,baz=347,slow=6.1,SNR=4.1							
SONM	**Songino Array**	**70.92**	**27**		IAmb	IAmb	21 44 51.4	
	comp=Z,1.2nm,0.8s							
ULN	**Ulaanbaatar**	**71.06**	**26**	*eP*		**P**	**21 44 50.9**	**+0.1**
ULN					pmax	pmax		
	comp=Z,4.0nm,1.2s							
NIL	**Nilore**	**71.35**	**57**		P	**P**	**21 44 52.9**	**+0.3**
NIL					pmax	pmax		
	comp=Z,8.0nm,1.0s							
NIL	**Nilore**	**71.35**	**57**		P	**P**	**21 44 52.9**	**+0.3**
NIL					IAmb	IAmb	21 44 55.9	
	comp=Z,7.5nm,0.9s							
BDFB	**Brasilia**	**72.86**	**194**		LR	LR	22 12 01.8	
	comp=Z,76nm,18.0s,baz=175,slow=32							
KLR	**Kul'dur**	**73.92**	**9**		LR	LR	22 16 46.3	
	comp=Z,48nm,18.7s,baz=334,slow=35							
GTA	**Gaotai**	**76.82**	**35**	*eP*		**P**	**21 45 24.3**	**-0.3**
GTA					pP	sP	21 45 28.5	+0.3
GTA					sP	pwP	21 45 31.8	+1.8
GTA					pmax	pmax		
	comp=Z,1.0nm,1.0s							
LPAZ	**La Paz**	**77.91**	**213**		LR	LR	22 17 55.0	
	comp=Z,55nm,20.3s,baz=334,slow=34							
HHC	**Hu-ho-hao-te**	**78.75**	**26**	*eP*		**P**	**21 45 32.5**	**-2.8**
HHC					pmax	pmax		
	comp=Z,1.0nm,0.8s							
HHC					pmax	pmax		
	comp=Z,54nm,6.2s							
KMBO	**Kilima Mbogo**	**80.90**	**106**		LR	LR	22 24 00.3	
	comp=Z,48nm,18.4s,baz=58,slow=37							
LZH	**Lanzhou**	**81.12**	**33**	*eP*		**P**	**21 45 46.3**	**-2.0**
LZH					pP	pP	21 45 49.5	-1.4
LZH					sP	sP	21 45 51.3	-0.5
LZH					*e*PP	**PP**	**21 48 52.5**	**-0.1**
LZH					pmax	pmax		
	comp=Z,22nm,1.3s							
LZH					pmax	pmax		
	comp=Z,69nm,6.4s							
LZH					LR	LR		
	comp=N,120nm,17.0s							
LZH					LR	LR		
	comp=E,130nm,16.8s							
LZH					LR	LR		
	comp=Z,180nm,19.3s							
CPUP	**Villa Florida**	**84.86**	**201**		P	**P**	**21 46 07.1**	**-0.2**
	comp=Z,1.3nm,0.6s,baz=21,slow=7.3,SNR=4.4							
KSRS	**Korea Array**	**85.12**	**14**		P	**P**	**21 46 07.8**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=9.2,slow=2.7,SNR=3.3							
NJ2	**Nanjing**	**88.82**	**23**	*eP*		**P**	**21 46 25.3**	**-1.5**
NJ2					pmax	pmax		
	comp=Z,3.0nm,0.6s							
CMAR	**Chiang Mai Arr**	**95.63**	**44**		P	**P**	**21 46 58.7**	**+0.2**
	comp=Z,0.5nm,0.8s,baz=314,slow=5.2,SNR=4.7							
ASAR	**Alice Springs**	**146.01**	**19**		PKPbc	**PKPdf**	**21 53 11.5**	**-0.3**
	comp=Z,1.9nm,0.6s,baz=347,slow=2.6,SNR=21							

*ANF **28** 21:33:44.7±1.0, 37.32N×114.07W, h2km±7km, ML3.1/6, Error ellipse: s-maj=9.1km s-min=2.7km az=72.0*
*UUSS **28** 21:33:45.7±2.6, 37.33N±0.04×114.12W±0.02, h7km±6km, ML2.9/9, ML3.0(REN), Error ellipse: s-maj=5.1km s-min=2.6km az=170.0*
*REN **28** 21:33:46.0±2.3, 37.32N±0.03×114.11W±0.02, h9km±6km, Error ellipse: s-maj=4.7km s-min=2.2km az=177.0*

NEIC 28 21:33:46.4±2.6, 37.32N±0.04×114.12W±0.03, h20km±9km, Error ellipse: s-maj=5.1km s-min=3.0km az=189.0, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCUT	**Cedar City**	**0.65**	**68**		Pb	21 33 58.3	-0.8
CCUT					Sb	21 34 04.9	-3.0
LCMT	**Little Creek M**	**0.76**	**113**		Pb	21 34 00.4	-0.7
SZCU	**Shurtz Canyon**	**0.87**	**71**		Pb	21 34 02.5	-0.4
KNB	**Kanab**	**1.08**	**106**		Pb	21 34 06.1	-0.3
KNB					Sb	21 34 18.4	-1.7
SHPR	**Sheep Range**	**1.16**	**226**	Pg	Pn	21 34 07.5	-0.2
SHPR					Sn	21 34 23.1	+0.1
PSUT	**Pine Spring**	**1.23**	**10**	Pn	Pn	21 34 08.8	+0.1
PKCU	**Pink Cliffs**	**1.45**	**84**		Pb	21 34 13.5	+0.7
R11A	**Troy Canyon, C**	**1.55**	**312**		Pn	21 34 13.4	+0.4
R11A	**Troy Canyon, C** baz=131	**1.55**	**312**	P	Pb	21 34 14.4	-0.1
R11A				S	Sb	21 34 35.9	+2.0
	baz=131						
MTPU	**Mount Pierson**	**1.70**	**64**		Pb	21 34 16.9	-0.2
U15A	**North Rim**	**1.71**	**121**		Pb	21 34 17.6	+0.2
U15A					Sb	21 34 37.7	-0.8
TPNV	**Topopah Spring**	**1.74**	**259**	Pn	Pn	21 34 16.2	+0.6
TPNV					Sn	21 34 36.9	-0.4
TPNV	**Topopah Spring** baz=77	**1.74**	**259**	P	Pn	21 34 16.1	+0.5
TPNV				S	Sb	21 34 41.6	+2.4
	baz=77						
TCRU	**Three Creeks R**	**1.85**	**45**	Pn	Pb	21 34 18.6	-1.0
MSU	**Marysvale**	**1.94**	**52**		Pb	21 34 20.4	-0.9
W13A	**Hualapai Mount**	**2.22**	**175**	Pn	Pn	21 34 22.3	+0.1
TUQ	**Turquoise Moun** baz=37	**2.38**	**218**	P	Pn	21 34 25.5	+1.2
NEE2	**Needles Airpor** baz=8.9	**2.58**	**189**	S	Sb	21 35 00.8	-2.2
Q16A	**Castle Valley**	**2.82**	**55**	Pn	Pn	21 34 29.8	-0.7
Q16A					Pb	21 34 39.9	+3.7
WUAZ	**Wupatki**	**2.85**	**128**	Pn	Pn	21 34 30.4	-0.5
WUAZ					Pb	21 34 39.6	+3.0
GSC	**Goldstone, Bar**	**2.96**	**228**	Pn	Pn	21 34 33.3	+1.0
GSC					Pg	21 34 40.0	+1.6
DAC	**Darwin (Calif)**	**2.98**	**251**	Pn	Pn	21 34 32.4	-0.2
DAC					Pb	21 34 44.1	+5.3
MPMC	**Manual Prospec** baz=64	**2.99**	**246**	P	Pn	21 34 33.8	+1.0
TMUT	**Trail Mountain**	**3.02**	**48**	Pn	Pn	21 34 32.3	-1.1
DUG	**Dugway, Tooele**	**3.05**	**19**		Pn	21 34 34.5	+0.9
NLU	**North Lily Min**	**3.08**	**31**	Pn	Pn	21 34 33.6	-0.5
IRM	**Iron Mountain** baz=14	**3.26**	**195**	P	Pn	21 34 37.2	+0.8
IRM				S	Sn	21 35 17.6	+3.0
	baz=14						
SRU	**San Rafael Swe**	**3.35**	**57**	Pn	Pn	21 34 36.0	-1.8
NV11	**Mina Array Sit**	**3.38**	**290**	Pn	Pn	21 34 36.7	-1.5
NV11					Pg	21 34 47.8	+2.0
NVAR	**Mina Array Bea**	**3.49**	**290**	Pn	Pn	21 34 38.9	-0.8
ELK	**Elko**	**3.53**	**346**	Pn	Pn	21 34 39.5	-0.8
ELK					Pb	21 34 42.7	-5.6
KVN	**Kaiserville**	**3.58**	**300**	Pn	Pn	21 34 40.9	-0.1
BGU	**Big Grassy Mou**	**3.70**	**13**	Pn	Pn	21 34 42.3	-0.3
RYN	**Ryan**	**3.72**	**292**	Pn	Pn	21 34 43.6	+0.8
ISA	**Isabella, Lake**	**3.88**	**246**	Pn	Pn	21 34 45.0	+0.1
ISA					Pb	21 34 59.2	+5.1
JLU	**Jordanelle**	**3.88**	**32**	Pn	Pn	21 34 44.3	-0.9
YERR	**Yerington**	**4.37**	**294**	Pn	Pn	21 34 52.2	+0.4
YERR					Pg	21 35 09.0	+6.4
MVCO	**Mesa Verde**	**4.48**	**90**	Pn	Pn	21 34 53.3	-0.1

*IDC **28** 21:40:32.2±1.3, 34.25N×26.66E, h0km, mb3.6/4, mb1 3.6/8, mb1mx3.4/42, mbtmp3.5/8, ML3.5/4, Error ellipse: s-maj=29.9km s-min=18.2km az=17.0*

ISC 28 21:40:35.7±0.9, 34.2N±0.1×26.64E±0.08, h33km, n10, σ2s30/14, mb3.6/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IDI	**Anoyia**	**1.80**	**308**	Pn	**Pn**	**21 41 04.2**	**-0.4**
	4.5nm,0.3s,baz=127,slow=20,SNR=13						
IDI				Sn	**Sn**	**21 41 25.1**	**-1.2**
	6.8nm,0.3s,baz=13,slow=16,SNR=8.6						
MMAI	**Mount Meron Ar**	**7.41**	**97**	Pn	**Pn**	**21 42 21.7**	**+0.2**
	1.4nm,0.3s,baz=286,slow=10,SNR=8.3						
MMAI				Sn	**Sn**	**21 43 44.1**	**-0.3**
	1.1nm,0.3s,baz=334,slow=20,SNR=3.4						
EIL	**Elat**	**8.38**	**120**	Pn	**Pn**	**21 42 35.6**	**+0.8**
	0.5nm,0.3s,baz=342,slow=13,SNR=7.9						
EIL				Sn	**Sn**	**21 44 02.8**	**-5.5**
	0.1nm,0.3s,baz=128,slow=17,SNR=2.4						
ASF	**Jabal al Asfar**	**8.83**	**100**	Pn	**Pn**	**21 42 41.2**	**+0.1**
	0.1nm,0.3s,baz=284,slow=19,SNR=1.8						
ASF				Sn	**Sn**	**21 44 23.1**	**+3.6**
	0.1nm,0.3s,baz=237,slow=16,SNR=2.0						
GERES	**GERESS Array B**	**17.51**	**331**	P	**Pn**	**21 44 37.5**	**+0.3**
	0.1nm,0.3s,baz=143,slow=13,SNR=4.3						
EKA	**Eskdalemuir Ar**	**29.53**	**325**	P	**P**	**21 46 38.3**	**+1.4**
	0.8nm,0.6s,baz=121,slow=11,SNR=2.4						
TORD	**Torodi Ar. Bea**	**30.85**	**233**	P	**P**	**21 46 50.4**	**+1.5**
	0.5nm,0.8s,baz=42,slow=8.7,SNR=3.3						
ARCES	**ARCESS Array B**	**35.39**	**359**	P	**P**	**21 47 25.3**	**-2.7**
	2.8nm,0.9s,baz=171,slow=8.2,SNR=4.3						
MKAR	**Makanchi Array**	**43.30**	**56**	P	**P**	**21 48 35.0**	**+0.8**
	0.4nm,0.5s,baz=265,slow=7.4,SNR=5.9						
ZALV	**Zalesovo Beam**	**44.80**	**45**	P	**P**	**21 48 46.5**	**+0.4**
	0.6nm,0.4s,baz=269,slow=9.6,SNR=3.0						

TAP 28 21:46:57.9, 23.50N×121.51E, h31km, ML1.6, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.08**	**264**	*i* P	Pb	21 47 03.2	-0.1
	baz=264						
EHY	**Hungye**	**0.17**	**272**	P	Pn	21 47 04.6	+0.1
	baz=271						
EHY				*i* S	Sn	21 47 08.8	+0.4
	baz=271						
EHY	**Hungye**	**0.17**	**272**	S	Sn	21 47 08.4	-0.1
	baz=272						
EGFH	**Guangfu**	**0.18**	**336**	*e*P	Pb	21 47 04.3	+0.2
	baz=336						
YULB	**Yu-li**	**0.22**	**241**	P	Pn	21 47 04.9	-0.2
	baz=241						
YULB				S	Sn	21 47 09.9	+0.2
	baz=241						
YULB	**Yu-li**	**0.22**	**241**	*e*S	Sn	21 47 09.9	+0.3
	baz=228						
TWF1	**Yuli**	**0.24**	**233**	*i* P	Pn	21 47 05.3	-0.1
	baz=231						
TWF1				S	Sn	21 47 10.6	+0.4
	baz=231						
**T

	baz=229						
OWD	**Renai**	**0.51**	**333**	*e*P	Pb	21 47 11.6	+0.5
	baz=332						
OWD				*e*S	Sb	21 47 19.5	+1.4
	baz=332						
SSLB	**Suanglung**	**0.52**	**303**	*e*P	Pb	21 47 11.8	+0.5
	baz=303						
SSLB				*e*S	Sb	21 47 19.8	+1.4
	baz=303						
CHGB	**Renai**	**0.60**	**337**	*e*P	Pb	21 47 13.2	+0.3
	baz=337						
CHGB				*e*S	Sb	21 47 22.3	+1.2
	baz=337						

IDC ***28*** *21:51:44.9±1.5,36°.13N×27°.13E,h0km,mb3.4/2, mb1 3.3/6,mb1mx3.1/49,mbtmp3.3/6,ML3.0/4,Error ellipse: s-maj=42.5km s-min=18.2km az=157.0*
ATH ***28*** *21:51:47.5,36°.15N×27°.12E,h31km±2km,ML3.3/7,Error ellipse: s-maj=3.5km s-min=1.2km az=85.0*
DDA ***28*** *21:51:47.3,36°.08N×27°.14E,h7km±1km,ML2.9*
ISK ***28*** *21:51:47.1,36°.15N×27°.14E,h1km,ML3.5/11*
THE ***28*** *21:51:48.3,36°.12N×27°.15E,h10km±3km,ML3.3/5,Error ellipse: s-maj=3.1km s-min=0.4km az=271.0*

ISC 28 21:51:48.4±1.0,36°.13N±0°.02×27°.12E±0°.02,h27km±9km, n53,σ1§40/77,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NISR	**Nisiros**	**0.48**	**1**	P	**Pb**	**21 51 58.0**	**-0.3**
NISR				S	**Sb**	**21 52 05.1**	**0.0**
	3μm,0.5s						
NISR	**Nisiros**	**0.48**	**1**	P	**Pb**	**21 51 58.1**	**-0.2**
NISR				S	**Sb**	**21 52 05.1**	**0.0**
KARP	**Karpathos**	**0.58**	**176**	P	**Pb**	**21 51 59.8**	**-0.3**
KARP				S	**Sb**	**21 52 08.0**	**-0.1**
	4μm,0.3s						
KARP	**Karpathos**	**0.58**	**176**	P	**Pb**	**21 51 59.7**	**-0.3**
KARP				S	**Sb**	**21 52 08.3**	**+0.2**
KARP				AML	AML	21 52 11.8	
	comp=E,9901μm,0.4s						
KARP				AML	AML	21 52 12.0	
	comp=N,6738μm,0.3s						
KARP	**Karpathos**	**0.58**	**176**	PG	**Pb**	**21 51 59.9**	**-0.2**
DAT	**Datca**	**0.70**	**32**	PG	**Pb**	**21 52 01.0**	**-1.1**
DAT				SG	**Sb**	**21 52 11.5**	**0.0**
DAT	**Datca**	**0.70**	**32**	*i* P	**Pb**	**21 52 01.7**	**-0.4**
DAT				*i* S	**Sn**	**21 52 11.9**	**-0.7**
DAT				IAML		21 52 15.0	
	comp=E,485nm,0.9s						
DAT				IAML		21 52 16.0	
	comp=N,367nm,0.9s						
DATC	**Datca-Mugla**	**0.77**	**35**	PG	**Pn**	**21 52 03.0**	**-0.4**
DATC				SG	**Sn**	**21 52 14.0**	**0.0**
ARG	**Arkhangelos**	**0.82**	**84**	P	**Pn**	**21 52 03.8**	**-0.3**
ARG				S	**Sn**	**21 52 14.9**	**-0.5**
	comp=N,2μm,1.1s						
ARG	**Arkhangelos**	**0.82**	**84**	P	**Pn**	**21 52 03.8**	**-0.3**
ARG				S	**Sn**	**21 52 15.5**	**+0.1**
ARG				AML	AML	21 52 18.4	
	comp=N,2854μm,0.6s						
ARG				AML	AML	21 52 18.8	
	comp=E,6005μm,1.0s						
BODT	**Bodrum**	**0.94**	**10**	P	**Pn**	**21 52 06.0**	**+0.2**
BODT	**Bodrum**	**0.94**	**10**	PG	**Pn**	**21 52 05.8**	**0.0**
BODT				SG	**Sn**	**21 52 19.4**	**+1.0**
AMGA	**Amorgos Island**	**1.21**	**306**	P	**Pn**	**21 52 09.2**	**-0.2**
AMGA				S	**Sb**	**21 52 27.3**	**+1.5**
	comp=E,1μm,0.5s						
AMGA	**Amorgos Island**	**1.21**	**306**	P	**Pn**	**21 52 09.4**	**-0.1**
AMGA				S	**Sb**	**21 52 27.2**	**+1.4**
STIA	**Sitia Lasithi**	**1.25**	**222**	P	**Pn**	**21 52 10.1**	**+0.1**
ZKR	**Zakros**	**1.25**	**216**	P	**Pb**	**21 52 11.0**	**-0.3**
ZKR				S	**Sb**	**21 52 27.9**	**+0.9**
	comp=E,940nm,0.4s						
ZKR	**Zakros**	**1.25**	**216**	P	**Pb**	**21 52 11.8**	**+0.4**
ZKR				S	**Sb**	**21 52 28.4**	**+1.4**
ZKR				AML	AML	21 52 32.3	
	comp=N,1079μm,0.5s						
ZKR				AML	AML	21 52 32.4	
	comp=E,2716μm,0.6s						
ZKR	**Zakros**	**1.25**	**216**	PN	**Pb**	**21 52 11.9**	**+0.6**
SANT	**Santorini**	**1.36**	**281**	P	**Pb**	**21 52 13.1**	**-0.1**
SANT				S	**Sb**	**21 52 31.1**	**+0.9**
SANT				AML	AML	21 52 34.2	
	comp=E,4241μm,0.6s						
SANT				AML	AML	21 52 35.0	
	comp=N,2008μm,0.5s						
SANT	**Santorini**	**1.36**	**281**	PN	**Pb**	**21 52 14.5**	**+1.3**
YER	**Yerkesik**	**1.37**	**43**	PN	**Pb**	**21 52 13.6**	**+0.2**
SAP2K	**Karterados**	**1.38**	**282**	P	**Pb**	**21 52 13.7**	**+0.2**
THT2	**Imerovigli**	**1.40**	**283**	PN	**Pb**	**21 52 15.1**	**+1.2**
SAP1	**Santorini-Akro**	**1.41**	**280**	P	**Pb**	**21 52 13.3**	**-0.7**
TURN	**Turunc**	**1.41**	**58**	*i* P	**Pn**	**21 52 08.7**	**-3.5**
TURN				*i* S	**Sn**	**21 52 25.0**	**-4.9**
TURN				IAML		21 52 28.0	
	comp=N,366nm,0.5s						
TURN				IAML		21 52 47.0	
	comp=E,528nm,0.7s						
DALY	**Dalyan (Mula)**	**1.42**	**61**	PN	**Pb**	**21 52 14.5**	**+0.4**
DALY				SN	**Sb**	**21 52 34.5**	**+2.8**
DALY	**Dalyan (Mula)**	**1.42**	**61**	*i* P	**Pb**	**21 52 14.5**	**+0.4**
DALY				IAML		21 53 01.0	
	comp=N,278nm,1.0s						
DALY				IAML		21 53 02.0	
	comp=E,165nm,0.9s						
NPS	**Neapolis**	**1.50**	**235**	P	**Pn**	**21 52 14.4**	**+0.9**
NPS				AML	AML	21 52 38.8	
	comp=N,1362μm,0.6s						
NPS				AML	AML	21 52 39.6	
	comp=E,1914μm,0.4s						
APE	**Apeiranthos**	**1.58**	**307**	P	**Pn**	**21 52 14.6**	**0.0**
APE	**Apeiranthos**	**1.58**	**307**	P	**Pn**	**21 52 14.5**	**-0.2**
APE	**Apeiranthos**	**1.58**	**307**	PN	**Pb**	**21 52 17.8**	**+0.8**
IOSP	**Ios island**	**1.59**	**292**	P	**Pn**	**21 52 14.6**	**0.0**
IOSP	**Ios island**	**1.59**	**292**	P	**Pn**	**21 52 14.6**	**0.0**
IOSP				AML	AML	21 52 41.5	
	comp=E,1461μm,0.5s						
IOSP				AML	AML	21 52 42.1	
	comp=N,1966μm,0.5s						
SMG	**Samos**	**1.59**	**352**	P	**Pn**	**21 52 14.8**	**+0.1**
AYDN	**Tasoluk**	**1.65**	**22**	*i* P	**Pb**	**21 52 18.6**	**+0.6**
AYDN				*i* S	**Sb**	**21 52 40.8**	**+2.4**
AYDN				IAML		21 53 18.0	
	comp=E,97nm,1.1s						
LAST	**Lasithi**	**1.65**	**234**	P	**Pn**	**21 52 16.4**	**+0.8**
LAST	**Lasithi**	**1.65**	**234**	P	**Pn**	**21 52 16.5**	**+1.0**
LAST				AML	AML	21 52 46.0	
	comp=E,777μm,0.5s						
LAST				AML	AML	21 52 51.0	
	comp=N,928μm,0.8s						
FETY	**Fethiye**	**1.67**	**72**	PN	**Pb**	**21 52 18.2**	**-0.2**
FETY	**Fethiye**	**1.67**	**72**	*i* P	**Pb**	**21 52 20.0**	**+1.6**
FETY				*i* S	**Sb**	**21 52 40.5**	**+1.5**
FETY				IAML		21 53 07.0	
	comp=N,197nm,0.6s						
FETY				IAML		21 53 07.0	
	comp=E,141nm,0.9s						
HRKL	**Herakleio**	**1.83**	**244**	PN	**Pb**	**21 52 21.5**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.92**	**19**	PN	**Pb**	**21 52 21.6**	**-1.1**
IDI	**Anoyia**	**2.00**	**246**	Pn	**Pn**	**21 52 20.9**	**+0.5**
	comp=E,2.9nm,0.3s,baz=59,slow=18,SNR=25						
IDI				Sn	**Sn**	**21 52 45.5**	**+1.0**
	comp=E,9.8nm,0.3s,baz=108,slow=19,SNR=7.3						
IDI	**Anoyia**	**2.00**	**246**	P	**Pn**	**21 52 20.9**	**+0.5**
IDI	**Anoyia**	**2.00**	**246**	PN	**Pb**	**21 52 22.6**	**-1.4**
AKAS	**Kas**	**2.02**	**86**	*i* P	**Pb**	**21 52 23.6**	**-0.8**
AKAS				*i* S	**Sb**	**21 52 51.8**	**+2.6**
AKAS				IAML		21 53 32.0	
	comp=E,111nm,1.5s						
AKAS				IAML		21 53 33.0	
	comp=N,129nm,0.9s						
SIVA	**Sivas**	**2.18**	**240**	P	**Pn**	**21 52 24.4**	**+1.6**
GOLH	**Golhisar**	**2.25**	**60**	*i* P	**Pb**	**21 52 27.8**	**-0.7**
GOLH				IAML		21 52 57.0	
	comp=E,35nm,3.2s						
GOLH				*i* S	**Sb**	**21 53 00.4**	**+4.4**
GOLH				IAML		21 53 25.0	
	comp=N,230nm,1.0s						
IMMV	**Iera Moni Meta**	**2.63**	**256**	PN	**Pb**	**21 52 32.6**	**-2.3**
BRTR	**Keskin Array B**	**6.28**	**53**	Pn	**Pn**	**21 53 21.4**	**+2.1**
	comp=N,0.1nm,0.3s,baz=236,slow=14,SNR=2.6						
MMAI	**Mount Meron Ar**	**7.51**	**112**	Pn	**Pn**	**21 53 35.0**	**-1.1**
	comp=N,0.9nm,0.3s,baz=295,slow=12,SNR=3.9						
MMAI				Sn	**Sn**	**21 54 59.5**	**-0.8**
	comp=N,1.4nm,0.3s,baz=320,slow=22,SNR=3.2						
EIL	**Elat**	**9.21**	**132**	Pn	**Pn**	**21 53 59.6**	**+0.2**
	comp=N,0.5nm,0.3s,baz=320,slow=7.9,SNR=3.9						
EIL				Sn	**Sn**	**21 55 37.5**	**-4.7**
	comp=N,0.2nm,0.3s,baz=328,slow=18,SNR=2.3						
TORD	**Torodi Ar. Bea**	**32.34**	**231**	P	**P**	**21 58 15.9**	**+0.5**
	comp=N,0.4nm,0.4s,baz=35,slow=7.9,SNR=4.4						
MKAR	**Makanchi Array**	**41.91**	**58**	P	**P**	**21 59 36.6**	**+0.2**
	comp=N,0.3nm,0.6s,baz=284,slow=7.3,SNR=4.0						

IDC ***28*** *21:52:06.6±1.1,36°.15N×27°.10E,h0km,mb3.9/5, mb1 3.8/7,mb1mx3.5/48,mbtmp3.8/7,ML3.7/2,Error ellipse: s-maj=37.0km s-min=19.7km az=163.0*

ISC 28 21:52:10.8±1.0,36°.0N±0°.1×27°.20E±0°.07,h28km,n8, σ1§23/10,mb3.9/5,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**2.01**	**250**	Sn	**Sn**	**21 53 07.2**	**+0.1**
	30nm,0.3s,baz=337,slow=19,SNR=6.0						
MMAI	**Mount Meron Ar**	**7.39**	**111**	Pn	**Pn**	**21 53 57.8**	**+0.9**
	1.3nm,0.3s,baz=298,slow=13,SNR=4.5						
MMAI				Sn	**Sn**	**21 55 19.6**	**-0.3**
	1.7nm,0.3s,baz=314,slow=27,SNR=3.7						
EIL	**Elat**	**9.07**	**132**	Pn	**Pn**	**21 54 21.8**	**+2.0**
	0.6nm,0.3s,baz=306,slow=19,SNR=4.3						
EIL				Sn	**Sn**	**21 55 58.6**	**-2.3**
	0.4nm,0.3s,baz=313,slow=19,SNR=2.4						
GEYT	**Alibeck**	**24.73**	**76**	P	**P**	**21 57 29.9**	**+0.1**
	1.8nm,0.6s,baz=268,slow=9.8,SNR=3.9						
MDT	**Midelt**	**26.38**	**272**	P	**P**	**21 57 44.4**	**-0.5**
	2.9nm,0.8s,baz=90,slow=13,SNR=4.0						
TORD	**Torodi Ar. Bea**	**32.30**	**232**	P	**P**	**21 58 37.4**	**-0.1**
	0.7nm,0.5s,baz=34,slow=8.8,SNR=7.9						
KURBB	**Kurchatov Arra**	**39.30**	**52**	P	**P**	**21 59 36.8**	**-0.3**
	0.7nm,0.2s,baz=283,slow=8.5,SNR=3.6						
MKAR	**Makanchi Array**	**41.93**	**57**	P	**P**	**21 59 58.5**	**-0.4**
	0.3nm,0.6s,baz=283,slow=7.5,SNR=5.2						

JMA ***28*** *22:02:27.8±0.5,45°.25N×149°.83E,h205km,M3.6*

SKHL 28 22:02:25.2±0.4,44°.80N×150°.60E,h30km±3km,mb4.3/4, 1C,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.99**	**284**	*e*P	Pn	22 02 57.0	+0.3
KUR				AMB	AMB	22 02 57.3	
	20nm,0.2s						
SHO	**Shikotan**	**2.86**	**252**	*e*P	Pn	22 03 09.9	+1.2
SHO				AMB	AMB	22 03 14.0	
	10.0nm,0.2s						
SHO				*e*S	Sn	22 03 43.1	+1.0
SHO				A	A	22 03 56.0	
	80nm,0.2s						
SHO				A	A	22 03 56.0	
	80nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.48**	**259**	*e*P	Pn	22 03 19.1	+1.9
YUK				AMB	AMB	22 03 21.0	
	40nm,0.2s						
YUK				*e*S	Sn	22 03 59.5	+2.1
YUK				A	A	22 04 02.0	
	130nm,0.2s						
YUK				A	A	22 04 02.0	
	40nm,0.2s						
GRPR	**Tuman**	**3.55**	**259**	*e*P	Pn	22 03 20.2	+1.9
GRPR				*e*S	Sn	22 04 01.7	+2.5
GRPR				A	A	22 04 06.0	
	120nm,0.3s						
GRPR				A	A	22 04 06.0	
	120nm,0.3s						
NEM2	**Nemuro 2**	**3.78**	**249**	P	Pn	22 03 23.6	+2.2
NEM2				*e*S	Sn	22 04 07.1	+2.3
NMR	**Nemuro--Hokkai**	**3.79**	**250**	*e*P	Pn	22 03 23.5	+2.0
NMR				*e*S	Sn	22 04 07.1	+2.1
GLVR	**Golovnino**	**3.80**	**256**	*e*P	Pn	22 03 23.5	+1.9
GLVR				AMB	AMB	22 03 24.1	
	30nm,0.2s						
GLVR				*e*S	Sn	22 04 07.6	+2.3
GLVR				A	A	22 04 11.0	
	80nm,0.2s						
GLVR				A	A	22 04 11.0	
	80nm,0.2s						
JRA	**Rausu**	**4.02**	**260**	P	Pn	22 03 25.5	+0.8
JNK	**Nakash**	**4.40**	**256**	P	Pn	22 03 30.5	+0.6
JAK	**Akkeshi**	**4.63**	**249**	P	Pn	22 03 34.1	+1.0
JAK				*e*S	Sn	22 04 25.7	-0.1
JTKR	**Abashiri--Toko**	**4.87**	**263**	P	Pn	22 03 35.3	-1.0
JAR	**Ashorobuto**	**5.15**	**255**	P	Pn	22 03 40.5	+0.3
JCH	**Churui**	**5.68**	**250**	P	Pn	22 03 47.2	-0.3
JCH				*e*S	Sn	22 04 48.1	-3.6
JKK2	**Kamakawa 2**	**5.71**	**263**	P	Pn	22 03 45.7	-2.2
JNBK	**Urakawa-nobuka**	**6.23**	**249**	P	Pn	22 03 53.9	-1.2
JBT2	**Biratori 2**	**6.29**	**254**	P	Pn	22 03 55.0	-0.9
JKB	**Kayabe**	**7.56**	**251**	P	Pn	22 04 10.2	-3.0
JKB				*e*S	Sn	22 05 28.7	-9.1
JYM2	**Yakumo 2**	**7.91**	**254**	P	Pn	22 04 14.5	-3.6

THE ***28*** *22:07:47.7,38°.41N×20°.44E,h2km±27km,ML3.1/5,Error ellipse: s-maj=27.1km s-min=0.5km az=87.0*
ATH ***28*** *22:07:47.4,38°.41N×20°.47E,h2km±1km,ML3.3/4,Error ellipse: s-maj=2.1km s-min=0.7km az=101.0*
IDC ***28*** *22:07:48.3±10.0,38°.78N×20°.57E,h0km,mb3.5/4, mb1 3.4/6,mb1mx3.2/49,mbtmp3.4/6,ML2.4/1,Error ellipse: s-maj=197.3km s-min=24.4km az=32.0*

ISC 28 22:07:47.3±1.1,38°.42N±0°.02×20°.44E±0°.04,h5km±7km, n29,σ1§00/47,mb3.7/4,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.11**	**68**	P	**Pg**	**22 07 49.3**	**-0.3**
FSK				S	**Sg**	**22 07 50.7**	**-0.4**
	20μm,0.3s						
FSK	**Fiskardo**	**0.11**	**68**	P	**Pg**	**22 07 49.3**	**-0.3**
FSK				S	**Sg**	**22 07 50.7**	**-0.4**
KEF1	**Kardakata, Kep**	**0.14**	**169**	P	**Pg**	**22 07 50.3**	**+0.1**
KEF1				S	**Sg**	**22 07 52.8**	**+0.7**
KEF3	**Kipouria, Keph**	**0.23**	**198**	P	**Pg**	**22 07 52.0**	**+0.3**
KEF3				S	**Sg**	**22 07 56.0**	**+1.4**
ARG2	**Argostoli**	**0.24**	**170**	P	**Pg**	**22 07 52.2**	**+0.2**
ARG2				S	**Sg**	**22 07 56.3**	**+1.1**
KEF2	**Argostoli. Kep**	**0.26**	**171**	P	**Pg**	**22 07 52.2**	**0.0**
KEF2				S	**Sg**	**22 07 56.4**	**+0.7**
EVGI	**Lefkada island**	**0.27**	**41**	P	**Pg**	**22 07 52.5**	**0.0**
EVGI				S	**Sg**	**22 07 57.2**	**+1.2**
EVGI	**Lefkada island**	**0.27**	**41**	P	**Pg**	**22 07 52.7**	**+0.1**
EVGI				S	**Sg**	**22 07 56.6**	**+0.5**
VLS	**Valsamata**	**0.27**	**153**	P	**Pg**	**22 07 52.4**	**-0.2**
VLS				S	**Sg**	**22 07 56.2**	**0.0**
	7μm,0.2s						
VLS	**Valsamata**	**0.27**	**153**	P	**Pg**	**22 07 52.3**	**-0.2**
VLS				S	**Sg**	**22 07 56.1**	**0.0**
VLS				AML	AML	22 07 57.1	
	comp=E,18183μm,0.2s						
VLS				AML	AML	22 07 59.2	
	comp=N,13832μm,0.3s						
LKD2	**Lefkada island**	**0.41**	**25**	P	**Pg**	**22 07 55.5**	**+0.3**
LKD2				S	**Sg**	**22 08 01.5**	**+0.9**
	comp=N,3μm,0.4s						
LKD2	**Lefkada island**	**0.41**	**25**	P	**Pg**	**22 07 55.3**	**0.0**
LKD2				S	**Sg**	**22 08 01.9**	**+1.3**
KFL	**Anninata**	**0.41**	**138**	P	**Pg**	**22 07 55.4**	**+0.1**
KFL				S	**Sg**	**22 08 01.8**	**+1.0**
	comp=N,6μm,0.2s						
KFL	**Anninata**	**0.41**	**138**	P	**Pg**	**22 07 55.0**	**-0.3**
KFL				S	**Sg**	**22 08 01.1**	**+0.3**
KFL				AML	AML	22 08 03.4	
	comp=E,11810μm,0.3s						
KFL				AML	AML	22 08 05.6	
	comp=N,12848μm,0.3s						
TSLK	**Tsoukalades, L**	**0.44**	**23**	P	**Pg**	**22 07 56.1**	**+0.3**
TSLK				S	**Sg**	**22 08 03.1**	**+1.5**
	comp=N,4μm,0.6s						
TSLK	**Tsoukalades, L**	**0.44**	**23**	P	**Pg**	**22 07 56.2**	**+0.3**
TSLK				S	**Sg**	**22 08 03.1**	**+1.5**
TSLK				AML	AML	22 08 07.0	
	comp=E,7454μm,0.7s						
TSLK				AML	AML	22 08 09.4	
	comp=N,8203μm,0.6s						
AST1	**Astakos**	**0.53**	**76**	P	**Pg**	**22 07 57.4**	**-0.1**
AST1				S	**Sb**	**22 08 05.7**	**-1.2**
VLMS	**Volimes, Zakyn**	**0.57**	**162**	P	**Pg**	**22 07 57.4**	**-0.8**
VLMS				S	**Sg**	**22 08 05.9**	**+0.2**
VLMS				AML	AML	22 08 11.0	
	comp=N,12665μm,0.3s						
VLMS				AML	AML	22 08 11.2	
	comp=E,9953μm,0.3s						
PDO	**Prodromos**	**0.61**	**73**	P	**Pg**	**22 07 59.4**	**+0.3**
ZAK2	**Zakynthos**	**0.73**	**150**	P	**Pg**	**22 08 01.4**	**+0.1**
PVO	**Paravola**	**0.88**	**77**	P	**Pg**	**22 08 04.0**	**-0.2**
RLS	**Riolos of Patr**	**0.89**	**114**	P	**Pg**	**22 08 04.2**	**-0.2**
IDI	**Anoyia**	**4.75**	**130**	Sn	**Sn**	**22 09 57.9**	**+3.0**
	comp=E,0.6nm,0.3s,baz=70,slow=9.7,SNR=3.5						
BRTR	**Keskin Array B**	**10.35**	**79**	Pn	**Pn**	**22 10 18.6**	**+2.1**
	comp=E,0.0nm,0.3s,baz=288,slow=15,SNR=2.3						
GERES	**GERESS Array B**	**11.50**	**337**	Pn	**Pn**	**22 10 31.1**	**-1.1**
	baz=159,slow=14,SNR=2.2						
HFS	**Hagfors**	**22.15**	**351**	P	**P**	**22 12 40.9**	**-2.8**
	comp=E,3.0nm,0.9s,baz=169,slow=16,SNR=2.2						
FINES	**FINESS Array B**	**23.32**	**7**	P	**P**	**22 12 54.2**	**-1.7**
	comp=E,2.3nm,0.9s,baz=187,slow=9.5,SNR=3.6						
MKAR	**Makanchi Array**	**45.23**	**59**	P	**P**	**22 16 04.9**	**-0.5**
	comp=E,0.1nm,0.5s,baz=279,slow=7.7,SNR=4.8						
ZALV	**Zalesovo Beam**	**45.58**	**48**	P	**P**	**22 16 07.6**	**-0.4**
	comp=E,0.7nm,0.6s,baz=278,slow=10,SNR=4.1						

BJI ***28*** *22:10:45.7±0.0,57°.06N×34°.51W,h10km,mB5.2/20, mb4.7/30,Ms5.0/13,Ms7 4.8/12*
IDC ***28*** *22:10:45.1±0.5,56°.59N×34°.51W,h0km,mb4.3/30, mb1 4.4/35,mb1mx4.3/50,mbtmp4.3/35,ML3.4/5,MS4.2/14, Ms1 4.2/14,ms1mx3.8/66,Error ellipse: s-maj=15.0km s-min=10.5km az=10.0*
MOS ***28*** *22:10:45.2±1.1,56°.68N×34°.46W,h10km,mb4.8/16,Error ellipse: s-maj=11.1km s-min=7.3km az=75.6*
GCMT ***28*** *22:10:46.6±0.2,56°.74N±0°.03×34°.19W±0°.03,h12km, MW5.0/99,Moment Tensor Solution. s28,c35; s99,c138; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr=3.13±.12; Mθθ=0.26±.14; Mθφ=2.87±.08; Mrθ=2.06±.53; Mφφ=0.03±.11; Mφr=0.82±.34; Best double couple: M₀3.59800×10¹⁶ NP1:φs199.00000°,δ41.00000°,λ-52.00000°. NP2: φs334.00000°,δ59.00000°,λ-118.00000°. Principal axes: T 3.0100, Plg10.0000°, Azm83.0000°; N 1.1710, Plg23.0000°, Azm349.0000°; P -4.1850, Plg64.0000°, Azm194.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***28*** *22:10:46.6±1.6,56°.70N±0°.08×34°.4W±0°.1,h10km±1km, mb4.9/161 Error ellipse: s-maj=13.3km s-min=12.1km az=141.0*

ISC 28 22:10:47.5±1.2,56°.75N±0°.05×34°.41W±0°.04,h13km±7km, n444,σ1§12/395,mb4.8/133,MS4.3/13,3C-7D,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANGG	**Ammassalik, Gr**	**9.04**	**351**	Pn	**Pn**	**22 12 56.9**	**-0.5**
ANGG				Sn	**Sn**	**22 14 33.2**	**-5.7**
BORG	**Borgarnes**	**10.24**	**33**	Pn	**Pn**	**22 13 16.7**	**+2.8**
	0.8nm,0.3s,baz=204,slow=4.4,SNR=5.8						
BORG				Sn	**Sn**	**22 15 03.0**	**-5.4**
	0.2nm,0.3s,baz=36,slow=14,SNR=3.3						
BORG				LR	LR	22 16 13.7	
	comp=Z,4μm,18.7s,baz=253,slow=32						
BORG	**Borgarnes**	**10.24**	**33**		**Pn**	**22 13 14.4**	**+0.5**
SFJD	**Kangerlussuaq**	**12.76**	**330**	Pn	**Pn**	**22 13 49.0**	**+0.7**
	0.2nm,0.3s,baz=144,slow=4.4,SNR=3.1						
SFJD				LR	LR	22 17 59.0	
	comp=Z,1μm,19.0s,baz=142,slow=34						
ILULI	**Ilulissat**	**14.55**	**336**	P	**Pn**	**22 14 13.1**	**+0.4**
ILULI	**Ilulissat**	**14.55**	**336**	Pn	**Pn**	**22 14 13.1**	**+0.4**
DRLN	**Deer Lake**	**15.74**	**251**	Pn	**Pn**	**22 14 27.1**	**-1.6**
DRLN				IAmb	IAmb	22 14 33.4	
	comp=Z,162nm,1.6s						
SUMG	**Summit**	**15.98**	**356**	*i* P	**Pn**	**22 14 34.0**	**+1.9**
SUMG				pmax	pmax		
	comp=Z,130nm,1.2s						
SUMG	**Summit**	**15.98**	**356**	*i* P	**Pn**	**22 14 34.0**	**+1.9**
	comp=Z,134nm,1.2s						
SUMG	**Summit**	**15.98**	**356**		**Pn**	**22 14 30.2**	**-1.8**
EKA	**Eskdalemuir Ar**	**17.44**	**81**	P	**Pn**	**22 14 51.6**	**+1.4**
	baz=278,slow=11,SNR=4.1						
EKA				LR	LR	22 20 22.8	
	comp=Z,1μm,18.8s,baz=290,slow=33						
JMIC	**Jan Mayen**	**18.03**	**28**	LR	LR	22 20 18.3	
	comp=Z,571nm,21.7s,baz=226,slow=32						
FRB	**Frobisher Bay**	**18.14**	**307**	P	**Pn**	**22 14 59.4**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=112,slow=12,SNR=9.1						
FRB				LR	LR	22 20 40.3	
	comp=Z,668nm,20.2s,baz=81,slow=33						
SCHQ	**Schefferville**	**18.24**	**278**	P	**Pn**	**22 14 59.7**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=66,slow=9.8,SNR=12						
SCHQ				LR	LR	22 20 49.4	
	comp=Z,963nm,19.4s,baz=48,slow=33						
SCHQ	**Schefferville**	**18.24**	**278**	P	**Pn**	**22 15 00.5**	**+0.3**
SCHQ				IAmb	IAmb	22 15 01.6	
	comp=Z,142nm,1.6s						
DAG	**Danmarks Havn**	**20.89**	**10**	*i* P	Pn	22 15 38.0	+6.5
DAG				pmax	pmax		
	comp=Z,15nm,1.4s						
DAG	**Danmarks Havn**	**20.89**	**10**	*i* P	Pn	22 15 38.0	+6.5
	comp=Z,15nm,1.4s						
LMN	**Caledonia Moun**	**21.72**	**253**	P	**P**	**22 15 37.0**	**-1.2**
LMN				IAmb	IAmb	22 15 38.1	
	comp=Z,42nm,0.9s						
D63A	**Stockholm**	**22.73**	**259**	P	**P**	**22 15 48.7**	**-0.2**
	baz=52						
PQI	**Presque Isle**	**22.91**	**258**	P	**P**	**22 15 49.7**	**-1.1**
PQI				IAmb	IAmb	22 15 52.4	
	comp=Z,50nm,1.2s						
E64A	**Bridgewater**	**22.97**	**258**	P	**P

baz=49
D58A Chemin du LacG 25.30 264 P **P** 22 16 13.5 0.0
baz=53
F60A Warwick 25.48 261 P **P** 22 16 14.9 -0.2
baz=51,SNR=6.7
NOR Nord 25.49 6 *i* P **P** 22 16 15.0 +0.1
comp=Z,33nm,1.5s
G61A St-Isidore-de- 25.69 259 P **P** 22 16 17.2 +0.3
baz=50
D57A Chemin Vers le 25.90 265 P **P** 22 16 19.0 +0.1
baz=53
H62A Milan 25.95 258 P **P** 22 16 19.5 +0.2
baz=49
E58A La Victoria 25.95 263 P **P** 22 16 19.5 +0.1
baz=52
I63A Otisfield 25.98 256 P **P** 22 16 20.5 +0.9
I63A Otisfield 25.98 256 P **P** 22 16 19.7 +0.1
baz=48
ESDC Sonseca Array 26.20 118 P **P** 22 16 21.2 -0.5
comp=Z,2.3nm,0.9s,baz=323,slow=9.9,SNR=5.8
G60A Masonville 26.24 260 P **P** 22 16 22.1 +0.1
baz=50
D56A ZEC Mazanza, M 26.36 266 P **P** 22 16 22.9 -0.2
baz=53
H61A Lyndonville 26.39 259 P **P** 22 16 23.8 +0.5
baz=49
E57A Chemin Saint G 26.41 264 P **P** 22 16 23.6 +0.1
baz=52
MATQ Matagami 26.42 273 P **P** 22 16 23.7 +0.2
baz=58
LSQQ Lebel-sur-Quev 26.43 271 P **P** 22 16 23.7 +0.1
baz=57
I62A Tamworth 26.51 257 P **P** 22 16 24.5 +0.1
baz=48
LBNH Lisbon 26.58 258 P **P** 22 16 25.8 +0.7
baz=48
PMOZ Porto Moniz, M 26.70 146 P **P** 22 16 25.4 -0.9
G59A Clarenceville 26.71 261 P **P** 22 16 26.6 +0.4
baz=50
D55A Sainte-Anne-du 26.77 266 P **P** 22 16 27.3 +0.5
baz=53
J63A Strafford 26.77 256 P **P** 22 16 26.7 0.0
baz=47
H60A Morristown 26.79 259 P **P** 22 16 26.9 0.0
baz=49
E56A St. Veronique 26.81 265 P **P** 22 16 27.3 +0.2
baz=53
I61A Oroboro, Fairl 26.94 258 P **P** 22 16 29.0 +0.7
baz=48
J62A Henniker 27.20 256 P **P** 22 16 31.3 +0.6
baz=47
H59A Cadyville 27.27 261 P **P** 22 16 31.7 +0.5
baz=50
D54A Lac Fusel, La 27.34 268 P **P** 22 16 33.1 +1.2
baz=54
K63A Dunstable 27.42 255 P **P** 22 16 33.1 +0.5
baz=46
J61A Chester 27.52 257 P **P** 22 16 34.2 +0.7
baz=47
HRV Adam Dziewonsk 27.56 255 P **P** 22 16 35.2 +1.3
baz=46
I60A Shoreham 27.58 259 P **P** 22 16 35.4 +1.4
baz=48
G57A Newington 27.68 263 P **P** 22 16 35.4 +0.5
baz=50
K62A Royalston 27.81 256 P **P** 22 16 36.6 +0.5
baz=46
CLL Collm 27.91 81 *e*P **P** 22 16 37.0 +0.1
CLL MLR MLR
comp=Z,700nm,19.6s
CLL Collm 27.91 81 *e*P **P** 22 16 37.0 +0.1
CLL *e*PPP PPP 22 17 30.0
CLL Lm MLR 22 27 00.0
comp=Z,700nm,19.6s
I59A Olmsteadville 27.93 259 P **P** 22 16 38.0 +0.8
baz=48
L63A North Scituate 28.04 254 P **P** 22 16 39.0 +0.9
baz=45
E54A Lac Daplat, Po 28.06 267 P **P** 22 16 38.9 +0.5
baz=53
L61B Northampton 28.20 256 P **P** 22 16 40.6 +1.1
baz=46
E53A Dumoine, Ponti 28.36 267 P **P** 22 16 41.7 +0.7
baz=53
K61A Williamstown 28.36 257 P **P** 22 16 42.2 +1.2
baz=47
J59A Piesco 28.49 259 P **P** 22 16 43.2 +1.0
baz=48
G55A Calabogie 28.54 264 P **P** 22 16 43.2 +0.6
baz=51
ARCES ARCESS Array B 28.55 40 P **P** 22 16 42.1 -0.4
ARCES ARCESS Array B 28.55 40 P **P** 22 16 41.9 -0.6
comp=Z,7.7nm,0.8s,baz=284,slow=4.9,SNR=5.4
ARCES ARCESS Array B 28.55 40 P **P** 22 16 42.1 -0.4
M63A Gales Ferry 28.59 254 P **P** 22 16 43.2 +0.1
baz=45
DAVOX Davos/Dischmat 28.68 91 P **P** 22 16 45.4 +1.3
comp=Z,1.1nm,0.6s,baz=330,slow=13,SNR=2.1
ALGO Algonquin Park 28.83 267 P **P** 22 16 45.1 -0.1
baz=52
L61A Hillsdale 1, H 28.84 257 P **P** 22 16 46.1 +0.8
baz=46
D51A Lot 18 Range I 28.87 270 P **P** 22 16 45.9 +0.4
baz=54
E52A Mattawa 28.96 268 P **P** 22 16 46.9 +0.6
baz=52
J58A Remsen 28.98 260 P **P** 22 16 46.9 +0.3
baz=48
FETA Feichten 29.01 90 pP **P** 22 16 51.6 +4.6
comp=Z,9.6nm,1.4s
MOTA Moosalm 29.02 89 pP **P** 22 16 47.0 -0.1
comp=Z,9.1nm,1.1s
SQTA Sankt Quirin 29.15 89 pP **P** 22 16 50.6 +2.4
comp=Z,6.7nm,0.9s
L60A Shokan 29.34 257 P **P** 22 16 50.8 +1.0
baz=46
KHC Kasperske Hory 29.37 84 *e*P **P** 22 16 52.0 +2.0
KHC pmax pmax
comp=Z,24nm,1.7s
M61A Granite Spring 29.57 255 P **P** 22 16 52.5 +0.7
baz=45
K58A Earlville 29.58 260 P **P** 22 16 52.6 +0.8
baz=47
GERES GERESS Array B 29.59 85 P **P** 22 16 52.6 +0.5
comp=Z,0.8nm,0.8s,baz=324,slow=13,SNR=3.1
GERES GERESS Array B 29.59 85 P **P** 22 16 51.3 -0.7
F52A Sundridge 29.63 268 P **P** 22 16 52.9 +0.6
baz=52
L59A Walton 29.64 258 P **P** 22 16 53.0 +0.5
baz=46
G53A Haliburton 29.66 266 P **P** 22 16 53.3 +0.7
baz=51
BINY Binghamton 30.15 259 P **P** 22 16 57.4 +0.5
baz=47
ABTA Abfaltersbach 30.15 89 *e*pP **P** 22 16 57.5 +0.5
comp=Z,10nm,1.3s
D48A Paudash Townsh 30.16 272 P **P** 22 16 57.5 +0.5
baz=54
DPC Dobruska-Polom 30.21 80 P **P** 22 16 58.1 +0.7
DPC pmax pmax
comp=Z,59nm,1.1s
FINES FINESS Array B 30.42 56 P **P** 22 16 59.6 +0.5
comp=Z,2.6nm,0.8s,baz=298,slow=4.1,SNR=3.9
N60A Cedar Hill Far 30.60 256 P **P** 22 17 01.8 +0.9
baz=45
L57A Andrews Acres 30.75 260 P **P** 22 17 03.3 +1.1
baz=47
VRAC Vranov 30.92 82 LR LR 22 29 58.8
comp=Z,825nm,18.1s,baz=266,slow=37
K55A Perry 30.92 262 P **P** 22 17 04.4 +0.7
baz=48
N59A State Game Lan 30.92 257 P **P** 22 17 04.5 +0.8
baz=45
D47A Chapleau 30.95 273 P **P** 22 17 04.8 +0.8
baz=54
M58A Price's Panora 30.98 258 P **P** 22 17 05.1 +0.9
baz=46
L56A Greenwood 31.04 261 P **P** 22 17 05.7 +0.8
baz=47
O60A Telford 31.15 256 P **P** 22 17 07.3 +1.5
baz=44
CONA Conrad Observa 31.30 85 *e*pP **P** 22 17 07.4 +0.3
comp=Z,17nm,2.3s
N58A Sunbury 31.49 258 P **P** 22 17 09.9 +1.2
baz=45
MDT Midelt 31.49 127 P **P** 22 17 09.5 +0.6
comp=Z,9.8nm,1.1s,baz=336,slow=8.6,SNR=5.2
ARSA Arzberg 31.51 86 *e*pP **P** 22 17 08.6 -0.3
comp=Z,5.5nm,1.0s
SOKA Soboth 31.58 87 pP **P** 22 17 12.2 +2.6
comp=Z,15nm,1.3s
P60A Greenville 31.64 255 P **P** 22 17 10.7 +0.7
baz=44
M56A Emporium 31.83 260 P **P** 22 17 12.8 +1.0
baz=46
L54A Sinclairville 31.93 262 P **P** 22 17 13.4 +0.8
baz=47
N57A Milroy 32.00 259 P **P** 22 17 14.4 +1.2
baz=45
E46A Sault Ste Mari 32.02 273 P **P** 22 17 14.2 +0.8
E46A IAmb IAmb 22 17 15.3
comp=Z,21nm,1.0s
O58A Lewisberry 32.10 257 P **P** 22 17 14.9 +0.8
baz=44
M55A Ridgway 32.16 261 P **P** 22 17 15.3 +0.7
baz=46
P59A Jarrettsville 32.21 256 P **P** 22 17 16.4 +1.4
baz=44
SSPA Standing Stone 32.26 259 P **P** 22 17 16.9 +1.4
baz=45
N56A West Decatur 32.28 260 P **P** 22 17 17.0 +1.3
baz=46
LANS Liptovska Anna 32.57 80 *e*P **P** 22 17 19.7 +1.5
LANS Liptovska Anna 32.57 80 *e*P **P** 22 17 19.7 +1.5
M54A Oil Creek Stat 32.62 262 P **P** 22 17 19.5 +0.8
baz=46
L53A Girard 32.64 263 P **P** 22 17 19.7 +0.9
baz=47
N55A Marion Center 32.76 260 P **P** 22 17 20.1 +0.2
baz=46
E44A Grand Marais A 32.76 274 P **P** 22 17 20.1 +0.3
baz=53
O56A Blue Knob Stat 32.89 259 P **P** 22 17 21.5 +0.4
baz=45
P57A Homestead Farm 33.15 257 P **P** 22 17 24.0 +0.8
baz=44
N54A Moraine State 33.17 261 P **P** 22 17 24.7 +1.2
N54A IAmb IAmb 22 17 25.3
comp=Z,15nm,0.9s
N54A Moraine State 33.17 261 P **P** 22 17 24.1 +0.6
baz=46
M53A WI Miller and 33.22 263 P **P** 22 17 24.7 +0.8
baz=46
J49A Marlette 33.28 267 P **P** 22 17 25.5 +1.1
baz=49
O55A Ligonier 33.33 260 P **P** 22 17 26.1 +1.2
baz=45
P56A Dayton Farm, R 33.58 258 P **P** 22 17 28.4 +1.4
baz=44
J48A Bridge Port 33.68 268 P **P** 22 17 29.4 +1.5
baz=49
Q57A Strasburg 33.69 257 P **P** 22 17 29.3 +1.3
baz=44
S60A Water View 33.72 254 P **P** 22 17 29.4 +1.2
baz=42
N53A Lisbon 33.74 262 P **P** 22 17 29.4 +0.9
baz=46
O54A Avella 33.93 261 P **P** 22 17 30.9 +0.8
baz=45
L50A Kingsville 33.98 265 P **P** 22 17 31.5 +1.1
baz=47
Q56A Snyder Ridge, 34.10 258 P **P** 22 17 32.6 +1.0
baz=44
P55A Reedsville 34.11 259 P **P** 22 17 32.6 +0.9
baz=44
KOLS Kolonicke sedl 34.21 79 *e*P P 22 17 37.6 +5.1
KOLS Kolonicke sedl 34.21 79 *e*P P 22 17 37.6 +5.1
R57A Stanardsville 34.28 257 P **P** 22 17 34.7 +1.5
baz=43
O53A New Philadelph 34.34 262 P **P** 22 17 34.6 +1.0
baz=45
P54A Burton 34.40 260 P **P** 22 17 35.4 +1.2
baz=44
TMCR Tamitsa 34.61 47 *e*P **P** 22 17 35.5 -0.2
TMCR pmax pmax
comp=Z,20nm,1.3s
Q55A Buckhannon 34.62 259 P **P** 22 17 38.1 +2.0
baz=44
R56A Bull Pasture M 34.67 258 P **P** 22 17 37.9 +1.3
baz=43
S57A Dark Hollow, R 34.91 256 P **P** 22 17 39.8 +1.3
baz=42
U60A Pendleton 34.91 253 P **P** 22 17 39.9 +1.3
baz=41
P53A Whipple 34.97 261 P **P** 22 17 40.3 +1.2
baz=44
EYMN Ely 35.01 280 P **P** 22 17 40.0 +0.6
N50A Nevada 35.03 264 P **P** 22 17 40.7 +1.1
baz=46
R55A Marlinton 35.15 258 P **P** 22 17 41.7 +0.9
baz=43
O51A Pataskala 35.17 263 P **P** 22 17 41.9 +1.1
baz=45
ACSO Alum Creek Sta 35.32 263 P **P** 22 17 42.8 +0.7
baz=46
Q53A Leroy 35.49 260 P **P** 22 17 44.6 +1.0
baz=44
N49A Columbus Grove 35.50 265 P **P** 22 17 43.8 +0.2
N49A IAmb IAmb 22 17 45.3
comp=Z,22nm,1.1s
N49A Columbus Grove 35.50 265 P **P** 22 17 44.4 +0.8
baz=46
T57A Hurt 35.63 256 P **P** 22 17 45.7 +1.0
baz=42
E38A The Farm, Brul 35.85 279 P **P** 22 17 45.5 -1.1
E38A IAmb IAmb 22 17 48.6
comp=Z,18nm,1.2s
KEST Kesra 36.00 107 P **P** 22 17 46.6 -1.5
comp=Z,8.1nm,1.1s,baz=304,slow=3.6,SNR=2.8
KEST Kesra 36.00 107 IAmb IAmb 22 17 54.2
comp=Z,29nm,1.2s
V59A Middlesex 36.02 253 P **P** 22 17 49.3 +1.2
baz=40
ULM Lac du Bonnet 36.02 286 P **P** 22 17 47.2 -0.8
comp=Z,3.8nm,0.8s,baz=70,slow=7.3,SNR=5.3
ULM Lac du Bonnet 36.02 286 IAmb IAmb 22 17 55.3
comp=Z,16nm,1.2s
T56A Rocky Mt 36.02 257 P **P** 22 17 49.0 +0.8
baz=42
BLA Blacksburg 36.10 257 P **P** 22 17 49.7 +0.9
baz=42
U57A Blanch 36.10 255 P **P** 22 17 49.9 +1.1
baz=41
S54A Dingess, Beckl 36.15 259 P **P** 22 17 49.9 +0.6
baz=43
Q51A Peebles 36.37 262 P **P** 22 17 50.2 -0.9
Q51A IAmb IAmb 22 18 44.6
comp=Z,20nm,1.0s
V58A Windy Hill, Pi 36.46 254 P **P** 22 17 53.1 +1.2
baz=41
R52A Catlettsburg 36.48 261 P **P** 22 17 53.1 +1.1
baz=44
BURAR Bucovina Array 36.58 78 P **P** 22 17 52.5 -0.4
KLMR Klimovskoe 36.64 52 *e*P **P** 22 17 52.4 -0.7
KLMR pmax pmax
comp=Z,48nm,1.5s
KLMR Klimovskoe 36.64 52 *e*P **P** 22 17 52.4 -0.7
KLMR AMP 22 18 03.5
comp=Z,48nm,1.5s
L44A Lake County Fo 36.69 270 P **P** 22 17 54.5 +0.6
baz=48
FFC Flin Flon 36.70 296 P **P** 22 17 54.1 +0.3
FFC pmax pmax
comp=Z,7.0nm,1.1s
FFC Flin Flon 36.70 296 P **P** 22 17 54.1 +0.3
T54A Tazewell 36.83 258 P **P** 22 17 55.8 +0.7
baz=42
AKASG Malin Array Be 36.90 72 P **P** 22 17 54.0 -1.5
AKASG pmax pmax
comp=Z,3.0nm,0.9s
AKASG Malin Array Be 36.90 72 P **P** 22 17 54.0 -1.5
AKBB Malin Array Si 36.90 72 P **P** 22 17 54.0 -1.5
AKBB pmax pmax
comp=Z,16nm,1.2s
AKBB Malin Array Si 36.90 72 P **P** 22 17 54.0 -1.5
U55A TA2, Sparta 36.96 257 P **P** 22 17 57.1 +0.8
baz=42
W58A Raeford 37.11 254 P **P** 22 17 59.2 +1.8
baz=40
V56A Mocksville 37.18 256 P **P** 22 17 59.3 +1.3
baz=41
SPMN Marine on St. 37.39 278 P **P** 22 18 00.5 +0.7
baz=50
S51A Beattyville 37.50 261 IAmb IAmb 22 18 04.6
comp=Z,23nm,0.9s
S51A Beattyville 37.50 261 P **P** 22 18 01.6 +0.8
baz=43
X58A Rowland 37.52 253 P **P** 22 18 01.8 +0.9
baz=40
V55A Taylorsville 37.54 256 P **P** 22 18 02.0 +0.9
baz=41
L42A Oliver, Polo 37.78 271 P **P** 22 18 02.7 -0.4
L42A IAmb IAmb 22 18 05.2
comp=Z,25nm,0.9s
V54A Nebo 37.98 257 P **P** 22 18 05.5 +0.6
baz=41
OBN Obninsk 38.16 62 *i* P **P** 22 18 07.8 +1.7
OBN *i* 22 19 35.7
OBN *i* S **S** 22 24 00.9 +2.2
OBN pmax pmax
comp=Z,5.0nm,1.2s
OBN MLR MLR
comp=Z,287nm,17.0s
OBN Obninsk 38.16 62 LR LR 22 32 53.2
comp=Z,107nm,18.8s,baz=294,slow=35
TZTN Tazewell 38.28 259 P **P** 22 18 08.4 +1.1
baz=42
U52A Thorn Hill 38.29 259 P **P** 22 18 08.5 +1.1
baz=42
X56A White Oak 38.47 255 P **P** 22 18 10.1 +1.2
baz=40
YKA Yellowknife Ar 38.49 313 P **P** 22 18 08.9 +0.1
comp=Z,2.9nm,1.0s,baz=61,slow=8.8,SNR=18
YKA PcP **PcP** 22 20 20.4 -1.0
comp=Z,2.2nm,1.0s,baz=55,slow=3.3,SNR=9.7
V53A Saluda 38.53 258 IAmb IAmb 22 18 11.6
comp=Z,55nm,1.8s
V53A Saluda 38.53 258 P **P** 22 18 10.3 +0.8
baz=41
W54A Cherokee Point 38.63 257 P **P** 22 18 11.3 +1.0
baz=41
U51A La Follette 38.65 260 P **P** 22 18 11.2 +0.7
baz=42
W53A Cullowhee 39.09 258 P **P** 22 18 15.4 +1.1
baz=41
BG3 Lake Jocassee 39.10 257 P **P** 22 18 14.2 -0.1
X54A Belton 39.14 256 P **P** 22 18 15.6 +1.0
baz=40
V51A Loudon 39.26 259 P **P** 22 18 16.7 +1.1
baz=42
Y55A Saluda 39.33 255 P **P** 22 18 17.0 +0.8
baz=40
MDND Maddock 39.42 286 P **P** 22 18 17.5 +0.7
baz=52
U49A Red Boiling Sp 39.51 262 P **P** 22 18 18.8 +1.2
baz=42
CPCT Cooper Cave 39.62 259 P **P** 22 18 18.0 -0.6
CPCT IAmb IAmb 22 18 22.2
comp=Z,19nm,0.8s
X53A Estanollee 39.67 257 P **P** 22 18 19.9 +0.9
baz=40
V50A Pikeville 39.77 260 P **P** 22 18 21.1 +1.3
baz=42
Y54A Tignall 39.83 256 P **P** 22 18 21.7 +1.4
baz=40
X52A Dahlonega 39.91 258 P **P** 22 18 21.9 +0.9
baz=41
W51A Cleveland 39.96 259 P **P** 22 18 22.6 +1.2
baz=41
V49A McMinnville 40.13 261 P **P** 22 18 23.4 +0.6
baz=42
Y53A Monroe 40.32 257 P **P** 22 18 25.4 +1.0
baz=40
Z54A Sparta 40.39 255 P **P** 22 18 25.8 +0.8
baz=39
ECSD EROS Data Cent 40.44 279 P **P** 22 18 26.3 +1.0
baz=49,SNR=9.3
X51A Calhoun 40.46 259 P **P** 22 18 26.3 +0.8
baz=41
S44A Carbondale 40.56 266 IAmb IAmb 22 18 30.0
comp=Z,31nm,0.9s
Y52A Lilburn 40.57 257 P **P** 22 18 26.5 0.0
Y52A Lilburn 40.57 257 P **P** 22 18 27.0 +0.6
baz=40
GOGA Godfrey 40.59 256 IAmb IAmb 22 18 30.1
comp=Z,19nm,1.0s
GOGA Godfrey 40.59 256 P **P** 22 18 27.8 +1.2
baz=40
155A Kite 40.67 254 P **P** 22 18 28.6 +1.3
baz=39
Z53A Monticello 40.75 256 P **P** 22 18 29.5 +1.6
baz=40
WVT Waverly 40.91 263 P **P** 22 18 29.9 +0.7
baz=42
Y51A Rockmart 41.08 258 P **P** 22 18 31.2 +0.5
baz=40
Z52A Williamson 41.27 257 P **P** 22 18 32.9 +0.7
baz=40
152A Waverly Hall 41.83 257 P **P** 22 18 37.8 +0.9
baz=39
PBMO Poplar Bluff 41.87 266 IAmb IAmb 22 18 40.2
comp=Z,25nm,0.9s
Z50A Ashland 42.03 258 P **P** 22 18 39.1 +0.6
baz=40
INK Inuvik 42.08 327 P **P** 22 18 39.0 +0.7
INK pmax pmax
comp=Z,21nm,1.5s
INK Inuvik 42.08 327 P **P** 22 18 39.0 +0.7
252A Lumpkin 42.36 256 P **P** 22 18 41.9 +0.7
baz=39
MGMO Mountain Grove 42.60 268 IAmb IAmb 22 18 45.8
comp=Z,19nm,0.9s
LRAL Lakeview Retre 42.78 259 P **P** 22 18 45.5 +1.0
baz=40
BGNE Belgrade 42.84 277 P **P** 22 18 45.6 +0.6
baz=46
352A Blakely 42.87 256 P **P** 22 18 46.7 +1.4
baz=39
OXF Oxford 42.98 263 P **P** 22 18 46.6 +0.5
baz=41
U40A Yellville 43.51 268 IAmb IAmb 22 18 53.0
comp=Z,20nm,1.2s
U40A Yellville 43.51 268 P **P** 22 18 51.1 +0.7
baz=43
KSU1 Kansas State U 43.60 274 P **P** 22 18 51.9 +0.7
baz=45
WHAR Wooly Hollow 43.98 266 IAmb IAmb 22 19 01.5
comp=Z,30nm,1.4s
W41B Gary Mavity, V 44.04 266 IAmb IAmb 22 18 57.2
comp=Z,29nm,1.3s
W41B Gary Mavity, V 44.04 266 P **P** 22 18 55.5 +0.8
baz=42
HHAR Hobbs 44.16 269 P **P** 22 18 55.1 -0.6
HHAR IAmb IAmb 22 19 02.7
comp=Z,22nm,1.3s
EGMT Eagleton 44.59 292 IAmb IAmb 22 19 03.4
comp=Z,25nm,1.2s
EGMT Eagleton 44.59 292 P **P** 22 19 00.1 +1.0
baz=49,SNR=6.2
TAM Tamanrasset 44.66 123 P **P** 22 18 59.7 -0.2
TAM pmax pmax
comp=Z,10.0nm,1.2s
TAM Tamanrasset 44.66 123 P **P** 22 18 59.7 -0.2
IDI Anoyia 44.76 93 LR LR 22 37 07.2
comp=Z,220nm,19.8s,baz=260,slow=35
W39A Magazine 44.87 267 IAmb IAmb 22 19 04.0
comp=Z,25nm,1.1s
W39A Magazine 44.87 267 P **P** 22 19 01.7 +0.4
baz=42,SNR=6.5
X40A Basin Creek Fa 44.87 266 IAmb IAmb 22 19 04.2
comp=Z,12nm,0.8s
X40A Basin Creek Fa 44.87 266 P **P** 22 19 01.8 +0.4
baz=42,SNR=7.2
MIAR Mount Ida 45.24 267 P **P** 22 19 04.7 +0.4
baz=42,SNR=11
VBMS Vicksburg 45.32 262 P **P** 22 19 05.5 +0.6
baz=40
TUL1 Leonard 45.45 270 IAmb IAmb 22 19 09.0
comp=Z,20nm,1.0s
TUL1 Leonard 45.45 270 P **P** 22 19 06.5 +0.6
baz=43
Z41A Richland Creek 45.78 265 P **P** 22 19 09.6 +1.0
baz=41
BR131 Keskin Array S 46.36 81 P **P** 22 19 12.4 -0.9
BR131 pmax pmax
comp=Z,4.0nm,0.9s
BR131 Keskin Array S 46.36 81 P **P** 22 19 12.4 -0.9
BRTR Keskin Array B 46.36 81 P **P** 22 19 15.2 +2.0
comp=Z,3.5nm,0.8s,baz=318,slow=4.9,SNR=17
BRTR PcP **PcP** 22 20 47.1 -1.0
comp=Z,1.4nm,0.9s,baz=255,slow=2.8,SNR=4.4
BRTR Keskin Array B 46.36 81 P **P** 22 19 13.3 +0.1
KSCO Kaye Shedlock' 46.97 278 P **P** 22 19 18.5 +0.5

baz=44
JTMT Jette 47.06 295 IAmb IAmb 22 19 24.0
comp=Z,12nm,1.3s
ARU Arti 47.31 49 *d i* P **P 22 19 20.9 +0.7**
ARU 22 21 09.1
ARU S S 22 26 17.5 +4.5
ARU SS **SS 22 29 41.6 +1.8**
ARU pmax pmax
comp=Z,18nm,1.0s
ARU Arti 47.31 49 P **P 22 19 20.6 +0.4**
comp=Z,5.1nm,1.0s,baz=347,slow=6.2,SNR=14
ARU Arti 47.31 49 P **P 22 19 19.7 -0.5**
PRP Porcupine Dome 47.47 328 IAmb IAmb 22 19 28.9
comp=Z,7.2nm,0.9s
MSO Missoula 47.51 294 P **P 22 19 22.4 +0.3**
baz=47
GOF Gofitskoye 47.66 69 *e* P **P 22 19 25.9 +2.8**
DLMT Dillon 47.83 291 IAmb IAmb 22 19 35.5
comp=Z,14nm,1.2s
WMOK Wichita Mounta 47.96 271 P **P 22 19 25.9 +0.3**
baz=42,SNR=14
ISCO Idaho Springs 48.02 281 P **P 22 19 26.0 -0.5**
baz=44,SNR=6.6
NEW Newport 48.12 297 P **P 22 19 26.9 +0.2**
baz=47
KIV Kislovodsk 48.23 71 *e* P **P 22 19 29.1 +1.4**
KIV pmax pmax
comp=Z,16nm,1.0s
KIV MLR MLR
comp=Z,491nm,16.0s
POKR Poker Plat Res 48.32 329 P **P 22 19 27.6 -0.4**
baz=43
DOT Dot Lake 48.38 326 IAmb IAmb 22 19 39.8
comp=Z,16nm,1.2s
IL31 48.41 328 IAmb IAmb 22 19 35.9
comp=Z,15nm,1.0s
ILAR Eielson Array 48.41 328 P **P 22 19 29.9 +1.2**
comp=Z,7.3nm,0.9s,baz=39,slow=6.1,SNR=36
ILAR PcP **PcP 22 20 54.8 0.0**
comp=Z,2.0nm,0.8s,baz=6.9,slow=2.4,SNR=5.1
ILAR Eielson Array 48.41 328 P **P 22 19 29.1 +0.4**
ILAR **PcP 22 20 54.3 -0.5**
KBZ Khabaz 48.50 71 P **P 22 19 32.0 +2.4**
comp=Z,3.1nm,1.0s,baz=308,slow=8.1,SNR=5.7
HDA Harding Lake 48.70 328 P **P 22 19 31.1 +0.2**
baz=43
CCB Clear Creek Bu 48.77 328 IAmb IAmb 22 19 41.4
comp=Z,13nm,1.2s
WRH Wood River Hil 48.99 328 IAmb IAmb 22 19 39.5
comp=Z,8.1nm,0.9s
B08A Colville Reser 49.13 299 IAmb IAmb 22 19 36.9
comp=Z,11nm,1.1s
T25A Trinidad 49.29 278 IAmb IAmb 22 19 40.0
comp=Z,13nm,0.9s
T25A Trinidad 49.29 278 P **P 22 19 36.0 -0.1**
baz=43,SNR=5.7
MLY Manley 49.31 330 IAmb IAmb 22 19 45.8
comp=Z,19nm,1.2s
IMAR Indian Mountai 49.39 332 P **P 22 19 37.4 +1.3**
SDCO Great Sand Dun 49.44 279 P **P 22 19 37.6 +0.3**
baz=43
AMTX Amarillo 49.45 274 P **P 22 19 37.8 +0.6**
baz=42
DHY Denali Highway 49.82 327 IAmb IAmb 22 19 47.0
comp=Z,10nm,1.0s
HWUT Hardware Ranch 49.92 287 IAmb IAmb 22 19 44.0
comp=Z,12nm,1.1s
HKT Hockley 49.97 265 P **P 22 19 40.7 -0.2**
HKT pmax pmax
comp=Z,28nm,1.6s
HKT Hockley 49.97 265 P **P 22 19 40.7 -0.2**
HKT IAmb IAmb 22 19 50.2
comp=Z,28nm,1.6s
ABTX Abilene, Hawle 50.02 270 P **P 22 19 41.7 +0.2**
baz=41
S22A 4UR Ranch, Cre 50.16 280 P **P 22 19 42.9 +0.1**
S22A **PcP 22 20 57.9 -4.2**
S22A IAmb IAmb 22 21 02.2
comp=Z,20nm,1.2s
KTH Kantishna Hill 50.50 329 IAmb IAmb 22 19 55.3
comp=Z,22nm,1.2s
MSTX Muleshoe 50.73 274 IAmb IAmb 22 19 50.9
comp=Z,24nm,1.1s
MSTX Muleshoe 50.73 274 P **P 22 19 48.0 +1.1**
baz=41,SNR=5.5
AKTO Aktyubinsk 51.19 55 P **P 22 19 50.6 +0.6**
comp=Z,9.5nm,1.0s,baz=309,slow=9.4,SNR=12
AKTO LR LR 22 41 00.9
comp=Z,264nm,19.2s,baz=335,slow=35
TIXI Tiksi 51.36 7 *e* P **P 22 19 52.1 +1.1**
TIXI pmax pmax
comp=Z,6.0nm,0.9s
TIXI Tiksi 51.36 7 P **P 22 19 50.4 -0.6**
TOA0 Torodi Ar. Sit 51.52 133 P **P 22 19 50.8 -2.1**
TOA0 IAmb IAmb 22 19 52.8
comp=Z,11nm,1.0s
TORD Torodi Ar. Bea 51.52 133 P **P 22 19 51.2 -1.6**
comp=Z,9.2nm,1.0s,baz=336,slow=7.5,SNR=32
JCT Junction City 51.74 268 IAmb IAmb 22 19 57.1
comp=Z,19nm,1.0s
JCT Junction City 51.74 268 P **P 22 19 55.0 +0.6**
baz=40,SNR=6.0
SKT Skwentna 51.90 328 IAmb IAmb 22 20 05.4
comp=Z,17nm,0.9s
ANMO Albuquerque 52.02 277 *e* P **P 22 19 58.8 +2.1**
ANMO pmax pmax
comp=Z,6.0nm,1.1s
ANMO Albuquerque 52.02 277 LR LR 22 41 15.2
comp=Z,636nm,18.4s,baz=55,slow=35
J08A Circle Bar Ran 52.23 293 IAmb IAmb 22 20 01.3
comp=Z,15nm,1.0s
ABKAR Akbulak array 52.91 55 P **P 22 20 03.2 +0.4**
ABKAR Akbulak array 52.91 55 IAmb IAmb 22 20 05.0
comp=Z,16nm,1.1s
WVOR Wild Horse Val 52.98 293 IAmb IAmb 22 20 09.5
comp=Z,19nm,1.4s
PINE Pine Mountain 53.16 295 IAmb IAmb 22 20 11.3
comp=Z,14nm,1.1s
833A Chaparral WMA, 53.18 266 P **P 22 20 05.8 +0.7**
baz=38
MDP Montagnes des 53.49 203 LR LR 22 37 30.3
comp=Z,112nm,20.6s,baz=85,slow=30
J05D Fort Rock, OR 53.67 295 P **P 22 20 09.0 +0.3**
baz=43,SNR=6.8
ASF Jabal al Asfar 53.70 85 P **P 22 20 09.7 +0.7**
comp=Z,1.8nm,0.6s,baz=331,slow=9.7
MNTX Cornudas Mount 53.88 274 P **P 22 20 10.4 +0.2**
baz=40,SNR=6.0
R11A Troy Canyon, C 54.40 287 P **P 22 20 14.7 +0.5**
baz=42,SNR=5.3
BRVK Borovoye 54.47 46 P **P 22 20 14.6 +0.4**
BRVK pmax pmax
comp=Z,10.0nm,1.1s
BRVK Borovoye 54.47 46 P **P 22 20 14.6 +0.4**
BRVK IAmb IAmb 22 20 16.4
comp=Z,10nm,1.1s
121A Cookes Peak, D 54.56 277 IAmb IAmb 22 20 19.4
comp=Z,13nm,1.1s
121A Cookes Peak, D 54.56 277 P **P 22 20 15.8 +0.4**
baz=40
BILL Bilibino 54.59 351 *i* P **P 22 20 12.8 -2.1**
BILL *i* 22 20 21.0
BILL *i* 22 22 16.2
BILL pmax pmax
comp=Z,5.0nm,1.2s
TX31 Lajitas Ar. Si 54.75 271 IAmb IAmb 22 20 45.5
comp=Z,16nm,1.6s
TX32 Lajitas Array 54.75 271 IAmb IAmb 22 20 45.5
comp=Z,17nm,1.6s
TXAR Lajitas Array 54.75 271 P **P 22 20 16.5 -0.2**
comp=Z,2.8nm,0.9s,baz=40,slow=6.5,SNR=9.6
TIC Toumodi 55.05 144 *e* P P 22 20 15.1 -3.8
M04C Macdoel 55.08 294 P **P 22 20 19.0 0.0**
baz=42
DBIC Dimbokro 55.09 143 P **P 22 20 17.4 -1.6**
DBIC pmax pmax
comp=Z,10.0nm,0.9s
DBIC Dimbokro 55.09 143 P **P 22 20 17.5 -1.5**
comp=Z,9.2nm,1.0s,baz=328,slow=7.3,SNR=9.4
DBIC Dimbokro 55.09 143 P **P 22 20 17.4 -1.6**
DBIC IAmb IAmb 22 20 18.8
comp=Z,9.7nm,0.9s
KVN Kaiserville 55.20 290 IAmb IAmb 22 20 23.3
comp=Z,16nm,1.0s
PAHR Pah Rah Range 55.37 291 IAmb IAmb 22 20 25.1
comp=Z,14nm,1.0s
KIC Kosan Boka 55.41 143 *e* P **P 22 20 19.6 -1.8**
comp=Z,13nm,0.9s
LIC Lamto 55.45 144 *e* P **P 22 20 19.8 -1.9**
comp=Z,28nm,1.1s
SHPR Sheep Range 55.55 285 IAmb IAmb 22 21 40.7
comp=Z,10nm,1.1s
NVAR Mina Array Bea 55.77 289 P **P 22 20 24.1 +0.1**
comp=Z,1.1nm,0.8s,baz=43,slow=6.4,SNR=6.2
TPNV Topopah Spring 55.80 286 IAmb IAmb 22 22 17.6
comp=Z,23nm,1.6s
TPNV Topopah Spring 55.80 286 P **P 22 20 24.6 +0.3**
baz=41
PNTR Pine Nut 55.94 291 P **P 22 20 24.9 -0.4**
PNTR IAmb IAmb 22 20 38.5
comp=Z,8.9nm,0.9s
O03E Paynes Creek 56.17 293 P **P 22 20 27.0 +0.2**
baz=41
319A Douglas 56.27 277 IAmb IAmb 22 20 38.6
comp=Z,11nm,0.9s
GRAC Grapevine Rang 56.35 287 P **P 22 20 28.4 +0.4**
baz=41
TUC Tucson 56.37 279 P **P 22 20 27.9 -0.4**
TUC pmax pmax
comp=Z,24nm,1.5s
TUC Tucson 56.37 279 P **P 22 20 27.9 -0.4**
TUC IAmb IAmb 22 21 53.7
comp=Z,24nm,1.4s
TUC Tucson 56.37 279 P **P 22 20 28.9 +0.6**
baz=40
AFDM Forest Hills D 56.76 291 IAmb IAmb 22 20 41.2
comp=Z,19nm,1.7s
MPMC Manual Prospec 57.12 287 P **P 22 20 34.6 +0.9**
baz=40,SNR=6.2
CWC Cottonwood Cre 57.15 287 P **P 22 20 34.9 +1.0**
baz=41
GSC Goldstone, Bar 57.34 286 P **P 22 20 36.1 +1.0**
baz=40
HEC Hec,Ludlow 57.44 285 P **P 22 20 37.2 +1.3**
baz=40
LRMC Laurel Mtn Rad 57.66 286 P **P 22 20 38.8 +1.3**
baz=40
214A Organ Pipe Nat 57.74 280 P **P 22 20 39.2 +1.2**
baz=40
BC3 Big Chuckawall 57.87 283 P **P 22 20 40.3 +1.4**
baz=40
BELC Belle Mtn. Jos 57.90 284 P **P 22 20 40.6 +1.5**
baz=40
GLA Glamis 57.99 282 P **P 22 20 41.0 +1.3**
baz=40
EDW2 Edwards Air Fo 58.28 286 P **P 22 20 42.6 +0.9**
baz=40,SNR=7.5
XPFO Pion Flat 58.44 284 P **P 22 20 42.1 -0.8**
PFO Pinyon Flats O 58.44 284 P **P 22 20 41.9 -1.0**
PFO pmax pmax
comp=Z,8.0nm,1.1s
PFO Pinyon Flats O 58.44 284 P **P 22 20 41.9 -1.0**
PFO Pinyon Flats O 58.44 284 P **P 22 20 43.8 +0.9**
baz=40
BFSC Mount Baldy Ra 58.60 285 P **P 22 20 45.4 +1.4**
baz=40
SWSC Sam W. Stewart 58.60 283 P **P 22 20 45.5 +1.7**
baz=40
MONP2 Monument Peak 58.97 284 P **P 22 20 48.4 +1.7**
baz=39
IKP In-Ko-Pah, Jac 58.99 283 P **P 22 20 47.9 +1.2**
baz=39
ZALV Zalesovo Beam 59.06 37 P **P 22 20 48.1 +1.4**
comp=Z,0.6nm,0.5s,baz=329,slow=5.4,SNR=3.6
ZALV Zalesovo Beam 59.06 37 P **P 22 20 46.9 +0.2**
KURK Kurchatov 59.52 43 *i e* P **P 22 20 50.3 +0.3**
KURK pmax pmax
comp=Z,12nm,1.1s
KURK Kurchatov 59.52 43 P **P 22 20 49.4 -0.6**
KURK IAmb IAmb 22 20 51.5
comp=Z,12nm,1.1s
CMIG Matias Romero 59.77 254 LR LR 22 46 16.4
comp=Z,252nm,21.4s,baz=19,slow=36
JTS Las Juntas de 60.48 241 *i e* P **P 22 20 58.6 +1.5**
JTS pmax pmax
comp=Z,17nm,2.1s
GEYT Alibeck 60.55 65 P **P 22 20 56.7 -0.6**
comp=Z,3.7nm,0.9s,baz=312,slow=8.9,SNR=6.5
GEYT Alibeck 60.55 65 P **P 22 20 56.8 -0.6**
ROSC El Rosal 60.59 227 P **P 22 21 00.8 +2.6**
comp=Z,10nm,0.5s,baz=24,slow=4.5,SNR=8.2
RCBR Riachuelo 62.37 182 LR LR 22 40 52.0
comp=Z,123nm,21.4s,baz=298,slow=29
MAKZ Makanchi 64.00 43 P **P 22 21 20.0 -0.3**
MAKZ pmax pmax
comp=Z,8.0nm,1.1s
MAKZ Makanchi 64.00 43 P **P 22 21 20.0 -0.3**
MAKZ IAmb IAmb 22 21 27.4
comp=Z,7.7nm,1.1s
MKAR Makanchi Array 64.13 43 P **P 22 21 21.4 +0.3**
comp=Z,4.0nm,0.9s,baz=334,slow=4.9,SNR=31
FRU1 Bishkek 64.35 51 IAmb IAmb 22 21 25.7
comp=Z,11nm,1.1s
AAK Ala-Archa 64.43 51 *i e* P **P 22 21 24.9 +1.5**
AAK pmax pmax
comp=Z,12nm,1.3s
AAK Ala-Archa 64.43 51 P **P 22 21 23.3 -0.1**
AAK IAmb IAmb 22 21 26.3
comp=Z,11nm,1.2s
RAYN Ar Rayn 65.18 85 P **P 22 21 29.0 +0.7**
KDJ Kajisay 65.98 49 IAmb IAmb 22 21 36.1
comp=Z,9.7nm,1.1s
NRN Naryn 66.06 50 IAmb IAmb 22 21 37.5
comp=Z,13nm,1.4s
PRZ Przheval'sk 66.20 48 IAmb IAmb 22 21 37.8
comp=Z,7.4nm,0.9s
OTAV Otavalo 66.46 229 P **P 22 21 38.8 +1.8**
OTAV pmax pmax
comp=Z,9.0nm,1.4s
KSH Kashi 67.64 52 P **P 22 21 46.8 +2.9**
KSH pP pwP 22 21 53.0 +2.7
KSH PP **PP 22 24 15.3 +2.8**
KSH S **S 22 30 41.0 +0.4**
KSH sS sS 22 30 48.3 +2.1
KSH SS **SS 22 34 59.0 -1.5**
KSH LR LR
comp=Z,320nm,7.9s
KSH LR LR
comp=Z,260nm,5.5s
KSH LR LR
comp=Z,450nm,8.5s
KBL Kabul 68.58 60 P **P 22 21 48.8 -1.2**
KBL pmax pmax
comp=Z,7.0nm,1.1s
KBL Kabul 68.58 60 P **P 22 21 48.8 -1.2**
KBL IAmb IAmb 22 21 52.2
comp=Z,7.3nm,1.1s
WMQ Urumqi 68.66 41 *e* P **P 22 21 52.5 +2.3**
WMQ pP pwP 22 21 56.5 -0.1
WMQ sP sP 22 22 02.0 +7.0
WMQ pmax pmax
comp=Z,8.0nm,1.3s
WMQ pmax pmax
comp=Z,110nm,4.9s
WMQ LR LR
comp=Z,500nm,20.5s
WMQ LR LR
comp=Z,270nm,20.9s
WMQ LR LR
comp=Z,490nm,16.7s
UOSS Minazif 69.84 75 P **P 22 21 56.5 -1.2**
SONM Songino Array 70.79 27 P **P 22 22 02.6 -0.8**
comp=Z,1.8nm,0.9s,baz=320,slow=4.4,SNR=7.2
ULN Ulaanbaatar 70.92 26 *i e* P **P 22 22 03.9 -0.3**
ULN pmax pmax
comp=Z,8.0nm,2.2s
NIL Nilore 71.28 57 P **P 22 22 06.7 +0.2**
NIL pmax pmax
comp=Z,21nm,1.1s
NIL Nilore 71.28 57 P **P 22 22 06.7 +0.2**
KLR Kul'dur 73.77 9 *i e* P **P 22 22 21.6 +0.7**
KLR pmax pmax
comp=Z,3.0nm,1.0s
GTA Gaotai 76.70 35 *e* P P 22 22 33.0 -5.2
GTA pP pP 22 22 37.0 -4.6
GTA sP sP 22 22 40.0 -2.9
GTA pmax pmax
comp=Z,2.0nm,0.8s
LPAZ La Paz 78.03 213 P **P 22 22 45.8 -0.5**
LPAZ pmax pmax
comp=Z,7.0nm,1.4s
LPAZ La Paz 78.03 213 P **P 22 22 45.8 -0.5**
comp=Z,1.3nm,0.8s,baz=21,slow=12,SNR=4.4
LPAZ La Paz 78.03 213 IAmb IAmb 22 22 54.4
comp=Z,7.0nm,1.4s
HHC Hu-ho-hao-te 78.61 26 *e* P **P 22 22 49.3 +0.5**
HHC pmax pmax
comp=Z,65nm,6.9s
KMBO Kilima Mbogo 80.97 106 P **P 22 23 00.5 -1.5**
comp=Z,1.0nm,0.6s,baz=284,slow=7.4,SNR=2.5
LZH Lanzhou 81.00 33 *e* P **P 22 23 02.5 +0.6**
LZH pP sP 22 23 07.3 +0.6
LZH sP PcP 22 23 09.5 +1.2
LZH *e* PP **PP 22 26 08.3 +2.5**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,78nm,6.2s
LZH LR LR
comp=Z,180nm,17.0s
LZH LR LR
comp=Z,180nm,16.9s
LZH LR LR
comp=Z,280nm,19.2s
PB11 IPOC Station P 81.76 213 P **P 22 23 04.4 -1.5**
PB11 IAmb IAmb 22 23 08.5
comp=Z,13nm,1.0s
XAN Xi'an 84.37 30 P **P 22 23 19.5 +0.2**
XAN pP sP 22 23 23.8 -0.3
XAN pmax pmax
comp=Z,4.0nm,1.1s
XAN LR LR
comp=Z,180nm,17.3s
XAN LR LR
comp=Z,120nm,18.4s
XAN LR LR
comp=Z,160nm,23.5s
KSRS Korea Array 84.97 14 P **P 22 23 21.8 -0.4**
comp=Z,2.3nm,1.0s,baz=356,slow=5.5,SNR=6.4
CPUP Villa Florida 85.00 201 P **P 22 23 19.9 -2.3**
comp=Z,5.8nm,1.1s,baz=354,slow=7.1,SNR=5.5
NJ2 Nanjing 88.69 22 *e* P **P 22 23 41.8 +1.5**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
CMAR Chiang Mai Arr 95.53 44 P **P 22 24 12.4 +0.2**
comp=Z,0.4nm,0.3s,baz=314,slow=6.2,SNR=5.7
AS31 Alice Springs 145.87 19 **PKPdf 22 30 26.2 +0.5**
ASAR Alice Springs 145.87 19 PKPbc **PKPdf 22 30 25.5 -0.2**
comp=Z,5.9nm,0.9s,baz=345,slow=2.9,SNR=21
QSPA South Pole Qui 146.64 180 **PKPbc 22 30 27.8 +0.5**

BUC 28 22:16:25.7±0.4, 45°64N×26°41E, h101km±3km, ml3.5/32, 79C-31D, Error ellipse: s-maj=2.7km s-min=1.9km az=149.0, Romania

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BISRR	**Bisoca**	**0.23**	**114**	↑P		Pn	22 16 41.2	+1.0
BISRR				↓S		Sn	22 16 52.2	+1.2
BISRR	**Bisoca**	**0.23**	**114**	↑P		Pn	22 16 41.2	+1.0
PLOR	**Plostina**	**0.27**	**38**	↑P		Pn	22 16 40.5	+0.2
PLOR				↑S		Sn	22 16 52.1	+0.9
PLOR	**Plostina**	**0.27**	**38**	↑P		Pn	22 16 40.5	+0.2
VRI	**Vrincioaia**	**0.32**	**44**	↑P		Pn	22 16 40.9	+0.4
VRI				↓S		Sn	22 16 51.7	+0.1
VRI	**Vrincioaia**	**0.32**	**44**	↑P		Pn	22 16 40.9	+0.4
MLR	**Muntele Rosu**	**0.36**	**246**	↑P		Pn	22 16 41.4	+0.6
MLR				↑S		Sn	22 16 52.5	+0.2
MLR	**Muntele Rosu**	**0.36**	**246**	↑P		Pn	22 16 41.4	+0.6
ODBI	**Odobesti**	**0.47**	**74**	↓P		Pn	22 16 42.7	+1.4
ODBI				↑S		Sn	22 16 55.2	+2.1
ODBI	**Odobesti**	**0.47**	**74**	↓P		Pn	22 16 42.7	+1.4
GRER		**0.47**	**123**	↑P		Pn	22 16 42.8	+1.4
GRER		**0.47**	**123**	↑P		Pn	22 16 42.8	+1.4
PETR	**Petresti**	**0.58**	**81**	↑S		Sn	22 16 55.7	+1.2
PETR	**Petresti**	**0.58**	**81**	↑S		Sn	22 16 55.7	+1.2
OZUR		**0.63**	**316**	↑P		Pn	22 16 42.8	+0.1
OZUR				↑S		Sn	22 16 54.6	-0.8
OZUR		**0.63**	**316**	↑P		Pn	22 16 42.8	+0.1
DOPR	**Dopca**	**0.79**	**295**	↑P		Pn	22 16 44.4	+0.4
DOPR				↑S		Sn	22 16 57.5	-0.3
DOPR	**Dopca**	**0.79**	**295**	↑P		Pn	22 16 44.4	+0.4
PGOR	**Pogoanele**	**0.84**	**151**	↑S		Sn	22 17 00.5	+1.9
PGOR	**Pogoanele**	**0.84**	**151**	↑S		Sn	22 17 00.5	+1.9
TUDR		**0.88**	**93**	↓P		Pn	22 16 45.0	+0.1
TUDR				↑S		Sn	22 16 58.9	-0.5
TUDR		**0.88**	**93**	↓P		Pn	22 16 45.0	+0.1
TESR	**Tescani**	**0.89**	**11**	↑P		Pn	22 16 45.4	+0.4
TESR				↑S		Sn	22 16 59.0	-0.6
TESR	**Tescani**	**0.89**	**11**	↑P		Pn	22 16 45.4	+0.4
SLCR	**Slobozia Conac**	**0.95**	**93**	↑P		Pn	22 16 45.7	+0.1
SLCR				↑S		Sn	22 17 00.5	-0.2
SLCR	**Slobozia Conac**	**0.95**	**93**	↑P		Pn	22 16 45.7	+0.1
IZVR	**Izvoarele**	**0.96**	**95**	↑S		Sn	22 16 59.9	-0.8
IZVR	**Izvoarele**	**0.96**	**95**	↑S		Sn	22 16 59.9	-0.8
SULR		**0.97**	**187**	↓P		Pn	22 16 46.8	+1.0
SULR				↑S		Sn	22 17 02.7	+1.8
SULR		**0.97**	**187**	↓P		Pn	22 16 46.8	+1.0
VOIR		**0.98**	**259**	↑P		Pn	22 16 46.5	+0.4
VOIR				↑S		Sn	22 17 00.7	-0.6
VOIR		**0.98**	**259**	↑P		Pn	22 16 46.5	+0.4
BRAG	**Branistea**	**1.02**	**101**	↓P		Pn	22 16 46.2	-0.1
BRAG				↑S		Sn	22 17 00.5	-1.4
BRAG	**Branistea**	**1.02**	**101**	↓P		Pn	22 16 46.2	-0.1
NEGR	**Negresti**	**1.03**	**95**	↓P		Pn	22 16 46.6	+0.2
NEGR				↑S		Sn	22 17 01.2	-0.9
NEGR	**Negresti**	**1.03**	**95**	↓P		Pn	22 16 46.6	+0.2
BIR	**Birlad**	**1.05**	**53**	↓P		Pn	22 16 47.5	+0.7
BIR				↑S		Sn	22 17 03.1	+0.5
BIR	**Birlad**	**1.05**	**53**	↓P		Pn	22 16 47.5	+0.7
GIUM	**Giurgiulesti**	**1.27**	**96**	↑S		Sn	22 17 07.5	+0.5
GIUM	**Giurgiulesti**	**1.27**	**96**	↑S		Sn	22 17 07.5	+0.5
GOLR		**1.30**	**233**	↑S		Sn	22 17 08.2	+0.6
GOLR		**1.30**	**233**	↑S		Sn	22 17 08.2	+0.6
BUC1	**Bucharest**	**1.32**	**192**	↓S		Sn	22 17 09.3	+1.2
BUC1	**Bucharest**	**1.32**	**192**	↓S		Sn	22 17 09.3	+1.2
VASR	**Vaslui**	**1.39**	**43**	↑P		Pn	22 16 51.4	+0.8
VASR				↓S		Sn	22 17 09.7	+0.2
VASR	**Vaslui**	**1.39**	**43**	↑P		Pn	22 16 51.4	+0.8
HARR	**Harsova**	**1.43**	**131**	↓P		Pn	22 16 51.5	+0.4
HARR	**Harsova**	**1.43**	**131**	↓P		Pn	22 16 51.5	+0.4
SGRR	**Singureni**	**1.45**	**193**	↓S		Sn	22 17 11.3	+0.5
SGRR	**Singureni**	**1.45**	**193**	↑P		Pn	22 16 57.6	+6.2
SGRR	**Singureni**	**1.45**	**193**	↓S		Sn	22 17 11.3	+0.5
HUMR	**Humele**	**1.50**	**223**	↑P		Pn	22 16 52.0	-0.1
HUMR				↑S		Sn	22 17 11.9	-0.1
HUMR	**Humele**	**1.50**	**223**	↑P		Pn	22 16 52.0	-0.1
RASA	**Rasa**	**1.52**	**160**	↓P		Pn	22 16 52.5	+0.5
RASA				↑S		Sn	22 17 12.2	-0.1
RASA	**Rasa**	**1.52**	**160**	↓P		Pn	22 16 52.7	+0.5
LEOM	**Leova**	**1.52**	**56**	↑P		Pn	22 16 53.0	+0.7
LEOM				↑S		Sn	22 17 12.6	+0.1
LEOM	**Leova**	**1.52**	**56**	↑P		Pn	22 16 53.0	+0.7
TOPG	**Topolog**	**1.58**	**118**	↑P		Pn	22 16 53.2	+0.2
TOPG				↓S		Sn	22 17 13.6	-0.1
TOPG	**Topolog**	**1.58**	**118**	↑P		Pn	22 16 53.2	+0.2
COPA	**Copaceanca**	**1.73**	**210**	↑S		Sn	22 17 16.4	-0.5
COPA	**Copaceanca**	**1.73**	**210**	↑S		Sn	22 17 16.4	-0.5
CVDA	**Cernavoda**	**1.74**	**138**	↑P		Pn	22 16 55.6	+0.6
CVDA				↓S		Sn	22 17 16.2	-1.0
CVDA	**Cernavoda**	**1.74**	**138**	↑P		Pn	22 16 55.6	+0.6
ICOR	**Ion Corvin**	**1.81**	**147**	↑P		Pn	22 16 56.5	+0.6
ICOR				↓S		Sn	22 17 18.1	-0.8
ICOR	**Ion Corvin**	**1.81**	**147**	↑P		Pn	22 16 56.5	+0.6
LOT	**Lotru**	**1.87**	**265**	↑S		Sn	22 17 20.3	0.0
LOT	**Lotru**	**1.87**	**265**	↑S		Sn	22 17 20.3	0.0
JURR	**Jurilovca**	**1.95**	**116**	↑P		Pn	22 16 58.3	+0.7
JURR	**Jurilovca**	**1.95**	**116**	↑P		Pn	22 16 58.3	+0.7
MILM	**Milestii Mici**	**2.10**	**52**	↓P		Pn	22 17 00.3	+0.8
MILM				↓S		Sn	22 17 24.6	-0.8
MILM	**Milestii Mici**	**2.10**	**52**	↓P		Pn	22 17 00.3	+0.8
BURAR	**Bucovina Array**	**2.14**	**338**	↑P		Pn	22 17 01.9	+1.7
BURAR	**Bucovina Array**	**2.14**	**338**	↑P		Pn	22 17 01.9	+1.7
KIS	**Kishinev**	**2.15**	**50**	↑S		Sn	22 17 25.9	-0.7
KIS	**Kishinev**	**2.15**	**50**	↑S		Sn	22 17 25.9	-0.7
VLAD	**Vladila**	**2.18**	**222**	↑S		Sn	22 17 26.9	-0.3
VLAD	**Vladila**	**2.18**	**222**	↑S		Sn	22 17 26.9	-0.3
SRE	**Strehaia**	**2.47**	**248**	↑S		Sn	22 17 33.4	-0.7
SRE	**Strehaia**	**2.47**	**248**	↑S		Sn	22 17 33.4	-0.7
PLVB	**Pleven**	**2.59**	**210**	↓P		Pn	22 17 06.7	+0.7
PLVB	**Pleven**	**2.59**	**210**	↓P		Pn	22 17 06.7	+0.7
BAIL	**Bailesti**	**2.72**	**235**	↑S		Sn	22 17 39.3	-0.6
BAIL	**Bailesti**	**2.72**	**235**	↑S		Sn	22 17 39.3	-0.6
PUNG	**Punghina**	**2.82**	**242**	↑P		Pn	22 17 08.5	-0.5

PUNG	**Punghina**	**2.82**	**242**	⇑P	Pn	22 17 08.5	-0.5
SORM	**Soroca**	**2.83**	**27**	⇑P	Pn	22 17 09.2	+0.2
SORM	**Soroca**	**2.83**	**27**	⇑P	Pn	22 17 09.2	+0.2

YARS ***28*** *22:17:12.8±0.0,64˚.26N×146˚.40E, h10km,ML2.8/2*
NERS ***28*** *22:17:16.4±0.0,64˚.26N×146˚.51E, h7km*
ISC 28 22:17:16.4±0.9,64˚.27N±0˚.04×146˚.62E±0˚.07,h10km,n11, σ1§62/28,2C-1D,Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SUUS	**Susuman**	**1.65**	**154**	⇑	*i*	P	**Pb**	**22 17 46.7**	**-0.1**
SUUS				⇓	*i*	Pg	**Pg**	**22 17 47.5**	**-0.5**
SUUS						Pgmax		22 17 47.8	
	160nm,0.3s								
SUUS					*e*	Sg	**Sg**	**22 18 08.6**	**-0.7**
SUUS						Sgmax		22 18 11.2	
	320nm,0.2s								
SUUS						Sgmax		22 18 11.2	
	50nm,0.2s								
SUUS	**Susuman**	**1.65**	**154**		*e*	Pg	**Pb**	**22 17 46.7**	**-0.1**
	160nm,0.3s								
SUUS					*e*	Sg	**Sg**	**22 18 08.6**	**-0.7**
	320nm,0.2s								
MOMR	**Moma**	**2.63**	**329**		*i*	Pn	**Pn**	**22 17 58.8**	**-0.1**
MOMR					*i*	Pg	**Pb**	**22 18 04.6**	**+1.1**
	25nm,0.4s								
MOMR					*e*	Sg	**Sg**	**22 18 38.7**	**-2.0**
	170nm,0.5s								
OCHR	**Omchak**	**2.67**	**167**	⇑	*i*	P	**Pn**	**22 18 00.6**	**+1.1**
OCHR					*e*	Pg	**Pb**	**22 18 05.3**	**+1.0**
OCHR						Pgmax		22 18 06.5	
	10.0nm,0.3s								
OCHR					*e*	Sg	**Sg**	**22 18 41.0**	**-1.2**
OCHR						Sgmax		22 18 44.8	
	60nm,0.3s								
OCHR						Sgmax		22 18 44.8	
	120nm,0.3s								
OCHR	**Omchak**	**2.67**	**167**		*e*	Pn	**Pn**	**22 18 00.6**	**+1.1**
	10.0nm,0.3s								
OCHR					*e*	Sg	**Sg**	**22 18 41.0**	**-1.2**
	60nm,0.3s								
SNGR	**Sinegor'e**	**2.80**	**141**		*e*	Pg	**Pg**	**22 18 08.7**	**-1.3**
SNGR						Pgmax		22 18 10.5	
	40nm,0.2s								
SNGR					*e*	Sg	**Sg**	**22 18 47.1**	**+0.9**
SNGR						Sgmax		22 18 53.7	
	190nm,0.2s								
SNGR						Sgmax		22 18 53.7	
	280nm,0.2s								
TLAR	**Talaya**	**4.12**	**137**		*e*	P	**Pn**	**22 18 20.8**	**+1.4**
TLAR					*e*	Pg	**Pg**	**22 18 33.0**	**-2.3**
TLAR						Pgmax		22 18 36.4	
	10.0nm,0.3s								
TLAR					*e*	Sg	**Sg**	**22 19 27.0**	**-1.6**
TLAR						Sgmax		22 19 35.9	
	60nm,0.2s								
YBGR	**Belaya Gora**	**4.29**	**358**		*i*	Pn	**Pn**	**22 18 22.3**	**+0.7**
YBGR					*i*	Pg	**Pg**	**22 18 37.9**	**-0.5**
	9.3nm,0.8s								
YBGR					*e*	Sn	**Sn**	**22 19 11.2**	**-0.4**
YBGR					*e*	Sn	**Sn**	**22 19 11.2**	**-0.4**
YBGR					*e*	Lg	Lg	22 19 29.0	
YBGR					*e*	Lg	Lg	22 19 29.0	
YBGR					*e*	Sg	**Sg**	**22 19 34.7**	**+0.8**
	113nm,0.8s								
OMS	**Omsukchan**	**4.48**	**109**		*e*	Sg	**Sg**	**22 19 38.4**	**-1.6**
OMS						Sgmax		22 19 42.4	
	130nm,0.3s								
MGD	**Magadan 1**	**4.65**	**154**		*e*	Pg	**Pb**	**22 18 41.0**	**+3.0**
MGD					*e*	Sg	**Sg**	**22 19 42.9**	**-2.7**
MGD						Sgmax		22 19 46.5	
	50nm,0.4s								
MGD						Sgmax		22 19 46.5	
	70nm,0.4s								
MA2	**Magadan**	**5.10**	**156**		*e*	Pg	**Pb**	**22 18 49.3**	**+3.7**
MA2					*e*	Sg	**Sg**	**22 19 57.3**	**-2.6**
MA2						Sgmax		22 20 06.1	
	60nm,0.6s								

BJI ***28*** *22:22:13.0±0.0,56˚.80N×34˚.50W, h5km, mB5.3/29, mb4.8/45, Ms5.2/30, Ms7 4.9/30*
IDC ***28*** *22:22:14.4±0.3,56˚.69N×34˚.50W, h0km, mb4.5/45, mb1 4.6/49, mb1mx4.5/67, mbtmp4.5/49, ML3.7/4, MS4.8/40, Ms1 4.8/40, ms1mx4.7/46, Error ellipse: s-maj=11.1km s-min=8.6km az=174.0*
MOS ***28*** *22:22:14.1±1.2,56˚.70N×34˚.51W, h11km, mb5.1/29, MS5.0/34, Error ellipse: s-maj=9.9km s-min=6.6km az=75.4*
NEIC ***28*** *22:22:14.9±2.5,56˚.74N±0˚.08×34˚.51W±0˚.09, h10km±1km, mb5.2/206, Ms_20 5.2/568, Mwb5.3/14, Mwc5.4(GCMT), Error ellipse: s-maj=13.6km s-min=8.1km az=169.0, Moment Tensor Solution. Moment tensor: Scale 10^{16}Nm; M_{rr}=4.12; $M_{\theta\theta}$-2.39; $M_{\phi\phi}$6.51; $M_{r\theta}$-0.13; $M_{\theta\phi}$0.08; $M_{r\phi}$7.61; Fault plane solution: $M_0$9.51000×10^{16} NP1:ϕ_s3.78000°, δ17.51000°, λ-85.33000°. NP2:ϕ_s178.88000°, δ72.55000°, λ-91.47000°. Principal axes: T 10.4798, Plg28.0000°, Azm270.0000°; N -2.3831, Plg1.0000°, Azm179.0000°; P -8.0967, Plg62.0000°, Azm87.0000°;*
GCMT ***28*** *22:22:16.9±0.1,56˚.68N±0˚.01×34˚.29W±0˚.01, h12km, MW5.3/144, Moment Tensor Solution. s91,c125; s144,c273; Duration: 1§2 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.31±.02; $M_{\theta\theta}$-0.04±.02; $M_{\phi\phi}$1.35±.01; $M_{r\theta}$0.07±.05; $M_{\theta\phi}$0.06±.02; $M_{r\phi}$0.01±.05; Best double couple: $M_0$1.33300×10^{17} NP1:ϕ_s359.00000°, δ45.00000°, λ-94.00000°. NP2:ϕ_s185.00000°, δ45.00000°, λ-86.00000°. Principal axes: T 1.3520, Plg0.0000°, Azm272.0000°; N -0.0420, Plg3.0000°, Azm2.0000°; P -1.3130, Plg87.0000°, Azm176.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
NEIC ***28*** *22:22:17, 56˚.68N×34˚.34W, h12km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.29; $M_{\theta\theta}$-0.06; $M_{\phi\phi}$ 1.35; $M_{r\theta}$-0.26; $M_{\theta\phi}$0.09; $M_{r\phi}$0.10; Fault plane solution: $M_0$1.35000×10^{17} NP1:ϕ_s15.00000°, δ44.00000°, λ-73.00000°. NP2:ϕ_s172.00000°, δ48.00000°, λ-106.00000°. Principal axes: T 1.3588, Plg2.0000°, Azm273.0000°; N -0.0141, Plg12.0000°, Azm183.0000°; P -1.3448, Plg78.0000°, Azm12.0000°;*
ISC 28 22:22:16.7±1.1,56˚.85N±0˚.04×34˚.57W±0˚.04,h14km±6km, n924,σ1§93/634,mb5.1/200,MS5.2/354,7C-4D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NRS	**Narsarsuaq**	**7.07**	**312**			P	**Pn**	**22 23 55.1**	**-4.5**
NRS	**Narsarsuaq**	**7.07**	**312**			Pn	**Pn**	**22 23 55.1**	**-4.5**
NRS							**Sn**	**22 25 13.4**	**-6.2**
IVI	**Ivigtut**	**8.26**	**308**			Pn	**Pn**	**22 24 13.3**	**-2.5**
IVI							**Sn**	**22 25 43.4**	**-5.3**
ANGG	**Ammassalik, Gr**	**8.92**	**352**				**Pn**	**22 24 24.8**	**-0.1**
ANGG							**Sn**	**22 25 58.8**	**-6.2**
BORG	**Borgarnes**	**10.21**	**34**		P		**Pn**	**22 24 42.8**	**+0.4**
BORG								22 26 32.0	
BORG	**Borgarnes**	**10.21**	**34**		Pn		**Pn**	**22 24 43.7**	**+1.2**
	0.8nm,0.3s,baz=236,slow=7.3,SNR=6.4								
BORG						Sn	**Sn**	**22 26 32.0**	**-4.5**
	0.3nm,0.3s,baz=122,slow=19,SNR=4.1								
BORG						LR	LR	22 27 44.2	
	comp=Z,19μm,18.2s,baz=250,slow=32								
BORG	**Borgarnes**	**10.21**	**34**		Pn		**Pn**	**22 24 42.8**	**+0.4**
SFJD	**Kangerlussuaq**	**12.62**	**330**		Pn		**Pn**	**22 25 16.6**	**+1.1**
	0.3nm,0.3s,baz=128,slow=16,SNR=2.0								
SFJD						Sn	**Sn**	**22 27 28.7**	**-7.0**
	0.5nm,0.3s,baz=52,slow=23,SNR=2.9								
SFJD						LR	LR	22 29 28.4	
	comp=Z,6μm,19.1s,baz=140,slow=34								
SFJD	**Kangerlussuaq**	**12.62**	**330**				Sn	22 27 27.3	-8.4
DRLN	**Deer Lake**	**15.69**	**251**				**Pn**	**22 25 53.9**	**-3.2**
SUMG	**Summit**	**15.87**	**356**		*i*	P	**Pn**	**22 26 00.0**	**+0.3**
SUMG	**Summit**	**15.87**	**356**		*i*	P	**Pn**	**22 26 00.0**	**+0.3**
SUMG	**Summit**	**15.87**	**356**				**Pn**	**22 25 57.6**	**-2.1**
EKA	**Eskdalemuir Ar**	**17.51**	**82**		P		**Pn**	**22 26 19.1**	**-1.1**
	baz=289,slow=11,SNR=5.4								
EKA						LR	LR	22 31 53.0	
	comp=Z,6μm,18.8s,baz=285,slow=33								
JMIC	**Jan Mayen**	**17.98**	**28**		LR		LR	22 31 47.5	
	comp=Z,4μm,19.3s,baz=232,slow=32								
FRB	**Frobisher Bay**	**18.01**	**307**		P		**Pn**	**22 26 26.2**	**0.0**
	0.1nm,0.3s,baz=104,slow=13,SNR=6.4								
FRB					LR		LR	22 32 10.0	
	comp=Z,4μm,20.5s,baz=96,slow=33								
SCHQ	**Schefferville**	**18.14**	**277**		P		**Pn**	**22 26 25.5**	**-2.4**
	0.0nm,0.3s,baz=85,slow=12,SNR=4.2								
SCHQ					LR		LR	22 32 27.9	
	comp=Z,5μm,18.2s,baz=81,slow=34								
SCHQ	**Schefferville**	**18.14**	**277**		P		**Pn**	**22 26 25.8**	**-2.1**
SCHQ					IAmb		IAmb	22 26 33.0	
	comp=Z,196nm,1.4s								
GBN	**Guysborough**	**20.27**	**247**		P		**P**	**22 26 47.4**	**-4.1**
DAG	**Danmarks Havn**	**20.81**	**10**		*e*	P	Pn	22 26 59.4	-0.1
DAG					pmax		pmax		
	comp=Z,72nm,1.4s								
DAG	**Danmarks Havn**	**20.81**	**10**		*i*	P	Pn	22 26 59.4	-0.1
	comp=Z,72nm,1.4s								
LMN	**Caledonia Moun**	**21.67**	**252**		P		**P**	**22 27 04.6**	**-2.0**
LMN					IAmb		IAmb	22 27 09.3	
	comp=Z,77nm,1.1s								
LMN					IAMs_20		IAMs_20	22 34 30.5	
	comp=Z,8μm,19.0s								
D63A	**Stockholm**	**22.67**	**259**		P		**P**	**22 27 16.8**	**-0.5**
	baz=52								
PQI	**Presque Isle**	**22.84**	**258**		P		**P**	**22 27 19.2**	**+0.1**
PQI					IAmb		IAmb	22 27 33.8	
	comp=Z,92nm,1.4s								
PQI					IAMs_20		IAMs_20	22 34 55.6	
	comp=Z,7μm,20.0s								
E64A	**Bridgewater**	**22.90**	**257**		P		**P**	**22 27 19.7**	**-0.1**
	baz=51								
D62A	**Allapoint, All**	**23.15**	**260**		P		**P**	**22 27 22.7**	**+0.4**
D62A					IAmb		IAmb	22 27 33.1	
	comp=Z,80nm,1.1s								
D62A					IAMs_20		IAMs_20	22 35 04.6	
	comp=Z,7μm,20.0s								
D62A	**Allapoint, All**	**23.15**	**260**		P		**P**	**22 27 22.6**	**+0.4**
	baz=52								
E63A	**Oxbow**	**23.22**	**258**		P		**P**	**22 27 22.0**	**-0.9**
E63A					IAmb		IAmb	22 27 32.1	
	comp=Z,141nm,1.6s								
E63A					IAMs_20		IAMs_20	22 35 18.5	
	comp=Z,7μm,19.0s								
E63A	**Oxbow**	**23.22**	**258**		P		**P**	**22 27 23.0**	**0.0**
	baz=51								
GGN	**Saint George**	**23.23**	**253**		P		**P**	**22 27 22.9**	**-0.1**
GGN					IAMs_20		IAMs_20	22 35 18.4	
	comp=Z,5μm,20.0s								
NC204	**NORSAR Array S**	**23.34**	**60**		P		**P**	**22 27 22.2**	**-1.9**
NC204					IAmb		IAmb	22 27 44.4	
	comp=Z,73nm,1.3s								
PBRG	**Braganca**	**23.34**	**118**		*e*	P	P	22 27 32.0	+7.7
	comp=Z,92nm,1.6s								
NAO01	**NORSAR Array S**	**23.48**	**61**		P		**P**	**22 27 23.6**	**-1.8**
F64A	**Sherman**	**23.54**	**257**		P		**P**	**22 27 25.4**	**-0.8**
F64A					IAmb		IAmb	22 27 36.0	
	comp=Z,142nm,1.3s								
F64A					IAMs_20		IAMs_20	22 35 26.9	
	comp=Z,6μm,19.0s								
F64A	**Sherman**	**23.54**	**257**		P		**P**	**22 27 26.8**	**+0.7**
	baz=50								
G65A	**Princeton**	**23.55**	**254**		P		**P**	**22 27 26.4**	**+0.1**
G65A					IAMs_20		IAMs_20	22 35 36.3	
	comp=Z,6μm,18.0s								
G65A	**Princeton**	**23.55**	**254**		P		**P**	**22 27 26.9**	**+0.6**
	baz=48								
NB2	**NORSAR Subarra**	**23.60**	**61**		P		**P**	**22 27 26.0**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=279,slow=10								
NOA	**NORSAR Array B**	**23.60**	**61**		P		**P**	**22 27 25.0**	**-1.7**
	comp=Z,2.1nm,0.9s,baz=281,slow=9.6,SNR=4.2								
NOA					LR		LR	22 35 10.0	
	comp=Z,2μm,21.4s,baz=275,slow=33								
PVIS	**Viseu**	**23.64**	**122**		*e*	P	**P**	**22 27 32.3**	**+5.1**
	comp=Z,168nm,1.7s								
NC303	**NORSAR Array S**	**23.64**	**60**		P		**P**	**22 27 25.4**	**-1.6**
D61A	**St Aubert, Com**	**23.69**	**261**		P		**P**	**22 27 28.2**	**+0.6**
	baz=53								
H66A	**Whiting**	**23.70**	**253**		P		**P**	**22 27 28.7**	**+1.0**
	baz=48								
MVO	**Moncorvo**	**23.70**	**120**		*e*	P	**P**	**22 27 30.2**	**+2.4**
MVO					*e*	LQ	LQ	22 32 43.9	
MVO					*e*	LR	LR	22 33 19.7	
	comp=Z,5μm,18.0s								
MUD	**Monsted U'grnd**	**23.75**	**72**		*i*	P	P	22 27 36.0	+7.9
	comp=Z,75nm,1.3s								
COI	**Coimbra**	**23.80**	**123**			IAMs_20	IAMs_20	22 33 53.2	
	comp=Z,6μm,20.0s								
EMMW	**East Machias**	**23.82**	**253**			P	**P**	**22 27 29.1**	**+0.2**
EMMW						IAMs_20	IAMs_20	22 35 45.5	
	comp=Z,5μm,19.0s								
NC405	**NORSAR Array S**	**23.82**	**60**		P		**P**	**22 27 27.8**	**-1.0**
CLF	**Chambon-Foret**	**23.86**	**96**		P		**P**	**22 27 28.4**	**-0.9**
CLF					IAMs_20		IAMs_20	22 35 48.5	
	comp=Z,6μm,18.0s								
BMRD	**Maredsous**	**23.99**	**89**		P		**P**	**22 27 29.1**	**-1.3**
F63A	**Nahmakanta, Br**	**24.04**	**257**		P		**P**	**22 27 28.4**	**-2.7**
F63A					IAmb		IAmb	22 27 41.0	
	comp=Z,114nm,1.3s								
F63A					IAMs_20		IAMs_20	22 35 51.3	
	comp=Z,6μm,18.0s								
F63A	**Nahmakanta, Br**	**24.04**	**257**		P		**P**	**22 27 31.6**	**+0.6**
	baz=50								
MTE	**Manteigas**	**24.05**	**122**		*e*	P	**P**	**22 27 32.5**	**+1.3**
MTE					*e*	LQ	LQ	22 32 55.0	
MTE					*e*	LR	LR	22 33 31.4	
	comp=Z,4μm,20.0s								
G64A	**Maxfield**	**24.15**	**256**		P		**P**	**22 27 32.5**	**+0.5**
	baz=49								
BEBN	**Eben Emael**	**24.24**	**87**		P		**P**	**22 27 31.6**	**-1.1**
H65A	**Eastbrook**	**24.25**	**254**		P		**P**	**22 27 34.1**	**+1.2**
	baz=48								
D60A	**Saint Jean D'O**	**24.27**	**261**		P		**P**	**22 27 33.1**	**+0.1**
	baz=52								
BSTI	**Sart Tilman**	**24.28**	**88**		P		**P**	**22 27 32.8**	**-0.3**
E61A	**Lac Etchemin**	**24.33**	**260**		P		**P**	**22 27 34.4**	**+0.7**
	baz=51								
PMAFR	**Mafra**	**24.42**	**126**		*e*	P	**P**	**22 27 35.8**	**+1.2**
	comp=Z,373nm,1.9s								
PKME	**Peaks-Kenny Pk**	**24.43**	**257**		P		**P**	**22 27 33.7**	**-0.8**
PKME					IAmb		IAmb	22 27 39.0	
	comp=Z,100nm,1.6s								
PKME	**Peaks-Kenny Pk**	**24.43**	**257**		P		**P**	**22 27 35.7**	**+1.2**
	baz=49								
MEM	**Membach**	**24.51**	**87**		P		**P**	**22 27 34.3**	**-0.9**
PCBR	**Castelo Branco**	**24.52**	**122**		*e*	P	P	22 27 41.0	+5.5
	comp=Z,102nm,2.0s								
G63A	**Kingsbury**	**24.70**	**257**		P		**P**	**22 27 37.7**	**+0.7**
	baz=49								
H64A	**Troy**	**24.80**	**255**		P		**P**	**22 27 38.3**	**+0.4**
	baz=48								
PMTG	**Montargil**	**24.80**	**125**		*e*	P	**P**	**22 27 38.9**	**+0.9**
	comp=Z,101nm,1.9s								
E60A	**Ste Agathe de**	**24.89**	**261**		P		**P**	**22 27 39.6**	**+0.9**
	baz=52								
F61A	**St Evariste**	**24.89**	**260**		P		**P**	**22 27 39.8**	**+1.1**
	baz=51								
PMRV	**Marv??o**	**24.89**	**123**		*e*	P	**P**	**22 27 43.3**	**+4.5**
	comp=Z,94nm,1.9s								
PMRV					*e*	LQ	LQ	22 33 15.9	
PMRV					*e*	LR	LR	22 33 49.0	
	comp=Z,4μm,20.0s								
HFS	**Hagfors**	**24.98**	**62**		LR		LR	22 36 30.0	
	comp=Z,2μm,18.7s,baz=288,slow=34								
LATQ	**La Tuque**	**25.00**	**264**		P		**P**	**22 27 36.9**	**-2.8**
LATQ	**La Tuque**	**25.00**	**264**		P		**P**	**22 27 39.7**	**+0.1**
	baz=53								
WLF	**Walferdange**	**25.09**	**89**		pP		**pP**	**22 27 45.5**	**+1.4**
WLF					sP		pwP	22 27 48.4	+1.6
WVL	**Waterville**	**25.09**	**256**		P		**P**	**22 27 40.5**	**+0.1**
WVL					IAmb		IAmb	22 27 46.2	
	comp=Z,72nm,1.2s								
WVL					IAMs_20		IAMs_20	22 36 33.0	
	comp=Z,5μm,18.0s								
G62A	**West of Eustis**	**25.12**	**258**		P		**P**	**22 27 40.8**	**0.0**
G62A					IAmb		IAmb	22 27 46.9	
	comp=Z,43nm,0.9s								
G62A					IAMs_20		IAMs_20	22 36 15.7	
	comp=Z,7μm,20.0s								
G62A	**West of Eustis**	**25.12**	**258**		P		**P**	**22 27 41.3**	**+0.5**
	baz=49								
D58A	**Chemin du LacG**	**25.22**	**264**		P		**P**	**22 27 42.0**	**+0.3**
	baz=53								
H63A	**New Sharon**	**25.22**	**256**		P		**P**	**22 27 42.0**	**+0.3**
	baz=48								
PESTR	**Estremoz**	**25.25**	**124**		P		**P**	**22 27 40.8**	**-1.3**
NOR	**Nord**	**25.40**	**6**		*i*	P	**P**	**22 27 46.5**	**+3.5**
	comp=Z,27nm,1.1s								
F60A	**Warwick**	**25.41**	**261**		P		**P**	**22 27 43.5**	**+0.1**
	baz=51								
PNCL	**Nicolau / Gran**	**25.45**	**126**		*e*	P	**P**	**22 27 45.7**	**+1.9**
I64A	**Boothbay**	**25.51**	**255**		P		**P**	**22 27 44.4**	**+0.1**
	baz=47								
G61A	**St-Isidore-de-**	**25.62**	**259**		P		**P**	**22 27 45.8**	**+0.5**
	baz=50								
PBEJ	**Beja**	**25.82**	**125**		*e*	P	P	22 27 52.5	+5.3
	comp=Z,54nm,1.5s								
D57A	**Chemin Vers le**	**25.82**	**265**		P		**P**	**22 27 47.5**	**+0.4**
	baz=53,SNR=5.8								
E58A	**La Victoria**	**25.88**	**263**		P		**P**	**22 27 47.9**	**+0.2**
	baz=52								
H62A	**Milan**	**25.88**	**257**		P		**P**	**22 27 47.1**	**-0.6**
H62A					IAmb		IAmb	22 27 53.2	
	comp=Z,57nm,1.2s								
H62A					IAMs_20		IAMs_20	22 36 57.9	
	comp=Z,8μm,18.0s								
H62A	**Milan**	**25.88**	**257**		P		**P**	**22 27 48.4**	**+0.7**
	baz=48								
I63A	**Otisfield**	**25.92**	**256**		P		**P**	**22 27 47.7**	**-0.4**
I63A					IAMs_20		IAMs_20	22 36 59.0	
	comp=Z,5μm,18.0s								
I63A	**Otisfield**	**25.92**	**256**		P		**P**	**22 27 48.8**	**+0.7**
	baz=48								
F59A	**Saint Guilaume**	**25.93**	**261**		P		**P**	**22 27 49.0**	**+0.8**
	baz=51								
MORF	**Marmelete**	**26.07**	**128**		*e*	P	**P**	**22 27 50.5**	**+1.0**
MORF						AMS	AMS	22 35 42.4	
	comp=Z,3μm,21.0s								
MORF	**Marmelete**	**26.07**	**128**		*e*	P	**P**	**22 27 51.2**	**+1.7**
MORF	**Marmelete**	**26.07**	**128**		*e*	P	**P**	**22 27 50.5**	**+1.0**
G60A	**Masonville**	**26.17**	**260**		P		**P**	**22 27 51.4**	**+1.0**
	baz=50								
PAB	**San Pablo**	**26.24**	**118**		P		**P**	**22 27 49.7**	**-1.4**
PAB					pmax		pmax		
	comp=Z,134nm,2.0s								
PAB					MLR		MLR		
	comp=Z,4μm,19.0s								
PAB	**San Pablo**	**26.24**	**118**		P		**P**	**22 27 49.6**	**-1.4**
PAB					IAmb		IAmb	22 28 02.7	
	comp=Z,134nm,1.9s								
PAB	**San Pablo**	**26.24**	**118**		IAMs_20		IAMs_20	22 36 06.9	
	comp=Z,4μm,19.0s								
D56A	**ZEC Mazanza, M**	**26.28**	**265**		P		**P**	**22 27 52.4**	**+1.2**
	baz=53,SNR=6.4								
H61A	**Lyndonville**	**26.32**	**258**		P		**P**	**22 27 52.7**	**+1.0**
	baz=49								
MATQ	**Matagami**	**26.32**	**273**		P		**P**	**22 27 52.4**	**+0.8**
	baz=58								
ESBB	**Sonseca Array**	**26.33**	**118**		P		**P**	**22 27 50.7**	**-1.2**
ESBB					IAmb		IAmb	22 28 11.6	
	comp=Z,80nm,1.6s								
ESBB					IAMs_20		IAMs_20	22 36 46.2	
	comp=Z,5μm,18.0s								
ESDC	**Sonseca Array**	**26.33**	**118**		P		**P**	**22 27 49.8**	**-2.1**
	comp=Z,12nm,1.1s,baz=318,slow=7.8,SNR=9.8								
ESDC	**Sonseca Array**	**26.33**	**118**		P		**P**	**22 27 50.3**	**-1.5**
E57A	**Chemin Saint G**	**26.33**	**264**		P		**P**	**22 27 52.3**	**+0.5**
	baz=52								
LSQQ	**Lebel-sur-Quev**	**26.34**	**271**		P		**P**	**22 27 52.4**	**+0.5**
	baz=56								
PVAQ	**Vaqueiros**	**26.40**	**126**		*e*	LQ	LQ	22 33 42.6	
PVAQ					*e*	LR	LR	22 34 25.8	
	comp=Z,5μm,20.0s								
PVAQ	**Vaqueiros**	**26.40**	**126**		IAMs_20		IAMs_20	22 35 40.9	
	comp=Z,5μm,19.0s								
ECH	**Echery**	**26.44**	**91**		P		**P**	**22 27 50.7**	**-2.1**
ECH					pmax		pmax		
	comp=Z,59nm,1.5s								
ECH					MLR		MLR		
	comp=Z,6μm,20.0s								
ECH	**Echery**	**26.44**	**91**		P		**P**	**22 27 50.6**	**-2.1**
ECH					IAmb		IAmb	22 28 00.1	
	comp=Z,59nm,1.5s								
ECH					IAMs_20		IAMs_20	22 37 11.7	
	comp=Z,6μm,20.0s								
I62A	**Tamworth**	**26.44**	**256**		IAmb		IAmb	22 28 03.4	
	comp=Z,61nm,1.2s								
I62A					IAMs_20		IAMs_20	22 37 15.8	
	comp=Z,6μm,18.0s								
I62A	**Tamworth**	**26.44**	**256**		P		**P**	**22 27 53.9**	**+1.1**
	baz=48								
LBNH	**Lisbon**	**26.52**	**258**		IAMs_20		IAMs_20	22 37 16.7	
	comp=Z,6μm,18.0s								
LBNH	**Lisbon**	**26.52**	**258**		P		**P**	**22 27 54.7**	**+1.2**
	baz=48								
G59A	**Clarenceville**	**26.64**	**260**		P		**P**	**22 27 55.2**	**+0.7**
	baz=50								
TRQ	**Mont Tremblant**	**26.67**	**264**		P		**P**	**22 27 52.7**	**-2.2**
D55A	**Sainte-Anne-du**	**26.69**	**266**		P		**P**	**22 27 55.6**	**+0.6**
	baz=53								
J63A	**Strafford**	**26.71**	**255**		P		**P**	**22 27 56.4**	**+1.2**
	baz=46								
H60A	**Morristown**	**26.72**	**259**		P		**P**	**22 27 56.9**	**+1.6**
	baz=49								
E56A	**St. Veronique**	**26.73**	**265**		P		**P**	**22 27 56.7**	**+1.3**
	baz=52								
I61A	**Oroboro, Fairl**	**26.87**	**257**		P		**P**	**22 27 58.8**	**+2.2**
	baz=48								
FFD	**Franklin Falls**	**26.89**	**256**		IAmb		IAmb	22 28 05.3	
	comp

comp=Z,4µm,20.0s
NCB Newcomb 27.93 260 P P 22 28 03.5 -2.7
NCB IAmb IAmb 22 28 14.8
comp=Z,68nm,1.6s
NCB IAMs_20 IAMs_20 22 37 52.1
comp=Z,5µm,20.0s
E54A Lac Daplat, Po 27.98 267 P P 22 28 10.1 +3.5
baz=52
L63A North Scituate 27.98 254 P P 22 28 08.0 +1.4
baz=45
CLL Collm 27.98 81 *e*P P **22 28 06.0 -0.5**
CLL pmax pmax
comp=Z,27nm,1.4s
CLL MLR MLR
comp=Z,4µm,19.8s
CLL Collm 27.98 81 *e*P P **22 28 06.0 -0.5**
comp=Z,27nm,1.4s
CLL *e*PPP PPP 22 29 03.0
CLL Lm MLR 22 38 00.0
comp=Z,4µm,19.8s
CLL Collm 27.98 81 P P **22 28 05.6 -0.9**
CLL IAMs_20 IAMs_20 22 38 33.4
comp=Z,4µm,20.0s
J60A Lant Hill Farm 27.99 258 P P **22 28 08.9 +2.2**
baz=47
BNI Bardonecchia 28.09 97 P P **22 28 08.4 +0.6**
BNI pmax pmax
comp=Z,14nm,2.6s
BNI Bardonecchia 28.09 97 IAMs_20 IAMs_20 22 38 20.4
comp=Z,6µm,19.0s
NKC Novy Kostel 28.23 83 AMS AMS 22 38 30.0
comp=Z,3µm,18.3s
E53A Dumoine, Ponti 28.27 267 P P **22 28 11.8 +2.6**
baz=52
K61A Williamstown 28.30 257 P P **22 28 11.2 +1.8**
baz=46
J59A Piesco 28.42 259 P P **22 28 08.3 -2.2**
J59A IAMs_20 IAMs_20 22 38 16.1
comp=Z,6µm,20.0s
J59A Piesco 28.42 259 P P **22 28 11.4 +0.8**
baz=48
G55A Calabogie 28.46 264 P P **22 28 14.3 +3.5**
baz=51
TRY Troy 28.47 257 IAMs_20 IAMs_20 22 38 18.4
comp=Z,5µm,19.0s
ARCES ARCESS Array B 28.53 40 P P **22 28 10.5 -0.8**
comp=Z,11nm,1.0s,baz=265,slow=9.6,SNR=11
ARCES LR LR 22 37 28.9
comp=Z,2µm,18.1s,baz=283,slow=32
RES Resolute Bay 28.62 331 P P **22 28 09.9 -2.1**
RES pmax pmax
comp=Z,17nm,1.5s
RES Resolute Bay 28.62 331 P P **22 28 13.8 +1.8**
comp=Z,0.7nm,0.5s,baz=92,slow=13,SNR=3.4
RES LR LR 22 39 27.8
comp=Z,1µm,18.9s,baz=101,slow=36
RES Resolute Bay 28.62 331 P P **22 28 09.8 -2.1**
TUE Stuetta 28.67 92 IAMs_20 IAMs_20 22 39 02.7
comp=Z,7µm,19.0s
BRG Berggiesshubel 28.71 81 *e*P P 22 28 17.7 +4.6
comp=Z,65nm,2.1s
BRG Berggiesshubel 28.71 81 *e*P P 22 28 17.7 +4.6
BRG pmax pmax
comp=Z,65nm,2.2s
DAVOX Davos/Dischmat 28.77 91 P P **22 28 14.0 +0.1**
DAVOX Davos/Dischmat 28.77 91 P P **22 28 14.0 +0.1**
comp=Z,5.6nm,0.7s,baz=270,slow=11,SNR=2.6
DAVOX LR LR 22 39 06.8
comp=Z,6µm,19.2s,baz=298,slow=35
D51A Lot 18 Range I 28.79 270 P P **22 28 15.8 +2.1**
baz=53
E52A Mattawa 28.88 268 P P **22 28 16.2 +1.6**
baz=52
J58A Remsen 28.91 260 IAMs_20 IAMs_20 22 38 32.1
comp=Z,6µm,19.0s
J58A Remsen 28.91 260 P P **22 28 17.1 +2.2**
baz=48
M62A Hamden 28.96 254 P P **22 28 18.5 +3.2**
baz=45
K59A Cooperstown 29.07 258 P P **22 28 16.3 -0.1**
baz=47
FUORN Ofenpass-Fuorn 29.08 91 P P **22 28 15.9 -0.8**
FUORN IAMs_20 IAMs_20 22 39 06.7
comp=Z,6µm,19.0s
G54A Lake Saint Pet 29.12 266 P P **22 28 17.4 +0.7**
baz=51
PVCC Panska Ves 29.23 81 AMS AMS 22 39 30.0
comp=Z,4µm,17.9s
J57A Williamstown 29.26 261 IAMs_20 IAMs_20 22 38 52.5
comp=Z,7µm,18.0s
PRA Prague 29.40 82 AMS AMS 22 39 00.0
comp=Z,4µm,20.0s
DELO Deloro Mine 29.42 264 IAMs_20 IAMs_20 22 38 48.5
comp=Z,6µm,20.0s
KHC Kasperske Hory 29.45 84 AMS AMS 22 40 40.0
comp=Z,4µm,12.5s
PRU Pruhonice 29.50 82 AMS AMS 22 39 10.0
comp=Z,4µm,22.5s
K58A Earlville 29.51 259 IAMs_20 IAMs_20 22 38 50.0
comp=Z,5µm,20.0s
M61A Granite Spring 29.51 255 P P **22 28 22.0 +1.8**
baz=45
F52A Sundridge 29.54 267 P P **22 28 21.7 +1.2**
baz=52
L59A Walton 29.58 258 IAMs_20 IAMs_20 22 39 01.8
comp=Z,6µm,18.0s
L59A Walton 29.58 258 P P **22 28 22.6 +1.7**
baz=46
G53A Haliburton 29.58 266 P P **22 28 22.0 +1.2**
baz=51
GERES GERESS Array B 29.67 85 P P **22 28 22.3 +0.6**
comp=Z,1.8nm,0.8s,baz=278,slow=6.8,SNR=4.3
GERES LR LR 22 39 39.3
comp=Z,3µm,18.3s,baz=305,slow=35
GOPC GO Pecny, Ondr 29.68 82 AMS AMS 22 39 20.0
comp=Z,4µm,20.7s
PAL Palisades 29.80 255 P P **22 28 25.1 +2.3**
baz=44
J56A Wolcott 29.82 261 IAMs_20 IAMs_20 22 39 00.2
comp=Z,6µm,20.0s
SALO Salr 29.84 93 IAMs_20 IAMs_20 22 39 32.7
comp=Z,6µm,20.0s
H53A Bobcaygeon 29.91 265 P P **22 28 25.8 +2.1**
baz=50
M60A Port Jervis 29.96 256 P P **22 28 26.4 +2.2**
baz=45
K57A Scipio Center 30.00 260 P P **22 28 23.5 -1.0**
baz=47
CHVC Chvalec 30.01 80 AMS AMS 22 40 10.0
comp=Z,4µm,18.7s
UPC Upice 30.03 80 AMS AMS 22 40 30.0
comp=Z,4µm,16.5s
D48A Paudash Townsh 30.07 272 P P **22 28 26.7 +1.6**
baz=54
BINY Binghamton 30.08 259 IAMs_20 IAMs_20 22 39 18.0
comp=Z,5µm,19.0s
SADO Sadowa 30.09 266 IAMs_20 IAMs_20 22 39 09.3
comp=Z,5µm,18.0s
OSTC Ostas 30.11 80 AMS AMS 22 40 20.0
comp=Z,4µm,17.9s
MSSA Maissana 30.12 96 IAMs_20 IAMs_20 22 40 17.0
comp=Z,3µm,18.0s
ODNJ Ogdensburg 30.12 256 IAMs_20 IAMs_20 22 39 27.1
comp=Z,3µm,18.0s
N61A South Mountain 30.19 255 P P **22 28 28.5 +2.3**
baz=44
CTI Castel Tesino 30.19 91 IAMs_20 IAMs_20 22 40 14.0
comp=Z,4µm,18.0s
M59A Waymart 30.24 257 P P **22 28 29.8 +3.1**
baz=45
PRMA PARMA 30.27 94 IAMs_20 IAMs_20 22 40 10.9
comp=Z,4µm,20.0s
DPC Dobruska-Polom 30.28 80 AMS AMS 22 39 30.0
comp=Z,3µm,21.1s
J55A Hilton 30.35 262 IAMs_20 IAMs_20 22 39 26.2
comp=Z,7µm,19.0s
BRNJ Basking Ridge 30.38 255 IAMs_20 IAMs_20 22 39 45.1
comp=Z,4µm,18.0s
TREC Trest 30.40 83 AMS AMS 22 40 10.0
comp=Z,4µm,16.8s
FINES FINESS Array B 30.44 56 P P **22 28 28.5 +0.3**
comp=Z,11nm,0.9s,baz=302,slow=4.3,SNR=6.7
K56A Middlesex 30.46 261 P P **22 28 29.4 +0.7**
baz=47
TEOL Teolo 30.63 92 IAMs_20 IAMs_20 22 40 24.7
comp=Z,6µm,18.0s
KRLC Kraliky 30.67 81 AMS AMS 22 40 50.0
comp=Z,4µm,17.2s

L57A Andrews Acres 30.68 259 P P **22 28 32.3 +1.7**
baz=46
MMNY Mt. Morris Dam 30.76 261 IAMs_20 IAMs_20 22 39 39.9
comp=Z,6µm,18.0s
MEDO Medina 30.76 263 IAMs_20 IAMs_20 22 39 39.1
comp=Z,6µm,19.0s
J54A Appleton 30.79 263 IAMs_20 IAMs_20 22 39 39.9
comp=Z,6µm,19.0s
K55A Perry 30.85 262 P P **22 28 35.1 +3.0**
baz=47
D47A Chapleau 30.85 273 P P **22 28 35.9 +3.8**
baz=53
N59A State Game Lan 30.86 257 IAMs_20 IAMs_20 22 39 41.7
comp=Z,5µm,20.0s
N59A State Game Lan 30.86 257 P P 22 28 36.2 +4.0
baz=45
FCC Fort Churchill 30.87 299 P P **22 28 33.7 +1.7**
FCC pmax pmax
comp=Z,62nm,1.6s
FCC Fort Churchill 30.87 299 P P **22 28 33.7 +1.7**
FCC IAmb IAmb 22 28 44.0
comp=Z,62nm,1.6s
LUPA Lehigh Univers 30.87 256 P P **22 28 30.5 -1.8**
L56A Greenwood 30.97 260 IAMs_20 IAMs_20 22 39 45.7
comp=Z,6µm,19.0s
L56A Greenwood 30.97 260 P P **22 28 36.2 +3.0**
baz=47
VRAC Vranov 30.99 82 P P **22 28 31.4 -1.8**
comp=Z,5.0nm,1.0s,baz=275,slow=11,SNR=1.8
VRAC Vranov 30.99 82 *e*P P **22 28 35.1 +1.8**
KRUC Moravsky 31.02 82 *e*P P **22 28 32.6 -0.9**
O60A Telford 31.09 256 P P **22 28 35.5 +1.3**
baz=44
MORC Moravsky Berou 31.25 80 *e*P P **22 28 37.6 +2.0**
MORC Moravsky Berou 31.25 80 IAMs_20 IAMs_20 22 41 11.9
comp=Z,4µm,18.0s
K54A Basiliko Farm, 31.27 262 P P **22 28 37.8 +2.1**
baz=47
M57A Sunshine Farm, 31.29 259 IAMs_20 IAMs_20 22 39 56.1
comp=Z,7µm,19.0s
E47A Iron Bridge 31.31 272 P P **22 28 38.1 +2.0**
baz=52
WVNY West Valley, N 31.36 262 IAMs_20 IAMs_20 22 39 57.8
comp=Z,6µm,19.0s
PSUB Penn St. - Bra 31.40 255 IAMs_20 IAMs_20 22 40 24.9
comp=Z,4µm,18.0s
L55A Hinsdale 31.42 261 P P **22 28 40.5 +3.4**
baz=47
N58A Sunbury 31.42 258 IAMs_20 IAMs_20 22 40 08.5
comp=Z,5µm,18.0s
N58A Sunbury 31.42 258 P P **22 28 39.7 +2.7**
baz=45
D46A Sault St. Mari 31.46 273 P P **22 28 40.3 +2.9**
baz=53
O59A Robesonia 31.51 256 P P **22 28 39.6 +1.7**
baz=44
OKC Ostava-Krasne 31.54 80 AMS AMS 22 41 30.0
comp=Z,4µm,15.8s
P60A Greenville 31.58 255 IAMs_20 IAMs_20 22 40 21.8
comp=Z,3µm,19.0s
P60A Greenville 31.58 255 P P **22 28 39.3 +0.9**
baz=43
MDT Midelt 31.63 127 P P **22 28 36.4 -2.7**
comp=Z,2.1nm,0.8s,baz=108,slow=19,SNR=3.7
MDT LR LR 22 39 40.2
comp=Z,732nm,20.8s,baz=340,slow=33
APA Apatity 31.72 43 ⇑*e*P P **22 28 39.6 +0.2**
APA pmax pmax
comp=Z,15nm,0.9s
M56A Emporium 31.76 260 IAMs_20 IAMs_20 22 40 10.5
comp=Z,5µm,20.0s
MVL Millersville 31.82 256 P P **22 28 39.2 -1.4**
MVL IAMs_20 IAMs_20 22 40 21.3
comp=Z,4µm,20.0s
PAGS Pennsylvania G 31.86 257 IAMs_20 IAMs_20 22 40 22.1
comp=Z,5µm,19.0s
CASP Castiglione de 31.86 96 IAMs_20 IAMs_20 22 40 48.0
comp=Z,3µm,19.0s
L54A Sinclairville 31.86 262 P P **22 28 42.6 +1.6**
baz=47
N57A Milroy 31.93 258 P P **22 28 43.3 +1.7**
baz=45
O58A Lewisberry 32.04 257 P P **22 28 44.7 +2.2**
baz=44
M55A Ridgway 32.09 260 IAMs_20 IAMs_20 22 40 20.1
comp=Z,6µm,20.0s
M55A Ridgway 32.09 260 P P **22 28 45.1 +2.1**
baz=46
LVZ Lovozero 32.10 42 IAMs_20 IAMs_20 22 39 27.9
comp=Z,3µm,19.0s
P59A Jarrettsville 32.15 256 P P **22 28 45.7 +2.2**
baz=43
SSPA Standing Stone 32.19 259 IAMs_20 IAMs_20 22 40 33.0
comp=Z,5µm,19.0s
SSPA Standing Stone 32.19 259 P P **22 28 45.1 +1.2**
baz=45
N56A West Decatur 32.22 259 P P **22 28 45.8 +1.6**
baz=45
OJC Ojcow 32.23 78 P P **22 28 42.7 -1.4**
OJC pmax pmax
comp=Z,23nm,1.3s
OJC Ojcow 32.23 78 P P **22 28 42.7 -1.4**
Q60A Greensboro 32.28 254 IAMs_20 IAMs_20 22 41 00.3
comp=Z,3µm,19.0s
ERPA Erie 32.30 263 IAMs_20 IAMs_20 22 40 36.9
comp=Z,6µm,19.0s
O57A Amberson 32.36 258 P P **22 28 48.4 +3.1**
baz=44
G47A Hillman 32.42 270 P P **22 28 48.3 +2.4**
baz=51
H48A Harrisville 32.43 269 IAMs_20 IAMs_20 22 40 50.2
comp=Z,5µm,19.0s
LATE Laterza 32.49 96 IAMs_20 IAMs_20 22 41 20.8
comp=Z,3µm,20.0s
M54A Oil Creek Stat 32.55 261 P P **22 28 46.1 -0.9**
M54A IAMs_20 IAMs_20 22 40 34.3
comp=Z,7µm,20.0s
M54A Oil Creek Stat 32.55 261 P P **22 28 49.1 +2.1**
baz=46
LANS Liptovska Anna 32.64 80 *e*P P **22 28 48.3 +0.5**
LANS Liptovska Anna 32.64 80 *e*P P **22 28 48.3 +0.5**
VYHS Vyhne 32.67 82 *e*P P **22 28 47.9 -0.1**
VYHS Vyhne 32.67 82 *e*P P **22 28 47.9 -0.1**
N55A Marion Center 32.69 260 P P **22 28 49.9 +1.6**
baz=45
O56A Blue Knob Stat 32.82 259 P P **22 28 49.3 -0.2**
O56A IAmb IAmb 22 28 54.2
comp=Z,23nm,1.1s
O56A IAMs_20 IAMs_20 22 40 52.6
comp=Z,5µm,20.0s
O56A Blue Knob Stat 32.82 259 P P **22 28 51.1 +1.6**
baz=45
I48A Sherman Twp 32.97 269 P P **22 28 51.7 +1.1**
baz=50
P57A Homestead Farm 33.08 257 IAMs_20 IAMs_20 22 41 01.6
comp=Z,4µm,20.0s
P57A Homestead Farm 33.08 257 P P **22 28 52.5 +0.8**
baz=44
N54A Moraine State 33.10 261 P P **22 28 52.3 +0.5**
N54A IAmb IAmb 22 28 57.4
comp=Z,60nm,1.3s
N54A IAMs_20 IAMs_20 22 40 53.0
comp=Z,6µm,20.0s
N54A Moraine State 33.10 261 P P **22 28 53.9 +2.1**
baz=46
M53A WI Miller and 33.14 262 P P **22 28 54.3 +2.1**
baz=46
S61A Accomac 33.17 252 IAMs_20 IAMs_20 22 41 57.9
comp=Z,4µm,18.0s
O55A Ligonier 33.26 259 P P **22 28 55.3 +2.1**
baz=45
Q58A Fox Den Farm, 33.30 256 P P **22 28 55.7 +2.2**
baz=43
M52A Chesterland 33.45 263 P P **22 28 57.8 +2.9**
baz=46
P56A Dayton Farm, R 33.51 258 P P **22 28 58.5 +3.0**
baz=44
I47A Gladwin 33.52 269 IAMs_20 IAMs_20 22 41 23.0
comp=Z,5µm,20.0s
AQU L'Aquila 33.54 95 IAMs_20 IAMs_20 22 42 18.0
comp=Z,5µm,20.0s
PSZ Piszkesteto 33.59 82 IAMs_20 IAMs_20 22 42 07.9
comp=Z,4µm,19.0s
Q57A Strasburg 33.62 257 P P **22 28 59.4 +3.0**
baz=43
N53A Lisbon 33.67 262 P P **22 28 55.4 -1.4**
N53A Lisbon 33.67 262 P P **22 28 58.4 +1.6**

baz=46
CBN Corbin Frederi 33.67 255 IAMs_20 IAMs_20 22 41 53.3
comp=Z,5µm,18.0s
D41A Chassel 33.84 277 IAMs_20 IAMs_20 22 41 44.5
comp=Z,4µm,18.0s
O54A Avella 33.86 260 IAMs_20 IAMs_20 22 41 27.1
comp=Z,6µm,20.0s
O54A Avella 33.86 260 P P **22 29 00.1 +1.6**
baz=45
L50A Kingsville 33.90 265 P P **22 29 01.7 +2.9**
baz=47
MCWV Mont Chateau 33.94 259 IAMs_20 IAMs_20 22 41 38.3
comp=Z,3µm,19.0s
Q56A Snyder Ridge, 34.03 258 IAMs_20 IAMs_20 22 41 39.7
comp=Z,5µm,19.0s
Q56A Snyder Ridge, 34.03 258 P P **22 29 00.7 +0.7**
baz=44
M51A Elyria 34.04 264 P P **22 29 00.6 +0.7**
baz=46
INTR Introdacqua 34.05 95 IAMs_20 IAMs_20 22 42 36.0
comp=Z,5µm,20.0s
BLY Banja Luka 34.05 88 IAMs_20 IAMs_20 22 42 46.1
comp=Z,3µm,18.0s
R58B Mineral 34.12 255 IAMs_20 IAMs_20 22 41 49.1
comp=Z,3µm,19.0s
T60A Surry 34.13 253 IAMs_20 IAMs_20 22 41 47.4
comp=Z,3µm,22.0s
R57A Stanardsville 34.22 256 P P **22 29 03.7 +2.2**
baz=43
O53A New Philadelph 34.27 261 P P **22 29 04.0 +2.1**
baz=45
P54A Burton 34.33 260 P P **22 29 05.5 +3.0**
baz=44
N51A Ashland 34.43 263 P P **22 29 04.9 +1.6**
baz=46
M50A Fremont 34.46 264 IAMs_20 IAMs_20 22 41 52.7
comp=Z,4µm,18.0s
UZH Uzhgorod 34.47 79 *e*P P **22 29 05.6 +2.0**
UZH *e* 22 29 08.7
UZH *e*S S **22 34 35.9 +4.7**
UZH MLR MLR
comp=N,600nm,16.0s
UZH MLR MLR
comp=E,300nm,16.0s
UZH MLR MLR
comp=Z,500nm,16.0s
S58A Poland Farm, P 34.47 255 IAMs_20 IAMs_20 22 42 08.4
comp=Z,3µm,19.0s
S58A Poland Farm, P 34.47 255 P P **22 29 07.3 +3.6**
baz=42
Q55A Buckhannon 34.55 259 P P **22 29 06.5 +2.0**
baz=44
R56A Bull Pasture M 34.61 257 P P **22 29 08.0 +2.9**
baz=43
TMCR Tamitsa 34.61 47 *e*P P **22 29 05.6 +1.0**
TMCR pmax pmax
comp=Z,72nm,1.3s
K47A Vermontville 34.67 268 P P **22 29 07.9 +2.4**
baz=48
T59A Double "B" Far 34.69 254 P P **22 29 06.9 +1.3**
baz=41
LVV L'vov 34.72 76 *e*P P **22 29 07.7 +1.9**
LVV *e* 22 30 17.6
LVV *e* 22 30 35.2
LVV *e*S S **22 34 36.2 +1.1**
LVV *e* 22 36 42.7
LVV *e* 22 37 15.7
LVV MLR MLR
comp=E,2µm,16.0s
LVV MLR MLR
comp=N,1µm,14.0s
LVV MLR MLR
comp=Z,1µm,15.0s
S57A Dark Hollow, R 34.84 256 IAMs_20 IAMs_20 22 42 13.2
comp=Z,4µm,18.0s
S57A Dark Hollow, R 34.84 256 P P **22 29 09.1 +2.1**
baz=42
U60A Pendleton 34.86 253 P P **22 29 10.2 +3.2**
baz=40
P53A Whipple 34.90 260 P P **22 29 10.0 +2.5**
baz=44
M49A Liberty Center 34.92 265 P P **22 29 10.1 +2.4**
baz=47
N50A Nevada 34.95 264 P P **22 29 09.9 +2.0**
baz=46
V61A Roper 35.07 251 IAMs_20 IAMs_20 22 43 15.2
comp=Z,5µm,19.0s
PAOL Paolisi 35.08 95 IAMs_20 IAMs_20 22 43 40.3
comp=Z,6µm,19.0s
R55A Marlinton 35.08 258 IAMs_20 IAMs_20 22 42 13.5
comp=Z,5µm,19.0s
O51A Pataskala 35.09 262 P P **22 29 11.1 +2.0**
baz=45
K46A Dorr 35.09 269 P P **22 29 11.5 +2.4**
baz=48
T58A Grand View Acr 35.23 255 P P **22 29 12.9 +2.6**
baz=41
SGRT San Giovanni R 35.23 93 IAMs_20 IAMs_20 22 43 46.6
comp=Z,3µm,18.0s
S56A Natural Bridge 35.23 257 P P **22 29 13.4 +3.0**
baz=42
ACSO Alum Creek Sta 35.24 263 P P **22 29 12.4 +2.0**
baz=45
U59A Littleton 35.28 253 IAMs_20 IAMs_20 22 43 04.8
comp=Z,3µm,18.0s
U59A Littleton 35.28 253 P P **22 29 14.3 +3.6**
baz=40
N49A Columbus Grove 35.41 265 IAmb IAmb 22 29 23.0
comp=Z,37nm,1.2s
N49A IAMs_20 IAMs_20 22 42 15.2
comp=Z,6µm,20.0s
N49A Columbus Grove 35.41 265 P P **22 29 14.3 +2.4**
baz=46
Q53A Leroy 35.42 260 P P **22 29 14.5 +2.5**
baz=44
V60A Jim Taylor Roa 35.45 252 P P **22 29 14.9 +2.7**
baz=40
T57A Hurt 35.57 255 P P **22 29 15.8 +2.6**
baz=42
R54A Victor 35.63 259 P P **22 29 15.7 +2.0**
baz=43
U58A Oxford 35.65 254 P P **22 29 15.2 +1.3**
baz=41
S55A Lewisburg 35.66 258 P P **22 29 15.2 +1.1**
baz=42
E38A The Farm, Brul 35.75 278 IAMs_20 IAMs_20 22 42 51.9
comp=Z,5µm,18.0s
Q52A Bidwell 35.75 261 P P **22 29 17.7 +3.0**
baz=44
W61A Ground Anchor 35.76 251 P P **22 29 17.6 +2.7**
baz=39
P51A Williamsport 35.81 262 IAMs_20 IAMs_20 22 42 35.7
comp=Z,5µm,19.0s
ULM Lac du Bonnet 35.91 286 P P **22 29 14.5 -1.5**
comp=Z,4.6nm,0.9s,baz=70,slow=11,SNR=4.1
ULM LR LR 22 42 36.0
comp=Z,3µm,20.8s,baz=63,slow=34
ULM Lac du Bonnet 35.91 286 IAmb IAmb 22 29 27.0
comp=Z,44nm,1.5s
ULM IAMs_20 IAMs_20 22 42 15.0
comp=Z,3µm,21.0s
N48A Decatur 35.92 266 P P **22 29 17.7 +1.5**
baz=46
T56A Rocky Mt 35.96 256 P P **22 29 18.7 +2.1**
baz=42
V59A Middlesex 35.96 253 P P **22 29 19.3 +2.7**
baz=40
ACER Acerenza 36.00 94 IAMs_20 IAMs_20 22 43 53.7
comp=Z,3µm,19.0s
O49A Covington 36.01 264 IAMs_20 IAMs_20 22 42 42.7
comp=Z,4µm,18.0s
O49A Covington 36.01 264 P P **22 29 19.0 +2.0**
baz=45
BLA Blacksburg 36.03 257 IAMs_20 IAMs_20 22 42 50.7
comp=Z,4µm,19.0s
BLA Blacksburg 36.03 257 P P **22 29 18.9 +1.6**
baz=42
R53A Hurricane 36.04 260 IAMs_20 IAMs_20 22 42 45.7
comp=Z,6µm,20.0s
R53A Hurricane 36.04 260 P P **22 29 18.8 +1.6**
baz=43
U57A Blanch 36.04 255 P P **22 29 19.9 +2.6**
baz=41
S54A Dingess, Beckl 36.08 258 IAMs_20 IAMs_20 22 42 53.8
comp=Z,5µm,20.0s
S54A Dingess, Beckl 36.08 258 P P **22 29 20.1 +2.5**
baz=43
KEST Kesra 36.12 107 P P **22 29 15.4 -2.6**

comp=Z,14nm,1.1s,baz=271,slow=14,SNR=3.8
KEST LR LR 22 43 17.8
comp=Z,1µm,18.3s,baz=256,slow=35
P50A Jamestown 36.12 263 P **P** **22 29 20.0 +2.0**
baz=45
CNNC Cliffs of the 36.18 252 IAMs_20 IAMs_20 22 44 06.6
comp=Z,4µm,18.0s
N47A Urbana 36.27 266 P **P** **22 29 21.6 +2.4**
baz=46
Q51A Peebles 36.29 262 IAMs_20 IAMs_20 22 42 51.4
comp=Z,5µm,20.0s
Q51A Peebles 36.29 262 P **P** **22 29 21.0 +1.5**
baz=44
V58A Windy Hill, Pi 36.40 254 IAMs_20 IAMs_20 22 43 28.4
comp=Z,2µm,19.0s
V58A Windy Hill, Pi 36.40 254 P **P** **22 29 23.5 +3.1**
baz=40
R52A Catlettsburg 36.41 260 P **P** **22 29 22.9 +2.5**
baz=43
O48A Farmland 36.41 265 P **P** **22 29 22.8 +2.4**
baz=46
FFC Flin Flon 36.58 296 P **P** **22 29 22.7 +1.0**
FFC pmax pmax
comp=Z,36nm,1.6s
FFC MLR MLR
comp=Z,3µm,18.0s
FFC Flin Flon 36.58 296 P **P** **22 29 22.7 +1.0**
FFC Flin Flon 36.58 296 IAMs_20 IAMs_20 22 43 21.1
comp=Z,3µm,18.0s
L44A Lake County Fo 36.60 270 IAMs_20 IAMs_20 22 43 34.7
comp=Z,4µm,18.0s
BURAR Bucovina Array 36.65 78 P **P** **22 29 21.9 -0.6**
KLMR Klimovskoe 36.65 52 *e*P **P** **22 29 23.3 +1.1**
KLMR pmax pmax
comp=Z,86nm,1.5s
KLMR Klimovskoe 36.65 52 *e*P **P** **22 29 23.4 +1.2**
KLMR AMP 22 29 35.3
comp=Z,86nm,1.5s
KLMR LQ LQ 22 40 39.6
KLMR LQ LQ 22 40 39.6
KLMR LR LR 22 42 13.3
U56A King 36.66 256 P **P** **22 29 25.1 +2.6**
baz=41
V57A Coltrane Farms 36.68 255 P **P** **22 29 24.5 +1.7**
baz=41
PDG Podgorica 36.70 90 IAMs_20 IAMs_20 22 43 24.4
comp=Z,4µm,22.0s
T54A Tazewell 36.76 258 P **P** **22 29 25.1 +1.5**
baz=42
CLTB Caltabellotta 36.80 101 IAMs_20 IAMs_20 22 44 06.8
comp=Z,3µm,18.0s
U55A TA2, Sparta 36.90 257 P **P** **22 29 26.2 +1.6**
baz=41
R51A Hillsboro 36.94 261 P **P** **22 29 27.0 +2.0**
baz=44
AKASG Malin Array Be 36.95 72 P **P** **22 29 23.6 -1.3**
comp=Z,25nm,0.3s,baz=308,slow=8.6,SNR=2.6
AKASG LR LR 22 44 31.4
comp=Z,2µm,20.5s,baz=295,slow=36
W58A Raeford 37.05 253 P **P** **22 29 27.4 +1.4**
baz=40,SNR=5.4
P48A Milroy 37.12 264 P **P** **22 29 27.9 +1.5**
baz=45
Q49A Aurora 37.15 263 P **P** **22 29 27.8 +1.1**
baz=44
M44A Midewin, Midew 37.21 269 IAmb IAmb 22 29 32.5
comp=Z,68nm,1.3s
M44A IAMs_20 IAMs_20 22 43 35.7
comp=Z,5µm,20.0s
SPMN Marine on St. 37.29 277 IAmb IAmb 22 29 39.0
comp=Z,34nm,1.1s
SPMN PP PP 22 30 46.9 -5.9
SPMN PcP **PcP** **22 31 47.1 +0.2**
U54A Nelsons Funny 37.30 257 P **P** **22 29 29.6 +1.5**
baz=42
Y60A Bolivia 37.31 251 IAMs_20 IAMs_20 22 44 41.4
comp=Z,4µm,18.0s
T53A Wise 37.34 259 P **P** **22 29 30.4 +2.0**
baz=42
W57A Gilead 37.35 254 IAMs_20 IAMs_20 22 45 08.6
comp=Z,3µm,18.0s
W57A Gilead 37.35 254 P **P** **22 29 31.1 +2.6**
baz=40
R50A Paris 37.36 262 P **P** **22 29 30.1 +1.6**
baz=44
SFIN Lafayette 37.39 267 P **P** **22 29 30.0 +1.3**
baz=46,SNR=5.7
JFWS Jewell Farm 37.40 273 P **P** **22 29 31.1 +2.3**
baz=48
S51A Beattyville 37.43 260 P **P** **22 29 31.6 +2.5**
baz=43
X58A Rowland 37.47 253 IAMs_20 IAMs_20 22 44 28.7
comp=Z,5µm,18.0s
V55A Taylorsville 37.47 256 P **P** **22 29 32.5 +3.0**
baz=41
TIP Timpagrande 37.58 96 IAMs_20 IAMs_20 22 45 16.3
comp=Z,3µm,18.0s
Q48A North Vernon 37.66 264 P **P** **22 29 33.9 +2.9**
baz=44
Y59A Loris 37.66 252 IAMs_20 IAMs_20 22 43 52.8
comp=Z,4µm,21.0s
W56A Indian Trail 37.68 255 P **P** **22 29 33.8 +2.6**
baz=40
L42A Oliver, Polo 37.69 271 IAMs_20 IAMs_20 22 44 02.3
comp=Z,2µm,18.0s
CEL Celeste 37.76 97 IAMs_20 IAMs_20 22 44 39.5
comp=Z,2µm,20.0s
TIR Tirane 37.77 90 IAMs_20 IAMs_20 22 46 08.5
comp=Z,4µm,19.0s
R49A Shelbyville 37.81 263 IAMs_20 IAMs_20 22 43 56.7
comp=Z,5µm,19.0s
R49A Shelbyville 37.81 263 P **P** **22 29 35.7 +3.4**
baz=44
U53A Fall Branch 37.82 258 P **P** **22 29 34.5 +2.0**
baz=42
S50A Richmond 37.84 261 P **P** **22 29 34.6 +2.0**
baz=43
SCTE Santa Cesarea 37.88 93 IAMs_20 IAMs_20 22 45 18.8
comp=Z,4µm,20.0s
V54A Nebo 37.92 257 P **P** **22 29 35.8 +2.5**
baz=41
BIRD Birdtown, Kers 37.99 254 IAMs_20 IAMs_20 22 44 26.5
comp=Z,2µm,18.0s
T51A Gray 38.11 260 P P 22 29 39.2 +4.3
baz=42
Y58A Scranton 38.14 253 IAMs_20 IAMs_20 22 44 41.5
comp=Z,4µm,20.0s
Y58A Scranton 38.14 253 P **P** **22 29 38.2 +3.1**
baz=39
OBN Obninsk 38.19 62 *i*P **P** **22 29 36.5 +1.2**
OBN *i* 22 29 43.3
OBN *i* 22 31 01.2
OBN *i* 22 31 53.9
OBN pmax pmax
comp=Z,7.0nm,0.9s
OBN MLR MLR
comp=Z,743nm,14.0s
OBN Obninsk 38.19 62 P **P** **22 29 35.6 +0.3**
comp=Z,1.5nm,0.4s,baz=298,slow=5.3,SNR=1.9
OBN Obninsk 38.19 62 P **P** **22 29 33.2 -2.1**
OBN IAMs_20 IAMs_20 22 44 01.3
comp=Z,2µm,21.0s
TZTN Tazewell 38.21 259 P **P** **22 29 37.8 +2.0**
baz=42
S49A Springfield 38.24 262 P **P** **22 29 38.4 +2.5**
baz=43
YKA Yellowknife Ar 38.36 313 P **P** **22 29 37.5 +0.9**
comp=Z,3.3nm,0.9s,baz=59,slow=8.2,SNR=15
YKA PcP **PcP** **22 31 50.2 +0.3**
comp=Z,2.9nm,0.8s,baz=56,slow=3.2,SNR=14
YKA ScP **ScP** **22 35 38.6 +1.6**
comp=Z,0.9nm,0.9s,baz=36,slow=5.4,SNR=3.6
YKA LR LR 22 43 57.2
comp=Z,2µm,21.7s,baz=0.0,slow=34
D32A Dogwood Acres, 38.37 283 IAMs_20 IAMs_20 22 43 50.1
comp=Z,4µm,20.0s
X56A White Oak 38.41 255 P **P** **22 29 38.2 +0.8**
baz=40
Y57A Sumter 38.44 253 IAMs_20 IAMs_20 22 44 49.3
comp=Z,3µm,18.0s
V53A Saluda 38.47 258 P **P** **22 29 39.5 +1.6**
baz=41
WCI Wyandotte Cave 38.47 264 P **P** **22 29 37.5 -0.4**
WCI pmax pmax
comp=Z,28nm,1.2s
WCI MLR MLR
comp=Z,5µm,19.0s
WCI Wyandotte Cave 38.47 264 P **P** **22 29 39.4 +1.5**
baz=44
T50A Nancy 38.56 261 P **P** **22 29 40.6 +2.0**
baz=42
W54A Cherokee Point 38.57 256 P **P** **22 29 39.5 +0.7**
baz=40
U51A La Follette 38.58 259 P **P** **22 29 40.9 +2.0**
baz=42
Z58A St. Stephen 38.66 252 P **P** **22 29 40.4 +0.9**
baz=38
X55A Gracelyn & Ava 38.74 255 P P 22 29 44.2 +4.0
baz=40
V52A Sevierville 38.76 258 IAMs_20 IAMs_20 22 44 18.7
comp=Z,4µm,21.0s
T49A Edmonton 38.87 262 P **P** **22 29 43.3 +2.0**
baz=43
KIS Kishinev 38.96 77 *e*P **P** **22 29 41.0 -0.9**
KIS *e*LR LR 22 41 00.0
comp=Z,2µm,19.0s
KIS Kishinev 38.96 77 *e*P **P** **22 29 41.0 -0.9**
KIS *i* 22 31 20.0
FNA Florina 38.99 90 IAMs_20 IAMs_20 22 46 28.9
comp=Z,4µm,21.0s
TKL Tuckaleechee C 38.99 258 IAMs_20 IAMs_20 22 44 35.9
comp=Z,4µm,20.0s
NHSC New Hope 39.03 252 IAMs_20 IAMs_20 22 45 27.0
comp=Z,5µm,18.0s
NHSC New Hope 39.03 252 P **P** **22 29 44.8 +2.2**
baz=38
BG3 Lake Jocassee 39.04 257 IAMs_20 IAMs_20 22 44 45.2
comp=Z,3µm,18.0s
X54A Belton 39.08 256 P **P** **22 29 44.7 +1.7**
baz=40
V51A Loudon 39.19 259 P **P** **22 29 46.5 +2.5**
baz=42
N41A Harden Midland 39.23 270 IAmb IAmb 22 29 56.1
comp=Z,61nm,1.1s
N41A IAMs_20 IAMs_20 22 44 59.0
comp=Z,3µm,18.0s
Y55A Saluda 39.27 255 P **P** **22 29 48.1 +3.5**
baz=40
MDND Maddock 39.31 285 IAMs_20 IAMs_20 22 44 18.0
comp=Z,3µm,22.0s
U49A Red Boiling Sp 39.44 261 P **P** **22 29 48.5 +2.5**
baz=42
Z56A Williston 39.48 254 IAMs_20 IAMs_20 22 45 31.1
comp=Z,2µm,20.0s
W52A Murphy 39.50 258 IAMs_20 IAMs_20 22 45 00.3
comp=Z,4µm,18.0s
X53A Estanollee 39.61 257 P **P** **22 29 49.1 +1.6**
baz=40
V50A Pikevile 39.70 260 P **P** **22 29 50.6 +2.5**
baz=42
SCIA State Center 39.70 274 P **P** **22 29 49.5 +1.3**
baz=47
Y54A Tignall 39.77 256 P **P** **22 29 51.4 +2.6**
baz=40
157A Early Branch 39.79 253 P **P** **22 29 52.1 +3.1**
baz=38
T47A Sharon Grove 39.81 263 IAMs_20 IAMs_20 22 44 52.6
comp=Z,4µm,20.0s
X52A Dahlonega 39.85 258 P **P** **22 29 51.5 +2.1**
baz=40
W51A Cleveland 39.90 259 P **P** **22 29 51.9 +2.1**
baz=41
CLTN Cedars of Leba 40.05 261 IAMs_20 IAMs_20 22 45 18.0
comp=Z,3µm,20.0s
V49A McMinnville 40.06 261 P **P** **22 29 53.7 +2.5**
baz=42
LIT Litokhoron 40.07 90 IAMs_20 IAMs_20 22 45 47.5
comp=Z,3µm,22.0s
Y53A Monroe 40.25 256 P **P** **22 29 54.5 +1.7**
baz=40,SNR=5.7
Z54A Sparta 40.33 255 P **P** **22 29 53.8 +0.3**
baz=39
ECSD EROS Data Cent 40.33 278 IAmb IAmb 22 30 05.6
comp=Z,48nm,1.3s
ECSD EROS Data Cent 40.33 278 IAMs_20 IAMs_20 22 45 16.2
comp=Z,4µm,19.0s
ECSD EROS Data Cent 40.33 278 P **P** **22 29 54.7 +1.3**
baz=48,SNR=12
X51A Calhoun 40.40 258 IAMs_20 IAMs_20 22 45 39.1
comp=Z,4µm,19.0s
X51A Calhoun 40.40 258 P **P** **22 29 55.1 +1.2**
baz=41
S44A Carbondale 40.48 266 IAmb IAmb 22 30 01.4
comp=Z,45nm,0.8s
Y52A Lilburn 40.50 257 IAMs_20 IAMs_20 22 45 31.0
comp=Z,4µm,18.0s
Y52A Lilburn 40.50 257 P **P** **22 29 56.0 +1.2**
baz=40
GOGA Godfrey 40.53 256 IAMs_20 IAMs_20 22 45 30.7
comp=Z,2µm,19.0s
GOGA Godfrey 40.53 256 P **P** **22 29 56.0 +0.9**
baz=39,SNR=5.6
155A Kite 40.61 254 P **P** **22 29 55.2 -0.5**
baz=39
Z53A Monticello 40.69 256 P **P** **22 29 57.4 +1.0**
baz=39,SNR=5.8
W49A Belvidere 40.74 260 P **P** **22 29 57.5 +0.7**
baz=41
AGG Agios Georgios 40.74 91 IAMs_20 IAMs_20 22 49 24.3
comp=Z,2µm,18.0s
FPAL Fort Paine 40.82 259 IAMs_20 IAMs_20 22 45 34.4
comp=Z,3µm,20.0s
WVT Waverly 40.84 263 P **P** **22 29 56.3 -1.3**
WVT pmax pmax
comp=Z,26nm,1.1s
WVT MLR MLR
comp=Z,4µm,19.0s
WVT Waverly 40.84 263 P **P** **22 29 56.2 -1.3**
WVT Waverly 40.84 263 IAMs_20 IAMs_20 22 45 33.8
comp=Z,4µm,19.0s
WVT Waverly 40.84 263 P **P** **22 29 59.1 +1.5**
baz=42
154A Montrose 40.96 255 IAMs_20 IAMs_20 22 46 07.0
comp=Z,3µm,18.0s
Y51A Rockmart 41.01 258 P **P** **22 30 00.7 +1.6**
baz=40
255A Hazlehurst 41.16 253 IAMs_20 IAMs_20 22 46 33.4
comp=Z,3µm,19.0s
Z52A Williamson 41.21 257 P **P** **22 30 02.4 +1.7**
baz=40,SNR=5.9
CCM Cathedral Cave 41.31 268 P **P** **22 30 00.9 -0.6**
CCM pmax pmax
comp=Z,44nm,1.4s
CCM MLR MLR
comp=Z,6µm,20.0s
CCM Cathedral Cave 41.31 268 P **P** **22 30 00.8 -0.6**
CCM IAmb IAmb 22 30 12.9
comp=Z,44nm,1.4s
CCM Cathedral Cave 41.31 268 P **P** **22 30 02.9 +1.4**
baz=44
DGMT Dagmar 41.33 289 IAMs_20 IAMs_20 22 45 41.6
comp=Z,2µm,19.0s
DGMT Dagmar 41.33 289 P **P** **22 30 03.5 +2.0**
baz=51
Z51A Franklin 41.52 257 IAMs_20 IAMs_20 22 46 02.8
comp=Z,4µm,20.0s
254A Abbeville 41.57 254 P **P** **22 30 05.4 +1.7**
baz=38
VSR Storozhevoye 41.72 65 *e*P **P** **22 30 04.6 -0.1**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR MLR MLR
comp=Z,2µm,16.0s
152A Waverly Hall 41.77 256 IAMs_20 IAMs_20 22 46 18.6
comp=Z,3µm,18.0s
152A Waverly Hall 41.77 256 P **P** **22 30 07.4 +2.1**
baz=39
PBMO Poplar Bluff 41.78 266 IAmb IAmb 22 30 10.3
comp=Z,54nm,1.1s
PLAL Pickwick Lake 41.82 262 IAMs_20 IAMs_20 22 46 21.9
comp=Z,4µm,18.0s
ITM Ithomi 41.84 93 IAMs_20 IAMs_20 22 47 19.3
comp=Z,4µm,21.0s
456A Hilliard 41.87 252 IAMs_20 IAMs_20 22 47 13.2
comp=Z,4µm,18.0s
INK Inuvik 41.94 327 P **P** **22 30 06.7 +0.5**
comp=Z,3.9nm,0.9s,baz=43,slow=10.0,SNR=7.6
INK LR LR 22 47 14.1
comp=Z,1µm,18.8s,baz=50,slow=36
Z50A Ashland 41.97 258 P **P** **22 30 08.1 +1.1**
baz=40
KIRV Kirov 42.11 51 P **P** **22 30 08.3 +0.7**
comp=Z,14nm,0.8s,baz=311,slow=13,SNR=5.9
TIGA Tifton 42.13 254 IAMs_20 IAMs_20 22 46 55.0
comp=Z,3µm,19.0s
252A Lumpkin 42.30 256 P **P** **22 30 10.3 +0.7**
baz=39,SNR=5.2
LRAL Lakeview Retre 42.71 259 P **P** **22 30 14.6 +1.6**
baz=40
BGNE Belgrade 42.74 277 IAmb IAmb 22 30 24.1
comp=Z,56nm,1.0s
OXF Oxford 42.90 263 P **P** **22 30 15.0 +0.6**
baz=41,SNR=7.9
VRH Novokhopyorsk 43.00 64 *e*P **P** **22 30 16.4 +1.4**
VRH pmax pmax
comp=Z,10.0nm,0.9s
SIM Simferopol' 43.10 75 P P 22 30 25.7 +10
SIM *e*S S 22 36 51.0 +10
SIM pmax pmax
comp=Z,140nm,10.8s
SIM MLR MLR
comp=Z,1µm,15.0s
250A Grady 43.13 257 IAMs_20 IAMs_20 22 47 09.6
comp=Z,4µm,18.0s
656A Willston 43.21 251 IAMs_20 IAMs_20 22 48 29.8
comp=Z,3µm,18.0s
U40A Yellville 43.42 267 P **P** **22 30 20.0 +1.3**
baz=43,SNR=6.0
LAO LASA Array 43.52 288 IAmb IAmb 22 30 31.7
comp=Z,68nm,1.2s
LAO IAMs_20 IAMs_20 22 47 01.6
comp=Z,3µm,20.0s
LAO LASA Array 43.52 288 P **P** **22 30 21.0 +1.5**
baz=49,SNR=7.4
553A Crawfordville 43.55 254 IAMs_20 IAMs_20 22 47 59.9
comp=Z,4µm,19.0s
451A Vernon 43.92 256 IAMs_20 IAMs_20 22 49 37.4
comp=Z,2µm,20.0s
W41B Gary Mavity, V 43.96 266 P **P** **22 30 23.4 +0.4**
baz=42,SNR=5.4
060A Indiantown 43.99 247 IAMs_20 IAMs_20 22 47 14.4
comp=Z,2µm,20.0s
HHAR Hobbs 44.07 268 IAmb IAmb 22 30 28.7
comp=Z,77nm,1.6s
RSSD Black Hills 44.07 284 IAMs_20 IAMs_20 22 47 17.1
comp=Z,3µm,21.0s
EPYK Eagle Plains 44.11 326 IAmb IAmb 22 30 41.5
comp=Z,84nm,1.6s
EPYK IAMs_20 IAMs_20 22 48 49.5
comp=Z,2µm,18.0s
BRAL Brewton 44.18 257 IAMs_20 IAMs_20 22 47 53.4
comp=Z,3µm,18.0s
SANT Santorini 44.37 91 IAMs_20 IAMs_20 22 48 17.2
comp=Z,2µm,20.0s
EGMT Eagleton 44.47 292 IAmb IAmb 22 30 39.4
comp=Z,58nm,1.3s
EGMT IAMs_20 IAMs_20 22 47 47.8
comp=Z,4µm,19.0s
EGMT Eagleton 44.47 292 P **P** **22 30 28.3 +1.2**
baz=49,SNR=9.7
W39A Magazine 44.79 267 IAmb IAmb 22 30 41.0
comp=Z,51nm,1.1s
W39A Magazine 44.79 267 P **P** **22 30 30.7 +1.0**
baz=42,SNR=12
TAM Tamanrasset 44.79 122 P **P** **22 30 29.3 -0.6**
TAM pmax pmax
comp=Z,31nm,1.4s
TAM MLR MLR
comp=Z,2µm,19.0s
TAM Tamanrasset 44.79 122 P **P** **22 30 29.3 -0.6**
TAM IAmb IAmb 22 30 33.0
comp=Z,31nm,1.4s
TAM IAMs_20 IAMs_20 22 48 11.0
comp=Z,2µm,19.0s
X40A Basin Creek Fa 44.79 266 IAmb IAmb 22 30 34.3
comp=Z,33nm,1.1s
X40A Basin Creek Fa 44.79 266 P **P** **22 30 30.9 +1.2**
baz=41,SNR=6.2
ANN Anapa 44.96 73 *e*P P 22 30 25.1 -5.8
ANN *e**PP pP 22 30 29.1 -5.5
ANN *e* 22 32 10.1
ANN *e*S S 22 36 58.7 -10
ANN pmax pmax
comp=Z,32nm,1.1s
ANN MLR MLR
comp=N,1µm,18.0s
ANN MLR MLR
comp=Z,3µm,18.0s
ANN MLR MLR
comp=E,1µm,18.0s
MIAR Mount Ida 45.16 266 P **P** **22 30 34.4 +1.9**
baz=42,SNR=14
OGNE Ogallala 45.17 279 IAMs_20 IAMs_20 22 48 05.3
comp=Z,3µm,19.0s
061Z Ochoppi 45.23 247 IAMs_20 IAMs_20 22 47 38.2
comp=Z,2µm,20.0s
TUL1 Leonard 45.36 270 IAMs_20 IAMs_20 22 48 30.4
comp=Z,3µm,19.0s
TUL1 Leonard 45.36 270 P **P** **22 30 35.6 +1.4**
baz=42,SNR=6.1
CBKS Cedar Bluff 45.42 276 IAMs_20 IAMs_20 22 48 37.0
comp=Z,2µm,19.0s
CBKS Cedar Bluff 45.42 276 P **P** **22 30 37.3 +2.6**
baz=44
Z41A Richland Creek 45.70 264 P **P** **22 30 40.7 +3.8**
baz=41
KARP Karpathos 45.91 90 IAMs_20 IAMs_20 22 50 59.0
comp=Z,2µm,20.0s
SC01 Santiago de Io 45.98 231 IAMs_20 IAMs_20 22 45 17.6
comp=Z,2µm,22.0s
ISP Isparta 46.09 85 IAMs_20 IAMs_20 22 51 30.4
comp=Z,3µm,18.0s
RLMT Red Lodge 46.15 289 IAMs_20 IAMs_20 22 48 34.2
comp=Z,3µm,20.0s
RLMT Red Lodge 46.15 289 P **P** **22 30 41.8 +1.2**
baz=47,SNR=13
K22A Casper 46.40 284 IAMs_20 IAMs_20 22 48 52.7
comp=Z,3µm,20.0s
K22A Casper 46.40 284 P **P** **22 30 43.8 +1.3**
baz=46,SNR=7.8
BR131 Keskin Array S 46.44 81 P **P** **22 30 42.4 -0.4**
BR131 pmax pmax
comp=Z,11nm,0.9s
BR131 Keskin Array S 46.44 81 P **P** **22 30 42.4 -0.4**
BRTR Keskin Array B 46.44 81 *ce*P **P** **22 30 46.2 +3.4**
BRTR pmax pmax
comp=Z,8.0nm,0.8s
BRTR Keskin Array B 46.44 81 P **P** **22 30 42.8 0.0**
comp=Z,4.1nm,0.8s,baz=313,slow=4.9,SNR=14
BRTR PcP **PcP** **22 32 17.6 +0.3**
comp=Z,3.9nm,1.0s,baz=283,slow=0.9,SNR=4.2
BRTR LR LR 22 52 39.3
comp=Z,416nm,18.5s,baz=306,slow=39
BRTR Keskin Array B 46.44 81 P **P** **22 30 43.0 +0.2**
BRTR PcP **PcP** **22 32 16.9 -0.5**
EGAK Eagle 46.55 326 IAMs_20 IAMs_20 22 50 33.0
comp=Z,2µm,18.0s
PHWY Pilot Hill 46.77 282 IAMs_20 IAMs_20 22 49 03.4
comp=Z,3µm,20.0s
KSCO Kaye Shedlock' 46.86 278 P **P** **22 30 46.8 +0.6**
baz=44
342A Flagon Creek P 46.87 262 IAMs_20 IAMs_20 22 49 32.6
comp=Z,3µm,19.0s
DLBC Dease Lake 46.91 314 IAMs_20 IAMs_20 22 49 32.6
comp=Z,3µm,19.0s
JTMT Jette 46.94 295 IAmb IAmb 22 31 05.4
comp=Z,24nm,1.3s
JTMT IAMs_20 IAMs_20 22 49 08.1
comp=Z,2µm,20.0s
SOC Sochi 46.99 73 *e*P **P** **22 30 47.3 +0.4**
SOC *e* 22 32 38.3
SOC *e*PPP PPP 22 33 29.4
SOC *e*S **S** **22 37 40.0 +2.4**
SOC *e*SSS SSS 22 42 11.8
SOC pmax pmax
comp=Z,35nm,1.1s
SOC MLR MLR
comp=Z,1µm,17.0s
WHY Whitehorse 47.25 319 P **P** **22 30 46.6 -2.3**
WHY IAmb IAmb 22 31 07.3
comp=Z,42nm,1.6s
ARU Arti 47.31 49 *d*iP **P** **22 30 49.3 +0.1**
ARU 22 32 38.1
ARU S **S** **22 37 42.4 +0.5**
ARU SS **SS** **22 41 09.7 +1.1**
ARU pmax pmax
comp=Z,50nm,1.2s
ARU Arti 47.31 49 P **P** **22 30 48.6 -0.6**
N23A Red Feather La 47.32 282 IAMs_20 IAMs_20 22 49 20.9
comp=Z,3µm,21.0s
N23A Red Feather La 47.32 282 P **P** **22 30 53.0 +3.1**
baz=45

H17A	Grant Village	47.33	289	P		P		22 30 52.7	+2.8
	baz=46,SNR=7.1								
PRP	Porcupine Dome	47.34	328	IAmb		IAmb		22 31 07.0	
	comp=Z,17nm,1.1s								
MSO	Missoula	47.39	294	P		P		22 30 51.4	+1.3
	baz=47								
RWWY	Rawlins	47.44	284	IAms_20		IAms_20		22 49 26.1	
	comp=Z,3µm,21.0s								
X34A	Smith Ranch, M	47.45	270	IAms_20		IAms_20		22 49 54.8	
	comp=Z,2µm,19.0s								
FLWY	Flagg Ranch	47.61	289	IAms_20		IAms_20		22 49 31.7	
	comp=Z,2µm,20.0s								
GOF	Gofitskoye	47.70	69	eP		P		22 30 55.0	+2.5
GOF				pmax		pmax			
	comp=Z,28nm,0.9s								
441A	DeRidder	47.83	263	IAms_20		IAms_20		22 49 52.8	
	comp=Z,3µm,21.0s								
IMW	Indian Meadow	47.86	289	IAms_20		IAms_20		22 49 41.5	
	comp=Z,2µm,19.0s								
MOOW	Moose Ponds	47.86	288	IAms_20		IAms_20		22 49 40.5	
	comp=Z,2µm,18.0s								
WMOK	Wichita Mounta	47.87	271	IAms_20		IAms_20		22 50 19.8	
	comp=Z,2µm,18.0s								
WMOK	Wichita Mounta	47.87	271	P		P		22 30 55.2	+1.3
	baz=42,SNR=15								
SVE	Sverdlovsk	47.89	48	eP		P		22 30 53.5	-0.2
SVE				pmax		pmax			
	comp=Z,29nm,1.1s								
ISCO	Idaho Springs	47.92	281	IAms_20		IAms_20		22 50 07.9	
	comp=Z,3µm,18.0s								
PD31	Pinedale Array	47.93	287	IAmb		IAmb		22 31 05.5	
	comp=Z,32nm,1.6s								
PDAR	Pinedale Array	47.93	287	P		P		22 30 54.5	0.0
	comp=Z,3.1nm,0.8s,baz=64,slow=7.0,SNR=18								
PDAR				LR		LR		22 50 03.8	
	comp=Z,3µm,19.7s,baz=36,slow=35								
BW06	Boulder Array	47.93	287	IAmb		IAmb		22 31 05.5	
	comp=Z,38nm,1.7s								
BW06				IAms_20		IAms_20		22 49 53.1	
	comp=Z,3µm,19.0s								
BW06	Boulder Array	47.93	287	P		P		22 30 55.3	+0.8
	baz=46								
NEW	Newport	47.99	297	IAmb		IAmb		22 31 10.8	
	comp=Z,45nm,1.7s								
NEW	Newport	47.99	297	P		P		22 30 56.1	+1.4
	baz=47								
SNOW	Snow King Moun	48.07	288	IAms_20		IAms_20		22 49 38.9	
	comp=Z,3µm,20.0s								
TPAW	Teton Pass	48.15	288	IAms_20		IAms_20		22 49 50.1	
	comp=Z,2µm,20.0s								
POKR	Poker Plat Res	48.18	328	P		P		22 30 57.1	+1.2
	baz=43,SNR=11								
REDW	Red Top Meadow	48.19	288	IAms_20		IAms_20		22 49 52.1	
	comp=Z,3µm,20.0s								
Q24A	Divide	48.26	280	IAms_20		IAms_20		22 50 04.1	
	comp=Z,3µm,19.0s								
IL31		48.28	328	IAmb		IAmb		22 31 14.8	
	comp=Z,30nm,1.1s								
ILAR	Eielson Array	48.28	328	P		P		22 30 58.4	+1.8
	comp=Z,8.4nm,0.9s,baz=36,slow=5.8,SNR=33								
ILAR				PcP		PcP		22 32 24.2	+0.9
	comp=Z,3.9nm,0.8s,baz=7.5,slow=2.7,SNR=5.4								
ILAR				LR		LR		22 51 41.5	
	comp=Z,989nm,18.0s,baz=60,slow=36								
ILAR	Eielson Array	48.28	328	P		P		22 30 58.2	+1.5
KIV	Kislovodsk	48.28	71	eP		P		22 30 57.4	+0.3
KIV				pmax		pmax			
	comp=Z,26nm,1.0s								
KIV				MLR		MLR			
	comp=Z,3µm,16.0s								
MDM	Murphy Dome	48.53	329	IAmb		IAmb		22 31 16.1	
	comp=Z,21nm,1.0s								
KBZ	Khabaz	48.55	71	P		P		22 31 00.7	+1.7
	comp=Z,5.3nm,0.9s,baz=315,slow=11,SNR=6.5								
KBZ				LR		LR		22 52 26.0	
	comp=Z,897nm,18.9s,slow=37								
HDA	Harding Lake	48.56	328	IAms_20		IAms_20		22 51 36.3	
	comp=Z,1µm,18.0s								
HDA	Harding Lake	48.56	328	P		P		22 31 01.0	+2.2
	baz=43								
CCB	Clear Creek Bu	48.64	328	IAmb		IAmb		22 31 17.1	
	comp=Z,50nm,1.7s								
AHID	Auburn Hatcher	48.74	288	IAms_20		IAms_20		22 50 20.6	
	comp=Z,3µm,19.0s								
WRH	Wood River Hil	48.85	328	IAmb		IAmb		22 31 20.8	
	comp=Z,16nm,1.0s								
B08A	Colville Reser	49.00	298	IAmb		IAmb		22 31 14.1	
	comp=Z,63nm,1.8s								
B08A				IAms_20		IAms_20		22 50 44.8	
	comp=Z,3µm,19.0s								
O20A	White River Ci	49.09	283	IAms_20		IAms_20		22 50 06.8	
	comp=Z,3µm,22.0s								
SMCO	Snowmass	49.10	281	IAmb		IAmb		22 31 16.4	
	comp=Z,19nm,1.1s								
MLY	Manley	49.18	330	IAmb		IAmb		22 31 21.6	
	comp=Z,36nm,1.5s								
PAX	Paxson	49.18	326	IAmb		IAmb		22 31 29.5	
	comp=Z,44nm,1.5s								
T25A	Trinidad	49.19	278	P		P		22 31 06.1	+1.9
	baz=43								
WHTX	Lake Whitney,	49.21	267	P		P		22 31 08.0	+3.8
	baz=40								
IMAR	Indian Mountai	49.25	332	P		P		22 31 04.9	+0.8
CTGM	Chitina Glacie	49.30	322	IAms_20		IAms_20		22 51 34.9	
	comp=Z,2µm,20.0s								
SDCO	Great Sand Dun	49.34	279	IAmb		IAmb		22 31 17.8	
	comp=Z,26nm,1.4s								
SDCO	Great Sand Dun	49.34	279	P		P		22 31 06.8	+1.3
	baz=43								
AMTX	Amarillo	49.35	273	IAms_20		IAms_20		22 51 21.1	
	comp=Z,2µm,18.0s								
AMTX	Amarillo	49.35	273	P		P		22 31 07.6	+2.1
	baz=42								
MCARA	McCarthy VSAT	49.56	323	IAms_20		IAms_20		22 51 43.7	
	comp=Z,2µm,20.0s								
BALM	Baldy	49.59	323	IAms_20		IAms_20		22 51 53.5	
	comp=Z,2µm,18.0s								
F10A	Beach Ranch, E	49.62	295	IAms_20		IAms_20		22 50 45.2	
	comp=Z,2µm,20.0s								
DHY	Denali Highway	49.69	327	IAmb		IAmb		22 31 23.5	
	comp=Z,68nm,1.8s								
DHY				IAms_20		IAms_20		22 52 34.9	
	comp=Z,1µm,18.0s								
E09A	Wood Farm, Sta	49.70	296	IAms_20		IAms_20		22 50 55.3	
	comp=Z,3µm,18.0s								
RDOG	Red Dog Mine	49.75	337	IAmb		IAmb		22 31 23.4	
	comp=Z,55nm,1.6s								
GLB	Gilahina Butte	49.78	324	IAms_20		IAms_20		22 51 05.4	
	comp=Z,2µm,22.0s								
HWUT	Hardware Ranch	49.80	287	IAms_20		IAms_20		22 50 54.7	
	comp=Z,3µm,21.0s								
VRDI	Verde Repeater	49.82	323	IAms_20		IAms_20		22 51 41.5	
	comp=Z,2µm,21.0s								
RND	Reindeer	49.88	328	IAmb		IAmb		22 31 26.0	
	comp=Z,25nm,1.0s								
HKT	Hockley	49.89	264	P		P		22 31 08.8	-0.5
HKT				pmax		pmax			
	comp=Z,58nm,1.6s								
HKT				MLR		MLR			
	comp=Z,4µm,19.0s								
HKT	Hockley	49.89	264	P		P		22 31 08.8	-0.5
HKT				IAmb		IAmb		22 31 20.0	
	comp=Z,58nm,1.6s								
B06A	Marblemount	49.93	300	IAms_20		IAms_20		22 51 16.2	
	comp=Z,3µm,20.0s								
ABTX	Abilene, Hawle	49.93	270	P		P		22 31 11.1	+1.4
	baz=40								
TGL	Tana Glacier	49.96	322	IAms_20		IAms_20		22 52 16.2	
	comp=Z,2µm,19.0s								
BPAW	Bear Paw Mtn.	49.96	329	IAmb		IAmb		22 31 22.3	
	comp=Z,47nm,1.5s								
S22A	4UR Ranch, Cre	50.05	280	IAmb		IAmb		22 31 30.4	
	comp=Z,46nm,1.7s								
S22A				IAms_20		IAms_20		22 51 05.5	
	comp=Z,2µm,20.0s								
S22A	4UR Ranch, Cre	50.05	280	P		P		22 31 12.7	+1.8
	baz=43								
CRQM	Cirque	50.06	323	IAms_20		IAms_20		22 51 59.6	
	comp=Z,2µm,19.0s								
GAZ	Gaziantep	50.22	81	P		P		22 31 10.0	-1.9
MSTX	Muleshoe	50.63	274	IAmb		IAmb		22 31 26.9	
	comp=Z,55nm,1.2s								
MSTX				IAms_20		IAms_20		22 52 20.0	
	comp=Z,2µm,18.0s								
MSTX	Muleshoe	50.63	274	P		P		22 31 16.3	+1.1
	baz=41,SNR=10								
MFID	Camas Ranch	50.72	292	IAms_20		IAms_20		22 51 41.2	
	comp=Z,2µm,18.0s								
RAGM	Ragged Mountai	50.85	323	IAms_20		IAms_20		22 52 26.7	
	comp=Z,3µm,18.0s								
G08A	Pilot Rock	50.97	295	IAms_20		IAms_20		22 51 37.8	
	comp=Z,3µm,19.0s								
FID	Port Fidalgo	51.16	324	IAms_20		IAms_20		22 53 07.4	
	comp=Z,2µm,19.0s								
AKTO	Aktyubinsk	51.21	55	P		P		22 31 19.4	+0.3
	comp=Z,12nm,0.8s,baz=310,slow=11,SNR=13								
TIXI	Tiksi	51.27	7	eP		P		22 31 21.7	+2.5
TIXI				pmax		pmax			
	comp=Z,40nm,2.5s								
PMR	Palmer	51.35	326	P		P		22 31 20.8	+0.8
PMR				pmax		pmax			
	comp=Z,83nm,1.7s								
PMR	Palmer	51.35	326	P		P		22 31 20.8	+0.8
MVCO	Mesa Verde	51.35	281	IAmb		IAmb		22 31 35.8	
	comp=Z,59nm,1.4s								
MVCO				IAms_20		IAms_20		22 51 57.8	
	comp=Z,3µm,19.0s								
MVCO	Mesa Verde	51.35	281	P		P		22 31 22.5	+1.8
	baz=42								
MAK	Makhachkala	51.47	68	eP		P		22 31 16.6	-4.5
MAK				eS		S		22 38 33.2	-7.2
MAK				MLR		MLR			
	comp=Z,850nm,15.0s								
DUG	Dugway, Tooele	51.47	287	IAms_20		IAms_20		22 52 09.0	
	comp=Z,2µm,19.0s								
TOA1	Torodi Ar. Sit	51.65	133	IAms_20		IAms_20		22 52 56.6	
	comp=Z,2µm,19.0s								
JCT	Junction City	51.65	268	IAmb		IAmb		22 31 27.3	
	comp=Z,40nm,1.1s								
JCT	Junction City	51.65	268	P		P		22 31 23.7	+0.9
	baz=39,SNR=6.7								
TOA0	Torodi Ar. Sit	51.66	133	P		P		22 31 20.2	-2.6
TOA0				IAmb		IAmb		22 31 23.8	
	comp=Z,37nm,1.1s								
TORD	Torodi Ar. Bea	51.66	133	P		P		22 31 20.1	-2.7
	comp=Z,24nm,1.1s,baz=335,slow=6.9,SNR=21								
TORD				PcP		PcP		22 32 36.3	0.0
	comp=Z,1.4nm,0.9s,baz=328,slow=5.1,SNR=1.8								
TORD				LR		LR		22 50 58.4	
	comp=Z,961nm,21.1s,baz=345,slow=34								
TORD	Torodi Ar. Bea	51.66	133	P		P		22 31 19.8	-3.0
ANMO	Albuquerque	51.92	277	P		P		22 31 27.5	+2.6
ANMO				MLR		MLR			
	comp=Z,3µm,19.0s								
ANMO	Albuquerque	51.92	277	P		P		22 31 27.5	+2.6
ANMO				IAmb		IAmb		22 31 37.7	
	comp=Z,56nm,1.9s								
ANMO	Albuquerque	51.92	277	P		P		22 31 27.8	+2.9
	baz=41								
GNI	Garni	52.07	73	P		P		22 31 26.4	+0.5
GNI				pmax		pmax			
	comp=Z,23nm,1.1s								
GNI				MLR		MLR			
	comp=Z,800nm,20.0s								
GNI	Garni	52.07	73	P		P		22 31 26.4	+0.5
GNI				IAmb		IAmb		22 31 31.8	
	comp=Z,23nm,1.1s								
I07A	Izee	52.10	295	IAms_20		IAms_20		22 52 33.8	
	comp=Z,2µm,18.0s								
J08A	Circle Bar Ran	52.11	293	IAmb		IAmb		22 31 37.4	
	comp=Z,35nm,1.3s								
ELK	Elko	52.34	289	IAms_20		IAms_20		22 52 26.0	
	comp=Z,2µm,20.0s								
Y22D	IRIS PASSCAL I	52.83	277	IAms_20		IAms_20		22 53 02.9	
	comp=Z,3µm,18.0s								
WVOR	Wild Horse Val	52.86	293	IAmb		IAmb		22 31 43.7	
	comp=Z,46nm,1.4s								
ABKAR	Akbulak array	52.92	55	IAmb		IAmb		22 31 36.3	
	comp=Z,27nm,1.2s								
H04A	Detroit Lake	53.00	297	IAms_20		IAms_20		22 52 17.4	
	comp=Z,3µm,21.0s								
833A	Chaparral WMA,	53.10	266	P		P		22 31 35.5	+2.0
	baz=38								
ANM	Nome	53.23	336	IAmb		IAmb		22 31 49.6	
	comp=Z,48nm,1.7s								
J05D	Fort Rock, OR	53.55	295	P		P		22 31 37.8	+1.1
	baz=43,SNR=8.6								
TEIG	Tepich	53.66	250	IAms_20		IAms_20		22 52 45.6	
	comp=Z,1µm,22.0s								
ASF	Jabal al Asfar	53.78	85	P		P		22 31 39.5	+1.0
	comp=Z,6.2nm,1.0s,baz=45,slow=4.8,SNR=3.8								
MNTX	Cornudas Mount	53.78	274	IAmb		IAmb		22 31 49.8	
	comp=Z,38nm,1.5s								
MNTX				IAms_20		IAms_20		22 54 02.4	
	comp=Z,2µm,19.0s								
MNTX	Cornudas Mount	53.78	274	P		P		22 31 39.6	+1.1
	baz=40,SNR=7.8								
U15A	North Rim	53.97	283	IAms_20		IAms_20		22 53 37.0	
	comp=Z,2µm,20.0s								
MOD	Modoc Plateau	54.09	293	IAmb		IAmb		22 31 46.3	
	comp=Z,19nm,1.1s								
MOD				IAms_20		IAms_20		22 53 56.4	
	comp=Z,2µm,19.0s								
WUAZ	Wupatki	54.16	282	IAmb		IAmb		22 31 53.5	
	comp=Z,37nm,1.4s								
WUAZ				IAms_20		IAms_20		22 53 34.9	
	comp=Z,2µm,19.0s								
WUAZ	Wupatki	54.16	282	P		P		22 31 43.7	+2.4
	baz=41								
R11A	Troy Canyon, C	54.29	287	IAmb		IAmb		22 31 53.9	
	comp=Z,30nm,1.8s								
R11A				IAms_20		IAms_20		22 54 13.4	
	comp=Z,1µm,18.0s								
R11A	Troy Canyon, C	54.29	287	P		P		22 31 43.4	+1.2
	baz=42,SNR=7.5								
121A	Cookes Peak, D	54.46	276	IAmb		IAmb		22 31 55.9	
	comp=Z,24nm,1.1s								
121A	Cookes Peak, D	54.46	276	P		P		22 31 45.7	+2.1
	baz=40,SNR=7.6								
BRVK	Borovoye	54.47	46	P		P		22 31 42.2	-0.9
BRVK				pmax		pmax			
	comp=Z,29nm,1.2s								
BRVK				MLR		MLR			
	comp=Z,1µm,21.0s								
BRVK	Borovoye	54.47	46	P		P		22 31 42.2	-0.9
BRVK				IAmb		IAmb		22 31 47.7	
	comp=Z,29nm,1.1s								
BILL	Bilibino	54.48	351	i	P	P		22 31 44.0	+1.0
BILL				e				22 32 46.6	
BILL				i				22 33 51.0	
BILL				pmax		pmax			
	comp=Z,8.0nm,1.2s								
BILL				MLR		MLR			
	comp=Z,895nm,20.0s								
BILL	Bilibino	54.48	351	P		P		22 31 42.0	-1.0
EIL	Elat	54.63	89	P		P		22 31 44.9	+0.3
	comp=Z,11nm,1.1s,baz=293,slow=7.7,SNR=4.4								
TXAR	Lajitas Array	54.66	271	P		P		22 31 44.9	-0.1
	comp=Z,9.1nm,1.2s,baz=46,slow=5.4,SNR=14								
TXAR				LR		LR		22 54 44.6	
	comp=Z,1µm,18.8s,baz=0.0,slow=36								
L04D	Klamath Falls	54.87	295	P		P		22 31 47.7	+1.3
	baz=42								
M04C	Macdoel	54.95	294	P		P		22 31 48.3	+1.3
	baz=42								
KVN	Kaiserville	55.08	289	IAmb		IAmb		22 31 59.8	
	comp=Z,22nm,1.0s								
KVN				IAms_20		IAms_20		22 54 32.5	
	comp=Z,3µm,18.0s								
K02D	Willamette Mer	55.19	296	P		P		22 31 50.0	+1.3
	baz=42								
TIC	Toumodi	55.19	143	eP		P		22 31 46.0	-2.8
DBIC	Dimbokro	55.22	143	P		P		22 31 46.9	-2.1
DBIC				pmax		pmax			
	comp=Z,19nm,1.0s								
DBIC	Dimbokro	55.22	143	P		P		22 31 46.4	-2.6
	comp=Z,11nm,0.8s,baz=327,slow=7.4,SNR=9.1								
DBIC				LR		LR		22 52 07.5	
	comp=Z,1µm,20.9s,baz=341,slow=33								
DBIC	Dimbokro	55.22	143	P		P		22 31 46.9	-2.1
DBIC				IAmb		IAmb		22 31 49.9	
	comp=Z,19nm,0.9s								
SDV	Santo Domingo	55.45	225	P		P		22 31 49.4	-1.5
	comp=Z,1.2nm,0.3s,baz=18,slow=6.4,SNR=2.8								
SDV	Santo Domingo	55.45	225	eP		P		22 31 53.3	+2.4
SDV	Santo Domingo	55.45	225	P		P		22 31 48.2	-2.7
SDV				IAmb		IAmb		22 32 10.3	
	comp=Z,14nm,1.1s								
KIC	Kosan Boka	55.55	143	eP		P		22 31 48.7	-2.7
	comp=Z,81nm,1.4s								
L02E	Cave Junction	55.55	296	P		P		22 31 53.5	+2.4
	baz=42								
NV11	Mina Array Sit	55.57	289	IAms_20		IAms_20		22 54 29.4	
	comp=Z,2µm,20.0s								
LIC	Lamto	55.58	144	eP		P		22 31 48.9	-2.7
	comp=Z,57nm,0.8s								
RYN	Ryan	55.61	289	IAms_20		IAms_20		22 54 40.6	
	comp=Z,2µm,20.0s								
BEKR	Beckworth	55.63	292	IAms_20		IAms_20		22 55 14.1	
	comp=Z,2µm,18.0s								
NVAR	Mina Array Bea	55.65	289	P		P		22 31 51.0	-1.1
	comp=Z,0.7nm,0.7s,baz=52,slow=8.1,SNR=4.9								
NVAR				LR		LR		22 54 41.3	
	comp=Z,2µm,20.3s,baz=34,slow=35								
TPNV	Topopah Spring	55.68	286	IAms_20		IAms_20		22 54 45.4	
	comp=Z,1µm,19.0s								
TPNV	Topopah Spring	55.68	286	P		P		22 31 53.6	+1.2
	baz=41,SNR=6.5								
YERR	Yerington	55.72	290	IAms_20		IAms_20		22 54 33.3	
	comp=Z,2µm,20.0s								
W13A	Hualapai Mount	55.82	283	IAms_20		IAms_20		22 54 44.8	
	comp=Z,2µm,20.0s								
N02D	Trinity Center	55.99	294	P		P		22 31 55.4	+0.9
	baz=41								
O03E	Paynes Creek	56.05	293	P		P		22 31 57.1	+2.3
	baz=41								
RUBR	Rubicon Trail	56.14	291	IAms_20		IAms_20		22 55 05.5	
	comp=Z,2µm,18.0s								
319A	Douglas	56.16	277	IAms_20		IAms_20		22 55 11.1	
	comp=Z,1µm,18.0s								
WAKR	Walker	56.18	290	IAms_20		IAms_20		22 55 17.6	
	comp=Z,2µm,18.0s								
Y14A	Wickenburg	56.23	282	IAms_20		IAms_20		22 54 59.9	
	comp=Z,2µm,20.0s								
GRAC	Grapevine Rang	56.23	287	P		P		22 31 59.1	+2.9
	baz=41								
TUC	Tucson	56.27	279	P		P		22 31 56.8	+0.3
TUC				pmax		pmax			
	comp=Z,15nm,1.2s								
TUC				MLR		MLR			
	comp=Z,3µm,20.0s								
TUC	Tucson	56.27	279	P		P		22 31 56.8	+0.3
TUC	Tucson	56.27	279	P		P		22 31 58.2	+1.7
	baz=40								
FURC	Furnace Creek,	56.37	286	P		P		22 31 58.2	+1.2
	baz=41								
O02D	Mt. Diablo Mer	56.63	294	P		P		22 32 00.4	+1.4
	baz=41								
AFDM	Forest Hills D	56.63	291	IAms_20		IAms_20		22 55 38.6	
	comp=Z,2µm,18.0s								
MDPB	Devils Postpil	56.65	289	IAms_20		IAms_20		22 55 17.0	
	comp=Z,2µm,20.0s								
TUQ	Turquoise Moun	56.65	285	P		P		22 32 01.7	+2.4
	baz=40								
MPMC	Manual Prospec	57.01	287	P		P		22 32 03.6	+1.8
	baz=40,SNR=7.6								
CMB	Columbia Colle	57.02	290	IAms_20		IAms_20		22 55 44.9	
	comp=Z,2µm,18.0s								
CWC	Cottonwood Cre	57.03	287	P		P		22 32 04.3	+2.3
	baz=40								
Y12C	Blythe	57.19	283	IAms_20		IAms_20		22 55 38.2	
	comp=Z,3µm,19.0s								
GSC	Goldstone, Bar	57.22	285	IAms_20		IAms_20		22 55 36.1	
	comp=Z,2µm,20.0s								
LRMC	Laurel Mtn Rad	57.55	286	P		P		22 32 07.3	+1.6
	baz=40,SNR=6.2								
HPIG		57.63	270	IAms_20		IAms_20		22 56 07.3	
	comp=Z,1µm,20.0s								
214A	Organ Pipe Nat	57.64	280	IAmb		IAmb		22 32 18.6	
	comp=Z,40nm,1.6s								
214A				PP		PP		22 34 14.5	+0.8
214A				IAms_20		IAms_20		22 55 37.3	
	comp=Z,2µm,20.0s								
214A	Organ Pipe Nat	57.64	280	P		P		22 32 08.1	+1.9
	baz=39,SNR=7.1								
BC3	Big Chuckawall	57.76	283	P		P		22 32 08.2	+1.1
	baz=40								
BELC	Belle Mtn. Jos	57.78	284	P		P		22 32 09.3	+2.0
	baz=40								
ISA	Isabella, Lake	57.83	287	P		P		22 32 09.9	+2.5
	baz=40								
GLA	Glamis	57.88	282	IAms_20		IAms_20		22 56 08.6	
	comp=Z,2µm,19.0s								
GLA	Glamis	57.88	282	P		P		22 32 10.9	+3.0
	baz=40								
EDW2	Edwards Air Fo	58.17	286	P		P		22 32 11.4	+1.5
	baz=40,SNR=7.0								
XPFO	Pion Flat	58.33	284	IAms_20		IAms_20		22 55 56.4	
	comp=Z,2µm,22.0s								
PFO	Pinyon Flats O	58.33	284	IAms_20		IAms_20		22 55 56.4	
	comp=Z,2µm,22.0s								
PFO	Pinyon Flats O	58.33	284	P		P		22 32 12.5	+1.4
	baz=40,SNR=6.3								
TPFO	Pinon Flats	58.33	284	P		P		22 32 13.6	+2.5
	baz=40								
BFSC	Mount Baldy Ra	58.48	285	P		P		22 32 15.1	+2.9
	baz=40								
SWSC	Sam W. Stewart	58.49	283	P		P		22 32 14.7	+2.7
	baz=39								
PAGB	Antelope Grade	58.70	288	IAms_20		IAms_20		22 56 50.4	
	comp=Z,2µm,20.0s								
MWC	Mount Wilson	58.71	286	IAms_20		IAms_20		22 56 33.5	
	comp=Z,2µm,21.0s								
MURC	Murrieta	58.73	284	P		P		22 32 16.4	+2.6
	baz=40								
OSI	Osito Audit: C	58.76	286	IAms_20		IAms_20		22 56 15.9	
	comp=Z,1µm,19.0s								
MONP2	Monument Peak	58.86	283	P		P		22 32 15.9	+1.0
	baz=39								
IKP	In-Ko-Pah, Jac	58.88	283	P		P		22 32 17.4	+2.5
	baz=39								
HSIG		58.90	276	IAms_20		IAms_20		22 56 09.7	
	comp=Z,1µm,19.0s								
CCIG	Comitan	58.95	251	IAms_20		IAms_20		22 56 50.7	
	comp=Z,2µm,19.0s								
ZALV	Zalesovo Beam	59.03	37	LR		LR		22 59 27.6	
	comp=Z,302nm,19.4s

AAK	**Ala-Archa**	**64.44**	**51**	P	**P**	**22 32 51.7**	**-0.7**		
AAK				IAmb	IAmb	22 32 57.6			
	comp=Z,24nm,1.2s								
AAK				PP	**PP**	**22 35 09.2**	**-4.4**		
BTK	**Batken**	**64.93**	**55**	IAMs_20	IAMs_20	23 00 39.5			
	comp=Z,1μm,20.0s								
RAYN	**Ar Rayn**	**65.26**	**85**	P	**P**	**22 32 55.8**	**-2.0**		
RAYN	**Ar Rayn**	**65.26**	**85**	P	**P**	**22 32 55.8**	**-2.0**		
RAYN				IAmb	IAmb	22 33 01.4			
	comp=Z,20nm,1.2s								
NBRF	**Rio Formoso -**	**65.30**	**181**	*eP*	**P**	**22 32 59.2**	**+1.3**		
HRA	**Herat**	**65.43**	**65**	IAmb	IAmb	22 33 03.1			
	comp=Z,27nm,1.6s								
NBTA	**Tacaratu-PE**	**65.80**	**184**	*eP*	**P**	**22 33 02.3**	**+1.2**		
KDJ	**Kajisay**	**65.98**	**49**	IAmb	IAmb	22 33 07.4			
	comp=Z,21nm,1.1s								
KDJ				IAMs_20	IAMs_20	23 00 31.4			
	comp=Z,2μm,20.0s								
PRZ	**Przheval'sk**	**66.19**	**48**	IAMs_20	IAMs_20	23 00 37.0			
	comp=Z,2μm,20.0s								
SMTB	**Santa Maria do**	**66.35**	**194**	*eP*	**P**	**22 33 04.5**	**-0.2**		
OTAV	**Otavalo**	**66.46**	**229**	P	**P**	**22 33 04.4**	**-1.6**		
OTAV				pmax	pmax				
	comp=Z,36nm,1.5s								
OTAV	**Otavalo**	**66.46**	**229**	*eP*	**P**	**22 33 08.6**	**+2.6**		
OTAV	**Otavalo**	**66.46**	**229**	P	**P**	**22 33 04.4**	**-1.6**		
OTAV				IAmb	IAmb	22 33 20.9			
	comp=Z,36nm,1.5s								
TLY	**Talaya**	**66.50**	**27**	*eP*	**P**	**22 33 05.0**	**-0.3**		
TLY				pmax	pmax				
	comp=Z,7.0nm,1.5s								
TLY				MLR	MLR				
	comp=Z,650nm,14.0s								
ZAK	**Zakamensk**	**67.60**	**28**	*eP*	**P**	**22 33 08.3**	**-4.2**		
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.5s								
NBPN	**Ponto Novo - B**	**67.61**	**186**	*eP*	**P**	**22 33 14.0**	**+1.3**		
KSH	**Kashi**	**67.64**	**52**	P	**P**	**22 33 15.0**	**+2.1**		
KSH				pP	pwP	22 33 19.0	-0.6		
KSH				sP	sP	22 33 26.0	+7.7		
KSH				PP	**PP**	**22 35 46.0**	**+4.5**		
KSH				S	**S**	**22 42 07.8**	**-1.7**		
KSH				sS	sS	22 42 17.0	+1.1		
KSH				SS	**SS**	**22 46 33.3**	**+3.9**		
KSH				LR	LR				
	comp=Z,180nm,5.3s								
KSH				LR	LR				
	comp=Z,190nm,5.6s								
KSH				LR	LR				
	comp=Z,690nm,7.6s								
NBLA	**Lagarto - SE**	**67.64**	**183**	*eP*	**P**	**22 33 14.2**	**+1.3**		
KBL	**Kabul**	**68.60**	**60**	P	**P**	**22 33 18.5**	**-0.6**		
KBL				pmax	pmax				
	comp=Z,20nm,1.2s								
KBL				MLR	MLR				
	comp=Z,700nm,20.0s								
KBL	**Kabul**	**68.60**	**60**	P	**P**	**22 33 18.5**	**-0.6**		
KBL				IAmb	IAmb	22 33 23.5			
	comp=Z,20nm,1.1s								
WMQ	**Urumqi**	**68.64**	**41**	*eP*	**P**	**22 33 20.8**	**+1.7**		
WMQ				pP	pwP	22 33 27.3	+1.5		
WMQ				sP	sP	22 33 31.3	+6.9		
WMQ				pmax	pmax				
	comp=Z,13nm,1.3s								
WMQ				pmax	pmax				
	comp=Z,94nm,3.6s								
WMQ				LR	LR				
	comp=Z,520nm,18.3s								
WMQ				LR	LR				
	comp=Z,370nm,18.9s								
WMQ				LR	LR				
	comp=Z,540nm,18.3s								
PEXB	**Peixe**	**69.64**	**194**	*eP*	**P**	**22 33 26.9**	**+1.5**		
SAML	**Samuel**	**69.67**	**210**	P	**P**	**22 33 23.7**	**-1.9**		
SAML				pmax	pmax				
	comp=Z,10.0nm,1.4s								
SAML				MLR	MLR				
	comp=Z,500nm,20.0s								
SAML	**Samuel**	**69.67**	**210**	P	**P**	**22 33 23.7**	**-1.9**		
UOSS	**Minazif**	**69.90**	**75**	P	**P**	**22 33 24.7**	**-2.3**		
UOSS				IAmb	IAmb	22 33 29.5			
	comp=Z,30nm,1.1s								
PETK	**Petropavlovsk-**	**69.94**	**352**	LR	LR	23 05 02.5			
	comp=Z,333nm,19.7s,baz=40,slow=37								
PET	**Petropavlovsk**	**69.95**	**352**	*eP*	**P**	**22 33 30.0**	**+3.1**		
PET				pmax	pmax				
	comp=Z,38nm,1.6s								
SONM	**Songino Array**	**70.74**	**27**	P	**P**	**22 33 33.7**	**+1.7**		
	comp=Z,2.4nm,0.9s,baz=316,slow=6.2,SNR=6.7								
SONM				LR	LR	23 06 35.7			
	comp=Z,477nm,20.2s,baz=316,slow=38								
ULN	**Ulaanbaatar**	**70.87**	**26**	P	**P**	**22 33 31.8**	**-1.0**		
ULN				pmax	pmax				
	comp=Z,47nm,2.0s								
ULN				MLR	MLR				
	comp=Z,400nm,21.0s								
ULN	**Ulaanbaatar**	**70.87**	**26**	P	**P**	**22 33 31.8**	**-1.0**		
ULN				IAmb	IAmb	22 33 47.6			
	comp=Z,47nm,2.0s								
NIL	**Nilore**	**71.30**	**57**	P	**P**	**22 33 34.4**	**-1.1**		
NIL				pmax	pmax				
	comp=Z,35nm,1.0s								
NIL				MLR	MLR				
	comp=Z,1μm,20.0s								
NIL	**Nilore**	**71.30**	**57**	P	**P**	**22 33 34.4**	**-1.1**		
NIL	**Nilore**	**71.30**	**57**	IAMs_20	IAMs_20	23 07 18.4			
	comp=Z,1μm,20.0s								
NBIT	**Itapeh - BA**	**71.62**	**185**	*eP*	**P**	**22 33 39.2**	**+1.8**		
JANB	**Januaria**	**72.09**	**190**	*eP*	**P**	**22 33 41.3**	**+1.0**		
GRNR	**Gornyy**	**72.49**	**6**	*eP*	**P**	**22 33 38.5**	**-3.8**		
GRNR				pmax	pmax				
	comp=Z,3.0nm,1.3s								
GRNR				MLR	MLR				
	comp=Z,370nm,14.0s								
WSAR	**Wadi Sarin**	**72.57**	**74**	P	**P**	**22 33 44.6**	**+1.4**		
	comp=Z,3.0nm,0.7s,baz=326,slow=3.8,SNR=3.5								
BDFB	**Brasilia**	**73.08**	**194**	P	**P**	**22 33 44.9**	**-1.4**		
BDFB				pmax	pmax				
	comp=Z,24nm,1.4s								
BDFB				MLR	MLR				
	comp=Z,800nm,21.0s								
BDFB	**Brasilia**	**73.08**	**194**	P	**P**	**22 33 46.9**	**+0.7**		
	comp=Z,5.3nm,0.8s,baz=3.3,slow=8.4,SNR=6.7								
BDFB				LR	LR	23 00 35.0			
	comp=Z,650nm,20.0s,baz=320,slow=32								
BDFB	**Brasilia**	**73.08**	**194**	P	**P**	**22 33 44.9**	**-1.4**		
BDFB				IAmb	IAmb	22 33 48.7			
	comp=Z,24nm,1.4s								
BDFB				IAMs_20	IAMs_20	23 00 14.5			
	comp=Z,826nm,21.0s								
FURI	**Furi**	**73.45**	**99**	IAMs_20	IAMs_20	23 07 40.9			
	comp=Z,671nm,18.0s								
KLR	**Kul'dur**	**73.68**	**9⍰**	*eP*	**P**	**22 33 52.9**	**+3.5**		
KLR				pmax	pmax				
	comp=Z,4.0nm,1.0s								
ARAG	**Araguaiana, MT**	**73.70**	**197**	*eP*	**P**	**22 33 51.1**	**+1.3**		
SALV	**Santo Antonio**	**74.59**	**201**	*eP*	**P**	**22 33 54.6**	**-0.3**		
IPMB	**Ipameri, GO**	**75.42**	**193**	*eP*	**P**	**22 34 01.2**	**+1.5**		
SJMB	**Sao Joao De Ma**	**75.46**	**186**	*eP*	**P**	**22 34 01.6**	**+1.7**		
BSFB	**Barra de Sao F**	**75.57**	**186**	*eP*	**P**	**22 34 01.8**	**+1.3**		
SIV	**San Ignacio**	**75.87**	**206**	P	**P**	**22 34 02.1**	**-0.2**		
	comp=Z,17nm,1.1s,baz=47,slow=5.4,SNR=23								
PP1B	**Ponte de Pedra**	**76.09**	**200**	*eP*	**P**	**22 34 05.7**	**+2.2**		
YSS	**Yuzh-Sakhalins**	**76.54**	**2**	*eP*	**P**	**22 34 07.3**	**+1.4**		
YSS				pmax	pmax				
	comp=Z,47nm,1.7s								
GTA	**Gaotai**	**76.67**	**35**	*eP*	**P**	**22 34 06.8**	**-0.1**		
GTA				pP	pwP	22 34 11.5	-2.2		
GTA				sP	PcP	22 34 14.5	-3.8		
GTA				pmax	pmax				
	comp=Z,160nm,4.5s								
GTA				LR	LR				
	comp=Z,350nm,19.4s								
GTA				LR	LR				
	comp=Z,320nm,14.6s								
GTA				LR	LR				
	comp=Z,580nm,16.2s								
C2SB	**Chapadao do Su**	**76.87**	**198**	*eP*	**P**	**22 34 10.8**	**+2.9**		
MBAR	**Mbarara**	**77.25**	**111**	IAMs_20	IAMs_20	23 09 19.3			
	comp=Z,1μm,19.0s								
ITRB	**Iturama**	**77.40**	**195**	*eP*	**P**	**22 34 12.9**	**+2.0**		
BSCB	**Bom Sucesso**	**78.02**	**190**	*eP*	**P**	**22 34 15.9**	**+1.5**		
LPAZ	**La Paz**	**78.06**	**213**	P	**P**	**22 34 13.9**	**-1.5**		
LPAZ				pmax	pmax				
	comp=Z,26nm,1.6s								
LPAZ	**La Paz**	**78.06**	**213**	P	**P**	**22 34 15.0**	**-0.4**		
	comp=Z,2.3nm,0.7s,baz=5.7,slow=12,SNR=8.2								
LPAZ				LR	LR	23 06 38.1			
	comp=Z,200nm,20.1s,baz=350,slow=34								
LPAZ	**La Paz**	**78.06**	**213**	*eP*	**P**	**22 34 17.0**	**+1.6**		
LPAZ	**La Paz**	**78.06**	**213**	P	**P**	**22 34 13.9**	**-1.5**		
LPAZ				IAmb	IAmb	22 34 18.0			
	comp=Z,26nm,1.6s								
BB19B	**Bebedouro**	**78.50**	**193**	*eP*	**P**	**22 34 18.8**	**+1.8**		
HHC	**Hu-ho-hao-te**	**78.56**	**26**	*eP*	**P**	**22 34 17.5**	**0.0**		
HHC				S	**S**	**22 44 10.5**	**-2.9**		
HHC				pmax	pmax				
	comp=Z,4.0nm,0.8s								
HHC				pmax	pmax				
	comp=Z,58nm,6.1s								
HHC				LR	LR				
	comp=Z,160nm,19.2s								
HHC				LR	LR				
	comp=Z,140nm,17.7s								
HHC				LR	LR				
	comp=Z,160nm,18.8s								
USRK	**Ussuriysk Ar.**	**78.69**	**10**	P	**P**	**22 34 16.4**	**-1.5**		
USRK	**Ussuriysk Ar.**	**78.69**	**10**	P	**P**	**22 34 19.9**	**+2.0**		
	comp=Z,2.8nm,0.8s,baz=147,slow=38,SNR=3.4								
USRK	**Ussuriysk Ar.**	**78.69**	**10**	P	**P**	**22 34 16.4**	**-1.5**		
AQDB	**Aquidauana**	**79.05**	**200**	*eP*	**P**	**22 34 21.9**	**+1.9**		
ASAJ	**Asahikawa**	**79.38**	**2**	LR	LR	23 09 32.1			
	comp=Z,164nm,19.8s,baz=248,slow=36								
PCMB	**Pacaembu**	**79.41**	**196**	*eP*	**P**	**22 34 24.6**	**+2.7**		
VAO	**Valinhos**	**80.22**	**192**	*eP*	**P**	**22 34 28.6**	**+2.1**		
DANN	**Dangsing**	**80.51**	**52**	*eP*	**P**	**22 34 29.0**	**+0.5**		
	comp=Z,49nm,1.0s								
SPB	**Sao Paulo**	**80.86**	**192**	IAMs_20	IAMs_20	23 04 20.4			
	comp=Z,709nm,21.0s								
LZH	**Lanzhou**	**80.96**	**33**	*eP*	**P**	**22 34 30.5**	**-0.1**		
LZH				pP	pwP	22 34 35.5	-1.9		
LZH				sP	PcP	22 34 37.8	+0.7		
LZH				PP	**PP**	**22 37 38.0**	**+3.5**		
LZH				SS	SS	22 49 50.0	-1.8		
LZH				pmax	pmax				
	comp=Z,20nm,1.3s								
LZH				pmax	pmax				
	comp=Z,100nm,6.2s								
LZH				LR	LR				
	comp=Z,560nm,16.3s								
LZH				LR	LR				
	comp=Z,580nm,16.1s								
LZH				LR	LR				
	comp=Z,690nm,17.9s								
KMBO	**Kilima Mbogo**	**81.08**	**106**	P	**P**	**22 34 29.0**	**-2.6**		
KMBO				pmax	pmax				
	comp=Z,11nm,1.7s								
KMBO				MLR	MLR				
	comp=Z,500nm,18.0s								
KMBO	**Kilima Mbogo**	**81.08**	**106**	P	**P**	**22 34 32.4**	**+0.9**		
	comp=Z,0.4nm,0.3s,baz=314,slow=1.0,SNR=5.2								
KMBO				LR	LR	23 11 51.3			
	comp=Z,273nm,18.8s,baz=284,slow=37								
KMBO	**Kilima Mbogo**	**81.08**	**106**	P	**P**	**22 34 29.0**	**-2.6**		
GKN	**Gorkha**	**81.19**	**51**	*eP*	**P**	**22 34 31.8**	**-0.1**		
	comp=Z,83nm,1.2s								
GO01	**Chusmiza**	**81.58**	**213**	IAmb	IAmb	22 34 37.0			
	comp=Z,30nm,1.1s								
KKN	**Kakani**	**81.65**	**51**	*eP*	**P**	**22 34 33.9**	**-0.6**		
	comp=Z,61nm,1.0s								
DMN	**Daman**	**81.73**	**51**	*eP*	**P**	**22 34 35.2**	**+0.2**		
	comp=Z,64nm,1.0s								
TIY	**Taiyuan**	**81.75**	**26**	*eP*	**P**	**22 34 31.5**	**-3.2**		
TIY				S	**S**	**22 44 52.3**	**+5.4**		
TIY				pmax	pmax				
	comp=Z,8.0nm,0.4s								
TIY				pmax	pmax				
	comp=Z,170nm,3.8s								
TIY				LR	LR				
	comp=Z,190nm,7.4s								
TIY				LR	LR				
	comp=Z,330nm,15.4s								
TIY				LR	LR				
	comp=Z,310nm,18.0s								
GUN	**Gumba**	**81.80**	**50**	*eP*	**P**	**22 34 35.0**	**-0.4**		
	comp=Z,52nm,0.9s								
PKIN	**Phulchoki**	**81.89**	**51**	*eP*	**P**	**22 34 35.7**	**-0.1**		
	comp=Z,51nm,1.5s								
PKI	**Pulchoki**	**81.90**	**51**	*eP*	**P**	**22 34 35.8**	**-0.1**		
	comp=Z,140nm,1.8s								
JIRN	**Jiri**	**82.15**	**50**	*eP*	**P**	**22 34 37.3**	**0.0**		
	comp=Z,91nm,0.9s								
PTGB	**Pitanga**	**82.58**	**196**	*eP*	**P**	**22 34 41.0**	**+2.1**		
RAMN	**Ramite**	**82.94**	**50**	*eP*	**P**	**22 34 41.0**	**-0.3**		
	comp=Z,62nm,1.0s								
ODAN	**Odare**	**83.36**	**50**	*eP*	**P**	**22 34 42.7**	**-0.7**		
	comp=Z,91nm,1.5s								
LVC	**Limon Verde**	**84.27**	**212**	P	**P**	**22 34 46.4**	**-1.6**		
LVC				pmax	pmax				
	comp=Z,45nm,1.3s								
LVC	**Limon Verde**	**84.27**	**212**	P	**P**	**22 34 48.2**	**+0.2**		
	comp=Z,20nm,1.0s,baz=14,slow=3.5,SNR=13								
LVC	**Limon Verde**	**84.27**	**212**	*eP*	**P**	**22 34 50.0**	**+2.0**		
LVC	**Limon Verde**	**84.27**	**212**	P	**P**	**22 34 46.4**	**-1.6**		
POO	**Poona**	**84.31**	**65**	*ex*	x	22 34 48.0			
XAN	**Xi'an**	**84.33**	**30**	P	**P**	**22 34 50.3**	**+2.3**		
XAN				pmax	pmax				
	comp=Z,7.0nm,1.9s								
XAN				LR	LR				
	comp=Z,490nm,21.7s								
XAN				LR	LR				
	comp=Z,400nm,20.6s								
XAN				LR	LR				
	comp=Z,680nm,25.5s								
XAN	**Xi'an**	**84.33**	**30**	P	**P**	**22 34 47.4**	**-0.6**		
XAN				pmax	pmax				
	comp=Z,20nm,1.6s								
XAN				MLR	MLR				
	comp=Z,600nm,20.0s								
XAN	**Xi'an**	**84.33**	**30**	P	**P**	**22 34 47.4**	**-0.6**		
XAN				IAmb	IAmb	22 34 51.4			
	comp=Z,20nm,1.6s								
XAN	**Xi'an**	**84.33**	**30**	IAMs_20	IAMs_20	23 13 59.2			
	comp=Z,589nm,20.0s								
KSRS	**Korea Array**	**84.90**	**14**	P	**P**	**22 34 52.1**	**+1.4**		
	comp=Z,3.6nm,0.9s,baz=355,slow=4.7,SNR=11								
CPUP	**Villa Florida**	**85.06**	**200**	P	**P**	**22 34 50.9**	**-0.6**		
	comp=Z,5.8nm,1.1s,baz=0.4,slow=6.5,SNR=5.5								
CPUP				LR	LR	23 08 01.0			
	comp=Z,343nm,21.9s,baz=10,slow=32								
CPUP	**Villa Florida**	**85.06**	**200**	*eP*	**P**	**22 34 51.0**	**-0.4**		
CPUP	**Villa Florida**	**85.06**	**200**	IAmb	IAmb	22 34 53.0			
	comp=Z,12nm,1.2s								
CD2	**Chengdu**	**85.74**	**35**	*eP*	**P**	**22 34 54.5**	**-0.6**		
CD2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
SHL	**Shillong**	**86.34**	**47**	IAmb	IAmb	22 35 01.8			
SHL				IAMs_20	IAMs_20	23 13 44.7			
	comp=Z,19nm,1.0s								
	comp=Z,823nm,20.0s								
TSUM	**Tsumeb**	**87.40**	**132**	P	**P**	**22 35 02.8**	**-0.4**		
	comp=Z,1.9nm,0.8s,baz=306,slow=12,SNR=3.8								
TSUM	**Tsumeb**	**87.40**	**132**	P	**P**	**22 35 01.0**	**-2.3**		
TSUM	**Tsumeb**	**87.40**	**132**	IAMs_20	IAMs_20	23 11 47.0			
	comp=Z,695nm,20.0s								
HYB	**Hyderabad**	**87.56**	**62**	*i* P	**P**	**22 35 06.0**	**+1.8**		
ENH	**Enshi**	**88.04**	**31**	IAMs_20	IAMs_20	23 16 42.2			
	comp=Z,755nm,21.0s								
ITQB	**Itaqui**	**88.19**	**199**	*eP*	**P**	**22 35 07.8**	**+1.1**		
NJ2	**Nanjing**	**88.62**	**22**	*eP*	**P**	**22 35 09.5**	**+0.5**		
NJ2				pmax	pmax				
	comp=Z,5.0nm,0.5s								
LSZ	**Lusaka**	**88.63**	**121**	P	**P**	**22 35 08.3**	**-0.9**		
	comp=Z,1.3nm,0.2s,baz=333,slow=6.8,SNR=5.6								
KMI	**Kunming**	**90.76**	**38**	P	**P**	**22 35 21.5**	**+2.1**		
KMI				pmax	pmax				
	comp=Z,8.0nm,2.0s								
GYA	**Guiyang**	**90.79**	**34**	P	**P**	**22 35 18.5**	**-0.9**		
GYA				pmax	pmax				
	comp=Z,10.0nm,1.0s								
CFA	**Coronel Fontan**	**92.61**	**208**	P	**P**	**22 35 26.5**	**-0.8**		
	comp=Z,9.3nm,1.1s,baz=315,slow=2.7,SNR=6.6								
CMAR	**Chiang Mai Arr**	**95.52**	**44**	*ce*	**P**	**22 35 44.2**	**+3.1**		
CMAR				pmax	pmax				
	comp=Z,2.0nm,0.9s								
CMAR	**Chiang Mai Arr**	**95.52**	**44**	P	**P**	**22 35 41.6**	**+0.5**		
	comp=Z,1.7nm,0.9s,baz=320,slow=5.5,SNR=7.5								
CMAR				PP	**PP**	**22 39 35.0**	**+3.6**		
	comp=Z,0.3nm,0.3s,baz=321,slow=7.8,SNR=4.5								
CMAR				LR	LR	23 20 50.9			
	comp=Z,265nm,20.4s,baz=310,slow=37								
PALK	**Pallekele**	**97.33**	**65**	IAMs_20	IAMs_20	23 23 38.2			
	comp=Z,469nm,20.0s								
BOSA	**Boshof**	**98.93**	**130**	LR	LR	23 18 28.4			
	comp=Z,454nm,20.2s,baz=348,slow=34								
PPT2	**Papeete2**	**118.20**	**281**	*e*LR	LR	23 17 28.3			
	comp=Z,962nm,22.0s								
TBI	**Tubuai**	**122.81**	**277**	*e*LR	LR	23 19 37.4			
	comp=Z,718nm,27.2s								
PMSA	**Palmer Station**	**123.36**	**195**	*e*P	**PKiKP**	**22 41 13.1**	**+1.4**		
VNA2	**Neumayer--Watz**	**128.93**	**169**	PKPdf	**PKiKP**	**22 41 24.0**	**+1.3**		
	baz=9.0,slow=5.3								
SNAA	**Sanae**	**130.15**	**167**	PKPdf	**PKiKP**	**22 41 25.2**	**-0.1**		
SNAA	**Sanae**	**130.15**	**167**	PKIKP	**PKPdf**	**22 41 22.9**	**-1.5**		
SNAA	**Sanae**	**130.15**	**167**		**PKPdf**	**22 41 22.9**	**-1.5**		
NVL	**N'lazarevskaya**	**131.51**	**161**	*e*PKIKP	**PKiKP**	**22 41 26.6**	**-1.3**		
NVL				pmax	pmax				
	comp=Z,5.0nm,0.6s								
SYO	**Syowa Base**	**136.50**	**150⫝̸**	*e*Pdiff	**Pdif**	**22 38 40.0**	**-2.1**		
DZM	**Mont Dzumac**	**141.99**	**327**	*e*LR	LR	23 28 30.1			
	comp=Z,576nm,24.3s								
AS31	**Alice Springs**	**145.80**	**19**		**PKPab**	**22 41 55.1**	**-0.3**		
ASAR	**Alice Springs**	**145.80**	**19**	PKPbc	**PKPbc**	**22 41 54.0**	**-1.1**		
	comp=Z,7.7nm,0.9s,baz=346,slow=2.2,SNR=21								
QSPA	**South Pole Qui**	**146.75**	**180**		**PKPdf**	**22 41 52.9**	**-1.9**		
QSPA				PKPbc	**PKiKP**	**22 41 58.1**	**-1.2**		

PDG ***28*** *22:22:36.7±0.3,38.44N×20.35E,h9km±1km,ML4.3/14, Error ellipse: s-maj=0.7km s-min=0.7km az=90.0*
MOS ***28*** *22:22:36.5±1.4,38.40N×20.27E,h12km,mb4.4/6,Error ellipse: s-maj=6.3km s-min=3.9km az=82.6*
IDC ***28*** *22:22:36.0±0.7,38.41N×20.55E,h0km,mb4.1/17, mb1 4.0/25,mb1mx3.9/62,mbtmp4.0/25,ML3.7/8,MS3.1/1, Ms1 3.1/1,ms1mx2.8/60,Error ellipse: s-maj=14.4km s-min=12.7km az=171.0*
NEIC ***28*** *22:22:38.0±2.9,38.40N±0.03×20.43E±0.04,h7km±3km, Error ellipse: s-maj=4.5km s-min=4.3km az=52.0*
ATH ***28*** *22:22:37.6,38.40N×20.49E,h16km,ML4.2/35,Error ellipse: s-maj=1.2km s-min=0.5km az=265.0*
TIR ***28*** *22:22:38.4,38.48N×20.47E,h19km,Md4.3/7*
BGR ***28*** *22:22:38.2±1.1,38.58N±21.19E,h10km,Error ellipse: s-maj=45.6km s-min=13.3km az=49.0*
THE ***28*** *22:22:38.0,38.42N×20.44E,h0km±2km,ML4.3/8,Error ellipse: s-maj=2.4km s-min=0.5km az=282.0*
MED_RC ***28*** *22:22:38.0±0.7,38.42N×20.35E,h24km±3km,MW4.5/6, Moment Tensor Solution.Mantle waves: s6,c7; Duration: 1s0 Moment tensor: Scale 10^15Nm; Mrr0.23±1.51; Mθθ3.46±1.07; Mϕϕ-3.69±1.02; Mrθ0.52±.77; Mθϕ6.39±1.20; Mϕr0.77±.74; Best double couple: M0.7.38000×10^15 NP1:φs105.00000°,δ83.00000°,λ3.00000°. NP2: φs14.00000°,δ87.00000°,λ173.00000°. Principal axes: T 7.3000, Plg7.0000°, Azm329.0000°; N 0.1500, Plg83.0000°, Azm174.0000°; P -7.4600, Plg3.0000°, Azm60.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
GII ***28*** *22:22:46.8±0.0,37.40N×21.06E,h1km*
ISC 28 22:22:38.6±0.6,38.41N±0.01×20.46E±0.02,h14km±3km, n355,σ1§69/425,mb4.3/36,22C-8D,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
FSK	**Fiskardo**	**0.09**	**60**	P	**Pg**	**22**	**22 39.8**	**-1.8**
FSK				S	**Pg**	**22**	**22 41.4**	**-0.2**
FSK	**Fiskardo**	**0.09**	**60**		**Pg**	**22**	**22 41.4**	**-0.2**
KEF1	**Kardakata, Kep**	**0.14**	**177**	P	**Pg**	**22**	**22 40.7**	**-1.4**
KEF1				S	**Sg**	**22**	**22 43.6**	**-0.9**
KEF1				AML	AML	22	22 45.3	
KEF1				AML	AML	22	22 45.4	
KEF3	**Kipouria, Keph**	**0.23**	**203**	P	**Pg**	**22**	**22 42.7**	**-0.8**
KEF3				S	**Sg**	**22**	**22 46.9**	**0.0**
KEF3				AML	AML	22	22 48.2	
KEF3				AML	AML	22	22 48.8	
ARG2	**Argostoli**	**0.24**	**175**	P	**Pg**	**22**	**22 42.6**	**-1.0**
ARG2				S	**Sg**	**22**	**22 46.8**	**-0.3**
ARG2	**Argostoli**	**0.24**	**175**		**Pg**	**22**	**22 42.6**	**-1.0**
ARG2					**Sg**	**22**	**22 46.8**	**-0.3**
CHV1	**Chavriata, Kef**	**0.24**	**195**	P	**Pg**	**22**	**22 42.9**	**-0.8**
CHV1				S	**Sg**	**22**	**22 47.3**	**+0.2**
KEF2	**Argostoli. Kep**	**0.25**	**175**	P	**Pg**	**22**	**22 42.8**	**-1.1**
KEF2				S	**Sg**	**22**	**22 46.9**	**-0.6**
KEF2				AML	AML	22	22 48.2	
KEF2				AML	AML	22	22 48.2	
VLS	**Valsamata**	**0.26**	**157**	P	**Pg**	**22**	**22 42.7**	**-1.3**
VLS				S	**Sg**	**22**	**22 47.0**	**-0.8**
	122μm,0.4s							
VLS	**Valsamata**	**0.26**	**157**	P	**Pg**	**22**	**22 42.9**	**-1.1**
VLS	**Valsamata**	**0.26**	**157**	P	**Pg**	**22**	**22 42.7**	**-1.3**
VLS				S	**Sg**	**22**	**22 46.9**	**-0.8**
VLS				AML	AML	22	22 48.0	
VLS				AML	AML	22	22 49.8	
VLS	**Valsamata**	**0.26**	**157**		**Pg**	**22**	**22 42.7**	**-1.3**
VLS					**Sg**	**22**	**22 47.0**	**-0.8**
EVGI	**Lefkada island**	**0.26**	**36**	P	**Pg**	**22**	**22 43.1**	**-1.0**
EVGI				S	**Sg**	**22**	**22 47.5**	**-0.3**
**

EFP	**Efpalio**	**1.14**	**89**	P		**Pb**	**22 22 58.3**	**-1.6**
EFP				AML	AML		22 23 22.4	
	comp=E,23808µm,0.4s							
EFP				AML	AML		22 23 24.8	
	comp=N,43955µm,0.6s							
ANX	**Ano Chora**	**1.16**	**81**	P		**Pn**	**22 22 59.2**	**-1.3**
ANX				AML	AML		22 23 25.6	
	comp=E,32785µm,0.5s							
ANX				AML	AML		22 23 25.7	
	comp=N,42459µm,0.5s							
EVR	**Evrytania**	**1.17**	**64**	P		**Pn**	**22 22 59.2**	**-1.4**
EVR				AML	AML		22 23 27.0	
	comp=N,12525µm,0.9s							
EVR				AML	AML		22 23 34.9	
	comp=E,8588µm,0.6s							
LAKA	**Lakka**	**1.21**	**98**	P		**Pn**	**22 22 59.6**	**-1.5**
LAKA				AML	AML		22 23 23.8	
	comp=N,14260µm,0.9s							
LAKA				AML	AML		22 23 26.3	
	comp=E,11328µm,0.8s							
SERG	**Sergoula**	**1.25**	**90**	P		**Pn**	**22 23 00.6**	**-1.1**
SERG				AML	AML		22 23 25.0	
	comp=N,41588µm,0.5s							
SERG				AML	AML		22 23 27.8	
	comp=E,28677µm,0.5s							
TRIZ	**Trizonia**	**1.27**	**92**	P		**Pn**	**22 23 00.7**	**-1.1**
JAN	**Janina**	**1.28**	**14**	P		**Pg**	**22 23 03.2**	**0.0**
JAN	**Janina**	**1.28**	**14**	P		**Pb**	**22 23 02.2**	**-0.3**
JAN				AML	AML		22 23 24.9	
	comp=N,15932µm,0.5s							
JAN				AML	AML		22 23 30.9	
	comp=E,12641µm,0.6s							
KALE	**Kalithea**	**1.32**	**90**	P		**Pn**	**22 23 01.6**	**-1.1**
KALE				AML	AML		22 23 27.2	
	comp=N,27770µm,0.6s							
KALE				AML	AML		22 23 28.3	
	comp=E,11774µm,0.5s							
AMT	**Artemida-Makis**	**1.32**	**131**	P		**Pn**	**22 23 02.5**	**-0.2**
AMT				AML	AML		22 23 39.4	
	comp=E,19990µm,0.6s							
AMT				AML	AML		22 23 41.1	
	comp=N,26480µm,0.7s							
KLV	**Kalavryta, Ach**	**1.38**	**105**	P		**Pn**	**22 23 02.5**	**-1.0**
KLV				AML	AML		22 23 28.9	
	comp=E,6208µm,0.5s							
KLV				AML	AML		22 23 35.4	
	comp=N,8200µm,0.6s							
KASA	**Kassiopi**	**1.39**	**343**	P		**Pb**	**22 23 04.4**	**0.0**
KASA				AML	AML		22 23 29.0	
	comp=E,10499µm,0.8s							
KASA				AML	AML		22 23 30.9	
	comp=N,6438µm,0.3s							
MAKR	**Makrakomi, Fth**	**1.44**	**65**	P		**Pn**	**22 23 04.1**	**-0.2**
MAKR				AML	AML		22 23 34.4	
	comp=N,15851µm,0.8s							
MAKR				AML	AML		22 23 35.7	
	comp=E,16783µm,0.4s							
SRN	**Sarande**	**1.51**	**346**	*i* PN		**Pb**	**22 23 05.7**	**-0.6**
SRN				*i* SN		**Sg**	**22 23 25.9**	**-1.2**
AGG	**Agios Georgios**	**1.58**	**67**	P		**Pb**	**22 23 06.9**	**-0.8**
AGG	**Agios Georgios**	**1.58**	**67**	P		**Pn**	**22 23 06.7**	**+0.4**
AGG				AML	AML		22 23 38.0	
	comp=N,8852µm,0.4s							
AGG				AML	AML		22 23 39.9	
	comp=E,7466µm,0.5s							
AGG	**Agios Georgios**	**1.58**	**67**			**Pb**	**22 23 06.9**	**-0.8**
THL	**Klokotos Trika**	**1.67**	**46**	P		**Pn**	**22 23 07.8**	**+0.4**
THL				AML	AML		22 23 37.9	
	comp=N,8122µm,0.7s							
THL				AML	AML		22 23 38.1	
	comp=E,10434µm,0.7s							
KPRO	**Kipourio**	**1.69**	**24**	P		**Pb**	**22 23 09.1**	**-0.4**
ITM	**Ithomi**	**1.69**	**136**	P		**Pn**	**22 23 08.4**	**+0.6**
ITM				AML	AML		22 23 45.7	
	comp=E,8429µm,0.8s							
ITM				AML	AML		22 23 46.6	
	comp=N,13623µm,1.3s							
ITM	**Ithomi**	**1.69**	**136**			**Pb**	**22 23 09.5**	**0.0**
ITM						**Sb**	**22 23 31.2**	**+0.5**
AXAR	**Agios Charalam**	**1.76**	**78**	P		**Pb**	**22 23 10.1**	**-0.5**
AXAR				AML	AML		22 23 43.9	
	comp=E,17958µm,1.0s							
AXAR				AML	AML		22 23 53.0	
	comp=N,25204µm,0.7s							
PYL	**PYLOS**	**1.82**	**146**	P		**Pn**	**22 23 10.0**	**+0.4**
PENT	**Pentalofos**	**1.86**	**16**	P		**Pb**	**22 23 11.5**	**-0.9**
PENT				AML	AML		22 23 44.2	
	comp=E,3735µm,0.9s							
PENT				AML	AML		22 23 51.4	
	comp=N,4338µm,0.9s							
TPE	**Tepelena**	**1.91**	**350**	*i* PN		**Pb**	**22 23 12.3**	**-0.9**
TPE				*i* SN		**Sg**	**22 23 38.1**	**-2.0**
PROD	**Prodromos**	**1.93**	**94**	P		**Pb**	**22 23 12.4**	**-1.1**
PROD				AML	AML		22 23 45.2	
	comp=E,9885µm,0.5s							
PROD				AML	AML		22 23 48.4	
	comp=N,8355µm,0.5s							
LKR	**Lokris**	**2.00**	**82**	P		**Pn**	**22 23 13.0**	**+1.0**
LKR				AML	AML		22 23 53.0	
	comp=N,3736µm,0.5s							
LKR				AML	AML		22 23 59.4	
	comp=E,3071µm,0.9s							
LTK	**Loutraki**	**2.01**	**100**	P		**Pn**	**22 23 13.1**	**+0.9**
LOUT	**Loutraki**	**2.02**	**101**	P		**Pn**	**22 23 13.4**	**+1.1**
KZN	**Kozani**	**2.15**	**28**	P		**Pb**	**22 23 16.7**	**-0.6**
KZN	**Kozani**	**2.15**	**28**	P		**Pb**	**22 23 15.7**	**-1.5**
KZN				AML	AML		22 23 53.5	
	comp=N,3637µm,0.6s							
KZN				AML	AML		22 23 59.1	
	comp=E,4159µm,0.7s							
VLO	**Vlora**	**2.18**	**340**	*i* PN		**Pn**	**22 23 15.3**	**+0.8**
VLO				*i* SN		**Sb**	**22 23 44.5**	**-0.3**
VIL2	**Platees**	**2.22**	**94**	P		**Pb**	**22 23 17.0**	**-1.4**
VIL2				AML	AML		22 24 00.1	
	comp=N,6912µm,0.6s							
VIL2				AML	AML		22 24 00.6	
	comp=E,7084µm,0.9s							
SCTE	**Santa Cesarea**	**2.27**	**318**			**Pn**	**22 23 15.8**	**+0.2**
LIT	**Litokhoron**	**2.31**	**42**	P		**Pb**	**22 23 18.2**	**-1.8**
LIT	**Litokhoron**	**2.31**	**42**	P		**Pn**	**22 23 17.1**	**+0.9**
LIT	**Litokhoron**	**2.31**	**42**			**Pb**	**22 23 18.1**	**-1.8**
NEO	**Neokhori**	**2.33**	**67**	P		**Pn**	**22 23 18.0**	**+1.4**
XOR	**Xorichti**	**2.33**	**65**	P		**Pn**	**22 23 17.3**	**+0.7**
DID	**Didima**	**2.37**	**112**	P		**Pn**	**22 23 18.0**	**+0.9**
DID				AML	AML		22 23 60.0	
	comp=E,5206µm,0.5s							
DID				AML	AML		22 24 02.6	
	comp=N,5874µm,1.1s							
SKIA	**Skiathos**	**2.47**	**71**	P		**Pn**	**22 23 19.0**	**+0.6**
MRKA	**Markates**	**2.47**	**82**	P		**Pn**	**22 23 19.8**	**+1.3**
MRKA				AML	AML		22 24 10.1	
	comp=E,1935µm,1.1s							
MRKA				AML	AML		22 24 15.9	
	comp=N,2807µm,0.9s							
FNA	**Florina**	**2.47**	**16**	P		**Pn**	**22 23 19.7**	**+1.2**
FNA	**Florina**	**2.47**	**16**	P		**Pn**	**22 23 19.3**	**+0.8**
FNA	**Florina**	**2.47**	**16**	Pn		**Pn**	**22 23 19.7**	**+1.2**
ATH	**Athens Observa**	**2.60**	**99**	P		**Pb**	**22 23 22.6**	**-2.4**
ATH	**Athens Observa**	**2.60**	**99**	P		**Pn**	**22 23 21.6**	**+1.4**
ATH				AML	AML		22 23 55.8	
	comp=E,3774µm,0.4s							
ATH				AML	AML		22 24 15.9	
	comp=N,3374µm,1.1s							
ATHU	**Athens Univers**	**2.66**	**99**	P		**Pn**	**22 23 21.5**	**+0.5**
VLY	**Voula,Athens**	**2.69**	**101**	P		**Pn**	**22 23 22.3**	**+0.9**
PTL	**Penteli**	**2.71**	**97**	P		**Pn**	**22 23 23.1**	**+1.4**
PTL				AML	AML		22 24 17.0	
	comp=N,2166µm,0.7s							
PTL				AML	AML		22 24 18.3	
	comp=E,2131µm,0.5s							
OHR	**Ohrid**	**2.71**	**5**	*i* Pn		**Pb**	**22 23 24.6**	**-2.2**
EREA	**Eretria**	**2.73**	**89**	P		**Pn**	**22 23 23.1**	**+1.2**
AOS	**Alonnisos**	**2.78**	**73**	P		**Pn**	**22 23 23.8**	**+1.1**
GRG	**Griva**	**2.95**	**30**	P		**Pn**	**22 23 26.0**	**+1.0**
TIR	**Tirane**	**2.97**	**351**	P		**Pn**	**22 23 26.3**	**+1.1**
TIR				S		**Sb**	**22 24 04.6**	**-2.7**
TIR	**Tirane**	**2.97**	**351**	*i* PN		**Pn**	**22 23 26.2**	**+0.9**
TIR				*i* SN		**Sb**	**22 24 04.6**	**-2.7**
TIR	**Tirane**	**2.97**	**351**	⇑P		**Pn**	**22 23 26.7**	**+1.5**
TIR	**Tirane**	**2.97**	**351**			**Pn**	**22 23 26.0**	**+0.7**
KTHA	**Kythira Island**	**2.99**	**135**	P		**Pn**	**22 23 27.0**	**+1.4**
TIP	**Timpagrande**	**2.99**	**286**	⇑P		**Pn**	**22 23 26.4**	**+0.7**
TIP	**Timpagrande**	**2.99**	**286**			**Pn**	**22 23 26.0**	**+0.3**
PLG	**Polygyros**	**3.03**	**49**	P		**Pn**	**22 23 27.1**	**+0.9**
KARY	**Karystos**	**3.15**	**96**	P		**Pn**	**22 23 28.8**	**+1.0**
CGL1	**Ceglie Messapi**	**3.21**	**315**	*e*Pn		**Pn**	**22 23 30.8**	**+2.1**
TAR1	**Taranto**	**3.24**	**312**	*e*Pn		**Pn**	**22 23 30.5**	**+1.5**
PHP	**Peshkopia**	**3.27**	**360**	*i* PN		**Pn**	**22 23 30.6**	**+1.1**
PHP				*i* SN		**Sb**	**22 24 12.5**	**-3.5**
KNT	**Kendrikon**	**3.33**	**34**	P		**Pn**	**22 23 31.2**	**+1.0**
VAY	**Valandovo**	**3.33**	**29**	P		**Pn**	**22 23 32.0**	**+1.8**
VAY	**Valandovo**	**3.33**	**29**	*i* Pn		**Pn**	**22 23 31.5**	**+1.3**
MASS	**Massafra**	**3.39**	**312**	*e*Pn		**Pn**	**22 23 32.5**	**+1.4**
STIP	**Stip**	**3.53**	**21**	*i* Pn		**Pn**	**22 23 36.3**	**+3.3**
CEL	**Celeste**	**3.59**	**269**			**Pn**	**22 23 34.5**	**+0.5**
CEL						**Sn**	**22 24 10.8**	**-5.5**
SKO	**Skopje**	**3.63**	**12**	*i* Pn		**Pn**	**22 23 37.3**	**+2.8**
PUK	**Puka**	**3.65**	**353**	*i* PN		**Pn**	**22 23 35.0**	**+0.3**
PUK				*i* SN		**Sb**	**22 24 22.5**	**-4.6**
MATE	**Matera**	**3.66**	**309**	⇑P		**Pn**	**22 23 36.1**	**+1.3**
MATE	**Matera**	**3.66**	**309**	⇑S		**Sg**	**22 24 41.9**	**+5.7**
ULC	**Ulcinj**	**3.67**	**346**	*e*Pn		**Pn**	**22 23 34.1**	**-0.8**
ULC				*e*Sn		**Sn**	**22 24 18.0**	**0.0**
SG1	**Sgolgore (BA)**	**3.79**	**311**	*e*Pn		**Pn**	**22 23 36.7**	**0.0**
BAI	**Bari**	**3.85**	**315**	*e*Pn		**Pn**	**22 23 37.9**	**+0.5**
DRME	**Dracevica, Mon**	**3.89**	**346**	*e*Pn		**Pn**	**22 23 37.9**	**-0.1**
DRME	**Dracevica, Mon**	**3.89**	**346**	*e*Pn		**Pn**	**22 23 37.8**	**-0.2**
DRME				*e*Sn		**Sn**	**22 24 23.6**	**+0.1**
BCI	**Bajram Curri**	**3.96**	**356**	*i* PN		**Pn**	**22 23 40.4**	**+1.5**
BCI				*i* SN		**Sn**	**22 24 23.5**	**-1.7**
KKB	**Krupnik**	**3.99**	**29**	P		**Pn**	**22 23 41.9**	**+2.5**
MMB	**Musomiste**	**4.04**	**37**	P		**Pn**	**22 23 42.5**	**+2.4**
BUM	**Brajici-Budva**	**4.06**	**343**	*e*Pn		**Pn**	**22 23 39.4**	**-1.0**
BUM				*e*Sn		**Sn**	**22 24 27.9**	**+0.1**
PDG	**Podgorica**	**4.12**	**347**	⇑P		**Pn**	**22 23 41.2**	**+0.2**
PDG	**Podgorica**	**4.12**	**347**	⇑S		**Sn**	**22 24 28.1**	**-0.8**
PDG	**Podgorica**	**4.12**	**347**	*e*Pn		**Pn**	**22 23 40.4**	**-0.6**
PDG	**Podgorica**	**4.12**	**347**			**Pn**	**22 23 40.8**	**-0.2**
PDG						**Sn**	**22 24 24.2**	**-4.7**
TTG	**Podgorica**	**4.12**	**347**	*e*Pn		**Pn**	**22 23 40.5**	**-0.6**
TTG				*e*Sn		**Sn**	**22 24 29.0**	**0.0**
PVY	**Plav**	**4.19**	**355**	*e*Pn		**Pn**	**22 23 42.4**	**+0.2**
PVY				*e*Sn		**Sn**	**22 24 31.2**	**+0.1**
ACER	**Acerenza**	**4.22**	**306**			**Pn**	**22 23 43.5**	**+1.0**
APE	**Apeiranthos**	**4.24**	**107**	⇑*e*P		**Pn**	**22 23 46.4**	**+3.6**
APE	**Apeiranthos**	**4.24**	**107**	⇓P		**Pb**	**22 23 48.6**	**-4.2**
APE	**Apeiranthos**	**4.24**	**107**	⇑S		**Sn**	**22 24 37.9**	**+5.9**
CEME	**Cevo**	**4.29**	**345**	*e*Pn		**Pn**	**22 23 42.4**	**-1.1**
CEME				*e*Sn		**Sn**	**22 24 32.6**	**-0.9**
HCY	**Herceg Novi**	**4.30**	**340**	*e*Pn		**Pn**	**22 23 42.3**	**-1.3**
HCY	**Herceg Novi**	**4.30**	**340**	*e*Pn		**Pn**	**22 23 42.1**	**-1.5**
HCY				*e*Sn		**Sn**	**22 24 33.0**	**-0.5**
SANT	**Santorini**	**4.47**	**116**	Pn		**Pn**	**22 23 45.6**	**-0.4**
IVA	**Berane**	**4.47**	**355**	*e*Pn		**Pn**	**22 23 45.5**	**-0.6**
IVA				*e*Sn		**Sn**	**22 24 37.8**	**-0.2**
KOME	**Kolasin**	**4.49**	**351**	*e*Pn		**Pn**	**22 23 46.1**	**-0.2**
KOME				*e*Sn		**Sn**	**22 24 38.5**	**+0.1**
NKME	**Niksic**	**4.50**	**346**	*e*Pn		**Pn**	**22 23 45.8**	**-0.5**
NKME				*e*Sn		**Sn**	**22 24 38.5**	**0.0**
NKY	**Niksic**	**4.54**	**346**	*e*Pn		**Pn**	**22 23 46.0**	**-0.9**
NKY				*e*Sn		**Sn**	**22 24 39.0**	**-0.5**
TREB	**Trebinje**	**4.59**	**340**	*e*Pn		**Pn**	**22 23 45.7**	**-1.9**
DBRK	**Dubrovnik**	**4.60**	**338**	*e*Pn		**Pn**	**22 23 47.0**	**-0.7**
DBRK				Sn		**Sn**	**22 24 39.5**	**-1.4**
RZN	**Rozhen**	**4.62**	**44**	P		**Pn**	**22 23 50.5**	**+2.3**
VTS	**Vitosha**	**4.70**	**26**	P		**Pn**	**22 23 50.4**	**+1.2**
VTS				S		**Sn**	**22 24 44.9**	**+1.2**
VTS	**Vitosha**	**4.70**	**26**	⇑P		**Pn**	**22 23 50.5**	**+1.2**
VTS	**Vitosha**	**4.70**	**26**	P		**Pn**	**22 23 50.7**	**+1.5**
VTS	**Vitosha**	**4.70**	**26**			**Pn**	**22 23 50.5**	**+1.3**
BRY	**Bratogost**	**4.72**	**343**	*e*Pn		**Pn**	**22 23 48.4**	**-1.0**
BRY	**Bratogost**	**4.72**	**343**	*e*Pn		**Pn**	**22 23 48.3**	**-1.1**
BRY				*e*Sn		**Sn**	**22 24 42.8**	**-1.2**
IDI	**Anoyia**	**4.73**	**130**	Pn		**Pn**	**22 23 49.1**	**-0.4**
	comp=E,1.0nm,0.3s,baz=322,slow=17,SNR=5.5							
IDI				Sn		**Sn**	**22 24 43.9**	**-0.2**
	comp=E,7.6nm,0.3s,baz=9.2,slow=16,SNR=4.7							
IDI				LR		LR	22 25 36.5	
	comp=E,212nm,18.0s,baz=288,slow=39							
VAE	**Valguarnera**	**4.87**	**261**	Pn		**Pn**	**22 23 53.4**	**+1.9**
	comp=E,3.8nm,0.3s,baz=17,slow=11,SNR=12							
VAE				Sn		**Sn**	**22 24 50.5**	**+2.7**
	comp=E,4.9nm,0.3s,baz=108,slow=8.6,SNR=4.9							
SGRT	**San Giovanni R**	**4.92**	**314**			**Pn**	**22 23 52.5**	**+0.3**
SGRT						**Sn**	**22 24 45.3**	**-3.6**
STON	**Ston**	**4.92**	**336**	*e*Pn		**Pn**	**22 23 51.2**	**-0.9**
STON	**Ston**	**4.92**	**336**	*e*Pn		**Pn**	**22 23 50.3**	**-1.8**
UPM	**Unac-Piva**	**4.93**	**347**	*e*Pn		**Pn**	**22 23 52.3**	**-0.1**
UPM	**Unac-Piva**	**4.93**	**347**	⇑*i*Pn		**Pn**	**22 23 52.5**	**+0.1**
UPM				*e*Sn		**Sn**	**22 24 48.7**	**-0.6**
ALN	**Alexandroupoli**	**4.97**	**58**	P		**Pn**	**22 23 54.3**	**+1.5**
ALN	**Alexandroupoli**	**4.97**	**58**	Pn		**Pn**	**22 23 54.3**	**+1.5**
PLE	**Pljevlja**	**4.98**	**351**	⇑*i*Pn		**Pn**	**22 23 52.7**	**-0.3**
PLE				*e*Sn		**Sn**	**22 24 50.1**	**-0.3**
PAOL	**Paolisi**	**5.24**	**302**			**Pn**	**22 23 57.7**	**+1.1**
RUDO	**Rudo**	**5.26**	**351**	*e*Pn		**Pn**	**22 23 55.7**	**-1.1**
WDD	**Wied Dalam**	**5.39**	**243**			**Pn**	**22 23 58.8**	**+0.1**
WDD						**Sn**	**22 24 57.8**	**-2.7**
BLKB	**Belogradchik**	**5.47**	**17**	⇑S		**Sn**	**22 25 01.6**	**-0.8**
BBLS	**Lazići**	**5.51**	**352**	*e*Pn		**Pn**	**22 23 59.8**	**-0.4**
MAKA	**Makarska**	**5.52**	**333**	*i* Pn		**Pn**	**22 24 00.1**	**-0.3**
MAKA				Sn		**Sn**	**22 25 00.1**	**-3.6**
CORL	**Corleone**	**5.67**	**267**	Pn		**Pn**	**22 24 03.6**	**+1.2**
DIVS	**Divibare**	**5.69**	**357**	*e*Pn		**Pn**	**22 24 00.0**	**-2.8**
HAPS	**Han Pijesak,Bl**	**5.78**	**349**	*e*Pn		**Pn**	**22 24 02.2**	**-1.8**
CLTB	**Caltabellotta**	**5.78**	**264**			**Pn**	**22 24 06.2**	**+2.2**
PLVB	**Pleven**	**5.88**	**31**	⇑P		**Pn**	**22 24 07.1**	**+1.8**
KARP	**Karpathos**	**6.08**	**116**	Pn		**Pn**	**22 24 06.5**	**-1.6**
KARP						**Sn**	**22 25 16.4**	**-1.0**
ELND	**Elena**	**6.11**	**41**	⇓P		**Pn**	**22 24 10.6**	**+2.3**
TEKS	**Tekeris**	**6.17**	**354**	*e*Pn		**Pn**	**22 24 07.1**	**-2.2**
KIJV	**Kijevo**	**6.37**	**333**	*i* Pn		**Pn**	**22 24 11.6**	**-0.4**
ZIRJ	**Zirje**	**6.38**	**327**	*e*Pn		**Pn**	**22 24 10.7**	**-1.4**
MGRS	**Mrkonjic Grad**	**6.51**	**338**	*e*Pn		**Pn**	**22 24 13.5**	**-0.5**
MORI	**Morici**	**6.52**	**328**	*i* Pn		**Pn**	**22 24 13.7**	**-0.4**
DOB	**Doboj**	**6.56**	**345**	*e*Pn		**Pn**	**22 24 11.6**	**-3.0**
AQU	**L'Aquila**	**6.67**	**308**	P		**Pn**	**22 24 18.7**	**+2.5**
AQU	**L'Aquila**	**6.67**	**308**	*e*Pn		**Pn**	**22 24 18.3**	**+2.1**
AQU	**L'Aquila**	**6.67**	**308**	Pn		**Pn**	**22 24 18.7**	**+2.5**
FRGS	**Fruska Gora**	**6.76**	**356**	*e*Pn		**Pn**	**22 24 14.5**	**-2.8**
BLY	**Banja Luka**	**6.79**	**340**	⇑P		**Pn**	**22 24 17.2**	**-0.6**
BLY	**Banja Luka**	**6.79**	**340**	⇑S		**Sn**	**22 25 32.7**	**-2.2**
BLY	**Banja Luka**	**6.79**	**340**	*e*Pn		**Pn**	**22 24 16.9**	**-0.8**
DUGI	**Dugi Otok**	**6.90**	**326**	*e*Pn		**Pn**	**22 24 18.8**	**-0.5**
UDBI	**Udbina**	**7.05**	**332**	*e*Pn		**Pn**	**22 24 21.8**	**+0.4**
NRCA	**Norcia**	**7.12**	**311**			**Pn**	**22 24 24.2**	**+1.8**
GZR	**Gura Zlata**	**7.18**	**13**	⇑P		**Pn**	**22 24 24.0**	**+0.8**
BZS	**Buzias**	**7.25**	**6**	⇑P		**Pn**	**22 24 25.7**	**+1.7**
NVLJ	**Novalja**	**7.44**	**327**	*e*Pn		**Pn**	**22 24 26.3**	**-0.3**
ELL	**Elmali**	**7.68**	**100**	P		Pn	22 24 35.8	+5.6
ELL	**Elmali**	**7.68**	**100**			Pn	22 24 35.8	+5.6
MURB	**Monte Urbino**	**7.72**	**311**			**Pn**	**22 24 26.9**	**-3.7**
VOIR		**7.81**	**25**	P		**Pn**	**22 24 35.1**	**+3.3**
VOIR		**7.81**	**25**	⇑P		**Pn**	**22 24 34.2**	**+2.4**
LATE	**Laterza**	**7.81**	**305**	Pn		**Pn**	**22 24 34.7**	**+2.8**
OZLJ	**Ozalj**	**8.10**	**334**	*e*Pn		**Pn**	**22 24 35.1**	**-0.5**
MLR	**Muntele Rosu**	**8.16**	**28**	Pn		**Pn**	**22 24 40.8**	**+4.0**
	comp=E,0.8nm,0.3s,baz=219,slow=13,SNR=12							
MLR	**Muntele Rosu**	**8.16**	**28**	⇑P		**Pn**	**22 24 37.7**	**+0.9**
RIY	**Rijeka**	**8.22**	**329**	*e*Pn		**Pn**	**22 24 37.0**	**-0.3**
GBRS	**Gornja Briga**	**8.26**	**331**	*i* Pn		**Pn**	**22 24 37.7**	**-0.3**
CRES	**Cresnjev**	**8.29**	**335**	*e*Pn		**Pn**	**22 24 36.6**	**-1.7**
CEY	**Cerknica**	**8.58**	**330**	*e*Pn		**Pn**	**22 24 41.1**	**-1.3**
OSSC	**Osservatorio P**	**8.64**	**309**	Pn		**Pn**	**22 24 45.8**	**+2.7**
PLOR	**Plostina**	**8.74**	**30**	P		**Pn**	**22 24 46.3**	**+1.8**
PLOR	**Plostina**	**8.74**	**30**	⇓P		**Pn**	**22 24 46.4**	**+1.8**
VRI	**Vrincioaia**	**8.78**	**30**	P		**Pn**	**22 24 48.7**	**+3.6**
VRI	**Vrincioaia**	**8.78**	**30**	⇑P		**Pn**	**22 24 47.5**	**+2.4**
LJU	**Ljubljana**	**8.80**	**332**	*e*Pn		**Pn**	**22 24 44.4**	**+1.0**
TRI	**Trieste**	**8.83**	**328**	P		**Pn**	**22 24 44.8**	**-0.9**
TRI	**Trieste**	**8.83**	**328**	Pn		**Pn**	**22 24 44.8**	**-0.9**
SOKA	**Soboth**	**9.18**	**336**	*e*Pn		**Pn**	**22 24 48.6**	**-2.0**
	comp=E,14nm,0.5s,SNR=19							
OBKA	**Obir**	**9.19**	**334**	*e*Pn		**Pn**	**22 24 50.3**	**-0.4**
OBKA	**Obir**	**9.19**	**334**	*e*Pn		**Pn**	**22 24 50.4**	**-0.4**
	comp=E,10nm,0.6s							
ZCCA	**Zocca**	**9.27**	**313**	Pn		**Pn**	**22 24 52.1**	**+0.3**
KEST	**Kesra**	**9.28**	**257**	Pn		**Pn**	**22 24 52.5**	**+0.6**
	comp=E,0.7nm,0.3s,baz=31,slow=4.1,SNR=10.0							
KEST				Sn		**Sn**	**22 26 36.4**	**+0.2**
	comp=E,0.5nm,0.3s,baz=274,slow=16,SNR=2.5							
KEST	**Kesra**	**9.28**	**257**	Pn		**Pn**	**22 24 52.8**	**+0.8**
PSZ	**Piszkesteto**	**9.51**	**358**	P		**Pn**	**22 24 56.6**	**+1.5**
PSZ	**Piszkesteto**	**9.51**	**358**			**Pn**	**22 24 56.6**	**+1.5**
TEOL	**Teolo**	**9.54**	**319**			**Pn**	**22 24 54.6**	**-0.9**
TEOL						**Sn**	**22 26 36.4**	**-6.2**
ARSA	**Arzberg**	**9.54**	**339**	*e*Pn		**Pn**	**22 24 54.7**	**-0.9**
ARSA	**Arzberg**	**9.54**	**339**	*e*Pn		**Pn**	**22 24 53.6**	**-2.0**
	comp=E,2.2nm,0.5s							
MYKA	**Terra Mystica**	**9.63**	**331**	*e*Pn		**Pn**	**22 24 55.2**	**-1.5**
	comp=E,3.8nm,0.4s,SNR=4.6							
STAL	**STALIGIAL**	**9.71**	**326**	Pn		**Pn**	**22 24 57.8**	**0.0**
BURAR	**Bucovina Array**	**9.83**	**19**	P		**Pn**	**22 25 02.2**	**+2.7**
BURAR	**Bucovina Array**	**9.83**	**19**	⇓P		**Pn**	**22 25 02.2**	**+2.7**
BURAR	**Bucovina Array**	**9.83**	**19**	Pn		Pn	22 25 04.6	+5.0
BUR08	**Bucovina Ar. S**	**9.85**	**19**			**Pn**	**22 25 02.2**	**+2.3**
CTI	**Castel Tesino**	**10.04**	**322**	P		**Pn**	**22 25 01.2**	**-1.2**
CTI	**Castel Tesino**	**10.04**	**322**			**Pn**	**22 25 01.2**	**-1.2**
CONA	**Conrad Observa**	**10.08**	**342**	Pn		**Pn**	**22 25 02.6**	**-0.4**
	comp=E,0.6nm,0.4s							
KBA	**Koelnbreinsper**	**10.11**	**331**	*e*Pn		**Pn**	**22 25 03.3**	**-0.2**
KBA	**Koelnbreinsper**	**10.11**	**331**	*e*Pn		**Pn**	**22 25 03.0**	**-0.5**
	comp=E,2.5nm,0.4s							
MSSA	**Maissana**	**10.12**	**309**	Pn		**Pn**	**22 25 04.9**	**+1.4**
VYHS	**Vyhne**	**10.14**	**354**	*e*P		**Pn**	**22 25 03.0**	**-0.8**
VYHS				*e*			22 26 53.6	
VYHS	**Vyhne**	**10.14**	**354**	*e*Pn		**Pn**	**22 25 03.0**	**-0.8**
VYHS				*e*SN		**Sn**	**22 26 53.6**	**-3.7**
ABTA	**Abfaltersbach**	**10.18**	**327**	Pn		**Pn**	**22 25 03.1**	**-1.2**
	comp=E,4.8nm,0.5s							
MODS	**Modra-Piesok**	**10.22**	**348**	*e*SN		**Sn**	**22 26 54.5**	**-4.7**
SALO	**Salr**	**10.31**	**317**	Pn		**Pn**	**22 25 05.1**	**-1.0**
SALO						**Sn**	**22 26 54.6**	**-6.9**
BRTR	**Keskin Array B**	**10.33**	**79**	Pn		Pn	22 25 12.3	+5.8
	comp=E,0.2nm,0.3s,baz=259,slow=12,SNR=8.6							
SMOL	**Smolenice**	**10.33**	**349**	*e*SN		**Sn**	**22 26 56.7**	**-5.2**
MOA	**Molln**	**10.46**	**336**	*e*Pn		**Pn**	**22 25 07.1**	**-0.9**
MOA				*e*Sn		**Sn**	**22 27 01.1**	**-3.9**

comp=Z,9.9nm,1.1s,baz=155,slow=11
NOA NORSAR Array B 23.38 349 P **P** **22 27 46.3 -0.3**
comp=Z,3.8nm,0.7s,baz=166,slow=10,SNR=6.3
NC303 NORSAR Array S 23.53 349 P **P** **22 27 47.6 -0.4**
NC204 NORSAR Array S 23.67 348 P **P** **22 27 50.8 +1.3**
KLMR Klimovskoe 25.44 22 *eP* **P** **22 28 05.9 +0.3**
KLMR pmax pmax
comp=Z,10.0nm,1.1s
KLMR Klimovskoe 25.44 22 *eP* **P** **22 28 06.0 +0.3**
KLMR AMP 22 28 15.3
comp=Z,10.0nm,1.1s
RAYN Ar Rayn 25.99 118 P **P** **22 28 13.6 +2.5**
RAYN pmax pmax
comp=Z,14nm,1.5s
RAYN Ar Rayn 25.99 118 P **P** **22 28 13.6 +2.5**
RAYN IAmb IAmb 22 28 32.3
comp=Z,14nm,1.5s
AKTO Aktyubinsk 29.08 53 P **P** **22 28 38.3 -0.1**
comp=Z,0.4nm,0.3s,baz=260,slow=10,SNR=4.4
GEYT Alibeck 29.48 79 P **P** **22 28 42.2 +0.1**
comp=Z,2.4nm,0.5s,baz=282,slow=7.1,SNR=6.0
GEYT Alibeck 29.48 79 P **P** **22 28 42.3 +0.1**
GYA0B ALIBECK ARRAY 29.48 79 P **P** **22 28 41.4 -0.8**
GYA0B IAmb IAmb 22 28 45.4
comp=Z,5.1nm,0.6s
TORD Torodi Ar. Bea 30.18 219 P **P** **22 28 47.8 -0.7**
comp=Z,2.4nm,0.8s,baz=33,slow=9.0,SNR=13
ARCES ARCESS Array B 31.30 3 P **P** **22 28 57.2 -0.7**
comp=Z,3.0nm,1.0s,baz=192,slow=12,SNR=3.3
BRVK Borovoye 36.94 50 P **P** **22 29 47.9 +1.0**
BRVK pmax pmax
comp=Z,9.0nm,1.5s
BRVK Borovoye 36.94 50 P **P** **22 29 47.9 +1.0**
BRVK IAmb IAmb 22 29 51.3
comp=Z,9.4nm,1.5s
TAS Tashkent 37.20 70 P **P** **22 29 49.4 0.0**
TAS Tashkent 37.20 70 P **P** **22 29 49.4 0.0**
KK31 Karatay Array 37.74 67 P **P** **22 29 54.1 +0.2**
KK31 pmax pmax
comp=Z,4.0nm,0.5s
KK31 Karatay Array 37.74 67 P **P** **22 29 54.1 +0.2**
KK31 IAmb IAmb 22 29 57.4
comp=Z,4.2nm,0.5s
KKAR Karatay Array 37.74 67 P **P** **22 29 53.9 -0.1**
KKAR pmax pmax
comp=Z,4.0nm,0.5s
KKAR Karatay Array 37.74 67 P **P** **22 29 53.9 -0.1**
KKAR IAmb IAmb 22 29 57.5
comp=Z,4.2nm,0.5s
DBIC Dimbokro 39.03 222 P **P** **22 30 05.2 +0.2**
comp=Z,1.8nm,0.5s,baz=13,slow=9.0,SNR=6.9
DBIC Dimbokro 39.03 222 P **P** **22 30 05.2 +0.2**
ARSB Arslanbob 39.91 69 P **P** **22 30 12.8 +0.5**
ARSB IAmb IAmb 22 30 22.2
comp=Z,12nm,1.4s
AAK Ala-Archa 40.71 66↑ *eP* **P** **22 30 21.4 +2.5**
AAK pmax pmax
comp=Z,6.0nm,1.6s
AAK Ala-Archa 40.71 66 P **P** **22 30 19.4 +0.5**
KURK Kurchatov 42.17 54↓ *eP* **P** **22 30 30.2 -0.4**
KURK pmax pmax
comp=Z,5.0nm,1.6s
KURK Kurchatov 42.17 54 P **P** **22 30 30.1 -0.5**
KSH Kashi 42.59 70 P **P** **22 30 31.5 -2.8**
KSH pmax pmax
comp=Z,160nm,4.1s
MK31 Makanchi Array 45.22 59 P **P** **22 30 54.4 -0.8**
MK31 pmax pmax
comp=Z,3.0nm,1.2s
MK31 Makanchi Array 45.22 59 P **P** **22 30 54.4 -0.8**
MKAR Makanchi Array 45.22 59 P **P** **22 30 54.3 -0.9**
comp=Z,1.7nm,0.5s,baz=282,slow=7.2,SNR=26
ZAA0 Zalesovo Array 45.57 48 IAmb IAmb 22 30 59.5
comp=Z,6.6nm,1.1s
ZALV Zalesovo Beam 45.57 48 P **P** **22 30 56.9 -0.9**
comp=Z,3.7nm,0.4s,baz=274,slow=7.8,SNR=22
WMQ Urumqi 49.69 61 *eP* **P** **22 31 32.5 +2.5**
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ pmax pmax
comp=Z,81nm,4.7s
TLY Talaya 57.16 47↑ *eP* **P** **22 32 27.0 +2.2**
TLY pmax pmax
comp=Z,3.0nm,0.9s
SCHQ Schefferville 58.26 317 P **P** **22 32 32.6 +0.2**
comp=Z,2.9nm,0.5s,baz=94,slow=4.1,SNR=5.8
SCHQ Schefferville 58.26 317 IAmb IAmb 22 32 39.3
comp=Z,15nm,1.3s
SONM Songino Array 60.34 51 P **P** **22 32 45.7 -1.4**
comp=Z,1.1nm,0.9s,baz=286,slow=7.6,SNR=5.2
ULN Ulaanbaatar 60.73 50↓ *eP* **P** **22 32 48.3 -1.5**
ULN pmax pmax
comp=Z,4.0nm,1.6s
LZH Lanzhou 64.14 63 *eP* **P** **22 33 13.5 +0.7**
LZH pP sP 22 33 20.5 +2.3
LZH sP pP 22 33 23.5 +6.3
LZH *e*PP **PP** **22 35 36.3 +2.8**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,120nm,6.5s
HHC Hu-ho-hao-te 66.94 56 *eP* **P** **22 33 32.5 +1.8**
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,36nm,7.1s
CMAR Chiang Mai Arr 69.90 82 *i*P **P** **22 33 50.7 +1.2**
CMAR Chiang Mai Arr 69.90 82 P **P** **22 33 48.3 -1.1**
comp=Z,0.5nm,0.3s,baz=305,slow=8.3,SNR=6.3
YKA Yellowknife Ar 73.15 340 P **P** **22 34 07.6 -0.7**
comp=Z,0.4nm,0.7s,baz=38,slow=5.5,SNR=4.0
ILAR Eielson Array 76.67 354 P **P** **22 34 30.0 +1.4**
ILAR Eielson Array 76.67 354 P **P** **22 34 30.0 +1.4**
comp=Z,0.5nm,0.9s,baz=16,slow=6.8,SNR=2.3
NJ2 Nanjing 76.74 60 *eP* **P** **22 34 29.5 -0.1**
NJ2 pmax pmax
comp=Z,7.0nm,0.5s
USRK Ussuriysk Ar. 77.14 43 P **P** **22 34 30.1 -1.6**
comp=Z,2.7nm,0.8s,baz=289,slow=4.4,SNR=5.0

*IDC **28** 22:23:38.6±0.9,38.32N×20.56E,h0km,mb4.2/12, mb1 4.2/16,mb1mx3.9/59,mbtmp4.2/16,ML3.9/5,MS3.9/1, Ms1 3.9/1,ms1mx3.1/51,Error ellipse: s-maj=20.1km s-min=15.6km az=135.0*
*ATH **28** 22:23:39.8,38.39N×20.44E,h16km±1km,ML4.2/21,Error ellipse: s-maj=2.2km s-min=0.8km az=263.0*
*NEIC **28** 22:23:40.1±1.7,38.41N±0.01×20.44E±0.03,h9km±4km, Error ellipse: s-maj=4.0km s-min=2.1km az=89.0*
*THE **28** 22:23:40.1,38.41N×20.43E,h13km±1km,ML4.3/7,Error ellipse: s-maj=1.7km s-min=0.4km az=267.0*
ISC 28 22:23:40.8±0.7,**38.40N**±0.02×**20.48E**±0.03,**h13**km±4km, **n102**,σ1§15/121,**mb4.3**/15,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF1	**Kardakata, Kep**	**0.12**	**182**	P	**Pg**	**22 23 43.0**	**-1.1**
KEF1				S	**Sg**	**22 23 45.7**	**-0.6**
KEF1				AML	AML	22 23 46.1	
KEF1				AML	AML	22 23 46.9	
KEF3	**Kipouria, Keph**	**0.22**	**207**	P	**Pg**	**22 23 44.0**	**-1.6**
KEF3				S	**Sg**	**22 23 48.2**	**-0.7**
KEF3				AML	AML	22 23 50.4	
KEF3				AML	AML	22 23 54.0	
ARG2	**Argostoli**	**0.22**	**178**	P	**Pg**	**22 23 45.0**	**-0.6**
ARG2				S	**Sg**	**22 23 49.1**	**+0.3**
	301μm,0.2s						
ARG2	**Argostoli**	**0.22**	**178**		**Pg**	**22 23 45.0**	**-0.6**
ARG2					**Sg**	**22 23 49.1**	**+0.3**
CHV1	**Chavriata, Kef**	**0.23**	**199**	P	**Pg**	**22 23 45.2**	**-0.5**
CHV1				S	**Sg**	**22 23 49.2**	**+0.2**
KEF2	**Argostoli. Kep**	**0.23**	**178**	P	**Pg**	**22 23 45.0**	**-0.8**
KEF2				S	**Sg**	**22 23 48.3**	**-0.9**
KEF2				AML	AML	22 23 49.9	
KEF2				AML	AML	22 23 50.0	
VLS	**Valsamata**	**0.24**	**158**	P	**Pg**	**22 23 45.0**	**-0.9**
VLS				S	**Sg**	**22 23 49.1**	**-0.3**
	71μm,0.5s						
VLS	**Valsamata**	**0.24**	**158**	P	**Pg**	**22 23 45.0**	**-0.9**
VLS				S	**Sg**	**22 23 48.5**	**-0.9**
VLS				AML	AML	22 23 49.8	
VLS				AML	AML	22 23 55.8	
VLS	**Valsamata**	**0.24**	**158**		**Pg**	**22 23 45.0**	**-0.9**
VLS					**Sg**	**22 23 49.1**	**-0.3**
EVGI	**Lefkada island**	**0.26**	**33**	P	**Pg**	**22 23 45.4**	**-1.0**
EVGI				S	**Sg**	**22 23 50.2**	**+0.1**
EVGI	**Lefkada island**	**0.26**	**33**	P	**Pg**	**22 23 45.4**	**-1.0**
EVGI				S	**Sg**	**22 23 50.1**	**+0.1**
EVGI	**Lefkada island**	**0.26**	**33**		**Pg**	**22 23 45.4**	**-1.0**
EVGI					**Sg**	**22 23 50.2**	**+0.1**
MGNA	**Meganis**	**0.35**	**44**	P	**Pg**	**22 23 46.9**	**-1.1**
MGNA				AML	AML	22 23 53.5	
	comp=N,79644μm,0.4s						
MGNA				AML	AML	22 23 54.0	
	comp=E,81828μm,0.4s						
KFL	**Anninata**	**0.38**	**140**	P	**Pg**	**22 23 47.8**	**-0.7**
KFL				S	**Sb**	**22 23 54.6**	**-0.7**
	comp=E,85μm,0.3s						
KFL	**Anninata**	**0.38**	**140**	P	**Pg**	**22 23 47.7**	**-0.8**
KFL				S	**Sg**	**22 23 53.6**	**0.0**
KFL				AML	AML	22 23 55.5	
KFL				AML	AML	22 23 57.5	
KFL	**Anninata**	**0.38**	**140**		**Pg**	**22 23 47.8**	**-0.7**
KFL					**Sb**	**22 23 54.6**	**-0.7**
LKD2	**Lefkada island**	**0.41**	**20**	P	**Pg**	**22 23 48.2**	**-0.9**
LKD2				S	**Sg**	**22 23 54.2**	**-0.5**
	comp=E,31μm,0.7s						
LKD2	**Lefkada island**	**0.41**	**20**	P	**Pg**	**22 23 48.4**	**-0.7**
LKD2				S	**Sb**	**22 23 55.0**	**-1.3**
LKD2				AML	AML	22 23 55.1	
	comp=E,43469μm,0.7s						
LKD2				AML	AML	22 23 58.3	
	comp=N,77593μm,0.8s						
LKD2	**Lefkada island**	**0.41**	**20**		**Pg**	**22 23 48.2**	**-0.9**
LKD2					**Sg**	**22 23 54.2**	**-0.5**
TSLK	**Tsoukalades, L**	**0.45**	**18**	P	**Pg**	**22 23 49.0**	**-0.7**
TSLK				S	**Sb**	**22 23 56.0**	**-1.2**
	comp=N,42μm,0.8s						
TSLK	**Tsoukalades, L**	**0.45**	**18**	P	**Pg**	**22 23 49.0**	**-0.7**
TSLK				S	**Sb**	**22 23 56.2**	**-1.1**
TSLK	**Tsoukalades, L**	**0.45**	**18**		**Pg**	**22 23 49.0**	**-0.7**
TSLK					**Sb**	**22 23 56.0**	**-1.2**
AST1	**Astakos**	**0.50**	**73**	P	**Pg**	**22 23 50.2**	**-0.5**
AST1				S	**Sb**	**22 23 58.8**	**0.0**
	comp=N,64μm,0.5s						
AST1	**Astakos**	**0.50**	**73**		**Pg**	**22 23 50.2**	**-0.5**
VLMS	**Volimes, Zakyn**	**0.54**	**164**	P	**Pg**	**22 23 50.9**	**-0.6**
PDO	**Prodromos**	**0.59**	**70**	P	**Pg**	**22 23 52.0**	**-0.3**
PDO	**Prodromos**	**0.59**	**70**	P	**Pg**	**22 23 52.0**	**-0.3**
ZAK2	**Zakynthos**	**0.70**	**151**	P	**Pg**	**22 23 54.0**	**-0.4**
ZAK2				S	**Sb**	**22 24 04.9**	**+0.5**
KRI1	**kERI**	**0.78**	**160**	P	**Pg**	**22 23 55.0**	**-1.0**
KRI1				S	**Sn**	**22 24 07.8**	**-1.5**
PVO	**Paravola**	**0.85**	**75**	P	**Pg**	**22 23 56.5**	**-0.8**
PVO				S	**Sb**	**22 24 09.6**	**+0.7**
	comp=N,20μm,0.8s						
PVO	**Paravola**	**0.85**	**75**	P	**Pg**	**22 23 56.6**	**-0.7**
PVO				AML	AML	22 24 14.8	
	comp=E,39649μm,0.7s						
PVO				AML	AML	22 24 19.9	
	comp=N,39658μm,0.6s						
RLS	**Riolos of Patr**	**0.85**	**113**	P	**Pb**	**22 23 57.4**	**-0.1**
RLS	**Riolos of Patr**	**0.85**	**113**	P	**Pg**	**22 23 56.8**	**-0.5**
RLS				AML	AML	22 24 16.6	
	comp=N,20719μm,0.7s						
RLS				AML	AML	22 24 19.5	
	comp=E,14527μm,0.8s						
DRO	**Drossia**	**1.07**	**114**	P	**Pn**	**22 24 01.1**	**-0.5**
DRO				AML	AML	22 24 23.7	
	comp=E,44689μm,0.4s						
DRO				AML	AML	22 24 24.2	
	comp=N,52528μm,0.6s						
EFP	**Efpalio**	**1.12**	**88**	P	**Pb**	**22 24 01.0**	**-1.1**
EFP				AML	AML	22 24 27.4	
	comp=N,26516μm,0.8s						
EFP				AML	AML	22 24 30.4	
	comp=E,19876μm,0.6s						
EVR	**Evrytania**	**1.16**	**63**	P	**Pn**	**22 24 02.2**	**-0.8**
EVR				AML	AML	22 24 28.6	
	comp=N,13194μm,0.8s						
EVR				AML	AML	22 24 31.4	
	comp=E,12484μm,0.8s						
LAKA	**Lakka**	**1.19**	**97**	P	**Pn**	**22 24 02.8**	**-0.5**
LAKA				AML	AML	22 24 28.1	
	comp=E,16796μm,0.7s						
LAKA				AML	AML	22 24 30.4	
	comp=N,11435μm,1.0s						
SERG	**Sergoula**	**1.24**	**89**	P	**Pn**	**22 24 03.2**	**-0.8**
SERG				AML	AML	22 24 27.5	
	comp=N,20837μm,0.4s						
SERG				AML	AML	22 24 30.2	
	comp=E,26282μm,0.5s						
TRIZ	**Trizonia**	**1.25**	**91**	P	**Pn**	**22 24 03.2**	**-0.9**
TRIZ	**Trizonia**	**1.25**	**91**	P	**Pn**	**22 24 03.3**	**-0.8**
KALE	**Kalithea**	**1.31**	**90**	P	**Pn**	**22 24 03.9**	**-1.0**
KALE	**Kalithea**	**1.31**	**90**	P	**Pn**	**22 24 04.7**	**-0.2**
KALE				AML	AML	22 24 38.7	
	comp=N,13550μm,0.7s						
KALE				AML	AML	22 24 39.7	
	comp=E,12918μm,1.1s						
KLV	**Kalavryta, Ach**	**1.37**	**105**	P	**Pn**	**22 24 05.5**	**-0.2**
KLV				AML	AML	22 24 33.1	
	comp=E,10817μm,1.0s						
KLV				AML	AML	22 24 36.1	
	comp=N,9133μm,0.6s						
MAKR	**Makrakomi, Fth**	**1.43**	**64**	P	**Pb**	**22 24 07.5**	**+0.1**
MAKR				AML	AML	22 24 35.4	
	comp=E,14431μm,0.5s						
MAKR				AML	AML	22 24 50.3	
	comp=N,14478μm,0.9s						
AGG	**Agios Georgios**	**1.58**	**66**	P	**Pg**	**22 24 10.2**	**-1.0**
AGG				AML	AML	22 24 42.3	
	comp=E,8467μm,0.5s						
AGG				AML	AML	22 24 51.3	
	comp=N,7136μm,0.8s						
AGG	**Agios Georgios**	**1.58**	**66**	Pn	**Pn**	**22 24 08.3**	**-0.3**
THL	**Klokotos Trika**	**1.67**	**45**	P	**Pb**	**22 24 10.4**	**-1.1**
THL				AML	AML	22 24 40.6	
	comp=E,10135μm,0.9s						
THL				AML	AML	22 24 41.1	
	comp=N,8599μm,0.8s						
PROD	**Prodromos**	**1.91**	**93**	P	**Pb**	**22 24 14.8**	**-0.8**
PROD				AML	AML	22 24 47.7	
	comp=E,10588μm,0.6s						
PROD				AML	AML	22 24 53.4	
	comp=N,8035μm,0.7s						
IDI	**Anoyia**	**4.71**	**130**	Sn	**Sn**	**22 25 49.8**	**+3.6**
	comp=N,9.5nm,0.3s,baz=205,slow=23,SNR=3.1						
IDI	**Anoyia**	**4.71**	**130**		**Sn**	**22 25 49.8**	**+3.6**
BLY	**Banja Luka**	**6.81**	**340**	Pn	**Pn**	**22 25 20.9**	**+0.4**
MLR	**Muntele Rosu**	**8.17**	**28**	Pn	**Pn**	**22 25 42.1**	**+2.8**
	comp=N,0.7nm,0.3s,baz=218,slow=9.1,SNR=3.5						
MLR	**Muntele Rosu**	**8.17**	**28**		**Pn**	**22 25 42.1**	**+2.8**
KEST	**Kesra**	**9.29**	**257**	LR	LR	22 31 02.1	
	comp=N,721nm,18.4s,baz=352,slow=48						
BRTR	**Keskin Array B**	**10.32**	**79**	Pn	Pn	22 26 13.3	+4.5
	comp=N,0.3nm,0.3s,baz=259,slow=12,SNR=4.6						
BRTR	**Keskin Array B**	**10.32**	**79**		Pn	22 26 13.3	+4.6
FUORN	**Ofenpass-Fuorn**	**11.14**	**321**		**Sn**	**22 26 24.8**	**+0.2**
GERES	**GERESS Array B**	**11.53**	**337**	Pn	**Pn**	**22 26 23.7**	**-1.5**
	comp=N,0.2nm,0.3s,baz=158,slow=16,SNR=3.1						
GERES	**GERESS Array B**	**11.53**	**337**		**Pn**	**22 26 23.7**	**-1.5**
MMAI	**Mount Meron Ar**	**13.26**	**109**	Pn	**Pn**	**22 26 46.2**	**-2.7**
	comp=N,0.8nm,0.3s,baz=306,slow=12,SNR=3.2						
MMAI	**Mount Meron Ar**	**13.26**	**109**		**Pn**	**22 26 46.2**	**-2.7**
AKASG	**Malin Array Be**	**13.78**	**24**	Pn	**Pn**	**22 26 55.2**	**-0.5**
	comp=N,1.7nm,0.3s,baz=213,slow=11,SNR=2.6						
AKASG	**Malin Array Be**	**13.78**	**24**		**Pn**	**22 26 55.2**	**-0.5**
BCLA	**Clavier**	**16.14**	**323**	P	**P**	**22 27 34.4**	**+3.8**
BCLA				pP	**pwP**	**22 27 38.1**	**+1.2**
BGIS	**Gesves**	**16.22**	**323**	P	**P**	**22 27 32.9**	**+1.4**
DOU	**Dourbes**	**16.27**	**321**	P	**P**	**22 27 31.9**	**-0.1**
OBN	**Obninsk**	**19.94**	**28**	P	**P**	**22 28 11.6**	**-0.8**
	comp=N,0.4nm,0.3s,baz=252,slow=15,SNR=3.2						
OBN	**Obninsk**	**19.94**	**28**	P	**P**	**22 28 11.6**	**-0.8**
OBN	**Obninsk**	**19.94**	**28**	IAmb	IAmb	22 28 14.3	
	comp=Z,12nm,1.0s						
HFS	**Hagfors**	**22.18**	**351**	P	**P**	**22 28 35.7**	**-0.7**
	comp=Z,4.9nm,0.6s,baz=172,slow=11,SNR=4.9						
HFS	**Hagfors**	**22.18**	**351**	P	**P**	**22 28 35.7**	**-0.7**
EKA	**Eskdalemuir Ar**	**23.23**	**324**	P	**P**	**22 28 46.8**	**-0.8**
	comp=Z,7.4nm,1.1s,baz=122,slow=9.3,SNR=2.7						
EKA	**Eskdalemuir Ar**	**23.23**	**324**	P	**P**	**22 28 46.8**	**-0.8**
FINES	**FINESS Array B**	**23.33**	**7**	P	**P**	**22 28 47.8**	**-0.7**
	comp=Z,4.1nm,0.4s,baz=181,slow=10,SNR=10						
FINES	**FINESS Array B**	**23.33**	**7**	P	**P**	**22 28 47.8**	**-0.7**
NOA	**NORSAR Array B**	**23.39**	**349**	P	**P**	**22 28 48.7**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=154,slow=10,SNR=3.8						
GEYT	**Alibeck**	**29.47**	**79**	P	**P**	**22 29 44.1**	**-0.4**
	comp=Z,2.2nm,0.5s,baz=267,slow=8.9,SNR=3.6						
GEYT	**Alibeck**	**29.47**	**79**	P	**P**	**22 29 44.1**	**-0.4**
GEYT	**Alibeck**	**29.47**	**79**	IAmb	IAmb	22 29 46.5	
	comp=Z,1.2nm,0.7s						
TORD	**Torodi Ar. Bea**	**30.18**	**219**	P	**P**	**22 29 50.5**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=34,slow=9.0,SNR=5.6						
TORD	**Torodi Ar. Bea**	**30.18**	**219**	P	**P**	**22 29 50.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**30.18**	**219**	IAmb	IAmb	22 29 53.6	
	comp=Z,1.1nm,0.8s						
KK31	**Karatay Array**	**37.74**	**67**	P	**P**	**22 30 56.9**	**+0.6**
KK31				IAmb	IAmb	22 30 58.4	
	comp=Z,5.4nm,0.5s						
KKAR	**Karatay Array**	**37.74**	**67**	P	**P**	**22 30 56.9**	**+0.6**
DBIC	**Dimbokro**	**39.03**	**222**	P	**P**	**22 31 06.2**	**-1.2**
	comp=Z,3.0nm,0.7s,baz=6.7,slow=12,SNR=5.3						
DBIC	**Dimbokro**	**39.03**	**222**	P	**P**	**22 31 06.2**	**-1.2**
DBIC	**Dimbokro**	**39.03**	**222**	IAmb	IAmb	22 31 10.2	
	comp=Z,5.1nm,1.1s						
TIC	**Toumodi**	**39.14**	**223**	*eP*	**P**	**22 31 09.4**	**+1.1**
KIC	**Kosan Boka**	**39.23**	**222**	*eP*	**P**	**22 31 08.9**	**-0.2**
	comp=Z,7.0nm,0.8s						
KIC	**Kosan Boka**	**39.23**	**222**	P	**P**	**22 31 08.9**	**-0.2**
LIC	**Lamto**	**39.50**	**222**	*eP*	**P**	**22 31 11.2**	**-0.1**
	comp=Z,22nm,0.7s						
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**	**22 31 56.2**	**-1.5**
	comp=Z,1.7nm,0.3s,baz=281,slow=7.4,SNR=10						
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**	**22 31 56.2**	**-1.5**
ZAA0	**Zalesovo Array**	**45.57**	**48**	P	**P**	**22 31 59.8**	**-0.5**
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**22 31 59.5**	**-0.8**
	comp=Z,6.2nm,0.4s,baz=278,slow=7.8,SNR=9.4						
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**22 31 59.6**	**-0.7**
FRB	**Frobisher Bay**	**55.94**	**328**	P	**P**	**22 33 19.4**	**+1.1**
	comp=Z,3.5nm,0.8s,baz=66,slow=12,SNR=2.6						
FRB	**Frobisher Bay**	**55.94**	**328**	P	**P**	**22 33 19.4**	**+1.1**
SCHQ	**Schefferville**	**58.27**	**317**	P	**P**	**22 33 36.6**	**+1.6**
	comp=Z,3.3nm,0.6s,baz=61,slow=3.5,SNR=5.9						
SCHQ	**Schefferville**	**58.27**	**317**	P	**P**	**22 33 36.6**	**+1.6**
YKA	**Yellowknife Ar**	**73.17**	**340**	P	**P**	**22 35 13.1**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=32,slow=4.9,SNR=3.1						
YKA	**Yellowknife Ar**	**73.17**	**340**	P	**P**	**22 35 13.2**	**+2.3**

*IDC **28** 22:32:25.9±0.8,56.60N×34.02W,h0km,mb3.7/11, mb1 3.9/12,mb1mx3.7/58,mbtmp3.7/12,ML3.1/1,MS3.6/4, Ms1 3.6/4,ms1mx3.4/46,Error ellipse: s-maj=24.5km s-min=16.7km az=13.0*
*NEIC **28** 22:32:27.4±2.0,56.7N±0.1×34.15W±0.07,h10km±1km, mb4.4/9,Error ellipse: s-maj=21.9km s-min=5.6km az=189.0*
ISC 28 22:32:27.0±0.7,**56.7N**±0.1×**34.09W**±0.08,**h10**km,**n30**, σ1§15/28,**mb4.0**/15,**Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NRS	**Narsarsuaq**	**7.38**	**312**	Pn	**Pn**	**22 34 13.5**	**-1.2**
IVI	**Ivigtut**	**8.57**	**308**	Pn	**Pn**	**22 34 29.7**	**-1.2**
BORG	**Borgarnes**	**10.20**	**32**	Pn	**Pn**	**22 34 52.2**	**-1.1**
	0.1nm,0.3s,baz=225,slow=4.3,SNR=2.3						
BORG				LR	LR	22 37 20.9	
	comp=Z,147nm,21.1s,baz=213,slow=29						
EKA	**Eskdalemuir Ar**	**17.28**	**81**	P	**P**	**22 36 30.4**	**+0.8**
	baz=288,slow=13,SNR=3.0						
SCHQ	**Schefferville**	**18.43**	**278**	LR	LR	22 42 38.0	
	comp=Z,260nm,18.9s,baz=308,slow=33						
LMN	**Caledonia Moun**	**21.87**	**253**	P	**P**	**22 37 20.4**	**+0.7**
NOA	**NORSAR Array B**	**23.45**	**60**	P	**P**	**22 37 36.5**	**+0.3**
	1.4nm,0.9s,baz=282,slow=10.0,SNR=2.5						
NOA				LR	LR	22 46 36.5	
	comp=Z,71nm,18.1s,baz=280,slow=36						
MICGM	**Minsk**	**34.04**	**67**	*e*LR	LR	22 39 16.0	
P46A	**Rosedale**	**38.23**	**267**	P	**P**	**22 39 46.0**	**-0.8**
YKA	**Yellowknife Ar**	**38.66**	**313**	P	**P**	**22 39 51.5**	**+1.3**
	0.7nm,1.0s,baz=58,slow=9.2,SNR=5.3						
YKA				PcP	**PcP**	**22 42 04.8**	**+2.9**
	0.2nm,0.5s,baz=56,slow=3.3,SNR=4.3						
BRTR	**Keskin Array B**	**46.20**	**81**	P	**P**	**22 40 50.2**	**-1.8**
	0.2nm,0.3s,baz=294,slow=7.7,SNR=2.4						
PDAR	**Pinedale Array**	**48.33**	**287**	P	**P**	**22 41 07.1**	**-0.8**
	0.2nm,0.4s,baz=66,slow=10,SNR=3.1						
ILAR	**Eielson Array**	**48.56**	**328**	P	**P**	**22 41 09.7**	**-0.2**
	1.7nm,0.9s,baz=28,slow=5.5,SNR=11						
AKTO	**Aktyubinsk**	**51.09**	**55**	P	**P**	**22 41 30.6**	**+1.4**
	2.2nm,1.0s,baz=325,slow=6.2,SNR=4.3						
TORD	**Torodi Ar. Bea**	**51.35**	**133**	P	**P**	**22 41 31.3**	**-0.3**
	1.1nm,0.9s,baz=338,slow=9.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**51.35**	**133**	P	**P**	**22 41 30.6**	**-1.0**
MMAI	**Mount Meron Ar**	**52.07**	**86**	LR	LR	23 04 32.1	
	comp=Z,22nm,18.4s,baz=255,slow=37						
ABKAR	**Akbulak array**	**52.80**	**55**	P	**P**	**22 41 42.1**	**+0.1**
ABKAR	**Akbulak array**	**52.80**	**55**	P	**P**	**22 41 41.5**	**-0.5**
ABKAR				IAmb	IAmb	22 41 44.5	
	comp=Z,7.3nm,1.5s						
DBIC	**Dimbokro**	**54.93**	**144**	P	**P**	**22 41 57.6**	**-0.3**
	comp=Z,2.4nm,0.9s,baz=359,slow=16,SNR=1.8						
KVN	**Kaiserville**	**55.38**	**290**	P	**P**	**22 42 01.6**	**+0.3**
NVAR	**Mina Array Bea**	**55.95**	**289**	P	**P**	**22 42 06.9**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=41,slow=6.1,SNR=2.2						
NVAR	**Mina Array Bea**	**55.95**	**289**	P	**P**	**22 42 04.8**	**-0.6**
ZALV	**Zalesovo Beam**	**59.00**	**37**	P	**P**	**22 42 28.4**	**+2.0**
	comp=Z,0.7nm,0.7s,baz=354,slow=2.9,SNR=2.9						
ZALV	**Zalesovo Beam**	**59.00**	**37**	P	**P**	**22 42 27.0**	**+0.6**
KURK	**Kurchatov**	**59.45**	**43**	P	**P**	**22 42 30.7**	**+1.2**
KURK				IAmb	IAmb	22 42 35.8	
	comp=Z,3.0nm,0.8s						
MK31	**Makanchi Array**	**64.06**	**43**	P	**P**	**22 43 00.7**	**0.0**
MK31				IAmb	IAmb	22 43 12.3	
	comp=Z,4.6nm,1.4s						
MKAR	**Makanchi Array**	**64.06**	**43**	P	**P**	**22 43 01.5**	**+0.9**
	comp=Z,1.5nm,0.8s,baz=337,slow=6.8,SNR=10						
MKAR	**Makanchi Array**	**64.06**	**43**	P	**P**	**22 43 01.0**	**+0.3**
AAK	**Ala-Archa**	**64.34**	**51**	P	**P**

comp=Z,170nm,20.9s,baz=107,slow=34
MKAR **Makanchi Array** **64.55** **43** P **P** **22 47 07.0 +2.3**
1.0nm,0.8s,baz=327,slow=6.5,SNR=7.4
ASAR **Alice Springs** **146.33** **19** PKPbc **PKPdf** **22 56 06.1 -1.3**
0.9nm,0.8s,baz=332,slow=2.5,SNR=3.5

*AZER **28** 22:36:57.4, 40.44N×47.31E, h35km, ML3.1*
*NSSP **28** 22:36:58.0, 40.42N×47.18E, h15km, Ms2.9*
ISC 28 22:36:59.3±0.7, 40.41N±0.02×47.39E±0.02, h10km, n50, σ1s71/95, 5C, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BRDA	**Brd**	**0.22**	**227**	P	**Pg**	**22 37 05.4**	**+1.7**
	SNR=263						
BRDA				S	**Sg**	**22 37 11.9**	**+5.1**
ZRD	**Zardab**	**0.26**	**120**	P	**Pg**	**22 37 06.6**	**+2.1**
	SNR=1623						
ZRD				S	**Sb**	**22 37 13.9**	**+3.3**
AGDM	**Agdam**	**0.37**	**215**	P	**Pg**	**22 37 07.0**	**+0.4**
	SNR=382						
AGDM				S	**Sb**	**22 37 14.2**	**+0.4**
MNGR	**Mingechevir, A**	**0.43**	**328**	P	**Pg**	**22 37 07.8**	**+0.2**
	SNR=104						
MNGR				S	**Sg**	**22 37 15.5**	**+2.2**
KDMR	**Kurdemir**	**0.61**	**93**	P	**Pg**	**22 37 11.4**	**+0.3**
	SNR=160						
KDMR				S	**Sb**	**22 37 22.6**	**+2.0**
QBL	**Gabala**	**0.63**	**32**	P	**Pg**	**22 37 11.4**	**-0.2**
	SNR=93						
QBL				S	**Sg**	**22 37 21.6**	**+1.7**
BLQ	**Beylaqan**	**0.70**	**169**	P	**Pg**	**22 37 12.1**	**-0.7**
	SNR=48						
BLQ				S	**Sg**	**22 37 22.6**	**+0.6**
IML	**Ismayilli**	**0.71**	**58**	P	**Pg**	**22 37 12.7**	**-0.4**
	SNR=174						
IML				S	**Sg**	**22 37 24.0**	**+1.6**
STKZ		**0.77**	**219**	⇑*i* P	**Pg**	**22 37 12.6**	**-1.6**
STKZ				⇑*i* S	**Sg**	**22 37 22.7**	**-1.6**
SEKA	**Sheki**	**0.81**	**350**	P	**Pg**	**22 37 13.2**	**-1.7**
	SNR=48						
SEKA				S	**Sg**	**22 37 25.0**	**-0.4**
GANJ	**Ganja**	**0.84**	**286**	P	**Pg**	**22 37 12.7**	**-2.8**
	SNR=158						
GANJ				S	**Sg**	**22 37 24.1**	**-2.5**
XNQ	**Khinaliq**	**0.95**	**37**	P	**Pg**	**22 37 16.1**	**-1.5**
	SNR=312						
XNQ				S	**Sg**	**22 37 29.3**	**-0.6**
QRD	**Qoradiz**	**0.95**	**183**	P	**Pg**	**22 37 15.8**	**-1.7**
	SNR=19						
QRD				S	**Sg**	**22 37 29.1**	**-0.8**
SAAT	**Saatly**	**0.97**	**124**	P	**Pg**	**22 37 15.3**	**-2.6**
	SNR=32						
SAAT				S	**Sg**	**22 37 29.9**	**-0.5**
PQL	**Pirkuli**	**0.99**	**67**	P	**Pg**	**22 37 17.6**	**-0.8**
	SNR=26						
PQL				S	**Sg**	**22 37 32.4**	**+1.1**
GBS	**Qobustan**	**1.19**	**84**	P	**Pb**	**22 37 21.8**	**-0.2**
	SNR=19						
GBS				S	**Sb**	**22 37 36.8**	**-0.7**
GRS	**Goris**	**1.22**	**222**	⇑*i* P	**Pb**	**22 37 22.0**	**-0.5**
GRS				⇑*i* S	**Sb**	**22 37 38.0**	**-0.3**
QUBA	**Quba, Azerbaij**	**1.26**	**41**	P	**Pn**	**22 37 22.0**	**-1.0**
	SNR=3.0						
QUBA				S	**Sb**	**22 37 39.5**	**0.0**
ATGJ	**Altiaghaj**	**1.26**	**69**	P	**Pn**	**22 37 22.3**	**-0.7**
	SNR=9.3						
ATGJ				S	**Sb**	**22 37 41.1**	**+1.6**
GDB	**GEDABAY**	**1.28**	**284**	P	Pn	22 37 19.8	-3.6
	SNR=31						
GDB				S	**Sb**	**22 37 36.4**	**-3.8**
QSAR	**Qusar**	**1.29**	**31**	P	**Pn**	**22 37 22.0**	**-1.3**
	SNR=51						
QSAR				S	**Sb**	**22 37 40.5**	**+0.3**
ALIB	**Äli-Bayra**	**1.32**	**110**	P	**Pn**	**22 37 24.3**	**+0.5**
	SNR=25						
ALIB				S	**Sb**	**22 37 41.7**	**+0.7**
SIZA	**Siyzn**	**1.33**	**59**	P	**Pn**	**22 37 23.2**	**-0.7**
	SNR=6.5						
SIZA				S	**Sb**	**22 37 42.5**	**+1.2**
ZKTA	**Zakatala**	**1.35**	**335**	P	**Pn**	**22 37 22.0**	**-2.3**
	SNR=25						
ZKTA				S	**Sb**	**22 37 40.6**	**-1.6**
GLBA	**Clilabad**	**1.40**	**146**	Pn	**Pn**	**22 37 23.1**	**-1.7**
	SNR=48						
GLBA				Sn	**Sn**	**22 37 43.7**	**+0.3**
DDFL	**Dedoflistskaro**	**1.41**	**317**	P	**Pn**	**22 37 24.8**	**-0.3**
DDFL				S	**Sg**	**22 37 47.2**	**+2.5**
YRD	**Yardimli**	**1.63**	**156**	Pn	**Pn**	**22 37 26.5**	**-1.8**
	SNR=15						
YRD				Sn	**Sn**	**22 37 48.0**	**-1.3**
QZX	**Qazax, Azerbai**	**1.66**	**293**	Pn	**Pn**	**22 37 25.8**	**-2.6**
	SNR=130						
QZX				Sn	**Sn**	**22 37 47.6**	**-2.3**
SBZ	**Shahbuz**	**1.74**	**235**	Pg	**Pn**	**22 37 28.7**	**-0.9**
	SNR=9.2						
SBZ				Sg	**Sn**	**22 37 51.5**	**-0.4**
ORD	**Ordubad**	**1.83**	**216**	Pn	**Pn**	**22 37 29.4**	**-1.4**
	SNR=25						
ORD				Sn	**Sn**	**22 37 53.2**	**-0.9**
NAX	**Nakhchivan**	**1.91**	**230**	Pg	**Pn**	**22 37 31.9**	**-0.1**
NAX				Sg	**Sn**	**22 37 58.1**	**+2.0**
LRK	**Lerik**	**1.91**	**157**	Pn	**Pn**	**22 37 30.7**	**-1.4**
	SNR=7.2						
LRK				Sn	**Sn**	**22 37 56.6**	**+0.3**
LKRN	**Lenkeran, Azer**	**2.01**	**147**	Pn	**Pn**	**22 37 31.8**	**-1.4**
	SNR=2.8						
LKRN				Sn	**Sn**	**22 37 57.6**	**-0.9**
KAPZ	**Kaputan**	**2.06**	**268**	*i* P	**Pn**	**22 37 34.1**	**0.0**
KAPZ				*i* S	**Sn**	**22 38 01.2**	**+1.4**
HYR	**Heyderabad**	**2.06**	**251**	Pg	**Pn**	**22 37 34.5**	**+0.5**
	SNR=11						
HYR				Sg	**Sn**	**22 38 02.4**	**+2.5**
NRKZ	**NAREK**	**2.13**	**260**	*i* P	**Pn**	**22 37 35.4**	**+0.4**
NRKZ				*i* S	**Sn**	**22 38 03.8**	**+2.3**
ASTR	**Astara**	**2.15**	**149**	Pn	**Pn**	**22 37 33.7**	**-1.4**
	SNR=18						
ASTR				Sn	**Sn**	**22 38 00.1**	**-1.6**
BTNK	**Botanikuri**	**2.33**	**304**	P	**Pn**	**22 37 36.7**	**-1.0**
BTNK				S	**Sn**	**22 38 07.2**	**+0.8**
STE	**Stepanavan**	**2.37**	**285**	*e*P	**Pn**	**22 37 35.0**	**-3.3**
STE				*e*S	**Sn**	**22 38 06.5**	**-1.0**
SEAG	**Tbilisi Sea**	**2.38**	**306**	P	**Pn**	**22 37 38.4**	**+0.1**
SEAG				S	**Sn**	**22 38 08.9**	**+1.4**
TBLG	**Delisi**	**2.40**	**304**	P	**Pn**	**22 37 37.7**	**-0.9**
TBLG				S	**Sn**	**22 38 08.8**	**+0.8**
ARUZ	**Aruch**	**2.52**	**268**	*i* P	**Pn**	**22 37 41.9**	**+1.5**
ARUZ				⇑*i* S	**Sn**	**22 38 13.8**	**+2.6**
METS	**Metsamor**	**2.54**	**265**	*i* P	**Pn**	**22 37 42.4**	**+1.8**
METS				S	**Sn**	**22 38 14.4**	**+2.7**
TRLG	**Trialeti**	**2.73**	**295**	P	**Pn**	**22 37 43.7**	**+0.4**
TRLG				S	**Sn**	**22 38 18.9**	**+2.4**
VNNZ	**Vanand**	**2.75**	**265**	*i* P	**Pn**	**22 37 46.3**	**+2.9**
VNNZ				*i* S	**Sb**	**22 38 22.3**	**+0.1**
BGD	**Bogdanovka**	**3.00**	**288**	P	**Pn**	**22 37 48.7**	**+1.7**
GUDG	**Gudauri**	**3.00**	**314**	P	**Pn**	**22 37 44.5**	**-2.6**
AKH	**Akhalkalaki**	**3.12**	**290**	P	**Pn**	**22 37 50.8**	**+2.2**
ONI	**Oni**	**3.67**	**308**	P	**Pn**	**22 37 58.9**	**+2.8**
TKB	**Tkibuli**	**3.83**	**302**	P	**Pn**	**22 38 01.5**	**+3.2**
TKB				S	**Sb**	**22 38 54.5**	**+1.1**

TAP 28 22:38:39.6, 23.11N×120.93E, h12km, ML1.0, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.11**	**46**	⇑*i* P	Pg	22 38 43.2	+0.4
	baz=49						
ELDTW				*i* S	Sg	22 38 46.2	+1.1
	baz=49						
STYT	**Tauyuan**	**0.17**	**289**	P	Pg	22 38 43.4	-0.1
	baz=288						
STYT				*i* S	Sg	22 38 47.0	+0.8
	baz=288						
SLGT	**Liugui**	**0.28**	**246**	*e*P	Pb	22 38 47.1	+0.5
	baz=245						
SLGT				*e*S	Sb	22 38 51.7	+0.4
	baz=245						
TWG	**Pinlang**	**0.32**	**155**	P	Pb	22 38 47.3	+0.1
	baz=154						
TWG				*i* S	Sb	22 38 51.7	-0.6
	baz=154						
SGST	**Jiashian**	**0.32**	**265**	*i* P	Pb	22 38 47.2	0.0
	baz=264						
SGST				S	Sb	22 38 52.1	-0.2
	baz=264						
WTP	**Ta-pu**	**0.32**	**295**	*i* P	Pb	22 38 47.0	-0.2
	baz=295						
TWGBT	**Beinan**	**0.32**	**154**	P	Pb	22 38 47.3	0.0
	baz=154						
TWGBT				S	Sb	22 38 51.7	-0.7
	baz=154						
TPUB	**Ta-pu**	**0.33**	**305**	P	Pb	22 38 47.3	-0.1
	baz=304						
FULB	**Fuli**	**0.35**	**75**	*e*P	Pg	22 38 46.3	-0.3
	baz=75						
CHN1	**Nanshi**	**0.38**	**282**	P	Pg	22 38 47.3	+0.2
	baz=281						
CHN1				S	Sb	22 38 53.8	-0.2
	baz=281						
YUS	**Yu-Shan**	**0.38**	**3**	P	Pg	22 38 47.9	+0.6
	baz=3.0						
CHN4	**Tsaushan**	**0.39**	**308**	P	Pb	22 38 48.4	0.0
	baz=308						
CHN4				*e*S	Sb	22 38 54.9	+0.5
	baz=308						
TTN	**Taitung**	**0.41**	**150**	P	Pb	22 38 48.6	-0.1
	baz=149						
TTN				S	Sb	22 38 55.2	+0.4
	baz=149						
TWF1	**Yuli**	**0.42**	**55**	*e*P	Pb	22 38 49.0	+0.1
	baz=55						
YULB	**Yu-li**	**0.44**	**50**	P	Pb	22 38 49.0	-0.3
	baz=50						
YULB				S	Sb	22 38 56.1	+0.2
	baz=50						
SSD	**Sandimen**	**0.45**	**217**	P	Pb	22 38 49.4	-0.1
	baz=216						
SSD				S	Sb	22 38 56.2	+0.1
	baz=216						
ECL	**Taimali**	**0.51**	**177**	*e*P	Pg	22 38 50.0	+0.4
	baz=176						
ECL				*e*S	Sb	22 38 57.7	-0.1
	baz=176						
HGSD	**Ruisui**	**0.59**	**50**	*e*P	Pb	22 38 51.6	-0.3
	baz=50						
HGSD				*e*S	Sb	22 39 00.7	+0.5
	baz=50						
VWDT	**VWDT**	**0.67**	**17**	*e*P	Pb	22 38 53.0	-0.1
	baz=17						

TAP 28 22:38:43.7, 23.06N×120.94E, h10km, ML1.2, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ELDTW	**Lidau**	**0.14**	**29**	⇑*i* P	Pg	22 38 47.7	+0.6
	baz=31						
ELDTW				*i* S	Sg	22 38 50.9	+1.4
	baz=31						
STYT	**Tauyuan**	**0.20**	**301**	P	Pg	22 38 48.6	+0.7
	baz=301						
STYT				S	Sg	22 38 51.9	+1.1
	baz=301						
TWG	**Pinlang**	**0.27**	**153**	*e*P	Pg	22 38 49.9	+0.7
	baz=152						
TWG				*e*S	Sb	22 38 54.9	-0.4
	baz=152						
SGST	**Jiashian**	**0.33**	**274**	*e*P	Pg	22 38 50.9	+0.5
	baz=273						
SGST				*e*S	Sb	22 38 56.2	-0.9
	baz=273						
FULB	**Fuli**	**0.35**	**67**	*i* P	Pb	22 38 51.8	-0.3
	baz=67						
FULB				S	Sb	22 38 57.6	-0.2
	baz=67						
FULB	**Fuli**	**0.35**	**67**	*e*S	Pb	22 38 51.8	-0.3
	baz=75						
WTP	**Ta-pu**	**0.35**	**301**	P	Pb	22 38 51.6	-0.6
	baz=301						
WTP				S	Sb	22 38 57.6	-0.3
	baz=301						
WTP	**Ta-pu**	**0.35**	**301**	S	Pb	22 38 51.6	-0.6
	baz=295						
TTN	**Taitung**	**0.36**	**148**	*e*P	Pb	22 38 51.8	-0.4
	baz=147						
TTN				*e*S	Sb	22 38 58.3	+0.4
	baz=147						
TPUB	**Ta-pu**	**0.37**	**310**	P	Pb	22 38 52.1	-0.4
	baz=309						
TPUB				S	Sb	22 38 58.4	0.0
	baz=309						
TPUB	**Ta-pu**	**0.37**	**310**	S	Pb	22 38 52.1	-0.3
	baz=304						
CHKT	**Chengkung**	**0.39**	**84**	*e*P	Pb	22 38 52.6	-0.2
	baz=84						
CHKT				*e*S	Sb	22 38 59.4	+0.5
	baz=84						
CHN1	**Nanshi**	**0.40**	**288**	P	Pb	22 38 52.9	0.0
	baz=287						
CHN1				S	Sb	22 38 59.3	+0.1
	baz=287						
SSD	**Sandimen**	**0.42**	**222**	*e*P	Pb	22 38 52.9	-0.4
	baz=221						
SSD				*e*S	Sb	22 38 59.5	-0.3
	baz=221						
YUS	**Yu-Shan**	**0.42**	**1**	P	Pb	22 38 53.0	-0.6
	baz=1.0						
YUS				S	Sb	22 38 59.6	-0.7
	baz=1.0						
YUS	**Yu-Shan**	**0.42**	**1**	S	Pb	22 38 53.2	-0.5
	baz=3.0						
CHN4	**Tsaushan**	**0.43**	**312**	P	Pb	22 38 53.4	-0.1
	baz=311						
CHN4				S	Sb	22 38 59.8	-0.3
	baz=311						
TWF1	**Yuli**	**0.44**	**48**	P	Pb	22 38 53.2	-0.4
	baz=49						
TWF1				S	Sb	22 39 00.5	+0.3
	baz=49						
ECL	**Taimali**	**0.46**	**179**	*e*S	Sb	22 39 01.2	+0.3
	baz=177						
ALS	**Alishan**	**0.46**	**344**	*e*S	Sb	22 39 01.1	-0.2
	baz=345						
YULB	**Yu-li**	**0.46**	**45**	P	Pg	22 38 53.4	+0.6
	baz=44						
YULB				S	Sb	22 39 00.2	-0.7
	baz=44						
CHN3	**Shinhua**	**0.53**	**272**	*e*P	Pb	22 38 54.8	-0.4
	baz=271						
SGLT	**Jiouru**	**0.53**	**231**	*e*P	Pb	22 38 55.0	-0.2
	baz=230						
SGLT				*e*S	Sb	22 39 03.4	+0.5
	baz=230						
EHY	**Hungye**	**0.56**	**38**	*e*P	Pb	22 38 56.0	+0.2
	baz=39						
EHY				*e*S	Sb	22 39 04.1	+0.3
	baz=39						
HGSD	**Ruisui**	**0.62**	**46**	*e*P	Pb	22 38 56.7	+0.1
	baz=45						
HGSD				S	Sb	22 39 05.8	+0.5
	baz=45						

*THE **28** 22:40:35.5, 38.21N×20.43E, h8km±1km, ML2.7/4, Error ellipse: s-maj=1.2km s-min=0.4km az=218.0*
*ATH **28** 22:40:35.6, 38.23N×20.43E, h4km±1km, ML2.8/1, Error ellipse: s-maj=2.1km s-min=1.2km az=267.0*
ISC 28 22:40:35.8±1.3, 38.22N±0.03×20.44E±0.04, h6km±7km, n13, σ0s51/25, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.06**	**140**	P	**Pg**	**22 40 37.2**	**-0.1**
ARG2				S	**Sg**	**22 40 38.5**	**+0.2**
	15μm,0.1s						
CHV1	**Chavriata, Kef**	**0.06**	**232**	P	**Pg**	**22 40 37.0**	**-0.3**
CHV1				S	**Sg**	**22 40 38.7**	**+0.3**
KEF1	**Kardakata, Kep**	**0.06**	**21**	P	**Pg**	**22 40 36.9**	**-0.5**
KEF1				S	**Sg**	**22 40 38.0**	**-0.5**
KEF2	**Argostoli. Kep**	**0.07**	**147**	P	**Pg**	**22 40 37.6**	**+0.1**
KEF2				S	**Sg**	**22 40 39.0**	**+0.4**
KEF3	**Kipouria, Keph**	**0.08**	**257**	P	**Pg**	**22 40 37.3**	**-0.3**
VLS	**Valsamata**	**0.12**	**110**	P	**Pg**	**22 40 38.2**	**-0.2**
VLS				S	**Sg**	**22 40 40.5**	**+0.4**
	8μm,0.2s						
VLS	**Valsamata**	**0.12**	**110**	P	**Pg**	**22 40 38.3**	**-0.2**
VLS				S	**Sg**	**22 40 40.6**	**+0.5**
VLS				AML	AML	22 40 40.7	
	comp=N,21227μm,0.3s						
VLS				AML	AML	22 40 41.1	
	comp=E,9306μm,0.1s						
FSK	**Fiskardo**	**0.26**	**22**	P	**Pg**	**22 40 40.9**	**0.0**
FSK				S	**Sg**	**22 40 45.0**	**+0.7**
FSK	**Fiskardo**	**0.26**	**22**	P	**Pg**	**22 40 40.6**	**-0.2**
FSK				S	**Sg**	**22 40 45.2**	**+0.9**
EVGI	**Lefkada island**	**0.43**	**23**	P	**Pg**	**22 40 43.8**	**-0.4**
EVGI				S	**Sg**	**22 40 50.8**	**+0.9**
RLS	**Riolos of Patr**	**0.82**	**101**	P	**Pg**	**22 40 51.3**	**-0.4**
RLS				S	**Sb**	**22 41 03.9**	**-0.1**
PVO	**Paravola**	**0.94**	**65**	P	**Pg**	**22 40 53.5**	**-0.4**
PVO				S	**Sb**	**22 41 07.2**	**-0.1**
	comp=E,450nm,0.6s						
LAKA	**Lakka**	**1.21**	**89**	P	**Pg**	**22 40 57.9**	**-1.1**
LAKA				S	**Sn**	**22 41 16.3**	**+0.2**
	comp=E,188nm,0.5s						

*KLM **28** 22:45:41.0, 0.23N×121.40E, h62km, mb4.7*
*BJI **28** 22:45:49.7±0.0, 0.27N×120.33E, h89km, mB4.9/17, mb4.5/32, Ms4.6/14, Ms7 4.3/13*
*IDC **28** 22:45:49.1±0.7, 0.53N×120.63E, h75km±6km, mb4.1/16, mb1 4.3/18, mb1mx4.0/44, mbtmp4.4/18, MS3.1/2, Ms1 3.1/2, ms1mx2.7/36, Error ellipse: s-maj=16.6km s-min=9.4km az=67.0*
*NEIC **28** 22:45:50.6±2.1, 0.48N±0.07×120.50E±0.07, h91km±7km, mb4.7/45, Error ellipse: s-maj=11.8km s-min=8.7km az=216.0*
*DJA **28** 22:45:50.3±0.2, 1.1°N±2°×12°0E±°, h46km±4km, M4.8/16, mB5.3/5, mb4.9/11, MLv4.9/16, MLv4.6/3, Mw(mB)4.7/5*
ISC 28 22:45:47.6±0.3, 0.52N±0.04×120.58E±0.04, h55km, n144, σ2s12/154, mb4.7/39, MS3.9/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MPSI	**Mapaga**	**0.71**	**255**	P	**Pn**	**22 46 04.1**	**+2.4**
MPSI				S	**Sn**	**22 46 14.4**	**+2.5**
MRSI	**Marisa**	**1.36**	**92**	P	**Pn**	**22 46 14.0**	**+3.7**
MRSI				S	**Sn**	**22 46 32.5**	**+5.1**
APSI	**Ampana**	**1.78**	**143**	P	Pn	22 46 20.6	+4.5
APSI				S	**Sn**	**22 46 46.1**	**+8.5**
LUWI	**Luwuk**	**2.69**	**125**	P	**Pn**	**22 46 32.7**	**+4.2**
LUWI				S	**Sn**	**22 47 05.2**	**+5.4**
LUWI	**Luwuk**	**2.69**	**125**		**Pn**	**22 46 32.6**	**+4.1**
KMSI	**Cibinong**	**3.40**	**89**	P	Pn	22 46 43.4	+5.2
KMSI				S	**Sn**	**22 47 22.9**	**+5.5**
SMKI	**Samarinda**	**3.51**	**254**	P	**Pn**	**22 46 41.6**	**+1.9**
SMKI				S	**Sn**	**22 47 20.8**	**+0.8**
TTSI	**Tana Toraja**	**3.63**	**192**	P	**Pn**	**22 46 41.9**	**+0.6**
BKB	**Balikpapan**	**4.09**	**244**	P	**Pn**	**22 46 48.4**	**+0.8**
BKB	**Balikpapan**	**4.09**	**244**		**Pn**	**22 46 49.0**	**+1.3**
BKB					**Sn**	**22 47 29.0**	**-5.3**
SPSI	**Sidrap Palu**	**4.53**	**190**	P	**Pn**	**22 46 56.4**	**+2.6**
KDI	**Kendari**	**4.90**	**155**	P	**Pn**	**22 47 01.6**	**+2.8**
BNSI	**Bone**	**4.92**	**186**	P	**Pn**	**22 47 02.1**	**+3.1**
KAPI	**Kappang**	**5.56**	**189**	P	**Pn**	**22 47 10.8**	**+2.9**
	11nm,0.3s,baz=338,slow=7.7,SNR=20						
KAPI				S	**Sn**	**22 48 11.8**	**+1.3**
	4.6nm,0.3s,baz=244,slow=23,SNR=3.9						
KAPI	**Kappang**	**5.56**	**189**		**Pn**	**22 47 10.4**	**+2.5**
KAPI					**Sn**	**22 48 10.5**	**0.0**
KBKI	**Kotabaru**	**5.82**	**229**	P	**Pn**	**22 47 12.4**	**+1.0**
BKSI	**Bulukumba**	**5.83**	**184**	P	**Pn**	**22 47 14.2**	**+2.7**
	0.2nm52nm,0.7s						
SPMM	**Sapulut**	**5.84**	**315**	P	**Pn**	**22 47 14.0**	**+2.2**
SANI	**Sanana**	**5.98**	**115**	P	**Pn**	**22 47 14.7**	**+1.1**
	0.4nm0.4nm28nm,1.0s						
KKM	**Kota Kinabalu**	**7.00**	**322**		**Pn**	**22 47 29.9**	**+2.1**
SKMP	**Bagumbayan, Su**	**7.15**	**33**	*e*P	**Pn**	**22 47 28.3**	**-1.4**
SKMP				*e*S	**Sn**	**22 48 44.3**	**-5.2**
PAGZ	**Pagadian**	**7.79**	**21**	*e*P	**Pn**	**22 47 38.1**	**-0.4**
PAGZ				*e*S	**Sn**	**22 49 03.9**	**-1.5**
DAV	**Davao City (W)**	**8.19**	**37**	S	**Sn**	**22 49 16.3**	**+1.1**
	66nm,0.3s,baz=255,slow=21,SNR=2.3						
DAV				LR	LR	22 51 01.4	
	comp=Z,95nm,21.3s,baz=165,slow=38						
SBUM	**Sibu**	**8.57**	**283**		**Pn**	**22 47 50.9**	**+1.7**
SBUM				Sn	**Sn**	**22 49 22.5**	**-2.0**
KSM	**Kuching**	**10.31**	**275**		**Pn**	**22 48 16.0**	**+3.0**
KSM	**Kuching**	**10.31**	**275**	P	**Pn**	**22 48 16.0**	**+3.0**
KPJI	**Karang Pucung**	**14.00**	**236**	P	**P**	**22 49 07.1**	**-2.5**
	54nm,0.9s						
CMJI	**Cimerak**	**14.64**	**235**	P	**P**	**22 49 15.2**	**-1.6**
	91nm,1.1s						
CISI	**Cisompet, Garu**	**15.05**	**238**	P	**Pn**	**22 49 17.8**	**+0.6**
CNJI	**Cibinong**	**15.51**	**240**	P	**P**	**22 49 27.2**	**+0.8**
	1μm124nm,1.1s						
KLSI		**16.66**	**252**	P	**P**	**22 49 40.7**	**+1.5**
	20nm,1.1s						
MYKOM	**Kota Tinggi**	**16.77**	**274**	P	**P**	**22 49 41.0**	**+0.6**
MTN	**Manton Dam**	**16.91**	**142**	P	**P**	**22 49 42.6**	**+0.7**
	baz=17,SNR=35						
MTN	**Manton Dam**	**16.91**	**142**	P	**P**	**22 49 42.8**	**+0.9**
MTN				IAmb	IAmb	22 49 45.4	
	comp=Z,51nm,1.1s						
MDSI	**Maura Dua**	**17.12**	**253**	P	**P**	**22 49 45.7**	**+1.4**
	comp=Z,27nm,1.0s						
KASI	**Kota Agung**	**17.15**	**249**	P	**P**	**22 49 48.8**	**+4.2**
	comp=Z,58nm,0.8s						
LWLI	**Liwa**	**17.40**	**251**	P	P	22 49 57.0	+10
KDU	**Kakadu**	**17.65**	**138**	P	**P**	**22 49 50.4**	**+0.3**
	baz=18,SNR=12						
KNRA	**Kununurra**	**18.01**	**154**	P	**Pn**	**22 49 55.2**	**+1.0**
	baz=18,SNR=14						
KNRA	**Kununurra**	**18.01**	**154**	P	**Pn**	**22 49 53.9**	**-0.3**
KNRA				IAmb	IAmb	22 50 11.7	
	comp=Z,37nm,0.9s						
MNAI	**Manna**	**18.27**	**254**	P	**Pn**	**22 49 58.9**	**+1.5**
JRMM	**Jerantut**	**18.39**	**281**	P	**Pn**	**22 50 01.0**	**+2.1**
FITZ	**Fitzroy Crossi**	**19.16**	**165**	P	**Pn**	**22 50 07.5**	**-0.6**
	baz=19,SNR=23						
FITZ	**Fitzroy Crossi**	**19.16**	**165**	P	**Pn**	**22 50 07.5**	**-0.6**
	comp=Z,21nm,0.3s,baz=1.1,slow=7.0,SNR=42						
FITZ	**Fitzroy Crossi**	**19.16**	**165**	P	**Pn**	**22 50 07.8**	**-0.3**
FITZ				IAmb	IAmb	22 50 08.3	
	comp=Z,23nm,0.8s						
SDSI	**Sungai Dareh**	**19.20**	**266**	P	**Pn**	**22 50 14.7**	**+6.1**
KRJI	**Kerinci**	**19.29**	**262**	P	**Pn**	**22 50 10.8**	**+1.0**
	comp=Z,197nm,0.8s						
IPM	**Ipoh**	**19.92**	**282**	P	**P**	**22 50 15.6**	**+0.5**
IPM				IAmb	IAmb	22 50 17.3	
	comp=Z,46nm,0.9s						
PDSI	**Padang**	**20.17**	**266**	P	Pn	22 50 19.2	-0.9
	comp=Z,18nm,0.6s						
KULM	**Kulim**	**20.45**	**284**	P	**P**	**22 50 21.4**	**+0.6**
KULM				IAmb	IAmb	22 50 22.4	
	comp=Z,43nm,0.9s						
KULM	**Kulim**	**20.45**	**284**	P	Pn	22 50 22.0	-1.4
UBPT	**Khong Chiam**	**20.92**	**315**	P	**P**	**22 50 26.7**	**+0.9**
QIZ	**Qiongzhong**	**21.19**	**331**	P	**P**	**22 50 31.3**	**+2.6**
QIZ

baz=27,SNR=5.3
COEN Coen 26.61 124 P **P** 22 51 19.4 -1.7
COEN IAmb IAmb 22 51 20.7
comp=Z,14nm,1.1s
ASAR Alice Springs 27.31 153 P **P** 22 51 26.9 -0.6
comp=Z,6.2nm,0.6s,baz=327,slow=7.2,SNR=44
ASAR PcP **PcP** 22 54 43.9 -2.1
comp=Z,1.2nm,0.4s,baz=345,slow=2.2,SNR=7.8
ASAR ScP **ScP** 22 58 15.9 -6.1
comp=Z,0.7nm,0.8s,baz=350,slow=4.7,SNR=4.2
ASAR LR LR 23 03 03.6
comp=Z,50nm,18.7s,baz=284,slow=38
ASAR Alice Springs 27.31 153 P **P** 22 51 27.2 -0.2
CMAR Chiang Mai Arr 27.73 311 P **P** 22 51 31.6 +0.4
comp=Z,3.2nm,0.9s,baz=137,slow=6.9,SNR=22
CMAR ScP **ScP** 22 58 18.8 -4.5
comp=Z,0.4nm,0.4s,baz=146,slow=1.8,SNR=3.5
CHTO Chiang Mai 27.95 312 P **P** 22 51 32.0 -1.1
QIS Mount Isa 28.03 139 P **P** 22 51 33.5 -0.3
baz=28,SNR=4.7
MORW Morawa 29.74 188 P **P** 22 51 47.9 -1.1
baz=30,SNR=3.9
MORW Morawa 29.74 188 P **P** 22 51 47.6 -1.3
MORW IAmb IAmb 22 51 53.6
comp=Z,22nm,1.2s
MTSU Mount Surprise 29.81 130 P **P** 22 51 50.2 +0.4
baz=30,SNR=10
WHN Wuhan 30.44 349 P P 22 52 02.0 +7.0
BLDU Ballidu 31.18 186 P **P** 22 52 00.0 -1.6
baz=31,SNR=5.7
NJ2 Nanjing 31.40 357 *e*P **P** 22 52 06.3 +2.8
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
KRVT Keravat (AS076 31.78 99 P **P** 22 52 06.5 -0.7
baz=261,slow=13
FORT Forrest 31.93 168 P **P** 22 52 07.6 -0.6
NWAO Narrogin (SRO) 33.42 185 P **P** 22 52 20.4 -0.9
baz=34,SNR=5.3
NWAO Narrogin (SRO) 33.42 185 P **P** 22 52 19.4 -1.8
NWAO IAmb IAmb 22 52 28.3
comp=Z,21nm,1.2s
NWAO Narrogin (SRO) 33.42 185 P **P** 22 52 19.8 -1.5
NWAO IAmb IAmb 22 52 36.1
comp=Z,31nm,1.3s
JCJ Chichijima 33.60 36 P **P** 22 52 20.8 -2.0
comp=Z,50nm,0.7s,baz=218,slow=17,SNR=2.9
QLP Quilpie 35.30 142 P **P** 22 52 38.4 +0.8
baz=35,SNR=4.9
BBOO Buckleboo 36.23 158 P **P** 22 52 44.6 -0.8
baz=36,SNR=9.8
BBOO Buckleboo 36.23 158 P **P** 22 52 44.2 -1.3
SHL Shillong 37.24 314 IAmb IAmb 22 52 55.2
comp=Z,8.4nm,0.8s
STKA Stephens Creek 37.87 150 P **P** 22 52 59.1 -0.3
baz=38,SNR=20
STKA Stephens Creek 37.87 150 P **P** 22 52 59.4 -0.1
comp=Z,9.4nm,0.6s,baz=324,slow=9.9,SNR=26
STKA Stephens Creek 37.87 150 IAmb IAmb 22 53 00.0
comp=Z,7.4nm,1.4s
HTT Hallett 37.93 155 P **P** 22 52 59.9 -0.1
baz=38,SNR=21
LZH Lanzhou 38.65 338 *e*P **P** 22 53 06.3 +0.2
LZH pP sP 22 53 29.0 +2.3
LZH sP pP 22 53 40.5 +20
LZH *e*PP **PnPn** 22 54 41.5 +3.5
LZH pmax pmax
comp=Z,16nm,1.2s
LZH pmax pmax
comp=Z,65nm,5.3s
MJAR Matsushiro Arr 39.39 23 P **P** 22 53 11.2 -0.9
comp=Z,1.7nm,0.3s,baz=110,slow=19,SNR=4.9
BJI Beijing 39.53 355 *e*P **P** 22 53 15.8 +2.6
BJI pmax pmax
comp=Z,3.0nm,0.6s
CMSA Cobar Meteorol 39.79 146 P **P** 22 53 15.8 +0.3
baz=40,SNR=21
LSA Lhasa 40.34 319 P **P** 22 53 22.0 +1.4
LSA pmax pmax
comp=Z,36nm,0.6s
LSA Lhasa 40.34 319 P **P** 22 53 21.4 +0.8
LSA IAmb IAmb 22 53 23.0
comp=Z,7.2nm,0.6s
HHC Hu-ho-hao-te 40.96 350 *e*P **P** 22 53 28.5 +3.3
HHC S **S** 22 59 35.0 +1.6
HHC pmax pmax
comp=Z,54nm,6.4s
HHC LR LR
comp=Z,240nm,19.1s
HHC LR LR
comp=Z,210nm,17.2s
HHC LR LR
comp=Z,260nm,13.2s
ODAN Odare 41.27 312 *e*P **P** 22 53 28.6 +0.6
comp=Z,36nm,0.9s
TAPN Taplejung 41.31 313 *e*P **P** 22 53 29.1 +0.7
comp=Z,16nm,0.5s
JIRN Jiri 42.60 312 *e*P **P** 22 53 39.5 +0.4
comp=Z,49nm,0.6s
ARMA Armidale 42.66 139 P **P** 22 53 40.4 +1.3
baz=43,SNR=7.3
ARMA Armidale 42.66 139 P **P** 22 53 40.7 +1.5
ARMA IAmb IAmb 22 53 41.3
comp=Z,12nm,0.8s
GUN Gumba 42.96 312 *e*P **P** 22 53 42.5 +0.5
comp=Z,53nm,0.8s
PKI Pulchoki 43.13 312 *e*P **P** 22 53 43.3 0.0
comp=Z,22nm,0.8s
PKIN Phulchoki 43.14 312 *e*P **P** 22 53 43.4 0.0
comp=Z,13nm,0.7s
KKN Kakani 43.34 312 *e*P **P** 22 53 45.3 +0.4
comp=Z,26nm,0.8s
DMN Daman 43.38 311 *e*P **P** 22 53 45.6 +0.4
comp=Z,18nm,0.5s
GKN Gorkha 43.94 312 *e*P **P** 22 53 49.7 +0.1
comp=Z,37nm,0.6s
CAN Canberra 44.44 146 P **P** 22 53 54.3 +0.9
KOLN Koldanda 44.60 311 *e*P **P** 22 53 55.4 +0.4
comp=Z,29nm,0.5s
DANN Dangsing 44.78 311 *e*P **P** 22 53 56.7 +0.2
comp=Z,48nm,0.6s
ULN Ulaanbaatar 48.60 348 P **P** 22 54 27.0 +1.1
SONM Songino Array 48.71 347 P **P** 22 54 26.6 -0.1
comp=Z,1.2nm,0.7s,baz=176,slow=8.0,SNR=6.6
SONM Songino Array 48.71 347 IAmb IAmb 22 54 28.2
comp=Z,1.2nm,0.8s
DZM Mont Dzumac 50.02 120 P **P** 22 54 37.2 +0.1
comp=Z,8.0nm,0.7s,baz=116,slow=7.9,SNR=4.8
WMQ Urumqi 52.11 330 *e*P **P** 22 54 53.8 +1.4
WMQ pmax pmax
comp=Z,9.0nm,1.1s
WMQ pmax pmax
comp=Z,140nm,4.5s
NIL Nilore 55.22 312 P **P** 22 55 15.0 -0.3
NIL IAmb IAmb 22 55 15.3
comp=Z,6.7nm,0.6s
KSH Kashi 56.19 319 P **P** 22 55 23.8 +1.5
KSH pP sP 22 55 44.5 +0.8
KSH S **S** **23 03 09.8 +1.9**
KSH sS sS 23 03 44.3 +13
KSH SS **SS** **23 06 57.5 +2.2**
KSH pmax pmax
comp=Z,17nm,1.1s
KSH LR LR
comp=Z,190nm,5.4s
KSH LR LR
comp=Z,180nm,4.2s
KSH LR LR
comp=Z,480nm,8.4s
MK31 Makanchi Array 56.92 329 IAmb IAmb 22 55 28.4
comp=Z,3.8nm,0.9s
MKAR Makanchi Array 56.92 329 P **P** 22 55 27.6 +0.4
comp=Z,7.4nm,1.0s,baz=129,slow=8.3,SNR=42
MKAR pP **sP** 22 55 46.4 -2.3
comp=Z,1.8nm,0.6s,baz=132,slow=7.6,SNR=5.7
MAKZ Makanchi 57.09 329 P **P** 22 55 28.0 -0.3
MAKZ IAmb IAmb 22 55 29.0
comp=Z,2.9nm,0.7s
NRN Naryn 57.21 321 P **P** 22 55 28.1 -1.6
KBL Kabul 58.76 311 P **P** 22 55 39.5 -1.1
AAK Ala-Archa 58.81 322 P **P** 22 55 40.4 -0.3
AAK IAmb IAmb 22 55 42.3
comp=Z,3.2nm,0.8s
ZAA0 Zalesovo Array 60.86 337 P **P** 22 55 53.4 -0.9
ZAA0 IAmb IAmb 22 55 54.5
comp=Z,3.6nm,0.8s
ZALV Zalesovo Beam 60.86 337 P **P** 22 55 53.6 -0.6
comp=Z,2.6nm,0.7s,baz=123,slow=5.5,SNR=12

KURK Kurchatov 61.33 331 P **P** 22 55 56.5 -1.0
KURK IAmb IAmb 22 55 58.5
comp=Z,9.7nm,0.8s
RPZ Rata Peaks 62.92 141 P **P** 22 56 08.0 -0.4
comp=Z,16nm,0.8s,baz=272,slow=2.3,SNR=7.6
RPZ Rata Peaks 62.92 141 IAmb IAmb 22 56 08.6
comp=Z,18nm,0.9s
BRVK Borovoye 66.87 330 P **P** 22 56 33.6 -0.3
BRVK IAmb IAmb 22 56 35.1
comp=Z,4.7nm,0.7s
GEYT Alibeck 68.21 311 P **P** 22 56 41.9 -0.9
comp=Z,1.3nm,0.7s,baz=168,slow=7.6,SNR=4.0
GEYT Alibeck 68.21 311 IAmb IAmb 22 56 43.5
comp=Z,1.8nm,1.1s
ABKAR Akbulak array 70.84 323 P **P** 22 56 57.4 -1.3
MAW Mawson 78.68 199 P **P** 22 57 43.4 -0.1
comp=Z,2.7nm,0.6s,baz=78,slow=9.3,SNR=3.3
KMBO Kilima Mbogo 83.34 269 P **P** 22 58 09.7 -0.1
comp=Z,1.8nm,0.9s,baz=76,slow=5.5,SNR=4.8
KMBO pP **sP** 22 58 28.9 -3.0
comp=Z,1.8nm,0.8s,baz=69,slow=2.7,SNR=3.6
BRTR Keskin Array B 87.31 310 P **P** 22 58 27.3 -1.7
comp=Z,0.6nm,0.6s,baz=116,slow=3.4,SNR=3.9
BRTR pP **pP** 22 58 47.6 +2.5
comp=Z,1.4nm,0.8s,baz=118,slow=4.1,SNR=5.6
ILAR Eielson Array 90.61 25 P **P** 22 58 41.5 -2.3
comp=Z,0.4nm,0.7s,baz=238,slow=5.7,SNR=5.2
TXAR Lajitas Array 128.39 51 PKP **PKPdf** 23 04 48.7 -0.3
comp=Z,0.5nm,0.7s,baz=201,slow=1.1,SNR=3.2
CPUP Villa Florida 154.26 184 PKPbc **PKPbc** 23 05 39.7 -2.8
comp=Z,1.1nm,0.5s,baz=194,slow=4.2,SNR=4.5

*IDC **28** 22:49:22.4±1.2,24.06S×175.97W,h0km,mb4.4/6, mb1 4.6/6,mb1mx4.0/37,mbtmp4.4/6,Error ellipse: s-maj=52.7km s-min=30.0km az=168.0*
ISC 28 22:49:27.2±1.2,24.1S±0.3×176.0W±0.2,h31km,n12, σ0.93/12,mb4.5/6,South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.15**	**269**	P	**P**	**22 56 18.6**	**+0.3**
	4.4nm,0.3s,baz=84,slow=10,SNR=7.5						
PMG	**Port Moresby**	**38.05**	**286**	P	**P**	**22 56 43.1**	**+0.1**
	19nm,0.8s,baz=103,slow=3.0,SNR=5.1						
ASAR	**Alice Springs**	**45.62**	**260**	P	**P**	**22 57 44.1**	**-0.9**
	0.7nm,0.4s,baz=88,slow=7.0,SNR=7.9						
ASAR				PcP	**PcP**	**22 59 23.7**	**+0.6**
	0.7nm,1.1s,baz=115,slow=4.2,SNR=3.5						
WRA	**Warramunga Arr**	**46.05**	**265**	P	**P**	**22 57 47.7**	**-0.7**
	3.1nm,0.7s,baz=104,slow=8.0,SNR=20						
ILAR	**Eielson Array**	**91.39**	**12**	P	**P**	**23 02 29.7**	**+0.2**
	0.2nm,0.7s,baz=224,slow=5.0,SNR=4.4						
CMAR	**Chiang Mai Arr**	**93.05**	**289**	P	**P**	**23 02 40.0**	**+1.7**
	3.0nm,0.8s,baz=136,slow=3.4,SNR=16						
MKAR	**Makanchi Array**	**114.98**	**312**	PKP	**PKPdf**	**23 08 03.7**	**-1.2**
	0.3nm,0.7s,baz=79,slow=3.1,SNR=3.6						
BVAR	**Borovoye Array**	**123.00**	**319**	PKP	**PKiKP**	**23 08 19.9**	**-0.4**
	0.8nm,0.6s,baz=104,slow=1.5,SNR=6.2						
HFS	**Hagfors**	**143.34**	**352**	PKhKP	PKPpre	23 08 54.5	
	1.7nm,0.7s,baz=318,slow=1.9,SNR=4.9						
AKASG	**Malin Array Be**	**147.03**	**330**	PKPbc	**PKPbc**	**23 09 05.6**	**-1.0**
	3.4nm,0.5s,baz=44,slow=3.9,SNR=2.1						
BRTR	**Keskin Array B**	**150.58**	**309**	PKPbc	**PKPbc**	**23 09 16.0**	**-0.3**
	1.0nm,0.9s,baz=338,slow=3.1,SNR=4.1						
TORD	**Torodi Ar. Bea**	**168.91**	**168**	PKPab	**PKPab**	**23 10 43.1**	**+0.5**
	0.5nm,0.9s,baz=177,slow=5.5,SNR=3.7						

IDC 28 22:53:26.6±71.0,13.14S×167.12E,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.6/51,mbtmp3.9/3,Error ellipse: s-maj=1194.0km s-min=118.8km az=62.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**29.94**	**227**	P	P	22 59 36.6	0.0
	1.7nm,0.8s,baz=56,slow=8.6,SNR=4.8						
WRA	**Warramunga Arr**	**32.11**	**253**	P	P	22 59 56.1	+0.1
	0.6nm,0.7s,baz=83,slow=8.4,SNR=2.3						
ASAR	**Alice Springs**	**33.13**	**247**	P	P	23 00 04.7	-0.2
	0.3nm,0.3s,baz=74,slow=9.8,SNR=5.6						

*LJU **28** 22:55:50.8,46.39N×15.07E,h0km Rockburst*
VIE 28 22:55:51.6±0.7,46.41N×15.04E,h0km,ml0.7/2,Error ellipse: s-maj=4.9km s-min=2.0km az=129.0 26 km NW of Celje Suspected Mining induced.,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOKA	**Soboth**	**0.27**	**359**	Pg	Pg	22 55 56.3	-0.5
	1.3nm,0.2s						
SOKA				*i* Sg	Sg	22 56 00.7	+0.4
	4.5nm,0.5s						
OBKA	**Obir**	**0.35**	**287**	*i* Pg	Pg	22 55 58.6	+0.2
	0.9nm,0.3s						
OBKA	**Obir**	**0.35**	**287**	x	Sg	22 56 04.5	+1.5
	4.5nm,0.4s						

KRNET 28 22:58:41.0±0.1,44.00N×78.01E,h17km,mb2.0,8C,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANVS	**Anan'yevo**	**1.24**	**192**	↑*i* P	Pg	22 59 04.7	-0.2
	baz=92						
ANVS				↑*i* S	Sg	22 59 21.6	+0.4
	baz=92						
PRZ	**Przheval'sk**	**1.54**	**169**	↑*i* P	Pg	22 59 10.0	-0.7
	baz=69						
PRZ				↑*i* S	Sg	22 59 31.1	+0.3
	baz=69						
KDJ	**Kajisay**	**1.96**	**198**	↑*i* P	Pb	22 59 17.3	+0.9
	baz=98						
KDJ				↑*i* S	Sg	22 59 44.0	-0.2
	baz=98						
NRN	**Naryn**	**2.96**	**211**	↑*i* P	Pb	22 59 31.4	-2.0
	baz=11						
NRN				↑*i* S	Sb	23 00 08.6	-0.8
	baz=11						

*NNC **28** 22:59:03.8±0.5,43.26N×78.13E,h0km±5km,mb2.5, mpv2.6,Error ellipse: s-maj=6.2km s-min=3.0km az=174.0*
SOME 28 22:59:04.2,43.25N×78.12E,h10km,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZHN	**Zhinishke**	**0.25**	**109**	*e*P	Pg	22 59 09.0	-0.3
	2.6nm,0.1s						
ZHN				*e*S	Sg	22 59 12.5	-0.2
	5.7nm,0.1s						
ZHN	**Zhinishke**	**0.25**	**109**	P	Pg	22 59 09.0	-0.3
	2.6nm,0.1s						
ZHN				S	Sg	22 59 12.5	-0.2
	5.7nm,0.1s						
SATY	**Saty**	**0.28**	**132**	*e*P	Pg	22 59 09.9	-0.1
	5.8nm,0.1s						
SATY				*e*S	Sg	22 59 14.1	+0.2
	56nm,0.1s						
SATY	**Saty**	**0.28**	**132**	P	Pg	22 59 09.9	-0.1
	5.8nm,0.1s						
SATY				S	Sg	22 59 14.1	+0.2
	56nm,0.1s						
KPKS	**Kokpek**	**0.47**	**62**	*e*P	Pg	22 59 13.0	-0.4
	4.6nm,0.1s						
KPKS				*e*S	Sg	22 59 19.2	-0.3
	11nm,0.3s						
UZB	**Uzynbulak**	**0.67**	**99**	*e*P	Pg	22 59 16.6	-0.6
	4.6nm,0.1s						
UZB				*e*S	Sg	22 59 25.6	-0.4
	3.9nm,0.1s						
UZB	**Uzynbulak**	**0.67**	**99**	P	Pg	22 59 16.6	-0.6
	4.6nm,0.1s						
UZB				S	Sg	22 59 25.6	-0.4
	3.9nm,0.1s						
KOTS	**Kotyrbulak**	**0.73**	**269**	*e*P	Pg	22 59 18.0	-0.4
	1.8nm,0.2s						
KOTS				*e*S	Sg	22 59 27.9	-0.1
	3.7nm,0.3s						
KOTS	**Kotyrbulak**	**0.73**	**269**	P	Pg	22 59 18.1	-0.4
	2.2nm,0.1s						
KOTS				S	Sg	22 59 27.9	-0.1

3.5nm,0.4s
PDGK Podgornoye 1.01 85 P Pg 22 59 22.7 -0.8
0.3nm,0.1s
PDGK S Sg 22 59 36.0 -0.7
0.4nm,0.1s
DGS Degeres 1.71 271 *e*P Pb 22 59 35.9 0.0
0.7nm,0.3s
DGS *e*S Sg 22 59 58.9 -0.4
1.7nm,0.5s
DGS Degeres 1.71 271 P Pb 22 59 35.8 0.0
0.6nm,0.2s
DGS S Sg 22 59 58.9 -0.4
1.6nm,0.3s

*ATH **28** 23:01:34.1,35.21N×23.15E,h39km±2km,ML3.5/6,Error ellipse: s-maj=7.2km s-min=1.8km az=51.0*
*THE **28** 23:01:35.6,35.21N×23.17E,h39km±2km,ML3.5/5,Error ellipse: s-maj=2.2km s-min=0.7km az=99.0*
*IDC **28** 23:01:36.1±1.6,35.35N×23.16E,h68km±16km,mb3.5/13, mb1 3.6/17,mb1mx3.4/68,mbtmp3.8/17,Error ellipse: s-maj=17.5km s-min=15.2km az=179.0*
ISC 28 23:01:32.8±1.1,35.17N±0.06×23.14E±0.05,h46km±10km, n46,σ2.28/56,mb3.7/13,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDR	**Palaiochora Ch**	**0.45**	**82**	P	**Pn**	**23 01 44.2**	**+0.9**
KNDR				S	**Sn**	**23 01 51.3**	**+0.6**
	6μm,0.5s						
ANKY	**Antikythira Is**	**0.71**	**11**	P	**Pn**	**23 01 47.9**	**+1.3**
ANKY	**Antikythira Is**	**0.71**	**11**	P	**Pn**	**23 01 48.1**	**+1.5**
ANKY				S	**Sn**	**23 01 58.0**	**+1.5**
ANKY				AML	AML	23 02 00.9	
	comp=N,6486μm,0.6s						
ANKY				AML	AML	23 02 04.5	
	comp=E,6287μm,0.7s						
IMMV	**Iera Moni Meta**	**0.75**	**67**	P	**Pn**	**23 01 48.6**	**+1.5**
IMMV				S	**Sn**	**23 01 58.9**	**+1.5**
	comp=E,4μm,0.6s						
IMMV	**Iera Moni Meta**	**0.75**	**67**	P	**Pn**	**23 01 48.5**	**+1.5**
IMMV				AML	AML	23 02 01.2	
	comp=N,8980μm,0.8s						
IMMV				AML	AML	23 02 02.8	
	comp=E,8548μm,0.5s						
CHAN	**Chania**	**0.82**	**65**	P	**Pn**	**23 01 49.8**	**+1.8**
CHAN				S	**Sn**	**23 02 00.6**	**+1.6**
	comp=E,2μm,0.6s						
GVD	**Gavdhos**	**0.84**	**113**	P	**Pn**	**23 01 50.5**	**+2.1**
GVD	**Gavdhos**	**0.84**	**113**	P	**Pn**	**23 01 50.8**	**+2.4**
GVD				AML	AML	23 02 12.1	
	comp=E,4242μm,0.3s						
GVD				AML	AML	23 02 15.0	
	comp=N,7660μm,0.4s						
VAM	**Vamos**	**0.90**	**74**	P	**Pn**	**23 01 51.2**	**+2.1**
VAM				S	**Sn**	**23 02 02.9**	**+1.9**
	comp=N,4μm,0.8s						
VAM	**Vamos**	**0.90**	**74**	P	**Pn**	**23 01 51.3**	**+2.1**
VAM				AML	AML	23 02 05.5	
	comp=E,6140μm,0.6s						
VAM				AML	AML	23 02 07.1	
	comp=N,11307μm,0.9s						
KTHA	**Kythira Island**	**1.09**	**357**	P	**Pn**	**23 01 53.8**	**+2.1**
KTHA				S	**Sn**	**23 02 07.4**	**+1.8**
	comp=N,1μm,0.7s						
KTHA	**Kythira Island**	**1.09**	**357**	P	**Pn**	**23 01 54.0**	**+2.3**
KTHA				AML	AML	23 02 15.7	
	comp=E,3434μm,0.7s						
KTHA				AML	AML	23 02 22.3	
	comp=N,1642μm,0.7s						
KTHR	**Kythira**	**1.09**	**354**	P	**Pn**	**23 01 53.7**	**+1.9**
PRNS	**Prines Rethymn**	**1.13**	**80**	P	**Pn**	**23 01 53.6**	**+1.4**
PRNS				S	**Sn**	**23 02 07.5**	**+0.9**
SIVA	**Sivas**	**1.38**	**96**	P	**Pn**	**23 01 58.1**	**+2.5**
SIVA	**Sivas**	**1.38**	**96**	P	**Pn**	**23 01 58.7**	**+3.1**
SIVA				AML	AML	23 02 27.0	
	comp=N,2754μm,0.7s						
SIVA				AML	AML	23 02 29.6	
	comp=E,3925μm,0.6s						
IDI	**Anoyia**	**1.44**	**85**	P	**Pn**	**23 01 59.1**	**+2.6**
	comp=E,9.2nm,0.3s,baz=280,slow=17,SNR=32						
IDI				S	**Sn**	**23 02 18.0**	**+3.7**
	comp=E,16nm,0.3s,baz=308,slow=20,SNR=11						
IDI	**Anoyia**	**1.44**	**85**	P	**Pn**	**23 01 58.9**	**+2.4**
VLI	**Veliai**	**1.55**	**354**	P	**Pn**	**23 02 00.2**	**+2.2**
VLI	**Veliai**	**1.55**	**354**	P	**Pn**	**23 02 00.4**	**+2.4**
LAST	**Lasithi**	**1.92**	**90**	P	**Pn**	**23 02 06.3**	**+3.2**
NPS	**Neapolis**	**2.03**	**87**	P	**Pn**	**23 02 07.9**	**+3.3**
DID	**Didima**	**2.33**	**2**	P	**Pn**	**23 02 10.5**	**+1.8**
ZKR	**Zakros**	**2.52**	**90**	P	**Pn**	**23 02 13.6**	**+2.3**
VAE	**Valguarnera**	**7.41**	**291**	S	**Sn**	**23 04 36.8**	**-4.4**
	comp=E,1.4nm,0.3s,baz=258,slow=19,SNR=4.3						
BRTR	**Keskin Array B**	**9.50**	**58**	P	**Pn**	**23 03 48.4**	**+1.2**
	comp=E,0.1nm,0.3s,baz=233,slow=14,SNR=8.8						
MMAI	**Mount Meron Ar**	**10.39**	**98**	P	**Pn**	**23 03 57.3**	**-2.0**
	comp=E,1.0nm,0.3s,baz=276,slow=12,SNR=6.6						
MMAI				S	**Sn**	**23 05 46.0**	**-8.4**
	comp=E,1.2nm,0.3s,baz=278,slow=39,SNR=3.5						
MLR	**Muntele Rosu**	**10.53**	**11**	P	**Pn**	**23 04 01.2**	**+0.1**
	comp=E,0.1nm,0.3s,baz=230,slow=2.3,SNR=3.4						
EIL	**Elat**	**11.38**	**116**	P	**Pn**	**23 04 10.9**	**-2.0**
	comp=E,0.3nm,0.3s,baz=257,slow=5.5,SNR=15						
EIL				S	Sn	23 06 08.8	-10
	comp=E,0.6nm,0.3s,baz=166,slow=3.7,SNR=4.6						
VRAC	**Vranov**	**14.93**	**343**	P	**Pn**	**23 05 02.9**	**+2.2**
	comp=E,0.1nm,0.3s,baz=140,slow=16,SNR=3.5						
GERES	**GERESS Array B**	**15.34**	**336**	P	**Pn**	**23 05 05.2**	**-1.1**
	comp=E,0.1nm,0.3s,baz=158,slow=14,SNR=3.9						
AKASG	**Malin Array Be**	**16.14**	**14**	P	**Pn**	**23 05 13.7**	**-2.6**
	comp=E,1.2nm,0.3s,baz=207,slow=11,SNR=1.5						
HFS	**Hagfors**	**25.72**	**349**	P	P	**23 06 59.0**	**+0.5**
	comp=E,1.8nm,0.4s,baz=149,slow=12,SNR=15						
FINES	**FINESS Array B**	**26.36**	**3**	P	**P**	**23 07 03.1**	**-1.2**
	comp=E,1.1nm,0.5s,baz=165,slow=10,SNR=11						
NB2	**NORSAR Subarra**	**26.99**	**347**	P	**P**	**23 07 09.0**	**-1.1**
	comp=Z,3.3nm,1.4s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	**26.99**	**347**	P	**P**	**23 07 09.5**	**-0.6**
	comp=Z,1.4nm,0.9s,baz=157,slow=9.9,SNR=4.9						
EKA	**Eskdalemuir Ar**	**27.09**	**326**	P	**P**	**23 07 11.3**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=126,slow=8.1,SNR=2.9						
TORD	**Torodi Ar. Bea**	**29.26**	**227**	P	**P**	**23 07 33.0**	**+2.3**
	comp=Z,0.3nm,0.4s,baz=30,slow=9.1,SNR=5.5						
ARCES	**ARCESS Array B**	**34.44**	**1**	P	**P**	**23 08 15.5**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=180,slow=7.9,SNR=7.3						
BVAR	**Borovoye Array**	**37.54**	**47**	P	**P**	**23 08 41.4**	**-0.9**
	comp=Z,0.5nm,0.7s,baz=245,slow=6.4,SNR=4.1						
DBIC	**Dimbokro**	**38.30**	**229**	P	**P**	**23 08 50.7**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=0.0,slow=9.1,SNR=3.2						
KURBB	**Kurchatov Arra**	**42.40**	**51**	P	**P**	**23 09 22.2**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=276,slow=8.4,SNR=5.4						
MKAR	**Makanchi Array**	**45.15**	**56**	P	**P**	**23 09 44.9**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=267,slow=7.9,SNR=15						
MKAR				PcP	**PcP**	**23 11 26.1**	**+1.6**
	comp=Z,0.2nm,0.5s,baz=256,slow=5.0,SNR=2.6						
ZALV	**Zalesovo Beam**	**46.19**	**46**	P	**P**	**23 09 52.3**	**-0.5**
	comp=Z,1.1nm,0.4s,baz=266,slow=9.8,SNR=9.3						
SONM	**Songino Array**	**60.75**	**50**	P	**P**	**23 11 39.3**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=277,slow=8.9,SNR=3.8						
TIXI	**Tiksi**	**61.73**	**20**	P	**P**	**23 11 45.9**	**-0.1**
	comp=Z,1.1nm,0.3s,baz=326,slow=5.1,SNR=3.7						

*ATH **28** 23:12:30.6,38.29N×20.43E,h10km±2km,ML3.2/5,Error ellipse: s-maj=2.5km s-min=0.7km az=241.0*
*THE **28** 23:12:30.8,38.30N×20.45E,h7km±2km,ML3.2/3,Error ellipse: s-maj=2.4km s-min=0.3km az=232.0*
ISC 28 23:12:30.6±1.4,38.30N±0.02×20.43E±0.05,h9km±7km, n17,σ0.46/34,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF1	**Kardakata, Kep**	**0.04**	**123**	P	**Pg**	**23 12 32.2**	**-0.2**
KEF1				S	**Sg**	**23 12 33.4**	**-0.2**
KEF3	**Kipouria, Keph**	**0.12**	**216**	P	**Pg**	**23 12 33.3**	**-0.1**
KEF3				S	**Sg**	**23 12 35.7**	**+0.5**
CHV1	**Chavriata, Kef**	**0.12**	**200**	P	**Pg**	**23 12 33.4**	**0.0**
CHV1				S	**Sg**	**23 12 35.5**	**+0.1**
ARG2	**Argostoli**	**0.13**	**160**	P	**Pg**	**23 12 33.6**	**+0.1**
ARG2				S	**Sg**	**23 12 35.4**	**-0.1**
KEF2	**Argostoli. Kep**	**0.14**	**162**	P	**Pg**	**23 12 33.8**	**0.0**
KEF2				S	**Sg**	**23 12 36.4**	**+0.6**
VLS	**Valsamata**	**0.17**	**134**	P	**Pg**	**23 12 34.0**	**-0.3**
VLS				S	**Sg**	**23 12 36.8**	**0.0**
	17μm,0.2s						
VLS	**Valsamata**	**0.17**	**134**	P	**Pg**	**23 12 34.3**	**0.0**

VLS				S	**Sg**	**23 12 37.2 +0.4**			
VLS				AML	AML	23 12 37.3			
	comp=N,49429µm,0.3s								
VLS				AML	AML	23 12 38.0			
	comp=E,26358µm,0.1s								
FSK	**Fiskardo**	**0.19**	**32**	P	**Pg**	**23 12 34.6 0.0**			
FSK				S	**Sg**	**23 12 37.3 -0.1**			
	comp=E,7µm,0.2s								
FSK	**Fiskardo**	**0.19**	**32**	P	**Pg**	**23 12 34.7 0.0**			
FSK				S	**Sg**	**23 12 38.1 +0.8**			
KFL	**Anninata**	**0.34**	**124**	P	**Pg**	**23 12 37.2 -0.1**			
KFL				S	**Sg**	**23 12 41.6 -0.2**			
	comp=E,11µm,0.4s								
KFL	**Anninata**	**0.34**	**124**	P	**Pg**	**23 12 37.3 -0.1**			
KFL				S	**Sg**	**23 12 42.6 +0.8**			
KFL				AML	AML	23 12 43.1			
	comp=N,21902µm,0.4s								
KFL				AML	AML	23 12 43.4			
	comp=E,22244µm,0.4s								
EVGI	**Lefkada island**	**0.37**	**28**	P	**Pg**	**23 12 37.5 -0.4**			
EVGI				S	**Sg**	**23 12 43.2 +0.4**			
EVGI	**Lefkada island**	**0.37**	**28**	P	**Pg**	**23 12 37.8 -0.1**			
EVGI				S	**Sg**	**23 12 43.9 +1.1**			
MGNA	**Meganis**	**0.46**	**38**	P	**Pg**	**23 12 39.2 -0.4**			
MGNA				S	**Sg**	**23 12 46.4 +0.9**			
MGNA				AML	AML	23 12 46.7			
	comp=N,5892µm,0.3s								
MGNA				AML	AML	23 12 46.7			
	comp=E,8140µm,0.4s								
VLMS	**Volimes, Zakyn**	**0.46**	**157**	P	**Pg**	**23 12 39.6 0.0**			
VLMS				S	**Sg**	**23 12 45.9 +0.3**			
VLMS				AML	AML	23 12 48.5			
	comp=E,10856µm,0.2s								
VLMS				AML	AML	23 12 49.3			
	comp=N,13028µm,0.3s								
LKD2	**Lefkada island**	**0.52**	**20**	P	**Pg**	**23 12 40.3 -0.5**			
LKD2				S	**Sg**	**23 12 48.5 +0.9**			
TSLK	**Tsoukalades, L**	**0.56**	**18**	P	**Pg**	**23 12 41.0 -0.4**			
TSLK				S	**Sb**	**23 12 49.9 -0.7**			
TSLK				AML	AML	23 12 51.7			
	comp=E,1711µm,0.4s								
TSLK				AML	AML	23 12 52.2			
	comp=N,1836µm,0.4s								

ROM 28 23:13:43.6±0.0,43°439N±0′002×12°459E±0′003, h9km,ML2.0/24,Error ellipse: s-maj=0.2km s-min=0.1km az=181.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.04**	**286**	P	Pg	23 13 45.5	+0.1
ATPI				S	Sg	23 13 46.6	-0.2
ATPI				AML	AML		
	comp=E,6140µm,0.7s						
ATPI				AML	AML		
	comp=N,6675µm,0.5s						
ATVO	**AVT- Monte Val**	**0.07**	**214**	P	Pg	23 13 46.0	+0.4
ATVO				S	Sg	23 13 47.5	+0.3
ATVO				AML	AML		
	comp=E,4940µm,0.2s						
ATVO				AML	AML		
	comp=N,3905µm,1.4s						
ATFO	**Monte Foce - G**	**0.11**	**131**	P	Pg	23 13 46.7	+0.4
ATFO				S	Sg	23 13 48.9	+0.7
ATFO				AML	AML		
	comp=E,1800µm,0.2s						
ATFO				AML	AML		
	comp=N,1850µm,0.2s						
PIEI	**Pieia**	**0.11**	**30**	P	Pg	23 13 46.8	+0.5
PIEI				S	Sg	23 13 49.1	+0.9
PIEI				AML	AML		
	comp=E,4280µm,0.2s						
PIEI				AML	AML		
	comp=N,4455µm,0.2s						
CDCA	**Citt' di Caste**	**0.17**	**277**	P	Pg	23 13 47.8	+0.7
CDCA				S	Sg	23 13 50.8	+1.3
CDCA				AML	AML		
	comp=N,782µm,1.6s						
CDCA				AML	AML		
	comp=N,786µm,1.6s						
CDCA				AML	AML		
	comp=E,3750µm,1.6s						
CDCA				AML	AML		
	comp=N,3425µm,0.2s						
CDCA				AML	AML		
	comp=E,620µm,0.2s						
CDCA				AML	AML		
	comp=N,780µm,1.6s						
BADI	**Badiali**	**0.17**	**294**	P	Pg	23 13 47.9	+0.7
BADI				S	Sg	23 13 51.0	+1.3
BADI				AML	AML		
	comp=E,976µm,0.2s						
BADI				AML	AML		
	comp=N,1220µm,0.2s						
BADI				AML	AML		
	comp=E,977µm,0.2s						
BADI				AML	AML		
	comp=N,1220µm,0.2s						
BADI				AML	AML		
	comp=E,978µm,0.2s						
ATMI	**Monte Miggiano**	**0.17**	**233**	P	Pg	23 13 48.0	+0.8
ATMI				S	Sg	23 13 50.9	+1.2
ATMI				AML	AML		
	comp=N,1175µm,0.4s						
ATMI				AML	AML		
	comp=E,1160µm,0.3s						
MURB	**Monte Urbino**	**0.18**	**165**	P	Pg	23 13 48.2	+0.8
MURB				S	Sg	23 13 51.4	+1.4
MURB				AML	AML		
	comp=N,2660µm,1.3s						
MURB				AML	AML		
	comp=E,3915µm,0.4s						
MURB				AML	AML		
	comp=N,2715µm,0.4s						
MURB				AML	AML		
	comp=E,3545µm,0.2s						
MURB				AML	AML		
	comp=N,2655µm,1.3s						
MURB				AML	AML		
	comp=N,2655µm,1.3s						
NARO	**Abbazia di Nar**	**0.19**	**27**	P	Pg	23 13 48.0	+0.4
NARO				S	Sg	23 13 51.5	+1.2
NARO				AML	AML		
	comp=E,624µm,0.3s						
NARO				AML	AML		
	comp=N,508µm,1.3s						
FRON	**Frontone**	**0.21**	**68**	P	Pg	23 13 48.5	+0.6
FRON				S	Sg	23 13 51.9	+1.1
FRON				AML	AML		
	comp=E,415µm,0.6s						
FRON				AML	AML		
	comp=N,688µm,0.3s						
SSFR	**Montelago di S**	**0.23**	**91**	P	Pg	23 13 49.0	+0.6
SSFR				S	Sg	23 13 53.3	+1.7
SSFR				AML	AML		
	comp=N,1116µm,1.0s						
SSFR				AML	AML		
	comp=E,1710µm,1.0s						
SSFR				AML	AML		
	comp=N,1114µm,1.0s						
SSFR				AML	AML		
	comp=E,1715µm,1.0s						
SSFR				AML	AML		
	comp=N,951µm,1.4s						
SSFR				AML	AML		
	comp=E,1570µm,1.0s						
SSFR				AML	AML		
	comp=N,1114µm,1.0s						
ATTE	**AVT- Monte Tez**	**0.25**	**198**	P	Pg	23 13 49.4	+0.8
ATTE				S	Sg	23 13 53.3	+1.2
ATTE				AML	AML		
	comp=E,424µm,0.3s						
ATTE				AML	AML		
	comp=E,423µm,0.3s						
ATTE				AML	AML		
	comp=N,286µm,0.2s						
PE3	**Peglio**	**0.26**	**6**	P	Pg	23 13 49.5	+0.7
PE3				AML	AML		
	comp=N,904µm,0.6s						
PE3				AML	AML		
	comp=E,670µm,0.4s						
FOSV	**Fossato di Vic**	**0.26**	**123**	P	Pb	23 13 49.7	-0.8
FOSV				S	Sb	23 13 54.0	-1.1
FOSV				AML	AML		
	comp=E,177µm,0.9s						
FOSV				AML	AML		
	comp=N,176µm,1.1s						
FOSV				AML	AML		
	comp=E,178µm,0.9s						
FOSV				AML	AML		
	comp=N,176µm,1.1s						
PARC	**Parchiule**	**0.26**	**323**	P	Pg	23 13 49.5	+0.7
PARC				S	Sb	23 13 54.3	-0.9
PARC				AML	AML		
	comp=N,384µm,1.6s						
PARC				AML	AML		
	comp=E,448µm,0.2s						
SSP9	**Sansepolcro**	**0.27**	**300**	P	Pb	23 13 49.9	-0.8
ATCC	**AVT- Casa Cast**	**0.29**	**152**	P	Pb	23 13 50.2	-0.7
ATCC				S	Sb	23 13 55.3	-0.5
ATCC				AML	AML		
	comp=E,1530µm,1.1s						
ATCC				AML	AML		
	comp=N,1525µm,0.3s						
ATCC				AML	AML		
	comp=E,1525µm,1.1s						
MPAG	**Monte Paganucc**	**0.29**	**49**	P	Pg	23 13 50.0	+0.6
MPAG				AML	AML		
	comp=N,182µm,0.3s						
MPAG				AML	AML		
	comp=E,204µm,1.0s						
MPAG				AML	AML		
	comp=N,182µm,0.3s						
FSSB	**Fossombrone**	**0.34**	**42**	P	Pg	23 13 50.9	+0.6
FSSB				S	Sb	23 13 56.9	-0.5
FSSB				AML	AML		
	comp=N,356µm,1.2s						
FSSB				AML	AML		
	comp=E,322µm,1.3s						
ARVD	**Arcevia**	**0.36**	**80**	P	Pg	23 13 51.2	+0.6
ARVD				S	Sb	23 13 57.1	-0.7
ARVD				AML	AML		
	comp=E,230µm,1.2s						
ARVD				AML	AML		
	comp=N,258µm,1.1s						
ARVD				AML	AML		
	comp=N,258µm,1.1s						
ARVD				AML	AML		
	comp=E,230µm,1.2s						
CAFI	**Castiglion Fio**	**0.38**	**253**	AML	AML		
	comp=E,140µm,0.7s						
CAFI				AML	AML		
	comp=N,170µm,0.5s						
SNTG	**Esanatoglia**	**0.40**	**117**	AML	AML		
	comp=N,380µm,0.3s						
SNTG				AML	AML		
	comp=E,161µm,1.1s						
CRE	**Caprese Michel**	**0.41**	**296**	AML	AML		
	comp=E,112µm,0.2s						
CRE				AML	AML		
	comp=N,188µm,0.3s						
ASSB	**Assisi San Ben**	**0.42**	**160**	AML	AML		
	comp=E,242µm,0.1s						
ASSB				AML	AML		
	comp=N,299µm,1.0s						
CESI	**CESI - Serrava**	**0.54**	**143**	P	Pg	23 13 54.1	0.0
MGAB	**Montegabbione**	**0.58**	**206**	P	Pb	23 13 55.4	-0.5
MGAB				S	Sg	23 14 03.4	+0.9
MGAB				AML	AML		
	comp=E,264µm,1.2s						
MGAB				AML	AML		
	comp=N,298µm,0.3s						
FDMO	**Fiordimonte**	**0.61**	**131**	P	Pg	23 13 55.7	+0.3
FDMO				AML	AML		
	comp=E,88µm,1.6s						
FDMO				AML	AML		
	comp=N,90µm,1.0s						
FDMO				AML	AML		
	comp=E,88µm,1.6s						
FDMO				AML	AML		
	comp=N,90µm,1.0s						
MOMA	**Monte Martano**	**0.64**	**173**	AML	AML		
	comp=E,210µm,1.1s						
MOMA				AML	AML		
	comp=E,144µm,0.3s						
MOMA				AML	AML		
	comp=N,98µm,1.5s						
MOMA				AML	AML		
	comp=E,144µm,0.3s						
MOMA				AML	AML		
	comp=N,98µm,1.5s						
MOMA				AML	AML		
	comp=N,323µm,1.5s						
NRCA	**Norcia**	**0.77**	**141**	AML	AML		
	comp=N,128µm,1.3s						
NRCA				AML	AML		
	comp=E,86µm,1.5s						
CESX	**Cesi**	**0.83**	**174**	AML	AML		
	comp=E,101µm,1.5s						
CESX				AML	AML		
	comp=N,104µm,1.6s						

ROM 28 23:14:42.0±0.1,43°444N±0′002×12°456E±0′004, h8km,ML1.5/7,Error ellipse: s-maj=0.2km s-min=0.1km az=104.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATPI	**Pietralunga -**	**0.04**	**280**	P	Pg	23 14 43.8	+0.1
ATPI				S	Sg	23 14 44.9	0.0
ATVO	**AVT- Monte Val**	**0.07**	**211**	P	Pg	23 14 44.3	+0.3
ATVO				S	Sg	23 14 45.8	+0.4
ATVO				AML	AML		
	comp=E,836µm,0.1s						
ATVO				AML	AML		
	comp=N,598µm,1.4s						
PIEI	**Pieia**	**0.11**	**32**	P	Pg	23 14 45.0	+0.5
PIEI				S	Sg	23 14 47.4	+1.1
PIEI				AML	AML		
	comp=N,682µm,0.2s						
PIEI				AML	AML		
	comp=E,680µm,0.2s						
ATFO	**Monte Foce - G**	**0.11**	**132**	P	Pg	23 14 45.0	+0.4
ATFO				S	Sg	23 14 47.2	+0.8
ATFO				AML	AML		
	comp=N,234µm,0.2s						
ATFO				AML	AML		
	comp=N,234µm,0.2s						
ATFO				AML	AML		
	comp=E,274µm,0.2s						
BADI	**Badiali**	**0.17**	**293**	P	Pg	23 14 46.1	+0.7
BADI				S	Sg	23 14 49.2	+1.4
BADI				AML	AML		
	comp=E,182µm,1.4s						
BADI				AML	AML		
	comp=N,245µm,0.2s						
BADI				AML	AML		
	comp=E,181µm,1.4s						
BADI				AML	AML		
	comp=E,182µm,1.4s						
BADI				AML	AML		
	comp=N,245µm,0.2s						
BADI				AML	AML		
	comp=N,245µm,0.2s						
ATMI	**Monte Miggiano**	**0.17**	**232**	AML	AML		
	comp=N,188µm,0.4s						
ATMI				AML	AML		
	comp=N,187µm,0.4s						
ATMI				AML	AML		
	comp=E,162µm,1.2s						
MURB	**Monte Urbino**	**0.19**	**165**	P	Pg	23 14 46.6	+0.8
MURB				S	Sg	23 14 49.8	+1.3
MURB				AML	AML		
	comp=E,520µm,0.2s						
MURB				AML	AML		
	comp=N,326µm,0.4s						
NARO	**Abbazia di Nar**	**0.19**	**28**	P	Pg	23 14 46.3	+0.4
NARO				S	Sg	23 14 49.6	+1.1
FRON	**Frontone**	**0.21**	**69**	P	Pg	23 14 46.7	+0.5
FRON				S	Sg	23 14 50.3	+1.2
SSFR	**Montelago di S**	**0.24**	**92**	P	Pg	23 14 47.3	+0.5
SSFR				S	Sg	23 14 51.7	+1.7
SSFR				AML	AML		
	comp=E,248µm,1.0s						
SSFR				AML	AML		
	comp=N,156µm,1.1s						
PE3	**Peglio**	**0.25**	**7**	P	Pg	23 14 47.9	+0.8
ATTE	**AVT- Monte Tez**	**0.26**	**197**	P	Pg	23 14 47.6	+0.5
ATTE				S	Sb	23 14 52.3	-1.3
ATCC	**AVT- Casa Cast**	**0.29**	**153**	P	Pg	23 14 48.5	+0.8
ATCC				S	Sb	23 14 53.8	-0.7

*TIR **28** 23:15:43.9,41°61N×19°32E,h15km,Md2.9/5*
*BEO **28** 23:15:45.8±0.5,41°70N×19°51E,h10km±4km,ML2.1/7*

ISC 28 23:15:44.3±1.1,41°65N±0°03×19°29E±0°03,h11km±10km, n22,σ0°81/37,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.53**	**125**	*e*Pg	**Pg**	**23 15 54.4**	**-0.2**
TIR				*e*Sg	**Sg**	**23 16 01.8**	**+0.3**
TIR	**Tirane**	**0.53**	**125**	*i* PG	**Pg**	**23 15 54.2**	**-0.4**
TIR				*i* SG	**Sg**	**23 16 01.5**	**-0.1**
PUK	**Puka**	**0.59**	**49**	*i* PG	**Pg**	**23 15 56.3**	**+0.4**
PUK				*i* SG	**Sb**	**23 16 05.7**	**+0.4**
PDG	**Podgorica**	**0.78**	**358**	*e*Pg	**Pn**	**23 16 00.4**	**-0.9**
PDG				*e*Sg	**Sb**	**23 16 10.4**	**-0.1**
PHP	**Peshkopia**	**0.86**	**87**	*i* PG	**Pg**	**23 16 00.4**	**-0.5**
PHP				*i* SN	**Sb**	**23 16 13.1**	**+0.2**
BCI	**Bajram Curri**	**0.92**	**39**	*i* PN	**Pg**	**23 16 02.1**	**+0.1**
BCI				*i* SN	**Sn**	**23 16 16.4**	**0.0**
OHR	**Ohrid**	**1.25**	**115**	*e*Pn	**Pn**	**23 16 08.0**	**+0.1**
OHR				*e*Sn	**Sg**	**23 16 25.4**	**+0.7**
TREB	**Trebinje**	**1.27**	**327**	*e*Pg	**Pg**	**23 16 09.0**	**+0.2**
TREB				*e*Sg	**Sg**	**23 16 27.7**	**+2.3**
DBRK	**Dubrovnik**	**1.33**	**320**	*i* Pn	**Pg**	**23 16 09.5**	**+0.3**
DBRK				Sn	**Sg**	**23 16 28.6**	**+1.6**
TPE	**Tepelena**	**1.46**	**158**	*i* PN	**Pn**	**23 16 10.1**	**-0.6**
TPE				*i* SN	**Sn**	**23 16 30.4**	**+0.6**
SKO	**Skopje**	**1.64**	**78**	*e*Pn	**Pg**	**23 16 15.7**	**0.0**
SKO				*e*Sn	**Sb**	**23 16 36.3**	**+1.2**
SJES	**Sjenica**	**1.68**	**17**	*e*Pg	**Pn**	**23 16 13.7**	**-0.2**
SJES				*e*Sg	**Sg**	**23 16 37.7**	**-0.8**
STON	**Ston**	**1.70**	**316**	*e*Pn	**Pg**	**23 16 16.1**	**-0.8**
IVAS	**Ivanjica**	**2.02**	**18**	*e*Pg	**Pb**	**23 16 19.7**	**-1.5**
IVAS				*e*Sg	**Sb**	**23 16 46.4**	**0.0**
STIP	**Stip**	**2.17**	**88**	*e*Pn	**Pb**	**23 16 23.0**	**-0.6**
STIP				*e*Sn	**Sb**	**23 16 51.6**	**+1.2**
BBLS	**Lazići**	**2.21**	**2**	*e*Pg	**Pg**	**23 16 25.9**	**-0.9**
BBLS				*e*Sg	**Sg**	**23 16 55.9**	**+0.4**
MAKA	**Makarska**	**2.34**	**315**	*e*Pn	**Pn**	**23 16 22.3**	**-0.5**
GRUS	**Gruza**	**2.47**	**25**	*e*Pg	**Pb**	**23 16 28.0**	**-0.7**
BOSS	**Bosilegrad**	**2.52**	**69**	*e*Pg	**Pn**	**23 16 25.8**	**+0.6**
TRUS	**Trudelj**	**2.70**	**17**	*e*Pn	**Pn**	**23 16 28.0**	**+0.3**
ZAPS	**Zavoj**	**2.95**	**56**	*e*Pn	**Pn**	**23 16 31.5**	**+0.2**
KIJV	**Kijevo**	**3.17**	**319**	*i* Pn	**Pn**	**23 16 35.4**	**+1.2**

*IDC **28** 23:17:10.1±0.7,56°47N×34°20W,h0km,mb3.9/15, mb1 4.1/16,mb1mx3.8/62,mbtmp3.9/16,ML3.5/1,Error ellipse: s-maj=21.0km s-min=15.9km az=173.0*
*NEIC **28** 23:17:12.2±1.6,56°59N±0°10×34°3W±0°2,h10km±2km, mb4.7/84,Error ellipse: s-maj=14.7km s-min=12.4km az=159.0*

ISC 28 23:17:13.9±0.4,56°56N±0°08×34°30W±0°06,h22km,n125, σ0°85/120,mb4.6/48,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**10.36**	**32**	Pn	**Pn**	**23 19 42.6**	**+1.6**
	0.4nm,0.3s,baz=229,slow=11,SNR=3.4						
BORG	**Borgarnes**	**10.36**	**32**		**Pn**	**23 19 42.6**	**+1.6**
SUMG	**Summit**	**16.17**	**356**	Pn	**Pn**	**23 20 57.7**	**-2.1**
SCHQ	**Schefferville**	**18.33**	**278**		**P**	**23 21 25.7**	**-0.7**
D62A	**Allapoint, All**	**23.25**	**261**	P	**P**	**23 22 18.3**	**-1.1**
D62A				IAmb	IAmb	23 22 19.8	
	comp=Z,31nm,1.5s						
G62A	**West of Eustis**	**25.21**	**259**	P	**P**	**23 22 37.2**	**-0.6**
ESDC	**Sonseca Array**	**26.06**	**117**	P	**P**	**23 22 45.9**	**+0.3**
CLL	**Collm**	**27.88**	**81**	P	**P**	**23 23 03.5**	**+1.8**
CLL				IAmb	IAmb	23 23 17.8	
	comp=Z,23nm,2.0s						
ARCES	**ARCESS Array B**	**28.66**	**39**	P	**P**	**23 23 06.8**	**-1.7**
	comp=Z,2.1nm,0.8s,baz=298,slow=5.1,SNR=3.9						
ARCES	**ARCESS Array B**	**28.66**	**39**	P	**P**	**23 23 06.8**	**-1.7**
FUORN	**Ofenpass-Fuorn**	**28.93**	**91**	P	**P**	**23 23 11.0**	**-0.4**
YLE	**Yale**	**29.14**	**255**	P	**P**	**23 23 13.8**	**+0.8**
SADO	**Sadowa**	**30.22**	**266**	P	**P**	**23 23 23.0**	**+0.4**
O56A	**Blue Knob Stat**	**32.91**	**259**	P	**P**	**23 23 46.6**	**+0.3**
N54A	**Moraine State**	**33.21**	**262**	P	**P**	**23 23 49.5**	**+0.6**
N53A	**Lisbon**	**33.78**	**262**	P	**P**	**23 23 54.9**	**+1.0**
P53A	**Whipple**	**35.01**	**261**	P	**P**	**23 24 04.3**	**-0.1**
KEST	**Kesra**	**35.89**	**107**	P	**P**	**23 24 13.9**	**+1.7**
P51A	**Williamsport**	**35.92**	**263**	P	**P**	**23 24 14.2**	**+1.8**
P51A				IAmb	IAmb	23 24 30.4	
	comp=Z,20nm,1.4s						
ULM	**Lac du Bonnet**	**36.13**	**287**	P	**P**	**23 24 14.0**	**-0.1**
BURAR	**Bucovina Array**	**36.56**	**78**	P	**P**	**23 24 16.6**	**-1.2**
AKASG	**Malin Array Be**	**36.90**	**71**	P	**P**	**23 24 20.5**	**0.0**
SPMN	**Marine on St.**	**37.48**	**278**	P	**P**	**23 24 26.5**	**+1.0**
SPMN				IAmb	IAmb	23 24 35.2	
	comp=Z,7.1nm,0.7s						
S51A	**Beattyville**	**37.53**	**261**	P	**P**	**23 24 27.1**	**+1.0**
S51A				IAmb	IAmb	23 24 31.3	
	comp=Z,34nm,1.9s						
L42A	**Oliver, Polo**	**37.84**	**272**	P	**P**	**23 24 28.7**	**0.0**
WCI	**Wyandotte Cave**	**38.59**	**264**	P	**P**	**23 24 35.4**	**+0.4**
WCI				IAmb	IAmb	23 24 49.0	
	comp=Z,28nm,1.8s						
YKA	**Yellowknife Ar**	**38.66**	**313**	P	**P**	**23 24 35.0**	**-0.3**
	comp=Z,0.7nm,0.7s,baz=59,slow=8.8,SNR=6.3						
YKA				PcP	**PcP**	**23 26 46.1**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=55,slow=3.1,SNR=3.5						
YKA	**Yellowknife Ar**	**38.66**	**313**	P	**P**	**23 24 35.0**	**-0.3**
YKA					**PcP**	**23 26 46.1**	**-0.7**
FNA	**Florina**	**38.84**	**90**	P	**P**	**23 24 39.2**	**+2.1**
FNA				IAmb	IAmb	23 24 46.5	
	comp=Z,26nm,1.5s						
BG3	**Lake Jocassee**	**39.12**	**258**	P	**P**	**23 24 39.4**	**-0.1**
BG3				IAmb	IAmb	23 24 53.4	
	comp=Z,33nm,2.0s						
CPCT	**Cooper Cave**	**39.65**	**260**	P	**P**	**23 24 45.9**	**+2.1**
CPCT				IAmb	IAmb	23 24 47.6	
	comp=Z,22nm,1.3s						
LIT	**Litokhoron**	**39.92**	**90**	P	**P**	**23 24 45.3**	**-0.8**
LIT				IAmb	IAmb	23 24 49.0	
	comp=Z,24nm,1.1s						
T47A	**Sharon Grove**	**39.93**	**264**	P	**P**	**23 24 46.6**	**+0.4**
T47A				IAmb	IAmb	23 24 51.3	
	comp=Z,34nm,1.9s						
ECSD	**EROS Data Cent**	**40.53**	**279**	P	**P**	**23 24 50.9**	**-0.1**
S44A	**Carbondale**	**40.61**	**266**	P	**P**	**23 24 51.7**	**0.0**
S44A				IAmb	IAmb	23 24 59.7	
	comp=Z,11nm,0.8s						
PBMO	**Poplar Bluff**	**41.91**	**266**	P	**P**	**23 25 03.1**	**+0.6**
PBMO				IAmb	IAmb	23 25 10.8	
	comp=Z,22nm,1.4s						
INK	**Inuvik**	**42.26**	**327**	P	**P**	**23 25 06.2**	**+1.3**
	comp=Z,1.4nm,0.7s,baz=36,slow=9.6,SNR=5.2						
INK	**Inuvik**	**42.26**	**327**	P	**P**	**23 25 06.2**	**+1.3**
LCAR	**Lake Charles**	**42.83**	**266**	P	**P**	**23 25 10.7**	**+0.7**
OXF	**Oxford**	**43.02**	**263**	P	**P**	**23 25 12.2**	**+0.7**
U40A	**Yellville**	**43.56**	**268**	P	**P**	**23 25 16.6**	**+0.7**
U40A				IAmb	IAmb	23 25 31.6	
	comp=Z,27nm,1.9s						
LAO	**LASA Array**	**43.76**	**289**	P	**P**	**23 25 17.5**	**0.0**
WHAR	**Wooly Hollow**	**44.03**	**266**	P	**P**	**23 25 20.2**	**+0.6**
WHAR				IAmb	IAmb	23 25 27.2	
	comp=Z,8.9nm,1.1s						
UALR	**University of**	**44.44**	**266**	P	**P**	**23 25 22.7**	**-0.2**
EGMT	**Eagleton**	**44.72**	**293**	P	**P**	**23 25 27.1**	**+1.9**
EGMT				IAmb	IAmb	23 25 32.7	
	comp=Z,15nm,1.4s						
X40A	**Basin Creek Fa**	**44.92**	**266**	P	**P**	**23 25 26.9**	**+0.1**
X40A				IAmb	IAmb	23 25 34.2	
	comp=Z,9.4nm,1.1s						
HUMP	**Col San Antoni**	**45.06**	**225**		**S**	**23 32 06.3**	**+0.6**
MIAR	**Mount Ida**	**45.29**	**267**	P	**P**	**23 25 29.8**	**+0.1**
TUL1	**Leonard**	**45.51**	**270**	P	**P**	**23 25 32.5**	**+1.0**
TUL1				IAmb	IAmb	23 25 38.7	
	comp=Z,9.6nm,0.8s						
Z41A	**Richland Creek**	**45.82**	**265**	P	**P**	**23 25 33.9**	**-0.1**
BMAR	**Burnt Mountain**	**46.04**	**330**	P	**P**	**23 25 35.4**	**0.0**
BRTR	**Keskin Array B**	**46.33**	**81**	P	**P**	**23 25 38.7**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=326,slow=4.1,SNR=5.4						
BRTR	**Keskin Array B**	**46.33**	**81**	P	**P**	**23 25 38.7**	**+0.6**
RLMT	**Red Lodge**	**46.39**	**289**	P	**P**	**23 25 38.1**	**-0.5**
RLMT				IAmb	IAmb	23 25 46.9	
	comp=Z,10nm,1.4s						
TOLK	**Toolik Lake Re**	**46.50**	**333**	P	**P**	**23 25 39.0**	**+0.1**
W35A	**Tecumseh**	**46.67**	**270**	P	**P**	**23 25 40.7**	**+0.1**

YNE	Yellowstone No	46.85	290	P		P	23 25 41.8	-0.4
EGAK	Eagle	46.87	326	P		P	23 25 42.6	+0.8
KSCO	Kaye Shedlock'	47.05	278	P		P	23 25 43.9	+0.1
ARU	Arti	47.38	49	P		P	23 25 46.0	+0.2
H17A	Grant Village	47.57	289	P		P	23 25 47.4	-0.5
COLD	Coldfoot	47.71	332	P		P	23 25 48.7	+0.4
QLMT	Earthquake Lak	47.71	290	P		P	23 25 49.9	+1.0
DLMT	Dillon	47.95	292			S	23 32 47.8	+0.8
ISCO	Idaho Springs	48.12	281	P		P	23 25 51.5	-0.7
PD31	Pinedale Array	48.15	287	P		P	23 25 52.1	-0.3
PDAR	Pinedale Array	48.15	287	P		P	23 25 51.6	-0.7
	comp=Z,1.2nm,0.8s,baz=58,slow=7.0,SNR=4.8							
PDAR	Pinedale Array	48.15	287	P		P	23 25 51.6	-0.7
BCAR	Beaver Creek A	48.27	324	P		P	23 25 52.4	-0.3
SCRK	Sand Creek	48.31	326	P		P	23 25 53.8	+0.7
TPAW	Teton Pass	48.39	289	P		P	23 25 52.6	-1.6
MCMT	McKenzie Canyo	48.45	291	P		P	23 25 55.3	+0.7
IL31		48.60	328	P		P	23 25 55.3	+0.1
IL31				IAmb		IAmb	23 26 03.3	
	comp=Z,6.2nm,1.1s							
ILAR	Eielson Array	48.60	328	P		P	23 25 55.8	+0.5
	comp=Z,2.4nm,0.9s,baz=36,slow=6.1,SNR=17							
ILAR	Eielson Array	48.60	328	P		P	23 25 54.4	-0.8
COLA	College	48.81	329	P		P	23 25 56.6	-0.2
HDA	Harding Lake	48.89	328	IAmb		IAmb	23 25 59.6	
	comp=Z,4.0nm,0.7s							
C09A	Chrisman Ranch	49.14	298	P		P	23 25 59.6	0.0
C09A				IAmb		IAmb	23 26 06.7	
	comp=Z,4.9nm,0.9s							
T25A	Trinidad	49.38	278	P		P	23 26 00.5	-1.2
MLY	Manley	49.50	330	P		P	23 26 02.7	+0.5
IMAR	Indian Mountai	49.58	332	P		P	23 26 02.6	0.0
TORD	Torodi Ar. Bea	51.35	133	P		P	23 26 14.2	-2.5
	comp=Z,2.4nm,1.1s,baz=328,slow=5.7,SNR=6.1							
TORD	Torodi Ar. Bea	51.35	133	P		P	23 26 15.3	-1.3
TIXI	Tiksi	51.53	7	P		P	23 26 17.4	+0.1
	comp=Z,0.9nm,0.3s,baz=0.7,slow=8.2,SNR=4.1							
TIXI	Tiksi	51.53	7	P		P	23 26 17.4	+0.1
TIXI	Tiksi	51.53	7	IAmb		IAmb	23 26 18.0	
	comp=Z,12nm,1.7s							
JCT	Junction City	51.80	269	P		P	23 26 20.0	0.0
JCT				IAmb		IAmb	23 26 26.6	
	comp=Z,12nm,1.2s							
J08A	Circle Bar Ran	52.36	294	P		P	23 26 24.4	+0.4
ABKAR	Akbulak array	52.96	55	P		P	23 26 28.0	-0.2
PINE	Pine Mountain	53.29	296	IAmb		IAmb	23 26 37.1	
	comp=Z,14nm,1.4s							
BRVK	Borovoye	54.56	46	P		P	23 26 39.7	-0.2
BRVK				IAmb		IAmb	23 26 42.3	
	comp=Z,12nm,1.7s							
TXAR	Lajitas Array	54.82	271	P		P	23 26 42.9	+0.7
	comp=Z,0.2nm,0.4s,baz=61,slow=9.4,SNR=2.9							
TXAR	Lajitas Array	54.82	271	P		P	23 26 42.9	+0.7
KVN	Kaiserville	55.32	290	IAmb		IAmb	23 26 53.7	
	comp=Z,6.5nm,1.2s							
PAHR	Pah Rah Range	55.50	291	IAmb		IAmb	23 26 54.8	
	comp=Z,8.3nm,1.2s							
NVAR	Mina Array Bea	55.88	289	P		P	23 26 50.4	+0.5
	comp=Z,0.4nm,0.6s,baz=52,slow=7.4,SNR=3.7							
NVAR	Mina Array Bea	55.88	289	P		P	23 26 50.4	+0.5
PFO	Pinyon Flats O	58.55	284	P		P	23 27 08.1	-0.5
	comp=Z,1.2nm,0.6s,baz=201,slow=5.3,SNR=2.4							
PFO	Pinyon Flats O	58.55	284	P		P	23 27 08.1	-0.5
PFO	Pinyon Flats O	58.55	284	IAmb		IAmb	23 27 19.2	
	comp=Z,10nm,1.6s							
KURK	Kurchatov	59.61	43	P		P	23 27 15.2	-0.4
KURK				IAmb		IAmb	23 27 16.6	
	comp=Z,5.2nm,1.1s							
KKAR	Karatay Array	62.39	53	P		P	23 27 34.7	0.0
MAKZ	Makanchi	64.09	43	P		P	23 27 46.3	+0.4
MAKZ				IAmb		IAmb	23 27 47.8	
	comp=Z,9.7nm,1.6s							
MA2	Magadan	64.14	357	P		P	23 27 45.4	-0.5
MK31	Makanchi Array	64.22	43	P		P	23 27 46.1	-0.6
MK31				IAmb		IAmb	23 27 47.8	
	comp=Z,6.1nm,1.6s							
MKAR	Makanchi Array	64.22	43	P		P	23 27 46.1	-0.6
	comp=Z,1.0nm,0.6s,baz=332,slow=5.9,SNR=13							
MKAR	Makanchi Array	64.22	43	P		P	23 27 46.0	-0.8
FRU1	Bishkek	64.42	51	P		P	23 27 48.4	+0.2
AAK	Ala-Archa	64.50	51	P		P	23 27 49.4	+0.6
BTK	Batken	64.97	55	IAmb		IAmb	23 27 53.9	
	comp=Z,6.2nm,0.9s							
KBL	Kabul	68.62	60	P		P	23 28 15.9	+0.6
SONM	Songino Array	70.92	27	P		P	23 28 29.6	+0.5
	comp=Z,0.2nm,0.3s,baz=330,slow=5.0,SNR=2.4							
SONM	Songino Array	70.92	27	P		P	23 28 29.6	+0.5
NIL	Nilore	71.33	57	P		P	23 28 32.4	+0.7
NIL				IAmb		IAmb	23 28 33.3	
	comp=Z,7.1nm,1.0s							
SIV	San Ignacio	75.68	207	P		P	23 28 57.5	+0.2
	comp=Z,1.6nm,1.0s,baz=314,slow=7.7,SNR=3.3							
SIV	San Ignacio	75.68	207	P		P	23 28 57.5	+0.2
GTA	Gaotai	76.81	35	*e*P		P	23 29 04.0	+0.2
GTA				pP		pP	23 29 08.3	-2.1
GTA				sP		pwP	23 29 11.3	-1.5
GTA				pmax		pmax		
	comp=Z,2.0nm,1.3s							
LPAZ	La Paz	77.91	213	P		P	23 29 09.6	-0.9
PB11	IPOC Station P	81.64	213	P		P	23 29 30.4	+0.2
LVC	Limon Verde	84.11	212	P		P	23 29 42.3	-0.9
KSAR	Wonju Array Be	85.14	14	P		P	23 29 46.9	-1.1
CMAR	Chiang Mai Arr	95.62	44	P		P	23 30 38.4	+0.8
CMAR	Chiang Mai Arr	95.62	44	P		P	23 30 38.4	+0.8
ASAR	Alice Springs	146.02	20	PKPbc		PKPdf	23 36 50.3	-0.6
	comp=Z,0.9nm,0.7s,baz=352,slow=2.7,SNR=7.4							
ASAR	Alice Springs	146.02	20			PKPdf	23 36 51.0	+0.1

*BJI **28** 23:17:38.1±0.0,56˚.73N×34˚.48W,h6km,mB5.3/22, mb4.8/35,Ms5.2/11,Ms7 4.8/11*
*IDC **28** 23:17:39.9±0.4,56˚.58N×34˚.42W,h0km,mb4.3/36, mb1 4.4/40,mb1mx4.3/63,mbtmp4.3/40,ML3.4/4,Error ellipse: s-maj=12.5km s-min=9.1km az=1.0*
*GCMT **28** 23:17:40.5±0.2,56˚.75N±0˚.03×34˚.24W±0˚.02,h12km, MW4.9/112,Moment Tensor Solution. s31,c32; s112,c157; Duration: 0 Moment tensor: Scale 1016Nm; Mrr-2.61±.07; Mθθ0.15±.07; Mϕϕ2.46±.05; Mrθ0.73±.30; Mθϕ0.46±.06; Mϕr-1.30±.24; Best double couple: M≥2.96600×1016 NP1:ϕs206.00000°,δ35.00000°, λ-63.00000°. NP2:ϕs354.00000°,δ59.00000°, λ-108.00000°. Principal axes: T 2.8040, Plg13.0000°, Azm96.0000°; N 0.3300, Plg15.0000°, Azm3.0000°; P -3.1290, Plg70.0000°, Azm225.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*MOS **28** 23:17:40.0±0.9,56˚.65N×34˚.30W,h12km,mb5.0/16, MS4.3/4 Error ellipse: s-maj=11.1km s-min=6.7km az=71.1*
*NEIC **28** 23:17:41.5±1.4,56˚.63N±0˚.09×34˚.3W±0˚.1,h10km±2km, mb5.0/220,Error ellipse: s-maj=12.4km s-min=10.5km az=179.0*
*NEIC **28** 23:17:41.5±0.0,56˚.63N×34˚.27W,h10km,M5.0*
ISC 28 23:17:40.8±1.2,56˚.60N±0˚.05×34˚.32W±0˚.04,h6km±7km, n560,σ0≥89/497,mb5.0/184,**MS4.5**/16,**5C-10D, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IVI	Ivigtut	8.52	309	Pn	Pn	23 19 44.8	+0.2
BORG	Borgarnes	10.34	33	P	Pn	23 20 09.4	0.0
BORG						23 22 01.0	
BORG	Borgarnes	10.34	33	Pn	Pn	23 20 11.1	+1.7
	0.6nm,0.3s,baz=220,slow=8.8,SNR=3.3						
BORG				Sn	Sn	23 22 01.0	-4.4
	0.2nm,0.3s,baz=80,slow=22,SNR=3.1						
BORG	Borgarnes	10.34	33	Pn	Pn	23 20 09.4	0.0
SUMG	Summit	16.13	356	P	Pn	23 21 27.5	-0.7
SUMG				pmax	pmax		
	comp=Z,83nm,1.5s						
SUMG	Summit	16.13	356	*i* P	Pn	23 21 27.0	-1.1
SUMG	Summit	16.13	356		Pn	23 21 27.5	-0.7
EKA	Eskdalemuir Ar	17.41	81	P	P	23 21 45.2	-0.2
	baz=291,slow=7.0,SNR=4.0						
FRB	Frobisher Bay	18.27	307	P	Pn	23 21 54.2	-0.4
	comp=Z,0.2nm,0.3s,baz=84,slow=14,SNR=6.7						
SCHQ	Schefferville	18.31	278	P	Pn	23 21 54.2	-1.0
	comp=Z,0.4nm,0.3s,baz=78,slow=9.0,SNR=7.1						
SCHQ	Schefferville	18.31	278		Pn	23 21 54.7	-0.5
CMLA	Cha da Macela	19.74	159	P	P	23 22 09.5	-1.6
CMLA				pmax	pmax		
	comp=Z,850nm,1.9s						
CMLA	Cha da Macela	19.74	159	P	P	23 22 09.5	-1.6
GBN	Guysborough	20.30	248	P	P	23 22 17.5	+0.4
DAG	Danmarks Havn	21.03	10	*i* P	P	23 22 25.4	+0.7
DAG				pmax	pmax		
	comp=Z,24nm,1.4s						
DAG	Danmarks Havn	21.03	10	*i* P	P	23 22 25.4	+0.7
	comp=Z,24nm,1.4s						
D63A	Stockholm	22.75	260	P	P	23 22 43.2	-0.2
	baz=52						
PQI	Presque Isle	22.93	259	P	P	23 22 45.5	+0.2
PQI				IAmb	IAmb	23 22 55.7	
	comp=Z,108nm,1.8s						
E64A	Bridgewater	22.98	258	P	P	23 22 45.5	-0.4
	baz=51						
KONO	Kongsberg	23.07	64	↓*e*P	P	23 22 45.3	-1.3
KONO				pmax	pmax		
	comp=Z,54nm,1.7s						
D62A	Allapoint, All	23.24	261	P	P	23 22 49.1	+0.6
D62A				IAmb	IAmb	23 22 55.4	
	comp=Z,69nm,1.6s						
D62A	Allapoint, All	23.24	261	P	P	23 22 48.0	-0.5
	baz=53						
E63A	Oxbow	23.30	259	P	P	23 22 49.6	+0.4
E63A				IAmb	IAmb	23 22 51.7	
	comp=Z,98nm,1.5s						
E63A	Oxbow	23.30	259	P	P	23 22 48.7	-0.5
	baz=52						
TULEG	Thule	23.55	341	P	P	23 22 51.7	+0.4
TULEG				IAmb	IAmb	23 23 29.5	
	comp=Z,85nm,1.6s						
NOA	NORSAR Array B	23.60	60	P	P	23 22 54.2	+2.2
	comp=Z,3.3nm,1.0s,baz=281,slow=9.7,SNR=3.4						
F64A	Sherman	23.62	257	P	P	23 22 52.6	+0.4
F64A				IAmb	IAmb	23 22 53.6	
	comp=Z,41nm,0.9s						
F64A	Sherman	23.62	257	P	P	23 22 51.3	-0.9
	baz=50,SNR=5.7						
G64A	Maxfield	24.23	257	P	P	23 22 57.6	-0.5
	baz=50						
H65A	Eastbrook	24.32	255	P	P	23 22 58.5	-0.4
	baz=48						
D60A	Saint Jean D'O	24.37	262	P	P	23 22 58.9	-0.4
	baz=53						
E61A	Lac Etchemin	24.42	261	P	P	23 22 59.3	-0.6
	baz=52						
PKME	Peaks-Kenny Pk	24.51	257	P	P	23 23 01.8	+1.1
PKME				IAmb	IAmb	23 23 10.1	
	comp=Z,99nm,2.0s						
H64A	Troy	24.88	256	P	P	23 23 03.9	-0.1
	baz=49						
HFS	Hagfors	24.98	62	P	P	23 23 06.1	+1.3
	comp=Z,10nm,1.1s,baz=276,slow=4.3,SNR=5.3						
F61A	St Evariste	24.98	261	P	P	23 23 04.9	0.0
	baz=51						
E60A	Ste Agathe de	24.98	262	P	P	23 23 04.7	-0.3
	baz=52						
LATQ	La Tuque	25.11	265	P	P	23 23 06.0	0.0
	baz=54						
G62A	West of Eustis	25.21	259	P	P	23 23 07.3	+0.4
G62A				IAmb	IAmb	23 23 08.7	
	comp=Z,29nm,0.9s						
G62A	West of Eustis	25.21	259	P	P	23 23 07.1	+0.1
	baz=50						
H63A	New Sharon	25.30	257	P	P	23 23 08.0	+0.3
	baz=49						
D58A	Chemin du LacG	25.34	264	P	P	23 23 08.3	+0.1
	baz=54						
F60A	Warwick	25.51	261	P	P	23 23 10.3	+0.7
	baz=52						
NOR	Nord	25.63	6	*i* P	P	23 23 09.0	-1.5
D57A	Chemin Vers le	25.94	265	P	P	23 23 14.0	+0.5
	baz=54						
H62A	Milan	25.96	258	P	P	23 23 14.7	+0.9
	baz=49						
E58A	La Victoria	25.99	264	P	P	23 23 14.2	+0.2
	baz=52						
I63A	Otisfield	26.00	257	P	P	23 23 14.5	+0.3
	baz=48						
ESDC	Sonseca Array	26.09	118	P	P	23 23 15.8	+0.7
	comp=Z,2.9nm,1.0s,baz=325,slow=8.8,SNR=6.4						
ESDC	Sonseca Array	26.09	118	P	P	23 23 15.2	+0.1
G60A	Masonville	26.27	260	P	P	23 23 17.0	+0.4
	baz=50						
D56A	ZEC Mazanza, M	26.40	266	P	P	23 23 17.9	+0.2
	baz=54						
E57A	Chemin Saint G	26.44	264	P	P	23 23 18.1	0.0
	baz=53						
LSQQ	Lebel-sur-Quev	26.49	272	P	P	23 23 19.2	+0.7
	baz=57						
I62A	Tamworth	26.52	257	P	P	23 23 19.1	+0.2
	baz=48						
G59A	Clarenceville	26.74	261	P	P	23 23 20.8	0.0
	baz=50						
D55A	Sainte-Anne-du	26.81	267	P	P	23 23 21.3	-0.1
	baz=54						
E56A	St. Veronique	26.85	265	P	P	23 23 21.9	+0.1
	baz=53						
I61A	Oroboro, Fairl	26.95	258	P	P	23 23 23.9	+1.1
	baz=48						
VLDQ	Val d'Or	27.27	270	P	P	23 23 27.6	+2.0
VLDQ				IAmb	IAmb	23 23 33.5	
	comp=Z,79nm,1.8s						
H59A	Cadyville	27.30	261	P	P	23 23 26.6	+0.7
	baz=50						
CLL	Collm	27.88	81	*e*P	P	23 23 30.0	-1.0
CLL				pmax	pmax		
	comp=Z,24nm,1.5s						
CLL				MLR	MLR		
	comp=Z,1μm,18.3s						
CLL	Collm	27.88	81	*e*P	P	23 23 30.0	-1.0
	comp=Z,24nm,1.5s						
CLL				Lm	MLR	23 34 00.0	
	comp=Z,1μm,18.3s						
CLL	Collm	27.88	81	P	P	23 23 31.1	+0.1
I59A	Olmsteadville	27.95	260	P	P	23 23 32.0	+0.2
	baz=49						
K61A	Williamstown	28.38	257	P	P	23 23 35.8	+0.3
	baz=47						
J59A	Piesco	28.51	260	P	P	23 23 37.6	+0.9
	baz=48						
ARCES	ARCESS Array B	28.63	39	P	P	23 23 36.9	-0.7
	comp=Z,2.8nm,0.7s,baz=284,slow=7.3,SNR=5.2						
I57A	Carthage	28.83	262	P	P	23 23 39.4	-0.1
	baz=49						
RES	Resolute Bay	28.91	331	P	P	23 23 39.2	-0.7
RES				pmax	pmax		
	comp=Z,35nm,1.9s						
RES	Resolute Bay	28.91	331	P	P	23 23 39.4	-0.5
	comp=Z,1.8nm,0.9s,baz=97,slow=6.9,SNR=4.6						
RES	Resolute Bay	28.91	331	P	P	23 23 39.2	-0.7
RES				IAmb	IAmb	23 23 48.8	
	comp=Z,35nm,1.9s						
D51A	Lot 18 Range I	28.92	270	P	P	23 23 40.7	+0.4
	baz=54						
FUORN	Ofenpass-Fuorn	28.94	91	P	P	23 23 41.0	+0.2
FUORN				IAmb	IAmb	23 23 43.8	
	comp=Z,43nm,1.8s						
E52A	Mattawa	29.01	268	P	P	23 23 41.7	+0.6
	baz=53						
M62A	Hamden	29.02	255	P	P	23 23 41.7	+0.5
	baz=49						
PVCC	Panska Ves	29.13	81	AMS	AMS	23 34 50.0	
	comp=Z,1μm,16.1s						
YLE	Yale	29.14	255	P	P	23 23 44.0	+1.8
G54A	Lake Saint Pet	29.24	266	P	P	23 23 42.7	-0.5
	baz=51						
PRA	Prague	29.30	82	AMS	AMS	23 35 10.0	
	comp=Z,1μm,10.8s						
KHC	Kasperske Hory	29.33	84	AMS	AMS	23 36 10.0	
	comp=Z,1μm,8.1s						
PRU	Pruhonice	29.40	82	AMS	AMS	23 35 00.0	
	comp=Z,1μm,20.8s						
GOPC	GO Pecny, Ondr	29.57	82	AMS	AMS	23 35 10.0	
	comp=Z,1μm,19.9s						
M61A	Granite Spring	29.59	256	P	P	23 23 46.4	+0.2
	baz=45						
K58A	Earlville	29.60	260	P	P	23 23 46.5	+0.1
	baz=48						
L59A	Walton	29.66	258	P	P	23 23 47.5	+0.5
	baz=47						
CHVC	Chvalec	29.91	80	AMS	AMS	23 35 30.0	
	comp=Z,1μm,18.6s						
UPC	Upice	29.93	80	AMS	AMS	23 35 30.0	
	comp=Z,1μm,17.8s						
OSTC	Ostas	30.02	80	AMS	AMS	23 34 50.0	
	comp=Z,1μm,22.5s						
DPC	Dobruska-Polom	30.18	80	AMS	AMS	23 36 00.0	
	comp=Z,900nm,15.1s						
SADO	Sadowa	30.21	266	P	P	23 23 50.3	-1.5
	comp=Z,6.2nm,0.8s,baz=74,slow=7.6,SNR=3.1						
SADO	Sadowa	30.21	266	IAmb	IAmb	23 23 57.1	
	comp=Z,18nm,1.1s						
N61A	South Mountain	30.26	256	P	P	23 23 52.7	+0.5
	baz=45						
TREC	Trest	30.29	82	AMS	AMS	23 37 30.0	
	comp=Z,1μm,8.2s						
FINES	FINESS Array B	30.46	55	P	P	23 23 55.1	+1.3
	comp=Z,4.7nm,0.8s,baz=300,slow=4.2,SNR=5.4						
KRLC	Kraliky	30.58	80	AMS	AMS	23 36 10.0	
	comp=Z,800nm,16.1s						
L57A	Andrews Acres	30.77	260	P	P	23 23 57.2	+0.4
	baz=47						
K55A	Perry	30.95	262	P	P	23 23 58.7	+0.3
	baz=48						
M58A	Price's Panora	31.00	259	P	P	23 23 59.4	+0.6
	baz=46						
D47A	Chapleau	31.00	273	P	P	23 23 58.7	-0.1
	baz=54						
FCC	Fort Churchill	31.11	299	P	P	23 24 00.1	+0.6
FCC				pmax	pmax		
	comp=Z,58nm,2.0s						
FCC	Fort Churchill	31.11	299	P	P	23 24 00.1	+0.6
FCC				IAmb	IAmb	23 24 06.4	
	comp=Z,58nm,1.9s						
MDT	Midelt	31.37	127	P	P	23 24 03.8	+1.6
	comp=Z,6.7nm,1.1s,baz=340,slow=2.7,SNR=5.3						
OKC	Ostrava-Krasne	31.45	80	AMS	AMS	23 36 50.0	
	comp=Z,1μm,14.9s						
E47A	Iron Bridge	31.46	272	P	P	23 24 03.2	+0.5
	baz=53						
O59A	Robesonia	31.59	257	P	P	23 24 04.1	+0.2
	baz=45						
VSU	Vasula	31.84	61	↓*e*P	P	23 24 05.1	-0.9
VSU				pmax	pmax		
	comp=Z,90nm,1.6s						
L54A	Sinclairville	31.96	263	P	P	23 24 06.8	-0.5
	baz=48						
OJC	Ojcow	32.14	78	P	P	23 24 08.9	+0.2
OJC				pmax	pmax		
	comp=Z,16nm,1.3s						
OJC	Ojcow	32.14	78	P	P	23 24 08.9	+0.2
M55A	Ridgway	32.18	261	P	P	23 24 11.0	+1.8
M55A	Ridgway	32.18	261	P	P	23 24 09.5	+0.3
	baz=46						
P59A	Jarrettsville	32.22	256	P	P	23 24 09.4	-0.1
	baz=44						
SSPA	Standing Stone	32.28	259	P	P	23 24 10.7	+0.6
	baz=45						
N56A	West Decatur	32.31	260	P	P	23 24 10.9	+0.6
	baz=46						
VYHS	Vyhne	32.57	81	*e*P	P	23 24 13.0	+0.4
VYHS	Vyhne	32.57	81	*e*P	P	23 24 13.0	+0.4
M54A	Oil Creek Stat	32.65	262	P	P	23 24 13.3	0.0
	baz=47						
L53A	Girard	32.67	263	P	P	23 24 14.0	+0.5
	baz=47						
N55A	Marion Center	32.78	260	P	P	23 24 15.0	+0.6
	baz=46						
O56A	Blue Knob Stat	32.91	259	P	P	23 24 16.2	+0.6
O56A				IAmb	IAmb	23 24 18.1	
	comp=Z,31nm,1.1s						
O56A	Blue Knob Stat	32.91	259	P	P	23 24 16.9	+1.3
	baz=45						
P57A	Homestead Farm	33.16	258	P	P	23 24 19.2	+1.4
	baz=44						
N54A	Moraine State	33.20	262	P	P	23 24 19.4	+1.3
N54A	Moraine State	33.20	262	P	P	23 24 19.2	+1.1
	baz=46						
M53A	WI Miller and	33.25	263	P	P	23 24 19.3	+0.8
	baz=47						
O55A	Ligonier	33.35	260	P	P	23 24 20.0	+0.6
	baz=45						
PSZ	Piszkesteto	33.48	82	P	P	23 24 19.3	-1.3
PSZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
PSZ	Piszkesteto	33.48	82	P	P	23 24 19.3	-1.3
M52A	Chesterland	33.55	264	P	P	23 24 21.7	+0.5
	baz=47						
P56A	Dayton Farm, R	33.60	259	P	P	23 24 22.4	+0.9
	baz=44						
Q57A	Strasburg	33.70	258	P	P	23 24 23.3	+0.9
	baz=44						
J48A	Bridge Port	33.72	268	P	P	23 24 23.5	+0.9
J48A	Bridge Port	33.72	268	P	P	23 24 23.3	+0.7
	baz=49						
N53A	Lisbon	33.77	262	P	P	23 24 23.4	+0.3
N53A	Lisbon	33.77	262	P	P	23 24 23.6	+0.5
	baz=46						
O54A	Avella	33.96	261	P	P	23 24 25.7	+1.1
	baz=45						
L50A	Kingsville	34.02	266	P	P	23 24 25.9	+0.8
	baz=48						
MCWV	Mont Chateau	34.03	260	P	P	23 24 26.3	+0.9
	baz=45						
Q56A	Snyder Ridge,	34.12	258	P	P	23 24 26.3	+0.2
Q56A	Snyder Ridge,	34.12	258	P	P	23 24 26.1	0.0
	baz=44						
P55A	Reedsville	34.13	260	P	P	23 24 26.5	+0.3
	baz=44						
R57A	Stanardsville	34.30	257	P	P	23 24 29.0	+1.4
	baz=43						
O53A	New Philadelph	34.37	262	P	P	23 24 28.7	+0.5
	baz=46						
P54A	Burton	34.42	260	P	P	23 24 29.5	+0.8
	baz=45						
N51A	Ashland	34.54	264	P	P	23 24 30.0	+0.2
	baz=46						
M50A	Fremont	34.58	265	P	P	23 24 31.3	+1.3
U61A	Possum Corner	34.65	252	P	P	23 24 30.6	-0.1
	baz=41						
L48A	N Adams	34.98	267	P	P	23 24 32.9	-0.6
	baz=48						
P53A	Whipple	35.00	261	IAmb	IAmb	23 24 36.6	
	comp=Z,27nm,1.1s						
P53A	Whipple	35.00	261	P	P	23 24 34.3	+0.7
	baz=45						
M49A	Liberty Center	35.04	266	P	P	23 24 34.6	+0.6
	baz=47						
Q54A	Coxs Mills	35.05	260	P	P	23 24 34.7	+0.6
	baz=44						
N50A	Nevada	35.07	264	P	P	23 24 35.3	+1.0
	baz=46						
EYMN	Ely	35.09	281	P	P	23 24 34.8	+0.4
V61A	Roper	35.13	252	P	P	23 24 34.5	-0.3
	baz=40						
O51A	Pataskala	35.20	263	P	P	23 24 36.2	+0.7
	baz=46						
T58A	Grand View Acr	35.30	255	P	P	23 24 35.9	-0.4
	baz=42						
P52A	Corning	35.30	262	P	P	23 24 36.8	+0.5
	baz=45						
ACSO	Alum Creek Sta	35.35	264	P	P	23 24 36.9	+0.2
ACSO				IAmb	IAmb	23 24 39.1	
	comp=Z,23nm,1.1s						
ACSO	Alum Creek Sta	35.35	264	P	P	23 24 37.4	+0.7

ULM Lac du Bonnet 36.11 287 P **P** **23 24 44.3 +1.2**
comp=Z,3.5nm,0.8s,baz=67,slow=11,SNR=3.6
ULM Lac du Bonnet 36.11 287 IAmb IAmb 23 24 50.0
comp=Z,28nm,1.4s
BLA Blacksburg 36.11 257 P **P** **23 24 44.9 +1.6**
baz=42
O49A Covington 36.12 265 P **P** **23 24 43.5 +0.2**
baz=46
R53A Hurricane 36.13 260 P **P** **23 24 44.2 +0.8**
baz=44
S54A Dingess, Beckl 36.17 259 P **P** **23 24 44.3 +0.5**
baz=43
P50A Jamestown 36.23 263 P **P** **23 24 45.0 +0.7**
baz=45
Q51A Peebles 36.40 262 P **P** **23 24 46.4 +0.7**
baz=45
V58A Windy Hill, Pi 36.47 255 P **P** **23 24 46.2 -0.1**
baz=41
O48A Farmland 36.53 266 P **P** **23 24 47.0 +0.2**
baz=46
BURAR Bucovina Array 36.56 78 P **P** **23 24 46.9 -0.2**
KLMR Klimovskoe 36.69 52 *e*P **P** **23 24 46.5 -1.4**
KLMR pmax pmax
comp=Z,56nm,1.4s
KLMR Klimovskoe 36.69 52 *e*P **P** **23 24 46.5 -1.4**
KLMR AMP 23 24 51.1
comp=Z,56nm,1.4s
P49A Miami Univ. Ec 36.79 264 P **P** **23 24 50.3 +1.2**
baz=45
T54A Tazewell 36.85 258 P **P** **23 24 50.6 +1.0**
baz=42
AKASG Malin Array Be 36.90 71 P **P** **23 24 49.8 0.0**
AKASG pmax pmax
comp=Z,2.0nm,1.0s
AKASG Malin Array Be 36.90 71 P **P** **23 24 49.8 0.0**
comp=Z,2.5nm,0.4s,baz=307,slow=8.3,SNR=3.0
AKASG Malin Array Be 36.90 71 IAmb IAmb 23 24 58.5
comp=Z,2.1nm,1.0s
AKBB Malin Array Si 36.90 71 P **P** **23 24 49.8 0.0**
AKBB pmax pmax
comp=Z,18nm,1.5s
AKBB Malin Array Si 36.90 71 P **P** **23 24 49.8 0.0**
U55A TA2, Sparta 36.98 257 P **P** **23 24 51.7 +1.0**
baz=42
W58A Raeford 37.12 254 P **P** **23 24 53.0 +1.2**
baz=40
P48A Milroy 37.23 265 IAmb IAmb 23 24 54.5
comp=Z,32nm,1.2s
P48A Milroy 37.23 265 P **P** **23 24 52.7 -0.1**
baz=45
Q49A Aurora 37.26 264 P **P** **23 24 52.7 -0.3**
baz=45
U54A Nelsons Funny 37.38 258 P **P** **23 24 54.9 +0.7**
baz=42
T53A Wise 37.43 259 P **P** **23 24 55.5 +1.0**
baz=43
SPMN Marine on St. 37.46 278 P **P** **23 24 55.4 +0.7**
baz=51
R50A Paris 37.46 262 P **P** **23 24 56.0 +1.2**
baz=44
SFIN Lafayette 37.51 267 P **P** **23 24 56.1 +0.9**
baz=46
S51A Beattyville 37.52 261 IAmb IAmb 23 24 57.7
comp=Z,17nm,0.9s
S51A Beattyville 37.52 261 P **P** **23 24 55.5 +0.2**
baz=43
JFWS Jewell Farm 37.55 273 P **P** **23 24 56.0 +0.5**
baz=49
Q48A North Vernon 37.77 264 P **P** **23 24 57.8 +0.4**
baz=45
L42A Oliver, Polo 37.83 271 IAmb IAmb 23 25 00.1
comp=Z,22nm,1.0s
U53A Fall Branch 37.91 259 P **P** **23 24 59.0 +0.4**
baz=42
R49A Shelbyville 37.92 263 P **P** **23 24 59.1 +0.4**
baz=44
S50A Richmond 37.94 262 P **P** **23 24 59.0 +0.3**
baz=44
V54A Nebo 38.00 257 P **P** **23 24 59.9 +0.5**
baz=41
OBN Obninsk 38.19 61 *i* P **P** **23 25 01.3 +0.6**
OBN *i* S **S** **23 30 55.6 +1.5**
OBN *i* SS **SnSn** **23 33 38.0 +0.8**
OBN pmax pmax
comp=Z,6.0nm,1.3s
OBN MLR MLR
comp=Z,163nm,14.0s
T51A Gray 38.21 261 P **P** **23 25 02.1 +1.0**
baz=43
TZTN Tazewell 38.30 260 P **P** **23 25 02.6 +0.7**
baz=42
U52A Thorn Hill 38.31 259 P **P** **23 25 02.2 +0.1**
baz=42
S49A Springfield 38.35 263 P **P** **23 25 02.7 +0.5**
baz=44
X56A White Oak 38.48 255 P **P** **23 25 03.2 -0.2**
baz=40
Y57A Sumter 38.50 254 P **P** **23 25 03.9 +0.4**
baz=40
V53A Saluda 38.55 258 P **P** **23 25 04.5 +0.5**
baz=42
WCI Wyandotte Cave 38.58 264 P **P** **23 25 04.6 +0.4**
WCI pmax pmax
comp=Z,16nm,1.0s
WCI Wyandotte Cave 38.58 264 P **P** **23 25 04.6 +0.4**
WCI Wyandotte Cave 38.58 264 P **P** **23 25 04.6 +0.4**
baz=44
YKA Yellowknife Ar 38.63 313 P **P** **23 25 03.5 -0.7**
comp=Z,2.9nm,0.8s,baz=60,slow=9.1,SNR=17
YKA PcP **PcP** **23 27 14.9 -1.3**
comp=Z,1.5nm,0.8s,baz=54,slow=3.2,SNR=8.5
W54A Cherokee Point 38.65 257 P **P** **23 25 05.6 +0.8**
baz=41
T50A Nancy 38.66 261 P **P** **23 25 05.3 +0.5**
baz=43
U51A La Follette 38.68 260 P **P** **23 25 05.3 +0.2**
baz=42
V52A Sevierville 38.84 259 P **P** **23 25 07.2 +0.8**
baz=42
FNA Florina 38.85 90 P **P** **23 25 06.9 +0.4**
FNA pmax pmax
comp=Z,94nm,1.7s
FNA Florina 38.85 90 P **P** **23 25 06.9 +0.4**
T49A Edmonton 38.97 262 P **P** **23 25 08.0 +0.4**
baz=43
NHSC New Hope 39.09 253 P **P** **23 25 09.1 +0.7**
baz=39
U50A Jamestown 39.10 261 P **P** **23 25 09.3 +0.7**
baz=42
W53A Cullowhee 39.11 258 P **P** **23 25 09.5 +0.7**
baz=41
V51A Loudon 39.28 260 P **P** **23 25 11.1 +1.0**
baz=42
Y55A Saluda 39.34 255 P **P** **23 25 11.5 +0.9**
baz=40
U49A Red Boiling Sp 39.54 262 P **P** **23 25 12.4 +0.2**
baz=43
Z56A Williston 39.55 254 P **P** **23 25 13.5 +1.2**
baz=39
W52A Murphy 39.58 259 P **P** **23 25 13.7 +1.0**
baz=41
X53A Estanollee 39.69 257 P **P** **23 25 14.6 +1.1**
baz=41
V50A Pikevile 39.79 260 P **P** **23 25 14.8 +0.5**
baz=42
Y54A Tignall 39.84 256 P **P** **23 25 15.4 +0.6**
baz=40
SCIA State Center 39.86 274 P **P** **23 25 13.9 -0.9**
SCIA IAmb IAmb 23 25 23.1
comp=Z,29nm,1.1s
T47A Sharon Grove 39.92 264 IAmb IAmb 23 25 23.9
comp=Z,33nm,1.4s
X52A Dahlonega 39.93 258 P **P** **23 25 16.1 +0.5**
baz=41
LIT Litokhoron 39.93 90 P **P** **23 25 14.1 -1.4**
LIT pmax pmax
comp=Z,43nm,0.9s
LIT Litokhoron 39.93 90 P **P** **23 25 14.1 -1.4**
LIT IAmb IAmb 23 25 15.0
comp=Z,43nm,0.9s
W51A Cleveland 39.98 259 P **P** **23 25 15.9 0.0**
baz=41
V49A McMinnville 40.16 261 P **P** **23 25 18.1 +0.7**
baz=42
Y53A Monroe 40.33 257 P **P** **23 25 19.4 +0.6**
baz=40,SNR=5.3
Z54A Sparta 40.41 256 P **P** **23 25 20.3 +0.9**
baz=40
X51A Calhoun 40.48 259 P **P** **23 25 21.1 +1.0**
baz=41
ECSD EROS Data Cent 40.51 279 P **P** **23 25 20.3 +0.1**
baz=49
Y52A Lilburn 40.58 257 P **P** **23 25 21.7 +0.8**
baz=40
S44A Carbondale 40.60 266 IAmb IAmb 23 25 23.1
comp=Z,44nm,1.1s
GOGA Godfrey 40.61 256 P **P** **23 25 21.9 +0.8**
baz=40
155A Kite 40.68 255 P **P** **23 25 23.6 +1.9**
baz=39
V48A Smith Brothers 40.68 262 IAmb IAmb 23 25 24.9
comp=Z,59nm,1.7s
Z53A Monticello 40.76 256 P **P** **23 25 23.2 +0.8**
baz=40
W49A Belvidere 40.84 261 P **P** **23 25 22.7 -0.3**
baz=42
WVT Waverly 40.95 263 P **P** **23 25 24.3 +0.4**
WVT pmax pmax
comp=Z,17nm,1.1s
WVT Waverly 40.95 263 P **P** **23 25 24.3 +0.4**
WVT Waverly 40.95 263 P **P** **23 25 24.1 +0.2**
baz=43
Y51A Rockmart 41.10 258 P **P** **23 25 25.9 +0.8**
baz=40
Z52A Williamson 41.29 257 P **P** **23 25 26.2 -0.5**
baz=40
CCM Cathedral Cave 41.44 268 P **P** **23 25 28.5 +0.6**
CCM pmax pmax
comp=Z,21nm,1.2s
CCM Cathedral Cave 41.44 268 P **P** **23 25 28.5 +0.6**
CCM Cathedral Cave 41.44 268 P **P** **23 25 27.5 -0.5**
baz=44
254A Abbeville 41.64 255 P **P** **23 25 30.2 +0.6**
baz=39
152A Waverly Hall 41.85 257 P **P** **23 25 31.9 +0.6**
baz=40
PBMO Poplar Bluff 41.91 266 IAmb IAmb 23 25 33.7
comp=Z,29nm,1.0s
PLAL Pickwick Lake 41.93 262 IAmb IAmb 23 25 33.8
comp=Z,34nm,1.4s
Z50A Ashland 42.05 259 P **P** **23 25 33.0 0.0**
baz=40
TIGA Tifton 42.20 255 P **P** **23 25 36.6 +2.4**
baz=38
INK Inuvik 42.22 327 P **P** **23 25 33.7 -0.3**
comp=Z,3.8nm,1.0s,baz=56,slow=11,SNR=6.0
INK PcP **PcP** **23 27 26.6 -1.2**
comp=Z,2.1nm,1.0s,baz=8.4,slow=3.0,SNR=3.3
INK Inuvik 42.22 327 P **P** **23 25 33.6 -0.3**
252A Lumpkin 42.38 256 P **P** **23 25 36.0 +0.3**
baz=39
LRAL Lakeview Retre 42.80 259 P **P** **23 25 39.6 +0.5**
baz=40
OXF Oxford 43.01 263 IAmb IAmb 23 25 48.8
comp=Z,52nm,1.1s
OXF Oxford 43.01 263 P **P** **23 25 40.9 +0.2**
baz=42
250A Grady 43.22 258 P **P** **23 25 43.3 +0.8**
U40A Yellville 43.55 268 IAmb IAmb 23 25 48.0
comp=Z,35nm,1.4s
U40A Yellville 43.55 268 P **P** **23 25 44.9 -0.2**
baz=43
LAO LASA Array 43.73 289 IAmb IAmb 23 25 49.5
comp=Z,30nm,0.9s
LAO LASA Array 43.73 289 P **P** **23 25 47.2 +0.7**
baz=49,SNR=8.0
WHAR Wooly Hollow 44.02 266 IAmb IAmb 23 25 50.8
comp=Z,28nm,1.1s
W41B Gary Mavity, V 44.08 266 IAmb IAmb 23 25 57.2
comp=Z,22nm,1.1s
W41B Gary Mavity, V 44.08 266 P **P** **23 25 49.2 -0.2**
baz=42
HHAR Hobbs 44.20 269 IAmb IAmb 23 25 58.0
comp=Z,18nm,1.2s
EPYK Eagle Plains 44.39 326 P **P** **23 25 51.6 +0.1**
baz=50
MANT Manisa 44.42 86 P **P** **23 25 52.5 +0.2**
TAM Tamanrasset 44.54 123 P **P** **23 25 53.4 +0.1**
TAM pmax pmax
comp=Z,20nm,1.4s
TAM Tamanrasset 44.54 123 P **P** **23 25 53.4 +0.1**
TAM IAmb IAmb 23 25 56.1
comp=Z,20nm,1.4s
EGMT Eagleton 44.69 293 IAmb IAmb 23 25 56.6
comp=Z,25nm,1.2s
EGMT Eagleton 44.69 293 P **P** **23 25 55.1 +0.8**
baz=49
X40A Basin Creek Fa 44.91 266 IAmb IAmb 23 26 03.8
comp=Z,19nm,0.9s
X40A Basin Creek Fa 44.91 266 P **P** **23 25 56.1 0.0**
baz=42,SNR=5.4
W39A Magazine 44.91 268 IAmb IAmb 23 26 04.1
comp=Z,20nm,1.0s
W39A Magazine 44.91 268 P **P** **23 25 55.9 -0.2**
baz=42
MIAR Mount Ida 45.28 267 IAmb IAmb 23 26 07.1
comp=Z,31nm,1.2s
MIAR Mount Ida 45.28 267 P **P** **23 25 59.3 +0.3**
baz=42
TUL1 Leonard 45.50 270 IAmb IAmb 23 26 08.1
comp=Z,26nm,1.1s
TUL1 Leonard 45.50 270 P **P** **23 26 01.2 +0.5**
baz=43
BMAR Burnt Mountain 46.00 330 P **P** **23 26 04.7 +0.4**
BR131 Keskin Array S 46.34 81 P **P** **23 26 06.3 -1.1**
BR131 pmax pmax
comp=Z,8.0nm,1.1s
BR131 Keskin Array S 46.34 81 P **P** **23 26 06.3 -1.1**
BRTR Keskin Array B 46.34 81 *c*e P **P** **23 26 09.3 +1.9**
BRTR pmax pmax
comp=Z,3.0nm,0.9s
BRTR Keskin Array B 46.34 81 P **P** **23 26 08.2 +0.8**
comp=Z,3.0nm,0.8s,baz=314,slow=4.8,SNR=8.7
BRTR PcP **PcP** **23 27 41.7 -0.8**
comp=Z,0.6nm,0.9s,baz=269,slow=2.5,SNR=4.3
BRTR Keskin Array B 46.34 81 P **P** **23 26 07.2 -0.2**
RLMT Red Lodge 46.36 289 IAmb IAmb 23 26 11.0
comp=Z,16nm,1.2s
RLMT Red Lodge 46.36 289 P **P** **23 26 08.4 +0.7**
baz=47,SNR=6.1
TOLK Toolik Lake Re 46.46 333 IAmb IAmb 23 26 10.1
comp=Z,29nm,1.3s
TOLK Toolik Lake Re 46.46 333 P **P** **23 26 08.0 0.0**
baz=44
EGAK Eagle 46.83 326 IAmb IAmb 23 26 12.7
comp=Z,18nm,1.1s
SOC Sochi 46.93 73 *e*P **P** **23 26 10.8 -1.1**
SOC *e* **23 27 55.3**
SOC *e*PPP PPP 23 28 43.1
SOC *e*S **S** **23 33 03.3 +0.3**
SOC *e*SSS SSS 23 37 39.2
SOC pmax pmax
comp=Z,25nm,0.7s
SOC MLR MLR
comp=Z,257nm,12.0s
KSCO Kaye Shedlock' 47.03 278 P **P** **23 26 12.8 -0.1**
baz=44
ARU Arti 47.37 49 *d* iP **P** **23 26 15.4 +0.3**
ARU 23 28 06.5
ARU S **S** **23 33 11.6 +2.7**
ARU SS **SS** **23 36 33.9 -1.8**
ARU pmax pmax
comp=Z,25nm,1.0s
ARU Arti 47.37 49 P **P** **23 26 14.7 -0.3**
N23A Red Feather La 47.51 283 IAmb IAmb 23 26 25.3
comp=Z,23nm,1.3s
N23A Red Feather La 47.51 283 P **P** **23 26 18.0 +1.2**
baz=45
H17A Grant Village 47.54 289 P **P** **23 26 18.6 +1.7**
baz=47
PRP Porcupine Dome 47.62 328 P **P** **23 26 17.5 +0.3**
PRP IAmb IAmb 23 26 19.0
comp=Z,6.7nm,0.8s
GOF Gofitskoye 47.66 69⇑ *e*P P 23 26 27.0 +9.5
DLMT Dillon 47.93 292 IAmb IAmb 23 26 27.3
comp=Z,16nm,1.4s
SVE Sverdlovsk 47.95 48 *e*P **P** **23 26 19.9 +0.2**
SVE pmax pmax
comp=Z,17nm,1.5s
WMOK Wichita Mounta 48.02 271 P **P** **23 26 21.2 +0.8**
baz=42,SNR=6.3
ISCO Idaho Springs 48.10 281 IAmb IAmb 23 26 24.2
comp=Z,11nm,0.8s
ISCO Idaho Springs 48.10 281 P **P** **23 26 22.1 +0.7**
baz=45,SNR=5.1
BW06 Boulder Array 48.13 287 P **P** **23 26 19.8 -1.7**
baz=46
PDAR Pinedale Array 48.13 287 P **P** **23 26 20.4 -1.1**
comp=Z,3.0nm,0.8s,baz=65,slow=7.2,SNR=11
PDAR Pinedale Array 48.13 287 P **P** **23 26 20.1 -1.4**
BCAR Beaver Creek A 48.23 324 P **P** **23 26 21.9 +0.1**
NEW Newport 48.23 297 P **P** **23 26 22.3 +0.3**
comp=Z,3.1nm,0.7s,baz=50,slow=7.5,SNR=5.7
NEW Newport 48.23 297 P **P** **23 26 21.7 -0.3**
baz=47
KIV Kislovodsk 48.23 71 *e*P **P** **23 26 24.1 +2.0**
KIV pmax pmax
comp=Z,20nm,1.1s
KIV MLR MLR
comp=Z,640nm,16.0s
Q24A Divide 48.44 280 P **P** **23 26 24.3 +0.2**
baz=44
POKR Poker Plat Res 48.47 329 P **P** **23 26 24.4 +0.9**
baz=43,SNR=5.9
KBZ Khabaz 48.50 71 P **P** **23 26 24.4 +0.4**
comp=Z,1.7nm,1.0s,baz=282,slow=10,SNR=4.3
DOT Dot Lake 48.53 326 IAmb IAmb 23 26 32.9
comp=Z,14nm,1.2s
IL31 48.56 328 IAmb IAmb 23 26 26.6
comp=Z,20nm,1.1s
ILAR Eielson Array 48.56 328 P **P** **23 26 24.1 -0.2**
ILAR 23 27 48.9
ILAR Eielson Array 48.56 328 P **P** **23 26 24.6 +0.3**
comp=Z,8.7nm,0.8s,baz=36,slow=5.5,SNR=26
ILAR PcP **PcP** **23 27 48.9 -0.9**
comp=Z,1.9nm,0.8s,baz=6.1,slow=2.4,SNR=5.7
ILAR Eielson Array 48.56 328 P **P** **23 26 24.1 -0.2**
COLA College 48.77 329 P **P** **23 26 25.9 +0.1**
COLA pmax pmax
comp=Z,17nm,0.9s
COLA College 48.77 329 P **P** **23 26 25.9 +0.1**
COLA IAmb IAmb 23 26 28.3
comp=Z,17nm,0.8s
TCOL CCGO_UAF Yank 48.77 329 P **P** **23 26 26.4 +0.6**
baz=42
MDM Murphy Dome 48.81 329 IAmb IAmb 23 26 28.5
comp=Z,18nm,0.9s
HDA Harding Lake 48.85 328 IAmb IAmb 23 26 29.7
comp=Z,19nm,0.9s
HDA Harding Lake 48.85 328 P **P** **23 26 26.1 -0.4**
baz=43,SNR=9.9
MENT Mentasta 48.94 325 IAmb IAmb 23 26 30.0
comp=Z,11nm,1.1s
C09A Chrisman Ranch 49.11 298 IAmb IAmb 23 26 30.0
comp=Z,16nm,1.2s
WRH Wood River Hil 49.13 328 IAmb IAmb 23 26 30.8
comp=Z,13nm,1.0s
B08A Colville Reser 49.24 299 IAmb IAmb 23 26 31.1
comp=Z,19nm,1.2s
SMCO Snowmass 49.28 282 IAmb IAmb 23 26 44.2
comp=Z,26nm,1.6s
T25A Trinidad 49.36 278 P **P** **23 26 32.1 +1.1**
baz=43,SNR=6.6
MLY Manley 49.46 330 IAmb IAmb 23 26 33.4
comp=Z,10nm,0.8s
AMTX Amarillo 49.51 274 P **P** **23 26 33.4 +1.4**
baz=42
SDCO Great Sand Dun 49.51 279 P **P** **23 26 32.7 +0.5**
baz=43
IMAR Indian Mountai 49.54 332 P **P** **23 26 31.6 -0.1**
CTGM Chitina Glacie 49.58 322 IAmb IAmb 23 26 36.2
comp=Z,24nm,1.3s
F10A Beach Ranch, E 49.86 295 IAmb IAmb 23 26 38.5
comp=Z,18nm,1.4s
DHY Denali Highway 49.97 327 IAmb IAmb 23 26 43.8
comp=Z,28nm,1.4s
HKT Hockley 50.00 265 P **P** **23 26 35.1 -0.5**
HKT pmax pmax
comp=Z,23nm,1.3s
HKT Hockley 50.00 265 P **P** **23 26 35.1 -0.5**
HKT IAmb IAmb 23 26 37.7
comp=Z,23nm,1.2s
HWUT Hardware Ranch 50.01 287 IAmb IAmb 23 26 37.1
comp=Z,15nm,1.2s
RDOG Red Dog Mine 50.03 337 IAmb IAmb 23 26 37.4
comp=Z,18nm,1.0s
ABTX Abilene, Hawle 50.07 270 P **P** **23 26 36.5 +0.2**
baz=41
RND Reindeer 50.16 328 IAmb IAmb 23 26 44.5
comp=Z,13nm,1.0s
AKH Akhalkalaki 50.44 72 P **P** **23 26 40.0 +0.9**
AKH pmax pmax
comp=Z,26nm,1.8s
AKH Akhalkalaki 50.44 72 P **P** **23 26 40.0 +0.9**
AKH IAmb IAmb 23 26 42.1
comp=Z,26nm,1.8s
TRF Thorofare Moun 50.55 328 P **P** **23 26 39.9 +0.3**
TRF IAmb IAmb 23 26 44.6
comp=Z,30nm,1.2s
KTH Kantishna Hill 50.65 329 IAmb IAmb 23 26 41.6
comp=Z,35nm,1.5s
MSTX Muleshoe 50.79 274 IAmb IAmb 23 26 49.9
comp=Z,28nm,1.2s
G08A Pilot Rock 51.20 296 IAmb IAmb 23 26 46.1
comp=Z,34nm,1.9s
TOA0 Torodi Ar. Sit 51.39 133 P **P** **23 26 44.5 -1.7**
TOA0 IAmb IAmb 23 26 46.9
comp=Z,32nm,1.4s
TORD Torodi Ar. Bea 51.39 133 P **P** **23 26 45.4 -0.9**
comp=Z,9.2nm,1.1s,baz=334,slow=6.3,SNR=15
TORD PcP **PcP** **23 28 01.2 +0.4**
comp=Z,0.3nm,0.7s,baz=321,slow=1.8,SNR=2.4
TORD Torodi Ar. Bea 51.39 133 P **P** **23 26 45.7 -0.5**
TIXI Tiksi 51.49 7⇓ *e*P **P** **23 26 46.9 +0.5**
TIXI pmax pmax
comp=Z,15nm,1.7s
TIXI Tiksi 51.49 7 P **P** **23 26 47.1 +0.7**
comp=Z,4.7nm,0.6s,baz=357,slow=7.7,SNR=9.4
TIXI Tiksi 51.49 7 P **P** **23 26 46.1 -0.2**
TIXI IAmb IAmb 23 26 48.4
comp=Z,37nm,1.8s
MVCO Mesa Verde 51.53 281 P **P** **23 26 47.7 +0.3**
baz=43
KNK Knik Glacier 51.56 326 IAmb IAmb 23 26 49.9
comp=Z,29nm,1.1s
JCT Junction City 51.79 269 IAmb IAmb 23 26 50.6
comp=Z,33nm,1.2s
JCT Junction City 51.79 269 P **P** **23 26 49.2 0.0**
baz=40
ANMO Albuquerque 52.09 278⇓ *i*P **P** **23 26 53.9 +2.3**
ANMO pmax pmax
comp=Z,13nm,1.7s
ANMO Albuquerque 52.09 278 P **P** **23 26 52.8 +1.2**
comp=Z,3.0nm,0.9s,baz=70,slow=6.1,SNR=6.2
ANMO Albuquerque 52.09 278 P **P** **23 26 50.8 -0.8**
ANMO Albuquerque 52.09 278 P **P** **23 26 52.8 +1.2**
baz=42
J08A Circle Bar Ran 52.34 294 IAmb IAmb 23 26 55.1
comp=Z,14nm,1.1s
ABKAR Akbulak array 52.95 55 P **P** **23 26 57.5 -0.1**
833A Chaparral WMA, 53.22 267 P **P** **23 27 00.2 +0.4**
baz=39
PINE Pine Mountain 53.26 296 IAmb IAmb 23 27 02.5
comp=Z,14nm,1.1s
H04D Lebanon 53.62 297 P **P** **23 27 02.0 -0.5**
baz=43
J05D Fort Rock, OR 53.78 295 P **P** **23 27 04.0 +0.1**
baz=43
MNTX Cornudas Mount 53.94 274 IAmb IAmb 23 27 06.8
comp=Z,13nm,1.2s
MNTX Cornudas Mount 53.94 274 P **P** **23 27 05.5 +0.5**
baz=40
K05A Summer Lake 54.01 295 IAmb IAmb 23 27 08.1
comp=Z,24nm,1.2s
J04D Umpqua Nationa 54.25 296 P **P** **23 27 06.9 -0.5**
baz=43
MOD Modoc Plateau 54.32 294 IAmb IAmb 23 27 09.7
comp=Z,13nm,1.1s
WUAZ Wupatki 54.34 282 IAmb IAmb 23 27 16.7
comp=Z,22nm,1.5s
R11A Troy Canyon, C 54.49 287 P **P** **23 27 09.9 +0.7**
baz=42,SNR=5.6
BRVK Borovoye 54.54 46 P **P** **23 27 09.2 +0.1**
BRVK pmax pmax
comp=Z,26nm,1.4s
BRVK Borovoye 54.54 46 P **P** **23 27 09.2 +0.1**
BRVK IAmb IAmb 23 27 11.0
comp=Z,26nm,1.4s
121A Cookes Peak, D 54.63 277 P **P** **23 27 10.7 +0.4**
baz=40
BILL Bilibino 54.74 351⇓ *i*P **P** **23 27 10.8 +0.4**
BILL pmax pmax

comp=Z,8.0nm,1.7s
TXAR Lajitas Array 54.80 271 P P 23 27 12.2 +0.7
TXAR Lajitas Array 54.80 271 P P 23 27 11.5 0.0
comp=Z,2.2nm,0.9s,baz=54,slow=6.4,SNR=7.1
TXAR Lajitas Array 54.80 271 P P 23 27 12.2 +0.7
TIC Toumodi 54.91 144 *e*PKP1 **P 23 27 11.7 -0.5**
DBIC Dimbokro 54.94 143 P P 23 27 11.7 -0.7
DBIC pmax pmax
comp=Z,49nm,1.7s
DBIC Dimbokro 54.94 143 P P 23 27 11.6 -0.8
comp=Z,6.5nm,0.8s,baz=331,slow=9.7,SNR=5.9
DBIC Dimbokro 54.94 143 P P 23 27 11.7 -0.7
M04C Macdoel 55.18 294 P P 23 27 14.0 -0.1
baz=42
KIC Kosan Boka 55.27 143 *e*PKP1 **P 23 27 11.8 -3.0**
comp=Z,25nm,1.3s
KVN Kaiserville 55.29 290 IAmb IAmb 23 27 17.0
comp=Z,16nm,1.0s
LIC Lamto 55.30 144 *e*PKP1 **P 23 27 12.5 -2.5**
SDV Santo Domingo 55.38 225 P P 23 27 15.3 -0.4
comp=Z,1.4nm,0.2s,baz=206,slow=22,SNR=2.8
PAHR Pah Rah Range 55.47 291 IAmb IAmb 23 27 18.7
comp=Z,15nm,1.1s
BEKR Beckworth 55.85 292 IAmb IAmb 23 27 21.0
comp=Z,15nm,1.4s
NVAR Mina Array Bea 55.86 289 P P 23 27 19.0 -0.1
comp=Z,2.1nm,0.8s,baz=56,slow=5.9,SNR=10
NVAR Mina Array Bea 55.86 289 P P 23 27 18.7 -0.4
TPNV Topopah Spring 55.89 287 IAmb IAmb 23 27 22.2
comp=Z,27nm,2.0s
TPNV Topopah Spring 55.89 287 P P 23 27 19.4 +0.1
baz=41
O03E Paynes Creek 56.27 293 P P 23 27 22.1 +0.2
baz=42
TUC Tucson 56.44 279 P P 23 27 23.0 -0.2
TUC pmax pmax
comp=Z,21nm,1.7s
TUC Tucson 56.44 279 P P 23 27 22.9 -0.2
TUC IAmb IAmb 23 27 26.0
comp=Z,21nm,1.7s
TUC Tucson 56.44 279 P P 23 27 24.0 +0.8
baz=40
ORV Oroville 56.67 292 IAmb IAmb 23 27 25.8
comp=Z,19nm,1.8s
O02D Mt. Diablo Mer 56.86 294 P P 23 27 25.6 -0.5
baz=41
DAC Darwin (Calif) 57.10 287 P P 23 27 26.9 -1.1
DAC pmax pmax
comp=Z,14nm,1.4s
DAC Darwin (Calif) 57.10 287 P P 23 27 26.9 -1.1
DAC IAmb IAmb 23 27 38.9
comp=Z,14nm,1.4s
MPMC Manual Prospec 57.21 287 P P 23 27 29.8 +1.0
baz=41
CWC Cottonwood Cre 57.24 288 P P 23 27 29.4 +0.5
baz=41
LRMC Laurel Mtn Rad 57.75 287 P P 23 27 32.0 -0.5
baz=40
214A Organ Pipe Nat 57.82 280 IAmb IAmb 23 27 41.6
comp=Z,24nm,1.6s
214A Organ Pipe Nat 57.82 280 P P 23 27 33.6 +0.8
baz=40
BC3 Big Chuckawall 57.95 284 P P 23 27 35.3 +1.5
baz=40
BELC Belle Mtn. Jos 57.98 284 P P 23 27 35.1 +1.0
baz=40
ISA Isabella, Lake 58.03 287 IAmb IAmb 23 27 38.2
comp=Z,38nm,1.9s
ISA Isabella, Lake 58.03 287 P P 23 27 35.5 +1.2
baz=40
GLA Glamis 58.07 283 P P 23 27 36.0 +1.3
baz=40
EDW2 Edwards Air Fo 58.37 286 P P 23 27 37.5 +0.7
baz=40,SNR=5.0
XPFO Pion Flat 58.52 284 P P 23 27 38.0 +0.1
PFO Pinyon Flats O 58.52 284 P P 23 27 38.7 +0.8
PFO pmax pmax
comp=Z,7.0nm,0.9s
PFO Pinyon Flats O 58.52 284 P P 23 27 37.9 0.0
comp=Z,4.5nm,0.8s,baz=22,slow=9.2,SNR=7.5
PFO Pinyon Flats O 58.52 284 P P 23 27 38.7 +0.8
PFO Pinyon Flats O 58.52 284 P P 23 27 38.3 +0.4
baz=40
SWSC Sam W. Stewart 58.68 283 P P 23 27 40.5 +1.6
baz=40
BFSC Mount Baldy Ra 58.68 286 P P 23 27 39.4 +0.4
baz=40
MONP2 Monument Peak 59.05 284 P P 23 27 43.6 +1.9
baz=40
HSIG 59.06 277 P P 23 27 42.2 +0.6
HSIG IAmb IAmb 23 27 43.7
comp=Z,15nm,1.1s
IKP In-Ko-Pah, Jac 59.07 283 P P 23 27 42.4 +0.8
baz=40
ZAA0 Zalesovo Array 59.15 37 P P 23 27 41.5 -0.2
ZAA0 IAmb IAmb 23 27 43.0
comp=Z,18nm,1.9s
ZALV Zalesovo Beam 59.15 37 P P 23 27 41.4 -0.4
ZALV Zalesovo Beam 59.15 37 P P 23 27 41.6 -0.2
comp=Z,0.5nm,0.4s,baz=322,slow=4.5,SNR=4.3
ZALV Zalesovo Beam 59.15 37 P P 23 27 41.4 -0.4
APG El Apazote 59.20 249 P P 23 27 40.4 -2.5
comp=Z,5.6nm,0.3s,baz=90,slow=15,SNR=2.7
ZAIG Zacatecas 59.35 265 P P 23 27 44.7 +0.7
ZAIG IAmb IAmb 23 27 47.1
comp=Z,9.9nm,1.0s
KURK Kurchatov 59.59 43 *i*P **P 23 27 44.2 -0.7**
KURK pmax pmax
comp=Z,13nm,1.0s
KURK Kurchatov 59.59 43 P P 23 27 44.3 -0.7
SNCC San Nicolas Is 60.44 286 P P 23 27 53.4 +2.4
baz=39
ROSC El Rosal 60.53 227 P P 23 27 54.2 +2.0
comp=Z,7.2nm,0.4s,baz=113,slow=12,SNR=9.7
ROSC El Rosal 60.53 227 IAmb IAmb 23 27 55.5
comp=Z,22nm,1.2s
GEYT Alibeck 60.57 65 P P 23 27 53.1 +1.3
comp=Z,2.2nm,0.9s,baz=297,slow=6.3,SNR=5.5
GEYT Alibeck 60.57 65 P P 23 27 51.2 -0.6
GYA0B ALIBECK ARRAY 60.57 65 P P 23 27 52.1 +0.3
GYA0B IAmb IAmb 23 27 54.1
comp=Z,25nm,1.7s
SEY Seymchan 60.69 356 *e*P **P 23 27 53.0 +0.8**
TLIG Tlapa 61.37 258 P P 23 27 58.4 +0.7
KK31 Karatay Array 62.38 53 P P 23 28 04.3 +0.3
KK31 pmax pmax
comp=Z,20nm,1.4s
KK31 Karatay Array 62.38 53 P P 23 28 04.3 +0.3
KK31 IAmb IAmb 23 28 06.2
comp=Z,20nm,1.4s
KKAR Karatay Array 62.38 53 P P 23 28 04.0 0.0
KKAR Karatay Array 62.38 53 P P 23 28 04.0 0.0
USP Ospenovka 63.98 50 P P 23 28 14.4 -0.2
SNR=5.9
MAKZ Makanchi 64.07 43 P P 23 28 15.0 -0.2
MAKZ pmax pmax
comp=Z,29nm,1.6s
MAKZ Makanchi 64.07 43 P P 23 28 15.0 -0.2
MA2 Magadan 64.10 357 P P 23 28 15.9 +0.8
MA2 pmax pmax
comp=Z,42nm,1.7s
MA2 Magadan 64.10 357 P P 23 28 15.9 +0.8
EKS2 Erkin-Say 64.16 51 P P 23 28 17.1 +1.2
SNR=16
MK31 Makanchi Array 64.20 43 P P 23 28 15.3 -0.7
MK31 pmax pmax
comp=Z,5.0nm,0.9s
MK31 Makanchi Array 64.20 43 P P 23 28 15.3 -0.7
MKAR Makanchi Array 64.20 43 P P 23 28 15.8 -0.2
comp=Z,4.3nm,0.8s,baz=334,slow=5.5,SNR=20
MKAR Makanchi Array 64.20 43 P P 23 28 15.3 -0.7
CHMS Chumysh 64.30 50 P P 23 28 17.5 +0.7
SNR=6.3
FRU1 Bishkek 64.41 51 P P 23 28 18.1 +0.6
FRU1 pmax pmax
comp=Z,17nm,1.0s
FRU1 Bishkek 64.41 51 P P 23 28 18.1 +0.6
AAK Ala-Archa 64.49 51 *e*P **P 23 28 19.6 +1.5**
AAK pmax pmax
comp=Z,26nm,1.7s
AAK Ala-Archa 64.49 51 P P 23 28 20.0 +1.8
SNR=8.9
AAK Ala-Archa 64.49 51 P P 23 28 18.6 +0.5
AML Almayashu 64.56 52 P P 23 28 19.6 +0.8
SNR=11
KBK Karagaybulak 64.67 50 P P 23 28 21.9 +2.5
SNR=6.5
UCH Uchtor 64.83 51 P P 23 28 22.7 +1.9
SNR=9.8
RAYN Ar Rayn 65.14 85 P P 23 28 22.6 +0.1
RAYN pmax pmax
comp=Z,28nm,1.7s
RAYN Ar Rayn 65.14 85 P P 23 28 22.6 +0.1
HRA Herat 65.41 65 IAmb IAmb 23 28 26.3
comp=Z,16nm,1.6s
KDJ Kajisay 66.04 49 P P 23 28 28.1 -0.1
KDJ pmax pmax
comp=Z,43nm,1.7s
KDJ Kajisay 66.04 49 P P 23 28 28.1 -0.1
KSH Kashi 67.69 52 *i*P **P 23 28 40.0 +1.3**
KSH PP **PP 23 31 11.0 +3.7**
KSH S **S 23 37 36.5 +0.2**
KSH SKS **SKiKP 23 38 34.3 -1.9**
KSH SS **SS 23 41 57.3 +1.0**
KSH pmax pmax
comp=Z,87nm,1.2s
KSH pmax pmax
comp=Z,350nm,4.9s
KSH LR LR
comp=Z,250nm,5.3s
KSH LR LR
comp=Z,250nm,4.2s
KSH LR LR
comp=Z,570nm,6.9s
KBL Kabul 68.61 60 P P 23 28 45.0 +0.3
KBL pmax pmax
comp=Z,32nm,1.7s
KBL Kabul 68.61 60 P P 23 28 45.0 +0.3
WMQ Urumqi 68.74 41 *e*P **P 23 28 46.5 +1.4**
WMQ sP pwP 23 28 53.0 +3.8
WMQ PcP **PcP 23 29 12.0 +2.2**
WMQ pmax pmax
comp=Z,12nm,1.5s
WMQ pmax pmax
comp=Z,170nm,4.9s
WMQ LR LR
comp=Z,190nm,14.5s
WMQ LR LR
comp=Z,200nm,17.5s
WMQ LR LR
comp=Z,180nm,19.7s
UOSS Minazif 69.83 75 P P 23 28 51.3 -0.7
PET Petropavlovsk 70.22 352 *e*P **P 23 28 54.5 +0.5**
PET pmax pmax
comp=Z,27nm,1.1s
SONM Songino Array 70.90 27 P P 23 28 58.1 -0.3
SONM pmax pmax
comp=Z,4.0nm,1.4s
SONM Songino Array 70.90 27 P P 23 28 58.0 -0.5
comp=Z,1.6nm,0.9s,baz=322,slow=6.1,SNR=7.0
SONM Songino Array 70.90 27 P P 23 28 58.1 -0.3
ULN Ulaanbaatar 71.03 26 *e*P **P 23 28 59.2 -0.1**
ULN pmax pmax
comp=Z,18nm,2.4s
ULN Ulaanbaatar 71.03 26 P P 23 28 59.7 +0.4
ULN IAmb IAmb 23 29 00.8
comp=Z,19nm,1.8s
NIL Nilore 71.32 57 P P 23 29 00.7 -0.4
NIL pmax pmax
comp=Z,50nm,1.5s
NIL Nilore 71.32 57 P P 23 29 00.7 -0.4
KLR Kul'dur 73.90 9 *e*P **P 23 29 14.8 -1.3**
KLR pmax pmax
comp=Z,2.0nm,1.0s
SIV San Ignacio 75.71 207 P P 23 29 26.9 0.0
comp=Z,9.2nm,1.1s,baz=51,slow=4.7,SNR=13
LPAZ La Paz 77.93 213 P P 23 29 39.8 -0.3
LPAZ pmax pmax
comp=Z,15nm,1.4s
LPAZ La Paz 77.93 213 P P 23 29 40.3 +0.1
comp=Z,1.2nm,0.7s,baz=337,slow=7.7,SNR=5.4
LPAZ La Paz 77.93 213 P P 23 29 39.8 -0.3
LPAZ IAmb IAmb 23 29 47.9
comp=Z,15nm,1.4s
HHC Hu-ho-hao-te 78.72 26 *e*P **P 23 29 43.8 0.0**
HHC pmax pmax
comp=Z,2.0nm,0.6s
HHC pmax pmax
comp=Z,120nm,6.4s
USRK Tassuriysk Ar. 78.91 10 P P 23 29 44.6 0.0
USRK Tassuriysk Ar. 78.91 10 P P 23 29 44.6 0.0
SOCY Socotra 79.00 85 P P 23 29 42.8 -2.9
DANN Dangsing 80.55 52 *e*P **P 23 29 54.3 +0.1**
comp=Z,57nm,1.3s
BJT Baijiatuan 80.56 23 P P 23 29 52.6 -1.0
BJT pmax pmax
comp=Z,15nm,1.5s
BJT Baijiatuan 80.56 23 P P 23 29 52.6 -1.0
KMBO Kilima Mbogo 80.88 106 *i*P **P 23 29 58.4 +2.4**
KOLN Koldanda 80.98 52 *e*P **P 23 29 55.6 -0.8**
comp=Z,47nm,1.1s
LZH Lanzhou 81.09 33 *e*P **P 23 29 56.3 -0.5**
LZH pP pwP 23 30 01.0 +0.1
LZH sP PcP 23 30 03.5 +0.3
LZH PP **PP 23 33 02.5 +1.5**
LZH pmax pmax
comp=Z,22nm,1.3s
LZH pmax pmax
comp=Z,130nm,6.2s
LZH LR LR
comp=Z,460nm,16.5s
LZH LR LR
comp=Z,480nm,16.3s
LZH LR LR
comp=Z,590nm,18.0s
GKN Gorkha 81.23 52 *e*P **P 23 29 57.6 -0.1**
comp=Z,34nm,0.9s
GO01 Chusmiza 81.44 213 P P 23 29 59.2 +0.2
GO01 IAmb IAmb 23 30 00.7
comp=Z,15nm,1.1s
PB11 IPOC Station P 81.67 213 P P 23 30 00.5 +0.7
PB11 IAmb IAmb 23 30 01.1
comp=Z,22nm,1.1s
KKN Kakani 81.70 51 *e*P **P 23 30 00.3 +0.1**
comp=Z,25nm,0.7s
DMN Daman 81.78 51 *e*P **P 23 30 01.1 +0.4**
comp=Z,33nm,0.9s
GUN Gumba 81.85 51 *e*P **P 23 30 01.5 +0.3**
comp=Z,56nm,1.3s
PKIN Phulchoki 81.93 51 *e*P **P 23 30 01.4 -0.1**
comp=Z,38nm,1.4s
PKI Pulchoki 81.94 51 *e*P **P 23 30 01.6 0.0**
comp=Z,53nm,1.4s
JIRN Jiri 82.20 50 *e*P **P 23 30 03.3 +0.3**
comp=Z,48nm,0.7s
LSA Lhasa 82.44 46 P P 23 30 04.1 -0.3
LSA pmax pmax
comp=Z,13nm,1.6s
LSA Lhasa 82.44 46 P P 23 30 04.1 -0.3
LSA IAmb IAmb 23 30 06.4
comp=Z,13nm,1.6s
RAMN Ramite 83.00 50 *e*P **P 23 30 06.7 -0.3**
comp=Z,19nm,0.7s
TAPN Taplejung 83.11 49 *e*P **P 23 30 07.8 +0.1**
comp=Z,39nm,1.5s
ODAN Odare 83.41 50 *e*P **P 23 30 09.5 +0.3**
comp=Z,78nm,1.5s
LVC Limon Verde 84.13 212 P P 23 30 13.7 +0.9
LVC pmax pmax
comp=Z,30nm,1.3s
LVC Limon Verde 84.13 212 P P 23 30 13.6 +0.9
comp=Z,14nm,1.1s,baz=13,slow=6.0,SNR=7.2
LVC Limon Verde 84.13 212 P P 23 30 13.7 +0.9
XAN Xi'an 84.47 30 P P 23 30 13.3 -1.0
XAN pmax pmax
comp=Z,5.0nm,1.4s
CPUP Villa Florida 84.88 201 P P 23 30 14.7 -1.3
comp=Z,1.1nm,0.6s,baz=7.7,slow=7.2,SNR=3.3
CPUP Villa Florida 84.88 201 IAmb IAmb 23 30 16.0
comp=Z,22nm,1.8s
KSRS Korea Array 85.10 14 P P 23 30 16.8 -0.5
comp=Z,1.6nm,0.8s,baz=331,slow=4.8,SNR=5.6
KSAR Wonju Array Be 85.11 14 P P 23 30 16.4 -0.9
KSAR Wonju Array Be 85.11 14 P P 23 30 16.4 -0.9
CD2 Chengdu 85.86 35 *e*P **P 23 30 20.0 -1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
SHL Shillong 86.41 47 P P 23 30 23.8 -0.4
SHL pmax pmax
comp=Z,20nm,1.2s
SHL Shillong 86.41 47 P P 23 30 23.8 -0.4
HYB Hyderabad 87.56 62 *i*P **P 23 30 29.5 -0.2**
NJ2 Nanjing 88.80 23 *e*P **P 23 30 34.0 -1.3**
NJ2 pmax pmax
comp=Z,8.0nm,0.6s
CMAR Chiang Mai Arr 95.60 44 *ce*P **P 23 31 07.5 +0.5**
CMAR pmax pmax
comp=Z,1.0nm,0.4s
CMAR Chiang Mai Arr 95.60 44 P P 23 31 06.7 -0.3
comp=Z,0.4nm,0.4s,baz=324,slow=5.0,SNR=4.5
AS31 Alice Springs 145.99 20 PKPdf 23 37 19.4 -0.9
ASAR Alice Springs 145.99 20 PKP2 **PKPdf 23 37 19.4 -1.0**
ASAR Alice Springs 145.99 20 PKPbc **PKPdf 23 37 19.9 -0.5**
comp=Z,3.9nm,0.8s,baz=347,slow=2.8,SNR=15
ASAR Alice Springs 145.99 20 PKPdf 23 37 19.4 -1.0
QSPA South Pole Qui 146.50 180 PKPdf 23 37 20.5 +0.6
QSPA PKPbc **pPKPdf 23 37 21.1 -0.1**

*IDC **28** 23:17:45.7±1.4, 4.7°98S×133.6°1E, h0km, mb4.0/2, mb1 4.2/7, mb1mx3.9/30, mbtmp4.0/7, ML3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/37, Error ellipse: s-maj=64.5km s-min=20.6km az=71.0*
*NEIC **28** 23:17:49.1±1.5, 4.7°91S±0.7°06×133.7°7E±0.7°2, h28km±4km, mb4.1/4, Error ellipse: s-maj=22.3km s-min=7.3km az=77.0.*
ISC 28 23:17:48.4±0.9, 4.7°99S±0.7°06×133.7°7E±0.7°1, h25km, n17, σ2.3s34/19, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**2.53**	**324**		**Pn**	**23 18 27.6**	**-0.4**
SAUI	**Saumlaki**	**3.83**	**219**	Pn	**Pn**	**23 18 49.1**	**+3.3**
SIJI	**Sorong**	**4.78**	**329**	Pn	**Pn**	**23 18 58.8**	**0.0**
	0.9nm,0.3s,baz=251,slow=23,SNR=3.4						
SIJI				Sn	**Sn**	**23 19 51.7**	**-1.7**
	1.5nm,0.3s,baz=150,slow=23,SNR=3.2						
MTN	**Manton Dam**	**8.22**	**198**	Pn	**Pn**	**23 19 49.3**	**+3.2**
KNRA	**Kununurra**	**11.69**	**204**		**Pn**	**23 20 34.9**	**+1.2**
WRA	**Warramunga Arr**	**14.88**	**178**	Pn	**Pn**	**23 21 16.1**	**-1.1**
	0.2nm,0.3s,baz=354,slow=13,SNR=9.5						
WRA				Sn	**Sn**	**23 23 55.8**	**-5.6**
	0.2nm,0.3s,baz=2.3,slow=22,SNR=3.3						
WRA	**Warramunga Arr**	**14.88**	**178**		**Pn**	**23 21 17.0**	**-0.2**
WR0	**Warramunga Arr**	**14.90**	**177**	Pn	**Pn**	**23 21 18.5**	**+1.0**
FITZ	**Fitzroy Crossi**	**15.24**	**211**	Pn	**Pn**	**23 21 22.5**	**+0.4**
	0.5nm,0.3s,baz=30,slow=11,SNR=7.9						
FITZ				Sn	**Sn**	**23 24 05.3**	**-5.0**
	0.5nm,0.3s,baz=112,slow=23,SNR=5.0						
FITZ	**Fitzroy Crossi**	**15.24**	**211**	IAmb	IAmb	23 21 32.2	
	comp=Z,11nm,1.1s						
AS31	**Alice Springs**	**18.57**	**180**	P	**Pn**	**23 22 04.1**	**+0.1**
AS31				IAmb	IAmb	23 22 08.6	
	comp=Z,2.5nm,0.8s						
ASAR	**Alice Springs**	**18.57**	**180**	P	**Pn**	**23 22 04.6**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=3.1,slow=12,SNR=31						
ASAR				LR	LR	23 30 24.4	
	comp=Z,69nm,20.6s,baz=263,slow=41						
CTA	**Charters Tower**	**19.33**	**142**	P	**Pn**	**23 22 14.2**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=333,slow=4.5,SNR=2.3						
RPSI	**Rantau Prapat**	**35.60**	**282**	P	**P**	**23 24 45.0**	**+0.7**
RPSI				IAmb	IAmb	23 24 47.9	
	comp=Z,6.8nm,0.4s						
MKAR	**Makanchi Array**	**68.66**	**325**	P	**P**	**23 28 50.8**	**+1.2**
	comp=Z,2.0nm,0.7s,baz=108,slow=8.0,SNR=16						
ZALV	**Zalesovo Beam**	**71.50**	**332**	P	**P**	**23 29 07.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=94,slow=6.2,SNR=3.0						
NEA	**Nenana**	**89.00**	**25**	P	**P**	**23 30 40.9**	**+0.1**

IDC 28 23:23:35.0±12.0, 8.7°41N×93.7°83E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.4/43, mbtmp3.5/4, ML3.9/1, Error ellipse: s-maj=258.5km s-min=54.9km az=144.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.15**	**26**	Pn	Pn	23 26 17.0	+1.1
	0.2nm,0.3s,baz=214,slow=14,SNR=4.2						
MKAR	**Makanchi Array**	**39.50**	**348**	P	P	23 31 07.0	-0.4
	0.3nm,0.7s,baz=168,slow=8.3,SNR=2.5						
ZALV	**Zalesovo Beam**	**45.99**	**353**	P	P	23 31 59.4	-0.5
	1.1nm,0.5s,baz=173,slow=8.1,SNR=6.3						
BRTR	**Keskin Array B**	**61.85**	**311**	P	P	23 33 56.8	+0.4
	0.1nm,0.3s,baz=115,slow=9.7,SNR=3.7						

*ATH **28** 23:23:46.6, 38.7°22N×20.7°39E, h16km±1km, ML3.0/6, Error ellipse: s-maj=2.2km s-min=1.3km az=248.0*
*THE **28** 23:23:47.7, 38.7°25N×20.7°43E, h8km±1km, ML3.3/2, Error ellipse: s-maj=1.0km s-min=0.3km az=214.0*
ISC 28 23:23:46.0±1.1, 38.7°24N±0.7°03×20.7°37E±0.7°05, h18km±6km, n37, σ0.6s63/54, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.04**	**205**	P	**Pg**	**23 23 49.5**	**+0.3**
KEF3				S	**Sg**	**23 23 51.7**	**+0.3**
CHV1	**Chavriata, Kef**	**0.05**	**168**	P	**Pg**	**23 23 49.5**	**+0.3**
CHV1				S	**Sg**	**23 23 51.5**	**+0.1**
ARG2	**Argostoli**	**0.11**	**121**	P	**Pb**	**23 23 49.7**	**+1.2**
ARG2				S	**Sg**	**23 23 51.4**	**-0.9**
KEF2	**Argostoli. Kep**	**0.12**	**127**	P	**Pb**	**23 23 49.9**	**+1.2**
KEF2				S	**Sg**	**23 23 52.2**	**-0.2**
VLS	**Valsamata**	**0.18**	**108**	P	**Pb**	**23 23 50.6**	**+0.1**
VLS				S	**Sg**	**23 23 53.1**	**-0.8**
	20μm,0.2s						
VLS	**Valsamata**	**0.18**	**108**	P	**Pb**	**23 23 50.6**	**+0.1**
VLS				S	**Sg**	**23 23 53.1**	**-0.8**
VLS				AML	AML	23 23 53.2	
	comp=E,37322μm,0.1s						
VLS				AML	AML	23 23 53.7	
	comp=N,41864μm,0.1s						
KFL	**Anninata**	**0.35**	**111**	P	**Pb**	**23 23 53.8**	**0.0**
KFL				S	**Sg**	**23 23 58.7**	**+0.2**
	comp=N,7μm,0.6s						
KFL	**Anninata**	**0.35**	**111**	P	**Pb**	**23 23 53.7**	**0.0**
KFL				S	**Sg**	**23 23 59.1**	**+0.5**
KFL				AML	AML	23 24 00.9	
	comp=E,12878μm,0.4s						
KFL				AML	AML	23 24 02.0	
	comp=N,13644μm,0.6s						
VLMS	**Volimes, Zakyn**	**0.43**	**147**	P	**Pb**	**23 23 55.4**	**+0.4**
VLMS				S	**Sb**	**23 24 01.8**	**+0.7**
VLMS				AML	AML	23 24 05.5	
	comp=N,9808μm,0.4s						
VLMS				AML	AML	23 24 08.0	
	comp=E,6724μm,0.4s						
EVGI	**Lefkada island**	**0.45**	**30**	P	**Pb**	**23 23 55.5**	**+0.2**
EVGI				S	**Sb**	**23 24 01.6**	**-0.1**
EVGI	**Lefkada island**	**0.45**	**30**	P	**Pb**	**23 23 55.6**	**+0.2**
EVGI				S	**Sb**	**23 24 02.7**	**+1.0**
LKD2	**Lefkada island**	**0.60**	**22**	P	**Pn**	**23 23 58.4**	**-1.2**
LKD2	**Lefkada island**	**0.60**	**22**	P	**Pn**	**23 23 58.5**	**-1.2**
TSLK	**Tsoukalades, L**	**0.63**	**21**	P	**Pn**	**23 23 59.2**	**-0.9**
TSLK	**Tsoukalades, L**	**0.63**	**21**	P	**Pn**	**23 23 59.2**	**-0.9**
AST1	**Astakos**	**0.64**	**62**	P	**Pg**	**23 23 59.0**	**+0.3**
AST1				S	**Sg**	**23 24 07.5**	**+0.2**
PDO	**Prodromos**	**0.74**	**60**	P	**Pn**	**23 24 00.6**	**-0.9**
PDO	**Prodromos**	**0.74**	**60**	P	**Pn**	**23 24 00.6**	**-0.9**
PDO				S	**Sn**	**23 24 11.9**	**-0.3**
RLS	**Riolos of Patr**	**0.89**	**101**	P	**Pn**	**23 24 03.2**	**-0.3**
RLS	**Riolos of Patr**	**0.89**	**101**	P	**Pn**	**23 24 03.3**	**-0.2**
RLS				S	**Sg**	**23 24 15.8**	**+0.9**
RLS				AML	AML	23 24 19.1	
	comp=E,1542μm,0.7s						
RLS				AML	AML	23 24 20.9	
	comp=N,1071μm,0.4s						
PVO	**Paravola**	**0.99**	**67**	P	**Pg**	**23 24 05.5**	**+0.4**
PVO	**Paravola**	**0.99**	**67**	P	**Pg**	**23 24 05.6**	**+0.4**
PVO				S	**Sn**	**23 24 19.8**	**+1.4**
DRO	**Drossia**	**1.10**	**105**	P	**Pg**	**23 24 07.3**	**+0.1**
DRO	**Drossia**	**1.10**	**105**	P	**Pg**	**23 24 07.5**	**+0.3**
EFP	**Efpalio**	**1.23**	**81**	P	**Pb**	**23 24 08.9**	**+0.3**
EFP	**Efpalio**	**1.23**	**81**	P	**Pg**	**23 24 09.0**	**-0.6**
LAKA	**Lakka**	**1.27**	**89**	P	**Pg**	**23 24 09.8**	**-0.7**
LAKA	**Lakka**	**1.27**	**89**	P	**Pg**	**23 24 10.1**	**-0.4**
LAKA				S	**Sg**	**23 24 27.1**	**+0.1**
LAKA				AML	AML	23 24 30.0	
	comp=N,871μm,0.5s						
LAKA				AML	AML	23 24 31.4	
	comp=E,702μm,0.6s						
ANX	**Ano Chora**	**1.27**	**73**	P	**Pg**	**23 24 10.4**	**-0.2**
EVR	**Evrytania**	**1.32**	**59**	P	**Pg**	**23 24 11.3**	**-0.2**
TRIZ	**Trizonia**	**1.35**	**84**	P	**Pb**	**23 24 11.1**	**+0.5**

ALIK	**Aliki, Aigiali**	**1.37**	**88**	P		**Pg**	**23 24 12.1**	**-0.4**
KALE	**Kalithea**	**1.40**	**83**	P		**Pb**	**23 24 12.1**	**+0.4**
KALE	**Kalithea**	**1.40**	**83**	P		**Pb**	**23 24 12.1**	**+0.4**
KLV	**Kalavryta, Ach**	**1.42**	**97**	P		**Pb**	**23 24 12.4**	**+0.5**
KLV	**Kalavryta, Ach**	**1.42**	**97**	P		**Pg**	**23 24 12.8**	**-0.5**
KLV				S		**Sg**	**23 24 32.0**	**+0.1**
KLV				AML	AML		23 24 36.3	
	comp=N,569μm,0.3s							
KLV				AML	AML		23 24 37.1	
	comp=E,545μm,0.6s							
ITM	**Ithomi**	**1.62**	**130**	P		**Pg**	**23 24 16.4**	**-0.9**

*ISK **28** 23:29:09.8,38°.70N×27°.25E,h6km,ML2.6/8*
*DDA **28** 23:29:10.1,38°.70N×27°.25E,h7km±2km,ML2.1*
ISC 28 23:29:10.0±1.0,38°.68N±0°.03×27°.23E±0°.03,h15km±9km, n20,σ0°35/33,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ZEDA	**zmir-Bergama**	**0.31**	**337**	*i* P		**Pg**	**23 29 16.4**	**-0.1**
ZEDA				*i* S		**Sg**	**23 29 20.9**	**0.0**
ZEDA				IAML			23 29 21.0	
	comp=N,378nm,0.3s							
ZEDA				IAML			23 29 21.0	
	comp=E,212nm,0.3s							
BLCB	**Balcova**	**0.33**	**207**	PG		**Pb**	**23 29 17.4**	**-0.2**
BLCB				SG		**Sb**	**23 29 22.7**	**0.0**
FOCM	**Foa**	**0.39**	**275**	PG		**Pb**	**23 29 18.2**	**-0.5**
FOCM				SG		**Sb**	**23 29 23.6**	**-0.9**
DKL	**Dikili**	**0.47**	**327**	PG		**Pg**	**23 29 19.5**	**+0.3**
DKL				SG		**Sg**	**23 29 25.8**	**+0.3**
AKS	**Akhisar**	**0.49**	**66**	PG		**Pg**	**23 29 19.5**	**-0.3**
AKS				SG		**Sg**	**23 29 26.6**	**+0.1**
AKHS	**Akhisar**	**0.50**	**66**	*i* P		**Pg**	**23 29 19.5**	**-0.3**
AKHS				*i* S		**Sg**	**23 29 26.7**	**+0.2**
AKHS				IAML			23 29 27.0	
	comp=E,74nm,0.2s							
ZEY	**zmir**	**0.72**	**233**	*i* P		**Pb**	**23 29 24.4**	**+0.1**
ZEY				IAML			23 29 37.0	
	comp=E,205nm,0.3s							
ZEY				IAML			23 29 38.0	
	comp=N,166nm,0.4s							
AYVA	**Ayvalik**	**0.76**	**326**	*i* P		**Pb**	**23 29 24.9**	**0.0**
AYVA				*i* S		**Sb**	**23 29 35.5**	**+0.5**
AYVA				IAML			23 29 38.0	
	comp=N,97nm,0.6s							
AYVA				IAML			23 29 38.0	
	comp=E,68nm,0.5s							
STEP	**BALIKESIR_Sava**	**0.79**	**28**	*i* P		**Pg**	**23 29 25.1**	**-0.3**
STEP				*i* S		**Sg**	**23 29 35.3**	**-0.5**
STEP				IAML			23 29 37.0	
	comp=N,93nm,0.5s							
STEP				IAML			23 29 38.0	
	comp=E,122nm,0.2s							
AYDB	**Zeytinkoy-Aydi**	**0.90**	**145**	PG		**Pn**	**23 29 27.6**	**-0.6**
CHOS	**Chios island**	**0.97**	**253**	PG		**Pn**	**23 29 29.3**	**+0.2**
GCAM	**G?zelcaml?**	**0.98**	**180**	*i* P		**Pn**	**23 29 29.3**	**+0.1**
GCAM				IAML			23 29 59.0	
	comp=N,574nm,0.8s							
GCAM				IAML			23 29 59.0	
	comp=E,370nm,0.8s							
BALB	**Balikesir**	**1.08**	**28**	PG		**Pb**	**23 29 30.5**	**+0.1**
BALY	**Balya**	**1.10**	**16**	*i* P		**Pb**	**23 29 30.8**	**0.0**
BALY				*i* S		**Sg**	**23 29 45.9**	**+0.3**
BALY				IAML			23 29 46.0	
	comp=N,91nm,0.6s							
BALY				IAML			23 29 46.0	
	comp=E,69nm,0.6s							
AYDN	**Tasoluk**	**1.14**	**153**	*i* P		**Pg**	**23 29 32.5**	**+0.6**
AYDN				*i* S		**Sn**	**23 29 47.0**	**+0.1**
AYDN				IAML			23 29 51.0	
	comp=N,17nm,0.4s							
AYDN				IAML			23 29 53.0	
	comp=E,39nm,1.7s							
BAYC	**CANAKKALE_Bayr**	**1.19**	**334**	*i* P		**Pn**	**23 29 32.0**	**0.0**
BAYC				*i* S		**Sb**	**23 29 47.9**	**+0.5**
BAYC				IAML			23 29 50.0	
	comp=E,67nm,0.3s							
BAYC				IAML			23 29 51.0	
	comp=N,29nm,0.3s							
DEMI	**Demirci**	**1.21**	**72**	*i* P		**Pn**	**23 29 32.7**	**+0.1**
DEMI				*i* S		**Sb**	**23 29 48.4**	**+0.2**
DEMI				IAML			23 29 52.0	
	comp=N,22nm,0.4s							
DEMI				IAML			23 29 53.0	
	comp=E,23nm,0.3s							
DURS	**Dursunbey**	**1.33**	**46**	*i* P		**Pb**	**23 29 34.7**	**-0.1**
DURS				*i* S		**Sb**	**23 29 51.3**	**-0.4**
DURS				IAML			23 29 54.0	
	comp=E,43nm,0.3s							
DURS				IAML			23 29 55.0	
	comp=N,34nm,0.5s							
EZN	**Ezine**	**1.34**	**329**	PN		**Pg**	**23 29 35.5**	**-0.3**
GONE	**Gonen-Balikesi**	**1.41**	**14**	PN		**Pb**	**23 29 36.3**	**+0.3**

*TEH **28** 23:47:33.9,32°.53N×50°.01E,h8km,ML4.9*
*DSN **28** 23:47:34.2±1.2,32°.45N×49°.80E,h10km,mb4.8/2,ML5.0/2, Error ellipse: s-maj=16.2km s-min=9.7km az=110.0*
*NEIC **28** 23:47:34.4±1.8,32°.45N±0°.05×49°.93E±0°.05,h10km±2km, Error ellipse: s-maj=7.3km s-min=6.3km az=168.0*
*MOS **28** 23:47:34.2±1.3,32°.44N×49°.98E,h20km,mb5.0/32, Error ellipse: s-maj=5.3km s-min=3.4km az=109.1*
*BJI **28** 23:47:35.2±0.0,32°.55N×49°.98E,h21km,mB5.0/32, mb4.6/51,Ms4.5/27,Ms7 4.3/28*
*THR **28** 23:47:36.5±0.4,32°.45N×49°.96E,h29km±8km,ML4.9*
*IDC **28** 23:47:38.3±1.7,32°.54N×49°.89E,h36km±13km,mb4.3/44, mb1 4.4/51,mb1mx4.3/66,mbtmp4.5/51,ML4.5/5,MS3.8/19, Ms1 3.9/19,ms1mx3.6/54,Error ellipse: s-maj=10.2km s-min=8.9km az=149.0*
*OMAN **28** 23:47:40.3±0.2,32°.38N×50°.30E,h50km±19km,mb5.1/1, Error ellipse: s-maj=4.0km s-min=3.7km az=297.0*
ISC 28 23:47:34.6±0.7,32°.44N±0°.03×49°.98E±0°.02,h12km±4km, n537,σ1s83/539,mb4.8/148,MS3.9/20,46C-19D,Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JHBN	**Jahan bin**	**0.62**	**110**	*e*Pg		**Pg**	**23 47 47.1**	**+0.3**
IPIR	**Pirpir**	**0.81**	**72**	*e*Pg		**Pg**	**23 47 49.0**	**-1.4**
IPIR	**Pirpir**	**0.81**	**72**	Pg		**Pg**	**23 47 49.0**	**-1.4**
ROKH	**ROKH**	**0.90**	**96**	*e*Pg		**Pb**	**23 47 51.3**	**-1.0**
SHGR	**Shooshtar-Gavs**	**1.05**	**252**	*e*Pn		**Pg**	**23 47 55.8**	**+0.9**
SHGR	**Shooshtar-Gavs**	**1.05**	**252**	*e*Pg		**Pg**	**23 47 55.8**	**+0.9**
SHGR				IAML			23 48 15.4	
	comp=N,28μm,0.4s							
SHGR	**Shooshtar-Gavs**	**1.05**	**252**	Pn		**Pg**	**23 47 55.7**	**+0.9**
IBRJ	**Brojen**	**1.21**	**116**	*e*Pg		**Pg**	**23 47 58.6**	**+0.7**
IBRJ				*e*			23 48 27.5	
IBRJ	**Brojen**	**1.21**	**116**	*e*		**Pg**	**23 47 58.6**	**+0.7**
IKLH	**Kolahrood**	**1.61**	**56**	*e*			23 48 07.8	
IKLH				*e*Pn		**Pn**	**23 48 02.2**	**-0.9**
IKMR	**Kamar-syah**	**1.72**	**309**	*e*			23 48 34.6	
IKMR				*e*Pn		**Pn**	**23 48 04.9**	**+0.5**
BDRS	**Dareh Seyedi**	**1.77**	**329**	*e*			23 48 39.4	
BDRS				*e*Pn		**Pn**	**23 48 05.8**	**+0.5**
QAM	**Ghamsar**	**1.80**	**43**	*e*Pn		**Pn**	**23 48 05.8**	**+0.1**
KLNJ	**Kolanjah**	**1.98**	**136**	*e*Pn		**Pb**	**23 48 11.7**	**+0.9**
IDOB	**Doab**	**2.02**	**312**	*e*Pn		**Pn**	**23 48 10.1**	**+1.3**
IZEF	**Zefreh**	**2.03**	**76**	*e*Pn		**Pb**	**23 48 10.7**	**-1.0**
IZEF				*e*			23 48 13.3	
IKFM	**Kafar-mosalman**	**2.09**	**302**	*e*Pn		**Pb**	**23 48 11.5**	**-1.0**
ASAO	**Ashtian**	**2.10**	**1**	*e*Pn		**Pn**	**23 48 11.7**	**+1.8**
ASAO	**Ashtian**	**2.10**	**1**	*e*Pn		**Pn**	**23 48 11.7**	**+1.8**
HSAM	**Samen**	**2.11**	**327**	*e*Pn		**Pn**	**23 48 11.6**	**+1.6**
HSAM				*e*			23 48 48.2	
IRAM	**Ramesheh**	**2.13**	**107**	*e*Pn		**Pb**	**23 48 13.3**	**-0.1**
IRAM				*e*			23 48 55.7	
IRAM	**Ramesheh**	**2.13**	**107**	Pn		**Pb**	**23 48 13.2**	**-0.1**
KRSH	**Karshahi**	**2.37**	**49**	*e*Pn		**Pb**	**23 48 15.8**	**-1.5**
KRSH				*e*			23 48 54.1	
HAGD	**Aghdareh**	**2.48**	**344**	*e*Pn		**Pn**	**23 48 16.7**	**+1.7**
IQOM	**Qom**	**2.56**	**20**	*e*Pn		**Pn**	**23 48 18.3**	**+2.1**
IQOM				*e*			23 48 58.0	
IKOM	**Komasi**	**2.70**	**311**	*e*Pn		**Pn**	**23 48 19.6**	**+1.6**
IKOM				*e*			23 49 18.7	
IVRN	**Varamin**	**2.94**	**29**	*e*Pn		**Pn**	**23 48 23.3**	**+2.1**
IVRN	**Varamin**	**2.94**	**29**	Pn		**Pn**	**23 48 23.2**	**+2.1**
IRAZ	**Razeghan**	**2.96**	**359**	*e*Pn		**Pn**	**23 48 23.7**	**+2.1**
IRAZ	**Razeghan**	**2.96**	**359**	Pn		**Pn**	**23 48 23.7**	**+2.1**
IKAZ	**Kazeroun**	**3.10**	**148**	*e*Pn		**Pn**	**23 48 26.3**	**+2.7**
HSRG	**Sareghieh**	**3.13**	**334**	*e*Pn		**Pn**	**23 48 26.1**	**+2.0**
IHSB	**Hasanabad**	**3.18**	**19**	*e*Pn		**Pn**	**23 48 26.4**	**+1.8**
ISAD	**Sadrabad**	**3.19**	**98**	*e*Pn		**Pb**	**23 48 28.8**	**-2.5**
ANAR	**Anarak**	**3.24**	**76**	*e*Pn		**Pn**	**23 48 28.4**	**+2.9**
IMHD	**Mahdasht**	**3.29**	**10**	*e*Pn		**Pn**	**23 48 27.9**	**+1.8**
IVIS	**Veis**	**3.34**	**309**	*e*Pn		**Pn**	**23 48 27.9**	**+1.1**
IGHG	**Ghaleghazi**	**3.42**	**304**	*e*Pn		**Pn**	**23 48 28.7**	**+0.7**
TEH	**Tehran**	**3.49**	**19**	*e*Pn		**Pn**	**23 48 30.4**	**+1.5**
ILIN	**Lien**	**3.53**	**315**	*e*Pn		**Pn**	**23 48 31.1**	**+1.6**
SHI	**Shiraz**	**3.54**	**141**	P		**Pn**	**23 48 31.8**	**+2.2**
SHI	**Shiraz**	**3.54**	**141**	*e*Pn		**Pn**	**23 48 31.7**	**+2.2**
IDMV	**Damavand**	**3.56**	**28**	*e*Pn		**Pn**	**23 48 31.9**	**+1.9**
CHTH	**Charan**	**3.59**	**15**	*e*Pn		**Pn**	**23 48 32.7**	**+2.4**
CHTH	**Charan**	**3.59**	**15**	*e*Pn		**Pn**	**23 48 32.7**	**+2.4**
IDHR	**Dehrash**	**3.75**	**308**	*e*Pn		**Pn**	**23 48 33.3**	**+0.8**
ICHK	**Chekchek**	**3.75**	**92**	*e*Pn		**Pn**	**23 48 36.9**	**+4.3**
ILAS	**Lasjerd**	**3.84**	**39**	*e*Pn		**Pn**	**23 48 36.1**	**+2.3**
YZKH	**Yazd**	**3.90**	**89**	*e*Pn		**Pn**	**23 48 37.1**	**+2.6**
YZKH	**Yazd**	**3.90**	**89**	*e*Pn		**Pn**	**23 48 37.1**	**+2.6**
IFIR	**Firoozkooh**	**3.94**	**35**	*e*Pn		**Pn**	**23 48 37.3**	**+2.2**
IGZV	**Ghazvin**	**3.94**	**3**	*e*Pn		**Pn**	**23 48 36.0**	**+0.8**
QALM	**Alamut, Qazvin**	**4.02**	**8**	*e*Pn		**Pn**	**23 48 38.3**	**+2.0**
IMEH	**Mehriz**	**4.08**	**104**	*e*Pn		**Pn**	**23 48 40.4**	**+3.4**
IPRN	**Peran**	**4.26**	**27**	*e*Pn		**Pn**	**23 48 42.5**	**+3.0**
IALA	**Alasht**	**4.32**	**32**	*e*Pn		**Pn**	**23 48 43.3**	**+2.8**
IALA	**Alasht**	**4.32**	**32**	Pn		**Pn**	**23 48 43.3**	**+2.8**
ISHM	**Shahmirzad**	**4.34**	**38**	*e*Pn		**Pn**	**23 48 43.4**	**+2.7**
ZNJK	**Zanjan**	**4.35**	**346**	*e*Pn		**Pn**	**23 48 42.9**	**+2.1**
ZNJK	**Zanjan**	**4.35**	**346**	*e*Pn		**Pn**	**23 48 42.9**	**+2.1**
IANJ	**Anjilo**	**4.45**	**46**	*e*Pn		**Pn**	**23 48 44.4**	**+2.2**
IANJ	**Anjilo**	**4.45**	**46**	Pn		**Pn**	**23 48 44.4**	**+2.2**
IBAF	**Bafgh**	**4.82**	**99**	*e*Pn		**Pn**	**23 48 50.9**	**+3.7**
JHRM	**Jahrom**	**5.00**	**141**	*e*Pn		**Pn**	**23 48 51.4**	**+1.8**
IGLO	**Ghalooghah**	**5.15**	**37**	*e*Pn		**Pn**	**23 48 55.0**	**+3.2**
MAHB	**Mahabad**	**5.57**	**322**	*e*Pn		**Pn**	**23 48 58.8**	**+1.3**
TPRV	**Parvadeh(Tabas**	**5.68**	**82**	*e*Pn		**Pn**	**23 49 01.6**	**+2.7**
TNSJ	**Nastanj**	**5.76**	**73**	*e*Pn		**Pn**	**23 49 02.1**	**+2.1**
LMD1	**Lamerd**	**5.79**	**151**	*e*Pn		**Pn**	**23 49 01.6**	**+1.3**
KHGB	**Koh Gabri**	**5.92**	**109**	*e*Pn		**Pn**	**23 49 05.2**	**+2.8**
LAR1	**LAR**	**6.09**	**140**	*e*Pn		**Pn**	**23 49 06.7**	**+2.1**
TKDS	**Koohdasht(Taba**	**6.11**	**77**	*e*Pn		**Pn**	**23 49 06.9**	**+2.0**
TABS	**Tabas**	**6.12**	**77**	*e*Pn		**Pn**	**23 49 07.4**	**+2.5**
TABS	**Tabas**	**6.12**	**77**	*e*Pn		**Pn**	**23 49 07.3**	**+2.5**
LKRN	**Lenkeran, Azer**	**6.33**	**351**	P		**Pn**	**23 49 08.4**	**+0.6**
IHRS	**Heris**	**6.34**	**339**	*e*Pn		**Pn**	**23 49 08.8**	**+0.7**
NGRK	**Negar Kerman**	**6.43**	**114**	*e*Pn		**Pn**	**23 49 13.0**	**+3.5**
IMND	**Minoodasht**	**6.56**	**41**	*e*Pn		**Pn**	**23 49 12.5**	**+1.6**
CHMN	**Cheshme madani**	**6.97**	**110**	*e*Pn		**Pn**	**23 49 20.5**	**+3.6**
GENO	**Geno**	**7.35**	**131**	*e*Pn		**Pn**	**23 49 23.1**	**+1.1**
NAX	**Nakhchivan**	**7.64**	**333**	P		**Pn**	**23 49 28.1**	**+2.3**
AFRZ	**Afriz**	**7.66**	**80**	*e*Pn		**Pn**	**23 49 28.7**	**+2.5**
NIAN	**Nian**	**7.68**	**128**	*e*Pn		**Pn**	**23 49 27.6**	**+1.3**
ISFR	**Sfrayin**	**8.04**	**53**	*e*Pn		**Pn**	**23 49 34.3**	**+2.7**
KHNJ	**Kahnooj**	**8.04**	**122**	*e*Pn		**Pn**	**23 49 32.4**	**+1.0**
IMON	**Monand**	**8.19**	**82**	*e*Pn		**Pn**	**23 49 37.1**	**+3.6**
IKRD	**Kardeh**	**8.26**	**56**	*e*Pn		Pb	23 49 47.0	-11
SHME	**Shamm**	**8.34**	**138**	*i* P		**Pn**	**23 49 35.4**	**0.0**
	SNR=22							
SHME	**Shamm**	**8.34**	**138**	*e*Pn		**Pn**	**23 49 35.6**	**+0.2**
IDAH	**Dahanechah**	**8.35**	**85**	*e*Pn		Pn	23 49 42.8	+7.1
UMQ	**Umm Al-Quwin**	**8.50**	**143**	*i* P		**Pn**	**23 49 39.5**	**+2.0**
	SNR=17							
UMQ	**Umm Al-Quwin**	**8.50**	**143**	*e*Pn		**Pn**	**23 49 40.2**	**+2.7**
UMQ	**Umm Al-Quwin**	**8.50**	**143**	P		**Pn**	**23 49 40.3**	**+2.8**
	SNR=17							
UMQ				S		**Sn**	**23 51 11.6**	**-1.7**
GEYT	**Alibeck**	**8.62**	**48**	Pn		**Pn**	**23 49 41.3**	**+2.1**
	comp=N,6.2nm,0.3s,baz=244,slow=9.7,SNR=69							
GYA0B	**ALIBECK ARRAY**	**8.62**	**48**			**Pn**	**23 49 41.7**	**+2.5**
NHDN	**Nehbandan**	**8.62**	**94**	*e*Pn		**Pn**	**23 49 43.0**	**+3.6**
MNGR	**Mingechevir, A**	**8.64**	**345**	P		**Pn**	**23 49 40.6**	**+1.2**
GANJ	**Ganja**	**8.70**	**341**	P		**Pn**	**23 49 41.9**	**+1.6**
ASHT	**Ashkhabad**	**8.80**	**49**	P		**Pn**	**23 49 44.6**	**+3.0**
ASHT	**Ashkhabad**	**8.80**	**49**	Pn		**Pn**	**23 49 44.6**	**+3.0**
MSFE	**Esma-Masafi**	**8.89**	**141**	*i* P		**Pn**	**23 49 42.8**	**-0.2**
	SNR=23							
MSFE	**Esma-Masafi**	**8.89**	**141**	*e*Pn		**Pn**	**23 49 43.1**	**+0.1**
NAZ	**Nazwa, Dubai**	**8.94**	**145**	*i* P		**Pn**	**23 49 45.8**	**+2.2**
	SNR=81							
NAZ	**Nazwa, Dubai**	**8.94**	**145**	*e*Pn		**Pn**	**23 49 45.0**	**+1.4**
NAZ	**Nazwa, Dubai**	**8.94**	**145**	P		**Pn**	**23 49 44.9**	**+1.3**
	SNR=30							
NAZ				S		**Sn**	**23 51 22.3**	**-2.0**
	SNR=8.9							
AJN	**Ajban**	**9.00**	**149**	*i* P		**Pn**	**23 49 46.7**	**+2.3**
	SNR=75							
AJN	**Ajban**	**9.00**	**149**	*e*Pn		**Pn**	**23 49 46.3**	**+1.9**
AJN	**Ajban**	**9.00**	**149**	P		**Pn**	**23 49 46.6**	**+2.2**
	SNR=40							
AJN				S		**Sn**	**23 51 24.8**	**-0.8**
	SNR=9.0							
SEKA	**Sheki**	**9.03**	**347**	P		**Pn**	**23 49 45.6**	**+0.7**
ASUD	**Al Ashush, Dub**	**9.09**	**148**	*i* P		**Pn**	**23 49 48.0**	**+2.3**
	SNR=45							
ASUD	**Al Ashush, Dub**	**9.09**	**148**	*e*Pn		**Pn**	**23 49 47.8**	**+2.1**
ASUD	**Al Ashush, Dub**	**9.09**	**148**	P		**Pn**	**23 49 48.2**	**+2.4**
	SNR=15							
ASUD				S		**Sn**	**23 51 28.7**	**+0.6**
FAQ	**Al Faqa, Dubai**	**9.11**	**146**	*i* P		**Pn**	**23 49 48.3**	**+2.3**
	SNR=8.0							
FAQ	**Al Faqa, Dubai**	**9.11**	**146**	*e*Pn		**Pn**	**23 49 48.3**	**+2.3**
FAQ	**Al Faqa, Dubai**	**9.11**	**146**	P		**Pn**	**23 49 48.3**	**+2.3**
	SNR=8.1							
FAQ				S		**Sn**	**23 51 25.7**	**-2.8**
IMYA	**Miami**	**9.22**	**62**	*e*Pn		**Pn**	**23 49 50.4**	**+2.8**
UOSS	**Minazif**	**9.25**	**142**	*i* P		**Pn**	**23 49 48.4**	**+0.5**
	SNR=22							
UOSS	**Minazif**	**9.25**	**142**	*e*Pn		**Pn**	**23 49 47.1**	**-0.8**
UOSS	**Minazif**	**9.25**	**142**			**Pn**	**23 49 48.0**	**+0.1**
JRKH	**Jarkhoshk**	**9.26**	**65**	*e*Pn		**Pn**	**23 49 51.4**	**+3.3**
HATD	**Hatta, Dubai**	**9.31**	**143**	*i* P		**Pn**	**23 49 50.2**	**+1.4**
	SNR=49							
HATD	**Hatta, Dubai**	**9.31**	**143**	*e*Pn		**Pn**	**23 49 49.5**	**+0.8**
HATD	**Hatta, Dubai**	**9.31**	**143**	P		**Pn**	**23 49 49.4**	**+0.7**
	SNR=49							
HATD				S		**Sn**	**23 51 30.0**	**-3.5**
	SNR=9.5							
ZKTA	**Zakatala**	**9.56**	**345**	P		**Pn**	**23 49 53.3**	**+1.2**
RAYN	**Ar Rayn**	**9.72**	**205**	P		**Pn**	**23 49 53.2**	**-1.2**
RAYN	**Ar Rayn**	**9.72**	**205**	*i* P		**Pn**	**23 49 53.4**	**-1.0**
	SNR=204							
RAYN	**Ar Rayn**	**9.72**	**205**			**Pn**	**23 49 53.2**	**-1.2**
ALNE	**Al Ain**	**9.78**	**147**	*i* P		**Pn**	**23 49 55.8**	**+0.7**
	SNR=55							
ALNE	**Al Ain**	**9.78**	**147**	*e*Pn		**Pn**	**23 49 55.3**	**+0.2**
AKH	**Akhalkalaki**	**10.35**	**332**	P		**Pn**	**23 50 06.2**	**+3.2**
AKH	**Akhalkalaki**	**10.35**	**332**	⇑P		**Pn**	**23 50 06.2**	**+3.2**
HRA	**Herat**	**10.43**	**76**			**Pn**	**23 50 05.5**	**+1.3**
ASF	**Jabal al Asfar**	**11.07**	**272**	P		**Pn**	**23 50 12.0**	**-0.9**
ASF	**Jabal al Asfar**	**11.07**	**272**	Pn		**Pn**	**23 50 12.0**	**-0.9**
	comp=N,6.8nm,0.3s,baz=48,slow=9.5,SNR=38							
ASF				Sn		**Sn**	**23 52 10.3**	**-6.4**
	comp=N,2.0nm,0.3s,baz=243,slow=23,SNR=3.0							
ASF				LR		LR	23 55 29.6	
	comp=N,279nm,21.4s,baz=77,slow=43							
ASF	**Jabal al Asfar**	**11.07**	**272**			**Pn**	**23 50 12.0**	**-0.9**
ZEI	**Tsey**	**11.39**	**337**	*e*P		Pn	23 50 25.5	+8.1
ZEI				pmax		pmax		
	comp=Z,13nm,1.1s							
GAZ	**Gaziantep**	**11.51**	**298**			**Pn**	**23 50 20.4**	**+1.6**
WSAR	**Wadi Sarin**	**11.94**	**138**	Pn		**Pn**	**23 50 24.0**	**-0.6**
	comp=Z,3.4nm,0.3s,baz=341,slow=15,SNR=45							
WSAR				Sn		**Sn**	**23 52 31.5**	**-6.2**
	comp=Z,8.4nm,0.3s,baz=196,slow=14,SNR=6.0							
WSAR				LR		LR	23 55 36.7	
	comp=Z,427nm,21.8s,baz=343,slow=40							
WSAR	**Wadi Sarin**	**11.94**	**138**	P		**Pn**	**23 50 23.5**	**-1.2**
	SNR=19							
MMAI	**Mount Meron Ar**	**12.29**	**277**	Pn		**Pn**	**23 50 29.5**	**0.0**
	comp=Z,2.5nm,0.3s,baz=87,slow=16,SNR=14							
KBZ	**Khabaz**	**12.57**	**336**	P		**Pn**	**23 50 35.0**	**+1.8**
KBZ	**Khabaz**	**12.57**	**336**	Pn		**Pn**	**23 50 35.0**	**+1.8**
KIV	**Kislovodsk**	**12.84**	**336**	*e*P		**Pn**	**23 50 37.3**	**+0.3**
KIV				pmax		pmax		
	comp=Z,58nm,1.1s							
KIV				MLR		MLR		
	comp=Z,449nm,11.0s							
KIV	**Kislovodsk**	**12.84**	**336**			**Pn**	**23 50 38.5**	**+1.5**
EIL	**Elat**	**13.18**	**262**	Pn		**Pn**	**23 50 41.2**	**-0.4**
	comp=Z,2.2nm,0.3s,baz=44,slow=9.2,SNR=14							
EIL				LR		LR	23 56 57.7	
	comp=Z,553nm,20.4s,baz=75,slow=43							
GOF	**Gofitskoye**	**13.71**	**339**	⇑*e*P		**P**	**23 50 58.5**	**+1.1**
GOF				pmax		pmax		
	comp=Z,32nm,0.7s							
SOC	**Sochi**	**13.74**	**327**	*e*P		**Pn**	**23 50 50.1**	**+0.9**
SOC				*e*			23 53 24.5	
SOC				MLR		MLR		
	comp=Z,353nm,10.0s							
CSS	**Mathiatis**	**14.09**	**285**			**Pn**	**23 50 55.4**	**+1.3**
BR131	**Keskin Array S**	**15.07**	**303**	P		**Pn**	**23 51 07.7**	**+0.2**
BR131				pmax		pmax		
	comp=Z,13nm,0.8s							
BR131	**Keskin Array S**	**15.07**	**303**			**Pn**	**23 51 07.7**	**+0.2**
BRTR	**Keskin Array B**	**15.07**	**303**	P		**Pn**	**23 51 07.7**	**+0.2**
BRTR	**Keskin Array B**	**15.07**	**303**	Pn		**Pn**	**23 51 08.1**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=128,slow=14,SNR=14							
BRTR				LR		LR	23 57 56.0	
	comp=Z,497nm,18.1s,baz=98,slow=41							
BRTR	**Keskin Array B**	**15.07**	**303**			**Pn**	**23 51 07.7**	**+0.2**
ILGA	**Ilgaz**	**15.60**	**308**	Pn		**Pn**	**23 51 14.7**	**+0.2**
ANTO	**Ankara**	**15.72**	**303**	P		**Pn**	**23 51 16.2**	**+0.2**
ANTO				pmax		pmax		
	comp=Z,21nm,0.9s							
ANTO	**Ankara**	**15.72**	**303**	Pn		**Pn**	**23 51 16.2**	**+0.2**
BR231	**Keskin MP Arra**	**15.72**	**303**	Pn		**Pn**	**23 51 15.1**	**-0.9**
ANN	**Anapa**	**15.74**	**325**	*e*P		**Pn**	**23 51 13.8**	**-2.2**
ANN				*e*S		**Sn**	**23 54 09.4**	**-0.9**
ANN				pmax		pmax		
	comp=Z,70nm,1.5s							
KBL	**Kabul**	**16.04**	**77**	P		**Pn**	**23 51 20.2**	**-0.1**
KBL				pmax		pmax		
	comp=Z,26nm,1.1s							
KBL	**Kabul**	**16.04**	**77**	Pn		**Pn**	**23 51 20.2**	**-0.1**
ISP	**Isparta**	**16.79**	**294**	P		**Pn**	**23 51 30.5**	**+0.8**
ISP				pmax		pmax		
	comp=Z,69nm,1.0s							
ISP	**Isparta**	**16.79**	**294**			**Pn**	**23 51 30.5**	**+0.8**
ISP				IAmb		IAmb	23 51 40.7	
	comp=Z,69nm,1.0s							
MDUB	**Mudurnu**	**17.08**	**303**	IAmb		IAmb	23 51 58.4	
	comp=Z,114nm,0.9s							
SIM	**Simferopol'**	**17.55**	**320**	*e*P		**P**	**23 51 45.7**	**+5.6**
SIM				pmax		pmax		
	comp=Z,18nm,0.8s							
TAS	**Tashkent**	**17.79**	**55**	P		**Pn**	**23 51 40.5**	**-1.5**
TAS				pmax		pmax		
	comp=Z,50nm,0.9s							
TAS	**Tashkent**	**17.79**	**55**	Pn		**Pn**	**23 51 40.5**	**-1.5**
TAS				IAmb		IAmb	23 51 46.6	
	comp=Z,50nm,0.9s			

KSH LR LR
comp=Z,720nm,8.1s
KSH LR LR
comp=Z,620nm,8.0s
KSH LR LR
comp=Z,400nm,6.4s
CHMS Chumysh 22.17 55 P **P** **23 52 32.3 +1.7**
SNR=10
KBK Karagaybulak 22.20 56 P **P** **23 52 32.5 +1.6**
SNR=8.3
BISRR Bisoca 22.23 313 ⇑P **P** **23 52 38.2 +7.1**
VRI Vrincioaia 22.37 314 P **P** **23 52 33.1 +0.5**
VRI pmax pmax
comp=Z,56nm,1.0s
VRI Vrincioaia 22.37 314 ⇓P **P** **23 52 34.4 +1.8**
PLOR Plostina 22.41 313 P **P** **23 52 33.5 +0.5**
PLOR Plostina 22.41 313 ⇑P **P** **23 52 33.6 +0.5**
COPA Copaceanca 22.58 308 ⇓P **P** **23 52 35.7 +0.9**
NRN Naryn 22.59 59 IAmb IAmb 23 52 44.1
comp=Z,23nm,0.8s
SORM Soroca 22.64 320 ⇓P **P** **23 52 33.7 -1.8**
MLR Muntele Rosu 22.68 312 P **P** **23 52 38.0 +2.0**
MLR pmax pmax
comp=Z,113nm,0.8s
MLR Muntele Rosu 22.68 312 P **P** **23 52 37.0 +1.0**
comp=Z,24nm,0.8s,baz=38,slow=2.3,SNR=38
MLR Muntele Rosu 22.68 312 ⇑P **P** **23 52 39.9 +3.9**
MLR Muntele Rosu 22.68 312 P **P** **23 52 38.0 +2.0**
PLVB Pleven 22.71 306 ⇓P **P** **23 52 40.8 +4.6**
TESR Tescani 22.73 315 ⇑P **P** **23 52 37.2 +0.8**
HUMR Humele 22.89 309 ⇑P **P** **23 52 38.5 +0.4**
ULHL Ulahol 22.98 57 P **P** **23 52 41.1 +1.8**
SNR=12
GOLR 23.03 310 ⇑P **P** **23 52 44.8 +5.2**
VOIR 23.22 311 ⇑P **P** **23 52 42.5 +0.9**
DOPR Dopca 23.24 313 ⇓P **P** **23 52 42.0 +0.3**
PRAR RASCA 23.41 316 ⇑P **P** **23 52 44.4 +1.0**
ARR Arges 23.46 311 ⇑P **P** **23 52 44.6 +0.6**
KDJ Kajisay 23.62 58 IAmb IAmb 23 53 12.8
comp=Z,28nm,1.4s
AKASG Malin Array Be 23.82 326 P **P** **23 52 45.7 -1.6**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 23.82 326 P **P** **23 52 45.4 -1.9**
comp=Z,3.9nm,0.4s,baz=136,slow=9.2,SNR=4.4
AKASG LR LR 00 02 49.7
comp=Z,212nm,21.2s,baz=105,slow=38
AKASG Malin Array Be 23.82 326 P **P** **23 52 45.7 -1.6**
AKBB Malin Array Si 23.82 326 IAmb IAmb 23 52 53.2
comp=Z,18nm,0.7s
MDB Medias 23.95 312 ⇑P **P** **23 52 50.3 +1.7**
LOT Lotru 24.05 310 ⇑P **P** **23 52 49.9 +0.2**
SRE Strehaia 24.12 308 ⇑P **P** **23 52 51.4 +1.2**
BURAR Bucovina Array 24.13 316 ⇑P **P** **23 52 50.6 +0.2**
BURAR Bucovina Array 24.13 316 P **P** **23 52 50.1 -0.3**
BUR08 Bucovina Ar. S 24.16 316 IAmb IAmb 23 53 10.8
comp=Z,25nm,0.9s
ARCR ARCALIA 24.39 314 ⇑P **P** **23 52 53.8 +1.1**
OBN Obninsk 24.56 341 *i* P **P** **23 52 54.7 +0.6**
OBN *i* 23 53 05.1
OBN *i* 23 53 24.5
OBN *i* 23 56 32.7
OBN pmax pmax
comp=Z,13nm,1.0s
OBN MLR MLR
comp=Z,256nm,16.0s
OBN Obninsk 24.56 341 P **P** **23 52 54.1 0.0**
comp=Z,5.3nm,0.5s,baz=88,slow=1.7,SNR=8.7
OBN LR LR 00 03 38.1
comp=Z,73nm,18.2s,baz=170,slow=39
OBN Obninsk 24.56 341 P **P** **23 52 53.8 -0.3**
OBN IAmb IAmb 23 53 01.4
comp=Z,33nm,0.9s
GZR Gura Zlata 24.67 309 ⇑P **P** **23 52 54.8 -0.5**
CJR Cluj-Napoca 24.69 313 ⇓P **P** **23 52 57.0 +1.6**
ARU Arti 24.72 11 *c i* P **P** **23 52 56.1 +0.6**
ARU 23 53 26.7
ARU S **S** **23 57 20.6 +3.6**
ARU SS **SnSn** **23 58 08.7 +5.4**
ARU pmax pmax
comp=Z,29nm,1.5s
ARU Arti 24.72 11 P **P** **23 52 55.6 +0.1**
comp=Z,3.3nm,0.6s,baz=186,slow=7.3,SNR=16
ARU ScP **ScP** **00 00 06.9 -3.9**
comp=Z,0.4nm,0.3s,baz=211,slow=5.9,SNR=3.0
ARU LR LR 00 04 36.5
comp=Z,169nm,20.1s,baz=168,slow=41
ARU Arti 24.72 11 P **P** **23 52 55.9 +0.4**
ARU IAmb IAmb 23 53 25.6
comp=Z,26nm,0.9s
HERR Herculane 24.72 308 ⇓P **P** **23 52 56.6 +1.0**
DEV Deva 24.78 311 ⇑P **P** **23 52 57.2 +1.0**
MOS Moscow 24.85 343 *eP* **P** **23 52 57.0 +0.3**
MOS *e* 23 53 35.5
MOS pmax pmax
comp=Z,105nm,1.4s
BMR Baia Mare 25.18 315 ⇑P **P** **23 53 00.1 +0.3**
BRVK Borovoye 25.27 29 P **P** **23 53 01.2 +0.7**
BRVK pmax pmax
comp=Z,21nm,1.0s
BRVK Borovoye 25.27 29 P **P** **23 53 01.2 +0.7**
BRVK IAmb IAmb 23 53 05.6
comp=Z,21nm,0.9s
DRGR 25.27 312 ⇑P **P** **23 53 01.8 +1.0**
BVAR Borovoye Array 25.29 30 P **P** **23 53 01.1 +0.4**
comp=Z,15nm,0.6s,baz=224,slow=7.7,SNR=73
BVAR PcP **PcP** **23 56 33.2 -0.3**
comp=Z,1.4nm,0.7s,baz=221,slow=1.9,SNR=4.7
SVE Sverdlovsk 25.48 14 *eP* **P** **23 53 02.9 +0.5**
SVE pmax pmax
comp=Z,28nm,1.5s
BZS Buzias 25.51 309 ⇑P **P** **23 53 03.4 +0.6**
POO Poona 25.54 117 *eP* P **23 52 53.0 -10**
BANR Banloc 25.75 308 ⇓P **P** **23 53 06.8 +1.9**
LVV L'vov 25.95 320 *eP* **P** **23 53 09.5 +2.8**
LVV *e* 23 53 57.9
LVV *eS* **S** **23 57 38.0 +1.3**
TRPA Tarpa 25.96 315 *eP* **P** **23 53 07.5 +0.6**
TRPA Tarpa 25.96 315 ⇑P **P** **23 53 07.5 +0.6**
LTVH Ltavrtes, Hu 26.02 313 *eP* **P** **23 53 11.7 +4.3**
KIRV Kirov 26.15 359 P **P** **23 53 08.2 -0.2**
comp=Z,9.8nm,0.6s,baz=169,slow=5.4,SNR=4.8
KIRV LR LR 00 05 53.3
comp=Z,305nm,19.2s,baz=245,slow=42
UZH Uzhgorod 26.34 316 *eP* **P** **23 53 11.6 +1.3**
UZH *i* 23 53 14.0
UZH *e* 23 53 22.6
UZH *e* 23 53 49.4
UZH *e* 23 54 00.2
KOLS Kolonicke sedl 26.49 317 *eP* **P** **23 53 12.7 +1.0**
KOLS pmax pmax
comp=Z,60nm,0.9s
KOLS Kolonicke sedl 26.49 317 *eP* **P** **23 53 12.7 +1.0**
KWP Kalwaria Pacla 26.58 318 *eP* **P** **23 53 12.9 +0.4**
KWP Kalwaria Pacla 26.58 318 *eP* **P** **23 53 12.9 +0.4**
CRVS Cervenica-Dubn 26.95 316 *eP* **P** **23 53 18.8 +2.9**
CRVS pmax pmax
comp=Z,138nm,1.2s
CRVS Cervenica-Dubn 26.95 316 *eP* **P** **23 53 18.8 +2.9**
BSZH Besenyszg 27.00 312 *eP* **P** **23 53 20.1 +3.8**
PSZ Piszkesteto 27.48 313 P **P** **23 53 23.7 +3.0**
PSZ pmax pmax
comp=Z,24nm,1.1s
PSZ Piszkesteto 27.48 313 ⇑P **P** **23 53 21.1 +0.5**
PSZ Piszkesteto 27.48 313 P **P** **23 53 23.7 +3.0**
PSZ IAmb IAmb 23 53 50.3
comp=Z,24nm,1.1s
TIP Timpagrande 27.66 293 ⇑P **P** **23 53 23.4 +1.0**
KURBB Kurchatov Arra 27.79 41 P **P** **23 53 24.5 +1.2**
comp=Z,5.1nm,0.7s,baz=242,slow=9.6,SNR=33
KURBB PcP **PcP** **23 56 39.4 0.0**
comp=Z,1.0nm,0.8s,baz=244,slow=3.1,SNR=2.8
KURBB ScP **ScP** **00 00 16.9 -3.1**
comp=Z,0.7nm,0.2s,baz=243,slow=4.1,SNR=2.9
MATE Matera 27.83 297 ⇑P **P** **23 53 25.6 +1.8**
NIE Niedzica 27.86 316 *eP* **P** **23 53 29.4 +5.3**
NIE Niedzica 27.86 316 *eP* **P** **23 53 29.4 +5.3**
KURK Kurchatov 27.89 41 ⇓ *i* P **P** **23 53 25.6 +1.4**
KURK pmax pmax
comp=Z,22nm,1.3s
KURK Kurchatov 27.89 41 P **P** **23 53 25.1 +1.0**
KURK IAmb IAmb 23 53 30.1
comp=Z,12nm,0.8s
KURK Kurchatov 27.89 41 **PcP** **23 56 39.4 -0.2**
KURK **ScP** **00 00 16.9 -3.3**

LANS Liptovska Anna 28.24 315 *eP* **P** **23 53 28.5 +1.1**
LANS pmax pmax
comp=Z,13nm,0.9s
LANS Liptovska Anna 28.24 315 *eP* **P** **23 53 28.5 +1.1**
MAKZ Makanchi 28.29 50 P **P** **23 53 28.7 +0.8**
MAKZ pmax pmax
comp=Z,6.0nm,1.1s
MAKZ Makanchi 28.29 50 P **P** **23 53 28.7 +0.8**
CSKK Cskako 28.30 311 *eP* P **23 53 33.0 +5.1**
VYHS Vyhne 28.36 314 *eP* **P** **23 53 29.8 +1.4**
VYHS pmax pmax
comp=Z,16nm,1.1s
VYHS Vyhne 28.36 314 *eP* **P** **23 53 29.8 +1.4**
MKAR Makanchi Array 28.49 50 P **P** **23 53 30.5 +0.8**
comp=Z,4.3nm,0.8s,baz=246,slow=9.5,SNR=28
MKAR PcP **PcP** **23 56 41.6 +0.3**
comp=Z,0.5nm,0.5s,baz=253,slow=2.9,SNR=2.8
MKAR ScP **ScP** **00 00 19.0 -3.3**
comp=Z,0.5nm,0.7s,baz=248,slow=1.6,SNR=3.1
MKAR LR LR 00 06 33.4
comp=Z,379nm,18.6s,baz=254,slow=40
MKAR Makanchi Array 28.49 50 P **P** **23 53 30.4 +0.7**
OJC Ojcow 28.52 317 *eP* **P** **23 53 29.8 0.0**
OJC Ojcow 28.52 317 *eP* **P** **23 53 29.8 0.0**
OJC Ojcow 28.52 317 IAmb IAmb 23 53 35.8
comp=Z,33nm,1.0s
MPLH Magyarpolny 28.70 310 *eP* P 23 53 24.1 -7.3
SUW Suwalki 28.79 326 *eP* **P** **23 53 35.1 +2.9**
SUW Suwalki 28.79 326 *eP* **P** **23 53 35.1 +2.9**
BEHE Becsehely 28.98 309 *eP* **P** **23 53 35.5 +1.6**
JAVC Velka Javorina 29.21 314 *eP* **P** **23 53 36.6 +0.5**
SMOL Smolenice 29.23 313 *eP* **P** **23 53 36.4 +0.2**
SMOL pmax pmax
comp=Z,7.0nm,1.0s
SMOL Smolenice 29.23 313 *eP* **P** **23 53 36.4 +0.2**
KLMR Klimovskoe 29.24 350 *eP* **P** **23 53 33.9 -2.2**
KLMR pmax pmax
comp=Z,23nm,0.9s
KLMR Klimovskoe 29.24 350 *eP* **P** **23 53 33.9 -2.2**
KLMR AMP 23 53 40.5
comp=Z,23nm,0.9s
MODS Modra-Piesok 29.27 313 *eP* **P** **23 53 39.1 +2.5**
MODS pmax pmax
comp=Z,26nm,1.3s
MODS Modra-Piesok 29.27 313 *eP* **P** **23 53 39.1 +2.5**
OKC Ostrava-Krasne 29.31 316 *eP* **P** **23 53 36.5 -0.4**
OKC *e* 23 53 40.4
OKC Ostrava-Krasne 29.31 316 *eP* **P** **23 53 36.5 -0.4**
OKC *epP* **pP** **23 53 40.4 -1.1**
ZST Bratislava 29.32 312 *eP* **P** **23 53 39.5 +2.5**
ZST pmax pmax
comp=Z,14nm,0.9s
ZST Bratislava 29.32 312 *eP* **P** **23 53 39.5 +2.5**
PRGR Permogore 29.35 356 *eP* **P** **23 53 35.9 -1.1**
PRGR *e* 23 54 28.5
PRGR pmax pmax
comp=Z,8.0nm,0.6s
DANN Dangsing 29.35 89 *eP* **P** **23 53 39.2 +1.4**
comp=Z,50nm,0.8s
SOP Sopron 29.49 311 *eP* **P** **23 53 38.7 +0.2**
MORC Moravsky Berou 29.64 315 ⇑P **P** **23 53 40.0 +0.1**
MORC Moravsky Berou 29.64 315 *eP* **P** **23 53 39.8 -0.1**
HYB Hyderabad 29.80 113 *i* P **P** **23 53 42.0 +0.5**
CONA Conrad Observa 30.02 311 *epP* **P** **23 53 42.8 -0.5**
comp=Z,3.4nm,0.5s
ARSA Arzberg 30.03 310 *epP* **P** **23 53 44.4 +1.1**
comp=Z,5.8nm,0.7s
VRAC Vranov 30.03 314 P **P** **23 53 43.4 +0.1**
comp=Z,10.0nm,0.8s,baz=108,slow=9.7,SNR=9.3
VRAC Vranov 30.03 314 ⇓P **P** **23 53 43.6 +0.3**
VRAC Vranov 30.03 314 *eP* **P** **23 53 43.0 -0.3**
KRUC Moravsky 30.07 313 *eP* **P** **23 53 43.8 +0.2**
SOKA Soboth 30.19 308 *epP* **P** **23 53 45.7 +0.9**
comp=Z,2.7nm,0.6s
GKN Gorkha 30.19 89 *eP* **P** **23 53 46.0 +0.9**
comp=Z,15nm,0.5s
KRLC Kraliky 30.21 315 *eP* **P** **23 53 44.2 -0.7**
KRLC *e* 23 53 46.8
KRLC Kraliky 30.21 315 *eP* **P** **23 53 44.2 -0.7**
KRLC *epP* **pP** **23 53 46.8 -2.7**
OBKA Obir 30.47 308 *epP* pP 23 53 50.3 -1.6
comp=Z,5.1nm,0.8s
DPC Dobruska-Polom 30.59 316 *eP* **P** **23 53 48.1 -0.2**
DPC *e* 23 53 51.4
DPC Dobruska-Polom 30.59 316 *eP* **P** **23 53 48.1 -0.2**
DPC *epP* **pP** **23 53 51.4 -1.5**
DMN Daman 30.70 90 *eP* **P** **23 53 50.6 +0.8**
comp=Z,16nm,0.7s
TREC Trest 30.71 313 *eP* **P** **23 53 52.9 +3.6**
TREC Trest 30.71 313 *eP* **P** **23 53 52.9 +3.6**
OSTC Ostas 30.74 316 *eP* **P** **23 53 49.4 -0.1**
OSTC *ex* x 23 53 52.2
KKN Kakani 30.80 89 *eP* **P** **23 53 51.5 +1.0**
comp=Z,23nm,0.6s
KSP Ksiaz 30.80 317 *eP* **P** **23 53 53.6 +3.5**
KSP Ksiaz 30.80 317 *eP* **P** **23 53 53.6 +3.5**
UPC Upice 30.84 316 *eP* **P** **23 53 50.1 -0.3**
UPC *e* 23 53 53.5
UPC Upice 30.84 316 *eP* **P** **23 53 50.1 -0.3**
UPC *epP* **pP** **23 53 53.5 -1.5**
CHVC Chvalec 30.84 316 *eP* **P** **23 53 50.3 -0.2**
CHVC *ex* x 23 53 52.5
PKIN Phulchoki 30.96 90 *eP* **P** **23 53 52.6 +0.6**
comp=Z,10.0nm,0.5s
PKI Pulchoki 30.97 90 *eP* **P** **23 53 52.9 +0.7**
comp=Z,35nm,1.1s
MOA Molln 31.02 310 *epP* **P** **23 53 51.7 -0.4**
comp=Z,15nm,0.5s
GUN Gumba 31.27 89 *eP* **P** **23 53 55.6 +0.8**
comp=Z,28nm,0.6s
GOPC GO Pecny, Ondr 31.35 314 *eP* **P** **23 53 54.3 -0.6**
GOPC GO Pecny, Ondr 31.35 314 *eP* **P** **23 53 54.3 -0.6**
KBA Koelnbreinsper 31.41 309 *epP* **P** **23 53 55.6 0.0**
comp=Z,17nm,0.7s,SNR=7.5
WMQ Urumqi 31.51 58 *eP* **P** **23 53 58.0 +1.5**
WMQ pP sP 23 54 04.8 +1.8
WMQ sP pP 23 54 09.0 +7.9
WMQ pmax pmax
comp=Z,10.0nm,0.9s
WMQ pmax pmax
comp=Z,83nm,5.5s
WMQ LR LR
comp=Z,190nm,13.1s
WMQ LR LR
comp=Z,170nm,19.1s
WMQ LR LR
comp=Z,220nm,17.1s
PRU Pruhonice 31.52 314 *eP* **P** **23 53 59.8 +3.4**
PRU Pruhonice 31.52 314 *eP* **P** **23 53 59.8 +3.4**
JIRN Jiri 31.61 89 *eP* **P** **23 53 58.8 +1.0**
comp=Z,28nm,0.6s
PRA Prague 31.62 314 *eP* **P** **23 54 00.7 +3.5**
PRA Prague 31.62 314 *eP* **P** **23 54 00.7 +3.5**
GEC2 GERESS Array S 31.67 312 *eP* **P** **23 54 00.7 +2.8**
comp=Z,9.4nm,0.9s,baz=106,slow=8.9
GEC2 GERESS Array S 31.67 312 IAmb IAmb 23 54 01.6
comp=Z,10nm,0.9s
GERES GERESS Array B 31.67 312 P **P** **23 53 57.1 -0.8**
comp=Z,4.0nm,0.6s,baz=112,slow=8.2,SNR=39
GERES PcP **PcP** **23 56 47.3 -2.3**
comp=Z,0.9nm,0.6s,baz=114,slow=4.7,SNR=3.1
GERES GERESS Array B 31.67 312 P **P** **23 53 56.8 -1.1**
PVCC Panska Ves 31.70 315 *eP* **P** **23 54 01.3 +3.3**
PVCC Panska Ves 31.70 315 *eP* **P** **23 54 01.3 +3.3**
KHC Kasperske Hory 31.83 312 ⇑ *eP* **P** **23 53 59.0 -0.2**
KHC pmax pmax
comp=Z,42nm,1.1s
KHC Kasperske Hory 31.83 312 *eP* **P** **23 53 58.7 -0.5**
KHC *epP* **pP** **23 54 01.2 -2.7**
KHC *ex* x 23 54 18.5
KHC Kasperske Hory 31.83 312 IAmb IAmb 23 54 05.3
comp=Z,26nm,1.5s
ABTA Abfaltersbach 31.89 308 *epP* **P** **23 53 59.8 0.0**
comp=Z,13nm,0.9s,SNR=5.4
RJOB Jochberg 31.94 310 *eP* **P** **23 54 03.7 +3.5**
comp=Z,21nm,0.8s,baz=106,slow=8.9
LODK Lodwar 31.96 208 P **P** **23 54 03.0 +2.4**
SNR=6.0
RAMN Ramite 32.17 90 *eP* **P** **23 54 03.3 +0.6**
BRG Berggiesshubel 32.19 316 *eP* **P** **23 54 05.0 +2.7**
comp=Z,12nm,0.9s
BRG Berggiesshubel 32.19 316 *eP* **P** **23 54 05.0 +2.7**
BRG pmax pmax
comp=Z,12nm,0.9s
BRG Berggiesshubel 32.19 316 *eP* **P** **23 54 05.1 +2.8**
comp=Z,12nm,0.9s,baz=106,slow=8.9
WET Wettzell 32.28 312 *eP* **P** **23 54 05.5 +2.4**
comp=Z,21nm,0.9s,baz=106,slow=8.9
CTI Castel Tesino 32.32 306 IAmb IAmb 23 54 10.9
comp=Z,12nm,0.9s
WTTA Wettenberg 32.59 308 *eP* **P** **23 54 05.1 -0.9**
comp=Z,32nm,0.9s,SNR=6.3
TMCR Tamitsa 32.61 350 *eP* **P** **23 54 04.5 -1.2**
TMCR pmax pmax
comp=Z,21nm,0.8s
WATA Walderalm 32.64 308 *eP* **P** **23 54 05.2 -1.2**
comp=Z,22nm,0.9s,SNR=9.4
ZAA0 Zalesovo Array 32.77 39 P **P** **23 54 07.3 0.0**
ZAA0 IAmb IAmb 23 54 16.8
comp=Z,13nm,1.1s
ZALV Zalesovo Beam 32.77 39 P **P** **23 54 07.4 +0.1**
ZALV Zalesovo Beam 32.77 39 P **P** **23 54 07.3 -0.1**
comp=Z,3.3nm,0.4s,baz=257,slow=10,SNR=18
ZALV LR LR 00 10 35.7
comp=Z,19nm,20.1s,baz=233,slow=42
SQTA Sankt Quirin 32.86 308 *eP* **P** **23 54 07.4 -0.9**
comp=Z,34nm,0.5s,SNR=17
ODAN Odare 32.87 90 *eP* **P** **23 54 09.5 +0.7**
comp=Z,11nm,0.6s
NKC Novy Kostel 32.88 314 *eP* **P** **23 54 08.1 -0.2**
NKC *e* 23 54 11.0
NKC Novy Kostel 32.88 314 *eP* **P** **23 54 08.1 -0.2**
NKC epP **pP** **23 54 11.0 -2.0**
ROTZ Rotzenmuhle 32.88 313 *eP* **P** **23 54 11.6 +3.2**
comp=Z,20nm,0.9s,baz=106,slow=8.9
RUE Ruedersdorf 32.89 318 *eP* **P** **23 54 11.5 +3.2**
comp=Z,50nm,1.0s,baz=106,slow=8.9
FINES FINESS Array B 32.90 339 P **P** **23 54 07.2 -1.1**
comp=Z,4.7nm,0.6s,baz=136,slow=9.4,SNR=15
CLL Collm 32.90 316 *eP* **P** **23 54 08.0 -0.5**
CLL *i* 23 54 13.5
CLL pmax pmax
comp=Z,24nm,0.9s
CLL Collm 32.90 316 *eP* **P** **23 54 08.0 -0.5**
comp=Z,24nm,0.9s
CLL *i* sP **P** **23 54 11.4 +2.9**
comp=Z,24nm,0.9s
CLL LmV 00 09 00.0
comp=Z,200nm,20.0s
CLL Collm 32.90 316 *eP* **P** **23 54 11.4 +2.9**
comp=Z,24nm,0.9s,baz=106,slow=8.9
CLL Collm 32.90 316 IAmb IAmb 23 54 12.9
comp=Z,22nm,0.9s
MOTA Moosalm 32.96 308 *eP* **P** **23 54 08.2 -1.1**
comp=Z,32nm,0.7s,SNR=7.4
FUR Furstenfeldbru 33.03 310 *eP* **P** **23 54 12.9 +3.1**
comp=Z,64nm,0.9s,baz=106,slow=8.9
FETA Feichten 33.14 308 *epP* **P** **23 54 10.4 -0.4**
comp=Z,32nm,0.7s,SNR=12
RETA Reutte 33.22 308 *eP* **P** **23 54 10.3 -1.1**
comp=Z,12nm,0.6s
FUORN Ofenpass-Fuorn 33.37 307 IAmb IAmb 23 54 30.5
comp=Z,14nm,0.9s
BSD Bornholm Skovb 33.43 323 *i* P **P** **23 54 11.6 -1.4**
BSD pmax pmax
comp=Z,11nm,0.4s
BSD Bornholm Skovb 33.43 323 *i* P **P** **23 54 11.6 -1.4**
comp=Z,10nm,0.4s
GRF Grafenberg Arr 33.47 313 *eP* **P** **23 54 16.5 +3.0**
comp=Z,36nm,0.9s,baz=106,slow=8.9
NEUB Neuenburg 33.59 315 *eP* **P** **23 54 17.4 +2.9**
comp=Z,25nm,0.9s,baz=106,slow=8.9
KEST Kesra 33.65 287 P **P** **23 54 16.1 +0.8**
comp=Z,3.7nm,1.0s,baz=288,slow=6.5,SNR=2.5
DAVOX Davos/Dischmat 33.66 307 P **P** **23 54 14.7 -0.7**
comp=Z,14nm,0.7s,baz=114,slow=6.3,SNR=17
DAVA Damuels 33.76 308 *eP* **P** **23 54 15.3 -1.0**
comp=Z,49nm,0.6s,SNR=19
CLZ Clausthal 34.63 316 *eP* **P** **23 54 26.8 +3.3**
comp=Z,51nm,0.8s,baz=106,slow=8.9
NRDL Niedersach Rie 34.99 317 *eP* **P** **23 54 30.6 +4.0**
comp=Z,59nm,1.0s,baz=106,slow=8.9
LSA Lhasa 35.22 83 P **P** **23 54 33.1 +3.7**
LSA pmax pmax
comp=Z,10.0nm,1.1s
LSA Lhasa 35.22 83 P **P** **23 54 33.1 +3.7**
KMBO Kilima Mbogo 35.49 202 P **P** **23 54 31.4 -0.1**
comp=Z,1.0nm,0.7s,baz=64,slow=17,SNR=2.1
ECH Echery 35.74 309 IAmb IAmb 23 54 36.6
comp=Z,41nm,1.5s
IBBN Ibbenburen 36.31 316 *eP* **P** **23 54 41.9 +4.0**
comp=Z,46nm,1.0s,baz=106,slow=8.9
HFS Hagfors 36.55 330 P **P** **23 54 39.1 -0.8**
comp=Z,13nm,0.7s,baz=135,slow=9.5,SNR=26
HFS LR LR 00 11 13.7
comp=Z,111nm,19.4s,baz=137,slow=39
MBAR Mbarara 37.56 213 P **P** **23 54 49.5 +0.4**
MBAR pmax pmax
comp=Z,8.0nm,0.6s
MBAR Mbarara 37.56 213 P **P** **23 54 50.4 +1.3**
comp=Z,5.8nm,0.5s,baz=53,slow=13,SNR=8.6
MBAR Mbarara 37.56 213 P **P** **23 54 49.5 +0.4**
NC405 NORSAR Array S 37.90 331 P **P** **23 54 52.7 +1.3**
NB2 NORSAR Subarra 38.07 330 P **P** **23 54 52.1 -0.8**
comp=Z,8.4nm,0.8s,baz=122,slow=8.6
NOA NORSAR Array B 38.07 330 P **P** **23 54 51.9 -1.0**
comp=Z,3.6nm,0.7s,baz=122,slow=8.4,SNR=15
NOA LR LR 00 11 25.6
comp=Z,154nm,21.4s,baz=120,slow=38
ARCES ARCESS Array B 39.61 347 P **P** **23 55 04.9 -0.7**
comp=Z,1.5nm,0.5s,baz=153,slow=7.4,SNR=16
TAM Tamanrasset 40.30 268 P **P** **23 55 12.8 +0.6**
TAM pmax pmax
comp=Z,4.0nm,0.9s
TAM Tamanrasset 40.30 268 P **P** **23 55 12.8 +0.6**
GTA Gaotai 40.53 66 *eP* **P** **23 55 15.0 +1.2**
GTA pP sP 23 55 22.0 +1.8
GTA sP pP 23 55 25.0 +6.5
GTA pmax pmax
comp=Z,16nm,0.7s
GTA pmax pmax
comp=Z,75nm,7.0s
GTA LR LR
comp=Z,140nm,11.1s
GTA LR LR
comp=Z,210nm,11.7s
GTA LR LR
comp=Z,250nm,14.6s
MOY Mondy 41.50 47 *eP* **P** **23 55 25.4 +3.8**
TLY Talaya 43.14 47 P **P** **23 55 34.2 -0.7**
comp=Z,3.2nm,0.7s,baz=248,slow=11,SNR=3.3
EKA Eskdalemuir Ar 43.28 318 P **P** **23 55 34.9 -1.0**
comp=Z,16nm,0.8s,baz=108,slow=8.2,SNR=14
ESDC Sonseca Array 43.65 295 P **P** **23 55 38.8 -0.4**
comp=Z,2.8nm,0.8s,baz=76,slow=7.4,SNR=8.7
ESDC LR LR 00 14 52.1
comp=Z,119nm,18.4s,baz=325,slow=38
ESDC Sonseca Array 43.65 295 P **P** **23 55 39.3 +0.1**
LZH Lanzhou 44.20 70 *eP* **P** **23 55 45.0 +1.3**
LZH pP sP 23 55 53.5 +3.3
LZH sP pP 23 55 57.3 +8.8
LZH *ePP* **PcP** **23 57 31.0 +2.6**
LZH pmax pmax
comp=Z,23nm,1.3s
LZH pmax pmax
comp=Z,110nm,5.6s
LZH LR LR
comp=Z,270nm,13.4s
LZH LR LR
comp=Z,370nm,13.6s
LZH LR LR
comp=Z,550nm,16.8s
SONM Songino Array 44.80 53 P **P** **23 55 48.8 +0.5**
SONM 23 57 29.4
SONM pmax pmax
comp=Z,8.0nm,1.9s
SONM Songino Array 44.80 53 P **P** **23 55 48.9 +0.6**
comp=Z,2.1nm,1.0s,baz=251,slow=3.4,SNR=8.1
SONM PcP **PcP** **23 57 29.4 -0.9**
comp=Z,0.5nm,0.5s,baz=204,slow=3.2,SNR=2.4
SONM LR LR 00 17 35.8
comp=Z,149nm,18.1s,baz=301,slow=40
SONM Songino Array 44.80 53 P **P** **23 55 48.8 +0.5**
ULN Ulaanbaatar 45.24 53 P **P** **23 55 52.3 +0.4**
ULN pmax pmax
comp=Z,7.0nm,1.0s
ULN Ulaanbaatar 45.24 53 P **P** **23 55 52.3 +0.4**
CD2 Chengdu 45.38 77 *eP* **P** **23 55 53.0 -0.1**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
MDT Midelt 45.53 286 P **P** **23 55 53.7 -0.6**

comp=Z,1.4nm,0.9s,baz=280,slow=15,SNR=2.3
CHTO Chiang Mai 45.81 95 P P 23 55 56.6 0.0
CHTO pmax pmax
comp=Z,6.0nm,0.7s
CHTO Chiang Mai 45.81 95 P P 23 55 56.6 0.0
CHTO IAmb IAmb 23 56 08.1
comp=Z,6.2nm,0.7s
CM31 Chiang Mai Arr 45.98 95 P P 23 55 57.1 -0.8
CM31 IAmb IAmb 23 56 04.8
comp=Z,5.9nm,0.8s
CMAR Chiang Mai Arr 45.98 95 P P 23 55 58.4 +0.5
comp=Z,2.7nm,0.7s,baz=294,slow=8.7,SNR=12
KMI Kunming 46.43 85 P P 23 56 03.8 +2.1
KMI pmax pmax
comp=Z,8.0nm,0.8s
TOA0 Torodi Ar. Sit 48.03 258 P P 23 56 13.7 -0.2
TOA0 Torodi Ar. Sit 48.03 258 P P 23 56 14.0 0.0
SNR=16
TORD Torodi Ar. Bea 48.03 258 P P 23 56 13.8 -0.2
comp=Z,5.7nm,0.7s,baz=51,slow=6.8,SNR=40
TORD LR LR 00 19 25.4
comp=Z,210nm,21.1s,baz=300,slow=40
TORD Torodi Ar. Bea 48.03 258 P P 23 56 13.6 -0.4
SPITS Spitsbergen Ar 48.12 351 P P 23 56 14.0 +0.2
comp=Z,7.2nm,0.6s,baz=160,slow=15,SNR=37
PBKT Sadao Pong 48.57 96 P P 23 56 18.5 +0.4
PBKT IAmb IAmb 23 56 29.8
comp=Z,11nm,0.8s
XAN Xi'an 48.72 71 P P 23 56 19.3 +0.1
XAN pP sP 23 56 28.0 +2.4
XAN pmax pmax
comp=Z,13nm,0.8s
XAN LR LR
comp=Z,220nm,24.9s
XAN LR LR
comp=Z,180nm,18.4s
XAN LR LR
comp=Z,190nm,30.4s
XAN Xi'an 48.72 71 P P 23 56 20.0 +0.8
XAN pmax pmax
comp=Z,10.0nm,0.7s
XAN Xi'an 48.72 71 P P 23 56 20.0 +0.8
XAN IAmb IAmb 23 56 24.7
comp=Z,9.9nm,0.7s
SLVN Son La 48.91 89 P P 23 56 21.5 +0.7
SLVN IAmb IAmb 23 56 33.5
comp=Z,6.6nm,0.9s
HHC Hu-ho-hao-te 49.23 62 eP P 23 56 24.5 +1.5
HHC pmax pmax
comp=Z,4.0nm,0.6s
HHC pmax pmax
comp=Z,72nm,6.6s
BOD Bodaibo 49.52 39 eP P 23 56 24.7 -0.2
BOD pmax pmax
comp=Z,7.0nm,1.4s
ENH Enshi 50.29 76 P P 23 56 31.5 +0.4
ENH IAmb IAmb 23 57 13.4
comp=Z,7.5nm,0.9s
OPO Ambohidratompo 50.79 183 P P 23 56 35.9 +0.9
comp=Z,8.0nm,0.9s,baz=356,slow=10.0,SNR=6.1
ABPO Ambohimpanom 51.23 183 P P 23 56 39.3 +0.9
ABPO pmax pmax
comp=Z,13nm,0.9s
ABPO Ambohimpanom 51.23 183 P P 23 56 39.2 +0.9
ABPO IAmb IAmb 23 56 41.1
comp=Z,13nm,0.9s
BJI Beijing 52.84 62 eP P 23 56 50.3 +0.3
BJI pmax pmax
comp=Z,6.0nm,0.9s
BJT Baijiatuan 52.84 62 P P 23 56 50.2 +0.2
BJT pmax pmax
comp=Z,6.0nm,1.1s
BJT Baijiatuan 52.84 62 P P 23 56 50.2 +0.2
HIA Hailar 53.49 50 P P 23 56 55.3 +0.5
HIA pmax pmax
comp=Z,6.0nm,0.4s
HIA Hailar 53.49 50 P P 23 56 55.3 +0.5
HIA IAmb IAmb 23 58 12.3
comp=Z,5.6nm,0.4s
DAG Danmarks Havn 53.81 345 iP P 23 56 55.5 -1.1
DAG pmax pmax
comp=Z,2.0nm,0.4s
DAG Danmarks Havn 53.81 345 iP P 23 56 55.5 -1.1
comp=Z,2.1nm,0.4s
PSI Prapat 54.51 112 P P 23 57 03.6 +0.9
comp=Z,2.9nm,0.4s,baz=269,slow=3.4,SNR=3.1
RPSI Rantau Prapat 54.57 112 P P 23 57 03.6 +0.6
TIA Tai'an 54.58 66 P P 23 57 03.3 +0.4
TIA pmax pmax
comp=Z,9.0nm,1.0s
NOR Nord 54.74 350 iP P 23 57 02.0 -1.4
comp=Z,1.0nm,0.4s
IPM Ipoh 55.15 109 P P 23 57 07.3 0.0
TIXI Tiksi 56.08 22⇓eP P 23 57 12.7 -0.4
TIXI pmax pmax
comp=Z,6.0nm,1.0s
TIXI Tiksi 56.08 22 P P 23 57 12.8 -0.3
TIXI IAmb IAmb 23 57 18.8
comp=Z,8.3nm,1.1s
DBIC Dimbokro 56.95 256 P P 23 57 19.9 -0.3
DBIC pmax pmax
comp=Z,16nm,1.0s
DBIC Dimbokro 56.95 256 P P 23 57 19.8 -0.4
comp=Z,4.5nm,0.6s,baz=21,slow=8.2,SNR=14
DBIC LR LR 00 23 03.8
comp=Z,149nm,18.4s,baz=28,slow=37
DBIC Dimbokro 56.95 256 P P 23 57 19.9 -0.3
DBIC IAmb IAmb 23 57 27.4
comp=Z,16nm,1.0s
KIC Kosan Boka 57.03 255 eP P 23 57 20.4 -0.3
comp=Z,52nm,0.9s
TIC Toumodi 57.10 256 eP P 23 57 20.7 -0.5
comp=Z,7.8nm,0.7s
YAK Yakutsk 57.18 34 eP P 23 57 22.2 +1.2
YAK pmax pmax
comp=Z,9.0nm,0.9s
LIC Lamto 57.34 255 eP P 23 57 22.7 -0.2
comp=Z,78nm,1.2s
SUMG Summit 58.94 339 P P 23 57 33.6 -0.1
SUMG pmax pmax
comp=Z,30nm,1.2s
SUMG Summit 58.94 339 iP P 23 57 33.0 -0.7
SUMG Summit 58.94 339 P P 23 57 33.6 -0.1
TSUM Tsumeb 59.99 216 P P 23 57 41.4 +0.1
TSUM IAmb IAmb 23 57 49.6
comp=Z,6.4nm,0.9s
KLR Kul'dur 61.15 48⇓eP P 23 57 47.7 -1.1
KLR pmax pmax
comp=Z,2.0nm,1.0s
LBTB Lobatse 61.69 205 P P 23 57 53.4 +0.7
LBTB pmax pmax
comp=Z,13nm,0.8s
LBTB Lobatse 61.69 205 P P 23 57 53.4 +0.7
KSAR Wonju Array Be 62.34 61 P P 23 57 56.0 -1.0
KSAR Wonju Array Be 62.34 61 P P 23 57 56.0 -1.0
KSRS Korea Array 62.37 61 P P 23 57 56.3 -0.9
comp=Z,3.0nm,0.8s,baz=280,slow=7.1,SNR=12
KSRS LR LR 00 28 41.0
comp=Z,134nm,18.7s,baz=308,slow=40
SFJD Kangerlussuaq 64.55 335 P P 23 58 10.4 -0.7
SFJD pmax pmax
comp=Z,112nm,1.9s
SFJD Kangerlussuaq 64.55 335 P P 23 58 10.3 -0.7
comp=Z,6.5nm,0.7s,baz=108,slow=9.6,SNR=2.8
SFJD Kangerlussuaq 64.55 335 iP P 23 58 08.1 -3.0
BOSA Boshof 65.11 204 P P 23 58 15.1 -0.2
BOSA pmax pmax
comp=Z,10.0nm,0.8s
BOSA Boshof 65.11 204 P P 23 58 15.9 +0.6
comp=Z,8.0nm,0.7s,baz=15,slow=5.2,SNR=21
BOSA Boshof 65.11 204 P P 23 58 15.1 -0.2
BOSA IAmb IAmb 23 58 20.8
comp=Z,10.0nm,0.8s
SEY Seymchan 66.94 29⇑iP P 23 58 27.0 +0.4
MA2 Magadan 67.73 33⇑eP P 23 58 31.1 -0.6
MA2 pmax pmax
comp=Z,6.0nm,1.0s
YSS Yuzh-Sakhalins 68.85 47 eP P 23 58 38.7 -0.2
YSS pmax pmax
comp=Z,19nm,1.1s
BILL Bilibino 69.28 21 eP P 23 58 41.7 +0.5
BILL i 23 58 54.4
BILL i 23 59 05.1
BILL i 00 01 16.0
BILL pmax pmax
comp=Z,6.0nm,1.1s
BILL MLR MLR
comp=Z,223nm,19.0s
FRB Frobisher Bay 72.63 336 P P 23 59 01.1 -0.5
comp=Z,11nm,0.7s,baz=62,slow=7.8
SCHQ Schefferville 77.60 328 P P 23 59 29.2 -1.3
comp=Z,6.6nm,0.7s,baz=53,slow=4.7,SNR=14
TOLK Toolik Lake Re 78.18 7 P P 23 59 33.6 +0.1
TOLK IAmb IAmb 23 59 41.3
comp=Z,11nm,0.8s
C36M Paulatuk 78.42 358 P P 23 59 33.3 -1.4
C36M IAmb IAmb 23 59 43.0
comp=Z,13nm,0.8s
INK Inuvik 79.53 1 P P 23 59 40.1 -0.7
comp=Z,2.3nm,0.7s,baz=5.3,slow=6.9,SNR=5.2
INK Inuvik 79.53 1 IAmb IAmb 23 59 40.8
comp=Z,11nm,1.4s
BMAR Burnt Mountain 79.83 6 P P 23 59 42.3 -0.3
IMAR Indian Mountai 80.20 10 P P 23 59 43.6 -0.9
PRP Porcupine Dome 81.62 6 IAmb IAmb 00 01 07.9
comp=Z,26nm,1.4s
ILAR Eielson Array 82.21 7 P P 23 59 54.4 -0.8
ILAR Eielson Array 82.21 7 P P 23 59 54.3 -0.9
comp=Z,0.9nm,0.7s,baz=316,slow=4.2,SNR=12
ILAR Eielson Array 82.21 7 P P 23 59 54.4 -0.8
BPAW Bear Paw Mtn. 82.37 9 IAmb IAmb 00 00 03.4
comp=Z,7.2nm,0.8s
SCRK Sand Creek 83.27 6 IAmb IAmb 00 00 06.6
comp=Z,9.5nm,0.8s
DOT Dot Lake 83.59 6 IAmb IAmb 00 00 09.9
comp=Z,6.6nm,0.8s
D62A Allapoint, All 83.72 323 P P 00 00 02.7 -0.7
FCC Fort Churchill 84.33 342 P P 00 00 06.0 -0.2
FCC pmax pmax
comp=Z,7.0nm,0.9s
FCC Fort Churchill 84.33 342 P P 00 00 06.0 -0.2
FCC IAmb IAmb 00 00 13.9
comp=Z,7.0nm,0.8s
BCAR Beaver Creek A 84.36 5 P P 00 00 05.9 -0.5
YKA Yellowknife Ar 84.59 353 P P 00 00 06.7 -0.8
comp=Z,2.8nm,0.6s,baz=9.4,slow=5.3,SNR=48
KDAK Kodiak Island 88.14 12 P P 00 00 24.9 -0.1
comp=Z,14nm,0.8s,baz=346,slow=4.2,SNR=5.2
ULM Lac du Bonnet 92.29 339 P P 00 00 43.7 -0.8
comp=Z,3.2nm,0.8s,baz=21,slow=4.5,SNR=6.8
WRA Warramunga Arr 95.90 110 P P 00 01 01.5 -0.1
comp=Z,0.9nm,0.9s,baz=307,slow=4.4,SNR=3.0
ASAR Alice Springs 97.53 113 P Pdif 00 01 11.0 +2.0
ASAR Alice Springs 97.53 113 P Pdif 00 01 11.0 +2.0
comp=Z,0.5nm,0.8s,baz=298,slow=4.1,SNR=3.4
QSPA South Pole Qui 122.27 180 PKiKP 00 06 28.6 -0.2

*IDC **28** 23:49:09.8±0.8,2°.46S×139°.93E,h0km,mb4.0/6, mb1 4.3/7,mb1mx3.9/46,mbtmp4.1/7,ML4.5/1,MS3.4/1, Ms1 3.4/1,ms1mx2.7/34,Error ellipse: s-maj=22.6km s-min=9.2km az=3.0*
*DJA **28** 23:49:12.9±0.8,2°.S±8°×14°.0E±°,h18km±8km,M3.7/4, MLv3.7/4*
*NEIC **28** 23:49:14.2±1.9,2°.5S±0°.1×140°.15E±0°.06,h38km±8km, mb4.3/7,Error ellipse: s-maj=20.4km s-min=8.4km az=179.0*
ISC 28 23:49:13.3±0.6,2°.56S±0°.08×140°.07E±0°.06,h25km,n26, σ2s04/29,mb4.0/6,Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.10**	**107**	P	**Pn**	**23 49 20.1**	**+2.1**
GENI				S	**Sb**	**23 49 25.4**	**+4.3**
JAY	**Jayapura**	**0.63**	**86**	Pg	**Pb**	**23 49 25.7**	**-0.2**
	110nm,0.3s,baz=245,slow=11,SNR=194						
JAY				Lg	Lg	23 49 35.4	
	144nm,0.3s,baz=47,slow=22,SNR=24						
JAY				LR	LR	23 50 02.0	
	comp=Z,960nm,18.6s,baz=325,slow=68						
JAY	**Jayapura**	**0.63**	**86**	P	**Pb**	**23 49 25.6**	**-0.2**
JAY				S	**Sn**	**23 49 34.8**	**-1.3**
SMPI	**Sarmi**	**1.48**	**293**	P	**Pn**	**23 49 38.2**	**-0.1**
WAMI	**Wamena**	**1.89**	**226**	P	**Pn**	**23 49 47.3**	**+3.3**
FAKI	**Fak Fak**	**7.82**	**267**	Pn	**Pn**	**23 51 06.0**	**+0.3**
MTN	**Manton Dam**	**13.51**	**220**		**Pn**	**23 52 24.4**	**+0.8**
KNRA	**Kununurra**	**17.14**	**220**		**Pn**	**23 53 11.3**	**0.0**
KNRA				IAmb	IAmb	23 53 15.7	
	comp=Z,23nm,0.7s						
SOEI	**Soe**	**17.25**	**245**	P	**P**	**23 53 15.2**	**+1.0**
WR0	**Warramunga Arr**	**18.11**	**197**	P	**Pn**	**23 53 24.5**	**+1.1**
WR0				IAmb	IAmb	23 53 28.3	
	comp=Z,24nm,1.4s						
WRAB	**Tennant Creek**	**18.15**	**198**	P	**Pn**	**23 53 24.5**	**+0.7**
WB2	**Warramunga Arr**	**18.16**	**198**	P	**Pn**	**23 53 25.1**	**+1.2**
WB2				IAmb	IAmb	23 53 27.3	
	comp=Z,10.0nm,0.6s						
WRA	**Warramunga Arr**	**18.16**	**198**	P	**Pn**	**23 53 24.5**	**+0.6**
	comp=Z,1.5nm,0.3s,baz=22,slow=12,SNR=57						
WRA				S	**Sn**	**23 56 40.2**	**-5.8**
	comp=Z,0.2nm,0.3s,baz=13,slow=21,SNR=3.7						
FITZ	**Fitzroy Crossi**	**20.94**	**222**	P	**P**	**23 53 54.8**	**+0.3**
	comp=Z,6.6nm,0.7s,baz=64,slow=11,SNR=10						
FITZ				S	**S**	**23 57 41.6**	**-5.2**
	comp=Z,6.0nm,1.1s,baz=153,slow=20,SNR=2.6						
FITZ				LR	LR	00 02 03.2	
	comp=Z,122nm,21.1s,baz=168,slow=37						
FITZ	**Fitzroy Crossi**	**20.94**	**222**	IAmb	IAmb	23 54 04.7	
	comp=Z,56nm,1.6s						
ASAR	**Alice Springs**	**21.81**	**195**	P	**P**	**23 54 05.0**	**+1.2**
	comp=Z,3.6nm,0.6s,baz=29,slow=11,SNR=24						
ASAR	**Alice Springs**	**21.81**	**195**	P	**P**	**23 54 04.5**	**+0.7**
CMAR	**Chiang Mai Arr**	**45.55**	**299**	P	**P**	**23 57 31.1**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=119,slow=5.9,SNR=4.5						
MK31	**Makanchi Array**	**70.51**	**322**	P	**P**	**00 00 26.1**	**+0.1**
MK31				IAmb	IAmb	00 00 29.9	
	comp=Z,3.3nm,1.4s						
MKAR	**Makanchi Array**	**70.51**	**322**	P	**P**	**00 00 26.7**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=100,slow=7.8,SNR=4.4						
BVAR	**Borovoye Array**	**79.97**	**325**	P	**P**	**00 01 20.5**	**+0.1**
	comp=Z,7.7nm,0.6s,baz=108,slow=7.7,SNR=3.5						
ILAR	**Eielson Array**	**85.14**	**24**	P	**P**	**00 01 45.9**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=258,slow=4.5,SNR=2.1						
DBIC	**Dimbokro**	**144.81**	**278**	PKP	**PKPab**	**00 08 47.3**	**-0.9**
	comp=Z,2.0nm,0.6s,baz=64,slow=4.8,SNR=5.9						
LPAZ	**La Paz**	**146.42**	**125**	PKPbc	**PKPdf**	**00 08 53.4**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=109,slow=3.6,SNR=4.7						
LPAZ	**La Paz**	**146.42**	**125**		**PKPdf**	**00 08 52.2**	**-0.5**
CPUP	**Villa Florida**	**146.71**	**151**	PKPbc	**PKPdf**	**00 08 52.7**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=256,slow=4.2,SNR=3.9						

IDC 28 23:51:55.5±34.0,18°.81S×178°.12W,h670km±288km, mb3.2/5,mb1 3.4/5,mb1mx3.0/35,mbtmp4.4/5,Error ellipse: s-maj=328.6km s-min=98.7km az=68.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.58**	**262**	P	P	23 57 44.6	+0.4
	3.3nm,0.6s,baz=74,slow=7.4,SNR=4.7						
STKA	**Stephens Creek**	**38.45**	**242**	P	P	23 58 23.7	+0.1
	1.7nm,0.3s,baz=65,slow=11,SNR=6.9						
WRA	**Warramunga Arr**	**44.75**	**260**	P	P	23 59 12.6	-0.3
	2.3nm,0.4s,baz=97,slow=7.4,SNR=25						
ASAR	**Alice Springs**	**44.82**	**255**	P	P	23 59 13.5	0.0
	5.2nm,0.7s,baz=87,slow=8.3,SNR=36						
ASAR				PcP	PcP	00 00 39.9	-0.2
	0.9nm,0.7s,baz=103,slow=4.5,SNR=4.2						
FITZ	**Fitzroy Crossi**	**53.16**	**261**	P	P	00 00 14.7	+0.3
	1.1nm,0.3s,baz=92,slow=7.7,SNR=7.0						

*PDG **28** 23:52:57.9±0.3,38°.26N×20°.10E,h25km±1km,ML4.0/14, Error ellipse: s-maj=2.2km s-min=0.9km az=90.0*
*IDC **28** 23:52:58.7±1.1,38°.55N×20°.52E,h0km,mb4.0/11, mb1 3.9/19,mb1mx3.8/56,mbtmp3.9/19,ML3.7/6,MS3.2/5, Ms1 3.2/5,ms1mx2.9/64,Error ellipse: s-maj=22.4km s-min=13.6km az=23.0*
*THE **28** 23:52:59.5,38°.42N×20°.48E,h5km±1km,ML4.1/17,Error ellipse: s-maj=1.7km s-min=0.3km az=320.0*
*NEIC **28** 23:53:00.1±2.1,38°.44N±0°.06×20°.39E±0°.06,h10km±3km, mb4.3/5,ML4.0(THE),Error ellipse: s-maj=9.0km s-min=6.6km az=183.0*
ISC 28 23:52:59.1±0.8,38°.43N±0°.02×20°.44E±0°.02,h10km±5km, n130,σ1s71/172,mb3.9/13,12C-14D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.10**	**75**	P	**Pg**	**23 53 01.1**	**-0.6**
FSK				S	**Sg**	**23 53 02.4**	**-1.1**
	191μm,0.5s						
EVGI	**Lefkada island**	**0.25**	**42**	P	**Pg**	**23 53 04.3**	**+0.1**
EVGI				S	**Sg**	**23 53 07.5**	**-0.2**
CHV1	**Chavriata, Kef**	**0.26**	**191**	P	**Pg**	**23 53 04.2**	**-0.1**
CHV1				S	**Sg**	**23 53 08.4**	**+0.7**
	241μm,0.3s						
ARG2	**Argostoli**	**0.26**	**172**	P	**Pg**	**23 53 03.9**	**-0.4**
ARG2				S	**Sg**	**23 53 07.9**	**+0.1**
	175μm,0.3s						
VLS	**Valsamata**	**0.28**	**156**	P	**Pg**	**23 53 04.1**	**-0.7**
VLS				S	**Sg**	**23 53 08.3**	**-0.3**
	49μm,0.4s						
LKD2	**Lefkada island**	**0.39**	**25**	P	**Pg**	**23 53 07.0**	**+0.1**
LKD2				S	**Sb**	**23 53 13.3**	**-1.0**
	22μm,0.8s						
KFL	**Anninata**	**0.42**	**140**	P	**Pg**	**23 53 06.6**	**-0.8**
TSLK	**Tsoukalades, L**	**0.42**	**23**	P	**Pg**	**23 53 07.7**	**+0.3**
TSLK				S	**Sb**	**23 53 14.3**	**-0.8**
	37μm,0.6s						
AST1	**Astakos**	**0.52**	**78**	P	**Pg**	**23 53 09.0**	**-0.2**
AST1				S	**Sg**	**23 53 16.6**	**+0.6**
	50μm,0.4s						
PDO	**Prodromos**	**0.60**	**74**	P	**Pg**	**23 53 10.0**	**-0.8**
PDO				S	**Sg**	**23 53 19.2**	**+0.5**
ZAK2	**Zakynthos**	**0.74**	**151**	P	**Pg**	**23 53 12.7**	**-0.6**
ZAK2				S	**Sg**	**23 53 23.2**	**+0.2**
	85μm,0.6s						
KRI1	**kERI**	**0.82**	**159**	P	**Pg**	**23 53 13.6**	**-1.4**
KRI1				S	**Sb**	**23 53 26.7**	**+0.1**
	29μm,0.6s						
PVO	**Paravola**	**0.87**	**78**	P	**Pg**	**23 53 15.4**	**-0.4**
PVO				S	**Sb**	**23 53 28.0**	**+0.1**
	11μm,0.8s						
RLS	**Riolos of Patr**	**0.89**	**115**	P	**Pg**	**23 53 15.2**	**-1.0**
RLS				S	**Sg**	**23 53 28.2**	**+0.4**
	6μm,1.0s						
UPR	**University Cam**	**1.07**	**98**	P	**Pb**	**23 53 18.4**	**-1.2**
DRO	**Drossia**	**1.11**	**115**	P	**Pb**	**23 53 19.2**	**-1.1**
DRO				S	**Sb**	**23 53 34.8**	**0.0**
	14μm,0.6s						
EFP	**Efpalio**	**1.15**	**90**	P	**Pb**	**23 53 19.9**	**-1.1**
EFP				S	**Sn**	**23 53 36.8**	**-0.1**
	8μm,0.7s						
ANX	**Ano Chora**	**1.17**	**82**	P	**Pb**	**23 53 20.8**	**-0.6**
ANX				S	**Sg**	**23 53 37.2**	**+0.4**
	9μm,0.5s						
EVR	**Evrytania**	**1.17**	**65**	P	**Pb**	**23 53 20.4**	**-1.1**
LAKA	**Lakka**	**1.22**	**99**	P	**Pn**	**23 53 21.1**	**-1.1**
LAKA				S	**Sg**	**23 53 38.9**	**+0.5**
	5μm,0.8s						
JAN	**Janina**	**1.26**	**14**	P	**Pg**	**23 53 23.5**	**+0.2**
JAN				S	**Sg**	**23 53 40.8**	**+1.1**
	6μm,0.8s						
SERG	**Sergoula**	**1.27**	**90**	P	**Pn**	**23 53 22.0**	**-0.8**
TRIZ	**Trizonia**	**1.28**	**93**	P	**Pn**	**23 53 22.0**	**-1.0**
ALIK	**Aliki, Aigiali**	**1.32**	**97**	P	**Pn**	**23 53 23.3**	**-0.3**
KALE	**Kalithea**	**1.33**	**91**	P	**Pn**	**23 53 22.9**	**-0.9**
AMT	**Artemida-Makis**	**1.34**	**132**	P	**Pn**	**23 53 24.2**	**+0.3**
AMT				S	**Sg**	**23 53 42.7**	**+0.3**
	7μm,0.7s						
KLV	**Kalavryta, Ach**	**1.40**	**106**	P	**Pn**	**23 53 23.6**	**-1.1**
MAKR	**Makrakomi, Fth**	**1.44**	**66**	P	**Pn**	**23 53 25.7**	**+0.4**
SRN	**Sarande**	**1.48**	**347**	P	**Pb**	**23 53 26.6**	**-0.1**
AGG	**Agios Georgios**	**1.59**	**68**	Pn	**Pb**	**23 53 29.0**	**+0.4**
PYL	**PYLOS**	**1.85**	**146**	P	**Pn**	**23 53 31.1**	**+0.3**
SCTE	**Santa Cesarea**	**2.24**	**317**	Pn	**Pn**	**23 53 37.1**	**+0.9**
LIT	**Litokhoron**	**2.30**	**43**	Pn	**Pn**	**23 53 38.6**	**+1.6**
FNA	**Florina**	**2.46**	**17**	Pn	**Pn**	**23 53 40.5**	**+1.3**
OHR	**Ohrid**	**2.69**	**6**	*i* Pn	**Pb**	**23 53 45.8**	**-1.5**
TIR	**Tirane**	**2.94**	**351**	⇓P	**Pn**	**23 53 47.9**	**+2.0**
TIR	**Tirane**	**2.94**	**351**	⇑S	**Sb**	**23 54 24.5**	**-3.2**
TIR	**Tirane**	**2.94**	**351**		**Pn**	**23 53 47.4**	**+1.5**
TIP	**Timpagrande**	**2.97**	**286**	Pn	**Pn**	**23 53 47.7**	**+1.3**
CGL1	**Ceglie Messapi**	**3.19**	**315**	*e*Pn	**Pn**	**23 53 51.2**	**+1.9**
VAY	**Valandovo**	**3.32**	**29**	*i* Pn	**Pn**	**23 53 53.5**	**+2.5**
MASS	**Massafra**	**3.37**	**312**	*e*Pn	**Pn**	**23 53 52.4**	**+0.7**
STIP	**Stip**	**3.52**	**22**	*i* Pn	**Pn**	**23 53 57.6**	**+3.8**
CEL	**Celeste**	**3.58**	**269**	Pn	**Pn**	**23 53 54.7**	**0.0**
SKO	**Skopje**	**3.62**	**12**	*i* Pn	**Pn**	**23 53 57.7**	**+2.5**
ULC	**Ulcinj**	**3.64**	**346⇑**	*i* Pn	**Pn**	**23 53 55.6**	**+0.1**
ULC				*i* Sn	**Sn**	**23 54 38.9**	**+0.3**
SG1	**Sgolgore (BA)**	**3.77**	**311**	*e*Pn	**Pn**	**23 53 57.9**	**+0.6**
SG1				Sn	**Sn**	**23 54 41.7**	**0.0**
BAI	**Bari**	**3.83**	**315**	*e*Pn	**Pn**	**23 53 58.7**	**+0.7**
DRME	**Dracevica, Mon**	**3.87**	**346⇑**	*i* Pn	**Pn**	**23 53 59.2**	**+0.6**
DRME				*e*Sn	**Sn**	**23 54 44.0**	**-0.1**
BUM	**Brajici-Budva**	**4.04**	**343⇑**	*i* Pn	**Pn**	**23 54 00.2**	**-0.8**
BUM				*e*Sn	**Sn**	**23 54 49.4**	**+0.7**
PDG	**Podgorica**	**4.09**	**348**	⇑P	**Pb**	**23 54 12.5**	**+1.3**
PDG	**Podgorica**	**4.09**	**348**	⇑S	**Sn**	**23 54 49.3**	**-0.3**
PDG	**Podgorica**	**4.09**	**348**	Pn	**Pn**	**23 54 02.8**	**+1.1**
TTG	**Podgorica**	**4.09**	**348**	*i* Pn	**Pn**	**23 54 01.7**	**0.0**
TTG				*e*Sn	**Sn**	**23 54 50.2**	**+0.6**
PVY	**Plav**	**4.17**	**355⇓**	*i* Pn	**Pn**	**23 54 04.1**	**+1.2**
PVY				*i* Sn	**Sn**	**23 54 53.7**	**+1.9**
ACER	**Acerenza**	**4.20**	**305**	Pn	**Pn**	**23 54 04.3**	**+1.2**
APE	**Apeiranthos**	**4.26**	**107**	⇓P	**Pn**	**23 54 08.7**	**+4.7**
APE	**Apeiranthos**	**4.26**	**107**	⇓S	**Sn**	**23 54 57.7**	**+4.0**
CEME	**Cevo**	**4.27**	**345⇑**	*i* Pn	**Pn**	**23 54 03.5**	**-0.7**
CEME				*e*Sn	**Sn**	**23 54 54.2**	**+0.1**
HCY	**Herceg Novi**	**4.28**	**340⇓**	*i* Pn	**Pn**	**23 54 03.7**	**-0.5**
HCY				*e*Sn	**Sn**	**23 54 53.7**	**-0.4**
IVA	**Berane**	**4.45**	**355⇑**	*i* Pn	**Pn**	**23 54 07.5**	**+0.8**
IVA				*i* Sn	**Sn**	**23 55 00.3**	**+1.7**
KOME	**Kolasin**	**4.47**	**351**	⇓*i* Pn	**Pn**	**23 54 07.6**	**+0.7**
KOME				*e*Sn	**Sn**	**23 54 59.8**	**+0.8**
NKME	**Niksic**	**4.47**	**346**	⇓*i* Pn	**Pn**	**23 54 06.6**	**-0.4**
NKME				*e*Sn	**Sn**	**23 54 58.8**	**-0.3**
NKY	**Niksic**	**4.51**	**346⇑**	*i* Pn	**Pn**	**23 54 06.7**	**-0.8**
NKY				*i* Sn	**Sn**	**23 54 59.5**	**-0.6**
DBRK	**Dubrovnik**	**4.58**	**338**	*i* Pn	**Pn**	**23 54 08.0**	**-0.3**
DBRK				Sn	**Sn**	**23 54 59.9**	**-1.7**
VTS	**Vitosha**	**4.69**	**26**	⇑P	**Pn**	**23 54 11.8**	**+1.7**
VTS	**Vitosha**	**4.69**	**26**	⇓S	**Sb**	**23 55 12.1**	**-5.9**
VTS	**Vitosha**	**4.69**	**26**	Pn	**Pn**	**23 54 12.0**	**+2.0**
BRY	**Bratogost**	**4.69**	**343**	⇓*i* Pn	**Pn**	**23 54 09.2**	**-0.8**
BRY				*e*Sn	**Sn**	**23 55 03.7**	**-0.9**
IDI	**Anoyia**	**4.75**	**130**	Pn	**Pn**	**23 54 12.7**	**+1.9**
	baz=277,slow=10,SNR=2.8						
IDI				Sn	**Sn**	**23 55 07.4**	**+1.5**
	4.6nm,0.3s,baz=3.6,slow=24,SNR=8.2						
VAE	**Valguarnera**	**4.86**	**261**	Pn	**Pn**	**23 54 13.6**	**+1.3**
	0.6nm,0.3s,baz=342,slow=1.6,SNR=3.5						
VAE				Sn	**Sn**	**23 55 10.3**	**+1.7**
	2.0nm,0.3s,baz=133,slow=13,SNR=4.0						
SGRT	**San Giovanni R**	**4.90**	**314**	Pn	**Pn**	**23 54 13.2**	**+0.4**
STON	**Ston**	**4.90**	**336**	*i* Pn	**Pn**	**23 54 12.2**	**-0.5**
STON				Sn	**Sn**	**23 55 07.2**	**-2.2**
UPM	**Unac-Piva**	**4.91**	**347**	⇓*i* Pn	**Pn**	**23 54 12.6**	**-0.4**
UPM				*e*Sn	**Sn**	**23 55 09.7**	**-0.2**
PLE	**Pljevlja**	**4.96**	**351**	⇓*i* Pn	**Pn**	**23 54 14.0**	**+0.4**
PLE				*i* Sn	**Sn**	**23 55 11.4**	**+0.3**
WDD	**Wied Dalam**	**5.39**	**243**			**23 54 18.4**	**-1.1**
BLKB	**Belogradchik**	**5.45**	**17**	⇓S	**Sn**	**23 55 28.8**	**+5.6**
MAKA	**Makarska**	**5.50**	**333**	*i* Pn	**Pn**	**23 54 21.0**	**0.0**
MAKA				Sn	**Sn**	**23 55 23.3**	**-0.9**
INTR	**Introdacqua**	**6.15**	**308**		**Pn**	**23 54 29.1**	**-0.9**
KIJV	**Kijevo**	**6.34**	**333**	*i* Pn	**Pn**	**23 54

KEST				Sn	**Sn**	**23 56 53.7**	**-3.5**
	0.1nm,0.3s,baz=238,slow=19,SNR=2.2						
KEST				LR	LR	00 00 12.3	
	comp=Z,104nm,19.3s,baz=354,slow=46						
TEOL	**Teolo**	**9.52**	**319**	Pn	**Pn**	**23 55 15.6**	**-0.5**
MYKA	**Terra Mystica**	**9.60**	**331**	*e*Pn	**Pn**	**23 55 17.1**	**-0.2**
	1.2nm,0.3s						
KBA	**Koelnbreinsper**	**10.09**	**331**	Pn	**Pn**	**23 55 23.3**	**-0.8**
	1.0nm,0.4s						
VYHS	**Vyhne**	**10.12**	**354**	*e*SN	**Sn**	**23 57 15.3**	**-2.7**
ABTA	**Abfaltersbach**	**10.15**	**327**	Pn	**Pn**	**23 55 25.2**	**+0.3**
	1.5nm,0.3s						
MODS	**Modra-Piesok**	**10.20**	**348**	*e*SN	**Sn**	**23 57 14.2**	**-5.6**
BRTR	**Keskin Array B**	**10.34**	**79**	Pn	**Pn**	**23 55 31.4**	**+3.9**
	0.1nm,0.3s,baz=269,slow=12,SNR=4.2						
MOA	**Molln**	**10.43**	**336**	*e*PP	**Pn**	**23 55 28.6**	**0.0**
	1.1nm,0.2s						
WTTA	**Wattenberg**	**10.93**	**327**	Pn	**Pn**	**23 55 35.9**	**+0.2**
	2.9nm,0.4s						
WATA	**Walderalm**	**11.01**	**327**	Pn	**Pn**	**23 55 37.7**	**+1.0**
VRAC	**Vranov**	**11.22**	**347**	LR	LR	00 01 17.9	
	comp=Z,260nm,19.4s,baz=138,slow=45						
MOTA	**Moosalm**	**11.23**	**325**	Pn	**Pn**	**23 55 42.1**	**+2.5**
	4.3nm,0.5s						
DAVOX	**Davos/Dischmat**	**11.40**	**320**	Pn	**Pn**	**23 55 43.3**	**+1.3**
	0.3nm,0.3s,baz=90,slow=11,SNR=3.3						
DAVOX				Sn	**Sn**	**23 57 46.6**	**-2.9**
	0.3nm,0.3s,baz=201,slow=11,SNR=3.3						
DAVOX				LR	LR	00 00 31.4	
	comp=Z,120nm,18.9s,baz=118,slow=40						
GERES	**GERESS Array B**	**11.49**	**337**	Pn	**Pn**	**23 55 43.1**	**0.0**
	0.2nm,0.3s,baz=154,slow=13,SNR=5.9						
GERES				Sn	**Sn**	**23 57 45.4**	**-6.2**
	0.2nm,0.3s,baz=157,slow=22,SNR=4.4						
GERES				LR	LR	00 01 33.8	
	comp=Z,53nm,18.2s,baz=126,slow=45						
MMAI	**Mount Meron Ar**	**13.30**	**109**	Pn	**Pn**	**23 56 08.1**	**+0.1**
	0.4nm,0.3s,baz=311,slow=11,SNR=2.5						
MMAI				Sn	**Sn**	**23 58 29.5**	**-6.3**
	1.0nm,0.3s,baz=306,slow=26,SNR=3.4						
ESDC	**Sonseca Array**	**18.99**	**281**	P	**Pn**	**23 57 22.8**	**+1.4**
	0.3nm,0.3s,baz=80,slow=11,SNR=2.9						
ESDC	**Sonseca Array**	**18.99**	**281**	IAmb	IAmb	23 57 29.6	
	comp=Z,2.1nm,1.1s						
HFS	**Hagfors**	**22.14**	**351**	P	**P**	**23 57 54.9**	**+0.3**
	comp=Z,3.1nm,0.7s,baz=172,slow=13,SNR=5.5						
EKA	**Eskdalemuir Ar**	**23.18**	**324**	P	**P**	**23 58 06.6**	**+0.9**
	comp=Z,3.3nm,0.9s,baz=119,slow=12,SNR=3.0						
FINES	**FINESS Array B**	**23.30**	**7**	P	**P**	**23 58 06.4**	**-0.4**
	comp=Z,2.1nm,0.4s,baz=181,slow=11,SNR=6.9						
NB2	**NORSAR Subarra**	**23.36**	**349**	P	**P**	**23 58 07.8**	**+0.4**
	comp=Z,2.4nm,1.0s,baz=159,slow=9.3						
NOA	**NORSAR Array B**	**23.36**	**349**	P	**P**	**23 58 07.6**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=160,slow=9.8,SNR=3.6						
GEYT	**Alibeck**	**29.48**	**79**	P	**P**	**23 59 04.6**	**+1.3**
	comp=Z,1.2nm,0.5s,baz=283,slow=7.4,SNR=5.0						
GEYT	**Alibeck**	**29.48**	**79**	IAmb	IAmb	23 59 10.0	
	comp=Z,2.9nm,1.4s						
ARCES	**ARCESS Array B**	**31.28**	**3**	P	**P**	**23 59 19.7**	**+0.9**
	comp=Z,4.2nm,1.0s,baz=190,slow=10,SNR=3.4						
ARCES				PcP	**PcP**	**00 02 13.3**	**+0.6**
	comp=Z,4.0nm,0.9s,baz=177,slow=4.5,SNR=3.4						
BVAR	**Borovoye Array**	**37.00**	**50**	P	**P**	**00 00 09.6**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=236,slow=4.9,SNR=3.8						
KKAR	**Karatay Array**	**37.75**	**67**	P	**P**	**00 00 15.3**	**+0.3**
SPITS	**Spitsbergen Ar**	**39.89**	**359**	LR	LR	00 19 16.2	
	comp=Z,37nm,21.3s,baz=190,slow=40						
KURBB	**Kurchatov Arra**	**42.13**	**54**	P	**P**	**00 00 51.4**	**+0.2**
	comp=Z,0.4nm,0.2s,baz=282,slow=5.6,SNR=2.4						
KURK	**Kurchatov**	**42.17**	**54**	P	**P**	**00 00 51.4**	**-0.2**
KURK	**Kurchatov**	**42.17**	**54**	IAmb	IAmb	00 01 29.0	
	comp=Z,20nm,2.0s						
MK31	**Makanchi Array**	**45.22**	**59**	IAmb	IAmb	00 01 22.2	
	comp=Z,4.2nm,1.6s						
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**	**00 01 15.6**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=279,slow=7.5,SNR=11						
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**00 01 18.1**	**-0.7**
	comp=Z,1.9nm,0.4s,baz=277,slow=8.0,SNR=5.0						
ZALV	**Zalesovo Beam**	**45.57**	**48**	P	**P**	**00 01 19.3**	**+0.4**
SONM	**Songino Array**	**60.34**	**51**	P	**P**	**00 03 08.5**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=287,slow=10,SNR=2.9						
SONM	**Songino Array**	**60.34**	**51**	IAmb	IAmb	00 03 12.9	
	comp=Z,1.7nm,1.2s						

IDC ***28*** *23:57:25.2±1.0, 38.28°N×20.55°E, h0km, mb3.7/13, mb1 3.8/22, mb1mx3.7/59, mbtmp3.7/22, ML3.3/8, Error ellipse: s-maj=17.8km s-min=14.0km az=36.0*
NEIC ***28*** *23:57:25.6±2.4, 38.16°N±0.06°×20.46°E±0.08, h10km±3km, mb4.1/8, ML3.7(THE), Error ellipse: s-maj=8.8km s-min=8.5km az=210.0*
THE ***28*** *23:57:27.3, 38.23°N×20.44E, h13km, ML4.1/10, Error ellipse: s-maj=0.8km s-min=0.3km az=252.0*

ISC 28 23:57:26.9±0.7, 38°23'N±0°03'×20°42'E±0°03, h16km±4km, n112, σ1s50/132, mb4.0/15, 12C-3D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.06**	**212**	P	**Pg**	**23 57 30.1**	**+0.3**
CHV1				S	**Sg**	**23 57 32.2**	**+0.5**
	584μm,0.4s						
ARG2	**Argostoli**	**0.07**	**134**	P	**Pg**	**23 57 29.9**	**-0.1**
ARG2				S	**Sg**	**23 57 31.6**	**-0.4**
	487μm,0.3s						
VLS	**Valsamata**	**0.14**	**112**	P	**Pg**	**23 57 30.6**	**-0.2**
VLS				S	**Sg**	**23 57 33.1**	**-0.3**
	536μm,0.3s						
KFL	**Anninata**	**0.32**	**113**	P	**Pg**	**23 57 33.3**	**-0.2**
KFL				S	**Sg**	**23 57 37.8**	**-0.2**
	182μm,0.3s						
EVGI	**Lefkada island**	**0.43**	**25**	P	**Pb**	**23 57 35.7**	**-0.5**
EVGI				S	**Sb**	**23 57 42.0**	**-0.5**
ZAK2	**Zakynthos**	**0.58**	**139**	P	**Pg**	**23 57 38.1**	**-0.3**
ZAK2				S	**Sb**	**23 57 47.4**	**+0.6**
	40μm,0.3s						
LKD2	**Lefkada island**	**0.59**	**18**	P	**Pg**	**23 57 38.4**	**-0.1**
LKD2				S	**Sb**	**23 57 46.8**	**-0.2**
	6μm,0.5s						
AST1	**Astakos**	**0.61**	**59**	P	**Pg**	**23 57 38.5**	**-0.4**
AST1				S	**Sb**	**23 57 47.5**	**-0.1**
	11μm,0.3s						
TSLK	**Tsoukalades, L**	**0.62**	**17**	P	**Pg**	**23 57 38.9**	**-0.2**
TSLK				S	**Sb**	**23 57 48.2**	**+0.3**
KRI1	**kERI**	**0.65**	**151**	P	**Pg**	**23 57 38.7**	**-0.9**
KRI1				S	**Sb**	**23 57 49.2**	**+0.5**
	19μm,0.4s						
PDO	**Prodromos**	**0.70**	**58**	P	**Pg**	**23 57 40.0**	**-0.6**
RLS	**Riolos of Patr**	**0.84**	**102**	P	**Pb**	**23 57 42.5**	**-0.7**
RLS				S	**Sn**	**23 57 55.2**	**-1.0**
	3μm,0.5s						
PVO	**Paravola**	**0.95**	**66**	P	**Pg**	**23 57 45.0**	**-0.3**
DRO	**Drossia**	**1.06**	**105**	P	**Pb**	**23 57 45.9**	**-0.9**
UPR	**University Cam**	**1.08**	**87**	P	**Pg**	**23 57 47.6**	**-0.1**
EFP	**Efpalio**	**1.19**	**80**	P	**Pn**	**23 57 48.0**	**-0.9**
LAKA	**Lakka**	**1.23**	**89**	P	**Pn**	**23 57 48.9**	**-0.6**
LAKA				S	**Sg**	**23 58 06.7**	**+0.1**
	838nm,0.4s						
ANX	**Ano Chora**	**1.23**	**72**	P	**Pn**	**23 57 49.6**	**0.0**
AMT	**Artemida-Makis**	**1.24**	**124**	P	**Pn**	**23 57 49.7**	**+0.1**
EVR	**Evrytania**	**1.29**	**57**	P	**Pn**	**23 57 50.2**	**-0.2**
SERG	**Sergoula**	**1.30**	**81**	P	**Pn**	**23 57 50.1**	**-0.4**
TRIZ	**Trizonia**	**1.31**	**84**	P	**Pn**	**23 57 50.1**	**-0.4**
ALIK	**Aliki, Aigiali**	**1.33**	**88**	P	**Pn**	**23 57 50.7**	**-0.2**
KALE	**Kalithea**	**1.36**	**83**	P	**Pn**	**23 57 50.7**	**-0.7**
KLV	**Kalavryta, Ach**	**1.38**	**97**	P	**Pn**	**23 57 51.8**	**+0.2**
SRN	**Sarande**	**1.68**	**349**	P	**Pb**	**23 57 56.7**	**-0.7**
PYL	**PYLOS**	**1.70**	**141**	P	**Pn**	**23 57 55.5**	**-0.4**
SCTE	**Santa Cesarea**	**2.38**	**321**		**Pn**	**23 58 06.9**	**+1.6**
TIP	**Timpagrande**	**3.02**	**289**	⇓P	**Pn**	**23 58 15.8**	**+1.7**
TIP	**Timpagrande**	**3.02**	**289**	⇑S	**Sn**	**23 58 51.1**	**+1.1**
TIR	**Tirane**	**3.14**	**352**	⇑P	**Pn**	**23 58 17.8**	**+2.0**
TIR	**Tirane**	**3.14**	**352**	⇑S	**Sn**	**23 58 56.3**	**+3.4**
TIR	**Tirane**	**3.14**	**352**		**Pn**	**23 58 17.4**	**+1.7**
CGL1	**Ceglie Messapi**	**3.32**	**318**	*e*Pn	**Pn**	**23 58 19.4**	**+1.1**
TAR1	**Taranto**	**3.34**	**314**	*e*Pn	**Pn**	**23 58 20.1**	**+1.6**
MASS	**Massafra**	**3.49**	**314**	*e*Pn	**Pn**	**23 58 21.7**	**+1.1**
MATE	**Matera**	**3.75**	**311**	⇑P	**Pb**	**23 58 29.4**	**-3.4**
MATE	**Matera**	**3.75**	**311**	⇑S	**Sn**	**23 59 08.5**	**+0.4**
SG1	**Sgolgore (BA)**	**3.89**	**313**	*e*Pn	**Pn**	**23 58 27.2**	**+1.1**
SG1					**Sn**	**23 59 11.8**	**+0.3**
BAI	**Bari**	**3.96**	**318**	*e*Pn	**Pn**	**23 58 28.0**	**+1.0**
APE	**Apeiranthos**	**4.22**	**104**	⇑P	**Pg**	**23 58 45.4**	**-2.3**
PDG	**Podgorica**	**4.29**	**348**	⇑P	**Pn**	**23 58 33.3**	**+1.8**
PDG	**Podgorica**	**4.29**	**348**	⇑P	**Sn**	**23 59 21.7**	**+0.5**
PDG	**Podgorica**	**4.29**	**348**		**Sn**	**23 59 21.8**	**+0.7**
ACER	**Acerenza**	**4.30**	**308**		**Pb**	**23 58 39.9**	**-2.3**
IDI	**Anoyia**	**4.64**	**128**	Pn	**Pn**	**23 58 35.8**	**-0.6**
	0.4nm,0.3s,baz=213,slow=18,SNR=2.4						
IDI				Sn	**Sn**	**23 59 32.4**	**+2.4**
	4.9nm,0.3s,baz=341,slow=24,SNR=6.6						
DBRK	**Dubrovnik**	**4.76**	**339**	*e*Pn	**Pn**	**23 58 37.6**	**-0.4**
DBRK				Sn	**Sn**	**23 59 31.1**	**-1.8**
VAE	**Valguarnera**	**4.81**	**263**	Pn	**Pn**	**23 58 34.8**	**-4.0**
	1.2nm,0.3s,baz=80,slow=6.1,SNR=3.1						
VAE				Sn	**Sn**	**23 59 39.8**	**+5.5**
	4.0nm,0.3s,baz=219,slow=9.6,SNR=3.7						
VTS	**Vitosha**	**4.88**	**25**	⇑P	**Pb**	**23 58 51.5**	**-0.6**
VTS	**Vitosha**	**4.88**	**25**	⇓S	**Sn**	**23 59 39.1**	**+3.1**
VTS	**Vitosha**	**4.88**	**25**	Pn	**Pn**	**23 58 41.1**	**+1.3**
SGRT	**San Giovanni R**	**5.03**	**316**	Pn	**Pn**	**23 58 42.5**	**+0.8**
SGRT					**Sn**	**23 59 38.4**	**-1.2**
STON	**Ston**	**5.08**	**337**	*i* Pn	**Pn**	**23 58 42.0**	**-0.4**
STON				Sn	**Sn**	**23 59 38.3**	**-2.3**
WDD	**Wied Dalam**	**5.29**	**245**	Pn	**Pn**	**23 58 44.9**	**-0.3**
MAKA	**Makarska**	**5.67**	**334**	*i* Pn	**Pn**	**23 58 50.9**	**+0.4**
CLTB	**Caltabellotta**	**5.73**	**266**	Pn	**Pn**	**23 58 52.1**	**+0.6**
INTR	**Introdacqua**	**6.26**	**309**		**Pn**	**23 59 00.6**	**+1.9**
ELND	**Elena**	**6.26**	**40**	⇓P	**Pn**	**23 59 00.3**	**+1.6**
ZIRJ	**Zirje**	**6.51**	**328**	*i* Pn	**Pn**	**23 59 01.8**	**-0.2**
KIJV	**Kijevo**	**6.51**	**334**	*e*Pn	**Pn**	**23 59 02.8**	**+0.7**
MORI	**Morici**	**6.66**	**329**	*i* Pn	**Pn**	**23 59 04.8**	**+0.7**
AQU	**L'Aquila**	**6.76**	**310**	Pn	**Pn**	**23 59 05.7**	**+0.2**
BLY	**Banja Luka**	**6.95**	**341**	Pn	**Pn**	**23 59 08.9**	**+0.9**
DUGI	**Dugi Otok**	**7.04**	**327**	*e*Pn	**Pn**	**23 59 10.1**	**+0.9**
UDBI	**Udbina**	**7.20**	**332**	*e*Pn	**Pn**	**23 59 13.3**	**+1.8**
NRCA	**Norcia**	**7.22**	**312**		**Pn**	**23 59 13.9**	**+2.1**
NVLJ	**Novalja**	**7.58**	**328**	*e*Pn	**Pn**	**23 59 17.2**	**+0.5**
MURB	**Monte Urbino**	**7.82**	**312**	Pn	**Pn**	**23 59 22.5**	**+2.4**
VOIR		**7.99**	**24**	⇑P	**Pn**	**23 59 26.5**	**+4.2**
OZLJ	**Ozalj**	**8.25**	**335**	*e*Pn	**Pn**	**23 59 26.5**	**+0.6**
MLR	**Muntele Rosu**	**8.34**	**28**	Pn	**Pn**	**23 59 26.9**	**-0.3**
	0.0nm,0.3s,baz=162,slow=20,SNR=1.8						
MLR	**Muntele Rosu**	**8.34**	**28**	⇑P	Pn	23 59 35.5	+8.3
PLOR	**Plostina**	**8.91**	**29**	⇑P	Pn	23 59 42.5	+7.5
KEST	**Kesra**	**9.21**	**258**	Pn	**Pn**	**23 59 40.4**	**+1.3**
	0.2nm,0.3s,baz=42,slow=16,SNR=4.2						
KEST				Sn	**Sn**	**00 01 21.8**	**-0.6**
	0.1nm,0.3s,baz=281,slow=22,SNR=3.0						
SOKA	**Soboth**	**9.33**	**337**	*e*Pn	**Pn**	**23 59 40.5**	**-0.3**
	2.0nm,0.2s						
OBKA	**Obir**	**9.34**	**334**	*e*Pn	**Pn**	**23 59 41.6**	**+0.7**
	1.9nm,0.2s						
OBKA				Sn	**Sn**	**00 01 23.0**	**-2.7**
	5.3nm,0.4s						
TEOL	**Teolo**	**9.66**	**320**	Pn	**Pn**	**23 59 45.6**	**+0.4**
CTI	**Castel Tesino**	**10.16**	**323**	Pn	**Pn**	**23 59 51.9**	**-0.3**
KBA	**Koelnbreinsper**	**10.26**	**332**	*e*Pn	**Pn**	**23 59 54.0**	**+0.4**
	2.0nm,0.4s						
ABTA	**Abfaltersbach**	**10.31**	**328**	*e*Pn	**Pn**	**23 59 55.0**	**+0.7**
	1.8nm,0.4s						
BRTR	**Keskin Array B**	**10.40**	**78**	Pn	**Pn**	**23 59 59.3**	**+3.7**
	0.1nm,0.3s,baz=258,slow=12,SNR=5.9						
MOA	**Molln**	**10.61**	**337**	*e*Pn	**Pn**	**23 59 59.4**	**+1.1**
	0.9nm,0.2s						
MOA				*e*Sn	**Sn**	**00 01 54.3**	**-2.5**
	1.7nm,0.3s						
WTTA	**Wattenberg**	**11.09**	**327**	Pn	**Pn**	**00 00 07.1**	**+2.1**
	3.9nm,0.5s						
SQTA	**Sankt Quirin**	**11.24**	**326**	Pn	**Pn**	**00 00 09.0**	**+2.0**
	0.9nm,0.2s						
MOTA	**Moosalm**	**11.38**	**326**	Pn	**Pn**	**00 00 10.2**	**+1.2**
	1.0nm,0.3s						
DAVOX	**Davos/Dischmat**	**11.54**	**321**	Pn	**Pn**	**00 00 13.3**	**+2.1**
DAVOX				Sn	**Sn**	**00 02 17.8**	**-2.0**
	0.3nm,0.3s,baz=285,slow=14,SNR=4.4						
GERES	**GERESS Array B**	**11.67**	**338**	Pn	**Pn**	**00 00 12.4**	**-0.4**
	0.3nm,0.3s,baz=164,slow=14,SNR=7.4						
GERES				Sn	**Sn**	**00 02 19.4**	**-3.4**
	0.3nm,0.3s,baz=154,slow=22,SNR=4.8						
KHC	**Kasperske Hory**	**11.96**	**338**	*e*PN	**Pn**	**00 00 17.0**	**+0.3**
KHC				*e*SN	**Sn**	**00 02 26.6**	**-3.2**
MMAI	**Mount Meron Ar**	**13.25**	**109**	Pn	**Pn**	**00 00 31.6**	**-2.9**
	0.7nm,0.3s,baz=304,slow=11,SNR=4.5						
EIL	**Etat**	**14.71**	**42**	Pn	**Pn**	**00 00 52.3**	**-2.8**
	0.3nm,0.3s,baz=301,slow=18,SNR=4.1						
KBZ	**Khabaz**	**17.82**	**65**	P	**P**	**00 01 34.6**	**-0.2**
	0.1nm,0.3s,baz=275,slow=11,SNR=2.8						
HFS	**Hagfors**	**22.34**	**351**	P	**P**	**00 02 24.2**	**+0.4**
	7.1nm,0.9s,baz=164,slow=9.5,SNR=10.0						
EKA	**Eskdalemuir Ar**	**23.34**	**325**	P	**P**	**00 02 36.4**	**+2.1**
	5.5nm,1.0s,baz=109,slow=12,SNR=4.0						
FINES	**FINESS Array B**	**23.50**	**7**	P	**P**	**00 02 35.5**	**-0.3**
	3.6nm,0.8s,baz=171,slow=11,SNR=6.0						
NOA	**NORSAR Array B**	**23.55**	**349**	P	**P**	**00 02 38.3**	**+1.9**
	0.7nm,0.7s,baz=246,slow=16,SNR=4.6						
GEYT	**Alibeck**	**29.54**	**79**	P	**P**	**00 03 30.5**	**-0.3**
	0.8nm,0.5s,baz=283,slow=13,SNR=2.9						
GEYT	**Alibeck**	**29.54**	**79**	IAmb	IAmb	00 03 31.2	
	comp=Z,3.9nm,1.8s						
TORD	**Torodi Ar. Bea**	**30.02**	**219**	P	**P**	**00 03 35.8**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=25,slow=9.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	**30.02**	**219**	IAmb	IAmb	00 03 44.5	
	comp=Z,1.4nm,1.2s						
ARU	**Arti**	**31.07**	**42**	P	**P**	**00 03 43.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=274,slow=16,SNR=2.7						
ARCES	**ARCESS Array B**	**31.48**	**3**	P	**P**	**00 03 47.3**	**-0.3**
	comp=Z,2.0nm,0.8s,baz=191,slow=9.0,SNR=4.3						
BVAR	**Borovoye Array**	**37.15**	**50**	P	**P**	**00 04 37.0**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=282,slow=10.0,SNR=3.5						
KK31	**Karatay Array**	**37.85**	**66**	P	**P**	**00 04 43.0**	**+0.1**
KKAR	**Karatay Array**	**37.85**	**66**	P	**P**	**00 04 42.3**	**-0.5**
KURBB	**Kurchatov Arra**	**42.26**	**54**	P	**P**	**00 05 18.5**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=282,slow=8.9,SNR=3.4						
KURBB				PcP	**PcP**	**00 07 15.4**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=264,slow=3.0,SNR=3.1						
KURK	**Kurchatov**	**42.31**	**53**	P	**P**	**00 05 18.5**	**-1.2**
KURK	**Kurchatov**	**42.31**	**53**	IAmb	IAmb	00 06 56.1	
	comp=Z,7.7nm,1.6s						
MK31	**Makanchi Array**	**45.34**	**58**	P	**P**	**00 05 43.8**	**-0.4**
MK31				IAmb	IAmb	00 05 45.2	
	comp=Z,3.7nm,1.4s						
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**00 05 43.8**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=273,slow=7.5,SNR=28						
ZAA0	**Zalesovo Array**	**45.72**	**48**	P	**P**	**00 05 47.4**	**+0.3**
ZALV	**Zalesovo Beam**	**45.72**	**48**	P	**P**	**00 05 46.8**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=275,slow=8.5,SNR=5.7						
SONM	**Songino Array**	**60.49**	**51**	P	**P**	**00 07 35.9**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=289,slow=9.0,SNR=2.8						

IDC ***29*** *00:00:18.0±0.9, 56.72°N×34.36W, h0km, mb3.8/12, mb1 4.1/12, mb1mx3.7/54, mbtmp3.8/12, MS3.7/14, Ms1 3.7/14, ms1mx3.4/55, Error ellipse: s-maj=30.9km s-min=16.5km az=8.0*
NEIC ***29*** *00:00:20.4±1.1, 56.7°N±0.2°×34.2°W±0.2, h10km±2km, mb4.5/22, Error ellipse: s-maj=23.8km s-min=15.8km az=185.0*

ISC 29 00:00:20.0±0.7, 56.7°N±0.2°×34.24°W±0.09, h10km, n52, σ0s82/39, mb4.0/17, MS3.7/10, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**10.20**	**33**	LR	LR	00 05 49.3	
	comp=Z,758nm,18.8s,baz=249,slow=32						
SFJD	**Kangerlussuaq**	**12.81**	**330**	LR	LR	00 07 29.9	
	comp=Z,266nm,19.7s,baz=144,slow=34						
FRB	**Frobisher Bay**	**18.22**	**307**	LR	LR	00 10 01.3	
	comp=Z,186nm,21.7s,baz=36,slow=32						
SCHQ	**Schefferville**	**18.33**	**278**	LR	LR	00 10 29.5	
	comp=Z,217nm,18.5s,baz=68,slow=34						
SCHQ	**Schefferville**	**18.33**	**278**		**Pn**	**00 04 33.7**	**-0.5**
SCHQ				IAmb	IAmb	00 04 39.1	
	comp=Z,41nm,1.6s						
DAVOX	**Davos/Dischmat**	**28.59**	**91**	LR	LR	00 16 38.6	
	comp=Z,201nm,20.6s,baz=282,slow=34						
GERES	**GERESS Array B**	**29.51**	**85**	LR	LR	00 16 28.8	
	comp=Z,104nm,21.2s,baz=316,slow=33						
FINES	**FINESS Array B**	**30.35**	**56**	P	**P**	**00 06 31.5**	**+0.1**
	comp=Z,4.2nm,1.1s,baz=302,slow=8.0,SNR=2.9						
ULM	**Lac du Bonnet**	**36.11**	**287**	LR	LR	00 20 16.8	
	comp=Z,135nm,20.9s,baz=58,slow=33						
YKA	**Yellowknife Ar**	**38.56**	**313**	P	**P**	**00 07 40.8**	**-1.5**
	comp=Z,0.7nm,0.9s,baz=60,slow=9.0,SNR=5.9						
YKA				PcP	**PcP**	**00 09 53.3**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=54,slow=3.1,SNR=4.9						
YKA				LR	LR	00 21 58.3	
	comp=Z,123nm,18.6s,baz=0.0,slow=34						
LAO	**LASA Array**	**43.73**	**289**	P	**P**	**00 08 26.5**	**+1.4**
TUL1	**Leonard**	**45.54**	**270**	P	**P**	**00 08 40.7**	**+1.1**
BMAR	**Burnt Mountain**	**45.90**	**330**	P	**P**	**00 08 42.5**	**+0.3**
BRTR	**Keskin Array B**	**46.27**	**81**	P	**P**	**00 08 45.7**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=319,slow=7.1,SNR=2.7						
BRTR				LR	LR	00 29 30.5	
	comp=Z,15nm,18.7s,baz=338,slow=38						
W35A	**Tecumseh**	**46.70**	**270**	P	**P**	**00 08 48.6**	**-0.2**
YNE	**Yellowstone No**	**46.82**	**289**	P	**P**	**00 08 51.0**	**+1.1**
DLBC	**Dease Lake**	**47.12**	**314**	P	**P**	**00 08 50.7**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=49,slow=9.8						
QLMT	**Earthquake Lak**	**47.68**	**290**	P	**P**	**00 08 58.6**	**+2.0**
WMOK	**Wichita Mounta**	**48.05**	**271**	P	**P**	**00 09 00.1**	**+0.7**
ISCO	**Idaho Springs**	**48.11**	**281**	P	**P**	**00 09 00.6**	**+0.5**
ISCO				IAmb	IAmb	00 09 02.2	
	comp=Z,4.1nm,0.9s						
PD31	**Pinedale Array**	**48.13**	**287**	P	**P**	**00 08 59.3**	**-0.8**
PDAR	**Pinedale Array**	**48.13**	**287**	P	**P**	**00 08 58.7**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=50,slow=8.4,SNR=5.6						
PDAR				LR	LR	00 27 56.2	
	comp=Z,130nm,18.8s,baz=40,slow=34						
PDAR	**Pinedale Array**	**48.13**	**287**	P	**P**	**00 08 59.2**	**-0.9**
BCAR	**Beaver Creek A**	**48.14**	**324**	P	**P**	**00 09 00.0**	**+0.3**
SCRK	**Sand Creek**	**48.18**	**326**	P	**P**	**00 09 00.9**	**+0.8**
KBZ	**Khabaz**	**48.42**	**71**	LR	LR	00 30 10.4	
	comp=Z,58nm,18.1s,baz=340,slow=37						
IL31		**48.47**	**328**	P	**P**	**00 09 02.8**	**+0.7**
ILAR	**Eielson Array**	**48.47**	**328**	P	**P**	**00 09 01.6**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=37,slow=6.2,SNR=26						
ILAR				PcP	**PcP**	**00 10 27.2**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=14,slow=3.2,SNR=4.7						
ILAR	**Eielson Array**	**48.47**	**328**	P	**P**	**00 09 02.6**	**+0.5**
HDA	**Harding Lake**	**48.75**	**328**	P	**P**	**00 09 05.0**	**+0.7**
IMAR	**Indian Mountai**	**49.44**	**332**	P	**P**	**00 09 10.0**	**+0.5**
AMTX	**Amarillo**	**49.54**	**274**	P	**P**	**00 09 11.7**	**+0.8**
AKTO	**Aktyubinsk**	**51.12**	**55**	P	**P**	**00 09 22.1**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=346,slow=8.3,SNR=4.6						
TOA0	**Torodi Ar. Sit**	**51.45**	**133**	P	**P**	**00 09 25.4**	**+0.1**
TORD	**Torodi Ar. Bea**	**51.45**	**133**	P	**P**	**00 09 24.6**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=344,slow=9.7,SNR=9.2						
TORD	**Torodi

PLBC Sn **Sn 00 24 19.5 -1.1**
PLBC Pleasant Camp 4.01 352 Pn Pn 00 23 35.2 +1.2
DLBC Dease Lake 4.10 42 Pn **Pn 00 23 37.2 +2.0**
0.5nm,0.3s,baz=213,slow=8.3,SNR=12
DLBC Sn **Sn 00 24 24.9 +1.9**
2.8nm,0.3s,baz=352,slow=11,SNR=6.1
DLBC Lg Lg 00 24 42.0
6.4nm,0.3s,baz=256,slow=19,SNR=3.3
DLBC Dease Lake 4.10 42 Pn **Pn 00 23 36.0 +0.7**
DLBC Sn **Sn 00 24 20.4 -2.6**
DLBC Sg **Sg 00 24 41.4 -3.5**
DLBC Dease Lake 4.10 42 Pn Pn 00 23 37.0 +1.7
PNL Peninsula 4.74 334 Pn **Pn 00 23 44.7 +0.8**
PNL Peninsula 4.74 334 Pn Pn 00 23 44.2 +0.3
WHY Whitehorse 5.18 2 Pn **Pn 00 23 52.1 +2.0**
WHY Whitehorse 5.18 2 Pn Pn 00 23 51.4 +1.4
YUK7 Dusty Glacier 5.27 344 Pn **Pn 00 23 52.8 +1.4**
YUK7 Dusty Glacier 5.27 344 Pn Pn 00 23 52.9 +1.4
PCA Pinnacle 5.33 332 Pn **Pn 00 23 54.1 +2.0**
PCA Pinnacle 5.33 332 Pn Pn 00 23 53.8 +1.7
BBB Bella Bella 5.37 125 Pn **Pn 00 23 52.6 0.0**
0.9nm,0.3s,baz=302,slow=8.3,SNR=10
BBB Sn **Sn 00 24 53.8 -0.3**
3.9nm,0.3s,baz=103,slow=17,SNR=11
BBB Lg Lg 00 25 20.1
1.4nm,0.3s,baz=211,slow=18,SNR=2.0
BBB Bella Bella 5.37 125 Pn Pn 00 23 54.1 +1.5
BBB Sn **Sn 00 24 50.3 -3.8**
BBB Bella Bella 5.37 125 Pn Pn 00 23 54.3 +1.7
HYT Haines Junctio 5.47 348 Pn **Pn 00 23 55.9 +1.8**
HYT Haines Junctio 5.47 348 Pn Pn 00 23 55.4 +1.3
YUK6 Outpost Mounta 5.70 345 Pn **Pn 00 23 58.6 +1.3**
YUK6 Outpost Mounta 5.70 345 Pn Pn 00 23 58.6 +1.3
RKAV Rock Avalanche 5.81 328 Pn **Pn 00 24 00.9 +2.2**
RKAV Sn **Sn 00 25 04.5 -0.5**
YUK5 Granite Creek 5.81 347 Pn **Pn 00 24 00.7 +1.9**
YUK5 Granite Creek 5.81 347 Pn Pn 00 24 00.7 +1.9
MESA MESA 5.90 325 Pn **Pn 00 23 57.4 -2.6**
YUK4 Talbot Arm 6.13 344 Pn **Pn 00 24 06.2 +3.0**
YUK4 Talbot Arm 6.13 344 Pn Pn 00 24 05.9 +2.7
GRNC Granite Creek 6.28 329 Pn **Pn 00 24 07.6 +2.4**
GRNC Sn **Sn 00 25 14.2 -2.4**
GRNC Granite Creek 6.28 329 Pn Pn 00 24 06.9 +1.7
CTGM Chitina Glacie 6.35 332 Pn **Pn 00 24 08.8 +2.7**
CTGM Sn **Sn 00 25 16.5 -1.8**
CTGM Chitina Glacie 6.35 332 Pn Pn 00 24 08.7 +2.5
HOLB Holberg 6.49 136 Sn **Sn 00 25 15.9 -5.6**
BARN Barnard Glacie 6.52 331 Pn Pn 00 24 10.8 +2.3
KIAG Kiagna River 6.61 328 Pn **Pn 00 24 11.9 +2.2**
KIAG Sn **Sn 00 25 21.7 -3.0**
KIAG Kiagna River 6.61 328 Pn Pn 00 24 10.2 +0.5
TGL Tana Glacier 6.62 326 Pn **Pn 00 24 10.4 +0.6**
TGL **Sb 00 25 46.1 -0.7**
BALM Baldy 6.69 329 Pn **Pn 00 24 13.2 +2.4**
BALM Sn **Sn 00 25 24.5 -2.2**
BALM Baldy 6.69 329 Pn Pn 00 24 13.1 +2.2
PHC Port Hardy 6.72 132 Sn **Sn 00 25 21.3 -5.9**
CRQM Cirque 6.72 325 Pn **Pn 00 24 11.9 +0.6**
PTPK Patty Peak 6.85 329 Pn **Pn 00 24 15.4 +2.3**
PTPK Sn **Sn 00 25 29.8 -0.8**
PTPK Patty Peak 6.85 329 Pn Pn 00 24 13.6 +0.5
YUK3 Moose Creek 6.85 339 Pn **Pn 00 24 15.2 +2.0**
YUK2 White River 6.95 337 Pn **Pn 00 24 16.1 +1.8**
BPBC Brooks Peninsu 7.01 137 Pn **Pn 00 24 15.9 +0.7**
UBRB Upper Baezaeko 7.05 107 Pn **Pn 00 24 16.9 +1.1**
MAYB Maynard 7.06 133 Pn **Pn 00 24 16.9 +0.9**
TLCB Telegraph Cove 7.09 131 Pn **Pn 00 24 17.9 +1.6**
TLCB Sn **Sn 00 25 32.8 -3.7**
MCARA McCarthy VSAT 7.17 329 Pn 00 24 19.1 +1.8
VRDI Verde Repeater 7.18 326 Pn Pn 00 24 18.4 +0.9
YUK1 Sand Pete Hill 7.21 340 Pn **Pn 00 24 20.0 +2.0**
GLB Gilahina Butte 7.45 327 Pn Pn 00 24 22.0 +0.8
FNBB Fort Nelson 7.47 58 Pn **Pn 00 24 22.5 +1.1**
GLI Glacier Island 8.25 316 Sn 00 26 04.6 -0.3
BC03 8.29 339 Pn 00 24 33.4 +0.8
BCAR Beaver Creek A 8.29 339 Pn **Pn 00 24 32.4 -0.3**
DAWY Dawson 8.84 348 Pn **Pn 00 24 41.6 +1.4**
DAWY Dawson 8.84 348 Pn 00 24 41.4 +1.2
PAX Paxson 9.13 329 Pn **Pn 00 24 45.1 +0.9**
PAX **Sn 00 26 25.7 -0.8**
KDAK Kodiak Island 9.82 291 Pn **Pn 00 24 52.9 -0.6**
0.3nm,0.3s,baz=45,slow=13,SNR=2.4
IL31 10.94 333 Pn 00 25 11.4 +2.6
ILAR Eielson Array 10.94 333 Pn **Pn 00 25 09.1 +0.3**
0.1nm,0.3s,baz=149,slow=11,SNR=25
KTH Kantishna Hill 11.30 322 Pn 00 25 17.3 +3.4
YKA Yellowknife Ar 12.70 48 Pn **Pn 00 25 31.8 -1.1**
0.1nm,0.3s,baz=244,slow=12,SNR=3.5
INK Inuvik 12.88 3 Pn **Pn 00 25 36.6 +1.4**
0.1nm,0.3s,baz=175,slow=12,SNR=6.8
IMAR Indian Mountai 13.79 327 Pn 00 25 52.4 +4.6
PDAR Pinedale Array 20.94 117 P **P 00 27 15.9 +0.5**
0.1nm,0.3s,baz=325,slow=5.7,SNR=2.4
RES Resolute Bay 24.77 24 P **P 00 27 56.4 +2.8**
2.4nm,1.0s,baz=250,slow=12,SNR=5.3
H11N2 WAKE ISLAND Hy 55.86 254 T T 01 32 43.9
baz=35,slow=76
H11N3 WAKE ISLAND Hy 55.87 254 T T 01 32 44.6
baz=35,slow=76
H11N1 WAKE ISLAND Hy 55.88 254 T T 01 32 45.2
baz=35,slow=76
H11S1 WAKE ISLAND Hy 56.96 254 T T 01 34 19.2
baz=34,slow=76
H11S2 WAKE ISLAND Hy 56.97 254 T T 01 34 20.1
baz=34,slow=76
H11S3 WAKE ISLAND Hy 56.98 254 T T 01 34 18.9
baz=34,slow=76

NEIC ***29*** *00:32:28.2± 1.4, 9.°60S± 0.°07 × 161.°23E± 0.°06, h41 km± 1km, mb5.6/298, Ms_20 5.3/329, Mwb5.6/38, Mwc5.6(GCMT), Error ellipse: s-maj=13.0km s-min=10.0km az=205.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.99; Mθθ-2.02; Mφφ-0.97; Mrθ-1.00; Mθφ1.65; Mφr0.36; Fault plane solution: M₀3.30000×10¹⁷ NP1: φs132.06000°, δ36.24000°, λ99.29000°. NP2: φs300.59000°, δ54.31000°, λ83.25000°. Principal axes: T 3.1856, Plg79.0000°, Azm184.0000°; N 0.2091, Plg5.0000°, Azm305.0000°; P -3.3947, Plg9.0000°, Azm35.0000°;*

BJI ***29*** *00:32:29.7± 0.0, 9.°16S × 161.°04E, h49km, mB5.4/69, mb5.3/80, Ms5.3/73, Ms7 4.9/71*

MOS ***29*** *00:32:30.8± 1.2, 9.°50S × 161.°09E, h68km, mb5.7/42, MS5.3/18, Error ellipse: s-maj=7.4km s-min=5.9km az=121.6*

NEIC ***29*** *00:32:30, 9.°47S × 161.°43E, h49km, Moment Tensor Solution. Moment tensor: Scale 10¹⁷Nm; Mrr2.26; Mθθ-1.49; Mφφ-0.76; Mrθ-0.82; Mθφ1.29; Mφr0.18; Fault plane solution: M₀2.51000×10¹⁷ NP1: φs136.00000°, δ37.00000°, λ104.00000°. NP2: φs298.00000°, δ55.00000°, λ80.00000°. Principal axes: T 2.4310, Plg78.0000°, Azm172.0000°; N 0.1598, Plg9.0000°, Azm305.0000°; P -2.5908, Plg9.0000°, Azm36.0000°;*

GCMT ***29*** *00:32:31.2± 0.1, 9.°50S± 0.°01 × 161.°35E± 0.°01, h46km, MW5.5/142, Moment Tensor Solution. s138,c230; s142,c263; Duration: 1s4 Moment tensor: Scale 10¹⁷ Nm; Mrr2.34±.03; Mθθ-1.54±.02; Mφφ-0.80±.02; Mrθ-0.87±.03; Mθφ1.22±.02; Mφr0.19±.02; Best double couple: M₀2.55500×10¹⁷ NP1: φs135.00000°, δ36.00000°, λ104.00000°. NP2: φs298.00000°, δ55.00000°, λ80.00000°. Principal axes: T 2.5280, Plg77.0000°, Azm174.0000°; N 0.0500, Plg8.0000°, Azm304.0000°; P -2.5820, Plg9.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

IDC ***29*** *00:32:32.6± 1.2, 9.°62S × 161.°21E, h81 km± 9km, mb5.0/40, mb1 5.1/43, mb1mx5.0/50, mbtmp5.3/43, MS5.0/26, Ms1 5.0/26, ms1mx4.8/36 Error ellipse: s-maj=12.2km s-min=8.8km az=90.0*

ISC 29 00:32:29.7±0.4, 9.°57S±0.°04 × 161.°22E±0.°04, h56km±3km, h56km: pP-P, n1239, σ1§02/1063, mb5.5/244, MS5.3/232, 64C-12D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.26**	**276**	P	**Pn**	**00 32 53.1**	**+2.1**
	5μm,0.3s,baz=152,slow=4.5,SNR=449						
HNR				S	**Sn**	**00 33 11.9**	**+4.9**
	17μm,0.3s,baz=162,slow=20,SNR=24						
HNR				LR	LR	00 33 30.4	
	comp=Z,26μm,21.3s,baz=134,slow=46						
HNR	**Honiara**	**1.26**	**276**	Pn	**Pn**	**00 32 52.1**	**+1.0**
SANVU	**Saraoutou**	**8.26**	**136**		**Pn**	**00 34 26.3**	**-0.6**
NOUC	**Port Laguerre**	**13.38**	**159**		**Pn**	**00 35 38.4**	**+1.4**
DZM	**Mont Dzumac**	**13.41**	**159**	*e*Pn	**Pn**	**00 35 33.0**	**-4.3**
	511nm,1.1s						
DZM				*e*Sn	Sn	00 37 50.6	-14
	163nm,1.1s						
DZM				*e*LR	LR	00 38 38.6	
	comp=Z,24μm,24.6s						
DZM	**Mont Dzumac**	**13.41**	**159**	P	**Pn**	**00 35 39.1**	**+1.7**
	3.3nm,0.3s,baz=320,slow=15,SNR=20						
DZM				S	**Sn**	**00 38 03.5**	**-1.3**
	3.2nm,0.3s,baz=195,slow=20,SNR=4.1						
DZM				LR	LR	00 40 19.4	
	comp=Z,13μm,20.1s,baz=330,slow=35						
DZM	**Mont Dzumac**	**13.41**	**159**		**Pn**	**00 35 38.5**	**+1.1**
PMG	**Port Moresby**	**13.87**	**270**	P	**P**	**00 35 46.7**	**-3.4**
	1.1nm,0.3s,baz=69,slow=11,SNR=4.0						
PMG				LR	LR	00 40 57.7	
	comp=Z,16μm,20.4s,baz=106,slow=36						
TARA	**Tarawa**	**15.93**	**48**		**Pn**	**00 36 09.8**	**-0.5**
TARA				IAmb	IAmb	00 36 30.0	
	comp=Z,425nm,0.8s						
PATS	**Pohnpei**	**16.55**	**350**	P	**Pn**	**00 36 18.0**	**-0.1**
	baz=17,SNR=12						
PATS	**Pohnpei**	**16.55**	**350**		**Pn**	**00 36 18.2**	**+0.1**
FUNA	**Funafuti**	**17.79**	**88**	P	**P**	**00 36 34.4**	**+0.8**
CTA	**Charters Tower**	**17.84**	**232**	P	**P**	**00 36 35.0**	**+0.9**
	comp=Z,3.0nm,0.3s,baz=61,slow=12,SNR=28						
CTA				LR	LR	00 42 58.3	
	comp=Z,12μm,20.0s,baz=54,slow=35						
COEN	**Coen**	**18.19**	**254**	P	**Pn**	**00 36 41.9**	**+3.4**
	baz=18,SNR=19						
COEN	**Coen**	**18.19**	**254**	P	**P**	**00 36 36.8**	**-1.3**
MSVF	**Nonsavu**	**18.25**	**118**	P	**Pn**	**00 36 40.4**	**+1.3**
MSVF				pmax	pmax		
	comp=Z,290nm,1.1s						
MSVF	**Nonsavu**	**18.25**	**118**	P	**Pn**	**00 36 40.4**	**+1.3**
EIDS	**Eidsvold**	**18.43**	**210**	P	**Pn**	**00 36 44.0**	**+2.7**
	baz=19,SNR=38						
EIDS	**Eidsvold**	**18.43**	**210**	P	**Pn**	**00 36 43.1**	**+1.8**
MTSU	**Mount Surprise**	**18.48**	**241**	P	**Pn**	**00 36 45.6**	**+3.7**
	baz=19,SNR=73						
KWAJ	**Kwajalein Atol**	**19.33**	**19**	P	**Pn**	**00 36 50.9**	**-1.1**
KWAJ				pmax	pmax		
	comp=Z,716nm,0.8s						
KWAJ	**Kwajalein Atol**	**19.33**	**19**	P	**Pn**	**00 36 50.9**	**-1.1**
RMQ	**Roma**	**20.55**	**213**	P	Pn	00 37 07.1	+0.7
	baz=21,SNR=38						
JAY	**Jayapura**	**21.56**	**288**	P	**P**	**00 37 14.4**	**-0.3**
	comp=Z,65nm,0.7s,baz=119,slow=8.0,SNR=3.8						
JAY				LR	LR	00 45 37.0	
	comp=Z,3μm,20.6s,baz=80,slow=36						
LHI	**Lord Howe Isla**	**21.93**	**185**	P	**P**	**00 37 20.8**	**+2.3**
	baz=22,SNR=4.5						
LHI	**Lord Howe Isla**	**21.93**	**185**	P	**P**	**00 37 18.9**	**+0.4**
LHI				IAmb	IAmb	00 37 22.0	
	comp=Z,142nm,0.9s						
ARMA	**Armidale**	**22.59**	**202**	P	**P**	**00 37 27.0**	**+1.3**
	baz=23,SNR=29						
ARMA	**Armidale**	**22.59**	**202**	P	**P**	**00 37 26.4**	**+0.7**
ARMA				IAMs_20	IAMs_20	00 44 41.1	
	comp=Z,8μm,21.0s						
QLP	**Quilpie**	**23.34**	**221**	P	**P**	**00 37 34.6**	**+1.5**
	baz=24,SNR=17						
QIS	**Mount Isa**	**23.52**	**240**	P	**P**	**00 37 36.0**	**+1.0**
	baz=23,SNR=34						
MGCD	**Mangrove Creek**	**25.31**	**200**	P	**P**	**00 37 53.0**	**+1.9**
	baz=26,SNR=13						
CMSA	**Cobar Meteorol**	**26.19**	**211**	P	**P**	**00 38 00.6**	**+1.5**
	baz=26,SNR=20						
AFI	**Afiamalu**	**26.78**	**102**	P	**P**	**00 38 05.3**	**+0.6**
AFI				pmax	pmax		
	comp=Z,100nm,1.1s						
AFI	**Afiamalu**	**26.78**	**102**	P	**P**	**00 38 00.9**	**-3.8**
	comp=Z,44nm,0.8s,baz=258,slow=19,SNR=3.5						
AFI				LR	LR	00 46 19.3	
	comp=Z,3μm,21.4s,baz=286,slow=31						
AFI	**Afiamalu**	**26.78**	**102**	P	**P**	**00 38 05.3**	**+0.6**
AFI				IAmb	IAmb	00 38 28.5	
	comp=Z,100nm,1.1s						
YNG	**Young**	**27.28**	**204**	P	**P**	**00 38 10.8**	**+1.9**
	baz=28,SNR=7.8						
RAO	**Raoul Island**	**27.67**	**138**	LR	LR	00 47 29.6	
	comp=Z,4μm,20.6s,baz=322,slow=32						
WR0	**Warramunga Arr**	**27.75**	**245**	IAmb	IAmb	00 38 15.2	
	comp=Z,240nm,1.5s						
WR0				IAMs_20	IAMs_20	00 48 22.8	
	comp=Z,5μm,22.0s						
WR7	**Warramunga Arr**	**27.80**	**245**	IAMs_20	IAMs_20	00 48 23.3	
	comp=Z,5μm,22.0s						
WB0	**Warramunga Arr**	**27.82**	**246**	IAmb	IAmb	00 38 15.6	
	comp=Z,111nm,0.7s						
CNB	**Canberra Magne**	**27.82**	**201**	P	**P**	**00 38 15.5**	**+1.7**
	baz=28,SNR=8.2						
WR5	**Warramunga Arr**	**27.84**	**245**	IAMs_20	IAMs_20	00 48 24.3	
	comp=Z,5μm,21.0s						
WR4	**Warramunga Arr**	**27.86**	**245**	IAMs_20	IAMs_20	00 48 24.9	
	comp=Z,5μm,21.0s						
WC3	**Warramunga Arr**	**27.90**	**245**	IAMs_20	IAMs_20	00 48 26.8	
	comp=Z,6μm,22.0s						
WRAB	**Tennant Creek**	**27.91**	**245**	*c* i P	**P**	**00 38 15.2**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,104nm,0.8s						
WRAB				MLR	MLR		
	comp=Z,986nm,15.0s						
WRAB	**Tennant Creek**	**27.91**	**245**	P	**P**	**00 38 14.7**	**-0.1**
WRAB				IAmb	IAmb	00 38 15.9	
	comp=Z,86nm,0.8s						
WRAB	**Tennant Creek**	**27.91**	**245**	IAMs_20	IAMs_20	00 48 26.9	
	comp=Z,5μm,22.0s						
WB2	**Warramunga Arr**	**27.91**	**245**	P	**P**	**00 38 14.9**	**+0.2**
WB2				IAmb	IAmb	00 38 16.0	
	comp=Z,88nm,0.8s						
WC1	**Warramunga Arr**	**27.92**	**245**	IAMs_20	IAMs_20	00 48 27.3	
	comp=Z,5μm,22.0s						
WRA	**Warramunga Arr**	**27.92**	**245**	*i* P	**P**	**00 38 13.6**	**-1.2**
WRA				pmax	pmax		
	comp=Z,58nm,0.5s						
WRA	**Warramunga Arr**	**27.92**	**245**	P	**P**	**00 38 15.0**	**+0.2**
	comp=Z,58nm,0.5s,baz=74,slow=9.1,SNR=254						
WRA				S	**S**	**00 42 54.8**	**-0.1**
	comp=Z,14nm,1.1s,baz=74,slow=15,SNR=4.0						
WRA				LR	LR	00 49 00.5	
	comp=Z,4μm,21.3s,baz=70,slow=35						
WRA				P3KPbc		01 10 40.0	
	comp=Z,0.8nm,0.8s,baz=259,slow=3.5,SNR=4.9						
WRA	**Warramunga Arr**	**27.92**	**245**	P	**P**	**00 38 14.4**	**-0.4**
OUZ	**Omahuta**	**27.93**	**158**	P	**P**	**00 38 14.8**	**+0.2**
OUZ				IAMs_20	IAMs_20	00 47 36.5	
	comp=Z,7μm,20.0s						
CAN	**Canberra**	**27.96**	**202**	P	**P**	**00 38 15.4**	**+0.4**
CAN				pmax	pmax		
	comp=Z,85nm,1.2s						
CAN				MLR	MLR		
	comp=Z,9μm,20.0s						
CAN	**Canberra**	**27.96**	**202**	P	**P**	**00 38 15.4**	**+0.4**
CAN				IAMs_20	IAMs_20	00 48 04.4	
	comp=Z,9μm,20.0s						
GUMO	**Guam**	**28.16**	**325**	LR	LR	00 49 14.8	
	comp=Z,2μm,20.1s,baz=155,slow=36						
KDU	**Kakadu**	**28.37**	**261**	P	**P**	**00 38 18.8**	**-0.1**
	baz=28,SNR=13						
STKA	**Stephens Creek**	**28.70**	**217**	P	**P**	**00 38 22.9**	**+1.3**
	baz=29,SNR=56						
STKA	**Stephens Creek**	**28.70**	**217**	P	**P**	**00 38 22.5**	**+0.9**
STKA				pmax	pmax		
	comp=Z,13nm,0.9s						
STKA				MLR	MLR		
	comp=Z,1μm,21.0s						
STKA	**Stephens Creek**	**28.70**	**217**	P	**P**	**00 38 22.6**	**+0.9**
	comp=Z,60nm,0.9s,baz=28,slow=12,SNR=43						
STKA				LR	LR	00 49 30.6	
	comp=Z,5μm,21.7s,baz=50,slow=36						
STKA	**Stephens Creek**	**28.70**	**217**	P	**P**	**00 38 22.5**	**+0.9**
MILA	**Mila**	**29.46**	**200**	P	**P**	**00 38 29.9**	**+1.5**
	baz=30,SNR=4.7						
ASAR	**Alice Springs**	**29.61**	**238**	P	**P**	**00 38 29.6**	**-0.2**
	comp=Z,27nm,0.8s,baz=67,slow=9.6,SNR=139						
ASAR				S	**S**	**00 43 18.6**	**-2.9**
	comp=Z,5.7nm,1.1s,baz=64,slow=15,SNR=3.8						
ASAR				ScP	**ScP**	**00 45 10.2**	**-0.8**
	comp=Z,1.1nm,0.8s,baz=59,slow=2.6,SNR=3.2						
ASAR				P3KPbc		01 10 33.1	
	comp=Z,1.3nm,0.9s,baz=247,slow=4.8,SNR=7.8						
ASAR	**Alice Springs**	**29.61**	**238**	P	**P**	**00 38 28.8**	**-1.1**
MTN	**Manton Dam**	**29.68**	**261**	P	**P**	**00 38 30.3**	**-0.2**
	baz=30,SNR=10						
SIJI	**Sorong**	**31.03**	**284**	LR	LR	00 51 11.6	
	comp=Z,2μm,21.8s,baz=116,slow=36						
TOO	**Toolangi**	**31.29**	**205**	P	**P**	**00 38 46.1**	**+1.7**
	baz=32,SNR=16						
TOO	**Toolangi**	**31.29**	**205**	P	**P**	**00 38 45.0**	**+0.5**
TOO				pmax	pmax		
	comp=Z,84nm,1.3s						
TOO				MLR	MLR		
	comp=Z,6μm,21.0s						
TOO	**Toolangi**	**31.29**	**205**	P	**P**	**00 38 45.0**	**+0.5**
TOO				IAmb	IAmb	00 38 47.5	
	comp=Z,84nm,1.3s						
TOO				IAMs_20	IAMs_20	00 50 13.5	
	comp=Z,7μm,21.0s						
HIZ	**Hauiti**	**31.32**	**159**	IAMs_20	IAMs_20	00 49 17.9	
	comp=Z,5μm,21.0s						
HTT	**Hallett**	**31.39**	**218**	P	**P**	**00 38 46.6**	**+1.2**
	baz=32,SNR=42						
URZ	**Urewera**	**31.94**	**156**	P	**P**	**00 38 49.9**	**-0.3**
	comp=Z,12nm,0.8s,baz=5.1,slow=7.7,SNR=5.8						
URZ	**Urewera**	**31.94**	**156**	P	**P**	**00 38 50.1**	**0.0**
KNRA	**Kununurra**	**32.22**	**256**	P	**P**	**00 38 53.2**	**+0.3**
	baz=32,SNR=28						
KNRA	**Kununurra**	**32.22**	**256**	P	**P**	**00 38 52.3**	**-0.6**
BKZ	**Black Stump Fm**	**32.49**	**158**	P	**P**	**00 38 54.9**	**-0.1**
BKZ				IAmb	IAmb	00 38 59.1	
	comp=Z,39nm,0.7s						
BKZ				IAMs_20	IAMs_20	00 50 10.3	
	comp=Z,6μm,21.0s						
QRZ	**Quartz Range**	**32.70**	**164**	P	**P**	**00 38 57.4**	**+0.6**
QRZ				IAMs_20	IAMs_20	00 50 07.0	
	comp=Z,4μm,22.0s						
BBOO	**Buckleboo**	**32.77**	**221**	P	**P**	**00 38 58.4**	**+0.8**
	baz=33,SNR=71						
BBOO	**Buckleboo**	**32.77**	**221**	P	**P**	**00 38 57.5**	**-0.1**
BBOO				IAmb	IAmb	00 38 59.0	
	comp=Z,92nm,0.8s						
BBOO				IAMs_20	IAMs_20	00 51 33.3	
	comp=Z,4μm,22.0s						
THZ	**Tophouse**	**33.68**	**164**	IAmb	IAmb	00 39 08.2	
	comp=Z,78nm,0.9s						
BFZ	**Birch Farm**	**33.73**	**159**	IAMs_20	IAMs_20	00 51 39.2	
	comp=Z,4μm,20.0s						
KHZ	**Kahutara**	**34.46**	**164**	IAmb	IAmb	00 39 13.8	
	comp=Z,58nm,1.0s						
KHZ				IAMs_20	IAMs_20	00 51 23.5	
	comp=Z,4μm,20.0s						
LTZ	**Lake Taylor**	**34.47**	**166**	IAmb	IAmb	00 39 15.1	
	comp=Z,59nm,1.1s						
FOZ	**Fox Glacier**	**34.66**	**169**	IAmb	IAmb	00 39 18.8	
	comp=Z,53nm,0.9s						
LBMI	**Labuha**	**34.70**	**283**	P	**P**	**00 39 15.3**	**+0.8**
	comp=Z,3μmcomp=Z,104nm,0.9s						
WRKA	**Warakurna**	**34.87**	**240**	P	**P**	**00 39 15.6**	**-0.3**
	baz=35,SNR=123						
MOO	**Moorlands**	**34.98**	**198**	P	**P**	**00 39 18.8**	**+2.2**
	baz=35,SNR=7.7						
RPZ	**Rata Peaks**	**35.08**	**168**	P	**P**	**00 39 16.7**	**-0.7**
	comp=Z,48nm,0.8s,baz=3.4,slow=2.0,SNR=29						
RPZ	**Rata Peaks**	**35.08**	**168**	P	**P**	**00 39 17.1**	**-0.4**
RPZ				IAmb	IAmb	00 39 18.4	
	comp=Z,65nm,0.9s						
MQZ	**McQueen's Vall**	**35.44**	**166**	IAmb	IAmb	00 39 22.0	
	comp=Z,79nm,1.0s						
FITZ	**Fitzroy Crossi**	**35.52**	**252**	P	**P**	**00 39 21.5**	**0.0**
	baz=36,SNR=32						
FITZ	**Fitzroy Crossi**	**35.52**	**252**	P	**P**	**00 39 21.0**	**-0.5**
	comp=Z,25nm,0.7s,baz=89,slow=7.1,SNR=38						
LBZ	**Lake Benmore**	**35.55**	**169**	IAmb	IAmb	00 39 41.0	
	comp=Z,71nm,1.4s						
MLZ	**Mavora Lakes**	**36.16**	**172**	IAmb	IAmb	00 39 27.8	
	comp=Z,78nm,1.1s						
MLZ				IAMs_20	IAMs_20	00 53 12.4	
	comp=Z,3μm,19.0s						
SOEI	**Soe**	**36.42**	**267**	P	**P**	**00 39 31.9**	**+2.5**
	comp=Z,2μmcomp=Z,132nm,0.9s						
SOEI	**Soe**	**36.42**	**267**	P	**P**	**00 39 28.5**	**-0.9**
WHZ	**Wether Hill Ro**	**36.65**	**172**	IAmb	IAmb	00 39 31.3	
	comp=Z,62nm,0.9s						
FORT	**Forrest**	**37.37**	**231**	P	**P**	**00 39 37.9**	**+0.7**
	baz=38,SNR=12						
LUWI	**Luwuk**	**39.17**	**280**	P	**P**	**00 39 53.1**	**+0.6**
	comp=Z,230nm,1.2s						
LUWI	**Luwuk**	**39.17**	**280**	P	**P**	**00 39 52.8**	**+0.3**
KCP	**Kidapawan**	**39.58**	**293**	↑ *i* P	**P**	**00 39 57.0**	**+1.0**
JCJ	**Chichijima**	**40.86**	**334**	P	**P**	**00 40 05.0**	**-1.2**
	comp=Z,49nm,0.6s,baz=132,slow=19,SNR=4.1						
JCJ				LR	LR	00 55 09.3	
	comp=Z,1μm,21.6s,baz=140,slow=33						
BKSI	**Bulukumba**	**40.95**	**273**	P	**P**	**00 40 07.3**	**+0.1**
	comp=Z,761nmcomp=Z,73nm,0.9s						
BNSI	**Bone**	**41.10**	**274**	P	**P**	**00 40 09.4**	**+0.9**
	comp=Z,2μmcomp=Z,214nm,0.9s						
KAPI	**Kappang**	**41.36**	**273**	P	**P**	**00 40 10.4**	**-0.2**
KAPI				pmax	pmax		
	comp=Z,122nm,1.0s						
KAPI				MLR	MLR		
	comp=Z,900nm,20.0s						
KAPI	**Kappang**	**41.36**	**273**	P	**P**	**00 40 10.7**	**+0.1**
	comp=Z,102nm,0.9s,baz=105,slow=5.9,SNR=23						
KAPI	**Kappang**	**41.36**	**273**	P	**P**	**00 40 10.4**	**-0.2**
KAPI				IAmb	IAmb	00 40 11.7	
	comp=Z,122nm,1.0s						
PSA00	**Pilbara Seismi**	**41.47**	**248**	P	**P**	**00 40 11.1**	**-0.4**
SPSI	**Sidrap Palu**	**41.51**	**275**	P	**P**	**00 40 11.4**	**-0.4**
	comp=Z,3μmcomp=Z,78nm,1.0s						
PSAD3	**Pilbara Seismi**	**41.55**	**248**	IAMs_20	IAMs_20	00 58 15.4	
	comp=Z,3μm,20.0s						
TTSI	**Tana Toraja**	**41.63**	**276**	P	**P**	**00 40 12.4**	**-0.4**
	comp=Z,42nm,0.9s						
KMBL	**Kambalda**	**42.44**	**233**	P	**P**	**00 40 20.0**	**+0.8**
	baz=43,SNR=8.7						
PLAI	**Plampang**	**42.87**	**267**	P	**P**	**00 40 22.4**	**-0.5**
	comp=Z,3μmcomp=Z,422nm,0.8s						
KLBR	**Kellerberrin**	**45.82**	**235**	P	**P**	**00 40 46.4**	**+0.2**
	baz=46,

TBI eLR LR 00 55 04.0
comp=Z,5μm,30.0s
PCJI Pacitan 49.43 267 P **P** **00 41 14.4 -0.1**
comp=Z,5μm,28.5s,baz=284
MEH Mehetia 49.83 105 eP **P** **00 41 18.2 +0.7**
comp=Z,20nm,1.1s
UGM Wanagama 50.10 268 P **P** **00 41 17.7 -2.0**
comp=Z,166nm,1.0s
INU Inuyama 50.19 334 P **P** **00 41 20.3 +0.4**
INU IAmb IAmb 00 41 47.5
comp=Z,37nm,1.0s
SBUM Sibu 50.25 281 P **P** **00 41 20.6 -0.1**
MJAR Matsushiro Arr 50.72 336 P **P** **00 41 23.7 -0.2**
comp=Z,7.3nm,0.6s,baz=157,slow=8.0,SNR=9.7
MJAR PcP **PcP** **00 42 40.5 0.0**
comp=Z,11nm,0.9s,baz=122,slow=4.7,SNR=6.3
MJAR LR LR 01 03 43.5
comp=Z,720nm,19.2s,baz=175,slow=37
MJAR Matsushiro Arr 50.72 336 P **P** **00 41 24.6 +0.8**
MAJO Matsushiro 50.72 336⇑ eP **P** **00 41 23.3 -0.6**
MAJO pmax pmax
comp=Z,12nm,0.9s
MAT Matsushiro 50.72 336 P **P** **00 41 23.6 -0.3**
MAT S **S** **00 48 32.2 -3.0**
TWG Pinlang 50.81 310 IAMs_20 IAMs_20 00 58 59.2
comp=Z,4μm,22.0s
YULB Yu-li 50.97 311 P **P** **00 41 26.5 +0.5**
JNU Nakatsue 51.35 327 P **P** **00 41 28.9 +0.1**
comp=Z,54nm,0.9s,baz=112,slow=7.5,SNR=19
JNU Nakatsue 51.35 327 IAmb IAmb 00 41 31.2
comp=Z,111nm,1.2s
TPUB Ta-pu 51.42 310 IAmb IAmb 00 42 06.7
comp=Z,66nm,1.2s
SSLB Suanglung 51.45 311 P **P** **00 41 30.1 +0.4**
HMH Humu'ula Sheep 51.56 56 P **P** **00 41 31.3 +0.5**
YHNB Yeheng 51.66 312 IAmb IAmb 00 41 57.9
comp=Z,53nm,0.9s
KPJI Karang Pucung 51.73 268 P **P** **00 41 29.8 -2.1**
comp=Z,139nm,0.8s
CMJI Cimerak 52.16 268 P **P** **00 41 31.9 -3.1**
comp=Z,110nm,0.8s
CISI Cisompet, Garu 52.81 268 P **P** **00 41 36.2 -3.7**
comp=Z,3μmcomp=Z,139nm,1.1s
QZH Quanzhou 53.88 310⇑ iP **P** **00 41 48.0 +0.5**
QZH pP **pP** **00 42 00.3 -2.1**
QZH S **S** **00 49 18.5 -0.3**
QZH sS **sS** **00 49 42.5 -1.5**
QZH pmax pmax
comp=Z,41nm,0.9s
QZH pmax pmax
comp=Z,270nm,4.3s
QZH LR LR
comp=Z,700nm,19.9s
QZH LR LR
comp=Z,370nm,18.5s
QZH LR LR
comp=Z,760nm,24.2s
TJN Taejon 55.70 327 d iP **P** **00 42 02.1 +1.6**
SSE Sheshan 55.74 318 IAmb IAmb 00 42 03.5
comp=Z,72nm,0.9s
ASAJ Asahikawa 56.04 344 P **P** **00 42 03.1 +0.4**
comp=Z,77nm,1.0s,baz=218,slow=12,SNR=13
KSRS Korea Array 56.22 328 P **P** **00 42 04.5 +0.4**
comp=Z,16nm,1.0s,baz=144,slow=7.4,SNR=46
KSRS LR LR 01 04 26.8
comp=Z,1μm,20.7s,baz=131,slow=34
KSAR Wonju Array Be 56.23 328 P **P** **00 42 04.1 -0.1**
KSAR Wonju Array Be 56.23 328 P **P** **00 42 04.1 -0.1**
KASI Kota Agung 56.33 270 P **P** **00 42 02.5 -2.9**
comp=Z,768nmcomp=Z,60nm,1.0s
INCN Inchon 56.92 327 P **P** **00 42 10.1 +0.9**
INCN pmax pmax
comp=Z,89nm,1.0s
INCN Inchon 56.92 327 P **P** **00 42 10.1 +0.9**
INCN IAmb IAmb 00 42 11.6
comp=Z,89nm,1.0s
TAOE Nuku Hiva Isla 57.82 94 eLR LR 00 59 07.0
comp=Z,2μm,25.4s
TAOE Nuku Hiva Isla 57.82 94 eT T 01 44 08.2
comp=Z,44nm,0.2s
NJ2 Nanjing 57.89 318 eP **P** **00 42 17.0 +0.9**
NJ2 pP **pP** **00 42 30.3 -0.7**
NJ2 pmax pmax
comp=Z,53nm,1.0s
NJ2 pmax pmax
comp=Z,620nm,5.5s
NJ2 LR LR
comp=Z,510nm,19.2s
NJ2 LR LR
comp=Z,470nm,25.0s
NJ2 LR LR
comp=Z,910nm,22.8s
YSS Yuzh-Sakhalins 58.63 345 eP **P** **00 42 20.7 -0.2**
YSS e 00 42 50.7
YSS pmax pmax
comp=Z,30nm,1.2s
TEY Ternei 58.72 340⇑ eP **P** **00 42 22.8 +1.3**
TEY pmax pmax
comp=E,20nm,1.4s
TEY pmax pmax
comp=Z,20nm,1.2s
VLA Vladivostok 58.86 335⇑ eP **P** **00 42 23.9 +1.3**
VLA pmax pmax
comp=Z,75nm,1.5s
USRK Ussuriysk Ar. 59.71 336 P **P** **00 42 29.3 +0.8**
comp=Z,59nm,1.0s,baz=142,slow=6.5,SNR=43
USRK LR LR 01 05 33.2
comp=Z,946nm,21.8s,baz=132,slow=33
USRK Ussuriysk Ar. 59.71 336 P **P** **00 42 28.8 +0.3**
WHN Wuhan 60.12 313⇑ P **P** **00 42 32.0 +0.5**
WHN S **S** **00 50 43.5 +2.6**
WHN pmax pmax
comp=Z,40nm,0.8s
WHN LR LR
comp=Z,5μm,27.4s
WHN LR LR
comp=Z,7μm,35.2s
WHN LR LR
comp=Z,2μm,22.0s
SKR Severo-Kuril's 60.16 356 eP **P** **00 42 32.0 +0.6**
SKR eS **S** **00 50 37.4 -3.3**
SKR pmax pmax
comp=Z,200nm,4.5s
SKR pmax pmax
comp=Z,600nm,16.7s
SKR MLR MLR
comp=Z,300nm,15.0s
DL2 Dalian 60.68 325 P **P** **00 42 36.0 +0.8**
DL2 sP **sP** **00 42 56.8 +0.4**
DL2 S **S** **00 50 47.3 -0.4**
DL2 pmax pmax
comp=Z,85nm,0.9s
DL2 pmax pmax
comp=Z,410nm,5.3s
DL2 LR LR
comp=Z,550nm,22.4s
DL2 LR LR
comp=Z,590nm,23.8s
DL2 LR LR
comp=Z,1μm,23.9s
MDJ Mudanjiang 61.04 335 P **P** **00 42 38.8 +1.2**
MDJ pP pP 00 42 52.0 -0.7
MDJ sP sP 00 42 57.5 -1.5
MDJ S **S** **00 50 57.5 +5.3**
MDJ pmax pmax
comp=Z,59nm,1.3s
MDJ pmax pmax
comp=Z,590nm,4.5s
MDJ LR LR
comp=Z,1μm,22.8s
MDJ LR LR
comp=Z,960nm,19.9s
MDJ LR LR
comp=Z,2μm,18.5s
MDJ Mudanjiang 61.04 335 P **P** **00 42 38.3 +0.7**
TIA Tai'an 61.59 320 P **P** **00 42 41.5 0.0**
TIA S **S** **00 51 02.3 +2.7**
TIA pmax pmax
comp=Z,35nm,0.7s
TIA pmax pmax
comp=Z,250nm,6.9s
TIA LR LR
comp=Z,460nm,24.5s
TIA LR LR
comp=Z,460nm,21.6s

TIA LR LR
comp=Z,600nm,21.6s
SNY Shenyang 61.71 329⇑ P **P** **00 42 40.0 -2.1**
SNY S **S** **00 50 59.0 -1.7**
SNY pmax pmax
comp=Z,21nm,1.4s
SNY pmax pmax
comp=Z,450nm,7.4s
SNY LR LR
comp=Z,1μm,22.6s
SNY LR LR
comp=Z,780nm,25.5s
SNY LR LR
comp=Z,2μm,23.5s
KULM Kulim 62.13 281 P **P** **00 42 45.2 -0.4**
KULM IAmb IAmb 00 42 47.5
comp=Z,49nm,1.2s
CN2 Changchun 62.26 331 eP **P** **00 42 46.5 +0.7**
CN2 eS **S** **00 51 10.0 +2.4**
CN2 pmax pmax
comp=Z,60nm,1.3s
CN2 pmax pmax
comp=Z,330nm,4.0s
CN2 LR LR
comp=Z,1μm,19.0s
CN2 LR LR
comp=Z,670nm,19.0s
CN2 LR LR
comp=Z,940nm,20.0s
TYV Tymovskoe 62.30 347 eP **P** **00 42 47.4 +1.5**
TYV pmax pmax
comp=Z,33nm,1.4s
PET Petropavlovsk 62.38 358 eP **P** **00 42 47.2 +0.9**
PET eS **S** **00 51 10.0 +1.2**
PET pmax pmax
comp=Z,59nm,1.1s
PET MLR MLR
comp=Z,1μm,20.0s
PET Petropavlovsk 62.38 358 P **P** **00 42 47.2 +0.9**
PET IAmb IAmb 00 42 48.2
comp=Z,60nm,1.1s
PEA0B Petropavlovsk- 62.50 358 IAMs_20 IAMs_20 01 05 14.3
comp=Z,2μm,20.0s
PETK Petropavlovsk- 62.50 358 P **P** **00 42 48.1 +0.9**
PETK Petropavlovsk- 62.50 358 P **P** **00 42 48.0 +0.8**
comp=Z,32nm,0.9s,baz=152,slow=7.9,SNR=16
PETK LR LR 01 05 36.5
comp=Z,2μm,21.8s,baz=184,slow=32
PETK Petropavlovsk- 62.50 358 P **P** **00 42 48.1 +0.9**
RPSI Rantau Prapat 63.24 278 P **P** **00 42 51.9 -1.0**
PSI Prapat 63.26 278 P **P** **00 42 51.9 -1.3**
PSI pmax pmax
comp=Z,24nm,1.1s
ENH Enshi 63.54 311 P **P** **00 42 54.1 -0.5**
ENH IAmb IAmb 00 42 55.8
comp=Z,60nm,1.1s
GRNR Gornyy 63.83 343 eP **P** **00 42 56.3 +0.2**
GRNR pmax pmax
comp=Z,30nm,1.4s
GYA Guiyang 63.92 306⇑ iP **P** **00 42 58.0 +0.6**
GYA pP pP 00 43 11.5 -0.8
GYA PP **PP** **00 45 13.8 -4.8**
GYA S **S** **00 51 26.0 -3.4**
GYA sS pS 00 51 49.0 +2.0
GYA SS **SS** **00 55 36.0 -3.0**
GYA pmax pmax
comp=Z,30nm,1.1s
GYA pmax pmax
comp=Z,220nm,4.3s
GYA LR LR
comp=Z,430nm,20.1s
GYA LR LR
comp=Z,580nm,17.6s
GYA LR LR
comp=Z,800nm,18.2s
KLR Kul'dur 64.01 339 c iP **P** **00 42 58.4 +1.1**
KLR pmax pmax
comp=Z,71nm,1.2s
KLR Kul'dur 64.01 339 P **P** **00 42 58.0 +0.8**
comp=Z,30nm,1.0s,baz=136,slow=3.1,SNR=49
BJT Baijiatuau 64.58 323 P **P** **00 43 01.0 -0.2**
BJT pmax pmax
comp=Z,39nm,1.3s
BJT MLR MLR
comp=Z,500nm,20.0s
BJT Baijiatuau 64.58 323 P **P** **00 43 01.0 -0.2**
BJI Beijing 64.58 323 P **P** **00 42 59.8 -1.4**
BJI S **S** **00 51 36.8 +0.1**
BJI LR LR
comp=Z,410nm,25.6s
BJI LR LR
comp=Z,210nm,20.6s
TIY Taiyuan 65.50 319 eP **P** **00 43 05.3 -2.0**
TIY pP **pP** **00 43 21.3 -1.2**
TIY S **S** **00 51 51.0 +2.8**
TIY pmax pmax
comp=Z,4.0nm,0.4s
TIY pmax pmax
comp=Z,270nm,5.6s
TIY LR LR
comp=Z,230nm,5.5s
TIY LR LR
comp=Z,430nm,14.9s
TIY LR LR
comp=Z,890nm,20.3s
XAN Xi'an 65.87 314 P **P** **00 43 10.0 +0.2**
XAN pP pP 00 43 23.8 -1.2
XAN S **S** **00 51 51.0 -1.8**
XAN sS pS 00 52 12.5 +1.8
XAN SS **SS** **00 56 07.8 -1.0**
XAN pmax pmax
comp=Z,54nm,1.2s
XAN pmax pmax
comp=Z,340nm,3.7s
XAN LR LR
comp=Z,260nm,19.1s
XAN LR LR
comp=Z,490nm,21.1s
XAN LR LR
comp=Z,690nm,25.5s
XAN Xi'an 65.87 314 P **P** **00 43 09.5 -0.3**
XAN pmax pmax
comp=Z,44nm,0.8s
XAN Xi'an 65.87 314 P **P** **00 43 09.5 -0.3**
XAN IAmb IAmb 00 43 25.1
comp=Z,44nm,0.8s
CASY Casey 66.18 200 P **P** **00 43 11.3 +0.1**
CASY Casey 66.18 200 IAMs_20 IAMs_20 01 06 57.0
comp=Z,1μm,22.0s
KMI Kunming 66.57 303 P **P** **00 43 15.8 +1.2**
KMI pP pP 00 43 29.5 -0.2
KMI sP sP 00 43 36.0 +0.2
KMI PP **PP** **00 45 40.0 -1.9**
KMI S **S** **00 52 03.0 +1.0**
KMI sS sS 00 52 24.8 -2.5
KMI pmax pmax
comp=Z,56nm,1.3s
KMI pmax pmax
comp=Z,360nm,5.6s
KMI LR LR
comp=Z,420nm,17.9s
KMI LR LR
comp=Z,570nm,20.4s
KMI LR LR
comp=Z,910nm,20.9s
KMI Kunming 66.57 303 IAmb IAmb 00 43 17.2
comp=Z,69nm,1.1s
CM31 Chiang Mai Arr 67.45 295 P **P** **00 43 20.7 +0.6**
CMAR Chiang Mai Arr 67.45 295 P **P** **00 43 20.6 +0.6**
comp=Z,16nm,0.9s,baz=122,slow=4.3,SNR=41
CMAR PKPPKP 01 11 43.2
comp=Z,4.1nm,0.9s,baz=283,slow=4.5,SNR=12
CHTO Chiang Mai 67.56 295 P **P** **00 43 21.1 +0.3**
CHTO pmax pmax
comp=Z,17nm,1.0s
CHTO Chiang Mai 67.56 295 P **P** **00 43 21.1 +0.3**
HHC Hu-ho-hao-te 67.87 321 eP **P** **00 43 23.8 +1.4**
HHC pP pP 00 43 36.0 -1.6
HHC S **S** **00 52 13.5 -3.3**
HHC ScS **SKiKP** **00 53 09.8 -4.5**
HHC pmax pmax
comp=Z,27nm,1.2s
HHC LR LR
comp=Z,270nm,16.2s
HHC LR LR
comp=Z,300nm,16.2s

HHC LR LR
comp=Z,460nm,16.2s
VNDA Vanda 67.93 180 P **P** **00 43 21.7 -0.4**
VNDA pmax pmax
comp=Z,44nm,0.9s
VNDA Vanda 67.93 180 P **P** **00 43 21.9 -0.2**
comp=Z,34nm,0.8s,baz=339,slow=6.1,SNR=31
VNDA LR LR 01 10 34.6
comp=Z,731nm,18.5s,baz=4.5,slow=34
VNDA Vanda 67.93 180 P **P** **00 43 21.7 -0.4**
VNDA IAmb IAmb 00 43 23.7
comp=Z,44nm,0.8s
CD2 Chengdu 68.19 309⇑ P **P** **00 43 25.0 +0.4**
CD2 pP pP 00 43 37.8 -1.8
CD2 sP sP 00 43 44.0 -1.8
CD2 S **S** **00 52 20.8 -0.1**
CD2 sS sS 00 52 45.5 -0.8
CD2 SS **SS** **00 56 44.0 -1.0**
CD2 pmax pmax
comp=Z,90nm,0.9s
CD2 pmax pmax
comp=Z,350nm,5.9s
CD2 LR LR
comp=Z,930nm,23.0s
CD2 LR LR
comp=Z,1μm,24.5s
CD2 LR LR
comp=Z,1μm,22.1s
HIA Hailar 68.94 332 P **P** **00 43 30.0 +1.2**
HIA pmax pmax
comp=Z,93nm,1.2s
HIA Hailar 68.94 332 P **P** **00 43 30.0 +1.2**
HIA IAmb IAmb 00 43 31.3
comp=Z,93nm,1.2s
HIA Hailar 68.94 332 IAMs_20 IAMs_20 01 11 37.6
comp=Z,2μm,21.0s
ZEA Zeya 69.32 339 eP **P** **00 43 32.7 +1.7**
ZEA pmax pmax
comp=N,83nm,1.0s
ZEA pmax pmax
comp=E,30nm,1.0s
ZEA pmax pmax
comp=Z,120nm,1.0s
ZEA MLR MLR
comp=N,600nm,17.0s
ZEA MLR MLR
comp=Z,1μm,17.0s
MA2 Magadan 69.42 354 c iP **P** **00 43 31.6 +0.1**
MA2 pmax pmax
comp=Z,40nm,1.0s
MA2 Magadan 69.42 354 P **P** **00 43 31.4 -0.2**
comp=Z,33nm,1.0s,baz=156,slow=6.1,SNR=21
MA2 Magadan 69.42 354 P **P** **00 43 31.8 +0.3**
MA2 Magadan 69.42 354 IAMs_20 IAMs_20 01 09 26.4
comp=Z,1μm,22.0s
LZH Lanzhou 70.50 314⇑ P **P** **00 43 40.5 +1.6**
LZH pP pP 00 43 53.5 -0.5
LZH S **S** **00 52 50.0 +1.8**
LZH sS sS 00 53 10.0 -4.2
LZH SS **SS** **00 57 16.3 -4.3**
LZH pmax pmax
comp=Z,53nm,1.2s
LZH pmax pmax
comp=Z,530nm,5.4s
LZH LR LR
comp=Z,460nm,17.9s
LZH LR LR
comp=Z,650nm,18.4s
LZH LR LR
comp=Z,850nm,17.9s
SEY Seymchan 72.60 356⇓ eP **P** **00 43 50.2 -0.5**
SEY Seymchan 72.60 356 P **P** **00 43 51.2 +0.5**
comp=Z,18nm,1.0s,baz=162,slow=6.0,SNR=30
KOHI KOHIMA 74.05 300 eP **P** **00 43 58.2 -2.1**
ULN Ulaanbaatar 74.53 325 P **P** **00 44 03.8 +1.2**
ULN pmax pmax
comp=Z,159nm,1.1s
ULN Ulaanbaatar 74.53 325 P **P** **00 44 03.8 +1.2**
GTA Gaotai 74.85 315⇑ P **P** **00 44 06.0 +1.4**
GTA pP PcP 00 44 18.0 -0.4
GTA sP sP 00 44 23.3 -2.7
GTA S **S** **00 53 37.5 -0.2**
GTA sS sS 00 53 59.5 -4.4
GTA SS **SS** **00 58 27.8 +0.8**
GTA pmax pmax
comp=Z,46nm,1.1s
GTA pmax pmax
comp=Z,260nm,6.7s
GTA LR LR
comp=Z,450nm,21.0s
GTA LR LR
comp=Z,440nm,21.3s
GTA LR LR
comp=Z,610nm,20.6s
ZIRO ZIRO 74.86 302 eP **P** **00 44 06.6 +1.6**
SONM Songino Array 74.88 325 P **P** **00 44 05.4 +0.8**
SONM pmax pmax
comp=Z,89nm,0.8s
SONM Songino Array 74.88 325 P **P** **00 44 05.9 +1.3**
comp=Z,89nm,0.8s,baz=138,slow=5.2,SNR=505
SONM LR LR 01 16 59.4
comp=Z,588nm,19.8s,baz=121,slow=36
SONM Songino Array 74.88 325 P **P** **00 44 05.4 +0.8**
TEZP TEZPUR 75.45 301 eP **P** **00 44 07.8 -0.4**
YAK Yakutsk 75.48 345 eP **P** **00 44 08.0 +0.5**
YAK e*PP **PcP** **00 44 20.3 0.0**
YAK e 00 44 27.7
YAK e 00 47 07.5
YAK eS **S** **00 53 46.1 +2.7**
YAK e*SS **ScS** **00 54 18.9 +3.0**
YAK eSS **SS** **00 58 38.5 +3.2**
YAK pmax pmax
comp=Z,164nm,1.2s
YAK pmax pmax
comp=N,38nm,1.0s
YAK pmax pmax
comp=E,27nm,1.2s
YAK pmax pmax
comp=Z,296nm,4.3s
YAK pmax pmax
comp=N,242nm,4.3s
YAK pmax pmax
comp=E,118nm,4.6s
YAK smax smax
comp=N,243nm,5.1s
YAK smax smax
comp=E,98nm,4.8s
YAK MLR MLR
comp=N,401nm,18.0s
YAK MLR MLR
comp=E,290nm,19.0s
YAK Yakutsk 75.48 345 P **P** **00 44 08.0 +0.5**
comp=E,46nm,0.7s,baz=331,slow=3.2,SNR=36
YAK Yakutsk 75.48 345 IAmb IAmb 00 44 10.1
comp=Z,194nm,1.2s
SHL Shillong 75.91 299 eP **P** **00 44 11.4 +0.3**
SHL Shillong 75.91 299 IAmb IAmb 00 44 12.5
comp=Z,81nm,1.2s
GAMB Gambell 75.98 12 IAMs_20 IAMs_20 01 10 19.0
comp=Z,1μm,21.0s
KDAK Kodiak Island 76.92 23 P **P** **00 44 16.8 +1.0**
KDAK pmax pmax
comp=Z,134nm,1.3s
KDAK Kodiak Island 76.92 23 P **P** **00 44 16.7 +0.9**
comp=Z,61nm,1.1s,baz=26,slow=6.5,SNR=6.5
KDAK Kodiak Island 76.92 23 P **P** **00 44 16.8 +1.0**
BOD Bodaibo 77.35 336 eP **P** **00 44 17.6 -0.6**
BOD pmax pmax
comp=Z,50nm,1.2s
BILL Bilibino 77.50 2 c iP **P** **00 44 19.7 +0.9**
BILL e 00 44 32.4
BILL e*PP sP 00 44 47.2 +6.3
BILL e 00 47 15.8
BILL ePPP PPP 00 49 03.7
BILL pmax pmax
comp=Z,131nm,1.1s
BILL MLR MLR
comp=Z,708nm,19.0s
BILL Bilibino 77.50 2 P **P** **00 44 19.6 +0.8**
LSA Lhasa 77.81 303 P **P** **00 44 23.0 +1.0**
LSA pmax pmax
comp=Z,69nm,1.2s
LSA Lhasa 77.81 303 P **P** **00 44 22.6 +0.6**
LSA pmax pmax
comp=Z,19nm,1.0s

LSA Lhasa 77.81 303 P P 00 44 22.6 +0.6
ZAK Zakamensk 77.98 326 eP P 00 44 22.6 +0.6
ZAK pmax pmax
comp=Z,70nm,1.1s
ANM Nome 78.08 14 IAmb IAmb 00 44 38.1
comp=Z,89nm,1.6s
TLY Talaya 78.46 328 c iP P 00 44 25.3 +0.7
TLY Talaya 78.46 328 P P 00 44 25.4 +0.9
comp=Z,36nm,0.9s,baz=152,slow=4.1,SNR=72
TLY Talaya 78.46 328 P P 00 44 25.6 +1.0
TLY IAmb IAmb 00 44 26.8
comp=Z,75nm,1.1s
BRLK Bradley Lake 78.92 22 IAmb IAmb 00 44 29.8
comp=Z,83nm,1.0s
SEW Seward 79.68 23 IAmb IAmb 00 44 33.4
comp=Z,62nm,1.0s
MOY Mondy 79.87 327 eP P 00 44 33.4 +1.0
MOY pmax pmax
comp=Z,89nm,2.7s
TAPN Taplejung 80.00 300 eP P 00 44 33.8 -0.1
comp=Z,85nm,1.3s
SUA Susitna One 80.11 21 IAmb IAmb 00 44 35.3
comp=Z,83nm,1.1s
SUA IAMs_20 IAMs_20 01 16 46.0
comp=Z,1µm,19.0s
ODAN Odare 80.14 299 eP P 00 44 34.5 -0.1
comp=Z,114nm,1.3s
SKT Skwentna 80.18 21 IAMs_20 IAMs_20 01 16 46.9
comp=Z,2µm,18.0s
RC01 Rabbit Creek A 80.22 22 IAmb IAmb 00 44 37.0
comp=Z,63nm,1.0s
QSPA South Pole Qui 80.42 180 P P 00 44 34.9 -0.3
QSPA IAmb IAmb 00 44 36.3
comp=Z,79nm,0.9s
PMR Palmer 80.77 22 IAmb IAmb 00 44 39.1
comp=Z,92nm,1.1s
RAMN Ramite 80.85 299 eP P 00 44 37.7 -0.7
KNK Knik Glacier 80.90 22 IAmb IAmb 00 44 41.9
comp=Z,46nm,1.0s
GHO Glory Hole Cre 80.97 22 IAmb IAmb 00 44 40.9
comp=Z,76nm,1.0s
HIN Hinchinbrook I 81.01 23 IAmb IAmb 00 44 40.6
comp=Z,89nm,1.1s
CHLP Challavanipeta 81.03 291 eP P 00 44 39.7 +0.5
CHLP IAmb IAmb 00 44 41.7
comp=Z,12nm,0.9s
GLI Glacier Island 81.08 23 IAmb IAmb 00 44 43.0
comp=Z,52nm,1.0s
GLI IAMs_20 IAMs_20 01 16 16.8
comp=Z,2µm,18.0s
SML Sawmill 81.20 22 P P 00 44 40.4 +1.1
SML IAmb IAmb 00 44 41.8
comp=Z,89nm,1.1s
FID Port Fidalgo 81.24 23 IAmb IAmb 00 44 43.7
comp=Z,66nm,1.1s
JIRN Jiri 81.39 300 eP P 00 44 41.5 +0.1
comp=Z,57nm,0.9s
EYAK Cordova Ski Ar 81.40 24 IAmb IAmb 00 44 42.7
comp=Z,47nm,1.1s
KTH Kantishna Hill 81.45 20 IAMs_20 IAMs_20 01 18 20.6
comp=Z,1µm,19.0s
RDOG Red Dog Mine 81.52 13 IAmb IAmb 00 44 43.4
comp=Z,72nm,1.1s
RDOG IAMs_20 IAMs_20 01 13 40.5
comp=Z,921nm,22.0s
SCM Sheep Creek Mo 81.59 22 IAmb IAmb 00 44 45.8
comp=Z,48nm,0.9s
SCM IAMs_20 IAMs_20 01 14 15.3
comp=Z,2µm,21.0s
TRF Thorofare Moun 81.59 20 IAmb IAmb 00 44 43.7
comp=Z,53nm,0.8s
TRF IAMs_20 IAMs_20 01 15 24.3
comp=Z,2µm,22.0s
GUN Gumba 81.72 300 eP P 00 44 43.3 +0.2
comp=Z,42nm,1.0s
BPAW Bear Paw Mtn. 81.80 19 IAMs_20 IAMs_20 01 16 01.8
comp=Z,1µm,21.0s
HMT Hamilton 81.87 24 IAmb IAmb 00 44 45.5
comp=Z,63nm,1.2s
PKI Pulchoki 82.03 300 eP P 00 44 44.6 -0.1
comp=Z,81nm,1.4s
PKIN Phulchoki 82.05 300 eP P 00 44 44.4 -0.3
RND Reindeer 82.05 20 IAMs_20 IAMs_20 01 18 05.4
comp=Z,1µm,20.0s
KKN Kakani 82.20 300 eP P 00 44 45.3 -0.2
IMAR Indian Mountai 82.26 17 P P 00 44 45.6 +0.9
DMN Daman 82.30 300 eP P 00 44 46.2 +0.1
comp=Z,139nm,1.3s
BWN Browne 82.35 20 IAMs_20 IAMs_20 01 15 38.7
comp=Z,2µm,22.0s
DHY Denali Highway 82.35 21 IAMs_20 IAMs_20 01 18 18.5
comp=Z,2µm,20.0s
MLY Manley 82.51 19 IAmb IAmb 00 44 48.8
comp=Z,73nm,1.0s
TGL Tana Glacier 82.69 24 IAmb IAmb 00 44 50.9
comp=Z,58nm,1.0s
GLB Gilahina Butte 82.69 23 IAmb IAmb 00 44 50.2
comp=Z,92nm,1.2s
GLB IAMs_20 IAMs_20 01 15 33.4
comp=Z,2µm,21.0s
VRDI Verde Repeater 82.71 24 IAmb IAmb 00 44 49.8
comp=Z,37nm,1.0s
VRDI IAMs_20 IAMs_20 01 14 49.9
comp=Z,2µm,20.0s
NEA Nenana 82.74 19 P P 00 44 48.0 +0.8
NEA IAMs_20 IAMs_20 01 15 51.0
comp=Z,1µm,20.0s
GKN Gorkha 82.81 300 eP P 00 44 48.3 -0.2
comp=Z,159nm,1.2s
PAX Paxson 82.97 22 IAmb IAmb 00 45 05.0
comp=Z,63nm,1.7s
PAX IAMs_20 IAMs_20 01 17 24.9
comp=Z,2µm,20.0s
PVM Polavaram 83.02 289 eP P 00 44 49.5 -0.1
PVM IAmb IAmb 00 44 49.9
comp=Z,26nm,1.7s
BALM Baldy 83.04 24 IAmb IAmb 00 44 52.0
comp=Z,49nm,1.0s
BALM IAMs_20 IAMs_20 01 16 41.7
comp=Z,2µm,19.0s
CCB Clear Creek Bu 83.20 20 IAmb IAmb 00 44 51.0
comp=Z,54nm,1.0s
CCB IAMs_20 IAMs_20 01 16 22.9
comp=Z,2µm,20.0s
TCOL CIGO, UAF Yank 83.33 19 P P 00 44 50.4 +0.2
baz=230,SNR=20
COLA College 83.33 19 P P 00 44 50.7 +0.5
COLA pmax pmax
comp=Z,138nm,0.9s
COLA College 83.33 19 P P 00 44 50.7 +0.5
COLA College 83.33 19 IAMs_20 IAMs_20 01 16 50.3
comp=Z,2µm,20.0s
HDA Harding Lake 83.34 20 IAMs_20 IAMs_20 01 16 56.6
comp=Z,1µm,20.0s
HDA Harding Lake 83.34 20 P P 00 44 50.9 +0.6
baz=231,SNR=67
IL31 83.59 20 P P 00 44 51.7 +0.2
IL31 IAmb IAmb 00 44 53.7
comp=Z,90nm,1.1s
ILAR Eielson Array 83.59 20 P P 00 44 51.7 +0.1
comp=Z,63nm,1.0s,baz=251,slow=4.1,SNR=126
ILAR LR LR 01 17 37.4
comp=Z,1µm,20.3s,baz=222,slow=32
MENT Mentasta 83.60 22 IAmb IAmb 00 44 57.0
comp=Z,44nm,1.0s
MENT IAMs_20 IAMs_20 01 15 16.4
comp=Z,1µm,20.0s
POKR Poker Plat Res 83.63 19 P P 00 44 51.8 0.0
baz=231,SNR=27
KOLN Koldanda 83.64 299 eP P 00 44 52.5 -0.4
comp=Z,136nm,1.2s
DANN Dangsing 83.64 300 eP P 00 44 52.4 -0.6
comp=Z,173nm,1.3s
MYLAV Mylavaram 83.84 288 eP P 00 44 53.9 0.0
MYLAV IAmb IAmb 00 44 54.4
comp=Z,12nm,1.1s
TIXI Tiksi 83.84 350 c iP P 00 44 52.9 +0.2
TIXI pmax pmax
comp=Z,42nm,1.0s
TIXI Tiksi 83.84 350 P P 00 44 52.6 -0.1
comp=Z,33nm,1.1s,baz=165,slow=5.5,SNR=32
TIXI Tiksi 83.84 350 P P 00 44 52.8 +0.1
TIXI IAmb IAmb 00 44 54.6
comp=Z,73nm,1.4s
TIXI IAMs_20 IAMs_20 01 21 03.2
comp=Z,827nm,22.0s
DIB Dawson Inlet, 83.89 34 IAmb IAmb 00 44 56.2
comp=Z,69nm,1.1s
DOT Dot Lake 83.89 21 IAmb IAmb 00 44 56.1
comp=Z,70nm,0.9s
DOT IAMs_20 IAMs_20 01 16 52.0
comp=Z,2µm,20.0s
SCRK Sand Creek 84.11 21 IAmb IAmb 00 44 57.0
comp=Z,70nm,1.0s
SKHT Srikalahasti 84.11 285 eP P 00 44 55.3 0.0
SKHT IAmb IAmb 00 44 55.9
comp=Z,8.4nm,1.1s
COLD Coldfoot 84.15 17 IAMs_20 IAMs_20 01 18 00.9
comp=Z,872nm,21.0s
ADKI Addanki 84.28 287 eP P 00 44 56.3 +0.1
ADKI IAmb IAmb 00 44 56.6
comp=Z,7.3nm,1.0s
MAW Mawson 84.40 202 P P 00 44 55.4 -0.3
comp=Z,21nm,1.0s,baz=85,slow=6.2,SNR=17
MAW LR LR 01 17 40.5
comp=Z,2µm,21.9s,baz=76,slow=32
BCAR Beaver Creek A 84.40 23 P P 00 44 56.8 +1.0
GGR Gangavaram 84.47 289 eP P 00 44 56.8 -0.3
GGR IAmb IAmb 00 44 57.1
comp=Z,9.2nm,0.9s
PRP Porcupine Dome 84.50 20 IAMs_20 IAMs_20 01 20 11.3
comp=Z,2µm,20.0s
KCPM Cahto Peak 84.87 49 IAmb IAmb 00 45 02.1
comp=Z,54nm,1.0s
WMQ Urumqi 84.92 316 eP P 00 44 59.5 +0.6
WMQ pP pP 00 45 13.3 -1.3
WMQ sP sP 00 45 19.0 -1.6
WMQ SKS **SKSac** 00 55 17.0 -1.8
WMQ S **SKKSac** 00 55 25.0 +0.1
WMQ sS sS 00 55 49.5 -0.5
WMQ pmax pmax
comp=Z,27nm,1.5s
WMQ pmax pmax
comp=Z,330nm,4.7s
WMQ LR LR
comp=Z,410nm,24.9s
WMQ LR LR
comp=Z,790nm,24.9s
WMQ LR LR
comp=Z,650nm,27.3s
WMQ Urumqi 84.92 316 P P 00 44 59.1 +0.2
WMQ pmax pmax
comp=Z,90nm,1.4s
WMQ Urumqi 84.92 316 P P 00 44 59.1 +0.2
WMQ IAmb IAmb 00 45 00.8
comp=Z,90nm,1.4s
KMRM Mail Ridge 84.93 48 IAmb IAmb 00 45 02.6
comp=Z,59nm,1.0s
BESE Bessie Mountai 85.04 28 IAmb IAmb 00 45 16.4
comp=Z,83nm,1.6s
NJS Nagarjunasagar 85.05 288 eP P 00 44 59.6 -0.4
NJS IAmb IAmb 00 45 00.1
comp=Z,14nm,0.9s
HOPS Hopland Field 85.05 49 IAmb IAmb 00 45 02.6
comp=Z,50nm,1.1s
KHMM Horse Mountain 85.11 47 IAmb IAmb 00 45 02.9
comp=Z,47nm,1.1s
JIS Juneau Island 85.12 29 IAmb IAmb 00 45 15.5
comp=Z,39nm,1.4s
KRMB Red Mountain 85.17 47 IAmb IAmb 00 45 03.7
comp=Z,56nm,1.1s
GDXM Geysers 85.21 50 IAmb IAmb 00 45 03.7
comp=Z,37nm,1.0s
SKAG Skagway 85.23 27 P P 00 45 01.1 +1.1
SKAG IAmb IAmb 00 45 03.2
comp=Z,57nm,1.3s
FYU Fort Yukon 85.24 19 IAMs_20 IAMs_20 01 19 02.4
comp=Z,1µm,19.0s
TOLK Toolik Lake Re 85.27 16 IAmb IAmb 00 45 02.8
comp=Z,29nm,0.9s
TOLK IAMs_20 IAMs_20 01 19 00.6
comp=Z,954nm,20.0s
TOLK Toolik Lake Re 85.27 16 P P 00 45 01.5 +1.5
baz=228
SRLM Srisailam 85.35 287 eP P 00 45 01.0 -0.5
SRLM IAmb IAmb 00 45 01.6
comp=Z,15nm,0.9s
RPR Rampur 85.52 290 eP P 00 45 01.9 -0.4
RPR IAmb IAmb 00 45 02.2
comp=Z,8.9nm,0.8s
L02E Cave Junction 85.57 46 P P 00 45 04.6 +2.5
baz=253,SNR=7.4
EGAK Eagle 85.58 21 IAMs_20 IAMs_20 01 16 29.7
comp=Z,2µm,21.0s
O02D Mt. Diablo Mer 85.60 48 P P 00 45 04.1 +1.8
baz=254,SNR=26
J01E Myrtle Point 85.64 45 P P 00 45 04.1 +1.8
baz=253
SAO San Andreas Ge 85.68 52 IAmb IAmb 00 45 05.7
comp=Z,44nm,1.1s
K02D Willamette Mer 85.69 46 P P 00 45 04.5 +1.8
baz=253,SNR=12
N02D Trinity Center 85.88 47 P P 00 45 05.8 +2.0
baz=254,SNR=16
M02C Callahan 85.89 47 P P 00 45 05.7 +1.9
baz=254,SNR=21
WDC Whiskeytown Da 85.89 48 IAmb IAmb 00 45 06.8
comp=Z,41nm,1.2s
HYB Hyderabad 85.92 288 i P P 00 45 04.0 -0.4
HYBB Hyderabad (bro 85.93 288 eP P 00 45 03.9 -0.5
HYBB IAmb IAmb 00 45 04.0
comp=Z,8.9nm,1.1s
BMAR Burnt Mountain 85.96 18 P P 00 45 05.1 +1.6
I02D Swisshome 85.98 44 P P 00 45 06.1 +2.1
baz=253
WHY Whitehorse 85.99 26 IAmb IAmb 00 45 19.8
comp=Z,45nm,1.6s
PMPB Monarch Peak 86.05 52 IAmb IAmb 00 45 08.0
comp=Z,43nm,1.1s
YBH Yreka Blue Hor 86.09 47 IAmb IAmb 00 45 08.1
comp=Z,49nm,1.1s
HUMO Hull Mountain 86.16 46 IAmb IAmb 00 45 08.4
comp=Z,52nm,1.0s
I03D Drain, OR 86.20 45 P P 00 45 06.4 +1.2
baz=253,SNR=5.6
SNCC San Nicolas Is 86.33 56 P P 00 45 07.6 +1.6
baz=256
O03E Paynes Creek 86.35 48 P P 00 45 07.2 +1.1
baz=254,SNR=27
PAGB Antelope Grade 86.36 53 IAmb IAmb 00 45 09.4
comp=Z,56nm,1.1s
ORV Oroville 86.38 49 IAmb IAmb 00 45 08.8
comp=Z,25nm,1.1s
SRSP Sriramsagar 86.41 290 eP P 00 45 05.8 -0.9
SRSP IAmb IAmb 00 45 06.2
comp=Z,11nm,1.1s
SMMC Simmler 86.45 53 P P 00 45 08.4 +1.7
baz=256,SNR=6.0
PKM Mcpherson Peak 86.50 54 P P 00 45 08.3 +1.3
baz=256,SNR=14
L04D Klamath Falls 86.52 46 P P 00 45 08.1 +1.2
baz=254,SNR=12
AFDM Forest Hills D 86.62 50 IAmb IAmb 00 45 10.1
comp=Z,38nm,1.0s
URV Uravakonda 86.67 286 eP P 00 45 08.3 +0.2
URV IAmb IAmb 00 45 12.6
comp=Z,7.1nm,0.9s
G03D McMinnville, O 86.70 43 P P 00 45 09.0 +1.5
baz=253
M04C Macdoel 86.73 47 P P 00 45 09.1 +1.2
baz=254,SNR=16
CMB Columbia Colle 86.83 51 P P 00 45 08.8 +0.4
CMB Columbia Colle 86.83 51 P P 00 45 08.8 +0.4
CMB IAMs_20 IAMs_20 01 17 28.1
comp=Z,1µm,20.0s
H04D Lebanon 86.86 44 P P 00 45 09.9 +1.6
baz=253,SNR=7.4
I04A Tendick Farm, 86.88 45 P P 00 45 09.9 +1.3
baz=254,SNR=9.0
E03A Lebam 86.89 42 IAMs_20 IAMs_20 01 15 18.1
comp=Z,1µm,20.0s
BLG Laguna Peak, P 86.91 55 P P 00 45 10.1 +1.2
baz=256
J04D Umpqua Nationa 86.94 45 P P 00 45 10.5 +1.5
baz=254,SNR=10
K04D Chiloquin, OR 87.02 46 P P 00 45 10.7 +1.3
baz=254,SNR=5.9
VOG Valley Oaks Go 87.18 53 P P 00 45 11.6 +1.5
baz=256
RUBR Rubicon Trail 87.26 50 IAmb IAmb 00 45 13.6
comp=Z,28nm,1.0s
CIS Catalina Islan 87.27 56 P P 00 45 12.0 +1.3
baz=257
DLBC Dease Lake 87.28 29 P P 00 45 10.6 +0.5
comp=Z,16nm,0.9s,baz=237,slow=7.3,SNR=6.6
OSI Osito Audit: C 87.30 54 IAmb IAmb 00 45 14.0
comp=Z,47nm,1.1s
OSI IAMs_20 IAMs_20 01 14 31.7
comp=Z,2µm,21.0s
OSI Osito Audit: C 87.30 54 P P 00 45 12.5 +1.6
baz=256
VES Vestal, Richgr 87.30 53 P P 00 45 11.8 +1.1
baz=256
BEKR Beckworth 87.31 49 IAmb IAmb 00 45 13.6
comp=Z,28nm,1.0s
BEKR IAMs_20 IAMs_20 01 16 04.8
comp=Z,1µm,21.0s
ARVC Arvin 87.34 54 P P 00 45 12.3 +1.4
baz=256,SNR=6.6
D03D Eldon 87.49 41 P P 00 45 13.0 +1.6
baz=253
DECC Green Verdugo 87.53 55 P P 00 45 13.2 +1.3
baz=257
E04D Cinebar 87.55 42 P P 00 45 13.1 +1.5
baz=253
J05D Fort Rock, OR 87.56 46 P P 00 45 13.6 +1.6
baz=254,SNR=33
PGC Sidney 87.59 40 P P 00 45 12.5 +0.8
PGC IAmb IAmb 00 47 32.8
comp=Z,82nm,1.8s
D04E Lakebay 87.60 41 P P 00 45 13.5 +1.7
baz=253
PASC Pasadena Art C 87.63 55 P P 00 45 13.3 +0.9
PASC IAmb IAmb 00 45 14.9
comp=Z,41nm,1.1s
PASC Pasadena Art C 87.63 55 IAMs_20 IAMs_20 01 15 36.5
comp=Z,2µm,21.0s
WAKR Walker 87.67 51 IAMs_20 IAMs_20 01 15 19.3
comp=Z,1µm,22.0s
PNTR Pine Nut 87.69 50 IAmb IAmb 00 45 16.7
comp=Z,30nm,1.0s
ISA Isabella, Lake 87.74 53 IAMs_20 IAMs_20 01 15 09.4
comp=Z,1µm,20.0s
ISA Isabella, Lake 87.74 53 P P 00 45 14.2 +1.3
baz=257,SNR=13
MWC Mount Wilson 87.75 55 IAMs_20 IAMs_20 01 15 29.5
comp=Z,2µm,20.0s
I05D Terrebonne, OR 87.77 45 P P 00 45 14.4 +1.5
baz=254
OMMB Old Mammoth Mi 87.79 51 IAmb IAmb 00 45 16.2
comp=Z,25nm,1.1s
MOD Modoc Plateau 87.87 47 IAmb IAmb 00 45 16.4
comp=Z,42nm,1.1s
KLRI Killari 87.88 289 eP P 00 45 13.7 -0.2
MLAC Mammoth, Mammo 87.92 51 P P 00 45 15.5 +1.6
baz=256
YERR Yerington 87.93 50 P P 00 45 15.2 +1.3
EDW2 Edwards Air Fo 87.95 54 P P 00 45 15.5 +1.6
baz=257,SNR=17
EPYK Eagle Plains 87.99 21 IAMs_20 IAMs_20 01 18 38.4
comp=Z,1µm,20.0s
EPYK Eagle Plains 87.99 21 P P 00 45 15.0 +1.7
baz=241,SNR=20
PAHR Pah Rah Range 88.00 49 IAmb IAmb 00 45 17.1
comp=Z,32nm,1.0s
G05D Wamic, OR 88.03 44 P P 00 45 15.7 +1.7
baz=254
BFSC Mount Baldy Ra 88.07 55 P P 00 45 15.7 +1.0
baz=257,SNR=16
A04D Lummi Island 88.08 40 P P 00 45 15.9 +1.8
baz=253
F05D White Salmon 88.11 43 P P 00 45 15.8 +1.5
baz=254
LON Longmire 88.11 42 IAMs_20 IAMs_20 01 16 38.6
comp=Z,1µm,20.0s
D05A Enumclaw 88.11 42 IAmb IAmb 00 45 52.2
comp=Z,62nm,1.4s
109C Camp Elliot, M 88.23 56 P P 00 45 16.7 +1.5
baz=257
CWC Cottonwood Cre 88.23 53 P P 00 45 16.8 +1.4
baz=257
TIN Tinemaha, Big 88.25 52 P P 00 45 17.0 +1.6
baz=257
MURC Murrieta 88.31 56 P P 00 45 16.9 +1.2
baz=257
LRMC Laurel Mtn Rad 88.33 54 P P 00 45 17.4 +1.6
baz=257,SNR=20
B05A Bryant 88.34 41 P P 00 45 16.8 +1.4
baz=254
RYN Ryan 88.39 51 IAMs_20 IAMs_20 01 18 09.5
comp=Z,1µm,20.0s
NVAR Mina Array Bea 88.51 51 P P 00 45 17.5 +0.8
comp=Z,18nm,0.8s,baz=238,slow=7.6,SNR=92
NVAR LR LR 01 21 35.7
comp=Z,832nm,18.1s,baz=274,slow=33
BAR Barrett 88.54 57 IAmb IAmb 00 45 19.5
comp=Z,27nm,1.1s
MPMC Manual Prospec 88.61 53 P P 00 45 18.9 +1.7
baz=257,SNR=28
NV11 Mina Array Sit 88.63 51 IAmb IAmb 00 45 20.1
comp=Z,28nm,1.0s
NV11 IAMs_20 IAMs_20 01 21 22.7
comp=Z,1µm,19.0s
BBRC Big Bear Solar 88.67 55 P P 00 45 18.7 +1.1
baz=258
RRX Edison Barstow 88.75 54 P P 00 45 19.0 +1.4
baz=257
MONP2 Monument Peak 88.79 57 P P 00 45 19.8 +1.7
baz=258,SNR=28
KVN Kaiserville 88.81 50 IAmb IAmb 00 45 20.3
comp=Z,22nm,1.1s
PFO Pinyon Flats O 88.91 56 P P 00 45 20.5 +1.9
PFO pmax pmax
comp=Z,36nm,1.4s
PFO Pinyon Flats O 88.91 56 P P 00 45 19.7 +1.1
comp=Z,10.0nm,1.0s,baz=261,slow=5.1,SNR=12
PFO Pinyon Flats O 88.91 56 P P 00 45 20.5 +1.9
PFO IAmb IAmb 00 45 21.5
comp=Z,36nm,1.4s
PFO Pinyon Flats O 88.91 56 IAMs_20 IAMs_20 01 20 34.4
comp=Z,2µm,20.0s
PFO Pinyon Flats O 88.91 56 P P 00 45 20.0 +1.5
baz=258,SNR=8.1
GRAC Grapevine Rang 88.92 52 P P 00 45 20.0 +1.6
baz=257,SNR=17
XPFO Pion Flat 88.92 56 P P 00 45 20.1 +1.6
XPFO IAmb IAmb 00 45 21.5
comp=Z,39nm,1.4s
XPFO Pion Flat 88.92 56 IAMs_20 IAMs_20 01 19 22.4
comp=Z,2µm,20.0s
I07A Izee 88.98 45 IAmb IAmb 00 45 21.9
comp=Z,32nm,1.2s
GSC Goldstone, Bar 88.99 54 IAmb IAmb 00 45 21.9
comp=Z,36nm,1.1s
GSC IAMs_20 IAMs_20 01 15 47.4
comp=Z,2µm,21.0s
GSC Goldstone, Bar 88.99 54 P P 00 45 20.4 +1.6
baz=258,SNR=19
IKP In-Ko-Pah, Jac 89.00 57 P P 00 45 20.7 +1.7
baz=258,SNR=12
FURC Furnace Creek, 89.19 53 P P 00 45 21.3 +1.7
baz=258,SNR=20
WVOR Wild Horse Val 89.20 47 IAmb IAmb 00 45 23.0
comp=Z,47nm,1.1s
HEC Hector,Ludlow 89.27 55 P P 00 45 21.6 +1.4
baz=258,SNR=6.4
SWSC Sam W. Stewart 89.31 57 P P 00 45 22.0 +1.7
baz=258,SNR=15
BELC Belle Mtn. Jos 89.37 56 P P 00 45 22.4 +1.7
baz=258,SNR=51
MK31 Makanchi Array 89.42 318 P P 00 45 20.7 +0.2
MK31 pmax pmax
comp=Z,47nm,1.0s
MK31 Makanchi Array 89.42 318 P P 00 45 20.7 +0.2
MKAR Makanchi Array 89.42 318 P P 00 45 20.8 +0.3
comp=Z,54nm,0.9s,baz=102,slow=5.2,SNR=267
MKAR PKiKP **PKiKP** 00 50 17.8 -0.5
comp=Z,2.0nm,0.9s,baz=88,slow=3.3,SNR=3.7
MKAR PKKPbc **PKKPdf** 01 02 53.9 +0.7
comp=Z,0.4nm,0.7s,baz=268,slow=3.5,SNR=5.7
MKAR LR LR 01 25 52.3
comp=Z,373nm,21.6s,baz=83,slow=36
MKAR Makanchi Array 89.42 318 P P 00 45 20.2 -0.3
J08A Circle Bar Ran 89.53 46 IAmb IAmb 00 45 24.3
comp=Z,30nm,1.0s
SHOC Shoshone, Teco 89.54 54 P P 00 45 22.4 +1.1
baz=258,SNR=17
MAKZ Makanchi 89.63 318 P P 00 45 21.6 +0.1
MAKZ pmax pmax
comp=Z,66nm,1.1s
MAKZ MLR MLR
comp=Z,600nm,22.0s

MAKZ	**Makanchi**	89.63	318	P	**P**	00 45 21.6	+0.1		
G08A	**Pilot Rock**	89.65	44	IAmb	IAmb	00 45 24.7			
	comp=Z,26nm,1.2s								
TUQ	**Turquoise Moun**	89.72	54	P	**P**	00 45 24.1	+1.7		
	baz=258,SNR=46								
BC3	**Big Chuckawall**	89.74	56	P	**P**	00 45 24.4	+1.9		
	baz=258,SNR=25								
ZAA0	**Zalesovo Array**	89.78	325	IAmb	IAmb	00 45 23.6			
	comp=Z,19nm,0.9s								
ZAA0				IAMs_20	IAMs_20	01 26 14.0			
	comp=Z,720nm,21.0s								
ZALV	**Zalesovo Beam**	89.78	325	P	**P**	00 45 21.3	-0.6		
	comp=Z,28nm,1.0s,baz=116,slow=4.8,SNR=58								
ZALV				PKiKP	**PKiKP**	00 50 18.5	-0.1		
	comp=Z,0.8nm,0.6s,baz=96,slow=1.4,SNR=2.7								
ZALV				LR	LR	01 26 24.5			
	comp=Z,421nm,20.1s,baz=96,slow=36								
TPNV	**Topopah Spring**	89.78	53	IAmb	IAmb	00 45 25.6			
	comp=Z,46nm,1.1s								
TPNV	**Topopah Spring**	89.78	53	P	**P**	00 45 24.3	+1.7		
	baz=258,SNR=27								
SMLA	**Simla**	89.85	301	IVmB_BB		00 45 22.6			
	comp=Z,240nm,1.6s								
SMLA				IAmb	IAmb	00 45 27.1			
	comp=Z,8.4nm,0.4s								
INK	**Inuvik**	89.99	20	P	**P**	00 45 23.2	+0.6		
	comp=Z,13nm,1.0s,baz=234,slow=3.3,SNR=30								
INK	**Inuvik**	89.99	20	IAmb	IAmb	00 45 38.1			
	comp=Z,64nm,1.7s								
IRM	**Iron Mountain**	90.09	56	P	**P**	00 45 25.8	+1.8		
	baz=258,SNR=64								
GLA	**Glamis**	90.14	57	IAMs_20	IAMs_20	01 16 29.8			
	comp=Z,1μm,22.0s								
GLA	**Glamis**	90.14	57	P	**P**	00 45 26.3	+2.1		
	baz=259,SNR=19								
B08A	**Colville Reser**	90.15	41	IAmb	IAmb	00 45 26.0			
	comp=Z,24nm,1.0s								
B08A				IAMs_20	IAMs_20	01 19 55.5			
	comp=Z,1μm,20.0s								
E09A	**Wood Farm, Sta**	90.49	43	P	**P**	00 45 26.3	+0.8		
Y12C	**Blythe**	90.52	56	IAmb	IAmb	00 45 29.1			
	comp=Z,43nm,1.0s								
Y12C	**Blythe**	90.52	56	P	**P**	00 45 27.9	+1.9		
	baz=259,SNR=21								
PDGK	**Podgornoye**	90.54	314	P	**P**	00 45 25.5	-0.5		
SHPR	**Sheep Range**	90.55	53	IAMs_20	IAMs_20	01 18 57.7			
	comp=Z,1μm,21.0s								
R11A	**Troy Canyon, C**	90.58	51	IAmb	IAmb	00 45 29.4			
	comp=Z,45nm,1.1s								
R11A				IAMs_20	IAMs_20	01 17 19.4			
	comp=Z,1μm,21.0s								
R11A	**Troy Canyon, C**	90.58	51	P	**P**	00 45 27.7	+1.4		
	baz=258,SNR=82								
NEE2	**Needles Airpor**	90.64	55	P	**P**	00 45 28.0	+1.5		
	baz=259								
BMO	**Blue Mountains**	90.69	45	IAmb	IAmb	00 45 29.6			
	comp=Z,51nm,1.5s								
C09A	**Chrisman Ranch**	90.70	42	IAmb	IAmb	00 45 28.8			
	comp=Z,28nm,1.1s								
PDMCI	**Parker Dam,Lak**	90.94	56	P	**P**	00 45 29.6	+1.7		
	baz=259,SNR=15								
PRZ	**Przheval'sk**	91.14	313	P	**P**	00 45 29.6	+0.7		
PRZ				pmax	pmax				
	comp=Z,73nm,0.8s								
PRZ	**Przheval'sk**	91.14	313	P	**P**	00 45 29.6	+0.7		
SRIG	**Santa Rosalia**	91.28	63	IAMs_20	IAMs_20	01 16 41.1			
	comp=Z,2μm,21.0s								
W13A	**Hualapai Mount**	91.29	55	IAmb	IAmb	00 45 32.9			
	comp=Z,35nm,1.0s								
W13A				IAMs_20	IAMs_20	01 21 37.4			
	comp=Z,1μm,19.0s								
MFID	**Camas Ranch**	91.43	46	IAmb	IAmb	00 45 33.2			
	comp=Z,42nm,1.2s								
NEW	**Newport**	91.56	41	P	**P**	00 45 31.1	+0.7		
	comp=Z,34nm,1.0s,baz=230,slow=3.5,SNR=33								
NEW	**Newport**	91.56	41	IAmb	IAmb	00 45 32.7			
	comp=Z,36nm,1.0s								
NEW	**Newport**	91.56	41	P	**P**	00 45 31.5	+1.0		
	baz=257								
214A	**Organ Pipe Nat**	91.61	58	IAMs_20	IAMs_20	01 16 36.8			
	comp=Z,1μm,22.0s								
214A	**Organ Pipe Nat**	91.61	58	P	**P**	00 45 33.2	+2.1		
	baz=260								
Y14A	**Wickenburg**	91.80	56	IAMs_20	IAMs_20	01 18 02.8			
	comp=Z,1μm,20.0s								
SYO	**Syowa Base**	91.85	198	*i*P	**P**	00 45 29.2	-2.2		
SYO	**Syowa Base**	91.85	198	*i*pP	pP	00 45 44.8	-2.2		
SYO	**Syowa Base**	91.85	198	*e*PP	PP	00 49 10.4	-0.1		
KDJ	**Kajisay**	91.96	312	P	**P**	00 45 33.2	+0.5		
KDJ				pmax	pmax				
	comp=Z,210nm,1.4s								
KDJ	**Kajisay**	91.96	312	P	**P**	00 45 33.2	+0.5		
KSH	**Kashi**	92.37	310	P	**P**	00 45 36.8	+2.2		
KSH				pP	pP	00 45 52.0	+1.6		
KSH				sP	sP	00 45 57.5	+1.0		
KSH				SKS	**SKSac**	00 56 05.8	+2.3		
KSH				S	**S**	00 56 32.5	-1.5		
KSH				sS	sS	00 57 01.8	+1.1		
KSH				pmax	pmax				
	comp=Z,35nm,1.0s								
KSH				pmax	pmax				
	comp=Z,560nm,4.9s								
KSH				LR	LR				
	comp=Z,330nm,5.3s								
KSH				LR	LR				
	comp=Z,340nm,4.8s								
KSH				LR	LR				
	comp=Z,820nm,11.0s								
ULHL	**Ulahol**	92.67	312	P	**P**	00 45 37.0	+1.0		
	SNR=13								
KURK	**Kurchatov**	92.68	321	P	**P**	00 45 35.2	-0.3		
KURK				pmax	pmax				
	comp=Z,43nm,1.3s								
KURK	**Kurchatov**	92.68	321	P	**P**	00 45 35.2	-0.3		
KURK				IAmb	IAmb	00 45 36.4			
	comp=Z,43nm,1.2s								
KURK					**PKiKP**	00 50 22.7	-0.9		
KURK	**Kurchatov**	92.68	321	IAMs_20	IAMs_20	01 32 14.0			
	comp=Z,926nm,20.0s								
HSIG		92.69	61	IAmb	IAmb	00 45 39.0			
	comp=Z,18nm,1.1s								
HSIG				IAMs_20	IAMs_20	01 18 39.7			
	comp=Z,1μm,20.0s								
KURBB	**Kurchatov Arra**	92.71	321	P	**P**	00 45 35.0	-0.7		
	comp=Z,16nm,1.0s,baz=105,slow=3.5,SNR=92								
KURBB				PKiKP	**PKiKP**	00 50 22.3	-1.3		
	comp=Z,1.4nm,0.9s,baz=116,slow=1.8,SNR=6.1								
U15A	**North Rim**	92.80	54	IAmb	IAmb	00 45 41.1			
	comp=Z,23nm,0.9s								
U15A				IAMs_20	IAMs_20	01 19 46.4			
	comp=Z,1μm,21.0s								
DUG	**Dugway, Tooele**	93.04	50	P	**P**	00 45 38.9	+1.3		
DUG				pmax	pmax				
	comp=Z,23nm,1.3s								
DUG	**Dugway, Tooele**	93.04	50	P	**P**	00 45 38.9	+1.3		
DUG				IAmb	IAmb	00 45 40.8			
	comp=Z,23nm,1.3s								
DUG	**Dugway, Tooele**	93.04	50	P	**P**	00 45 39.1	+1.4		
	baz=260,SNR=12								
X16A	**Lo Mia Camp, P**	93.16	56	IAMs_20	IAMs_20	01 18 36.7			
	comp=Z,1μm,22.0s								
TUC	**Tucson**	93.36	58	P	**P**	00 45 40.6	+1.4		
TUC				pmax	pmax				
	comp=Z,10.0nm,0.9s								
TUC	**Tucson**	93.36	58	P	**P**	00 45 40.6	+1.4		
TUC	**Tucson**	93.36	58	IAMs_20	IAMs_20	01 17 41.3			
	comp=Z,1μm,22.0s								
TUC	**Tucson**	93.36	58	P	**P**	00 45 40.9	+1.7		
	baz=261								
WUAZ	**Wupatki**	93.39	55	IAMs_20	IAMs_20	01 21 39.8			
	comp=Z,1μm,19.0s								
WUAZ	**Wupatki**	93.39	55	P	**P**	00 45 41.0	+1.6		
	baz=261								
MSO	**Missoula**	93.39	43	P	**P**	00 45 39.2	+0.1		
	baz=260								
SPUT	**South Promonto**	93.50	49	P	**P**	00 45 40.3	+0.6		
C36M	**Paulatuk**	93.56	20	P	**P**	00 45 40.1	+1.0		
	baz=252								
KBK	**Karagaybulak**	93.68	312	P	**P**	00 45 41.0	+0.5		
	SNR=9.4								
CHMS	**Chumysh**	93.88	313	P	**P**	00 45 41.1	-0.2		
	SNR=11								
CTU	**Camp Tracy**	93.92	50	P	**P**	00 45 42.4	+0.7		
UCH	**Uchtor**	93.93	312	P	**P**	00 45 42.7	+0.7		
	SNR=9.8								
AAK	**Ala-Archa**	94.01	312	P	**P**	00 45 41.4	-0.7		
AAK				pmax	pmax				
	comp=Z,91nm,0.8s								
AAK	**Ala-Archa**	94.01	312	P	**P**	00 45 42.5	+0.5		
	SNR=9.3								
AAK	**Ala-Archa**	94.01	312	P	**P**	00 45 41.4	-0.7		
DLMT	**Dillon**	94.06	45	IAmb	IAmb	00 45 45.3			
	comp=Z,35nm,1.2s								
USP	**Ospenovka**	94.10	313	P	**P**	00 45 42.3	0.0		
	SNR=12								
JLU	**Jordanelle**	94.13	50	P	**P**	00 45 43.7	+0.9		
X18A	**Snowflake**	94.39	56	IAMs_20	IAMs_20	01 20 28.4			
	comp=Z,1μm,20.0s								
319A	**Douglas**	94.48	59	IAmb	IAmb	00 45 47.9			
	comp=Z,17nm,0.9s								
319A				IAMs_20	IAMs_20	01 23 30.0			
	comp=Z,1μm,18.0s								
AML	**Almayashu**	94.51	312	P	**P**	00 45 45.1	+0.4		
	SNR=12								
EKS2	**Erkin-Say**	94.53	312	P	**P**	00 45 44.6	+0.2		
	SNR=9.6								
W18A	**Petrified Fore**	94.65	55	IAMs_20	IAMs_20	01 18 51.3			
	comp=Z,1μm,22.0s								
ARSB	**Arslanbob**	94.92	311	P	**P**	00 45 46.6	+0.4		
TPAW	**Teton Pass**	94.94	47	IAmb	IAmb	00 45 48.5			
	comp=Z,16nm,1.0s								
REDW	**Red Top Meadow**	94.99	47	IAmb	IAmb	00 45 49.7			
	comp=Z,18nm,1.1s								
IMW	**Indian Meadow**	95.00	46	IAmb	IAmb	00 45 49.9			
	comp=Z,22nm,1.1s								
IMW				IAMs_20	IAMs_20	01 23 57.0			
	comp=Z,762nm,20.0s								
SNOW	**Snow King Moun**	95.08	47	IAmb	IAmb	00 45 50.6			
	comp=Z,19nm,0.9s								
FLWY	**Flagg Ranch**	95.20	46	IAmb	IAmb	00 45 50.8			
	comp=Z,21nm,1.1s								
H17A	**Grant Village**	95.33	46	IAmb	IAmb	00 45 52.8			
	comp=Z,24nm,0.9s								
H17A				IAMs_20	IAMs_20	01 25 52.0			
	comp=Z,1μm,20.0s								
H17A	**Grant Village**	95.33	46	P	**P**	00 45 51.4	+3.1		
	baz=262,SNR=25								
YUF	**Upper Falls**	95.42	46	P	**P**	00 45 50.9	+2.3		
YKA	**Yellowknife Ar**	95.73	28	P	**P**	00 45 49.1	-0.1		
	comp=Z,11nm,0.9s,baz=256,slow=4.8,SNR=93								
YKA				PKiKP	**PKiKP**	00 50 27.9	-0.7		
	comp=Z,0.7nm,0.8s,baz=261,slow=1.3,SNR=5.3								
YKA				LR	LR	01 23 23.7			
	comp=Z,852nm,20.5s,baz=0.0,slow=32								
BW06	**Boulder Array**	95.85	48	IAmb	IAmb	00 45 53.4			
	comp=Z,15nm,1.1s								
BW06	**Boulder Array**	95.85	48	P	**P**	00 45 51.5	+0.9		
	baz=262,SNR=17								
PD31	**Pinedale Array**	95.85	48	IAmb	IAmb	00 45 53.3			
	comp=Z,14nm,1.1s								
PDAR	**Pinedale Array**	95.85	48	P	**P**	00 45 51.4	+0.8		
	comp=Z,12nm,1.0s,baz=251,slow=2.7,SNR=52								
PDAR				LR	LR	01 25 25.8			
	comp=Z,307nm,18.2s,baz=276,slow=33								
PDAR	**Pinedale Array**	95.85	48	P	**P**	00 45 50.6	0.0		
121A	**Cookes Peak, D**	95.90	58	IAMs_20	IAMs_20	01 19 34.6			
	comp=Z,1μm,21.0s								
121A	**Cookes Peak, D**	95.90	58	P	**P**	00 45 52.1	+1.1		
	baz=262								
MVCO	**Mesa Verde**	95.93	53	IAMs_20	IAMs_20	01 23 43.0			
	comp=Z,1μm,20.0s								
RLMT	**Red Lodge**	96.36	45	P	**P**	00 45 54.4	+1.6		
	baz=263,SNR=6.9								
EGMT	**Eagleton**	96.38	42	P	**P**	00 45 53.9	+1.3		
	baz=263,SNR=20								
O20A	**White River Ci**	96.50	50	P	**P**	00 45 54.7	+1.2		
	baz=263								
Y22D	**IRIS PASSCAL I**	96.81	57	IAMs_20	IAMs_20	01 22 53.6			
	comp=Z,1μm,20.0s								
EPT	**El Paso**	96.89	59	IAMs_20	IAMs_20	01 24 03.4			
	comp=Z,1μm,20.0s								
KKAR	**Karatay Array**	96.97	312	P	**P**	00 45 54.6	-0.8		
KKAR	**Karatay Array**	96.97	312	P	**P**	00 45 54.6	-0.8		
HPIG		97.02	64	IAMs_20	IAMs_20	01 20 18.2			
	comp=Z,1μm,21.0s								
KBL	**Kabul**	97.13	304	P	**P**	00 45 55.7	-0.8		
KBL				pmax	pmax				
	comp=Z,7.0nm,1.1s								
KBL	**Kabul**	97.13	304	P	**P**	00 45 55.7	-0.8		
ANMO	**Albuquerque**	97.30	56	P	**P**	00 45 57.3	0.0		
ANMO				pmax	pmax				
	comp=Z,8.0nm,1.0s								
ANMO	**Albuquerque**	97.30	56	P	**P**	00 45 57.2	0.0		
ANMO	**Albuquerque**	97.30	56	IAMs_20	IAMs_20	01 20 49.4			
	comp=Z,1μm,22.0s								
ANMO	**Albuquerque**	97.30	56	P	Pdif	00 45 58.8	+1.5		
	baz=263								
S22A	**4UR Ranch, Cre**	97.31	53	IAMs_20	IAMs_20	01 21 19.8			
	comp=Z,1μm,21.0s								
S22A	**4UR Ranch, Cre**	97.31	53	P	Pdif	00 45 58.5	+1.0		
	baz=264								
MNTX	**Cornudas Mount**	97.83	59	IAMs_20	IAMs_20	01 24 32.6			
	comp=Z,1μm,20.0s								
MNTX	**Cornudas Mount**	97.83	59	P	Pdif	00 46 00.0	+0.5		
	baz=264								
K22A	**Casper**	98.06	48	P	Pdif	00 46 01.5	+1.0		
	baz=264								
BVAR	**Borovoye Array**	98.06	322	P	**P**	00 45 59.3	-0.7		
	comp=Z,17nm,0.9s,baz=98,slow=5.1,SNR=53								
BVAR				PKiKP	**PKiKP**	00 50 33.0	+0.1		
	comp=Z,1.1nm,0.7s,baz=108,slow=4.7,SNR=2.6								
BRVK	**Borovoye**	98.13	322	P	**P**	00 45 59.7	-0.6		
BRVK				pmax	pmax				
	comp=Z,19nm,1.1s								
BRVK				MLR	MLR				
	comp=Z,800nm,20.0s								
BRVK	**Borovoye**	98.13	322	P	**P**	00 45 59.7	-0.6		
BRVK				IAmb	IAmb	00 46 00.8			
	comp=Z,19nm,1.1s								
BRVK	**Borovoye**	98.13	322	IAMs_20	IAMs_20	01 31 19.6			
	comp=Z,811nm,20.0s								
SNAA	**Sanae**	98.24	185	P	**P**	00 45 59.5	-1.1		
SNAA	**Sanae**	98.24	185	P	**P**	00 45 59.6	-1.1		
SNAA				pmax	pmax				
	comp=Z,11nm,1.0s								
SNAA	**Sanae**	98.24	185	P	**P**	00 45 59.6	-1.1		
N23A	**Red Feather La**	98.32	50	Pdiff	Pdif	00 46 03.0	+1.1		
	baz=264								
SDCO	**Great Sand Dun**	98.36	53	IAMs_20	IAMs_20	01 24 10.5			
	comp=Z,1μm,20.0s								
SDCO	**Great Sand Dun**	98.36	53	Pdiff	Pdif	00 46 02.7	+0.5		
	baz=264								
ISCO	**Idaho Springs**	98.47	51	IAMs_20	IAMs_20	01 28 30.2			
	comp=Z,789nm,20.0s								
LAO	**LASA Array**	98.63	44	Pdiff	Pdif	00 46 03.9	+1.1		
	baz=265								
Q24A	**Divide**	98.75	52	Pdiff	Pdif	00 46 05.0	+1.1		
	baz=265								
TXAR	**Lajitas Array**	99.05	62	P	**Pdif**	00 46 05.9	+0.8		
TXAR	**Lajitas Array**	99.05	62	P	**Pdif**	00 46 05.1	-0.1		
	comp=Z,0.8nm,0.8s,baz=268,slow=6.1,SNR=7.6								
TXAR				LR	LR	01 23 13.6			
	comp=Z,728nm,20.4s,baz=0.0,slow=31								
TXAR	**Lajitas Array**	99.05	62	P	**Pdif**	00 46 05.9	+0.8		
VNA3	**Neumayer Olymp**	99.14	183	P	**Pdif**	00 46 03.0	-1.5		
T25A	**Trinidad**	99.17	54	IAMs_20	IAMs_20	01 25 18.8			
	comp=Z,1μm,19.0s								
T25A	**Trinidad**	99.17	54	Pdiff	**Pdif**	00 46 07.2	+1.5		
	baz=265								
VNA2	**Neumayer--Watz**	99.32	184	P	**Pdif**	00 46 04.2	-1.1		
	baz=170,slow=4.4								
ZAIG	**Zacatecas**	99.33	68	IAMs_20	IAMs_20	01 21 01.7			
	comp=Z,748nm,21.0s								
RSSD	**Black Hills**	99.98	47	Pdiff	**Pdif**	00 46 10.5	+1.4		
	baz=266								
DGMT	**Dagmar**	100.12	42	Pdiff	**Pdif**	00 46 10.5	+1.2		
	baz=267								
MSTX	**Muleshoe**	100.23	57		**Pdif**	00 46 11.7	+1.3		
MSTX				IAMs_20	IAMs_20	01 22 15.1			
	comp=Z,1μm,22.0s								
MSTX	**Muleshoe**	100.23	57	Pdiff	**Pdif**	00 46 11.2	+0.8		
	baz=265								
AMTX	**Amarillo**	101.20	56	IAMs_20	IAMs_20	01 25 13.7			
	comp=Z,1μm,20.0s								
AMTX	**Amarillo**	101.20	56	Pdiff	**Pdif**	00 46 15.4	+0.8		
	baz=266								
OGNE	**Ogallala**	101.28	50	IAMs_20	IAMs_20	01 29 00.5			
	comp=Z,1μm,19.0s								
JCT	**Junction City**	102.49	61	IAMs_20	IAMs_20	01 27 58.3			
	comp=Z,1μm,20.0s								
833A	**Chaparral WMA,**	102.69	63	IAMs_20	IAMs_20	01 24 51.9			
	comp=Z,1μm,19.0s								
ABTX	**Abilene, Hawle**	102.75	59	IAMs_20	IAMs_20	01 24 24.0			
	comp=Z,1μm,21.0s								
RES	**Resolute Bay**	102.83	15	PKiKP	**PKiKP**	00 50 41.0	+0.1		
	comp=Z,1.7nm,1.0s,baz=249,slow=3.7,SNR=4.7								
CBKS	**Cedar Bluff**	102.96	52	IAMs_20	IAMs_20	01 27 32.1			
	comp=Z,1μm,20.0s								
U32A	**Winter Ranch,**	103.46	55	IAMs_20	IAMs_20	01 25 21.1			
	comp=Z,1μm,21.0s								
WMOK	**Wichita Mounta**	103.58	57	IAMs_20	IAMs_20	01 29 29.6			
	comp=Z,1μm,20.0s								
SUSD	**Miller**	103.64	47	IAMs_20	IAMs_20	01 26 44.8			
	comp=Z,1μm,20.0s								
435B	**Jarrell**	104.41	61	IAMs_20	IAMs_20	01 25 43.0			
	comp=Z,1μm,20.0s								
ABKAR	**Akbulak array**	104.54	318		**Pdif**	00 46 28.1	-0.9		
WHTX	**Lake Whitney,**	104.57	59	IAMs_20	IAMs_20	01 29 25.2			
	comp=Z,854nm,19.0s								
ARU	**Arti**	104.91	326	P	**Pdif**	00 46 27.9	-2.5		
ARU				S	**SKSac**	00 57 05.0	-0.6		
ARU				MLR	MLR				
	comp=Z,803nm,21.0s								
ECSD	**EROS Data Cent**	105.33	47		**Pdif**	00 46 34.3	+1.7		
ECSD	**EROS Data Cent**	105.33	47	PKiKP	**PKiKP**	00 50 46.5	0.0		
	baz=271								
ULM	**Lac du Bonnet**	105.55	41	PKiKP	**PKiKP**	00 50 46.5	-0.1		
	comp=Z,5.7nm,1.2s,baz=114,slow=1.8,SNR=4.2								
AKTO	**Aktyubinsk**	105.72	320	PKiKP	**PKiKP**	00 50 47.2	+0.3		
	baz=269,slow=0.5								
TUL1	**Leonard**	106.05	55	IAMs_20	IAMs_20	01 24 55.9			
	comp=Z,1μm,22.0s								
NATX	**Nacogdoches**	106.94	60	IAMs_20	IAMs_20	01 27 05.9			
	comp=Z,973nm,19.0s								
HHAR	**Hobbs**	107.54	55	IAMs_20	IAMs_20	01 30 19.5			
	comp=Z,1μm,20.0s								
MIAR	**Mount Ida**	107.86	57	IAMs_20	IAMs_20	01 28 23.0			
	comp=Z,1μm,22.0s								
SPMN	**Marine on St.**	107.98	46	IAMs_20	IAMs_20	01 32 12.6			
	comp=Z,1μm,20.0s								
U40A	**Yellville**	108.42	55	PKiKP	**PKiKP**	00 50 52.1	-0.3		
	baz=272								
Z41A	**Richland Creek**	108.52	58	IAMs_20	IAMs_20	01 28 50.8			
	comp=Z,990nm,20.0s								
MGMO	**Mountain Grove**	108.86	54	IAMs_20	IAMs_20	01 30 53.4			
	comp=Z,1μm,20.0s								
WHAR	**Wooly Hollow**	108.91	56	IAMs_20	IAMs_20	01 27 44.7			
	comp=Z,1μm,22.0s								
W41B	**Gary Mavity, V**	108.94	56	IAMs_20	IAMs_20	01 28 17.7			
	comp=Z,1μm,20.0s								
W41B	**Gary Mavity, V**	108.94	56	PKiKP	**PKiKP**	00 50 52.9	-0.4		
	baz=272								
ABPO	**Ambohimpanom**	109.02	246	IAMs_20	IAMs_20	01 30 58.0			
	comp=Z,967nm,20.0s								
SPITS	**Spitsbergen Ar**	109.14	353	PKiKP	**PKiKP**	00 50 52.1	-0.4		
	comp=Z,10nm,0.9s,baz=177,slow=11,SNR=3.6								
CCM	**Cathedral Cave**	109.63	53	IAMs_20	IAMs_20	01 30 00.8			
	comp=Z,1μm,19.0s								
LCAR	**Lake Charles**	109.80	55	IAMs_20	IAMs_20	01 31 06.4			
	comp=Z,710nm,21.0s								
G40A	**Rib Lake**	109.81	45	IAMs_20	IAMs_20	01 34 13.9			
	comp=Z,805nm,20.0s								
MET	**Memphis--Engin**	110.84	56	IAMs_20	IAMs_20	01 32 52.9			
	comp=Z,1μm,20.0s								
HENM	**Henderson Moun**	111.12	54	IAMs_20	IAMs_20	01 30 28.2			
	comp=Z,926nm,20.0s								
S44A	**Carbondale**	111.23	53	IAMs_20	IAMs_20	01 29 35.9			
	comp=Z,1μm,21.0s								
HALT	**Halls**	111.28	55	IAMs_20	IAMs_20	01 30 13.4			
	comp=Z,894nm,21.0s								
GLAT	**Glass**	111.30	55	IAMs_20	IAMs_20	01 28 35.9			
	comp=Z,879nm,21.0s								
OXF	**Oxford**	111.30	57	IAMs_20	IAMs_20	01 32 46.1			
	comp=Z,782nm,20.0s								
PLAL	**Pickwick Lake**	112.37	56	IAMs_20	IAMs_20	01 31 54.3			
	comp=Z,992nm,19.0s								
DAG	**Danmarks Havn**	112.82	360	*i* PKiKP	**PKiKP**	00 50 58.0	-1.5		
DAG				pmax	pmax				
	comp=Z,4.0nm,0.8s								
DAG	**Danmarks Havn**	112.82	360	*i* P	**PKiKP**	00 50 58.0	-1.5		
	comp=Z,4.3nm,0.8s								
T47A	**Sharon Grove**	112.99	54	IAMs_20	IAMs_20	01 35 10.8			
	comp=Z,732nm,20.0s								
L46A	**Eue Claire**	113.03	48	PKiKP	**PKiKP**	00 51 01.2	+0.3		
	baz=278								
K46A	**Dorr**	113.31	48	PKiK

S50A	Richmond	115.06	53	PKiKP	PKiKP	00 51 04.6	-0.3	
	baz=277							
W51A	Cleveland	115.06	56	PKiKP	PKPdf	00 51 04.9	-0.1	
	baz=276							
D48A	Paudash Townsh	115.21	42	PKiKP	PKPdf	00 51 05.3	+0.3	
	baz=284							
Q50A	Georgetown	115.23	52	PKiKP	PKiKP	00 51 05.2	0.0	
	baz=278							
P50A	Jamestown	115.25	51	PKiKP	PKPdf	00 51 05.5	+0.2	
	baz=279							
O50A	Cable	115.31	50	PKiKP	PKPdf	00 51 05.5	+0.1	
	baz=279							
152A	Waverly Hall	115.33	58	PKiKP	PKiKP	00 51 06.0	+0.4	
	baz=275							
Z52A	Williamson	115.54	58	PKiKP	PKiKP	00 51 06.2	+0.3	
	baz=275							
N50A	Nevada	115.56	49	PKiKP	PKPdf	00 51 06.3	+0.5	
	baz=280							
L50A	Kingsville	115.59	48	PKiKP	PKPdf	00 51 06.2	+0.4	
	baz=281							
R51A	Hillsboro	115.61	52	PKiKP	PKPdf	00 51 05.9	0.0	
	baz=278							
Q51A	Peebles	115.69	51	PKiKP	PKPdf	00 51 06.0	-0.1	
	baz=279							
S51A	Beattyville	115.70	53	PKiKP	PKiKP	00 51 06.3	+0.2	
	baz=278							
VRH	Novokhopyorsk	115.71	323	*e*PKiKP	PKiKP	00 51 04.7	-1.0	
VRH				pmax	pmax			
	comp=Z,20nm,0.8s							
W52A	Murphy	115.75	56	PKiKP	PKPdf	00 51 06.3	-0.1	
	baz=276							
Y52A	Lilburn	115.77	57	PKiKP	PKPdf	00 51 06.2	-0.2	
	baz=276							
ACSO	Alum Creek Sta	115.78	50	PKiKP	PKiKP	00 51 06.3	+0.1	
	baz=280							
TKL	Tuckaleechee C	115.81	55	IAMs_20	IAMs_20	01 35 01.3		
	comp=Z,932nm,20.0s							
X52A	Dahlonega	115.83	56	PKiKP	PKiKP	00 51 06.8	+0.3	
	baz=276							
TZTN	Tazewell	115.88	54	IAMs_20	IAMs_20	01 34 59.2		
	comp=Z,1µm,20.0s							
SUMG	Summit	115.93	6	*i* PKiKP	PKPdf	00 51 07.0	+0.9	
SUMG				pmax	pmax			
	comp=Z,26nm,1.1s							
SUMG	Summit	115.93	6	*i* P	PKPdf	00 51 07.0	+0.9	
	comp=Z,26nm,1.1s							
V52A	Sevierville	115.93	55	IAMs_20	IAMs_20	01 33 26.6		
	comp=Z,1µm,22.0s							
V52A	Sevierville	115.93	55	PKiKP	PKiKP	00 51 06.8	+0.1	
	baz=277							
U52A	Thorn Hill	116.04	54	PKiKP	PKPdf	00 51 06.4	-0.5	
	baz=278							
O51A	Pataskala	116.07	50	PKiKP	PKPdf	00 51 06.3	-0.5	
	baz=280							
N51A	Ashland	116.11	49	PKiKP	PKPdf	00 51 06.9	0.0	
	baz=280							
Y53A	Monroe	116.17	57	PKiKP	PKPdf	00 51 07.2	0.0	
	baz=276							
M51A	Elyria	116.18	49	PKiKP	PKiKP	00 51 07.0	0.0	
	baz=281							
Z53A	Monticello	116.24	58	PKiKP	PKPdf	00 51 06.9	-0.4	
	baz=276							
T52A	Hallie	116.25	53	PKiKP	PKiKP	00 51 07.4	+0.1	
	baz=278							
GOGA	Godfrey	116.31	58	IAMs_20	IAMs_20	01 32 08.9		
	comp=Z,988nm,20.0s							
GOGA	Godfrey	116.31	58	PKiKP	PKPdf	00 51 07.3	-0.2	
	baz=276							
X53A	Estanollee	116.33	56	PKiKP	PKiKP	00 51 07.7	+0.3	
	baz=277							
W53A	Cullowhee	116.36	56	PKiKP	PKiKP	00 51 08.0	+0.4	
	baz=277							
TIGA	Tifton	116.39	60	PKiKP	PKPdf	00 51 07.5	-0.1	
	baz=275							
ZEI	Tsey	116.42	313	*i* PKiKP	PKPdf	00 51 04.5	-3.2	
ZEI				pmax	pmax			
	comp=Z,7.0nm,0.9s							
I51A	Listowel	116.52	46	PKiKP	PKPdf	00 51 07.4	-0.1	
	baz=283							
P52A	Corning	116.52	50	PKiKP	PKPdf	00 51 07.3	-0.4	
	baz=280							
V53A	Saluda	116.58	55	PKiKP	PKiKP	00 51 08.3	+0.4	
	baz=278							
T53A	Wise	116.63	53	PKiKP	PKPdf	00 51 08.0	-0.1	
	baz=278							
N52A	McGinn's Farm,	116.64	49	PKiKP	PKPdf	00 51 07.9	0.0	
	baz=281							
U53A	Fall Branch	116.68	54	PKiKP	PKiKP	00 51 08.4	+0.3	
	baz=278							
M52A	Chesterland	116.75	48	PKiKP	PKPdf	00 51 08.1	0.0	
	baz=281							
D51A	Lot 18 Range I	116.84	42	PKiKP	PKiKP	00 51 08.3	+0.2	
	baz=286							
R53A	Hurricane	116.88	52	PKiKP	PKPdf	00 51 08.3	-0.1	
	baz=279							
Y54A	Tignall	116.91	57	PKiKP	PKiKP	00 51 08.7	+0.1	
	baz=277							
E51A	G1948 Merrick	116.91	42	PKiKP	PKiKP	00 51 08.6	+0.4	
	baz=285							
KBZ	Khabaz	116.93	314	PKP	PKPdf	00 51 07.5	-0.7	
	comp=Z,3.5nm,0.8s,baz=112,slow=4.7,SNR=8.0							
KBZ				PKKPbc	PKKPbc	01 01 35.3	0.0	
	comp=Z,2.3nm,0.9s,baz=93,slow=1.1,SNR=4.3							
AKH	Akhalkalaki	117.00	312	⇑P	PKiKP	00 51 09.6	+0.8	
KIV	Kislovodsk	117.03	315	*i* PKiKP	PKPdf	00 51 07.1	-1.5	
KIV				pmax	pmax			
	comp=Z,23nm,1.1s							
KIV				MLR	MLR			
	comp=Z,874nm,23.0s							
X54A	Belton	117.08	56	PKiKP	PKiKP	00 51 09.4	+0.5	
	baz=277							
O53A	New Philadelph	117.11	50	PKiKP	PKPdf	00 51 08.8	0.0	
	baz=281							
P53A	Whipple	117.11	51	PKiKP	PKiKP	00 51 09.0	+0.2	
	baz=280							
H52A	Wyevale	117.12	45	PKiKP	PKPdf	00 51 08.7	0.0	
	baz=284							
Q53A	Leroy	117.12	51	PKiKP	PKPdf	00 51 08.7	-0.2	
	baz=280							
MATQ	Matagami	117.16	39	PKiKP	PKPdf	00 51 08.5	-0.1	
	baz=288							
NEY	Neytrino	117.17	314	⇓*i* PKiKP	PKiKP	00 51 10.2	+1.1	
W54A	Cherokee Point	117.17	56	PKiKP	PKPdf	00 51 09.0	-0.1	
	baz=278							
OBN	Obninsk	117.22	328	*i* PKiKP	PKiKP	00 51 09.1	+0.6	
OBN				*e*		00 52 17.7		
OBN				*e*PPP	PPP	00 54 46.4		
OBN				pmax	pmax			
	comp=Z,17nm,1.1s							
OBN				MLR	MLR			
	comp=Z,1µm,24.0s							
OBN	Obninsk	117.22	328	PKP	PKPdf	00 51 07.3	-1.2	
	comp=Z,1.6nm,0.4s,baz=88,slow=18,SNR=3.9							
155A	Kite	117.23	58	PKiKP	PKPdf	00 51 09.1	-0.1	
	baz=276							
VSR	Storozhevoye	117.23	323	*e*PKiKP	PKPdf	00 51 07.5	-1.1	
VSR				pmax	pmax			
	comp=Z,10.0nm,0.8s							
VORD	Divnogorie	117.24	323	*e*PKiKP	PKPdf	00 51 08.4	-0.3	
VORD				pmax	pmax			
	comp=Z,30nm,1.4s							
U54A	Nelsons Funny	117.26	54	PKiKP	PKiKP	00 51 09.5	+0.2	
	baz=276							
V54A	Nebo	117.27	55	PKiKP	PKPdf	00 51 09.3	+0.1	
	baz=278							
M53A	WI Miller and	117.27	48	PKiKP	PKiKP	00 51 09.2	+0.1	
	baz=282							
N53A	Lisbon	117.28	49	PKiKP	PKiKP	00 51 09.4	+0.3	
	baz=281							
T54A	Tazewell	117.37	53	PKiKP	PKiKP	00 51 09.6	+0.1	
	baz=279							
D52A	ZEK Kipawa Sen	117.50	42	PKiKP	PKPdf	00 51 09.3	0.0	
	baz=286							
E52A	Mattawa	117.53	43	PKiKP	PKPdf	00 51 09.3	0.0	
	baz=286							
Q54A	Coxs Mills	117.63	51	PKiKP	PKiKP	00 51 10.0	+0.2	
	baz=280							
R54A	Victor	117.65	52	PKiKP	PKPdf	00 51 09.7	-0.2	
	baz=280							
X55A	Gracelyn & Ava	117.70	56	PKiKP	PKiKP	00 51 10.6	+0.5	
	baz=276							
O54A	Avella	117.75	50	PKiKP	PKiKP	00 51 10.6	+0.5	
	baz=281							
P54A	Burton	117.78	50	PKiKP	PKiKP	00 51 10.3	+0.1	
	baz=281							
LSQQ	Lebel-sur-Quev	117.79	39	PKiKP	PKiKP	00 51 10.2	+0.3	
	baz=289							
V55A	Taylorsville	117.84	55	PKiKP	PKPdf	00 51 10.2	-0.2	
	baz=279							
KMSC	Kings Mountain	117.85	55	PKiKP	PKiKP	00 51 10.4	0.0	
	baz=278							
G53A	Haliburton	117.87	44	PKiKP	PKPdf	00 51 09.9	-0.2	
	baz=285							
N54A	Moraine State	117.88	49	PKiKP	PKPdf	00 51 10.2	0.0	
	baz=282							
U55A	TA2, Sparta	117.88	54	PKiKP	PKPdf	00 51 10.0	-0.5	
	baz=279							
T55A	Pulaski	117.99	53	PKiKP	PKPdf	00 51 10.3	-0.3	
	baz=280							
M54A	Oil Creek Stat	118.00	48	PKiKP	PKiKP	00 51 10.6	+0.1	
	baz=283							
ALGO	Algonquin Park	118.03	43	PKiKP	PKPdf	00 51 10.4	+0.1	
	baz=286							
JSC	Jenkinsville	118.03	56	IAMs_20	IAMs_20	01 33 28.2		
	comp=Z,409nm,19.0s							
Z56A	Williston	118.06	57	IAMs_20	IAMs_20	01 33 55.6		
	comp=Z,1µm,21.0s							
Z56A	Williston	118.06	57	PKiKP	PKPdf	00 51 10.8	0.0	
	baz=277							
L54A	Sinclairville	118.09	47	PKiKP	PKiKP	00 51 10.9	+0.2	
	baz=283							
S55A	Lewisburg	118.10	52	PKiKP	PKPdf	00 51 10.8	0.0	
	baz=280							
G54A	Lake Saint Pet	118.16	43	PKiKP	PKPdf	00 51 10.7	0.0	
	baz=286							
E53A	Dumoine, Ponti	118.17	42	PKiKP	PKPdf	00 51 10.7	0.0	
	baz=287							
Q55A	Buckhannon	118.20	51	PKiKP	PKPdf	00 51 11.0	0.0	
	baz=281							
MCWV	Mont Chateau	118.25	50	PKiKP	PKPdf	00 51 11.0	0.0	
	baz=282							
BLA	Blacksburg	118.26	53	PKiKP	PKiKP	00 51 11.4	+0.2	
	baz=280							
R55A	Marlinton	118.31	52		PKiKP	00 51 11.4	+0.1	
R55A	Marlinton	118.31	52	PKiKP	PKiKP	00 51 11.6	+0.4	
	baz=281							
V56A	Mocksville	118.43	54	PKiKP	PKiKP	00 51 11.9	+0.4	
	baz=279							
K54A	Basiliko Farm,	118.45	47	PKiKP	PKiKP	00 51 11.5	+0.1	
	baz=284							
E54A	Lac Daplat, Po	118.47	42	PKiKP	PKPdf	00 51 11.2	+0.1	
	baz=287							
O55A	Ligonier	118.55	49	PKiKP	PKPdf	00 51 11.6	+0.1	
	baz=282							
D54A	Lac Fusel, La	118.60	41	PKiKP	PKPdf	00 51 11.1	-0.3	
	baz=288							
Z57A	Bowman	118.62	57	PKiKP	PKPdf	00 51 11.7	-0.2	
	baz=278							
N55A	Marion Center	118.66	49	PKiKP	PKPdf	00 51 11.4	-0.4	
	baz=283							
M55A	Ridgway	118.67	48	PKiKP	PKiKP	00 51 11.9	0.0	
	baz=283							
FINES	FINESS Array B	118.73	337	PKP	PKPdf	00 51 11.1	-0.1	
	comp=Z,16nm,0.9s,baz=49,slow=3.3,SNR=41							
L55A	Hinsdale	118.74	47	PKiKP	PKiKP	00 51 12.1	+0.1	
	baz=284							
R56A	Bull Pasture M	118.83	51	PKiKP	PKiKP	00 51 12.5	+0.2	
	baz=281							
K55A	Perry	118.87	46	PKiKP	PKPdf	00 51 11.9	-0.2	
	baz=284							
Q56A	Snyder Ridge,	118.88	51	IAMs_20	IAMs_20	01 36 36.3		
	comp=Z,891nm,20.0s							
W57A	Gilead	118.94	55	PKiKP	PKiKP	00 51 12.7	+0.2	
	baz=279							
V57A	Coltrane Farms	118.99	54	PKiKP	PKPdf	00 51 12.5	0.0	
	baz=280							
P56A	Dayton Farm, R	119.04	50	PKiKP	PKPdf	00 51 12.4	-0.2	
	baz=282							
O56A	Blue Knob Stat	119.08	49	PKiKP	PKPdf	00 51 12.7	0.0	
	baz=283							
M56A	Emporium	119.09	48	PKiKP	PKPdf	00 51 12.6	0.0	
	baz=284							
158A	Hollywood	119.12	58	PKiKP	PKPdf	00 51 12.7	-0.1	
	baz=278							
G55A	Calabogie	119.12	43	PKiKP	PKPdf	00 51 12.5	0.0	
	baz=287							
N56A	West Decatur	119.14	48	PKiKP	PKiKP	00 51 13.0	+0.2	
	baz=283							
E55A	Montcerf-Lytto	119.20	42	PKiKP	PKiKP	00 51 13.0	+0.3	
	baz=288							
T57A	Hurt	119.22	53	PKiKP	PKiKP	00 51 13.1	+0.2	
	baz=280							
U57A	Blanch	119.25	54	PKiKP	PKiKP	00 51 13.2	+0.1	
	baz=280							
S57A	Dark Hollow, R	119.31	52	PKiKP	PKiKP	00 51 13.3	+0.2	
	baz=281							
L56A	Greenwood	119.38	47	PKiKP	PKiKP	00 51 13.6	+0.3	
	baz=285							
ATD	Ata Tunnel	119.48	278	IAMs_20	IAMs_20	01 47 09.9		
	comp=Z,675nm,18.0s							
SSPA	Standing Stone	119.50	49	PKiKP	PKiKP	00 51 13.5	0.0	
	baz=284							
X58A	Rowland	119.56	56	PKiKP	PKPdf	00 51 13.6	-0.1	
	baz=279							
W58A	Raeford	119.57	55	PKiKP	PKiKP	00 51 13.8	+0.1	
	baz=279							
P57A	Homestead Farm	119.67	50	IAMs_20	IAMs_20	01 42 44.3		
	comp=Z,953nm,19.0s							
P57A	Homestead Farm	119.67	50	PKiKP	PKPdf	00 51 13.8	+0.1	
	baz=283							
N57A	Milroy	119.73	48	PKiKP	PKiKP	00 51 14.0	+0.1	
	baz=284							
O57A	Amberson	119.79	49	PKiKP	PKiKP	00 51 14.1	+0.1	
	baz=283							
T58A	Grand View Acr	119.79	53	PKiKP	PKPdf	00 51 13.9	-0.1	
	baz=281							
E56A	St. Veronique	119.85	41	PKiKP	PKPdf	00 51 13.8	-0.1	
	baz=289							
D56A	ZEC Mazanza, M	119.86	41	PKiKP	PKPdf	00 51 13.4	-0.4	
	baz=290							
U58A	Oxford	119.88	54	PKiKP	PKPdf	00 51 14.1	-0.1	
	baz=281							
M57A	Sunshine Farm,	119.89	48		PKiKP	00 51 14.8	+0.6	
M57A	Sunshine Farm,	119.89	48	PKiKP	PKPdf	00 51 14.0	-0.1	
	baz=284							
L57A	Andrews Acres	119.93	47	PKiKP	PKPdf	00 51 14.2	0.0	
	baz=284							
K57A	Scipio Center	119.97	46	PKiKP	PKPdf	00 51 14.2	0.0	
	baz=286							
S58A	Poland Farm, P	120.04	52	PKiKP	PKPdf	00 51 14.5	0.0	
	baz=282							
Q58A	Fox Den Farm,	120.04	50	PKiKP	PKPdf	00 51 14.4	-0.1	
	baz=283							
R58B	Mineral	120.10	52	PKiKP	PKPdf	00 51 14.0	-0.6	
	baz=282							
W59A	Clinton	120.19	55	PKiKP	PKiKP	00 51 15.1	+0.2	
	baz=280							
P58A	Pank, Wackersv	120.21	50	PKiKP	PKPdf	00 51 14.3	-0.4	
	baz=283							
V59A	Middlesex	120.25	54	PKiKP	PKPdf	00 51 15.0	+0.1	
	baz=280							
VSU	Vasula	120.25	334	⇑*i* PKiKP	PKiKP	00 51 14.5	+0.2	
VSU	Vasula	120.25	334	*e*P	PKPdf	00 51 13.2	-1.0	
H57A	Richville	120.26	44	PKiKP	PKPdf	00 51 14.7	0.0	
	baz=288							
N58A	Sunbury	120.32	48	PKiKP	PKPdf	00 51 14.9	0.0	
	baz=284							
G57A	Newington	120.34	43	PKiKP	PKiKP	00 51 15.0	+0.1	
	baz=288							
O58A	Lewisberry	120.34	49	PKiKP	PKPdf	00 51 15.1	0.0	
	baz=284							
M58A	Price's Panora	120.37	47	PKiKP	PKPdf	00 51 15.1	0.0	
	baz=285							
D57A	Chemin Vers le	120.43	41	PKiKP	PKPdf	00 51 15.0	0.0	
	baz=290							
CBN	Corbin Frederi	120.44	51	PKiKP	PKPdf	00 51 15.2	0.0	
	baz=282							
E57A	Chemin Saint G	120.47	41	PKiKP	PKPdf	00 51 15.2	+0.1	
	baz=290							
U59A	Littleton	120.49	53	PKiKP	PKPdf	00 51 15.1	-0.3	
	baz=281							
BINY	Binghamton	120.49	46	PKiKP	PKiKP	00 51 15.7	+0.3	
	baz=286							
T59A	Double "B" Far	120.56	53	PKiKP	PKPdf	00 51 15.4	-0.1	
	baz=282							
K58A	Earlville	120.58	46	PKiKP	PKiKP	00 51 16.0	+0.4	
	baz=286							
S59A	Mechanicsville	120.59	52	PKiKP	PKPdf	00 51 15.7	0.0	
	baz=282							
L58A	Harry Jones Me	120.63	47	PKiKP	PKiKP	00 51 15.7	+0.1	
	baz=286							
R59A	King George, V	120.64	51	PKiKP	PKiKP	00 51 16.4	+0.7	
	baz=283							
J58A	Remsen	120.66	45	PKiKP	PKPdf	00 51 15.5	0.0	
	baz=287							
O59A	Robesonia	120.84	49	PKiKP	PKPdf	00 51 15.7	-0.3	
	baz=285							
G58A	Ormstown	120.95	43	PKiKP	PKPdf	00 51 15.7	-0.2	
	baz=289							
U60A	Pendleton	120.97	53	PKiKP	PKPdf	00 51 15.1	-1.2	
	baz=282							
N59A	State Game Lan	120.99	48	PKiKP	PKPdf	00 51 16.0	-0.3	
	baz=285							
LATQ	La Tuque	121.00	40	IAMs_20	IAMs_20	01 36 22.4		
	comp=Z,557nm,21.0s							
LATQ	La Tuque	121.00	40	PKiKP	PKPdf	00 51 16.0	-0.1	
	baz=292							
V60A	Jim Taylor Roa	121.03	54	PKiKP	PKPdf	00 51 16.3	-0.2	
	baz=281							
R60A	Leonardtown, M	121.03	51	PKiKP	PKPdf	00 51 15.9	-0.4	
	baz=283							
D58A	Chemin du LacG	121.04	40	PKiKP	PKPdf	00 51 15.7	-0.5	
	baz=291							
E58A	La Victoria	121.05	41	PKiKP	PKPdf	00 51 15.8	-0.3	
	baz=290							
M59A	Waymart	121.07	47	PKiKP	PKPdf	00 51 16.4	0.0	
	baz=286							
SCHQ	Schefferville	121.07	30	PKP	PKPdf	00 51 15.4	-0.6	
	comp=Z,5.7nm,0.9s,baz=222,slow=3.8,SNR=4.7							
H58A	Gabriels	121.10	44	PKiKP	PKiKP	00 51 16.5	0.0	
	baz=289							
S60A	Water View	121.10	52	PKiKP	PKiKP	00 51 16.6	0.0	
	baz=283							
K59A	Cooperstown	121.14	46	PKiKP	PKiKP	00 51 16.8	+0.2	
	baz=287							
L59A	Walton	121.17	46	PKiKP	PKPdf	00 51 16.4	-0.2	
	baz=287							
J59A	Piesco	121.17	45	PKiKP	PKPdf	00 51 16.5	0.0	
	baz=288							
GCUF	Volcan Galeras	121.18	94	*e*P	PKiKP	00 51 18.6	+0.5	
H59A	Cadyville	121.36	43	PKiKP	PKiKP	00 51 17.3	+0.4	
	baz=289							
P60A	Greenville	121.38	49	PKiKP	PKiKP	00 51 17.1	0.0	
	baz=285							
O60A	Telford	121.42	48	PKiKP	PKPdf	00 51 17.2	0.0	
	baz=285							
Q60A	Greensboro	121.42	50	PKiKP	PKiKP	00 51 17.3	+0.1	
	baz=284							
N60A	Cedar Hill Far	121.50	48	PKiKP	PKPdf	00 51 17.3	+0.1	
	baz=286							
M60A	Port Jervis	121.71	47	PKiKP	PKiKP	00 51 17.9	+0.1	
	baz=286							
D59A	Saint-Raymond	121.74	40	PKiKP	PKiKP	00 51 17.8	+0.2	
	baz=292							
ODNJ	Ogdensburg	121.80	47		PKiKP	00 51 17.9	0.0	
I60A	Shoreham	121.89	44	PKiKP	PKiKP	00 51 18.5	+0.5	
	baz=289							
J60A	Lant Hill Farm	121.99	45	PKiKP	PKPdf	00 51 18.2	+0.1	
	baz=288							
IZAR	Zarasai	122.03	332	*e*P	PKiKP	00 51 18.6	+0.7	
P61A	Hammonton	122.04	49	PKiKP	PKiKP	00 51 18.5	+0.1	
	baz=285							
F60A	Warwick	122.05	41	PKiKP	PKPdf	00 51 18.2	+0.1	
	baz=291							
H60A	Morristown	122.05	43	PKiKP	PKPdf	00 51 18.1	-0.1	
	baz=290							
POPC	Popayan, Colom	122.07	93	*e*P	PKPdf	00 51 18.2	-1.2	
N61A	South Mountain	122.11	48	PKiKP	PKiKP	00 51 19.0	+0.5	
	baz=286							
ISAL	Salakas	122.19	332	*e*P	PKiKP	00 51 19.0	+0.8	
ISAL				IAmb	IAmb	00 51 20.4		
	comp=Z,20nm,1.1s							
L61A	Hillsdale 1, H	122.23	46	PKiKP	PKPdf	00 51 18.5	0.0	
	baz=288							
E60A	Ste Agathe de	122.23	41	PKiKP	PKPdf	00 51 18.0	-0.5	
	baz=292							
IIGN	Ignalina	122.27	331	*e*P	PKiKP	00 51 19.5	+1.1	
IIGN				IAmb	IAmb	00 51 20.8		
	comp=Z,46nm,1.2s							
K61A	Williamstown	122.28	45	PKiKP	PKiKP	00 51 19.0	+0.1	
	baz=288							
PAL	Palisades	122.33	47	PKiKP	PKPdf	00 51 18.8	+0.1	
	baz=287							
M61A	Granite Spring	122.34	47	PKiKP	PKiKP	00 51 19.0	0.0	
	baz=287							
D60A	Saint Jean D'O	122.36	40	PKiKP	PKPdf	00 51 18.5	-0.1	
	baz=293							
MNMC	Minye Minye	122.37	120		PKPdf	00 51 19.8	-0.1	
J61A	Chester	122.56	44	PKiKP	PKiKP	00 51 19.5	+0.1	
	baz=289							
G61A	St-Isidore-de-	122.58	42	PKiKP	PKPdf	00 51 19.2	0.0	
	baz=291							
H61A	Lyndonville	122.58	43	PKiKP	PKiKP	00 51 19.4	0.0	
	baz=291							
I61A	Oroboro, Fairl	122.60	44	PKiKP	PKiKP	00 51 19.7	+0.3	
	baz=290							
SIM	Simferopol'	122.60	318	*i* PKiKP	PKiKP	00 51 19.8	+0.4	
SIM				pmax	pmax			
	comp=Z,25nm,0.8s							
YOTC	Yotoco, Valle	122.62	91	*e*P	PKPdf	00 51 19.3	-1.0	
N62A	Caumsett State	122.67	47	PKiKP	PKiKP	00 51 19.9	+0.3	
	baz=287							
F61A	St Evariste	122.67	41	PKiKP	PKiKP	00 51 19.7	+0.2	
	baz=292							
GAZ	Gaziantep	122.68	308		PKiKP	00 51 20.0	+0.1	
LBNH	Lisbon	122.68	43	PKiKP	PKiKP	00 51 19.8	+0.3	
	baz=290							
WSPT	Westport, CT	122.69	47	IAMs_20	IAMs_20	01 46 37.1		
	comp=Z,798nm,18.0s							
D61A	St Aubert, Com	122.70	39	PKiKP	PKiKP	00 51 20.0	+0.5	
	baz=294							
L61B	Northampton	122.76	45	PKiKP	PKPdf	00 51 19.7	+0.1	
	baz=289							
E61A	Lac Etchemin	122.82	40	PKiKP	PKiKP	00 51 19.9	+0.1	
	baz=293							
K62A	Royalston	123.00	45	PKiKP	PKiKP	00 51 20.3	+0.1	
	baz=289							
BOSA	Boshof	123.00	227	PKP	PKPdf	00 51 20.5	-0.2	
	comp=Z,2.3nm,0.6s,baz=118,slow=3.4,SNR=9.8							
H62A	Milan	123.08	42	PKiKP	PKiKP	00 51 20.6	+0.2	
	baz=291							
J62A	Henniker	123.11	44	PKiKP	PKiKP	00 51 20.7	+0.2	
	baz=290							
AKASG	Malin Array Be	123.17	326	PKP	PKPdf	00 51 19.9	-0.2	
	comp=Z,31nm,0.8s,baz=60,slow=2.7,SNR=8

PQI	Presque Isle	124.28	39			PKiKP	00 51 22.5	-0.1	
NORC	Norcasia	124.31	90	eP		PKPdf	00 51 22.7	-0.8	
NAO01	NORSAR Array S	124.31	343			PKiKP	00 51 23.1	+0.8	
H64A	Troy	124.34	42	PKiKP		PKiKP	00 51 23.2	+0.4	
	baz=293								
I64A	Boothbay	124.34	43	PKiKP		PKiKP	00 51 23.2	+0.4	
	baz=292								
G64A	Maxfield	124.40	41	PKiKP		PKiKP	00 51 23.2	+0.3	
	baz=294								
F64A	Sherman	124.41	40	PKiKP		PKiKP	00 51 22.9	0.0	
	baz=294								
SUW	Suwalki	124.48	331	ePKiKP		PKiKP	00 51 23.1	+0.3	
SUW	Suwalki	124.48	331	ePKP		PKiKP	00 51 23.1	+0.3	
E64A	Bridgewater	124.50	39	PKiKP		PKPdf	00 51 23.0	+0.2	
	baz=295								
ZARC	Zaragoza, Cauc	124.55	87	eP		PKPdf	00 51 23.1	-0.7	
BRTR	Keskin Array B	124.68	312	PKP		PKPdf	00 51 23.1	-0.4	
	comp=Z,6.6nm,0.9s,baz=131,slow=2.4,SNR=28								
ROSC	El Rosal	124.75	91	PKP		PKPdf	00 51 24.9	+0.1	
	comp=Z,18nm,0.6s,baz=134,slow=7.2,SNR=10								
ROSC	El Rosal	124.75	91	eP		PKPdf	00 51 24.6	-0.1	
ROSC	El Rosal	124.75	91			PKiKP	00 51 24.9	-0.1	
LPAZ	La Paz	124.82	117	PKiKP		PKiKP	00 51 25.3	-0.1	
LPAZ	La Paz	124.82	117	PKP		PKPdf	00 51 24.8	-0.3	
	comp=Z,8.8nm,1.0s,baz=321,slow=2.3,SNR=17								
LPAZ	La Paz	124.82	117			PKiKP	00 51 25.3	-0.1	
PTBC	PUERTO BERRIO	124.84	89	eP		PKPdf	00 51 22.7	-1.7	
BORG	Borgarnes	124.88	1	PKP		PKiKP	00 51 23.2	-0.1	
	comp=Z,28nm,1.0s,baz=53,slow=4.2,SNR=5.0								
SORM	Soroca	124.89	323	⇑PKiKP		PKPdf	00 51 23.2	-0.3	
SORM	Soroca	124.89	323	⇑P		PKPdf	00 51 23.2	-0.3	
H65A	Eastbrook	124.95	41	PKiKP		PKiKP	00 51 24.2	+0.1	
	baz=294								
MMAI	Mount Meron Ar	125.06	304	PKP		PKiKP	00 51 25.0	+0.3	
	comp=Z,14nm,0.9s,baz=64,slow=3.8,SNR=9.5								
SPBC	San Pablo de B	125.10	90	eP		PKPdf	00 51 23.1	-1.9	
MILM	Milestii Mici	125.18	322	⇓P		PKPdf	00 51 24.2	+0.1	
G65A	Princeton	125.19	41	PKiKP		PKiKP	00 51 24.6	+0.1	
	baz=295								
ANTO	Ankara	125.25	312	⇑PKiKP		PKiKP	00 51 25.6	+0.7	
ANTO	Ankara	125.25	312	⇑P		PKiKP	00 51 25.6	+0.7	
ANTO	Ankara	125.25	312			PKPdf	00 51 24.7	+0.1	
CHIC	Chingaza	125.30	91	eP		PKPdf	00 51 25.6	-0.2	
SMLC	San Martn de	125.46	86	eP		PKPdf	00 51 23.1	-2.4	
H66A	Whiting	125.52	41	PKiKP		PKiKP	00 51 25.1	0.0	
	baz=295								
VASR	Vaslui	125.93	322	⇑P		PKiKP	00 51 26.2	+0.3	
EIL	Elat	126.09	300	PKP		PKiKP	00 51 26.7	-0.1	
	comp=Z,10nm,0.9s,baz=320,slow=3.4,SNR=8.7								
JURR	Jurilovca	126.09	319	⇑P		PKiKP	00 51 26.7	+0.4	
RUSC	La Rusia	126.11	90	eP		PKPdf	00 51 27.5	+0.1	
RUSC	La Rusia	126.11	90			PKPdf	00 51 26.7	-0.8	
MDUB	Mudurnu	126.20	314			PKiKP	00 51 26.9	+0.1	
TOPG	Topolog	126.37	320	⇓P		PKiKP	00 51 27.4	+0.6	
CFR	Carcaliu	126.39	320	⇓PKiKP		PKiKP	00 51 27.2	+0.3	
CFR	Carcaliu	126.39	320	⇓P		PKiKP	00 51 27.2	+0.3	
GHRR		126.44	321	⇑P		PKiKP	00 51 28.3	+1.4	
LVV	L'vov	126.47	327	ePKiKP		PKiKP	00 51 27.4	+0.5	
PRAR	RASCA	126.52	323	⇑P		PKiKP	00 51 27.4	+0.3	
TIRR	Tirgusor	126.53	319	⇓PKiKP		PKPdf	00 51 25.7	-1.0	
TIRR	Tirgusor	126.53	319	⇓P		PKPdf	00 51 25.7	-1.0	
MFTR	Murfatlar	126.64	319	⇓P		PKiKP	00 51 28.1	+0.7	
PAMC	Pamplona, Colo	126.66	88	eP		PKPdf	00 51 27.0	-1.4	
TESR	Tescani	126.69	322	⇓P		PKiKP	00 51 27.4	-0.1	
HARR	Harsova	126.73	320	⇑PKiKP		PKiKP	00 51 27.6	0.0	
HARR	Harsova	126.73	320	⇑P		PKiKP	00 51 27.6	0.0	
ODBI	Odobesti	126.79	321	⇑P		PKiKP	00 51 29.0	+1.3	
VRI	Vrincioaia	126.95	321	⇑PKiKP		PKPdf	00 51 27.5	0.0	
VRI	Vrincioaia	126.95	321	⇑P		PKPdf	00 51 27.5	0.0	
BEL	Belsk	126.96	330	ePKiKP		PKiKP	00 51 28.8	+1.0	
BEL	Belsk	126.96	330	ePKP		PKiKP	00 51 28.8	+1.0	
BURAR	Bucovina Array	126.99	324	⇑PKiKP		PKiKP	00 51 29.1	+0.9	
BURAR	Bucovina Array	126.99	324	⇑P		PKiKP	00 51 29.1	+0.9	
BURAR	Bucovina Array	126.99	324			PKiKP	00 51 28.4	+0.2	
PLOR	Plostina	127.00	321	⇑PKiKP		PKiKP	00 51 28.3	+0.1	
PLOR	Plostina	127.00	321	⇑P		PKiKP	00 51 28.3	+0.1	
KWP	Kalwaria Pacla	127.29	327	ePKiKP		PKiKP	00 51 29.1	+0.5	
KWP	Kalwaria Pacla	127.29	327	ePKP		PKiKP	00 51 29.1	+0.5	
OZUR		127.41	322	⇑P		PKiKP	00 51 59.5	+31	
MLR	Muntele Rosu	127.61	321	PKP		PKiKP	00 51 29.4	-0.1	
	comp=Z,17nm,1.1s,baz=358,slow=2.1,SNR=14								
MLR	Muntele Rosu	127.61	321	⇑P		PKPdf	00 51 29.0	+0.1	
MLR	Muntele Rosu	127.61	321	IAMs_20	IAMs_20		01 47 54.6		
	comp=Z,832nm,22.0s								
GKP	Gorka Klasztor	127.67	333	ePKiKP		PKiKP	00 51 30.0	+0.8	
GKP	Gorka Klasztor	127.67	333	ePKP		PKiKP	00 51 30.0	+0.8	
DOPR	Dopca	127.72	322	⇑P		PKiKP	00 51 30.6	+1.0	
ARCR	ARCALIA	127.76	324	⇑P		PKiKP	00 51 30.5	+0.9	
KOLS	Kolonicke sedl	127.92	327	ePKiKP		PKiKP	00 51 30.7	+0.8	
KOLS	Kolonicke sedl	127.92	327	ePKP		PKiKP	00 51 30.7	+0.8	
BMR	Baia Mare	127.94	325	⇑PKiKP		PKiKP	00 51 30.7	+0.8	
BMR	Baia Mare	127.94	325	⇑P		PKiKP	00 51 30.7	+0.8	
UZH	Uzhgorod	128.08	326	ePKiKP		PKPdf	00 51 28.6	-1.0	
UZH				e			00 51 45.8		
UZH				e			00 51 52.2		
VOIR		128.19	322	⇑PKiKP		PKiKP	00 51 32.2	+1.6	
VOIR		128.19	322	⇑P		PKiKP	00 51 32.2	+1.6	
TRPA	Tarpa	128.23	326	⇑P		PKPdf	00 51 30.1	+0.2	
CPUP	Villa Florida	128.27	135	PKP		PKPdf	00 51 30.4	-0.3	
	comp=Z,3.0nm,0.4s,baz=243,slow=3.2,SNR=7.3								
CRVS	Cervenica-Dubn	128.38	327	ePKiKP		PKiKP	00 51 31.3	+0.5	
CRVS	Cervenica-Dubn	128.38	327	ePKP		PKiKP	00 51 31.3	+0.5	
RGN	Rugen	128.39	337	eP		PKPpre	00 51 20.0		
RGN				IAmb	IAmb		00 51 21.0		
	comp=Z,323nm,1.3s								
OJC	Ojcow	128.45	329	ePKiKP		PKiKP	00 51 31.3	+0.4	
OJC	Ojcow	128.45	329	ePKP		PKiKP	00 51 31.3	+0.4	
ARR	Arges	128.47	322	⇑P		PKiKP	00 51 32.2	+1.1	
SOCV	Socops	128.58	87	eP		PKPdf	00 51 30.9	-0.6	
HUMR	Humele	128.67	321	⇑P		PKiKP	00 51 31.4	-0.1	
NIE	Niedzica	128.69	328	ePKiKP		PKiKP	00 51 32.1	+0.7	
NIE	Niedzica	128.69	328	ePKP		PKiKP	00 51 32.1	+0.7	
SDV	Santo Domingo	128.85	86	PKP		PKPdf	00 51 32.4	+0.1	
	comp=Z,49nm,0.8s,baz=268,slow=2.1,SNR=56								
SDV	Santo Domingo	128.85	86	eP		PKPdf	00 51 30.9	-1.4	
ELND	Elena	128.85	318	⇑P		PKiKP	00 51 31.8	-0.2	
LANS	Liptovska Anna	129.28	328	ePKiKP		PKiKP	00 51 34.8	+2.2	
LANS	Liptovska Anna	129.28	328	ePKP		PKiKP	00 51 34.8	+2.2	
OKC	Ostrava-Krasne	129.52	330	ePKiKP		PKiKP	00 51 33.3	+0.3	
OKC				MLR	MLR				
	comp=Z,1μm,24.2s								
OKC	Ostrava-Krasne	129.52	330	ePKPDF		PKiKP	00 51 33.3	+0.3	
OKC				AMS	AMS		01 50 50.0		
	comp=Z,1μm,24.2s								
GZR	Gura Zlata	129.58	323	⇑PKiKP		PKPdf	00 51 32.3	-0.3	
GZR	Gura Zlata	129.58	323	⇑P		PKPdf	00 51 32.3	-0.3	
RUE	Ruedersdorf	129.72	335	ePKPdf		PKiKP	00 51 33.7	+0.4	
	baz=42,slow=1.9								
RUE	Ruedersdorf	129.72	335	eP		PKiKP	00 51 33.8	+0.4	
KSP	Ksiaz	129.75	332	ePKiKP		PKiKP	00 51 33.8	+0.3	
KSP	Ksiaz	129.75	332	ePKP		PKiKP	00 51 33.8	+0.3	
SIRR	Siria	129.77	324	⇑P		PKiKP	00 51 34.0	+0.3	
PSZ	Piszkesteto	129.80	327	PKiKP		PKPdf	00 51 33.1	+0.2	
PSZ				MLR	MLR				
	comp=Z,1μm,20.0s								
PSZ	Piszkesteto	129.80	327	⇑P		PKPdf	00 51 33.2	+0.2	
PSZ	Piszkesteto	129.80	327			PKPdf	00 51 33.1	+0.2	
MORC	Moravsky Berou	129.86	330	⇑PKiKP		PKiKP	00 51 33.7	-0.1	
MORC	Moravsky Berou	129.86	330	⇑P		PKiKP	00 51 33.7	-0.1	
MORC	Moravsky Berou	129.86	330	ePKP		PKiKP	00 51 34.1	+0.3	
MORC				e			00 51 48.2		
BAIL	Bailesti	129.95	321	⇑P		PKiKP	00 51 35.4	+1.4	
OSTC	Ostas	129.98	331	ePKPDF		PKiKP	00 51 34.6	+0.6	
OSTC				AMS	AMS		01 47 30.0		
	comp=Z,2μm,20.9s								
BSEG	Bad Segeberg	130.00	338	ePKPdf		PKiKP	00 51 34.0	+0.2	
	baz=42,slow=1.9								
BSEG				eL	L		01 52 49.1		
	comp=Z,689nm,20.0s								
VYHS	Vyhne	130.01	328	ePKiKP		PKiKP	00 51 33.8	-0.3	
VYHS	Vyhne	130.01	328	ePKP		PKiKP	00 51 33.8	-0.3	
KRLC	Kraliky	130.03	331	ePKiKP		PKPdf	00 51 33.7	+0.4	
KRLC				e			00 51 49.8		
KRLC				MLR	MLR				
	comp=Z,1μm,20.6s								
KRLC	Kraliky	130.03	331	ePKPDF		PKPdf	00 51 33.7	+0.4	
KRLC				epPKP		pPKPdf	00 51 49.8	+0.1	
KRLC				eSKP			00 54 55.0		
KRLC				AMS	AMS		01 48 30.0		
	comp=Z,1μm,20.6s								
CHVC	Chvalec	130.03	332	ePKPDF		PKiKP	00 51 34.2	+0.1	
CHVC				epPKP		pPKPdf	00 51 48.6	-1.0	
CHVC				AMS	AMS		01 47 10.0		
	comp=Z,2μm,23.0s								
DPC	Dobruska-Polom	130.07	331	ePKIKP		PKiKP	00 51 34.6	+0.4	
DPC				MLR	MLR				
	comp=Z,2μm,22.5s								
DPC	Dobruska-Polom	130.07	331	ePKPDF		PKiKP	00 51 34.6	+0.4	
DPC				eSKP			00 54 54.8		
DPC				AMS	AMS		01 47 10.0		
	comp=Z,2μm,22.5s								
UPC	Upice	130.11	332	ePKIKP		PKiKP	00 51 34.5	+0.3	
UPC				MLR	MLR				
	comp=Z,2μm,22.5s								
UPC	Upice	130.11	332	ePKPDF		PKiKP	00 51 34.5	+0.3	
UPC				AMS	AMS		01 47 40.0		
	comp=Z,2μm,22.5s								
BZS	Buzias	130.15	323	⇑PKIKP		PKiKP	00 51 34.6	+0.2	
BZS	Buzias	130.15	323	⇑P		PKiKP	00 51 34.6	+0.2	
JAVC	Velka Javorina	130.38	329	ePKP		PKiKP	00 51 35.7	+0.8	
BANR	Banloc	130.56	323	⇓P		PKiKP	00 51 36.4	+1.2	
VRAC	Vranov	130.63	330	⇑PKiKP		PKiKP	00 51 36.5	+1.2	
VRAC	Vranov	130.63	330	PKP		PKPdf	00 51 34.6	+0.2	
	comp=Z,7.5nm,0.9s,baz=135,slow=1.9,SNR=8.0								
VRAC	Vranov	130.63	330	⇑P		PKiKP	00 51 36.5	+1.2	
VRAC	Vranov	130.63	330	ePKP		PKiKP	00 51 35.4	+0.1	
VTS	Vitosha	130.71	319	PKiKP		PKPdf	00 51 35.2	+0.2	
VTS	Vitosha	130.71	319	⇑P		PKPdf	00 51 35.1	+0.2	
VTS	Vitosha	130.71	319			PKPdf	00 51 35.2	+0.2	
SMOL	Smolenice	130.73	329	ePKIKP		PKiKP	00 51 35.8	+0.3	
SMOL	Smolenice	130.73	329	ePKP		PKiKP	00 51 35.8	+0.3	
PVCC	Panska Ves	130.76	332	ePKIKP		PKiKP	00 51 35.7	+0.2	
PVCC				MLR	MLR				
	comp=Z,1μm,20.9s								
PVCC	Panska Ves	130.76	332	ePKPDF		PKiKP	00 51 35.7	+0.2	
PVCC				AMS	AMS		01 48 20.0		
	comp=Z,1μm,20.9s								
BRG	Berggiesshubel	130.80	333	i PKP		PKiKP	00 51 35.3	-0.3	
	comp=Z,15nm,1.0s								
BRG				epPKP		pPKPdf	00 51 49.5	-1.5	
	comp=Z,19nm,1.4s								
BRG				i PKS			00 54 57.5		
	comp=Z,81nm,1.9s								
BRG				eSKKP			01 04 32.6		
	comp=Z,16nm,1.7s								
BRG				eSKKS			01 08 24.3		
	comp=Z,21nm,1.6s								
	comp=N,530nm,21.2s								
	comp=E,695nm,18.5s								
	comp=Z,936nm,21.2s								
BRG	Berggiesshubel	130.80	333	i PKIKP		PKiKP	00 51 35.3	-0.3	
BRG				e			00 51 49.5		
BRG				pmax	pmax				
	comp=Z,15nm,1.0s								
BRG				MLR	MLR				
	comp=N,530nm,21.2s								
BRG				MLR	MLR				
	comp=E,695nm,18.5s								
BRG				MLR	MLR				
	comp=Z,936nm,21.2s								
BRG	Berggiesshubel	130.80	333	ePKPdf		PKiKP	00 51 35.7	+0.2	
	baz=42,slow=1.9								
KRUC	Moravsky	130.89	330	ePKP		PKiKP	00 51 35.7	-0.1	
KRUC				e			00 51 50.0		
MODS	Modra-Piesok	130.90	329	ePKIKP		PKPdf	00 51 35.2	+0.2	
MODS	Modra-Piesok	130.90	329	ePKP		PKPdf	00 51 35.2	+0.2	
CLL	Collm	130.90	334	i PKIKP		PKPdf	00 51 34.9	+0.1	
CLL				e			00 51 49.0		
CLL				pmax	pmax				
	comp=Z,16nm,0.8s								
CLL	Collm	130.90	334	i PKPdf		PKPdf	00 51 34.9	+0.1	
	comp=Z,16nm,0.8s								
CLL				Lm	MLR		00 49 00.0		
	comp=N,700nm,21.1s								
CLL				Lm	MLR		00 49 00.0		
	comp=E,200nm,21.4s								
CLL				epPKPdf	pPKPdf		00 51 49.0	-2.2	
CLL				ePP	PP		00 53 51.0	0.0	
CLL				eSKPbc	SKPab		00 54 57.0	+2.3	
	comp=Z,39nm,1.5s								
CLL				eSKPdf	SKPdf		00 55 05.0	-0.5	
CLL	Collm	130.90	334	ePKPdf	PKiKP		00 51 35.7	-0.1	
	baz=42,slow=1.9								
CLL				eL	L		01 50 10.4		
	comp=Z,694nm,21.6s								
CLL	Collm	130.90	334			PKPdf	00 51 35.2	+0.4	
FBE	Freiberg	131.03	333	ePKPdf		PKiKP	00 51 36.1	+0.1	
	baz=42,slow=1.9								
GOPC	GO Pecny, Ondr	131.09	332	ePKIKP		PKiKP	00 51 36.3	+0.1	
GOPC				MLR	MLR				
	comp=Z,1μm,23.1s								
GOPC	GO Pecny, Ondr	131.09	332	ePKPDF		PKiKP	00 51 36.3	+0.1	
GOPC				eSKP			00 54 58.8		
GOPC				AMS	AMS		01 48 20.0		
	comp=Z,1μm,23.1s								
ZST	Bratislava	131.10	329	ePKIKP		PKPdf	00 51 35.8	+0.5	
ZST	Bratislava	131.10	329	ePKP		PKPdf	00 51 35.8	+0.5	
PRA	Prague	131.15	332	ePKIKP		PKiKP	00 51 36.3	0.0	
PRA				MLR	MLR				
	comp=Z,1μm,19.3s								
PRA	Prague	131.15	332	ePKPDF		PKiKP	00 51 36.3	0.0	
PRA				AMS	AMS		01 49 10.0		
	comp=Z,1μm,19.3s								
PRU	Pruhonice	131.15	332	ePKIKP		PKiKP	00 51 36.1	-0.2	
PRU				e			00 51 50.3		
PRU				MLR	MLR				
	comp=Z,1μm,23.7s								
PRU	Pruhonice	131.15	332	ePKPDF		PKiKP	00 51 36.1	-0.2	
PRU				epPKP		pPKPdf	00 51 50.3	-1.4	
PRU				AMS	AMS		01 48 50.0		
	comp=Z,1μm,23.7s								
TREC	Trest	131.18	331	ePKIKP		PKiKP	00 51 36.3	-0.1	
TREC				e			00 51 51.9		
TREC				MLR	MLR				
	comp=Z,2μm,21.4s								
TREC	Trest	131.18	331	ePKPDF		PKiKP	00 51 36.3	-0.1	
TREC				epPKP		pPKPdf	00 51 51.9	+0.1	
TREC				AMS	AMS		01 49 20.0		
	comp=Z,2μm,21.4s								
NEUB	Neuenburg	131.50	335	ePKPdf		PKiKP	00 51 36.8	-0.1	
	baz=42,slow=1.9								
CLZ	Clausthal	131.60	336	ePKPdf		PKiKP	00 51 37.4	+0.2	
	baz=42,slow=1.9								
PBCC	Pribram	131.62	332	ePKPDF		PKiKP	00 51 37.1	-0.2	
TANN	Tannenbergstha	131.79	334	ePKPdf		PKiKP	00 51 37.5	-0.1	
	baz=42,slow=1.9								
PLN	Plauen	131.87	334	ePKPdf		PKiKP	00 51 37.5	-0.3	
	baz=42,slow=1.9								
GUNZ	Gunzen	131.88	334	ePKPdf		PKiKP	00 51 37.8	0.0	
	baz=42,slow=1.9								
CONA	Conrad Observa	131.91	329	ePKiKP		PKiKP	00 51 37.6	-0.4	
	comp=Z,15nm,0.8s,SNR=7.6								
WERN	Wernitzgruen	131.92	334	ePKPdf		PKiKP	00 51 38.0	+0.1	
	baz=42,slow=1.9								
NKC	Novy Kostel	131.93	333	ePKIKP		PKiKP	00 51 37.6	-0.3	
NKC				e			00 51 53.1		
NKC	Novy Kostel	131.93	333	ePKPDF		PKiKP	00 51 37.6	-0.3	
NKC				epPKP		pPKPdf	00 51 53.1	-0.1	
MOX	Moxa	131.99	334	ePKPdf		PKiKP	00 51 37.5	-0.5	
	baz=42,slow=1.9								
MOX				eL	L		01 50 36.4		
	comp=Z,651nm,22.0s								
SAML	Samuel	132.12	111	PKIKP		PKPdf	00 51 38.6	+0.4	
SAML	Samuel	132.12	111			PKPdf	00 51 38.6	+0.4	
KHC	Kasperske Hory	132.20	332	ePKPDF		PKiKP	00 51 38.3	-0.2	
KHC				epPKP		pPKPdf	00 51 53.8	0.0	
KHC				eSKP			00 55 01.1		
KHC				AMS	AMS		01 48 40.0		
	comp=Z,2μm,18.6s								
MANZ	Manzenberg	132.26	333	ePKPdf		PKiKP	00 51 38.2	-0.4	
	baz=42,slow=1.9								
GEC2	GERESS Array S	132.34	331	ePKPdf		PKiKP	00 51 38.5	-0.4	
	baz=42,slow=1.9								
GEC2				eL	L		01 50 00.8		
	comp=Z,1μm,21.9s								
GERES	GERESS Array B	132.34	331	PKP		PKPdf	00 51 38.2	+0.4	
	comp=Z,9.2nm,0.7s,baz=58,slow=1.5,SNR=48								
GERES	GERESS Array B	132.34	331			PKPdf	00 51 38.1	+0.3	
WET	Wettzell	132.52	332	ePKPdf		PKiKP	00 51 38.8	-0.4	
	baz=42,slow=1.9								
WET				eL	L		01 50 24.6		
	comp=Z,1000nm,21.6s								
ARSA	Arzberg	132.53	329	ePKPdf		PKPdf	00 51 38.1	0.0	
	comp=Z,13nm,1.0s								
EKA	Eskdalemuir Ar	132.71	348	PKP		PKiKP	00 51 39.2	-0.1	
	comp=Z,6.6nm,0.7s,baz=16,slow=1.9,SNR=13								
MOA	Molln	132.76	330	ePKiKP		PKPdf	00 51 38.7	+0.2	
	comp=Z,11nm,0.8s								
GRF	Grafenberg Arr	132.86	334	ePKPdf		PKiKP	00 51 39.4	-0.4	
	baz=42,slow=1.9								
GRF				eL	L		01 50 54.2		
	comp=Z,869nm,21.4s								
BUG	Bochum--Univer	133.11	338	ePKPdf		PKiKP	00 51 39.8	-0.4	
	baz=42,slow=1.9								
SOKA	Soboth	133.16	328	ePKiKP		PKPdf	00 51 39.5	+0.1	
	comp=Z,20nm,0.9s								
BLY	Banja Luka	133.21	325	⇑P		PKiKP	00 51 40.5	-0.2	
BLY	Banja Luka	133.21	325			PKPdf	00 51 40.0	+0.6	
PDG	Podgorica	133.32	321	IAMs_20	IAMs_20		01 51 03.8		
	comp=Z,562nm,21.0s								
RJOB	Jochberg	133.55	331	ePKPdf		PKiKP	00 51 41.1	-0.2	
	baz=42,slow=1.9								
TNS	Taunus Mts	133.62	336	ePKPdf		PKiKP	00 51 41.0	-0.3	
	baz=42,slow=1.9								
TNS				eL	L		01 51 13.4		
	comp=Z,830nm,22.0s								
HUMP	Col San Antoni	133.62	74			PKiKP	00 51 41.6	-0.5	
KBA	Koelnbreinsper	133.74	330	ePKPdf		PKPdf	00 51 40.4	-0.2	
	comp=Z,16nm,1.0s								
MYKA	Terra Mystica	133.90	329	ePKiKP		PKPdf	00 51 41.3	+0.6	
	comp=Z,14nm,1.0s								
AHRW	Bad Neuenahr-A	133.90	337	ePKPdf		PKiKP	00 51 41.5	-0.3	
	baz=42,slow=1.9								
FUR	Furstenfeldbru	133.96	332	ePKPdf		PKiKP	00 51 41.7	-0.4	
	baz=42,slow=1.9								
FUR				eL	L		01 51 36.9		
	comp=Z,977nm,21.9s								
MEM	Membach	134.25	338	PKiKP		PKiKP	00 51 42.2	-0.3	
MEM				pPKiKP		pPKPdf	00 51 56.8	-0.7	
ABTA	Abfaltersbach	134.38	330	ePKiKP		PKPdf	00 51 42.3	+0.6	
	comp=Z,18nm,1.0s								
WATA	Walderalm	134.42	331	ePKiKP		PKiKP	00 51 42.8	-0.4	
	comp=Z,11nm,0.9s								
BSTI	Sart Tilman	134.43	338	PKiKP		PKiKP	00 51 44.1	+1.2	
STU	Stuttgart	134.43	334	ePKPdf		PKiKP	00 51 42.4	-0.6	
	baz=42,slow=1.9								
WTTA	Wattenberg	134.44	331	ePKiKP		PKPdf	00 51 42.1	+0.2	
	comp=Z,21nm,0.8s,SNR=6.0								
MOTA	Moosalm	134.63	332	ePKPdf		PKPdf	00 51 41.9	-0.3	
	comp=Z,23nm,0.8s,SNR=6.2								
BCLA	Clavier	134.66	338	PKiKP		PKiKP	00 51 43.1	-0.3	
BCLA				pPKiKP		pPKPdf	00 51 57.1	-1.1	
SQTA	Sankt Quirin	134.68	331	ePKiKP		PKPdf	00 51 42.6	+0.4	
	comp=Z,21nm,0.8s,SNR=5.9								
RETA	Reutte	134.69	332	ePKiKP		PKiKP	00 51 43.2	-0.4	
	comp=Z,8.4nm,0.9s								
UBR	Ueberruh	134.85	333	ePKPdf		PKPdf	00 51 42.9	+0.4	
	baz=42,slow=1.9								
BMRD	Maredsous	134.95	339	PKiKP		PKiKP	00 51 43.6	-0.4	
BMRD				pPKiKP		pPKPdf	00 51 58.2	-0.6	
WLF	Walferdange	134.96	337	PKiKP		PKPdf	00 51 43.1	+0.5	
WLF	Walferdange	134.96	337	ePKPdf		PKi

	comp=Z,8.2nm,1.0s,baz=105,slow=1.7,SNR=7.1								
MDT				PKPbc	**PKiKP**	**00 52 23.2**	**+0.6**		
	comp=Z,32nm,0.9s,baz=3.8,slow=1.5,SNR=26								
MDT				PKPab	**sPKPdf**	**00 52 35.9**	**-1.2**		
	comp=Z,37nm,0.9s,baz=40,slow=0.7,SNR=12								
AVE	**Averroes**	**154.16**	**338**	PKP	**PKiKP**	**00 52 25.0**	**+1.0**		
RCBR	**Riachuelo**	**157.09**	**131**	PKPab	**PKPab**	**00 52 50.6**	**-0.2**		
	comp=Z,15nm,0.9s,baz=78,slow=9.7,SNR=3.2								
TOA0	**Torodi Ar. Sit**	**159.62**	**282**		**PKPdf**	**00 52 22.5**	**-0.7**		
TORD	**Torodi Ar. Bea**	**159.62**	**282**	PKP	**PKPdf**	**00 52 21.9**	**-1.3**		
	comp=Z,3.9nm,0.9s,baz=11,slow=0.8,SNR=15								
TORD				PKPab	**PKPab**	**00 53 00.8**	**-1.0**		
	comp=Z,3.1nm,0.9s,baz=84,slow=4.0,SNR=6.6								
TORD	**Torodi Ar. Bea**	**159.62**	**282**		**PKPdf**	**00 52 22.4**	**-0.8**		
KIC	**Kosan Boka**	**165.74**	**258**	*e*PKIKP	**PKPdf**	**00 52 28.6**	**-0.7**		
	comp=Z,16nm,1.1s								
KIC	**Kosan Boka**	**165.74**	**258**	*e*P	**PKPab**	**00 53 27.3**	**-1.4**		
	comp=Z,29nm,1.2s								
DBIC	**Dimbokro**	**165.92**	**259**	PKP	**PKPdf**	**00 52 28.3**	**-1.1**		
	comp=Z,6.5nm,0.9s,baz=164,slow=1.7,SNR=6.4								
DBIC				PKPab	**PKPab**	**00 53 28.8**	**-0.7**		
	comp=Z,11nm,1.1s,baz=68,slow=6.4,SNR=4.1								
DBIC	**Dimbokro**	**165.92**	**259**		**PKPdf**	**00 52 29.1**	**-0.3**		
LIC	**Lamto**	**165.98**	**257**	*e*PKIKP	**PKPdf**	**00 52 28.4**	**-1.0**		
	comp=Z,4.3nm,0.3s								
LIC	**Lamto**	**165.98**	**257**	*e*P	**PKPab**	**00 53 28.2**	**-1.6**		
TIC	**Toumodi**	**166.07**	**259**	*e*PKIKP	**PKPdf**	**00 52 28.6**	**-0.9**		
TIC	**Toumodi**	**166.07**	**259**	*e*P	**PKPab**	**00 53 28.9**	**-1.3**		

IDC ***29*** *00:32:30.8±1.2,56°.28N×35°.01W,h0km,mb3.6/9, mb1 3.9/11,mb1mx3.6/66,mbtmp3.7/11,ML3.5/2,MS3.9/26, Ms1 3.9/26,ms1mx3.7/61,Error ellipse: s-maj=32.6km s-min=20.5km az=7.0*

NEIC ***29*** *00:32:32.8±2.1,56°.3N±0°.1×35°.1W±0°.2,h10km±2km, mb4.4/10,Error ellipse: s-maj=19.8km s-min=15.9km az=160.0*

GCMT ***29*** *00:32:38.8±0.4,56°.85N±0°.05×34°.21W±0°.04,h12km±1km, MW4.8/75,Moment Tensor Solution. s14,c14; s75,c101; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-1.60±.19; Mθθ-0.31±.13; Mφφ 1.90±.14; Mrθ-0.15±.42; Mθφ 0.33±.09; Mφr-0.98±.36; Best double couple: M=2.03200×10¹⁶ NP1:φs188.00000°,δ30.00000°,λ-90.00000°. NP2: φs8.00000°,δ60.00000°,λ-90.00000°. Principal axes: T 2.2060, Plg15.0000°, Azm98.0000°; N -0.3530, Plg0.0000°, Azm188.0000°; P -1.8580, Plg75.0000°, Azm279.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 29 00:32:32.8±0.9,56°.3N±0°.2×35°.01W±0°.10,h10km,n44, σ1§10/23,mb3.8/10,MS3.8/21,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BORG	**Borgarnes**	**10.78**	**33**	Pn	**Pn**	**00 35 05.2**	**-1.8**
	0.3nm,0.3s,baz=225,slow=20,SNR=2.7						
BORG				LR	LR	00 38 05.7	
	comp=Z,1µm,19.3s,baz=242,slow=31						
SFJD	**Kangerlussuaq**	**12.97**	**332**	LR	LR	00 39 48.0	
	comp=Z,632nm,19.1s,baz=137,slow=34						
SCHQ	**Schefferville**	**17.97**	**279**	LR	LR	00 42 39.8	
	comp=Z,443nm,19.6s,baz=36,slow=34						
FRB	**Frobisher Bay**	**18.14**	**308**	P	**Pn**	**00 36 43.8**	**-0.6**
	0.2nm,0.3s,baz=101,slow=12,SNR=2.4						
FRB				LR	LR	00 42 30.3	
	comp=Z,368nm,20.1s,baz=74,slow=33						
JMIC	**Jan Mayen**	**18.56**	**27**	LR	LR	00 42 00.4	
	comp=Z,222nm,21.5s,baz=243,slow=31						
NOA	**NORSAR Array B**	**24.07**	**59**	LR	LR	00 45 31.1	
	comp=Z,161nm,19.8s,baz=280,slow=32						
HFS	**Hagfors**	**25.45**	**61**	LR	LR	00 46 13.0	
	comp=Z,260nm,18.3s,baz=290,slow=32						
ESDC	**Sonseca Array**	**26.31**	**116**	LR	LR	00 47 04.1	
	comp=Z,231nm,18.0s,baz=315,slow=33						
SPITS	**Spitsbergen Ar**	**27.83**	**20**	LR	LR	00 46 48.0	
	comp=Z,146nm,18.4s,baz=185,slow=31						
RES	**Resolute Bay**	**28.97**	**332**	LR	LR	00 49 55.8	
	comp=Z,205nm,18.0s,baz=122,slow=36						
DAVOX	**Davos/Dischmat**	**29.01**	**90**	LR	LR	00 49 38.8	
	comp=Z,508nm,18.2s,baz=292,slow=35						
ARCES	**ARCESS Array B**	**29.09**	**39**	LR	LR	00 47 29.9	
	comp=Z,126nm,21.9s,baz=336,slow=31						
SADO	**Sadowa**	**29.81**	**266**	LR	LR	00 49 42.1	
	comp=Z,437nm,19.0s,baz=148,slow=35						
GERES	**GERESS Array B**	**29.97**	**84**	LR	LR	00 49 32.1	
	comp=Z,206nm,18.9s,baz=311,slow=34						
FINES	**FINESS Array B**	**30.94**	**55**	P	**P**	**00 38 51.0**	**+1.6**
	3.2nm,0.9s,baz=260,slow=7.9,SNR=3.3						
FINES				LR	LR	00 49 22.2	
	comp=Z,154nm,21.8s,baz=262,slow=33						
ULM	**Lac du Bonnet**	**35.82**	**287**	LR	LR	00 52 56.9	
	comp=Z,303nm,20.4s,baz=28,slow=34						
AKASG	**Malin Array Be**	**37.35**	**71**	LR	LR	00 54 53.6	
	comp=Z,145nm,19.4s,baz=290,slow=36						
VAE	**Valguarnera**	**37.68**	**99**	LR	LR	00 55 00.7	
	comp=Z,149nm,18.4s,baz=328,slow=36						
YKA	**Yellowknife Ar**	**38.53**	**313**	P	**P**	**00 39 55.8**	**+0.8**
	0.5nm,1.1s,baz=54,slow=8.5,SNR=3.1						
YKA				LR	LR	00 54 29.3	
	comp=Z,237nm,19.5s,baz=0.0,slow=34						
OBN	**Obninsk**	**38.66**	**61**	LR	LR	00 54 14.1	
	comp=Z,41nm,19.1s,baz=322,slow=34						
INK	**Inuvik**	**42.25**	**327**	P	**P**	**00 40 25.4**	**-0.2**
	1.1nm,1.1s,baz=7.4,slow=2.3,SNR=2.2						
INK				LR	LR	00 56 39.7	
	comp=Z,196nm,19.2s,baz=59,slow=34						
INK	**Inuvik**	**42.25**	**327**	IAmb	IAmb	00 40 36.7	
	comp=Z,6.3nm,1.2s						
BRTR	**Keskin Array B**	**46.76**	**80**	LR	LR	01 00 16.1	
	comp=Z,49nm,21.1s,baz=300,slow=36						
ARU	**Arti**	**47.84**	**48**	P	**P**	**00 41 11.7**	**+1.6**
PD31	**Pinedale Array**	**47.84**	**287**	P	**P**	**00 41 10.6**	**-0.1**
PDAR	**Pinedale Array**	**47.84**	**287**	P	**P**	**00 41 09.9**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=53,slow=5.1,SNR=2.4						
PDAR				LR	LR	01 00 24.9	
	comp=Z,298nm,19.0s,baz=54,slow=35						
NEW	**Newport**	**48.02**	**297**	LR	LR	01 00 16.9	
	comp=Z,313nm,19.7s,baz=358,slow=35						
BCAR	**Beaver Creek A**	**48.23**	**324**	P	**P**	**00 41 13.1**	**-0.1**
IL31		**48.60**	**328**	P	**P**	**00 41 15.2**	**-0.7**
ILAR	**Eielson Array**	**48.60**	**328**	P	**P**	**00 41 14.4**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=42,slow=6.4,SNR=8.8						
AMTX	**Amarillo**	**49.14**	**274**	P	**P**	**00 41 21.1**	**+0.5**
IMAR	**Indian Mountai**	**49.60**	**332**	P	**P**	**00 41 23.1**	**-0.5**
MCK	**McKinley**	**49.97**	**328**	P	**P**	**00 41 28.4**	**+1.9**
TORD	**Torodi Ar. Bea**	**51.48**	**132**	P	**P**	**00 41 37.0**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=339,slow=7.7,SNR=3.6						
ELK	**Elko**	**52.28**	**289**	LR	LR	01 03 07.7	
	comp=Z,242nm,19.3s,baz=66,slow=35						
ABKAR	**Akbulak array**	**53.42**	**54**	P	**P**	**00 41 53.5**	**+1.1**
TXAR	**Lajitas Array**	**54.42**	**271**	P	**P**	**00 42 00.2**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=55,slow=6.7,SNR=2.9						
YBH	**Yreka Blue Hor**	**55.43**	**295**	LR	LR	01 05 05.2	
	comp=Z,194nm,19.1s,baz=71,slow=35						
KURK	**Kurchatov**	**60.06**	**42**	P	**P**	**00 42 38.4**	**-1.1**
KURBB	**Kurchatov Arra**	**60.10**	**42**	P	**P**	**00 42 38.4**	**-1.4**
	comp=Z,0.7nm,1.0s,baz=320,slow=6.9,SNR=1.8						
MK31	**Makanchi Array**	**64.67**	**42**	P	**P**	**00 43 11.4**	**+0.9**
MKAR	**Makanchi Array**	**64.67**	**42**	P	**P**	**00 43 10.8**	**+0.4**
	comp=Z,1.2nm,0.9s,baz=342,slow=5.0,SNR=5.1						
BTK	**Batken**	**65.43**	**54**	P	**P**	**00 43 15.8**	**+0.2**
BTK				IAmb	IAmb	00 43 22.5	
	comp=Z,4.6nm,1.1s						
ASAR	**Alice Springs**	**146.38**	**19**	PKPbc	**PKPdf**	**00 52 12.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=350,slow=4.7,SNR=3.1						

SOME ***29*** *00:46:01.2,39°.83N×75°.68E,h0km*

NNC ***29*** *00:46:04.4±1.2,39°.87N×75°.75E,h0km,mb4.2,mpv3.9, Error ellipse: s-maj=8.7km s-min=5.3km az=164.0*

KRNET ***29*** *00:46:08.5±0.1,39°.97N×75°.85E,mb3.6*

BJI ***29*** *00:46:09.0±0.0,40°.10N×75°.77E,h7km,ML3.6/5*

ISC 29 00:46:04.6±2.0,39.89N±0°.08×75.72E±0°.03,h5km±16km, n76,σ1§81/109,23C-13D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**0.42**	**152**	Pg	Pn	00 46 25.3	+8.0
KSH				Sg	Sb	00 46 38.8	+18
KSH				smax	smax		
	comp=N,2µm,0.6s						
KSH				smax	smax		
	comp=E,2µm,0.5s						

NRN	**Naryn**	**1.56**	**8**	⇑*i*P	**Pg**	**00 46 35.3**	**+0.9**
	baz=4.0						
NRN				⇑*i*S	**Sg**	**00 46 55.0**	**+0.4**
	baz=4.0						
ARLS	**Aral**	**2.24**	**332**	⇓*i*P	**Pg**	**00 46 48.4**	**+1.0**
	baz=29						
ARLS				⇓*i*S	**Sg**	**00 47 17.8**	**+1.4**
	baz=29						
ULHL	**Ulahol**	**2.39**	**9**	⇑*i*P	**Pg**	**00 46 49.9**	**-0.4**
	baz=7.0						
ULHL				⇑*i*S	**Sb**	**00 47 19.0**	**+1.1**
	baz=7.0						
ULHL	**Ulahol**	**2.39**	**9**	P	**Pg**	**00 46 50.5**	**+0.1**
	SNR=78						
KDJ	**Kajisay**	**2.50**	**26**	⇑*i*P	**Pg**	**00 46 51.2**	**-1.2**
	baz=25						
KDJ				⇑*i*S	**Sb**	**00 47 21.0**	**0.0**
	baz=25						
UCH	**Uchtor**	**2.51**	**339**	⇓*i*P	**Pg**	**00 46 52.7**	**0.0**
	baz=36						
UCH				⇓*i*S	**Sg**	**00 47 24.4**	**-0.8**
	baz=36						
UCH	**Uchtor**	**2.51**	**339**	P	**Pg**	**00 46 52.6**	**0.0**
	SNR=54						
ARSB	**Arslanbob**	**2.53**	**305**	⇑*e*P	**Pg**	**00 46 53.7**	**+0.6**
	baz=3.0						
ARSB				⇑*i*S	**Sg**	**00 47 27.3**	**+1.4**
	baz=3.0						
AML	**Almayashu**	**2.71**	**326**	⇑*i*P	**Pg**	**00 46 56.0**	**-0.6**
	baz=24						
AML				⇑*i*S	**Sg**	**00 47 30.0**	**-1.8**
	baz=24						
AML	**Almayashu**	**2.71**	**326**	P	**Pg**	**00 46 55.7**	**-0.9**
	SNR=35						
KBK	**Karagaybulak**	**2.83**	**348**	⇑*i*P	**Pb**	**00 46 56.6**	**+1.0**
	baz=46						
KBK				⇑*i*S	**Sb**	**00 47 31.1**	**+0.6**
	baz=46						
KBK	**Karagaybulak**	**2.83**	**348**	P	**Pg**	**00 46 57.4**	**-1.4**
	SNR=17						
AAK	**Ala-Archa**	**2.90**	**342**	⇑*i*P	**Pb**	**00 46 57.8**	**+1.0**
	baz=39						
AAK				⇑*i*S	**Sb**	**00 47 33.3**	**+0.7**
	baz=39						
AAK	**Ala-Archa**	**2.90**	**342**	P	**Pb**	**00 46 58.2**	**+1.4**
	SNR=35						
AAK	**Ala-Archa**	**2.90**	**342**	⇓Pg	**Pb**	**00 46 58.3**	**+1.5**
	42nm,0.8s						
AAK				⇑Lg	Lg	00 47 38.4	
	129nm,0.7s						
FRU1	**Bishkek**	**3.03**	**345**	⇑*i*P	**Pb**	**00 46 58.7**	**-0.3**
	baz=42						
FRU1				⇑*i*S	**Sb**	**00 47 35.5**	**-0.8**
	baz=42						
EKS2	**Erkin-Say**	**3.13**	**333**	P	**Pb**	**00 47 01.4**	**+0.6**
	SNR=5.8						
KST	**Kastek**	**3.16**	**3**	*e*P	**Pb**	**00 47 02.3**	**+1.1**
	26nm,0.3s						
KST				*e*S	**Sg**	**00 47 46.8**	**+0.8**
	152nm,0.4s						
KST	**Kastek**	**3.16**	**3**	Pg	**Pb**	**00 47 02.1**	**+1.0**
	38nm,0.7s						
KST				Lg	Lg	00 47 46.6	
	129nm,0.7s						
CHMS	**Chumysh**	**3.19**	**347**	⇓*i*P	**Pb**	**00 47 01.3**	**-0.4**
	baz=45						
CHMS				⇓*i*S	**Sb**	**00 47 40.0**	**-0.9**
	baz=45						
CHMS	**Chumysh**	**3.19**	**347**	P	**Pb**	**00 47 02.1**	**+0.4**
	SNR=11						
IZV	**Izvestkoviy**	**3.21**	**12**	*e*P	**Pb**	**00 47 03.3**	**+1.2**
	37nm,0.3s						
IZV				*e*S	**Sg**	**00 47 48.5**	**+0.7**
	125nm,0.3s						
IZV	**Izvestkoviy**	**3.21**	**12**	Pg	**Pb**	**00 47 03.4**	**+1.2**
	38nm,0.6s						
IZV				Lg	Lg	00 47 47.9	
	120nm,0.7s						
ANVS	**Anan'yevo**	**3.24**	**26**	⇓*i*P	**Pb**	**00 47 00.9**	**-1.8**
	baz=25						
ANVS				⇓*i*S	**Sb**	**00 47 39.1**	**-3.4**
	baz=25						
TNSS	**Tian-Shan**	**3.28**	**16**	*e*P	**Pb**	**00 47 04.3**	**+0.9**
	32nm,0.2s						
TNSS				*e*S	**Sg**	**00 47 50.2**	**+0.4**
	85nm,0.3s						
TNSS	**Tian-Shan**	**3.28**	**16**	Pg	**Pb**	**00 47 04.8**	**+1.4**
	33nm,0.6s						
TNSS				Lg	Lg	00 47 50.0	
	69nm,0.6s						
MTBS	**Maitube**	**3.28**	**9**	*e*P	**Pb**	**00 47 04.2**	**+0.9**
	17nm,0.2s						
MTBS				*e*S	**Sg**	**00 47 50.0**	**+0.1**
	86nm,0.3s						
MTBS	**Maitube**	**3.28**	**9**	Pg	**Pb**	**00 47 04.3**	**+1.1**
	23nm,0.3s						
MTBS				Lg	Lg	00 47 49.7	
	88nm,0.4s						
PRZ	**Przheval'sk**	**3.29**	**37**	⇑*i*P	**Pb**	**00 47 01.7**	**-1.7**
	baz=37						
PRZ				⇑*i*S	**Sb**	**00 47 40.0**	**-3.8**
	baz=37						
DGS	**Degeres**	**3.35**	**1**	*e*P	**Pb**	**00 47 05.5**	**+1.0**
	30nm,0.4s						
DGS				*e*S	**Sg**	**00 47 52.2**	**+0.1**
	151nm,0.4s						
DGS	**Degeres**	**3.35**	**1**	Pg	**Pb**	**00 47 05.7**	**+1.2**
	30nm,0.6s						
DGS				Lg	Lg	00 47 52.2	
	114nm,0.6s						
MRKS	**Merke**	**3.42**	**327**	*e*P	**Pb**	**00 47 07.5**	**+1.9**
	27nm,0.3s						
MRKS				*e*S	**Sg**	**00 47 55.3**	**+1.0**
	53nm,0.2s						
MRKS	**Merke**	**3.42**	**327**	Pg	**Pb**	**00 47 06.4**	**+0.8**
	30nm,0.5s						
MRKS				Lg	Lg	00 47 52.9	
	49nm,0.5s						
MDOK	**Medeo**	**3.42**	**16**	*e*P	**Pb**	**00 47 06.3**	**+0.6**
	17nm,0.2s						
MDOK				*e*S	**Sg**	**00 47 53.7**	**-0.7**
	140nm,0.5s						
MDOK	**Medeo**	**3.42**	**16**	Pg	**Pb**	**00 47 05.3**	**-0.4**
	23nm,0.8s						
MDOK				⇑Lg	Lg	00 47 52.8	
	138nm,0.8s						
MDOK	**Medeo**	**3.42**	**16**	Pg	**Pb**	**00 47 06.2**	**+0.6**
	17nm,0.5s						
MDOK				Lg	Lg	00 47 52.9	
	140nm,0.7s						
ARK	**Arkit**	**3.43**	**305**	⇑*i*P	**Pb**	**00 47 05.8**	**0.0**
	baz=3.0						
ARK				⇑*i*S	**Sb**	**00 47 47.1**	**-0.8**
	baz=3.0						
AAA	**Alma-Ata**	**3.44**	**15**	*e*P	**Pg**	**00 47 08.0**	**-2.4**
	14nm,0.1s						
AAA				*e*S	**Sg**	**00 47 56.3**	**+1.5**
	82nm,0.2s						
AAA	**Alma-Ata**	**3.44**	**15**	Pg	**Pb**	**00 47 06.7**	**+0.8**
	27nm,0.1s						
AAA				Lg	Lg	00 47 54.6	
	106nm,0.4s						
KNDC	**Almaty**	**3.45**	**15**	⇓Pg	**Pb**	**00 47 07.2**	**+1.0**
	19nm,0.3s						
KNDC				⇓Lg	Lg	00 47 55.1	
	296nm,0.9s						
USP	**Ospenovka**	**3.50**	**345**	P	**Pb**	**00 47 06.1**	**-0.9**
	SNR=12						
KOTS	**Kotyrbulak**	**3.50**	**17**	*e*P	**Pb**	**00 47 08.3**	**+1.3**
	32nm,0.4s						
KOTS				*e*S	**Sg**	**00 47 57.0**	**0.0**
	638nm,0.3s						
KOTS	**Kotyrbulak**	**3.50**	**17**	Pg	**Pb**	**00 47 08.4**	**+1.4**
	32nm,0.5s						
KOTS				Lg	Lg	00 47 56.5	
	163nm,0.5s						
SGDS	**Sogindy**	**3.65**	**347**	Pg	**Pb**	**00 47 11.1**	**+1.5**
	23nm,0.4s						
SGDS				Lg	Lg	00 48 01.0	
	125nm,0.6s						
SATY	**Saty**	**3.75**	**32**	*e*P	**Pb**	**00 47 12.5**	**+1.1**
	29nm,0.3s						
SATY				*e*S	**Sg**	**00 48 03.7**	**-1.5**
	116nm,0.5s						
SATY	**Saty**	**3.75**	**32**	Pg	**Pb**	**00 47 12.9**	**+1.6**
	29nm,0.6s						
SATY				Lg	Lg	00 48 04.4	
	87nm,0.8s						

ZHN	**Zhinishke**	**3.86**	**31**	*e*P	**Pb**	**00 47 14.4**	**+1.3**
	3.0nm,0.1s						
ZHN				*e*S	**Sg**	**00 48 06.7**	**-1.7**
	22nm,0.1s						
ZHN	**Zhinishke**	**3.86**	**31**	Pg	**Pb**	**00 47 14.3**	**+1.2**
	7.3nm,0.3s						
ZHN				Lg	Lg	00 48 06.4	
	16nm,0.3s						
KTBS	**Karatobe**	**3.89**	**10**	*e*P	**Pb**	**00 47 15.5**	**+1.9**
	32nm,0.2s						
KTBS				*e*S	**Sg**	**00 48 08.7**	**-0.6**
	161nm,0.4s						
KTBS	**Karatobe**	**3.89**	**10**	Pg	**Pb**	**00 47 15.5**	**+1.9**
	32nm,0.6s						
KTBS				Lg	Lg	00 48 08.7	
	79nm,0.5s						
KUU	**Kurty**	**4.03**	**6**	*e*P	**Pb**	**00 47 18.0**	**+2.0**
	9.7nm,0.2s						
KUU				*e*S	**Sg**	**00 48 13.0**	**-0.9**
	91nm,0.5s						
KUU	**Kurty**	**4.03**	**6**	Pg	**Pb**	**00 47 17.4**	**+1.4**
	10nm,0.4s						
KUU				Lg	Lg	00 48 11.8	
	111nm,0.8s						
CHKK	**Chushkaly**	**4.07**	**13**	*e*P	**Pb**	**00 47 18.5**	**+1.8**
	2.3nm,0.0s						
CHKK				*e*S	**Sg**	**00 48 14.3**	**-1.0**
	72nm,0.3s						
CHKK	**Chushkaly**	**4.07**	**13**	Pg	**Pb**	**00 47 18.5**	**+1.8**
	14nm,0.4s						
CHKK				Lg	Lg	00 48 14.2	
	75nm,0.6s						
UZB	**Uzynbulak**	**4.09**	**36**	*e*P	**Pb**	**00 47 18.4**	**+1.3**
	6.2nm,0.3s						
UZB				*e*S	**Sg**	**00 48 13.7**	**-2.2**
	46nm,0.5s						
UZB	**Uzynbulak**	**4.09**	**36**	Pg	**Pb**	**00 47 18.6**	**+1.5**
	8.9nm,0.6s						
UZB				Lg	Lg	00 48 13.8	
	46nm,0.7s						
KPKS	**Kokpek**	**4.21**	**31**	*e*P	**Pb**	**00 47 20.4**	**+1.4**
	8.3nm,0.3s						
KPKS				*e*S	**Sg**	**00 48 17.2**	**-2.4**
	111nm,0.3s						
SHLS	**Shalkode**	**4.30**	**39**	*e*P	**Pg**	**00 47 27.7**	**+0.7**
	27nm,0.5s						
SHLS				*e*S	**Sg**	**00 48 29.6**	**+6.7**
	72nm,0.4s						
SHLS	**Shalkode**	**4.30**	**39**	Pg	**Pg**	**00 47 26.4**	**-0.7**
	28nm,0.9s						
SHLS				Lg	Lg	00 48 27.1	
	92nm,0.9s						
PDGK	**Podgornoye**	**4.45**	**38**	Pg	**Pb**	**00 47 24.9**	**+1.7**
	5.8nm,0.6s						
PDGK				Lg	Lg	00 48 24.9	
	39nm,0.9s						
PDGK	**Podgornoye**	**4.45**	**38**	⇓Pg	**Pg**	**00 47 32.0**	**+2.3**
	8.0nm,0.5s						
PDGK				⇓Lg	Lg	00 48 24.5	
	106nm,0.8s						
DZA	**Taraz**	**4.46**	**314**	Pg	**Pg**	**00 47 26.9**	**-3.1**
	54nm,0.1s						
DZA				Lg	Lg	00 48 29.0	
	48nm,0.2s						
ARXS	**Arharly**	**4.59**	**19**	*e*P	**Pb**	**00 47 27.9**	**+2.2**
	5.6nm,0.4s						
ARXS				*e*S	**Sg**	**00 48 29.9**	**-2.2**
	51nm,0.3s						
ARXS	**Arharly**	**4.59**	**19**	Pg	**Pb**	**00 47 28.2**	**+2.5**
	7.0nm,0.5s						
ARXS				Lg	Lg	00 48 31.0	
	46nm,0.7s						
JBG	**Jabagly**	**4.66**	**305**	Pg	**Pb**	**00 47 30.1**	**+3.4**
	11nm,0.6s						
JBG				Lg	Lg	00 48 34.2	
	34nm,0.6s						
IUG	**Iuzhnay**	**4.86**	**299**	Pg	**Pg**	**00 47 34.0**	**-3.6**
	2.5nm,0.4s						
IUG				Lg	Lg	00 48 40.5	
	24nm,0.8s						
KK31	**Karatay Array**	**5.06**	**311**	Pn	Pb	00 47 28.1	-5.4
	0.7nm,0.3s,baz=125,slow=9.2,SNR=4.2						
KK31				⇑Pg	**Pg**	**00 47 40.7**	**-0.8**
	4.5nm,0.7s,baz=124,slow=15,SNR=7.0						
KK31				Lg	Lg	00 48 47.1	
	6.3nm,0.4s,baz=126,slow=29,SNR=7.0						
BTLS	**Baital**	**5.29**	**347**	*e*P	**Pb**	**00 47 40.7**	**+3.2**
	0.7nm,0.1s						
BTLS				*e*S	**Sg**	**00 48 52.0**	**-2.6**
	10nm,0.3s						
BTLS	**Baital**	**5.29**	**347**	Pg	**Pb**	**00 47 41.1**	**+3.5**
	1.8nm,0.6s						
BTLS				Lg	Lg	00 48 53.2	
	11nm,0.5s						
DJR	**Jarkent**	**5.37**	**33**	*e*P	**Pb**	**00 47 41.5**	**+2.7**
	0.8nm,0.1s						
DJR				*e*S	**Sg**	**00 48 53.7**	**-3.3**
	21nm,0.4s						
DJR	**Jarkent**	**5.37**	**33**	Pg	**Pb**	**00 47 41.4**	**+2.5**
	1.6nm,0.4s						
DJR				Lg	Lg	00 48 53.5	
	21nm,0.7s						
TDK	**Taldyqorghan**	**5.48**	**20**	*e*P	**Pb**	**00 47 44.5**	**+3.8**
	8.5nm,0.1s						
TDK				*e*S	**Sg**	**00 48 58.6**	**-1.9**
	43nm,0.3s						
TDK	**Taldyqorghan**	**5.48**	**20**	Pg	**Pb**	**00 47 44.3**	**+3.6**
	21nm,0.4s						
TDK				Lg	Lg	00 48 58.2	
	48nm,1.0s						
KAPS	**Kapalarasan**	**6.02**	**25**	Pg	**Pb**	**00 47 53.3**	**+3.4**
	5.1nm,0.7s						
KAPS				Lg	Lg	00 49 13.3	
	15nm,0.5s						
WMQ	**Urumqi**	**9.76**	**62**	*e*P	Pn	00 48 30.3	+4.8

DDA ***29*** *00:56:40.5,37°.21N×28°.77E,h7km±1km,ML2.0*

ISK ***29*** *00:56:40.1,37°.20N×28°.85E,h16km,ML2.7/6*

ISC 29 00:56:40.1±1.2,37°.21N±0°.03×28°.79E±0°.04,h9km±11km, n11,σ0§67/17,Turkey

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

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.07**	**179**	P	**Pg**	**01 18 24.6**	**-0.1**
CHV1				S	**Sg**	**01 18 25.9**	**-0.4**
ARG2	**Argostoli**	**0.11**	**129**	P	**Pg**	**01 18 25.2**	**0.0**
ARG2				S	**Sg**	**01 18 26.9**	**-0.3**
VLS	**Valsamata**	**0.18**	**113**	P	**Pg**	**01 18 26.4**	**+0.1**
VLS				S	**Sg**	**01 18 28.9**	**-0.2**
	84μm,0.2s						
FSK	**Fiskardo**	**0.26**	**34**	P	**Pb**	**01 18 28.3**	**-0.8**
FSK				S	**Sb**	**01 18 33.0**	**-0.5**
	8μm,0.2s						
KFL	**Anninata**	**0.35**	**113**	P	**Pb**	**01 18 29.5**	**-1.2**
KFL				S	**Sb**	**01 18 34.8**	**-1.4**
	20μm,0.4s						
EVGI	**Lefkada island**	**0.43**	**30**	P	**Pb**	**01 18 31.8**	**-0.3**
EVGI				S	**Sb**	**01 18 38.8**	**+0.2**
LKD2	**Lefkada island**	**0.58**	**22**	P	**Pb**	**01 18 34.3**	**-0.4**
LKD2				S	**Sb**	**01 18 43.6**	**+0.6**
	2μm,0.3s						
TSLK	**Tsoukalades, L**	**0.61**	**20**	P	**Pb**	**01 18 35.0**	**-0.2**
TSLK				S	**Sb**	**01 18 44.4**	**+0.5**
	3μm,0.4s						
ZAK2	**Zakynthos**	**0.62**	**138**	P	**Pb**	**01 18 34.6**	**-0.6**
AST1	**Astakos**	**0.63**	**62**	P	**Pb**	**01 18 34.9**	**-0.5**
AST1				S	**Sb**	**01 18 45.1**	**+0.8**
KRI1	**kERI**	**0.68**	**149**	P	**Pb**	**01 18 35.0**	**-1.3**
KRI1				S	**Sb**	**01 18 45.1**	**-0.6**
PDO	**Prodromos**	**0.72**	**61**	P	**Pb**	**01 18 36.7**	**-0.3**
PDO				S	**Sb**	**01 18 47.8**	**+0.9**
	5μm,0.4s						
RLS	**Riolos of Patr**	**0.88**	**102**	P	**Pb**	**01 18 38.9**	**-0.8**
RLS				S	**Sn**	**01 18 53.0**	**-0.5**
PVO	**Paravola**	**0.97**	**67**	P	**Pn**	**01 18 41.5**	**-0.5**
PVO				S	**Sn**	**01 18 56.8**	**+1.0**
	3μm,0.8s						
DRO	**Drossia**	**1.09**	**105**	P	**Pb**	**01 18 42.4**	**-0.9**
DRO				S	**Sn**	**01 18 59.9**	**+1.1**
	3μm,0.8s						
EFP	**Efpalio**	**1.21**	**81**	P	**Pb**	**01 18 44.6**	**-0.8**
ANX	**Ano Chora**	**1.26**	**74**	P	**Pg**	**01 18 46.0**	**-0.6**
ANX				S	**Sn**	**01 19 05.3**	**+2.3**
	2μm,1.2s						
LAKA	**Lakka**	**1.26**	**90**	P	**Pg**	**01 18 45.6**	**-1.0**
LAKA				S	**Sn**	**01 19 04.5**	**+1.5**
AMT	**Artemida-Makis**	**1.27**	**124**	P	**Pg**	**01 18 46.4**	**-0.4**
EVR	**Evrytania**	**1.30**	**59**	P	**Pb**	**01 18 46.5**	**-0.5**
SERG	**Sergoula**	**1.33**	**82**	P	**Pb**	**01 18 46.6**	**-0.8**
TRIZ	**Trizonia**	**1.34**	**84**	P	**Pb**	**01 18 46.8**	**-0.7**
KALE	**Kalithea**	**1.39**	**84**	P	**Pb**	**01 18 47.6**	**-0.9**
KLV	**Kalavryta, Ach**	**1.41**	**98**	P	**Pb**	**01 18 48.1**	**-0.7**
ITM	**Ithomi**	**1.63**	**131**	P	**Pb**	**01 18 51.5**	**-0.9**
SRN	**Sarande**	**1.66**	**350**	P	**Pb**	**01 18 53.1**	**+0.2**
AGG	**Agios Georgios**	**1.71**	**63**	P	**Pg**	**01 18 54.2**	**-1.1**
OHR	**Ohrid**	**2.88**	**6**	*i* Pn	**Pb**	**01 19 12.0**	**-1.8**
TIP	**Timpagrande**	**2.98**	**289**	⇑P	**Pn**	**01 19 11.6**	**+1.8**
TIP	**Timpagrande**	**2.98**	**289**	⇑S	**Sn**	**01 19 46.2**	**+0.7**
STIP	**Stip**	**3.71**	**21**	*i* Pn	**Pb**	**01 19 24.9**	**-3.1**
IDI	**Anoyia**	**4.67**	**128**	Pn	**Pn**	**01 19 34.7**	**+1.7**
	0.3nm,0.3s,baz=279,slow=18,SNR=2.0						
IDI				Sn	**Sn**	**01 20 29.8**	**+2.6**
	2.3nm,0.3s,baz=124,slow=24,SNR=9.6						
DBRK	**Dubrovnik**	**4.73**	**340**	*e*Pn	**Pn**	**01 19 34.1**	**+0.4**
DBRK				Sn	**Sn**	**01 20 26.7**	**-1.9**
VAE	**Valguarnera**	**4.79**	**263**	Pn	**Pn**	**01 19 33.9**	**-0.7**
	0.5nm,0.3s,baz=42,slow=12,SNR=2.6						
VAE				Sn	**Sn**	**01 20 32.9**	**+2.9**
	2.6nm,0.3s,baz=252,slow=9.7,SNR=5.9						
VTS	**Vitosha**	**4.88**	**26**	⇑P	Pb	01 19 42.4	-5.5
VTS	**Vitosha**	**4.88**	**26**	⇑S	**Sn**	**01 20 37.8**	**+5.4**
STON	**Ston**	**5.05**	**337**	*e*Pn	**Pn**	**01 19 38.4**	**+0.3**
STON				Sn	**Sn**	**01 20 35.2**	**-1.1**
MAKA	**Makarska**	**5.64**	**334**	*e*Pn	**Pn**	**01 19 46.7**	**+0.5**
MAKA				Sn	**Sn**	**01 20 48.8**	**-2.2**
ZIRJ	**Zirje**	**6.48**	**328**	*i* Pn	**Pn**	**01 19 57.8**	**+0.1**
KIJV	**Kijevo**	**6.49**	**334**	*e*Pn	**Pn**	**01 19 58.6**	**+0.8**
MORI	**Morici**	**6.63**	**329**	*e*Pn	**Pn**	**01 20 00.7**	**+1.0**
MORI				Sn	**Sn**	**01 21 12.6**	**-2.7**
BLY	**Banja Luka**	**6.92**	**341**	⇑P	**Pn**	**01 20 04.5**	**+0.7**
BLY	**Banja Luka**	**6.92**	**341**	⇑S	**Sn**	**01 21 24.3**	**+1.8**
DUGI	**Dugi Otok**	**7.00**	**327**	*e*Pn	**Pn**	**01 20 05.8**	**+0.9**
NVLJ	**Novalja**	**7.54**	**328**	*e*Pn	**Pn**	**01 20 12.9**	**+0.6**
OZLJ	**Ozalj**	**8.22**	**335**	*e*Pn	**Pn**	**01 20 22.8**	**+1.2**
MLR	**Muntele Rosu**	**8.34**	**28**	Pn	**Pn**	**01 20 25.9**	**+2.6**
	0.1nm,0.3s,baz=198,slow=18,SNR=2.5						
KEST	**Kesra**	**9.18**	**257**	Pn	**Pn**	**01 20 36.6**	**+1.7**
	0.1nm,0.3s,baz=57,slow=17,SNR=2.5						
KEST				Sn	**Sn**	**01 22 17.8**	**-0.4**
	0.1nm,0.3s,baz=279,slow=19,SNR=2.4						
SOKA	**Soboth**	**9.30**	**337**	*e*Pn	**Pn**	**01 20 36.7**	**+0.2**
	3.2nm,0.7s						
OBKA	**Obir**	**9.31**	**334**	*e*Pn	**Pn**	**01 20 38.1**	**+1.5**
	1.9nm,0.3s						
MOA	**Molln**	**10.58**	**337**	*e*Pn	**Pn**	**01 20 55.0**	**+1.0**
	1.5nm,0.5s						
MOTA	**Moosalm**	**11.35**	**326**	*e*Pn	**Pn**	**01 21 06.7**	**+2.1**
	0.8nm,0.4s						
GERES	**GERESS Array B**	**11.64**	**338**	Pn	**Pn**	**01 21 08.1**	**-0.5**
	0.2nm,0.3s,baz=156,slow=13,SNR=6.3						
GERES				Sn	**Sn**	**01 23 12.4**	**-6.1**
	0.1nm,0.3s,baz=150,slow=22,SNR=3.1						
HFS	**Hagfors**	**22.31**	**351**	P	**P**	**01 23 21.2**	**+1.5**
	3.0nm,0.9s,baz=155,slow=11,SNR=3.8						
FINES	**FINESS Array B**	**23.49**	**7**	P	**P**	**01 23 31.3**	**-0.6**
	2.9nm,0.9s,baz=188,slow=8.4,SNR=4.5						
NOA	**NORSAR Array B**	**23.53**	**349**	P	**P**	**01 23 31.5**	**-0.8**
	1.0nm,1.0s,baz=153,slow=11,SNR=2.5						
TORD	**Torodi Ar. Bea**	**30.02**	**219**	P	**P**	**01 24 31.9**	**+0.6**
	1.2nm,1.1s,baz=39,slow=9.3,SNR=4.3						
MKAR	**Makanchi Array**	**45.36**	**58**	P	**P**	**01 26 40.0**	**-0.7**
	0.7nm,0.6s,baz=276,slow=7.0,SNR=9.6						
ZALV	**Zalesovo Beam**	**45.73**	**48**	P	**P**	**01 26 42.9**	**-0.4**
	0.8nm,0.4s,baz=272,slow=8.9,SNR=4.7						

*NEIC **29** 01:30:26.8±1.8, 37.32N±0.02×114.11W±0.02, h5km±6km, Error ellipse: s-maj=3.6km s-min=1.0km az=211.0, Moment Tensor Solution. Moment tensor: Scale 10^{14}Nm; M_{rr}=1.40; $M_{\theta\theta}$=2.68; $M_{\phi\phi}$=-1.27; $M_{r\theta}$=-1.76; $M_{\theta\phi}$=5.42; $M_{r\phi}$=0.65; Fault plane solution: M_0=6.19000×10^{14} NP1: ϕ_s=191.25000°, δ=69.98000°, λ=-170.78000°. NP2: ϕ_s=98.07000°, δ=81.34000°, λ=-20.27000°. Principal axes: T 6.6218, Plg8.0000°, Azm146.0000°; N -0.9777, Plg68.0000°, Azm256.0000°; P -5.6442, Plg20.0000°, Azm53.0000°;*

*IDC **29** 01:30:27.2±0.8, 37.32N×114.21W, h0km, mb2.7/1, mb1 3.5/6, mb1mx3.3/62, mbtmp3.2/6, ML3.6/5 Error ellipse: s-maj=11.2km s-min=7.7km az=108.0*

*REN **29** 01:30:27.8±1.9, 37.34N±0.03×114.11W±0.03, h5km±6km, Error ellipse: s-maj=5.1km s-min=2.9km az=203.0*

*UUSS **29** 01:30:27.5±1.5, 37.32N±0.03×114.11W±0.03, h7km±5km, ML4.0/23, Mwr3.8/34(NEIC), Mwr3.9(REN), Error ellipse: s-maj=4.5km s-min=2.4km az=223.0*

*ANF **29** 01:30:28.3±0.6, 37.33N×114.14W, h11km±4km, ML4.2/31, Error ellipse: s-maj=2.4km s-min=1.8km az=136.0*

ISC 29 01:30:26.3±1.2, 37.31N±0.02×114.14W±0.02, h1km±11km, n130, σ1§19/164, Southern Nevada

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCUT	**Cedar City**	**0.66**	**68**		**Pb**	**01 30 39.7**	**-1.1**
CCUT				Sg	**Sb**	**01 30 49.2**	**-1.4**
LCMT	**Little Creek M**	**0.77**	**112**		**Pb**	**01 30 42.0**	**-0.6**
LCMT				Sg	**Sg**	**01 30 51.9**	**+0.8**
SZCU	**Shurtz Canyon**	**0.88**	**71**		**Pb**	**01 30 43.9**	**-0.7**
SZCU				Sg	**Sb**	**01 30 55.9**	**-1.0**
KNB	**Kanab**	**1.09**	**105**		**Pn**	**01 30 48.0**	**-0.9**
KNB				Sg	**Sb**	**01 31 02.1**	**-0.7**
SHPR	**Sheep Range**	**1.15**	**226**		**Pb**	**01 30 48.6**	**-0.4**
PSUT	**Pine Spring**	**1.24**	**10**		**Pg**	**01 30 50.6**	**+0.4**
PSUT				Sg	**Sg**	**01 31 06.5**	**+0.2**
PKCU	**Pink Cliffs**	**1.46**	**84**		**Pb**	**01 30 53.7**	**-0.8**
PKCU					**Sg**	**01 31 14.5**	**+1.2**
R11A	**Troy Canyon, C**	**1.55**	**313**		**Pn**	**01 30 54.9**	**-0.3**
R11A				Sg	**Sg**	**01 31 17.7**	**+1.6**
R11A	**Troy Canyon, C**	**1.55**	**313**	P	**Pn**	**01 30 55.0**	**-0.3**
	baz=130,SNR=1000						
R11A				S	**Sg**	**01 31 16.8**	**+0.7**
	baz=130						
MTPU	**Mount Pierson**	**1.71**	**64**		**Pn**	**01 30 57.2**	**-0.5**
MTPU				Sg	**Sg**	**01 31 21.9**	**+0.5**
U15A	**North Rim**	**1.72**	**120**		**Pn**	**01 30 57.5**	**-0.1**
U15A				Sg	**Sg**	**01 31 21.4**	**-0.2**
TPNV	**Topopah Spring**	**1.73**	**259**		**Pn**	**01 30 58.0**	**+0.4**
TPNV				Sg	**Sg**	**01 31 22.9**	**+1.1**
TPNV	**Topopah Spring**	**1.73**	**259**	P	**Pn**	**01 30 58.0**	**+0.4**
	baz=76,SNR=715						
TPNV				S	**Sb**	**01 31 21.3**	**+0.1**
	baz=76						
TCRU	**Three Creeks R**	**1.86**	**45**	Pn	**Pn**	**01 30 59.2**	**-0.4**
TCRU				Sg	**Sg**	**01 31 26.7**	**+0.5**
MSU	**Marysvale**	**1.96**	**52**		**Pn**	**01 31 00.8**	**-0.1**
W13A	**Hualapai Mount**	**2.21**	**175**		**Pn**	**01 31 05.1**	**+0.7**
W13A				Sn	**Sn**	**01 31 31.9**	**-0.5**
SHOC	**Shoshone, Teco**	**2.22**	**231**	Pb	**Pb**	**01 31 08.6**	**+1.3**
	baz=50						
SHOC				S	**Sn**	**01 31 33.5**	**+1.1**
	baz=50						
FURC	**Furnace Creek,**	**2.34**	**250**	P	**Pn**	**01 31 06.7**	**+0.8**
	baz=68,SNR=140						
FURC				S	**Sn**	**01 31 36.4**	**+1.2**
	baz=68						
TUQ	**Turquoise Moun**	**2.36**	**218**	P	**Pn**	**01 31 07.2**	**+0.9**
	baz=37,SNR=357						
TUQ				S	**Sb**	**01 31 37.6**	**-1.8**
	baz=37						
NEE2	**Needles Airpor**	**2.56**	**189**	P	**Pn**	**01 31 09.3**	**+0.3**
	baz=8.9,SNR=13						
NEE2				Sb	**Sg**	**01 31 49.0**	**+0.3**
	baz=8.9						
GRAC	**Grapevine Rang**	**2.60**	**264**	P	**Pn**	**01 31 10.1**	**+0.6**
	baz=82,SNR=60						
GRAC				S	**Sb**	**01 31 43.8**	**-2.4**
	baz=82						
Q16A	**Castle Valley**	**2.84**	**55**		**Pn**	**01 31 14.0**	**+1.1**
WUAZ	**Wupatki**	**2.86**	**128**		**Pn**	**01 31 14.4**	**+1.2**
WUAZ				Sn	**Sn**	**01 31 46.5**	**-1.7**
WUAZ	**Wupatki**	**2.86**	**128**	Pb	**Pb**	**01 31 18.7**	**+0.6**
	baz=310,SNR=222						
WUAZ				Sb	**Sb**	**01 31 55.1**	**+1.5**
	baz=310						
GSC	**Goldstone, Bar**	**2.94**	**228**		**Pn**	**01 31 14.9**	**+0.6**
GSC	**Goldstone, Bar**	**2.94**	**228**	P	**Pn**	**01 31 15.3**	**+1.0**
	baz=46,SNR=71						
GSC				Sb	**Sg**	**01 31 59.8**	**-1.1**
	baz=46						
DAC	**Darwin (Calif)**	**2.96**	**251**		**Pn**	**01 31 14.9**	**+0.3**
MPMC	**Manual Prospec**	**2.97**	**246**	P	**Pn**	**01 31 15.3**	**+0.5**
	baz=64,SNR=64						
MPMC				Sb	**Sg**	**01 32 00.6**	**-1.1**
	baz=64						
PDMCI	**Parker Dam,Lak**	**3.00**	**180**	Pb	**Pb**	**01 31 22.3**	**+1.9**
	baz=0.4,SNR=31						
PDMCI				Sb	**Sg**	**01 32 01.4**	**-1.3**
	baz=0.4						
TMUT	**Trail Mountain**	**3.04**	**48**		**Pn**	**01 31 14.5**	**-1.4**
HEC	**Hector,Ludlow**	**3.05**	**216**	P	**Pn**	**01 31 16.5**	**+0.8**
	baz=35,SNR=18						
HEC				Sb	**Sg**	**01 32 04.3**	**+0.1**
	baz=35						
DUG	**Dugway, Tooele**	**3.06**	**19**		**Pn**	**01 31 14.7**	**-1.3**
DUG	**Dugway, Tooele**	**3.06**	**19**	P	**Pn**	**01 31 16.2**	**+0.2**
	baz=200						
DUG				Sb	**Sg**	**01 32 02.9**	**-1.9**
	baz=200						
NLU	**North Lily Min**	**3.10**	**31**	Pn	**Pn**	**01 31 15.8**	**-0.7**
IRM	**Iron Mountain**	**3.25**	**195**	P	**Pn**	**01 31 19.0**	**+0.5**
	baz=14,SNR=22						
IRM				Sb	**Sg**	**01 32 09.4**	**-1.4**
	baz=14						
CWC	**Cottonwood Cre**	**3.28**	**256**	P	**Pn**	**01 31 19.7**	**+0.7**
	baz=73						
MPU	**Maple Canyon**	**3.34**	**35**		**Pn**	**01 31 18.7**	**-1.1**
RRX	**Edison Barstow**	**3.35**	**225**	Sb	**Sg**	**01 32 12.8**	**-1.3**
	baz=43						
SRU	**San Rafael Swe**	**3.37**	**57**		**Pn**	**01 31 18.8**	**-1.4**
NV11	**Mina Array Sit**	**3.37**	**291**		**Pn**	**01 31 19.9**	**-0.3**
LRMC	**Laurel Mtn Rad**	**3.39**	**239**	P	**Pn**	**01 31 21.4**	**+0.8**
	baz=56,SNR=31						
LRMC				Sb	**Sg**	**01 32 13.5**	**-1.8**
	baz=56						
P17A	**Butcher Ranch,**	**3.43**	**50**		**Pn**	**01 31 21.9**	**+0.8**
NVAR	**Mina Array Bea**	**3.48**	**290**	Pn	**Pn**	**01 31 22.1**	**+0.3**
	3.5nm,0.3s,baz=116,slow=14,SNR=64						
NVAR				Lg	Lg	01 32 14.8	
	1.8nm,0.3s,baz=118,slow=15,SNR=2.7						
NVAR	**Mina Array Bea**	**3.48**	**290**		**Pn**	**01 31 20.3**	**-1.6**
Y14A	**Wickenburg**	**3.49**	**164**		**Pn**	**01 31 21.9**	**+0.1**
ELK	**Elko**	**3.54**	**346**	Pn	**Pn**	**01 31 22.3**	**-0.3**
	1.4nm,0.3s,baz=172,slow=11,SNR=26						
ELK				Lg	Lg	01 32 17.1	
	22nm,0.3s,baz=110,slow=15,SNR=8.5						
ELK	**Elko**	**3.54**	**346**		**Pn**	**01 31 21.5**	**-1.1**
Y12C	**Blythe**	**3.56**	**185**		**Pn**	**01 31 22.2**	**-0.5**
Y12C	**Blythe**	**3.56**	**185**	P	**Pn**	**01 31 23.6**	**+0.8**
	baz=5.2,SNR=15						
Y12C				Sb	**Sg**	**01 32 18.7**	**-2.2**
	baz=5.2						
KVN	**Kaiserville**	**3.58**	**300**		**Pn**	**01 31 23.1**	**+0.1**
X16A	**Lo Mia Camp, P**	**3.62**	**142**		**Pn**	**01 31 24.2**	**+0.5**
BELC	**Belle Mtn. Jos**	**3.63**	**205**	P	**Pn**	**01 31 24.6**	**+0.8**
	baz=24,SNR=20						
BELC				Sb	**Sg**	**01 32 21.5**	**-1.5**
	baz=24						
RYN	**Ryan**	**3.71**	**292**		**Pn**	**01 31 24.8**	**-0.1**
BGU	**Big Grassy Mou**	**3.71**	**13**		**Pn**	**01 31 24.7**	**-0.3**
MLAC	**Mammoth, Mammo**	**3.75**	**276**	P	**Pn**	**01 31 25.9**	**+0.3**
	baz=93,SNR=10.0						
BBRC	**Big Bear Solar**	**3.79**	**218**	P	**Pn**	**01 31 27.8**	**+1.8**
	baz=36,SNR=14						
BC3	**Big Chuckawall**	**3.80**	**197**	P	**Pn**	**01 31 27.0**	**+0.9**
	baz=16,SNR=14						
CTU	**Camp Tracy**	**3.86**	**28**		**Pn**	**01 31 24.1**	**-2.8**
ISA	**Isabella, Lake**	**3.86**	**246**		**Pn**	**01 31 28.0**	**+1.1**
ISA	**Isabella, Lake**	**3.86**	**246**	P	**Pn**	**01 31 28.1**	**+1.1**
	baz=63,SNR=13						
OMMB	**Old Mammoth Mi**	**3.88**	**276**		**Pn**	**01 31 28.1**	**+0.7**
JLU	**Jordanelle**	**3.90**	**32**		**Pn**	**01 31 26.7**	**-0.9**
MDPB	**Devils Postpil**	**3.95**	**276**		**Pn**	**01 31 28.5**	**+0.2**
EDW2	**Edwards Air Fo**	**3.95**	**233**	P	**Pn**	**01 31 30.1**	**+1.9**
	baz=51,SNR=22						
EDW2				Sb	**Sg**	**01 32 31.5**	**-1.9**
	baz=51						
PFO	**Pinyon Flats O**	**4.15**	**208**	Pn	**Pn**	**01 31 31.8**	**+0.9**
	2.3nm,0.3s,baz=30,slow=13,SNR=16						
PFO				Sn	**Sn**	**01 32 21.1**	**+1.0**
	1.1nm,0.3s,baz=60,slow=20,SNR=2.4						
PFO				Lg	Lg	01 32 36.9	
	3.1nm,0.3s,baz=317,slow=23,SNR=11						
PFO	**Pinyon Flats O**	**4.15**	**208**		**Pn**	**01 31 30.7**	**-0.2**
PFO					**Sn**	**01 32 19.8**	**-0.3**
PFO	**Pinyon Flats O**	**4.15**	**208**	P	**Pn**	**01 31 31.8**	**+0.9**
	baz=26,SNR=11						
XPFO	**Pion Flat**	**4.15**	**208**		**Pn**	**01 31 31.2**	**+0.3**
XPFO				Sn	**Sn**	**01 32 19.7**	**-0.3**
TPFO	**Pinon Flats**	**4.15**	**208**	P	**Pn**	**01 31 31.8**	**+0.9**
	baz=26,SNR=9.8						
W18A	**Petrified Fore**	**4.17**	**120**		**Pn**	**01 31 30.9**	**-0.5**
W18A	**Petrified Fore**	**4.17**	**120**	P	**Pn**	**01 31 32.2**	**+0.9**
	baz=303,SNR=46						
BFSC	**Mount Baldy Ra**	**4.19**	**224**	P	**Pn**	**01 31 33.1**	**+1.6**
	baz=42,SNR=6.7						
SPUT	**South Promonto**	**4.21**	**18**		**Pn**	**01 31 30.7**	**-1.0**
GLA	**Glamis**	**4.28**	**188**		**Pn**	**01 31 33.8**	**+1.2**
GLA				Sn	**Sn**	**01 32 22.5**	**-0.8**
GLA	**Glamis**	**4.28**	**188**	P	**Pn**	**01 31 33.9**	**+1.2**
	baz=7.6						
TCUT	**Toone Canyon**	**4.36**	**28**		**Pn**	**01 31 33.0**	**-0.8**
YERR	**Yerington**	**4.36**	**294**		**Pn**	**01 31 34.5**	**+0.6**
WAKR	**Walker**	**4.36**	**288**		**Pn**	**01 31 34.8**	**+0.9**
X18A	**Snowflake**	**4.38**	**128**		**Pn**	**01 31 34.4**	**+0.2**
MWC	**Mount Wilson**	**4.43**	**227**		**Pn**	**01 31 34.6**	**-0.2**
MURC	**Murrieta**	**4.46**	**215**	P	**Pn**	**01 31 36.9**	**+1.8**
	baz=33,SNR=28						
MVCO	**Mesa Verde**	**4.50**	**90**		**Pn**	**01 31 36.0**	**+0.1**
MVCO	**Mesa Verde**	**4.50**	**90**	P	**Pn**	**01 31 36.8**	**+1.0**
	baz=273,SNR=43						
HVU	**Hansel Valley**	**4.59**	**13**	Pn	**Pn**	**01 31 35.9**	**-1.1**
PNTR	**Pine Nut**	**4.66**	**294**		**Pn**	**01 31 37.1**	**-0.9**
HWUT	**Hardware Ranch**	**4.73**	**24**		**Pn**	**01 31 37.1**	**-1.9**
PAHR	**Pah Rah Range**	**4.76**	**302**		**Pn**	**01 31 39.7**	**+0.3**
VCNR	**Virginia City**	**4.77**	**296**	Pn	**Pn**	**01 31 39.8**	**+0.3**
RDMU	**Red Mountain**	**4.83**	**46**		**Pn**	**01 31 40.1**	**-0.2**
CMB	**Columbia Colle**	**5.01**	**280**		**Pn**	**01 31 42.3**	**-0.4**
BAR	**Barrett**	**5.06**	**205**		**Pn**	**01 31 42.9**	**-0.5**
PAGB	**Antelope Grade**	**5.17**	**254**	Pn	**Pn**	**01 31 44.1**	**-0.8**
O20A	**White River Ci**	**5.41**	**57**		**Pn**	**01 31 47.9**	**-0.4**
214A	**Organ Pipe Nat**	**5.45**	**168**		**Pn**	**01 31 50.2**	**+1.6**
214A	**Organ Pipe Nat**	**5.45**	**168**	P	**Pn**	**01 31 50.3**	**+1.6**
	baz=349						
BEKR	**Beckworth**	**5.50**	**300**		**Pn**	**01 31 50.6**	**+1.0**
AFDM	**Forest Hills D**	**5.63**	**289**	Pn	**Pn**	**01 31 49.3**	**-1.9**
TUC	**Tucson**	**5.70**	**150**		**Pn**	**01 31 51.8**	**-0.4**
TUC	**Tucson**	**5.70**	**150**	P	**Pn**	**01 31 54.2**	**+2.1**
	baz=332						
S22A	**4UR Ranch, Cre**	**5.82**	**83**		**Pn**	**01 31 53.7**	**-0.4**
SMCO	**Snowmass**	**5.94**	**69**		**Pn**	**01 31 55.9**	**+0.2**
WVOR	**Wild Horse Val**	**6.18**	**327**		**Pn**	**01 31 59.2**	**+0.4**
MFID	**Camas Ranch**	**6.24**	**349**	Pn	**Pn**	**01 31 58.0**	**-1.5**
BW06	**Boulder Array**	**6.49**	**31**		**Pn**	**01 32 02.4**	**-0.7**
BW06	**Boulder Array**	**6.49**	**31**	P	**Pn**	**01 32 05.2**	**+2.1**
	baz=214						
PD31	**Pinedale Array**	**6.49**	**31**		**Pn**	**01 32 02.5**	**-0.6**
PDAR	**Pinedale Array**	**6.49**	**31**	Pn	**Pn**	**01 32 06.4**	**+3.3**
	0.4nm,0.3s,baz=195,slow=10,SNR=29						
PDAR				Lg	Lg	01 33 51.7	
	1.7nm,0.3s,baz=225,slow=29,SNR=8.1						
REDW	**Red Top Meadow**	**6.55**	**21**		**Pn**	**01 32 03.6**	**-0.3**
MOD	**Modoc Plateau**	**6.61**	**316**		**Pn**	**01 32 05.7**	**+0.9**
ANMO	**Albuquerque**	**6.65**	**108**	Pn	**Pn**	**01 32 08.2**	**+2.9**
	0.2nm,0.3s,baz=290,slow=10,SNR=7.7						
ANMO				Pg	Pg	01 32 29.0	-4.7
	1.2nm,0.3s,baz=261,slow=8.3,SNR=6.6						
ANMO				Lg	Lg	01 33 53.1	
	0.9nm,0.3s,baz=42,slow=18,SNR=2.4						
ANMO	**Albuquerque**	**6.65**	**108**		**Pn**	**01 32 07.0**	**+1.8**
ANMO	**Albuquerque**	**6.65**	**108**	P	**Pn**	**01 32 08.0**	**+2.7**
	baz=293						
O03E	**Paynes Creek**	**6.69**	**299**	P	**Pn**	**01 32 08.0**	**+2.3**
	baz=114						
SDCO	**Great Sand Dun**	**6.88**	**84**	Pn	**Pn**	**01 32 08.0**	**-0.6**
J08A	**Circle Bar Ran**	**6.89**	**333**		**Pn**	**01 32 08.0**	**-0.5**
IMW	**Indian Meadow**	**7.02**	**19**		**Pn**	**01 32 10.0**	**-0.4**
FLWY	**Flagg Ranch**	**7.25**	**20**		**Pn**	**01 32 12.5**	**-1.1**
Q24A	**Divide**	**7.27**	**74**	Pn	**Pn**	**01 32 14.2**	**+0.1**
N23A	**Red Feather La**	**7.31**	**58**	Pn	**Pn**	**01 32 16.5**	**+2.1**
N23A	**Red Feather La**	**7.31**	**58**	P	**Pn**	**01 32 17.1**	**+2.7**
	baz=243						
T25A	**Trinidad**	**7.76**	**88**	Pn	**Pn**	**01 32 21.3**	**+0.7**
I07A	**Izee**	**7.90**	**331**		**Pn**	**01 32 24.5**	**+2.1**
K22A	**Casper**	**7.91**	**45**		**Pn**	**01 32 21.4**	**-1.2**
K22A	**Casper**	**7.91**	**45**	P	**Pn**	**01 32 24.4**	**+1.8**
	baz=230,SNR=7.5						
PINE	**Pine Mountain**	**8.29**	**323**		**Pn**	**01 32 26.4**	**-1.5**
RLMT	**Red Lodge**	**8.62**	**24**	P	**Pn**	**01 32 35.6**	**+3.2**
	baz=207						
RSSD	**Black Hills**	**10.25**	**45**		**Pn**	**01 32 54.6**	**-0.1**
RSSD	**Black Hills**	**10.25**	**45**	P	**Pn**	**01 32 55.6**	**+0.9**
	baz=232						
TXAR	**Lajitas Array**	**11.82**	**129**	Lg	Lg	01 36 38.4	
	0.1nm,0.3s,baz=320,slow=22,SNR=3.5						
YKA	**Yellowknife Ar**	**25.21**	**359**	P	**P**	**01 35 54.4**	**+1.2**
	0.1nm,0.5s,baz=179,slow=9.7,SNR=3.2						

*IDC **29** 01:32:26.1±0.9, 38.55N×20.44E, h0km, mb3.7/10, mb1 3.8/17, mb1mx3.6/63, mbtmp3.7/17, ML3.4/6, Error ellipse: s-maj=16.9km s-min=14.1km az=171.0*

*PDG **29** 01:32:26.9±0.3, 38.42N×20.38E, h16km, ML3.9/13, Error

MAKA				Sn	**Sn**	01 34 50.3	-2.5
DIVS	**Divibare**	**5.67**	**356**	*e*Pn	**Pn**	01 33 51.1	-0.7
HAPS	**Han Pijesak,BI**	**5.77**	**349**	*e*Pn	**Pn**	01 33 52.1	-0.9
KIJV	**Kijevo**	**6.36**	**332**	*e*Pn	**Pn**	01 34 01.2	+0.1
ZIRJ	**Zirje**	**6.37**	**327**	*e*Pn	**Pn**	01 34 00.9	-0.3
ZIRJ				Sn	**Sn**	01 35 10.6	-3.3
MGRS	**Mrkonjic Grad**	**6.50**	**338**	*e*Pn	**Pn**	01 34 04.1	+1.0
MORI	**Morici**	**6.51**	**328**	*i* Pn	**Pn**	01 34 03.8	+0.6
MORI				Sn	**Sn**	01 35 14.5	-3.0
FRGS	**Fruska Gora**	**6.74**	**356**	*e*Pn	Pn	01 34 01.3	-5.0
BLY	**Banja Luka**	**6.78**	**340**	⇑P	**Pn**	01 34 09.6	+2.8
BLY	**Banja Luka**	**6.78**	**340**	⇑S	**Sn**	01 35 24.7	+0.7
BLY	**Banja Luka**	**6.78**	**340**	*e*Pn	**Pn**	01 34 06.4	-0.4
DUGI	**Dugi Otok**	**6.90**	**325**	*e*Pn	**Pn**	01 34 08.7	+0.2
UDBI	**Udbina**	**7.04**	**331**	*e*Pn	**Pn**	01 34 11.8	+1.2
GZR	**Gura Zlata**	**7.16**	**13**	⇑P	**Pn**	01 34 16.1	+3.9
BZS	**Buzias**	**7.23**	**6**	⇑P	**Pn**	01 34 13.2	+0.2
NVLJ	**Novalja**	**7.43**	**327**	*e*Pn	**Pn**	01 34 16.5	+0.8
VOIR		**7.78**	**24**	⇑P	**Pn**	01 34 22.3	+1.7
MORH	**Mrgy, Hungar**	**7.90**	**351**	*e*Pn	**Pn**	01 34 22.3	+0.2
OZLJ	**Ozalj**	**8.09**	**334**	*i* Pn	**Pn**	01 34 25.3	+0.5
MLR	**Muntele Rosu** 0.0nm,0.3s,baz=235,slow=12,SNR=1.8	**8.14**	**28**	Pn	**Pn**	01 34 25.9	+0.2
MLR	**Muntele Rosu**	**8.14**	**28**	⇓P	**Pn**	01 34 27.2	+1.6
CRES	**Cresnjev**	**8.28**	**335**	*e*Pn	**Pn**	01 34 27.3	-0.1
CEY	**Cerknica**	**8.57**	**330**	*e*Pn	**Pn**	01 34 31.8	+0.3
LJU	**Ljubljana**	**8.79**	**332**	*e*Pn	**Pn**	01 34 35.0	+0.5
SOKA	**Soboth** 6.6nm,0.7s	**9.17**	**336**	*e*Pn	**Pn**	01 34 39.3	-0.4
OBKA	**Obir** 1.2nm,0.3s	**9.18**	**333**	Pn	**Pn**	01 34 41.7	+1.9
KEST	**Kesra** 0.3nm,0.3s,baz=17,slow=11,SNR=7.3	**9.30**	**257**	Pn	**Pn**	01 34 41.7	+0.2
ARSA	**Arzberg** 0.5nm,0.2s	**9.53**	**339**	*e*Pn	Pn	01 34 49.1	+4.5
KBA	**Koelnbreinsper** 1.9nm,0.6s	**10.11**	**331**	Pn	**Pn**	01 34 54.5	+1.9
VYHS	**Vyhne**	**10.13**	**354**	*e*PN	**Pn**	01 34 55.1	+2.3
VYHS				*e*SN	**Sn**	01 36 44.6	-1.7
ABTA	**Abfaltersbach** 3.4nm,0.7s	**10.17**	**327**	Pn	**Pn**	01 34 55.3	+1.9
MOA	**Molln** 2.2nm,0.4s	**10.45**	**336**	*e*Pn	**Pn**	01 34 58.4	+1.3
WTTA	**Wattenberg** 1.7nm,0.4s	**10.95**	**327**	Pn	**Pn**	01 35 07.5	+3.4
SQTA	**Sankt Quirin** 1.9nm,0.4s	**11.11**	**325**	*e*Pn	**Pn**	01 35 08.5	+2.3
MOTA	**Moosalm** 7.1nm,0.8s	**11.25**	**325**	Pn	**Pn**	01 35 09.2	+1.0
GERES	**GERESS Array B** 0.2nm,0.3s,baz=152,slow=15,SNR=9.6	**11.50**	**337**	Pn	**Pn**	01 35 10.2	-1.5
GERES				Sn	**Sn**	01 37 12.6	-7.6
KHC	**Kasperske Hory** 0.1nm,0.3s,baz=152,slow=25,SNR=3.0	**11.79**	**337**	*e*PN	**Pn**	01 35 16.7	+1.1
KHC				*e*SN	**Sn**	01 37 23.7	-3.5
MMAI	**Mount Meron Ar** 0.3nm,0.3s,baz=311,slow=13,SNR=2.9	**13.27**	**110**	Pn	**Pn**	01 35 36.2	+0.4
MMAI				Sn	**Sn**	01 38 00.5	-2.9
ESDC	**Sonseca Array** 0.7nm,0.3s,baz=308,slow=28,SNR=2.5	**19.02**	**281**	P	**Pn**	01 36 49.7	-0.3
HFS	**Hagfors** 2.2nm,0.6s,baz=179,slow=7.1,SNR=12	**22.14**	**351**	P	**P**	01 37 23.1	+0.2
EKA	**Eskdalemuir Ar** 2.0nm,0.8s,baz=142,slow=5.9,SNR=2.7	**23.20**	**324**	P	**P**	01 37 32.5	-1.7
FINES	**FINESS Array B** 2.7nm,0.7s,baz=173,slow=12,SNR=9.9	**23.30**	**7**	P	**P**	01 37 33.5	-1.5
NB2	**NORSAR Subarra** comp=Z,0.3nm,0.5s,baz=290,slow=3.3,SNR=3.4	**23.36**	**349**	P	**P**	01 37 37.6	+1.8
MKAR	**Makanchi Array** comp=Z,0.5nm,0.4s,baz=272,slow=9.6,SNR=9.8	**45.20**	**59**	P	**P**	01 40 44.0	-0.4
ZALV	**Zalesovo Beam** comp=Z,2.1nm,0.5s,baz=268,slow=7.9,SNR=10	**45.55**	**48**	P	**P**	01 40 45.2	-1.7
YKA	**Yellowknife Ar** comp=Z,0.1nm,0.6s,baz=40,slow=4.8,SNR=3.1	**73.14**	**340**	P	**P**	01 43 58.0	+0.5

*ANF **29** 01:38:59.1±0.4,37.35N×114.04W,h0km,ML3.3/15, Error ellipse: s-maj=3.7km s-min=2.9km az=41.0*
*UUSS **29** 01:39:00.6±1.3,37.33N±0.02×114.12W±0.01,h7km±5km, ML3.1/10, Error ellipse: s-maj=3.5km s-min=1.5km az=198.0*
*NEIC **29** 01:39:00.2±1.9,37.32N±0.02×114.09W±0.02,h5km±1km, Error ellipse: s-maj=3.5km s-min=3.2km az=169.0*
*REN **29** 01:39:00.8±1.5,37.34N±0.02×114.11W±0.02,h5km±5km, Error ellipse: s-maj=3.2km s-min=2.7km az=164.0*

ISC 29 01:38:59.8±1.1,**37.32N**±0.02×**114.15W**±0.02,**h7**km±12km, **n65,**σ1**21/82,Southern Nevada**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ICU	**Indian Springs**	**0.24**	**133**				**Pg**	**01 39 05.7**	**+1.0**
CCUT	**Cedar City**	**0.67**	**69**				**Pb**	**01 39 13.3**	**-0.6**
LCMT	**Little Creek M**	**0.78**	**112**				**Pb**	**01 39 15.4**	**-0.5**
LCMT						Sg	**Sg**	**01 39 25.2**	**+0.1**
SZCU	**Shurtz Canyon**	**0.89**	**71**				**Pb**	**01 39 17.2**	**-0.5**
SZCU						Sg	**Sg**	**01 39 28.4**	**-0.1**
KNB	**Kanab**	**1.10**	**105**				**Pn**	**01 39 21.1**	**-0.8**
KNB						Sg	**Sg**	**01 39 34.9**	**-0.3**
SHPR	**Sheep Range**	**1.15**	**225**				**Pn**	**01 39 22.4**	**-0.1**
PSUT	**Pine Spring**	**1.24**	**11**				**Pg**	**01 39 23.6**	**0.0**
PSUT							**Sg**	**01 39 39.4**	**-0.2**
PKCU	**Pink Cliffs**	**1.47**	**84**				**Pb**	**01 39 26.8**	**-0.8**
PKCU							**Sg**	**01 39 47.6**	**+0.5**
R11A	**Troy Canyon, C**	**1.54**	**313**				**Pb**	**01 39 28.1**	**-0.6**
R11A						Sg	**Sg**	**01 39 50.8**	**+1.6**
R11A	**Troy Canyon, C** baz=130,SNR=193	**1.54**	**313**	P			**Pb**	**01 39 28.4**	**-0.3**
R11A	baz=130			S			**Sg**	**01 39 50.8**	**+1.6**
MTPU	**Mount Pierson**	**1.72**	**64**				**Pb**	**01 39 30.7**	**-1.2**
TPNV	**Topopah Spring**	**1.72**	**258**	Pn			**Pn**	**01 39 30.6**	**+0.3**
TPNV						Sg	**Sg**	**01 39 57.1**	**+2.0**
TPNV	**Topopah Spring** baz=76,SNR=81	**1.72**	**258**	P			**Pb**	**01 39 31.1**	**-0.7**
TPNV	baz=76			S			**Sg**	**01 39 56.5**	**+1.5**
U15A	**North Rim**	**1.73**	**120**				**Pn**	**01 39 30.0**	**-0.6**
TCRU	**Three Creeks R**	**1.86**	**46**				**Pb**	**01 39 34.3**	**-0.1**
TCRU						Sg	**Sg**	**01 40 00.1**	**+0.4**
W13A	**Hualapai Mount**	**2.22**	**174**				**Pn**	**01 39 38.1**	**+0.9**
FURC	**Furnace Creek,** baz=68	**2.34**	**250**	Sb			**Sg**	**01 40 16.4**	**+1.6**
TUQ	**Turquoise Moun** baz=37,SNR=36	**2.36**	**218**	P			**Pn**	**01 39 40.5**	**+1.4**
TUQ	baz=37			Sb			**Sg**	**01 40 16.4**	**+0.7**
GRAC	**Grapevine Rang** baz=82	**2.59**	**264**	P			**Pb**	**01 39 44.2**	**-2.4**
GRAC	baz=82			S			**Sb**	**01 40 17.4**	**-1.3**
Q16A	**Castle Valley**	**2.84**	**55**				**Pn**	**01 39 45.1**	**-0.6**
WUAZ	**Wupatki**	**2.87**	**128**				**Pn**	**01 39 46.8**	**+0.6**
WUAZ	**Wupatki** baz=310	**2.87**	**128**	Sb			**Sb**	**01 40 27.8**	**+1.0**
GSC	**Goldstone, Bar**	**2.94**	**228**				**Pn**	**01 39 47.9**	**+0.8**
GSC	**Goldstone, Bar** baz=46	**2.94**	**228**	Sb			**Sg**	**01 40 33.8**	**-0.5**
DAC	**Darwin (Calif)**	**2.95**	**251**	Pn			**Pn**	**01 39 48.3**	**+1.0**
MPMC	**Manual Prospec** baz=64,SNR=13	**2.96**	**246**	P			**Pn**	**01 39 48.9**	**+1.4**
TMUT	**Trail Mountain**	**3.04**	**49**				**Pn**	**01 39 48.9**	**+0.2**
DUG	**Dugway, Tooele**	**3.06**	**20**				**Pn**	**01 39 48.4**	**-0.3**
NLU	**North Lily Min**	**3.10**	**31**	Pn			**Pn**	**01 39 48.2**	**-1.1**
IRM	**Iron Mountain** baz=14	**3.25**	**195**	P			**Pn**	**01 39 52.1**	**+0.8**
IRM	baz=14			Sb			**Sg**	**01 40 43.0**	**-1.3**
MPU	**Maple Canyon**	**3.34**	**35**	Pn			**Pn**	**01 39 52.9**	**+0.2**
NV11	**Mina Array Sit**	**3.36**	**291**	Pn			**Pn**	**01 39 54.0**	**+1.1**
SRU	**San Rafael Swe**	**3.37**	**57**				**Pn**	**01 39 53.1**	**+0.1**
LRMC	**Laurel Mtn Rad** baz=56	**3.39**	**238**	Sb			**Sg**	**01 40 48.1**	**-0.6**
P17A	**Butcher Ranch,**	**3.44**	**50**				**Pn**	**01 39 54.1**	**+0.2**
ELK	**Elko**	**3.53**	**346**				**Pn**	**01 39 56.1**	**+0.8**
KVN	**Kaiserville**	**3.56**	**300**				**Pn**	**01 39 56.3**	**+0.6**
Y12C	**Blythe**	**3.57**	**185**				**Pn**	**01 39 56.9**	**+1.3**
Y12C	**Blythe** baz=5.3,SNR=5.7	**3.57**	**185**	P			**Pn**	**01 39 56.6**	**+1.0**
X16A	**Lo Mia Camp, P**	**3.63**	**142**				**Pn**	**01 39 58.3**	**+1.7**
BELC	**Belle Mtn. Jos** baz=24	**3.63**	**205**	P			**Pn**	**01 39 57.8**	**+1.2**
BELC	baz=24			Sb			**Sg**	**01 40 54.1**	**-2.4**
RYN	**Ryan**	**3.70**	**292**				**Pn**	**01 39 58.0**	**+0.4**
BGU	**Big Grassy Mou**	**3.71**	**13**				**Pn**	**01 39 59.2**	**+1.5**
BC3	**Big Chuckawall** baz=16	**3.80**	**197**	P			**Pn**	**01 39 60.0**	**+1.1**
CTU	**Camp Tracy**	**3.85**	**28**	Pn			**Pn**	**01 39 59.8**	**+0.1**
CTU	**Camp Tracy**	**3.85**	**28**	Pn			**Pg**	**01 40 12.4**	**-1.2**
ISA	**Isabella, Lake**	**3.86**	**246**	Pn			**Pn**	**01 39 59.7**	**+0.1**
JLU	**Jordanelle**	**3.90**	**32**	Pn			**Pn**	**01 40 00.6**	**+0.2**
XPFO	**Pion Flat**	**4.15**	**208**	Pn			**Pn**	**01 40 05.2**	**+1.5**
PFO	**Pinyon Flats O**	**4.15**	**208**	Pn			**Pn**	**01 40 04.8**	**+1.1**
PFO							**Pn**	**01 40 05.0**	**+1.3**
TPFO	**Pinon Flats** baz=26	**4.15**	**208**	P			**Pn**	**01 40 04.9**	**+1.2**
SPUT	**South Promonto**	**4.20**	**18**	Pn			**Pn**	**01 40 05.9**	**+1.5**
YERR	**Yerington**	**4.35**	**294**	Pn			**Pn**	**01 40 06.2**	**-0.2**
WAKR	**Walker**	**4.35**	**287**	Pn			**Pg**	**01 40 22.1**	**-1.1**
WAKR				Sn			**Sb**	**01 41 12.2**	**+2.8**
TCUT	**Toone Canyon**	**4.35**	**28**	Pn			**Pn**	**01 40 06.3**	**-0.4**
X18A	**Snowflake**	**4.40**	**128**	Pn			**Pn**	**01 40 08.7**	**+1.5**
MWC	**Mount Wilson**	**4.43**	**227**	Pn			**Pg**	**01 40 22.6**	**-2.1**
MWC							**Sb**	**01 41 14.2**	**+2.4**
MVCO	**Mesa Verde**	**4.51**	**90**	Pn			**Pn**	**01 40 09.1**	**+0.4**
PNTR	**Pine Nut**	**4.64**	**294**	Pn			**Pn**	**01 40 10.7**	**+0.1**
HWUT	**Hardware Ranch**	**4.73**	**24**	Pn			**Pb**	**01 40 25.2**	**+2.1**
HWUT							**Sb**	**01 41 20.0**	**-0.4**
MONP2	**Monument Peak** baz=22	**4.79**	**204**	P			**Pn**	**01 40 13.9**	**+1.3**
S22A	**4UR Ranch, Cre**	**5.83**	**84**	Pn			**Pn**	**01 40 27.0**	**0.0**
MFID	**Camas Ranch**	**6.23**	**349**				**Pb**	**01 40 48.6**	**-0.1**
J08A	**Circle Bar Ran**	**6.88**	**333**				**Pb**	**01 40 55.7**	**-4.0**
121A	**Cookes Peak, D**	**7.08**	**131**				Pb	01 40 57.0	-6.1

*SJA **29** 01:40:18.1±1.2,21.00S×68.83W,h119km±10km,ML3.1, MW3.2*
*GUC **29** 01:40:18.8±0.6,20.94S×68.91W,h112km±3km,ML3.3*
*IDC **29** 01:40:19.8±1.5,21.02S×68.47W,h109km±18km,mb3.1/1, mb1 3.0/3,mb1mx2.9/31,mbtmp3.4/3, Error ellipse: s-maj=51.7km s-min=17.0km az=106.0*

ISC 29 01:40:18.6±1.0,**20.94S**±0.03×**68.92W**±0.07,**h111**km±8km, **n30,**σ1**9**16/51,**5C-7D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.54**	**259**	⇑*i*P			**Pn**	**01 40 35.6**	**-0.3**
PB01				*e*S			**Sn**	**01 40 48.9**	**0.0**
PB08	**IPOC Station P**	**0.82**	**345**	⇓*i*P			**Pn**	**01 40 39.0**	**+0.4**
PB08				*i* S			**Sn**	**01 40 54.1**	**+0.5**
PB08	comp=E,1μm,0.3s			IAML				01 40 54.9	
PB09	**IPOC Station P**	**0.91**	**199**	⇑*i*P			**Pn**	**01 40 39.4**	**+0.2**
PB09				*i* S			**Sn**	**01 40 55.2**	**+0.6**
PB09	comp=E,556nm,0.3s			IAML				01 40 56.8	
PB09	**IPOC Station P**	**0.91**	**199**	*i* P			**Pn**	**01 40 39.3**	**+0.2**
PB09				*e*S			**Sn**	**01 40 55.9**	**+1.2**
PB09	comp=Z,430nm,0.3s			IAML				01 40 57.2	
PB02	**IPOC Station P**	**0.98**	**247**	⇑*i*P			**Pn**	**01 40 40.1**	**+0.3**
PB02				*e*S			**Sn**	**01 40 55.9**	**+0.1**
PB02	comp=E,1μm,0.4s			IAML				01 40 57.6	
PATCX	**Punta Patache**	**1.16**	**276**	⇑*i*P			**Pn**	**01 40 42.0**	**+0.4**
PATCX				*e*S			**Sn**	**01 40 59.2**	**+0.2**
PATCX	comp=N,514nm,0.3s			IAML				01 41 03.8	
PB07	**IPOC Station P**	**1.19**	**229**	⇓*i*P			**Pn**	**01 40 42.4**	**+0.2**
PB07				*i* S			**Sn**	**01 41 00.1**	**+0.2**
PB07	comp=N,827nm,0.2s			IAML				01 41 01.5	
TA01	**Diego Aracena**	**1.23**	**287**	⇑*i*P			**Pn**	**01 40 42.5**	**+0.2**
TA01				*i* S			**Sn**	**01 41 00.3**	**-0.1**
GO01	**Chusmiza**	**1.29**	**349**	⇓*i*P			**Pn**	**01 40 43.9**	**+0.4**
GO01				*e*S			**Sn**	**01 41 02.9**	**+0.6**
PB03	**IPOC Station P**	**1.35**	**215**	⇓*i*P			**Pn**	**01 40 43.9**	**0.0**
PB03				*e*S			**Sn**	**01 41 02.8**	**-0.3**
PB03	comp=N,570nm,0.6s			IAML				01 41 05.3	
PB11	**IPOC Station P**	**1.36**	**329**	⇓*i*P			**Pn**	**01 40 44.2**	**+0.2**
PB11				*i* S			**Sn**	**01 41 04.0**	**+0.8**
PB11	comp=N,1μm,0.2s			IAML				01 41 05.1	
LVC	**Limon Verde** comp=N,27nm,0.3s,baz=8.1,slow=10,SNR=246	**1.67**	**180**	P			**Pn**	**01 40 48.2**	**+0.3**
LVC							**Sn**	**01 41 10.4**	**+0.4**
LVC	comp=N,27nm,0.3s,baz=78,slow=22,SNR=16								
LVC	**Limon Verde**	**1.67**	**180**	⇑*i*P			**Pn**	**01 40 48.2**	**+0.3**
LVC				*e*S			**Sn**	**01 41 10.9**	**+0.8**
PSGC	**Pisagua**	**1.75**	**320**	⇓*i*P			**Pn**	**01 40 48.6**	**0.0**
PSGC				*i* S			**Sn**	**01 41 11.6**	**+0.2**
PSGC	comp=E,335nm,0.3s			IAML				01 41 17.7	
PB04	**IPOC Station P**	**1.80**	**219**	*e*P			**Pn**	**01 40 49.8**	**+0.5**
PB04	**IPOC Station P**	**1.80**	**219**	*i* P			**Pn**	**01 40 50.0**	**+0.7**
PB04				*e*S			**Sn**	**01 41 15.0**	**+2.3**
PB04	comp=Z,190nm,0.4s			IAML				01 41 16.6	
PB06	**IPOC Station P**	**1.86**	**199**	⇓*i*P			**Pn**	**01 40 50.0**	**-0.1**
PB06				*i* S			**Sn**	**01 41 13.5**	**-0.5**
PB06	comp=E,267nm,0.3s			IAML				01 41 16.9	
PB06	**IPOC Station P**	**1.86**	**199**	*i* P			**Pn**	**01 40 50.3**	**+0.2**
PB06				*e*S			**Sn**	**01 41 14.4**	**+0.3**
MNMC	**Minye Minye**	**1.90**	**341**	*e*P			**Pn**	**01 40 51.3**	**+0.6**
MNMC				*e*S			**Sn**	**01 41 16.0**	**+0.8**
MNMC	comp=E,502nm,0.1s			IAML				01 41 21.8	
PB05	**IPOC Station P**	**2.25**	**212**	*e*P			**Pn**	**01 40 55.2**	**+0.2**
PB05	**IPOC Station P**	**2.25**	**212**	*i* P			**Pn**	**01 40 55.3**	**+0.4**
PB05				*e*S			**Sn**	**01 41 18.9**	**-3.9**
PB15	**IPOC Station P**	**2.32**	**193**	*e*P			**Pn**	**01 40 55.2**	**-0.7**
PB15				*i* S			**Sn**	**01 41 28.8**	**+0.7**
PB15	**IPOC Station P**	**2.32**	**193**	*i* P			**Pn**	**01 40 56.6**	**+0.7**
PB15				*e*S			**Sn**	**01 41 28.3**	**+3.8**
PB10	**IPOC Station P**	**2.98**	**210**	*i* P			**Pn**	**01 41 05.5**	**+1.2**
PB10	comp=Z,24nm,0.4s			IAML				01 41 37.9	
PB14	**IPOC Station P**	**3.92**	**200**	*i* P			**Pn**	**01 41 17.4**	**+0.2**
LPAZ	**La Paz** comp=Z,0.8nm,0.3s,baz=176,slow=9.6,SNR=10	**4.69**	**9**	*i* P			**Pn**	**01 41 29.2**	**+1.4**
LPAZ	**La Paz**	**4.69**	**9**	*i* P			**Pn**	**01 41 29.8**	**+2.0**
SIV	**San Ignacio** comp=Z,0.1nm,0.3s,baz=237,slow=12,SNR=4.2	**8.93**	**58**	P			**Pn**	**01 42 21.5**	**-3.2**
TORD	**Torodi Ar. Bea** comp=Z,0.2nm,0.4s,baz=250,slow=5.9,SNR=5.1	**77.18**	**70**	P			**P**	**01 51 59.6**	**-1.2**
MKAR	**Makanchi Array** comp=Z,0.5nm,0.8s,baz=288,slow=3.5,SNR=4.1	**145.19**	**35**	PKPbc			**PKPdf**	**01 59 43.8**	**+0.7**

*THE **29** 01:59:29.8,38.40N×20.47E,h8km±1km,ML3.3/5, Error ellipse: s-maj=1.7km s-min=0.3km az=290.0*

ISC 29 01:59:29.0±0.9,**38.41N**±0.02×**20.44E**±0.04,**h13**km±6km, **n26,**σ0**88**/41,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FSK	**Fiskardo**	**0.11**	**64**	P			**Pg**	**01 59 31.7**	**-0.5**
FSK				S			**Sg**	**01 59 33.7**	**-0.7**
CHV1	**Chavriata, Kef**	**0.23**	**190**	P			**Pg**	**01 59 34.0**	**0.0**
CHV1				S			**Sg**	**01 59 38.2**	**+0.8**
ARG2	**Argostoli**	**0.24**	**170**	P			**Pg**	**01 59 34.5**	**+0.4**
ARG2				S			**Sg**	**01 59 37.7**	**+0.2**
VLS	**Valsamata**	**0.26**	**152**	P			**Pg**	**01 59 34.8**	**+0.2**
VLS				S			**Sg**	**01 59 38.6**	**+0.2**
EVGI	**Lefkada island**	**0.27**	**40**	P			**Pg**	**01 59 35.0**	**+0.2**
EVGI				S			**Sg**	**01 59 38.8**	**+0.2**
KFL	**Anninata**	**0.41**	**137**	P			**Pg**	**01 59 36.8**	**-0.4**
KFL				S			**Sg**	**01 59 42.7**	**0.0**
LKD2	**Lefkada island** 11μm,0.2s	**0.41**	**25**	P			**Pg**	**01 59 37.6**	**+0.2**
LKD2	3μm,0.5s			S			**Sg**	**01 59 43.7**	**+0.7**
TSLK	**Tsoukalades, L**	**0.45**	**23**	P			**Pg**	**01 59 38.4**	**+0.5**
TSLK	5μm,0.5s			S			**Sg**	**01 59 45.1**	**+1.2**
AST1	**Astakos**	**0.53**	**76**	P			**Pg**	**01 59 39.4**	**-0.1**
AST1				S			**Sg**	**01 59 47.0**	**+0.5**
PDO	**Prodromos** 4μm,0.4s	**0.62**	**72**	P			**Pg**	**01 59 40.9**	**-0.2**
PDO				S			**Sg**	**01 59 49.9**	**+0.6**
ZAK2	**Zakynthos**	**0.72**	**149**	P			**Pg**	**01 59 43.5**	**+0.4**
KRI1	**kERI**	**0.81**	**158**	P			**Pg**	**01 59 44.3**	**-0.4**
KRI1				S			**Sb**	**01 59 56.0**	**+0.3**
PVO	**Paravola**	**0.88**	**76**	P			**Pg**	**01 59 46.0**	**-0.1**
PVO				S			**Sb**	**01 59 58.7**	**+0.9**
OHR	**Ohrid**	**2.71**	**6**	*i* Pn			**Pb**	**02 00 16.5**	**-0.9**
STIP	**Stip**	**3.54**	**22**	*i* Pn			Pn	02 00 28.8	+5.1
DBRK	**Dubrovnik**	**4.60**	**338**	*i* Pn			**Pn**	**02 00 37.8**	**-0.4**
DBRK				Sn			**Sn**	**02 01 31.4**	**0.0**
STON	**Ston** 0.5nm,0.3s	**4.92**	**336**	*e*Pn			**Pn**	**02 00 43.0**	**+0.5**
STON				Sn			**Sn**	**02 01 37.4**	**-1.9**
MAKA	**Makarska**	**5.52**	**333**	*e*Pn			**Pn**	**02 00 51.5**	**+0.7**
MAKA				Sn			**Sn**	**02 01 53.7**	**-0.4**
KIJV	**Kijevo**	**6.36**	**333**	*i* Pn			**Pn**	**02 01 03.3**	**+0.9**
ZIRJ	**Zirje**	**6.37**	**327**	*e*Pn			**Pn**	**02 01 02.9**	**+0.4**
ZIRJ				Sn			**Sn**	**02 02 12.2**	**-2.8**
MORI	**Morici**	**6.51**	**328**	*e*Pn			**Pn**	**02 01 06.0**	**+1.5**
DUGI	**Dugi Otok**	**6.89**	**326**	*i* Pn			**Pn**	**02 01 11.2**	**+1.5**
UDBI	**Udbina**	**7.04**	**332**	*i* Pn			**Pn**	**02 01 13.0**	**+1.2**
NVLJ	**Novalja**	**7.43**	**328**	*e*Pn			**Pn**	**02 01 18.1**	**+1.1**
SOKA	**Soboth** 0.5nm,0.3s	**9.17**	**336**	*e*Pn			**Pn**	**02 01 41.6**	**+0.6**
MOA	**Molln** 0.8nm,0.4s	**10.45**	**336**	*e*Pn			**Pn**	**02 01 59.4**	**+0.9**

BEO 29 02:04:33.4±0.8,**43.18N**×**19.91E,h0**km,**ML1.4**/5, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.10**	**29**	*e*Pg			Pg	02 04 34.8	-0.5
SJES				*e*Sg			Sg	02 04 36.8	+0.2
IVAS	**Ivanjica**	**0.44**	**24**	*e*Pg			Pg	02 04 39.8	-2.0
IVAS				*e*Sg			Sg	02 04 45.0	-2.5
BBLS	**Lazići**	**0.78**	**332**	*e*Pg			Pg	02 04 47.6	-0.8
BBLS				*e*Sg			Sg	02 04 58.2	-0.3
SELS	**Selova**	**0.89**	**87**	*e*Sg			Pg	02 04 49.6	-0.8
SELS	**Selova**	**0.89**	**87**	*e*Pg			Sg	02 05 01.8	-0.1
GRUS	**Gruza**	**0.92**	**39**	*e*Pg			Pg	02 04 49.4	-1.7
GRUS				*e*Sg			Sg	02 05 03.7	+0.6
DIVS	**Divibare**	**0.93**	**4**	*e*Pg			Pg	02 04 50.1	-1.0
DIVS				*e*Sg			Sg	02 05 03.5	+0.4
TRUS	**Trudelj**	**1.11**	**19**	*e*Pg			Pg	02 04 54.6	-0.1
TRUS				*e*Sg			Sg	02 05 09.6	+0.6

*VIE **29** 02:13:59.7±2.0,50.37N×18.71E,h0km,mb1.9/2,ml2.6/4, Error ellipse: s-maj=34.8km s-min=14.3km az=139.0 24 km NW of Katowice Suspected Mining induced.*
*IPEC **29** 02:14:00.1±0.1,50.27N×18.81E,h1km,ML2.1/3,Error ellipse: s-maj=1.5km s-min=0.7km az=180.0*
*PRU **29** 02:14:00.4±0.0,50.29N×18.73E,h0km*

ISC 29 02:14:00.2±0.8,**50.21N**±0.04×**18.75E**±0.02,**h0**km,**n30,** σ0**72/53,Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.54**	**226**	*e*PG			**Pb**	**02 14 12.1**	**-0.4**
OKC	comp=Z,40nm,0.7s			*e*SG			**Sb**	**02 14 19.7**	**-1.1**
OJC	**Ojcow**	**0.67**	**89**	*e*Pg			**Pg**	**02 14 12.4**	**-0.7**
OJC				*e*Sg			**Sg**	**02 14 21.5**	**-0.3**
MORC	**Moravsky Berou**	**0.89**	**241**	*e*PG			**Pb**	**02 14 18.2**	**-0.3**
MORC				*e*SG			**Sb**	**02 14 30.9**	**-0.1**
MORC	**Moravsky Berou** baz=58	**0.89**	**241**	*e*Pg			**Pb**	**02 14 18.2**	**-0.3**
MORC	30nm,0.3s,baz=58			*e*Sg			**Sb**	**02 14 30.8**	**-0.2**
ANAC	**Anensky vrch** baz=78	**0.89**	**262**	*e*Pg			**Pb**	**02 14 18.2**	**-0.4**
LIPC	**Lipinka** baz=69	**1.16**	**252**	*e*Pg			**Pb**	**02 14 23.2**	**+0.2**
LANS	**Liptovska

CHKT *i* S Sb 02 15 00.5 +0.4
baz=170
FULB Fuli 0.15 260⇑*i*P Pb 02 14 56.4 -0.4
baz=231
FULB *i* S Sb 02 14 59.8 -0.4
baz=231
TWF1 Yuli 0.19 311 ⇓P Pb 02 14 56.9 -0.4
baz=324
TWF1 S Sb 02 15 00.2 -0.8
baz=324
YULB Yu-li 0.22 319 ⇓P Pb 02 14 57.2 -0.4
baz=330
YULB S Sb 02 15 00.9 -0.8
baz=330
HGSD Ruisui 0.27 354⇑*e*P Pb 02 14 58.4 +0.2
baz=18
HGSD S Sn 02 15 05.1 -0.4
baz=18
EHY Hungye 0.31 336⇓*i*P Pb 02 14 58.8 0.0
baz=339
EHY S Sb 02 15 03.3 -0.4
baz=339
ELDTW Lidau 0.41 265⇓*i*P Pb 02 14 59.5 -0.9
baz=259
ELDTW *i* S Sb 02 15 04.3 -2.0
baz=259
EGFH Guangfu 0.44 357 *e*P Pb 02 15 01.4 +0.5
baz=352
TWH Lutao 0.51 178⇓*i*P Pb 02 15 03.1 +1.0
baz=169
TWH S Sn 02 15 11.6 +0.1
baz=169
TWGBT Beinan 0.53 221 ⇑P Pb 02 15 02.1 -0.4
baz=211
TWGBT S Sb 02 15 09.4 -0.4
baz=211
YUS Yu-Shan 0.53 300 P Pb 02 15 02.1 -0.7
baz=295
YUS S Sb 02 15 08.0 -2.3
baz=295
TWG Pinlang 0.54 222⇑*i*P Pb 02 15 02.1 -0.4
baz=211
TWG S Sb 02 15 09.1 -0.8
baz=211
TWG Pinlang 0.54 222 Pb 02 15 01.3 -1.2
TWG Sb 02 15 08.8 -1.0
TTN Taitung 0.55 211 ⇑P Pn 02 15 03.6 -0.4
baz=206
ESL Shilin 0.59 358 *e*P Pb 02 15 03.1 -0.3
baz=7.0
VWDT VWDT 0.60 331 *e*P Pb 02 15 03.5 -0.2
baz=348
VWDT S Sb 02 15 11.3 -0.4
baz=348
STYT Tauyuan 0.65 265⇑*i*P Pb 02 15 03.9 -0.5
baz=260
STYT S Sb 02 15 11.8 -1.3
baz=260
ALS Alishan 0.66 296 P Pb 02 15 04.6 -0.3
baz=289
ALS S Sb 02 15 12.7 -1.1
baz=289
ENLB Shoufeng 0.69 11 *e*P Pb 02 15 05.4 +0.3
baz=5.0
ENLB S Sn 02 15 16.8 +0.9
baz=5.0
SSLB Suanglung 0.73 321 ⇓P Pb 02 15 05.5 -0.3
baz=334
SSLB *e*S Sb 02 15 14.1 -1.2
baz=334
SSLB Suanglung 0.73 321 Pn Pb 02 15 05.5 -0.3
SSLB Sn Sb 02 15 15.2 -0.1
WHYT Xinyi Township 0.73 310⇓*e*P Pb 02 15 05.8 0.0
baz=318
WHYT S Sb 02 15 14.7 -0.7
baz=318
HWA Hwalien 0.76 10 *e*P Pn 02 15 07.3 +0.3
baz=1.0
TPUB Ta-pu 0.76 276 *e*P Pb 02 15 06.2 -0.2
baz=280
TPUB S Sb 02 15 16.4 0.0
baz=280
TPUB Ta-pu 0.76 276 Pn Pb 02 15 05.4 -1.0
TPUB Sn Sn 02 15 16.7 -1.1
OWD Renai 0.77 341 *e*P Pb 02 15 06.7 +0.1
baz=345
WTP Ta-pu 0.78 272 ⇑P Pn 02 15 06.8 -0.4
baz=268
WTP S Sn 02 15 17.1 -1.0
baz=268
ECL Taimali 0.78 217⇑*e*P Pb 02 15 05.3 -1.3
baz=209
ECL *e*S Sb 02 15 15.6 -1.2
baz=209
SLGT Liugui 0.78 253 ⇑P Pb 02 15 06.5 -0.1
baz=248
SLGT *e*S Sb 02 15 16.6 -0.2
baz=248
CHN4 Tsaushan 0.80 279 *e*P Pn 02 15 07.3 -0.2
baz=277
CHN4 S Sn 02 15 18.1 -0.7
baz=277
CHN5 Tsauling 0.81 298⇓*i*P Pn 02 15 07.5 -0.1
baz=298
CHN5 S Sn 02 15 18.0 -0.9
baz=298
SGST Jiashian 0.82 260 ⇑P Pb 02 15 06.5 -0.7
baz=255
SGST S Sb 02 15 17.3 -0.6
baz=255
SMLT Sun Moon Lake 0.83 322 ⇑P Pb 02 15 07.5 -0.1
baz=332
SMLT S Sb 02 15 18.6 +0.2
baz=332
CHN1 Nanshi 0.85 268⇑*i*P Pn 02 15 08.4 +0.2
baz=264
CHN1 S Sn 02 15 19.9 -0.2
baz=264
TWD Chiawan 0.86 9 *e*P Pb 02 15 07.5 -0.5
baz=359
CHGB Renai 0.87 343 ⇑P Pb 02 15 08.0 -0.3
baz=348
CHGB *e*S Sb 02 15 19.8 +0.1
baz=348
TYC Yuchr 0.87 321 *e*P Pb 02 15 08.1 -0.1
baz=336
TYC *e*S Sn 02 15 19.7 -0.7
baz=336
SNST Tainan City 0.88 270 *e*P Pn 02 15 08.7 +0.1
baz=267
SNST *e*S Sn 02 15 20.9 +0.3
baz=267
TWK Hsinying 0.89 273 ⇑P Pn 02 15 08.8 0.0
baz=270
TWK S Sn 02 15 20.6 -0.3
baz=270
WJS Zhushan 0.90 312⇑*e*P Pn 02 15 09.7 +0.9
baz=324
WJS *e*S Sn 02 15 22.4 +1.4
baz=324
SSD Sandimen 0.90 238 *e*P Pb 02 15 07.8 -0.8
baz=228
SSD *e*S Sb 02 15 19.9 -0.3
baz=228
WHF Hehuan Shan 0.93 349 *e*P Pb 02 15 09.0 -0.6
baz=5.0
DPDB Guoxing 0.94 329 *e*P Pn 02 15 09.7 +0.2
baz=341
DPDB *e*S Sn 02 15 21.7 -0.5
baz=341
WGK Gukeng 0.94 299 *e*P Pn 02 15 10.1 +0.7
baz=299
WGK S Sn 02 15 23.4 +1.3
baz=299
CHN2 Minshiung 0.95 289 *e*P Pn 02 15 10.5 +0.9
baz=287
CHN2 S Sn 02 15 24.1 +1.8
baz=287
NACB Ninganchiao 0.95 8 *e*P Pb 02 15 08.7 -0.9
baz=13
NACB *e*S Sn 02 15 22.5 +0.1
baz=13
NACB Ninganchiao 0.95 8 Pb 02 15 08.8 -0.9
NACB Sn Sb 02 15 21.5 -0.3
WDLH Douliu 0.96 299 *e*P Pn 02 15 10.7 +1.0
baz=298
WDLH *e*S Sn 02 15 24.1 +1.5
baz=298

WNT Mingjian 0.96 313 ⇑P Pn 02 15 10.6 +0.9
baz=314
WNT S Sn 02 15 24.0 +1.4
baz=314
MASBT Mashibuluo 0.97 231⇑*e*P Pb 02 15 09.2 -0.7
baz=222
MASBT *e*S Sb 02 15 21.6 -0.8
baz=222
ETLH Xiulin Townshi 0.98 1 *e*P Pb 02 15 09.3 -0.7
baz=4.0
CHY Chiayi 0.99 286 *e*P Pn 02 15 10.7 +0.7
baz=284
CHY *e*S Sn 02 15 24.8 +1.6
baz=284
TAW Tawu 1.01 211 *e*P Pn 02 15 09.2 -1.1
baz=209
EAST Anshuo 1.01 214 *e*P Pb 02 15 09.1 -1.4
baz=212
CHN3 Shinhua 1.02 262 ⇑P Pn 02 15 12.3 +1.9
baz=267
CHN3 S Sn 02 15 27.1 +3.2
baz=267
SGLT Jiouru 1.02 241 *e*P Pb 02 15 13.0 +2.3
baz=237
TWM1 Shoushan 1.03 247 ⇑P Pb 02 15 12.4 +1.4
baz=246
TWT Tachien 1.06 346 *e*P Pb 02 15 11.5 0.0
baz=347
TDCB Techi 1.06 345 *e*P Pn 02 15 11.1 -0.1
baz=347
WLGB Puzi 1.09 284 *e*P Pb 02 15 12.7 +0.8
baz=281
WLGB *e*S Sn 02 15 27.1 +1.3
baz=281
SNJT Kaohsiung City 1.14 246⇑*e*P Pb 02 15 14.8 +2.1
baz=241
SNJT *e*S Sn 02 15 32.1 +5.2
baz=241
TAI1 Yung-k'ang 1.15 261 *e*P Pb 02 15 13.8 +1.0
baz=272
SCZT Fangliau 1.15 222 *e*P Pn 02 15 12.5 +0.2
baz=215
WHP Taichung City 1.15 336 *e*P Pb 02 15 14.4 +1.5
baz=343
CHN8 Yiju 1.15 276 *e*P Pb 02 15 13.3 +0.3
baz=273
CHN8 *e*S Sn 02 15 28.5 +1.2
baz=273
SCLT Jiali 1.16 268 *e*P Pb 02 15 14.0 +0.9
baz=264
SCLT *e*S Sn 02 15 30.8 +3.3
baz=264
TCU Taichung 1.17 322 *e*P Pb 02 15 14.2 +1.0
baz=323
LAY Lan-yu 1.18 176⇓*e*P Pn 02 15 11.9 -0.9
baz=163
WCHH Zhanghua 1.19 316 *e*P Pn 02 15 14.5 +1.0
baz=317
NNSB Datong 1.20 357 *e*P Pn 02 15 13.2 +0.1
baz=13
NNSB *e*S Sn 02 15 28.2 -0.6
baz=13
NNSH Datong 1.20 357 *e*P Pb 02 15 13.9 0.0
baz=10.0
RLNB Erlin 1.21 304 *e*P Pb 02 15 14.2 +0.4
baz=303
RLNB *e*S Sb 02 15 31.1 +2.1
baz=303
WSF Szhu 1.21 290 *e*P Pb 02 15 14.3 +0.4
baz=288
WSF S Sb 02 15 30.5 +1.5
baz=288
NNS Nan Shan 1.21 356 *e*P Pb 02 15 13.8 -0.3
baz=10.0
ENA Nanau 1.23 12 *e*P Pn 02 15 13.2 -0.2
baz=1.0
NANB Nanao 1.23 13 *e*P Pn 02 15 13.5 +0.2
baz=2.0
KAU Kaohsiung 1.24 239 *e*P Pb 02 15 15.5 +1.0
baz=239
WTCT Ta-ch'eng 1.25 301 *e*P Pb 02 15 14.4 -0.3
baz=300
WTCT *e*S Sb 02 15 32.5 +2.1
baz=300
TWQ1 Liyutan 1.28 331 *e*P Pb 02 15 16.4 +1.2
baz=332
WLCH Liuqiu 1.32 229 *e*P Pb 02 15 18.6 +2.8
baz=212
WDJ Dajia District 1.35 326 *e*P Pb 02 15 17.2 +0.9
baz=327
NSY Sanyi 1.35 332 *e*P Pb 02 15 17.3 +1.0
baz=335
NDT Datong Townshi 1.37 2 *e*P Pb 02 15 17.1 +0.4
baz=14
HEN Hengchun 1.38 209 *e*P Pb 02 15 18.2 +1.4
baz=200
PTSB Yuanli 1.40 331 *e*P Pb 02 15 16.8 -0.4
baz=330
TWKBT Hengchun 1.41 205 *e*P Pn 02 15 16.4 +0.6
baz=193
TWKBT *e*S Sn 02 15 34.0 +0.4
baz=193
TWK1 Hengchun 1.41 205 *e*P Pb 02 15 17.1 -0.2
baz=196
TSEB Hengchuen, Pin 1.42 201 *e*P Pb 02 15 17.9 +0.5
baz=192
TWC Suao 1.43 15 *e*P Pb 02 15 17.3 -0.3
baz=2.0
YHNB Yeheng 1.44 357 *e*P Pb 02 15 17.6 -0.3
baz=11
YHNB Yeheng 1.44 357 Pn 02 15 14.9 -1.5
YHNB Sn Sn 02 15 33.5 -1.1
NMLH Miaoli 1.44 335 *e*P Pb 02 15 18.0 +0.1
baz=335
NSK Sanguang 1.45 356 *e*P Pb 02 15 17.5 -0.6
baz=10.0
EOS1 EOS1 1.46 25 *e*P Pb 02 15 18.1 0.0
baz=37
NSTT Nanjuang 1.46 344 *e*P Pb 02 15 18.8 +0.6
baz=344
LIOB Emei 1.47 344 *e*P Pb 02 15 18.9 +0.5
baz=344
TWE Neicheng 1.50 7 *e*P Pb 02 15 18.3 -0.6
baz=7.0
SLBB Yuanshan 1.53 6 *e*P Pb 02 15 19.1 -0.4
baz=6.0
NWLT Wulai 1.55 2 *e*P Pb 02 15 18.9 -0.8
baz=14
WLTB Daxi 1.63 353 *e*P Pb 02 15 21.3 +0.2
baz=3.0
WDGT Dungji 1.65 272⇑*e*P Pn 02 15 19.9 +0.7
baz=268
WDGT *e*S Sb 02 15 40.7 -1.2
baz=268
NTC Toucheng 1.66 12 *e*P Pb 02 15 21.9 +0.4
baz=10.0
NHDH Xindian Distri 1.73 2 *e*P Pb 02 15 23.4 +0.6
baz=14
TATO Taipei 1.74 1 Pn Pn 02 15 18.3 -2.2
TATO Sn Sn 02 15 38.8 -3.1
TWA Mucha 1.75 4 *e*P Pn 02 15 21.9 +1.2
baz=15
PHUB P'eng-hu 1.76 280 P Pn 02 15 21.1 +0.5
baz=276
PHUB S Sb 02 15 43.1 -1.7
baz=276
TIPB Shuangxi 1.77 11 *e*P Pb 02 15 23.1 -0.5
baz=9.0
PNG Penghu 1.78 281 *e*P Pn 02 15 21.7 +0.7
baz=278
PNG *e*S Sb 02 15 43.8 -1.8
baz=278
JYNG Yonaguni jima 1.83 48 P Pn 02 15 23.2 +1.6
JYNG *e*S Sn 02 15 45.8 +1.7
TWB1 Santiao Chiao 1.84 15 *e*P Pb 02 15 24.4 -0.3
baz=2.0
NWF Wu-fen Shan 1.86 9 *e*P Pb 02 15 24.0 -1.2
baz=6.0
WFSB Wu-fen Shan 1.86 9 *e*P Pb 02 15 24.9 -0.2
baz=6.0
VCHM Qimei 1.86 270 *e*P Pn 02 15 22.4 +0.3
baz=266
VCHM *e*S Sb 02 15 46.1 -1.9
baz=266
TWS1 Kuangyinshan 1.87 359 *e*P Pb 02 15 23.9 -1.3
baz=14
YOJ Yonaguni jima 1.88 49 *e*P Pn 02 15 23.9 +1.5
baz=47

YOJ Yonaguni jima 1.88 49 P Pn 02 15 24.0 +1.6
YOJ *e*S Sn 02 15 46.8 +1.5
YOJ Yonaguni jima 1.88 49 Pn 02 15 21.6 -0.7
YOJ Sn Sn 02 15 45.4 +0.1
YM01 YM01 1.92 3 *e*P Pb 02 15 25.9 -0.1
baz=360
YM04 YM04 1.92 2 *e*P Pb 02 15 24.9 -1.2
baz=16
YM10 YM10 1.93 3 *e*P Pb 02 15 25.4 -0.8
baz=17
YM03 YM03 1.95 2 *e*P Pb 02 15 26.8 +0.2
baz=16
HATJ Hateruma jima 2.31 68 P Pn 02 15 29.5 +1.3
HATJ S Sn 02 15 57.1 +1.3
IRIF Iriomote-Funau 2.36 62 P Pn 02 15 31.2 +2.3
IRIF *e*S Sn 02 15 58.9 +1.8
PCYT Pengchaiyu 2.46 13 *e*P Pb 02 15 33.2 -2.1
baz=9.0
VWUC VWUC 2.54 314 *e*P Pn 02 15 32.4 +1.0
baz=302
JKRS Kuro-shima 2.55 66 P Pn 02 15 33.5 +2.0
JKRS S Sn 02 16 03.9 +2.1
JIJ Ishigaki jima 2.71 65 P Pn 02 15 35.0 +1.3
JIJ *e*S Sn 02 16 06.2 +0.4
PTTC Pingtan 2.74 326 *e*P Pn 02 15 35.6 +1.4
baz=326
PTTC *e*S Sn 02 16 06.9 +0.5
baz=326
PTMZ Houxiangcun 2.80 311 *e*P Pn 02 15 35.9 +1.0
baz=312
JISG Ishigakijimahi 2.94 62 P Pn 02 15 38.2 +1.2
JISG *e*S Sn 02 16 12.4 +0.9
KNM Kinmen 3.01 294⇑*e*P Pn 02 15 39.8 +1.9
baz=293
KNMB Chin-men Tao 3.07 294⇑*e*P Pn 02 15 39.0 +0.3
baz=295
KNMB Chin-men Tao 3.07 294 Pn 02 15 37.1 -1.5
KNMB Sn Sn 02 16 11.7 -2.9
QZH Quanzhou 3.13 304⇑*i*Pn Pn 02 15 39.8 +0.3
QZH Sn Sn 02 16 12.0 -4.1
QZH smax smax
comp=N,290nm,0.7s
QZH smax smax
comp=E,250nm,0.8s
QZH LR LR
comp=N,1μm,10.4s
QZH LR LR
comp=E,1μm,11.8s
QZH LR LR
comp=Z,2μm,12.3s
MATB Ma-tsu 3.22 335 *e*P Pn 02 15 42.2 +1.5
baz=345
JTJ Tarama 3.29 64 P Pn 02 15 43.6 +1.9
JTJ *e*S Sn 02 16 21.9 +1.9
ZPLA Ao Xicun 3.47 282⇑*e*P Pn 02 15 44.8 +0.5
baz=282
AXDP Jialang 3.60 298 *e*P Pn 02 15 46.8 +0.9
baz=299
MHZQ Yeshan 3.62 323 *e*P Pn 02 15 47.3 +1.1
baz=325
LYJJ Jianjiangzhen 3.65 335 *e*P Pn 02 15 48.2 +1.5
baz=344
ZZJH Jiuhuzhen 3.72 290⇑*e*P Pn 02 15 48.0 +0.4
baz=291
XPSS Dashiqiu 3.86 343 *e*P Pn 02 15 50.5 +0.9
baz=341
WHN Wuhan 9.66 321 ⇑P Pn 02 17 10.5 +1.3
WHN S Sn 02 18 57.8 +0.8
WHN LR LR
comp=N,2μm,8.7s
WHN LR LR
comp=E,2μm,9.3s
WHN LR LR
comp=Z,3μm,11.4s
GYA Guiyang 13.81 287 P Pn 02 18 08.5 +2.4
GYA PP P 02 18 20.3 +5.9
GYA S Sn 02 20 42.0 +3.1
GYA SS S 02 20 58.3 -2.5
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA LR LR
comp=N,250nm,8.5s
GYA LR LR
comp=E,530nm,11.4s
GYA LR LR
comp=Z,730nm,11.2s
KSRS Korea Array 15.23 20 Pn Pn 02 18 23.9 -1.4
0.2nm,0.3s,baz=197,slow=12,SNR=3.3
KSRS LR LR 02 23 46.9
comp=Z,44nm,19.1s,baz=268,slow=36
XAN Xi'an 15.39 317 P P 02 18 37.8 +6.0
XAN S Sn 02 21 21.0 +3.9
XAN smax smax
comp=N,15nm,2.4s
XAN smax smax
comp=E,16nm,1.3s
XAN LR LR
comp=N,440nm,11.2s
XAN LR LR
comp=E,550nm,12.2s
XAN LR LR
comp=Z,750nm,13.7s
BJT Baijiatuau 17.33 346 Pn Pn 02 18 50.0 -2.0
CMAR Chiang Mai Arr 21.56 262 P P 02 19 42.1 +2.5
comp=Z,1.4nm,0.3s,baz=70,slow=9.1,SNR=6.5
CMAR LR LR 02 28 45.4
comp=Z,107nm,19.5s,baz=97,slow=39
KLR Kul'dur 27.20 15 P P 02 20 34.4 +1.0
comp=Z,0.9nm,0.7s,baz=37,slow=16,SNR=4.0
SONM Songino Array 27.35 338 P P 02 20 35.2 +0.3
comp=Z,0.6nm,0.8s,baz=151,slow=9.2,SNR=5.1
SONM Songino Array 27.35 338 P P 02 20 33.3 -1.6
KAPI Kappang 28.11 184 P P 02 20 39.6 -2.3
WMQ Urumqi 34.50 315 *e*P P 02 21 41.5 +3.5
WMQ pmax pmax
comp=Z,8.0nm,0.7s
MK31 Makanchi Array 39.20 317 P P 02 22 15.9 -1.9
MKAR Makanchi Array 39.20 317 P P 02 22 19.2 +1.3
comp=Z,0.6nm,0.6s,baz=115,slow=9.2,SNR=8.7
MKAR Makanchi Array 39.20 317 P P 02 22 16.7 -1.2
PETK Petropavlovsk- 40.52 33 LR LR 02 40 59.4
comp=Z,44nm,19.0s,baz=216,slow=39
ZALV Zalesovo Beam 41.18 328 P P 02 22 34.2 0.0
comp=Z,1.7nm,0.8s,baz=120,slow=8.5,SNR=7.0
ZALV Zalesovo Beam 41.18 328 P P 02 22 32.5 -1.6
H11N1 WAKE ISLAND Hy 42.30 86 T T 03 07 53.3
baz=283,slow=74
H11N2 WAKE ISLAND Hy 42.30 86 T T 03 07 55.1
baz=283,slow=74
H11N3 WAKE ISLAND Hy 42.32 86 T T 03 07 54.3
baz=283,slow=74
H11S3 WAKE ISLAND Hy 42.40 88 T T 03 08 01.4
baz=285,slow=75
H11S1 WAKE ISLAND Hy 42.41 88 T T 03 08 04.0
baz=285,slow=75
H11S2 WAKE ISLAND Hy 42.42 88 T T 03 08 02.8
baz=285,slow=75
PSAD1 Pilbara Seismi 44.44 182 P P 02 22 59.2 -1.6
PSAD1 IAmb IAmb 02 23 00.9
comp=Z,3.6nm,0.9s
PSAC2 Pilbara Seismi 44.54 182 P P 02 23 00.8 -0.9
PSAC2 IAmb IAmb 02 23 11.4
comp=Z,11nm,1.1s
WR0 Warramunga Arr 44.78 162 P P 02 23 03.3 -0.3
WR0 IAmb IAmb 02 23 10.9
comp=Z,3.2nm,0.9s
KBL Kabul 46.80 296 P P 02 23 17.4 -2.4
KBL IAmb IAmb 02 23 24.2
comp=Z,4.1nm,1.1s
ASAR Alice Springs 48.15 165 P P 02 23 30.9 +0.8
comp=Z,0.9nm,0.9s,baz=340,slow=6.8,SNR=4.4
CTAO Charters Tower 49.38 149 P P 02 23 38.1 -1.4
ABKAR Akbulak array 54.29 315 P P 02 24 15.1 -0.8
ABKAR Akbulak array 54.29 315 P P 02 24 14.4 -1.4
ABKAR IAmb IAmb 02 24 18.6
comp=Z,1.5nm,1.1s
HFS Hagfors 78.52 331 LR LR 03 05 18.6
comp=Z,126nm,18.2s,baz=108,slow=39
NOA NORSAR Array B 79.19 332 LR LR 03 06 05.0
comp=Z,48nm,18.5s,baz=5.0,slow=39
YKA Yellowknife Ar 83.75 23 P P 02 27 18.5 0.0
comp=Z,0.4nm,0.7s,baz=312,slow=4.8,SNR=8.3

*ANF **29** 02:24:06.7±0.7, 35.97N×96.90W, h3^{km}×4^{km}, ML3.8/6,*

Error ellipse: s-maj=6.3km s-min=3.2km az=177.0
*TUL **29** 02:24:06.7±1.2,35°.94N±0°.03×96°.91W±0°.03,h5km±6km, ML3.2, Error ellipse: s-maj=5.6km s-min=2.5km az=142.0*
*NEIC **29** 02:24:07.1±1.5,35°.90N±0°.03×96°.91W±0°.04,h10km±6km, Error ellipse: s-maj=6.1km s-min=2.7km az=134.0*

ISC 29 02:24:06.8±1.1,35°.91N±0°.04×96°.91W±0°.02,h9km±9km, n43,σ1§16/66,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OK005	**Luther M Schoo**	**0.35**	**222**	Pg	**Pg**	**02 24 13.3**	**-0.3**
OK005				Sg	**Sg**	**02 24 18.7**	**+0.5**
ADOK	**Arcadia Dam**	**0.46**	**236**		**Pg**	**02 24 15.7**	**0.0**
OK001	**Jones High Sch**	**0.47**	**222**	Pg	**Pg**	**02 24 16.1**	**+0.1**
OK001				Sg	**Sg**	**02 24 22.2**	**+0.1**
OK009	**Oakdale Elemen**	**0.54**	**232**	Pg	**Pg**	**02 24 17.4**	**+0.2**
OK009					**Sg**	**02 24 24.6**	**+0.4**
OKCFA	**Oklahoma City**	**0.67**	**222**		**Pg**	**02 24 19.9**	**+0.2**
OKCFA				Sg	**Sg**	**02 24 28.3**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**0.67**	**221**		**Pg**	**02 24 18.3**	**-1.4**
OKCSW				Sg	**Sg**	**02 24 25.7**	**-2.7**
W35A	**Tecumseh**	**0.76**	**178**		**Pg**	**02 24 21.6**	**+0.2**
W35A				Sg	**Sg**	**02 24 31.8**	**+0.6**
FNO	**Franklin**	**0.77**	**212**		**Pg**	**02 24 21.6**	**0.0**
FNO				Sg	**Sg**	**02 24 32.0**	**+0.4**
TUL1	**Leonard**	**0.90**	**90**		**Pg**	**02 24 24.0**	**-0.2**
TUL1				Sg	**Sg**	**02 24 36.0**	**0.0**
TUL1	**Leonard**	**0.90**	**90**	P	**Pg**	**02 24 23.8**	**-0.3**
	baz=272						
TUL1				S	**Sg**	**02 24 36.2**	**+0.3**
	baz=272						
X34A	**Smith Ranch, M**	**1.51**	**210**		**Pn**	**02 24 35.2**	**+1.0**
X34A					**Sn**	**02 24 50.1**	**-3.8**
U32A	**Winter Ranch,**	**1.76**	**286**		**Pn**	**02 24 38.4**	**+0.9**
U32A				Sn	**Sb**	**02 25 02.0**	**+0.5**
WMOK	**Wichita Mounta**	**1.93**	**233**		**Pn**	**02 24 40.5**	**+0.7**
WMOK					**Sn**	**02 25 06.1**	**+1.8**
WMOK	**Wichita Mounta**	**1.93**	**233**	P	**Pn**	**02 24 40.9**	**+1.1**
	baz=51						
WMOK				S	**Sb**	**02 25 07.5**	**+1.1**
	baz=51						
HHAR	**Hobbs**	**2.43**	**80**		**Pn**	**02 24 46.9**	**+0.2**
HHAR				Sn	**Sb**	**02 25 19.7**	**-1.1**
W39A	**Magazine**	**2.64**	**105**		**Pn**	**02 24 51.0**	**+1.4**
W39A				Sn	**Sn**	**02 25 21.5**	**-0.3**
MIAR	**Mount Ida**	**3.05**	**116**		**Pn**	**02 24 55.0**	**-0.1**
MIAR				Sn	**Sn**	**02 25 29.7**	**-2.1**
MIAR	**Mount Ida**	**3.05**	**116**	P	**Pn**	**02 24 56.9**	**+1.7**
	baz=298						
MIAR				S	**Sn**	**02 25 34.4**	**+2.6**
	baz=298						
U40A	**Yellville**	**3.31**	**81**		**Pn**	**02 24 59.4**	**+0.5**
U40A				Sn	**Sn**	**02 25 39.8**	**+1.4**
X40A	**Basin Creek Fa**	**3.62**	**112**	Pn	**Pn**	**02 25 03.5**	**+0.4**
X40A				Sn	**Sn**	**02 25 44.5**	**-1.6**
CBKS	**Cedar Bluff**	**3.67**	**323**		**Pn**	**02 25 03.9**	**0.0**
WHAR	**Wooly Hollow**	**3.81**	**98**		**Pn**	**02 25 06.5**	**+0.8**
WHAR				Sn	**Sn**	**02 25 51.0**	**+0.3**
WLAR	**White Oak Lake**	**3.83**	**124**	Pn	**Pn**	**02 25 05.8**	**-0.2**
WLAR					**Sn**	**02 25 47.4**	**-3.7**
W41B	**Gary Mavity, V**	**3.87**	**100**		**Pn**	**02 25 07.5**	**+1.0**
W41B				Sn	**Sn**	**02 25 51.9**	**-0.2**
W41B	**Gary Mavity, V**	**3.87**	**100**	P	**Pn**	**02 25 07.4**	**+1.0**
	baz=283						
W41B				S	**Sn**	**02 25 53.6**	**+1.5**
	baz=283						
UALR	**University of**	**3.90**	**106**	Pn	**Pn**	**02 25 07.0**	**+0.1**
MGMO	**Mountain Grove**	**3.93**	**70**		**Pn**	**02 25 06.4**	**-1.0**
WHTX	**Lake Whitney,**	**3.94**	**187**	Pn	**Pn**	**02 25 08.4**	**+1.0**
WHTX	**Lake Whitney,**	**3.94**	**187**	P	**Pn**	**02 25 08.5**	**+1.1**
	baz=6.4						
ABTX	**Abilene, Hawle**	**3.99**	**215**	Pn	**Pn**	**02 25 08.9**	**+0.8**
AMTX	**Amarillo**	**4.03**	**257**		**Pn**	**02 25 07.8**	**-1.1**
Z41A	**Richland Creek**	**4.30**	**127**	S	**Sn**	**02 26 02.8**	**+0.2**
	baz=310						
LCAR	**Lake Charles**	**4.67**	**86**	Pn	**Pn**	**02 25 17.9**	**+0.4**
CCM	**Cathedral Cave**	**5.01**	**63**		**Pn**	**02 25 22.4**	**+0.2**
MSTX	**Muleshoe**	**5.19**	**250**	Pn	**Pn**	**02 25 23.5**	**-1.3**
PBMO	**Poplar Bluff**	**5.30**	**79**	Pn	**Pn**	**02 25 25.5**	**-0.7**
KSCO	**Kaye Shedlock'**	**5.50**	**306**	Pn	**Pn**	**02 25 28.3**	**-0.8**
BGNE	**Belgrade**	**5.57**	**350**	Pn	**Pn**	**02 25 30.1**	**+0.1**
BGNE	**Belgrade**	**5.57**	**350**	P	**Pn**	**02 25 29.5**	**-0.5**
	baz=170						
JCT	**Junction City**	**5.94**	**205**	Pn	**Pn**	**02 25 35.5**	**+0.5**
OGNE	**Ogallala**	**6.44**	**323**	Pn	**Pn**	**02 25 42.5**	**+0.6**
SCIA	**State Center**	**6.64**	**25**	Pn	**Pn**	**02 25 44.9**	**+0.3**
SDCO	**Great Sand Dun**	**7.13**	**287**	Pn	**Pn**	**02 25 51.2**	**-0.4**

*ATH **29** 02:34:19.0,38°.23N×20°.42E,h7km±2km,ML3.4/1,Error ellipse: s-maj=2.6km s-min=1.0km az=75.0*
*THE **29** 02:34:18.9,38°.26N×20°.42E,h8km±2km,ML3.7/4,Error ellipse: s-maj=2.7km s-min=0.6km az=234.0*

ISC 29 02:34:18.7±1.2,38°.24N±0°.03×20°.43E±0°.05,h9km±6km, n28,σ0§40/39,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF1	**Kardakata, Kep**	**0.05**	**41**	P	**Pg**	**02 34 20.8**	**+0.2**
KEF1				S	**Sg**	**02 34 22.0**	**+0.2**
CHV1	**Chavriata, Kef**	**0.07**	**214**	P	**Pg**	**02 34 20.7**	**0.0**
CHV1				S	**Sg**	**02 34 21.9**	**-0.2**
ARG2	**Argostoli**	**0.08**	**143**	P	**Pg**	**02 34 20.9**	**+0.1**
ARG2				S	**Sg**	**02 34 22.3**	**0.0**
	121μm,0.1s						
KEF2	**Argostoli. Kep**	**0.09**	**148**	P	**Pg**	**02 34 21.1**	**+0.2**
KEF2				S	**Sg**	**02 34 22.3**	**-0.3**
VLS	**Valsamata**	**0.14**	**116**	P	**Pg**	**02 34 21.9**	**+0.1**
VLS				S	**Sg**	**02 34 24.4**	**+0.4**
	26μm,0.2s						
VLS	**Valsamata**	**0.14**	**116**	P	**Pg**	**02 34 21.9**	**+0.1**
VLS				S	**Sg**	**02 34 24.3**	**+0.4**
VLS				AML	AML	02 34 24.5	
	comp=N,46116μm,0.2s						
VLS				AML	AML	02 34 25.0	
	comp=E,47556μm,0.1s						
FSK	**Fiskardo**	**0.24**	**25**	P	**Pg**	**02 34 23.4**	**-0.2**
KFL	**Anninata**	**0.31**	**115**	P	**Pg**	**02 34 25.0**	**+0.1**
KFL				S	**Sg**	**02 34 29.5**	**+0.5**
	comp=E,9μm,0.3s						
KFL	**Anninata**	**0.31**	**115**	P	**Pg**	**02 34 24.9**	**+0.1**
KFL				S	**Sg**	**02 34 29.6**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.41**	**153**	P	**Pg**	**02 34 26.8**	**+0.1**
VLMS				S	**Sg**	**02 34 32.9**	**+0.9**
EVGI	**Lefkada island**	**0.42**	**25**	P	**Pg**	**02 34 27.6**	**+0.6**
LKD2	**Lefkada island**	**0.58**	**18**	P	**Pg**	**02 34 29.8**	**-0.1**
LKD2	**Lefkada island**	**0.58**	**18**	P	**Pg**	**02 34 30.3**	**+0.4**
ZAK2	**Zakynthos**	**0.58**	**140**	P	**Pg**	**02 34 30.3**	**+0.3**
ZAK2				S	**Sb**	**02 34 39.7**	**+0.2**
	comp=E,11μm,0.5s						
AST1	**Astakos**	**0.60**	**60**	P	**Pg**	**02 34 30.5**	**+0.2**
TSLK	**Tsoukalades, L**	**0.61**	**17**	P	**Pg**	**02 34 30.5**	**0.0**
TSLK	**Tsoukalades, L**	**0.61**	**17**	P	**Pg**	**02 34 30.6**	**+0.1**
PDO	**Prodromos**	**0.69**	**59**	P	**Pg**	**02 34 32.3**	**+0.2**
PDO	**Prodromos**	**0.69**	**59**	P	**Pg**	**02 34 32.4**	**+0.4**
RLS	**Riolos of Patr**	**0.84**	**102**	P	**Pg**	**02 34 34.6**	**-0.3**
RLS	**Riolos of Patr**	**0.84**	**102**	P	**Pg**	**02 34 34.6**	**-0.3**
PVO	**Paravola**	**0.94**	**66**	P	**Pb**	**02 34 37.0**	**-0.2**
PVO	**Paravola**	**0.94**	**66**	P	**Pb**	**02 34 37.2**	**-0.1**
DRO	**Drossia**	**1.05**	**105**	P	**Pg**	**02 34 38.2**	**-0.7**
EFP	**Efpalio**	**1.18**	**80**	P	**Pb**	**02 34 40.4**	**-0.8**
LAKA	**Lakka**	**1.22**	**89**	P	**Pb**	**02 34 41.0**	**-1.0**
ANX	**Ano Chora**	**1.22**	**73**	P	**Pb**	**02 34 41.7**	**-0.4**
ANX				S	**Sn**	**02 34 59.0**	**+0.1**
ITM	**Ithomi**	**1.59**	**131**	P	**Pb**	**02 34 48.4**	**+0.1**

THE 29 02:34:29.3,38°.38N×20°.47E,h2km±25km,ML3.1/3,Error ellipse: s-maj=25.5km s-min=1.2km az=0.0,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.11**	**43**	P	Pg	02 34 31.4	0.0
FSK				S	Sg	02 34 32.9	+0.1
	30μm,0.3s						
EVGI	**Lefkada island**	**0.28**	**31**	P	Pg	02 34 34.5	-0.2
EVGI				S	Sg	02 34 39.1	+0.7
LKD2	**Lefkada island**	**0.43**	**20**	P	Pg	02 34 37.5	-0.1
LKD2				S	Sg	02 34 43.5	+0.2
	3μm,0.4s						
TSLK	**Tsoukalades, L**	**0.47**	**18**	P	Pg	02 34 38.1	-0.2
TSLK				S	Sg	02 34 45.5	+1.1
	3μm,0.6s						
TSLK	**Tsoukalades, L**	**0.47**	**18**	S	Pg	02 34 37.9	-0.4
AST1	**Astakos**	**0.51**	**72**	P	Pg	02 34 39.4	+0.3
PDO	**Prodromos**	**0.60**	**69**	P	Pg	02 34 40.5	-0.3

*MEX **29** 02:46:18.0±0.7,14°.04N×93°.28W,h15km±35km,MD3.9*
*GCG **29** 02:46:23.8±0.3,15°.69N×92°.48W,h36km±999km,MD3.9*

ISC 29 02:46:16.2±2.3,14°.2N±0°.1×93°.22W±0°.08,h10km,n8, σ1§36/15,Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**1.18**	**52**	*i* P	**Pn**	**02 46 38.6**	**0.0**
THIG				*e*S	**Sb**	**02 46 54.4**	**+0.5**
PCIG		**1.52**	**0**	*i* P	**Pn**	**02 46 42.8**	**-0.6**
PCIG				*i* S	**Sn**	**02 47 02.7**	**-0.6**
STG3	**Santiaguito 3,**	**1.69**	**71**	*e*P	**Pn**	**02 46 46.3**	**+0.5**
STG3				*e*S	**Sn**	**02 47 03.8**	**-3.8**
FUG	**Fuego 3**	**2.32**	**83**	*e*P	**Pn**	**02 46 55.9**	**+1.3**
CCIG	**Comitan**	**2.34**	**26**	*i* P	**Pn**	**02 46 56.0**	**+1.1**
CCIG				*i* S	**Sn**	**02 47 24.0**	**+0.2**
TGIG		**2.59**	**2**	*i* P	**Pn**	**02 46 59.3**	**+1.1**
TGIG				*e*S	**Sn**	**02 47 30.4**	**+0.6**
IXG	**Ixpaco**	**2.69**	**90**	*e*P	**Pn**	**02 47 00.2**	**+0.4**
IXG				*e*S	**Sn**	**02 47 32.8**	**+0.2**
CMIG	**Matias Romero**	**3.31**	**331**	*i* P	**Pn**	**02 47 08.4**	**+0.3**
CMIG				*i* S	**Sn**	**02 47 46.2**	**-1.4**

*IDC **29** 02:47:18.7±1.2,38°.16N×20°.43E,h0km,mb3.7/6, mb1 3.7/10,mb1mx3.5/40,mbtmp3.7/10,ML3.1/4,Error ellipse: s-maj=21.6km s-min=20.0km az=85.0*
*ATH **29** 02:47:19.2,38°.16N×20°.37E,h15km±1km,ML3.4/4,Error ellipse: s-maj=2.8km s-min=1.2km az=71.0*
*THE **29** 02:47:19.8,38°.17N×20°.37E,h6km,ML3.3/4,Error ellipse: s-maj=0.9km s-min=0.4km az=246.0*

ISC 29 02:47:19.5±0.8,38°.18N±0°.02×20°.37E±0°.03,h8km±4km, n76,σ1§18/99,mb3.8/6,11C-3D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.01**	**48**	P	**Pg**	**02 47 20.8**	**-0.1**
CHV1				S	**Sg**	**02 47 21.8**	**-0.1**
ARG2	**Argostoli**	**0.09**	**88**	P	**Pg**	**02 47 22.0**	**+0.3**
ARG2				S	**Sg**	**02 47 22.8**	**+0.5**
KEF2	**Argostoli. Kep**	**0.09**	**96**	P	**Pg**	**02 47 22.1**	**+0.3**
KEF2				S	**Sg**	**02 47 23.7**	**+0.3**
KEF1	**Kardakata, Kep**	**0.13**	**38**	P	**Pg**	**02 47 22.7**	**+0.4**
KEF1				S	**Sg**	**02 47 25.1**	**+0.8**
VLS	**Valsamata**	**0.17**	**89**	P	**Pg**	**02 47 23.2**	**+0.1**
VLS				S	**Sg**	**02 47 26.0**	**+0.5**
VLS	**Valsamata**	**0.17**	**89**	P	**Pg**	**02 47 23.3**	**+0.1**
FSK	**Fiskardo**	**0.32**	**28**	P	**Pg**	**02 47 26.2**	**+0.4**
FSK				S	**Sg**	**02 47 31.3**	**+1.2**
	10μm,0.3s						
FSK	**Fiskardo**	**0.32**	**28**	P	**Pg**	**02 47 26.4**	**+0.6**
FSK				S	**Sb**	**02 47 31.7**	**-1.1**
KFL	**Anninata**	**0.34**	**101**	P	**Pg**	**02 47 26.3**	**+0.2**
KFL				S	**Sg**	**02 47 31.3**	**+0.8**
	12μm,0.5s						
KFL	**Anninata**	**0.34**	**101**	P	**Pg**	**02 47 26.3**	**+0.2**
KFL				S	**Sg**	**02 47 31.1**	**+0.5**
KFL				AML	AML	02 47 31.8	
	comp=N,20432μm,0.5s						
KFL				AML	AML	02 47 36.9	
	comp=E,26518μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.38**	**142**	P	**Pg**	**02 47 27.2**	**+0.3**
VLMS				S	**Sb**	**02 47 32.7**	**-1.7**
VLMS				AML	AML	02 47 38.5	
	comp=E,12650μm,0.3s						
VLMS				AML	AML	02 47 44.4	
	comp=N,17713μm,0.3s						
EVGI	**Lefkada island**	**0.50**	**27**	P	**Pg**	**02 47 29.4**	**+0.2**
EVGI				S	**Sg**	**02 47 36.6**	**+0.9**
EVGI	**Lefkada island**	**0.50**	**27**	P	**Pg**	**02 47 29.5**	**+0.4**
EVGI				S	**Sb**	**02 47 37.5**	**-0.5**
ZAK2	**Zakynthos**	**0.57**	**133**	P	**Pb**	**02 47 30.8**	**-0.9**
KRI1	**kERI**	**0.62**	**145**	P	**Pg**	**02 47 31.3**	**-0.2**
LKD2	**Lefkada island**	**0.65**	**20**	P	**Pg**	**02 47 32.1**	**0.0**
LKD2				S	**Sb**	**02 47 42.4**	**0.0**
	comp=N,3μm,0.6s						
LKD2	**Lefkada island**	**0.65**	**20**	P	**Pg**	**02 47 32.1**	**0.0**
LKD2				S	**Sg**	**02 47 41.5**	**+0.8**
LKD2				AML	AML	02 47 45.1	
	comp=E,3161μm,0.4s						
LKD2				AML	AML	02 47 48.1	
	comp=N,6020μm,0.6s						
AST1	**Astakos**	**0.67**	**57**	P	**Pg**	**02 47 32.5**	**0.0**
AST1				S	**Sb**	**02 47 42.2**	**-0.7**
TSLK	**Tsoukalades, L**	**0.69**	**19**	P	**Pg**	**02 47 32.6**	**-0.1**
TSLK				S	**Sb**	**02 47 43.2**	**-0.1**
	comp=N,2μm,0.5s						
TSLK	**Tsoukalades, L**	**0.69**	**19**	P	**Pg**	**02 47 32.8**	**+0.1**
TSLK				S	**Sb**	**02 47 43.5**	**+0.1**
TSLK				AML	AML	02 47 45.4	
	comp=E,5267μm,0.5s						
TSLK				AML	AML	02 47 54.1	
	comp=N,6070μm,0.6s						
PDO	**Prodromos**	**0.77**	**56**	P	**Pg**	**02 47 34.0**	**-0.2**
PDO	**Prodromos**	**0.77**	**56**	P	**Pg**	**02 47 34.2**	**0.0**
RLS	**Riolos of Patr**	**0.87**	**97**	P	**Pg**	**02 47 36.0**	**-0.2**
RLS	**Riolos of Patr**	**0.87**	**97**	P	**Pg**	**02 47 36.0**	**-0.2**
PVO	**Paravola**	**1.01**	**64**	P	**Pg**	**02 47 38.9**	**0.0**
PVO	**Paravola**	**1.01**	**64**	P	**Pg**	**02 47 38.9**	**0.0**
DRO	**Drossia**	**1.08**	**101**	P	**Pg**	**02 47 40.0**	**-0.2**
EFP	**Efpalio**	**1.23**	**78**	P	**Pg**	**02 47 42.2**	**-0.9**
LAKA	**Lakka**	**1.27**	**87**	P	**Pn**	**02 47 43.0**	**-0.6**
SERG	**Sergoula**	**1.35**	**79**	P	**Pn**	**02 47 44.2**	**-0.4**
EVR	**Evrytania**	**1.35**	**56**	P	**Pn**	**02 47 44.5**	**-0.2**
TRIZ	**Trizonia**	**1.35**	**81**	P	**Pn**	**02 47 44.2**	**-0.4**
KALE	**Kalithea**	**1.41**	**81**	P	**Pn**	**02 47 45.1**	**-0.4**
KLV	**Kalavryta, Ach**	**1.41**	**95**	P	**Pn**	**02 47 45.6**	**+0.1**
SCTE	**Santa Cesarea**	**2.40**	**323**	P	**Pn**	**02 47 60.0**	**+0.9**
OHR	**Ohrid**	**2.95**	**6**	*i* Pn	**Pn**	**02 48 07.8**	**+1.1**
TIP	**Timpagrande**	**3.00**	**291**	||P	**Pn**	**02 48 08.6**	**+1.3**
TIP	**Timpagrande**	**3.00**	**291**	||S	**Sn**	**02 48 45.2**	**+1.7**
TIR	**Tirane**	**3.19**	**353**	||S	**Sn**	**02 48 50.4**	**+2.2**
VAY	**Valandovo**	**3.57**	**28**	*i* Pn	**Pn**	**02 48 12.5**	**-2.7**
MATE	**Matera**	**3.76**	**312**	||P	**Pn**	**02 48 18.8**	**+1.0**
STIP	**Stip**	**3.78**	**21**	*i* Pn	**Pb**	**02 48 22.9**	**-3.6**
SG1	**Sgolgore (BA)**	**3.90**	**314**	*e*Pn	**Pn**	**02 48 21.1**	**+1.4**
BAI	**Bari**	**3.98**	**318**	*e*Pn	**Pn**	**02 48 21.9**	**+1.2**
PDG	**Podgorica**	**4.33**	**349**	||P	**Pn**	**02 48 26.9**	**+1.3**
PDG	**Podgorica**	**4.33**	**349**	||S	**Sn**	**02 49 16.6**	**+0.2**
IDI	**Anoyia**	**4.63**	**127**	Pn	**Pn**	**02 48 31.1**	**+1.3**
	comp=N,0.3nm,0.3s,baz=331,slow=18,SNR=2.6						
IDI				Sn	**Sn**	**02 49 23.1**	**-0.7**
	comp=N,1.3nm,0.3s,baz=319,slow=19,SNR=3.8						
VAE	**Valguarnera**	**4.77**	**263**	Pn	**Pn**	**02 48 33.9**	**+2.2**
	comp=N,0.5nm,0.3s,baz=55,slow=18,SNR=2.8						
VAE				Sn	**Sn**	**02 49 25.9**	**-1.2**
	comp=N,1.3nm,0.3s,baz=241,slow=19,SNR=3.8						
DBRK	**Dubrovnik**	**4.80**	**340**	*e*Pn	**Pn**	**02 48 31.9**	**-0.2**
DBRK				Sn	**Sn**	**02 49 25.7**	**-2.1**
VTS	**Vitosha**	**4.95**	**25**	||P	**Pn**	**02 48 35.6**	**+1.4**
VTS	**Vitosha**	**4.95**	**25**	||S	**Sn**	**02 49 32.6**	**+0.9**
STON	**Ston**	**5.11**	**337**	*e*Pn	**Pn**	**02 48 36.4**	**+0.1**
MAKA	**Makarska**	**5.71**	**335**	*i* Pn	**Pn**	**02 48 44.3**	**-0.1**
MAKA				Sn	**Sn**	**02 49 46.5**	**-3.6**
ZIRJ	**Zirje**	**6.54**	**328**	*i* Pn	**Pn**	**02 48 55.3**	**-0.6**
ZIRJ				Sn	**Sn**	**02 50 07.9**	**-2.7**
KIJV	**Kijevo**	**6.55**	**334**	*e*Pn	**Pn**	**02 48 56.1**	**+0.1**
MORI	**Morici**	**6.69**	**330**	*e*Pn	**Pn**	**02 48 58.4**	**+0.5**
BLY	**Banja Luka**	**6.99**	**341**	||P	**Pn**	**02 49 03.4**	**+1.4**
DUGI	**Dugi Otok**	**7.06**	**327**	*e*Pn	**Pn**	**02 49 03.7**	**+0.6**
DUGI				Sn	**Sn**	**02 50 19.9**	**-3.5**
UDBI	**Udbina**	**7.23**	**333**	*e*Pn	**Pn**	**02 49 06.8**	**+1.3**
GZR	**Gura Zlata**	**7.43**	**13**	||P	**Pn**	**02 49 09.8**	**+1.6**
BZS	**Buzias**	**7.49**	**7**	||P	**Pn**	**02 49 10.2**	**+1.2**
NVLJ	**Novalja**	**7.60**	**329**	*e*Pn	**Pn**	**02 49 10.3**	**-0.2**
VOIR		**8.05**	**24**	||P	**Pn**	**02 49 18.8**	**+2.1**
MLR	**Muntele Rosu**	**8.41**	**28**	Pn	**Pn**	**02 49 23.7**	**+2.0**
	comp=N,0.1nm,0.3s,baz=205,slow=11,SNR=2.9						
MLR	**Muntele Rosu**	**8.41**	**28**	||P	**Pn**	**02 49 22.2**	**+0.5**
VRI	**Vrincioaia**	**9.02**	**30**	||P	**Pn**	**02 49 29.7**	**-0.3**
SOKA	**Soboth**	**9.37**	**337**	*e*Pn	**Pn**	**02 49 34.0**	**-0.7**
	comp=N,2.2nm,0.5s						
OBKA	**Obir**	**9.37**	**335**	*e*Pn	**Pn**	**02 49 35.6**	**+0.7**
	comp=N,1.7nm,0.3s						
MOA	**Molln**	**10.65**	**337**	*e*Pn	**Pn**	**02 49 54.4**	**+2.1**
	comp=N,1.2nm,0.3s						
GERES	**GERESS Array B**	**11.71**	**338**	Pn	**Pn**	**02 50 07.1**	**+0.3**
	comp=N,0.2nm,0.3s,baz=154,slow=16,SNR=4.2						
HFS	**Hagfors**	**22.39**	**351**	P	**P**	**02 52 19.5**	**+1.6**
	comp=N,4.9nm,0.9s,baz=138,slow=11,SNR=4.4						
FINES	**FINESS Array B**	**23.56**	**7**	P	**P**	**02 52 32.3**	**+2.2**
	comp=N,2.1nm,0.8s,baz=181,slow=12,SNR=4.7						
TORD	**Torodi Ar. Bea**	**29.95**	**219**	P	**P**	**02 53 28.6**	**+0.4**
	comp=N,0.7nm,0.9s,baz=30,slow=9.7,SNR=3.6						
MKAR	**Makanchi Array**	**45.40**	**58**	P	**P**	**02 55 37.7**	**-0.7**
	comp=N,0.6nm,0.5s,baz=280,slow=6.3,SNR=17						
ZALV	**Zalesovo Beam**	**45.78**	**48**	P	**P**	**02 55 40.6**	**-0.7**
	comp=N,1.5nm,0.6s,baz=268,slow=9.0,SNR=5.0						
SONM	**Songino Array**	**60.55**	**51**	P	**P**	**02 57 31.0**	**+0.7**
	comp=N,0.2nm,0.4s,baz=289,slow=10,SNR=3.6						

*THE **29** 03:04:44.7,38°.28N×20°.41E,h11km,ML3.1/5,Error ellipse: s-maj=0.9km s-min=0.3km az=255.0*
*ATH **29** 03:04:44.7,38°.29N×20°.42E,h3km±1km,ML3.2/4,Error ellipse: s-maj=2.0km s-min=0.8km az=89.0*

ISC 29 03:04:44.6±1.1,38°.28N±0°.02×20°.43E±0°.05,h9km±6km, n34,σ0§58/56,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF1	**Kardakata, Kep**	**0.04**	**93**	P	**Pg**	**03 04 45.8**	**-0.4**
KEF1				S	**Sg**	**03 04 46.7**	**-0.8**
CHV1	**Chavriata, Kef**	**0.10**	**199**	P	**Pg**	**03 04 47.4**	**+0.4**
CHV1				S	**Sg**	**03 04 49.5**	**+0.7**
ARG2	**Argostoli**	**0.11**	**154**	P	**Pg**	**03 04 47.5**	**+0.3**
ARG2				S	**Sg**	**03 04 49.6**	**+0.6**
KEF2	**Argostoli. Kep**	**0.12**	**157**	P	**Pg**	**03 04 47.7**	**+0.3**
KEF2				S	**Sg**	**03 04 50.0**	**+0.6**
VLS	**Valsamata**	**0.17**	**128**	P	**Pg**	**03 04 48.3**	**+0.2**
VLS				S	**Sg**	**03 04 51.3**	**+0.8**
VLS	**Valsamata**	**0.17**	**128**	P	**Pg**	**03 04 48.2**	**+0.2**
VLS				S	**Sg**	**03 04 51.1**	**+0.7**
VLS				AML	AML	03 04 51.4	
	comp=N,38346μm,0.3s						
VLS				AML	AML	03 04 51.5	
	comp=E,21522μm,0.1s						
FSK	**Fiskardo**	**0.21**	**31**	P	**Pg**	**03 04 49.1**	**+0.3**
FSK				S	**Sg**	**03 04 53.0**	**+1.2**
	comp=E,3μm,0.5s						
FSK	**Fiskardo**	**0.21**	**31**	P	**Pg**	**03 04 49.1**	**+0.3**
FSK				S	**Sg**	**03 04 52.2**	**+0.4**
KFL	**Anninata**	**0.33**	**121**	P	**Pg**	**03 04 51.4**	**+0.2**
KFL				S	**Sg**	**03 04 56.8**	**+1.2**
	comp=E,8μm,0.4s						
KFL	**Anninata**	**0.33**	**121**	P	**Pg**	**03 04 51.3**	**+0.2**
KFL				S	**Sg**	**03 04 56.5**	**+0.9**
KFL				AML	AML	03 04 58.9	
	comp=N,15127μm,0.4s						
KFL				AML	AML	03 05 00.5	
	comp=E,17261μm,0.4s						
EVGI	**Lefkada island**	**0.39**	**28**	P	**Pg**	**03 04 52.4**	**+0.2**
EVGI				S	**Sg**	**03 04 58.5**	**+1.2**
EVGI	**Lefkada island**	**0.39**	**28**	P	**Pg**	**03 04 52.4**	**+0.2**
EVGI				S	**Sg**	**03 04 58.2**	**+0.9**
VLMS	**Volimes, Zakyn**	**0.44**	**155**	P	**Pg**	**03 04 53.5**	**+0.3**
LKD2	**Lefkada island**	**0.54**	**20**	P	**Pg**	**03 04 54.9**	**-0.2**
LKD2				S	**Sb**	**03 05 03.6**	**-0.6**
LKD2	**Lefkada island**	**0.54**	**20**	P	**Pg**	**03 04 54.9**	**-0.2**
TSLK	**Tsoukalades, L**	**0.57**	**18**	P	**Pg**	**03 04 55.6**	**-0.1**
TSLK				S	**Sg**	**03 05 04.3**	**+1.1**
	comp=E,1μm,0.8s						
TSLK	**Tsoukalades, L**	**0.57**	**18**	P	**Pg**	**03 04 55.6**	**-0.1**
AST1	**Astakos**	**0.58**	**63**	P	**Pg**	**03 04 56.3**	**+0.4**
AST1				S

LKD2					S	**Sb**	**03 21 10.7**	**-0.1**
LKD2					AML	AML	03 21 17.1	
	comp=E,1910µm,0.3s							
LKD2					AML	AML	03 21 21.6	
	comp=N,2058µm,0.9s							
AST1	**Astakos**	**0.58**	**62**		P	**Pb**	**03 21 03.6**	**+0.1**
AST1					S	**Sn**	**03 21 13.2**	**-1.6**
	comp=N,4µm,0.3s							
TSLK	**Tsoukalades, L**	**0.58**	**17**		P	**Pg**	**03 21 03.4**	**+0.5**
TSLK					S	**Sb**	**03 21 12.3**	**+0.5**
	comp=N,900nm,0.2s							
TSLK	**Tsoukalades, L**	**0.58**	**17**		P	**Pg**	**03 21 03.4**	**+0.5**
TSLK					S	**Sb**	**03 21 12.5**	**+0.7**
ZAK2	**Zakynthos**	**0.60**	**143**		P	**Pb**	**03 21 04.2**	**+0.3**
ZAK2					S	**Sb**	**03 21 13.1**	**+0.9**
PDO	**Prodromos**	**0.67**	**60**		P	**Pb**	**03 21 05.4**	**+0.3**
PDO					S	**Sn**	**03 21 15.9**	**-1.2**
PDO	**Prodromos**	**0.67**	**60**		P	**Pb**	**03 21 05.4**	**+0.3**
KRI1	**kERI**	**0.67**	**154**		P	**Pg**	**03 21 04.8**	**+0.2**
KRI1					S	**Sb**	**03 21 14.7**	**+0.4**
RLS	**Riolos of Patr**	**0.84**	**104**		P	**Pg**	**03 21 08.2**	**+0.5**
RLS	**Riolos of Patr**	**0.84**	**104**		P	**Pb**	**03 21 07.4**	**-0.5**
RLS					AML	AML	03 21 23.8	
	comp=E,1525µm,0.4s							
RLS					AML	AML	03 21 29.5	
	comp=N,868µm,0.4s							
PVO	**Paravola**	**0.92**	**67**		P	**Pn**	**03 21 10.2**	**0.0**
PVO					S	**Sn**	**03 21 24.1**	**+0.8**
PVO	**Paravola**	**0.92**	**67**		P	**Pn**	**03 21 10.2**	**0.0**
PVO					AML	AML	03 21 26.2	
	comp=E,2446µm,0.4s							
PVO					AML	AML	03 21 33.4	
	comp=N,2234µm,0.4s							
DRO	**Drossia**	**1.05**	**107**		P	**Pg**	**03 21 12.4**	**+0.6**
DRO					AML	AML	03 21 35.9	
	comp=N,2264µm,0.4s							
DRO					AML	AML	03 21 38.5	
	comp=E,2758µm,0.4s							
EFP	**Efpalio**	**1.16**	**82**		P	**Pg**	**03 21 13.8**	**-0.2**
EFP					AML	AML	03 21 37.6	
	comp=E,1053µm,0.5s							
EFP					AML	AML	03 21 38.9	
	comp=N,1076µm,0.4s							
ANX	**Ano Chora**	**1.21**	**74**		P	**Pg**	**03 21 14.7**	**-0.1**
ANX					AML	AML	03 21 39.8	
	comp=E,2043µm,0.6s							
ANX					AML	AML	03 21 43.0	
	comp=N,1824µm,0.6s							
LAKA	**Lakka**	**1.21**	**91**		P	**Pg**	**03 21 14.8**	**-0.1**
LAKA					AML	AML	03 21 40.2	
	comp=E,790µm,0.6s							
LAKA					AML	AML	03 21 40.2	
	comp=N,695µm,0.7s							
AMT	**Artemida-Makis**	**1.24**	**126**		P	**Pg**	**03 21 16.1**	**+0.7**
EVR	**Evrytania**	**1.25**	**58**		P	**Pb**	**03 21 15.4**	**+0.3**
EVR					AML	AML	03 21 46.0	
	comp=E,540µm,0.5s							
EVR					AML	AML	03 21 49.8	
	comp=N,625µm,1.1s							
SERG	**Sergoula**	**1.28**	**83**		P	**Pb**	**03 21 15.6**	**+0.1**
SERG					AML	AML	03 21 45.6	
	comp=E,812µm,0.3s							
SERG					AML	AML	03 21 46.2	
	comp=N,1033µm,0.6s							
TRIZ	**Trizonia**	**1.29**	**85**		P	**Pb**	**03 21 15.8**	**+0.2**
KALE	**Kalithea**	**1.34**	**84**		P	**Pg**	**03 21 17.4**	**+0.1**
KLV	**Kalavryta, Ach**	**1.37**	**99**		P	**Pb**	**03 21 17.3**	**+0.3**
KLV					AML	AML	03 21 44.7	
	comp=N,435µm,0.6s							
KLV					AML	AML	03 21 48.6	
	comp=E,473µm,0.7s							
JAN	**Janina**	**1.43**	**13**		P	**Pn**	**03 21 17.7**	**+0.5**
JAN	**Janina**	**1.43**	**13**		P	**Pg**	**03 21 20.4**	**+1.4**
JAN					AML	AML	03 21 48.2	
	comp=N,353µm,0.4s							
JAN					AML	AML	03 21 48.4	
	comp=E,482µm,0.4s							
ITM	**Ithomi**	**1.60**	**132**		P	**Pb**	**03 21 21.6**	**+0.6**
AGG	**Agios Georgios**	**1.66**	**62**		P	**Pg**	**03 21 23.0**	**-0.5**
AGG					AML	AML	03 21 54.5	
	comp=E,362µm,0.7s							
AGG					AML	AML	03 21 59.1	
	comp=N,408µm,0.5s							
THL	**Klokotos Trika**	**1.79**	**43**		P	**Pb**	**03 21 24.7**	**+0.6**
AXAR	**Agios Charalam**	**1.81**	**73**		P	**Pg**	**03 21 26.4**	**+0.1**
LKR	**Lokris**	**2.05**	**78**		P	**Pb**	**03 21 29.1**	**+0.6**
NEO	**Neokhori**	**2.41**	**64**		P	**Pb**	**03 21 34.1**	**-0.7**
PLG	**Polygyros**	**3.14**	**47**		P	**Pn**	**03 21 43.1**	**+2.3**
DBRK	**Dubrovnik**	**4.73**	**339**	*e*Pn	**Pn**		**03 22 02.6**	**0.0**
DBRK					Sn	**Sn**	**03 22 56.0**	**-1.3**
VAE	**Valguarnera**	**4.83**	**262**	Pn	**Pn**		**03 22 06.3**	**+2.3**
	comp=N,0.3nm,0.3s,baz=49,slow=19,SNR=2.3							
VAE					Sn	**Sn**	**03 23 00.3**	**+0.5**
	comp=N,0.5nm,0.3s,baz=13,slow=14,SNR=2.4							
STON	**Ston**	**5.05**	**336**	*e*Pn	**Pn**		**03 22 06.4**	**-0.5**
MAKA	**Makarska**	**5.65**	**334**	*e*Pn	**Pn**		**03 22 15.3**	**+0.2**
MAKA					Sn	**Sn**	**03 23 17.2**	**-2.6**
KIJV	**Kijevo**	**6.49**	**333**	*e*Pn	**Pn**		**03 22 27.5**	**+0.7**
ZIRJ	**Zirje**	**6.49**	**328**	*e*Pn	**Pn**		**03 22 26.6**	**-0.1**
ZIRJ					Sn	**Sn**	**03 23 37.1**	**-3.5**
MORI	**Morici**	**6.64**	**329**	*e*Pn	**Pn**		**03 22 29.8**	**+1.0**
MORI					Sn	**Sn**	**03 23 42.4**	**-1.8**
DUGI	**Dugi Otok**	**7.01**	**326**	*e*Pn	**Pn**		**03 22 35.2**	**+1.3**
NVLJ	**Novalja**	**7.55**	**328**	*e*Pn	**Pn**		**03 22 41.6**	**+0.3**
FINES	**FINESS Array B**	**23.47**	**7**	P	**P**		**03 25 58.5**	**-2.0**
	comp=N,3.5nm,1.0s,baz=183,slow=11,SNR=2.4							
TORD	**Torodi Ar. Bea**	**30.06**	**219**	P	**P**		**03 27 01.7**	**+1.2**
	comp=N,0.3nm,0.7s,baz=30,slow=8.9,SNR=3.6							
MKAR	**Makanchi Array**	**45.31**	**58**	P	**P**		**03 29 09.5**	**+0.5**
	comp=N,0.3nm,0.5s,baz=276,slow=7.4,SNR=7.5							
ZALV	**Zalesovo Beam**	**45.68**	**48**	P	**P**		**03 29 10.5**	**-1.3**
	comp=N,0.6nm,0.5s,baz=286,slow=9.3,SNR=2.9							

*LDG **29** 03:32:29.5±0.1, 49°36'N×2°37'W, h6km, Md2.3/1, Ml2.7/13, Error ellipse: s-maj=2.1km s-min=0.9km az=166.0*

BGS 29 03:32:29.5±0.1, 49°36'N×2°38'W, h7km, ML1.6, 6C-2D, France

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
					Op	ISC	h	m	s	ISC
JVM	**Valle D.L. Mar**	**0.18**	**141**	⇑*i*P	Pg		03	32	33.5	+0.4
JVM				*e*S	Sg		03	32	36.4	+0.8
JVM	**Valle D.L. Mar**	**0.18**	**141**	⇑*i*P	Pg		03	32	33.5	+0.4
JVM				*e*S	Sg		03	32	36.4	+0.8
JLP	**Les Platons**	**0.21**	**122**	⇑*i*P	Pg		03	32	34.0	+0.3
JLP				*e*S	Sg		03	32	37.4	+0.7
JLP	**Les Platons**	**0.21**	**122**	⇑*i*P	Pg		03	32	34.0	+0.3
JLP				*e*S	Sg		03	32	37.4	+0.7
JSA	**Saint Aubin**	**0.22**	**141**	*e*P	Pg		03	32	34.2	+0.4
JSA				*e*S	Sg		03	32	37.5	+0.8
JSA				IAML			03	32	37.8	
	comp=N,150nm,0.1s									
JSA				IAML			03	32	37.8	
	comp=E,124nm,0.1s									
JSA	**Saint Aubin**	**0.22**	**141**	*e*P	Pg		03	32	34.2	+0.4
JSA				*e*S	Sg		03	32	37.5	+0.8
JSA				IAML			03	32	37.8	
	comp=N,150nm,0.1s									
JSA				IAML			03	32	37.8	
	comp=E,124nm,0.1s									
JRS	**Jersey**	**0.25**	**131**	*e*P	Pg		03	32	34.7	+0.3
JRS				*e*S	Sg		03	32	38.5	+0.7
JRS				IAML			03	32	38.8	
	comp=N,92nm,0.1s									
JRS				IAML			03	32	38.8	
	comp=E,139nm,0.2s									
JRS	**Jersey**	**0.25**	**131**	*e*P	Pg		03	32	34.7	+0.3
JRS				*e*S	Sg		03	32	38.5	+0.7
JRS				IAML			03	32	38.8	
	comp=N,92nm,0.1s									
JRS				IAML			03	32	38.8	
	comp=E,139nm,0.2s									
JDG	**Jersey Dam (Ga**	**0.27**	**127**	⇓*i*P	Pg		03	32	35.1	+0.2
JDG				*e*S	Sg		03	32	39.1	+0.7
JDG				IAML			03	32	39.3	
	comp=N,51nm,0.2s									
JDG				IAML			03	32	39.4	
	comp=E,54nm,0.1s									
JDG	**Jersey Dam (Ga**	**0.27**	**127**	⇓*i*P	Pg		03	32	35.1	+0.2
JDG				*e*S	Sg		03	32	39.1	+0.7
JDG				IAML			03	32	39.3	
	comp=N,51nm,0.2s									
JDG				IAML			03	32	39.4	
	comp=E,54nm,0.1s									
JQE	**Queens East**	**0.27**	**125**	⇑*i*P	Pg		03	32	35.1	+0.3
JQE				*e*S	Sg		03	32	39.4	+0.9
JQE	**Queens East**	**0.27**	**125**	⇑*i*P	Pg		03	32	35.1	+0.3
JQE				*e*S	Sg		03	32	39.4	+0.9
JDC	**Jersey Dam (Cr**	**0.28**	**128**	*e*P	Pg		03	32	35.1	+0.2
JDC	**Jersey Dam (Cr**	**0.28**	**128**	*e*P	Pg		03	32	35.1	+0.2
SGMF	**Saint Gilles**	**1.11**	**186**	*e*Pn	Pg		03	32	50.0	-0.8
SGMF	**Saint Gilles**	**1.11**	**186**	*e*Pg	Pg		03	32	50.3	-0.5
SGMF				*e*Sg	Sg		03	33	04.8	-0.4
	comp=E,10nm,0.2s									
ROSF	**Rostrenen**	**1.18**	**210**	*e*Pn	Pg		03	32	51.0	-1.1
ROSF	**Rostrenen**	**1.18**	**210**	*e*Pg	Pg		03	32	51.5	-0.6
ROSF				*e*Sg	Sg		03	33	06.7	-0.7
	comp=E,30nm,0.3s									
FLN	**La Foliniere**	**1.38**	**115**	*e*Pn	Pn		03	32	54.2	-1.0
FLN	**La Foliniere**	**1.38**	**115**	*e*Pg	Pn		03	32	55.3	+0.1
	baz=297									
FLN				*e*Sg	Sb		03	33	13.2	-0.3
	comp=E,23nm,0.2s,baz=296									
GRR	**Gorron**	**1.40**	**133**	*e*Pn	Pn		03	32	53.7	-1.7
GRR	**Gorron**	**1.40**	**133**	*e*Pg	Pn		03	32	55.3	-0.1
GRR				*e*Sg	Sb		03	33	13.8	-0.1
	comp=E,24nm,0.2s									
QUIF	**Quistinic**	**1.53**	**200**	*e*Pn	Pn		03	32	55.9	-1.4
QUIF	**Quistinic**	**1.53**	**200**	*e*Pg	Pb		03	32	58.1	-0.1
QUIF				*e*Sg	Sg		03	33	18.3	-0.4
	comp=E,20nm,0.3s									
LDF	**La Druitiere**	**1.67**	**116**	*e*Pn	Pn		03	32	57.3	-1.9
LDF	**La Druitiere**	**1.67**	**116**	*e*Pg	Pb		03	33	00.3	-0.3
LDF				*e*Sg	Sb		03	33	22.3	+0.4
	comp=E,7.3nm,0.2s									
MFF	**Saint Martin d**	**3.14**	**151**	*e*Pn	Pn		03	33	18.0	-1.4
MFF	**Saint Martin d**	**3.14**	**151**	*e*Pg	Pg		03	33	28.1	-1.5
MFF				*e*Sn	Sn		03	33	53.0	-4.1
MFF				*e*Sg	Sg		03	34	07.9	-2.3
	comp=E,1.4nm,0.2s									
TCF	**Toulx Ste Croi**	**4.36**	**133**	*e*Pn	Pn		03	33	34.1	-2.0
TCF	**Toulx Ste Croi**	**4.36**	**133**	*e*Pg	Pg		03	33	50.1	-2.8
TCF				*e*Sn	Sn		03	34	21.9	-5.3
TCF				*e*Sg	Sg		03	34	46.2	-3.2
	comp=E,1.1nm,0.2s									
BGF	**Bois d'Agland**	**4.49**	**127**	*e*Pn	Pn		03	33	35.8	-2.2
BGF	**Bois d'Agland**	**4.49**	**127**	*e*Pg	Pg		03	33	52.1	-3.4
BGF				*e*Sn	Sn		03	34	25.4	-5.0
BGF				*e*Sg	Sg		03	34	49.1	-4.5
	comp=E,3.1nm,0.3s									
SSF	**Saint Saulge**	**4.56**	**118**	*e*Pn	Pn		03	33	36.7	-2.1
SSF	**Saint Saulge**	**4.56**	**118**	*e*Pg	Pg		03	33	53.5	-3.2
SSF				*e*Sn	Sn		03	34	26.9	-5.1
SSF				*e*Sg	Sg		03	34	51.8	-3.9
	comp=E,2.6nm,0.3s									
AVF	**Avril sur Loir**	**4.62**	**122**	*e*Pn	Pn		03	33	37.8	-1.9
AVF	**Avril sur Loir**	**4.62**	**122**	*e*Pg	Pg		03	33	54.7	-3.3
AVF				*e*Sn	Sn		03	34	28.3	-5.3
AVF				*e*Sg	Sg		03	34	54.0	-3.8
	comp=E,0.4nm,0.2s									
LOR	**Lormes**	**4.66**	**114**	*e*Pn	Pn		03	33	38.6	-1.7
LOR	**Lormes**	**4.66**	**114**	*e*Pg	Pg		03	33	55.6	-3.1
	baz=295									
LOR				*e*Sn	Sn		03	34	30.1	-4.5
LOR				*e*Sg	Sg		03	34	55.4	-3.6
	comp=E,0.8nm,0.2s,baz=297									

*MAN **29** 03:37:33.0, 3°99'N×126°88'E, h21km, mb5.1, ML4.0, MS4.2*
*NEIC **29** 03:37:32.8±1.1, 4°49'N±0°10'×127°2E±0°2, h35km±2km, mb4.3/13, Error ellipse: s-maj=29.6km s-min=14.7km az=71.0*
*IDC **29** 03:37:37.4±3.4, 4°39'N×126°98E, h66km±33km, mb3.9/11, mb1 4.1/13, mb1mx3.8/39, mbtmp4.3/13, ML4.3/2, MS3.1/2, Ms1 3.2/2, ms1mx2.6/30, Error ellipse: s-maj=39.9km s-min=14.3km az=66.0*

ISC 29 03:37:38.1±0.5, 4°39N±0°08×127°0E±0°1, h81km, n40, σ1s13/43, mb4.2/17, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
					Op	ISC	h	m	s	ISC
GSPH	**General Santos**	**2.62**	**310**	*e*P	**Pn**		**03**	**38**	**16.9**	**-1.5**
KCP	**Kidapawan**	**3.20**	**324**	⇓*e*P	**Pn**		**03**	**38**	**27.1**	**+0.9**
KCP				*e*S	**Sn**		**03**	**38**	**58.8**	**-4.5**
TNTI	**Ternate**	**3.62**	**174**		Pn		03	38	26.6	-5.3
TNTI				*i*S	**Sn**		**03**	**39**	**11.2**	**-2.3**
CTBH	**Cotabato--PC H**	**3.90**	**316**	*e*P	**Pn**		**03**	**38**	**36.7**	**+1.0**
CTBH				*i*S	Sn		03	39	06.2	-14
SIJI	**Sorong**	**6.77**	**140**	P	**Pn**		**03**	**39**	**14.3**	**-0.5**
	8.4nm,0.3s,baz=332,slow=16,SNR=15									
SIJI				S	**Sn**		**03**	**40**	**28.9**	**-1.6**
	baz=343,slow=20,SNR=2.2									
SBUM	**Sibu**	**14.84**	**263**	P	**P**		**03**	**41**	**08.1**	**+0.5**
SBUM				IAmb	IAmb		03	41	10.3	
	comp=Z,6.0nm,0.6s									
JAY	**Jayapura**	**15.35**	**116**	P	**Pn**		**03**	**41**	**09.6**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=308,slow=17,SNR=2.6									
FITZ	**Fitzroy Crossi**	**22.39**	**183**	P	**P**		**03**	**42**	**30.1**	**+0.2**
	comp=Z,3.4nm,0.4s,baz=10,slow=6.3,SNR=15									
FITZ	**Fitzroy Crossi**	**22.39**	**183**	P	**P**		**03**	**42**	**30.2**	**+0.2**
WB0	**Warramunga Arr**	**25.09**	**163**	P	**P**		**03**	**42**	**54.9**	**-0.5**
WB0				IAmb	IAmb		03	42	58.1	
	comp=Z,14nm,0.6s									
WRA	**Warramunga Arr**	**25.25**	**164**	P	**P**		**03**	**42**	**57.8**	**+1.0**
	comp=Z,11nm,0.7s,baz=344,slow=10,SNR=13									
WRA	**Warramunga Arr**	**25.25**	**164**	P	**P**		**03**	**42**	**55.8**	**-1.0**
PBKT	**Sadao Pong**	**28.23**	**297**	P	**P**		**03**	**43**	**24.0**	**+0.4**
PBKT				IAmb	IAmb		03	43	25.9	
	comp=Z,4.4nm,1.0s									
ASAR	**Alice Springs**	**28.70**	**167**	P	**P**		**03**	**43**	**28.6**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=352,slow=7.5,SNR=12									
ASAR				PcP	**PcP**		**03**	**46**	**36.9**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=346,slow=2.2,SNR=2.7									
ASAR	**Alice Springs**	**28.70**	**167**	P	**P**		**03**	**43**	**27.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**30.75**	**299**	P	**P**		**03**	**43**	**46.5**	**+0.6**
	comp=Z,1.5nm,0.5s,baz=115,slow=7.3,SNR=8.9									
CMAR				LR	LR		03	55	44.7	
	comp=Z,20nm,21.4s,baz=150,slow=35									
STKA	**Stephens Creek**	**38.66**	**160**	P	**P**		**03**	**44**	**55.2**	**+1.3**
	comp=Z,1.9nm,0.3s,baz=335,slow=10,SNR=10									
STKA	**Stephens Creek**	**38.66**	**160**	P	**P**		**03**	**44**	**53.5**	**-0.5**
SHL	**Shillong**	**39.68**	**306**	P	**P**		**03**	**45**	**02.6**	**-0.2**
SONM	**Songino Array**	**46.75**	**341**	P	**P**		**03**	**46**	**01.0**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=156,slow=8.7,SNR=7.0									
SONM	**Songino Array**	**46.75**	**341**	P	**P**		**03**	**45**	**59.4**	**+0.1**
MK31	**Makanchi Array**	**57.15**	**325**	P	**P**		**03**	**47**	**17.1**	**+0.6**
MK31				IAmb	IAmb		03	47	18.5	
	comp=Z,1.3nm,0.6s									
MKAR	**Makanchi Array**	**57.15**	**325**	P	**P**		**03**	**47**	**17.8**	**+1.3**
	comp=Z,1.8nm,0.5s,baz=119,slow=7.8,SNR=50									
MKAR	**Makanchi Array**	**57.15**	**325**	P	**P**		**03**	**47**	**15.7**	**-0.8**
AAK	**Ala-Archa**	**60.03**	**318**	P	**P**		**03**	**47**	**35.2**	**-1.5**
AAK				IAmb	IAmb		03	47	36.6	
	comp=Z,2.9nm,0.8s									
ZALV	**Zalesovo Beam**	**60.11**	**333**	P	**P**		**03**	**47**	**37.7**	**+0.9**
	comp=Z,0.8nm,0.4s,baz=128,slow=8.5,SNR=4.8									
ZALV				LR	LR		04	13	57.8	
	comp=Z,31nm,19.7s,baz=350,slow=36									
ZALV	**Zalesovo Beam**	**60.11**	**333**	P	**P**		**03**	**47**	**36.6**	**-0.3**
KURK	**Kurchatov**	**61.31**	**327**	P	**P**		**03**	**47**	**45.5**	**+0.5**
KKAR	**Karatay Array**	**62.91**	**317**	P	**P**		**03**	**47**	**56.6**	**+0.6**
ABKAR	**Akbulak array**	**71.79**	**321**	P	**P**		**03**	**48**	**51.5**	**-0.4**
ABKAR	**Akbulak array**	**71.79**	**321**	P	**P**		**03**	**48**	**52.5**	**+0.6**
ABKAR				IAmb	IAmb		03	48	54.7	
	comp=Z,1.8nm,0.6s									
ARU	**Arti**	**74.50**	**328**	P	**P**		**03**	**49**	**07.9**	**+0.1**
ARU				IAmb	IAmb		03	49	09.3	
	comp=Z,4.7nm,0.7s									
BRTR	**Keskin Array B**	**89.78**	**310**	P	**P**		**03**	**50**	**28.3**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=124,slow=6.1,SNR=6.0									
BRTR	**Keskin Array B**	**89.78**	**310**	P	**P**		**03**	**50**	**27.6**	**-0.5**
ARCES	**ARCESS Array B**	**89.91**	**340**	P	**P**		**03**	**50**	**28.4**	**+0.5**
	comp=Z,1.9nm,0.9s,baz=75,slow=6.6,SNR=5.5									
ARCES	**ARCESS Array B**	**89.91**	**340**	P	**P**		**03**	**50**	**27.9**	**0.0**
FINES	**FINESS Array B**	**91.36**	**332**	P	**P**		**03**	**50**	**35.4**	**+0.7**
	comp=Z,2.8nm,0.8s,baz=96,slow=1.9,SNR=8.0									
FINES	**FINESS Array B**	**91.36**	**332**	P	**P**		**03**	**50**	**35.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**122.93**	**289**	PKP	**PKiKP**		**03**	**56**	**27.1**	**+0.8**
	comp=Z,1.5nm,0.7s,baz=92,slow=1.6,SNR=7.9									
TORD	**Torodi Ar. Bea**	**122.93**	**289**		**PKPdf**		**03**	**56**	**25.3**	**-0.7**

*IDC **29** 04:03:50.3±1.2, 28°57'N×43°96'W, h0km, mb3.7/5, mb1 4.0/5, mb1mx3.6/43, mbtmp3.7/5, MS3.6/7, Ms1 3.6/7, ms1mx3.2/37, Error ellipse: s-maj=39.4km s-min=28.6km az=49.0*

*NEIC **29** 04:03:51.6±1.4, 28°5'N±0°2×43°8'W±0°2, h10km±1km, mb4.4/9, Error ellipse: s-maj=28.6km s-min=25.8km az=68.0*

ISC 29 04:03:52.2±0.9, 28°6'N±0°2×43°8'W±0°2, h14km, n26, σ0s81/16, mb4.0/7, MS3.7/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
					Op	ISC	h	m	s	ISC
SJG	**San Juan**	**22.93**	**248**	LR	LR		04	15	36.9	
	comp=Z,72nm,21.3s,baz=92,slow=31									
ROSC	**El Rosal**	**37.31**	**236**	LR	LR		04	25	53.0	
	comp=Z,61nm,20.7s,baz=174,slow=36									
DBIC	**Dimbokro**	**42.77**	**113**	LR	LR		04	26	45.3	
	comp=Z,154nm,18.3s,baz=250,slow=32									
SCO	**Scoresbysund**	**43.77**	**10**	P	**P**		**04**	**11**	**56.2**	**-0.7**
TORD	**Torodi Ar. Bea**	**44.95**	**100**	P	**P**		**04**	**12**	**07.9**	**+0.8**
	1.2nm,1.1s,baz=296,slow=6.7,SNR=4.0									
TORD	**Torodi Ar. Bea**	**44.95**	**100**	P	**P**		**04**	**12**	**06.8**	**-0.4**
H10N2	**ASCENSION HYDR**	**45.94**	**137**	T	T		05	00	50.1	
	baz=322,slow=75,SNR=53									
H10N3	**ASCENSION HYDR**	**45.94**	**138**	T	T		05	00	50.2	
	baz=322,slow=75,SNR=58									
H10N1	**ASCENSION HYDR**	**45.96**	**137**	T	T		05	00	51.5	
	baz=322,slow=75,SNR=51									
H10S3	**ASCENSION HYDR**	**46.74**	**139**	T	T		05	01	52.0	
	baz=322,slow=74,SNR=151									
H10S2	**ASCENSION HYDR**	**46.75**	**139**	T	T		05	01	51.9	
	baz=258,slow=74,SNR=180									
LPAZ	**La Paz**	**50.39**	**211**	P	**P**		**04**	**12**	**49.9**	**0.0**
	2.8nm,1.0s,baz=17,slow=11,SNR=5.2									
LPAZ	**La Paz**	**50.39**	**211**	P	**P**		**04**	**12**	**49.3**	**-0.7**
LPAZ				IAmb	IAmb		04	12	53.3	
	comp=Z,6.8nm,1.3s									
Q24A	**Divide**	**51.17**	**299**	P	**P**		**04**	**12**	**55.6**	**+0.3**
Q24A				IAmb	IAmb		04	13	12.3	
	comp=Z,3.6nm,0.8s									
TXAR	**Lajitas Array**	**51.84**	**286**	LR	LR		04	35	51.7	
	comp=Z,25nm,18.1s,baz=0.0,slow=37									
GO01	**Chusmiza**	**53.83**	**210**	P	**P**		**04**	**13**	**15.2**	**-0.2**
GO01				IAmb	IAmb		04	13	21.4	
	comp=Z,11nm,1.0s									
BW06	**Boulder Array**	**53.98**	**304**	P	**P**		**04**	**13**	**15.9**	**-0.1**
PD31	**Pinedale Array**	**53.98**	**304**	P	**P**		**04**	**13**	**16.8**	**+0.8**
PD31				IAmb	IAmb		04	13	35.0	
	comp=Z,2.4nm,1.1s									
PDAR	**Pinedale Array**	**53.98**	**304**	P	**P**		**04**	**13**	**15.3**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=79,slow=9.3,SNR=2.8									
PDAR				LR	LR		04	34	51.7	
	comp=Z,70nm,19.9s,baz=78,slow=34									
PDAR	**Pinedale Array**	**53.98**	**304**	P	**P**		**04**	**13**	**17.0**	**+1.0**
YNE	**Yellowstone No**	**54.03**	**307**	P	**P**		**04**	**13**	**15.9**	**-0.5**
YMR	**Madison River**	**54.75**	**306**	P	**P**		**04**	**13**	**22.6**	**+1.0**
YKA	**Yellowknife Ar**	**56.24**	**328**	P	**P**		**04**	**13**	**30.8**	**-1.0**
	comp=Z,0.6nm,1.2s,baz=87,slow=7.5,SNR=3.1									
YKA				LR	LR		04	37	49.6	
	comp=Z,93nm,18.0s

RDO	**Rodhopi**	**1.08**	**135**	P	**Pg**	**04 12 05.6**	**-0.3**
RDO				S	**Sg**	**04 12 19.6**	**-0.3**
RDO	**Rodhopi**	**1.08**	**135**	P	**Pg**	**04 12 05.6**	**-0.1**
RDO				S	**Sg**	**04 12 19.8**	**-0.1**
RDO				AML	AML	04 12 22.2	
	comp=E,289μm,0.2s						
RDO				AML	AML	04 12 23.8	
	comp=N,282μm,0.2s						
VTS	**Vitosha**	**1.19**	**306**	*e*Pg	**Pb**	**04 12 07.0**	**0.0**
VTS				*e*Sg	**Sn**	**04 12 22.2**	**-0.5**
VTS	**Vitosha**	**1.19**	**306**	⇑P	**Pn**	**04 12 06.6**	**-0.3**
VTS	**Vitosha**	**1.19**	**306**	⇓S	**Sg**	**04 12 25.8**	**+2.4**
THAS	**Thassos island**	**1.32**	**174**	⇓P	**Pb**	**04 12 09.5**	**+0.4**
THAS	**Thassos island**	**1.32**	**174**	P	**Pb**	**04 12 08.8**	**-0.4**
SOH	**Sokhos**	**1.41**	**219**	P	**Pg**	**04 12 11.6**	**-0.4**
SOH				S	**Sg**	**04 12 30.5**	**+0.1**
	comp=N,182nm,0.4s						
SOH	**Sokhos**	**1.41**	**219**	P	**Pb**	**04 12 11.1**	**+0.3**
SOH				S	**Sg**	**04 12 30.0**	**-0.5**
ELND	**Elena**	**1.42**	**44**	⇑P	**Pg**	**04 12 11.4**	**-0.7**
ELND	**Elena**	**1.42**	**44**	⇓S	**Sg**	**04 12 29.9**	**-0.6**
KNT	**Kendrikon**	**1.44**	**239**	P	**Pg**	**04 12 12.0**	**-0.6**
KNT				S	**Sg**	**04 12 32.1**	**+0.7**
	comp=N,120nm,0.4s						
KNT	**Kendrikon**	**1.44**	**239**	P	**Pb**	**04 12 11.5**	**+0.3**
KNT				S	**Sg**	**04 12 31.6**	**+0.2**
KNT				AML	AML	04 12 33.5	
	comp=N,206μm,0.5s						
KNT				AML	AML	04 12 33.8	
	comp=E,263μm,0.3s						
PLVB	**Pleven**	**1.47**	**2**	⇓P	**Pg**	**04 12 13.3**	**+0.2**
PLVB	**Pleven**	**1.47**	**2**	⇑S	**Sg**	**04 12 33.7**	**+1.5**
ALN	**Alexandroupoli**	**1.53**	**131**	P	**Pb**	**04 12 13.1**	**+0.4**
ALN	**Alexandroupoli**	**1.53**	**131**	P	**Pg**	**04 12 14.0**	**-0.3**
ALN				S	**Sg**	**04 12 34.0**	**-0.1**
VAY	**Valandovo**	**1.59**	**249**	*e*Sg	**Pg**	**04 12 15.1**	**-0.3**
VAY	**Valandovo**	**1.59**	**249**	*e*Pg	**Sg**	**04 12 36.0**	**-0.1**
BOSS	**Bosilegrad**	**1.63**	**291**	*e*Pg	**Pg**	**04 12 15.4**	**-0.8**
BOSS				*e*Sg	**Sg**	**04 12 38.1**	**+0.7**
SMTH	**Samothraki Isl**	**1.63**	**152**	P	**Pg**	**04 12 15.6**	**-0.6**
HORT	**Hortiatis**	**1.71**	**220**	P	**Pg**	**04 12 17.1**	**-0.6**
STIP	**Stip**	**1.77**	**263**	*i* Pn	**Pn**	**04 12 13.5**	**-1.2**
GRG	**Griva**	**1.87**	**240**	P	**Pb**	**04 12 18.3**	**-0.3**
ZAPS	**Zavoj**	**1.95**	**315**	*e*Pg	**Pg**	**04 12 20.9**	**-1.4**
ZAPS				*e*Sg	**Sg**	**04 12 46.7**	**-0.9**
BLKB	**Belogradchik**	**2.18**	**322**	⇑S	**Sn**	**04 12 48.2**	**+1.1**
BARS	**Barje**	**2.21**	**295**	*e*Pn	**Pb**	**04 12 24.6**	**+0.3**
BARS				*e*Sg	**Sg**	**04 12 55.5**	**-0.3**
ZAGS	**Zajecar**	**2.54**	**319**	*e*Pn	**Pb**	**04 12 29.4**	**-0.5**
ZAGS				*e*Sg	**Sg**	**04 13 06.4**	**0.0**
BOVS	**Bovan**	**2.70**	**310**	*e*Sg	**Sg**	**04 13 11.0**	**-0.5**
SELS	**Selova**	**2.84**	**298**	*e*Sg	**Pn**	**04 12 31.8**	**+2.4**
SELS	**Selova**	**2.84**	**298**	*e*Pn	**Sg**	**04 13 14.3**	**-1.7**
VOIR		**3.54**	**6**	⇑P	**Pn**	**04 12 38.0**	**-1.1**
GZR	**Gura Zlata**	**3.70**	**340**	⇑P	**Pn**	**04 12 43.4**	**+2.2**
BZS	**Buzias**	**4.26**	**331**	⇑P	**Pn**	**04 12 49.0**	**+0.1**

*ATH **29** 04:14:49.8, 38°.17N×20°.45E, h16km±1km, ML2.5/3, Error ellipse: s-maj=3.3km s-min=1.5km az=246.0*
*THE **29** 04:14:50.0, 38°.17N×20°.39E, h10km±1km, ML2.5/7, Error ellipse: s-maj=1.2km s-min=0.7km az=91.0*
ISC 29 04:14:49.9±1.4, 38°.18N±0'.04×20°.42E±0'.07, h13km±5km, n30, σ0$44/43, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.05**	**89**	P	**Pg**	**04 14 52.5**	**+0.1**
ARG2				S	**Sg**	**04 14 54.2**	**0.0**
	24μm,0.2s						
KEF2	**Argostoli. Kep**	**0.05**	**103**	P	**Pg**	**04 14 52.5**	**0.0**
KEF2				S	**Sg**	**04 14 54.2**	**0.0**
KEF1	**Kardakata, Kep**	**0.11**	**20**	P	**Pg**	**04 14 53.0**	**-0.1**
KEF1				S	**Sg**	**04 14 55.0**	**-0.2**
VLS	**Valsamata**	**0.13**	**90**	P	**Pg**	**04 14 53.4**	**0.0**
VLS				S	**Sg**	**04 14 56.1**	**+0.3**
	3μm,0.1s						
VLS	**Valsamata**	**0.13**	**90**	P	**Pg**	**04 14 53.4**	**0.0**
VLS				S	**Sg**	**04 14 56.0**	**+0.3**
VLS				AML	AML	04 14 56.1	
	comp=E,8417μm,0.1s						
KFL	**Anninata**	**0.29**	**103**	P	**Pg**	**04 14 56.2**	**+0.2**
KFL				S	**Sb**	**04 15 01.4**	**-0.4**
	comp=E,1μm,0.2s						
KFL	**Anninata**	**0.29**	**103**	P	**Pg**	**04 14 56.3**	**+0.2**
KFL				S	**Sg**	**04 15 00.5**	**+0.3**
KFL				AML	AML	04 15 03.5	
	comp=E,3636μm,0.4s						
KFL				AML	AML	04 15 04.8	
	comp=N,1721μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.35**	**148**	P	**Pg**	**04 14 57.3**	**+0.2**
EVGI	**Lefkada island**	**0.48**	**22**	P	**Pg**	**04 14 59.4**	**0.0**
EVGI				S	**Sb**	**04 15 07.0**	**-0.2**
EVGI	**Lefkada island**	**0.48**	**22**	P	**Pg**	**04 14 59.4**	**0.0**
EVGI				S	**Sg**	**04 15 06.5**	**+0.7**
ZAK2	**Zakynthos**	**0.54**	**136**	P	**Pb**	**04 15 01.1**	**-0.1**
AST1	**Astakos**	**0.64**	**55**	P	**Pg**	**04 15 02.2**	**-0.2**
AST1				S	**Sb**	**04 15 12.3**	**+0.6**
	comp=N,628nm,0.3s						
LKD2	**Lefkada island**	**0.64**	**17**	P	**Pg**	**04 15 02.6**	**+0.2**
LKD2	**Lefkada island**	**0.64**	**17**	P	**Pg**	**04 15 01.7**	**-0.8**
TSLK	**Tsoukalades, L**	**0.67**	**16**	P	**Pg**	**04 15 03.1**	**+0.1**
TSLK	**Tsoukalades, L**	**0.67**	**16**	P	**Pg**	**04 15 03.3**	**+0.2**
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	**04 15 04.1**	**0.0**
PDO				S	**Sn**	**04 15 16.0**	**-0.9**
	comp=N,368nm,0.3s						
PDO	**Prodromos**	**0.73**	**55**	P	**Pg**	**04 15 04.1**	**0.0**
PDO				AML	AML	04 15 22.8	
	comp=N,722μm,0.3s						
PDO				AML	AML	04 15 23.2	
	comp=E,601μm,0.2s						
RLS	**Riolos of Patr**	**0.83**	**98**	P	**Pg**	**04 15 05.7**	**-0.3**
RLS	**Riolos of Patr**	**0.83**	**98**	P	**Pg**	**04 15 05.2**	**-0.8**
PVO	**Paravola**	**0.97**	**63**	P	**Pb**	**04 15 08.7**	**+0.1**
PVO				S	**Sn**	**04 15 23.2**	**+0.4**
	comp=E,362nm,0.5s						
PVO	**Paravola**	**0.97**	**63**	P	**Pb**	**04 15 08.7**	**+0.1**
DRO	**Drossia**	**1.04**	**102**	P	**Pb**	**04 15 09.4**	**-0.4**
DRO				S	**Sn**	**04 15 26.1**	**+1.5**
	comp=E,202nm,0.5s						
DRO	**Drossia**	**1.04**	**102**	P	**Pb**	**04 15 08.8**	**-1.0**
EFP	**Efpalio**	**1.19**	**77**	P	**Pn**	**04 15 11.8**	**-0.4**
LAKA	**Lakka**	**1.23**	**87**	P	**Pn**	**04 15 12.6**	**-0.2**
ANX	**Ano Chora**	**1.25**	**70**	P	**Pn**	**04 15 13.1**	**0.0**
TRIZ	**Trizonia**	**1.31**	**81**	P	**Pn**	**04 15 13.9**	**0.0**
KALE	**Kalithea**	**1.37**	**80**	P	**Pn**	**04 15 14.8**	**+0.1**
KLV	**Kalavryta, Ach**	**1.37**	**95**	P	**Pn**	**04 15 14.9**	**+0.1**

*IPEC **29** 04:24:07.1±0.2, 51°.50N×16°.28E, h0km, ML2.7/3, Error ellipse: s-maj=1.5km s-min=0.9km az=46.0*
*IDC **29** 04:24:08.6±0.9, 51°.49N×16°.01E, h0km, mb3.3/1, mb1 3.5/5, mb1mx3.3/28, mbtmp3.3/5, ML2.8/4, Error ellipse: s-maj=18.7km s-min=9.6km az=116.0*
*LDG **29** 04:24:08.0±0.2, 51°.40N×16°.17E, h1km, Ml3.4/2, Error ellipse: s-maj=4.6km s-min=4.1km az=161.0, Suspected Mining induced.*
*BGR **29** 04:24:10.0±0.4, 51°.42N×16°.13E, h1km, ML3.4/11, Error ellipse: s-maj=4.4km s-min=2.2km az=33.0*
*VIE **29** 04:24:11.0±1.1, 51°.26N×15°.94E, h0km, mb2.5/5, ml3.2/7, Error ellipse: s-maj=13.1km s-min=4.1km az=49.0 77 km WNW of Wroclaw Suspected Mining induced.*
ISC 29 04:24:07.1±0.7, 51°.48N±0'.03×16°.15E±0'.02, h0km, n72, σ1$45/130, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**172**	*e*Pg	**Pg**	**04 24 20.3**	**+0.8**
	SNR=57						
KSP				*e*Sg	**Sg**	**04 24 28.6**	**+0.8**
	SNR=11						
KSP	**Ksiaz**	**0.65**	**172**	*i* Pg	**Pg**	**04 24 20.2**	**+0.7**
KSP				*e*Sg	**Sg**	**04 24 28.3**	**+0.5**
CHVC	**Chvalec**	**0.90**	**184**	*e*PG	**Pg**	**04 24 25.1**	**+0.8**
CHVC				*e*SG	**Sg**	**04 24 36.7**	**+0.8**
	comp=Z,131nm,0.4s						
OSTC	**Ostas**	**0.93**	**178**	*e*PG	**Pg**	**04 24 25.7**	**+0.9**
OSTC				*e*SG	**Sg**	**04 24 37.5**	**+0.7**
	comp=Z,162nm,0.6s						
UPC	**Upice**	**0.98**	**185**	*e*PG	**Pg**	**04 24 26.3**	**+0.5**
UPC				*e*SG	**Sg**	**04 24 38.9**	**+0.4**
	comp=Z,304nm,0.5s						
DPC	**Dobruska-Polom**	**1.14**	**175**	*e*Pg	**Pg**	**04 24 29.1**	**+0.2**
	SNR=51						
DPC				*e*Sg	**Sg**	**04 24 43.8**	**+0.1**
	SNR=6.0						
DPC	**Dobruska-Polom**	**1.14**	**175**	*e*PG	**Pg**	**04 24 29.1**	**+0.2**
DPC				*e*SG	**Sg**	**04 24 43.7**	**+0.1**
	comp=Z,155nm,0.6s						
PVCC	**Panska Ves**	**1.38**	**227**	*e*Pn	**Pn**	**04 24 34.0**	**+0.4**
	SNR=1.3						
PVCC				*e*Pg	**Pb**	**04 24 34.7**	**+0.9**
	SNR=98						
PVCC				*e*Sg	**Sb**	**04 24 53.3**	**+1.3**
	SNR=5.4						
PVCC	**Panska Ves**	**1.38**	**227**	*e*PG	**Pb**	**04 24 34.6**	**+0.8**
PVCC				*e*SG	**Sb**	**04 24 52.9**	**+0.9**
	comp=Z,461nm,0.3s						
KRLC	**Kraliky**	**1.47**	**164**	*e*PG	**Pn**	**04 24 34.9**	**+0.1**
KRLC				*e*SG	**Sg**	**04 24 53.9**	**-0.2**
	comp=Z,101nm,0.2s						
BRG	**Berggiesshubel**	**1.52**	**247**	PN	Pn	04 24 25.7	-10
BRG				PG	**Pg**	**04 24 37.5**	**+1.4**
BRG				SG	**Sg**	**04 24 57.5**	**+1.7**
	224nm,0.4s						
BRG	**Berggiesshubel**	**1.52**	**247**	*e*Pn	**Pn**	**04 24 35.8**	**+0.3**
	SNR=1.8						
BRG				*e*Pg	**Pg**	**04 24 37.5**	**+1.4**
	SNR=22						
BRG				*e*Sg	**Sg**	**04 24 57.6**	**+1.8**
	SNR=15						
RUE	**Ruedersdorf**	**1.77**	**305**	*e*Sg	**Sg**	**04 25 07.4**	**+3.4**
	SNR=4.5						
PRA	**Prague**	**1.79**	**218**	*e*PN	**Pn**	**04 24 40.1**	**+1.0**
PRA				*e*PG	**Pg**	**04 24 42.0**	**+0.7**
PRA				*e*SG	**Sb**	**04 25 04.2**	**+0.6**
	comp=Z,123nm,0.6s						
GOPC	**GO Pecny, Ondr**	**1.79**	**209**	*e*PN	**Pn**	**04 24 40.0**	**+0.7**
GOPC				*e*PG	**Pb**	**04 24 41.4**	**+0.6**
PRU	**Pruhonice**	**1.81**	**215**	*e*Pn	**Pn**	**04 24 41.0**	**+1.5**
	SNR=3.9						
PRU				*e*Sg	**Sb**	**04 25 05.1**	**+0.8**
	SNR=5.0						
PRU	**Pruhonice**	**1.81**	**215**	*e*PG	**Pb**	**04 24 41.3**	**+0.2**
PRU				*e*SG	**Sb**	**04 25 05.0**	**+0.7**
	comp=Z,185nm,0.4s						
FBE	**Freiberg**	**1.85**	**253**	*e*Sg	**Sg**	**04 25 07.7**	**+1.3**
	SNR=8.5						
MORC	**Moravsky Berou**	**1.92**	**152**	*e*Pn	**Pn**	**04 24 41.1**	**0.0**
	SNR=18						
MORC				*e*Sn	**Sn**	**04 25 06.0**	**0.0**
MORC	**Moravsky Berou**	**1.92**	**152**	*e*PN	**Pn**	**04 24 41.1**	**0.0**
MORC				*e*SG	**Sn**	**04 25 06.4**	**+0.4**
MORC	**Moravsky Berou**	**1.92**	**152**	*e*Pn	**Pn**	**04 24 41.0**	**0.0**
	baz=356						
MORC				*e*Sg	**Sn**	**04 25 06.4**	**+0.4**
	66nm,0.5s,baz=336						
CLL	**Collm**	**1.98**	**266**	*e*Pn	**Pn**	**04 24 42.0**	**+0.2**
CLL				*e*Pg	**Pb**	**04 24 45.0**	**+1.0**
CLL				*e*Sg	**Sb**	**04 25 11.0**	**+1.8**
	comp=Z,81nm,0.5s						
CLL	**Collm**	**1.98**	**266**	*e*Pn	**Pn**	**04 24 42.4**	**+0.6**
	SNR=5.0						
OKC	**Ostrava-Krasne**	**2.08**	**142**	*e*PG	**Pb**	**04 24 46.3**	**+0.7**
OKC				*e*SG	**Sb**	**04 25 11.9**	**-0.1**
	comp=Z,80nm,0.6s						
VRAC	**Vranov**	**2.20**	**172**	*e*Pn	**Pn**	**04 24 46.5**	**+1.7**
	SNR=5.7						
VRAC	**Vranov**	**2.20**	**172**	*e*PN	**Pn**	**04 24 45.5**	**+0.7**
VRAC				*e*SG	**Sb**	**04 25 15.6**	**+0.2**
VRAC	**Vranov**	**2.20**	**172**	*e*Pn	**Pn**	**04 24 45.5**	**+0.7**
	baz=355						
VRAC				*e*Sg	**Sb**	**04 25 15.6**	**+0.2**
	comp=Z,35nm,0.3s,baz=355						
TREC	**Trest**	**2.23**	**191**	*e*Pn	**Pn**	**04 24 46.8**	**+1.5**
	SNR=5.3						
TREC	**Trest**	**2.23**	**191**	*e*PN	**Pn**	**04 24 46.6**	**+1.3**
TREC				*e*SG	**Sb**	**04 25 17.5**	**+1.1**
	comp=Z,92nm,0.4s						
PBCC	**Pribram**	**2.27**	**218**	*e*PN	**Pn**	**04 24 46.5**	**+0.8**
PBCC				*e*PG	**Pb**	**04 24 49.9**	**+1.1**
PBCC				*e*SG	**Sb**	**04 25 18.4**	**+1.0**
	comp=Z,22nm,0.3s						
KRUC	**Moravsky**	**2.43**	**176**	*e*Pn	**Pn**	**04 24 49.3**	**+1.3**
	SNR=2.7						
KRUC	**Moravsky**	**2.43**	**176**	*e*PN	**Pn**	**04 24 49.0**	**+1.0**
KRUC				*e*SG	**Sb**	**04 25 23.6**	**+1.5**
KRUC	**Moravsky**	**2.43**	**176**	*e*Pn	**Pn**	**04 24 48.9**	**+1.0**
	baz=358						
KRUC				*e*Sg	**Sb**	**04 25 23.5**	**+1.5**
	comp=Z,29nm,0.3s,baz=358						
TANN	**Tannenbergstha**	**2.57**	**247**	*e*Pn	**Pn**	**04 24 51.0**	**+1.0**
	SNR=10.0						
TANN				*e*Sg	**Sg**	**04 25 29.8**	**+0.3**
	SNR=5.9						
OJC	**Ojcow**	**2.63**	**117**	*e*Pg	**Pg**	**04 24 57.2**	**-0.3**
OJC				*e*Sg	**Sg**	**04 25 32.5**	**+0.9**
NKC	**Novy Kostel**	**2.66**	**243**	*e*Pn	**Pn**	**04 24 52.4**	**+1.2**
	SNR=10.0						
NKC	**Novy Kostel**	**2.66**	**243**	*e*PN	**Pn**	**04 24 52.4**	**+1.2**
NKC				*e*PG	**Pg**	**04 24 58.1**	**+0.1**
NKC				*e*SG	**Sg**	**04 25 32.9**	**+0.4**
	comp=Z,185nm,0.3s						
GUNZ	**Gunzen**	**2.67**	**247**	*e*Pn	**Pn**	**04 24 52.5**	**+1.2**
	SNR=3.5						
GUNZ				*e*Sg	**Sg**	**04 25 33.0**	**+0.4**
	SNR=11						
WERN	**Wernitzgruen**	**2.67**	**245**	*e*Pn	**Pn**	**04 24 53.0**	**+1.6**
	SNR=5.9						
JAVC	**Velka Javorina**	**2.80**	**159**	*e*Pn	**Pn**	**04 24 55.8**	**+2.6**
	SNR=6.9						
JAVC	**Velka Javorina**	**2.80**	**159**	*e*PN	**Pn**	**04 24 54.6**	**+1.4**
JAVC				*e*SG	**Sg**	**04 25 36.1**	**-0.9**
KHC	**Kasperske Hory**	**2.88**	**216**	*e*Pn	**Pn**	**04 24 55.2**	**+1.0**
	SNR=2.4						
KHC	**Kasperske Hory**	**2.88**	**216**	*e*PN	**Pn**	**04 24 54.8**	**+0.6**
KHC				*e*PG	**Pb**	**04 25 01.1**	**+1.9**
KHC				*e*SN	**Sn**	**04 25 27.5**	**-2.0**
KHC				*e*SG	**Sb**	**04 25 37.6**	**+2.6**
	comp=Z,46nm,0.4s						
MANZ	**Manzenberg**	**2.98**	**241**	*e*Pn	**Pn**	**04 24 56.9**	**+1.4**
	SNR=3.3						
MOX	**Moxa**	**2.98**	**255**	*e*Pn	**Pn**	**04 24 56.9**	**+1.3**
	SNR=3.3						
ROTZ	**Rotzenmuhle**	**3.04**	**237**	*e*Pn	**Pn**	**04 24 57.6**	**+1.1**
	SNR=6.0						
GEC2	**GERESS Array S**	**3.08**	**212**	*e*Pn	**Pn**	**04 24 58.6**	**+1.6**
	SNR=5.2						
GERES	**GERESS Array B**	**3.08**	**212**	Pn	**Pn**	**04 24 58.3**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=30,slow=13,SNR=18						
GERES				Lg	Lg	04 25 42.3	
	comp=Z,16nm,0.3s,baz=28,slow=30,SNR=15						
SMOL	**Smolenice**	**3.08**	**164**	*e*PG	**Pg**	**04 25 06.1**	**0.0**
SMOL				*e*SG	**Sg**	**04 25 47.4**	**+1.3**
LANS	**Liptovska Anna**	**3.16**	**136**	*e*PN	**Pn**	**04 24 58.7**	**+0.7**
LANS				*e*SG	**Sg**	**04 25 48.5**	**+0.1**
LANS				*e*LG	Lg	04 25 56.9	
MODS	**Modra-Piesok**	**3.20**	**166**	*e*PN	**Pn**	**04 25 00.1**	**+1.5**
MODS				*e*PG	**Pg**	**04 25 08.4**	**+0.1**
MODS				*e*SG	**Sg**	**04 25 51.6**	**+1.9**
MODS				*e*LG	Lg	04 25 55.0	
ZST	**Bratislava**	**3.35**	**169**	*e*PG	**Pg**	**04 25 10.5**	**-0.7**
ZST				*e*SG	**Sg**	**04 25 53.0**	**-1.5**
ZST				*e*LG	Lg	04 25 56.6	
NIE	**Niedzica**	**3.36**	**126**	*e*P	**Pg**	**04 25 12.6**	**+1.1**
NIE				*e*S	**Sg**	**04 25 56.6**	**+1.6**
VYHS	**Vyhne**	**3.46**	**149**	*e*PN	**Pn**	**04 25 02.4**	**+0.3**
VYHS				*e*SG	**Sg**	**04 25 59.7**	**+1.6**
CONA	**Conrad Observa**	**3.56**	**183**	*e*Pn	**Pn**	**04 25 04.9**	**+1.3**
	comp=Z,0.6nm,0.2s						
CONA				Sg	**Sg**	**04 25 59.4**	**-2.1**
	comp=Z,30nm,0.4s						
BSD	**Bornholm Skovb**	**3.71**	**349**	*i* P	**Pn**	**04 25 05.6**	**0.0**
BSD				*i* S	**Sn**	**04 25 48.2**	**-1.8**
MOA	**Molln**	**3.84**	**199**	*e*Pn	**Pn**	**04 25 08.4**	**+1.0**
	comp=Z,1.3nm,0.2s						
MOA				Sg	**Sg**	**04 26 08.8**	**-1.5**
	comp=Z,33nm,0.6s						
STHS	**Stebnicka Huta**	**3.85**	**120**	*e*PN	**Pn**	**04 25 07.8**	**+0.2**
STHS				*e*PG	**Pg**	**04 25 21.6**	**+0.7**
STHS				*e*SG	**Sg**	**04 26 13.4**	**+2.6**
STHS				*e*LG	Lg	04 26 33.8	
ARSA	**Arzberg**	**4.26**	**186**	*e*Pn	**Pn**	**04 25 14.4**	**+1.3**
	comp=Z,1.1nm,0.3s						
ARSA				Sg	**Sg**	**04 26 23.4**	**-0.4**
	comp=Z,7.7nm,0.3s						
BSEG	**Bad Segeberg**	**4.32**	**307**	*e*Pn	**Pn**	**04 25 14.9**	**+1.0**
	SNR=3.8						
KOLS	**Kolonicke sedl**	**4.69**	**121**	*e*PN	**Pn**	**04 25 19.5**	**+0.5**
KOLS				*e*PG	Pg	04 25 41.7	+4.9
KBA	**Koelnbreinsper**	**4.78**	**204**	*e*Pn	**Pn**	**04 25 21.2**	**+0.8**
	comp=Z,1.0nm,0.3s						
KBA				Sg	**Sg**	**04 26 38.7**	**-1.7**
	comp=Z,27nm,0.7s						
WTTA	**Wattenberg**	**5.15**	**217**	*e*Pn	**Pn**	**04 25 27.7**	**+2.1**
	comp=Z,0.8nm,0.2s						
CDF	**Champ du Feu**	**6.50**	**245**	*e*Pn	**Pn**	**04 25 42.0**	**-2.0**
CDF				*e*SG	**Sg**	**04 27 31.1**	**-4.6**
HINF	**Hinteralfeld**	**7.06**	**242**	*e*Pn	**Pn**	**04 25 49.2**	**-2.5**
HINF				*e*Sg	**Sg**	**04 27 48.2**	**-5.6**
	comp=Z,10nm,0.6s						
HAU	**Haudompre**	**7.24**	**245**	*e*Pn	**Pn**	**04 25 52.4**	**-1.7**
HAU				*e*Sg	Sg	04 27 51.9	-7.6
	comp=Z,6.1nm,0.3s						
CABF	**La Chapelle**	**8.21**	**238**	*e*Pn	**Pn**	**04 26 05.7**	**-1.8**
CABF				*e*Sg	**Sg**	**04 28 26.0**	**-4.6**
AKASG	**Malin Array Be**	**8.27**	**90**	Pn	**Pn**	**04 26 07.4**	**-0.7**
	comp=Z,1.8nm,0.3s,baz=278,slow=12,SNR=1.9						
AKASG				Lg	Lg	04 28 31.2	
	baz=276,slow=26,SNR=0.7						
NOA	**NORSAR Array B**	**9.96**	**346**	Pn	**Pn**	**04 26 29.9**	**-1.5**
	comp=Z,0.0nm,0.3s,baz=167,slow=12,SNR=5.3						
FINES	**FINESS Array B**	**11.38**	**25**	Pn	**Pn**	**04 26 48.6**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=206,slow=13,SNR=7.7						
FINES				Sn	Sn	04 28 49.0	-9.3
	comp=Z,0.2nm,0.3s,baz=219,slow=21,SNR=3.9						
ARCES	**ARCESS Array B**	**18.64**	**10**	Pn	**P**	**04 28 22.3**	**-3.7**
	comp=Z,0.2nm,0.3s,baz=197,slow=12,SNR=5.5						
YKA	**Yellowknife Ar**	**59.89**	**336**	P	**P**	**04 34 15.3**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=26,slow=7.1,SNR=3.7						

*SJA **29** 04:30:24.9±1.1, 22°.59S×67°.57W, h181km±10km, ML3.8, MW3.4*
*IDC **29** 04:30:25.4±0.7, 22°.59S×67°.45W, h164km±7km, mb3.7/8, mb1 3.8/15, mb1mx3.7/25, mbtmp4.2/15, Error ellipse: s-maj=16.7km s-min=12.9km az=22.0*
*NEIC **29** 04:30:25.1±1.9, 22°.47S±0°.06×67°.9W±0°.1, h195km±4km, Error ellipse: s-maj=14.3km s-min=8.9km az=90.0*
*SCB **29** 04:30:26.9±1.8, 22°.70S×67°.59W, h187km±14km, ML3.5/4, Error ellipse: s-maj=8.4km s-min=4.9km az=0.0*
*VAO **29** 04:30:26.4±0.4, 22°.51S×67°.62W, h186km±3km, mb4.3*
*GUC **29** 04:30:27.0±0.7, 22°.48S×68°.05W, h203km±7km, ML4.4*
ISC 29 04:30:25.0±0.6, 22°.58S±0'.04×67°.60W±0'.03, h180km±5km, n138, σ1$79/182, mb4.1/10, 14C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.21**	**268**	P	**Pn**	**04 30 55.8**	**+0.9**
	330nm,0.3s,baz=152,slow=4.5,SNR=2551						
LVC				S	**Sn**	**04 31 17.4**	**-0.3**
	68nm,0.3s,baz=30,slow=20,SNR=61						
LVC	**Limon Verde**	**1.21**	**268**	*e*P	**Pn**	**04 30 55.9**	**+1.0**
LVC	**Limon Verde**	**1.21**	**268**		**Pn**	**04 30 55.6**	**+0.7**
LVC					**Sn**	**04 31 17.2**	**-0.6**
LVC	**Limon Verde**	**1.21**	**268**	*e*P	**Pn**	**04 30 55.7**	**+0.9**
PB09	**IPOC Station P**	**1.71**	**297**	⇑*i*P	**Pn**	**04 31 00.7**	**+1.4**
PB09				*i* S	**Sn**	**04 31 25.8**	**+0.1**
PB09	**IPOC Station P**	**1.71**	**297**	*e*P	**Pn**	**04 31 00.7**	**+1.4**
PB09				*e*S	**Sn**	**04 31 26.2**	**+0.4**
PB09				IAML		04 31 27.3	
	comp=Z,1μm,0.4s						
PB06	**IPOC Station P**	**1.82**	**266**	⇑*i*P	**Pn**	**04 31 01.2**	**+0.8**
PB06				*e*S	**Sn**	**04 31 27.6**	**-0.2**
PB06				IAML		04 31 31.1	
	comp=N,2μm,0.5s						
PB06	**IPOC Station P**	**1.82**	**266**	P	**Pn**	**04 31 01.2**	**+0.8**
PB06	**IPOC Station P**	**1.82**	**266**	*e*P	**Pn**	**04 31 01.4**	**+1.0**
PB06				*e*S	**Sn**	**04 31 28.5**	**+0.7**
PB06				IAML		04 31 29.6	
	comp=Z,951nm,0.4s						
PB15	**IPOC Station P**	**1.83**	**250**	⇑*i*P	**Pn**	**04 31 01.7**	**+1.1**
PB15	**IPOC Station P**	**1.83**	**250**	*e*P	**Pn**	**04 31 01.8**	**+1.2**
PB15				*e*S	**Sn**	**04 31 29.8**	**+1.8**
YJA	**Yavi**	**1.98**	**79**	P	**Pn**	**04 31 03.1**	**+0.8**
YJA				S	**Sn**	**04 31 30.9**	**-0.2**
YJA				AML	AML	04 31 32.3	

PB14					IAML		04 31 59.0	
	comp=E,325nm,0.5s							
PB14	**IPOC Station P**	**3.28**	**231**	*eP*		**Pn**	**04 31 18.0**	**+0.6**
PB14					IAML		04 31 18.8	
	comp=Z,323nm,0.4s							
PB14					*eS*	**Sn**	**04 31 56.7**	**-1.5**
PB11	**IPOC Station P**	**3.40**	**325**			**Pn**	**04 31 17.6**	**-1.2**
PB11					Sn	**Sn**	**04 31 57.1**	**-3.6**
PSGC	**Pisagua**	**3.79**	**321**	⇓*iP*		**Pn**	**04 31 22.9**	**-0.7**
PSGC					*eS*	**Sn**	**04 32 05.7**	**-3.7**
MNMC	**Minye Minye**	**3.91**	**331**		P	**Pn**	**04 31 26.2**	**+0.9**
MNMC					S	**Sn**	**04 32 11.4**	**-1.0**
MNMC					AML	AML	04 32 12.6	
	comp=Z,100nm,0.7s							
BS03	**Mojotorillo**	**4.43**	**43**		P	**Pn**	**04 31 32.5**	**+0.4**
BS03					S	**Sn**	**04 32 21.0**	**-3.6**
BS03					AML	AML	04 32 28.2	
	comp=Z,72nm,0.6s							
BS06	**Camiri**	**4.57**	**57**		P	**Pn**	**04 31 34.0**	**+0.4**
BS08	**Valle Grande**	**5.22**	**39**		P	**Pn**	**04 31 44.5**	**+2.4**
GO03	**Copiap**	**5.53**	**205**			**Pn**	**04 31 44.8**	**-1.1**
GO03					Sn	**Sn**	**04 32 47.3**	**-2.4**
BBOJ	**La Paz, Jacaqu**	**5.61**	**354**		P	**Pn**	**04 31 50.7**	**+3.2**
BBOE	**La Paz, Chanca**	**5.75**	**356**		P	**Pn**	**04 31 52.1**	**+2.7**
BBOD	**La Paz, Gloria**	**5.99**	**351**		P	**Pn**	**04 31 55.2**	**+2.7**
LPAZ	**La Paz**	**6.28**	**355**		P	**Pn**	**04 31 58.3**	**+1.9**
	comp=Z,3.4nm,0.3s,baz=160,slow=8.4,SNR=58							
LPAZ					S	**Sn**	**04 33 05.4**	**-2.9**
	baz=181,slow=16,SNR=2.3							
LPAZ	**La Paz**	**6.28**	**355**		P	**Pn**	**04 31 58.5**	**+2.1**
LPAZ	**La Paz**	**6.28**	**355**	*eP*		**Pn**	**04 31 57.4**	**+1.0**
LPAZ	**La Paz**	**6.28**	**355**			**Pn**	**04 31 54.9**	**-1.5**
LPAZ						**Sn**	**04 33 07.1**	**-1.1**
BBOB	**La Paz, Bander**	**6.43**	**355**		P	**Pn**	**04 31 59.7**	**+1.5**
GO04	**Tololo Observa**	**8.08**	**200**			**Pn**	**04 32 17.4**	**-2.2**
SIV	**San Ignacio**	**9.00**	**44**		P	**Pn**	**04 32 29.2**	**-2.4**
	comp=Z,19nm,0.3s,baz=232,slow=10,SNR=256							
SIV					S	**Sn**	**04 34 03.5**	**-8.6**
	comp=Z,5.4nm,0.3s,baz=181,slow=19,SNR=14							
CFA	**Coronel Fontan**	**9.01**	**183**		P	**Pn**	**04 32 31.0**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=326,slow=14,SNR=4.4							
CFA					S	**Sn**	**04 34 05.3**	**-6.8**
	comp=Z,0.9nm,0.3s,baz=351,slow=19,SNR=4.7							
CPUP	**Villa Florida**	**10.07**	**114**		P	**Pn**	**04 32 43.9**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=292,slow=11,SNR=7.6							
CPUP	**Villa Florida**	**10.07**	**114**	*eP*		**Pn**	**04 32 47.5**	**+2.0**
AQDB	**Aquidauana**	**11.28**	**82**	*eP*		**Pn**	**04 33 03.2**	**+2.0**
PP1B	**Ponte de Pedra**	**12.94**	**70**	*eP*		**P**	**04 33 24.2**	**-2.3**
SALV	**Santo Antonio**	**13.06**	**61**	*eP*		**Pn**	**04 33 23.1**	**-0.9**
NNA	**Nana**	**13.73**	**319**		P	**Pn**	**04 33 34.2**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=95,slow=17,SNR=2.2							
TRCB	**Terra Rica**	**13.82**	**94**	*eP*		**P**	**04 33 35.3**	**-0.9**
SAML	**Samuel**	**14.20**	**18**	*eP*		**Pn**	**04 33 37.7**	**-0.7**
SAML	**Samuel**	**14.20**	**18**		P	**Pn**	**04 33 37.6**	**-0.7**
C2SB	**Chapadao do Su**	**14.33**	**77**	*eP*		**P**	**04 33 41.6**	**-0.3**
PTGB	**Pitanga**	**14.40**	**102**	*eP*		**P**	**04 33 43.5**	**+0.8**
ITAB	**Concordia**	**14.78**	**111**	*eP*		**P**	**04 33 47.4**	**+0.6**
CPSB	**Cacapava Do Su**	**14.87**	**125**	*eP*		**P**	**04 33 47.2**	**-0.6**
PCMB	**Pacaembu**	**15.18**	**89**	*eP*		**P**	**04 33 50.8**	**-0.4**
PLTB	**Pedras Altas**	**15.44**	**129**	*eP*		**P**	**04 33 55.4**	**+1.3**
CLDB	**Colider**	**16.22**	**46**	*eP*		**P**	**04 34 02.4**	**-0.4**
OGAUY	**Aigu**	**16.28**	**139**	*eP*		**Pn**	**04 34 05.0**	**+1.4**
ITRB	**Iturama**	**16.34**	**83**	*eP*		**Pn**	**04 34 06.3**	**+0.8**
ARAG	**Araguaiana, MT**	**16.41**	**68**	*eP*		**Pn**	**04 34 05.8**	**+0.4**
CNLB	**Canela**	**16.48**	**117**	*eP*		**Pn**	**04 34 06.9**	**+0.7**
FRTB	**Fartura**	**16.63**	**96**	*eP*		**Pn**	**04 34 08.7**	**+0.7**
BB19B	**Bebedouro**	**17.78**	**89**	*eP*		**Pn**	**04 34 21.3**	**-0.3**
PLCA	**Paso Flores**	**18.27**	**187**		P	**Pn**	**04 34 26.9**	**-0.4**
	comp=Z,0.2nm,0.3s,baz=90,slow=20,SNR=9.8							
PLCA	**Paso Flores**	**18.27**	**187**	*eP*		**Pn**	**04 34 27.1**	**-0.2**
PLCA	**Paso Flores**	**18.27**	**187**		P	**Pn**	**04 34 25.4**	**-1.8**
PLCA					IAmb	IAmb	04 34 33.0	
	comp=Z,2.9nm,0.8s							
RCLB	**Rio Claro- Sao**	**18.55**	**93**	*eP*		**Pn**	**04 34 29.0**	**-1.7**
SPB	**Sao Paulo**	**18.59**	**97**	*eP*		**Pn**	**04 34 30.4**	**-0.7**
IPMB	**Ipameri, GO**	**18.75**	**79**	*eP*		**Pn**	**04 34 31.6**	**-1.5**
VAO	**Valinhos**	**19.03**	**95**	*eP*		**Pn**	**04 34 34.2**	**-2.2**
BDFB	**Brasilia**	**19.74**	**73**		P	**P**	**04 34 41.8**	**+0.4**
	comp=Z,2.4nm,0.3s,baz=246,slow=11,SNR=23							
BDFB	**Brasilia**	**19.74**	**73**		P	**P**	**04 34 41.9**	**+0.6**
BDFB					IAmb	IAmb	04 34 42.8	
	comp=Z,12nm,0.6s							
PARB	**Paraibuna**	**20.25**	**96**	*eP*		**P**	**04 34 47.1**	**+0.4**
PEXB	**Peixe**	**21.14**	**64**	*eP*		**P**	**04 34 56.2**	**0.0**
BSCB	**Bom Sucesso**	**21.25**	**90**	*eP*		**P**	**04 34 58.0**	**+0.6**
VAS01	**Vassouras-RJ**	**22.33**	**94**	*eP*		**P**	**04 35 09.3**	**+1.1**
JANB	**Januaria**	**23.26**	**75**	*eP*		**P**	**04 35 17.3**	**+0.5**
SMTB	**Santa Maria do**	**23.56**	**58**	*eP*		**P**	**04 35 20.0**	**+0.6**
SJMB	**Sao Joao De Ma**	**25.01**	**86**	*eP*		**P**	**04 35 32.5**	**0.0**
OTAV	**Otavalo**	**25.02**	**334**	*eP*		**P**	**04 35 33.7**	**+0.5**
BSFB	**Barra de Sao F**	**25.29**	**86**	*eP*		**P**	**04 35 35.3**	**+0.7**
NBIT	**Itapeh - BA**	**27.70**	**79**	*eP*		**P**	**04 35 57.9**	**+1.2**
NBPN	**Ponto Novo - B**	**28.66**	**70**	*eP*		**P**	**04 36 06.0**	**+0.7**
NBLA	**Lagarto - SE**	**30.71**	**73**	*eP*		**P**	**04 36 23.8**	**+0.4**
NBPS	**Pedro II - PI**	**31.10**	**58**	*eP*		**P**	**04 36 27.6**	**+0.8**
NBTA	**Tacaratu-PE**	**31.33**	**69**	*eP*		**P**	**04 36 29.7**	**+1.0**
NBMA	**Muriti-CE**	**31.61**	**66**	*eP*		**P**	**04 36 32.3**	**+1.1**
NBPB	**Pedra_Branca-C**	**31.92**	**62**	*eP*		**P**	**04 36 34.7**	**+0.8**
NBAN	**Anadia - AL**	**32.63**	**72**	*eP*		**P**	**04 36 41.1**	**+1.0**
NBLI	**Livramento-PB**	**33.15**	**68**	*eP*		**P**	**04 36 45.7**	**+1.0**
NBRF	**Rio Formoso -**	**34.09**	**71**	*eP*		**P**	**04 36 53.9**	**+1.2**
RCBR	**Riachuelo**	**34.83**	**66**	*eP*		**P**	**04 37 00.1**	**+1.0**
TXAR	**Lajitas Array**	**62.21**	**324**		P	**P**	**04 40 29.6**	**+1.8**
	comp=Z,0.3nm,0.7s,baz=150,slow=9.3,SNR=3.7							
DBIC	**Dimbokro**	**67.89**	**72**		P	**P**	**04 41 05.6**	**+1.1**
	comp=Z,4.5nm,0.9s,baz=211,slow=8.6,SNR=6.7							
DBIC	**Dimbokro**	**67.89**	**72**		P	**P**	**04 41 04.5**	**-0.1**
DBIC					IAmb	IAmb	04 41 06.8	
	comp=Z,4.1nm,0.8s							
ANMO	**Albuquerque**	**68.06**	**326**		P	**P**	**04 41 01.1**	**-4.4**
ANMO					IAmb	IAmb	04 41 10.0	
	comp=Z,2.3nm,0.8s							
BGNE	**Belgrade**	**69.69**	**336**		P	**P**	**04 41 11.7**	**-3.5**
SRU	**San Rafael Swe**	**73.34**	**326**		P	**P**	**04 41 34.4**	**-2.8**
CCUT	**Cedar City**	**73.69**	**324**		P	**P**	**04 41 35.2**	**-4.1**
PSUT	**Pine Spring**	**74.67**	**324**		P	**P**	**04 41 42.0**	**-3.0**
PDAR	**Pinedale Array**	**75.65**	**329**		P	**P**	**04 41 53.6**	**+3.1**
	comp=Z,0.3nm,0.5s,baz=136,slow=8.0,SNR=5.1							
PDAR	**Pinedale Array**	**75.65**	**329**		P	**P**	**04 41 47.5**	**-3.0**
TOA0	**Torodi Ar. Sit**	**76.59**	**70**		P	**P**	**04 41 56.1**	**0.0**
TORD	**Torodi Ar. Bea**	**76.59**	**70**		P	**P**	**04 41 57.9**	**+1.8**
	comp=Z,7.6nm,0.5s,baz=254,slow=5.5,SNR=78							
TORD	**Torodi Ar. Bea**	**76.59**	**70**		P	**P**	**04 41 57.0**	**+0.8**
ULM	**Lac du Bonnet**	**76.71**	**342**		P	**P**	**04 41 57.8**	**+1.8**
	comp=Z,3.5nm,0.7s,baz=146,slow=6.9,SNR=8.2							
ULM	**Lac du Bonnet**	**76.71**	**342**		P	**P**	**04 41 54.4**	**-1.6**
NVAR	**Mina Array Bea**	**77.09**	**321**		P	**P**	**04 42 02.4**	**+3.7**
	comp=Z,0.7nm,0.8s,baz=144,slow=5.5,SNR=5.2							
PAHR	**Pah Rah Range**	**78.57**	**322**		P	**P**	**04 42 03.3**	**-3.5**
PAHR					IAmb	IAmb	04 42 12.0	
	comp=Z,5.2nm,0.8s							
BOSA	**Boshof**	**81.87**	**117**		P	**P**	**04 42 26.7**	**+1.9**
	comp=Z,1.2nm,0.5s,baz=199,slow=1.2,SNR=4.8							
BOSA	**Boshof**	**81.87**	**117**		P	**P**	**04 42 25.6**	**+0.8**
BOSA					IAmb	IAmb	04 42 43.8	
	comp=Z,5.7nm,1.1s							
NLWA	**Neilton Lookou**	**86.07**	**326**		P	**P**	**04 42 43.0**	**-2.3**
YKA	**Yellowknife Ar**	**92.61**	**340**		P	**P**	**04 43 18.4**	**+2.8**
	comp=Z,1.1nm,0.6s,baz=135,slow=4.3,SNR=26							
ASAR	**Alice Springs**	**129.50**	**206**		PKP	**PKiKP**	**04 49 14.9**	**+1.1**
	comp=Z,1.0nm,0.7s,baz=140,slow=2.1,SNR=7.7							
ASAR	**Alice Springs**	**129.50**	**206**		PKP	**PKPdf**	**04 49 12.5**	**-0.6**
ZALV	**Zalesovo Beam**	**142.39**	**27**		PKP	**PKiKP**	**04 49 38.4**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=302,slow=2.7,SNR=2.3							
KSH	**Kashi**	**144.81**	**53**		PKP	**PKPdf**	**04 49 41.5**	**+0.7**
KSH					pPKP	pPKPdf	04 50 22.0	-7.5
MKAR	**Makanchi Array**	**145.77**	**38**		PKPbc	**PKPab**	**04 49 43.9**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=319,slow=3.2,SNR=6.4							
MKAR	**Makanchi Array**	**145.77**	**38**		PKPdf	**PKPbc**	**04 49 42.6**	**-0.3**

*ATH **29** 04:31:04.8,41.°94N×24.°51E,h17km±2km, ML2.6/5, Error ellipse: s-maj=8.4km s-min=2.1km az=184.0*
*SOF **29** 04:31:04.7,41.°92N×24.°52E,h12km, MD2.5*
*SKO **29** 04:31:06.4,41.°94N×24.°49E,h12km*
*THE **29** 04:31:06.1,41.°88N×24.°54E,h3km±2km, ML2.2/3, Error ellipse: s-maj=2.9km s-min=0.7km az=165.0*

ISC 29 04:31:05.1±1.2,41.°93N±0.°02×24.°52E±0.°03,h14km±11km, n35,σ0°96/39,5C-3D,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLD	**Plovdiv**	**0.22**	**37**	P	**Pb**	**04 31 10.8**	**-0.1**
RZN	**Rozhen**	**0.28**	**149**	P	**Pg**	**04 31 11.0**	**-0.1**
PGB	**Panagyurishte**	**0.68**	**337**	P	**Pg**	**04 31 17.3**	**-1.0**
MMB	**Musomiste**	**0.69**	**241**	P	**Pg**	**04 31 18.3**	**-0.2**
KDZ	**Kurdzhali**	**0.72**	**112**	P	**Pg**	**04 31 17.9**	**-1.3**
KAVA	**Kavala**	**0.93**	**180**	P	**Pb**	**04 31 22.6**	**-0.4**
KAVA				S	**Sb**	**04 31 35.6**	**+0.4**
	152nm,0.4s						
KAVA	**Kavala**	**0.93**	**180**	P	**Pb**	**04 31 22.6**	**-0.4**
KAVA				AML	AML	04 31 52.1	
	comp=E,430μm,0.3s						
KAVA				AML	AML	04 31 52.7	
	comp=N,855μm,0.5s						
SRS	**Serrai**	**1.07**	**221**	P	**Pb**	**04 31 25.8**	**+0.4**
SRS				S	**Sb**	**04 31 40.4**	**+1.1**
	comp=N,155nm,0.5s						
SRS	**Serrai**	**1.07**	**221**	P	**Pb**	**04 31 25.8**	**+0.4**
SRS				AML	AML	04 31 56.7	
	comp=E,766μm,0.5s						
SRS				AML	AML	04 32 00.9	
	comp=N,432μm,0.4s						
KKB	**Krupnik**	**1.08**	**267**	P	**Pb**	**04 31 25.6**	**+0.1**
RDO	**Rodhopi**	**1.09**	**135**	P	**Pn**	**04 31 25.6**	**-0.4**
RDO				S	**Sn**	**04 31 40.6**	**-0.2**
RDO	**Rodhopi**	**1.09**	**135**	P	**Pn**	**04 31 25.5**	**-0.4**
RDO				AML	AML	04 31 54.3	
	comp=N,547μm,0.3s						
RDO				AML	AML	04 31 56.9	
	comp=E,669μm,0.2s						
VTS	**Vitosha**	**1.18**	**306**	⇓P	**Pn**	**04 31 27.0**	**-0.3**
VTS	**Vitosha**	**1.18**	**306**	P	**Pn**	**04 31 27.1**	**-0.3**
THAS	**Thassos island**	**1.33**	**174**	P	**Pg**	**04 31 30.5**	**-0.2**
THAS	**Thassos island**	**1.33**	**174**	P	**Pg**	**04 31 30.6**	**0.0**
SOH	**Sokhos**	**1.41**	**219**	P	**Pb**	**04 31 31.7**	**+0.4**
SOH	**Sokhos**	**1.41**	**219**	P	**Pb**	**04 31 31.4**	**+0.1**
SOH				AML	AML	04 32 05.8	
	comp=N,502μm,0.5s						
SOH				AML	AML	04 32 06.8	
	comp=E,447μm,0.4s						
ELND	**Elena**	**1.41**	**45**	⇑P	**Pg**	**04 31 34.5**	**+2.2**
ELND				⇑S	Sg	04 32 02.1	+11
KNT	**Kendrikon**	**1.44**	**238**	P	**Pb**	**04 31 31.8**	**+0.1**
KNT				S	**Sg**	**04 31 51.9**	**+0.4**
	comp=E,70nm,0.4s						
KNT	**Kendrikon**	**1.44**	**238**	P	**Pb**	**04 31 31.6**	**-0.1**
KNT				AML	AML	04 32 06.7	
	comp=N,302μm,0.4s						
KNT				AML	AML	04 32 06.9	
	comp=E,327μm,0.3s						
PLVB	**Pleven**	**1.46**	**3**	⇑P	**Pg**	**04 31 32.9**	**-0.3**
ALN	**Alexandroupoli**	**1.54**	**131**	P	**Pg**	**04 31 33.9**	**-0.8**
ALN	**Alexandroupoli**	**1.54**	**131**	P	**Pg**	**04 31 33.9**	**-0.8**
SMTH	**Samothraki Isl**	**1.64**	**152**	P	**Pb**	**04 31 35.7**	**+0.5**
OUR	**Ouranopolis**	**1.64**	**195**	P	**Pb**	**04 31 35.3**	**+0.1**
HORT	**Hortiatis**	**1.71**	**219**	P	**Pb**	**04 31 36.3**	**0.0**
PLG	**Polygyros**	**1.75**	**208**	P	**Pn**	**04 31 36.0**	**+0.9**
STIP	**Stip**	**1.76**	**263**	*i* Pn	**Pn**	**04 31 33.5**	**-1.7**
GRG	**Griva**	**1.87**	**239**	P	**Pb**	**04 31 39.9**	**+0.9**
PAIG	**Paliouri**	**2.10**	**198**	P	**Pn**	**04 31 40.1**	**+0.2**
HERR	**Herculane**	**3.33**	**333**	⇓P	**Pg**	**04 32 08.9**	**+0.1**
GZR	**Gura Zlata**	**3.69**	**345**	⇑P	**Pg**	**04 32 12.8**	**-2.9**
GZS	**Luzias**	**4.25**	**331**	⇑P	**Pb**	**04 32 11.8**	**+2.3**
VRI	**Vrincioaia**	**4.25**	**21**	⇑P	**Pg**	**04 32 25.2**	**-1.3**

*WEL **29** 04:51:34.4,40.°7S×0.°6×175.°9E±0.°9,h28km±1km, M4.0/62, ML4.3/14, MLv4.0/62, Error ellipse: s-maj=0.0km s-min=0.0km az=94.9*
*NEIC **29** 04:51:34.1±1.2,40.°64S±0.°03×175.°82E±0.°07,h29km±8km, Error ellipse: s-maj=9.0km s-min=1.6km az=119.0*

ISC 29 04:51:34.4±0.8,40.°66S±0.°02×175.°86E±0.°03,h32km±5km, n86,σ0°86/98,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIWZ	**Tintock**	**0.12**	**171**	P	**Pn**	**04 51 40.2**	**0.0**
TIWZ				S	**Sb**	**04 51 44.6**	**+0.4**
PRWZ	**Pori Road**	**0.13**	**40**	P	**Pn**	**04 51 40.2**	**-0.1**
PRWZ				S	**Sb**	**04 51 44.5**	**+0.3**
MRZ	**Mangatainoka R**	**0.21**	**269**	P	**Pn**	**04 51 40.9**	**-0.5**
MRZ				S	**Sb**	**04 51 45.6**	**+0.1**
POWZ	**Post Office Ro**	**0.27**	**345**	P	**Pb**	**04 51 41.5**	**-0.2**
BFZ	**Birch Farm**	**0.29**	**95**	P	**Pb**	**04 51 42.2**	**+0.2**
BFZ	**Birch Farm**	**0.29**	**95**		**Pb**	**04 51 42.2**	**+0.2**
BFZ					**Sb**	**04 51 46.7**	**-0.3**
HOWZ	**Holdsworth Sta**	**0.36**	**227**	P	**Pn**	**04 51 43.1**	**-0.3**
HOWZ				S	**Sn**	**04 51 49.4**	**-0.1**
CPWZ	**Castlepoint**	**0.36**	**135**	P	**Pn**	**04 51 44.0**	**+0.5**
DVHZ	**Dannevirke**	**0.42**	**33**	P	**Pn**	**04 51 43.7**	**-0.1**
TMWZ	**Te Maipa**	**0.45**	**177**	P	**Pn**	**04 51 44.9**	**+0.1**
TMWZ				S	**Sn**	**04 51 53.2**	**+1.3**
ANWZ	**Angora Road**	**0.51**	**68**	P	**Pn**	**04 51 45.4**	**0.0**
OGWZ	**Otaki Gorge**	**0.55**	**253**	P	**Pn**	**04 51 46.1**	**+0.1**
OGWZ				S	**Sn**	**04 51 54.2**	**0.0**
MTW	**Mount Morrison**	**0.57**	**208**	P	**Pn**	**04 51 46.4**	**0.0**
TSZ	**Takapari Road**	**0.60**	**7**	P	**Pb**	**04 51 45.5**	**-0.1**
TSZ				S	**Sn**	**04 51 54.9**	**-0.2**
OHWZ	**Ohakea**	**0.61**	**317**	P	**Pn**	**04 51 47.7**	**+0.8**
PRHZ	**Porangahau**	**0.71**	**57**	P	**Pb**	**04 51 48.2**	**-0.2**
WPHZ	**Waipukurau**	**0.74**	**37**	P	**Pn**	**04 51 49.1**	**+0.4**
KIW	**Kapiti Island**	**0.75**	**254**	P	**Pn**	**04 51 49.4**	**+0.6**
CAW	**Cannon Point**	**0.75**	**233**	P	**Pn**	**04 51 49.3**	**+0.4**
TRWZ	**Traveller**	**0.75**	**190**	P	**Pb**	**04 51 48.9**	**-0.2**
PNHZ	**Pukenui**	**0.79**	**19**	P	**Pn**	**04 51 49.6**	**+0.3**
PAWZ	**Paruwai Farm**	**0.80**	**204**	P	**Pb**	**04 51 49.6**	**-0.3**
MSWZ	**Moikau Station**	**0.89**	**211**	P	**Pn**	**04 51 50.5**	**-0.2**
MSWZ	**Moikau Station**	**0.89**	**211**		**Pn**	**04 51 50.5**	**-0.2**
PXZ	**Pawanui**	**0.99**	**51**	P	**Pn**	**04 51 51.9**	**-0.2**
PLWZ	**Palliser**	**1.02**	**206**	P	**Pn**	**04 51 52.2**	**-0.4**
PLWZ	**Palliser**	**1.02**	**206**		**Pn**	**04 51 52.3**	**-0.4**
PLWZ				S	**Sn**	**04 52 06.3**	**+0.4**
WEL	**Wellington**	**1.04**	**232**	P	**Pb**	**04 51 53.3**	**-0.5**
BHW	**Baring Head**	**1.06**	**225**	P	**Pn**	**04 51 53.0**	**0.0**
BHW	**Baring Head**	**1.06**	**225**		**Pn**	**04 51 53.1**	**0.0**
KRHZ	**Kereru**	**1.08**	**21**	P	**Pn**	**04 51 53.8**	**+0.3**
SNZO	**South Karori**	**1.09**	**233**		**Pn**	**04 51 53.6**	**+0.1**
WAZ	**Wanganui**	**1.12**	**323**	P	**Pn**	**04 51 55.9**	**+0.7**
KAHZ	**Kahuranaki**	**1.16**	**42**	P	**Pn**	**04 51 54.5**	**0.0**
BHHZ	**Black Hill Sta**	**1.18**	**8**	P	**Pb**	**04 51 55.4**	**-0.8**
MOVZ	**Moawhango**	**1.25**	**356**	P	**Pb**	**04 51 56.7**	**-0.8**
KWHZ	**Kaweka Forest**	**1.30**	**19**	P	**Pn**	**04 51 56.9**	**+0.4**
MTVZ	**Mangateitei**	**1.30**	**347**	P	**Pb**	**04 51 58.3**	**-0.1**
TCW	**Tory Channel**	**1.32**	**245**	P	**Pn**	**04 51 56.8**	**+0.1**
CKHZ	**Cape Kidnapper**	**1.36**	**43**	P	**Pn**	**04 51 56.8**	**-0.4**
MCHZ	**McNeill Hill**	**1.37**	**28**	P	**Pn**	**04 51 57.7**	**+0.4**
TRVZ	**Turoa**	**1.38**	**350**	P	**Pb**	**04 51 59.0**	**-0.7**
WHVZ	**Whangaehu Hut**	**1.39**	**351**	P	**Pb**	**04 51 59.4**	**-0.5**
TUVZ	**Tukino**	**1.40**	**353**	P	**Pb**	**04 51 59.6**	**-0.4**
DRZ	**Dome Shelter**	**1.40**	**350**	P	**Pb**	**04 51 60.0**	**-0.1**
FWVZ	**Far West T-bar**	**1.42**	**350**	P	**Pb**	**04 51 59.9**	**-0.6**
PKVZ	**Pokaka**	**1.42**	**344**	P	**Pb**	**04 51 59.9**	**-0.5**
DUWZ	**D'Urville Isla**	**1.48**	**264**	P	**Pn**	**04 51 59.6**	**+0.7**
NGZ	**Ngauruhoe**	**1.49**	**352**	P	**Pb**	**04 52 00.8**	**-0.8**
WTVZ	**West Tongariro**	**1.55**	**352**	P	**Pb**	**04 52 01.6**	**-1.0**
BKZ	**Black Stump Fm**	**1.56**	**18**	P	**Pn**	**04 52 00.2**	**+0.2**
BKZ	**Black Stump Fm**	**1.56**	**18**		**Pn**	**04 52 00.2**	**+0.2**
KRVZ	**Karewarewa**	**1.57**	**354**	P	**Pb**	**04 52 01.8**	**-1.1**
TWVZ	**Taurewa**	**1.62**	**348**	P	**Pb**	**04 52 02.2**	**-1.4**
LREZ	**Lake Rotokare**	**1.64**	**316**	P	**Pb**	**04 52 04.2**	**+0.3**
ARHZ	**Aropaoanui**	**1.64**	**32**	P	**Pn**	**04 52 01.5**	**+0.5**
TUWZ	**Tuamarina**	**1.64**	**241**	P	**Pn**	**04 52 00.8**	**-0.3**
TUWZ	**Tuamarina**	**1.64**	**241**		**Pn**	**04 52 01.5**	**+0.4**
CMWZ	**Cape Campbell**	**1.66**	**228**		**Pn**	**04 52 01.1**	**-0.1**
CMWZ				Sn	**Sb**	**04 52 29.6**	**+4.8**
RITZ	**Rihia Road**	**1.68**	**360**	P	**Pn**	**04 52 02.9**	**+1.3**
KATZ	**Kakaramea**	**1.68**	**356**	P	**Pn**	**04 52 03.9**	**-0.9**
NMHZ	**Naumai**	**1.72**	**25**	P	**Pn**	**04 52 02.8**	**+0.6**
VRZ	**Vera Road**	**1.75**	**331**	P	**Pn**	**04 52 04.8**	**-1.0**
RATZ	**Rangitukua**	**1.79**	**358**	P	**Pn**	**04 52 04.3**	**+1.1**
BSWZ	**Blackbirch Sta**	**1.83**	**234**	P	**Pn**	**04 52 03.4**	**-0.3**
BSWZ	**Blackbirch Sta**	**1.83**	**234**		**Pn**	**04 52 03.5**	**-0.3**
MRHZ	**Matea Rd**	**1.87**	**13**	P	**Pn**	**04 52 04.4**	**+0.1**
DREZ	**Durham Road**	**1.94**	**318**	P	**Pb**	**04 52 09.6**	**+0.5**
WATZ	**Wairara**	**1.95**	**357**	P	**Pn**	**04 52 06.2**	**+0.8**
MTHZ	**Maungataniwha**	**1.95**	**23**	P	**Pn**	**04 52 05.4**	**0.0**
NNZ	**Nelson**	**1.96**	**253**	Pn	**Pn**	**04 52 05.5**	**0.0**
NNZ				Sn	**Sn**	**04 52 27.0**	**-2.0**
KHEZ	**Kahui Hut**	**1.96**	**313**	P	**Pb**	**04 52 09.0**	**-0.6**
NMEZ	**Namu Road**	**1.96**	**309**	P	**Pb**	**04 52 09.1**	**-0.4**
RAHZ	**Arahi**	**1.98**	**29**	P	**Pn**	**04 52 05.7**	**0.0**
HIZ	**Hauiti**	**2.28**	**340**		**Pn**	**04 52 09.6**	**-0.3**
HIZ				Sn	**Sn**	**04 52 38.7**	**+2.0**
KHZ	**Kahutara**	**2.48**	**224**		**Pn**	**04 52 11.3**	**-1.3**
THZ	**Tophouse**	**2.49**	**243**		**Pn**	**04 52 11.8**	**-1.0**
QRZ	**Quartz Range**	**2.54**	**265**		**Pn**	**04 52 13.1**	**-0.3**
URZ	**Urewera**	**2.58**	**22**		**Pn**	**04 52 12.7**	**-1.3**
LTZ	**Lake Taylor**	**3.43**	**230**		**Pn**	**04 52 24.8**	**-0.9**
MXZ	**Matakaoa Point**	**3.63**	**32**	Pn	**Pn**	**04 52 27.9**	**-0.4**
RPZ	**Rata Peaks**	**4.70**	**228**	Pn	**Pn**	**04 52 40.5**	**-2.6**
OUZ	**Omahuta**	**5.71**	**341**	Pn	**Pn**	**04 52 56.6**	**-0.4**
VNDA	**Vanda**	**37.44**	**185**	P	**P**	**04 58 45.4**	**+1.2**
VNDA				IAmb	IAmb	04 58 54.1	
	comp=Z,4.0nm,1.1s						
ASAR	**Alice Springs**	**38.94**	**283**	P	**P**	**04 58 56.9**	**-0.7**
WRAB	**Tennant Creek**	**40.89**	**288**	P	**P**	**04 59 12.2**	**-1.6**

*SJA **29** 04:57:22.6±1.0,32.°80S×70.°19W,h108km±6km, ML2.7, MW2.8*
*GUC **29** 04:57:23.1±0.6,32.°80S×70.°32W,h108km±3km, ML3.0*

ISC 29 04:57:23.3±1.7,32.°81S±0.°05×70.°20W±0.°04, h110km±11km,n21,σ0°63/38,7C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VA03	**San Esteban**	**0.30**	**278**	⇑*iP*	**Pn**	**04 57 39.1**	**-0.1**
VA03				*eS*	**Sn**	**04 57 50.9**	**-0.3**
VA03				IAML		04 57 51.7	

SRS	**Serrai**	**1.10**	**222**	P	**Pg**	**05 05 32.9**	**+0.5**
SRS				S	**Sn**	**05 05 47.2**	**+0.4**
SRS				AML	AML	05 05 49.8	
	comp=N,5331μm,0.4s						
SRS				AML	AML	05 05 49.8	
	comp=E,13040μm,0.5s						
VTS	**Vitosha**	**1.20**	**305**	⇓P	**Pn**	**05 05 30.8**	**-2.7**
THAS	**Thassos island**	**1.33**	**175**	P	**Pb**	**05 05 35.6**	**-0.2**
THAS				S	**Sg**	**05 05 53.8**	**-0.4**
	comp=E,1μm,0.3s						
THAS	**Thassos island**	**1.33**	**175**	P	**Pn**	**05 05 35.4**	**+0.2**
THAS				S	**Sg**	**05 05 53.9**	**-0.3**
THAS				AML	AML	05 05 57.0	
	comp=N,3064μm,0.3s						
THAS				AML	AML	05 05 59.0	
	comp=E,2366μm,0.3s						
ELND	**Elena**	**1.39**	**44**	⇑P	**Pn**	**05 05 35.4**	**-0.6**
ELND	**Elena**	**1.39**	**44**	⇑S	**Sg**	**05 05 56.0**	**+0.1**
PVL	**Pavlikeni**	**1.40**	**24**	*e*P	**Pn**	**05 05 36.0**	**-0.1**
PVL	**Pavlikeni**	**1.40**	**24**	*e*P	**Pn**	**05 05 36.0**	**-0.1**
SOH	**Sokhos**	**1.44**	**220**	P	**Pb**	**05 05 37.4**	**-0.2**
SOH				S	**Sg**	**05 05 56.8**	**-0.8**
	comp=E,3μm,0.4s						
SOH	**Sokhos**	**1.44**	**220**	P	**Pb**	**05 05 37.5**	**-0.2**
SOH				S	**Sg**	**05 05 57.3**	**-0.4**
SOH				AML	AML	05 05 59.0	
	comp=N,6766μm,0.4s						
SOH				AML	AML	05 05 59.9	
	comp=E,5613μm,0.4s						
SOH	**Sokhos**	**1.44**	**220**	S	**Pn**	**05 05 37.1**	**+0.4**
PLVB	**Pleven**	**1.45**	**2**	⇑P	**Pg**	**05 05 39.3**	**+0.1**
KNT	**Kendrikon**	**1.47**	**239**	P	**Pg**	**05 05 39.4**	**-0.1**
KNT				S	**Sg**	**05 05 58.2**	**-0.5**
	comp=E,2μm,0.4s						
KNT	**Kendrikon**	**1.47**	**239**	P	**Pg**	**05 05 39.5**	**-0.1**
KNT				S	**Sg**	**05 05 57.7**	**-1.0**
KNT				AML	AML	05 05 59.8	
	comp=N,4151μm,0.4s						
KNT				AML	AML	05 06 00.1	
	comp=E,4615μm,0.4s						
ALN	**Alexandroupoli**	**1.52**	**133**	P	**Pg**	**05 05 40.4**	**0.0**
ALN				S	**Sg**	**05 05 59.9**	**-0.3**
	comp=E,490nm,0.9s						
ALN	**Alexandroupoli**	**1.52**	**133**	P	**Pg**	**05 05 40.4**	**0.0**
ALN				S	**Sg**	**05 06 00.3**	**+0.1**
ALN				AML	AML	05 06 02.6	
	comp=N,1638μm,0.9s						
ALN				AML	AML	05 06 05.4	
	comp=E,1366μm,1.0s						
SMTH	**Samothraki Isl**	**1.63**	**153**	P	**Pg**	**05 05 42.0**	**-0.6**
SMTH				S	**Sb**	**05 06 02.5**	**+1.2**
	comp=E,888nm,0.7s						
SMTH	**Samothraki Isl**	**1.63**	**153**	P	**Pg**	**05 05 42.0**	**-0.6**
SMTH				S	**Sg**	**05 06 04.4**	**+0.7**
SMTH				AML	AML	05 06 05.2	
	comp=N,2203μm,0.6s						
SMTH				AML	AML	05 06 06.1	
	comp=E,1464μm,0.7s						
OUR	**Ouranopolis**	**1.66**	**196**	P	**Pg**	**05 05 43.2**	**+0.1**
OUR				S	**Sg**	**05 06 04.4**	**-0.2**
HORT	**Hortiatis**	**1.73**	**220**	P	**Pb**	**05 05 42.2**	**-0.5**
HORT	**Hortiatis**	**1.73**	**220**	P	**Pg**	**05 05 44.0**	**-0.6**
HORT				S	**Sg**	**05 06 06.8**	**-0.3**
HORT				AML	AML	05 06 08.4	
	comp=E,3037μm,0.6s						
HORT				AML	AML	05 06 09.2	
	comp=N,2231μm,0.8s						
PLG	**Polygyros**	**1.77**	**209**	P	**Pb**	**05 05 43.2**	**-0.2**
PLG				S	**Sb**	**05 06 06.4**	**+1.0**
	comp=N,4μm,0.8s						
PLG	**Polygyros**	**1.77**	**209**	P	**Pg**	**05 05 45.2**	**0.0**
PLG				S	**Sg**	**05 06 08.3**	**0.0**
PLG				AML	AML	05 06 09.7	
	comp=E,2254μm,0.8s						
PLG				AML	AML	05 06 12.7	
	comp=N,2835μm,0.8s						
STIP	**Stip**	**1.80**	**263**	*i* Pn	**Pn**	**05 05 40.2**	**-1.4**
ZIMR		**1.82**	**19**	⇑P	**Pn**	**05 05 43.1**	**+1.2**
GRG	**Griva**	**1.90**	**240**	P	**Pb**	**05 05 46.0**	**+0.5**
GRG	**Griva**	**1.90**	**240**	P	**Pb**	**05 05 46.3**	**+0.8**
GRG				S	**Sb**	**05 06 10.1**	**+1.0**
GRG				AML	AML	05 06 13.7	
	comp=N,2695μm,0.8s						
GRG				AML	AML	05 06 16.2	
	comp=E,1374μm,0.6s						
VLAD	**Vladila**	**2.07**	**357**	⇑P	**Pg**	**05 05 50.8**	**-0.1**
VLAD	**Vladila**	**2.07**	**357**	⇓S	**Sg**	**05 06 18.3**	**+0.6**
PAIG	**Paliouri**	**2.12**	**199**	P	**Pn**	**05 05 46.1**	**+0.2**
PAIG	**Paliouri**	**2.12**	**199**	P	**Pb**	**05 05 49.2**	**+0.1**
RAZG	**Razgrad**	**2.17**	**41**	⇓P	Pn	05 05 40.9	-5.8
BLKB	**Belogradchik**	**2.19**	**321**	⇑S	**Sg**	**05 06 20.9**	**-0.7**
COPA	**Copaceanca**	**2.25**	**12**	⇓P	**Pb**	**05 05 50.0**	**-1.4**
SGRR	**Singureni**	**2.51**	**24**	⇑S	**Sn**	**05 06 18.8**	**-2.9**
PUNG	**Punghina**	**2.63**	**333**	⇑P	**Pn**	**05 05 54.8**	**+1.7**
BUC1	**Bucharest**	**2.64**	**23**	⇓P	**Pn**	**05 05 54.4**	**+1.3**
SRE	**Strehaia**	**2.90**	**340**	⇓P	**Pn**	**05 05 58.5**	**+1.7**
SRE	**Strehaia**	**2.90**	**340**	⇑S	**Sb**	**05 06 41.0**	**+3.1**
ARR	**Arges**	**3.43**	**1**	⇑P	**Pn**	**05 06 05.6**	**+1.5**
VOIR		**3.52**	**6**	⇓P	**Pn**	**05 06 07.4**	**+2.1**
MDVR	**Moldovita**	**3.53**	**325**	⇑P	**Pn**	**05 06 06.4**	**+1.0**
MDVR	**Moldovita**	**3.53**	**325**	⇓S	**Sb**	**05 06 56.3**	**+0.4**
MLR	**Muntele Rosu**	**3.69**	**15**	⇓P	**Pn**	**05 06 08.2**	**+0.4**
TIRR	**Tirgusor**	**3.78**	**47**	⇓P	**Pn**	**05 06 06.9**	**-1.9**
DOPR	**Dopca**	**4.08**	**8**	⇓P	**Pn**	**05 06 16.0**	**+3.0**
CFR	**Carcaliu**	**4.15**	**37**	⇓P	**Pn**	**05 06 13.5**	**-0.4**
PLOR	**Plostina**	**4.20**	**20**	⇑P	**Pn**	**05 06 15.1**	**+0.5**
ODBI	**Odobesti**	**4.23**	**24**	⇑P	**Pn**	**05 06 14.8**	**-0.2**
VRI	**Vrincioaia**	**4.23**	**21**	⇑P	**Pn**	**05 06 15.6**	**+0.6**
PETR	**Petresti**	**4.25**	**26**	⇑P	**Pn**	**05 06 12.9**	**-2.4**
BZS	**Buzias**	**4.26**	**331**	⇑P	**Pn**	**05 06 16.6**	**+1.2**
BZS	**Buzias**	**4.26**	**331**	⇓S	**Sb**	**05 07 18.2**	**+1.4**
GHRR		**4.61**	**25**	⇓S	**Sn**	**05 07 11.7**	**-1.6**
TESR	**Tescani**	**4.81**	**17**	⇑P	**Pn**	**05 06 25.2**	**+2.2**
BIR	**Birlad**	**4.86**	**26**	⇑P	**Pn**	**05 06 23.8**	**+0.2**
DRGR		**5.04**	**345**	⇑P	Pn	05 06 20.5	-5.6
BURAR	**Bucovina Array**	**5.70**	**4**	⇑P	**Pn**	**05 06 37.5**	**+2.2**
KOLS	**Kolonicke sedl**	**7.18**	**348**	*e*SG	**Sg**	**05 09 01.0**	**-0.5**
MPLH	**Magyarpolny**	**7.25**	**319**	*e*Pb	**Pn**	**05 06 57.3**	**+0.8**

IDC 29 05:12:55.5±1.6, 11°.01N×138°.58E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/30, mbtmp3.6/4, Error ellipse: s-maj=49.9km s-min=32.8km az=77.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H11S3	**WAKE ISLAND Hy 28.15**		**71**	T	T	05 47 38.8	
	baz=255,slow=75,SNR=5.8						
H11S1	**WAKE ISLAND Hy 28.16**		**71**	T	T	05 47 40.0	
	baz=255,slow=75,SNR=3.2						
H11S2	**WAKE ISLAND Hy 28.17**		**71**	T	T	05 47 39.5	
	baz=255,slow=75,SNR=4.6						
ASAR	**Alice Springs**	**34.76**	**188**	P	P	05 19 47.5	-0.3
	0.4nm,0.6s,baz=17,slow=12,SNR=5.6						
CMAR	**Chiang Mai Arr**	**36.98**	**286**	P	P	05 20 24.0	+0.2
	0.5nm,0.4s,baz=97,slow=7.4,SNR=4.6						
MKAR	**Makanchi Array**	**59.19**	**318**	P	P	05 22 58.0	-0.4
	0.5nm,0.9s,baz=102,slow=7.5,SNR=4.3						
YKA	**Yellowknife Ar**	**87.93**	**26**	P	P	05 25 47.2	+0.2
	0.4nm,1.0s,baz=301,slow=6.4,SNR=4.1						

*IDC **29** 05:48:05.4±4.3, 36°.64N×142°.71E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.4/41, mbtmp3.4/3, ML2.9/1, MS2.6/2, Ms1 2.6/2, ms1mx2.4/23, Error ellipse: s-maj=108.0km s-min=28.9km az=163.0*

*JMA **29** 05:48:13.4±0.2, 37°.23N×142°.10E, h36km±5km, M3.4*

ISC 29 05:48:10.6±4.0, 37°.31N±0°.07×142°.20E±0°.09, h7km±25km, n22, σ2.5°01/21, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.05**	**273**	P	**Pb**	**05 48 30.9**	**-0.3**
JMST	**Minamisoumatoc**	**1.12**	**292**	P	**Pn**	**05 48 32.6**	**0.0**
JMST				*e*S	**Sb**	**05 48 46.1**	**-0.9**
ONAJ	**Iwakimizuishiy**	**1.14**	**260**	P	Pn	05 48 32.1	-0.8
ONAJ				*e*S	**Sb**	**05 48 45.2**	**-2.3**
JIKH	**Ishinomakikobu**	**1.15**	**330**	P	**Pn**	**05 48 33.8**	**+0.7**
JIKH				*e*S	**Sb**	**05 48 47.2**	**-0.8**
JMM	**Marumori**	**1.24**	**297**	P	**Pn**	**05 48 34.5**	**+0.1**
JMM				*e*S	**Sb**	**05 48 49.6**	**-1.0**
JFFD	**Fukushimafurud**	**1.32**	**261**	P	Pn	05 48 34.8	-0.7
JFFD				*e*S	**Sn**	**05 48 50.6**	**-2.8**
JIO	**Ouri**	**1.32**	**330**	P	**Pn**	**05 48 36.3**	**+0.8**
JHO	**Hitachi**	**1.48**	**242**	*e*S	**Sn**	**05 48 54.0**	**-3.2**
JFT	**Otama**	**1.49**	**279**	P	**Pn**	**05 48 38.5**	**+0.7**
JOU	**Okura**	**1.60**	**311**	P	**Pn**	**05 48 41.2**	**+1.8**
JOU				*e*S	**Sn**	**05 49 01.0**	**+0.6**
JFY	**Yanaizu**	**1.99**	**274**	*e*S	**Sn**	**05 49 09.5**	**-0.3**
MJAR	**Matsushiro Arr**	**3.29**	**258**	Pn	**Pn**	**05 49 04.4**	**+2.0**
	1.0nm,0.3s,baz=91,slow=14,SNR=21						
MJAR				Sn	**Sn**	**05 49 45.7**	**+3.9**
	0.4nm,0.3s,baz=90,slow=27,SNR=4.2						
MJAR				LR	LR	05 50 43.6	
	comp=Z,70nm,18.2s,baz=110,slow=44						
MAT	**Matsushiro**	**3.29**	**258**	P	**Pn**	**05 49 04.8**	**+2.3**
MAT				S	**Sn**	**05 49 45.2**	**+3.4**
KSRS	**Korea Array**	**11.36**	**275**	LR	LR	05 54 45.4	
	comp=Z,33nm,18.2s,baz=70,slow=34						
H11N2	**WAKE ISLAND Hy 27.76**		**122**	T	T	06 22 58.6	
	baz=314,slow=75,SNR=16						
H11N1	**WAKE ISLAND Hy 27.77**		**122**	T	T	06 22 57.1	
	baz=314,slow=75,SNR=12						
H11N3	**WAKE ISLAND Hy 27.78**		**122**	T	T	06 22 56.0	
	baz=314,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy 28.49**		**124**	T	T	06 23 50.6	
	baz=316,slow=76,SNR=7.1						
H11S3	**WAKE ISLAND Hy 28.49**		**124**	T	T	06 23 51.2	
	baz=316,slow=76,SNR=8.5						
H11S2	**WAKE ISLAND Hy 28.51**		**124**	T	T	06 23 48.9	
	baz=316,slow=76,SNR=6.0						
MKAR	**Makanchi Array**	**44.50**	**302**	P	**P**	**05 56 23.2**	**+0.7**
	0.4nm,0.8s,baz=90,slow=9.7,SNR=4.2						
ILAR	**Eielson Array**	**48.93**	**32**	P	**P**	**05 56 55.7**	**-1.2**
	0.3nm,0.7s,baz=266,slow=6.5,SNR=4.7						

*IDC **29** 05:59:16.8±0.7, 56°.58N×34°.23W, h0km, mb3.7/16, mb1 4.0/18, mb1mx3.8/52, mbtmp3.8/18, ML2.3/1, MS3.9/37, Ms1 3.9/37, ms1mx3.9/44, Error ellipse: s-maj=21.3km s-min=13.3km az=11.0*

*MOS **29** 05:59:18.8±1.1, 56°.74N×34°.16W, h12km, mb4.7/24, Error ellipse: s-maj=13.2km s-min=8.6km az=76.4*

*GCMT **29** 05:59:20.1±0.3, 56°.58N±0°.05×33°.97W±0°.05, h18km±1km, MW4.9/81, Moment Tensor Solution. s18,c18; s81,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.10±.20; $M_{\theta\theta}$-0.16±.14; $M_{\phi\phi}$2.26±.15; $M_{r\theta}$-0.66±.39; $M_{\theta\phi}$-0.09±.09; $M_{\phi r}$-1.98±.31; Best double couple: $M_0$3.02200×10^{16} NP1:ϕ_s164.00000°, δ25.00000°, λ-116.00000°. NP2: ϕ_s12.00000°, δ67.00000°, λ-78.00000°. Principal axes: T 3.0330, Plg21.0000°, Azm93.0000°; N -0.0240, Plg11.0000°, Azm187.0000°; P -3.0110, Plg66.0000°, Azm303.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **29** 05:59:20.1±1.9, 56°.74N±0°.10×34°.1W±0°.2, h10km±1km, mb4.7/71 Error ellipse: s-maj=17.0km s-min=16.6km az=207.0*

ISC 29 05:59:20.2±0.4, 56°.74N±0°.07×34°.14W±0°.05, h10km, n173, σ1.8°40/145, mb4.6/72, MS3.9/35, 5C-1D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANGG	**Ammassalik, Gr**	**9.07**	**351**	Pn	**Pn**	**06 01 30.6**	**-0.2**
BORG	**Borgarnes**	**10.17**	**33**	P	**Pn**	**06 01 47.4**	**+1.4**
BORG	**Borgarnes**	**10.17**	**33**	Pn	**Pn**	**06 01 47.2**	**+1.2**
	0.8nm,0.3s,baz=145,slow=1.7,SNR=6.9						
BORG				Sn	**Sn**	**06 03 33.8**	**-6.1**
	0.1nm,0.3s,baz=248,slow=6.0,SNR=2.5						
BORG				LR	LR	06 04 36.8	
	comp=Z,1μm,18.0s,baz=250,slow=31						
SFJD	**Kangerlussuaq**	**12.84**	**330**	LR	LR	06 06 29.9	
	comp=Z,902nm,18.4s,baz=140,slow=33						
SUMG	**Summit**	**16.00**	**355**	P	**Pn**	**06 03 04.7**	**-0.7**
SUMG				pmax	pmax		
	comp=Z,14nm,1.4s						
SUMG	**Summit**	**16.00**	**355**	Pn	**Pn**	**06 03 04.7**	**-0.7**
JMIC	**Jan Mayen**	**17.97**	**27**	LR	LR	06 08 49.2	
	comp=Z,429nm,19.4s,baz=232,slow=32						
FRB	**Frobisher Bay**	**18.27**	**307**	LR	LR	06 09 12.1	
	comp=Z,498nm,20.1s,baz=92,slow=32						
SCHQ	**Scheffville**	**18.39**	**278**	P	**P**	**06 03 32.0**	**-3.0**
	comp=Z,0.1nm,0.3s,baz=104,slow=4.2,SNR=4.5						
SCHQ				LR	LR	06 09 11.3	
	comp=Z,695nm,20.5s,baz=62,slow=32						
DAG	**Danmarks Havn**	**20.88**	**10**	P	Pn	06 04 04.0	-0.4
NOA	**NORSAR Array B**	**23.45**	**60**	LR	LR	06 12 22.6	
	comp=Z,249nm,20.0s,baz=275,slow=33						
F64A	**Sherman**	**23.74**	**257**	P	**P**	**06 04 32.2**	**0.0**
F64A				IAmb	IAmb	06 04 40.3	
	comp=Z,25nm,1.2s						
G65A	**Princeton**	**23.75**	**255**	P	**P**	**06 04 33.1**	**+0.8**
HFS	**Hagfors**	**24.83**	**62**	LR	LR	06 12 51.8	
	comp=Z,394nm,18.5s,baz=288,slow=33						
G62A	**West of Eustis**	**25.33**	**259**	P	**P**	**06 04 48.6**	**+1.8**
ESDC	**Sonseca Array**	**26.07**	**118**	P	**P**	**06 04 52.6**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=316,slow=7.2,SNR=2.6						
ESDC				LR	LR	06 13 24.7	
	comp=Z,398nm,18.5s,baz=310,slow=33						
ESDC	**Sonseca Array**	**26.07**	**118**	P	**P**	**06 04 53.0**	**-0.6**
I62A	**Tamworth**	**26.65**	**257**	P	**P**	**06 04 59.8**	**+1.0**
LBNH	**Lisbon**	**26.72**	**258**	P	**P**	**06 04 58.9**	**-0.6**
LBNH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LBNH	**Lisbon**	**26.72**	**258**	P	**P**	**06 04 58.9**	**-0.6**
SPITS	**Spitsbergen Ar**	**27.28**	**20**	LR	LR	06 13 18.0	
	comp=Z,141nm,19.2s,baz=195,slow=31						
CLL	**Collm**	**27.77**	**81**	*e*P	**P**	**06 05 09.0**	**+0.3**
CLL				MLR	MLR		
	comp=Z,500nm,20.2s						
CLL	**Collm**	**27.77**	**81**	*e*P	**P**	**06 05 09.0**	**+0.3**
CLL				*e*S	**S**	**06 09 54.0**	**+2.9**
CLL				Lm	MLR	06 15 00.0	
	comp=N,300nm,19.4s						
CLL				Lm	MLR	06 15 00.0	
	comp=E,500nm,20.2s						
CLL				Lm	MLR	06 15 00.0	
	comp=Z,500nm,20.2s						
ARCES	**ARCESS Array B**	**28.47**	**40**	P	**P**	**06 05 13.4**	**-1.4**
	comp=Z,2.7nm,1.0s,baz=282,slow=8.8,SNR=3.5						
ARCES				LR	LR	06 14 30.9	
	comp=Z,278nm,18.1s,baz=324,slow=32						
DAVOX	**Davos/Dischmat**	**28.54**	**91**	LR	LR	06 16 09.0	
	comp=Z,239nm,19.1s,baz=300,slow=35						
RES	**Resolute Bay**	**28.84**	**331**	LR	LR	06 16 55.8	
	comp=Z,211nm,18.7s,baz=53,slow=37						
GERES	**GERESS Array B**	**29.45**	**85**	P	**P**	**06 05 23.6**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=287,slow=13,SNR=2.8						
GERES				LR	LR	06 16 42.0	
	comp=Z,321nm,18.5s,baz=298,slow=35						
DPC	**Dobruska-Polom**	**30.06**	**80**	P	**P**	**06 05 29.7**	**+0.5**
FINES	**FINESS Array B**	**30.31**	**56**	P	**P**	**06 05 30.1**	**-1.0**
	comp=Z,3.8nm,0.9s,baz=269,slow=8.2,SNR=2.6						
FINES				LR	LR	06 16 13.8	
	comp=Z,204nm,20.4s,baz=278,slow=33						
SMOL	**Smolenice**	**31.68**	**83**	*e*P	**P**	**06 05 42.8**	**-0.6**
SMOL	**Smolenice**	**31.68**	**83**	*e*P	**P**	**06 05 42.8**	**-0.6**
ZST	**Bratislava**	**31.68**	**83**	*e*P	**P**	**06 05 43.0**	**-0.4**
ZST	**Bratislava**	**31.68**	**83**	*e*P	**P**	**06 05 43.0**	**-0.4**
NIE	**Niedzica**	**32.73**	**79**	P	**P**	**06 05 53.2**	**+0.5**
Q54A	**Cox Mills**	**35.17**	**260**	P	**P**	**06 06 15.5**	**+1.6**
DRGR		**35.58**	**81**	P	**P**	**06 06 16.2**	**-1.2**
KEST	**Kesra**	**35.86**	**107**	LR	LR	06 19 06.3	
	comp=Z,190nm,18.6s,baz=226,slow=33						
ULM	**Lac du Bonnet**	**36.16**	**287**	LR	LR	06 19 48.6	
	comp=Z,371nm,19.7s,baz=28,slow=34						
KLMR	**Klimovskoe**	**36.53**	**52**	*e*P	**P**	**06 06 21.8**	**-3.5**
KLMR				pmax	pmax		
	comp=Z,55nm,1.5s						
KLMR	**Klimovskoe**	**36.53**	**52**	*e*P	**P**	**06 06 21.8**	**-3.5**
KLMR				AMP		06 06 27.9	
	comp=Z,55nm,1.5s						
AKASG	**Malin Array Be**	**36.77**	**72**	P	**P**	**06 06 25.1**	**-2.4**
AKASG				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AKASG	**Malin Array Be**	**36.77**	**72**	P	**P**	**06 06 24.4**	**-3.0**
	comp=Z,26nm,0.3s,baz=304,slow=8.8,SNR=1.6						
AKASG				LR	LR	06 21 23.3	
	comp=Z,213nm,20.4s,baz=285,slow=36						
AKASG	**Malin Array Be**	**36.77**	**72**	P	**P**	**06 06 25.1**	**-2.4**
AKBB	**Malin Array Si**	**36.77**	**72**	P	**P**	**06 06 26.3**	**-1.1**
AKBB				IAmb	IAmb	06 06 41.2	
	comp=Z,11nm,1.1s						
OBN	**Obninsk**	**38.04**	**62**	*e*P	**P**	**06 06 36.7**	**-1.5**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YKA	**Yellowknife Ar**	**38.61**	**313**	*e*P	**P**	**06 06 42.5**	**-0.4**
YKA	**Yellowknife Ar**	**38.61**	**313**	P	**P**	**06 06 41.7**	**-1.2**
	comp=Z,0.4nm,0.7s,baz=57,slow=8.7,SNR=6.0						
YKA				PcP	**PcP**	**06 08 52.8**	**-2.0**
	comp=Z,0.4nm,0.7s,baz=50,slow=3.2,SNR=4.1						
YKA				LR	LR	06 20 58.7	
	comp=Z,251nm,21.0s,baz=0.0,slow=34						
ECSD	**EROS Data Cent**	**40.58**	**279**	P	**P**	**06 06 59.7**	**+0.1**
CCM	**Cathedral Cave**	**41.54**	**268**	P	**P**	**06 07 07.4**	**-0.1**
PBMO	**Poplar Bluff**	**42.01**	**266**	P	**P**	**06 07 10.8**	**-0.5**
PBMO				IAmb	IAmb	06 07 25.4	
	comp=Z,15nm,1.1s						
INK	**Inuvik**	**42.16**	**327**	P	**P**	**06 07 11.1**	**-1.1**
INK				pmax	pmax		
	comp=Z,9.0nm,1.5s						
INK	**Inuvik**	**42.16**	**327**	P	**P**	**06 07 11.1**	**-1.1**
	comp=Z,1.0nm,0.9s,baz=32,slow=9.5,SNR=2.8						
INK	**Inuvik**	**42.16**	**327**	IAmb	IAmb	06 07 20.2	
	comp=Z,8.7nm,1.5s						
LCAR	**Lake Charles**	**42.93**	**266**	P	**P**	**06 07 19.0**	**+0.2**
LCAR				IAmb	IAmb	06 07 22.0	
	comp=Z,16nm,1.5s						
OXF	**Oxford**	**43.12**	**263**	P	**P**	**06 07 21.1**	**+0.7**
OXF				pmax	pmax		
	comp=Z,30nm,1.1s						
OXF	**Oxford**	**43.12**	**263**	P	**P**	**06 07 21.1**	**+0.7**
U40A	**Yellville**	**43.65**	**268**	IAmb	IAmb	06 07 33.0	
	comp=Z,22nm,1.4s						
HHAR	**Hobbs**	**44.30**	**269**	P	**P**	**06 07 30.8**	**+0.8**
HHAR				IAmb	IAmb	06 07 34.9	
	comp=Z,18nm,1.5s						
EPYK	**Eagle Plains**	**44.33**	**326**	IAmb	IAmb	06 07 37.7	
	comp=Z,21nm,1.5s						
TAM	**Tamanrasset**	**44.53**	**123**	P	**P**	**06 07 34.5**	**+2.5**
TAM				pmax	pmax		
	comp=Z,5.0nm,1.4s						
EGMT	**Eagleton**	**44.73**	**292**	P	**P**	**06 07 34.3**	**+0.9**
EGMT				IAmb	IAmb	06 07 42.9	
	comp=Z,19nm,1.4s						
BMAR	**Burnt Mountain**	**45.93**	**330**	P	**P**	**06 07 41.3**	**-1.2**
BRTR	**Keskin Array B**	**46.22**	**81**	*e*P	**P**	**06 07 47.7**	**+2.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	**46.22**	**81**	P	**P**	**06 07 43.9**	**-1.4**
	comp=Z,1.1nm,0.9s,baz=325,slow=11,SNR=4.0						
BRTR				LR	LR	06 27 07.4	
	comp=Z,56nm,21.1s,baz=300,slow=36						
BRTR	**Keskin Array B**	**46.22**	**81**	P	**P**	**06 07 44.4**	**-0.9**
TOLK	**Toolik Lake Re**	**46.39**	**333**	P	**P**	**06 07 46.8**	**+0.7**
RLMT	**Red Lodge**	**46.41**	**289**	IAmb	IAmb	06 07 49.2	
	comp=Z,8.3nm,1.4s						
ARU	**Arti**	**47.20**	**49**	*d* iP	**P**	**06 07 53.2**	**+0.6**
ARU						06 09 38.1	
ARU				S	**S**	**06 14 47.3**	**+2.4**
ARU				SS	**SS**	**06 18 11.5**	**0.0**
ARU				pmax	pmax		
	comp=Z,18nm,1.7s						
ARU	**Arti**	**47.20**	**49**	P	**P**	**06 07 52.0**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=292,slow=7.2,SNR=5.4						
ARU	**Arti**	**47.20**	**49**	P	**P**	**06 07 52.8**	**+0.3**
ARU				IAmb	IAmb	06 07 59.3	
	comp=Z,11nm,1.3s						
LKWY	**Lake**	**47.38**	**289**	P	**P**	**06 07 55.2**	**+0.8**
LKWY				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LKWY	**Lake**	**47.38**	**289**	P	**P**	**06 07 55.2**	**+0.8**
N23A	**Red Feather La**	**47.57**	**283**	P	**P**	**06 07 56.6**	**+0.7**
FLWY	**Flagg Ranch**	**47.87**	**289**	P	**P**	**06 08 00.2**	**+2.1**
FLWY				IAmb	IAmb	06 08 13.4	
	comp=Z,12nm,1.4s						
DLMT	**Dillon**	**47.97**	**292**	P	**P**	**06 08 00.1**	**+1.3**
DLMT				IAmb	IAmb	06 08 15.9	
	comp=Z,9.7nm,1.4s						
KIV	**Kislovodsk**	**48.10**	**71**	*e*P	**P**	**06 08 01.2**	**+1.4**
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,406nm,16.0s						
WMOK	**Wichita Mounta**	**48.11**	**271**	P	**P**	**06 07 59.1**	**-0.8**
PDAR	**Pinedale Array**	**48.18**	**287**	P	**P**	**06 07 58.6**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=63,slow=8.2,SNR=3.0						
PDAR				LR	LR	06 27 06.1	
	comp=Z,364nm,19.2s,baz=41,slow=35						
PDAR	**Pinedale Array**	**48.18**	**287**	P	**P**	**06 07 59.5**	**-1.2**
SCRK	**Sand Creek**	**48.21**	**326**	P	**P**	**06 08 01.5**	**+1.0**
**N

TXAR					LR	LR	06 31 47.2		
	comp=Z,142nm,18.3s,baz=0.0,slow=36								
TXAR	**Lajitas Array**	**54.90**	**271**		P	**P**	**06 08 50.9**	**0.0**	
DBIC	**Dimbokro**	**54.99**	**144**		P	**P**	**06 08 48.0**	**-3.5**	
	comp=Z,2.6nm,1.0s,baz=16,slow=7.4,SNR=2.9								
DBIC					LR	LR	06 29 29.7		
	comp=Z,174nm,18.5s,baz=332,slow=33								
KVN	**Kaiserville**	**55.34**	**290**		P	**P**	**06 08 53.2**	**-0.9**	
KVN					pmax	pmax			
	comp=Z,13nm,1.4s								
KVN	**Kaiserville**	**55.34**	**290**		P	**P**	**06 08 53.1**	**-0.9**	
KVN					IAmb	IAmb	06 09 02.7		
	comp=Z,12nm,1.4s								
PAHR	**Pah Rah Range**	**55.51**	**291**		IAmb	IAmb	06 08 56.8		
	comp=Z,17nm,1.5s								
BEKR	**Beckworth**	**55.89**	**292**		P	**P**	**06 08 58.3**	**+0.3**	
NVAR	**Mina Array Bea**	**55.91**	**289**		P	**P**	**06 08 56.4**	**-1.8**	
	comp=Z,0.2nm,0.6s,baz=32,slow=5.3,SNR=3.1								
NVAR					LR	LR	06 31 43.0		
	comp=Z,331nm,19.2s,baz=10.0,slow=35								
PNTR	**Pine Nut**	**56.08**	**291**		P	**P**	**06 08 58.4**	**-1.1**	
PNTR					IAmb	IAmb	06 09 08.3		
	comp=Z,10.0nm,1.4s								
WDC	**Whiskeytown Da**	**56.47**	**294**		P	**P**	**06 09 02.4**	**+0.5**	
WDC					pmax	pmax			
	comp=Z,9.0nm,1.4s								
WDC	**Whiskeytown Da**	**56.47**	**294**		P	**P**	**06 09 02.4**	**+0.5**	
WDC					IAmb	IAmb	06 09 04.2		
	comp=Z,8.8nm,1.4s								
TUC	**Tucson**	**56.52**	**279**		P	**P**	**06 09 03.8**	**+1.4**	
TUC					pmax	pmax			
	comp=Z,7.0nm,1.5s								
TUC	**Tucson**	**56.52**	**279**		P	**P**	**06 09 03.8**	**+1.4**	
ZALV	**Zalesovo Beam**	**58.98**	**37**		LR	LR	06 36 29.1		
	comp=Z,60nm,18.6s,baz=314,slow=38								
KURK	**Kurchatov**	**59.43**	**43**	*ceP*		**P**	**06 09 23.2**	**+0.7**	
KURK					pmax	pmax			
	comp=Z,6.0nm,1.7s								
KURK	**Kurchatov**	**59.43**	**43**		P	**P**	**06 09 21.4**	**-1.1**	
KURK					IAmb	IAmb	06 09 38.5		
	comp=Z,6.9nm,1.2s								
GEYT	**Alibeck**	**60.42**	**65**		LR	LR	06 37 10.3		
	comp=Z,66nm,18.6s,baz=190,slow=38								
SEY	**Seymchan**	**60.56**	**357**	*i* P		**P**	**06 09 31.0**	**+1.0**	
ROSC	**El Rosal**	**60.69**	**227**		LR	LR	06 33 27.1		
	comp=Z,48nm,20.9s,baz=338,slow=34								
YAK	**Yakutsk**	**60.90**	**9**	*i* P		**P**	**06 09 34.3**	**+2.0**	
YAK					pmax	pmax			
	comp=Z,4.0nm,0.9s								
KKAR	**Karatay Array**	**62.22**	**53**		P	**P**	**06 09 42.4**	**+0.8**	
KKAR	**Karatay Array**	**62.22**	**53**		P	**P**	**06 09 42.4**	**+0.8**	
MAKZ	**Makanchi**	**63.91**	**43**		P	**P**	**06 09 52.6**	**-0.2**	
MAKZ					pmax	pmax			
	comp=Z,7.0nm,2.0s								
MAKZ	**Makanchi**	**63.91**	**43**		P	**P**	**06 09 52.5**	**-0.3**	
MK31	**Makanchi Array**	**64.04**	**43**		P	**P**	**06 09 54.2**	**+0.5**	
MK31					pmax	pmax			
	comp=Z,5.0nm,1.5s								
MKAR	**Makanchi Array**	**64.04**	**43**	*eP*		**P**	**06 09 53.5**	**-0.2**	
MKAR					pmax	pmax			
	comp=Z,1.0nm,0.8s								
MKAR	**Makanchi Array**	**64.04**	**43**		P	**P**	**06 09 53.3**	**-0.4**	
	comp=Z,0.5nm,0.7s,baz=18,slow=4.2,SNR=7.8								
MKAR					LR	LR	06 37 12.3		
	comp=Z,65nm,18.3s,baz=313,slow=36								
AAK	**Ala-Archa**	**64.33**	**51**	*ceP*		**P**	**06 09 58.0**	**+2.2**	
AAK					pmax	pmax			
	comp=Z,14nm,1.7s								
AAK	**Ala-Archa**	**64.33**	**51**		P	**P**	**06 09 57.4**	**+1.6**	
AAK					IAmb	IAmb	06 10 10.5		
	comp=Z,9.1nm,1.4s								
ARSB	**Arslanbob**	**64.74**	**53**		P	**P**	**06 09 58.0**	**-0.4**	
BTK	**Batken**	**64.80**	**55**		P	**P**	**06 09 58.9**	**+0.1**	
BTK					pmax	pmax			
	comp=Z,11nm,1.2s								
BTK	**Batken**	**64.80**	**55**		P	**P**	**06 09 58.9**	**+0.1**	
BOOM	**Boomskoye usch**	**65.06**	**50**		IAmb	IAmb	06 10 07.6		
	comp=Z,4.8nm,1.2s								
OTAV	**Otavalo**	**66.56**	**230**		P	**P**	**06 10 11.4**	**+0.6**	
OTAV					pmax	pmax			
	comp=Z,7.0nm,1.6s								
KSH	**Kashi**	**67.53**	**52**	⇑*iP*		**P**	**06 10 19.0**	**+2.6**	
KSH					pP	pwP	06 10 22.5	+0.6	
KSH					PP	**PP**	**06 12 46.0**	**+1.3**	
KSH					S	**S**	**06 19 12.8**	**+0.1**	
KSH					sS	sS	06 19 20.5	+3.8	
KSH	**Kashi**	**67.53**	**52**		SS	SS	06 23 31.0	-1.2	
KSH					pmax	pmax			
	comp=Z,32nm,1.2s								
KSH					pmax	pmax			
	comp=Z,190nm,4.8s								
KSH					LR	LR			
	comp=N,120nm,5.9s								
KSH					LR	LR			
	comp=E,110nm,4.4s								
KSH					LR	LR			
	comp=Z,330nm,5.9s								
WMQ	**Urumqi**	**68.57**	**41**	*eP*		**P**	**06 10 24.0**	**+1.2**	
WMQ					pmax	pmax			
	comp=Z,9.0nm,0.9s								
WMQ					pmax	pmax			
	comp=Z,150nm,3.6s								
WMQ					LR	LR			
	comp=N,440nm,23.1s								
WMQ					LR	LR			
	comp=E,890nm,25.1s								
WMQ					LR	LR			
	comp=Z,23nm,22.3s								
PETK	**Petropavlovsk-**	**70.09**	**352**		LR	LR	06 41 11.3		
	comp=Z,45nm,20.6s,baz=29,slow=36								
SONM	**Songino Array**	**70.73**	**27**	*eP*		**P**	**06 10 36.0**	**-0.1**	
SONM	**Songino Array**	**70.73**	**27**		P	**P**	**06 10 35.5**	**-0.7**	
	comp=Z,0.4nm,0.6s,baz=358,slow=6.2,SNR=3.7								
SONM					LR	LR	06 43 25.2		
	comp=Z,68nm,19.8s,baz=319,slow=37								
SONM	**Songino Array**	**70.73**	**27**		IAmb	IAmb	06 10 42.0		
	comp=Z,1.3nm,0.9s								
BDFB	**Brasilia**	**73.03**	**194**		LR	LR	06 37 26.8		
	comp=Z,55nm,18.1s,baz=81,slow=31								
KLR	**Kul'dur**	**73.75**	**10**	*iP*		**P**	**06 10 53.5**	**-0.5**	
KLR					pmax	pmax			
	comp=Z,1.0nm,1.1s								
GTA	**Gaotai**	**76.62**	**35**	*eP*		**P**	**06 11 10.5**	**-0.4**	
GTA					pP	sP	06 11 14.3	0.0	
GTA					sP	pwP	06 11 17.0	+0.5	
GTA					pmax	pmax			
	comp=Z,4.0nm,1.9s								
LPAZ	**La Paz**	**78.10**	**213**	*eP*		**P**	**06 11 19.4**	**-0.4**	
LPAZ					pmax	pmax			
	comp=Z,2.0nm,1.0s								
LPAZ	**La Paz**	**78.10**	**213**		P	**P**	**06 11 20.1**	**+0.3**	
LPAZ					IAmb	IAmb	06 11 26.9		
	comp=Z,10nm,1.5s								
HHC	**Hu-ho-hao-te**	**78.56**	**26**	*eP*		**P**	**06 11 21.3**	**-0.3**	
HHC					pmax	pmax			
	comp=Z,3.0nm,0.7s								
HHC					pmax	pmax			
	comp=Z,88nm,5.2s								
LZH	**Lanzhou**	**80.93**	**33**	*eP*		**P**	**06 11 35.0**	**+0.4**	
LZH					pP	sP	06 11 38.0	-0.1	
LZH					sP	pwP	06 11 39.8	-0.5	
LZH					PP	**PP**	**06 14 42.0**	**+3.7**	
LZH					pmax	pmax			
	comp=Z,15nm,1.0s								
LZH					pmax	pmax			
	comp=Z,80nm,5.4s								
GO01	**Chusmiza**	**81.61**	**213**		P	**P**	**06 11 38.3**	**-0.3**	
KSRS	**Korea Array**	**84.95**	**14**		LR	LR	06 51 00.8		
	comp=Z,28nm,19.6s,baz=340,slow=36								
CPUP	**Villa Florida**	**85.04**	**201**		LR	LR	06 48 40.2		
	comp=Z,40nm,18.3s,baz=68,slow=35								
NJ2	**Nanjing**	**88.64**	**23**	*eP*		**P**	**06 12 14.0**	**+0.7**	
NJ2					pmax	pmax			
	comp=Z,6.0nm,0.5s								
CMAR	**Chiang Mai Arr**	**95.43**	**44**		LR	LR	06 57 42.2		
	comp=Z,29nm,21.6s,baz=340,slow=37								
BOSA	**Boshof**	**98.68**	**130**		LR	LR	06 57 05.7		
	comp=Z,65nm,18.3s,baz=132,slow=35								
ASAR	**Alice Springs**	**145.83**	**20**	*e*PKP2		**PKiKP**	**06 19 01.3**	**-1.6**	
ASAR	**Alice Springs**	**145.83**	**20**	PKPbc		**PKPdf**	**06 18 58.0**	**-0.8**	
	comp=Z,1.4nm,0.9s,baz=356,slow=2.7,SNR=6.6								

*IDC **29** 06:00:03.2±1.0, 13°.41N×120°.93E, h149km±9km, mb3.2/5, mb1 3.4/5, mb1mx3.1/46, mbtmp3.7/5, Error ellipse:*

s-maj=79.6km s-min=17.2km az=67.0
*MAN **29** 06:00:05.9, 13°.50N×120°.77E, h111km, mb4.3, ML3.2, MS3.0*
ISC 29 06:00:03.5±0.8, 13°.43N±0°.05×120°.73E±0°.07, h147km±7km, n15, σ1s10/22, mb3.4/5, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.56**	**303**	*eP*		**Pn**	**06 00 24.5**	**-0.3**
LUBP					*eS*	**Sn**	**06 00 38.2**	**-2.8**
TGY	**Tagaytay City**	**0.70**	**17**	P		**Pn**	**06 00 25.8**	**0.0**
	313nm,0.3s,baz=184,slow=1.3,SNR=18							
TGY					S	**Sn**	**06 00 43.9**	**+1.0**
	130nm,0.3s,baz=183,slow=18,SNR=11							
TGY	**Tagaytay City**	**0.70**	**17**	*eP*		Pn	06 00 18.1	-7.7
SJMP	**San Jose**	**1.03**	**158**	*eP*		**Pn**	**06 00 29.0**	**+0.7**
SJMP					*eS*	**Sn**	**06 00 47.6**	**+0.4**
LQP	**Lukban**	**1.04**	**49**	⇑*iP*		**Pn**	**06 00 29.1**	**+0.5**
LQP					*i* S	**Sn**	**06 00 48.4**	**+0.6**
BUSP	**Coron**	**1.51**	**200**	*eP*		**Pn**	**06 00 34.5**	**+1.6**
BUSP					*eS*	**Sn**	**06 00 56.8**	**+1.3**
OTRP	**Odiongan**	**1.65**	**130**	*eP*		**Pn**	**06 00 34.6**	**+0.1**
OTRP					*eS*	**Sn**	**06 00 57.0**	**-1.1**
GQP	**Guinayangan**	**1.74**	**74**	⇓*eP*		**Pn**	**06 00 35.6**	**+0.2**
POLP	**Polilio Island**	**1.75**	**42**	*eP*		**Pn**	**06 00 35.9**	**+0.3**
POLP					*eS*	**Sn**	**06 01 01.5**	**+1.3**
BOLP	**Bolinao**	**3.04**	**345**	*eP*		**Pn**	**06 00 52.0**	**+0.7**
BOLP					*eS*	**Sn**	**06 01 28.3**	**+0.1**
WRA	**Warramunga Arr**	**35.77**	**158**	P		**P**	**06 06 47.2**	**-1.4**
	0.4nm,0.6s,baz=337,slow=9.5,SNR=3.2							
SONM	**Songino Array**	**36.32**	**344**	P		**P**	**06 06 53.3**	**+0.1**
	0.3nm,0.4s,baz=160,slow=9.8,SNR=3.2							
ASAR	**Alice Springs**	**39.05**	**161**	P		**P**	**06 07 15.2**	**-1.0**
	0.2nm,0.3s,baz=332,slow=7.4,SNR=5.5							
MKAR	**Makanchi Array**	**46.26**	**324**	P		**P**	**06 08 14.9**	**+0.8**
	0.2nm,0.3s,baz=118,slow=8.1,SNR=9.4							
ARCES	**ARCESS Array B**	**79.35**	**339**	P		**P**	**06 11 52.3**	**-0.3**
	3.5nm,1.0s,baz=91,slow=7.3,SNR=3.0							

*THE **29** 06:03:41.2, 38°.21N×20°.41E, h9km, ML3.3/8, Error ellipse: s-maj=0.7km s-min=0.3km az=233.0*
*ATH **29** 06:03:41.6, 38°.23N×20°.44E, h7km±2km, ML3.1/5, Error ellipse: s-maj=3.0km s-min=1.1km az=252.0*
ISC 29 06:03:41.1±0.9, 38°.23N±0°.02×20°.42E±0°.04, h8km±5km, n41, σ0s54/62, Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.05**	**213**		P	**Pg**	**06 03 43.1**	**+0.2**
CHV1					S	**Sg**	**06 03 44.4**	**+0.2**
KEF3	**Kipouria, Keph**	**0.06**	**246**		P	**Pg**	**06 03 43.5**	**+0.5**
KEF3					S	**Sg**	**06 03 45.1**	**+0.8**
KEF1	**Kardakata, Kep**	**0.06**	**39**		P	**Pg**	**06 03 43.0**	**0.0**
KEF1					S	**Sg**	**06 03 44.0**	**-0.4**
ARG2	**Argostoli**	**0.07**	**133**		P	**Pg**	**06 03 43.1**	**0.0**
ARG2					S	**Sg**	**06 03 44.8**	**+0.2**
	73μm,0.1s							
KEF2	**Argostoli. Kep**	**0.08**	**140**		P	**Pg**	**06 03 43.6**	**+0.3**
KEF2					S	**Sg**	**06 03 45.4**	**+0.6**
VLS	**Valsamata**	**0.14**	**111**		P	**Pg**	**06 03 44.3**	**+0.1**
VLS					S	**Sg**	**06 03 46.6**	**+0.3**
	16μm,0.1s							
VLS	**Valsamata**	**0.14**	**111**		P	**Pg**	**06 03 44.4**	**+0.2**
VLS					S	**Sg**	**06 03 46.6**	**+0.3**
VLS					AML	AML	06 03 46.9	
	comp=N,41928μm,0.2s							
VLS					AML	AML	06 03 47.5	
	comp=E,25776μm,0.1s							
VSK1	**VASILIKIADES**	**0.21**	**32**		P	**Pg**	**06 03 45.9**	**+0.5**
VSK1					S	**Sg**	**06 03 49.1**	**+0.7**
	comp=E,17μm,0.2s							
KFL	**Anninata**	**0.31**	**112**		P	**Pg**	**06 03 47.0**	**-0.3**
KFL					S	**Sg**	**06 03 52.3**	**+0.8**
	comp=E,9μm,0.5s							
KFL	**Anninata**	**0.31**	**112**		P	**Pg**	**06 03 47.6**	**+0.3**
KFL					S	**Sg**	**06 03 52.8**	**+1.3**
KFL					AML	AML	06 03 53.7	
	comp=N,16320μm,0.5s							
KFL					AML	AML	06 03 54.4	
	comp=E,22536μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.40**	**151**		P	**Pg**	**06 03 49.4**	**+0.4**
VLMS					S	**Sg**	**06 03 55.5**	**+1.3**
VLMS					AML	AML	06 03 59.0	
	comp=N,8300μm,0.2s							
VLMS					AML	AML	06 03 59.0	
	comp=E,7132μm,0.2s							
EVGI	**Lefkada island**	**0.43**	**25**	P		**Pg**	**06 03 49.7**	**+0.1**
EVGI					S	**Sg**	**06 03 56.5**	**+1.2**
EVGI	**Lefkada island**	**0.43**	**25**	P		**Pg**	**06 03 50.0**	**+0.5**
EVGI					S	**Sb**	**06 03 57.0**	**-0.7**
LKD2	**Lefkada island**	**0.59**	**18**	P		**Pg**	**06 03 52.5**	**0.0**
LKD2					S	**Sb**	**06 04 01.8**	**-0.4**
LKD2	**Lefkada island**	**0.59**	**18**	P		**Pg**	**06 03 52.7**	**+0.1**
AST1	**Astakos**	**0.61**	**59**	P		**Pg**	**06 03 53.2**	**+0.3**
AST1					S	**Sb**	**06 04 02.5**	**-0.3**
	comp=E,3μm,0.3s							
TSLK	**Tsoukalades, L**	**0.62**	**17**	P		**Pg**	**06 03 53.1**	**-0.1**
TSLK	**Tsoukalades, L**	**0.62**	**17**	P		**Pg**	**06 03 53.4**	**+0.3**
TSLK					S	**Sg**	**06 04 02.2**	**+0.9**
TSLK					AML	AML	06 04 09.7	
	comp=E,1170μm,0.5s							
TSLK					AML	AML	06 04 13.7	
	comp=N,1766μm,0.5s							
KRI1	**kERI**	**0.65**	**151**	P		**Pg**	**06 03 53.2**	**-0.4**
PDO	**Prodromos**	**0.70**	**58**	P		**Pg**	**06 03 54.6**	**-0.1**
PDO	**Prodromos**	**0.70**	**58**	P		**Pg**	**06 03 55.1**	**+0.4**
PDO					S	**Sb**	**06 04 05.1**	**-0.3**
PDO					AML	AML	06 04 08.0	
	comp=E,3834μm,0.5s							
PDO					AML	AML	06 04 12.9	
	comp=N,3210μm,0.4s							
RLS	**Riolos of Patr**	**0.84**	**101**	P		**Pg**	**06 03 57.3**	**0.0**
RLS	**Riolos of Patr**	**0.84**	**101**	P		**Pg**	**06 03 57.3**	**0.0**
PVO	**Paravola**	**0.95**	**66**	P		**Pg**	**06 03 59.6**	**+0.2**
PVO					S	**Sb**	**06 04 13.5**	**+1.0**
	comp=N,1μm,0.3s							
PVO	**Paravola**	**0.95**	**66**	P		**Pg**	**06 03 59.8**	**+0.4**
DRO	**Drossia**	**1.05**	**105**	P		**Pg**	**06 04 01.3**	**-0.1**
DRO					S	**Sb**	**06 04 16.5**	**+1.0**
	comp=N,1μm,0.6s							
DRO	**Drossia**	**1.05**	**105**	P		**Pg**	**06 04 01.2**	**-0.1**
EFP	**Efpalio**	**1.19**	**80**	P		**Pb**	**06 04 02.9**	**-0.9**
EFP	**Efpalio**	**1.19**	**80**	P		**Pb**	**06 04 03.7**	**0.0**
LAKA	**Lakka**	**1.23**	**89**	P		**Pb**	**06 04 03.8**	**-0.7**
LAKA	**Lakka**	**1.23**	**89**	P		**Pb**	**06 04 04.1**	**-0.4**
ANX	**Ano Chora**	**1.23**	**72**	P		**Pb**	**06 04 04.2**	**-0.5**
ANX	**Ano Chora**	**1.23**	**72**	P		**Pg**	**06 04 05.2**	**+0.4**
SERG	**Sergoula**	**1.30**	**81**	P		**Pn**	**06 04 05.1**	**-0.4**
SERG	**Sergoula**	**1.30**	**81**	P		**Pn**	**06 04 05.3**	**-0.3**
TRIZ	**Trizonia**	**1.31**	**84**	P		**Pn**	**06 04 04.8**	**-0.8**
TRIZ					S	**Sn**	**06 04 23.7**	**+0.5**
TRIZ	**Trizonia**	**1.31**	**84**	P		**Pn**	**06 04 05.3**	**-0.3**
ALIK	**Aliki, Aigiali**	**1.33**	**88**	P		**Pn**	**06 04 05.5**	**-0.4**
KALE	**Kalithea**	**1.36**	**83**	P		**Pn**	**06 04 05.9**	**-0.5**
KALE	**Kalithea**	**1.36**	**83**	P		**Pn**	**06 04 06.2**	**-0.3**
KLV	**Kalavryta, Ach**	**1.38**	**97**	P		**Pn**	**06 04 06.0**	**-0.6**
KLV					S	**Sb**	**06 04 24.7**	**-0.2**
	comp=N,248nm,0.4s							

*GCG **29** 06:16:00.0±1.1, 15°.96N×92°.50W, h142km±73km, MD4.1*
*MEX **29** 06:16:07.8±0.5, 14°.59N×93°.12W, h16km±17km, MD3.8*
ISC 29 06:16:04.7±2.3, 14°.6N±0°.1×93°.12W±0°.08, h25km±22km, n9, σ1s02/15, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
THIG		**0.90**	**67**	*eP*		**Pn**	**06 16 21.9**	**+0.2**
THIG					*i* S	**Sn**	**06 16 32.7**	**-1.3**
PCIG		**1.15**	**355**	*eP*		**Pn**	**06 16 25.0**	**-0.2**
PCIG					*i* S	**Sn**	**06 16 38.5**	**-1.6**
ERG	**Entre ros, C**	**1.51**	**94**	*eP*		**Pb**	**06 16 31.9**	**-0.1**
CCIG	**Comitan**	**1.96**	**29**	*eP*		**Pn**	**06 16 37.7**	**+1.2**
CCIG					*i* S	**Sn**	**06 16 59.9**	**-0.5**
FUG	**Fuego 3**	**2.21**	**93**	*eP*		**Pn**	**06 16 39.9**	**-0.1**
FUG					*eS*	**Sn**	**06 17 08.0**	**+1.4**
TGIG		**2.21**	**360**	*i* P		**Pn**	**06 16 40.9**	**+1.0**
TGIG					*i* S	**Sn**	**06 17 06.4**	**0.0**
IXG	**Ixpaco**	**2.62**	**98**	*eP*		**Pn**	**06 16 44.5**	**-1.1**
IXG					*eS*	**Sn**	**06 17 17.8**	**+1.0**
NBG	**Las Nubes**	**2.69**	**89**	*eP*		Pn	06 16 41.7	-4.9
CMIG	**Matias Romero**	**3.04**	**326**	*eP*		**Pn**	**06 16 51.6**	**+0.4**
CMIG				*i* S		**Sn**	**06 17 26.8**	**0.0**

*KRAR **29** 06:30:52.8±0.1, 54°.04N×86°.85E, M2.0, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 29 06:30:49.7±7.1, 53°.97N×86°.17E, h0km, mb3.6, mpv3.2, 3C-5D, Error ellipse: s-maj=70.6km s-min=46.8km az=162.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**5.66**	**238**	⇓P	n	Pn	06 32 15.0	0.0
	3.5nm,1.2s							
KURK				⇑S	n	Sn	06 33 23.1	+2.5
	1.3nm,0.8s							
KURK				⇑Lg		Lg	06 33 54.6	
	3.3nm,0.8s							
KURBB	**Kurchatov Arra**	**5.76**	**237**	⇓P	n	Pn	06 32 17.4	+1.0
	2.0nm,0.7s							
KURBB				⇓S	n	Sn	06 33 20.5	-2.6
	2.2nm,0.6s							
KURBB				⇑Lg		Lg	06 33 55.4	
	6.5nm,0.6s							
MK31	**Makanchi Array**	**7.60**	**201**		Pn	Pn	06 32 41.9	+0.2
	baz=24,slow=13,SNR=5.8							
MK31				⇓S	n	Sn	06 34 11.6	+3.2
	0.3nm,0.6s,baz=29,slow=27,SNR=3.6							
MK31				⇓Lg		Lg	06 34 52.6	
	4.3nm,1.1s,baz=25,slow=32,SNR=5.2							

IDC 29 06:49:26.4±7.3, 17°.47S×178°.85W, h610km±91km, mb3.1/7, mb1 3.4/7, mb1mx3.0/34, mbtmp4.0/7, Error ellipse: s-maj=86.3km s-min=29.2km az=149.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.47**	**241**	P		P	06 55 57.8	-0.2
	3.8nm,0.9s,baz=97,slow=9.7,SNR=6.4							
WRA	**Warramunga Arr**	**44.30**	**259**	P		P	06 56 43.8	-0.2
	1.2nm,0.4s,baz=91,slow=7.7,SNR=22							
ASAR	**Alice Springs**	**44.51**	**254**	P		P	06 56 45.7	+0.1
	14nm,0.6s,baz=88,slow=8.5,SNR=180							
ASAR				PcP		PcP	06 58 14.9	-0.3
	0.2nm,0.5s,baz=99,slow=2.9,SNR=3.1							
NVAR	**Mina Array Bea**	**79.40**	**44**	P		P	07 00 30.6	-0.2
	0.4nm,0.6s,baz=227,slow=5.9,SNR=3.9							
ILAR	**Eielson Array**	**85.55**	**13**	P		P	07 01 00.8	+0.1
	0.3nm,0.4s,baz=224,slow=5.0,SNR=5.6							
TXAR	**Lajitas Array**	**86.12**	**58**	P		P	07 01 04.8	+0.4
	0.3nm,0.6s,baz=302,slow=2.8,SNR=3.8							
PDAR	**Pinedale Array**	**87.32**	**44**	P		P	07 01 09.8	-0.1
	0.4nm,0.6s,baz=234,slow=3.7,SNR=5.2							

*THE **29** 06:51:58.9, 38°.22N×20°.40E, h10km±1km, ML3.1/6, Error ellipse: s-maj=1.5km s-min=0.8km az=259.0*
*ATH **29** 06:51:59.6, 38°.18N×20°.44E, h9km±2km, ML3.0/3, Error ellipse: s-maj=2.6km s-min=1.2km az=233.0*
ISC 29 06:51:58.8±1.0, 38°.20N±0°.03×20°.42E±0°.04, h13km±5km, n19, σ0s46/31, Greece

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.03**	**240**		P	**Pg**	**06 52 00.5**	**-0.6**
CHV1					S	**Sg**	**06 52 02.6**	**-0.2**
	40μm,0.2s							
KEF3	**Kipouria, Keph**	**0.06**	**274**		P	**Pg**	**06 52 01.9**	**+0.6**
KEF3					S	**Sg**	**06 52 03.1**	**0.0**
ARG2	**Argostoli**	**0.06**	**111**		P	**Pg**	**06 52 01.5**	**+0.2**
ARG2					S	**Sg**	**06 52 02.9**	**-0.2**
	46μm,0.2s							
KEF2	**Argostoli. Kep**	**0.07**	**122**		P	**Pg**	**06 52 01.4**	**0.0**
KEF2					S	**Sg**	**06 52 02.3**	**-1.0**
VLS	**Valsamata**	**0.14**	**99**		P	**Pg**	**06 52 02.6**	**+0.3**
VLS					S	**Sg**	**06 52 05.0**	**+0.2**
	17μm,0.2s							
VLS	**Valsamata**	**0.14**	**99**		P	**Pg**	**06 52 02.6**	**+0.3**
VLS					S	**Sg**	**06 52 04.4**	**-0.4**
VLS					AML	AML	06 52 05.2	
	comp=E,45547μm,0.2s							
VLS					AML	AML	06 52 05.8	
	comp=N,19709μm,0.2s							
FSK	**Fiskardo**	**0.28**	**24**		P	**Pg**	**06 52 05.1**	**+0.4**
KFL	**Anninata**	**0.31**	**107**		P	**Pg**	**06 52 05.4**	**+0.3**
KFL					S	**Sg**	**06 52 10.0**	**+0.7**
	comp=N,5μm,0.3s							
KFL	**Anninata**	**0.31**	**107**		P	**Pg**	**06 52 05.2**	**+0.2**
KFL					S	**Sg**	**06 52 09.2**	**-0.1**
KFL					AML	AML	06 52 13.0	
	comp=N,6594μm,0.3s							
KFL					AML	AML	06 52 14.0	
	comp=E,12200μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.38**	**149**		P	**Pg**	**06 52 06.5**	**+0.1**
VLMS					S	**Sg**	**06 52 11.3**	**-0.2**
VLMS					AML	AML	06 52 14.0	
	comp=E,4507μm,0.3s							
VLMS					AML	AML

*ATH **29** 07:25:27.8, 38°.19N×20°.43E, h13km±1km, ML3.0/6, Error ellipse: s-maj=1.9km s-min=0.9km az=251.0*

ISC 29 07:25:27.6±1.0, 38°.20N±0°.02×20°.41E±0°.04, h14km±5km, n36, σ0s29/57, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.03**	**238**	P	**Pg**	**07 25 30.1**	**0.0**
CHV1				S	**Sg**	**07 25 31.7**	**-0.1**
	107µm,0.2s						
KEF3	**Kipouria, Keph**	**0.05**	**275**	P	**Pg**	**07 25 30.4**	**+0.1**
KEF3				S	**Sg**	**07 25 32.0**	**0.0**
ARG2	**Argostoli**	**0.06**	**108**	P	**Pg**	**07 25 30.3**	**0.0**
ARG2				S	**Sg**	**07 25 32.0**	**-0.2**
	92µm,0.1s						
KEF2	**Argostoli. Kep**	**0.07**	**119**	P	**Pg**	**07 25 30.3**	**-0.1**
KEF2				S	**Sg**	**07 25 31.8**	**-0.5**
KEF1	**Kardakata, Kep**	**0.09**	**30**	P	**Pg**	**07 25 30.8**	**+0.1**
KEF1				S	**Sg**	**07 25 32.8**	**+0.1**
VLS	**Valsamata**	**0.14**	**99**	P	**Pg**	**07 25 31.1**	**-0.2**
VLS				S	**Sg**	**07 25 33.8**	**0.0**
	48µm,0.1s						
VLS	**Valsamata**	**0.14**	**99**	P	**Pg**	**07 25 31.2**	**-0.1**
VLS				S	**Sg**	**07 25 33.8**	**0.0**
VLS				AML	AML	07 25 33.9	
	comp=N,64994µm,0.1s						
VLS				AML	AML	07 25 34.0	
VSK1	**VASILIKIADES**	**0.24**	**30**	P	**Pg**	**07 25 32.5**	**-0.4**
VSK1				S	**Sg**	**07 25 36.6**	**+0.2**
	comp=N,12µm,0.2s						
FSK	**Fiskardo**	**0.29**	**24**	P	**Pg**	**07 25 33.9**	**+0.2**
FSK				S	**Sg**	**07 25 38.4**	**+0.7**
KFL	**Anninata**	**0.31**	**107**	P	**Pg**	**07 25 33.9**	**-0.1**
KFL				S	**Sg**	**07 25 38.6**	**+0.2**
	comp=N,4µm,0.2s						
KFL	**Anninata**	**0.31**	**107**	P	**Pg**	**07 25 34.0**	**0.0**
KFL				S	**Sg**	**07 25 38.4**	**0.0**
KFL				AML	AML	07 25 39.5	
	comp=E,6584µm,0.3s						
KFL				AML	AML	07 25 40.0	
	comp=N,9034µm,0.2s						
VLMS	**Volimes, Zakyn**	**0.38**	**148**	P	**Pg**	**07 25 35.2**	**0.0**
VLMS				S	**Sg**	**07 25 41.0**	**+0.6**
VLMS				AML	AML	07 25 41.9	
	comp=E,18548µm,0.1s						
VLMS				AML	AML	07 25 42.9	
	comp=N,13880µm,0.2s						
EVGI	**Lefkada island**	**0.46**	**24**	P	**Pg**	**07 25 36.8**	**0.0**
EVGI				S	**Sb**	**07 25 43.9**	**-0.4**
EVGI	**Lefkada island**	**0.46**	**24**	P	**Pg**	**07 25 36.9**	**0.0**
EVGI				S	**Sb**	**07 25 44.0**	**-0.4**
LKD2	**Lefkada island**	**0.62**	**18**	P	**Pg**	**07 25 39.7**	**-0.1**
LKD2				S	**Sg**	**07 25 48.1**	**+0.1**
LKD2	**Lefkada island**	**0.62**	**18**	P	**Pg**	**07 25 39.8**	**-0.1**
KRI1	**kERI**	**0.62**	**149**	P	**Pg**	**07 25 39.6**	**-0.2**
KRI1				S	**Sb**	**07 25 48.9**	**0.0**
	comp=N,2µm,0.2s						
AST1	**Astakos**	**0.63**	**57**	P	**Pg**	**07 25 39.9**	**-0.1**
AST1				S	**Sb**	**07 25 49.7**	**+0.5**
	comp=N,1µm,0.1s						
TSLK	**Tsoukalades, L**	**0.65**	**17**	P	**Pg**	**07 25 40.2**	**-0.2**
TSLK				S	**Sb**	**07 25 50.0**	**+0.2**
TSLK	**Tsoukalades, L**	**0.65**	**17**	P	**Pg**	**07 25 40.4**	**-0.1**
PDO	**Prodromos**	**0.73**	**56**	P	**Pg**	**07 25 41.5**	**-0.3**
RLS	**Riolos of Patr**	**0.84**	**99**	P	**Pb**	**07 25 44.1**	**+0.1**
RLS				S	**Sb**	**07 25 56.3**	**+1.1**
RLS	**Riolos of Patr**	**0.84**	**99**	P	**Pg**	**07 25 44.0**	**0.0**
PVO	**Paravola**	**0.97**	**64**	P	**Pb**	**07 25 46.3**	**+0.1**
PVO				S	**Sn**	**07 26 00.4**	**0.0**
	comp=N,562nm,0.4s						
PVO	**Paravola**	**0.97**	**64**	P	**Pb**	**07 25 46.3**	**+0.1**
PVO				AML	AML	07 26 02.7	
	comp=E,1573µm,0.3s						
PVO				AML	AML	07 26 07.7	
	comp=N,660µm,0.6s						
DRO	**Drossia**	**1.05**	**103**	P	**Pb**	**07 25 47.7**	**0.0**
DRO				S	**Sn**	**07 26 02.6**	**+0.1**
	comp=N,305nm,0.4s						
DRO	**Drossia**	**1.05**	**103**	P	**Pb**	**07 25 47.8**	**+0.2**
DRO				AML	AML	07 26 15.8	
	comp=N,662µm,0.4s						
DRO				AML	AML	07 26 18.1	
	comp=E,646µm,0.5s						
EFP	**Efpalio**	**1.20**	**79**	P	**Pn**	**07 25 49.5**	**-0.5**
AMT	**Artemida-Makis**	**1.22**	**123**	P	**Pg**	**07 25 51.3**	**+0.1**
LAKA	**Lakka**	**1.23**	**88**	P	**Pn**	**07 25 50.4**	**-0.2**
ANX	**Ano Chora**	**1.25**	**71**	P	**Pn**	**07 25 50.8**	**0.0**
ANX				AML	AML	07 26 15.3	
	comp=N,717µm,0.5s						
ANX				AML	AML	07 26 16.4	
	comp=E,476µm,0.8s						
SERG	**Sergoula**	**1.31**	**80**	P	**Pn**	**07 25 51.5**	**-0.1**
TRIZ	**Trizonia**	**1.32**	**82**	P	**Pn**	**07 25 51.5**	**0.0**
KLV	**Kalavryta, Ach**	**1.38**	**96**	P	**Pb**	**07 25 53.2**	**0.0**
ITM	**Ithomi**	**1.57**	**130**	P	**Pg**	**07 25 57.3**	**-0.6**
AGG	**Agios Georgios**	**1.71**	**61**	P	**Pg**	**07 25 60.0**	**-0.6**

*IDC **29** 07:30:07.6±0.8, 7°.17S×154°.76E, h36km±5km, mb3.8/10, mb1 4.1/11, mb1mx3.9/34, mbtmp4.0/11, ML4.2/1, MS4.2/1, Ms1 4.2/1, ms1mx2.8/41, Error ellipse: s-maj=29.3km s-min=15.7km az=127.0*

*NEIC **29** 07:30:07.3±0.7, 7°.45S±0°.1×154°.8E±0°.2, h40km±10km, mb4.4/7, Error ellipse: s-maj=29.8km s-min=8.9km az=53.0*

ISC 29 07:30:08.3±0.7, 7°.20S±0°.10×154°.6E±0°.1, h41km, n22, σ1s00/28, mb4.3/13, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.87**	**320**	Pn	**Pn**	**07 31 06.9**	**+1.6**
KRVT	**Keravat (AS076**	**3.87**	**318**	Pn	**Pn**	**07 31 04.6**	**-0.8**
	17nm,0.3s,baz=209,slow=19,SNR=5.1						
KRVT				Sn	**Sn**	**07 31 48.6**	**-1.0**
	14nm,0.3s,baz=101,slow=16,SNR=2.2						
WR0	**Warramunga Arr**	**23.26**	**235**	P	**P**	**07 35 12.6**	**+0.2**
WR0				IAmb	IAmb	07 35 25.6	
	comp=Z,15nm,0.9s						
WB0	**Warramunga Arr**	**23.28**	**236**	P	**P**	**07 35 12.0**	**-0.6**
WB0				IAmb	IAmb	07 35 25.8	
	comp=Z,11nm,0.9s						
WB2	**Warramunga Arr**	**23.41**	**235**	P	**P**	**07 35 12.9**	**-0.9**
WRA	**Warramunga Arr**	**23.41**	**235**	P	**P**	**07 35 13.0**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=59,slow=10,SNR=7.9						
WRA				pP	**pP**	**07 35 25.2**	**+1.9**
	comp=Z,8.2nm,0.8s,baz=60,slow=9.8,SNR=17						
WRA	**Warramunga Arr**	**23.41**	**235**	P	**P**	**07 35 13.5**	**-0.4**
ASAR	**Alice Springs**	**25.78**	**228**	P	**P**	**07 35 36.2**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=59,slow=9.0,SNR=5.8						
ASAR				pP	**sP**	**07 35 47.6**	**-2.2**
	comp=Z,2.8nm,0.9s,baz=58,slow=9.4,SNR=8.5						
STKA	**Stephens Creek**	**27.41**	**205**	P	**P**	**07 35 50.1**	**0.0**
	comp=Z,2.1nm,0.8s,baz=34,slow=7.3,SNR=2.5						
RAR	**Rarotonga**	**46.16**	**112**	LR	LR	07 55 02.6	
	comp=Z,238nm,18.3s,baz=285,slow=32						
CMAR	**Chiang Mai Arr**	**60.55**	**296**	P	**P**	**07 40 15.7**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=113,slow=6.9,SNR=3.1						
SONM	**Songino Array**	**69.31**	**328**	P	**P**	**07 41 12.0**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=124,slow=7.5,SNR=2.8						
SONM				pP	**pP**	**07 41 23.2**	**+1.8**
	comp=Z,0.9nm,0.6s,baz=134,slow=6.3,SNR=4.5						
MK31	**Makanchi Array**	**83.32**	**319**	P	**P**	**07 42 31.2**	**+0.2**
MKAR	**Makanchi Array**	**83.32**	**319**	P	**P**	**07 42 32.0**	**+1.0**
	comp=Z,2.3nm,0.8s,baz=110,slow=5.3,SNR=18						
MKAR	**Makanchi Array**	**83.32**	**319**	P	**P**	**07 42 30.4**	**-0.6**
MAKZ	**Makanchi**	**83.53**	**319**	P	**P**	**07 42 31.2**	**-0.9**
MAKZ				IAmb	IAmb	07 44 22.2	
	comp=Z,3.7nm,0.8s						
ILAR	**Eielson Array**	**83.69**	**22**	P	**P**	**07 42 30.9**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=237,slow=5.9,SNR=5.1						
ILAR				pP	**pP**	**07 42 41.9**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=235,slow=5.4,SNR=3.0						
ZALV	**Zalesovo Beam**	**84.15**	**326**	P	**P**	**07 42 34.6**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=130,slow=7.6,SNR=3.6						
NVAR	**Mina Array Bea**	**92.12**	**52**	P	**P**	**07 43 14.4**	**+0.5**
	comp=Z,0.1nm,0.5s,baz=255,slow=8.5,SNR=4.7						
NVAR				pP	**pP**	**07 43 25.1**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=256,slow=5.5,SNR=3.8						
NVAR	**Mina Array Bea**	**92.12**	**52**	P	**P**	**07 43 13.9**	**0.0**
YKA	**Yellowknife Ar**	**96.68**	**28**	P	**P**	**07 43 33.7**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=266,slow=4.7,SNR=13						
YKA				pP	**pP**	**07 43 44.2**	**0.0**
	comp=Z,1.0nm,0.6s,baz=264,slow=4.6,SNR=9.4						
TORD	**Torodi Ar. Bea**	**152.74**	**285**	PKPbc	**PKiKP**	**07 50 02.0**	**0.0**
	comp=Z,0.9nm,0.8s,baz=74,slow=1.8,SNR=4.5						

*IDC **29** 07:31:56.4±1.0, 7°.13S×154°.86E, h36km±5km, mb3.9/9, mb1 4.2/10, mb1mx3.9/33, mbtmp4.1/10, ML4.0/1, MS3.7/5, Ms1 3.7/5, ms1mx3.2/38, Error ellipse: s-maj=30.2km s-min=17.6km az=132.0*

ISC 29 07:31:57.3±0.8, 7°.1S±0°.1×154°.8E±0°.1, h41km, n15, σ0s97/19, mb4.2/9, MS3.6/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**3.89**	**315**	Pn	**Pn**	**07 32 54.9**	**+0.2**
	9.5nm,0.3s,baz=311,slow=20,SNR=2.5						
KRVT				Sn	**Sn**	**07 33 39.0**	**-0.2**
	5.5nm,0.3s,baz=17,slow=19,SNR=3.1						
PMG	**Port Moresby**	**7.92**	**252**	LR	LR	07 36 08.6	
	comp=Z,333nm,18.2s,baz=20,slow=32						
DZM	**Mont Dzumac**	**18.67**	**144**	LR	LR	07 42 05.4	
	comp=Z,243nm,18.7s,baz=196,slow=33						
WRA	**Warramunga Arr**	**23.62**	**235**	P	**P**	**07 37 03.8**	**-1.2**
	4.6nm,1.0s,baz=59,slow=9.8,SNR=5.5						
WRA				pP	**pP**	**07 37 14.2**	**+0.4**
	12nm,0.9s,baz=60,slow=9.8,SNR=15						
WRA				LR	LR	07 45 15.3	
	comp=Z,117nm,18.7s,baz=240,slow=34						
ASAR	**Alice Springs**	**25.98**	**228**	P	**P**	**07 37 25.9**	**-0.7**
	1.5nm,1.0s,baz=63,slow=8.9,SNR=3.6						
ASAR				pP	**pP**	**07 37 36.7**	**+1.0**
	3.0nm,0.9s,baz=58,slow=9.1,SNR=7.2						
FITZ	**Fitzroy Crossi**	**30.45**	**246**	LR	LR	07 49 36.2	
	comp=Z,119nm,18.6s,baz=22,slow=35						
AFI	**Afiamalu**	**33.53**	**104**	LR	LR	07 50 43.9	
	comp=Z,371nm,18.9s,baz=164,slow=34						
CMAR	**Chiang Mai Arr**	**60.64**	**296**	P	**P**	**07 42 06.2**	**+1.5**
	0.9nm,0.3s,baz=111,slow=4.9,SNR=6.0						
CMAR				pP	**sP**	**07 42 17.1**	**-1.2**
	0.9nm,0.3s,baz=126,slow=5.3,SNR=2.1						
SONM	**Songino Array**	**69.29**	**327**	P	**P**	**07 43 00.8**	**+0.2**
	1.4nm,0.9s,baz=136,slow=6.4,SNR=5.0						
SONM				pP	**pP**	**07 43 11.3**	**+0.7**
	1.4nm,0.8s,baz=140,slow=5.5,SNR=5.9						
MKAR	**Makanchi Array**	**83.33**	**319**	P	**P**	**07 44 20.4**	**+0.3**
	2.4nm,0.8s,baz=101,slow=6.3,SNR=12						
MKAR				pP	**pP**	**07 44 30.6**	**+0.1**
	0.9nm,0.7s,baz=104,slow=6.1,SNR=4.5						
ILAR	**Eielson Array**	**83.51**	**22**	P	**P**	**07 44 18.8**	**-1.8**
	0.5nm,0.8s,baz=243,slow=6.0,SNR=4.1						
ILAR				pP	**pP**	**07 44 31.3**	**-0.2**
	0.5nm,0.6s,baz=244,slow=5.7,SNR=3.2						
ZALV	**Zalesovo Beam**	**84.13**	**326**	P	**P**	**07 44 22.7**	**-1.3**
	0.6nm,0.6s,baz=138,slow=6.9,SNR=2.7						
NVAR	**Mina Array Bea**	**91.91**	**52**	P	**P**	**07 45 03.3**	**+1.3**
	0.8nm,0.8s,baz=254,slow=7.6,SNR=4.8						
NVAR				pP	**pP**	**07 45 13.5**	**+0.7**
	0.8nm,0.8s,baz=255,slow=5.4,SNR=4.6						
YKA	**Yellowknife Ar**	**96.49**	**28**	P	**P**	**07 45 22.2**	**0.0**
	1.9nm,0.9s,baz=268,slow=4.9,SNR=11						
TORD	**Torodi Ar. Bea**	**152.86**	**285**	PKPbc	**PKPbc**	**07 51 50.3**	**-0.8**
	1.2nm,0.8s,baz=83,slow=1.4,SNR=4.9						

*HLW **29** 07:33:20.7, 35°.74N×31°.58E, h14km±18km, Md3.7*
*DDA **29** 07:33:21.4, 35°.70N×31°.87E, h36km±2km, ML3.2*
*ISK **29** 07:33:21.3, 35°.70N×31°.69E, h26km, ML4.0/20*
*NIC **29** 07:33:21.5±0.0, 35°.89N×31°.93E, h17km±1km, Ml3.8/8*
*IDC **29** 07:33:23.9±1.6, 35°.81N×31°.72E, h67km±21km, mb3.5/3, mb1 3.5/8, mb1mx3.2/42, mbtmp3.6/8, Error ellipse: s-maj=17.9km s-min=12.1km az=86.0*

ISC 29 07:33:22.8±1.0, 35.74N±0°.03×31.75E±0°.02, h47km±13km, n81, σ2s17/126, mb3.5/3, 3C, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.68**	**43**	*i* P	**Pn**	**07 33 35.6**	**-0.5**
GAZI				*i* S	**Sn**	**07 33 43.9**	**-1.9**
GAZI				IAML		07 33 44.0	
	comp=E,4µm,0.4s						
GAZI				IAML		07 33 47.0	
	comp=N,992nm,0.4s						
AKMS	**Akamas**	**0.86**	**146**	*ie* P	**Pn**	**07 33 39.1**	**+0.5**
AKMS				S	**Sn**	**07 33 52.5**	**+2.3**
AKMS				AML	AML	07 33 58.3	
	comp=N,14nm,0.5s						
AKMS				AML	AML	07 33 58.3	
	comp=N,14nm,0.5s						
AKMS				AML	AML	07 33 58.4	
	comp=N,12nm,0.4s						
AKMS				AML	AML	07 33 58.4	
	comp=N,12nm,0.4s						
ALFC	**Alefka**	**0.91**	**130**	*ie* P	**Pn**	**07 33 39.0**	**-0.2**
ALFC				S	**Sn**	**07 33 52.0**	**+0.8**
ALFC				AML	AML	07 33 54.2	
	comp=N,11nm,0.2s						
ALFC				AML	AML	07 33 54.2	
	comp=N,11nm,0.2s						
ALFC				AML	AML	07 33 58.1	
	comp=N,10nm,0.3s						
ALFC				AML	AML	07 33 58.1	
	comp=N,10nm,0.3s						
LEF	**Lefka**	**1.12**	**123**	*i* P	**Pn**	**07 33 41.4**	**-0.6**
LEF				*i* S	**Sn**	**07 33 53.8**	**-2.5**
LEF				IAML		07 34 01.0	
	comp=N,437nm,0.2s						
LEF				IAML		07 34 02.0	
	comp=E,594nm,0.3s						
KEPZ	**Antalya-Kepez**	**1.17**	**354**	*i* P	**Pn**	**07 33 42.2**	**-0.6**
KEPZ				*i* S	**Sn**	**07 33 56.7**	**-0.9**
NATA	**Nata**	**1.17**	**145**	P	**Pn**	**07 33 44.0**	**+1.2**
NATA				S	**Sn**	**07 34 00.8**	**+3.3**
NATA				AML	AML	07 34 10.7	
	comp=E,18nm,0.5s						
NATA				AML	AML	07 34 10.7	
	comp=E,18nm,0.5s						
NATA				AML	AML	07 34 11.4	
	comp=E,17nm,0.7s						
NATA				AML	AML	07 34 11.4	
	comp=E,17nm,0.7s						
TEKE	**Tekeli-Mersin**	**1.18**	**70**	PN	**Pn**	**07 33 43.3**	**+0.4**
AKUM	**Antalya-Kumluc**	**1.28**	**298**	*i* P	**Pn**	**07 33 46.8**	**+2.5**
AKUM				*i* S	**Sn**	**07 34 04.9**	**+4.7**
AKUM				IAML		07 34 12.0	
	comp=E,464nm,0.8s						
AKUM				IAML		07 34 15.0	
	comp=N,552nm,0.4s						
ERMK	**Ermenek**	**1.30**	**46**	*i* P	**Pn**	**07 33 46.0**	**+1.2**
ERMK				*i* S	**Sn**	**07 34 00.3**	**-0.8**
ERMK				IAML		07 34 05.0	
	comp=N,634nm,0.3s						
ERMK				IAML		07 34 06.0	
	comp=E,518nm,0.3s						
BERE	**Bereket-Mersin**	**1.34**	**63**	PN	**Pn**	**07 33 45.9**	**+0.7**
BERE				SN	**Sn**	**07 34 03.7**	**+1.7**
SZAC	**Souni**	**1.35**	**136**	P	**Pn**	**07 33 46.7**	**+1.4**
SZAC				S	**Sn**	**07 34 05.8**	**+3.7**
SZAC				AML	AML	07 34 16.8	
	comp=E,4.0nm,0.5s						
SZAC				AML	AML	07 34 16.8	
	comp=E,4.0nm,0.5s						
SZAC				AML	AML	07 34 18.6	
	comp=E,5.7nm,0.6s						
SZAC				AML	AML	07 34 18.6	
	comp=E,5.7nm,0.6s						
OREN	**Orenkoy-Mersin**	**1.47**	**71**	PN	**Pn**	**07 33 47.6**	**+0.8**
ATHAL	**Athalassa**	**1.47**	**113**	P	**Pn**	**07 33 47.1**	**+0.2**
ATHAL				S	**Sn**	**07 34 05.6**	**+0.6**
ATHAL				AML	AML	07 34 06.6	
	comp=E,4.9nm,0.3s						
ATHAL				AML	AML	07 34 06.6	
	comp=E,4.9nm,0.3s						
ATHAL				AML	AML	07 34 21.9	
	comp=E,6.3nm,0.6s						
ATHAL				AML	AML	07 34 21.9	
	comp=E,6.3nm,0.6s						
CSS	**Mathiatis**	**1.51**	**120**	PN	**Pn**	**07 33 47.7**	**+0.3**
CSS	**Mathiatis**	**1.51**	**120**	P	**Pn**	**07 33 47.0**	**-0.4**
AKK1	**Akkuyu-Mersin**	**1.51**	**74**	PN	**Pn**	**07 33 48.2**	**+0.8**
AKK2	**Akkuyu-Mersin**	**1.52**	**74**	PN	**Pn**	**07 33 48.4**	**+1.0**
AKKU	**Akkuyu-Mersin**	**1.52**	**73**	PN	**Pn**	**07 33 48.4**	**+0.8**
GULN	**MERSIN_Gulnar**	**1.52**	**72**	*i* P	**Pn**	**07 33 48.3**	**+0.7**
GULN				*i* S	**Sn**	**07 34 06.4**	**+0.2**
GULN				IAML		07 34 09.0	
	comp=E,394nm,0.5s						
GULN				IAML		07 34 10.0	
	comp=N,348nm,0.5s						
TEPK	**Tepekoy-MERSIN**	**1.54**	**71**	PN	**Pn**	**07 33 48.8**	**+1.0**
TEVE	**Tevekalti-Mers**	**1.54**	**63**	PN	**Pn**	**07 33 48.8**	**+0.9**
TEVE				SN	**Sn**	**07 34 08.7**	**+2.0**
ASGA	**Asgata**	**1.55**	**127**	P	**Pn**	**07 33 49.5**	**+1.5**
ASGA				S	**Sn**	**07 34 09.9**	**+3.0**
ASGA				AML	AML	07 34 15.6	
	comp=N,2.6nm,0.4s						
ASGA				AML	AML	07 34 15.6	
	comp=N,2.6nm,0.4s						
ASGA				AML	AML	07 34 22.0	
	comp=N,2.5nm,0.4s						
ASGA				AML	AML	07 34 22.0	
	comp=N,2.5nm,0.4s						
AKIN	**Akıncılar- Kıb**	**1.58**	**117**	PN	**Pn**	**07 33 48.9**	**+0.6**
YESI	**Yesilovacik-Me**	**1.60**	**73**	PN	**Pn**	**07 33 49.8**	**+1.2**
TISA	**Tisan-Mersin**	**1.62**	**74**	PN	**Pn**	**07 33 49.7**	**+0.8**
IKL	**Isikli**	**1.65**	**72**	PN	**Pn**	**07 33 50.1**	**+0.8**
KARG	**Kargicak-Mersi**	**1.66**	**73**	PN	**Pn**	**07 33 50.6**	**+1.2**
KORT	**Korkueli**	**1.69**	**319**	*i* P	**Pn**	**07 33 54.6**	**+4.6**
KORT				*i* S	**Sn**	**07 34 16.9**	**+6.4**
KORT				IAML		07 34 23.0	
	comp=E,347nm,0.7s						
KORT				IAML		07 34 28.0	
	comp=N,190nm,0.6s						
MVOU	**Mavrovouni**	**1.70**	**115**	*ie* P	**Pn**	**07 33 49.4**	**-0.6**
MVOU				AML	AML	07 34 09.0	
	comp=N,3.1nm,0.4s						
MVOU				AML	AML	07 34 09.0	
	comp=N,3.1nm,0.4s						
MVOU				AML	AML	07 34 09.2	
	comp=N,1.6nm,0.2s						
MVOU				AML	AML	07 34 09.2	
	comp=N,1.6nm,0.2s						
MVOU				S	**Sn**	**07 34 09.4**	**-1.2**
ELL	**Elmali**	**1.80**	**305**	P	**Pn**	**07 33 54.2**	**+2.7**
ELL				S	**Sn**	**07 34 16.4**	**+3.3**
AKAS	**Kas**	**1.81**	**286**	*i* P	**Pn**	**07 33 52.3**	**+0.7**
AKAS				*i* S	**Sn**	**07 34 10.2**	**-3.1**
EREN	**Erenkoy**	**1.98**	**95**	PN	**Pn**	**07 33 55.0**	**+1.1**
EREN	**Erenkoy**	**1.98**	**95**	*i* P	**Pn**	**07 33 53.8**	**-0.1**
EREN				*i* S	**Sn**	**07 34 17.5**	**-0.1**
EREN				IAML		07 34 20.0	
	comp=E,282nm,1.0s						
EREN				IAML		07 34 25.0	
	comp=N,288nm,0.4s						
PARAL	**Paralimni**	**2.02**	**111**	P	**Pn**	**07 33 57.6**	**+3.3**
PARAL				S	**Sn**	**07 34 25.9**	**+7.6**
PARAL				AML	AML	07 34 33.6	
	comp=N,2.2nm,0.7s						
PARAL				AML	AML	07 34 33.6	
	comp=N,2.2nm,0.7s						
PARAL				AML	AML	07 34 34.9	
	comp=N,2.4nm,0.7s						
PARAL				AML	AML	07 34 34.9	
	comp=N,2.4nm,0.7s						
KMER	**Konya-Meram**	**2.09**	**14**	*i* P	**Pn**	**07 33 57.9**	**+2.4**
KMER				*i* S	**Sn**	**07 34 23.1**	**+2.9**
KMER				IAML		07 34 28.0	
	comp=E,397nm,0.5s						
KMER				IAML		07 34 29.0	
	comp=N,218nm,0.4s						
KONT	**Konya--Tatoy**	**2.26**	**12**	*i* P	**Pn**	**07 33 60.0**	**+2.3**
KONT				*i* S	**Sn**	**07 34 28.8**	**+4.4**
KONT				IAML		07 34 33.0	
	comp=E,138nm,0.9s						
KONT				IAML		07 34 36.0	
	comp=N,141nm,0.6s						
GOLH	**Golhisar**	**2.31**	**311**	*i* P	**Pn**	**07 34 01.0**	**+2.5**
GOLH				*i* S	**Sn**	**07 34 27.8**	**+2.1**
GOLH				IAML		07 34 43.0	
	comp=N,137nm,0.5s						
FETY	**Fethiye**	**2.33**	**293**	PN	**Pn**	**07 33 58.8**	**+0.1**
FETY	**Fethiye**	**2.33**	**293**	*i* P	**Pn**	**07 33 58.3**	**-0.5**
FETY				*i* S	**Sn**	**07 34 25.2**	**-1.0**
DOGA	**KONYA_Doganhis**	**2.36**	**358**	*i* P	**Pn**	**07 34 01.6**	**+2.3**
DOGA				*i* S	**Sn**	**07 34 30.9**	**+3.8**
DOGA				IAML		07 34 35.0	
	comp=N,137nm,0.5s						
DOGA				IAML		07 34 36.0	
	comp=E,133nm,0.7s						
BAGO	**Egridir - ISPA**	**2.38**	**341**	*i* P	**Pn**	**07 34 01.4**	**+2.1**
BAGO				*i* S	**Sn**	**07 34 29.0**	**+1.7**
BRDR	**BURDUR-Merkez**	**2.38**	**326**	*i* P	**Pn**	**07 34 02.8**	**+3.4**
BRDR				*i* S	**Sn**	**07 34 27.4**	**+0.1**
KERG	**Konya-Eregli**	**2.54**	**48**	*i* P	**Pn**	**07 34 03.7**	**+2.0**
KERG				*i* S	**Sn**	**07 34 34.9**	**+3.4**
KERG				IAML		07 34 37.0	
	comp=N,233nm,0.4s						
DALY	**Dalyan (Mula)**	**2.72**	**294**	PN	**Pn**	**07 34 04.3**	**+0.3**
DALY	**Dalyan (Mula)**	**2.72**	**294**	*i* P	**Pn**	**07 34 04.2**	**+0.3**
DALY				*i* S	**Sn**	**07 34 33.7**	**-1.9**
TURN	**Turunc**	**2.78**	**295**	*i* P	**Pn**	**07 34 07.8**	**+3.0**
TURN				*i* S	**Sn**	**07 34 40.4**	**+3.3**
KZIL	**AFYON_Kizioren**	**2.83**	**333**	*i* P	**Pn**	**07 34 07.2**	**+1.7**
KZIL				*i* S	**Sn**	**07 34 38.7**	**+0.3**
TAVA	**DENIZLI_Tavas**	**2.86**	**308**	*i* P	**Pn**	**07 34 06.8**	**+0.8**
TAVA				*i* S	**Sn**	**07 34 38.4**	**-0.8**
ARG	**Arkhangelos**	**2.98**	**280**	PN	**Pn**	**07 34 07.7**	**+0.2**
BOLV	**Bolvadin**	**3.04**	**348**	*i* P	**Pn**	**07 34 10.5**	**+2.0**
BOLV				*i* S	**Sn**	**07 34 41.9**	**-1.9**
BOLV				IAML		07 34 51.0	
	comp=N,42nm,0.

comp=N,5.1nm,0.3s,baz=307,slow=18,SNR=10.0
HHAG Hagoal 5.78 177 P **Pn 07 34 47.5 +1.5**
baz=175
KOT Kottamia 5.79 179 P **Pn 07 34 46.9 +0.7**
baz=177
HSAF As Saff 6.10 182 P **Pn 07 34 51.1 +0.6**
baz=181
GLL Jalalah 6.14 180 P **Pn 07 34 51.8 +0.7**
baz=178
ZAF Zafarana 6.47 174 P **Pn 07 34 56.2 +0.7**
baz=172
EIL Elat 6.62 155 P **Pn 07 34 59.8 +2.2**
comp=N,1.0nm,0.3s,baz=322,slow=2.4,SNR=7.4
EIL S **Sn 07 36 08.6 -3.2**
comp=N,4.3nm,0.3s,baz=61,slow=18,SNR=11
SLUM Salum 6.90 234 P **Pn 07 35 01.2 -0.1**
baz=234
NBNS Bani Suef 7.11 183 P **Pn 07 35 04.5 +0.3**
baz=183
SWA2 8.38 221 P **Pn 07 35 21.0 -0.6**
baz=221
HFRF Wahat Farafira 9.05 200 P **Pn 07 35 31.0 +0.1**
baz=199
AKASG Malin Array Be 15.07 354 P **P 07 36 55.6 -1.4**
comp=N,1.2nm,0.3s,baz=178,slow=9.1,SNR=1.5
FINES FINESS Array B 25.98 354 P **P 07 38 48.1 -2.7**
comp=N,2.8nm,0.6s,baz=159,slow=11,SNR=9.9
TORD Torodi Ar. Bea 35.18 238 P **P 07 40 12.2 -0.2**
comp=N,0.5nm,0.8s,baz=35,slow=10,SNR=3.5
MKAR Makanchi Array 38.95 58 P **P 07 40 43.6 -0.6**
comp=N,0.4nm,0.6s,baz=276,slow=7.3,SNR=6.3

*RHSSO **29** 07:44:36.0±0.5, 43°.26N×19°.80E, h5km, ML1.6/5*
BEO 29 07:44:35.4±0.7, 43°.26N×19°.91E, h0km, ML1.6/6,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.04**	**94**	*e*Pg	Pg	07 44 35.6	-0.6
SJES				*e*Sg	Sg	07 44 36.9	+0.1
IVAS	**Ivanjica**	**0.36**	**29**	*e*Pg	Pg	07 44 40.6	-1.7
IVAS				*e*Sg	Sg	07 44 45.0	-1.9
BBLS	**Lazići**	**0.71**	**329**	*e*Pg	Pg	07 44 47.5	-1.4
BBLS				*e*Sg	Sg	07 44 58.2	+0.1
BBLS	**Lazići**	**0.71**	**329**	*e*Pg	Pg	07 44 47.4	-1.5
BBLS				*e*Sg	Sg	07 44 58.2	+0.1
UPM	**Unac-Piva**	**0.74**	**266**	*e*Pg	Pg	07 44 47.6	-2.0
UPM				*e*Sg	Sg	07 44 56.9	-2.3
DIVS	**Divibare**	**0.84**	**4**	*e*Pg	Pg	07 44 50.9	-0.5
DIVS				*e*Sg	Sg	07 45 02.4	+0.1
DIVS	**Divibare**	**0.84**	**4**	*e*Pg	Pg	07 44 51.4	0.0
DIVS				*e*Sg	Sb	07 45 03.6	-1.1
GRUS	**Gruza**	**0.85**	**43**	*e*Pg	Pg	07 44 50.9	-0.9
GRUS				*e*Sg	Sg	07 45 02.6	-0.2
SELS	**Selova**	**0.88**	**92**	*e*Sg	Pg	07 44 51.2	-1.1
SELS	**Selova**	**0.88**	**92**	*e*Pg	Sg	07 45 04.1	+0.4
TRUS	**Trudelj**	**1.02**	**20**	*e*Pg	Pg	07 44 54.4	-0.6
TRUS				*e*Sg	Sg	07 45 08.7	+0.4
BRY	**Bratogost**	**1.07**	**251**	*e*Sg	Sg	07 45 07.3	-2.5
HAPS	**Han Pijesak,BI**	**1.08**	**320**	*e*Pg	Pg	07 44 54.6	-1.5
HAPS				*e*Sg	Sg	07 45 09.5	-0.6
DRME	**Dracevica, Mon**	**1.20**	**207**	*e*Pg	Pg	07 44 56.9	-1.6
DRME				*e*Sg	Sg	07 45 13.1	-0.9
TREB	**Trebinje**	**1.27**	**245**	*e*Sg	Sg	07 45 14.7	-1.5
ZAGS	**Zajecar**	**1.77**	**71**	*e*Sg	Sb	07 45 31.8	+0.2

*IDC **29** 07:47:54.2±0.6, 17°.32S×172°.70W, h0km, mb4.3/14, mb1 4.6/14, mb1mx4.3/43, mbtmp4.3/14, MS3.7/8, Ms1 3.7/8, ms1mx3.4/30, Error ellipse: s-maj=26.3km s-min=18.4km az=137.0*
*NEIC **29** 07:47:57.5±2.5, 17°.20S±0°.04×172°.20W±0°.08, h20km±5km, mb4.8/5, Error ellipse: s-maj=12.1km s-min=3.5km az=63.0*
ISC 29 07:47:57.8±0.4, 17°.40S±0°.09×172°.19W±0°.08, h21km, n73, σ1s9.06/65, mb4.5/19, MS3.6/10, 2C-3D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**2.72**	**128**		**Pn**	**07 48 39.2**	**-1.1**
NIUE				Sn	**Sn**	**07 49 11.9**	**-0.7**
AFI	**Afiamalu**	**3.49**	**7**	Pn	Pn	07 48 43.9	-7.0
	10.0nm,0.3s,baz=207,slow=1.8,SNR=14						
AFI				Sn	Sn	07 49 22.2	-10
	43nm,0.3s,baz=25,slow=22,SNR=10						
AFI	**Afiamalu**	**3.49**	**7**		Pn	07 48 44.5	-6.5
MSVF	**Nonsavu**	**9.31**	**266**		**Pn**	**07 50 10.5**	**-0.5**
RAR	**Rarotonga**	**12.32**	**110**	Pn	**Pn**	**07 50 50.5**	**-1.6**
	2.2nm,0.3s,baz=253,slow=4.2,SNR=3.3						
RAR	**Rarotonga**	**12.32**	**110**		**Pn**	**07 50 51.3**	**-0.7**
DZM	**Mont Dzumac**	**20.64**	**254**	*e*LR	LR	07 57 39.5	
	comp=Z,246nm,25.1s						
DZM	**Mont Dzumac**	**20.64**	**254**	LR	LR	07 58 46.7	
	comp=Z,179nm,19.8s,baz=82,slow=32						
PPT2	**Papeete2**	**21.57**	**94**	*e*LR	LR	07 57 36.9	
	comp=Z,206nm,28.5s						
TBI	**Tubuai**	**22.10**	**109**	*e*LR	LR	07 58 00.2	
	comp=Z,198nm,29.0s						
URZ	**Urewera**	**22.80**	**202**	P	**P**	**07 52 57.3**	**-1.8**
	7.2nm,0.4s,baz=20,slow=11,SNR=7.9						
URZ				S	**S**	**07 57 04.8**	**-2.3**
	3.0nm,0.7s,baz=158,slow=19,SNR=4.1						
HNR	**Honiara**	**28.21**	**283**	LR	LR	08 04 12.1	
	comp=Z,235nm,18.1s,baz=123,slow=35						
LTZ	**Lake Taylor**	**28.55**	**204**	P	**P**	**07 53 54.2**	**+2.1**
LTZ				IAmb	IAmb	07 54 03.3	
	comp=Z,15nm,0.8s						
RPZ	**Rata Peaks**	**29.82**	**205**	P	**P**	**07 54 05.4**	**+2.0**
	comp=Z,10nm,0.8s,baz=33,slow=9.9,SNR=3.8						
STKA	**Stephens Creek**	**44.09**	**242**	LR	LR	08 13 35.4	
	comp=Z,66nm,19.1s,baz=210,slow=35						
WB0	**Warramunga Arr**	**50.52**	**258**	P	P	07 56 49.6	-5.3
WRA	**Warramunga Arr**	**50.55**	**258**	P	P	07 56 49.7	-5.4
	comp=Z,2.2nm,0.7s,baz=96,slow=8.0,SNR=4.5						
WRA				LR	LR	08 18 02.1	
	comp=Z,88nm,18.2s,baz=230,slow=36						
ASAR	**Alice Springs**	**50.63**	**253**	P	P	07 56 50.2	-5.5
	comp=Z,21nm,1.0s,baz=88,slow=8.3,SNR=44						
QSPA	**South Pole Qui**	**72.66**	**180**	P	**P**	**07 59 24.7**	**+0.9**
QSPA				IAmb	IAmb	07 59 27.1	
	comp=Z,9.9nm,1.1s						
PETK	**Petropavlovsk-**	**74.88**	**342**	P	**P**	**07 59 35.4**	**-1.3**
	comp=Z,12nm,1.0s,baz=152,slow=7.5,SNR=6.0						
NVAR	**Mina Array Bea**	**75.05**	**41**	P	**P**	**07 59 39.5**	**+1.2**
	comp=Z,1.3nm,0.8s,baz=228,slow=8.8,SNR=11						
NVAR				LR	LR	08 28 16.1	
	comp=Z,91nm,18.4s,baz=222,slow=32						
NVAR	**Mina Array Bea**	**75.05**	**41**	P	**P**	**07 59 38.2**	**-0.1**
KSRS	**Korea Array**	**78.39**	**315**	P	**P**	**07 59 55.9**	**-1.0**
	comp=Z,4.8nm,1.1s,baz=140,slow=6.2,SNR=9.3						
KSRS				LR	LR	08 31 11.4	
	comp=Z,15nm,19.3s,baz=330,slow=33						
KSAR	**Wonju Array Be**	**78.41**	**315**	P	**P**	**07 59 56.9**	**-0.1**
TXAR	**Lajitas Array**	**80.77**	**55**	P	**P**	**08 00 12.4**	**+2.2**
	comp=Z,0.9nm,1.0s,baz=216,slow=4.5,SNR=6.0						
PDAR	**Pinedale Array**	**82.98**	**41**	P	**P**	**08 00 21.5**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=212,slow=3.2,SNR=9.1						
PDAR				LR	LR	08 33 18.7	
	comp=Z,49nm,18.6s,baz=280,slow=33						
YHL	**Hebgen Lake**	**83.09**	**39**	P	**P**	**08 00 22.9**	**+0.6**
WRH	**Wood River Hil**	**83.69**	**10**	P	**P**	**08 00 24.2**	**-0.4**
ILAR	**Eielson Array**	**84.18**	**11**	P	**P**	**08 00 26.1**	**-0.9**
	comp=Z,0.7nm,0.7s,baz=224,slow=5.9,SNR=10						
ILAR	**Eielson Array**	**84.18**	**11**	P	**P**	**08 00 26.4**	**-0.6**
IMAR	**Indian Mountai**	**84.29**	**7**	P	**P**	**08 00 27.2**	**-0.3**
SEY	**Seymchan**	**84.74**	**345**	P	**P**	**08 00 28.4**	**-1.5**
	comp=Z,2.8nm,0.9s,baz=128,slow=7.8,SNR=7.4						
BMAR	**Burnt Mountain**	**86.99**	**10**	P	**P**	**08 00 41.8**	**+0.8**
PLCA	**Paso Flores**	**87.32**	**132**	P	**P**	**08 00 46.0**	**+2.5**
	comp=Z,1.9nm,0.9s,baz=254,slow=11,SNR=3.8						
INK	**Inuvik**	**89.93**	**13**	P	**P**	**08 00 54.3**	**-0.5**
	comp=Z,1.4nm,1.0s,baz=232,slow=5.0,SNR=3.1						
XAN	**Xi'an**	**90.73**	**305**	P	**P**	**08 01 00.0**	**+0.5**
XAN				pP	pwP	08 01 13.8	+0.2
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VNA3	**Neumayer Olymp**	**90.77**	**174**	P	**P**	**08 00 58.8**	**-0.2**
SNAA	**Sanae**	**90.86**	**177**	P	**P**	**08 00 59.2**	**-0.2**
VNA2	**Neumayer--Watz**	**91.28**	**175**	P	**P**	**08 01 01.6**	**+0.3**
	baz=196,slow=2.8						
YKA	**Yellowknife Ar**	**91.47**	**23**	P	**P**	**08 01 02.3**	**+0.2**
	comp=Z,0.7nm,1.0s,baz=239,slow=5.1,SNR=6.4						
CMAR	**Chiang Mai Arr**	**94.34**	**288**	P	**P**	**08 01 16.0**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=85,slow=3.8,SNR=6.6						
CMAR				LR	LR	08 39 33.2	
	comp=Z,22nm,21.0s,baz=60,slow=33						
GTA	**Gaotai**	**99.33**	**308**	*e*P	**Pdif**	**08 01 38.5**	**-0.2**
GTA				pP	pP	08 01 43.3	0.0
GTA				sP	sP	08 01 45.5	+1.0
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KURBB	**Kurchatov Arra**	**115.46**	**318**	PKP	**PKiKP**	**08 06 37.3**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=85,slow=2.2,SNR=4.0						
KSH	**Kashi**	**117.59**	**306**	*e*PKP	**PKiKP**	**08 06 46.3**	**+3.7**
KMBO	**Kilima Mbogo**	**145.64**	**241**	PKPbc	**PKPab**	**08 07 36.4**	**-0.1**
	comp=Z,6.8nm,1.0s,baz=60,slow=3.2,SNR=10.0						
CLL	**Collm**	**145.92**	**354**	*i* PKPbc	**PKPab**	**08 07 35.8**	**-0.2**
	comp=Z,11nm,1.0s						
CLL				*e*		08 07 50.0	
CHVC	**Chvalec**	**146.24**	**351**	*e*PKP	**PKPbc**	**08 07 36.8**	**+0.2**
OSTC	**Ostas**	**146.24**	**350**	*e*PKP	**PKPab**	**08 07 37.7**	**+0.4**
KOLS	**Kolonicke sedl**	**146.42**	**343**	*e*PKP	**PKiKP**	**08 07 39.8**	**-0.4**
DPC	**Dobruska-Polom**	**146.42**	**350**	*e*PKP	**PKPab**	**08 07 37.8**	**-0.3**
KRLC	**Kraliky**	**146.61**	**349**	*e*PKP	**PKPab**	**08 07 38.3**	**-0.5**
BURAR	**Burcovina Array**	**146.64**	**338**		**PKPbc**	**08 07 37.7**	**-0.3**
MORC	**Moravsky Berou**	**146.76**	**348**	⇑P	**PKPab**	**08 07 39.0**	**-0.4**
TRPA	**Tarpa**	**147.06**	**342**	⇓P	**PKPbc**	**08 07 39.4**	**+0.4**
GHRR		**147.10**	**335**	⇑P	**PKPab**	**08 07 40.1**	**-0.6**
VRI	**Vrincioaia**	**147.54**	**335**	⇓P	**PKPbc**	**08 07 40.2**	**-0.3**
VYHS	**Vyhne**	**147.71**	**346**	*e*PKP	**PKPbc**	**08 07 41.0**	**+0.2**
KHC	**Kasperske Hory**	**148.00**	**353**	*e*PKP	**PKPdf**	**08 07 38.5**	**-0.1**
KHC				*ex*	x	08 07 41.9	
MODS	**Modra-Piesok**	**148.15**	**348**	*e*PKP	**PKPbc**	**08 07 42.0**	**-0.1**
GERES	**GERESS Array B**	**148.27**	**353**	PKPbc	**PKPbc**	**08 07 42.6**	**+0.2**
	comp=Z,2.3nm,0.8s,baz=38,slow=2.4,SNR=12						
GERES	**GERESS Array B**	**148.27**	**353**		**PKPbc**	**08 07 42.5**	**+0.1**
BRTR	**Keskin Array B**	**148.43**	**320**	PKPbc	**PKPbc**	**08 07 42.5**	**-0.8**
	comp=Z,3.1nm,1.0s,baz=132,slow=3.5,SNR=9.0						
CONA	**Conrad Observa**	**148.84**	**350**	*e*pPKPdf	**PKiKP**	**08 07 44.8**	**-0.6**
	comp=Z,6.5nm,0.9s						
MOA	**Molln**	**149.17**	**352**	*e*PKPab	**PKPab**	**08 07 47.8**	**-1.2**
	comp=Z,8.0nm,1.4s						
WATA	**Walderalm**	**149.98**	**355**	*e*pPKPdf	**PKiKP**	**08 07 48.0**	**+0.2**
	comp=Z,6.4nm,1.0s						
MOTA	**Moosalm**	**150.01**	**356**	*e*pPKPdf	**PKPbc**	**08 07 46.6**	**-0.3**
	comp=Z,9.4nm,1.2s						
WTTA	**Wattenberg**	**150.05**	**355**	*i* PKPab	**PKPab**	**08 07 50.5**	**-2.3**
KBA	**Koelnbreinsper**	**150.05**	**352**	*e*pPKPdf	**PKPbc**	**08 07 46.7**	**-0.4**
	comp=Z,5.6nm,0.9s						
SQTA	**Sankt Quirin**	**150.13**	**355**	*e*pPKPdf	**PKPbc**	**08 07 47.5**	**+0.3**
	comp=Z,4.3nm,0.8s						
FETA	**Feichten**	**150.36**	**356**	*e*pPKPdf	**PKiKP**	**08 07 48.4**	**-0.2**
	comp=Z,7.4nm,1.0s						
MYKA	**Terra Mystica**	**150.45**	**352**	*e*PKiKP	**PKPbc**	**08 07 47.1**	**-0.9**
	comp=Z,3.7nm,0.8s						
ABTA	**Abfaltersbach**	**150.48**	**353**	*e*pPKPdf	**PKPbc**	**08 07 47.9**	**-0.1**
	comp=Z,7.5nm,0.7s						
TORD	**Torodi Ar. Bea**	**172.74**	**125**	PKP	**PKPdf**	**08 08 05.6**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=305,slow=3.1,SNR=3.2						
TORD				PKPab	**PKPab**	**08 09 33.3**	**+1.2**
	comp=Z,1.2nm,0.6s,baz=249,slow=4.9,SNR=6.3						

*SJA **29** 07:55:18.9±1.0, 22°.59S×66°.21W, h264km±7km, ML3.9, MW3.4*
*IDC **29** 07:55:19.6±1.1, 22°.49S×66°.26W, h250km±25km, mb3.1/1, mb1 3.2/7, mb1mx3.0/23, mbtmp3.8/7, Error ellipse: s-maj=34.5km s-min=14.0km az=108.0*
ISC 29 07:55:18.7±0.8, 22°.63S±0°.06×66°.26W±0°.06, h245km, n30, σ2s09/38, 2D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YJA	**Yavi**	**0.82**	**57**	*i* P	**Pn**	**07 55 55.2**	**+2.3**
YJA				*e*S	**S**	**07 56 22.0**	**+2.4**
HJA	**Humahuaca**	**0.97**	**127**	⇓*e*P	**Pn**	**07 55 56.7**	**+3.2**
AZAP	**Zapla**	**1.93**	**146**	⇑*i*P	**Pn**	**07 56 03.0**	**+2.6**
LVC	**Limon Verde**	**2.45**	**270**	P	**Pn**	**07 56 07.9**	**+2.4**
	7.6nm,0.3s,baz=79,slow=8.2,SNR=39						
LVC				S	**S**	**07 56 44.0**	**+1.7**
	11nm,0.3s,baz=304,slow=22,SNR=39						
LVC	**Limon Verde**	**2.45**	**270**	*i* P	**Pn**	**07 56 07.9**	**+2.4**
PB09	**IPOC Station P**	**2.89**	**286**	⇓*i* P	**Pn**	**07 56 12.5**	**+2.6**
PB09				*e*S	**S**	**07 56 52.3**	**+2.1**
PB09				IAML		07 56 57.4	
	comp=Z,153nm,0.2s						
PB15	**IPOC Station P**	**3.02**	**258**	*i* P	**Pn**	**07 56 14.3**	**+2.9**
PB06	**IPOC Station P**	**3.06**	**268**	*i* P	**Pn**	**07 56 14.2**	**+2.4**
PB06				*e*S	**S**	**07 56 55.0**	**+1.4**
PB06				IAML		07 56 58.7	
	comp=Z,219nm,0.1s						
PB04	**IPOC Station P**	**3.61**	**274**	*i* P	**Pn**	**07 56 19.7**	**+1.8**
PB04				*e*S	**S**	**07 57 04.3**	**-0.5**
PB04				IAML		07 57 06.1	
	comp=Z,352nm,0.1s						
PB05	**IPOC Station P**	**3.65**	**266**	*i* P	**Pn**	**07 56 20.0**	**+1.6**
PB05				*e*S	**S**	**07 57 04.9**	**-0.6**
PB10	**IPOC Station P**	**4.05**	**257**	*i* P	**Pn**	**07 56 24.6**	**+1.6**
PB10				IAML		07 57 15.0	
	comp=Z,68nm,0.3s						
CYA	**Choya**	**5.80**	**176**	*i* P	**Pn**	**07 56 48.2**	**+3.9**
VCA	**Vinchina**	**6.33**	**196**	*i* P	**Pn**	**07 56 54.6**	**+3.5**
VCA				IAML		07 58 11.7	
	comp=Z,6.9nm,0.5s						
LPAZ	**La Paz**	**6.55**	**344**	P	**Pn**	**07 56 54.7**	**+0.4**
	comp=Z,0.9nm,0.3s,baz=170,slow=10.0,SNR=18						
LPAZ				S	**S**	**07 58 07.8**	**-2.9**
	comp=Z,0.2nm,0.3s,baz=266,slow=16,SNR=4.0						
LPAZ	**La Paz**	**6.55**	**344**	*i* P	**Pn**	**07 56 55.1**	**+0.8**
ACLC	**CERRO LA CRUZ**	**6.80**	**185**	*i* P	**Pn**	**07 56 58.9**	**+2.0**
APLL	**PUNTA DE LOS L**	**7.74**	**182**	*i* P	**Pn**	**07 57 09.8**	**+1.0**
SIV	**San Ignacio**	**8.22**	**37**	P	**Pn**	**07 57 14.0**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=233,slow=10,SNR=18						
AMOG	**MOGNA**	**8.52**	**193**	*i* P	**Pn**	**07 57 19.2**	**+0.6**
GO04	**Tololo Observa**	**8.54**	**207**	*i* P	**Pn**	**07 57 20.1**	**+0.9**
TCA	**Tanti**	**8.80**	**171**	*i* P	**Pn**	**07 57 23.3**	**+1.1**
TCA				IAML		07 57 24.5	
	comp=Z,5.4nm,0.2s						
RTLL	**Cerro Villicun**	**8.89**	**192**	*i* P	**Pn**	**07 57 24.0**	**+0.7**
CFA	**Coronel Fontan**	**9.11**	**191**	P	**Pn**	**07 57 27.1**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=37,slow=10,SNR=39						
CFA				S	**S**	**07 59 04.3**	**-4.8**
	comp=Z,2.1nm,0.3s,baz=108,slow=20,SNR=11						
CFA	**Coronel Fontan**	**9.11**	**191**	*i* P	**Pn**	**07 57 26.6**	**+0.5**
ACAN	**Cantantal**	**9.64**	**185**	*i* P	**Pn**	**07 57 33.7**	**+0.8**
MRA	**San Martin**	**9.77**	**177**	*i* P	**Pn**	**07 57 34.3**	**-0.2**
MRA				IAML		07 57 35.7	
	comp=Z,5.4nm,0.2s						
ASAL	**Salagasta**	**10.18**	**192**	*i* P	**Pn**	**07 57 41.2**	**+1.5**
PLCA	**Paso Flores**	**18.41**	**190**	P	**Pn**	**07 59 18.4**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=9.5,slow=11,SNR=9.3						
BDFB	**Brasilia**	**18.57**	**71**	P	**P**	**07 59 18.7**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=237,slow=10,SNR=3.1						
TORD	**Torodi Ar. Bea**	**75.44**	**69**	P	**P**	**08 06 36.3**	**0.0**
	comp=Z,0.3nm,0.4s,baz=244,slow=5.8,SNR=5.0						

*IDC **29** 07:56:50.4±0.9, 36°.96N×144°.86E, h0km, mb3.7/10, mb1 3.9/15, mb1mx3.7/44, mbtmp3.7/15, ML3.1/5, MS3.1/3, Ms1 3.1/3, ms1mx2.5/58, Error ellipse: s-maj=23.3km s-min=19.3km az=160.0*
*JMA **29** 07:56:55.3±0.3, 37°.18N×144°.53E, h44km, M4.3*
ISC 29 07:56:54.7±0.8, 37°.23N±0°.06×144°.73E±0°.06, h26km, n47, σ2s21/55, mb3.7/10, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIKH	**Ishinomakikobu**	**2.80**	**294**	P	**Pn**	**07 57 37.4**	**-0.4**
JIO	**Ouri**	**2.94**	**296**	P	**Pn**	**07 57 39.5**	**-0.2**
JKMT	**Kesennumamotoy**	**3.02**	**303**	P	**Pn**	**07 57 40.4**	**-0.3**
JKMT				S	**Sn**	**07 58 14.3**	**-1.7**
OFUJ	**Ofunato**	**3.04**	**308**	P	**Pn**	**07 57 40.9**	**-0.1**
JFK	**Kawauchi**	**3.07**	**274**	P	**Pn**	**07 57 40.6**	**-1.0**
JFK				*e*S	**Sn**	**07 58 14.4**	**-3.1**
JMST	**Minamisoumatoc**	**3.09**	**280**	P	**Pn**	**07 57 40.8**	**-1.0**
JMST				*e*S	**Sn**	**07 58 15.2**	**-2.7**
JMK	**Ichinoseki**	**3.26**	**303**	P	**Pn**	**07 57 44.1**	**0.0**
JMK				*e*S	**Sn**	**07 58 20.3**	**-1.7**
JOU	**Okura**	**3.41**	**291**	P	**Pn**	**07 57 46.6**	**+0.4**
JFT	**Otama**	**3.51**	**276**	P	**Pn**	**07 57 47.6**	**+0.1**
JFT				*e*S	**Sn**	**07 58 26.2**	**-2.0**
JYK	**Kaneyama**	**3.84**	**297**	P	**Pn**	**07 57 52.8**	**+0.8**
JRG	**Rokugo**	**3.88**	**305**	P	**Pn**	**07 57 53.4**	**+0.8**
JRG				*e*S	**Sn**	**07 58 37.0**	**-0.3**
BSO1	**Boso 1**	**3.98**	**231**	P	**Pn**	**07 57 50.8**	**-2.7**
JAH	**Hinai**	**4.36**	**314**	P	**Pn**	**07 58 00.6**	**+1.5**
JAH				*e*S	**Sn**	**07 58 49.0**	**0.0**
JTM	**Tenmabayashi**	**4.55**	**322**	P	**Pn**	**07 58 02.4**	**+0.5**
JTM				*e*S	**Sn**	**07 58 51.0**	**-2.9**
JRY	**Ryogami san**	**4.84**	**257**	P	**Pn**	**07 58 04.2**	**-1.6**
JRY				*e*S	**Sn**	**07 58 56.2**	**-4.8**
JOD2	**Odawara 2**	**4.96**	**248**	P	**Pn**	**07 58 05.7**	**-1.8**
JOT	**Ohata**	**5.03**	**327**	P	**Pn**	**07 58 08.9**	**+0.4**
MJAR	**Matsushiro Arr**	**5.27**	**264**	Pn	**Pn**	**07 58 12.0**	**+0.3**
	0.6nm,0.3s,baz=74,slow=11,SNR=18						
MJAR				Sn	**Sn**	**07 59 09.6**	**-2.0**
	0.3nm,0.3s,baz=80,slow=30,SNR=3.7						
MAT	**Matsushiro**	**5.27**	**264**	P	**Pn**	**07 58 12.0**	**+0.2**
MAT				S	**Sn**	**07 59 09.3**	**-2.4**
JKB	**Kayabe**	**5.46**	**330**	P	**Pn**	**07 58 15.4**	**+1.1**
JCH	**Churui**	**5.48**	**349**	P	**Pn**	**07 58 13.9**	**-0.7**
JCH				*e*S	**Sn**	**07 59 12.6**	**-4.2**
NEM2	**Nemuro 2**	**6.18**	**7**	P	**Pn**	**07 58 21.7**	**-2.5**
NEM2				*e*S	**Sn**	**07 59 27.0**	**-6.9**
JOSM	**Okushiri--Mats**	**6.32**	**322**	P	**Pn**	**07 58 27.5**	**+1.4**
JTKR	**Abashiri--Toko**	**6.76**	**355**	P	**Pn**	**07 58 31.3**	**-0.9**
JTKR				*e*S	**Sn**	**07 59 43.5**	**-4.8**
JHR	**Hokuryu**	**6.90**	**342**	P	**Pn**	**07 58 35.5**	**+1.5**
JHR				*e*S	**Sn**	**07 59 51.9**	**+0.3**
ASAJ	**Asahikawa**	**7.07**	**347**	Pn	**Pn**	**07 58 41.0**	**+4.6**
	0.9nm,0.3s,baz=212,slow=19,SNR=4.3						
ASAJ				Sn	**Sn**	**07 59 51.3**	**-4.6**
	0.8nm,0.3s,baz=73,slow=20,SNR=1.8						
USRK	**Ussuriysk Ar.**	**11.90**	**310**	Pn	**Pn**	**07 59 45.0**	**+2.4**
	baz=113,slow=14,SNR=3.7						
JNU	**Nakatsue**	**12.05**	**254**	LR	LR	08 04 26.4	
	comp=Z,56nm,20.8s,baz=82,slow=38						
KSRS	**Korea Array**	**13.38**	**276**	Pn	**Pn**	**08 00 04.4**	**+1.7**
	0.1nm,0.3s,baz=94,slow=13,SNR=6.2						
KSRS				LR	LR	08 05 28.8	
	comp=Z,46nm,18.0s,baz=148,slow=38						
KLR	**Kul'dur**	**15.25**	**326**	Pn	**Pn**	**08 00 28.9**	**+0.8**
	0.1nm,0.3s,baz=143,slow=15,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**26.04**	**126**	T	T	08 29 12.3	
	baz=317,slow=75,SNR=292						
H11N1	**WAKE ISLAND Hy**	**26.05**	**126**	T	T	08 29 15.0	
	baz=317,slow=75,SNR=140						
H11N3	**WAKE ISLAND Hy**	**26.06**	**126**	T	T	08 29 14.3	
	baz=317,slow=75,SNR=211						
SEY	**Seymchan**	**26.16**	**8**	P	**P**	**08 02 28.6**	**+2.0**
	2.3nm,0.8s,baz=203,slow=6.1,SNR=5.6						
H11S1	**WAKE ISLAND Hy**	**26.82**	**128**	T	T	08 30 09.7	
	baz=319,slow=76,SNR=58						
H11S3	**WAKE ISLAND Hy**	**26.82**	**128**	T	T	08 30 12.8	
	baz=319,slow=76,SNR=60						
H11S2	**WAKE ISLAND Hy**	**26.83**	**128**	T	T	08 30 10.5	
	baz=319,slow=76,SNR=58						
MKAR	**Makanchi Array**	**46.25**	**303**	P	**P**	**08 05 19.0**	**+1.3**
	0.3nm,0.6s,baz=74,slow=11,SNR=2.9						
ILAR	**Eielson Array**	**47.91**	**32**	P	**P**	**08 05 30.9**	**+0.5**
	0.6nm,0.7s,baz=261,slow=6.4,SNR=6.8						
KURBB	**Kurchatov Arra**	**47.96**	**308**	P	**P**	**08 05 31.9**	**+1.0**
	1.1nm,0.4s,baz=80,slow=7.8,SNR=6.0						
INK	**Inuvik**	**53.00**	**27**	P	**P**	**08 06 10.2**	**+1.5**
	0.7nm,0.5s,baz=318,slow=7.3,SNR=6.6						
ASAR	**Alice Springs**	**61.42**	**191**	P	**P**	**08 07 06.7**	**-2.0**
	0.9nm,1.1s,baz=13,slow=8.6,SNR=2.8						
YKA	**Yellowknife Ar**	**62.29**	**31**	P	**P**	**08 07 14.3**	**+0.2**
	0.4nm,0.8s,ba

FSK	**Fiskardo**	**0.17**	**39**	P	**Pg**	08 08 49.0	**-0.1**
FSK				S	**Sg**	08 08 51.9	**+0.3**
	2µm,0.1s						
FSK	**Fiskardo**	**0.17**	**39**	P	**Pg**	08 08 49.0	**-0.1**
FSK				S	**Sg**	08 08 51.7	**+0.1**
KEF2	**Argostoli. Kep**	**0.17**	**164**	P	**Pg**	08 08 49.6	**+0.4**
VLS	**Valsamata**	**0.20**	**140**	P	**Pg**	08 08 48.8	**-0.8**
VLS				S	**Sg**	08 08 52.9	**+0.4**
	14µm,0.1s						
VLS	**Valsamata**	**0.20**	**140**	P	**Pg**	08 08 49.7	**+0.1**
VLS				S	**Sg**	08 08 52.9	**+0.4**
VLS				AML	AML	08 08 53.1	
	comp=N,25644µm,0.1s						
VLS				AML	AML	08 08 53.1	
	comp=E,28304µm,0.1s						
EVGI	**Lefkada island**	**0.34**	**31**	P	**Pg**	08 08 52.1	**-0.1**
EVGI				S	**Sg**	08 08 57.6	**+0.8**
EVGI	**Lefkada island**	**0.34**	**31**	P	**Pg**	08 08 52.1	**-0.1**
EVGI				S	**Sg**	08 08 56.9	**+0.1**
KFL	**Anninata**	**0.36**	**128**	P	**Pg**	08 08 51.7	**-0.9**
KFL				S	**Sg**	08 08 58.4	**+1.1**
	comp=E,3µm,0.5s						
KFL	**Anninata**	**0.36**	**128**	P	**Pg**	08 08 51.7	**-0.9**
KFL				S	**Sg**	08 08 57.3	**0.0**
KFL				AML	AML	08 08 59.0	
	comp=E,5471µm,0.5s						
KFL				AML	AML	08 09 01.4	
	comp=N,6856µm,0.6s						
MGNA	**Meganis**	**0.43**	**41**	P	**Pg**	08 08 53.6	**-0.3**
MGNA				S	**Sg**	08 08 60.0	**+0.4**
MGNA				AML	AML	08 09 01.0	
	comp=E,2324µm,0.3s						
MGNA				AML	AML	08 09 01.1	
	comp=N,2602µm,0.3s						
VLMS	**Volimes, Zakyn**	**0.49**	**158**	P	**Pg**	08 08 54.8	**-0.1**
VLMS				AML	AML	08 09 03.9	
	comp=N,11691µm,0.4s						
VLMS				AML	AML	08 09 05.6	
	comp=E,6490µm,0.3s						
LKD2	**Lefkada island**	**0.49**	**21**	P	**Pg**	08 08 54.6	**-0.4**
LKD2				S	**Sg**	08 09 02.0	**+0.5**
	comp=E,370nm,0.6s						
LKD2	**Lefkada island**	**0.49**	**21**	P	**Pg**	08 08 54.7	**-0.3**
LKD2				S	**Sg**	08 09 02.0	**+0.5**
TSLK	**Tsoukalades, L**	**0.53**	**20**	P	**Pg**	08 08 55.5	**-0.2**
TSLK				S	**Sb**	08 09 03.6	**-0.7**
	comp=E,465nm,0.5s						
TSLK	**Tsoukalades, L**	**0.53**	**20**	P	**Pg**	08 08 55.5	**-0.2**
TSLK				S	**Sg**	08 09 02.7	**+0.1**
PDO	**Prodromos**	**0.65**	**65**	P	**Pg**	08 08 57.8	**-0.2**
PDO				S	**Sb**	08 09 08.3	**+0.4**
PDO	**Prodromos**	**0.65**	**65**	P	**Pg**	08 08 57.8	**-0.2**
PDO				AML	AML	08 09 14.6	
	comp=E,936µm,0.6s						
PDO				AML	AML	08 09 16.9	
	comp=N,829µm,0.6s						
KRI1	**kERI**	**0.73**	**155**	P	**Pg**	08 08 59.3	**-0.3**
KRI1				S	**Sb**	08 09 10.6	**+0.3**
	comp=N,3µm,0.4s						
RLS	**Riolos of Patr**	**0.86**	**108**	P	**Pb**	08 09 02.3	**-0.1**
RLS				S	**Sb**	08 09 15.5	**+1.5**
RLS	**Riolos of Patr**	**0.86**	**108**	P	**Pg**	08 09 01.7	**-0.3**
PVO	**Paravola**	**0.91**	**71**	P	**Pg**	08 09 02.8	**-0.1**
PVO				S	**Sn**	08 09 17.3	**0.0**
	comp=N,258nm,0.7s						
PVO	**Paravola**	**0.91**	**71**	P	**Pg**	08 09 02.8	**-0.1**
DRO	**Drossia**	**1.08**	**110**	P	**Pb**	08 09 06.3	**+0.2**
DRO				S	**Sn**	08 09 22.3	**+0.8**
	comp=N,460nm,0.5s						
DRO	**Drossia**	**1.08**	**110**	P	**Pg**	08 09 05.6	**-0.5**
ANX	**Ano Chora**	**1.20**	**77**	P	**Pg**	08 09 07.6	**-0.9**
ANX				AML	AML	08 09 36.4	
	comp=N,456µm,0.6s						
ANX				AML	AML	08 09 39.9	
	comp=E,478µm,0.6s						
LAKA	**Lakka**	**1.22**	**94**	P	**Pg**	08 09 07.6	**-1.3**
SERG	**Sergoula**	**1.28**	**86**	P	**Pn**	08 09 08.5	**-0.8**
AMT	**Artemida-Makis**	**1.29**	**128**	P	**Pn**	08 09 09.7	**+0.3**
AMT				AML	AML	08 09 36.3	
	comp=E,1069µm,0.7s						
AMT				AML	AML	08 09 36.6	
	comp=N,846µm,0.5s						
TRIZ	**Trizonia**	**1.29**	**88**	P	**Pn**	08 09 08.8	**-0.6**
KALE	**Kalithea**	**1.35**	**87**	P	**Pn**	08 09 09.6	**-0.6**
KLV	**Kalavryta, Ach**	**1.39**	**101**	P	**Pn**	08 09 10.5	**-0.3**
ITM	**Ithomi**	**1.65**	**134**	P	**Pg**	08 09 16.7	**-0.3**

*NEIC **29** 08:24:12.5±1.8,23°.48S±0°.08×179°.90W±0°.09, h520km±7km, mb4.5/67, Error ellipse: s-maj=15.6km s-min=7.0km az=48.0*

*IDC **29** 08:24:13.0±1.2,23°.43S×179°.87W, h527km±12km, mb3.7/19, mb1 3.9/22, mb1mx3.8/32, mbtmp4.6/22, Error ellipse: s-maj=13.4km s-min=12.6km az=142.0*

ISC 29 08:24:13.0±0.4, 23°.53S±0°.06×179°.87W±0°.07, h532km, n142, σ1°64/141, mb4.5/50, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.97**	**163**	P	**P**	**08 25 50.6**	**+0.2**
MSVF	**Nonsavu**	**6.09**	**341**	P	**P**	**08 25 52.1**	**+0.4**
NIUE	**Niue**	**10.27**	**66**	P	**P**	**08 26 33.4**	**-0.2**
	baz=10,SNR=4.7						
NIUE	**Niue**	**10.27**	**66**	P	**P**	**08 26 32.7**	**-0.8**
AFI	**Afiamalu**	**12.25**	**40**	P	**P**	**08 26 52.3**	**-2.1**
	1.4nm,0.3s,baz=47,slow=19,SNR=2.7						
AFI				S	S	08 28 55.4	-12
	1.0nm,0.3s,baz=108,slow=20,SNR=3.8						
DZM	**Mont Dzumac**	**12.71**	**274**	P	**P**	**08 27 00.1**	**+1.0**
	1.2nm,0.3s,baz=96,slow=15,SNR=9.0						
DZM	**Mont Dzumac**	**12.71**	**274**	P	**P**	**08 26 58.7**	**-0.4**
NOUC	**Port Laguerre**	**12.84**	**274**	P	**P**	**08 26 59.0**	**-1.2**
PUZ	**Puketiti**	**14.59**	**186**	P	**P**	**08 27 19.8**	**+1.5**
PUZ				S	**S**	**08 29 49.7**	**-1.4**
SANVU	**Saraoutou**	**14.60**	**301**	P	**P**	**08 27 16.9**	**-1.8**
URZ	**Urewera**	**14.91**	**189**	P	**P**	**08 27 21.4**	**-0.2**
	3.0nm,0.3s,baz=348,slow=1.9,SNR=27						
URZ				S	**S**	**08 29 52.4**	**-4.7**
	0.8nm,0.3s,baz=30,slow=20,SNR=7.3						
URZ	**Urewera**	**14.91**	**189**	P	**P**	**08 27 21.8**	**+0.1**
BKZ	**Black Stump Fm**	**15.89**	**190**	P	**P**	**08 27 30.4**	**-1.4**
BKZ				IAmb	IAmb	08 27 36.8	
	comp=Z,12nm,0.6s						
BKZ					**S**	**08 30 17.7**	**+2.8**
MRZ	**Mangatainoka R**	**17.51**	**192**	S	**S**	**08 30 35.9**	**-5.8**
DUWZ	**D'Urville Isla**	**18.00**	**195**	P	**P**	**08 27 52.6**	**+1.1**
DUWZ				S	**S**	**08 30 43.3**	**-6.4**
TCW	**Tory Channel**	**18.30**	**194**	P	**P**	**08 27 55.3**	**+1.0**
TCW				S	**S**	**08 30 51.1**	**-3.4**
QRZ	**Quartz Range**	**18.40**	**199**	P	**P**	**08 27 56.7**	**+1.5**
QRZ				S	**S**	**08 30 55.9**	**-0.1**
QRZ	**Quartz Range**	**18.40**	**199**	P	**P**	**08 27 56.2**	**+1.1**
NNZ	**Nelson**	**18.53**	**196**	P	**P**	**08 27 57.0**	**+0.7**
NNZ				S	**S**	**08 30 53.2**	**-4.9**
NNZ	**Nelson**	**18.53**	**196**	P	**P**	**08 27 57.2**	**+0.9**
NNZ				IAmb	IAmb	08 27 58.8	
	comp=Z,13nm,1.1s						
THZ	**Tophouse**	**19.16**	**197**	P	**P**	**08 28 02.7**	**+0.4**
THZ				S	**S**	**08 31 02.4**	**-6.2**
THZ	**Tophouse**	**19.16**	**197**	P	**P**	**08 28 02.6**	**+0.4**
THZ				IAmb	IAmb	08 28 08.1	
	comp=Z,11nm,0.9s						
KHZ	**Kahutara**	**19.62**	**195**	P	**P**	**08 28 06.4**	**+0.1**
KHZ				S	**S**	**08 31 12.5**	**-3.2**
KHZ	**Kahutara**	**19.62**	**195**	P	**P**	**08 28 06.4**	**+0.1**
KHZ				IAmb	IAmb	08 28 16.3	
	comp=Z,17nm,1.0s						
GVZ	**Greta Valley S**	**20.26**	**195**	P	**P**	**08 28 11.3**	**-0.8**
LTZ	**Lake Taylor**	**20.28**	**197**	P	**P**	**08 28 12.1**	**-0.2**
LTZ				S	**S**	**08 31 23.4**	**-3.0**
LTZ	**Lake Taylor**	**20.28**	**197**	P	**P**	**08 28 12.6**	**+0.3**
INZ	**Inchbonnie**	**20.46**	**199**	P	**P**	**08 28 13.7**	**-0.1**
INZ				S	**S**	**08 31 25.1**	**-4.1**
RPZ	**Rata Peaks**	**21.48**	**198**	P	**P**	**08 28 23.5**	**+0.3**
	comp=Z,6.0nm,0.6s,baz=23,slow=7.7,SNR=4.5						
RPZ	**Rata Peaks**	**21.48**	**198**	IAmb	IAmb	08 28 25.9	
	comp=Z,15nm,1.1s						
FOZ	**Fox Glacier**	**21.69**	**201**	P	**P**	**08 28 25.5**	**+0.5**
FOZ				IAmb	IAmb	08 28 31.9	
	comp=Z,14nm,1.0s						
MLZ	**Mavora Lakes**	**23.88**	**201**	P	**P**	**08 28 45.1**	**+0.5**
MLZ				IAmb	IAmb	08 28 55.0	
	comp=Z,22nm,1.1s						
WHZ	**Wether Hill Ro**	**24.40**	**201**	P	**P**	**08 28 50.5**	**+1.3**
WHZ				IAmb	IAmb	08 28 51.1	
	comp=Z,18nm,0.9s						
ARMA	**Armidale**	**26.27**	**249**	P	**P**	**08 29 07.9**	**+1.9**
	baz=26,SNR=15						
ARMA	**Armidale**	**26.27**	**249**	P	**P**	**08 29 08.0**	**+1.9**
ARMA				IAmb	IAmb	08 29 08.8	
	comp=Z,23nm,1.1s						
EIDS	**Eidsvold**	**26.49**	**260**	P	**P**	**08 29 08.8**	**+0.9**
	baz=26,SNR=26						
EIDS	**Eidsvold**	**26.49**	**260**	P	**P**	**08 29 08.8**	**+0.9**
MGCD	**Mangrove Creek**	**27.23**	**243**	P	**P**	**08 29 16.2**	**+1.9**
	baz=27,SNR=7.6						
RMQ	**Roma**	**28.55**	**258**	P	**P**	**08 29 27.8**	**+1.8**
	baz=29,SNR=14						
CNB	**Canberra Magne**	**29.15**	**239**	P	**P**	**08 29 33.0**	**+1.9**
	baz=29,SNR=5.1						
CAN	**Canberra**	**29.43**	**239**	P	**P**	**08 29 35.2**	**+1.6**
CMSA	**Cobar Meteorol**	**31.47**	**248**	P	**P**	**08 29 52.0**	**+0.9**
	baz=32,SNR=63						
QLP	**Quilpie**	**32.60**	**257**	P	**P**	**08 30 01.4**	**+0.7**
	baz=33,SNR=15						
TOO	**Toolangi**	**32.75**	**237**	P	**P**	**08 30 03.2**	**+1.2**
	baz=33,SNR=18						
TOO	**Toolangi**	**32.75**	**237**	P	**P**	**08 30 02.9**	**+0.9**
TOO				IAmb	IAmb	08 30 03.5	
	comp=Z,13nm,0.6s						
MTSU	**Mount Surprise**	**33.84**	**272**	P	**P**	**08 30 12.2**	**+0.7**
	baz=34,SNR=36						
PMG	**Port Moresby**	**34.49**	**288**	P	**P**	**08 30 17.0**	**+0.2**
	comp=Z,90nm,0.8s,baz=90,slow=4.4,SNR=17						
PMG	**Port Moresby**	**34.49**	**288**	P	**P**	**08 30 17.3**	**+0.4**
STKA	**Stephens Creek**	**34.98**	**248**	P	**P**	**08 30 21.5**	**+0.8**
	baz=35,SNR=37						
STKA	**Stephens Creek**	**34.98**	**248**	P	**P**	**08 30 21.4**	**+0.7**
	comp=Z,22nm,0.6s,baz=94,slow=11,SNR=81						
COEN	**Coen**	**36.18**	**279**	P	**P**	**08 30 31.2**	**+0.3**
	baz=36,SNR=18						
COEN	**Coen**	**36.18**	**279**	P	**P**	**08 30 31.0**	**+0.1**
COEN				IAmb	IAmb	08 30 32.5	
	comp=Z,9.0nm,0.7s						
HTT	**Hallett**	**37.34**	**245**	P	**P**	**08 30 40.8**	**+0.5**
	baz=37,SNR=17						
QIS	**Mount Isa**	**37.60**	**266**	P	**P**	**08 30 42.4**	**-0.2**
	baz=38,SNR=8.8						
BBOO	**Buckleboo**	**39.70**	**246**	P	**P**	**08 30 59.4**	**-0.1**
	baz=40,SNR=9.3						
BBOO	**Buckleboo**	**39.70**	**246**	P	**P**	**08 30 59.3**	**-0.1**
AS31	**Alice Springs**	**42.22**	**260**	P	**P**	**08 31 19.7**	**+0.1**
ASAR	**Alice Springs**	**42.22**	**260**	P	**P**	**08 31 19.7**	**+0.1**
	comp=Z,36nm,0.6s,baz=95,slow=7.3,SNR=442						
ASAR				ScP	**ScP**	**08 36 02.8**	**+1.4**
	comp=Z,4.4nm,0.9s,baz=100,slow=4.0,SNR=13						
ASAR				S	**S**	**08 37 00.9**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=96,slow=15,SNR=4.2						
ASAR	**Alice Springs**	**42.22**	**260**	P	**P**	**08 31 19.0**	**-0.6**
WR0	**Warramunga Arr**	**42.37**	**266**	P	**P**	**08 31 20.3**	**-0.5**
WB2	**Warramunga Arr**	**42.55**	**266**	P	**P**	**08 31 21.6**	**-0.5**
WB0	**Warramunga Arr**	**42.55**	**266**	P	**P**	**08 31 21.6**	**-0.5**
WRA	**Warramunga Arr**	**42.56**	**266**	P	**P**	**08 31 21.7**	**-0.5**
	comp=Z,18nm,0.3s,baz=90,slow=6.0,SNR=338						
WRA				ScP	**ScP**	**08 36 05.0**	**+2.2**
	comp=Z,4.0nm,0.9s,baz=102,slow=3.8,SNR=7.9						
WRA	**Warramunga Arr**	**42.56**	**266**	P	**P**	**08 31 21.6**	**-0.7**
JAY	**Jayapura**	**43.48**	**293**	P	**P**	**08 31 29.1**	**-0.4**
	comp=Z,18nm,0.3s,baz=150,slow=4.3,SNR=14						
KDU	**Kakadu**	**46.38**	**275**	P	**P**	**08 31 51.1**	**-0.6**
	baz=46,SNR=32						
FORT	**Forrest**	**46.56**	**249**	P	**P**	**08 31 52.6**	**-0.3**
	baz=47,SNR=35						
WRKA	**Warakurna**	**47.04**	**257**	P	**P**	**08 31 56.6**	**0.0**
	baz=47,SNR=64						
MTN	**Manton Dam**	**47.55**	**274**	P	**P**	**08 31 59.8**	**-0.8**
	baz=48,SNR=16						
MTN	**Manton Dam**	**47.55**	**274**	P	**P**	**08 31 60.0**	**-0.6**
KNRA	**Kununurra**	**48.81**	**269**	P	**P**	**08 32 09.9**	**-0.1**
	baz=49,SNR=21						
KNRA	**Kununurra**	**48.81**	**269**	P	**P**	**08 32 09.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**50.98**	**265**	P	**P**	**08 32 26.1**	**+0.2**
	baz=51,SNR=24						
FITZ	**Fitzroy Crossi**	**50.98**	**265**	P	**P**	**08 32 26.2**	**+0.3**
SWI	**Sorong**	**52.44**	**288**	P	**P**	**08 32 36.4**	**-0.1**
	comp=Z,150nm,0.8s						
SOEI	**Soe**	**54.94**	**275**	P	**P**	**08 32 54.5**	**+0.2**
	comp=Z,75nm,1.0s						
KLBR	**Kellerberrin**	**55.25**	**247**	P	**P**	**08 32 55.9**	**-0.1**
	baz=55,SNR=23						
PSA00	**Pilbara Seismi**	**55.35**	**259**	P	**P**	**08 32 56.0**	**-0.9**
PSA00				IAmb	IAmb	08 32 57.4	
	comp=Z,14nm,0.9s						
NWAO	**Narrogin (SRO)**	**55.50**	**245**	P	**P**	**08 32 58.0**	**+0.1**
	baz=56,SNR=6.6						
NWAO	**Narrogin (SRO)**	**55.50**	**245**	P	**P**	**08 32 57.9**	**+0.1**
RKGY	**Rocky Gully**	**55.51**	**243**	P	**P**	**08 32 58.2**	**+0.3**
	baz=56,SNR=5.3						
BLDU	**Ballidu**	**56.28**	**248**	P	**P**	**08 33 03.0**	**-0.2**
	baz=56,SNR=50						
MUN	**Mundaring**	**56.49**	**246**	P	**P**	**08 33 04.7**	**0.0**
	baz=56,SNR=5.6						
SANI	**Sana**	**56.54**	**284**	P	**P**	**08 33 04.6**	**-0.7**
	comp=Z,28nm,0.7s						
MORW	**Morawa**	**57.12**	**250**	P	**P**	**08 33 08.9**	**-0.2**
	baz=57,SNR=11						
MORW	**Morawa**	**57.12**	**250**	IAmb	IAmb	08 33 09.3	
	comp=Z,22nm,0.6s						
GIRL	**Giralia**	**60.12**	**257**	P	**P**	**08 33 30.6**	**+1.2**
	baz=60,SNR=9.2						
GIRL	**Giralia**	**60.12**	**257**	P	**P**	**08 33 30.8**	**+1.5**
GIRL				IAmb	IAmb	08 33 48.6	
	comp=Z,15nm,0.8s						
BKSI	**Bulukumba**	**60.44**	**277**	P	**P**	**08 33 31.1**	**-0.5**
QSPA	**South Pole Qui**	**66.55**	**180**	P	**P**	**08 34 11.6**	**+1.7**
	comp=Z,3.2nm,0.7s,baz=346,slow=1.1,SNR=21						
QSPA	**South Pole Qui**	**66.55**	**180**	P	**P**	**08 34 12.0**	**+2.0**
KKM	**Kota Kinabalu**	**68.91**	**287**	P	**P**	**08 34 25.2**	**0.0**
MJAR	**Matsushiro Arr**	**71.66**	**325**	P	**P**	**08 34 40.4**	**-0.5**
	comp=Z,3.0nm,0.8s,baz=150,slow=5.3,SNR=6.7						
NACB	**Ninganchiao**	**73.99**	**306**	P	**P**	**08 34 54.0**	**-0.5**
NACB				IAmb	IAmb	08 34 54.5	
	comp=Z,13nm,0.7s						
KSRS	**Korea Array**	**78.04**	**320**	P	**P**	**08 35 17.0**	**+0.4**
	comp=Z,1.4nm,0.7s,baz=131,slow=6.2,SNR=6.4						
PETK	**Petropavlovsk-**	**78.77**	**346**	P	**P**	**08 35 20.0**	**-0.1**
	comp=Z,3.4nm,0.9s,baz=133,slow=6.5,SNR=4.1						
USRK	**Ussuriysk Ar.**	**80.52**	**327**	P	**P**	**08 35 30.4**	**+0.8**
	comp=Z,3.2nm,0.8s,baz=123,slow=5.3,SNR=3.9						
YBH	**Yreka Blue Hor**	**83.72**	**39**	P	**P**	**08 35 45.6**	**-0.4**
WAKR	**Walker**	**83.73**	**43**	IAmb	IAmb	08 35 48.2	
	comp=Z,6.9nm,0.9s						
PNTR	**Pine Nut**	**83.97**	**43**	IAmb	IAmb	08 35 49.3	
	comp=Z,10nm,0.8s						
KLR	**Kul'dur**	**84.27**	**330**	P	**P**	**08 35 50.2**	**+1.8**
	comp=Z,0.5nm,0.4s,baz=214,slow=3.6,SNR=3.7						
HSIG		**84.40**	**55**	IAmb	IAmb	08 35 51.4	
	comp=Z,11nm,0.9s						
NVAR	**Mina Array Bea**	**84.40**	**44**	P	**P**	**08 35 50.1**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=225,slow=7.7,SNR=17						
NVAR	**Mina Array Bea**	**84.40**	**44**	P	**P**	**08 35 50.0**	**+0.3**
PINE	**Pine Mountain**	**86.02**	**38**	P	**P**	**08 35 58.8**	**+1.5**
PINE				IAmb	IAmb	08 35 59.0	
	comp=Z,5.3nm,0.8s						
TUC	**Tucson**	**86.19**	**52**	P	**P**	**08 35 59.8**	**+1.6**
TUC				IAmb	IAmb	08 36 00.9	
	comp=Z,6.9nm,0.8s						
I07A	**Izee**	**87.02**	**39**	P	**P**	**08 36 03.3**	**+1.3**
I07A				IAmb	IAmb	08 36 03.8	
	comp=Z,9.1nm,1.0s						
J08A	**Circle Bar Ran**	**87.19**	**40**	IAmb	IAmb	08 36 05.2	
	comp=Z,8.9nm,1.1s						
U15A	**North Rim**	**87.27**	**48**	IAmb	IAmb	08 36 05.6	
	comp=Z,7.8nm,0.8s						
X18A	**Snowflake**	**87.92**	**51**	IAmb	IAmb	08 36 08.4	
	comp=Z,3.8nm,0.7s						
PLCA	**Paso Flores**	**88.44**	**134**	P	**P**	**08 36 09.9**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=277,slow=4.5,SNR=7.3						
PLCA	**Paso Flores**	**88.44**	**134**	IAmb	IAmb	08 36 10.9	
	comp=Z,4.2nm,1.1s						
121A	**Cookes Peak, D**	**88.50**	**54**	IAmb	IAmb	08 36 11.6	
	comp=Z,4.2nm,0.8s						
XAN	**Xi'an**	**88.61**	**308**	P	**P**	**08 36 10.8**	**+1.3**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MFID	**Camas Ranch**	**88.80**	**41**	IAmb	IAmb	08 36 11.8	
	comp=Z,6.5nm,0.9s						
SEY	**Seymchan**	**88.93**	**348**	P	**P**	**08 36 10.3**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=20,slow=22,SNR=4.2						
TMUT	**Trail Mountain**	**89.49**	**46**	P	**P**	**08 36 14.8**	**+0.9**
CMAR	**Chiang Mai Arr**	**89.51**	**290**	P	**P**	**08 36 15.7**	**+1.7**
	comp=Z,1.7nm,0.4s,baz=136,slow=1.7,SNR=13						
MNTX	**Cornudas Mount**	**89.90**	**55**	IAmb	IAmb	08 36 17.4	
	comp=Z,6.5nm,1.0s						
TX31	**Lajitas Ar. Si**	**90.13**	**58**	IAmb	IAmb	08 36 18.8	
	comp=Z,5.0nm,0.8s						
TX32	**Lajitas Array**	**90.13**	**58**	IAmb	IAmb	08 36 18.8	
	comp=Z,5.1nm,0.8s						
TXAR	**Lajitas Array**	**90.13**	**58**	P	**P**	**08 36 17.7**	**+0.9**
	comp=Z,3.6nm,0.7s,baz=214,slow=6.7,SNR=43						
HHC	**Hu-ho-hao-te**	**90.24**	**315**	*e*P	**P**	**08 36 15.5**	**-1.5**
HHC	**Hu-ho-hao-te**	**90.24**	**315**	S	**S**	**08 46 23.0**	**-2.9**
HWUT	**Hardware Ranch**	**90.46**	**44**	IAmb	IAmb	08 36 19.1	
	comp=Z,4.3nm,0.7s						
ILAR	**Eielson Array**	**91.64**	**13**	P	**P**	**08 36 20.8**	**-2.0**
	comp=Z,0.6nm,0.8s,baz=211,slow=5.7,SNR=8.0						
PDAR	**Pinedale Array**	**92.34**	**44**	P	**P**	**08 36 26.8**	**0.0**
	comp=Z,1.3nm,0.6s,baz=217,slow=3.9,SNR=15						
PDAR				PP	**PP**	**08 40 14.4**	**-2.8**
	comp=Z,0.4nm,0.7s,baz=238,slow=7.9,SNR=4.1						
PDAR	**Pinedale Array**	**92.34**	**44**	P	**P**	**08 36 26.5**	**-0.2**
LZH	**Lanzhou**	**93.24**	**308**	*e*P	**P**	**08 36 31.5**	**+0.5**
LZH				pP	pP	08 38 29.3	+2.0
LZH				sP	sP	08 39 16.8	-3.5
LZH				PP	PP	08 40 33.0	+8.8
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,88nm,5.4s						
SONM	**Songino Array**	**96.90**	**319**	P	**P**	**08 36 47.3**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=142,slow=4.9,SNR=2.6						
MKAR	**Makanchi Array**	**111.99**	**313**	PKiKP	**PKiKP**	**08 41 46.6**	**-1.1**
	comp=Z,0.2nm,0.6s,baz=96,slow=2.9,SNR=4.6						
MKAR				SKP		08 44 32.1	
	comp=Z,0.4nm,0.7s,baz=134,slow=0.1,SNR=4.1						
KURBB	**Kurchatov Arra**	**115.06**	**316**	PKiKP	**PKPdf**	**08 41 51.8**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=116,slow=2.2,SNR=3.9						
KURBB				SKP		08 44 37.4	
	comp=Z,0.3nm,0.3s,baz=100,slow=2.1,SNR=4.3						
KSH	**Kashi**	**115.17**	**304**	*e*PKP	**PKiKP**	**08 41 59.8**	**+5.7**
KSH				sPKP		08 44 39.3	
ARCES	**ARCESS Array B**	**131.55**	**348**	PKP	**PKPdf**	**08 42 24.5**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=14,slow=1.1,SNR=3.9						
FINES	**FINESS Array B**	**138.13**	**342**	PKhKP	PKPpre	08 42 27.5	
	comp=Z,3.6nm,1.1s,baz=77,slow=3.0,SNR=3.1						
FINES				SKPbc	**SKPbc**	**08 45 20.4**	**-0.6**
	comp=Z,2.8nm,0.6s,baz=64,slow=3.2,SNR=14						
HFS	**Hagfors**	**142.21**	**349**	PKhKP	PKPpre	08 42 40.0	
	comp=Z,5.2nm,0.3s,baz=72,slow=4.7,SNR=33						
AKASG	**Malin Array Be**	**144.72**	**328**	PKP	**PKPdf**	**08 42 48.2**	**-0.7**
	comp=Z,26nm,0.3s,baz=45,slow=4.3,SNR=2.2						
ASF	**Jabal al Asfar**	**146.50**	**293**	PKPbc	**PKPbc**	**08 42 55.7**	**+0.6**
	comp=Z,1.8nm,0.4s,baz=63,slow=2.3,SNR=3.9						
BRTR	**Keskin Array B**	**147.45**	**308**	PKPbc	**PKPbc**	**08 42 56.7**	**-0.8**
	comp=Z,2.8nm,0.6s,baz=46,slow=4.2,SNR=5.6						
MMAI	**Mount Meron Ar**	**147.66**	**295**	PKPbc	**PKPbc**	**08 42 58.8**	**+0.6**
	comp=Z,5.9nm,0.5s,baz=73,slow=5.0,SNR=6.2						
EKA	**Eskdalemuir Ar**	**148.14**	**4**	PKPbc	**PKPbc**	**08 42 58.0**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=335,slow=2.3,SNR=5.3						
KWP	**Kalwaria Pacla**	**148.50**	**331**		**PKPdf**	**08 42 55.2**	**0.0**

*THE **29** 08:24:54.7, 38°.22N×20°.38E, h9km, ML2.7/7, Error ellipse: s-maj=0.9km s-min=0.3km az=241.0*

*ATH **29** 08:24:54.3, 38°.23N×20°.39E, h12km±1km, ML2.7/7, Error ellipse: s-maj=2.3km s-min=1.0km az=249.0*

ISC 29 08:24:54.5±1.1, 38°.23N±0°.02×20°.38E±0°.05, h10km±5km, n29, σ0°.47/49, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.03**	**225**	P	**Pg**	**08 24 56.5**	**+0.2**
KEF3				S	**Sg**	**08 24 57.9**	**+0.4**
CHV1	**Chavriata, Kef**	**0.04**	**174**	P	**Pg**	**08 24 56.4**	**+0.1**
CHV1

OCLP			*eS*	Sn	08 33 13.6	+0.8
RCP	**Roxas**	**1.02 293**	*eP*	Pb	08 33 01.4	-0.5
RCP			*eS*	Sn	08 33 16.4	+0.7
GUIM	**Jordan**	**1.22 244**	*eP*	Pn	08 33 04.4	-0.4
GUIM			*eS*	Sb	08 33 20.4	-0.2
MSLP	**Maasin**	**1.53 132**	*eP*	Pn	08 33 07.5	-1.6
MSLP			*eS*	Sb	08 33 31.3	+1.6

MAN 29 08:41:14.8, 16°38N×120°50E, h34km, mb4.6, ML3.5, MS3.4, Luzon

WEL 29 08:46:20.9, 39°4S±1°0×177°5E±°, h82km±1km, M3.4/62, ML3.7/61, MLv3.4/62, Error ellipse: s-maj=0.0km s-min=0.0km az=88.6, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTVZ	**Mangateitei**	**0.05**	**115**	P	Pn	08 46 32.7	+0.1
MTVZ				S	Sn	08 46 40.8	-0.4
PKVZ	**Pokaka**	**0.09**	**326**	P	Pn	08 46 32.7	+0.1
PKVZ				S	Sn	08 46 40.8	-0.5
TRVZ	**Turoa**	**0.12**	**58**	P	Pn	08 46 33.0	+0.1
TRVZ				S	Sn	08 46 41.1	-0.6
DRZ	**Dome Shelter**	**0.15**	**53**	P	Pn	08 46 33.2	+0.2
FWVZ	**Far West T-bar**	**0.15**	**45**	P	Pn	08 46 33.1	+0.1
FWVZ				S	Sn	08 46 42.1	+0.2
WHVZ	**Whangaehu Hut**	**0.16**	**59**	P	Pn	08 46 33.2	+0.2
WHVZ				S	Sn	08 46 42.6	+0.7
TUVZ	**Tukino**	**0.21**	**63**	P	Pn	08 46 33.3	+0.2
TUVZ				S	Sn	08 46 41.4	-0.7
NGZ	**Ngauruhoe**	**0.24**	**38**	P	Pn	08 46 33.3	+0.1
NGZ				S	Sn	08 46 43.3	+1.0
MOVZ	**Moawhango**	**0.27**	**99**	P	Pn	08 46 33.1	-0.1
MOVZ				S	Sn	08 46 42.0	-0.4
WTVZ	**West Tongariro**	**0.28**	**29**	P	Pn	08 46 33.5	+0.1
TWVZ	**Taurewa**	**0.29**	**4**	P	Pn	08 46 33.4	0.0
KRVZ	**Karewarewa**	**0.32**	**34**	P	Pn	08 46 33.5	-0.1
KATZ	**Kakaramea**	**0.45**	**30**	P	Pn	08 46 34.7	+0.2
WAZ	**Wanganui**	**0.51**	**220**	P	Pn	08 46 35.0	+0.1
BHHZ	**Black Hill Sta**	**0.52**	**104**	P	Pn	08 46 34.7	-0.3
RITZ	**Rihia Road**	**0.52**	**42**	P	Pn	08 46 35.4	+0.4
VRZ	**Vera Road**	**0.56**	**295**	P	Pn	08 46 35.3	+0.1
RATZ	**Rangitukua**	**0.57**	**30**	P	Pn	08 46 35.5	+0.1
WATZ	**Wairara**	**0.70**	**21**	P	Pn	08 46 37.1	+0.4
HATZ	**Hinemaiaia**	**0.71**	**48**	P	Pn	08 46 36.7	-0.1
KWHZ	**Kaweka Forest**	**0.79**	**95**	P	Pn	08 46 38.1	+0.5
LREZ	**Lake Rotokare**	**0.79**	**263**	P	Pn	08 46 37.7	+0.2
KRHZ	**Kereru**	**0.79**	**111**	P	Pn	08 46 37.9	+0.3
TSZ	**Takapari Road**	**0.81**	**149**	P	Pn	08 46 38.4	+0.5
WHTZ	**Whakaora**	**0.82**	**32**	P	Pn	08 46 38.7	+0.8
PNHZ	**Pukenui**	**0.82**	**132**	P	Pn	08 46 38.0	+0.1
OHWZ	**Ohakea**	**0.84**	**185**	P	Pn	08 46 38.9	+0.7
BKZ	**Black Stump Fm**	**0.86**	**77**	P	Pn	08 46 38.5	0.0
MHEZ	**Mangahewa**	**0.89**	**288**	P	Pn	08 46 39.3	+0.6
KUTZ	**Kaahu Road**	**0.93**	**20**	P	Pn	08 46 39.6	+0.4
MRHZ	**Matea Rd**	**0.94**	**56**	P	Pn	08 46 39.3	-0.1
HIZ	**Hauiti**	**0.95**	**333**	P	Pn	08 46 39.7	+0.3
DREZ	**Durham Road**	**0.96**	**280**	P	Pn	08 46 40.1	+0.6
PREZ	**Palmer Road**	**0.97**	**271**	P	Pn	08 46 40.5	+0.8
MCHZ	**McNeill Hill**	**1.00**	**95**	P	Pn	08 46 40.8	+0.8
WPRZ	**Whakapapataran**	**1.03**	**35**	P	Pn	08 46 40.5	+0.2
TLZ	**Tolley Road**	**1.04**	**5**	P	Pn	08 46 40.7	+0.2
WPHZ	**Waipukurau**	**1.06**	**132**	P	Pn	08 46 42.2	+1.5
POWZ	**Post Office Ro**	**1.06**	**165**	P	Pn	08 46 41.7	+1.0
ALRZ	**Allen Road**	**1.08**	**72**	P	Pn	08 46 41.1	+0.1
KHEZ	**Kahui Hut**	**1.09**	**273**	P	Pn	08 46 41.4	+0.3
DVHZ	**Dannevirke**	**1.10**	**148**	P	Pn	08 46 41.8	+0.5
NMHZ	**Naumai**	**1.11**	**77**	P	Pn	08 46 42.5	+1.1
PKE	**Pukeiti**	**1.12**	**278**	P	Pn	08 46 41.7	+0.2
GRRZ	**Galatos Road**	**1.15**	**28**	P	Pn	08 46 42.3	+0.5
PRRZ	**Plateau Road**	**1.15**	**42**	P	Pn	08 46 42.1	+0.2
HRRZ	**Handcock Road**	**1.19**	**35**	P	Pn	08 46 42.8	+0.5
NMEZ	**Namu Road**	**1.19**	**267**	P	Pn	08 46 42.4	+0.2
NBEZ	**Newall Road No**	**1.20**	**274**	P	Pn	08 46 42.6	+0.2
KAHZ	**Kahuranaki**	**1.21**	**111**	P	Pn	08 46 43.2	+0.6
MTHZ	**Maungataniwha**	**1.22**	**66**	P	Pn	08 46 42.9	+0.1
ARHZ	**Aropaoanui**	**1.23**	**86**	P	Pn	08 46 43.7	+0.9
HSRZ	**Hossack Road**	**1.24**	**32**	P	Pn	08 46 43.4	+0.5
PRWZ	**Pori Road**	**1.26**	**160**	P	Pn	08 46 43.5	+0.3
MRZ	**Mangatainoka R**	**1.30**	**174**	P	Pn	08 46 43.3	-0.3
PXZ	**Pawanui**	**1.30**	**121**	P	Pn	08 46 43.8	+0.1
PRHZ	**Porangahau**	**1.30**	**134**	P	Pn	08 46 44.0	+0.3
CKHZ	**Cape Kidnapper**	**1.32**	**103**	P	Pn	08 46 45.3	+1.4
HLRZ	**Highlands Stat**	**1.33**	**54**	P	Pn	08 46 43.9	+0.4
UTU	**Utuhina**	**1.33**	**28**	P	Pn	08 46 44.8	+0.7
RRRZ	**Republican Roa**	**1.34**	**40**	P	Pn	08 46 44.5	+0.3
ANWZ	**Angora Road**	**1.37**	**144**	P	Pn	08 46 44.7	+0.2
RAHZ	**Arahi**	**1.38**	**72**	P	Pn	08 46 45.2	+0.5
MUGZ	**Murupara**	**1.38**	**51**	P	Pn	08 46 44.6	-0.1
NGRZ	**Ngongotaha**	**1.40**	**26**	P	Pn	08 46 45.6	+0.6
TARZ	**Mount Tarawera**	**1.41**	**38**	P	Pn	08 46 45.8	+0.6
RTZ	**Ruatahuna**	**1.43**	**59**	P	Pn	08 46 45.5	+0.1
WHHZ	**Waihua**	**1.44**	**79**	P	Pn	08 46 46.7	+1.3
TIWZ	**Tintock**	**1.46**	**166**	P	Pn	08 46 45.9	+0.2
OGWZ	**Otaki Gorge**	**1.46**	**187**	P	Pn	08 46 45.5	-0.2
OMRZ	**Omania**	**1.46**	**31**	P	Pn	08 46 46.4	+0.6
BFZ	**Birch Farm**	**1.46**	**154**	P	Pn	08 46 45.3	-0.4
MKRZ	**Makatiti**	**1.48**	**34**	P	Pn	08 46 47.1	+1.0
KARZ	**Kaharoa**	**1.49**	**26**	P	Pn	08 46 46.7	+0.6
HOWZ	**Holdsworth Sta**	**1.53**	**177**	P	Pn	08 46 46.0	-0.7
KIW	**Kapiti Island**	**1.54**	**194**	P	Pn	08 46 46.2	-0.6
KMRZ	**Kaimai**	**1.57**	**15**	P	Pn	08 46 47.8	+0.6
SNGZ	**Shannon Statio**	**1.61**	**69**	P	Pn	08 46 48.0	+0.3
EDRZ	**Edgecumbe**	**1.63**	**40**	P	Pn	08 46 48.3	+0.3
TOZ	**Tahuroa Road**	**1.63**	**2**	P	Pn	08 46 48.3	+0.4
CPWZ	**Castlepoint**	**1.66**	**159**	P	Pn	08 46 49.1	+0.9
MARZ	**Manawahe**	**1.69**	**36**	P	Pn	08 46 49.4	+0.6
URZ	**Urewera**	**1.73**	**51**	P	Pn	08 46 48.9	-0.2
CAW	**Cannon Point**	**1.76**	**189**	P	Pn	08 46 48.8	-0.8
OPRZ	**Ohinepanea**	**1.76**	**31**	P	Pn	08 46 50.1	+0.5
TGRZ	**Tauranga**	**1.76**	**22**	P	Pn	08 46 50.3	+0.6
TMWZ	**Te Maipa**	**1.78**	**168**	P	Pn	08 46 49.0	-0.9
RAGZ	**Rawiri**	**1.79**	**62**	P	Pn	08 46 51.2	+1.2
KNZ	**Kokohu**	**1.79**	**80**	P	Pn	08 46 49.8	-0.2
MTW	**Mount Morrison**	**1.79**	**178**	P	Pn	08 46 48.9	-1.1
DUWZ	**D'Urville Isla**	**1.84**	**218**	P	Pn	08 46 49.7	-1.0
WHRZ	**Whale Island**	**1.94**	**40**	P	Pn	08 46 53.9	+1.9
RIGZ	**Rimuhau**	**1.98**	**71**	P	Pn	08 46 51.9	-0.1
MWZ	**Matawai**	**1.95**	**59**	P	Pn	08 46 52.0	-0.1
MHGZ	**Mahia Peninsul**	**1.95**	**85**	P	Pn	08 46 51.8	-0.3
PRGZ	**Paritu Road**	**1.97**	**78**	P	Pn	08 46 52.0	-0.4
WEL	**Wellington**	**1.98**	**194**	P	Pn	08 46 51.2	-1.3
PAWZ	**Paruwai Farm**	**2.02**	**180**	P	Pn	08 46 51.6	-1.4
TCW	**Tory Channel**	**2.04**	**205**	P	Pn	08 46 52.0	-1.3
TRWZ	**Traveller**	**2.04**	**174**	P	Pn	08 46 52.2	-1.2
MSWZ	**Moikau Station**	**2.05**	**183**	P	Pn	08 46 52.1	-1.4
BHW	**Baring Head**	**2.08**	**191**	P	Pn	08 46 52.4	-1.5
TKGZ	**Te Karaka**	**2.11**	**65**	P	Pn	08 46 54.2	0.0
PLWZ	**Palliser**	**2.21**	**183**	P	Pn	08 46 53.9	-1.7
RUGZ	**Raukumara Rang**	**2.26**	**52**	P	Pn	08 46 55.9	-0.5
MKAZ	**Moumakai**	**2.27**	**355**	P	Pn	08 46 56.5	+0.2
TUWZ	**Tuamarina**	**2.35**	**208**	P	Pn	08 46 55.7	-1.7
CNGZ	**Carnagh Statio**	**2.35**	**69**	P	Pn	08 46 57.0	-0.4
AWAZ	**Awhitu Peninsu**	**2.38**	**345**	P	Pn	08 46 58.5	+0.8
NNZ	**Nelson**	**2.42**	**219**	P	Pn	08 46 56.7	-1.6
ETAZ	**East Tamaki Re**	**2.44**	**351**	P	Pn	08 46 58.9	+0.3
HAZ	**Te Kaha**	**2.46**	**50**	P	Pn	08 46 57.9	-0.9
WTAZ	**Waiatarua**	**2.52**	**344**	P	Pn	08 47 00.6	+0.9
CMWZ	**Cape Campbell**	**2.55**	**201**	P	Pn	08 47 05.3	+5.1
PUZ	**Puketiti**	**2.57**	**61**	P	Pn	08 46 59.4	-1.0
WIAZ	**Waiheke Island**	**2.58**	**355**	P	Pn	08 47 00.9	+0.4
MBAZ	**Motutapu North**	**2.62**	**351**	P	Pn	08 47 01.4	+0.3
BSWZ	**Blackbird Sta**	**2.62**	**206**	P	Pn	08 46 59.2	-1.9
KUZ	**Kuaotunu**	**2.63**	**5**	P	Pn	08 47 01.1	-0.1
QRZ	**Quartz Range**	**2.65**	**236**	P	Pn	08 46 59.8	-1.6
WMGZ	**Waiomatatini S**	**2.81**	**58**	P	Pn	08 47 02.7	-1.0
MXZ	**Matakaoa Point**	**2.90**	**53**	P	Pn	08 47 06.2	+1.4
THZ	**Tophouse**	**3.06**	**218**	P	Pn	08 47 05.2	-1.9
KHZ	**Kahutara**	**3.36**	**204**	P	Pn	08 47 08.6	-2.5
DSZ	**Denniston Nort**	**3.63**	**228**	P	Pn	08 47 12.1	-2.7
GVZ	**Greta Valley S**	**4.02**	**206**	P	Pn	08 47 16.8	-3.3
LTZ	**Lake Taylor**	**4.16**	**214**	P	Pn	08 47 18.4	-3.6
INZ	**Inchbonnie**	**4.50**	**221**	P	Pn	08 47 23.7	-2.9
OKCZ	**Okains Bay**	**4.70**	**201**	P	Pn	08 47 25.4	-3.9
WVZ	**Waitaha Valley**	**5.12**	**222**	P	Pn	08 47 33.3	-1.6
FOZ	**Fox Glacier**	**5.92**	**223**	P	Pn	08 47 42.2	-3.6
JCZ	**Jackson Bay**	**6.83**	**224**	P	Pn	08 47 54.5	-3.9
WKZ	**Wanaka**	**7.24**	**219**	P	Pn	08 48 01.8	-2.1

*THE **29** 08:56:05.9, 38°.39N×20°.46E, h11km, ML3.2/11, Error ellipse: s-maj=0.9km s-min=0.3km az=276.0*
*ATH **29** 08:56:05.6, 38°.38N×20°.48E, h15km, ML3.1/18, Error ellipse: s-maj=1.3km s-min=0.6km az=276.0*
ISC 29 08:56:05.9±0.8, 38°38N±0°.02×20°48E±0°.03, h12km±4km, n65, σ0°65/101, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.07**	**64**	P	**Pg**	**08 56 07.9**	**-0.6**
VSK1				S	**Sg**	**08 56 09.9**	**-0.5**
KEF1	**Kardakata, Kep**	**0.10**	**185**	P	**Pg**	**08 56 08.5**	**-0.2**
KEF1				S	**Sg**	**08 56 10.9**	**0.0**
FSK	**Fiskardo**	**0.10**	**37**	P	**Pg**	**08 56 08.3**	**-0.5**
FSK				S	**Sg**	**08 56 11.6**	**+0.6**
	14μm,0.3s						
FSK	**Fiskardo**	**0.10**	**37**	P	**Pg**	**08 56 08.3**	**-0.5**
FSK				S	**Sb**	**08 56 12.2**	**+1.2**
ARG2	**Argostoli**	**0.20**	**179**	P	**Pg**	**08 56 10.2**	**-0.1**
ARG2				S	**Sg**	**08 56 13.7**	**+0.5**
KEF3	**Kipouria, Keph**	**0.20**	**211**	P	**Pg**	**08 56 10.3**	**-0.1**
KEF3				S	**Sg**	**08 56 14.1**	**+0.7**
CHV1	**Chavriata, Kef**	**0.21**	**202**	P	**Pb**	**08 56 11.0**	**-0.6**
CHV1				S	**Sb**	**08 56 14.5**	**+1.0**
KEF2	**Argostoli. Kep**	**0.21**	**179**	P	**Pg**	**08 56 10.4**	**-0.1**
KEF2				S	**Sg**	**08 56 14.4**	**+0.8**
VLS	**Valsamata**	**0.22**	**157**	P	**Pg**	**08 56 10.5**	**-0.1**
VLS				S	**Sg**	**08 56 14.7**	**+0.9**
	6μm,0.5s						
VLS	**Valsamata**	**0.22**	**157**	P	**Pg**	**08 56 10.6**	**-0.1**
VLS				S	**Sg**	**08 56 13.5**	**-0.3**
VLS				AML	AML	08 56 17.7	
	comp=E,12069μm,0.3s						
VLS				AML	AML	08 56 19.4	
	comp=N,12156μm,0.4s						
EVGI	**Lefkada island**	**0.28**	**29**	P	**Pg**	**08 56 11.5**	**-0.2**
EVGI				S	**Sg**	**08 56 16.2**	**+0.6**
EVGI	**Lefkada island**	**0.28**	**29**	P	**Pg**	**08 56 11.6**	**-0.2**
EVGI				S	**Sb**	**08 56 16.7**	**-0.8**
KFL	**Anninata**	**0.36**	**138**	P	**Pg**	**08 56 13.2**	**0.0**
KFL				S	**Sg**	**08 56 18.9**	**+0.9**
	comp=N,7μm,0.4s						
KFL	**Anninata**	**0.36**	**138**	P	**Pg**	**08 56 13.1**	**0.0**
KFL				S	**Sg**	**08 56 18.9**	**+0.9**
KFL				AML	AML	08 56 21.6	
	comp=E,12034μm,0.3s						
KFL				AML	AML	08 56 24.6	
	comp=N,14034μm,0.4s						
MGNA	**Meganis**	**0.37**	**41**	P	**Pg**	**08 56 13.0**	**-0.3**
MGNA				S	**Sg**	**08 56 18.8**	**+0.5**
MGNA				AML	AML	08 56 19.7	
	comp=N,12954μm,0.4s						
MGNA				AML	AML	08 56 19.9	
	comp=E,11393μm,0.3s						
LKD2	**Lefkada island**	**0.43**	**18**	P	**Pg**	**08 56 14.0**	**-0.5**
LKD2				S	**Sg**	**08 56 20.3**	**0.0**
	comp=E,2μm,0.7s						
LKD2	**Lefkada island**	**0.43**	**18**	P	**Pg**	**08 56 14.0**	**-0.5**
LKD2				S	**Sg**	**08 56 20.6**	**+0.3**
LKD2				AML	AML	08 56 26.5	
	comp=N,4011μm,0.4s						
LKD2				AML	AML	08 56 34.5	
	comp=E,3218μm,0.6s						
TSLK	**Tsoukalades, L**	**0.47**	**17**	P	**Pg**	**08 56 14.8**	**-0.3**
TSLK				S	**Sg**	**08 56 21.1**	**-0.3**
TSLK	**Tsoukalades, L**	**0.47**	**17**	P	**Pg**	**08 56 14.8**	**-0.3**
TSLK				S	**Sb**	**08 56 22.0**	**-1.0**
AST1	**Astakos**	**0.50**	**71**	P	**Pg**	**08 56 16.0**	**+0.2**
AST1				S	**Sb**	**08 56 24.4**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.52**	**164**	P	**Pg**	**08 56 16.1**	**0.0**
VLMS				S	**Sb**	**08 56 24.0**	**-0.5**
VLMS				AML	AML	08 56 25.5	
	comp=N,13335μm,0.5s						
VLMS				AML	AML	08 56 29.2	
	comp=E,6320μm,0.3s						
PDO	**Prodromos**	**0.59**	**68**	P	**Pg**	**08 56 17.3**	**-0.2**
PDO				S	**Sb**	**08 56 26.7**	**+0.2**
PDO	**Prodromos**	**0.59**	**68**	P	**Pg**	**08 56 17.1**	**-0.4**
PDO				S	**Sg**	**08 56 25.5**	**+0.2**
PDO				AML	AML	08 56 31.7	
	comp=N,5109μm,0.3s						
PDO				AML	AML	08 56 34.9	
	comp=E,4506μm,0.4s						
KRI1	**kERI**	**0.76**	**160**	P	**Pg**	**08 56 20.1**	**-0.6**
KRI1				S	**Sb**	**08 56 31.6**	**+0.2**
RLS	**Riolos of Patr**	**0.84**	**112**	P	**Pg**	**08 56 21.2**	**-0.9**
RLS				AML	AML	08 56 44.0	
	comp=N,1714μm,1.0s						
RLS				AML	AML	08 56 46.4	
	comp=E,964μm,0.5s						
PVO	**Paravola**	**0.85**	**73**	P	**Pb**	**08 56 22.6**	**0.0**
PVO				S	**Sb**	**08 56 35.0**	**+1.0**
	comp=E,2μm,0.5s						
PVO	**Paravola**	**0.85**	**73**	P	**Pb**	**08 56 22.6**	**0.0**
PVO				AML	AML	08 56 43.7	
	comp=N,3646μm,0.6s						
PVO				AML	AML	08 56 46.1	
	comp=E,2592μm,0.5s						
DRO	**Drossia**	**1.06**	**113**	P	**Pb**	**08 56 25.3**	**-0.8**
DRO				S	**Sn**	**08 56 42.3**	**+1.1**
	comp=E,1μm,0.6s						
DRO	**Drossia**	**1.06**	**113**	P	**Pb**	**08 56 25.1**	**-1.1**
DRO				AML	AML	08 56 49.1	
	comp=E,2494μm,0.5s						
DRO				AML	AML	08 56 50.7	
	comp=N,2220μm,0.6s						
EFP	**Efpalio**	**1.12**	**87**	P	**Pb**	**08 56 26.4**	**-0.8**
EFP				S	**Sg**	**08 56 42.2**	**+0.2**
	comp=N,2μm,0.7s						
EFP	**Efpalio**	**1.12**	**87**	P	**Pb**	**08 56 26.3**	**-0.8**
EFP				AML	AML	08 56 50.0	
	comp=E,3671μm,0.7s						
EFP				AML	AML	08 56 51.0	
	comp=N,2517μm,0.7s						
ANX	**Ano Chora**	**1.15**	**79**	P	**Pb**	**08 56 27.3**	**-0.4**
ANX				S	**Sn**	**08 56 43.7**	**+0.1**
	comp=N,1μm,0.8s						
ANX	**Ano Chora**	**1.15**	**79**	P	**Pb**	**08 56 27.1**	**-0.6**
ANX				S	**Sg**	**08 56 43.3**	**+0.2**
ANX				AML	AML	08 56 51.1	
	comp=N,3369μm,0.6s						
ANX				AML	AML	08 56 51.4	
	comp=E,2087μm,0.5s						
EVR	**Evrytania**	**1.17**	**62**	P	**Pb**	**08 56 27.5**	**-0.6**
EVR				S	**Sn**	**08 56 44.2**	**+0.1**
	comp=E,338nm,0.7s						
EVR	**Evrytania**	**1.17**	**62**	P	**Pb**	**08 56 27.5**	**-0.6**
EVR				AML	AML	08 56 55.9	
	comp=E,680μm,0.6s						
EVR				AML	AML	08 57 02.4	
	comp=N,687μm,0.9s						
LAKA	**Lakka**	**1.18**	**96**	P	**Pn**	**08 56 27.8**	**-0.5**
LAKA				S	**Sg**	**08 56 45.0**	**+0.9**
LAKA	**Lakka**	**1.18**	**96**	P	**Pn**	**08 56 27.8**	**-0.5**
LAKA				S	**Sb**	**08 56 43.4**	**-0.2**
LAKA				AML	AML	08 56 52.8	
	comp=N,778μm,0.6s						
LAKA				AML	AML	08 56 58.0	
	comp=E,668μm,0.7s						
SERG	**Sergoula**	**1.24**	**88**	P	**Pn**	**08 56 28.5**	**-0.5**
SERG	**Sergoula**	**1.24**	**88**	P	**Pn**	**08 56 28.6**	**-0.5**
SERG				AML	AML	08 56 52.7	
	comp=N,1980μm,0.5s						
SERG				AML	AML	08 56 53.1	
	comp=E,1514μm,0.5s						
TRIZ	**Trizonia**	**1.25**	**90**	P	**Pn**	**08 56 28.6**	**-0.6**
TRIZ				S	**Sg**	**08 56 46.5**	**+0.3**
	comp=E,678nm,0.5s						
TRIZ	**Trizonia**	**1.25**	**90**	P	**Pn**	**08 56 28.6**	**-0.6**
AMT	**Artemida-Makis**	**1.28**	**131**	P	**Pn**	**08 56 29.7**	**0.0**
KALE	**Kalithea**	**1.30**	**89**	P	**Pn**	**08 56 29.6**	**-0.4**
KALE				S	**Sn**	**08 56 47.4**	**+0.1**
	comp=E,752nm,0.8s						
KALE	**Kalithea**	**1.30**	**89**	P	**Pn**	**08 56 29.5**	**-0.5**
KALE				AML	AML	08 56 56.1	
	comp=N,1928μm,0.7s						
KALE				AML	AML	08 56 57.8	
	comp=E,1014μm,0.8s						
JAN	**Janina**	**1.31**	**13**	P	**Pb**	**08 56 30.2**	**-0.3**
JAN	**Janina**	**1.31**	**13**	P	**Pb**	**08 56 30.3**	**-0.1**
KLV	**Kalavryta, Ach**	**1.35**	**104**	P	**Pn**	**08 56 30.7**	**0.0**
KLV				S	**Sg**	**08 56 49.3**	**-0.3**
KLV	**Kalavryta, Ach**	**1.35**	**104**	P	**Pn**	**08 56 30.7**	**0.0**
KLV				S	**Sg**	**08 56 50.7**	**+1.2**
KASA	**Kassiopi**	**1.43**	**343**	P	**Pg**	**08 56 33.1**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.44**	**63**	P	**Pn**	**08 56 32.1**	**+0.3**
MAKR				AML	AML	08 57 01.0	
	comp=N,753μm,0.4s						
MAKR				AML	AML	08 57 01.4	
	comp=E,1509μm,0.7s						
AGG	**Agios Georgios**	**1.58**	**65**	P	**Pb**	**08 56 34.9**	**-0.2**
AGG				AML	AML	08 57 07.3	
	comp=E,703μm,0.8s						
AGG				AML	AML	08 57 08.8	
	comp=N,675μm,0.5s						
ITM	**Ithomi**	**1.66**	**136**	P	**Pb**	**08 56 36.7**	**+0.3**
THL	**Klokotos Trika**	**1.68**	**45**	P	**Pb**	**08 56 36.7**	**-0.1**
KPRO	**Kipourio**	**1.72**	**23**	P	**Pb**	**08 56 37.1**	**-0.3**
AXAR	**Agios Charalam**	**1.75**	**77**	P	**Pb**	**08 56 38.3**	**+0.3**
AXAR				AML	AML	08 57 13.5	
	comp=N,1386μm,0.5s						
AXAR				AML	AML	08 57 17.4	
	comp=E,1417μm,1.1s						
PYL	**PYLOS**	**1.79**	**146**	P	**Pb**	**08 56 37.8**	**-0.7**
VLX	**Vlachokerasia**	**1.81**	**123**	P	**Pb**	**08 56 39.0**	**0.0**
PROD	**Prodromos**	**1.91**	**93**	P	**Pb**	**08 56 40.7**	**+0.1**
LTK	**Loutraki**	**1.99**	**99**	P	**Pb**	**08 56 41.5**	**-0.5**
VIL2	**Platees**	**2.20**	**93**	P	**Pb**	**08 56 44.6**	**-1.0**
LIT	**Litokhoron**	**2.32**	**42**	P	**Pn**	**08 56 45.5**	**+1.6**
DID	**Didima**	**2.34**	**111**	P	**Pb**	**08 56 47.1**	**-1.0**
MRKA	**Markates**	**2.46**	**81**	P	**Pb**	**08 56 48.3**	**-1.7**
VLI	**Veliai**	**2.56**	**130**	P	**Pb**	**08 56 49.9**	**-1.8**
PAIG	**Paliouri**	**2.93**	**57**	P	**Pn**	**08 56 54.3**	**+2.1**

IDC 29 09:05:07.1±1.4, 4°67S×139°36E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/33, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=49.9km s-min=14.1km az=105.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**2.52**	**32**	Pn	Pn	09 05 49.5	+0.1
	8.2nm,0.3s,baz=216,slow=11,SNR=13						
JAY				Sn	Sn	09 06 21.2	+0.4
	9.2nm,0.3s,baz=144,slow=18,SNR=6.5						
WRA	**Warramunga Arr**	**15.95**	**197**	Pn	P	09 08 55.0	-1.8
	0.3nm,0.3s,baz=21,slow=11,SNR=6.1						
ASAR	**Alice Springs**	**19.61**	**195**	P	P	09 09 37.0	-0.2
	0.2nm,0.3s,baz=26,slow=9.1,SNR=13						
ASAR				S	S	09 13 19.6	+0.1
	0.1nm,0.3s,baz=15,slow=22,SNR=4.1						
MKAR	**Makanchi Array**	**71.73**	**323**	P	P	09 16 31.2	0.0
	0.3nm,0.8s,baz=134,slow=4.2,SNR=3.1						

*THE **29** 09:14:23.9, 38°.35N×21°.98E, h10km, ML3.9/15, Error ellipse: s-maj=0.7km s-min=0.3km az=41.0*
*PDG **29** 09:14:23.8±0.2, 38°.35N×21°.98E, h12km, ML4.0/13, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*ATH **29** 09:14:23.7, 38°.34N×21°.99E, h11km±1km, ML3.9/13, Error ellipse: s-maj=1.7km s-min=0.7km az=337.0*
*NEIC **29** 09:14:24.5±1.9, 38°.31N±0°.04×22°.01E±0°.05, h8km±2km, Error ellipse: s-maj=7.9km s-min=3.9km az=137.0, Moment Tensor Solution. Moment tensor: Scale 10^{15}Nm; M_{rr}=1.52; $M_{\theta\theta}$1.42; $M_{\phi\phi}$0.09; $M_{r\theta}$-0.21; $M_{\theta\phi}$-0.61; $M_{\phi r}$-0.56; Fault plane solution: $M_0$1.70000×10^{15} NP1: ϕ_s310.56000°, δ48.65000°, λ-62.29000°. NP2:ϕ_s92.08000°, δ48.35000°, λ-117.85000°. Principal axes: T 1.6618, Plg0.0000°, Azm21.0000°; N 0.0770, Plg20.0000°, Azm111.0000°; P -1.7388, Plg70.0000°, Azm291.0000°;*
*IDC **29** 09:14:29.3±1.6, 38°.32N×22°.14E, h48km±19km, mb3.8/16, mb1 3.9/20, mb1mx3.8/37, mbtmp4.0/20, ML3.7/4, MS3.4/25, Ms1 3.4/25, ms1mx3.3/53 Error ellipse: s-maj=15.4km s-min=12.4km az=81.0*
**ISC 29 09:14:24.5±0.7, 38°34N±0

RLS					AML	AML	09 14 41.3		
	comp=N,24582µm,0.4s								
RLS					AML	AML	09 14 43.3		
	comp=E,17058µm,0.2s								
EVR	**Evrytania**	**0.60**	**346**		P	**Pg**	**09 14 35.0**	**-1.1**	
EVR					S	**Sg**	**09 14 43.8**	**-0.1**	
	comp=E,22µm,0.7s								
EVR	**Evrytania**	**0.60**	**346**		P	**Pg**	**09 14 35.1**	**-0.9**	
EVR					S	**Sg**	**09 14 43.9**	**-0.1**	
EVR					AML	AML	09 14 47.3		
	comp=N,46044µm,0.8s								
EVR					AML	AML	09 14 47.5		
	comp=E,44658µm,0.6s								
AXAR	**Agios Charalam**	**0.68**	**50**		P	**Pg**	**09 14 36.8**	**-0.7**	
AXAR					S	**Sg**	**09 14 46.9**	**+0.6**	
AXAR					AML	AML	09 14 49.2		
	comp=E,44766µm,0.3s								
AXAR					AML	AML	09 14 50.8		
	comp=N,60246µm,0.3s								
MAKR	**Makrakomi, Fth**	**0.68**	**9**		P	**Pg**	**09 14 36.6**	**-1.1**	
MAKR					S	**Sg**	**09 14 46.5**	**-0.1**	
	comp=N,22µm,0.5s								
PDO	**Prodromos**	**0.69**	**293**		P	**Pg**	**09 14 37.6**	**-0.2**	
PDO					S	**Sg**	**09 14 46.6**	**-0.1**	
PDO					AML	AML	09 14 51.4		
	comp=E,18576µm,0.3s								
PDO					AML	AML	09 14 54.1		
	comp=N,22460µm,0.3s								
PROD	**Prodromos**	**0.72**	**96**		P	**Pg**	**09 14 37.6**	**-0.7**	
PROD					S	**Sb**	**09 14 48.8**	**-0.5**	
PROD	**Prodromos**	**0.72**	**96**		P	**Pg**	**09 14 37.7**	**-0.7**	
PROD					S	**Sb**	**09 14 48.4**	**-0.9**	
PROD					AML	AML	09 14 54.4		
	comp=E,9596µm,0.5s								
PROD					AML	AML	09 14 59.0		
	comp=N,16453µm,0.3s								
AGG	**Agios Georgios**	**0.73**	**21**		P	**Pg**	**09 14 37.1**	**-1.6**	
AGG					S	**Sg**	**09 14 48.6**	**+0.4**	
	comp=N,5µm,0.7s								
AGG	**Agios Georgios**	**0.73**	**21**		P	**Pg**	**09 14 37.0**	**-1.6**	
AGG	**Agios Georgios**	**0.73**	**21**			**Pg**	**09 14 37.0**	**-1.6**	
AGG					Sg	**Sb**	**09 14 49.3**	**-0.5**	
AST1	**Astakos**	**0.74**	**286**		P	**Pg**	**09 14 37.7**	**-1.0**	
AST1					S	**Sg**	**09 14 48.2**	**-0.1**	
	comp=N,11µm,0.5s								
LTK	**Loutraki**	**0.83**	**112**		P	**Pg**	**09 14 39.8**	**-0.6**	
LTK	**Loutraki**	**0.83**	**112**		P	**Pg**	**09 14 39.8**	**-0.6**	
AMT	**Artemida-Makis**	**0.83**	**196**		P	**Pg**	**09 14 39.5**	**-1.0**	
AMT					S	**Sb**	**09 14 52.2**	**-0.5**	
	comp=N,10µm,0.5s								
LOUT	**Loutraki**	**0.85**	**114**		P	**Pg**	**09 14 40.4**	**-0.4**	
LOUT					S	**Sb**	**09 14 52.4**	**-0.6**	
	comp=N,3µm,0.4s								
LKR	**Lokris**	**0.85**	**68**		P	**Pg**	**09 14 39.7**	**-1.2**	
LKR					S	**Sg**	**09 14 52.3**	**+0.4**	
	comp=N,7µm,0.3s								
LKR	**Lokris**	**0.85**	**68**		P	**Pg**	**09 14 39.6**	**-1.2**	
LKR					S	**Sg**	**09 14 52.0**	**+0.1**	
LKR					AML	AML	09 14 54.4		
	comp=N,13379µm,0.3s								
LKR					AML	AML	09 14 57.3		
	comp=E,14561µm,0.5s								
KFL	**Anninata**	**0.98**	**257**		P	**Pg**	**09 14 41.9**	**-1.4**	
KFL	**Anninata**	**0.98**	**257**		P	**Pg**	**09 14 42.3**	**-0.9**	
VIL2	**Platees**	**1.01**	**97**		P	**Pb**	**09 14 44.2**	**0.0**	
VLX	**Vlachokerasia**	**1.01**	**162**		P	**Pg**	**09 14 42.6**	**-1.3**	
VLX					S	**Sb**	**09 14 58.5**	**+0.6**	
VLX	**Vlachokerasia**	**1.01**	**162**		P	**Pg**	**09 14 42.6**	**-1.3**	
VILL	**Villia**	**1.05**	**99**		P	**Pg**	**09 14 43.9**	**-0.8**	
VLS	**Valsamata**	**1.12**	**262**		P	**Pg**	**09 14 43.8**	**-2.2**	
VLMS	**Volimes, Zakyn**	**1.15**	**247**		P	**Pg**	**09 14 45.3**	**-1.2**	
ITM	**Ithomi**	**1.16**	**183**		P	**Pg**	**09 14 45.1**	**-1.6**	
ITM	**Ithomi**	**1.16**	**183**			**Pg**	**09 14 44.8**	**-1.9**	
THL	**Klokotos Trika**	**1.23**	**1**		P	**Pb**	**09 14 46.5**	**-1.5**	
MRKA	**Markates**	**1.30**	**73**		P	**Pn**	**09 14 48.2**	**-0.9**	
NEO	**Neokhori**	**1.36**	**44**		P	**Pn**	**09 14 49.2**	**-0.7**	
ATH	**Athens Observa**	**1.41**	**104**		P	**Pn**	**09 14 50.3**	**-0.1**	
ATH					S	**Sg**	**09 15 09.7**	**0.0**	
ATH					AML	AML	09 15 14.0		
	comp=N,4231µm,0.8s								
ATH					AML	AML	09 15 14.3		
	comp=E,5560µm,0.6s								
VLY	**Voula,Athens**	**1.50**	**108**		P	**Pn**	**09 14 51.5**	**-0.2**	
PTL	**Penteli**	**1.50**	**100**		P	**Pn**	**09 14 51.5**	**-0.3**	
LIT	**Litokhoron**	**1.80**	**12**			**Pn**	**09 14 55.7**	**-0.2**	
LIT					Sn	**Sg**	**09 15 23.8**	**+1.3**	
FNA	**Florina**	**2.49**	**349**			**Pn**	**09 15 06.3**	**+0.8**	
FNA					Sn	**Sn**	**09 15 37.0**	**+1.0**	
OHR	**Ohrid**	**2.92**	**342**	*i* Pn		**Pn**	**09 15 13.9**	**+2.5**	
VAY	**Valandovo**	**3.01**	**8**	P		**Pn**	**09 15 13.2**	**+0.7**	
VAY	**Valandovo**	**3.01**	**8**	P		**Pn**	**09 15 13.2**	**+0.7**	
VAY	**Valandovo**	**3.01**	**8**	*i* Pn		**Pn**	**09 15 14.4**	**+1.9**	
APE	**Apeiranthos**	**3.08**	**113**	⇑P		**Pn**	**09 15 12.5**	**-1.0**	
APE	**Apeiranthos**	**3.08**	**113**	⇑S		**Sn**	**09 15 45.4**	**-5.1**	
SCTE	**Santa Cesarea**	**3.24**	**303**			**Pn**	**09 15 16.3**	**+0.6**	
STIP	**Stip**	**3.36**	**2**	*i* Pn		**Pn**	**09 15 18.5**	**+1.2**	
SANT	**Santorini**	**3.39**	**124**	Pn		**Pn**	**09 15 19.6**	**+1.9**	
TIR	**Tirane**	**3.42**	**332**	⇑S		**Sn**	**09 15 59.0**	**0.0**	
TIR	**Tirane**	**3.42**	**332**			**Pn**	**09 15 20.8**	**+2.6**	
MMB	**Musomiste**	**3.51**	**22**	P		**Pn**	**09 15 19.4**	**0.0**	
MMB	**Musomiste**	**3.51**	**22**	P		**Pn**	**09 15 19.4**	**0.0**	
IDI	**Anoyia**	**3.83**	**142**	P		**Pn**	**09 15 25.2**	**+1.4**	
	comp=E,2.8nm,0.3s,baz=314,slow=19,SNR=19								
IDI					S	**Sn**	**09 16 07.2**	**-1.9**	
	comp=E,12nm,0.3s,baz=284,slow=20,SNR=3.5								
RZN	**Rozhen**	**3.95**	**31**	P		**Pn**	**09 15 27.1**	**+1.6**	
RZN	**Rozhen**	**3.95**	**31**	P		**Pn**	**09 15 27.1**	**+1.6**	
ALN	**Alexandroupoli**	**4.04**	**49**	Pn		**Pn**	**09 15 25.3**	**-1.3**	
TIP	**Timpagrande**	**4.18**	**283**	⇑P		**Pn**	**09 15 29.3**	**+0.7**	
TIP	**Timpagrande**	**4.18**	**283**	⇑S		**Sn**	**09 16 20.4**	**+2.7**	
TIP	**Timpagrande**	**4.18**	**283**			**Pn**	**09 15 29.1**	**+0.5**	
ULC	**Ulcinj**	**4.19**	**331**	⇓*i* Pn		**Pn**	**09 15 28.8**	**0.0**	
ULC					eSn	**Sn**	**09 16 17.7**	**-0.2**	
KDZ	**Kurdzhali**	**4.23**	**37**	P		**Pn**	**09 15 27.5**	**-1.7**	
KDZ	**Kurdzhali**	**4.23**	**37**	P		**Pn**	**09 15 27.5**	**-1.7**	
VTS	**Vitosha**	**4.38**	**12**	⇑P		**Pn**	**09 15 32.1**	**+0.7**	
VTS	**Vitosha**	**4.38**	**12**	P		**Pn**	**09 15 32.4**	**+0.9**	
VTS	**Vitosha**	**4.38**	**12**	P		**Pn**	**09 15 32.4**	**+0.9**	
VTS	**Vitosha**	**4.38**	**12**			**Pn**	**09 15 32.6**	**+1.2**	
VTS					Sn	**Sn**	**09 16 26.0**	**+3.2**	
DRME	**Dracevica, Mon**	**4.41**	**332**	*e*Pn		**Pn**	**09 15 33.0**	**+1.3**	
DRME	**Dracevica, Mon**	**4.41**	**332**	*e*Pn		**Pn**	**09 15 31.7**	**0.0**	
DRME					*e*Sn	**Sn**	**09 16 23.2**	**0.0**	
PVY	**Plav**	**4.53**	**341**	*e*Pn		**Pn**	**09 15 33.6**	**+0.1**	
PVY					*e*Sn	**Sn**	**09 16 26.0**	**-0.4**	
PDG	**Podgorica**	**4.59**	**334**	⇑P		**Pn**	**09 15 34.7**	**+0.5**	
PDG	**Podgorica**	**4.59**	**334**	⇓S		**Sn**	**09 16 31.8**	**+4.0**	
PDG	**Podgorica**	**4.59**	**334**	*e*Pn		**Pn**	**09 15 34.3**	**+0.1**	
PDG	**Podgorica**	**4.59**	**334**			**Pn**	**09 15 34.8**	**+0.6**	
TTG	**Podgorica**	**4.59**	**334**	*e*Pn		**Pn**	**09 15 34.3**	**+0.1**	
TTG					*e*Sn	**Sn**	**09 16 27.6**	**-0.1**	
BUM	**Brajici-Budva**	**4.61**	**330**	*e*Pn		**Pn**	**09 15 34.2**	**-0.4**	
BUM					*e*Sn	**Sn**	**09 16 27.8**	**-0.6**	
MATE	**Matera**	**4.70**	**301**	⇑P		**Pn**	**09 15 35.8**	**+0.1**	
CEL	**Celeste**	**4.80**	**271**	Pn		**Pn**	**09 15 38.4**	**+1.2**	
IVA	**Berane**	**4.80**	**341**	*e*Pn		**Pn**	**09 15 37.5**	**+0.3**	
IVA					*e*Sn	**Sn**	**09 16 32.4**	**-0.7**	
CEME	**Cevo**	**4.81**	**332**	*e*Pn		**Pn**	**09 15 37.2**	**-0.2**	
CEME					*e*Sn	**Sn**	**09 16 33.1**	**-0.3**	
KOME	**Kolasin**	**4.89**	**338**	*e*Pn		**Pn**	**09 15 38.5**	**+0.1**	
KOME					*e*Sn	**Sn**	**09 16 34.3**	**-0.9**	
HCY	**Herceg Novi**	**4.90**	**328**	*e*Pn		**Pn**	**09 15 36.6**	**-1.9**	
HCY	**Herceg Novi**	**4.90**	**328**	*e*Pn		**Pn**	**09 15 37.9**	**-0.6**	
HCY					*e*Sn	**Sn**	**09 16 34.8**	**-0.5**	
KARP	**Karpathos**	**4.99**	**122**	Pn		**Pn**	**09 15 40.3**	**+0.6**	
NKME	**Niksic**	**4.99**	**333**	*e*Pn		**Pn**	**09 15 39.6**	**-0.2**	
NKME					*e*Sn	**Sn**	**09 16 37.0**	**-0.8**	
TREB	**Trebinje**	**5.18**	**329**	*e*Pn		**Pn**	**09 15 42.3**	**0.0**	
BRY	**Bratogost**	**5.26**	**331**	*e*Pn		**Pn**	**09 15 43.7**	**+0.1**	
BRY	**Bratogost**	**5.26**	**331**	*e*Pn		**Pn**	**09 15 43.9**	**+0.3**	
BRY					*e*Sn	**Sn**	**09 16 43.9**	**-0.6**	
ACER	**Acerenza**	**5.28**	**300**			**Pn**	**09 15 44.8**	**+1.1**	
PLE	**Pljevlja**	**5.37**	**339**	*e*Pn		**Pn**	**09 15 45.1**	**+0.1**	
PLE					*e*Sn	**Sn**	**09 16 47.0**	**0.0**	
UPM	**Unac-Piva**	**5.40**	**335**	*e*Pn		**Pn**	**09 15 45.6**	**+0.1**	
UPM					*e*Sn	**Sn**	**09 16 47.2**	**-0.7**	
PLVB	**Pleven**	**5.42**	**21**	⇑P		**Pn**	**09 15 46.9**	**+1.3**	
ELND	**Elena**	**5.45**	**32**	⇑P		**Pn**	**09 15 46.7**	**+0.6**	
STON	**Ston**	**5.58**	**326**	*e*Pn		**Pn**	**09 15 47.1**	**-0.7**	
BBLS	**Lazići**	**5.86**	**341**	*e*Pn		**Pn**	**09 15 51.8**	**+0.1**	
SGRT	**San Giovanni R**	**5.89**	**307**			**Pn**	**09 15 52.3**	**+0.2**	
SGRT					Sn	**Sn**	**09 17 00.5**	**+0.7**	

DIVS	**Divibare**	**5.95**	**346**	*e*Pn		**Pn**	**09 15 53.8**	**+0.8**	
HAPS	**Han Pijesak,Bl**	**6.18**	**339**	*e*Pn		**Pn**	**09 15 55.8**	**-0.4**	
PAOL	**Paolisi**	**6.33**	**297**			**Pn**	**09 15 59.6**	**+1.5**	
TEKS	**Tekeris**	**6.48**	**344**	*e*Pn		**Pn**	**09 15 58.7**	**-1.5**	
CORL	**Corleone**	**6.87**	**269**	Pn		**Pn**	**09 16 06.8**	**+1.3**	
FRGS	**Fruska Gora**	**7.01**	**347**	*e*Pn		**Pn**	**09 16 07.1**	**-0.3**	
GZR	**Gura Zlata**	**7.08**	**4**	⇑P		**Pn**	**09 16 09.5**	**+1.1**	
INTR	**Introdacqua**	**7.20**	**303**			**Pn**	**09 16 11.8**	**+1.6**	
BZS	**Buzias**	**7.28**	**358**	⇑P		**Pn**	**09 16 12.0**	**+0.8**	
BLY	**Banja Luka**	**7.35**	**332**	⇑P		**Pn**	**09 16 12.9**	**+0.8**	
BLY	**Banja Luka**	**7.35**	**332**	*e*Pn		**Pn**	**09 16 11.2**	**-0.9**	
BLY	**Banja Luka**	**7.35**	**332**	Pn		**Pn**	**09 16 13.4**	**+1.3**	
VOIR		**7.45**	**17**	⇑P		**Pn**	**09 16 14.5**	**+1.0**	
MLR	**Muntele Rosu**	**7.73**	**21**	P		**Pn**	**09 16 18.9**	**+1.5**	
	comp=E,0.3nm,0.3s,baz=149,slow=3.9,SNR=5.1								
MLR					LR	LR	09 20 03.7		
	comp=E,680nm,19.9s,baz=203,slow=43								
MLR	**Muntele Rosu**	**7.73**	**21**	⇑P		**Pn**	**09 16 18.5**	**+1.1**	
MLR	**Muntele Rosu**	**7.73**	**21**			**Pn**	**09 16 18.3**	**+0.8**	
NRCA	**Norcia**	**8.11**	**306**			**Pn**	**09 16 23.9**	**+1.3**	
MORH	**Mrgy, Hungar**	**8.25**	**344**	*e*Pn		**Pn**	**09 16 23.6**	**-0.9**	
PLOR	**Plostina**	**8.27**	**23**	⇓P		**Pn**	**09 16 26.1**	**+1.4**	
VRI	**Vrincioaia**	**8.30**	**24**	⇑P		**Pn**	**09 16 25.4**	**+0.2**	
DRGR		**8.47**	**3**	⇓P		**Pn**	**09 16 28.9**	**+1.4**	
CRES	**Cresnjev**	**8.92**	**329**	*e*Pn		**Pn**	**09 16 31.4**	**-2.3**	
BR131	**Keskin Array S**	**9.17**	**78**			**Pn**	**09 16 39.1**	**+1.9**	
BRTR	**Keskin Array B**	**9.17**	**78**	P		**Pn**	**09 16 39.1**	**+1.9**	
	comp=E,0.6nm,0.3s,baz=255,slow=12,SNR=13								
BRTR					LR	LR	09 20 16.3		
	comp=E,157nm,20.6s,baz=242,slow=38								
CEY	**Cerknica**	**9.29**	**325**	*e*Pn		**Pn**	**09 16 38.0**	**-0.8**	
BURAR	**Bucovina Array**	**9.57**	**13**	⇑P		**Pn**	**09 16 44.0**	**+1.4**	
PSZ	**Piszkesteto**	**9.70**	**352**	⇑P		**Pn**	**09 16 46.4**	**+2.0**	
PSZ	**Piszkesteto**	**9.70**	**352**			**Pn**	**09 16 45.3**	**+0.9**	
OBKA	**Obir**	**9.84**	**328**	Pn		**Pn**	**09 16 47.9**	**+1.5**	
OBKA					*e*Sn	**Sn**	**09 18 41.1**	**+4.0**	
	comp=E,5.5nm,0.7s								
ARSA	**Arzberg**	**10.09**	**334**	Pn		**Pn**	**09 16 53.5**	**+3.8**	
	comp=E,1.1nm,0.2s								
VYHS	**Vyhne**	**10.41**	**348**	*e*PN		Pn	09 17 03.8	+10	
VYHS					*e*SN	**Sn**	**09 18 54.1**	**+3.3**	
KEST	**Kesra**	**10.44**	**259**	LR		LR	09 22 01.2		
	comp=E,148nm,21.3s,baz=326,slow=43								
KBA	**Koelnbreinsper**	**10.80**	**327**	*i* Pn		**Pn**	**09 17 00.6**	**+1.0**	
	comp=E,1.8nm,0.5s								
CTI	**Castel Tesino**	**10.87**	**318**			**Pn**	**09 17 00.1**	**-0.3**	
MOA	**Molln**	**11.05**	**332**	Pn		**Pn**	**09 17 04.9**	**+2.1**	
	comp=E,1.4nm,0.3s								
VRAC	**Vranov**	**11.64**	**342**	LR		LR	09 23 12.1		
	comp=E,145nm,20.4s,baz=173,slow=45								
GERES	**GERESS Array B**	**12.09**	**333**	P		**Pn**	**09 17 21.0**	**+3.8**	
	comp=E,0.3nm,0.3s,baz=157,slow=13,SNR=3.9								
GERES					LR	LR	09 22 53.0		
	comp=E,516nm,21.3s,baz=148,slow=41								
DAVOX	**Davos/Dischmat**	**12.28**	**317**	LR		LR	09 23 35.8		
	comp=E,153nm,21.3s,baz=165,slow=44								
KHC	**Kasperske Hory**	**12.38**	**333**	*e*PN		**Pn**	**09 17 23.5**	**+2.5**	
AKASG	**Malin Array Be**	**13.38**	**20**	LR		LR	09 23 06.7		
	comp=E,204nm,22.0s,baz=220,slow=39								
EIL	**Elat**	**13.78**	**125**	LR		LR	09 25 01.6		
	comp=E,41nm,18.4s,baz=282,slow=46								
CLL	**Collm**	**14.44**	**337**	*e*PP		**P**	**09 17 57.0**	**+1.0**	
KBZ	**Khabaz**	**16.65**	**65**	LR		LR	09 25 54.9		
	comp=E,87nm,18.5s,baz=235,slow=41								
OBN	**Obninsk**	**19.46**	**26**	LR		LR	09 27 03.6		
	comp=E,38nm,18.0s,baz=50,slow=39								
ESDC	**Sonseca Array**	**20.20**	**282**	P		Pn	09 19 02.2	+0.6	
	comp=E,1.2nm,0.5s,baz=75,slow=11,SNR=8.0								
PAB	**San Pablo**	**20.50**	**282**	P		**P**	**09 19 03.7**	**+0.6**	
PAB					IAmb	IAmb	09 19 12.1		
	comp=Z,26nm,1.4s								
MDT	**Midelt**	**22.29**	**264**	LR		LR	09 28 33.7		
	comp=E,73nm,18.6s,baz=133,slow=38								
HFS	**Hagfors**	**22.44**	**349**	P		**P**	**09 19 23.2**	**-0.4**	
	comp=Z,3.8nm,0.7s,baz=159,slow=13,SNR=12								
HFS					LR	LR	09 29 11.0		
	comp=Z,88nm,21.1s,baz=161,slow=39								
FINES	**FINESS Array B**	**23.27**	**5**	P		**P**	**09 19 31.5**	**-0.7**	
	comp=Z,1.1nm,0.6s,baz=192,slow=7.0,SNR=4.6								
FINES					LR	LR	09 30 08.9		
	comp=Z,121nm,18.1s,baz=194,slow=40								
FINES	**FINESS Array B**	**23.27**	**5**	P		**P**	**09 19 32.4**	**+0.1**	
NC602	**NORSAR Array S**	**23.36**	**347**	P		**P**	**09 19 32.9**	**-0.4**	
NAO01	**NORSAR Array S**	**23.59**	**346**	P		**P**	**09 19 35.2**	**-0.2**	
NC405	**NORSAR Array S**	**23.69**	**348**	P		**P**	**09 19 36.1**	**-0.3**	
NB201	**NORSAR Array S**	**23.70**	**347**	P		**P**	**09 19 36.4**	**-0.2**	
NB2	**NORSAR Subarra**	**23.71**	**347**	P		**P**	**09 19 35.2**	**-1.5**	
	comp=Z,1.2nm,0.7s,baz=158,slow=9.3								
NOA	**NORSAR Array B**	**23.71**	**347**	P		**P**	**09 19 35.5**	**-1.2**	
	comp=Z,2.0nm,0.8s,baz=172,slow=12,SNR=7.0								
NOA					LR	LR	09 31 03.3		
	comp=Z,75nm,18.8s,baz=150,slow=42								
NBO00	**NORSAR Array S**	**23.78**	**346**	P		**P**	**09 19 37.9**	**+0.6**	
EKA	**Eskdalemuir Ar**	**23.98**	**323**	P		**P**	**09 19 38.4**	**-0.8**	
	comp=Z,10nm,0.8s,baz=123,slow=10,SNR=15								
ESK	**Eskdalemuir**	**23.99**	**323**	P		**P**	**09 19 39.3**	**-0.1**	
KIRV	**Kirov**	**26.90**	**32**	LR		LR	09 32 13.5		
	comp=Z,101nm,18.9s,baz=269,slow=40								
AKTO	**Aktyubinsk**	**28.16**	**53**	LR		LR	09 35 13.4		
	comp=Z,23nm,18.0s,baz=264,slow=44								
GEYT	**Ailbeck**	**28.31**	**79**	LR		LR	09 34 49.3		
	comp=Z,31nm,19.1s,baz=210,slow=43								
ARU	**Arti**	**30.17**	**41**	LR		LR	09 33 24.6		
	comp=Z,72nm,21.9s,baz=204,slow=38								
TOA0	**Torodi Ar. Sit**	**30.90**	**221**	P		**P**	**09 20 42.3**	**+0.7**	
TORD	**Torodi Ar. Bea**	**30.90**	**221**	P		**P**	**09 20 42.0**	**+0.3**	
	comp=Z,4.5nm,0.7s,baz=31,slow=9.2,SNR=23								
TORD					LR	LR	09 33 36.0		
	comp=Z,77nm,18.4s,baz=340,slow=37								
TORD	**Torodi Ar. Bea**	**30.90**	**221**	P		**P**	**09 20 42.1**	**+0.4**	
ARCES	**ARCESS Array B**	**31.32**	**2**	P		**P**	**09 20 44.8**	**-0.1**	
	comp=Z,2.4nm,0.9s,baz=193,slow=8.9,SNR=5.8								
ARCES					LR	LR	09 34 26.9		
	comp=Z,150nm,20.0s,baz=183,slow=38								
KK31	**Karatay Array**	**36.67**	**67**	P		**P**	**09 21 32.3**	**+0.6**	
KKAR	**Karatay Array**	**36.67**	**67**	P		**P**	**09 21 33.1**	**+1.4**	
KKAR	**Karatay Array**	**36.67**	**67**	P		**P**	**09 21 32.3**	**+0.6**	
KKAR					IAmb	IAmb	09 21 39.0		
	comp=Z,2.7nm,0.7s								
AAK	**Ala-Archa**	**39.63**	**67**	LR		LR	09 41 37.5		
	comp=Z,54nm,19.6s,baz=300,slow=41								
DBIC	**Dimbokro**	**39.81**	**224**	P		**P**	**09 21 58.6**	**+0.3**	
	comp=Z,4.2nm,0.7s,baz=6.9,slow=8.1,SNR=5.4								
DBIC					LR	LR	09 38 48.6		
	comp=Z,66nm,19.6s,baz=12,slow=37								
DBIC	**Dimbokro**	**39.81**	**224**	P		**P**	**09 21 58.6**	**+0.3**	
DBIC					IAmb	IAmb	09 22 01.1		
	comp=Z,5.0nm,0.8s								
TIC	**Toumodi**	**39.92**	**225**	*e*P		**P**	**09 22 01.8**	**+2.5**	
KIC	**Kosan Boka**	**40.00**	**224**	*e*P		**P**	**09 21 59.4**	**-0.5**	
	comp=Z,7.8nm,0.7s								
KIC	**Kosan Boka**	**40.00**	**224**	P		**P**	**09 21 59.4**	**-0.5**	
SPITS	**Spitsbergen Ar**	**40.02**	**358**	P		**P**	**09 22 00.7**	**+1.2**	
	comp=Z,15nm,1.1s,baz=158,slow=12,SNR=4.5								
LIC	**Lamto**	**40.27**	**224**	*e*P		**P**	**09 22 02.4**	**+0.3**	
	comp=Z,24nm,0.8s								
LIC	**Lamto**	**40.27**	**224**	P		**P**	**09 22 02.4**	**+0.3**	
KSH	**Kashi**	**41.48**	**71**	P		**P**	**09 22 11.5**	**-0.6**	
KSH					sP	sP	09 22 18.8	+3.1	
KSH					pmax	pmax			
	comp=Z,360nm,5.1s								
MK31	**Makanchi Array**	**44.23**	**59**	P		**P**	**09 22 33.6**	**-0.6**	
MK31					IAmb	IAmb	09 22 40.3		
	comp=Z,3.5nm,0.7s								
MKAR	**Makanchi Array**	**44.23**	**59**	P		**P**	**09 22 33.3**	**-0.9**	
	comp=Z,2.4nm,0.5s,baz=274,slow=7.1,SNR=40								
MKAR					LR	LR	09 44 18.0		
	comp=Z,42nm,18.4s,baz=286,slow=40								
MKAR	**Makanchi Array**	**44.23**	**59**	P		**P**	**09 22 33.6**	**-0.6**	
ZAA0	**Zalesovo Array**	**44.72**	**48**	P		**P**	**09 22 38.3**	**+0.3**	
ZAA0					IAmb	IAmb	09 22 46.4		
	comp=Z,2.9nm,0.6s								
ZALV	**Zalesovo Beam**	**44.72**	**48**	P		**P**	**09 22 37.4**	**-0.5**	
	comp=Z,2.0nm,0.5s,baz=267,slow=8.6,SNR=8.7								
ZALV					LR	LR	09 41 33.1		
	comp=Z,32nm,20.1s,baz=280,slow=36								
ZALV	**Zalesovo Beam**	**44.72**	**48**	P		**P**	**09 22 37.3**	**-0.6**	
WMQ	**Urumqi**	**48.67**	**61**	*e*P		**P**	**09 23 11.5**	**+2.4**	
WMQ					LR	LR			
	comp=N,200nm,28.8s								
WMQ					LR	LR			
	comp=E,940nm,29.1s								
WMQ					LR	LR			
	comp=Z,76nm,27.3s								
GTA	**Gaotai**	**58.73**	**62**	*e*P		**P**	**09 24 23.5**	**+0.5**	
GTA					pP	sP	09 24 28.5	+1.8	
GTA					sP	pP	09 24 30.5	+4.9	
GTA					pmax	pmax			
	comp=Z,2.0nm,0.8s								
SCHQ	**Schefferville**	**59.13**	**318**	P		**P**	**09 24 25.1**	**-0.3**	
	comp=Z,0.6nm,0.3s,baz=56,slow=5.8,SNR=3.5								
SONM	**Songino Array**	**59.46**	**51**	P		**P**	**09 24 25.1**	**-2.8**	
	comp=Z,1.8nm,1.0s,baz=278,slow=10,SNR=7.9								
SONM	**Songino Array**	**59.46**	**51**	P		**P**	**09 24 27.4**	**-0.5**	
LZH	**Lanzhou**	**63.09**	**64**	*e*P		**P**	**09 24 53.0**	**+0.2**	
LZH					pP	sP	09 24 56.0	-0.5	
LZH					sP	pP	09 24 59.3	+3.9	
LZH					PP	**PP**	**09 27 07.5**	**-3.7**	
LZH					pmax	pmax			
	comp=Z,17nm,1.1s								
LZH					pmax	pmax			
	comp=Z,59nm,4.9s								
HHC	**Hu-ho-hao-te**	**65.99**	**56**	*e*P		**P**	**09 25 11.5**	**0.0**	
HHC					pmax	pmax			
	comp=Z,2.0nm,0.8s								
HHC					pmax	pmax			
	comp=Z,100nm,5.3s								
SADO	**Sadowa**	**71.01**	**312**	LR		LR	09 57 15.2		
	comp=Z,49nm,19.3s,baz=224,slow=36								
ILAR	**Eielson Array**	**76.86**	**355**	P		**P**	**09 26 17.3**	**+0.7**	
	comp=Z,0.3nm,0.7s,baz=0.2,slow=1.9,SNR=4.6								
PDAR	**Pinedale Array**	**88.06**	**327**	P		**P**	**09 27 13.7**	**-2.1**	
	comp=Z,0.3nm,0.7s,baz=97,slow=6.0,SNR=3.5								
TXAR	**Lajitas Array**	**95.69**	**315**	P		**P**	**09 27 51.5**	**+0.3**	
	comp=Z,0.5nm,0.9s,

	baz=328,SNR=23							
BFSC				S		Sb	09 23 33.0	-0.2
	baz=328							
SSK	**Sunset Peak**	**1.28**	**149**			**Pn**	**09 23 16.5**	**-0.2**
BLG	**Laguna Peak, P**	**1.29**	**202**	P		**Pn**	**09 23 16.4**	**-0.3**
	baz=21,SNR=5.2							
BLG					Sb	**Sn**	**09 23 35.2**	**+1.2**
	baz=21							
GVRC	**Garvey Reservo**	**1.29**	**166**			**Pn**	**09 23 17.4**	**+0.7**
RRX	**Edison Barstow**	**1.30**	**109**			**Pn**	**09 23 17.5**	**+0.6**
RRX	**Edison Barstow**	**1.30**	**109**	P		**Pn**	**09 23 16.3**	**-0.6**
	baz=290,SNR=12							
RRX				S		**Sb**	**09 23 33.6**	**-0.4**
	baz=290							
SBC	**Santa Barbara**	**1.32**	**229**	S		**Sb**	**09 23 34.7**	**+0.1**
	baz=48							
CGO	**Cerro Gordo**	**1.36**	**24**			**Pn**	**09 23 18.0**	**0.0**
SS2	**San Sevaine**	**1.37**	**143**			**Pn**	**09 23 18.5**	**+0.7**
GSC	**Goldstone, Bar**	**1.38**	**90**			**Pn**	**09 23 17.3**	**-0.8**
GSC	**Goldstone, Bar**	**1.38**	**90**	P		**Pn**	**09 23 17.2**	**-0.8**
	baz=271,SNR=105							
QSM	**Queen of Sheba**	**1.48**	**63**			**Pn**	**09 23 19.3**	**0.0**
PAGB	**Antelope Grade**	**1.49**	**287**			**Pn**	**09 23 18.9**	**-0.6**
FMP	**Fort Macarthur**	**1.60**	**174**	Pg		**Pb**	**09 23 22.9**	**+0.6**
	baz=354							
SCZ2	**Santa Cruz Isl**	**1.61**	**216**	S		**Sn**	**09 23 41.8**	**-0.2**
	baz=35							
BTL	**Butler Peak**	**1.62**	**130**			**Pb**	**09 23 23.2**	**+0.5**
BBRC	**Big Bear Solar**	**1.67**	**128**			**Pb**	**09 23 24.1**	**+0.6**
BBRC	**Big Bear Solar**	**1.67**	**128**	Pg		**Pb**	**09 23 23.9**	**+0.4**
	baz=310,SNR=12							
TIN	**Tinemaha, Big**	**1.75**	**7**	Pb		**Pb**	**09 23 24.8**	**-0.2**
	baz=187,SNR=8.6							
SME	**Santa Rosa Min**	**1.76**	**147**			**Pn**	**09 23 23.1**	**-0.1**
FURC	**Furnace Creek,**	**1.76**	**48**	Pg		**Pb**	**09 23 25.4**	**+0.5**
	baz=229,SNR=35							
GATR	**Gnd/Air Tx Cnt**	**1.81**	**246**			**Pb**	**09 23 26.3**	**+0.4**
HEC	**Hector,Ludlow**	**1.84**	**105**	P		**Pn**	**09 23 23.6**	**-0.7**
	baz=286,SNR=7.1							
SHOC	**Shoshone, Teco**	**1.90**	**71**	P		**Pn**	**09 23 24.7**	**-0.5**
	baz=253,SNR=24							
CIS	**Catalina Islan**	**1.91**	**178**	P		**Pn**	**09 23 25.2**	**0.0**
	baz=358							
GRAC	**Grapevine Rang**	**1.92**	**28**			**Pb**	**09 23 28.0**	**+0.3**
GRAC	**Grapevine Rang**	**1.92**	**28**	Pg		**Pb**	**09 23 28.2**	**+0.5**
	baz=209							
FRI	**Friant**	**1.94**	**330**			**Pn**	**09 23 26.5**	**+0.8**
MURC	**Murrieta**	**2.02**	**147**			**Pn**	**09 23 27.0**	**+0.3**
MURC	**Murrieta**	**2.02**	**147**	P		**Pn**	**09 23 26.6**	**-0.1**
	baz=328,SNR=7.6							
DGR	**Domenigoni Val**	**2.06**	**143**			**Pn**	**09 23 27.3**	**-0.1**
POB	**Polly Butte**	**2.08**	**141**			**Pn**	**09 23 27.8**	**+0.2**
PMPB	**Monarch Peak**	**2.08**	**296**	Pn		**Pn**	**09 23 27.9**	**+0.2**
TUQ	**Turquoise Moun**	**2.10**	**86**	P		**Pn**	**09 23 27.1**	**-0.9**
	baz=267,SNR=15							
AMDNV	**Amargosa**	**2.13**	**57**			**Pn**	**09 23 28.0**	**-0.2**
MLAC	**Mammoth, Mammo**	**2.33**	**353**			**Pb**	**09 23 35.2**	**+0.2**
MLAC	**Mammoth, Mammo**	**2.33**	**353**	Pb		**Pb**	**09 23 34.5**	**-0.4**
	baz=173,SNR=11							
MMIM	**Miami Mountain**	**2.33**	**335**			**Pn**	**09 23 33.0**	**+1.9**
OMMB	**Old Mammoth Mi**	**2.33**	**350**			**Pb**	**09 23 33.9**	**-1.1**
MCSM	**Casa Diablo Ho**	**2.36**	**352**			**Pb**	**09 23 35.7**	**+0.2**
MDPB	**Devils Postpil**	**2.37**	**349**			**Pb**	**09 23 34.8**	**-0.7**
MDPB						**Sb**	**09 24 05.3**	**+0.5**
PFO	**Pinyon Flats O**	**2.39**	**135**			**Pn**	**09 23 31.7**	**-0.2**
PFO	**Pinyon Flats O**	**2.39**	**135**	P		**Pn**	**09 23 31.6**	**-0.4**
	baz=316,SNR=13							
XPFO	**Pion Flat**	**2.39**	**135**			**Pn**	**09 23 31.7**	**-0.2**
MTPC	**Mountain Pass**	**2.41**	**85**			**Pn**	**09 23 32.0**	**-0.2**
BELC	**Belle Mtn. Jos**	**2.44**	**122**	P		**Pn**	**09 23 32.1**	**-0.5**
	baz=303,SNR=7.9							
TPNV	**Topopah Spring**	**2.44**	**47**			**Pn**	**09 23 33.0**	**+0.3**
HAY	**Hayfield**	**2.82**	**124**			**Pn**	**09 23 37.8**	**0.0**
SHPR	**Sheep Range**	**2.96**	**65**			**Pb**	**09 23 47.2**	**+1.6**
IRM	**Iron Mountain**	**2.99**	**112**	P		**Pn**	**09 23 38.8**	**-1.3**
	baz=294,SNR=6.7							
BAR	**Barrett**	**3.03**	**149**			**Pb**	**09 23 45.5**	**-1.2**
CMB	**Columbia Colle**	**3.12**	**331**			**Pn**	**09 23 44.8**	**+2.9**
NV11	**Mina Array Sit**	**3.13**	**5**			**Pb**	**09 23 49.9**	**+1.5**
WAKR	**Walker**	**3.28**	**347**			**Pb**	**09 23 50.5**	**-0.5**
RYN	**Ryan**	**3.31**	**360**			**Pb**	**09 23 53.1**	**+1.5**
YERR	**Yerington**	**3.72**	**351**			**Pb**	**09 23 59.5**	**+1.0**
KVN	**Kaiserville**	**3.75**	**5**			**Pb**	**09 24 00.4**	**+1.4**
W13A	**Hualapai Mount**	**3.78**	**92**			**Pb**	**09 24 02.3**	**+2.7**

*IDC **29** 09:34:28.5±1.0, 14°.98S×172°.26W, h0km, mb4.0/7, mb1 4.3/7, mb1mx3.9/45, mbtmp4.0/7, MS3.4/6, Ms1 3.4/6, ms1mx3.2/28, Error ellipse: s-maj=48.9km s-min=15.1km az=125.0*

*NEIC **29** 09:34:29.3±2.1, 15°.17S±0°.05×171°.9W±0°.2, h23km±5km, mb4.4/11, Error ellipse: s-maj=31.5km s-min=5.3km az=99.0*

ISC 29 09:34:29.7±0.6, 15°.01S±0°.10×172°.1W±0°.2, h18km, n33, σ1§74/30, mb4.2/10, MS3.5/5, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.15**	**17**	Pn	**Pn**	**09 34 51.0**	**0.0**
	104nm,0.3s,baz=198,slow=1.8,SNR=128						
AFI				Sn	**Sg**	**09 35 08.0**	**+1.1**
	526nm,0.3s,baz=246,slow=14,SNR=23						
AFI				LR	LR	09 35 23.0	
	comp=Z,168nm,18.3s,baz=198,slow=47						
AFI	**Afiamalu**	**1.15**	**17**		**Pn**	**09 34 50.8**	**-0.1**
AFI					**Sg**	**09 35 07.8**	**+0.8**
NIUE	**Niue**	**4.55**	**153**		Pn	09 35 24.9	-13
NIUE					Sn	09 36 07.9	-22
MSVF	**Nonsavu**	**9.81**	**253**		Pn	09 36 36.4	-14
MSVF					Sn	09 38 27.9	-12
KNTN	**Kanton**	**12.17**	**2**	Pn	**Pn**	**09 37 19.7**	**-2.6**
RAR	**Rarotonga**	**13.26**	**120**	LR	LR	09 42 25.3	
	comp=Z,36nm,18.3s,baz=6.0,slow=36						
DZM	**Mont Dzumac**	**21.49**	**248**	LR	LR	09 46 14.3	
	comp=Z,195nm,20.9s,baz=55,slow=33						
PPT	**Papeete**	**21.79**	**100**	LR	LR	09 45 05.2	
	comp=Z,56nm,19.7s,baz=178,slow=29						
URZ	**Urewera**	**25.04**	**200**	P	**P**	**09 39 53.3**	**+0.5**
	4.9nm,0.5s,baz=348,slow=9.3,SNR=14						
URZ	**Urewera**	**25.04**	**200**	P	**P**	**09 39 52.5**	**-0.4**
URZ				IAmb	IAmb	09 40 04.0	
	comp=Z,26nm,1.5s						
BKZ	**Black Stump Fm**	**26.06**	**200**	P	**P**	**09 40 03.6**	**+1.3**
BKZ				IAmb	IAmb	09 40 09.2	
	comp=Z,11nm,1.1s						
HNR	**Honiara**	**27.84**	**278**	LR	LR	09 49 44.6	
	comp=Z,88nm,20.8s,baz=98,slow=33						
QRZ	**Quartz Range**	**28.98**	**204**	P	**P**	**09 40 32.2**	**+3.9**
MCQ	**Macquarie Isla**	**45.38**	**203**	P	**P**	**09 42 46.7**	**-0.2**
BBOO	**Buckleboo**	**50.07**	**240**	P	**P**	**09 43 22.6**	**-1.2**
WB0	**Warramunga Arr**	**51.09**	**257**	P	**P**	**09 43 32.5**	**+0.8**
WB0				IAmb	IAmb	09 43 46.7	
	comp=Z,6.1nm,1.4s						
WB2	**Warramunga Arr**	**51.12**	**256**	P	**P**	**09 43 32.4**	**+0.5**
WRA	**Warramunga Arr**	**51.13**	**256**	P	**P**	**09 43 32.5**	**+0.5**
	comp=Z,1.6nm,0.9s,baz=92,slow=7.0,SNR=7.1						
WRA				LR	LR	10 04 30.1	
	comp=Z,46nm,18.0s,baz=215,slow=35						
AS31	**Alice Springs**	**51.40**	**252**	P	**P**	**09 43 33.9**	**-0.1**
ASAR	**Alice Springs**	**51.40**	**252**	P	**P**	**09 43 33.5**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=88,slow=7.9,SNR=38						
ASAR				LR	LR	10 06 13.2	
	comp=Z,76nm,18.1s,baz=140,slow=37						
ASAR	**Alice Springs**	**51.40**	**252**	P	**P**	**09 43 33.3**	**-0.7**
NVAR	**Mina Array Bea**	**73.22**	**41**	P	**P**	**09 46 01.9**	**+1.9**
	comp=Z,0.8nm,0.7s,baz=231,slow=10,SNR=7.0						
QSPA	**South Pole Qui**	**75.03**	**180**	P	**P**	**09 46 08.4**	**-1.8**
QSPA				IAmb	IAmb	09 46 26.0	
	comp=Z,3.4nm,1.1s						
ILAR	**Eielson Array**	**81.83**	**11**	P	**P**	**09 46 49.4**	**+2.0**
	comp=Z,0.5nm,0.9s,baz=208,slow=4.5,SNR=4.6						
RWWY	**Rawlins**	**82.16**	**43**	P	**P**	**09 46 45.4**	**-4.6**
INK	**Inuvik**	**87.60**	**13**	P	**P**	**09 47 18.5**	**+2.2**
	comp=Z,1.1nm,1.0s,baz=225,slow=1.4,SNR=3.5						
INK	**Inuvik**	**87.60**	**13**	P	**P**	**09 47 19.1**	**+2.7**
INK				IAmb	IAmb	09 47 37.0	
	comp=Z,2.6nm,1.4s						
YKA	**Yellowknife Ar**	**89.26**	**23**	P	**P**	**09 47 26.3**	**+2.0**
	comp=Z,0.6nm,1.1s,baz=238,slow=4.7,SNR=8.3						
GERES	**GERESS Array B**	**145.92**	**353**	PKPbc	**PKPab**	**09 54 10.2**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=90,slow=1.3,SNR=4.3						
BRTR	**Keskin Array B**	**146.62**	**322**	PKPbc	**PKiKP**	**09 54 12.9**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=29,slow=3.1,SNR=5.8						
BRTR	**Keskin Array B**	**146.62**	**322**		**PKPdf**	**09 54 08.2**	**-1.0**
BRTR				PKPbc	**PKiKP**	**09 54 13.3**	**-0.3**
KMBO	**Kilima Mbogo**	**146.81**	**244**	PKPbc	**PKPab**	**09 54 14.0**	**+0.5**
	comp=Z,1.1nm,0.3s,baz=71,slow=13,SNR=3.2						
KMBO	**Kilima Mbogo**	**146.81**	**244**		**PKPdf**	**09 54 09.4**	**-1.0**

*SNET **29** 09:41:23.7±2.3, 12°.42N×89°.07W, h0km±15km, ML3.4*

*NEIC **29** 09:41:28.4±0.8, 12°.62N±0°.07×88°.96W±0°.08, h40km±15km, mb4.3/17, Error ellipse: s-maj=12.8km s-min=8.3km az=45.0*

ISC 29 09:41:22.7±1.9, 12°.40N±0°.07×89°.07W±0°.05, h0km±11km, n44, σ1§48/54, mb4.4/6, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALJI	**Alcalda de J**	**1.04**	**28**	*eP*	**Pb**	**09 41 44.2**	**+0.5**
ALJI				IAML		09 41 53.0	
	comp=Z,630nm,0.6s						
ALJI				*eS*	**Sb**	**09 41 57.8**	**0.0**
JUCU	**Jucuaŗn**	**1.17**	**43**	*eP*	**Pg**	**09 41 45.8**	**+0.7**
JUCU				*eS*	**Sn**	**09 42 03.1**	**0.0**
JUCU				IAML		09 42 08.6	
	comp=Z,1μm,0.3s						
COEB	**Comit de Eme**	**1.21**	**26**	*eP*	**Pg**	**09 41 46.3**	**+0.3**
COEB				IAML		09 42 20.2	
	comp=Z,583nm,0.5s						
TECA	**Tecapa**	**1.22**	**27**	*eP*	**Pg**	**09 41 46.8**	**+0.6**
COEG	**Centro de Oper**	**1.22**	**9**	*eP*	**Pg**	**09 41 46.2**	**0.0**
COEG				*eS*	**Sn**	**09 42 04.5**	**0.0**
COEG				IAML		09 42 09.3	
	comp=Z,392nm,0.3s						
LCY	**Lacayo**	**1.27**	**37**	*eP*	**Pg**	**09 41 47.8**	**+0.8**
PACA	**Pacayal**	**1.28**	**34**	*eP*	**Pg**	**09 41 47.6**	**+0.2**
SNET	**Serv Nac Est T**	**1.28**	**353**	*eP*	**Pg**	**09 41 47.6**	**+0.2**
SNET				*eS*	**Sg**	**09 42 04.7**	**+0.5**
SNET				IAML		09 42 09.3	
	comp=Z,592nm,0.2s						
SNET	**Serv Nac Est T**	**1.28**	**353**		**Pg**	**09 41 47.1**	**-0.4**
SNET				Sn	**Sg**	**09 42 01.3**	**-2.8**
OPAM	**Oficina de Pla**	**1.31**	**355**	*eP*	**Pn**	**09 41 49.1**	**+0.8**
OPAM				IAML		09 42 08.2	
	comp=Z,432nm,0.2s						
PAVA	**Las Pavas**	**1.31**	**6**	*eP*	**Pg**	**09 41 47.9**	**0.0**
PAVA				*eP*	**Sb**	**09 42 06.7**	**+1.0**
PAVA				IAML		09 42 13.6	
	comp=Z,687nm,0.4s						
LFU	**La Fuente**	**1.34**	**358**	*eP*	**Pg**	**09 41 48.6**	**+0.2**
LCND	**La Caada**	**1.46**	**52**	*eP*	**Pn**	**09 41 49.8**	**-0.6**
LCND				*eS*	**Sn**	**09 42 11.8**	**+1.6**
LCND				IAML		09 42 16.9	
	comp=Z,684nm,0.3s						
CNCH	**Conchagua**	**1.49**	**54**	*eP*	**Pn**	**09 41 50.6**	**-0.2**
CNCH				*eS*	**Sn**	**09 42 14.5**	**+3.4**
CNCH				IAML		09 42 19.7	
	comp=Z,2μm,0.5s						
CEVE	**Cerro Verde**	**1.52**	**339**	*eP*	**Pn**	**09 41 51.3**	**-0.1**
CEVE				*eS*	**Sn**	**09 42 16.9**	**+4.9**
CEVE				IAML		09 42 22.2	
	comp=Z,1μm,0.3s						
SBLS	**San Blas**	**1.52**	**339**	*eP*	**Pn**	**09 41 52.3**	**+0.8**
SNJE	**San Jose**	**1.55**	**340**	*eP*	**Pn**	**09 41 52.2**	**+0.4**
RTR	**El Retiro**	**1.59**	**339**	*eP*	**Pn**	**09 41 52.9**	**+0.6**
FAGO	**Alcalda de S**	**1.59**	**36**	*eP*	**Pn**	**09 41 52.4**	**+0.2**
FAGO				*eS*	**Sg**	**09 42 14.7**	**+0.7**
FAGO				IAML		09 42 19.8	
	comp=Z,185nm,0.3s						
TGUH	**Tegucigalpa,Un**	**2.40**	**47**		**Pn**	**09 42 03.7**	**+0.2**
ESTN	**Estel**	**2.73**	**75**		**Pn**	**09 42 07.7**	**-0.2**
ACON	**Acoyapa**	**3.83**	**96**	Pn	**Pn**	**09 42 24.0**	**+1.0**
JTS	**Las Juntas de**	**4.55**	**117**	Pn	**Pn**	**09 42 33.1**	**+0.2**
CCIG	**Comitan**	**4.87**	**323**	Pn	**Pn**	**09 42 37.5**	**+0.1**
FSCY	**Frank Sound, G**	**10.23**	**47**	Pn	**Pn**	**09 43 47.5**	**-3.5**
TLIG	**Tlapa**	**10.51**	**300**	Pn	**Pn**	**09 43 56.6**	**+1.8**
KVTX	**Kingsville**	**17.18**	**333**	P	**Pn**	**09 45 23.5**	**-0.9**
435B	**Jarrell**	**19.91**	**338**	P	**P**	**09 45 55.1**	**-0.9**
435B				IAmb	IAmb	09 45 56.3	
	comp=Z,11nm,0.8s						
NATX	**Nacogdoches**	**19.94**	**346**	P	**P**	**09 45 55.0**	**-1.4**
NATX				IAmb	IAmb	09 45 59.9	
	comp=Z,11nm,1.0s						
JCT	**Junction City**	**20.55**	**333**	P	**P**	**09 46 02.1**	**-0.9**
TXAR	**Lajitas Array**	**21.64**	**323**	P	**P**	**09 46 16.0**	**+1.2**
TX31	**Lajitas Ar. Si**	**21.64**	**323**	P	**P**	**09 46 16.1**	**+1.3**
TX32	**Lajitas Array**	**21.64**	**323**	P	**P**	**09 46 16.1**	**+1.3**
MIAR	**Mount Ida**	**22.42**	**350**	P	**P**	**09 46 22.4**	**-0.7**
MIAR				IAmb	IAmb	09 46 24.6	
	comp=Z,7.3nm,0.8s						
HBAR	**Harrisburg**	**23.09**	**357**	P	**P**	**09 46 28.8**	**-1.4**
BG3	**Lake Jocassee**	**23.17**	**13**	P	**P**	**09 46 29.1**	**-1.9**
FNO	**Franklin**	**23.97**	**343**	P	**P**	**09 46 37.7**	**-1.2**
HICK	**Hickman**	**24.03**	**360**	P	**P**	**09 46 37.3**	**-2.2**
U40A	**Yellville**	**24.09**	**353**	P	**P**	**09 46 39.2**	**-0.8**
U40A				IAmb	IAmb	09 46 41.4	
	comp=Z,4.1nm,0.8s						
MGMO	**Mountain Grove**	**24.81**	**354**	P	**P**	**09 46 45.5**	**-1.1**
MGMO				IAmb	IAmb	09 46 47.3	
	comp=Z,9.1nm,0.7s						
CCM	**Cathedral Cave**	**25.62**	**356**	P	**P**	**09 46 52.0**	**-1.9**
CCM				IAmb	IAmb	09 46 53.1	
	comp=Z,11nm,0.8s						
WCI	**Wyandotte Cave**	**25.84**	**5**	P	**P**	**09 46 54.0**	**-1.8**
WCI				IAmb	IAmb	09 46 54.6	
	comp=Z,3.6nm,0.7s						
SPMN	**Marine on St.**	**32.86**	**355**	P	**P**	**09 47 55.5**	**-2.8**
SPMN				IAmb	IAmb	09 47 56.6	
	comp=Z,7.0nm,0.7s						
GAMB	**Gambell**	**75.71**	**333**	P	**P**	**09 53 08.5**	**-1.3**

*SJA **29** 10:01:49.2±0.7, 18°.58S×69°.67W, h132km±3km, ML5.4, MW5.1*

*GUC **29** 10:01:49.9±0.7, 18°.56S×69°.60W, h122km±4km, ML5.3*

*VAO **29** 10:01:50.8±0.7, 18°.48S×69°.22W, h110km±7km, mb5.5*

*NEIC **29** 10:01:50.7±2.3, 18°.51S±0°.04×69°.37W±0°.07, h120km±3km, mb5.4/414, Mwb5.6/37, Mww5.6, ML5.3(GUC), ML5.4(ARE), Mwc5.7(GCMT), Error ellipse: s-maj=9.1km s-min=6.1km az=99.0, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}=0.03; $M_{\theta\theta}$=0.19; $M_{\phi\phi}$0.22; $M_{r\theta}$=0.56; $M_{\theta\phi}$ 1.46; $M_{\phi r}$-3.21; Fault plane solution: $M_0$3.58000×10^{17} NP1: ϕ_s5.00000°, δ88.41000°, λ-113.22000°. NP2:ϕ_a271.30000°, δ23.27000°, λ-4.02000°. Principal axes: T 3.8353, Plg39.0000°, Azm116.0000°; N -0.5774, Plg23.0000°, Azm6.0000°; P -3.2580, Plg42.0000°, Azm253.0000°;*

*MOS **29** 10:01:50.0±1.4, 18°.41S×69°.34W, h118km, mb5.5/44 Error ellipse: s-maj=9.5km s-min=5.5km az=109.5*

*IDC **29** 10:01:51.8±0.3, 18°.58S×69°.27W, h122km±2km, mb4.9/28, mb1 5.0/32, mb1mx4.9/39, mbtmp5.3/32, MS4.4/17, Ms1 4.4/17, ms1mx4.3/25, Error ellipse: s-maj=8.2km s-min=6.2km az=103.0*

*NEIC **29** 10:01:52, 18°.51S×68°.83W, h150km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-1.02; $M_{\theta\theta}$0.24; $M_{\phi\phi}$0.78; $M_{r\theta}$-0.18; $M_{\theta\phi}$1.13; $M_{\phi r}$-2.49; Fault plane solution: $M_0$2.89000×10^{17} NP1:ϕ_s251.00000°, δ24.00000°, λ-29.00000°. NP2:ϕ_a8.00000°, δ79.00000°, λ-110.00000°. Principal axes: T 2.9269, Plg31.0000°, Azm115.0000°; N -0.0711, Plg20.0000°, Azm12.0000°; P -2.8558, Plg52.0000°, Azm254.0000°;*

*BJI **29** 10:01:53.0±0.0, 18°.60S×69°.40W, h120km, mB5.4/22*

*GCMT **29** 10:01:54.7±0.1, 18°.65S±0°.01×69°.64W±0°.01, h136km, MW5.7/150, Moment Tensor Solution. s129,c222; s150,c291; Duration: 1s7 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.84±.04; $M_{\theta\theta}$-0.33±.04; $M_{\phi\phi}$ 1.17±.05; $M_{r\theta}$0.59±.03; $M_{\theta\phi}$1.84±.04; $M_{\phi r}$-3.24±.04; Best double couple: $M_0$3.91400×10^{17} NP1:ϕ_s252.00000°, δ31.00000°, λ-14.00000°. NP2:ϕ_a355.00000°, δ83.00000°, λ-120.00000°. Principal axes: T 3.8870, Plg31.0000°, Azm109.0000°; N 0.0560, Plg30.0000°, Azm359.0000°; P -3.9410, Plg44.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NEIC **29** 10:01:56, 18°.69S×69°.64W, h135km, Moment Tensor Solution. Moment tensor: Scale 10^{17}Nm; M_{rr}-0.83; $M_{\theta\theta}$-0.29; $M_{\phi\phi}$ 1.12; $M_{r\theta}$0.61; $M_{\theta\phi}$1.97; $M_{\phi r}$-3.30; Fault plane solution: $M_0$4.02000×10^{17} NP1:ϕ_s254.00000°, δ32.00000°, λ-13.00000°. NP2:ϕ_a355.00000°, δ83.00000°, λ-121.00000°. Principal axes: T 3.9653, Plg31.0000°, Azm110.0000°; N 0.1070, Plg31.0000°, Azm359.0000°; P -4.0723, Plg43.0000°, Azm235.0000°;*

ISC 29 10:01:50.4±0.2, 18°.55S±0°.03×69°.42W±0°.04, h117km±2km, h117km:pP-P, n1272, σ1§28/1481, mb5.4/244, 6C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB16	**IPOC Station P**	**0.23**	**340**	*eP*	**Pn**	**10 02 08.3**	**+0.8**
PB16				*i* S	**Sn**	**10 02 22.2**	**+1.9**
PB16				IAML		10 02 24.2	
	comp=N,160μm,0.4s						
PB16	**IPOC Station P**	**0.23**	**340**	*i* P	**Pn**	**10 02 08.6**	**+1.0**
PB16				*i* S	**Sn**	**10 02 21.9**	**+1.7**
MNMC	**Minye Minye**	**0.60**	**196**	*eP*	**Pn**	**10 02 09.6**	**+0.6**
MNMC				*i* S	**Sn**	**10 02 24.6**	**+1.6**
MNMC	**Minye Minye**	**0.60**	**196**		**Pn**	**10 02 10.1**	**+1.1**
MNMC				Sn	**Sn**	**10 02 24.8**	**+1.8**
MNMCX	**Minye Minye**	**0.60**	**196**	*i* P	**Pn**	**10 02 10.0**	**+1.0**
MNMCX				*i* S	**Sn**	**10 02 24.4**	**+1.4**
AP01	**Chacalluta**	**0.89**	**282**	*eP*	**Pn**	**10 02 09.9**	**-1.2**
GO01	**Chusmiza**	**1.13**	**169**	*eP*	**Pn**	**10 02 15.4**	**+1.3**
GO01				*i* S	**Sn**	**10 02 34.6**	**+2.8**
GO01	**Chusmiza**	**1.13**	**169**		**Pn**	**10 02 15.8**	**+1.8**
GO01				Sn	**Sn**	**10 02 34.9**	**+3.0**
PB11	**IPOC Station P**	**1.22**	**190**	*eP*	**Pn**	**10 02 15.1**	**+0.4**
PB11				*i* S	**Sn**	**10 02 33.8**	**+0.7**
PB11				IAML		10 02 35.4	
	comp=E,75μm,0.4s						
PB11	**IPOC Station P**	**1.22**	**190**		**Pn**	**10 02 15.9**	**+1.2**
PB11				Sn	**Sn**	**10 02 34.1**	**+1.0**
PB11	**IPOC Station P**	**1.22**	**190**	*i* P	**Pn**	**10 02 15.4**	**+0.7**
PB11				*i* S	**Sn**	**10 02 33.9**	**+0.9**
PSGC	**Pisagua**	**1.23**	**212**	*eP*	**Pn**	**10 02 14.0**	**-0.7**
PSGC				*i* S	**Sn**	**10 02 32.2**	**-0.9**
PSGCX	**Pisagua**	**1.23**	**212**	*i* P	**Pn**	**10 02 14.3**	**-0.5**
PSGCX				*i* S	**Sn**	**10 02 32.3**	**-0.9**
PB08	**IPOC Station P**	**1.60**	**171**	*eP*	**Pn**	**10 02 20.4**	**+1.2**
PB08				*i* S	**Sn**	**10 02 43.0**	**+1.9**
PB08				IAML		10 02 44.6	
	comp=E,33μm,0.5s						
PB08	**IPOC Station P**	**1.60**	**171**	*i* P	**Pn**	**10 02 20.6**	**+1.4**
PB08				*i* S	**Sn**	**10 02 43.0**	**+1.9**
PATCX	**Punta Patache**	**2.36**	**197**	*i* P	**Pn**	**10 02 27.7**	**-0.7**
PB01	**IPOC Station P**	**2.48**	**181**		**Pn**	**10 02 30.6**	**+0.7**
PB01				Sn	**Sn**	**10 03 00.5**	**+0.3**
PB01	**IPOC Station P**	**2.48**	**181**	*i* P	**Pn**	**10 02 30.1**	**+0.2**
PB01				*i* S	**Sn**	**10 02 59.5**	**-0.7**
I08BO	**LAS PENAS INFR**	**2.50**	**22**	P	**Pn**	**10 02 34.9**	**+4.2**
	baz=226,slow=16,SNR=8.1						
LPAZ	**La Paz**	**2.57**	**29**	P	**Pn**	**10 02 34.5**	**+2.8**
	comp=E,432nm,0.3s,baz=204,slow=6.0,SNR=3809						
LPAZ				S	**Sn**	**10 03 07.7**	**+4.5**
	comp=E,50nm,0.3s,baz=10,slow=13,SNR=8.2						
LPAZ	**La Paz**	**2.57**	**29**		**Pn**	**10 02 34.8**	**+3.2**
PB07	**IPOC Station P**	**3.19**	**188**	*eP*	**Pn**	**10 02 38.8**	**-0.5**
PB07	**IPOC Station P**	**3.19**	**188**	*i* P	**Pn**	**10 02 39.3**	**+0.1**
PB07				*i* S	**Sn**	**10 03 14.7**	**-2.3**
PB09	**IPOC Station P**	**3.23**	**177**	*eP*	**Pn**	**10 02 40.5**	**+0.6**
PB09	**IPOC Station P**	**3.23**	**177**	*i* P	**Pn**	**10 02 40.3**	**+0.5**
PB09				IAML		10 03 49.2	
	comp=Z,7μm,0.5s						
PB03	**IPOC Station P**	**3.49**	**185**	*i* P	**Pn**	**10 02 43.0**	**-0.3**
PB03				*i* S	**Sn**	**10 03 21.2**	**-3.0**
PB04	**IPOC Station P**	**3.82**	**190**		**Pn**	**10 02 46.0**	**+0.3**
PB04	**IPOC Station P**	**3.82**	**190**	*i* P	**Pn**	**10 02 46.8**	**-0.9**
PB04				IAML		10 03 34.0	
	comp=Z,7μm,0.3s						
LVC	**Limon Verde**	**4.06**	**173**	P	**Pn**	**10 02 52.0**	**+0.9**
	comp=Z,110nm,0.3s,baz=352,slow=8.7,SNR=675						
LVC				S	**

comp=Z,0.8nm,0.3s,baz=147,slow=13,SNR=14
ATAH S **Sn** **10 07 45.3 -1.4**
comp=Z,0.8nm,0.3s,baz=39,slow=14,SNR=1.9
ROC1 El Roble 14.43 185 **Pn** **10 05 09.1 -0.4**
AAGR Agrelo 14.48 178 *i* P **Pn** **10 05 08.5 -1.5**
PEL Peldehue 14.57 184 P **Pn** **10 05 10.6 -0.4**
PEL Peldehue 14.57 184 **Pn** **10 05 10.6 -0.4**
CLDB Colider 15.23 62 *e*P **Pn** **10 05 16.5 -2.9**
TRCB Terra Rica 16.27 108 *e*P **Pn** **10 05 31.8 -0.4**
COIS El Sosneado 16.49 180 *i* P **Pn** **10 05 34.4 -0.5**
GO05 Huala 16.54 187 P **P** **10 05 36.8 +0.8**
ARAG Araguaiana, MT 17.07 83 *e*P **P** **10 05 41.4 -0.6**
PTGB Pitanga 17.26 114 *e*P **P** **10 05 44.0 -0.1**
PCMB Pacaembu 17.33 103 *e*P **P** **10 05 44.1 -0.7**
ITAB Concordia 18.11 122 *e*P **P** **10 05 53.2 -0.2**
FRTB Fartura 19.15 108 *e*P **P** **10 06 04.5 -0.3**
LPA La Plata 19.23 150 *i* P P 10 05 57.1 -8.3
LPA pP pP 10 06 21.8 -6.2
LPA S S 10 09 25.2 -12
LPA PCP **PcP** **10 10 17.5 -6.4**
LPA SCS ScS 10 17 19.0 -12
LPA PKIKP **PKiKP** **10 18 12.1 -1.8**
LPA SKIKS 10 25 02.3
CANA Caviahue 19.32 184 *i* P **Pn** **10 06 08.5 -0.3**
CANA IAML 10 06 15.5
comp=Z,60nm,0.7s
PTLC Puerto Leguiza 19.34 344 *e*P pP 10 06 25.4 -4.2
PLTB Pedras Altas 19.41 136 *e*P **P** **10 06 06.7 -0.8**
CNLB Canela 20.04 126 *e*P **P** **10 06 13.1 -1.3**
IPMB Ipameri, GO 20.15 92 *e*P **P** **10 06 14.4 -1.3**
BDFB Brasilia 20.67 85 P **P** **10 06 20.0 -1.3**
comp=Z,94nm,0.5s,baz=266,slow=9.2,SNR=37
BDFB S **S** **10 10 02.5 -3.5**
comp=Z,6.9nm,0.7s,baz=148,slow=17,SNR=1.6
BDFB Brasilia 20.67 85 P **P** **10 06 20.2 -1.1**
BDFB IAmb IAmb 10 06 25.7
comp=Z,128nm,0.8s
OTAV Otavalo 20.67 334 P **P** **10 06 22.3 +0.6**
OTAV pmax pmax
comp=Z,35nm,0.9s
OTAV Otavalo 20.67 334 *e*P **P** **10 06 23.2 +1.5**
OTAV Otavalo 20.67 334 P **P** **10 06 22.3 +0.6**
RCLB Rio Claro- Sao 20.86 104 *e*P **P** **10 06 22.1 -1.2**
FLOC Florencia 20.93 342 *e*P Pn 10 06 26.1 -1.7
FLOC Florencia 20.93 342 P **P** **10 06 24.2 +0.2**
MACC Macarena, Meta 21.02 348 *e*P pP 10 06 56.6 +8.6
SPB Sao Paulo 21.12 108 *e*P **P** **10 06 23.4 -2.5**
SPB Sao Paulo 21.12 108 P **P** **10 06 24.9 -1.1**
SPB IAmb IAmb 10 06 34.4
comp=Z,149nm,1.0s
VAO Valinhos 21.45 106 *e*P **P** **10 06 28.6 -1.0**
SOTA Rioblanco 21.74 340 *e*P pP 10 06 59.9 +3.5
BBAC Balboa, Cauca 21.85 339 *e*P **P** **10 06 35.4 +1.3**
PCON Cinco Dias 21.86 341 *e*P **P** **10 06 38.7 +4.2**
BETC Betania 21.92 344 *e*P pP 10 07 01.3 +3.4
PLCA Paso Flores 22.13 182 P **P** **10 06 37.4 +0.8**
comp=Z,120nm,1.0s,baz=31,slow=11,SNR=122
PLCA S **S** **10 10 35.4 +2.7**
comp=Z,7.0nm,1.2s,baz=117,slow=3.8,SNR=2.4
PLCA LR LR 10 17 37.2
comp=Z,836nm,18.1s,baz=10,slow=43
PLCA Paso Flores 22.13 182 *e*P **P** **10 06 37.5 +1.0**
PLCA Paso Flores 22.13 182 P **P** **10 06 37.5 +1.0**
PLCA IAmb IAmb 10 06 39.8
comp=Z,160nm,1.0s
PARB Paraibuna 22.72 106 *e*P **P** **10 06 41.3 -1.4**
PTGC Puerto Gaitan, 22.77 353 *e*P **P** **10 06 42.0 -1.1**
PRAC Prado 22.77 346 *e*P pP 10 07 09.9 +2.9
VILC Villavicencio, 22.91 349 *e*P **P** **10 06 45.3 +0.7**
VILC *e*P P 10 06 54.0 +9.3
HORQ Saladito 23.02 341 *e*P pP 10 07 13.2 +3.2
ORTC Ortega, Tolima 23.05 345 *e*P **P** **10 06 44.6 -1.2**
ORTC *e*P **P** **10 06 48.0 +2.1**
BSCB Bom Sucesso 23.32 100 *e*P **P** **10 06 47.4 -1.1**
CHIC Chingaza 23.43 349 *e*P pP 10 07 35.1 +21
MALC Bahia Malaga 23.74 340 *e*P **P** **10 06 56.0 +3.8**
ROSC El Rosal 23.74 348 P **P** **10 06 53.3 +0.7**
comp=Z,17nm,0.5s,baz=178,slow=9.6,SNR=5.2
ROSC pP **pP** **10 07 17.4 -0.3**
comp=Z,15nm,0.6s,baz=186,slow=23,SNR=2.0
ROSC S **S** **10 11 03.1 +3.5**
comp=Z,4.8nm,0.3s,baz=320,slow=4.7,SNR=3.7
ROSC El Rosal 23.74 348 P **P** **10 06 52.7 +0.1**
PLMC San Jos del P 24.27 343 *e*P **P** **10 06 58.6 +1.6**
PLMC *e*P **P** **10 06 59.3 +2.3**
GUY2C Guyana, Caldas 24.34 346 *e*P **P** **10 07 00.6 +2.5**
GUY2C *e*P **P** **10 07 01.9 +3.8**
SPBC San Pablo de B 24.48 349 *e*P **P** **10 07 01.9 +3.0**
RUSC La Rusia 24.56 351 *e*P **P** **10 06 59.3 -0.8**
RUSC La Rusia 24.56 351 P **P** **10 07 00.3 +0.2**
NORC Norcasia 24.56 347 *e*P **P** **10 06 58.6 -1.0**
VASS01 Vassouras-RJ 24.62 103 *e*P **P** **10 06 59.5 -0.6**
TAMC Tame, Arauca 24.94 354 *e*P **P** **10 07 03.3 +0.2**
CBOC Ciudad Bolivar 25.12 344 *e*P **P** **10 07 06.6 +1.8**
BARC Barichara 25.26 351 *e*P **P** **10 07 04.6 -1.6**
HELC Santa Helena 25.31 346 *e*P **P** **10 07 06.6 -0.2**
PTBC PUERTO BERRIO, 25.42 348 *e*P **P** **10 07 05.9 -1.5**
SOLC Bahia Solano 25.85 342 *e*P **P** **10 07 11.2 0.0**
SOLC *e*P **P** **10 07 16.5 +5.3**
DBBC Dabeiba 26.28 345 *e*P **P** **10 07 17.9 +2.7**
PTAC Punta Ardita, 26.84 341 *e*P pP 10 07 47.8 +1.0
PAYG Puerto Ayora 27.11 309 P **P** **10 07 19.9 -2.7**
SDV Santo Domingo 27.29 357 P **P** **10 07 23.8 -0.6**
comp=Z,34nm,1.2s,baz=144,slow=7.3,SNR=16
SDV pP **pP** **10 07 50.8 -0.2**
comp=Z,8.7nm,0.5s,baz=254,slow=6.1,SNR=3.5
SDV Santo Domingo 27.29 357 P **P** **10 07 22.9 -1.5**
SMLC San Martn de 27.57 350 *e*P **P** **10 07 25.2 -1.4**
MDP Montagnes des 28.74 37 P **P** **10 07 36.8 -0.3**
comp=Z,22nm,0.6s,baz=205,slow=7.8,SNR=18
SJCC San Jacinto, C 28.84 348 *e*P **P** **10 07 41.1 +3.2**
PLCV Puerto La Cruz 28.93 10 P **P** **10 07 39.6 +0.8**
PCRV Puerto La Cruz 28.94 10 P **P** **10 07 39.6 +0.7**
comp=Z,7.3nm,0.6s,baz=38,slow=9.7,SNR=3.1
JTS Las Juntas de 32.50 331 P **P** **10 08 11.8 +1.6**
JTS pmax pmax
comp=Z,30nm,1.0s
JTS Las Juntas de 32.50 331 P **P** **10 08 11.8 +1.6**
GO09 Cerro Castillo 32.73 183 P **P** **10 08 12.2 +0.3**
FDF Fort de France 34.07 14 P **P** **10 08 21.7 -2.1**
FDF pmax pmax
comp=Z,202nm,1.5s
FDF Fort de France 34.07 14 P **P** **10 08 21.7 -2.1**
ACON Acoyapa 34.08 332 P **P** **10 08 23.8 -0.1**
EFI East Falkland 34.25 167 P **P** **10 08 26.2 +1.3**
EFI pmax pmax
comp=Z,196nm,1.4s
EFI East Falkland 34.25 167 P **P** **10 08 26.2 +1.3**
RCBR Riachuelo 35.04 73 P **P** **10 08 32.2 -0.2**
RCBR pmax pmax
comp=Z,154nm,1.2s
RCBR Riachuelo 35.04 73 P **P** **10 08 31.2 -1.1**
comp=Z,66nm,0.6s,baz=239,slow=8.4,SNR=38
RCBR LR LR 10 23 31.1
comp=Z,896nm,20.0s,baz=231,slow=37
RCBR Riachuelo 35.04 73 *e*P **P** **10 08 32.4 0.0**
RCBR Riachuelo 35.04 73 P **P** **10 08 32.2 -0.2**
ESTN Estel 35.62 331 P **P** **10 08 35.5 -1.7**
ESTN IAmb IAmb 10 08 39.5
comp=Z,109nm,1.4s
USHA Ushuaia 36.22 179 P **P** **10 08 43.6 +1.8**
comp=Z,24nm,0.8s,baz=13,slow=5.0,SNR=8.0
SJG San Juan 36.58 5 P **P** **10 08 43.3 -1.9**
SJG pmax pmax
comp=Z,56nm,1.1s
SJG San Juan 36.58 5 P **P** **10 08 43.3 -1.9**
SJG IAmb IAmb 10 08 49.3
comp=Z,56nm,1.1s
TGUH Tegucigalpa,Un 36.87 330 P **P** **10 08 48.5 +0.6**
TGUH IAmb IAmb 10 08 50.1
comp=Z,82nm,1.0s
SMRT St. Maarten 36.91 10 P **P** **10 08 45.7 -2.4**
SMRT IAmb IAmb 10 08 46.3
comp=Z,46nm,0.6s
SMRT pP **pP** **10 09 12.2 -3.2**
DR12 Loma Pena Alta 37.11 0 P **P** **10 08 49.3 -0.5**
SDDR Presa de Saban 37.35 357 P **P** **10 08 50.7 -1.2**
MTDJ Mount Denham 37.41 347 P **P** **10 08 51.9 -0.5**
MTDJ IAmb IAmb 10 09 02.6
comp=Z,110nm,1.4s
RPN Rapa Nui 37.63 249 P **P** **10 08 57.1 +2.9**
RPN pmax pmax
comp=Z,235nm,0.9s
RPN Rapa Nui 37.63 249 P **P** **10 08 57.7 +3.6**
comp=Z,174nm,0.7s,baz=138,slow=3.6,SNR=9.2
RPN Rapa Nui 37.63 249 P **P** **10 08 57.1 +2.9**
CCIG Comitan 41.21 326 P **P** **10 09 24.9 +0.7**
CCIG IAmb IAmb 10 09 26.3
comp=Z,103nm,1.4s
TEIG Tepich 42.74 333 P **P** **10 09 36.5 +0.2**
TEIG IAmb IAmb 10 09 37.7
comp=Z,102nm,0.9s
HOPE Hope Point 43.69 153 P **P** **10 09 43.9 +0.3**
HOPE pmax pmax
comp=Z,93nm,0.9s
HOPE Hope Point 43.69 153 P **P** **10 09 43.9 +0.3**
HOPE IAmb IAmb 10 09 46.4
comp=Z,93nm,0.9s
061Z Ochoppi 45.54 345 P **P** **10 09 58.2 -0.4**
061Z **pP** **10 10 26.9 +0.1**
061Z Ochoppi 45.54 345 P **P** **10 09 59.3 +0.7**
baz=165
TLIG Tlapa 45.93 320 P **P** **10 10 02.8 +0.9**
TLIG IAmb IAmb 10 10 05.0
comp=Z,59nm,0.9s
PMSA Palmer Station 46.33 177 P **P** **10 10 06.7 +2.5**
comp=Z,8.7nm,0.8s,baz=339,slow=5.4,SNR=3.6
PMSA Palmer Station 46.33 177 P **P** **10 10 06.4 +2.2**
060A Indiantown 46.55 347 P **P** **10 10 06.6 +0.2**
060A IAmb IAmb 10 10 12.2
comp=Z,93nm,0.9s
DWPF Disney Wildern 47.82 346 P **P** **10 10 16.8 +0.5**
baz=165
MOIG Morelia 49.14 319 P **P** **10 10 27.1 +0.2**
656A Williston 49.30 345 P **P** **10 10 25.5 -2.1**
456A Hilliard 50.47 346 P **P** **10 10 37.0 +0.5**
553A Crawfordville 50.57 343 P **P** **10 10 37.8 +0.6**
553A **pP** **10 11 06.5 +0.6**
451A Vernon 51.35 342 P **P** **10 10 43.3 +0.3**
TIGA Tifton 51.53 345 P **P** **10 10 44.1 -0.3**
TIGA **pP** **10 11 14.9 +1.8**
TIGA Tifton 51.53 345 P **P** **10 10 44.3 -0.1**
baz=163,SNR=7.2
255A Hazlehurst 51.73 346 P **P** **10 10 46.5 +0.7**
255A Hazlehurst 51.73 346 P **P** **10 10 45.5 -0.3**
baz=164
352A Blakely 51.93 343 P **P** **10 10 47.1 -0.2**
352A pP **pP** **10 11 14.8 -1.3**
352A Blakely 51.93 343 P **P** **10 10 47.4 +0.1**
baz=161,SNR=14
254A Abbeville 51.94 345 P **P** **10 10 47.4 0.0**
baz=163,SNR=8.5
157A Early Branch 52.13 348 P **P** **10 10 49.3 +0.6**
baz=166
RGRS Roger Stewart 52.20 349 P **P** **10 10 50.1 +0.8**
RGRS **pP** **10 11 19.4 +1.2**
156A Sylvania 52.21 347 P **P** **10 10 49.8 +0.4**
baz=166
CSU Charleston Sou 52.25 349 P **P** **10 10 50.9 +1.2**
BRAL Brewton 52.26 341 P **P** **10 10 49.7 -0.1**
BRAL **pP** **10 11 18.6 -0.1**
BRAL Brewton 52.26 341 P **P** **10 10 49.6 -0.2**
baz=159,SNR=8.3
ZAIG Zacatecas 52.30 320 P **P** **10 10 51.7 +1.1**
ZAIG IAmb IAmb 10 10 53.5
comp=Z,66nm,0.9s
Z59A Georgetown, SC 52.36 350 P **P** **10 10 51.2 +0.7**
baz=168
252A Lumpkin 52.36 344 P **P** **10 10 50.5 0.0**
baz=162,SNR=5.8
NHSC New Hope 52.39 349 pP 10 11 19.4 -0.2
NHSC New Hope 52.39 349 P **P** **10 10 51.0 +0.4**
baz=167
155A Kite 52.40 346 P **P** **10 10 50.7 0.0**
baz=164,SNR=5.9
154A Montrose 52.54 345 P **P** **10 10 51.3 -0.5**
154A **pP** **10 11 20.5 -0.1**
154A Montrose 52.54 345 P **P** **10 10 52.0 +0.2**
baz=164,SNR=13
Z57A Bowman 52.67 348 P **P** **10 10 52.1 -0.7**
baz=167
250A Grady 52.77 342 P **P** **10 10 53.1 -0.5**
250A pP **pP** **10 11 21.9 -0.5**
Z56A Williston 52.83 347 P **P** **10 10 53.6 -0.3**
baz=166
Z55A Blythe 52.90 347 P **P** **10 10 54.5 +0.1**
baz=165
Waverly Hall 52.99 344 P **P** **10 10 54.7 -0.5**
152A IAmb IAmb 10 10 56.0
comp=Z,80nm,1.1s
152A pP **pP** **10 11 23.8 -0.3**
152A Waverly Hall 52.99 344 P **P** **10 10 54.5 -0.7**
baz=162,SNR=17
Y59A Loris 53.02 350 P **P** **10 10 54.8 -0.5**
baz=169
Z54A Sparta 53.07 346 P **P** **10 10 55.4 -0.3**
baz=164,SNR=8.7
Y58A Scranton 53.07 349 P **P** **10 10 55.7 0.0**
Y58A IAmb IAmb 10 11 01.1
comp=Z,78nm,1.0s
Y58A **pP** **10 11 23.9 -0.8**
Y58A Scranton 53.07 349 P **P** **10 10 55.4 -0.3**
baz=168
Y56A Pelion 53.27 348 P **P** **10 10 56.9 -0.2**
baz=166
Z53A Monticello 53.28 345 P **P** **10 10 56.8 -0.5**
baz=163,SNR=6.4
Y57A Sumter 53.31 349 P **P** **10 10 57.8 +0.3**
Y57A IAmb IAmb 10 11 02.9
comp=Z,69nm,0.9s
Y57A **pP** **10 11 27.5 +1.0**
Y57A Sumter 53.31 349 P **P** **10 10 56.9 -0.5**
baz=167
GOGA Godfrey 53.38 345 P **P** **10 10 57.8 -0.2**
GOGA *PP **pP** **10 11 26.8 -0.2**
GOGA pmax pmax
comp=Z,33nm,1.0s
GOGA Godfrey 53.38 345 P **P** **10 10 57.8 -0.2**
GOGA IAmb IAmb 10 10 58.9
comp=Z,33nm,1.0s
GOGA **pP** **10 11 26.8 -0.2**
GOGA Godfrey 53.38 345 P **P** **10 10 57.6 -0.4**
baz=163,SNR=6.2
Z52A Williamson 53.41 344 P **P** **10 10 57.4 -0.8**
baz=162,SNR=8.0
X60A Albert Glenn T 53.46 351 P **P** **10 10 57.5 -1.1**
baz=170
KVTX Kingsville 53.49 328 P **P** **10 11 00.6 +1.7**
Y55A Saluda 53.53 347 P **P** **10 10 58.7 -0.4**
baz=165,SNR=9.8
X59A McDuffie Farm, 53.55 351 P **P** **10 10 58.4 -0.7**
baz=169
Y54A Tignall 53.64 346 P **P** **10 10 59.6 -0.3**
baz=164,SNR=14
X58A Rowland 53.65 350 P **P** **10 10 59.5 -0.4**
baz=168
X57A Johnson Farm, 53.69 349 P **P** **10 11 00.4 +0.1**
baz=168
Z51A Franklin 53.73 344 P **P** **10 11 00.3 -0.2**
Z51A IAmb IAmb 10 11 01.4
comp=Z,57nm,1.2s
JSC Jenkinsville 53.74 348 P **P** **10 11 01.1 +0.5**
JSC pmax pmax
comp=Z,17nm,0.8s
JSC Jenkinsville 53.74 348 P **P** **10 11 01.1 +0.5**
344A Westbrook Farm 53.77 337 P **P** **10 11 01.3 +0.5**
344A IAmb IAmb 10 11 02.3
comp=Z,56nm,0.9s
344A **pP** **10 11 28.4 -1.5**
Y53A Monroe 53.84 345 P **P** **10 11 00.9 -0.4**
baz=163,SNR=6.4
Z50A Ashland 53.87 343 P **P** **10 11 01.6 0.0**
Z50A pP **pP** **10 11 29.7 -1.0**
Z50A Ashland 53.87 343 P **P** **10 11 01.4 -0.3**
baz=161,SNR=20
W60A Pink Hill 53.89 352 P **P** **10 11 00.9 -0.7**
baz=170
HODGE Hodges 53.90 347 P **P** **10 11 02.3 +0.6**
HODGE IAmb IAmb 10 11 02.9
comp=Z,39nm,1.1s
HODGE **pP** **10 11 28.8 -2.0**
X56A White Oak 53.90 348 P **P** **10 11 01.8 +0.1**
baz=166,SNR=11
BIRD Birdtown, Kers 53.94 349 P **P** **10 11 02.5 +0.5**
BIRD IAmb IAmb 10 11 07.4
comp=Z,61nm,0.8s
Y52A Lilburn 53.96 345 P **P** **10 11 02.1 -0.1**
Y52A IAmb IAmb 10 11 03.0
comp=Z,59nm,1.2s
Y52A **pP** **10 11 30.4 -0.8**
Y52A Lilburn 53.96 345 P **P** **10 11 01.8 -0.4**
baz=163,SNR=7.0
LRAL Lakeview Retre 53.98 342 P **P** **10 11 02.0 -0.4**
LRAL IAmb IAmb 10 11 03.0
comp=Z,40nm,1.1s
LRAL Lakeview Retre 53.98 342 P **P** **10 11 01.9 -0.5**
baz=159,SNR=8.9
X55A Gracelyn & Ava 53.99 348 P **P** **10 11 02.9 +0.5**
baz=166,SNR=9.7
441A DeRidder 54.09 335 P **P** **10 11 03.0 -0.2**
W58A Raeford 54.09 350 P **P** **10 11 02.8 -0.3**
baz=169
X54A Belton 54.23 347 P **P** **10 11 04.3 +0.2**
baz=165,SNR=12
Y51A Rockmart 54.25 344 P **P** **10 11 03.9 -0.5**
baz=162,SNR=18
342A Flagon Creek P 54.30 336 P **P** **10 11 05.0 +0.4**
342A pP **pP** **10 11 33.6 -0.2**
H10N3 ASCENSION HYDR 54.34 86 P **P** **10 11 06.1 +1.1**
baz=264,slow=5.7,SNR=4.1
W57A Gilead 54.35 349 P **P** **10 11 05.0 0.0**
W57A IAmb IAmb 10 11 10.2
comp=Z,56nm,1.0s
W57A **pP** **10 11 33.5 -0.5**
W57A Gilead 54.35 349 P **P** **10 11 04.8 -0.2**
baz=168
H10N2 ASCENSION HYDR 54.35 86 P **P** **10 11 06.2 +1.0**
baz=264,slow=5.7,SNR=5.6
H10N1 ASCENSION HYDR 54.36 86 P **P** **10 11 06.2 +1.0**
baz=264,slow=5.7,SNR=6.7
PAULI Pauline 54.37 347 P **P** **10 11 05.5 +0.3**
PAULI IAmb IAmb 10 11 06.6
comp=Z,65nm,1.2s
PAULI **pP** **10 11 33.4 -0.9**
VBMS Vicksburg 54.38 338 P **P** **10 11 05.6 +0.3**
VBMS IAmb IAmb 10 11 06.5
comp=Z,109nm,1.4s
X53A Estanollee 54.39 346 P **P** **10 11 05.2 -0.2**
baz=164,SNR=8.6
W56A Indian Trail 54.43 349 P **P** **10 11 05.7 0.0**
baz=167,SNR=11
ASCN Ascension 54.44 87 P **P** **10 11 06.7 +0.5**
HKT Hockley 54.53 332 P **P** **10 11 06.7 +0.4**
HKT pmax pmax
comp=Z,81nm,1.3s
HKT Hockley 54.53 332 P **P** **10 11 06.7 +0.4**
HKT IAmb IAmb 10 11 08.6
comp=Z,81nm,1.3s
Y49A Blount Mountai 54.58 343 P **P** **10 11 05.9 -0.8**
Y49A IAmb IAmb 10 11 07.1
comp=Z,31nm,0.8s
Y49A **pP** **10 11 34.2 -1.6**
KMSC Kings Mountain 54.59 348 P **P** **10 11 06.4 -0.3**
KMSC IAmb IAmb 10 11 12.2
comp=Z,40nm,0.8s
KMSC Kings Mountain 54.59 348 P **P** **10 11 06.6 -0.1**
baz=166,SNR=9.9
X52A Dahlonega 54.62 345 P **P** **10 11 06.5 -0.5**
baz=163,SNR=6.2
V59A Middlesex 54.66 351 P **P** **10 11 07.0 -0.2**
baz=170
W54A Cherokee Point 54.70 347 P **P** **10 11 08.0 +0.4**
baz=165,SNR=13
BG3 Lake Jocassee 54.78 346 P **P** **10 11 07.6 -0.6**
BG3 **pP** **10 11 36.3 -1.0**
V58A Windy Hill, Pi 54.83 350 P **P** **10 11 07.9 -0.5**
baz=169
X51A Calhoun 54.83 344 P **P** **10 11 08.0 -0.5**
X51A IAmb IAmb 10 11 09.4
comp=Z,74nm,1.1s
X51A **pP** **10 11 36.8 -0.7**
X51A Calhoun 54.83 344 P **P** **10 11 08.3 -0.2**
baz=162,SNR=7.4
833A Chaparral WMA, 54.88 327 P **P** **10 11 09.3 +0.3**
833A Chaparral WMA, 54.88 327 P **P** **10 11 09.6 +0.6**
baz=145,SNR=48
W53A Cullowhee 55.00 346 P **P** **10 11 09.8 -0.1**
baz=164,SNR=22
FPAL Fort Paine 55.00 344 P **P** **10 11 09.1 -0.7**
FPAL **pP** **10 11 35.5 -3.4**
V57A Coltrane Farms 55.02 350 P **P** **10 11 09.8 -0.1**
baz=168
V56A Mocksville 55.08 349 P **P** **10 11 10.7 +0.5**
baz=167,SNR=14
W52A Murphy 55.10 345 P **P** **10 11 09.7 -0.8**
W52A IAmb IAmb 10 11 11.6
comp=Z,55nm,1.1s
W52A pP **pP** **10 11 37.3 -2.4**
W52A Murphy 55.10 345 P **P** **10 11 10.4 -0.1**
baz=163,SNR=8.3
U59A Littleton 55.18 352 P **P** **10 11 10.8 -0.1**
baz=170
U60A Pendleton 55.21 352 P **P** **10 11 11.0 -0.2**
baz=171
V55A Taylorsville 55.25 348 P **P** **10 11 11.6 +0.1**
V55A IAmb IAmb 10 11 13.1
comp=Z,70nm,0.9s
V55A Taylorsville 55.25 348 P **P** **10 11 11.9 +0.4**
baz=166,SNR=14
X48A Hartselle 55.31 342 P **P** **10 11 11.1 -0.9**
X48A IAmb IAmb 10 11 12.6
comp=Z,51nm,0.8s
V54A Nebo 55.32 348 P **P** **10 11 12.1 +0.1**
baz=166,SNR=20
U58A Oxford 55.33 351 P **P** **10 11 11.5 -0.5**
baz=170
W51A Cleveland 55.37 345 P **P** **10 11 12.1 -0.3**
baz=162,SNR=12
V53A Saluda 55.40 347 P **P** **10 11 11.2 -1.4**
V53A IAmb IAmb 10 11 13.7
comp=Z,33nm,0.8s
V53A Saluda 55.40 347 P **P** **10 11 12.3 -0.3**
baz=165,SNR=9.6
U57A Blanch 55.48 350 P **P** **10 11 12.5 -0.6**
baz=169
NATX Nacogdoches 55.58 334 P **P** **10 11 14.4 +0.5**
NATX **pP** **10 11 43.9 +0.8**
NATX Nacogdoches 55.58 334 P **P** **10 11 14.7 +0.8**
baz=151,SNR=13
U56A King 55.58 349 P **P** **10 11 13.8 0.0**
U56A IAmb IAmb 10 11 19.8
comp=Z,75nm,1.1s
U56A King 55.58 349 P **P** **10 11 14.2 +0.4**
baz=168,SNR=8.8
CPCT Cooper Cave 55.59 345 P **P** **10 11 13.4 -0.5**
CPCT IAmb IAmb 10 11 14.7
comp=Z,52nm,1.1s
CPCT **pP** **10 11 42.1 -0.9**
TKL Tuckaleechee C 55.60 346 P **P** **10 11 13.8 -0.3**
TKL pmax pmax
comp=Z,59nm,1.0s
TKL Tuckaleechee C 55.60 346 P **P** **10 11 13.8 -0.3**
TKL IAmb IAmb 10 11 14.7
comp=Z,59nm,0.9s
W49A Belvidere 55.72 343 P **P** **10 11 14.4 -0.5**
baz=161,SNR=7.5
SWET Sewanee 55.72 344 P **P** **10 11 14.3 -0.7**
SWET pP **pP** **10 11 42.9 -1.3**
V52A Sevierville 55.74 346 P **P** **10 11 15.0 0.0**
V52A IAmb IAmb 10 11 15.8
comp=Z,67nm,0.8s
V52A pP **pP** **10 11 42.7 -1.6**
V52A Sevierville 55.74 346 P **P** **10 11 14.8 -0.3**
baz=164,SNR=19
T59A Double "B" Far 55.76 352 P **P** **10 11 14.9 -0.1**
T59A IAmb IAmb 10 11 20.1
comp=Z,47nm,1.0s
T59A **pP** **10 11 43.0 -1.3**
T59A Double "B" Far 55.76 352 P **P** **10 11 14.5 -0.6**
baz=171
U55A TA2, Sparta 55.85 349 P **P** **10 11 16.0 +0.2**
baz=167,SNR=9.6
T58A Grand View Acr 55.87 351 P **P** **10 11 15.5 -0.4**
baz=170
V51A Loudon 55.88 345 P **P** **10 11 15.6 -0.4**
V51A IAmb IAmb 10 11 16.7
comp=Z,31nm,0.8s
V51A **pP** **10 11 44.8 -0.5**
V51A Loudon 55.88 345 P **P** **10 11 15.5 -0.5**
baz=163,SNR=9.0
V50A Pikevile 55.94 345 P **P** **10 11 16.0 -0.4**
baz=162,SNR=23
U54A Nelsons Funny 56.02 348 P **P** **10 11 17.2 +0.2**
U54A Nelsons Funny 56.02 348 P **P** **10 11 17.2 +0.2**

baz=166,SNR=15
U53A Fall Branch 56.02 347 P P 10 11 16.5 -0.5
baz=165,SNR=11
T57A Hurt 56.03 351 P P 10 11 17.8 +0.8
T57A IAmb IAmb 10 11 22.3
comp=Z,52nm,1.1s
T57A **pP 10 11 45.9 -0.4**
T57A Hurt 56.03 351 P P 10 11 16.8 -0.3
baz=169
435B Jarrell 56.03 331 P P 10 11 17.2 0.0
435B **pP 10 11 45.4 -1.0**
435B Jarrell 56.03 331 P P 10 11 17.6 +0.4
baz=148,SNR=13
SACV Santiago Islan 56.09 57 P P 10 11 17.7 -0.2
OXF Oxford 56.09 340 P P 10 11 16.4 -1.1
OXF pmax pmax
comp=Z,134nm,1.1s
OXF Oxford 56.09 340 P P 10 11 16.4 -1.1
OXF Oxford 56.09 340 P P 10 11 16.4 -1.1
baz=157,SNR=15
PLAL Pickwick Lake 56.11 342 P P 10 11 16.5 -1.1
PLAL IAmb IAmb 10 11 17.8
comp=Z,51nm,1.0s
Z41A Richland Creek 56.15 336 P P 10 11 17.7 -0.3
Z41A IAmb IAmb 10 11 19.6
comp=Z,63nm,1.0s
Z41A **pP 10 11 46.0 -1.2**
Z41A Richland Creek 56.15 336 P P 10 11 18.3 +0.3
baz=153,SNR=8.2
T56A Rocky Mt 56.18 350 P P 10 11 18.3 +0.2
baz=168,SNR=9.0
U52A Thorn Hill 56.22 346 P P 10 11 17.7 -0.7
baz=164
V49A McMinnville 56.23 344 P P 10 11 18.0 -0.5
baz=161,SNR=19
S61A Accomac 56.24 354 P P 10 11 19.0 +0.5
baz=173
PTCN Pitcairn Islan 56.31 252 P P 10 11 20.2 +0.8
U51A La Follette 56.35 346 P P 10 11 18.6 -0.7
baz=163,SNR=6.2
CCAR Cane Creek 56.36 338 P P 10 11 19.6 +0.1
CCAR **pP 10 11 48.3 -0.4**
S60A Water View 56.37 353 P P 10 11 18.4 -1.0
baz=172
T55A Pulaski 56.40 349 P P 10 11 20.3 +0.6
baz=167,SNR=16
TZTN Tazewell 56.40 346 P P 10 11 19.4 -0.3
TZTN IAmb IAmb 10 11 20.5
comp=Z,47nm,1.1s
TZTN **pP 10 11 48.0 -1.1**
TZTN Tazewell 56.40 346 P P 10 11 18.9 -0.8
baz=164
BLA Blacksburg 56.43 349 P P 10 11 20.6 +0.7
BLA pmax pmax
comp=Z,79nm,1.5s
BLA Blacksburg 56.43 349 P P 10 11 20.6 +0.7
BLA IAmb IAmb 10 11 25.2
comp=Z,79nm,1.5s
BLA Blacksburg 56.43 349 P P 10 11 20.3 +0.3
baz=168
S58A Poland Farm, P 56.45 352 P P 10 11 20.0 0.0
baz=170
V48A Smith Brothers 56.46 343 P P 10 11 19.6 -0.5
T54A Tazewell 56.49 348 P P 10 11 20.4 -0.1
baz=166,SNR=6.9
U50A Jamestown 56.58 345 P P 10 11 20.4 -0.6
baz=162,SNR=15
X43A Marvell 56.59 339 P P 10 11 21.3 +0.2
X43A **pP 10 11 49.4 -0.9**
X43A Marvell 56.59 339 P P 10 11 21.0 -0.1
baz=156,SNR=7.1
T53A Wise 56.61 347 P P 10 11 21.3 +0.1
baz=165,SNR=10
WLAR White Oak Lake 56.65 336 P P 10 11 22.4 +0.9
WLAR **pP 10 11 51.3 +0.5**
CLTN Cedars of Leba 56.66 344 P P 10 11 21.0 -0.5
CLTN IAmb IAmb 10 11 22.2
comp=Z,38nm,0.9s
CLTN pP **pP 10 11 49.4 -1.3**
CLTN **S 10 19 02.2 -2.6**
S57A Dark Hollow, R 56.73 351 P P 10 11 22.1 +0.1
S57A IAmb IAmb 10 11 27.5
comp=Z,36nm,1.0s
S57A Dark Hollow, R 56.73 351 P P 10 11 22.2 +0.2
baz=169
S56A Natural Bridge 56.74 350 P P 10 11 22.0 -0.1
baz=169
R58B Mineral 56.77 352 P P 10 11 21.5 -0.8
baz=170
T52A Hallie 56.82 347 P P 10 11 21.4 -1.3
T52A IAmb IAmb 10 11 23.5
comp=Z,46nm,0.9s
T52A Hallie 56.82 347 P P 10 11 22.1 -0.6
baz=165,SNR=7.4
MET Memphis--Engin 56.82 340 P P 10 11 22.1 -0.6
JCT Junction City 56.84 329 P P 10 11 22.9 -0.1
JCT pmax pmax
comp=Z,72nm,1.0s
JCT Junction City 56.84 329 P P 10 11 22.9 -0.1
JCT IAmb IAmb 10 11 24.4
comp=Z,72nm,1.0s
JCT Junction City 56.84 329 P P 10 11 23.3 +0.3
baz=145,SNR=39
R61A Willards 56.85 354 P P 10 11 22.3 -0.5
baz=173
T51A Gray 56.90 346 P P 10 11 23.2 0.0
baz=164,SNR=11
U49A Red Boiling Sp 56.91 344 P P 10 11 22.8 -0.5
baz=162,SNR=13
R59A King George, V 56.91 353 P P 10 11 22.7 -0.5
baz=171
R60A Leonardtown, M 56.92 353 P P 10 11 24.5 +1.2
baz=172
CBN Corbin Frederi 56.95 353 P P 10 11 22.9 -0.5
CBN IAmb IAmb 10 11 28.6
comp=Z,29nm,0.8s
CBN Corbin Frederi 56.95 353 P P 10 11 24.0 +0.5
baz=171
S55A Lewisburg 56.99 350 P P 10 11 24.0 +0.1
baz=168,SNR=15
WHTX Lake Whitney, 56.99 332 P P 10 11 23.5 -0.4
WHTX Lake Whitney, 56.99 332 P P 10 11 24.2 +0.3
baz=148,SNR=46
WVT Waverly 57.11 342 P P 10 11 23.4 -1.3
WVT pP **pP 10 11 52.2 -1.7**
WVT Waverly 57.11 342 P P 10 11 23.7 -1.0
baz=159
R58A Rapidan 57.12 352 P P 10 11 25.7 +0.9
baz=170
T50A Nancy 57.16 345 P P 10 11 24.2 -0.8
baz=163,SNR=16
S54A Dingess, Beckl 57.16 349 P P 10 11 24.7 -0.4
S54A Dingess, Beckl 57.16 349 P P 10 11 25.0 -0.1
baz=167,SNR=14
S53A Williamson 57.20 348 P P 10 11 24.9 -0.5
baz=166,SNR=12
X40A Basin Creek Fa 57.26 337 P P 10 11 25.2 -0.6
X40A Basin Creek Fa 57.26 337 P P 10 11 25.2 -0.6
baz=154
HPIG 57.28 321 P P 10 11 26.8 +0.5
HPIG IAmb IAmb 10 11 27.7
comp=Z,44nm,0.7s
UALR University of 57.34 338 P P 10 11 25.7 -0.6
UALR IAmb IAmb 10 11 27.2
comp=Z,84nm,1.2s
HALT Halls 57.36 341 P P 10 11 25.6 -0.9
HALT **pP 10 11 52.2 -3.5**
LPAR Lepanto 57.38 340 P P 10 11 25.9 -0.7
LPAR **pP 10 11 54.7 -1.2**
S52A Salyersville 57.39 347 P P 10 11 26.5 -0.2
baz=165
T49A Edmonton 57.41 345 P P 10 11 26.0 -0.8
T49A pP **pP 10 11 55.7 -0.5**
T49A Edmonton 57.41 345 P P 10 11 26.3 -0.5
baz=162,SNR=35
R55A Marlinton 57.42 350 P P 10 11 27.6 +0.8
R55A IAmb IAmb 10 11 34.0
comp=Z,76nm,1.4s
R55A Marlinton 57.42 350 P P 10 11 27.7 +0.8
baz=168
HBAR Harrisburg 57.46 339 P P 10 11 26.6 -0.6
S51A Beattyville 57.46 347 P P 10 11 26.6 -0.5
S51A IAmb IAmb 10 11 28.3
comp=Z,46nm,1.4s
S51A pP **pP 10 11 54.8 -1.8**
S51A Beattyville 57.46 347 P P 10 11 27.2 0.0
baz=164
R54A Victor 57.47 349 P P 10 11 27.1 -0.1
baz=167,SNR=8.9
Q59A Harwood 57.52 353 P P 10 11 27.2 -0.3
baz=172
Q60A Greensboro 57.57 354 P P 10 11 27.9 +0.1
baz=173
LNXT Lenox 57.58 341 P P 10 11 28.1 +0.1
LNXT pP **pP 10 11 55.7 -1.6**
MIAR Mount Ida 57.59 336 P P 10 11 27.1 -1.0
MIAR *PP **pP 10 11 55.7 -1.7**
MIAR pmax pmax
comp=Z,93nm,1.3s
MIAR Mount Ida 57.59 336 P P 10 11 27.1 -1.0
MIAR IAmb IAmb 10 11 29.2
comp=Z,93nm,1.2s
MIAR pP **pP 10 11 55.7 -1.7**
MIAR Mount Ida 57.59 336 P P 10 11 27.9 -0.2
baz=153,SNR=26
UTMT University of 57.61 341 P P 10 11 27.6 -0.6
UTMT **pP 10 11 56.6 -0.9**
GNAR Gosnell 57.62 340 P P 10 11 28.1 -0.2
GNAR **pP 10 11 56.7 -0.9**
W41B Gary Mavity, V 57.66 338 P P 10 11 27.9 -0.7
W41B IAmb IAmb 10 11 29.5
comp=Z,101nm,1.5s
W41B Gary Mavity, V 57.66 338 P P 10 11 28.1 -0.5
baz=154,SNR=14
GLAT Glass 57.67 341 P P 10 11 28.0 -0.6
GLAT **pP 10 11 56.9 -1.1**
S50A Richmond 57.68 346 P P 10 11 28.1 -0.6
baz=163,SNR=16
T47A Sharon Grove 57.71 343 P P 10 11 28.1 -0.8
T47A pP **pP 10 11 57.7 -0.6**
T47A **S 10 19 15.2 -3.3**
PEBM Pemiscott Bayo 57.71 340 P P 10 11 28.4 -0.5
PEBM pP **pP 10 11 56.5 -1.8**
Q58A Fox Den Farm, 57.71 352 P P 10 11 28.4 -0.4
baz=171
WHAR Wooly Hollow 57.78 338 P P 10 11 28.6 -0.9
R53A Hurricane 57.79 348 P P 10 11 29.5 0.0
R53A IAmb IAmb 10 11 30.5
comp=Z,41nm,0.9s
R53A Hurricane 57.79 348 P P 10 11 29.4 0.0
baz=166,SNR=8.3
Q57A Strasburg 57.90 352 P P 10 11 31.0 +0.8
baz=170,SNR=6.5
HICK Hickman 57.91 341 P P 10 11 29.3 -1.0
PVMO Portageville 57.93 341 P P 10 11 30.6 +0.1
PVMO pP **pP 10 11 59.1 -0.7**
R52A Catlettsburg 57.93 348 P P 10 11 29.6 -0.9
baz=165
PENMO Penman 57.95 341 P P 10 11 30.4 -0.2
PENMO pP **pP 10 11 59.1 -0.8**
TXAR Lajitas Array 57.95 325 P P 10 11 31.0 +0.1
comp=Z,20nm,0.9s,baz=145,slow=8.0,SNR=145
TXAR pP **pP 10 11 59.8 -0.5**
comp=Z,7.3nm,0.7s,baz=148,slow=9.3,SNR=5.8
TX31 Lajitas Ar. Si 57.95 325 P P 10 11 30.9 0.0
TX31 IAmb IAmb 10 11 32.4
comp=Z,35nm,1.1s
TX32 Lajitas Array 57.95 325 P P 10 11 31.2 +0.3
TX32 IAmb IAmb 10 11 32.4
comp=Z,35nm,1.1s
S49A Springfield 57.99 345 P P 10 11 30.0 -0.9
baz=162,SNR=13
Q56A Snyder Ridge, 58.02 351 P P 10 11 31.4 +0.3
Q56A IAmb IAmb 10 11 37.1
comp=Z,41nm,0.8s
Q56A Snyder Ridge, 58.02 351 P P 10 11 31.2 +0.2
baz=169,SNR=8.8
LCAR Lake Charles 58.09 339 P P 10 11 30.9 -0.6
LCAR IAmb IAmb 10 11 32.1
comp=Z,43nm,1.0s
LCAR pP **pP 10 11 59.7 -1.3**
R51A Hillsboro 58.09 347 P P 10 11 31.2 -0.4
baz=164,SNR=12
Q55A Buckhannon 58.11 350 P P 10 11 31.3 -0.4
baz=168,SNR=8.2
P61A Hammonton 58.14 355 P P 10 11 31.2 -0.6
baz=174
PARMO Parma 58.18 341 P P 10 11 32.5 +0.4
PARMO **pP 10 12 01.2 -0.4**
P58A Pank, Wackersv 58.21 353 P P 10 11 32.4 +0.1
baz=171
Q54A Coxs Mills 58.22 350 P P 10 11 32.8 +0.3
Q54A IAmb IAmb 10 11 34.1
comp=Z,57nm,1.1s
Q54A **pP 10 12 02.0 +0.2**
Q54A Coxs Mills 58.22 350 P P 10 11 32.4 0.0
baz=167,SNR=7.6
Q53A Leroy 58.23 349 P P 10 11 32.7 +0.2
baz=167,SNR=16
P59A Jarrettsville 58.23 354 P P 10 11 32.9 +0.4
baz=172
R50A Paris 58.24 346 P P 10 11 32.5 -0.1
R50A IAmb IAmb 10 11 33.3
comp=Z,56nm,1.1s
R50A **pP 10 12 00.7 -1.4**
R50A Paris 58.24 346 P P 10 11 32.2 -0.4
baz=163,SNR=13
W39A Magazine 58.24 337 P P 10 11 33.0 +0.4
W39A IAmb IAmb 10 11 34.4
comp=Z,71nm,1.1s
W39A Magazine 58.24 337 P P 10 11 33.1 +0.4
baz=153,SNR=15
P57A Homestead Farm 58.29 352 P P 10 11 33.3 +0.4
P57A Homestead Farm 58.29 352 P P 10 11 33.3 +0.4
baz=170
P60A Greenville 58.35 354 pP 10 12 04.7 +1.9
P60A Greenville 58.35 354 P P 10 11 32.9 -0.4
baz=173
P56A Dayton Farm, R 58.42 351 P P 10 11 34.1 +0.2
baz=170
R49A Shelbyville 58.45 345 P P 10 11 33.6 -0.4
R49A IAmb IAmb 10 11 34.4
comp=Z,47nm,1.1s
R49A pP **pP 10 12 01.6 -1.9**
R49A Shelbyville 58.45 345 P P 10 11 33.2 -0.8
baz=162,SNR=6.5
Q52A Bidwell 58.47 348 P P 10 11 33.4 -0.7
baz=166
PBMO Poplar Bluff 58.50 340 P P 10 11 33.8 -0.6
PBMO pP **pP 10 12 02.3 -1.5**
ABTX Abilene, Hawle 58.53 330 P P 10 11 35.0 +0.2
ABTX pP **pP 10 12 03.6 -0.6**
ABTX Abilene, Hawle 58.53 330 P P 10 11 34.9 +0.2
baz=146,SNR=58
O61A Allentown 58.54 355 P P 10 11 34.5 -0.1
baz=174
MVL Millersville 58.61 354 P P 10 11 35.1 +0.1
MVL **pP 10 12 04.5 -0.1**
WCI Wyandotte Cave 58.66 344 P P 10 11 34.5 -1.0
WCI *PP **pP 10 12 03.2 -1.7**
WCI pmax pmax
comp=Z,83nm,1.2s
WCI Wyandotte Cave 58.66 344 P P 10 11 34.5 -1.0
WCI IAmb IAmb 10 11 35.8
comp=Z,83nm,1.2s
WCI pP **pP 10 12 03.2 -1.7**
WCI Wyandotte Cave 58.66 344 P P 10 11 34.4 -1.1
baz=161
Q50A Georgetown 58.70 347 P P 10 11 35.0 -0.8
baz=164,SNR=16
MCWV Mont Chateau 58.72 351 P P 10 11 36.6 +0.7
baz=168,SNR=7.1
Q51A Peebles 58.74 347 P P 10 11 34.1 -2.0
Q51A IAmb IAmb 10 11 36.7
comp=Z,34nm,1.1s
Q51A Peebles 58.74 347 P P 10 11 35.8 -0.3
baz=165,SNR=8.5
P54A Burton 58.77 350 P P 10 11 36.7 +0.4
baz=168,SNR=15
USIN University of 58.78 343 P P 10 11 35.2 -1.1
USIN IAmb IAmb 10 11 36.5
comp=Z,44nm,0.9s
USIN **pP 10 12 03.9 -1.9**
O58A Lewisberry 58.79 353 P P 10 11 36.5 +0.2
baz=172
P53A Whipple 58.81 349 P P 10 11 35.8 -0.8
P53A Whipple 58.81 349 P P 10 11 36.5 0.0
baz=167,SNR=20
O60A Telford 58.83 355 P P 10 11 36.0 -0.6
baz=173
O59A Robesonia 58.90 354 P P 10 11 37.3 +0.2
baz=173
U40A Yellville 58.94 338 P P 10 11 36.2 -1.3
U40A IAmb IAmb 10 11 38.1
comp=Z,35nm,0.8s
U40A pP **pP 10 12 04.7 -2.3**
U40A Yellville 58.94 338 P P 10 11 37.2 -0.3
baz=154,SNR=23
O57A Amberson 58.96 353 P P 10 11 37.6 0.0
baz=171
S44A Carbondale 58.98 342 P P 10 11 37.1 -0.6
S44A pP **pP 10 12 06.7 -0.4**
Q49A Aurora 59.06 346 P P 10 11 37.5 -0.8
baz=163,SNR=9.2
P52A Corning 59.09 349 P P 10 11 37.8 -0.6
baz=166,SNR=10
P51A Williamsport 59.12 348 P P 10 11 37.6 -1.1
P51A IAmb IAmb 10 11 39.1
comp=Z,30nm,0.9s
P51A **pP 10 12 07.1 -1.1**
P51A Williamsport 59.12 348 P P 10 11 38.2 -0.5
baz=165,SNR=7.3
O56A Blue Knob Stat 59.13 352 P P 10 11 39.3 +0.5
O56A IAmb IAmb 10 11 44.7
comp=Z,39nm,1.0s
O56A Blue Knob Stat 59.13 352 P P 10 11 38.6 -0.1
baz=170
O55A Ligonier 59.18 351 P P 10 11 39.6 +0.6
baz=169,SNR=6.5
Q48A North Vernon 59.19 345 P P 10 11 38.3 -0.8
baz=161,SNR=11
CPNY Central Park 59.19 356 P P 10 11 38.4 -0.6
CPNY IAmb IAmb 10 11 45.8
comp=Z,43nm,1.4s
HHAR Hobbs 59.26 337 P P 10 11 39.3 -0.5
HHAR IAmb IAmb 10 11 40.7
comp=Z,92nm,1.4s
O54A Avella 59.32 350 P P 10 11 40.1 +0.1
O54A IAmb IAmb 10 11 41.2
comp=Z,27nm,1.0s
O54A Avella 59.32 350 P P 10 11 39.4 -0.6
baz=168
N60A Cedar Hill Far 59.35 355 P P 10 11 39.6 -0.6
baz=174
X34A Smith Ranch, M 59.37 333 P P 10 11 40.7 +0.2
P50A Jamestown 59.40 347 P P 10 11 39.7 -0.9
baz=164,SNR=13
PAL Palisades 59.40 356 P P 10 11 40.1 -0.4
baz=175
SSPA Standing Stone 59.41 353 P P 10 11 40.5 -0.1
baz=171
W35A Tecumseh 59.43 334 P P 10 11 40.2 -0.7
MGMO Mountain Grove 59.45 339 P P 10 11 40.5 -0.5
MGMO pP **pP 10 12 09.3 -1.2**
N58A Sunbury 59.48 354 P P 10 11 41.5 +0.4
N58A IAmb IAmb 10 11 46.5
comp=Z,25nm,0.9s
N58A Sunbury 59.48 354 P P 10 11 41.1 +0.1
baz=172
N57A Milroy 59.49 353 P P 10 11 40.6 -0.5
baz=171
O53A New Philadelph 59.52 350 P P 10 11 41.5 +0.1
baz=167,SNR=7.0
P49A Miami Univ. Ec 59.53 346 P P 10 11 40.5 -1.0
baz=163,SNR=5.5
WSPT Westport, CT 59.53 357 pP 10 12 08.7 -2.4
BLO Bloomington 59.61 345 P P 10 11 41.2 -0.8
BLO pP **pP 10 12 10.4 -1.5**
OLIL Olney 59.62 343 P P 10 11 41.3 -0.8
OLIL IAmb IAmb 10 11 41.6
comp=Z,31nm,1.0s
OLIL **pP 10 12 10.0 -1.5**
P48A Milroy 59.62 346 P P 10 11 41.3 -0.8
P48A IAmb IAmb 10 11 41.4
comp=Z,32nm,0.8s
P48A **pP 10 12 10.1 -1.6**
P48A Milroy 59.62 346 P P 10 11 40.8 -1.3
baz=162,SNR=6.9
TUL1 Leonard 59.65 335 P P 10 11 42.2 -0.2
TUL1 Leonard 59.65 335 P P 10 11 42.1 -0.2
baz=151,SNR=28
YLE Yale 59.65 357 P P 10 11 41.9 -0.4
YLE IAmb IAmb 10 11 47.7
comp=Z,62nm,1.2s
O51A Pataskala 59.68 348 P P 10 11 42.2 -0.3
baz=166,SNR=8.7
M61A Granite Spring 59.69 356 P P 10 11 41.6 -0.9
baz=175
N55A Marion Center 59.70 352 P P 10 11 42.7 +0.1
baz=170,SNR=9.1
M63A Gales Ferry 59.70 358 P P 10 11 41.8 -0.8
baz=177
N56A West Decatur 59.74 352 P P 10 11 43.4 +0.5
baz=170
FNO Franklin 59.74 334 P P 10 11 43.0 -0.1
FNO **pP 10 12 11.8 -0.7**
M60A Port Jervis 59.77 355 P P 10 11 42.8 -0.3
baz=174
M62A Hamden 59.78 357 P P 10 11 43.1 0.0
baz=176
ACSO Alum Creek Sta 59.83 348 P P 10 11 42.4 -1.1
ACSO **pP 10 12 10.1 -3.1**
ACSO Alum Creek Sta 59.83 348 P P 10 11 43.3 -0.3
baz=165,SNR=13
O50A Cable 59.88 347 P P 10 11 43.5 -0.4
baz=164,SNR=9.6
OKCSW OKLAHOMA CITY 59.88 334 P P 10 11 43.5 -0.5
OKCSW pP **pP 10 12 12.8 -0.7**
OKCFA Oklahoma City 59.90 334 P P 10 11 43.4 -0.7
WMOK Wichita Mounta 59.90 332 P P 10 11 43.4 -0.8
WMOK pmax pmax
comp=Z,19nm,1.0s
WMOK Wichita Mounta 59.90 332 P P 10 11 43.4 -0.8
WMOK Wichita Mounta 59.90 332 P P 10 11 43.3 -0.9
baz=148,SNR=22
CCM Cathedral Cave 59.93 340 P P 10 11 43.7 -0.5
CCM S **S 10 19 45.8 -1.5**
CCM pmax pmax
comp=Z,62nm,1.1s
CCM Cathedral Cave 59.93 340 P P 10 11 43.7 -0.5
CCM IAmb IAmb 10 11 44.9
comp=Z,62nm,1.1s
CCM **S 10 19 45.8 -1.5**
CCM Cathedral Cave 59.93 340 P P 10 11 43.7 -0.5
baz=156
M58A Price's Panora 59.98 354 P P 10 11 45.1 +0.6
baz=172,SNR=7.8
N53A Lisbon 60.00 350 P P 10 11 45.0 +0.3
N53A IAmb IAmb 10 11 46.0
comp=Z,40nm,0.9s
N53A pP **pP 10 12 13.6 -0.7**
N53A Lisbon 60.00 350 P P 10 11 45.0 +0.3
baz=168,SNR=9.5
M57A Sunshine Farm, 60.01 353 P P 10 11 44.8 0.0
M57A Sunshine Farm, 60.01 353 P P 10 11 45.1 +0.4
baz=172
N54A Moraine State 60.02 351 P P 10 11 44.8 0.0
N54A Moraine State 60.02 351 P P 10 11 44.7 -0.1
baz=168,SNR=10
M59A Waymart 60.05 355 P P 10 11 44.5 -0.5
baz=174
O49A Covington 60.07 347 P P 10 11 43.7 -1.5
O49A IAmb IAmb 10 11 45.0
comp=Z,48nm,1.0s
O49A pP **pP 10 12 12.7 -2.3**
O49A Covington 60.07 347 P P 10 11 44.5 -0.6
baz=164
L63A North Scituate 60.14 358 P P 10 11 45.6 0.0
baz=178
SLM Saint Louis 60.14 341 P P 10 11 43.9 -1.8
SLM IAmb IAmb 10 11 45.6
comp=Z,26nm,0.9s
SLM **pP 10 12 13.9 -1.3**
SLM **PcP 10 12 30.2 0.0**
N52A McGinn's Farm, 60.15 349 P P 10 11 45.5 -0.2
baz=167,SNR=7.3
BRYW Bryant College 60.20 358 P P 10 11 46.3 +0.3
BRYW IAmb IAmb 10 11 51.3
comp=Z,62nm,1.0s
BRYW **pP 10 12 12.9 -2.7**
L64A Middleborough 60.20 359 P P 10 11 46.1 +0.2
baz=178
P46A Rosedale 60.21 344 P P 10 11 45.2 -0.9
P46A IAmb IAmb 10 11 46.1
comp=Z,90nm,1.4s
P46A **pP 10 12 13.7 -1.8**
M56A Emporium 60.28 352 P P 10 11 47.0 +0.4

M56A IAmb IAmb 10 11 55.7
comp=Z,29nm,1.0s
M56A Emporium 60.28 352 P **P** **10 11 46.4 -0.2**
baz=170
O48A Farmland 60.32 346 P **P** **10 11 46.0 -0.9**
baz=163,SNR=12
M55A Ridgway 60.34 352 P **P** **10 11 47.1 0.0**
M55A Ridgway 60.34 352 P **P** **10 11 47.0 0.0**
baz=170,SNR=5.5
N51A Ashland 60.38 349 P **P** **10 11 47.0 -0.3**
N51A IAmb IAmb 10 11 47.9
comp=Z,39nm,0.8s
N51A **pP** **10 12 16.1 -0.8**
N51A Ashland 60.38 349 P **P** **10 11 46.6 -0.7**
baz=166,SNR=10
N50A Nevada 60.38 348 P **P** **10 11 46.7 -0.6**
baz=165,SNR=9.9
L60A Shokan 60.40 356 P **P** **10 11 47.2 -0.1**
baz=175
M54A Oil Creek Stat 60.51 351 P **P** **10 11 47.8 -0.3**
M54A IAmb IAmb 10 11 50.0
comp=Z,33nm,0.8s
M54A Oil Creek Stat 60.51 351 P **P** **10 11 48.4 +0.2**
baz=169,SNR=8.8
L58A Harry Jones Me 60.58 355 P **P** **10 11 48.6 -0.1**
baz=173
SHEL Horse Pasture 60.59 98 P **P** **10 11 49.0 -0.3**
SHEL pmax pmax
comp=Z,178nm,1.1s
SHEL Horse Pasture 60.59 98 P **P** **10 11 49.0 -0.3**
M53A WI Miller and 60.59 350 P **P** **10 11 48.8 +0.1**
baz=168,SNR=16
L57A Andrews Acres 60.64 354 P **P** **10 11 48.9 -0.1**
baz=172
WES Weston 60.66 358 pP 10 12 17.4 -1.4
L59A Walton 60.66 355 P **P** **10 11 48.7 -0.5**
L59A IAmb IAmb 10 11 54.9
comp=Z,91nm,1.5s
L59A **pP** **10 12 17.4 -1.5**
L59A Walton 60.66 355 P **P** **10 11 48.5 -0.7**
baz=174
MNTX Cornudas Mount 60.71 325 P **P** **10 11 49.1 -0.6**
MNTX IAmb IAmb 10 11 50.6
comp=Z,69nm,1.1s
MNTX Cornudas Mount 60.71 325 P **P** **10 11 49.4 -0.3**
baz=140,SNR=75
ALLY Alegheny Colle 60.72 351 P **P** **10 11 49.8 +0.3**
N49A Columbus Grove 60.74 347 P **P** **10 11 49.0 -0.6**
N49A pP **pP** **10 12 18.2 -1.3**
N49A Columbus Grove 60.74 347 P **P** **10 11 49.1 -0.6**
baz=164,SNR=23
M51A Elyria 60.74 349 P **P** **10 11 49.3 -0.4**
baz=166,SNR=11
BINY Binghamton 60.75 354 P **P** **10 11 49.5 -0.3**
BINY IAmb IAmb 10 11 55.4
comp=Z,47nm,1.4s
BINY Binghamton 60.75 354 P **P** **10 11 49.7 -0.1**
baz=173
L61B Northampton 60.77 357 P **P** **10 11 49.4 -0.5**
baz=176
HRV Adam Dziewonsk 60.78 358 P **P** **10 11 49.6 -0.3**
HRV IAmb IAmb 10 11 55.4
comp=Z,47nm,1.1s
HRV **pP** **10 12 18.2 -1.5**
HRV Adam Dziewonsk 60.78 358 P **P** **10 11 50.1 +0.1**
baz=178
M52A Chesterland 60.80 350 P **P** **10 11 50.3 +0.1**
M52A IAmb IAmb 10 11 51.2
comp=Z,45nm,0.9s
M52A **pP** **10 12 19.4 -0.5**
M52A Chesterland 60.80 350 P **P** **10 11 49.8 -0.3**
baz=167,SNR=6.1
L56A Greenwood 60.85 353 P **P** **10 11 50.3 -0.2**
L56A **pP** **10 12 18.2 -2.1**
L56A Greenwood 60.85 353 P **P** **10 11 50.5 0.0**
baz=171
P43A Skaggs, Pawnee 60.86 342 P **P** **10 11 49.5 -1.0**
P43A pP **pP** **10 12 18.6 -1.5**
N48A Decatur 60.86 346 P **P** **10 11 49.7 -0.8**
baz=163,SNR=9.7
SFIN Lafayette 60.90 345 P **P** **10 11 49.3 -1.4**
SFIN pP **pP** **10 12 18.0 -2.6**
SFIN Lafayette 60.90 345 P **P** **10 11 49.2 -1.6**
baz=161,SNR=18
M50A Fremont 60.97 348 P **P** **10 11 50.6 -0.6**
M50A IAmb IAmb 10 11 51.9
comp=Z,46nm,0.8s
M50A **pP** **10 12 19.5 -1.6**
M50A Fremont 60.97 348 P **P** **10 11 50.8 -0.4**
baz=165,SNR=7.2
L55A Hinsdale 61.00 352 P **P** **10 11 52.1 +0.6**
baz=170
K61A Williamstown 61.02 357 P **P** **10 11 51.9 +0.3**
baz=176
L53A Girard 61.03 351 P **P** **10 11 51.7 0.0**
baz=168,SNR=15
N47A Urbana 61.03 346 P **P** **10 11 50.5 -1.2**
N47A IAmb IAmb 10 11 51.8
comp=Z,57nm,0.8s
N47A pP **pP** **10 12 19.4 -2.2**
N47A Urbana 61.03 346 P **P** **10 11 50.5 -1.2**
baz=162,SNR=16
O44A Mansfield 61.04 343 P **P** **10 11 49.9 -1.8**
O44A IAmb IAmb 10 11 51.5
comp=Z,55nm,0.8s
O44A **pP** **10 12 19.3 -2.0**
MSTX Muleshoe 61.14 329 P **P** **10 11 52.2 -0.5**
MSTX pP **pP** **10 12 21.4 -0.9**
MSTX Muleshoe 61.14 329 P **P** **10 11 52.4 -0.3**
baz=144,SNR=53
ERPA Erie 61.15 351 P **P** **10 11 52.5 0.0**
ERPA pP **pP** **10 12 23.1 +0.9**
ERPA Erie 61.15 351 P **P** **10 11 52.3 -0.2**
baz=169,SNR=20
L54A Sinclairville 61.17 352 P **P** **10 11 52.6 0.0**
baz=169,SNR=8.5
K59A Cooperstown 61.23 355 P **P** **10 11 53.0 +0.1**
baz=174
M49A Liberty Center 61.23 348 P **P** **10 11 52.4 -0.6**
baz=164,SNR=16
WVNY West Valley, N 61.24 352 P **P** **10 11 53.8 +0.7**
WVNY IAmb IAmb 10 11 56.8
comp=Z,24nm,0.8s
K58A Earlville 61.28 355 P **P** **10 11 53.6 +0.2**
K58A Earlville 61.28 355 P **P** **10 11 53.2 -0.2**
baz=173
K57A Scipio Center 61.33 354 P **P** **10 11 53.3 -0.4**
baz=172
AMTX Amarillo 61.35 330 P **P** **10 11 53.7 -0.3**
AMTX IAmb IAmb 10 11 55.1
comp=Z,24nm,0.8s
AMTX Amarillo 61.35 330 P **P** **10 11 53.7 -0.3**
baz=145
U32A Winter Ranch, 61.38 333 P **P** **10 11 53.7 -0.5**
K56A Middlesex 61.38 353 P **P** **10 11 54.2 +0.1**
baz=172
M48A Edgerton 61.39 347 P **P** **10 11 53.0 -1.0**
M48A IAmb IAmb 10 11 54.5
comp=Z,66nm,1.1s
M48A **pP** **10 12 22.7 -1.2**
M48A Edgerton 61.39 347 P **P** **10 11 53.1 -0.9**
baz=164
K54A Basiliko Farm, 61.45 352 P **P** **10 11 54.2 -0.3**
baz=170
M47A Cromwell 61.47 346 P **P** **10 11 53.9 -0.7**
baz=163,SNR=9.6
MMNY Mt. Morris Dam 61.48 353 P **P** **10 11 53.1 -1.5**
MMNY IAmb IAmb 10 12 00.2
comp=Z,72nm,1.5s
MMNY **pP** **10 12 22.6 -2.0**
K55A Perry 61.49 353 P **P** **10 11 54.7 -0.1**
baz=171
L50A Kingsville 61.55 349 P **P** **10 11 54.1 -1.0**
baz=166,SNR=5.0
J60A Lant Hill Farm 61.60 357 P **P** **10 11 56.1 +0.7**
baz=176
HDIL Hopedale 61.65 343 P **P** **10 11 54.6 -1.2**
HDIL pP **pP** **10 12 22.6 -2.9**
HDIL Hopedale 61.65 343 P **P** **10 11 54.4 -1.4**
baz=159,SNR=14
SRIG Santa Rosalia 61.66 317 P **P** **10 11 56.4 +0.3**
SRIG IAmb IAmb 10 11 58.0
comp=Z,33nm,0.9s
J61A Chester 61.66 357 P **P** **10 11 55.5 -0.3**
baz=177
L48A N Adams 61.77 347 P **P** **10 11 56.0 -0.6**
baz=164,SNR=13
L49A Milan 61.80 348 P **P** **10 11 56.0 -0.8**
baz=165,SNR=9.0
J58A Remsen 61.84 355 P **P** **10 11 57.9 +0.8**
baz=174
J59A Piesco 61.89 356 P **P** **10 11 57.1 -0.3**
J59A **pP** **10 12 25.3 -2.1**
J59A Piesco 61.89 356 P **P** **10 11 57.7 +0.3**
baz=175
K52A Tillsonburg 61.91 351 P **P** **10 11 57.9 +0.4**
baz=168
J57A Williamstown 61.95 355 P **P** **10 11 58.6 +0.8**
baz=173
L47A Sherwood 61.97 347 P **P** **10 11 57.0 -0.9**
baz=163,SNR=15
K51A Iona Station 61.98 350 P **P** **10 11 58.6 +0.6**
baz=167
HSIG 62.01 319 P **P** **10 11 59.0 +0.5**
HSIG IAmb IAmb 10 12 01.5
comp=Z,44nm,1.1s
HSIG **pP** **10 12 28.2 +0.1**
M44A Midewin, Midew 62.09 344 P **P** **10 11 57.2 -1.5**
M44A IAmb IAmb 10 11 58.4
comp=Z,77nm,1.4s
M44A **pP** **10 12 26.4 -2.3**
I60A Shoreham 62.19 357 P **P** **10 12 00.5 +1.2**
baz=176
K50A Casco 62.22 349 P **P** **10 11 59.2 -0.4**
K50A **pP** **10 12 28.9 -0.6**
K50A Casco 62.22 349 P **P** **10 11 58.9 -0.8**
baz=166,SNR=8.5
I61A Oroboro, Fairl 62.23 358 P **P** **10 12 00.2 +0.6**
baz=177
N41A Harden Midland 62.24 342 P **P** **10 11 58.8 -0.9**
N41A pP **pP** **10 12 27.8 -1.6**
L46A Eue Claire 62.25 346 P **P** **10 11 58.7 -1.1**
L46A **pP** **10 12 27.4 -2.3**
L46A Eue Claire 62.25 346 P **P** **10 11 58.4 -1.4**
baz=162
J52A Paris 62.32 351 P **P** **10 12 00.2 -0.1**
baz=168,SNR=12
K49A Clarkson 62.39 348 P **P** **10 12 00.0 -0.7**
baz=165
K48A Perry 62.53 348 P **P** **10 12 00.8 -0.9**
baz=164,SNR=6.7
K47A Vermontville 62.59 347 P **P** **10 12 01.1 -0.9**
baz=163,SNR=6.6
121A Cookes Peak, D 62.67 324 P **P** **10 12 03.9 +0.8**
121A IAmb IAmb 10 12 05.1
comp=Z,52nm,0.8s
121A Cookes Peak, D 62.67 324 P **P** **10 12 04.0 +0.9**
baz=139,SNR=32
319A Douglas 62.68 322 P **P** **10 12 03.8 +0.7**
KSU1 Kansas State U 62.74 336 P **P** **10 12 02.7 -0.5**
baz=151,SNR=28
K46A Dorr 62.77 346 P **P** **10 12 02.2 -1.0**
baz=163,SNR=5.3
L44A Lake County Fo 62.80 345 P **P** **10 12 02.3 -1.1**
L44A IAmb IAmb 10 12 04.2
comp=Z,94nm,1.4s
L44A pP **pP** **10 12 31.2 -2.2**
L44A Lake County Fo 62.80 345 P **P** **10 12 02.2 -1.1**
baz=160
H58A Gabriels 62.81 356 P **P** **10 12 03.9 +0.3**
baz=175
H61A Lyndonville 62.82 358 P **P** **10 12 04.3 +0.7**
baz=177
H62A Milan 62.84 359 P **P** **10 12 04.3 +0.6**
baz=178
J49A Marlette 62.88 349 P **P** **10 12 03.2 -0.8**
baz=165,SNR=7.8
H64A Troy 62.89 0 P **P** **10 12 04.8 +0.9**
baz=180
H63A New Sharon 62.91 360 P **P** **10 12 05.2 +1.1**
baz=179
I55A Frankford 62.92 353 P **P** **10 12 04.8 +0.6**
baz=171
H57A Richville 62.95 355 P **P** **10 12 05.0 +0.6**
baz=174
J48A Bridge Port 62.95 348 P **P** **10 12 04.1 -0.3**
J48A IAmb IAmb 10 12 04.9
comp=Z,74nm,0.8s
J48A **pP** **10 12 32.8 -1.5**
J48A Bridge Port 62.95 348 P **P** **10 12 03.6 -0.8**
baz=165,SNR=11
I51A Listowel 62.96 351 P **P** **10 12 04.3 -0.2**
baz=168,SNR=7.0
VNA3 Neumayer Olymp 63.01 162 P **P** **10 12 06.3 +1.7**
H59A Cadyville 63.01 357 P **P** **10 12 05.2 +0.3**
baz=176
LONY Lake Ozonia 63.04 356 P **P** **10 12 04.3 -0.8**
LONY IAmb IAmb 10 12 20.9
comp=Z,50nm,1.1s
LONY Lake Ozonia 63.04 356 P **P** **10 12 05.3 +0.2**
baz=175
I52A Shelburne 63.09 351 P **P** **10 12 05.5 +0.1**
baz=169
L42A Oliver, Polo 63.09 343 P **P** **10 12 04.5 -0.9**
L42A IAmb IAmb 10 12 05.1
comp=Z,32nm,0.9s
L42A **pP** **10 12 32.9 -2.2**
J47A Sunmer 63.09 347 P **P** **10 12 04.8 -0.6**
J47A pP **pP** **10 12 34.4 -1.0**
J47A Sunmer 63.09 347 P **P** **10 12 04.7 -0.7**
baz=164,SNR=10
H56A Elgin 63.15 355 P **P** **10 12 05.6 -0.1**
baz=173
FRNY Flat Rock 63.20 357 P **P** **10 12 06.6 +0.6**
FRNY **pP** **10 12 34.9 -1.2**
H55A Tweed 63.20 354 P **P** **10 12 06.5 +0.5**
baz=172
VNA1 Neumayer--Stat 63.21 161 P **P** **10 12 08.1 +2.2**
J46A Howard City 63.37 347 P **P** **10 12 06.9 -0.4**
baz=163
H53A Bobcaygeon 63.38 353 P **P** **10 12 07.5 +0.3**
baz=170
I49A Point Hope 63.39 349 P **P** **10 12 06.6 -0.7**
I49A **pP** **10 12 36.7 -0.5**
I49A Point Hope 63.39 349 P **P** **10 12 06.6 -0.7**
baz=166,SNR=5.9
K43A Burlington 63.40 345 P **P** **10 12 06.5 -1.0**
K43A **pP** **10 12 36.1 -1.3**
G60A Masonville 63.40 358 P **P** **10 12 07.6 +0.2**
baz=177
G65A Princeton 63.47 1 P **P** **10 12 09.1 +1.3**
baz=182
G62A West of Eustis 63.47 359 P **P** **10 12 08.0 +0.1**
G62A pP **pP** **10 12 37.8 -0.1**
G62A West of Eustis 63.47 359 P **P** **10 12 08.3 +0.5**
baz=179,SNR=10
G64A Maxfield 63.50 1 P **P** **10 12 08.7 +0.6**
baz=181
PKME Peaks-Kenny Pk 63.51 0 P **P** **10 12 09.1 +1.0**
baz=180
G58A Ormstown 63.53 356 P **P** **10 12 08.2 -0.1**
baz=175
G57A Newington 63.55 356 P **P** **10 12 08.0 -0.3**
baz=174
G61A St-Isidore-de- 63.56 358 P **P** **10 12 08.0 -0.4**
baz=178
VNA2 Neumayer--Watz 63.58 161 P **P** **10 12 10.0 +1.7**
baz=270,slow=6.7
L40A Anamosa 63.59 342 P **P** **10 12 07.9 -0.8**
L40A IAmb IAmb 10 12 09.2
comp=Z,62nm,0.9s
L40A **pP** **10 12 37.2 -1.3**
H52A Wyevale 63.61 352 P **P** **10 12 08.9 +0.1**
baz=169
SADO Sadowa 63.64 352 pP 10 12 37.8 -1.3
CBKS Cedar Bluff 63.74 334 P **P** **10 12 09.8 0.0**
CBKS pmax pmax
comp=Z,137nm,1.0s
CBKS Cedar Bluff 63.74 334 P **P** **10 12 09.8 0.0**
CBKS Cedar Bluff 63.74 334 P **P** **10 12 10.0 +0.1**
baz=148,SNR=40
I47A Gladwin 63.78 348 P **P** **10 12 09.2 -0.7**
I47A **pP** **10 12 37.4 -2.5**
I47A Gladwin 63.78 348 P **P** **10 12 08.8 -1.1**
baz=164,SNR=9.0
ANMO Albuquerque 63.78 327*d i* P **P** **10 12 10.7 +0.3**
ANMO pmax pmax
comp=Z,30nm,0.9s
ANMO Albuquerque 63.78 327 P **P** **10 12 10.5 +0.1**
ANMO Albuquerque 63.78 327 P **P** **10 12 10.6 +0.3**
baz=141
I48A Sherman Twp 63.79 349 P **P** **10 12 09.3 -0.6**
baz=165,SNR=16
G55A Calabogie 63.85 354 P **P** **10 12 09.8 -0.4**
baz=172
I46A Reed City 63.90 347 P **P** **10 12 09.5 -1.2**
baz=163,SNR=11
G53A Haliburton 63.92 353 P **P** **10 12 10.8 0.0**
baz=170
SCIA State Center 64.06 340 P **P** **10 12 11.4 -0.4**
SCIA **pP** **10 12 40.5 -1.1**
SCIA State Center 64.06 340 P **P** **10 12 11.4 -0.4**
baz=155,SNR=7.6
JFWS Jewell Farm 64.10 343 P **P** **10 12 11.6 -0.4**
JFWS pP **pP** **10 12 40.8 -1.1**
JFWS Jewell Farm 64.10 343 P **P** **10 12 11.8 -0.2**
baz=158,SNR=20
F64A Sherman 64.12 1 P **P** **10 12 12.8 +0.7**
F64A Sherman 64.12 1 P **P** **10 12 12.9 +0.9**
baz=181
G54A Lake Saint Pet 64.13 353 P **P** **10 12 12.5 +0.3**
baz=171
H48A Harrisville 64.21 349 P **P** **10 12 10.9 -1.8**
H48A IAmb IAmb 10 12 13.2
comp=Z,50nm,0.7s
H48A **pP** **10 12 41.5 -1.3**
H48A Harrisville 64.21 349 P **P** **10 12 12.4 -0.3**
baz=165
TUC Tucson 64.23 322 P **P** **10 12 13.9 +0.6**
TUC pmax pmax
comp=Z,19nm,1.0s
TUC Tucson 64.23 322 P **P** **10 12 13.9 +0.6**
TUC Tucson 64.23 322 P **P** **10 12 13.9 +0.6**
baz=136
F61A St Evariste 64.24 359 P **P** **10 12 12.9 0.0**
baz=178
F60A Warwick 64.26 358 P **P** **10 12 13.2 +0.3**
baz=177
H47A Mio 64.28 348 P **P** **10 12 12.6 -0.6**
baz=164
F55A Otter Lake 64.39 355 P **P** **10 12 14.6 +0.8**
baz=173
H46A Fife Lake 64.42 348 P **P** **10 12 13.1 -1.0**
baz=164,SNR=19
T25A Trinidad 64.47 329 P **P** **10 12 15.2 +0.3**
T25A IAmb IAmb 10 12 16.4
comp=Z,33nm,0.9s
T25A pP **pP** **10 12 42.5 -2.1**
T25A Trinidad 64.47 329 P **P** **10 12 15.4 +0.5**
baz=143,SNR=28
GLMI Grayling 64.58 348 P **P** **10 12 14.8 -0.3**
GLMI **pP** **10 12 44.8 -0.3**
GLMI Grayling 64.58 348 P **P** **10 12 14.7 -0.5**
baz=164,SNR=5.1
TRQ Mont Tremblant 64.64 356 P **P** **10 12 15.7 +0.1**
TRQ **pP** **10 12 45.1 -0.6**
E60A Ste Agathe de 64.64 358 P **P** **10 12 16.2 +0.7**
baz=178
I42A Draeger Farm, 64.66 345 P **P** **10 12 14.8 -0.8**
I42A IAmb IAmb 10 12 16.4
comp=Z,54nm,0.7s
I42A **pP** **10 12 44.8 -0.9**
F52A Sundridge 64.67 352 P **P** **10 12 16.0 +0.3**
baz=170
E63A Oxbow 64.67 1 pP 10 12 45.2 -0.6
E63A Oxbow 64.67 1 P **P** **10 12 16.8 +1.1**
baz=181
ALGO Algonquin Park 64.68 353 P **P** **10 12 16.6 +0.9**
baz=171
E64A Bridgewater 64.68 1 P **P** **10 12 16.6 +0.9**
baz=182
E61A Lac Etchemin 64.68 359 P **P** **10 12 17.4 +1.6**
baz=179
E58A La Victoria 64.71 357 P **P** **10 12 17.1 +1.2**
baz=176
G47A Hillman 64.77 349 P **P** **10 12 16.1 -0.2**
baz=165
E57A Chemin Saint G 64.80 356 P **P** **10 12 17.4 +0.9**
baz=175
F51A Arnstein 64.88 352 P **P** **10 12 17.2 +0.2**
baz=169
H43A Windswept, Lux 64.92 346 P **P** **10 12 17.1 -0.2**
H43A **pP** **10 12 45.7 -1.7**
PQI Presque Isle 64.93 1 P **P** **10 12 16.9 -0.4**
PQI **pP** **10 12 47.1 -0.4**
E56A St. Veronique 64.99 356 P **P** **10 12 17.6 -0.1**
baz=174,SNR=9.2
G45A Suttons Bay 64.99 347 P **P** **10 12 16.6 -1.2**
G45A IAmb IAmb 10 12 18.1
comp=Z,59nm,0.8s
G45A Suttons Bay 64.99 347 P **P** **10 12 17.5 -0.3**
baz=163
F49A Sandfield 65.03 350 P **P** **10 12 17.7 -0.3**
baz=167
E53A Dumoine, Ponti 65.05 354 P **P** **10 12 18.6 +0.4**
baz=171
E52A Mattawa 65.07 353 P **P** **10 12 18.6 +0.3**
baz=170
I40A Norwalk 65.11 343 P **P** **10 12 18.0 -0.5**
I40A IAmb IAmb 10 12 18.8
comp=Z,26nm,0.7s
I40A pP **pP** **10 12 47.6 -0.9**
KSCO Kaye Shedlock' 65.16 332 P **P** **10 12 19.7 +0.6**
KSCO **pP** **10 12 48.6 -0.4**
KSCO Kaye Shedlock' **65.16 332** P **P** **10 12 19.6 +0.4**
baz=145,SNR=20
D60A Saint Jean D'O 65.17 359 P **P** **10 12 19.8 +0.9**
baz=178
F48A Evansville 65.18 350 P **P** **10 12 18.8 -0.2**
baz=166
214A Organ Pipe Nat 65.20 320 P **P** **10 12 20.7 +1.2**
214A Organ Pipe Nat 65.20 320 P **P** **10 12 20.9 +1.4**
baz=134,SNR=50
SNAA Sanae 65.21 161 P **P** **10 12 20.4 +1.4**
SNAA Sanae 65.21 161 P **P** **10 12 19.2 +0.2**
SNAA pmax pmax
comp=Z,77nm,1.3s
SNAA Sanae 65.21 161 P **P** **10 12 19.2 +0.2**
SNAA IAmb IAmb 10 12 21.4
comp=Z,77nm,1.3s
D59A Saint-Raymond 65.29 358 P **P** **10 12 20.2 +0.5**
baz=178
D63A Stockholm 65.29 1 P **P** **10 12 19.7 +0.1**
baz=181
D62A Allapoint, All 65.33 0 P **P** **10 12 20.6 +0.7**
D62A Allapoint, All 65.33 0 P **P** **10 12 20.8 +0.9**
baz=180,SNR=9.3
BGNE Belgrade 65.33 337 P **P** **10 12 20.1 0.0**
BGNE Belgrade 65.33 337 P **P** **10 12 20.1 0.0**
baz=150,SNR=31
X18A Snowflake 65.36 324 P **P** **10 12 20.3 -0.4**
X18A IAmb IAmb 10 12 23.3
comp=Z,81nm,1.3s
D57A Chemin Vers le 65.39 357 P **P** **10 12 21.1 +0.8**
baz=175
D58A Chemin du LacG 65.42 357 P **P** **10 12 21.9 +1.4**
baz=176,SNR=12
E51A G1948 Merrick 65.42 352 P **P** **10 12 21.6 +1.1**
baz=170
D61A St Aubert, Com 65.45 359 P **P** **10 12 21.8 +1.1**
baz=179
D56A ZEC Mazanza, M 65.47 356 P **P** **10 12 21.9 +1.0**
baz=174
SDCO Great Sand Dun 65.48 329 P **P** **10 12 21.4 -0.1**
SDCO IAmb IAmb 10 12 23.6
comp=Z,62nm,0.8s
SDCO Great Sand Dun 65.48 329 P **P** **10 12 22.0 +0.6**
baz=142,SNR=112
D55A Sainte-Anne-du 65.49 355 P **P** **10 12 21.9 +0.9**
baz=174,SNR=8.7
F45A CMU Biological 65.58 348 P **P** **10 12 21.1 -0.4**
baz=163,SNR=6.5
W18A Petrified Fore 65.68 324 P **P** **10 12 23.7 +1.0**
W18A IAmb IAmb 10 12 25.1
comp=Z,96nm,1.2s
W18A Petrified Fore 65.68 324 P **P** **10 12 23.7 +1.0**
baz=138,SNR=14
D54A Lac Fusel, La 65.72 355 P **P** **10 12 21.9 -0.6**
baz=172,SNR=5.7
D52A ZEK Kipawa Sen 65.72 353 P **P** **10 12 21.4 -1.0**
baz=171
E48A Lockeyer 65.75 350 P **P** **10 12 22.3 -0.3**
baz=167,SNR=6.6
E47A Iron Bridge 65.90 350 P **P** **10 12 23.3 -0.3**
baz=166,SNR=7.5
D51A Lot 18 Range I 65.95 353 P **P** **10 12 23.9 0.0**
baz=170
E46A Sault Ste Mari 66.00 349 P **P** **10 12 23.3 -0.9**

E46A IAmb IAmb 10 12 24.7
comp=Z,50nm,0.8s
E46A PcP **10 12 53.4 -0.5**
X16A Lo Mia Camp, P 66.13 323 P P **10 12 24.9 -0.6**
X16A IAmb IAmb 10 12 28.4
comp=Z,86nm,1.4s
S22A 4UR Ranch, Cre 66.14 328 P P **10 12 24.8 -0.9**
S22A 4UR Ranch, Cre 66.14 328 P P **10 12 26.7 +1.0**
baz=141,SNR=37
G40A Rib Lake 66.27 344 P P **10 12 25.4 -0.7**
Q24A Divide 66.28 330 P P **10 12 26.9 +0.3**
Q24A IAmb IAmb 10 12 28.6
comp=Z,57nm,0.8s
Q24A PcP **10 12 55.6 -0.1**
Q24A Divide 66.28 330 P P **10 12 27.0 +0.5**
baz=143,SNR=22
D48A Paudash Townsh 66.37 351 P P **10 12 26.3 -0.3**
baz=167,SNR=6.9
D46A Sault St. Mari 66.46 349 P P **10 12 26.3 -0.9**
baz=165
OGNE Ogallala 66.49 334 P P **10 12 26.5 -1.2**
OGNE IAmb IAmb 10 12 29.3
comp=Z,64nm,0.7s
OGNE Ogallala 66.49 334 P P **10 12 28.3 +0.6**
baz=146,SNR=9.7
E43A Lone Tree Farm 66.55 347 P P **10 12 27.0 -0.8**
E43A IAmb IAmb 10 12 28.3
comp=Z,36nm,0.7s
E43A PcP **10 12 56.4 +0.2**
MVCO Mesa Verde 66.58 327 P P **10 12 28.1 -0.4**
MVCO Mesa Verde 66.58 327 P P **10 12 29.1 +0.7**
baz=140,SNR=46
Y14A Wickenburg 66.70 321 P P **10 12 30.1 +1.0**
VLDQ Val d'Or 66.75 354 P P **10 12 29.3 +0.3**
COWI Conover 66.78 345 P P **10 12 28.9 -0.4**
ECSD EROS Data Cent 66.81 339 P P **10 12 29.1 -0.4**
ECSD IAmb IAmb 10 12 30.7
comp=Z,106nm,1.4s
ECSD EROS Data Cent 66.81 339 P P **10 12 29.5 0.0**
baz=152,SNR=33
WUAZ Wupatki 66.88 324 P P **10 12 31.4 +1.1**
WUAZ IAmb IAmb 10 12 33.1
comp=Z,77nm,1.0s
WUAZ Wupatki 66.88 324 P P **10 12 31.7 +1.4**
baz=136,SNR=55
SPMN Marine on St. 66.94 342 P P **10 12 29.8 -0.5**
SPMN IAmb IAmb 10 12 30.9
comp=Z,46nm,0.8s
SPMN Marine on St. 66.94 342 P P **10 12 29.8 -0.5**
baz=156,SNR=18
ISCO Idaho Springs 67.16 330 P P **10 12 31.8 -0.3**
ISCO pmax pmax
comp=Z,43nm,0.9s
ISCO Idaho Springs 67.16 330 P P **10 12 31.8 -0.3**
ISCO IAmb IAmb 10 12 34.2
comp=Z,43nm,0.9s
ISCO Idaho Springs 67.16 330 P P **10 12 33.0 +0.8**
baz=143,SNR=24
GLA Glamis 67.19 320 P P **10 12 33.2 +1.1**
GLA pmax pmax
comp=Z,42nm,1.3s
GLA Glamis 67.19 320 P P **10 12 33.2 +1.1**
GLA Glamis 67.19 320 P P **10 12 33.7 +1.5**
baz=133,SNR=6.7
SMCO Snowmass 67.32 329 P P **10 12 34.2 +0.9**
SMCO IAmb IAmb 10 12 35.6
comp=Z,48nm,0.8s
Y12C Blythe 67.48 320 P P **10 12 34.5 +0.6**
Y12C IAmb IAmb 10 12 36.7
comp=Z,34nm,0.8s
Y12C Blythe 67.48 320 P P **10 12 35.1 +1.2**
baz=134,SNR=27
D41A Chassel 67.55 346 P P **10 12 33.7 -0.3**
D41A IAmb IAmb 10 12 35.2
comp=Z,67nm,0.8s
PDMCI Parker Dam,Lak 67.63 321 P P **10 12 36.1 +1.3**
baz=134,SNR=15
LSQQ Lebel-sur-Quev 67.64 355 P P **10 12 35.2 +0.6**
baz=172
IKP In-Ko-Pah, Jac 67.72 318 P P **10 12 36.6 +1.1**
baz=132,SNR=19
SWSC Sam W. Stewart 67.72 319 P P **10 12 37.1 +1.7**
baz=132,SNR=5.7
E38A The Farm, Brul 67.87 344 P P **10 12 35.7 -0.3**
E38A IAmb IAmb 10 12 36.8
comp=Z,43nm,1.0s
BC3 Big Chuckawall 67.98 320 P P **10 12 38.3 +1.1**
baz=133,SNR=38
W13A Hualapai Mount 68.03 322 P P **10 12 37.9 +0.3**
U15A North Rim 68.05 324 P P **10 12 37.9 +0.1**
U15A IAmb IAmb 10 12 40.9
comp=Z,82nm,1.1s
LIC Lamto 68.07 75 *e*P P **10 12 36.8 -1.2**
comp=Z,24nm,0.3s
MONP2 Monument Peak 68.07 318 P P **10 12 39.4 +1.5**
baz=132,SNR=24
BAR Barrett 68.09 318 P P **10 12 39.2 +1.4**
BAR IAmb IAmb 10 12 40.7
comp=Z,82nm,1.2s
IRM Iron Mountain 68.13 320 P P **10 12 39.6 +1.6**
baz=133,SNR=60
N23A Red Feather La 68.18 331 P P **10 12 39.3 +0.8**
N23A IAmb IAmb 10 12 40.5
comp=Z,42nm,0.8s
N23A Red Feather La 68.18 331 P P **10 12 39.5 +1.0**
baz=143,SNR=30
NEE2 Needles Airpor 68.23 321 P P **10 12 39.9 +1.3**
baz=134
TIC Toumodi 68.24 75 *e*P P **10 12 37.8 -1.3**
comp=Z,10nm,0.2s
SUSD Miller 68.25 338 P P **10 12 38.3 -0.2**
SUSD IAmb IAmb 10 12 39.5
comp=Z,46nm,0.7s
SUSD Miller 68.25 338 P P **10 12 38.4 -0.2**
baz=150
PHWY Pilot Hill 68.28 332 P P **10 12 38.7 -0.4**
KIC Kosan Boka 68.38 75 *e*P P **10 12 38.9 -1.1**
comp=Z,126nm,0.6s
DBIC Dimbokro 68.40 75 P P **10 12 39.0 -1.1**
DBIC pmax pmax
comp=Z,91nm,0.9s
DBIC Dimbokro 68.40 75 P P **10 12 39.5 -0.6**
comp=Z,65nm,0.6s,baz=225,slow=6.4,SNR=90
DBIC pP **pP 10 13 10.5 +0.3**
comp=Z,26nm,0.8s,baz=221,slow=9.3,SNR=3.4
DBIC LR LR 10 41 35.5
comp=Z,469nm,20.4s,baz=219,slow=35
DBIC Dimbokro 68.40 75 P P **10 12 39.0 -1.1**
DBIC IAmb IAmb 10 12 40.8
comp=Z,91nm,0.9s
MATQ Matagami 68.40 354 P P **10 12 39.9 +0.6**
baz=172,SNR=8.0
109C Camp Elliot, M 68.50 318 P P **10 12 41.5 +1.1**
109C IAmb IAmb 10 12 43.3
comp=Z,62nm,1.5s
109C Camp Elliot, M 68.50 318 P P **10 12 40.7 +0.4**
baz=131
BELC Belle Mtn. Jos 68.55 320 P P **10 12 41.9 +1.1**
baz=132,SNR=27
XPFO Pion Flat 68.57 319 P P **10 12 42.2 +1.2**
PFO Pinyon Flats O 68.57 319 P P **10 12 40.7 -0.3**
PFO pmax pmax
comp=Z,34nm,1.0s
PFO Pinyon Flats O 68.57 319 P P **10 12 40.7 -0.3**
PFO Pinyon Flats O 68.57 319 P P **10 12 42.5 +1.5**
baz=132,SNR=26
O20A White River Ci 68.68 329 P P **10 12 41.0 -0.6**
O20A IAmb IAmb 10 12 43.8
comp=Z,66nm,1.1s
O20A White River Ci 68.68 329 P P **10 12 42.6 +1.0**
baz=140,SNR=32
KNB Kanab 68.77 324 P P **10 12 41.4 -0.7**
KNB pmax pmax
comp=Z,169nm,1.0s
KNB Kanab 68.77 324 P P **10 12 41.4 -0.7**
PKCU Pink Cliffs 68.79 324 P P **10 12 43.4 +0.9**
LCMT Little Creek M 69.00 324 P P **10 12 43.7 +0.1**
MURC Murrieta 69.03 319 P P **10 12 45.1 +1.5**
baz=131,SNR=9.0
SRU San Rafael Swe 69.06 327 P P **10 12 43.5 -0.4**
SRU pmax pmax
comp=Z,40nm,0.7s
SRU San Rafael Swe 69.06 327 P P **10 12 43.5 -0.4**
EYMN Ely 69.09 344 P P **10 12 43.2 -0.5**
EYMN pP pP **10 13 13.2 -0.8**
EYMN Ely 69.09 344 P P **10 12 43.3 -0.3**
baz=158
MTPU Mount Pierson 69.15 325 P P **10 12 45.2 +0.4**
Q16A Castle Valley 69.25 326 P P **10 12 45.8 +0.6**
BBRC Big Bear Solar 69.29 319 P P **10 12 47.5 +2.0**
baz=132,SNR=19
HEC Hector,Ludlow 69.31 320 P P **10 12 47.3 +1.8**
baz=132,SNR=11
SZCU Shurtz Canyon 69.33 324 P P **10 12 46.0 +0.3**
RWWY Rawlins 69.39 331 P P **10 12 47.4 +1.4**
P17A Butcher Ranch, 69.44 327 P P **10 12 46.8 +0.5**
CCUT Cedar City 69.45 324 P P **10 12 48.2 +1.8**
TUQ Turquoise Moun 69.47 321 P P **10 12 47.9 +1.5**
baz=133,SNR=27
SCI2 San Clemente I 69.48 317 P P **10 12 47.6 +1.2**
baz=130
MSU Marysvale 69.49 325 P P **10 12 47.8 +1.2**
MSU Marysvale 69.49 325 P P **10 12 47.8 +1.2**
TMUT Trail Mountain 69.55 327 P P **10 12 46.4 -0.7**
RDMU Red Mountain 69.67 328 P P **10 12 48.1 +0.5**
CIS Catalina Islan 69.67 318 P P **10 12 48.6 +1.0**
baz=130,SNR=5.6
TCRU Three Creeks R 69.71 325 P P **10 12 48.5 +0.5**
BFSC Mount Baldy Ra 69.74 319 P P **10 12 49.3 +1.2**
baz=131,SNR=15
NVL N'lazarevskaya 69.75 160 *e*P P **10 12 47.6 +0.2**
NVL pmax pmax
comp=Z,67nm,1.2s
RRX Edison Barstow 69.75 320 P P **10 12 49.3 +1.3**
baz=132
SHPR Sheep Range 69.75 322 P P **10 12 49.5 +1.3**
SHPR IAmb IAmb 10 12 51.2
comp=Z,48nm,1.0s
FMP Fort Macarthur 69.79 318 P P **10 12 49.7 +1.4**
baz=130
K22A Casper 69.84 332 P P **10 12 48.9 +0.3**
K22A IAmb IAmb 10 12 50.5
comp=Z,43nm,0.8s
K22A Casper 69.84 332 P P **10 12 49.1 +0.5**
baz=143,SNR=21
GSC Goldstone, Bar 69.91 320 P P **10 12 50.7 +1.6**
GSC pmax pmax
comp=Z,104nm,1.5s
GSC Goldstone, Bar 69.91 320 P P **10 12 50.7 +1.6**
GSC IAmb IAmb 10 12 52.3
comp=Z,104nm,1.5s
GSC Goldstone, Bar 69.91 320 P P **10 12 50.7 +1.6**
baz=132,SNR=30
D32A Dogwood Acres, 69.95 340 P P **10 12 48.5 -0.4**
D32A IAmb IAmb 10 12 49.7
comp=Z,62nm,0.8s
D32A **pP 10 13 18.6 -0.5**
RSSD Black Hills 69.95 334 P P **10 12 49.8 +0.5**
RSSD pmax pmax
comp=Z,44nm,0.8s
RSSD Black Hills 69.95 334 P P **10 12 49.8 +0.5**
RSSD IAmb IAmb 10 12 51.2
comp=Z,44nm,0.8s
RSSD Black Hills 69.95 334 P P **10 12 49.9 +0.6**
baz=145
MWC Mount Wilson 69.98 319 P P **10 12 49.0 -0.6**
MWC pP **pP 10 13 20.8 +1.1**
SHOC Shoshone, Teco 69.99 321 P P **10 12 50.4 +0.9**
baz=133,SNR=19
PASC Pasadena Art C 70.02 318 P P **10 12 48.6 -1.1**
PASC IAmb IAmb 10 12 52.7
comp=Z,101nm,1.4s
PASC **pP 10 13 20.2 +0.5**
DECC Green Verdugo 70.17 318 P P **10 12 51.8 +1.2**
baz=131,SNR=6.6
SNCC San Nicolas Is 70.28 317 P P **10 12 52.1 +0.8**
baz=130
MPU Maple Canyon 70.30 327 P P **10 12 52.7 +1.2**
EDW2 Edwards Air Fo 70.36 319 P P **10 12 53.1 +1.3**
baz=131,SNR=16
PSUT Pine Spring 70.42 324 P P **10 12 53.3 +0.9**
NLU North Lily Min 70.49 326 P P **10 12 53.0 +0.3**
BLG Laguna Peak, P 70.54 318 P P **10 12 54.2 +1.4**
baz=130
LRMC Laurel Mtn Rad 70.56 320 P P **10 12 54.5 +1.3**
baz=132,SNR=18
AGMN Agassiz Nation 70.62 342 P P **10 12 52.8 -0.3**
AGMN IAmb IAmb 10 12 53.9
comp=Z,34nm,0.8s
AGMN pP **pP 10 13 22.7 -0.5**
JLU Jordanelle 70.64 327 P P **10 12 52.4 -1.3**
OSI Osito Audit: C 70.65 318 P P **10 12 54.9 +1.4**
OSI Osito Audit: C 70.65 318 P P **10 12 54.7 +1.1**
baz=130
TPNV Topopah Spring 70.69 322 P P **10 12 55.4 +1.5**
TPNV pmax pmax
comp=Z,76nm,1.2s
TPNV Topopah Spring 70.69 322 P P **10 12 55.4 +1.5**
TPNV IAmb IAmb 10 12 57.2
comp=Z,76nm,1.1s
TPNV Topopah Spring 70.69 322 P P **10 12 55.8 +1.9**
baz=133,SNR=50
FURC Furnace Creek, 70.73 321 P P **10 12 55.5 +1.6**
baz=132,SNR=44
MPMC Manual Prospec 70.83 320 P P **10 12 56.2 +1.4**
baz=132,SNR=23
SCZ2 Santa Cruz Isl 70.83 317 P P **10 12 55.5 +0.9**
baz=130
CTU Camp Tracy 70.86 327 P P **10 12 55.5 +0.6**
TCUT Toone Canyon 71.00 328 P P **10 12 56.9 +1.1**
ARVC Arvin 71.05 319 P P **10 12 57.1 +1.2**
baz=130,SNR=6.7
DUG Dugway, Tooele 71.05 326 P P **10 12 57.3 +1.3**
DUG pmax pmax
comp=Z,68nm,1.2s
DUG Dugway, Tooele 71.05 326 P P **10 12 57.3 +1.3**
DUG IAmb IAmb 10 12 58.7
comp=Z,68nm,1.1s
DUG Dugway, Tooele 71.05 326 P P **10 12 57.2 +1.3**
baz=137,SNR=49
ISA Isabella, Lake 71.17 319 P P **10 12 58.2 +1.5**
ISA pmax pmax
comp=Z,31nm,0.9s
ISA Isabella, Lake 71.17 319 P P **10 12 58.2 +1.5**
ISA Isabella, Lake 71.17 319 P P **10 12 58.3 +1.6**
baz=131,SNR=29
R11A Troy Canyon, C 71.26 323 P P **10 12 59.0 +1.7**
R11A Troy Canyon, C 71.26 323 P P **10 12 58.9 +1.5**
baz=134,SNR=55
BW06 Boulder Array 71.33 330 P P **10 12 58.0 +0.3**
BW06 Boulder Array 71.33 330 P P **10 12 58.1 +0.3**
baz=140,SNR=24
PD31 Pinedale Array 71.33 330 P P **10 12 57.9 +0.1**
PDAR Pinedale Array 71.33 330 P P **10 12 58.1 +0.4**
comp=Z,9.5nm,0.7s,baz=128,slow=7.6,SNR=80
PDAR pP **pP 10 13 28.6 +0.5**
comp=Z,7.4nm,0.7s,baz=134,slow=7.7,SNR=4.8
PDAR LR LR 10 47 58.0
comp=Z,85nm,18.6s,baz=138,slow=39
PDAR Pinedale Array 71.33 330 P P **10 12 57.7 0.0**
GRAC Grapevine Rang 71.38 321 P P **10 12 59.3 +1.4**
baz=132,SNR=7.5
MDND Maddock 71.42 339 P P **10 12 58.0 +0.1**
MDND Maddock 71.42 339 P P **10 12 58.2 +0.3**
baz=150,SNR=23
HWUT Hardware Ranch 71.44 328 P P **10 12 59.0 +0.6**
CWC Cottonwood Cre 71.44 320 P P **10 12 59.7 +1.3**
baz=131
PKM Mcpherson Peak 71.51 318 P P **10 13 00.3 +1.4**
baz=130,SNR=16
QSPA South Pole Qui 71.62 180 P P **10 13 00.6 +1.5**
VES Vestal, Richgr 71.67 319 P P **10 13 00.8 +1.2**
baz=130,SNR=16
SPUT South Promonto 71.67 327 P P **10 13 00.7 +1.0**
BGU Big Grassy Mou 71.69 327 P P **10 13 00.8 +0.9**
SMMC Simmler 71.90 318 P P **10 13 02.8 +1.7**
baz=130,SNR=9.2
TIN Tinemaha, Big 71.94 321 P P **10 13 03.1 +1.7**
baz=132,SNR=8.2
AHID Auburn Hatcher 72.07 329 P P **10 13 02.9 +0.7**
AHID IAmb IAmb 10 13 04.0
comp=Z,41nm,0.8s
VOG Valley Oaks Go 72.16 319 P P **10 13 03.1 +0.6**
baz=130
HVU Hansel Valley 72.18 327 P P **10 13 04.1 +1.3**
HVU pmax pmax
comp=Z,32nm,0.9s
HVU Hansel Valley 72.18 327 P P **10 13 04.1 +1.3**
PAGB Antelope Grade 72.32 319 P P **10 13 04.3 +0.7**
ULM Lac du Bonnet 72.38 343 P P **10 13 03.0 -0.5**
ULM pmax pmax
comp=Z,44nm,0.7s
ULM Lac du Bonnet 72.38 343 P P **10 13 03.0 -0.5**
ULM IAmb IAmb 10 13 04.1
comp=Z,44nm,0.7s
REDW Red Top Meadow 72.40 330 P P **10 13 04.7 +0.6**
SNOW Snow King Moun 72.43 330 P P **10 13 04.9 +0.5**
TPAW Teton Pass 72.54 330 P P **10 13 04.9 -0.1**
MOOW Moose Ponds 72.64 330 P P **10 13 04.9 -0.7**
MLAC Mammoth, Mammo 72.68 321 P P **10 13 07.7 +1.8**
baz=131,SNR=11
ELK Elko 72.74 325 P P **10 13 06.7 +0.5**
ELK pmax pmax
comp=Z,20nm,1.0s
ELK Elko 72.74 325 P P **10 13 06.7 +0.5**
OMMB Old Mammoth Mi 72.77 321 P P **10 13 07.6 +1.1**
OMMB IAmb IAmb 10 13 09.3
comp=Z,114nm,1.5s
NV11 Mina Array Sit 72.80 322 P P **10 13 07.5 +1.0**
MDPB Devils Postpil 72.83 321 P P **10 13 07.0 +0.2**
IMW Indian Meadow 72.84 330 P P **10 13 05.8 -1.0**
IMW IAmb IAmb 10 13 09.1
comp=Z,135nm,1.4s
FLWY Flagg Ranch 72.87 330 P P **10 13 07.7 +0.9**
FLWY IAmb IAmb 10 13 09.5
comp=Z,82nm,0.8s
NVAR Mina Array Bea 72.89 322 P P **10 13 08.6 +1.5**
comp=Z,17nm,1.0s,baz=145,slow=6.4,SNR=83
NVAR pP **pP 10 13 38.1 +0.8**
comp=Z,13nm,0.8s,baz=134,slow=6.4,SNR=7.1
NVAR LR LR 10 45 17.8
comp=Z,176nm,20.0s,baz=134,slow=36
NVAR Mina Array Bea 72.89 322 P P **10 13 07.4 +0.3**
NVAR **pP 10 13 37.9 +0.5**
LAO LASA Array 72.93 334 P P **10 13 07.1 +0.1**
LAO IAmb IAmb 10 13 09.0
comp=Z,138nm,1.4s
LAO LASA Array 72.93 334 P P **10 13 07.4 +0.5**
baz=144,SNR=15
PMPB Monarch Peak 72.97 319 P P **10 13 07.6 +0.2**
PMPB IAmb IAmb 10 13 10.6
comp=Z,50nm,1.0s
PMPB **pP 10 13 38.7 +1.0**
RLMT Red Lodge 73.00 332 P P **10 13 08.0 +0.3**
RLMT IAmb IAmb 10 13 09.4
comp=Z,42nm,0.8s
RLMT Red Lodge 73.00 332 P P **10 13 08.6 +1.0**
baz=141,SNR=35
H17A Grant Village 73.05 330 P P **10 13 08.4 +0.4**
H17A Grant Village 73.05 330 P P **10 13 09.6 +1.7**
baz=139,SNR=37
YPP Pitchstone Pla 73.06 330 P P **10 13 08.2 +0.1**
LKWY Lake 73.09 331 P P **10 13 09.6 +1.4**
LKWY pmax pmax
comp=Z,59nm,0.8s
LKWY Lake 73.09 331 P P **10 13 09.6 +1.4**
LKWY IAmb IAmb 10 13 11.6
comp=Z,59nm,0.8s
YMP Mirror Lake Pl 73.12 331 P P **10 13 09.4 +1.0**
SCHQ Schefferville 73.12 2 P P **10 13 08.6 +0.7**
comp=Z,5.8nm,0.6s,baz=199,slow=6.1,SNR=10.0
SCHQ pP **pP 10 13 38.4 -0.1**
comp=Z,34nm,0.9s,baz=213,slow=6.8,SNR=11
SCHQ Schefferville 73.12 2 P P **10 13 08.8 +0.9**
RYN Ryan 73.15 322 P P **10 13 08.9 +0.3**
KVN Kaiserville 73.18 322 P P **10 13 10.0 +1.2**
KVN pmax pmax
comp=Z,51nm,1.2s
KVN Kaiserville 73.18 322 P P **10 13 10.0 +1.2**
YNE Yellowstone No 73.25 331 P P **10 13 10.2 +1.1**
YUF Upper Falls 73.26 331 P P **10 13 10.8 +1.7**
YNR Norris Junctio 73.34 331 P P **10 13 10.2 +0.6**
YMR Madison River 73.44 330 P P **10 13 12.0 +1.8**
YHH Holmes Hill 73.47 331 P P **10 13 12.2 +1.7**
DGMT Dagmar 73.59 337 P P **10 13 11.8 +1.0**
DGMT IAmb IAmb 10 13 13.0
comp=Z,65nm,0.8s
DGMT Dagmar 73.59 337 P P **10 13 12.0 +1.2**
baz=146,SNR=20
YHB Horse Butte 73.61 330 P P **10 13 12.9 +1.7**
WAKR Walker 73.61 321 P P **10 13 12.3 +1.0**
YHL Hebgen Lake 73.68 330 P P **10 13 12.3 +0.7**
QLMT Earthquake Lak 73.78 330 P P **10 13 13.8 +1.6**
YERR Yerington 73.81 322 P P **10 13 13.5 +1.1**
YERR IAmb IAmb 10 13 16.3
comp=Z,67nm,1.4s
CMB Columbia Colle 73.87 320 P P **10 13 12.5 -0.2**
CMB pmax pmax
comp=Z,25nm,1.5s
CMB Columbia Colle 73.87 320 P P **10 13 12.5 -0.2**
PNTR Pine Nut 74.08 322 P P **10 13 14.2 +0.1**
VCNR Virginia City 74.25 322 P P **10 13 15.3 +0.2**
PAHR Pah Rah Range 74.36 322 P P **10 13 16.9 +1.3**
PAHR IAmb IAmb 10 13 18.6
comp=Z,56nm,0.8s
RUBR Rubicon Trail 74.39 321 P P **10 13 17.3 +1.4**
MCMT McKenzie Canyo 74.45 329 P P **10 13 17.6 +1.5**
DLMT Dillon 74.72 330 P P **10 13 18.6 +1.0**
AFDM Forest Hills D 74.81 321 P P **10 13 18.8 +0.7**
MFID Camas Ranch 74.92 327 P P **10 13 20.3 +1.6**
MFID IAmb IAmb 10 13 21.7
comp=Z,88nm,1.1s
BEKR Beckworth 75.04 322 P P **10 13 21.0 +1.5**
EGMT Eagleton 75.46 333 P P **10 13 22.3 +0.7**
EGMT IAmb IAmb 10 13 23.4
comp=Z,56nm,0.8s
EGMT Eagleton 75.46 333 P P **10 13 22.1 +0.5**
baz=141,SNR=24
ORV Oroville 75.51 321 P P **10 13 23.6 +1.6**
ORV pmax pmax
comp=Z,106nm,1.3s
ORV Oroville 75.51 321 P P **10 13 23.6 +1.6**
ORV IAmb IAmb 10 13 25.0
comp=Z,106nm,1.3s
PPTF Pamatai, Papee 75.53 256 P P **10 13 23.5 +0.8**
PPT Papeete 75.54 256 P P **10 13 24.9 +2.2**
comp=Z,53nm,0.9s,baz=101,slow=13,SNR=6.4
PPT LR LR 10 40 05.6
comp=Z,98nm,20.6s,baz=138,slow=30
WVOR Wild Horse Val 75.75 325 P P **10 13 23.7 +0.2**
WVOR pmax pmax
comp=Z,23nm,1.4s
WVOR Wild Horse Val 75.75 325 P P **10 13 23.7 +0.2**
GDXM Geysers 75.83 320 P P **10 13 24.3 +0.4**
O03E Paynes Creek 76.16 321 P P **10 13 25.8 -0.1**
baz=129,SNR=12
J08A Circle Bar Ran 76.28 325 P P **10 13 26.6 +0.1**
TTIG Tnine Tigouga, 76.29 51 P P **10 13 29.0 +2.2**
SNR=10
MOD Modoc Plateau 76.33 323 P P **10 13 28.2 +1.4**
MSO Missoula 76.44 330 P P **10 13 27.9 +0.7**
MSO Missoula 76.44 330 P P **10 13 28.2 +0.9**
baz=137,SNR=22
O02D Mt. Diablo Mer 76.67 321 P P **10 13 29.4 +0.7**
baz=129,SNR=6.4
BMO Blue Mountains 76.69 327 P P **10 13 29.1 +0.4**
BMO pmax pmax
comp=Z,49nm,0.9s
BMO Blue Mountains 76.69 327 P P **10 13 29.1 +0.4**
BMO IAmb IAmb 10 13 31.1
comp=Z,49nm,0.9s
WDC Whiskeytown Da 76.78 321 P P **10 13 28.6 -0.6**
WDC pmax pmax
comp=Z,14nm,0.8s
WDC Whiskeytown Da 76.78 321 P P **10 13 28.6 -0.6**
TOA0 Torodi Ar. Sit 76.85 71 P P **10 13 28.5 -1.6**
TORD Torodi Ar. Bea 76.85 71 P P **10 13 28.6 -1.5**
comp=Z,89nm,0.5s,baz=252,slow=5.4,SNR=309
TORD pP **pP 10 14 00.8 -0.2**
comp=Z,76nm,0.9s,baz=254,slow=5.2,SNR=4.8
TORD LR LR 10 47 15.2
comp=Z,778nm,18.7s,baz=290,slow=36
TORD Torodi Ar. Bea 76.85 71 P P **10 13 28.0 -2.1**
OUK Oukaimeden 77.05 51 P P **10 13 34.0 +2.7**
SNR=7.0
N02D Trinity Center 77.12 321 P P **10 13 31.5 +0.3**
baz=129,SNR=6.6
M04C Macdoel 77.13 323 P P **10 13 32.1 +0.8**
baz=130,SNR=15
K05A Summer Lake 77.19 324 P P **10 13 33.2 +1.5**
K05A IAmb IAmb 10 13 34.8
comp=Z,66nm,1.1s
KMRM Mail Ridge 77.26 320 P P **10 13 32.3 +0.3**
KMRM IAmb IAmb 10 13 35.1
comp=Z,76nm,1.2s

JTMT Jette 77.27 331 P **P** **10 13 32.9 +1.0**
I07A Izee 77.32 325 P **P** **10 13 32.7 +0.4**
F10A Beach Ranch, E 77.43 328 P **P** **10 13 34.1 +1.3**
M02C Callahan 77.47 322 P **P** **10 13 34.1 +1.0**
baz=129,SNR=6.3
YBH Yreka Blue Hor 77.60 322 P **P** **10 13 33.6 -0.3**
YBH pmax pmax
comp=Z,23nm,1.3s
YBH Yreka Blue Hor 77.60 322 P **P** **10 13 33.6 -0.3**
K04D Chiloquin, OR 77.61 323 P **P** **10 13 34.9 +1.0**
baz=130,SNR=5.8
L04D Klamath Falls 77.67 323 P **P** **10 13 34.8 +0.5**
baz=129,SNR=5.3
OUZM OUZ 77.72 51 P **P** **10 13 37.0 +2.2**
SNR=11
J05D Fort Rock, OR 77.75 324 P **P** **10 13 35.7 +1.0**
baz=130,SNR=7.6
G08A Pilot Rock 77.84 327 P **P** **10 13 36.3 +1.1**
PINE Pine Mountain 77.91 325 P **P** **10 13 35.3 -0.4**
PINE IAmb IAmb 10 13 38.8
comp=Z,62nm,1.2s
FFC Flin Flon 78.10 341 P **P** **10 13 35.9 -0.3**
FFC pmax pmax
comp=Z,18nm,1.1s
FFC Flin Flon 78.10 341 P **P** **10 13 35.9 -0.3**
ZGR Zagora 78.17 53 P **P** **10 13 39.0 +1.7**
SNR=12
J04D Umpqua Nationa 78.21 324 P **P** **10 13 38.0 +0.6**
baz=130
E09A Wood Farm, Sta 78.26 328 P **P** **10 13 37.9 +0.6**
L02E Cave Junction 78.39 322 P **P** **10 13 39.0 +0.9**
baz=128
I05D Terrebonne, OR 78.49 325 P **P** **10 13 40.3 +1.7**
baz=130,SNR=16
TZRR Tazzarine 78.54 52 P **P** **10 13 41.1 +1.8**
SNR=14
I04A Tendick Farm, 78.73 324 P **P** **10 13 40.4 +0.4**
baz=130,SNR=5.0
K02D Willamette Mer 78.75 322 P **P** **10 13 41.2 +1.0**
baz=128,SNR=6.1
HAWA Hanford 78.88 327 P **P** **10 13 41.3 +0.6**
HAWA IAmb IAmb 10 13 43.5
comp=Z,60nm,1.1s
NEW Newport 78.97 330 P **P** **10 13 40.7 -0.5**
NEW pmax pmax
comp=Z,9.0nm,0.8s
NEW Newport 78.97 330 P **P** **10 13 40.6 -0.5**
NEW Newport 78.97 330 P **P** **10 13 41.5 +0.3**
baz=134,SNR=13
G05D Wamic, OR 79.06 326 P **P** **10 13 43.5 +1.7**
baz=131,SNR=13
E07A Sunnyside 79.16 327 P **P** **10 13 43.3 +1.1**
I03D Drain, OR 79.20 323 P **P** **10 13 43.1 +0.7**
baz=129
J01E Myrtle Point 79.20 323 P **P** **10 13 43.6 +1.1**
baz=128
C09A Chrisman Ranch 79.21 329 P **P** **10 13 43.5 +1.0**
C09A IAmb IAmb 10 13 44.9
comp=Z,65nm,0.7s
H04D Lebanon 79.37 324 P **P** **10 13 44.1 +0.7**
baz=129
SYO Syowa Base 79.42 160⇑ *e*P **P** **10 13 42.6 -0.7**
SYO Syowa Base 79.42 160⇑ *e*PcP **PcP** **10 13 49.8 -1.2**
F05D White Salmon 79.55 326 P **P** **10 13 45.6 +1.2**
baz=131,SNR=6.4
VNDA Vanda 79.65 190 P **P** **10 13 46.0 +1.5**
comp=Z,8.1nm,0.9s,baz=116,slow=4.9,SNR=4.2
FCC Fort Churchill 79.67 347 P **P** **10 13 43.9 -0.7**
FCC pmax pmax
comp=Z,26nm,0.9s
FCC Fort Churchill 79.67 347 P **P** **10 13 43.9 -0.7**
MORF Marmelete 79.72 45 *e*P **P** **10 13 46.3 +0.7**
MORF AMb AMB 10 13 56.5
comp=Z,110nm,1.9s
MORF Marmelete 79.72 45 *e*P **P** **10 13 47.2 +1.7**
MORF Marmelete 79.72 45 *e*PcP **PcP** **10 13 52.6 -0.3**
MORF *e*pP **pP** **10 14 17.5 +0.8**
MORF Marmelete 79.72 45 *e*P **P** **10 13 46.2 +0.7**
PTEO Sao Teotonio 79.80 45 *e*P **P** **10 13 47.9 +2.0**
comp=Z,215nm,1.3s
PTEO *e*pP **pP** **10 14 15.6 -1.5**
LTY Liberty 80.04 327 P **P** **10 13 47.5 +0.5**
LTY IAmb IAmb 10 13 49.6
comp=Z,131nm,1.5s
F04A Amboy 80.10 326 P **P** **10 13 48.0 +0.7**
F04A IAmb IAmb 10 13 49.5
comp=Z,72nm,0.8s
B08A Colville Reser 80.11 329 P **P** **10 13 47.6 +0.3**
PBDV Barranco-do-Ve 80.17 45 *e*P **P** **10 13 49.9 +2.0**
comp=Z,131nm,1.8s
PBDV Barranco-do-Ve 80.17 45 *e*PcP **PcP** **10 13 53.9 -0.9**
IFR Ifrane 80.22 50 *e*P P 10 13 55.2 +6.7
IFR *e*S **S** **10 23 42.0 -2.4**
PNCL Nicolau / Gran 80.24 44 *e*P **P** **10 13 50.0 +1.8**
PNCL Nicolau / Gran 80.24 44 *e*PcP **PcP** **10 13 55.0 0.0**
MDT Midelt 80.25 51 P **P** **10 13 49.5 +0.9**
comp=Z,52nm,1.0s,baz=146,slow=6.6,SNR=7.3
LON Longmire 80.30 326 P **P** **10 13 47.9 -0.6**
LON pmax pmax
comp=Z,12nm,0.8s
LON Longmire 80.30 326 P **P** **10 13 47.9 -0.6**
PCVE Castro Verde 80.31 45 *e*P **P** **10 13 50.4 +1.8**
PVAQ Vaqueiros 80.40 45 *e*P **P** **10 13 50.8 +1.7**
PVAQ *e*pP **pP** **10 14 17.2 -3.2**
SUR Sutherland 80.49 121 P **P** **10 13 50.2 +0.1**
SUR IAmb IAmb 10 13 52.6
comp=Z,86nm,1.3s
F04D Rainier, OR 80.51 325 P **P** **10 13 50.6 +1.1**
baz=129
E04D Cinebar 80.58 326 P **P** **10 13 51.3 +1.4**
baz=130
C06D Leavenworth 80.59 328 P **P** **10 13 50.4 +0.4**
baz=131
PBEJ Beja 80.63 45 *e*P **P** **10 13 52.0 +1.7**
comp=Z,70nm,1.4s
PBEJ Beja 80.63 45 *e*PcP **PcP** **10 13 57.2 +0.4**
D05A Enumclaw 80.68 327 P **P** **10 13 51.2 +0.9**
D05A IAmb IAmb 10 13 52.6
comp=Z,74nm,0.9s
EVO Evora 80.80 44 *e*P **P** **10 13 52.4 +1.2**
comp=Z,71nm,1.8s
PMTG Montargil 80.95 44 *e*P **P** **10 13 53.4 +1.4**
comp=Z,167nm,1.4s
PMTG Montargil 80.95 44 *e*PcP **PcP** **10 13 58.7 +0.5**
D04E Lakebay 81.08 326 P **P** **10 13 53.7 +1.2**
baz=130,SNR=5.2
PTOM Tomar 81.13 43 *e*P **P** **10 13 54.3 +1.4**
comp=Z,101nm,1.5s
PTOM Tomar 81.13 43 *e*PcP **PcP** **10 14 00.1 +1.2**
B06A Marblemount 81.28 328 P **P** **10 13 53.3 -0.2**
B06A IAmb IAmb 10 13 55.1
comp=Z,53nm,0.7s
B06A *e*pP **pP** **10 14 25.4 +0.9**
PCAS Casmilo, Conde 81.31 43 *e*P **P** **10 13 55.1 +1.2**
TSUM Tsumeb 81.36 107 P **P** **10 13 55.5 +0.6**
B05A Bryant 81.43 327 P **P** **10 13 54.5 +0.2**
baz=130,SNR=18
D03D Eldon 81.47 326 P **P** **10 13 55.8 +1.2**
baz=130,SNR=5.9
PMRV Marv??o 81.69 44 *e*P **P** **10 13 56.6 +0.6**
LIJA Lijar 81.72 47 *i* P **P** **10 13 58.0 +1.7**
PCBR Castelo Branco 81.85 43 *e*P **P** **10 13 58.0 +1.2**
A04D Lummi Island 82.03 328 P **P** **10 13 58.4 +0.9**
baz=130
PVIS Viseu 82.05 42 *e*P **P** **10 13 58.6 +0.7**
PVIS *e*pP **pP** **10 14 29.8 +0.5**
MTE Manteigas 82.11 43 *e*P **P** **10 13 59.1 +0.9**
PGC Sidney 82.37 327 P **P** **10 13 59.7 +0.5**
PGC IAmb IAmb 10 14 01.7
comp=Z,112nm,1.3s
PGC **pP** **10 14 31.9 +1.7**
PVRL Vila Real 82.47 42 *e*P **P** **10 14 01.0 +1.0**
comp=Z,108nm,1.7s
PCAB Cabril 82.51 42 *e*P **P** **10 14 01.2 +1.0**
comp=Z,141nm,1.6s
LLLB Lillooet 82.84 329 P **P** **10 14 01.9 +0.2**
LLLB IAmb IAmb 10 14 03.5
comp=Z,52nm,1.2s
MVO Moncorvo 82.85 42 *e*P **P** **10 14 02.9 +0.9**
comp=Z,62nm,1.3s
MVO *e*pP **pP** **10 14 37.6 +4.1**
PBRG Braganca 83.37 42 *e*P **P** **10 14 05.4 +0.7**
comp=Z,132nm,1.7s
PBRG *e*pP **pP** **10 14 39.5 +3.4**
PAB San Pablo 83.77 45 P **P** **10 14 07.7 +0.9**
PAB pmax pmax
comp=Z,86nm,0.9s
PAB San Pablo 83.77 45 P **P** **10 14 07.7 +0.9**
PAB IAmb IAmb 10 14 08.9
comp=Z,86nm,0.9s
RAR Rarotonga 83.78 250 P **P** **10 14 08.2 +1.0**
RAR pmax pmax
comp=Z,64nm,1.2s
RAR Rarotonga 83.78 250 P **P** **10 14 08.9 +1.7**
comp=Z,24nm,0.9s,baz=252,slow=3.5,SNR=3.9
RAR Rarotonga 83.78 250 P **P** **10 14 08.2 +1.0**
RAR IAmb IAmb 10 14 09.6
comp=Z,64nm,1.1s
TAM Tamanrasset 83.94 64 P **P** **10 14 08.6 +0.5**
TAM pmax pmax
comp=Z,67nm,1.4s
TAM Tamanrasset 83.94 64 P **P** **10 14 08.6 +0.5**
TAM IAmb IAmb 10 14 13.6
comp=Z,66nm,1.4s
ESDC Sonseca Array 84.09 45 P **P** **10 14 09.3 +1.0**
comp=Z,41nm,0.9s,baz=249,slow=5.3,SNR=81
ESDC pP **pP** **10 14 41.5 +1.6**
comp=Z,8.8nm,0.9s,baz=265,slow=4.1,SNR=2.6
ESDC LR LR 10 48 11.9
comp=Z,164nm,21.9s,baz=240,slow=33
ESDC Sonseca Array 84.09 45 P **P** **10 14 09.2 +0.8**
ESBB Sonseca Array 84.09 45 P **P** **10 14 08.1 -0.3**
ESBB IAmb IAmb 10 14 10.6
comp=Z,66nm,1.0s
BOSA Boshof 85.26 118 P **P** **10 14 14.7 0.0**
BOSA pmax pmax
comp=Z,39nm,1.1s
BOSA Boshof 85.26 118 P **P** **10 14 14.8 0.0**
comp=Z,30nm,1.1s,baz=281,slow=5.9,SNR=11
BOSA LR LR 10 49 07.4
comp=Z,822nm,20.4s,baz=242,slow=33
BOSA Boshof 85.26 118 P **P** **10 14 14.7 0.0**
LBTB Lobatse 86.69 115 P **P** **10 14 21.8 -0.1**
LBTB pmax pmax
comp=Z,77nm,1.5s
LBTB Lobatse 86.69 115 P **P** **10 14 21.8 -0.1**
LBTB IAmb IAmb 10 14 23.4
comp=Z,77nm,1.5s
MAW Mawson 87.28 164 P **P** **10 14 24.9 +1.3**
MAW pmax pmax
comp=Z,3.0nm,1.1s
MAW Mawson 87.28 164 P **P** **10 14 25.1 +1.5**
comp=Z,6.7nm,0.9s,baz=192,slow=4.4,SNR=5.5
MAW LR LR 10 53 44.5
comp=Z,197nm,20.2s,baz=244,slow=36
MAW Mawson 87.28 164 P **P** **10 14 24.9 +1.3**
YKA Yellowknife Ar 88.26 341 P **P** **10 14 28.9 +0.7**
comp=Z,40nm,0.7s,baz=135,slow=4.7,SNR=950
YKA pP **pP** **10 15 00.7 +0.9**
comp=Z,60nm,0.8s,baz=136,slow=4.7,SNR=14
YKA PKKPbc **PKKPbc** **10 32 12.0 -2.5**
comp=Z,0.2nm,0.5s,baz=318,slow=3.7,SNR=5.6
YKA LR LR 10 57 23.3
comp=Z,183nm,20.5s,baz=0.0,slow=38
BORG Borgarnes 90.80 19 LR LR 10 51 24.1
comp=Z,85nm,21.4s,baz=239,slow=33
WRAK Wrangell Islan 91.32 330 P **P** **10 14 42.1 -0.4**
WRAK IAmb IAmb 10 14 44.3
comp=Z,25nm,1.0s
DLBC Dease Lake 91.38 333 P **P** **10 14 44.2 +1.2**
DLBC IAmb IAmb 10 14 45.1
comp=Z,32nm,0.9s
DLBC **pP** **10 15 15.2 +0.8**
KEST Kesra 91.92 53 P **P** **10 14 46.9 +0.8**
comp=Z,10.0nm,0.9s,baz=292,slow=5.5,SNR=5.8
KEST LR LR 10 55 59.3
comp=Z,211nm,20.1s,baz=206,slow=35
EKA Eskdalemuir Ar 92.37 32 P **P** **10 14 47.3 -0.2**
comp=Z,10.0nm,1.0s,baz=329,slow=1.5,SNR=6.8
SUMG Summit 93.24 9 P **P** **10 14 51.2 -0.4**
SUMG pmax pmax
comp=Z,18nm,0.9s
SUMG Summit 93.24 9 *i* P **P** **10 14 53.0 +1.4**
comp=Z,45nm,0.9s
SUMG *i* 10 15 26.2
SUMG Summit 93.24 9 P **P** **10 14 51.2 -0.4**
SUMG IAmb IAmb 10 14 57.6
comp=Z,18nm,0.9s
RES Resolute Bay 94.43 353 P **P** **10 14 55.8 -0.7**
RES pmax pmax
comp=Z,2.0nm,0.8s
RES Resolute Bay 94.43 353 P **P** **10 14 55.8 -0.7**
DAVOX Davos/Dischmat 96.24 43 P **P** **10 15 04.6 -1.1**
comp=Z,3.0nm,0.8s,baz=275,slow=12,SNR=3.3
LTZ Lake Taylor 96.73 221 P **P** **10 15 06.6 -1.4**
LTZ IAmb IAmb 10 15 11.7
comp=Z,15nm,0.9s
INK Inuvik 98.02 340 P Pdif 10 15 13.1 +0.1
INK pmax pmax
comp=Z,3.0nm,0.9s
INK Inuvik 98.02 340 P Pdif 10 15 13.1 +0.2
EPYK Eagle Plains 98.16 338 Pdiff Pdif 10 15 14.4 +0.7
baz=118
GERES GERESS Array B 99.35 42 P **Pdif** **10 15 19.7 +0.2**
comp=Z,1.7nm,1.0s,baz=214,slow=4.5,SNR=5.2
GERES pP **pP** **10 15 52.4 +0.9**
comp=Z,0.4nm,0.3s,baz=208,slow=2.6,SNR=2.1
GERES PKKPbc **PKKPbc** **10 31 42.8 -1.8**
comp=Z,0.4nm,0.2s,baz=58,slow=3.3,SNR=4.1
GERES LR LR 11 00 19.1
comp=Z,74nm,18.1s,baz=276,slow=35
GERES GERESS Array B 99.35 42 P **Pdif** **10 15 18.4 -1.1**
CLL Collm 99.66 39 *e*P **Pdif** **10 15 21.0 +0.3**
CLL Collm 99.66 39 *e*Pdif **Pdif** **10 15 21.0 +0.3**
CLL *e* 10 15 29.0
CLL *e*(pPdif) 10 15 54.0
CLL *e*sPP 10 20 12.0
CLL *e*SP SP 10 28 12.0 0.0
CLL *e*SS **SS** **10 33 36.0 -2.1**
CLL Lm MLR 10 57 00.0
comp=Z,200nm,21.4s
HDA Harding Lake 101.30 334 Pdiff **Pdif** **10 15 27.9 +0.2**
baz=109
ILAR Eielson Array 101.39 335 P **Pdif** **10 15 28.2 +0.1**
ILAR 10 19 37.0
ILAR Eielson Array 101.39 335 P **Pdif** **10 15 27.5 -0.6**
comp=Z,0.8nm,1.1s,baz=141,slow=2.4,SNR=7.3
ILAR pP pP 10 16 00.8 +0.8
comp=Z,1.3nm,1.0s,baz=148,slow=3.4,SNR=4.0
ILAR PP **PP** **10 19 39.4 +0.1**
comp=Z,6.0nm,1.2s,baz=101,slow=5.1,SNR=9.7
ILAR Eielson Array 101.39 335 **Pdif** **10 15 28.2 +0.1**
ILAR **PP** **10 19 37.0 -2.2**
NOA NORSAR Array B 101.61 29 P **Pdif** **10 15 28.9 -0.3**
comp=Z,0.9nm,0.9s,baz=113,slow=11,SNR=3.3
POKR Poker Plat Res 101.72 335 Pdiff **Pdif** **10 15 30.0 +0.4**
baz=109
TCOL CIGO, UAF Yank 101.82 335 Pdiff **Pdif** **10 15 30.3 +0.4**
baz=108
TOLK Toolik Lake Re 103.58 338 Pdiff **Pdif** **10 15 39.6 +1.8**
baz=106
FINES FINESS Array B 108.73 30 PKKPbc PKKPbc 10 31 14.9 -1.7
comp=Z,2.7nm,0.7s,baz=48,slow=5.7,SNR=6.4
ARCES ARCESS Array B 108.95 22 PKKPbc PKKPbc 10 31 14.2 -1.9
comp=Z,2.9nm,0.7s,baz=76,slow=3.9,SNR=11
BRTR Keskin Array B 111.51 54 PP **PP** **10 20 52.1 -2.3**
comp=Z,3.6nm,0.9s,baz=255,slow=4.9,SNR=7.0
APA Apatity 111.89 24 ‖ *i* PKIKP PKiKP 10 20 25.6 +15
APA *i* *P 10 20 54.2 -1.8
APA pmax pmax
comp=Z,6.0nm,1.3s
OBN Obninsk 114.14 37 *i* PKIKP **PKiKP** **10 20 17.1 +1.4**
OBN *e* 10 21 12.1
OBN pmax pmax
comp=Z,12nm,0.5s
KLMR Klimovskoe 115.25 31 *e*PKIKP **PKPdf** **10 20 19.4 +1.7**
KLMR pmax pmax
comp=Z,8.0nm,1.0s
KLMR Klimovskoe 115.25 31 *e*PKPdf **PKPdf** **10 20 19.4 +1.7**
KLMR AMP 10 20 22.4
comp=Z,8.0nm,1.0s
KIV Kislovodsk 118.47 50 *i* PKIKP **PKiKP** **10 20 26.4 +1.8**
KIV pmax pmax
comp=Z,15nm,1.1s
KIV MLR MLR
comp=Z,179nm,22.0s
KBZ Khabaz 118.62 50 PKP **PKiKP** **10 20 25.7 +1.0**
comp=Z,2.7nm,0.8s,baz=302,slow=3.0,SNR=5.3
KBZ pPKP **pPKPdf** **10 20 59.7 +2.0**
comp=Z,5.3nm,0.9s,baz=162,slow=1.4,SNR=4.8
KBZ PKKPab **PKKPab** **10 30 47.1 +3.9**
comp=Z,1.9nm,0.9s,baz=112,slow=5.4,SNR=3.6
BILL Bilibino 119.61 339 *i* PKIKP **PKPdf** **10 20 25.9 0.0**
BILL *e* 10 21 46.5
BILL pmax pmax
comp=Z,7.0nm,1.7s
TIXI Tiksi 125.82 353 *c* *i* PKIKP **PKiKP** **10 20 38.3 +0.2**
TIXI pmax pmax
comp=Z,3.0nm,0.7s
TIXI Tiksi 125.82 353 **PKPdf** **10 20 37.8 +0.1**
ARU Arti 125.97 33 *i* PKIKP **PKiKP** **10 20 39.0 +0.2**
ARU 10 22 34.0
ARU 10 27 38.9
ARU Arti 125.97 33 PKP **PKiKP** **10 20 40.1 +1.3**
comp=Z,0.9nm,0.3s,baz=274,slow=7.4,SNR=5.9
ARU pPKP **pPKPdf** **10 21 12.7 +1.1**
comp=Z,3.3nm,0.6s,baz=250,slow=2.1,SNR=3.9
H11S2 WAKE ISLAND Hyl 126.97 279 T T 12 40 21.7
baz=101,slow=75,SNR=307
H11N3 WAKE ISLAND Hyl 126.98 281 T T 12 40 11.7
baz=100,slow=75,SNR=90
H11S1 WAKE ISLAND Hyl 126.98 280 T T 12 40 12.3
baz=101,slow=75,SNR=32
H11N2 WAKE ISLAND Hyl 126.99 281 T T 12 40 16.3
baz=100,slow=75,SNR=135
H11S3 WAKE ISLAND Hyl 126.99 279 T T 12 40 26.7
baz=101,slow=75
H11N1 WAKE ISLAND Hyl 127.00 281 T T 12 40 07.3
baz=100,slow=75,SNR=77
SEY Seymchan 127.21 337 *i* PKIKP **PKiKP** **10 20 41.9 +0.8**
AKTO Aktyubinsk 127.73 40 PKP **PKPdf** **10 20 41.6 -0.3**
comp=Z,2.1nm,0.8s,baz=319,slow=3.6,SNR=7.7
CTA Charters Tower 128.05 224 PKP **PKiKP** **10 20 44.6 +0.5**
comp=Z,8.7nm,0.8s,baz=65,slow=3.6,SNR=9.0
ABKAR Akbulak array 129.29 41 **PKiKP** **10 20 46.0 +0.3**
ABKAR Akbulak array 129.29 41 **PKiKP** **10 20 45.6 -0.1**
MA2 Magadan 129.87 335 *c* *i* PKIKP **PKiKP** **10 20 47.3 +0.7**
MA2 pmax pmax
comp=Z,5.0nm,1.3s
PETK Petropavlovsk- 129.90 325 PKP **PKiKP** **10 20 46.7 -0.2**
comp=Z,14nm,0.8s,baz=113,slow=6.3,SNR=13
PETK pPKP **pPKPdf** **10 21 20.8 +2.1**
comp=Z,11nm,1.0s,baz=104,slow=11,SNR=3.1
GEYT Alibeck 130.59 56 PKP **PKiKP** **10 20 48.4 -0.3**
comp=Z,2.0nm,0.7s,baz=242,slow=9.5,SNR=3.7
GEYT SKPbc **SKPab** **10 24 01.4 +0.2**
comp=Z,7.4nm,0.9s,baz=308,slow=7.3,SNR=7.4
WSAR Wadi Sarin 131.45 75 PKP **PKPdf** **10 20 49.9 0.0**
comp=Z,8.1nm,1.1s,baz=285,slow=3.3,SNR=5.7
WSAR pPKP **pPKPdf** **10 21 23.8 +0.7**
comp=Z,4.2nm,0.9s,baz=344,slow=3.7,SNR=2.5
WSAR PP **PP** **10 23 09.2 -1.1**
comp=Z,11nm,1.1s,baz=305,slow=7.9,SNR=8.2
AS31 Alice Springs 132.26 209 **PKPdf** **10 20 50.7 -0.8**
AS31 pPKPdf **pPKPdf** **10 21 25.9 +1.3**
ASAR Alice Springs 132.26 209 PKhKP PKPpre 10 20 34.4
comp=Z,1.1nm,0.6s,baz=135,slow=2.6,SNR=16
ASAR PKP **PKPdf** **10 20 51.0 -0.6**
comp=Z,5.7nm,0.6s,baz=134,slow=1.8,SNR=44
ASAR pPKP pPKPdf 10 21 26.0 +1.5
comp=Z,9.9nm,0.9s,baz=147,slow=2.3,SNR=9.1
ASAR PP **PP** **10 23 13.1 -0.8**
comp=Z,3.1nm,1.0s,baz=149,slow=6.5,SNR=6.6
ASAR SKPbc **SKPbc** **10 24 07.2 -0.4**
comp=Z,7.9nm,1.1s,baz=142,slow=3.6,SNR=9.5
ASAR Alice Springs 132.26 209 **SKPbc** **10 24 06.2 -1.4**
WRA Warramunga Arr 135.20 213 PKhKP PKPpre 10 20 44.2
comp=Z,1.2nm,0.7s,baz=136,slow=2.3,SNR=8.2
WRA PKP **PKPdf** **10 20 57.6 +0.5**
comp=Z,15nm,0.7s,baz=153,slow=1.8,SNR=36
WRA pPKP pPKPdf 10 21 31.2 +1.3
comp=Z,13nm,0.8s,baz=158,slow=1.6,SNR=8.4
WRA SKPbc **SKPbc** **10 24 16.5 -0.9**
comp=Z,10nm,1.2s,baz=149,slow=3.2,SNR=9.4
WRA Warramunga Arr 135.20 213 **PKPdf** **10 20 57.0 -0.1**
WRA pPKPdf **pPKPdf** **10 21 31.4 +1.5**
WRA **SKPbc** **10 24 17.2 -0.2**
WRAB Tennant Creek 135.20 213 PKIKP **PKPdf** **10 20 57.7 +0.6**
WRAB Tennant Creek 135.20 213 **PKPdf** **10 20 57.7 +0.6**
WB0 Warramunga Arr 135.32 213 **PKPdf** **10 20 56.7 -0.6**
KKAR Karatay Array 138.34 45 PKIKP **PKPdf** **10 21 01.8 -0.4**
KKAR Karatay Array 138.34 45 **PKPdf** **10 21 01.8 -0.4**
KURK Kurchatov 139.10 31 *c* *i* PKIKP **PKiKP** **10 21 06.8 +1.3**
KURK pmax pmax
comp=Z,8.0nm,1.3s
ZAA0 Zalesovo Array 139.48 23 **PKiKP** **10 21 05.2 -1.1**
ZALV Zalesovo Beam 139.48 23 PKP **PKPdf** **10 21 05.0 +1.1**
comp=Z,4.6nm,0.5s,baz=296,slow=2.8,SNR=20
ZALV pPKP **pPKPdf** **10 21 38.1 +1.1**
comp=Z,18nm,0.8s,baz=290,slow=2.7,SNR=4.3
ZALV SKPbc **SKPbc** **10 24 29.1 +0.4**
comp=Z,9.3nm,0.9s,baz=306,slow=3.5,SNR=6.3
ZALV Zalesovo Beam 139.48 23 **PKPdf** **10 21 04.9 +1.1**
ZALV **SKPbc** **10 24 29.6 +0.9**
BOD Bodaibo 140.71 357 *e*PKHKP PKPpre 10 20 58.1
BOD pmax pmax
comp=Z,10.0nm,1.8s
ARSB Arslanbob 140.73 47 **PKPdf** **10 21 08.0 +1.2**
AAK Ala-Archa 141.19 44 *i* PKIKP **PKPdf** **10 21 07.7 +0.1**
AAK Ala-Archa 141.19 44 **PKPdf** **10 21 06.2 -1.4**
YSS Yuzh-Sakhalins 141.30 324 *e*PKIKP **PKiKP** **10 21 09.0 -1.2**
ZEA Zeya 142.59 344 *e*PKIKP **PKPdf** **10 21 09.2 -0.3**
ZEA pmax pmax
comp=Z,42nm,2.0s
NRN Naryn 142.74 45 PKIKP **PKPdf** **10 21 08.4 -2.2**
NRN Naryn 142.74 45 **PKPdf** **10 21 08.4 -2.2**
JKA Kamikawa-asahi 143.01 321 PKPbc 10 21 08.6 +0.9
ASAJ Asahikawa 143.01 321 PKP PKPbc 10 21 08.6 +0.9
comp=Z,10nm,0.8s,baz=88,slow=5.7,SNR=6.5
KDJ Kajisay 143.18 43 PKIKP **PKPdf** **10 21 10.0 -1.2**
KDJ Kajisay 143.18 43 **PKPdf** **10 21 10.0 -1.2**
MAKZ Makanchi 143.32 33 PKIKP PKPbc 10 21 08.6 +0.1
MAKZ Makanchi 143.32 33 PKPbc 10 21 08.6 +0.2
MK31 Makanchi Array 143.49 33 PKIKP PKPbc 10 21 09.2 +0.2
MK31 Makanchi Array 143.49 33 PKPbc 10 21 09.2 +0.3
MKAR Makanchi Array 143.49 33 PKP PKPbc 10 21 09.1 +0.2
comp=Z,3.1nm,0.7s,baz=329,slow=4.5,SNR=37
MKAR pPKP pPKPdf 10 21 45.0 +0.5
comp=Z,4.8nm,0.7s,baz=298,slow=2.6,SNR=5.9
MKAR Makanchi Array 143.49 33 PKPbc 10 21 09.2 +0.3
KSH Kashi 143.56 48 PKP PKPbc 10 21 10.0 +0.5
KSH PP **PP** **10 24 28.8 +3.9**
KSH SKKS 10 31 07.8
KSH SS **SS** **10 42 57.5 -0.1**
KSH AMB AMB
comp=Z,490nm,3.8s
KSH LR LR
comp=Z,230nm,4.8s
KSH LR LR
comp=Z,200nm,5.0s
KSH LR LR
comp=Z,290nm,6.4s
JAY Jayapura 143.70 238 PKP **PKPdf** **10 21 11.6 -1.1**
comp=Z,59nm,1.1s,baz=112,slow=2.8,SNR=4.6
POO Poona 145.22 84 *e*P **PKiKP** **10 21 25.0 +5.9**
TEY Ternei 145.84 326 ‖ *i* PKP2 **PKPab** **10 21 16.9 +0.2**
TEY pmax pmax
comp=Z,200nm,2.4s
TEY pmax pmax
comp=E,30nm,1.0s
TEY pmax pmax
comp=N,10.0nm,1.7s
TEY pmax pmax
comp=Z,140nm,0.8s
TRD Trivandrum 145.88 102 *e*P **PKPab** **10 21 18.7 +0.8**
IRK Irkutsk 146.02 7 *e*PKP2 **PKiKP** **10 21 20.5 +0.8**
IRK pmax pmax
comp=Z,40nm,3.2s
MOY Mondy 146.10 11 *e*PKP2 **PKPab** **10 21 17.9 +0.2**
MOY pmax pmax
comp=Z,26nm,2.1s
DHRM DHARAMSHALA 146.33 59 *e*P **PKPbc** **10 21 18.6 +0.2**
DHRM *i* x 10 24 40.0
TLY Talaya 146.49 8 *e*PKP2 **PKPab** **10 21 19.5 +0.4**
TLY *e*SS SS 10 43 21.5 -7.2
TLY pmax pmax
comp=Z,29nm,0.9s
TLY Talaya 146.49 8 **PKPab** **10 21 18.9 -0.2**
SAUI Saumlaki 146.63 220 **PKPdf** **10 21 17.1 -0.6**
GUMO Guam 146.71 267 PKPbc **PKPbc** **10 21 19.1 -0.5**
comp=Z,342nm,0.9s,baz=175,slow=4.8,SNR=9.2
GUMO pPKPbc pPKPbc 10 21 52.1 +0.2
comp=Z,343nm,1.0s,baz=173,slow=9.6,SNR=5.1
GUMO Guam 146.71 267 **PKPbc** **10 21 20.2 +0.6**
SMLA Simla 147.33 61 *e*P **PKPbc** **10 21 19.9 -1.0**
ZAK Zakamensk 147.71 9 *e*PKP2 **PKPbc** **10 21 21.9 +0.4**

ZAK					pmax	pmax			
	comp=Z,12nm,1.1s								
KLRI	**Killari**	**147.76**	**85**	*e*PKPab	**PKPbc**	**10 21 22.3**	**-0.2**		
URV	**Uravakonda**	**147.92**	**91**	*e*PKPab	**PKPbc**	**10 21 22.4**	**-0.5**		
WMQ	**Urumqi**	**148.31**	**32**	*e*PKPbc	**PKPdf**	**10 21 18.5**	**-1.2**		
WMQ					AMB	AMB			
	comp=Z,110nm,4.3s								
WMQ					LR	LR			
	comp=Z,370nm,29.1s								
WMQ					LR	LR			
	comp=Z,1µm,29.0s								
WMQ					LR	LR			
	comp=Z,78nm,29.2s								
WMQ	**Urumqi**	**148.31**	**32**	PKP2	**PKPbc**	**10 21 23.6**	**+0.4**		
WMQ	**Urumqi**	**148.31**	**32**	PKPdf	**PKPdf**	**10 21 19.1**	**-0.6**		
WMQ					**PKPbc**	**10 21 23.6**	**+0.4**		
HIA	**Hailar**	**148.48**	**348**	PKP2	**PKPbc**	**10 21 24.0**	**+0.6**		
HIA	**Hailar**	**148.48**	**348**		**PKPbc**	**10 21 24.0**	**+0.6**		
BHPL	**Bhopal**	**148.72**	**76**	*e*P	**PKiKP**	**10 21 25.6**	**-0.6**		
USA0B	**Ussuriysk Arra**	**148.76**	**330**	PKP2	**PKiKP**	**10 21 25.7**	**+0.1**		
USA0B	**Ussuriysk Arra**	**148.76**	**330**		**PKiKP**	**10 21 25.7**	**+0.1**		
USRK	**Ussuriysk Ar.**	**148.76**	**330**	PKPbc	**PKiKP**	**10 21 25.1**	**-0.5**		
	comp=Z,47nm,0.8s,baz=25,slow=1.8,SNR=47								
USRK				pPKPbc	**pPKPbc**	**10 21 56.8**	**-0.1**		
	comp=Z,35nm,0.9s,baz=53,slow=2.9,SNR=7.2								
USRK	**Ussuriysk Ar.**	**148.76**	**330**		**PKiKP**	**10 21 25.6**	**0.0**		
SOEI	**Soe**	**148.79**	**207**		**PKiKP**	**10 21 27.4**	**+0.6**		
SRSP	**Sriramsagar**	**149.50**	**84**	*e*PKPab	**PKPbc**	**10 21 27.3**	**+0.5**		
MDJ	**Mudanjiang**	**149.53**	**333**	PKPbc	**PKPdf**	**10 21 21.5**	**0.0**		
MDJ	**Mudanjiang**	**149.53**	**333**		**PKiKP**	**10 21 26.8**	**-0.4**		
HYBB	**Hyderabad (bro**	**149.54**	**87**	*e*PKPdf	**PKPdf**	**10 21 18.3**	**-4.1**		
HYB	**Hyderabad**	**149.54**	**87**	*i* PKP	**PKiKP**	**10 21 28.0**	**-0.1**		
HYB				*e*		10 22 06.0			
HYB	**Hyderabad**	**149.54**	**87**	*e*P	**PKPbc**	**10 21 27.5**	**+0.4**		
SRLM	**Srisailam**	**149.68**	**90**	*e*PKPab	**PKPbc**	**10 21 27.7**	**+0.3**		
JCJ	**Chichijima**	**149.72**	**292**	PKPbc	**PKiKP**	**10 21 28.5**	**+0.4**		
	comp=Z,147nm,0.9s,baz=312,slow=18,SNR=5.0								
MJAR	**Matsushiro Arr**	**149.81**	**312**	PKP	**PKPdf**	**10 21 23.3**	**+1.0**		
	comp=Z,27nm,0.9s,baz=140,slow=2.2,SNR=5.9								
MJAR				PKPbc	**PKiKP**	**10 21 28.1**	**+0.1**		
	comp=Z,35nm,0.8s,baz=127,slow=1.2,SNR=73								
MJAR				pPKPbc	**pPKPbc**	**10 21 59.2**	**-0.6**		
	comp=Z,31nm,1.1s,baz=155,slow=0.6,SNR=4.8								
MJAR	**Matsushiro Arr**	**149.81**	**312**		**PKiKP**	**10 21 28.2**	**+0.2**		
MJAR				PKPab	**PKPab**	**10 21 32.5**	**-0.4**		
MAJO	**Matsushiro**	**149.81**	**312**	PKP2	**PKiKP**	**10 21 28.0**	**-0.1**		
MAJO	**Matsushiro**	**149.81**	**312**		**PKiKP**	**10 21 28.0**	**-0.1**		
MAT	**Matsushiro**	**149.81**	**312**	PKP	**PKPbc**	**10 21 27.5**	**+0.3**		
MJB9	**Matsu-Tunnel**	**149.81**	**312**		**PKiKP**	**10 21 28.0**	**-0.1**		
FAKI	**Fak Fak**	**149.82**	**227**		**PKiKP**	**10 21 28.9**	**+0.1**		
SKHT	**Srikalahasti**	**149.99**	**95**	*e*PKiKP	**PKPbc**	**10 21 26.3**	**-1.8**		
NJS	**Nagarjunasagar**	**150.14**	**89**	*e*PKPbc	**PKPdf**	**10 21 25.3**	**+2.0**		
NGP	**Nagpur**	**150.26**	**80**	*e*P	**PKiKP**	**10 21 29.4**	**0.0**		
SONM	**Songino Array**	**150.60**	**6**	PKP	**PKPdf**	**10 21 24.8**	**+1.5**		
	comp=Z,15nm,0.6s,baz=326,slow=1.5,SNR=90								
SONM				PKPbc	**PKiKP**	**10 21 30.1**	**+0.7**		
	comp=Z,15nm,0.6s,baz=326,slow=1.5,SNR=90								
SONM				pPKPbc	**pPKPbc**	**10 22 01.0**	**-0.8**		
	comp=Z,12nm,0.7s,baz=311,slow=1.3,SNR=4.9								
SONM	**Songino Array**	**150.60**	**6**		**PKPdf**	**10 21 25.0**	**+1.7**		
SONM					**PKiKP**	**10 21 30.4**	**+0.9**		
ULN	**Ulaanbaatar**	**150.62**	**5**	PKIKP	**PKiKP**	**10 21 30.4**	**+0.8**		
ULN	**Ulaanbaatar**	**150.62**	**5**	PKPdf	**PKPdf**	**10 21 23.0**	**-0.4**		
ULN					**PKiKP**	**10 21 30.4**	**+0.8**		
ADKI	**Addanki**	**150.66**	**91**	*e*PKiKP	**PKPbc**	**10 21 29.7**	**+0.1**		
JBP	**Jabalpur**	**151.08**	**76**	*e*P	**PKPbc**	**10 21 28.9**	**-1.6**		
JBP				AML	AML	10 21 32.4			
	comp=Z,70nm,0.6s								
JBP				*ex*	x	10 21 45.1			
GGR	**Gangavaram**	**151.15**	**87**	*e*PKPdf	**PKPdf**	**10 21 22.0**	**-2.9**		
INU	**Inuyama**	**151.23**	**311**		**PKiKP**	**10 21 31.4**	**+0.4**		
MYLAV	**Mylavaram**	**151.43**	**89**	*e*PKPbc	**PKPbc**	**10 21 28.5**	**-3.0**		
CN2	**Changchun**	**151.89**	**337**	*e*PKPbc	**PKPbc**	**10 21 31.5**	**-0.2**		
PVM	**Polavaram**	**152.43**	**88**	*e*PKPab	**PKPab**	**10 21 43.3**	**-1.0**		
CHLP	**Challavanipeta**	**154.86**	**86**	*e*PKPab	**PKPab**	**10 21 51.4**	**-3.2**		
KAPI	**Kappang**	**154.90**	**202**	PKP2	**PKPab**	**10 21 56.5**	**+1.8**		
KAPI	**Kappang**	**154.90**	**202**	PKPbc	**PKPbc**	**10 21 37.2**	**-2.0**		
KAPI					**PKPab**	**10 21 56.5**	**+1.8**		
KSRS	**Korea Array**	**155.80**	**325**	PKP	**PKPdf**	**10 21 32.3**	**+1.4**		
	comp=Z,2.4nm,1.0s,baz=86,slow=1.9,SNR=7.2								
KSRS				PKPbc	PKPab	10 21 41.5	-17		
	comp=Z,5.4nm,0.7s,baz=13,slow=1.5,SNR=16								
KSRS				PKPab	**pPKPdf**	**10 21 58.8**	**-5.3**		
	comp=Z,8.0nm,0.9s,baz=51,slow=3.6,SNR=9.4								
KSAR	**Wonju Array Be**	**155.83**	**325**	PKP2	**PKPab**	**10 21 58.8**	**+0.6**		
KSAR						11 21 31.1			
KSAR	**Wonju Array Be**	**155.83**	**325**		**PKPdf**	**10 21 31.1**	**+0.2**		
KSAR				PKPab	**PKPab**	**10 21 58.8**	**+0.6**		
GTA	**Gaotai**	**157.22**	**22**	*e*PKP	**PKPdf**	**10 21 35.0**	**+2.1**		
GTA				pPKP	pPKPdf	10 22 07.5	+1.3		
GTA				sPKP		10 22 19.5			
GTA				PP	**PP**	**10 25 49.0**	**+6.5**		
GTA				SS	SS	10 45 29.0	+1.6		
GTA				AMB	AMB				
	comp=Z,49nm,5.6s								
GTA				LR	LR				
	comp=Z,110nm,17.8s								
GTA				LR	LR				
	comp=Z,76nm,17.8s								
GTA				LR	LR				
	comp=Z,130nm,18.1s								
HHC	**Hu-ho-hao-te**	**157.76**	**358**	*e*PKP	**PKPdf**	**10 21 35.3**	**+1.8**		
LZH	**Lanzhou**	**161.55**	**17**	*e*PKP	**PKPdf**	**10 21 40.3**	**+2.2**		
LZH				pPKP	pPKPdf	10 22 06.3	-5.0		
LZH				PKPab	**sPKPdf**	**10 22 24.8**	**+1.0**		
LZH				LR	LR				
	comp=Z,270nm,18.4s								
LZH				LR	LR				
	comp=Z,290nm,17.4s								
LZH				LR	LR				
	comp=Z,510nm,20.7s								
XAN	**Xi'an**	**164.51**	**5**	PKP	**pPKPdf**	**10 22 16.3**	**+2.3**		
XAN				pPKP	pPKPab	10 23 07.3	-0.6		
XAN	**Xi'an**	**164.51**	**5**	PKIKP	**PKPdf**	**10 21 40.5**	**-0.3**		
XAN	**Xi'an**	**164.51**	**5**		**PKPdf**	**10 21 40.5**	**-0.3**		
NJ2	**Nanjing**	**164.63**	**333**	*e*PKP	**PKPdf**	**10 21 39.8**	**-1.1**		
CD2	**Chengdu**	**166.23**	**25**	PKP	**PKPdf**	**10 21 41.5**	**-0.8**		
CD2				PP	**PP**	**10 26 31.0**	**+0.5**		
CD2				AMB	AMB				
	comp=Z,200nm,7.1s								
WHN	**Wuhan**	**167.58**	**345**	PKP	**PKPdf**	**10 21 46.5**	**+3.3**		
WHN				pPKP	**pPKPdf**	**10 22 18.5**	**+2.2**		
CM31	**Chiang Mai Arr**	**168.96**	**89**		**PKPab**	**10 22 56.7**	**+0.4**		
CMAR	**Chiang Mai Arr**	**168.96**	**89**	PKP	**PKPdf**	**10 21 46.1**	**+1.6**		
	comp=Z,0.5nm,0.3s,baz=270,slow=1.4,SNR=5.1								
CMAR				pPKP	**pPKPdf**	**10 22 19.6**	**+1.7**		
	comp=Z,1.1nm,0.7s,baz=272,slow=2.3,SNR=2.9								
CMAR				PKPab	**PKPab**	**10 22 56.6**	**+0.2**		
	comp=Z,13nm,0.9s,baz=272,slow=5.9,SNR=32								
CMAR				PP	**PP**	**10 26 47.8**	**+1.4**		
	comp=Z,1.2nm,0.8s,baz=273,slow=6.0,SNR=5.4								
CHTO	**Chiang Mai**	**168.97**	**87**	PKP2	**PKPab**	**10 22 55.9**	**-0.5**		
CHTO	**Chiang Mai**	**168.97**	**87**		**PKPab**	**10 22 55.9**	**-0.5**		
KMI	**Kunming**	**170.22**	**47**	PKP	**PKPdf**	**10 21 38.5**	**-6.9**		
KMI				pPKP	pPKPdf	10 22 20.8	+2.0		
KMI				PP	PP	10 27 02.5	+11		
KMI				AMB	AMB				
	comp=Z,160nm,6.9s								
PBKT	**Sadao Pong**	**170.63**	**101**		**PKPdf**	**10 21 46.3**	**+0.8**		
PBKT				PKPab	**PKPab**	**10 23 04.3**	**+0.6**		
GYA	**Guiyang**	**171.34**	**24**	*e*PKP	**PKPdf**	**10 21 47.0**	**+1.2**		
GYA				PP	**PP**	**10 26 58.8**	**+2.4**		
GYA				SKKS		10 33 30.5			
GYA				SS	**SS**	**10 47 50.5**	**-1.7**		
GYA				AMB	AMB				
	comp=Z,100nm,8.0s								
QIZ	**Qiongzhong**	**179.16**	**56**	PKP	**PKPdf**	**10 21 46.3**	**-1.7**		
QIZ				PP	**PP**	**10 27 34.5**	**-0.5**		
QIZ				LR	LR				
	comp=Z,540nm,23.5s								
QIZ				LR	LR				
	comp=Z,750nm,19.1s								
QIZ				LR	LR				
	comp=Z,400nm,42.2s								

*IDC **29** 10:02:29.7±1.2,35°.88N×29°.28E,h0km,mb3.4/2,*
mb1 3.6/7,mb1mx3.4/46,mbtmp3.5/7,ML3.6/5,Error
ellipse: s-maj=23.6km s-min=19.2km az=179.0
*ATH **29** 10:02:31.9,36°.02N×29°.20E,h33km±4km,ML3.3/2,Error*
ellipse: s-maj=6.6km s-min=1.6km az=359.0
*HLW **29** 10:02:32.1,35°.94N×29°.13E,h21km±16km,Md4.0*

*ISK **29** 10:02:32.6,36°.03N×29°.07E,h11km,ML3.7/23*
*THE **29** 10:02:33.2,36°.05N×29°.09E,h2km±1km,ML3.1/2,Error*
ellipse: s-maj=2.7km s-min=0.8km az=124.0
*NIC **29** 10:02:33.9±0.0,35°.93N×29°.17E,h29km±1km,Ml4.2/5*
*DDA **29** 10:02:33.3,36°.07N×29°.06E,h41km±2km,MW4.1*
ISC 29 10:02:32.7±0.7,**35°.93N**±0°.03×**29°.12E**±0°.02,**h20**km±4km,
n84,σ**1°40**/127,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.50**	**52**	PG	**Pb**	**Pb**	**10 02 43.1**	**+0.3**
AKAS	**Kas**	**0.50**	**52**	*i* P	**Pb**	**Pb**	**10 02 43.4**	**+0.5**
AKAS				*i* S	**Sn**	**Sn**	**10 02 53.6**	**+0.7**
AKAS				IAML			10 02 55.0	
	comp=N,5µm,0.7s							
AKAS				IAML			10 02 59.0	
	comp=E,4µm,0.6s							
DEMR	**Demre-Antalya**	**0.70**	**64**	PG	**Pb**	**Pb**	**10 02 46.4**	**0.0**
DEMR				SG	**Sn**	**Sn**	**10 02 57.2**	**-0.6**
FETY	**Fethiye**	**0.71**	**357**	P	**Pb**	**Pb**	**10 02 45.0**	**-1.5**
FETY				S	**Sb**	**Sb**	**10 02 54.2**	**-1.6**
FETY	**Fethiye**	**0.71**	**357**	*i* P	**Pb**	**Pb**	**10 02 45.0**	**-1.5**
FETY				*i* S	**Sb**	**Sb**	**10 02 54.1**	**-1.7**
FETY				IAML			10 02 56.0	
	comp=E,4µm,1.1s							
FETY				IAML			10 02 56.0	
	comp=N,3µm,0.8s							
ARG	**Arkhangelos**	**0.86**	**290**	P	**Pb**	**Pb**	**10 02 49.1**	**+0.1**
ARG				S	**Sn**	**Sn**	**10 03 01.5**	**-0.1**
	comp=N,3µm,1.0s							
ARG	**Arkhangelos**	**0.86**	**290**	P	**Pb**	**Pb**	**10 02 49.1**	**+0.1**
ARG				S	**Sn**	**Sn**	**10 03 01.5**	**-0.1**
ARG				AML	AML		10 03 07.4	
	comp=E,7672µm,1.2s							
ARG				AML	AML		10 03 13.1	
	comp=N,3212µm,1.1s							
ARG	**Arkhangelos**	**0.86**	**290**	PG	**Pb**	**Pb**	**10 02 48.9**	**0.0**
ARG	**Arkhangelos**	**0.86**	**290**	P	**Pb**	**Pb**	**10 02 49.3**	**+0.3**
ARG				S	**Sn**	**Sn**	**10 03 02.2**	**+0.6**
DALY	**Dalyan (Mula)**	**0.97**	**337**	PG	**Pb**	**Pb**	**10 02 49.4**	**-1.4**
DALY				SG	**Sb**	**Sb**	**10 03 01.7**	**-1.4**
DALY	**Dalyan (Mula)**	**0.97**	**337**	*i* P	**Pb**	**Pb**	**10 02 49.3**	**-1.5**
DALY				*i* S	**Sb**	**Sb**	**10 03 02.2**	**-1.0**
DALY				IAML			10 03 10.0	
	comp=N,1µm,0.7s							
DALY				IAML			10 03 10.0	
	comp=E,1µm,0.9s							
TURN	**Turunc**	**1.03**	**336**	PG	**Pn**	**Pn**	**10 02 51.9**	**-0.2**
TURN	**Turunc**	**1.03**	**336**	*i* P	**Pb**	**Pb**	**10 02 52.6**	**+0.7**
TURN				*i* S	**Sn**	**Sn**	**10 03 06.2**	**+0.3**
ELL	**Elmali**	**1.04**	**37**	PG	**Pb**	**Pb**	**10 02 51.1**	**-1.0**
ELL				SG	**Sn**	**Sn**	**10 03 06.6**	**+0.4**
ELL	**Elmali**	**1.04**	**37**	S	**Sn**	**Sn**	**10 03 06.2**	**-0.1**
AKUM	**Antalya-Kumluc**	**1.06**	**68**	*i* P	**Pb**	**Pb**	**10 02 53.2**	**+0.8**
AKUM				*i* S	**Sn**	**Sn**	**10 03 07.8**	**+1.2**
AKUM				IAML			10 03 11.0	
	comp=N,878nm,1.0s							
MRSB	**Marmaris-Mugla**	**1.09**	**317**	PG	**Pn**	**Pn**	**10 02 52.0**	**-0.8**
KEMT	**Kemer-ANTALYA**	**1.34**	**59**	PN	**Pb**	**Pb**	**10 02 57.1**	**0.0**
GOLH	**Golhisar**	**1.36**	**15**	*i* P	**Pn**	**Pn**	**10 02 56.7**	**+0.1**
GOLH				*i* S	**Sb**	**Sb**	**10 03 14.6**	**+0.1**
YER	**Yerkesik**	**1.38**	**331**	P	**Pn**	**Pn**	**10 02 56.6**	**-0.4**
YER				S	**Sn**	**Sn**	**10 03 14.4**	**-0.3**
YER	**Yerkesik**	**1.38**	**331**	PN	**Pn**	**Pn**	**10 02 57.0**	**0.0**
YER				SN	**Sn**	**Sn**	**10 03 14.6**	**-0.1**
DATC	**Datca-Mugla**	**1.45**	**306**	PN	**Pn**	**Pn**	**10 02 58.2**	**+0.5**
KORT	**Korkueli**	**1.46**	**42**	PN	**Pb**	**Pb**	**10 02 58.9**	**-0.4**
KORT	**Korkueli**	**1.46**	**42**	*i* P	**Pb**	**Pb**	**10 02 59.4**	**+0.1**
KORT				*i* S	**Sb**	**Sb**	**10 03 22.5**	**+5.1**
KORT				IAML			10 03 33.0	
	comp=N,1µm,0.6s							
KORT				IAML			10 03 33.0	
	comp=E,1µm,0.8s							
DAT	**Datca**	**1.48**	**303**	PN	**Pn**	**Pn**	**10 02 58.8**	**+0.4**
DAT	**Datca**	**1.48**	**303**	*i* P	**Pn**	**Pn**	**10 02 58.6**	**+0.2**
DAT				*i* S	**Sb**	**Sb**	**10 03 19.7**	**+1.6**
TAVA	**DENIZLI_Tavas**	**1.55**	**354**	*i* P	**Pb**	**Pb**	**10 03 00.6**	**-0.2**
TAVA				*i* S	**Sn**	**Sn**	**10 03 17.3**	**-1.4**
TAVA				IAML			10 03 23.0	
	comp=E,844nm,0.6s							
TAVA				IAML			10 03 24.0	
	comp=N,660nm,0.7s							
ANTB	**Antalya**	**1.57**	**51**	PN	**Pb**	**Pb**	**10 03 00.8**	**-0.3**
KARP	**Karpathos**	**1.64**	**257**	P	**Pn**	**Pn**	**10 03 01.5**	**+1.1**
KARP				S	**Sb**	**Sb**	**10 03 22.9**	**+0.3**
	comp=N,242nm,0.1s							
KARP	**Karpathos**	**1.64**	**257**	P	**Pn**	**Pn**	**10 03 01.5**	**+1.1**
KARP				S	**Sb**	**Sb**	**10 03 23.0**	**+0.5**
KARP				AML	AML		10 03 37.1	
	comp=N,1148µm,0.5s							
KARP				AML	AML		10 03 43.8	
	comp=E,924µm,0.5s							
KARP	**Karpathos**	**1.64**	**257**	PN	**Pn**	**Pn**	**10 03 01.6**	**+1.1**
KARP	**Karpathos**	**1.64**	**257**	P	**Pn**	**Pn**	**10 03 01.3**	**+0.9**
KARP				S	**Sb**	**Sb**	**10 03 22.3**	**-0.3**
DENT	**Denizli**	**1.83**	**358**	PN	**Pn**	**Pn**	**10 03 03.7**	**+0.7**
BODT	**Bodrum**	**1.85**	**308**	P	**Pn**	**Pn**	**10 03 02.6**	**-0.7**
BODT	**Bodrum**	**1.85**	**308**	PN	**Pn**	**Pn**	**10 03 02.8**	**-0.5**
BRDR	**BURDUR-Merkez**	**1.92**	**23**	*i* P	**Pn**	**Pn**	**10 03 05.1**	**+0.8**
BRDR				*i* S	**Sb**	**Sb**	**10 03 30.2**	**-0.5**
BRDR				IAML			10 03 36.0	
	comp=E,549nm,0.6s							
BCK	**Bucak**	**1.93**	**37**	PN	**Pn**	**Pn**	**10 03 05.6**	**+1.1**
BASM	**Basmaki-Afyon**	**2.12**	**20**	PN	**Pn**	**Pn**	**10 03 08.1**	**+1.0**
ISP	**Isparta**	**2.20**	**30**	PN	**Pn**	**Pn**	**10 03 09.6**	**+1.4**
KEPZ	**Antalya-Kepez**	**2.23**	**63**	*i* P	**Pn**	**Pn**	**10 03 09.8**	**+1.3**
KEPZ				*i* S	**Sb**	**Sb**	**10 03 39.8**	**+0.4**
AYDB	**Zeytinkoy-Aydi**	**2.25**	**334**	PN	**Pn**	**Pn**	**10 03 09.2**	**+0.3**
GCAM	**G?zelcaml?**	**2.33**	**320**	PN	**Pn**	**Pn**	**10 03 10.5**	**+0.6**
GCAM	**G?zelcaml?**	**2.33**	**320**	*i* P	**Pn**	**Pn**	**10 03 09.6**	**-0.3**
GCAM				*i* S	**Sn**	**Sn**	**10 03 35.1**	**-2.8**
BAGO	**Egridir - ISPA**	**2.46**	**32**	*i* P	**Pb**	**Pb**	**10 03 14.8**	**-1.4**
BAGO				*i* S	**Sb**	**Sb**	**10 03 49.6**	**+3.5**
KHAL	**Karahalli**	**2.46**	**7**	*i* P	**Pn**	**Pn**	**10 03 10.6**	**-1.2**
KHAL				*i* S	**Sn**	**Sn**	**10 03 43.2**	**+2.0**
KZIL	**AFYON_Kizioren**	**2.47**	**19**	*i* P	**Pn**	**Pn**	**10 03 09.5**	**-2.4**
ZKR	**Zakros**	**2.50**	**252**	P	**Pn**	**Pn**	**10 03 14.0**	**+1.7**
ZKR	**Zakros**	**2.50**	**252**	P	**Pn**	**Pn**	**10 03 14.4**	**+2.1**
ZKR	**Zakros**	**2.50**	**252**	P	**Pn**	**Pn**	**10 03 13.8**	**+1.5**
ZKR				S	**Sn**	**Sn**	**10 03 44.0**	**+1.8**
SMG	**Samos**	**2.56**	**315**	P	**Pn**	**Pn**	**10 03 13.0**	**0.0**
MANT	**Manisa**	**2.60**	**350**	*i* P	**Pn**	**Pn**	**10 03 11.4**	**-2.4**
KULA	**Kula-Manisa**	**2.61**	**352**	PN	**Pn**	**Pn**	**10 03 14.8**	**+1.0**
AKMS	**Akamas**	**2.77**	**108**	P	**Pn**	**Pn**	**10 03 16.1**	**+0.1**
AKMS				S	**Sn**	**Sn**	**10 03 49.0**	**+0.1**
AKMS				AML	AML		10 03 49.0	
	comp=E,3.4nm,0.7s							
AKMS				AML	AML		10 03 49.0	
	comp=E,3.4nm,0.7s							
AKMS				AML	AML		10 03 49.3	
	comp=E,1.3nm,0.3s							
AKMS				AML	AML		10 03 49.3	
	comp=E,1.3nm,0.3s							
SHUT	**Suhut-Afyon**	**2.86**	**23**	PN	**Pn**	**Pn**	**10 03 18.7**	**+1.4**
ALFC	**Alefka**	**2.94**	**104**	P	**Pn**	**Pn**	**10 03 17.9**	**-0.3**
ALFC				AML	AML		10 03 52.6	
	comp=E,1.7nm,0.6s							
ALFC				AML	AML		10 03 52.6	
	comp=E,1.7nm,0.6s							
ALFC				S	**Sn**	**Sn**	**10 03 52.9**	**0.0**
ALFC				AML	AML		10 03 54.0	
	comp=E,1.3nm,0.2s							
ALFC				AML	AML		10 03 54.0	
	comp=E,1.3nm,0.2s							
NPS	**Neapolis**	**2.94**	**258**	P	**Pn**	**Pn**	**10 03 19.3**	**+1.1**
NPS				S	**Sn**	**Sn**	**10 03 54.9**	**+2.0**
DOGA	**KONYA_Doganhis**	**2.98**	**42**	*i* P	**Pn**	**Pn**	**10 03 20.1**	**+1.2**
DOGA				*i* S	**Sb**	**Sb**	**10 03 58.1**	**-3.2**
AFYO	**Afyonkarahisar**	**3.01**	**18**	*i* P	**Pn**	**Pn**	**10 03 22.0**	**+2.7**
NATA	**Nata**	**3.04**	**111**	P	**Pn**	**Pn**	**10 03 20.2**	**+0.6**
NATA				S	**Sn**	**Sn**	**10 03 56.0**	**+0.5**
NATA				AML	AML		10 03 56.7	
	comp=E,2.6nm,0.6s							
NATA				AML	AML		10 03 56.7	
	comp=E,2.6nm,0.6s							
NATA				AML	AML		10 04 02.3	
	comp=E,2.8nm,0.6s							
NATA				AML	AML		10 04 02.3	
	comp=E,2.8nm,0.6s							
LAST	**Lasithi**	**3.07**	**257**	P	**Pn**	**Pn**	**10 03 21.6**	**+1.5**
LAST				S	**Sn**	**Sn**	**10 03 57.5**	**+1.2**
DEMI	**Demirci**	**3.13**	**354**	*i* P	**Pn**	**Pn**	**10 03 18.3**	**-2.7**
LEF	**Lefka**	**3.18**	**104**	*i* P	**Pn**	**Pn**	**10 03 20.0**	**-1.5**
LEF				*i* S	**Sn**	**Sn**	**10 03 56.0**	**-2.8**
SZAC	**Souni**	**3.29**	**110**	P	**Pn**	**Pn**	**10 03 23.5**	**+0.4**
SZAC				S	**Sn**	**Sn**	**10 04 01.9**	**+0.3**
SZAC				AML	AML		10 04 02.6	
	comp=E,1.5nm,0.5s							
SZAC				AML	AML		10 04 02.6	
	comp=E,1.5nm,0.5s							
SZAC				AML	AML		10 04 02.7	
	comp=E,2.1nm,0.8s							
SZAC				AML	AML		10 04 02.7	
	comp=E,2.1nm,0.8s							
IDI	**Anoyia**	**3.51**	**261**	Pn	**Pn**	**Pn**	**10 03 26.8**	**+0.7**
	comp=E,6.7nm,0.3s,baz=99,slow=19,SNR=27							
IDI				Sn	**Sn**	**Sn**	**10 04 07.4**	**+0.3**
	comp=E,2.5nm,0.3s,baz=279,slow=19,SNR=12							
IDI	**Anoyia**	**3.51**	**261**	P	**Pn**	**Pn**	**10 03 27.0**	**+0.9**
ASGA	**Asgata**	**3.56**	**107**	P	**Pn**	**Pn**	**10 03 27.2**	**+0.5**
ASGA				S	**Sn**	**Sn**	**10 04 08.7**	**+0.5**
ASGA				AML	AML		10 04 09.5	
	comp=E,1.0nm,0.4s							
ASGA				AML	AML		10 04 09.5	
	comp=E,1.0nm,0.4s							
ASGA				AML	AML		10 04 16.0	
	comp=E,0.7nm,0.4s							
ASGA				AML	AML		10 04 16.0	
	comp=E,0.7nm,0.4s							
CSS	**Mathiatis**	**3.57**	**104**	P	**Pn**	**Pn**	**10 03 26.8**	**-0.1**
CSS				S	**Sn**	**Sn**	**10 04 07.3**	**-1.1**
CSS	**Mathiatis**	**3.57**	**104**	P	**Pn**	**Pn**	**10 03 26.9**	**0.0**
MVOU	**Mavrovouni**	**3.79**	**103**	P	**Pn**	**Pn**	**10 03 29.9**	**-0.1**
BRTR	**Keskin Array B**	**5.21**	**42**	Pn	**Pn**	**Pn**	**10 03 50.3**	**+0.7**
	comp=E,0.5nm,0.3s,baz=212,slow=15,SNR=11							
SLUM	**Salum**	**5.49**	**218**	P	**Pn**	**Pn**	**10 03 54.3**	**+1.0**
	baz=218							
SLUM				S	**Sn**	**Sn**	**10 04 52.5**	**-3.5**
	baz=218							
MMAI	**Mount Meron Ar**	**5.94**	**117**	Pn	**Pn**	**Pn**	**10 03 55.7**	**-3.9**
	comp=E,3.7nm,0.3s,baz=293,slow=32,SNR=10.0							
MMAI				Sn	**Sn**	**Sn**	**10 05 05.3**	**-1.9**
	comp=E,15nm,0.3s,baz=305,slow=26,SNR=9.5							
RSH		**6.27**	**141**	P	**Pn**	**Pn**	**10 04 03.8**	**-0.2**
	baz=141							
KOT	**Kottamia**	**6.40**	**158**	P	**Pn**	**Pn**	**10 04 06.3**	**+0.4**
	baz=158							
HNAT	**Natroun**	**6.40**	**168**	P	**Pn**	**Pn**	**10 04 05.4**	**-0.4**
	baz=168							
HNAT				S	**Sn**	**Sn**	**10 05 14.7**	**-3.6**
	baz=168							
GLL	**Jalalah**	**6.69**	**160**	P	**Pn**	**Pn**	**10 04 10.4**	**+0.5**

PVO	**Paravola**	**0.86**	**77**	P	**Pb**	**10 17 26.7**	**-0.1**
PVO				AML	AML	10 17 46.2	
	comp=E,13432μm,0.5s						
PVO				AML	AML	10 17 47.7	
	comp=N,10390μm,0.6s						
RLS	**Riolos of Patr**	**0.88**	**115**	P	**Pg**	**10 17 26.4**	**-0.4**
RLS	**Riolos of Patr**	**0.88**	**115**	P	**Pg**	**10 17 26.4**	**-0.4**
RLS				AML	AML	10 17 45.9	
	comp=N,3751μm,0.5s						
RLS				AML	AML	10 17 48.3	
	comp=E,4008μm,0.5s						
DRO	**Drossia**	**1.10**	**115**	P	**Pb**	**10 17 30.3**	**-0.7**
EFP	**Efpalio**	**1.14**	**90**	P	**Pb**	**10 17 30.6**	**-1.0**
ANX	**Ano Chora**	**1.16**	**82**	P	**Pb**	**10 17 31.5**	**-0.5**
EVR	**Evrytania**	**1.17**	**65**	P	**Pb**	**10 17 31.6**	**-0.5**
LAKA	**Lakka**	**1.22**	**99**	P	**Pn**	**10 17 32.0**	**-0.8**
LAKA				AML	AML	10 17 58.7	
	comp=E,2209μm,0.7s						
LAKA				AML	AML	10 18 00.4	
	comp=N,2510μm,0.8s						
SERG	**Sergoula**	**1.26**	**90**	P	**Pn**	**10 17 32.8**	**-0.7**
SERG				AML	AML	10 17 57.1	
	comp=E,6068μm,0.6s						
SERG				AML	AML	10 17 58.9	
	comp=N,5137μm,0.4s						
JAN	**Janina**	**1.26**	**14**	P	**Pg**	**10 17 35.3**	**+1.2**
TRIZ	**Trizonia**	**1.27**	**92**	P	**Pn**	**10 17 33.0**	**-0.6**
KALE	**Kalithea**	**1.33**	**91**	P	**Pn**	**10 17 33.8**	**-0.6**
AMT	**Artemida-Makis**	**1.34**	**132**	P	**Pb**	**10 17 35.0**	**0.0**
KASA	**Kassiopi**	**1.37**	**343**	P	**Pg**	**10 17 36.9**	**+0.7**
KLV	**Kalavryta, Ach**	**1.39**	**106**	P	**Pn**	**10 17 35.0**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.44**	**66**	P	**Pb**	**10 17 36.6**	**0.0**
AGG	**Agios Georgios**	**1.58**	**68**	P	**Pb**	**10 17 39.1**	**-0.1**
AGG				AML	AML	10 18 09.2	
	comp=E,2498μm,0.5s						
AGG				AML	AML	10 18 12.4	
	comp=N,2937μm,0.5s						
THL	**Klokotos Trika**	**1.66**	**47**	P	**Pg**	**10 17 41.5**	**-0.3**
ITM	**Ithomi**	**1.71**	**137**	P	**Pb**	**10 17 41.2**	**-0.1**
AXAR	**Agios Charalam**	**1.76**	**78**	P	**Pg**	**10 17 43.2**	**-0.4**
PYL	**PYLOS**	**1.84**	**146**	P	**Pb**	**10 17 43.0**	**-0.6**
LTK	**Loutraki**	**2.02**	**101**	P	**Pb**	**10 17 46.2**	**-0.4**
VIL2	**Platees**	**2.23**	**95**	P	**Pb**	**10 17 50.2**	**+0.1**
XOR	**Xorichti**	**2.33**	**66**	P	**Pb**	**10 17 50.9**	**-1.0**
OHR	**Ohrid**	**2.69**	**6**	*i* Pn	**Pb**	**10 17 56.0**	**-2.0**
TIR	**Tirane**	**2.95**	**351**	⇑P	**Pn**	**10 17 58.6**	**+1.9**
TIR	**Tirane**	**2.95**	**351**	⇑S	**Sn**	**10 18 34.8**	**+2.8**
TIP	**Timpagrande**	**2.98**	**286**	⇑P	**Pn**	**10 17 58.5**	**+1.4**
TIP	**Timpagrande**	**2.98**	**286**	⇓S	**Sn**	**10 18 34.3**	**+1.4**
VAY	**Valandovo**	**3.31**	**29**	*i* Pn	**Pb**	**10 18 06.4**	**-2.3**
STIP	**Stip**	**3.52**	**22**	*i* Pn	**Pn**	**10 18 08.2**	**+3.7**
MATE	**Matera**	**3.65**	**309**	⇑P	**Pn**	**10 18 07.1**	**+0.9**
ULC	**Ulcinj**	**3.65**	**346**	*e*Pn	**Pn**	**10 18 06.2**	**-0.1**
ULC				*e*Sn	**Sn**	**10 18 49.6**	**+0.3**
DRME	**Dracevica, Mon**	**3.87**	**346**	*e*Pn	**Pn**	**10 18 09.7**	**+0.3**
DRME				*e*Sn	**Sn**	**10 18 54.8**	**0.0**
BUM	**Brajici-Budva**	**4.04**	**343**	*e*Pn	**Pn**	**10 18 11.8**	**+0.1**
BUM				*e*Sn	**Sn**	**10 18 59.3**	**+0.2**
PDG	**Podgorica**	**4.10**	**347**	⇓P	**Pn**	**10 18 13.5**	**+1.1**
PDG	**Podgorica**	**4.10**	**347**	⇑S	**Sn**	**10 19 00.4**	**+0.1**
TTG	**Podgorica**	**4.10**	**347**	*e*Pn	**Pn**	**10 18 12.4**	**0.0**
TTG				*e*Sn	**Sn**	**10 18 59.8**	**-0.5**
PVY	**Plav**	**4.17**	**355**	*e*Pn	**Pn**	**10 18 13.7**	**+0.1**
PVY				*e*Sn	**Sn**	**10 19 02.4**	**-0.1**
CEME	**Cevo**	**4.27**	**345**	*e*Pn	**Pn**	**10 18 15.0**	**+0.1**
CEME				*e*Sn	**Sn**	**10 19 04.5**	**-0.3**
HCY	**Herceg Novi**	**4.28**	**340**	*e*Pn	**Pn**	**10 18 14.6**	**-0.3**
HCY				*e*Sn	**Sn**	**10 19 04.4**	**-0.5**
IVA	**Berane**	**4.46**	**355**	*e*Pn	**Pn**	**10 18 18.1**	**+0.7**
IVA				*e*Sn	**Sn**	**10 19 09.8**	**+0.5**
KOME	**Kolasin**	**4.47**	**351**	*e*Pn	**Pn**	**10 18 18.4**	**+0.8**
KOME				*e*Sn	**Sn**	**10 19 09.9**	**+0.2**
NKME	**Niksic**	**4.48**	**346**	*e*Pn	**Pn**	**10 18 18.0**	**+0.3**
NKME				*e*Sn	**Sn**	**10 19 09.3**	**-0.5**
DBRK	**Dubrovnik**	**4.58**	**338**	*e*Pn	**Pn**	**10 18 19.0**	**-0.1**
DBRK				Sn	**Sn**	**10 19 10.0**	**-2.3**
VTS	**Vitosha**	**4.69**	**26**	⇑P	**Pn**	**10 18 22.6**	**+1.9**
BRY	**Bratogost**	**4.70**	**343**	*e*Pn	**Pn**	**10 18 20.8**	**0.0**
BRY				*e*Sn	**Sn**	**10 19 14.5**	**-0.8**
IDI	**Anoyia**	**4.74**	**130**	P	**Pn**	**10 18 25.9**	**+4.5**
	comp=N,0.3nm,0.3s,baz=314,slow=12,SNR=3.2						
IDI				S	**Sn**	**10 19 18.7**	**+2.2**
	comp=N,1.5nm,0.3s,baz=285,slow=20,SNR=4.5						
STON	**Ston**	**4.90**	**336**	*e*Pn	**Pn**	**10 18 23.6**	**+0.1**
UPM	**Unac-Piva**	**4.91**	**347**	⇓*i*Pn	**Pn**	**10 18 24.1**	**+0.4**
UPM				*e*Sn	**Sn**	**10 19 20.6**	**0.0**
PLE	**Pljevlja**	**4.96**	**351**	*e*Pn	**Pn**	**10 18 24.5**	**+0.1**
PLE				*e*Sn	**Sn**	**10 19 21.6**	**-0.2**
MAKA	**Makarska**	**5.50**	**333**	*e*Pn	**Pn**	**10 18 32.2**	**+0.5**
MAKA				Sn	**Sn**	**10 19 33.2**	**-1.8**
KIJV	**Kijevo**	**6.35**	**333**	*i* Pn	**Pn**	**10 18 44.1**	**+0.7**
ZIRJ	**Zirje**	**6.36**	**327**	*e*Pn	**Pn**	**10 18 43.3**	**-0.1**
ZIRJ				Sn	**Sn**	**10 19 52.8**	**-3.2**
MORI	**Morici**	**6.50**	**328**	*e*Pn	**Pn**	**10 18 46.2**	**+0.7**
MORI				Sn	**Sn**	**10 19 56.8**	**-2.8**
DUGI	**Dugi Otok**	**6.88**	**326**	*e*Pn	**Pn**	**10 18 51.1**	**+0.4**
DUGI				Sn	**Sn**	**10 20 05.3**	**-3.7**
NVLJ	**Novalja**	**7.42**	**327**	*i* Pn	**Pn**	**10 18 58.4**	**+0.4**
VOIR		**7.79**	**25**	⇓P	**Pn**	**10 19 04.1**	**+0.9**
MLR	**Muntele Rosu**	**8.15**	**28**	⇑P	**Pn**	**10 19 09.7**	**+1.4**
SOKA	**Soboth**	**9.16**	**336**	*e*Pn	**Pn**	**10 19 21.9**	**0.0**
	comp=N,1.1nm,0.2s						
OBKA	**Obir**	**9.17**	**334**	Pn	**Pn**	**10 19 22.7**	**+0.6**
	comp=N,2.0nm,0.3s						
OBKA				*i* Sn	**Sn**	**10 21 03.1**	**-2.3**
	comp=N,14nm,0.7s						
KBA	**Koelnbreinsper**	**10.09**	**331**	*e*Pn	**Pn**	**10 19 36.0**	**+1.1**
	comp=N,1.6nm,0.3s						
KBA				*i* Sn	**Sn**	**10 21 24.2**	**-3.9**
	comp=N,0.2nm,0.2s						
VYHS	**Vyhne**	**10.13**	**354**	*e*SN	**Sn**	**10 21 22.4**	**-6.3**
MODS	**Modra-Piesok**	**10.20**	**348**	*e*SN	**Sn**	**10 21 25.0**	**-5.5**
BRTR	**Keskin Array B**	**10.34**	**79**	P	Pn	10 19 44.5	+6.3
	comp=N,0.1nm,0.3s,baz=259,slow=13,SNR=3.4						
MOA	**Molln**	**10.44**	**336**	*e*Pn	**Pn**	**10 19 39.7**	**+0.2**
	comp=N,1.9nm,0.2s						
GERES	**GERESS Array B**	**11.49**	**337**	P	**Pn**	**10 19 54.4**	**+0.4**
	comp=N,0.3nm,0.3s,baz=156,slow=13,SNR=4.2						
KHC	**Kasperske Hory**	**11.79**	**337**	*e*PN	**Pn**	**10 19 56.5**	**-1.4**
KHC				*e*SN	**Sn**	**10 22 04.0**	**-5.4**
HFS	**Hagfors**	**22.14**	**351**	P	**P**	**10 22 05.9**	**+0.5**
	comp=N,3.3nm,0.5s,baz=170,slow=12,SNR=13						
FINES	**FINESS Array B**	**23.30**	**7**	P	**P**	**10 22 18.0**	**+0.5**
	comp=N,4.1nm,0.8s,baz=182,slow=10,SNR=9.2						
NB2	**NORSAR Subarra**	**23.36**	**349**	P	**P**	**10 22 18.8**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=151,slow=11						
NOA	**NORSAR Array B**	**23.36**	**349**	P	**P**	**10 22 19.2**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=163,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**	**10 25 26.8**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=279,slow=6.7,SNR=5.6						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**10 25 30.1**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=282,slow=7.3,SNR=4.4						

*SKO **29** 10:39:34.3, 41°.91N×24°.54E, h6km*
*THE **29** 10:39:34.1, 41°.86N×24°.55E, h6km±1km, ML2.5/6, Error ellipse: s-maj=1.6km s-min=0.7km az=184.0*
*ATH **29** 10:39:34.3, 41°.83N×24°.56E, h16km±3km, ML2.5/4, Error ellipse: s-maj=4.5km s-min=1.5km az=184.0*

ISC 29 10:39:31.6±2.0, 41°.97N±0°.09×24°.53E±0°.04, h11km±11km, n14, σ0s43/25, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
KAVA	**Kavala**	**0.97**	**181**	P			**Pb**	**10 39 50.6**	**+0.1**
KAVA				S			**Sb**	**10 40 03.3**	**0.0**
	352nm,0.3s								
KAVA	**Kavala**	**0.97**	**181**	P			**Pb**	**10 39 50.6**	**+0.1**
KAVA				S			**Sg**	**10 40 02.8**	**-0.2**
KAVA				AML		AML	AML	10 40 06.8	
	comp=E,739μm,0.4s								
KAVA				AML		AML	AML	10 40 07.5	
	comp=N,661μm,0.3s								
SRS	**Serrai**	**1.10**	**220**	P			**Pn**	**10 39 53.5**	**+0.5**
SRS				S			**Sn**	**10 40 08.1**	**-0.1**
	comp=N,248nm,0.5s								
SRS	**Serrai**	**1.10**	**220**	P			**Pn**	**10 39 53.7**	**+0.7**
SRS				S			**Sn**	**10 40 08.3**	**+0.1**
SRS				AML		AML	AML	10 40 09.1	
	comp=N,338μm,0.5s								
SRS				AML		AML	AML	10 40 11.5	
	comp=E,637μm,0.5s								
RDO	**Rodhopi**	**1.12**	**137**	P			**Pn**	**10 39 53.6**	**+0.4**
RDO				S			**Sg**	**10 40 07.9**	**+0.3**
	comp=E,298nm,0.2s								
RDO	**Rodhopi**	**1.12**	**137**	P			**Pn**	**10 39 53.6**	**+0.4**
RDO				S			**Sg**	**10 40 07.5**	**-0.2**
RDO				AML		AML	AML	10 40 10.4	
	comp=N,579μm,0.2s								
RDO				AML		AML	AML	10 40 11.7	
	comp=E,597μm,0.2s								
THAS	**Thassos island**	**1.37**	**174**	P			**Pb**	**10 39 57.2**	**0.0**
THAS				S			**Sg**	**10 40 15.2**	**-0.5**
	comp=E,142nm,0.2s								
THAS	**Thassos island**	**1.37**	**174**	P			**Pb**	**10 39 57.2**	**0.0**
THAS				S			**Sb**	**10 40 13.9**	**-0.8**
SOH	**Sokhos**	**1.45**	**218**	P			**Pg**	**10 39 59.1**	**-0.3**
SOH				S			**Sg**	**10 40 18.5**	**+0.3**
	comp=E,180nm,0.4s								
KNT	**Kendrikon**	**1.47**	**237**	P			**Pg**	**10 39 59.6**	**-0.1**
KNT				S			**Sg**	**10 40 19.0**	**+0.2**
	comp=E,142nm,0.3s								
KNT	**Kendrikon**	**1.47**	**237**	P			**Pg**	**10 40 00.3**	**+0.6**
KNT				AML		AML	AML	10 40 21.4	
	comp=N,255μm,0.3s								
KNT				AML		AML	AML	10 40 21.7	
	comp=E,306μm,0.3s								
ALN	**Alexandroupoli**	**1.56**	**133**	P			**Pg**	**10 40 01.9**	**+0.3**
ALN				S			**Sg**	**10 40 21.3**	**-0.7**
SMTH	**Samothraki Isl**	**1.68**	**153**	P			**Pg**	**10 40 03.6**	**-0.2**
STIP	**Stip**	**1.77**	**262**	*i* Pn			**Pn**	**10 40 01.5**	**-0.7**

*SOF **29** 10:40:17.1, 41°.93N×24°.55E, h18km, MD2.7*
*ISK **29** 10:40:18.4, 41°.90N×24°.70E, h5km, ML2.8/4*

ISC 29 10:40:17.0±1.0, 41°.90N±0°.04×24°.52E±0°.04, h9km, n15, σ0s93/18, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
PLD	**Plovdiv**	**0.25**	**33**	P			**Pg**	**10 40 23.2**	**+1.2**
PLD	**Plovdiv**	**0.25**	**33**	PG			**Pg**	**10 40 23.2**	**+1.2**
PLD				SG			**Sg**	**10 40 27.0**	**+1.6**
RZN	**Rozhen**	**0.25**	**145**	P			**Pg**	**10 40 23.4**	**+1.2**
MMB	**Musomiste**	**0.67**	**243**	P			**Pg**	**10 40 30.6**	**+0.6**
PGB	**Panagyurishte**	**0.70**	**338**	P			**Pg**	**10 40 29.6**	**-1.0**
KDZ	**Kurdzhali**	**0.71**	**110**	P			**Pg**	**10 40 30.3**	**-0.5**
KDZ	**Kurdzhali**	**0.71**	**110**	PG			**Pg**	**10 40 30.4**	**-0.4**
KDZ				SG			**Sg**	**10 40 39.0**	**-1.1**
DIM	**Dimitrovgrad**	**0.77**	**78**	P			**Pn**	**10 40 32.7**	**-1.3**
RDO	**Rodhopi**	**1.07**	**134**	PG			**Pn**	**10 40 37.9**	**-0.3**
KKB	**Krupnik**	**1.08**	**269**	P			**Pb**	**10 40 38.2**	**+0.4**
VTS	**Vitosha**	**1.20**	**307**	P			**Pn**	**10 40 39.2**	**-0.9**
ALN	**Alexandroupoli**	**1.52**	**131**	PN			**Pg**	**10 40 46.3**	**+0.1**
ENEZ	**Enez**	**1.69**	**133**	PN			**Pg**	**10 40 49.7**	**+0.3**
ENEZ				SN			**Sg**	**10 41 11.3**	**0.0**
ERIK	**Erikli-Kesan**	**1.94**	**129**	PN			**Pb**	**10 40 52.8**	**+0.3**
GADA	**Gvkgeada**	**2.00**	**148**	PN			**Pb**	**10 40 53.9**	**+0.4**

*SJA **29** 10:52:04.3±0.6, 25°.67S×68°.92W, h169km±9km, ML3.2, MW3.3*
*GUC **29** 10:52:05.7±0.7, 25°.65S×68°.88W, h129km±6km, ML3.5*

ISC 29 10:52:06.9±1.4, 25°.68S±0°.04×68°.83W±0°.09, h113km±20km, n25, σ2s19/44, 5C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
GO02	**Mina Guanaco**	**0.86**	**307**	⇑*i*P			**Pn**	**10 52 28.1**	**+0.7**
GO02				*e*S			**Sn**	**10 52 44.5**	**+1.8**
GO02				IAML				10 52 47.0	
	comp=E,1μm,0.1s								
PB14	**IPOC Station P**	**1.77**	**306**	*e*P			**Pn**	**10 52 37.6**	**+0.1**
PB14				*e*S			**Sn**	**10 53 01.6**	**+0.8**
PB14	**IPOC Station P**	**1.77**	**306**	*i* P			**Pn**	**10 52 38.1**	**+0.6**
PB14				*i* S			**Sn**	**10 53 02.2**	**+1.4**
PB14				IAML				10 53 08.8	
	comp=Z,76nm,0.2s								
GO03	**Copiap**	**2.28**	**213**	⇑*i*P			**Pn**	**10 52 44.1**	**+0.5**
GO03				*e*S			**Sn**	**10 53 13.3**	**+1.5**
GO03	**Copiap**	**2.28**	**213**	*i* P			**Pn**	**10 52 44.3**	**+0.6**
GO03				*i* S			**Sn**	**10 53 13.8**	**+1.9**
PB15	**IPOC Station P**	**2.53**	**347**	*e*P			**Pn**	**10 52 46.6**	**-0.5**
PB15				*e*S			**Sn**	**10 53 18.5**	**+0.6**
PB15	**IPOC Station P**	**2.53**	**347**	*i* P			**Pn**	**10 52 47.4**	**+0.3**
PB15				*i* S			**Sn**	**10 53 19.8**	**+1.9**
PB10	**IPOC Station P**	**2.67**	**324**	⇑*i*P			**Pn**	**10 52 49.0**	**+0.4**
PB10				*e*S			**Sn**	**10 53 20.5**	**-0.2**
PB10				IAML				10 53 33.1	
	comp=E,113nm,0.3s								
PB10	**IPOC Station P**	**2.67**	**324**	*i* P			**Pn**	**10 52 49.2**	**+0.6**
PB10				*i* S			Sn	10 53 30.5	+10
PB10				IAML				10 53 34.5	
	comp=Z,76nm,0.4s								
PB06	**IPOC Station P**	**3.04**	**347**	⇑*i*P			**Pn**	**10 52 53.7**	**0.0**
PB06				*e*S			**Sn**	**10 53 27.6**	**-2.1**
PB06				IAML				10 53 30.5	
	comp=N,96nm,0.7s								
PB06	**IPOC Station P**	**3.04**	**347**	*i* P			**Pn**	**10 52 53.8**	**0.0**
PB06				*i* S			**Sn**	**10 53 29.9**	**+0.2**
PB06				IAML				10 53 41.3	
	comp=Z,69nm,0.2s								
LVC	**Limon Verde**	**3.06**	**359**	*e*P			**Pn**	**10 52 53.9**	**-0.2**
LVC				*e*S			**Sn**	**10 53 30.7**	**+0.2**
LVC	**Limon Verde**	**3.06**	**359**	*i* P			**Pn**	**10 52 53.8**	**-0.4**
LVC				*i* S			**Sn**	**10 53 31.1**	**+0.6**
PB05	**IPOC Station P**	**3.08**	**336**	⇑*i*P			**Pn**	**10 52 54.0**	**-0.2**
PB05				*e*S			**Sn**	**10 53 30.1**	**-0.6**
PB05				IAML				10 53 42.1	
	comp=E,123nm,0.2s								
PB05	**IPOC Station P**	**3.08**	**336**	*i* P			**Pn**	**10 52 54.0**	**-0.2**
PB05				*i* S			**Sn**	**10 53 36.0**	**+5.3**
VCA	**Vinchina**	**3.09**	**170**	*i* P			**Pn**	**10 52 55.0**	**+0.6**
VCA				IAML				10 52 56.7	
	comp=N,30nm,0.2s								
VCA				*i* S			**Sn**	**10 53 34.8**	**+3.8**
PB04	**IPOC Station P**	**3.54**	**340**	*e*P			**Pn**	**10 52 58.8**	**-1.6**
PB04				*e*S			**Sn**	**10 53 39.7**	**-2.0**
PB04				IAML				10 53 56.6	
	comp=N,111nm,0.4s								
PB04	**IPOC Station P**	**3.54**	**340**	*i* P			**Pn**	**10 52 59.4**	**-1.0**
PB04				*i* S			Sn	10 53 51.7	+10
PB04				IAML				10 53 56.8	
	comp=Z,59nm,0.4s								
PB09	**IPOC Station P**	**3.89**	**354**	*i* P			**Pn**	**10 53 04.7**	**-0.3**
PB09				*i* S			**Sn**	**10 53 48.9**	**-1.0**
PB09				IAML				10 54 06.9	
	comp=Z,27nm,0.3s								
GO04	**Tololo Observa**	**4.80**	**201**	*i* P			**Pn**	**10 53 15.6**	**-1.6**
GO04				*i* S			**Sn**	**10 54 18.6**	**+6.7**
RTCV	**Cerro Valdivia**	**6.16**	**178**	*i* P			**Pn**	**10 53 34.2**	**-1.3**
ARCO	**CERRO ARCO**	**7.13**	**181**	*i* P			**Pn**	**10 53 47.5**	**-1.3**
ARCO				IAML				10 53 55.1	
	comp=Z,3.7nm,0.4s								
MRA	**San Martin**	**7.25**	**159**	*i* P			**Pn**	**10 53 46.9**	**-3.3**
MRA				IAML				10 53 47.9	
	comp=Z,2.4nm,0.3s								
MRA				*i* S			**Sn**	**10 55 04.2**	**-6.8**
AAGR	**Agrelo**	**7.38**	**180**	*i* P			**Pn**	**10 53 50.9**	**-1.1**
ROC1	**El Roble**	**7.51**	**194**	*i* P			**Pn**	**10 53 51.2**	**-2.7**

*IDC **29** 11:42:58.6±1.8, 17°.83S×178°.66W, h536km±22km, mb3.4/11, mb1 3.7/13, mb1mx3.5/27, mbtmp4.3/13, Error ellipse: s-maj=24.0km s-min=12.1km az=147.0*
*NEIC **29** 11:42:59.6±1.1, 17°.77S±0°.10×178°.7W±0°.1, h547km±7km, mb4.3/29, Error ellipse: s-maj=16.8km s-min=14.4km az=81.0*

ISC 29 11:42:59.9±0.6, 17°.8S±0°.1×178°.61W±0°.10, h550km, n60, σ1s13/59, mb4.2/24, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time	Res
								h m s	ISC
MSVF	**Nonsavu**	**3.19**	**271**				**P**	**11 44 19.1**	**+2.9**
AFI	**Afiamalu**	**7.64**	**60**	P			**P**	**11 44 53.0**	**-1.3**
	9.9nm,0.3s,baz=94,slow=6.7,SNR=16								
AFI	**Afiamalu**	**7.64**	**60**	P			**P**	**11 44 53.5**	**-0.8**
SANVU	**Saraoutou**	**13.80**	**278**	P			**P**	**11 45 57.9**	**+0.7**
DZM	**Mont Dzumac**	**14.67**	**251**	P			**P**	**11 46 04.9**	**-1.3**
	1.7nm,0.3s,baz=291,slow=21,SNR=10								
DZM	**Mont Dzumac**	**14.67**	**251**	P			**P**	**11 46 05.3**	**-0.9**
NOUC	**Port Laguerre**	**14.81**	**251**	P			**P**	**11 46 07.0**	**-0.4**
OUZ	**Omahuta**	**18.66**	**200**	P			**P**	**11 46 46.9**	**+3.3**
OUZ				IAmb			IAmb	11 46 51.3	
	comp=Z,12nm,1.1s								
URZ	**Urewera**	**20.70**	**190**	P			**P**	**11 46 59.7**	**-2.4**
	comp=Z,1.9nm,0.3s,baz=270,slow=2.1,SNR=6.2								
URZ	**Urewera**	**20.70**	**190**	P			**P**	**11 47 00.4**	**-1.7**
EIDS	**Eidsvold**	**29.12**	**250**	P			**P**	**11 48 16.8**	**0.0**
ARMA	**Armidale**	**29.82**	**240**	P			**P**	**11 48 23.7**	**+0.8**
CTA	**Charters Tower**	**33.27**	**260**	P			**P**	**11 48 51.8**	**-0.6**
	comp=Z,9.9nm,0.9s,baz=74,slow=9.9,SNR=5.6								
CAN	**Canberra**	**33.60**	**232**	P			**P**	**11 48 56.0**	**+0.9**
COEN	**Coen**	**36.92**	**270**	P			**P**	**11 49 22.7**	**-0.1**
COEN				IAmb			IAmb	11 49 23.2	
	comp=Z,8.9nm,0.9s								
TOO	**Toolangi**	**37.07**	**231**	P			**P**	**11 49 24.9**	**+1.0**
STKA	**Stephens Creek**	**38.50**	**241**	P			**P**	**11 49 35.8**	**+0.2**
	comp=Z,5.6nm,0.5s,baz=101,slow=11,SNR=9.3								
STKA	**Stephens Creek**	**38.50**	**241**	P			**P**	**11 49 36.2**	**+0.7**
BBOO	**Buckleboo**	**43.28**	**241**	P			**P**	**11 50 13.3**	**-0.1**
WR0	**Warramunga Arr**	**44.27**	**259**	P			**P**	**11 50 19.9**	**-1.4**
WR0				IAmb			IAmb	11 50 30.4	
	comp=Z,7.2nm,1.4s								
WB0	**Warramunga Arr**	**44.43**	**260**	P			**P**	**11 50 21.6**	**-1.0**
WB0				IAmb			IAmb	11 50 21.7	
	comp=Z,9.1nm,1.1s								
WB2	**Warramunga Arr**	**44.45**	**259**	P			**P**	**11 50 21.5**	**-1.2**
WB2				IAmb			IAmb	11 50 22.1	
	comp=Z,6.0nm,0.7s								
WRAB	**Tennant Creek**	**44.45**	**259**	P			**P**	**11 50 21.5**	**-1.2**
WRAB				IAmb			IAmb	11 50 22.5	
	comp=Z,13nm,1.2s								
WRA	**Warramunga Arr**	**44.46**	**259**	P			**P**	**11 50 21.6**	**-1.2**
	comp=Z,1.5nm,0.4s,baz=96,slow=7.1,SNR=37								
WRA	**Warramunga Arr**	**44.46**	**259**	P			**P**	**11 50 21.8**	**-1.0**
AS31	**Alice Springs**	**44.63**	**254**	P			**P**	**11 50 23.6**	**-0.5**
AS31				IAmb			IAmb	11 50 24.0	
	comp=Z,9.6nm,0.6s								
ASAR	**Alice Springs**	**44.63**	**254**	P			**P**	**11 50 23.5**	**-0.6**
	comp=Z,33nm,0.6s,baz=89,slow=7.9,SNR=706								
FITZ	**Fitzroy Crossi**	**52.85**	**261**	P			**P**	**11 51 25.1**	**+0.1**
PSA00	**Pilbara Seismi**	**57.75**	**255**	P			**P**	**11 51 58.4**	**-0.6**
MJAR	**Matsushiro Arr**	**67.73**	**323**	P			**P**	**11 53 02.0**	**-1.0**
	comp=Z,1.9nm,0.5s,baz=141,slow=5.6,SNR=5.5								
QSPA	**South Pole Qui**	**72.22**	**180**	P			**P**	**11 53 29.7**	**+0.4**
PETK	**Petropavlovsk-**	**73.56**	**345**	P			**P**	**11 53 36.4**	**-0.5**
	comp=Z,2.0nm,0.7s,baz=132,slow=8.3,SNR=12								
PETK	**Petropavlovsk-**	**73.56**	**345**	P			**P**	**11 53 36.8**	**-0.1**
KMRM	**Mail Ridge**	**77.08**	**40**	P			**P**	**11 53 59.0**	**+2.1**
KMRM				IAmb			IAmb	11 54 04.3	
	comp=Z,20nm,1.4s								
MDPB	**Devils Postpil**	**78.55**	**44**	P			**P**	**11 54 06.5**	**+1.3**
PNTR	**Pine Nut**	**79.01**	**43**	P			**P**	**11 54 08.6**	**+1.1**
YERR	**Yerington**	**79.19**	**43**	P			**P**	**11 54 09.3**	**+0.9**
NVAR	**Mina Array Bea**	**79.50**	**44**	P			**P**	**11 54 10.9**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=226,slow=8.9,SNR=11								
SUA	**Susitna One**	**82.10**	**13**	P			**P**	**11 54 22.4**	**-0.4**
PMR	**Palmer**	**82.57**	**14**	P			**P**	**11 54 24.6**	**-0.5**
PMR				IAmb			IAmb	11 54 27.4	
	comp=Z,14nm,1.4s								
U15A	**North Rim**	**82.61**	**48

PSGCX				*i* S		**Sn**	**11 48 53.1**	**+0.8**
PB04	**IPOC Station P**	**1.75**	**217**	*e*P		**Pn**	**11 48 30.6**	**-0.2**
PB04	**IPOC Station P**	**1.75**	**217**	*i* P		**Pn**	**11 48 30.6**	**-0.2**
PB04				*i* S		**Sn**	**11 48 56.3**	**+2.9**
PB04				IAML			11 49 05.5	
	comp=Z,895nm,0.2s							
PB06	**IPOC Station P**	**1.83**	**197**	*e*P		**Pn**	**11 48 31.4**	**-0.5**
PB06				*i* S		**Sn**	**11 48 55.6**	**+0.3**
PB06	**IPOC Station P**	**1.83**	**197**	*i* P		**Pn**	**11 48 31.7**	**-0.2**
PB06				*i* S		**Sn**	**11 48 55.4**	**+0.1**
PB06				IAML			11 48 59.7	
	comp=Z,531nm,0.3s							
MNMC	**Minye Minye**	**1.89**	**343**	⇊*i* P		**Pn**	**11 48 32.8**	**+0.1**
MNMC				*i* S		**Sn**	**11 48 57.5**	**+0.8**
MNMCX	**Minye Minye**	**1.89**	**343**	*i* P		**Pn**	**11 48 33.3**	**+0.6**
MNMCX				*i* S		**Sn**	**11 48 59.5**	**+2.9**
PB05	**IPOC Station P**	**2.21**	**210**	IAML			11 49 13.8	
	comp=N,366nm,0.3s							
PB05	**IPOC Station P**	**2.21**	**210**	*i* P		**Pn**	**11 48 36.1**	**-0.5**
PB15	**IPOC Station P**	**2.30**	**191**	*i* P		**Pn**	**11 48 38.3**	**+0.4**
PB15				*i* S		**Sn**	**11 49 11.0**	**+5.0**
PB16	**IPOC Station P**	**2.64**	**349**	*i* P		**Pn**	**11 48 43.8**	**+1.1**
PB16				*i* S		**Sn**	**11 49 16.5**	**+2.0**
PB10	**IPOC Station P**	**2.94**	**209**	*i* P		**Pn**	**11 48 45.2**	**-1.0**
PB10				*i* S		**Sn**	**11 49 28.6**	**+7.8**
PB10				IAML			11 49 34.9	
	comp=Z,107nm,0.2s							
YJA	**Yavi**	**3.47**	**111**	⇊*i* P		**Pn**	**11 48 53.8**	**+0.2**
YJA				*i* S		**Sn**	**11 49 35.9**	**+1.7**
PB14	**IPOC Station P**	**3.89**	**199**	*i* P		**Pn**	**11 48 57.2**	**-2.0**
PB14				IAML			11 49 04.2	
	comp=Z,196nm,0.3s							
PB14				*i* S		Sn	11 49 52.8	+8.7
HJA	**Humahuaca**	**4.02**	**125**	*i* P		**Pn**	**11 49 02.3**	**+1.3**
LPAZ	**La Paz**	**4.70**	**10**	P		**Pn**	**11 49 12.6**	**+2.1**
	comp=Z,2.3nm,0.3s,baz=165,slow=3.9,SNR=28							
LPAZ	**La Paz**	**4.70**	**10**	*i* P		**Pn**	**11 49 12.5**	**+2.1**
AZAP	**Zapla**	**4.89**	**133**	*i* P		**Pn**	**11 49 12.0**	**-0.5**
PLCA	**Paso Flores**	**19.77**	**183**	P		**Pn**	**11 52 26.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=8.3,slow=7.4,SNR=4.9							
NVAR	**Mina Array Bea**	**75.00**	**322**	P		**P**	**11 59 32.2**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=146,slow=6.6,SNR=2.8							
TORD	**Torodi Ar. Bea**	**77.25**	**70**	P		**P**	**11 59 42.0**	**-2.6**
	comp=Z,0.4nm,0.9s,baz=133,slow=4.4,SNR=4.2							
YKA	**Yellowknife Ar**	**90.64**	**341**	P		**P**	**12 00 50.3**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=298,slow=3.1,SNR=10							
MKAR	**Makanchi Array**	**145.23**	**35**	PKP		**PKPdf**	**12 07 26.0**	**-0.7**

*ATH **29** 12:20:08.8,38.19N×20.40E,h10km,ML2.7/15,Error ellipse: s-maj=0.8km s-min=0.5km az=259.0*
*THE **29** 12:20:09.0,38.19N×20.39E,h0km±1km,ML2.9/7,Error ellipse: s-maj=2.0km s-min=0.4km az=251.0*
ISC 29 12:20:08.9±1.0,38.18N±0.02×20.41E±0.04,h8km±5km, n42,σ0949/63,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.05**	**294**	P			**Pg**	**12 20 10.8**	**+0.1**
KEF3				S			**Sg**	**12 20 12.3**	**+0.4**
KEF2	**Argostoli. Kep**	**0.07**	**105**	P			**Pg**	**12 20 10.9**	**0.0**
KEF2				S			**Sg**	**12 20 12.3**	**0.0**
KEF4	**Livadi, Kephal**	**0.08**	**11**	P			**Pg**	**12 20 10.9**	**-0.1**
KEF4				S			**Sg**	**12 20 12.7**	**+0.2**
KEF1	**Kardakata, Kep**	**0.11**	**29**	P			**Pg**	**12 20 11.3**	**-0.2**
KEF1				S			**Sg**	**12 20 13.1**	**-0.1**
VLS	**Valsamata**	**0.15**	**92**	P			**Pg**	**12 20 12.1**	**0.0**
VLS				S			**Sg**	**12 20 14.4**	**+0.1**
	19μm,0.1s								
VLS	**Valsamata**	**0.15**	**92**	P			**Pg**	**12 20 12.0**	**0.0**
VLS				S			**Sg**	**12 20 14.2**	**-0.1**
VLS				AML			AML	12 20 14.5	
	comp=N,35605μm,0.2s								
VLS				AML			AML	12 20 14.6	
	comp=E,39579μm,0.1s								
FSK	**Fiskardo**	**0.30**	**24**	P			**Pg**	**12 20 14.9**	**-0.1**
FSK				S			**Sg**	**12 20 19.7**	**+0.7**
	comp=E,1μm,0.4s								
FSK	**Fiskardo**	**0.30**	**24**	P			**Pg**	**12 20 14.8**	**-0.1**
FSK				S			**Sg**	**12 20 19.3**	**+0.4**
KFL	**Anninata**	**0.31**	**104**	P			**Pg**	**12 20 15.1**	**0.0**
KFL				S			**Sg**	**12 20 20.0**	**+0.8**
	comp=E,5μm,0.3s								
KFL	**Anninata**	**0.31**	**104**	P			**Pg**	**12 20 15.0**	**0.0**
KFL				S			**Sg**	**12 20 20.3**	**+1.0**
KFL				AML			AML	12 20 20.5	
	comp=E,13030μm,0.4s								
KFL				AML			AML	12 20 24.4	
	comp=N,5109μm,0.3s								
VLMS	**Volimes, Zakyn**	**0.37**	**146**	P			**Pg**	**12 20 15.8**	**-0.3**
VLMS				S			**Sg**	**12 20 21.9**	**+0.9**
EVGI	**Lefkada island**	**0.48**	**24**	P			**Pg**	**12 20 18.1**	**-0.2**
EVGI				S			**Sg**	**12 20 25.3**	**+0.7**
EVGI	**Lefkada island**	**0.48**	**24**	P			**Pg**	**12 20 17.6**	**-0.7**
EVGI				S			**Sg**	**12 20 25.2**	**+0.6**
MGNA	**Meganis**	**0.56**	**33**	P			**Pg**	**12 20 19.4**	**-0.4**
MGNA				AML			AML	12 20 28.6	
	comp=N,2112μm,0.2s								
MGNA				AML			AML	12 20 28.8	
	comp=E,2276μm,0.3s								
KRI1	**kERI**	**0.61**	**148**	P			**Pg**	**12 20 20.6**	**-0.2**
KRI1				S			**Sb**	**12 20 30.4**	**-0.2**
LKD2	**Lefkada island**	**0.64**	**18**	P			**Pg**	**12 20 21.3**	**0.0**
LKD2	**Lefkada island**	**0.64**	**18**	P			**Pg**	**12 20 21.2**	**0.0**
AST1	**Astakos**	**0.65**	**56**	P			**Pg**	**12 20 21.9**	**+0.5**
AST1				S			**Sb**	**12 20 31.1**	**-0.5**
	comp=E,1μm,0.2s								
TSLK	**Tsoukalades, L**	**0.67**	**17**	P			**Pg**	**12 20 21.5**	**-0.4**
TSLK				S			**Sg**	**12 20 31.2**	**+0.6**
TSLK	**Tsoukalades, L**	**0.67**	**17**	P			**Pg**	**12 20 21.4**	**-0.4**
PDO	**Prodromos**	**0.74**	**56**	P			**Pg**	**12 20 22.9**	**-0.3**
PDO				S			**Sb**	**12 20 33.8**	**-0.5**
PDO	**Prodromos**	**0.74**	**56**	P			**Pg**	**12 20 22.6**	**-0.6**
RLS	**Riolos of Patr**	**0.85**	**98**	P			**Pg**	**12 20 24.7**	**-0.5**
RLS	**Riolos of Patr**	**0.85**	**98**	P			**Pg**	**12 20 24.4**	**-0.8**
RLS				AML			AML	12 20 40.1	
	comp=E,675μm,0.5s								
RLS				AML			AML	12 20 41.6	
	comp=N,500μm,0.2s								
PVO	**Paravola**	**0.98**	**63**	P			**Pg**	**12 20 27.6**	**-0.2**
PVO				S			**Sn**	**12 20 42.8**	**-0.2**
	comp=N,535nm,0.3s								
PVO	**Paravola**	**0.98**	**63**	P			**Pg**	**12 20 27.5**	**-0.2**
PVO				AML			AML	12 20 49.2	
	comp=N,777μm,0.3s								
PVO				AML			AML	12 20 49.4	
	comp=E,1358μm,0.3s								
DRO	**Drossia**	**1.06**	**102**	P			**Pg**	**12 20 29.0**	**-0.2**
DRO				S			**Sn**	**12 20 44.9**	**0.0**
	comp=E,550nm,0.3s								
DRO	**Drossia**	**1.06**	**102**	P			**Pg**	**12 20 28.7**	**-0.5**
DRO				AML			AML	12 20 47.9	
	comp=E,1142μm,0.3s								
DRO				AML			AML	12 20 49.7	
	comp=N,1052μm,0.3s								
EFP	**Efpalio**	**1.21**	**78**	P			**Pb**	**12 20 32.0**	**0.0**
EFP	**Efpalio**	**1.21**	**78**	P			**Pb**	**12 20 31.4**	**-0.6**
EFP				AML			AML	12 20 55.2	
	comp=E,462μm,0.4s								
EFP				AML			AML	12 20 56.6	
	comp=N,402μm,0.6s								
AMT	**Artemida-Makis**	**1.22**	**122**	P			**Pb**	**12 20 32.1**	**-0.1**
AMT				AML			AML	12 21 00.4	
	comp=E,533μm,0.5s								
AMT				AML			AML	12 21 02.6	
	comp=N,446μm,0.9s								
LAKA	**Lakka**	**1.24**	**87**	P			**Pn**	**12 20 31.7**	**-0.8**
LAKA				S			**Sn**	**12 20 51.1**	**+1.6**
LAKA	**Lakka**	**1.24**	**87**	P			**Pn**	**12 20 31.8**	**-0.8**
LAKA				AML			AML	12 20 52.0	
	comp=N,532μm,0.4s								
LAKA				AML			AML	12 20 57.7	
	comp=E,317μm,0.7s								
ANX	**Ano Chora**	**1.26**	**71**	P			**Pg**	**12 20 33.3**	**+0.2**
ANX				S			**Sn**	**12 20 51.1**	**+1.1**
	comp=E,352nm,0.7s								
ANX	**Ano Chora**	**1.26**	**71**	P			**Pn**	**12 20 32.8**	**-0.1**
ANX				AML			AML	12 20 56.0	
	comp=N,935μm,0.5s								
ANX				AML			AML	12 21 00.1	
	comp=E,513μm,0.8s								
SERG	**Sergoula**	**1.32**	**79**	P			**Pn**	**12 20 33.5**	**-0.1**
SERG				AML			AML	12 20 58.4	
	comp=N,492μm,0.4s								
SERG				AML			AML	12 21 00.4	
	comp=E,478μm,0.3s								
TRIZ	**Trizonia**	**1.32**	**82**	P			**Pn**	**12 20 33.3**	**-0.4**
KALE	**Kalithea**	**1.38**	**81**	P			**Pn**	**12 20 34.3**	**-0.2**
KALE				AML			AML	12 21 02.6	
	comp=E,244μm,0.7s								
KALE				AML			AML	12 21 06.0	
	comp=N,312μm,0.6s								
KLV	**Kalavryta, Ach**	**1.38**	**95**	P			**Pn**	**12 20 34.4**	**-0.2**
KLV				AML			AML	12 21 07.0	
	comp=N,192μm,0.8s								
KLV				AML			AML	12 21 07.5	
	comp=E,212μm,0.7s								
ITM	**Ithomi**	**1.57**	**129**	P			**Pb**	**12 20 38.1**	**-0.1**
AGG	**Agios Georgios**	**1.73**	**60**	P			**Pb**	**12 20 41.1**	**+0.3**
THL	**Klokotos Trika**	**1.87**	**42**	P			**Pb**	**12 20 43.0**	**-0.2**
THL				AML			AML	12 21 15.7	
	comp=E,128μm,0.4s								
THL				AML			AML	12 21 20.3	
	comp=N,94μm,0.6s								

*SJA **29** 12:22:13.9±0.8,22.71S×66.38W,h255km±6km,ML2.7, MW2.9*
*GUC **29** 12:22:15.8±0.5,22.65S×66.70W,h277km±8km,ML3.6*
ISC 29 12:22:13.7±2.4,22.69S±0.05×66.43W±0.07, h253km±17km,n30,σ1837/55,13C-3D,Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
YJA	**Yavi**	**0.98**	**59**	*i* P			**Pn**	**12 22 50.0**	**+0.4**
YJA				*i* S			**S**	**12 23 15.5**	**-2.2**
YJA				IAML				12 23 18.0	
	comp=Z,5.0nm,0.5s								
HJA	**Humahuaca**	**1.07**	**119**	*i* P			**Pn**	**12 22 50.6**	**+0.6**
HJA				IAML				12 22 50.6	
	comp=Z,9.9nm,0.3s								
HJA				*i* S			**S**	**12 23 17.8**	**-0.6**
AZAP	**Zapla**	**1.98**	**141**	*i* P			**Pn**	**12 22 58.0**	**+1.4**
AZAP				IAML				12 23 00.7	
	comp=Z,2.7nm,0.3s								
LVC	**Limon Verde**	**2.29**	**271**	⇊*i* P			**Pn**	**12 23 00.9**	**+1.3**
LVC				*i* S			**S**	**12 23 35.5**	**-0.4**
LVC	**Limon Verde**	**2.29**	**271**	*i* P			**Pn**	**12 23 01.0**	**+1.4**
LVC				*i* S			**S**	**12 23 35.8**	**0.0**
PB09	**IPOC Station P**	**2.75**	**288**	⇑*i* P			**Pn**	**12 23 05.9**	**+1.8**
PB09	**IPOC Station P**	**2.75**	**288**	*i* P			**Pn**	**12 23 05.9**	**+1.8**
PB09				IAML				12 23 07.4	
	comp=Z,18nm,0.1s								
PB15	**IPOC Station P**	**2.85**	**259**	⇊*i* P			**Pn**	**12 23 06.9**	**+1.8**
PB15				*i* S			**S**	**12 23 45.4**	**-0.3**
PB15	**IPOC Station P**	**2.85**	**259**	*i* P			**Pn**	**12 23 06.9**	**+1.8**
PB15				*i* S			**S**	**12 23 45.8**	**+0.1**
PB06	**IPOC Station P**	**2.90**	**269**	⇑*i* P			**Pn**	**12 23 07.3**	**+1.7**
PB06				*i* S			**S**	**12 23 45.8**	**-0.8**
PB06				IAML				12 23 49.6	
	comp=E,73nm,0.1s								
PB06	**IPOC Station P**	**2.90**	**269**	*i* P			**Pn**	**12 23 07.3**	**+1.7**
PB06				*i* S			**S**	**12 23 46.0**	**-0.6**
PB06				IAML				12 23 48.8	
	comp=Z,39nm,0.1s								
PB03	**IPOC Station P**	**3.14**	**281**	⇑*i* P			**Pn**	**12 23 09.1**	**+1.0**
PB03				*i* S			**S**	**12 23 49.9**	**-1.3**
PB03				IAML				12 23 51.8	
	comp=N,59nm,0.2s								
PB03	**IPOC Station P**	**3.14**	**281**	*i* P			**Pn**	**12 23 09.4**	**+1.3**
PB03				*i* S			**S**	**12 23 50.0**	**-1.3**
PB01	**IPOC Station P**	**3.28**	**299**	⇑*i* P			**Pn**	**12 23 10.6**	**+1.0**
PB01				*i* S			**S**	**12 23 52.6**	**-1.2**
PB01	**IPOC Station P**	**3.28**	**299**	*i* P			**Pn**	**12 23 10.9**	**+1.3**
PB01				*i* S			**S**	**12 23 53.2**	**-0.6**
PB07	**IPOC Station P**	**3.34**	**286**	⇑*i* P			**Pn**	**12 23 11.5**	**+1.1**
PB07				*i* S			**S**	**12 23 53.6**	**-1.7**
PB07	**IPOC Station P**	**3.34**	**286**	*i* P			**Pn**	**12 23 11.6**	**+1.1**
PB07				*i* S			**S**	**12 23 53.8**	**-1.5**
PB04	**IPOC Station P**	**3.46**	**275**	⇑*i* P			**Pn**	**12 23 12.9**	**+1.2**
PB04				*i* S			**S**	**12 23 56.0**	**-1.7**
PB04	**IPOC Station P**	**3.46**	**275**	*i* P			**Pn**	**12 23 12.9**	**+1.2**
PB04				*i* S			**S**	**12 23 55.9**	**-1.7**
PB04				IAML				12 24 00.1	
	comp=Z,41nm,0.1s								
PB05	**IPOC Station P**	**3.49**	**267**	⇑*i* P			**Pn**	**12 23 13.0**	**+1.0**
PB05				*i* S			**S**	**12 23 56.4**	**-1.7**
PB05	**IPOC Station P**	**3.49**	**267**	*i* P			**Pn**	**12 23 13.0**	**+1.0**
PB05				*i* S			**S**	**12 23 56.6**	**-1.4**
PB08	**IPOC Station P**	**3.59**	**314**	⇑*i* P			**Pn**	**12 23 15.2**	**+1.8**
PB08				*i* S			**S**	**12 24 00.4**	**-0.2**
GO02	**Mina Guanaco**	**3.80**	**229**	⇊*i* P			**Pn**	**12 23 17.0**	**+1.3**
GO02				*i* S			**S**	**12 24 05.0**	**+0.1**
PB10	**IPOC Station P**	**3.89**	**257**	⇑*i* P			**Pn**	**12 23 17.3**	**+0.9**
PB10				*i* S			**S**	**12 24 04.0**	**-2.1**
PB10	**IPOC Station P**	**3.89**	**257**	*i* P			**Pn**	**12 23 17.4**	**+0.9**
PB10				*i* S			**S**	**12 24 04.0**	**-2.1**
PB10				IAML				12 24 05.9	
	comp=Z,26nm,0.3s								
GO01	**Chusmiza**	**3.96**	**319**	⇑*i* P			**Pn**	**12 23 19.1**	**+1.4**
GO01				*i* S			**S**	**12 24 08.7**	**+0.2**
PB14	**IPOC Station P**	**4.13**	**241**	*i* P			**Pn**	**12 23 18.8**	**-0.7**
PB14				*i* S			**S**	**12 24 09.7**	**-2.0**
PB14				IAML				12 24 11.9	
	comp=Z,33nm,0.2s								
PB11	**IPOC Station P**	**4.19**	**313**	⇑*i* P			**Pn**	**12 23 20.4**	**+0.3**
PB11				*i* S			**S**	**12 24 10.7**	**-2.1**
MNMC	**Minye Minye**	**4.61**	**319**	⇑*i* P			**Pn**	**12 23 26.3**	**+1.0**
MNMC				*i* S			**S**	**12 24 20.7**	**-1.5**
BLY	**Banja Luka**	**101.29**	**46**	⇑*i* Pg				12 36 44.7	
BLY				*e*Sg				12 36 50.2	

*RHSSO **29** 12:41:31.5±0.4,43.28N×19.82E,h3km±2km,ML2.1/8*
BEO 29 12:41:32.1±0.3,43.28N×19.94E,h0km,ML2.0/12,2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SJES	**Sjenica**	**0.03**	**133**	*e*Pg			Pg	12 41 32.2	-0.5
SJES				*e*Sg			Sg	12 41 33.3	+0.3
IVAS	**Ivanjica**	**0.33**	**27**	*e*Pg			Pg	12 41 37.2	-1.3
IVAS				*e*Sg			Sg	12 41 42.1	-0.7
RUDO	**Rudo**	**0.54**	**309**	⇑*i* Pg			Pg	12 41 39.1	-3.3
RUDO				*e*Sg			Sg	12 41 47.0	-2.3
BBLS	**Lazići**	**0.70**	**326**	*e*Pg			Pg	12 41 44.0	-1.6
BBLS				*e*Sg			Sg	12 41 54.8	+0.1
BBLS	**Lazići**	**0.70**	**326**	*e*Pg			Pg	12 41 43.6	-2.0
BBLS				*e*Sg			Sg	12 41 53.5	-1.2
UPM	**Unac-Piva**	**0.76**	**264**	*e*Pg			Pg	12 41 43.7	-3.0
UPM				*e*Sg			Sg	12 41 53.4	-3.2
DIVS	**Divibare**	**0.82**	**2**	*e*Pg			Pg	12 41 46.6	-1.2
DIVS				*e*Sg			Sg	12 41 58.8	+0.4
DIVS	**Divibare**	**0.82**	**2**	*e*Pg			Pg	12 41 46.1	-1.7
DIVS				*e*Sg			Sg	12 41 58.0	-0.4
GRUS	**Gruza**	**0.83**	**43**	*e*Pg			Pg	12 41 47.2	-0.7
GRUS				*e*Sg			Sg	12 41 57.8	-0.9
SELS	**Selova**	**0.86**	**94**	*e*Pg			Pg	12 41 47.9	-0.7
SELS				*e*Sg			Sg	12 41 59.3	-0.5
PDG	**Podgorica**	**0.99**	**211**	*e*Pg			Pg	12 41 48.3	-2.8
PDG				*e*Sg			Sg	12 42 01.5	-2.4
TRUS	**Trudelj**	**1.00**	**19**	*e*Pg			Pg	12 41 49.9	-1.4
TRUS				*e*Sg			Sg	12 42 04.3	+0.1
HAPS	**Han Pijesak,Bl**	**1.08**	**318**	*e*Pg			Pg	12 41 49.3	-3.5
HAPS				*e*Sg			Sg	12 42 04.2	-2.6
BRY	**Bratogost**	**1.10**	**250**	*e*Pg			Pg	12 41 49.7	-3.4
BRY				*e*Sg			Sg	12 42 03.5	-3.8
DRME	**Dracevica, Mon**	**1.23**	**207**	*e*Pg			Pg	12 41 53.0	-2.6
DRME				*e*Sg			Sg	12 42 09.4	-2.2
TREB	**Trebinje**	**1.30**	**245**	*e*Pg			Pg	12 41 57.0	0.0
TREB				*e*Sg			Sg	12 42 12.0	-1.8
TREB	**Trebinje**	**1.30**	**245**	⇑*i* Pg			Pg	12 41 53.9	-3.1
TREB				*e*Sg			Sg	12 42 10.3	-3.5
TEKS	**Tekeris**	**1.30**	**347**	*e*Sg			Pg	12 41 56.7	-0.4
TEKS	**Tekeris**	**1.30**	**347**	*e*Pg			Sg	12 42 12.7	-1.2
TEKS	**Tekeris**	**1.30**	**347**	*e*Pg			Pg	12 41 55.4	-1.7
TEKS				*e*Sg			Sg	12 42 12.6	-1.3
BOVS	**Bovan**	**1.33**	**74**	*e*Pg			Pg	12 41 55.8	-1.8
BOVS				*e*Sg			Sg	12 42 14.4	-0.5
HCY	**Herceg Novi**	**1.35**	**232**	*e*Pg			Pg	12 41 53.8	-4.2
BARS	**Barje**	**1.45**	**108**	*e*Pg			Pn	12 41 59.0	-0.6
BARS	**Barje**	**1.45**	**108**	*e*Pg			Pb	12 42 02.7	+2.7
BARS				*e*Sg			Sg	12 42 18.7	+0.1
DBRK	**Dubrovnik**	**1.45**	**246**	*e*Pn			Pn	12 41 57.0	-2.7
DBRK					Sn		Sg	12 42 16.8	-1.9
STON	**Ston**	**1.69**	**257**	*i* Pn			Pn	12 42 01.4	-1.5
STON					Sn		Sn	12 42 23.5	-1.8
STON	**Ston**	**1.69**	**257**	*e*Pn			Pn	12 42 00.4	-2.5
STON				*e*Sn			Sn	12 42 22.4	-2.9
ZAGS	**Zajecar**	**1.75**	**72**	*e*Pg			Pn	12 42 03.7	0.0
ZAGS				*e*Sg			Sb	12 42 27.5	0.0
FRGS	**Fruska Gora**	**1.88**	**357**	*e*Pg			Pn	12 42 05.6	+0.1
FRGS				*e*Sg			Sb	12 42 31.5	+0.2
FRGS	**Fruska Gora**	**1.88**	**357**	*e*Pn			Pn	12 42 04.3	-1.2
FRGS				*e*Sn			Sn	12 42 28.7	-1.2
ZAPS	**Zavoj**	**1.96**	**89**	*e*Pg			Pb	12 42 08.6	-0.2
ZAPS				*e*Sg			Sb	12 42 34.3	+0.5
BOSS	**Bosilegrad**	**2.02**	**112**	*e*Pg			Pn	12 42 08.4	+0.9
BOSS				*e*Sg			Sb	12 42 34.5	-1.0
MAKA	**Makarska**	**2.13**	**271**	*e*Pn			Pn	12 42 09.3	+0.3
MAKA					Sn		Sb	12 42 37.9	-0.8

MAN 29 12:42:43.2,5.83N×124.46E,h1km,mb4.8,ML3.7,MS3.7, 2D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.55**	**62**	*e*P			Pn	12 42 58.9	+0.6
GSPH				*i* S			Sn	12 43 10.7	+2.5
SKMP	**Bagumbayan, Su**	**0.69**	**7**	*e*P			Pg	12 42 56.2	-0.2
SKMP				*e*S			Sg	12 43 06.8	+1.3
DDMP	**Don Marcelino,**	**1.27**	**78**	*e*P			Pg	12 43 06.9	-0.7
DDMP				*e*S			Sn	12 43 26.2	+0.3
KCP	**Kidapawan**	**1.33**	**28**	⇊*e*P			Pb	12 43 09.2	+0.2
CTBH	**Cotabato--PC H**	**1.40**	**351**	⇊*i* P			Pg	12 43 10.1	0.0
CTBH				*i* S			Sb	12 43 28.4	-0.1
BUKP	**Musuan**	**2.12**	**16**	*e*P			Pn	12 43 20.6	+0.8
BUKP				*e*S			Sb	12 43 48.6	-0.8

THE 29 12:42:57.5,38.37N×20.45E,h2km±28km,ML2.6/2,Error ellipse: s-maj=28.4km s-min=0.6km az=84.0,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.10**	**69**	P			Pg	12 42 59.5	+0.1
VSK1				S			Sg	12 43 00.8	0.0
ARG2	**Argostoli**	**0.20**	**170**	P			Pg	12 43 01.0	-0.3
VLS	**Valsamata**	**0.23**	**150**	P			Pg	12 43 02.2	+0.4
VLS				S			Sg	12 43 04.8	0.0
	2μm,0.3s								
EVGI	**Lefkada island**	**0.30**	**34**	P			Pg	12 43 03.2	0.0
EVGI				S			Sg	12 43 07.9	+0.8
KFL	**Anninata**	**0.38**	**134**	P			Pg	12 43 04.8	+0.1
KFL				S			Sg	12 43 10.7	+1.1
	1μm,0.4s								
LKD2	**Lefkada island**	**0.45**	**22**	P			Pg	12 43 06.4	+0.3
LKD2				S			Sg	12 43 12.0	+0.1
RLS	**Riolos of Patr**	**0.86**	**111**	P			Pg	12 43 14.0	-0.1

*IDC **29** 13:00:17.0±6.7,23.35S×178.38W,h0km,mb3.7/2, mb1 3.9/2,mb1mx3.6/28,mbtmp3.7/2,Error ellipse: s-maj=316.0km s-min=53.0km az=151.0*
ISC 29 13:01:18.0±1.9,24.3S±0.2×179.1W±0.3,h600km,n15, σ2864/15,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**5.10**	**168**	P			**P**	**13 02 48.5**	**-3.0**
URZ	**Urewera**	**14.33**	**192**	P			**P**	**13 04 22.1**	**+2.3**
KWHZ	**Kaweka Forest**	**15.60**	**193**	P			**P**	**13 04 33.9**	**+2.4**
BHHZ	**Black Hill Sta**	**15.73**	**194**	P			**P**	**13 04 34.0**	**+1.2**
MRZ	**Mangatainoka R**	**16.96**	**194**	P			**P**	**13 04 45.2**	**+1.2**
CAW	**Cannon Point**	**17.50**	**195**	P			**P**	**13 04 51.5**	**+2.6**
DUWZ	**D'Urville Isla**	**17.51**	**198**	P			**P**	**13 04 51.5**	**+2.5**
QRZ	**Quartz Range**	**17.96**	**201**	P			**P**	**13 04 56.2**	**+3.2**
NNZ	**Nelson**	**18.05**	**199**	P			**P**	**13 04 51.8**	**-2.0**
THZ

az=112.0

ISC 29 13:37:13.5±1.2,6°29S±0.°10×147°9E±0.°3,h51km,n11, σ1§24/12,mb3.5/7,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.17**	**193**	P		**Pn**	**13 38 02.3**	**+1.4**
	11nm,0.3s,baz=356,slow=7.9,SNR=35							
PMG				S		**Sn**	**13 38 38.5**	**+0.9**
	11nm,0.3s,baz=11,slow=16,SNR=4.2							
PMG				LR		LR	13 39 23.2	
	comp=Z,93nm,18.9s,baz=186,slow=42							
JAY	**Jayapura**	**8.08**	**297**	LR		LR	13 43 22.6	
	comp=Z,39nm,19.6s,baz=202,slow=44							
WRA	**Warramunga Arr**	**18.90**	**223**	P		**P**	**13 41 29.0**	**-1.1**
	0.3nm,0.3s,baz=53,slow=10,SNR=9.0							
ASAR	**Alice Springs**	**21.89**	**216**	P		**P**	**13 42 02.1**	**-0.3**
	2.1nm,0.7s,baz=54,slow=8.9,SNR=38							
ASAR				S		**S**	**13 46 00.2**	**-1.4**
	0.4nm,0.7s,baz=48,slow=14,SNR=4.5							
FITZ	**Fitzroy Crossi**	**24.67**	**240**	P		**P**	**13 42 29.5**	**-0.2**
	4.5nm,0.9s,baz=55,slow=9.8,SNR=5.0							
STKA	**Stephens Creek**	**26.12**	**192**	P		**P**	**13 42 41.0**	**-1.9**
	2.4nm,0.7s,baz=8.7,slow=10.0,SNR=7.0							
SONM	**Songino Array**	**65.09**	**331**	P		**P**	**13 47 50.7**	**+1.8**
	0.2nm,0.6s,baz=159,slow=4.5,SNR=2.8							
MKAR	**Makanchi Array**	**78.28**	**320**	P		**P**	**13 49 07.9**	**-0.3**
	0.2nm,0.6s,baz=118,slow=8.3,SNR=3.0							
KURBB	**Kurchatov Arra**	**81.99**	**323**	P		**P**	**13 49 27.7**	**-0.3**
	0.2nm,0.7s,baz=111,slow=5.1,SNR=3.5							
ILAR	**Eielson Array**	**85.41**	**23**	P		**P**	**13 49 44.2**	**-1.0**
	0.3nm,0.9s,baz=226,slow=5.7,SNR=3.8							
TORD	**Torodi Ar. Bea**	**146.02**	**284**	PKPbc		**PKPbc**	**13 56 49.2**	**+0.4**
	2.3nm,0.7s,baz=75,slow=4.3,SNR=12							

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*MOS **29** 13:46:47.6±0.9,23°.82N×94°.07E,h49km,mb5.3/74, MS4.3/7,Error ellipse: s-maj=6.4km s-min=3.9km az=120.1*

*BJI **29** 13:46:47.9±0.0,23°.80N×93°.90E,h62km,mB5.1/50, mb4.8/64,ML5.1/3,Ms4.6/70,Ms7 4.3/59*

*NEIC **29** 13:46:50.3±1.4,23°.84N±0°.05×93°.96E±0°.06,h59km±4km, mb5.1/180,Error ellipse: s-maj=8.3km s-min=7.3km az=68.0*

*IDC **29** 13:46:50.3±0.5,23°.73N×94°.02E,h58km±4km,mb4.4/37, mb1 4.5/38,mb1mx4.5/46,mbtmp4.7/38,MS4.0/29, Ms1 4.0/29,ms1mx3.9/41,Error ellipse: s-maj=7.9km s-min=7.0km az=163.0*

*NDI **29** 13:46:54.3±4.1,24°.21N×93°.50E,h74km±23km,mb5.0, ML4.8,mb5.1(NEIC)*

*GCMT **29** 13:46:54.3±0.2,23°.71N±0°.01×94°.08E±0°.01,h54km±1km, MW5.1/103,Moment Tensor Solution. s54,c66; s103,c152; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.18; $M_{\theta\theta}$-2.87±.14; $M_{\phi\phi}$3.16±.13; $M_{r\theta}$0.68±.13; $M_{\theta\phi}$3.22±.13; $M_{\phi r}$-2.47±.11; Best double couple: M_o5.09400×10^{16} NP1:ϕ_s249.00000°,δ60.00000°, λ0.00000°. NP2:ϕ_s339.00000°,δ90.00000°,λ-150.00000°. Principal axes: T 5.3040, Plg20.0000°, Azm110.0000°; N -0.4290, Plg60.0000°, Azm340.0000°; P -4.8830, Plg21.0000°, Azm208.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*BGR **29** 13:46:55.4±0.0,24°.00N×93°.90E,h55km,mb5.0,Ms4.2*

*BKK **29** 13:47:06.1±0.0,23°.N±40°×9°5E±3°8,h0km,M5.3/11, mb5.4/11,mB5.5/9,MLv5.6/6,Mw(mB)5.0/9*

ISC 29 13:46:50.2±0.3,23°.82N±0°.03×93°.91E±0°.03,h59km±2km, h59km:pP-P,n631,σ1§91/825,mb5.0/207,MS4.0/40, 12C-16D,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**1.90**	**5**	*e*P		**Pn**	**13 47 20.8**	**+0.4**
KOHI				*ex*		x	13 47 34.9	
KOHI				*ex*		**Sn**	**13 47 38.6**	**-4.7**
KOHI				IAML			13 47 46.0	
	comp=N,9μm,0.6s							
BELO	**BELONIA**	**2.33**	**256**	*e*P		**Pn**	**13 47 27.2**	**+1.1**
BELO				*ex*		**Sn**	**13 47 55.8**	**+2.1**
BRDH	**Bariadhala**	**2.38**	**242**	P		**Pn**	**13 47 28.5**	**+1.7**
	comp=N,1.6nm,0.3s,baz=360,slow=24,SNR=40							
BRDH				S		**Sn**	**13 47 55.7**	**+0.9**
	comp=N,34nm,0.3s,baz=360,slow=24,SNR=18							
SHL	**Shillong**	**2.53**	**314**	P		**Pn**	**13 47 28.5**	**-0.6**
SHL				S		**Sn**	**13 47 58.1**	**-0.8**
SHL	**Shillong**	**2.53**	**314**	*e*P		**Pn**	**13 47 28.6**	**-0.6**
SHL				*ex*		**Sn**	**13 47 56.4**	**-2.5**
SHL				IAML			13 47 58.4	
	comp=E,4μm,0.2s							
SHL				IAML			13 47 59.6	
	comp=N,25μm,0.9s							
SHL	**Shillong**	**2.53**	**314**			**Pn**	**13 47 28.3**	**-0.8**
JORH	**JORHAT**	**2.92**	**6**	*e*P		**Pn**	**13 47 35.1**	**+0.9**
JORH				*e*S		**Sn**	**13 48 04.3**	**-3.8**
JORH				*e*S		**Sn**	**13 48 15.6**	**+7.5**
TEZP	**TEZPUR**	**2.96**	**340**	*e*P		**Pn**	**13 47 33.1**	**-1.6**
TEZP				*e*S		**Sn**	**13 48 01.4**	**-7.6**
ZIRO	**ZIRO**	**3.69**	**359**	*e*P		**Pn**	**13 47 44.1**	**-0.8**
ZIRO				*e*S		**Sn**	**13 48 20.4**	**-6.8**
ZIRO				IAML			13 48 25.0	
	comp=N,7μm,0.6s							
ZIRO				IAML			13 48 34.1	
	comp=E,16μm,0.8s							
SIMRM	**Sittwe**	**3.79**	**195**			**Pn**	**13 47 46.9**	**+0.8**
SIMRM				Sn		**Sn**	**13 48 31.8**	**+2.2**
LKP	**Lekhapani**	**3.91**	**26**	*e*P		**Pn**	**13 47 48.4**	**+0.7**
GTK	**Tadong**	**5.92**	**307**	*e*P		**Pn**	**13 48 12.3**	**-3.1**
GTK				*ex*		**Sn**	**13 49 19.6**	**-2.6**
GTK				IAML			13 49 25.1	
	comp=E,949nm,0.1s							
GTK				IAML			13 49 25.6	
	comp=N,926nm,0.4s							
LSA	**Lhasa**	**6.35**	**338**	P		**Pn**	**13 48 23.3**	**+1.7**
LSA				pmax		pmax		
	comp=N,180nm,0.5s							
LSA	**Lhasa**	**6.35**	**338**	P		**Pn**	**13 48 22.8**	**+1.2**
LSA	**Lhasa**	**6.35**	**338**			**Pn**	**13 48 22.8**	**+1.2**
TAPN	**Taplejung**	**6.61**	**303**	*e*Pn		**Pn**	**13 48 24.3**	**-0.7**
ODAN	**Odare**	**6.63**	**298**	*e*Pn		**Pn**	**13 48 24.5**	**-0.7**
MHMT	**Maesarieng**	**6.76**	**146**	P		**Pn**	**13 48 28.2**	**+1.5**
CHTO	**Chiang Mai**	**6.84**	**136**	P		**Pn**	**13 48 28.6**	**+0.6**
CHTO	**Chiang Mai**	**6.84**	**136**			**Pn**	**13 48 28.6**	**+0.6**
CMMT	**Chiang Mai**	**6.85**	**136**	P		**Pn**	**13 48 29.4**	**+1.3**
CM31	**Chiang Mai Arr**	**7.11**	**138**			**Pn**	**13 48 32.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**7.11**	**138**	*i* P		**Pn**	**13 48 32.7**	**+1.1**
CMAR				pmax		pmax		
	comp=Z,79nm,0.7s							
CMAR	**Chiang Mai Arr**	**7.11**	**138**	P		**Pn**	**13 48 31.8**	**+0.2**
	comp=Z,5.8nm,0.3s,baz=314,slow=13,SNR=235							
CMAR				S		**Sn**	**13 49 51.4**	**+0.3**
	baz=321,slow=17,SNR=2.6							
CMAR				ScP		**ScP**	**13 58 43.2**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=281,slow=2.0,SNR=11							
RAMN	**Ramite**	**7.31**	**297**	*e*Pn		**Pn**	**13 48 33.4**	**-1.1**
BOK	**Bokaro**	**7.35**	**271**	⇑ *i*P		**Pn**	**13 48 34.9**	**0.0**
BOK				IAmb		IAmb	13 48 35.7	
	comp=Z,560nm,0.7s							
BOK				*i* pP			13 48 46.8	
BOK				*ex*		**Sn**	**13 49 52.2**	**-4.8**
LAMP	**Lampang**	**7.50**	**134**	P		**Pn**	**13 48 38.7**	**+1.7**
PHRA	**Phrae**	**7.92**	**131**	P		**Pn**	**13 48 44.3**	**+1.5**
JIRN	**Jiri**	**7.94**	**300**	*e*Pn		**Pn**	**13 48 42.1**	**-1.2**
NANT	**Nan**	**8.06**	**127**	P		**Pn**	**13 48 44.8**	**+0.1**
KMI	**Kunming**	**8.15**	**79**	P		**Pn**	**13 48 50.5**	**+4.5**
KMI				sP			13 49 03.3	
KMI				S		**Sn**	**13 50 25.3**	**+8.5**
KMI				pmax		pmax		
	comp=Z,2μm,3.1s							
KMI				LR		LR		
	comp=Z,2μm,13.1s							
KMI				LR		LR		
	comp=Z,3μm,11.2s							
KMI				LR		LR		
	comp=Z,3μm,10.4s							
KMI	**Kunming**	**8.15**	**79**	P		**Pn**	**13 48 50.2**	**+4.2**
KMI	**Kunming**	**8.15**	**79**			**Pn**	**13 48 50.2**	**+4.2**
GUN	**Gumba**	**8.30**	**301**	*e*Pn		**Pn**	**13 48 46.9**	**-1.3**
GUN				*e*Sn		**Sn**	**13 50 15.8**	**-4.9**
	comp=Z,2μm,0.6s							
PKI	**Pulchoki**	**8.53**	**298**	*e*Pn		**Pn**	**13 48 49.8**	**-1.5**
PKI				*e*Sn		**Sn**	**13 50 21.6**	**-4.7**
	comp=Z,684nm,0.4s							
PKIN	**Phulchoki**	**8.54**	**298**	*e*Pn		**Pn**	**13 48 49.7**	**-1.7**
PKIN				*e*Sn		**Sn**	**13 50 21.6**	**-4.9**
	comp=Z,513nm,0.4s							
KKN	**Kakani**	**8.72**	**299**	*e*Pn		**Pn**	**13 48 52.0**	**-1.9**
DMN	**Daman**	**8.79**	**297**	*e*Pn		**Pn**	**13 48 52.8**	**-2.0**
GKN	**Gorkha**	**9.33**	**298**	*e*Pn		**Pn**	**13 49 00.3**	**-1.8**
GKN				*e*Sn		**Sn**	**13 50 39.7**	**-5.9**
	comp=Z,1μm,0.5s							
SLVN	**Son La**	**9.56**	**103**			**Pn**	**13 49 06.4**	**+1.2**
PBKT	**Sadao Pong**	**9.79**	**136**			**Pn**	**13 49 09.5**	**+1.1**
PBKT	**Sadao Pong**	**9.79**	**136**	P		**Pn**	**13 49 10.8**	**+2.5**
KOLN	**Koldanda**	**10.09**	**295**	*e*Pn		**Pn**	**13 49 10.1**	**-2.4**
KOLN				*e*Sn		**Sn**	**13 50 57.2**	**-7.1**
	comp=Z,452nm,0.3s							
DANN	**Dangsing**	**10.18**	**298**	*e*Pn		**Pn**	**13 49 11.3**	**-2.5**
DANN				*e*Sn		**Sn**	**13 51 00.3**	**-6.3**
NONG	**Nongkai**	**10.36**	**122**	P		**Pn**	**13 49 19.7**	**+3.6**
CHLP	**Challavanipeta**	**10.61**	**242**	*e*P		**Pn**	**13 49 17.4**	**-2.0**
CHLP				*e*			13 51 05.0	
DGPR	**DIGLIPUR**	**10.63**	**185**	⇑ *i*x		**Pn**	**13 49 19.1**	**-0.7**
DGPR				IAmb		IAmb	13 49 20.6	
	comp=Z,228nm,0.9s							
SRDT	**SRDT**	**10.63**	**152**	P		**Pn**	**13 49 21.2**	**+1.4**
CHAI	**Chaiyaphum**	**10.94**	**135**	P		**Pn**	**13 49 27.5**	**+3.4**
CD2	**Chengdu**	**11.24**	**49**	P		**Pn**	**13 49 28.0**	**-0.1**
CD2				sP			13 49 47.8	
CD2				S		**Sn**	**13 51 34.3**	**+2.1**
CD2				SS		**SnSn**	**13 51 50.8**	**+6.0**
CD2				pmax		pmax		
	comp=Z,20nm,0.7s							
CD2				pmax		pmax		
	comp=Z,300nm,5.3s							
CD2				LR		LR		
	comp=Z,3μm,13.2s							
CD2				LR		LR		
	comp=Z,3μm,12.3s							
CD2				LR		LR		
	comp=Z,2μm,12.7s							
SKNT	**Sakolnakorn**	**11.64**	**124**	P		**Pn**	**13 49 37.5**	**+3.9**
GYA	**Guiyang**	**11.85**	**75**	P		Pn	13 49 48.8	+12
GYA				sP			13 50 06.8	
GYA				S		Sn	13 51 59.8	+13
GYA				SS		**SnSn**	**13 52 05.3**	**+5.7**
GYA				pmax		pmax		
	comp=Z,20nm,0.7s							
GYA				pmax		pmax		
	comp=Z,120nm,4.9s							
GYA				LR		LR		
	comp=N,250nm,11.8s							
GYA				LR		LR		
	comp=E,530nm,11.4s							
GYA				LR		LR		
	comp=Z,730nm,12.0s							
PHET	**Kaeng Krachan**	**12.13**	**152**	P		**Pn**	**13 49 42.5**	**+2.2**
PBA	**Port Blair**	**12.15**	**185**	Pn		Pn	13 49 40.0	-0.6
SRAK	**Srakaew**	**12.42**	**140**	P		**P**	**13 49 53.1**	**-1.2**
PATY	**Pattaya**	**12.69**	**147**	P		**P**	**13 49 53.3**	**-4.0**
JBP	**Jabalpur**	**12.80**	**270**	*e*P		**Pn**	**13 49 50.6**	**+1.2**
JBP				*ex*		**Sn**	**13 52 04.4**	**-5.9**
PVM	**Polavaram**	**13.23**	**243**	*e*P		**Pn**	**13 49 53.9**	**-1.4**
PVM				*e*			13 52 08.8	
PVM				*e*S		**Sn**	**13 52 22.4**	**+1.5**
UBPT	**Khong Chiam**	**13.81**	**126**			**Pn**	**13 50 03.3**	**+0.2**
NGP	**Nagpur**	**13.99**	**262**	*e*P		**Pn**	**13 50 03.3**	**-2.3**
NGP				*ex*		Sn	13 52 28.4	-11
GGR	**Gangavaram**	**14.14**	**248**	*e*P		**Pn**	**13 50 05.2**	**-2.4**
GGR				*e*			13 52 31.4	
GGR				*e*S		**Sn**	**13 52 45.6**	**+2.6**
MYLAV	**Mylavaram**	**14.30**	**243**	*e*P		**Pn**	**13 50 08.1**	**-1.6**
MYLAV				*e*S		**Sn**	**13 52 45.8**	**-1.0**
RPR	**Rampur**	**14.48**	**253**	*e*P		**Pn**	**13 50 10.7**	**-1.4**
RPR				*e*			13 52 41.9	
LZH	**Lanzhou**	**14.94**	**33**	⇑P		**P**	**13 50 22.5**	**+0.2**
LZH				pP		Pn	13 50 30.0	+12
LZH				sP			13 50 35.3	
LZH				S		**Sn**	**13 53 05.5**	**+3.1**
LZH				sS		S	13 53 15.8	-1.5
LZH				SS		**SnSn**	**13 53 20.5**	**+4.6**
LZH				pmax		pmax		
	comp=Z,96nm,1.1s							
LZH				pmax		pmax		
	comp=Z,240nm,5.4s							
LZH				LR		LR		
	comp=Z,780nm,12.5s							
LZH				LR		LR		
	comp=Z,2μm,13.0s							
LZH				LR		LR		
	comp=Z,870nm,11.4s							
BHPL	**Bhopal**	**15.13**	**271**	*e*P		**Pn**	**13 50 18.0**	**-2.5**
BHPL				IAmb		IAmb	13 50 19.2	
	comp=Z,59nm,0.5s							
BHPL				*i* x		x	13 50 31.7	
BHPL				*ex*		Sn	13 52 55.9	-11
ENH	**Enshi**	**15.28**	**62**			**Pn**	**13 50 20.7**	**-1.7**
SRSP	**Sriramsagar**	**15.29**	**254**	*e*P		**Pn**	**13 50 19.0**	**-3.6**
SRSP				*e*			13 52 56.2	
ADKI	**Addanki**	**15.32**	**241**	*e*P		**Pn**	**13 50 21.0**	**-1.9**
ADKI				*e*			13 52 59.4	
ADKI				*e*S		**Sn**	**13 53 11.1**	**-0.6**
NJS	**Nagarjunasagar**	**15.49**	**245**	*e*P		**Pn**	**13 50 24.9**	**-0.3**
NJS				*e*			13 53 01.1	
DDI	**Dehra Dun**	**15.53**	**298**	*e*S		**Sn**	**13 53 06.8**	**-10**
QIZ	**Qiongzhong**	**15.58**	**105**	P		**P**	**13 50 30.0**	**+0.6**
QIZ				S		**Sn**	**13 53 17.3**	**-0.6**
QIZ				pmax		pmax		
	comp=Z,80nm,1.0s							
QIZ				LR		LR		
	comp=Z,1μm,8.9s							
QIZ				LR		LR		
	comp=Z,1μm,11.9s							
QIZ				LR		LR		
	comp=Z,1μm,10.8s							
QIZ	**Qiongzhong**	**15.58**	**105**	P		**P**	**13 50 28.7**	**-0.7**
HYB	**Hyderabad**	**15.72**	**249**	*i* P		**Pn**	**13 50 25.0**	**-3.1**
	comp=Z,200nm,1.0s							
HYB				*e*			13 53 05.0	
HYB				*e*S		**Sn**	**13 53 18.0**	**-3.4**
HYB	**Hyderabad**	**15.72**	**249**	*e*P		**Pn**	**13 50 28.8**	**+0.8**
HYB				*i* x		x	13 50 32.8	
HYB				*ex*		x	13 53 07.9	
HYBB	**Hyderabad (bro**	**15.72**	**249**	*e*P		**Pn**	**13 50 28.6**	**+0.6**
HYBB				*e*			13 50 31.5	
HYBB				*e*			13 53 06.4	
HYBB				*e*S		**Sn**	**13 53 20.4**	**-1.0**
NDI	**New Delhi**	**15.74**	**291**	*e*P		**Pn**	**13 50 23.0**	**-5.2**
NDI				*ex*		x	13 53 00.0	
SRLM	**Srisailam**	**16.07**	**244**	*e*P		**Pn**	**13 50 31.1**	**-1.4**
SRLM				*e*			13 53 15.6	
GTA	**Gaotai**	**16.33**	**16**	⇑P		**Pn**	**13 50 34.5**	**-1.2**
GTA				pP		pP	13 50 45.0	-5.6
GTA				PP		**PnPn**	**13 50 51.5**	**+5.5**
GTA				sP		sP	13 50 54.0	-4.2
GTA				S		**Sn**	**13 53 34.8**	**-1.2**
GTA				sS		S	13 53 51.3	+5.6
GTA				ScP		**ScP**	**13 58 55.8**	**+0.1**
GTA				ScS		**ScS**	**14 02 33.3**	**-1.5**
GTA				pmax		pmax		
	comp=Z,54nm,4.9s							
GTA				LR		LR		
	comp=Z,430nm,14.9s							
GTA				LR		LR		
	comp=Z,1μm,16.8s							
SMLA	**Simla**	**16.54**	**300**	*e*P		**Pn**	**13 50 34.4**	**-3.8**
SMLA				*ex*		x	13 53 20.0	
XAN	**Xi'an**	**16.60**	**49**	P		**Pn**	**13 50 38.5**	**-0.6**
XAN				S		**Sn**	**13 53 43.8**	**+1.2**
XAN				pmax		pmax		
	comp=Z,75nm,1.1s							
XAN				pmax		pmax		
	comp=Z,230nm,4.9s							
XAN				LR		LR		
	comp=Z,930nm,12.8s							
XAN				LR		LR		
	comp=Z,670nm,12.9s							
XAN				LR		LR		
	comp=Z,780nm,13.7s							
XAN	**Xi'an**	**16.60**	**49**	P		**Pn**	**13 50 37.0**	**-2.1**
XAN				pmax		pmax		
	comp=Z,77nm,1.4s							
XAN	**Xi'an**	**16.60**	**49**			**Pn**	**13 50 37.0**	**-2.1**
SKHT	**Srikalahasti**	**16.76**	**236**	*e*P		**Pn**	**13 50 40.8**	**-0.3**
SKHT				*e*			13 53 28.2	
KLRI	**Killari**	**17.15**	**254**	*e*P		**Pn**	**13 50 44.2**	**-1.7**
KLRI				*e*			13 53 41.6	
KLRI				*e*S		**Sn**	**13 53 56.4**	**+0.4**
DHRM	**DHARAMSHALA**	**17.65**	**302**	*e*P		**Pn**	**13 50 48.4**	**-3.9**
DHRM				IAmb		IAmb	13 50 51.0	
	comp=Z,52nm,1.1s							
DHRM				*i* pP		**pP**	**13 51 02.3**	**-3.2**
URV	**Uravakonda**	**18.01**	**244**	*e*P		**P**	**13 50 54.9**	**-1.4**
URV				*e*			13 53 56.2	
DLV	**T Lat**	**18.20**	**128**	P		**P**	**13 50 56.2**	**-2.4**
HKPS	**Hong Kong Po S**	**18.68**	**91**	P		**P**	**13 51 02.4**	**-1.3**
LHMI	**Lhok Sumawe**	**18.72**	**171**	P		**P**	**13 51 04.2**	**+0.1**
	comp=Z,253nm,1.2s							
LHMI	**Lhok Sumawe**	**18.72**	**171**	P		**P**	**13 51 03.8**	**-0.3**
WHN	**Wuhan**	**19.36**	**65**	⇑P		**P**	**13 51 10.0**	**-1.0**
WHN				pP		**pP**	**13 51 25.8**	**+1.9**
WHN				S		**S**	**13 54 42.3**	**-4.7**
WHN				LR		LR		
	comp=Z,3μm,16.4s							
WHN				LR		LR		
	comp=Z,1μm,9.1s							
WHN				LR		LR		
	comp=Z,2μm,20.3s							
POO	**Poona**	**19.43**	**258**	⇓ *i*P		**P**	**13 51 12.0**	**+0.1**
	comp=Z,70nm,1.2s							
POO				*e*P		**Pn**	**13 51 14.0**	**+0.5**
POO				*e*PP		**PnPn**	**13 51 29.0**	**+0.5**
POO				*e*PPP		PPP	13 51 38.0	
POO				*i* S		**S**	**13 54 44.5**	**-4.2**
KULM	**Kulim**	**19.54**	**160**	P		**P**	**13 51 13.7**	**+0.7**
KULM	**Kulim**	**19.54**	**160**	P		**Pn**	**13 51 19.0**	**+4.2**
MLSI	**Meulaboh, Aceh**	**19.59**	**173**	P		**P**	**13 51 13.0**	**-0.6**
	comp=Z,3μmcomp=Z,284nm,0.9s							
SARP	**Sargodha**	**20.41**	**298**	P		**P**	**13 51 22.2**	**-0.3**
IPM	**Ipoh**	**20.42**	**159**	P		**P**	**13 51 21.9**	**-0.7**
IPM				IAmb		IAmb	13 51 22.6	
	comp=Z,82nm,0.7s							
IPM	**Ipoh**	**20.42**	**159**	P		Pn	13 51 27.0	+1.8
CHCP	**Chirah Chowk**	**20.55**	**303**	P		**P**	**13 51 25.1**	**+1.1**
NIL	**Nilore**	**20.56**	**303**	P		**P**	**13 51 24.4**	**+0.3**
NIL				pmax		pmax		
	comp=Z,231nm,1.0s							
NIL	**Nilore**	**20.56**	**303**	P		**P**	**13 51 24.4**	**+0.3**
WMQ	**Urumqi**	**20.59**	**347**	*e*P		Pn	13 51 26.0	-1.1
WMQ				pP		sP	13 51 42.0	-3.1
WMQ				sP		pP	13 51 46.3	+8.8
WMQ				sS		sS	13 55 26.0	-7.2
WMQ				SS		**SnSn**	**13 55 36.8**	**+2.3**
WMQ				pmax		pmax		
	comp=Z,45nm,1.3s							
WMQ				pmax		pmax		
	comp=Z,140nm,3.8s							
WMQ				LR		LR		
	comp=Z,120nm,16.1s							
WMQ				LR		LR		
	comp=Z,470nm,16.1s							
WMQ	**Urumqi**	**20.59**	**347**	P		**P**	**13 51 24.1**	**-0.3**
WMQ				pmax		pmax		
	comp=Z,91nm,1.0s							
WMQ	**Urumqi**	**20.59**	**347**	P		**P**	**13 51 24.1**	**-0.3**
WMQ				IAmb		IAmb	13 51 42.7	
	comp=Z,91nm,1.0s							
GOA	**Goa**	**20.64**	**250**	*e*P		Pn	13 51 26.8	-1.0
GOA				IAmb		IAmb	13 51 28.2	
	comp=Z,96nm,0.9s							
TPTI		**20.68**	**171**	P		**P**	**13 51 22.9**	**-2.6**
	comp=Z,232nmcomp=Z,14nm,0.7s							
PALK	**Pallekele**	**20.77**	**220**	P		**P**	**13 51 27.2**	**+0.7**
PALK				pmax		pmax		
	comp=Z,107nm,0.9s							
PALK	**Pallekele**	**20.77**	**220**	P		**P**	**13 51 27.2**	**+0.7**
PALK				IAmb		IAmb	13 51 29.4	
	comp=Z,107nm,0.9s							
TIY	**Taiyuan**	**21.04**	**45**	*e*P		**P**	**13 51 29.0**	**-0.3**
TIY				pP		**pP**	**13 51 40.3**	**-2.0**
TIY				sP		**sP**	**13 51 52.3**	**+2.6**
TIY				S		**S**	**13 55 18.5**	**-1.9**
TIY				sS		**sS**	**13 55 36.3**	**-6.0**
TIY				SS		Sn	13 55 52.5	+23
TIY				pmax		pmax		
	comp=Z,130nm,5.5s							
TIY				LR		LR		
	comp=Z,230nm,8.3s							
TIY				LR		LR		
	comp=Z,390nm,6.3s							
TIY				LR		LR		
	comp=Z,290nm,9.0s							
SNSI	**Sinabang, Aceh**	**21.42**	**173**	P		**P**	**13 51 31.3**	**-2.0**
	comp=Z,4μmcomp=Z,457nm,0.9s							
THW	**Thamme Wali**	**21.43**	**300**	P		**P**	**13 51 34.4**	**+0.9**
PSI	**Prapat**	**21.45**	**166**	P		**P**	**13 51 34.5**	**+0.6**
	comp=Z,16nm,0.7s,baz=340,slow=5.6,SNR=12							
PSI				ScP		**ScP**	**13 59 07.7**	**+0.3**
	comp=Z,10nm,0.8s,baz=315,slow=2.7,SNR=6.4							
PSI				LR		LR	14 01 47.2	
	comp=Z,156nm,21.0s,baz=330,slow=42							
BTO	**Baotou**	**21.52**	**35**	*e*P		**P**	**13 51 32.3**	**-2.1**
BTO				S		**S**	**13 55 20.8**	**-9.1**
RPSI	**Rantau Prapat**	**21.56**	**166**	P		**P**	**13 51 34.3**	**-0.6**
RPSI				IAmb		IAmb	13 51 41.1	
	comp=Z,67nm,0.9s							
RPSI	**Rantau Prapat**	**21.56**	**166**	P		**P**	**13 51 34.5**	**-0.3**
RPSI						**ScP**	**13 59 07.7**	**+0.2**
CEP	**Cherat**	**21.66**	**302**	P		**P**	**13 51 36.0**	**0.0**
KSH	**Kashi**	**21.80**	**320**	P		**P**	**13 51 40.8**	**+3.4**
KSH				pP		pP	13 51 52.3	+1.6
KSH				PP		**sP**	**13 52 05.5**	**+7.3**
KSH				S		**S**	**13 55 32.8**	**-2.5**
KSH				pmax		pmax		
	comp=Z,21nm,0.4s							
KSH				LR		LR		
	comp=Z,500nm,5.6s							
KSH				LR		LR		
	comp=Z,950nm,8.1s							
KSH				LR		LR		
	comp=Z,1μm,8.0s							
KNMB	**

ZHN comp=Z,26nm,1.8s *e*PP **sP** 13 52 18.1 +5.7
KPKS Kokpek 23.27 331 *e*P **P** 13 51 53.6 +0.9
comp=Z,28nm,1.5s
KPKS *e*pP **pP** 13 52 07.3 +0.9
KPKS *e*PP **sP** 13 52 20.0 +6.1
KPKS *e*S **S** 13 55 53.7 -6.8
comp=Z,58nm,4.1s
NJ2 Nanjing 23.47 64 *e*P **P** 13 51 53.0 -1.6
NJ2 pP **pP** 13 52 07.0 -1.4
NJ2 sP **sP** 13 52 12.8 -2.8
NJ2 S **S** 13 56 06.0 +2.2
NJ2 sS Sn 13 56 26.5 -1.1
NJ2 pmax pmax
comp=Z,34nm,1.1s
NJ2 pmax pmax
comp=Z,130nm,4.6s
NJ2 LR LR
comp=Z,1μm,22.4s
NJ2 LR LR
comp=Z,860nm,22.4s
NJ2 LR LR
comp=Z,720nm,25.0s
ULHL Ulahol 23.52 326 P **P** 13 51 57.5 +2.3
SNR=27
TIA Tai'an 23.52 53 P **P** 13 51 59.5 +4.4
TIA pmax pmax
comp=Z,78nm,0.9s
TIA Tai'an 23.52 53 P **P** 13 51 53.8 -1.3
TIA pmax pmax
comp=Z,21nm,1.1s
TNSS Tian-Shan 23.74 328 *e*P **P** 13 51 58.9 +1.4
MDOK Medeo 23.79 328 *e*P **P** 13 51 59.3 +1.7
comp=Z,694nm,1.7s
MDOK *e*pP **pP** 13 52 13.9 +1.9
MDOK *e*S **S** 13 56 17.8 +8.7
BOOM Boomskoye usch 23.85 326 P **P** 13 51 58.9 +0.7
BOOM pmax pmax
comp=Z,63nm,1.0s
BOOM Boomskoye usch 23.85 326 P **P** 13 51 58.9 +0.7
BOOM IAmb IAmb 13 52 17.2
comp=Z,63nm,1.0s
AAA Alma-Ata 23.89 328 *e*P **P** 13 52 01.6 +3.2
AAA *e*S **S** 13 56 18.6 +8.1
AAA pmax pmax
comp=Z,800nm,2.6s
AAA smax smax
comp=E,500nm,4.0s
AAA Alma-Ata 23.89 328 *e*P **P** 13 51 59.6 +1.2
comp=E,57nm,1.3s
AAA *e*S S 13 56 21.4 +11
MYKOM Kota Tinggi 23.92 155 P **P** 13 51 59.2 +0.4
MYKOM Kota Tinggi 23.92 155 P **P** 13 52 01.0 +2.1
PBSI Pulau Batu 24.11 169 P **P** 13 51 55.9 -4.6
comp=E,2μmcomp=E,99nm,0.6s
KBL Kabul 24.14 302 P **P** 13 52 01.9 +0.9
KBL pmax pmax
comp=Z,44nm,0.9s
KBL Kabul 24.14 302 P **P** 13 52 01.9 +0.9
KBL IAmb IAmb 13 52 14.2
comp=Z,44nm,0.9s
CHKK Chushkaly 24.34 329 *e*P **P** 13 52 03.5 +1.1
BKNI Bangkinang 24.36 162 P **P** 13 52 02.2 -0.6
comp=Z,111nm,1.1s
BKNI Bangkinang 24.36 162 P **P** 13 52 02.7 -0.1
UCH Uchtor 24.42 323 P **P** 13 52 05.8 +2.1
SNR=12
KBK Karagaybulak 24.48 325 P **P** 13 52 06.4 +2.4
SNR=14
TPUB Ta-pu 24.49 86 P **P** 13 52 03.5 -0.5
ZSN Zaisan 24.66 345 *e*P **P** 13 52 07.5 +2.1
comp=Z,17nm,1.5s
ZSN *e*S **S** 13 56 30.7 +7.9
KUU Kurty 24.68 328 *e*P **P** 13 52 07.4 +1.8
comp=Z,57nm,1.8s
KUU *e*pP **pP** 13 52 21.0 +0.7
KUU *e*PP **PnPn** 13 52 37.9 -2.1
KUU *e*S **S** 13 56 25.5 +2.4
AAK Ala-Archa 24.71 324 *de*P **P** 13 52 08.5 +2.4
AAK pmax pmax
comp=Z,18nm,1.0s
AAK Ala-Archa 24.71 324 P **P** 13 52 08.6 +2.6
comp=Z,17nm,0.9s,baz=125,slow=6.3,SNR=36
AAK ScP **ScP** 13 59 15.8 +0.1
comp=Z,3.5nm,1.0s,baz=56,slow=7.3,SNR=4.0
AAK LR LR 14 03 31.7
comp=Z,282nm,21.2s,baz=112,slow=40
AAK Ala-Archa 24.71 324 P **P** 13 52 08.4 +2.3
SNR=21
AAK Ala-Archa 24.71 324 P **P** 13 52 08.0 +1.9
SSLB Suanglung 24.73 85 P **P** 13 52 05.4 -0.9
ANR Andizhan 24.73 318 P **P** 13 52 07.3 +1.2
BJT Baijiatuan 24.75 44 P **P** 13 52 05.6 -0.6
BJT pmax pmax
comp=Z,14nm,1.1s
BJT Baijiatuan 24.75 44 P **P** 13 52 05.6 -0.6
MK31 Makanchi Array 24.75 341 P **P** 13 52 07.7 +1.6
MK31 pmax pmax
comp=Z,28nm,0.8s
MK31 Makanchi Array 24.75 341 P **P** 13 52 07.7 +1.6
MKAR Makanchi Array 24.75 341 P **P** 13 52 07.8 +1.6
comp=Z,18nm,0.7s,baz=148,slow=9.5,SNR=229
MKAR ScP **ScP** 13 59 16.2 +0.7
comp=Z,2.3nm,0.9s,baz=163,slow=5.1,SNR=5.3
MKAR Makanchi Array 24.75 341 P **P** 13 52 07.6 +1.5
FRU1 Bishkek 24.76 325 P **P** 13 52 07.1 +0.7
FRU1 pmax pmax
comp=Z,48nm,0.9s
FRU1 Bishkek 24.76 325 P **P** 13 52 07.1 +0.7
FRU1 IAmb IAmb 13 52 26.1
comp=Z,48nm,0.9s
AML Almayashu 24.81 322 P **P** 13 52 09.5 +2.3
SNR=17
CHMS Chumysh 24.83 325 P **P** 13 52 08.6 +1.7
SNR=6.8
MAKZ Makanchi 24.86 340 P **P** 13 52 08.3 +1.1
MAKZ pmax pmax
comp=Z,30nm,1.0s
MAKZ Makanchi 24.86 340 P **P** 13 52 08.3 +1.1
TWG Pinlang 24.95 87 P **P** 13 52 08.2 0.0
YHNB Yeheng 25.04 82 P **P** 13 52 08.7 -0.4
YULB Yu-li 25.09 85 P **P** 13 52 09.6 +0.2
EKS2 Erkin-Say 25.12 323 P **P** 13 52 12.4 +2.7
SNR=16
USP Ospenovka 25.15 325 P **P** 13 52 12.8 +3.0
SNR=15
SGDS Sogindy 25.21 326 *e*P **P** 13 52 11.8 +1.3
comp=Z,14nm,1.2s
SGDS *e*pP **pP** 13 52 26.4 +1.2
SGDS *e*PP **PnPn** 13 52 48.6 +1.3
SGDS *e*S **S** 13 56 32.8 +1.2
SSE Sheshan 25.22 67 P **P** 13 52 07.7 -2.8
SSE IAmb IAmb 13 52 15.7
comp=Z,61nm,0.8s
NACB Ninganchiao 25.28 84 P **P** 13 52 11.2 +0.1
NACB IAmb IAmb 13 52 14.6
comp=Z,111nm,1.2s
RGRI Rengat 25.38 160 P **P** 13 52 12.8 +0.7
PDSI Padang 25.40 165 P **P** 13 52 10.2 -2.1
comp=Z,26nm,0.7s
SISI Saibi 25.50 168 P **P** 13 52 14.7 +1.5
comp=Z,624nmcomp=Z,34nm,0.6s
SONM Songino Array 25.94 19 P **P** 13 52 18.2 +1.1
comp=Z,25nm,1.0s,baz=196,slow=9.2,SNR=139
SONM ScP **ScP** 13 59 18.5 -0.5
comp=Z,3.7nm,0.9s,baz=198,slow=3.0,SNR=9.0
SONM LR LR 14 03 41.2
comp=Z,443nm,19.8s,baz=210,slow=39
SONM Songino Array 25.94 19 P **P** 13 52 17.7 +0.6
SONM **ScP** 13 59 17.9 -1.1
ULN Ulaanbaatar 26.18 20 *i* P **P** 13 52 19.8 +0.6
ULN pmax pmax
comp=Z,15nm,1.1s
ULN Ulaanbaatar 26.18 20 P **P** 13 52 19.5 +0.3
ULN IAmb IAmb 13 52 37.2
comp=Z,90nm,1.1s
BTLS Baital 26.63 327 *e*P **P** 13 52 24.1 +0.9
BTLS *e*pP **pP** 13 52 39.1 +1.1
DZA Taraz 26.64 321 *e*P **P** 13 52 25.7 +2.4
DZA *e*pP **pP** 13 52 38.8 +0.7
DZA *e*PP **PnPn** 13 53 07.4 +0.5
KRJI Kerinci 26.79 163 P **P** 13 52 25.0 +0.1
comp=Z,65nm,0.5s
IUG Iuzhnay 26.97 318 *e*P **P** 13 52 27.8 +1.4
IUG *e*pP **pP** 13 52 42.6 +1.4
IUG *e*PP **PnPn** 13 53 11.8 +0.4
PPSI Pulau Pagai 27.08 167 P **P** 13 52 27.1 -0.4
comp=Z,3μmcomp=Z,175nm,0.9s
KK31 Karatay Array 27.25 321 P **P** 13 52 29.5 +0.7
KK31 pmax pmax
comp=Z,23nm,1.3s
KK31 Karatay Array 27.25 321 P **P** 13 52 29.5 +0.7
KKAR Karatay Array 27.25 321 P **P** 13 52 29.5 +0.7
KKAR pmax pmax
comp=Z,23nm,1.3s
KKAR Karatay Array 27.25 321 P **P** 13 52 29.5 +0.7
KKAR Karatay Array 27.25 321 P **P** 13 52 29.5 +0.7
KKAR IAmb IAmb 13 52 45.6
comp=Z,23nm,1.2s
KSM Kuching 27.31 142 P **P** 13 52 29.8 +0.2
KSM Kuching 27.31 142 P **P** 13 52 31.0 +1.4
CHM Chimkent 27.33 318 *e*P **P** 13 52 30.9 +1.4
CHM *e*pP **pP** 13 52 44.3 +0.1
ZAK Zakamensk 27.50 13 *e*P **P** 13 52 34.4 +3.4
ZAK pmax pmax
comp=Z,36nm,1.4s
KKM Kota Kinabalu 27.79 126 P **P** 13 52 34.7 +0.7
MOY Mondy 28.33 9 *e*P **P** 13 52 41.9 +3.5
MOY pmax pmax
comp=Z,77nm,1.9s
SEM Semipalatinsk 28.59 342 *e*P **P** 13 52 40.1 -0.8
comp=Z,3.6nm,0.9s
SEM *e*pP **pP** 13 52 55.5 -0.3
TLY Talaya 28.80 13 *e*P **P** 13 52 47.0 +4.5
TLY *e*SSS SSS 13 58 51.4
TLY pmax pmax
comp=Z,39nm,1.5s
TLY MLR MLR
comp=Z,747nm,10.0s
KURBB Kurchatov Arra 29.30 340 P **P** 13 52 48.1 +1.2
comp=Z,7.7nm,0.7s,baz=154,slow=8.1,SNR=66
KURBB PcP **PcP** 13 55 52.9 +0.6
comp=Z,2.9nm,0.8s,baz=162,slow=2.3,SNR=4.4
KURBB ScP **ScP** 13 59 29.4 +0.4
comp=Z,4.0nm,1.0s,baz=154,slow=2.8,SNR=8.1
KURK Kurchatov 29.35 340 *d i* P **P** 13 52 48.6 +1.2
KURK pmax pmax
comp=Z,15nm,0.7s
KURK Kurchatov 29.35 340 P **P** 13 52 47.9 +0.5
KURK Kurchatov 29.35 340 **PcP** 13 55 52.9 +0.4
KURK **ScP** 13 59 29.4 +0.2
IRK Irkutsk 29.46 13 *e*P P 13 53 04.3 +16
IRK pmax pmax
comp=Z,90nm,3.1s
MDSI Maura Dua 29.86 159 P **P** 13 52 49.7 -2.5
comp=Z,1μmcomp=Z,14nm,0.7s
ZAA0 Zalesovo Array 30.85 350 P **P** 13 53 01.2 +0.6
ZALV Zalesovo Beam 30.85 350 P **P** 13 53 00.9 +0.3
ZALV Zalesovo Beam 30.85 350 P **P** 13 53 02.0 +1.4
comp=Z,4.8nm,0.4s,baz=168,slow=7.2,SNR=44
ZALV ScP **ScP** 13 59 33.0 -1.0
comp=Z,4.1nm,0.9s,baz=184,slow=4.0,SNR=7.2
ZALV LR LR 14 06 13.0
comp=Z,144nm,18.1s,baz=206,slow=38
ZALV Zalesovo Beam 30.85 350 P **P** 13 53 00.9 +0.3
ZALV **ScP** 13 59 32.5 -1.5
BRZS Berezniki 30.93 333 *e*P **P** 13 53 02.9 +1.5
comp=Z,25nm,1.3s
BRZS *e*pP **pP** 13 53 17.9 +1.6
JOW Kunigami 31.15 77 P **P** 13 53 01.8 -1.8
JOW IAmb IAmb 13 53 17.2
comp=Z,24nm,0.7s
KSAR Wonju Array Be 32.04 57 PcP **PcP** 13 55 60.0 +0.2
KSRS Korea Array 32.08 57 P **P** 13 53 11.6 0.0
comp=Z,1.9nm,0.6s,baz=252,slow=8.4,SNR=6.4
KSRS PcP **PcP** 13 56 00.2 +0.3
comp=Z,1.7nm,0.6s,baz=263,slow=2.9,SNR=7.2
KSRS ScP **ScP** 13 59 36.0 -2.5
comp=Z,3.7nm,0.9s,baz=261,slow=4.4,SNR=7.5
KSRS LR LR 14 06 52.0
comp=Z,365nm,21.1s,baz=256,slow=38
WSAR Wadi Sarin 32.30 276 P **P** 13 53 15.0 +1.3
comp=Z,3.0nm,0.9s,baz=96,slow=13,SNR=4.5
HIA Hailar 32.50 32 P **P** 13 53 14.9 -0.2
HIA pmax pmax
comp=Z,16nm,1.0s
HIA Hailar 32.50 32 P **P** 13 53 14.9 -0.2
CN2 Changchun 32.63 45 *e*P **P** 13 53 19.5 +3.2
GEYT Alibeck 33.57 303 P **P** 13 53 26.9 +2.3
comp=Z,3.4nm,0.8s,baz=153,slow=10.0,SNR=8.0
GEYT ScP **ScP** 13 59 43.7 0.0
comp=Z,5.3nm,0.9s,baz=169,slow=1.5,SNR=7.6
GEYT LR LR 14 10 10.0
comp=Z,331nm,20.3s,baz=60,slow=42
GEYT Alibeck 33.57 303 P **P** 13 53 25.9 +1.2
GEYT **ScP** 13 59 43.5 -0.3
GYA0B ALIBECK ARRAY 33.57 303 P **P** 13 53 26.1 +1.4
GYA0B IAmb IAmb 13 53 42.8
comp=Z,30nm,1.1s
JNU Nakatsue 33.65 66 P **P** 13 53 23.6 -1.9
JNU IAmb IAmb 13 53 29.7
comp=Z,14nm,0.8s
BRVK Borovoye 34.24 335 P **P** 13 53 30.4 +0.1
BRVK pmax pmax
comp=Z,12nm,0.9s
BRVK Borovoye 34.24 335 P **P** 13 53 30.4 +0.1
KPJI Karang Pucung 34.26 153 P **P** 13 53 31.9 +1.1
comp=Z,41nm,1.1s
UOSS Minazif 34.29 280 P **P** 13 53 31.2 +0.1
DAV Davao City (W) 34.64 114 LR LR 14 09 44.3
comp=Z,162nm,18.0s,baz=308,slow=40
MRSI Marisa 35.74 126 P **P** 13 53 44.2 +0.6
comp=Z,44nm,0.7s
AB31 Akbulak array 36.77 322 P **P** 13 53 53.1 +1.1
ABKAR Akbulak array 36.77 322 P **P** 13 53 53.4 +1.3
ABKAR Akbulak array 36.77 322 P **P** 13 53 53.3 +1.3
ABKAR IAmb IAmb 13 54 09.4
comp=Z,22nm,0.8s
BOD Bodaibo 36.91 18 *e*P **P** 13 53 53.6 +0.5
BOD pmax pmax
comp=Z,14nm,1.3s
USA0B Ussuriysk Arra 37.10 47 P **P** 13 53 54.7 -0.2
USA0B pmax pmax
comp=Z,17nm,1.1s
USA0B Ussuriysk Arra 37.10 47 P **P** 13 53 54.7 -0.2
USA0B IAmb IAmb 13 54 00.8
comp=Z,17nm,1.1s
USRK Ussuriysk Ar. 37.10 47 P **P** 13 53 53.0 -1.9
USRK Ussuriysk Ar. 37.10 47 P **P** 13 53 54.5 -0.4
comp=Z,15nm,1.1s,baz=239,slow=5.2,SNR=7.1
USRK LR LR 14 10 47.5
comp=Z,123nm,19.0s,baz=237,slow=39
USRK Ussuriysk Ar. 37.10 47 P **P** 13 53 53.0 -1.9
LUWI Luwuk 37.38 127 P **P** 13 53 56.3 -1.2
KAPI Kappang 38.16 135 LR LR 14 13 22.4
comp=Z,143nm,18.4s,baz=118,slow=42
AKTO Aktyubinsk 38.45 323 P **P** 13 54 07.5 +1.4
comp=Z,5.7nm,0.7s,baz=113,slow=8.4,SNR=26
AKTO ScP **ScP** 14 00 01.1 -0.2
comp=Z,2.3nm,0.8s,baz=110,slow=3.9,SNR=4.2
INU Inuyama 38.93 63 P **P** 13 54 08.2 -2.2
INU IAmb IAmb 13 54 09.9
comp=Z,33nm,1.1s
ZEA Zeya 38.96 31 *e*P **P** 13 54 10.1 -0.3
ZEA pmax pmax
comp=E,29nm,1.0s
ZEA pmax pmax
comp=N,22nm,1.2s
ZEA pmax pmax
comp=Z,36nm,1.2s
ZEA MLR MLR
comp=Z,700nm,15.0s
ZEA MLR MLR
comp=E,400nm,16.0s
ZEA MLR MLR
comp=N,500nm,17.0s
KLR Kul'dur 38.98 40 *i* P **P** 13 54 11.3 +0.7
KLR pmax pmax
comp=Z,9.0nm,1.3s
KLR Kul'dur 38.98 40 P **P** 13 54 09.9 -0.7
comp=Z,3.0nm,0.8s,baz=278,slow=12,SNR=6.2
KLR PcP **PcP** 13 56 20.3 +0.3
comp=Z,2.6nm,0.7s,baz=262,slow=8.8,SNR=3.5
KLR ScP **ScP** 14 00 00.7 -2.7
comp=Z,1.1nm,0.7s,baz=310,slow=3.1,SNR=3.9
SOCY Socotra 39.56 260 P **P** 13 54 15.5 -0.5
SOCY IAmb IAmb 13 54 18.0
comp=Z,30nm,1.0s
MJB9 Matsu-Tunnel 40.00 61 P **P** 13 54 17.0 -2.4
MJB9 IAmb IAmb 13 54 18.4
comp=Z,20nm,0.9s
MAJO Matsushiro 40.01 61 P **P** 13 54 17.1 -2.3
MAJO pmax pmax
comp=Z,19nm,0.9s
MAJO Matsushiro 40.01 61 P **P** 13 54 17.1 -2.3
MAJO IAmb IAmb 13 54 18.4
comp=Z,19nm,0.9s
MAT Matsushiro 40.01 61 P **P** 13 54 17.2 -2.2
MAT S **S** 14 00 20.8 -0.1
MJAR Matsushiro Arr 40.01 61 P **P** 13 54 17.2 -2.2
MJAR LR 13 56 23.8
MJAR pmax pmax
comp=Z,6.0nm,0.8s
MJAR Matsushiro Arr 40.01 61 P **P** 13 54 17.7 -1.7
comp=Z,12nm,0.9s,baz=270,slow=9.7,SNR=25
MJAR PcP **PcP** 13 56 23.8 +0.2
comp=Z,4.8nm,0.8s,baz=250,slow=2.8,SNR=5.4
MJAR ScP **ScP** 14 00 05.8 -1.9
comp=Z,13nm,1.1s,baz=269,slow=4.0,SNR=15
MJAR LR LR 14 12 44.0
comp=Z,194nm,18.1s,baz=255,slow=39
MJAR Matsushiro Arr 40.01 61 P **P** 13 54 17.2 -2.2
SVE Sverdlovsk 40.85 333 *e*P **P** 13 54 27.8 +1.8
SVE pmax pmax
comp=Z,33nm,1.2s
ARU Arti 41.50 331 *d i* P **P** 13 54 32.5 +1.1
ARU *PP **pP** 13 54 47.1 +0.4
ARU PPP PPP 13 56 36.4
ARU S **S** 14 00 46.0 +3.4
ARU SS **SS** 14 03 44.0 -4.8
ARU pmax pmax
comp=Z,16nm,1.0s
ARU Arti 41.50 331 P **P** 13 54 32.8 +1.5
comp=Z,1.3nm,0.3s,baz=91,slow=2.9,SNR=10.0
ARU Arti 41.50 331 P **P** 13 54 31.6 +0.3
GRNR Gornyy 42.36 40 *i* P **P** 13 54 37.4 -1.1
GRNR *e*S **S** 14 00 54.2 -1.2
GRNR pmax pmax
comp=Z,10.0nm,0.9s
GRNR smax smax
comp=N,2.0nm,1.1s
GRNR MLR MLR
comp=Z,130nm,17.0s
ZKTA Zakatala 42.99 306 P **P** 13 54 46.3 +2.5
GANJ Ganja 43.06 305 P **P** 13 54 46.8 +2.4
NAX Nakhchivan 43.52 302 P **P** 13 54 50.2 +2.1
SIJI Sorong 43.79 119 P **P** 13 54 49.9 -0.7
comp=Z,22nm,0.7s,baz=324,slow=7.3,SNR=8.1
RAYN Ar Rayn 44.16 280 P **P** 13 54 53.9 +0.5
RAYN pmax pmax
comp=Z,26nm,1.2s
RAYN Ar Rayn 44.16 280 P **P** 13 54 53.9 +0.5
RAYN IAmb IAmb 13 54 55.5
comp=Z,26nm,1.1s
ASAJ Asahikawa 44.43 51 P **P** 13 54 55.4 +0.1
comp=Z,9.0nm,0.9s,baz=240,slow=12,SNR=5.8
JKA Kamikawa-asahi 44.43 51 P **P** 13 54 55.4 +0.1
SOEI Soe 44.65 135 P P 13 55 07.7 +10
SOEI Soe 44.65 135 P **P** 13 54 56.7 -0.8
YSS Yuzh-Sakhalins 45.13 47 *e*P **P** 13 54 59.5 -1.2
YSS *e* 13 55 21.1
YSS *e* 14 01 38.2
YSS MLR MLR
comp=Z,500nm,18.0s
YSS Yuzh-Sakhalins 45.13 47 P **P** 13 54 59.6 -1.2
YSS IAmb IAmb 13 55 18.5
comp=Z,40nm,1.3s
ZEI Tsey 45.16 307 *e*P **P** 13 55 02.7 +1.3
ZEI pmax pmax
comp=Z,50nm,0.9s
YAK Yakutsk 45.21 23 *e*P **P** 13 55 00.6 -0.5
YAK *e*PP **pP** 13 55 13.2 -3.5
YAK *e* 13 56 42.0
YAK *e*S **S** 14 01 34.1 -2.5
YAK *e*SS **sS** 14 01 56.4 -6.8
YAK *e* 14 04 51.5
YAK *e*SSS SSS 14 05 55.1
YAK pmax pmax
comp=Z,77nm,1.3s
YAK pmax pmax
comp=N,32nm,1.5s
YAK pmax pmax
comp=E,32nm,1.4s
YAK smax smax
comp=N,143nm,4.0s
YAK smax smax
comp=E,159nm,4.8s
YAK Yakutsk 45.21 23 P **P** 13 55 01.2 +0.1
comp=E,9.5nm,0.3s,baz=151,slow=1.2,SNR=37
YAK Yakutsk 45.21 23 P **P** 13 55 00.8 -0.3
AKH Akhalkalaki 45.29 305 P **P** 13 55 05.5 +3.2
AKH pmax pmax
comp=Z,36nm,0.9s
FAKI Fak Fak 45.81 120 P **P** 13 55 05.7 -0.8
KBZ Khabaz 46.03 308 P **P** 13 55 08.4 +0.5
comp=Z,4.1nm,0.9s,baz=136,slow=7.4,SNR=5.8
KBZ LR LR 14 17 49.6
comp=Z,153nm,18.8s,baz=92,slow=40
TYV Tymovskoe 46.10 41 *e*P **P** 13 55 06.6 -1.7
TYV pmax pmax
comp=Z,8.0nm,1.7s
SHA1 Shidzhatmaz 46.20 308 *i* P **P** 13 55 11.0 +1.4
KIV Kislovodsk 46.21 309 *e*P **P** 13 55 11.5 +2.0
KIV pmax pmax
comp=Z,40nm,1.0s
KIV MLR MLR
comp=Z,227nm,16.0s
KIV Kislovodsk 46.21 309 P **P** 13 55 09.8 +0.4
KIV IAmb IAmb 13 55 27.3
comp=Z,20nm,1.0s
VRH Novokhopyorsk 48.29 318 *e*P **P** 13 55 25.9 +0.6
VRH *e*PP **pP** 13 55 40.4 -0.6
VRH pmax pmax
comp=Z,30nm,1.8s
SAUI Saumlaki 48.30 126 P **P** 13 55 24.7 -1.2
SOC Sochi 48.30 308 *e*P **P** 13 55 24.9 -0.7
SOC *e* 13 57 20.8
SOC *e*PPP PPP 13 58 08.0
SOC *e*S **S** 14 02 22.3 +1.1
SOC pmax pmax
comp=Z,19nm,0.7s
SOC MLR MLR
comp=Z,191nm,16.0s
VSR Storozhevoye 49.86 318 *e*P **P** 13 55 39.3 +2.0
VSR *e*PP **pP** 13 55 51.6 -1.5
VSR pmax pmax
comp=Z,20nm,1.9s
PRGR Permogore 49.92 332 *e*P **P** 13 55 37.7 +0.1
PRGR *e*PP **pP** 13 55 52.9 -0.5
MTN Manton Dam 51.50 131 P **P** 13 55 49.0 -1.1
PSAD1 Pilbara Seismi 51.59 149 P **P** 13 55 50.0 -0.7
PSAD1 IAmb IAmb 13 55 56.8
comp=Z,15nm,0.7s
PSAC1 Pilbara Seismi 51.65 149 P **P** 13 55 50.6 -0.6
PSAC1 IAmb IAmb 13 55 57.1
comp=Z,16nm,0.7s
PSAB1 Pilbara Seismi 51.69 149 P **P** 13 55 51.2 -0.2
PSAB1 IAmb IAmb 13 55 52.3
comp=Z,12nm,0.7s
PSAA2 Pilbara Seismi 51.69 149 P **P** 13 55 51.5 0.0
PSAA2 IAmb IAmb 13 55 57.5
comp=Z,14nm,0.7s
PSAB2 Pilbara Seismi 51.69 149 P **P** 13 55 51.4 -0.1
PSAB2 IAmb IAmb 13 55 57.5
comp=Z,18nm,0.7s
PSAA1 Pilbara Seismi 51.70 149 P **P** 13 55 51.5 0.0
PSAA1 IAmb IAmb 13 55 57.5
comp=Z,14nm,0.7s
PSA00 Pilbara Seismi 51.70 149 P **P** 13 55 51.5 0.0
PSA00 IAmb IAmb 13 55 57.5
comp=Z,14nm,0.7s
PSAA3 Pilbara Seismi 51.71 149 P **P** 13 55 51.6 0.0
PSAA3 IAmb IAmb 13 55 57.5
comp=Z,14nm,0.7s
PSAC2 Pilbara Seismi 51.72 149 P **P** 13 55 51.7 0.0
PSAC2 IAmb IAmb 13 55 52.5
comp=Z,17nm,0.8s
PSAB3 Pilbara Seismi 51.72 149 P **P** 13 55 51.7 -0.1
PSAB3 IAmb IAmb 13 55 57.7
comp=Z,13nm,0.6s
PSAD3 Pilbara Seismi 51.73 149 P **P** 13 55 51.5 -0.2
PSAD3 IAmb IAmb 13 55 52.2
comp=Z,9.8nm,0.7s
PSAC3 Pilbara Seismi 51.73 149 P **P** 13 55 50.7 -1.1
PSAC3 IAmb IAmb 13 55 57.3

MOS Moscow 51.78 323 *e*P **P** **13 55 51.5 -0.2**
MOS *e* 13 56 06.6
MOS *e**PP **pP** **13 56 07.0 -0.6**
MOS *eS* **S** **14 03 06.1 -3.2**
MOS *e* 14 03 28.3
MOS pmax pmax
comp=Z,37nm,0.7s
TIXI Tiksi 51.78 13 *i* P **P** **13 55 51.5 0.0**
TIXI pmax pmax
comp=Z,36nm,0.8s
TIXI Tiksi 51.78 13 P **P** **13 55 51.1 -0.4**
PSAD2 Pilbara Seismi 51.80 149 P **P** **13 55 51.6 -0.7**
PSAD2 IAmb IAmb 13 55 58.2
comp=Z,17nm,0.6s
FITZ Fitzroy Crossi 51.91 141 P **P** **13 55 52.7 -0.5**
KNRA Kununurra 51.97 136 P **P** **13 55 53.2 -0.4**
GENI Genyem 52.08 114 P **P** **13 55 53.1 -1.5**
comp=Z,138nm,1.9s
OBN Obninsk 52.22 322 *e*P **P** **13 55 58.3 +3.3**
OBN *e**PP **pP** **13 56 11.7 +0.9**
OBN *e* 13 57 11.5
OBN pmax pmax
comp=Z,10.0nm,1.0s
KLMR Klimovskoe 52.32 330 *e*P **P** **13 55 55.7 +0.1**
KLMR pmax pmax
comp=Z,56nm,0.9s
KLMR Klimovskoe 52.32 330 *e*P **P** **13 55 55.8 +0.1**
KLMR AMP 13 56 13.8
comp=Z,56nm,0.9s
KLMR LR LR 14 18 40.7
JAY Jayapura 52.49 113 LR LR 14 18 05.9
comp=Z,65nm,21.8s,baz=328,slow=36
BRTR Keskin Array B 52.71 303 *c*eP **P** **13 55 59.9 +0.8**
BRTR pmax pmax
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 52.71 303 P **P** **13 55 59.9 +0.8**
comp=Z,1.5nm,0.8s,baz=120,slow=8.0,SNR=6.7
BRTR ScP **ScP** **14 00 59.5 -1.2**
comp=Z,2.2nm,0.9s,baz=113,slow=8.2,SNR=5.6
BRTR LR LR 14 22 24.4
comp=Z,51nm,20.4s,baz=104,slow=40
BRTR Keskin Array B 52.71 303 P **P** **13 55 59.4 +0.3**
MA2 Magadan 53.09 32 P **P** **13 56 00.6 -0.8**
MA2 pmax pmax
comp=Z,33nm,0.9s
MA2 Magadan 53.09 32 P **P** **13 56 00.6 -0.8**
CSS Mathiatis 53.23 297 P **P** **13 56 01.9 -1.0**
CSS IAmb IAmb 13 56 16.6
comp=Z,28nm,1.1s
TMCR Tamitsa 54.12 333 *e*P **P** **13 56 10.2 +1.4**
TMCR pmax pmax
comp=Z,53nm,0.9s
SEY Seymchan 54.81 28 *i* P **P** **13 56 14.0 +0.1**
PEA0B Petropavlovsk- 55.65 41 P **P** **13 56 19.5 -0.6**
PEA0B pmax pmax
comp=Z,29nm,1.2s
PEA0B Petropavlovsk- 55.65 41 P **P** **13 56 19.5 -0.6**
PEA0B IAmb IAmb 13 56 24.5
comp=Z,29nm,1.2s
PETK Petropavlovsk- 55.65 41 P **P** **13 56 19.2 -0.9**
PETK Petropavlovsk- 55.65 41 P **P** **13 56 19.4 -0.6**
comp=Z,9.3nm,1.0s,baz=253,slow=3.9,SNR=19
PETK LR LR 14 20 41.9
comp=Z,117nm,18.8s,baz=242,slow=36
PETK Petropavlovsk- 55.65 41 P **P** **13 56 19.2 -0.9**
ELL Elmali 55.83 299 P **P** **13 56 22.7 +0.9**
ELL pmax pmax
comp=Z,206nm,1.2s
ELL Elmali 55.83 299 P **P** **13 56 22.6 +0.9**
AKASG Malin Array Be 56.02 316 P **P** **13 56 23.2 +0.5**
comp=Z,27nm,0.3s,baz=82,slow=6.4,SNR=3.7
AKASG pP **pP** **13 56 38.9 +0.1**
comp=Z,16nm,0.7s,baz=83,slow=6.4,SNR=5.4
AKASG LR LR 14 25 28.1
comp=Z,97nm,18.7s,baz=85,slow=41
AKASG Malin Array Be 56.02 316 P **P** **13 56 22.9 +0.1**
AKBB Malin Array Si 56.02 316 P **P** **13 56 22.8 +0.1**
AKBB pmax pmax
comp=Z,36nm,0.9s
AKBB Malin Array Si 56.02 316 P **P** **13 56 22.8 +0.1**
SORM Soroca 56.49 313 ⇓P **P** **13 56 27.0 +0.8**
SORM Soroca 56.49 313 ⇓P **P** **13 56 27.0 +0.8**
LVZ Lovozero 56.71 337 P **P** **13 56 29.0 +1.5**
LVZ pmax pmax
comp=Z,36nm,0.9s
LVZ Lovozero 56.71 337 P **P** **13 56 29.0 +1.5**
MORW Morawa 56.73 157 P **P** **13 56 28.4 +0.4**
APA Apatity 57.05 337 ⇓*i*P P 13 56 41.3 +12
APA pmax pmax
comp=Z,17nm,1.0s
APA MLR MLR
comp=Z,300nm,16.0s
VRI Vrincioaia 57.62 310 ⇓P **P** **13 56 35.6 +1.3**
VRI Vrincioaia 57.62 310 ⇓P **P** **13 56 35.6 +1.3**
TESR Tescani 57.66 311 ⇓P **P** **13 56 36.1 +1.6**
PLOR Plostina 57.68 310 ⇓P **P** **13 56 37.4 +2.7**
PLOR Plostina 57.68 310 ⇓P **P** **13 56 37.4 +2.7**
NACGM Naroch 57.76 321 *e*P **P** **13 56 35.0 0.0**
VSU Vasula 58.10 325 *e*P **P** **13 56 38.2 +0.8**
VSU *e*pP **pP** **13 56 53.8 +0.3**
IIGN Ignalina 58.11 322 *e*P **P** **13 56 39.1 +1.6**
IIGN *e*pP **pP** **13 56 54.1 +0.6**
IIGN IAmb IAmb 13 56 57.0
comp=Z,38nm,1.0s
IZAR Zarasai 58.13 322 *e*P **P** **13 56 38.9 +1.3**
KARP Karpathos 58.18 298 P **P** **13 56 39.2 +0.9**
ISAL Salakas 58.18 322 *e*P **P** **13 56 39.2 +1.2**
ISAL *e*pP **pP** **13 56 54.8 +0.8**
ISAL IAmb IAmb 13 56 57.4
comp=Z,30nm,1.1s
MLR Muntele Rosu 58.19 310 P **P** **13 56 39.9 +1.5**
MLR pmax pmax
comp=Z,75nm,1.0s
MLR Muntele Rosu 58.19 310 ⇑P **P** **13 56 40.6 +2.3**
MLR Muntele Rosu 58.19 310 P **P** **13 56 39.9 +1.5**
ALN Alexandroupoli 58.43 304 P **P** **13 56 41.1 +1.1**
ALN pmax pmax
comp=Z,10.0nm,0.9s
ALN Alexandroupoli 58.43 304 P **P** **13 56 41.1 +1.1**
ALN IAmb IAmb 13 56 41.9
comp=Z,10.0nm,0.9s
WB0 Warramunga Arr 58.60 134 P **P** **13 56 40.9 -0.4**
BURAR Bucovina Array 58.61 312 ⇓P **P** **13 56 43.1 +1.9**
BURAR Bucovina Array 58.61 312 ⇓P **P** **13 56 43.1 +1.9**
BURAR Bucovina Array 58.61 312 P **P** **13 56 41.8 +0.6**
BUR08 Bucovina Ar. S 58.62 312 P **P** **13 56 41.9 +0.6**
BUR08 IAmb IAmb 13 57 00.6
comp=Z,10nm,1.0s
WRA Warramunga Arr 58.69 134 *i* P **P** **13 56 41.9 -0.1**
WRA pmax pmax
comp=Z,23nm,0.6s
WRA Warramunga Arr 58.69 134 P **P** **13 56 41.9 -0.1**
comp=Z,22nm,0.7s,baz=320,slow=7.5,SNR=149
WRA S **S** **14 04 39.5 -3.1**
comp=Z,1.8nm,1.2s,baz=307,slow=13,SNR=5.2
WRA Warramunga Arr 58.69 134 P **P** **13 56 41.0 -1.0**
WRAB Tennant Creek 58.69 134 *i* P **P** **13 56 42.2 +0.2**
WRAB pmax pmax
comp=Z,40nm,0.8s
WRAB Tennant Creek 58.69 134 P **P** **13 56 41.9 -0.1**
WB2 Warramunga Arr 58.70 134 P **P** **13 56 41.8 -0.3**
FIA1 FINESS Array S 58.78 329 P **P** **13 56 43.0 +1.0**
FIA1 IAmb IAmb 13 57 00.2
comp=Z,15nm,0.8s
FINES FINESS Array B 58.78 329 P **P** **13 56 42.9 +0.9**
comp=Z,3.3nm,0.6s,baz=99,slow=6.9,SNR=14
FINES LR LR 14 24 22.5
comp=Z,226nm,20.8s,baz=99,slow=38
FINES FINESS Array B 58.78 329 P **P** **13 56 42.7 +0.7**
WR0 Warramunga Arr 58.84 134 P **P** **13 56 42.8 -0.2**
LVV L'vov 59.33 315 *e*P P 13 57 02.5 +16
PABE Paberze 59.40 322 *e*P **P** **13 56 47.5 +1.1**
PABE *e*pP **pP** **13 57 03.1 +0.5**
PABE IAmb IAmb 13 57 05.5
comp=Z,125nm,1.0s
SANT Santorini 59.43 299 P **P** **13 56 47.5 +0.4**
SUW Suwalki 59.83 320 P **P** **13 56 50.0 +0.6**
SUW *PP **pP** **13 57 05.3 -0.2**
SUW Suwalki 59.83 320 *e*P P 13 57 05.6 +16
SUW Suwalki 59.83 320 P **P** **13 56 50.0 +0.6**
SUW pP **pP** **13 57 05.3 -0.2**
KWP Kalwaria Pacla 60.20 315 P **P** **13 56 52.8 +0.8**
KWP Kalwaria Pacla 60.20 315 P **P** **13 56 52.8 +0.8**

KMBO Kilima Mbogo 60.30 254 P **P** **13 56 53.5 -0.1**
KMBO pmax pmax
comp=Z,12nm,0.9s
KMBO Kilima Mbogo 60.30 254 P **P** **13 56 54.5 +1.0**
comp=Z,10nm,0.8s,baz=42,slow=11,SNR=21
KMBO Kilima Mbogo 60.30 254 P **P** **13 56 53.5 -0.1**
KMBO IAmb IAmb 13 56 55.9
comp=Z,12nm,0.9s
VTS Vitosha 60.35 307 P **P** **13 56 54.3 +0.9**
VTS *pP **pP** **13 57 09.9 +0.4**
VTS IAmb IAmb 13 57 13.2
comp=Z,19nm,1.0s
DRGR 60.36 312 ⇑P **P** **13 56 55.1 +1.8**
DRGR 60.36 312 ⇑P **P** **13 56 55.1 +1.8**
ARCES ARCESS Array B 60.36 338 P **P** **13 56 53.7 +0.9**
ARCES *PP **pP** **13 57 09.2 +0.3**
ARCES ARCESS Array B 60.36 338 P **P** **13 56 53.8 +1.0**
comp=Z,2.7nm,0.7s,baz=107,slow=7.4,SNR=13
ARCES ARCESS Array B 60.36 338 P **P** **13 56 53.7 +0.9**
ARCES **pP** **13 57 09.2 +0.3**
ARE0 ARCESS Array S 60.36 338 *e*P **P** **13 56 54.1 +1.3**
ARE0 *e*pP **pP** **13 57 08.5 -0.5**
ARE0 IVmB_BB 13 57 10.0
ARE0 comp=Z,420nm,2.0s
ARE0 *eS* **S** **14 05 05.2 +2.3**
TRPA Tarpa 60.39 313 *e*P pP 13 57 07.2 -2.3
GZR Gura Zlata 60.42 310 ⇑P P 13 56 45.6 -8.1
KOLS Kolonicke sedl 60.52 314 *e*P **P** **13 56 56.0 +1.8**
KOLS Kolonicke sedl 60.52 314 *e*P **P** **13 56 56.0 +1.8**
UZH Uzhgorod 60.52 314 *e*P **P** **13 56 55.8 +1.6**
UZH *i* 13 57 11.0
UZH *e* 13 57 38.6
CRVS Cervenica-Dubn 61.05 314 *e*P **P** **13 56 58.0 +0.1**
CRVS Cervenica-Dubn 61.05 314 *e*P **P** **13 56 58.0 +0.1**
KTK1 Kautokeino 61.06 337 *e*P **P** **13 56 58.2 +0.6**
KTK1 IVmB_BB 13 57 01.9
comp=Z,444nm,3.0s
KTK1 *epP **pP** **13 57 14.2 +0.4**
KTK1 *eS* **S** **14 05 10.2 -1.6**
AS31 Alice Springs 61.12 138 P **P** **13 56 58.3 -0.3**
AS31 IAmb IAmb 13 56 59.6
comp=Z,9.8nm,0.7s
ASAR Alice Springs 61.12 138 P **P** **13 56 58.9 +0.3**
comp=Z,28nm,0.6s,baz=316,slow=6.4,SNR=492
ASAR S **S** **14 05 11.7 -2.0**
comp=Z,4.0nm,1.1s,baz=310,slow=13,SNR=13
ASAR LR LR 14 26 52.8
comp=Z,58nm,21.0s,baz=320,slow=39
ASAR Alice Springs 61.12 138 P **P** **13 56 58.5 -0.1**
HAMF Hammerfest 61.19 339 *e*P **P** **13 56 59.8 +1.5**
HAMF IVmB_BB 13 57 02.2
comp=Z,619nm,2.8s
HAMF *epP **pP** **13 57 15.4 +0.9**
HAMF *eS* **S** **14 05 13.9 +0.6**
LIT Litokhoron 61.22 304 P **P** **13 56 59.2 +0.1**
LIT *PP **pP** **13 57 14.8 -0.5**
LIT Litokhoron 61.22 304 P **P** **13 56 59.2 +0.1**
LIT **pP** **13 57 14.8 -0.5**
LIT IAmb IAmb 13 57 16.9
comp=Z,22nm,1.0s
BILL Bilibino 61.54 24 *c*P **P** **13 57 00.9 +0.1**
BILL *e**PP **pP** **13 57 15.8 -1.1**
BILL *e* 13 57 41.8
BILL *e* 13 59 14.0
BILL pmax pmax
comp=Z,55nm,1.0s
BILL Bilibino 61.54 24 P **P** **13 57 00.9 +0.1**
PMG Port Moresby 61.61 116 P **P** **13 57 01.9 -0.2**
PMG pmax pmax
comp=Z,31nm,1.1s
PMG Port Moresby 61.61 116 P **P** **13 57 01.8 -0.2**
comp=Z,6.8nm,0.4s,baz=153,slow=11,SNR=4.5
PMG Port Moresby 61.61 116 IAmb IAmb 13 57 06.4
comp=Z,31nm,1.1s
NIE Niedzica 61.78 315 *e*P pP 13 57 20.3 +1.3
NIE Niedzica 61.78 315 *e*P pP 13 57 20.3 +1.3
FNA Florina 61.96 305 P **P** **13 57 04.1 -0.1**
FNA pmax pmax
comp=Z,18nm,0.9s
FNA Florina 61.96 305 P **P** **13 57 04.1 -0.1**
FNA IAmb IAmb 13 57 22.7
comp=Z,18nm,0.9s
OJC Ojcow 62.04 316 P **P** **13 57 05.2 +0.7**
OJC pmax pmax
comp=Z,10.0nm,0.9s
OJC Ojcow 62.04 316 P **P** **13 57 05.2 +0.7**
OJC IAmb IAmb 13 57 21.7
comp=Z,10nm,0.9s
HOPEN Hopen 62.11 346 *e*P **P** **13 57 05.7 +1.2**
HOPEN *epP **pP** **13 57 21.4 +0.6**
ABPO Ambohimpanom 62.34 231 P **P** **13 57 07.7 +0.7**
ABPO pmax pmax
comp=Z,25nm,1.1s
ABPO Ambohimpanom 62.34 231 P **P** **13 57 07.7 +0.7**
ABPO IAmb IAmb 13 57 09.1
comp=Z,25nm,1.1s
TRO Tromso 62.66 338 *e*P **P** **13 57 08.7 +0.4**
TRO IVmB_BB 13 57 09.0
comp=Z,519nm,3.4s
TRO *epP **pP** **13 57 24.9 +0.4**
TRO *eS* **S** **14 05 34.1 +2.3**
OKC Ostrava-Krasne 63.13 315 *e*P **P** **13 57 13.1 +1.3**
OKC *e**PP **pP** **13 57 29.0 +1.0**
OKC Ostrava-Krasne 63.13 315 *e*P **P** **13 57 13.1 +1.3**
OKC *epP **pP** **13 57 29.0 +1.0**
MORH Mrgy, Hungar 63.21 311 *e*P **P** **13 57 12.6 +0.3**
MORC Moravsky Berou 63.53 315 P **P** **13 57 15.3 +0.8**
MORC *PP **pP** **13 57 31.0 +0.2**
MORC Moravsky Berou 63.53 315 *e*P **P** **13 57 15.2 +0.8**
MORC *e* 13 57 31.2
MORC Moravsky Berou 63.53 315 P **P** **13 57 14.3 +0.8**
MORC **pP** **13 57 31.0 +0.2**
MORC IAmb IAmb 13 57 32.6
comp=Z,21nm,1.0s
JAVC Velka Javorina 63.55 314 *e*P **P** **13 57 17.2 +2.6**
JAVC *e* 13 57 32.1
MPLH Magyarpolny 63.84 312 *e*P P 13 57 21.7 +5.2
STEI Steigen 63.91 336 *e*P **P** **13 57 17.6 +1.1**
STEI IVmBBB 13 57 20.8
comp=Z,754nm,2.7s
KRLC Kraliky 63.99 316 *e*P **P** **13 57 18.2 +0.7**
KRLC *e**PP **pP** **13 57 34.4 +0.6**
KRLC Kraliky 63.99 316 *e*P **P** **13 57 18.2 +0.7**
KRLC *epP **pP** **13 57 34.4 +0.6**
VRAC Vranov 64.20 315 ⇓P **P** **13 57 20.6 +1.8**
VRAC Vranov 64.20 315 ⇓P **P** **13 57 20.6 +1.8**
VRAC Vranov 64.20 315 *e*P **P** **13 57 20.1 +1.3**
VRAC *e* 13 57 35.9
MOR8 Moi Rana 64.22 334 *e*P **P** **13 57 18.3 -0.3**
MOR8 *epP **pP** **13 57 34.5 -0.4**
MOR8 *eS* **S** **14 05 49.9 -1.5**
DPC Dobruska-Polom 64.25 316 *e*P **P** **13 57 20.9 +1.7**
DPC *e**PP **pP** **13 57 36.7 +1.2**
DPC Dobruska-Polom 64.25 316 *e*P **P** **13 57 20.9 +1.7**
DPC *epP **pP** **13 57 36.7 +1.2**
OSTC Ostas 64.29 316 *e*P **P** **13 57 17.5 -1.9**
OSTC *epP **pP** **13 57 36.0 +0.3**
SPA0 Spitsbergen Ar 64.30 347 *e*P **P** **13 57 20.3 +1.4**
SPA0 IVmB_BB 13 57 29.0
comp=Z,739nm,2.5s
SPA0 *epP **pP** **13 57 35.8 +0.4**
SPA0 *eS* **S** **14 05 54.6 +2.5**
SPA0 Spitsbergen Ar 64.30 347 P **P** **13 57 19.9 +0.9**
SPA0 **pP** **13 57 35.4 0.0**
HSPB Hornsund (broa 64.34 346 *e*P **P** **13 57 20.0 +0.8**
HSPB *epP **pP** **13 57 36.2 +0.5**
KRUC Moravsky 64.36 315 *e*P **P** **13 57 21.2 +1.4**
KRUC *e* 13 57 36.6
CHVC Chvalec 64.39 316 *e*P **P** **13 57 21.6 +1.5**
CHVC *epP **pP** **13 57 37.3 +0.9**
UPC Upice 64.43 316 *e*P **P** **13 57 21.9 +1.6**
UPC Upice 64.43 316 *e*P **P** **13 57 21.9 +1.6**
BLY Banja Luka 64.43 310 P **P** **13 57 20.5 +0.1**
BLY **pP** **13 57 37.1 +0.4**
BLY IAmb IAmb 13 57 38.6
comp=Z,36nm,1.3s
BEHE Becsehely 64.46 312 *e*P **P** **13 57 21.7 +1.2**
LOF Lofoten 64.55 336 *e*P **P** **13 57 21.2 +0.5**
LOF IVmBBB 13 57 22.8
comp=Z,1μm,1.3s
LOF *eS* **S** **14 06 03.4 +8.1**
KONS Konsvik 64.74 334 *e*P **P** **13 57 23.6 +1.6**

KONS *epP **pP** **13 57 38.9 +0.6**
CONA Conrad Observa 64.86 313 P **P** **13 57 24.6 +1.3**
comp=Z,13nm,1.6s,SNR=4.5
CONA *i* pP **pP** **13 57 40.5 +0.9**
comp=Z,31nm,1.2s
ARSA Arzberg 65.19 313 *i* pP pP 13 57 41.4 -0.3
comp=Z,7.9nm,0.7s
GOPC GO Pecny, Ondr 65.28 316 *e*P **P** **13 57 27.1 +1.2**
GOPC *e**PP **pP** **13 57 43.2 +1.0**
GOPC GO Pecny, Ondr 65.28 316 *e*P **P** **13 57 27.1 +1.2**
GOPC *epP **pP** **13 57 43.2 +1.0**
NSS Namsos 65.31 332 *e*P **P** **13 57 27.1 +1.4**
NSS IVmB_BB 13 57 32.2
comp=Z,834nm,2.3s
NSS *epP **pP** **13 57 42.9 +0.8**
NSS *eS* **S** **14 06 07.7 +2.8**
PRU Pruhonice 65.43 316 *e*P **P** **13 57 28.1 +1.3**
PRU *e**PP **pP** **13 57 43.8 +0.7**
PRU Pruhonice 65.43 316 *e*P **P** **13 57 28.1 +1.3**
PRU *epP **pP** **13 57 43.8 +0.7**
SOKA Soboth 65.61 312 *i* pP pP 13 57 44.8 +0.3
comp=Z,14nm,1.3s
BRG Berggiesshubel 65.68 317 *i* P **P** **13 57 29.4 +1.0**
comp=Z,6.5nm,0.7s
BRG *i* pP **pP** **13 57 45.3 +0.5**
comp=Z,29nm,1.0s
BRG Berggiesshubel 65.68 317 *i* P **P** **13 57 29.4 +1.0**
BRG *i* *PP **pP** **13 57 45.3 +0.5**
BRG pmax pmax
comp=Z,7.0nm,0.7s
NC602 NORSAR Array S 65.82 328 *e*P **P** **13 57 29.6 +0.5**
NC602 *epP **pP** **13 57 45.4 0.0**
NC602 *eS* **S** **14 06 12.1 +0.8**
NC602 NORSAR Array S 65.82 328 P **P** **13 57 29.2 +0.1**
NC602 *epP **pP** **13 57 44.9 -0.5**
MBAR Mbarara 65.85 258 P **P** **13 57 30.3 0.0**
MBAR pmax pmax
comp=Z,16nm,0.9s
MBAR Mbarara 65.85 258 P **P** **13 57 30.3 0.0**
MBAR IAmb IAmb 13 57 32.8
comp=Z,16nm,0.9s
NC303 NORSAR Array S 65.86 328 P **P** **13 57 29.5 +0.1**
NC303 **pP** **13 57 45.1 -0.5**
MOA Molln 65.94 313 P **P** **13 57 31.2 +1.0**
comp=Z,6.8nm,0.6s,SNR=7.1
MOA *i* pP **pP** **13 57 47.1 +0.6**
comp=Z,15nm,0.9s
NB2 NORSAR Subarra 65.95 328 P **P** **13 57 30.0 0.0**
comp=Z,0.9nm,0.6s,baz=83,slow=6.5
NB2 NORSAR Subarra 65.95 328 P **P** **13 57 30.0 0.0**
baz=83,slow=6.5
NOA NORSAR Array B 65.95 328 P **P** **13 57 30.0 0.0**
comp=Z,2.2nm,0.9s,baz=85,slow=6.4,SNR=5.1
NOA pP **pP** **13 57 46.2 -0.1**
comp=Z,13nm,1.0s,baz=84,slow=6.6,SNR=11
NOA LR LR 14 29 21.9
comp=Z,180nm,21.5s,baz=95,slow=39
OBKA Obir 65.97 312 *i* pP pP 13 57 47.6 +0.8
comp=Z,15nm,1.2s
LJU Ljubljana 66.06 311 *i* P **P** **13 57 32.2 +1.3**
LJU *i* pP **pP** **13 57 47.8 +0.5**
NAO01 NORSAR Array S 66.13 328 P **P** **13 57 31.1 0.0**
NAO01 **pP** **13 57 46.6 -0.9**
NAO01 IAmb IAmb 13 57 48.8
comp=Z,18nm,0.8s
NC204 NORSAR Array S 66.14 328 P **P** **13 57 31.4 +0.2**
NC204 **pP** **13 57 47.2 -0.4**
GEC2 GERESS Array S 66.15 315 *e*P **P** **13 57 32.7 +1.1**
comp=Z,10nm,0.7s,baz=85,slow=5.7
GEC2 *epP **pP** **13 57 48.6 +0.6**
GEC2 *eL* L 14 27 18.3
comp=Z,121nm,21.8s
GEC2 GERESS Array S 66.15 315 P **P** **13 57 31.7 +0.2**
GEC2 pP **pP** **13 57 47.9 -0.1**
GEC2 IAmb IAmb 13 57 50.8
comp=Z,35nm,1.1s
GERES GERESS Array B 66.15 315 P **P** **13 57 32.2 +0.6**
GERES *PP **pP** **13 57 48.0 +0.1**
GERES GERESS Array B 66.15 315 P **P** **13 57 32.7 +1.1**
comp=Z,6.8nm,0.6s,baz=73,slow=6.2,SNR=53
GERES pP **pP** **13 57 48.9 +1.0**
comp=Z,22nm,1.0s,baz=83,slow=5.8,SNR=12
GERES LR LR 14 29 44.3
comp=Z,163nm,19.8s,baz=80,slow=39
GERES GERESS Array B 66.15 315 P **P** **13 57 32.2 +0.6**
GERES pP **pP** **13 57 48.0 +0.1**
KHC Kasperske Hory 66.18 315 *e*P **P** **13 57 32.5 +0.8**
KHC *e**PP **pP** **13 57 47.9 -0.2**
KHC Kasperske Hory 66.18 315 *e*P **P** **13 57 32.5 +0.8**
KHC *epP **pP** **13 57 47.9 -0.2**
KHC Kasperske Hory 66.18 315 P **P** **13 57 32.6 +0.8**
KHC **pP** **13 57 47.7 -0.4**
CEY Cerknica 66.19 311 *i* P **P** **13 57 32.8 +1.0**
CLL Collm 66.20 317 *e*P **P** **13 57 33.0 +1.3**
CLL *e**PP **pP** **13 57 49.0 +0.9**
CLL *e**SP **sP** **13 57 56.0 +1.1**
CLL Collm 66.20 317 *e*P **P** **13 57 33.0 +1.3**
CLL *epP **pP** **13 57 49.0 +0.9**
comp=Z,23nm,1.2s
CLL *esP **sP** **13 57 56.0 +1.1**
CLL *e* 13 58 08.0
CLL *esS sS 14 07 00.0 +17
CLL *eSS SS 14 10 48.0 +15
CLL Collm 66.20 317 *eL* L 14 29 48.4
comp=Z,195nm,21.6s
CLL Collm 66.20 317 P **P** **13 57 32.3 +0.6**
CLL IAmb IAmb 13 57 50.6
comp=Z,14nm,0.9s
OSL Oslo 66.32 327 *e*P **P** **13 57 33.7 +1.4**
OSL *epP **pP** **13 57 49.1 +0.5**
JAVS Javornik 66.41 311 *i* P **P** **13 57 33.9 +0.6**
JAVS *i* pP **pP** **13 57 49.8 +0.1**
WET Wettzell 66.63 315 *e*P **P** **13 57 35.6 +1.1**
comp=Z,3.5nm,0.7s,baz=85,slow=5.7
WET *epP **pP** **13 57 51.6 +0.6**
WET *eL* L 14 26 16.4
comp=Z,168nm,19.2s
TRI Trieste 66.65 311 P **P** **13 57 35.0 +0.3**
TRI *PP **pP** **13 57 50.6 -0.5**
TRI Trieste 66.65 311 P **P** **13 57 35.0 +0.3**
TRI **pP** **13 57 50.6 -0.5**
TRI IAmb IAmb 13 57 53.8
comp=Z,21nm,0.8s
KBA Koelnbreinsper 66.69 313 *i* P **P** **13 57 35.7 +0.5**
comp=Z,3.3nm,0.5s
KBA *i* pP **pP** **13 57 51.6 0.0**
comp=Z,16nm,0.9s
WERN Wernitzgruen 66.76 316 *e*P **P** **13 57 36.5 +1.1**
comp=Z,7.5nm,0.9s,baz=85,slow=5.7
WERN *epP **pP** **13 57 52.2 +0.5**
GUNZ Gunzen 66.78 316 *e*pP pP 13 57 52.7 +0.8
DOMB Dombas 66.86 329 *e*P **P** **13 57 37.0 +1.2**
DOMB IVmB_BB 13 57 42.2
comp=Z,841nm,3.0s
DOMB *epP **pP** **13 57 52.2 +0.1**
ROTZ Rotzenmuhle 66.96 316 *e*P **P** **13 57 38.3 +1.8**
comp=Z,13nm,0.8s,baz=85,slow=5.7
MOX Moxa 67.18 317 *eL* L 14 29 39.6
comp=Z,156nm,21.8s
GRB3 Grafenberg Arr 67.29 315 *e*P **P** **13 57 40.7 +2.0**
baz=85,slow=5.7
GRB3 *epP **pP** **13 57 55.9 +0.8**
ABTA Abfaltersbach 67.31 313 *i* P **P** **13 57 38.9 -0.1**
comp=Z,3.7nm,0.6s
BSEG Bad Segeberg 67.40 320 *eL* L 14 29 54.3
comp=Z,166nm,22.0s
SKAR Skarslia 67.41 328 *e*P **P** **13 57 40.3 +1.0**
SKAR *epP **pP** **13 57 56.4 +0.7**
SKAR *eS* **S** **14 06 32.3 +1.7**
MOL Molde 67.49 330 *e*P **P** **13 57 40.7 +1.0**
MOL *eS* **S** **14 06 30.4 -0.9**
GRA1 Grafenberg Arr 67.60 316 pP 13 57 57.5 +0.4
GRF Grafenberg Arr 67.60 316 *e*pP **pP** **13 57 58.0 +0.9**
GRF *eL* L 14 30 41.1
comp=Z,144nm,19.9s
NRCA Norcia 67.68 308 P **P** **13 57 42.2 +0.8**
WTTA Wattenberg 67.80 313 *i* P **P** **13 57 42.6 +0.4**
comp=Z,6.2nm,0.5s
WTTA *i* pP **pP** **13 57 58.1 -0.5**
comp=Z,17nm,0.9s
WATA Walderalm 67.82 313 *i* P **P** **13 57 43.4 +1.1**
comp=Z,3.8nm,0.5s
WATA *i* pP **pP** **13 57 58.4 -0.3**
comp=Z,18nm,1.1s

FUR	**Furstenfeldbru**	**67.86**	**314**	*e*L		L	14 30 38.8		
	comp=Z,137nm,21.7s								
MURB	**Monte Urbino**	**68.01**	**309**	P		**P**	**13 57 44.6**	**+1.2**	
MURB						**pP**	**13 58 00.6**	**+0.7**	
SQTA	**Sankt Quirin**	**68.09**	**313**	*i* P		**P**	**13 57 44.3**	**+0.4**	
	comp=Z,4.1nm,0.5s								
SQTA				*i* pP		**pP**	**13 57 59.8**	**-0.6**	
	comp=Z,18nm,0.9s								
MOTA	**Moosalm**	**68.13**	**313**	P		**P**	**13 57 44.4**	**+0.1**	
	comp=Z,13nm,1.0s,SNR=5.3								
MOTA				*i* pP		**pP**	**13 58 00.4**	**-0.3**	
	comp=Z,31nm,1.0s								
RETA	**Reutte**	**68.33**	**314**	*i* P		**P**	**13 57 46.0**	**+0.6**	
	comp=Z,6.4nm,0.6s								
RETA				*i* pP		**pP**	**13 58 01.5**	**-0.4**	
	comp=Z,25nm,0.8s								
HYA	**Hoyanger**	**68.35**	**329**	*e*P		**P**	**13 57 46.3**	**+1.2**	
HYA				*e*pP		**pP**	**13 58 00.2**	**-1.3**	
HYA				*e*S		**S**	**14 06 40.3**	**-1.3**	
FETA	**Feichten**	**68.45**	**313**	*i* P		**P**	**13 57 46.7**	**+0.5**	
	comp=Z,2.8nm,0.5s								
FETA				*i* pP		**pP**	**13 58 02.3**	**-0.4**	
	comp=Z,20nm,1.1s								
BLS5	**Blasjo**	**68.53**	**327**	*e*P		**P**	**13 57 48.0**	**+1.6**	
BLS5				*e*pP		**pP**	**13 58 03.0**	**+0.2**	
DAVA	**Damuels**	**68.96**	**313**	*i* P		**P**	**13 57 50.2**	**+0.8**	
	comp=Z,8.4nm,1.0s								
DAVA				*i* pP		**pP**	**13 58 06.1**	**+0.2**	
	comp=Z,38nm,1.3s								
STU	**Stuttgart**	**69.09**	**315**	P		**P**	**13 57 50.6**	**+0.6**	
STU				pmax		pmax			
	comp=Z,41nm,1.0s								
STU	**Stuttgart**	**69.09**	**315**	P		**P**	**13 57 50.6**	**+0.6**	
BBOO	**Buckleboo**	**69.19**	**143**	P		**P**	**13 57 50.3**	**-0.5**	
TNS	**Taunus Mts**	**69.25**	**317**	*e*L		L	14 31 41.1		
	comp=Z,117nm,21.6s								
NOR	**Nord**	**69.52**	**352**	*i* P		**P**	**13 57 52.2**	**+0.1**	
	comp=Z,8.7nm,1.3s								
BFO	**Black Forest**	**69.75**	**315**	*e*L		L	14 28 46.4		
	comp=Z,136nm,19.6s								
WLF	**Walferdange**	**70.82**	**317**	P		**P**	**13 58 01.1**	**+0.5**	
WLF				pmax		pmax			
	comp=Z,51nm,0.9s								
WLF	**Walferdange**	**70.82**	**317**	P		**P**	**13 58 01.3**	**+0.8**	
WLF				pP		**pP**	**13 58 17.2**	**+0.1**	
	comp=Z,52nm,1.3s								
WLF				sP		**sP**	**13 58 23.3**	**-0.5**	
WLF	**Walferdange**	**70.82**	**317**	P		**P**	**13 58 01.1**	**+0.5**	
SENIN	**Lac Senin/Sane**	**70.90**	**313**	P		**P**	**13 58 02.0**	**+0.6**	
LPL	**La Plagne**	**71.50**	**312**	*e*P		**P**	**13 58 05.6**	**+0.5**	
LPL				pmax		pmax			
	comp=Z,12nm,0.5s								
BNI	**Bardonecchia**	**71.66**	**312**	P		**P**	**13 58 05.9**	**0.0**	
BNI				pmax		pmax			
	comp=Z,53nm,1.4s								
BNI	**Bardonecchia**	**71.66**	**312**	P		**P**	**13 58 05.8**	**0.0**	
BNI				lAmb		lAmb	13 58 24.1		
	comp=Z,52nm,1.4s								
STKA	**Stephens Creek**	**71.73**	**139**	P		**P**	**13 58 06.0**	**-0.2**	
STKA				pmax		pmax			
	comp=Z,3.0nm,0.9s								
STKA	**Stephens Creek**	**71.73**	**139**	P		**P**	**13 58 05.6**	**-0.6**	
	comp=Z,5.7nm,0.4s,baz=324,slow=5.4,SNR=34								
STKA				LR		LR	14 35 08.5		
	comp=Z,74nm,18.1s,baz=305,slow=40								
STKA	**Stephens Creek**	**71.73**	**139**	P		**P**	**13 58 06.0**	**-0.2**	
DAG	**Danmarks Havn**	**71.95**	**347**	*i* P		**P**	**13 58 07.0**	**+0.1**	
DAG	**Danmarks Havn**	**71.95**	**347**	*i* P		**P**	**13 58 07.0**	**+0.1**	
KEST	**Kesra**	**72.30**	**302**	P		**P**	**13 58 10.8**	**+1.0**	
	comp=Z,17nm,0.9s,baz=303,slow=1.5,SNR=9.6								
KEST				LR		LR	14 36 21.6		
	comp=Z,104nm,18.1s,baz=226,slow=41								
KEST	**Kesra**	**72.30**	**302**	P		**P**	**13 58 10.5**	**+0.7**	
KEST				lAmb		lAmb	13 58 27.9		
	comp=Z,32nm,1.1s								
RDOG	**Red Dog Mine**	**72.92**	**23**	P		**P**	**13 58 12.8**	**0.0**	
SSB	**Saint Sauveur**	**73.05**	**312**	P		**P**	**13 58 14.7**	**+0.6**	
SSB				pmax		pmax			
	comp=Z,29nm,1.2s								
SSB	**Saint Sauveur**	**73.05**	**312**	P		**P**	**13 58 14.7**	**+0.6**	
SSB				lAmb		lAmb	13 58 32.5		
	comp=Z,28nm,1.2s								
ANM	**Nome**	**73.22**	**26**	P		**P**	**13 58 15.2**	**+0.6**	
ANM				pmax		pmax			
	comp=Z,22nm,1.2s								
ANM	**Nome**	**73.22**	**26**	P		**P**	**13 58 15.2**	**+0.6**	
ANM				lAmb		lAmb	13 58 16.3		
	comp=Z,22nm,1.2s								
SSF	**Saint Saulge**	**73.22**	**314**	*e*P		**P**	**13 58 15.1**	**+0.1**	
SSF				pmax		pmax			
	comp=Z,12nm,0.8s								
LFF	**La Frestale**	**75.71**	**313**	*e*P		**P**	**13 58 30.7**	**+1.2**	
LFF				pmax		pmax			
	comp=Z,9.0nm,0.5s								
IMAR	**Indian Mountai**	**77.06**	**23**	P		**P**	**13 58 36.8**	**+0.1**	
TOLK	**Toolik Lake Re**	**77.06**	**20**	P		**P**	**13 58 37.3**	**+0.6**	
TOLK				lAmb		lAmb	13 58 38.8		
	comp=Z,24nm,0.8s								
COLD	**Coldfoot**	**77.62**	**21**	P		**P**	**13 58 40.3**	**+0.4**	
MLY	**Manley**	**78.62**	**23**	P		**P**	**13 58 46.1**	**+0.6**	
MLY				lAmb		lAmb	13 58 47.3		
	comp=Z,24nm,1.0s								
SUMG	**Summit**	**78.64**	**347**	P		**P**	**13 58 46.1**	**+0.3**	
SUMG				pmax		pmax			
	comp=Z,25nm,1.2s								
SUMG	**Summit**	**78.64**	**347**	*i* P		**P**	**13 58 45.8**	**0.0**	
SUMG	**Summit**	**78.64**	**347**	P		**P**	**13 58 46.1**	**+0.3**	
SUMG				lAmb		lAmb	13 59 04.8		
	comp=Z,25nm,1.2s								
BPAW	**Bear Paw Mtn.**	**79.03**	**24**	P		**P**	**13 58 47.9**	**+0.1**	
PPLA	**Purkeypile**	**79.22**	**25**	P		**P**	**13 58 49.0**	**+0.1**	
PPLA				lAmb		lAmb	13 58 50.5		
	comp=Z,36nm,1.4s								
BMAR	**Burnt Mountain**	**79.30**	**20**	P		**P**	**13 58 50.7**	**+1.6**	
TULEG	**Thule**	**79.31**	**356**	P		**P**	**13 58 48.6**	**-0.4**	
TULEG				lAmb		lAmb	13 59 07.0		
	comp=Z,23nm,1.0s								
NEA	**Nenana**	**79.47**	**23**	P		**P**	**13 58 49.2**	**-0.8**	
NEA				lAmb		lAmb	13 58 51.4		
	comp=Z,16nm,1.0s								
MDM	**Murphy Dome**	**79.55**	**22**	P		**P**	**13 58 50.4**	**-0.2**	
MDM				lAmb		lAmb	13 58 52.1		
	comp=Z,35nm,0.9s								
BWN	**Browne**	**79.56**	**23**	P		**P**	**13 58 51.3**	**+0.7**	
BWN				lAmb		lAmb	13 58 53.1		
	comp=Z,31nm,1.0s								
FYU	**Fort Yukon**	**79.61**	**20**	P		**P**	**13 58 52.0**	**+1.2**	
FYU				lAmb		lAmb	13 59 08.7		
	comp=Z,36nm,1.2s								
COLA	**College**	**79.73**	**22**	P		**P**	**13 58 51.4**	**-0.1**	
COLA				pmax		pmax			
	comp=Z,18nm,1.0s								
COLA	**College**	**79.73**	**22**	P		**P**	**13 58 51.4**	**-0.1**	
COLA				lAmb		lAmb	13 59 10.4		
	comp=Z,18nm,0.9s								
CCB	**Clear Creek Bu**	**79.88**	**23**	P		**P**	**13 58 51.2**	**-1.1**	
WRH	**Wood River Hil**	**79.88**	**23**	P		**P**	**13 58 51.8**	**-0.5**	
SKT	**Skwentna**	**79.96**	**26**	P		**P**	**13 58 52.2**	**-0.6**	
SKT				lAmb		lAmb	13 59 09.4		
	comp=Z,29nm,1.0s								
MCK	**McKinley**	**80.00**	**24**	P		**P**	**13 58 52.4**	**-0.6**	
MCK				pmax		pmax			
	comp=Z,12nm,0.8s								
MCK	**McKinley**	**80.00**	**24**	P		**P**	**13 58 52.4**	**-0.6**	
IL31		**80.13**	**22**	P		**P**	**13 58 52.6**	**-1.0**	
IL31						**pP**	**13 59 09.6**	**-0.8**	
ILAR	**Eielson Array**	**80.13**	**22**	P		**P**	**13 58 52.4**	**-1.2**	
ILAR							14 01 55.4		
ILAR	**Eielson Array**	**80.13**	**22**	P		**P**	**13 58 52.9**	**-0.8**	
	comp=Z,6.1nm,0.8s,baz=297,slow=4.9,SNR=50								
ILAR				PP		**PP**	**14 01 55.4**	**-0.5**	
	comp=Z,1.6nm,0.9s,baz=290,slow=6.1,SNR=5.3								
ILAR				LR		LR	14 38 36.7		
	comp=Z,156nm,19.3s,baz=314,slow=39								
ILAR	**Eielson Array**	**80.13**	**22**	P		**P**	**13 58 52.4**	**-1.2**	
PRP	**Porcupine Dome**	**80.15**	**21**	P		**P**	**13 58 53.1**	**-0.8**	
PRP				lAmb		lAmb	13 58 55.8		
	comp=Z,29nm,1.0s								
RND	**Reindeer**	**80.21**	**24**	P		**P**	**13 58 53.6**	**-0.6**	
RND				pmax		pmax			
	comp=Z,12nm,0.9s								
RND	**Reindeer**	**80.21**	**24**	P		**P**	**13 58 53.6**	**-0.6**	
HDA	**Harding Lake**	**80.32**	**23**	P		**P**	**13 58 53.0**	**-1.6**	
ESDC	**Sonseca Array**	**80.88**	**309**	P		**P**	**13 58 58.8**	**+0.6**	
	comp=Z,1.9nm,0.8s,baz=36,slow=5.3,SNR=4.5								
ESDC				pP		**pP**	**13 59 14.6**	**-0.5**	
	comp=Z,6.2nm,0.9s,baz=61,slow=5.4,SNR=7.1								
ESDC				LR		LR	14 41 16.0		
	comp=Z,35nm,18.5s,baz=245,slow=40								
ESDC	**Sonseca Array**	**80.88**	**309**	P		**P**	**13 58 58.4**	**+0.2**	
PMR	**Palmer**	**81.13**	**26**	P		**P**	**13 58 58.5**	**-0.5**	
PMR				pmax		pmax			
	comp=Z,23nm,1.1s								
PMR	**Palmer**	**81.13**	**26**	P		**P**	**13 58 58.5**	**-0.5**	
PMR				lAmb		lAmb	13 58 60.0		
	comp=Z,23nm,1.1s								
SML	**Sawmill**	**81.32**	**25**	P		**P**	**13 58 60.0**	**-0.1**	
SML				lAmb		lAmb	13 59 01.5		
	comp=Z,36nm,1.0s								
RIDG	**Independent Ri**	**81.47**	**23**	P		**P**	**13 59 00.4**	**-0.5**	
RIDG				lAmb		lAmb	13 59 01.6		
	comp=Z,18nm,0.8s								
KNK	**Knik Glacier**	**81.50**	**26**	P		**P**	**13 59 01.2**	**+0.2**	
KNK				lAmb		lAmb	13 59 02.3		
	comp=Z,31nm,1.2s								
RES	**Resolute Bay**	**81.56**	**2**	P		**P**	**13 59 01.2**	**+0.1**	
RES				pmax		pmax			
	comp=Z,16nm,1.2s								
RES	**Resolute Bay**	**81.56**	**2**	P		**P**	**13 59 01.2**	**+0.1**	
SCRK	**Sand Creek**	**81.62**	**22**	P		**P**	**13 59 01.8**	**+0.1**	
SCRK				lAmb		lAmb	13 59 03.1		
	comp=Z,32nm,1.1s								
PAX	**Paxson**	**81.71**	**23**	P		**P**	**13 59 02.8**	**+0.6**	
PAX				pmax		pmax			
	comp=Z,16nm,1.2s								
PAX	**Paxson**	**81.71**	**23**	P		**P**	**13 59 02.8**	**+0.6**	
KDAK	**Kodiak Island**	**81.75**	**30**	LR		LR	14 36 02.5		
	comp=Z,229nm,21.3s,baz=301,slow=36								
DOT	**Dot Lake**	**81.80**	**22**	P		**P**	**13 59 02.2**	**-0.3**	
INK	**Inuvik**	**81.81**	**16**	P		**P**	**13 59 02.8**	**+0.4**	
INK				pmax		pmax			
	comp=Z,26nm,0.9s								
INK	**Inuvik**	**81.81**	**16**	LR		LR	14 42 02.1		
	comp=Z,103nm,18.1s,baz=312,slow=40								
INK	**Inuvik**	**81.81**	**16**	P		**P**	**13 59 02.8**	**+0.4**	
INK				lAmb		lAmb	13 59 04.0		
	comp=Z,26nm,0.8s								
EGAK	**Eagle**	**82.06**	**21**	P		**P**	**13 59 03.8**	**0.0**	
EGAK				lAmb		lAmb	13 59 22.5		
	comp=Z,16nm,1.1s								
LBTB	**Lobatse**	**82.06**	**238**	P		**P**	**13 59 05.2**	**+0.6**	
LBTB				pmax		pmax			
	comp=Z,28nm,0.9s								
LBTB	**Lobatse**	**82.06**	**238**	P		**P**	**13 59 05.2**	**+0.6**	
EPYK	**Eagle Plains**	**82.33**	**18**	P		**P**	**13 59 05.2**	**-0.1**	
EPYK				lAmb		lAmb	13 59 06.3		
	comp=Z,12nm,0.7s								
MENT	**Mentasta**	**82.36**	**23**	P		**P**	**13 59 05.8**	**+0.3**	
C36M	**Paulatuk**	**83.14**	**13**	P		**P**	**13 59 09.2**	**-0.1**	
VRDI	**Verde Repeater**	**83.54**	**24**	P		**P**	**13 59 12.3**	**+0.4**	
MCARA	**McCarthy VSAT**	**83.60**	**24**	P		**P**	**13 59 12.7**	**+0.7**	
CRQM	**Cirque**	**83.95**	**24**	P		**P**	**13 59 14.4**	**+0.4**	
CRQM				lAmb		lAmb	13 59 15.9		
	comp=Z,24nm,1.1s								
TGL	**Tana Glacier**	**84.07**	**24**	P		**P**	**13 59 15.0**	**+0.5**	
BALM	**Baldy**	**84.07**	**24**	P		**P**	**13 59 15.3**	**+0.8**	
BALM				lAmb		lAmb	13 59 16.6		
	comp=Z,24nm,1.1s								
BOSA	**Boshof**	**84.16**	**235**	P		**P**	**13 59 16.3**	**+0.9**	
BOSA				pmax		pmax			
	comp=Z,42nm,1.0s								
BOSA	**Boshof**	**84.16**	**235**	P		**P**	**13 59 16.4**	**+0.9**	
	comp=Z,29nm,0.9s,baz=52,slow=4.3,SNR=21								
BOSA				LR		LR	14 33 19.8		
	comp=Z,144nm,20.6s,baz=104,slow=33								
BOSA	**Boshof**	**84.16**	**235**	P		**P**	**13 59 16.3**	**+0.9**	
BARN	**Barnard Glacie**	**84.31**	**24**	P		**P**	**13 59 16.7**	**+0.9**	
BARN				lAmb		lAmb	13 59 35.6		
	comp=Z,14nm,1.0s								
CTGM	**Chitina Glacie**	**84.50**	**24**	P		**P**	**13 59 17.6**	**+0.9**	
TOA0	**Torodi Ar. Sit**	**86.78**	**283**	P		**P**	**13 59 29.8**	**+1.1**	
TOA0				lAmb		lAmb	13 59 31.3		
	comp=Z,13nm,1.1s								
TORD	**Torodi Ar. Bea**	**86.78**	**283**	P		**P**	**13 59 29.9**	**+1.3**	
	comp=Z,7.2nm,1.0s,baz=73,slow=4.5,SNR=26								
TORD				LR		LR	14 41 46.9		
	comp=Z,84nm,19.8s,baz=345,slow=38								
TORD	**Torodi Ar. Bea**	**86.78**	**283**	P		**P**	**13 59 29.2**	**+0.6**	
WHY	**Whitehorse**	**87.00**	**22**	P		**P**	**13 59 29.1**	**+0.1**	
WHY				lAmb		lAmb	13 59 48.3		
	comp=Z,9.7nm,1.1s								
SKAG	**Skagway**	**87.71**	**23**	P		**P**	**13 59 33.0**	**+0.8**	
SKAG				lAmb		lAmb	13 59 52.5		
	comp=Z,25nm,1.2s								
YKA	**Yellowknife Ar**	**91.03**	**13**	P		**P**	**13 59 47.6**	**-0.1**	
	comp=Z,2.8nm,0.7s,baz=327,slow=4.3,SNR=52								
YKA				PP		**PP**	**14 03 22.8**	**-1.1**	
	comp=Z,1.5nm,0.8s,baz=332,slow=7.3,SNR=4.0								
YKA				PKKPbc		**PKKPbc**	**14 17 10.7**	**-2.1**	
	comp=Z,0.1nm,0.5s,baz=162,slow=1.2,SNR=4.9								
YKA				LR		LR	14 45 06.9		
	comp=Z,51nm,21.4s,baz=0.0,slow=38								
DBIC	**Dimbokro**	**95.30**	**280**	P		**P**	**14 00 08.3**	**-0.1**	
DBIC				pmax		pmax			
	comp=Z,10.0nm,1.0s								
DBIC	**Dimbokro**	**95.30**	**280**	P		**P**	**14 00 08.5**	**+0.1**	
	comp=Z,1.8nm,0.5s,baz=68,slow=2.0,SNR=4.9								
DBIC				LR		LR	14 46 39.4		
	comp=Z,63nm,18.2s,baz=48,slow=38								
DBIC	**Dimbokro**	**95.30**	**280**	P		**P**	**14 00 08.3**	**-0.1**	
DBIC				lAmb		lAmb	14 00 27.7		
	comp=Z,9.7nm,1.0s								
PDAR	**Pinedale Array**	**110.30**	**18**	PKiKP		**PKiKP**	**14 05 16.1**	**0.0**	
	comp=Z,0.5nm,0.6s,baz=105,slow=1.2,SNR=5.7								
NVAR	**Mina Array Bea**	**111.10**	**27**	PKiKP		**PKiKP**	**14 05 18.1**	**+0.4**	
	comp=Z,0.5nm,0.7s,baz=320,slow=2.9,SNR=4.7								
MNTX	**Cornudas Mount**	**121.79**	**19**			**PKiKP**	**14 05 38.5**	**+0.2**	
JCT	**Junction City**	**124.43**	**14**	PKIKP		**PKPdf**	**14 05 43.3**	**+0.1**	
JCT	**Junction City**	**124.43**	**14**			**PKPdf**	**14 05 43.3**	**+0.1**	
TX31	**Lajitas Ar. Si**	**124.51**	**19**			**PKPdf**	**14 05 43.6**	**+0.1**	
TX32	**Lajitas Array**	**124.51**	**19**			**PKPdf**	**14 05 43.4**	**-0.1**	
TXAR	**Lajitas Array**	**124.51**	**19**	PKIKP		**PKPdf**	**14 05 43.5**	**0.0**	
TXAR	**Lajitas Array**	**124.51**	**19**	PKP		**PKiKP**	**14 05 44.0**	**+0.2**	
	comp=Z,1.7nm,0.6s,baz=196,slow=0.6,SNR=26								
TXAR	**Lajitas Array**	**124.51**	**19**			**PKPdf**	**14 05 43.5**	**0.0**	
SDV	**Santo Domingo**	**144.15**	**333**			PKPbc	14 06 18.6	0.0	
RUSC	**La Rusia**	**147.85**	**335**	PKPbc		**PKPdf**	**14 06 28.6**	**+1.4**	
ROSC	**El Rosal**	**149.29**	**337**	PKPbc		**PKiKP**	**14 06 35.2**	**+0.3**	
	comp=Z,19nm,0.5s,baz=120,slow=12,SNR=8.7								
ROSC	**El Rosal**	**149.29**	**337**			**PKiKP**	**14 06 35.8**	**+0.9**	
CPUP	**Villa Florida**	**153.85**	**258**	PKIKP		**PKPdf**	**14 06 34.2**	**-1.2**	
CPUP	**Villa Florida**	**153.85**	**258**	PKPbc		**PKiKP**	**14 06 43.5**	**0.0**	
	comp=Z,2.9nm,0.7s,baz=216,slow=2.0,SNR=3.3								
CPUP	**Villa Florida**	**153.85**	**258**	PKPdf		**PKPdf**	**14 06 34.2**	**-1.2**	
PLCA	**Paso Flores**	**158.68**	**214**	PKPab		**PKPab**	**14 07 16.6**	**-0.4**	
	comp=Z,5.8nm,1.1s,baz=186,slow=3.7,SNR=5.3								
LPAZ	**La Paz**	**161.55**	**291**	PKPab		**PKPab**	**14 07 31.4**	**+0.5**	
	comp=Z,2.4nm,0.8s,baz=112,slow=3.5,SNR=4.9								

BEO 29 13:56:06.2±0.8, 44°45N×21°93E, h0km, ML1.5/7, Mining explosion., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
KUBS	**Kucevo**	**0.19**	**258**	*e*Pg		Pg	13 56 09.1	-0.6	
KUBS				*e*Sg		Sg	13 56 11.0	-1.1	
ZAGS	**Zajecar**	**0.68**	**161**	*e*Pg		Pg	13 56 18.6	-0.5	
ZAGS				*e*Sg		Sg	13 56 28.6	+0.7	
BOVS	**Bovan**	**0.83**	**191**	*e*Sg		Pg	13 56 22.0	-0.1	
BOVS	**Bovan**	**0.83**	**191**	*e*Pg		Sg	13 56 33.4	+0.5	
GRUS	**Gruza**	**1.04**	**238**	*e*Pg		Pg	13 56 25.1	-1.0	
GRUS				*e*Sg		Sb	13 56 40.6	-0.6	
ZAPS	**Zavoj**	**1.28**	**156**	*e*Pg		Pg	13 56 30.2	-0.6	
ZAPS				*e*Sg		Sg	13 56 46.1	-1.3	
SELS	**Selova**	**1.36**	**206**	*e*Pg		Pg	13 56 30.3	-2.0	
SELS				*e*Sg		Sg	13 56 49.6	-0.4	
IVAS	**Ivanjica**	**1.55**	**236**	*e*Pg		Pn	13 56 34.3	-0.8	
IVAS				*e*Sg		Sn	13 56 55.2	-0.8	
BARS	**Barje**	**1.64**	**183**	*e*Pg		Pn	13 56 35.4	-0.9	
BARS				*e*Sg		Sn	13 56 57.4	-0.6	

ROM 29 14:06:27.0±0.0, 43°412N±0°003×12°483E±0°004, h8km, ML2.0/22, Error ellipse: s-maj=0.3km s-min=0.2km az=33.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
					Op	ISC	h m s		ISC
ATVO	**AVT- Monte Val**	**0.06**	**242**	P		Pg	14 06 29.1	+0.1	
ATVO						S	14 06 30.4	0.0	
ATVO						AML	AML		
	comp=E,5575µm,0.3s								
ATVO						AML	AML		
	comp=N,5625µm,0.1s								
ATPI	**Pietralunga -**	**0.07**	**303**	P		Pg	14 06 29.3	+0.2	
ATPI						S	Sg	14 06 30.8	+0.2
ATPI						AML	AML		
	comp=E,1690µm,0.1s								
ATPI						AML	AML		
	comp=N,3710µm,0.5s								
ATFO	**Monte Foce - G**	**0.08**	**125**	P		Pg	14 06 29.4	+0.2	
ATFO						S	Sg	14 06 31.0	+0.2
ATFO						AML	AML		
	comp=E,3285µm,0.2s								
ATFO						AML	AML		
	comp=N,3985µm,0.3s								
PIEI	**Pieia**	**0.13**	**17**	P		Pg	14 06 30.6	+0.6	
PIEI						S	Sg	14 06 33.3	+1.4
PIEI						AML	AML		
	comp=N,2125µm,0.3s								
PIEI						AML	AML		
	comp=E,2710µm,0.1s								
MURB	**Monte Urbino**	**0.15**	**169**	P		Pg	14 06 31.1	+0.8	
MURB						S	Sg	14 06 34.0	+1.4
MURB						AML	AML		
	comp=E,1755µm,0.2s								
MURB						AML	AML		
	comp=N,1535µm,1.2s								
MURB						AML	AML		
	comp=N,1760µm,0.9s								
MURB						AML	AML		
	comp=E,1752µm,0.2s								
MURB						AML	AML		
	comp=E,1860µm,0.2s								
MURB						AML	AML		
	comp=N,1533µm,1.2s								
ATMI	**Monte Miggiano**	**0.17**	**244**	P		Pg	14 06 31.2	+0.5	
ATMI						S	Sg	14 06 34.1	+0.9
ATMI						AML	AML		
	comp=E,926µm,1.0s								
ATMI						AML	AML		
	comp=N,961µm,0.4s								
CDCA	**Citt' di Caste**	**0.19**	**284**	P		Pg	14 06 31.6	+0.7	
CDCA						S	Sg	14 06 35.1	+1.6
CDCA						AML	AML		
	comp=N,510µm,0.3s								
CDCA						AML	AML		
	comp=E,666µm,0.8s								
BADI	**Badiali**	**0.20**	**299**	P		Pg	14 06 31.8	+0.7	
BADI						S	Sg	14 06 35.5	+1.6
BADI						AML	AML		
	comp=E,2270µm,0.1s								
BADI						AML	AML		
	comp=E,2265µm,0.1s								
BADI						AML	AML		
	comp=N,1475µm,0.3s								
NARO	**Abbazia di Nar**	**0.21**	**20**	P		Pg	14 06 31.9	+0.6	
NARO						S	Sg	14 06 35.6	+1.4
NARO						AML	AML		
	comp=E,358µm,0.2s								
NARO						AML	AML		
	comp=N,244µm,0.7s								
SSFR	**Montelago di S**	**0.22**	**84**	P		Pg	14 06 32.1	+0.6	
SSFR						S	Sg	14 06 36.1	+1.6
SSFR						AML	AML		
	comp=N,1062µm,1.1s								
SSFR						AML	AML		
	comp=E,1320µm,1.4s								
SSFR						AML	AML		
	comp=N,1280µm,1.1s								
SSFR						AML	AML		
	comp=E,1265µm,0.7s								
ATTE	**AVT- Monte Tez**	**0.23**	**204**	P		Pg	14 06 32.3	+0.5	
ATTE						S	Sg	14 06 36.3	+1.4
ATTE						AML	AML		
	comp=N,436µm,0.6s								
ATTE						AML	AML		
	comp=E,347µm,0.2s								
FOSV	**Fossato di Vic**	**0.23**	**120**	P		Pg	14 06 32.3	+0.5	
FOSV						S	Sg	14 06 36.5	+1.5
FOSV						AML	AML		
	comp=E,221µm,1.1s								
FOSV						AML	AML		
	comp=N,224µm,0.3s								
ATCC	**AVT- Casa Cast**	**0.25**	**153**	P		Pg	14 06 33.0	+0.8	
ATCC						S	Sb	14 06 37.7	-0.7
ATCC						AML	AML		
	comp=E,798µm,1.3s								
ATCC						AML	AML		
	comp=N,777µm,0.2s								
MPAG	**Monte Paganucc**	**0.30**	**43**	P		Pg	14 06 33.6	+0.6	
MPAG						S	Sb	14 06 38.8	-0.9
MPAG						AML	AML		
	comp=E,140µm,0.4s								
MPAG						AML	AML

MURB				S	Sg	14 07 02.4	+1.4
MURB				END			
PIEI	**Pieia**	**0.14**	**13**	P	Pg	14 06 59.5	+0.5
PIEI				S	Sg	14 07 02.3	+1.2
PIEI				END			
NARO	**Abbazia di Nar**	**0.22**	**17**	P	Pg	14 07 00.8	+0.4

NEIC ***29*** *14:13:13.6±1.3, 18°.35N±0°.09×145°.6E±0°.2, h201km±7km, mb4.5/17, Error ellipse: s-maj=21.5km s-min=12.7km az=94.0*
IDC ***29*** *14:13:31.1±1.2, 18°.27N×145°.32E, h383km±14km, mb3.1/10, mb1 3.3/13, mb1mx3.1/35, mbtmp3.9/13, Error ellipse: s-maj=29.4km s-min=12.1km az=87.0*
ISC 29 14:13:32.0±0.6, 18°.26N±0°.07×145°.3E±0°.1, h400km, n30, σ2s51/30, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.66**	**185**	P	**Pn**	**14 14 49.3**	**-1.3**
	6.0nm,0.3s,baz=180,slow=20,SNR=2.5						
GUMO				S	**S**	14 15 52.1	-2.2
	1.7nm,0.3s,baz=195,slow=20,SNR=2.0						
JCJ	**Chichijima**	**9.25**	**343**	P	**Pn**	**14 15 41.8**	**+0.5**
	8.8nm,0.3s,baz=294,slow=22,SNR=8.0						
MJAR	**Matsushiro Arr**	**19.25**	**343**	P	**P**	**14 17 27.7**	**-1.7**
	0.1nm,0.3s,baz=160,slow=9.7,SNR=5.3						
MJAR	**Matsushiro Arr**	**19.25**	**343**	P	**P**	**14 17 22.6**	**-6.8**
MAJO	**Matsushiro**	**19.25**	**343**	P	**P**	**14 17 22.5**	**-6.9**
MAJO				IAmb	IAmb	14 17 23.5	
	comp=Z,27nm,1.8s						
MJB9	**Matsu-Tunnel**	**19.26**	**343**	P	**P**	**14 17 22.5**	**-6.9**
MJB9				IAmb	IAmb	14 17 23.5	
	comp=Z,28nm,1.8s						
SSLB	**Suanglung**	**23.34**	**288**	P	**P**	**14 18 06.3**	**-0.6**
SSLB				IAmb	IAmb	14 18 31.2	
	comp=Z,14nm,1.1s						
KSRS	**Korea Array**	**24.44**	**325**	P	**P**	**14 18 17.3**	**+0.8**
	comp=Z,1.0nm,0.6s,baz=144,slow=8.5,SNR=5.4						
SSE	**Sheshan**	**25.28**	**305**	P	**P**	**14 18 23.4**	**-0.7**
KNMB	**Chin-men Tao**	**25.76**	**289**	P	**P**	**14 18 29.6**	**+1.2**
QIZ	**Qiongzhong**	**33.55**	**277**	P	**P**	**14 19 37.5**	**+1.0**
SBUM	**Sibu**	**36.00**	**248**	P	**P**	**14 19 58.0**	**+0.7**
PETK	**Petropavlovsk-**	**36.11**	**13**	P	**P**	**14 19 58.0**	**+0.3**
	comp=Z,3.7nm,1.0s,baz=110,slow=6.6,SNR=5.1						
WRAB	**Tennant Creek**	**39.44**	**196**	P	**P**	**14 20 25.9**	**+0.4**
WRAB				IAmb	IAmb	14 21 25.7	
	comp=Z,39nm,1.9s						
WB2	**Warramunga Arr**	**39.45**	**196**	P	**P**	**14 20 25.6**	**0.0**
WB2				IAmb	IAmb	14 20 55.1	
	comp=Z,58nm,2.0s						
WRA	**Warramunga Arr**	**39.45**	**196**	P	**P**	**14 20 26.9**	**+1.3**
	comp=Z,1.1nm,1.0s,baz=20,slow=7.4,SNR=5.1						
FITZ	**Fitzroy Crossi**	**40.96**	**209**	P	**P**	**14 20 38.8**	**+0.9**
FITZ				IAmb	IAmb	14 21 12.4	
	comp=Z,27nm,1.6s						
ASAR	**Alice Springs**	**43.12**	**195**	P	**P**	**14 20 55.3**	**+0.2**
	comp=Z,0.8nm,1.1s,baz=10,slow=5.8,SNR=8.1						
SONM	**Songino Array**	**43.24**	**322**	P	**P**	**14 20 57.1**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=139,slow=7.7,SNR=5.5						
SONM	**Songino Array**	**43.24**	**322**	IAmb	IAmb	14 20 59.7	
	comp=Z,0.6nm,0.6s						
EIDS	**Eidsvold**	**43.73**	**172**	P	**P**	**14 20 59.8**	**0.0**
EIDS				IAmb	IAmb	14 21 29.4	
	comp=Z,35nm,1.4s						
YAK	**Yakutsk**	**45.08**	**350**	P	**P**	**14 21 09.8**	**0.0**
LSA	**Lhasa**	**50.35**	**294**	P	**P**	**14 21 49.6**	**-1.4**
BILL	**Bilibino**	**51.52**	**10**	P	**P**	**14 21 59.2**	**+0.9**
BILL				IAmb	IAmb	14 23 53.9	
	comp=Z,18nm,1.9s						
MKAR	**Makanchi Array**	**58.48**	**314**	P	**P**	**14 22 49.0**	**+1.2**
	comp=Z,0.2nm,0.4s,baz=85,slow=8.7,SNR=5.0						
MAKZ	**Makanchi**	**58.69**	**314**	P	**P**	**14 22 50.8**	**+1.5**
MAKZ				IAmb	IAmb	14 23 03.8	
	comp=Z,12nm,2.0s						
YKA	**Yellowknife Ar**	**78.57**	**28**	P	**P**	**14 24 50.8**	**+0.6**
	comp=Z,0.1nm,0.5s,baz=292,slow=5.4,SNR=4.2						
ARCES	**ARCESS Array B**	**82.79**	**342**	P	**P**	**14 25 13.0**	**+0.8**
	comp=Z,5.0nm,1.0s,baz=20,slow=13,SNR=2.6						
NVAR	**Mina Array Bea**	**83.73**	**52**	P	**P**	**14 25 19.4**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=311,slow=8.2,SNR=1.9						
FINES	**FINESS Array B**	**87.11**	**335**	P	**P**	**14 25 32.7**	**-0.8**
	comp=Z,0.4nm,0.4s,baz=107,slow=2.0,SNR=4.6						

ANF ***29*** *14:22:25.4±0.1, 34°.24N×119°.57W, h16km±1km, ML3.0/22, Error ellipse: s-maj=2.2km s-min=1.2km az=81.0*
NEIC ***29*** *14:22:25.6±2.0, 34°.23N±0°.02×119°.55W±0°.02, h20km±2km, Error ellipse: s-maj=2.7km s-min=2.6km az=65.0*
PAS ***29*** *14:22:26.3±2.0, 34°.24N±0°.01×119°.56W±0.01, h8km±5km, ML2.9/163, Error ellipse: s-maj=1.7km s-min=1.5km az=204.0*
SCEDC ***29*** *14:22:26.3, 34°.24N×119°.56W, h8km*
ISC 29 14:22:25.7±0.9, 34°.23N±0°.02×119°.56W±0°.02, h15km±7km, n81, σ0s69/106, Southern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBC	**Santa Barbara**	**0.24**	**328**		**Sg**	**14 22 34.6**	**0.0**
SBC	**Santa Barbara**	**0.24**	**328**	P	**Pg**	**14 22 30.7**	**-0.4**
	baz=148,SNR=32						
SBC				S	**Sg**	**14 22 34.6**	**0.0**
	baz=148						
SCZ2	**Santa Cruz Isl**	**0.25**	**195**		**Sb**	**14 22 36.1**	**0.0**
SCZ2	**Santa Cruz Isl**	**0.25**	**195**	P	**Pg**	**14 22 31.5**	**+0.4**
	baz=14,SNR=97						
SCZ2				S	**Sb**	**14 22 36.0**	**0.0**
	baz=14						
STCC	**Santa Clara**	**0.32**	**77**		**Pb**	**14 22 33.7**	**+0.6**
BLG	**Laguna Peak, P**	**0.43**	**107**		**Pg**	**14 22 34.2**	**-0.1**
BLG					**Sg**	**14 22 40.8**	**+0.7**
BLG	**Laguna Peak, P**	**0.43**	**107**	P	**Pg**	**14 22 34.2**	**-0.1**
	baz=288,SNR=11						
BLG				S	**Sg**	**14 22 40.8**	**+0.7**
	baz=288						
RYS	**Reyes Peak**	**0.44**	**23**		**Pg**	**14 22 34.5**	**-0.1**
SYP	**Santa Ynez Pea**	**0.45**	**310**		**Pg**	**14 22 34.7**	**-0.1**
SYP					**Sg**	**14 22 41.7**	**+0.7**
FIGC	**Figueroa Mtn.**	**0.61**	**324**		**Pg**	**14 22 37.8**	**+0.1**
FIGC					**Sb**	**14 22 47.5**	**+0.9**
AGOC	**Agoura**	**0.66**	**97**		**Pg**	**14 22 38.3**	**-0.4**
MPI	**Mount Pinos, F**	**0.67**	**31**		**Pg**	**14 22 38.3**	**-0.6**
MPI					**Sg**	**14 22 47.9**	**+0.1**
ABL	**Mount Abel**	**0.68**	**24**		**Pg**	**14 22 38.5**	**-0.5**
BSM	**San Miguel Isl**	**0.69**	**254**		**Pg**	**14 22 38.5**	**-0.6**
BSM					**Sg**	**14 22 48.6**	**+0.4**
PKM	**Mcpherson Peak**	**0.69**	**342**		**Pg**	**14 22 38.7**	**-0.4**
PKM					**Sg**	**14 22 48.7**	**+0.4**
PKM	**Mcpherson Peak**	**0.69**	**342**	P	**Pg**	**14 22 38.7**	**-0.4**
	baz=162,SNR=42						
PKM				S	**Sg**	**14 22 48.7**	**+0.4**
	baz=162						
BCW	**Bitter Crk WRg**	**0.71**	**10**		**Pg**	**14 22 39.4**	**-0.3**
BLCC	**Black Canyon**	**0.73**	**89**		**Pn**	**14 22 41.4**	**-0.2**
PYR	**Pyramid**	**0.75**	**64**		**Pg**	**14 22 40.4**	**0.0**
OSI	**Osito Audit: C**	**0.79**	**61**		**Pb**	**14 22 40.7**	**-0.5**
OSI	**Osito Audit: C**	**0.79**	**61**		**Pb**	**14 22 41.2**	**0.0**
OSI				Sg	**Sb**	**14 22 51.7**	**0.0**
OSI	**Osito Audit: C**	**0.79**	**61**	P	**Pb**	**14 22 41.1**	**0.0**
	baz=242						
OSI				S	**Sb**	**14 22 51.9**	**+0.2**
	baz=242						
OAT	**Oat Mountain**	**0.79**	**82**		**Pb**	**14 22 40.9**	**-0.3**
GATR	**Gnd/Air Tx Cnt**	**0.84**	**292**		**Pb**	**14 22 41.4**	**-0.6**
SBI	**Santa Barbara**	**0.87**	**149**		**Sb**	**14 22 54.3**	**+0.4**
DJJ	**Donna J Jenkin**	**0.92**	**98**		**Pb**	**14 22 42.2**	**-1.3**
DJJ					**Sb**	**14 22 54.9**	**-0.7**
IR2C	**Iron Canyon**	**0.97**	**81**		**Pb**	**14 22 44.1**	**-0.2**
SNCC	**San Nicolas Is**	**0.98**	**178**	Pg	**Pb**	**14 22 43.5**	**-0.9**
SNCC				Sg	**Sb**	**14 22 57.2**	**-0.1**
SNCC	**San Nicolas Is**	**0.98**	**178**		**Sg**	**14 22 58.2**	**+0.6**
SNCC	**San Nicolas Is**	**0.98**	**178**	P	**Pb**	**14 22 43.7**	**-0.7**
	baz=358						
SNCC				S	**Sb**	**14 22 57.9**	**+0.6**
	baz=358						
THC	**Tehachapi Micr**	**1.00**	**47**		**Pb**	**14 22 43.9**	**-1.0**
DECC	**Green Verdugo**	**1.01**	**89**		**Pb**	**14 22 44.1**	**-0.9**
DECC	**Green Verdugo**	**1.01**	**89**	P	**Pb**	**14 22 44.2**	**-0.9**
	baz=270						
TJR	**Tejon Ranch**	**1.04**	**40**		**Sb**	**14 22 58.6**	**-0.2**
BCH	**Branch Mountai**	**1.04**	**336**		**Pb**	**14 22 44.8**	**-0.7**
GR2C	**Griffith Obs.**	**1.05**	**96**		**Pb**	**14 22 44.2**	**-1.4**
ARVC	**Arvin**	**1.07**	**34**		**Pb**	**14 22 45.2**	**-0.8**
ARVC	**Arvin**	**1.07**	**34**	P	**Pb**	**14 22 45.8**	**-0.2**
	baz=214						
ARVC				S	**Sg**	**14 23 00.9**	**+0.4**
	baz=214						
RPV	**Rancho Palos V**	**1.08**	**117**		**Sb**	**14 22 58.3**	**-1.6**
CARC	**Carrizo Plain**	**1.10**	**348**		**Pb**	**14 22 46.3**	**-0.1**
LEOC	**Leona Valley**	**1.11**	**69**		**Pb**	**14 22 45.8**	**-0.9**
SMMC	**Simmler**	**1.14**	**342**		**Pb**	**14 22 46.5**	**-0.6**
SMMC	**Simmler**	**1.14**	**342**	P	**Pb**	**14 22 46.5**	**-0.6**
	baz=162,SNR=18						
SMMC				S	**Sn**	**14 23 02.7**	**+0.2**
	baz=162						
PASC	**Pasadena Art C**	**1.14**	**93**		**Pn**	**14 22 45.8**	**-1.4**
PASC	**Pasadena Art C**	**1.14**	**93**		**Sb**	**14 23 01.2**	**-0.5**
PASC	**Pasadena Art C**	**1.14**	**93**	Pg	**Pn**	**14 22 45.7**	**-1.5**
PASC	**Pasadena Art C**	**1.14**	**93**	Sg	**Sb**	**14 23 00.8**	**-1.0**
FMP	**Fort Macarthur**	**1.17**	**116**	P	**Pn**	**14 22 47.3**	**-0.2**
	baz=297						
FMP				S	**Sn**	**14 23 03.8**	**+0.5**
	baz=297						
TEJ	**El Tejon**	**1.23**	**36**		**Pn**	**14 22 47.4**	**-0.9**
MWC	**Mount Wilson**	**1.24**	**90**	Pn	**Pn**	**14 22 47.6**	**-1.1**
CIS	**Catalina Islan**	**1.26**	**131**	P	**Pn**	**14 22 48.7**	**-0.1**
	baz=312						
CIS				S	**Sg**	**14 23 06.8**	**+0.3**
	baz=312						
CHFC	**Chilao Flat St**	**1.27**	**85**		**Pn**	**14 22 48.0**	**-1.1**
EDW2	**Edwards Air Fo**	**1.44**	**63**		**Pn**	**14 22 51.2**	**-0.2**
EDW2					**Sn**	**14 23 10.4**	**+0.3**
EDW2	**Edwards Air Fo**	**1.44**	**63**	P	**Pn**	**14 22 51.3**	**-0.2**
	baz=244,SNR=67						
EDW2				S	**Sn**	**14 23 10.5**	**+0.3**
	baz=244						
SCI2	**San Clemente I**	**1.51**	**146**	Sg	**Sg**	**14 23 15.8**	**+1.5**
	baz=326						
SSK	**Sunset Peak**	**1.55**	**90**		**Pn**	**14 22 53.2**	**+0.3**
BFSC	**Mount Baldy Ra**	**1.57**	**89**	P	**Pn**	**14 22 52.9**	**-0.3**
	baz=271,SNR=39						
BFSC				S	**Sn**	**14 23 14.0**	**+0.6**
	baz=271						
PAGB	**Antelope Grade**	**1.60**	**339**	Pn	**Pn**	**14 22 52.8**	**-0.7**
VES	**Vestal, Richgr**	**1.65**	**14**	P	**Pn**	**14 22 54.4**	**+0.2**
	baz=194,SNR=9.3						
VES				S	**Sb**	**14 23 16.5**	**0.0**
	baz=194						
ISA	**Isabella, Lake**	**1.68**	**32**		**Pn**	**14 22 54.8**	**+0.2**
ISA	**Isabella, Lake**	**1.68**	**32**	Pb	**Pn**	**14 22 55.7**	**+1.0**
	baz=212,SNR=43						
ISA				S	**Sn**	**14 23 16.4**	**+0.4**
	baz=212						
LRMC	**Laurel Mtn Rad**	**1.98**	**51**	S	**Sn**	**14 23 23.5**	**0.0**
	baz=232						
SRTC	**Snort**	**2.08**	**45**		**Pb**	**14 23 02.4**	**-0.7**
CCCA	**Chr Cany lake**	**2.22**	**54**		**Pn**	**14 23 00.9**	**-1.1**
PMPB	**Monarch Peak**	**2.22**	**333**		**Pn**	**14 23 01.0**	**-1.1**
POB	**Polly Butte**	**2.26**	**103**		**Pn**	**14 23 01.9**	**-0.7**
MPMC	**Manual Prospec**	**2.49**	**42**	Pb	**Pb**	**14 23 10.1**	**-0.1**
	baz=224						
GSC	**Goldstone, Bar**	**2.50**	**64**		**Pn**	**14 23 06.0**	**0.0**
CWC	**Cottonwood Cre**	**2.51**	**28**	Pb	**Pb**	**14 23 10.1**	**-0.5**
	baz=209						
DAC	**Darwin (Calif)**	**2.60**	**38**		**Pg**	**14 23 15.2**	**-0.3**
PFO	**Pinyon Flats O**	**2.65**	**103**	Pn	**Pn**	**14 23 08.7**	**+0.7**
XPFO	**Pion Flat**	**2.65**	**103**	Pn	**Pn**	**14 23 08.6**	**+0.5**
HEC	**Hector,Ludlow**	**2.73**	**77**	P	**Pn**	**14 23 09.0**	**0.0**
	baz=258						
HEC				S	**Sn**	**14 23 42.1**	**+0.2**
	baz=258						
BAR	**Barrett**	**2.87**	**122**	Pn	**Pn**	**14 23 12.0**	**+1.1**
SAO	**San Andreas Ge**	**2.96**	**329**	Pn	**Pn**	**14 23 11.5**	**-0.6**
TIN	**Tinemaha, Big**	**3.02**	**21**	Sb	**Sb**	**14 23 58.3**	**+2.4**
	baz=201						
IKP	**In-Ko-Pah, Jac**	**3.29**	**118**	S	**Sn**	**14 23 56.6**	**+0.9**
	baz=300						
OMMB	**Old Mammoth Mi**	**3.40**	**7**		**Pn**	**14 23 18.8**	**+0.3**
MDPB	**Devils Postpil**	**3.41**	**6**	Pn	**Pn**	**14 23 19.7**	**+1.0**
TPNV	**Topopah Spring**	**3.82**	**44**	Pn	**Pn**	**14 23 24.6**	**+0.4**
W13A	**Hualapai Mount**	**4.75**	**78**	Pn	**Pn**	**14 23 37.3**	**+0.2**

THE ***29*** *14:26:14.4, 38°.37N×20°.44E, h5km±2km, ML2.3/4, Error ellipse: s-maj=2.5km s-min=0.3km az=95.0*
ATH ***29*** *14:26:14.1, 38°.37N×20°.47E, h14km±2km, ML2.5/7, Error ellipse: s-maj=2.4km s-min=0.7km az=275.0*
ISC 29 14:26:14.1±1.0, 38°.38N±0°.02×20°.47E±0°.04, h11km±5km, n33, σ0s53/52, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.08**	**65**	P	**Pg**	**14 26 16.5**	**-0.2**
VSK1				S	**Sg**	**14 26 18.2**	**-0.3**
KEF1	**Kardakata, Kep**	**0.10**	**180**	P	**Pg**	**14 26 16.9**	**+0.1**
KEF1				S	**Sg**	**14 26 18.9**	**+0.1**
FSK	**Fiskardo**	**0.11**	**41**	P	**Pg**	**14 26 17.1**	**+0.1**
FSK	**Fiskardo**	**0.11**	**41**	P	**Pg**	**14 26 17.1**	**+0.1**
FSK				S	**Sg**	**14 26 19.1**	**-0.1**
KEF4	**Livadi, Kephal**	**0.12**	**197**	P	**Pg**	**14 26 17.3**	**+0.2**
KEF4				S	**Sg**	**14 26 19.8**	**+0.5**
ARG2	**Argostoli**	**0.20**	**176**	P	**Pg**	**14 26 18.6**	**+0.2**
ARG2				S	**Sg**	**14 26 21.4**	**+0.2**
KEF3	**Kipouria, Keph**	**0.20**	**209**	P	**Pg**	**14 26 18.5**	**+0.2**
KEF3				S	**Sg**	**14 26 22.2**	**+1.0**
KEF2	**Argostoli. Kep**	**0.21**	**176**	P	**Pg**	**14 26 18.7**	**+0.1**
KEF2				S	**Sg**	**14 26 22.4**	**+0.7**
VLS	**Valsamata**	**0.22**	**155**	P	**Pg**	**14 26 18.8**	**+0.1**
VLS				S	**Sg**	**14 26 22.3**	**+0.4**
	2μm,0.2s						
VLS	**Valsamata**	**0.22**	**155**	P	**Pg**	**14 26 18.9**	**+0.1**
VLS				S	**Sg**	**14 26 22.6**	**+0.7**
VLS				AML	AML	14 26 22.8	
	comp=E,4153μm,0.1s						
VLS				AML	AML	14 26 25.0	
	comp=N,3535μm,0.2s						
EVGI	**Lefkada island**	**0.29**	**31**	P	**Pg**	**14 26 20.2**	**+0.2**
EVGI				S	**Sg**	**14 26 24.9**	**+1.0**
EVGI	**Lefkada island**	**0.29**	**31**	P	**Pg**	**14 26 20.2**	**+0.2**
EVGI				S	**Sg**	**14 26 25.0**	**+1.1**
KFL	**Anninata**	**0.36**	**137**	P	**Pg**	**14 26 21.5**	**+0.1**
KFL				S	**Sg**	**14 26 27.6**	**+1.3**
	comp=N,1μm,0.2s						
KFL	**Anninata**	**0.36**	**137**	P	**Pg**	**14 26 21.5**	**+0.1**
KFL				S	**Sg**	**14 26 27.2**	**+0.9**
KFL				AML	AML	14 26 29.3	
	comp=N,3051μm,0.2s						
KFL				AML	AML	14 26 29.5	
	comp=E,3269μm,0.3s						
LKD2	**Lefkada island**	**0.44**	**20**	P	**Pg**	**14 26 22.7**	**-0.1**
LKD2				S	**Sg**	**14 26 29.8**	**+1.2**
	comp=E,238nm,0.6s						
LKD2	**Lefkada island**	**0.44**	**20**	P	**Pg**	**14 26 22.8**	**-0.1**
LKD2				S	**Sb**	**14 26 30.0**	**-0.5**
LKD2				AML	AML	14 26 31.3	
	comp=E,473μm,0.6s						
LKD2				AML	AML	14 26 33.5	
	comp=N,495μm,0.5s						
TSLK	**Tsoukalades, L**	**0.47**	**18**	P	**Pg**	**14 26 23.5**	**+0.1**
TSLK				S	**Sg**	**14 26 30.5**	**+0.8**
	comp=N,282nm,0.6s						
TSLK	**Tsoukalades, L**	**0.47**	**18**	P	**Pg**	**14 26 22.9**	**-0.5**
TSLK				S	**Sg**	**14 26 30.5**	**+0.8**
VLMS	**Volimes, Zakyn**	**0.52**	**163**	P	**Pg**	**14 26 24.1**	**-0.2**
VLMS				S	**Sb**	**14 26 32.5**	**-0.3**
VLMS				AML	AML	14 26 35.5	
	comp=E,2142μm,0.2s						
VLMS				AML	AML	14 26 36.3	
	comp=N,2579μm,0.2s						
PDO	**Prodromos**	**0.60**	**68**	P	**Pg**	**14 26 25.8**	**-0.1**
PDO	**Prodromos**	**0.60**	**68**	P	**Pg**	**14 26 25.8**	**-0.1**
PDO				S	**Sb**	**14 26 35.4**	**+0.2**
RLS	**Riolos of Patr**	**0.85**	**112**	P	**Pg**	**14 26 30.5**	**+0.1**
PVO	**Paravola**	**0.86**	**73**	P	**Pg**	**14 26 31.0**	**+0.2**
PVO	**Paravola**	**0.86**	**73**	P	**Pg**	**14 26 31.0**	**+0.2**
PVO				AML	AML	14 26 49.1	
	comp=E,406μm,0.3s						
PVO				AML	AML	14 26 51.8	
	comp=N,486μm,0.5s						
DRO	**Drossia**	**1.06**	**113**	P	**Pg**	**14 26 34.8**	**+0.2**
DRO				AML	AML	14 26 56.8	
	comp=E,738μm,0.5s						
DRO				AML	AML	14 26 56.9	
	comp=N,803μm,0.5s						
EFP	**Efpalio**	**1.13**	**87**	P	**Pb**	**14 26 34.9**	**-0.7**
ANX	**Ano Chora**	**1.16**	**79**	P	**Pb**	**14 26 35.8**	**-0.4**
ANX				AML	AML	14 26 59.1	
	comp=N,467μm,0.6s						
ANX				AML	AML	14 27 00.1	
	comp=E,505μm,0.8s						
LAKA	**Lakka**	**1.19**	**96**	P	**Pb**	**14 26 36.2**	**-0.6**
TRIZ	**Trizonia**	**1.26**	**90**	P	**Pn**	**14 26 37.1**	**-0.5**
KALE	**Kalithea**	**1.31**	**89**	P	**Pn**	**14 26 37.7**	**-0.7**
KLV	**Kalavryta, Ach**	**1.36**	**104**	P	**Pn**	**14 26 39.0**	**-0.1**
KLV	**Kalavryta, Ach**	**1.36**	**104**	P	**Pn**	**14 26 39.0**	**-0.1**
AGG	**Agios Georgios**	**1.59**	**65**	P	**Pb**	**14 26 44.1**	**+0.5**

DDA ***29*** *14:29:43.6, 39°.80N×33°.05E, h7km±4km, ML1.3*
ISK 29 14:29:43.7, 39°.90N×33°.06E, h5km, ML2.0/5, Suspected Mining explosion., Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTO	**Ankara**	**0.21**	**262**	PG	Pg	14 29 48.4	+0.6
LOD	**Lodumlu**	**0.23**	**268**	PG	Pg	14 29 48.8	+0.6
AFSR	**Afar-Bala (An**	**0.45**	**179**	PG	Pg	14 29 53.3	+0.9
BRTR	**Keskin Array B**	**0.48**	**111**	PG	Pg	14 29 53.6	+0.7
BRTR				SG	Sb	14 30 00.6	-1.4
KKUL	**Konya-Kulu**	**0.74**	**189**	*i* S	Sn	14 30 11.4	-1.1
CMDR	**Camlidere-ANKA**	**0.75**	**323**	*i* S	Sb	14 30 09.8	0.0
CMDR	**Camlidere-ANKA**	**0.75**	**323**	*i* S	Sn	14 30 11.4	-1.4
KULU	**Kulu**	**0.86**	**183**	PG	Pg	14 30 00.6	+0.5
KIRS	**Kırehir-Merke**	**1.01**	**139**	*i* P	Pg	14 30 01.6	-1.4
KIRS				*i* S	Sg	14 30 16.3	+0.1
KIRS				IAML		14 30 22.0	
	comp=Z,6.8nm,0.3s						
CDAG	**Cicekdag**	**1.04**	**105**	*i* S	Sn	14 30 22.8	+2.7
KIBS	**BOLU**	**1.06**	**300**	*i* P	Pb	14 30 04.4	-0.3
KIBS				IAML		14 30 28.0	
	comp=Z,21nm,0.6s						
KIBS	**BOLU**	**1.06**	**300**	*i* P	Pg	14 30 04.1	0.0
KIBS				IAML		14 30 28.0	
	comp=Z,21nm,0.6s						
YUVA	**Yuva-Kibriscik**	**1.16**	**295**	PN	Pn	14 30 06.7	-0.1
BCAM	**Yenicaga**	**1.19**	**321**	*i* S	Sn	14 30 26.1	+2.3
BCAM	**Yenicaga**	**1.19**	**321**	*i* P	Pn	14 30 08.2	+1.0
BCAM				*i* S	Sb	14 30 22.8	+0.2
BCAM				IAML		14 30 29.0	
	comp=Z,7.2nm,0.4s						
CORM	**Corum**	**1.23**	**76**	PN	Pb	14 30 07.6	0.0
SIRC	**Yozgat**	**1.71**	**109**	*i* P	Pb	14 30 15.5	-0.1
SIRC				*i* S	Sg	14 30 38.3	-0.2
SIRC				IAML		14 30 49.0	
	comp=Z,2.8nm,0.6s						

NIED ***29*** *14:33:00, 30°.00N×142°.50E, h5km, Mw4.2 Best double couple: M0 2.07000×10^15 NP1:φs28.00000°, δ52.00000°, λ119.00000°. NP2:φs166.00000°, δ46.00000°, λ58.00000°.*
BJI ***29*** *14:33:12.3±0.0, 29°.84N×142°.30E, h18km, mB4.8/33, mb4.4/40, Ms4.4/10, Ms7 4.1/5*
IDC ***29*** *14:33:13.1±0.6, 29°.90N×142°.31E, h0km, mb4.1/24, mb1 4.3/27, mb1mx4.2/42, mbtmp4.1/27, ML3.4/4, MS3.3/7, Ms1 3.3/7, ms1mx3.0/35, Error ellipse: s-maj=17.0km s-min=12.7km az=88.0*
JMA ***29*** *14:33:14.4±0.1, 30°.02N×142°.52E, h46km, M4.5*
MOS ***29*** *14:33:14.8±0.9, 29°.96N×142°.33E, h25km, mb4.6/26, Error ellipse: s-maj=11.2km s-min=5.4km az=109.6*
NEIC ***29*** *14:33:15.7±1.5, 29°.90N±0°.05×142°.12E±0°.07, h16km±4km, mb4.7/63, Error ellipse: s-maj=9.2km s-min=6.2km az=55.0*
ISC 29 14:33:17.0±0.4, 29°.97N±0°.04×142°.25E±0°.06, h26km, n174, σ1s60/178, mb4.5/67, MS3.6/10, 4C-2D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.86**	**181**	P	**Pn**	**14 33 59.9**	**-1.1**
CBIJ				*e*S	**Sn**	**14 34 32.9**	**-1.7**
JCJ	**Chichijima**	**2.86**	**181**	Pn	**Pn**	**14 33 59.9**	**-1.1**
	8.1nm,0.3s,baz=254,slow=23,SNR=12						
JCJ				Sn	**Sn**	**14 34 32.1**	**-2.5**
	60nm,0.3s,baz=143,slow=22,SNR=13						
JHJ2	**Mitsune**	**3.76**	**327**	P	**Pn**	**14 34 12.8**	**-0.4**
JHJ2				*e*S	**Sn**	**14 34 55.7**	**-0.9**
JHJ2	**Mitsune**	**3.76**	**327**	Pn	**Pn**	**14 34 12.3**	**-0.9**
BSO1	**Boso 1**	**4.79**	**347**	P	**Pn**	**14 34 25.9**	**-1.1**
BSO1				*e*S	**Sn**	**14 35 20.3**	**-1.1**
BSO3	**Boso 3**	**5.04**	**344**	P	**Pn**	**14 34 29.6**	**-1.0**
BSO3				*e*S	**Sn**	**14 35 27.9**	**+0.1**
BSO4	**Boso 4**	**5.26**	**343**	P	**Pn**	**14 34 34.4**	**+0.6**
JOD2	**Odawara 2**	**5.91**	**334**	P	**Pn**	**14 34 43.2**	**+0.3**
JOD2				*e*S	**Sn**	**14 35 50.8**	**+1.0**
JHU	**Hanno**	**6.37**	**338**	P	**Pn**	**14

KLR	**Kul'dur**	**20.83**	**340**	P	Pn	14 37 56.8	-2.2
	comp=Z,8.5nm,0.7s,baz=172,slow=7.3,SNR=19						
GRNR	**Gornyy**	**21.23**	**350**	*i* P	**P**	**14 38 01.8**	**+1.0**
GRNR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GRNR				MLR	MLR		
	comp=Z,80nm,11.0s						
KNMB	**Chin-men Tao**	**21.90**	**261**	P	**P**	**14 38 08.8**	**+0.6**
KNMB				IAmb	IAmb	14 38 56.6	
	comp=Z,66nm,1.5s						
SKR	**Severo-Kuril's**	**23.16**	**23**	*e*P	**P**	**14 38 18.9**	**-2.3**
SKR				pmax	pmax		
	comp=Z,300nm,4.8s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
SKR				MLR	MLR		
	comp=Z,1μm,16.0s						
BJT	**Baijiatuau**	**23.52**	**302**	P	**P**	**14 38 24.0**	**-1.0**
BJT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BJT	**Baijiatuau**	**23.52**	**302**	P	**P**	**14 38 24.0**	**-1.0**
PETK	**Petropavlovsk-**	**25.74**	**22**	P	**P**	**14 38 44.9**	**-0.4**
	comp=Z,2.8nm,0.8s,baz=225,slow=20,SNR=3.0						
HIA	**Hailar**	**25.75**	**325**	P	**P**	**14 38 44.3**	**-1.1**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HIA	**Hailar**	**25.75**	**325**	P	**P**	**14 38 44.3**	**-1.1**
HIA				IAmb	IAmb	14 38 47.3	
	comp=Z,8.6nm,0.9s						
ZEA	**Zeya**	**26.14**	**340**	*e*P	**P**	**14 38 48.9**	**+0.1**
ZEA				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC	**Hu-ho-hao-te**	**27.13**	**302**	*e*P	**P**	**14 38 57.3**	**-0.8**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,81nm,6.0s						
ENH	**Enshi**	**28.29**	**279**	P	**P**	**14 39 07.2**	**-1.2**
ENH				IAmb	IAmb	14 39 12.2	
	comp=Z,23nm,1.8s						
TNTI	**Ternate**	**32.30**	**209**	P	**P**	**14 39 44.2**	**+0.3**
ULN	**Ulaanbaatar**	**32.33**	**313**	*ce*P	**P**	**14 39 45.4**	**+1.3**
ULN				pmax	pmax		
	comp=Z,11nm,1.7s						
ULN	**Ulaanbaatar**	**32.33**	**313**	P	**P**	**14 39 45.0**	**+0.8**
ULN				IAmb	IAmb	14 39 46.1	
	comp=Z,5.5nm,0.7s						
JAY	**Jayapura**	**32.34**	**183**	LR	LR	14 49 02.1	
	comp=Z,50nm,21.2s,baz=242,slow=29						
LZH	**Lanzhou**	**32.62**	**291**	*e*P	**P**	**14 39 48.8**	**+2.0**
LZH				pP	sP	14 39 54.3	-1.2
LZH				sP	pwP	14 39 57.3	-2.3
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,59nm,4.9s						
LZH				LR	LR		
	comp=Z,290nm,12.6s						
LZH				LR	LR		
	comp=Z,320nm,13.2s						
LZH				LR	LR		
	comp=Z,290nm,15.1s						
SONM	**Songino Array**	**32.74**	**313**	P	**P**	**14 39 47.9**	**+0.3**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SONM	**Songino Array**	**32.74**	**313**	P	**P**	**14 39 48.5**	**+0.9**
	comp=Z,2.6nm,0.8s,baz=110,slow=7.8,SNR=18						
SONM				LR	LR	14 51 51.1	
	comp=Z,44nm,18.9s,baz=290,slow=34						
SONM	**Songino Array**	**32.74**	**313**	P	**P**	**14 39 47.9**	**+0.3**
CD2	**Chengdu**	**33.09**	**282**	P	**P**	**14 39 48.5**	**-2.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YAK	**Yakutsk**	**33.11**	**349**	*i* P	**P**	**14 39 52.4**	**+1.9**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YAK	**Yakutsk**	**33.11**	**349**	P	**P**	**14 39 53.6**	**+3.1**
YAK				IAmb	IAmb	14 40 49.7	
	comp=Z,3.8nm,0.7s						
SEY	**Seymchan**	**33.62**	**8**	*i* P	**P**	**14 39 54.7**	**-0.3**
SEY	**Seymchan**	**33.62**	**8**	P	**P**	**14 39 55.6**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=214,slow=11,SNR=7.4						
SLVN	**Son La**	**35.48**	**265**	P	**P**	**14 40 10.1**	**-1.6**
SLVN				IAmb	IAmb	14 41 03.3	
	comp=Z,14nm,1.9s						
TLY	**Talaya**	**35.79**	**318**	*e*P	P	14 40 18.3	+4.4
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,423nm,15.0s						
GTA	**Gaotai**	**35.86**	**297**	*e*P	**P**	**14 40 14.0**	**-0.8**
GTA				pP	pP	14 40 19.8	-1.2
GTA				sP	sP	14 40 22.8	-0.8
GTA				pmax	pmax		
	comp=Z,80nm,5.1s						
GTA				LR	LR		
	comp=Z,62nm,15.6s						
GTA				LR	LR		
	comp=Z,63nm,14.3s						
PBKT	**Sadao Pong**	**39.98**	**260**	P	**P**	**14 40 49.1**	**-0.5**
BILL	**Bilibino**	**40.66**	**14**	*e*P	**P**	**14 40 54.8**	**+0.2**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CHTO	**Chiang Mai**	**40.76**	**264**	P	**P**	**14 40 55.3**	**-0.8**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHTO	**Chiang Mai**	**40.76**	**264**	P	**P**	**14 40 55.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**40.90**	**264**	P	**P**	**14 40 56.5**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=66,slow=5.9,SNR=11						
CMAR				LR	LR	14 59 24.3	
	comp=Z,49nm,18.5s,baz=85,slow=38						
MTN	**Manton Dam**	**43.89**	**196**	P	**P**	**14 41 21.0**	**-0.4**
LSA	**Lhasa**	**44.02**	**283**	P	**P**	**14 41 19.5**	**-3.5**
LSA				pmax	pmax		
	comp=Z,13nm,1.9s						
LSA	**Lhasa**	**44.02**	**283**	P	**P**	**14 41 19.5**	**-3.5**
LSA				IAmb	IAmb	14 41 29.6	
	comp=Z,13nm,1.9s						
WMQ	**Urumqi**	**44.99**	**303**	*e*P	**P**	**14 41 30.8**	**+0.6**
WMQ				pP	sP	14 41 38.3	-0.8
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,73nm,3.7s						
WMQ				LR	LR		
	comp=Z,310nm,28.5s						
WMQ				LR	LR		
	comp=Z,760nm,27.1s						
WMQ	**Urumqi**	**44.99**	**303**	P	**P**	**14 41 30.8**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ	**Urumqi**	**44.99**	**303**	P	**P**	**14 41 30.8**	**+0.6**
WMQ				IAmb	IAmb	14 41 36.4	
	comp=Z,4.6nm,0.7s						
KULM	**Kulim**	**46.23**	**246**	P	**P**	**14 41 40.0**	**-0.3**
IPM	**Ipoh**	**46.43**	**245**	P	**P**	**14 41 41.0**	**-0.8**
ZALV	**Zalesovo Beam**	**47.39**	**317**	P	**P**	**14 41 49.7**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=86,slow=9.1,SNR=4.0						
ZALV				PcP	**PcP**	**14 43 19.0**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=105,slow=4.2,SNR=3.7						
ZALV				LR	LR	15 02 17.7	
	comp=Z,50nm,18.1s,baz=72,slow=37						
MK31	**Makanchi Array**	**48.73**	**308**	P	**P**	**14 41 59.5**	**+0.2**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK31	**Makanchi Array**	**48.73**	**308**	P	**P**	**14 41 59.5**	**+0.2**
MK31				IAmb	IAmb	14 42 00.8	
	comp=Z,5.2nm,0.8s						
MKAR	**Makanchi Array**	**48.73**	**308**	P	**P**	**14 42 00.2**	**+0.9**
	comp=Z,5.2nm,0.7s,baz=92,slow=9.3,SNR=42						
MKAR	**Makanchi Array**	**48.73**	**308**	P	**P**	**14 41 59.5**	**+0.1**
MAKZ	**Makanchi**	**48.94**	**308**	P	**P**	**14 42 01.2**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAKZ	**Makanchi**	**48.94**	**308**	P	**P**	**14 42 01.2**	**+0.3**
MAKZ				IAmb	IAmb	14 42 03.3	
	comp=Z,5.6nm,1.0s						
WB0	**Warramunga Arr**	**50.02**	**190**	P	**P**	**14 42 08.7**	**-0.7**
WR0	**Warramunga Arr**	**50.19**	**189**	P	**P**	**14 42 09.8**	**-0.8**
WR0				IAmb	IAmb	14 42 28.4	
	comp=Z,33nm,1.9s						
WRAB	**Tennant Creek**	**50.19**	**190**	P	**P**	**14 42 10.0**	**-0.6**
WRAB	**Tennant Creek**	**50.19**	**190**	P	**P**	**14 42 10.0**	**-0.6**
WB2	**Warramunga Arr**	**50.20**	**190**	P	**P**	**14 42 10.1**	**-0.6**
WRA	**Warramunga Arr**	**50.20**	**190**	P	**P**	**14 42 10.3**	**-0.4**
	comp=Z,4.8nm,0.5s,baz=9.1,slow=8.1,SNR=43						
WRA	**Warramunga Arr**	**50.20**	**190**	P	**P**	**14 42 09.4**	**-1.3**
KURK	**Kurchatov**	**51.04**	**313**	*i* P	**P**	**14 42 17.1**	**+0.3**
KURK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURK	**Kurchatov**	**51.04**	**313**	P	**P**	**14 42 17.7**	**+0.9**
KURK	**Kurchatov**	**51.04**	**313**	IAmb	IAmb	14 42 19.4	
	comp=Z,7.6nm,1.2s						
GSI	**Gunungsitoli**	**51.08**	**245**	P	**P**	**14 42 16.2**	**-1.3**
GSI				IAmb	IAmb	14 42 17.0	
	comp=Z,16nm,1.0s						
KURBB	**Kurchatov Arra**	**51.10**	**313**	P	**P**	**14 42 17.7**	**+0.5**
	comp=Z,2.2nm,0.5s,baz=91,slow=7.2,SNR=17						
IMAR	**Indian Mountai**	**52.47**	**28**	P	**P**	**14 42 28.2**	**+1.0**
PPLA	**Purkeypile**	**52.68**	**32**	P	**P**	**14 42 30.2**	**+1.2**
PPLA				IAmb	IAmb	14 43 47.4	
	comp=Z,41nm,1.7s						
KDJ	**Kajisay**	**52.82**	**302**	P	**P**	**14 42 30.7**	**+0.3**
KDJ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KDJ	**Kajisay**	**52.82**	**302**	P	**P**	**14 42 30.7**	**+0.3**
MLY	**Manley**	**53.57**	**29**	P	**P**	**14 42 37.1**	**+1.7**
MLY				IAmb	IAmb	14 43 03.9	
	comp=Z,10nm,1.6s						
TRF	**Thorofare Moun**	**53.60**	**31**	P	**P**	**14 42 37.8**	**+2.0**
TRF				IAmb	IAmb	14 43 35.8	
	comp=Z,32nm,1.7s						
BOOM	**Boomskoye usch**	**53.67**	**303**	P	**P**	**14 42 37.2**	**+0.6**
BOOM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOOM	**Boomskoye usch**	**53.67**	**303**	P	**P**	**14 42 37.2**	**+0.6**
AS31	**Alice Springs**	**53.93**	**189**	P	**P**	**14 42 38.1**	**-0.3**
ASAR	**Alice Springs**	**53.93**	**189**	P	**P**	**14 42 37.9**	**-0.6**
	comp=Z,0.8nm,0.4s,baz=2.9,slow=6.8,SNR=30						
ASAR	**Alice Springs**	**53.93**	**189**	P	**P**	**14 42 37.7**	**-0.7**
KSH	**Kashi**	**54.19**	**299**	P	P	14 42 44.3	+3.8
KSH				pP	sP	14 42 48.0	-1.5
KSH				S	**S**	**14 50 21.0**	**+4.9**
KSH				sS	sS	14 50 29.5	+2.7
KSH				SS	**SS**	**14 54 03.5**	**+5.7**
KSH				pmax	pmax		
	comp=Z,400nm,5.6s						
KSH				LR	LR		
	comp=Z,130nm,4.2s						
KSH				LR	LR		
	comp=Z,130nm,4.5s						
KSH				LR	LR		
	comp=Z,280nm,6.1s						
NEA	**Nenana**	**54.23**	**30**	P	P	14 42 45.2	+5.1
NEA				IAmb	IAmb	14 44 24.8	
	comp=Z,27nm,2.0s						
TOLK	**Toolik Lake Re**	**54.51**	**25**	P	**P**	**14 42 43.5**	**+1.3**
TOLK				IAmb	IAmb	14 43 28.9	
	comp=Z,20nm,1.7s						
AAK	**Ala-Archa**	**54.70**	**303**	*ce*P	**P**	**14 42 44.9**	**+0.8**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AAK	**Ala-Archa**	**54.70**	**303**	P	**P**	**14 42 44.6**	**+0.5**
	comp=Z,1.5nm,0.6s,baz=120,slow=6.1,SNR=11						
AAK	**Ala-Archa**	**54.70**	**303**	P	**P**	**14 42 44.2**	**+0.1**
SCM	**Sheep Creek Mo**	**54.87**	**33**	P	**P**	**14 42 45.1**	**+0.1**
SCM				pmax	pmax		
	comp=Z,46nm,1.6s						
SCM	**Sheep Creek Mo**	**54.87**	**33**	P	**P**	**14 42 45.1**	**+0.1**
ILAR	**Eielson Array**	**55.18**	**30**	P	**P**	**14 42 47.1**	**+0.1**
	comp=Z,0.3nm,0.7s,baz=248,slow=6.1,SNR=4.7						
PSAB3	**Pilbara Seismi**	**55.61**	**205**	P	**P**	**14 42 50.0**	**-0.6**
EYAK	**Cordova Ski Ar**	**55.63**	**35**	P	**P**	**14 42 52.8**	**+2.5**
PSAC3	**Pilbara Seismi**	**55.65**	**205**	P	**P**	**14 42 50.1**	**-0.7**
PSAC3				IAmb	IAmb	14 43 45.4	
	comp=Z,26nm,1.5s						
EIDS	**Eidsvold**	**55.67**	**170**	P	**P**	**14 42 52.4**	**+1.4**
PSAD3	**Pilbara Seismi**	**55.68**	**205**	P	**P**	**14 42 50.4**	**-0.7**
PSAD3				IAmb	IAmb	14 44 40.9	
	comp=Z,32nm,1.6s						
BRVK	**Borovoye**	**56.05**	**316**	P	**P**	**14 42 54.1**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRVK	**Borovoye**	**56.05**	**316**	P	**P**	**14 42 54.1**	**+0.6**
BMAR	**Burnt Mountain**	**56.26**	**26**	P	**P**	**14 42 56.5**	**+1.7**
DOT	**Dot Lake**	**56.39**	**31**	P	**P**	**14 42 56.2**	**+0.4**
DOT				IAmb	IAmb	14 43 13.5	
	comp=Z,17nm,1.8s						
SCRK	**Sand Creek**	**56.42**	**31**	P	**P**	**14 42 56.3**	**+0.2**
SCRK				IAmb	IAmb	14 42 58.5	
	comp=Z,14nm,1.6s						
HUH	**Hualalai**	**56.54**	**85**	P	**P**	**14 42 58.6**	**+0.8**
KK31	**Karatay Array**	**57.48**	**304**	P	**P**	**14 43 04.4**	**+0.6**
KK31				pmax	pmax		
	comp=Z,17nm,1.2s						
KK31	**Karatay Array**	**57.48**	**304**	P	**P**	**14 43 04.4**	**+0.6**
KK31				IAmb	IAmb	14 43 05.6	
	comp=Z,17nm,1.2s						
KKAR	**Karatay Array**	**57.48**	**304**	P	**P**	**14 43 04.4**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,17nm,1.2s						
KKAR	**Karatay Array**	**57.48**	**304**	P	**P**	**14 43 04.3**	**+0.5**
KKAR	**Karatay Array**	**57.48**	**304**	P	**P**	**14 43 04.4**	**+0.5**
KKAR				IAmb	IAmb	14 43 05.6	
	comp=Z,17nm,1.2s						
NIL	**Nilore**	**57.75**	**293**	P	**P**	**14 43 06.6**	**+0.7**
NIL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NIL	**Nilore**	**57.75**	**293**	P	**P**	**14 43 06.5**	**+0.7**
NIL				IAmb	IAmb	14 43 08.3	
	comp=Z,5.5nm,0.7s						
EPYK	**Eagle Plains**	**59.38**	**28**	P	**P**	**14 43 17.7**	**+0.9**
INK	**Inuvik**	**60.41**	**25**	P	**P**	**14 43 24.4**	**+0.8**
	comp=Z,1.1nm,0.4s,baz=290,slow=4.5,SNR=13						
INK	**Inuvik**	**60.41**	**25**	IAmb	IAmb	14 45 27.6	
	comp=Z,12nm,1.8s						
STKA	**Stephens Creek**	**61.51**	**181**	P	**P**	**14 43 31.2**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=0.0,slow=5.8,SNR=8.5						
STKA	**Stephens Creek**	**61.51**	**181**	IAmb	IAmb	14 43 49.2	
	comp=Z,6.8nm,1.8s						
ARU	**Arti**	**62.20**	**321**	*d* P	**P**	**14 43 36.6**	**+0.6**
ARU						14 45 52.0	
ARU				S	**S**	**14 52 05.5**	**+5.6**
ARU				SS	**SS**	**14 55 59.7**	**-3.0**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ABKAR	**Akbulak array**	**63.15**	**313**	P	**P**	**14 43 42.1**	**-0.4**
ABKAR				IAmb	IAmb	14 43 48.2	
	comp=Z,3.1nm,0.7s						
ABKAR	**Akbulak array**	**63.15**	**313**	P	**P**	**14 43 42.5**	**0.0**
GEYT	**Alibeck**	**68.01**	**302**	P	**P**	**14 44 15.8**	**+1.6**
	comp=Z,3.6nm,0.8s,baz=74,slow=6.9,SNR=6.9						
GEYT	**Alibeck**	**68.01**	**302**	P	**P**	**14 44 12.8**	**-1.3**
YKA	**Yellowknife Ar**	**69.60**	**29**	P	**P**	**14 44 24.0**	**+0.5**
YKA	**Yellowknife Ar**	**69.60**	**29**	P	**P**	**14 44 24.0**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=294,slow=6.5,SNR=11						
ARCES	**ARCESS Array B**	**70.86**	**341**	P	**P**	**14 44 31.6**	**+0.5**
	comp=Z,1.8nm,0.7s,baz=42,slow=12,SNR=5.2						
JOF	**Joensuu**	**72.54**	**333**	P	**P**	**14 44 41.9**	**+0.6**
JOF				pmax	pmax		
	comp=Z,7.0nm,2.8s						
OBN	**Obninsk**	**74.21**	**325**	*e*P	**P**	**14 44 52.4**	**+1.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	**FINESS Array B**	**75.40**	**334**	P	**P**	**14 44 58.8**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=83,slow=4.0,SNR=9.4						
KBZ	**Khabaz**	**76.10**	**313**	P	**P**	**14 45 03.9**	**+1.5**
	comp=Z,2.7nm,0.8s,baz=71,slow=2.6,SNR=5.2						
KIV	**Kislovodsk**	**76.13**	**313**	*e*P	**P**	**14 45 02.8**	**+0.1**
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
NVAR	**Mina Array Bea**	**78.71**	**52**	P	**P**	**14 45 17.4**	**0.0**
	comp=Z,0.4nm,0.5s,baz=297,slow=6.0,SNR=4.1						
AKASG	**Malin Array Be**	**80.34**	**324**	P	**P**	**14 45 26.2**	**+0.5**
	comp=Z,27nm,0.3s,baz=50,slow=5.6,SNR=1.4						
NB2	**NORSAR Subarra**	**80.97**	**338**	P	**P**	**14 45 29.6**	**+0.6**
	comp=Z,2.0nm,0.8s,baz=42,slow=5.6						
NOA	**NORSAR Array B**	**80.97**	**338**	P	**P**	**14 45 29.0**	**0.0**
	comp=Z,1.6nm,0.8s,baz=40,slow=5.2,SNR=3.7						
PDAR	**Pinedale Array**	**82.14**	**45**	P	**P**	**14 45 36.7**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=310,slow=5.7,SNR=2.9						
RAYN	**Ar Rayn**	**84.05**	**294**	P	**P**	**14 45 46.8**	**+1.1**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAYN	**Ar Rayn**	**84.05**	**294**	P	**P**	**14 45 46.8**	**+1.1**
RAYN				IAmb	IAmb	14 46 00.3	
	comp=Z,5.0nm,0.9s						
BRTR	**Keskin Array B**	**84.10**	**313**	P	**P**	**14 45 46.8**	**+0.9**
	comp=Z,1.7nm,0.7s,baz=67,slow=3.2,SNR=4.6						
PHWY	**Pilot Hill**	**85.48**	**44**	P	**P**	**14 45 55.4**	**+2.4**
TXAR	**Lajitas Array**	**93.84**	**53**	P	**P**	**14 46 32.9**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=316,slow=3.8,SNR=5.5						

IDC ***29*** *14:33:54.7±1.9,59°.40N×152°.82W,h54km±35km,mb3.7/3, mb1 3.7/7,mb1mx3.3/46,mbtmp3.8/7,ML3.5/4,Error ellipse: s-maj=32.9km s-min=9.8km az=108.0*
NEIC ***29*** *14:33:55.6±1.0,59°.34N±0°.03×152°.67W±0°.05,h73km±4km, Error ellipse: s-maj=4.9km s-min=3.7km az=177.0*
AEIC ***29*** *14:33:57.0±1.6,59°.34N±0°.03×152°.70W±0°.06,h64km±4km, ML3.4/100,Error ellipse: s-maj=5.1km s-min=4.0km az=159.0*

ISC 29 14:33:55.7±0.8,59°.34N±0°.04×152°.62W±0°.04,h74km±7km, n99,σ0.961/114,mb3.9/3,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AU22	**Augustine Moun**	**0.38**	**276**		**Pn**	**14 34 07.6**	**-0.3**
AU22					**Sn**	**14 34 16.7**	**-0.1**
AUQ	**Augustine Qik'**	**0.41**	**273**		**Pn**	**14 34 07.9**	**-0.2**
AUQ					**Sn**	**14 34 17.0**	**-0.3**
AUP	**Augustine Pinn**	**0.41**	**274**		**Pn**	**14 34 08.1**	**-0.2**
AUH	**Augustine H**	**0.42**	**274**		**Pn**	**14 34 08.2**	**-0.2**
AUW	**Augustine West**	**0.44**	**275**		**Pn**	**14 34 08.1**	**-0.2**
HOM	**Homer**	**0.59**	**57**		**Pn**	**14 34 09.9**	**+0.1**
HOM					**Sn**	**14 34 20.7**	**+0.5**
ILS	**Iliamna Low So**	**0.66**	**340**		**Pn**	**14 34 10.2**	**-0.4**
IVE	**Iliamna Volcan**	**0.71**	**344**		**Pn**	**14 34 10.7**	**-0.5**
CNPM	**China Poot**	**0.73**	**74**		**Pn**	**14 34 11.1**	**-0.2**
CNPM					**Sn**	**14 34 22.7**	**-0.1**
ILIM	**Iliamna**	**0.77**	**347**		**Pn**	**14 34 11.3**	**-0.4**
ILW	**Iliamna West**	**0.77**	**340**		**Pn**	**14 34 11.5**	**-0.5**
FOSS	**Fourpeaked Sta**	**0.77**	**226**		**Pn**	**14 34 11.0**	**-0.8**
BRLK	**Bradley Lake**	**0.98**	**63**		**Pn**	**14 34 14.0**	**-0.2**
BRSE	**Bradley Lake S**	**1.04**	**66**		**Pn**	**14 34 14.6**	**-0.4**
BRSE					**Sn**	**14 34 29.3**	**0.0**
RED	**Redoubt Volcan**	**1.09**	**356**		**Pn**	**14 34 15.4**	**-0.2**
RSO	**Redoubt South**	**1.13**	**357**		**Pn**	**14 34 16.0**	**-0.3**
RDWB	**Redoubt West**	**1.16**	**355**		**Pn**	**14 34 16.3**	**-0.3**
RDWB					**Sn**	**14 34 32.5**	**+0.3**
DFR	**Drift River**	**1.26**	**358**		**Pn**	**14 34 17.8**	**0.0**
DFR					**Sn**	**14 34 34.8**	**+0.5**
RDJH	**Redoubt Jeurge**	**1.26**	**356**		**Pn**	**14 34 18.0**	**+0.2**
RDJH					**Sn**	**14 34 34.9**	**+0.5**
KAHG	**Katmai Hook Gl**	**1.31**	**231**		**Pn**	**14 34 18.2**	**-0.2**
KAHG					**Sn**	**14 34 35.5**	**+0.1**
KARR	**Katmai Rainbow**	**1.37**	**233**		**Pn**	**14 34 19.1**	**-0.1**
KAHC	**Katmai Hardscr**	**1.42**	**242**		**Pn**	**14 34 19.4**	**-0.4**
KDAK	**Kodiak Island**	**1.56**	**179**	P	**Pn**	**14 34 21.0**	**-0.6**
	56nm,0.3s,baz=51,slow=6.5,SNR=425						
KDAK				S	**Sn**	**14 34 40.7**	**-0.3**
	78nm,0.3s,baz=169,slow=22,SNR=11						
KDAK	**Kodiak Island**	**1.56**	**179**		**Pn**	**14 34 21.1**	**-0.4**
KDAK					**Sn**	**14 34 43.5**	**+2.5**
CAPN	**Captain Cook N**	**1.61**	**26**		**Pn**	**14 34 23.5**	**+1.2**
KCG	**Knife Ck. Glac**	**1.66**	**233**		**Pn**	**14 34 22.8**	**-0.2**
KCG					**Sn**	**14 34 43.6**	**+0.1**
SLKM	**Skilak Lake**	**1.69**	**45**		**Pn**	**14 34 23.7**	**+0.4**
KABU	**Katmai Buttres**	**1.75**	**234**		**Pn**	**14 34 24.3**	**+0.1**
KABU					**Sn**	**14 34 45.9**	**+0.1**
SEW	**Seward**	**1.78**	**63**		**Pn**	**14 34 25.6**	**+1.1**
KELA	**Mount Kelaz**	**1.85**	**242**		**Pn**	**14 34 25.4**	**-0.1**
KELA					**Sn**	**14 34 47.4**	**-0.8**
ANCK	**Angle Creek**	**1.88**	**234**		**Pn**	**14 34 26.0**	**+0.1**
SPCR	**Spurr Chakacha**	**1.88**	**6**		**Pn**	**14 34 26.4**	**+0.5**
SPBG	**Spurr Blockage**	**1.94**	**4**		**Pn**	**14 34 27.3**	**+0.6**
SPCG	**Spurr Capps Gl**	**1.98**	**8**		**Pn**	**14 34 27.9**	**+0.6**
OHAK	**Old Harbor**	**2.15**	**190**		**Pn**	**14 34 28.0**	**-0.8**
FIS	**Fire Island**	**2.17**	**32**		**Pn**	**14 34 30.7**	**+1.0**
RC01	**Rabbit Creek A**	**2.27**	**38**		**Pn**	**14 34 32.0**	**+0.9**
SVW2	**Sparrevohn**	**2.30**	**321**		**Pn**	**14 34 31.2**	**-0.3**
SUA	**Susitna One**	**2.33**	**23**		**Pn**	**14 34 32.7**	**+0.7**
PLK3	**Peulik 3**	**2.53**	**231**		**Pn**	**14 34 35.3**	**+0.8**
PLK5	**Peulik 5**	**2.60**	**241**		**Pn**	**14 34 35.7**	**+0.3**
PWL	**Port Wells**	**2.63**	**53**		**Pn**	**14 34 35.6**	**-0.4**
SII	**Sitkinak Islan**	**2.91**	**197**		**Pn**	**14 34 38.9**	**-0.8**
KNK	**Knik Glacier**	**2.94**	**43**		**Pn**	**14 34 39.7**	**-0.3**
GHO	**Glory Hole Cre**	**3.05**	**35**	Pn	**Pn**	**14 34 42.4**	**+0.7**
GLI	**Glacier Island**	**3.17**	**58**	Pn	**Pn**	**14 34 43.7**	**+0.5**
MID	**Middleton Isla**	**3.21**	**86**		**Pn**	**14 34 43.4**	**-0.4**
SML	**Sawmill**	**3.26**	**39**	Pn	**Pn**	**14 34 44.7**	**+0.2**
HIN	**Hinchinbrook I**	**3.26**	**68**		**Pn**	**14 34 44.6**	**+0.1**
FID	**Port Fidalgo**	**3.39**	**63**		**Pn**	**14 34 45.8**	**-0.4**
PPLA	**Purkeypile**	**3.58**	**3**		**Pn**	**14 34 49.2**	**+0.3**
SCM	**Sheep Creek Mo**	**3.62**	**44**		**Pn**	**14 34 49.5**	**+0.2**
EYAK	**Cordova Ski Ar**	**3.66**	**68**		**Pn**	**14 34 49.5**	**-0.4**
CHIR	**Chirikof Islan**	**3.

JHJ2				*e*S	**Sn**	**14 39 44.9**	**-2.3**
BSO1	**Boso 1**	**4.84**	**345**	P	**Pn**	**14 39 16.3**	**+0.3**
BSO1				*e*S	**Sn**	**14 40 10.1**	**-0.5**
BSO3	**Boso 3**	**5.10**	**342**	P	**Pn**	**14 39 20.3**	**+0.5**
JOD2	**Odawara 2**	**6.00**	**333**	P	**Pn**	**14 39 32.7**	**+0.3**
JHU	**Hanno**	**6.45**	**336**	P	**Pn**	**14 39 39.0**	**+0.4**
JHU				*e*S	**Sn**	**14 40 49.8**	**-1.2**
JYT	**Yasato**	**6.53**	**344**	P	**Pn**	**14 39 40.1**	**+0.4**
JYT				S	**Sn**	**14 40 50.2**	**-2.7**
JRY	**Ryogami san**	**6.73**	**335**	P	**Pn**	**14 39 42.9**	**+0.4**
JHO	**Hitachi**	**6.81**	**347**	P	**Pn**	**14 39 42.5**	**-1.1**
JAG	**Ashikaga**	**6.92**	**340**	P	**Pn**	**14 39 45.2**	**+0.2**
MJAR	**Matsushiro Arr**	**7.46**	**333**	Pn	**Pn**	**14 39 52.8**	**+0.3**
	0.2nm,0.3s,baz=164,slow=14,SNR=12						
MJAR				Sn	**Sn**	**14 41 16.6**	**+0.8**
	0.0nm,0.3s,baz=148,slow=31,SNR=2.3						
SONM	**Songino Array**	**32.87**	**313**	P	**P**	**14 44 37.9**	**+1.0**
	0.5nm,0.8s,baz=100,slow=7.9,SNR=3.3						
MKAR	**Makanchi Array**	**48.87**	**308**	P	**P**	**14 46 49.5**	**+1.1**
	0.4nm,0.6s,baz=76,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**50.23**	**190**	P	**P**	**14 46 58.5**	**-0.3**
	1.1nm,0.6s,baz=9.9,slow=8.1,SNR=8.8						
KURBB	**Kurchatov Arra**	**51.24**	**313**	P	**P**	**14 47 07.3**	**+1.1**
	0.2nm,0.3s,baz=93,slow=6.7,SNR=3.7						
ASAR	**Alice Springs**	**53.95**	**190**	P	**P**	**14 47 25.8**	**-0.8**
	0.4nm,1.0s,baz=15,slow=7.7,SNR=5.0						

MAN 29 14:45:43.5, 14°.15N×122°.14E, h1km, mb3.6, ML2.3, MS1.8, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LQP	**Lukban**	**0.58**	**266**‖	*e*P	Pg	14 45 54.6	-0.1
POLP	**Polilio Island**	**0.60**	**341**	*e*P	Pg	14 45 55.0	-0.1
POLP				*e*S	Sb	14 46 05.4	-0.5
BOAC	**Boac**	**0.75**	**203**	*e*P	Pg	14 45 57.8	0.0
BOAC				*e*S	Sg	14 46 08.3	+0.8
BALP	**Baler**	**1.67**	**341**	*e*P	Pn	14 46 14.1	+0.2
BALP				*e*S	Sg	14 46 38.7	+1.4
OTRP	**Odiongan**	**1.78**	**184**	*e*P	Pn	14 46 16.0	+0.6
OTRP				*e*S	Sn	14 46 37.9	-0.9
MSLP	**Maasin**	**4.80**	**146**	*e*P	Pn	14 46 50.5	-6.4
MSLP				*e*S	Sn	14 47 10.8	-42
DCPH	**Dipolog City**	**5.66**	**168**‖	*e*P	Pn	14 46 58.6	-10

*TAP **29** 15:28:31.1, 24°.11N×122°.23E, h20km, ML2.9, C*
*JMA **29** 15:28:31.3±0.1, 24°.03N×122°.23E, h27km±3km, M1.8*
ISC 29 15:28:31.0±1.1, 24°.07N±0°.02×122°.24E±0°.02, h18km±6km, n96, σ0s61/164, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.48**	**348**	P	**Pg**	**15 28 40.2**	**-0.5**
	baz=347						
EOS1				*e*S	**Sb**	**15 28 47.8**	**0.0**
	baz=347						
NANB	**Nanao**	**0.57**	**309**	P	**Pb**	**15 28 41.3**	**-1.1**
	baz=316						
NANB				*e*S	**Sb**	**15 28 49.5**	**-0.7**
	baz=316						
ENA	**Nanau**	**0.57**	**308**	P	**Pb**	**15 28 41.9**	**-0.6**
	baz=316						
ENA				*e*S	**Sb**	**15 28 50.2**	**-0.2**
	baz=316						
TWD	**Chiawan**	**0.58**	**271**	*e*P	**Pb**	**15 28 42.6**	**0.0**
	baz=267						
NACB	**Ninganchiao**	**0.59**	**280**	P	**Pg**	**15 28 43.0**	**+0.2**
	baz=259						
NACB				*e*S	**Sg**	**15 28 52.3**	**+1.6**
	baz=259						
ENLB	**Shoufeng**	**0.60**	**254**	*e*P	**Pb**	**15 28 42.7**	**-0.3**
	baz=236						
ENLB				*e*S	**Sn**	**15 28 53.3**	**-0.7**
	baz=236						
TWC	**Suao**	**0.64**	**327**	P	**Pb**	**15 28 42.4**	**-1.2**
	baz=333						
TWC				*e*S	**Sb**	**15 28 51.9**	**-0.4**
	baz=333						
ETLH	**Xiulin Townshi**	**0.70**	**281**	P	**Pb**	**15 28 44.7**	**-0.1**
	baz=264						
ETLH				*e*S	**Sg**	**15 28 55.0**	**+0.9**
	baz=264						
JYNG	**Yonagunijimaku**	**0.75**	**60**	P	**Pb**	**15 28 45.6**	**+0.1**
JYNG				S	**Sg**	**15 28 56.4**	**+0.8**
ESL	**Shilin**	**0.78**	**251**	*e*P	**Pb**	**15 28 45.4**	**-0.6**
	baz=236						
ESL				*e*S	**Sn**	**15 28 58.3**	**0.0**
	baz=236						
YOJ	**Yonaguni jima**	**0.81**	**61**	P	**Pb**	**15 28 46.6**	**+0.1**
	baz=62						
YOJ	**Yonaguni jima**	**0.81**	**61**	P	**Pb**	**15 28 46.6**	**+0.1**
YOJ				*e*S	**Sn**	**15 28 59.3**	**+0.3**
ILA	**Ilan**	**0.82**	**327**	*e*P	**Pb**	**15 28 46.5**	**-0.2**
	baz=326						
ILA				*e*S	**Sg**	**15 28 58.2**	**+0.3**
	baz=326						
TWE	**Neicheng**	**0.83**	**321**	P	**Pb**	**15 28 46.1**	**-0.7**
	baz=326						
TWE				*e*S	**Sb**	**15 28 57.7**	**0.0**
	baz=326						
ENTT	**Nioudou**	**0.83**	**313**	P	**Pb**	**15 28 46.6**	**-0.3**
	baz=320						
ENTT				*e*S	**Sb**	**15 28 57.9**	**+0.1**
	baz=320						
EGFH	**Guangfu**	**0.84**	**242**	*e*P	**Pb**	**15 28 46.3**	**-0.7**
	baz=227						
EGFH				*e*S	**Sn**	**15 28 59.4**	**-0.5**
	baz=227						
NDT	**Datong Townshi**	**0.84**	**309**	P	**Pb**	**15 28 47.1**	**-0.1**
	baz=316						
NDT				S	**Sb**	**15 28 58.0**	**-0.2**
	baz=316						
NNSB	**Datong**	**0.85**	**295**	P	**Pb**	**15 28 47.4**	**0.0**
	baz=293						
NNSB				S	**Sb**	**15 28 58.4**	**-0.2**
	baz=293						
NNSH	**Datong**	**0.85**	**295**	P	**Pb**	**15 28 47.4**	**+0.1**
	baz=293						
NNSH				*e*S	**Sg**	**15 28 59.4**	**+0.4**
	baz=293						
NTC	**Toucheng**	**0.86**	**335**	*e*P	**Pb**	**15 28 46.5**	**-1.0**
	baz=348						
NTC				S	**Sg**	**15 28 59.4**	**+0.2**
	baz=348						
NNS	**Nan Shan**	**0.87**	**295**	P	**Pb**	**15 28 47.6**	**0.0**
	baz=293						
NNS				*e*S	**Sg**	**15 28 59.6**	**+0.1**
	baz=293						
SLBB	**Yuanshan**	**0.87**	**321**	*e*P	**Pb**	**15 28 47.2**	**-0.5**
	baz=327						
SLBB				*e*S	**Sg**	**15 28 59.5**	**0.0**
	baz=327						
WHF	**Hehuan Shan**	**0.89**	**275**	P	**Pb**	**15 28 47.8**	**-0.4**
	baz=260						
WHF				*e*S	**Sg**	**15 29 00.8**	**+0.6**
	baz=260						
HGSD	**Ruisui**	**0.94**	**232**	*e*P	**Pn**	**15 28 49.2**	**-0.2**
	baz=231						
HGSD				*e*S	**Sn**	**15 29 02.9**	**+0.6**
	baz=231						
TWB1	**Santiao Chiao**	**0.96**	**346**	P	**Pb**	**15 28 48.7**	**-0.4**
	baz=345						
TWB1				*e*S	**Sg**	**15 29 02.2**	**-0.1**
	baz=345						
NWLT	**Wulai**	**0.97**	**317**	*e*P	**Pb**	**15 28 49.0**	**-0.3**
	baz=321						
NWLT				*e*S	**Sg**	**15 29 02.7**	**+0.1**
	baz=321						
CHGB	**Renai**	**0.97**	**269**	P	**Pb**	**15 28 48.8**	**-0.6**
	baz=255						
CHGB				*e*S	**Sb**	**15 29 02.2**	**+0.2**
	baz=255						
TIPB	**Shuangxi**	**0.97**	**337**	P	**Pb**	**15 28 49.2**	**-0.1**
	baz=336						
TIPB				*e*S	**Sb**	**15 29 02.0**	**+0.2**
	baz=336						
OWD	**Renai**	**0.98**	**263**	P	**Pb**	**15 28 48.7**	**-0.7**
	baz=262						
OWD				S	**Sb**	**15 29 02.2**	**+0.1**
	baz=262						
YHNB	**Yeheng**	**0.98**	**307**	P	**Pb**	**15 28 49.4**	**-0.1**
	baz=306						
YHNB				*e*S	**Sb**	**15 29 02.7**	**+0.5**
	baz=306						
NSK	**Sanguang**	**1.00**	**307**	*e*P	**Pb**	**15 28 49.4**	**-0.4**
	baz=306						
NSK				*e*S	**Sb**	**15 29 02.8**	**0.0**
	baz=306						
TDCB	**Techi**	**1.00**	**281**	P	**Pn**	**15 28 50.3**	**0.0**
	baz=266						
TDCB				*e*S	**Sn**	**15 29 04.2**	**+0.1**
	baz=266						
EHY	**Hungye**	**1.01**	**236**	P	**Pb**	**15 28 48.6**	**-1.3**
	baz=250						
VWDT	**VWDT**	**1.05**	**253**	*e*P	**Pb**	**15 28 50.7**	**+0.1**
	baz=239						
NWF	**Wu-fen Shan**	**1.08**	**338**	P	**Pb**	**15 28 50.8**	**-0.4**
	baz=336						
NWF				*e*S	**Sn**	**15 29 05.5**	**-0.3**
	baz=336						
WFSB	**Wu-fen Shan**	**1.08**	**338**	*e*P	**Pb**	**15 28 49.9**	**-1.2**
	baz=353						
TWA	**Mucha**	**1.08**	**327**	*e*P	**Pb**	**15 28 50.6**	**-0.5**
	baz=326						
TWA				S	**Sn**	**15 29 06.0**	**+0.2**
	baz=326						
YULB	**Yu-li**	**1.09**	**232**	P	**Pn**	**15 28 50.1**	**-1.3**
	baz=248						
YULB				*e*S	**Sn**	**15 29 06.3**	**+0.2**
	baz=248						
NHDH	**Xindian Distri**	**1.10**	**324**	P	**Pb**	**15 28 51.5**	**0.0**
	baz=337						
NHDH				*i* S	**Sn**	**15 29 06.2**	**0.0**
	baz=337						
TWF1	**Yuli**	**1.12**	**230**	P	**Pn**	**15 28 50.9**	**-0.9**
	baz=247						
TWF1				*e*S	**Sn**	**15 29 06.9**	**+0.1**
	baz=247						
TATO	**Taipei**	**1.13**	**323**	P	**Pn**	**15 28 51.8**	**-0.1**
	baz=322						
TATO				S	**Sn**	**15 29 06.8**	**-0.2**
	baz=322						
TAP1	**Taipei**	**1.16**	**326**	*e*P	**Pb**	**15 28 52.9**	**+0.4**
	baz=325						
TAP1				*e*S	**Sg**	**15 29 08.8**	**+0.2**
	baz=325						
WLTB	**Daxi**	**1.19**	**311**	*e*P	**Pn**	**15 28 52.5**	**-0.2**
	baz=310						
WLTB				*e*S	**Sg**	**15 29 09.8**	**+0.4**
	baz=310						
WHP	**Taichung City**	**1.20**	**280**	P	**Pb**	**15 28 53.4**	**+0.2**
	baz=267						
WHP				*e*S	**Sg**	**15 29 10.4**	**+0.6**
	baz=267						
DPDB	**Guoxing**	**1.20**	**268**	*e*P	**Pn**	**15 28 51.6**	**-1.3**
	baz=267						
SSLB	**Suanglung**	**1.21**	**257**	P	**Pn**	**15 28 52.3**	**-0.7**
	baz=243						
FULB	**Fuli**	**1.23**	**225**	*e*P	**Pn**	**15 28 51.9**	**-1.4**
	baz=210						
YM01	**YM01**	**1.23**	**331**	P	**Pb**	**15 28 54.3**	**+0.6**
	baz=346						
YM01				*e*S	**Sg**	**15 29 10.3**	**-0.6**
	baz=346						
SMLT	**Sun Moon Lake**	**1.24**	**261**	*e*P	**Pn**	**15 28 53.6**	**+0.1**
	baz=260						
YM10	**YM10**	**1.24**	**330**	P	**Pn**	**15 28 53.5**	**-0.1**
	baz=346						
YM10				*e*S	**Sn**	**15 29 09.7**	**-0.1**
	baz=346						
YM11	**YM11**	**1.24**	**331**	P	**Pb**	**15 28 53.9**	**-0.2**
	baz=346						
YM11				*e*S	**Sn**	**15 29 10.5**	**+0.6**
	baz=346						
YM05	**YM05**	**1.25**	**331**	P	**Pn**	**15 28 53.9**	**+0.2**
	baz=346						
YM05				*e*S	**Sn**	**15 29 10.0**	**0.0**
	baz=346						
LIOB	**Emei**	**1.25**	**297**	P	**Pb**	**15 28 54.2**	**+0.2**
	baz=296						
LIOB				*e*S	**Sg**	**15 29 11.1**	**-0.4**
	baz=296						
YM04	**YM04**	**1.25**	**330**	*e*P	**Pb**	**15 28 54.1**	**0.0**
	baz=345						
YM04				*e*S	**Sb**	**15 29 09.6**	**-0.3**
	baz=345						
NSTT	**Nanjuang**	**1.25**	**297**	P	**Pb**	**15 28 54.4**	**+0.3**
	baz=295						
NSTT				S	**Sn**	**15 29 10.7**	**+0.6**
	baz=295						
YM08	**YM08**	**1.26**	**332**	P	**Pb**	**15 28 54.7**	**+0.5**
	baz=331						
YM08				*e*S	**Sn**	**15 29 10.2**	**0.0**
	baz=331						
TWS1	**Kuangyinshan**	**1.27**	**324**	P	**Pg**	**15 28 55.2**	**-0.3**
	baz=336						
TWS1				S	**Sg**	**15 29 11.5**	**-0.5**
	baz=336						
TYC	**Yuchr**	**1.27**	**263**	*e*P	**Pb**	**15 28 54.6**	**+0.2**
	baz=261						
YM03	**YM03**	**1.27**	**330**	*e*P	**Pb**	**15 28 55.1**	**+0.6**
	baz=329						
YM03				*e*S	**Sg**	**15 29 12.3**	**+0.1**
	baz=329						
YUS	**Yu-Shan**	**1.31**	**244**	P	**Pn**	**15 28 54.4**	**-0.5**
	baz=243						
YUS				*e*S	**Sb**	**15 29 11.3**	**-0.8**
	baz=243						
WHYT	**Xinyi Township**	**1.32**	**254**	*e*P	**Pn**	**15 28 54.9**	**+0.3**
	baz=243						
TWQ1	**Liyutan**	**1.36**	**282**	*e*P	**Pb**	**15 28 55.7**	**-0.2**
	baz=281						
TWQ1				S	**Sb**	**15 29 14.1**	**+1.0**
	baz=281						
NMLH	**Miaoli**	**1.40**	**290**	*e*S	**Sb**	**15 29 14.8**	**+0.8**
	baz=288						
WJS	**Zhushan**	**1.40**	**260**	*e*P	**Pb**	**15 28 57.0**	**+0.4**
	baz=259						
WJS				*e*S	**Sg**	**15 29 17.8**	**+1.5**
	baz=259						
ELDTW	**Lidau**	**1.42**	**232**	*e*P	**Pn**	**15 28 54.9**	**-1.2**
	baz=217						
ALS	**Alishan**	**1.42**	**247**	*e*P	**Pn**	**15 28 55.8**	**-0.5**
	baz=246						
TCU	**Taichung**	**1.43**	**273**	S	**Sg**	**15 29 16.6**	**-0.5**
	baz=272						
WNT	**Mingjian**	**1.43**	**263**	*e*P	**Pb**	**15 28 57.1**	**-0.1**
	baz=261						
WNT				*e*S	**Sb**	**15 29 16.2**	**+1.1**
	baz=261						
CHN5	**Tsauling**	**1.50**	**252**	P	**Pb**	**15 28 58.2**	**-0.2**
	baz=240						
CHN5				*e*S	**Sb**	**15 29 18.4**	**+1.2**
	baz=240						
TWH	**Lutao**	**1.52**	**207**	*e*P	**Pn**	**15 28 56.3**	**-1.0**
	baz=207						
PCYT	**Pengchaiyu**	**1.56**	**355**	*e*P	**Pn**	**15 28 57.8**	**0.0**
	baz=340						
WDLH	**Douliu**	**1.60**	**257**	*e*P	**Pb**	**15 29 00.0**	**0.0**
	baz=242						
WDLH				*e*S	**Sg**	**15 29 22.1**	**-0.5**
	baz=242						
JKRS	**Kuro-shima**	**1.63**	**84**	P	**Pb**	**15 28 59.9**	**-0.6**
STYT	**Tauyuan**	**1.63**	**237**	*e*P	**Pb**	**15 29 00.3**	**-0.3**
	baz=236						
STYT				*e*S	**Sb**	**15 29 20.9**	**+0.1**
	baz=236						
TWGBT	**Beinan**	**1.64**	**221**	*e*P	**Pn**	**15 28 58.5**	**-0.4**
	baz=222						
TWGBT				*e*S	**Sn**	**15 29 19.4**	**-0.2**
	baz=222						
TWG	**Pinlang**	**1.64**	**221**	*e*S	**Sn**	**15 29 18.9**	**-0.7**
	baz=222						
TPUB	**Ta-pu**	**1.66**	**243**	P	**Pb**	**15 29 00.3**	**-0.7**
	baz=242						
TPUB				S	**Sb**	**15 29 22.7**	**+1.0**
	baz=242						
CHN4	**Tsaushan**	**1.67**	**245**	P	**Pb**	**15 29 01.1**	**-0.1**
	baz=233						
CHN4				*e*S	**Sg**	**15 29 24.0**	**-0.8**
	baz=233						
WTP	**Ta-pu**	**1.70**	**241**	P	**Pn**	**15 29 00.8**	**+1.0**
	baz=241						
WTP				*e*S	**Sg**	**15 29 24.7**	**-1.1**
	baz=241						
RLNB	**Erlin**	**1.73**	**264**	S	**Sb**	**15 29 24.1**	**+0.6**
	baz=263						
JIJ	**Ishigaki jima**	**1.77**	**80**	P	**Pn**	**15 29 01.6**	**+0.9**
TWK	**Hsinying**	**1.79**	**244**	P	**Pb**	**15 29 02.6**	**-0.7**
	baz=243						
TWK				*i* S	**Sb**	**15 29 26.3**	**+0.8**
	baz=243						
CHN1	**Nanshi**	**1.80**	**241**	P	**Pb**	**15 29 02.9**	**-0.6**
	baz=241						
CHN1				*i* S	**Sb**	**15 29 26.6**	**+1.0**
	baz=241						
WTCT	**Ta-ch'eng**	**1.80**	**264**	*e*S	**Sb**	**15 29 25.5**	**-0.2**
	baz=263						
SNST	**Tainan City**	**1.81**	**242**	*e*S	**Sb**	**15 29 26.9**	**+1.1**
	baz=242						
SGST	**Jiashian**	**1.81**	**237**	P	**Pn**	**15 29 01.9**	**+0.6**
	baz=237						
SGST				S	**Sb**	**15 29 26.9**	**+1.0**
	baz=237						
SLGT	**Liugui**	**1.81**	**234**	P	**Pn**	**15 29 02.1**	**+0.8**
	baz=223						
SLGT				*e*S	**Sb**	**15 29 26.7**	**+0.7**
	baz=223						
WSF	**Szhu**	**1.89**	**257**	*e*S	**Sb**	**15 29 28.7**	**+0.4**
	baz=242						
JISG	**Ishigakijimahi**	**1.96**	**74**	P	**Pn**	**15 29 03.3**	**-0.1**
JISG				*e*S	**Sn**	**15 29 27.1**	**-0.4**
SSD	**Sandimen**	**1.98**	**228**	P	**Pn**	**15 29 04.4**	**+0.8**
	baz=219						
MASBT	**Mashibuluo**	**2.07**	**226**	*e*P	**Pn**	**15 29 06.3**	**+1.4**
	baz=219						
MASBT				*e*S	**Sb**	**15 29 33.1**	**-0.4**
	baz=219						
WDGT	**Dungji**	**2.50**	**252**	*e*P	**Pn**	**15 29 11.6**	**+0.9**
	baz=250						
PHUB	**P'eng-hu**	**2.50**	**258**	*e*P	**Pn**	**15 29 11.8**	**+1.0**
	baz=255						
PHUB				S	**Sn**	**15 29 41.5**	**+0.6**
	baz=255						
PNG	**Penghu**	**2.50**	**259**	*e*P	**Pn**	**15 29 11.7**	**+0.8**
	baz=256						
PNG				*e*S	**Sn**	**15 29 41.1**	**+0.1**
	baz=256						
VWUC	**VWUC**	**2.70**	**290**	*e*P	**Pn**	**15 29 13.1**	**-0.4**
	baz=289						
PTMZ	**Houxiangcun**	**3.00**	**289**	*e*P	**Pn**	**15 29 17.1**	**-0.5**
	baz=288						

*RSNC **29** 15:38:22.6±1.1, 6°.79N×73°.14W, h140km±5km, ML2.6, Mw2.9*
*FUNV **29** 15:38:22.1, 6°.80N×73°.11W, h130km, MW2.6*
ISC 29 15:38:19.1±1.3, 6°.82N±0°.04×73°.05W±0°.04, h159km±8km, n22, σ1s66/43, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.26**	**211**⇑	*i*P	**Pn**	**15 38 41.7**	**+0.7**
BARC				*e*S	**Sn**	**15 38 56.3**	**-1.3**
BARC				*i*		15 38 58.2	
	comp=Z,129nm,0.4s						
PAMC	**Pamplona, Colo**	**0.62**	**34**	*e*P	**Pn**	**15 38 44.5**	**+1.8**
PAMC				*e*S	**Sn**	**15 39 01.2**	**+0.4**
PAMC				*i*		15 39 03.6	
	comp=Z,69nm,0.5s						
BRRC	**Barranca, Sant**	**0.72**	**294**	*e*P	**Pn**	**15 38 43.5**	**+0.8**
BRRC				*e*S	**Sn**	**15 38 59.5**	**-1.3**
BRRC				*i*		15 39 04.7	
	comp=Z,76nm,0.1s						
BRRC				*i*		15 39 04.8	
	comp=Z,70nm,0.1s						
RUSC	**La Rusia**	**0.92**	**182**	*e*P	**Pn**	**15 38 45.6**	**+0.8**
RUSC				*e*S	**Sn**	**15 39 03.8**	**-0.6**
RUSC				*i*		15 39 04.8	
	comp=Z,27nm,0.7s						
RUSC				*i*		15 39 05.6	
	comp=Z,27nm,0.2s						
PTBC	**PUERTO BERRIO,**	**1.43**	**259**	*e*P	**Pn**	**15 38 48.3**	**-0.3**
PTBC				*e*S	**Sn**	**15 39 09.5**	**-1.8**
PTBC				*i*		15 39 12.0	
	comp=Z,66nm,0.2s						
PTBC				*i*		15 39 12.1	
	comp=Z,57nm,0.2s						
OCAC	**Ocana**	**1.44**	**349**	*e*P	**Pn**	**15 38 50.5**	**+1.6**
OCAC				*e*S	**Sn**	**15 39 11.6**	**-0.4**
OCAC				*i*		15 39 15.1	
	comp=Z,52nm,0.4s						
OCAC				*i*		15 39 15.3	
	comp=Z,43nm,0.4s						
SPBC	**San Pablo de B**	**1.54**	**221**	*e*P	**Pn**	**15 38 50.6**	**+0.7**
SPBC				*e*S	**Sn**	**15 39 12.3**	**-1.3**
SPBC				*i*		15 39 15.8	
	comp=Z,41nm,0.2s						
SPBC				*i*		15 39 19.6	
	comp=Z,48nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.92**	**291**	*e*P	**Pn**	**15 38 55.2**	**+1.3**
ZARC				*e*S	**Sn**	**15 39 20.1**	**-0.5**
ZARC				*i*		15 39 26.6	
	comp=Z,60nm,0.3s						
ZARC				*i*		15 39 26.6	
	comp=Z,69nm,0.3s						
NORC	**Norcasia**	**2.20**	**236**	*e*P	**Pn**	**15 38 57.8**	**+0.6**
NORC				*e*S	**Sn**	**15 39 25.2**	**-1.3**
NORC				*i*		15 39 28.1	
	comp=Z,29nm,0.5s						
NORC				*i*		15 39 29.1	
	comp=Z,29nm,0.8s						
SMLC	**San Martn de**	**2.22**	**333**	*e*P	**Pn**	**15 38 58.4**	**+1.1**
SMLC				*e*S	**Sn**	**15 39 25.7**	**-1.2**
SMLC				*i*		15 39 35.9	
	comp=Z,34nm,0.1s						
SMLC				*i*		15 39 36.0	
	comp=Z,48nm,0.2s						
CHIC	**Chingaza**	**2.28**	**197**	*e*P	**Pn**	**15 38 59.7**	**+1.3**
CHIC				*e*S	**Sn**	**15 39 28.3**	**-0.5**
CHIC				*i*		15 39 34.9	
	comp=Z,15nm,0.3s						
CHIC				*i*		15 39 34.9	
	comp=Z,14nm,0.3s						
HELC	**Santa Helena**	**2.54**	**256**	*e*P	**Pn**	**15 39 03.9**	**+2.3**
HELC				*e*S	**Sn**	**15 39 31.9**	**-2.4**
HELC				*i*		15 39 40.0	
	comp=Z,24nm,0.4s						
HELC				*i*		15 39 41.2	
	comp=Z,24nm,0.5s						
VIGV	**El Vigia**	**2.61**	**40**	*e*P	**Pn**	**15 39 03.8**	**+1.7**
VIGV				*e*S	**Sn**	**15 39 32.9**	**-2.5**
SOCV	**Socops**	**2.62**	**56**	*e*P	**Pn**	**15 39 04.0**	**+1.9**
SOCV				*e*S	**Sn**	**15 39 33.1**	**-2.3**
GUY2C	**Guyana, Caldas**	**2.80**	**236**	*e*P	**Pn**	**15 39 07.6**	**+2.8**
GUY2C				*e*S	**Sn**	**15 39 40.4**	**+0.4**
GUY2C				*i*		15 39 45.6	
	comp=Z,15nm,0.6s						
GUY2C				*i*		15 39 51.2	
	comp=Z,15nm,0.6s						
CODC	**Agustn Codazz**	**3.12**	**353**	*e*P	**Pn**	**15 39 09.9**	**+1.6**
CODC				*e*S	**Sn**	**15 39 46.4**	**-0.3**
CODC				*i*		15 39 58.5	
	comp=Z,3.7nm,0.6s						
CODC				*i*		15 40 25.8	
	comp=Z,7.5nm,3.4s						
DBBC	**Dabeiba**	**3.15**	**274**	*e*P	**Pn**	**15 39 09.6**	**+0.9**
DBBC				*e*S	**Sn**	**15 39 42.5**	**-4.7**
DBBC				*i*		15 39 49.2	
	comp=Z,29nm,0.3s						
SDV	**Santo Domingo**	**3.15**	**49**	*e*P	**Pn**	**15 39 10.9**	**+2.0**
SDV				*e*S	**Sn**	**15 39 46.1**	**-1.5**
PRAC	**Prado**	**3.59**	**211**	*e*P	**Pn**	**15 39 16.0**	**+1.7**
PRAC				*e*S	**Sn**	**15 39 56.8**	**-0.5**
PRAC				*i*		15 40 03.7	
	comp=Z,18nm,0.6s						
PRAC				*i*		15 40 04.2	
	comp=Z,18nm,0.3s						
CURV	**Curarigua**	**4.41**	**44**	*e*P	**Pn**	**15 39 26.7**	**+1.7**
CURV				*e*S	**Sn**	**15 40 14.7**	**-1.6**
BAUV	**El Baul**	**5.39**	**67**	*e*P	**Pn**	**15 39 37.6**	**-0.2**
BAUV				*e*S	**Sn**	**15 40 37.8**	**-1.6**
PAYV	**Puerto Ayacuch**	**5.54**	**104**	*e*P	**Pn**	**15 39 40.1**	**+0.3**

*ATH **29** 15:39:04.2, 38°.38N×20°.46E, h14km±1km, ML2.9/17, Error ellipse: s-maj=1.5km s-min=0.6km az=267.0*
*THE **29** 15:39:04.8, 38°.37N×20°.45E, h0km±1km, ML3.1/15, Error ellipse: s-maj=1.1km s-min=0.2km az=276.0*
**ISC 29 15:39:04.9±0.9, 38°.38N±0

FSK					S	Sg	15 39 09.2	+0.3	
	9µm,0.5s								
FSK	**Fiskardo**	**0.10**	**36**		P	Pg	15 39 07.2	0.0	
FSK					S	Sg	15 39 09.3	+0.5	
KEF4	**Livadi, Kephal**	**0.13**	**202**		P	Pg	15 39 07.4	-0.2	
KEF4					S	Sg	15 39 10.0	+0.6	
ARG2	**Argostoli**	**0.20**	**179**		P	Pg	15 39 08.8	0.0	
ARG2					S	Sg	15 39 12.2	+0.7	
	16µm,0.3s								
KEF3	**Kipouria, Keph**	**0.20**	**212**		P	Pg	15 39 08.6	-0.3	
KEF3					S	Sg	15 39 12.3	+0.7	
KEF2	**Argostoli. Kep**	**0.21**	**179**		P	Pg	15 39 08.9	-0.1	
KEF2					S	Sg	15 39 12.2	+0.3	
VLS	**Valsamata**	**0.21**	**157**		P	Pg	15 39 09.1	-0.1	
VLS					S	Sg	15 39 12.9	+0.8	
	5µm,0.4s								
VLS	**Valsamata**	**0.21**	**157**		P	Pg	15 39 09.1	-0.1	
VLS					S	Sg	15 39 12.9	+0.8	
VLS					AML	AML	15 39 15.3		
	comp=E,8313µm,0.3s								
VLS					AML	AML	15 39 21.2		
	comp=N,11163µm,0.4s								
EVGI	**Lefkada island**	**0.28**	**29**		P	Pg	15 39 10.6	+0.2	
EVGI					S	Sg	15 39 15.3	+1.1	
EVGI	**Lefkada island**	**0.28**	**29**		P	Pg	15 39 10.6	+0.2	
EVGI					S	Sg	15 39 14.4	+0.2	
KFL	**Anninata**	**0.36**	**138**		P	Pg	15 39 11.8	0.0	
KFL					S	Sg	15 39 17.7	+1.1	
	comp=N,7µm,0.4s								
KFL	**Anninata**	**0.36**	**138**		P	Pg	15 39 11.8	0.0	
KFL					S	Sg	15 39 17.5	+1.0	
KFL					AML	AML	15 39 18.8		
	comp=N,8740µm,0.4s								
KFL					AML	AML	15 39 19.2		
	comp=E,17855µm,0.3s								
MGNA	**Meganis**	**0.37**	**41**		P	Pg	15 39 12.0	-0.1	
MGNA					S	Sg	15 39 17.0	0.0	
MGNA					AML	AML	15 39 18.9		
	comp=N,9856µm,0.5s								
MGNA					AML	AML	15 39 19.2		
	comp=E,9346µm,0.4s								
LKD2	**Lefkada island**	**0.43**	**18**		P	Pg	15 39 13.2	-0.2	
LKD2					S	Sg	15 39 20.1	+1.0	
	comp=E,2µm,0.5s								
LKD2	**Lefkada island**	**0.43**	**18**		P	Pg	15 39 13.1	-0.2	
LKD2					S	Sg	15 39 19.2	+0.2	
LKD2					AML	AML	15 39 22.7		
	comp=E,3414µm,0.5s								
LKD2					AML	AML	15 39 27.3		
	comp=N,2706µm,0.4s								
TSLK	**Tsoukalades, L**	**0.47**	**17**		P	Pg	15 39 14.1	+0.1	
TSLK					S	Sb	15 39 21.2	-1.4	
	comp=N,2µm,0.6s								
TSLK	**Tsoukalades, L**	**0.47**	**17**		P	Pg	15 39 13.7	-0.3	
TSLK					S	Sg	15 39 20.3	+0.2	
AST1	**Astakos**	**0.50**	**71**		P	Pg	15 39 14.9	+0.3	
AST1					S	Sb	15 39 23.4	-0.2	
	comp=N,4µm,0.3s								
VLMS	**Volimes, Zakyn**	**0.52**	**164**		P	Pg	15 39 14.5	-0.4	
VLMS					S	Sg	15 39 22.7	+1.1	
VLMS					AML	AML	15 39 27.6		
	comp=E,5600µm,0.4s								
VLMS					AML	AML	15 39 28.1		
	comp=N,6906µm,0.7s								
PDO	**Prodromos**	**0.59**	**68**		P	Pg	15 39 16.4	+0.1	
PDO					S	Sb	15 39 26.0	-0.1	
PDO	**Prodromos**	**0.59**	**68**		P	Pg	15 39 16.4	+0.1	
PDO					S	Sg	15 39 25.3	+1.2	
PDO					AML	AML	15 39 31.7		
	comp=N,3542µm,0.4s								
PDO					AML	AML	15 39 37.7		
	comp=E,2954µm,0.6s								
KRI1	**kERI**	**0.76**	**160**		P	Pg	15 39 18.8	-0.7	
KRI1					S	Sb	15 39 30.8	-0.1	
	comp=E,3µm,0.8s								
RLS	**Riolos of Patr**	**0.84**	**112**		P	Pg	15 39 20.5	-0.4	
RLS					AML	AML	15 39 42.4		
	comp=E,1035µm,0.4s								
RLS					AML	AML	15 39 45.3		
	comp=N,1330µm,0.5s								
PVO	**Paravola**	**0.85**	**73**		P	Pg	15 39 21.4	+0.1	
PVO					S	Sb	15 39 34.1	+0.5	
	comp=N,818nm,0.5s								
PVO	**Paravola**	**0.85**	**73**		P	Pg	15 39 21.4	+0.1	
PVO					AML	AML	15 39 42.4		
	comp=E,1547µm,0.5s								
PVO					AML	AML	15 39 46.0		
	comp=N,1802µm,0.4s								
DRO	**Drossia**	**1.05**	**113**		P	Pg	15 39 24.8	-0.3	
DRO					S	Sn	15 39 41.5	+0.5	
	comp=N,962nm,0.6s								
DRO	**Drossia**	**1.05**	**113**		P	Pg	15 39 24.6	-0.5	
DRO					S	Sg	15 39 39.1	+0.3	
EFP	**Efpalio**	**1.12**	**87**		P	Pg	15 39 25.6	-0.7	
EFP					S	Sn	15 39 43.2	+0.6	
	comp=N,655nm,0.5s								
EFP	**Efpalio**	**1.12**	**87**		P	Pg	15 39 25.2	-1.2	
EFP					AML	AML	15 39 49.5		
	comp=N,1384µm,0.5s								
EFP					AML	AML	15 39 55.5		
	comp=E,1176µm,0.8s								
ANX	**Ano Chora**	**1.15**	**79**		P	Pg	15 39 26.2	-0.7	
ANX					S	Sn	15 39 44.1	+0.6	
	comp=E,1µm,0.5s								
ANX	**Ano Chora**	**1.15**	**79**		P	Pg	15 39 25.9	-1.0	
ANX					AML	AML	15 39 52.7		
	comp=E,2483µm,0.5s								
ANX					AML	AML	15 39 54.5		
	comp=N,2368µm,0.5s								
EVR	**Evrytania**	**1.17**	**62**		P	Pg	15 39 26.5	-0.9	
EVR	**Evrytania**	**1.17**	**62**		P	Pg	15 39 26.4	-0.9	
EVR					AML	AML	15 39 54.3		
	comp=N,586µm,0.7s								
EVR					AML	AML	15 39 56.0		
	comp=E,724µm,0.9s								
LAKA	**Lakka**	**1.18**	**96**		P	Pg	15 39 26.5	-1.1	
LAKA					S	Sn	15 39 45.6	+1.4	
LAKA	**Lakka**	**1.18**	**96**		P	Pg	15 39 26.3	-1.3	
LAKA					S	Sg	15 39 43.4	+0.4	
LAKA					AML	AML	15 39 52.1		
	comp=N,794µm,0.7s								
LAKA					AML	AML	15 39 53.4		
	comp=E,729µm,0.6s								
SERG	**Sergoula**	**1.24**	**88**		P	Pn	15 39 27.8	-0.8	
SERG					S	Sn	15 39 47.0	+1.5	
	comp=E,505nm,0.7s								
SERG	**Sergoula**	**1.24**	**88**		P	Pn	15 39 27.3	-1.3	
SERG					AML	AML	15 39 57.0		
	comp=E,1081µm,0.9s								
SERG					AML	AML	15 39 58.0		
	comp=N,904µm,0.5s								
TRIZ	**Trizonia**	**1.25**	**90**		P	Pn	15 39 27.5	-1.2	
TRIZ					S	Sn	15 39 47.4	+1.6	
	comp=N,585nm,0.5s								
TRIZ	**Trizonia**	**1.25**	**90**		P	Pn	15 39 27.5	-1.2	
AMT	**Artemida-Makis**	**1.28**	**131**		P	Pg	15 39 29.5	0.0	
KALE	**Kalithea**	**1.30**	**89**		P	Pn	15 39 28.2	-1.3	
KALE					S	Sn	15 39 48.1	+0.9	
KALE					AML	AML	15 39 55.0		
	comp=N,755µm,0.7s								
KALE					AML	AML	15 39 59.0		
	comp=E,508µm,0.7s								
JAN	**Janina**	**1.31**	**12**		P	Pb	15 39 29.5	-0.3	
JAN					AML	AML	15 39 52.9		
	comp=N,782µm,0.7s								
JAN					AML	AML	15 39 54.5		
	comp=E,683µm,0.5s								
KLV	**Kalavryta, Ach**	**1.35**	**104**		P	Pn	15 39 29.5	-0.7	
KLV					S	Sg	15 39 50.0	+1.6	
KLV	**Kalavryta, Ach**	**1.35**	**104**		P	Pn	15 39 29.3	-0.9	
KLV					S	Sg	15 39 49.5	+1.1	
KLV					AML	AML	15 40 07.1		
	comp=N,390µm,1.1s								
KLV					AML	AML	15 40 10.0		
	comp=E,398µm,1.0s								
MAKR	**Makrakomi, Fth**	**1.44**	**63**		P	Pn	15 39 31.1	-0.3	
AGG	**Agios Georgios**	**1.58**	**65**		P	Pn	15 39 33.8	+0.4	
AGG	**Agios Georgios**	**1.58**	**65**		P	Pn	15 39 33.5	+0.1	
ITM	**Ithomi**	**1.65**	**136**		P	Pb	15 39 34.9	-0.7	
THL	**Klokotos Trika**	**1.68**	**45**		P	Pb	15 39 36.0	-0.2	
THL	**Klokotos Trika**	**1.68**	**45**		P	Pb	15 39 36.3	+0.1	
AXAR	**Agios Charalam**	**1.75**	**76**		P	Pn	15 39 35.8	+0.2	
AXAR					AML	AML	15 40 16.1		
	comp=E,875µm,1.0s								
AXAR					AML	AML	15 40 17.8		
	comp=N,1368µm,0.7s								
PYL	**PYLOS**	**1.78**	**146**		P	Pn	15 39 36.6	+0.6	
VIL2	**Platees**	**2.20**	**93**		P	Pb	15 39 44.0	-1.0	
DID	**Didima**	**2.34**	**111**		P	Pb	15 39 45.6	-1.8	
MRKA	**Markates**	**2.46**	**81**		P	Pn	15 39 46.4	+1.0	

IDC 29 15:45:58.6±1.6, 31°50'N×104°53'E, h0km, mb3.4/3, mb1 3.5/5, mb1mx3.2/55, mbtmp3.3/5, ML3.3/2, Error ellipse: s-maj=60.0km s-min=24.9km az=64.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**13.93**	**203**		Pn		Pn	15 49 19.2	+1.9
	0.1nm,0.3s,baz=6.0,slow=9.0,SNR=8.3								
SONM	**Songino Array**	**16.38**	**4**		Pn		P	15 49 51.9	-1.0
	0.1nm,0.3s,baz=193,slow=5.9,SNR=3.0								
MKAR	**Makanchi Array**	**22.93**	**318**		P		P	15 51 02.6	-1.5
	0.4nm,0.8s,baz=126,slow=12,SNR=4.9								
KURBB	**Kurchatov Arra**	**27.15**	**322**		P		P	15 51 44.5	+1.1
	0.5nm,0.8s,baz=133,slow=9.0,SNR=1.2								
WRA	**Warramunga Arr**	**58.60**	**147**		P		P	15 55 56.9	-0.6
	0.4nm,0.4s,baz=344,slow=7.0,SNR=5.0								

*IDC **29** 15:48:46.4±0.9, 32°50'N×49°93'E, h0km, mb3.9/17, mb1 4.1/22, mb1mx3.8/54, mbtmp3.9/22, ML3.8/5, MS3.2/4, Ms1 3.3/4, ms1mx2.9/34, Error ellipse: s-maj=23.6km s-min=13.4km az=177.0*

*NEIC **29** 15:48:47.7±1.1, 32°44N±0°08×49°90E±0°09, h10km±1km, mb4.6/21, mb_Lg4.0(TEH), ML3.9(THR), Error ellipse: s-maj=13.3km s-min=12.2km az=154.0*

*TEH **29** 15:48:48.4, 32°53N×50°03E, h9km, ML4.0*

*THR **29** 15:48:50.5±0.4, 32°54N×49°96E, h15km±4km, ML4.0*

*OMAN **29** 15:48:58.5±0.8, 31°67N×49°71E, h59km±29km, Error ellipse: s-maj=64.7km s-min=15.3km az=246.0*

*DSN **29** 15:49:12.6±6.5, 30°20N×50°14E, h10km, ML4.2/4, Error ellipse: s-maj=93.0km s-min=9.9km az=171.0*

ISC 29 15:48:47.3±0.4, 32°42N±0°03×49°92E±0°03, h11km, n170, σ2s34/182, mb4.5/38, 11C, Western Iran

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHBN	**Jahan bin**	**0.66**	**107**	*e*	Pg		**Pb**	**15 49 01.1**	**0.0**
JHBN				*e*				15 49 15.7	
IPIR	**Pirpir**	**0.86**	**72**	*e*	Pg		**Pg**	**15 49 02.8**	**-1.2**
ROKH	**ROKH**	**0.95**	**94**	*e*				15 49 23.8	
ROKH				*e*	Pg		**Pg**	**15 49 05.4**	**-0.3**
SHGR	**Shooshtar-Gavs**	**0.99**	**252**	*e*	Pn		**Pn**	**15 49 10.4**	**+3.2**
SHGR	**Shooshtar-Gavs**	**0.99**	**252**	*e*	Pg		**Pn**	**15 49 10.4**	**+3.2**
IBRJ	**Brojen**	**1.25**	**114**	*e*	Pg		**Pg**	**15 49 13.2**	**+1.8**
IKLH	**Kolahrood**	**1.66**	**57**	*e*	Pn		**Pg**	**15 49 19.0**	**-0.2**
IKLH				*e*				15 49 21.3	
IKMR	**Kamar-syah**	**1.69**	**311**	*e*	Pn		**Pg**	**15 49 19.8**	**+0.1**
IKMR				*e*				15 49 46.9	
BDRS	**Dareh Seyedi**	**1.76**	**331**	*e*			Sg	15 49 53.9	+10
QAM	**Ghamsar**	**1.85**	**43**	*e*	Pn		**Pb**	**15 49 21.3**	**+0.1**
QAM				*e*				15 49 48.4	
IDOB	**Doab**	**1.99**	**313**	*e*	Pn		**Pg**	**15 49 25.0**	**-0.6**
KLNJ	**Kolanjah**	**2.01**	**134**	*e*	Pn		**Pg**	**15 49 25.8**	**-0.1**
KLNJ				*e*				15 50 06.8	
IKFM	**Kafar-mosalman**	**2.06**	**303**	*e*	Pn		**Pb**	**15 49 25.0**	**+0.4**
IZEF	**Zefreh**	**2.09**	**76**	*e*	Pn		**Pb**	**15 49 25.5**	**+0.1**
IZEF				*e*				15 49 29.7	
HSAM	**Samen**	**2.10**	**329**	*e*	Pn		**Pb**	**15 49 26.0**	**+0.5**
ASAO	**Ashtian**	**2.12**	**2**	*e*	Pn		**Pb**	**15 49 25.9**	**0.0**
ASAO	**Ashtian**	**2.12**	**2**	*e*	Pn		**Pb**	**15 49 25.9**	**0.0**
ASAO				*e*	Sg		**Sg**	**15 49 54.0**	**-1.5**
IRAM	**Ramesheh**	**2.18**	**106**	*e*			**Sg**	**15 50 04.1**	**+6.7**
GHVR	**GHOM**	**2.35**	**29**	*e*	Pn		**Pb**	**15 49 29.0**	**-0.8**
GHVR	**GHOM**	**2.35**	**29**	*e*	Pn		**Pb**	**15 49 29.0**	**-0.8**
GHVR				*e*	Sg		**Sg**	**15 50 00.1**	**-2.9**
KRSH	**Karshahi**	**2.42**	**50**	*e*	Pn		**Pb**	**15 49 30.2**	**-0.7**
KRSH				*e*				15 50 07.2	
HAGD	**Aghdareh**	**2.48**	**345**	*e*	Pn		**Pb**	**15 49 31.4**	**-0.6**
HAGD				*e*				15 50 08.1	
IQOM	**Qom**	**2.60**	**21**	*e*	Pn		**Pb**	**15 49 32.9**	**-1.2**
IQOM				*e*				15 50 11.4	
IKOM	**Komasi**	**2.67**	**312**	*e*	Pn		**Pb**	**15 49 33.6**	**-1.6**
IKOM				*e*				15 50 13.2	
IBZA	**Bozab**	**2.67**	**320**	*e*	Pn		**Pb**	**15 49 33.9**	**-1.4**
IBZA				*e*				15 50 31.3	
IRAZ	**Razeghan**	**2.97**	**0**	*e*	Pn		**Pb**	**15 49 38.0**	**-2.4**
IVRN	**Varamin**	**2.98**	**30**	*e*	Pn		**Pb**	**15 49 37.4**	**-3.0**
IKAZ	**Kazeroun**	**3.11**	**147**	*e*	Pn		**Pn**	**15 49 40.0**	**+3.4**
IKAZ				*e*				15 50 35.4	
HSRG	**Sareghieh**	**3.12**	**335**	*e*	Pn		**Pb**	**15 49 40.2**	**-2.8**
IHSB	**Hasanabad**	**3.21**	**20**	*e*	Pn		**Pb**	**15 49 41.1**	**-3.3**
ISAD	**Sadrabad**	**3.24**	**98**	*e*	Pn		**Pb**	**15 49 42.9**	**-2.1**
ANAR	**Anarak**	**3.30**	**76**	*e*	Pn		**Pn**	**15 49 41.6**	**+2.5**
IVIS	**Veis**	**3.31**	**310**	*e*	Pn		**Pn**	**15 49 41.3**	**+2.1**
IMHD	**Mahdasht**	**3.31**	**11**	*e*	Pn		**Pb**	**15 49 42.4**	**-3.8**
IGHG	**Ghaleghazi**	**3.38**	**305**	*e*	Pn		**Pn**	**15 49 42.3**	**+2.0**
IGHG				*e*				15 50 55.6	
SNGE	**Sanandaj**	**3.42**	**322**		IAML			15 50 42.5	
	comp=N,245nm,0.5s								
ILIN	**Lien**	**3.50**	**316**	*e*	Pn		**Pn**	**15 49 44.3**	**+2.4**
ILIN				*e*				15 50 59.1	
IDMV	**Damavand**	**3.60**	**29**	*e*	Pn		**Pn**	**15 49 46.2**	**+2.8**
CHTH	**Charan**	**3.62**	**16**	*e*	Pn		**Pn**	**15 49 46.5**	**+3.0**
CHTH	**Charan**	**3.62**	**16**	*e*	Pn		**Pn**	**15 49 46.5**	**+3.0**
IDHR	**Dehrash**	**3.72**	**309**	*e*	Pn		**Pn**	**15 49 46.9**	**+2.0**
ILAS	**Lasjerd**	**3.89**	**40**	*e*	Pn		**Pn**	**15 49 50.0**	**+2.8**
YZKH	**Yazd**	**3.96**	**89**	*e*	Pn		**Pb**	**15 49 52.4**	**-4.7**
YZKH	**Yazd**	**3.96**	**89**	*e*	Pn		**Pb**	**15 49 52.4**	**-4.7**
IGZV	**Ghazvin**	**3.96**	**4**	*e*	Pn		**Pn**	**15 49 51.7**	**+3.5**
IFIR	**Firoozkooh**	**3.98**	**36**	*e*	Pn		**Pn**	**15 49 51.7**	**+3.2**
QALM	**Alamut, Qazvin**	**4.04**	**8**	*e*	Pn		**Pn**	**15 49 52.6**	**+3.2**
QALM				*e*				15 51 03.0	
IMEH	**Mehriz**	**4.12**	**103**	*e*	Pn		**Pn**	**15 49 54.4**	**+3.9**
IPRN	**Peran**	**4.30**	**27**	*e*	Pn		**Pn**	**15 49 56.0**	**+3.2**
IALA	**Alasht**	**4.37**	**32**	*e*	Pn		**Pn**	**15 49 57.3**	**+3.4**
ISHM	**Shahmirzad**	**4.38**	**39**	*e*	Pn		**Pn**	**15 49 57.1**	**+3.0**
IANJ	**Anjilo**	**4.50**	**46**	*e*	Pn		**Pn**	**15 49 57.7**	**+2.0**
IBAF	**Bafgh**	**4.87**	**98**	*e*	Pn		**Pn**	**15 50 04.6**	**+3.9**
IGLO	**Ghaloghah**	**5.20**	**37**	*e*	Pn		**Pn**	**15 50 08.1**	**+2.9**
MAHB	**Mahabad**	**5.55**	**322**	*e*	Pn		**Pn**	**15 50 13.1**	**+3.1**
TPRV	**Parvadeh(Tabas**	**5.74**	**82**	*e*	Pn		**Pn**	**15 50 15.6**	**+3.1**
TNSJ	**Nastanj**	**5.82**	**73**	*e*	Pn		**Pn**	**15 50 16.7**	**+3.1**
KHGB	**Koh Gabri**	**5.97**	**108**	*e*	Pn		**Pn**	**15 50 18.2**	**+2.4**
TKDS	**Koohdasht(Taba**	**6.17**	**77**	*e*	Pn		**Pn**	**15 50 21.1**	**+2.6**
GENO	**Geno**	**7.38**	**131**	*e*	Pn		**Pn**	**15 50 37.3**	**+2.1**
SHME	**Shamm**	**8.36**	**138**	*e*	P		**Pn**	**15 50 51.7**	**+3.2**
GEYT	**Alibeck**	**8.67**	**48**		Pn		**Pn**	**15 50 53.1**	**+0.3**
	comp=N,0.2nm,0.3s,baz=210,slow=17,SNR=2.7								
GEYT					Lg		Lg	15 53 28.3	
	comp=N,0.1nm,0.3s,baz=207,slow=29,SNR=3.0								
GEYT					LR		LR	15 54 48.3	
	comp=N,120nm,19.0s,baz=355,slow=42								
GEYT	**Alibeck**	**8.67**	**48**				**Pn**	**15 50 52.8**	**0.0**
GYA0B	**ALIBECK ARRAY**	**8.67**	**48**		Pn		**Pn**	**15 50 55.4**	**+2.6**
MSFE	**Esma-Masafi**	**8.91**	**141**	*i*	P		**Pn**	**15 50 58.3**	**+2.3**
	SNR=9.5								
MSFE	**Esma-Masafi**	**8.91**	**141**	*e*	Pn		**Pn**	**15 50 56.7**	**+0.6**
NAZ	**Nazwa, Dubai**	**8.96**	**144**		P		**Pn**	**15 50 59.6**	**+2.9**
NAZ					S		**Sn**	**15 52 35.7**	**-2.0**
AJN	**Ajban**	**9.01**	**149**	*e*	Pn		**Pn**	**15 50 58.4**	**+1.0**
MDH	**Madha**	**9.04**	**140**	*i*	P		**Pn**	**15 50 58.0**	**+0.3**
	SNR=9.6								
MDH	**Madha**	**9.04**	**140**	*e*	Pn		**Pn**	**15 50 58.4**	**+0.7**
MDH	**Madha**	**9.04**	**140**	*e*	P		**Pn**	**15 50 58.2**	**+0.4**
	SNR=9.6								
MDH					S		**Sn**	**15 52 35.6**	**-3.9**
ASUD	**Al Ashush, Dub**	**9.11**	**147**		P		**Pn**	**15 51 00.8**	**+2.1**
ASUD					S		**Sn**	**15 52 40.1**	**-1.2**
UOSS	**Minazif**	**9.27**	**142**	*i*	P		**Pn**	**15 51 01.9**	**+0.9**
	SNR=7.5								
UOSS	**Minazif**	**9.27**	**142**	*e*	Pn		**Pn**	**15 51 01.9**	**+0.9**
UOSS	**Minazif**	**9.27**	**142**				**Pn**	**15 51 01.7**	**+0.8**
UOSS	**Minazif**	**9.27**	**142**		P		**Pn**	**15 51 01.7**	**+0.8**
HATD	**Hatta, Dubai**	**9.33**	**143**		P		**Pn**	**15 51 03.3**	**+1.5**
HATD	**Hatta, Dubai**	**9.33**	**143**	*e*	Pn		**Pn**	**15 51 02.8**	**+1.0**
HATD	**Hatta, Dubai**	**9.33**	**143**		P		**Pn**	**15 51 04.7**	**+2.8**
HATD					S		**Sn**	**15 52 43.5**	**-3.3**
RAYN	**Ar Rayn**	**9.69**	**205**	*i*	P		**Pn**	**15 51 06.9**	**+0.2**
	SNR=10								
RAYN	**Ar Rayn**	**9.69**	**205**				**Pn**	**15 51 07.0**	**+0.3**
SOHO	**SOHO**	**10.11**	**143**		P		**Pn**	**15 51 12.0**	**-0.5**
SOHO					S		**Sn**	**15 53 02.0**	**-3.8**
HOQ	**Hoqain**	**10.96**	**142**		P		**Pn**	**15 51 26.8**	**+2.7**
HOQ					S		**Sn**	**15 53 22.4**	**-4.5**
ASF	**Jabal al Asfar**	**11.02**	**272**		Pn		**Pn**	**15 51 26.0**	**+1.0**
	comp=N,1.3nm,0.3s,baz=58,slow=14,SNR=10								
ASF					Sn		**Sn**	**15 53 22.5**	**-5.8**
	comp=N,0.2nm,0.3s,baz=259,slow=16,SNR=1.6								
SMDO	**Samad**	**11.78**	**140**		P		**Pn**	**15 51 38.5**	**+3.1**
SMDO					S		**Sn**	**15 53 42.9**	**-4.1**
WSAR	**Wadi Sarin**	**11.96**	**138**		Pn		**Pn**	**15 51 39.4**	**+1.6**
	comp=N,1.2nm,0.3s,baz=310,slow=11,SNR=18								
WSAR					Sn		**Sn**	**15 53 43.1**	**-8.1**
	comp=N,0.3nm,0.3s,baz=338,slow=18,SNR=4.3								
WSAR	**Wadi Sarin**	**11.96**	**138**		P		**Pn**	**15 51 39.9**	**+2.1**
	SNR=7.3								
WSAR					S		**Sn**	**15 53 46.7**	**-4.6**
MMAI	**Mount Meron Ar**	**12.24**	**277**		Pn		**Pn**	**15 51 42.1**	**+0.5**
	comp=N,1.4nm,0.3s,baz=77,slow=14,SNR=3.1								
JMDO	**Jabal Madar**	**12.37**	**142**		P		**Pn**	**15 51 44.8**	**+1.4**
	SNR=16								
JMDO					S		**Sn**	**15 53 59.5**	**-1.9**
KBZ	**Khabaz**	**12.56**	**336**		LR		LR	15 57 07.5	
	comp=N,68nm,21.0s,baz=220,slow=40								
WBK	**Wadi Bani Khal**	**12.65**	**138**		P		**Pn**	**15 51 48.8**	**+1.6**
WBK					S		**Sn**	**15 54 06.8**	**-1.3**
EIL	**Elat**	**13.12**	**262**		Pn		**Pn**	**15 51 54.9**	**+1.2**
	comp=N,0.4nm,0.3s,baz=148,slow=13,SNR=2.5								
MHTO	**MHTO**	**13.47**	**146**		P		**Pn**	**15 51 59.0**	**+0.7**
	SNR=7.9								
MHTO					S		**Sn**	**15 54 20.6**	**-7.5**
DQM	**DQM**	**14.19**	**149**		P		**Pn**	**15 52 09.9**	**+1.5**
DQM					S		**Sn**	**15 54 38.0**	**-7.8**
WHFO	**Wadi Hawf**	**14.86**	**166**		P		**Pn**	**15 52 16.8**	**-0.7**
	SNR=21								
WHFO					S		**Sn**	**15 54 54.0**	**-8.1**
BRTR	**Keskin Array B**	**15.03**	**304**		Pn		**P**	**15 52 25.2**	**0.0**
	comp=N,0.2nm,0.3s,baz=119,slow=12,SNR=9.6								
BRTR	**Keskin Array B**	**15.03**	**304**				**Pn**	**15 52 20.0**	**+0.2**
DMTO	**DMTO**	**15.33**	**162**		P		**Pn**	**15 52 23.7**	**0.0**
	SNR=14								
DMTO					S		Sn	15 55 02.8	-11
ABKAR	**Akbulak array**	**18.42**	**21**		P		**P**	**15 53 03.7**	**+1.2**
KKAR	**Karatay Array**	**19.41**	**51**		P		**Pn**	**15 53 14.5**	**-0.1**
SOCY	**Socotra**	**20.49**	**169**		P		**P**	**15 53 22.3**	**-3.0**
SOCY					IAmb		IAmb	15 54 20.9	
	comp=Z,22nm,1.2s								
SANT	**Santorini**	**20.55**	**288**		P		**P**	**15 53 25.9**	**0.0**
ALN	**Alexandroupoli**	**20.89**	**301**		P		**P**	**15 53 29.5**	**0.0**
ALN					IAmb		IAmb	15 53 41.5	
	comp=Z,51nm,1.8s								
IDI	**Anoyia**	**20.96**	**285**		P		Pn	15 53 32.2	-0.9
	comp=Z,20nm,0.7s,baz=347,slow=6.7,SNR=22								
MLR	**Muntele Rosu**	**22.65**	**312**		P		**P**	**15 53 50.1**	**+1.5**
	comp=Z,7.3nm,0.8s,baz=235,slow=2.1,SNR=6.9								
MLR	**Muntele Rosu**	**22.65**	**312**		⇑P		**P**	**15 53 52.6**	**+4.1**
TESR	**Tescani**	**22.71**	**315**		⇑P		**P**	**15 53 50.7**	**+1.8**
VOIR		**23.19**	**311**		⇑P		**P**	**15 53 56.2**	**+2.0**
DOPR	**Dopca**	**23.21**	**313**		⇑P		**P**	**15 53 56.7**	**+2.4**
KDJ	**Kajisay**	**23.67**	**58**		P		**P**	**15 53 58.5**	**-0.6**
AKASG	**Malin Array Be**	**23.80**	**326**		P		**P**	**15 53 59.4**	**-0.6**
	comp=Z,26nm,0.3s,baz=136,slow=9.2,SNR=1.8								
AKASG	**Malin Array Be**	**23.80**	**326**		P		**P**	**15 53

C36M	**Paulatuk**	**78.43 358**	P	**P**	**16 00 47.1**	**-0.5**
C36M			IAmb	IAmb	16 00 47.9	
	comp=Z,4.8nm,1.0s					
ILAR	**Eielson Array**	**82.23 7**	P	**P**	**16 01 07.4**	**-0.8**
	comp=Z,0.3nm,0.9s,baz=306,slow=3.1,SNR=3.4					
YKA	**Yellowknife Ar**	**84.60 353**	P	**P**	**16 01 20.2**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=8.3,slow=5.0,SNR=14					

BJI **29** *16:02:24.9±0.0, 9.75N×126.41E, h65km, mB5.0/49, mb4.7/67, Ms4.4/36, Ms7 4.1/35*
MAN **29** *16:02:24.3, 9.84N×126.49E, h68km, mb5.5, ML4.5, MS4.9*
MAN Intensity IV - General Luna Surigao del Norte; Intensity III - Surigao City; Intensity II - Mainit Surigao del Norte.
MOS **29** *16:02:25.9±0.9, 9.87N×126.20E, h68km, mb5.1/45, Error ellipse: s-maj=10.3km s-min=4.9km az=113.6*
KLM **29** *16:02:26.0, 9.78N×126.39E, h72km, mb5.0*
IDC **29** *16:02:27.5±2.0, 9.89N×126.29E, h64km±18km, mb4.5/27, mb1 4.6/30, mb1mx4.5/41, mbtmp4.8/30, MS3.8/29, Ms1 3.8/29, ms1mx3.7/44, Error ellipse: s-maj=15.5km s-min=9.1km az=72.0*
DJA **29** *16:02:27.3±0.4, 10.0N±3.3×12.7E±1.1, h78km±4km, M5.1/58, mb4.9/58, mB5.5/10, MLv5.4/2, Mw(mB)5.0/10, Mwp5.3/1*
NEIC **29** *16:02:28.1±1.8, 9.89N±0.06×126.24E±0.09, h73km±4km, mb4.9/105, Error ellipse: s-maj=13.0km s-min=9.0km az=79.0*

ISC 29 16:02:27.1±0.5, 9.89N±0.03×126.35E±0.04, h65km±4km, n388, σ1°26/392, mb4.9/132, 27C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.16 218**		*eP*	**Pn**	**16 02 45.6**	**-1.8**
BUTP				*eS*	**Sn**	**16 03 02.5**	**-0.1**
MSLP	**Maasin**	**1.48 279**		*eP*	**Pn**	**16 02 51.3**	**-0.3**
MSLP				*eS*	**Sn**	**16 03 12.5**	**+2.4**
BIPH	**Bislig**	**1.70 179**	⇓	*eP*	**Pn**	**16 02 52.0**	**-2.6**
BIPH				*i* S	**Sn**	**16 03 13.0**	**-2.3**
OCLP	**Ormoc**	**2.06 304**		*eP*	**Pn**	**16 02 59.5**	**0.0**
CGP	**Cagayan de Oro**	**2.17 229**	⇑	*i*P	**Pn**	**16 03 01.1**	**+0.2**
CGP				*i* S	**Sn**	**16 03 27.7**	**+1.0**
BUKP	**Musuan**	**2.37 212**		*eP*	**Pn**	**16 03 03.5**	**-0.2**
BUKP				*eS*	**Sn**	**16 03 34.0**	**+2.3**
LLP	**Lapu-Lapu**	**2.38 280**	⇓	*eP*	**Pn**	**16 03 04.3**	**+0.6**
LLP				*eS*	**Sn**	**16 03 36.6**	**+4.7**
DAV	**Davao City (W)**	**2.91 195**		P	**Pn**	**16 03 11.9**	**+1.0**
	91nm,0.3s,baz=50,slow=7.9,SNR=4.9						
DAV				LR	LR	16 04 46.5	
	comp=Z,3μm,20.7s,baz=338,slow=48						
DAV	**Davao City (W)**	**2.91 195**	⇑	*eP*	**Pn**	**16 03 15.0**	**+4.1**
DAV	**Davao City (W)**	**2.91 195**			**Pn**	**16 03 12.4**	**+1.5**
DMPH	**Davao City--Mi**	**2.91 197**	⇓	*i*P	Pn	16 03 17.9	+6.8
MATI	**Mati**	**2.93 182**		*eP*	**Pn**	**16 03 09.2**	**-2.1**
DCPH	**Dipolog City**	**3.23 246**	⇑	*eP*	**Pn**	**16 03 15.7**	**+0.3**
CTBH	**Cotabato--PC H**	**3.37 218**	⇑	*eP*	**Pn**	**16 03 17.6**	**+0.3**
CTBH				*i* S	**Sn**	**16 03 52.8**	**-3.3**
PAGZ	**Pagadian**	**3.56 235**		*eP*	**Pn**	**16 03 19.2**	**-0.8**
PAGZ				*eS*	**Sn**	**16 04 01.6**	**+0.8**
SKMP	**Bagumbayan, Su**	**3.80 208**		*eP*	**Pn**	**16 03 21.1**	**-2.0**
DDMP	**Don Marcelino,**	**3.82 190**		*eP*	**Pn**	**16 03 21.3**	**-2.1**
DDMP				*eS*	**Sn**	**16 04 13.1**	**+6.0**
RCP	**Roxas**	**3.91 295**	⇑	*eP*	**Pn**	**16 03 26.0**	**+1.4**
JAP	**San Jose, Anti**	**4.41 281**	⇓	*eP*	**Pn**	**16 03 35.1**	**+3.5**
OTRP	**Odiongan**	**4.90 300**		*eP*	**Pn**	**16 03 39.3**	**+1.0**
LQP	**Lukban**	**5.30 312**	⇑	*eP*	Pn	16 03 50.9	-6.7
TGY	**Tagaytay City**	**6.75 309**		P	**Pn**	**16 04 04.8**	**+1.2**
	77nm,0.3s,baz=216,slow=8.7,SNR=3.0						
TGY				LR	LR	16 07 05.7	
	comp=Z,2μm,18.1s,baz=120,slow=42						
TNTI	**Ternate**	**9.12 174**		P	**Pn**	**16 04 35.7**	**-0.3**
	83nm,0.8s						
TNTI	**Ternate**	**9.12 174**			**Pn**	**16 04 36.1**	**+0.1**
MRSI	**Marisa**	**10.33 205**		P	Pn	16 04 57.4	+4.9
	36nm,0.5s						
KKM	**Kota Kinabalu**	**10.74 250**		Pn	**Pn**	**16 04 58.4**	**+0.2**
LUWI	**Luwuk**	**11.43 198**		P	Pn	16 05 12.4	+4.8
	5μm1μm100nm,1.0s						
LUWI	**Luwuk**	**11.43 198**			**Pn**	**16 05 08.9**	**+1.4**
APSI	**Ampana**	**11.71 204**		P	Pn	16 05 17.2	+5.8
	511nm38nm,0.8s						
SWI	**Sorong**	**11.75 155**		P	**Pn**	**16 05 12.6**	**+0.6**
	38nm,0.8s						
SIJI	**Sorong**	**11.76 155**		P	**Pn**	**16 05 13.8**	**+1.7**
	2.8nm,0.3s,baz=305,slow=23,SNR=15						
SANI	**Sanana**	**11.87 182**		P	**Pn**	**16 05 09.6**	**-4.0**
MSAI	**Masohi**	**13.40 169**		P	**P**	**16 05 39.2**	**-2.5**
	267nm20nm,0.8s						
AAI	**Ambon**	**13.62 172**		P	**P**	**16 05 42.6**	**-1.5**
	63nm,0.8s						
SMKI	**Samarinda**	**13.72 222**		P	**P**	**16 05 42.4**	**-2.8**
TWG	**Pinlang**	**13.81 339**		Pn	**Pn**	**16 05 39.3**	**-0.5**
FAKI	**Fak Fak**	**14.02 155**		P	**Pn**	**16 05 41.5**	**-1.2**
	51nm,0.9s						
FAKI	**Fak Fak**	**14.02 155**		Pn	**Pn**	**16 05 43.7**	**+1.0**
YULB	**Yu-li**	**14.27 341**			**P**	**16 05 49.9**	**-1.3**
TTSI	**Tana Toraja**	**14.40 207**		P	**P**	**16 05 50.8**	**-2.0**
	59nm,1.2s						
TPUB	**Ta-pu**	**14.41 338**		Pn	**Pn**	**16 05 48.8**	**+1.0**
SSLB	**Suanglung**	**14.75 340**		P	**P**	**16 05 56.3**	**-0.3**
SPSI	**Sidrap Palu**	**15.24 206**		P	**P**	**16 06 02.8**	**+0.6**
	35nm,0.9s						
YHNB	**Yeheng**	**15.44 343**		P	**P**	**16 06 05.2**	**+0.8**
BNSI	**Bone**	**15.50 204**		P	**Pn**	**16 06 03.4**	**+1.6**
	55nm,1.3s						
SBUM	**Sibu**	**15.86 243**		P	**P**	**16 06 10.4**	**+1.3**
KAPI	**Kappang**	**16.20 204**		P	**Pn**	**16 06 10.6**	**-0.1**
KAPI				pmax	pmax		
	comp=Z,180nm,1.8s						
KAPI	**Kappang**	**16.20 204**		LR	LR	16 13 26.7	
	comp=Z,360nm,19.7s,baz=62,slow=41						
KAPI	**Kappang**	**16.20 204**		Pn	**Pn**	**16 06 10.6**	**-0.1**
KAPI				IAmb	IAmb	16 06 21.7	
	comp=Z,180nm,1.8s						
BKSI	**Bulukumba**	**16.34 203**		P	**P**	**16 06 14.1**	**-0.2**
	comp=Z,28nm,1.1s						
KNMB	**Chin-men Tao**	**16.35 333**		P	**P**	**16 06 14.3**	**-0.1**
KBKI	**Kotabaru**	**16.57 218**		P	**P**	**16 06 19.7**	**+2.8**
	comp=Z,31nm,1.0s						
SMPI	**Sarmi**	**17.06 133**		P	**Pn**	**16 06 19.9**	**-1.5**
	comp=Z,45nm,1.2s						
STKI	**Sintang**	**17.73 237**		P	**P**	**16 06 32.5**	**+2.8**
	comp=Z,12μmcomp=Z,34nm,1.5s						
KSM	**Kuching**	**18.00 243**		P	**Pn**	**16 06 34.6**	**+1.5**
KSM	**Kuching**	**18.00 243**		P	**P**	**16 06 31.0**	**-1.8**
QIZ	**Qiongzhong**	**18.37 301**		P	**P**	**16 06 36.0**	**-0.7**
QIZ				S	**Sn**	**16 09 59.8**	**-2.3**
QIZ				pmax	pmax		
	comp=Z,11nm,1.5s						
GUMO	**Guam**	**18.50 77**		LR	LR	16 13 44.8	
	comp=Z,205nm,18.0s,baz=226,slow=36						
SOEI	**Soe**	**19.63 186**		P	**Pn**	**16 06 52.0**	**-0.5**
	comp=Z,99nm,0.7s						
SOEI	**Soe**	**19.63 186**			**Pn**	**16 06 52.3**	**-0.2**
PLAI	**Plampang**	**20.46 205**		P	Pn	16 07 01.3	-0.9
	comp=Z,47nm,1.4s						
UBPT	**Khong Chiam**	**21.06 287**		P	**P**	**16 07 05.1**	**-0.9**
SSE	**Sheshan**	**21.64 348**		P	**P**	**16 07 11.4**	**-0.6**
SSE				IAmb	IAmb	16 07 14.0	
	comp=Z,33nm,0.9s						
GMJI	**Gumukmas**	**22.15 216**		P	**P**	**16 07 19.7**	**+2.0**
	comp=Z,36nm,1.1s						
JCJ	**Chichijima**	**22.72 39**		P	**P**	**16 07 22.9**	**-0.8**
	comp=Z,109nm,1.0s,baz=293,slow=18,SNR=3.6						
JCJ				LR	LR	16 14 17.5	
	comp=Z,248nm,21.1s,baz=190,slow=31						
MTN	**Manton Dam**	**23.08 168**		P	**P**	**16 07 27.4**	**-0.1**
	baz=23,SNR=44						
MTN	**Manton Dam**	**23.08 168**		P	**P**	**16 07 27.2**	**-0.3**
MTN				IAmb	IAmb	16 07 30.5	
	comp=Z,45nm,0.8s						
NJ2	**Nanjing**	**23.12 344**		*eP*	**P**	**16 07 27.0**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,38nm,0.8s						
KDU	**Kakadu**	**23.24 165**		P	**P**	**16 07 28.1**	**-0.9**
	baz=23,SNR=43						
WHN	**Wuhan**	**23.39 333**		P	**P**	**16 07 31.5**	**+1.2**
JNU	**Nakatsue**	**23.49 10**		P	**P**	**16 07 30.8**	**-0.4**
	comp=Z,7.9nm,0.9s,baz=153,slow=10,SNR=3.7						
JNU				LR	LR	16 17 46.2	
	comp=Z,105nm,19.3s,baz=166,slow=39						
UGM	**Wanagama**	**23.69 222**		P	**P**	**16 07 34.8**	**+1.6**
MYKOM	**Kota Tinggi**	**23.77 252**		P	**P**	**16 07 35.5**	**+1.7**
MYKOM				IAmb	IAmb	16 07 36.7	
	comp=Z,56nm,0.7s						
MYKOM	**Kota Tinggi**	**23.77 252**		P	**P**	**16 07 32.0**	**-1.9**
KPJI	**Karang Pucung**	**24.36 226**		P	**P**	**16 07 39.6**	**+0.3**
	comp=Z,38nm,1.4s						
SLVN	**Son La**	**24.39 300**		P	**P**	**16 07 38.6**	**-0.9**
JRMM	**Jerantut**	**24.43 258**		P	**P**	**16 07 38.0**	**-1.9**
GYA	**Guiyang**	**24.86 314**		P	**P**	**16 07 44.3**	**+0.4**
GYA				pmax	pmax		
	comp=Z,110nm,0.9s						
LEM	**Lembang**	**24.98 229**		LR	LR	16 18 57.0	
	comp=Z,254nm,18.1s,baz=53,slow=40						
KNRA	**Kunanurra**	**25.52 175**		P	**P**	**16 07 49.6**	**-0.1**
	baz=26,SNR=87						
KNRA	**Kunanurra**	**25.52 175**		P	**P**	**16 07 49.4**	**-0.3**
PBKT	**Sadao Pong**	**25.56 288**		P	**P**	**16 07 50.4**	**+0.3**
ENH	**Enshi**	**25.66 325**		P	**P**	**16 07 49.5**	**-1.4**
IPM	**Ipoh**	**25.68 260**		P	**P**	**16 07 50.1**	**-1.2**
IPM				IAmb	IAmb	16 07 54.4	
	comp=Z,30nm,0.8s						
IPM	**Ipoh**	**25.68 260**		P	**P**	**16 07 46.0**	**-5.3**
KULM	**Kulim**	**25.87 262**		P	**P**	**16 07 52.4**	**-0.7**
KULM	**Kulim**	**25.87 262**		P	**P**	**16 07 52.0**	**-1.0**
KLSI		**25.95 237**		P	**P**	**16 07 55.4**	**+1.6**
	comp=Z,14nm,0.8s						
MDSI	**Maura Dua**	**26.30 238**		P	**P**	**16 07 57.4**	**+0.5**
	comp=Z,18nm,1.1s						
KASI	**Kota Agung**	**26.61 236**		P	**P**	**16 07 59.4**	**-0.3**
	comp=Z,532nmcomp=Z,40nm,1.2s						
LWLI	**Liwa**	**26.69 237**		P	**P**	**16 08 00.4**	**-0.1**
	comp=Z,37nm,0.8s						
KMI	**Kunming**	**27.06 307**		P	**P**	**16 08 04.8**	**+0.9**
KMI				pP	pP	16 08 17.8	-1.6
KMI				sP	sP	16 08 26.5	-0.5
KMI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,86nm,5.1s						
KSAR	**Wonju Array Be**	**27.46 3**		P	**P**	**16 08 07.7**	**+0.6**
KSAR	**Wonju Array Be**	**27.46 3**		P	**P**	**16 08 07.7**	**+0.6**
KSRS	**Korea Array**	**27.46 3**		P	**P**	**16 08 07.9**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=185,slow=9.6,SNR=9.8						
KSRS				LR	LR	16 18 57.3	
	comp=Z,92nm,21.8s,baz=183,slow=36						
TIA	**Tai'an**	**27.51 344**		P	**P**	**16 08 07.5**	**0.0**
TIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
FITZ	**Fitzroy Crossi**	**27.82 181**		P	**P**	**16 08 10.3**	**-0.1**
	baz=28,SNR=37						
FITZ	**Fitzroy Crossi**	**27.82 181**		P	**P**	**16 08 10.8**	**+0.4**
	comp=Z,29nm,0.5s,baz=360,slow=7.7,SNR=27						
FITZ				LR	LR	16 22 13.8	
	comp=Z,48nm,19.0s,baz=8.5,slow=43						
FITZ	**Fitzroy Crossi**	**27.82 181**		P	**P**	**16 08 10.1**	**-0.3**
FITZ				IAmb	IAmb	16 08 14.7	
	comp=Z,55nm,1.0s						
CM31	**Chiang Mai Arr**	**27.87 291**		P	**P**	**16 08 09.6**	**-1.3**
CM31				IAmb	IAmb	16 08 23.5	
	comp=Z,23nm,1.0s						
CMAR	**Chiang Mai Arr**	**27.87 291**		P	**P**	**16 08 11.1**	**+0.2**
	comp=Z,7.2nm,1.0s,baz=104,slow=7.3,SNR=41						
CMAR				PcP	**PcP**	**16 11 26.5**	**+0.9**
	comp=Z,1.8nm,0.8s,baz=98,slow=0.9,SNR=6.1						
PDSI	**Padang**	**27.91 249**		P	**P**	**16 08 11.8**	**+0.4**
	comp=Z,26nm,0.7s						
CHTO	**Chiang Mai**	**27.95 292**		P	**P**	**16 08 10.8**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,16nm,1.0s						
CHTO	**Chiang Mai**	**27.95 292**		P	**P**	**16 08 10.8**	**-0.9**
PSI	**Prapat**	**28.13 257**		P	**P**	**16 08 14.3**	**+0.9**
PSI				pmax	pmax		
	comp=Z,60nm,1.6s						
PSI	**Prapat**	**28.13 257**		P	**P**	**16 08 14.3**	**+0.9**
	comp=Z,6.4nm,0.7s,baz=90,slow=5.4,SNR=7.3						
RPSI	**Rantau Prapat**	**28.16 257**		P	**P**	**16 08 13.3**	**-0.3**
RPSI				IAmb	IAmb	16 08 25.7	
	comp=Z,60nm,1.6s						
RPSI	**Rantau Prapat**	**28.16 257**		P	**P**	**16 08 14.3**	**+0.8**
MJAR	**Matsushiro Arr**	**28.63 20**		PcP	**PcP**	**16 11 28.6**	**+1.4**
	comp=Z,0.4nm,0.3s,baz=198,slow=5.4,SNR=4.4						
MJAR				LR	LR	16 17 51.5	
	comp=Z,171nm,21.4s,baz=200,slow=32						
XAN	**Xi'an**	**28.86 329**		P	**P**	**16 08 18.8**	**-0.9**
XAN				S	**S**	**16 13 06.0**	**+0.6**
XAN				pmax	pmax		
	comp=Z,50nm,0.8s						
XAN	**Xi'an**	**28.86 329**		P	**P**	**16 08 18.3**	**-1.4**
XAN				pmax	pmax		
	comp=Z,37nm,0.7s						
XAN	**Xi'an**	**28.86 329**		P	**P**	**16 08 18.3**	**-1.4**
XAN				IAmb	IAmb	16 08 19.5	
	comp=Z,37nm,0.7s						
COEN	**Coen**	**28.99 145**		P	**P**	**16 08 20.9**	**0.0**
COEN				IAmb	IAmb	16 08 22.6	
	comp=Z,42nm,1.5s						
SISI	**Saibi**	**29.34 249**		P	**P**	**16 08 24.2**	**+0.2**
	comp=Z,563nmcomp=Z,44nm,1.0s						
CD2	**Chengdu**	**29.64 318**		P	**P**	**16 08 25.3**	**-1.3**
CD2				S	**S**	**16 13 15.0**	**-2.7**
CD2				pmax	pmax		
	comp=Z,150nm,5.1s						
CD2				LR	LR		
	comp=Z,390nm,17.2s						
CD2				LR	LR		
	comp=Z,380nm,18.6s						
CD2				LR	LR		
	comp=Z,630nm,16.7s						
GSI	**Gunungsitoli**	**29.85 255**		P	**P**	**16 08 28.2**	**-0.4**
	comp=Z,45nm,0.8s						
GSI	**Gunungsitoli**	**29.85 255**		P	**P**	**16 08 28.0**	**-0.6**
GSI				IAmb	IAmb	16 08 39.6	
	comp=Z,39nm,0.9s						
WRAB	**Tennant Creek**	**30.67 165**	*ce*	P	**P**	**16 08 35.9**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,42nm,2.5s						
WRAB	**Tennant Creek**	**30.67 165**		P	**P**	**16 08 34.5**	**-1.2**
WRA	**Warramunga Arr**	**30.67 165**		P	**P**	**16 08 34.5**	**-1.2**
	comp=Z,4.0nm,0.8s,baz=343,slow=9.1,SNR=20						
WRA	**Warramunga Arr**	**30.67 165**		P	**P**	**16 08 35.0**	**-0.7**
WB2	**Warramunga Arr**	**30.68 165**		P	**P**	**16 08 34.6**	**-1.1**
WB2				IAmb	IAmb	16 08 37.8	
	comp=Z,40nm,1.6s						
WR2	**Warramunga Arr**	**30.68 165**		P	**P**	**16 08 35.2**	**-0.7**
	baz=31						
WR0	**Warramunga Arr**	**30.74 165**		P	**P**	**16 08 35.2**	**-1.2**
WR0				IAmb	IAmb	16 08 36.4	
	comp=Z,28nm,1.4s						
BJT	**Baijiatuau**	**31.34 345**		P	**P**	**16 08 41.6**	**+0.2**
BJT				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BJT	**Baijiatuau**	**31.34 345**		P	**P**	**16 08 41.6**	**+0.2**
PSA00	**Pilbara Seismi**	**31.91 191**		P	**P**	**16 08 46.2**	**-0.5**
PSA00	**Pilbara Seismi**	**31.91 191**		P	**P**	**16 08 46.1**	**-0.5**
PSA00				IAmb	IAmb	16 08 47.8	
	comp=Z,26nm,0.8s						
LZH	**Lanzhou**	**33.13 325**	⇑	P	**P**	**16 08 57.3**	**-0.1**
LZH				pP	sP	16 09 18.0	-1.9
LZH				sP	pwP	16 09 24.0	+8.8
LZH				PP	**PnPn**	**16 10 07.8**	**-1.4**
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				pmax	pmax		
	comp=Z,68nm,5.4s						
LZH				LR	LR		
	comp=Z,210nm,15.2s						
LZH				LR	LR		
	comp=Z,220nm,14.1s						
LZH				LR	LR		
	comp=Z,230nm,16.8s						
HHC	**Hu-ho-hao-te**	**33.49 339**	*eP*	P	**P**	**16 09 01.5**	**+1.1**
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,67nm,4.9s						
HHC				LR	LR		
	comp=Z,120nm,15.3s						
HHC				LR	LR		
	comp=Z,91nm,16.0s						
HHC				LR	LR		
	comp=Z,130nm,17.0s						
AS04	**Alice Springs**	**34.16 168**		P	**P**	**16 09 05.8**	**-0.4**
	baz=34						
AS31	**Alice Springs**	**34.16 168**		P	**P**	**16 09 05.6**	**-0.7**
AS31				IAmb	IAmb	16 09 09.8	
	comp=Z,5.0nm,0.3s						
ASAR	**Alice Springs**	**34.16 168**		P	**P**	**16 09 05.5**	**-0.8**
	comp=Z,3.8nm,0.3s,baz=348,slow=7.5,SNR=122						
ASAR				PcP	**PcP**	**16 11 42.9**	**+0.7**
	comp=Z,2.0nm,0.5s,baz=348,slow=2.9,SNR=5.2						
ASAR	**Alice Springs**	**34.16 168**		P	**P**	**16 09 05.2**	**-1.0**
GIRL	**Giralia**	**34.44 200**		P	**P**	**16 09 10.2**	**+1.5**
USRK	**Ussuriysk Ar.**	**34.53 7**		P	**P**	**16 09 09.5**	**+0.3**
	comp=Z,2.7nm,0.7s,baz=204,slow=6.5,SNR=5.2						
USRK				PcP	**PcP**	**16 11 43.7**	**+0.8**
	comp=Z,1.6nm,0.5s,baz=222,slow=3.8,SNR=4.2						
USRK				LR	LR	16 24 26.0	
	comp=Z,76nm,18.4s,baz=184,slow=38						
GTA	**Gaotai**	**37.73 326**	⇑	P	**P**	**16 09 36.5**	**-0.3**
GTA				PcP	**PcP**	**16 11 54.5**	**+1.8**
GTA				pmax	pmax		
	comp=Z,13nm,0.8s						
GTA				pmax	pmax		
	comp=Z,110nm,5.1s						
GTA				LR	LR		
	comp=Z,140nm,15.5s						
GTA				LR	LR		
	comp=Z,130nm,15.2s						
GTA				LR	LR		
	comp=Z,230nm,15.9s						
LSA	**Lhasa**	**38.31 306**		P	**P**	**16 09 41.6**	**-0.6**
LSA				pmax	pmax		
	comp=Z,27nm,1.8s						
LSA	**Lhasa**	**38.31 306**		P	**P**	**16 09 41.6**	**-0.6**
LSA				IAmb	IAmb	16 10 02.0	
	comp=Z,27nm,1.8s						
HNR	**Honiara**	**38.56 119**		LR	LR	16 23 34.5	
	comp=Z,111nm,20.3s,baz=302,slow=33						
KLR	**Kul'dur**	**39.47 6**	*eP*		**P**	**16 09 52.1**	**+1.1**
KLR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**39.48 18**	*eP*		**P**	**16 09 47.5**	**-3.6**
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
HIA	**Hailar**	**39.63 353**		P	**P**	**16 09 52.7**	**+0.3**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HIA	**Hailar**	**39.63 353**		P	**P**	**16 09 52.7**	**+0.3**
H11S3	**WAKE ISLAND Hy**	**39.96 73**		T	T	16 52 52.1	
	baz=262,slow=75,SNR=133						
H11S1	**WAKE ISLAND Hy**	**39.97 73**		T	T	16 52 51.9	
	baz=262,slow=75,SNR=64						
H11S2	**WAKE ISLAND Hy**	**39.97 73**		T	T	16 52 52.6	
	baz=262,slow=75,SNR=50						
MORW	**Morawa**	**39.99 194**		P	**P**	**16 09 56.1**	**+0.5**
	baz=40						
MORW	**Morawa**	**39.99 194**		P	**P**	**16 09 55.6**	**0.0**
H11N1	**WAKE ISLAND Hy**	**40.30 71**		T	T	16 53 20.0	
	baz=264,slow=74,SNR=202						
TAPN	**Taplejung**	**40.31 301**	*eP*		**P**	**16 09 58.3**	**-0.4**
	comp=Z,12nm,0.4s						
H11N2	**WAKE ISLAND Hy**	**40.31 71**		T	T	16 53 19.5	
	baz=264,slow=74,SNR=161						
H11N3	**WAKE ISLAND Hy**	**40.32 71**		T	T	16 53 20.7	
	baz=264,slow=74,SNR=211						
ODAN	**Odare**	**40.43 300**	*eP*		**P**	**16 09 59.2**	**-0.4**
	comp=Z,34nm,0.7s						
FORT	**Forrest**	**40.47 178**		P	**P**	**16 10 00.2**	**+0.7**
	baz=41						
FORT	**Forrest**	**40.47 178**		P	**P**	**16 09 59.9**	**+0.3**
RAMN	**Ramite**	**41.13 300**	*eP*		**P**	**16 10 04.5**	**-0.9**
	comp=Z,18nm,0.6s						
ULN	**Ulaanbaatar**	**41.20 340**	*ce*	P	**P**	**16 10 06.5**	**+0.9**
ULN				pmax	pmax		
	comp=Z,24nm,1.0s						
ULN	**Ulaanbaatar**	**41.20 340**		P	**P**	**16 10 06.1**	**+0.6**
ULN				IAmb	IAmb	16 10 07.5	
	comp=Z,17nm,0.7s						
SONM	**Songino Array**	**41.40 340**		P	**P**	**16 10 07.5**	**+0.3**
SONM						16 12 04.9	
SONM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SONM	**Songino Array**	**41.40 340**		P	**P**	**16 10 08.2**	**+1.1**
	comp=Z,5.1nm,0.5s,baz=157,slow=9.9,SNR=51						
SONM				PcP	**PcP**	**16 12 04.9**	**+0.7**
	comp=Z,2.7nm,0.8s,baz=160,slow=3.1,SNR=4.4						
SONM				LR	LR	16 27 25.7	
	comp=Z,98nm,21.1s,baz=140,slow=36						
SONM	**Songino Array**	**41.40 340**		P	**P**	**16 10 07.5**	**+0.3**
GRNR	**Gornyy**	**41.59 10**	⇓	*i*P	**P**	**16 10 10.5**	**+2.0**
GRNR				*eS*	**S**	**16 16 24.9**	**+4.9**
GRNR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GRNR				smax	smax		
	comp=E,2.0nm,1.1s						
GRNR				MLR	MLR		
	comp=Z,110nm,16.0s						
JIRN	**Jiri**	**41.69 301**	*eP*		**P**	**16 10 09.7**	**-0.4**
	comp=Z,37nm,0.4s						
CHLP	**Challavanipeta**	**41.80 287**	*eP*		**P**	**16 10 11.5**	**+0.8**
CHLP				IAmb	IAmb	16 10 12.4	
	comp=Z,11nm,1.0s						
GUN	**Gumba**	**42.02 301**	*eP*		**P**	**16 10 12.6**	**-0.2**
	comp=Z,20nm,0.6s						
PKI	**Pulchoki**	**42.32 300**	*eP*		**P**	**16 10 14.2**	**-1.1**
	comp=Z,5.7nm,0.2s						
PKIN	**Phulchoki**	**42.34 300**	*eP*		**P**	**16 10 14.0**	**-1.3**
	comp=Z,6.7nm,0.2s						
EIDS	**Eidsvold**	**42.53 146**		P	**P**	**16 10 18.8**	**+2.3**
EIDS				IAmb	IAmb	16 10 49.6	
	comp=Z,59nm,1.6s						
NWAO	**Narrogin (SRO)**	**43.46 191**		P	**P**	**16 10 24.3**	**+0.5**
NWAO	**Narrogin (SRO)**

HYBB IAmb IAmb 16 10 52.6
comp=Z,12nm,0.5s
SRSP Sriramsagar 47.23 287 *e*P **P** **16 10 54.0 0.0**
SRSP IAmb IAmb 16 10 54.7
comp=Z,7.8nm,0.6s
WMQ Urumqi 47.56 322 *e*P **P** **16 10 56.8 +0.5**
WMQ pP pP 16 11 15.8 +3.2
WMQ pmax pmax
comp=Z,9.0nm,0.9s
WMQ pmax pmax
comp=Z,96nm,3.6s
WMQ LR LR
comp=Z,140nm,28.1s
WMQ LR LR
comp=Z,1μm,27.7s
WMQ LR LR
comp=Z,190nm,27.7s
WMQ Urumqi 47.56 322 P **P** **16 10 55.0 -1.3**
WMQ pmax pmax
comp=Z,7.0nm,0.7s
WMQ Urumqi 47.56 322 P **P** **16 10 55.0 -1.3**
URV Uravakonda 48.12 281 *e*P **P** **16 11 00.9 -0.1**
URV IAmb IAmb 16 11 01.9
comp=Z,13nm,0.9s
BOD Bodaibo 48.75 351 *e*P **P** **16 11 05.6 +0.5**
BOD pmax pmax
comp=Z,16nm,1.5s
KLRI Killari 48.83 285 *e*P **P** **16 11 06.4 -0.1**
KLRI IAmb IAmb 16 11 07.2
comp=Z,24nm,0.7s
PETK Petropavlovsk- 49.95 24 P **P** **16 11 16.1 +1.7**
comp=Z,2.9nm,0.7s,baz=204,slow=4.6,SNR=11
PETK LR LR 16 34 10.1
comp=Z,90nm,18.1s,baz=240,slow=38
PETK Petropavlovsk- 49.95 24 P **P** **16 11 15.1 +0.7**
TOO Toolangi 50.51 160 P **P** **16 11 20.1 +1.3**
TOO pmax pmax
comp=Z,78nm,1.6s
TOO Toolangi 50.51 160 P **P** **16 11 20.1 +1.3**
DZM Mont Dzumac 50.55 129 P **P** **16 11 21.0 +1.5**
comp=Z,9.9nm,0.8s,baz=250,slow=12,SNR=9.4
DZM Mont Dzumac 50.55 129 P **P** **16 11 21.0 +1.5**
YAK Yakutsk 52.10 2 *e*P **P** **16 11 30.7 +0.4**
YAK *e**PP **pP** **16 11 46.9 +1.7**
YAK *e* 16 12 39.9
YAK *e* 16 13 30.2
YAK *e*S **S** **16 18 49.4 0.0**
YAK *e**SS **sS** **16 19 13.1 -2.3**
YAK *e*SS **SS** **16 22 23.0 -4.3**
YAK *e*SSS SSS 16 24 05.1
YAK pmax pmax
comp=Z,20nm,1.3s
YAK pmax pmax
comp=N,16nm,1.5s
YAK pmax pmax
comp=Z,150nm,4.8s
YAK pmax pmax
comp=N,145nm,5.0s
YAK pmax pmax
comp=E,176nm,5.0s
YAK smax smax
comp=N,96nm,4.0s
YAK smax smax
comp=E,80nm,4.3s
YAK Yakutsk 52.10 2 P **P** **16 11 30.5 +0.2**
MK31 Makanchi Array 52.37 323 P **P** **16 11 32.2 -0.5**
MK31 pmax pmax
comp=Z,11nm,0.7s
MK31 Makanchi Array 52.37 323 P **P** **16 11 32.2 -0.5**
MK31 IAmb IAmb 16 11 33.4
comp=Z,11nm,0.7s
MKAR Makanchi Array 52.37 323 P **P** **16 11 32.9 +0.2**
comp=Z,16nm,0.6s,baz=121,slow=8.2,SNR=159
MKAR PcP **PcP** **16 12 41.7 -1.2**
comp=Z,4.7nm,0.7s,baz=118,slow=4.7,SNR=4.7
MKAR LR LR 16 35 09.2
comp=Z,88nm,21.0s,baz=116,slow=38
MKAR Makanchi Array 52.37 323 P **P** **16 11 32.1 -0.6**
PDGK Podgornoye 52.53 318 P **P** **16 11 31.7 -2.3**
MAKZ Makanchi 52.56 323 P **P** **16 11 33.7 -0.4**
MAKZ pmax pmax
comp=Z,12nm,0.6s
MAKZ Makanchi 52.56 323 P **P** **16 11 33.6 -0.4**
MAKZ IAmb IAmb 16 11 34.7
comp=Z,12nm,0.6s
MA2 Magadan 52.88 15 P **P** **16 11 37.3 +1.1**
MA2 pmax pmax
comp=Z,5.0nm,0.9s
MA2 Magadan 52.88 15 P **P** **16 11 37.2 +1.1**
PRZ Przheval'sk 52.91 316 P **P** **16 11 36.9 0.0**
PRZ pmax pmax
comp=Z,11nm,0.7s
PRZ Przheval'sk 52.91 316 P **P** **16 11 36.9 0.0**
PRZ IAmb IAmb 16 11 38.4
comp=Z,11nm,0.7s
KSH Kashi 53.54 312 P **P** **16 11 45.5 +4.0**
KSH pP sP 16 12 05.8 +0.9
KSH PP **PP** **16 13 45.8 +3.1**
KSH S **S** **16 19 10.0 0.0**
KSH sS sS 16 19 42.8 +4.3
KSH SS **SS** **16 22 50.5 -0.6**
KSH pmax pmax
comp=Z,200nm,4.8s
KSH LR LR
comp=Z,200nm,5.8s
KSH LR LR
comp=Z,250nm,5.3s
KSH LR LR
comp=Z,210nm,5.5s
KDJ Kajisay 53.61 316 P **P** **16 11 41.6 -0.4**
KDJ pmax pmax
comp=Z,6.0nm,0.6s
KDJ Kajisay 53.61 316 P **P** **16 11 41.6 -0.4**
KDJ IAmb IAmb 16 11 42.8
comp=Z,5.8nm,0.6s
NIL Nilore 54.01 304 P **P** **16 11 44.1 -0.8**
NIL pmax pmax
comp=Z,12nm,0.8s
NIL Nilore 54.01 304 P **P** **16 11 44.1 -0.8**
NIL IAmb IAmb 16 11 59.8
comp=Z,12nm,0.8s
NRN Naryn 54.17 314 P **P** **16 11 45.7 -0.7**
NRN pmax pmax
comp=Z,5.0nm,0.5s
NRN Naryn 54.17 314 P **P** **16 11 45.6 -0.7**
NRN IAmb IAmb 16 11 47.5
comp=Z,4.8nm,0.5s
ULHL Ulahol 54.30 315 P **P** **16 11 47.1 -0.1**
SNR=13
KZA Kyzart 54.93 315 P **P** **16 11 52.5 +0.5**
SNR=9.3
ZAA0 Zalesovo Array 54.99 331 P **P** **16 11 50.4 -1.2**
ZALV Zalesovo Beam 54.99 331 P **P** **16 11 50.9 -0.7**
comp=Z,3.2nm,0.3s,baz=118,slow=6.8,SNR=24
ZALV LR LR 16 35 46.4
comp=Z,56nm,20.7s,baz=104,slow=36
ZALV Zalesovo Beam 54.99 331 P **P** **16 11 50.4 -1.2**
KBK Karagaybulak 55.34 316 P **P** **16 11 54.5 -0.1**
SNR=8.0
UCH Uchtor 55.49 315 P **P** **16 11 56.6 +0.5**
SNR=22
AAK Ala-Archa 55.65 315*ce*P **P** **16 11 56.6 -0.2**
AAK pmax pmax
comp=Z,2.0nm,0.7s
AAK Ala-Archa 55.65 315 P **P** **16 11 55.0 -1.8**
FUNA Funafuti 55.71 107 P **P** **16 11 56.6 -0.8**
USP Ospenovka 55.86 316 P **P** **16 11 57.9 -0.3**
SNR=9.3
TAU Tasmania Unive 55.93 161 P **P** **16 11 59.5 +1.0**
TAU pmax pmax
comp=Z,184nm,2.0s
TAU Tasmania Unive 55.93 161 P **P** **16 11 59.5 +1.0**
AML Almayashu 56.03 315 P **P** **16 12 00.2 +0.4**
SNR=15
EKS2 Erkin-Say 56.15 315 P **P** **16 12 00.5 +0.2**
SNR=8.6
SEY Seymchan 56.17 14 *i* P **P** **16 12 00.9 +1.0**
KURK Kurchatov 56.42 326*ce*P **P** **16 12 01.8 -0.1**
KURK pmax pmax
comp=Z,21nm,0.8s
KURK Kurchatov 56.42 326 P **P** **16 12 01.4 -0.5**
BTK Batken 57.49 311 P **P** **16 12 08.5 -1.3**
BTK pmax pmax
comp=Z,4.0nm,0.6s
BTK Batken 57.49 311 P **P** **16 12 08.5 -1.3**

KBL Kabul 57.61 305 P **P** **16 12 09.9 -1.0**
KBL pmax pmax
comp=Z,8.0nm,1.0s
KBL Kabul 57.61 305 P **P** **16 12 09.9 -1.0**
KBL IAmb IAmb 16 12 11.1
comp=Z,7.6nm,0.9s
KK31 Karatay Array 58.57 315 P **P** **16 12 16.4 -0.8**
KK31 pmax pmax
comp=Z,7.0nm,1.1s
KK31 Karatay Array 58.57 315 P **P** **16 12 16.4 -0.8**
KKAR Karatay Array 58.57 315 P **P** **16 12 16.5 -0.7**
KKAR pmax pmax
comp=Z,7.0nm,1.1s
KKAR Karatay Array 58.57 315 P **P** **16 12 16.5 -0.7**
TIXI Tiksi 61.73 1 *e*P **P** **16 12 38.9 +0.7**
TIXI pmax pmax
comp=Z,22nm,1.7s
TIXI Tiksi 61.73 1 P **P** **16 12 38.4 +0.2**
TIXI IAmb IAmb 16 12 39.9
comp=Z,12nm,1.0s
BRVK Borovoye 62.09 325 P **P** **16 12 40.6 -0.4**
BRVK pmax pmax
comp=Z,9.0nm,0.8s
BRVK Borovoye 62.09 325 P **P** **16 12 40.6 -0.4**
BRVK IAmb IAmb 16 12 41.7
comp=Z,9.4nm,0.8s
BILL Bilibino 63.74 16 *e*P **P** **16 12 51.5 -0.3**
BILL *e* 16 13 26.0
BILL pmax pmax
comp=Z,18nm,2.5s
BILL Bilibino 63.74 16 P **P** **16 12 52.4 +0.6**
BILL IAmb IAmb 16 12 54.0
comp=Z,26nm,1.7s
GEYT Alibeck 66.83 307 P **P** **16 13 12.9 +0.5**
comp=Z,10nm,0.7s,baz=158,slow=4.8,SNR=24
GEYT LR LR 16 46 48.1
comp=Z,89nm,19.2s,baz=175,slow=40
GEYT Alibeck 66.83 307 P **P** **16 13 12.1 -0.3**
GYA0B ALIBECK ARRAY 66.83 307 P **P** **16 13 12.4 +0.1**
GYA0B IAmb IAmb 16 13 13.7
comp=Z,14nm,0.8s
RPZ Rata Peaks 67.03 146 P **P** **16 13 14.6 +1.3**
comp=Z,11nm,0.5s,baz=249,slow=2.1,SNR=18
RPZ Rata Peaks 67.03 146 P **P** **16 13 14.4 +1.0**
AB31 Akbulak array 67.21 319 *i* P **P** **16 13 13.4 -1.1**
ABKAR Akbulak array 67.21 319 P **P** **16 13 13.7 -0.8**
ABKAR Akbulak array 67.21 319 P **P** **16 13 13.6 -0.8**
ABKAR IAmb IAmb 16 13 14.9
comp=Z,6.0nm,1.0s
BKZ Black Stump Fm 67.45 140 P **P** **16 13 17.4 +1.2**
SVE Sverdlovsk 68.57 327⇑*e*P **P** **16 13 23.0 +0.1**
SVE pmax pmax
comp=Z,13nm,0.9s
AKTO Aktyubinsk 68.66 320 LR LR 16 46 05.8
comp=Z,138nm,18.5s,baz=93,slow=38
ARU Arti 69.58 327*c i* P **P** **16 13 28.4 -0.7**
ARU *PP **pP** **16 13 46.9 +1.2**
ARU S **S** **16 22 33.5 +1.3**
ARU SS **SS** **16 27 00.4 -0.5**
ARU pmax pmax
comp=Z,11nm,0.5s
ARU Arti 69.58 327 P **P** **16 13 28.1 -1.1**
SOCY Socotra 70.87 280 P **P** **16 13 36.4 -1.5**
CASY Casey 76.85 186 P **P** **16 14 12.1 +0.4**
IMAR Indian Mountai 76.91 24 P **P** **16 14 13.0 +0.8**
RAYN Ar Rayn 77.78 292 P **P** **16 14 17.4 -0.5**
RAYN pmax pmax
comp=Z,9.0nm,0.8s
RAYN Ar Rayn 77.78 292 P **P** **16 14 17.4 -0.5**
RAYN IAmb IAmb 16 14 18.6
comp=Z,8.8nm,0.8s
ZEI Tsey 77.83 312 *e*P **P** **16 14 17.4 -0.6**
ZEI pmax pmax
comp=Z,11nm,0.7s
BPAW Bear Paw Mtn. 77.96 26 P **P** **16 14 19.2 +1.1**
BPAW IAmb IAmb 16 14 32.9
comp=Z,9.6nm,0.9s
MLY Manley 78.11 25 P **P** **16 14 20.1 +1.1**
COLD Coldfoot 78.41 23 P **P** **16 14 21.8 +1.3**
COLD IAmb IAmb 16 14 27.4
comp=Z,20nm,1.9s
KBZ Khabaz 78.52 313 P **P** **16 14 21.2 -0.3**
comp=Z,5.9nm,1.0s,baz=108,slow=0.3,SNR=7.7
KVAR Kislovodsk Arr 78.65 313 LR LR 16 53 21.9
comp=Z,91nm,20.1s,baz=96,slow=39
KIV Kislovodsk 78.66 313 *e*P **P** **16 14 20.8 -1.7**
KIV pmax pmax
comp=Z,52nm,1.1s
KIV MLR MLR
comp=Z,169nm,19.0s
KIV Kislovodsk 78.66 313 P **P** **16 14 22.3 -0.2**
KIV IAmb IAmb 16 14 24.1
comp=Z,12nm,0.8s
TOLK Toolik Lake Re 78.69 22 P **P** **16 14 23.6 +1.5**
MCK McKinley 78.86 27 P **P** **16 14 23.5 +0.4**
MCK pmax pmax
comp=Z,18nm,1.0s
MCK McKinley 78.86 27 P **P** **16 14 23.5 +0.4**
MCK IAmb IAmb 16 14 32.5
comp=Z,18nm,1.0s
VRH Novokhopyorsk 79.00 320 *e*P **P** **16 14 22.8 -1.2**
VRH pmax pmax
comp=Z,20nm,1.2s
CCB Clear Creek Bu 79.35 26 P **P** **16 14 26.2 +0.6**
CCB IAmb IAmb 16 14 38.4
comp=Z,27nm,2.0s
IL31 79.75 26 P **P** **16 14 28.2 +0.5**
IL31 IAmb IAmb 16 14 31.9
comp=Z,22nm,1.9s
ILAR Eielson Array 79.75 26 P **P** **16 14 28.6 +0.8**
comp=Z,1.4nm,0.7s,baz=241,slow=4.9,SNR=21
ILAR Eielson Array 79.75 26 P **P** **16 14 27.3 -0.6**
KLMR Klimovskoe 79.89 330 *e*P **P** **16 14 27.4 -1.2**
KLMR pmax pmax
comp=Z,11nm,0.7s
KLMR Klimovskoe 79.89 330 *e*P **P** **16 14 27.5 -1.2**
KLMR AMP 16 14 29.5
comp=Z,11nm,0.7s
TMCR Tamitsa 80.44 334 *e*P **P** **16 14 28.6 -2.9**
TMCR pmax pmax
comp=Z,9.0nm,0.6s
VORD Divnogorie 80.55 320 *e*P **P** **16 14 29.9 -2.5**
VORD pmax pmax
comp=Z,30nm,1.4s
BMAR Burnt Mountain 80.58 23 P **P** **16 14 33.6 +1.2**
VSR Storozhevoye 80.61 320 *e*P **P** **16 14 29.0 -3.7**
VSR pmax pmax
comp=Z,10.0nm,1.1s
RIDG Independent Ri 80.68 27 P **P** **16 14 33.2 +0.3**
RIDG IAmb IAmb 16 14 47.1
comp=Z,11nm,1.0s
DOT Dot Lake 81.03 27 P **P** **16 14 35.8 +0.9**
DOT IAmb IAmb 16 15 11.7
comp=Z,41nm,2.0s
MENT Mentasta 81.24 28 P **P** **16 14 37.2 +1.3**
MENT IAmb IAmb 16 14 46.9
comp=Z,16nm,1.3s
OBN Obninsk 81.84 325 *e*P **P** **16 14 39.0 -0.1**
OBN *e* 16 17 44.5
OBN pmax pmax
comp=Z,5.0nm,0.8s
BARN Barnard Glacie 82.39 29 P **P** **16 14 44.6 +2.4**
BARN IAmb IAmb 16 14 58.6
comp=Z,11nm,0.8s
CTGM Chitina Glacie 82.56 29 P **P** **16 14 45.1 +2.1**
CTGM IAmb IAmb 16 14 59.1
comp=Z,24nm,0.9s
ABPO Ambohimpanom 83.07 249 P **P** **16 14 45.4 -1.1**
ABPO pmax pmax
comp=Z,10.0nm,0.8s
ABPO Ambohimpanom 83.07 249 P **P** **16 14 45.4 -1.1**
ABPO IAmb IAmb 16 14 47.3
comp=Z,9.8nm,0.8s
EPYK Eagle Plains 83.79 24 P **P** **16 14 50.2 +1.1**
EPYK IAmb IAmb 16 14 51.6
comp=Z,27nm,1.4s
SPA0 Spitsbergen Ar 84.40 349 *e*P **P** **16 14 52.4 +0.4**
SPA0 Spitsbergen Ar 84.40 349 P **P** **16 14 52.5 +0.5**
SPITS Spitsbergen Ar 84.40 349 LR LR 16 59 06.8
comp=Z,67nm,18.1s,baz=330,slow=40
ARCES ARCESS Array B 84.57 340 P **P** **16 14 53.2 +0.2**
comp=Z,16nm,0.7s,baz=78,slow=6.5,SNR=55
ARCES LR LR 16 54 34.2
comp=Z,43nm,21.6s,baz=358,slow=37
ARCES ARCESS Array B 84.57 340 P **P** **16 14 53.0 +0.1**

ARE0 ARCESS Array S 84.57 340 *e*P **P** **16 14 53.1 +0.1**
INK Inuvik 84.61 22 P **P** **16 14 53.7 +0.6**
INK pmax pmax
comp=Z,19nm,1.3s
INK Inuvik 84.61 22 P **P** **16 14 53.7 +0.6**
INK IAmb IAmb 16 14 55.6
comp=Z,19nm,1.3s
KBS Kingsbay 84.91 350*ce*P **P** **16 14 54.3 -0.2**
KBS pmax pmax
comp=Z,154nm,1.7s
KBS Kingsbay 84.91 350 *e*P **P** **16 14 54.7 +0.2**
HSPB Hornsund (broa 85.01 348 *e*P **P** **16 14 54.9 -0.1**
MMAI Mount Meron Ar 85.47 303 LR LR 16 56 17.1
comp=Z,46nm,21.3s,baz=155,slow=38
KTK1 Kautokeino 85.49 339 *e*P **P** **16 14 57.2 -0.4**
WHY Whitehorse 85.73 29 P **P** **16 14 59.2 +0.2**
WHY IAmb IAmb 16 15 02.4
comp=Z,13nm,1.1s
BR131 Keskin Array S 85.83 309 P **P** **16 14 59.0 -1.1**
BR131 pmax pmax
comp=Z,24nm,1.7s
BR131 Keskin Array S 85.83 309 P **P** **16 14 59.0 -1.1**
BR131 IAmb IAmb 16 15 10.5
comp=Z,24nm,1.7s
BRTR Keskin Array B 85.83 309 P **P** **16 14 59.5 -0.6**
comp=Z,3.2nm,0.9s,baz=124,slow=5.4,SNR=10
BRTR LR LR 16 56 40.1
comp=Z,30nm,21.4s,baz=80,slow=38
BRTR Keskin Array B 85.83 309 P **P** **16 14 58.9 -1.1**
FINES FINESS Array B 86.26 332 P **P** **16 15 01.7 +0.2**
comp=Z,8.7nm,0.5s,baz=75,slow=4.8,SNR=69
FINES LR LR 16 55 30.9
comp=Z,60nm,19.3s,baz=46,slow=37
FINES FINESS Array B 86.26 332 P **P** **16 15 01.1 -0.4**
EIL Elat 86.38 299 LR LR 16 58 39.4
comp=Z,38nm,18.9s,baz=70,slow=39
AKASG Malin Array Be 86.90 321 P **P** **16 15 04.0 -0.9**
AKASG pmax pmax
comp=Z,5.0nm,1.0s
AKASG Malin Array Be 86.90 321 P **P** **16 15 04.1 -0.7**
comp=Z,3.1nm,0.4s,baz=65,slow=4.9,SNR=2.0
AKASG Malin Array Be 86.90 321 P **P** **16 15 04.0 -0.9**
AKBB Malin Array Si 86.90 321 P **P** **16 15 04.1 -0.8**
AKBB pmax pmax
comp=Z,13nm,0.9s
AKBB Malin Array Si 86.90 321 P **P** **16 15 04.0 -0.8**
AKBB IAmb IAmb 16 15 05.3
comp=Z,13nm,0.9s
NOR Nord 86.96 355 *i* P **P** **16 15 05.4 +0.8**
comp=Z,9.2nm,0.9s
KDZE Karadeniz Ereo 87.20 311⇑P P 16 15 22.4 +16
C36M Paulatuk 87.57 20 P **P** **16 15 08.1 +0.3**
C36M IAmb IAmb 16 15 10.8
comp=Z,7.9nm,0.7s
SORM Soroca 88.00 318⇑P **P** **16 15 08.3 -1.9**
SORM Soroca 88.00 318⇑P **P** **16 15 08.3 -1.9**
STEI Steigen 88.63 339 *e*P **P** **16 15 12.3 -0.5**
TSMN Mangalia Port- 88.77 314⇑P P 16 15 33.0 +19
KMBO Kilima Mbogo 89.30 269 P **P** **16 15 18.2 +0.9**
comp=Z,6.0nm,0.9s,baz=45,slow=7.2,SNR=11
MAW Mawson 89.37 200 P **P** **16 15 16.8 +0.7**
MAW pmax pmax
comp=Z,1.0nm,0.9s
MAW Mawson 89.37 200 P **P** **16 15 17.1 +1.0**
comp=Z,8nm,0.6s,baz=76,slow=7.0,SNR=5.4
MAW Mawson 89.37 200 P **P** **16 15 16.8 +0.7**
MOR8 Moi Rana 89.62 338 *e*P **P** **16 15 16.1 -1.4**
BURAR Bucovina Array 90.17 318⇑P **P** **16 15 20.9 +0.3**
BURAR Bucovina Array 90.17 318⇑P **P** **16 15 20.9 +0.3**
BURAR Bucovina Array 90.17 318 P **P** **16 15 20.1 -0.5**
BUR08 Bucovina Ar. S 90.17 318 P **P** **16 15 20.5 -0.1**
MLR Muntele Rosu 90.22 316⇑P **P** **16 15 19.5 -1.4**
DAG Danmarks Havn 91.13 352 *i* P **P** **16 15 24.4 +0.1**
DAG pmax pmax
comp=Z,16nm,0.9s
DAG Danmarks Havn 91.13 352 *i* P **P** **16 15 24.4 +0.1**
comp=Z,16nm,0.9s
KWP Kalwaria Pacla 91.23 321 P **P** **16 15 25.2 -0.2**
KWP Kalwaria Pacla 91.23 321 P **P** **16 15 25.1 -0.2**
NSS Namsos 91.26 337 *e*P **P** **16 15 25.3 +0.2**
KOLS Kolonicke sedl 91.70 320 *e*P **P** **16 15 27.0 -0.5**
KOLS Kolonicke sedl 91.70 320 *e*P **P** **16 15 27.0 -0.5**
RES Resolute Bay 91.85 10 P **P** **16 15 28.7 +1.0**
RES pmax pmax
comp=Z,7.0nm,0.8s
RES Resolute Bay 91.85 10 P **P** **16 15 28.6 +1.0**
RES IAmb IAmb 16 15 29.9
comp=Z,6.5nm,0.8s
DRGR 92.04 318⇑P **P** **16 15 29.1 -0.1**
DRGR 92.04 318⇑P **P** **16 15 29.1 -0.1**
CRVS Cervenica-Dubn 92.22 320 *e*P **P** **16 15 30.7 +0.7**
CRVS pmax pmax
comp=Z,23nm,0.9s
CRVS Cervenica-Dubn 92.22 320 *e*P **P** **16 15 30.7 +0.7**
HFS Hagfors 92.42 332 LR LR 17 00 06.8
comp=Z,110nm,18.5s,baz=90,slow=37
NC602 NORSAR Array S 93.12 333 *e*P **P** **16 15 33.1 -0.7**
NB2 NORSAR Subarra 93.13 334 P **P** **16 15 32.9 -1.0**
comp=Z,6.5nm,0.9s,baz=65,slow=4.4
NB2 NORSAR Subarra 93.13 334 P **P** **16 15 32.9 -1.0**
baz=65,slow=4.4
NOA NORSAR Array B 93.13 334 P **P** **16 15 33.3 -0.6**
comp=Z,2.8nm,0.7s,baz=65,slow=4.5,SNR=8.5
NOA LR LR 17 01 01.7
comp=Z,44nm,18.9s,baz=55,slow=38
VYHS Vyhne 94.00 321 *e*P **P** **16 15 38.0 -0.2**
VYHS Vyhne 94.00 321 *e*P **P** **16 15 38.0 -0.2**
YKA Yellowknife Ar 94.07 24 P **P** **16 15 39.2 +1.1**
comp=Z,4.0nm,0.6s,baz=299,slow=4.6,SNR=80
YKA PKiKP **PKiKP** **16 20 22.4 +0.4**
comp=Z,0.1nm,0.5s,baz=320,slow=2.1,SNR=4.2
VRAC Vranov 95.10 322⇑P **P** **16 15 43.8 +0.6**
VRAC Vranov 95.10 322⇑P **P** **16 15 43.8 +0.6**
BLS5 Blasjo 95.99 334 *e*P **P** **16 15 45.8 -1.2**
KHC Kasperske Hory 96.99 322 *e*P **P** **16 15 52.0 +0.2**
KHC Kasperske Hory 96.99 322 *e*P **P** **16 15 52.0 +0.2**
GEC2 GERESS Array S 97.03 322 P Pdif 16 15 52.2 +0.1
GEC2 IAmb IAmb 16 15 53.1
comp=Z,5.7nm,1.0s
GERES GERESS Array B 97.03 322 P Pdif 16 15 52.4 +0.2
comp=Z,2.0nm,0.7s,baz=67,slow=4.6,SNR=16
GERES LR LR 17 02 29.0
comp=Z,37nm,19.1s,baz=94,slow=37
GERES GERESS Array B 97.03 322 P **P** **16 15 51.8 -0.3**
NVAR Mina Array Bea 103.04 47 PKKPbc PKKPbc 16 32 16.5 -0.2
comp=Z,0.8nm,0.8s,baz=168,slow=4.6,SNR=4.6
PDAR Pinedale Array 106.94 40 PKKP 16 32 17.7
comp=Z,1.3nm,0.7s,baz=123,slow=6.6,SNR=10
TXAR Lajitas Array 118.02 49 PKP **PKPdf** **16 21 06.6 -0.8**
comp=Z,0.7nm,0.6s,baz=0.0,slow=1.3,SNR=6.1
TXAR PKKPbc **PKKPab** **16 31 29.8 -1.6**
comp=Z,1.0nm,0.9s,baz=92,slow=7.2,SNR=4.3
TORD Torodi Ar. Bea 120.47 292 PKP **PKPdf** **16 21 11.9 -0.4**
comp=Z,0.5nm,0.3s,baz=39,slow=2.1,SNR=9.3
TORD Torodi Ar. Bea 120.47 292 **PKPdf** **16 21 11.2 -1.0**
U40A Yellville 121.04 37 **PKiKP** **16 21 13.0 0.0**
PLCA Paso Flores 145.83 157 PKPbc **PKPab** **16 22 00.9 +1.0**
comp=Z,6.4nm,0.8s,baz=226,slow=2.7,SNR=19
PLCA Paso Flores 145.83 157 PKPbc **PKPab** **16 22 00.4 +0.5**

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*THE **29** 16:06:23.6, 38˚.42N×20˚.45E, h7km±1km, ML3.0/10, Error ellipse: s-maj=1.3km s-min=0.3km az=95.0*
*ATH **29** 16:06:23.5, 38˚.41N×20˚.49E, h12km±1km, ML2.9/17, Error ellipse: s-maj=1.6km s-min=0.6km az=258.0*

ISC 29 16:06:23.8±0.9, **38˚.40N**±0˚.02×**20˚.50E**±0˚.03, **h8**km±5km, **n61**, σ**0**.**76**/91, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.05**	**83**	P		**Pg**	**16 06 25.5**	**0.0**
VSK1				S		**Sg**	**16 06 27.0**	**+0.3**
FSK	**Fiskardo**	**0.07**	**39**	P		**Pg**	**16 06 25.7**	**-0.1**
FSK				S		**Sg**	**16 06 27.3**	**+0.1**
KEF1	**Kardakata, Kep**	**0.13**	**192**	P		**Pg**	**16 06 26.6**	**0.0**
KEF1				S		**Sg**	**16 06 28.8**	**+0.3**
KEF4	**Livadi, Kephal**	**0.16**	**203**	P		**Pg**	**16 06 26.9**	**-0.1**
KEF4				S		**Sg**	**16 06 30.0**	**+0.7**
ARG2	**Argostoli**	**0.23**	**183**	P		**Pg**	**16 06 28.3**	**0.0**
ARG2				S		**Sg**	**16 06 32.3**	**+1.0**
KEF3	**Kipouria, Keph**	**0.23**	**211**	P		**Pg**	**16 06 28.3**	**-0.2**
KEF3				S		**Sg**	**16 06 32.3**	**+0.7**
VLS	**Valsamata**	**0.24**	**163**	P		**Pg**	**16 06 28.5**	**0.0**
VLS				S		**Sg**	**16 06 33.0**	**+1.3**

5μm,0.2s
VLS Valsamata 0.24 163 P **Pg** **16 06 28.5 0.0**
VLS S **Sg** **16 06 31.3 -0.4**
VLS AML AML 16 06 34.3
comp=E,8664μm,0.1s
VLS AML AML 16 06 36.3
comp=N,10756μm,0.3s
KEF2 Argostoli. Kep 0.24 183 P **Pg** **16 06 28.5 -0.1**
KEF2 S **Sg** **16 06 32.2 +0.4**
EVGI Lefkada island 0.25 29 P **Pg** **16 06 28.6 -0.1**
EVGI S **Sg** **16 06 33.0 +0.8**
EVGI Lefkada island 0.25 29 P **Pg** **16 06 28.7 -0.1**
EVGI S **Sg** **16 06 33.0 +0.8**
MGNA Meganis 0.34 42 P **Pg** **16 06 30.1 -0.3**
MGNA S **Sg** **16 06 35.6 +0.6**
MGNA AML AML 16 06 36.5
comp=N,7460μm,0.2s
MGNA AML AML 16 06 36.8
comp=E,6669μm,0.3s
KFL Anninata 0.37 143 P **Pg** **16 06 31.1 +0.1**
KFL S **Sb** **16 06 37.7 -0.8**
comp=E,9μm,0.3s
KFL Anninata 0.37 143 P **Pg** **16 06 31.1 +0.1**
KFL S **Sg** **16 06 37.2 +1.3**
KFL AML AML 16 06 38.3
comp=E,21129μm,0.4s
KFL AML AML 16 06 38.6
comp=N,14196μm,0.2s
LKD2 Lefkada island 0.40 17 P **Pg** **16 06 31.2 -0.5**
LKD2 S **Sg** **16 06 37.8 +0.8**
comp=N,2μm,0.5s
LKD2 Lefkada island 0.40 17 P **Pg** **16 06 31.1 -0.6**
LKD2 S **Sg** **16 06 37.8 +0.8**
LKD2 AML AML 16 06 39.2
comp=E,3156μm,0.2s
LKD2 AML AML 16 06 39.4
comp=N,3946μm,0.4s
TSLK Tsoukalades, L 0.44 16 P **Pg** **16 06 32.0 -0.3**
TSLK S **Sg** **16 06 39.0 +0.9**
comp=N,2μm,0.4s
TSLK Tsoukalades, L 0.44 16 P **Pg** **16 06 32.0 -0.3**
TSLK S **Sg** **16 06 38.7 +0.6**
AST1 Astakos 0.48 73 P **Pg** **16 06 33.2 +0.1**
AST1 S **Sb** **16 06 41.8 +0.1**
comp=N,4μm,0.4s
VLMS Volimes, Zakyn 0.54 167 P **Pg** **16 06 33.9 -0.4**
VLMS S **Sg** **16 06 42.0 +0.7**
VLMS AML AML 16 06 45.6
comp=E,7258μm,0.4s
VLMS AML AML 16 06 46.6
comp=N,10597μm,0.3s
PDO Prodromos 0.57 70 P **Pg** **16 06 34.7 -0.1**
PDO S **Sb** **16 06 43.9 -0.4**
PDO Prodromos 0.57 70 P **Pg** **16 06 34.7 -0.1**
PDO AML AML 16 06 46.2
comp=N,2601μm,0.2s
PDO AML AML 16 06 51.2
comp=E,2750μm,0.4s
PVO Paravola 0.83 75 P **Pg** **16 06 39.9 +0.1**
PVO S **Sb** **16 06 52.3 +0.5**
comp=E,952nm,0.4s
PVO Paravola 0.83 75 P **Pg** **16 06 39.8 +0.1**
PVO AML AML 16 06 59.4
comp=E,2207μm,0.6s
PVO AML AML 16 07 00.0
comp=N,1535μm,0.2s
RLS Riolos of Patr 0.83 114 P **Pg** **16 06 39.6 -0.2**
RLS S **Sb** **16 06 53.1 +1.2**
comp=N,380nm,0.5s
RLS Riolos of Patr 0.83 114 P **Pg** **16 06 39.0 -0.8**
RLS S **Sb** **16 06 52.0 +0.2**
RLS AML AML 16 07 00.5
comp=E,736μm,0.6s
RLS AML AML 16 07 01.5
comp=N,744μm,0.4s
DRO Drossia 1.05 115 P **Pg** **16 06 43.4 -0.6**
DRO S **Sn** **16 07 00.4 +0.7**
comp=N,1μm,0.3s
DRO Drossia 1.05 115 P **Pg** **16 06 43.5 -0.6**
DRO S **Sg** **16 06 56.8 -0.9**
DRO AML AML 16 07 05.2
comp=E,2128μm,0.2s
DRO AML AML 16 07 12.3
comp=N,2087μm,0.4s
EFP Efpalio 1.10 88 P **Pb** **16 06 43.9 -1.2**
EFP S **Sn** **16 07 01.6 +0.7**
comp=N,1μm,0.7s
EFP Efpalio 1.10 88 P **Pb** **16 06 43.8 -1.3**
EFP AML AML 16 07 07.6
comp=E,2690μm,0.6s
EFP AML AML 16 07 07.9
comp=N,1470μm,0.6s
ANX Ano Chora 1.13 80 P **Pb** **16 06 44.5 -1.2**
ANX Ano Chora 1.13 80 P **Pb** **16 06 44.4 -1.2**
ANX AML AML 16 07 09.1
comp=E,1244μm,0.4s
ANX AML AML 16 07 11.6
comp=N,1148μm,0.5s
EVR Evrytania 1.14 63 P **Pb** **16 06 44.9 -1.0**
EVR S **Sn** **16 07 03.3 +1.2**
comp=N,280nm,0.8s
EVR Evrytania 1.14 63 P **Pb** **16 06 44.8 -1.1**
EVR S **Sn** **16 07 02.2 +0.1**
EVR AML AML 16 07 08.3
comp=E,485μm,0.9s
EVR AML AML 16 07 12.0
comp=N,632μm,0.7s
LAKA Lakka 1.17 98 P **Pb** **16 06 45.1 -1.2**
LAKA Lakka 1.17 98 P **Pb** **16 06 45.1 -1.2**
LAKA AML AML 16 07 12.1
comp=E,600μm,0.7s
LAKA AML AML 16 07 15.5
comp=N,470μm,0.7s
SERG Sergoula 1.22 89 P **Pn** **16 06 45.9 -1.3**
SERG Sergoula 1.22 89 P **Pn** **16 06 45.9 -1.3**
SERG AML AML 16 07 10.2
comp=N,1095μm,0.6s
SERG AML AML 16 07 15.3
comp=E,994μm,0.5s
TRIZ Trizonia 1.23 91 P **Pn** **16 06 46.1 -1.2**
TRIZ Trizonia 1.23 91 P **Pn** **16 06 46.1 -1.2**
JAN Janina 1.28 12 P **Pg** **16 06 48.9 +0.5**
KALE Kalithea 1.29 90 P **Pn** **16 06 47.0 -1.1**
KALE Kalithea 1.29 90 P **Pn** **16 06 47.0 -1.1**
KALE AML AML 16 07 16.8
comp=N,783μm,0.5s
KALE AML AML 16 07 17.0
comp=E,447μm,0.6s
KLV Kalavryta, Ach 1.35 105 P **Pn** **16 06 48.2 -0.7**
KLV S **Sg** **16 07 08.7 +1.6**
KLV Kalavryta, Ach 1.35 105 P **Pn** **16 06 48.3 -0.7**
KASA Kassiopi 1.41 342 P **Pb** **16 06 49.6 -0.8**
MAKR Makrakomi, Fth 1.41 64 P **Pn** **16 06 49.7 -0.1**
MAKR Makrakomi, Fth 1.41 64 P **Pn** **16 06 49.6 -0.3**
MAKR AML AML 16 07 23.0
comp=N,594μm,0.4s
MAKR AML AML 16 07 23.2
comp=E,763μm,0.5s
AGG Agios Georgios 1.56 66 P **Pn** **16 06 52.1 +0.3**
AGG Agios Georgios 1.56 66 P **Pn** **16 06 52.2 +0.3**
THL Klokotos Trika 1.65 45 P **Pb** **16 06 53.9 -0.6**
ITM Ithomi 1.66 137 P **Pg** **16 06 55.5 -0.2**
KPRO Kipouria 1.69 23 P **Pg** **16 06 55.7 -0.5**
AXAR Agios Charalam 1.73 77 P **Pb** **16 06 56.3 +0.5**
AXAR AML AML 16 07 31.4
comp=N,740μm,0.7s
AXAR AML AML 16 07 35.9
comp=E,736μm,0.5s
PROD Prodromos 1.89 94 P **Pb** **16 06 58.3 -0.2**
LKR Lokris 1.97 82 P **Pb** **16 06 58.9 -1.1**
LTK Loutraki 1.98 100 P **Pb** **16 06 60.0 -0.1**
NEST Nestorio 2.05 12 P **Pb** **16 07 00.7 -0.7**
VIL2 Platees 2.18 94 P **Pb** **16 07 02.7 -0.9**
DID Didima 2.34 112 P **Pn** **16 07 04.2 +1.6**
MRKA Markates 2.44 82 P **Pn** **16 07 04.9 +1.0**

*IDC **29** 16:09:34.6±6.1,23.°08S×177.°19W,h136km±42km, mb4.0/7, mb1 4.2/8,mb1mx3.7/34,mbtmp4.4/8, Error ellipse: s-maj=104.1km s-min=19.2km az=145.0*
*NEIC **29** 16:09:35.2±1.9,23.°0S±0.°1×177.°3W±0.°2,h142km±5km, mb4.8/23, Error ellipse: s-maj=24.4km s-min=14.6km az=110.0*

ISC 29 16:09:35.6±0.6,23.°0S±0.°1×177.°17W±0.°10,h150km,n37, σ1°18/37,mb4.5/13,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**6.25**	**186**	Pn	Pn	16 10 59.8	-5.8
NIUE	**Niue**	**7.82**	**61**	Pn	**Pn**	**16 11 28.7**	**+2.1**
NIUE				Sn	**Sn**	**16 12 50.5**	**-3.3**
AFI	**Afiamalu**	**10.40**	**30**	P	**Pn**	**16 12 00.9**	**-0.2**
	4.7nm,0.3s,baz=202,slow=18,SNR=12						
AFI				S	Sn	16 13 48.5	-7.7
	2.4nm,0.3s,baz=214,slow=18,SNR=3.8						
QRZ	**Quartz Range**	**19.77**	**204**	P	**Pn**	**16 13 54.8**	**-2.2**
QRZ				IAmb	IAmb	16 14 23.1	
	comp=Z,54nm,1.4s						
KHZ	**Kahutara**	**20.84**	**200**	P	**P**	**16 14 05.7**	**+0.4**
KHZ				IAmb	IAmb	16 14 10.6	
	comp=Z,31nm,1.2s						
LTZ	**Lake Taylor**	**21.58**	**202**	P	**P**	**16 14 13.7**	**+0.3**
WKZ	**Wanaka**	**24.52**	**204**	P	**P**	**16 14 40.4**	**-0.7**
CTA	**Charters Tower**	**34.09**	**268**	P	**P**	**16 16 07.6**	**+1.6**
	comp=Z,11nm,0.3s,baz=94,slow=10,SNR=10.0						
MCQ	**Macquarie Isla**	**36.18**	**204**	P	**P**	**16 16 22.8**	**-0.5**
STKA	**Stephens Creek**	**37.46**	**247**	P	**P**	**16 16 35.2**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=84,slow=8.8,SNR=7.5						
STKA	**Stephens Creek**	**37.46**	**247**	P	**P**	**16 16 34.8**	**+0.2**
COEN	**Coen**	**38.57**	**276**	P	**P**	**16 16 44.4**	**+0.3**
COEN				IAmb	IAmb	16 17 17.3	
	comp=Z,32nm,1.4s						
BBOO	**Buckleboo**	**42.18**	**246**	P	**P**	**16 17 13.0**	**-0.5**
BBOO				IAmb	IAmb	16 17 24.1	
	comp=Z,46nm,1.4s						
AS31	**Alice Springs**	**44.75**	**259**	P	**P**	**16 17 34.0**	**-0.3**
ASAR	**Alice Springs**	**44.75**	**259**	P	**P**	**16 17 34.4**	**0.0**
	comp=Z,3.3nm,0.8s,baz=95,slow=7.3,SNR=24						
ASAR				PcP	**PcP**	**16 19 13.8**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=104,slow=3.7,SNR=4.8						
ASAR	**Alice Springs**	**44.75**	**259**	P	**P**	**16 17 33.6**	**-0.7**
WR0	**Warramunga Arr**	**44.88**	**264**	P	**P**	**16 17 34.6**	**-0.8**
WR0				IAmb	IAmb	16 19 03.2	
	comp=Z,30nm,1.6s						
WB2	**Warramunga Arr**	**45.06**	**264**	P	**P**	**16 17 35.4**	**-1.4**
WB2				IAmb	IAmb	16 17 36.9	
	comp=Z,20nm,1.1s						
WRAB	**Tennant Creek**	**45.06**	**264**	P	**P**	**16 17 35.1**	**-1.7**
WRAB				IAmb	IAmb	16 17 36.8	
	comp=Z,16nm,1.1s						
WRA	**Warramunga Arr**	**45.07**	**264**	P	**P**	**16 17 35.7**	**-1.2**
	comp=Z,3.6nm,0.3s,baz=96,slow=8.0,SNR=70						
WRA	**Warramunga Arr**	**45.07**	**264**	P	**P**	**16 17 35.8**	**-1.1**
FORT	**Forrest**	**49.05**	**249**	P	**P**	**16 18 06.3**	**-1.3**
MTN	**Manton Dam**	**50.00**	**272**	P	**P**	**16 18 13.5**	**-1.4**
KNRA	**Kununurra**	**51.30**	**268**	P	**P**	**16 18 24.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**53.50**	**264**	P	**P**	**16 18 40.6**	**-0.2**
	comp=Z,2.6nm,0.3s,baz=80,slow=7.1,SNR=16						
FITZ	**Fitzroy Crossi**	**53.50**	**264**	IAmb	IAmb	16 18 41.7	
	comp=Z,50nm,1.9s						
PSA00	**Pilbara Seismi**	**57.88**	**258**	P	**P**	**16 19 11.3**	**-0.8**
PSA00	**Pilbara Seismi**	**57.88**	**258**	P	**P**	**16 19 10.8**	**-1.3**
PSA00				IAmb	IAmb	16 20 26.7	
	comp=Z,16nm,0.7s						
QSPA	**South Pole Qui**	**67.07**	**180**	P	**P**	**16 20 13.8**	**+1.3**
KSM	**Kuching**	**74.53**	**278**	P	**P**	**16 20 58.6**	**+0.3**
KSM				IAmb	IAmb	16 23 27.2	
	comp=Z,35nm,1.4s						
TPUB	**Ta-pu**	**75.98**	**303**	P	**P**	**16 21 05.7**	**-0.7**
AKUT	**Akutan**	**77.46**	**7**	P	**P**	**16 21 13.9**	**0.0**
ILAR	**Eielson Array**	**90.59**	**12**	P	**P**	**16 22 21.4**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=221,slow=5.1,SNR=5.2						
CMAR	**Chiang Mai Arr**	**91.67**	**289**	P	**P**	**16 22 28.1**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=141,slow=3.5,SNR=4.6						
ARCES	**ARCESS Array B**	**131.52**	**350**	PKP	**PKiKP**	**16 28 31.7**	**+1.1**
	comp=Z,3.8nm,1.0s,baz=38,slow=1.6,SNR=4.2						
AKASG	**Malin Array Be**	**145.57**	**330**	PKPbc	**PKPdf**	**16 28 55.2**	**-0.5**
	comp=Z,2.1nm,0.3s,baz=44,slow=4.0,SNR=1.3						
BRTR	**Keskin Array B**	**149.06**	**310**	PKPbc	**PKPbc**	**16 29 06.2**	**-0.2**
	comp=Z,1.3nm,0.7s,baz=147,slow=5.2,SNR=5.7						

ROM 29 16:14:05.4±0.2,43.°393N±0.°004×12.°499E±0.°006, h4km±1km,ML0.7/3,Error ellipse: s-maj=0.5km s-min=0.1km az=48.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.06**	**116**	P	Pg	16 14 06.8	0.0
ATFO				S	Sg	16 14 08.0	+0.2
ATFO				AML	AML		
	comp=E,289μm,0.5s						
ATFO				AML	AML		
	comp=N,356μm,0.2s						
ATVO	**AVT- Monte Val**	**0.07**	**261**	P	Pg	16 14 07.0	+0.1
ATVO				S	Sg	16 14 08.4	+0.4
ATVO				AML	AML		
	comp=E,99μm,0.4s						
ATVO				AML	AML		
	comp=N,117μm,0.2s						
ATPI	**Pietralunga -**	**0.09**	**309**	P	Pg	16 14 07.5	+0.1
ATPI				S	Sg	16 14 09.4	+0.8
ATPI				AML	AML		
	comp=E,50μm,1.4s						
ATPI				AML	AML		
	comp=N,61μm,1.6s						
MURB	**Monte Urbino**	**0.13**	**172**	P	Pg	16 14 08.4	+0.4
MURB				S	Sg	16 14 11.1	+1.3
MURB				AML	AML		
	comp=E,79μm,1.4s						
MURB				AML	AML		
	comp=N,69μm,1.6s						
PIEI	**Pieia**	**0.14**	**10**	P	Pg	16 14 08.5	+0.2
PIEI				S	Sg	16 14 11.5	+1.3
PIEI				AML	AML		
	comp=N,42μm,1.3s						
PIEI				AML	AML		
	comp=E,66μm,0.3s						

*IDC **29** 16:18:56.5±1.2,26.°18S×71.°04E,h0km,mb3.7/6, mb1 3.9/6,mb1mx3.6/39,mbtmp3.7/6,MS3.5/2,Ms1 3.6/2, ms1mx2.9/44,Error ellipse: s-maj=39.9km s-min=25.9km az=6.0*
*NEIC **29** 16:18:58.1±0.7,26.°1S±0.°1×71.°1E±0.°2,h10km±5km, mb4.5/4,Error ellipse: s-maj=24.8km s-min=15.3km az=121.0*

ISC 29 16:18:58.4±0.9,26.°2S±0.°2×71.°0E±0.°2,h11km,n16, σ0°44/9,mb3.8/8,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08S1	**Diego Carcia H**	**18.46**	**5**	T	T	16 42 07.7	
	baz=186,slow=75,SNR=14						
H08S2	**Diego Garcia H**	**18.46**	**5**	T	T	16 42 10.3	
	baz=186,slow=75,SNR=13						
H08S3	**Diego Garcia H**	**18.48**	**5**	T	T	16 42 09.3	
	baz=186,slow=75,SNR=19						
H01W2	**Cape Leeuwin H**	**37.90**	**114**	T	T	17 06 27.9	
	baz=271,slow=75,SNR=6.9						
H01W3	**Cape Leeuwin H**	**37.90**	**114**	T	T	17 06 27.8	
	baz=271,slow=75,SNR=8.1						
H01W1	**Cape Leeuwin H**	**37.91**	**114**	T	T	17 06 29.2	
	baz=271,slow=75,SNR=6.7						
MATP	**Matopo**	**39.35**	**269**	P	**P**	**16 26 28.2**	**0.0**
	1.1nm,0.7s,baz=104,slow=8.3,SNR=2.8						
MAW	**Mawson**	**41.77**	**185**	LR	LR	16 41 46.4	
	comp=Z,182nm,20.3s,baz=328,slow=33						
CMAR	**Chiang Mai Arr**	**51.98**	**34**	P	**P**	**16 28 08.4**	**+0.6**
	0.6nm,0.8s,baz=211,slow=7.1,SNR=7.4						
CMAR				LR	LR	16 46 17.8	
	comp=Z,17nm,20.4s,baz=60,slow=32						
ASAR	**Alice Springs**	**56.58**	**102**	P	**P**	**16 28 41.4**	**-0.1**
	0.7nm,0.7s,baz=250,slow=6.3,SNR=15						
WRA	**Warramunga Arr**	**58.10**	**98**	P	**P**	**16 28 51.8**	**-0.4**
	1.2nm,0.8s,baz=254,slow=7.2,SNR=3.9						
QSPA	**South Pole Qui**	**63.98**	**180**	P	**P**	**16 29 31.7**	**+0.2**
QSPA				IAmb	IAmb	16 30 21.4	
	comp=Z,20nm,1.9s						
KKAR	**Karatay Array**	**68.92**	**360**	P	**P**	**16 30 03.1**	**-0.1**
MK31	**Makanchi Array**	**73.32**	**8**	P	**P**	**16 30 29.3**	**-0.5**
MK31				IAmb	IAmb	16 30 37.1	
	comp=Z,1.4nm,1.1s						
MKAR	**Makanchi Array**	**73.32**	**8**	P	**P**	**16 30 29.2**	**-0.6**
	comp=Z,0.7nm,0.8s,baz=196,slow=4.9,SNR=7.6						
SONM	**Songino Array**	**80.22**	**23**	P	**P**	**16 31 09.2**	**+0.3**
	comp=Z,0.5nm,1.0s,baz=222,slow=1.9,SNR=3.2						

*IDC **29** 16:35:34.1±19.0,37.°95N×20.°03E,h0km,mb3.7/4, mb1 3.7/5,mb1mx3.3/37,mbtmp3.6/5,ML3.5/1,Error ellipse: s-maj=357.8km s-min=30.2km az=37.0*
*THE **29** 16:35:40.2,38.°37N×20.°42E,h1km±1km,ML3.5/16,Error ellipse: s-maj=1.7km s-min=0.3km az=271.0*
*ATH **29** 16:35:40.2,38.°37N×20.°48E,h12km±1km,ML3.4/18,Error ellipse: s-maj=1.5km s-min=0.6km az=260.0*

ISC 29 16:35:40.2±0.8,38.°37N±0.°02×20.°49E±0.°03,h8km±5km, n78,σ0°83/112,mb3.8/4,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.07**	**60**	P	**Pg**	**16 35 42.1**	**-0.1**
VSK1				S	**Sg**	**16 35 43.9**	**+0.3**
	55μm,0.5s						
KEF1	**Kardakata, Kep**	**0.10**	**187**	P	**Pg**	**16 35 42.4**	**-0.1**
KEF1				S	**Sg**	**16 35 44.7**	**+0.5**
FSK	**Fiskardo**	**0.10**	**35**	P	**Pg**	**16 35 42.8**	**+0.1**
FSK				S	**Sg**	**16 35 45.1**	**+0.7**
	23μm,0.9s						
FSK	**Fiskardo**	**0.10**	**35**	P	**Pg**	**16 35 42.8**	**+0.1**
FSK				S	**Sg**	**16 35 44.3**	**-0.1**
KEF4	**Livadi, Kephal**	**0.13**	**203**	P	**Pg**	**16 35 43.0**	**0.0**
KEF4				S	**Sg**	**16 35 45.6**	**+0.8**
ARG2	**Argostoli**	**0.20**	**180**	P	**Pg**	**16 35 44.3**	**+0.1**
ARG2				S	**Sg**	**16 35 47.6**	**+0.7**
	39μm,0.6s						
KEF3	**Kipouria, Keph**	**0.20**	**213**	P	**Pg**	**16 35 44.3**	**0.0**
KEF3				S	**Sg**	**16 35 47.9**	**+0.8**
KEF2	**Argostoli. Kep**	**0.21**	**180**	P	**Pg**	**16 35 44.5**	**+0.1**
KEF2				S	**Sg**	**16 35 48.3**	**+1.0**
VLS	**Valsamata**	**0.21**	**158**	P	**Pg**	**16 35 44.5**	**0.0**
VLS				S	**Sg**	**16 35 48.1**	**+0.7**
	12μm,0.3s						
VLS	**Valsamata**	**0.21**	**158**	P	**Pg**	**16 35 44.6**	**0.0**
VLS				S	**Sg**	**16 35 48.3**	**+0.9**
VLS				AML	AML	16 35 49.1	
	comp=N,24538μm,0.4s						
VLS				AML	AML	16 35 51.1	
	comp=E,19012μm,0.2s						
EVGI	**Lefkada island**	**0.28**	**28**	P	**Pg**	**16 35 46.2**	**+0.4**
EVGI				S	**Sb**	**16 35 51.2**	**-1.2**
EVGI	**Lefkada island**	**0.28**	**28**	P	**Pg**	**16 35 46.2**	**+0.4**
EVGI				S	**Sb**	**16 35 51.2**	**-1.2**
KFL	**Anninata**	**0.35**	**138**	P	**Pg**	**16 35 47.3**	**+0.1**
KFL				S	**Sb**	**16 35 53.6**	**-0.9**
	comp=E,18μm,0.4s						
KFL	**Anninata**	**0.35**	**138**	P	**Pg**	**16 35 47.3**	**+0.1**
KFL				S	**Sg**	**16 35 53.0**	**+1.1**
KFL				AML	AML	16 35 54.6	
	comp=E,48179μm,0.3s						
KFL				AML	AML	16 35 55.6	
	comp=N,23741μm,0.5s						
MGNA	**Meganis**	**0.37**	**40**	P	**Pg**	**16 35 47.7**	**+0.2**
MGNA				S	**Sg**	**16 35 52.4**	**0.0**
MGNA				AML	AML	16 35 54.5	
	comp=N,19693μm,0.3s						
MGNA				AML	AML	16 35 54.7	
	comp=E,21642μm,0.5s						
LKD2	**Lefkada island**	**0.43**	**18**	P	**Pg**	**16 35 48.8**	**+0.1**
LKD2				S	**Sb**	**16 35 56.0**	**-0.9**
	comp=E,4μm,0.6s						
LKD2	**Lefkada island**	**0.43**	**18**	P	**Pg**	**16 35 48.8**	**+0.1**
LKD2				S	**Sb**	**16 35 56.1**	**-0.8**
LKD2				AML	AML	16 36 01.4	
	comp=E,6416μm,0.6s						
LKD2				AML	AML	16 36 04.3	
	comp=N,7638μm,0.7s						
TSLK	**Tsoukalades, L**	**0.47**	**16**	P	**Pg**	**16 35 49.6**	**+0.2**
TSLK				S	**Sb**	**16 35 57.4**	**-0.5**
	comp=N,4μm,0.7s						
TSLK	**Tsoukalades, L**	**0.47**	**16**	P	**Pg**	**16 35 49.6**	**+0.2**
TSLK				S	**Sg**	**16 35 56.3**	**+0.8**
AST1	**Astakos**	**0.50**	**70**	P	**Pb**	**16 35 50.5**	**-0.8**
AST1				S	**Sb**	**16 35 59.2**	**+0.4**
	comp=N,9μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.52**	**164**	P	**Pg**	**16 35 49.9**	**-0.3**
VLMS				S	**Sg**	**16 35 57.9**	**+1.0**
VLMS				AML	AML	16 35 59.5	
	comp=N,18316μm,0.6s						
VLMS				AML	AML	16 36 04.8	
	comp=E,12961μm,0.4s						
PDO	**Prodromos**	**0.59**	**67**	P	**Pg**	**16 35 51.9**	**+0.2**
PDO				S	**Sb**	**16 36 01.4**	**+0.1**
	comp=E,6μm,0.4s						
PDO	**Prodromos**	**0.59**	**67**	P	**Pg**	**16 35 52.0**	**+0.4**
PDO				S	**Sb**	**16 36 01.0**	**-0.3**
PDO				AML	AML	16 36 04.7	
	comp=N,11329μm,0.3s						
PDO				AML	AML	16 36 09.2	
	comp=E,6835μm,0.6s						
KRI1	**kERI**	**0.76**	**160**	P	**Pg**	**16 35 54.2**	**-0.6**
KRI1				S	**Sb**	**16 36 06.8**	**+0.7**
	comp=E,8μm,0.5s						
RLS	**Riolos of Patr**	**0.83**	**112**	P	**Pg**	**16 35 56.2**	**-0.1**
RLS				S	**Sn**	**16 36 10.3**	**-0.4**
	comp=E,1μm,0.5s						
RLS	**Riolos of Patr**	**0.83**	**112**	P	**Pg**	**16 35 56.1**	**-0.1**
RLS				AML	AML	16 36 17.3	
	comp=E,2434μm,0.6s						
RLS				AML	AML	16 36 20.7	
	comp=N,2873μm,0.5s						
PVO	**Paravola**	**0.85**	**73**	P	**Pb**	**16 35 57.0**	**-0.3**
PVO				S	**Sn**	**16 36 11.0**	**-0.2**
	comp=N,3μm,0.5s						
PVO	**Paravola**	**0.85**	**73**	P	**Pb**	**16 35 56.9**	**-0.3**
PVO				AML	AML	16 36 13.6	
	comp=N,6065μm,0.5s						
PVO				AML	AML	16 36 17.8	
	comp=E,7206μm,0.5s						
DRO	**Drossia**	**1.05**	**113**	P	**Pg**	**16 36 00.0**	**-0.4**
DRO				S	**Sn**	**16 36 17.6**	**+1.4**
	comp=E,3μm,0.7s						
DRO	**Drossia**	**1.05**	**113**	P	**Pg**	**16 35 59.6**	**-0.8**
DRO				S	**Sb**	**16 36 14.6**	**0.0**
DRO				AML	AML	16 36 25.7	
	comp=E,7026μm,0.5s						
DRO				AML	AML	16 36 34.4	
	comp=N,4338μm,0.9s						
EFP	**Efpalio**	**1.12**	**87**	P	**Pg**	**16 36 01.5**	**-0.2**
EFP				S	**Sn**	**16 36 19.2**	**+1.5**
	comp=N,3μm,0.4s						
EFP	**Efpalio**	**1.12**	**87**	P	**Pg**	**16 36 00.8**	**-0.8**
ANX	**Ano Chora**	**1.15**	**79**	P	**Pg**	**16 36 01.8**	**-0.5**
ANX				S	**Sn**	**16 36 20.2**	**+1.6**
	comp=N,3μm,0.5s						
ANX	**Ano Chora**	**1.15**	**79**	P	**Pg**	**16 36 01.5**	**-0.7**
ANX				AML	AML	16 36 28.2	
	comp=E,7833μm,0.5s						
ANX				AML	AML	16 36 30.0	
	comp=N,5639μm,0.5s						
EVR	**Evrytania**	**1.17**	**62**	P	**Pb**	**16 36 02.0**	**-0.8**
EVR	**Evrytania**	**1.17**	**62**	P	**Pb**	**16 36 01.9**	**-0.8**
EVR				AML	AML	16 36 29.9	
	comp=E,1376μm,0.8s						
EVR				AML	AML	16 36 30.0	
	comp=N,1670μm,0.7s						
LAKA	**Lakka**	**1.18**	**96**	P	**Pb**	**16 36 02.1**	**-0.8**
LAKA				S	**Sn**	**16 36 21.6**	**+2.2**
LAKA	**Lakka**	**1.18**	**96**	P	**Pb**	**16 36 01.9**	**-1.0**
LAKA				AML	AML	16 36 27.6	
	comp=N,1949μm,0.7s						
LAKA				AML	AML	16 36 28.9	
	comp=E,2098μm,0.7s						
SERG	**Sergoula**	**1.23**	**88**	P	**Pn**	**16 36 03.1**	**-0.7**
SERG	**Sergoula**	**1.23**	**88**	P	**Pn**	**16 36 02.7**	**-1.1**
SERG				AML	AML	16 36 28.8	
	comp=N,3990μm,0.4s						
SERG				AML	AML	16 36 32.6	
	comp=E,3804μm,0.7s						
TRIZ	**Trizonia**	**1.25**	**90**	P	**Pn**	**16 36 03.1**	**-0.8**
TRIZ	**Trizonia**	**1.25**	**90**	P	**Pn**	**16 36 03.1**	**-0.8**
TRIZ				S	**Sn**	**16 36 21.0**	**+0.1**
AMT	**Artemida-Makis**	**1.28**	**131**	P	**Pg**	**16 36 05.2**	**+0.4**
AMT	**Artemida-Makis**	**1.28**	**131**	P	**Pg**	**16 36 04.9**	**+0.1**
AMT				AML	AML	16 36 32.2	
	comp=E,3646μm,0.6s						
AMT				AML	AML	16 36 36.7	
	comp=N,3435μm,0.7s						
KALE	**Kalithea**	**1.30**	**89**	P	**Pn**	**16 36 03.9**	**-0.8**
KALE				S	**Sn**	**16 36 24.6**	**+2.3**
	comp=N,938nm,0.6s						
KALE	**Kalithea**	**1.30**	**89**	P	**Pn**	**16 36 04.0**	**-0.8**

KALE					AML	AML	16 36 35.9	
	comp=N,2085µm,0.6s							
KALE					AML	AML	16 36 38.1	
	comp=E,1646µm,0.6s							
JAN	**Janina**	**1.31**	**12**	P	**Pg**		**16 36 06.0**	**+0.6**
KLV	**Kalavryta, Ach**	**1.35**	**104**	P	**Pn**		**16 36 04.9**	**-0.6**
KLV				S	**Sg**		**16 36 26.0**	**+2.3**
KLV	**Kalavryta, Ach**	**1.35**	**104**	P	**Pn**		**16 36 04.8**	**-0.6**
KLV				AML	AML		16 36 27.8	
	comp=E,1085µm,0.4s							
KLV				AML	AML		16 36 28.0	
	comp=N,1221µm,0.4s							
KASA	**Kassiopi**	**1.44**	**343**	P	**Pg**		**16 36 08.2**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.44**	**63**	P	**Pb**		**16 36 06.8**	**-0.5**
MAKR	**Makrakomi, Fth**	**1.44**	**63**	P	**Pn**		**16 36 06.6**	**0.0**
AGG	**Agios Georgios**	**1.58**	**65**	P	**Pb**		**16 36 09.5**	**-0.2**
AGG	**Agios Georgios**	**1.58**	**65**	P	**Pb**		**16 36 09.6**	**-0.2**
AGG				AML	AML		16 36 39.5	
	comp=N,1234µm,0.5s							
AGG				AML	AML		16 36 43.1	
	comp=E,1408µm,0.5s							
ITM	**Ithomi**	**1.65**	**136**	P	**Pb**		**16 36 11.0**	**+0.1**
ITM	**Ithomi**	**1.65**	**136**	P	**Pg**		**16 36 11.5**	**-0.4**
THL	**Klokotos Trika**	**1.68**	**45**	P	**Pb**		**16 36 11.4**	**0.0**
THL	**Klokotos Trika**	**1.68**	**45**	P	**Pb**		**16 36 11.7**	**+0.3**
KPRO	**Kipourio**	**1.72**	**23**	P	**Pb**		**16 36 12.3**	**+0.1**
AXAR	**Agios Charalam**	**1.75**	**76**	P	**Pg**		**16 36 13.0**	**-0.7**
AXAR				AML	AML		16 36 53.0	
	comp=E,2571µm,0.9s							
AXAR				AML	AML		16 36 53.3	
	comp=N,4076µm,1.0s							
PYL	**PYLOS**	**1.78**	**146**	P	**Pb**		**16 36 12.4**	**-0.7**
LTK	**Loutraki**	**1.98**	**99**	P	**Pb**		**16 36 16.4**	**-0.2**
LKR	**Lokris**	**1.99**	**81**	P	**Pb**		**16 36 15.9**	**-0.8**
LKR	**Lokris**	**1.99**	**81**	P	**Pb**		**16 36 16.3**	**-0.4**
VIL2	**Platees**	**2.19**	**93**	P	**Pb**		**16 36 20.1**	**-0.1**
XOR	**Xorichti**	**2.33**	**64**	P	**Pn**		**16 36 19.8**	**+0.9**
DID	**Didima**	**2.34**	**111**	P	**Pb**		**16 36 21.2**	**-1.4**
MRKA	**Markates**	**2.45**	**81**	P	**Pn**		**16 36 21.4**	**+0.8**
VLY	**Voula,Athens**	**2.66**	**100**	P	**Pn**		**16 36 25.2**	**+1.8**
EREA	**Eretria**	**2.71**	**88**	P	**Pn**		**16 36 26.2**	**+2.1**
OHR	**Ohrid**	**2.74**	**5**	*i* Pn	**Pg**		**16 36 33.7**	**+0.9**
VAY	**Valandovo**	**3.35**	**28**	*i* Pn	**Pb**		**16 36 40.9**	**+1.0**
STIP	**Stip**	**3.56**	**21**	*i* Pn	**Pb**		**16 36 40.8**	**-2.7**
GERES	**GERESS Array B**	**11.56**	**337**	Pn	**Pn**		**16 38 24.9**	**-0.7**
	comp=N,0.1nm,0.3s,baz=153,slow=11,SNR=3.2							
FINES	**FINESS Array B**	**23.36**	**7**	P	**P**		**16 40 49.1**	**+0.3**
	comp=N,3.3nm,0.9s,baz=186,slow=11,SNR=2.7							
KURBB	**Kurchatov Arra**	**42.13**	**54**	P	**P**		**16 43 32.6**	**-0.2**
	comp=N,0.3nm,0.2s,baz=280,slow=8.9,SNR=2.8							
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**		**16 43 56.8**	**-1.0**
	comp=N,0.2nm,0.4s,baz=282,slow=7.7,SNR=12							
ZALV	**Zalesovo Beam**	**45.58**	**48**	P	**P**		**16 43 59.5**	**-1.0**
	comp=N,0.8nm,0.4s,baz=280,slow=8.6,SNR=4.9							

MAN 29 16:47:22.7,17.44N×120.22E,h10km,mb5.4,ML4.4, MS4.7,2C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.53**	**25**	*i* P	Pg	16 47 33.3	+0.3
APYP	**Conner**	**1.06**	**66**	*e* P	Pg	16 47 41.6	-1.5
APYP				*e* S	Sg	16 47 56.4	-0.4
CAUP	**Cauayan**	**1.61**	**108**	*e* P	Pg	16 47 53.8	+0.2
CAUP				*e* S	Sg	16 48 18.8	+4.5
SGCP	**Mt. Cagua**	**1.91**	**65**	*e* P	Pn	16 47 55.8	+0.5
SGCP				*e* S	Sb	16 48 20.7	-0.9
LQP	**Lukban**	**3.54**	**159**	*e* P	Pn	16 48 19.3	+1.3

*IDC **29** 16:49:12.3±1.2,38.50N×20.47E,h0km,mb3.6/7, mb1 3.7/10,mb1mx3.5/52,mbtmp3.7/10,ML3.3/3,MS3.0/3, Ms1 3.0/3,ms1mx2.5/46,Error ellipse: s-maj=26.4km s-min=18.2km az=58.0*

*THE **29** 16:49:14.9,38.41N×20.47E,h7km±1km,ML3.6/11,Error ellipse: s-maj=1.2km s-min=0.3km az=101.0*

*ATH **29** 16:49:14.3,38.42N×20.43E,h11km±1km,ML3.5/17,Error ellipse: s-maj=1.5km s-min=0.6km az=277.0*

ISC 29 16:49:13.7±0.7,38.43N±0.02×20.46E±0.03,h14km±4km, n89,σ1s34/124,mb3.6/7,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.09**	**102**	P	**Pg**	**16 49 16.6**	**-0.2**
VSK1				S	**Sg**	**16 49 18.4**	**-0.4**
FSK	**Fiskardo**	**0.09**	**68**	P	**Pg**	**16 49 16.7**	**-0.1**
FSK				S	**Sg**	**16 49 18.6**	**-0.2**
	47µm,0.6s						
FSK	**Fiskardo**	**0.09**	**68**	P	**Pg**	**16 49 16.7**	**-0.1**
FSK				S	**Sg**	**16 49 18.9**	**+0.1**
KEF1	**Kardakata, Kep**	**0.15**	**176**	P	**Pg**	**16 49 17.6**	**+0.1**
KEF1				S	**Sg**	**16 49 20.3**	**+0.3**
KEF4	**Livadi, Kephal**	**0.17**	**189**	P	**Pg**	**16 49 17.9**	**+0.1**
KEF4				S	**Sg**	**16 49 20.4**	**-0.1**
EVGI	**Lefkada island**	**0.25**	**39**	P	**Pb**	**16 49 19.9**	**-0.1**
EVGI				S	**Sb**	**16 49 24.1**	**-0.1**
EVGI	**Lefkada island**	**0.25**	**39**	P	**Pb**	**16 49 19.9**	**-0.1**
EVGI				S	**Sb**	**16 49 24.4**	**+0.3**
ARG2	**Argostoli**	**0.25**	**175**	P	**Pg**	**16 49 19.3**	**+0.2**
ARG2				S	**Sb**	**16 49 23.1**	**-1.0**
	162µm,0.4s						
CHV1	**Chavriata, Kef**	**0.25**	**194**	P	**Pb**	**16 49 19.9**	**-0.1**
CHV1				S	**Sb**	**16 49 23.9**	**-0.3**
KEF2	**Argostoli. Kep**	**0.26**	**175**	P	**Pg**	**16 49 19.5**	**+0.2**
KEF2				S	**Sg**	**16 49 23.1**	**0.0**
VLS	**Valsamata**	**0.27**	**157**	P	**Pg**	**16 49 19.6**	**+0.1**
VLS				S	**Sb**	**16 49 23.9**	**-0.9**
	24µm,0.4s						
VLS	**Valsamata**	**0.27**	**157**	P	**Pg**	**16 49 19.6**	**+0.1**
VLS				S	**Sb**	**16 49 23.7**	**-1.0**
VLS				AML	AML	16 49 24.1	
	comp=E,50921µm,0.3s						
VLS				AML	AML	16 49 27.5	
	comp=N,42292µm,0.4s						
MGNA	**Meganis**	**0.35**	**49**	P	**Pb**	**16 49 21.4**	**-0.2**
MGNA				S	**Sb**	**16 49 27.1**	**+0.1**
LKD2	**Lefkada island**	**0.39**	**23**	P	**Pb**	**16 49 22.4**	**-0.1**
LKD2				S	**Sb**	**16 49 29.1**	**+0.7**
	comp=N,7µm,0.6s						
LKD2	**Lefkada island**	**0.39**	**23**	P	**Pb**	**16 49 22.2**	**-0.2**
LKD2				S	**Sb**	**16 49 29.2**	**+0.7**
LKD2				AML	AML	16 49 29.7	
	comp=N,18055µm,0.7s						
LKD2				AML	AML	16 49 29.9	
	comp=E,13088µm,0.5s						
KFL	**Anninata**	**0.41**	**141**	P	**Pb**	**16 49 22.2**	**-0.5**
KFL				S	**Sb**	**16 49 28.8**	**0.0**
	comp=E,23µm,0.4s						
KFL	**Anninata**	**0.41**	**141**	P	**Pb**	**16 49 22.3**	**-0.5**
KFL				S	**Sb**	**16 49 29.1**	**+0.3**
KFL				AML	AML	16 49 29.3	
	comp=E,43890µm,0.4s						
KFL				AML	AML	16 49 29.5	
	comp=N,50008µm,0.5s						
TSLK	**Tsoukalades, L**	**0.43**	**21**	P	**Pb**	**16 49 23.1**	**+0.1**
TSLK				S	**Sb**	**16 49 30.2**	**+0.9**
	comp=N,11µm,1.0s						
TSLK	**Tsoukalades, L**	**0.43**	**21**	P	**Pb**	**16 49 23.0**	**+0.1**
TSLK				S	**Sb**	**16 49 29.8**	**+0.5**
AST1	**Astakos**	**0.51**	**77**	P	**Pb**	**16 49 24.6**	**+0.2**
AST1				S	**Sn**	**16 49 32.6**	**-2.4**
	comp=N,14µm,0.5s						
VLMS	**Volimes, Zakyn**	**0.57**	**164**	P	**Pb**	**16 49 25.1**	**-0.4**
VLMS				S	**Sb**	**16 49 32.6**	**-0.9**
VLMS				AML	AML	16 49 34.7	
	comp=N,73140µm,0.3s						
VLMS				AML	AML	16 49 35.4	
	comp=E,31231µm,0.3s						
PVO	**Paravola**	**0.86**	**77**	P	**Pn**	**16 49 31.3**	**0.0**
PVO				S	**Sn**	**16 49 43.2**	**-0.5**
	comp=E,4µm,0.8s						
RLS	**Riolos of Patr**	**0.88**	**115**	P	**Pn**	**16 49 31.4**	**-0.1**
RLS	**Riolos of Patr**	**0.88**	**115**	P	**Pn**	**16 49 30.9**	**-0.6**
RLS				AML	AML	16 49 53.0	
	comp=N,3752µm,0.7s						
RLS				AML	AML	16 49 59.9	
	comp=E,2411µm,0.7s						
DRO	**Drossia**	**1.09**	**115**	P	**Pg**	**16 49 34.6**	**-0.3**
DRO				S	**Sg**	**16 49 50.4**	**+1.3**
	comp=E,3µm,0.9s						
DRO	**Drossia**	**1.09**	**115**	P	**Pg**	**16 49 34.5**	**-0.3**
DRO				AML	AML	16 49 58.0	
	comp=E,7751µm,0.8s						
DRO				AML	AML	16 50 00.3	
	comp=N,4850µm,0.5s						
ANX	**Ano Chora**	**1.16**	**81**	P	**Pg**	**16 49 35.8**	**-0.3**
ANX				S	**Sg**	**16 49 53.2**	**+2.0**
	comp=N,3µm,0.8s						
ANX	**Ano Chora**	**1.16**	**81**	P	**Pg**	**16 49 36.1**	**0.0**
ANX				AML	AML	16 50 01.2	
	comp=N,6210µm,0.9s						
ANX				AML	AML	16 50 05.0	
	comp=E,4376µm,0.7s						
EVR	**Evrytania**	**1.16**	**65**	P	**Pg**	**16 49 35.9**	**-0.3**
EVR				AML	AML	16 50 07.7	
	comp=E,2434µm,0.6s						
EVR				AML	AML	16 50 10.4	
	comp=N,2143µm,0.8s						
LAKA	**Lakka**	**1.21**	**98**	P	**Pg**	**16 49 36.5**	**-0.5**
LAKA	**Lakka**	**1.21**	**98**	P	**Pg**	**16 49 36.8**	**-0.2**
LAKA				AML	AML	16 50 03.3	
	comp=N,2638µm,0.8s						
LAKA				AML	AML	16 50 03.4	
	comp=E,2795µm,0.7s						
SERG	**Sergoula**	**1.25**	**90**	P	**Pg**	**16 49 38.5**	**+0.6**
SERG				S	**Sg**	**16 49 55.5**	**+1.2**
	comp=E,2µm,0.5s						
SERG	**Sergoula**	**1.25**	**90**	P	**Pg**	**16 49 37.8**	**-0.1**
SERG				AML	AML	16 50 01.3	
	comp=E,4068µm,0.6s						
SERG				AML	AML	16 50 01.6	
	comp=N,5791µm,0.5s						
JAN	**Janina**	**1.27**	**14**	P	**Pg**	**16 49 38.6**	**+0.5**
TRIZ	**Trizonia**	**1.27**	**92**	P	**Pg**	**16 49 37.6**	**-0.5**
TRIZ	**Trizonia**	**1.27**	**92**	P	**Pg**	**16 49 37.7**	**-0.5**
KALE	**Kalithea**	**1.32**	**91**	P	**Pg**	**16 49 38.6**	**-0.6**
KALE	**Kalithea**	**1.32**	**91**	P	**Pg**	**16 49 38.6**	**-0.6**
KALE				AML	AML	16 50 06.3	
	comp=N,5319µm,0.9s						
KALE				AML	AML	16 50 06.6	
	comp=E,2257µm,0.4s						
AMT	**Artemida-Makis**	**1.33**	**132**	P	**Pg**	**16 49 40.2**	**+0.9**
AMT				AML	AML	16 50 10.5	
	comp=E,6296µm,0.6s						
AMT				AML	AML	16 50 15.2	
	comp=N,7165µm,0.7s						
KASA	**Kassiopi**	**1.38**	**343**	P	**Pg**	**16 49 40.6**	**+0.4**
KLV	**Kalavryta, Ach**	**1.39**	**105**	P	**Pg**	**16 49 39.5**	**-0.9**
KLV				S	**Sg**	**16 49 59.5**	**+1.1**
KLV	**Kalavryta, Ach**	**1.39**	**105**	P	**Pg**	**16 49 39.5**	**-0.9**
KLV				S	**Sg**	**16 50 00.6**	**+2.2**
KLV				AML	AML	16 50 10.0	
	comp=E,1579µm,0.7s						
KLV				AML	AML	16 50 14.2	
	comp=N,1343µm,1.4s						
MAKR	**Makrakomi, Fth**	**1.43**	**65**	P	**Pg**	**16 49 41.4**	**+0.1**
MAKR				AML	AML	16 50 11.2	
	comp=E,3607µm,0.9s						
MAKR				AML	AML	16 50 13.5	
	comp=N,2620µm,0.6s						
AGG	**Agios Georgios**	**1.58**	**67**	P	**Pg**	**16 49 44.0**	**-0.1**
AGG				AML	AML	16 50 18.8	
	comp=N,1774µm,1.1s						
AGG				AML	AML	16 50 19.9	
	comp=E,1828µm,0.8s						
THL	**Klokotos Trika**	**1.66**	**46**	P	**Pg**	**16 49 45.9**	**+0.2**
ITM	**Ithomi**	**1.70**	**137**	P	**Pg**	**16 49 45.8**	**-0.6**
AXAR	**Agios Charalam**	**1.76**	**78**	P	**Pg**	**16 49 47.1**	**-0.4**
AXAR				AML	AML	16 50 26.0	
	comp=E,2471µm,0.8s						
AXAR				AML	AML	16 50 30.9	
	comp=N,3854µm,1.0s						
PENT	**Pentalofos**	**1.84**	**16**	P	**Pg**	**16 49 48.9**	**-0.3**
VLX	**Vlachokerasia**	**1.85**	**124**	P	**Pg**	**16 49 49.0**	**-0.2**
PROD	**Prodromos**	**1.93**	**94**	P	**Pg**	**16 49 49.8**	**-0.9**
LKR	**Lokris**	**2.00**	**83**	P	**Pg**	**16 49 50.9**	**-1.2**
LKR				AML	AML	16 50 24.4	
	comp=N,861µm,0.8s						
LKR				AML	AML	16 50 33.3	
	comp=E,523µm,0.9s						
LTK	**Loutraki**	**2.02**	**101**	P	**Pb**	**16 49 50.5**	**+0.4**
VIL2	**Platees**	**2.22**	**95**	P	**Pg**	**16 49 54.6**	**-1.7**
DID	**Didima**	**2.38**	**112**	P	**Pb**	**16 49 56.0**	**-0.3**
MRKA	**Markates**	**2.47**	**83**	P	**Pb**	**16 49 56.8**	**-1.1**
OHR	**Ohrid**	**2.69**	**5**	*i* Pn	**Pb**	**16 50 00.7**	**-1.0**
EREA	**Eretria**	**2.73**	**89**	P	**Pb**	**16 50 00.3**	**-2.0**
CGL1	**Ceglie Messapi**	**3.20**	**315**	*e*Pn	**Pn**	**16 50 06.5**	**+2.9**
MASS	**Massafra**	**3.38**	**312**	*e*Pn	**Pn**	**16 50 07.5**	**+1.5**
STIP	**Stip**	**3.52**	**22**	*i* Pn	**Pb**	**16 50 13.8**	**-2.0**
SG1	**Sgolgore (BA)**	**3.79**	**311**	*e*Pn	**Pn**	**16 50 13.3**	**+1.7**
SG1				Sn	**Sn**	**16 50 56.7**	**+0.8**
DBRK	**Dubrovnik**	**4.59**	**338**	*e*Pn	**Pn**	**16 50 23.3**	**+0.6**
DBRK				Sn	**Sn**	**16 51 14.8**	**-0.9**
IDI	**Anoyia**	**4.74**	**130**	Pn	**Pn**	**16 50 26.7**	**+1.9**
	comp=E,0.1nm,0.3s,baz=54,slow=13,SNR=2.2						
IDI				Sn	**Sn**	**16 51 21.4**	**+2.0**
	comp=E,1.8nm,0.3s,baz=72,slow=20,SNR=3.7						
IDI				LR	LR	16 52 49.3	
	comp=E,85nm,19.4s,baz=39,slow=45						
STON	**Ston**	**4.91**	**336**	*i* Pn	**Pn**	**16 50 27.4**	**+0.4**
STON				Sn	**Sn**	**16 51 21.3**	**-2.3**
KIJV	**Kijevo**	**6.36**	**333**	*e*Pn	**Pn**	**16 50 47.9**	**+1.0**
KIJV				Sn	**Sn**	**16 51 56.9**	**-2.3**
ZIRJ	**Zirje**	**6.37**	**327**	*i* Pn	**Pn**	**16 50 47.1**	**+0.1**
ZIRJ				Sn	**Sn**	**16 51 56.2**	**-3.2**
MORI	**Morici**	**6.51**	**328**	*i* Pn	**Pn**	**16 50 50.0**	**+1.0**
DUGI	**Dugi Otok**	**6.89**	**326**	*e*Pn	**Pn**	**16 50 54.8**	**+0.6**
UDBI	**Udbina**	**7.04**	**331**	*e*Pn	**Pn**	**16 50 58.1**	**+1.7**
NVLJ	**Novalja**	**7.43**	**327**	*e*Pn	**Pn**	**16 51 01.9**	**+0.4**
MLR	**Muntele Rosu**	**8.15**	**28**	Pn	Pb	16 51 23.0	-12
	comp=E,0.3nm,0.3s,baz=266,slow=9.1,SNR=8.0						
SOKA	**Soboth**	**9.16**	**336**	*e*Pn	**Pn**	**16 51 25.7**	**+0.2**
	comp=E,7.4nm,0.6s						
OBKA	**Obir**	**9.18**	**334**	*i* Pn	**Pn**	**16 51 28.1**	**+2.4**
	comp=E,1.7nm,0.3s						
OBKA				*e*Sn	**Sn**	**16 53 03.6**	**-5.2**
	comp=E,3.8nm,0.5s						
ARSA	**Arzberg**	**9.53**	**339**	Pn	**Pn**	**16 51 31.4**	**+0.9**
	comp=E,0.8nm,0.3s						
KBA	**Koelnbreinsper**	**10.10**	**331**	*e*Pn	Pn	16 51 44.1	+5.7
	comp=E,2.2nm,0.6s						
KBA				*i* Sn	**Sn**	**16 53 28.3**	**-3.2**
	comp=E,1.1nm,0.3s						
MODS	**Modra-Piesok**	**10.21**	**348**	*e*SN	**Sn**	**16 53 28.2**	**-5.7**
MOA	**Molln**	**10.44**	**336**	*i* Pn	**Pn**	**16 51 43.7**	**+0.7**
	comp=E,2.8nm,0.5s						
VRAC	**Vranov**	**11.23**	**347**	LR	LR	16 56 34.8	
	comp=E,91nm,21.3s,baz=158,slow=40						
MOTA	**Moosalm**	**11.24**	**325**	*i* Pn	**Pn**	**16 51 55.0**	**+1.1**
DAVOX	**Davos/Dischmat**	**11.41**	**320**	Pn	**Pn**	**16 51 57.8**	**+1.5**
	comp=E,0.3nm,0.3s,baz=307,slow=15,SNR=2.2						
DAVOX				Sn	**Sn**	**16 54 02.6**	**-1.1**
	comp=E,0.3nm,0.3s,baz=145,slow=16,SNR=2.3						
GERES	**GERESS Array B**	**11.50**	**337**	Pn	**Pn**	**16 51 56.9**	**-0.6**
	comp=E,0.2nm,0.3s,baz=155,slow=14,SNR=6.2						
GERES				Sn	**Sn**	**16 54 00.7**	**-5.0**
	comp=E,0.1nm,0.3s,baz=154,slow=23,SNR=4.5						
KHC	**Kasperske Hory**	**11.79**	**337**	*e*PN	**Pn**	**16 52 01.4**	**0.0**
KHC				*ex*	x	16 52 11.0	
KHC				*e*SN	**Sn**	**16 54 09.7**	**-3.0**
HFS	**Hagfors**	**22.15**	**351**	P	**P**	**16 54 09.0**	**+0.2**
	comp=E,4.9nm,0.9s,baz=152,slow=13,SNR=6.1						
EKA	**Eskdalemuir Ar**	**23.20**	**324**	P	**P**	**16 54 21.0**	**+1.1**
	comp=E,1.1nm,0.6s,baz=131,slow=7.6,SNR=3.7						
FINES	**FINESS Array B**	**23.31**	**7**	P	**P**	**16 54 20.5**	**-0.3**
	comp=E,20nm,1.3s,baz=169,slow=11,SNR=4.5						
FINES				LR	LR	17 05 15.2	
	comp=E,78nm,18.2s,baz=42,slow=41						
NOA	**NORSAR Array B**	**23.36**	**349**	P	**P**	**16 54 22.3**	**+0.7**
	comp=E,0.4nm,0.5s,baz=162,slow=9.9,SNR=2.5						
TORD	**Torodi Ar. Bea**	**30.19**	**219**	P	**P**	**16 55 24.6**	**+0.9**
	comp=E,0.8nm,0.8s,baz=29,slow=9.9,SNR=4.6						
MKAR	**Makanchi Array**	**45.21**	**59**	P	**P**	**16 57 30.6**	**+0.4**
	comp=E,0.3nm,0.5s,baz=280,slow=6.4,SNR=7.3						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**16 57 33.0**	**+0.2**
	comp=E,0.9nm,0.5s,baz=271,slow=9.1,SNR=5.3						

*ATH **29** 16:56:21.0,38.39N×20.43E,h11km±1km,ML2.8/18,Error ellipse: s-maj=1.5km s-min=0.6km az=265.0*

*THE **29** 16:56:21.3,38.37N×20.42E,h5km±2km,ML2.8/7,Error ellipse: s-maj=2.9km s-min=0.3km az=94.0*

ISC 29 16:56:21.6±0.9,38.38N±0.02×20.46E±0.03,h8km±5km, n52,σ0s72/82,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.09**	**69**	P	**Pg**	**16 56 23.5**	**-0.3**
VSK1				S	**Sg**	**16 56 25.8**	**+0.4**
KEF1	**Kardakata, Kep**	**0.10**	**176**	P	**Pg**	**16 56 23.7**	**-0.2**
KEF1				S	**Sg**	**16 56 25.9**	**+0.3**
FSK	**Fiskardo**	**0.11**	**44**	P	**Pg**	**16 56 24.0**	**-0.2**
FSK				S	**Sg**	**16 56 26.3**	**+0.3**
	6µm,0.3s						
FSK	**Fiskardo**	**0.11**	**44**	P	**Pg**	**16 56 24.0**	**-0.2**
FSK				S	**Sg**	**16 56 26.3**	**+0.3**
KEF4	**Livadi, Kephal**	**0.12**	**194**	P	**Pg**	**16 56 24.1**	**-0.3**
KEF4				S	**Sg**	**16 56 26.8**	**+0.5**
KEF3	**Kipouria, Keph**	**0.20**	**207**	P	**Pg**	**16 56 25.3**	**-0.3**
KEF3				S	**Sg**	**16 56 28.9**	**+0.6**
ARG2	**Argostoli**	**0.20**	**174**	P	**Pg**	**16 56 25.6**	**-0.1**
ARG2				S	**Sg**	**16 56 28.3**	**-0.1**
KEF2	**Argostoli. Kep**	**0.21**	**175**	P	**Pg**	**16 56 25.7**	**-0.2**
KEF2				S	**Sg**	**16 56 29.3**	**+0.5**
VLS	**Valsamata**	**0.23**	**154**	P	**Pg**	**16 56 25.9**	**-0.2**
VLS				S	**Sg**	**16 56 29.7**	**+0.5**
	4µm,0.4s						
VLS	**Valsamata**	**0.23**	**154**	P	**Pg**	**16 56 25.9**	**-0.2**
VLS				S	**Sg**	**16 56 29.7**	**+0.5**
VLS				AML	AML	16 56 30.3	
	comp=N,9025µm,0.3s						
VLS				AML	AML	16 56 30.9	
	comp=E,6624µm,0.2s						
EVGI	**Lefkada island**	**0.29**	**32**	P	**Pg**	**16 56 27.3**	**0.0**
EVGI				S	**Sg**	**16 56 32.4**	**+1.3**
EVGI	**Lefkada island**	**0.29**	**32**	P	**Pg**	**16 56 27.3**	**0.0**
EVGI				S	**Sg**	**16 56 31.7**	**+0.6**
KFL	**Anninata**	**0.37**	**136**	P	**Pg**	**16 56 28.6**	**-0.3**
KFL				S	**Sg**	**16 56 34.8**	**+1.0**
	comp=E,6µm,0.3s						
KFL	**Anninata**	**0.37**	**136**	P	**Pg**	**16 56 28.4**	**-0.5**
KFL				S	**Sg**	**16 56 34.8**	**+1.0**
KFL				AML	AML	16 56 35.6	
	comp=N,7585µm,0.3s						
KFL				AML	AML	16 56 36.0	
	comp=E,14884µm,0.3s						
MGNA	**Meganis**	**0.38**	**43**	P	**Pg**	**16 56 28.7**	**-0.3**
MGNA				S	**Sg**	**16 56 34.3**	**+0.3**
MGNA				AML	AML	16 56 35.8	
	comp=N,7934µm,0.5s						
MGNA				AML	AML	16 56 36.1	
	comp=E,4640µm,0.2s						
LKD2	**Lefkada island**	**0.44**	**20**	P	**Pg**	**16 56 30.0**	**-0.1**
LKD2				S	**Sg**	**16 56 36.6**	**+0.7**
	comp=E,1µm,0.5s						
LKD2	**Lefkada island**	**0.44**	**20**	P	**Pg**	**16 56 29.8**	**-0.4**
LKD2				S	**Sg**	**16 56 35.8**	**-0.1**
LKD2				AML	AML	16 56 39.5	
	comp=E,2483µm,0.5s						
LKD2				AML	AML	16 56 44.1	
	comp=N,2298µm,0.4s						
TSLK	**Tsoukalades, L**	**0.47**	**19**	P	**Pg**	**16 56 30.7**	**0.0**
TSLK				S	**Sb**	**16 56 38.2**	**-1.0**
	comp=N,1µm,0.6s						
TSLK	**Tsoukalades, L**	**0.47**	**19**	P	**Pg**	**16 56 30.7**	**0.0**
TSLK				S	**Sg**	**16 56 36.7**	**-0.3**
AST1	**Astakos**	**0.52**	**72**	P	**Pg**	**16 56 31.7**	**+0.1**
AST1				S	**Sg**	**16 56 39.7**	**+1.3**
VLMS	**Volimes, Zakyn**	**0.53**	**162**	P	**Pg**	**16 56 31.4**	**-0.4**
VLMS				S	**Sg**	**16 56 39.6**	**+0.9**
VLMS				AML	AML	16 56 42.0	
	comp=N,5889µm,0.4s						
VLMS				AML	AML	16 56 44.4	
	comp=E,4750µm,0.5s						
PDO	**Prodromos**	**0.61**	**69**	P	**Pg**	**16 56 33.0**	**-0.3**
PDO				S	**Sb**	**16 56 42.7**	**-0.4**
	comp=E,2µm,0.4s						
PDO	**Prodromos**	**0.61**	**69**	P	**Pg**	**16 56 33.3**	**-0.1**
PDO				S	**Sg**	**16 56 41.9**	**+0.6**
PDO				AML	AML	16 56 48.1	
	comp=E,2316µm,0.5s						
PDO				AML	AML	16 56 48.5	
	comp=N,2772µm,0.4s						
KRI1	**kERI**	**0.77**	**159**	P	**Pg**	**16 56 35.6**	**-0.8**
KRI1				S	**Sb**	**16 56 47.2**	**-0.6**
RLS	**Riolos of Patr**	**0.85**	**112**	P	**Pg**	**16 56 37.4**	**-0.6**
RLS				AML	AML	16 56 58.6	
	comp=N,810µm,0.4s						
RLS				AML	AML	16 56 59.1	
	comp=E,749µm,0.3s						
PVO	**Paravola**	**0.87**	**74**	P	**Pg**	**16 56 38.1**	**-0.2**
PVO				S	**Sb**	**16 56 52.0**	**+1.4**
	comp=E,588nm,0.5s						
PVO	**Paravola**	**0.87**	**74**	P	**Pg**	**16 56 38.2**	**-0.1**
PVO				S	**Sg**	**16 56 49.8**	**+0.2**
PVO				AML	AML	16 56 59.2	
	comp=E,1156µm,0.5s						
PVO				AML	AML	16 57 02.8	
	comp=N,1279µm,0.4s						
DRO	**Drossia**	**1.07**	**113**	P	**Pg**	**16

mb1 3.1/5,mb1mx2.9/44,mbtmp3.2/5,ML3.6/1,Error ellipse: s-maj=66.7km s-min=19.7km az=71.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.89**	**168**	P	Pn	17 04 57.5	0.0
	0.2nm,0.3s,baz=344,slow=13,SNR=4.2						
SONM	**Songino Array**	**21.86**	**17**	P	P	17 07 38.2	+0.2
	0.5nm,0.9s,baz=195,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**22.73**	**333**	P	P	17 07 47.1	-0.2
	0.3nm,0.8s,baz=143,slow=10,SNR=3.5						
WRA	**Warramunga Arr**	**59.21**	**138**	P	P	17 12 44.8	-0.1
	0.5nm,0.6s,baz=329,slow=7.5,SNR=4.9						
ASAR	**Alice Springs**	**61.87**	**141**	P	P	17 13 03.1	+0.1
	0.3nm,0.4s,baz=323,slow=6.5,SNR=6.6						

ATH 29 17:14:39.4,38°29N×20°38E,h11km±1km,ML2.5/4,Error ellipse: s-maj=2.1km s-min=0.9km az=239.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.05**	**126**	P	Pg	17 14 41.5	-0.1
KEF4				S	Sg	17 14 42.7	-0.4
KEF1	**Kardakata, Kep**	**0.07**	**96**	P	Pg	17 14 41.7	-0.2
KEF1				S	Sg	17 14 42.9	-0.7
KEF3	**Kipouria, Keph**	**0.09**	**195**	P	Pg	17 14 42.2	+0.2
KEF3				S	Sg	17 14 44.3	+0.5
KEF2	**Argostoli. Kep**	**0.15**	**144**	P	Pg	17 14 42.9	+0.1
KEF2				S	Sg	17 14 45.2	-0.1
VLS	**Valsamata**	**0.20**	**123**	P	Pg	17 14 43.5	-0.2
VLS				S	Sg	17 14 46.5	-0.2
VLS				AML	AML	17 14 46.6	
	comp=N,6425μm,0.2s						
VLS				AML	AML	17 14 46.9	
	comp=E,6098μm,0.1s						
FSK	**Fiskardo**	**0.23**	**40**	P	Pg	17 14 44.4	+0.2
FSK				S	Sg	17 14 48.3	+0.9
KFL	**Anninata**	**0.37**	**118**	P	Pg	17 14 46.5	-0.3
KFL				S	Sg	17 14 52.2	+0.5
KFL				AML	AML	17 14 52.4	
	comp=N,1592μm,0.5s						
KFL				AML	AML	17 14 53.4	
	comp=E,1750μm,0.3s						
EVGI	**Lefkada island**	**0.40**	**33**	P	Pg	17 14 47.6	+0.3
EVGI				S	Sg	17 14 53.7	+0.9
VLMS	**Volimes, Zakyn**	**0.47**	**151**	P	Pg	17 14 48.6	0.0
VLMS				S	Sb	17 14 56.1	-0.5
VLMS				AML	AML	17 14 56.7	
	comp=N,2626μm,0.4s						
VLMS				AML	AML	17 14 57.6	
	comp=E,2107μm,0.2s						
MGNA	**Meganis**	**0.49**	**41**	P	Pg	17 14 49.1	0.0
MGNA				S	Sg	17 14 55.4	-0.2
LKD2	**Lefkada island**	**0.55**	**24**	P	Pg	17 14 50.1	-0.1
LKD2				S	Sg	17 14 57.0	-0.4
TSLK	**Tsoukalades, L**	**0.58**	**22**	P	Pg	17 14 50.7	-0.1
TSLK				S	Sg	17 14 58.3	-0.2
PDO	**Prodromos**	**0.71**	**64**	P	Pg	17 14 52.9	-0.2
PDO				S	Sb	17 15 03.3	-0.1
PDO				AML	AML	17 15 05.8	
	comp=N,609μm,0.5s						
PDO				AML	AML	17 15 05.8	
	comp=E,662μm,0.4s						
RLS	**Riolos of Patr**	**0.89**	**105**	P	Pg	17 14 55.9	-0.6
PVO	**Paravola**	**0.96**	**70**	P	Pg	17 14 57.7	-0.2
DRO	**Drossia**	**1.10**	**107**	P	Pb	17 14 59.8	-0.7
EFP	**Efpalio**	**1.21**	**83**	P	Pn	17 15 01.4	-0.8
ANX	**Ano Chora**	**1.25**	**75**	P	Pn	17 15 02.3	-0.6
LAKA	**Lakka**	**1.26**	**92**	P	Pn	17 15 02.4	-0.6
KALE	**Kalithea**	**1.39**	**85**	P	Pn	17 15 04.4	-0.4

THE 29 17:15:13.6,38°30N×20°41E,h0km±4km,ML2.2/9,Error ellipse: s-maj=4.8km s-min=0.8km az=255.0,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.16**	**48**	P	Pg	17 15 16.7	0.0
VSK1				S	Sg	17 15 19.4	+0.6
	4μm,0.1s						
VLS	**Valsamata**	**0.19**	**132**	P	Pg	17 15 17.0	-0.2
VLS				S	Sg	17 15 20.3	+0.7
	2μm,0.1s						
KFL	**Anninata**	**0.35**	**123**	P	Pg	17 15 20.0	-0.4
KFL				S	Sg	17 15 26.0	+1.1
	2μm,0.4s						
EVGI	**Lefkada island**	**0.37**	**31**	P	Pg	17 15 20.4	-0.3
EVGI				S	Sg	17 15 26.0	+0.4
	468nm,0.1s						
LKD2	**Lefkada island**	**0.52**	**22**	P	Pg	17 15 24.1	+0.5
LKD2				S	Sg	17 15 30.7	+0.3
	132nm,0.3s						
TSLK	**Tsoukalades, L**	**0.56**	**20**	P	Pg	17 15 25.1	+0.8
TSLK				S	Sg	17 15 33.0	+1.5
	125nm,0.4s						
PDO	**Prodromos**	**0.67**	**64**	P	Pg	17 15 26.1	-0.4
PDO				S	Sg	17 15 35.9	+0.6
	605nm,0.3s						
RLS	**Riolos of Patr**	**0.87**	**106**	P	Pg	17 15 30.2	0.0
RLS				S	Sb	17 15 43.1	-0.5
	62nm,0.4s						
PVO	**Paravola**	**0.93**	**70**	P	Pg	17 15 30.5	-0.9
PVO				S	Sb	17 15 45.6	+0.1
	270nm,0.3s						

*NEIC **29** 17:20:32.5±1.4,5.43S×0.07×151.77E±0.07,h59km±4km, mb4.8/66,Error ellipse: s-maj=11.0km s-min=9.1km az=119.0*

*IDC **29** 17:20:34.0±1.0,5.41S×151.70E,h63km±8km,mb4.2/14, mb1 4.4/16,mb1mx4.2/29,mbtmp4.5/16,MS3.5/17, Ms1 3.5/17,ms1mx3.4/30,Error ellipse: s-maj=18.4km s-min=8.1km az=121.0*

*DJA **29** 17:20:38.3±1.4,5.5S×15.2E±1.2,h109km±9km,M5.0/13, mb4.7/13,mB5.4/1,MLv5.1/2,Mw(mB)4.8/1*

ISC 29 17:20:32.6±0.4,5.42S±0.05×151.75E±0.07,h57km,n145, σ1**9**05/141**,mb4.8/55,MS3.4/15,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**1.14**	**14**	P	**Pn**	**17 20 52.4**	**-0.1**
KRVT	3μm,0.3s,baz=140,slow=1.5,SNR=813			S	**Sn**	**17 21 09.1**	**+1.9**
	2μm,0.3s,baz=103,slow=19,SNR=26						
RABL	**Rabaul**	**1.29**	**19**	Pn	**Pn**	**17 20 54.6**	**+0.1**
MANU	**Manus Island**	**5.51**	**307**		Pn	17 21 57.5	+5.3
PMG	**Port Moresby**	**6.03**	**229**	P	**Pn**	**17 22 00.6**	**+1.3**
	5.8nm,0.3s,baz=42,slow=11,SNR=19						
PMG				S	**Sn**	**17 23 08.8**	**+1.8**
	7.1nm,0.3s,baz=130,slow=18,SNR=5.2						
PMG	**Port Moresby**	**6.03**	**229**		**Pn**	**17 22 00.3**	**+1.0**
HNR	**Honiara**	**9.05**	**117**	LR	LR	17 26 30.2	
	comp=Z,189nm,20.4s,baz=305,slow=39						
HNR	**Honiara**	**9.05**	**117**	Pn	**Pn**	**17 22 40.4**	**-0.4**
COEN	**Coen**	**11.97**	**224**	Pn	**Pn**	**17 23 19.9**	**-0.7**
CTA	**Charters Tower**	**15.53**	**200**	P	**Pn**	**17 24 07.9**	**-0.2**
	0.4nm,0.3s,baz=259,slow=16,SNR=2.0						
CTA				LR	LR	17 29 57.0	
	comp=Z,277nm,18.3s,baz=7.0,slow=36						
EIDS	**Eidsvold**	**19.84**	**182**	P	**P**	**17 24 58.1**	**-0.9**
GUMO	**Guam**	**20.09**	**340**	LR	LR	17 32 55.4	
	comp=Z,18nm,19.7s,baz=106,slow=37						
SIJI	**Sorong**	**20.94**	**282**	P	**P**	**17 25 11.8**	**+0.9**
	10nm,0.7s,baz=197,slow=19,SNR=3.1						
MTN	**Manton Dam**	**21.63**	**249**	P	**P**	**17 25 16.4**	**-1.9**
MTN				IAmb	IAmb	17 25 32.7	
	comp=Z,50nm,1.1s						
DZM	**Mont Dzumac**	**21.82**	**141**	P	**P**	**17 25 22.3**	**+2.0**
	comp=Z,37nm,1.4s,baz=166,slow=10.0,SNR=5.9						
DZM				LR	LR	17 32 39.3	
	comp=Z,380nm,20.6s,baz=234,slow=33						
DZM	**Mont Dzumac**	**21.82**	**141**	P	**P**	**17 25 19.5**	**-0.9**
DZM				IAmb	IAmb	17 25 34.9	
	comp=Z,44nm,1.3s						
WB0	**Warramunga Arr**	**22.10**	**228**	P	**P**	**17 25 23.5**	**+0.1**
WB0				IAmb	IAmb	17 25 36.1	
	comp=Z,39nm,1.1s						
WR0	**Warramunga Arr**	**22.11**	**228**	P	**P**	**17 25 23.6**	**+0.1**
WR0				IAmb	IAmb	17 25 36.2	
	comp=Z,33nm,0.9s						
WRAB	**Tennant Creek**	**22.24**	**228**	P	**P**	**17 25 25.2**	**+0.4**
WRAB				IAmb	IAmb	17 25 37.8	
	comp=Z,37nm,0.8s						
WB2	**Warramunga Arr**	**22.24**	**228**	P	**P**	**17 25 20.9**	**-4.0**
WB2				IAmb	IAmb	17 25 37.9	
	comp=Z,33nm,0.8s						
WRA	**Warramunga Arr**	**22.25**	**228**	P	**P**	**17 25 25.1**	**+0.1**
	comp=Z,17nm,0.6s,baz=52,slow=10.0,SNR=54						
WRA				S	**S**	**17 29 26.6**	**+0.1**
	comp=Z,3.4nm,0.9s,baz=51,slow=18,SNR=3.8						
WRA				LR	LR	17 34 29.7	
	comp=Z,97nm,18.6s,baz=50,slow=38						
WRA	**Warramunga Arr**	**22.25**	**228**	P	**P**	**17 25 24.1**	**-0.8**
KNRA	**Kununurra**	**24.76**	**244**	P	**P**	**17 25 47.9**	**-1.3**
ARMA	**Armidale**	**24.86**	**180**	P	**P**	**17 25 49.5**	**-0.6**
AS31	**Alice Springs**	**24.99**	**222**	P	**P**	**17 25 50.8**	**-0.4**
ASAR	**Alice Springs**	**24.99**	**222**	P	**P**	**17 25 51.6**	**+0.4**
	comp=Z,14nm,0.8s,baz=57,slow=8.5,SNR=84						
ASAR				S	**S**	**17 30 16.3**	**+5.0**
	comp=Z,1.9nm,1.0s,baz=48,slow=15,SNR=3.5						
ASAR				LR	LR	17 35 43.5	
	comp=Z,116nm,19.3s,baz=112,slow=36						
ASAR	**Alice Springs**	**24.99**	**222**	P	**P**	**17 25 50.6**	**-0.6**
STKA	**Stephens Creek**	**27.98**	**199**	P	**P**	**17 26 19.9**	**+1.8**
	comp=Z,2.0nm,0.7s,baz=11,slow=10.0,SNR=5.9						
STKA				LR	LR	17 37 52.0	
	comp=Z,110nm,19.1s,slow=37						
STKA	**Stephens Creek**	**27.98**	**199**	P	**P**	**17 26 18.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**28.44**	**242**	P	**P**	**17 26 22.4**	**+0.1**
	comp=Z,23nm,0.6s,baz=62,slow=6.7,SNR=51						
FITZ				LR	LR	17 39 20.4	
	comp=Z,79nm,18.6s,baz=125,slow=40						
FITZ	**Fitzroy Crossi**	**28.44**	**242**	P	**P**	**17 26 21.8**	**-0.5**
FITZ				IAmb	IAmb	17 26 23.2	
	comp=Z,21nm,0.7s						
KAPI	**Kappang**	**31.86**	**269**	LR	LR	17 41 52.1	
	comp=Z,34nm,19.1s,baz=334,slow=40						
FORT	**Forrest**	**33.65**	**219**	P	**P**	**17 27 07.7**	**-0.4**
PSA00	**Pilbara Seismi**	**34.81**	**239**	P	**P**	**17 27 18.3**	**0.0**
JAGI	**Jajag, Banyuwa**	**37.43**	**263**	P	**P**	**17 27 39.1**	**-1.6**
YOJ	**Yonaguni jima**	**40.81**	**318**	P	**P**	**17 28 08.4**	**-0.3**
UGM	**Wanagama**	**41.01**	**264**	P	**P**	**17 28 10.3**	**-0.3**
MORW	**Morawa**	**41.14**	**231**	P	**P**	**17 28 11.5**	**-0.1**
MORW				IAmb	IAmb	17 28 24.5	
	comp=Z,39nm,1.4s						
YULB	**Yu-li**	**41.28**	**315**	P	**P**	**17 28 12.7**	**0.0**
YULB				IAmb	IAmb	17 29 44.0	
	comp=Z,37nm,1.7s						
SSLB	**Suanglung**	**41.77**	**315**	P	**P**	**17 28 16.7**	**0.0**
YHNB	**Yeheng**	**42.05**	**317**	P	**P**	**17 28 19.2**	**+0.1**
JNU	**Nakatsue**	**43.15**	**334**	LR	LR	17 43 45.8	
	comp=Z,38nm,20.6s,baz=178,slow=32						
CISI	**Cisompet, Garu**	**43.69**	**265**	P	**P**	**17 28 31.4**	**-1.1**
LEM	**Lembang**	**43.89**	**266**	LR	LR	17 48 54.9	
	comp=Z,61nm,21.5s,baz=232,slow=39						
KNMB	**Chin-men Tao**	**44.02**	**314**	P	**P**	**17 28 34.6**	**-0.2**
KSRS	**Korea Array**	**48.09**	**334**	LR	LR	17 48 02.2	
	comp=Z,24nm,20.9s,baz=154,slow=34						
ENH	**Enshi**	**53.82**	**314**	P	**P**	**17 29 50.0**	**+0.1**
ENH				IAmb	IAmb	17 29 51.6	
	comp=Z,13nm,1.2s						
GSI	**Gunungsitoli**	**54.51**	**275**	P	**P**	**17 29 53.0**	**-2.2**
GSI				IAmb	IAmb	17 30 32.3	
	comp=Z,13nm,1.1s						
XAN	**Xi'an**	**56.36**	**317**	P	**P**	**17 30 07.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**57.20**	**296**	P	**P**	**17 30 15.8**	**+1.5**
	comp=Z,1.8nm,0.7s,baz=121,slow=5.5,SNR=23						
CMAR				LR	LR	17 52 57.5	
	comp=Z,19nm,21.4s,baz=163,slow=34						
CHTO	**Chiang Mai**	**57.31**	**296**	P	**P**	**17 30 15.6**	**+0.4**
PETK	**Petropavlovsk-**	**58.53**	**4**	P	**P**	**17 30 25.2**	**+2.2**
	comp=Z,2.0nm,0.6s,baz=171,slow=7.8,SNR=7.0						
PETK				LR	LR	17 49 41.5	
	comp=Z,69nm,21.3s,baz=241,slow=30						
PETK	**Petropavlovsk-**	**58.53**	**4**	P	**P**	**17 30 24.7**	**+1.7**
ULN	**Ulaanbaatar**	**65.97**	**329**	P	**P**	**17 31 13.4**	**+0.2**
SONM	**Songino Array**	**66.30**	**328**	P	**P**	**17 31 16.2**	**+1.0**
	comp=Z,3.6nm,0.5s,baz=145,slow=5.5,SNR=42						
SONM				LR	LR	17 58 42.4	
	comp=Z,64nm,21.6s,baz=154,slow=34						
SONM	**Songino Array**	**66.30**	**328**	P	**P**	**17 31 15.9**	**+0.7**
CASY	**Casey**	**67.12**	**197**	P	**P**	**17 31 20.0**	**+0.1**
LSA	**Lhasa**	**67.73**	**305**	P	**P**	**17 31 24.7**	**-0.4**
TAPN	**Taplejung**	**69.83**	**302**	*eP*	**P**	**17 31 38.1**	**+0.1**
	comp=Z,9.5nm,0.8s						
ODAN	**Odare**	**69.96**	**301**	*eP*	**P**	**17 31 38.8**	**+0.1**
	comp=Z,14nm,0.7s						
RAMN	**Ramite**	**70.66**	**301**	*eP*	**P**	**17 31 43.3**	**+0.3**
	comp=Z,6.9nm,0.6s						
JIRN	**Jiri**	**71.21**	**301**	*eP*	**P**	**17 31 46.8**	**+0.3**
	comp=Z,17nm,0.7s						
GUN	**Gumba**	**71.55**	**302**	*eP*	**P**	**17 31 48.3**	**-0.2**
	comp=Z,22nm,0.6s						
PKI	**Pulchoki**	**71.85**	**301**	*eP*	**P**	**17 31 50.2**	**-0.1**
	comp=Z,4.4nm,0.6s						
PKIN	**Phulchoki**	**71.86**	**301**	*eP*	**P**	**17 31 50.2**	**-0.1**
	comp=Z,3.1nm,0.5s						
KKN	**Kakani**	**72.02**	**301**	*eP*	**P**	**17 31 51.5**	**+0.3**
	comp=Z,11nm,0.6s						
DMN	**Daman**	**72.12**	**301**	*eP*	**P**	**17 31 52.3**	**+0.4**
	comp=Z,16nm,0.7s						
GKN	**Gorkha**	**72.63**	**301**	*eP*	**P**	**17 31 54.9**	**+0.1**
	comp=Z,19nm,0.8s						
KOLN	**Koldanda**	**73.45**	**301**	*eP*	**P**	**17 31 59.6**	**-0.1**
	comp=Z,18nm,0.7s						
DANN	**Dangsing**	**73.47**	**302**	*eP*	**P**	**17 31 59.6**	**-0.3**
	comp=Z,15nm,0.6s						
MK31	**Makanchi Array**	**80.11**	**319**	P	**P**	**17 32 36.0**	**-0.5**
MKAR	**Makanchi Array**	**80.11**	**319**	P	**P**	**17 32 36.7**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=99,slow=7.5,SNR=25						
MKAR	**Makanchi Array**	**80.11**	**319**	P	**P**	**17 32 35.9**	**-0.7**
MAKZ	**Makanchi**	**80.31**	**319**	P	**P**	**17 32 37.0**	**-0.7**
ZAA0	**Zalesovo Array**	**81.09**	**327**	P	**P**	**17 32 40.4**	**-1.2**
ZALV	**Zalesovo Beam**	**81.09**	**327**	P	**P**	**17 32 40.6**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=117,slow=5.8,SNR=9.0						
ZALV				LR	LR	18 08 04.6	
	comp=Z,42nm,20.4s,baz=88,slow=35						
IMAR	**Indian Mountai**	**81.32**	**20**	P	**P**	**17 32 43.6**	**+1.0**
PRZ	**Przheval'sk**	**81.50**	**314**	P	**P**	**17 32 44.4**	**+0.1**
PRZ				IAmb	IAmb	17 32 46.0	
	comp=Z,6.5nm,0.9s						
MLY	**Manley**	**81.84**	**21**	P	**P**	**17 32 46.1**	**+0.7**
MLY				IAmb	IAmb	17 32 47.2	
	comp=Z,4.0nm,0.5s						
KDJ	**Kajisay**	**82.28**	**314**	P	**P**	**17 32 49.1**	**+0.6**
KDJ				IAmb	IAmb	17 32 50.4	
	comp=Z,6.9nm,0.8s						
ULHL	**Ulahol**	**82.98**	**314**	P	**P**	**17 32 52.6**	**+0.5**
	SNR=6.5						
IL31		**83.13**	**22**	P	**P**	**17 32 51.1**	**-0.9**
IL31				IAmb	IAmb	17 33 37.2	
	comp=Z,15nm,1.8s						
ILAR	**Eielson Array**	**83.13**	**22**	P	**P**	**17 32 51.1**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=251,slow=5.1,SNR=22						
ILAR	**Eielson Array**	**83.13**	**22**	P	**P**	**17 32 51.3**	**-0.8**
MCARA	**McCarthy VSAT**	**83.19**	**26**	P	**P**	**17 32 52.6**	**+0.1**
MCARA				IAmb	IAmb	17 35 16.9	
	comp=Z,11nm,1.1s						
BALM	**Baldy**	**83.35**	**27**	P	**P**	**17 32 53.1**	**-0.4**
RIDG	**Independent Ri**	**83.44**	**24**	P	**P**	**17 32 53.3**	**-0.5**
RIDG				IAmb	IAmb	17 33 34.3	
	comp=Z,21nm,1.6s						
NIL	**Nilore**	**83.46**	**305**	P	**P**	**17 32 54.1**	**-0.4**
NIL				IAmb	IAmb	17 32 55.3	
	comp=Z,11nm,0.8s						
KURK	**Kurchatov**	**83.61**	**322**	P	**P**	**17 32 54.0**	**-0.9**
KZA	**Kyzart**	**83.66**	**313**	P	**P**	**17 32 57.5**	**+1.6**
	SNR=8.2						
BARN	**Barnard Glacie**	**83.67**	**27**	P	**P**	**17 32 55.0**	**-0.2**
BARN				IAmb	IAmb	17 35 02.3	
	comp=Z,6.9nm,0.9s						
DOT	**Dot Lake**	**83.72**	**24**	P	**P**	**17 32 54.3**	**-0.9**
DOT				IAmb	IAmb	17 33 27.2	
	comp=Z,15nm,1.5s						
CTGM	**Chitina Glacie**	**83.77**	**27**	P	**P**	**17 32 55.1**	**-0.5**
SCRK	**Sand Creek**	**83.89**	**24**	P	**P**	**17 32 55.9**	**-0.2**
PCA	**Pinnacle**	**83.94**	**28**	P	**P**	**17 32 56.3**	**-0.1**
TOLK	**Toolik Lake Re**	**84.13**	**18**	P	**P**	**17 32 57.0**	**-0.2**
TOLK				IAmb	IAmb	17 35 53.9	
	comp=Z,15nm,1.7s						
UCH	**Uchtor**	**84.23**	**313**	P	**P**	**17 33 00.3**	**+1.5**
	SNR=5.3						
AAK	**Ala-Archa**	**84.33**	**314**	P	**P**	**17 32 59.6**	**+0.7**
USP	**Ospenovka**	**84.47**	**314**	P	**P**	**17 33 00.3**	**+0.8**
	SNR=9.2						
QSPA	**South Pole Qui**	**84.54**	**180**	P	**P**	**17 32 59.9**	**+0.4**
QSPA				IAmb	IAmb	17 33 12.0	
	comp=Z,5.5nm,1.0s						
AML	**Almayashu**	**84.80**	**313**	P	**P**	**17 33 02.8**	**+1.2**
	SNR=19						
EKS2	**Erkin-Say**	**84.86**	**314**	P	**P**	**17 33 02.8**	**+1.2**
	SNR=11						
ARSB	**Arslanbob**	**85.16**	**312**	P	**P**	**17 33 02.5**	**-0.6**
ARSB				IAmb	IAmb	17 33 04.9	
	comp=Z,14nm,1.2s						
WHY	**Whitehorse**	**86.64**	**28**	P	**P**	**17 33 10.9**	**+0.9**
WHY				IAmb	IAmb	17 33 20.2	
	comp=Z,9.3nm,1.5s						
KKAR	**Karatay Array**	**87.30**	**314**	P	**P**	**17 33 13.0**	**-0.5**
EPYK	**Eagle Plains**	**87.64**	**22**	P	**P**	**17 33 14.4**	**-0.1**
INK	**Inuvik**	**89.41**	**21**	P	**P**	**17 33 23.2**	**+0.4**
INK				IAmb	IAmb	17 36 04.1	
	comp=Z,12nm,1.7s						
PINE	**Pine Mountain**	**91.77**	**46**	P	**P**	**17 33 35.9**	**+1.2**
WAKR	**Walker**	**92.41**	**52**	P	**P**	**17 33 37.1**	**-0.6**
WAKR				IAmb	IAmb	17 33 40.0	
	comp=Z,2.9nm,1.1s						
I07A	**Izee**	**92.83**	**46**	P	**P**	**17 33 38.3**	**-1.1**
I07A				IAmb	IAmb	17 33 41.5	
	comp=Z,5.2nm,0.9s						
C36M	**Paulatuk**	**92.98**	**21**	P	**P**	**17 33 38.0**	**-1.4**
C36M				IAmb	IAmb	17 34 00.2	
	comp=Z,4.2nm,1.2s						
MWC	**Mount Wilson**	**93.17**	**56**	P	**P**	**17 33 39.8**	**-1.5**
NVAR	**Mina Array Bea**	**93.29**	**52**	P	**P**	**17 33 43.6**	**+1.7**
	comp=Z,3.4nm,0.7s,baz=256,slow=6.4,SNR=25						
NVAR				LR	LR	18 10 48.9	
	comp=Z,58nm,18.5s,baz=329,slow=32						
NVAR	**Mina Array Bea**	**93.29**	**52**	P	**P**	**17 33 41.0**	**-0.8**
NV11	**Mina Array Sit**	**93.41**	**52**	P	**P**	**17 33 42.8**	**+0.6**
NV11				IAmb	IAmb	17 33 44.7	
	comp=Z,4.2nm,0.8s						
KVN	**Kaiserville**	**93.50**	**51**	P	**P**	**17 33 43.7**	**+1.0**
KVN				IAmb	IAmb	17 33 44.9	
	comp=Z,5.6nm,1.1s						
BMO	**Blue Mountains**	**94.46**	**46**	P	**P**	**17 33 47.0**	**+0.1**
BMO				IAmb	IAmb	17 33 49.1	
	comp=Z,8.8nm,1.6s						
TPNV	**Topopah Spring**	**94.82**	**53**	P	**P**	**17 33 49.1**	**+0.2**
TPNV				IAmb	IAmb	17 33 51.3	
	comp=Z,3.7nm,0.8s						
ABKAR	**Akbulak array**	**95.25**	**319**	P	**P**	**17 33 48.2**	**-2.0**
ABKAR	**Akbulak array**	**95.25**	**319**	P	**P**	**17 33 49.0**	**-1.3**
ABKAR				IAmb	IAmb	17 33 49.9	
	comp=Z,1.1nm,0.8s						
YKA	**Yellowknife Ar**	**96.46**	**28**	P	**P**	**17 33 55.9**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=271,slow=4.9,SNR=6.5						
PDAR	**Pinedale Array**	**100.04**	**48**	P	**Pdif**	**17 34 12.7**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=233,slow=2.4,SNR=11						
PDAR	**Pinedale Array**	**100.04**	**48**		**Pdif**	**17 34 11.2**	**-1.1**
AKASG	**Malin Array Be**	**114.38**	**324**	PKiKP	PKPdf	17 39 05.6	-0.4
	comp=Z,1.7nm,0.3s,baz=56,slow=2.4,SNR=2.7						
BRTR	**Keskin Array B**	**114.93**	**311**	PKiKP	**PKiKP**	**17 39 07.4**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=45,slow=2.2,SNR=3.6						
NOA	**NORSAR Array B**	**117.13**	**340**	PKP	**PKPdf**	**17 39 10.8**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=48,slow=1.9,SNR=3.2						
KOLS	**Kolonicke sedl**	**119.20**	**324**	*e*PKP	**PKPdf**	**17 39 16.1**	**+0.6**
LANS	**Liptovska Anna**	**120.70**	**326**	*e*PKP	**PKiKP**	**17 39 19.8**	**+1.3**
VYHS	**Vyhne**	**121.40**	**325**	*e*PKP	**PKPdf**	**17 39 19.7**	**0.0**
LONY	**Lake Ozonia**	**123.83**	**38**		**PKPdf**	**17 39 22.3**	**-2.2**
KHC	**Kasperske Hory**	**123.92**	**328**	*e*PKPDF	**PKPdf**	**17 39 21.4**	**-3.2**
KHC				*ex*	x	17 39 25.0	
GEC2	**GERESS Array S**	**124.03**	**328**		**PKPdf**	**17 39 25.1**	**+0.3**
GERES	**GERESS Array B**	**124.03**	**328**	PKP	**PKPdf**	**17 39 25.4**	**+0.6**
	comp=Z,2.6nm,0.5s,baz=63,slow=1.9,SNR=30						
GERES	**GERESS Array B**	**124.03**	**328**		**PKPdf**	**17 39 24.9**	**0.0**
WATA	**Walderalm**	**126.08**	**327**	*i* PKiKP	**PKPdf**	**17 39 29.6**	**+0.8**
	comp=Z,7.5nm,0.7s						
MOTA	**Moosalm**	**126.32**	**328**	*i* PKiKP	**PKPdf**	**17 39 29.7**	**+0.4**
	comp=Z,2.3nm,0.4s						
FETA	**Feichten**	**126.72**	**328**	*i* PKiKP	**PKPdf**	**17 39 30.9**	**+0.7**
	comp=Z,2.4nm,0.6s						
KEST	**Kesra**	**134.13**	**316**	PKP	**PKPdf**	**17 39 45.5**	**+1.1**
	comp=Z,8.3nm,1.1s,baz=49,slow=4.5,SNR=4.2						
SDV	**Santo Domingo**	**137.83**	**83**		**PKPdf**	**17 39 52.0**	**-0.1**
TOA0	**Torodi Ar. Sit**	**149.49**	**287**		**PKPbc**	**17 40 15.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**149.49**	**287**	PKPbc	**PKPbc**	**17 40 16.7**	**+0.1**
	comp=Z,9.8nm,0.6s,baz=72,slow=3.2,SNR=38						
TORD	**Torodi Ar. Bea**	**149.49**	**287**		**PKPbc**	**17 40 16.0**	**-0.6**
BDFB	**Brasilia**	**151.35**	**137**	PKPbc	**PKPbc**	**17 40 22.0**

LUWI	**Luwuk**	**5.29**	**242**	P	**Pn**	**17 37 10.9**	**+1.5**
	0.3nm46nm,1.3s						
MRSI	**Marisa**	**5.58**	**260**	P	**Pn**	**17 37 12.4**	**-0.9**
	0.1nm14nm,1.2s						
BNSI	**Bone**	**9.37**	**231**	P	**Pn**	**17 38 05.2**	**+0.8**
SPSI	**Sidrap Palu**	**9.38**	**235**	P	**Pn**	**17 38 05.7**	**+1.2**
	20nm,0.5s						
BKSI	**Bulukumba**	**9.96**	**227**	P	**Pn**	**17 38 13.7**	**+1.5**
WRA	**Warramunga Arr**	**22.36**	**163**	P	**P**	**17 40 40.4**	**+0.3**
	0.4nm,0.5s,baz=343,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**25.79**	**166**	P	**P**	**17 41 12.2**	**+0.5**
	0.2nm,0.5s,baz=346,slow=6.9,SNR=4.2						
MKAR	**Makanchi Array**	**59.78**	**326**	P	**P**	**17 45 43.6**	**-0.5**
	0.1nm,0.3s,baz=116,slow=6.6,SNR=3.8						

*IDC **29** 17:41:01.1±5.6,36°.25N×71°.31E,h182^{km}±42^{km},mb3.2/5, mb1 3.2/7,mb1mx3.0/30,mbtmp3.7/7, Error ellipse: s-maj=71.4km s-min=26.2km az=149.0*

*NNC **29** 17:41:11.0±4.9,37°.08N×70°.95E,h200^{km}±67^{km},mb2.6, mpv3.6, Error ellipse: s-maj=50.5km s-min=34.6km az=19.0*

ISC 29 17:41:04.6±0.8,36°.65N±0°.08×71°.08E±0°.08,h188^{km},n34, σ1§16/37,mb3.5/4,2C-2D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHRV	**Charvak**	**5.06**	**350**	P	**Pn**	**17 42 21.8**	**+2.3**
CHRV				S	**Sn**	**17 43 17.4**	**-1.1**
AML	**Almayashu**	**5.83**	**20**	P	**Pn**	**17 42 31.2**	**+1.4**
	SNR=108						
UCH	**Uchtor**	**6.17**	**24**	P	**Pn**	**17 42 35.5**	**+1.3**
	SNR=81						
KZA	**Kyzart**	**6.31**	**30**	P	**Pn**	**17 42 36.7**	**+0.7**
	SNR=9.2						
EKS2	**Erkin-Say**	**6.35**	**18**	P	**Pn**	**17 42 37.8**	**+1.5**
	SNR=23						
KK31	**Karatay Array**	**6.46**	**356**	P	**Pn**	**17 42 39.4**	**+1.8**
	1.1nm,0.3s,baz=183,slow=17,SNR=28						
KK31				⇓S	**Sn**	**17 43 47.8**	**-3.4**
	7.6nm,0.4s,baz=180,slow=17,SNR=11						
AAK	**Ala-Archa**	**6.53**	**23**	P	**Pn**	**17 42 40.3**	**+1.6**
	SNR=12						
AAK	**Ala-Archa**	**6.53**	**23**	⇓P	**Pn**	**17 42 39.8**	**+1.0**
	3.1nm,0.3s						
AAK				⇑S	**Sn**	**17 43 52.5**	**-0.6**
	5.9nm,0.5s						
KBK	**Karagaybulak**	**6.70**	**25**	P	**Pn**	**17 42 42.9**	**+2.0**
	SNR=17						
ULHL	**Ulahol**	**6.87**	**34**	P	**Pn**	**17 42 44.1**	**+1.0**
	SNR=7.5						
CHMS	**Chumysh**	**6.94**	**23**	P	**Pn**	**17 42 45.7**	**+1.8**
	SNR=7.2						
USP	**Ospenovka**	**7.11**	**21**	P	**Pn**	**17 42 46.8**	**+0.6**
	SNR=9.6						
GEYT	**Alibeck**	**10.41**	**281**	P	**Pn**	**17 43 29.4**	**+0.1**
	0.2nm,0.3s,baz=108,slow=9.3,SNR=2.4						
MKAR	**Makanchi Array**	**13.13**	**36**	P	**Pn**	**17 44 03.5**	**-0.5**
	0.1nm,0.3s,baz=220,slow=13,SNR=6.6						
DANN	**Dangsing**	**13.52**	**124**	*eP*	**Pn**	**17 44 09.0**	**-0.4**
	4.4nm,0.3s						
KOLN	**Koldanda**	**13.80**	**126**	*eP*	**Pn**	**17 44 13.2**	**+0.4**
	6.6nm,0.5s						
GKN	**Gorkha**	**14.33**	**123**	*eP*	**Pn**	**17 44 19.0**	**-0.3**
	9.1nm,0.3s						
DMN	**Daman**	**14.90**	**123**	*eP*	**P**	**17 44 27.7**	**+0.2**
	4.8nm,0.3s						
KKN	**Kakani**	**14.90**	**122**	*eP*	**P**	**17 44 27.3**	**-0.2**
	4.4nm,0.4s						
AB31	**Akbulak array**	**14.98**	**331**	P	**Pn**	**17 44 27.2**	**+0.3**
	0.4nm,0.4s,baz=134,slow=14,SNR=15						
PKIN	**Phulchoki**	**15.12**	**123**	*eP*	**P**	**17 44 30.2**	**+0.3**
	6.8nm,0.4s						
PKI	**Pulchoki**	**15.13**	**123**	*eP*	**P**	**17 44 30.6**	**+0.5**
	8.8nm,0.5s						
GUN	**Gumba**	**15.24**	**121**	*eP*	**P**	**17 44 31.3**	**0.0**
	6.1nm,0.4s						
JIRN	**Jiri**	**15.61**	**121**	*eP*	**Pn**	**17 44 34.9**	**-0.3**
	21nm,0.4s						
RAMN	**Ramite**	**16.34**	**122**	*eP*	**P**	**17 44 43.1**	**-0.3**
AKTO	**Aktyubinsk**	**16.68**	**330**	⇑P	**Pn**	**17 44 47.9**	**+0.4**
	1.4nm,0.5s						
TAPN	**Taplejung**	**16.86**	**119**	*eP*	**Pn**	**17 44 50.0**	**-0.2**
	6.4nm,0.4s						
ODAN	**Odare**	**16.94**	**121**	*eP*	**Pn**	**17 44 51.0**	**-0.1**
	3.5nm,0.4s						
ZALV	**Zalesovo Beam**	**19.75**	**25**	P	**P**	**17 45 19.8**	**-0.1**
	0.8nm,0.4s,baz=220,slow=9.9,SNR=3.4						
FINES	**FINESS Array B**	**37.39**	**326**	P	**P**	**17 47 59.8**	**+0.8**
	2.5nm,0.9s,baz=112,slow=15,SNR=1.1						
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**17 48 29.9**	**+1.0**
	2.5nm,0.9s,baz=117,slow=11,SNR=1.5						
NB2	**NORSAR Subarra**	**44.30**	**323**	P	**P**	**17 48 55.7**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**17 48 55.1**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=99,slow=7.9,SNR=1.6						
TORD	**Torodi Ar. Bea**	**65.78**	**269**	P	**P**	**17 51 28.1**	**-1.7**
	comp=Z,0.2nm,0.6s,baz=69,slow=3.7,SNR=1.3						

*IDC **29** 17:59:28.8±1.2,3°.70S×102°.69W,h0^{km},mb3.7/5, mb1 4.1/5,mb1mx3.8/41,mbtmp3.7/5,MS3.5/5,Ms1 3.5/5, ms1mx3.2/26, Error ellipse: s-maj=90.7km s-min=28.3km az=71.0*

*NEIC **29** 17:59:29.1±2.1,3°.65S±0°.1×102°.6W±0°.2,h10^{km}±2^{km}, mb4.6/5, Error ellipse: s-maj=28.7km s-min=16.7km az=297.0*

ISC 29 17:59:29.6±1.0,3°.6S±0°.2×102°.6W±0°.3,h10^{km},n21, σ1§31/16,mb4.0/8,MS3.4/5,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**21.41**	**10**	P	**P**	**18 04 18.5**	**+0.6**
TLIG				IAmb	IAmb	18 04 25.8	
	comp=Z,5.0nm,0.8s						
APG	**El Apazote**	**22.04**	**33**	LR	LR	18 11 03.4	
	comp=Z,168nm,20.9s,baz=266,slow=31						
NNA	**Nana**	**26.78**	**110**	LR	LR	18 13 39.4	
	comp=Z,62nm,18.5s,baz=262,slow=32						
TXAR	**Lajitas Array**	**32.78**	**358**	P	**P**	**18 06 03.7**	**+0.6**
	comp=Z,0.4nm,0.9s,baz=183,slow=6.3,SNR=2.3						
TXAR				LR	LR	18 17 59.6	
	comp=Z,59nm,19.8s,baz=0.0,slow=34						
TXAR	**Lajitas Array**	**32.78**	**358**	P	**P**	**18 06 01.3**	**-1.8**
LVC	**Limon Verde**	**37.66**	**123**	P	**P**	**18 06 45.1**	**-0.6**
LVC				IAmb	IAmb	18 06 50.6	
	comp=Z,12nm,0.5s						
BEKR	**Beckworth**	**46.26**	**341**	P	**P**	**18 07 52.8**	**-2.7**
BEKR				IAmb	IAmb	18 08 00.3	
	comp=Z,11nm,1.2s						
PDAR	**Pinedale Array**	**46.60**	**353**	P	**P**	**18 07 59.8**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=176,slow=4.1,SNR=3.3						
PDAR	**Pinedale Array**	**46.60**	**353**	P	**P**	**18 07 57.8**	**-0.4**
PLCA	**Paso Flores**	**46.86**	**146**	P	**P**	**18 08 00.3**	**+0.2**
	comp=Z,2.2nm,0.9s,baz=355,slow=6.1,SNR=3.5						
Q56A	**Snyder Ridge,**	**47.61**	**25**	P	**P**	**18 08 05.1**	**-0.8**
YBH	**Yreka Blue Hor**	**48.72**	**340**	LR	LR	18 24 51.7	
	comp=Z,52nm,19.8s,baz=188,slow=31						
YKA	**Yellowknife Ar**	**66.56**	**354**	P	**P**	**18 10 21.0**	**+1.4**
	comp=Z,1.0nm,1.0s,baz=167,slow=6.0,SNR=9.5						
YKA				LR	LR	18 38 28.9	
	comp=Z,34nm,19.0s,baz=0.0,slow=35						
ILAR	**Eielson Array**	**75.56**	**342**	P	**P**	**18 11 15.3**	**+1.1**
	comp=Z,1.3nm,0.9s,baz=150,slow=4.3,SNR=9.5						
H11S2	**WAKE ISLAND Hy**	**91.82**	**288**	T	T	19 54 12.8	
	baz=94,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	**91.83**	**288**	T	T	19 54 13.4	
	baz=94,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**91.84**	**288**	T	T	19 54 11.9	
	baz=94,slow=75,SNR=10						
KURBB	**Kurchatov Arra**	**133.15**	**359**	PKP	**PKiKP**	**18 18 47.0**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=6.4,slow=1.9,SNR=2.8						
MKAR	**Makanchi Array**	**136.78**	**355**	PKP	**PKiKP**	**18 18 54.2**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=9.8,slow=2.7,SNR=3.2						
MKAR	**Makanchi Array**	**136.78**	**355**		**PKiKP**	**18 18 53.6**	**-0.9**
CMAR	**Chiang Mai Arr**	**154.30**	**307**	PKP	**PKPdf**	**18 19 24.5**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=52,slow=3.5,SNR=3.8						
CMAR				PKPab	**PKPab**	**18 19 44.4**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=18,slow=3.2,SNR=4.4						

IDC 29 18:02:58.6±2.1,6°.44S×128°.36E,h0^{km},mb3.2/1, mb1 3.5/3,mb1mx3.3/32,mbtmp3.3/3,ML3.1/2,Error ellipse: s-maj=176.4km s-min=30.5km az=66.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.63**	**157**	Pn	Pn	18 06 27.0	-0.1
	0.1nm,0.3s,baz=336,slow=11,SNR=4.2						
WRA				Sn	Sn	18 09 00.2	-10
	0.1nm,0.3s,baz=339,slow=26,SNR=3.9						
ASAR	**Alice Springs**	**17.94**	**163**	P	Pn	18 07 09.7	-0.1
	0.2nm,0.3s,baz=346,slow=11,SNR=14						
MKAR	**Makanchi Array**	**66.87**	**327**	P	P	18 13 52.6	0.0
	0.1nm,0.4s,baz=118,slow=6.8,SNR=3.6						

*ATH **29** 18:23:44.7,38°.34N×21°.98E,h13^{km}±1^{km},ML3.1/19, Error ellipse: s-maj=1.0km s-min=0.6km az=338.0*

*IDC **29** 18:23:44.4±1.4,38°.49N×21°.99E,h0^{km},mb3.7/4, mb1 3.6/5,mb1mx3.4/40,mbtmp3.6/5,ML2.6/1, Error ellipse: s-maj=43.5km s-min=25.6km az=142.0*

*THE **29** 18:23:45.4,38°.34N×21°.98E,h8^{km},ML3.1/19, Error ellipse: s-maj=0.9km s-min=0.3km az=90.0*

ISC 29 18:23:45.1±0.7,38°.34N±0°.01×21°.97E±0°.02,h10^{km}±4^{km}, n91,σ0§65/129,mb3.7/4,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.08**	**73**	P	**Pg**	**18 23 47.3**	**-0.1**
TRIZ				S	**Sg**	**18 23 49.0**	**-0.1**
	64μm,0.4s						
TRIZ	**Trizonia**	**0.08**	**73**	P	**Pg**	**18 23 47.3**	**-0.1**
TRIZ				S	**Sg**	**18 23 49.2**	**+0.1**
SERG	**Sergoula**	**0.10**	**43**	P	**Pg**	**18 23 47.5**	**-0.2**
SERG				S	**Sg**	**18 23 49.4**	**-0.1**
	32μm,0.3s						
SERG	**Sergoula**	**0.10**	**43**	P	**Pg**	**18 23 47.6**	**-0.2**
SERG				S	**Sg**	**18 23 49.5**	**-0.1**
SERG				AML	AML	18 23 49.6	
	comp=E,61190μm,0.3s						
SERG				AML	AML	18 23 50.3	
	comp=N,66272μm,0.3s						
EFP	**Efpalio**	**0.10**	**328**	P	**Pg**	**18 23 47.6**	**-0.1**
EFP				S	**Sg**	**18 23 49.5**	**-0.1**
EFP	**Efpalio**	**0.10**	**328**	P	**Pg**	**18 23 47.6**	**-0.1**
EFP				S	**Sg**	**18 23 49.6**	**+0.1**
EFP				AML	AML	18 23 49.9	
	comp=E,81705μm,0.3s						
EFP				AML	AML	18 23 50.4	
	comp=N,67751μm,0.2s						
LAKA	**Lakka**	**0.10**	**178**	P	**Pg**	**18 23 47.6**	**-0.1**
LAKA				S	**Sg**	**18 23 49.3**	**-0.4**
	comp=N,11μm,0.5s						
LAKA	**Lakka**	**0.10**	**178**	P	**Pg**	**18 23 47.7**	**-0.1**
LAKA				S	**Sg**	**18 23 49.7**	**+0.1**
LAKA				AML	AML	18 23 52.8	
	comp=E,24418μm,0.5s						
LAKA				AML	AML	18 23 54.6	
	comp=N,23567μm,0.5s						
KALE	**Kalithea**	**0.14**	**70**	P	**Pg**	**18 23 48.3**	**0.0**
KALE				S	**Sg**	**18 23 51.3**	**+0.7**
	comp=N,17μm,0.4s						
KALE	**Kalithea**	**0.14**	**70**	P	**Pg**	**18 23 48.4**	**0.0**
KALE				S	**Sg**	**18 23 50.8**	**+0.2**
KALE				AML	AML	18 23 52.5	
	comp=E,26488μm,0.2s						
KALE				AML	AML	18 23 54.2	
	comp=N,34346μm,0.3s						
UPR	**University Cam**	**0.16**	**248**	P	**Pg**	**18 23 48.6**	**0.0**
UPR				S	**Sg**	**18 23 51.7**	**+0.7**
UPR	**University Cam**	**0.16**	**248**	P	**Pg**	**18 23 48.6**	**0.0**
UPR				S	**Sg**	**18 23 51.6**	**+0.6**
ANX	**Ano Chora**	**0.25**	**351**	P	**Pg**	**18 23 50.3**	**0.0**
ANX				S	**Sg**	**18 23 54.6**	**+0.7**
	comp=N,12μm,0.7s						
ANX	**Ano Chora**	**0.25**	**351**	P	**Pg**	**18 23 50.4**	**0.0**
ANX				S	**Sg**	**18 23 54.2**	**+0.4**
ANX				AML	AML	18 23 56.9	
	comp=E,24611μm,0.3s						
ANX				AML	AML	18 23 59.3	
	comp=N,22637μm,0.6s						
KLV	**Kalavryta, Ach**	**0.33**	**155**	P	**Pg**	**18 23 51.6**	**-0.1**
KLV				S	**Sg**	**18 23 56.6**	**+0.5**
	comp=N,2μm,0.3s						
KLV	**Kalavryta, Ach**	**0.33**	**155**	P	**Pg**	**18 23 51.6**	**-0.1**
KLV				S	**Sg**	**18 23 56.6**	**+0.5**
KLV				AML	AML	18 23 58.6	
	comp=E,3914μm,0.3s						
KLV				AML	AML	18 23 58.7	
	comp=N,3284μm,0.3s						
DLFA	**Delphi**	**0.43**	**72**	P	**Pg**	**18 23 53.0**	**-0.6**
DLFA				S	**Sb**	**18 24 00.2**	**-1.3**
DLFA				AML	AML	18 24 05.3	
	comp=N,4232μm,0.5s						
DLFA				AML	AML	18 24 07.0	
	comp=E,5671μm,0.8s						
DRO	**Drossia**	**0.44**	**208**	P	**Pg**	**18 23 53.7**	**0.0**
DRO				S	**Sb**	**18 24 00.8**	**-0.8**
	comp=E,8μm,0.3s						
DRO	**Drossia**	**0.44**	**208**	P	**Pg**	**18 23 53.8**	**0.0**
DRO				S	**Sb**	**18 24 00.5**	**-1.1**
DRO				AML	AML	18 24 03.7	
	comp=E,18618μm,0.3s						
DRO				AML	AML	18 24 07.4	
	comp=N,11935μm,0.3s						
PVO	**Paravola**	**0.45**	**308**	P	**Pg**	**18 23 53.7**	**-0.1**
PVO				S	**Sb**	**18 24 01.3**	**-0.5**
	comp=N,2μm,0.7s						
PVO	**Paravola**	**0.45**	**308**	P	**Pg**	**18 23 53.8**	**-0.1**
PVO				AML	AML	18 24 05.0	
	comp=N,4704μm,0.6s						
PVO				AML	AML	18 24 12.0	
	comp=E,4660μm,0.9s						
RLS	**Riolos of Patr**	**0.49**	**235**	P	**Pg**	**18 23 54.7**	**+0.1**
RLS				S	**Sb**	**18 24 02.7**	**-0.3**
	comp=E,2μm,0.5s						
RLS	**Riolos of Patr**	**0.49**	**235**	P	**Pg**	**18 23 54.7**	**+0.1**
RLS				S	**Sg**	**18 24 01.4**	**+0.3**
RLS				AML	AML	18 24 02.9	
	comp=E,2953μm,0.6s						
RLS				AML	AML	18 24 04.9	
	comp=N,5265μm,0.5s						
EVR	**Evrytania**	**0.59**	**347**	P	**Pg**	**18 23 56.4**	**-0.2**
EVR				S	**Sb**	**18 24 05.9**	**-0.1**
	comp=N,3μm,0.6s						
EVR	**Evrytania**	**0.59**	**347**	P	**Pg**	**18 23 56.3**	**-0.3**
EVR				S	**Sg**	**18 24 04.6**	**+0.3**
EVR				AML	AML	18 24 08.8	
	comp=E,7740μm,0.5s						
EVR				AML	AML	18 24 09.3	
	comp=N,6206μm,0.8s						
PDO	**Prodromos**	**0.67**	**293**	P	**Pg**	**18 23 58.0**	**-0.1**
PDO	**Prodromos**	**0.67**	**293**	P	**Pg**	**18 23 57.9**	**-0.2**
MAKR	**Makrakomi, Fth**	**0.68**	**10**	P	**Pg**	**18 23 58.2**	**-0.1**
MAKR				S	**Sb**	**18 24 09.1**	**+0.5**
	comp=N,3μm,0.6s						
MAKR	**Makrakomi, Fth**	**0.68**	**10**	P	**Pg**	**18 23 58.3**	**0.0**
AXAR	**Agios Charalam**	**0.68**	**52**	P	**Pg**	**18 23 58.0**	**-0.4**
AXAR				S	**Sb**	**18 24 07.7**	**-1.0**
AXAR				AML	AML	18 24 12.2	
	comp=E,13336μm,0.3s						
AXAR				AML	AML	18 24 19.3	
	comp=N,11098μm,0.5s						
AGG	**Agios Georgios**	**0.73**	**22**	P	**Pg**	**18 23 58.5**	**-0.8**
AGG				S	**Sb**	**18 24 10.4**	**+0.3**
	comp=N,988nm,0.6s						
AGG	**Agios Georgios**	**0.73**	**22**	P	**Pg**	**18 23 58.3**	**-1.0**
AGG				S	**Sg**	**18 24 08.5**	**-0.4**
AGG				AML	AML	18 24 16.1	
	comp=N,2181μm,0.4s						
AGG				AML	AML	18 24 16.2	
	comp=E,1667μm,0.4s						
AMT	**Artemida-Makis**	**0.83**	**195**	P	**Pb**	**18 24 01.3**	**-0.4**
AMT	**Artemida-Makis**	**0.83**	**195**	P	**Pg**	**18 24 01.1**	**-0.1**
AMT				AML	AML	18 24 19.4	
	comp=N,4358μm,0.4s						
AMT				AML	AML	18 24 22.4	
	comp=E,3814μm,0.4s						
LTK	**Loutraki**	**0.84**	**112**	P	**Pb**	**18 24 01.3**	**-0.5**
LTK	**Loutraki**	**0.84**	**112**	P	**Pb**	**18 24 01.4**	**-0.5**
LKR	**Lokris**	**0.86**	**69**	P	**Pg**	**18 24 01.2**	**-0.5**
LKR	**Lokris**	**0.86**	**69**	P	**Pg**	**18 24 01.1**	**-0.6**
LKR				S	**Sb**	**18 24 13.7**	**-0.1**
LKR				AML	AML	18 24 18.7	
	comp=N,1810μm,0.5s						
LKR				AML	AML	18 24 19.6	
	comp=E,2293μm,0.2s						
LOUT	**Loutraki**	**0.86**	**114**	P	**Pg**	**18 24 01.5**	**-0.2**
KFL	**Anninata**	**0.96**	**256**	P	**Pb**	**18 24 03.7**	**-0.2**
KFL				S	**Sn**	**18 24 18.0**	**-0.4**
	comp=E,2μm,0.5s						
KFL	**Anninata**	**0.96**	**256**	P	**Pg**	**18 24 03.1**	**-0.5**
VLX	**Vlachokerasia**	**1.02**	**162**	P	**Pg**	**18 24 03.8**	**-1.0**
VLX	**Vlachokerasia**	**1.02**	**162**	P	**Pg**	**18 24 03.8**	**-1.0**
VIL2	**Platees**	**1.03**	**97**	P	**Pn**	**18 24 05.7**	**+0.1**
VIL2				S	**Sn**	**18 24 19.9**	**-0.2**
VIL2				AML	AML	18 24 30.8	
	comp=N,1903μm,0.5s						
VIL2				AML	AML	18 24 31.3	
	comp=E,2783μm,0.9s						
VILL	**Villia**	**1.07**	**99**	P	**Pb**	**18 24 05.7**	**0.0**
VILL				S	**Sn**	**18 24 21.5**	**+0.4**
	comp=E,1μm,0.7s						
VLS	**Valsamata**	**1.10**	**262**	P	**Pg**	**18 24 05.3**	**-1.0**
VLS				S	**Sn**	**18 24 22.7**	**+0.8**
	comp=E,858nm,0.5s						
VLS	**Valsamata**	**1.10**	**262**	P	**Pg**	**18 24 04.9**	**-1.3**
LKD2	**Lefkada island**	**1.12**	**294**	P	**Pg**	**18 24 06.4**	**-0.3**
LKD2	**Lefkada island**	**1.12**	**294**	P	**Pg**	**18 24 06.2**	**-0.5**
VLMS	**Volimes, Zakyn**	**1.13**	**246**	P	**Pg**	**18 24 06.2**	**-0.7**
ITM	**Ithomi**	**1.16**	**182**	P	**Pg**	**18 24 06.6**	**-0.8**
ITM				S	**Sn**	**18 24 24.4**	**+1.1**
	comp=E,510nm,0.4s						
ITM	**Ithomi**	**1.16**	**182**	P	**Pg**	**18 24 06.4**	**-1.0**
KEF2	**Argostoli. Kep**	**1.18**	**262**	P	**Pb**	**18 24 06.2**	**-1.4**
THL	**Klokotos Trika**	**1.22**	**1**	P	**Pb**	**18 24 07.8**	**-0.5**
THL				S	**Sn**	**18 24 26.0**	**+1.2**
	comp=E,285nm,0.6s						
THL	**Klokotos Trika**	**1.22**	**1**	P	**Pb**	**18 24 08.0**	**-0.3**
DID	**Didima**	**1.30**	**129**	P	**Pn**	**18 24 09.3**	**-0.1**
DID				S	**Sn**	**18 24 27.8**	**+1.0**
	comp=E,772nm,0.5s						
DID	**Didima**	**1.30**	**129**	P	**Pn**	**18 24 08.8**	**-0.6**
MRKA	**Markates**	**1.32**	**74**	P	**Pb**	**18 24 09.6**	**-0.3**
MRKA				S	**Sn**	**18 24 28.5**	**+1.3**
	comp=E,408nm,0.7s						
MRKA	**Markates**	**1.32**	**74**	P	**Pn**	**18 24 09.1**	**-0.5**
MRKA				S	**Sn**	**18 24 27.7**	**+0.5**
MRKA				AML	AML	18 24 36.1	
	comp=E,823μm,0.7s						
MRKA				AML	AML	18 24 38.0	
	comp=N,793μm,0.7s						
NEO	**Neokhori**	**1.37**	**45**	P	**Pb**	**18 24 10.6**	**-0.3**
NEO	**Neokhori**	**1.37**	**45**	P	**Pn**	**18 24 10.4**	**0.0**
XOR	**Xorichti**	**1.40**	**43**	P	**Pn**	**18 24 10.2**	**-0.5**
XOR	**Xorichti**	**1.40**	**43**	P	**Pn**	**18 24 10.4**	**-0.3**
ATH	**Athens Observa**	**1.42**	**105**	P	**Pn**	**18 24 10.7**	**-0.3**
ATH				AML	AML	18 24 35.8	
	comp=E,1312μm,0.8s						
ATH				AML	AML	18 24 41.1	
	comp=N,797μm,0.5s						
SKIA	**Skiathos**	**1.43**	**54**	P	**Pn**	**18 24 11.0**	**-0.1**
PYL	**PYLOS**	**1.46**	**187**	P	**Pb**	**18 24 11.8**	**-0.5**
PYL	**PYLOS**	**1.46**	**187**	P	**Pn**	**18 24 11.6**	**+0.2**
ATHU	**Athens Univers**	**1.48**	**104**	P	**Pb**	**18 24 12.5**	**-0.1**
VLY	**Voula,Athens**	**1.52**	**108**	P	**Pb**	**18 24 12.7**	**-0.6**
VLY	**Voula,Athens**	**1.52**	**108**	P	**Pb**	**18 24 12.9**	**-0.4**
PTL	**Penteli**	**1.52**	**101**	P	**Pb**	**18 24 12.5**	**+0.1**
PTL	**Penteli**	**1.52**	**101**	P	**Pb**	**18 24 12.8**	**-0.5**
EREA	**Eretria**	**1.54**	**87**	P	**Pb**	**18 24 13.3**	**-0.4**
EREA				AML	AML	18 24 41.6	
	comp=E,725μm,0.5s						
EREA				AML	AML	18 24 45.3	
	comp=N,605μm,0.8s						
JAN	**Janina**	**1.58**	**327**	P	**Pg**	**18 24 15.1**	**-0.3**
KPRO	**Kipourio**	**1.68**	**344**	P	**Pb**	**18 24 15.6**	**-0.6**
AOS	**Alonnisos**	**1.71**	**60**	P	**Pn**	**18 24 15.3**	**+0.4**
VLI	**Veliai**	**1.79**	**154**	P	**Pb**	**18 24 16.9**	**-1.1**
VLI	**Veliai**	**1.79**	**154**	P	**Pn**	**18 24 16.8**	**+0.7**
LIT	**Litokhoron**	**1.80**	**13**	P	**Pb**	**18 24 17.1**	**-1.1**
LIT	**Litokhoron**	**1.80**	**13**	P	**Pb**	**18 24 17.2**	**-1.0**
KARY	**Karystos**	**1.97**	**98**	P	**Pn**	**18 24 18.8**	**+0.3**
KARY	**Karystos**	**1.97**	**98**	P	**Pn**	**18 24 19.4**	**+1.0**
KTHA	**Kythira Island**	**2.26**	**157**	P	**Pb**	**18 24 24.5**	**-1.4**
OHR	**Ohrid**	**2.91**	**342**	*i* Pn	**Pg**	**18 24 39.8**	**-1.1**
VAY	**Valandovo**	**3.01**	**9**	*i* Pn	**Pb**	**18 24 37.9**	**-0.9**
STIP	**Stip**	**3.35**	**3**	*i* Pn	**Pb**	**18 24 42.6**	**-2.0**
BRTR	**Keskin Array B**	**9.18**	**78**	Pn	**Pn**	**18 25 59.6**	**+1.8**
	comp=N,0.1nm,0.3s,baz=264,slow=13,SNR=2.6						
NOA	**NORSAR Array B**	**23.70**	**347**	P	**P**	**18 28 56.5**	**-0.4**
	comp=N,1.3nm,0.9s,baz=158,slow=12,SNR=3.0						
TORD	**Torodi Ar. Bea**	**30.89**	**221**	P	**P**	**18 30 03.6**	**+1.7**
	comp=N,0.9nm,0.7s,baz=31,slow=8.7,SNR=5.2						
MKAR	**Makanchi Array**	**44.24**	**59**	P	**P**	**18 31 55.2**	**+0.7**
	comp=N,0.8nm,0.5s,baz=275,slow=7.5,SNR=17						
ZALV	**Zalesovo Beam**	**44.73**	**48**	P	**P**	**18 31 57.4**	**-0.8**
	comp=N,0.5nm,0.5s,baz=283,slow=7.3,SNR=3.3						

*IDC **29** 18:26:17.5±2.3,44°.93S×78°.31W,h0^{km},mb4.0/3, mb1 4.1/4,mb1mx3.8/38,mbtmp4.0/4,ML3.5/1,MS3.7/8, Ms1 3.7/8,ms1mx3.4/24,Error ellipse: s-maj=81.0km s-min=26.8km az=116.0*

*NEIC **29** 18:26:21.7±1.4,44°.9S±0°.1×78°.1W±0°.3,h25^{km}±5^{km}, mb4.5/7, Error ellipse: s-maj=31.0km s-min=16.4km az=99.0*

ISC 29 18:26:22.7±0.8,44°.8S±0°.1×78°.2W±0°.2,h35^{km},n28, σ1§09/19,mb4.1/5,MS3.8/6,Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**6.97**	**57**	Pn	**Pn**	**18 28 02.7**	**+0.3**
	0.2nm,0.3s,baz=257,slow=15,SNR=11						
PLCA				LR

Error ellipse: s-maj=9.3km s-min=6.8km az=104.0
*VAO **29** 18:26:47.6±0.8,22°.33S×69°.01W,h97km,mb4.5*
*IDC **29** 18:26:47.9±0.4,22°.31S×68°.84W,h88km±3km,mb4.1/9, mb1 4.1/14,mb1mx3.9/37,mbtmp4.4/14,MS2.8/1, Ms1 2.8/1,ms1mx2.4/19,Error ellipse: s-maj=17.8km s-min=10.8km az=93.0*
*SJA **29** 18:26:49.6±0.7,22°.19S×69°.10W,h66km±18km,MD3.1*
ISC 29 18:26:47.7±0.5,22°.27S±0°.04×68°.94W±0°.05,h91km±4km, h91km:pP-P,n96,σ1ª06/122,mb4.7/14,8C-8D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.34**	**175**	P		**Pn**		**18 27 02.5**	**+0.6**
	2µm,0.3s,baz=351,slow=5.4,SNR=5142								
LVC				S		**Sn**		**18 27 13.4**	**+0.9**
	2µm,0.3s,baz=176,slow=19,SNR=235								
LVC	**Limon Verde**	**0.34**	**175**	*e*P		**Pn**		**18 27 02.7**	**+0.8**
LVC	**Limon Verde**	**0.34**	**175**			**Pn**		**18 27 02.5**	**+0.6**
LVC						**Sn**		**18 27 12.1**	**-0.4**
LVC	**Limon Verde**	**0.34**	**175**	*i* P		**Pn**		**18 27 02.5**	**+0.6**
LVC				*i* Sg		**Sn**		**18 27 12.9**	**+0.4**
PB09	**IPOC Station P**	**0.55**	**330**	⇑*i*P		**Pn**		**18 27 03.9**	**+0.7**
PB09				*i* S		**Sn**		**18 27 15.2**	**+0.5**
PB09				IAML				18 27 16.9	
	comp=N,23µm,0.6s								
PB06	**IPOC Station P**	**0.72**	**233**	⇓*i*P		**Pn**		**18 27 05.3**	**+0.6**
PB06				*i* S		**Sn**		**18 27 18.3**	**+0.9**
PB06				IAML				18 27 19.8	
	comp=E,19µm,0.2s								
PB06	**IPOC Station P**	**0.72**	**233**	*i* P		**Pn**		**18 27 05.1**	**+0.3**
PB03	**IPOC Station P**	**0.79**	**286**	⇑*i*P		**Pn**		**18 27 05.6**	**+0.2**
PB03				*i* S		**Sn**		**18 27 18.6**	**+0.1**
PB03				IAML				18 27 19.6	
	comp=N,22µm,0.5s								
PB07	**IPOC Station P**	**1.03**	**302**	⇑*i*P		**Pn**		**18 27 08.3**	**+0.3**
PB07				*i* S		**Sn**		**18 27 23.5**	**+0.2**
PB07				IAML				18 27 24.4	
	comp=N,30µm,0.4s								
PB15	**IPOC Station P**	**1.05**	**208**	⇓*i*P		**Pn**		**18 27 09.3**	**+1.0**
PB15				*i* S		**Sn**		**18 27 26.3**	**+2.6**
PB04	**IPOC Station P**	**1.12**	**267**	⇓*i*P		**Pn**		**18 27 09.2**	**+0.1**
PB04				*i* S		**Sn**		**18 27 25.5**	**+0.4**
PB04				IAML				18 27 29.5	
	comp=N,19µm,0.3s								
PB04	**IPOC Station P**	**1.12**	**267**	Pn		**Pn**		**18 27 09.5**	**+0.5**
PB04	**IPOC Station P**	**1.12**	**267**	*i* P		**Pn**		**18 27 09.3**	**+0.3**
PB04				*i* Sg		**Sn**		**18 27 23.1**	**-1.9**
PB02	**IPOC Station P**	**1.30**	**317**	⇑*i*P		**Pn**		**18 27 11.4**	**+0.3**
PB02				*i* S		**Sn**		**18 27 29.2**	**+0.4**
PB02				IAML				18 27 36.3	
	comp=E,17µm,0.3s								
PB05	**IPOC Station P**	**1.30**	**243**	⇓*i*P		**Pn**		**18 27 11.3**	**+0.2**
PB05				*i* S		**Sn**		**18 27 29.3**	**+0.4**
PB05				IAML				18 27 33.8	
	comp=E,11µm,0.3s								
PB01	**IPOC Station P**	**1.33**	**337**	⇑*i*P		**Pn**		**18 27 11.8**	**+0.4**
PB01				*i* S		**Sn**		**18 27 29.9**	**+0.6**
PB01				IAML				18 27 31.1	
	comp=E,18µm,0.4s								
PB01	**IPOC Station P**	**1.33**	**337**			**Pn**		**18 27 11.4**	**-0.1**
PATCX	**Punta Patache**	**1.83**	**322**	⇓*i*P		**Pn**		**18 27 17.8**	**0.0**
PATCX				*i* S		**Sn**		**18 27 41.4**	**+0.6**
PATCX				IAML				18 27 45.6	
	comp=N,12µm,0.4s								
PB10	**IPOC Station P**	**1.93**	**230**	⇓*i*P		**Pn**		**18 27 19.7**	**+0.7**
PB10				*i* S		**Sn**		**18 27 42.9**	**-0.1**
PB10				IAML				18 27 52.0	
	comp=N,3µm,0.3s								
PB10	**IPOC Station P**	**1.93**	**230**			**Pn**		**18 27 19.8**	**+0.7**
TA01	**Diego Aracena**	**2.06**	**326**	⇑*i*P		**Pn**		**18 27 20.4**	**-0.3**
TA01				*i* S		**Sn**		**18 27 46.8**	**+1.0**
TA01				IAML				18 27 50.7	
	comp=N,3µm,0.4s								
PB08	**IPOC Station P**	**2.13**	**355**	⇓*i*P		**Pn**		**18 27 23.2**	**+1.1**
PB08				*i* S		**Sn**		**18 27 49.5**	**+1.3**
PB08				IAML				18 28 00.1	
	comp=E,2µm,0.3s								
PB11	**IPOC Station P**	**2.59**	**345**	⇑*i*P		**Pn**		**18 27 27.6**	**-0.3**
PB11				*e*S		**Sn**		**18 27 59.7**	**+0.9**
PB11	**IPOC Station P**	**2.59**	**345**			**Pn**		**18 27 27.5**	**-0.4**
GO01	**Chusmiza**	**2.60**	**355**	*e*P		**Pn**		**18 27 29.0**	**+0.6**
GO01	**Chusmiza**	**2.60**	**355**	Pn		**Pn**		**18 27 28.4**	**0.0**
PB14	**IPOC Station P**	**2.70**	**210**	IAML				18 28 11.0	
	comp=E,3µm,0.2s								
PSGC	**Pisagua**	**2.88**	**337**	⇓*i*P		**Pn**		**18 27 30.2**	**-1.6**
PSGC				*i* S		**Sn**		**18 28 08.8**	**+3.1**
PSGC				IAML				18 28 15.1	
	comp=N,2µm,0.4s								
GO02	**Mina Guanaco**	**2.94**	**192**			**Pn**		**18 27 32.8**	**+0.1**
MNMC	**Minye Minye**	**3.19**	**349**	Pn		**Pn**		**18 27 35.8**	**-0.2**
HJA	**Humahuaca**	**3.39**	**107**	*e*P		**Pn**		**18 27 41.1**	**+2.2**
AZAP	**Zapla**	**4.06**	**119**	*e*P		**Pn**		**18 27 49.4**	**+1.6**
GO03	**Copiap**	**5.42**	**192**			**Pn**		**18 28 05.1**	**-1.1**
LPAZ	**La Paz**	**6.00**	**7**	P		**Pn**		**18 28 16.6**	**+2.0**
	comp=N,9.2nm,0.3s,baz=200,slow=4.4,SNR=58								
LPAZ	**La Paz**	**6.00**	**7**	*e*P		**Pn**		**18 28 15.7**	**+1.1**
LPAZ	**La Paz**	**6.00**	**7**			**Pn**		**18 28 16.2**	**+1.6**
VCA	**Vinchina**	**6.47**	**174**	*e*P		**Pn**		**18 28 21.3**	**+0.8**
VCA				IAML				18 28 27.5	
	comp=Z,176nm,0.5s								
AGUA	**GUANDACOL**	**7.19**	**177**	*e*P		**Pn**		**18 28 30.5**	**+0.2**
GO04	**Tololo Observa**	**8.04**	**192**	Pn		**Pn**		**18 28 38.9**	**-3.0**
AMOG	**MOGNA**	**8.64**	**177**	*e*P		**Pn**		**18 28 49.2**	**-0.8**
AMOG				*e*S		**Sn**		**18 30 24.9**	**-0.8**
CFA	**Coronel Fontan**	**9.31**	**176**	P		**Pn**		**18 28 57.0**	**-2.2**
	comp=Z,7.5nm,0.3s,baz=351,slow=13,SNR=20								
CFA				S		**Sn**		**18 30 45.9**	**+3.7**
	comp=Z,3.9nm,0.3s,baz=248,slow=18,SNR=2.9								
RTLS	**Leoncito**	**9.49**	**182**	*e*P		**Pn**		**18 28 59.9**	**-1.8**
RTCV	**Cerro Valdivia**	**9.56**	**178**	*e*P		**Pn**		**18 29 01.1**	**-1.3**
RTCV				*e*S		**Sn**		**18 30 45.1**	**-2.9**
SIV	**San Ignacio**	**9.71**	**51**	P		**Pn**		**18 29 02.5**	**-2.1**
	comp=Z,14nm,0.3s,baz=244,slow=11,SNR=158								
SIV				LR		LR		18 32 27.8	
	comp=Z,55nm,19.1s,baz=276,slow=35								
CPUP	**Villa Florida**	**11.33**	**113**	P		**Pn**		**18 29 25.7**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=298,slow=13,SNR=4.8								
AQDB	**Aquidauana**	**12.47**	**84**	*e*P		**Pn**		**18 29 42.4**	**+0.6**
SALV	**Santo Antonio**	**14.03**	**65**	*e*P		**Pn**		**18 30 02.5**	**+0.1**
SAML	**Samuel**	**14.36**	**24**	*e*P		**Pn**		**18 30 06.5**	**-0.2**
SAML	**Samuel**	**14.36**	**24**	P		**Pn**		**18 30 06.5**	**-0.2**
ITAB	**Concordia**	**16.05**	**111**	*e*P		**P**		**18 30 28.9**	**-0.8**
PCMB	**Pacaembu**	**16.42**	**91**	*e*P		**P**		**18 30 33.9**	**0.0**
ARAG	**Araguaiana, MT**	**17.46**	**71**	*e*P		**Pn**		**18 30 45.7**	**+0.3**
FRTB	**Fartura**	**17.90**	**97**	*e*P		**P**		**18 30 49.7**	**-0.5**
PLCA	**Paso Flores**	**18.45**	**184**	P		**P**		**18 30 56.7**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=26,slow=11,SNR=9.2								
PLCA	**Paso Flores**	**18.45**	**184**	P		**P**		**18 30 56.4**	**+0.3**
IPMB	**Ipameri, GO**	**19.92**	**81**	*e*P		**P**		**18 31 11.7**	**-0.7**
BDFB	**Brasilia**	**20.85**	**75**	P		**P**		**18 31 21.9**	**-0.5**
	comp=Z,7.1nm,0.8s,baz=246,slow=15,SNR=6.8								
BDFB	**Brasilia**	**20.85**	**75**	P		**P**		**18 31 21.3**	**-1.1**
RUSC	**La Rusia**	**28.29**	**351**	P		**P**		**18 32 32.7**	**-0.5**
RCBR	**Riachuelo**	**35.85**	**68**	P		**P**		**18 33 39.0**	**+0.1**
	comp=Z,12nm,0.6s,baz=232,slow=9.8,SNR=6.6								
RCBR	**Riachuelo**	**35.85**	**68**	P		**P**		**18 33 36.0**	**-3.0**
RCBR				IAmb		IAmb		18 33 39.5	
	comp=Z,17nm,0.8s								
TEIG	**Tepich**	**46.27**	**335**	P		**P**		**18 35 03.5**	**-0.7**
Z50A	**Ashland**	**57.55**	**343**	P		**P**		**18 36 27.1**	**-0.6**
Z50A				IAmb		IAmb		18 37 25.4	
	comp=Z,39nm,1.7s								
SWET	**Sewanee**	**59.40**	**344**	P		**P**		**18 36 40.4**	**-0.2**
V48A	**Smith Brothers**	**60.13**	**343**	P		**P**		**18 36 44.8**	**-0.8**
V48A				IAmb		IAmb		18 38 44.7	
	comp=Z,21nm,1.6s								
WVT	**Waverly**	**60.77**	**343**	P		**P**		**18 36 49.4**	**-0.6**
X40A	**Basin Creek Fa**	**60.85**	**337**	P		**P**		**18 36 50.4**	**-0.1**
X40A				IAmb		IAmb		18 38 05.1	
	comp=Z,29nm,1.9s								
TXAR	**Lajitas Array**	**61.24**	**325**	P		**P**		**18 36 54.0**	**+0.6**
	comp=Z,0.2nm,0.6s,baz=150,slow=9.2,SNR=2.6								
TXAR				pP		**pP**		**18 37 17.8**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=153,slow=8.1,SNR=1.8								
SNAA	**Sanae**	**61.56**	**161**	P		**P**		**18 36 55.8**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=282,slow=8.3,SNR=14								
SNAA				pP		**pP**		**18 37 18.7**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=253,slow=5.8,SNR=3.1								
SNAA	**Sanae**	**61.56**	**161**	P		**P**		**18 36 55.8**	**+0.8**
SNAA				IAmb		IAmb		18 37 56.6	
	comp=Z,22nm,2.0s								
QSPA	**South Pole Qui**	**67.92**	**180**	P		**P**		**18 37 38.0**	**+1.6**
	comp=Z,2.1nm,0.6s,baz=136,slow=2.4,SNR=14								
QSPA	**South Pole Qui**	**67.92**	**180**	P		**P**		**18 37 38.0**	**+1.6**
DBIC	**Dimbokro**	**68.98**	**73**	P		**P**		**18 37 43.5**	**-0.2**
	comp=Z,3.0nm,0.9s,baz=254,slow=11,SNR=3.3								
D62A	**Allapoint, All**	**69.03**	**360**	P		**P**		**18 37 44.1**	**+0.8**
D62A				IAmb		IAmb		18 40 00.3	
	comp=Z,51nm,1.8s								
VLDQ	**Val d'Or**	**70.48**	**354**	P		**P**		**18 37 52.8**	**+0.7**
VLDQ				IAmb		IAmb		18 37 52.9	
	comp=Z,25nm,1.6s								
PDAR	**Pinedale Array**	**74.76**	**330**	P		**P**		**18 38 18.5**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=131,slow=8.4,SNR=4.1								
SYO	**Syowa Base**	**75.79**	**159**	⇑*e*P		**P**		**18 38 23.2**	**-0.1**
ULM	**Lac du Bonnet**	**76.04**	**343**	P		**P**		**18 38 24.8**	**-0.1**
	comp=Z,2.6nm,0.5s,baz=155,slow=6.2,SNR=10								
ULM	**Lac du Bonnet**	**76.04**	**343**	P		**P**		**18 38 24.7**	**-0.1**
ULM				IAmb		IAmb		18 39 10.9	
	comp=Z,32nm,1.8s								
TOA0	**Torodi Ar. Sit**	**77.64**	**70**	P		**P**		**18 38 34.3**	**-0.3**
TORD	**Torodi Ar. Bea**	**77.64**	**70**	P		**P**		**18 38 34.2**	**-0.4**
	comp=Z,8.5nm,0.7s,baz=252,slow=5.2,SNR=58								
YKA	**Yellowknife Ar**	**91.90**	**341**	P		**P**		**18 39 46.0**	**+0.7**
	comp=Z,1.3nm,0.7s,baz=137,slow=4.5,SNR=27								
YKA				pP		**pP**		**18 40 11.1**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=133,slow=4.5,SNR=3.8								
ASAR	**Alice Springs**	**129.22**	**207**	PKP		**PKiKP**		**18 45 46.8**	**0.0**
	comp=Z,0.3nm,0.6s,baz=135,slow=1.3,SNR=5.1								
ASAR				pPKP		**pPKPdf**		**18 46 12.3**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=138,slow=2.2,SNR=2.9								
ASAR	**Alice Springs**	**129.22**	**207**			**PKiKP**		**18 45 46.6**	**-0.2**
WRA	**Warramunga Arr**	**132.27**	**210**	PKP		**PKiKP**		**18 45 52.8**	**-0.2**
	comp=Z,0.7nm,1.0s,baz=149,slow=1.8,SNR=3.9								
WRA				pPKP		**pPKPdf**		**18 46 18.0**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=161,slow=1.7,SNR=1.9								
ZALV	**Zalesovo Beam**	**142.66**	**26**	PKP		**PKPdf**		**18 46 10.0**	**+0.1**
	comp=Z,1.4nm,0.6s,baz=302,slow=3.8,SNR=6.3								
ZALV	**Zalesovo Beam**	**142.66**	**26**			PKPpre		18 46 06.7	
NRN	**Naryn**	**144.94**	**49**			PKPbc		18 46 11.9	-2.3
KDJ	**Kajisay**	**145.48**	**47**			**PKPab**		**18 46 16.9**	**+0.9**
MAKZ	**Makanchi**	**146.09**	**37**			**PKPbc**		**18 46 17.1**	**-0.1**
MK31	**Makanchi Array**	**146.27**	**37**			**PKPbc**		**18 46 17.7**	**0.0**
MKAR	**Makanchi Array**	**146.27**	**37**	PKPbc		**PKPbc**		**18 46 17.7**	**0.0**
	comp=Z,4.7nm,0.8s,baz=320,slow=2.7,SNR=46								
MKAR	**Makanchi Array**	**146.27**	**37**			**PKPbc**		**18 46 17.5**	**-0.2**
SONM	**Songino Array**	**154.22**	**7**	PKPbc		**PKiKP**		**18 46 38.1**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=334,slow=2.7,SNR=3.5								
SONM				pPKPbc		**pPKPbc**		**18 47 02.4**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=322,slow=1.3,SNR=5.0								
SONM	**Songino Array**	**154.22**	**7**			**PKiKP**		**18 46 37.9**	**+0.6**
SONM						**pPKPbc**		**18 47 02.2**	**-1.3**
GTA	**Gaotai**	**160.41**	**27**	*e*P		**PKPab**		**18 47 19.0**	**+0.8**
GTA				pP		sPKPdf		18 47 24.8	+11
GTA				sP		pPKPab		18 47 27.0	-17
GTA				pmax		pmax			
	comp=Z,2.0nm,1.3s								

*IDC **29** 18:49:37.6±1.2,33°.05S×178°.99W,h0km,mb4.2/5, mb1 4.3/6,mb1mx4.0/38,mbtmp4.2/6,ML4.2/1,MS3.3/3, Ms1 3.4/3,ms1mx2.9/25,Error ellipse: s-maj=36.0km s-min=24.6km az=55.0*
*NEIC **29** 18:49:41.9±3.1,33°.28S±0°.08×178°.9W±0°.1,h35km±2km, mb4.3/3, Error ellipse: s-maj=22.9km s-min=4.8km az=123.0*
*WEL **29** 18:49:46.7±0.7,33°.5S×179°.9W±1°.9,h33km,M4.3/21, mB4.9/12,ML4.9/21,MLv4.7/21,Mw(mB)4.2/12*
ISC 29 18:49:45.5±1.0,33°.40S±0°.08×179°.2W±0°.1,h48km,n67, σ2ª18/69,mb4.0/5,MS3.3/3,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.61**	**205**	P		**Pn**		**18 50 53.8**	**+1.2**
MXZ				S		**Sn**		**18 51 45.7**	**+0.8**
MXZ	**Matakaoa Point**	**4.61**	**205**	Pn		**Pn**		**18 50 53.3**	**+0.7**
WMGZ	**Waiomatatini S**	**4.81**	**203**	P		**Pn**		**18 50 56.9**	**+1.6**
WMGZ				S		**Sn**		**18 51 51.5**	**+1.8**
HAZ	**Te Kaha**	**4.98**	**208**	P		**Pn**		**18 50 58.6**	**+1.0**
HAZ				S		**Sn**		**18 51 58.5**	**+4.7**
PKGZ	**Pakihiroa**	**4.98**	**205**	P		**Pn**		**18 50 58.7**	**+0.9**
PKGZ				S		**Sn**		**18 51 57.1**	**+3.0**
PUZ	**Puketiti**	**5.09**	**203**	P		**Pn**		**18 50 58.7**	**-0.4**
PUZ				S		**Sn**		**18 51 58.7**	**+2.0**
RUGZ	**Raukumara Rang**	**5.20**	**208**	P		**Pn**		**18 51 01.6**	**+0.7**
RUGZ				S		**Sn**		**18 52 00.6**	**+1.1**
CNGZ	**Carnagh Statio**	**5.48**	**201**	P		**Pn**		**18 51 07.3**	**+2.8**
TKGZ	**Te Karaka**	**5.56**	**204**	P		**Pn**		**18 51 09.6**	**+4.0**
TKGZ				S		**Sn**		**18 52 10.4**	**+2.3**
MWZ	**Matawai**	**5.58**	**207**	P		**Pn**		**18 51 06.7**	**+0.8**
MWZ				S		**Sn**		**18 52 09.0**	**+0.2**
MARZ	**Manawahe**	**5.66**	**215**	P		**Pn**		**18 51 09.8**	**+2.8**
URZ	**Urewera**	**5.68**	**210**	Pn		**Pn**		**18 51 08.3**	**+1.0**
	5.3nm,0.3s,baz=254,slow=4.8,SNR=28								
URZ				Sn		**Sn**		**18 52 13.3**	**+2.1**
	12nm,0.3s,baz=101,slow=22,SNR=6.9								
URZ	**Urewera**	**5.68**	**210**	P		**Pn**		**18 51 09.4**	**+2.0**
URZ	**Urewera**	**5.68**	**210**			**Pn**		**18 51 06.9**	**-0.4**
RAGZ	**Rawiri**	**5.76**	**207**	P		**Pn**		**18 51 11.4**	**+2.9**
RIGZ	**Rimuhau**	**5.83**	**204**	P		**Pn**		**18 51 10.7**	**+1.3**
PRGZ	**Paritu Road**	**5.98**	**202**	P		**Pn**		**18 51 12.9**	**+1.4**
MUGZ	**Murupara**	**6.01**	**211**	P		**Pn**		**18 51 13.3**	**+1.5**
RTZ	**Ruatahuna**	**6.04**	**209**	P		**Pn**		**18 51 11.8**	**-0.5**
SNGZ	**Shannon Statio**	**6.04**	**206**	P		**Pn**		**18 51 13.4**	**+1.1**
OUZ	**Omahuta**	**6.20**	**251**			**Pn**		**18 51 16.8**	**+2.4**
RAHZ	**Arahi**	**6.26**	**207**	P		**Pn**		**18 51 17.3**	**+2.0**
MTHZ	**Maungataniwha**	**6.30**	**209**	P		**Pn**		**18 51 17.1**	**+1.3**
MRHZ	**Matea Rd**	**6.46**	**212**	P		**Pn**		**18 51 18.7**	**+0.6**
ARHZ	**Ropaoanui**	**6.59**	**206**	P		**Pn**		**18 51 21.7**	**+1.9**
BKZ	**Black Stump Fm**	**6.71**	**210**	P		**Pn**		**18 51 21.3**	**-0.2**
BKZ	**Black Stump Fm**	**6.71**	**210**			**Pn**		**18 51 20.8**	**-0.6**
MCHZ	**McNeill Hill**	**6.86**	**207**	P		**Pn**		**18 51 25.6**	**+2.1**
KWHZ	**Kaweka Forest**	**6.96**	**209**	P		**Pn**		**18 51 27.0**	**+2.2**
HIZ	**Hauiti**	**7.00**	**221**			**Pn**		18 51 20.2	-5.2
WTVZ	**West Tongariro**	**7.07**	**215**	P		**Pn**		**18 51 29.2**	**+2.7**
TWVZ	**Taurewa**	**7.11**	**216**	P		**Pn**		**18 51 28.9**	**+1.9**
NGZ	**Ngauruhoe**	**7.11**	**214**	P		**Pn**		**18 51 28.4**	**+1.3**
BHHZ	**Black Hill Sta**	**7.16**	**211**	P		**Pn**		**18 51 28.2**	**+0.6**
KRHZ	**Kereru**	**7.16**	**208**	P		**Pn**		**18 51 27.8**	**+0.1**
FWVZ	**Far West T-bar**	**7.20**	**214**	P		**Pn**		**18 51 29.2**	**+1.0**
PNHZ	**Pukenui**	**7.46**	**208**	P		**Pn**		**18 51 31.2**	**-0.5**
BFZ	**Birch Farm**	**8.11**	**205**	Pn		**Pn**		**18 51 40.4**	**-0.3**
PAWZ	**Paruwai Farm**	**9.03**	**206**	P		**Sn**		**18 53 28.8**	**-4.5**
MSWZ	**Moikau Station**	**9.12**	**207**	Pn		**Pn**		**18 51 52.0**	**-2.4**
SNZO	**South Karori**	**9.25**	**210**	Pn		**Pn**		**18 51 54.9**	**-1.3**
PLWZ	**Palliser**	**9.25**	**207**	P		**Sn**		**18 53 22.6**	**-6.3**
BHW	**Baring Head**	**9.26**	**209**	P		**Sn**		**18 53 33.7**	**-5.5**
TCW	**Tory Channel**	**9.35**	**212**	P		**Sn**		**18 53 36.7**	**-4.5**
TUWZ	**Tuamarina**	**9.67**	**212**	P		Sn		18 53 39.0	-10
TUWZ	**Tuamarina**	**9.67**	**212**	Pn		**Pn**		**18 51 60.0**	**-2.0**
NNZ	**Nelson**	**9.77**	**215**	Pn		**Pn**		**18 52 01.1**	**-2.1**
THZ	**Tophouse**	**10.41**	**214**	Pn		**Pn**		**18 52 09.4**	**-2.8**
KHZ	**Kahutara**	**10.65**	**210**	Pn		Pn		18 52 11.1	-4.2
DZM	**Mont Dzumac**	**16.95**	**308**	LR		LR		18 58 47.7	
	comp=Z,139nm,19.4s,baz=167,slow=32								
PPT2	**Papeete2**	**30.92**	**67**	*e*LR		LR		18 55 46.4	
	comp=Z,78nm,26.0s								
CTA	**Charters Tower**	**33.38**	**285**	P		**P**		**18 56 20.6**	**+1.2**
	7.7nm,1.1s,baz=159,slow=2.1,SNR=3.0								
ASAR	**Alice Springs**	**41.99**	**271**	P		**P**		**18 57 31.9**	**-0.3**
	1.1nm,0.4s,baz=108,slow=7.2,SNR=39								
ASAR	**Alice Springs**	**41.99**	**271**	P		**P**		**18 57 31.3**	**-0.9**
WRA	**Warramunga Arr**	**43.26**	**276**	P		**P**		**18 57 41.8**	**-0.6**
	2.5nm,0.8s,baz=116,slow=7.6,SNR=10								
WRA	**Warramunga Arr**	**43.26**	**276**	P		**P**		**18 57 41.6**	**-0.9**
QSPA	**South Pole Qui**	**56.72**	**180**	P		**P**		**18 59 26.0**	**+2.0**
	3.0nm,0.8s,baz=22,slow=0.6,SNR=18								
QSPA	**South Pole Qui**	**56.72**	**180**	P		**P**		**18 59 26.4**	**+2.3**
QSPA				IAmb		IAmb		18 59 26.9	
	comp=Z,4.0nm,0.8s								
SNAA	**Sanae**	**75.19**	**179**	P		**P**		**19 01 23.1**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=201,slow=9.3,SNR=13								
SNAA	**Sanae**	**75.19**	**179**	P		**P**		**19 01 23.2**	**+0.7**
SNAA				IAmb		IAmb		19 01 38.9	
	comp=Z,2.1nm,1.0s								
CMAR	**Chiang Mai Arr**	**93.41**	**290**	LR		LR		19 47 56.6	
	comp=Z,9.7nm,19.1s,baz=205,slow=37								
MA2	**Magadan**	**95.91**	**345**	LR		LR		19 39 42.7	
	comp=Z,15nm,19.6s,baz=66,slow=31								
ARCES	**ARCESS Array B**	**141.27**	**346**	PKP		**PKPdf**		**19 09 08.2**	**-1.6**
	comp=Z,3.6nm,0.9s,baz=42,slow=2.7,SNR=3.0								
FINES	**FINESS Array B**	**147.55**	**337**	PKPbc		**PKPbc**		**19 09 21.5**	**-2.1**
	comp=Z,2.7nm,0.7s,baz=45,slow=4.1,SNR=11								
FINES	**FINESS Array B**	**147.55**	**337**			**PKPbc**		**19 09 21.6**	**-1.9**
NB2	**NORSAR Subarra1**	**51.52**	**349**	PKP		**PKPbc**		**19 09 31.9**	**-1.6**
	comp=Z,1.0nm,0.6s,baz=18,slow=2.6								
NOA	**NORSAR Array B**	**51.52**	**349**	PKPbc		**PKPbc**		**19 09 32.0**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=14,slow=4.0,SNR=5.9								

*NEIC **29** 18:58:22.7±1.5,18°.61S±0°.06×69°.4W±0°.1,h128km±5km, Error ellipse: s-maj=15.0km s-min=8.0km az=98.0*
*IDC **29** 18:58:23.1±0.7,18°.60S×69°.36W,h126km±6km,mb3.9/10, mb1 4.1/14,mb1mx3.9/34,mbtmp4.3/14,Error ellipse: s-maj=14.5km s-min=8.6km az=95.0*
*GUC **29** 18:58:23.5±0.5,18°.66S×69°.64W,h123km±2km,ML4.2*
*VAO **29** 18:58:25.1±0.6,18°.61S×69°.31W,h138km±5km,mb4.5*
ISC 29 18:58:22.4±0.5,18°.61S±0°.04×69°.53W±0°.06,h125km±5km, n99,σ1ª18/105,mb4.5/13,6C-6D,Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	**0.53**	**186**	⇓*i*P		**Pn**		**18 58 42.2**	**+0.8**
MNMC				*i* S		**Sn**		**18 58 56.7**	**+0.8**
MNMC	**Minye Minye**	**0.53**	**186**			**Pn**		**18 58 42.3**	**+0.8**
GO01	**Chusmiza**	**1.10**	**163**	⇓*i*P		**Pn**		**18 58 48.1**	**+1.6**
GO01				*i* S		**Sn**		**18 59 06.8**	**+2.2**
GO01				IAML				18 59 08.2	
	comp=E,8µm,0.2s								
GO01	**Chusmiza**	**1.10**	**163**			**Pn**		**18 58 48.1**	**+1.6**
PSGC	**Pisagua**	**1.13**	**209**	⇑*i*P		**Pn**		**18 58 46.6**	**+0.3**
PSGC				*i* S		**Sn**		**18 59 04.3**	**-0.2**
PSGC				IAML				18 59 05.3	
	comp=N,5µm,0.7s								
PB11	**IPOC Station P

	comp=Z,2.2nm,1.1s								
YKA	**Yellowknife Ar**	**88.28**	**341**	P		**P**	**19 10 60.0**	**+0.8**	
	comp=Z,2.8nm,0.6s,baz=135,slow=4.7,SNR=44								
YKA				pP		**pP**	**19 11 31.4**	**-1.2**	
	comp=Z,1.2nm,0.6s,baz=136,slow=4.7,SNR=6.0								
VYHS	**Vyhne**	**102.64**	**43**	*e*PDIFF		**Pdif**	**19 12 05.8**	**+0.8**	
H11S2	**WAKE ISLAND Hyl**	**26.88**	**279**	T		T	21 36 57.9		
	baz=101,slow=74,SNR=13								
H11N3	**WAKE ISLAND Hyl**	**26.89**	**281**	T		T	21 36 55.0		
	baz=100,slow=74,SNR=7.9								
H11S1	**WAKE ISLAND Hyl**	**26.89**	**279**	T		T	21 36 52.4		
	baz=101,slow=74,SNR=7.3								
H11S3	**WAKE ISLAND Hyl**	**26.90**	**279**	T		T	21 36 51.8		
	baz=101,slow=74,SNR=8.3								
H11N2	**WAKE ISLAND Hyl**	**26.90**	**281**	T		T	21 36 58.3		
	baz=100,slow=74,SNR=8.3								
H11N1	**WAKE ISLAND Hyl**	**26.90**	**281**	T		T	21 36 47.7		
	baz=100,slow=74,SNR=5.8								
SEY	**Seymchan**	**127.22**	**337**	PKP		**PKPdf**	**19 17 12.6**	**+1.1**	
	comp=Z,0.8nm,0.7s,baz=88,slow=3.6,SNR=4.8								
ASAR	**Alice Springs**	**132.16**	**209**	PKP		**PKPdf**	**19 17 22.6**	**+0.3**	
	comp=Z,0.4nm,0.5s,baz=141,slow=1.9,SNR=6.9								
WRA	**Warramunga Arr**	**135.10**	**213**	PKP		**PKPdf**	**19 17 28.9**	**+1.1**	
	comp=Z,0.8nm,0.6s,baz=152,slow=1.7,SNR=6.8								
MKAR	**Makanchi Array**	**143.59**	**33**	PKP		PKPbc	19 17 42.1	+1.9	
	comp=Z,0.1nm,0.4s,baz=230,slow=1.1,SNR=2.8								
KLR	**Kul'dur**	**144.96**	**336**	PKPbc		**PKPbc**	**19 17 45.3**	**+1.1**	
	comp=Z,1.9nm,0.6s,baz=79,slow=4.6,SNR=8.1								
MJAR	**Matsushiro Arr**	**149.76**	**312**	PKPbc		**PKPbc**	**19 17 59.6**	**+1.7**	
	comp=Z,1.2nm,0.6s,baz=44,slow=2.5,SNR=3.9								

*MOS **29** 19:15:01.6±1.2,54.°93N×110.°77E,h11km,mb3.6/1,Error ellipse: s-maj=13.6km s-min=8.0km az=68.5*
*BYKL **29** 19:15:02.7±0.2,54.°97N×110.°75E,h13km±4km*
*IDC **29** 19:15:05.6±4.3,54.°86N×110.°29E,h0km,mb1 3.2/5, mb1mx3.1/37,mbtmp3.2/5,ML2.8/5,Error ellipse: s-maj=52.5km s-min=30.8km az=97.0*

ISC 29 19:15:02.5±0.9,55.°00N±0.°02×110.°78E±0.°02,h14km±7km, n50,σ2s40/109,11C-11D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YLYR	**Ulyunkhan**	**0.25**	**118**	⇓*i*Pg		**Pg**		**19 15 08.2**	**+0.3**
	2μm,0.3s								
YLYR				⇑*i*Pg		**Pg**		**19 15 08.2**	**+0.3**
	4μm,0.3s								
YLYR				⇑*i*Pg		**Pg**		**19 15 08.2**	**+0.3**
	5μm,0.3s								
YLYR				*e*Sg		**Sg**		**19 15 12.4**	**+0.8**
YLYR				Pmax					
	2μm,0.1s								
YLYR				Smax					
	9μm,0.4s								
YLYR	**Ulyunkhan**	**0.25**	**118**	⇑*i*PG		**Pg**		**19 15 08.2**	**+0.3**
YLYR				*e*				19 15 11.7	
YLYR				pmax	pmax				
	comp=Z,2μm,0.1s								
YLYR				smax	smax				
	comp=E,7μm,0.2s								
KMO	**Kumora**	**0.93**	**15**	⇓*i*Pg		**Pg**		**19 15 20.0**	**-0.4**
KMO				*e*Sg		**Sb**		**19 15 33.2**	**+0.7**
KMO				Pmax					
	comp=E,203nm,0.3s								
KMO				Smax					
	comp=E,810nm,1.1s								
KMO	**Kumora**	**0.93**	**15**	⇑*i*PG		**Pg**		**19 15 20.4**	**0.0**
KMO				*e*				19 15 33.3	
KMO				pmax	pmax				
	comp=Z,66nm,0.2s								
KMO				smax	smax				
	comp=N,672nm,0.7s								
NIZ	**Nizh Angarsk**	**1.05**	**318**	⇑*i*Pg		**Pg**		**19 15 22.5**	**-0.3**
NIZ				*e*Sg		**Sb**		**19 15 36.7**	**+0.5**
NIZ				Pmax					
	comp=N,281nm,0.2s								
NIZ				Smax					
	comp=N,592nm,0.8s								
NIZ	**Nizh Angarsk**	**1.05**	**318**	⇑*i*PG		**Pg**		**19 15 22.5**	**-0.3**
NIZ				*e*				19 15 36.5	
NIZ				pmax	pmax				
	comp=Z,281nm,0.4s								
NIZ				smax	smax				
	comp=N,583nm,0.8s								
YOA	**Uoyan**	**1.26**	**25**	*e*Pg		**Pg**		**19 15 26.6**	**-0.2**
YOA				*e*Sg		**Sb**		**19 15 43.8**	**+1.6**
YOA				*e*				19 15 47.6	
YOA				Pmax					
	comp=N,351nm,0.2s								
YOA				max					
	comp=N,2μm,0.5s								
YOA	**Uoyan**	**1.26**	**25**	⇑*i*PG		**Pg**		**19 15 26.6**	**-0.2**
YOA				*e*				19 15 45.4	
YOA				pmax	pmax				
	comp=Z,183nm,0.2s								
YOA				smax	smax				
	comp=N,2μm,0.4s								
SYVR	**Suvo**	**1.42**	**199**	⇓*i*Pg		**Pn**		**19 15 28.2**	**+0.4**
SYVR				*e*Sg		**Sn**		**19 15 47.5**	**+1.2**
SYVR				Pmax					
	comp=N,204nm,0.6s								
SYVR				Smax					
	comp=N,578nm,0.3s								
SYVR	**Suvo**	**1.42**	**199**	*e*PG		**Pn**		**19 15 28.2**	**+0.4**
SYVR				*e*				19 15 47.3	
SYVR				pmax	pmax				
	comp=Z,185nm,0.2s								
SYVR				smax	smax				
	comp=N,654nm,0.2s								
UKT	**Uakit**	**1.71**	**72**	⇑*i*Pg		**Pn**		**19 15 33.5**	**+1.6**
UKT				*e*				19 15 35.1	
UKT				*e*Sb		**Sn**		**19 15 49.5**	**-4.0**
UKT				*i* Sg		**Sb**		**19 15 56.3**	**+1.3**
UKT				max					
	comp=N,271nm,1.1s								
UKT				Smax					
	comp=N,929nm,0.3s								
UKT	**Uakit**	**1.71**	**72**	⇑*i*PN		**Pn**		**19 15 33.5**	**+1.6**
UKT				*e*				19 15 56.4	
UKT				pmax	pmax				
	comp=Z,272nm,1.1s								
UKT				smax	smax				
	comp=N,919nm,0.3s								
SVKR	**Severomuysk**	**1.94**	**53**	⇓*i*Pn		**Pb**		**19 15 37.3**	**-0.3**
SVKR				⇓*i*Pg		**Pg**		**19 15 38.4**	**-1.3**
SVKR				*e*				19 15 41.9	
SVKR				*e*Sg		**Sg**		**19 16 05.2**	**+0.4**
SVKR				max					
	comp=N,253nm,0.5s								
SVKR				Smax					
	comp=N,2μm,0.6s								
MXMB	**Maximikha**	**2.11**	**215**	⇓*i*Pn		**Pn**		**19 15 38.3**	**+0.9**
MXMB				*e*Pg		**Pb**		**19 15 40.1**	**-0.4**
MXMB				*e*Sn		**Sb**		**19 16 05.5**	**-1.0**
MXMB				*e*Sg		**Sg**		**19 16 08.4**	**-1.8**
OGRR	**Ongureny**	**2.30**	**235**	⇓*i*Pn		**Pb**		**19 15 42.5**	**-1.4**
OGRR				*e*Pg		**Pg**		**19 15 44.1**	**-2.6**
OGRR				*e*				19 16 11.1	
OGRR				*e*Sg		**Sg**		**19 16 14.7**	**-1.8**
OGRR				Pmax					
	comp=N,67nm,0.4s								
OGRR				Smax					
	comp=N,808nm,0.3s								
OGRR	**Ongureny**	**2.30**	**235**	⇓*i*PN		**Pb**		**19 15 42.4**	**-1.4**
OGRR				*e*				19 15 44.6	
OGRR				*e*				19 16 11.7	
OGRR				pmax	pmax				
	comp=Z,75nm,1.6s								
OGRR				smax	smax				
	comp=N,804nm,0.4s								
NLYR	**Nelyaty**	**3.16**	**60**	⇓*i*Pn		**Pn**		**19 15 53.5**	**+1.6**
NLYR				*e*Pg		**Pb**		**19 15 59.0**	**+0.5**
NLYR				*e*Sn		**Sn**		**19 16 30.9**	**+1.5**
NLYR				*e*Sg		**Sg**		**19 16 42.0**	**-2.0**
NLYR				Pmax					
	comp=N,25nm,0.6s								
NLYR				Smax					
	comp=N,148nm,0.9s								
ZRHB	**Zarechye**	**3.26**	**223**	Pn		**Pn**		**19 15 54.1**	**+1.0**
ZRHB				*e*Pg		**Pb**		**19 16 01.0**	**+0.9**
ZRHB				*e*				19 16 08.4	
ZRHB				*e*Sg		**Sg**		**19 16 44.4**	**-2.6**
TRTB	**Turuntaevo**	**3.34**	**215**	*e*Pn		**Pn**		**19 15 55.3**	**+0.9**
TRTB				*e*Pg		**Pb**		**19 16 01.1**	**-0.5**
TRTB				*e*Sn		**Sn**		**19 16 33.6**	**-0.3**
TRTB				*e*Sg		**Sg**		**19 16 46.1**	**-3.8**
BOD	**Bodaibo**	**3.35**	**31**	*e*Pn		**Pn**		**19 15 55.8**	**+1.4**
BOD				*e*Pg		**Pb**		**19 16 02.1**	**+0.5**
BOD				*e*				19 16 05.7	
BOD				*e*Sn		**Sn**		**19 16 34.8**	**+0.9**
BOD				*e*Sg		**Sb**		**19 16 45.8**	**+3.6**
BOD				max					
	comp=N,15nm,0.4s								
BOD				Smax					
	comp=N,128nm,1.5s								
CIT	**Chita**	**3.41**	**150**	*e*Pg		**Pb**		**19 16 02.2**	**-0.5**
CIT				*e*Sg		**Sb**		**19 16 47.3**	**+3.3**
CIT				Pmax					
	comp=N,62nm,0.3s								
CIT				Smax					
	comp=N,467nm,0.2s								
CIT	**Chita**	**3.41**	**150**	*e*PN		**Pb**		**19 16 04.2**	**+1.5**
CIT				*e*				19 16 46.4	
CIT				pmax	pmax				
	comp=Z,62nm,0.4s								
CIT				smax	smax				
	comp=E,464nm,0.2s								
TRG	**Tyrgan**	**3.45**	**231**	*e*Pn		**Pn**		**19 15 57.1**	**+1.3**
TRG				*e*Pg		**Pb**		**19 16 02.9**	**-0.4**
TRG				*e*Sg		**Sb**		**19 16 48.2**	**+3.1**
TRG				Pmax					
	comp=E,20nm,0.6s								
TRG				Smax					
	comp=E,210nm,0.5s								
TRG	**Tyrgan**	**3.45**	**231**	*e*PN		**Pn**		**19 15 57.1**	**+1.3**
TRG				*e*				19 16 04.1	
TRG				*e*S		**Sn**		**19 16 36.3**	**-0.1**
TRG				*e*				19 16 46.4	
TRG				pmax	pmax				
	comp=Z,13nm,0.2s								
TRG				smax	smax				
	comp=N,179nm,0.5s								
STDB	**Stepnoy Dvoret**	**3.86**	**225**	*e*Sg		**Sg**		**19 17 02.5**	**-4.0**
HRMR	**Khuramsha**	**4.08**	**216**	⇑*i*Pn		**Pn**		**19 16 05.6**	**+1.2**
HRMR				*e*Pg		**Pb**		**19 16 15.6**	**+1.5**
HRMR				*e*Sg		**Sg**		**19 17 08.9**	**-4.5**
HRMR				Pmax					
	comp=N,76nm,0.5s								
HRMR				Smax					
	comp=N,754nm,0.6s								
BGT	**Bolshoye Golou**	**4.36**	**230**	*e*Pn		**Pn**		**19 16 06.9**	**-1.4**
BGT				*e*Pg		**Pb**		**19 16 20.1**	**+1.3**
BGT				*e*Sn		**Sn**		**19 16 58.8**	**0.0**
BGT				*e*Sg		**Sg**		**19 17 16.4**	**-5.9**
VTMR	**Vitim**	**4.56**	**11**	*e*Pn		**Pn**		**19 16 11.3**	**+0.3**
VTMR				*e*Pg		**Pb**		**19 16 24.6**	**+2.4**
VTMR				*e*Sn		**Sn**		**19 17 04.1**	**+0.4**
VTMR				*e*Sg		**Sg**		**19 17 24.5**	**-4.3**
CRS	**Chara**	**4.62**	**63**	*e*Pn		**Pn**		**19 16 13.1**	**+1.2**
CRS				*e*Pg		**Pb**		**19 16 25.3**	**+2.0**
CRS				*e*Sg		**Sg**		**19 17 26.3**	**-4.5**
CRS				Pmax					
	comp=N,38nm,0.9s								
CRS				Smax					
	comp=N,95nm,0.9s								
CRS	**Chara**	**4.62**	**63**	*e*PN		**Pb**		**19 16 25.4**	**+2.1**
CRS				*e*				19 17 25.6	
CRS				pmax	pmax				
	comp=Z,37nm,0.8s								
CRS				smax	smax				
	comp=E,95nm,0.9s								
LSTR	**Listvyanka**	**4.74**	**231**	*e*Sg		**Sb**		**19 17 27.6**	**+5.5**
LSTR				Smax					
	comp=E,111nm,1.1s								
IRK	**Irkutsk**	**4.75**	**237**	*e*Sg		**Sb**		**19 17 26.9**	**+4.3**
IRK				Smax					
	comp=E,399nm,0.5s								
IRK	**Irkutsk**	**4.75**	**237**	*e*PN		**Pb**		**19 16 28.1**	**+2.5**
IRK				*e*				19 17 27.8	
IRK				pmax	pmax				
	comp=Z,36nm,0.2s								
IRK				smax	smax				
	comp=N,399nm,0.4s								
IVK	**Ivanovka**	**4.97**	**233**	*e*Pn		**Pn**		**19 16 17.4**	**+0.7**
IVK				*e*Pg		**Pb**		**19 16 30.3**	**+1.0**
IVK				*e*Sn		**Sn**		**19 17 11.1**	**-2.9**
IVK				*e*Sg		**Sb**		**19 17 33.6**	**+4.7**
TUP	**Tupik**	**5.35**	**92**	⇓*i*Pn		**Pn**		**19 16 22.7**	**+0.8**
TUP				*e*Pg		**Pb**		**19 16 37.5**	**+1.8**
TUP				*e*Sn		**Sn**		**19 17 22.5**	**-0.8**
TUP				*e*Sg		**Sg**		**19 17 48.4**	**-5.7**
TUP				Pmax					
	comp=N,21nm,1.1s								
TUP				Smax					
	comp=N,171nm,1.0s								
TUP	**Tupik**	**5.35**	**92**	*e*PN		**Pn**		**19 16 22.4**	**+0.5**
TUP				*e*				19 16 37.6	
TUP				*e*S		**Sn**		**19 17 21.3**	**-2.0**
TUP				*e*				19 17 46.4	
TUP				pmax	pmax				
	comp=Z,17nm,0.5s								
TUP				smax	smax				
	comp=N,169nm,0.9s								
KPC	**Khapcheranga**	**5.39**	**169**	⇓*i*Pn		**Pn**		**19 16 21.7**	**-0.8**
KPC				*e*Pg		**Pb**		**19 16 38.5**	**+2.1**
KPC				*e*Sn		**Sn**		**19 17 22.0**	**-2.3**
KPC				*e*Sg		**Sg**		**19 17 48.5**	**-6.9**
KPC				Pmax					
	comp=N,10.0nm,0.9s								
KPC				Smax					
	comp=N,127nm,0.9s								
KPC	**Khapcheranga**	**5.39**	**169**	⇑*i*PN		**Pn**		**19 16 21.8**	**-0.8**
KPC				*e*				19 16 38.3	
KPC				*e*S		**Sn**		**19 17 22.1**	**-2.3**
KPC				*e*				19 17 48.2	
KPC				pmax	pmax				
	comp=Z,9.0nm,0.6s								
KPC				smax	smax				
	comp=E,126nm,0.9s								
TLY	**Talaya**	**5.41**	**235**	*e*Pg		**Pb**		**19 16 38.1**	**+1.3**
TLY				*e*Sg		**Sb**		**19 17 47.4**	**+5.9**
TLY				Pmax					
	comp=E,10.0nm,0.7s								
TLY				Smax					
	comp=E,56nm,0.5s								
TLY	**Talaya**	**5.41**	**235**	PN		**Pn**		**19 16 23.0**	**+0.2**
TLY				*e*PG		**Pb**		**19 16 38.5**	**+1.7**
TLY				*e*SG		**Sb**		**19 17 47.7**	**+6.2**
TLY				pmax	pmax				
	comp=Z,10.0nm,0.3s								
TLY	**Talaya**	**5.41**	**235**	Pn		**Pn**		**19 16 23.0**	**+0.2**
	comp=Z,0.0nm,0.3s,baz=25,slow=14,SNR=1.8								
TLY				Lg		Lg		19 17 47.1	
	comp=Z,0.1nm,0.3s,baz=102,slow=15,SNR=16								
ARS	**Arshan**	**5.86**	**242**	*e*Pn		**Pn**		**19 16 26.9**	**-2.1**
ARS				*e*				19 16 50.4	
ARS				*e*Sn		**Sn**		**19 17 34.0**	**-2.0**
ARS				*e*Sg		**Sb**		**19 18 01.7**	**+7.1**
ARS				max					
	comp=Z,25nm,0.6s								
ARS				Smax					
	comp=Z,279nm,0.4s								
ARS	**Arshan**	**5.86**	**242**	*e*PN		**Pn**		**19 16 29.6**	**+0.6**
ARS				*e*				19 16 49.0	
ARS				*e*				19 18 00.3	
ARS				pmax	pmax				
	comp=Z,25nm,0.6s								
ARS				smax	smax				
	comp=E,280nm,0.6s								
MOY	**Mondy**	**6.74**	**244**	*e*PN		**Pn**		**19 16 43.3**	**+2.2**
MOY				*e*				19 17 02.5	
MOY				*e*S		**Sn**		**19 17 56.8**	**-0.9**
MOY				*e*				19 18 30.5	
MOY				pmax	pmax				
	comp=Z,11nm,0.5s								
MOY				smax	smax				
	comp=E,151nm,1.1s								
ORL	**Orlik**	**6.95**	**254**	*e*PN		**Pn**		**19 16 45.2**	**+1.2**
ORL				*e*				19 17 07.6	
ORL				*e*S		**Sn**		**19 18 00.7**	**-2.1**
ORL				*e*				19 18 35.8	
ORL				pmax	pmax				
	comp=Z,14nm,0.8s								
ORL				smax	smax				
	comp=N,88nm,1.2s								
SONM	**Songino Array**	**7.67**	**203**	Pn		**Pn**		**19 16 55.2**	**+1.3**
	comp=N,0.7nm,0.3s,baz=21,slow=13,SNR=32								
SONM				Lg		Lg		19 19 03.1	
	comp=N,2.5nm,0.3s,baz=20,slow=28,SNR=13								
ZALV	**Zalesovo Beam**	**15.10**	**277**	Pn		**Pn**		**19 18 35.6**	**+0.4**
	comp=N,0.1nm,0.3s,baz=73,slow=11,SNR=6.7								
MKAR	**Makanchi Array**	**19.64**	**257**	P		**Pn**		**19 19 32.3**	**+0.3**
	comp=N,0.0nm,0.3s,baz=55,slow=8.2,SNR=3.4								
KURK	**Kurchatov**	**19.78**	**271**	P		**Pn**		**19 19 35.4**	**+1.9**
KURBB	**Kurchatov Arra**	**19.87**	**271**	P		**Pn**		**19 19 35.4**	**+0.8**
	comp=N,0.0nm,0.3s,baz=64,slow=10,SNR=4.2								

*SJA **29** 19:17:37.9±0.3,35.°47S×70.°17W,h156km±4km,ML3.6, MW3.2*
*GUC **29** 19:17:39.1±0.6,35.°50S×70.°46W,h160km±7km,ML3.8*

ISC 29 19:17:37.6±1.7,35.°51S±0.°05×70.°14W±0.°07, h167km±13km,n29,σ1s01/46,4C-4D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PUMA	**Malargue**	**0.57**	**89**	*i* P		**Pn**		**19 18 01.0**	**-0.3**
BO02	**Sierra Bellavi**	**0.88**	**324**	⇓*i*P		**Pn**		**19 18 03.8**	**+0.4**
BO02				*i* S		**Sn**		**19 18 23.8**	**+0.8**
GO05	**Huala**	**1.54**	**288**	⇑*i*P		**Pn**		**19 18 09.1**	**+0.1**
GO05				*i* S		**Sn**		**19 18 31.7**	**-1.5**
GO05	**Huala**	**1.54**	**288**	*e*P		**Pn**		**19 18 08.0**	**-0.9**
LMEL	**Las Melosas**	**1.66**	**358**	⇓*i*P		**Pn**		**19 18 11.3**	**+1.0**
LMEL				*i* S		**Sn**		**19 18 36.5**	**+1.0**
LMEL				IAML				19 18 45.8	
	comp=N,313nm,0.2s								
MT01	**Popeta**	**1.88**	**331**	⇑*i*P		**Pn**		**19 18 12.8**	**+0.3**
MT01				*i* S		**Sn**		**19 18 38.1**	**-1.2**
MT01				IAML				19 18 41.4	
	comp=N,412nm,0.1s								
CCHI	**Chillan**	**1.91**	**235**	*i* P		**Pn**		**19 18 13.0**	**+0.3**
MT03	**Universidad Ad**	**2.03**	**351**	⇑*i*P		**Pn**		**19 18 15.5**	**+1.2**
MT03				*e*S		**Sn**		**19 18 43.3**	**+0.6**
MT03				IAML				19 18 49.2	
	comp=N,574nm,0.4s								
CLCH	**Cerro Calan**	**2.13**	**351**	⇑*i*P		**Pn**		**19 18 16.4**	**+1.0**
CLCH				*i* S		**Sn**		**19 18 45.0**	**+0.4**
CLCH				IAML				19 18 47.1	
	comp=E,406nm,0.4s								
MT05	**Renca**	**2.17**	**347**	*e*P		**Pn**		**19 18 16.7**	**+0.9**
MT05				IAML				19 18 48.3	
	comp=N,680nm,0.3s								
FCH	**Farellones**	**2.18**	**357**	*e*P		**Pn**		**19 18 17.1**	**+0.9**
FCH				*i* S		**Sn**		**19 18 46.7**	**+0.7**
PEL	**Peldehue**	**2.40**	**349**	⇓*i*P		**Pn**		**19 18 19.3**	**+0.8**
PEL				*i* S		**Sn**		**19 18 49.9**	**-0.3**
PEL				IAML				19 18 52.5	
	comp=E,398nm,0.3s								
CANA	**Caviahue**	**2.49**	**197**	⇓*i*P		**Pn**		**19 18 20.6**	**+1.0**
ROC1	**El Roble**	**2.62**	**344**	*i* P		**Pn**		**19 18 21.5**	**+0.1**
ROCH	**El Roble**	**2.63**	**344**	*e*P		**Pn**		**19 18 21.9**	**+0.5**
ROCH				*e*S		**Sn**		**19 18 54.2**	**-1.1**
ROCH				IAML				19 18 58.9	
	comp=N,313nm,0.5s								
AAGR	**Agrelo**	**2.65**	**25**	*i* P		**Pn**		**19 18 22.0**	**+0.4**
VA03	**San Esteban**	**2.76**	**353**	*e*P		**Pn**		**19 18 24.0**	**+1.1**
VA03				*i* S		**Sn**		**19 18 58.1**	**+0.2**
VA03				IAML				19 19 02.5	
	comp=E,489nm,0.2s								
VA01	**Torpederas**	**2.77**	**333**	*e*P		**Pn**		**19 18 23.1**	**+0.2**
VA01				*i* S		**Sn**		**19 18 55.6**	**-2.4**
VA01				IAML				19 18 58.6	
	comp=E,458nm,0.1s								
ASAL	**Salagasta**	**3.10**	**21**	*i* P		**Pn**		**19 18 27.4**	**+0.3**
ASAL				*i* Sg		**Sn**		**19 19 04.0**	**-1.5**
ASAL	**Salagasta**	**3.10**	**21**	*e*P		**Pn**		**19 18 26.9**	**-0.2**
ASAL				*e*S		**Sn**		**19 19 04.0**	**-1.5**
RTLS	**Leoncito**	**3.76**	**11**	*i* P		**Pn**		**19 18 36.4**	**+0.8**
RTLS				*i* Sg		**Sn**		**19 19 19.9**	**-0.9**
RTLS				IAML				19 19 24.7	
	comp=Z,91nm,0.3s								
RTLS	**Leoncito**	**3.76**	**11**	*e*P		**Pn**		**19 18 37.0**	**+1.3**
RTLS				*e*S		**Sn**		**19 19 21.0**	**+0.2**
RTLS				IAML				19 19 24.7	
	comp=Z,77nm,0.3s								
RTCV	**Cerro Valdivia**	**3.87**	**21**	*e*P		**Pn**		**19 18 37.1**	**+0.3**
RTLL	**Cerro Villicun**	**4.39**	**19**	*i* P		**Pn**		**19 18 43.7**	**+0.2**
RTLL				IAML				19 19 37.0	
	comp=Z,65nm,0.5s								
AMOG	**MOGNA**	**4.76**	**17**	*i* P		**Pn**		**19 18 49.1**	**+0.7**
AMOG				*i* Sg		**Sn**		**19 19 41.2**	**-2.4**
AMOG				IAML				19 19 50.9	
	comp=Z,67nm,0.4s								
AMOG	**MOGNA**	**4.76**	**17**	*e*P		**Pn**		**19 18 49.1**	**+0.7**
AMOG				*e*S		**Sn**		**19 19 42.6**	**-0.9**
MRA	**San Martin**	**4.80**	**51**	*e*P		**Pn**		**19 18 48.3**	**-0.5**
PLCA	**Paso Flores**	**5.23**	**183**	*i* P		**Pn**		**19 18 55.8**	**+1.4**
AGUA	**GUANDACOL**	**6.16**	**14**	*e*P		**Pn**		**19 19 08.2**	**+1.4**

*THE **29** 19:23:30.0,38.°36N×20.°46E,h1km±1km,ML2.6/6,Error ellipse: s-maj=1.7km s-min=0.4km az=261.0*
*ATH **29** 19:23:30.2,38.°39N×20.°45E,h10km±2km,ML2.8/10,Error ellipse: s-maj=2.6km s-min=0.6km az=260.0*

ISC 29 19:23:30.5±1.1,38.°38N±0.°02×20.°50E±0.°04,h6km±6km, n31,σ0s60/54,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.06**	**59**	P		**Pg**		**19 23 31.8**	**-0.4**
VSK1				S		**Sg**		**19 23 33.6**	**+0.2**
FSK	**Fiskardo**	**0.10**	**32**	P		**Pg**		**19 23 32.4**	**-0.3**
FSK				S		**Sg**		**19 23 34.5**	**+0.3**
	7μm,0.4s								
FSK	**Fiskardo**	**0.10**	**32**	P		**Pg**		**19 23 32.5**	**-0.2**
FSK				S		**Sg**		**19 23 34.5**	**+0.3**
KEF1	**Kardakata, Kep**	**0.10**	**191**	P		**Pg**		**19 23 32.8**	**0.0**
KEF1				S		**Sg**		**19 23 34.8**	**+0.6**
KEF4	**Livadi, Kephal**	**0.13**	**205**	P		**Pg**		**19 23 33.3**	**+0.1**
KEF4				S		**Sg**		**19 23 36.0**	**+0.9**
ARG2	**Argostoli**	**0.20**	**182**	P		**Pg**		**19 23 34.1**	**-0.4**
KEF3	**Kipouria, Keph**	**0.21**	**214**	P		**Pg**		**19 23 34.4**	**-0.2**
KEF3				S		**Sg**		**19 23 38.0**	**+0.6**
KEF2	**Argostoli. Kep**	**0.21**	**182**	P		**Pg**		**19 23 34.7**	**0.0**
KEF2				S

VLMS					AML	AML	19 23 52.7		
	comp=E,3243μm,0.4s								
PDO	**Prodromos**	**0.58**	**67**	P	**Pg**		**19 23 41.6**	**-0.2**	
PDO	**Prodromos**	**0.58**	**67**	P	**Pg**		**19 23 41.7**	**0.0**	
PDO				S	**Sb**		**19 23 51.1**	**-0.6**	
PDO				AML	AML		19 23 54.2		
	comp=N,1609μm,0.3s								
PDO				AML	AML		19 23 54.8		
	comp=E,1774μm,0.4s								
RLS	**Riolos of Patr**	**0.83**	**112**	P	**Pb**		**19 23 47.0**	**-0.3**	
PVO	**Paravola**	**0.84**	**73**	P	**Pg**		**19 23 46.7**	**0.0**	
PVO				S	**Sb**		**19 23 59.4**	**+0.3**	
	comp=E,368nm,0.4s								
PVO	**Paravola**	**0.84**	**73**	P	**Pg**		**19 23 46.9**	**+0.1**	
PVO				S	**Sg**		**19 23 58.9**	**+1.2**	
PVO				AML	AML		19 24 03.8		
	comp=N,798μm,0.5s								
PVO				AML	AML		19 24 06.6		
	comp=E,726μm,0.5s								
DRO	**Drossia**	**1.05**	**113**	P	**Pg**		**19 23 50.7**	**0.0**	
DRO				S	**Sn**		**19 24 06.6**	**-0.1**	
DRO				AML	AML		19 24 12.4		
	comp=E,928μm,0.3s								
DRO				AML	AML		19 24 23.5		
	comp=N,772μm,0.5s								
EFP	**Efpalio**	**1.11**	**87**	P	**Pg**		**19 23 51.1**	**-0.7**	
ANX	**Ano Chora**	**1.14**	**79**	P	**Pg**		**19 23 51.6**	**-0.8**	
ANX				AML	AML		19 24 16.3		
	comp=E,686μm,0.6s								
ANX				AML	AML		19 24 19.7		
	comp=N,828μm,0.6s								
EVR	**Evrytania**	**1.16**	**62**	P	**Pg**		**19 23 52.0**	**-0.8**	
LAKA	**Lakka**	**1.18**	**96**	P	**Pg**		**19 23 52.3**	**-0.7**	
AMT	**Artemida-Makis**	**1.28**	**131**	P	**Pg**		**19 23 55.4**	**+0.3**	

IDC ***29*** *19:25:58.4±1.0, 37.°64N×135.°64E, h357km±12km, mb2.8/5, mb1 3.0/11, mb1mx2.8/51, mbtmp3.6/11, Error ellipse: s-maj=19.6km s-min=13.9km az=80.0*
JMA ***29*** *19:25:58.3±0.4, 37.°51N×135.°48E, h358km±4km, M3.0*
ISC 29 19:25:58.0±0.8, 37.°59N±0.°08×135.°71E±0.°09, h365km, n14, σ1§62/16, mb3.1/5, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JKG	**Kaga**	**1.40**	**159**	P			**Pn**	**19 26 46.8**	**-0.4**
MAT	**Matsushiro**	**2.25**	**117**	P			**Pn**	**19 26 53.1**	**+0.6**
MJAR	**Matsushiro Arr**	**2.26**	**117**	P			**Pn**	**19 26 53.7**	**+1.2**
	0.7nm,0.3s,baz=299,slow=9.4,SNR=47								
JWT	**Wachi**	**2.32**	**186**	P			**Pn**	**19 26 52.5**	**-0.5**
JWT				S			**S**	**19 27 34.2**	**-3.0**
JNU	**Nakatsue**	**5.95**	**223**	P			**Pn**	**19 27 28.2**	**-0.7**
	0.6nm,0.3s,baz=80,slow=6.1,SNR=6.0								
KSRS	**Korea Array**	**6.19**	**271**	P			**Pn**	**19 27 30.6**	**-0.8**
	0.2nm,0.3s,baz=83,slow=12,SNR=6.8								
USRK	**Ussuriysk Ar.**	**7.18**	**338**	P			**Pn**	**19 27 43.2**	**+0.7**
	baz=144,slow=10,SNR=8.5								
ASAJ	**Asahikawa**	**8.35**	**37**	P			**Pn**	**19 27 57.4**	**+1.1**
	4.3nm,0.3s,baz=228,slow=9.8,SNR=58								
ASAJ				S			**S**	**19 29 29.3**	**-3.8**
	0.6nm,0.3s,baz=331,slow=32,SNR=6.7								
KLR	**Kul'dur**	**11.98**	**347**	P			**P**	**19 28 39.0**	**+0.5**
	0.4nm,0.3s,baz=176,slow=10,SNR=8.5								
SONM	**Songino Array**	**23.72**	**305**	P			**P**	**19 30 39.2**	**+0.6**
	0.5nm,0.5s,baz=101,slow=10.0,SNR=4.8								
MKAR	**Makanchi Array**	**39.95**	**301**	P			**P**	**19 32 57.8**	**-0.4**
	0.2nm,0.5s,baz=82,slow=11,SNR=5.1								
WRA	**Warrannunga Arr**	**57.24**	**182**	P			**P**	**19 35 09.8**	**+1.2**
	0.4nm,0.4s,baz=358,slow=7.6,SNR=5.2								
ASAR	**Alice Springs**	**60.95**	**182**	P			**P**	**19 35 35.3**	**+1.5**
	0.1nm,0.3s,baz=19,slow=12,SNR=3.4								
FINES	**FINESS Array B**	**66.14**	**330**	P			**P**	**19 36 07.8**	**+1.0**
	1.6nm,0.9s,baz=38,slow=7.0,SNR=3.4								

INET ***29*** *19:26:54.7, 12.°80N×88.°87W, h37km, ML3.2*
UCR ***29*** *19:26:55.2±0.8, 12.°96N×88.°83W, h56km±9km, ML3.8*
SNET ***29*** *19:26:55.0±0.9, 12.°96N×88.°83W, h57km±10km, ML3.8*
ISC 29 19:26:55.8±2.0, 12.°9N±0.°2×88.°82W±0.°06, h53km±25km, n26, σ0§59/41, 6D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ALJI	**Alcalda de J**	**0.46**	**32**	*eS*			**Sn**	**19 27 15.5**	**+0.8**
COEB	**Comit de Eme**	**0.62**	**27**	*eP*			**Pn**	**19 27 08.5**	**-0.4**
COEB				*eS*			**Sn**	**19 27 18.7**	**+0.4**
COEB				IAML				19 27 21.3	
	comp=Z,4μm,0.2s								
JUCU	**Jucuar¡n**	**0.64**	**61**	*eP*			**Pn**	**19 27 08.4**	**-0.6**
JUCU				*eS*			**Sn**	**19 27 18.8**	**+0.2**
COEG	**Centro de Oper**	**0.68**	**355**	*eP*			**Pn**	**19 27 08.7**	**-0.9**
COEG				*eS*			**Sn**	**19 27 19.4**	**-0.1**
COEG				IAML				19 27 24.9	
	comp=Z,3μm,0.2s								
LCY	**Lacayo**	**0.70**	**47**	⇓*iP*			**Pn**	**19 27 09.5**	**-0.3**
LCY	**Lacayo**	**0.70**	**47**	⇓*iP*			**Pn**	**19 27 09.5**	**-0.3**
PACA	**Pacayal**	**0.71**	**42**	⇓*iP*			**Pn**	**19 27 09.8**	**-0.3**
PACA				*eS*			**Sn**	**19 27 21.3**	**+1.0**
PACA	**Pacayal**	**0.71**	**42**	⇓*iP*			**Pn**	**19 27 09.8**	**-0.3**
PACA				*eS*			**Sn**	**19 27 21.3**	**+1.0**
LFRS	**El Faro**	**0.72**	**341**	*eP*			**Pn**	**19 27 09.2**	**-1.0**
BLLM	**Bellamira**	**0.76**	**48**	*eP*			**Pn**	**19 27 10.1**	**-0.4**
BLLM	**Bellamira**	**0.76**	**48**	*eP*			**Pn**	**19 27 10.1**	**-0.4**
PAVA	**Las Pavas**	**0.78**	**351**	*eP*			**Pn**	**19 27 10.3**	**-0.5**
PAVA				*eS*			**Sn**	**19 27 22.3**	**+0.5**
PAVA	**Las Pavas**	**0.78**	**351**	*eP*			**Pn**	**19 27 10.3**	**-0.5**
PAVA				*eS*			**Sn**	**19 27 22.3**	**+0.5**
LBRS	**Las Brisas**	**0.82**	**345**	*eP*			**Pn**	**19 27 10.9**	**-0.5**
LFU	**La Fuente**	**0.85**	**340**	*eP*			**Pn**	**19 27 11.2**	**-0.6**
LFU	**La Fuente**	**0.85**	**340**	*eP*			**Pn**	**19 27 11.2**	**-0.6**
BOQS	**Boqueron**	**0.91**	**330**	*eP*			**Pn**	**19 27 11.8**	**-0.9**
BOQS				*eS*			**Sn**	**19 27 25.1**	**+0.1**
LCND	**La Caada**	**0.98**	**68**	*eP*			**Pn**	**19 27 13.1**	**-0.2**
LCND				*eS*			**Sn**	**19 27 27.0**	**+0.8**
LCND				IAML				19 27 28.9	
	comp=Z,2μm,0.3s								
LCND	**La Caada**	**0.98**	**68**	*eP*			**Pn**	**19 27 13.1**	**-0.2**
LCND				*eS*			**Sn**	**19 27 27.0**	**+0.8**
LCND				IAML				19 27 28.9	
	comp=Z,2μm,0.3s								
CNCH	**Conchagua**	**1.02**	**71**	⇓*iP*			**Pn**	**19 27 13.4**	**-0.5**
CNCH				*eS*			**Sn**	**19 27 27.4**	**+0.1**
CNCH				IAML				19 27 34.6	
	comp=Z,3μm,0.3s								
CNCH	**Conchagua**	**1.02**	**71**	⇓*iP*			**Pn**	**19 27 13.4**	**-0.5**
CNCH				*eS*			**Sn**	**19 27 27.4**	**+0.1**
CNCH				IAML				19 27 34.6	
	comp=Z,3μm,0.3s								
FAGO	**Alcalda de S**	**1.02**	**43**	*eP*			**Pn**	**19 27 13.5**	**-0.5**
FAGO				*eS*			**Sn**	**19 27 27.5**	**+0.2**
CEVE	**Cerro Verde**	**1.18**	**318**	*eP*			**Pn**	**19 27 16.6**	**+0.2**
CEVE				*eS*			**Sn**	**19 27 32.5**	**+0.9**
CEVE				IAML				19 27 35.5	
	comp=Z,1μm,0.5s								
CEVE	**Cerro Verde**	**1.18**	**318**	*eP*			**Pn**	**19 27 16.6**	**+0.2**
CEVE				*eS*			**Sn**	**19 27 32.5**	**+0.9**
CEVE				IAML				19 27 35.5	
	comp=Z,1μm,0.5s								
IXG	**Ixpaco**	**2.00**	**308**	*eP*			**Pn**	**19 27 26.8**	**-0.6**
IXG	**Ixpaco**	**2.00**	**308**	*eP*			**Pn**	**19 27 26.8**	**-0.6**

THE ***29*** *19:28:57.9, 38.°23N×20.°35E, h7km±1km, ML2.9/14, Error ellipse: s-maj=1.4km s-min=0.4km az=232.0*
ATH ***29*** *19:28:57.8, 38.°24N×20.°39E, h10km, ML2.8/16, Error ellipse: s-maj=1.4km s-min=0.8km az=261.0*
ISC 29 19:28:57.8±1.0, 38.°23N±0.°02×20.°37E±0.°04, h9km±5km, n51, σ0§66/82, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.04**	**209**	P			**Pg**	**19 28 59.7**	**+0.3**
KEF3				S			**Sg**	**19 29 00.7**	**+0.1**
KEF4	**Livadi, Kephal**	**0.05**	**61**	P			**Pg**	**19 28 59.7**	**+0.1**
KEF4				S			**Sg**	**19 29 00.6**	**-0.2**
CHV1	**Chavriata, Kef**	**0.05**	**169**	P			**Pg**	**19 28 59.7**	**+0.1**
CHV1				S			**Sg**	**19 29 01.1**	**+0.2**
KEF1	**Kardakata, Kep**	**0.09**	**61**	P			**Pg**	**19 29 00.2**	**+0.1**
KEF1				S			**Sg**	**19 29 01.5**	**-0.2**
ARG2	**Argostoli**	**0.11**	**121**	P			**Pg**	**19 29 00.4**	**+0.1**
ARG2				S			**Sg**	**19 29 02.1**	**0.0**
KEF2	**Argostoli. Kep**	**0.12**	**127**	P			**Pg**	**19 29 00.6**	**+0.1**
KEF2				S			**Sg**	**19 29 02.2**	**-0.1**

VLS	**Valsamata**	**0.18**	**108**	P			**Pg**	**19 29 01.5**	**-0.1**
VLS				S			**Sg**	**19 29 04.1**	**-0.1**
	16μm,0.2s								
VLS	**Valsamata**	**0.18**	**108**	P			**Pg**	**19 29 01.4**	**-0.1**
VLS				S			**Sg**	**19 29 03.8**	**-0.3**
VLS				AML	AML		19 29 04.4		
	comp=N,41294μm,0.2s								
VLS				AML	AML		19 29 04.8		
	comp=E,23518μm,0.2s								
VSK1	**VASILIKIADES**	**0.23**	**41**	P			**Pg**	**19 29 02.8**	**+0.3**
VSK1				S			**Sg**	**19 29 06.4**	**+0.7**
	comp=E,11μm,0.4s								
KFL	**Anninata**	**0.35**	**111**	P			**Pg**	**19 29 04.6**	**-0.2**
KFL				S			**Sg**	**19 29 09.9**	**+0.5**
	comp=E,6μm,0.5s								
KFL	**Anninata**	**0.35**	**111**	P			**Pg**	**19 29 04.6**	**-0.2**
KFL				S			**Sg**	**19 29 10.1**	**+0.7**
KFL				AML	AML		19 29 10.6		
	comp=E,15536μm,0.3s								
KFL				AML	AML		19 29 12.9		
	comp=N,7535μm,0.6s								
VLMS	**Volimes, Zakyn**	**0.42**	**147**	P			**Pg**	**19 29 05.8**	**-0.3**
VLMS				S			**Sg**	**19 29 11.9**	**+0.2**
VLMS				AML	AML		19 29 14.5		
	comp=E,10168μm,0.3s								
VLMS				AML	AML		19 29 20.4		
	comp=N,9079μm,0.3s								
EVGI	**Lefkada island**	**0.45**	**30**	P			**Pg**	**19 29 06.9**	**+0.4**
EVGI				S			**Sb**	**19 29 14.0**	**-0.7**
EVGI	**Lefkada island**	**0.45**	**30**	P			**Pg**	**19 29 06.8**	**+0.2**
EVGI				S			**Sg**	**19 29 12.2**	**-0.2**
MGNA	**Meganis**	**0.54**	**38**	P			**Pg**	**19 29 08.2**	**0.0**
MGNA				S			**Sg**	**19 29 15.2**	**0.0**
MGNA				AML	AML		19 29 17.0		
	comp=N,4077μm,0.2s								
MGNA				AML	AML		19 29 17.1		
	comp=E,4616μm,0.2s								
LKD2	**Lefkada island**	**0.60**	**22**	P			**Pg**	**19 29 09.2**	**-0.2**
LKD2				S			**Sb**	**19 29 18.5**	**-0.6**
	comp=E,500nm,0.5s								
LKD2	**Lefkada island**	**0.60**	**22**	P			**Pg**	**19 29 09.0**	**-0.4**
LKD2				S			**Sg**	**19 29 17.8**	**+0.5**
LKD2				AML	AML		19 29 25.7		
	comp=E,1060μm,0.6s								
LKD2				AML	AML		19 29 27.0		
	comp=N,703μm,0.5s								
ZAK2	**Zakynthos**	**0.61**	**137**	P			**Pg**	**19 29 09.8**	**+0.2**
ZAK2				S			**Sb**	**19 29 19.8**	**+0.4**
TSLK	**Tsoukalades, L**	**0.63**	**21**	P			**Pg**	**19 29 10.1**	**+0.1**
TSLK				S			**Sb**	**19 29 19.5**	**-0.5**
	comp=N,732nm,0.7s								
TSLK	**Tsoukalades, L**	**0.63**	**21**	P			**Pg**	**19 29 09.8**	**-0.2**
TSLK				S			**Sg**	**19 29 17.8**	**-0.5**
KRI1	**kERI**	**0.67**	**148**	P			**Pg**	**19 29 10.2**	**-0.6**
KRI1				S			**Sg**	**19 29 19.9**	**+0.4**
	comp=N,3μm,0.4s								
PDO	**Prodromos**	**0.73**	**60**	P			**Pg**	**19 29 11.9**	**-0.1**
PDO				S			**Sb**	**19 29 23.5**	**+0.5**
	comp=N,1μm,0.4s								
PDO	**Prodromos**	**0.73**	**60**	P			**Pg**	**19 29 11.8**	**-0.2**
RLS	**Riolos of Patr**	**0.88**	**101**	P			**Pg**	**19 29 14.4**	**-0.4**
RLS				S			**Sn**	**19 29 28.8**	**-0.6**
	comp=N,402nm,0.5s								
RLS	**Riolos of Patr**	**0.88**	**101**	P			**Pg**	**19 29 14.3**	**-0.5**
RLS				S			**Sg**	**19 29 25.5**	**-0.8**
RLS				AML	AML		19 29 32.8		
	comp=E,858μm,0.4s								
RLS				AML	AML		19 29 37.6		
	comp=N,693μm,0.4s								
PVO	**Paravola**	**0.98**	**67**	P			**Pg**	**19 29 16.7**	**-0.1**
PVO				S			**Sb**	**19 29 30.9**	**+0.7**
PVO	**Paravola**	**0.98**	**67**	P			**Pg**	**19 29 16.6**	**-0.1**
DRO	**Drossia**	**1.09**	**104**	P			**Pg**	**19 29 18.0**	**-0.8**
DRO				S			**Sn**	**19 29 36.2**	**+1.5**
	comp=N,890nm,0.5s								
DRO	**Drossia**	**1.09**	**104**	P			**Pg**	**19 29 17.8**	**-1.0**
DRO				AML	AML		19 29 43.9		
	comp=N,1655μm,0.5s								
DRO				AML	AML		19 29 47.5		
	comp=E,1982μm,0.5s								
EFP	**Efpalio**	**1.22**	**80**	P			**Pb**	**19 29 20.1**	**-1.1**
EFP				S			**Sn**	**19 29 39.6**	**+1.8**
	comp=E,348nm,0.5s								
EFP	**Efpalio**	**1.22**	**80**	P			**Pb**	**19 29 20.0**	**-1.1**
EFP				AML	AML		19 29 44.9		
	comp=E,695μm,0.5s								
EFP				AML	AML		19 29 46.9		
	comp=N,633μm,0.4s								
LAKA	**Lakka**	**1.27**	**89**	P			**Pn**	**19 29 21.0**	**-0.8**
LAKA				S			**Sn**	**19 29 40.6**	**+1.6**
	comp=N,255nm,0.4s								
LAKA	**Lakka**	**1.27**	**89**	P			**Pn**	**19 29 21.0**	**-0.8**
LAKA				AML	AML		19 29 43.4		
	comp=E,477μm,0.6s								
LAKA				AML	AML		19 29 43.4		
	comp=N,611μm,0.5s								
ANX	**Ano Chora**	**1.27**	**73**	P			**Pb**	**19 29 22.0**	**0.0**
ANX				S			**Sn**	**19 29 40.8**	**+1.7**
	comp=N,710nm,0.7s								
ANX	**Ano Chora**	**1.27**	**73**	P			**Pn**	**19 29 21.4**	**-0.5**
ANX				AML	AML		19 29 46.0		
	comp=N,1509μm,0.6s								
ANX				AML	AML		19 29 47.8		
	comp=E,1327μm,0.9s								
EVR	**Evrytania**	**1.32**	**58**	P			**Pn**	**19 29 21.8**	**-0.8**
EVR				AML	AML		19 29 47.3		
	comp=E,300μm,0.7s								
EVR				AML	AML		19 29 48.0		
	comp=N,378μm,0.6s								
SERG	**Sergoula**	**1.34**	**82**	P			**Pn**	**19 29 22.5**	**-0.3**
SERG				S			**Sg**	**19 29 42.7**	**+1.8**
	comp=N,308nm,0.7s								
SERG	**Sergoula**	**1.34**	**82**	P			**Pn**	**19 29 22.0**	**-0.8**
SERG				AML	AML		19 29 50.3		
	comp=N,733μm,0.5s								
SERG				AML	AML		19 29 50.5		
	comp=E,506μm,0.9s								
TRIZ	**Trizonia**	**1.35**	**84**	P			**Pn**	**19 29 21.9**	**-0.9**
TRIZ	**Trizonia**	**1.35**	**84**	P			**Pn**	**19 29 22.1**	**-0.7**
ALIK	**Aliki, Aigiali**	**1.37**	**88**	P			**Pn**	**19 29 22.6**	**-0.6**
KALE	**Kalithea**	**1.40**	**83**	P			**Pn**	**19 29 23.0**	**-0.7**
KALE				AML	AML		19 29 52.3		
	comp=E,557μm,0.7s								
KALE				AML	AML		19 29 53.8		
	comp=N,452μm,0.4s								
KLV	**Kalavryta, Ach**	**1.42**	**97**	P			**Pn**	**19 29 23.8**	**-0.1**
KLV				S			**Sn**	**19 29 43.0**	**+0.3**
	comp=N,160nm,0.6s								
KLV	**Kalavryta, Ach**	**1.42**	**97**	P			**Pn**	**19 29 23.4**	**-0.4**
KLV				AML	AML		19 29 50.3		
	comp=N,250μm,0.5s								
KLV				AML	AML		19 29 50.9		
	comp=E,389μm,0.7s								
MAKR	**Makrakomi, Fth**	**1.58**	**60**	P			**Pb**	**19 29 27.4**	**+0.1**
AGG	**Agios Georgios**	**1.73**	**62**	P			**Pb**	**19 29 29.7**	**0.0**
AGG				AML	AML		19 29 60.0		
	comp=N,299μm,0.9s								
AGG				AML	AML		19 30 09.3		
	comp=E,263μm,0.5s								
VLX	**Vlachokerasia**	**1.81**	**118**	P			**Pb**	**19 29 31.3**	**+0.1**
AXAR	**Agios Charalam**	**1.87**	**73**	P			**Pb**	**19 29 31.9**	**-0.3**
AXAR				AML	AML		19 30 10.7		
	comp=N,530μm,0.5s								
AXAR				AML	AML		19 30 13.3		
	comp=E,625μm,0.7s								
LTK	**Loutraki**	**2.06**	**95**	P			**Pb**	**19 29 34.5**	**-0.9**
VIL2	**Platees**	**2.28**	**90**	P			**Pb**	**19 29 38.0**	**-1.2**
DID	**Didima**	**2.38**	**107**	P			**Pn**	**19 29 38.4**	**+1.2**

KRNET ***29*** *19:41:52.7±0.1, 39.°03N×77.°03E, mb3.2*
NNC ***29*** *19:41:55.3±2.3, 39.°51N×77.°55E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=15.4km s-min=12.3km az=162.0*
SOME ***29*** *19:41:57.4, 39.°67N×77.°35E, h0km*
ISC 29 19:41:52.3±2.6, 39.°1N±0.°1×77.°49E±0.°06, h16km, n35, σ2§18/60, 19C-16D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NRN	**Naryn**	**2.63**	**335**	⇑*iP*			**Pn**	**19 42 36.3**	**+1.9**
	baz=41								
NRN				⇑*iS*			**Sn**	**19 43 07.9**	**+1.7**
	baz=41								
KDJ	**Kajisay**	**3.07**	**356**	⇓*eP*			**Pn**	**19 42 43.8**	**+3.4**
	baz=2.0								
KDJ				⇓*iS*			**Sb**	**19 43 22.1**	**-2.0**
	baz=2.0								
ULHL	**Ulahol**	**3.32**	**344**	⇓*iP*			**Pn**	**19 42 46.5**	**+2.7**
	baz=50								
ULHL				⇓*iS*			**Sn**	**19 43 25.8**	**+2.8**
	baz=50								
KZA	**Kyzart**	**3.46**	**331**	⇑*iP*			**Pn**	**19 42 48.1**	**+2.1**
	baz=36								
KZA				⇑*iS*			**Sn**	**19 43 28.3**	**+1.4**
	baz=36								
PRZ	**Przheval'sk**	**3.49**	**11**	⇓*iP*			**Pb**	**19 42 51.2**	**-2.6**
	baz=17								
PRZ				⇓*iS*			**Sb**	**19 43 34.0**	**-1.9**
	baz=17								
BOOM	**Boomskoye usch**	**3.62**	**341**	⇑*iP*			**Pn**	**19 42 50.8**	**+2.9**
	baz=47								
BOOM				⇑*iS*			**Sn**	**19 43 32.9**	**+2.5**
	baz=47								
ARLS	**Aral**	**3.70**	**320**	⇓*iP*			**Pn**	**19 42 50.0**	**+1.1**
	baz=25								
ARLS				⇓*iS*			**Sn**	**19 43 31.7**	**-0.6**
	baz=25								
ANVS	**Anan'yevo**	**3.72**	**2**	⇓*iP*			**Pn**	**19 42 53.7**	**+4.4**
	baz=7.0								
ANVS				⇓*iS*			**Sn**	**19 43 37.9**	**+5.0**
	baz=7.0								
UCH	**Uchtor**	**3.89**	**325**	⇑*iP*			**Pn**	**19 42 53.8**	**+1.9**
	baz=30								
UCH				⇑*iS*			**Sn**	**19 43 38.1**	**+0.7**
	baz=30								
TNSS	**Tian-Shan**	**3.99**	**354**	*eP*			**Pb**	**19 43 01.1**	**-1.4**
	4.2nm,0.1s								
TNSS				*eS*			**Sb**	**19 43 47.0**	**-3.8**
	6.3nm,0.1s								
TNSS	**Tian-Shan**	**3.99**	**354**	Pg			**Pb**	**19 43 01.8**	**-0.7**
	8.6nm,0.6s								
TNSS				Lg			Lg	19 43 49.9	
	12nm,0.7s								
SATY	**Saty**	**4.05**	**10**	*eP*			**Pb**	**19 43 02.3**	**-1.1**
	5.5nm,0.2s								
SATY				*eS*			**Sb**	**19 43 48.9**	**-3.2**
	10nm,0.4s								
SATY	**Saty**	**4.05**	**10**	Pg			**Pb**	**19 43 01.9**	**-1.5**
	7.0nm,0.6s								
SATY				Lg			Lg	19 43 50.1	
	10nm,0.9s								
KBK	**Karagaybulak**	**4.08**	**333**	⇑*iP*			**Pn**	**19 42 56.5**	**+2.3**
	baz=37								
KBK				⇑*iS*			**Sn**	**19 43 43.0**	**+1.4**
	baz=37								
MDOK	**Medeo**	**4.11**	**355**	*eP*			**Pb**	**19 43 02.6**	**-1.8**
	6.9nm,0.4s								
MDOK				*eS*			**Sb**	**19 43 49.8**	**-4.1**
	6.6nm,0.4s								
MDOK	**Medeo**	**4.11**	**355**	Pg			**Pb**	**19 43 02.1**	**-2.3**
	11nm,0.9s								
MDOK				⇑Lg			Lg	19 43 53.7	
	21nm,0.8s								
MDOK	**Medeo**	**4.11**	**355**	Pg			**Pb**	**19 43 02.6**	**-1.8**
	5.3nm,0.6s								
MDOK				Lg			Lg	19 43 51.3	
	24nm,0.8s								
ARSB	**Arslanbob**	**4.13**	**305**	⇑*iP*			**Pn**	**19 42 55.4**	**+0.5**
	baz=8.0								
ARSB				⇑*iS*			**Sn**	**19 43 40.4**	**-2.5**
	baz=8.0								
KST	**Kastek**	**4.14**	**344**	*eP*			**Pb**	**19 43 05.0**	**+0.1**
	2.4nm,0.2s								
KST				*eS*			**Sb**	**19 43 53.4**	**-1.4**
	5.8nm,0.3s								
KST	**Kastek**	**4.14**	**344**	Pg			**Pb**	**19 43 04.2**	**-0.7**
	2.2nm,0.9s								
KST				Lg			Lg	19 43 54.3	
	4.4nm,0.9s								
AML	**Almayashu**	**4.21**	**318**	⇑*iP*			**Pn**	**19 42 58.0**	**+1.7**
	baz=22								
AML				⇑*iS*			**Sn**	**19 43 45.5**	**+0.1**
	baz=22								
AAK	**Ala-Archa**	**4.23**	**328**	⇑*iP*			**Pn**	**19 42 58.3**	**+2.0**
	baz=33								
AAK				⇑*iS*			**Sn**	**19 43 46.4**	**+0.9**
	baz=33								
AAK	**Ala-Archa**	**4.23**	**328**	⇑Pg			**Pb**	**19 43 05.6**	**-0.9**
	2.1nm,0.5s								
AAK				⇓Lg			Lg	19 43 57.0	
	16nm,0.8s								
UZB	**Uzynbulak**	**4.24**	**15**	*eP*			**Pb**	**19 43 06.9**	**+0.3**
	1.3nm,0.2s								
UZB				*eS*			**Sb**	**19 43 56.6**	**-1.0**
	16nm,0.4s								
FRU1	**Bishkek**	**4.33**	**331**	⇓*iP*			**Pn**	**19 42 59.2**	**+1.7**
	baz=35								
FRU1				⇓*iS*			**Sn**	**19 43 48.2**	**+0.5**
	baz=35								
SHLS	**Shalkode**	**4.35**	**19**	*eP*			**Pg**	**19 43 12.4**	**-3.3**
	6.0nm,0.3s								
SHLS				*eS*			**Sb**	**19 44 06.0**	**+5.2**
	39nm,0.6s								
KURS	**Kuram**	**4.45**

	baz=304							
TWC	**Suao**	**0.51**	**322**	⇓*i*	P	**Pn**	**20 32 38.2**	**-0.4**
	baz=327							
TWC					*e*S	**Sn**	**20 32 45.7**	**-0.6**
	baz=327							
NACB	**Ninganchiao**	**0.55**	**267**	⇓	P	**Pn**	**20 32 38.7**	**-0.4**
	baz=264							
NACB					*e*S	**Sn**	**20 32 47.1**	**-0.1**
	baz=264							
TWD	**Chiawan**	**0.56**	**257**	⇑*i*	P	**Pn**	**20 32 38.9**	**-0.4**
	baz=246							
TWD					S	**Sn**	**20 32 47.5**	**0.0**
	baz=246							
HWA	**Hwalien**	**0.59**	**247**	⇑	P	**Pn**	**20 32 39.6**	**0.0**
	baz=243							
HWA					*e*S	**Sn**	**20 32 49.1**	**+1.0**
	baz=243							
ENLB	**Shoufeng**	**0.62**	**241**	*e*P		**Pn**	**20 32 38.8**	**-1.3**
	baz=231							
ENLB					*e*S	**Sn**	**20 32 48.7**	**-0.2**
	baz=231							
ETLH	**Xiulin Townshi**	**0.65**	**270**	⇓*i*	P	**Pn**	**20 32 40.1**	**-0.5**
	baz=268							
ETLH					*e*S	**Sn**	**20 32 49.5**	**-0.3**
	baz=268							
ILA	**Ilan**	**0.69**	**324**	*e*P		**Pn**	**20 32 41.2**	**+0.2**
	baz=318							
ILA					*e*S	**Sn**	**20 32 52.1**	**+1.6**
	baz=318							
TWE	**Neicheng**	**0.70**	**317**	⇓*i*	P	**Pn**	**20 32 41.2**	**+0.1**
	baz=318							
TWE					S	**Sn**	**20 32 51.2**	**+0.4**
	baz=318							
ENTT	**Nioudou**	**0.72**	**307**	⇓*i*	P	**Pn**	**20 32 41.4**	**-0.1**
	baz=307							
ENTT					*e*S	**Sn**	**20 32 51.8**	**+0.5**
	baz=307							
JYNG	**Yonagunijimaku**	**0.72**	**70**		P	**Pn**	**20 32 41.3**	**-0.1**
JYNG					S	**Sn**	**20 32 51.8**	**+0.5**
NTC	**Toucheng**	**0.73**	**333**		P	**Pn**	**20 32 41.7**	**+0.2**
	baz=343							
NTC					*e*S	**Sn**	**20 32 51.2**	**-0.2**
	baz=343							
NDT	**Datong Townshi**	**0.74**	**302**	⇓*i*	P	**Pn**	**20 32 41.6**	**-0.1**
	baz=298							
NDT					S	**Sn**	**20 32 52.0**	**+0.3**
	baz=298							
SLBB	**Yuanshan**	**0.75**	**317**	⇓*i*	P	**Pn**	**20 32 42.1**	**+0.3**
	baz=313							
SLBB					*e*S	**Sn**	**20 32 52.1**	**+0.1**
	baz=313							
NNSB	**Datong**	**0.78**	**287**	⇓	P	**Pn**	**20 32 42.0**	**-0.3**
	baz=285							
NNSB					*e*S	**Sn**	**20 32 52.6**	**-0.2**
	baz=285							
NNSH	**Datong**	**0.78**	**287**	⇓*i*	P	**Pn**	**20 32 41.9**	**-0.4**
	baz=285							
NNSH					S	**Sn**	**20 32 52.5**	**-0.3**
	baz=285							
YOJ	**Yonaguni jima**	**0.78**	**71**	*e*P		**Pn**	**20 32 42.3**	**0.0**
	baz=73							
YOJ					*e*S	**Sn**	**20 32 53.4**	**+0.5**
	baz=73							
YOJ	**Yonaguni jima**	**0.78**	**71**		P	**Pn**	**20 32 42.2**	**0.0**
YOJ					S	**Sn**	**20 32 53.3**	**+0.5**
NNS	**Nan Shan**	**0.79**	**287**	⇓*i*	P	**Pn**	**20 32 42.1**	**-0.4**
	baz=286							
NNS					*e*S	**Sn**	**20 32 52.6**	**-0.5**
	baz=286							
ESL	**Shilin**	**0.80**	**241**	⇑*i*	P	**Pn**	**20 32 41.8**	**-0.7**
	baz=238							
ESL					*e*S	**Sn**	**20 32 52.6**	**-0.7**
	baz=238							
TWB1	**Santiao Chiao**	**0.82**	**347**		P	**Pn**	**20 32 42.2**	**-0.6**
	baz=348							
TWB1					*e*S	**Sn**	**20 32 52.6**	**-1.1**
	baz=348							
TIPB	**Shuangxi**	**0.83**	**336**	*e*P		**Pn**	**20 32 42.9**	**-0.1**
	baz=344							
TIPB					*e*S	**Sn**	**20 32 53.0**	**-1.1**
	baz=344							
NWLT	**Wulai**	**0.85**	**312**	⇓*i*	P	**Pn**	**20 32 43.3**	**+0.1**
	baz=302							
NWLT					*e*S	**Sn**	**20 32 54.9**	**+0.4**
	baz=302							
WHF	**Hehuan Shan**	**0.85**	**266**		P	**Pn**	**20 32 43.2**	**-0.5**
	baz=255							
WHF					*e*S	**Sn**	**20 32 54.8**	**-0.4**
	baz=255							
YHNB	**Yeheng**	**0.88**	**302**	⇓*i*	P	**Pn**	**20 32 43.7**	**0.0**
	baz=301							
YHNB					*e*S	**Sn**	**20 32 54.8**	**-0.5**
	baz=301							
EGFH	**Guangfu**	**0.89**	**233**	⇑*i*	P	**Pn**	**20 32 43.0**	**-0.7**
	baz=224							
EGFH					*e*S	**Sn**	**20 32 55.2**	**-0.2**
	baz=224							
NSK	**Sanguang**	**0.90**	**301**	⇓*i*	P	**Pn**	**20 32 43.8**	**-0.1**
	baz=301							
NSK					S	**Sn**	**20 32 55.2**	**-0.6**
	baz=301							
TWT	**Tachien**	**0.94**	**273**	*e*P		**Pn**	**20 32 45.0**	**+0.5**
	baz=271							
TWT					*e*S	**Sn**	**20 32 57.1**	**+0.3**
	baz=271							
NWF	**Wu-fen Shan**	**0.94**	**336**		P	**Pn**	**20 32 44.3**	**-0.2**
	baz=349							
NWF					*e*S	**Sn**	**20 32 55.9**	**-0.9**
	baz=349							
WFSB	**Wu-fen Shan**	**0.94**	**336**	*e*P		**Pn**	**20 32 44.3**	**-0.1**
	baz=348							
WFSB					*e*S	**Sn**	**20 32 55.7**	**-1.0**
	baz=348							
CHGB	**Renai**	**0.95**	**261**		P	**Pn**	**20 32 44.6**	**-0.2**
	baz=251							
CHGB					*e*S	**Sn**	**20 32 56.5**	**-0.6**
	baz=251							
TDCB	**Techi**	**0.95**	**273**		P	**Pn**	**20 32 44.8**	**+0.1**
	baz=271							
TDCB					*e*S	**Sn**	**20 32 56.9**	**-0.2**
	baz=271							
TWA	**Mucha**	**0.95**	**324**		P	**Pn**	**20 32 44.9**	**+0.3**
	baz=324							
TWA					*e*S	**Sn**	**20 32 58.1**	**+1.1**
	baz=324							
OWD	**Renai**	**0.97**	**255**	*e*P		**Pn**	**20 32 44.7**	**-0.2**
	baz=253							
OWD					*e*S	**Sn**	**20 32 56.8**	**-0.8**
	baz=253							
NHDH	**Xindian Distri**	**0.97**	**321**	⇓*i*	P	**Pn**	**20 32 45.3**	**+0.5**
	baz=321							
NHDH					S	**Sn**	**20 32 57.9**	**+0.5**
	baz=321							
TATO	**Taipei**	**1.00**	**320**	*e*P		**Pn**	**20 32 45.6**	**+0.3**
	baz=320							
TATO					*e*S	**Sn**	**20 32 58.7**	**+0.6**
	baz=320							
HGSD	**Ruisui**	**1.00**	**225**	⇑	P	**Pn**	**20 32 44.7**	**-0.6**
	baz=219							
HGSD					*e*S	**Sn**	**20 32 57.3**	**-0.9**
	baz=219							
TAP	**Taipei**	**1.04**	**323**	*e*P		**Pn**	**20 32 46.3**	**+0.5**
	baz=323							
TAP					*e*S	**Sn**	**20 32 59.4**	**+0.3**
	baz=323							
EHY	**Hungye**	**1.06**	**229**	*e*P		**Pn**	**20 32 45.2**	**-0.9**
	baz=227							
EHY					*e*S	**Sn**	**20 32 58.6**	**-1.1**
	baz=227							
VWDT	**VWDT**	**1.07**	**245**	⇑	P	**Pn**	**20 32 46.2**	**+0.1**
	baz=234							
VWDT					*e*S	**Sn**	**20 32 59.7**	**-0.1**
	baz=234							
WLTB	**Daxi**	**1.07**	**307**	*e*P		**Pn**	**20 32 46.9**	**+0.7**
	baz=298							
WLTB					*e*S	**Sn**	**20 33 01.7**	**+1.8**
	baz=298							
YM01	**YM01**	**1.09**	**329**	*e*P		**Pn**	**20 32 46.3**	**-0.3**
	baz=341							
YM01					*e*S	**Sn**	**20 32 59.8**	**-0.7**
	baz=341							
YM10	**YM10**	**1.11**	**329**	*e*P		**Pn**	**20 32 46.6**	**-0.2**
	baz=340							
YM10					*e*S	**Sn**	**20 32 59.5**	**-1.4**
	baz=340							
YM11	**YM11**	**1.11**	**329**	*e*P		**Pn**	**20 32 46.5**	**-0.3**
	baz=340							
YM11					*e*S	**Sn**	**20 32 59.8**	**-1.2**
	baz=340							
YM08	**YM08**	**1.12**	**331**	*e*P		**Pn**	**20 32 46.6**	**-0.3**
	baz=341							
YM08					*e*S	**Sn**	**20 32 59.8**	**-1.4**
	baz=341							
YM03	**YM03**	**1.14**	**328**	*e*P		**Pn**	**20 32 47.5**	**+0.3**
	baz=339							
YM03					*e*S	**Sn**	**20 33 01.4**	**-0.3**
	baz=339							
TWS1	**Kuangyinshan**	**1.14**	**322**	P		**Pn**	**20 32 47.5**	**+0.4**
	baz=328							
TWS1					*e*S	**Sn**	**20 33 02.1**	**+0.6**
	baz=328							
WHP	**Taichung City**	**1.15**	**274**	⇓*i*	P	**Pn**	**20 32 48.0**	**+0.7**
	baz=266							
WHP					*e*S	**Sn**	**20 33 02.4**	**+0.5**
	baz=266							
ANP	**Anpu**	**1.15**	**328**	*e*P		**Pn**	**20 32 47.3**	**-0.1**
	baz=339							
ANP					*e*S	**Sn**	**20 33 01.5**	**-0.6**
	baz=339							
YULB	**Yu-li**	**1.16**	**226**	⇑*e*P		**Pn**	**20 32 46.6**	**-0.8**
	baz=236							
YULB					*e*S	**Sn**	**20 33 00.4**	**-1.7**
	baz=236							
LIOB	**Emei**	**1.16**	**292**	⇓	P	**Pn**	**20 32 48.3**	**+0.8**
	baz=291							
LIOB					*e*S	**Sn**	**20 33 03.0**	**+0.9**
	baz=291							
NSTT	**Nanjuang**	**1.17**	**291**	⇓	P	**Pn**	**20 32 48.2**	**+0.7**
	baz=290							
NSTT					*e*S	**Sn**	**20 33 03.3**	**+0.9**
	baz=290							
DPDB	**Guoxing**	**1.18**	**262**	⇓*e*P		**Pn**	**20 32 48.1**	**+0.4**
	baz=255							
DPDB					*e*S	**Sn**	**20 33 02.9**	**+0.3**
	baz=255							
TWF1	**Yuli**	**1.19**	**224**	P		**Pn**	**20 32 47.1**	**-0.7**
	baz=234							
TWF1					*e*S	**Sn**	**20 33 01.9**	**-0.9**
	baz=234							
NCU	**National Centr**	**1.19**	**310**	*e*P		**Pn**	**20 32 47.6**	**-0.3**
	baz=309							
NCU					*e*S	**Sn**	**20 33 04.0**	**+1.1**
	baz=309							
NCUH	**Zhongli**	**1.19**	**310**	P		**Pn**	**20 32 48.2**	**+0.3**
	baz=309							
TWY	**Chenhua**	**1.19**	**333**	*e*P		**Pn**	**20 32 48.3**	**+0.4**
	baz=344							
TWY					*e*S	**Sn**	**20 33 02.8**	**-0.1**
	baz=344							
SSLB	**Suanglung**	**1.21**	**250**	*e*P		**Pn**	**20 32 47.8**	**-0.4**
	baz=249							
SSLB					*e*S	**Sn**	**20 33 02.6**	**-0.8**
	baz=249							
SMLT	**Sun Moon Lake**	**1.23**	**255**	P		**Pn**	**20 32 48.9**	**+0.4**
	baz=247							
SMLT					*e*S	**Sn**	**20 33 04.2**	**+0.3**
	baz=247							
SBCB	**Hsinchu**	**1.25**	**298**	*e*P		**Pn**	**20 32 49.1**	**+0.5**
	baz=297							
TYC	**Yuchr**	**1.26**	**256**	*e*P		**Pn**	**20 32 49.1**	**+0.3**
	baz=248							
TYC					*e*S	**Sn**	**20 33 04.4**	**-0.2**
	baz=248							
HSN	**Hsinchu**	**1.27**	**298**	*e*P		**Pn**	**20 32 48.8**	**-0.1**
	baz=299							
FULB	**Fuli**	**1.30**	**220**	*e*P		**Pn**	**20 32 48.7**	**-0.8**
	baz=209							
FULB					*e*S	**Sn**	**20 33 04.8**	**-0.8**
	baz=209							
TWQ1	**Liyutan**	**1.31**	**276**	⇓	P	**Pn**	**20 32 50.5**	**+1.0**
	baz=275							
TWQ1					*e*S	**Sn**	**20 33 07.8**	**+2.1**
	baz=275							
NMLH	**Miaoli**	**1.32**	**285**	⇓	P	**Pn**	**20 32 50.6**	**+0.9**
	baz=283							
NMLH					*e*S	**Sn**	**20 33 08.1**	**+1.9**
	baz=283							
NSY	**Sanyi**	**1.33**	**279**	*e*P		**Pn**	**20 32 50.9**	**+1.1**
	baz=278							
NSY					*e*S	**Sn**	**20 33 08.9**	**+2.7**
	baz=278							
WHYT	**Xinyi Township**	**1.33**	**248**	P		**Pn**	**20 32 50.5**	**+0.7**
	baz=247							
WHYT					*e*S	**Sn**	**20 33 06.9**	**+0.5**
	baz=247							
CHKT	**Chengkung**	**1.34**	**215**	*e*P		**Pn**	**20 32 48.9**	**-1.1**
	baz=205							
CHKT					*e*S	**Sn**	**20 33 04.3**	**-2.3**
	baz=205							
YUS	**Yu-Shan**	**1.35**	**238**	*e*P		**Pn**	**20 32 50.2**	**-0.2**
	baz=237							
YUS					*e*S	**Sn**	**20 33 06.9**	**-0.4**
	baz=237							
PTSB	**Yuanli**	**1.38**	**280**	*e*P		**Pn**	**20 32 51.0**	**+0.5**
	baz=279							
PTSB					*e*S	**Sn**	**20 33 09.5**	**+1.9**
	baz=279							
TCU	**Taichung**	**1.39**	**268**	*e*P		**Pn**	**20 32 51.9**	**+1.3**
	baz=279							
TCU					*e*S	**Sn**	**20 33 10.2**	**+2.4**
	baz=279							
WJS	**Zhushan**	**1.40**	**254**	*e*P		**Pn**	**20 32 52.2**	**+1.4**
	baz=249							
WJS					*e*S	**Sn**	**20 33 10.3**	**+2.3**
	baz=249							
IRIF	**Iriomote-Funau**	**1.40**	**85**		P	**Pn**	**20 32 50.7**	**-0.1**
IRIF					S	**Sn**	**20 33 08.3**	**+0.2**
PCYT	**Pengchaiyu**	**1.42**	**355**	*e*P		**Pn**	**20 32 50.6**	**-0.4**
	baz=347							
WNT	**Mingjian**	**1.42**	**257**	*e*P		**Pn**	**20 32 52.6**	**+1.6**
	baz=256							
WNT					*e*S	**Sn**	**20 33 10.8**	**+2.3**
	baz=256							
WDJ	**Dajia District**	**1.43**	**276**	*e*P		**Pn**	**20 32 51.9**	**+0.8**
	baz=275							
WDJ					*e*S	**Sn**	**20 33 10.4**	**+1.7**
	baz=275							
ALS	**Alishan**	**1.45**	**242**	*e*P		**Pn**	**20 32 52.6**	**+0.9**
	baz=233							
ALS					*e*S	**Sn**	**20 33 09.9**	**+0.2**
	baz=233							
HATJ	**Hateruma jima**	**1.48**	**96**		P	**Pn**	**20 32 52.5**	**+0.8**
HATJ					*e*S	**Sn**	**20 33 11.1**	**+1.3**
ELDTW	**Lidau**	**1.48**	**227**	*e*P		**Pn**	**20 32 51.2**	**-0.8**
	baz=226							
ELDTW					*e*S	**Sn**	**20 33 08.8**	**-1.4**
	baz=226							
WCHH	**Zhanghua**	**1.50**	**265**	*e*P		**Pn**	**20 32 53.2**	**+1.1**
	baz=265							
WCHH					*e*S	**Sn**	**20 33 12.8**	**+2.3**
	baz=265							
CHN5	**Tsauling**	**1.52**	**247**	*e*P		**Pn**	**20 32 53.6**	**+1.2**
	baz=237							
CHN5					*e*S	**Sn**	**20 33 13.0**	**+1.9**
	baz=237							
WGK	**Gukeng**	**1.58**	**251**	*e*P		**Pn**	**20 32 55.2**	**+2.0**
	baz=240							
WGK					*e*S	**Sn**	**20 33 15.2**	**+2.7**
	baz=240							
WDLH	**Douliu**	**1.60**	**252**	*e*P		**Pn**	**20 32 55.1**	**+1.5**
	baz=240							
WDLH					*e*S	**Sn**	**20 33 14.5**	**+1.5**
	baz=240							
TWH	**Lutao**	**1.63**	**204**	*e*P		**Pn**	**20 32 52.9**	**-1.0**
	baz=203							
TWH					*e*S	**Sn**	**20 33 11.4**	**-2.3**
	baz=203							
JKRS	**Kuro-shima**	**1.65**	**89**		P	**Pn**	**20 32 54.7**	**+0.5**
JKRS					S	**Sn**	**20 33 14.9**	**+0.7**
STYT	**Tauyuan**	**1.68**	**232**	*e*P		**Pn**	**20 32 55.6**	**+0.9**
	baz=224							
STYT					*e*S	**Sn**	**20 33 16.3**	**+1.3**
	baz=224							
TPUB	**Ta-pu**	**1.70**	**238**	*e*P		**Pn**	**20 32 56.4**	**+1.5**
	baz=238							
TPUB					*e*S	**Sn**	**20 33 17.1**	**+1.8**
	baz=238							
CHN4	**Tsaushan**	**1.70**	**240**	*e*P		**Pn**	**20 32 56.6**	**+1.8**
	baz=230							
CHN4					*e*S	**Sn**	**20 33 17.8**	**+2.4**
	baz=230							
RLNB	**Erlin**	**1.71**	**260**	*e*P		**Pn**	**20 32 56.1**	**+1.1**
	baz=259							
RLNB					*e*S	**Sn**	**20 33 17.4**	**+1.8**
	baz=259							
TWGBT	**Beinan**	**1.72**	**217**	*e*P		**Pn**	**20 32 54.1**	**-1.1**
	baz=216							
TWGBT					*e*S	**Sn**	**20 33 14.1**	**-1.9**
	baz=216							
TWG	**Pinlang**	**1.73**	**217**	*e*P		**Pn**	**20 32 54.2**	**-1.0**
	baz=216							
TWG					*e*S	**Sn**	**20 33 14.2**	**-1.9**
	baz=216							
WTP	**Ta-pu**	**1.74**	**237**	*e*P		**Pn**	**20 32 56.7**	**+1.3**
	baz=236							
WTP					*e*S	**Sn**	**20 33 18.4**	**+1.9**
	baz=236							
CHY	**Chiayi**	**1.77**	**247**	*e*P		**Pn**	**20 32 57.4**	**+1.6**
	baz=237							
CHY					*e*S	**Sn**	**20 33 19.6**	**+2.4**
	baz=237							
JIJ	**Ishigaki jima**	**1.78**	**85**		P	**Pn**	**20 32 55.6**	**-0.4**
JIJ					S	**Sn**	**20 33 17.1**	**-0.3**
WTCT	**Ta-ch'eng**	**1.79**	**259**	*e*P		**Pn**	**20 32 57.0**	**+1.0**
	baz=259							
WTCT					*e*S	**Sn**	**20 33 19.3**	**+1.8**
	baz=259							
TWK	**Hsinying**	**1.83**	**239**	*e*P		**Pn**	**20 32 58.5**	**+1.8**
	baz=239							
TWK					*e*S	**Sn**	**20 33 21.2**	**+2.7**
	baz=239							
CHN1	**Nanshi**	**1.84**	**237**	*e*P		**Pn**	**20 32 58.3**	**+1.5**
	baz=236							
CHN1					*e*S	**Sn**	**20 33 20.6**	**+1.7**
	baz=236							
SNST	**Tainan City**	**1.84**	**238**	*e*P		**Pn**	**20 32 58.8**	**+2.0**
	baz=238							
SNST					*e*S	**Sn**	**20 33 21.1**	**+2.1**
	baz=238							
SGST	**Jiashian**	**1.86**	**233**	*e*P		**Pn**	**20 32 57.9**	**+0.9**
	baz=233							
SGST					*e*S	**Sn**	**20 33 20.8**	**+1.5**
	baz=233							
SLGT	**Liugui**	**1.87**	**230**	*e*P		**Pn**	**20 32 58.4**	**+1.3**
	baz=238							
SLGT					*e*S	**Sn**	**20 33 22.1**	**+2.5**
	baz=238							
WLGB	**Puzi**	**1.88**	**248**	*e*S		**Sn**	**20 33 22.8**	**+2.9**
	baz=236							
WSF	**Szhu**	**1.90**	**253**	*e*P		**Pn**	**20 32 58.7**	**+1.2**
	baz=264							
WSF					*e*S	**Sn**	**20 33 22.9**	**+2.7**
	baz=264							
JISG	**Ishigakijimahi**	**1.96**	**78**		P	**Pn**	**20 32 58.2**	**-0.2**
JISG					*e*S	**Sn**	**20 33 21.1**	**-0.7**
ECL	**Taimali**	**1.97**	**216**	*e*P		**Pn**	**20 32 56.8**	**-1.8**
	baz=215							
SSD	**Sandimen**	**2.05**	**225**	*e*P		**Pn**	**20 33 00.0**	**+0.4**
	baz=225							
SSD					*e*S	**Sn**	**20 33 25.5**	**+1.5**
	baz=225							
TWM1	**Shoushan**	**2.13**	**230**	*e*P		**Pn**	**20 33 04.7**	**+3.9**
	baz=229							
MASBT	**Mashibuluo**	**2.14**	**222**	*e*P		**Pn**	**20 33 01.3**	**+0.3**
	baz=222							
MASBT					*e*S	**Sn**	**20 33 27.7**	**+1.4**
	baz=222							
EAST	**Anshuo**	**2.20**	**215**	*e*P		**Pn**	**20 33 00.0**	**-1.7**
	baz=206							
LAY	**Lan-yu**	**2.24**	**196**	*e*P		**Pn**	**20 33 01.7**	**-0.6**
	baz=195							
LAY					*e*S	**Sn**	**20 33 26.3**	**-2.5**
	baz=195							
JTJ	**Tarama**	**2.32**	**79**		P	**Pn**	**20 33 03.8**	**+0.4**
JTJ					S	**Sn**	**20 33 30.6**	**-0.1**
SCZT	**Fangliau**	**2.33**	**219**	*e*P		**Pn**	**20 33 04.7**	**+1.2**
	baz=214							
SCZT					*e*S	**Sn**	**20 33 33.6**	**+2.5**
	baz=214							
PHUB	**P'eng-hu**	**2.50**	**254**	*e*P		**Pn**	**20 33 05.5**	**-0.4**
	baz=254							
PNG	**Penghu**	**2.50**	**256**	*e*P		**Pn**	**20 33 05.6**	**-0.2**
	baz=256							
PNG					*e*S	**Sn**	**20 33 35.1**	**-0.1**
	baz=256							
WDGT	**Dungji**	**2.51**	**248**	*e*P		**Pn**	**20 33 06.6**	**+0.7**
	baz=248							
PTTC	**Pingtan**	**2.55**	**301**	*e*P		**Pn**	**20 33 05.4**	**-1.2**
	baz=298							
PTTC					*e*S	**Sn**	**20 33 33.4**	**-3.0**
	baz=298							
VWUC	**VWUC**	**2.62**	**288**	*e*P		**Pn**	**20 33 06.6**	**-0.9**
	baz=286							
VWUC					*e*S	**Sn**	**20 33 35.3**	**-2.8**
	baz=286							
JIRB	**Irabujima**	**2.78**	**77**		P	**Pn**	**20 33 10.2**	**+0.5**
JIRB					*e*S	**Sn**	**20 33 42.6**	**+0.6**
MATB	**Ma-tsu**	**2.81**	**314**	*e*P		**Pn**	**20 33 09.2**	**-1.0**
	baz=312							
JIKM	**Ikemajima**	**2.87**	**75**		P	**Pn**	**20 33 11.3**	**+0.4**
JIKM					*e*S	**Sn**	**20 33 45.2**	**+1.1**
JMJ2	**Miyako jima3**	**2.90**	**79**		P	**Pn**	**20 33 12.4**	**+1.1**
JMJ2					S	**Sn**	**20 33 46.3**	**+1.3**
PTMZ	**Houxiangcun**	**2.92**	**287**	*e*P		**Pn**	**20 33 10.7**	**-0.9**
	baz=285							
PTMZ					*e*S	**Sn**	**20 33 42.3**	**-3.2**
	baz=285							
JOGS	**Gusukube**	**2.97**	**79**	*e*S		**Sn**	**20 33 47.5**	**+0.7**
LYJJ	**Jianjiangzhen**	**3.21**	**317**	*e*P		**Pn**	**20 33 14.5**	**-1.1**
	baz=315							
XPSS	**Dashiqiu**	**3.26**	**327**	*e*P		**Pn**	**20 33 15.5**	**-0.8**
	baz=335							
MHZQ	**Yeshan**	**3.43**	**304**	*e*P		**Pn**	**20 33 17.4**	**-1.3**
	baz=302							
KNMB	**Chin-men Tao**	**3.48**	**275**	*e*P		**Pn**	**20 33 18.3**	**-1.1**
	baz=264							
AXDP	**Jialang**	**3.91**	**281**	*e*P		**Pn**	**20 33 24.1**	**-1.1**
	baz=280							
ZPLA	**Ao Xicun**	**4.08**	**267**	*e*P		**Pn**	**20 33 26.7**	**-0.8**
	baz=266							
ZZJH	**Jiuhuzhen**	**4.17**	**275**	*e*P		**Pn**	**20 33 28.4**	**-0.5**
	baz=265							

*NNC **29** 20:44:59.8±13.0, 39.07N×67.62E, h0km, mb3.4, mpv3.1, Error ellipse: s-maj=118.9km s-min=77.8km az=178.0*
ISC 29 20:44:55.1±3.5, 38.7N±0.2×67.6OE±0.0, h10km, n4, σ4º16/6, 3C-2D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NUT	**Nurota**	**2.40**	**322**	*i*	P	**Pn**	**20 45 30.9**	**-3.6**
NUT				*i*	S	**Sg**	**20 46 15.8**	**+3.6**
KK31	**Karatay Array**	**4.95**	**26**	⇓	Pg	**Pg**	**20 46 26.3**	**-3.6**
	1.2nm,0.4s,baz=217,slow=16,SNR=6.3							
KK31				⇑	Lg	Lg	20 47 28.9	
	4.9nm,0.5s,baz=213,slow=29,SNR=7.9							
AAK	**Ala-Archa**	**6.57**	**51**	⇑	Pn	**Pn**	**20 46 33.5**	**+1.6**
	1.1nm,0.5s							
AAK				⇓	Sn	**Sn**	**20 47 46.5**	**-0.4**
	1.5nm,0.5s							
AB31	**Akbulak array**	**11.93**	**335**	⇑	P	**Pn**	**20 47 48.3**	**+3.2**
	0.2nm,0.3s,baz=168,slow=11,SNR=5.2							

*IDC **29** 20:53:08.7±1.0, 38.60N×20.46E, h0km, mb3.7/9, mb1 3.7/13, mb1mx3.5/43, mbtmp3.6/13, ML3.3/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/58, Error ellipse: s-maj=18.3km s-min=17.5km az=6.0*
*ATH **29** 20:53:08.8, 38.39N×20.45E, h2km±2km, ML3.4/17, Error ellipse: s-maj=3.0km s-min=0.8km az=265.0*
*THE **29** 20:53:09.1, 38.38N×20.45E, h3km±3km, ML3.5/13, Error ellipse: s-maj=3.3km s-min=0.3km az=91.0*
ISC 29 20:53:08.7±0.8, 38.41N±0.02×20.42E±0.02, h8km±5km, n105, σ1º47/151, mb3.7/9, Greece

| Code | Station Name |

KEF2				S		Sg	20 53 17.0	+0.2
VLS	**Valsamata**	**0.26**	**150**	P		Pg	20 53 13.4	-0.5
VLS				S		Sg	20 53 17.2	-0.3
	24μm,0.5s							
VLS	**Valsamata**	**0.26**	**150**	P		Pg	20 53 13.4	-0.5
EVGI	**Lefkada island**	**0.28**	**41**	P		Pg	20 53 14.8	+0.4
EVGI				S		Sg	20 53 19.1	+1.0
EVGI	**Lefkada island**	**0.28**	**41**	P		Pg	20 53 14.7	+0.4
EVGI				S		Sg	20 53 19.4	+1.3
KFL	**Anninata**	**0.41**	**135**	P		Pg	20 53 16.1	-0.6
KFL				S		Sg	20 53 22.4	+0.2
	15μm,0.4s							
KFL	**Anninata**	**0.41**	**135**	P		Pg	20 53 16.2	-0.6
KFL				S		Sg	20 53 22.2	0.0
KFL				AML	AML		20 53 23.0	
	comp=N,24518μm,0.4s							
KFL				AML	AML		20 53 23.1	
	comp=E,35737μm,0.3s							
LKD2	**Lefkada island**	**0.43**	**26**	P		Pg	20 53 17.3	+0.3
LKD2				S		Sg	20 53 24.1	+1.5
	comp=E,5μm,0.6s							
LKD2	**Lefkada island**	**0.43**	**26**	P		Pg	20 53 17.3	+0.3
LKD2				S		Sg	20 53 23.9	+1.2
LKD2				AML	AML		20 53 24.8	
	comp=E,9525μm,0.7s							
LKD2				AML	AML		20 53 25.1	
	comp=N,11355μm,0.5s							
TSLK	**Tsoukalades, L**	**0.46**	**24**	P		Pg	20 53 18.0	+0.4
TSLK				S		Sb	20 53 25.6	-0.4
	comp=N,7μm,0.7s							
TSLK	**Tsoukalades, L**	**0.46**	**24**	P		Pg	20 53 18.0	+0.4
TSLK				S		Sb	20 53 25.3	-0.7
TSLK				AML	AML		20 53 27.0	
	comp=E,15128μm,0.7s							
TSLK				AML	AML		20 53 33.5	
	comp=N,13612μm,0.6s							
AST1	**Astakos**	**0.54**	**75**	P		Pg	20 53 19.0	-0.2
AST1				S		Sg	20 53 26.9	+0.6
VLMS	**Volimes, Zakyn**	**0.56**	**160**	P		Pg	20 53 19.0	-0.6
VLMS				S		Sg	20 53 27.1	+0.2
VLMS				AML	AML		20 53 28.3	
	comp=N,29100μm,0.8s							
VLMS				AML	AML		20 53 31.1	
	comp=E,17670μm,0.6s							
PDO	**Prodromos**	**0.63**	**72**	P		Pg	20 53 20.5	-0.4
PDO				S		Sg	20 53 29.7	+0.7
PDO	**Prodromos**	**0.63**	**72**	P		Pg	20 53 20.4	-0.4
PDO				S		Sg	20 53 30.0	+0.9
ZAK2	**Zakynthos**	**0.72**	**148**	P		Pg	20 53 22.4	-0.2
ZAK2				S		Sb	20 53 33.3	-0.3
KRI1	**kERI**	**0.81**	**157**	P		Pg	20 53 23.1	-1.1
KRI1				S		Sb	20 53 35.8	-0.2
PVO	**Paravola**	**0.89**	**76**	P		Pg	20 53 25.6	-0.2
PVO				S		Sb	20 53 38.7	+0.2
	comp=E,3μm,0.6s							
PVO	**Paravola**	**0.89**	**76**	P		Pg	20 53 25.5	-0.4
PVO				S		Sb	20 53 38.4	-0.1
PVO				AML	AML		20 53 42.6	
	comp=N,6989μm,0.6s							
PVO				AML	AML		20 53 46.2	
	comp=E,5392μm,0.5s							
RLS	**Riolos of Patr**	**0.89**	**113**	P		Pg	20 53 24.6	-1.3
RLS				S		Sg	20 53 37.6	+0.1
	comp=E,2μm,0.5s							
RLS	**Riolos of Patr**	**0.89**	**113**	P		Pg	20 53 25.2	-0.7
RLS				S		Sb	20 53 38.3	-0.3
RLS				AML	AML		20 53 46.9	
	comp=N,3581μm,0.5s							
RLS				AML	AML		20 53 53.5	
	comp=E,2735μm,0.6s							
DRO	**Drossia**	**1.11**	**114**	P		Pg	20 53 28.6	-1.5
DRO				S		Sg	20 53 44.2	-0.3
	comp=E,3μm,0.6s							
DRO	**Drossia**	**1.11**	**114**	P		Pg	20 53 29.1	-1.0
DRO				S		Sb	20 53 45.2	+0.3
DRO				AML	AML		20 53 51.2	
	comp=E,4742μm,0.6s							
DRO				AML	AML		20 53 57.3	
	comp=N,5150μm,0.5s							
EFP	**Efpalio**	**1.17**	**88**	P		Pb	20 53 29.4	-1.7
EFP				S		Sb	20 53 46.9	+0.5
	comp=N,2μm,0.5s							
EFP	**Efpalio**	**1.17**	**88**	P		Pb	20 53 30.0	-1.1
EFP				AML	AML		20 53 53.4	
	comp=N,5397μm,0.5s							
EFP				AML	AML		20 53 53.6	
	comp=E,4073μm,0.4s							
ANX	**Ano Chora**	**1.19**	**80**	P		Pb	20 53 30.2	-1.4
ANX				S		Sn	20 53 48.2	-0.1
	comp=E,3μm,0.5s							
ANX	**Ano Chora**	**1.19**	**80**	P		Pb	20 53 30.4	-1.2
ANX				AML	AML		20 53 55.1	
	comp=E,5948μm,0.5s							
ANX				AML	AML		20 53 57.9	
	comp=N,5776μm,0.5s							
EVR	**Evrytania**	**1.20**	**64**	P		Pb	20 53 30.4	-1.4
EVR				S		Sn	20 53 48.9	+0.4
	comp=N,950nm,1.1s							
EVR	**Evrytania**	**1.20**	**64**	P		Pb	20 53 30.9	-0.9
EVR				AML	AML		20 53 58.5	
	comp=N,1989μm,0.8s							
EVR				AML	AML		20 54 00.0	
	comp=E,1493μm,0.8s							
LAKA	**Lakka**	**1.24**	**97**	P		Pn	20 53 30.6	-1.8
LAKA				S		Sb	20 53 48.5	0.0
SERG	**Sergoula**	**1.28**	**89**	P		Pn	20 53 31.7	-1.3
SERG				S		Sn	20 53 51.3	+0.8
	comp=E,2μm,0.6s							
SERG	**Sergoula**	**1.28**	**89**	P		Pn	20 53 32.3	-0.8
SERG				AML	AML		20 53 55.9	
	comp=E,3443μm,0.6s							
SERG				AML	AML		20 53 56.1	
	comp=N,3346μm,0.5s							
JAN	**Janina**	**1.29**	**15**	P		Pg	20 53 34.0	+0.5
JAN	**Janina**	**1.29**	**15**	P		Pb	20 53 33.7	+0.4
JAN				AML	AML		20 53 56.1	
	comp=N,2984μm,0.4s							
JAN				AML	AML		20 53 58.8	
	comp=E,4283μm,0.5s							
TRIZ	**Trizonia**	**1.30**	**91**	P		Pn	20 53 31.7	-1.5
AMT	**Artemida-Makis**	**1.34**	**130**	P		Pn	20 53 33.0	-0.8
AMT	**Artemida-Makis**	**1.34**	**130**	P		Pn	20 53 33.2	-0.5
AMT				AML	AML		20 54 03.1	
	comp=E,3734μm,0.8s							
AMT				AML	AML		20 54 03.3	
	comp=N,3401μm,1.0s							
KALE	**Kalithea**	**1.35**	**90**	P		Pn	20 53 32.4	-1.6
KALE				S		Sg	20 53 53.1	+1.0
	comp=N,1μm,0.6s							
KALE	**Kalithea**	**1.35**	**90**	P		Pn	20 53 33.1	-0.8
KALE				AML	AML		20 54 00.7	
	comp=E,2157μm,0.6s							
KALE				AML	AML		20 54 04.9	
	comp=N,3422μm,0.6s							
KLV	**Kalavryta, Ach**	**1.41**	**104**	P		Pn	20 53 33.8	-1.0
KLV				S		Sg	20 53 54.5	+0.5
KLV	**Kalavryta, Ach**	**1.41**	**104**	P		Pn	20 53 33.9	-0.8
KLV				AML	AML		20 54 06.1	
	comp=E,1190μm,1.1s							
KLV				AML	AML		20 54 11.1	
	comp=N,1066μm,0.7s							
AGG	**Agios Georgios**	**1.62**	**67**	P		Pn	20 53 37.9	+0.3
AGG	**Agios Georgios**	**1.62**	**67**	P		Pg	20 53 39.8	+0.1
AGG				AML	AML		20 54 09.6	
	comp=E,1576μm,0.5s							
AGG				AML	AML		20 54 12.4	
	comp=N,1103μm,0.5s							
THL	**Klokotos Trika**	**1.70**	**47**	P		Pg	20 53 41.2	-0.1
ITM	**Ithomi**	**1.71**	**135**	P		Pb	20 53 40.0	-0.4
VLX	**Vlachokerasia**	**1.86**	**123**	P		Pg	20 53 44.2	-0.3
VLX				AML	AML		20 54 18.7	
	comp=N,2298μm,0.9s							
VLX				AML	AML		20 54 28.2	
	comp=E,2087μm,0.8s							
OHR	**Ohrid**	**2.72**	**6**	*i* Pn		Pb	20 53 55.4	-2.2
CGL1	**Ceglie Messapi**	**3.20**	**316**	*e*Pn		Pn	20 54 00.2	+0.9
VAY	**Valandovo**	**3.35**	**29**	*i* Pn		Pb	20 54 05.6	-2.7
MASS	**Massafra**	**3.37**	**312**	*e*Pn		Pn	20 54 03.6	+1.9
STIP	**Stip**	**3.55**	**22**	*i* Pn		Pn	20 54 07.8	+3.6
SG1	**Sgolgore (BA)**	**3.78**	**311**	*e*Pn		Pn	20 54 08.0	+0.7
SG1				S		Sn	20 54 51.7	-0.2
BAI	**Bari**	**3.84**	**316**	*e*Pn		Pn	20 54 09.5	+1.4
DRME	**Dracevica, Mon**	**3.89**	**346**	*e*Pn		Pn	20 54 09.0	+0.1
PDG	**Podgorica**	**4.12**	**348**	*e*Pn		Pn	20 54 11.4	-0.5
HCY	**Herceg Novi**	**4.30**	**341**	*e*Pn		Pn	20 54 13.8	-0.6
TREB	**Trebinje**	**4.59**	**341**	*e*Pn		Pn	20 54 17.7	-0.7
DBRK	**Dubrovnik**	**4.60**	**339**	*e*Pn		Pn	20 54 17.8	-0.8
DBRK					Sn	Sn	20 55 10.0	-2.2
BRY	**Bratogost**	**4.71**	**343**	*e*Pn		Pn	20 54 19.8	-0.5
IDI	**Anoyia**	**4.75**	**130**	Pn		Pn	20 54 24.5	+3.9
	comp=E,0.4nm,0.3s,baz=289,slow=18,SNR=5.6							
IDI					Sn	Sn	20 55 19.2	+3.3
	comp=E,2.1nm,0.3s,baz=325,slow=22,SNR=7.8							
IDI					LR	LR	20 56 43.5	
	comp=E,74nm,19.8s,baz=286,slow=44							
VAE	**Valguarnera**	**4.84**	**261**	Pn		Pn	20 54 23.0	+1.1
	comp=E,0.2nm,0.3s,baz=4.8,slow=12,SNR=2.6							
VAE					Sn	Sn	20 55 16.9	-1.3
	comp=E,2.2nm,0.3s,baz=90,slow=3.2,SNR=5.0							
STON	**Ston**	**4.92**	**336**	*e*Pn		Pn	20 54 22.1	-0.7
STON					Sn	Sn	20 55 16.9	-3.1
STON	**Ston**	**4.92**	**336**	*e*Pn		Pn	20 54 21.9	-1.0
UPM	**Unac-Piva**	**4.93**	**347**	*e*Pn		Pn	20 54 23.8	+0.5
RUDO	**Rudo**	**5.27**	**352**	*e*Pn		Pn	20 54 27.1	-0.7
BBLS	**Lazići**	**5.51**	**352**	*e*Pn		Pn	20 54 31.0	-0.1
MAKA	**Makarska**	**5.52**	**333**	*e*Pn		Pn	20 54 31.3	+0.2
MAKA					Sn	Sn	20 55 32.1	-2.6
DIVS	**Divibare**	**5.70**	**357**	*e*Pn		Pn	20 54 32.8	-0.9
HAPS	**Han Pijesak,BI**	**5.78**	**349**	*e*Pn		Pn	20 54 33.8	-1.1
KIJV	**Kijevo**	**6.36**	**333**	*e*Pn		Pn	20 54 43.0	+0.3
ZIRJ	**Zirje**	**6.37**	**327**	*e*Pn		Pn	20 54 42.5	-0.3
ZIRJ					Sn	Sn	20 55 50.7	-5.0
MGRS	**Mrkonjic Grad**	**6.51**	**338**	*e*Pn		Pn	20 54 46.1	+1.3
MORI	**Morici**	**6.51**	**328**	*i* Pn		Pn	20 54 45.2	+0.4
MORI					Sn	Sn	20 55 56.3	-2.9
FRGS	**Fruska Gora**	**6.76**	**356**	*e*Pn		Pn	20 54 46.6	-1.7
BLY	**Banja Luka**	**6.79**	**340**	*e*Pn		Pn	20 54 52.3	+3.7
DUGI	**Dugi Otok**	**6.89**	**326**	*e*Pn		Pn	20 54 50.3	+0.3
DUGI					Sn	Sn	20 56 03.6	-5.0
NVLJ	**Novalja**	**7.43**	**328**	*e*Pn		Pn	20 54 57.3	-0.1
NVLJ					Sn	Sn	20 56 17.9	-3.9
MORH	**Mrgy, Hungar**	**7.91**	**351**	*e*Pn		Pn	20 55 03.1	-0.9
CRES	**Cresnjev**	**8.28**	**335**	*e*Pn		Pn	20 55 08.6	-0.5
CEY	**Cerknica**	**8.57**	**331**	*e*Pn		Pn	20 55 12.9	-0.2
LJU	**Ljubljana**	**8.79**	**332**	*e*Pn		Pn	20 55 15.7	-0.4
SOKA	**Soboth**	**9.17**	**336**	*e*Pn		Pn	20 55 20.5	-0.9
	comp=E,2.5nm,0.4s							
SOKA					*e*Sn	Sn	20 56 59.3	-5.5
	comp=E,1.7nm,0.5s							
OBKA	**Obir**	**9.18**	**334**	*i* Pn		Pn	20 55 22.6	+1.0
	comp=E,0.8nm,0.3s							
OBKA					*i* Sn	Sn	20 57 01.0	-4.1
	comp=E,4.6nm,0.5s							
KEST	**Kesra**	**9.24**	**257**	Pn		Pn	20 55 25.6	+3.2
	comp=E,0.2nm,0.3s,baz=18,slow=14,SNR=4.1							
ARSA	**Arzberg**	**9.54**	**339**	*e*Pn		Pn	20 55 25.8	-0.6
	comp=E,1.5nm,0.4s							
KBA	**Koelnbreinsper**	**10.11**	**331**	*e*Pn		Pn	20 55 35.6	+1.4
	comp=E,1.4nm,0.5s							
ABTA	**Abfaltersbach**	**10.17**	**328**	*e*Pn		Pn	20 55 38.6	+3.6
	comp=E,2.3nm,0.5s							
MOA	**Molln**	**10.45**	**337**	*i* Pn		Pn	20 55 38.9	+0.1
	comp=E,1.0nm,0.3s							
VRAC	**Vranov**	**11.24**	**347**	LR		LR	21 01 22.2	
	comp=E,54nm,18.8s,baz=125,slow=45							
GERES	**GERESS Array B**	**11.51**	**337**	Pn		Pn	20 55 52.3	-1.1
	comp=E,0.1nm,0.3s,baz=154,slow=16,SNR=4.2							
HFS	**Hagfors**	**22.16**	**351**	P		P	20 58 05.6	+0.7
	comp=E,2.2nm,0.5s,baz=176,slow=10,SNR=7.0							
FINES	**FINESS Array B**	**23.33**	**7**	P		P	20 58 16.5	-0.5
	comp=E,1.8nm,0.7s,baz=177,slow=12,SNR=5.5							
NOA	**NORSAR Array B**	**23.38**	**349**	P		P	20 58 17.4	-0.2
	comp=E,0.5nm,0.6s,baz=161,slow=9.6,SNR=3.3							
AKTO	**Aktyubinsk**	**29.11**	**53**	P		P	20 59 09.9	+0.1
	comp=E,0.6nm,0.5s,baz=258,slow=9.1,SNR=3.8							
GEYT	**Alibeck**	**29.51**	**79**	P		P	20 59 15.2	+1.6
	comp=E,1.0nm,0.6s,baz=270,slow=8.9,SNR=3.7							
TORD	**Torodi Ar. Bea**	**30.16**	**218**	P		P	20 59 22.0	+2.6
	comp=E,0.5nm,0.7s,baz=19,slow=11,SNR=3.0							
MKAR	**Makanchi Array**	**45.25**	**59**	P		P	21 01 25.4	-1.2
	comp=E,0.7nm,0.7s,baz=297,slow=5.3,SNR=11							
ZALV	**Zalesovo Beam**	**45.60**	**48**	P		P	21 01 28.4	-0.8
	comp=E,2.5nm,0.6s,baz=275,slow=8.3,SNR=11							
SONM	**Songino Array**	**60.38**	**51**	P		P	21 03 18.8	+0.4
	comp=E,0.2nm,0.7s,baz=288,slow=10,SNR=2.8							

*THE **29** 20:57:55.5, 38°.36N×20°.50E, h14km, ML3.1/7, Error ellipse: s-maj=0.7km s-min=0.2km az=277.0*
*ATH **29** 20:57:55.5, 38°.35N×20°.51E, h14km±2km, ML2.8/14, Error ellipse: s-maj=2.1km s-min=0.7km az=265.0*
ISC 29 20:57:55.3±0.9, **38°.36N**±0°.02×**20°.51E**±0°.04, **h16**km±5km, **n39**, **σ0°.29**/62, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.07**	**39**	P		Pg	20 57 58.3	-0.2
VSK1				S		Sg	20 58 00.2	-0.3
	21μm,0.2s							
FSK	**Fiskardo**	**0.11**	**22**	P		Pg	20 57 58.8	-0.1
FSK				S		Sg	20 58 01.3	+0.1
	21μm,0.3s							
FSK	**Fiskardo**	**0.11**	**22**	P		Pg	20 57 58.8	-0.1
FSK				S		Sg	20 58 01.1	-0.1
KEF4	**Livadi, Kephal**	**0.12**	**214**	P		Pg	20 57 58.9	-0.1
KEF4				S		Sg	20 58 01.3	+0.1
ARG2	**Argostoli**	**0.18**	**186**	P		Pg	20 57 59.6	-0.1
ARG2				S		Sg	20 58 02.9	+0.2
	28μm,0.1s							
VLS	**Valsamata**	**0.19**	**161**	P		Pg	20 57 59.8	-0.1
VLS				S		Sg	20 58 03.2	+0.2
	4μm,0.1s							
VLS	**Valsamata**	**0.19**	**161**	P		Pg	20 57 59.8	-0.1
KEF2	**Argostoli. Kep**	**0.19**	**185**	P		Pg	20 57 59.8	-0.1
KEF2				S		Sg	20 58 03.1	0.0
KEF3	**Kipouria, Keph**	**0.20**	**220**	P		Pg	20 57 59.9	-0.1
KEF3				S		Sg	20 58 03.6	+0.4
CHV1	**Chavriata, Kef**	**0.20**	**210**	P		Pg	20 58 00.1	0.0
CHV1				S		Sg	20 58 03.7	+0.5
EVGI	**Lefkada island**	**0.29**	**23**	P		Pg	20 58 01.6	+0.1
EVGI				S		Sg	20 58 06.1	+0.3
EVGI	**Lefkada island**	**0.29**	**23**	P		Pg	20 58 01.5	0.0
EVGI				S		Sg	20 58 06.1	+0.3
KFL	**Anninata**	**0.33**	**138**	P		Pg	20 58 02.2	0.0
KFL				S		Sb	20 58 07.7	-0.3
	8μm,0.3s							
KFL	**Anninata**	**0.33**	**138**	P		Pg	20 58 02.2	0.0
KFL				S		Sb	20 58 07.6	-0.3
KFL				AML	AML		20 58 08.2	
	comp=N,17507μm,0.4s							
KFL				AML	AML		20 58 08.6	
	comp=E,15248μm,0.3s							
LKD2	**Lefkada island**	**0.45**	**15**	P		Pg	20 58 04.1	-0.3
LKD2				S		Sg	20 58 10.9	+0.4
	comp=E,1μm,0.2s							
LKD2	**Lefkada island**	**0.45**	**15**	P		Pg	20 58 04.0	-0.3
LKD2				S		Sb	20 58 11.3	0.0
LKD2				AML	AML		20 58 20.4	
	comp=E,2150μm,0.4s							
LKD2				AML	AML		20 58 20.8	
	comp=N,2358μm,0.3s							
TSLK	**Tsoukalades, L**	**0.48**	**14**	P		Pg	20 58 04.8	-0.2
TSLK				S		Sb	20 58 12.1	-0.2
	comp=N,1μm,0.4s							
TSLK	**Tsoukalades, L**	**0.48**	**14**	P		Pg	20 58 04.5	-0.5
TSLK				S		Sb	20 58 12.3	0.0
TSLK				AML	AML		20 58 16.5	
	comp=E,2755μm,0.3s							
TSLK				AML	AML		20 58 20.0	
	comp=N,2852μm,0.5s							
AST1	**Astakos**	**0.49**	**68**	P		Pg	20 58 05.3	+0.2
VLMS	**Volimes, Zakyn**	**0.49**	**166**	P		Pg	20 58 04.9	-0.3
VLMS				S		Sg	20 58 11.9	+0.1
VLMS				AML	AML		20 58 16.0	
	comp=E,3134μm,0.2s							
VLMS				AML	AML		20 58 21.5	
	comp=N,5900μm,0.4s							
PDO	**Prodromos**	**0.58**	**65**	P		Pg	20 58 06.6	-0.3
PDO	**Prodromos**	**0.58**	**65**	P		Pg	20 58 06.5	-0.3
ZAK2	**Zakynthos**	**0.65**	**151**	P		Pg	20 58 08.0	0.0
KRI1	**kERI**	**0.73**	**161**	P		Pg	20 58 09.1	-0.6
RLS	**Riolos of Patr**	**0.81**	**111**	P		Pg	20 58 10.7	-0.5
RLS				S		Sb	20 58 22.1	+0.3
RLS				AML	AML		20 58 27.8	
	comp=N,981μm,0.4s							
RLS				AML	AML		20 58 35.9	
	comp=E,677μm,0.4s							
PVO	**Paravola**	**0.84**	**72**	P		Pb	20 58 11.7	+0.2
PVO	**Paravola**	**0.84**	**72**	P		Pb	20 58 11.5	0.0
PVO				S		Sn	20 58 24.0	-0.5
PVO				AML	AML		20 58 31.0	
	comp=E,1840μm,0.5s							
PVO				AML	AML		20 58 31.5	
	comp=N,2216μm,0.6s							
DRO	**Drossia**	**1.03**	**113**	P		Pb	20 58 15.0	+0.2
DRO				S		Sg	20 58 29.1	+0.4
DRO				AML	AML		20 58 37.6	
	comp=N,1676μm,0.4s							
DRO				AML	AML		20 58 41.4	
	comp=E,1809μm,0.6s							
EFP	**Efpalio**	**1.10**	**86**	P		Pb	20 58 15.7	-0.2
EFP				AML	AML		20 58 38.2	
	comp=N,1021μm,0.5s							
EFP				AML	AML		20 58 38.4	
	comp=E,1685μm,0.4s							
ANX	**Ano Chora**	**1.13**	**78**	P		Pg	20 58 17.4	+0.1
ANX				AML	AML		20 58 39.9	
	comp=N,1594μm,0.5s							
ANX				AML	AML		20 58 40.8	
	comp=E,1397μm,0.9s							
EVR	**Evrytania**	**1.16**	**61**	P		Pg	20 58 17.8	+0.1
EVR				S		Sg	20 58 33.1	+0.1
EVR				AML	AML		20 58 39.8	
	comp=E,408μm,0.4s							
EVR				AML	AML		20 58 43.3	
	comp=N,530μm,0.7s							
LAKA	**Lakka**	**1.16**	**95**	P		Pn	20 58 16.7	-0.3
AMT	**Artemida-Makis**	**1.25**	**131**	P		Pg	20 58 19.8	+0.2
AMT				AML	AML		20 58 49.8	
	comp=N,903μm,0.5s							
AMT				AML	AML		20 58 51.7	
	comp=E,903μm,0.7s							
KALE	**Kalithea**	**1.28**	**88**	P		Pn	20 58 18.8	+0.1
KALE	**Kalithea**	**1.28**	**88**	P		Pn	20 58 18.8	+0.1
KALE				AML	AML		20 58 45.8	
	comp=N,536μm,0.4s							
KALE				AML	AML		20 58 51.7	
	comp=E,310μm,0.6s							
JAN	**Janina**	**1.32**	**11**	P		Pg	20 58 20.8	-0.1
JAN				S		Sg	20 58 39.1	+0.9
JAN				AML	AML		20 58 42.7	
	comp=E,966μm,0.3s							
JAN				AML	AML		20 58 48.4	
	comp=N,703μm,0.5s							
KLV	**Kalavryta, Ach**	**1.33**	**103**	P		Pn	20 58 19.8	+0.5
AGG	**Agios Georgios**	**1.57**	**64**	P		Pg	20 58 25.4	-0.2
AGG				AML	AML		20 58 54.8	
	comp=N,360μm,0.3s							
AGG				AML	AML		20 58 55.7	
	comp=E,429μm,0.6s							
THL	**Klokotos Trika**	**1.68**	**44**	P		Pg	20 58 27.1	-0.6

IDC 29 21:03:40.1±4.2, **37°.51N**×**22°.21E**, **h0**km, **mb3.9**/5, **mb1 3.8**/6, **mb1mx3.4**/51, **mbtmp3.9**/6, **ML2.3**/1, **Error ellipse: s-maj=87.7km s-min=28.5km az=55.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IDI	**Anoyia**	**3.10**	**135**	Pn		Pn	21 04 30.4	+0.1
	0.4nm,0.3s,baz=301,slow=13,SNR=6.1							
HFS	**Hagfors**	**23.28**	**349**	P		P	21 08 49.4	+0.2
	3.2nm,0.9s,baz=169,slow=17,SNR=5.5							
FINES	**FINESS Array B**	**24.08**	**5**	P		P	21 08 56.7	-0.2
	1.6nm,0.7s,baz=163,slow=10,SNR=3.1							
KURBB	**Kurchatov Arra**	**41.55**	**53**	P		P	21 11 29.4	+0.2
	0.5nm,0.2s,baz=280,slow=8.7,SNR=4.2							
MKAR	**Makanchi Array**	**44.51**	**58**	P		P	21 11 52.9	-0.4
	0.4nm,0.5s,baz=268,slow=8.0,SNR=4.2							
ZALV	**Zalesovo Beam**	**45.14**	**48**	P		P	21 11 57.9	-0.2
	0.7nm,0.4s,baz=270,slow=9.8,SNR=3.6							

*IDC **29** 21:04:06.4±1.4, 31°.25N×103°.69E, h0km, mb3.9/3, mb1 3.8/5, mb1mx3.3/58, mbtmp3.7/5, ML3.5/2, MS3.1/2, Ms1 3.1/2, ms1mx2.5/42, Error ellipse: s-maj=58.0km s-min=22.6km az=63.0*
*BJI **29** 21:04:08.0±0.0, 31°.31N×103°.44E, h17km, ML3.4/17*
ISC 29 21:04:08.4±0.7, **31°.39N**±0°.03×**103°.58E**±0°.06, **h13**km, **n13**, **σ2s54**/20, **mb3.8**/3, **1C, Sichuan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CD2	**Chengdu**	**0.50**	**162**	*i* Pg		Pg	21 04 16.5	-1.8
CD2				Sg		Sg	21 04 23.8	-1.2
CD2				smax		smax		
	comp=N,7μm,0.6s							
CD2				smax		smax		
	comp=E,7μm,0.5s							
LZH	**Lanzhou**	**4.69**	**3**	*e*Pn		Pn	21 05 21.8	+2.8
LZH				Pg		Pb	21 05 33.0	+2.4
LZH				Sn		Sn	21 06 16.0	+2.6
LZH				Sg		Sg	21 06 36.5	-2.5
LZH				smax		smax		
	comp=N,26nm,1.0s							
LZH				smax		smax		
	comp=E,39nm,0.7s							
XAN	**Xi'an**	**5.22**	**58**	Pn		Pn	21 05 27.3	+1.1
XAN				Pg		Pg	21 05 45.5	-2.9
XAN				Sn		Sn	21 06 32.3	+5.9
XAN				Sg		Sg	21 06 53.0	-3.1
XAN				smax		smax		
	comp=N,60nm,1.0s							
XAN				smax		smax		
	comp=E,59nm,1.1s

-7.3400, Plg55.0000°, Azm217.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.
*THE **29**21:04:11.5,37.08N,21.84E,h20km,ML4.4/9 Error ellipse: s-maj=1.4km s-min=0.8km az=211.0*
ISC 29 21:04:09.7±0.5,**37.06N**±0.03,**21.77E**±0.03,**h44**km±4km, **n579,**σ1ş95/630,**mb4.8**/89,**42C-25D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.17**	**187**	P		**Pn**	**21 04 15.9**	**-1.3**
PYL				S		**Sn**	**21 04 20.7**	**-1.6**
	120μm,0.4s							
PYL	**PYLOS**	**0.17**	**187**	P		**Pn**	**21 04 15.9**	**-1.3**
PYL				S		**Sn**	**21 04 20.8**	**-1.6**
PYL				AML		AML	21 04 21.5	
PYL				AML		AML	21 04 22.5	
ITM	**Ithomi**	**0.17**	**47**	P		**Pn**	**21 04 15.4**	**-1.9**
ITM				S		**Sn**	**21 04 19.3**	**-3.2**
	227μm,0.5s							
ITM	**Ithomi**	**0.17**	**47**	P		**Pn**	**21 04 15.4**	**-1.9**
ITM				S		**Sn**	**21 04 19.3**	**-3.2**
ITM				AML		AML	21 04 19.9	
ITM				AML		AML	21 04 20.1	
ITM	**Ithomi**	**0.17**	**47**	P		**Pn**	**21 04 15.4**	**-1.9**
KLMT	**Kalamata**	**0.23**	**90**	P		**Pn**	**21 04 15.9**	**-1.7**
KLMT				S		**Sn**	**21 04 20.8**	**-2.4**
	159μm,0.6s							
AMT	**Artemida-Makis**	**0.47**	**354**	P		**Pn**	**21 04 19.7**	**-0.6**
AMT				S		**Sn**	**21 04 28.1**	**+0.3**
	83μm,0.5s							
AMT	**Artemida-Makis**	**0.47**	**354**	P		**Pn**	**21 04 19.6**	**-0.6**
AMT				AML		AML	21 04 30.0	
AMT				AML		AML	21 04 35.1	
VLX	**Vlachokerasia**	**0.58**	**58**	P		**Pn**	**21 04 20.1**	**-1.6**
VLX				S		**Sn**	**21 04 28.0**	**-2.3**
	37μm,0.6s							
VLX	**Vlachokerasia**	**0.58**	**58**	P		**Pn**	**21 04 20.2**	**-1.5**
VLX				S		**Sn**	**21 04 28.8**	**-1.5**
VLX				AML		AML	21 04 31.6	
	comp=E,86708μm,0.6s							
VLX				AML		AML	21 04 32.7	
	comp=N,54888μm,0.7s							
DRO	**Drossia**	**0.89**	**357**	P		**Pn**	**21 04 26.9**	**+1.1**
DRO	**Drossia**	**0.89**	**357**	P		**Pn**	**21 04 26.6**	**+0.7**
DRO				S		**Sn**	**21 04 39.6**	**+2.0**
DRO				AML		AML	21 04 48.2	
DRO				AML		AML	21 04 48.4	
	comp=N,88798μm,0.8s							
KRI1	**kERI**	**0.96**	**309**	P		**Pn**	**21 04 28.7**	**+1.9**
VLI	**Veliai**	**1.00**	**110**	P		**Pn**	**21 04 29.9**	**+2.6**
VLI				S		**Sn**	**21 04 44.1**	**+3.9**
	comp=N,28μm,0.9s							
VLI	**Veliai**	**1.00**	**110**	P		**Pn**	**21 04 28.5**	**+1.2**
VLI				S		**Sn**	**21 04 40.2**	**0.0**
VLI				AML		AML	21 04 49.1	
	comp=E,97806μm,1.1s							
VLI				AML		AML	21 04 50.1	
	comp=N,78773μm,0.7s							
RLS	**Riolos of Patr**	**1.02**	**347**	P		**Pn**	**21 04 30.2**	**+2.6**
RLS	**Riolos of Patr**	**1.02**	**347**	P		**Pn**	**21 04 29.8**	**+2.2**
RLS				S		**Sn**	**21 04 43.9**	**+3.1**
RLS				AML		AML	21 04 47.8	
	comp=E,28589μm,1.1s							
RLS				AML		AML	21 04 48.2	
	comp=N,33670μm,0.5s							
KLV	**Kalavryta, Ach**	**1.03**	**17**	P		**Pn**	**21 04 29.1**	**+1.4**
KLV	**Kalavryta, Ach**	**1.03**	**17**	P		**Pn**	**21 04 29.3**	**+1.5**
KLV				S		**Sn**	**21 04 43.8**	**+2.8**
KLV				AML		AML	21 04 46.3	
	comp=E,17654μm,1.0s							
KLV				AML		AML	21 04 54.1	
	comp=N,22551μm,0.8s							
MNVA	**Monemvasia**	**1.08**	**110**	P		**Pn**	**21 04 30.0**	**+1.6**
MNVA				S		**Sn**	**21 04 43.5**	**+1.2**
MNVA				AML		AML	21 04 50.7	
	comp=N,17192μm,1.0s							
MNVA				AML		AML	21 04 52.5	
	comp=E,36209μm,1.3s							
LAKA	**Lakka**	**1.19**	**8**	P		**Pn**	**21 04 32.1**	**+2.2**
LAKA				S		**Sn**	**21 04 47.8**	**+2.9**
	comp=E,11μm,0.8s							
VLMS	**Volimes, Zakyn**	**1.20**	**313**	P		**Pn**	**21 04 33.3**	**+3.2**
VLMS				S		**Sn**	**21 04 50.6**	**+5.5**
VLMS				AML		AML	21 05 02.2	
	comp=N,46198μm,0.6s							
VLMS				AML		AML	21 05 05.5	
	comp=E,38340μm,0.4s							
ALIK	**Aliki, Aigiali**	**1.23**	**13**	P		**Pn**	**21 04 33.5**	**+3.1**
DID	**Didima**	**1.25**	**69**	P		**Pn**	**21 04 32.2**	**+1.4**
DID	**Didima**	**1.25**	**69**	P		**Pn**	**21 04 32.2**	**+1.4**
DID				S		**Sn**	**21 04 48.8**	**+2.3**
DID				AML		AML	21 04 55.0	
	comp=E,27636μm,1.2s							
DID				AML		AML	21 04 58.3	
	comp=N,18718μm,0.9s							
KTHA	**Kythira Island**	**1.32**	**127**	P		**Pn**	**21 04 34.7**	**+3.1**
KTHA	**Kythira Island**	**1.32**	**127**	P		**Pn**	**21 04 33.8**	**+2.2**
KTHA				S		**Sn**	**21 04 50.0**	**+2.0**
KTHA				AML		AML	21 05 01.4	
	comp=E,41072μm,0.6s							
KTHA				AML		AML	21 05 06.2	
	comp=N,25076μm,0.7s							
KTHA	**Kythira Island**	**1.32**	**127**	*eP*		**Pn**	**21 04 33.1**	**+1.5**
TRIZ	**Trizonia**	**1.32**	**10**	P		**Pn**	**21 04 33.6**	**+1.9**
TRIZ				S		**Sn**	**21 04 53.4**	**+5.3**
	comp=N,12μm,0.7s							
LTK	**Loutraki**	**1.35**	**44**	P		**Pn**	**21 04 33.5**	**+1.3**
LTK	**Loutraki**	**1.35**	**44**	P		**Pn**	**21 04 33.4**	**+1.3**
LTK				S		**Sn**	**21 04 52.0**	**+3.0**
LTK				AML		AML	21 04 59.1	
	comp=N,15271μm,0.8s							
LTK				AML		AML	21 05 02.3	
	comp=E,16236μm,0.7s							
KALE	**Kalithea**	**1.36**	**12**	P		**Pn**	**21 04 35.0**	**+2.7**
KALE				S		**Sn**	**21 04 53.5**	**+4.3**
	comp=E,10μm,0.6s							
KALE	**Kalithea**	**1.36**	**12**	P		**Pn**	**21 04 34.0**	**+1.8**
KALE				AML		AML	21 04 58.4	
	comp=E,20648μm,0.5s							
KALE				AML		AML	21 04 59.6	
	comp=N,16266μm,0.8s							
EFP	**Efpalio**	**1.37**	**5**	P		**Pn**	**21 04 34.1**	**+1.8**
EFP	**Efpalio**	**1.37**	**5**	P		**Pn**	**21 04 34.7**	**+2.4**
EFP				AML		AML	21 05 14.0	
	comp=N,13755μm,0.8s							
EFP				AML		AML	21 05 16.1	
	comp=E,14966μm,0.6s							
SERG	**Sergoula**	**1.37**	**10**	P		**Pn**	**21 04 35.2**	**+2.8**
YDRA	**Hydra**	**1.39**	**78**	P		**Pn**	**21 04 33.8**	**+1.3**
YDRA				S		**Sn**	**21 04 51.4**	**+1.7**
YDRA				AML		AML	21 04 58.0	
	comp=E,21123μm,0.9s							
YDRA				AML		AML	21 04 58.1	
	comp=N,21795μm,0.8s							
PROD	**Prodromos**	**1.50**	**37**	P		**Pn**	**21 04 35.4**	**+1.3**
ANX	**Ano Chora**	**1.53**	**5**	P		**Pn**	**21 04 37.5**	**+2.8**
ANX	**Ano Chora**	**1.53**	**5**	P		**Pn**	**21 04 37.4**	**+2.8**
PVO	**Paravola**	**1.56**	**353**	P		**Pn**	**21 04 37.4**	**+2.4**
VILL	**Villia**	**1.65**	**48**	P		**Pn**	**21 04 37.1**	**+0.9**
ANKY	**Antikythira Is**	**1.72**	**134**	P		**Pn**	**21 04 39.3**	**+2.2**
ANKY	**Antikythira Is**	**1.72**	**134**	P		**Pn**	**21 04 39.6**	**+2.4**
ANKY				S		**Sn**	**21 05 00.9**	**+3.1**
ANKY				AML		AML	21 05 12.6	
	comp=N,16825μm,0.7s							
ANKY				AML		AML	21 05 12.7	
	comp=E,14786μm,1.0s							
VLY	**Voula,Athens**	**1.79**	**63**	P		**Pn**	**21 04 38.6**	**+0.4**
VLY	**Voula,Athens**	**1.79**	**63**	P		**Pn**	**21 04 39.0**	**+0.8**
VLY				AML		AML	21 05 06.5	
	comp=N,8717μm,0.8s							
VLY				AML		AML	21 05 14.7	
	comp=E,7938μm,0.5s							
ATH	**Athens Observa**	**1.80**	**59**	P		**Pn**	**21 04 38.9**	**+0.7**
ATH	**Athens Observa**	**1.80**	**59**	P		**Pn**	**21 04 38.9**	**+0.7**
ATH	**Athens Observa**	**1.80**	**59**	P		**Pn**	**21 04 39.0**	**+0.7**
ATH				AML		AML	21 05 13.1	
	comp=N,8469μm,0.8s							
ATH				AML		AML	21 05 17.0	
	comp=E,14626μm,1.0s							
ATHU	**Athens Univers**	**1.84**	**60**	P		**Pn**	**21 04 39.5**	**+0.7**
EVR	**Evrytania**	**1.85**	**1**	P		Pn	21 04 43.0	+3.9
EVR	**Evrytania**	**1.85**	**1**	P		**Pn**	**21 04 41.6**	**+2.5**
EVR				AML		AML	21 05 21.1	
	comp=N,13998μm,0.7s							
EVR				AML		AML	21 05 23.8	
	comp=E,11625μm,0.9s							
LKR	**Lokris**	**1.86**	**31**	P		**Pn**	**21 04 40.1**	**+1.0**
LKR	**Lokris**	**1.86**	**31**	P		**Pn**	**21 04 40.6**	**+1.5**
LKR				AML		AML	21 05 13.7	
	comp=E,9353μm,0.8s							
LKR				AML		AML	21 05 22.6	
	comp=N,6845μm,1.4s							
PTL	**Penteli**	**1.94**	**59**	P		**Pn**	**21 04 40.9**	**+0.7**
MAKR	**Makrakomi, Fth**	**1.97**	**8**	P		**Pn**	**21 04 43.8**	**+3.2**
AGG	**Agios Georgios**	**2.01**	**13**	P		**Pn**	**21 04 43.4**	**+2.3**
AGG	**Agios Georgios**	**2.01**	**13**	P		**Pn**	**21 04 43.5**	**+2.3**
AGG	**Agios Georgios**	**2.01**	**13**	*eP*		**Pn**	**21 04 42.7**	**+1.6**
AGG	**Agios Georgios**	**2.01**	**13**	Pn		**Pn**	**21 04 43.5**	**+2.4**
MHLO	**Agia Marina, M**	**2.15**	**99**	P		**Pn**	**21 04 43.9**	**+0.9**
MHLO	**Agia Marina, M**	**2.15**	**99**	P		**Pn**	**21 04 44.3**	**+1.3**
MHLO				AML		AML	21 05 27.9	
	comp=N,24727μm,0.8s							
MHLO				AML		AML	21 05 35.3	
	comp=E,31963μm,0.8s							
MRKA	**Markates**	**2.18**	**41**	P		**Pn**	**21 04 44.6**	**+1.1**
MRKA	**Markates**	**2.18**	**41**	P		**Pn**	**21 04 44.5**	**+0.9**
MRKA				AML		AML	21 05 27.2	
	comp=N,5262μm,0.7s							
MRKA				AML		AML	21 05 33.2	
	comp=E,5738μm,0.9s							
EREA	**Eretria**	**2.19**	**51**	P		**Pn**	**21 04 44.5**	**+0.9**
KARY	**Karystos**	**2.33**	**65**	P		**Pn**	**21 04 46.2**	**+0.6**
KARY	**Karystos**	**2.33**	**65**	P		**Pn**	**21 04 46.5**	**+0.9**
KARY				AML		AML	21 05 32.4	
	comp=N,2979μm,0.7s							
KARY				AML		AML	21 05 33.6	
	comp=E,2349μm,0.9s							
KNDR	**Palaiochora Ch**	**2.40**	**139**	*eP*		**Pn**	**21 04 49.6**	**+3.2**
IMMV	**Iera Moni Meta**	**2.40**	**131**	P		**Pn**	**21 04 48.4**	**+1.9**
IMMV	**Iera Moni Meta**	**2.40**	**131**	P		**Pn**	**21 04 48.5**	**+1.9**
IMMV				AML		AML	21 05 42.5	
	comp=N,7777μm,0.6s							
IMMV				AML		AML	21 05 48.9	
	comp=E,9391μm,1.7s							
IMMV	**Iera Moni Meta**	**2.40**	**131**	*eP*		**Pn**	**21 04 48.1**	**+1.6**
SKIA	**Skiathos**	**2.49**	**32**	P		**Pn**	**21 04 48.8**	**+1.0**
THL	**Klokotos Trika**	**2.51**	**4**	P		**Pn**	**21 04 50.0**	**+2.1**
NEO	**Neokhori**	**2.52**	**27**	P		**Pn**	**21 04 49.1**	**+1.0**
XOR	**Xorichti**	**2.56**	**26**	P		**Pn**	**21 04 49.8**	**+1.1**
VAM	**Vamos**	**2.57**	**129**	P		**Pn**	**21 04 51.0**	**+2.1**
VAM	**Vamos**	**2.57**	**129**	P		**Pn**	**21 04 50.9**	**+2.1**
VAM				AML		AML	21 05 48.0	
	comp=E,8994μm,0.9s							
VAM				AML		AML	21 05 48.9	
	comp=N,6258μm,0.8s							
AOS	**Alonnisos**	**2.68**	**38**	P		**Pn**	**21 04 50.6**	**+0.2**
AOS	**Alonnisos**	**2.68**	**38**	*eP*		**Pn**	**21 04 50.4**	**0.0**
JAN	**Janina**	**2.69**	**345**	P		**Pn**	**21 04 53.1**	**+2.6**
JAN	**Janina**	**2.69**	**345**	P		**Pn**	**21 04 53.1**	**+2.6**
IOSP	**Ios island**	**2.84**	**96**	P		**Pn**	**21 04 53.6**	**+1.0**
SKY	**Skiros Island**	**2.85**	**50**	P		**Pn**	**21 04 52.8**	**+0.1**
KPRO	**Kipourio**	**2.91**	**354**	P		**Pn**	**21 04 56.4**	**+2.9**
GVDS	**Gavdos**	**2.91**	**139**	*eP*		**Pn**	**21 04 57.0**	**+3.5**
GVD	**Gavdhos**	**2.91**	**139**	*eP*		**Pn**	**21 04 56.1**	**+2.6**
THR5	**Thira Island,**	**2.95**	**102**	P		**Pn**	**21 04 56.2**	**+2.2**
THR3	**Thira Island,**	**2.99**	**102**	P		**Pn**	**21 04 56.6**	**+2.0**
THR6	**Thira Island,**	**3.00**	**102**	P		**Pn**	**21 04 56.1**	**+1.4**
THT2	**Imerovigli**	**3.00**	**101**	*eP*		**Pn**	**21 04 56.7**	**+1.9**
THR7	**Fira-Santorini**	**3.01**	**101**	P		**Pn**	**21 04 56.7**	**+1.8**
APE	**Apeiranthos**	**3.01**	**89**	P		**Pn**	**21 04 55.4**	**+0.5**
APE	**Apeiranthos**	**3.01**	**89**	*c iP*		**Pn**	**21 04 54.9**	**0.0**
APE	**Apeiranthos**	**3.01**	**89**	↑P		**Pn**	**21 04 55.4**	**+0.5**
APE	**Apeiranthos**	**3.01**	**89**	↑S		**Sn**	**21 05 29.9**	**+0.1**
APE	**Apeiranthos**	**3.01**	**89**	*eP*		**Pn**	**21 04 55.8**	**+0.9**
SANT	**Santorini**	**3.04**	**102**	↑P		**Pn**	**21 04 56.2**	**+0.8**
SANT	**Santorini**	**3.04**	**102**	↑S		**Sn**	**21 05 32.2**	**+1.6**
SANT	**Santorini**	**3.04**	**102**	*eP*		**Pn**	**21 04 55.9**	**+0.5**
SANT	**Santorini**	**3.04**	**102**			**Pn**	**21 04 56.4**	**+1.0**
THR8	**Santorini-Mono**	**3.05**	**101**	P		**Pn**	**21 04 56.2**	**+0.8**
IDI	**Anoyia**	**3.08**	**124**	Pn		**Pn**	**21 04 55.6**	**-0.4**
	comp=N,6.5nm,0.3s,baz=297,slow=7.3,SNR=24							
IDI				Sn		**Sn**	**21 05 26.5**	**-5.1**
	comp=N,56nm,0.3s,baz=294,slow=19,SNR=7.5							
IDI				LR		LR	21 06 20.8	
	comp=N,543nm,20.0s,baz=292,slow=43							
IDI	**Anoyia**	**3.08**	**124**	*eP*		**Pn**	**21 04 58.8**	**+2.8**
LIT	**Litokhoron**	**3.09**	**10**	P		**Pn**	**21 04 57.3**	**+1.4**
LIT	**Litokhoron**	**3.09**	**10**	P		**Pn**	**21 04 57.4**	**+1.5**
LIT	**Litokhoron**	**3.09**	**10**	Pn		**Pn**	**21 04 57.4**	**+1.5**
SRN	**Sarande**	**3.14**	**334**	P		**Pn**	**21 04 58.0**	**+1.4**
PENT	**Pentalofos**	**3.17**	**351**	P		**Pn**	**21 05 00.2**	**+3.1**
PAIG	**Paliouri**	**3.23**	**27**	P		**Pn**	**21 04 58.9**	**+1.0**
KZN	**Kozani**	**3.24**	**0**	P		**Pn**	**21 04 59.9**	**+1.8**
KZN	**Kozani**	**3.24**	**0**	P		**Pn**	**21 04 59.9**	**+1.8**
NEST	**Nestorio**	**3.39**	**351**	P		**Pn**	**21 05 00.8**	**+2.8**
TPE	**Tesalena**	**3.51**	**337**	P		**Pn**	**21 05 03.1**	**+1.4**
PLG	**Polygyros**	**3.56**	**21**	P		**Pn**	**21 05 03.3**	**+0.9**
CHOS	**Chios island**	**3.65**	**67**	P		**Pn**	**21 05 04.3**	**+0.6**
CHOS	**Chios island**	**3.65**	**67**	*eP*		**Pn**	**21 05 04.5**	**+0.8**
HORT	**Hortiatis**	**3.68**	**16**	P		**Pn**	**21 05 04.9**	**+0.7**
OUR	**Ouranopolis**	**3.70**	**27**	P		**Pn**	**21 05 05.5**	**+1.2**
OUR	**Ouranopolis**	**3.70**	**27**	*eP*		**Pn**	**21 05 05.5**	**+1.2**
FNA	**Florina**	**3.73**	**355**	P		**Pn**	**21 05 06.4**	**+1.6**
FNA	**Florina**	**3.73**	**355**	P		**Pn**	**21 05 06.0**	**+1.2**
FNA	**Florina**	**3.73**	**355**	*eP*		**Pn**	**21 05 06.6**	**+1.8**
FNA	**Florina**	**3.73**	**355**	Pn		**Pn**	**21 05 06.0**	**+1.2**
SIGR	**SIGRI**	**3.87**	**55**	*eP*		**Pn**	**21 05 07.7**	**+1.0**
GRG	**Griva**	**3.92**	**7**	P		**Pn**	**21 05 08.7**	**+1.3**
SOH	**Sokhos**	**3.95**	**18**	P		**Pn**	**21 05 09.4**	**+1.5**
SCTE	**Santa Cesarea**	**3.96**	**320**			**Pn**	**21 05 09.2**	**+1.2**
SMG	**Samos**	**4.09**	**79**	P		**Pn**	**21 05 10.1**	**+0.4**
ZKR	**Zakros**	**4.09**	**117**	*eP*		**Pn**	**21 05 13.2**	**+3.4**
OHR	**Ohrid**	**4.11**	**350**	*i* Pn		**Pn**	**21 05 11.9**	**+1.8**
KNT	**Kendrikon**	**4.19**	**12**	P		**Pn**	**21 05 12.5**	**+1.5**
KOSK	**Kos Island**	**4.19**	**93**	*eP*		**Pn**	**21 05 13.2**	**+2.2**
SRS	**Serrai**	**4.29**	**19**	P		**Pn**	**21 05 13.7**	**+1.2**
VAY	**Valandovo**	**4.30**	**8**	*i* Pn		**Pn**	**21 05 14.2**	**+1.6**
BOZC	**Bozcaada**	**4.36**	**49**	*eP*		**Pn**	**21 05 14.3**	**+0.9**
BLCB	**Balcova**	**4.38**	**71**	*eP*		**Pn**	**21 05 15.3**	**+1.6**
GCAM	**G?zelcaml?**	**4.40**	**80**	*eP*		**Pn**	**21 05 15.8**	**+1.9**
BODT	**Bodrum**	**4.43**	**88**	*eP*		**Pn**	**21 05 16.2**	**+1.8**
KAVA	**Kavala**	**4.47**	**28**	P		**Pn**	**21 05 15.7**	**+0.8**
TIP	**Timpagrande**	**4.48**	**300**	↓P		**Pn**	**21 05 17.3**	**+2.2**
TIP	**Timpagrande**	**4.48**	**300**	Pn		**Pn**	**21 05 17.7**	**+2.6**
GADA	**Gvkgeada**	**4.50**	**45**	*eP*		**Pn**	**21 05 15.8**	**+0.5**
EZN	**Ezine**	**4.52**	**51**	*eP*		**Pn**	**21 05 16.5**	**+0.9**
DKL	**Dikili**	**4.52**	**62**	*eP*		**Pn**	**21 05 16.6**	**+1.0**
TIR	**Tirane**	**4.53**	**342**	P		**Pn**	**21 05 17.2**	**+1.5**
TIR	**Tirane**	**4.53**	**342**	↑P		**Pn**	**21 05 16.8**	**+1.1**
TIR	**Tirane**	**4.53**	**342**			**Pn**	**21 05 17.2**	**+1.5**
KARP	**Karpathos**	**4.61**	**108**			**Pn**	**21 05 17.9**	**+1.0**
STIP	**Stip**	**4.64**	**4**	*i* Pn		**Pn**	**21 05 19.4**	**+2.2**
DAT	**Datca**	**4.67**	**92**	*eP*		**Pn**	**21 05 19.9**	**+2.1**
PHP	**Peshkopia**	**4.73**	**348**	P		**Pn**	**21 05 19.5**	**+1.0**
CEL	**Celeste**	**4.81**	**286**			**Pn**	**21 05 20.9**	**+1.2**
CGL1	**Ceglie Messapi**	**4.91**	**318**	↓*i*Pn		**Pn**	**21 05 21.9**	**+1.0**
CGL1				Sn		**Sn**	**21 06 16.9**	**+0.5**
SKO	**Skopje**	**4.91**	**357**	*i* Pn		**Pn**	**21 05 22.1**	**+1.1**
TAR1	**Taranto**	**4.92**	**316**	↑*i*Pn		**Pn**	**21 05 21.8**	**+0.7**
TAR1				Sn		**Sn**	**21 06 15.2**	**-1.5**
AYDB	**Zeytinkoy-Aydi**	**4.95**	**78**	*eP*		**Pn**	**21 05 21.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**4.96**	**46**	*eP*		**Pn**	**21 05 23.0**	**+1.3**
RDO	**Rodhopi**	**5.02**	**35**	P		**Pn**	**21 05 22.8**	**+0.3**
MASS	**Massafra**	**5.07**	**316**	↓*i*Pn		**Pn**	**21 05 24.1**	**+0.9**
ALN	**Alexandroupoli**	**5.08**	**40**	P		**Pn**	**21 05 23.5**	**+0.3**
ALN	**Alexandroupoli**	**5.08**	**40**	*eP*		**Pn**	**21 05 24.9**	**+1.7**
ALN	**Alexandroupoli**	**5.08**	**40**			**Pn**	**21 05 23.5**	**+0.3**
LPK	**Lepseki**	**5.12**	**48**	*eP*		**Pn**	**21 05 26.0**	**+2.2**
ERIK	**Erikli-Kesan**	**5.17**	**44**	*eP*		**Pn**	**21 05 25.6**	**+1.2**
YER	**Yerkesik**	**5.21**	**87**	*eP*		**Pn**	**21 05 27.7**	**+2.6**
ULC	**Ulcinj**	**5.27**	**339**	↓*i*Pn		**Pn**	**21 05 25.4**	**-0.5**
ULC				*i* Sn		**Sn**	**21 06 23.3**	**-2.0**
MATE	**Matera**	**5.33**	**314**	↑P		**Pn**	**21 05 27.4**	**+0.7**
KDZ	**Kurdzhali**	**5.38**	**31**	*eP*		**Pn**	**21 05 27.9**	**+0.4**
BALB	**Balikesir**	**5.45**	**60**	*eP*		**Pn**	**21 05 29.6**	**+1.2**
KRBG	**Karabiga-Canak**	**5.46**	**51**	*eP*		**Pn**	**21 05 29.1**	**+0.7**
SG1	**Sgolgore (BA)**	**5.47**	**315**	↓*i*Pn		**Pn**	**21 05 29.5**	**+0.8**
SG1				Sn		**Sn**	**21 06 28.7**	**-1.7**
TURN	**Turunc**	**5.48**	**90**	*eP*		**Pn**	**21 05 27.1**	**-1.6**
DRME	**Dracevica, Mon**	**5.49**	**340**	↑*i*Pn		**Pn**	**21 05 29.1**	**+0.2**
DRME	**Dracevica, Mon**	**5.49**	**340**	↓*i*Pn		**Pn**	**21 05 28.3**	**-0.6**
DRME				*e*Sn		**Sn**	**21 06 28.4**	**-2.4**
DALY	**Dalyan (Mula)**	**5.52**	**90**	*eP*		**Pn**	**21 05 32.3**	**+3.0**
PLD	**Plovdiv**	**5.52**	**23**	*eP*		**Pn**	**21 05 31.4**	**+2.1**
BAI	**Bari**	**5.55**	**318**	↓*i*Pn		**Pn**	**21 05 30.4**	**+0.7**
BAI				Sn		**Sn**	**21 06 31.9**	**-0.2**
UKOP	**Uzunkopru-Edir**	**5.55**	**41**	*eP*		**Pn**	**21 05 31.3**	**+1.6**
RKY	**Sarkoy-Tekirda**	**5.56**	**48**	*eP*		**Pn**	**21 05 31.5**	**+1.6**
MANT	**Manisa**	**5.56**	**73**			**Pn**	**21 05 31.0**	**+0.8**
KULA	**Kula-Manisa**	**5.65**	**73**	*eP*		**Pn**	**21 05 32.8**	**+1.6**
VTS	**Vitosha**	**5.66**	**11**	P		**Pn**	**21 05 32.7**	**+1.3**
VTS	**Vitosha**	**5.66**	**11**	↑P		**Pn**	**21 05 31.8**	**+0.4**
VTS	**Vitosha**	**5.66**	**11**			**Pn**	**21 05 32.7**	**+1.3**
PVY	**Plav**	**5.70**	**346**	*e*Pn		**Pn**	**21 05 31.2**	**-0.7**
PVY				*i* Sn		**Sn**	**21 06 33.5**	**-2.5**
PDG	**Podgorica**	**5.70**	**341**	↓P		**Pn**	**21 05 32.2**	**+0.5**
PDG	**Podgorica**	**5.70**	**341**	↑*i*Pn		**Pn**	**21 05 31.6**	**-0.2**
PDG	**Podgorica**	**5.70**	**341**			**Pn**	**21 05 31.7**	**0.0**
PDG						**Sn**	**21 06 33.3**	**-2.6**
TTG	**Podgorica**	**5.70**	**341**	↓*i*Pn		**Pn**	**21 05 30.9**	**-0.9**
TTG				*e*Sn		**Sn**	**21 06 33.3**	**-2.6**
MRMT	**Marmara Adasi**	**5.76**	**50**	*eP*		**Pn**	**21 05 33.9**	**+1.2**
EDC	**Edincik**	**5.79**	**54**	*eP*		**Pn**	**21 05 34.8**	**+1.8**
ACER	**Acerenza**	**5.87**	**311**			**Pn**	**21 05 35.2**	**+1.1**
ACER				Sn		**Sn**	**21 06 37.0**	**-3.2**
VAE	**Valguarnera**	**5.88**	**276**	Pn		**Pn**	**21 05 36.7**	**+2.4**
	comp=N,13nm,0.3s,baz=159,slow=6.2,SNR=31							
VAE				Sn		**Sn**	**21 06 38.8**	**-1.7**
	comp=N,9.9nm,0.3s,baz=328,slow=9.5,SNR=3.9							
FETY	**Fethiye**	**5.88**	**92**	P		Pn	21 05 38.5	+4.2
FETY	**Fethiye**	**5.88**	**92**	*eP*		**Pn**	**21 05 37.4**	**+3.1**
CEME	**Cevo**	**5.90**	**339**	*e*Pn		**Pn**	**21 05 33.8**	**-0.8**
CEME				*e*Sn		**Sn**	**21 06 37.9**	**-3.0**
HCY	**Herceg Novi**	**5.94**	**336**	*e*Pn		**Pn**	**21 05 34.3**	**-0.8**
HCY	**Herceg Novi**	**5.94**	**336**	↓*i*Pn		**Pn**	**21 05 34.2**	**-0.8**
HCY				*i* Sn		**Sn**	**21 06 39.3**	**-2.5**
WDD	**Wied Dalam**	**5.96**	**260**			**Pn**	**21 05 35.5**	**0.0**
WDD						**Sn**	**21 06 40.2**	**-2.3**
IVA	**Berane**	**5.98**	**347**	↓*i*Pn		**Pn**	**21 05 35.1**	**-0.6**
IVA				*i* Sn		**Sn**	**21 06 40.2**	**-2.7**
KOME	**Kolasin**	**6.03**	**344**	↑*i*Pn		**Pn**	**21 05 35.7**	**-0.8**
KOME				*e*Sn		**Sn**	**21 06 41.5**	**-2.8**
SIMA	**Simav-Kutahya**	**6.04**	**68**	*eP*		**Pn**	**21 05 38.7**	**+2.2**
NKME	**Niksic**	**6.09**	**340**	↓*i*Pn		**Pn**	**21 05 36.2**	**-1.0**
NKME				*e*Sn		**Sn**	**21 06 43.2**	**-2.5**
NKY	**Niksic**	**6.13**	**341**	↑*i*Pn		**Pn**	**21 05 36.7**	**-1.0**
NKY				*e*Sn		**Sn**	**21 06 43.5**	**-3.0**
EDRB	**Edirne**	**6.14**	**37**	*eP*		**Pn**	**21 05 39.9

BURAR **Bucovina Array** 10.85 12 ⇑P Pn 21 06 42.8 +0.4
BURAR **Bucovina Array** 10.85 12 Pn Pn 21 06 43.0 +0.6
OBKA Obir 10.86 333 *e*Pn Pn 21 06 41.5 -1.1
SNR=8.6
OBKA Obir 10.86 333 *e*Pn Pn 21 06 41.7 -0.9
comp=N,4.1nm,0.2s,SNR=8.7
OBKA *i* Sn Sn 21 08 36.9 -5.8
comp=N,33nm,0.8s
PSZ Piszkesteto 10.94 353 P Pn 21 06 43.4 -0.2
PSZ 21 08 43.1
PSZ Piszkesteto 10.94 353 ⇑P Pn 21 06 43.4 -0.2
PSZ Piszkesteto 10.94 353 Pn 21 06 43.4 -0.2
PSZ Sn Sn 21 08 43.1 -1.4
ZCCA Zocca 10.95 315 Pn Pn 21 06 47.3 +3.5
KOT Kottamia 11.00 127 AMP 21 08 00.0
baz=127
TRPA Tarpa 11.08 3 ⇑P Pn 21 06 45.2 -0.2
VLC Villacollemand 11.18 313 Pn Pn 21 06 50.1 +3.2
ARSA Arzberg 11.18 338 *e*Pn Pn 21 06 45.3 -1.6
SNR=6.0
ARSA Arzberg 11.18 338 Pn Pn 21 06 45.3 -1.6
comp=N,5.3nm,0.5s,SNR=7.8
ARSA *i* Sn Sn 21 08 44.5 -6.0
comp=N,3.9nm,0.7s
TEOL Teolo 11.24 321 Pn Pn 21 06 48.2 +0.6
SOP Sopron 11.29 342 Sn Sn 21 08 48.6 -4.4
MYKA Terra Mystica 11.31 330 *e*Pn Pn 21 06 50.2 +1.5
comp=N,1.8nm,0.3s
MYKA *e*Sn Sn 21 08 48.4 -5.3
HFRF Wahat Farafira 11.33 149 AMP 21 09 00.0
baz=149
VYHS Vyhne 11.62 350 *e*P Pn 21 06 51.7 -1.2
VYHS *e* 21 08 59.1
VYHS Vyhne 11.62 350 *e*PN Pn 21 06 51.7 -1.2
VYHS *e*PG 21 07 53.5
VYHS *e*SN Sn 21 08 59.1 -2.2
CONA Conrad Observa 11.70 340 *e*Pn Pn 21 06 53.7 -0.3
comp=N,1.3nm,0.4s
CONA *i* Sn Sn 21 08 59.5 -3.6
comp=N,2.6nm,0.5s
CTI Castel Tesino 11.74 323 P Pn 21 06 53.4 -1.2
CTI Castel Tesino 11.74 323 Pn 21 06 53.4 -1.2
MODS Modra-Piesok 11.77 345 *e*P Pn 21 06 52.9 -2.1
MODS *e* 21 08 58.7
MODS Modra-Piesok 11.77 345 *e*PN Pn 21 06 52.9 -2.1
MODS Modra-Piesok 11.77 345 *e*SN Sn 21 08 58.7 -6.2
KBA Koelnbreinsper 11.79 331 *e*Pn Pn 21 06 55.0 -0.4
SNR=3.6
KBA *e*Sn Sn 21 08 58.5 -7.2
SNR=3.7
KBA Koelnbreinsper 11.79 331 *e*Pn Pn 21 06 55.2 -0.2
comp=N,1.5nm,0.3s
KBA *i* Sn Sn 21 08 58.9 -6.7
comp=N,6.0nm,0.5s
CRVS Cervenica-Dubn 11.84 359 *e*P Pn 21 06 55.6 -0.2
CRVS Cervenica-Dubn 11.84 359 *e*PN Pn 21 06 55.6 -0.2
KOLS Kolonicke sedl 11.87 2 *e*P Pn 21 06 56.6 +0.3
KOLS Kolonicke sedl 11.87 2 *e*PN Pn 21 06 56.6 +0.3
ABTA Abfaltersbach 11.87 327 *e*Pn Pn 21 06 55.2 -1.1
comp=N,2.9nm,0.3s
ABTA *i* Sn Sn 21 08 59.2 -8.3
comp=N,17nm,0.9s
MMAI Mount Meron Ar 11.88 106 Pn Pn 21 06 51.8 -4.8
comp=N,2.3nm,0.3s,baz=298,slow=13,SNR=14
MMAI Sn Sn 21 08 59.4 -8.4
comp=N,2.8nm,0.3s,baz=299,slow=25,SNR=6.1
MMAI LR LR 21 12 27.7
comp=N,70nm,21.0s,baz=235,slow=42
SALO Salr 12.01 319 Pn Pn 21 06 58.8 +0.6
MOA Molln 12.11 335 *e*Pn Pn 21 06 58.8 -0.8
SNR=8.3
MOA *e*Sn Sn 21 09 09.5 -3.7
SNR=5.1
MOA Molln 12.11 335 *e*Pn Pn 21 06 59.3 -0.2
comp=N,2.7nm,0.2s,SNR=9.9
MOA *i* Sn Sn 21 09 07.9 -5.3
comp=N,10.0nm,0.5s
JAVC Velka Javorina 12.16 347 *e*PN Pn 21 06 59.1 -1.2
RJOB Jochberg 12.55 331 *e*Pn Pn 21 07 05.0 -0.6
SNR=5.4
RJOB *e*Sn Sn 21 09 19.0 -4.9
SNR=3.0
KRUC Moravsky 12.62 344 *e*PN Pn 21 07 05.1 -1.3
WTTA Wattenberg 12.65 327 *e*Pn Pn 21 07 07.6 +0.5
SNR=4.4
WTTA Wattenberg 12.65 327 *e*Pn Pn 21 07 07.9 +0.8
comp=N,2.6nm,0.4s
WTTA *e*Sn Sn 21 09 21.0 -5.6
comp=N,9.1nm,0.4s
WATA Walderalm 12.73 327 *i* Pn Pn 21 07 08.4 +0.2
comp=N,8.9nm,0.5s,SNR=9.9
WATA *i* Sn Sn 21 09 23.3 -5.3
comp=N,9.0nm,0.5s
VRAC Vranov 12.80 345 P Pn 21 07 08.0 -1.0
VRAC Vranov 12.80 345 Pn Pn 21 07 08.0 -1.0
comp=N,0.4nm,0.3s,baz=162,slow=11,SNR=4.4
VRAC LR LR 21 13 21.8
comp=N,375nm,18.9s,baz=170,slow=43
VRAC Vranov 12.80 345 *e*PN Pn 21 07 07.5 -1.5
SQTA Sankt Quirin 12.81 326 *e*Pn Pn 21 07 09.3 +0.1
comp=N,5.8nm,0.3s,SNR=10
SQTA *i* Sn Sn 21 09 25.8 -4.6
comp=N,8.9nm,0.5s
FUORN **Ofenpass-Fuorn** 12.82 322 Pn 21 07 11.5 +2.0
FUORN Sn 21 09 22.8 -8.1
LVV L'vov 12.86 7 *e*P Pn 21 07 10.8 +1.1
FETA Feichten 12.88 324 *e*Pn Pn 21 07 12.8 +2.5
comp=N,1.6nm,0.5s
FETA *i* Sn Sn 21 09 24.4 -7.8
comp=N,4.6nm,0.6s
MOTA Moosalm 12.95 326 *e*Pn Pn 21 07 11.4 +0.3
comp=N,1.4nm,0.2s,SNR=10
MORC Moravsky Berou 13.07 348 *e*PN Pn 21 07 11.1 -1.6
DAVOX **Davos/Dischmat** 13.12 321 Pn Pn 21 07 15.8 +2.2
comp=N,0.7nm,0.3s,baz=190,slow=12,SNR=7.2
DAVOX Sn Sn 21 09 31.1 -7.0
comp=N,0.7nm,0.3s,baz=32,slow=19,SNR=3.2
GEC2 GERESS Array S 13.16 336 *e*Pn Pn 21 07 13.3 -0.7
SNR=3.7
GEC2 *e*Sn Sn 21 09 33.2 -5.7
SNR=1.9
GEC2 GERESS Array S 13.16 336 Pn 21 07 13.4 -0.6
GEC2 Sn Sn 21 09 33.8 -5.1
GERES **GERESS Array B** 13.16 336 Pn Pn 21 07 13.7 -0.3
comp=N,0.7nm,0.3s,baz=157,slow=13,SNR=22
GERES Sn Sn 21 09 33.2 -5.7
comp=N,1.5nm,0.3s,baz=154,slow=22,SNR=11
GERES LR LR 21 13 20.0
comp=N,561nm,19.7s,baz=146,slow=42
GERES **GERESS Array B** 13.16 336 Pn 21 07 13.3 -0.7
EIL Elat 13.25 120 Pn Pn 21 07 16.7 +1.5
comp=N,1.7nm,0.3s,baz=164,slow=2.3,SNR=6.3
EIL Sn Sn 21 09 26.0 -15
comp=N,1.7nm,0.3s,baz=346,slow=8.3,SNR=4.5
ASF Jabal al Asfar 13.38 107 Pn Pn 21 07 17.2 +0.2
comp=N,0.4nm,0.3s,baz=263,slow=8.1,SNR=4.4
ASF Sn Sn 21 09 34.9 -9.5
comp=N,0.2nm,0.3s,baz=270,slow=11,SNR=2.0
KHC Kasperske Hory 13.45 336 *e*P Pn 21 07 17.0 -0.9
KHC *e* 21 09 39.8
KHC Kasperske Hory 13.45 336 *e*PN Pn 21 07 17.0 -0.9
KHC *ex* x 21 07 27.5
KHC *e*SN Sn 21 09 39.8 -6.1
DAVA Damuels 13.48 323 *i* Pn Pn 21 07 21.2 +2.9
comp=N,1.2nm,0.2s
KRLC Kraliky 13.50 346 *e*P Pn 21 07 18.1 -0.4
KRLC Kraliky 13.50 346 *e*PN Pn 21 07 18.1 -0.4
DPC Dobruska-Polom 13.85 345 *e*P Pn 21 07 22.0 -1.3
DPC Dobruska-Polom 13.85 345 *e*PN Pn 21 07 22.0 -1.3
PRU Pruhonice 13.93 340 *e*P Pn 21 07 21.9 -2.5
PRU Pruhonice 13.93 340 *e*PN Pn 21 07 21.9 -2.5
ANN Anapa 14.13 52 *e*P Pn 21 07 23.7 -3.3
ANN pmax pmax
comp=Z,158nm,2.2s
SENIN Lac Senin/Sane 14.23 315 Pn 21 07 28.1 -0.5
SENIN Sn 21 10 01.0 -4.2
AKASG **Malin Array Be** 14.64 19 P Pn 21 07 33.0 -0.9
AKASG **Malin Array Be** 14.64 19 Pn Pn 21 07 31.1 -2.8
comp=Z,1.0nm,0.3s,baz=205,slow=12,SNR=1.9
AKASG LR LR 21 13 36.5
comp=Z,94nm,21.1s,baz=170,slow=39
AKASG **Malin Array Be** 14.64 19 Pn 21 07 33.0 -0.9
AKBB **Malin Array Si** 14.64 19 P Pn 21 07 31.8 -2.1
AKBB **Malin Array Si** 14.64 19 Pn 21 07 31.8 -2.1
BRG Berggiesshubel 14.90 340 *e*P P 21 07 43.2 +1.0
comp=Z,6.6nm,0.7s
BRG Berggiesshubel 14.90 340 *e*P P 21 07 43.2 +1.0
BRG pmax pmax
comp=Z,7.0nm,0.7s
BFO Black Forest 14.95 323 P Pn 21 07 38.6 +0.5
BFO Black Forest 14.95 323 Pn Pn 21 07 38.6 +0.5
ECH Echery 15.46 321 P Pn 21 07 44.8 +0.2
ECH pmax pmax
comp=Z,5.0nm,1.1s
ECH Echery 15.46 321 Pn Pn 21 07 44.8 +0.2
CLL Collm 15.55 339 *e*P P 21 07 48.0 -1.4
CLL Collm 15.55 339 *e*P P 21 07 48.0 -1.4
CLL *i* pP Pn 21 07 50.8 +5.0
comp=Z,21nm,0.9s
CLL *i* 21 07 52.9
comp=Z,25nm,1.1s
CLL *i* 21 08 02.0
CLL *i* sPP 21 08 04.3
CLL *e*S Sn 21 10 24.0 -13
CLL Lm MLR 21 14 00.0
comp=N,300nm,18.1s
CLL Lm MLR 21 14 00.0
comp=E,200nm,20.9s
CLL Collm 15.55 339 P P 21 07 48.5 -0.9
BRNS Bernies 16.91 138 AMP 21 08 00.0
baz=138
WLF Walferdange 16.91 323 sP sP 21 08 20.3 0.0
SUW Suwalki 16.98 3 P P 21 08 03.6 -1.7
SUW pmax pmax
comp=Z,93nm,0.7s
SUW Suwalki 16.98 3 P P 21 08 03.6 -1.7
SHA1 Shidzhatmaz 17.23 61 *i* P P 21 08 07.2 -1.2
KIV Kislovodsk 17.31 60 *e*P P 21 08 08.1 -1.0
KIV pmax pmax
comp=Z,25nm,1.0s
KIV MLR MLR
comp=Z,136nm,14.0s
KIV Kislovodsk 17.31 60 P P 21 08 08.9 -0.2
AKH Akhalkalaki 17.37 69 P P 21 08 09.5 -0.4
AKH pmax pmax
comp=Z,9.0nm,1.1s
AKH Akhalkalaki 17.37 69 P P 21 08 09.5 -0.4
KBZ Khabaz 17.39 61 P P 21 08 10.8 +0.8
comp=Z,0.6nm,0.3s,baz=282,slow=3.4,SNR=21
KBZ LR LR 21 16 26.2
comp=Z,142nm,20.9s,baz=273,slow=43
GOF Gofitskoye 17.89 57⇓ *e*P P 21 08 15.9 +0.5
GOF pmax pmax
comp=Z,32nm,0.7s
ZEI Tsey 17.89 65 *e*P Pn 21 08 13.3 -2.2
ZEI pmax pmax
comp=Z,22nm,0.8s
DOU Dourbes 17.96 322 x x 21 08 18.0
NACGM **Naroch** 18.17 9 *e*P Pn 21 08 17.0 -1.5
NACGM *e*S S 21 11 40.0 -4.0
GNI Garni 18.21 73 P Pn 21 08 18.8 -0.5
GNI pmax pmax
comp=Z,15nm,0.8s
GNI Garni 18.21 73 P Pn 21 08 18.8 -0.5
TBLG Delisi 18.34 68 P P 21 08 18.1 -2.3
TBLG pmax pmax
comp=Z,15nm,1.0s
TBLG Delisi 18.34 68 P P 21 08 18.1 -2.3
PABE Paberze 18.51 4 *i* Pg Pn 21 08 21.5 -1.0
PABE *e*P Pn 21 08 21.5 -1.0
PABE IAmb IAmb 21 08 24.9
comp=Z,68nm,0.5s
IIGN Ignalina 18.54 8 *e*P Pn 21 08 21.9 -1.1
IIGN IAmb IAmb 21 08 22.9
comp=Z,18nm,0.5s
BSD Bornholm Skovb 18.65 348 *i* P Pn 21 08 23.1 -1.2
BSD pmax pmax
comp=Z,11nm,0.4s
BSD Bornholm Skovb 18.65 348 *i* P Pn 21 08 23.1 -1.2
comp=Z,11nm,0.4s
ISAL Salakas 18.75 8 *e*P Pn 21 08 24.3 -1.2
ISAL IAmb IAmb 21 08 26.4
comp=Z,14nm,0.6s
VSR Storozhevoye 18.80 36 *e*P P 21 08 23.5 -1.8
VSR pmax pmax
comp=Z,20nm,0.5s
IZAR Zarasai 18.94 8 *e*P Pn 21 08 27.1 -0.6
PBUR Paburg 18.97 0 *e*P Pn 21 08 27.7 -0.4
TAM Tamanrasset 19.97 229 P P 21 08 39.2 +0.7
TAM pmax pmax
comp=Z,9.0nm,0.8s
TAM Tamanrasset 19.97 229 P P 21 08 39.2 +0.7
VRH Novokhopyorsk 20.03 39 *e*P Pn 21 08 38.1 -2.7
VRH pmax pmax
comp=Z,50nm,0.6s
ESDC Sonseca Array 20.32 285 P Pn 21 08 43.7 -0.8
comp=Z,0.6nm,0.4s,baz=78,slow=12,SNR=7.1
ESDC Sonseca Array 20.32 285 IAmb IAmb 21 08 49.3
comp=Z,1.1nm,0.9s
AKT Akhty 20.55 70 *e*P Pn 21 08 44.4 -2.7
AKT *e* 21 09 02.7
AKT pmax pmax
comp=Z,21nm,1.1s
SLIT Slitere, Latvi 20.58 1 *e*P Pn 21 08 44.0 -3.2
OBN Obninsk 20.69 25 *de*P P 21 08 44.6 -1.2
OBN *e* 21 09 02.8
OBN *e* 21 12 53.5
OBN pmax pmax
comp=Z,37nm,0.6s
OBN MLR MLR
comp=Z,152nm,18.0s
OBN Obninsk 20.69 25 P P 21 08 44.8 -1.0
comp=Z,14nm,0.7s,baz=201,slow=1.5,SNR=17
OBN Obninsk 20.69 25 P P 21 08 44.9 -1.0
MOS Moscow 21.55 25 *e*P P 21 08 52.8 -2.3
MOS *e*S S 21 12 52.3 +0.9
MOS pmax pmax
comp=Z,42nm,0.8s
VSU Vasula 21.66 7 *ce*P P 21 08 56.2 0.0
VSU pmax pmax
comp=Z,164nm,0.8s
VSU Vasula 21.66 7 *e*P P 21 08 55.2 -1.0
MDT Midelt 22.00 267 P P 21 09 00.8 +0.5
comp=Z,4.1nm,0.8s,baz=194,slow=20,SNR=4.6
PUL Pulkovo 23.39 11 *ce*P P 21 09 14.8 +0.6
PUL pmax pmax
comp=Z,59nm,0.6s
HFS Hagfors 23.66 350 P P 21 09 15.8 -1.0
comp=Z,24nm,0.5s,baz=161,slow=11,SNR=113
OSL Oslo 23.97 346 *e*P P 21 09 19.0 -0.7
RAYN Ar Rayn 24.46 117 P P 21 09 23.9 -0.7
RAYN pmax pmax
comp=Z,3.0nm,0.8s
RAYN Ar Rayn 24.46 117 P P 21 09 23.9 -0.7
FINES FINESS Array B 24.55 5 P P 21 09 24.2 -0.8
comp=Z,26nm,0.7s,baz=169,slow=11,SNR=46
FINES FINESS Array B 24.55 5 P P 21 09 23.8 -1.3
NC602 NORSAR Array S 24.57 348 *e*P P 21 09 24.9 -0.4
NC602 NORSAR Array S 24.57 348 P P 21 09 23.4 -1.8
NC405 NORSAR Array S 24.90 348 P P 21 09 27.8 -0.4
NB201 NORSAR Array S 24.91 348 P P 21 09 27.1 -1.2
EKA Eskdalemuir Ar 24.91 325 P P 21 09 29.0 +0.7
comp=Z,4.7nm,0.6s,baz=127,slow=9.1,SNR=23
NB2 NORSAR Subarra 24.91 348 P P 21 09 28.2 -0.2
comp=Z,6.5nm,0.6s,baz=155,slow=9.3
NB2 NORSAR Subarra 24.91 348 P P 21 09 28.2 -0.2
baz=155,slow=9.3
NOA NORSAR Array B 24.91 348 P P 21 09 27.9 -0.5
comp=Z,9.1nm,0.6s,baz=157,slow=9.0,SNR=40
NC204 NORSAR Array S 25.21 347 IAmb IAmb 21 09 32.4
comp=Z,9.5nm,0.7s
DOMB Dombas 26.23 346 *e*P P 21 09 41.0 +0.8
KLMR Klimovskoe 26.33 20 *e*P P 21 09 38.9 -2.3
KLMR pmax pmax
comp=Z,38nm,0.6s
KLMR Klimovskoe 26.33 20 *e*P P 21 09 38.9 -2.3
KLMR AMP 21 09 43.8
comp=Z,38nm,0.6s
KIRV Kirov 28.07 31 P P 21 09 55.7 -1.1
comp=Z,29nm,0.7s,baz=171,slow=1.8,SNR=13
NSS Namsos 28.12 351 *e*P P 21 09 56.4 -0.7
GEYT Alibeck 28.74 77 P P 21 10 02.2 -0.8
comp=Z,3.1nm,0.6s,baz=289,slow=9.2,SNR=10
GEYT Alibeck 28.74 77 P P 21 10 02.2 -0.8
PRGR Permogore 28.76 24 *e*P P 21 10 00.2 -2.7
PRGR pmax pmax
comp=Z,19nm,0.9s
AKTO Aktyubinsk 29.09 51 P P 21 10 04.6 -1.3
comp=Z,2.3nm,0.4s,baz=260,slow=11,SNR=12
MOR8 Moi Rana 29.46 354 *e*P P 21 10 09.3 +0.2
TOA0 Torodi Ar. Sit 29.83 222 P P 21 10 14.2 +1.4
TOA0 IAmb IAmb 21 10 16.3
comp=Z,4.4nm,0.7s
TORD Torodi Ar. Bea 29.83 222 P P 21 10 13.8 +1.0
comp=Z,3.5nm,0.5s,baz=32,slow=9.1,SNR=45
TORD Torodi Ar. Bea 29.83 222 P P 21 10 13.0 +0.2
ABKAR **Akbulak array** 30.08 54 P P 21 10 13.4 -1.3
ABKAR **Akbulak array** 30.08 54 IAmb IAmb 21 10 15.4
comp=Z,3.3nm,1.0s
STEI Steigen 31.14 355 *e*P P 21 10 23.9 +0.1
ARU Arti 31.26 40 *c i*P P 21 10 23.9 -1.1
ARU 21 11 23.2
ARU S S 21 15 28.8 +0.4
ARU SS SnSn 21 17 10.8 -3.0
ARU pmax pmax
comp=Z,20nm,0.8s
ARU Arti 31.26 40 P P 21 10 24.0 -1.0
comp=Z,4.5nm,0.5s,baz=245,slow=7.6,SNR=28
ARU Arti 31.26 40 P P 21 10 24.0 -1.0
APA Apatity 31.26 9⇓ *i*P P 21 10 24.1 -0.8
APA pmax pmax
comp=Z,11nm,0.8s
APA MLR MLR
comp=Z,300nm,12.0s
KTK1 Kautokeino 32.02 1 *e*P P 21 10 32.1 +0.5
ARCES **ARCESS Array B** 32.59 2 P P 21 10 36.4 -0.2
comp=Z,8.4nm,0.7s,baz=186,slow=10,SNR=52
ARE0 ARCESS Array S 32.59 2 *e*P P 21 10 36.4 -0.2
TRO Tromso 32.67 358 *e*P P 21 10 37.7 +0.5
HAMF Hammerfest 33.66 1 *e*P P 21 10 46.1 +0.2
WSAR Wadi Sarin 34.50 103 P P 21 10 54.2 +0.4
comp=Z,1.8nm,0.7s,baz=305,slow=11,SNR=4.2
BRVK Borovoye 37.03 49 P P 21 11 14.7 -0.4
BRVK pmax pmax
comp=Z,13nm,0.8s
BRVK Borovoye 37.03 49 P P 21 11 14.7 -0.4
BRVK IAmb IAmb 21 11 15.6
comp=Z,13nm,0.8s
BVAR Borovoye Array 37.09 49 P P 21 11 15.2 -0.4
comp=Z,6.7nm,0.6s,baz=262,slow=6.0,SNR=50
KK31 Karatay Array 37.35 65 IAmb IAmb 21 11 18.7
comp=Z,3.8nm,0.7s
KKAR Karatay Array 37.35 65 P P 21 11 16.5 -1.5
KKAR Karatay Array 37.35 65 P P 21 11 16.4 -1.5
KKAR Karatay Array 37.35 65 IAmb IAmb 21 11 18.7
comp=Z,3.8nm,0.7s
DBIC Dimbokro 38.78 225 P P 21 11 31.3 +1.1
comp=Z,5.7nm,0.5s,baz=19,slow=9.3,SNR=13
DBIC Dimbokro 38.78 225 P P 21 11 31.3 +1.1
DBIC IAmb IAmb 21 11 33.6
comp=Z,8.0nm,0.7s
TIC Toumodi 38.89 225 *e*P P 21 11 32.0 +0.8
KIC Kosan Boka 38.97 225 *e*P P 21 11 32.8 +1.0
comp=Z,18nm,0.8s
LIC Lamto 39.24 225 *e*P P 21 11 35.1 +1.1
comp=Z,34nm,0.5s
EKS2 Erkin-Say 39.79 65 P P 21 11 38.2 -0.4
SNR=14
AML Almayashu 39.83 66 P P 21 11 39.8 +0.6
SNR=7.5
AAK Ala-Archa 40.32 65 P P 21 11 42.4 -0.5
AAK pmax pmax
comp=Z,8.0nm,1.1s
AAK Ala-Archa 40.32 65 P P 21 11 42.8 -0.1
comp=Z,5.0nm,0.8s,baz=201,slow=8.6,SNR=16
AAK Ala-Archa 40.32 65 P P 21 11 42.9 -0.1
SNR=8.0
AAK Ala-Archa 40.32 65 P P 21 11 42.4 -0.5
AAK IAmb IAmb 21 11 43.4
comp=Z,7.5nm,1.1s
CHMS Chumysh 40.44 65 P P 21 11 43.4 -0.4
SNR=9.0
SPA0 Spitsbergen Ar 41.29 358 *e*P P 21 11 50.9 +0.6
SPITS Spitsbergen Ar 41.29 358 P P 21 11 50.9 +0.6
comp=Z,3.8nm,0.6s,baz=158,slow=16,SNR=22
ULHL Ulahol 41.66 65 P P 21 11 53.8 -0.3
SNR=13
NIL Nilore 41.71 79 P P 21 11 54.0 -0.4
NIL pmax pmax
comp=Z,13nm,1.1s
NIL Nilore 41.71 79 P P 21 11 54.0 -0.4
NIL IAmb IAmb 21 11 55.1
comp=Z,13nm,1.1s
KSH Kashi 42.08 69 P P 21 11 55.5 -1.9
KSH sP pP 21 12 13.5 +4.0
KSH PP 21 13 36.8
KSH S S 21 18 09.8 -4.1
KSH sS sS 21 18 34.5 +0.5
KSH SS SS 21 21 13.3 -8.8
KSH pmax pmax
comp=Z,12nm,0.5s
KSH pmax pmax
comp=Z,270nm,4.0s
KSH LR LR
comp=Z,130nm,4.3s
KSH LR LR
comp=Z,140nm,4.5s
KSH LR LR
comp=Z,170nm,5.8s
KURBB **Kurchatov Arra** 42.11 53 P P 21 11 56.4 -0.9
comp=Z,31nm,0.6s,baz=279,slow=8.8,SNR=138
KURK Kurchatov 42.16 52 *ce*P P 21 11 56.8 -0.9
KURK pmax pmax
comp=Z,28nm,0.8s
KURK Kurchatov 42.16 52 P P 21 11 56.7 -1.1
DAG Danmarks Havn 43.60 347 *i* P P 21 12 09.8 +0.8
DAG Danmarks Havn 43.60 347 *i* P P 21 12 09.8 +0.8
DAG *i* 21 12 18.1
MAKZ Makanchi 44.84 58 P P 21 12 18.2 -1.2
MAKZ pmax pmax
comp=Z,6.0nm,0.8s
MAKZ Makanchi 44.84 58 P P 21 12 18.2 -1.2
MAKZ IAmb IAmb 21 12 19.2
comp=Z,5.8nm,0.8s
MKAR Makanchi Array 45.05 58 P P 21 12 19.9 -1.2
comp=Z,13nm,0.5s,baz=275,slow=7.0,SNR=133
MKAR PcP **PcP** 21 14 01.2 -0.1
comp=Z,1.5nm,0.5s,baz=274,slow=3.7,SNR=2.6
MKAR ScP **ScP** 21 17 50.6 +0.4
comp=Z,0.6nm,0.6s,baz=271,slow=5.3,SNR=4.2
ZALV Zalesovo Beam 45.71 47 P P 21 12 25.1 -1.1
comp=Z,30nm,0.7s,baz=273,slow=9.0,SNR=96
ZALV Zalesovo Beam 45.71 47 P P 21 12 24.9 -1.3
SUMG Summit 46.22 339 *e*P P 21 12 31.9 +1.5
SUMG *e* 21 12 44.3
SUMG Summit 46.22 339 *i* P P 21 12 31.9 +1.5
SUMG *e* 21 12 44.3
NOR Nord 46.71 353 *i* P P 21 12 33.9 +0.2
WMQ Urumqi 49.44 60 *e*P P 21 12 55.0 -0.4
WMQ pP pP 21 13 07.8 +0.1
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,67nm,3.6s
WMQ LR LR
comp=Z,490nm,29.3s
WMQ LR LR
comp=Z,740nm,29.7s
WMQ LR LR
comp=Z,150nm,29.0s
DANN Dangsing 52.08 81 *e*P P 21 13 15.1 -0.6
comp=Z,97nm,0.6s
KOLN Koldanda 52.21 81 *e*P P 21 13 15.6 -1.0
comp=Z,39nm,0.9s
LSZ Lusaka 52.41 172 P P 21 13 19.8 +1.9
comp=Z,2.2nm,0.6s,baz=20,slow=6.7,SNR=6.2
GKN Gorkha 52.93 81 *e*P P 21 13 20.6 -1.3
comp=Z,48nm,0.5s
DMN Daman 53.48 81 *e*P P 21 13 25.1 -0.9
comp=Z,36nm,0.5s
KKN Kakani 53.53 80 *e*P P 21 13 25.0 -1.4
comp=Z,17nm,0.6s
PKIN Phulchoki 53.72 81 *e*P P 21 13 26.4 -1.4
comp=Z,21nm,0.9s
PKI Pulchoki 53.73 81 *e*P P 21 13 26.6 -1.4
comp=Z,25nm,0.9s
GUN Gumba 53.95 80 *e*P P 21 13 28.3 -1.3
comp=Z,21nm,0.4s
JIRN Jiri 54.31 80 *e*P P 21 13 31.2 -1.0
comp=Z,18nm,0.4s
RAMN Ramite 54.96 81 *e*P P 21 13 35.4 -1.4
comp=Z,54nm,0.8s
ODAN Odare 55.62 80 *e*P P 21 13 40.2 -1.4
comp=Z,20nm,0.8s
TAPN Taplejung 55.65 80 *e*P P 21 13 40.6 -1.2
comp=Z,23nm,0.7s

LSA	**Lhasa**	**57.26**	**76**	P	**P**	**21 13 53.0**	**-0.4**
LSA				pmax	pmax		
	comp=Z,59nm,0.6s						
TLY	**Talaya**	**57.32**	**47**	*e*P	**P**	**21 13 52.1**	**-0.9**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAK	**Zakamensk**	**57.55**	**49**	*e*P	**P**	**21 13 54.2**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA	**Gaotai**	**59.48**	**62**	⇑P	**P**	**21 14 07.5**	**-0.9**
GTA				pP	pP	21 14 16.8	-4.2
GTA				sP	sP	21 14 22.0	-4.0
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,57nm,5.6s						
GTA				LR	LR		
	comp=Z,38nm,18.7s						
GTA				LR	LR		
	comp=Z,150nm,18.4s						
GTA				LR	LR		
	comp=Z,72nm,17.8s						
TIXI	**Tiksi**	**60.35**	**20**	*e*P	**P**	**21 14 14.7**	**+1.0**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SONM	**Songino Array**	**60.40**	**50**	P	**P**	**21 14 13.7**	**-0.9**
SONM						21 15 00.0	
SONM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SONM	**Songino Array**	**60.40**	**50**	P	**P**	**21 14 14.1**	**-0.5**
	comp=Z,6.3nm,0.9s,baz=283,slow=8.1,SNR=42						
SONM	**Songino Array**	**60.40**	**50**	P	**P**	**21 14 13.7**	**-0.9**
SONM				PcP	**PcP**	**21 14 60.0**	**+0.8**
BOD	**Bodaibo**	**60.64**	**38**	⇓*i*P	**P**	**21 14 14.2**	**-1.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULN	**Ulaanbaatar**	**60.80**	**50**	*ce*P	**P**	**21 14 16.7**	**-0.6**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ULN	**Ulaanbaatar**	**60.80**	**50**	P	**P**	**21 14 16.5**	**-0.8**
ULN				IAmb	IAmb	21 14 17.4	
	comp=Z,6.9nm,0.8s						
LZH	**Lanzhou**	**63.82**	**63**	⇑P	**P**	**21 14 37.0**	**-0.7**
LZH				pP	pP	21 14 53.0	+2.6
LZH				sP	sP	21 14 58.0	+2.6
LZH				PP	**PP**	**21 16 57.3**	**-0.8**
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,68nm,4.3s						
LZH				LR	LR		
	comp=Z,460nm,16.5s						
LZH				LR	LR		
	comp=Z,480nm,16.3s						
LZH				LR	LR		
	comp=Z,590nm,18.0s						
BOSA	**Boshof**	**65.41**	**177**	P	**P**	**21 14 49.9**	**+2.0**
	comp=Z,1.7nm,0.4s,baz=355,slow=7.1,SNR=10						
BOSA	**Boshof**	**65.41**	**177**	IAmb	IAmb	21 14 50.7	
	comp=Z,2.5nm,0.8s						
CD2	**Chengdu**	**66.26**	**68**	P	**P**	**21 14 52.3**	**-1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**66.85**	**56**	*e*P	**P**	**21 14 56.5**	**-0.7**
HHC				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HHC				pmax	pmax		
	comp=Z,57nm,4.9s						
HIA	**Hailar**	**67.62**	**45**	IAmb	IAmb	21 15 02.1	
	comp=Z,6.8nm,0.7s						
XAN	**Xi'an**	**68.45**	**63**	P	**P**	**21 15 06.5**	**-0.8**
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN	**Xi'an**	**68.45**	**63**	IAmb	IAmb	21 15 07.7	
	comp=Z,5.5nm,0.8s						
KMI	**Kunming**	**68.46**	**74**	IAmb	IAmb	21 15 07.7	
	comp=Z,6.8nm,0.8s						
CHTO	**Chiang Mai**	**68.87**	**82**	P	**P**	**21 15 09.2**	**-0.9**
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHTO	**Chiang Mai**	**68.87**	**82**	P	**P**	**21 15 09.2**	**-0.9**
CHTO				IAmb	IAmb	21 15 10.2	
	comp=Z,3.1nm,0.8s						
CMAR	**Chiang Mai Arr**	**69.06**	**82**	P	**P**	**21 15 10.6**	**-0.7**
	comp=Z,3.0nm,0.9s,baz=303,slow=8.0,SNR=22						
SLVN	**Son La**	**71.39**	**77**	IAmb	IAmb	21 15 26.8	
	comp=Z,5.9nm,1.0s						
BILL	**Bilibino**	**71.88**	**13**	*e*P	**P**	**21 15 28.1**	**+0.4**
BILL				*e*		21 15 41.4	
BILL				*e*		21 18 11.7	
BILL				*e*PPP	PPP	21 19 50.7	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,49nm,16.0s						
BILL	**Bilibino**	**71.88**	**13**	P	**P**	**21 15 28.0**	**+0.4**
BILL				IAmb	IAmb	21 15 30.8	
	comp=Z,4.9nm,1.0s						
SEY	**Seymchan**	**72.82**	**21**	*i* P	**P**	**21 15 34.1**	**+0.8**
INK	**Inuvik**	**73.33**	**351**	P	**P**	**21 15 36.9**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=9.8,slow=6.7,SNR=8.0						
CN2	**Changchun**	**73.92**	**47**	*e*P	**P**	**21 15 39.8**	**-0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	**Kul'dur**	**74.10**	**40**	*e*P	**P**	**21 15 40.4**	**-0.7**
KLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KLR	**Kul'dur**	**74.10**	**40**	P	**P**	**21 15 41.2**	**+0.1**
	comp=Z,3.7nm,0.6s,baz=316,slow=7.9,SNR=17						
TOLK	**Toolik Lake Re**	**74.41**	**357**	IAmb	IAmb	21 15 48.3	
	comp=Z,9.6nm,1.1s						
YKA	**Yellowknife Ar**	**74.77**	**341**	P	**P**	**21 15 45.5**	**+0.8**
	comp=Z,1.9nm,0.7s,baz=32,slow=5.2,SNR=30						
MA2	**Magadan**	**74.91**	**24**	*ce*P	**P**	**21 15 46.5**	**+0.9**
MA2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
RDOG	**Red Dog Mine**	**75.14**	**2**	P	**P**	**21 15 47.8**	**+1.0**
RDOG				IAmb	IAmb	21 15 48.8	
	comp=Z,6.3nm,1.0s						
BMAR	**Burnt Mountain**	**75.31**	**355**	P	**P**	**21 15 49.7**	**+1.8**
EPYK	**Eagle Plains**	**75.57**	**351**	IAmb	IAmb	21 15 50.9	
	comp=Z,7.2nm,0.8s						
NJ2	**Nanjing**	**76.52**	**60**	*e*P	**P**	**21 15 55.0**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ULM	**Lac du Bonnet**	**77.18**	**324**	P	**P**	**21 16 00.1**	**+1.3**
	comp=Z,4.1nm,0.5s,baz=47,slow=5.0,SNR=11						
ULM	**Lac du Bonnet**	**77.18**	**324**	IAmb	IAmb	21 16 00.9	
	comp=Z,8.4nm,1.1s						
IMAR	**Indian Mountai**	**77.22**	**358**	P	**P**	**21 16 00.2**	**+1.5**
USRK	**Ussuriysk Ar.**	**77.41**	**44**	P	**P**	**21 15 59.6**	**-0.5**
	comp=Z,8.6nm,0.8s,baz=279,slow=5.0,SNR=15						
ILAR	**Eielson Array**	**78.11**	**355**	P	**P**	**21 16 05.0**	**+1.3**
	comp=Z,1.6nm,0.5s,baz=349,slow=3.3,SNR=26						
ILAR	**Eielson Array**	**78.11**	**355**	P	**P**	**21 16 04.9**	**+1.3**
HDA	**Harding Lake**	**78.47**	**355**	IAmb	IAmb	21 16 07.2	
	comp=Z,7.9nm,0.6s						
WRH	**Wood River Hil**	**78.48**	**356**	IAmb	IAmb	21 16 07.4	
	comp=Z,6.3nm,0.7s						
KSAR	**Wonju Array Be**	**79.25**	**51**	P	**P**	**21 16 10.0**	**-0.4**
KSAR	**Wonju Array Be**	**79.25**	**51**	P	**P**	**21 16 10.0**	**-0.4**
KSRS	**Korea Array**	**79.27**	**51**	P	**P**	**21 16 10.3**	**-0.2**
	comp=Z,8.8nm,0.7s,baz=312,slow=4.5,SNR=27						
BCAR	**Beaver Creek A**	**79.34**	**352**	P	**P**	**21 16 11.2**	**+0.6**
DHY	**Denali Highway**	**79.82**	**355**	IAmb	IAmb	21 16 15.1	
	comp=Z,9.3nm,0.7s						
KNK	**Knik Glacier**	**81.55**	**355**	IAmb	IAmb	21 16 26.4	
	comp=Z,8.9nm,0.9s						
CRQM	**Cirque**	**81.75**	**353**	IAmb	IAmb	21 16 25.2	
	comp=Z,7.2nm,0.8s						
MAT	**Matsushiro**	**86.05**	**46**	P	**P**	**21 16 44.8**	**-1.0**
MJAR	**Matsushiro Arr**	**86.05**	**46**	P	**P**	**21 16 46.6**	**+0.8**
MJAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	**Matsushiro Arr**	**86.05**	**46**	P	**P**	**21 16 45.2**	**-0.6**
	comp=Z,4.7nm,0.7s,baz=326,slow=4.8,SNR=9.6						
MJAR	**Matsushiro Arr**	**86.05**	**46**	P	**P**	**21 16 46.6**	**+0.8**
MJA0	**Matsu Arr-Jizo**	**86.07**	**46**	*e*P	**P**	**21 16 45.2**	**-0.8**
MJA0				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CPUP	**Villa Florida**	**97.41**	**243**	LR	LR	22 02 04.9	
	comp=Z,31nm,20.5s,baz=170,slow=36						
WRA	**Warramunga Arr**	**119.49**	**94**	PKP	**PKiKP**	**21 22 54.7**	**-0.3**
	comp=Z,0.8nm,1.0s,baz=323,slow=1.3,SNR=4.6						
ASAR	**Alice Springs**	**121.06**	**98**	PKP	**PKiKP**	**21 22 57.8**	**-0.2**
	comp=Z,0.3nm,0.3s,baz=313,slow=1.8,SNR=9.3						

*THE **29** 21:24:56.4, 38˚.20N×20˚.40E, h10km, ML2.5/7, Error ellipse: s-maj=1.0km s-min=0.4km az=237.0*
*ATH **29** 21:24:56.5, 38˚.22N×20˚.40E, h10km±1km, ML2.5/6, Error ellipse: s-maj=2.3km s-min=1.1km az=258.0*
ISC 29 21:24:56.3±1.1, 38˚.21N±0˚.03×20˚.39E±0˚.04, h11km±5km, n38, σ0$40/57, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.03**	**199**	P	**Pg**	**21 24 58.3**	**+0.1**
CHV1				S	**Sg**	**21 24 59.5**	**0.0**
KEF3	**Kipouria, Keph**	**0.04**	**261**	P	**Pg**	**21 24 58.4**	**+0.2**
KEF3				S	**Sg**	**21 24 59.9**	**+0.2**
KEF4	**Livadi, Kephal**	**0.06**	**27**	P	**Pg**	**21 24 58.4**	**0.0**
KEF4				S	**Sg**	**21 24 59.9**	**-0.1**
ARG2	**Argostoli**	**0.08**	**112**	P	**Pg**	**21 24 58.8**	**+0.1**
ARG2				S	**Sg**	**21 25 00.3**	**-0.1**
	16μm,0.1s						
KEF2	**Argostoli. Kep**	**0.09**	**120**	P	**Pg**	**21 24 58.9**	**+0.2**
KEF2				S	**Sg**	**21 25 00.5**	**0.0**
KEF1	**Kardakata, Kep**	**0.09**	**42**	P	**Pg**	**21 24 58.9**	**+0.1**
KEF1				S	**Sg**	**21 25 00.3**	**-0.4**
VLS	**Valsamata**	**0.16**	**102**	P	**Pg**	**21 24 59.9**	**0.0**
VLS				S	**Sg**	**21 25 02.2**	**-0.1**
	4μm,0.1s						
VLS	**Valsamata**	**0.16**	**102**	P	**Pg**	**21 24 59.8**	**0.0**
VLS				S	**Sg**	**21 25 02.4**	**+0.1**
VLS				AML	AML	21 25 02.5	
	comp=N,9520μm,0.2s						
VLS				AML	AML	21 25 02.5	
	comp=E,5578μm,0.1s						
VSK1	**VASILIKIADES**	**0.24**	**34**	P	**Pg**	**21 25 01.2**	**-0.1**
VSK1				S	**Sg**	**21 25 05.0**	**+0.4**
	comp=E,2μm,0.3s						
FSK	**Fiskardo**	**0.28**	**28**	P	**Pg**	**21 25 02.1**	**+0.1**
FSK				S	**Sg**	**21 25 06.4**	**+0.5**
	comp=E,475nm,0.2s						
FSK	**Fiskardo**	**0.28**	**28**	P	**Pg**	**21 25 02.2**	**+0.2**
FSK				S	**Sg**	**21 25 06.6**	**+0.7**
KFL	**Anninata**	**0.33**	**108**	P	**Pg**	**21 25 02.8**	**0.0**
KFL				S	**Sg**	**21 25 07.8**	**+0.6**
	comp=E,1μm,0.3s						
KFL	**Anninata**	**0.33**	**108**	P	**Pg**	**21 25 03.0**	**+0.1**
KFL				S	**Sg**	**21 25 08.3**	**+1.1**
KFL				AML	AML	21 25 08.6	
	comp=E,4242μm,0.4s						
KFL				AML	AML	21 25 12.5	
	comp=N,1795μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.39**	**147**	P	**Pg**	**21 25 04.4**	**+0.3**
VLMS				S	**Sb**	**21 25 10.7**	**-0.7**
VLMS				AML	AML	21 25 11.8	
	comp=E,3064μm,0.2s						
VLMS				AML	AML	21 25 14.2	
	comp=N,2470μm,0.3s						
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**21 25 05.4**	**+0.1**
EVGI				S	**Sg**	**21 25 12.4**	**+1.0**
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**21 25 05.3**	**+0.1**
EVGI				S	**Sb**	**21 25 12.6**	**-0.7**
MGNA	**Meganis**	**0.55**	**35**	P	**Pg**	**21 25 06.0**	**-0.9**
LKD2	**Lefkada island**	**0.61**	**20**	P	**Pg**	**21 25 08.2**	**0.0**
LKD2	**Lefkada island**	**0.61**	**20**	P	**Pg**	**21 25 08.3**	**0.0**
TSLK	**Tsoukalades, L**	**0.65**	**18**	P	**Pg**	**21 25 08.7**	**-0.1**
TSLK	**Tsoukalades, L**	**0.65**	**18**	P	**Pg**	**21 25 09.0**	**+0.2**
PDO	**Prodromos**	**0.73**	**58**	P	**Pg**	**21 25 10.0**	**-0.4**
PDO				S	**Sb**	**21 25 21.8**	**+0.7**
	comp=N,270nm,0.4s						
PDO	**Prodromos**	**0.73**	**58**	P	**Pg**	**21 25 10.2**	**-0.2**
PDO				AML	AML	21 25 26.2	
	comp=N,413μm,0.3s						
PDO				AML	AML	21 25 34.8	
	comp=E,374μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pg**	**21 25 12.5**	**-0.3**
RLS				S	**Sb**	**21 25 24.7**	**-0.1**
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pg**	**21 25 12.6**	**-0.2**
PVO	**Paravola**	**0.98**	**65**	P	**Pg**	**21 25 15.0**	**-0.1**
PVO	**Paravola**	**0.98**	**65**	P	**Pg**	**21 25 15.1**	**0.0**
PVO				AML	AML	21 25 37.5	
	comp=N,284μm,0.3s						
PVO				AML	AML	21 25 39.3	
	comp=E,396μm,0.4s						
DRO	**Drossia**	**1.07**	**103**	P	**Pg**	**21 25 16.5**	**-0.4**
DRO				S	**Sn**	**21 25 31.8**	**-0.4**
	comp=E,218nm,0.3s						
DRO	**Drossia**	**1.07**	**103**	P	**Pg**	**21 25 16.7**	**-0.2**
DRO				AML	AML	21 25 41.4	
	comp=N,604μm,0.4s						
DRO				AML	AML	21 25 41.5	
	comp=E,494μm,0.4s						
EFP	**Efpalio**	**1.21**	**79**	P	**Pn**	**21 25 18.5**	**-0.6**
AMT	**Artemida-Makis**	**1.24**	**123**	P	**Pg**	**21 25 20.2**	**+0.1**
LAKA	**Lakka**	**1.25**	**88**	P	**Pn**	**21 25 19.3**	**-0.4**
ANX	**Ano Chora**	**1.26**	**72**	P	**Pg**	**21 25 20.6**	**+0.1**
EVR	**Evrytania**	**1.32**	**57**	P	**Pb**	**21 25 21.4**	**+0.3**
SERG	**Sergoula**	**1.32**	**81**	P	**Pg**	**21 25 22.1**	**+0.4**
TRIZ	**Trizonia**	**1.33**	**83**	P	**Pn**	**21 25 20.3**	**-0.5**
KALE	**Kalithea**	**1.39**	**82**	P	**Pn**	**21 25 21.4**	**-0.2**
KLV	**Kalavryta, Ach**	**1.40**	**96**	P	**Pn**	**21 25 22.3**	**+0.5**

*IDC **29** 21:34:55.0±1.0, 52˚.69N×34˚.59W, h0km, mb3.7/13, mb1 4.0/14, mb1mx3.7/60, mbtmp3.8/14, ML4.0/1, MS3.2/8, Ms1 3.2/8, ms1mx3.0/43, Error ellipse: s-maj=30.5km s-min=16.7km az=2.0*
*NEIC **29** 21:34:57.1±0.7, 52˚.8N±0˚.2×34˚.6W±0˚.2, h10km±1km, mb4.2/2, Error ellipse: s-maj=28.4km s-min=14.3km az=206.0*
ISC 29 21:34:57.8±0.8, 52˚.6N±0˚.2×34˚.64W±0˚.08, h20km, n24, σ0$76/19, mb3.8/15, MS3.1/8, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DRLN	**Deer Lake**	**14.79**	**266**	Pn	**Pn**	**21 38 24.1**	**-1.5**
DRLN				S	Sn	21 40 53.9	-15
EKA	**Eskdalemuir Ar**	**18.63**	**69**	P	**Pn**	**21 39 14.3**	**+0.2**
	baz=285,slow=9.4,SNR=5.6						
FRB	**Frobisher Bay**	**20.77**	**316**	LR	LR	21 45 28.1	
	comp=Z,62nm,20.4s,baz=340,slow=30						
NOA	**NORSAR Array B**	**25.95**	**53**	P	**P**	**21 40 28.4**	**-0.1**
	1.1nm,0.8s,baz=270,slow=8.2,SNR=3.0						
NOA				LR	LR	21 48 47.3	
	comp=Z,28nm,18.7s,baz=270,slow=32						
HFS	**Hagfors**	**27.24**	**55**	LR	LR	21 49 59.6	
	comp=Z,56nm,19.2s,baz=268,slow=33						
SADO	**Sadowa**	**29.99**	**273**	LR	LR	21 51 47.4	
	comp=Z,46nm,18.9s,baz=118,slow=34						
GERES	**GERESS Array B**	**30.37**	**77**	P	**P**	**21 41 08.3**	**+0.2**
	0.1nm,0.4s,baz=306,slow=8.0,SNR=4.2						
SPITS	**Spitsbergen Ar**	**31.26**	**18**	LR	LR	21 51 45.7	
	comp=Z,39nm,18.8s,baz=150,slow=32						
ARCES	**ARCESS Array B**	**31.92**	**35**	P	**P**	**21 41 20.9**	**-0.6**
	1.4nm,0.5s,baz=265,slow=7.1,SNR=14						
FINES	**FINESS Array B**	**33.02**	**50**	P	**P**	**21 41 30.7**	**-0.4**
	1.6nm,0.8s,baz=265,slow=9.2,SNR=6.7						
FINES				LR	LR	21 52 35.9	
	comp=Z,48nm,21.7s,baz=300,slow=32						
YKA	**Yellowknife Ar**	**41.28**	**316**	P	**P**	**21 42 41.3**	**+0.1**
	0.3nm,0.6s,baz=63,slow=8.6,SNR=4.5						
KIRV	**Kirov**	**44.90**	**48**	LR	LR	22 01 33.4	
	comp=Z,47nm,19.2s,baz=196,slow=36						
BRTR	**Keskin Array B**	**47.27**	**77**	P	**P**	**21 43 29.6**	**0.0**
	0.9nm,0.8s,baz=323,slow=8.0,SNR=2.9						
TORD	**Torodi Ar. Bea**	**48.89**	**130**	P	**P**	**21 43 41.9**	**-0.3**
	1.8nm,1.0s,baz=336,slow=8.6,SNR=6.0						
TORD				LR	LR	22 03 22.7	
	comp=Z,36nm,18.2s,baz=5.0,slow=35						
PDAR	**Pinedale Array**	**49.22**	**290**	P	**P**	**21 43 45.2**	**+0.5**
	0.4nm,0.5s,baz=66,slow=9.3,SNR=4.7						
HWUT	**Hardware Ranch**	**51.11**	**290**	P	**P**	**21 44 00.5**	**+1.5**
HWUT				IAmb	IAmb	21 44 10.3	
	comp=Z,3.8nm,1.0s						
ILAR	**Eielson Array**	**51.88**	**330**	P	**P**	**21 44 03.5**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=45,slow=5.9,SNR=7.2						
AKTO	**Aktyubinsk**	**53.74**	**52**	P	**P**	**21 44 18.1**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=296,slow=6.7						
TXAR	**Lajitas Array**	**54.77**	**273**	P	**P**	**21 44 27.4**	**+1.4**
	comp=Z,0.3nm,0.6s,baz=64,slow=9.4,SNR=4.5						
MK31	**Makanchi Array**	**67.27**	**42**	P	**P**	**21 45 51.1**	**+0.5**
MK31				IAmb	IAmb	21 45 51.4	
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**67.27**	**42**	P	**P**	**21 45 50.9**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=332,slow=4.9,SNR=33						
SONM	**Songino Array**	**74.54**	**26**	P	**P**	**21 46 35.3**	**+0.4**
	comp=Z,0.6nm,0.9s,baz=334,slow=4.4,SNR=3.9						

WRA	**Warramunga Arr**	**146.27**	**19**	PKPbc	**PKPbc**	**21 54 36.6**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=29,slow=30,SNR=5.0						
ASAR	**Alice Springs**	**149.79**	**21**	PKPbc	**PKPbc**	**21 54 45.1**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=324,slow=1.7,SNR=4.3						

*IDC **29** 21:39:39.0±1.1, 4˚.42S×100˚.77E, h0km, mb4.2/13, mb1 4.3/15, mb1mx4.0/49, mbtmp4.2/15, ML3.7/2, MS3.6/5, Ms1 3.6/5, ms1mx3.1/28, Error ellipse: s-maj=35.5km s-min=13.9km az=52.0*
*NEIC **29** 21:39:40.7±2.4, 4˚.43S±0˚.08×100˚.84E±0˚.07, h17km±4km, mb4.5/25, Error ellipse: s-maj=13.8km s-min=7.5km az=216.0*
*DJA **29** 21:39:41.3±0.4, 5˚S±3˚×10˚1E±˚, h49km±25km, M4.7/19, mb4.8/13, mB5.4/4, MLv4.6/19, Mw(mB)4.8/4*
ISC 29 21:39:37.5±3.4, 4˚.57S±0˚.07×100˚.65E±0˚.06, h1km±21km, n100, σ1$84/106, mb4.4/29, MS3.9/10, 1C, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PPSI	**Pulau Pagai**	**1.91**	**340**	P	**Pn**	**21 40 10.9**	**-0.3**
PPSI				S	**Sn**	**21 40 33.2**	**-2.7**
KSI	**Kapahiang**	**2.14**	**65**	P	**Pn**	**21 40 15.1**	**+0.6**
KSI				S	**Sn**	**21 40 42.2**	**+0.4**
MNAI	**Manna**	**2.31**	**85**	P	**Pn**	**21 40 18.0**	**+1.2**
MNAI				S	**Sn**	**21 40 46.9**	**+1.1**
MNAI	**Manna**	**2.31**	**85**		**Pn**	**21 40 17.7**	**+0.9**
MNAI					Sn	21 40 36.9	-8.9
KRJI	**Kerinci**	**2.59**	**18**	P	**Pn**	**21 40 21.0**	**+0.2**
KRJI				S	**Sn**	**21 40 51.9**	**-1.1**
LWLI	**Liwa**	**3.42**	**98**	P	**Pn**	**21 40 33.4**	**+1.2**
MDSI	**Maura Dua**	**3.52**	**89**	P	**Pn**	**21 40 35.1**	**+1.7**
MDSI				S	**Sn**	**21 41 15.6**	**-0.1**
SISI	**Saibi**	**3.58**	**334**	P	**Pn**	**21 40 32.8**	**-1.5**
SISI				S	**Sn**	**21 41 13.0**	**-4.3**
PDSI	**Padang**	**3.64**	**357**	P	**Pn**	**21 40 34.4**	**-0.7**
PDSI				S	**Sn**	**21 41 14.3**	**-4.5**
SDSI	**Sungai Dareh**	**3.70**	**12**	P	**Pn**	**21 40 36.2**	**+0.3**
SDSI				S	**Sn**	**21 41 17.4**	**-2.7**
KASI	**Kota Agung**	**3.95**	**104**	P	**Pn**	**21 40 40.3**	**+1.0**
KASI				S	**Sn**	**21 41 22.2**	**-4.1**
KLSI		**4.07**	**92**	P	**Pn**	**21 40 42.8**	**+1.8**
PMBI	**Palembang**	**4.42**	**68**	Pn	**Pn**	**21 40 43.3**	**-2.5**
BKNI	**Bangkinang**	**4.88**	**5**	P	**Pn**	**21 40 51.8**	**-0.3**
BKNI	**Bangkinang**	**4.88**	**5**	Pn	**Pn**	**21 40 51.4**	**-0.8**
PBSI	**Pulau Batu**	**5.07**	**332**	P	**Pn**	**21 40 55.1**	**+0.3**
	0.4nm52nm,0.8s						
PBSI				S	**Sn**	**21 41 47.1**	**-7.0**
	0.4nm52nm,0.8s						
SKJI	**Sukabumi**	**6.35**	**113**	P	**Pn**	**21 41 13.8**	**+1.4**
	0.6nm148nm,0.8s						
DBJI	**Dramaga**	**6.38**	**108**	P	**Pn**	**21 41 14.4**	**+1.6**
	0.5nm83nm,0.9s						
GSI	**Gunungsitoli**	**6.59**	**332**	P	**Pn**	**21 41 15.7**	**0.0**
	0.1nm37nm,1.0s						
GSI	**Gunungsitoli**	**6.59**	**332**		**Pn**	**21 41 15.8**	**+0.1**
GSI					**Sn**	**21 42 27.2**	**-4.5**
CNJI	**Cibinong**	**6.99**	**113**	P	**Pn**	**21 41 21.0**	**-0.2**
	0.5nm1μm177nm,0.7s						
MYKOM	**Kota Tinggi**	**7.08**	**27**	Pn	**Pn**	**21 41 23.1**	**+0.6**
LEM	**Lembang**	**7.29**	**108**	Pn	**Pn**	**21 41 27.9**	**+2.5**
	3.4nm,0.3s,baz=355,slow=21,SNR=8.4						
RPSI	**Rantau Prapat**	**7.42**	**347**	Pn	**Pn**	**21 41 25.6**	**-1.5**
RPSI	**Rantau Prapat**	**7.42**	**347**		**Pn**	**21 41 27.4**	**+0.3**
PSI	**Prapat**	**7.52**	**347**	Pn	**Pn**	**21 41 27.4**	**-1.3**
	0.5nm,0.3s,baz=158,slow=11,SNR=4.6						
CISI	**Cisompet, Garu**	**7.72**	**113**	P	**Pn**	**21 41 31.0**	**-0.2**
	0.6nm1μm185nm,0.7s						
CISI	**Cisompet, Garu**	**7.72**	**113**		**Pn**	**21 41 30.7**	**-0.5**
CISI				Sn	**Sn**	**21 42 52.0**	**-7.4**
CMJI	**Cimerak**	**8.38**	**113**	P	**Pn**	**21 41 40.4**	**+0.1**
	87nm,1.1s						
KPJI	**Karang Pucung**	**8.68**	**109**	P	**Pn**	**21 41 46.2**	**+1.8**
	60nm,0.8s						
IPM	**Ipoh**	**9.00**	**2**		**Pn**	**21 41 48.8**	**0.0**
MLSI	**Meulaboh, Aceh**	**9.75**	**334**	P	**Pn**	**21 41 59.8**	**+0.7**
	59nm,1.1s						
KULM	**Kulim**	**9.79**	**360**		**Pn**	**21 41 58.9**	**-0.7**
UGM	**Wanagama**	**10.36**	**109**	P	**Pn**	**21 42 07.2**	**-0.3**
	127nm,1.1s						
UGM	**Wanagama**	**10.36**	**109**	Pn	**Pn**	**21 42 05.8**	**-1.6**
UGM				Sn	**Sn**	**21 44 00.3**	**-4.0**
PCJI	**Pacitan**	**11.06**	**110**	P	**Pn**	**21 42 17.1**	**+0.1**
SBUM	**Sibu**	**13.50**	**59**		**Pn**	**21 42 46.1**	**-4.3**
UBPT	**Khong Chiam**	**20.29**	**14**	P	**P**	**21 44 11.5**	**-3.5**
UBPT				IAmb	IAmb	21 44 16.2	
	comp=Z,46nm,1.4s						
PBKT	**Sadao Pong**	**21.01**	**1**	P	**P**	**21 44 20.2**	**-2.5

comp=Z,14nm,0.9s
NJ2 Nanjing 40.33 24 *e*P **P 21 47 19.0 +2.2**
NJ2 pmax pmax
comp=Z,3.0nm,0.6s
LZH Lanzhou 40.55 4 ⇑P **P 21 47 20.0 +1.2**
LZH pP 21 47 25.3
LZH sP 21 47 29.0
LZH PP PcP 21 49 09.5 -12
LZH pmax pmax
comp=Z,19nm,1.2s
LZH pmax pmax
comp=Z,72nm,4.3s
LZH LR LR
comp=N,300nm,14.6s
LZH LR LR
comp=E,270nm,15.2s
LZH LR LR
comp=Z,520nm,15.4s
GTA Gaotai 43.77 359 *e*P **P 21 47 45.5 +0.5**
GTA pP 21 47 54.5
GTA sP 21 47 58.0
GTA pmax pmax
comp=Z,2.0nm,1.0s
GTA pmax pmax
comp=Z,93nm,4.8s
GTA LR LR
comp=N,160nm,15.5s
GTA LR LR
comp=E,220nm,15.2s
GTA LR LR
comp=Z,220nm,14.9s
HHC Hu-ho-hao-te 46.29 11 *e*P **P 21 48 06.8 +1.8**
HHC pmax pmax
comp=Z,4.0nm,1.1s
BJT Baijiatuau 46.61 16 P **P 21 48 07.0 -0.4**
STKA Stephens Creek 46.98 130 P **P 21 48 12.0 +1.4**
comp=Z,1.5nm,0.6s,baz=296,slow=11,SNR=3.6
STKA Stephens Creek 46.98 130 P **P 21 48 09.8 -0.7**
KSAR Wonju Array Be 48.89 29 P **P 21 48 23.9 -1.2**
KSRS Korea Array 48.91 29 P **P 21 48 24.8 -0.5**
comp=Z,2.4nm,1.0s,baz=210,slow=7.2,SNR=4.9
KSH Kashi 49.42 335 P **P 21 48 30.3 +1.0**
KSH pmax pmax
comp=Z,360nm,5.3s
WMQ Urumqi 49.57 348 *e*P **P 21 48 32.0 +1.7**
WMQ sP 21 48 38.5
WMQ pmax pmax
comp=Z,12nm,1.1s
WMQ pmax pmax
comp=Z,80nm,4.7s
WMQ LR LR
comp=N,400nm,28.1s
WMQ LR LR
comp=E,540nm,27.7s
WMQ LR LR
comp=Z,59nm,28.3s
SONM Songino Array 52.43 5 P **P 21 48 53.0 +1.1**
comp=Z,4.4nm,0.9s,baz=189,slow=9.0,SNR=29
SONM LR LR 22 14 30.0
comp=Z,51nm,18.3s,slow=40
SONM Songino Array 52.43 5 P **P 21 48 52.0 +0.1**
SONM PcP **PcP 21 50 03.9 +1.2**
ULN Ulaanbaatar 52.52 5 P **P 21 48 53.0 +0.4**
ULN IAmb IAmb 21 48 59.7
comp=Z,4.0nm,0.8s
CN2 Changchun 53.08 22 *e*P **P 21 48 56.5 -0.1**
MK31 Makanchi Array 53.66 344 P **P 21 48 59.9 -1.0**
MK31 IAmb IAmb 21 49 13.0
comp=Z,4.2nm,0.9s
MKAR Makanchi Array 53.66 344 P **P 21 49 01.4 +0.6**
comp=Z,3.3nm,0.8s,baz=147,slow=7.7,SNR=26
MKAR Makanchi Array 53.66 344 P **P 21 49 01.0 +0.1**
MAKZ Makanchi 53.76 344 P **P 21 49 02.1 +0.6**
MAKZ IAmb IAmb 21 49 14.7
comp=Z,3.9nm,1.1s
MJAR Matsushiro Arr 53.88 37 P **P 21 49 01.5 -1.1**
comp=Z,1.3nm,0.7s,baz=210,slow=8.3,SNR=4.7
MJAR Matsushiro Arr 53.88 37 P **P 21 49 00.9 -1.8**
USRK Ussuriysk Ar. 56.12 27 P **P 21 49 19.2 +0.6**
comp=Z,8.5nm,0.8s,baz=224,slow=6.8,SNR=20
USRK Ussuriysk Ar. 56.12 27 P **P 21 49 19.0 +0.3**
KURK Kurchatov 58.24 344 P **P 21 49 33.9 +0.4**
ZALV Zalesovo Beam 59.80 349 P **P 21 49 44.6 +0.3**
comp=Z,7.2nm,0.9s,baz=176,slow=5.9,SNR=23
ZALV Zalesovo Beam 59.80 349 P **P 21 49 44.3 0.0**
ABKAR Akbulak array 64.19 332 P **P 21 50 13.6 -0.4**
KBZ Khabaz 70.67 319 P **P 21 50 57.4 +2.4**
comp=Z,2.2nm,1.0s,baz=109,slow=8.5,SNR=3.6
BRTR Keskin Array B 75.53 313 P **P 21 51 25.0 +0.8**
comp=Z,0.5nm,0.7s,baz=125,slow=9.0,SNR=3.0
KOLS Kolonicke sedl 85.82 320 *e*P **P 21 52 21.0 +2.1**
VYHS Vyhne 87.98 319 *e*P **P 21 52 31.6 +2.1**
NOA NORSAR Array B 93.69 331 LR LR 22 38 11.2
comp=Z,14nm,19.0s,baz=115,slow=38
KEST Kesra 93.70 305 LR LR 22 36 53.8
comp=Z,32nm,18.0s,baz=262,slow=37
TXAR Lajitas Array 146.28 40 PKPbc **PKPab 21 59 22.2 +0.6**
comp=Z,1.7nm,0.7s,baz=284,slow=1.9,SNR=16

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*IDC **29** 21:43:51.3±1.1, 38°.28N×20°.39E, h0km, mb3.9/11, mb1 3.9/14, mb1mx3.7/45, mbtmp3.8/14, ML3.4/3, MS2.8/3, Ms1 2.8/3, ms1mx2.3/42, Error ellipse: s-maj=22.3km s-min=16.4km az=50.0*
*PDG **29** 21:43:53.6±0.6, 38°.32N×20°.29E, h9km±1km, ML3.9/14, Error ellipse: s-maj=1.1km s-min=1.1km az=90.0*
*THE **29** 21:43:53.9, 38°.21N×20°.43E, h12km, ML4.0/8, Error ellipse: s-maj=0.7km s-min=0.3km az=254.0*
*ATH **29** 21:43:53.8, 38°.22N×20°.45E, h13km±1km, ML3.7/19, Error ellipse: s-maj=1.7km s-min=0.8km az=255.0*
*NEIC **29** 21:43:57.4±2.4, 38°.26N±0°.06×20°.41E±0°.02, h41km±10km, Error ellipse: s-maj=8.7km s-min=1.1km az=164.0*
ISC 29 21:43:53.6±0.6, 38°.23N±0°.02×20°.42E±0°.02, h14km±3km**, n205, σ1§49/268, mb4.0/13, 18C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.03**	**13**	P	**Pg**	**21 43 56.3**	**+0.1**
KEF4				S	**Sg**	**21 43 58.2**	**+0.3**
CHV1	**Chavriata, Kef**	**0.05**	**210**	P	**Pg**	**21 43 56.1**	**-0.2**
CHV1				S	**Sg**	**21 43 57.9**	**-0.2**
KEF3	**Kipouria, Keph**	**0.06**	**243**	P	**Pg**	**21 43 56.3**	**-0.1**
KEF3				S	**Sg**	**21 43 58.2**	**-0.1**
KEF1	**Kardakata, Kep**	**0.06**	**42**	P	**Pg**	**21 43 56.5**	**0.0**
KEF1				S	**Sg**	**21 43 58.4**	**+0.1**
ARG2	**Argostoli**	**0.08**	**133**	P	**Pg**	**21 43 56.1**	**-0.4**
ARG2				S	**Sg**	**21 43 57.8**	**-0.7**
KEF2	**Argostoli. Kep**	**0.09**	**139**	P	**Pg**	**21 43 56.2**	**-0.4**
KEF2				S	**Sg**	**21 43 57.8**	**-0.9**
VLS	**Valsamata**	**0.15**	**111**	P	**Pg**	**21 43 57.0**	**-0.4**
VLS				S	**Sg**	**21 43 59.4**	**-0.6**
194μm,0.2s							
VLS	**Valsamata**	**0.15**	**111**	P	**Pg**	**21 43 57.0**	**-0.4**
VSK1	**VASILIKIADES**	**0.21**	**33**	P	**Pb**	**21 43 58.9**	**-0.4**
VSK1				S	**Sb**	**21 44 02.7**	**-0.4**
FSK	**Fiskardo**	**0.26**	**27**	P	**Pb**	**21 43 59.6**	**-0.4**
FSK				S	**Sb**	**21 44 03.6**	**-0.7**
73μm,0.4s							
FSK	**Fiskardo**	**0.26**	**27**	P	**Pb**	**21 43 59.7**	**-0.4**
FSK				S	**Sb**	**21 44 03.5**	**-0.8**
KFL	**Anninata**	**0.32**	**112**	P	**Pg**	**21 43 59.8**	**-0.4**
KFL				S	**Sg**	**21 44 04.3**	**-0.3**
58μm,0.3s							
KFL	**Anninata**	**0.32**	**112**	P	**Pg**	**21 43 59.8**	**-0.4**
KFL				S	**Sg**	**21 44 04.6**	**-0.1**
KFL				AML	AML	21 44 05.3	
KFL				AML	AML	21 44 05.5	
comp=N,74843μm,0.3s							
VLMS	**Volimes, Zakyn**	**0.40**	**151**	P	**Pg**	**21 44 01.2**	**-0.6**
VLMS				S	**Sg**	**21 44 07.3**	**+0.1**
VLMS				AML	AML	21 44 07.9	
comp=E,66687μm,0.3s							
VLMS				AML	AML	21 44 08.5	
comp=N,74377μm,0.4s							
EVGI	**Lefkada island**	**0.43**	**26**	P	**Pb**	**21 44 02.6**	**-0.5**
EVGI				S	**Sb**	**21 44 09.7**	**+0.3**
EVGI	**Lefkada island**	**0.43**	**26**	P	**Pb**	**21 44 02.6**	**-0.5**
ZAK2	**Zakynthos**	**0.58**	**139**	P	**Pg**	**21 44 04.5**	**-0.6**
ZAK2				S	**Sb**	**21 44 13.5**	**-0.2**
LKD2	**Lefkada island**	**0.59**	**19**	P	**Pg**	**21 44 05.0**	**-0.2**
LKD2				S	**Sb**	**21 44 14.3**	**+0.3**
comp=N,7μm,0.5s							
LKD2	**Lefkada island**	**0.59**	**19**	P	**Pg**	**21 44 05.0**	**-0.2**
LKD2				S	**Sb**	**21 44 13.3**	**-0.6**
LKD2				AML	AML	21 44 20.2	
comp=E,12440μm,0.5s							
LKD2				AML	AML	21 44 22.5	
comp=N,14881μm,0.5s							
AST1	**Astakos**	**0.61**	**59**	P	**Pg**	**21 44 05.5**	**-0.2**
AST1				S	**Sb**	**21 44 14.8**	**+0.2**
TSLK	**Tsoukalades, L**	**0.62**	**17**	P	**Pg**	**21 44 05.9**	**+0.1**
TSLK				S	**Sb**	**21 44 15.0**	**+0.1**
comp=N,11μm,0.7s							
TSLK	**Tsoukalades, L**	**0.62**	**17**	P	**Pg**	**21 44 05.7**	**-0.1**
TSLK				S	**Sg**	**21 44 14.1**	**-0.1**
TSLK				AML	AML	21 44 22.4	
comp=E,21897μm,0.7s							
TSLK				AML	AML	21 44 23.0	
comp=N,20454μm,0.7s							
KRI1	**kERI**	**0.65**	**151**	P	**Pg**	**21 44 05.2**	**-1.1**
KRI1				S	**Sg**	**21 44 15.1**	**+0.2**
PDO	**Prodromos**	**0.71**	**58**	P	**Pg**	**21 44 07.3**	**-0.1**
PDO				S	**Sb**	**21 44 17.1**	**-0.2**
PDO	**Prodromos**	**0.71**	**58**	P	**Pg**	**21 44 07.1**	**-0.3**
PDO				S	**Sg**	**21 44 16.3**	**-0.4**
PDO				AML	AML	21 44 25.3	
comp=E,21457μm,0.5s							
PDO				AML	AML	21 44 25.3	
comp=N,33208μm,0.4s							
RLS	**Riolos of Patr**	**0.85**	**101**	P	**Pg**	**21 44 09.1**	**-0.9**
RLS				S	**Sb**	**21 44 21.6**	**+0.3**
RLS	**Riolos of Patr**	**0.85**	**101**	P	**Pg**	**21 44 09.1**	**-0.9**
RLS				S	**Sg**	**21 44 20.5**	**-0.6**
RLS				AML	AML	21 44 30.0	
comp=N,4723μm,0.4s							
RLS				AML	AML	21 44 31.2	
comp=E,4636μm,0.5s							
PVO	**Paravola**	**0.95**	**66**	P	**Pg**	**21 44 12.1**	**0.0**
PVO				S	**Sn**	**21 44 26.0**	**0.0**
comp=E,14μm,0.3s							
PVO	**Paravola**	**0.95**	**66**	P	**Pg**	**21 44 11.9**	**-0.2**
PVO				AML	AML	21 44 28.3	
comp=E,39607μm,0.3s							
PVO				AML	AML	21 44 28.4	
comp=N,15069μm,0.3s							
DRO	**Drossia**	**1.06**	**105**	P	**Pb**	**21 44 13.1**	**-0.6**
DRO				S	**Sn**	**21 44 28.9**	**+0.3**
comp=N,6μm,0.5s							
DRO	**Drossia**	**1.06**	**105**	P	**Pb**	**21 44 13.4**	**-0.3**
DRO				S	**Sb**	**21 44 27.0**	**-0.4**
DRO				AML	AML	21 44 37.3	
comp=N,11470μm,0.4s							
DRO				AML	AML	21 44 39.6	
comp=E,13290μm,0.4s							
EFP	**Efpalio**	**1.19**	**80**	P	**Pn**	**21 44 14.9**	**-0.9**
EFP	**Efpalio**	**1.19**	**80**	P	**Pn**	**21 44 15.3**	**-0.5**
EFP				AML	AML	21 44 40.1	
comp=E,6571μm,0.4s							
EFP				AML	AML	21 44 40.7	
comp=N,5689μm,0.5s							
LAKA	**Lakka**	**1.23**	**89**	P	**Pn**	**21 44 15.9**	**-0.5**
LAKA				S	**Sb**	**21 44 32.3**	**-0.1**
ANX	**Ano Chora**	**1.24**	**72**	P	**Pn**	**21 44 16.3**	**-0.3**
ANX				S	**Sg**	**21 44 34.3**	**+0.7**
comp=N,5μm,0.5s							
ANX	**Ano Chora**	**1.24**	**72**	P	**Pb**	**21 44 16.7**	**-0.1**
ANX				S	**Sg**	**21 44 33.9**	**+0.3**
ANX				AML	AML	21 44 41.7	
comp=E,9019μm,0.6s							
ANX				AML	AML	21 44 43.6	
comp=N,9296μm,0.4s							
AMT	**Artemida-Makis**	**1.24**	**124**	P	**Pb**	**21 44 16.8**	**0.0**
AMT	**Artemida-Makis**	**1.24**	**124**	P	**Pg**	**21 44 17.2**	**-0.2**
AMT				AML	AML	21 44 44.8	
comp=E,6729μm,0.6s							
AMT				AML	AML	21 44 45.3	
comp=N,6207μm,0.6s							
EVR	**Evrytania**	**1.29**	**57**	P	**Pn**	**21 44 17.1**	**-0.2**
EVR	**Evrytania**	**1.29**	**57**	P	**Pn**	**21 44 17.2**	**-0.1**
EVR				AML	AML	21 44 48.0	
comp=N,3450μm,0.7s							
EVR				AML	AML	21 44 48.6	
comp=E,3640μm,0.8s							
SERG	**Sergoula**	**1.30**	**81**	P	**Pn**	**21 44 16.9**	**-0.5**
SERG	**Sergoula**	**1.30**	**81**	P	**Pn**	**21 44 17.4**	**0.0**
SERG				AML	AML	21 44 49.2	
comp=E,5939μm,0.5s							
SERG				AML	AML	21 44 50.9	
comp=N,6982μm,0.5s							
TRIZ	**Trizonia**	**1.31**	**84**	P	**Pn**	**21 44 17.1**	**-0.4**
KALE	**Kalithea**	**1.36**	**83**	P	**Pn**	**21 44 17.9**	**-0.4**
KALE	**Kalithea**	**1.36**	**83**	P	**Pn**	**21 44 18.2**	**-0.1**
KALE				AML	AML	21 44 47.6	
comp=E,2518μm,0.4s							
KALE				AML	AML	21 44 47.7	
comp=N,4531μm,0.4s							
KLV	**Kalavryta, Ach**	**1.38**	**97**	P	**Pn**	**21 44 18.2**	**-0.3**
KLV	**Kalavryta, Ach**	**1.38**	**97**	P	**Pn**	**21 44 18.7**	**+0.2**
KLV				AML	AML	21 44 49.4	
comp=N,2367μm,0.6s							
KLV				AML	AML	21 44 49.7	
comp=E,1760μm,0.5s							
JAN	**Janina**	**1.46**	**13**	P	**Pg**	**21 44 21.5**	**-0.3**
JAN				AML	AML	21 44 49.1	
comp=E,4838μm,0.6s							
JAN				AML	AML	21 44 52.7	
comp=N,3086μm,0.5s							
MAKR	**Makrakomi, Fth**	**1.55**	**59**	P	**Pb**	**21 44 21.5**	**-0.7**
ITM	**Ithomi**	**1.59**	**131**	P	**Pn**	**21 44 21.5**	**+0.1**
ITM	**Ithomi**	**1.59**	**131**	P	**Pb**	**21 44 23.1**	**+0.3**
ITM				AML	AML	21 45 00.2	
comp=E,1576μm,0.7s							
ITM				AML	AML	21 45 01.1	
comp=N,1592μm,1.2s							
ITM	**Ithomi**	**1.59**	**131**		**Pn**	**21 44 21.6**	**+0.2**
AGG	**Agios Georgios**	**1.69**	**62**	P	**Pb**	**21 44 24.1**	**-0.5**
AGG	**Agios Georgios**	**1.69**	**62**	P	**Pg**	**21 44 25.4**	**-0.8**
AGG				AML	AML	21 44 59.8	
comp=N,1962μm,0.5s							
AGG				AML	AML	21 44 59.8	
comp=E,2316μm,0.4s							
AGG	**Agios Georgios**	**1.69**	**62**		**Pb**	**21 44 24.3**	**-0.3**
VLX	**Vlachokerasia**	**1.78**	**118**	P	**Pb**	**21 44 25.9**	**-0.1**
THL	**Klokotos Trika**	**1.82**	**43**	P	**Pb**	**21 44 27.0**	**+0.3**
THL				AML	AML	21 45 02.3	
comp=E,3164μm,0.6s							
THL				AML	AML	21 45 03.6	
comp=N,1607μm,0.9s							
KPRO	**Kipourio**	**1.87**	**23**	P	**Pn**	**21 44 25.6**	**+0.3**
SCTE	**Santa Cesarea**	**2.38**	**321**		**Pn**	**21 44 33.3**	**+1.1**
XOR	**Xorichti**	**2.45**	**62**	P	**Pn**	**21 44 34.3**	**+1.1**
LIT	**Litokhoron**	**2.47**	**40**		**Pn**	**21 44 35.1**	**+1.7**
FNA	**Florina**	**2.66**	**16**		**Pn**	**21 44 38.2**	**+2.2**
OHR	**Ohrid**	**2.89**	**6**	*i* Pn	**Pn**	**21 44 42.0**	**+2.7**
TIP	**Timpagrande**	**3.02**	**289**	⇑P	**Pn**	**21 44 41.2**	**+0.2**
TIP	**Timpagrande**	**3.02**	**289**	⇑S	**Sn**	**21 45 14.6**	**-2.3**
TIP	**Timpagrande**	**3.02**	**289**		**Pn**	**21 44 41.8**	**+0.8**
TIR	**Tirane**	**3.14**	**352**	⇓P	**Pn**	**21 44 43.0**	**+0.4**
TIR	**Tirane**	**3.14**	**352**		**Pn**	**21 44 43.4**	**+0.7**
CGL1	**Ceglie Messapi**	**3.32**	**318**	*i* Pn	**Pn**	**21 44 46.0**	**+0.8**
TAR1	**Taranto**	**3.34**	**314**	*e*Pn	**Pn**	**21 44 46.6**	**+1.2**
MASS	**Massafra**	**3.49**	**314**	*e*Pn	**Pn**	**21 44 48.4**	**+0.9**
VAY	**Valandovo**	**3.50**	**28**	*e*P	**Pb**	**21 44 54.6**	**-0.8**
VAY	**Valandovo**	**3.50**	**28**	*i* Pn	**Pn**	**21 44 49.1**	**+1.4**
CEL	**Celeste**	**3.56**	**272**	Pn	**Pn**	**21 44 49.3**	**+0.8**
CEL				Sn	**Sn**	**21 45 31.4**	**+1.0**
STIP	**Stip**	**3.72**	**21**	*i* Pn	**Pn**	**21 44 53.6**	**+3.0**
MATE	**Matera**	**3.75**	**311**	⇑P	**Pn**	**21 44 49.7**	**-1.3**
MATE	**Matera**	**3.75**	**311**	⇑S	**Sn**	**21 45 33.0**	**-2.1**
SKO	**Skopje**	**3.82**	**12**	*i* Pn	**Pn**	**21 44 53.6**	**+1.6**
ULC	**Ulcinj**	**3.83**	**347**	⇓*i* Pn	**Pn**	**21 44 52.5**	**+0.3**
ULC				*i* Sn	**Sn**	**21 45 37.8**	**+0.7**
SG1	**Sgolgore (BA)**	**3.89**	**313**	⇓*i* Pn	**Pn**	**21 44 54.2**	**+1.2**
BAI	**Bari**	**3.96**	**318**	⇓*i* Pn	**Pn**	**21 44 55.3**	**+1.4**
DRME	**Dracevica, Mon**	**4.06**	**347**	*e*Pn	**Pn**	**21 44 55.9**	**+0.6**
DRME	**Dracevica, Mon**	**4.06**	**347**	⇑*i* Pn	**Pn**	**21 44 56.0**	**+0.6**
DRME				*e*Sn	**Sn**	**21 45 43.0**	**+0.3**
MMB	**Musomiste**	**4.21**	**36**	*e*P	**Pb**	**21 44 58.7**	**+1.3**
APE	**Apeiranthos**	**4.22**	**104**	⇑P	**Pb**	**21 45 03.3**	**-4.4**
BUM	**Brajici-Budva**	**4.23**	**344**	⇑*i* Pn	**Pn**	**21 44 58.0**	**+0.3**
BUM				*i* Sn	**Sn**	**21 45 46.6**	**-0.3**
PDG	**Podgorica**	**4.29**	**348**	⇑P	**Pn**	**21 44 59.1**	**+0.7**
PDG	**Podgorica**	**4.29**	**348**	*e*Pn	**Pn**	**21 44 58.4**	**0.0**
PDG	**Podgorica**	**4.29**	**348**		**Pn**	**21 44 58.9**	**+0.5**
PDG					**Sn**	**21 45 47.9**	**-0.3**
TTG	**Podgorica**	**4.29**	**348**	*e*Pn	**Pn**	**21 44 58.7**	**+0.3**
TTG				*e*Sn	**Sn**	**21 45 48.5**	**+0.3**
ACER	**Acerenza**	**4.30**	**308**		**Pn**	**21 44 59.9**	**+1.2**
ACER					**Sn**	**21 45 49.7**	**+1.1**
PVY	**Plav**	**4.37**	**356**	*e*Pn	**Pn**	**21 45 00.3**	**+0.6**
PVY				*e*Sn	**Sn**	**21 45 51.6**	**+1.1**
CEME	**Cevo**	**4.46**	**346**	*e*Pn	**Pn**	**21 45 00.2**	**-0.7**
CEME				*e*Sn	**Sn**	**21 45 52.5**	**-0.1**
HCY	**Herceg Novi**	**4.46**	**341**	*e*Pn	**Pn**	**21 44 59.5**	**-1.3**
HCY	**Herceg Novi**	**4.46**	**341**	⇑*i* Pn	**Pn**	**21 45 01.3**	**+0.5**
HCY				*i* Sn	**Sn**	**21 45 52.3**	**-0.2**
IDI	**Anoyia**	**4.64**	**128**	Pn	**Pn**	**21 45 05.2**	**+1.8**
comp=N,0.3nm,0.3s,baz=322,slow=14,SNR=4.4							
IDI				Sn	**Sn**	**21 45 59.6**	**+2.6**
comp=N,2.5nm,0.3s,baz=148,slow=22,SNR=11							
IVA	**Berane**	**4.65**	**355**	*e*Pn	**Pn**	**21 45 04.3**	**+0.8**
IVA				*e*Sn	**Sn**	**21 45 57.8**	**+0.4**
KOME	**Kolasin**	**4.67**	**352**	⇓*i* Pn	**Pn**	**21 45 04.8**	**+1.1**
KOME				*e*Sn	**Sn**	**21 45 58.1**	**+0.4**
NKME	**Niksic**	**4.67**	**347**	*e*Pn	**Pn**	**21 45 03.8**	**+0.1**
NKME				*e*Sn	**Sn**	**21 45 57.8**	**+0.2**
NKY	**Niksic**	**4.70**	**347**	*e*Pn	**Pn**	**21 45 04.5**	**+0.2**
NKY				*e*Sn	**Sn**	**21 45 58.3**	**-0.4**
TREB	**Trebinje**	**4.75**	**341**	*e*Pn	**Pn**	**21 45 04.2**	**-0.6**
DBRK	**Dubrovnik**	**4.76**	**339**	*e*Pn	**Pn**	**21 45 04.3**	**-0.6**
DBRK				Sn	**Sn**	**21 45 57.1**	**-2.8**
RZN	**Rozhen**	**4.78**	**42**	*e*P	**Pn**	**21 45 08.8**	**+3.4**
VAE	**Valguarnera**	**4.81**	**263**	Pn	**Pn**	**21 45 08.6**	**+2.9**
comp=N,0.9nm,0.3s,baz=357,slow=17,SNR=3.3							
VAE				Sn	**Sn**	**21 46 04.8**	**+3.6**
comp=N,3.8nm,0.3s,baz=255,slow=17,SNR=6.4							
BRY	**Bratogost**	**4.88**	**344**	*e*Pn	**Pn**	**21 45 06.2**	**-0.5**
BRY	**Bratogost**	**4.88**	**344**	*e*Pn	**Pn**	**21 45 06.3**	**-0.4**
BRY				*e*Sn	**Sn**	**21 46 02.4**	**-0.6**
VTS	**Vitosha**	**4.88**	**25**	⇓P	**Pn**	**21 45 08.6**	**+1.9**
VTS	**Vitosha**	**4.88**	**25**		**Pn**	**21 45 08.4**	**+1.7**
SGRT	**San Giovanni R**	**5.03**	**316**		**Pn**	**21 45 09.3**	**+0.7**
SGRT					**Sn**	**21 46 03.8**	**-2.8**
STON	**Ston**	**5.08**	**337**	*e*Pn	**Pn**	**21 45 08.6**	**-0.7**
STON	**Ston**	**5.08**	**337**	*e*Pn	**Pn**	**21 45 08.5**	**-0.7**
UPM	**Unac-Piva**	**5.10**	**347**	*e*Pn	**Pn**	**21 45 10.7**	**+1.0**
UPM	**Unac-Piva**	**5.10**	**347**	⇓*i* Pn	**Pn**	**21 45 10.8**	**+1.1**
UPM				*e*Sn	**Sn**	**21 46 08.2**	**-0.3**
ALN	**Alexandroupoli**	**5.10**	**57**	Pn	**Pn**	**21 45 11.5**	**+1.9**
PLE	**Pljevlja**	**5.15**	**352**	*e*Pn	**Pn**	**21 45 10.9**	**+0.5**
PLE				*e*Sn	**Sn**	**21 46 09.4**	**-0.3**
PAOL	**Paolisi**	**5.31**	**304**	Pn	**Pn**	**21 45 14.2**	**+1.6**
RUDO	**Rudo**	**5.44**	**352**	*e*Pn	**Pn**	**21 45 13.9**	**-0.4**
CORL	**Corleone**	**5.62**	**269**	Pn	**Pn**	**21 45 17.9**	**+1.1**
MAKA	**Makarska**	**5.67**	**334**	*e*Pn	**Pn**	**21 45 17.6**	**+0.2**
MAKA				Sn	**Sn**	**21 46 19.2**	**-3.1**
BBLS	**Lazići**	**5.68**	**353**	*e*Pn	**Pn**	**21 45 17.9**	**+0.3**
DIVS	**Divibare**	**5.87**	**357**	*e*Pn	**Pn**	**21 45 19.8**	**-0.5**
HAPS	**Han Pijesak,Bl**	**5.95**	**350**	*e*Pn	**Pn**	**21 45 20.3**	**-1.1**
PLVB	**Pleven**	**6.06**	**30**	⇑P	**Pn**	**21 45 25.1**	**+2.4**
INTR	**Introdacqua**	**6.26**	**309**		**Pn**	**21 45 28.5**	**+2.9**
ELND	**Elena**	**6.27**	**40**	⇑P	**Pn**	**21 45 27.4**	**+1.8**
ZIRJ	**Zirje**	**6.51**	**328**	*e*Pn	**Pn**	**21 45 28.5**	**-0.5**
ZIRJ				Sn	**Sn**	**21 46 39.7**	**-3.3**
KIJV	**Kijevo**	**6.51**	**334**	*e*Pn	**Pn**	**21 45 29.4**	**+0.4**
MORI	**Morici**	**6.66**	**329**	*i* Pn	**Pn**	**21 45 31.7**	**+0.5**
MGRS	**Mrkonjic Grad**	**6.67**	**339**	*e*Pn	**Pn**	**21 45 31.7**	**+0.5**
AQU	**L'Aquila**	**6.76**	**310**	Pn	**Pn**	**21 45 34.1**	**+1.7**
HERR	**Herculane**	**6.81**	**12**	⇑P	**Pn**	**21 45 34.8**	**+1.7**
FRGS	**Fruska Gora**	**6.94**	**356**	*e*Pn	**Pn**	**21 45 32.4**	**-2.4**
BLY	**Banja Luka**	**6.95**	**341**	⇑P	**Pn**	**21 45 35.3**	**+0.3**
BLY	**Banja Luka**	**6.95**	**341**	*e*Pn	**Pn**	**21 45 35.1**	**+0.1**
BLY	**Banja Luka**	**6.95**	**341**	Pn	**Pn**	**21 45 36.1**	**+1.1**
DUGI	**Dugi Otok**	**7.03**	**327**	*i* Pn	**Pn**	**21 45 36.4**	**+0.2**
UDBI	**Udbina**	**7.20**	**332**	*e*Pn	**Pn**	**21 45 39.7**	**+1.2**
NRCA	**Norcia**	**7.21**	**312**		**Pn**	**21 45 41.1**	**+2.4**
NRCA					**Sn**	**21 46 59.3**	**-1.1**
GZR	**Gura Zlata**	**7.37**	**13**	⇑P	**Pn**	**21 45 41.7**	**+0.9**
BZS	**Buzias**	**7.43**	**7**	⇑P	**Pn**	**21 45 43.0**	**+1.4**
NVLJ	**Novalja**	**7.58**	**328**	*e*Pn	**Pn**	**21 45 43.7**	**+0.1**
ARR	**Arges**	**7.79**	**22**	⇑P	**Pn**	**21 45 48.3**	**+1.6**
MURB	**Monte Urbino**	**7.82**	**312**	Pn	**Pn**	**21 45 50.2**	**+3.2**
MURB					**Sn**	**21 47 14.8**	**-0.5**
YOIR		**7.99**	**24**	⇑P	**Pn**	**21 45 51.8**	**+2.4**
MORH	**Mrgy, Hungar**	**8.09**	**351**	*e*Pn	**Pn**	**21 45 49.0**	**-1.6**
OZLJ	**Ozalj**	**8.25**	**335**	*e*Pn	**Pn**	**21 45 52.6**	**-0.1**
MLR	**Muntele Rosu**	**8.34**	**28**	Pn	**Pn**	21 45 59.0	+4.8
comp=N,0.3nm,0.3s,baz=176,slow=7.8,SNR=7.8							
MLR				LR	LR	21 50 31.8	
comp=N,62nm,20.4s,baz=120,slow=48							
RIY	**Rijeka**	**8.36**	**330**	*e*Pn	**Pn**	**21 45 54.1**	**-0.2**
CRES	**Cresnjev**	**8.44**	**336**	*e*Pn	**Pn**	**21 45 54.8**	**-0.6**
CEY	**Cerknica**	**8.72**	**331**	*e*Pn	**Pn**	**21 45 59.1**	**-0.3**
OSSC	**Osservatorio P**	**8.73**	**310**	Pn	**Pn**	**21 46 03.0**	**+3.6**
LJU	**Ljubljana**	**8.95**	**333**	*e*Pn	**Pn**	**21 46 01.9**	**-0.5**
VRI	**Vrincioaia**	**8.96**	**30**	⇑P	**Pn**	**21 46 04.7**	**+2.2**
TRI	**Trieste**	**8.96**	**329**	Pn	**Pn**	**21 46 02.9**	**+0.4**
SOKA	**Soboth**	**9.33**	**337**	Pn	**Pn**	**21 46 07.1**	**-0.6**
comp=N,4.2nm,0.4s,SNR=14							
SOKA	**Soboth**	**9.33**	**337**	Sn	**Sn**	**21 47 46.8**	**-5.6**
comp=N,2.0nm,0.5s							
OBKA	**Obir**	**9.34**	**334**	*e*Pn	**Pn**	**21 46 08.7**	**+0.9**

comp=N,2.1nm,0.6s,baz=179,slow=9.8,SNR=9.4

NB2	**NORSAR Subarra**	**23.55**	**349**	P		**P**	**21 49 03.3**	**0.0**
	comp=Z,2.0nm,1.1s,baz=156,slow=9.3							
NOA	**NORSAR Array B**	**23.55**	**349**	P		**P**	**21 49 01.8**	**-1.5**
	comp=Z,0.9nm,0.7s,baz=152,slow=12,SNR=3.7							
NOA				LR		LR	21 59 24.0	
	comp=Z,26nm,20.3s,baz=175,slow=40							
AKTO	**Aktyubinsk**	**29.21**	**53**	P		**P**	**21 49 54.9**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=237,slow=14,SNR=4.1							
TORD	**Torodi Ar. Bea**	**30.02**	**219**	P		**P**	**21 50 01.8**	**-0.2**
	comp=Z,1.6nm,0.9s,baz=36,slow=9.9,SNR=7.2							
ARCES	**ARCESS Array B**	**31.48**	**3**	P		**P**	**21 50 14.0**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=185,slow=9.9,SNR=8.1							
KK31	**Karatay Array**	**37.85**	**66**	IAmb		IAmb	21 51 14.7	
	comp=Z,2.4nm,0.7s							
KKAR	**Karatay Array**	**37.85**	**66**	P		**P**	**21 51 12.0**	**+2.1**
KKAR	**Karatay Array**	**37.85**	**66**	P		**P**	**21 51 11.8**	**+1.9**
KKAR				IAmb		IAmb	21 51 14.7	
	comp=Z,2.4nm,0.7s							
MK31	**Makanchi Array**	**45.34**	**58**	IAmb		IAmb	21 52 16.2	
	comp=Z,2.8nm,1.2s							
MKAR	**Makanchi Array**	**45.34**	**58**	P		**P**	**21 52 10.7**	**-0.5**
	comp=Z,1.0nm,0.5s,baz=275,slow=7.4,SNR=20							
MKAR	**Makanchi Array**	**45.34**	**58**	P		**P**	**21 52 10.3**	**-0.9**
ZAA0	**Zalesovo Array**	**45.72**	**48**	P		**P**	**21 52 13.7**	**-0.3**
ZALV	**Zalesovo Beam**	**45.72**	**48**	P		**P**	**21 52 13.6**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=272,slow=8.9,SNR=11							
ZALV	**Zalesovo Beam**	**45.72**	**48**	P		**P**	**21 52 13.1**	**-0.9**
SONM	**Songino Array**	**60.49**	**51**	P		**P**	**21 54 03.0**	**-0.1**
	comp=Z,1.2nm,1.1s,baz=290,slow=8.0,SNR=5.1							
CMAR	**Chiang Mai Arr**	**69.96**	**82**	P		**P**	**21 55 03.7**	**-1.1**
	comp=Z,0.5nm,0.6s,baz=298,slow=7.9,SNR=5.7							
YKA	**Yellowknife Ar**	**73.31**	**340**	P		**P**	**21 55 25.1**	**+0.9**
	comp=Z,0.1nm,0.6s,baz=32,slow=5.1,SNR=3.7							

TEH 29 22:01:32.7, 35.93N×53.23E, h7km, ML3.6, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ISHM	**Shahmirzad**	**0.14**	**156**	*e*Pg		Pg	22 01 36.4	+0.7
ISHM				*e*Sg		Sg	22 01 38.9	+1.1
IALA	**Alasht**	**0.37**	**294**	*e*Pg		Pg	22 01 40.4	+0.4
IALA				*e*Sg		Sg	22 01 46.1	+1.2
IALA				*e*			22 01 47.2	
IFIR	**Firoozkooh**	**0.48**	**233**	*e*Pg		Pg	22 01 42.1	+0.1
IFIR				*e*			22 01 50.3	
ILAS	**Lasjerd**	**0.59**	**202**	*e*Pg		Pg	22 01 44.6	+0.5
IANJ	**Anjilo**	**0.73**	**129**	*e*Pg		Pg	22 01 47.1	+0.4
IANJ				*e*			22 01 47.5	
IGLO	**Ghaloghah**	**0.75**	**40**	*e*Pg		Pg	22 01 47.2	0.0
IGLO				*e*			22 02 06.3	
IPRN	**Peran**	**0.78**	**294**	*e*Pg		Pg	22 01 47.9	+0.1
IPRN				*e*			22 02 00.6	
IDMV	**Damavand**	**1.03**	**250**	*e*Pg		Pg	22 01 52.6	+0.1
IDMV				*e*			22 02 11.6	
TEH	**Tehran**	**1.51**	**263**	*e*Pg		Pg	22 02 02.5	+0.8
IVRN	**Varamin**	**1.54**	**233**	*e*			22 02 03.0	
IVRN				*e*Pn		Pg	22 02 01.9	-0.3
IHSB	**Hasanabad**	**1.66**	**253**	*e*			22 02 06.4	
IHSB				*e*Pn		Pb	22 02 04.0	+0.3
CHTH	**Charan**	**1.70**	**270**	*e*Pn		Pb	22 02 04.7	+0.2
IQOM	**Qom**	**2.07**	**239**	*e*Pn		Pb	22 02 10.2	-0.5
IQOM				*e*			22 02 11.0	
IMHD	**Mahdasht**	**2.09**	**264**	*e*Pn		Pb	22 02 11.8	+0.7
GHVR	**GHOM**	**2.14**	**228**	*e*Pn		Pb	22 02 11.8	-0.1
QALM	**Alamut, Qazvin**	**2.15**	**284**	*e*Pn		Pb	22 02 12.2	+0.1
KRSH	**Karshahi**	**2.15**	**205**	*e*Pn		Pn	22 02 10.6	+1.4
KRSH				*e*			22 02 41.5	
IMND	**Minoodasht**	**2.20**	**52**	*e*Pn		Pn	22 02 11.2	+1.5
IMND				*e*			22 02 50.9	
IGZV	**Ghazvin**	**2.48**	**281**	*e*		Sg	22 03 01.5	+9.3
QAM	**Ghamsar**	**2.62**	**215**	*e*Pn		Pn	22 02 17.3	+1.7
IRAZ	**Razeghan**	**2.73**	**260**	*e*Pn		Pb	22 02 20.2	-1.9
IRAZ				*e*			22 03 14.5	
ANAR	**Anarak**	**2.77**	**171**	*e*Pn		Pn	22 02 19.1	+1.5
ANAR				*e*			22 03 12.4	
IKLH	**Kolahrood**	**2.94**	**208**	*e*Pn		Pn	22 02 21.7	+1.6
IKLH				*e*			22 03 05.1	
ASAO	**Ashtian**	**2.96**	**243**	*e*Pn		Pn	22 02 22.6	+2.2
QABG	**Abgarm-Qazvin**	**2.97**	**267**	*e*Pn		Pn	22 02 22.8	+2.3
QABG				*e*			22 03 12.3	
IZEF	**Zefreh**	**3.12**	**194**	*e*Pn		Pn	22 02 24.8	+2.2
IZEF				*e*			22 03 20.0	
TNSJ	**Nastanj**	**3.40**	**124**	*e*Pn		Pn	22 02 28.1	+1.8
HAGD	**Aghdareh**	**3.52**	**253**	*e*Pn		Pn	22 02 31.0	+3.0
IPIR	**Pirpir**	**3.77**	**211**	*e*Pn		Pn	22 02 35.0	+3.4
ICHK	**Chekchek**	**3.81**	**165**	*e*Pn		Pn	22 02 35.2	+3.2
ICHK				*e*			22 03 41.6	
TABS	**Tabas**	**3.93**	**124**	*e*Pn		Pn	22 02 36.0	+2.4
TKDS	**Koohdasht(Taba**	**3.95**	**125**	*e*Pn		Pn	22 02 35.9	+2.0
ISFR	**Sfrayin**	**4.01**	**72**	*e*Pn		Pn	22 02 38.2	+3.4
TPRV	**Parvadeh(Tabas**	**4.07**	**134**	*e*Pn		Pn	22 02 37.3	+1.8
HSRG	**Sareghieh**	**4.09**	**262**	*e*Pn		Pn	22 02 38.6	+2.7
HSAM	**Samen**	**4.16**	**247**	*e*Pn		Pn	22 02 40.8	+3.9
IKRD	**Kardeh**	**4.35**	**77**	*e*Pn		Pg	22 02 53.2	-2.9
IAKL	**Akhelmad**	**4.52**	**80**	*e*Pn		Pn	22 02 44.3	+2.4
IEMG	**Emamgholi**	**4.61**	**70**	*e*Pn		Pn	22 02 46.0	+2.9
IKMR	**Kamar-syah**	**4.66**	**240**	*e*Pn		Pn	22 02 47.3	+3.8
IDOB	**Doab**	**4.67**	**244**	*e*Pn		Pn	22 02 47.8	+4.0
AFRZ	**Afriz**	**5.39**	**116**	*e*Pn		Pn	22 02 55.9	+2.3
ITEG	**Tejag**	**5.48**	**122**	*e*Pn		Pn	22 02 57.2	+2.3
IKOO	**Kooshah**	**5.93**	**124**	*e*Pn		Pn	22 03 03.3	+2.1
IMON	**Monand**	**5.97**	**115**	*e*			22 03 05.5	
IMON				*e*Pn		Pn	22 03 04.5	+2.7
IDAH	**Dahanechah**	**6.35**	**118**	*e*Pn		Pn	22 03 09.4	+2.4

ISC 29 22:05:53.8±1.5, 51.47N±0.07×16.09E±0.04, h0km, n16, σ0=89/32, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KSP	**Ksiaz**	**0.64**	**169**	*e*Pg		**Pg**	**22 06 06.5**	**+0.4**
KSP				*e*Sg		**Sg**	**22 06 15.2**	**+0.8**
CHVC	**Chvalec**	**0.88**	**182**	*e*PG		**Pb**	**22 06 11.3**	**-0.7**
CHVC				*e*SG		**Sg**	**22 06 23.1**	**+1.0**
	comp=Z,7.8nm,0.4s							
OSTC	**Ostas**	**0.92**	**175**	*e*PG		**Pb**	**22 06 11.9**	**-0.7**
OSTC				*e*SG		**Sg**	**22 06 23.9**	**+0.7**
	comp=Z,8.7nm,0.4s							
UPC	**Upice**	**0.96**	**183**	*e*PG		**Pb**	**22 06 13.2**	**-0.2**
UPC				*e*SG		**Sg**	**22 06 25.3**	**+0.5**
	comp=Z,15nm,0.5s							
DPC	**Dobruska-Polom**	**1.13**	**173**	*e*PG		**Pg**	**22 06 15.4**	**-0.1**
DPC				*e*SG		**Sg**	**22 06 29.9**	**-0.2**
	comp=Z,3.6nm,0.3s							
PVCC	**Panska Ves**	**1.35**	**226**	*e*PG		**Pb**	**22 06 20.1**	**+0.2**
PVCC				*e*SG		**Sg**	**22 06 38.1**	**+1.1**
	comp=Z,24nm,0.3s							
KRLC	**Kraliky**	**1.46**	**162**	*e*PG		**Pn**	**22 06 21.2**	**-0.3**
KRLC				*e*SG		**Sg**	**22 06 40.6**	**-0.2**
	comp=Z,9.9nm,0.5s							
BRG	**Berggiesshubel**	**1.48**	**247**	PG		**Pb**	**22 06 22.2**	**+0.1**
BRG				SG		**Sg**	**22 06 42.1**	**+0.8**
	7.3nm,0.3s							
PRU	**Pruhonice**	**1.78**	**214**	*e*SG		**Sb**	**22 06 51.1**	**+0.9**
	comp=Z,5.8nm,0.4s							
MORC	**Moravsky Berou**	**1.93**	**151**	*e*PN		**Pn**	**22 06 27.4**	**-0.5**
MORC				*e*SG		**Sn**	**22 06 52.7**	**-0.2**
CLL	**Collm**	**1.94**	**266**	*e*Pn		**Pn**	**22 06 27.0**	**-1.0**
	comp=Z,4.0nm,0.4s							
CLL				*e*Pg		**Pb**	**22 06 30.0**	**0.0**
CLL				*e*Sg		**Sg**	**22 06 57.0**	**+0.8**
OKC	**Ostrava-Krasne**	**2.09**	**141**	*e*SG		**Sb**	**22 06 59.2**	**+0.1**
VRAC	**Vranov**	**2.19**	**171**	*e*PN		**Pn**	**22 06 31.6**	**+0.2**
VRAC				*e*SG		**Sb**	**22 07 00.8**	**-1.1**
NKC	**Novy Kostel**	**2.62**	**243**	*e*PG		**Pg**	**22 06 43.9**	**-0.1**
NKC				*e*SG		**Sg**	**22 07 19.4**	**+1.5**
	comp=Z,5.9nm,0.3s							
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN		**Pn**	**22 06 40.0**	**-0.5**
KHC				*e*PG		**Pb**	**22 06 46.5**	**+1.1**
KHC				*e*SN		**Sn**	**22 07 13.9**	**-1.5**
KHC				*e*SG		**Sg**	**22 07 25.2**	**+0.1**
LANS	**Liptovska Anna**	**3.17**	**136**	*e*SG		**Sg**	**22 07 38.4**	**+2.7**

*THE **29** 22:06:47.9, 38.15N×20.40E, h12km, ML3.0/6, Error ellipse: s-maj=0.5km s-min=0.3km az=262.0*
*ATH **29** 22:06:47.5, 38.17N×20.42E, h15km±1km, ML2.5/12, Error ellipse: s-maj=2.5km s-min=1.0km az=250.0*

ISC 29 22:06:47.9±1.1, 38.16N±0.03×20.42E±0.03, h10km, n40, σ0=59/60, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.04**	**305**	P		**Pg**	**22 06 50.1**	**+0.3**
CHV1				S		**Sg**	**22 06 51.8**	**+0.7**
KEF2	**Argostoli. Kep**	**0.05**	**87**	P		**Pg**	**22 06 50.3**	**+0.4**
KEF2				S		**Sg**	**22 06 51.9**	**+0.5**
ARG2	**Argostoli**	**0.06**	**74**	P		**Pg**	**22 06 50.4**	**+0.5**
ARG2				S		**Sg**	**22 06 52.0**	**+0.6**
	37μm,0.2s							
KEF3	**Kipouria, Keph**	**0.07**	**306**	P		**Pg**	**22 06 50.2**	**+0.2**
KEF3				S		**Sg**	**22 06 52.0**	**+0.3**
KEF4	**Livadi, Kephal**	**0.10**	**3**	P		**Pg**	**22 06 50.8**	**+0.4**
KEF4				S		**Sg**	**22 06 53.0**	**+0.8**
VLS	**Valsamata**	**0.14**	**84**	P		**Pg**	**22 06 51.3**	**+0.3**
VLS				S		**Sg**	**22 06 53.9**	**+0.7**
	8μm,0.1s							
VLS	**Valsamata**	**0.14**	**84**	P		**Pg**	**22 06 51.3**	**+0.3**
VSK1	**VASILIKIADES**	**0.27**	**25**	P		**Pg**	**22 06 53.6**	**+0.2**
VSK1				S		**Sg**	**22 06 57.9**	**+0.8**
	5μm,0.3s							
KFL	**Anninata**	**0.30**	**100**	P		**Pg**	**22 06 54.0**	**+0.2**
KFL				S		**Sg**	**22 06 59.0**	**+1.2**
	3μm,0.3s							
KFL	**Anninata**	**0.30**	**100**	P		**Pg**	**22 06 54.0**	**+0.2**
KFL				S		**Sg**	**22 06 59.1**	**+1.2**
KFL				AML		AML	22 07 00.2	
	comp=N,4810μm,0.3s							
KFL				AML		AML	22 07 00.8	
	comp=E,6699μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.34**	**146**	P		**Pg**	**22 06 54.8**	**+0.1**
VLMS				S		**Sb**	**22 07 00.6**	**-1.0**
VLMS				AML		AML	22 07 01.2	
	comp=E,6039μm,0.3s							
VLMS				AML		AML	22 07 09.0	
	comp=N,7909μm,0.4s							
EVGI	**Lefkada island**	**0.49**	**22**	P		**Pg**	**22 06 57.5**	**-0.1**
EVGI				S		**Sg**	**22 07 05.4**	**+1.3**
EVGI	**Lefkada island**	**0.49**	**22**	P		**Pg**	**22 06 57.4**	**-0.1**
EVGI				S		**Sg**	**22 07 04.9**	**+0.8**
KRI1	**kERI**	**0.59**	**148**	P		**Pg**	**22 06 59.1**	**-0.2**
AST1	**Astakos**	**0.65**	**54**	P		**Pg**	**22 07 00.4**	**0.0**
AST1				S		**Sb**	**22 07 10.5**	**+0.1**
	comp=N,1μm,0.3s							
LKD2	**Lefkada island**	**0.65**	**17**	P		**Pg**	**22 07 00.3**	**-0.2**
LKD2				S		**Sg**	**22 07 08.8**	**-0.4**
LKD2				AML		AML	22 07 16.9	
	comp=E,692μm,0.3s							
LKD2				AML		AML	22 07 17.7	
	comp=N,636μm,0.4s							
TSLK	**Tsoukalades, L**	**0.69**	**16**	P		**Pg**	**22 07 00.7**	**-0.5**
TSLK				S		**Sg**	**22 07 09.5**	**-0.7**
TSLK				AML		AML	22 07 18.6	
	comp=E,725μm,0.4s							
TSLK				AML		AML	22 07 19.6	
	comp=N,900μm,0.5s							
PDO	**Prodromos**	**0.74**	**54**	P		**Pg**	**22 07 02.1**	**-0.2**
PDO				S		**Sb**	**22 07 13.5**	**+0.4**
	comp=N,970nm,0.5s							
PDO	**Prodromos**	**0.74**	**54**	P		**Pg**	**22 07 02.0**	**-0.2**
PDO				S		**Sg**	**22 07 12.0**	**+0.1**
PDO				AML		AML	22 07 18.7	
	comp=N,1473μm,0.5s							
PDO				AML		AML	22 07 21.2	
	comp=E,1245μm,0.3s							
RLS	**Riolos of Patr**	**0.83**	**97**	P		**Pg**	**22 07 03.6**	**-0.3**
RLS	**Riolos of Patr**	**0.83**	**97**	P		**Pg**	**22 07 03.5**	**-0.4**
RLS				S		**Sb**	**22 07 15.6**	**0.0**
RLS				AML		AML	22 07 21.6	
	comp=E,338μm,0.6s							
RLS				AML		AML	22 07 22.0	
	comp=N,358μm,0.4s							
PVO	**Paravola**	**0.98**	**62**	P		**Pg**	**22 07 06.8**	**0.0**
PVO	**Paravola**	**0.98**	**62**	P		**Pg**	**22 07 06.6**	**-0.1**
PVO				AML		AML	22 07 23.4	
	comp=N,961μm,0.4s							
PVO				AML		AML	22 07 24.1	
	comp=E,733μm,0.3s							
DRO	**Drossia**	**1.04**	**101**	P		**Pg**	**22 07 07.4**	**-0.5**
DRO				S		**Sg**	**22 07 21.2**	**-0.2**
DRO				AML		AML	22 07 30.3	
	comp=E,630μm,0.5s							
DRO				AML		AML	22 07 34.1	
	comp=N,784μm,0.5s							
AMT	**Artemida-Makis**	**1.20**	**121**	P		**Pn**	**22 07 10.9**	**+0.2**
EFP	**Efpalio**	**1.20**	**77**	P		**Pn**	**22 07 09.7**	**-1.0**
EFP	**Efpalio**	**1.20**	**77**	P		**Pn**	**22 07 09.7**	**-1.0**
EFP				AML		AML	22 07 36.0	
	comp=N,276μm,0.6s							
EFP				AML		AML	22 07 38.8	
	comp=E,262μm,0.4s							
LAKA	**Lakka**	**1.23**	**86**	P		**Pn**	**22 07 10.5**	**-0.7**
LAKA	**Lakka**	**1.23**	**86**	P		**Pn**	**22 07 10.3**	**-0.9**
ANX	**Ano Chora**	**1.26**	**70**	P		**Pn**	**22 07 10.9**	**-0.7**
ANX	**Ano Chora**	**1.26**	**70**	P		**Pn**	**22 07 11.1**	**-0.5**
ANX				S		**Sn**	**22 07 29.4**	**+0.8**
ANX				AML		AML	22 07 35.8	
	comp=N,624μm,0.6s							
ANX				AML		AML	22 07 41.9	
	comp=E,340μm,0.7s							
SERG	**Sergoula**	**1.31**	**79**	P		**Pn**	**22 07 11.6**	**-0.7**
SERG	**Sergoula**	**1.31**	**79**	P		**Pn**	**22 07 11.5**	**-0.7**
SERG				AML		AML	22 07 37.3	
	comp=E,182μm,0.4s							
SERG				AML		AML	22 07 40.6	
	comp=N,272μm,0.4s							
TRIZ	**Trizonia**	**1.32**	**81**	P		**Pn**	**22 07 11.7**	**-0.6**
EVR	**Evrytania**	**1.32**	**55**	P		**Pn**	**22 07 11.7**	**-0.8**
EVR				AML		AML	22 07 39.8	
	comp=N,206μm,1.2s							
EVR				AML		AML	22 07 46.0	
	comp=E,129μm,0.6s							
ALIK	**Aliki, Aigiali**	**1.34**	**85**	P		**Pn**	**22 07 12.2**	**-0.4**
KLV	**Kalavryta, Ach**	**1.37**	**94**	P		**Pn**	**22 07 12.6**	**-0.5**
KLV	**Kalavryta, Ach**	**1.37**	**94**	P		**Pn**	**22 07 13.1**	**0.0**
KALE	**Kalithea**	**1.37**	**80**	P		**Pn**	**22 07 12.6**	**-0.6**
KALE	**Kalithea**	**1.37**	**80**	P		**Pn**	**22 07 12.6**	**-0.6**

IDC 29 22:24:31.6±7.5, 4.74N×94.34E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.6/29, mbtmp3.8/5, Error ellipse: s-maj=164.8km s-min=71.4km az=143.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.36**	**18**	Pn		Pn	22 27 56.9	+0.5
	baz=211,slow=12,SNR=2.3							
H08S2	**Diego Garcia H**	**25.03**	**241**	T		T	22 55 57.5	
	baz=62							
H08S3	**Diego Garcia H**	**25.03**	**241**	T		T	22 55 57.4	
	baz=62,SNR=29							
H08S1	**Diego Garcia H**	**25.04**	**241**	T		T	22 55 58.8	
	baz=62							
MKAR	**Makanchi Array**	**43.17**	**348**	P		P	22 32 34.2	0.0
	0.5nm,0.6s,baz=170,slow=8.3,SNR=10							
SONM	**Songino Array**	**44.17**	**12**	P		P	22 32 41.7	-0.6
	0.4nm,0.7s,baz=203,slow=8.0,SNR=3.4							
ZALV	**Zalesovo Beam**	**49.67**	**353**	P		P	22 33 25.1	0.0
	0.3nm,0.3s,baz=192,slow=8.2,SNR=3.5							
FINES	**FINESS Array B**	**75.56**	**333**	P		P	22 36 18.1	+0.1
	4.7nm,1.1s,baz=83,slow=4.3,SNR=3.8							

TAP 29 22:49:22.7, 24.32N×121.76E, h11km, ML1.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
NANB	**Nanao**	**0.11**	**356**	*i* P		Pg	22 49 26.1	+0.6
	baz=356							
NANB				S		Sg	22 49 28.4	+0.9
	baz=356							
ENA	**Nanau**	**0.11**	**352**	P		Pg	22 49 26.1	+0.6
	baz=355							
ENA				S		Sg	22 49 28.7	+1.2
	baz=355							
NACB	**Ninganchiao**	**0.21**	**225**	*e*P		Pb	22 49 28.1	-0.5
	baz=225							
NACB				S		Sg	22 49 31.7	+1.6
	baz=225							
ETLH	**Xiulin Townshi**	**0.28**	**246**	*e*P		Pb	22 49 29.2	-0.6
	baz=245							
ETLH				*e*S		Sb	22 49 34.2	-0.4
	baz=245							
TWD	**Chiawan**	**0.28**	**212**	*e*P		Pg	22 49 29.1	+0.7
	baz=210							
TWD				*e*S		Sb	22 49 34.0	-0.6
	baz=210							
TWC	**Suao**	**0.30**	**16**	*e*S		Sb	22 49 34.5	-0.6
	baz=18							
NDT	**Datong Townshi**	**0.36**	**322**	*e*P		Pb	22 49 31.2	0.0
	baz=321							
NDT				*e*S		Sb	22 49 36.6	-0.2
	baz=321							
NNSB	**Datong**	**0.36**	**287**	*e*P		Pb	22 49 31.1	-0.1
	baz=287							
NNSB				*e*S		Sb	22 49 36.5	-0.5
	baz=287							
NNSH	**Datong**	**0.36**	**287**	P		Pb	22 49 31.1	-0.1
	baz=287							
NNSH				S		Sb	22 49 36.6	-0.3
	baz=287							
ENTT	**Nioudou**	**0.36**	**331**	P		Pb	22 49 30.9	-0.4
	baz=331							
ENTT				S		Sb	22 49 36.3	-0.6
	baz=331							
NNS	**Nan Shan**	**0.37**	**289**	*e*P		Pg	22 49 30.6	+0.5
	baz=288							
NNS				*e*S		Sb	22 49 36.9	-0.3
	baz=288							
TWE	**Neicheng**	**0.41**	**348**	*e*S		Sb	22 49 38.1	-0.1
	baz=350							
YHNB	**Yeheng**	**0.49**	**315**	*e*P		Pb	22 49 33.6	+0.1
	baz=314							
YHNB				S		Sb	22 49 41.0	+0.3
	baz=314							

JMA 29 22:49:28.8±0.2, 24.78N×123.23E, h23km, M1.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.37**	**212**	P		Pb	22 49 36.7	-0.1
YOJ				*e*S		Sb	22 49 42.4	+0.1
JYNG	**Yonagunijimaku**	**0.42**	**218**	P		Pb	22 49 37.5	-0.1
JYNG				*e*S		Sb	22 49 43.0	-0.5
IRIF	**Iriomote-Funau**	**0.64**	**134**	P		Pb	22 49 40.9	-0.3
HATJ	**Hateruma jima**	**0.89**	**144**	P		Pb	22 49 45.7	+0.1
JKRS	**Kuro-shima**	**0.89**	**127**	P		Pb	22 49 45.2	-0.4
JIJ	**Ishigaki jima**	**0.93**	**116**	P		Pb	22 49 45.8	-0.4
JIJ				*e*S		Sb	22 49 58.4	+0.3

*IDC **29** 22:53:08.5±1.3, 30.34S×179.18W, h322km±14km, mb3.2/2, mb1 3.4/3, mb1mx3.2/26, mbtmp4.0/3, Error ellipse: s-maj=34.0km s-min=29.2km az=141.0*

ISC 29 22:53:07.4±0.9, 30.45±0.1×179.5W±0.2, h300km, n24, σ2=31/21, 1C, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**1.77**	**49**	P		**Pn**	**22 53 54.3**	**+1.8**
	100nm,0.3s,baz=35,slow=18,SNR=6.4							
RAO				S		**S**	**22 54 27.3**	**-1.1**
	181nm,0.3s,baz=41,slow=19,SNR=4.9							
WMGZ	**Waiomatatini S**	**7.58**	**193**	P		**Pn**	**22 54 59.2**	**+3.4**
HAZ	**Te Kaha**	**7.66**	**197**	P		**Pn**	**22 54 58.4**	**+1.7**
PUZ	**Puketiti**	**7.86**	**193**	P		**Pn**	**22 55 02.5**	**+3.4**
RUGZ	**Raukumara Rang**	**7.88**	**197**	P		**Pn**	**22 55 01.7**	**+2.1**
CNGZ	**Carnagh Statio**	**8.27**	**193**	P		**Pn**	**22 55 06.2**	**+2.1**
MWZ	**Matawai**	**8.27**	**197**	P		**Pn**	**22 55 07.0**	**+2.8**
URZ	**Urewera**	**8.31**	**199**	P		**Pn**	**22 55 07.0**	**+2.4**
	0.9nm,0.3s,baz=259,slow=5.5,SNR=16							
URZ				S		**S**	**22 56 36.8**	**-3.1**
	3.1nm,0.3s,baz=274,slow=20,SNR=12							
URZ	**Urewera**	**8.31**	**199**	P		**Pn**	**22 55 06.6**	**+1.9**
RAGZ	**Rawiri**	**8.45**	**197**	P		**Pn**	**22 55 07.6**	**+1.2**
MUGZ	**Murupara**	**8.61**	**200**	P		**Pn**	**22 55 10.7**	**+2.3**
SNGZ	**Shannon Statio**	**8.74**	**197**	P		**Pn**	**22 55 11.7**	**+1.7**
RAHZ	**Arahi**	**8.93**	**198**	P		**Pn**	**22 55 14.7**	**+2.4**
ASAR	**Alice Springs**	**41.85**	**268**	P		**P**	**23 00 30.1**	**+1.2**
	0.6nm,0.5s,baz=108,slow=7.7,SNR=6.7							
WRA	**Warramunga Arr**	**42.85**	**273**	P		**P**	**23 00 37.8**	**+0.9**
	1.0nm,0.4s,baz=110,slow=7.8,SNR=6.0							
SYO	**Syowa Base**	**76.80**	**193**	⇑*e*P		**P**	**23 04 24.0**	**-1.8**
MKAR	**Makanchi Array**	**116.83**	**310**	PKP		**PKPdf**	**23 11 13.7**	**-2.4**
	0.1nm,0.4s,baz=116,slow=3.1,SNR=4.4							
H10S2	**ASCENSION HYDR**	**38.21**	**157**	T		T	01 44 12.8	
	baz=16,slow=74,SNR=9.7							
H10S3	**ASCENSION HYDR**	**38.21**	**157**	T		T	01 44 12.7	
	baz=204,slow=74,SNR=10							
H10N3	**ASCENSION HYDR**	**39.30**	**157**	T		T	01 45 34

VLS	**Valsamata**	**0.13**	**101**	P	**Pg**	**23 25 29.0**	**-0.2**
VLS				S	**Sg**	**23 25 31.3**	**-0.3**
	26μm,0.2s						
VLS	**Valsamata**	**0.13**	**101**	P	**Pg**	**23 25 29.0**	**-0.2**
VSK1	**VASILIKIADES**	**0.23**	**28**	P	**Pg**	**23 25 30.7**	**0.0**
VSK1				S	**Sg**	**23 25 34.5**	**+0.3**
	11μm,0.4s						
FSK	**Fiskardo**	**0.28**	**23**	P	**Pg**	**23 25 31.4**	**0.0**
FSK				S	**Sg**	**23 25 35.8**	**+0.4**
	4μm,0.3s						
KFL	**Anninata**	**0.30**	**108**	P	**Pg**	**23 25 31.8**	**0.0**
KFL				S	**Sg**	**23 25 36.3**	**+0.2**
	8μm,0.4s						
KFL	**Anninata**	**0.30**	**108**	P	**Pg**	**23 25 31.7**	**0.0**
KFL				S	**Sg**	**23 25 36.3**	**+0.2**
KFL				AML	AML	23 25 36.9	
	comp=N,18474μm,0.5s						
KFL				AML	AML	23 25 38.3	
	comp=E,13386μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.38**	**150**	P	**Pg**	**23 25 33.2**	**0.0**
VLMS				S	**Sb**	**23 25 39.2**	**-0.4**
VLMS				AML	AML	23 25 40.0	
	comp=N,7514μm,0.2s						
VLMS				AML	AML	23 25 40.1	
	comp=E,11319μm,0.1s						
EVGI	**Lefkada island**	**0.45**	**23**	P	**Pg**	**23 25 34.5**	**-0.2**
EVGI				S	**Sb**	**23 25 41.4**	**-0.5**
EVGI	**Lefkada island**	**0.45**	**23**	P	**Pg**	**23 25 34.4**	**-0.2**
MGNA	**Meganis**	**0.54**	**32**	P	**Pg**	**23 25 35.2**	**-0.9**
MGNA				S	**Sg**	**23 25 43.3**	**0.0**
MGNA				AML	AML	23 25 44.5	
	comp=E,1952μm,0.2s						
MGNA				AML	AML	23 25 44.9	
	comp=N,2015μm,0.2s						
ZAK2	**Zakynthos**	**0.56**	**138**	P	**Pg**	**23 25 36.7**	**+0.2**
ZAK2				S	**Sb**	**23 25 45.7**	**+0.9**
	comp=N,4μm,0.3s						
LKD2	**Lefkada island**	**0.61**	**17**	P	**Pg**	**23 25 37.2**	**-0.4**
LKD2				S	**Sb**	**23 25 47.0**	**+0.5**
LKD2	**Lefkada island**	**0.61**	**17**	P	**Pg**	**23 25 37.2**	**-0.4**
LKD2				S	**Sg**	**23 25 45.8**	**+0.1**
LKD2				AML	AML	23 25 54.7	
	comp=E,960μm,0.2s						
LKD2				AML	AML	23 25 57.5	
	comp=N,946μm,0.3s						
AST1	**Astakos**	**0.62**	**57**	P	**Pg**	**23 25 37.5**	**-0.2**
AST1				S	**Sb**	**23 25 46.8**	**+0.1**
	comp=N,2μm,0.3s						
KRI1	**kERI**	**0.62**	**150**	P	**Pg**	**23 25 37.2**	**-0.5**
KRI1				S	**Sb**	**23 25 46.6**	**-0.1**
	comp=N,3μm,0.3s						
TSLK	**Tsoukalades, L**	**0.65**	**16**	P	**Pg**	**23 25 38.3**	**+0.1**
TSLK				S	**Sb**	**23 25 47.5**	**+0.1**
TSLK	**Tsoukalades, L**	**0.65**	**16**	P	**Pg**	**23 25 38.1**	**-0.1**
TSLK				S	**Sg**	**23 25 46.8**	**+0.1**
TSLK				AML	AML	23 25 52.2	
	comp=N,992μm,0.3s						
TSLK				AML	AML	23 25 55.7	
	comp=E,1128μm,0.3s						
PDO	**Prodromos**	**0.71**	**56**	P	**Pg**	**23 25 39.0**	**-0.5**
PDO	**Prodromos**	**0.71**	**56**	P	**Pg**	**23 25 39.0**	**-0.5**
PDO				S	**Sb**	**23 25 49.9**	**+0.5**
PDO				AML	AML	23 25 55.6	
	comp=E,1369μm,0.4s						
PDO				AML	AML	23 25 57.6	
	comp=N,2112μm,0.3s						
RLS	**Riolos of Patr**	**0.83**	**100**	P	**Pb**	**23 25 41.2**	**-0.5**
RLS				S	**Sn**	**23 25 54.8**	**0.0**
RLS	**Riolos of Patr**	**0.83**	**100**	P	**Pb**	**23 25 41.1**	**-0.7**
RLS				S	**Sb**	**23 25 53.7**	**+1.0**
RLS				AML	AML	23 25 58.6	
	comp=N,540μm,0.4s						
RLS				AML	AML	23 26 02.0	
	comp=E,415μm,0.5s						
PVO	**Paravola**	**0.96**	**64**	P	**Pb**	**23 25 43.9**	**0.0**
PVO				S	**Sn**	**23 25 59.4**	**+1.5**
	comp=E,1μm,0.3s						
PVO	**Paravola**	**0.96**	**64**	P	**Pb**	**23 25 43.8**	**0.0**
PVO				AML	AML	23 25 59.9	
	comp=E,3199μm,0.3s						
PVO				AML	AML	23 25 60.0	
	comp=N,2129μm,0.3s						
DRO	**Drossia**	**1.04**	**104**	P	**Pb**	**23 25 44.8**	**-0.5**
DRO				S	**Sg**	**23 25 59.9**	**+0.5**
	comp=N,608nm,0.3s						
DRO	**Drossia**	**1.04**	**104**	P	**Pb**	**23 25 44.8**	**-0.5**
DRO				S	**Sn**	**23 26 00.7**	**+0.6**
DRO				AML	AML	23 26 05.3	
	comp=E,1284μm,0.3s						
DRO				AML	AML	23 26 07.3	
	comp=N,1098μm,0.3s						
EFP	**Efpalio**	**1.19**	**79**	P	**Pn**	**23 25 47.1**	**-0.5**
EFP				AML	AML	23 26 11.3	
	comp=E,515μm,0.4s						
EFP				AML	AML	23 26 12.7	
	comp=N,491μm,0.4s						
ANX	**Ano Chora**	**1.24**	**71**	P	**Pn**	**23 25 48.4**	**0.0**
ANX				AML	AML	23 26 16.2	
	comp=E,449μm,0.4s						
ANX				AML	AML	23 26 17.8	
	comp=N,678μm,0.6s						
EVR	**Evrytania**	**1.30**	**56**	P	**Pn**	**23 25 49.2**	**-0.1**
JAN	**Janina**	**1.49**	**13**	P	**Pg**	**23 25 53.5**	**-0.7**
JAN				AML	AML	23 26 20.2	
	comp=E,332μm,0.5s						
JAN				AML	AML	23 26 22.1	
	comp=N,319μm,0.4s						

*THE **29** 23:38:38.9, 38˚.21N×20˚.45E, h11km, ML2.5/3, Error ellipse: s-maj=0.7km s-min=0.3km az=246.0*
*ATH **29** 23:38:38.3, 38˚.21N×20˚.42E, h14km±1km, ML2.5/6, Error ellipse: s-maj=2.1km s-min=0.9km az=259.0*

ISC 29 23:38:38.4±1.1, 38˚.21N±0˚.03×20˚.44E±0˚.04, h13km±5km, n29, σ0s33/47, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.05**	**133**	P	**Pg**	**23 38 40.9**	**0.0**
ARG2				S	**Sg**	**23 38 42.5**	**-0.2**
KEF4	**Livadi, Kephal**	**0.05**	**343**	P	**Pg**	**23 38 41.0**	**+0.1**
KEF4				S	**Sg**	**23 38 42.7**	**0.0**
CHV1	**Chavriata, Kef**	**0.06**	**240**	P	**Pg**	**23 38 41.0**	**0.0**
CHV1				S	**Sg**	**23 38 43.0**	**+0.2**
KEF2	**Argostoli. Kep**	**0.06**	**143**	P	**Pg**	**23 38 41.0**	**0.0**
KEF2				S	**Sg**	**23 38 42.6**	**-0.2**
KEF1	**Kardakata, Kep**	**0.07**	**19**	P	**Pg**	**23 38 41.2**	**0.0**
KEF1				S	**Sg**	**23 38 42.9**	**-0.1**
KEF3	**Kipouria, Keph**	**0.07**	**264**	P	**Pg**	**23 38 41.2**	**0.0**
KEF3				S	**Sg**	**23 38 43.2**	**+0.1**
VLS	**Valsamata**	**0.12**	**106**	P	**Pg**	**23 38 41.6**	**-0.1**
VLS				S	**Sg**	**23 38 44.0**	**-0.1**
	5μm,0.1s						
VLS	**Valsamata**	**0.12**	**106**	P	**Pg**	**23 38 41.6**	**-0.1**
VSK1	**VASILIKIADES**	**0.22**	**26**	P	**Pg**	**23 38 43.4**	**+0.1**
VSK1				S	**Sg**	**23 38 46.9**	**+0.4**
FSK	**Fiskardo**	**0.27**	**21**	P	**Pg**	**23 38 44.1**	**+0.1**
FSK				S	**Sg**	**23 38 48.5**	**+0.7**
	1μm,0.1s						
FSK	**Fiskardo**	**0.27**	**21**	P	**Pg**	**23 38 44.1**	**+0.1**
FSK				S	**Sg**	**23 38 48.5**	**+0.7**
KFL	**Anninata**	**0.29**	**110**	P	**Pg**	**23 38 44.4**	**-0.1**
KFL				S	**Sg**	**23 38 49.0**	**+0.4**
	1μm,0.3s						
KFL	**Anninata**	**0.29**	**110**	P	**Pg**	**23 38 44.4**	**-0.1**
KFL				S	**Sg**	**23 38 48.9**	**+0.4**
KFL				AML	AML	23 38 49.8	
	comp=E,3265μm,0.4s						
KFL				AML	AML	23 38 49.9	
	comp=N,2189μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.38**	**152**	P	**Pg**	**23 38 46.1**	**0.0**
VLMS				S	**Sg**	**23 38 52.1**	**+1.0**
VLMS				AML	AML	23 38 52.7	
	comp=E,1969μm,0.2s						
VLMS				AML	AML	23 38 54.4	
	comp=N,2458μm,0.4s						
EVGI	**Lefkada island**	**0.44**	**22**	P	**Pg**	**23 38 47.1**	**-0.1**
EVGI				S	**Sg**	**23 38 53.9**	**+0.7**
EVGI	**Lefkada island**	**0.44**	**22**	P	**Pg**	**23 38 47.1**	**-0.1**
EVGI				S	**Sb**	**23 38 54.2**	**-0.4**
MGNA	**Meganis**	**0.52**	**32**	P	**Pg**	**23 38 48.4**	**-0.3**
MGNA				S	**Sb**	**23 38 56.6**	**-0.3**
MGNA				AML	AML	23 38 57.0	
	comp=N,675μm,0.2s						
MGNA				AML	AML	23 38 57.9	
	comp=E,476μm,0.1s						
LKD2	**Lefkada island**	**0.60**	**16**	P	**Pg**	**23 38 50.3**	**+0.1**
LKD2	**Lefkada island**	**0.60**	**16**	P	**Pg**	**23 38 49.8**	**-0.4**
LKD2				S	**Sg**	**23 38 58.1**	**-0.1**
TSLK	**Tsoukalades, L**	**0.64**	**15**	P	**Pg**	**23 38 50.6**	**-0.2**
TSLK	**Tsoukalades, L**	**0.64**	**15**	P	**Pg**	**23 38 50.7**	**-0.2**
PDO	**Prodromos**	**0.70**	**56**	P	**Pg**	**23 38 51.9**	**-0.1**
PDO	**Prodromos**	**0.70**	**56**	P	**Pg**	**23 38 52.0**	**-0.1**
PDO				S	**Sb**	**23 39 02.6**	**+0.6**
PDO				AML	AML	23 39 03.3	
	comp=E,542μm,0.3s						
PDO				AML	AML	23 39 08.9	
	comp=N,462μm,0.3s						
RLS	**Riolos of Patr**	**0.82**	**100**	P	**Pg**	**23 38 54.1**	**-0.3**
PVO	**Paravola**	**0.94**	**64**	P	**Pg**	**23 38 56.6**	**-0.1**
PVO	**Paravola**	**0.94**	**64**	P	**Pg**	**23 38 56.5**	**-0.1**
PVO				AML	AML	23 39 12.5	
	comp=E,908μm,0.3s						
PVO				AML	AML	23 39 12.6	
	comp=N,458μm,0.2s						
AMT	**Artemida-Makis**	**1.21**	**124**	P	**Pn**	**23 39 00.8**	**-0.3**
LAKA	**Lakka**	**1.21**	**88**	P	**Pn**	**23 39 00.7**	**-0.4**
KLV	**Kalavryta, Ach**	**1.36**	**97**	P	**Pn**	**23 39 03.2**	**+0.1**

DJA 30 00:02:37.4±1.1, 3˚S±6˚×12˚0E±˚, h10km, M3.2/7, MLv3.2/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**0.35**	**188**	P	Pg	00 02 43.0	-1.3
TTSI	**Tana Toraja**	**0.35**	**188**	P	Pg	00 02 43.5	-0.8
TTSI				S	Sg	00 02 47.1	-1.8
SPSI	**Sidrap Palu**	**1.26**	**185**	P	Pn	00 03 00.6	-0.5
SPSI	**Sidrap Palu**	**1.26**	**185**	P	Pn	00 02 59.9	-1.2
SPSI				S	Sb	00 03 16.9	-0.7
BNSI	**Bone**	**1.71**	**172**	P	Pn	00 03 07.7	+0.5
BNSI	**Bone**	**1.71**	**172**	P	Pb	00 03 08.2	-0.7
BNSI				S	Sb	00 03 29.9	-0.5
BKSI	**Bulukumba**	**2.62**	**174**	P	Pn	00 03 20.2	+0.4
BKSI	**Bulukumba**	**2.62**	**174**	P	Pn	00 03 19.8	0.0
KBKI	**Kotabaru**	**3.75**	**261**	P	Pg	00 03 47.4	-1.8

*IDC **30** 00:02:39.9±1.2, 7˚.09S×126˚.21E, h469km±14km, mb3.9/15, mb1 4.0/19, mb1mx3.8/39, mbtmp4.8/19, Error ellipse: s-maj=15.2km s-min=7.9km az=77.0*
*NEIC **30** 00:02:39.3±2.1, 7˚.04S±0˚.09×126˚.20E±0˚.04, h468km±7km, mb4.5/46, Error ellipse: s-maj=12.6km s-min=5.4km az=168.0*
*DJA **30** 00:02:39.4±0.2, 7˚.2S×12˚.6E±˚, h463km±3km, M4.6/29, mb4.5/29, mB5.1/7, MLv4.8/10, Mw(mB)4.4/7*

ISC 30 00:02:38.2±0.4, 7˚.10S±0˚.04×126˚.20E±0˚.05, h450km, n121, σ1s74/135, mb4.5/49, 1D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**3.26**	**216**	P	**P**	**00 03 50.9**	**+3.5**
SOEI				S	**S**	**00 04 46.6**	**+3.0**
SOEI	**Soe**	**3.26**	**216**	P	**P**	**00 03 51.2**	**+3.8**
SOEI				S	**S**	**00 04 41.2**	**-2.4**
AAI	**Ambon**	**3.92**	**30**	P	**P**	**00 03 55.4**	**+2.7**
NLAI	**Namlea**	**3.93**	**13**	P	**P**	**00 03 56.3**	**+3.5**
NLAI				S	**S**	**00 04 56.7**	**+3.3**
BNDI	**Bandanaira**	**4.48**	**55**	P	**P**	**00 04 00.4**	**+2.7**
MSAI	**Masohi**	**4.61**	**36**	P	**P**	**00 03 59.0**	**+0.1**
MSAI				S	**S**	**00 05 08.2**	**+3.6**
SANI	**Sanana**	**5.02**	**358**	P	**P**	**00 04 04.7**	**+1.9**
	0.6nm2μm178nm,0.9s						
SAUI	**Saumlaki**	**5.13**	**100**	P	**P**	**00 04 07.3**	**+3.4**
LBMI	**Labuha**	**6.54**	**11**	P	**P**	**00 04 20.7**	**+2.5**
	0.5nm168nm,1.0s						
LUWI	**Luwuk**	**6.92**	**330**	P	**P**	**00 04 24.9**	**+2.8**
LUWI	**Luwuk**	**6.92**	**330**	P	**P**	**00 04 25.2**	**+3.1**
FAKI	**Fak Fak**	**7.31**	**56**	P	**P**	**00 04 27.9**	**+1.6**
	0.5nm154nm,0.7s						
FAKI	**Fak Fak**	**7.31**	**56**	P	**P**	**00 04 26.4**	**+0.1**
FAKI				S	**S**	**00 05 50.0**	**-4.8**
MTN	**Manton Dam**	**7.50**	**140**	P	**P**	**00 04 28.4**	**+0.2**
KMSI	**Cibinong**	**7.93**	**344**	P	**P**	**00 04 35.9**	**+2.9**
	1.0nm281nm,0.7s						
SIJI	**Sorong**	**7.98**	**39**	P	**P**	**00 04 35.9**	**+2.4**
	17nm,0.3s,baz=240,slow=23,SNR=33						
SIJI				S	**S**	**00 06 04.3**	**-3.8**
	1.7nm,0.3s,baz=129,slow=23,SNR=2.9						
SWI	**Sorong**	**7.98**	**39**	P	**P**	**00 04 35.4**	**+1.9**
	3μm234nm,0.7s						
PLAI	**Plampang**	**8.52**	**258**	P	**P**	**00 04 38.1**	**-1.2**
	29nm,0.6s						
MRSI	**Marisa**	**8.64**	**330**	P	**P**	**00 04 42.7**	**+2.1**
	75nm,0.8s						
KNRA	**Kunumurra**	**8.89**	**164**	P	**P**	**00 04 45.2**	**+2.0**
KNRA				S	**S**	**00 06 26.5**	**+0.5**
RKPI	**Ransiki, Papua**	**9.69**	**55**	P	**P**	**00 04 55.1**	**+3.0**
	6μm211nm,0.9s						
FITZ	**Fitzroy Crossi**	**10.95**	**183**	P	**P**	**00 05 07.6**	**+1.9**
	12nm,0.3s,baz=3.6,slow=9.6,SNR=186						
FITZ				S	**S**	**00 07 06.2**	**-1.0**
	0.2nm,0.3s,baz=193,slow=22,SNR=3.3						
JAGI	**Jajag, Banyuwa**	**12.02**	**263**	P	**P**	**00 05 17.0**	**-0.4**
JAGI				S	**S**	**00 07 24.0**	**-4.7**
WB0	**Warramunga Arr**	**14.90**	**149**	P	**P**	**00 05 48.9**	**+0.6**
WRAB	**Tennant Creek**	**15.01**	**149**	P	**P**	**00 05 50.1**	**+0.5**
WRA	**Warramunga Arr**	**15.01**	**149**	P	**P**	**00 05 50.0**	**+0.5**
	7.1nm,0.3s,baz=333,slow=9.8,SNR=67						
WRA				S	**S**	**00 08 25.5**	**-2.2**
	1.3nm,0.3s,baz=324,slow=20,SNR=16						
WRA	**Warramunga Arr**	**15.01**	**149**	P	**P**	**00 05 49.4**	**-0.2**
WRA				S	**S**	**00 08 25.9**	**-1.8**
WB2	**Warramunga Arr**	**15.02**	**149**	P	**P**	**00 05 50.3**	**+0.7**
WR0	**Warramunga Arr**	**15.13**	**148**	P	**P**	**00 05 51.5**	**+0.6**
PSA00	**Pilbara Seismi**	**15.65**	**202**	P	**P**	**00 05 57.1**	**+0.8**
KKM	**Kota Kinabalu**	**16.42**	**322**	P	**P**	**00 06 08.7**	**+4.0**
SBUM	**Sibu**	**16.87**	**304**	P	**P**	**00 06 09.9**	**+0.6**
KSM	**Kuching**	**18.00**	**298**	P	**P**	**00 06 21.9**	**+0.8**
KSM				IAmb	IAmb	00 06 24.5	
	comp=Z,19nm,0.9s						
COEN	**Coen**	**18.02**	**114**	P	**P**	**00 06 21.4**	**+0.1**
COEN				IAmb	IAmb	00 06 28.3	
	comp=Z,15nm,1.1s						
AS31	**Alice Springs**	**18.06**	**157**	P	**P**	**00 06 22.4**	**+0.7**
ASAR	**Alice Springs**	**18.06**	**157**	P	**P**	**00 06 22.1**	**+0.5**
	comp=Z,8.4nm,0.3s,baz=343,slow=15,SNR=202						
ASAR				S	**S**	**00 09 25.0**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=336,slow=21,SNR=10						
ASAR				ScP	**ScP**	**00 13 20.4**	**-3.4**
	comp=Z,0.2nm,0.3s,baz=350,slow=2.2,SNR=11						
ASAR	**Alice Springs**	**18.06**	**157**	P	**P**	**00 06 22.3**	**+0.7**
ASAR					**ScP**	**00 13 20.2**	**-3.7**
CISI	**Cisompet, Garu**	**18.24**	**267**	P	**P**	**00 06 22.4**	**-1.2**
	comp=Z,58nm,1.0s						
CNJI	**Cibinong**	**18.93**	**268**	P	**P**	**00 06 29.2**	**-0.7**
	comp=Z,62nm,0.7s						
GIRL	**Giralia**	**19.29**	**215**	P	**P**	**00 06 34.9**	**+1.8**
FORT	**Forrest**	**23.63**	**176**	P	**P**	**00 07 12.8**	**+0.5**
MORW	**Morawa**	**23.87**	**202**	P	**P**	**00 07 15.4**	**+0.8**
MORW				IAmb	IAmb	00 07 20.1	
	comp=Z,35nm,1.5s						
NWAO	**Narrogin (SRO)**	**27.02**	**197**	P	**P**	**00 07 43.0**	**+0.6**
	comp=Z,16nm,0.4s,baz=29,slow=7.4,SNR=30						
NWAO	**Narrogin (SRO)**	**27.02**	**197**	P	**P**	**00 07 43.1**	**+0.6**
NWAO				IAmb	IAmb	00 07 43.8	
	comp=Z,18nm,0.7s						
NWAO	**Narrogin (SRO)**	**27.02**	**197**	IAmb	IAmb	00 07 43.8	
	comp=Z,14nm,0.7s						
BBOO	**Buckleboo**	**27.18**	**162**	P	**P**	**00 07 44.4**	**+0.5**
BBOO				IAmb	IAmb	00 07 49.3	
	comp=Z,16nm,1.2s						
STKA	**Stephens Creek**	**28.53**	**152**	P	**P**	**00 07 56.8**	**+0.9**
	comp=Z,8.3nm,0.4s,baz=328,slow=8.4,SNR=30						
STKA	**Stephens Creek**	**28.53**	**152**	P	**P**	**00 07 56.7**	**+0.9**
RPSI	**Rantau Prapat**	**28.91**	**289**	P	**P**	**00 07 58.9**	**-0.4**
RPSI				IAmb	IAmb	00 08 01.0	
	comp=Z,15nm,0.9s						
PSI	**Prapat**	**28.95**	**289**	P	**P**	**00 08 00.1**	**+0.2**
	comp=Z,14nm,0.8s,baz=107,slow=9.1,SNR=10						
UBPT	**Khong Chiam**	**30.27**	**317**	P	**P**	**00 08 11.2**	**+0.1**
QIZ	**Qiongzhong**	**30.56**	**328**	P	**P**	**00 08 13.6**	**0.0**
QIZ				IAmb	IAmb	00 08 23.8	
	comp=Z,28nm,1.3s						
TPUB	**Ta-pu**	**30.70**	**350**	P	**P**	**00 08 13.4**	**-1.4**
TPUB				IAmb	IAmb	00 08 14.0	
	comp=Z,16nm,0.5s						
SSLB	**Suanglung**	**31.12**	**351**	P	**P**	00 08 15.6	-2.8
SSLB				IAmb	IAmb	00 08 27.0	
	comp=Z,18nm,1.4s						
YHNB	**Yeheng**	**31.92**	**352**	P	**P**	**00 08 23.6**	**-1.8**
YHNB				IAmb	IAmb	00 08 38.5	
	comp=Z,27nm,1.5s						
TOO	**Toolangi**	**35.03**	**153**	P	**P**	**00 08 53.5**	**+1.9**
TOO				IAmb	IAmb	00 08 54.5	
	comp=Z,34nm,1.4s						
SLVN	**Son La**	**35.74**	**323**	P	**P**	**00 08 57.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**36.99**	**314**	P	**P**	**00 09 09.0**	**+0.8**
	comp=Z,4.3nm,0.7s,baz=142,slow=6.7,SNR=25						
CMAR				PcP	**PcP**	**00 11 18.6**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=160,slow=2.8,SNR=5.5						
CMAR				ScP	**S**	**00 14 20.0**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=175,slow=3.4,SNR=4.5						
CHTO	**Chiang Mai**	**37.22**	**314**	P	**P**	**00 09 09.4**	**-0.6**
WHN	**Wuhan**	**39.11**	**344**	P	**P**	**00 09 26.0**	**+0.7**
NJ2	**Nanjing**	**39.55**	**350**	*e*P	**P**	**00 09 29.5**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
ENH	**Enshi**	**40.47**	**337**	IAmb	IAmb	00 09 37.0	
	comp=Z,23nm,0.9s						
CD2	**Chengdu**	**43.48**	**332**	P	**P**	**00 10 01.0**	**+0.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
XAN	**Xi'an**	**44.06**	**339**	P	**P**	**00 10 03.8**	**-1.1**
XAN				pP	PcP	00 11 40.8	0.0
XAN				pmax	pmax		
	comp=Z,21nm,0.8s						
XAN	**Xi'an**	**44.06**	**339**	P	**P**	**00 10 03.0**	**-1.8**
XAN				IAmb	IAmb	00 10 04.6	
	comp=Z,16nm,0.7s						
KSRS	**Korea Array**	**44.34**	**2**	P	**P**	**00 10 07.3**	**+0.4**
	comp=Z,1.6nm,0.4s,baz=179,slow=9.1,SNR=10						
MJAR	**Matsushiro Arr**	**44.84**	**14**	P	**P**	**00 10 10.0**	**-0.8**
	comp=Z,4.5nm,0.6s,baz=186,slow=8.8,SNR=9.4						
SHL	**Shillong**	**46.55**	**315**	P	**P**	**00 10 22.9**	**-1.4**
SHL				IAmb	IAmb	00 10 25.8	
	comp=Z,11nm,0.7s						
LZH	**Lanzhou**	**47.82**	**335**	*e*P	**P**	**00 10 34.8**	**+1.1**
LZH				pP	pP	00 12 05.5	+5.9
LZH				PP	**PP**	**00 12 30.5**	**-0.6**
LZH				sP	sP	00 12 52.3	+3.1
LZH				pmax	pmax		
	comp=Z,32nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,4.3s						
HHC	**Hu-ho-hao-te**	**49.57**	**345**	*e*P	**P**	**00 10 50.5**	**+3.8**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,83nm,5.3s						
LSA	**Lhasa**	**49.73**	**319**	P	**P**	**00 10 49.5**	**+1.0**
LSA				pmax	pmax		
	comp=Z,82nm,0.5s						
LSA	**Lhasa**	**49.73**	**319**	P	**P**	**00 10 49.2**	**+0.6**
LSA				IAmb	IAmb	00 10 50.2	
	comp=Z,21nm,0.7s						
ODAN	**Odare**	**50.53**	**314**	*e*P	**P**	**00 10 54.1**	**-0.1**
	comp=Z,36nm,0.6s						
TAPN	**Taplejung**	**50.59**	**314**	*e*P	**P**	**00 10 54.0**	**-0.7**
	comp=Z,34nm,0.4s						
RAMN	**Ramite**	**51.15**	**313**	*e*P	**P**	**00 10 59.2**	**+0.4**
	comp=Z,79nm,0.6s						
USRK	**Ussuriysk Ar.**	**51.32**	**5**	P	**P**	**00 10 59.4**	**0.0**
	comp=Z,4.4nm,0.5s,baz=192,slow=6.9,SNR=13						
USRK	**Ussuriysk Ar.**	**51.32**	**5**	P	**P**	**00 10 59.0**	**-0.4**
JIRN	**Jiri**	**51.86**	**314**	*e*P	**P**	**00 11 04.0**	**-0.1**
	comp=Z,53nm,0.7s						
GUN	**Gumba**	**52.23**	**314**	*e*P	**P**	**00 11 06.6**	**-0.1**
	comp=Z,72nm,0.7s						
GTA	**Gaotai**	**52.33**	**334**	||P	**P**	**00 11 07.3**	**+0.4**
GTA				pP	pP	00 12 38.3	+3.3
GTA				sP	sP	00 13 33.3	+9.4
GTA				pmax	pmax		
	comp=Z,19nm,0.8s						
PKI	**Pulchoki**	**52.38**	**313**	*e*P	**P**	**00 11 07.3**	**-0.5**
	comp=Z,29nm,0.4s						
PKIN	**Phulchoki**	**52.39**	**313**	*e*P	**P**	**00 11 07.2**	**-0.6**
	comp=Z,28nm,0.4s						
KKN	**Kakani**	**52.59**	**313**	*e*P	**P**	**00 11 09.1**	**-0.1**
	comp=Z,20nm,0.4s						
DMN	**Daman**	**52.62**	**313**	*e*P	**P**	**00 11 09.3**	**-0.1**
GKN	**Gorkha**	**53.18**	**313**	*e*P	**P**	**00 11 13.3**	**0.0**
	comp=Z,64nm,0.4s						
KOLN	**Koldanda**	**53.81**	**312**	*e*P	**P**	**00 11 17.8**	**-0.1**
	comp=Z,59nm,0.8s						
DANN	**Dangsing**	**54.02**	**313**	*e*P	**P**	**00 11 19.3**	**-0.2**
	comp=Z,30nm,0.6s						
ULN	**Ulaanbaatar**	**57.28**	**345**	P	**P**	**00 11 41.1**	**-0.6**
SONM	**Songino Array**	**57.42**	**344**	P	**P**	**00 11 42.9**	**+0.2**
	comp=Z,2.4nm,0.4s,baz=167,slow=7.5,SNR=61						
SONM				PcP	**PcP**	**00 12 29.9**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=158,slow=3.9,SNR=4.9						
SONM	**Songino Array**	**57.42**	**344**	P	**P**	**00 11 42.7**	**0.0**
WMQ	**Urumqi**	**61.48**	**329**	*e*P	**P**	**00 12 10.5**	**+0.5**
WMQ				pP	pwP	00 13 49.3	+1.4
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,92nm,4.9s						
WMQ				LR	LR		
	comp=N,630nm,29.9s						
WMQ				LR	LR		
	comp=E,800nm,25.3s						
WMQ				LR	LR

TORD Torodi Ar. Bea 125.13 281 PKP **PKPdf 00 20 46.8 -0.8**
comp=Z,1.4nm,0.6s,baz=35,slow=2.5,SNR=24

TXAR Lajitas Array 128.19 58 PKP **PKPdf 00 20 53.6 +0.4**
comp=Z,0.4nm,0.7s,baz=223,slow=2.7,SNR=4.5

CPUP Villa Florida 146.60 174 PKPbc **PKPdf 00 21 29.0 +2.2**
comp=Z,2.1nm,0.7s,baz=158,slow=2.4,SNR=5.1

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*IDC **30** 00:02:55.0±0.9, 41°.98N×126°.92W, h0km, mb4.2/17, mb1 4.3/21, mb1mx4.2/40, mbtmp4.1/21, ML3.6/4, MS4.0/40, Ms1 4.0/40, ms1mx4.0/46, Error ellipse: s-maj=22.3km s-min=9.7km az=25.0*

*NEIC **30** 00:02:55.7±1.8, 41°.87N±0°.06×126°.84W±0°.09, h10km±1km, mb4.7/66, Error ellipse: s-maj=11.4km s-min=9.2km az=300.0*

*GCMT **30** 00:02:56.7±0.2, 41°.93N±0°.03×127°.14W±0°.02, h17km, MW5.0/104, Moment Tensor Solution. s42,c45; s104,c150; Duration: 0 Moment tensor: Scale 10¹⁶Nm; Mrr-3.26±.15; Mθθ0.20±.10; Mϕϕ3.06±.10; Mrθ-0.16±.32; Mθϕ0.06±.07; Mϕr-0.93±.23; Best double couple: M₀3.29800×10¹⁶ NP1:ϕs179.00000°, δ37.00000°, λ-94.00000°. NP2:ϕs4.00000°, δ53.00000°, λ-87.00000°. Principal axes: T 3.1960, Plg8.0000°, Azm92.0000°; N 0.1990, Plg2.0000°, Azm182.0000°; P -3.4000, Plg81.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*NCEDC **30** 00:02:56.3±1.6, 41°.86N±0°.07×126°.89W±0°.10, h6km±4km Error ellipse: s-maj=10.7km s-min=9.4km az=67.0*

*ANF **30** 00:02:57.6±0.8, 41°.96N×126°.59W, h0km, ML4.0/20, Error ellipse: s-maj=8.8km s-min=4.1km az=75.0*

ISC 30 00:02:56.4±0.5, 41°.95N±0°.05×126°.84W±0°.06, h10km, n280, σ1§54/242, mb4.7/58, MS4.1/39, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBO	**Bosley Butte**	**1.96**	**81**		**Pn**	**00 03 28.9**	**-0.9**
KBO					**Sn**	**00 03 54.0**	**-0.4**
KEBM	**Edson Butte**	**2.07**	**63**		**Pn**	**00 03 30.8**	**-0.4**
KSXB	**Camp Six Broad**	**2.21**	**92**		**Pn**	**00 03 32.3**	**-1.0**
KRMB	**Red Mountain**	**2.23**	**100**		**Pn**	**00 03 32.6**	**-0.9**
KRPM	**Rodgers**	**2.25**	**110**		**Pn**	**00 03 32.8**	**-1.0**
KCTM	**Capetown**	**2.39**	**127**		**Pn**	**00 03 34.3**	**-1.3**
JCC	**Jacoby Creek,**	**2.40**	**117**		**Pn**	**00 03 34.2**	**-1.4**
L02E	**Cave Junction**	**2.42**	**84**		**Pn**	**00 03 35.3**	**-0.7**
L02E	**Cave Junction**	**2.42**	**84**	P	**Pn**	**00 03 35.3**	**-0.7**
	baz=264,SNR=129						
L02E				S	**Sn**	**00 04 05.7**	**0.0**
	baz=264						
J01E	**Myrtle Point**	**2.47**	**60**	P	**Pn**	**00 03 36.0**	**-0.6**
	baz=240,SNR=23						
J01E				S	**Sn**	**00 04 06.5**	**-0.3**
	baz=240						
K02D	**Willamette Mer**	**2.47**	**71**	P	**Pn**	**00 03 36.2**	**-0.6**
	baz=252,SNR=373						
K02D				S	**Sn**	**00 04 06.4**	**-0.6**
	baz=252						
KMPM	**Mount Pierce**	**2.56**	**126**		**Pn**	**00 03 36.4**	**-1.6**
KHMM	**Horse Mountain**	**2.57**	**114**		**Pn**	**00 03 37.4**	**-0.8**
KTRM	**Thompson Ridge**	**2.58**	**90**		**Pn**	**00 03 37.8**	**-0.6**
KOMM	**Orleans Mounta**	**2.62**	**104**		**Pn**	**00 03 38.3**	**-0.6**
KCRM	**Chalk Rock**	**2.74**	**123**		**Pn**	**00 03 39.1**	**-1.3**
KCSM	**Cold Springs**	**2.88**	**118**		**Pn**	**00 03 41.5**	**-0.9**
KMRM	**Mail Ridge**	**2.93**	**125**		**Pn**	**00 03 42.1**	**-0.9**
HUMO	**Hull Mountain**	**2.95**	**76**		**Pn**	**00 03 43.1**	**-0.3**
HUMO	**Hull Mountain**	**2.95**	**76**		**Pn**	**00 03 43.4**	**+0.1**
KHBM	**Hayfork Bally**	**3.02**	**114**		**Pn**	**00 03 43.3**	**-1.1**
M02C	**Callahan**	**3.04**	**99**		**Pn**	**00 03 44.6**	**0.0**
M02C	**Callahan**	**3.04**	**99**	P	**Pn**	**00 03 44.3**	**-0.2**
	baz=280,SNR=53						
M02C				S	**Sn**	**00 04 19.9**	**-1.1**
	baz=280						
KPPM	**Pickett Peak**	**3.07**	**120**		**Pn**	**00 03 45.0**	**-0.1**
I02D	**Swisshome**	**3.08**	**44**	P	**Pn**	**00 03 45.2**	**+0.2**
	baz=226,SNR=80						
I02D				S	**Sn**	**00 04 20.3**	**-1.5**
	baz=226						
YBH	**Yreka Blue Hor**	**3.09**	**93**	Pn	**Pn**	**00 03 45.9**	**+0.6**
	14nm,0.3s,baz=290,slow=13,SNR=148						
YBH				Sn	**Sn**	**00 04 25.4**	**+3.1**
	9.0nm,0.3s,baz=196,slow=21,SNR=3.8						
YBH				LR	LR	00 04 49.5	
	comp=Z,3μm,20.8s,baz=270,slow=36						
YBH	**Yreka Blue Hor**	**3.09**	**93**		**Pn**	**00 03 46.3**	**+1.0**
YBH					Sn	00 04 15.5	-6.8
I03D	**Drain, OR**	**3.10**	**55**	P	**Pn**	**00 03 45.2**	**-0.1**
	baz=236,SNR=80						
I03D				S	**Sn**	**00 04 22.6**	**+0.1**
	baz=236						
KBSM	**Bell Springs**	**3.19**	**128**		**Pn**	**00 03 45.4**	**-1.2**
N02D	**Trinity Center**	**3.25**	**106**	P	**Pn**	**00 03 47.0**	**-0.6**
	baz=286,SNR=20						
N02D				S	**Sn**	**00 04 26.7**	**+0.3**
	baz=286						
KCPM	**Cahto Peak**	**3.35**	**131**		**Pn**	**00 03 47.4**	**-1.4**
L04D	**Klamath Falls**	**3.38**	**84**	P	**Pn**	**00 03 49.8**	**+0.5**
	baz=265,SNR=20						
WDC	**Whiskeytown Da**	**3.52**	**111**		**Pn**	**00 03 51.3**	**+0.3**
O02D	**Mt. Diablo Mer**	**3.54**	**119**	P	**Pn**	**00 03 50.4**	**-1.0**
	baz=299,SNR=20						
O02D				S	**Sn**	**00 04 34.2**	**+0.9**
	baz=299						
COR	**Corvallis**	**3.69**	**43**		**Pn**	**00 03 54.5**	**+1.1**
J04D	**Umpqua Nationa**	**3.72**	**68**	P	**Pn**	**00 03 54.9**	**+0.9**
	baz=250,SNR=25						
M04C	**Macdoel**	**3.74**	**91**	P	**Pn**	**00 03 54.8**	**+0.6**
	baz=272,SNR=29						
I04A	**Tendick Farm,**	**3.74**	**59**	P	**Pn**	**00 03 54.6**	**+0.4**
	baz=241,SNR=16						
I04A				S	**Sn**	**00 04 39.0**	**+0.7**
	baz=241						
H04D	**Lebanon**	**3.95**	**48**	P	**Pn**	**00 03 57.8**	**+0.8**
	baz=230,SNR=33						
H04D				S	**Sn**	**00 04 44.4**	**+1.1**
	baz=230						
HOPS	**Hopland Field**	**4.12**	**135**		**Pn**	**00 03 58.4**	**-0.9**
O03E	**Paynes Creek**	**4.15**	**112**	P	**Pn**	**00 03 59.2**	**-0.6**
	baz=293,SNR=10.0						
O03E				S	**Sn**	**00 04 47.5**	**-0.9**
	baz=293						
G03D	**McMinnville, O**	**4.17**	**37**	P	**Pn**	**00 03 59.9**	**-0.1**
	baz=220						
J05D	**Fort Rock, OR**	**4.34**	**70**	P	**Pn**	**00 04 03.0**	**+0.4**
	baz=253,SNR=16						
GDXM	**Geysers**	**4.40**	**134**		**Pn**	**00 04 02.5**	**-0.8**
I05D	**Terrebonne, OR**	**4.68**	**57**	P	**Pn**	**00 04 07.8**	**+0.8**
	baz=241						
ORV	**Oroville**	**4.71**	**119**		**Pn**	**00 04 06.6**	**-0.8**
ORV					Sn	00 04 55.5	-6.5
PINE	**Pine Mountain**	**4.71**	**65**		**Pn**	**00 04 08.9**	**+1.3**
MCCM	**Marconi Confer**	**4.86**	**140**	Pn	**Pn**	**00 04 09.8**	**+0.3**
MOD	**Modoc Plateau**	**4.88**	**88**		**Pn**	**00 04 09.9**	**+0.1**
MOD				Sn	**Sn**	**00 05 02.2**	**-4.2**
F04D	**Rainier, OR**	**4.97**	**32**	P	**Pn**	**00 04 11.5**	**+0.5**
	baz=215						
F04A	**Amboy**	**5.10**	**37**	Sn	**Sn**	**00 05 07.4**	**-4.4**
E03A	**Lebam**	**5.16**	**26**		**Pn**	**00 04 14.9**	**+1.3**
G05D	**Wamic, OR**	**5.19**	**49**	P	**Pn**	**00 04 15.1**	**+1.1**
	baz=232,SNR=23						
BEKR	**Beckworth**	**5.33**	**111**		**Pn**	**00 04 15.4**	**-0.8**
AFDM	**Forest Hills D**	**5.38**	**122**	Pn	**Pn**	**00 04 18.1**	**+1.4**
F05D	**White Salmon**	**5.53**	**43**	P	**Pn**	**00 04 19.6**	**+0.9**
	baz=226,SNR=9.5						
E04D	**Cinebar**	**5.53**	**32**	P	**Pn**	**00 04 20.2**	**+1.5**
	baz=215,SNR=13						
I07A	**Izee**	**5.78**	**66**		**Pn**	**00 04 23.9**	**+1.6**
LON	**Longmire**	**6.00**	**35**		**Pn**	**00 04 27.5**	**+2.3**
VCNR	**Virginia City**	**6.08**	**113**		**Pn**	**00 04 29.2**	**+2.7**
PAHR	**Pah Rah Range**	**6.08**	**109**		**Pn**	**00 04 27.3**	**+0.9**
WVOR	**Wild Horse Val**	**6.11**	**83**	Pn	**Pn**	**00 04 27.0**	**+0.2**
D03D	**Eldon**	**6.19**	**24**	P	**Pn**	**00 04 29.4**	**+1.7**
	baz=207						
PNTR	**Pine Nut**	**6.21**	**115**	Pn	**Pn**	**00 04 31.1**	**+2.9**
D05A	**Emumclaw**	**6.28**	**32**	Pn	**Pn**	**00 04 31.7**	**+2.7**
CMB	**Columbia Colle**	**6.31**	**126**		**Pn**	**00 04 29.3**	**-0.1**
J08A	**Circle Bar Ran**	**6.33**	**74**	Pn	**Pn**	**00 04 29.8**	**0.0**
F07A	**Phinny Hill Vi**	**6.36**	**49**		**Pn**	**00 04 29.8**	**-0.3**
YERR	**Yerington**	**6.50**	**115**		**Pn**	**00 04 32.1**	**-0.2**
G08A	**Pilot Rock**	**6.62**	**57**		**Pn**	**00 04 36.1**	**+2.3**
WAKR	**Walker**	**6.62**	**119**	Pn	**Pn**	**00 04 35.0**	**+1.1**
WAKR					Sn	00 05 37.7	-12
E07A	**Sunnyside**	**6.81**	**45**		**Pn**	**00 04 38.2**	**+1.9**
HAWA	**Hanford**	**6.88**	**47**		**Pn**	**00 04 38.8**	**+1.6**
LTY	**Liberty**	**6.89**	**38**		**Pn**	**00 04 38.2**	**+0.7**
E08A	**Dider Farm, El**	**7.20**	**48**	Pn	**Pn**	**00 04 43.0**	**+1.4**
KVN	**Kaiserville**	**7.26**	**111**	Pn	**Pn**	**00 04 43.3**	**+0.6**
C06D	**Leavenworth**	**7.31**	**33**	P	**Pn**	**00 04 42.8**	**-0.3**
	baz=217						
BMO	**Blue Mountains**	**7.52**	**64**		**Pn**	**00 04 48.3**	**+2.1**
B06A	**Marblemount**	**7.58**	**28**		**Pn**	**00 04 49.0**	**+2.2**
E09A	**Wood Farm, Sta**	**7.73**	**51**	Pn	**Pn**	**00 04 48.3**	**-0.6**
F10A	**Beach Ranch, E**	**8.01**	**57**		**Pn**	**00 04 53.5**	**+0.6**
PAGB	**Antelope Grade**	**8.06**	**138**		**Pn**	**00 04 52.1**	**-1.3**
MFID	**Camas Ranch**	**8.24**	**76**		**Pn**	**00 04 56.2**	**+0.1**
SMMC	**Simmler**	**8.51**	**139**	P	**Pn**	**00 05 00.2**	**+0.5**
	baz=322						
ELK	**Elko**	**8.81**	**94**	Pn	**Pn**	**00 05 07.0**	**+3.0**
	0.3nm,0.3s,baz=287,slow=15,SNR=10						
ELK	**Elko**	**8.81**	**94**	Pn	**Pn**	**00 05 06.2**	**+2.3**
ISA	**Isabella, Lake**	**9.05**	**131**	Pn	**Pn**	**00 05 07.9**	**+0.7**
ISA	**Isabella, Lake**	**9.05**	**131**	P	**Pn**	**00 05 07.1**	**-0.1**
	baz=316						
ARVC	**Arvin**	**9.26**	**135**	P	**Pn**	**00 05 10.6**	**+0.7**
	baz=319						
LLLB	**Lillooet**	**9.31**	**20**	Pn	**Pn**	**00 05 13.3**	**+2.7**
NEW	**Newport**	**9.33**	**44**	Pn	**Pn**	**00 05 13.5**	**+2.7**
	0.2nm,0.3s,baz=113,slow=19,SNR=3.0						
NEW				LR	LR	00 08 55.0	
	comp=Z,2μm,18.7s,baz=240,slow=38						
NEW	**Newport**	**9.33**	**44**	Pn	**Pn**	**00 05 12.9**	**+2.1**
NEW	**Newport**	**9.33**	**44**	P	**Pn**	**00 05 12.0**	**+1.2**
	baz=231						
R11A	**Troy Canyon, C**	**9.34**	**109**	Pn	**Pn**	**00 05 12.2**	**+1.1**
R11A	**Troy Canyon, C**	**9.34**	**109**	P	**Pn**	**00 05 12.0**	**+0.9**
	baz=295						
TPNV	**Topopah Spring**	**9.59**	**118**	P	**Pn**	**00 05 18.2**	**+3.7**
	baz=304						
EDW2	**Edwards Air Fo**	**9.89**	**133**	P	**Pn**	**00 05 20.6**	**+1.9**
	baz=317						
BBB	**Bella Bella**	**10.28**	**356**	LR	LR	00 08 32.0	
	comp=Z,420nm,20.1s,baz=184,slow=33						
BGU	**Big Grassy Mou**	**10.42**	**91**	Pn	**Pn**	**00 05 28.8**	**+2.9**
MSO	**Missoula**	**10.44**	**58**	P	**Pn**	**00 05 27.3**	**+1.2**
	baz=246						
PSUT	**Pine Spring**	**10.49**	**105**	Pn	**Pn**	**00 05 27.2**	**+0.2**
MCMT	**McKenzie Canyo**	**10.58**	**70**	Pn	**Pn**	**00 05 30.0**	**+1.8**
JTMT	**Jette**	**10.63**	**53**	Pn	**Pn**	**00 05 31.1**	**+2.4**
DUG	**Dugway, Tooele**	**10.73**	**95**	Pn	**Pn**	**00 05 33.2**	**+3.0**
DUG	**Dugway, Tooele**	**10.73**	**95**	P	**Pn**	**00 05 32.0**	**+1.7**
	baz=283						
GMRC	**Granite Mounta**	**11.31**	**126**	P	**Pn**	**00 05 40.0**	**+1.8**
	baz=312						
NLU	**North Lily Min**	**11.34**	**95**	Pn	**Pn**	**00 05 40.4**	**+1.7**
HWUT	**Hardware Ranch**	**11.41**	**87**	Pn	**Pn**	**00 05 42.7**	**+3.2**
SZCU	**Shurtz Canyon**	**11.44**	**108**	Pn	**Pn**	**00 05 43.9**	**+3.9**
QLMT	**Earthquake Lak**	**11.58**	**70**	Pn	**Pn**	**00 05 44.7**	**+2.9**
MPU	**Maple Canyon**	**11.66**	**94**	Pn	**Pn**	**00 05 42.8**	**-0.1**
JLU	**Jordanelle**	**11.66**	**92**	Pn	**Pn**	**00 05 45.1**	**+2.1**
AHID	**Auburn Hatcher**	**11.68**	**81**	Pn	**Pn**	**00 05 44.9**	**+1.7**
PFO	**Pinyon Flats O**	**11.68**	**132**	Pn	**Pn**	**00 05 46.3**	**+3.1**
	0.1nm,0.3s,baz=320,slow=17,SNR=3.6						
PFO				LR	LR	00 10 01.7	
	comp=Z,767nm,20.5s,baz=304,slow=36						
XPFO	**Pion Flat**	**11.69**	**132**		**Pn**	**00 05 42.1**	**-1.2**
MSU	**Marysvale**	**11.72**	**102**	Pn	**Pn**	**00 05 47.4**	**+3.6**
YHB	**Horse Butte**	**11.73**	**71**	Pn	**Pn**	**00 05 44.0**	**+0.1**
YHL	**Hebgen Lake**	**11.75**	**70**	Pn	**Pn**	**00 05 46.1**	**+1.8**
TPAW	**Teton Pass**	**11.79**	**77**	Pn	Pn	00 05 42.9	-1.8
IMW	**Indian Meadow**	**11.82**	**75**		**Pn**	**00 05 47.1**	**+1.9**
REDW	**Red Top Meadow**	**11.86**	**78**	Pn	**Pn**	**00 05 48.3**	**+2.6**
KNB	**Kanab**	**11.89**	**110**	Pn	**Pn**	**00 05 49.5**	**+3.4**
MTPU	**Mount Pierson**	**11.90**	**104**	Pn	**Pn**	**00 05 49.3**	**+2.9**
SNOW	**Snow King Moun**	**11.93**	**77**	Pn	**Pn**	**00 05 48.6**	**+1.9**
MOOW	**Moose Ponds**	**11.95**	**76**	Pn	**Pn**	**00 05 47.3**	**+0.3**
MOOW					**Sn**	**00 08 02.9**	**+2.5**
Q16A	**Castle Valley**	**12.32**	**99**	Pn	**Pn**	**00 05 54.5**	**+2.6**
P17A	**Butcher Ranch,**	**12.46**	**96**	Pn	**Pn**	**00 05 56.4**	**+2.5**
YNE	**Yellowstone No**	**12.60**	**70**	Pn	**Pn**	**00 05 57.5**	**+1.7**
Y12C	**Blythe**	**12.71**	**126**	Pn	**Pn**	**00 05 58.9**	**+1.8**
BW06	**Boulder Array**	**12.81**	**81**	Pn	**Pn**	**00 06 01.4**	**+2.7**
PD31	**Pinedale Array**	**12.81**	**81**	Pn	**Pn**	**00 06 01.2**	**+2.5**
PDAR	**Pinedale Array**	**12.81**	**81**	Pn	**Pn**	**00 06 01.2**	**+2.5**
	0.0nm,0.3s,baz=262,slow=10,SNR=14						
PDAR				LR	LR	00 11 10.8	
	comp=Z,1μm,21.7s,baz=272,slow=38						
RDMU	**Red Mountain**	**13.07**	**90**	Pn	**Pn**	**00 06 04.0**	**+1.8**
RLMT	**Red Lodge**	**13.14**	**70**	Pn	**Pn**	**00 06 06.5**	**+3.4**
EGMT	**Eagleton**	**13.52**	**58**	Pn	**Pn**	**00 06 08.6**	**+0.4**
WUAZ	**Wupatki**	**13.66**	**113**	Pn	**Pn**	**00 06 11.9**	**+1.6**
X16A	**Lo Mia Camp, P**	**14.24**	**117**	P	**Pn**	**00 06 21.0**	**+2.8**
MVCO	**Mesa Verde**	**14.91**	**102**		**Pn**	**00 06 27.9**	**+0.5**
W18A	**Petrified Fore**	**15.01**	**111**	Pn	**Pn**	**00 06 28.8**	**+0.1**
K22A	**Casper**	**15.05**	**81**	Pn	**Pn**	**00 06 28.8**	**-0.4**
K22A				IAmb	IAmb	00 06 44.3	
	comp=Z,46nm,1.5s						
X18A	**Snowflake**	**15.18**	**114**		**Pn**	**00 06 30.2**	**-0.8**
X18A				IAmb	IAmb	00 06 47.3	
	comp=Z,49nm,1.2s						
LAO	**LaSA Array**	**15.48**	**65**	Pn	**Pn**	**00 06 34.5**	**-0.2**
TUC	**Tucson**	**15.99**	**122**		**Pn**	**00 06 39.6**	**-1.8**
PHWY	**Pilot Hill**	**16.00**	**85**	Pn	**Pn**	**00 06 39.3**	**-2.4**
ISCO	**Idaho Springs**	**16.20**	**91**	Pn	**Pn**	**00 06 41.6**	**-2.7**
RSSD	**Black Hills**	**16.80**	**75**	P	**Pn**	**00 06 50.5**	**-1.4**
JIS	**Juneau Island**	**17.03**	**346**	P	**Pn**	**00 06 55.0**	**+0.7**
JIS				IAmb	IAmb	00 07 13.0	
	comp=Z,24nm,0.4s						
DGMT	**Dagmar**	**17.20**	**60**	P	**Pn**	**00 06 57.4**	**+0.8**
DGMT				IAmb	IAmb	00 07 13.9	
	comp=Z,94nm,1.4s						
ANMO	**Albuquerque**	**17.41**	**107**	Pn	**P**	**00 07 04.0**	**+3.2**
	comp=Z,0.1nm,0.3s,baz=306,slow=12,SNR=7.2						
ANMO				LR	LR	00 14 10.9	
	comp=Z,1μm,19.2s,baz=302,slow=39						
ANMO	**Albuquerque**	**17.41**	**107**	P	**Pn**	**00 06 59.2**	**-0.3**
121A	**Cookes Peak, D**	**17.81**	**116**	P	**Pn**	**00 07 07.0**	**+2.5**
HSIG		**18.23**	**130**	P	**Pn**	**00 07 10.5**	**+1.0**
OGNE	**Ogallala**	**18.61**	**85**	P	**P**	**00 07 12.8**	**-1.0**
OGNE				IAmb	IAmb	00 07 23.4	
	comp=Z,56nm,1.0s						
KSCO	**Kaye Shedlock'**	**18.64**	**91**	P	**P**	**00 07 11.2**	**-3.1**
KSCO				IAmb	IAmb	00 07 24.1	
	comp=Z,105nm,1.4s						
MDND	**Maddock**	**20.12**	**64**	P	**P**	**00 07 27.5**	**-2.7**
MDND				IAmb	IAmb	00 07 40.9	
	comp=Z,44nm,1.1s						
FFC	**Flin Flon**	**20.75**	**43**	P	**P**	**00 07 38.2**	**+1.1**
FFC				IAmb	IAmb	00 07 47.4	
	comp=Z,44nm,1.1s						
CBKS	**Cedar Bluff**	**20.85**	**90**	P	**P**	**00 07 38.5**	**+0.3**
CBKS				IAmb	IAmb	00 07 47.9	
	comp=Z,43nm,1.1s						
AMTX	**Amarillo**	**20.89**	**101**	P	**P**	**00 07 38.2**	**-0.6**
AMTX				IAmb	IAmb	00 07 51.9	
	comp=Z,29nm,1.1s						
D32A	**Dogwood Acres,**	**21.80**	**66**	P	**P**	**00 07 49.1**	**+0.7**
D32A				IAmb	IAmb	00 08 05.4	
	comp=Z,28nm,1.1s						
YKA	**Yellowknife Ar**	**21.82**	**15**	P	**P**	**00 07 48.6**	**+0.1**
	comp=Z,5.6nm,0.8s,baz=205,slow=11,SNR=60						
YKA				PcP	**PcP**	**00 11 47.7**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=198,slow=2.2,SNR=4.6						
YKA				LR	LR	00 15 54.4	
	comp=Z,112nm,21.6s,baz=0.0,slow=36						
ECSD	**EROS Data Cent**	**22.18**	**75**	P	**P**	**00 07 53.0**	**+0.4**
LPIG	**La Paz**	**22.49**	**137**	LR	LR	00 15 52.9	
	comp=Z,355nm,18.6s,baz=325,slow=34						
TX31	**Lajitas Ar. Si**	**22.57**	**116**	IAmb	IAmb	00 08 07.6	
	comp=Z,26nm,1.4s						
TX32	**Lajitas Array**	**22.57**	**116**	IAmb	IAmb	00 08 07.6	
	comp=Z,26nm,1.4s						
TXAR	**Lajitas Array**	**22.57**	**116**	P	**P**	**00 07 59.3**	**+2.5**
	comp=Z,1.8nm,0.7s,baz=299,slow=5.6,SNR=12						
TXAR				LR	LR	00 18 15.4	
	comp=Z,85nm,18.4s,baz=0.0,slow=41						
TXAR	**Lajitas Array**	**22.57**	**116**	P	**P**	**00 07 56.6**	**-0.2**
AGMN	**Agassiz Nation**	**22.66**	**63**	IAmb	IAmb	00 08 10.6	
	comp=Z,26nm,1.1s						
KDAK	**Kodiak Island**	**22.73**	**323**	LR	LR	00 14 27.2	
	comp=Z,826nm,20.6s,baz=125,slow=30						
ULM	**Lac du Bonnet**	**22.89**	**58**	P	**P**	**00 08 00.8**	**+0.8**
	comp=Z,20nm,0.8s,baz=267,slow=8.8,SNR=25						
ULM				LR	LR	00 17 12.2	
	comp=Z,668nm,18.1s,baz=269,slow=37						
ULM	**Lac du Bonnet**	**22.89**	**58**	P	**P**	**00 07 59.9**	**-0.1**
WMOK	**Wichita Mounta**	**23.09**	**99**	IAmb	IAmb	00 08 16.0	
	comp=Z,18nm,0.9s						
MENT	**Mentasta**	**23.26**	**340**	P	**P**	**00 08 05.5**	**+1.7**
MENT				IAmb	IAmb	00 08 12.9	
	comp=Z,41nm,1.3s						
ABTX	**Abilene, Hawle**	**23.47**	**104**	P	**P**	**00 08 03.8**	**-2.3**
ABTX				IAmb	IAmb	00 08 14.8	
	comp=Z,20nm,1.0s						
FNO	**Franklin**	**23.88**	**97**	P	**P**	**00 08 08.5**	**-1.5**
SPMN	**Marine on St.**	**24.76**	**71**	P	**P**	**00 08 15.9**	**-2.1**
SPMN				IAmb	IAmb	00 08 24.3	
	comp=Z,20nm,1.2s						
TUL1	**Leonard**	**24.81**	**94**	P	**P**	**00 08 16.5**	**-2.1**
EYMN	**Ely**	**25.57**	**64**	IAmb	IAmb	00 08 36.1	
	comp=Z,25nm,1.1s						
ILAR	**Eielson Array**	**25.57**	**340**	P	**P**	**00 08 26.1**	**+0.9**
	comp=Z,4.4nm,0.9s,baz=154,slow=8.6,SNR=18						
ILAR				PcP	**PcP**	**00 11 55.6**	**-0.3**
	baz=188,slow=2.1,SNR=6.6						
ILAR				LR	LR	00 16 53.0	
	comp=Z,271nm,20.2s,baz=162,slow=33						
PRP	**Porcupine Dome**	**25.86**	**342**	IAmb	IAmb	00 08 38.4	
	comp=Z,13nm,0.9s						
NEA	**Nenana**	**26.00**	**338**	IAmb	IAmb	00 08 34.6	
	comp=Z,25nm,1.1s						
HHAR	**Hobbs**	**26.04**	**92**	IAmb	IAmb	00 08 41.4	
	comp=Z,29nm,1.1s						
I40A	**Norwalk**	**26.46**	**73**	IAmb	IAmb	00 08 47.8	
	comp=Z,34nm,1.5s						
W39A	**Magazine**	**26.59**	**94**	IAmb	IAmb	00 08 47.9	
	comp=Z,28nm,1.2s						
INK	**Inuvik**	**26.66**	**354**	P	**P**	**00 08 35.3**	**+0.4**
	comp=Z,3.0nm,1.1s,baz=150,slow=8.5,SNR=4.2						
INK	**Inuvik**	**26.66**	**354**	P	**P**	**00 08 35.6**	**+0.7**
MLY	**Manley**	**26.81**	**338**	P	**P**	**00 08 36.1**	**-0.4**
MLY				IAmb	IAmb	00 08 39.6	
	comp=Z,33nm,1.4s						
MIAR	**Mount Ida**	**27.02**	**95**	P	**P**	**00 08 37.2**	**-1.4**
MIAR				IAmb	IAmb	00 08 51.6	
	comp=Z,16nm,1.0s						
CCM	**Cathedral Cave**	**27.42**	**86**	P	**P**	**00 08 43.0**	**+0.9**
CCM				IAmb	IAmb	00 08 50.6	
	comp=Z,10nm,0.9s						
C36M	**Paulatuk**	**27.50**	**2**	P	**P**	**00 08 41.2**	**-1.3**
WHAR	**Wooly Hollow**	**27.67**	**92**	P	**P**	**00 08 43.9**	**-0.4**
WHAR				IAmb	IAmb	00 08 52.6	
	comp=Z,20nm,1.0s						
WHAR				PcP	PcP	00 11 56.0	-5.4
I42A	**Draeger Farm,**	**27.68**	**73**	P	**P**	**00 08 43.5**	**-0.9**
W41B	**Gary Mavity, V**	**27.75**	**93**	IAmb	IAmb	00 08 53.4	
	comp=Z,18nm,1.4s						
IMAR	**Indian Mountai**	**28.37**	**337**	P	**P**	**00 08 51.1**	**+0.8**
PBMO	**Poplar Bluff**	**28.47**	**88**	P	P	00 08 50.0	-1.5
PBMO				IAmb	IAmb	00 09 03.3	
	comp=Z,20nm,1.1s						
TOLK	**Toolik Lake Re**	**29.34**	**343**	P	**P**	**00 09 00.3**	**+1.3**
VLDQ	**Val d'Or**	**34.94**	**63**	P	P	00 09 46.9	-1.3
VLDQ				IAmb	IAmb	00 09 48.7	
	comp=Z,14nm,0.9s						
RES	**Resolute Bay**	**35.88**	**14**	P	**P**	**00 09 56.1**	**+0.2**
L56A	**Greenwood**	**36.19**	**73**	P	**P**	**00 09 58.3**	**-0.8**
SCHQ	**Schefferville**	**40.63**	**50**	P	**P**	**00 10 36.9**	**+0.6**
	comp=Z,5.0nm,0.8s,baz=279,slow=7.4,SNR=8.8						
SCHQ				LR	LR	00 28 16.5	
	comp=Z,323nm,18.4s,baz=318,slow=37						
SCHQ	**Schefferville**	**40.63**	**50**	P	**P**	**00 10 35.2**	**-1.0**
SEY	**Seymchan**	**49.69**	**324**	P	**P**	**00 11 48.1**	**0.0**
	comp=Z,4.3nm,1.0s,baz=99,slow=8.6,SNR=7

ESDC	Sonseca Array	83.63	41	P	P	00 15 24.1	-0.9	
SQTA	Sankt Quirin	83.73	27	*i* PcP	P	00 15 27.3	+1.8	
	comp=Z,17nm,1.5s							
FETA	Feichten	83.74	28	*i* PcP	P	00 15 27.7	+2.1	
	comp=Z,8.5nm,1.5s							
KRUC	Moravsky	83.77	23	*e*P	P	00 15 26.5	+1.0	
WTTA	Wattenberg	83.84	27	*i* PcP	P	00 15 27.9	+1.7	
FUORN	Ofenpass-Fuorn	83.92	28	P	P	00 15 27.6	+1.0	
HNR	Honiara	84.02	252	LR	LR	00 45 07.2		
	comp=Z,164nm,19.9s,baz=59,slow=30							
MOA	Molln	84.19	25	*i* PcP	P	00 15 30.3	+2.6	
	comp=Z,13nm,1.6s							
JAVC	Velka Javorina	84.32	23	*e*P	P	00 15 30.4	+2.0	
CONA	Conrad Observa	84.62	24	*i* PcP	P	00 15 31.5	+1.6	
	comp=Z,11nm,1.4s							
MODS	Modra-Piesok	84.64	23	*e*P	P	00 15 30.4	+0.4	
NJ2	Nanjing	84.78	309	*e*P	P	00 15 29.0	-1.9	
NJ2				pmax	pmax			
	comp=Z,8.0nm,0.5s							
ARSA	Arzberg	85.12	25	*i* pP	P	00 15 33.9	+1.5	
	comp=Z,8.0nm,1.0s							
CRVS	Cervenica-Dubn	85.32	20	*e*P	P	00 15 34.3	+0.9	
AKASG	Malin Array Be	85.39	15	P	P	00 15 33.2	-0.4	
	comp=Z,2.0nm,0.8s,baz=342,slow=5.0,SNR=9.0							
AKASG				LR	LR	00 53 10.7		
	comp=Z,48nm,19.6s,baz=255,slow=35							
AKASG	Malin Array Be	85.39	15	P	P	00 15 32.7	-1.0	
OBKA	Obir	85.47	26	*i* pP	P	00 15 34.9	+0.7	
	comp=Z,14nm,1.2s							
SOKA	Soboth	85.47	25	*i* pP	P	00 15 35.3	+1.0	
	comp=Z,14nm,1.6s							
PSZ	Piszkesteto	85.80	22	P	P	00 15 35.0	-0.9	
KRVT	Keravat (AS076	86.28	261	LR	LR	00 49 16.0		
	comp=Z,196nm,18.3s,baz=103,slow=32							
MKAR	Makanchi Array	87.93	340	P	P	00 15 45.3	-0.9	
	comp=Z,0.5nm,0.8s,baz=20,slow=5.1,SNR=5.1							
MKAR				LR	LR	00 57 13.0		
	comp=Z,86nm,18.1s,baz=16,slow=37							
WHN	Wuhan	88.48	311	P	P	00 16 05.3	+16	
WHN				pmax	pmax			
	comp=Z,12nm,0.6s							
DZM	Mont Dzumac	88.58	238	*e*LR	LR	00 43 40.0		
	comp=Z,237nm,22.4s							
DZM	Mont Dzumac	88.58	238	LR	LR	00 47 09.8		
	comp=Z,140nm,20.5s,baz=34,slow=30							
GTA	Gaotai	88.60	326	*e*P	P	00 15 49.8	+0.1	
GTA				pP	PcP	00 15 54.8	+3.5	
GTA				sP	sP	00 15 57.5	+4.4	
GTA				pmax	pmax			
	comp=Z,4.0nm,1.5s							
GTA				pmax	pmax			
	comp=Z,89nm,4.6s							
GTA				LR	LR			
	comp=N,130nm,19.7s							
GTA				LR	LR			
	comp=E,110nm,19.7s							
GTA				LR	LR			
	comp=Z,170nm,20.6s							
XAN	Xi'an	88.71	317	P	P	00 15 49.5	-0.7	
XAN				pP	pwP	00 16 23.0	+27	
XAN				pmax	pmax			
	comp=Z,9.0nm,1.9s							
XAN				LR	LR			
	comp=N,140nm,17.3s							
XAN				LR	LR			
	comp=E,93nm,20.6s							
XAN				LR	LR			
	comp=Z,150nm,23.5s							
WMQ	Urumqi	89.16	336	*e*P	P	00 15 53.0	+0.9	
WMQ				pP	PcP	00 15 57.8	+4.2	
WMQ				pmax	pmax			
	comp=Z,9.0nm,1.7s							
WMQ				LR	LR			
	comp=N,310nm,29.1s							
WMQ				LR	LR			
	comp=E,670nm,29.2s							
WMQ				LR	LR			
	comp=Z,74nm,28.9s							
LZH	Lanzhou	89.56	321	*e*P	P	00 15 51.8	-2.5	
LZH				pP	PcP	00 15 56.3	+0.7	
LZH				sP	pP	00 16 00.5	+3.7	
LZH				PP	PP	00 19 33.5	+8.5	
LZH				pmax	pmax			
	comp=Z,16nm,1.2s							
LZH				pmax	pmax			
	comp=Z,77nm,4.9s							
BDFB	Brasilia	92.24	109	LR	LR	01 02 06.7		
	comp=Z,67nm,19.1s,baz=292,slow=38							
KEST	Kesra	92.91	34	LR	LR	00 56 42.5		
	comp=Z,73nm,19.2s,baz=282,slow=35							
PMG	Port Moresby	93.26	260	LR	LR	00 52 36.5		
	comp=Z,116nm,18.4s,baz=226,slow=32							
CPUP	Villa Florida	93.41	123	LR	LR	00 59 07.1		
	comp=Z,50nm,18.8s,baz=240,slow=36							
JAY	Jayapura	93.50	270	LR	LR	00 50 12.5		
	comp=Z,133nm,20.1s,baz=348,slow=30							
CD2	Chengdu	93.82	318	P	P	00 16 11.0	-3.0	
CD2				pmax	pmax			
	comp=Z,20nm,0.6s							
URZ	Urewera	94.75	221	LR	LR	00 49 20.2		
	comp=Z,111nm,20.9s,baz=70,slow=29							
KSH	Kashi	96.31	342	P	P	00 16 25.3	0.0	
KSH				pP	PcP	00 16 29.5	+4.0	
KSH				pmax	pmax			
	comp=Z,250nm,5.3s							

*NIC **30** 00:19:23.5±0.0, 33.88N×26.24E, h32km±29km, Ml3.4/1*
*ATH **30** 00:19:25.8, 34.26N×26.48E, h13km±3km, ML3.2/6, Error ellipse: s-maj=4.2km s-min=1.8km az=356.0*
*IDC **30** 00:19:25.4±1.0, 34.47N×26.54E, h0km, mb3.9/9, mb1 3.9/13, mb1mx3.7/39, mbtmp3.8/13, ML3.7/4, MS3.0/2, Ms1 3.2/2, ms1mx2.4/34, Error ellipse: s-maj=24.0km s-min=14.8km az=1.0*
*ISK **30** 00:19:28.2, 34.48N×26.49E, h14km, ML3.6/17*
*THE **30** 00:19:29.4, 34.49N×26.40E, h0km±1km, ML3.2/4, Error ellipse: s-maj=3.0km s-min=1.0km az=161.0*
*HLW **30** 00:19:29.1, 34.30N×26.60E, h18km±15km, Md3.9, Ml4.0*

IDC 30 00:19:27.0±1.4, 34.35N±0.05×26.51E±0.03, h16km±8km, n84, σ1s32/91, mb4.0/9, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	0.80	343	P	Pb	00 19 42.1	-0.4
ZKR				S	Sn	00 19 52.9	-2.3
	2µm,0.6s						
ZKR	**Zakros**	0.80	343	P	Pb	00 19 42.0	-0.4
ZKR				S	Sn	00 19 55.0	-0.2
ZKR				AML	AML	00 20 06.8	
	comp=E,6267µm,0.6s						
ZKR				AML	AML	00 20 07.5	
	comp=N,2878µm,0.7s						
ZKR	**Zakros**	0.80	343	PG	Pb	00 19 42.1	-0.4
ZKR				SG	Sb	00 19 51.4	-1.6
ZKR	**Zakros**	0.80	343	P	Pb	00 19 42.2	-0.4
ZKR				AML	AML	00 19 57.7	
	comp=N,3.6nm,0.4s						
ZKR				AML	AML	00 19 57.7	
	comp=N,1.6nm,0.4s						
STIA	**Sitia Lasithi**	0.91	338	P	Pb	00 19 44.3	-0.2
STIA				S	Sn	00 19 56.9	-1.1
FRMA	**Ierapetra Chan**	0.92	316	P	Pg	00 19 43.0	-1.8
NPS	**Neapolis**	1.17	321	P	Pb	00 19 48.4	-0.4
NPS				S	Sn	00 20 04.2	-0.2
	comp=N,1µm,0.6s						
NPS	**Neapolis**	1.17	321	P	Pb	00 19 48.5	-0.4
NPS				S	Sn	00 20 05.7	+1.4
NPS				AML	AML	00 20 10.0	
	comp=E,3098µm,0.7s						
NPS				AML	AML	00 20 22.1	
	comp=N,1990µm,0.6s						
LAST	**Lasithi**	1.17	314	P	Pb	00 19 48.3	-0.6
LAST				S	Sn	00 20 04.7	+0.2
	comp=N,1µm,0.6s						
LAST	**Lasithi**	1.17	314	P	Pb	00 19 48.5	-0.4
LAST				S	Sn	00 20 06.0	+1.5
LAST				AML	AML	00 20 15.1	
	comp=N,2246µm,0.6s						
LAST				AML	AML	00 20 16.1	
	comp=E,1823µm,0.6s						
KARP	**Karpathos**	1.30	24	P	Pg	00 19 52.9	+0.8
KARP				S	Sg	00 20 09.7	+0.5
	comp=E,860nm,0.8s						
KARP	**Karpathos**	1.30	24	P	Pg	00 19 52.7	+0.6
KARP				S	Sg	00 20 11.0	+1.8
KARP				AML	AML	00 20 25.5	
	comp=E,1793µm,1.1s						
KARP				AML	AML	00 20 44.8	
	comp=N,931µm,0.3s						
KARP	**Karpathos**	1.30	24	P	Pg	00 19 53.0	+0.8
HRKL	**Herakleio**	1.50	310	PN	Pb	00 19 54.3	-0.2
KSTL	**Kastelli Herak**	1.52	309	P	Pn	00 19 50.9	-2.6
SIVA	**Sivas**	1.55	296	P	Pb	00 19 55.3	0.0
SIVA	**Sivas**	1.55	296	P	Pb	00 19 55.6	+0.3
SIVA				S	Sg	00 20 17.7	+0.8
SIVA				AML	AML	00 20 31.9	
	comp=N,2254µm,0.7s						
SIVA				AML	AML	00 20 33.7	
	comp=E,3002µm,0.5s						
IDI	**Anoyia**	1.62	305	Pn	Pb	00 19 56.9	+0.3
	comp=E,7.3nm,0.3s,baz=138,slow=10,SNR=53						
IDI				LR	LR	00 20 50.6	
	comp=E,178nm,19.1s,baz=100,slow=54						
IDI	**Anoyia**	1.62	305	P	Pb	00 19 56.9	+0.3
IDI				S	Sg	00 20 18.9	-0.5
IDI				AML	AML	00 20 30.9	
	comp=E,530µm,0.8s						
IDI				AML	AML	00 20 31.9	
	comp=N,651µm,0.8s						
IDI	**Anoyia**	1.62	305	PN	Pn	00 19 55.9	+0.9
GVDS	**Gavdos**	2.05	284	PN	Pn	00 20 02.6	+1.7
GVD	**Gavdhos**	2.06	284	PN	Pn	00 20 02.2	+1.3
VAM	**Vamos**	2.17	300	P	Pn	00 20 04.4	+1.9
VAM	**Vamos**	2.17	300	P	Pn	00 20 04.1	+1.6
SANT	**Santorini**	2.19	337	PN	Pn	00 20 03.4	+0.6
THR6	**Thira Island,**	2.19	336	P	Pb	00 20 04.4	-1.9
SAP1	**Santorini-Akro**	2.20	336	P	Pb	00 20 04.3	-2.0
THR8	**Santorini-Mono**	2.21	338	P	Pn	00 20 03.6	+0.5
SAP2K	**Karterados**	2.23	337	P	Pn	00 20 04.1	+0.8
THR3	**Thira Island,**	2.24	337	P	Pn	00 20 04.2	+0.8
THT2	**Imerovigli**	2.26	337	P	Pn	00 20 04.5	+0.8
THT2	**Imerovigli**	2.26	337	PN	Pn	00 20 04.8	+1.1
ARG	**Arkhangelos**	2.28	35	P	Pb	00 20 06.7	-1.1
ARG	**Arkhangelos**	2.28	35	P	Pb	00 20 06.5	-1.3
ARG				S	Sg	00 20 39.0	-1.3
IMMV	**Iera Moni Meta**	2.35	299	P	Pn	00 20 07.1	+2.1
IMMV	**Iera Moni Meta**	2.35	299	P	Pn	00 20 07.0	+2.1
IMMV	**Iera Moni Meta**	2.35	299	PN	Pn	00 20 06.9	+1.9
AMGA	**Amorgos Island**	2.52	349	P	Pn	00 20 07.6	+0.3
DAT	**Datca**	2.52	20	PN	Pn	00 20 08.7	+1.2
IOSP	**Ios island**	2.56	338	P	Pn	00 20 08.5	+0.6
BODT	**Bodrum**	2.78	13	PN	Pn	00 20 12.2	+1.3
APE	**Apeiranthos**	2.82	344	P	Pn	00 20 12.2	+0.7
APE	**Apeiranthos**	2.82	344	PN	Pn	00 20 12.3	+0.7
APE	**Apeiranthos**	2.82	344	P	Pn	00 20 12.1	+0.7
DALY	**Dalyan (Mula)**	3.02	35	PN	Pn	00 20 15.5	+1.4
TURN	**Turunc**	3.04	34	PN	Pn	00 20 12.5	-1.9
FETY	**Fethiye**	3.10	42	PN	Pn	00 20 16.6	+1.3
YER	**Yerkesik**	3.13	27	PN	Pn	00 20 17.1	+1.4
AKAS	**Kas**	3.15	53	PN	Pn	00 20 17.5	+1.4
ELL	**Elmali**	3.66	48	PN	Pn	00 20 24.7	+1.6
ELL	**Elmali**	3.66	48	P	Pn	00 20 25.5	+2.4
AYDB	**Zeytinkoy-Aydi**	3.75	17	PN	Pn	00 20 25.8	+1.4
KORT	**Korkueli**	4.09	49	PN	Pn	00 20 31.5	+2.4
DID	**Didima**	4.12	321	P	Pn	00 20 29.4	+0.1
BCK	**Bucak**	4.54	46	PN	Pn	00 20 38.0	+2.9
BASM	**Basmaki-Afyon**	4.57	38	PN	Pn	00 20 37.9	+2.4
AKMS	**Akamas**	4.85	81	P	Pn	00 20 39.2	-0.1
ALFC	**Alefka**	5.08	79	P	Pn	00 20 42.6	+0.1
SWA2		5.17	190	AMP		00 21 00.0	
	baz=192						
SZAC	**Souni**	5.28	84	P	Pn	00 20 44.7	-0.5
SHUT	**Suhut-Afyon**	5.31	37	PN	Pn	00 20 48.3	+2.6
ASGA	**Asgata**	5.58	84	P	Pn	00 20 49.5	+0.2
CSS	**Mathiatis**	5.66	82	P	Pn	00 20 50.2	-0.2
HNAT	**Natroun**	5.86	142	AMP		00 22 00.0	
	baz=142						
MVOU	**Mavrovouni**	5.91	82	P	Pn	00 20 53.7	-0.1
KOT	**Kottamia**	6.31	133	AMP		00 22 00.0	
	baz=133						
HHAG	**Hagoal**	6.46	131	AMP		00 22 00.0	
	baz=131						
NBNS	**Bani Suef**	7.02	143	AMP		00 22 00.0	
	baz=143						
MMAI	**Mount Meron Ar**	7.53	98	Pn	Pn	00 21 15.6	-0.7
	comp=N,3.4nm,0.3s,baz=299,slow=11,SNR=15						
MMAI				Sn	Sn	00 22 38.2	-3.2
	comp=N,8.8nm,0.3s,baz=304,slow=24,SNR=10						
BRTR	**Keskin Array B**	7.82	45	Pn	Pn	00 21 22.0	+1.7
	comp=N,0.2nm,0.3s,baz=220,slow=15,SNR=8.1						
EIL	**Elat**	8.55	121	Pn	Pn	00 21 30.6	+0.4
	comp=N,0.5nm,0.3s,baz=297,slow=2.4,SNR=24						
EIL				Sn	Sn	00 23 00.5	-5.9
	comp=N,2.2nm,0.3s,baz=194,slow=15,SNR=7.1						
MLR	**Muntele Rosu**	11.13	358	LR	LR	00 26 44.2	
	comp=N,46nm,21.4s,baz=118,slow=40						
AKASG	**Malin Array Be**	16.46	6	Pn	Pn	00 23 17.5	+0.4
	comp=N,1.1nm,0.3s,baz=194,slow=11,SNR=12						
GERES	**GERESS Array B**	17.32	331	P	Pn	00 23 28.2	0.0
	comp=N,0.2nm,0.3s,baz=133,slow=12,SNR=7.0						
ESDC	**Sonseca Array**	24.84	291	P	P	00 24 50.4	+1.7
	comp=N,0.2nm,0.4s,baz=86,slow=9.2,SNR=3.4						
GEYT	**Alibeck**	25.71	73	P	P	00 24 57.3	+0.7
	comp=N,1.4nm,0.3s,baz=272,slow=11,SNR=12						
FINES	**FINESS Array B**	27.11	360	P	P	00 25 06.7	-2.2
	comp=N,3.2nm,0.9s,baz=158,slow=12,SNR=5.7						
TORD	**Torodi Ar. Bea**	30.86	233	P	P	00 25 43.8	+1.2
	comp=N,0.4nm,0.5s,baz=37,slow=8.3,SNR=10.0						
ARCES	**ARCESS Array B**	35.24	359	P	P	00 26 19.2	-1.2
	comp=N,1.3nm,0.7s,baz=162,slow=9.1,SNR=6.6						
MKAR	**Makanchi Array**	43.30	56	P	P	00 27 28.6	+0.6
	comp=N,0.9nm,0.6s,baz=266,slow=7.4,SNR=17						
ZALV	**Zalesovo Beam**	44.77	46	P	P	00 27 39.7	+0.1
	comp=N,2.4nm,0.5s,baz=267,slow=8.3,SNR=14						
SONM	**Songino Array**	59.14	51	P	P	00 29 27.8	+0.8
	comp=N,0.8nm,0.6s,baz=284,slow=8.5,SNR=10.0						
SCHQ	**Schefferville**	64.52	320	P	P	00 30 01.9	-1.0
	comp=N,0.8nm,0.4s,baz=52,slow=9.5,SNR=5.1						
CMAR	**Chiang Mai Arr**	65.56	84	LR	LR	01 06 12.4	
	comp=N,21nm,18.0s,baz=40,slow=43						

UPP 30 00:26:14.4±0.0, 67.83N×20.20E, h0km, ML2.0, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.13	23	P	Pg	00 26 17.1	+0.2
KUA				S	Sg	00 26 18.9	+0.3
RATU	**Laukkuluspa**	0.23	268	P	Pg	00 26 19.0	+0.2
RATU				S	Sg	00 26 22.2	+0.4
LANU	**Lannavaara**	0.71	71	P	Pg	00 26 27.7	-0.3
LANU				S	Sg	00 26 37.2	0.0
DUNU	**Dundret**	0.73	169	P	Pg	00 26 28.0	-0.4
DUNU				S	Sg	00 26 37.6	-0.1
MASU	**Masugnsbyn**	0.79	118	P	Pg	00 26 29.3	-0.1
MASU				S	Sg	00 26 39.7	+0.1
KIF	**Kilpisjarvi**	1.20	10	*e*P	Pg	00 26 37.1	-0.2
PAJU	**Pajala**	1.39	125	P	Pg	00 26 39.8	-1.1
HARU	**Harads**	1.71	169	P	Pn	00 26 45.5	+0.2

IDC 30 00:29:34.0±3.1, 19.13S×178.92E, h0km, mb3.7/3, mb1 4.1/3, mb1mx3.7/31, mbtmp3.7/3, Error ellipse: s-maj=363.5km s-min=34.0km az=161.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	41.93	261	P	P	00 37 25.8	-1.0
	0.8nm,0.4s,baz=96,slow=8.5,SNR=8.5						
ASAR	**Alice Springs**	42.03	256	P	P	00 37 28.4	+0.8
	0.6nm,0.6s,baz=96,slow=7.5,SNR=5.5						
TXAR	**Lajitas Array**	88.79	58	P	P	00 42 30.2	0.0
	0.3nm,0.7s,baz=214,slow=6.3,SNR=5.2						

IDC 30 00:32:02.6±8.1, 18.53S×174.73W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/36, mbtmp3.7/3, MS3.7/1, Ms1 3.7/1, ms1mx2.7/28, Error ellipse: s-maj=350.6km s-min=40.2km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	47.96	260	P	P	00 40 43.2	-0.3
	0.5nm,0.3s,baz=97,slow=7.6,SNR=6.1						
WRA				LR	LR	00 59 27.1	
	comp=Z,95nm,21.8s,baz=80,slow=34						
ASAR	**Alice Springs**	48.00	255	P	P	00 40 43.8	0.0
	0.5nm,0.5s,baz=95,slow=7.9,SNR=9.0						
ILAR	**Eielson Array**	85.75	12	P	P	00 44 43.1	-0.1
	0.2nm,0.6s,baz=223,slow=6.7,SNR=4.2						

IDC 30 00:40:21.4±2.1, 1.16N×126.25E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.3/37, mbtmp3.5/3, Error ellipse: s-maj=200.6km s-min=24.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.42	160	P	P	00 45 21.1	-0.8
	1.0nm,0.6s,baz=338,slow=11,SNR=6.0						
ASAR	**Alice Springs**	25.77	164	P	P	00 45 54.7	+0.5
	0.3nm,0.3s,baz=347,slow=13,SNR=4.5						
MKAR	**Makanchi Array**	59.40	326	P	P	00 50 25.7	-0.1
	0.2nm,0.3s,baz=119,slow=7.7,SNR=15						

*IDC **30** 01:00:25.5±1.4, 38.43N×20.26E, h0km, mb3.7/4, mb1 3.6/5, mb1mx3.4/34, mbtmp3.6/5, ML2.6/1, Error ellipse: s-maj=48.2km s-min=23.8km az=134.0*
*THE **30** 01:00:27.6, 38.30N×20.39E, h12km, ML3.5/9, Error ellipse: s-maj=0.7km s-min=0.2km az=265.0*
*ATH **30** 01:00:27.2, 38.28N×20.41E, h16km±1km, ML3.3/14, Error ellipse: s-maj=1.8km s-min=0.7km az=265.0*

ISC 30 01:00:27.1±0.7, 38.30N±0.02×20.41E±0.03, h15km±4km, n67, σ1s01/103, mb3.7/4, 2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	0.04	167	P	Pg	01 00 29.6	-0.1
KEF4				S	Sg	01 00 31.3	-0.2
KEF1	**Kardakata, Kep**	0.05	114	P	Pg	01 00 29.6	-0.2
KEF1				S	Sg	01 00 31.1	-0.5
KEF3	**Kipouria, Keph**	0.11	208	P	Pg	01 00 30.4	0.0
KEF3				S	Sg	01 00 32.6	+0.1
CHV1	**Chavriata, Kef**	0.12	192	P	Pg	01 00 30.6	+0.1
CHV1				S	Sb	01 00 33.2	-0.4
ARG2	**Argostoli**	0.13	154	P	Pb	01 00 31.0	-0.3
ARG2				S	Sb	01 00 33.6	-0.5
KEF2	**Argostoli. Kep**	0.14	156	P	Pb	01 00 31.0	-0.5
KEF2				S	Sg	01 00 33.5	+0.2
VSK1	**VASILIKIADES**	0.16	47	P	Pb	01 00 31.4	-0.4
VSK1				S	Sb	01 00 34.4	-0.6
VLS	**Valsamata**	0.18	131	P	Pb	01 00 31.5	-0.7
VLS				S	Sb	01 00 34.6	-1.0
	33µm,0.1s						
VLS	**Valsamata**	0.18	131	P	Pb	01 00 31.5	-0.7
FSK	**Fiskardo**	0.20	36	P	Pb	01 00 32.1	-0.3
FSK				S	Sb	01 00 35.6	-0.4
	17µm,0.5s						
FSK	**Fiskardo**	0.20	36	P	Pb	01 00 32.0	-0.5
FSK				S	Sb	01 00 35.4	-0.7
KFL	**Anninata**	0.35	122	P	Pb	01 00 34.6	-0.4
KFL				S	Sb	01 00 40.3	-0.1
	23µm,0.4s						
KFL	**Anninata**	0.35	122	P	Pb	01 00 34.5	-0.5
KFL				S	Sb	01 00 40.0	-0.4
KFL				AML	AML	01 00 40.8	
	comp=N,43570µm,0.4s						
KFL				AML	AML	01 00 41.0	
	comp=E,48344µm,0.4s						
EVGI	**Lefkada island**	0.37	31	P	Pb	01 00 35.1	-0.3
EVGI				S	Sb	01 00 41.1	0.0
EVGI	**Lefkada island**	0.37	31	P	Pb	01 00 35.1	-0.3
EVGI				S	Sb	01 00 41.1	0.0
VLMS	**Volimes, Zakyn**	0.47	155	P	Pb	01 00 36.5	-0.5
VLMS				S	Sb	01 00 43.1	-0.6
VLMS				AML	AML	01 00 45.1	
	comp=N,52386µm,0.5s						
VLMS				AML	AML	01 00 45.9	
	comp=E,19410µm,0.2s						
LKD2	**Lefkada island**	0.53	21	P	Pb	01 00 37.6	-0.5
LKD2				S	Sb	01 00 45.8	+0.3
LKD2	**Lefkada island**	0.53	21	P	Pb	01 00 37.6	-0.5
LKD2				S	Sb	01 00 45.8	+0.3
LKD2				AML	AML	01 00 51.2	
	comp=N,2638µm,0.7s						
LKD2				AML	AML	01 00 58.5	
	comp=E,3084µm,0.3s						
TSLK	**Tsoukalades, L**	0.56	20	P	Pb	01 00 38.2	-0.4
TSLK				S	Sb	01 00 46.9	+0.5
	comp=E,2µm,0.6s						
TSLK	**Tsoukalades, L**	0.56	20	P	Pb	01 00 38.4	-0.2
TSLK				S	Sb	01 00 46.4	0.0
TSLK				AML	AML	01 00 55.7	
	comp=N,3575µm,0.4s						
TSLK				AML	AML	01 00 56.1	
	comp=E,4088µm,0.6s						
AST1	**Astakos**	0.58	65	P	Pb	01 00 38.9	-0.1
AST1				S	Sb	01 00 47.8	+0.7
ZAK2	**Zakynthos**	0.64	143	P	Pb	01 00 39.9	0.0
ZAK2				S	Sn	01 00 50.2	-1.3
PDO	**Prodromos**	0.68	63	P	Pb	01 00 40.6	0.0
PDO				S	Sn	01 00 51.5	-0.9
PDO	**Prodromos**	0.68	63	P	Pb	01 00 40.3	-0.2
PDO				S	Sb	01 00 50.5	+0.8
PDO				AML	AML	01 00 54.8	
	comp=E,12046µm,0.5s						
PDO				AML	AML	01 00 55.5	
	comp=N,9061µm,0.6s						
KRI1	**kERI**	0.71	153	P	Pb	01 00 41.0	-0.2
KRI1				S	Sn	01 00 52.4	-0.9
RLS	**Riolos of Patr**	0.86	106	P	Pg	01 00 43.7	-0.1
RLS				S	Sn	01 00 56.8	-0.3
	comp=N,1µm,0.6s						
RLS	**Riolos of Patr**	0.86	106	P	Pg	01 00 43.6	-0.3
RLS				S	Sb	01 00 55.3	+0.2
RLS				AML	AML	01 01 03.6	
	comp=E,2554µm,0.6s						
RLS				AML	AML	01 01 03.7	
	comp=N,2121µm,0.6s						
PVO	**Paravola**	0.93	70	P	Pn	01 00 45.6	-0.1
PVO				S	Sn	01 00 59.4	+0.7
	comp=N,3µm,0.4s						
PVO	**Paravola**	0.93	70	P	Pn	01 00 45.5	-0.1
PVO				S	Sn	01 00 57.9	-0.8
PVO				AML	AML	01 01 02.2	
	comp=E,5981µm,0.3s						
PVO				AML	AML	01 01 07.0	
	comp=N,4668µm,0.6s						
DRO	**Drossia**	1.08	108	P	Pg	01 00 47.7	-0.2
DRO				S	Sn	01 01 03.8	+1.3
	comp=N,3µm,0.5s						
DRO

	comp=E,2524μm,0.6s							
SERG	**Sergoula**	**1.30**	**84**	P	**Pb**	**01 00 51.1**	**-0.1**
SERG	**Sergoula**	**1.30**	**84**	P	**Pb**	**01 00 51.1**	**-0.1**
TRIZ	**Trizonia**	**1.31**	**87**	P	**Pb**	**01 00 51.1**	**-0.2**
KALE	**Kalithea**	**1.36**	**86**	P	**Pb**	**01 00 51.9**	**-0.4**
KALE	**Kalithea**	**1.36**	**86**	P	**Pb**	**01 00 52.2**	**-0.1**
KLV	**Kalavryta, Ach**	**1.39**	**100**	P	**Pb**	**01 00 52.8**	**0.0**
KLV				S	**Sg**	**01 01 11.7**	**-0.3**
KLV	**Kalavryta, Ach**	**1.39**	**100**	P	**Pb**	**01 00 52.9**	**0.0**
JAN	**Janina**	**1.40**	**14**	P	**Pg**	**01 00 54.4**	**+0.4**
JAN				S	**Sg**	**01 01 13.6**	**+1.4**
JAN				AML	AML	01 01 21.1	
	comp=E,939μm,0.7s						
JAN				AML	AML	01 01 24.2	
	comp=N,998μm,0.5s						
ITM	**Ithomi**	**1.64**	**132**	P	**Pb**	**01 00 57.0**	**-0.1**
AGG	**Agios Georgios**	**1.67**	**64**	P	**Pb**	**01 00 57.4**	**-0.1**
AGG	**Agios Georgios**	**1.67**	**64**	P	**Pg**	**01 00 58.3**	**-0.8**
AGG				AML	AML	01 01 31.6	
	comp=E,999μm,0.9s						
AGG				AML	AML	01 01 33.5	
	comp=N,719μm,0.9s						
CGL1	**Ceglie Messapi**	**3.27**	**317**	*e*Pn	**Pn**	**01 01 19.0**	**+1.2**
MASS	**Massafra**	**3.44**	**314**	*e*Pn	**Pn**	**01 01 21.4**	**+1.3**
VAY	**Valandovo**	**3.45**	**28**	*i* Pn	**Pn**	**01 01 23.1**	**+2.9**
STIP	**Stip**	**3.66**	**21**	*e*Pn	**Pb**	**01 01 27.2**	**-4.2**
SG1	**Sgolgore (BA)**	**3.84**	**313**	⇓*i* Pn	**Pn**	**01 01 27.2**	**+1.5**
SG1					Sn	**Sn**	**01 02 10.4**	**-0.2**
BAI	**Bari**	**3.91**	**317**	⇓*i* Pn	**Pn**	**01 01 28.3**	**+1.7**
VAE	**Valguarnera**	**4.82**	**262**	Sn	**Sn**	**01 02 35.7**	**+1.0**
	comp=N,1.1nm,0.3s,baz=329,slow=8.5,SNR=3.6						
SOKA	**Soboth**	**9.27**	**336**	*i* Pn	**Pn**	**01 02 40.7**	**+0.5**
	comp=N,1.1nm,0.4s						
SOKA				*i* Sn	**Sn**	**01 04 18.9**	**-5.2**
	comp=N,0.9nm,0.4s						
OBKA	**Obir**	**9.28**	**334**	*i* Pn	**Pn**	**01 02 42.6**	**+2.3**
	comp=N,1.4nm,0.4s						
BRTR	**Keskin Array B**	**10.39**	**78**	Pn	Pn	01 03 02.8	+7.1
	comp=N,0.1nm,0.3s,baz=258,slow=12,SNR=3.0						
MOA	**Molln**	**10.55**	**337**	*e*Pn	**Pn**	**01 03 00.0**	**+2.3**
	comp=N,0.6nm,0.2s						
FINES	**FINESS Array B**	**23.44**	**7**	P	**P**	**01 05 35.5**	**0.0**
	comp=N,3.0nm,0.9s,baz=177,slow=11,SNR=3.2						
TORD	**Torodi Ar. Bea**	**30.07**	**219**	P	**P**	**01 06 36.9**	**+1.0**
	comp=N,0.3nm,0.6s,baz=276,slow=7.2,SNR=12						
MKAR	**Makanchi Array**	**45.31**	**58**	P	**P**	**01 08 44.4**	**+0.1**
	comp=N,0.3nm,0.4s,baz=276,slow=7.2,SNR=12						
ZALV	**Zalesovo Beam**	**45.67**	**48**	P	**P**	**01 08 47.3**	**+0.3**
	comp=N,1.1nm,0.4s,baz=277,slow=8.7,SNR=5.3						

*IDC **30** 01:25:26.8±4.9, 38°.28N×20°.27E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.2/45, mbtmp3.4/4, ML3.3/2, Error ellipse: s-maj=110.9km s-min=22.9km az=50.0*
*ATH **30** 01:25:27.9, 38°.24N×20°.38E, h16km±1km, ML3.1/17, Error ellipse: s-maj=2.1km s-min=0.8km az=252.0*
*THE **30** 01:25:28.2, 38°.25N×20°.36E, h14km, ML3.2/10, Error ellipse: s-maj=0.7km s-min=0.3km az=262.0*

ISC 30 01:25:28.0±0.8, 38°.26N±0°.02×20°.34E±0°.03, h16km±4km, n65, σ1ˢ18/104, 2D, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF3	**Kipouria, Keph**	**0.06**	**175**	P	**Pg**	**01 25 30.9**	**-0.2**
KEF3				S	**Sg**	**01 25 32.8**	**-0.4**
KEF4	**Livadi, Kephal**	**0.07**	**91**	P	**Pg**	**01 25 30.9**	**-0.3**
KEF4				S	**Sg**	**01 25 32.9**	**-0.4**
CHV1	**Chavriata, Kef**	**0.08**	**157**	P	**Pg**	**01 25 31.0**	**-0.3**
CHV1				S	**Sg**	**01 25 33.1**	**-0.3**
ARG2	**Argostoli**	**0.14**	**125**	P	**Pg**	**01 25 31.6**	**-0.4**
ARG2				S	**Sg**	**01 25 34.0**	**-0.6**
KEF2	**Argostoli. Kep**	**0.15**	**129**	P	**Pg**	**01 25 31.7**	**-0.4**
KEF2				S	**Sg**	**01 25 33.9**	**-0.8**
VLS	**Valsamata**	**0.21**	**113**	P	**Pg**	**01 25 32.4**	**-0.6**
VLS				S	**Sg**	**01 25 35.5**	**-0.9**
	20μm,0.1s						
VLS	**Valsamata**	**0.21**	**113**	P	**Pg**	**01 25 32.4**	**-0.6**
VSK1	**VASILIKIADES**	**0.23**	**49**	P	**Pg**	**01 25 33.1**	**-0.2**
VSK1				S	**Sg**	**01 25 36.5**	**-0.4**
FSK	**Fiskardo**	**0.27**	**41**	P	**Pg**	**01 25 33.8**	**-0.1**
FSK				S	**Sg**	**01 25 37.7**	**-0.1**
	14μm,0.3s						
FSK	**Fiskardo**	**0.27**	**41**	P	**Pg**	**01 25 33.8**	**-0.1**
FSK				S	**Sg**	**01 25 37.7**	**-0.1**
KFL	**Anninata**	**0.38**	**113**	P	**Pg**	**01 25 35.2**	**-0.7**
KFL				S	**Sg**	**01 25 40.9**	**-0.4**
	15μm,0.3s						
KFL	**Anninata**	**0.38**	**113**	P	**Pg**	**01 25 35.2**	**-0.7**
KFL				S	**Sg**	**01 25 40.8**	**-0.4**
KFL				AML	AML	01 25 41.4	
	comp=E,42446μm,0.4s						
KFL				AML	AML	01 25 43.3	
	comp=N,16650μm,0.3s						
EVGI	**Lefkada island**	**0.44**	**34**	P	**Pg**	**01 25 36.6**	**-0.3**
EVGI				S	**Sb**	**01 25 43.4**	**-0.3**
EVGI	**Lefkada island**	**0.44**	**34**	P	**Pg**	**01 25 36.7**	**-0.3**
EVGI				S	**Sb**	**01 25 43.6**	**-0.1**
VLMS	**Volimes, Zakyn**	**0.46**	**146**	P	**Pg**	**01 25 36.5**	**-0.8**
VLMS				S	**Sg**	**01 25 42.9**	**-0.6**
VLMS				AML	AML	01 25 44.3	
	comp=N,39318μm,0.4s						
VLMS				AML	AML	01 25 48.4	
	comp=E,14313μm,0.4s						
LKD2	**Lefkada island**	**0.58**	**25**	P	**Pg**	**01 25 39.0**	**-0.6**
LKD2				S	**Sb**	**01 25 48.9**	**+1.0**
	comp=E,2μm,0.5s						
LKD2	**Lefkada island**	**0.58**	**25**	P	**Pg**	**01 25 39.2**	**-0.5**
LKD2				S	**Sb**	**01 25 48.5**	**+0.5**
LKD2				AML	AML	01 25 55.0	
	comp=E,2741μm,0.3s						
LKD2				AML	AML	01 25 55.5	
	comp=N,2638μm,0.3s						
TSLK	**Tsoukalades, L**	**0.62**	**23**	P	**Pg**	**01 25 39.8**	**-0.4**
TSLK				S	**Sb**	**01 25 49.5**	**+0.7**
	comp=N,2μm,0.3s						
TSLK	**Tsoukalades, L**	**0.62**	**23**	P	**Pg**	**01 25 39.8**	**-0.4**
TSLK				S	**Sb**	**01 25 49.1**	**+0.3**
TSLK				AML	AML	01 25 57.5	
	comp=N,3122μm,0.3s						
TSLK				AML	AML	01 25 58.5	
	comp=E,3881μm,0.3s						
ZAK2	**Zakynthos**	**0.65**	**137**	P	**Pg**	**01 25 40.2**	**-0.5**
ZAK2				S	**Sb**	**01 25 50.1**	**+0.5**
AST1	**Astakos**	**0.65**	**64**	P	**Pg**	**01 25 40.3**	**-0.6**
AST1				S	**Sb**	**01 25 50.0**	**+0.2**
KRI1	**kERI**	**0.70**	**148**	P	**Pg**	**01 25 40.8**	**-1.0**
KRI1				S	**Sb**	**01 25 51.9**	**+0.6**
PDO	**Prodromos**	**0.74**	**63**	P	**Pg**	**01 25 41.9**	**-0.7**
PDO				S	**Sb**	**01 25 53.0**	**+0.5**
	comp=E,4μm,0.7s						
PDO	**Prodromos**	**0.74**	**63**	P	**Pg**	**01 25 41.9**	**-0.7**
PDO				S	**Sg**	**01 25 52.1**	**-0.3**
PDO				AML	AML	01 25 54.4	
	comp=E,4738μm,0.4s						
PDO				AML	AML	01 25 56.7	
	comp=N,5686μm,0.8s						
RLS	**Riolos of Patr**	**0.91**	**102**	P	**Pg**	**01 25 44.3**	**-1.4**
RLS				S	**Sn**	**01 25 58.9**	**+0.1**
	comp=N,738nm,0.7s						
RLS	**Riolos of Patr**	**0.91**	**102**	P	**Pg**	**01 25 44.4**	**-1.4**
RLS				S	**Sg**	**01 25 56.6**	**-1.0**
RLS				AML	AML	01 26 03.3	
	comp=N,1695μm,0.7s						
RLS				AML	AML	01 26 06.7	
	comp=E,1143μm,0.5s						
PVO	**Paravola**	**1.00**	**69**	P	**Pb**	**01 25 46.8**	**-0.1**
PVO				S	**Sn**	**01 26 01.0**	**0.0**
	comp=E,2μm,0.4s						
PVO	**Paravola**	**1.00**	**69**	P	**Pb**	**01 25 46.9**	**-0.1**
PVO				S	**Sb**	**01 25 59.5**	**-0.2**
PVO				AML	AML	01 26 03.3	
	comp=E,4458μm,0.3s						
PVO				AML	AML	01 26 08.1	
	comp=N,3826μm,0.6s						
DRO	**Drossia**	**1.12**	**105**	P	**Pb**	**01 25 48.2**	**-0.8**
DRO				S	**Sn**	**01 26 04.6**	**+0.5**
	comp=N,2μm,0.4s						
DRO	**Drossia**	**1.12**	**105**	P	**Pb**	**01 25 48.4**	**-0.7**
DRO				S	**Sb**	**01 26 03.4**	**0.0**
DRO				AML	AML	01 26 12.0	
	comp=N,3148μm,0.4s						
DRO				AML	AML	01 26 12.1	
	comp=E,3150μm,0.5s						
EFP	**Efpalio**	**1.24**	**82**	P	**Pn**	**01 25 50.0**	**-0.7**
EFP	**Efpalio**	**1.24**	**82**	P	**Pn**	**01 25 50.6**	**-0.1**
EFP				AML	AML	01 26 14.1	
	comp=N,1387μm,0.5s						
EFP				AML	AML	01 26 20.4	
	comp=E,1478μm,0.4s						
ANX	**Ano Chora**	**1.28**	**74**	P	**Pn**	**01 25 51.3**	**-0.1**
ANX	**Ano Chora**	**1.28**	**74**	P	**Pn**	**01 25 51.6**	**+0.2**
ANX				AML	AML	01 26 15.8	
	comp=E,4347μm,0.6s						
ANX				AML	AML	01 26 16.1	
	comp=N,5296μm,0.5s						
LAKA	**Lakka**	**1.29**	**90**	P	**Pn**	**01 25 50.9**	**-0.5**
LAKA				S	**Sn**	**01 26 08.4**	**+0.1**
LAKA	**Lakka**	**1.29**	**90**	P	**Pn**	**01 25 51.2**	**-0.1**
LAKA				AML	AML	01 26 14.2	
	comp=N,980μm,0.5s						
LAKA				AML	AML	01 26 15.4	
	comp=E,806μm,0.6s						
AMT	**Artemida-Makis**	**1.30**	**123**	P	**Pg**	**01 25 52.6**	**-0.6**
AMT				AML	AML	01 26 18.8	
	comp=N,1789μm,0.7s						
AMT				AML	AML	01 26 24.4	
	comp=E,1372μm,0.8s						
EVR	**Evrytania**	**1.32**	**60**	P	**Pn**	**01 25 52.1**	**+0.2**
EVR				S	**Sg**	**01 26 10.0**	**-0.9**
	comp=E,460nm,0.5s						
EVR	**Evrytania**	**1.32**	**60**	P	**Pg**	**01 25 52.9**	**-0.7**
EVR				AML	AML	01 26 18.8	
	comp=N,1072μm,0.4s						
EVR				AML	AML	01 26 26.3	
	comp=E,777μm,0.6s						
SERG	**Sergoula**	**1.36**	**83**	P	**Pn**	**01 25 52.0**	**-0.3**
SERG	**Sergoula**	**1.36**	**83**	P	**Pb**	**01 25 52.8**	**-0.2**
SERG				AML	AML	01 26 18.1	
	comp=E,1108μm,0.3s						
SERG				AML	AML	01 26 21.2	
	comp=N,1264μm,0.4s						
TRIZ	**Trizonia**	**1.37**	**85**	P	**Pn**	**01 25 51.9**	**-0.5**
KALE	**Kalithea**	**1.42**	**84**	P	**Pn**	**01 25 52.8**	**-0.4**
KALE	**Kalithea**	**1.42**	**84**	P	**Pb**	**01 25 54.2**	**0.0**
KALE				AML	AML	01 26 23.1	
	comp=E,833μm,0.4s						
KALE				AML	AML	01 26 24.2	
	comp=N,888μm,0.5s						
KLV	**Kalavryta, Ach**	**1.44**	**98**	P	**Pn**	**01 25 53.6**	**+0.1**
KLV	**Kalavryta, Ach**	**1.44**	**98**	P	**Pn**	**01 25 53.9**	**+0.4**
KLV				S	**Sg**	**01 26 13.7**	**-1.0**
KLV				AML	AML	01 26 29.6	
	comp=E,425μm,0.5s						
KLV				AML	AML	01 26 30.5	
	comp=N,516μm,0.6s						
JAN	**Janina**	**1.45**	**16**	P	**Pg**	**01 25 55.4**	**-0.6**
JAN				S	**Sg**	**01 26 15.7**	**+0.8**
JAN				AML	AML	01 26 21.3	
	comp=N,920μm,0.3s						
JAN				AML	AML	01 26 26.9	
	comp=E,1279μm,0.5s						
OHR	**Ohrid**	**2.87**	**7**	*i* Pn	**Pb**	**01 26 17.4**	**-1.4**
CGL1	**Ceglie Messapi**	**3.26**	**318**	⇓*i* Pn	**Pn**	**01 26 19.7**	**+1.2**
STIP	**Stip**	**3.71**	**22**	*i* Pn	**Pn**	**01 26 28.8**	**+4.2**
SG1	**Sgolgore (BA)**	**3.83**	**313**	*e*Pn	**Pn**	**01 26 27.6**	**+1.3**
SG1					Sn	**Sn**	**01 27 11.3**	**+0.4**
BAI	**Bari**	**3.90**	**318**	⇓*i* Pn	**Pn**	**01 26 28.3**	**+1.1**
IDI	**Anoyia**	**4.70**	**128**	Pn	**Pn**	**01 26 40.9**	**+2.6**
	comp=E,0.3nm,0.3s,baz=295,slow=14,SNR=3.2						
IDI				Sn	**Sn**	**01 27 35.2**	**+2.6**
	comp=E,1.4nm,0.3s,baz=156,slow=22,SNR=11						
DBRK	**Dubrovnik**	**4.71**	**340**	*e*Pn	**Pn**	**01 26 38.0**	**-0.4**
DBRK				Sn	**Sn**	**01 27 30.6**	**-2.1**
STON	**Ston**	**5.03**	**337**	*e*Pn	**Pn**	**01 26 42.4**	**-0.3**
STON				Sn	**Sn**	**01 27 37.9**	**-2.5**
MAKA	**Makarska**	**5.62**	**334**	*e*Pn	**Pn**	**01 26 51.8**	**+0.9**
MAKA				Sn	**Sn**	**01 27 53.3**	**-1.7**
ZIRJ	**Zirje**	**6.46**	**328**	*e*Pn	**Pn**	**01 27 02.5**	**+0.1**
KIJV	**Kijevo**	**6.46**	**334**	*e*Pn	**Pn**	**01 27 03.1**	**+0.7**
SOKA	**Soboth**	**9.28**	**337**	*i* Pn	**Pn**	**01 27 41.7**	**+0.6**
	comp=E,1.4nm,0.3s						
SOKA				*i* Sn	**Sn**	**01 29 19.9**	**-5.3**
	comp=E,0.9nm,0.4s						
OBKA	**Obir**	**9.29**	**334**	*i* Pn	**Pn**	**01 27 42.4**	**+1.1**
	comp=E,1.3nm,0.3s						
VYHS	**Vyhne**	**10.29**	**354**	*e*PN	Pn	01 27 49.8	-5.1
MOA	**Molln**	**10.56**	**337**	*i* Pn	**Pn**	**01 27 60.0**	**+1.3**
	comp=E,1.1nm,0.3s						
MOA				Sn	**Sn**	**01 29 51.9**	**-4.6**
GERES	**GERESS Array B**	**11.62**	**338**	Pn	**Pn**	**01 28 13.8**	**+0.6**
	comp=E,0.2nm,0.3s,baz=158,slow=14,SNR=4.5						
FINES	**FINESS Array B**	**23.48**	**7**	P	**P**	**01 30 39.6**	**+3.0**
	comp=E,1.9nm,0.9s,baz=192,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**45.38**	**58**	P	**P**	**01 33 46.1**	**+0.6**
	comp=E,0.2nm,0.5s,baz=280,slow=7.5,SNR=3.8						

*IDC **30** 01:40:41.6±1.7, 10°.21N×83°.75W, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.8/27, mbtmp3.8/8, ML4.3/1, MS3.4/17, Ms1 3.4/17, ms1mx3.3/32, Error ellipse: s-maj=47.1km s-min=12.3km az=178.0*
*UPA **30** 01:40:44.2±2.0, 9°.53N×84°.15W, h10km±7km, MW4.9*
*UCR **30** 01:40:45.8±1.7, 9°.50N×84°.12W, h36km±4km, MD3.9, mb4.6(NEIC), Fault plane solution: NP1:δs281.90000°, δ52.84000°, λ-64.59000°.*
*NEIC **30** 01:40:45.1±1.7, 9°.52N±0°.05×84°.21W±0°.04, h36km±5km, mb4.3/13, Mwr4.6(UCR), Error ellipse: s-maj=7.8km s-min=3.5km az=142.0*
*INET **30** 01:40:47.3, 9°.77N×84°.18W, h2km, ML4.6*

ISC 30 01:40:45.5±0.8, 9°.52N±0°.05×84°.17W±0°.04, h38km±1km, n105, σ1ˢ77/107, mb4.0/12, MS3.4/12, 13C-3D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCR2	**La Lucha 2**	**0.28**	**37**	*i* P	**Pn**	**01 40 53.2**	**-0.8**
LCR2				*e*S	**Sn**	**01 40 59.1**	**-2.0**
EDDO	**Dominical**	**0.40**	**131**	⇓*i* P	**Pn**	**01 40 54.3**	**-0.4**
EDDO				*e*S	**Sn**	**01 41 01.5**	**0.0**
SJS	**Escuela Geolog**	**0.43**	**16**	⇑*i* P	**Pn**	**01 40 55.3**	**0.0**
HDC	**Heredia**	**0.48**	**7**	P	**Pn**	**01 40 55.9**	**-0.2**
HDC					Sn	**Sn**	**01 41 03.2**	**-0.2**
EDLM	**Las Mercedes**	**0.62**	**113**	⇓*e*P	**Pn**	**01 40 57.6**	**-0.5**
SRA1	**San Ramn**	**0.64**	**332**	⇑*i* P	**Pn**	**01 40 58.3**	**0.0**
CVTR	**Volcan Turrial**	**0.64**	**39**	⇑*e*P	**Pn**	**01 40 58.2**	**-0.4**
EDPN	**Palmar Norte**	**0.90**	**128**	*e*P	**Pn**	**01 41 01.4**	**-0.3**
DRK0	**Durika**	**0.95**	**106**	⇑*i* P	**Pn**	**01 41 02.0**	**-0.5**
DRK0				*e*S	**Sn**	**01 41 14.7**	**-0.2**
DRK0	**Durika**	**0.95**	**106**	*e*P	**Pn**	**01 41 01.9**	**-0.6**
DRK0				*e*S	**Sn**	**01 41 14.8**	**-0.1**
EDBA	**Buenos Aires**	**0.95**	**112**	⇑*i* P	**Pn**	**01 41 01.6**	**-0.8**
FORC	**Fortuna**	**1.06**	**332**	*i* P	**Pn**	**01 41 04.6**	**+0.7**
FORC				*i* S	**Sn**	**01 41 19.9**	**+2.5**
CASO	**Castillo**	**1.06**	**329**	*i* P	**Pn**	**01 41 04.8**	**+0.8**
ARE1	**Arenal 1**	**1.08**	**330**	⇑*i* P	**Pn**	**01 41 05.2**	**+1.0**
JTS	**Las Juntas de**	**1.09**	**315**	Pg	**Pn**	**01 41 04.8**	**+0.6**
	603nm,0.3s,baz=172,slow=5.9,SNR=3632						
JTS				Lg	Lg	01 41 20.3	
	1μm,0.3s,baz=12,slow=23,SNR=30						
JTS				LR	LR	01 41 45.9	
	comp=Z,1μm,19.9s,baz=178,slow=54						
JTS	**Las Juntas de**	**1.09**	**315**	⇑*i* P	**Pn**	**01 41 04.9**	**+0.6**
JTS				*e*S	**Sn**	**01 41 19.8**	**+1.8**
JTS	**Las Juntas de**	**1.09**	**315**	⇑*i* P	**Pn**	**01 41 05.2**	**+0.9**
JTS				*e*S	**Sn**	**01 41 19.2**	**+1.1**
JTS	**Las Juntas de**	**1.09**	**315**		**Pn**	**01 41 03.5**	**-0.8**
JTS				Sn	**Sn**	**01 41 18.3**	**+0.2**
PTJ1	**Puerto Jimnez**	**1.30**	**139**	⇑*e*P	**Pn**	**01 41 07.2**	**0.0**
AMAS	**Alto Masis**	**1.35**	**323**	*i* P	**Pn**	**01 41 09.1**	**+1.1**
EDSV	**San Vito**	**1.37**	**120**	*e*P	**Pn**	**01 41 08.9**	**+0.7**
ACAL	**Aguas Claras**	**1.40**	**323**	*i* P	**Pn**	**01 41 10.0**	**+1.4**
ACAL				*i* S	**Sn**	**01 41 29.2**	**+3.4**
PLVR	**Palo Verde**	**1.42**	**305**	⇓*e*P	**Pn**	**01 41 09.5**	**+0.5**
PTEN	**Parque Tenorio**	**1.43**	**326**	*i* P	**Pn**	**01 41 10.5**	**+1.4**
CUI	**Cuipilapa**	**1.49**	**319**	⇑*e*P	**Pn**	**01 41 11.1**	**+1.2**
CUI				*i* S	**Sn**	**01 41 31.3**	**+3.1**
COLC	**Colonia**	**1.53**	**318**	*i* P	**Pn**	**01 41 11.0**	**+0.7**
HORNC	**Hornillas**	**1.54**	**320**	*i* P	**Pn**	**01 41 11.6**	**+1.0**
GUAB	**Guayabo de Bag**	**1.57**	**319**	*i* P	**Pn**	**01 41 12.0**	**+1.1**
MESS	**Mesas**	**1.58**	**320**	*i* P	**Pn**	**01 41 12.1**	**+1.0**
LIM1	**Limonal**	**1.58**	**318**	*i* P	**Pn**	**01 41 12.0**	**+0.9**
BRU2	**Volcan**	**1.63**	**116**	⇑*i* P	**Pn**	**01 41 11.6**	**-0.2**
BRU2	**Volcan**	**1.63**	**116**	⇑*i* P	**Pn**	**01 41 11.6**	**-0.2**
BRU2				*e*S	**Sn**	**01 41 32.3**	**+0.6**
CNI2	**El Empalme, Bo**	**1.68**	**93**	*e*P	**Pn**	**01 41 11.9**	**-0.5**
CNI2				*e*S	**Sn**	**01 41 33.1**	**+0.4**

GPS2	**Hotel Rincn d**	**1.69**	**317**	*i* P	**Pn**	**01 41 13.6**	**+1.0**
GPS3	**Bodega del ICE**	**1.70**	**316**	*i* P	**Pn**	**01 41 13.9**	**+1.2**
GPS1	**Guardaparques**	**1.70**	**317**	*i* P	**Pn**	**01 41 14.6**	**+1.8**
NY14	**Universidad de**	**1.75**	**310**	*i* P	**Pn**	**01 41 15.1**	**+1.8**
LAPC	**Finca la Perla**	**1.75**	**315**	*i* P	**Pn**	**01 41 14.5**	**+1.0**
GBS3	**Finca Las Img**	**1.78**	**315**	*i* P	**Pn**	**01 41 14.8**	**+1.0**
BCO2	**Palmira**	**1.81**	**116**	*e*P	**Pn**	**01 41 14.0**	**-0.3**
BCO2				*e*S	**Sn**	**01 41 39.4**	**+3.3**
DVD	**David**	**2.01**	**122**	*e*P	**Pn**	**01 41 18.1**	**+1.1**
DVD				*e*S	**Sn**	**01 41 45.4**	**+4.5**
CHGR2	**Aguacate**	**2.08**	**106**	*e*P	**Pn**	**01 41 18.4**	**+0.4**
CHGR2				*e*S	**Sn**	**01 41 43.8**	**+1.1**
ACON	**Acoyapa**	**2.62**	**338**	⇑*i* P	**Pn**	**01 41 26.4**	**+1.0**
ACON	**Acoyapa**	**2.62**	**338**		**Pn**	**01 41 25.4**	**0.0**
ACON				Sn	**Sn**	**01 41 55.2**	**-0.8**
GMAL	**Guarumal, Vera**	**3.39**	**121**	*e*P	**Pn**	**01 41 36.0**	**+0.1**
ESTN	**Estel**	**4.16**	**329**		**Pn**	**01 41 46.1**	**-0.5**
AZU	**Azuero**	**4.22**	**114**	*e*P	**Pn**	**01 41 49.3**	**+2.0**
BCIP	**Isla Barro Col**	**4.29**	**94**	*e*P	**Pn**	**01 41 50.2**	**+1.9**
BCIP	**Isla Barro Col**	**4.29**	**94**		**Pn**	**01 41 49.3**	**+1.0**
UPA	**Univ. de Panam**	**4.61**	**96**	*e*P	Pn	01 41 60.0	+7.3
TGUH	**Tegucigalpa,Un**	**5.44**	**326**	*e*P	Pn	01 42 11.5	+7.3
TGUH	**Tegucigalpa,Un**	**5.44**	**326**		**Pn**	**01 42 03.1**	**-1.0**
TGUH				Sn	**Sn**	**01 43 05.2**	**-0.4**
APG	**El Apazote**	**8.22**	**312**	Pn	**Pn**	**01 42 46.2**	**+3.8**
	1.1nm,0.3s,baz=124,slow=4.1,SNR=9.3						
DBBC	**Dabeiba**	**8.26**	**107**	*e*P	**Pn**	**01 42 45.9**	**+2.9**
UREC	**San Jos de Ur**	**8.72**	**101**	*e*P	**Pn**	**01 42 51.9**	**+2.7**
CBOC	**Ciudad Bolivar**	**8.86**	**114**	*e*P	**Pn**	**01 42 52.4**	**+1.1**
SJCC	**San Jacinto, C**	**8.87**	**87**	*e*P	**Pn**	**01 42 55.0**	**+3.7**
HELC	**Santa Helena**	**9.18**	**110**	*e*P	**Pn**	**01 42 58.8**	**+3.0**
ZARC	**Zaragoza, Cauc**	**9.43**	**102**	*e*P	**Pn**	**01 42 59.9**	**+1.0**
YOTC	**Yotoco, Valle**	**9.52**	**125**	*e*P	**Pn**	**01 43 01.3**	**+1.1**
GUY2C	**Guyana, Caldas**	**9.72**	**115**	*e*P	**Pn**	**01 43 06.6**	**+3.3**
RREF	**El Recreo**	**9.88**	**117**	*e*P	**Pn**	**01 43 09.7**	**+4.0**
ORTC	**Ortega, Tolima**	**10.47**	**122**	*e*P	**Pn**	**01 43 17.2**	**+4.0**
SPBC	**San Pablo de B**	**10.72**	**110**	*e*P	**Pn**	**01 43 19.0**	**+2.3**
ROSC	**El Rosal**	**10.82**	**115**	LR	LR	01 47 13.2	
	comp=Z,257nm,22.0s,baz=296,slow=36						
ROSC	**El Rosal**	**10.82**	**115**	Pn	**Pn**	**01 43 18.3**	**-0.1**
TEIG	**Tepich**	**11.36**	**340**	LR	LR	01 47 44.3	
	comp=Z,228nm,20.1s,baz=56,slow=39						
PAMC	**Pamplona, Colo**	**11.55**	**100**	*e*P	**Pn**	**01 43 28.8**	**+0.4**
RUSC	**La Rusia**	**11.56**	**107**		**Pn**	**01 43 28.8**	**+0.2**
CMIG	**Matias Romero**	**12.85**	**307**	Pn	**Pn**	**01 43 46.6**	**+0.9**
	1.8nm,0.3s,baz=132,slow=9.4,SNR=16						
SDV	**Santo Domingo**	**13.38**	**92**	LR	LR	01 50 39.6	
	comp=Z,43nm,18.2s,baz=248,slow=46						
TLIG	**Tlapa**	**16.11**	**301**	P	**Pn**	**01 44 30.6**	**+1.2**
TLIG				IAmb	IAmb	01 44 36.2	
	comp=Z,18nm,0.9s						
ATAH	**Atahualpa**	**17.52**	**161**	LR	LR	01 50 49.9	
	comp=Z,267nm,19.9s,baz=335,slow=34						
SJG	**San Juan**	**19.46**	**62**	LR	LR	01 50 47.0	
	comp=Z,50nm,21.7s,baz=262,slow=32						
344A	**Westbrook Farm**	**22.66**	**345**	P	**P**	**01 45 42.6**	**-0.9**
Z50A	**Ashland**	**23.68**	**356**	P	**P**	**01 45 52.6**	**-1.1**
Z50A				IAmb	IAmb	01 46 08.3	
	comp=Z,13nm,1.1s						
HODGE	**Hodges**	**24.66**	**4**	P	**P**	**01 46 01.8**	**-0.9**
HODGE				IAmb	IAmb	01 46 04.5	
	comp=Z,22nm,1.5s						
TKL	**Tuckaleechee C**	**26.02**	**1**	LR	LR	01 55 40.4	
	comp=Z,148nm,18.8s,baz=180,slow=36						
MIAR	**Mount Ida**	**26.36**	**342**	P	**P**	**01 46

NWLT					*e*S	Sb	01 52 34.2	-0.8
	baz=6.0							
WHP	**Taichung City**	**0.46**	**264**		P	Pb	01 52 28.9	+0.6
	baz=264							
WHP					S	Sb	01 52 34.9	-0.4
	baz=264							
LIOB	**Emei**	**0.51**	**309**		*e*S	Sg	01 52 34.7	+0.2
	baz=309							
EOS1	**EOS1**	**0.66**	**70**		*e*S	Sb	01 52 42.3	+1.3
	baz=70							

JMA 30 01:52:44.7±0.1, 24°01N×123°48E, h28km±1km, M1.7, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.30**	**81**	P	Pb	01 52 51.7	-0.3
HATJ				S	Sb	01 52 56.9	0.0
IRIF	**Iriomote-Funau**	**0.40**	**35**	P	Pb	01 52 53.2	-0.2
IRIF				S	Sb	01 52 59.2	-0.1
JKRS	**Kuro-shima**	**0.53**	**65**	P	Pb	01 52 55.5	-0.1
JKRS				S	Sb	01 53 03.2	+0.2
YOJ	**Yonaguni jima**	**0.62**	**316**	P	Pb	01 52 56.7	-0.4
YOJ				S	Sb	01 53 04.8	-0.7
JYNG	**Yonagunijimaku**	**0.66**	**312**	P	Pb	01 52 57.3	-0.3
JYNG				S	Sb	01 53 05.7	-0.8
JIJ	**Ishigaki jima**	**0.70**	**60**	P	Pb	01 52 57.9	-0.5
JIJ				S	Sb	01 53 07.4	-0.3
JISG	**Ishigakijimahi**	**0.95**	**53**	P	Pn	01 53 01.7	-0.5
JISG				*e*S	Sb	01 53 14.7	-0.1

*THE **30** 01:53:48.9, 38°21N×20°45E, h6km, ML3.1/2, Error ellipse: s-maj=0.9km s-min=0.3km az=208.0*
*ATH **30** 01:53:48.9, 38°22N×20°45E, h7km±1km, ML2.6/12, Error ellipse: s-maj=1.9km s-min=0.8km az=256.0*
ISC 30 01:53:48.8±0.9, 38°21N±0°02×20°46E±0°03, h7km±5km, n44, σ0°61/64, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.04**	**150**	P	**Pg**	**01 53 50.3**	**+0.1**
ARG2				S	**Sg**	**01 53 51.1**	**-0.1**
KEF2	**Argostoli. Kep**	**0.05**	**158**	P	**Pg**	**01 53 50.5**	**+0.1**
KEF2				S	**Sg**	**01 53 51.6**	**+0.1**
KEF4	**Livadi, Kephal**	**0.05**	**326**	P	**Pg**	**01 53 50.3**	**-0.1**
KEF4				S	**Sg**	**01 53 51.6**	**+0.1**
KEF1	**Kardakata, Kep**	**0.06**	**6**	P	**Pg**	**01 53 50.4**	**-0.1**
KEF1				S	**Sg**	**01 53 51.5**	**-0.2**
CHV1	**Chavriata, Kef**	**0.07**	**244**	P	**Pg**	**01 53 50.8**	**+0.2**
KEF3	**Kipouria, Keph**	**0.09**	**263**	P	**Pg**	**01 53 51.0**	**+0.1**
KEF3				S	**Sg**	**01 53 52.9**	**+0.5**
VLS	**Valsamata**	**0.11**	**110**	P	**Pg**	**01 53 51.3**	**+0.1**
VLS				S	**Sg**	**01 53 53.2**	**+0.4**
	20μm,0.2s						
VLS	**Valsamata**	**0.11**	**110**	P	**Pg**	**01 53 51.2**	**+0.1**
VLS				S	**Sg**	**01 53 53.2**	**+0.4**
VSK1	**VASILIKIADES**	**0.21**	**22**	P	**Pg**	**01 53 53.1**	**+0.1**
VSK1				S	**Sg**	**01 53 56.4**	**+0.5**
KFL	**Anninata**	**0.28**	**112**	P	**Pg**	**01 53 54.5**	**+0.3**
KFL				S	**Sg**	**01 53 58.5**	**+0.6**
	5μm,0.4s						
KFL	**Anninata**	**0.28**	**112**	P	**Pg**	**01 53 54.5**	**+0.3**
KFL				S	**Sg**	**01 53 59.4**	**+1.4**
KFL				AML	AML	01 53 59.9	
	comp=E,13734μm,0.4s						
KFL				AML	AML	01 54 01.7	
	comp=N,6389μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.37**	**155**	P	**Pg**	**01 53 56.3**	**+0.2**
VLMS				S	**Sb**	**01 54 02.6**	**-1.2**
VLMS				AML	AML	01 54 06.8	
	comp=E,2708μm,0.2s						
VLMS				AML	AML	01 54 09.2	
	comp=N,3983μm,0.5s						
EVGI	**Lefkada island**	**0.43**	**21**	P	**Pg**	**01 53 57.2**	**0.0**
EVGI				S	**Sg**	**01 54 04.0**	**+1.1**
EVGI	**Lefkada island**	**0.43**	**21**	P	**Pg**	**01 53 57.3**	**0.0**
EVGI				S	**Sg**	**01 54 04.3**	**+1.3**
MGNA	**Meganis**	**0.51**	**30**	P	**Pg**	**01 53 58.5**	**-0.1**
MGNA				S	**Sg**	**01 54 06.8**	**+1.4**
MGNA				AML	AML	01 54 07.7	
	comp=E,2011μm,0.2s						
MGNA				AML	AML	01 54 07.9	
	comp=N,1828μm,0.2s						
AST1	**Astakos**	**0.59**	**56**	P	**Pg**	**01 54 00.1**	**-0.1**
AST1				S	**Sb**	**01 54 09.6**	**-0.5**
LKD2	**Lefkada island**	**0.59**	**15**	P	**Pg**	**01 54 00.0**	**-0.3**
LKD2	**Lefkada island**	**0.59**	**15**	P	**Pg**	**01 54 00.0**	**-0.3**
LKD2				S	**Sg**	**01 54 08.7**	**+0.6**
LKD2				AML	AML	01 54 16.0	
	comp=E,929μm,0.4s						
LKD2				AML	AML	01 54 18.1	
	comp=N,630μm,0.2s						
KRI1	**kERI**	**0.62**	**153**	P	**Pg**	**01 54 00.6**	**-0.1**
TSLK	**Tsoukalades, L**	**0.63**	**14**	P	**Pg**	**01 54 00.6**	**-0.3**
TSLK	**Tsoukalades, L**	**0.63**	**14**	P	**Pg**	**01 54 00.6**	**-0.3**
PDO	**Prodromos**	**0.69**	**56**	P	**Pg**	**01 54 01.8**	**-0.2**
PDO	**Prodromos**	**0.69**	**56**	P	**Pg**	**01 54 01.9**	**-0.1**
PDO				S	**Sg**	**01 54 12.0**	**+1.1**
PDO				AML	AML	01 54 18.0	
	comp=N,1806μm,0.4s						
PDO				AML	AML	01 54 18.0	
	comp=E,1282μm,0.4s						
RLS	**Riolos of Patr**	**0.81**	**101**	P	**Pg**	**01 54 04.1**	**-0.2**
RLS	**Riolos of Patr**	**0.81**	**101**	P	**Pg**	**01 54 04.0**	**-0.2**
RLS				S	**Sb**	**01 54 16.2**	**-0.1**
RLS				AML	AML	01 54 19.6	
	comp=E,502μm,0.5s						
RLS				AML	AML	01 54 22.4	
	comp=N,378μm,0.3s						
PVO	**Paravola**	**0.93**	**64**	P	**Pg**	**01 54 06.6**	**0.0**
PVO	**Paravola**	**0.93**	**64**	P	**Pg**	**01 54 06.6**	**0.0**
PVO				S	**Sb**	**01 54 20.1**	**+0.4**
PVO				AML	AML	01 54 23.4	
	comp=N,848μm,0.3s						
PVO				AML	AML	01 54 23.6	
	comp=E,1515μm,0.3s						
DRO	**Drossia**	**1.02**	**104**	P	**Pg**	**01 54 08.6**	**+0.2**
DRO	**Drossia**	**1.02**	**104**	P	**Pg**	**01 54 08.0**	**-0.3**
DRO				S	**Sb**	**01 54 23.1**	**+0.7**
DRO				AML	AML	01 54 28.7	
	comp=E,811μm,0.3s						
DRO				AML	AML	01 54 30.3	
	comp=N,875μm,0.3s						
EFP	**Efpalio**	**1.16**	**79**	P	**Pg**	**01 54 09.9**	**-1.1**
EFP	**Efpalio**	**1.16**	**79**	P	**Pg**	**01 54 10.2**	**-0.7**
EFP				AML	AML	01 54 38.3	
	comp=N,361μm,0.4s						
EFP				AML	AML	01 54 39.7	
	comp=E,403μm,0.3s						
LAKA	**Lakka**	**1.20**	**88**	P	**Pg**	**01 54 10.8**	**-0.9**
LAKA	**Lakka**	**1.20**	**88**	P	**Pg**	**01 54 11.0**	**-0.8**
LAKA				AML	AML	01 54 31.2	
	comp=N,271μm,0.5s						
LAKA				AML	AML	01 54 34.9	
	comp=E,309μm,0.5s						
AMT	**Artemida-Makis**	**1.20**	**124**	P	**Pn**	**01 54 12.4**	**+0.4**
ANX	**Ano Chora**	**1.21**	**71**	P	**Pg**	**01 54 11.4**	**-0.5**
ANX	**Ano Chora**	**1.21**	**71**	P	**Pg**	**01 54 11.5**	**-0.5**
ANX				AML	AML	01 54 36.0	
	comp=E,411μm,0.4s						
ANX				AML	AML	01 54 41.9	
	comp=N,427μm,0.6s						
EVR	**Evrytania**	**1.27**	**56**	P	**Pn**	**01 54 12.6**	**-0.5**
SERG	**Sergoula**	**1.27**	**81**	P	**Pn**	**01 54 12.0**	**-1.0**
SERG	**Sergoula**	**1.27**	**81**	P	**Pn**	**01 54 12.3**	**-0.7**
TRIZ	**Trizonia**	**1.28**	**83**	P	**Pn**	**01 54 11.9**	**-1.1**
ALIK	**Aliki, Aigiali**	**1.30**	**87**	P	**Pn**	**01 54 12.7**	**-0.7**
KALE	**Kalithea**	**1.33**	**82**	P	**Pn**	**01 54 12.8**	**-1.1**
KLV	**Kalavryta, Ach**	**1.34**	**97**	P	**Pn**	**01 54 13.5**	**-0.5**
JAN	**Janina**	**1.47**	**12**	P	**Pb**	**01 54 16.9**	**+0.4**

IDC 30 01:53:48.1±3.5, 42°47N×126°36W, h0km, mb3.1/3, mb1 3.5/4, mb1mx3.3/42, mbtmp3.1/4, ML2.7/1, MS2.3/1, Ms1 2.3/1, ms1mx2.1/13, Error ellipse: s-maj=79.1km s-min=19.3km az=43.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YBH	**Yreka Blue Hor**	**2.81**	**104**	Pn	Pn	01 54 34.4	0.0
	1.1nm,0.3s,baz=284,slow=15,SNR=17						
YBH				LR	LR	01 55 43.3	
	comp=Z,53nm,19.9s,baz=289,slow=41						
YKA	**Yellowknife Ar**	**21.23**	**15**	P	P	01 58 36.9	+1.6
	1.0nm,0.8s,baz=206,slow=11,SNR=8.7						
TXAR	**Lajitas Array**	**22.49**	**118**	P	P	01 58 51.1	+1.9
	0.1nm,0.4s,baz=316,slow=11,SNR=4.2						
ILAR	**Eielson Array**	**25.21**	**339**	P	P	01 59 14.1	-1.1
	0.5nm,0.8s,baz=138,slow=9.0,SNR=5.3						
H11N3	**WAKE ISLAND Hy**	**59.94**	**270**	T	T	03 08 02.2	
	baz=52,slow=75,SNR=21						
H11N2	**WAKE ISLAND Hy**	**59.94**	**270**	T	T	03 08 03.4	
	baz=52,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	**59.95**	**270**	T	T	03 08 05.1	
	baz=52,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**60.84**	**269**	T	T	03 09 12.1	
	baz=51,slow=75,SNR=21						
H11S2	**WAKE ISLAND Hy**	**60.85**	**269**	T	T	03 09 17.6	
	baz=51,slow=75,SNR=12						
H11S3	**WAKE ISLAND Hy**	**60.86**	**269**	T	T	03 09 15.0	
	baz=51,slow=75,SNR=11						

*JMA **30** 01:56:32.4±0.2, 32°51N×137°98E, h389km, M3.4*
*IDC **30** 01:56:34.1±2.2, 32°38N×137°78E, h366km±25km, mb2.8/5, mb1 3.0/6, mb1mx2.8/43, mbtmp3.6/6, Error ellipse: s-maj=31.6km s-min=19.4km az=70.0*
ISC 30 01:56:34.5±1.0, 32°62N±0°10×137°98E±0°08, h376km, n24, σ1°43/29, mb3.0/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TTO3	**TONANKAI O.B.S**	**1.33**	**339**	P	**Pn**	**01 57 25.1**	**+0.9**
TK02	**Tokai 2**	**1.33**	**352**	P	**Pn**	**01 57 25.0**	**+0.9**
TTO2	**TONANKAI O.B.S**	**1.37**	**324**	P	**Pn**	**01 57 24.8**	**+0.6**
TTO1	**TONANKAI O.B.S**	**1.42**	**315**	P	**Pn**	**01 57 24.6**	**+0.2**
TTO4	**TONANKAI O.B.S**	**1.43**	**345**	P	**Pn**	**01 57 25.3**	**+0.8**
JHJ2	**Mitsune**	**1.62**	**72**	P	**Pn**	**01 57 25.7**	**-0.2**
JHJ2				*e*S	**S**	**01 58 07.6**	**+0.3**
JIE	**Ise**	**2.06**	**329**	P	**Pn**	**01 57 28.7**	**+0.1**
JKN2	**Miekihoku**	**2.15**	**319**	P	**Pn**	**01 57 28.8**	**-0.4**
HMMJ	**Hamamatsu 2**	**2.24**	**354**	P	**Pn**	**01 57 30.7**	**+0.9**
JTNC	**Tanabenakahech**	**2.32**	**302**	P	**Pn**	**01 57 29.4**	**-1.0**
JOD2	**Odawara 2**	**2.79**	**19**	P	**Pn**	**01 57 34.9**	**+0.9**
JAI	**Aioi**	**3.18**	**292**	P	**Pn**	**01 57 36.2**	**-1.2**
BSO1	**Boso 1**	**3.22**	**50**	P	**Pn**	**01 57 36.4**	**-0.6**
BSO1				*e*S	**S**	**01 58 26.2**	**-1.5**
JWT	**Wachi**	**3.41**	**322**	P	**Pn**	**01 57 39.6**	**+0.2**
JRY	**Ryogami san**	**3.47**	**12**	P	**Pn**	**01 57 41.4**	**+1.4**
MJAR	**Matsushiro Ar**	**3.91**	**3**	P	**Pn**	**01 57 45.5**	**+1.3**
	0.3nm,0.3s,baz=181,slow=10,SNR=10						
JAG	**Ashikaga**	**3.98**	**17**	P	**Pn**	**01 57 45.0**	**+0.2**
JAG				*e*S	**S**	**01 58 39.8**	**-2.0**
JYT	**Yasato**	**4.03**	**26**	P	**Pn**	**01 57 45.4**	**+0.1**
JYT				*e*S	**S**	**01 58 39.3**	**-3.3**
JFK	**Kawauchi**	**5.29**	**26**	P	**Pn**	**01 57 58.5**	**+0.1**
JFK				*e*S	**S**	**01 59 02.8**	**-3.8**
SONM	**Songino Array**	**28.26**	**312**	P	**P**	**02 01 55.8**	**+1.1**
	0.3nm,0.4s,baz=118,slow=8.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**42.96**	**316**	P	**P**	**02 03 58.0**	**+0.1**
	0.4nm,0.3s,baz=79,slow=7.8,SNR=2.6						
MKAR	**Makanchi Array**	**44.22**	**306**	P	**P**	**02 04 08.4**	**+0.4**
	0.7nm,0.5s,baz=88,slow=8.6,SNR=7.1						
WRA	**Warramunga Arr**	**52.38**	**184**	P	**P**	**02 05 08.2**	**-1.6**
	0.7nm,0.9s,baz=0.4,slow=7.6,SNR=6.8						
ILAR	**Eielson Array**	**54.72**	**30**	P	**P**	**02 05 28.5**	**+2.5**
	0.3nm,0.7s,baz=273,slow=5.7,SNR=4.0						

*IDC **30** 02:28:03.4±1.1, 34°30N×25°12E, h0km, mb4.1/6, mb1 4.1/11, mb1mx3.7/48, mbtmp4.0/11, ML4.0/5, Error ellipse: s-maj=20.1km s-min=17.8km az=66.0*
*ATH **30** 02:28:04.7, 34°19N×25°09E, h13km±6km, ML3.3/7, Error ellipse: s-maj=6.3km s-min=1.5km az=341.0*
*ISK **30** 02:28:05.7, 34°31N×25°12E, h10km, ML3.6/14*
*THE **30** 02:28:06.8, 34°32N×25°09E, h0km, ML3.3/9, Error ellipse: s-maj=1.5km s-min=0.5km az=173.0*
*NIC **30** 02:28:09.5±0.0, 34°07N×25°50E, h35km±22km, Ml4.1/4*
*DDA **30** 02:28:10.5, 34°62N×25°64E, h5km±2km, ML3.0*
*HLW **30** 02:28:12.5, 33°98N×25°33E, h26km±30km, Md4.1, Ml4.0*
ISC 30 02:28:04.2±1.4, 34°17N±0°05×25°16E±0°03, h9km±9km, n110, σ1°57/142, mb4.1/6, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.89**	**341**	P	**Pg**	**02 28 21.1**	**-0.2**
SIVA				S	**Sg**	**02 28 32.8**	**-0.2**
	5μm,0.4s						
SIVA	**Sivas**	**0.89**	**341**	P	**Pg**	**02 28 21.2**	**-0.2**
SIVA				S	**Sg**	**02 28 32.7**	**-0.2**
SIVA				AML	AML	02 28 34.5	
	comp=E,12116μm,0.3s						
SIVA				AML	AML	02 28 40.8	
	comp=N,9390μm,0.5s						
TMBK	**Timbaki Herakl**	**0.95**	**340**	P	**Pg**	**02 28 22.6**	**0.0**
TMBK				S	**Sg**	**02 28 35.1**	**+0.1**
	comp=N,2μm,0.5s						
FRMA	**Ierapetra Chan**	**0.96**	**29**	P	**Pn**	**02 28 25.3**	**+1.4**
FRMA				S	**Sn**	**02 28 39.5**	**+1.8**
LAST	**Lasithi**	**1.02**	**15**	P	**Pb**	**02 28 24.0**	**-0.1**
LAST				S	**Sb**	**02 28 37.9**	**+0.2**
	comp=N,1μm,0.5s						
LAST	**Lasithi**	**1.02**	**15**	P	**Pb**	**02 28 24.1**	**0.0**
LAST				S	**Sb**	**02 28 37.9**	**+0.2**
LAST				AML	AML	02 28 45.3	
	comp=E,2296μm,0.6s						
LAST				AML	AML	02 28 49.6	
	comp=N,2290μm,0.5s						
GVD	**Gavdhos**	**1.11**	**307**	P	**Pg**	**02 28 25.3**	**-0.2**
GVD				S	**Sn**	**02 28 40.9**	**-0.3**
	comp=N,3μm,0.5s						
GVD	**Gavdhos**	**1.11**	**307**	P	**Pg**	**02 28 25.1**	**-0.4**
GVD				S	**Sg**	**02 28 39.5**	**-0.4**
GVD				AML	AML	02 28 47.2	
	comp=N,5982μm,0.3s						
GVD				AML	AML	02 28 48.6	
	comp=E,6319μm,0.5s						
GVD	**Gavdhos**	**1.11**	**307**	PG	**Pg**	**02 28 25.2**	**-0.2**
GVD				SG	**Sg**	**02 28 39.8**	**-0.1**
GVDS	**Gavdos**	**1.11**	**308**	P	**Pb**	**02 28 25.6**	**+0.1**
GVDS				S	**Sn**	**02 28 41.2**	**0.0**
	comp=E,2μm,0.4s						
GVDS	**Gavdos**	**1.11**	**308**	PG	**Pb**	**02 28 25.6**	**+0.1**
GVDS				SG	**Sb**	**02 28 40.5**	**+0.5**
KSTL	**Kastelli Herak**	**1.13**	**356**	P	**Pg**	**02 28 24.6**	**-1.3**
KSTL				S	**Sg**	**02 28 38.4**	**-2.3**
IDI	**Anoyia**	**1.14**	**349**	Pn	**Pg**	**02 28 25.1**	**-0.9**
	comp=E,37nm,0.3s,baz=175,slow=10,SNR=298						
IDI				Sn	**Sg**	**02 28 39.4**	**-1.4**
	comp=E,55nm,0.3s,baz=338,slow=22,SNR=13						
IDI	**Anoyia**	**1.14**	**349**	P	**Pg**	**02 28 25.2**	**-0.8**
IDI				S	**Sb**	**02 28 41.1**	**+0.2**
IDI				AML	AML	02 28 47.3	
	comp=E,1390μm,0.6s						
IDI				AML	AML	02 28 48.2	
	comp=N,2056μm,0.6s						
IDI	**Anoyia**	**1.14**	**349**	PG	**Pg**	**02 28 25.2**	**-0.8**
IDI				SG	**Sg**	**02 28 39.4**	**-1.4**
HRKL	**Herakleio**	**1.14**	**358**	P	**Pg**	**02 28 25.8**	**-0.3**
HRKL	**Herakleio**	**1.14**	**358**	PG	**Pg**	**02 28 25.3**	**-0.8**
NPS	**Neapolis**	**1.15**	**19**	P	**Pb**	**02 28 26.3**	**0.0**
NPS				S	**Sb**	**02 28 41.6**	**+0.3**
	comp=N,1μm,0.5s						
NPS	**Neapolis**	**1.15**	**19**	P	**Pb**	**02 28 26.3**	**0.0**
NPS				S	**Sn**	**02 28 42.5**	**+0.2**
NPS				AML	AML	02 28 51.1	
	comp=N,1648μm,0.4s						
NPS				AML	AML	02 28 54.3	
	comp=E,2642μm,0.5s						
STIA	**Sitia Lasithi**	**1.28**	**36**	P	**Pg**	**02 28 29.8**	**+1.0**
STIA				S	**Sn**	**02 28 47.4**	**+1.9**
ZKR	**Zakros**	**1.28**	**43**	P	**Pg**	**02 28 29.6**	**+0.8**
ZKR				S	**Sn**	**02 28 47.8**	**+2.2**
	comp=E,805nm,0.5s						
ZKR	**Zakros**	**1.28**	**43**	P	**Pg**	**02 28 29.6**	**+0.8**
ZKR				AML	AML	02 28 53.5	
	comp=N,1083μm,0.4s						
ZKR				AML	AML	02 29 05.8	
	comp=E,2225μm,0.5s						
ZKR	**Zakros**	**1.28**	**43**	PN	**Pg**	**02 28 29.7**	**+0.9**
ZKR				SN	**Sn**	**02 28 46.4**	**+0.8**
ZKR	**Zakros**	**1.28**	**43**	P	**Pg**	**02 28 29.5**	**+0.7**
ZKR				S	**Sn**	**02 28 45.6**	**0.0**
ZKR				AML	AML	02 28 48.6	
	comp=E,2.2nm,0.5s						
ZKR				AML	AML	02 28 48.6	
	comp=E,2.2nm,0.5s						
ZKR				AML	AML	02 28 53.1	
	comp=E,1.1nm,0.4s						
ZKR				AML	AML	02 28 53.1	
	comp=E,1.1nm,0.4s						
PRNS	**Prines Rethymn**	**1.31**	**336**	P	**Pn**	**02 28 28.5**	**-0.1**
PRNS				S	**Sb**	**02 28 45.4**	**-0.4**
VAM	**Vamos**	**1.46**	**328**	P	**Pn**	**02 28 30.9**	**+0.2**
VAM				S	**Sn**	**02 28 49.6**	**-0.4**
	comp=E,1μm,0.6s						
VAM	**Vamos**	**1.46**	**328**	P	**Pn**	**02 28 30.8**	**0.0**
VAM				AML	AML	02 28 59.0	
	comp=E,2690μm,0.8s						
VAM				AML	AML	02 28 59.6	
	comp=N,2105μm,0.4s						
IMMV	**Iera Moni Meta**	**1.61**	**323**	P	**Pn**	**02 28 33.3**	**+0.5**
IMMV				S	**Sn**	**02 28 53.4**	**-0.2**
	comp=N,935nm,0.5s						
IMMV	**Iera Moni Meta**	**1.61**	**323**	P	**Pb**	**02 28 33.6**	**-0.5**
IMMV	**Iera Moni Meta**	**1.61**	**323**	PN	**Pn**	**02 28 33.4**	**+0.6**
KNDR	**Palaiochora Ch**	**1.61**	**312**	PN	**Pb**	**02 28 34.2**	**+0.1**
CHAN	**Chania**	**1.63**	**326**	P	**Pb**	**02 28 34.2**	**-0.2**
KARP	**Karpathos**	**2.14**	**50**	P	**Pb**	**02 28 43.2**	**0.0**
KARP	**Karpathos**	**2.14**	**50**	P	**Pb**	**02 28 43.0**	**-0.2**
KARP	**Karpathos**	**2.14**	**50**	P	**Pb**	**02 28 42.9**	**-0.3**
THR6	**Thira Island,**	**2.19**	**5**	P	**Pn**	**02 28 41.4**	**+0.7**
SANT	**Santorini**	**2.21**	**6**	P	**Pn**	**02 28 41.2**	**+0.2**
SANT	**Santorini**	**2.21**	**6**	PN	**Pn**	**02 28 41.2**	**+0.2**
THR3	**Thira Island,**	**2.24**	**5**	P	**Pn**	**02 28 41.5**	**+0.1**
THT2	**Imerovigli**	**2.27**	**5**	P	**Pn**	**02 28 42.6**	**+0.8**
THT2	**Imerovigli**	**2.27**	**5**	PN	**Pn**	**02 28 42.3**	**+0.5**
IOSP	**Ios island**	**2.55**	**2**	P	**Pn**	**02 28 46.0**	**+0.3**
MHLO	**Agia Marina, M**	**2.59**	**346**	P	**Pn**	**02 28 46.9**	**+0.7**
SLUM	**Salum**	**2.67**	**179**	AMP		02 29 00.0	
	baz=183						
KTHA	**Kythira Island**	**2.70**	**321**	P	**Pn**	**02 28 49.3**	**+1.6**
KTHA	**Kythira Island**	**2.70**	**321**	PN	**Pn**	**02 28 48.9**	**+1.2**
AMGA	**Amorgos Island**	**2.72**	**13**	P	**Pn**	**02 28 48.4**	**+0.4**
APE	**Apeiranthos**	**2.91**	**6**	P	**Pn**	**02 28 50.8**	**+0.2**
APE	**Apeiranthos**	**2.91**	**6**	PN	**Pn**	**02 28 51.0**	**+0.4**
ARG	**Arkhangelos**	**3.17**	**49**	P	**Pn**	**02 28 57.0**	**+2.8**
ARG	**Arkhangelos**	**3.17**	**49**	PN	**Pn**	**02 28 56.4**	**+2.2**
ARG	**Arkhangelos**	**3.17**	**49**	P	**Pn**	**02 28 55.9**	**+1.7**
ARG				S	**Sn**	**02 29 32.8**	**+0.6**
DAT	**Datca**	**3.23**	**37**	PN	**Pn**	**02 28 56.6**	**+1.5**
DAT	**Datca**	**3.23**	**37**	*i* P	**Pn**	**02 28 56.8**	**+1.7**
DAT				*i* S	**Sn**	**02 29 30.8**	**-2.8**
DATC	**Datca-Mugla**	**3.29**	**38**	PN	**Pn**	**02 28 57.6**	**+1.7**
BODT	**Bodrum**	**3.38**	**31**	PN	**Pn**	**02 28 58.6**	**+1.6**
DID	**Didima**	**3.68**	**335**	P	**Pn**	**02 29 01.3**	**+0.1**
DALY	**Dalyan (Mula)**	**3.88**	**46**	PN	**Pn**	**02 29 06.4**	**+2.4**
DALY	**Dalyan (Mula)**	**3.88**	**46**	*i* P	**Pn**	**02 29 06.1**	**+2.1**
TURN	**Turunc**	**3.89**	**45**	PN	**Pn**	**02 29 02.2**	**-1.9**
TURN	**Turunc**	**3.89**	**45**	*i* P	**Pn**	**02 29 01.8**	**-2.3**
TURN				*i* S	Sn	02 29 40.2	-10
YER	**Yerkesik**	**3.90**	**40**	PN	**Pn**	**02 29 06.4**	**+2.1**
FETY	**Fethiye**	**4.04**	**51**	*i* P	**Pn**	**02 29 07.6**	**+1.4**
FETY				*i* S	**Sn**	**02 29 48.9**	**-4.7**
AYDN	**Tasoluk**	**4.12**	**32**	*i* P	**Pn**	**02 29 09.0**	**+1.6**
AKAS	**Kas**	**4.18**	**59**	*i* P	**Pn**	**02 29 10.0**	**+1.8**
AKAS				IAML		02 30 03.0	
	comp=N,60nm,0.5s						
AKAS				IAML		02 30 05.0	
	comp=E,46nm,0.3s						
ZEY	**zmir**	**4.20**	**15**	*i* P	Pn	02 29 03.5	-4.9
CHOS	**Chios island**	**4.27**	**10**	PN	**Pn**	**02 29 10.4**	**+1.0**
AYDB	**Zeytinkoy-Aydi**	**4.37**	**30**	PN	**Pn**	**02 29 12.9**	**+2.1**
BLCB	**Balcova**	**4.47**	**19**	PN	**Pn**	**02 29 13.3**	**+1.2**
TAVA	**DENIZLI_Tavas**	**4.48**	**42**	*i* P	**Pn**	**02 29 13.6**	**+1.2**
TAVA				IAML		02 30 04.0	
	comp=E,17nm,1.8s						
ELL	**Elmali**	**4.65**	**55**	P	**Pn**	**02 29 16.0**	**+1.3**
GOLH	**Golhisar**	**4.71**	**48**	*i* P	**Pn**	**02 29 17.6**	**+2.2**
GOLH				IAML		02 30 11.0	
	comp=E,16nm,0.9s						
GOLH				IAML		02 30 17.0	
	comp=N,38nm,0.6s						
SWA2		**4.92**	**177**	AMP		02 30 00.0	
	baz=178						
KORT	**Korkueli**	**5.08**	**55**	*i* P	**Pn**	**02 29 23.1**	**+2.5**
KORT				*i* S	**Sn**	**02 30 19.5**	**-0.1**
KORT				IAML		02 30 23.0	
	comp=E,30nm,0.8s						
KORT				IAML		02 30 24.0	
	comp=N,12nm,0.3s						
MANT	**Manisa**	**5.11**	**31**	*i* P	**Pn**	**02 29 23.0**	**+1.9**
BRDR	**BURDUR-Merkez**	**5.31**	**47**	*i* P	**Pn**	**02 29 25.1**	**+1.4**
KHAL	**Karahalli**	**5.46**	**39**	*i* P	**Pn**	**02 29 27.2**	**+1.4**
KHAL				*i* S	**Sn**	**02 30 23.6**	**-5.1**
KHAL				IAML		02 30 27.0	
	comp=N,13nm,0.5s						
USAK	**Uak-Merkez**	**5.50**	**33**	*i* P	**Pn**	**02 29 27.8**	**+1.6**
DEMI	**Demirci**	**5.64**	**29**	*i* P	**Pn**	**02 29

comp=N,0.1nm,0.3s,baz=233,slow=12,SNR=3.3
AKO Adana 8.98 66 *i* P **Pn** **02 30 15.8 +1.8**
AKO IAML 02 31 59.0
comp=N,5.9nm,0.5s
YAHY KAYSERI_Yahyal 9.13 62 *i* P **Pn** **02 30 18.2 +2.0**
EIL Elat 9.45 116 Pn **Pn** **02 30 22.1 +1.6**
comp=N,2.2nm,0.3s,baz=336,slow=1.2,SNR=24
KBZ Khabaz 16.75 50 Pn **P** **02 32 03.7 +2.5**
comp=N,0.1nm,0.3s,baz=220,slow=11,SNR=6.1
AKASG Malin Array Be 16.79 9 Pn **Pn** **02 31 59.6 +0.3**
comp=N,1.0nm,0.3s,baz=199,slow=10,SNR=10.0
GERES GERESS Array B 16.96 333 Pn **P** **02 32 03.3 -0.3**
comp=N,0.3nm,0.3s,baz=145,slow=11,SNR=10
TORD Torodi Ar. Bea 29.86 231 P **P** **02 34 13.2 +1.2**
comp=N,3.4nm,0.5s,baz=32,slow=8.4,SNR=62
ARCES ARCESS Array B 35.42 0 P **P** **02 34 57.9 -2.2**
comp=N,4.6nm,1.0s,baz=188,slow=10.0,SNR=3.3
KURBB Kurchatov Arra 41.75 50 P **P** **02 35 53.0 -0.5**
comp=N,1.0nm,0.6s,baz=278,slow=8.5,SNR=12
MKAR Makanchi Array 44.33 56 P **P** **02 36 15.1 +0.6**
comp=N,0.9nm,0.5s,baz=279,slow=6.5,SNR=13
ZALV Zalesovo Beam 45.69 45 P **P** **02 36 24.8 -0.3**
comp=N,1.8nm,0.4s,baz=267,slow=7.7,SNR=8.1
SONM Songino Array 60.12 50 P **P** **02 38 12.7 +0.8**
comp=N,0.6nm,0.7s,baz=284,slow=7.9,SNR=6.7

IDC 30 02:34:01.1±1.8, 5.67S×123.36E, h0km, mb3.2/2, mb1 3.6/3, mb1mx3.3/36, mbtmpb 3.4/3, ML3.6/1, Error ellipse: s-maj=215.5km s-min=28.6km az=59.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.75**	**144**	P	Pn	02 38 10.3	+0.4
	0.2nm,0.3s,baz=317,slow=12,SNR=7.4						
ASAR	**Alice Springs**	**20.57**	**151**	P	P	02 38 41.5	-0.2
	0.4nm,0.7s,baz=329,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**63.63**	**330**	P	P	02 44 34.1	0.0
	0.5nm,0.8s,baz=131,slow=7.2,SNR=3.9						

IDC 30 02:39:47.0±7.9, 19.99S×179.94E, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/30, mbtmpb 3.6/2, Error ellipse: s-maj=336.7km s-min=65.9km az=146.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.76**	**256**	P	P	02 47 46.1	-0.5
	0.2nm,0.4s,baz=89,slow=8.5,SNR=4.2						
WRA	**Warramunga Arr**	**42.76**	**262**	P	P	02 47 46.7	+0.1
	0.7nm,0.3s,baz=96,slow=8.3,SNR=6.3						
BRTR	**Keskin Array B**	**145.06**	**312**	PKPbc	PKPbc	02 59 25.4	-0.8
	0.9nm,0.8s,baz=45,slow=4.3,SNR=3.6						

*IDC **30** 03:03:00.5±1.6, 17.70S×178.81W, h510km±18km, mb3.8/18, mb1 4.0/20, mb1mx3.7/51, mbtmp4.7/20, Error ellipse: s-maj=18.2km s-min=10.6km az=135.0*
*NEIC **30** 03:03:01.4±1.4, 17.65S±0.1×178.81W±0.03, h527km±7km, mb4.2/55, Error ellipse: s-maj=18.6km s-min=4.4km az=176.0*
ISC 30 03:03:02.4±0.4, 17.65S±0.09×178.81W±0.08, h539km, n132, σ0.89/112, mb4.2/40, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**2.99**	**268**	P	**P**	**03 04 16.0**	**-0.6**
AFI	**Afiamalu**	**7.72**	**62**	P	**P**	**03 04 54.5**	**-2.7**
	8.0nm,0.3s,baz=346,slow=9.9,SNR=8.9						
AFI	**Afiamalu**	**7.72**	**62**	P	**P**	**03 04 54.7**	**-2.5**
NIUE	**Niue**	**8.55**	**101**	P	**P**	**03 05 04.5**	**-0.9**
	baz=8.6,SNR=3.7						
NIUE	**Niue**	**8.55**	**101**	P	**P**	**03 05 04.9**	**-0.5**
SANVU	**Saraoutou**	**13.59**	**277**	P	**P**	**03 05 56.5**	**-0.9**
DZM	**Mont Dzumac**	**14.55**	**250**	P	**P**	**03 06 06.1**	**-1.4**
	1.5nm,0.3s,baz=91,slow=15,SNR=7.8						
DZM	**Mont Dzumac**	**14.55**	**250**	P	**P**	**03 06 06.2**	**-1.2**
NOUC	**Port Laguerre**	**14.68**	**250**	P	**P**	**03 06 06.9**	**-1.8**
OUZ	**Omahuta**	**18.76**	**200**	P	**P**	**03 06 48.6**	**+1.1**
URZ	**Urewera**	**20.84**	**189**	P	**P**	**03 07 04.7**	**-1.7**
	5.6nm,0.5s,baz=32,slow=1.8,SNR=7.2						
RPZ	**Rata Peaks**	**27.36**	**196**	P	**P**	**03 08 03.5**	**-0.9**
	4.5nm,0.4s,baz=48,slow=5.4,SNR=7.0						
RPZ	**Rata Peaks**	**27.36**	**196**	P	**P**	**03 08 03.4**	**-0.9**
RPZ				IAmb	IAmb	03 08 17.1	
	comp=Z,3.4nm,0.6s						
EIDS	**Eidsvold**	**29.00**	**249**	P	**P**	**03 08 18.9**	**+0.1**
	baz=29,SNR=8.3						
MLZ	**Mavora Lakes**	**29.71**	**199**	P	**P**	**03 08 24.8**	**0.0**
ARMA	**Armidale**	**29.74**	**239**	P	**P**	**03 08 26.5**	**+1.1**
	baz=30,SNR=31						
ARMA	**Armidale**	**29.74**	**239**	P	**P**	**03 08 26.5**	**+1.1**
MGCD	**Mangrove Creek**	**31.13**	**234**	P	**P**	**03 08 38.4**	**+1.3**
	baz=31,SNR=21						
RMQ	**Roma**	**31.24**	**248**	P	**P**	**03 08 39.4**	**+1.1**
	baz=31,SNR=12						
CNB	**Canberra Magne**	**33.28**	**232**	P	**P**	**03 08 56.6**	**+1.1**
	baz=33,SNR=32						
YNG	**Young**	**33.63**	**234**	P	**P**	**03 08 59.7**	**+1.3**
	baz=34,SNR=4.5						
CMSA	**Cobar Meteorol**	**34.94**	**240**	P	**P**	**03 09 10.0**	**+0.6**
	baz=35,SNR=58						
MTSU	**Mount Surprise**	**35.05**	**263**	P	**P**	**03 09 10.8**	**+0.2**
	baz=35,SNR=5.2						
QLP	**Quilpie**	**35.27**	**249**	P	**P**	**03 09 12.4**	**+0.2**
	baz=35,SNR=6.6						
TOO	**Toolangi**	**37.04**	**230**	P	**P**	**03 09 27.6**	**+0.9**
	baz=37,SNR=19						
TOO	**Toolangi**	**37.04**	**230**	P	**P**	**03 09 26.9**	**+0.2**
STKA	**Stephens Creek**	**38.42**	**241**	P	**P**	**03 09 39.0**	**+1.0**
	baz=38,SNR=44						
STKA	**Stephens Creek**	**38.42**	**241**	P	**P**	**03 09 39.0**	**+1.0**
	comp=Z,14nm,0.5s,baz=94,slow=10,SNR=55						
STKA	**Stephens Creek**	**38.42**	**241**	P	**P**	**03 09 37.7**	**-0.3**
STKA				IAmb	IAmb	03 09 39.9	
	comp=Z,6.4nm,1.1s						
QIS	**Mount Isa**	**39.33**	**259**	P	**P**	**03 09 46.8**	**+1.2**
	baz=39,SNR=3.6						
HTT	**Hallett**	**40.95**	**239**	P	**P**	**03 09 59.1**	**+0.7**
	baz=41,SNR=14						
BBOO	**Buckleboo**	**43.20**	**241**	P	**P**	**03 10 16.5**	**+0.5**
	baz=43,SNR=26						
BBOO	**Buckleboo**	**43.20**	**241**	P	**P**	**03 10 15.9**	**-0.1**
WB0	**Warramunga Arr**	**44.27**	**260**	P	**P**	**03 10 23.7**	**-0.8**
WB0				IAmb	IAmb	03 10 24.2	
	comp=Z,9.3nm,1.1s						
WB2	**Warramunga Arr**	**44.29**	**259**	P	**P**	**03 10 24.2**	**-0.5**
WB2				IAmb	IAmb	03 10 31.8	
	comp=Z,10.0nm,0.9s						
WRA	**Warramunga Arr**	**44.30**	**259**	P	**P**	**03 10 24.0**	**-0.8**
	comp=Z,4.4nm,0.6s,baz=94,slow=7.2,SNR=37						
WRA	**Warramunga Arr**	**44.30**	**259**	P	**P**	**03 10 23.8**	**-1.0**
ASAR	**Alice Springs**	**44.49**	**254**	P	**P**	**03 10 26.4**	**+0.2**
	comp=Z,48nm,0.5s,baz=88,slow=8.1,SNR=821						
ASAR				ScP	**ScP**	**03 15 01.9**	**+3.0**
	comp=Z,0.3nm,0.6s,baz=107,slow=4.2,SNR=4.2						
ASAR				S	**S**	**03 16 20.9**	**-1.6**
	comp=Z,2.0nm,1.0s,baz=84,slow=18,SNR=7.8						
ASAR	**Alice Springs**	**44.49**	**254**	P	**P**	**03 10 26.0**	**-0.2**
KDU	**Kakadu**	**47.18**	**269**	P	**P**	**03 10 47.0**	**+0.3**
	baz=47,SNR=7.0						
MTN	**Manton Dam**	**48.42**	**268**	P	**P**	**03 10 56.1**	**+0.1**
	baz=48,SNR=4.4						
WRKA	**Warakurna**	**49.56**	**252**	P	**P**	**03 11 04.7**	**+0.3**
	baz=50,SNR=56						
FORT	**Forrest**	**49.77**	**244**	P	**P**	**03 11 05.6**	**-0.1**
	baz=50,SNR=25						
FORT	**Forrest**	**49.77**	**244**	P	**P**	**03 11 05.2**	**-0.6**
KNRA	**Kununurra**	**50.13**	**264**	P	**P**	**03 11 08.7**	**+0.1**
	baz=50,SNR=5.8						
FITZ	**Fitzroy Crossi**	**52.69**	**260**	P	**P**	**03 11 27.9**	**+0.8**
	baz=53,SNR=6.6						
KLBR	**Kellerberrin**	**58.60**	**243**	P	**P**	**03 12 07.8**	**-0.2**
	baz=59,SNR=7.9						
MORW	**Morawa**	**60.23**	**246**	P	**P**	**03 12 18.9**	**0.0**
	baz=60,SNR=4.1						
MJAR	**Matsushiro Arr**	**67.47**	**324**	P	**P**	**03 13 05.1**	**+0.3**
	comp=Z,3.7nm,0.5s,baz=140,slow=5.9,SNR=8.4						
MAT	**Matsushiro**	**67.47**	**324**	P	**P**	**03 13 05.1**	**+0.3**
QSPA	**South Pole Qui**	**72.40**	**180**	P	**P**	**03 13 34.3**	**+0.5**
QSPA				IAmb	IAmb	03 13 35.1	
	comp=Z,6.0nm,0.8s						
PETK	**Petropavlovsk-**	**73.33**	**345**	P	**P**	**03 13 39.8**	**+0.7**
	comp=Z,9.1nm,0.9s,baz=134,slow=7.7,SNR=4.8						
CMB	**Columbia Colle**	**77.92**	**43**	P	**P**	**03 14 05.7**	**+0.8**
ISA	**Isabella, Lake**	**77.92**	**46**	P	**P**	**03 14 05.4**	**+0.4**
ISA				IAmb	IAmb	03 14 07.4	
	comp=Z,7.1nm,1.0s						
AFDM	**Forest Hills D**	**78.05**	**42**	P	**P**	**03 14 04.8**	**-0.8**
KDAK	**Kodiak Island**	**78.25**	**14**	P	**P**	**03 14 06.9**	**+0.9**
	comp=Z,9.1nm,0.7s,baz=206,slow=2.4,SNR=7.6						
KDAK	**Kodiak Island**	**78.25**	**14**	P	**P**	**03 14 05.2**	**-0.9**
KDAK				IAmb	IAmb	03 14 08.3	
	comp=Z,11nm,0.9s						
YBH	**Yreka Blue Hor**	**78.57**	**39**	P	**P**	**03 14 10.2**	**+1.9**
	comp=Z,2.3nm,0.6s,baz=120,slow=1.3,SNR=6.7						
CN2	**Changchun**	**79.58**	**323**	*eP*	P	03 13 55.8	-18
CN2				pmax	pmax		
	comp=Z,10.0nm,1.6s						
CN2				pmax	pmax		
	comp=Z,160nm,4.6s						
KVN	**Kaiserville**	**79.97**	**44**	P	**P**	**03 14 16.6**	**+0.6**
MOD	**Modoc Plateau**	**80.14**	**40**	IAmb	IAmb	03 14 18.6	
	comp=Z,5.0nm,0.8s						
WVOR	**Wild Horse Val**	**81.46**	**40**	IAmb	IAmb	03 14 25.9	
	comp=Z,6.8nm,1.1s						
TUC	**Tucson**	**81.85**	**52**	P	**P**	**03 14 25.6**	**-0.1**
X16A	**Lo Mia Camp, P**	**82.31**	**50**	IAmb	IAmb	03 14 31.0	
	comp=Z,4.8nm,0.9s						
U15A	**North Rim**	**82.63**	**48**	IAmb	IAmb	03 14 32.7	
	comp=Z,6.1nm,0.8s						
GHO	**Glory Hole Cre**	**82.65**	**14**	P	**P**	**03 14 29.4**	**+0.3**
ELK	**Elko**	**82.73**	**43**	P	**P**	**03 14 31.6**	**+1.5**
	comp=Z,2.4nm,0.8s,baz=260,slow=7.1,SNR=9.8						
WUAZ	**Wupatki**	**82.87**	**49**	IAmb	IAmb	03 14 34.2	
	comp=Z,6.7nm,1.1s						
SCM	**Sheep Creek Mo**	**83.08**	**14**	P	**P**	**03 14 31.6**	**+0.4**
SEY	**Seymchan**	**83.44**	**347**	P	**P**	**03 14 33.4**	**+0.6**
	comp=Z,9.6nm,0.6s,baz=143,slow=5.5,SNR=21						
MFID	**Camas Ranch**	**83.73**	**41**	IAmb	IAmb	03 14 37.2	
	comp=Z,6.4nm,1.1s						
KTH	**Kantishna Hill**	**83.81**	**12**	P	**P**	**03 14 34.3**	**-0.5**
KTH				IAmb	IAmb	03 14 36.2	
	comp=Z,6.5nm,0.9s						
TRF	**Thorofare Moun**	**83.84**	**12**	P	**P**	**03 14 34.9**	**-0.2**
BARN	**Barnard Glacie**	**83.90**	**17**	P	**P**	**03 14 35.8**	**+0.4**
DHY	**Denali Highway**	**84.14**	**14**	IAmb	IAmb	03 14 37.1	
	comp=Z,3.4nm,0.5s						
F10A	**Beach Ranch, E**	**84.23**	**38**	IAmb	IAmb	03 14 39.0	
	comp=Z,4.8nm,0.9s						
MCK	**McKinley**	**84.38**	**13**	IAmb	IAmb	03 14 38.9	
	comp=Z,7.0nm,0.8s						
WRH	**Wood River Hil**	**85.20**	**13**	P	**P**	**03 14 41.4**	**-0.1**
WRH				IAmb	IAmb	03 14 43.0	
	comp=Z,7.8nm,0.9s						
DOT	**Dot Lake**	**85.41**	**15**	IAmb	IAmb	03 14 43.7	
	comp=Z,5.1nm,0.7s						
CCB	**Clear Creek Bu**	**85.42**	**13**	IAmb	IAmb	03 14 43.1	
	comp=Z,10nm,1.2s						
IMAR	**Indian Mountai**	**85.50**	**10**	P	**P**	**03 14 42.9**	**+0.1**
NEW	**Newport**	**85.53**	**36**	P	**P**	**03 14 44.1**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=130,slow=3.3,SNR=5.2						
SCRK	**Sand Creek**	**85.71**	**15**	IAmb	IAmb	03 14 46.8	
	comp=Z,3.9nm,0.9s						
IL31		**85.72**	**13**	IAmb	IAmb	03 14 44.5	
	comp=Z,2.9nm,0.6s						
ILAR	**Eielson Array**	**85.72**	**13**	P	**P**	**03 14 43.6**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=224,slow=5.2,SNR=42						
ILAR	**Eielson Array**	**85.72**	**13**	P	**P**	**03 14 43.7**	**-0.3**
TX31	**Lajitas Ar. Sí**	**86.18**	**58**	IAmb	IAmb	03 14 50.4	
	comp=Z,4.8nm,1.0s						
TX32	**Lajitas Array**	**86.18**	**58**	IAmb	IAmb	03 14 50.4	
	comp=Z,4.9nm,1.0s						
TXAR	**Lajitas Array**	**86.18**	**58**	P	**P**	**03 14 49.4**	**+2.2**
	comp=Z,2.3nm,0.8s,baz=218,slow=6.2,SNR=29						
TXAR	**Lajitas Array**	**86.18**	**58**	P	**P**	**03 14 45.2**	**-1.9**
ANMO	**Albuquerque**	**86.24**	**52**	P	**P**	**03 14 46.3**	**-1.1**
PD31	**Pinedale Array**	**87.43**	**44**	IAmb	IAmb	03 14 54.1	
	comp=Z,2.1nm,0.8s						
PDAR	**Pinedale Array**	**87.43**	**44**	P	**P**	**03 14 53.5**	**+0.6**
	comp=Z,1.6nm,0.5s,baz=210,slow=3.0,SNR=22						
PDAR	**Pinedale Array**	**87.43**	**44**	P	**P**	**03 14 53.0**	**+0.1**
H17A	**Grant Village**	**87.52**	**42**	IAmb	IAmb	03 14 56.8	
	comp=Z,2.9nm,0.8s						
SMCO	**Snowmass**	**87.63**	**48**		pwP	03 16 51.6	-2.7
BMAR	**Burnt Mountain**	**88.49**	**13**	P	**P**	**03 14 57.9**	**+0.9**
SNAA	**Sanae**	**90.86**	**179**	P	**P**	**03 15 07.9**	**-0.2**
SNAA	**Sanae**	**90.86**	**179**	P	**P**	**03 15 07.9**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=204,slow=8.6,SNR=19						
SNAA	**Sanae**	**90.86**	**179**	P	**P**	**03 15 07.3**	**-0.9**
VNA3	**Neumayer Olymp**	**91.02**	**177**	P	**P**	**03 15 08.9**	**+0.1**
VNA2	**Neumayer--Watz**	**91.45**	**177**	P	**P**	**03 15 11.0**	**+0.2**
INK	**Inuvik**	**91.74**	**15**	P	**P**	**03 15 11.9**	**0.0**
	comp=Z,2.6nm,0.8s,baz=211,slow=4.9,SNR=9.1						
YKA	**Yellowknife Ar**	**94.26**	**25**	P	**P**	**03 15 23.8**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=244,slow=4.6,SNR=19						
MKAR	**Makanchi Array**	**108.68**	**314**	PKiKP	**PKiKP**	**03 20 29.9**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=166,slow=1.2,SNR=7.5						
FINES	**FINESS Array B**	**132.84**	**344**	SKPbc	**SKPab**	**03 23 56.2**	**+0.8**
	comp=Z,4.3nm,0.9s,baz=132,slow=2.8,SNR=3.8						
AKASG	**Malin Array Be**	**140.15**	**332**		PKPpre	03 21 21.4	
EKA	**Eskdalemuir Ar**	**142.24**	**4**	PKhKP	PKPpre	03 21 29.2	
	comp=Z,0.6nm,0.5s,baz=5.7,slow=2.9,SNR=3.4						
BUR08	**Bucovina Ar. S**	**144.19**	**332**		**PKPab**	**03 21 36.9**	**-0.1**
BURAR	**Bucovina Array**	**144.21**	**332**		**PKPab**	**03 21 36.8**	**-0.2**
BRTR	**Keskin Array B**	**144.33**	**315**	PKP	**PKPab**	**03 21 38.1**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=120,slow=3.3,SNR=15						
BRTR	**Keskin Array B**	**144.33**	**315**		PKPbc	03 21 36.9	-0.6
OSTC	**Ostas**	**145.03**	**343**	*e*PKP	**PKPab**	**03 21 40.7**	**+0.7**
CHVC	**Chvalec**	**145.05**	**343**	*e*PKP	**PKPab**	**03 21 40.7**	**+0.7**
CLL	**Collm**	**145.13**	**347**	PKPdf	**PKPbc**	**03 21 38.8**	**-0.4**
DPC	**Dobruska-Polom**	**145.19**	**343**	*e*PKP	**PKPab**	**03 21 40.8**	**+0.2**
MLR	**Muntele Rosu**	**145.41**	**329**	PKPbc	**PKPab**	**03 21 41.3**	**-0.5**
	comp=Z,1.5nm,0.5s,baz=356,slow=12,SNR=8.5						
PVCC	**Panska Ves**	**145.49**	**345**	*e*PKP	**PKPab**	**03 21 42.0**	**+0.3**
PRU	**Pruhonice**	**146.00**	**345**	*e*PKP	**PKPab**	**03 21 42.7**	**-1.0**
KHC	**Kasperske Hory**	**147.03**	**345**	*e*PKP	**PKPbc**	**03 21 45.0**	**+0.3**
GERES	**GERESS Array B**	**147.26**	**345**	PKPbc	**PKPbc**	**03 21 46.1**	**+0.6**
	comp=Z,2.2nm,0.5s,baz=26,slow=3.3,SNR=18						
GERES	**GERESS Array B**	**147.26**	**345**		**PKPbc**	**03 21 45.7**	**+0.2**
CONA	**Conrad Observa**	**147.50**	**342**	*i* PKiKP	**PKiKP**	**03 21 47.3**	**-0.4**
	comp=Z,2.1nm,0.5s						
SOKA	**Soboth**	**148.87**	**341**	*i* PKiKP	**PKPbc**	**03 21 49.7**	**+0.1**
	comp=Z,1.3nm,0.4s						
WATA	**Walderalm**	**149.19**	**346**	*i* PKiKP	**PKiKP**	**03 21 50.8**	**-0.5**
	comp=Z,1.7nm,0.3s						
RETA	**Reutte**	**149.22**	**347**	*i* PKiKP	**PKiKP**	**03 21 50.9**	**-0.3**
	comp=Z,1.5nm,0.3s						
WTTA	**Wattenberg**	**149.24**	**346**	*i* PKiKP	**PKiKP**	**03 21 51.2**	**-0.2**
	comp=Z,5.5nm,0.3s						
MOTA	**Moosalm**	**149.28**	**347**	*i* PKiKP	**PKiKP**	**03 21 51.0**	**-0.5**
	comp=Z,1.6nm,0.3s						
MYKA	**Terra Mystica**	**149.32**	**343**	*i* PKiKP	**PKPbc**	**03 21 50.5**	**-0.1**
	comp=Z,2.7nm,0.4s						
SQTA	**Sankt Quirin**	**149.38**	**347**	*i* PKiKP	**PKiKP**	**03 21 51.4**	**-0.2**
	comp=Z,2.9nm,0.4s						
ABTA	**Abfaltersbach**	**149.51**	**345**	*i* PKiKP	**PKPbc**	**03 21 51.2**	**+0.1**
	comp=Z,2.5nm,0.5s						
DAVA	**Damuels**	**149.59**	**348**	*i* PKiKP	**PKiKP**	**03 21 52.5**	**+0.5**
	comp=Z,1.2nm,0.3s						

ROM 30 03:09:57.7±0.2, 43.426N±0.003×12.512E±0.005, h8km±1km, Md1.3/3, Error ellipse: s-maj=0.3km s-min=0.3km az=138.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATFO	**Monte Foce - G**	**0.07**	**144**	P	Pg	03 09 59.8	0.0
ATPI	**Pietralunga -**	**0.08**	**288**	P	Pg	03 10 00.3	+0.3
ATPI				S	Sg	03 10 02.0	+0.4
ATPI				END			
ATVO	**AVT- Monte Val**	**0.09**	**241**	P	Pg	03 10 00.2	+0.2
ATVO				S	Sg	03 10 02.1	+0.5
ATVO				END			
PIEI	**Pieia**	**0.11**	**9**	P	Pg	03 10 00.9	+0.5
PIEI				S	Sg	03 10 03.1	+0.9
MURB	**Monte Urbino**	**0.16**	**177**	P	Pg	03 10 01.8	+0.7
MURB				S	Sg	03 10 04.9	+1.4
FRON	**Frontone**	**0.18**	**59**	P	Pg	03 10 02.0	+0.5
FRON				S	Sg	03 10 05.3	+1.3
FRON				END			
NARO	**Abbazia di Nar**	**0.19**	**15**	P	Pg	03 10 02.2	+0.5
NARO				S	Sg	03 10 05.5	+1.1
SSFR	**Montelago di S**	**0.20**	**87**	P	Pg	03 10 02.5	+0.7
SSFR				S	Sg	03 10 05.7	+1.1

*LJU **30** 03:10:43.2, 46.39N×15.07E, h0km Rockburst*

VIE 30 03:10:43.1±0.4, 46.41N×15.10E, h0km, ml0.9/2, Error ellipse: s-maj=2.8km s-min=1.5km az=179.0 24 km NNW of Celje Suspected Mining induced., Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOKA	**Soboth**	**0.27**	**350**	*i* Pg	Pg	03 10 48.5	+0.2
	1.7nm,0.3s						
SOKA				*i* Sg	Sg	03 10 53.0	+1.1
	4.7nm,0.5s						
OBKA	**Obir**	**0.39**	**285**	*i* Pg	Pg	03 10 50.8	+0.2
	1.8nm,0.3s						
OBKA				*i* Sg	Sg	03 10 56.7	+0.9
	7.2nm,0.3s						

*IDC **30** 03:14:03.4±0.8, 56.62N×34.43W, h0km, mb4.1/19, mb1 4.2/21, mb1mx4.0/66, mbtmp4.1/21, ML2.8/2, MS3.6/21, Ms1 3.6/21, ms1mx3.4/48, Error ellipse: s-maj=25.1km s-min=12.2km az=178.0*
*NEIC **30** 03:14:05.2±1.0, 56.6N±0.1×34.4W±0.2, h15km±4km, mb4.7/62, Error ellipse: s-maj=17.4km s-min=13.4km az=182.0*
ISC 30 03:14:06.3±0.7, 56.6N±0.1×34.44W±0.07, h22km, n88, σ0.84/64, mb4.7/49, MS3.5/17, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**10.39**	**33**	Pn	**Pn**	**03 16 36.3**	**+2.5**
	1.5nm,0.3s,baz=210,slow=8.0,SNR=9.0						
BORG				LR	LR	03 19 31.1	
	comp=Z,814nm,19.4s,baz=255,slow=32						
BORG	**Borgarnes**	**10.39**	**33**		**Pn**	**03 16 32.4**	**-1.4**
JMIC	**Jan Mayen**	**18.18**	**27**	LR	LR	03 23 35.3	
	comp=Z,180nm,18.3s,baz=349,slow=32						
FRB	**Frobisher Bay**	**18.23**	**307**	P	**P**	**03 18 17.3**	**-0.4**
	0.1nm,0.3s,baz=97,slow=13,SNR=4.1						
FRB				LR	LR	03 23 46.1	
	comp=Z,147nm,21.6s,baz=72,slow=32						
SCHQ	**Schefferville**	**18.25**	**278**	P	**P**	**03 18 18.2**	**+0.3**
	0.2nm,0.3s,baz=116,slow=5.3,SNR=6.8						
SCHQ				LR	LR	03 23 54.8	
	comp=Z,241nm,19.7s,baz=101,slow=32						
SCHQ	**Schefferville**	**18.25**	**278**	P	**P**	**03 18 18.1**	**+0.2**
NOA	**NORSAR Array B**	**23.67**	**60**	P	**P**	**03 19 16.0**	**+0.1**
	0.9nm,0.7s,baz=281,slow=9.5,SNR=3.7						
NOA				LR	LR	03 26 58.4	
	comp=Z,85nm,20.5s,baz=285,slow=33						
HFS	**Hagfors**	**25.05**	**62**	LR	LR	03 27 51.5	
	comp=Z,101nm,21.2s,baz=274,slow=33						
ARCES	**ARCESS Array B**	**28.69**	**39**	P	**P**	**03 20 00.6**	**-0.6**
	6.0nm,0.9s,baz=273,slow=8.4,SNR=8.7						
ARCES				LR	LR	03 28 59.0	
	comp=Z,97nm,19.7s,baz=288,slow=31						
ARCES	**ARCESS Array B**	**28.69**	**39**	P	**P**	**03 20 00.4**	**-0.8**
DAVOX	**Davos/Dischmat**	**28.70**	**91**	LR	LR	03 30 46.0	
	comp=Z,248nm,19.6s,baz=35						
RES	**Resolute Bay**	**28.89**	**331**	LR	LR	03 30 25.8	
	comp=Z,65nm,19.8s,baz=56,slow=34						
GERES	**GERESS Array B**	**29.63**	**84**	LR	LR	03 31 37.8	
	comp=Z,125nm,18.3s,baz=304,slow=36						
FINES	**FINESS Array B**	**30.53**	**55**	P	**P**	**03 20 17.4**	**-0.1**
	1.5nm,0.6s,baz=303,slow=8.1,SNR=6.2						
FINES				LR	LR	03 30 25.2	
	comp=Z,95nm,20.6s,baz=246,slow=32						
FINES	**FINESS Array B**	**30.53**	**55**	P	**P**	**03 20 16.7**	**-0.8**
VRAC	**Vranov**	**30.96**	**82**	LR	LR	03 32 24.0	
	comp=Z,155nm,18.4s,baz=287,slow=36						
ULM	**Lac du Bonnet**	**36.05**	**287**	P	**P**	**03 21 05.4**	**-0.3**
	2.1nm,0.9s,baz=64,slow=6.7,SNR=4.7						
ULM				LR	LR	03 33 35.8	
	comp=Z,110nm,21.1s,baz=104,slow=32						
ULM	**Lac du Bonnet**	**36.05**	**287**	P	**P**	**03 21 05.3**	**-0.5**
ULM				IAmb	IAmb	03 21 07.5	
	comp=Z,21nm,1.6s						
AKASG	**Malin Array Be**	**36.97**	**71**	P	**P**	**03 21 13.3**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=307,slow=8.6,SNR=7.2						
AKASG				LR	LR	03 35 47.8	
	comp=Z,69nm,18.2s,baz=25,slow=35						
AKASG	**Malin Array Be**	**36.97**	**71**	P	**P**	**03 21 11.9**	**-1.6**
YKA	**Yellowknife Ar**	**38.59**	**313**	P	**P**	**03 21 26.6**	**-0.5**

comp=Z,12nm,1.3s
ELK Elko 52.50 289 P **P** **03 23 19.6 +1.9**
comp=Z,1.9nm,0.9s,baz=53,slow=9.0,SNR=4.0
ABKAR Akbulak array 53.02 55 P **P** **03 23 20.6 -0.5**
ABKAR Akbulak array 53.02 55 IAmb IAmb 03 23 22.9
comp=Z,15nm,1.6s
MNTX Cornudas Mount 53.88 274 IAmb IAmb 03 23 33.6
comp=Z,12nm,1.6s
BRVK Borovoye 54.60 46 P **P** **03 23 31.6 -0.9**
BRVK IAmb IAmb 03 23 34.1
comp=Z,14nm,1.6s
TXAR Lajitas Array 54.74 271 P **P** **03 23 35.1 +1.1**
comp=Z,0.8nm,0.9s,baz=52,slow=6.5,SNR=9.0
TXAR LR LR 03 46 40.4
comp=Z,69nm,18.1s,baz=0.0,slow=36
TXAR Lajitas Array 54.74 271 P **P** **03 23 33.2 -0.8**
KVN Kaiserville 55.23 290 IAmb IAmb 03 23 39.5
comp=Z,6.3nm,0.9s
PAHR Pah Rah Range 55.41 291 IAmb IAmb 03 23 45.5
comp=Z,6.4nm,1.0s
BEKR Beckworth 55.80 292 IAmb IAmb 03 23 42.7
comp=Z,3.9nm,0.6s
XPFO Pion Flat 58.46 284 P **P** **03 24 00.7 +0.2**
XPFO IAmb IAmb 03 24 02.9
comp=Z,20nm,1.8s
PFO Pinyon Flats O 58.46 284 P **P** **03 24 00.4 -0.1**
PFO IAmb IAmb 03 24 03.0
comp=Z,21nm,1.8s
ZALV Zalesovo Beam 59.20 37 LR LR 03 50 33.9
comp=Z,35nm,18.0s,baz=336,slow=37
KURK Kurchatov 59.65 43 P **P** **03 24 08.3 0.0**
KURBB Kurchatov Arra 59.70 43 P **P** **03 24 08.7 +0.1**
comp=Z,1.6nm,0.6s,baz=323,slow=7.2,SNR=14
SEY Seymchan 60.70 356 P **P** **03 24 16.2 +0.9**
comp=Z,1.4nm,0.4s,baz=295,slow=7.8,SNR=4.9
KKAR Karatay Array 62.45 53 P **P** **03 24 27.2 -0.3**
MAKZ Makanchi 64.13 43 P **P** **03 24 38.3 -0.3**
MAKZ IAmb IAmb 03 24 39.0
comp=Z,9.3nm,1.7s
MKAR Makanchi Array 64.26 43 P **P** **03 24 39.4 0.0**
comp=Z,1.0nm,0.6s,baz=337,slow=5.6,SNR=19
MKAR Makanchi Array 64.26 43 P **P** **03 24 39.5 +0.1**
AAK Ala-Archa 64.55 51 P **P** **03 24 40.0 -1.5**
AAK IAmb IAmb 03 24 44.1
comp=Z,14nm,1.8s
BTK Batken 65.03 55 IAmb IAmb 03 24 47.8
comp=Z,6.5nm,0.8s
KSH Kashi 67.75 52 P **P** **03 25 04.8 +2.7**
KSH pmax pmax
comp=Z,17nm,0.5s
KSH pmax pmax
comp=Z,220nm,3.3s
SONM Songino Array 70.94 27 P **P** **03 25 21.7 0.0**
comp=Z,0.8nm,0.8s,baz=318,slow=5.8,SNR=6.5
SONM Songino Array 70.94 27 P **P** **03 25 21.0 -0.7**
KSRS Korea Array 85.14 14 LR LR 04 06 25.0
comp=Z,10nm,18.4s,baz=185,slow=37

*IDC **30** 03:20:46.7±4.2,9°.78N×83°.95W,h29km±38km, mb3.4/4, mb1 3.8/5,mb1mx3.4/38,mbtmp3.7/5,ML4.2/1,MS3.2/4, Ms1 3.2/4,ms1mx2.9/15,Error ellipse: s-maj=157.3km s-min=31.8km az=30.0*
*UPA **30** 03:20:46.8±2.3,9°.51N×84°.16W,h8km±20km,MW5.2*
*UCR **30** 03:20:48.6±1.6,9°.52N×84°.11W,h36km±3km,MD3.8, mb4.3(NEIC)*
*NEIC **30** 03:20:50.0±1.5,9°.72N±0°.05×84°.10W±0°.06,h37km±2km, mb4.0/9,Mwr4.3(UCR),Error ellipse: s-maj=9.8km s-min=6.4km az=56.0*

ISC 30 03:20:49.4±0.8,9°.60N±0°.05×84°.11W±0°.05,h41km±7km, n84,σ1°38/96,mb3.9/8,2C-1D,Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCR2	**La Lucha 2**	**0.18**	**35**	*e*P	**Pn**	**03 20 55.7**	**-1.2**
LCR2				*e*S	**Sn**	**03 21 01.6**	**-0.5**
SJS	**Escuela Geolog**	**0.34**	**9**	*e*P	**Pn**	**03 20 57.9**	**-0.6**
HDC	**Heredia**	**0.40**	**359**		**Pn**	**03 20 58.4**	**-0.7**
HDC				Sn	**Sn**	**03 21 04.1**	**-1.7**
EDDO	**Dominical**	**0.42**	**145**	*e*P	**Pn**	**03 20 56.9**	**-2.3**
CVTR	**Volcan Turrial**	**0.54**	**39**	*e*P	**Pn**	**03 21 00.7**	**-0.4**
EDLM	**Las Mercedes**	**0.60**	**122**	*e*P	**Pn**	**03 21 00.1**	**-1.5**
SRA1	**San Ramn**	**0.61**	**323**	*e*P	**Pn**	**03 21 00.9**	**-1.0**
EDPN	**Palmar Norte**	**0.90**	**135**	*e*P	**Pn**	**03 21 04.1**	**-1.5**
DRK0	**Durika**	**0.91**	**111**	*e*P	**Pn**	**03 21 04.5**	**-1.5**
DRK0	**Durika**	**0.91**	**111**	*e*P	**Pn**	**03 21 05.1**	**-0.9**
DRK0				*e*S	**Sn**	**03 21 18.3**	**+0.3**
EDBA	**Buenos Aires**	**0.93**	**118**	*e*P	**Pn**	**03 21 04.1**	**-2.0**
FORC	**Fortuna**	**1.03**	**327**	*i* P	**Pn**	**03 21 07.4**	**0.0**
FORC				*i* S	**Sn**	**03 21 22.7**	**+2.1**
CASO	**Castillo**	**1.04**	**323**	*i* P	**Pn**	**03 21 07.3**	**-0.3**
ARE1	**Arenal 1**	**1.05**	**325**	*e*P	**Pn**	**03 21 07.7**	**0.0**
JTS	**Las Juntas de**	**1.08**	**310**	Pg	**Pn**	**03 21 07.5**	**-0.6**
	416nm,0.3s,baz=178,slow=17,SNR=1865						
JTS				Lg	Lg	03 21 22.8	
	959nm,0.3s,baz=281,slow=21,SNR=46						
JTS	**Las Juntas de**	**1.08**	**310**	*e*P	**Pn**	**03 21 07.6**	**-0.6**
JTS	**Las Juntas de**	**1.08**	**310**	*i* P	**Pn**	**03 21 07.7**	**-0.5**
JTS				*e*S	**Sn**	**03 21 22.3**	**+0.3**
JTS	**Las Juntas de**	**1.08**	**310**		**Pn**	**03 21 07.4**	**-0.8**
JTS				Sn	**Sn**	**03 21 21.5**	**-0.5**
PTJ1	**Puerto Jimnez**	**1.32**	**143**	*e*P	**Pn**	**03 21 11.1**	**-0.3**
AMAS	**Alto Masis**	**1.33**	**319**	*i* P	**Pn**	**03 21 11.6**	**-0.1**
AMAS				*i* S	**Sn**	**03 21 30.4**	**+2.1**
ACAL	**Aguas Claras**	**1.38**	**318**	*i* P	**Pn**	**03 21 12.8**	**+0.5**
PLVR	**Palo Verde**	**1.44**	**301**	*e*P	**Pn**	**03 21 12.3**	**-0.9**
RGM0	**Gandoca**	**1.48**	**90**	*e*P	**Pn**	**03 21 11.9**	**-1.7**
RGM0				*e*S	**Sn**	**03 21 34.9**	**+3.2**
CUI	**Cuipilapa**	**1.48**	**315**	*i* P	**Pn**	**03 21 13.8**	**+0.1**
COLC	**Colonia**	**1.51**	**315**	*i* P	**Pn**	**03 21 14.0**	**-0.1**
HORNC	**Hornillas**	**1.53**	**316**	*i* P	**Pn**	**03 21 14.3**	**-0.1**
HORNC				*i* S	**Sn**	**03 21 33.8**	**+0.7**
MESS	**Mesas**	**1.56**	**317**	*i* P	**Pn**	**03 21 14.8**	**-0.1**
MESS				*i* S	**Sn**	**03 21 35.2**	**+1.3**
GUAB	**Guayabo de Bag**	**1.56**	**315**	*i* P	**Pn**	**03 21 14.8**	**0.0**
LIM1	**Limonal**	**1.57**	**314**	*i* P	**Pn**	**03 21 14.9**	**-0.1**
BRU2	**Volcan**	**1.61**	**120**	*e*P	**Pn**	**03 21 14.1**	**-1.4**
BRU2	**Volcan**	**1.61**	**120**	*e*P	**Pn**	**03 21 14.3**	**-1.3**
CNI2	**El Empalme, Bo**	**1.62**	**96**	*e*S	**Sn**	**03 21 34.3**	**-0.9**
GPS2	**Hotel Rincn d**	**1.68**	**313**	*i* P	**Pn**	**03 21 16.1**	**-0.3**
GPS3	**Bodega del ICE**	**1.69**	**313**	*i* P	**Pn**	**03 21 16.4**	**-0.2**
GPS1	**Guardaparques**	**1.69**	**314**	*i* P	**Pn**	**03 21 17.3**	**+0.6**
LAPC	**Finca la Perla**	**1.75**	**312**	*i* P	**Pn**	**03 21 17.1**	**-0.2**
BUEV	**Buena Vista**	**1.75**	**313**	*i* P	**Pn**	**03 21 17.1**	**-0.3**
NY14	**Universidad de**	**1.75**	**307**	*i* P	**Pn**	**03 21 17.9**	**+0.6**
GB1A	**Borinquen Arri**	**1.76**	**314**	*e*P	**Pn**	**03 21 17.4**	**-0.1**
GBS3	**Finca Las Img**	**1.77**	**312**	*i* P	**Pn**	**03 21 17.6**	**-0.1**
BCO2	**Palmira**	**1.79**	**119**	*e*P	**Pn**	**03 21 16.9**	**-1.1**
BCO2				*e*S	**Sn**	**03 21 40.5**	**+0.9**
DVD	**David**	**2.00**	**125**	*e*P	**Pn**	**03 21 20.2**	**-0.6**
DVD				*e*S	**Sn**	**03 21 47.2**	**+2.6**
CHGR2	**Aguacate**	**2.04**	**109**	*e*P	**Pn**	**03 21 21.5**	**+0.1**
CHGR2				*e*S	**Sn**	**03 21 46.9**	**+1.1**
CHIR3	**Chiriqui UPA,**	**2.12**	**124**	*e*P	**Pn**	**03 21 21.1**	**-1.3**
ACON	**Acoyapa**	**2.58**	**336**	*e*P	**Pn**	**03 21 28.8**	**+0.1**
ACON	**Acoyapa**	**2.58**	**336**		**Pn**	**03 21 28.9**	**+0.1**
ACON				Sn	**Sn**	**03 21 57.9**	**-1.0**
ESTN	**Estel**	**4.13**	**328**		**Pn**	**03 21 50.0**	**-0.2**
AZU	**Azuero**	**4.19**	**115**	*e*P	**Pn**	**03 21 50.5**	**-0.4**
AZU	**Azuero**	**4.19**	**115**	*e*P	**Pn**	**03 21 52.6**	**+1.7**
BCIP	**Isla Barro Col**	**4.23**	**95**	*e*P	**Pn**	**03 21 49.6**	**-1.8**
BCIP	**Isla Barro Col**	**4.23**	**95**		**Pn**	**03 21 51.7**	**+0.2**
UPA	**Univ. de Panam**	**4.55**	**97**	*e*P	**Pn**	**03 21 56.8**	**+0.9**
TGUH	**Tegucigalpa,Un**	**5.41**	**325**	*e*P	**Pn**	**03 22 09.8**	**+2.1**
TGUH	**Tegucigalpa,Un**	**5.41**	**325**	Pn	**Pn**	**03 22 07.5**	**-0.3**
SOLC	**Bahia Solano**	**7.43**	**116**	*e*P	**Pn**	**03 22 33.6**	**-1.8**
APG	**El Apazote**	**8.21**	**311**	Pn	**Pn**	**03 22 48.7**	**+2.3**
	0.9nm,0.3s,baz=295,slow=20,SNR=9.5						
APG				LR	LR	03 26 11.8	
	comp=Z,151nm,19.1s,baz=104,slow=40						
DBBC	**Dabeiba**	**8.22**	**108**	*e*P	**Pn**	**03 22 49.1**	**+2.8**
CBOC	**Ciudad Bolivar**	**8.84**	**114**	*e*P	**Pn**	**03 22 55.4**	**+0.5**
HELC	**Santa Helena**	**9.14**	**111**	*e*P	**Pn**	**03 23 01.1**	**+1.8**
GUY2C	**Guyana, Caldas**	**9.70**	**116**	*e*P	**Pn**	**03 23 09.6**	**+2.7**
ORTC	**Ortega, Tolima**	**10.46**	**122**	*e*P	**Pn**	**03 23 18.3**	**+1.4**
PRAC	**Prado**	**10.86**	**122**	*e*P	**Pn**	**03 23 25.4**	**+2.9**
TEIG	**Tepich**	**11.31**	**340**	LR	LR	03 28 06.0	
	comp=Z,73nm,18.8s,baz=51,slow=39						
RUSC	**La Rusia**	**11.53**	**108**	Pn	**Pn**	**03 23 33.9**	**+1.9**
CMIG	**Matias Romero**	**12.86**	**307**	Pn	**Pn**	**03 23 49.5**	**-0.3**
	1.3nm,0.3s,baz=141,slow=9.4,SNR=13						
SDV	**Santo Domingo**	**13.32**	**92**	Pn	**Pn**	**03 23 57.7**	**+1.5**
	0.3nm,0.3s,baz=294,slow=3.6,SNR=6.3						
SDV				LR	LR	03 29 58.8	
	comp=Z,65nm,21.9s,baz=250,slow=42						
TLIG	**Tlapa**	**16.12**	**301**	P	**P**	**03 24 34.3**	**-1.9**
TLIG				IAmb	IAmb	03 24 42.0	
	comp=Z,9.1nm,1.0s						
344A	**Westbrook Farm**	**22.60**	**345**	P	**P**	**03 25 46.2**	**-0.5**
344A				IAmb	IAmb	03 25 47.6	
	comp=Z,35nm,0.8s						
LRAL	**Lakeview Retre**	**23.48**	**354**	P	**P**	**03 25 54.5**	**-0.9**
LRAL				IAmb	IAmb	03 25 57.1	
	comp=Z,6.9nm,1.1s						
HODGE	**Hodges**	**24.58**	**4**	P	**P**	**03 26 05.0**	**-0.7**
HODGE				IAmb	IAmb	03 26 18.7	
	comp=Z,2.2nm,0.8s						
JSC	**Jenkinsville**	**24.71**	**6**	P	**P**	**03 26 06.3**	**-0.5**
JSC				IAmb	IAmb	03 26 13.8	
	comp=Z,5.3nm,1.2s						
TXAR	**Lajitas Array**	**26.86**	**320**	P	**P**	**03 26 25.5**	**-1.0**
	comp=Z,0.2nm,0.4s,baz=142,slow=9.8,SNR=7.0						
TXAR	**Lajitas Array**	**26.86**	**320**	P	**P**	**03 26 26.8**	**+0.3**
MSU	**Marysvale**	**38.24**	**323**	P	**P**	**03 28 09.7**	**+3.7**
BDFB	**Brasilia**	**43.66**	**125**	LR	LR	03 49 00.6	
	comp=Z,86nm,18.1s,baz=178,slow=39						
YKA	**Yellowknife Ar**	**57.23**	**344**	P	**P**	**03 30 28.9**	**-3.5**
	comp=Z,0.1nm,0.4s,baz=143,slow=6.9,SNR=6.8						
TOLK	**Toolik Lake Re**	**72.29**	**340**	P	**P**	**03 32 09.6**	**-0.9**
SVW2	**Sparrevohn**	**72.72**	**331**	P	**P**	**03 32 13.2**	**0.0**
ESDC	**Sonseca Array**	**76.37**	**51**	P	**P**	**03 32 33.3**	**-1.5**
	comp=Z,1.2nm,0.8s,baz=277,slow=5.0,SNR=5.0						
ESDC	**Sonseca Array**	**76.37**	**51**	P	**P**	**03 32 33.0**	**-1.8**
TORD	**Torodi Ar. Bea**	**83.81**	**78**	P	**P**	**03 33 12.8**	**-2.6**
	comp=Z,0.5nm,0.8s,baz=282,slow=7.1,SNR=3.4						
TORD	**Torodi Ar. Bea**	**83.81**	**78**	P	**P**	**03 33 16.0**	**+0.6**
KSH	**Kashi**	**127.75**	**19**	*e*PKP	**PKiKP**	**03 39 54.0**	**+2.3**
KSH				*e*PP	PP	03 42 01.5	+10
LZH	**Lanzhou**	**133.95**	**351**	*e*PKP	**PKPdf**	**03 40 02.3**	**-0.7**
LZH				pPKP	pPKPdf	03 40 14.0	-2.3
LZH				sPKP		03 40 19.0	

*NEIC **30** 03:34:40.5±1.3,6°.45S±0°.2×106°.4E±0°.1,h148km±10km, mb4.1/8,Error ellipse: s-maj=25.4km s-min=8.5km az=212.0*
*DJA **30** 03:34:41.2±0.4,7°.5S±6°×10°6E±°,h134km±5km,M4.3/13, mB5.2/1,mb5.0/1,MLv4.0/13,Mw(mB)4.5/1*
*IDC **30** 03:34:42.4±1.9,6°.44S×106°.40E,h157km±11km,mb3.6/8, mb1 3.8/8,mb1mx3.4/35,mbtmp4.0/8,Error ellipse: s-maj=51.0km s-min=12.2km az=52.0*

ISC 30 03:34:40.5±0.7,6°.62S±0°.08×106°.30E±0°.06,h149km±5km, n44,σ1°03/50,mb4.0/12,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DBJI	**Dramaga**	**0.45**	**82**	P	**Pn**	**03 35 01.9**	**+0.3**
DBJI				S	**Sn**	**03 35 17.3**	**-0.2**
SKJI	**Sukabumi**	**0.46**	**147**	P	**Pn**	**03 35 01.3**	**-0.3**
SKJI				S	**Sn**	**03 35 17.2**	**-0.5**
CBJI	**Citeko**	**0.58**	**70**	P	**Pn**	**03 35 02.6**	**+0.4**
CBJI				S	**Sn**	**03 35 19.5**	**+0.8**
CNJI	**Cibinong**	**1.07**	**130**	P	**Pn**	**03 35 05.1**	**-0.7**
CNJI				S	**Sn**	**03 35 22.2**	**-2.9**
LEM	**Lembang**	**1.32**	**99**	P	**Pn**	**03 35 09.6**	**+1.2**
	28nm,0.3s,baz=328,slow=5.1,SNR=12						
LEM				LR	LR	03 35 55.1	
	comp=Z,114nm,19.2s,baz=238,slow=57						
LEM	**Lembang**	**1.32**	**99**	P	**Pn**	**03 35 08.5**	**+0.1**
CISI	**Cisompet, Garu**	**1.77**	**122**	P	**Pn**	**03 35 12.8**	**-0.2**
CISI				S	**Sn**	**03 35 36.8**	**-1.1**
CISI	**Cisompet, Garu**	**1.77**	**122**		**Pn**	**03 35 13.3**	**+0.3**
CISI				Sn	**Sn**	**03 35 37.2**	**-0.7**
KASI	**Kota Agung**	**2.10**	**301**	P	**Pn**	**03 35 17.8**	**+1.0**
CMJI	**Cimerak**	**2.42**	**119**	P	**Pn**	**03 35 20.2**	**-0.5**
KLSI		**2.48**	**321**	P	**Pn**	**03 35 20.9**	**-0.4**
KPJI	**Karang Pucung**	**2.70**	**105**	P	**Pn**	**03 35 25.1**	**+1.0**
MDSI	**Maura Dua**	**2.99**	**315**	P	**Pn**	**03 35 28.9**	**+1.1**
MNAI	**Manna**	**4.02**	**304**	P	**Pn**	**03 35 41.4**	**+0.4**
MNAI	**Manna**	**4.02**	**304**	Pn	**Pn**	**03 35 41.6**	**+0.5**
MNAI					**Sn**	**03 36 26.6**	**-1.5**
TPI	**Tanjungpandan**	**4.07**	**19**	P	**Pn**	**03 35 41.3**	**-0.4**
UGM	**Wanagama**	**4.38**	**107**	Pn	**Pn**	**03 35 45.8**	**0.0**
UGM				Sn	**Sn**	**03 36 35.9**	**-0.7**
KSI	**Kapahiang**	**4.73**	**308**	P	**Pn**	**03 35 50.5**	**+0.1**
H01W3	**Cape Leeuwin H**	**29.04**	**167**	T	T	04 10 34.5	
	baz=341,slow=79,SNR=7.2						
H01W1	**Cape Leeuwin H**	**29.05**	**167**	T	T	04 10 30.6	
	baz=341,slow=79,SNR=6.8						
H01W2	**Cape Leeuwin H**	**29.05**	**167**	T	T	04 10 31.1	
	baz=341,slow=79,SNR=9.3						
WB0	**Warramunga Arr**	**30.24**	**118**	P	**P**	**03 40 38.4**	**+0.9**
WB0				IAmb	IAmb	03 40 44.0	
	comp=Z,2.1nm,0.9s						
WRA	**Warramunga Arr**	**30.26**	**119**	P	**P**	**03 40 39.7**	**+2.0**
	comp=Z,0.5nm,0.4s,baz=300,slow=9.2,SNR=4.5						
WRAB	**Tennant Creek**	**30.27**	**119**	P	**P**	**03 40 38.8**	**+1.0**
WRAB				IAmb	IAmb	03 40 44.4	
	comp=Z,5.1nm,1.1s						
WB2	**Warramunga Arr**	**30.27**	**119**	P	**P**	**03 40 38.5**	**+0.7**
WB2				IAmb	IAmb	03 40 49.9	
	comp=Z,7.2nm,1.1s						
WR0	**Warramunga Arr**	**30.44**	**119**	P	**P**	**03 40 39.2**	**-0.1**
ASAR	**Alice Springs**	**31.47**	**126**	P	**P**	**03 40 49.9**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=308,slow=9.5,SNR=5.8						
ASAR				S	**S**	**03 45 45.6**	**+0.1**
	comp=Z,2.2nm,1.1s,baz=299,slow=14,SNR=7.5						
H08S2	**Diego Garcia H**	**33.56**	**266**	T	T	04 15 39.4	
	baz=91						
H08S3	**Diego Garcia H**	**33.57**	**266**	T	T	04 15 40.3	
	baz=91						
H08S1	**Diego Garcia H**	**33.58**	**266**	T	T	04 15 35.8	
	baz=91						
COEN	**Coen**	**36.97**	**104**	P	**P**	**03 41 35.1**	**-0.7**
BBOO	**Buckleboo**	**38.00**	**137**	P	**P**	**03 41 45.5**	**+1.3**
BBOO				IAmb	IAmb	03 41 48.9	
	comp=Z,5.6nm,1.1s						
STKA	**Stephens Creek**	**41.41**	**132**	P	**P**	**03 42 14.6**	**+2.2**
	comp=Z,7.0nm,0.4s,baz=311,slow=7.6,SNR=32						
STKA	**Stephens Creek**	**41.41**	**132**	P	**P**	**03 42 12.7**	**+0.3**
STKA				IAmb	IAmb	03 42 15.2	
	comp=Z,1.6nm,0.5s						
KSRS	**Korea Array**	**48.27**	**23**	P	**P**	**03 43 06.8**	**+0.3**
	comp=Z,1.6nm,1.0s,baz=207,slow=8.8,SNR=4.6						
SONM	**Songino Array**	**54.22**	**0**	P	**P**	**03 43 50.7**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=182,slow=9.7,SNR=8.0						
SONM				PcP	**PcP**	**03 44 53.5**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=182,slow=4.4,SNR=5.1						
SONM	**Songino Array**	**54.22**	**0**	P	**P**	**03 43 49.9**	**-1.0**
SONM				PcP	**PcP**	**03 44 52.8**	**-0.6**
MKAR	**Makanchi Array**	**57.30**	**341**	P	**P**	**03 44 11.2**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=155,slow=7.8,SNR=4.9						
MKAR				pP	**pP**	**03 44 48.5**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=147,slow=8.6,SNR=2.5						
MKAR				PcP	**PcP**	**03 45 05.8**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=138,slow=6.5,SNR=4.5						
MKAR	**Makanchi Array**	**57.30**	**341**	P	**P**	**03 44 10.2**	**-2.4**
FINES	**FINESS Array B**	**91.11**	**332**	P	**P**	**03 47 28.6**	**+0.6**
	comp=Z,3.7nm,0.9s,baz=94,slow=1.8,SNR=3.2						
FINES	**FINESS Array B**	**91.11**	**332**	P	**P**	**03 47 27.4**	**-0.6**
ARCES	**ARCESS Array B**	**92.94**	**340**	P	**P**	**03 47 36.4**	**0.0**
	comp=Z,1.6nm,0.8s,baz=120,slow=5.3,SNR=2.7						
TXAR	**Lajitas Array**	**143.83**	**48**	PKP	**PKPdf**	**03 53 58.4**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=292,slow=1.0,SNR=14						
TXAR	**Lajitas Array**	**143.83**	**48**		PKPbc	03 53 57.8	+0.9

*THE **30** 03:43:03.9,38°.28N×20°.41E,h10km±1km,ML2.5/3,Error ellipse: s-maj=1.2km s-min=0.3km az=243.0*
*ATH **30** 03:43:03.3,38°.28N×20°.40E,h13km±1km,ML2.5/3,Error ellipse: s-maj=2.2km s-min=1.0km az=249.0*

ISC 30 03:43:03.1±2.0,38°.28N±0°.03×20°.40E±0°.06,h14km±8km, n21,σ0°36/35,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.03**	**139**	P	**Pg**	**03 43 05.5**	**-0.1**
KEF4				S	**Sg**	**03 43 07.0**	**-0.4**
KEF1	**Kardakata, Kep**	**0.06**	**94**	P	**Pg**	**03 43 05.8**	**0.0**
KEF1				S	**Sg**	**03 43 07.0**	**-0.6**
KEF3	**Kipouria, Keph**	**0.09**	**207**	P	**Pg**	**03 43 06.2**	**+0.1**
KEF3				S	**Sg**	**03 43 07.9**	**-0.2**
CHV1	**Chavriata, Kef**	**0.10**	**188**	P	**Pg**	**03 43 06.4**	**+0.2**
CHV1				S	**Sg**	**03 43 08.6**	**+0.3**
ARG2	**Argostoli**	**0.12**	**146**	P	**Pg**	**03 43 06.7**	**+0.2**
ARG2				S	**Sg**	**03 43 08.9**	**+0.1**
KEF2	**Argostoli. Kep**	**0.14**	**149**	P	**Pg**	**03 43 06.7**	**0.0**
KEF2				S	**Sg**	**03 43 08.8**	**-0.3**
VSK1	**VASILIKIADES**	**0.18**	**46**	P	**Pg**	**03 43 07.7**	**+0.3**
VSK1				S	**Sg**	**03 43 10.6**	**+0.3**
VLS	**Valsamata**	**0.18**	**125**	P	**Pg**	**03 43 07.5**	**+0.1**
VLS				S	**Sg**	**03 43 10.6**	**+0.3**
	3µm,0.1s						
VLS	**Valsamata**	**0.18**	**125**	P	**Pg**	**03 43 07.3**	**-0.1**
VLS				S	**Sg**	**03 43 10.1**	**-0.3**
VLS				AML	AML	03 43 10.7	
	comp=N,5462µm,0.1s						
VLS				AML	AML	03 43 10.7	
	comp=E,6404µm,0.1s						
FSK	**Fiskardo**	**0.22**	**36**	P	**Pg**	**03 43 08.4**	**+0.4**
FSK				S	**Sg**	**03 43 11.6**	**+0.3**
	comp=E,628nm,0.3s						
FSK	**Fiskardo**	**0.22**	**36**	P	**Pg**	**03 43 08.2**	**+0.2**
FSK				S	**Sg**	**03 43 11.2**	**-0.1**
FSK				AML	AML	03 43 12.5	
	comp=N,655µm,0.2s						
FSK				AML	AML	03 43 12.6	
	comp=E,1801µm,0.1s						
KFL	**Anninata**	**0.35**	**119**	P	**Pg**	**03 43 10.4**	**+0.1**
KFL				S	**Sg**	**03 43 16.0**	**+0.9**
	comp=E,1µm,0.3s						
KFL	**Anninata**	**0.35**	**119**	P	**Pg**	**03 43 10.2**	**0.0**
KFL				S	**Sg**	**03 43 15.1**	**0.0**
KFL				AML	AML	03 43 16.3	
	comp=N,2043µm,0.3s						
KFL				AML	AML	03 43 16.4	
	comp=E,3677µm,0.4s						
EVGI	**Lefkada island**	**0.40**	**31**	P	**Pg**	**03 43 10.8**	**-0.3**
EVGI				S	**Sg**	**03 43 16.9**	**+0.4**
VLMS	**Volimes, Zakyn**	**0.46**	**153**	P	**Pg**	**03 43 12.1**	**-0.1**
LKD2	**Lefkada island**	**0.55**	**22**	P	**Pg**	**03 43 14.1**	**+0.2**
TSLK	**Tsoukalades, L**	**0.58**	**20**	P	**Pg**	**03 43 14.1**	**-0.4**
PDO	**Prodromos**	**0.69**	**63**	P	**Pg**	**03 43 16.7**	**+0.1**
PDO	**Prodromos**	**0.69**	**63**	P	**Pg**	**03 43 15.7**	**-0.9**
PVO	**Paravola**	**0.95**	**69**	P	**Pg**	**03 43 21.7**	**+0.3**
PVO	**Paravola**	**0.95**	**69**	P	**Pg**	**03 43 20.9**	**-0.5**

*IDC **30** 04:25:40.0±4.8,35°.09S×179°.14E,h101km±38km,mb4.3/5, mb1 4.5/6,mb1mx4.0/22,mbtmp4.6/6,MS3.3/2,Ms1 3.2/2, ms1mx2.7/32,Error ellipse: s-maj=39.1km s-min=21.1km az=56.0*
*WEL **30** 04:25:40.6±1.0,35°.5S±5°×18°0E±°,h33km,M4.5/18, ML4.7/18,MLv4.5/18*
*NEIC **30** 04:25:42.1±0.7,35°.47S±0°.10×179°.3E±0°.2,h134km±7km, mb4.7/9,ML4.5(WEL),Error ellipse: s-maj=18.7km s-min=14.1km az=75.0*

ISC 30 04:25:47.0±1.4,35°.7S±0°.1×179°.0E±0°.1,h168km±10km, n113,σ1°86/109,mb4.5/9,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.95**	**197**	P	**Pn**	**04 26 18.5**	**-4.1**
MXZ				Sn	**Sn**	**04 26 47.4**	**-2.9**
HAZ	**Te Kaha**	**2.29**	**205**	P	**Pn**	**04 26 25.0**	**-1.4**
HAZ				S	**Sn**	**04 26 59.8**	**+2.8**
PUZ	**Puketiti**	**2.45**	**194**	P	**Pn**	**04 26 27.1**	**-1.2**
RUGZ	**Raukumara Rang**	**2.51**	**205**	P	**Pn**	**04 26 28.3**	**-0.9**
TWGZ	**Tauwhareparae**	**2.61**	**198**	P	**Pn**	**04 26 29.5**	**-0.8**
TWGZ				S	**Sn**	**04 27 09.1**	**+5.0**
WHRZ	**Whale Island**	**2.71**	**217**	P	**Pn**	**04 26 32.9**	**+1.4**
CNGZ	**Carnagh Statio**	**2.86**	**193**	P	**Pn**	**04 26 32.4**	**-0.9**
KUZ	**Kuaotunu**	**2.87**	**248**	P	**Pn**	**04 26 33.1**	**-0.2**
MWZ	**Matawai**	**2.89**	**204**	P	**Pn**	**04 26 33.0**	**-0.7**
MWZ				S	**Sn**	**04 27 12.6**	**+2.5**
TKGZ	**Te Karaka**	**2.90**	**199**	P	**Pn**	**04 26 32.7**	**-0.9**
TKGZ				S	**Sn**	**04 27 14.4**	**+4.3**
MARZ	**Manawahe**	**2.96**	**219**	P	**Pn**	**04 26 34.8**	**+0.3**
URZ	**Urewera**	**2.98**	**210**	P	**Pn**	**04 26 33.4**

FITZ	**Fitzroy Crossi**	**50.12**	**276**	P	**P**	**04 34 25.6**	**+0.3**
FITZ				IAmb	IAmb	04 34 29.1	
	comp=Z,8.9nm,0.8s						
QSPA	**South Pole Qui**	**54.43**	**180**	P	P	04 35 02.3	+5.8
	comp=Z,5.0nm,0.8s,baz=17,slow=1.1,SNR=17						
QSPA	**South Pole Qui**	**54.43**	**180**	P	**P**	**04 34 57.4**	**+0.9**
SNAA	**Sanae**	**72.92**	**179**	P	**P**	**04 37 01.0**	**+3.6**
VNA3	**Neumayer Olymp**	**73.18**	**177**	P	**P**	**04 37 02.8**	**+4.0**
VNA2	**Neumayer--Watz**	**73.58**	**178**	P	P	04 37 05.4	+4.3
	baz=158,slow=7.3						
VNA1	**Neumayer--Stat**	**73.83**	**177**	P	P	04 37 06.6	+4.1
PETK	**Petropavlovsk-**	**90.36**	**347**	P	**P**	**04 38 27.4**	**-1.1**
	comp=Z,3.4nm,0.5s,baz=134,slow=6.4,SNR=13						
PETK	**Petropavlovsk-**	**90.36**	**347**	P	**P**	**04 38 26.9**	**-1.6**
CMAR	**Chiang Mai Arr**	**92.85**	**291**	P	**P**	**04 38 42.4**	**+1.6**
	comp=Z,1.4nm,0.5s,baz=149,slow=4.2,SNR=4.3						
YKA	**Yellowknife Ar**	**111.29**	**27**	PKiKP	**PKiKP**	**04 44 00.6**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=259,slow=1.8,SNR=12						
MKAR	**Makanchi Array**	**119.18**	**309**	PKP	**PKPdf**	**04 44 14.9**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=228,slow=0.8,SNR=7.6						
MKAR	**Makanchi Array**	**119.18**	**309**		**PKPdf**	**04 44 15.0**	**-0.6**
KKAR	**Karatay Array**	**125.79**	**301**		**PKPdf**	**04 44 27.4**	**-1.0**
ARCES	**ARCESS Array B**	**143.13**	**345**	PKHKP	PKPpre	04 44 56.6	
	comp=Z,4.1nm,0.9s,baz=37,slow=0.6,SNR=6.3						
FIA1	**FINESS Array S**	**149.06**	**335**	PKPdf	**PKPdf**	**04 45 10.2**	**+0.2**
FINES	**FINESS Array B**	**149.06**	**335**	PKPbc	**PKPbc**	**04 45 13.3**	**-1.1**
	comp=Z,17nm,0.8s,baz=56,slow=3.8,SNR=48						
FINES	**FINESS Array B**	**149.06**	**335**	PKPdf	**PKPdf**	**04 45 10.2**	**+0.2**
DBIC	**Dimbokro**	**150.89**	**172**	PKPbc	**PKiKP**	**04 45 22.1**	**+1.3**
	comp=Z,1.9nm,0.5s,baz=205,slow=2.0,SNR=7.4						
DBIC	**Dimbokro**	**150.89**	**172**		**PKPbc**	**04 45 19.6**	**-0.6**
BR131	**Keskin Array S**	**152.42**	**289**		**PKPbc**	**04 45 22.8**	**-0.4**
BRTR	**Keskin Array B**	**152.42**	**289**	PKPbc	**PKPbc**	**04 45 22.6**	**-0.5**
	comp=Z,2.9nm,0.8s,baz=154,slow=3.7,SNR=14						
BRTR	**Keskin Array B**	**152.42**	**289**		**PKPbc**	**04 45 22.3**	**-0.9**
NB2	**NORSAR Subarra**	**153.47**	**347**	PKPdf	**PKPbc**	**04 45 24.1**	**-0.5**
	comp=Z,2.3nm,0.7s,baz=31,slow=1.9						
NOA	**NORSAR Array B**	**153.47**	**347**	PKPbc	**PKPbc**	**04 45 24.4**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=30,slow=2.0,SNR=6.8						
AKASG	**Malin Array Be**	**153.59**	**314**	PKPbc	**PKPbc**	**04 45 24.7**	**-0.4**
	comp=Z,1.9nm,0.5s,baz=63,slow=3.0,SNR=12						
AKASG				PKPab	**PKPab**	**04 45 37.4**	**-1.1**
	comp=Z,1.4nm,0.5s,baz=56,slow=4.3,SNR=8.0						
AKASG	**Malin Array Be**	**153.59**	**314**		**PKPbc**	**04 45 24.6**	**-0.6**
TORD	**Torodi Ar. Bea**	**157.42**	**187**	PKP	**PKPdf**	**04 45 24.6**	**+1.1**
	comp=Z,1.1nm,1.0s,baz=262,slow=1.3,SNR=4.1						
TORD				PKPab	**PKPab**	**04 45 57.9**	**+2.3**
	comp=Z,1.2nm,0.7s,baz=146,slow=4.3,SNR=5.2						

*NEIC **30** 04:45:51.9±1.7, 17.°89S×0.°05×174.°6W×0.°1, h10km±1km, mb4.6/7, Error ellipse: s-maj=18.6km s-min=5.7km az=251.0*

*IDC **30** 04:45:52.0±1.2, 17.°86S×174.°59W, h0km, mb4.1/5, mb1 4.4/6, mb1mx3.9/51, mbtmp4.1/6, ML3.7/1, MS4.0/19, Ms1 4.0/19, ms1mx3.9/35, Error ellipse: s-maj=53.1km s-min=21.7km az=134.0*

*GCMT **30** 04:45:57.9±0.2, 17.°84S±0.°03×174.°40W±0.°01, h15km, MW4.9/82, Moment Tensor Solution. s31,c38; s82,c115; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr=2.77±.17; Mθθ=0.09±.11; Mφφ=2.68±.11; Mrθ=-0.34±.27; Mrφ=0.57±.07; Mθφ=0.88±.20; Best double couple: Mo=2.94×10^16 NP1:φs=22.00000°,δ38.00000°,λ=-74.00000°. NP2: φs=182.00000°,δ54.00000°,λ=-102.00000°. Principal axes: T 2.9120, Plg8.0000°, Azm280.0000°; N 0.0540, Plg10.0000°, Azm189.0000°; P -2.9700, Plg77.0000°, Azm50.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 04:45:52.1±0.6, 17.°87S±0.°08×174.°57W±0.°09, h10km, n57, σ0.°90/27, mb4.3/8, MS4.1/20, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	**4.57**	**106**	Pn	**Pn**	**04 47 01.6**	**+0.3**
NIUE				Sn	**Sn**	**04 47 54.0**	**-0.4**
AFI	**Afiamalu**	**4.77**	**35**	Pn	**Pn**	**04 47 04.3**	**+0.2**
	3.4nm,0.3s,baz=73,slow=14,SNR=5.7						
AFI				T	T	04 52 01.4	
	14nm,0.3s,baz=51,slow=22,SNR=5.0						
AFI	**Afiamalu**	**4.77**	**35**		**Pn**	**04 47 04.9**	**+0.7**
AFI				Sn	**Sn**	**04 47 59.0**	**-0.6**
RAR	**Rarotonga**	**14.34**	**106**	LR	LR	04 53 32.9	
	comp=Z,526nm,20.4s,baz=279,slow=32						
DZM	**Mont Dzumac**	**18.33**	**254**	eLR	LR	04 54 30.8	
	comp=Z,2μm,25.3s						
DZM	**Mont Dzumac**	**18.33**	**254**	LR	LR	04 56 02.0	
	comp=Z,1μm,20.9s,baz=63,slow=33						
URZ	**Urewera**	**21.58**	**198**	P	**P**	**04 50 43.2**	**+1.2**
	3.8nm,0.7s,baz=342,slow=9.6,SNR=3.4						
URZ	**Urewera**	**21.58**	**198**		**P**	**04 50 41.0**	**-1.0**
URZ				IAmb	IAmb	04 50 50.9	
	comp=Z,18nm,1.2s						
PAE	**Paea**	**23.80**	**93**	eT	T	05 15 01.4	
	comp=Z,5.5nm,0.3s						
PPT2	**Papeete2**	**23.80**	**93**	eLR	LR	04 56 48.9	
	comp=Z,2μm,26.5s,baz=260						
PPT2	**Papeete2**	**23.80**	**93**	eT	T	05 15 02.8	
	comp=Z,6.6nm,0.4s						
PPT	**Papeete**	**23.81**	**93**	LR	LR	04 57 52.9	
	comp=Z,334nm,20.2s,baz=258,slow=30						
TVO	**Taravao**	**24.10**	**94**	eT	T	05 15 24.5	
	comp=Z,3.1nm,0.4s						
TBI	**Tubuai**	**24.11**	**107**	eLR	LR	04 57 04.4	
	comp=Z,2μm,27.8s,baz=279						
TBI	**Tubuai**	**24.11**	**107**	eT	T	05 15 37.5	
	comp=Z,6.2nm,0.4s						
MEH	**Mehetia**	**25.22**	**94**	eT	T	05 16 48.8	
	comp=Z,31nm,0.2s						
TAOE	**Nuku Hiva Isla**	**34.61**	**80**	eLR	LR	05 01 41.2	
	comp=Z,789nm,26.9s						
H11S2	**WAKE ISLAND Hy**	**40.55**	**332**	T	T	05 37 29.0	
	baz=149,slow=75,SNR=14						
H11S3	**WAKE ISLAND Hy**	**40.57**	**332**	T	T	05 37 28.8	
	baz=149,slow=75,SNR=7.6						
H11S1	**WAKE ISLAND Hy**	**40.57**	**332**	T	T	05 37 17.0	
	baz=149,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**41.55**	**333**	T	T	05 38 10.1	
	baz=151,slow=76,SNR=13						
H11N1	**WAKE ISLAND Hy**	**41.55**	**333**	T	T	05 38 04.4	
	baz=151,slow=76,SNR=21						
H11N2	**WAKE ISLAND Hy**	**41.56**	**333**	T	T	05 38 05.4	
	baz=151,slow=76,SNR=17						
STKA	**Stephens Creek**	**41.86**	**242**	LR	LR	05 08 47.7	
	comp=Z,214nm,18.5s,baz=50,slow=33						
WRA	**Warramunga Arr**	**48.23**	**259**	P	**P**	**04 54 34.7**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=96,slow=7.3,SNR=9.8						
WRA				LR	LR	05 13 22.9	
	comp=Z,527nm,20.8s,baz=90,slow=34						
AS31	**Alice Springs**	**48.32**	**254**	P	**P**	**04 54 33.9**	**-0.3**
ASAR	**Alice Springs**	**48.32**	**254**	P	**P**	**04 54 35.2**	**+1.0**
	comp=Z,3.3nm,0.8s,baz=90,slow=8.2,SNR=22						
ASAR	**Alice Springs**	**48.32**	**254**	P	**P**	**04 54 33.9**	**-0.3**
SAUI	**Saumlaki**	**53.51**	**273**	P	**P**	**04 55 12.4**	**-0.9**
NWAO	**Narrogin (SRO)**	**62.45**	**242**	LR	LR	05 20 24.5	
	comp=Z,130nm,18.3s,baz=64,slow=33						
DAV	**Davao City (W)**	**64.06**	**287**	LR	LR	05 21 22.2	
	comp=Z,205nm,19.0s,baz=118,slow=33						
MJAR	**Matsushiro Arr**	**70.12**	**321**	LR	LR	05 22 54.9	
	comp=Z,48nm,22.0s,baz=215,slow=32						
QSPA	**South Pole Qui**	**72.19**	**180**	P	**P**	**04 57 17.1**	**0.0**
QSPA				IAmb	IAmb	04 57 33.6	
	comp=Z,3.0nm,1.1s						
H06E1	**SOCORRO T-PHAS**	**72.36**	**63**	T	T	06 16 28.9	
	SNR=5.0						
JNU	**Nakatsue**	**72.69**	**314**	LR	LR	05 24 14.3	
	comp=Z,85nm,20.5s,baz=168,slow=32						
ASAJ	**Asahikawa**	**73.06**	**329**	LR	LR	05 23 11.5	
	comp=Z,63nm,21.0s,baz=150,slow=31						
KSRS	**Korea Array**	**77.15**	**316**	LR	LR	05 27 59.1	
	comp=Z,81nm,18.9s,baz=141,slow=33						
USRK	**Ussuriysk Ar.**	**78.69**	**324**	LR	LR	05 26 15.8	
	comp=Z,157nm,21.9s,baz=136,slow=31						
KLR	**Kul'dur**	**81.99**	**328**	LR	LR	05 29 31.3	
	comp=Z,48nm,20.7s,baz=162,slow=32						
TXAR	**Lajitas Array**	**82.91**	**56**	LR	LR	05 28 17.5	
	comp=Z,46nm,20.4s,baz=0.0,slow=31						
MCMT	**McKenzie Canyo**	**83.87**	**39**	P	**P**	**04 58 20.7**	**-1.7**
S22A	**4UR Ranch, Cre**	**84.26**	**48**	P	**P**	**04 58 24.6**	**0.0**
S22A				IAmb	IAmb	04 58 34.0	
	comp=Z,6.9nm,1.1s						
WRH	**Wood River Hil**	**84.58**	**11**	P	**P**	**04 58 25.7**	**+0.5**
WRH				IAmb	IAmb	04 58 32.8	
	comp=Z,8.6nm,1.2s						
PDAR	**Pinedale Array**	**84.84**	**42**	P	**P**	**04 58 29.1**	**+1.7**
	comp=Z,1.3nm,0.8s,baz=190,slow=4.2,SNR=6.1						
PDAR				LR	LR	05 29 40.4	
	comp=Z,81nm,19.7s,baz=246,slow=31						
PDAR	**Pinedale Array**	**84.84**	**42**	P	**P**	**04 58 27.2**	**-0.2**
YHL	**Hebgen Lake**	**84.89**	**40**	P	**P**	**04 58 26.8**	**-0.9**
ILAR	**Eielson Array**	**85.08**	**12**	P	**P**	**04 58 28.8**	**+1.0**
	comp=Z,1.8nm,1.1s,baz=207,slow=6.0,SNR=7.6						
ILAR				LR	LR	05 28 20.5	
	comp=Z,38nm,22.0s,baz=198,slow=30						
ILAR	**Eielson Array**	**85.08**	**12**	P	**P**	**04 58 28.4**	**+0.7**
PSI	**Prapat**	**87.53**	**274**	LR	LR	05 40 06.6	
	comp=Z,87nm,18.7s,baz=104,slow=37						
PLCA	**Paso Flores**	**88.68**	**132**	LR	LR	05 29 16.7	
	comp=Z,81nm,21.8s,baz=259,slow=29						
ULM	**Lac du Bonnet**	**96.55**	**39**	LR	LR	05 35 48.1	
	comp=Z,103nm,19.1s,baz=279,slow=31						
CLL	**Collm**	**146.10**	**351**	*e*PKPbc	**PKPab**	**05 05 34.0**	**+1.1**
	comp=Z,8.0nm,0.9s						
DPC	**Dobruska-Polom**	**146.44**	**347**	*e*PKP	**PKiKP**	**05 05 37.2**	**+0.7**
BRTR	**Keskin Array B**	**147.29**	**318**	PKPbc	**PKPab**	**05 05 37.7**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=49,slow=3.8,SNR=5.9						
BRTR	**Keskin Array B**	**147.29**	**318**	PKPdf	**PKPdf**	**05 05 32.6**	**-1.5**
KHC	**Kasperske Hory**	**148.13**	**350**	*e*PKP	**PKPab**	**05 05 40.5**	**-0.5**
GERES	**GERESS Array B**	**148.38**	**350**	PKPbc	**PKiKP**	**05 05 40.7**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=7.0,slow=4.1,SNR=6.3						

IDC 30 04:46:58.9±20.0, 4.°48S×150.°88E, h308km±179km, mb3.0/4, mb1 3.2/4, mb1mx2.8/40, mbtmp3.6/4, Error ellipse: s-maj=105.7km s-min=42.7km az=67.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.27**	**225**	P	P	04 51 30.8	0.0
	0.9nm,0.4s,baz=53,slow=9.6,SNR=16						
ASAR	**Alice Springs**	**25.14**	**219**	P	P	04 51 56.0	-0.8
	0.3nm,0.5s,baz=50,slow=8.5,SNR=3.7						
FITZ	**Fitzroy Crossi**	**28.15**	**239**	P	P	04 52 24.4	+0.8
	1.1nm,0.3s,baz=58,slow=8.7,SNR=5.6						
MKAR	**Makanchi Array**	**78.84**	**319**	P	P	04 58 28.1	-0.1
	0.2nm,0.5s,baz=93,slow=6.0,SNR=5.1						
TORD	**Torodi Ar. Bea**	**148.39**	**288**	PKPbc	PKPbc	05 06 09.0	-1.1
	2.5nm,1.0s,baz=75,slow=2.5,SNR=21						
BDFB	**Brasilia**	**152.62**	**137**	PKPbc	PKiKP	05 06 21.7	+1.3
	3.3nm,0.9s,baz=204,slow=5.6,SNR=3.6						

*IDC **30** 04:50:29.5±2.0, 35.°95N×96.°82W, h0km, mb3.3/1, mb1 3.4/3, mb1mx3.2/39, mbtmp3.1/3, ML2.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.2/22, Error ellipse: s-maj=35.1km s-min=14.1km az=107.0*

*TUL **30** 04:50:30.6±0.8, 35.°95N±0.°02×96.°92W±0.°01, h6km±4km, ML3.2, Error ellipse: s-maj=2.3km s-min=1.3km az=157.0*

*ANF **30** 04:50:30.3±0.3, 35.°91N×96.°93W, h0km, ML3.9/6, Error ellipse: s-maj=3.5km s-min=2.9km az=171.0*

ISC 30 04:50:27.8±1.3, 35.°94N±0.°03×96.°85W±0.°03, h1km±11km, n54, σ1.°75/66, Oklahoma

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OK005	**Luther M Schoo**	**0.40**	**224**	Pg	**Pb**	**04 50 37.6**	**-0.1**
OK005				Sg	**Sb**	**04 50 43.0**	**-1.3**
ADOK	**Arcadia Dam**	**0.51**	**236**		**Pb**	**04 50 39.5**	**-0.2**
ADOK				Sg	**Sb**	**04 50 46.7**	**-0.9**
OK001	**Jones High Sch**	**0.52**	**223**	Pg	**Pg**	**04 50 37.3**	**-0.5**
OK001				Sg	**Sb**	**04 50 47.0**	**-0.9**
OKCFA	**Oklahoma City**	**0.72**	**223**		**Pb**	**04 50 43.6**	**+0.5**
OKCFA				Sg	**Sb**	**04 50 53.3**	**-0.2**
OKCSW	**OKLAHOMA CITY**	**0.72**	**222**		**Pb**	**04 50 43.6**	**+0.4**
OKCSW				Sg	**Sb**	**04 50 53.4**	**-0.1**
W35A	**Tecumseh**	**0.79**	**181**		**Pn**	**04 50 45.7**	**-0.5**
W35A				Sg	**Sn**	**04 50 56.7**	**-1.9**
FNO	**Franklin**	**0.82**	**213**		**Pn**	**04 50 45.9**	**-0.6**
FNO				Sg	**Sn**	**04 50 57.4**	**-1.9**
TUL1	**Leonard**	**0.86**	**92**	Pg	**Pn**	**04 50 47.8**	**+0.6**
TUL1				Sg	**Sn**	**04 50 59.8**	**-0.6**
TUL1	**Leonard**	**0.86**	**92**	P	**Pn**	**04 50 47.7**	**+0.6**
	baz=271						
TUL1				S	**Sn**	**04 51 00.1**	**-0.3**
	baz=271						
X34A	**Smith Ranch, M**	**1.56**	**211**		**Pg**	**04 50 58.4**	**+0.7**
X34A				Sg	**Sg**	**04 51 20.4**	**+2.5**
U32A	**Winter Ranch,**	**1.79**	**285**		**Pb**	**04 51 01.6**	**0.0**
U32A				Sn	**Sb**	**04 51 23.1**	**-1.5**
WMOK	**Wichita Mounta**	**1.98**	**233**		**Pb**	**04 51 04.3**	**-0.4**
WMOK				Sg	**Sg**	**04 51 31.8**	**+0.3**
WMOK	**Wichita Mounta**	**1.98**	**233**	P	**Pb**	**04 51 04.7**	**0.0**
	baz=51						
WMOK				Sb	**Sg**	**04 51 31.3**	**-0.2**
	baz=51						
HHAR	**Hobbs**	**2.38**	**81**	Pn	**Pb**	**04 51 11.7**	**+0.2**
W39A	**Magazine**	**2.61**	**106**		**Pb**	**04 51 13.7**	**-1.7**
W39A	**Magazine**	**2.61**	**106**	P	**Pb**	**04 51 15.1**	**-0.3**
	baz=287						
MIAR	**Mount Ida**	**3.02**	**116**	Pn	**Pb**	**04 51 19.9**	**-2.6**
MIAR	**Mount Ida**	**3.02**	**116**	P	**Pb**	**04 51 21.0**	**-1.4**
	baz=298						
MIAR				S	**Sb**	**04 51 58.3**	**-1.5**
	baz=298						
KSU1	**Kansas State U**	**3.16**	**3**	Pb	**Pg**	**04 51 28.4**	**-0.1**
	baz=185						
KSU1				Sb	**Sg**	**04 52 09.9**	**+0.5**
	baz=185						
U40A	**Yellville**	**3.26**	**82**		**Pn**	**04 51 23.0**	**+2.8**
X40A	**Basin Creek Fa**	**3.59**	**113**		**Pn**	**04 51 27.1**	**+2.3**
CBKS	**Cedar Bluff**	**3.68**	**322**		**Pn**	**04 51 27.4**	**+1.5**
WHAR	**Wooly Hollow**	**3.77**	**99**	Pn	**Pn**	**04 51 29.8**	**+2.6**
WLAR	**White Oak Lake**	**3.81**	**125**	Pn	**Pn**	**04 51 30.1**	**+2.4**
W41B	**Gary Mavity, V**	**3.83**	**100**		**Pn**	**04 51 30.7**	**+2.7**
W41B	**Gary Mavity, V**	**3.83**	**100**	P	**Pn**	**04 51 31.2**	**+3.2**
	baz=282						
W41B				S	**Sn**	**04 52 17.5**	**+3.8**
	baz=282						
UALR	**University of**	**3.86**	**106**	Pn	**Pn**	**04 51 31.9**	**+3.4**
MGMO	**Mountain Grove**	**3.88**	**70**		**Pn**	**04 51 31.6**	**+2.9**
AMTX	**Amarillo**	**4.08**	**256**	Pn	**Pn**	**04 51 33.2**	**+1.7**
NATX	**Nacogdoches**	**4.55**	**156**	Pn	**Pn**	**04 51 39.6**	**+1.7**
LCAR	**Lake Charles**	**4.62**	**87**	Pn	**Pn**	**04 51 41.2**	**+2.3**
CCM	**Cathedral Cave**	**4.96**	**63**	Pn	**Pn**	**04 51 45.9**	**+2.4**
MSTX	**Muleshoe**	**5.25**	**250**	Pn	**Pn**	**04 51 49.4**	**+1.8**
BGNE	**Belgrade**	**5.55**	**351**	Pn	**Pn**	**04 51 53.0**	**+1.5**
JCT	**Junction City**	**5.98**	**205**	Pn	**Pn**	**04 51 59.2**	**+1.6**
GLAT	**Glass**	**6.13**	**85**	Pn	**Pn**	**04 51 59.8**	**+0.2**
T25A	**Trinidad**	**6.20**	**283**	Pn	**Pn**	**04 52 01.0**	**+0.2**
OXF	**Oxford**	**6.25**	**101**	Pn	**Pn**	**04 52 02.3**	**+1.0**
S44A	**Carbondale**	**6.34**	**72**	Pn	**Pn**	**04 52 05.8**	**+3.3**
OGNE	**Ogallala**	**6.44**	**322**	Pn	**Pn**	**04 52 03.0**	**-1.0**
N41A	**Harden Midland**	**6.70**	**43**	Pn	**Pn**	**04 52 08.7**	**+1.3**
SDCO	**Great Sand Dun**	**7.17**	**287**	Pn	**Pn**	**04 52 14.1**	**0.0**
PLAL	**Pickwick Lake**	**7.22**	**95**	Pn	**Pn**	**04 52 16.1**	**+1.5**
ECSD	**EROS Data Cent**	**7.79**	**1**		**Pn**	**04 52 23.9**	**+1.6**
ANMO	**Albuquerque**	**7.90**	**266**	Pg	Pg	04 52 54.5	-4.8
	0.3nm,0.3s,baz=97,slow=16,SNR=9.9						
ANMO				Lg	Lg	04 54 34.6	
	0.5nm,0.3s,baz=350,slow=19,SNR=4.0						
T47A	**Sharon Grove**	**7.92**	**80**	Pn	**Pn**	**04 52 26.3**	**+2.2**
ISCO	**Idaho Springs**	**7.93**	**302**	Pn	**Pn**	**04 52 25.5**	**+0.9**
MNTX	**Cornudas Mount**	**8.26**	**242**	Pn	**Pn**	**04 52 28.7**	**-0.2**
TXAR	**Lajitas Array**	**8.74**	**223**	Pn	**Pn**	**04 52 35.5**	**0.0**
	0.0nm,0.3s,baz=42,slow=12,SNR=3.4						
TXAR				Lg	Lg	04 55 06.0	
	1.2nm,0.3s,baz=46,slow=27,SNR=7.5						
TKL	**Tuckaleechee C**	**10.63**	**88**	Lg	Lg	04 56 00.9	
	0.4nm,0.3s,baz=350,slow=13,SNR=5.1						
PDAR	**Pinedale Array**	**11.96**	**309**	Pg	Pn	04 54 09.6	+50
	0.1nm,0.3s,baz=107,slow=21,SNR=4.4						
PDAR				Lg	Lg	04 56 40.5	
	0.1nm,0.3s,baz=114,slow=30,SNR=3.1						
ULM	**Lac du Bonnet**	**14.32**	**3**	Pn	**Pn**	**04 53 47.7**	**-4.0**
	0.2nm,0.3s,baz=178,slow=13,SNR=2.6						
ULM				Sn	Sn	04 56 20.1	-11
	0.2nm,0.3s,baz=108,slow=15,SNR=3.3						
ULM				Lg	Lg	04 57 57.9	
	0.2nm,0.3s,baz=270,slow=20,SNR=3.7						
SADO	**Sadowa**	**16.10**	**51**	LR	LR	04 59 56.8	
	comp=Z,47nm,19.2s,baz=327,slow=35						
ILAR	**Eielson Array**	**41.29**	**330**	P	**P**	**04 58 17.0**	**+2.5**
	0.6nm,1.0s,baz=97,slow=6.6,SNR=5.8						

*IDC **30** 04:55:36.5±0.8, 16.°24N×122.°39E, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.8/42, mbtmp3.9/9, MS3.6/3, Ms1 3.7/3, ms1mx3.0/32, Error ellipse: s-maj=52.3km s-min=16.6km az=70.0*

*MAN **30** 04:55:39.7, 16.°25N×122.°43E, h17km, mb5.1, ML4.0, MS4.2*

*NEIC **30** 04:55:39.8±1.7, 16.°23N±0.°09×122.°5E±0.°2, h32km±7km, mb4.3/10, Error ellipse: s-maj=25.4km s-min=12.4km az=77.0*

ISC 30 04:55:36.9±1.8, 16.°23N±0.°03×122.°51E±0.°05, h11km±12km, n48, σ0.°96/54, mb4.1/11, 3C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.84**	**355**	*e*P	**Pn**	**04 55 54.8**	**+0.2**
PALP				*e*S	**Sn**	**04 56 07.5**	**+0.5**
CAUP	**Cauayan**	**0.97**	**318**	*e*P	**Pb**	**04 55 55.9**	**+0.2**
CAUP				*e*S	**Sn**	**04 56 10.2**	**0.0**
BALP	**Baler**	**1.01**	**242**	*e*P	**Pn**	**04 55 57.2**	**+0.2**
BALP				*e*S	**Sn**	**04 56 11.8**	**+0.5**
PCPH	**Palayan**	**1.51**	**244↑**	*e*P	**Pb**	**04 56 04.9**	**0.0**
PCPH				*e*S	**Sg**	**04 56 26.6**	**+1.1**
POLP	**Polillo Island**	**1.58**	**200**	*e*P	**Pb**	**04 56 06.4**	**+0.2**
POLP				*e*S	**Sg**	**04 56 28.1**	**+0.1**
SMPP	**San Manuel, Pa**	**1.76**	**268**	*e*P	**Pn**	**04 56 08.2**	**+1.0**
SMPP				*e*S	**Sb**	**04 56 30.5**	**-0.7**
APYP	**Conner**	**2.03**	**324**	*e*P	**Pn**	**04 56 12.0**	**+1.0**
APYP				*e*S	**Sn**	**04 56 37.1**	**+0.8**
SGCP	**Mt. Cagua**	**2.05**	**348**	*e*P	**Pb**	**04 56 13.8**	**-0.4**
SGCP				*e*S	**Sb**	**04 56 39.4**	**-0.4**
ABRA	**Dolores**	**2.23**	**310**	*e*P	**Pn**	**04 56 14.2**	**+0.5**
ABRA				*e*S	**Sn**	**04 56 38.7**	**-2.5**
LQP	**Lukban**	**2.30**	**204⇓**	*e*P	**Pb**	**04 56 17.9**	**-0.6**
LQP				*e*S	**Sg**	**04 56 49.6**	**-1.3**
GQP	**Guinayangan**	**2.31**	**181⇑**	*e*P	**Pb**	**04 56 17.7**	**-0.8**
GQP				*e*S	**Sb**	**04 56 46.3**	**-0.8**
BOLP	**Bolinao**	**2.50**	**274**	*e*P	**Pb**	**04 56 21.2**	**-0.5**
BOLP				*e*S	**Sb**	**04 56 52.0**	**-0.5**
SIPP	**Brgy, Tapao**	**2.59**	**311⇓**	*e*P	**Pb**	**04 56 21.1**	**-2.2**
SIPP				*i* S	**Sg**	**04 57 00.5**	**+0.5**
TGY	**Tagaytay City**	**2.60**	**216**	*e*P	**Pn**	**04 56 17.8**	**-1.1**
TGY				*i* S	**Sg**	**04 57 01.1**	**+0.7**
YULB	**Yu-li**	**7.22**	**351**	Pn	**Pn**	**04 57 23.0**	**+0.5**
SSLB	**Suanglung**	**7.66**	**349**	Pn	**Pn**	**04 57 29.3**	**+0.7**
YHNB	**Yeheng**	**8.47**	**353**	Pn	**Pn**	**04 57 39.4**	**-0.2**
YHNB					**Sn**	**04 59 12.6**	**-2.7**
DAV	**Davao City (W)**	**9.58**	**161**	LR	LR	05 02 29.7	
	comp=Z,368nm,20.3s,baz=330,slow=43						
KSM	**Kuching**	**18.95**	**221**	P	**P**	**04 59 58.1**	**-0.2**
KSM				IAmb	IAmb	05 00 06.3	
	comp=Z,11nm,1.0s						
PBKT	**Sadao Pong**	**20.66**	**274**	P	**P**	**05 00 16.2**	**-0.7**
KSRS	**Korea Array**	**21.68**	**12**	P	**P**	**05 00 28.8**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=194,slow=11,SNR=2.7						
KS19	**Wonju Array Si**	**21.72**	**12**	P	**P**	**05 00 28.1**	**0.0**
KS19				IAmb	IAmb	05 00 32.5	
	comp=Z,11nm,1.1s						
CMAR	**Chiang Mai Arr**	**22.60**	**279**	LR	LR	05 09 43.5	
	comp=Z,142nm,18.5s,baz=96,slow=38						
SONM	**Songino Array**	**34.21**	**341**	P	**P**	**05 02 23.4**	**+0.8**
	comp=Z,0.7nm,0.5s,baz=163,slow=11,SNR=6.1						
SONM	**Songino Array**	**34.21**	**341**	P	**P**	**05 02 22.4**	**-0.2**
FITZ	**Fitzroy Crossi**

TNTI				Sn		**Sn**	**05 16 08.7**	**+0.4**
LBMI	**Labuha**	**1.96**	**162**	P		**Pn**	**05 16 15.2**	**+1.1**
LBMI				S		**Sn**	**05 16 37.7**	**-0.1**
KMSI	**Cibinong**	**2.99**	**257**	P		**Pn**	**05 16 28.6**	**+0.6**
SANI	**Sanana**	**3.39**	**196**	P		**Pn**	**05 16 32.5**	**-1.0**
SANI				S		**Sn**	**05 17 08.2**	**-4.4**
LUWI	**Luwuk**	**4.71**	**241**	P		**Pn**	**05 16 51.0**	**-0.4**
LUWI	**Luwuk**	**4.71**	**241**			**Pn**	**05 16 51.9**	**+0.5**
LUWI				Sn		**Sn**	**05 17 49.8**	**+5.0**
MSAI	**Masohi**	**4.99**	**156**	P		**Pn**	**05 16 58.6**	**+3.3**
MRSI	**Marisa**	**5.01**	**261**	P		**Pn**	**05 16 56.3**	**+0.7**
	0.4nm3µm79nm,0.5s							
SKMP	**Bagumbayan, Su**	**5.75**	**336**	*eP*		**Pn**	**05 17 04.9**	**-0.7**
SKMP				*eS*		**Sn**	**05 18 07.0**	**-3.2**
KCP	**Kidapawan**	**6.01**	**343**	*eP*		**Pn**	**05 17 10.2**	**+0.9**
KCP				*eS*		Sn	05 18 30.6	+14
KDI	**Kendari**	**6.71**	**220**	P		**Pn**	**05 17 18.4**	**-0.3**
	0.3nm27µm62nm,0.6s							
FAKI	**Fak Fak**	**6.76**	**128**	P		**Pn**	**05 17 18.8**	**-0.7**
	0.3nm85nm,1.1s							
FAKI	**Fak Fak**	**6.76**	**128**			**Pn**	**05 17 18.0**	**-1.4**
PAGZ	**Pagadian**	**7.44**	**332**	*eP*		**Pn**	**05 17 28.6**	**-0.2**
PAGZ				*eS*		Sn	05 18 36.0	-16
TTSI	**Tana Toraja**	**8.26**	**239**	P		**Pn**	**05 17 39.5**	**-0.5**
	38nm,0.7s							
SPSI	**Sidrap Palu**	**8.80**	**234**	P		**Pn**	**05 17 47.9**	**+0.5**
	5µm54nm,0.8s							
BKSI	**Bulukumba**	**9.40**	**226**	P		**Pn**	**05 17 55.1**	**-0.4**
	60nm,0.6s							
KAPI	**Kappang**	**9.46**	**229**	P		**Pn**	**05 17 57.3**	**+0.8**
	7.2nm,0.3s,baz=353,slow=5.5,SNR=12							
KAPI				S		**Sn**	**05 19 36.7**	**-4.6**
	1.2nm,0.3s,baz=54,slow=24,SNR=1.5							
KAPI	**Kappang**	**9.46**	**229**			**Pn**	**05 17 57.1**	**+0.6**
KAPI						**Sn**	**05 19 40.2**	**-1.1**
MTN	**Manton Dam**	**14.61**	**163**	Pn		**Pn**	**05 19 05.0**	**-0.9**
KNRA	**Kununurra**	**16.91**	**174**			**Pn**	**05 19 34.3**	**-0.7**
KNRA				IAmb		IAmb	05 19 37.6	
	comp=Z,42nm,1.0s							
FITZ	**Fitzroy Crossi**	**19.26**	**184**	P		**P**	**05 20 01.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=360,slow=12,SNR=4.4							
FITZ	**Fitzroy Crossi**	**19.26**	**184**	P		**P**	**05 20 00.4**	**-1.3**
FITZ				IAmb		IAmb	05 20 09.2	
	comp=Z,15nm,1.1s							
GUMO	**Guam**	**21.61**	**55**	LR		LR	05 27 42.7	
	comp=Z,125nm,21.7s,baz=123,slow=34							
WB0	**Warramunga Arr**	**22.14**	**161**	P		**P**	**05 20 32.1**	**-0.6**
WB0				IAmb		IAmb	05 20 51.2	
	comp=Z,19nm,1.1s							
WRAB	**Tennant Creek**	**22.28**	**161**	P		**P**	**05 20 33.6**	**-0.6**
WRA	**Warramunga Arr**	**22.28**	**161**	P		**P**	**05 20 33.5**	**-0.8**
	comp=Z,8.8nm,0.7s,baz=340,slow=11,SNR=9.7							
WRA	**Warramunga Arr**	**22.28**	**161**	P		**P**	**05 20 33.5**	**-0.8**
WB2	**Warramunga Arr**	**22.29**	**161**	P		**P**	**05 20 33.6**	**-0.8**
WB2				IAmb		IAmb	05 20 53.2	
	comp=Z,25nm,0.9s							
WR0	**Warramunga Arr**	**22.36**	**161**	P		**P**	**05 20 34.5**	**-0.7**
WR0				IAmb		IAmb	05 20 52.3	
	comp=Z,16nm,0.9s							
YULB	**Yu-li**	**22.68**	**347**	P		**P**	**05 20 36.9**	**-1.7**
TPUB	**Ta-pu**	**22.76**	**345**	P		**P**	**05 20 39.1**	**-0.2**
TPUB				IAmb		IAmb	05 20 45.8	
	comp=Z,22nm,1.4s							
SSLB	**Suanglung**	**23.14**	**346**	P		**P**	**05 20 45.1**	**+1.9**
PSA00	**Pilbara Seismi**	**23.70**	**197**	P		**P**	**05 20 49.0**	**+0.7**
PSA00	**Pilbara Seismi**	**23.70**	**197**	P		**P**	**05 20 47.9**	**-0.4**
PSA00				IAmb		IAmb	05 20 49.4	
	comp=Z,5.1nm,0.8s							
AS31	**Alice Springs**	**25.68**	**165**	P		**P**	**05 21 05.3**	**-1.0**
ASAR	**Alice Springs**	**25.68**	**165**	P		**P**	**05 21 06.0**	**-0.3**
	comp=Z,7.3nm,0.8s,baz=348,slow=12,SNR=41							
ASAR				PcP		**PcP**	**05 24 36.1**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=345,slow=2.1,SNR=5.0							
ASAR	**Alice Springs**	**25.68**	**165**	P		**P**	**05 21 04.7**	**-1.6**
FORT	**Forrest**	**31.86**	**178**	P		**P**	**05 22 01.9**	**+0.7**
MORW	**Morawa**	**31.88**	**198**	P		**P**	**05 22 01.2**	**-0.1**
MORW				IAmb		IAmb	05 22 02.2	
	comp=Z,5.9nm,1.0s							
BBOO	**Buckleboo**	**34.96**	**166**	P		**P**	**05 22 28.1**	**0.0**
STKA	**Stephens Creek**	**35.76**	**158**	P		**P**	**05 22 32.7**	**-2.4**
	comp=Z,2.9nm,0.7s,baz=338,slow=9.4,SNR=4.0							
STKA				LR		LR	05 40 24.0	
	comp=Z,106nm,19.2s,baz=17,slow=42							
STKA	**Stephens Creek**	**35.76**	**158**	P		**P**	**05 22 33.3**	**-1.7**
KSRS	**Korea Array**	**36.05**	**1**	P		**P**	**05 22 37.6**	**+0.2**
	comp=Z,0.7nm,0.7s,baz=179,slow=9.5,SNR=3.4							
XAN	**Xi'an**	**36.71**	**335**	P		**P**	**05 22 43.3**	**+0.1**
ARMA	**Armidale**	**39.32**	**145**	P		**P**	**05 23 07.0**	**+1.7**
BJT	**Baijiatuau**	**39.81**	**347**	P		**P**	**05 23 10.4**	**+1.4**
ASAJ	**Asahikawa**	**44.91**	**16**	LR		LR	05 40 42.3	
	comp=Z,88nm,21.5s,baz=147,slow=33							
KLR	**Kul'dur**	**47.99**	**4**	P		**P**	**05 24 15.3**	**+0.9**
	comp=Z,0.5nm,0.4s,baz=157,slow=13,SNR=2.9							
ULN	**Ulaanbaatar**	**49.52**	**343**	P		**P**	**05 24 26.4**	**-0.1**
SONM	**Songino Array**	**49.70**	**342**	P		**P**	**05 24 29.1**	**+1.4**
	comp=Z,3.0nm,0.9s,baz=150,slow=9.4,SNR=18							
SONM				PcP		**PcP**	**05 25 49.3**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=173,slow=4.8,SNR=3.0							
SONM	**Songino Array**	**49.70**	**342**	P		**P**	**05 24 28.4**	**+0.6**
MK31	**Makanchi Array**	**59.69**	**326**	P		**P**	**05 25 41.0**	**+1.0**
MK31				IAmb		IAmb	05 25 42.2	
	comp=Z,1.9nm,0.6s							
MKAR	**Makanchi Array**	**59.69**	**326**	P		**P**	**05 25 41.3**	**+1.4**
	comp=Z,2.2nm,0.5s,baz=118,slow=8.1,SNR=58							
MKAR	**Makanchi Array**	**59.69**	**326**	P		**P**	**05 25 40.8**	**+0.9**
MAKZ	**Makanchi**	**59.88**	**326**	P		**P**	**05 25 41.0**	**-0.2**
MAKZ				IAmb		IAmb	05 25 44.2	
	comp=Z,3.1nm,0.8s							
KSH	**Kashi**	**59.93**	**316**	P		**P**	**05 25 46.5**	**+4.7**
ZALV	**Zalesovo Beam**	**62.87**	**334**	P		**P**	**05 26 02.1**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=132,slow=6.8,SNR=3.6							
ZALV	**Zalesovo Beam**	**62.87**	**334**	P		**P**	**05 26 01.5**	**+0.3**
KBL	**Kabul**	**63.18**	**308**	P		**P**	**05 26 03.1**	**-0.8**
KBL				IAmb		IAmb	05 26 04.5	
	comp=Z,3.2nm,0.6s							
KURK	**Kurchatov**	**63.92**	**328**	P		**P**	**05 26 09.3**	**+1.1**
KURK				IAmb		IAmb	05 26 11.5	
	comp=Z,7.5nm,0.8s							
KKAR	**Karatay Array**	**65.17**	**318**	P		**P**	**05 26 14.3**	**-2.2**
BRVK	**Borovoye**	**69.56**	**327**	P		**P**	**05 26 44.3**	**+0.3**
BRVK				IAmb		IAmb	05 26 51.4	
	comp=Z,3.4nm,0.8s							
GEYT	**Alibeck**	**72.58**	**309**	P		**P**	**05 27 04.8**	**+2.0**
	comp=Z,1.5nm,0.6s,baz=101,slow=7.6,SNR=3.3							
GEYT				LR		LR	05 59 42.7	
	comp=Z,29nm,20.9s,baz=65,slow=36							
GEYT	**Alibeck**	**72.58**	**309**	P		**P**	**05 27 02.1**	**-0.6**
ABKAR	**Akbulak array**	**74.18**	**321**	P		**P**	**05 27 10.9**	**-0.9**
ABKAR				IAmb		IAmb	05 27 24.0	
	comp=Z,2.7nm,0.9s							
FALS	**False Pass**	**77.39**	**34**	P		**P**	**05 27 28.1**	**-1.9**
VNDA	**Vanda**	**80.95**	**173**	P		**P**	**05 27 49.5**	**+0.6**
	comp=Z,9.5nm,1.1s,baz=351,slow=9.3,SNR=3.9							
ILAR	**Eielson Array**	**87.27**	**25**	P		**P**	**05 28 21.3**	**0.0**
	comp=Z,0.3nm,0.8s,baz=251,slow=5.6,SNR=2.0							
TAOE	**Nuku Hiva Isla**	**93.11**	**99**	*eT*		T	05 28 21.8	
	comp=Z,132nm,0.2s							
TXAR	**Lajitas Array**	**122.96**	**53**	PKP		**PKiKP**	**05 34 33.0**	**+1.0**
	comp=Z,0.2nm,0.7s,baz=321,slow=1.3,SNR=2.9							
TORD	**Torodi Ar. Bea**	**123.82**	**287**	PKP		**PKPdf**	**05 34 33.7**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=72,slow=1.9,SNR=5.5							

*ATH **30** 05:41:54.3,38˚.16N×20˚.39E,h13km±1km,ML2.7/11,Error ellipse: s-maj=2.2km s-min=1.2km az=259.0*
*THE **30** 05:41:55.2,38˚.17N×20˚.42E,h8km,ML2.7/3,Error ellipse: s-maj=0.8km s-min=0.4km az=229.0*
ISC 30 05:41:54.8±1.3,38˚.17N±0˚.03×20˚.41E±0˚.04,h10km±5km, n38,σ0ˢ46/53,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.02**	**303**	P		P	**Pg**	**05 41 56.6**	**+0.1**
CHV1				S		S	**Sg**	**05 41 58.0**	**+0.3**
KEF3	**Kipouria, Keph**	**0.06**	**305**	P		P	**Pg**	**05 41 56.8**	**0.0**
KEF3				S		S	**Sg**	**05 41 58.6**	**+0.3**
KEF2	**Argostoli. Kep**	**0.06**	**94**	P		P	**Pg**	**05 41 56.7**	**-0.2**
KEF2				S		S	**Sg**	**05 41 59.7**	**+1.4**
ARG2	**Argostoli**	**0.06**	**82**	P		P	**Pg**	**05 41 56.6**	**-0.2**
ARG2				S		S	**Sg**	**05 41 58.1**	**-0.2**
KEF4	**Livadi, Kephal**	**0.09**	**8**	P		P	**Pg**	**05 41 57.3**	**+0.1**
KEF4				S		S	**Sg**	**05 41 59.1**	**+0.2**
KEF1	**Kardakata, Kep**	**0.12**	**25**	P		P	**Pg**	**05 41 57.4**	**-0.2**
KEF1				S		S	**Sg**	**05 41 59.5**	**-0.1**
VLS	**Valsamata**	**0.14**	**87**	P		P	**Pg**	**05 41 57.8**	**-0.2**
VLS				S		S	**Sg**	**05 42 00.4**	**+0.2**
	9µm,0.4s								
VLS	**Valsamata**	**0.14**	**87**	P		P	**Pg**	**05 41 57.8**	**-0.2**
VLS				S		S	**Sg**	**05 42 00.3**	**0.0**
VLS					AML	AML		05 42 03.9	
	comp=E,11040µm,0.2s								
VLS					AML	AML		05 42 04.7	
	comp=N,22528µm,0.4s								
VSK1	**VASILIKIADES**	**0.27**	**27**	P		P	**Pg**	**05 42 00.5**	**+0.3**
VSK1				S		S	**Sg**	**05 42 04.3**	**+0.4**
KFL	**Anninata**	**0.31**	**101**	P		P	**Pg**	**05 42 01.0**	**+0.1**
KFL				S		S	**Sg**	**05 42 05.8**	**+0.8**
	comp=N,6µm,0.5s								
KFL	**Anninata**	**0.31**	**101**	P		P	**Pg**	**05 42 01.0**	**+0.1**
KFL				S		S	**Sg**	**05 42 05.4**	**+0.6**
KFL					AML	AML		05 42 06.4	
	comp=E,16846µm,0.4s								
KFL					AML	AML		05 42 10.2	
	comp=N,6919µm,0.4s								
FSK	**Fiskardo**	**0.31**	**23**	P		P	**Pg**	**05 42 01.3**	**+0.3**
FSK				S		S	**Sg**	**05 42 05.8**	**+0.6**
	comp=N,645nm,0.3s								
VLMS	**Volimes, Zakyn**	**0.35**	**145**	P		P	**Pg**	**05 42 02.1**	**+0.3**
EVGI	**Lefkada island**	**0.49**	**23**	P		P	**Pg**	**05 42 04.3**	**0.0**
EVGI				S		S	**Sg**	**05 42 11.6**	**+0.8**
EVGI	**Lefkada island**	**0.49**	**23**	P		P	**Pg**	**05 42 04.3**	**0.0**
EVGI				S		S	**Sg**	**05 42 11.7**	**+0.8**
MGNA	**Meganis**	**0.57**	**32**	P		P	**Pg**	**05 42 05.8**	**-0.1**
MGNA				S		S	**Sg**	**05 42 14.0**	**+0.6**
LKD2	**Lefkada island**	**0.65**	**18**	P		P	**Pg**	**05 42 07.2**	**-0.1**
TSLK	**Tsoukalades, L**	**0.68**	**16**	P		P	**Pg**	**05 42 07.7**	**-0.3**
PDO	**Prodromos**	**0.74**	**55**	P		P	**Pg**	**05 42 09.0**	**-0.1**
PDO	**Prodromos**	**0.74**	**55**	P		P	**Pg**	**05 42 09.0**	**-0.1**
PDO					AML	AML		05 42 30.8	
	comp=E,854µm,0.5s								
PDO					AML	AML		05 42 31.5	
	comp=N,998µm,0.7s								
RLS	**Riolos of Patr**	**0.84**	**97**	P		P	**Pg**	**05 42 10.7**	**-0.3**
RLS					AML	AML		05 42 29.4	
	comp=E,828µm,0.7s								
RLS					AML	AML		05 42 32.2	
	comp=N,505µm,0.8s								
PVO	**Paravola**	**0.98**	**63**	P		P	**Pg**	**05 42 13.7**	**0.0**
PVO	**Paravola**	**0.98**	**63**	P		P	**Pg**	**05 42 13.7**	**0.0**
PVO					AML	AML		05 42 38.5	
	comp=E,928µm,0.6s								
PVO					AML	AML		05 42 40.5	
	comp=N,845µm,0.5s								
DRO	**Drossia**	**1.05**	**102**	P		P	**Pg**	**05 42 14.7**	**-0.2**
DRO	**Drossia**	**1.05**	**102**	P		P	**Pg**	**05 42 14.8**	**-0.2**
DRO					AML	AML		05 42 44.5	
	comp=E,1300µm,0.6s								
DRO					AML	AML		05 42 44.9	
	comp=N,938µm,0.6s								
EFP	**Efpalio**	**1.21**	**77**	P		P	**Pn**	**05 42 17.0**	**-0.8**
AMT	**Artemida-Makis**	**1.21**	**121**	P		P	**Pn**	**05 42 17.3**	**-0.6**
AMT					AML	AML		05 42 45.8	
	comp=E,1054µm,0.6s								
AMT					AML	AML		05 42 48.7	
	comp=N,792µm,0.6s								
LAKA	**Lakka**	**1.24**	**86**	P		P	**Pn**	**05 42 17.6**	**-0.7**
LAKA	**Lakka**	**1.24**	**86**	P		P	**Pn**	**05 42 17.6**	**-0.7**
LAKA					AML	AML		05 42 43.5	
	comp=E,424µm,0.7s								
LAKA					AML	AML		05 42 47.3	
	comp=N,271µm,0.8s								
ANX	**Ano Chora**	**1.26**	**70**	P		P	**Pg**	**05 42 19.3**	**+0.3**
ANX					AML	AML		05 42 43.9	
	comp=E,690µm,0.6s								
ANX					AML	AML		05 42 45.7	
	comp=N,652µm,0.5s								
SERG	**Sergoula**	**1.32**	**79**	P		P	**Pn**	**05 42 18.7**	**-0.7**
SERG	**Sergoula**	**1.32**	**79**	P		P	**Pn**	**05 42 19.0**	**-0.4**
SERG					AML	AML		05 42 49.1	
	comp=E,546µm,0.8s								
SERG					AML	AML		05 42 52.8	
	comp=N,304µm,0.9s								
TRIZ	**Trizonia**	**1.32**	**81**	P		P	**Pn**	**05 42 18.9**	**-0.5**
EVR	**Evrytania**	**1.33**	**55**	P		P	**Pn**	**05 42 19.3**	**-0.3**
KALE	**Kalithea**	**1.38**	**80**	P		P	**Pn**	**05 42 19.7**	**-0.5**
KALE	**Kalithea**	**1.38**	**80**	P		P	**Pn**	**05 42 19.8**	**-0.5**
KLV	**Kalavryta, Ach**	**1.38**	**95**	P		P	**Pn**	**05 42 20.4**	**+0.2**
KLV	**Kalavryta, Ach**	**1.38**	**95**	P		P	**Pn**	**05 42 20.4**	**+0.2**
KLV					AML	AML		05 42 49.5	
	comp=N,225µm,0.7s								
KLV					AML	AML		05 42 54.0	
	comp=E,301µm,0.9s								

*IDC **30** 05:52:27.7±3.9, 16˚.47N×122˚.71E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/41, mbtmp3.4/3, Error ellipse: s-maj=369.4km s-min=23.3km az=63.0*
*MAN **30** 05:52:32.4, 16˚.27N×122˚.41E, h15km, mb4.9, ML3.8, MS3.9*
ISC 30 05:52:31.9±0.9, 16˚.28N±0˚.03×122˚.46E±0˚.06, h22km±6km, n23,σ1ˢ34/26, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.78**	**357**	*eP*			**Pb**	**05 52 47.1**	**+0.2**
PALP				*eS*			**Sn**	**05 53 00.4**	**+1.6**
CAUP	**Cauayan**	**0.91**	**317**	*eP*			**Pb**	**05 52 48.5**	**-0.5**
CAUP				*eS*			**Sn**	**05 53 02.3**	**+0.6**
BALP	**Baler**	**1.01**	**238**	*eP*			**Pb**	**05 52 49.3**	**-1.4**
BALP				*eS*			**Sb**	**05 53 03.9**	**+0.4**
PCPH	**Palayan**	**1.50**	**242**	*eP*			**Pn**	**05 52 57.8**	**+0.3**
PCPH				*eS*			**Sb**	**05 53 17.4**	**-0.2**
POLP	**Polilio Island**	**1.62**	**198**	*eP*			**Pn**	**05 52 56.8**	**-2.4**
POLP				*eS*			Sb	05 53 31.9	+11
SMPP	**San Manuel, Pa**	**1.72**	**266**	*eP*			**Pn**	**05 53 00.9**	**+0.3**
SMPP				*eS*			**Sn**	**05 53 22.9**	**+1.0**
APYP	**Conner**	**1.96**	**324**	*eP*			**Pn**	**05 53 03.9**	**0.0**
APYP				*eS*			**Sb**	**05 53 29.8**	**-1.3**
ABRA	**Dolores**	**2.16**	**309**	*eP*			**Pn**	**05 53 06.7**	**0.0**
ABRA				*eS*			**Sn**	**05 53 32.1**	**-0.8**
LQP	**Lukban**	**2.33**	**203**	*eP*			**Pn**	**05 53 10.4**	**+1.2**
GQP	**Guinayangan**	**2.36**	**180**	*eP*			**Pn**	**05 53 11.2**	**+1.8**
GQP				*eS*			**Sn**	**05 53 38.4**	**+0.8**
BOLP	**Bolinao**	**2.45**	**273**	*eP*			**Pn**	**05 53 12.8**	**+2.2**
BOLP				*eS*			**Sn**	**05 53 41.8**	**+1.9**
SIPP	**Brgy, Tapao**	**2.52**	**311**	*iP*			**Pn**	**05 53 13.5**	**+1.8**
SIPP				*eS*			Sb	05 54 02.8	+16
TGY	**Tagaytay City**	**2.62**	**215**	*eP*			Pb	05 53 28.7	+11
TGY				*i* S			**Sb**	**05 53 51.8**	**+1.9**
WRA	**Warramunga Arr**	**37.84**	**162**	P			**P**	**05 59 46.6**	**-0.6**
	3.1nm,0.3s,baz=343,slow=9.2,SNR=4.4								
ASAR	**Alice Springs**	**41.24**	**164**	P			**P**	**06 00 15.9**	**+0.4**
	1.1nm,0.6s,baz=344,slow=7.8,SNR=7.1								
H11S3	**WAKE ISLAND Hy**	**42.19**	**80**	T			T	06 45 35.7	
	baz=274,slow=75,SNR=49								
H11S1	**WAKE ISLAND Hy**	**42.20**	**80**	T			T	06 45 36.8	
	baz=274,slow=75,SNR=48								
H11S2	**WAKE ISLAND Hy**	**42.20**	**80**	T			T	06 45 37.2	
	baz=274,slow=75,SNR=61								
H11N1	**WAKE ISLAND Hy**	**42.31**	**78**	T			T	06 45 46.5	
	baz=273,slow=74,SNR=51								
H11N2	**WAKE ISLAND Hy**	**42.31**	**78**	T			T	06 45 45.8	
	baz=273,slow=74,SNR=55								
H11N3	**WAKE ISLAND Hy**	**42.32**	**78**	T			T	06 45 46.4	
	baz=273,slow=74,SNR=28								
MKAR	**Makanchi Array**	**45.04**	**321**	P			**P**	**06 00 44.2**	**-1.9**
	0.1nm,0.5s,baz=115,slow=9.7,SNR=2.0								
KURBB	**Kurchatov Arra**	**49.06**	**324**	P			**P**	**06 01 17.1**	**-0.2**
	0.4nm,0.6s,baz=120,slow=8.2,SNR=4.7								

IDC 30 06:06:30.8±3.8, 15˚.58S×70˚.01W, h153km±27km, mb3.3/3, mb1 3.4/3, mb1mx3.1/28, mbtmp3.7/3, Error ellipse: s-maj=114.2km s-min=39.7km az=28.0, Southern Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.94**	**112**	P		P	Pn	06 07 07.8	+1.7
	3.2nm,0.3s,baz=291,slow=7.5,SNR=52								
LPAZ				S		S	Sn	06 07 33.0	-0.1
	0.6nm,0.3s,baz=252,slow=16,SNR=2.5								
SCHQ	**Schefferville**	**70.18**	**2**	P		P		06 17 26.8	+0.2
	1.8nm,0.8s,baz=188,slow=7.1,SNR=3.3								
TORD	**Torodi Ar. Bea**	**76.44**	**72**	P		P		06 18 04.6	+0.5
	0.3nm,0.4s,baz=281,slow=6.1,SNR=2.9								
YKA	**Yellowknife Ar**	**85.28**	**341**	P		P		06 18 48.9	-1.1
	0.2nm,0.5s,baz=137,slow=4.7,SNR=4.7								
SONM	**Songino Array**	**147.69**	**5**	PKPbc		PKPbc		06 25 56.6	-1.0
	0.4nm,1.0s,baz=14,slow=3.0,SNR=2.1								

*ATH **30** 06:06:38.3,38˚.19N×20˚.43E,h13km±1km,ML2.7/9, Error ellipse: s-maj=2.6km s-min=1.1km az=253.0*
*THE **30** 06:06:38.8,38˚.19N×20˚.42E,h10km,ML2.7/3, Error ellipse: s-maj=0.8km s-min=0.3km az=222.0*
ISC 30 06:06:38.3±1.1, 38˚.20N±0˚.03×20˚.43E±0˚.05, h11km±5km, n39,σ0ˢ39/53, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHV1	**Chavriata, Kef**	**0.04**	**250**	P		P	**Pg**	**06 06 40.8**	**+0.4**
CHV1				S		S	**Sg**	**06 06 42.0**	**+0.1**
ARG2	**Argostoli**	**0.05**	**111**	P		P	**Pg**	**06 06 40.6**	**+0.1**
ARG2				S		S	**Sg**	**06 06 42.0**	**-0.1**
KEF2	**Argostoli. Kep**	**0.06**	**124**	P		P	**Pg**	**06 06 40.6**	**+0.1**
KEF2				S		S	**Sg**	**06 06 42.0**	**-0.2**
KEF4	**Livadi, Kephal**	**0.06**	**358**	P		P	**Pg**	**06 06 40.8**	**+0.2**
KEF4				S		S	**Sg**	**06 06 42.9**	**+0.5**
KEF1	**Kardakata, Kep**	**0.09**	**23**	P		P	**Pg**	**06 06 41.1**	**+0.2**
KEF1				S		S	**Sg**	**06 06 42.9**	**+0.1**
VLS	**Valsamata**	**0.13**	**99**	P		P	**Pg**	**06 06 41.6**	**+0.1**
VLS				S		S	**Sg**	**06 06 44.0**	**+0.2**
	13µm,0.2s								
VLS	**Valsamata**	**0.13**	**99**	P		P	**Pg**	**06 06 41.6**	**+0.1**
VLS				S		S	**Sg**	**06 06 43.8**	**0.0**
VLS					AML	AML		06 06 44.1	
	comp=E,24334µm,0.1s								
VLS					AML	AML		06 06 44.1	
	comp=N,25326µm,0.2s								
VSK1	**VASILIKIADES**	**0.24**	**27**	P		P	**Pg**	**06 06 43.8**	**+0.5**
FSK	**Fiskardo**	**0.28**	**22**	P		P	**Pg**	**06 06 44.5**	**+0.4**
FSK				S		S	**Sg**	**06 06 49.0**	**+1.0**
	comp=N,1µm,0.3s								
KFL	**Anninata**	**0.30**	**107**	P		P	**Pg**	**06 06 44.6**	**+0.3**
KFL				S		S	**Sg**	**06 06 49.5**	**+1.1**
	comp=N,2µm,0.5s								
KFL	**Anninata**	**0.30**	**107**	P		P	**Pg**	**06 06 44.6**	**+0.3**
KFL				S		S	**Sg**	**06 06 49.3**	**+0.9**
KFL					AML	AML		06 06 50.1	
	comp=N,3314µm,0.3s								
KFL					AML	AML		06 06 51.7	
	comp=E,4855µm,0.5s								
VLMS	**Volimes, Zakyn**	**0.37**	**150**	P		P	**Pg**	**06 06 45.9**	**+0.3**
VLMS				S		S	**Sg**	**06 06 51.6**	**+1.0**
EVGI	**Lefkada island**	**0.46**	**23**	P		P	**Pg**	**06 06 47.6**	**+0.2**
EVGI				S		S	**Sb**	**06 06 55.0**	**-0.2**
EVGI	**Lefkada island**	**0.46**	**23**	P		P	**Pg**	**06 06 47.8**	**+0.4**
EVGI				S		S	**Sg**	**06 06 54.9**	**-0.4**
MGNA	**Meganis**	**0.54**	**32**	P		P	**Pg**	**06 06 49.0**	**+0.1**
MGNA					AML	AML		06 06 58.0	
	comp=E,3581µm,0.1s								
MGNA					AML	AML		06 06 58.2	
	comp=N,3147µm,0.1s								
LKD2	**Lefkada island**	**0.62**	**17**	P		P	**Pg**	**06 06 50.3**	**-0.1**
LKD2	**Lefkada island**	**0.62**	**17**	P		P	**Pg**	**06 06 50.3**	**-0.1**
LKD2				S		S	**Sg**	**06 06 58.9**	**+0.4**
LKD2					AML	AML		06 07 04.7	
	comp=N,487µm,0.3s								
LKD2					AML	AML		06 07 05.6	
	comp=E,457µm,0.3s								
AST1	**Astakos**	**0.62**	**56**	P		P	**Pg**	**06 06 50.7**	**+0.3**
TSLK	**Tsoukalades, L**	**0.65**	**16**	P		P	**Pg**	**06 06 51.1**	**+0.1**
TSLK	**Tsoukalades, L**	**0.65**	**16**	P		P	**Pg**	**06 06 51.1**	**

ROSC	El Rosal	14.56	3	eP		P	06 16 17.9	+1.8	
ROSC	El Rosal	14.56	3			Pn	06 16 12.9	-0.2	
PLMC	San Jos del P	14.65	355	eP		P	06 16 16.7	-0.1	
GUY2C	Guyana, Caldas	14.92	359	eP		P	06 16 20.9	+0.7	
SIV	San Ignacio	14.99	116	P		Pn	06 16 18.4	+0.2	
	5.1nm,0.3s,baz=305,slow=11,SNR=54								
SPBC	San Pablo de B	15.38	4	eP		Pn	06 16 23.4	+0.3	
CBOC	Ciudad Bolivar	15.58	357	eP		P	06 16 30.0	+2.8	
RUSC	La Rusia	15.71	7	eP		P	06 16 29.4	+0.5	
RUSC	La Rusia	15.71	7	P		Pn	06 16 28.0	+0.5	
HELC	Santa Helena	15.88	358	eP		P	06 16 31.9	+1.1	
PTBC	PUERTO BERRIO,	16.24	2	eP		Pn	06 16 34.3	+0.7	
BARC	Barichara	16.39	7	eP		Pn	06 16 36.6	+0.9	
TAMC	Tame, Arauca	16.45	12	eP		Pn	06 16 36.7	+0.4	
DBBC	Dabeiba	16.74	356	eP		Pn	06 16 40.4	+0.6	
ZARC	Zaragoza, Cauc	17.17	1	eP		P	06 16 43.4	-1.2	
PAMC	Pamplona, Colo	17.19	8	eP		Pn	06 16 46.5	+0.8	
ELOV	Elorza	17.60	19	eP		P	06 16 49.5	+0.2	
PAYG	Puerto Ayora	17.61	300	P		P	06 16 49.2	-0.4	
PAYG				IAmb		IAmb	06 16 53.7		
	comp=Z,51nm,1.4s								
OCAC	Ocana	18.00	6	eP		P	06 16 55.0	+1.1	
SOCV	Socops	18.45	13	eP		P	06 16 59.5	+0.9	
SMLC	San Martn de	18.50	3	eP		P	06 16 58.6	-0.6	
SDV	Santo Domingo	19.08	14	P		P	06 17 06.8	+1.1	
	comp=Z,2.3nm,0.3s,baz=230,slow=7.7,SNR=27								
SDV	Santo Domingo	19.08	14	eP		P	06 17 06.0	+0.3	
SDV	Santo Domingo	19.08	14	P		P	06 17 05.5	-0.2	
SDV				IAmb		IAmb	06 17 08.3		
	comp=Z,30nm,1.1s								
UPA	Univ. de Panam	19.16	347	eP		P	06 17 04.5	-1.9	
ARGC	Ariguani, Magd	19.54	3	eP		P	06 17 09.8	-0.7	
SJCC	San Jacinto, C	19.56	360	eP		Pn	06 17 15.0	+1.7	
CODC	Agustn Codazz	19.67	5	eP		P	06 17 11.4	-0.5	
SALV	Santo Antonio	19.86	110	eP		P	06 17 14.1	+0.1	
DABV	Dabajuro	21.05	12	eP		P	06 17 27.8	+1.0	
PP1B	Ponte de Pedra	21.11	114	eP		P	06 17 27.8	+0.4	
PCRV	Puerto La Cruz	22.40	28	P		P	06 17 41.5	+0.5	
	comp=Z,6.5nm,0.4s,baz=202,slow=2.1,SNR=6.1								
PLCV	Puerto La Cruz	22.41	28	P		P	06 17 41.5	+0.4	
CFA	Coronel Fontan	22.62	165	P		P	06 17 43.0	0.0	
	comp=Z,0.8nm,0.4s,baz=320,slow=7.9,SNR=2.6								
CFA				pP		pP	06 18 08.0	+0.9	
	comp=Z,1.5nm,0.7s,baz=349,slow=11,SNR=2.8								
ARAG	Araguaiana, MT	23.45	107	eP		P	06 17 50.2	-0.7	
CPUP	Villa Florida	23.53	137	P		P	06 17 51.5	0.0	
	comp=Z,2.2nm,0.4s,baz=326,slow=12,SNR=4.0								
CPUP				pP		pP	06 18 16.7	-0.2	
	comp=Z,2.1nm,0.3s,baz=315,slow=10,SNR=2.5								
PCMB	Pacaembu	25.73	120	eP		P	06 18 10.5	-1.1	
PTGB	Pitanga	26.47	127	eP		P	06 18 17.9	-0.3	
MDP	Montagnes des	26.82	57	P		P	06 18 22.8	+1.3	
	comp=Z,23nm,1.0s,baz=227,slow=4.5,SNR=3.8								
BDFB	Brasilia	27.04	105	P		P	06 18 23.5	0.0	
	comp=Z,3.8nm,0.6s,baz=263,slow=11,SNR=6.0								
BDFB				pP		pP	06 18 51.5	+0.9	
	comp=Z,5.6nm,0.8s,baz=197,slow=7.4,SNR=4.8								
BDFB				sP		sP	06 19 06.3	+1.0	
	comp=Z,8.0nm,1.0s,baz=306,slow=8.7,SNR=4.0								
BDFB	Brasilia	27.04	105	P		P	06 18 22.6	-0.9	
IPMB	Ipameri, GO	27.31	110	eP		P	06 18 25.2	-0.6	
OBIP	Obispado Ponce	28.90	117	P		P	06 18 38.3	-1.4	
PDPR	Patillas Dam,	29.05	18	P		P	06 18 41.8	+0.7	
SJG	San Juan	29.10	18	P		P	06 18 41.9	+0.4	
	comp=Z,7.0nm,0.2s,baz=288,slow=3.2,SNR=4.2								
AOPR	Arecibo Observ	29.15	16	P		P	06 18 43.1	+1.1	
CBYP	Canovanas	29.34	18	P		P	06 18 43.7	0.0	
PLCA	Paso Flores	31.08	173	P		P	06 18 58.7	-0.2	
	comp=Z,1.0nm,0.6s,baz=16,slow=12,SNR=5.0								
PLCA				pP		pP	06 19 26.4	-0.1	
	comp=Z,1.2nm,0.7s,baz=2.1,slow=6.6,SNR=2.3								
PLCA	Paso Flores	31.08	173	P		P	06 18 59.9	+1.0	
Z50A	Ashland	44.03	347	P		P	06 20 47.9	+0.1	
Z50A				IAmb		IAmb	06 21 04.7		
	comp=Z,16nm,1.4s								
LRAL	Lakeview Retre	44.07	346	P		P	06 20 48.2	+0.1	
HODGE	Hodges	44.31	351	P		P	06 20 50.7	+0.8	
HODGE				IAmb		IAmb	06 21 02.5		
	comp=Z,8.5nm,1.2s								
Y49A	Blount Mountai	44.72	347	P		P	06 20 53.0	-0.3	
FPAL	Fort Paine	45.20	348	P		P	06 20 57.1	-0.1	
X48A	Hartselle	45.44	346	P		P	06 20 58.8	-0.1	
V53A	Saluda	45.80	351	P		P	06 21 02.2	+0.3	
V53A				IAmb		IAmb	06 21 18.4		
	comp=Z,15nm,1.4s								
CPCT	Cooper Cave	45.87	349	P		P	06 21 02.5	+0.1	
CPCT				IAmb		IAmb	06 21 02.7		
	comp=Z,5.4nm,0.8s								
SWET	Sewanee	45.92	348	P		P	06 21 02.5	-0.3	
SWET				IAmb		IAmb	06 21 03.1		
	comp=Z,5.9nm,0.9s								
V52A	Sevierville	46.09	350	P		P	06 21 03.9	-0.2	
V52A				IAmb		IAmb	06 21 04.8		
	comp=Z,12nm,1.0s								
V51A	Loudon	46.18	350	P		P	06 21 04.8	0.0	
V51A				IAmb		IAmb	06 21 05.4		
	comp=Z,6.0nm,0.8s								
PLAL	Pickwick Lake	46.19	345	P		P	06 21 04.5	-0.4	
U54A	Nelsons Funny	46.50	353	P		P	06 21 07.8	+0.5	
WLAR	White Oak Lake	46.51	339	P		P	06 21 07.8	+0.4	
V48A	Smith Brothers	46.62	347	P		P	06 21 07.5	-0.7	
T57A	Hurt	46.70	355	P		P	06 21 08.1	-0.8	
TZTN	Tazewell	46.77	351	P		P	06 21 07.5	-1.9	
WVT	Waverly	47.23	346	P		P	06 21 12.0	-0.9	
WVT				IAmb		IAmb	06 21 20.6		
	comp=Z,9.7nm,1.4s								
T52A	Hallie	47.23	351	P		P	06 21 12.6	-0.3	
S57A	Dark Hollow, R	47.44	356	P		P	06 21 13.8	-0.8	
S57A				IAmb		IAmb	06 21 15.7		
	comp=Z,8.1nm,0.8s								
MIAR	Mount Ida	47.45	339	P		P	06 21 14.6	0.0	
MIAR				IAmb		IAmb	06 21 16.1		
	comp=Z,9.5nm,1.1s								
W41B	Gary Mavity, V	47.57	341	P		P	06 21 15.2	-0.4	
W41B				IAmb		IAmb	06 21 17.1		
	comp=Z,12nm,1.4s								
TXAR	Lajitas Array	47.66	326	P		P	06 21 17.3	+0.8	
	comp=Z,2.4nm,0.6s,baz=152,slow=8.5,SNR=40								
TXAR				pP		pP	06 21 47.0	+1.2	
	comp=Z,1.1nm,0.9s,baz=146,slow=6.6,SNR=3.3								
TXAR				PcP		PcP	06 22 44.7	+0.5	
	comp=Z,0.5nm,0.5s,baz=153,slow=6.5,SNR=5.5								
TX31	Lajitas Ar. Si	47.66	326	P		P	06 21 17.3	+0.8	
TX32	Lajitas Array	47.66	326	P		P	06 21 17.2	+0.6	
WHAR	Wooly Hollow	47.69	341	P		P	06 21 16.6	+0.1	
WHAR				IAmb		IAmb	06 21 16.9		
	comp=Z,11nm,1.1s								
ABTX	Abilene, Hawle	48.25	332	P		P	06 21 20.4	-0.5	
U40A	Yellville	48.85	341	P		P	06 21 25.3	-0.2	
S44A	Carbondale	49.06	345	P		P	06 21 26.1	-0.8	
X34A	Smith Ranch, M	49.13	335	P		P	06 21 27.5	0.0	
HHAR	Hobbs	49.14	340	P		P	06 21 27.8	+0.1	
P53A	Whipple	49.37	354	P		P	06 21 29.0	-0.3	
P53A				IAmb		IAmb	06 21 46.0		
	comp=Z,9.3nm,0.9s								
MGMO	Mountain Grove	49.40	342	P		P	06 21 29.2	-0.4	
TUL1	Leonard	49.47	338	P		P	06 21 29.7	-0.4	
TUL1				IAmb		IAmb	06 21 31.7		
	comp=Z,10nm,0.9s								
P48A	Milroy	49.93	350	P		P	06 21 32.3	-1.3	
SSPA	Standing Stone	50.24	357	P		P	06 21 36.8	+0.9	
SSPA				IAmb		IAmb	06 21 50.0		
	comp=Z,8.3nm,1.2s								
MSTX	Muleshoe	50.84	330	P		P	06 21 40.7	0.0	
MSTX				IAmb		IAmb	06 21 41.4		
	comp=Z,5.0nm,0.8s								
M55A	Ridgway	51.12	356	P		P	06 21 43.1	+0.7	
M55A				IAmb		IAmb	06 21 50.3		
	comp=Z,14nm,1.3s								
N49A	Columbus Grove	51.15	351	P		P	06 21 42.5	-0.2	
N47A	Urbana	51.36	350	P		P	06 21 43.5	-0.8	
L42A	Oliver, Polo	53.25	346	P		P	06 21 57.4	-0.7	
ANMO	Albuquerque	53.48	328	P		P	06 22 00.8	+0.5	
T25A	Trinidad	54.18	331	P		P	06 22 05.2	-0.2	
T25A				IAmb		IAmb	06 22 06.5		
	comp=Z,9.4nm,1.2s								
JFWS	Jewell Farm	54.25	346	P		P	06 22 04.9	-0.5	
214A	Organ Pipe Nat	54.98	321	P		P	06 22 12.0	+1.0	
214A				IAmb		IAmb	06 22 13.6		
	comp=Z,7.4nm,1.2s								
X18A	Snowflake	55.08	325	P		P	06 22 10.6	-1.3	
G65A	Princeton	55.16	6	P		P	06 22 11.6	-0.3	
SDCO	Great Sand Dun	55.19	331	P		P	06 22 13.3	+0.6	
SDCO				IAmb		IAmb	06 22 14.6		
	comp=Z,9.5nm,1.2s								
W18A	Petrified Fore	55.39	326	P		P	06 22 14.0	0.0	
W18A				IAmb		IAmb	06 22 16.4		
	comp=Z,12nm,1.4s								
WUAZ	Wupatki	56.60	325	P		P	06 22 22.4	-0.3	
WUAZ				IAmb		IAmb	06 22 25.1		
	comp=Z,14nm,1.5s								
ECSD	EROS Data Cent	56.75	341	P		P	06 22 23.2	-0.1	
ECSD				IAmb		IAmb	06 22 24.1		
	comp=Z,9.2nm,1.4s								
SPMN	Marine on St.	57.04	345	P		P	06 22 24.1	-1.3	
EYMN	Ely	59.30	347	P		P	06 22 40.1	-0.9	
RDMU	Red Mountain	59.37	330	P		P	06 22 42.5	+0.5	
JLU	Jordanelle	60.34	329	P		P	06 22 48.0	-0.6	
CTU	Camp Tracy	60.56	329	P		P	06 22 50.0	0.0	
AGMN	Agassiz Nation	60.68	344	P		P	06 22 49.9	-0.6	
TCUT	Toone Canyon	60.70	329	P		P	06 22 51.7	+0.6	
DUG	Dugway, Tooele	60.75	328	P		P	06 22 51.2	-0.1	
DUG				IAmb		IAmb	06 22 53.5		
	comp=Z,5.6nm,1.1s								
PD31	Pinedale Array	61.04	332	P		P	06 22 53.0	-0.3	
PDAR	Pinedale Array	61.04	332	P		P	06 22 53.4	0.0	
	comp=Z,1.1nm,0.8s,baz=149,slow=6.9,SNR=9.1								
PDAR				PcP		PcP	06 23 34.8	-0.5	
	comp=Z,0.4nm,0.5s,baz=143,slow=6.2,SNR=5.2								
PDAR	Pinedale Array	61.04	332	P		P	06 22 52.7	-0.6	
BW06	Boulder Array	61.05	332	P		P	06 22 52.9	-0.4	
AHID	Auburn Hatcher	61.78	331	P		P	06 22 58.2	0.0	
AHID				IAmb		IAmb	06 22 59.5		
	comp=Z,5.8nm,1.1s								
ELK	Elko	62.44	326	P		P	06 23 03.6	+0.9	
ELK				IAmb		IAmb	06 23 04.9		
	comp=Z,7.8nm,1.5s								
ULM	Lac du Bonnet	62.48	345	P		P	06 23 01.8	-0.7	
	comp=Z,6.7nm,0.6s,baz=160,slow=6.9,SNR=21								
ULM	Lac du Bonnet	62.48	345	P		P	06 23 01.5	-0.9	
IMW	Indian Meadow	62.56	332	P		P	06 23 02.9	-0.6	
IMW				IAmb		IAmb	06 23 05.9		
	comp=Z,7.0nm,1.3s								
PMPB	Monarch Peak	62.79	319	P		P	06 23 06.8	+1.9	
YNE	Yellowstone No	62.98	333	P		P	06 23 05.8	-0.5	
YHH	Holmes Hill	63.20	332	P		P	06 23 07.4	-0.3	
YHB	Horse Butte	63.33	332	P		P	06 23 07.2	-1.3	
YHL	Hebgen Lake	63.40	332	P		P	06 23 10.6	+1.6	
GCMT	Greyclift	63.44	334	P		P	06 23 09.3	+0.2	
DGMT	Dagmar	63.45	339	P		P	06 23 09.9	+1.0	
DGMT				IAmb		IAmb	06 23 11.0		
	comp=Z,10.0nm,0.9s								
MCMT	McKenzie Canyo	64.16	331	P		P	06 23 14.5	+0.5	
MCMT						S	06 31 39.4	-2.0	
MFID	Camas Ranch	64.62	328	P		P	06 23 18.3	+1.4	
MFID				IAmb		IAmb	06 23 19.0		
	comp=Z,10nm,1.1s								
SCHQ	Schefferville	64.75	5	P		P	06 23 17.4	0.0	
	comp=Z,1.5nm,0.5s,baz=217,slow=7.2,SNR=6.6								
SCHQ	Schefferville	64.75	5	P		P	06 23 17.9	+0.5	
EGMT	Eagleton	65.23	335	P		P	06 23 21.3	+0.7	
EGMT				IAmb		IAmb	06 23 22.6		
	comp=Z,3.5nm,0.8s								
ORV	Oroville	65.27	322	P		P	06 23 23.0	+2.0	
MOD	Modoc Plateau	66.05	325	P		P	06 23 25.9	-0.2	
I07A	Izee	67.03	327	P		P	06 23 33.8	+1.5	
I07A				IAmb		IAmb	06 23 34.5		
	comp=Z,7.3nm,0.6s								
DBIC	Dimbokro	71.85	80	P		P	06 24 02.5	+0.1	
	comp=Z,1.3nm,0.4s,baz=227,slow=3.7,SNR=7.1								
DBIC	Dimbokro	71.85	80	P		P	06 24 02.9	+0.4	
PPT	Papeete	72.40	255	P		P	06 24 05.9	+0.3	
	comp=Z,16nm,0.7s,baz=75,slow=18,SNR=2.1								
SNAA	Sanae	75.21	162	P		P	06 24 22.3	+1.2	
SNAA				pP		pP	06 24 53.8	+1.1	
YKA	Yellowknife Ar	78.26	342	P		P	06 24 38.1	-0.1	
	comp=Z,0.7nm,0.4s,baz=144,slow=5.8,SNR=23								
TORD	Torodi Ar. Bea	79.56	75	P		P	06 24 46.2	-0.1	
	comp=Z,1.7nm,0.7s,baz=273,slow=5.0,SNR=8.2								
QSPA	South Pole Qui	80.33	180	P		P	06 24 51.4	+1.8	
QSPA						pP	06 25 23.7	+2.1	
ESDC	Sonseca Array	82.04	48	P		P	06 25 00.2	+1.1	
	comp=Z,0.5nm,0.5s,baz=253,slow=5.6,SNR=5.8								
RES	Resolute Bay	85.21	355	P		P	06 25 15.3	+0.9	
INK	Inuvik	87.99	342	P		P	06 25 28.7	+0.7	
MCARA	McCarthy VSAT	88.27	333	P		P	06 25 30.6	+1.1	
MCARA				IAmb		IAmb	06 25 31.0		
	comp=Z,5.3nm,0.8s								
VRDI	Verde Repeater	88.39	333	P		P	06 25 31.2	+0.8	
VRDI				IAmb		IAmb	06 25 44.2		
	comp=Z,4.9nm,1.1s								
BCAR	Beaver Creek A	88.44	335	P		P	06 25 31.3	+0.9	
ILAR	Eielson Array	91.18	336	P		P	06 25 42.8	-0.3	
	comp=Z,0.4nm,0.6s,baz=155,slow=1.7,SNR=7.2								
ILAR	Eielson Array	91.18	336	P		P	06 25 43.9	+0.9	
MODS	Modra-Piesok	98.81	42	ePDIFF		P	06 26 17.0	-1.2	
STKA	Stephens Creek	125.70	219	PKP		PKPdf	06 31 39.5	-0.4	
	comp=Z,1.0nm,0.5s,baz=60,slow=3.9,SNR=4.3								
STKA	Stephens Creek	125.70	219			PKiKP	06 31 40.8	+0.5	
KURBB	Kurchatov Arra	133.85	23	PKP		PKiKP	06 31 55.5	-0.5	
	comp=Z,0.4nm,0.6s,baz=312,slow=2.6,SNR=11								
KLR	Kul'dur	134.75	335	PKP		PKPdf	06 31 56.5	0.0	
	comp=Z,0.7nm,0.6s,baz=78,slow=9.3,SNR=3.4								
ASAR	Alice Springs	136.30	220	PKhKP	PKPpre		06 31 57.1		
	comp=Z,1.0nm,0.5s,baz=121,slow=1.8,SNR=13								
ASAR				PKP		PKPdf	06 31 59.7	-0.6	
	comp=Z,1.0nm,0.5s,baz=124,slow=1.9,SNR=16								
ASAR				pPKP	pPKPdf		06 32 34.5	+0.3	
	comp=Z,0.4nm,0.8s,baz=121,slow=1.7,SNR=3.8								
MKAR	Makanchi Array	138.41	23	PKP		PKPdf	06 32 03.4	0.0	
	comp=Z,0.5nm,0.7s,baz=3.6,slow=1.7,SNR=5.3								
MKAR	Makanchi Array	138.41	23	PKPdf		PKPdf	06 32 03.7	+0.3	
WRA	Warramunga Arr	138.61	224	PKP		PKPdf	06 32 05.0	+0.4	
	comp=Z,1.5nm,0.5s,baz=128,slow=1.9,SNR=12								
WRA				pPKP		pPKPdf	06 32 38.9	+0.4	
	comp=Z,1.3nm,0.6s,baz=132,slow=1.8,SNR=3.2								
WRA	Warramunga Arr	138.61	224			PKPdf	06 32 04.7	+0.1	
KSH	Kashi	140.75	36	ePKP		PKPdf	06 32 09.0	+1.0	
KSH				PP		PP	06 35 04.5	-4.1	
KSH				SKS		SKSdf	06 39 08.5	+1.6	
KSH				SKKS		SKKSac	06 41 54.0	+3.1	
SONM	Songino Array	142.06	358	PKhKP	PKPpre		06 32 05.0		
	comp=Z,0.5nm,0.6s,baz=341,slow=2.3,SNR=5.8								
KSRS	Korea Array	145.51	327	PKPbc		PKPdf	06 32 15.8	-0.5	
	comp=Z,2.5nm,0.6s,baz=53,slow=4.4,SNR=15								
KSRS				pPKPbc	pPKPab		06 32 49.8	-0.2	
	comp=Z,2.4nm,0.8s,baz=62,slow=3.8,SNR=4.3								
CD2	Chengdu	158.96	3	PKP		PKPdf	06 32 34.8	-1.6	
CMAR	Chiang Mai Arr	169.63	33	PKPab		PKPab	06 33 58.9	-1.3	
	comp=Z,1.2nm,0.4s,baz=330,slow=5.2,SNR=3.6								

*THE **30** 06:14:14.0,38°.24N×20°.42E,h10km,ML2.7/3,Error ellipse: s-maj=0.9km s-min=0.4km az=264.0*
*ATH **30** 06:14:14.0,38°.26N×20°.42E,h5km±1km,ML2.5/10,Error ellipse: s-maj=2.1km s-min=1.0km az=263.0*

ISC 30 06:14:13.8±1.0,38°.26N±0°.02×20°.43E±0.04,h7km±5km, n39,σ0°58/52,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	Livadi, Kephal	0.01	303	P	Pg	06 14 14.8	-0.3
KEF4				S	Sg	06 14 15.6	-0.3
KEF1	Kardakata, Kep	0.04	55	P	Pg	06 14 15.2	-0.1
KEF1				S	Sg	06 14 16.4	0.0
CHV1	Chavriata, Kef	0.08	208	P	Pg	06 14 16.1	+0.3
CHV1				S	Sg	06 14 18.0	+0.8
KEF3	Kipouria, Keph	0.08	231	P	Pg	06 14 15.9	0.0
ARG2	Argostoli	0.09	149	P	Pg	06 14 16.5	+0.6
ARG2				S	Sg	06 14 18.3	+0.9
KEF2	Argostoli. Kep	0.10	153	P	Pg	06 14 16.3	+0.2
KEF2				S	Sg	06 14 18.4	+0.7
VLS	Valsamata	0.15	122	P	Pg	06 14 17.0	+0.1
VLS				S	Sg	06 14 19.6	+0.6
	8μm,0.2s						
VLS	Valsamata	0.15	122	P	Pg	06 14 17.3	+0.4
VLS				S	Sg	06 14 19.6	+0.6
VLS				AML	AML	06 14 20.0	
	comp=N,18583μm,0.3s						
VLS				AML	AML	06 14 20.5	
	comp=E,14495μm,0.1s						
VSK1	VASILIKIADES	0.19	34	P	Pg	06 14 18.0	+0.4
VSK1				S	Sg	06 14 21.4	+1.2
FSK	Fiskardo	0.23	27	P	Pg	06 14 18.8	+0.4
FSK				S	Sg	06 14 22.9	+1.4
	comp=E,1μm,0.2s						
FSK	Fiskardo	0.23	27	P	Pg	06 14 18.9	+0.4
FSK				S	Sg	06 14 22.7	+1.2
KFL	Anninata	0.32	117	P	Pg	06 14 20.3	+0.2
KFL				S	Sg	06 14 25.4	+1.1
	comp=E,2μm,0.4s						
KFL	Anninata	0.32	117	P	Pg	06 14 20.3	+0.2
KFL				S	Sg	06 14 25.0	+0.8
KFL				AML	AML	06 14 26.1	
	comp=N,3755μm,0.4s						
KFL				AML	AML	06 14 27.6	
	comp=E,5701μm,0.4s						
EVGI	Lefkada island	0.41	26	P	Pg	06 14 22.1	+0.4
EVGI				S	Sb	06 14 28.8	-1.0
EVGI	Lefkada island	0.41	26	P	Pg	06 14 22.1	+0.4
VLMS	Volimes, Zakyn	0.42	154	P	Pg	06 14 22.3	+0.3
MGNA	Meganis	0.49	35	P	Pg	06 14 23.4	0.0
MGNA				AML	AML	06 14 32.1	
	comp=N,1265μm,0.3s						
MGNA				AML	AML	06 14 32.8	
	comp=E,959μm,0.3s						
LKD2	Lefkada island	0.56	18	P	Pg	06 14 24.8	+0.1
LKD2	Lefkada island	0.56	18	P	Pg	06 14 24.6	-0.1
TSLK	Tsoukalades, L	0.60	17	P	Pg	06 14 25.5	+0.1
TSLK	Tsoukalades, L	0.60	17	P	Pg	06 14 25.5	+0.1
KRI1	kERI	0.67	153	P	Pg	06 14 26.3	-0.4
PDO	Prodromos	0.68	60	P	Pg	06 14 27.3	+0.3
PDO	Prodromos	0.68	60	P	Pg	06 14 27.4	+0.3
PDO				AML	AML	06 14 39.6	
	comp=E,936μm,0.5s						
PDO				AML	AML	06 14 45.9	
	comp=N,1002μm,0.3s						
RLS	Riolos of Patr	0.84	103	P	Pg	06 14 30.2	+0.2
RLS				AML	AML	06 14 45.9	
	comp=N,395μm,0.3s						
RLS				AML	AML	06 14 47.3	
	comp=E,291μm,0.3s						
PVO	Paravola	0.93	67	P	Pb	06 14 32.3	-0.1
PVO	Paravola	0.93	67	P	Pb	06 14 32.2	-0.2
PVO				AML	AML	06 14 53.4	
	comp=E,653μm,0.3s						
PVO				AML	AML	06 14 55.0	
	comp=N,632μm,0.5s						
DRO	Drossia	1.05	106	P	Pg	06 14 34.1	0.0
DRO	Drossia	1.05	106	P	Pg	06 14 34.1	0.0
DRO				AML	AML	06 14 55.9	
	comp=E,599μm,0.2s						
DRO				AML	AML	06 14 57.2	
	comp=N,796μm,0.4s						
EFP	Efpalio	1.17	81	P	Pg	06 14 35.4	-1.0
EFP	Efpalio	1.17	81	P	Pg	06 14 35.8	-0.5
LAKA	Lakka	1.22	90	P	Pg	06 14 36.5	-0.7
LAKA	Lakka	1.22	90	P	Pg	06 14 36.6	-0.7
LAKA				AML	AML	06 14 56.8	
	comp=N,263μm,0.4s						
LAKA				AML	AML	06 15 00.7	
	comp=E,207μm,0.7s						
AMT	Artemida-Makis	1.24	125	P	Pn	06 14 37.9	+0.2
SERG	Sergoula	1.29	82	P	Pn	06 14 37.8	-0.5
TRIZ	Trizonia	1.30	85	P	Pn	06 14 37.9	-0.5
KALE	Kalithea	1.35	84	P	Pn	06 14 38.7	-0.5
KALE	Kalithea	1.35	84	P	Pn	06 14 38.5	-0.7
KALE				AML	AML	06 15 08.3	
	comp=N,260μm,0.4s						
KALE				AML	AML	06 15 08.4	
	comp=E,281μm,0.5s						
KLV	Kalavryta, Ach	1.37	98	P	Pn	06 14 39.5	+0.1
KLV				AML	AML	06 15 03.0	
	comp=N,258μm,0.4s						
KLV				AML	AML	06 15 03.8	
	comp=E,161μm,0.5s						

*UPA **30** 06:16:06.5±0.8,8°.21N×82°.95W,h20km±2km,MW4.5*
*UCR **30** 06:16:07.3±2.5,8°.22N×82°.95W,h13km±6km*

**ISC 30 06:16:05.6±1.2,8°.16N±0°.05×82°.98W±0°.03,h17

GPS3	**Bodega del ICE**	**3.49**	**318**	*e*P		**Pn**	**06 17 01.7**	**+2.5**
GPS1	**Guardaparques**	**3.49**	**318**	*e*P		**Pn**	**06 17 01.6**	**+2.4**
UPA	**Univ. de Panam**	**3.51**	**76**	*e*P		**Pn**	**06 17 02.6**	**+3.3**
UPA				*e*S		**Sn**	**06 17 40.9**	**+0.4**
NY14	**Universidad de**	**3.53**	**315**	*e*P		**Pn**	**06 17 02.3**	**+2.7**
LAPC	**Finca la Perla**	**3.54**	**317**	*e*P		**Pn**	**06 17 02.3**	**+2.4**
BUEV	**Buena Vista**	**3.55**	**318**	*e*P		**Pn**	**06 17 02.6**	**+2.6**
BUAI	**Buenos Aires**	**3.56**	**320**	*e*P		**Pn**	**06 17 03.1**	**+3.0**
GB1A	**Borinquen Arri**	**3.56**	**318**	*e*P		**Pn**	**06 17 02.7**	**+2.5**
GBS3	**Finca Las Img**	**3.57**	**317**	*e*P		**Pn**	**06 17 03.1**	**+2.9**
ACON	**Acoyapa**	**4.36**	**330**	*e*P		**Pn**	**06 17 13.4**	**+2.4**
PTAC	**Punta Ardita,**	**5.23**	**101**	*e*P		**Pn**	**06 17 22.8**	**-0.2**
MATN	**Matagalpa**	**5.55**	**329**	*e*P		**Pn**	**06 17 30.2**	**+2.6**
SOLC	**Bahia Solano**	**5.85**	**109**	*e*P		**Pn**	**06 17 30.8**	**-0.8**
SOLC	**Bahia Solano**	**5.85**	**109**	*e*P		**Pn**	**06 17 30.2**	**-1.4**
CBOC	**Ciudad Bolivar**	**7.28**	**108**	*e*P		**Pn**	**06 17 53.3**	**+1.8**

ISC 30 06:16:49.2±1.4, 50°18N±0°07×19°28E±0°04, h0km, n5, σ0.86/10, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.33**	**83**	*e*Pg	**Pg**	**06 16 55.4**	**-0.2**
OJC				*e*Sg	**Sg**	**06 16 59.7**	**-0.2**
NIE	**Niedzica**	**1.01**	**139**	*e*Pg	**Pg**	**06 17 10.0**	**+1.5**
NIE				*e*Sg	**Sb**	**06 17 23.8**	**+0.5**
LANS	**Liptovska Anna**	**1.04**	**173**	*e*PG	**Pg**	**06 17 08.5**	**-0.5**
LANS				*e*SG	**Sb**	**06 17 24.4**	**+0.2**
LANS				*e*LG	Lg	06 17 27.4	
MORC	**Moravsky Berou**	**1.19**	**251**	*e*PG	**Pg**	**06 17 12.6**	**+0.5**
MORC				*e*SG	**Sb**	**06 17 29.1**	**+0.4**
VYHS	**Vyhne**	**1.71**	**190**	*e*PN	**Pn**	**06 17 20.2**	**-0.1**
VYHS				*e*SN	**Sn**	**06 17 41.5**	**-1.3**

*IDC **30** 06:19:45.3±1.2, 38°.65N×20°.43E, h0km, mb3.7/8, mb1 3.7/10, mb1mx3.5/39, mbtmp3.6/10, ML3.2/2, Error ellipse: s-maj=27.7km s-min=21.1km az=68.0*
*THE **30** 06:19:46.4, 38°.32N×20°.42E, h12km, ML3.5/6, Error ellipse: s-maj=0.7km s-min=0.2km az=262.0*
*ATH **30** 06:19:46.2, 38°.31N×20°.45E, h13km, ML3.3/15, Error ellipse: s-maj=1.8km s-min=0.8km az=272.0*

ISC 30 06:19:46.1±0.7, 38°32N±0°02×20°43E±0°03, h13km±4km, n71, σ0.91/98, mb3.8/8, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF1	**Kardakata, Kep**	**0.06**	**145**	P	**Pg**	**06 19 48.4**	**-0.1**
KEF1				S	**Sg**	**06 19 50.1**	**-0.2**
KEF4	**Livadi, Kephal**	**0.07**	**185**	P	**Pg**	**06 19 48.6**	**0.0**
KEF4				S	**Sg**	**06 19 50.4**	**0.0**
VSK1	**VASILIKIADES**	**0.14**	**51**	P	**Pg**	**06 19 49.9**	**+0.4**
VSK1				S	**Sg**	**06 19 52.1**	**+0.1**
KEF3	**Kipouria, Keph**	**0.14**	**209**	P	**Pg**	**06 19 49.6**	**+0.1**
KEF3				S	**Sg**	**06 19 52.1**	**+0.2**
CHV1	**Chavriata, Kef**	**0.14**	**196**	P	**Pg**	**06 19 49.7**	**+0.1**
CHV1				S	**Sg**	**06 19 52.4**	**+0.3**
ARG2	**Argostoli**	**0.15**	**163**	P	**Pg**	**06 19 49.9**	**+0.2**
ARG2				S	**Sg**	**06 19 52.5**	**+0.3**
KEF2	**Argostoli. Kep**	**0.16**	**164**	P	**Pg**	**06 19 50.0**	**+0.1**
KEF2				S	**Sg**	**06 19 52.7**	**+0.1**
FSK	**Fiskardo**	**0.17**	**37**	P	**Pg**	**06 19 50.5**	**+0.5**
FSK				S	**Sg**	**06 19 53.5**	**+0.7**
	17μm,0.3s						
FSK	**Fiskardo**	**0.17**	**37**	P	**Pg**	**06 19 50.5**	**+0.5**
FSK				S	**Sg**	**06 19 52.5**	**-0.3**
VLS	**Valsamata**	**0.19**	**139**	P	**Pg**	**06 19 50.4**	**+0.1**
VLS				S	**Sg**	**06 19 53.6**	**+0.3**
VLS	**Valsamata**	**0.19**	**139**	P	**Pg**	**06 19 50.5**	**+0.1**
VLS				S	**Sg**	**06 19 53.7**	**+0.3**
VLS				AML	AML	06 19 53.9	
VLS				AML	AML	06 19 53.9	
EVGI	**Lefkada island**	**0.35**	**31**	P	**Pg**	**06 19 53.5**	**+0.4**
EVGI				S	**Sg**	**06 19 58.9**	**+1.1**
EVGI	**Lefkada island**	**0.35**	**31**	P	**Pg**	**06 19 53.5**	**+0.4**
EVGI				S	**Sg**	**06 19 58.7**	**+0.9**
KFL	**Anninata**	**0.35**	**127**	P	**Pg**	**06 19 53.3**	**+0.1**
KFL				S	**Sg**	**06 19 58.8**	**+0.8**
	25μm,0.4s						
KFL	**Anninata**	**0.35**	**127**	P	**Pg**	**06 19 53.4**	**+0.1**
KFL				S	**Sg**	**06 19 58.4**	**+0.4**
KFL				AML	AML	06 19 59.7	
	comp=E,47623μm,0.3s						
KFL				AML	AML	06 19 60.0	
	comp=N,53508μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.48**	**158**	P	**Pg**	**06 19 55.6**	**0.0**
VLMS				S	**Sg**	**06 20 02.7**	**+0.6**
LKD2	**Lefkada island**	**0.50**	**21**	P	**Pg**	**06 19 55.9**	**0.0**
LKD2				S	**Sg**	**06 20 03.4**	**+0.8**
	comp=N,2μm,0.9s						
LKD2	**Lefkada island**	**0.50**	**21**	P	**Pg**	**06 19 55.9**	**0.0**
LKD2				AML	AML	06 20 04.5	
	comp=N,4005μm,0.7s						
LKD2				AML	AML	06 20 12.4	
	comp=E,3578μm,0.4s						
TSLK	**Tsoukalades, L**	**0.53**	**19**	P	**Pg**	**06 19 56.7**	**+0.2**
TSLK				S	**Sb**	**06 20 05.3**	**+0.4**
TSLK	**Tsoukalades, L**	**0.53**	**19**	P	**Pg**	**06 19 56.7**	**+0.2**
AST1	**Astakos**	**0.56**	**67**	P	**Pg**	**06 19 57.4**	**+0.3**
AST1				S	**Sb**	**06 20 06.0**	**+0.2**
ZAK2	**Zakynthos**	**0.65**	**145**	P	**Pg**	**06 19 58.9**	**+0.2**
ZAK2				S	**Sb**	**06 20 08.6**	**+0.3**
PDO	**Prodromos**	**0.65**	**65**	P	**Pg**	**06 19 58.7**	**-0.1**
PDO				S	**Sb**	**06 20 08.5**	**+0.1**
PDO	**Prodromos**	**0.65**	**65**	P	**Pg**	**06 19 59.0**	**+0.2**
PDO				AML	AML	06 20 11.7	
	comp=E,7761μm,0.4s						
PDO				AML	AML	06 20 12.9	
	comp=N,7159μm,0.4s						
KRI1	**kERI**	**0.73**	**155**	P	**Pg**	**06 19 59.8**	**-0.4**
KRI1				S	**Sb**	**06 20 11.1**	**+0.6**
RLS	**Riolos of Patr**	**0.86**	**108**	P	**Pg**	**06 20 02.3**	**-0.4**
RLS	**Riolos of Patr**	**0.86**	**108**	P	**Pg**	**06 20 02.3**	**-0.4**
RLS				AML	AML	06 20 22.8	
	comp=E,1728μm,0.6s						
RLS				AML	AML	06 20 23.9	
	comp=N,2410μm,0.5s						
PVO	**Paravola**	**0.91**	**71**	P	**Pg**	**06 20 03.9**	**+0.3**
PVO				S	**Sn**	**06 20 17.4**	**-0.2**
	comp=N,3μm,0.5s						
PVO	**Paravola**	**0.91**	**71**	P	**Pg**	**06 20 03.9**	**+0.3**
PVO				AML	AML	06 20 24.6	
	comp=E,7418μm,0.5s						
PVO				AML	AML	06 20 24.7	
	comp=N,5135μm,0.5s						
DRO	**Drossia**	**1.07**	**110**	P	**Pb**	**06 20 06.2**	**-0.4**
DRO				S	**Sn**	**06 20 22.2**	**+0.4**
	comp=N,3μm,0.5s						
DRO	**Drossia**	**1.07**	**110**	P	**Pb**	**06 20 06.7**	**+0.1**
DRO				AML	AML	06 20 29.2	
	comp=E,5673μm,0.5s						
DRO				AML	AML	06 20 31.7	
	comp=N,4513μm,0.5s						
EFP	**Efpalio**	**1.16**	**84**	P	**Pb**	**06 20 07.4**	**-0.7**
EFP	**Efpalio**	**1.16**	**84**	P	**Pb**	**06 20 07.5**	**-0.6**
ANX	**Ano Chora**	**1.20**	**77**	P	**Pn**	**06 20 08.4**	**+0.3**
ANX				S	**Sn**	**06 20 25.6**	**+0.6**
	comp=N,2μm,0.8s						
ANX	**Ano Chora**	**1.20**	**77**	P	**Pn**	**06 20 08.7**	**0.0**
ANX				AML	AML	06 20 33.2	
	comp=E,3773μm,0.9s						
ANX				AML	AML	06 20 36.8	
	comp=N,3630μm,0.6s						
LAKA	**Lakka**	**1.22**	**93**	P	**Pn**	**06 20 08.6**	**-0.3**
LAKA				S	**Sn**	**06 20 25.9**	**+0.5**
LAKA	**Lakka**	**1.22**	**93**	P	**Pn**	**06 20 08.6**	**-0.3**
LAKA				AML	AML	06 20 32.3	
	comp=N,1175μm,0.7s						
LAKA				AML	AML	06 20 36.6	
	comp=E,1495μm,1.0s						
EVR	**Evrytania**	**1.23**	**61**	P	**Pn**	**06 20 09.2**	**+0.1**
EVR	**Evrytania**	**1.23**	**61**	P	**Pn**	**06 20 09.3**	**+0.1**
EVR				AML	AML	06 20 33.1	
	comp=E,1406μm,0.6s						
EVR				AML	AML	06 20 36.7	
	comp=N,2061μm,1.0s						
SERG	**Sergoula**	**1.28**	**85**	P	**Pn**	**06 20 09.4**	**-0.4**
SERG	**Sergoula**	**1.28**	**85**	P	**Pn**	**06 20 09.4**	**-0.4**
AMT	**Artemida-Makis**	**1.28**	**128**	P	**Pb**	**06 20 10.3**	**+0.2**
TRIZ	**Trizonia**	**1.29**	**88**	P	**Pn**	**06 20 09.5**	**-0.4**
TRIZ	**Trizonia**	**1.29**	**88**	P	**Pn**	**06 20 09.5**	**-0.4**
KALE	**Kalithea**	**1.34**	**87**	P	**Pn**	**06 20 10.4**	**-0.3**
KALE	**Kalithea**	**1.34**	**87**	P	**Pn**	**06 20 10.4**	**-0.3**
KALE				AML	AML	06 20 38.4	
	comp=E,1432μm,0.6s						
KALE				AML	AML	06 20 41.7	
	comp=N,1857μm,0.5s						
KLV	**Kalavryta, Ach**	**1.38**	**101**	P	**Pn**	**06 20 11.3**	**+0.1**
KLV	**Kalavryta, Ach**	**1.38**	**101**	P	**Pn**	**06 20 11.3**	**+0.1**
KLV				AML	AML	06 20 41.0	
	comp=E,1386μm,1.2s						
KLV				AML	AML	06 20 44.9	
	comp=N,1179μm,1.0s						
MAKR	**Makrakomi, Fth**	**1.50**	**62**	P	**Pb**	**06 20 14.0**	**+0.2**
MAKR				AML	AML	06 20 44.4	
	comp=E,2493μm,0.4s						
MAKR				AML	AML	06 20 51.0	
	comp=N,1686μm,0.6s						
AGG	**Agios Georgios**	**1.64**	**64**	P	**Pb**	**06 20 16.9**	**+0.6**
ITM	**Ithomi**	**1.65**	**133**	P	**Pb**	**06 20 16.4**	**0.0**
ITM				AML	AML	06 20 49.5	
	comp=E,967μm,1.4s						
ITM				AML	AML	06 20 50.5	
	comp=N,925μm,0.5s						
THL	**Klokotos Trika**	**1.75**	**44**	P	**Pb**	**06 20 18.9**	**+0.8**
PYL	**PYLOS**	**1.77**	**143**	P	**Pb**	**06 20 17.5**	**-0.8**
AXAR	**Agios Charalam**	**1.80**	**75**	P	**Pb**	**06 20 18.5**	**-0.5**
VLX	**Vlachokerasia**	**1.81**	**121**	P	**Pb**	**06 20 19.3**	**+0.1**
PROD	**Prodromos**	**1.94**	**91**	P	**Pb**	**06 20 21.2**	**-0.2**
PROD				AML	AML	06 20 54.2	
	comp=E,603μm,0.5s						
PROD				AML	AML	06 21 06.0	
	comp=N,752μm,0.9s						
LKR	**Lokris**	**2.04**	**80**	P	**Pb**	**06 20 22.8**	**-0.3**
STIP	**Stip**	**3.63**	**21**	*i* Pn	**Pn**	**06 20 45.4**	**+3.4**
IDI	**Anoyia**	**4.69**	**129**	Pn	**Pn**	**06 21 01.2**	**+4.6**
	comp=N,0.4nm,0.3s,baz=349,slow=16,SNR=3.5						
IDI				Sn	**Sn**	**06 21 50.6**	**-0.4**
	comp=N,1.6nm,0.3s,baz=291,slow=22,SNR=1.9						
SOKA	**Soboth**	**9.25**	**336**	*e*Pn	**Pn**	**06 21 58.8**	**-0.5**
OBKA	**Obir**	**9.26**	**334**	*e*Pn	**Pn**	**06 21 59.9**	**+0.5**
	comp=N,2.5nm,0.5s						
MOA	**Molln**	**10.53**	**337**	*i* Pn	**Pn**	**06 22 15.7**	**-1.0**
GERES	**GERESS Array B**	**11.59**	**337**	Pn	**Pn**	**06 22 28.6**	**-2.7**
	comp=N,0.1nm,0.3s,baz=153,slow=13,SNR=2.7						
HFS	**Hagfors**	**22.25**	**351**	P	**P**	**06 24 40.9**	**-1.6**
	comp=N,1.1nm,0.6s,baz=155,slow=15,SNR=3.9						
FINES	**FINESS Array B**	**23.41**	**7**	P	**P**	**06 24 53.2**	**-1.3**
	comp=N,3.1nm,1.0s,baz=187,slow=11,SNR=3.9						
NOA	**NORSAR Array B**	**23.46**	**349**	P	**P**	**06 24 52.0**	**-3.1**
	comp=N,0.7nm,0.7s,baz=167,slow=12,SNR=2.4						
TORD	**Torodi Ar. Bea**	**30.10**	**219**	P	**P**	**06 25 58.5**	**+3.0**
	comp=N,1.6nm,1.0s,baz=29,slow=9.6,SNR=3.7						
MKAR	**Makanchi Array**	**45.29**	**58**	P	**P**	**06 28 02.6**	**-0.8**
	comp=N,0.5nm,0.5s,baz=275,slow=7.6,SNR=12						
ZALV	**Zalesovo Beam**	**45.65**	**48**	P	**P**	**06 28 05.5**	**-0.6**
	comp=N,1.6nm,0.4s,baz=272,slow=9.2,SNR=6.6						
YKA	**Yellowknife Ar**	**73.23**	**340**	P	**P**	**06 31 16.9**	**+0.4**
	comp=N,0.1nm,0.7s,baz=33,slow=5.3,SNR=2.9						
KLR	**Kul'dur**	**73.81**	**39**	P	**P**	**06 31 19.9**	**-0.3**
	comp=N,1.2nm,0.6s,baz=322,slow=9.3,SNR=3.8						

YARS 30 06:20:19.8±0.0, 57°48N×120°67E, h14km, mb4.3/1, ML1.6/6, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YKLR	**Yuktali**	**1.04**	**148**	*e*Pg	Pb	06 20 38.7	-0.9
	2.5nm,0.4s						
YKLR				*e*Sg	Sb	06 20 52.5	-0.5
	14nm,0.3s						
CLNS	**Chul'man**	**2.39**	**104**	*e*Pn	Pn	06 20 59.1	+0.6
CLNS				*e*Pg	Pb	06 21 03.0	+0.5
	0.9nm,0.2s						
CLNS				*e*Sn	Sn	06 21 28.3	+0.7
CLNS				*e*Sn	Sn	06 21 28.3	+0.7
CLNS				*e*Sg	Sg	06 21 34.6	-1.9
	14nm,0.7s						
ALDR	**Aldan**	**2.76**	**64**	*e*Pn	Pn	06 21 04.2	+0.6
ALDR				*e*Pg	Pb	06 21 09.8	+0.8
	0.9nm,0.2s						
ALDR				*e*Sn	Sn	06 21 37.6	+0.8
ALDR				*e*Sn	Sn	06 21 37.6	+0.8
ALDR				*e*Sg	Sg	06 21 46.4	-2.1
	13nm,0.6s						
OLMR	**Olekminsk**	**2.91**	**358**	*e*Pn	Pn	06 21 06.2	+0.7
OLMR				*e*Pg	Pb	06 21 12.2	+0.9
	1.4nm,0.4s						
OLMR				*e*Sn	Sn	06 21 40.8	+0.6
OLMR				*e*Sn	Sn	06 21 40.8	+0.6
OLMR				*e*Sg	Sg	06 21 50.6	-2.4
	11nm,0.7s						
TUP	**Tupik**	**3.09**	**188**	*e*Sn	Sn	06 21 45.1	+0.3
TUP				*e*Sn	Sn	06 21 45.1	+0.3
TUP				*e*Sg	Sg	06 21 56.0	-2.9
	16nm,0.5s						
KROS	**Kirovskiy**	**4.68**	**128**	*e*Sg	Sg	06 22 45.9	-3.8
	7.0nm,0.4s						
CGD	**Chagda**	**5.43**	**72**	*i* Pn	Pn	06 21 41.2	+1.0
CGD				*e*Pg	Pb	06 21 57.8	+3.6
	1.4nm,0.6s						
CGD				*e*Sn	Sn	06 22 42.8	+0.5
CGD				*e*Sn	Sn	06 22 42.8	+0.5
CGD				*e*Sg	Sg	06 23 09.6	-4.2
	3.5nm,0.3s						
TBGR	**Tabaga**	**6.29**	**42**	*i* Pn	Pn	06 21 53.3	+1.3
TBGR				*i* Pg	Pb	06 22 13.4	+4.5
	1.5nm,0.2s						
TBGR				*e*Sn	Sn	06 23 04.0	+0.4
TBGR				*e*Sn	Sn	06 23 04.0	+0.4
TBGR				*e*Sg	Sg	06 23 36.6	-4.8
	8.5nm,0.2s						

*IDC **30** 06:30:16.0±3.1, 53°.61N×90°.70E, h0km, mb1 3.5/3, mb1mx3.2/53, mbtmp3.5/3, ML2.8/3, Error ellipse: s-maj=26.8km s-min=22.2km az=56.0*
*NNC **30** 06:30:21.4±2.6, 53°.33N×90°.33E, h0km, mb3.8, mpv3.5, Error ellipse: s-maj=21.1km s-min=16.2km az=84.0*

ASRS 30 06:30:09.3, 53°81N×91°03E, M2.4, 7C-7D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**3.68**	**275**	*i*		06 54 48.9	
	baz=90,slow=339,SNR=6.5						
ZAA0	**Zalesovo Array**	**3.68**	**275**	⇓Pn	Pb	06 31 16.1	+1.0
	4.5nm,0.8s						
ZAA0				⇓Lg	Lg	06 32 08.1	
	15nm,0.8s						
ZALV	**Zalesovo Beam**	**3.68**	**275**	Pn	Pb	06 31 12.2	-3.0
	1.4nm,0.3s,baz=91,slow=12,SNR=12						
ZALV				Lg	Lg	06 32 07.3	
	2.4nm,0.3s,baz=89,slow=28,SNR=10						
KURK	**Kurchatov**	**8.22**	**253**	⇑Pn	Pn	06 32 12.3	+2.6
	3.6nm,0.8s						
KURK				⇑Sn	Sn	06 33 41.9	-1.3
	11nm,0.9s						
KURK				⇓Lg	Lg	06 34 26.3	
	30nm,0.9s						
KURBB	**Kurchatov Arra**	**8.31**	**252**	Pn	Pn	06 32 14.0	+3.0
	0.2nm,0.3s,baz=64,slow=14,SNR=15						
KURBB				Sn	Sn	06 33 44.8	-0.7
	0.0nm,0.3s,baz=67,slow=25,SNR=4.2						
KURBB				Lg	Lg	06 34 30.8	
	0.1nm,0.3s,baz=69,slow=32,SNR=3.9						
KURBB	**Kurchatov Arra**	**8.31**	**252**	⇓Pn	Pn	06 32 13.8	+2.8
	4.5nm,0.6s						
KURBB				⇑Sn	Sn	06 33 44.7	-0.8
	45nm,0.7s						
KURBB				⇑Lg	Lg	06 34 29.8	
	41nm,0.9s						
MK31	**Makanchi Array**	**8.98**	**222**	⇑Pn	Pn	06 32 23.6	+3.5
	0.8nm,0.7s,baz=36,slow=12,SNR=26						
MK31				⇑Sn	Sn	06 34 01.8	0.0
	8.0nm,1.0s,baz=41,slow=22,SNR=5.1						
MK31				⇑Lg	Lg	06 34 47.4	
	25nm,1.0s,baz=54,slow=28,SNR=5.2						
MKAR	**Makanchi Array**	**8.98**	**222**	Pn	Pn	06 32 23.9	+3.7
	0.3nm,0.3s,baz=36,slow=14,SNR=19						
MKAR				Sn	Sn	06 33 59.8	-2.0
	baz=41,slow=27,SNR=1.4						
MKAR				Lg	Lg	06 34 50.7	
	0.1nm,0.3s,baz=32,slow=21,SNR=6.3						
MAKZ	**Makanchi**	**9.09**	**223**	⇓Pn	Pn	06 32 24.0	+2.3
	2.3nm,1.0s						
MAKZ				⇓Sn	Sn	06 34 03.1	-1.5
	4.7nm,0.8s						
MAKZ				⇓Lg	Lg	06 34 52.0	
	16nm,0.9s						

UCR 30 06:45:33.0±0.8, 9°34N×85°56W, h21km±5km, MD3.7, 1C, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLVR	**Palo Verde**	**1.02**	**12**	*e*P	Pb	06 45 51.3	-0.8
PLVR				*e*S	Sb	06 46 05.4	+0.4
JTS	**Las Juntas de**	**1.11**	**32**	*e*P	Pn	06 45 52.3	-1.2
JTS				*e*S	Sb	06 46 07.2	-0.5
CASO	**Castillo**	**1.35**	**37**	⇑*i* P	Pn	06 45 56.4	-0.3
CUI	**Cuipilapa**	**1.36**	**17**	*e*P	Pn	06 45 56.7	-0.2
ARE1	**Arenal 1**	**1.38**	**37**	*e*P	Pn	06 45 57.2	0.0
FORC	**Fortuna**	**1.42**	**38**	*i* P	Pn	06 45 57.4	-0.2
LAPC	**Finca la Perla**	**1.42**	**5**	*i* P	Pn	06 45 57.4	-0.3
BUEV	**Buena Vista**	**1.45**	**6**	*i* P	Pn	06 45 57.8	-0.3
GB1A	**Borinquen Arri**	**1.47**	**6**	*i* P	Pn	06 45 58.2	-0.2
LCR2	**La Lucha 2**	**1.58**	**75**	*e*P	Pn	06 45 58.7	-1.4

MAN 30 06:57:37.3, 10°07N×124°02E, h31km, mb3.6, ML2.3, MS1.9, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.25**	**348**	⇓*i* P	Pn	06 57 45.7	+0.7
LLP				*e*S	Sn	06 57 51.6	+1.8
MSLP	**Maasin**	**0.83**	**85**	*e*P	Pn	06 57 52.7	-0.2
MSLP				*e*S	Sn	06 58 02.9	-1.2

MAN 30 07:00:40.8, 7°64N×125°98E, h5km, mb3.5, ML2.2, MS1.6, Mindanao

*SOME **30** 07:23:15.8, 39°.07N×71°.65E, h10km*
*IDC **30** 07:23:16.6±1.3, 38°.77N×70°.78E, h0km, mb3.5/4, mb1 3.6/9, mb1mx3.5/51, mbtmp3.5/9, ML3.3/5, Error ellipse: s-maj=25.7km s-min=13.1km az=144.0*
*KRNET **30** 07:23:18.0±0.1, 39°.03N×70°.27E, mb3.1*
*NNC **30** 07:23:23.4±10.0, 39°.03N×71°.02E, h0km, mb4.1, mpv3.5, Error ellipse: s-maj=79.7km s-min=49.5km az=1.0*

ISC 30 07:23:19.7±1.1, 38°.97N±0°.07×70°.25E±0°.06, h13km, n34, σ2.43/50, mb3.4/4, 15C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**1.18**	**22**	⇑*i* P	**Pn**	**07 23 39.3**	**-2.6**
	baz=22						
BTK				⇑*i* S	**Sb**	**07 23 54.8**	**-2.3**
	baz=22						
FRG	**Fergana**	**2.13**	**33**	P	**Pn**	**07 23 52.8**	**-2.1**
FRG				S	**Sn**	**07 24 19.6**	**-1.6**
ANR	**Andizhan**	**2.42**	**42**	P	**Pn**	**07 24 00.7**	**+1.8**
ANR				S	**Sn**	**07 24 32.6**	**+4.2**
CHRV	**Charvak**	**2.68**	**355**	*e*P	**Pb**	**07 24 09.2**	**+1.6**
CHRV				*e*S	**Sg**	**07 24 45.4**	**-0.5**
ARK	**Arkit**	**3.12**	**24**	⇑*i* P	**Pn**	**07 24 09.7**	**+1.0**
	baz=25						
ARK				⇑*i* S	**Sn**	**07 24 47.4**	**+1.6**
	baz=25						
ARSB	**Arslanbob**	**3.15**	**41**	⇑*i* P	**Pn**	**07 24 10.0**	**+0.8**
	baz=41						
ARSB				⇑*i* S	**Sn**	**07 24 48.1**	**+1.4**
	baz=41						
IUG	**Iuzhnay**	**3.18**	**357**	*e*P	**Pn**	**07 24 13.8**	**+4.3**
	4.7nm,0.2s						
IUG				*e*S	**Sb**	**07 24 56.2**	**+1.3**
	270nm,0.4s						
AML	**Almayashu**	**4.11**	**39**	P	**Pn**	**07 24 23.3**	**+0.7**
	SNR=18						
KK31	**Karatay Array**	**4.14**	**3**	⇓Pn	**Pn**	**07 24 25.4**	**+2.8**
	2.0nm,0.3s,baz=169,slow=15,SNR=179						
KK31				⇑Pg	**Pb**	**07 24 35.1**	**+2.7**
	2.6nm,0.3s,baz=182,slow=19,SNR=10						
KK31				⇑Sn	**Sn**	**07 25 16.5**	**+5.7**
	6.6nm,0.3s,baz=174,slow=18,SNR=4.9						
KK31				⇑Lg	Lg	07 25 32.2	
	36nm,0.6s,baz=161,slow=27,SNR=8.1						
ARLS	**Aral**	**4.25**	**46**	⇑*i* P	**Pn**	**07 24 25.5**	**+1.3**
	baz=46						
ARLS				⇑*i* S	**Sn**	**07 25 15.3**	**+1.6**
	baz=46						
MRKS	**Merke**	**4.40**	**30**	*e*P	**Pn**	**07 24 27.4**	**+1.2**
	22nm,0.3s						
MRKS				*e*S	**Sn**	**07 25 19.2**	**+1.8**
	42nm,0.4s						
EKS2	**Erkin-Say**	**4.56**	**35**	P	**Pn**	**07 24 30.8**	**+2.3**
	SNR=22						
UCH	**Uchtor**	**4.60**	**44**	P	**Pn**	**07 24 29.7**	**+0.4**
	SNR=44						
AAK	**Ala-Archa**	**4.88**	**40**	Pn	**Pn**	**07 24 33.6**	**+0.7**
	4.6nm,0.3s,baz=212,slow=8.7,SNR=44						
AAK				Sn	**Sn**	**07 25 30.8**	**+1.5**
	1.5nm,0.3s,baz=27,slow=16,SNR=9.7						
AAK	**Ala-Archa**	**4.88**	**40**	P	**Pn**	**07 24 34.0**	**+1.1**
	SNR=22						
AAK	**Ala-Archa**	**4.88**	**40**	⇓Pn	**Pn**	**07 24 33.8**	**+0.9**
	6.8nm,0.4s						
AAK				Sn	**Sn**	**07 25 29.2**	**-0.2**
	31nm,0.7s						
KZA	**Kyzart**	**4.92**	**49**	P	**Pn**	**07 24 33.9**	**+0.3**
	SNR=6.8						
NRN	**Naryn**	**5.05**	**59**

IDC 30 07:29:47.1±2.2,7.09S×145.60E,H327km±54km, mb2.8/1, mb1 2.7/4, mb1mx2.5/37, mbtmp3.3/4, Error ellipse: s-maj=94.2km s-min=31.8km az=106.0, Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.77**	**146**	P	Pn	07 30 42.5	-0.2
	2.9nm,0.3s,baz=340,slow=6.4,SNR=5.5						
WRA	**Warramunga Arr**	**16.81**	**219**	P	P	07 33 22.2	-0.4
	0.1nm,0.3s,baz=45,slow=11,SNR=2.2						
ASAR	**Alice Springs**	**19.95**	**213**	P	P	07 33 56.1	+0.1
	0.2nm,0.3s,baz=39,slow=7.6,SNR=2.4						
CMAR	**Chiang Mai Arr**	**52.55**	**300**	P	P	07 38 27.7	-0.6
	1.0nm,0.3s,baz=121,slow=6.7,SNR=4.3						
MKAR	**Makanchi Array**	**77.45**	**321**	P	P	07 41 07.6	+0.7
	0.3nm,0.7s,baz=103,slow=6.2,SNR=1.8						

*SKHL **30** 07:36:44.4±0.5,47.80N×149.10E,h394km±13km, mb4.7/8, msha5.1/5*
*IDC **30** 07:36:47.2±1.9,48.24N×149.01E,h385km±25km, mb3.1/8, mb1 3.3/13, mb1mx3.1/49, mbtmp4.0/13, Error ellipse: s-maj=25.8km s-min=17.3km az=156.0*
ISC 30 07:36:45.2±0.7,47.67N±0.07×149.07E±0.08, h400km, n38, σ2s00/50, mb3.4/8, 1C-2D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.57**	**199**	⇓*i*P	**Pn**	**07 37 45.8**	**+0.7**
KUR				AMB	AMB	07 37 46.0	
	110nm,0.5s						
KUR				*e*S	**S**	**07 38 35.3**	**+1.9**
KUR				A	A	07 38 35.5	
	20nm,0.3s						
KUR				A	A	07 38 35.5	
	40nm,0.3s						
SHO	**Shikotan**	**4.11**	**203**	*i* P	**Pn**	**07 37 57.8**	**-0.5**
SHO				AMB	AMB	07 37 59.0	
	120nm,0.4s						
SHO				⇓*i*S	**S**	**07 38 55.2**	**-2.4**
SHO				A	A	07 38 57.0	
	140nm,0.6s						
SHO				A	A	07 38 57.0	
	80nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.27**	**213**	*e*P	**Pn**	**07 38 01.0**	**+1.2**
YUK				AMB	AMB	07 38 03.0	
	120nm,0.4s						
YUK				*e*S	**S**	**07 39 01.8**	**+1.4**
YUK				A	A	07 39 06.0	
	100nm,0.6s						
YUK				A	A	07 39 06.0	
	130nm,0.6s						
GRPR	**Tuman**	**4.34**	**213**	*e*P	**Pn**	**07 38 02.4**	**+1.9**
GRPR				AMB	AMB	07 38 03.0	
	120nm,0.4s						
GRPR				*e*S	**S**	**07 39 04.4**	**+2.8**
GRPR				A	A	07 39 07.0	
	100nm,0.6s						
GRPR				A	A	07 39 07.0	
	100nm,0.6s						
YSS	**Yuzh-Sakhalins**	**4.36**	**263**	*e*P	**Pn**	**07 38 02.0**	**+1.4**
GLVR	**Golovnino**	**4.65**	**214**	*e*P	**Pn**	**07 38 05.8**	**+2.2**
GLVR				AMB	AMB	07 38 11.0	
	100nm,0.4s						
GLVR				*e*S	**S**	**07 39 09.9**	**+2.6**
GLVR				A	A	07 39 14.0	
	20nm,0.4s						
GLVR				A	A	07 39 14.0	
	50nm,0.4s						
NEM2	**Nemuro 2**	**4.89**	**210**	P	**Pn**	**07 38 05.2**	**-0.9**
NEM2				*e*S	**S**	**07 39 09.1**	**-2.8**
NMR	**Nemuro--Hokkai**	**4.90**	**210**	*i* P	**Pn**	**07 38 05.0**	**-1.1**
NMR				*i* S	**S**	**07 39 09.0**	**-2.9**
JNK	**Nakash**	**5.09**	**218**	P	**Pn**	**07 38 09.0**	**+0.8**
TYV	**Tymovskoe**	**5.28**	**310**	*e*P	**Pn**	**07 38 07.3**	**-2.6**
TYV				AMB	AMB	07 38 07.8	
	110nm,0.6s						
SKR	**Severo-Kuril's**	**5.52**	**54**	*e*P	**Pn**	**07 38 12.8**	**+0.4**
SKR				AMB	AMB	07 38 17.2	
	30nm,1.0s						
JAK	**Akkeshi**	**5.59**	**215**	P	**Pn**	**07 38 13.2**	**-0.2**
JAK				*e*S	**S**	**07 39 23.4**	**-1.9**
JAR	**Ashorobuto**	**5.74**	**222**	P	**Pn**	**07 38 16.0**	**+1.0**
ASAJ	**Asahikawa**	**5.75**	**234**	P	**Pn**	**07 38 19.0**	**+4.0**
	2.8nm,0.3s,baz=67,slow=13,SNR=9.0						
JOB	**Onbets**	**6.03**	**220**	P	**Pn**	**07 38 18.6**	**+0.5**
JOB				*e*S	**S**	**07 39 32.4**	**-1.4**
JCH	**Churui**	**6.46**	**221**	P	**Pn**	**07 38 22.9**	**0.0**
JCH				*e*S	**S**	**07 39 40.3**	**-2.3**
JBT2	**Biratori 2**	**6.80**	**227**	P	**P**	**07 38 28.4**	**+1.2**
JNBK	**Urakawa-nobuka**	**7.00**	**222**	P	**Pn**	**07 38 28.9**	**0.0**
JEM	**Erimo**	**7.04**	**219**	P	**P**	**07 38 30.3**	**+0.4**
JNB	**Noboribetsu**	**7.70**	**231**	P	**P**	**07 38 38.6**	**+1.4**
JNB				*e*S	**S**	**07 40 08.5**	**+0.5**
JKB	**Kayabe**	**8.13**	**228**	P	**Pn**	**07 38 41.9**	**+0.3**
JKB				*e*S	**S**	**07 40 13.1**	**-3.8**
JTM	**Tenmabayashi**	**8.96**	**223**	*e*S	**S**	**07 40 30.0**	**-4.5**
JANG	**Nango**	**9.09**	**219**	P	**P**	**07 38 52.5**	**-0.2**
JANG				*e*S	**S**	**07 40 34.1**	**-3.4**
KLR	**Kul'dur**	**11.61**	**284**	P	**Pn**	**07 39 21.9**	**+0.2**
	0.5nm,0.3s,baz=77,slow=11,SNR=16						
EKMR	**Ekimchan**	**11.62**	**304**	⇓eP	**Pn**	**07 39 21.0**	**-0.8**
MA2	**Magadan**	**11.97**	**4**	P	**P**	**07 39 21.2**	**-3.1**
	1.1nm,0.3s,baz=188,slow=9.6,SNR=13						
MJAR	**Matsushiro Arr**	**13.71**	**220**	P	Pn	07 39 51.7	+5.5
	0.2nm,0.3s,baz=21,slow=13,SNR=12						
BMKR	**Bomnak**	**14.48**	**307**	*e*P	**P**	**07 39 53.8**	**+2.1**
SEY	**Seymchan**	**15.41**	**6**	P	**P**	**07 39 58.6**	**-3.1**
	0.6nm,0.3s,baz=190,slow=8.5,SNR=20						
KROS	**Kirovskiy**	**15.42**	**304**	*e*P	**P**	**07 40 04.0**	**+2.1**
TIXI	**Tiksi**	**25.85**	**345**	P	**P**	**07 41 39.3**	**-2.5**
	1.4nm,0.4s,baz=158,slow=2.2,SNR=3.9						
ILAR	**Eielson Array**	**37.57**	**39**	P	**P**	**07 43 22.1**	**-0.6**
	0.9nm,0.4s,baz=258,slow=5.8,SNR=18						
INK	**Inuvik**	**42.36**	**33**	P	**P**	**07 44 01.1**	**-0.4**
	1.9nm,0.3s,baz=299,slow=9.1,SNR=36						
MKAR	**Makanchi Array**	**44.06**	**295**	P	**P**	**07 44 16.7**	**+1.4**
	0.3nm,0.4s,baz=63,slow=6.4,SNR=6.2						
YKA	**Yellowknife Ar**	**51.82**	**36**	P	**P**	**07 45 13.5**	**-0.1**
	0.7nm,0.6s,baz=303,slow=7.3,SNR=16						
FINES	**FINESS Array B**	**62.00**	**333**	P	**P**	**07 46 23.0**	**-1.0**
	2.9nm,0.9s,baz=354,slow=1.4,SNR=4.4						
PDAR	**Pinedale Array**	**66.39**	**52**	P	**P**	**07 46 54.4**	**+1.5**
	0.3nm,0.5s,baz=318,slow=1.9,SNR=5.0						
TXAR	**Lajitas Array**	**79.39**	**58**	P	**P**	**07 48 10.7**	**+2.4**
	0.1nm,0.4s,baz=301,slow=4.0,SNR=2.8						

*SKO **30** 07:39:48.7,42.48N×23.81E,h0km*
*ATH **30** 07:39:48.4,42.42N×23.84E,h16km±2km, ML2.6/4, Error ellipse: s-maj=4.8km s-min=2.1km az=170.0*
*BEO **30** 07:39:49.5±0.7,42.42N×23.75E,h0km, ML2.2/6*
*THE **30** 07:39:50.3,42.41N×23.79E,h9km±7km, ML2.6/7, Error ellipse: s-maj=10.4km s-min=1.6km az=354.0*
ISC 30 07:39:48.6±1.3,42.41N±0.02×23.78E±0.03,h1km±10km, n48, σ0s67/67, 15C-6D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VTS	**Vitosha**	**0.45**	**297**	*e*Pg	**Pg**	**07 39 57.1**	**-0.2**
VTS				*e*Sg	**Sg**	**07 40 03.5**	**+0.4**
VTS	**Vitosha**	**0.45**	**297**	⇓P	**Pg**	**07 39 56.9**	**-0.3**
VTS				⇑S	**Sg**	**07 40 03.3**	**+0.2**
BOSS	**Bosilegrad**	**0.96**	**275**	*e*Pg	**Pg**	**07 40 06.8**	**-0.3**
BOSS				*e*Sg	**Sg**	**07 40 19.6**	**+0.1**
PLVB	**Pleven**	**1.16**	**32**	⇑P	**Pg**	**07 40 10.8**	**+0.1**
PLVB	**Pleven**	**1.16**	**32**	⇑S	**Sn**	**07 40 28.4**	**0.0**
ZAPS	**Zavoj**	**1.20**	**316**	*e*Pg	**Pb**	**07 40 11.5**	**-0.8**
ZAPS				*e*Sg	**Sb**	**07 40 27.8**	**-0.5**
SRS	**Serrai**	**1.30**	**186**	P	**Pn**	**07 40 13.4**	**-0.6**
SRS				S	**Sn**	**07 40 32.2**	**+0.1**
	295nm,0.6s						
SRS	**Serrai**	**1.30**	**186**	P	**Pn**	**07 40 13.1**	**-0.9**
SRS				S	**Sn**	**07 40 32.0**	**-0.1**
SRS				AML	AML	07 40 34.0	
	comp=E,584μm,0.5s						
SRS				AML	AML	07 40 34.6	
	comp=N,408μm,0.2s						
STIP	**Stip**	**1.38**	**239**	⇓*i*Pg	Pn	07 40 10.2	-4.9
KNT	**Kendrikon**	**1.41**	**208**	P	**Pn**	**07 40 15.3**	**-0.2**
KNT				S	**Sn**	**07 40 34.6**	**-0.2**
	comp=N,118nm,0.4s						
KNT	**Kendrikon**	**1.41**	**208**	P	**Pn**	**07 40 15.4**	**-0.1**
KNT				S	**Sb**	**07 40 34.7**	**+0.4**
KNT				AML	AML	07 40 37.1	
	comp=E,221μm,0.3s						
KNT				AML	AML	07 40 38.1	
	comp=N,214μm,0.2s						
VAY	**Valandovo**	**1.41**	**220**	*e*Pg	**Pn**	**07 40 15.4**	**-0.1**
VAY				*e*Sg	**Sn**	**07 40 34.5**	**-0.3**
VAY	**Valandovo**	**1.41**	**220**	⇓*i*Pg	**Pn**	**07 40 15.6**	**+0.1**
VAY				*i* Sg	**Sg**	**07 40 35.5**	**+1.5**
VAY				*e*Lg	Lg	07 40 36.1	
	comp=N,30nm,0.6s						
VAY				*e*Lg	Lg	07 40 36.5	
	comp=E,40nm,0.5s						
BLKB	**Belogradchik**	**1.45**	**327**	⇑S	**Sg**	**07 40 36.9**	**+1.6**
BARS	**Barje**	**1.50**	**286**	*e*Pn	**Pn**	**07 40 16.7**	**-0.1**
BARS	**Barje**	**1.50**	**286**	*e*Pn	Pg	07 40 26.6	+9.2
BARS				*e*Sn	**Sn**	**07 40 35.8**	**-1.2**
BARS				*e*Sn	Sg	07 40 52.0	+15
KAVA	**Kavala**	**1.52**	**158**	P	**Pn**	**07 40 17.1**	**+0.1**
KAVA				S	**Sb**	**07 40 37.3**	**-0.1**
	comp=E,165nm,0.3s						
KAVA	**Kavala**	**1.52**	**158**	P	**Pn**	**07 40 17.0**	**+0.1**
KAVA				S	**Sb**	**07 40 37.7**	**+0.3**
KAVA				AML	AML	07 40 42.6	
	comp=E,299μm,0.3s						
KAVA				AML	AML	07 40 43.6	
	comp=N,367μm,0.2s						
SOH	**Sokhos**	**1.62**	**191**	P	**Pn**	**07 40 19.0**	**+0.6**
SOH				S	**Sb**	**07 40 40.3**	**-0.1**
	comp=N,240nm,0.5s						
SOH	**Sokhos**	**1.62**	**191**	P	**Pn**	**07 40 19.2**	**+0.8**
SOH				S	**Sb**	**07 40 40.5**	**+0.1**
SOH				AML	AML	07 40 42.9	
	comp=E,435μm,0.3s						
SOH				AML	AML	07 40 43.7	
	comp=N,498μm,0.6s						
ELND	**Elena**	**1.63**	**71**	⇑P	**Pn**	**07 40 17.7**	**-0.9**
ELND	**Elena**	**1.63**	**71**	⇑S	**Sb**	**07 40 39.8**	**-0.8**
VLAD	**Vladila**	**1.65**	**16**	⇑S	**Sg**	**07 40 42.9**	**+1.2**
GRG	**Griva**	**1.78**	**216**	P	**Pn**	**07 40 20.5**	**-0.1**
GRG				S	**Sn**	**07 40 44.5**	**+0.5**
	comp=N,55nm,0.5s						
GRG	**Griva**	**1.78**	**216**	P	**Pn**	**07 40 21.2**	**+0.6**
RDO	**Rodhopi**	**1.83**	**133**	P	**Pn**	**07 40 20.7**	**-0.5**
RDO				S	**Sb**	**07 40 45.6**	**-0.6**
	comp=N,128nm,0.4s						
RDO	**Rodhopi**	**1.83**	**133**	P	**Pn**	**07 40 20.6**	**-0.5**
HORT	**Hortiatis**	**1.88**	**196**	P	**Pn**	**07 40 22.6**	**+0.5**
HORT				S	**Sn**	**07 40 46.9**	**+0.4**
	comp=N,72nm,0.4s						
HORT	**Hortiatis**	**1.88**	**196**	P	**Pn**	**07 40 22.7**	**+0.7**
THAS	**Thassos island**	**1.94**	**158**	P	**Pn**	**07 40 23.3**	**+0.6**
BOVS	**Bovan**	**1.95**	**310**	*e*Pn	**Pn**	**07 40 23.6**	**+0.7**
BOVS				*e*Sg	**Sg**	**07 40 51.6**	**+0.4**
PUNG	**Punghina**	**1.96**	**342**	⇑P	**Pn**	**07 40 23.6**	**+0.5**
PUNG	**Punghina**	**1.96**	**342**	⇑S	**Sb**	**07 40 49.5**	**-0.7**
COPA	**Copaceanca**	**2.02**	**31**	⇑P	**Pn**	**07 40 23.7**	**-0.1**
COPA	**Copaceanca**	**2.02**	**31**	⇓S	**Sg**	**07 40 52.5**	**-0.9**
OUR	**Ouranopolis**	**2.08**	**176**	P	**Pn**	**07 40 24.5**	**-0.2**
SELS	**Selova**	**2.11**	**293**	*e*Pn	**Pn**	**07 40 24.6**	**-0.6**
ALLN	**Alexandroupoli**	**2.28**	**131**	P	**Pn**	**07 40 27.3**	**-0.1**
HUMR	**Humele**	**2.29**	**22**	⇑P	**Pn**	**07 40 28.4**	**+0.8**
GRUS	**Gruza**	**2.68**	**304**	*e*Pn	**Pn**	**07 40 32.8**	**-0.2**
GRUS				*e*Sn	**Sn**	**07 41 05.9**	**-0.2**
IVAS	**Ivanjica**	**2.90**	**295**	*e*Pn	**Pn**	**07 40 36.3**	**+0.2**
IVAS				*e*Sn	**Sn**	**07 41 11.6**	**0.0**
GZR	**Gura Zlata**	**3.07**	**347**	⇑P	**Pn**	**07 40 37.9**	**-0.4**
VOIR		**3.16**	**17**	⇑P	**Pn**	**07 40 40.1**	**+0.5**
DIVS	**Divibare**	**3.24**	**303**	*e*Pn	**Pn**	**07 40 40.8**	**+0.1**
BZS	**Buzias**	**3.56**	**335**	⇑P	**Pn**	**07 40 44.4**	**-0.6**
BZS	**Buzias**	**3.56**	**335**	⇑S	**Sn**	**07 41 29.8**	**+2.0**
VRI	**Vrincioaia**	**4.05**	**31**	⇓P	**Pn**	**07 40 52.6**	**+0.7**
VRI	**Vrincioaia**	**4.05**	**31**	⇓S	**Sn**	**07 41 41.9**	**+1.9**

*THE **30** 07:43:15.3,38.21N×20.37E,h8km, ML2.9/8, Error ellipse: s-maj=1.0km s-min=0.3km az=224.0*
*ATH **30** 07:43:15.3,38.21N×20.39E,h9km±1km, ML2.9/14, Error ellipse: s-maj=2.4km s-min=1.0km az=255.0*
ISC 30 07:43:15.1±1.1,38.21N±0.03×20.37E±0.05,h9km±5km, n44, σ0s52/69, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.02**	**243**	P	**Pg**	**07 43 17.0**	**+0.3**
CHV1	**Chavriata, Kef**	**0.03**	**169**	P	**Pg**	**07 43 16.9**	**+0.2**
CHV1				S	**Sg**	**07 43 17.9**	**+0.1**
KEF4	**Livadi, Kephal**	**0.06**	**42**	P	**Pg**	**07 43 17.1**	**+0.1**
KEF4				S	**Sg**	**07 43 18.3**	**-0.1**
ARG2	**Argostoli**	**0.10**	**111**	P	**Pg**	**07 43 17.8**	**+0.3**
ARG2				S	**Sg**	**07 43 19.1**	**0.0**
KEF1	**Kardakata, Kep**	**0.10**	**50**	P	**Pg**	**07 43 17.7**	**+0.1**
KEF1				S	**Sg**	**07 43 19.3**	**+0.1**
KEF2	**Argostoli. Kep**	**0.10**	**118**	P	**Pg**	**07 43 17.9**	**+0.4**
KEF2				S	**Sg**	**07 43 19.5**	**+0.2**
VLS	**Valsamata**	**0.17**	**102**	P	**Pg**	**07 43 18.8**	**+0.1**
VLS				S	**Sg**	**07 43 21.5**	**+0.3**
	45μm,0.2s						
VLS	**Valsamata**	**0.17**	**102**	P	**Pg**	**07 43 18.8**	**+0.1**
VLS				S	**Sg**	**07 43 21.5**	**+0.3**
VLS				AML	AML	07 43 21.6	
	comp=E,78292μm,0.1s						
VLS				AML	AML	07 43 21.6	
	comp=N,56492μm,0.1s						
VSK1	**VASILIKIADES**	**0.25**	**37**	P	**Pg**	**07 43 20.4**	**+0.3**
VSK1				S	**Sg**	**07 43 24.2**	**+0.8**
FSK	**Fiskardo**	**0.29**	**31**	P	**Pg**	**07 43 21.1**	**+0.3**
FSK				S	**Sg**	**07 43 24.9**	**+0.2**
	comp=N,3μm,0.4s						
FSK	**Fiskardo**	**0.29**	**31**	P	**Pg**	**07 43 21.2**	**+0.4**
FSK				S	**Sg**	**07 43 24.9**	**+0.2**
KFL	**Anninata**	**0.34**	**108**	P	**Pg**	**07 43 21.9**	**+0.1**
KFL				S	**Sg**	**07 43 27.1**	**+0.8**
	comp=N,6μm,0.4s						
KFL	**Anninata**	**0.34**	**108**	P	**Pg**	**07 43 22.0**	**+0.1**
KFL				S	**Sg**	**07 43 27.2**	**+0.8**
KFL				AML	AML	07 43 27.5	
	comp=N,11324μm,0.4s						
KFL				AML	AML	07 43 31.4	
	comp=E,12191μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.41**	**146**	P	**Pg**	**07 43 23.4**	**+0.3**
EVGI	**Lefkada island**	**0.46**	**28**	P	**Pg**	**07 43 24.4**	**+0.3**
EVGI				S	**Sg**	**07 43 31.7**	**+1.4**
EVGI	**Lefkada island**	**0.46**	**28**	P	**Pg**	**07 43 24.3**	**+0.1**
EVGI				S	**Sg**	**07 43 31.6**	**+1.4**
MGNA	**Meganis**	**0.55**	**36**	P	**Pg**	**07 43 25.7**	**-0.1**
MGNA				AML	AML	07 43 34.5	
	comp=N,6257μm,0.4s						
MGNA				AML	AML	07 43 34.7	
	comp=E,5418μm,0.2s						
LKD2	**Lefkada island**	**0.62**	**21**	P	**Pg**	**07 43 26.9**	**-0.1**
LKD2				S	**Sg**	**07 43 35.8**	**+0.7**
	comp=E,685nm,0.4s						
LKD2	**Lefkada island**	**0.62**	**21**	P	**Pg**	**07 43 26.9**	**-0.1**
LKD2				S	**Sb**	**07 43 36.4**	**-0.5**
LKD2				AML	AML	07 43 42.4	
	comp=N,1481μm,0.4s						
LKD2				AML	AML	07 43 42.7	
	comp=E,1260μm,0.5s						
TSLK	**Tsoukalades, L**	**0.65**	**20**	P	**Pg**	**07 43 27.6**	**-0.1**
TSLK				S	**Sb**	**07 43 37.8**	**0.0**
	comp=E,968nm,0.7s						
TSLK	**Tsoukalades, L**	**0.65**	**20**	P	**Pg**	**07 43 27.6**	**-0.1**
TSLK				S	**Sb**	**07 43 37.6**	**-0.2**
AST1	**Astakos**	**0.65**	**60**	P	**Pg**	**07 43 27.6**	**-0.1**
AST1				S	**Sb**	**07 43 37.9**	**+0.1**
PDO	**Prodromos**	**0.74**	**59**	P	**Pg**	**07 43 29.3**	**-0.1**
PDO				S	**Sb**	**07 43 41.2**	**+0.7**
PDO	**Prodromos**	**0.74**	**59**	P	**Pg**	**07 43 29.3**	**-0.1**
PDO				AML	AML	07 43 45.1	
	comp=E,2310μm,0.7s						
PDO				AML	AML	07 43 45.7	
	comp=N,2236μm,0.5s						
RLS	**Riolos of Patr**	**0.88**	**100**	P	**Pg**	**07 43 32.1**	**+0.1**
RLS				AML	AML	07 43 47.4	
	comp=E,608μm,0.5s						
RLS				AML	AML	07 43 49.1	
	comp=N,789μm,0.4s						
PVO	**Paravola**	**0.99**	**66**	P	**Pg**	**07 43 34.1**	**-0.1**
PVO				S	**Sb**	**07 43 48.7**	**+1.1**
	comp=N,725nm,0.7s						
PVO	**Paravola**	**0.99**	**66**	P	**Pg**	**07 43 34.0**	**-0.1**
PVO				AML	AML	07 43 58.0	
	comp=E,1172μm,0.3s						
PVO				AML	AML	07 43 58.7	
	comp=N,1641μm,0.6s						
DRO	**Drossia**	**1.09**	**103**	P	**Pg**	**07 43 35.9**	**-0.1**
DRO				S	**Sn**	**07 43 51.7**	**-0.1**
	comp=N,802nm,0.5s						
DRO	**Drossia**	**1.09**	**103**	P	**Pg**	**07 43 36.1**	**+0.1**
DRO				AML	AML	07 44 00.7	
	comp=N,1619μm,0.5s						
DRO				AML	AML	07 44 04.2	
	comp=E,1624μm,0.6s						
EFP	**Efpalio**	**1.22**	**80**	P	**Pb**	**07 43 37.0**	**-1.4**
EFP	**Efpalio**	**1.22**	**80**	P	**Pb**	**07 43 37.5**	**-0.9**
EFP				AML	AML	07 44 02.4	
	comp=E,819μm,0.5s						
EFP				AML	AML	07 44 06.5	
	comp=N,540μm,0.7s						
AMT	**Artemida-Makis**	**1.26**	**122**	P	**Pb**	**07 43 39.2**	**+0.2**
AMT				AML	AML	07 44 02.9	
	comp=N,1262μm,0.7s						
AMT				AML	AML	07 44 07.0	
	comp=E,1069μm,0.5s						
LAKA	**Lakka**	**1.26**	**88**	P	**Pn**	**07 43 38.3**	**-0.7**
LAKA				S	**Sn**	**07 43 56.3**	**+0.1**
LAKA	**Lakka**	**1.26**	**88**	P	**Pn**	**07 43 38.4**	**-0.7**
LAKA				AML	AML	07 44 04.5	
	comp=N,444μm,0.5s						
LAKA				AML	AML	07 44 07.0	
	comp=E,372μm,0.6s						
ANX	**Ano Chora**	**1.27**	**72**	P	**Pn**	**07 43 39.1**	**-0.1**
ANX				S	**Sn**	**07 43 57.7**	**+1.2**
	comp=E,492nm,0.8s						
ANX	**Ano Chora**	**1.27**	**72**	P	**Pn**	**07 43 39.3**	**+0.1**
ANX				AML	AML	07 44 03.9	
	comp=N,1005μm,0.5s						
ANX				AML	AML	07 44 05.2	
	comp=E,953μm,0.9s						
SERG	**Sergoula**	**1.34**	**81**	P	**Pn**	**07 43 39.5**	**-0.5**
SERG	**Sergoula**	**1.34**	**81**	P	**Pn**	**07 43 39.5**	**-0.5**
SERG				AML	AML	07 44 07.7	
	comp=N,623μm,0.4s						
SERG				AML	AML	07 44 07.9	
	comp=E,516μm,0.6s						
TRIZ	**Trizonia**	**1.34**	**83**	P	**Pn**	**07 43 39.4**	**-0.7**
TRIZ	**Trizonia**	**1.34**	**83**	P	**Pn**	**07 43 39.5**	**-0.6**
KALE	**Kalithea**	**1.40**	**82**	P	**Pn**	**07 43 40.4**	**-0.5**
KALE	**Kalithea**	**1.40**	**82**	P	**Pn**	**07 43 40.4**	**-0.5**
KALE				AML	AML	07 44 09.7	
	comp=E,396μm,0.6s						
KALE				AML	AML	07 44 13.2	
	comp=N,649μm,0.4s						
KLV	**Kalavryta, Ach**	**1.41**	**96**	P	**Pn**	**07 43 41.2**	**+0.1**
KLV				S	**Sb**	**07 43 59.3**	**-0.5**
KLV	**Kalavryta, Ach**	**1.41**	**96**	P	**Pn**	**07 43 41.2**	**+0.1**

IDC 30 08:00:05.9±6.5,24.12N×94.53E,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.4/46,mbtmp3.8/3,1C, Error ellipse: s-maj=592.7km s-min=26.9km az=60.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**24.67**	**340**	⇑Pn	P	08 05 28.2	-0.1
	2.4nm,1.2s,baz=181,slow=13,SNR=6.3						
MKAR	**Makanchi Array**	**24.67**	**340**	P	P	08 05 28.4	0.0
	0.4nm,0.4s,baz=164,slow=9.8,SNR=8.5						
WRA	**Warramunga Arr**	**58.50**	**135**	P	P	08 10 04.0	-0.1
	0.9nm,0.3s,baz=319,slow=7.7,SNR=12						
ASAR	**Alice Springs**	**60.96**	**138**	P	P	08 10 21.1	0.0
	0.4nm,0.4s,baz=320,slow=7.0,SNR=9.0						

*NNC **30** 08:18:30.0±8.8,53.47N×87.96E,h0km, mb3.1, mpv2.7, Error ellipse: s-maj=70.4km s-min=37.9km az=62.0*
*IDC **30** 08:18:31.1±2.9,53.56N×87.94E,h0km, mb1 3.0/2, mb1mx2.9/47, mbtmp3.0/2, ML2.8/2, Error ellipse: s-maj=24.1km s-min=15.2km az=60.0*
KRAR 30 08:18:29.3±0.1,53.59N×87.77E, M2.2, 7C-2D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.79**	**283**	*i*		08 31 55.9	
	baz=98,slow=339,SNR=14						
ZAA0	**Zalesovo Array**	**1.79**	**283**	⇑Pg	Pg	08 19 05.0	+1.4
	0.6nm,0.6s						
ZAA0				⇑Lg	Lg	08 19 29.9	
	2.6nm,0.8s						
ZALV	**Zalesovo Beam**	**1.79**	**283**	Pg	Pg	08 19 04.5	+0.9
	1.2nm,0.3s,baz=100,slow=15,SNR=11						
ZALV				Lg	Lg	08 19 31.0	
	2.8nm,0.3s,baz=105,slow=28,SNR=13						
KURK	**Kurchatov**	**6.32**	**247**	⇑Lg	Lg	08 21 53.4	
	4.8nm,0.9s						
KURBB	**Kurchatov Arra**	**6.42**	**246**	Pn	Pn	08 20 08.9	+3.9
	0.1nm,0.3s,baz=62,slow=14,SNR=12						
KURBB				Sn	Sn	08 21 21.7	+2.8
	0.1nm,0.3s,baz=53,slow=22,SNR=4.4						
KURBB				Lg	Lg	08 21 58.2	
	0.0nm,0.3s,baz=64,slow=31,SNR=5.3						
KURBB	**Kurchatov Arra**	**6.42**	**246**	⇑Pn	Pn	08 20 08.7	+3.6
	0.9nm,0.3s						
KURBB				⇑Sn	Sn	08 21 19.9	+0.9
	3.4nm,0.7s						
KURBB				⇑Lg	Lg	08 21 55.4	
	3.1nm,

VLMS				S	Sg	08 30 25.7	+0.5	
EVGI	**Lefkada island**	**0.46**	**24**	P	Pg	08 30 21.3	-0.1	
EVGI				S	Sg	08 30 27.9	+0.4	
EVGI	**Lefkada island**	**0.46**	**24**	P	Pg	08 30 21.2	-0.1	
EVGI				S	Sg	08 30 27.9	+0.4	
MGNA	**Meganis**	**0.54**	**33**	P	Pg	08 30 22.5	-0.3	
MGNA				AML	AML	08 30 35.5		
	comp=E,1570μm,0.3s							
MGNA				AML	AML	08 30 36.8		
	comp=N,1169μm,0.5s							
LKD2	**Lefkada island**	**0.61**	**17**	P	Pg	08 30 24.3	0.0	
LKD2	**Lefkada island**	**0.61**	**17**	P	Pg	08 30 24.2	0.0	
LKD2				AML	AML	08 30 41.6		
	comp=E,1120μm,0.6s							
LKD2				AML	AML	08 30 42.6		
	comp=N,1482μm,0.4s							
TSLK	**Tsoukalades, L**	**0.65**	**16**	P	Pg	08 30 24.8	-0.1	
TSLK	**Tsoukalades, L**	**0.65**	**16**	P	Pg	08 30 24.9	-0.1	
PDO	**Prodromos**	**0.72**	**56**	P	Pg	08 30 25.9	-0.3	
PDO	**Prodromos**	**0.72**	**56**	P	Pg	08 30 26.0	-0.3	
PDO				AML	AML	08 30 44.0		
	comp=N,2361μm,0.4s							
PDO				AML	AML	08 30 44.0		
	comp=E,2115μm,0.6s							
RLS	**Riolos of Patr**	**0.84**	**100**	P	Pg	08 30 28.1	-0.4	
RLS				AML	AML	08 30 43.2		
	comp=E,556μm,0.4s							
RLS				AML	AML	08 30 45.3		
	comp=N,730μm,0.5s							
PVO	**Paravola**	**0.96**	**64**	P	Pb	08 30 30.6	-0.1	
PVO	**Paravola**	**0.96**	**64**	P	Pb	08 30 30.8	+0.1	
PVO				AML	AML	08 30 51.5		
	comp=N,1502μm,0.4s							
PVO				AML	AML	08 30 51.8		
	comp=E,1416μm,0.4s							
DRO	**Drossia**	**1.05**	**104**	P	Pn	08 30 32.6	+0.1	
EFP	**Efpalio**	**1.19**	**79**	P	Pn	08 30 33.7	-0.7	
EFP	**Efpalio**	**1.19**	**79**	P	Pg	08 30 35.0	-0.2	
LAKA	**Lakka**	**1.23**	**88**	P	Pn	08 30 34.3	-0.7	
LAKA	**Lakka**	**1.23**	**88**	P	Pn	08 30 34.7	-0.3	
ANX	**Ano Chora**	**1.24**	**71**	P	Pn	08 30 35.3	0.0	
ANX	**Ano Chora**	**1.24**	**71**	P	Pg	08 30 36.5	+0.3	
SERG	**Sergoula**	**1.30**	**80**	P	Pn	08 30 35.9	-0.2	
SERG	**Sergoula**	**1.30**	**80**	P	Pn	08 30 36.1	0.0	
TRIZ	**Trizonia**	**1.31**	**82**	P	Pn	08 30 35.8	-0.2	
TRIZ	**Trizonia**	**1.31**	**82**	P	Pn	08 30 35.9	-0.2	
KALE	**Kalithea**	**1.36**	**82**	P	Pn	08 30 36.2	-0.7	
KALE	**Kalithea**	**1.36**	**82**	P	Pb	08 30 37.7	+0.1	
KALE				AML	AML	08 31 06.4		
	comp=E,341μm,0.6s							
KALE				AML	AML	08 31 13.6		
	comp=N,394μm,0.8s							
KLV	**Kalavryta, Ach**	**1.37**	**96**	P	Pn	08 30 37.4	+0.4	
KLV	**Kalavryta, Ach**	**1.37**	**96**	P	Pn	08 30 37.5	+0.4	

NIED ***30*** *08:35:00,42.˚50N×142.˚70E,h38km,Mw3.8 Best double couple: M0 6.11000×10^14 NP1:φs187.00000°,δ77.00000°, λ149.00000°. NP2:φs284.00000°,δ60.00000°,λ15.00000°.*

MOS ***30*** *08:35:05.7±1.0,42.˚40N×142.˚50E,h38km,mb4.0/1,Error ellipse: s-maj=13.4km s-min=8.6km az=54.6*

SKHL ***30*** *08:35:06.8±0.6,42.˚40N×142.˚50E,h53km±5km,mb4.4/5*

JMA ***30*** *08:35:07.3±0.1,42.˚50N×142.˚64E,h30km±1km,M3.9 Broadband fault plane solution: P waves. NP1: φs301.00000°,δ52.00000°,λ45.00000°. NP2: φs179.00000°,δ56.00000°,λ132.00000°. Principal axes: T Plg56.0000°, Azm148.0000°; N Plg34.0000°, Azm332.0000°; P Plg2.0000°, Azm241.0000°;*

JMA Felt I J1.

IDC ***30*** *08:35:08.9±2.1,42.˚45N×142.˚37E,h45km±19km,mb3.2/7, mb1 3.4/9,mb1mx3.2/46,mbtmp3.4/9,ML2.9/2,MS2.6/2, Ms1 2.6/2,ms1mx2.3/18 Error ellipse: s-maj=27.8km s-min=14.3km az=111.0*

ISC 30 08:35:06.7±0.9, 42.˚43N±0.˚04×142.˚60E±0.˚03, h33km±5km, n54,σ1$47/64, mb3.5/8, 9C-10D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSHD	**Hidakashinhida**	**0.10**	**257**	⇑P	**Pb**	**08 35 12.6**	**+0.2**
JNBK	**Urakawa-nobuka**	**0.19**	**143**	⇑P	**Pb**	**08 35 13.6**	**+0.5**
JBT2	**Biratori 2**	**0.39**	**334**	⇑P	**Pb**	**08 35 14.9**	**-0.7**
JBT2				*e*S	**Sb**	**08 35 21.5**	**-0.2**
JIAM	**Iburiatsuma**	**0.54**	**291**	⇓P	**Pn**	**08 35 19.0**	**+0.9**
JTHR	**Tokachihiroo**	**0.54**	**105**	⇓P	**Pb**	**08 35 17.7**	**-0.2**
JTHR				*e*S	**Sn**	**08 35 26.1**	**+0.1**
JEM	**Erimo**	**0.59**	**135**	P	**Pn**	**08 35 19.2**	**+0.4**
ERM	**Erimo**	**0.59**	**135**	*i* PN	**Pn**	**08 35 19.5**	**+0.7**
JCH	**Churui**	**0.59**	**72**	⇓P	**Pb**	**08 35 18.2**	**-0.6**
JCH				*e*S	**Sb**	**08 35 27.1**	**0.0**
JFR	**Furan**	**0.73**	**360**	P	**Pn**	**08 35 19.6**	**-1.2**
JEW	**Eniwo**	**0.94**	**296**	⇓P	**Pn**	**08 35 24.1**	**+0.5**
JEW				*e*S	**Sb**	**08 35 37.0**	**+0.3**
JOB	**Onbets**	**1.03**	**62**	⇓P	**Pn**	**08 35 24.8**	**0.0**
JAB	**Ashibetsu**	**1.11**	**346**	P	**Pn**	**08 35 25.7**	**-0.3**
JNB	**Noboribetsu**	**1.15**	**272**	⇓P	**Pn**	**08 35 25.8**	**-0.8**
JNB				*e*S	**Sn**	**08 35 40.3**	**-0.9**
JISS	**Ishikarishitsu**	**1.21**	**315**	P	**Pn**	**08 35 27.5**	**+0.2**
JAR	**Ashorobuto**	**1.22**	**45**	⇓P	**Pn**	**08 35 26.9**	**-0.6**
ASAJ	**Asahikawa**	**1.68**	**360**	P	**Pn**	**08 35 34.5**	**+0.6**
	45nm,0.3s,baz=197,slow=15,SNR=97						
ASAJ				S	**Sn**	**08 35 56.3**	**+2.0**
	25nm,0.3s,baz=143,slow=28,SNR=3.8						
ASAJ				LR	LR	08 36 30.3	
	comp=Z,125nm,20.3s,baz=153,slow=49						
JKA	**Kamikawa-asahi**	**1.68**	**0**	*e*P	**Pn**	**08 35 34.5**	**+0.6**
JKA				*e*S	**Sn**	**08 35 56.3**	**+2.0**
NMR	**Nemuro--Hokkai**	**2.48**	**67**	*e*PN	**Pn**	**08 35 44.0**	**-0.9**
NMR	**Nemuro--Hokkai**	**2.48**	**67**	*e*P	**Pn**	**08 35 44.0**	**-0.9**
NMR				*i* S	**Sn**	**08 36 11.0**	**-3.0**
GLVR	**Golovnino**	**2.51**	**58**	⇑*i*PN	**Pn**	**08 35 45.8**	**+0.6**
GLVR				*e*S	**Sn**	**08 36 15.1**	**+0.5**
GLVR				pmax	pmax		
	comp=Z,278nm,0.6s						
GLVR				smax	smax		
	comp=N,899nm,0.3s						
GLVR				smax	smax		
	comp=E,378nm,0.3s						
GLVR	**Golovnino**	**2.51**	**58**	⇑*i*P	**Pn**	**08 35 45.8**	**+0.6**
GLVR				AMB	AMB	08 35 49.0	
	comp=E,30nm,0.4s						
GLVR				*e*S	**Sn**	**08 36 15.1**	**+0.5**
GLVR				A	A	08 36 20.5	
	comp=E,120nm,0.2s						
GLVR				A	A	08 36 20.5	
	comp=E,70nm,0.2s						
GRPR	**Tuman**	**2.80**	**55**	*e*PN	**Pn**	**08 35 50.1**	**+0.9**
GRPR				*e*S	**Sn**	**08 36 22.7**	**+0.9**
GRPR				pmax	pmax		
	comp=Z,295nm,0.3s						
GRPR				pmax	pmax		
	comp=E,183nm,0.4s						
GRPR				pmax	pmax		
	comp=N,216nm,0.2s						
GRPR				smax	smax		
	comp=E,363nm,0.2s						
GRPR				smax	smax		
	comp=N,785nm,0.3s						
GRPR	**Tuman**	**2.80**	**55**	*e*P	**Pn**	**08 35 50.1**	**+0.9**
GRPR				AMB	AMB	08 35 56.0	
	comp=N,20nm,0.3s						
GRPR				AMB	AMB	08 35 56.0	
	comp=N,20nm,0.3s						
GRPR				AMB	AMB	08 35 56.0	
	comp=N,30nm,0.3s						
GRPR				*e*S	**Sn**	**08 36 22.7**	**+0.9**
GRPR				A	A	08 36 25.0	
	comp=N,80nm,0.2s						
GRPR				A	A	08 36 25.0	
	comp=N,40nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**2.87**	**55**	⇑*i*PN	**Pn**	**08 35 51.2**	**+1.0**
YUK				*e*S	**Sn**	**08 36 24.6**	**+1.0**
YUK				pmax	pmax		
	comp=Z,436nm,0.3s						
YUK				pmax	pmax		
	comp=N,86nm,0.2s						
YUK				pmax	pmax		
	comp=E,91nm,0.2s						
YUK				smax	smax		
	comp=E,429nm,0.4s						
YUK				smax	smax		
	comp=N,559nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**2.87**	**55**	⇑*i*P	**Pn**	**08 35 51.2**	**+1.0**
YUK				AMB	AMB	08 35 53.0	
	comp=N,10.0nm,0.3s						
YUK				AMB	AMB	08 35 53.0	
	comp=N,10.0nm,0.3s						
YUK				AMB	AMB	08 35 53.0	
	comp=N,40nm,0.3s						
YUK				*e*S	**Sn**	**08 36 24.6**	**+1.0**
YUK				A	A	08 36 32.5	
	comp=N,120nm,0.3s						
YUK				A	A	08 36 32.5	
	comp=N,80nm,0.3s						
SHO	**Shikotan**	**3.42**	**64**	⇑*i*PN	**Pn**	**08 35 57.1**	**-0.5**
SHO				pmax	pmax		
	comp=Z,101nm,0.4s						
SHO				pmax	pmax		
	comp=N,35nm,0.2s						
SHO				pmax	pmax		
	comp=E,75nm,0.4s						
SHO	**Shikotan**	**3.42**	**64**	⇑*i*P	**Pn**	**08 35 57.1**	**-0.5**
SHO				AMB	AMB	08 36 06.0	
	comp=E,30nm,0.4s						
SHO				AMB	AMB	08 36 06.0	
	comp=E,80nm,0.4s						
SHO				AMB	AMB	08 36 06.0	
	comp=E,100nm,0.4s						
SHO				*i* S	**Sn**	**08 36 35.0**	**-2.0**
SHO				A	A	08 36 38.0	
	comp=E,180nm,0.4s						
SHO				A	A	08 36 38.0	
	comp=E,50nm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.52**	**1**	*e*PN	**Pn**	**08 36 15.9**	**+3.0**
YSS				MLR	MLR		
	comp=Z,300nm,12.0s						
YSS	**Yuzh-Sakhalins**	**4.52**	**1**	*e*P	**Pn**	**08 36 15.9**	**+3.0**
KUR	**Kuril'sk**	**4.73**	**52**	⇓*i*PN	**Pn**	**08 36 18.8**	**+3.1**
KUR				*e*S	**Sn**	**08 37 13.2**	**+3.8**
KUR				pmax	pmax		
	comp=Z,75nm,0.5s						
KUR				pmax	pmax		
	comp=N,29nm,0.4s						
KUR				pmax	pmax		
	comp=E,46nm,0.4s						
KUR				smax	smax		
	comp=N,40nm,0.4s						
KUR				smax	smax		
	comp=E,96nm,0.4s						
KUR	**Kuril'sk**	**4.73**	**52**	⇓*i*P	**Pn**	**08 36 17.6**	**+1.9**
KUR				AMB	AMB	08 36 19.5	
	comp=E,10.0nm,0.4s						
KUR				AMB	AMB	08 36 19.5	
	comp=E,20nm,0.4s						
KUR				AMB	AMB	08 36 19.5	
	comp=E,60nm,0.4s						
KUR				⇓*i*S	**Sn**	**08 37 11.3**	**+1.9**
KUR				A	A	08 37 14.0	
	comp=E,40nm,0.4s						
KUR				A	A	08 37 14.0	
	comp=E,100nm,0.4s						
MJAR	**Matsushiro Arr**	**6.79**	**211**	PN	**Pn**	**08 36 46.0**	**+1.9**
MJAR	**Matsushiro Arr**	**6.79**	**211**	P	**Pn**	**08 36 46.0**	**+1.9**
	comp=E,0.2nm,0.3s,baz=22,slow=15,SNR=8.2						
MJAR				LR	LR	08 39 51.2	
	comp=E,41nm,20.5s,baz=50,slow=42						
VLA	**Vladivostok**	**7.91**	**279**	*i* PN	**Pn**	**08 36 58.6**	**-0.8**
VLA	**Vladivostok**	**7.91**	**279**	*i* P	**Pn**	**08 36 58.6**	**-0.8**
KLR	**Kul'dur**	**10.17**	**316**	LR	LR	08 41 09.0	
	comp=E,39nm,18.3s,baz=124,slow=36						
KSRS	**Korea Array**	**12.31**	**251**	P	**Pn**	**08 38 00.2**	**+0.6**
	comp=E,0.1nm,0.3s,baz=64,slow=14,SNR=1.8						
SEY	**Seynchan**	**21.33**	**12**	*i* P	**P**	**08 39 46.4**	**-4.2**
BILL	**Bilibino**	**28.61**	**18**	*i* P	**P**	**08 40 56.5**	**-3.1**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.4s						
H11N2	**WAKE ISLAND Hy**	**30.55**	**130**	T	T	09 12 58.9	
	baz=324,slow=75,SNR=52						
H11N1	**WAKE ISLAND Hy**	**30.56**	**130**	T	T	09 12 52.4	
	baz=324,slow=75,SNR=34						
H11N3	**WAKE ISLAND Hy**	**30.56**	**130**	T	T	09 12 59.5	
	baz=324,slow=75,SNR=33						
H11S1	**WAKE ISLAND Hy**	**31.42**	**132**	T	T	09 13 51.2	
	baz=325,slow=76,SNR=35						
H11S3	**WAKE ISLAND Hy**	**31.42**	**132**	T	T	09 13 59.0	
	baz=325,slow=76,SNR=34						
H11S2	**WAKE ISLAND Hy**	**31.44**	**132**	T	T	09 14 00.2	
	baz=325,slow=76,SNR=40						
MKAR	**Makanchi Array**	**42.23**	**297**	P	**P**	**08 42 56.3**	**-0.3**
	comp=Z,0.2nm,0.5s,baz=69,slow=7.4,SNR=1.9						
KURK	**Kurchatov**	**43.50**	**304**	P	**P**	**08 43 06.9**	**+0.2**
KURK	**Kurchatov**	**43.50**	**304**	*e*P	**P**	**08 43 06.9**	**+0.2**
KURBB	**Kurchatov Arra**	**43.58**	**304**	P	**P**	**08 43 06.9**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=76,slow=8.9,SNR=4.9						
BVAR	**Borovoye Array**	**47.75**	**309**	P	**P**	**08 43 40.2**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=80,slow=11,SNR=1.9						
AKTO	**Aktyubinsk**	**55.84**	**310**	P	**P**	**08 44 39.8**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=90,slow=5.1,SNR=1.9						
YKA	**Yellowknife Ar**	**58.72**	**32**	P	**P**	**08 45 02.3**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=307,slow=6.0,SNR=2.0						
ASAR	**Alice Springs**	**66.25**	**189**	P	**P**	**08 45 51.7**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=15,slow=7.7,SNR=1.5						
TXAR	**Lajitas Array**	**86.13**	**53**	P	**P**	**08 47 46.3**	**+1.5**
	comp=Z,0.1nm,0.5s,baz=288,slow=3.6,SNR=2.7						

MAN 30 08:38:23.4,16.˚26N×120.˚49E,h29km,mb4.8,ML3.7, MS3.7,2C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMPP	**San Manuel, Pa**	**0.21**	**121**	*e*P	Pn	08 38 30.7	+0.1
SMPP				*e*S	Sb	08 38 36.7	+2.8
BOLP	**Bolinao**	**0.57**	**283**	*e*P	Pn	08 38 35.6	0.0
BOLP				*e*S	Sn	08 38 44.7	+0.7
PCPH	**Palayan**	**0.90**	**140**	⇑*e*P	Pn	08 38 39.0	-1.2
PCPH				*e*S	Sb	08 38 51.6	-0.7
BALP	**Baler**	**1.16**	**116**	*e*P	Pn	08 38 43.6	-0.1
BALP				*e*S	Sn	08 38 58.4	-0.3
ABRA	**Dolores**	**1.40**	**9**	*e*P	Pn	08 38 47.4	+0.3
ABRA				*e*S	Sn	08 39 04.5	0.0
CAUP	**Cauayan**	**1.45**	**62**	*e*P	Pn	08 38 47.5	-0.2
CAUP				*e*S	Sn	08 39 05.5	-0.2
SIPP	**Brgy, Tapao**	**1.66**	**359**	⇓*i*P	Pb	08 38 53.8	+0.5
APYP	**Conner**	**1.75**	**24**	*e*P	Pn	08 38 52.9	+1.0
APYP				*e*S	Sn	08 39 14.2	+1.0
LQP	**Lukban**	**2.36**	**154**	⇑*e*P	Pn	08 39 02.4	+1.9
LUBP	**Lubang**	**2.52**	**185**	*e*P	Pn	08 39 03.2	+0.8
LUBP				*e*S	Sn	08 39 31.5	-0.7

IDC ***30*** *08:41:33.7±1.6,20.˚82S×173.˚88E,h0km,mb4.1/6, mb1 4.3/8,mb1mx4.0/29,mbtmp4.1/8,ML3.6/2,MS4.1/31, Ms1 4.1/31,ms1mx4.1/38,Error ellipse: s-maj=45.7km s-min=29.7km az=141.0*

NEIC ***30*** *08:41:35.3±1.8,21.˚0S±0.˚1×173.˚97E±0.˚10,h10km±2km, mb4.4/4,Error ellipse: s-maj=19.0km s-min=12.3km az=165.0*

GCMT ***30*** *08:41:42.3±0.2,20.˚84S±0.˚01×173.˚73E±0.˚01,h17km, MW5.1/115,Moment Tensor Solution. s60,c79; s115,c185; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-0.76±.13; Mθθ-2.06±.12; Mφφ2.81±.12; Mrθ-0.83±.28; Mθφ-4.85±.10; Mφr0.28±.26; Best double couple: M0 5.49700×10^16 NP1:φs13.00000°,δ81.00000°, λ-1.00000°. NP2:φs103.00000°,δ89.00000°, λ-171.00000°. Principal axes: T 5.8700, Plg6.0000°, Azm238.0000°; N -0.7520, Plg81.0000°, Azm110.0000°; P -5.1240, Plg7.0000°, Azm329.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 08:41:37.2±0.7, 21.˚0S±0.˚1×173.˚92E±0.˚09, h24km, n45, σ1$03/21, mb4.1/8, MS4.1/29, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.09**	**51**	Pn	**Pn**	**08 42 53.4**	**+1.3**
DZM	**Mont Dzumac**	**7.04**	**260**	*e*Pn	**Pn**	**08 43 19.9**	**+1.1**
	384nm,1.7s						
DZM				*e*LR	LR	08 45 00.6	
	comp=Z,9μm,25.2s						
DZM	**Mont Dzumac**	**7.04**	**260**	Pn	**Pn**	**08 43 19.2**	**+0.3**
	1.2nm,0.3s,baz=55,slow=22,SNR=4.2						
DZM				LR	LR	08 45 43.0	
	comp=Z,7μm,21.5s,baz=74,slow=36						
DZM	**Mont Dzumac**	**7.04**	**260**		**Pn**	**08 43 19.5**	**+0.7**
NOUC	**Port Laguerre**	**7.17**	**260**		**Pn**	**08 43 20.8**	**+0.3**
SANVU	**Saraoutou**	**8.45**	**310**		**Pn**	**08 43 39.0**	**+0.8**
RAO	**Raoul Island**	**11.03**	**140**	LR	LR	08 47 35.5	
	comp=Z,3μm,21.1s,baz=163,slow=32						
URZ	**Urewera**	**17.40**	**172**	P	**Pn**	**08 45 40.1**	**+1.8**
	0.2nm,0.3s,baz=350,slow=9.0,SNR=2.8						
URZ				LR	LR	08 50 51.6	
	comp=Z,1μm,21.0s,baz=354,slow=32						
URZ	**Urewera**	**17.40**	**172**	P	**Pn**	**08 45 38.7**	**+0.4**
URZ				IAmb	IAmb	08 45 52.5	
	comp=Z,49nm,1.4s						
HNR	**Honiara**	**17.72**	**308**	LR	LR	08 51 26.0	
	comp=Z,665nm,19.7s,baz=143,slow=34						
RPZ	**Rata Peaks**	**22.75**	**185**	LR	LR	08 54 19.1	
	comp=Z,636nm,20.4s,baz=1.5,slow=33						
RAR	**Rarotonga**	**24.54**	**95**	LR	LR	08 56 54.5	
	comp=Z,295nm,18.6s,baz=264,slow=37						
CTA	**Charters Tower**	**25.91**	**267**	LR	LR	08 56 38.5	
	comp=Z,1μm,20.3s,baz=93,slow=35						
STKA	**Stephens Creek**	**30.79**	**243**	P	**P**	**08 47 51.8**	**+0.8**
	comp=Z,2.8nm,0.7s,baz=75,slow=14,SNR=3.6						
STKA				LR	LR	08 59 03.1	
	comp=Z,662nm,20.1s,slow=34						
STKA	**Stephens Creek**	**30.79**	**243**	P	**P**	**08 47 52.2**	**+1.2**
TBI	**Tubuai**	**33.93**	**101**	*e*LQ	LQ	08 55 51.0	
	comp=Z,2μm,28.5s						
TBI				*e*LR	LR	08 57 20.9	
	comp=Z,281nm,27.5s						
PPT2	**Papeete2**	**34.57**	**91**	*e*S	**S**	**08 53 52.3**	**-0.1**
	comp=Z,126nm,25.2s						
PPT2				*e*LQ	LQ	08 56 03.8	
	comp=Z,2μm,30.5s						
PPT2				*e*LR	LR	08 57 34.1	
	comp=Z,913nm,28.0s						
PPT	**Papeete**	**34.58**	**91**	LR	LR	08 59 17.8	
	comp=Z,206nm,20.9s,baz=256,slow=31						
AS31	**Alice Springs**	**37.02**	**258**	P	**P**	**08 48 46.2**	**+0.9**
AS31				IAmb	IAmb	08 48 47.4	
	comp=Z,2.2nm,0.8s						
ASAR	**Alice Springs**	**37.02**	**258**	P	**P**	**08 48 45.8**	**+0.4**
	comp=Z,5.5nm,0.8s,baz=84,slow=8.8,SNR=36						
ASAR				LR	LR	09 03 11.5	
	comp=Z,821nm,21.5s,baz=98,slow=35						
ASAR	**Alice Springs**	**37.02**	**258**	P	**P**	**08 48 45.0**	**-0.3**
WRA	**Warramunga Arr**	**37.03**	**264**	P	**P**	**08 48 44.7**	**-0.7**
	comp=Z,2.6nm,0.9s,baz=99,slow=9.0,SNR=5.8						
WRA				LR	LR	09 03 37.7	
	comp=Z,1μm,19.9s,baz=105,slow=36						
WRA	**Warramunga Arr**	**37.03**	**264**	P	**P**	**08 48 45.3**	**-0.1**
KAPI	**Kappang**	**54.84**	**279**	LR	LR	09 16 35.5	
	comp=Z,83nm,18.3s,baz=116,slow=38						
DAV	**Davao City (W)**	**55.06**	**295**	LR	LR	09 14 02.1	
	comp=Z,37nm,18.3s,baz=354,slow=36						
VNDA	**Vanda**	**56.85**	**183**	LR	LR	09 13 22.3	
	comp=Z,144nm,18.0s,baz=6.5,slow=34						
TGY	**Tagaytay City**	**62.65**	**299**	LR	LR	09 16 06.5	
	comp=Z,110nm,20.4s,baz=162,slow=33						
LEM	**Lembang**	**65.48**	**272**	LR	LR	09 23 24.2	
	comp=Z,153nm,18.1s,baz=101,slow=38						
MJAR	**Matsushiro Arr**	**66.45**	**329**	LR	LR	09 17 00.6	
	comp=Z,128nm,21.6s,baz=235,slow=32						
JNU	**Nakatsue**	**67.72**	**322**	LR	LR	09 17 59.3	
	comp=Z,65nm,22.0s,baz=167,slow=32						
QSPA	**South Pole Qui**	**69.04**	**180**	P	**P**	**08 52 39.0**	**-1.7**
QSPA				IAmb	IAmb	08 52 54.8	
	comp=Z,6.9nm,1.1s						
KSRS	**Korea Array**	**72.51**	**323**	LR	LR	09 23 07.4	
	comp=Z,63nm,19.2s,baz=144,slow=34						
PETK	**Petropavlovsk-**	**75.15**	**350**	LR	LR	09 19 52.3	
	comp=Z,243nm,20.4s,baz=184,slow=31						
USRK	**Ussuriysk Ar.**	**75.40**	**330**	LR	LR	09 23 20.7	
	comp=Z,85nm,19.8s,baz=157,slow=33						
PSI	**Prapat**	**77.04**	**278**	LR	LR	09 25 40.8	
	comp=Z,75nm,21.7s,baz=152,slow=34						
MAW	**Mawson**	**78.42**	**201**	LR	LR	09 25 32.4	
	comp=Z,180nm,18.1s,baz=72,slow=34						
KLR	**Kul'dur**	**79.36**	**333**	LR	LR	09 23 28.4	
	comp=Z,101nm,20.9s,baz=182,slow=32						
CMAR	**Chiang Mai Arr**	**83.24**	**293**	P	**P**	**08 54 01.8**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=99,slow=5.6,SNR=1.3						
CMAR				LR	LR	09 30 46.8	
	comp=Z,21nm,19.5s,baz=180,slow=36						
ILAR	**Eielson Array**	**90.68**	**16**	P	**P**	**08 54 37.4**	**0.0**
	comp=Z,0.5nm,0.9s,baz=234,slow=4.7,SNR=3.1						
ILAR				LR	LR	09 29 16.1	
	comp=Z,122nm,20.0s,baz=228,slow=32						
SONM	**Songino Array**	**91.31**	**321**	P	**P**	**08 54 39.5**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=134,slow=4.2,SNR=1.7						
SONM				LR	LR	09 34 36.5	
	comp=Z,42nm,19.0s,baz=44,slow=35						
TXAR	**Lajitas Array**	**93.79**	**60**	LR	LR	09 30 17.3	
	comp=Z,162nm,19.0s,baz=0.0,slow=31						
PDAR	**Pinedale Array**	**94.64**	**46**	LR	LR	09 32 15.0	
	comp=Z,244nm,18.3s,slow=32						
TLY	**Talaya**	**94.75**	**324**	LR	LR	09 35 42.8	
	comp=Z,62nm,21.0s,baz=125,slow=34						
TIXI	**Tiksi**	**97.42**	**347**	LR	LR	09 36 05.1	
	comp=Z,71nm,19.8s,baz=152,slow=34						
GERES	**GERESS Array B**	**148.05**	**335**	PKPbc	**PKiKP**	**09 01 20.8**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=48,slow=1.5,SNR=2.0						

THE ***30*** *09:04:48.8,38.˚25N×20.˚40E,h12km,ML3.1/9,Error ellipse: s-maj=0.7km s-min=0.3km az=255.0*

ATH ***30*** *09:04:49.0,38.˚25N×20.˚45E,h10km±2km,ML3.4/4,Error ellipse: s-maj=2.5km s-min=0.8km az=251.0*

ISC 30 09:04:48.6±0.9, 38.˚25N±0.˚02×20.˚41E±0.˚04, h13km±5km, n48, σ0$40/76, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.02**	**65**	P	**Pg**	**09 04 50.6**	**-0.2**
KEF4				S	**Sg**	**09 04 51.7**	**-0.6**
KEF3	**Kipouria, Keph**	**0.07**	**224**	P	**Pg**	**09 04 51.2**	**+0.1**
KEF3				S	**Sg**	**09 04 52.5**	**-0.5**

PDO	**Prodromos**	**0.70**	**60**	P	**Pg**	**09 05 02.3**	**+0.1**
PDO				S	**Sg**	**09 05 10.9**	**-0.5**
PDO				AML	AML	09 05 19.4	
	comp=E,2785μm,0.7s						
PDO				AML	AML	09 05 20.0	
	comp=N,5097μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**103**	P	**Pg**	**09 05 04.9**	**-0.3**
RLS				S	**Sb**	**09 05 17.9**	**+1.1**
	comp=N,932nm,0.6s						
RLS	**Riolos of Patr**	**0.86**	**103**	P	**Pg**	**09 05 04.9**	**-0.3**
PVO	**Paravola**	**0.95**	**67**	P	**Pb**	**09 05 07.1**	**+0.1**
PVO				S	**Sn**	**09 05 20.7**	**-0.5**
	comp=N,1μm,0.5s						
PVO	**Paravola**	**0.95**	**67**	P	**Pg**	**09 05 06.9**	**0.0**
DRO	**Drossia**	**1.07**	**106**	P	**Pb**	**09 05 08.8**	**-0.2**
DRO				S	**Sn**	**09 05 24.6**	**+0.5**
	comp=N,2μm,0.5s						
DRO	**Drossia**	**1.07**	**106**	P	**Pb**	**09 05 08.8**	**-0.2**
EFP	**Efpalio**	**1.19**	**81**	P	**Pb**	**09 05 10.4**	**-0.7**
EFP	**Efpalio**	**1.19**	**81**	P	**Pb**	**09 05 10.3**	**-0.8**
ANX	**Ano Chora**	**1.24**	**74**	P	**Pn**	**09 05 11.7**	**-0.1**
ANX				S	**Sn**	**09 05 29.0**	**+0.6**
	comp=N,1μm,0.6s						
ANX	**Ano Chora**	**1.24**	**74**	P	**Pn**	**09 05 11.7**	**-0.1**
ANX				S	**Sb**	**09 05 28.0**	**+0.2**
ANX				AML	AML	09 05 36.8	
	comp=E,2302μm,0.7s						
ANX				AML	AML	09 05 38.8	
	comp=N,2308μm,0.6s						
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**09 05 11.4**	**-0.3**
LAKA				S	**Sn**	**09 05 28.5**	**+0.2**
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**09 05 11.3**	**-0.4**
AMT	**Artemida-Makis**	**1.26**	**124**	P	**Pb**	**09 05 12.3**	**+0.2**
EVR	**Evrytania**	**1.28**	**58**	P	**Pn**	**09 05 12.3**	**-0.1**
EVR	**Evrytania**	**1.28**	**58**	P	**Pn**	**09 05 12.3**	**-0.1**
SERG	**Sergoula**	**1.31**	**82**	P	**Pn**	**09 05 12.3**	**-0.3**
SERG	**Sergoula**	**1.31**	**82**	P	**Pn**	**09 05 12.6**	**0.0**
TRIZ	**Trizonia**	**1.32**	**85**	P	**Pn**	**09 05 12.2**	**-0.5**
TRIZ	**Trizonia**	**1.32**	**85**	P	**Pn**	**09 05 12.5**	**-0.2**
KALE	**Kalithea**	**1.37**	**84**	P	**Pn**	**09 05 13.3**	**-0.2**
KALE	**Kalithea**	**1.37**	**84**	P	**Pn**	**09 05 13.7**	**+0.2**
KLV	**Kalavryta, Ach**	**1.39**	**98**	P	**Pn**	**09 05 13.9**	**+0.1**
KLV				S	**Sb**	**09 05 32.5**	**+0.3**
KLV	**Kalavryta, Nm**	**1.39**	**98**	P	**Pn**	**09 05 13.9**	**+0.1**
ITM	**Ithomi**	**1.61**	**131**	P	**Pg**	**09 05 19.1**	**-0.4**
PYL	**PYLOS**	**1.72**	**141**	P	**Pb**	**09 05 20.4**	**+0.4**

*IDC **30** 09:09:43.9±0.7, 7.79N×127.05E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.7/50, mbtmp3.8/9, Error ellipse: s-maj=23.9km s-min=16.4km az=86.0*
*MAN **30** 09:09:54.1, 7.58N×126.62E, h22km, mb4.6, ML3.5, MS3.4*
ISC 30 09:09:46.7±1.7, 7.73N±0.04×127.00E±0.06, h18km±9km, n20, σ1§22/29, mb3.7/9, 3C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.78**	**306**	⇓*eP*		**Pn**	**09 10 04.3**	**+1.4**
BIPH				*eS*		**Sb**	**09 10 12.8**	**+0.8**
MATI	**Mati**	**1.07**	**223**	*eP*		**Pn**	**09 10 08.0**	**+1.2**
MATI				*eS*		**Sg**	**09 10 19.5**	**-2.0**
DAV	**Davao City (W)**	**1.55**	**245**	Pn		**Pb**	**09 10 15.7**	**+0.7**
	114nm,0.3s,baz=90,slow=3.0,SNR=4.1							
DAV				Sn		**Sg**	**09 10 37.8**	**+1.0**
	109nm,0.3s,baz=75,slow=10,SNR=5.2							
DMPH	**Davao City--Mi**	**1.61**	**247**	⇑*iP*		**Pg**	**09 10 18.6**	**+0.9**
BUTP	**Butuan**	**1.84**	**312**	*eP*		**Pg**	**09 10 21.8**	**-0.3**
BUTP				*eS*		**Sg**	**09 10 44.7**	**-1.3**
BUKP	**Musuan**	**1.92**	**275**	*eP*		**Pb**	**09 10 21.0**	**-0.3**
BUKP				*eS*		**Sn**	**09 10 41.7**	**-0.8**
KCP	**Kidapawan**	**2.02**	**249**	⇓*eP*		**Pn**	**09 10 21.9**	**+1.8**
KCP				*i* S		**Sn**	**09 10 41.5**	**-3.4**
DDMP	**Don Marcelino,**	**2.06**	**218**	*eP*		**Pb**	**09 10 23.3**	**-0.3**
DDMP				*eS*		**Sn**	**09 10 45.0**	**-0.7**
CGP	**Cagayan de Oro**	**2.39**	**288**	⇑*eP*		Pg	09 10 39.6	+6.9
CGP				*eS*		**Sn**	**09 10 54.4**	**+0.4**
CTBH	**Cotabato--PC H**	**2.77**	**260**	⇑*iP*		**Pn**	**09 10 31.5**	**+1.2**
CTBH				*i* S		Sn	09 10 53.0	-10
FITZ	**Fitzroy Crossi**	**25.70**	**183**	P		**P**	**09 15 15.9**	**-0.1**
	3.2nm,0.8s,baz=11,slow=10,SNR=3.8							
WRA	**Warramunga Arr**	**28.43**	**165**	P		**P**	**09 15 40.3**	**-0.4**
	0.5nm,0.5s,baz=345,slow=10,SNR=9.4							
WRA				PcP		**PcP**	**09 18 52.8**	**-0.1**
	0.5nm,0.5s,baz=340,slow=2.6,SNR=5.2							
ASAR	**Alice Springs**	**31.92**	**168**	P		**P**	**09 16 12.1**	**+0.5**
	0.3nm,0.3s,baz=340,slow=7.3,SNR=22							
ASAR				PcP		**PcP**	**09 19 02.0**	**+0.1**
	0.8nm,0.6s,baz=347,slow=2.5,SNR=12							
STKA	**Stephens Creek**	**41.78**	**161**	P		**P**	**09 17 34.8**	**-0.6**
	1.9nm,0.7s,baz=357,slow=3.1,SNR=4.2							
MKAR	**Makanchi Array**	**54.48**	**324**	P		**P**	**09 19 12.1**	**-1.4**
	0.3nm,0.6s,baz=122,slow=8.2,SNR=2.0							
KURBB	**Kurchatov Arra**	**58.56**	**326**	P		**P**	**09 19 41.0**	**-1.4**
	0.3nm,0.5s,baz=120,slow=7.1,SNR=3.0							
ILAR	**Eielson Array**	**81.41**	**26**	P		**P**	**09 22 03.3**	**+0.9**
	0.4nm,0.6s,baz=252,slow=4.7,SNR=6.8							
INK	**Inuvik**	**86.37**	**22**	P		**P**	**09 22 28.3**	**+0.7**
	0.4nm,0.8s,baz=304,slow=2.7,SNR=3.2							
YKA	**Yellowknife Ar**	**95.77**	**24**	P		**P**	**09 23 11.6**	**-0.1**
	0.2nm,0.6s,baz=288,slow=4.6,SNR=3.6							
TXAR	**Lajitas Array**	**118.91**	**50**	PKP		**PKPdf**	**09 28 36.2**	**+1.1**
	0.1nm,0.5s,baz=279,slow=2.3,SNR=2.3							

*SOF **30** 09:23:38.9, 42.41N×23.81E, h11km, MD2.9*
*SKO **30** 09:23:40.0, 42.46N×23.81E, h0km*
*BEO **30** 09:23:41.9±0.8, 42.42N×23.67E, h9km±3km, ML2.9/9*
ISC 30 09:23:39.8±1.1, 42.41N±0.02×23.77E±0.02, h9km±9km, n61, σ1§47/70, 28C-11D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PGB	**Panagyurishte**	**0.33**	**64**	P		**Pg**	**09 23 45.4**	**-0.9**
SOF	**Sofiya**	**0.43**	**311**	P		**Pg**	**09 23 47.9**	**-0.3**
VTS	**Vitosha**	**0.45**	**298**	*ePg*		**Pg**	**09 23 48.4**	**-0.2**
VTS				*eSg*		**Sg**	**09 23 54.6**	**0.0**
VTS	**Vitosha**	**0.45**	**298**	⇑P		**Pg**	**09 23 48.6**	**0.0**
VTS				⇑S		**Sg**	**09 23 54.4**	**-0.2**
VTS	**Vitosha**	**0.45**	**298**	P		**Pg**	**09 23 48.3**	**-0.3**
KKB	**Krupnik**	**0.74**	**224**	P		**Pg**	**09 23 54.3**	**+0.2**
PLD	**Plovdiv**	**0.75**	**113**	P		**Pg**	**09 23 53.4**	**-0.9**
MMB	**Musomiste**	**0.82**	**182**	P		**Pg**	**09 23 56.3**	**+0.8**
BOSS	**Bosilegrad**	**0.96**	**276**	*ePg*		**Pg**	**09 23 58.3**	**0.0**
BOSS				*eSg*		**Sg**	**09 24 11.1**	**+0.3**
RZN	**Rozhen**	**1.00**	**135**	P		**Pg**	**09 23 58.7**	**-0.4**
PLVB	**Pleven**	**1.16**	**32**	⇑P		**Pb**	**09 24 01.6**	**-0.4**
PLVB	**Pleven**	**1.16**	**32**	⇑S		**Sb**	**09 24 17.1**	**-0.1**
ZAPS	**Zavoj**	**1.21**	**316**	*ePg*		**Pb**	**09 24 03.0**	**+0.1**
ZAPS				*eSg*		**Sg**	**09 24 19.4**	**+0.8**
STIP	**Stip**	**1.38**	**240**	⇑*iPg*		**Pn**	**09 24 01.4**	**-3.9**
STIP				*i* Sg		**Sn**	**09 24 18.4**	**-5.2**
STIP				*eLg*		Lg	09 24 19.5	
	comp=E,131nm,0.3s							
STIP				*eLg*		Lg	09 24 20.8	
	comp=Z,26nm,0.2s							
VAY	**Valandovo**	**1.41**	**220**	*ePg*		**Pn**	**09 24 06.5**	**+0.9**
VAY				*eSg*		**Sb**	**09 24 25.3**	**+1.0**
VAY	**Valandovo**	**1.41**	**220**	*iPg*		**Pb**	**09 24 06.8**	**+0.6**
VAY				*i* Sg		**Sg**	**09 24 26.9**	**+1.9**
VAY				*eLg*		Lg	09 24 27.4	
	comp=N,169nm,0.6s							
VAY				*eLg*		Lg	09 24 27.8	
	comp=E,210nm,0.5s							
BLKB	**Belogradchik**	**1.46**	**327**	⇑S		**Sn**	**09 24 24.6**	**-1.1**
BARS	**Barje**	**1.50**	**287**	*ePg*		**Pn**	**09 24 07.7**	**+0.7**
BARS	**Barje**	**1.50**	**287**	*ePn*		Pg	09 24 17.3	+8.7
BARS				*eSg*		**Sn**	**09 24 26.6**	**-0.1**
BARS				*eSg*		Sg	09 24 47.5	+19
BAIL	**Bailesti**	**1.64**	**349**	⇓P		**Pn**	**09 24 09.3**	**+0.4**
BAIL	**Bailesti**	**1.64**	**349**	⇓S		**Sn**	**09 24 27.8**	**-2.3**
VLAD	**Vladila**	**1.66**	**16**	⇑P		**Pg**	**09 24 10.9**	**-0.7**
VLAD	**Vladila**	**1.66**	**16**	⇓S		**Sb**	**09 24 31.2**	**-0.3**
ZIMR		**1.71**	**42**	⇑P		**Pb**	**09 24 11.1**	**-0.4**
ZIMR		**1.71**	**42**	⇑S		**Sg**	**09 24 34.9**	**+0.1**
BOVS	**Bovan**	**1.95**	**310**	*ePg*		**Pb**	**09 24 15.7**	**+0.2**
BOVS				*eSg*		**Sb**	**09 24 40.6**	**+0.6**
PUNG	**Punghina**	**1.97**	**342**	⇓P		**Pb**	**09 24 14.7**	**-1.1**
PUNG	**Punghina**	**1.97**	**342**	⇓S		**Sn**	**09 24 37.9**	**-0.3**
COPA	**Copaceanca**	**2.02**	**31**	⇓P		**Pb**	**09 24 16.4**	**-0.3**
COPA	**Copaceanca**	**2.02**	**31**	⇓S		**Sb**	**09 24 40.7**	**-1.4**
SELS	**Selova**	**2.12**	**294**	*ePn*		**Pn**	**09 24 16.0**	**+0.6**
SELS				*eSg*		**Sb**	**09 24 46.6**	**+1.9**
SRE	**Strehaia**	**2.29**	**350**	⇑P		**Pn**	**09 24 18.5**	**+0.7**
HUMR	**Humele**	**2.30**	**22**	⇑P		**Pb**	**09 24 19.9**	**-1.5**
RAZG	**Razgrad**	**2.32**	**59**	⇑S		**Sb**	**09 24 51.5**	**+1.0**
SGRR	**Singureni**	**2.42**	**41**	⇓P		**Pb**	**09 24 21.5**	**-2.1**
DJES	**Djerdap**	**2.44**	**338**	*ePn*		**Pn**	**09 24 21.0**	**+1.2**
KUBS	**Kucevo**	**2.52**	**323**	*ePn*		**Pn**	**09 24 22.0**	**+1.0**
HERR	**Herculane**	**2.66**	**339**	⇑P		**Pn**	**09 24 22.4**	**-0.5**
HERR	**Herculane**	**2.66**	**339**	⇑S		**Sn**	**09 24 53.4**	**-1.9**
GRUS	**Gruza**	**2.68**	**305**	*ePn*		**Pn**	**09 24 24.2**	**+1.0**
IVAS	**Ivanjica**	**2.90**	**295**	*ePn*		**Pn**	**09 24 27.3**	**+1.0**
LOT	**Lotru**	**3.04**	**360**	⇑P		**Pn**	**09 24 28.9**	**+0.7**
LOT	**Lotru**	**3.04**	**360**	⇑S		**Sn**	**09 25 04.5**	**-0.3**
TRUS	**Trudelj**	**3.06**	**308**	*ePn*		**Pn**	**09 24 29.3**	**+1.0**
GZR	**Gura Zlata**	**3.07**	**347**	⇑P		**Pn**	**09 24 28.6**	**-0.1**
GZR	**Gura Zlata**	**3.07**	**347**	⇑S		**Sn**	**09 25 03.8**	**-1.7**
VOIR		**3.17**	**16**	⇑P		**Pn**	**09 24 31.4**	**+1.4**
VOIR		**3.17**	**16**	⇓S		**Sn**	**09 25 08.6**	**+0.7**
DIVS	**Divibare**	**3.24**	**303**	*ePn*		**Pn**	**09 24 31.6**	**+0.7**
ICOR	**Ion Corvin**	**3.40**	**58**	⇑P		**Pb**	**09 24 37.5**	**-2.8**
MLR	**Muntele Rosu**	**3.46**	**26**	⇑P		**Pn**	**09 24 35.5**	**+1.5**
BZS	**Buzias**	**3.57**	**335**	⇑P		**Pn**	**09 24 35.2**	**-0.1**
DOPR	**Dopca**	**3.75**	**18**	⇓P		**Pn**	**09 24 39.1**	**+1.3**
TREB	**Trebinje**	**4.02**	**276**	*ePn*		**Pn**	**09 24 42.6**	**+1.1**
PLOR	**Plostina**	**4.02**	**30**	⇓P		**Pn**	**09 24 44.3**	**+2.7**
PLOR	**Plostina**	**4.02**	**30**	⇓S		**Sn**	**09 25 30.8**	**+2.0**
VRI	**Vrincioaia**	**4.06**	**31**	⇑P		**Pn**	**09 24 44.8**	**+2.6**
VRI	**Vrincioaia**	**4.06**	**31**	⇑S		**Sn**	**09 25 32.1**	**+2.2**
CFR	**Carcaliu**	**4.20**	**47**	⇓P		**Pn**	**09 24 46.8**	**+2.8**
TESR	**Tescani**	**4.59**	**26**	⇑P		**Pn**	**09 24 51.8**	**+2.4**
BURAR	**Bucovina Array**	**5.31**	**11**	⇑P		**Pn**	**09 25 00.6**	**+1.3**

MAN 30 09:36:41.4, 5.67N×126.37E, h123km, mb4.5, ML3.3, MS3.2, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.27**	**355**	*eP*		Pn	09 37 07.1	+0.6
MATI				*eS*		Sn	09 37 26.7	+1.1
GSPH	**General Santos**	**1.47**	**286**	⇓*iP*		Pn	09 37 07.1	-1.7
KCP	**Kidapawan**	**1.84**	**316**	⇓*iP*		Pn	09 37 14.4	+1.3
KCP				*i* S		Sn	09 37 38.2	+0.9
SKMP	**Bagumbayan, Su**	**2.00**	**295**	*eP*		Pn	09 37 14.8	-0.2
SKMP				*eS*		Sn	09 37 39.1	-1.6

*ASRS **30** 09:45:04.8±0.3, 50°N±2°×9°0E±°, h5km, MLh3.2/17, smi:org.gfz-potsdam.de/geofon/LOCSAT earthModelID smi:org.gfz-potsdam.de/geofon/iasp91 confirmed*
*NNC **30** 09:45:10.7±3.0, 50.20N×89.63E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=25.9km s-min=19.8km az=52.0*
ISC 30 09:45:06.6±1.0, 50.23N±0.04×89.97E±0.03, h10km, n25, σ1§81/47, 9C-2D, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CUR	**Chagan-Uzun**	**1.05**	**264**	Pg		**Pg**	**09 45 25.4**	**-1.4**
CUR				Sg		**Sg**	**09 45 39.9**	**-0.4**
ULGR	**Ulagan, Altay**	**1.34**	**288**	Pg		**Pn**	**09 45 30.9**	**+0.6**
ULGR				Sg		**Sb**	**09 45 48.6**	**-0.6**
AKAR	**Aktash**	**1.51**	**274**	Pg		**Pb**	**09 45 33.7**	**-1.0**
AKAR				Sg		**Sb**	**09 45 54.2**	**+0.2**
CHBI	**Chibit, Altay**	**1.58**	**274**	Pg		**Pb**	**09 45 35.0**	**-1.0**
CHBI				Sg		**Sg**	**09 45 59.0**	**+1.5**
DGZ	**Jazzator, Alta**	**1.72**	**253**	Pg		**Pb**	**09 45 37.8**	**-0.6**
DGZ				Sg		**Sg**	**09 46 03.4**	**+1.5**
ARTR	**Artybash**	**2.31**	**314**	Pg		**Pb**	**09 45 49.0**	**+0.6**
ARTR				Sg		**Sg**	**09 46 19.6**	**-1.3**
TUNR	**Tungur**	**2.34**	**270**	Pg		**Pg**	**09 45 50.2**	**-1.2**
TUNR				Sg		**Sg**	**09 46 21.6**	**-0.1**
ELDR	**Elanda**	**2.66**	**293**	Pg		**Pg**	**09 45 55.8**	**-1.6**
ELDR				Sg		**Sg**	**09 46 31.3**	**-0.6**
DJO	**Djoy, Khakassi**	**2.67**	**16**	Pg		**Pb**	**09 45 54.7**	**+0.2**
DJO				Sg		**Sb**	**09 46 28.5**	**+1.1**
DJOS	**Djoyskaya Sosn**	**2.72**	**19**	Pg		**Pb**	**09 45 55.7**	**+0.4**
DJOS				Sg		**Sb**	**09 46 30.9**	**+2.2**
CERR	**Cheremushki**	**2.78**	**18**	Pg		**Pb**	**09 45 55.6**	**-0.8**
CERR				Sg		**Sb**	**09 46 33.1**	**+2.7**
TASR	**Tashtagol**	**2.85**	**334**	Pg		**Pb**	**09 45 58.5**	**+0.9**
TASR				Sg		**Sg**	**09 46 35.8**	**-2.4**
VEH	**Verkhnyaya Baz**	**3.04**	**4**	Pg		**Pb**	**09 46 00.9**	**+0.1**
VEH				Sg		**Sg**	**09 46 41.5**	**-2.6**
GALT	**Gorno-Altaysk,**	**3.07**	**306**	Pg		**Pb**	**09 46 02.1**	**+0.8**
GALT				Sg		**Sg**	**09 46 43.6**	**-1.7**
KZLR	**Kyzyl**	**3.20**	**61**	Pg		**Pb**	**09 46 03.8**	**+0.3**
KZLR				Sg		**Sg**	**09 46 48.3**	**-0.9**
LUZB	**Luzhba, Kemero**	**3.50**	**350**	Pg		**Pb**	**09 46 10.9**	**+2.3**
LUZB				Sg		**Sg**	**09 46 55.9**	**-3.1**
ELT	**Eltsovka**	**3.82**	**324**	Pg		**Pb**	**09 46 16.2**	**+2.1**
ELT				Sg		**Sg**	**09 47 08.0**	**-1.2**
TDJR	**Todzha**	**4.42**	**58**	Pg		**Pg**	**09 46 28.8**	**-2.3**
SALR	**Pechorkino, Sa**	**4.95**	**330**	Pg		**Pb**	**09 46 36.1**	**+2.9**
SALR				Sg		**Sg**	**09 47 22.4**	**+1.0**
MINR	**Mina**	**5.34**	**27**	Pg		**Pg**	**09 46 45.4**	**-3.4**
MINR				Sg		**Sg**	**09 47 57.6**	**-0.4**
MK31	**Makanchi Array**	**6.15**	**239**	⇑Pn		**Pn**	**09 46 39.9**	**+2.4**
	0.2nm,0.3s,baz=263,slow=22,SNR=11							
MK31				⇑Pg		**Pg**	**09 47 01.9**	**-2.3**
	1.8nm,0.6s,baz=60,slow=15,SNR=6.7							
MK31				⇑Lg		Lg	09 48 20.0	
	0.8nm,0.3s,baz=55,slow=32,SNR=4.4							
BSTK	**Bystrovka, Nov**	**6.24**	**317**	Sg		**Sg**	**09 48 26.7**	**0.0**
MAKZ	**Makanchi**	**6.32**	**240**	⇑Pn		**Pn**	**09 46 40.4**	**+0.7**
	2.9nm,1.3s							
MAKZ				⇑Pg		**Pg**	**09 47 03.1**	**-4.3**
	2.3nm,0.9s							
MAKZ				⇑Lg		Lg	09 48 23.8	
	2.9nm,0.6s							
KURK	**Kurchatov**	**7.26**	**278**	⇓Pn		**Pn**	**09 46 55.3**	**+2.7**
	1.8nm,0.8s							
KURK				⇑Lg		Lg	09 48 54.4	
	5.6nm,0.8s							
KURBB	**Kurchatov Arra**	**7.32**	**277**	⇑Pn		**Pn**	**09 46 56.6**	**+3.1**
	1.9nm,0.7s							
KURBB				⇓Sn		**Sn**	**09 48 17.7**	**+1.2**
	2.6nm,0.8s							
KURBB				⇑Lg		Lg	09 48 57.3	
	12nm,0.8s							

MAN 30 09:46:12.1, 9.75N×124.73E, h23km, mb4.1, ML3.0, MS2.7, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.40**	**18**	*eP*		Pb	09 46 20.3	-0.3
MSLP				*eS*		Sn	09 46 31.0	+1.7
LLP	**Lapu-Lapu**	**0.94**	**307**	⇓*eP*		Pb	09 46 29.6	-0.2
LLP				*eS*		Sb	09 46 42.0	+0.2
CGP	**Cagayan de Oro**	**1.29**	**182**	⇓*eP*		Pn	09 46 34.2	-0.6
CGP				*eS*		Sb	09 46 51.6	-0.3
BUKP	**Musuan**	**1.89**	**170**	*eP*		Pn	09 46 43.3	+0.2
BUKP				*eS*		Sb	09 47 08.4	-0.8

IDC 30 09:50:40.5±3.2, 1.64S×145.83E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/37, mbtmp3.6/5, MS2.8/2, Ms1 2.8/2, ms1mx2.4/33, Error ellipse: s-maj=96.4km s-min=28.2km az=91.0, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**5.19**	**260**	LR		LR	09 53 43.4	
	comp=Z,72nm,19.9s,baz=178,slow=35							
SIJI	**Sorong**	**14.58**	**273**	LR		LR	09 59 22.6	
	comp=Z,47nm,18.4s,baz=220,slow=36							
WRA	**Warramunga Arr**	**21.38**	**211**	P		P	09 55 30.6	+0.7
	2.1nm,1.1s,baz=32,slow=11,SNR=4.4							
ASAR	**Alice Springs**	**24.76**	**207**	P		P	09 56 03.7	-0.5
	0.8nm,0.8s,baz=32,slow=8.8,SNR=6.3							
H11S3	**WAKE ISLAND Hy**	**28.66**	**45**	T		T	10 26 47.5	
	baz=228,slow=75,SNR=12							
H11S2	**WAKE ISLAND Hy**	**28.67**	**45**	T		T	10 26 48.1	
	baz=228,slow=75,SNR=6.7							
H11S1	**WAKE ISLAND Hy**	**28.68**	**45**	T		T	10 26 49.2	
	baz=228,slow=75,SNR=7.0							
H11N1	**WAKE ISLAND Hy**	**29.63**	**43**	T		T	10 27 58.9	
	baz=226,slow=76,SNR=6.3							
H11N2	**WAKE ISLAND Hy**	**29.64**	**43**	T		T	10 28 00.0	
	baz=226,slow=76,SNR=11							
H11N3	**WAKE ISLAND Hy**	**29.64**	**43**	T		T	10 28 01.5	
	baz=226,slow=76,SNR=6.2							
CMAR	**Chiang Mai Arr**	**50.24**	**296**	P		P	09 59 39.0	0.0
	0.7nm,0.3s,baz=113,slow=6.9,SNR=3.8							
MKAR	**Makanchi Array**	**73.42**	**320**	P		P	10 02 14.7	-0.1
	0.2nm,0.7s,baz=104,slow=6.1,SNR=2.6							
BVAR	**Borovoye Array**	**82.58**	**324**	P		P	10 03 05.5	0.0
	0.2nm,0.5s,baz=110,slow=6.3,SNR=3.6							

*SJA **30** 10:02:10.9±1.3, 32.08S×72.13W, h10km, ML4.6, MW4.4*
*BJI **30** 10:02:12.0±0.0, 32.10S×72.00W, h5km, mB5.2/2, Ms4.8/2, Ms7 4.7/4*
*GUC **30** 10:02:14.1±0.7, 32.12S×71.79W, h26km±4km, ML4.9*
*NEIC **30** 10:02:14.8±2.5, 32.14S±0.04×72.06W±0.09, h27km±1km, Error ellipse: s-maj=13.6km s-min=5.9km az=259.0, Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr4.70; Mθθ-0.01; Mφφ-4.69; Mrθ0.30; Mrφ-0.04; Mθφ-3.78; Fault plane solution: M0 6.04000×10¹⁵ NP1: φs177.34000°, δ64.46000°, λ87.33000°. NP2: φs3.52000°, δ25.67000°, λ95.57000°. Principal axes: T 6.0500, Plg70.0000°, Azm82.0000°; N -0.0285, Plg2.0000°, Azm178.0000°; P -6.0216, Plg19.0000°, Azm269.0000°;*
*IDC **30** 10:02:16.3±4.4, 32.08S×71.83W, h32km±31km, mb4.5/10, mb1 4.5/15, mb1mx4.3/28, mbtmp4.6/15, ML4.5/5, MS4.0/13, Ms1 3.9/13, ms1mx3.7/26 Error ellipse: s-maj=24.0km s-min=13.5km az=95.0*
*VAO **30** 10:02:27.6±2.4, 32.42S×71.62W, h166km, mb4.4*
ISC 30 10:02:14.3±0.8, 32.09S±0.02×71.80W±0.04, h18km±3km, n145, σ1§38/164, mb4.9/14, 4C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VA01	**Torpederas**	**0.94**	**172**	*eP*		**Pb**	**10 02 31.4**	**-0.6**
VA01				*i* S		**Sb**	**10 02 44.4**	**+0.3**
ROCH	**El Roble**	**1.10**	**143**	⇓*iP*		**Pb**	**10 02 34.6**	**-0.4**
ROCH				*i* S		**Sg**	**10 02 50.1**	**0.0**
ROCH				IAML			10 02 55.6	
	comp=N,29μm,0.4s							
ROC1	**El Roble**	**1.10**	**143**			**Pn**	**10 02 35.2**	**+0.1**
ROC1				Sn		**Sg**	**10 02 50.0**	**-0.2**
ROC1	**El Roble**	**1.10**	**143**	*eP*		**Pn**	**10 02 35.2**	**+0.1**
ROC1				*eS*		**Sn**	**10 02 49.6**	**-0.3**
CO02	**Combarbal**	**1.12**	**38**	⇓*iP*		**Pb**	**10 02 35.2**	**0.0**
CO02				*i* S		**Sg**	**10 02 51.6**	**+1.0**
CO02				IAML			10 02 56.9	
	comp=E,56μm,0.4s							
VA03	**San Esteban**	**1.25**	**123**	⇓*iP*		**Pn**	**10 02 37.0**	**+0.1**
VA03				*i* S		**Sg**	**10 02 54.4**	**-0.5**
VA03				IAML			10 02 56.6	
	comp=E,90μm,0.3s							
PEL	**Peldehue**	**1.41**	**138**	*eP*		**Pn**	**10 02 39.4**	**+0.3**
PEL				*i* S		**Sb**	**10 02 58.5**	**+0.8**
PEL				IAML			10 03 01.2	
	comp=N,27μm,0.2s							
PEL	**Peldehue**	**1.41**	**138**			**Pb**	**10 02 39.9**	**-0.1**
PEL				Sn		**Sg**	**10 02 59.0**	**-0.8**
PEL	**Peldehue**	**1.41**	**138**	*eP*		**Pb**	**10 02 40.2**	**+0.1**
PEL				*eS*		**Sg**	**10 02 59.2**	**-0.6**
MT05	**Renca**	**1.57**	**146**	*eP*		**Pn**	**10 02 41.9**	**+0.5**
MT05				*eS*		**Sb**	**10 03 02.7**	**+0.2**
MT05				IAML			10 03 07.0	
	comp=E,54μm,0.4s							
STL	**Sant

LVC	**Limon Verde**	**9.79**	**16**	*e*P		Pn		10 04 49.0	+15
LVC	**Limon Verde**	**9.79**	**16**			**Pn**		**10 04 32.0**	**-2.5**
PB04	**IPOC Station P**	**9.83**	**9**			**Pn**		**10 04 36.4**	**+1.4**
PB09	**IPOC Station P**	**10.51**	**13**	*i* P		**Pn**		**10 04 46.1**	**+1.9**
PB01	**IPOC Station P**	**11.20**	**11**	Pn		**Pn**		**10 04 53.6**	**0.0**
PB11	**IPOC Station P**	**12.43**	**9**	Pn		**Pn**		**10 05 10.2**	**-0.4**
GO01	**Chusmiza**	**12.59**	**11**			**Pn**		**10 05 11.1**	**-1.9**
MNMC	**Minye Minye**	**13.06**	**9**			**Pn**		**10 05 17.0**	**-2.2**
CPUP	**Villa Florida**	**13.88**	**69**	Pn		**Pn**		**10 05 30.6**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=244,slow=12,SNR=7.6								
CPUP				Sn		**Sn**		**10 07 58.2**	**-5.5**
	comp=Z,0.6nm,0.3s,baz=240,slow=20,SNR=1.7								
CPUP				LR		LR		10 11 09.0	
	comp=Z,532nm,20.3s,baz=249,slow=38								
CPUP	**Villa Florida**	**13.88**	**69**			**Pn**		**10 05 33.2**	**+3.2**
LPAZ	**La Paz**	**16.09**	**13**	Pn		**Pn**		**10 06 00.8**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=188,slow=6.2,SNR=17								
LPAZ	**La Paz**	**16.09**	**13**			**Pn**		**10 05 59.7**	**-0.5**
LPAZ	**La Paz**	**16.09**	**13**			**Pn**		**10 06 00.7**	**+0.5**
ITAB	**Concordia**	**17.76**	**79**	*e*P		**P**		**10 06 21.7**	**+0.3**
AQDB	**Aquidauana**	**18.47**	**55**	*e*P		**Pn**		**10 06 30.6**	**+1.2**
SIV	**San Ignacio**	**18.77**	**34**	P		**P**		**10 06 32.4**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=224,slow=12,SNR=20								
SIV				LR		LR		10 15 15.3	
	comp=Z,269nm,20.8s,baz=274,slow=42								
PTGB	**Pitanga**	**18.84**	**72**	*e*P		**Pn**		**10 06 35.9**	**+2.0**
TRCB	**Terra Rica**	**19.34**	**66**	*e*P		**Pn**		**10 06 41.2**	**+1.2**
NNA	**Nana**	**20.54**	**346**	P		**P**		**10 06 51.9**	**-0.1**
	comp=Z,2.9nm,0.4s,baz=129,slow=14,SNR=1.5								
NNA				LR		LR		10 12 56.2	
	comp=Z,185nm,20.8s,baz=171,slow=31								
PCMB	**Pacaembu**	**21.06**	**65**	*e*P		**P**		**10 06 56.8**	**-0.6**
EFI	**East Falkland**	**22.01**	**157**	P		**P**		**10 07 07.2**	**-0.1**
EFI				IAmb		IAmb		10 07 24.2	
	comp=Z,88nm,1.2s								
USHA	**Ushuaia**	**22.86**	**175**	P		**P**		**10 07 16.2**	**-0.1**
	comp=Z,11nm,0.8s,baz=83,slow=4.9,SNR=3.9								
SPB	**Sao Paulo**	**23.11**	**75**	*e*P		**P**		**10 07 19.3**	**-0.1**
BB19B	**Bebedouro**	**23.48**	**68**	*e*P		**P**		**10 07 22.6**	**-0.5**
VAO	**Valinhos**	**23.76**	**74**	*e*P		**P**		**10 07 24.6**	**-1.3**
SAML	**Samuel**	**24.38**	**21**	*e*P		**P**		**10 07 32.5**	**+0.9**
SAML	**Samuel**	**24.38**	**21**	P		**P**		**10 07 32.3**	**+0.8**
ARAG	**Araguaiana, MT**	**24.43**	**53**	*e*P		**P**		**10 07 31.8**	**-0.2**
IPMB	**Ipameri, GO**	**25.50**	**62**	*e*P		**P**		**10 07 40.9**	**-0.9**
BDFB	**Brasilia**	**27.13**	**58**	P		**P**		**10 07 55.6**	**-1.1**
	comp=Z,12nm,0.5s,baz=228,slow=8.1,SNR=16								
BDFB				LR		LR		10 20 16.6	
	comp=Z,554nm,18.3s,baz=254,slow=40								
BDFB	**Brasilia**	**27.13**	**58**	P		**P**		**10 07 56.1**	**-0.5**
BDFB				IAmb		IAmb		10 07 57.4	
	comp=Z,42nm,1.3s								
PMSA	**Palmer Station**	**33.05**	**174**	LR		LR		10 22 05.4	
	comp=Z,263nm,18.1s,baz=316,slow=36								
RUSC	**La Rusia**	**37.79**	**358**	P		**P**		**10 09 31.4**	**+1.2**
VNA3	**Neumayer Olymp**	**51.05**	**158**	P		**P**		**10 11 15.6**	**+0.6**
VNA1	**Neumayer--Stat**	**51.35**	**158**	P		**P**		**10 11 19.1**	**+1.9**
VNA2	**Neumayer--Watz**	**51.69**	**158**	P		**P**		**10 11 20.4**	**+0.6**
	baz=270,slow=8.5								
SNAA	**Sanae**	**53.27**	**158**	P		**P**		**10 11 32.1**	**+0.4**
SNAA	**Sanae**	**53.27**	**158**	P		**P**		**10 11 32.0**	**+0.4**
	comp=Z,7.4nm,0.6s,baz=278,slow=7.2,SNR=25								
SNAA	**Sanae**	**53.27**	**158**	P		**P**		**10 11 32.2**	**+0.6**
SNAA				IAmb		IAmb		10 11 33.1	
	comp=Z,24nm,1.2s								
TEIG	**Tepich**	**54.37**	**341**	P		**P**		**10 11 38.5**	**-1.5**
QSPA	**South Pole Qui**	**58.14**	**180**	P		**P**		**10 12 07.0**	**+0.3**
	comp=Z,5.3nm,0.7s,baz=158,slow=1.6,SNR=42								
QSPA	**South Pole Qui**	**58.14**	**180**	P		**P**		**10 12 07.0**	**+0.3**
QSPA				IAmb		IAmb		10 12 08.4	
	comp=Z,5.4nm,0.8s								
SYO	**Syowa Base**	**67.56**	**159**	*e*P		P		10 13 03.7	-5.4
SYO	**Syowa Base**	**67.56**	**159**	*e*X		**P**		**10 13 07.6**	**-1.5**
SYO	**Syowa Base**	**67.56**	**159**	*e*sP		sP		10 13 16.1	-0.6
TBI	**Tubuai**	**67.97**	**256**	*e*T		T		11 27 02.7	
	comp=Z,4.4nm,0.2s								
TXAR	**Lajitas Array**	**68.18**	**330**	P		**P**		**10 13 13.9**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=157,slow=8.8,SNR=8.3								
TXAR	**Lajitas Array**	**68.18**	**330**	P		**P**		**10 13 12.5**	**-1.1**
MEH	**Mehetia**	**69.32**	**261**	*e*T		T		11 28 45.1	
	comp=Z,14nm,0.3s								
TIAR	**Tiarei**	**70.54**	**261**	*e*T		T		11 30 16.8	
	comp=Z,4.0nm,0.3s								
PPT2	**Papeete2**	**70.72**	**261**	*e*LR		LR		10 34 55.3	
	comp=Z,84nm,25.8s								
PPT	**Papeete**	**70.73**	**261**	LR		LR		10 36 49.6	
	comp=Z,45nm,18.1s,baz=103,slow=29								
LIC	**Lamto**	**73.99**	**72**	*e*P		**P**		**10 13 48.8**	**-0.3**
	comp=Z,30nm,0.7s								
TIC	**Toumodi**	**74.24**	**72**	*e*P		**P**		**10 13 50.3**	**-0.3**
	comp=Z,5.0nm,0.2s								
KIC	**Kosan Boka**	**74.30**	**72**	*e*P		**P**		**10 13 50.8**	**-0.1**
	comp=Z,35nm,0.8s								
DBIC	**Dimbokro**	**74.38**	**72**	P		**P**		**10 13 51.2**	**-0.2**
	comp=Z,16nm,0.7s,baz=214,slow=6.4,SNR=24								
DBIC				LR		LR		10 45 43.3	
	comp=Z,67nm,18.1s,baz=220,slow=35								
MAW	**Mawson**	**74.95**	**164**	P		**P**		**10 13 54.1**	**+0.3**
	comp=Z,4.4nm,0.4s,baz=217,slow=7.4,SNR=11								
MAW				LR		LR		10 49 13.4	
	comp=Z,281nm,18.0s,baz=265,slow=38								
BOSA	**Boshof**	**80.78**	**118**	P		**P**		**10 14 26.8**	**-0.4**
	comp=Z,7.6nm,1.0s,baz=221,slow=4.7,SNR=6.9								
BOSA				LR		LR		10 46 54.0	
	comp=Z,112nm,18.0s,baz=216,slow=33								
BOSA	**Boshof**	**80.78**	**118**	IAmb		IAmb		10 14 28.8	
	comp=Z,12nm,1.1s								
TOA0	**Torodi Ar. Sit**	**83.37**	**70**	P		**P**		**10 14 40.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**83.37**	**70**	P		**P**		**10 14 40.8**	**+0.1**
	comp=Z,12nm,0.7s,baz=265,slow=4.6,SNR=50								
TORD				LR		LR		10 48 28.4	
	comp=Z,76nm,21.8s,baz=305,slow=33								
SCHQ	**Schefferville**	**86.68**	**3**	P		**P**		**10 14 55.3**	**-1.0**
	comp=Z,3.6nm,0.9s,baz=198,slow=6.4,SNR=2.5								
DZM	**Mont Dzumac**	**102.52**	**234**	*e*LR		LR		10 49 45.0	
	comp=Z,83nm,22.4s								
ASAR	**Alice Springs**	**119.35**	**207**	PKP		**PKPdf**		**10 21 01.7**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=129,slow=1.5,SNR=8.5								
ASAR				PKKPbc		**PKKPbc**		**10 31 14.8**	**0.0**
	comp=Z,0.3nm,0.5s,baz=336,slow=3.5,SNR=5.4								
WRA	**Warramunga Arr**	**122.52**	**209**	PKP		**PKPdf**		**10 21 07.3**	**-2.0**
	comp=Z,0.8nm,0.4s,baz=163,slow=1.8,SNR=11								
H11S2	**WAKE ISLAND Hyd**	**125.98**	**270**	T		T		12 40 13.8	
	baz=118,slow=75,SNR=144								
H11S1	**WAKE ISLAND Hyd**	**125.99**	**270**	T		T		12 40 17.0	
	baz=118,slow=75,SNR=148								
H11S3	**WAKE ISLAND Hyd**	**126.00**	**270**	T		T		12 40 15.0	
	baz=118,slow=75,SNR=135								
H11N3	**WAKE ISLAND Hyd**	**126.34**	**272**	T		T		12 40 42.1	
	baz=116,slow=75,SNR=42								
H11N1	**WAKE ISLAND Hyd**	**126.36**	**272**	T		T		12 40 45.0	
	baz=116,slow=75,SNR=17								
H11N2	**WAKE ISLAND Hyd**	**126.36**	**272**	T		T		12 40 44.3	
	baz=116,slow=75,SNR=154								
SEY	**Seymchan**	**138.47**	**331**	PKP		**PKPdf**		**10 21 39.0**	**+1.1**
	comp=Z,0.7nm,0.6s,baz=41,slow=20,SNR=6.7								
TIXI	**Tiksi**	**138.86**	**350**	PKP		**PKiKP**		**10 21 39.9**	**-0.7**
	comp=Z,2.4nm,0.3s,baz=83,slow=2.2,SNR=4.8								
BVAR	**Borovoye Array**	**145.73**	**41**	PKPbc		**PKPab**		**10 21 52.4**	**+0.3**
	comp=Z,3.2nm,0.5s,baz=283,slow=2.9,SNR=18								
KK31	**Karatay Array**	**148.42**	**59**			**PKPbc**		**10 21 59.7**	**+0.1**
KKAR	**Karatay Array**	**148.42**	**59**			**PKPbc**		**10 21 58.1**	**-1.5**
KKAR	**Karatay Array**	**148.42**	**59**			**PKPbc**		**10 21 59.7**	**+0.1**
ARSB	**Arslanbob**	**150.47**	**62**			**PKiKP**		**10 22 05.4**	**-0.2**
KURBB	**Kurchatov Arra**	**151.33**	**41**	PKPbc		**PKPbc**		**10 22 06.3**	**-0.1**
	comp=Z,3.0nm,0.5s,baz=300,slow=3.0,SNR=14								
KURK	**Kurchatov**	**151.33**	**41**			**PKPbc**		**10 22 06.6**	**+0.3**
KURK						**PKPab**		**10 22 14.7**	**+0.2**
AAK	**Ala-Archa**	**151.39**	**59**	PKPbc		**PKiKP**		**10 22 07.4**	**-0.1**
	comp=Z,6.4nm,0.7s,baz=185,slow=3.6,SNR=15								
AAK	**Ala-Archa**	**151.39**	**59**			**PKiKP**		**10 22 07.9**	**+0.4**
ZAA0	**Zalesovo Array**	**152.50**	**31**			**PKPbc**		**10 22 09.0**	**+0.1**
ZAA0						**sPKPbc**		**10 22 17.6**	**+0.8**
ZALV	**Zalesovo Beam**	**152.50**	**31**	PKPbc		**PKPbc**		**10 22 08.7**	**-0.3**
	comp=Z,3.8nm,0.5s,baz=298,slow=3.8,SNR=15								
ZALV				PKPab		**sPKPbc**		**10 22 18.1**	**+1.3**
	comp=Z,10nm,0.5s,baz=295,slow=3.3,SNR=21								
ZALV	**Zalesovo Beam**	**152.50**	**31**			**PKPbc**		**10 22 08.4**	**-0.5**
KSH	**Kashi**	**152.94**	**65**	PKPbc		**PKPdf**		**10 22 05.5**	**+2.2**
KSH				PP		**PP**		**10 25 57.8**	**+2.4**
KSH				SKS		**SKSdf**		**10 29 09.5**	**-0.2**
KSH				SKKS		**SKKSac**		**10 32 48.8**	**+4.1**
KSH				SS		**SS**		**10 45 26.5**	**-1.1**
KSH				LR		LR			
	comp=Z,220nm,6.2s								
MKAR	**Makanchi Array**	**155.33**	**46**	PKPbc		PKPdf		10 22 15.6	+9.3
	comp=Z,0.5nm,0.7s,baz=25,slow=2.0,SNR=2.8								
MKAR				PKPab		**PKPab**		**10 22 31.0**	**-0.6**
	comp=Z,3.7nm,0.7s,baz=296,slow=3.3,SNR=17								
WMQ	**Urumqi**	**160.10**	**48**	*e*PKP		**PKPdf**		**10 22 12.0**	**-0.4**
WMQ				LR		LR			
	comp=Z,69nm,28.9s								
CMAR	**Chiang Mai Arr**	**164.06**	**146**	PKPab		**PKPab**		**10 23 10.2**	**0.0**
	comp=Z,0.6nm,0.3s,baz=217,slow=4.4,SNR=3.5								
GTA	**Gaotai**	**170.02**	**41**	*e*PKP		**PKPdf**		**10 22 23.8**	**+2.8**
GTA				PKPab		**PKPab**		**10 23 37.3**	**+1.1**
GTA				LR		LR			
	comp=Z,38nm,19.7s								
GTA				LR		LR			
	comp=Z,55nm,19.7s								
GTA				LR		LR			
	comp=Z,56nm,18.7s								
HHC	**Hu-ho-hao-te**	**170.85**	**344**	*e*PKP		**PKPdf**		**10 22 21.8**	**+0.4**
NJ2	**Nanjing**	**170.96**	**273**	*e*PKP		**PKPdf**		**10 22 22.0**	**+0.4**
LZH	**Lanzhou**	**174.62**	**41**	*e*PKP		**PKPdf**		**10 22 19.5**	**-3.7**
LZH				pPKP		pPKPdf		10 22 29.3	+0.2
CD2	**Chengdu**	**176.03**	**106**	PKP		**PKPdf**		**10 22 22.5**	**-1.1**

*IDC **30** 10:04:48.8±0.9, 32.°03S×72.°10W, h0km, mb4.4/6, mb1 4.4/9, mb1mx4.1/27, mbtmp4.4/9, ML4.1/3, Error ellipse: s-maj=31.7km s-min=21.3km az=115.0*
*SJA **30** 10:04:53.0±0.7, 32.°23S×71.°91W, h10km±25km, ML4.0, MW4.0*

ISC 30 10:04:49.7±3.2, 32.°10S±0.°04×72.°06W±0.°06, h5km±19km, n37, σ1s42/41, mb4.4/6, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ROC1	**El Roble**	**1.25**	**135**	*i* P		**Pn**	**10 05 13.8**	**-0.2**
ROC1				*e*S		**Sb**	**10 05 28.6**	**-1.7**
PEL	**Peldehue**	**1.56**	**132**	*i* P		**Pb**	**10 05 18.8**	**-0.3**
PEL				*e*S		**Sn**	**10 05 37.0**	**-1.8**
GO04	**Tololo Observa**	**2.20**	**30**	*i* P		**Pb**	**10 05 30.0**	**-0.1**
GO04				*e*S		**Sb**	**10 05 59.0**	**+1.2**
RTLS	**Leoncito**	**2.37**	**84**	*i* P		**Pb**	**10 05 33.3**	**+0.3**
RTLS				*e*S		**Sb**	**10 06 02.3**	**-0.4**
RTLS				IAML			10 06 04.8	
	comp=Z,515nm,0.8s							
ARCO	**CERRO ARCO**	**2.75**	**107**	*i* P		**Pb**	**10 05 40.2**	**+0.8**
ARCO				*e*S		**Sb**	**10 06 13.2**	**-0.3**
ARCO				IAML			10 06 14.5	
	comp=Z,751nm,1.2s							
ASAL	**Salagasta**	**2.78**	**101**	*i* P		**Pb**	**10 05 41.4**	**+1.5**
ASAL				*e*S		**Sb**	**10 06 15.6**	**+1.4**
ASAL				IAML			10 06 25.6	
	comp=Z,530nm,0.6s							
AAGR	**Agrelo**	**2.90**	**111**	*i* P		**Pb**	**10 05 41.2**	**-0.8**
AAGR				IAML			10 06 32.3	
	comp=Z,589nm,1.4s							
ZON	**Zonda**	**2.93**	**80**	*i* P		**Pb**	**10 05 41.7**	**-0.8**
ZON				*e*S		**Sb**	**10 06 18.4**	**-0.3**
ZON				IAML			10 06 28.0	
	comp=Z,597nm,0.6s							
RTCV	**Cerro Valdivia**	**3.00**	**86**	*i* P		**Pb**	**10 05 42.0**	**-1.6**
RTCV				IAML			10 06 35.1	
	comp=Z,304nm,1.5s							
RTLL	**Cerro Villicun**	**3.15**	**77**	*i* P		**Pb**	**10 05 44.5**	**-1.7**
RTLL				*e*S		**Sb**	**10 06 24.9**	**-0.1**
RTLL				IAML			10 06 27.6	
	comp=Z,691nm,0.5s							
AMOG	**MOGNA**	**3.26**	**70**	*i* P		**Pb**	**10 05 45.9**	**-2.2**
AMOG				IAML			10 06 42.6	
	comp=Z,827nm,0.5s							
CFA	**Coronel Fontan**	**3.29**	**82**	Pn		**Pn**	**10 05 43.4**	**+1.4**
	comp=Z,40nm,0.3s,baz=277,slow=16,SNR=3.5							
CFA				Sn		**Sn**	**10 06 23.3**	**+1.8**
	comp=Z,19nm,0.3s,baz=7.1,slow=16,SNR=2.3							
CFA	**Coronel Fontan**	**3.29**	**82**	*i* P		**Pb**	**10 05 45.5**	**-3.0**
CFA				*e*S		**Sb**	**10 06 27.0**	**-2.0**
AGUA	**GUANDACOL**	**4.03**	**51**	*i* P		**Pb**	**10 05 58.3**	**-2.8**
AGUA				IAML			10 07 06.9	
	comp=Z,114nm,0.7s							
ACAN	**Cantantal**	**4.14**	**94**	*i* P		**Pn**	**10 05 57.2**	**+3.7**
ACAN				IAML			10 07 11.4	
	comp=Z,105nm,1.3s							
VCA	**Vinchina**	**4.72**	**46**	*i* P		Pb	10 06 07.8	-5.3
VCA				IAML			10 07 28.9	
	comp=Z,487nm,1.5s							
PLCA	**Paso Flores**	**8.70**	**172**	Pn		**Pn**	**10 06 57.8**	**+1.5**
	comp=Z,0.7nm,0.3s,baz=351,slow=8.8,SNR=4.1							
PB09	**IPOC Station P**	**10.56**	**14**	*i* P		Pn	10 07 10.8	-11
LPAZ	**La Paz**	**16.14**	**14**	Pn		**Pn**	**10 08 38.6**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=210,slow=20,SNR=2.1							
BDFB	**Brasilia**	**27.32**	**59**	P		**P**	**10 10 34.4**	**-1.3**
	comp=Z,8.0nm,0.9s,baz=207,slow=8.7,SNR=4.2							
SNAA	**Sanae**	**53.35**	**158**	P		**P**	**10 14 10.2**	**+0.6**
	comp=Z,1.8nm,0.5s,baz=250,slow=5.1,SNR=3.8							
QSPA	**South Pole Qui**	**58.13**	**180**	P		**P**	**10 14 44.7**	**+0.6**
	comp=Z,1.8nm,0.7s,baz=174,slow=16,SNR=3.9							
DBIC	**Dimbokro**	**74.60**	**72**	P		**P**	**10 16 30.1**	**0.0**
	comp=Z,3.9nm,0.5s,baz=204,slow=5.9,SNR=4.9							
BOSA	**Boshof**	**80.97**	**118**	P		**P**	**10 17 05.7**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=225,slow=1.4,SNR=3.1							
TORD	**Torodi Ar. Bea**	**83.58**	**70**	P		**P**	**10 17 18.9**	**-0.4**
	comp=Z,4.3nm,0.8s,baz=267,slow=4.9,SNR=9.0							
ASAR	**Alice Springs**	**119.25**	**207**	PKP		**PKPdf**	**10 23 39.7**	**-0.8**
	comp=Z,0.3nm,0.9s,baz=132,slow=1.4,SNR=3.0							
WRA	**Warramunga Arr**	**122.41**	**210**	PKP		**PKPdf**	**10 23 45.9**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=173,slow=1.6,SNR=5.5							
H11S2	**WAKE ISLAND Hyd**	**125.76**	**271**	T		T	12 42 44.9	
	baz=116							
H11S1	**WAKE ISLAND Hyd**	**125.77**	**271**	T		T	12 42 44.4	
	baz=116,slow=74,SNR=39							
H11S3	**WAKE ISLAND Hyd**	**125.77**	**271**	T		T	12 42 46.1	
	baz=116,slow=74,SNR=20							
H11N3	**WAKE ISLAND Hyd**	**126.12**	**272**	T		T	12 43 07.7	
	baz=117,slow=74,SNR=17							
H11N1	**WAKE ISLAND Hyd**	**126.14**	**272**	T		T	12 43 11.5	
	baz=117							
H11N2	**WAKE ISLAND Hyd**	**126.14**	**272**	T		T	12 43 09.1	
	baz=117,slow=74,SNR=40							
BVAR	**Borovoye Array**	**145.88**	**41**	PKPbc		**PKPab**	**10 24 30.7**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=228,slow=2.5,SNR=6.0							
KURBB	**Kurchatov Arra**	**151.47**	**41**	PKPbc		**PKPbc**	**10 24 44.2**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=303,slow=2.8,SNR=3.3							
KURBB				PKPab		**PKPab**	**10 24 52.4**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=302,slow=2.9,SNR=7.0							
ZALV	**Zalesovo Beam**	**152.62**	**30**	PKPbc		**PKPbc**	**10 24 46.0**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=316,slow=3.5,SNR=3.0							
ZALV				PKPab		**PKPab**	**10 24 56.0**	**-1.3**
	comp=Z,2.8nm,0.5s,baz=309,slow=3.0,SNR=5.2							
MKAR	**Makanchi Array**	**155.49**	**46**	PKPab		**PKPab**	**10 25 09.8**	**-0.1**
	comp=Z,1.5nm,0.8s,baz=305,slow=3.3,SNR=4.4							

ROM 30 10:30:30.3±0.0, 43.°441N±0.°003×12.°468E±0.°003, h8km, ML2.2/19, Error ellipse: s-maj=0.3km s-min=0.1km az=24.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.05**	**281**	P		Pg	10 30 32.2	+0.1
ATPI				S		Sg	10 30 33.2	-0.1
ATPI				AML		AML		
	comp=E,5650μm,0.6s							
ATPI				AML		AML		
	comp=N,5000μm,0.5s							
ATVO	**AVT- Monte Val**	**0.07**	**217**	*i* P		Pg	10 30 32.6	+0.3
ATVO				S		Sg	10 30 34.1	+0.3
ATVO				AML		AML		
	comp=E,2175μm,0.6s							
ATVO				AML		AML		
	comp=N,2045μm,0.5s							
ATFO	**Monte Foce - G**	**0.11**	**134**	P		Pg	10 30 33.2	+0.4
ATFO				AML		AML		
	comp=N,3005μm,0.2s							
ATFO				AML		AML		
	comp=E,3335μm,1.0s							
PIEI	**Pieia**	**0.11**	**27**	P		Pg	10 30 33.4	+0.6
PIEI				S		Sg	10 30 35.7	+1.1
PIEI				AML		AML		
	comp=E,2930μm,0.2s							
PIEI				AML		AML		
	comp=N,3580μm,0.3s							
CDCA	**Citt' di Caste**	**0.17**	**276**	P		Pg	10 30 34.9	+1.0
CDCA				AML		AML		
	comp=E,3780μm,1.4s							
CDCA				AML		AML		
	comp=N,2620μm,0.3s							
CDCA				AML		AML		
	comp=E,508μm,0.5s							
CDCA				AML		AML		
	comp=N,796μm,0.4s							
BADI	**Badiali**	**0.18**	**293**	P		Pg	10 30 34.6	+0.6
BADI				S		Sg	10 30 37.8	+1.4
ATMI	**Monte Miggiano**	**0.18**	**234**	P		Pg	10 30 34.5	+0.5
ATMI				AML		AML		
	comp=E,919μm,0.8s							
ATMI				AML		AML		
	comp=N,855μm,0.9s							
ATMI				AML		AML		
	comp=E,920μm,0.8s							
MURB	**Monte Urbino**	**0.18**	**167**	P		Pg	10 30 34.8	+0.7
MURB				S		Sg	10 30 38.0	+1.4
MURB				AML		AML		
	comp=E,5205μm,0.3s							
MURB				AML		AML		
	comp=E,5085μm,0.3s							
MURB				AML		AML		
	comp=N,4080μm,0.3s							
MURB				AML		AML		
	comp=N,4035μm,0.9s							
NARO	**Abbazia di Nar**	**0.19**	**26**	P		Pg	10 30 34.7	+0.5
NARO				AML		AML		
	comp=E,463μm,0.5s							
NARO				AML		AML		
	comp=N,398μm,1.4s							
SSFR	**Montelago di S**	**0.23**	**91**	P		Pg	10 30 35.5	+0.6
SSFR				S		Sg	10 30 39.5	+1.4
SSFR				AML		AML		
	comp=E,1970μm,0.7s							
SSFR				AML		AML		
	comp=N,2245μm,1.4s							
SSFR				AML		AML		
	comp=N,1990μm,1.3s							
SSFR				AML		AML		
	comp=E,1990μm,0.2s							
PE3	**Peglio**	**0.26**	**5**	P		Pg	10 30 35.7	+0.3
PE3				AML		AML		
	comp=E,861μm,0.6s							
PE3				AML		AML		
	comp=N,654μm,0.3s							
FOSV	**Fossato di Vic**	**0.26**	**124**	P		Pg	10 30 36.2	+0.8
FOSV				S		Sb	10 30 40.7	-1.1
FOSV				AML		AML		
	comp=E,262μm,0.4s							
FOSV				AML		AML		
	comp=N,310μm,0.9s							
FOSV				AML		AML		
	comp=E,262μm,0.4s							
FOSV				AML		AML		
	comp=N,309μm,0.9s							
PARC	**Parchiule**	**0.27**	**321**	P		Pg	10 30 36.3	+0.7
PARC				S		Sb	10 30 41.3	-0.8
PARC				AML		AML		
	comp=E,454μm,0.4s							
PARC				AML		AML		
	comp=N,386μm,0.2s							
SSP9	**Sansepolcro**	**0.28**	**299**	P		Pg	10 30 36.5	+0.7
SSP9				S		Sb	10 30 41.4	-0.9
MPAG	**Monte Paganucc**	**0.28**	**48**	P		Pg	10 30 36.5	+0.6
MPAG				S		Sb	10 30 41.4	-1.2
ATCC	**AVT- Casa Cast**	**0.28**	**154**	P		Pg	10 30 36.8	+0.8
ATCC				S		Sb	10 30 41.9	-0.6
ATCC				AML		AML		
	comp=N,1670μm,0.9s							
ATCC				AML		AML		
	comp=E,2710μm,1.1s							
FSSB	**Fossombrone**	**0.34**	**42**	P		Pg	10 30 37.5	+0.6
FSSB				AML		AML		
	comp=E,460μm,0.3s							
FSSB				AML		AML		
	comp=N,473μm,1.2s							
ARVD	**Arcevia**	**0.35**	**80**	P		Pg	10 30 37.8	+0.6
ARVD				S		Sb

KRMB					IAML			10 36 10.8		
	comp=E,48nm,2.5s									
JCC	**Jacoby Creek,**	**2.47**	**114**		Pn	**Pn**	**10 35 20.0**	**-1.1**		
JCC					IAML		10 36 19.8			
	comp=E,53nm,1.9s									
JCC					IAML		10 36 20.3			
	comp=N,51nm,3.8s									
KHMM	**Horse Mountain**	**2.65**	**111**		Pn	**Pn**	**10 35 22.2**	**-1.5**		
KHMM					IAML		10 35 44.0			
	comp=E,46nm,4.0s									
KHMM					IAML		10 37 02.9			
	comp=N,45nm,3.5s									
KMRM	**Mail Ridge**	**2.98**	**123**		Pn	**Pn**	**10 35 27.7**	**-0.6**		
KMRM					IAML		10 36 24.6			
	comp=N,56nm,4.2s									
KMRM					IAML		10 36 30.3			
	comp=E,49nm,5.0s									
HUMO	**Hull Mountain**	**3.09**	**75**			**Pn**	**10 35 28.1**	**-1.5**		
YBH	**Yreka Blue Hor**	**3.21**	**91**		Pn	**Pn**	**10 35 31.3**	**-0.1**		
	comp=E,0.7nm,0.3s,baz=283,slow=14,SNR=8.6									
YBH					Sn	**Sn**	**10 36 10.6**	**+0.9**		
	comp=E,0.2nm,0.3s,baz=183,slow=17,SNR=2.7									
YBH					LR	LR	10 36 35.5			
	comp=E,270nm,21.1s,baz=266,slow=37									
YBH	**Yreka Blue Hor**	**3.21**	**91**			**Pn**	**10 35 31.4**	**0.0**		
COR	**Corvallis**	**3.82**	**44**		Pn	**Pn**	**10 35 37.1**	**-2.6**		
K05A	**Summer Lake**	**4.60**	**77**		Pn	**Pn**	**10 35 51.4**	**+0.7**		
PINE	**Pine Mountain**	**4.85**	**65**		Pn	**Pn**	**10 35 51.9**	**-2.1**		
PINE					IAML		10 37 16.2			
	comp=E,31nm,4.7s									
LON	**Longmire**	**6.13**	**36**			**Pn**	**10 36 12.3**	**+0.8**		
LTY	**Liberty**	**7.02**	**38**		Pn	**Pn**	**10 36 24.3**	**+0.5**		
BMO	**Blue Mountains**	**7.66**	**64**		Pn	**Pn**	**10 36 32.7**	**+0.2**		
NEW	**Newport**	**9.46**	**44**		LR	LR	10 40 39.6			
	comp=E,219nm,19.0s,baz=238,slow=39									
BBB	**Bella Bella**	**10.34**	**356**		LR	LR	10 40 16.1			
	comp=E,84nm,18.2s,baz=123,slow=33									
H02S1	**DAWSON INLET T**	**11.92**	**344**		T	T	10 49 42.2			
	SNR=217									
H02N1	**VAN INLET T-PH**	**11.98**	**344**		T	T	10 49 43.4			
	SNR=31									
PDAR	**Pinedale Array**	**12.94**	**80**		LR	LR	10 42 54.5			
	comp=E,116nm,19.9s,slow=38									
ANMO	**Albuquerque**	**17.50**	**107**		LR	LR	10 46 05.8			
	comp=E,146nm,19.3s,baz=230,slow=39									
YKA	**Yellowknife Ar**	**21.93**	**15**		P	**P**	**10 39 33.4**	**-0.7**		
	comp=E,0.3nm,0.6s,baz=202,slow=12,SNR=6.7									
LPIG	**La Paz**	**22.51**	**137**		LR	LR	10 47 28.5			
	comp=E,41nm,18.2s,baz=342,slow=34									
TXAR	**Lajitas Array**	**22.64**	**116**		P	**P**	**10 39 43.4**	**+1.3**		
	comp=E,0.5nm,1.1s,baz=319,slow=9.5,SNR=3.0									
TXAR					LR	LR	10 49 41.8			
	comp=E,50nm,19.8s,baz=0.0,slow=40									
KDAK	**Kodiak Island**	**22.72**	**323**		LR	LR	10 46 21.9			
	comp=E,78nm,18.1s,baz=100,slow=31									
ULM	**Lac du Bonnet**	**23.02**	**58**		LR	LR	10 49 05.7			
	comp=E,77nm,19.7s,baz=282,slow=38									
ILAR	**Eielson Array**	**25.60**	**340**		P	**P**	**10 40 10.1**	**+0.2**		
	comp=E,0.4nm,0.9s,baz=161,slow=8.6,SNR=3.4									
H11N3	**WAKE ISLAND Hy**	**59.46**	**270**		T	T	11 49 09.4			
	baz=52,slow=75,SNR=24									
H11N2	**WAKE ISLAND Hy**	**59.46**	**270**		T	T	11 49 12.4			
	baz=52,slow=75,SNR=18									
H11N1	**WAKE ISLAND Hy**	**59.48**	**270**		T	T	11 49 07.6			
	baz=52,slow=75,SNR=22									
H11S1	**WAKE ISLAND Hy**	**60.35**	**269**		T	T	11 50 16.0			
	baz=52,slow=75,SNR=27									
H11S2	**WAKE ISLAND Hy**	**60.36**	**269**		T	T	11 50 12.6			
	baz=52,slow=75,SNR=16									
H11S3	**WAKE ISLAND Hy**	**60.37**	**269**		T	T	11 50 17.1			
	baz=52,slow=75,SNR=16									

*HLW **30** 11:06:13.4,39.1°S/176.2°W/47.E, h9km±22km, Md4.8, Ml5.2*
*BGR **30** 11:06:15.2±1.1, 38.2°S/23.1°W/28.E, h10km, mb4.7, Error ellipse: s-maj=55.6km s-min=14.5km az=62.0*
*IDC **30** 11:06:17.0±0.5, 38.4°N/20.9°E/51.E, h0km, mb4.3/26, mb1 4.3/37, mb1mx4.2/52, mbtmp4.2/37, ML4.0/9, MS3.9/36, Ms1 3.9/36, ms1mx3.8/64, Error ellipse: s-maj=12.1km s-min=11.4km az=159.0*
*SKO **30** 11:06:16.4, 38.2°N/20.3°E/20.E, h0km*
*MOS **30** 11:06:16.9±1.2, 38.4°S/45.6°W/27.E, h13km, mb4.7/24, MS4.1/7, Error ellipse: s-maj=6.5km s-min=3.8km az=71.5*
*PDG **30** 11:06:17.3±0.3, 38.4°S/45.2°W/40.E, h9km±1km, ML4.5/13, Error ellipse: s-maj=0.8km s-min=0.7km az=90.0*
*GCMT **30** 11:06:17.4±0.4, 38.2°N±0.0°/20.4°E±0.0°, h24km±1km, MW4.8/75, Moment Tensor Solution. s6,c6; s75,c100; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr 0.06±.11; Mθθ 0.85±.09; Mϕϕ -0.90±.08; Mrθ -0.07±.11; Mθϕ 1.50±.07; Mϕr 0.34±.11; Best double couple: M0 1.76800×10^16 NP1: ϕs 105.00000°, δ 80.00000°, λ -4.00000°. NP2: ϕs 195.00000°, δ 86.00000°, λ -170.00000°. Principal axes: T 1.7160, Plg 4.0000°, Azm 330.0000°; N 0.1050, Plg 79.0000°, Azm 218.0000°; P -1.8210, Plg 10.0000°, Azm 60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*
*THE **30** 11:06:18.2, 38.4°N/20.7°E/44.E, h0km±1km, ML4.5/21 Error ellipse: s-maj=1.9km s-min=0.4km az=280.0*
*MED_RC **30** 11:06:18.0±0.2, 38.4°N/20.8°E/45.E, h20km±1km, MW4.7/26, Moment Tensor Solution. Mantle waves: s26,c36; Duration: 180 Moment tensor: Scale 10^16 Nm; Mrr 0.07±.08; Mθθ 0.65±.07; Mϕϕ -0.58±.05; Mrθ -0.34±.09; Mθϕ 1.39±.05; Mϕr 0.06±.09; Best double couple: M0 1.56000×10^16 NP1: ϕs 192.00000°, δ 77.00000°, λ -179.00000°. NP2: ϕs 102.00000°, δ 89.00000°, λ -13.00000°. Principal axes: T 1.5900, Plg 9.0000°, Azm 148.0000°; N -0.0700, Plg 77.0000°, Azm 280.0000°; P -1.5200, Plg 10.0000°, Azm 56.0000°; nsta1 refers to body waves. nsta2 refers to surface waves, cutoff=35s.*
*ATH **30** 11:06:18.4, 38.4°N/20.5°E, h9km±1km, ML4.4/6 Error ellipse: s-maj=1.8km s-min=0.7km az=284.0*
*NEIC **30** 11:06:18.6±2.0, 38.4°N±0.0°/20.3°E±0.0°, h10km±1km, Error ellipse: s-maj=8.8km s-min=3.7km az=222.0*

ISC 30 11:06:18.3±0.5, 38.41N±0.01°/20.47E±0.02°, h12km±3km, n428, σ1193/500, mb4.5/56, MS4.0/33, 17C-5D, Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.07**	**87**	P			**Pg**	**11 06 20.1**	**-0.8**
VSK1				S			**Sg**	**11 06 21.6**	**-1.2**
	1383μm,0.3s								
FSK	**Fiskardo**	**0.09**	**53**	P			**Pg**	**11 06 20.3**	**-0.8**
FSK	**Fiskardo**	**0.09**	**53**	P			**Pg**	**11 06 20.3**	**-0.8**
FSK				S			**Sg**	**11 06 21.3**	**-1.7**
KEF1	**Kardakata, Kep**	**0.13**	**180**	P			**Pg**	**11 06 21.3**	**-0.2**
KEF1				S			**Sg**	**11 06 24.1**	**+0.3**
KEF4	**Livadi, Kephal**	**0.15**	**194**	P			**Pg**	**11 06 22.1**	**+0.2**
KEF4				S			**Sg**	**11 06 24.7**	**+0.3**
KEF3	**Kipouria, Keph**	**0.22**	**206**	P			**Pg**	**11 06 23.3**	**+0.2**
KEF3				S			**Sg**	**11 06 27.2**	**+0.9**
ARG2	**Argostoli**	**0.23**	**177**	P			**Pg**	**11 06 23.1**	**0.0**
ARG2				S			**Sg**	**11 06 27.0**	**+0.6**
	294μm,0.3s								
KEF2	**Argostoli. Kep**	**0.24**	**177**	P			**Pg**	**11 06 23.3**	**0.0**
KEF2				S			**Sg**	**11 06 27.7**	**+0.9**
VLS	**Valsamata**	**0.25**	**158**	P			**Pg**	**11 06 23.3**	**-0.2**
VLS				S			**Sg**	**11 06 26.9**	**-0.1**
	140μm,0.7s								
VLS	**Valsamata**	**0.25**	**158**	P			**Pg**	**11 06 23.3**	**-0.2**
VLS				S			**Sg**	**11 06 26.9**	**-0.1**
VLS	**Valsamata**	**0.25**	**158**	P			**Pg**	**11 06 23.2**	**-0.3**
VLS				S			**Sg**	**11 06 26.9**	**-0.1**
VLS				AML			AML	11 06 28.2	
VLS				AML			AML	11 06 28.4	
EVGI	**Lefkada island**	**0.26**	**34**	P			**Pg**	**11 06 23.5**	**-0.2**
EVGI	**Lefkada island**	**0.26**	**34**	P			**Pg**	**11 06 23.5**	**-0.2**
EVGI				S			**Sg**	**11 06 27.2**	**-0.2**
KFL	**Anninata**	**0.39**	**140**	P			**Pg**	**11 06 25.9**	**-0.1**
KFL				S			**Sb**	**11 06 32.2**	**-0.7**
	112μm,0.4s								
KFL	**Anninata**	**0.39**	**140**	P			**Pg**	**11 06 26.1**	**+0.1**
KFL				S			**Sg**	**11 06 30.9**	**-0.3**
KFL				AML			AML	11 06 33.4	
KFL				AML			AML	11 06 34.5	
LKD2	**Lefkada island**	**0.41**	**21**	P			**Pg**	**11 06 25.9**	**-0.5**
LKD2				S			**Sb**	**11 06 32.6**	**-1.1**
	51μm,0.9s								
LKD2	**Lefkada island**	**0.41**	**21**	P			**Pg**	**11 06 26.0**	**-0.5**
LKD2				S			**Sg**	**11 06 31.4**	**-0.6**
LKD2				AML			AML	11 06 37.8	
	comp=E,90649μm,0.9s								
LKD2				AML			AML	11 06 41.7	
TSLK	**Tsoukalades, L**	**0.44**	**19**	P			**Pg**	**11 06 26.8**	**-0.2**
TSLK				S			**Sb**	**11 06 33.6**	**-1.0**
	comp=E,100μm,1.1s								
TSLK	**Tsoukalades, L**	**0.44**	**19**	P			**Pg**	**11 06 27.0**	**-0.1**
TSLK				S			**Sb**	**11 06 33.9**	**-0.7**
TSLK				AML			AML	11 06 38.1	
TSLK				AML			AML	11 06 38.6	
AST1	**Astakos**	**0.50**	**74**	P			**Pg**	**11 06 28.2**	**0.0**
AST1				S			**Sb**	**11 06 36.1**	**-0.2**
	comp=E,141μm,0.5s								
VLMS	**Volimes, Zakyn**	**0.55**	**164**	P			**Pg**	**11 06 28.8**	**-0.2**
VLMS				S			**Sg**	**11 06 35.5**	**-0.8**
VLMS				AML			AML	11 06 38.9	
VLMS				AML			AML	11 06 43.5	
PDO	**Prodromos**	**0.59**	**71**	P			**Pg**	**11 06 29.4**	**-0.4**
PDO				S			**Sb**	**11 06 38.7**	**-0.1**
	comp=E,67μm,0.5s								
PDO	**Prodromos**	**0.59**	**71**	P			**Pg**	**11 06 29.4**	**-0.4**
PDO				S			**Sg**	**11 06 36.6**	**-1.0**
PDO				AML			AML	11 06 47.1	
	comp=E,90442μm,0.4s								
PDO				AML			AML	11 06 47.2	
ZAK2	**Zakynthos**	**0.70**	**151**	P			**Pg**	**11 06 31.9**	**0.0**
ZAK2				S			**Sn**	**11 06 44.0**	**-0.7**
	comp=E,220μm,0.7s								
KRI1	**kERI**	**0.79**	**160**	P			**Pg**	**11 06 32.6**	**-1.0**
KRI1				S			**Sb**	**11 06 45.4**	**+0.8**
	comp=E,57μm,0.7s								
PVO	**Paravola**	**0.85**	**75**	P			**Pg**	**11 06 34.6**	**-0.2**
PVO				S			**Sn**	**11 06 48.6**	**+0.1**
	comp=E,32μm,0.5s								
PVO	**Paravola**	**0.85**	**75**	P			**Pg**	**11 06 34.6**	**-0.2**
PVO				S			**Sg**	**11 06 45.7**	**-0.3**
RLS	**Riolos of Patr**	**0.86**	**114**	P			**Pg**	**11 06 34.2**	**-0.6**
RLS				S			**Sb**	**11 06 47.2**	**+0.7**
	comp=E,21μm,0.9s								
RLS	**Riolos of Patr**	**0.86**	**114**	P			**Pg**	**11 06 34.5**	**-0.3**
UPR	**University Cam**	**1.04**	**96**	P			**Pn**	**11 06 38.4**	**-0.2**
UPR	**University Cam**	**1.04**	**96**	P			**Pb**	**11 06 37.5**	**-0.7**
DRO	**Drossia**	**1.08**	**114**	P			**Pb**	**11 06 37.8**	**-1.0**
DRO				S			**Sn**	**11 06 54.4**	**+0.4**
	comp=E,35μm,0.5s								
DRO	**Drossia**	**1.08**	**114**	P			**Pb**	**11 06 37.8**	**-1.0**
EFP	**Efpalio**	**1.13**	**88**	P			**Pb**	**11 06 38.6**	**-1.1**
EFP				S			**Sn**	**11 06 57.1**	**+1.9**
	comp=E,33μm,0.7s								
EFP	**Efpalio**	**1.13**	**88**	P			**Pb**	**11 06 39.2**	**-0.5**
ANX	**Ano Chora**	**1.15**	**80**	P			**Pb**	**11 06 39.4**	**-0.8**
ANX	**Ano Chora**	**1.15**	**80**	P			**Pb**	**11 06 39.4**	**-0.8**
EVR	**Evrytania**	**1.17**	**64**	P			**Pb**	**11 06 39.2**	**-1.2**
EVR	**Evrytania**	**1.17**	**64**	P			**Pb**	**11 06 39.5**	**-0.9**
LAKA	**Lakka**	**1.20**	**97**	P			**Pn**	**11 06 40.0**	**-0.8**
LAKA				S			**Sn**	**11 06 57.9**	**+0.9**
	comp=E,14μm,0.9s								
LAKA	**Lakka**	**1.20**	**97**	P			**Pn**	**11 06 39.8**	**-1.0**
SERG	**Sergoula**	**1.25**	**89**	P			**Pn**	**11 06 40.6**	**-0.9**
SERG				S			**Sn**	**11 07 00.5**	**+2.3**
	comp=E,21μm,0.5s								
SERG	**Sergoula**	**1.25**	**89**	P			**Pn**	**11 06 40.8**	**-0.7**
TRIZ	**Trizonia**	**1.26**	**91**	P			**Pn**	**11 06 41.0**	**-0.6**
TRIZ				S			**Sg**	**11 07 00.4**	**+1.5**
	comp=E,21μm,0.5s								
TRIZ	**Trizonia**	**1.26**	**91**	P			**Pn**	**11 06 41.1**	**-0.5**
JAN	**Janina**	**1.28**	**13**	P			**Pg**	**11 06 42.7**	**-0.3**
JAN				S			**Sg**	**11 07 01.9**	**+2.2**
	comp=E,13μm,0.7s								
JAN	**Janina**	**1.28**	**13**	P			**Pg**	**11 06 42.7**	**-0.3**
JAN				S			**Sg**	**11 07 01.9**	**+2.2**
JAN	**Janina**	**1.28**	**13**	P			**Pg**	**11 06 42.9**	**-0.1**
ALIK	**Aliki, Aigiali**	**1.30**	**96**	P			**Pn**	**11 06 41.9**	**-0.2**
AMT	**Artemida-Makis**	**1.31**	**131**	P			**Pn**	**11 06 41.8**	**-0.6**
AMT	**Artemida-Makis**	**1.31**	**131**	P			**Pn**	**11 06 42.4**	**0.0**
KALE	**Kalithea**	**1.31**	**90**	P			**Pn**	**11 06 41.8**	**-0.6**
KALE	**Kalithea**	**1.31**	**90**	P			**Pn**	**11 06 41.8**	**-0.6**
KLV	**Kalavryta, Ach**	**1.37**	**105**	P			**Pn**	**11 06 42.8**	**-0.4**
KLV				S			**Sg**	**11 07 03.9**	**+1.4**
	comp=E,8μm,1.1s								
KLV	**Kalavryta, Ach**	**1.37**	**105**	P			**Pn**	**11 06 42.9**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.43**	**64**	P			**Pb**	**11 06 44.5**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.43**	**64**	P			**Pb**	**11 06 44.5**	**-0.4**
SRN	**Sarande**	**1.52**	**346**	P			**Pb**	**11 06 45.9**	**-0.4**
AGG	**Agios Georgios**	**1.58**	**66**	P			**Pb**	**11 06 47.0**	**-0.4**
AGG	**Agios Georgios**	**1.58**	**66**	P			**Pg**	**11 06 48.9**	**+0.3**
AGG	**Agios Georgios**	**1.58**	**66**	P			**Pb**	**11 06 46.8**	**-0.6**
AGG	**Agios Georgios**	**1.58**	**66**				**Pg**	**11 06 48.9**	**+0.3**
THL	**Klokotos Trika**	**1.67**	**46**	P			**Pb**	**11 06 48.9**	**0.0**
ITM	**Ithomi**	**1.68**	**136**	P			**Pb**	**11 06 49.5**	**-0.4**
ITM				S			**Sg**	**11 07 13.5**	**+1.1**
	comp=E,16μm,1.3s								
ITM	**Ithomi**	**1.68**	**136**	P			**Pg**	**11 06 49.9**	**-0.6**
ITM	**Ithomi**	**1.68**	**136**				**Pg**	**11 06 50.2**	**-0.3**
KPRO	**Kipourio**	**1.70**	**24**	P			**Pg**	**11 06 50.3**	**-0.5**
KPRO				S			**Sg**	**11 07 13.3**	**+0.5**
	comp=E,14μm,1.2s								
AXAR	**Agios Charalam**	**1.75**	**77**	P			**Pb**	**11 06 50.8**	**+0.4**
PYL	**PYLOS**	**1.81**	**146**	P			**Pb**	**11 06 50.3**	**-1.1**
VLX	**Vlachokerasia**	**1.83**	**124**	P			**Pb**	**11 06 52.0**	**+0.3**
VLX	**Vlachokerasia**	**1.83**	**124**	P			**Pb**	**11 06 51.4**	**-0.3**
KLMT	**Kalamata**	**1.84**	**136**	P			**Pg**	**11 06 53.4**	**-0.2**
PENT	**Pentalofos**	**1.86**	**16**	P			**Pb**	**11 06 52.4**	**+0.1**
TPE	**Tepelena**	**1.92**	**349**	P			**Pn**	**11 06 51.5**	**+0.8**
LKR	**Lokris**	**2.00**	**82**	P			**Pb**	**11 06 53.8**	**-0.7**
LTK	**Loutraki**	**2.00**	**100**	P			**Pb**	**11 06 53.9**	**-0.7**
LTK	**Loutraki**	**2.00**	**100**	P			**Pb**	**11 06 53.8**	**-0.7**
LOUT	**Loutraki**	**2.02**	**101**	P			**Pb**	**11 06 54.1**	**-0.7**
NEST	**Nestorio**	**2.06**	**12**	P			**Pb**	**11 06 55.8**	**+0.2**
KZN	**Kozani**	**2.15**	**28**	P			**Pb**	**11 06 56.6**	**-0.5**
KZN	**Kozani**	**2.15**	**28**	P			**Pb**	**11 06 56.6**	**-0.5**
DYR	**Agios Nikonas**	**2.21**	**137**	P			**Pb**	**11 06 58.6**	**+0.5**
DYR	**Agios Nikonas**	**2.21**	**137**	P			**Pb**	**11 06 58.0**	**-0.1**
VILL	**Villia**	**2.25**	**95**	P			**Pb**	**11 06 57.0**	**-1.8**
SCTE	**Santa Cesarea**	**2.28**	**318**				**Pn**	**11 06 56.3**	**+0.6**
SCTE							**Sn**	**11 07 25.0**	**+1.4**
LIT	**Litokhoron**	**2.31**	**42**	P			**Pb**	**11 06 59.4**	**-0.3**
LIT	**Litokhoron**	**2.31**	**42**	P			**Pb**	**11 06 59.5**	**-0.3**
LIT	**Litokhoron**	**2.31**	**42**				**Pb**	**11 06 59.5**	**-0.3**
NEO	**Neokhori**	**2.33**	**66**	P			**Pb**	**11 06 58.8**	**-1.4**
XOR	**Xorichti**	**2.33**	**65**	P			**Pb**	**11 06 58.5**	**-1.7**
KTI	**Kastanea**	**2.36**	**32**	P			**Pb**	**11 06 59.6**	**-1.1**
DID	**Didima**	**2.36**	**111**	P			**Pn**	**11 06 58.5**	**+1.6**
DID	**Didima**	**2.36**	**111**	P			**Pb**	**11 06 59.0**	**-1.8**
SKIA	**Skiathos**	**2.46**	**71**	P			**Pb**	**11 07 00.6**	**-1.8**
MRKA	**Markates**	**2.46**	**82**	P			**Pn**	**11 07 00.2**	**+2.0**
MRKA	**Markates**	**2.46**	**82**	P			**Pb**	**11 07 00.7**	**-1.8**
FNA	**Florina**	**2.48**	**16**	P			**Pn**	**11 06 59.9**	**+1.5**
FNA	**Florina**	**2.48**	**16**	P			**Pn**	**11 07 00.3**	**+1.9**
FNA	**Florina**	**2.48**	**16**				**Pn**	**11 07 00.3**	**+1.9**
VLI	**Veliai**	**2.58**	**130**	P			**Pb**	**11 07 03.9**	**-0.6**
ATH	**Athens Observa**	**2.59**	**99**	P			**Pn**	**11 07 01.7**	**+1.7**
ATHU	**Athens Univers**	**2.65**	**99**	P			**Pn**	**11 07 02.4**	**+1.7**
VLY	**Voula,Athens**	**2.68**	**101**	P			**Pn**	**11 07 02.7**	**+1.5**
OHR	**Ohrid**	**2.71**	**5**	*i* Pn			**Pn**	**11 07 03.9**	**+2.2**
OHR				*e*Sn			**Sb**	**11 07 38.5**	**-1.5**
OHR				*e*Lg			Lg	11 07 41.3	
	comp=N,2μm,1.3s								
OHR				*e*Lg			Lg	11 07 45.1	
	comp=E,4μm,1.3s								
AOS	**Alonnisos**	**2.77**	**73**	P			**Pn**	**11 07 03.6**	**+1.2**
PAIG	**Palíouri**	**2.92**	**58**	P			**Pn**	**11 07 06.1**	**+1.6**
KTHR	**Kythira**	**2.94**	**136**	P			**Pb**	**11 07 07.8**	**-2.8**
GRG	**Griva**	**2.95**	**30**	P			**Pn**	**11 07 06.2**	**+1.3**
TIR	**Tirane**	**2.98**	**351**	P			**Pn**	**11 07 06.0**	**+0.8**
TIR	**Tirane**	**2.98**	**351**	P			**Pn**	**11 07 06.0**	**+0.8**
TIR				S			**Sb**	**11 07 45.0**	**-2.5**
TIR	**Tirane**	**2.98**	**351**	P	⇑		**Pn**	**11 07 06.6**	**+1.4**
TIR	**Tirane**	**2.98**	**351**	P	⇑		**Sn**	**11 07 39.2**	**-1.6**
TIR	**Tirane**	**2.98**	**351**				**Pn**	**11 07 06.3**	**+1.1**
KTHA	**Kythira Island**	**2.98**	**135**	P			**Pb**	**11 07 08.7**	**-2.5**
TIP	**Timpagrande**	**3.00**	**286**	P	⇓		**Pn**	**11 07 06.7**	**+1.0**
TIP	**Timpagrande**	**3.00**	**286**	P	⇑		**Sn**	**11 07 37.7**	**-3.8**
TIP	**Timpagrande**	**3.00**	**286**				**Pn**	**11 07 06.5**	**+0.8**
PLG	**Polygyros**	**3.03**	**49**	P			**Pn**	**11 07 06.8**	**+0.8**
CGL1	**Ceglie Messapi**	**3.23**	**315**	*e*Pn			**Pn**	**11 07 08.8**	**+0.1**
PHP	**Peshkopia**	**3.27**	**360**	P			**Pn**	**11 07 10.8**	**+1.4**
KNT	**Kendrikon**	**3.33**	**33**	P			**Pn**	**11 07 11.6**	**+1.5**
VAY	**Valandovo**	**3.33**	**28**	*i* Pn			**Pn**	**11 07 11.9**	**+1.8**
VAY				*e*Sn			**Sb**	**11 07 55.1**	**-2.6**
VAY				*e*Lg			Lg	11 07 55.6	
	comp=E,816nm,1.3s								
VAY				*e*Lg			Lg	11 07 58.7	
	comp=N,961nm,1.1s								
ANKY	**Antikythira Is**	**3.40**	**137**	P			**Pn**	**11 07 13.8**	**+2.8**
MASS	**Massafra**	**3.40**	**312**	*e*Pn			**Pn**	**11 07 12.8**	**+1.7**
STIP	**Stip**	**3.54**	**21**	*i* Pn			**Pn**	**11 07 16.3**	**+3.3**
CEL	**Celeste**	**3.60**	**269**				**Pn**	**11 07 14.3**	**+0.4**
CEL							Sn	**11 07 55.2**	**-1.1**
ULC	**Ulcinj**	**3.68**	**346**	*e*Pn			**Pn**	**11 07 14.6**	**-0.3**
ULC				*e*Sn			**Sn**	**11 07 57.7**	**-0.4**
SG1	**Sgolgore (BA)**	**3.81**	**311**	*e*Pn			**Pn**	**11 07 17.8**	**+1.1**
BAI	**Bari**	**3.87**	**315**	*e*Pn			**Pn**	**11 07 18.6**	**+1.2**
DRME	**Dracevica, Mon**	**3.90**	**346**	*e*Pn			**Pn**	**11 07 17.4**	**-0.6**
DRME	**Dracevica, Mon**	**3.90**	**346**	*e*Pn			**Pn**	**11 07 18.0**	**0.0**
DRME				*e*Sn			**Sn**	**11 08 04.1**	**+0.4**
KKB	**Krupnik**	**4.00**	**29**	*i* P			**Pn**	**11 07 20.8**	**+1.5**
MMB	**Musomiste**	**4.05**	**37**	*i* P			**Pn**	**11 07 23.1**	**+3.1**
IMMV	**Iera Moni Meta**	**4.07**	**135**	P			**Pn**	**11 07 22.7**	**+2.4**
BUM	**Brajici-Budva**	**4.07**	**343**	*e*Pn			**Pn**	**11 07 20.1**	**-0.3**
BUM				*e*Sn			**Sn**	**11 08 08.0**	**0.0**
PDG	**Podgorica**	**4.13**	**347**	⇓P			**Pn**	**11 07 22.2**	**+1.1**
PDG	**Podgorica**	**4.13**	**347**	⇑S			**Sn**	**11 08 08.4**	**-0.7**
PDG	**Podgorica**	**4.13**	**347**	*e*Pn			**Pn**	**11 07 20.8**	**-0.2**
PDG	**Podgorica**	**4.13**	**347**				**Pn**	**11 07 21.4**	**+0.3**
PDG							Sn	**11 08 09.0**	**-0.2**
TTG	**Podgorica**	**4.13**	**347**	*e*Pn			**Pn**	**11 07 20.8**	**-0.2**
TTG				*e*Sn			**Sn**	**11 08 10.0**	**+0.8**
PVY	**Plav**	**4.20**	**355**	*e*Pn			**Pn**	**11 07 22.1**	**-0.1**
PVY				*e*Sn			**Sn**	**11 08 12.1**	**+0.8**
APE	**Apeiranthos**	**4.23**	**107**	*i* P			**Pn**	**11 07 24.2**	**+1.7**
APE	**Apeiranthos**	**4.23**	**107**	⇑P			**Pn**	**11 07 25.7**	**+3.3**
ACER	**Acerenza**	**4.23**	**306**				**Pn**	**11 07 23.5**	**+1.0**
CEME	**Cevo**	**4.30**	**345**	*e*Pn			**Pn**	**11 07 23.1**	**-0.4**
CEME				*e*Sn			**Sn**	**11 08 13.6**	**0.0**
HCY	**Herceg Novi**	**4.31**	**340**	*e*Pn			**Pn**	**11 07 22.2**	**-1.4**
HCY	**Herceg Novi**	**4.31**	**340**	*e*Pn			**Pn**	**11 07 23.1**	**-0.5**
HCY				*e*Sn			**Sn**	**11 08 13.3**	**-0.4**
SANT	**Santorini**	**4.46**	**116**	⇑P			**Pn**	**11 07 30.4**	**+4.7**
SANT	**Santorini**	**4.46**	**116**				**Pn**	**11 07 29.6**	**+3.9**
IVA	**Berane**	**4.48**	**355**	*e*Pn			**Pn**	**11 07 26.5**	**+0.5**
IVA				*e*Sn			**Sn**	**11 08 18.6**	**+0.5**
KOME	**Kolasin**	**4.50**	**351**	*e*Pn			**Pn**	**11 07 26.9**	**+0.6**
KOME				*e*Sn			**Sn**	**11 08 19.1**	**+0.6**
NKME	**Niksic**	**4.51

baz=160
CTI Castel Tesino 10.05 322 P Pn 11 08 41.5 -0.9
CTI Castel Tesino 10.05 322 Pn 11 08 41.5 -0.9
CONA Conrad Observa 10.09 342 *e*Pn **Pn 11 08 41.5 -1.5**
comp=Z,0.7nm,0.3s
KBA Koelnbreinsper 10.12 331 *e*Pn **Pn 11 08 43.2 -0.3**
KBA *e*Sn **Sn 11 10 31.1 -5.9**
KBA Koelnbreinsper 10.12 331 *e*Pn **Pn 11 08 43.3 -0.2**
comp=Z,3.0nm,0.3s
KBA *e*Sn **Sn 11 10 31.0 -6.0**
comp=Z,11nm,0.5s
ABTA Abfaltersbach 10.19 327 Pn **Pn 11 08 43.7 -0.6**
comp=Z,4.5nm,0.4s
MODS Modra-Piesok 10.23 348 *e*P **Pn 11 08 43.5 -1.3**
MODS *e* 11 10 31.5
MODS Modra-Piesok 10.23 348 *e*PN **Pn 11 08 43.5 -1.3**
MODS *e*SN **Sn 11 10 31.5 -7.9**
MODS *e*SG 11 11 47.4
SALO Salr 10.32 317 Pn **Pn 11 08 46.1 0.0**
SALO **Sn 11 10 39.0 -2.7**
BR131 Keskin Array S 10.33 79 P **Pn 11 08 48.7 +2.4**
BR131 Keskin Array S 10.33 79 **Pn 11 08 48.7 +2.4**
BRTR Keskin Array B 10.33 79 Pn **Pn 11 08 50.3 +4.0**
comp=Z,0.3nm,0.3s,baz=259,slow=12,SNR=9.9
BRTR LR LR 11 13 41.2
comp=Z,726nm,18.1s,baz=242,slow=43
BRTR Keskin Array B 10.33 79 Pn **Pn 11 08 49.9 +3.6**
MOA Molln 10.47 336 *e*Pn **Pn 11 08 47.5 -0.6**
MOA *e*Sn **Sn 11 10 40.0 -5.2**
MOA Molln 10.47 336 *e*Pn **Pn 11 08 47.2 -0.9**
comp=Z,5.6nm,0.3s,SNR=9.7
MOA Sn **Sn 11 10 40.5 -4.7**
comp=Z,4.9nm,0.3s
KOLS Kolonicke sedl 10.60 6 *e*P **Pn 11 08 51.2 +1.3**
KOLS Kolonicke sedl 10.60 6 *e*PN **Pn 11 08 51.2 +1.3**
KOLS *e*SN Sn 11 10 32.8 -16
RJOB Jochberg 10.88 331 *e*Pn **Pn 11 08 54.1 +0.3**
RJOB *e*Sn **Sn 11 10 50.2 -5.2**
WTTA Wattenberg 10.97 327 *e*Pn **Pn 11 08 55.8 +0.8**
WTTA *e*Sn **Sn 11 10 53.7 -4.0**
WTTA Wattenberg 10.97 327 *e*Pn **Pn 11 08 54.9 -0.2**
comp=Z,17nm,0.6s,SNR=5.3
WTTA Sn **Sn 11 10 54.4 -3.3**
comp=Z,25nm,0.5s
WATA Walderalm 11.05 327 *e*Pn **Pn 11 08 56.3 +0.2**
comp=Z,8.9nm,0.5s
WATA Sn **Sn 11 10 57.3 -2.4**
comp=Z,18nm,0.6s
SQTA Sankt Quirin 11.12 325 Pn **Pn 11 08 58.4 +1.3**
comp=Z,9.1nm,0.4s
SQTA Sn **Sn 11 10 59.8 -1.6**
comp=Z,12nm,0.5s
FUORN Ofenpass-Fuorn 11.13 321 **Pn 11 08 57.0 -0.4**
FUORN **Sn 11 11 00.2 -1.7**
FETA Feichten 11.19 323 Pn **Pn 11 09 00.5 +2.4**
comp=Z,3.1nm,0.4s
VRAC Vranov 11.25 347 LR LR 11 14 13.2
comp=Z,897nm,19.8s,baz=166,slow=42
MOTA Moosalm 11.26 325 *e*Pn **Pn 11 08 59.3 +0.3**
comp=Z,8.2nm,0.4s,SNR=8.8
TREC Trest 11.46 343 AMS AMS 11 14 10.0
comp=Z,2µm,18.7s
RETA Reutte 11.52 325 Pn **Pn 11 09 03.7 +1.2**
comp=Z,2.6nm,0.3s
RETA Sn **Sn 11 11 08.7 -2.4**
comp=Z,12nm,0.5s
GEC2 GERESS Array S 11.52 337 *e*Sn **Sn 11 11 04.9 -6.2**
GEC2 GERESS Array S 11.52 337 **Pn 11 09 02.0 -0.6**
GERES GERESS Array B 11.52 337 P **Pn 11 09 01.7 -0.9**
GERES 11 11 03.5
GERES GERESS Array B 11.52 337 Pn **Pn 11 09 00.7 -1.9**
comp=Z,0.9nm,0.3s,baz=155,slow=14,SNR=17
GERES Sn **Sn 11 11 03.5 -7.7**
comp=Z,0.7nm,0.3s,baz=158,slow=21,SNR=4.6
GERES LR LR 11 14 16.9
comp=Z,609nm,19.8s,baz=148,slow=42
GERES GERESS Array B 11.52 337 **Pn 11 09 01.7 -0.9**
OKC Ostrava-Krasne 11.55 352 AMS AMS 11 14 00.0
comp=Z,1µm,16.7s
MORC Moravsky Berou 11.56 350 P **Pn 11 09 02.7 -0.3**
LVV L'vov 11.69 11 *e*P **Pn 11 09 04.7 -0.1**
LVV *e*S **Sn 11 11 14.8 -0.3**
LVV MLR MLR
comp=N,700nm,7.5s
LVV MLR MLR
comp=E,700nm,7.5s
LVV MLR MLR
comp=Z,800nm,8.0s
DAVA Damuels 11.79 322 Pn **Pn 11 09 06.6 +0.3**
comp=Z,3.8nm,0.3s
KHC Kasperske Hory 11.82 337 *e*P **Pn 11 09 05.4 -1.1**
KHC *e* 11 11 12.2
KHC MLR MLR
comp=Z,2µm,12.2s
KHC Kasperske Hory 11.82 337 *e*PN **Pn 11 09 05.4 -1.1**
KHC *e*SN **Sn 11 11 12.2 -6.0**
KHC AMS AMS 11 14 20.0
comp=Z,2µm,12.2s
KHC Kasperske Hory 11.82 337 **Pn 11 09 05.8 -0.7**
KRLC Kraliky 11.96 348 AMS AMS 11 14 30.0
comp=Z,2µm,17.0s
GOPC GO Pecny, Ondr 12.20 342 AMS AMS 11 14 40.0
comp=Z,1µm,16.1s
DPC Dobruska-Polom 12.30 347 AMS AMS 11 14 50.0
comp=Z,2µm,13.9s
PRU Pruhonice 12.33 342 *e*P **Pn 11 09 13.1 -0.4**
PRU MLR MLR
comp=Z,1µm,13.5s
PRU Pruhonice 12.33 342 *e*PN **Pn 11 09 13.1 -0.4**
PRU AMS AMS 11 14 40.0
comp=Z,1µm,13.5s
PRA Prague 12.43 342 AMS AMS 11 14 40.0
comp=Z,1µm,14.1s
UPC Upice 12.51 347 AMS AMS 11 15 00.0
comp=Z,2µm,11.9s
OSTC Ostas 12.52 347 AMS AMS 11 15 00.0
comp=Z,2µm,15.5s
SENIN Lac Senin/Sane 12.56 313 **Pn 11 09 16.0 -0.8**
SENIN **Sn 11 11 32.4 -4.3**
CHVC Chvalec 12.58 347 AMS AMS 11 15 00.0
comp=Z,2µm,13.5s
GLL Jalalah 12.81 130 P **Pn 11 09 15.9 -4.4**
baz=135
PVCC Panska Ves 12.83 343 AMS AMS 11 15 10.0
comp=Z,2µm,10.5s
HFRF Wahat Farafira 13.01 147 AMP 11 11 00.0
baz=152
NKC Novy Kostel 13.13 337 AMS AMS 11 15 10.0
comp=Z,2µm,11.1s
MMAI Mount Meron Ar 13.27 109 Pn **Pn 11 09 25.6 -0.9**
comp=Z,5.8nm,0.3s,baz=289,slow=14,SNR=4.9
MMAI Sn **Sn 11 11 47.1 -6.8**
comp=Z,5.2nm,0.3s,baz=311,slow=21,SNR=4.6
MMAI LR LR 11 15 29.6
comp=Z,367nm,18.2s,baz=325,slow=42
BRG Berggiesshubel 13.30 342 *e*P Pn 11 09 17.2 -9.4
comp=Z,5.7nm,1.1s
comp=N,1µm,16.1s
comp=E,2µm,11.7s
comp=Z,1µm,10.4s
BRG Berggiesshubel 13.30 342 *e*P Pn 11 09 17.2 -9.5
BRG pmax pmax
comp=Z,6.0nm,1.1s
BRG MLR MLR
comp=N,1µm,16.1s
BRG MLR MLR
comp=E,2µm,11.7s
BRG MLR MLR
comp=Z,1µm,10.4s
MOX Moxa 13.76 336 P **Pn 11 09 31.7 -1.3**
AKASG Malin Array Be 13.77 24 Pn **Pn 11 09 33.2 0.0**
comp=Z,0.6nm,0.3s,baz=212,slow=11,SNR=5.4
CLL Collm 13.93 340 *e*P **P 11 09 45.0 +1.5**
CLL Collm 13.93 340 *e*PP **P 11 09 45.0 +1.5**
comp=Z,37nm,1.7s
CLL *e* 11 09 49.0
comp=Z,87nm,2.3s
ANN Anapa 14.20 58 *e*P **P 11 09 44.9 -1.5**
ANN pmax pmax
comp=Z,90nm,0.9s
ASF Jabal al Asfar 14.78 110 Pn **Pn 11 09 48.4 +1.3**
comp=Z,0.2nm,0.3s,baz=247,slow=5.6,SNR=2.3
ASF Sn **Sn 11 12 23.0 -7.8**
comp=Z,0.3nm,0.3s,baz=248,slow=4.5,SNR=2.6
EIL Elat 14.82 122 Pn **Pn 11 09 49.2 +1.6**
comp=Z,0.7nm,0.3s,baz=298,slow=21,SNR=3.5
EIL Sn Sn 11 12 21.7 -10
comp=Z,1.7nm,0.3s,baz=19,slow=12,SNR=5.2
EIL LR LR 11 18 01.9
comp=Z,302nm,18.9s,baz=296,slow=48
CLZ Clausthal 15.19 335 *e*P **P 11 09 59.2 +1.7**
comp=Z,135nm,2.1s
WLF Walferdange 15.22 322 pP pP 11 10 01.1 +0.5
SOC Sochi 15.42 64 *e*P **P 11 10 05.3 +5.3**
SOC MLR MLR
comp=Z,135nm,10.0s
BSTI Sart Tilman 16.13 324 pPn **P 11 10 06.3 -1.5**
BSTI PgPg **PgPg 11 11 24.0 -2.9**
DOU Dourbes 16.27 321 Pn **Pn 11 10 05.7 -0.7**
DOU pP **pP 11 10 11.8 -0.4**
DOU PnPn **sP 11 10 14.2 0.0**
DOU PgPg **PgPg 11 11 25.3 -4.4**
NACGM Naroch 17.05 13 *e*P **Pn 11 10 16.0 -0.3**
NACGM *e*S **S 11 13 32.0 -3.3**
NACGM *e*LQ LQ 11 15 36.0
NACGM *e*LR LR 11 17 15.0
PABE Paberze 17.27 7 *e*P **P 11 10 20.9 +0.5**
IIGN Ignalina 17.39 11 *e*P **P 11 10 22.4 +0.6**
IIGN IAmb IAmb 11 10 24.8
comp=Z,14nm,1.0s
NEY Neytrino 17.51 67 *i*P **P 11 10 25.1 +1.7**
SHA1 Shidzhatmaz 17.54 65 *i*P **P 11 10 24.3 +0.5**
ISAL Salakas 17.59 11 *e*P **P 11 10 25.3 +1.3**
ISAL IAmb IAmb 11 10 27.1
comp=Z,17nm,1.2s
KIV Kislovodsk 17.60 65 *e*P **P 11 10 24.5 +0.2**
KIV pmax pmax
comp=Z,36nm,1.0s
KBZ Khabaz 17.71 65 *i*P **P 11 10 26.4 +1.0**
KBZ Khabaz 17.71 65 Pn **P 11 10 26.6 +1.3**
comp=Z,0.1nm,0.3s,baz=275,slow=7.2,SNR=6.1
KBZ LR LR 11 18 20.5
comp=Z,255nm,19.0s,baz=234,slow=41
IZAR Zarasai 17.78 11 *e*P **P 11 10 27.1 +1.0**
IZAR IAmb IAmb 11 10 32.7
comp=Z,12nm,0.4s
AKH Akhalkalaki 17.91 73 P **P 11 10 31.2 +3.4**
PYA1 Pyatigorsk 17.91 64 *i*P **P 11 10 27.9 +0.2**
NCK Nalchik 18.17 66 *e*P **P 11 10 32.1 +1.5**
NCK pmax pmax
comp=Z,8.0nm,0.7s
VORD Divnogorie 18.29 41 *e*P **P 11 10 32.5 +0.8**
VORD pmax pmax
comp=Z,10.0nm,1.0s
ZEI Tsey 18.31 69 *e*P **P 11 10 35.8 +3.6**
ZEI pmax pmax
comp=Z,7.0nm,0.6s
VSR Storozhevoye 18.37 40 *e*P **P 11 10 33.1 +0.5**
VSR pmax pmax
comp=Z,10.0nm,1.2s
ESDC Sonseca Array 19.01 281 P **Pn 11 10 41.3 +0.7**
comp=Z,0.7nm,0.3s,baz=78,slow=11,SNR=14
VRH Novokhopyorsk 19.69 43 *e*P **Pn 11 10 51.1 +2.6**
VRH pmax pmax
comp=Z,20nm,0.8s
OBN Obninsk 19.94 28 *e*P **P 11 10 50.5 +0.7**
OBN *e*S **Sn 11 14 37.0 +1.7**
OBN pmax pmax
comp=Z,16nm,0.8s
OBN MLR MLR
comp=Z,331nm,16.0s
OBN Obninsk 19.94 28 LR LR 11 19 52.2
comp=Z,73nm,19.4s,baz=198,slow=41
VSU Vasula 20.48 9 *ce*P **P 11 10 54.8 -0.8**
VSU pmax pmax
comp=Z,113nm,1.3s
VSU Vasula 20.48 9 *e*P **P 11 10 56.5 +0.9**
MOS Moscow 20.81 28 *e*P **P 11 10 58.7 -0.5**
MOS *e*S Sn 11 14 54.2 -2.0
MOS *e* 11 14 59.0
MOS pmax pmax
comp=Z,27nm,0.7s
MDT Midelt 21.11 262 LR LR 11 20 21.0
comp=Z,244nm,19.8s,baz=156,slow=40
MVO Moncorvo 21.28 286 *e*P **P 11 11 04.3 -0.2**
comp=Z,62nm,1.5s
PMRV Marv??o 21.67 281 *e*P **P 11 11 11.4 +2.7**
PCBR Castelo Branco 21.70 283 *e*P **P 11 11 09.6 +0.7**
PVIS Viseu 21.95 285 *e*P **P 11 11 14.4 +2.7**
HFS Hagfors 22.17 351 P **P 11 11 15.5 +1.7**
comp=Z,9.7nm,0.5s,baz=161,slow=11,SNR=26
HFS LR LR 11 22 13.1
comp=Z,355nm,20.0s,baz=166,slow=43
PUL Pulkovo 22.29 13 *ce*P **P 11 11 15.5 +0.4**
PUL pmax pmax
comp=Z,60nm,0.4s
PMTG Montargil 22.36 281 *e*P **P 11 11 17.3 +1.2**
comp=Z,54nm,1.8s
EKA Eskdalemuir Ar 23.22 324 P **P 11 11 25.6 +0.7**
comp=Z,3.1nm,0.6s,baz=123,slow=9.0,SNR=8.9
FINES FINESS Array B 23.33 7 *i*P **P 11 11 25.8 -0.1**
FINES pmax pmax
comp=Z,12nm,0.6s
FINES FINESS Array B 23.33 7 P **P 11 11 25.9 0.0**
comp=Z,12nm,0.7s,baz=177,slow=11,SNR=28
FINES LR LR 11 21 41.6
comp=Z,471nm,18.9s,baz=194,slow=40
FINES FINESS Array B 23.33 7 P **P 11 11 26.4 +0.5**
FIA1 FINESS Array S 23.33 7 P **P 11 11 26.3 +0.4**
NC405 NORSAR Array S 23.38 349 P **P 11 11 27.5 +1.0**
NB2 NORSAR Subarra 23.39 349 P **P 11 11 26.5 -0.1**
comp=Z,37nm,1.7s,baz=162,slow=9.3
NOA NORSAR Array B 23.39 349 P **P 11 11 27.5 +0.9**
comp=Z,5.9nm,0.8s,baz=160,slow=9.8,SNR=10
NOA LR LR 11 22 21.2
comp=Z,543nm,18.9s,baz=165,slow=41
NBO00 NORSAR Array S 23.45 348 P **P 11 11 28.6 +1.4**
SUF Sumiainen 24.59 6 P **P 11 11 37.9 +0.1**
SUF pmax pmax
comp=Z,35nm,0.9s
JOF Joensuu 25.41 12 P **P 11 11 47.3 +2.0**
JOF pmax pmax
comp=Z,4.0nm,1.1s
KLMR Klimovskoe 25.44 22 *e*P **P 11 11 42.8 -2.8**
KLMR pmax pmax
comp=Z,21nm,1.0s
KLMR Klimovskoe 25.44 22 *e*P **P 11 11 42.8 -2.8**
KLMR AMP 11 11 48.5
comp=Z,21nm,1.0s
RAYN Ar Rayn 25.98 118 P **P 11 11 51.7 +0.8**
RAYN pmax pmax
comp=Z,12nm,1.2s
RAYN Ar Rayn 25.98 118 P **P 11 11 51.7 +0.8**
RAYN IAmb IAmb 11 11 58.2
comp=Z,12nm,1.1s
KIRV Kirov 27.49 33 LR LR 11 23 35.7
comp=Z,463nm,19.6s,baz=190,slow=38
PRGR Permogore 27.97 26 *e*P **P 11 12 04.8 -3.6**
PRGR pmax pmax
comp=Z,19nm,1.1s
AKTO Aktyubinsk 29.08 53 P **P 11 12 18.6 +0.3**
comp=Z,2.0nm,0.9s,baz=255,slow=8.4,SNR=6.6
AKTO LR LR 11 27 19.9
comp=Z,189nm,18.2s,baz=277,slow=44
GEYT Alibeck 29.47 79 P **P 11 12 23.1 +1.1**
comp=Z,3.1nm,0.5s,baz=282,slow=8.9,SNR=5.9
GEYT LR LR 11 26 25.7
comp=Z,153nm,19.8s,baz=230,slow=41
GEYT Alibeck 29.47 79 P **P 11 12 23.3 +1.3**
APA Apatity 30.10 10 *i*P **P 11 12 24.2 -3.0**
APA pmax pmax
comp=Z,5.0nm,0.6s
APA MLR MLR
comp=Z,500nm,12.0s
ABKAR Akbulak array 30.15 56 P **P 11 12 28.3 +0.5**
ABKAR Akbulak array 30.15 56 P **P 11 12 28.9 +1.1**
ABKAR IAmb IAmb 11 12 44.7
comp=Z,4.0nm,1.2s
TORD Torodi Ar. Bea 30.18 219 P **P 11 12 28.8 +0.4**
comp=Z,4.7nm,0.8s,baz=36,slow=9.2,SNR=21
TORD LR LR 11 27 24.7
comp=Z,221nm,18.6s,baz=10.0,slow=42
ARU Arti 30.92 42 *d*P **P 11 12 34.9 +0.4**
ARU 11 13 35.5
ARU S **S 11 17 41.3 +3.0**
ARU SS **SnSn 11 19 21.5 +3.7**
ARU pmax pmax
comp=Z,14nm,1.6s
ARU Arti 30.92 42 LR LR 11 25 35.6
comp=Z,238nm,18.5s,baz=246,slow=38
ARCES ARCESS Array B 31.31 3 P **P 11 12 39.3 +1.4**
comp=Z,3.5nm,0.8s,baz=194,slow=9.9,SNR=6.4
ARCES LR LR 11 26 25.9
comp=Z,347nm,18.9s,baz=181,slow=39
KK31 Karatay Array 37.74 67 P **P 11 13 35.1 +1.3**
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KK31 Karatay Array 37.74 67 P **P 11 13 35.1 +1.3**
KKAR Karatay Array 37.74 67 P **P 11 13 35.0 +1.2**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 37.74 67 P **P 11 13 35.0 +1.2**
KKAR IAmb IAmb 11 13 38.8
comp=Z,5.3nm,0.8s
KKAR Karatay Array 37.74 67 P **P 11 13 33.9 +0.1**
DBIC Dimbokro 39.03 222 P **P 11 13 45.9 +1.0**
comp=Z,6.4nm,0.9s,baz=352,slow=9.1,SNR=5.3
DBIC LR LR 11 30 54.3
comp=Z,300nm,19.1s,baz=14,slow=38
DBIC Dimbokro 39.03 222 IAmb IAmb 11 13 46.2
comp=Z,8.8nm,1.0s
TIC Toumodi 39.14 223 *e*P **P 11 13 46.4 +0.6**
KIC Kosan Boka 39.23 222 *e*P **P 11 13 46.5 -0.1**
comp=Z,11nm,0.8s
LIC Lamto 39.50 222 *e*P **P 11 13 49.5 +0.7**
comp=Z,32nm,0.8s
SOCY Socotra 39.63 122 P **P 11 13 49.6 -0.4**
SOCY IAmb IAmb 11 13 52.1
comp=Z,16nm,1.0s
SPITS Spitsbergen Ar 39.92 359 P **P 11 13 52.7 +1.1**
comp=Z,12nm,1.1s,baz=168,slow=14,SNR=5.4
MBAR Mbarara 39.95 164 P **P 11 13 54.2 +1.5**
MBAR pmax pmax
comp=Z,5.0nm,0.9s
MBAR Mbarara 39.95 164 P **P 11 13 53.9 +1.2**
comp=Z,8.4nm,0.2s,baz=330,slow=8.1,SNR=8.5
MBAR Mbarara 39.95 164 *eS* **P 11 13 54.3 +1.6**
MBAR Mbarara 39.95 164 P **P 11 13 54.2 +1.5**
AAK Ala-Archa 40.70 66 P **P 11 14 00.3 +1.5**
AAK pmax pmax
comp=Z,4.0nm,0.9s
AAK Ala-Archa 40.70 66 LR LR 11 33 24.6
comp=Z,123nm,19.1s,baz=272,slow=40
AAK Ala-Archa 40.70 66 P **P 11 14 00.3 +1.5**
KURK Kurchatov 42.17 54 *ce*P **P 11 14 09.8 -0.7**
KURK pmax pmax
comp=Z,4.0nm,1.0s
KSH Kashi 42.58 70 *e*P **P 11 14 15.8 +1.6**
KSH *ep*P sP 11 14 25.8 +6.2
KSH *e*S **S 11 20 33.5 -3.2**
KSH *es*S sS 11 20 50.8 +7.9
KSH *e*SS **SS 11 23 36.0 -10**
KSH pmax pmax
comp=Z,300nm,4.6s
KSH LR LR
comp=N,110nm,5.2s
KSH LR LR
comp=E,130nm,4.0s
KSH LR LR
comp=Z,310nm,5.9s
MK31 Makanchi Array 45.22 59 P **P 11 14 35.7 +0.6**
MK31 pmax pmax
comp=Z,3.0nm,0.6s
MK31 Makanchi Array 45.22 59 P **P 11 14 35.6 +0.6**
MK31 IAmb IAmb 11 14 46.4
comp=Z,2.6nm,0.6s
MKAR Makanchi Array 45.22 59 *i*P **P 11 14 35.0 -0.1**
MKAR pmax pmax
comp=Z,2.0nm,0.4s
MKAR Makanchi Array 45.22 59 P **P 11 14 34.5 -0.6**
comp=Z,2.0nm,0.4s,baz=281,slow=7.2,SNR=45
MKAR ScP **ScP 11 20 08.1 +0.7**
comp=Z,0.5nm,0.9s,baz=242,slow=3.1,SNR=3.8
MKAR LR LR 11 36 57.7
comp=Z,124nm,18.4s,baz=282,slow=41
MKAR Makanchi Array 45.22 59 P **P 11 14 35.2 +0.1**
ZAA0 Zalesovo Array 45.57 48 P **P 11 14 37.7 0.0**
ZALV Zalesovo Beam 45.57 48 P **P 11 14 37.6 -0.1**
comp=Z,9.8nm,0.5s,baz=274,slow=8.6,SNR=35
ZALV LR LR 11 35 55.2
comp=Z,334nm,18.0s,baz=282,slow=39
WMQ Urumqi 49.68 61 *e*P P 11 15 15.0 +5.1
WMQ LR LR
comp=N,340nm,29.3s
WMQ LR LR
comp=E,790nm,29.2s
WMQ LR LR
comp=Z,110nm,27.3s
TLY Talaya 57.16 47 *i*P **P 11 16 06.1 +1.4**
TLY pmax pmax
comp=Z,6.0nm,1.1s
TLY Talaya 57.16 47 P **P 11 16 06.9 +2.2**
TLY IAmb IAmb 11 16 08.7
comp=Z,7.8nm,1.1s
SCHQ Schefferville 58.27 317 P **P 11 16 12.1 -0.3**
comp=Z,2.7nm,0.5s,baz=76,slow=5.2,SNR=12
SCHQ LR LR 11 40 49.0
comp=Z,108nm,18.8s,baz=357,slow=36
SCHQ Schefferville 58.27 317 IAmb IAmb 11 16 18.4
comp=Z,5.1nm,0.8s
TIXI Tiksi 59.45 20 *ce*P **P 11 16 21.1 +0.8**
TIXI pmax pmax
comp=Z,11nm,2.5s
TIXI Tiksi 59.45 20 P **P 11 16 21.5 +1.2**
comp=Z,0.8nm,0.3s,baz=351,slow=5.1,SNR=2.5
TIXI Tiksi 59.45 20 IAmb IAmb 11 16 23.6
comp=Z,4.5nm,1.1s
RES Resolute Bay 59.54 344 LR LR 11 41 30.3
comp=Z,64nm,21.5s,baz=87,slow=36
GTA Gaotai 59.75 62 *e*P **P 11 16 24.0 +0.9**
GTA pP sP 11 16 27.5 -1.1
GTA sP pP 11 16 29.5 +2.5
GTA pmax pmax
comp=Z,2.0nm,1.2s
GTA pmax pmax
comp=Z,38nm,6.0s
GTA LR LR
comp=N,98nm,18.4s
GTA LR LR
comp=E,140nm,17.8s
GTA LR LR
comp=Z,130nm,18.7s
SONM Songino Array 60.34 51 P **P 11 16 27.7 +0.7**
SONM pmax pmax
comp=Z,3.0nm,1.2s
SONM Songino Array 60.34 51 P **P 11 16 26.5 -0.5**
comp=Z,3.0nm,1.1s,baz=287,slow=6.5,SNR=12
SONM LR LR 11 45 19.7
comp=Z,153nm,18.6s,baz=294,slow=39
SONM Songino Array 60.34 51 P **P 11 16 27.7 +0.7**
YAK Yakutsk 64.93 29 *i*P **P 11 16 55.9 -1.3**
YAK pmax pmax
comp=Z,3.0nm,0.8s
CD2 Chengdu 66.72 68 P **P 11 17 09.8 +0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
BOSA Boshof 66.82 175 LR LR 11 48 05.9
comp=Z,149nm,20.2s,baz=311,slow=38
HHC Hu-ho-hao-te 66.94 56 *e*P **P 11 17 12.3 +1.7**
HHC pP sP 11 17 19.8 +3.6
HHC S **S 11 26 02.3 -1.3**
HHC pmax pmax
comp=Z,2.0nm,0.6s
HHC pmax pmax
comp=Z,83nm,4.7s
HHC LR LR
comp=N,180nm,19.6s
HHC LR LR
comp=E,77nm,13.3s
HHC LR LR
comp=Z,96nm,15.2s
XAN Xi'an 68.76 63 P **P 11 17 23.8 +1.7**
XAN pP PcP 11 17 53.5 +6.7
XAN pmax pmax
comp=Z,3.0nm,0.8s
CMAR Chiang Mai Arr 69.90 82 *i*P **P 11 17 30.7 +1.4**
CMAR pmax pmax
comp=Z,1.0nm,0.5s
CMAR Chiang Mai Arr 69.90 82 P **P 11 17 29.1 -0.2**
comp=Z,0.8nm,0.5s,baz=303,slow=8.2,SNR=8.0
CMAR LR LR 11 52 34.3
comp=Z,43nm,19.2s,baz=310,slow=40
BILL Bilibino 70.80 13 *ce*P **P 11 17 35.1 +1.0**
BILL pmax pmax
comp=Z,7.0nm,1.3s
BILL MLR MLR
comp=Z,154nm,20.0s

INK	**Inuvik**	**71.83**	**350**	P	**P**	**11 17 41.6**	**+1.3**
	comp=Z,0.9nm,0.7s,baz=6.2,slow=4.9,SNR=3.8						
SEY	**Seymchan**	**71.94**	**21**	*i* P	**P**	**11 17 41.1**	**+0.1**
YKA	**Yellowknife Ar**	**73.16**	**340**	P	**P**	**11 17 49.1**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=36,slow=5.7,SNR=8.8						
YKA				LR	LR	11 51 30.8	
	comp=Z,56nm,18.6s,baz=0.0,slow=37						
KLR	**Kul'dur**	**73.72**	**40**	*i* P	**P**	**11 17 51.2**	**-0.7**
KLR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KLR	**Kul'dur**	**73.72**	**40**	P	**P**	**11 17 52.3**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=257,slow=18,SNR=6.2						
CN2	**Changchun**	**73.76**	**47**	*e*P	**P**	**11 17 56.8**	**+4.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BMAR	**Burnt Mountain**	**73.88**	**354**	P	**P**	**11 17 53.7**	**+1.2**
MA2	**Magadan**	**74.10**	**24**	*ce*P	**P**	**11 17 54.6**	**+0.7**
MA2				pmax	pmax		
	comp=Z,17nm,2.5s						
ULM	**Lac du Bonnet**	**75.49**	**324**	P	**P**	**11 18 03.4**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=35,slow=6.5,SNR=3.4						
ULM				LR	LR	11 53 51.7	
	comp=Z,92nm,18.6s,baz=42,slow=38						
ULM	**Lac du Bonnet**	**75.49**	**324**	IAmb	IAmb	11 18 14.2	
	comp=Z,5.9nm,1.1s						
IMAR	**Indian Mountai**	**75.84**	**358**	P	**P**	**11 18 05.9**	**+2.1**
ILAR	**Eielson Array**	**76.68**	**354**	P	**P**	**11 18 10.0**	**+1.4**
ILAR	**Eielson Array**	**76.68**	**354**	P	**P**	**11 18 09.9**	**+1.4**
	comp=Z,1.1nm,1.0s,baz=353,slow=3.0,SNR=6.0						
ILAR				LR	LR	11 53 10.5	
	comp=Z,71nm,20.5s,baz=350,slow=37						
NJ2	**Nanjing**	**76.73**	**60**	*e*P	**P**	**11 18 10.0**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
HDA	**Harding Lake**	**77.04**	**354**	P	**P**	**11 18 13.7**	**+3.0**
USRK	**Ussuriysk Ar.**	**77.14**	**43**	P	**P**	**11 18 13.4**	**+1.9**
	comp=Z,3.0nm,0.8s,baz=243,slow=6.2,SNR=5.8						
MSHR	**Mys Shultsa**	**77.75**	**45**	*i* P	**P**	**11 18 14.5**	**-0.5**
DHY	**Denali Highway**	**78.39**	**354**	P	**P**	**11 18 21.9**	**+3.5**
DHY				IAmb	IAmb	11 18 28.5	
	comp=Z,3.8nm,1.0s						
KSRS	**Korea Array**	**79.22**	**51**	P	**P**	**11 18 23.7**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=318,slow=4.5,SNR=2.9						
KSRS				LR	LR	11 57 25.9	
	comp=Z,75nm,18.4s,baz=320,slow=39						
YSS	**Yuzh-Sakhalins**	**80.61**	**36**	*e*P	**P**	**11 18 26.1**	**-4.4**
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
YSS				MLR	MLR		
	comp=N,300nm,17.0s						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s						
PETK	**Petropavlovsk-**	**81.61**	**24**	LR	LR	12 00 04.4	
	comp=Z,106nm,18.6s,baz=40,slow=40						
MJAR	**Matsushiro Arr**	**85.86**	**46**	P	**P**	**11 18 59.5**	**+1.7**
	comp=Z,1.9nm,0.8s,baz=295,slow=5.9,SNR=4.5						
MJAR				LR	LR	11 59 50.5	
	comp=Z,64nm,18.7s,baz=10.0,slow=37						
TXAR	**Lajitas Array**	**94.79**	**314**	P	**P**	**11 19 39.8**	**-0.3**
	comp=Z,0.5nm,1.1s,baz=87,slow=8.9,SNR=4.0						
CPUP	**Villa Florida**	**97.12**	**242**	LR	LR	12 05 07.5	
	comp=Z,193nm,18.7s,baz=44,slow=36						
LPAZ	**La Paz**	**98.86**	**256**	LR	LR	12 08 07.1	
	comp=Z,31nm,19.2s,baz=84,slow=38						
ASAR	**Alice Springs**	**122.24**	**96**	PKP	**PKPdf**	**11 25 13.1**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=314,slow=1.7,SNR=4.6						

ROM 30 11:06:55.4±0.1,**43°003N**±0°.004×**12°919E**±0°.005, **h12**km,**ML1.3/3,Error ellipse: s-maj=0.4km s-min=0.4km az=150.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CESI	**CESI - Serrava**	**0.01**	**282**	P	Pg	11 06 57.9	+0.3
CESI				S	Sg	11 06 59.4	+0.3
CESI				AML	AML		
	comp=E,51μm,0.5s						
CESI				AML	AML		
	comp=N,132μm,0.2s						
FEMA	**Monte Fema**	**0.10**	**113**	P	Pg	11 06 58.7	+0.3
FEMA				S	Sg	11 07 01.1	+0.5
FDMO	**Fiordimonte**	**0.13**	**75**	P	Pg	11 06 59.0	+0.4
FDMO				S	Sg	11 07 01.4	+0.5
FDMO				AML	AML		
	comp=E,266μm,0.2s						
FDMO				AML	AML		
	comp=N,272μm,0.8s						
ASSB	**Assisi San Ben**	**0.20**	**282**	P	Pg	11 07 00.0	+0.3
ASSB				S	Sg	11 07 03.4	+0.7
ASSB				AML	AML		
	comp=E,166μm,0.6s						
ASSB				AML	AML		
	comp=N,184μm,0.4s						
NRCA	**Norcia**	**0.22**	**140**	S	Sg	11 07 10.0	+6.6
SNTG	**Esanatoglia**	**0.25**	**4**	P	Pg	11 07 01.0	+0.3
SNTG				S	Sb	11 07 05.3	-0.9
ATCC	**AVT- Casa Cast**	**0.27**	**312**	P	Pg	11 07 01.5	+0.5
ATCC				S	Sb	11 07 06.3	-0.6
MOMA	**Monte Martano**	**0.32**	**232**	P	Pg	11 07 02.4	+0.4
MOMA				S	Sb	11 07 07.6	-0.8
ATFO	**Monte Foce - G**	**0.44**	**325**	P	Pg	11 07 01.3	-2.8

*BUG **30** 11:06:58.6±0.0,51°.60N×6°.83E,h3km±1km,ML2.0/7*
*BNS **30** 11:07:00.1±0.5,51°.58N×6°.86E,h1km±19km,ML1.7*
BGR 30 11:07:00.5±0.3,**51°.59N**×**6°.81E,h1**km,**ML2.0/6,Error ellipse: s-maj=3.3km s-min=2.2km az=112.0,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BZER	**Hlnxe**	**0.05**	**49**	Pg	Pg	11 07 00.0	-1.5
BZER				Sg	Sg	11 07 01.3	-0.9
BAVN	**Auguste-Victor**	**0.25**	**52**	Pg	Pg	11 07 04.4	-0.9
BAVN				Sg	Sg	11 07 10.8	+2.3
LAUG	**Laupendahl**	**0.25**	**160**	*e*Pg	Pg	11 07 04.7	-0.6
BULI	**Ruhr-Universit**	**0.31**	**115**	Pg	Pg	11 07 05.6	-0.9
BUG	**Bochum--Univer**	**0.32**	**117**	Pg	Pg	11 07 06.0	-0.7
BUG				*e*Sg	Sg	11 07 10.8	-0.1
BKLB	**Ruhr-Universit**	**0.33**	**117**	Pg	Pg	11 07 05.9	-0.8
BTEZ	**Ruhr-Universit**	**0.33**	**115**	Pg	Pg	11 07 06.0	-0.7
WTSB	**Winterswijk**	**0.38**	**359**	*e*Pg	Pg	11 07 07.2	-0.6
WTSB				*e*Sg	Sg	11 07 12.8	+0.1
ENTS	**Ennepetalsperr**	**0.51**	**132**	*e*Pg	Pg	11 07 09.4	-0.9
ENTS				*e*Sg	Sg	11 07 15.9	-1.0
PLH	**Pulheim**	**0.58**	**179**	*e*Sg	Sg	11 07 19.0	-0.2
HOBG	**Hohbusch**	**0.69**	**151**	*e*Pg	Pg	11 07 13.1	-0.6
SORT	**Sorpetalsperre**	**0.77**	**108**	*e*Pg	Pg	11 07 13.8	-1.3
SORT				*e*Sg	Sg	11 07 23.7	-1.4
	22nm,0.3s						
GSH	**Grosshau**	**0.89**	**198**	*e*Pg	Pg	11 07 17.0	-0.6
GSH				*e*Sg	Sg	11 07 29.3	+0.2
	16nm,0.2s						
IBBN	**Ibbenburen**	**0.93**	**39**	*e*Pg	Pg	11 07 18.0	-0.3
IBBN				*e*Sg	Sg	11 07 31.0	+0.6
HGN	**Heimansgroeve**	**0.99**	**214**	*e*Pg	Pg	11 07 19.3	-0.1
HGN				*e*Sg	Sg	11 07 32.3	+0.1
KLL	**Kalltalsperre**	**0.99**	**199**	*e*Pg	Pg	11 07 18.8	-0.6
DREG	**Dreilaegerbach**	**0.99**	**202**	*e*Pg	Pg	11 07 19.1	-0.4
STB	**Steinbach**	**0.99**	**179**	*e*Pg	Pg	11 07 19.1	-0.4
STB				*e*Sg	Sg	11 07 32.6	+0.3
	19nm,0.9s						
TDN	**Todenfeld**	**1.02**	**175**	*e*Pg	Pg	11 07 19.1	-0.8
TDN				*e*Sg	Sg	11 07 32.8	-0.3
	19nm,0.3s						
AHRW	**Bad Neuenahr-A**	**1.06**	**171**	*e*Pg	Pg	11 07 20.2	-0.6
AHRW				*e*Sg	Sg	11 07 34.9	+0.4
MEM	**Membach**	**1.10**	**208**	*e*Pg	Pg	11 07 20.7	-0.8
MEM				*e*Sg	Sg	11 07 35.5	-0.3
OLFT	**Oleftalsperre**	**1.12**	**193**	*e*Sg	Sg	11 07 36.1	-0.4
LOH	**Wallersheim-Lo**	**1.42**	**187**	*e*Sg	Sg	11 07 44.3	-1.6
	29nm,0.5s						

*IDC **30** 11:12:23.4±22.0,38°.27N×20°.02E,h0km,mb3.6/4, mb1 3.6/4,mb1mx3.3/46,mbtmp3.7/4, Error ellipse: s-maj=423.5km s-min=48.3km az=40.0*
*ATH **30** 11:12:27.3,38°.40N×20°.44E,h23km±1km,ML3.3/13,Error ellipse: s-maj=2.2km s-min=0.8km az=275.0*
*THE **30** 11:12:28.7,38°.42N×20°.45E,h6km±2km,ML3.3/8,Error ellipse: s-maj=2.3km s-min=0.4km az=98.0*
ISC 30 11:12:28.0±0.8,**38°.42N**±0°.02×**20°.47E**±0°.04,**h13**km±5km, **n48,**σ0**°77**/72,**mb3.7**/4,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.08**	**96**	P	**Pg**	**11 12 30.4**	**-0.3**
VSK1				S	**Sg**	**11 12 32.1**	**-0.6**
FSK	**Fiskardo**	**0.09**	**61**	P	**Pg**	**11 12 30.6**	**-0.2**
FSK				S	**Sg**	**11 12 32.4**	**-0.4**
	29μm,0.6s						
FSK	**Fiskardo**	**0.09**	**61**	P	**Pg**	**11 12 30.6**	**-0.2**
KEF4	**Livadi, Kephal**	**0.16**	**191**	P	**Pg**	**11 12 31.6**	**-0.1**
KEF4				S	**Sg**	**11 12 35.1**	**+0.7**
KEF3	**Kipouria, Keph**	**0.23**	**203**	P	**Pg**	**11 12 33.2**	**+0.3**
KEF3				S	**Sg**	**11 12 37.1**	**+0.8**
ARG2	**Argostoli**	**0.24**	**176**	P	**Pg**	**11 12 33.3**	**+0.3**
ARG2				S	**Sg**	**11 12 37.2**	**+0.7**
CHV1	**Chavriata, Kef**	**0.24**	**196**	P	**Pg**	**11 12 34.2**	**+1.1**
CHV1				S	**Sg**	**11 12 37.6**	**+1.0**
KEF2	**Argostoli. Kep**	**0.25**	**176**	P	**Pg**	**11 12 33.4**	**+0.1**
KEF2				S	**Sg**	**11 12 37.2**	**+0.3**
EVGl	**Lefkada island**	**0.25**	**36**	P	**Pb**	**11 12 33.8**	**-0.6**
EVGl				S	**Sb**	**11 12 38.1**	**-0.6**
EVGl	**Lefkada island**	**0.25**	**36**	P	**Pg**	**11 12 33.7**	**+0.4**
EVGl				S	**Sb**	**11 12 38.1**	**-0.6**
VLS	**Valsamata**	**0.26**	**158**	P	**Pb**	**11 12 33.5**	**-1.0**
VLS				S	**Sb**	**11 12 37.5**	**-1.3**
	7μm,0.3s						
VLS	**Valsamata**	**0.26**	**158**	P	**Pb**	**11 12 33.5**	**-1.0**
VLS				S	**Sb**	**11 12 37.6**	**-1.3**
VLS				AML	AML	11 12 39.5	
	comp=N,14868μm,0.3s						
VLS				AML	AML	11 12 39.9	
	comp=E,14170μm,0.2s						
MGNA	**Meganis**	**0.35**	**47**	P	**Pg**	**11 12 35.1**	**+0.1**
MGNA				S	**Sb**	**11 12 41.0**	**-0.5**
MGNA				AML	AML	11 12 41.6	
	comp=E,16474μm,0.3s						
MGNA				AML	AML	11 12 41.7	
	comp=N,24971μm,0.3s						
KFL	**Anninata**	**0.40**	**140**	P	**Pb**	**11 12 36.1**	**-0.8**
KFL				S	**Sb**	**11 12 42.8**	**-0.1**
	comp=N,8μm,0.3s						
KFL	**Anninata**	**0.40**	**140**	P	**Pg**	**11 12 35.9**	**0.0**
KFL				S	**Sb**	**11 12 42.9**	**-0.1**
KFL				AML	AML	11 12 47.3	
	comp=E,18380μm,0.4s						
KFL				AML	AML	11 12 47.4	
	comp=N,11706μm,0.4s						
LKD2	**Lefkada island**	**0.40**	**22**	P	**Pg**	**11 12 36.1**	**+0.1**
LKD2				S	**Sb**	**11 12 42.8**	**-0.3**
	comp=N,5μm,0.5s						
LKD2	**Lefkada island**	**0.40**	**22**	P	**Pb**	**11 12 36.4**	**-0.6**
LKD2				S	**Sb**	**11 12 42.7**	**-0.4**
LKD2				AML	AML	11 12 44.0	
	comp=E,9155μm,0.5s						
LKD2				AML	AML	11 12 46.4	
	comp=N,7280μm,0.5s						
TSLK	**Tsoukalades, L**	**0.43**	**20**	P	**Pb**	**11 12 36.9**	**-0.6**
TSLK				S	**Sb**	**11 12 44.2**	**+0.2**
	comp=N,6μm,0.8s						
TSLK	**Tsoukalades, L**	**0.43**	**20**	P	**Pb**	**11 12 37.0**	**-0.6**
TSLK				S	**Sb**	**11 12 44.0**	**0.0**
AST1	**Astakos**	**0.51**	**76**	P	**Pg**	**11 12 37.3**	**-0.3**
AST1				S	**Sb**	**11 12 46.6**	**+0.6**
VLMS	**Volimes, Zakyn**	**0.56**	**164**	P	**Pb**	**11 12 39.0**	**-0.7**
VLMS				AML	AML	11 12 48.7	
	comp=N,21172μm,0.5s						
VLMS				AML	AML	11 12 51.2	
	comp=E,9830μm,0.2s						
PDO	**Prodromos**	**0.59**	**72**	P	**Pg**	**11 12 39.2**	**-0.3**
PDO				S	**Sb**	**11 12 49.6**	**+1.1**
PDO	**Prodromos**	**0.59**	**72**	P	**Pb**	**11 12 39.9**	**-0.3**
PDO				AML	AML	11 12 53.7	
	comp=N,5898μm,0.3s						
PDO				AML	AML	11 12 57.6	
	comp=E,4878μm,0.3s						
KRI1	**kERI**	**0.80**	**160**	P	**Pg**	**11 12 43.1**	**-0.4**
KRI1				S	**Sn**	**11 12 56.3**	**-0.5**
PVO	**Paravola**	**0.86**	**76**	P	**Pb**	**11 12 45.0**	**+0.3**
PVO				S	**Sb**	**11 12 58.0**	**+1.9**
	comp=E,2μm,0.6s						
PVO	**Paravola**	**0.86**	**76**	P	**Pb**	**11 12 45.0**	**+0.3**
PVO				AML	AML	11 13 05.6	
	comp=E,3671μm,0.4s						
PVO				AML	AML	11 13 06.8	
	comp=N,4417μm,0.5s						
RLS	**Riolos of Patr**	**0.87**	**114**	P	**Pb**	**11 12 44.8**	**-0.1**
RLS				S	**Sn**	**11 12 58.3**	**-0.1**
	comp=N,912nm,0.8s						
RLS	**Riolos of Patr**	**0.87**	**114**	P	**Pb**	**11 12 44.7**	**-0.1**
DRO	**Drossia**	**1.08**	**115**	P	**Pb**	**11 12 48.6**	**0.0**
DRO	**Drossia**	**1.08**	**115**	P	**Pg**	**11 12 48.1**	**-0.8**
DRO				AML	AML	11 13 12.0	
	comp=N,3200μm,0.5s						
DRO				AML	AML	11 13 16.9	
	comp=E,3700μm,0.6s						
EFP	**Efpalio**	**1.13**	**89**	P	**Pg**	**11 12 49.0**	**-0.7**
EFP	**Efpalio**	**1.13**	**89**	P	**Pg**	**11 12 49.0**	**-0.7**
EFP				AML	AML	11 13 13.1	
	comp=E,3628μm,0.6s						
EFP				AML	AML	11 13 14.2	
	comp=N,2950μm,0.4s						
ANX	**Ano Chora**	**1.16**	**81**	P	**Pg**	**11 12 49.6**	**-0.6**
ANX				S	**Sn**	**11 13 08.1**	**+2.4**
	comp=N,2μm,0.7s						
ANX	**Ano Chora**	**1.16**	**81**	P	**Pg**	**11 12 49.8**	**-0.4**
ANX				AML	AML	11 13 16.0	
	comp=E,2618μm,0.7s						
ANX				AML	AML	11 13 16.7	
	comp=N,3537μm,0.6s						
EVR	**Evrytania**	**1.16**	**64**	P	**Pg**	**11 12 49.8**	**-0.6**
EVR				AML	AML	11 13 16.6	
	comp=N,1243μm,0.8s						
EVR				AML	AML	11 13 20.0	
	comp=E,1280μm,0.7s						
LAKA	**Lakka**	**1.20**	**98**	P	**Pg**	**11 12 50.6**	**-0.5**
LAKA	**Lakka**	**1.20**	**98**	P	**Pg**	**11 12 50.6**	**-0.5**
LAKA				AML	AML	11 13 18.9	
	comp=N,1018μm,0.9s						
LAKA				AML	AML	11 13 27.8	
	comp=E,829μm,0.8s						
SERG	**Sergoula**	**1.25**	**90**	P	**Pn**	**11 12 51.4**	**+0.2**
TRIZ	**Trizonia**	**1.26**	**92**	P	**Pn**	**11 12 51.4**	**0.0**
KALE	**Kalithea**	**1.32**	**91**	P	**Pn**	**11 12 52.1**	**0.0**
KALE	**Kalithea**	**1.32**	**91**	P	**Pn**	**11 12 52.1**	**0.0**
KALE				AML	AML	11 13 18.8	
	comp=E,1134μm,0.6s						
KALE				AML	AML	11 13 25.1	
	comp=N,2020μm,0.5s						
KLV	**Kalavryta, Ach**	**1.38**	**105**	P	**Pn**	**11 12 53.3**	**+0.3**
KLV	**Kalavryta, Ach**	**1.38**	**105**	P	**Pn**	**11 12 53.3**	**+0.3**
IDI	**Anoyia**	**4.73**	**130**	Sn	**Sn**	**11 14 36.2**	**+2.4**
	comp=N,0.6nm,0.3s,baz=270,slow=20,SNR=2.9						
HFS	**Hagfors**	**22.16**	**351**	P	**P**	**11 17 21.6**	**-1.8**
	comp=N,2.9nm,0.9s,baz=164,slow=16,SNR=3.1						
FINES	**FINESS Array B**	**23.32**	**7**	P	**P**	**11 17 34.6**	**-0.8**
	comp=N,1.5nm,0.8s,baz=187,slow=9.7,SNR=3.2						
MKAR	**Makanchi Array**	**45.21**	**59**	P	**P**	**11 20 44.8**	**+0.1**
	comp=N,0.2nm,0.5s,baz=270,slow=8.2,SNR=5.1						
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**11 20 48.0**	**+0.7**
	comp=N,1.0nm,0.5s,baz=274,slow=8.8,SNR=4.2						

*ATH **30** 11:15:29.4,38°.19N×20°.43E,h12km±2km,ML3.4/6,Error ellipse: s-maj=2.6km s-min=1.0km az=260.0*
*THE **30** 11:15:30.3,38°.21N×20°.42E,h9km,ML3.4/6,Error ellipse: s-maj=0.8km s-min=0.3km az=259.0*
*IDC **30** 11:15:35.4±4.6,38°.61N×21°.42E,h0km,mb3.7/4, mb1 3.6/5,mb1mx3.3/55,mbtmp3.7/5,ML2.7/1,Error ellipse: s-maj=97.1km s-min=30.8km az=60.0*
ISC 30 11:15:30.2±0.8,**38°.20N**±0°.02×**20°.44E**±0°.03,**h9**km±4km, **n35,**σ0**°93**/62,**mb3.8**/4,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG2	**Argostoli**	**0.04**	**119**	P	**Pg**	**11 15 32.2**	**+0.2**
ARG2				S	**Sg**	**11 15 33.5**	**+0.3**
CHV1	**Chavriata, Kef**	**0.05**	**251**	P	**Pg**	**11 15 32.0**	**0.0**
CHV1				S	**Sg**	**11 15 33.4**	**+0.1**
KEF2	**Argostoli. Kep**	**0.05**	**133**	P	**Pg**	**11 15 32.1**	**0.0**
KEF2				S	**Sg**	**11 15 33.1**	**-0.2**
KEF4	**Livadi, Kephal**	**0.06**	**348**	P	**Pg**	**11 15 31.7**	**-0.5**
KEF4				S	**Sg**	**11 15 33.5**	**-0.1**
KEF3	**Kipouria, Keph**	**0.07**	**273**	P	**Pg**	**11 15 32.1**	**-0.2**
KEF3				S	**Sg**	**11 15 33.3**	**-0.6**
KEF1	**Kardakata, Kep**	**0.08**	**17**	P	**Pg**	**11 15 31.8**	**-0.6**
KEF1				S	**Sg**	**11 15 33.7**	**-0.4**
VLS	**Valsamata**	**0.12**	**101**	P	**Pg**	**11 15 33.1**	**+0.1**
VLS				S	**Sg**	**11 15 35.6**	**+0.7**
	32μm,0.4s						
VLS	**Valsamata**	**0.12**	**101**	P	**Pg**	**11 15 33.0**	**0.0**
VLS				S	**Sg**	**11 15 35.0**	**0.0**
VLS				AML	AML	11 15 35.9	
	comp=E,74064μm,0.2s						
VLS				AML	AML	11 15 36.3	
	comp=N,41784μm,0.1s						
VSK1	**VASILIKIADES**	**0.23**	**25**	P	**Pg**	**11 15 34.9**	**0.0**
VSK1				S	**Sg**	**11 15 38.3**	**+0.2**
FSK	**Fiskardo**	**0.28**	**20**	P	**Pg**	**11 15 35.4**	**-0.4**
FSK				S	**Sg**	**11 15 39.7**	**+0.2**
	comp=N,11μm,0.2s						
FSK	**Fiskardo**	**0.28**	**20**	P	**Pg**	**11 15 35.1**	**-0.6**
FSK				S	**Sg**	**11 15 39.6**	**+0.1**
KFL	**Anninata**	**0.29**	**108**	P	**Pg**	**11 15 35.7**	**-0.2**
KFL				S	**Sg**	**11 15 40.8**	**+0.9**
KFL				AML	AML	11 15 44.8	
	comp=E,27739μm,0.4s						
KFL				AML	AML	11 15 46.4	
	comp=N,22443μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.37**	**151**	P	**Pg**	**11 15 35.8**	**-1.7**
VLMS				S	**Sg**	**11 15 42.1**	**-0.2**
VLMS				AML	AML	11 15 44.7	
	comp=N,63199μm,0.4s						
VLMS				AML	AML	11 15 45.0	
	comp=E,55357μm,0.2s						
EVGl	**Lefkada island**	**0.45**	**22**	P	**Pg**	**11 15 38.9**	**-0.2**
EVGl				S	**Sb**	**11 15 46.1**	**-1.2**
EVGl	**Lefkada island**	**0.45**	**22**	P	**Pg**	**11 15 38.7**	**-0.4**
EVGl				S	**Sg**	**11 15 45.4**	**+0.4**
ZAK2	**Zakynthos**	**0.55**	**138**	P	**Pg**	**11 15 41.1**	**+0.3**
ZAK2				S	**Sb**	**11 15 50.0**	**0.0**
KRI1	**kERI**	**0.61**	**151**	P	**Pg**	**11 15 41.9**	**-0.2**
KRI1				S	**Sb**	**11 15 51.5**	**-0.4**
AST1	**Astakos**	**0.61**	**56**	P	**Pg**	**11 15 42.4**	**+0.3**
AST1				S	**Sb**	**11 15 51.2**	**-0.7**
RLS	**Riolos of Patr**	**0.82**	**100**	P	**Pg**	**11 15 45.6**	**-0.4**
RLS				S	**Sb**	**11 15 58.1**	**+0.2**
	comp=E,728nm,0.5s						
RLS	**Riolos of Patr**	**0.82**	**100**	P	**Pg**	**11 15 45.3**	**-0.8**
RLS				S	**Sg**	**11 15 55.8**	**-0.9**
RLS				AML	AML	11 16 04.4	
	comp=N,1321μm,0.3s						
RLS				AML	AML	11 16 05.2	
	comp=E,1433μm,0.5s						
PVO	**Paravola**	**0.95**	**64**	P	**Pg**	**11 15 48.4**	**-0.1**
PVO				S	**Sn**	**11 16 03.2**	**-0.3**
	comp=E,3μm,0.4s						
DRO	**Drossia**	**1.03**	**103**	P	**Pg**	**11 15 49.8**	**-0.3**
DRO				S	**Sn**	**11 16 05.5**	**0.0**
	comp=E,2μm,0.5s						
DRO	**Drossia**	**1.03**	**103**	P	**Pg**	**11 15 48.7**	**-1.4**
DRO				AML	AML	11 16 10.5	
	comp=E,3207μm,0.2s						
DRO				AML	AML	11 16 17.9	
	comp=N,3951μm,0.5s						
EFP	**Efpalio**	**1.18**	**78**	P	**Pb**	**11 15 51.6**	**-1.1**
AMT	**Artemida-Makis**	**1.20**	**123**	P	**Pb**	**11 15 52.5**	**-0.7**
AMT				S	**Sb**	**11 16 09.1**	**+0.1**
AMT				AML	AML	11 16 17.5	
	comp=E,2552μm,0.7s						
AMT				AML	AML	11 16 18.4	
	comp=N,2770μm,0.7s						
LAKA	**Lakka**	**1.21**	**88**	P	**Pb**	**11 15 52.4**	**-1.0**
LAKA				S	**Sn**	**11 16 10.9**	**+0.9**
ANX	**Ano Chora**	**1.23**	**71**	P	**Pb**	**11 15 53.7**	**0.0**
ANX				S	**Sg**	**11 16 10.2**	**+0.4**
	comp=N,1μm,0.5s						
SERG	**Sergoula**	**1.29**	**80**	P	**Pn**	**11 15 53.8**	**-0.7**
TRIZ	**Trizonia**	**1.29**	**82**	P	**Pn**	**11 15 53.7**	**-0.8**
KLV	**Kalavryta, Ach**	**1.36**	**96**	P	**Pn**	**11 15 55.0**	**-0.5**
KLV				S	**Sg**	**11 16 14.9**	**+1.0**
IDI	**Anoyia**	**4.61**	**128**	Pn	**Pn**	**11 16 42.5**	**+2.3**
	comp=N,0.4nm,0.3s,baz=288,slow=13,SNR=4.0						
IDI				Sn	**Sn**	**11 17 30.9**	**-2.9**
	comp=N,1.3nm,0.3s,baz=240,slow=14,SNR=3.8						
HFS	**Hagfors**	**22.37**	**351**	P	**P**	**11 20 32.1**	**+3.6**
	comp=N,3.9nm,0.8s,baz=171,slow=10,SNR=2.8						
FINES	**FINESS Array B**	**23.53**	**7**	P	**P**	**11 20 41.1**	**+0.7**
	comp=N,2.4nm,0.8s,baz=183,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**11 23 47.2**	**-1.5**
	comp=N,0.4nm,0.4s,baz=278,slow=7.0,SNR=13						
ZALV	**Zalesovo Beam**	**45.72**	**48**	P	**P**	**11 23 52.7**	**+1.2**
	comp=N,0.8nm,0.5s,baz=279,slow=9.5,SNR=4.2						

*IDC **30** 11:27:36.8±0.9,21°.37S×66°.57W,h208km±9km,mb3.1/4, mb1 3.4/9,mb1mx3.3/38,mbtmp3.8/9,MS3.5/1,Ms1 3.5/1, ms1mx3.0/5,Error ellipse: s-maj=18.3km s-min=10.4km az=114.0*
ISC 30 11:27:36.9±0.7,**21°.44S**±0°.06×**66°.57W**±0°.09,**h219**km,**n31,** σ1**°52**/34,**mb3.4**/4,**9C-3D,Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.46**	**241**	P	**Pn**	**11 28 22.9**	**+0.8**
	3.9nm,0.3s,baz=33,slow=7.4,SNR=23						
LVC				S	**S**	**11 28 56.4**	**-0.6**
	19nm,0.3s,baz=72,slow=21,SNR=27						
PB09	**IPOC Station P**	**2.51**	**261**	*e*P	**Pn**

CD2	**Chengdu**	**3.38**	**78**	⇓*i*Pg		**Pb**	**11 31 30.5**	**-1.2**
CD2				Sg		**Sg**	**11 32 22.8**	**+2.5**
CD2				smax	smax			
	comp=N,860nm,1.0s							
CD2				smax	smax			
	comp=E,470nm,0.6s							
KMI	**Kunming**	**5.69**	**153**	Pg		**Pg**	**11 32 17.0**	**-3.6**
KMI				Sg		**Sg**	**11 33 29.5**	**-4.8**
KMI				smax	smax			
	comp=N,20nm,1.8s							
KMI				smax	smax			
	comp=E,18nm,2.1s							
KMI				LR	LR			
	comp=N,790nm,8.5s							
KMI				LR	LR			
	comp=E,1μm,9.5s							
KMI				LR	LR			
	comp=Z,520nm,6.7s							
KMI	**Kunming**	**5.69**	**153**	Pn		**Pn**	**11 31 58.5**	**+2.0**
KMI				Sn		**Sn**	**11 33 04.8**	**+2.9**
KMI				Sg		**Sg**	**11 33 35.8**	**+1.5**
KMI				smax	smax			
	comp=Z,20nm,1.4s							
KMI				smax	smax			
	comp=Z,20nm,1.6s							
LZH	**Lanzhou**	**6.69**	**28**	*e*Pn		**Pn**	**11 32 13.8**	**+3.6**
LZH				Pg		**Pb**	**11 32 31.8**	**+3.6**
LZH				Sn		**Sn**	**11 33 22.5**	**-4.0**
LZH				Sg		**Sg**	**11 33 59.3**	**-7.2**
LZH				smax	smax			
	comp=Z,22nm,1.2s							
LZH				smax	smax			
	comp=Z,23nm,1.3s							
LZH				LR	LR			
	comp=Z,350nm,6.0s							
LZH				LR	LR			
	comp=Z,420nm,8.7s							
LSA	**Lhasa**	**7.62**	**268**	Pn		**Pn**	**11 32 25.3**	**+2.0**
XAN	**Xi'an**	**8.52**	**61**	P		**Pn**	**11 32 37.5**	**+2.3**
XAN				smax	smax			
	comp=Z,15nm,1.3s							
XAN				smax	smax			
	comp=Z,13nm,1.5s							
GTA	**Gaotai**	**9.14**	**360**	*e*P		**Pn**	**11 32 42.3**	**-1.5**
GTA				pP			11 32 46.5	
GTA				pmax	pmax			
	comp=Z,1.0nm,1.2s							
GTA				LR	LR			
	comp=Z,190nm,10.8s							
GTA				LR	LR			
	comp=Z,280nm,14.3s							
GTA				LR	LR			
	comp=Z,240nm,13.7s							
TAPN	**Taplejung**	**11.09**	**258**	*e*P		**Pn**	**11 33 10.8**	**+0.1**
	comp=Z,20nm,0.5s							
ODAN	**Odare**	**11.52**	**256**	*e*P		**Pn**	**11 33 15.6**	**-0.9**
	comp=Z,32nm,0.6s							
CMAR	**Chiang Mai Arr**	**11.77**	**185**	Pn		**Pn**	**11 33 22.9**	**+3.2**
	comp=Z,0.2nm,0.3s,baz=357,slow=12,SNR=9.9							
CMAR				Pg			11 34 08.8	
	comp=Z,0.1nm,0.3s,baz=352,slow=17,SNR=4.4							
CMAR				Lg		Lg	11 36 42.3	
	comp=Z,0.1nm,0.3s,baz=357,slow=31,SNR=2.7							
CMAR				LR		LR	11 38 01.3	
	comp=Z,114nm,21.0s,baz=342,slow=38							
RAMN	**Ramite**	**12.15**	**258**	*e*P		**Pn**	**11 33 24.0**	**-1.2**
	comp=Z,31nm,0.6s							
JIRN	**Jiri**	**12.29**	**261**	*e*P		**Pn**	**11 33 26.3**	**-0.9**
	comp=Z,39nm,0.6s							
WHN	**Wuhan**	**12.47**	**85**	P		Pn	11 33 36.5	+7.3
GUN	**Gumba**	**12.50**	**263**	*e*P		**Pn**	**11 33 28.7**	**-1.3**
	comp=Z,23nm,0.5s							
PKI	**Pulchoki**	**12.99**	**262**	*e*P		**Pn**	**11 33 35.1**	**-1.5**
	comp=Z,36nm,0.6s							
PKIN	**Phulchoki**	**12.99**	**262**	*e*P		**Pn**	**11 33 34.9**	**-1.8**
	comp=Z,23nm,0.6s							
KKN	**Kakani**	**13.04**	**263**	*e*P		**Pn**	**11 33 36.1**	**-1.2**
DANN	**Dangsing**	**14.22**	**266**	*e*P		**Pn**	**11 33 49.5**	**-4.1**
	comp=Z,21nm,0.6s							
QIZ	**Qiongzhong**	**14.35**	**139**	P		**Pn**	**11 33 54.3**	**-0.7**
QIZ				S		**Sn**	**11 36 36.0**	**+1.7**
QIZ				LR	LR			
	comp=Z,350nm,13.9s							
KOLN	**Koldanda**	**14.49**	**264**	*e*P		**Pn**	**11 33 53.4**	**-3.7**
WMQ	**Urumqi**	**16.67**	**328**	*e*P		**Pn**	**11 34 25.0**	**-0.4**
WMQ				pP		P	11 34 28.5	+0.7
WMQ				LR	LR			
	comp=Z,67nm,6.7s							
WMQ				LR	LR			
	comp=Z,30nm,5.3s							
SONM	**Songino Array**	**18.26**	**14**	P		**P**	**11 34 45.9**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=200,slow=13,SNR=13							
MKAR	**Makanchi Array**	**21.44**	**325**	P		**P**	**11 35 20.5**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=130,slow=12,SNR=18							
AAK	**Ala-Archa**	**23.80**	**308**	P		**P**	**11 35 46.3**	**+1.5**
	comp=Z,2.3nm,0.7s,baz=145,slow=5.2,SNR=9.3							
KSRS	**Korea Array**	**24.29**	**65**	P		**P**	**11 35 49.2**	**0.0**
	comp=Z,3.3nm,1.0s,baz=253,slow=10,SNR=3.4							
KURBB	**Kurchatov Arra**	**25.89**	**328**	P		**P**	**11 36 03.2**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=137,slow=10,SNR=9.7							
ZALV	**Zalesovo Beam**	**26.09**	**340**	P		**P**	**11 36 05.2**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=145,slow=8.5,SNR=2.7							
GEYT	**Alibeck**	**35.22**	**294**	P		**P**	**11 37 27.6**	**+1.3**
	comp=Z,3.1nm,0.7s,baz=110,slow=8.5,SNR=5.6							
GEYT				LR		LR	11 55 26.6	
	comp=Z,67nm,18.1s,baz=195,slow=42							
AKASG	**Malin Array Be**	**55.34**	**313**	P		**P**	**11 40 04.6**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=69,slow=7.2,SNR=3.1							
FINES	**FINESS Array B**	**56.27**	**326**	P		**P**	**11 40 11.8**	**-0.3**
	comp=Z,1.3nm,0.7s,baz=77,slow=6.3,SNR=3.3							
SPITS	**Spitsbergen Ar**	**59.30**	**346**	LR		LR	12 09 05.2	
	comp=Z,25nm,18.7s,baz=330,slow=39							
WRA	**Warramunga Arr**	**59.90**	**142**	P		**P**	**11 40 37.9**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=332,slow=7.3,SNR=9.3							
ASAR	**Alice Springs**	**62.76**	**145**	P		**P**	**11 40 57.2**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=322,slow=6.3,SNR=5.5							
ILAR	**Eielson Array**	**72.14**	**24**	P		**P**	**11 41 58.0**	**+1.8**
	comp=Z,0.4nm,0.9s,baz=305,slow=5.4,SNR=4.5							

IDC 30 11:40:38.9±3.5, 9°76S×161°27E, *h*66km±24km, mb3.3/3, mb1 3.6/4, mb1mx3.3/32, mbtmp3.8/4, Error ellipse: s-maj=42.6km s-min=25.9km az=41.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.34**	**284**	P	Pn	11 41 00.8	-0.8
	44nm,0.3s,baz=150,slow=8.4,SNR=21						
HNR				S	Sn	11 41 18.8	0.0
	167nm,0.3s,baz=33,slow=22,SNR=14						
DZM	**Mont Dzumac**	**13.21**	**159**	P	Pn	11 43 44.6	+0.8
	0.1nm,0.3s,baz=307,slow=20,SNR=2.5						
WRA	**Warramunga Arr**	**27.89**	**246**	P	P	11 46 23.0	+0.2
	0.5nm,0.4s,baz=74,slow=8.9,SNR=6.0						
H11S2	**WAKE ISLAND Hy**	**28.58**	**11**	T	T	12 15 38.1	
	baz=193,slow=74,SNR=4.5						
H11S3	**WAKE ISLAND Hy**	**28.58**	**11**	T	T	12 15 38.3	
	baz=193,slow=74,SNR=4.7						
H11S1	**WAKE ISLAND Hy**	**28.59**	**11**	T	T	12 15 39.2	
	baz=193						
ASAR	**Alice Springs**	**29.56**	**239**	P	P	11 46 37.3	-0.4
	0.2nm,0.5s,baz=65,slow=10,SNR=4.1						
H11N1	**WAKE ISLAND Hy**	**29.80**	**11**	T	T	12 17 14.2	
	baz=192,slow=76,SNR=7.8						
H11N3	**WAKE ISLAND Hy**	**29.81**	**11**	T	T	12 17 10.1	
	baz=192,slow=76,SNR=6.1						
H11N2	**WAKE ISLAND Hy**	**29.82**	**11**	T	T	12 17 05.6	
	baz=192,slow=76,SNR=11						
SONM	**Songino Array**	**75.06**	**325**	P	P	11 52 14.0	+0.2
	0.3nm,0.6s,baz=133,slow=6.3,SNR=2.9						

*NEIC **30** 11:42:58.7±1.3, 41°88N±0°06×127°0W±0°2, *h*10km±2km, ML3.0/20, Error ellipse: s-maj=21.1km s-min=9.7km az=275.0*

*IDC **30** 11:43:05.0±2.7, 42°51N×126°11W, *h*0km, mb3.2/4, mb1 3.5/6, mb1mx3.3/46, mbtmp3.2/6, ML3.3/2, MS3.4/11, Ms1 3.4/11, ms1mx3.3/18, Error ellipse: s-maj=51.0km s-min=16.0km az=38.0*

ISC 30 11:43:02.4±1.7, 41°97N±0°09×126°6W±0°1, *h*10km, n31, σ1°34/17, mb3.2/4, MS3.5/5, Off coast of northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBO	**Bosley Butte**	**1.81**	**81**	Pn	**Pn**	**11 43 33.5**	**-0.2**
KBO				IAML		11 44 11.1	
	comp=N,146nm,2.4s						
KBO				IAML		11 44 14.1	
	comp=E,137nm,2.4s						
KEBM	**Edson Butte**	**1.93**	**61**	Pn	**Pn**	**11 43 35.4**	**+0.1**
KEBM				IAML		11 44 14.7	
	comp=E,128nm,1.9s						
KRMB	**Red Mountain**	**2.08**	**101**	Pn	**Pn**	**11 43 37.8**	**+0.3**
KRMB				IAML		11 44 32.1	
	comp=E,66nm,2.0s						
JCC	**Jacoby Creek,**	**2.27**	**120**	Pn	**Pn**	**11 43 39.5**	**-0.4**
JCC				IAML		11 44 53.4	
	comp=E,60nm,2.3s						
JCC				IAML		11 45 08.9	
	comp=N,63nm,3.7s						
KHMM	**Horse Mountain**	**2.44**	**116**		**Pn**	**11 43 42.8**	**+0.4**
KHMM				IAML		11 44 51.2	
	comp=N,86nm,1.9s						
KHMM				IAML		11 45 00.3	
	comp=E,62nm,3.7s						
HUMO	**Hull Mountain**	**2.80**	**76**		**Pn**	**11 43 48.0**	**+0.7**
KMRM	**Mail Ridge**	**2.81**	**127**	Pn	**Pn**	**11 43 46.0**	**-1.5**
KMRM				IAML		11 44 40.1	
	comp=N,55nm,1.9s						
YBH	**Yreka Blue Hor**	**2.94**	**93**	Pn	**Pn**	**11 43 49.5**	**+0.3**
	comp=N,0.6nm,0.3s,baz=284,slow=12,SNR=19						
YBH				Sn	**Sn**	**11 44 22.4**	**-2.2**
	comp=N,0.3nm,0.3s,baz=288,slow=20,SNR=2.3						
YBH				LR	LR	11 44 55.2	
	comp=N,529nm,21.2s,baz=246,slow=42						
YBH	**Yreka Blue Hor**	**2.94**	**93**		**Pn**	**11 43 50.6**	**+1.4**
YBH				IAML		11 45 06.2	
	comp=E,23nm,4.4s						
F04A	**Amboy**	**4.99**	**36**	Pn	**Pn**	**11 44 17.2**	**-0.2**
LON	**Longmire**	**5.90**	**34**		**Pn**	**11 44 30.0**	**+0.1**
ELK	**Elko**	**8.65**	**94**	LR	LR	11 47 31.4	
	comp=E,65nm,20.5s,baz=268,slow=32						
NEW	**Newport**	**9.20**	**44**	LR	LR	11 48 49.5	
	comp=E,270nm,21.7s,baz=240,slow=40						
PFO	**Pinyon Flats O**	**11.58**	**133**	LR	LR	11 50 33.0	
	comp=E,202nm,18.2s,baz=306,slow=38						
PDAR	**Pinedale Array**	**12.66**	**81**	Pn	**Pn**	**11 46 02.6**	**0.0**
	comp=E,0.1nm,0.3s,baz=274,slow=12,SNR=2.9						
PDAR				LR	LR	11 51 24.4	
	comp=E,237nm,18.7s,slow=41						
ANMO	**Albuquerque**	**17.27**	**107**	LR	LR	11 53 23.6	
	comp=E,66nm,22.0s,baz=352,slow=36						
YKA	**Yellowknife Ar**	**21.76**	**15**	P	**P**	**11 47 52.7**	**-1.1**
	comp=E,1.1nm,0.8s,baz=206,slow=11,SNR=6.8						
LPIG	**La Paz**	**22.40**	**138**	LR	LR	11 57 30.2	
	comp=E,83nm,19.1s,baz=343,slow=38						
TXAR	**Lajitas Array**	**22.44**	**117**	P	**P**	**11 48 05.1**	**+3.6**
	comp=E,0.2nm,0.6s,baz=306,slow=8.8,SNR=3.6						
ULM	**Lac du Bonnet**	**22.75**	**58**	P	**P**	**11 48 03.6**	**-0.9**
	comp=E,3.4nm,0.9s,baz=274,slow=12,SNR=2.7						
ILAR	**Eielson Array**	**25.61**	**340**	P	**P**	**11 48 31.4**	**-0.1**
	comp=E,0.4nm,0.7s,baz=156,slow=7.0,SNR=4.2						
TKL	**Tuckaleechee C**	**33.71**	**86**	LR	LR	12 04 27.8	
	comp=E,116nm,18.8s,baz=328,slow=38						
SADO	**Sadowa**	**34.25**	**69**	LR	LR	12 04 27.4	
	comp=E,94nm,19.0s,baz=298,slow=38						
CMIG	**Matias Romero**	**36.76**	**123**	LR	LR	12 05 44.2	
	comp=E,54nm,19.2s,baz=340,slow=37						
FRB	**Frobisher Bay**	**39.46**	**36**	LR	LR	12 06 45.3	
	comp=E,96nm,18.2s,baz=42,slow=37						
H11N3	**WAKE ISLAND Hy**	**59.73**	**270**	T	T	12 57 31.6	
	baz=52,slow=75,SNR=30						
H11N2	**WAKE ISLAND Hy**	**59.73**	**270**	T	T	12 57 32.6	
	baz=52,slow=75,SNR=30						
H11N1	**WAKE ISLAND Hy**	**59.75**	**270**	T	T	12 57 32.8	
	baz=52,slow=75,SNR=35						
H11S1	**WAKE ISLAND Hy**	**60.63**	**269**	T	T	12 58 36.3	
	baz=51,slow=75,SNR=30						
H11S2	**WAKE ISLAND Hy**	**60.64**	**269**	T	T	12 58 38.6	
	baz=51,slow=75,SNR=31						
H11S3	**WAKE ISLAND Hy**	**60.65**	**269**	T	T	12 58 35.7	
	baz=51,slow=75,SNR=22						

IDC 30 12:09:58.8±3.6, 22°55S×179°60W, *h*0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/24, mbtmp3.6/3, Error ellipse: s-maj=372.9km s-min=34.7km az=163.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.63**	**259**	P	P	12 17 57.0	-0.2
	0.6nm,0.8s,baz=92,slow=7.5,SNR=9.4						
WRA	**Warramunga Arr**	**42.88**	**265**	P	P	12 17 59.3	0.0
	0.4nm,0.4s,baz=102,slow=8.4,SNR=10						
TXAR	**Lajitas Array**	**89.41**	**58**	P	P	12 22 57.9	0.0
	0.6nm,1.0s,baz=233,slow=5.5,SNR=4.4						

*IDC **30** 12:13:31.6±0.6, 30°11N×99°75E, *h*0km, mb4.1/19, mb1 4.1/21, mb1mx4.0/43, mbtmp4.0/21, ML3.6/2, MS3.5/5, Ms1 3.5/5, ms1mx3.1/46, Error ellipse: s-maj=19.0km s-min=13.1km az=54.0*

*BJI **30** 12:13:33.0±0.0, 30°16N×99°86E, *h*10km, mB4.2/1, mb4.1/21, ML3.9/18, Ms3.9/17, Ms7 3.8/17*

*NEIC **30** 12:13:33.4±1.8, 30°23N±0°08×99°83E±0°08, *h*10km±2km, mb4.3/23, Error ellipse: s-maj=12.0km s-min=10.1km az=184.0*

*MOS **30** 12:13:34.6±1.3, 30°16N×99°76E, *h*31km, mb4.4/20, Error ellipse: s-maj=8.3km s-min=6.2km az=108.9*

ISC 30 12:13:33.3±0.4, 30°18N±0°04×99°81E±0°04, *h*10km, n122, σ1°92/135, mb4.2/38, MS3.4/4, 2C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**3.48**	**77**	⇓*i*Pn	**Pb**	**12 14 31.5**	**-3.6**
CD2				Sg	**Sg**	**12 15 23.5**	**-1.7**
CD2				smax	smax		
	comp=N,1μm,1.1s						
CD2				smax	smax		
	comp=E,630nm,1.1s						
LKP	**Lekhapani**	**4.49**	**232**	*e*P	**Pn**	**12 14 41.9**	**+0.5**
LKP				*ex*	x	12 15 41.4	
KMI	**Kunming**	**5.67**	**152**	Pn	**Pn**	**12 14 59.0**	**+1.2**
KMI				Sn	**Sn**	**12 16 03.0**	**-0.1**
KMI				Sg	**Sg**	**12 16 36.5**	**+1.2**
KMI				LR	LR		
	comp=N,2μm,10.3s						
KMI	**Kunming**	**5.67**	**152**	P	**Pn**	**12 14 59.1**	**+1.2**
KMI	**Kunming**	**5.67**	**152**		**Pn**	**12 14 59.1**	**+1.2**
ZIRO	**ZIRO**	**5.86**	**245**	*e*P	**Pn**	**12 15 02.0**	**+1.7**
LZH	**Lanzhou**	**6.79**	**29**	*e*Pn	**Pn**	**12 15 14.8**	**+1.6**
LZH				Sn	**Sn**	**12 16 29.8**	**-0.9**
LZH				Sg	**Sg**	**12 17 07.3**	**-4.1**
LZH				smax	smax		
	comp=N,49nm,1.1s						
LZH				smax	smax		
	comp=E,49nm,1.2s						
GYA	**Guiyang**	**7.09**	**120**	Pn	**Pn**	**12 15 15.8**	**-1.4**
GYA				Sn	**Sn**	**12 16 44.3**	**+6.4**
GYA				Sg	**Sg**	**12 17 18.3**	**-2.6**
GYA				smax	smax		
	comp=N,90nm,0.8s						
GYA				smax	smax		
	comp=E,100nm,1.0s						
LSA	**Lhasa**	**7.53**	**269**	Pn	**Pn**	**12 15 26.3**	**+2.6**
LSA	**Lhasa**	**7.53**	**269**	P	**Pn**	**12 15 26.2**	**+2.6**
LSA	**Lhasa**	**7.53**	**269**		**Pn**	**12 15 26.2**	**+2.6**
ENH	**Enshi**	**8.37**	**87**		**Pn**	**12 15 36.0**	**+1.1**
SHL	**Shillong**	**8.38**	**239**	P	**Pn**	**12 15 35.2**	**+0.1**
SHL	**Shillong**	**8.38**	**239**	*e*P	**Pn**	**12 15 35.4**	**+0.3**
SHL				*e*S	**Sn**	**12 17 03.2**	**-6.7**
SHL	**Shillong**	**8.38**	**239**		**Pn**	**12 15 35.2**	**+0.1**
XAN	**Xi'an**	**8.63**	**61**	P	**Pn**	**12 15 37.5**	**-0.9**
XAN				smax	smax		
	comp=N,28nm,1.8s						
XAN				smax	smax		
	comp=E,27nm,1.5s						
XAN				LR	LR		
	comp=N,510nm,10.4s						
XAN				LR	LR		
	comp=Z,610nm,11.3s						
XAN	**Xi'an**	**8.63**	**61**	P	**Pn**	**12 15 37.8**	**-0.6**
XAN	**Xi'an**	**8.63**	**61**		**Pn**	**12 15 37.8**	**-0.6**
GTA	**Gaotai**	**9.21**	**0**	*e*P	**Pn**	**12 15 46.8**	**+0.4**
GTA				pP		12 15 51.0	
GTA				sP		12 15 54.0	
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GTA				LR	LR		
	comp=N,390nm,9.0s						
GTA				LR	LR		
	comp=Z,390nm,12.7s						
SLVN	**Son La**	**9.55**	**156**		**Pn**	**12 15 51.0**	**0.0**
GTK	**Tadong**	**10.24**	**257**	*e*P	**Pn**	**12 16 01.0**	**+0.5**
TAPN	**Taplejung**	**10.98**	**258**	*e*P	**Pn**	**12 16 11.5**	**+0.6**
	45nm,0.4s						
ODAN	**Odare**	**11.41**	**256**	*e*P	**Pn**	**12 16 15.7**	**-0.9**
	71nm,0.5s						
CMAR	**Chiang Mai Arr**	**11.70**	**184**	Pn	**Pn**	**12 16 20.9**	**+0.6**
	0.2nm,0.3s,baz=357,slow=12,SNR=16						
CMAR				Pg		12 17 10.7	
	0.3nm,0.3s,baz=3.7,slow=15,SNR=11						
RAMN	**Ramite**	**12.05**	**258**	*e*P	**Pn**	**12 16 24.9**	**-0.5**
	49nm,0.5s						
JIRN	**Jiri**	**12.19**	**261**	*e*P	**Pn**	**12 16 27.3**	**-0.2**
GUN	**Gumba**	**12.40**	**263**	*e*P	**Pn**	**12 16 29.7**	**-0.5**
	56nm,0.5s						
WHN	**Wuhan**	**12.56**	**85**	P	**Pn**	**12 16 31.0**	**-1.2**
WHN				S	**Sn**	**12 18 49.3**	**-2.9**
PKI	**Pulchoki**	**12.88**	**262**	*e*P	**Pn**	**12 16 35.3**	**-1.6**
	74nm,0.5s						
PKIN	**Phulchoki**	**12.89**	**262**	*e*P	**Pn**	**12 16 35.2**	**-1.8**
	52nm,0.5s						
KKN	**Kakani**	**12.94**	**263**	*e*P	**Pn**	**12 16 36.1**	**-1.4**
	51nm,0.6s						
DMN	**Daman**	**13.13**	**262**	*e*P	**Pn**	**12 16 38.6**	**-1.6**
	46nm,0.8s						
GKN	**Gorkha**	**13.45**	**264**	*e*P	**Pn**	**12 16 41.9**	**-2.5**
	22nm,0.4s						
PBKT	**Sadao Pong**	**13.59**	**175**		**Pn**	**12 16 48.9**	**+2.7**
BOK	**Bokaro**	**13.94**	**246**	*e*P	**Pn**	**12 16 49.1**	**-1.9**
DANN	**Dangsing**	**14.13**	**267**	*e*P	**Pn**	**12 16 50.7**	**-3.2**
	43nm,0.6s						
HHC	**Hu-ho-hao-te**	**14.30**	**39**	*e*P	**Pn**	**12 16 55.8**	**-0.2**
HHC				sP	P	12 17 02.8	-0.4
HHC				PP	**PnPn**	**12 17 11.5**	**+7.5**
HHC				S	**Sn**	**12 19 34.3**	**-0.4**
HHC				sS	S	12 19 41.5	-14
HHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HHC				LR	LR		
	comp=Z,330nm,15.8s						
QIZ	**Qiongzhong**	**14.36**	**138**	P	**Pn**	**12 16 57.0**	**+0.2**
QIZ				S	**Sn**	**12 19 38.0**	**+1.9**
QIZ				LR	LR		
	comp=Z,260nm,8.5s						
KOLN	**Koldanda**	**14.39**	**264**	*e*P	**Pn**	**12 16 54.3**	**-3.1**
	69nm,0.9s						
TIA	**Tai'an**	**15.69**	**63**	P	**P**	**12 17 21.0**	**+2.5**
TIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2	**Nanjing**	**16.42**	**79**	*e*P	**P**	**12 17 25.0**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,190nm,10.0s						
WMQ	**Urumqi**	**16.68**	**328**	*e*P	**Pn**	**12 17 27.5**	**+0.3**
WMQ				LR	LR		
	comp=Z,380nm,23.3s						
WMQ				LR	LR		
	comp=Z,79nm,18.1s						
WMQ	**Urumqi**	**16.68**	**328**	P	**Pn**	**12 17 26.0**	**-1.2**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
WMQ	**Urumqi**	**16.68**	**328**	Pn	**Pn**	**12 17 26.0**	**-1.2**
SONM	**Songino Array**	**18.35**	**14**	P	**Pn**	**12 17 46.9**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=199,slow=11,SNR=20						
SONM				LR	LR	12 26 16.8	
	comp=Z,96nm,18.9s,baz=166,slow=42						
SONM	**Songino Array**	**18.35**	**14**	P	**Pn**	**12 17 46.8**	**-1.1**
ULN	**Ulaanbaatar**	**18.52**	**16**	*i* P	**Pn**	**12 17 50.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ULN	**Ulaanbaatar**	**18.52**	**16**	P	**P**	**12 17 49.0**	**-1.0**
SMLA	**Simla**	**19.50**	**279**	*ex*	x	12 18 00.2	
SMLA				IAmb	IAmb	12 18 03.0	
	comp=Z,13nm,0.5s						
ZAK	**Zakamensk**	**20.35**	**6**	*e*P	**P**	**12 18 09.6**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s						
PRZ	**Przheval'sk**	**21.11**	**311**	P	**P**	**12 18 18.8**	**+0.5**
PRZ				pmax	pmax		
	comp=Z,11nm,0.7s						
PRZ	**Przheval'sk**	**21.11**	**311**	P	**P**	**12 18 18.8**	**+0.5**
PRZ				IAmb	IAmb	12 18 20.4	
	comp=Z,11nm,0.7s						
MK31	**Makanchi Array**	**21.45**	**326**	P	**P**	**12 18 21.6**	**-0.1**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MK31	**Makanchi Array**	**21.45**	**326**	P	**P**	**12 18 21.6**	**-0.1**
MKAR	**Makanchi Array**	**21.45**	**326**	*i* P	**P**	**12 18 21.3**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	**Makanchi Array**	**21.45**	**326**	P	**P**	**12 18 21.6**	**0.0**
	comp=Z,3.5nm,0.6s,baz=132,slow=12,SNR=34						
MKAR	**Makanchi Array**	**21.45**	**326**	P	**P**	**12 18 21.5**	**-0.2**
KSH	**Kashi**	**21.62**	**302**	P	**P**	**12 18 27.8**	**+4.1**
KSH				sP	sP	12 18 32.8	+3.0
KSH				S	**S**	**12 22 23.3**	**+0.1**
KSH				sS	sS	12 22 28.8	-0.9
KSH				SS	**SnSn**	**12 22 56.5**	**+10**
TLY	**Talaya**	**21.67**	**6**	*i* P	**P**	**12 18 24.3**	**+0.3**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY	**Talaya**	**21.67**	**6**	P	**P**	**12 18 25.7**	**+1.7**
	comp=Z,2.7nm,0.6s,baz=197,slow=11,SNR=5.2						
NRN	**Naryn**	**22.27**	**307**	P	**P**	**12 18 31.5**	**+0.6**
NRN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NRN	**Naryn**	**22.27**	**307**	P	**P**	**12 18 31.5**	**+0.6**
NRN				IAmb	IAmb	12 18 32.4	
	comp=Z,5.4nm,0.8s						
NIL	**Nilore**	**22.79**	**286**	P	**P**	**12 18 34.3**	**-1.9**
NIL				pmax	pmax		
	comp=Z,26nm,0.8s						
NIL	**Nilore**	**22.79**	**286**	P	**P**	**12 18 34.2**	**-1.9**
AAK	**Ala-Archa**	**23.77**	**308**	P	**P**	**12 18 46.7**	**+0.6**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AAK	**Ala-Archa**	**23.77**	**308**	P	**P**	**12 18 46.5**	**+0.4**
	comp=Z,5

KBL	Kabul	26.30	288	P	P	12 19 08.9	-0.5
KBL				IAmb	IAmb	12 19 27.3	
	comp=Z,6.0nm,0.7s						
KK31	Karatay Array	26.67	307	P	P	12 19 12.8	+0.4
KK31				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KK31	Karatay Array	26.67	307	P	P	12 19 12.8	+0.4
KK31				IAmb	IAmb	12 19 16.2	
	comp=Z,4.3nm,0.8s						
KKAR	Karatay Array	26.67	307	P	P	12 19 12.8	+0.4
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KKAR	Karatay Array	26.67	307	P	P	12 19 12.8	+0.4
KKAR				IAmb	IAmb	12 19 16.2	
	comp=Z,4.3nm,0.8s						
VLA	Vladivostok	28.61	54	P	P	12 19 33.5	+3.8
VLA				pmax	pmax		
	comp=Z,40nm,1.1s						
GEYT	Alibeck	35.17	294	P	P	12 20 28.5	+1.0
	comp=Z,6.3nm,0.7s,baz=115,slow=6.7,SNR=11						
GEYT				LR	LR	12 37 10.4	
	comp=Z,83nm,20.9s,baz=220,slow=40						
GEYT	Alibeck	35.17	294	P	P	12 20 28.1	+0.7
GYA0B	ALIBECK ARRAY	35.17	294	P	P	12 20 28.5	+1.1
ABKAR	Akbulak array	35.58	314	P	P	12 20 29.9	-0.9
YAK	Yakutsk	37.34	23 *i*	P	P	12 20 46.4	+0.8
YAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARU	Arti	38.96	324 *c i*	P	P	12 20 58.7	-0.7
ARU				S	S	12 26 57.4	-0.4
ARU				SS	SnSn	12 29 44.8	-3.6
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARU	Arti	38.96	324	P	P	12 20 59.1	-0.3
ARU				IAmb	IAmb	12 21 04.4	
	comp=Z,6.9nm,1.1s						
MA2	Magadan	44.92	34 *i*	P	P	12 21 50.1	+2.1
MA2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KVAR	Kislovodsk Arr	46.72	304	LR	LR	12 46 15.9	
	comp=Z,196nm,18.9s,baz=118,slow=42						
KIV	Kislovodsk	46.73	304 *eP*	P	P	12 22 02.2	-0.5
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
NEY	Neytrino	46.74	303 *i*	P	P	12 22 02.4	-0.5
NEY				pmax	pmax		
	comp=Z,2.0nm,1.4s						
PETK	Petropavlovsk-	47.42	44	P	P	12 22 08.1	+0.2
	comp=Z,3.2nm,0.8s,baz=217,slow=4.0,SNR=4.6						
BILL	Bilibino	53.59	25 *eP*	P	P	12 22 56.2	+2.0
BILL				pmax	pmax		
	comp=Z,3.0nm,1.4s						
MMAI	Mount Meron Ar	54.16	291	LR	LR	12 50 50.6	
	comp=Z,36nm,20.5s,baz=105,slow=41						
AKASG	Malin Array Be	55.32	313	P	P	12 23 05.9	-1.1
	comp=Z,1.1nm,0.6s,baz=70,slow=6.8,SNR=5.2						
FINES	FINESS Array B	56.28	326	P	P	12 23 13.2	-0.5
	comp=Z,2.0nm,0.7s,baz=92,slow=7.4,SNR=3.0						
ARCES	ARCESS Array B	56.59	336	P	P	12 23 15.5	-0.4
	comp=Z,2.3nm,0.8s,baz=73,slow=6.7,SNR=3.6						
BURAR	Bucovina Array	58.40	310	P	P	12 23 29.3	+0.2
BURAR	Bucovina Array	58.40	310	P	P	12 23 29.3	+0.2
WRAB	Tennant Creek	59.90	142 *ceP*	P	P	12 23 42.5	+2.9
WRAB				pmax	pmax		
	comp=Z,44nm,2.5s						
WRAB	Tennant Creek	59.90	142	P	P	12 23 39.7	+0.1
WRA	Warramunga Arr	59.90	142	P	P	12 23 38.8	-0.9
	comp=Z,5.6nm,0.8s,baz=329,slow=7.6,SNR=18						
WB2	Warramunga Arr	59.90	142	P	P	12 23 40.1	+0.4
ASAR	Alice Springs	62.75	145	P	P	12 23 58.0	-0.9
ASAR	Alice Springs	62.75	145	P	P	12 23 58.0	-0.9
	comp=Z,1.1nm,0.7s,baz=329,slow=7.7,SNR=14						
GERES	GERESS Array B	65.52	314	P	P	12 24 17.0	0.0
	comp=Z,0.6nm,0.6s,baz=64,slow=6.1,SNR=3.9						
KMBO	Kilima Mbogo	67.09	254	P	P	12 24 27.2	-0.5
KMBO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMBO	Kilima Mbogo	67.09	254	P	P	12 24 27.0	-0.7
	comp=Z,2.0nm,0.4s,baz=45,slow=14,SNR=7.2						
KMBO	Kilima Mbogo	67.09	254	P	P	12 24 27.2	-0.5
ILAR	Eielson Array	72.24	24	P	P	12 24 59.3	+0.9
	comp=Z,0.6nm,1.0s,baz=304,slow=5.0,SNR=4.2						
STKA	Stephens Creek	73.35	144	P	P	12 25 05.7	+0.4
	comp=Z,2.3nm,0.6s,baz=316,slow=13,SNR=4.6						
DLBC	Dease Lake	82.44	24	P	P	12 25 54.8	-0.9
YKA	Yellowknife Ar	83.61	15	P	P	12 26 02.2	+0.6
TORD	Torodi Ar. Bea	90.34	285	P	P	12 26 34.9	-0.4
	comp=Z,0.8nm,0.7s,baz=33,slow=4.0,SNR=5.0						

IDC ***30*** *12:17:14.0±1.0,22°.81N×94°.45E,h83km±9km, mb4.1/26, mb1 4.2/27,mb1mx4.2/41,mbtmp4.4/27,MS3.5/8, Ms1 3.5/8,ms1mx3.1/42,Error ellipse: s-maj=10.5km s-min=7.4km az=25.0*

MOS ***30*** *12:17:13.5±1.3,22°.95N×94°.61E,h90km,mb4.8/42,Error ellipse: s-maj=7.7km s-min=4.8km az=116.0*

BJI ***30*** *12:17:13.1±0.0,22°.73N×94°.35E,h101km,mB4.8/38, mb4.8/58*

NDI ***30*** *12:17:14.9±3.2,22°.78N×94°.31E,h41km±123km, mb4.4, ML4.6,mb4.7(NEIC)*

NEIC ***30*** *12:17:14.8±2.3,22°.84N±0°.05×94°.38E±0°.06,h91km±6km, mb4.7/100,Error ellipse: s-maj=8.8km s-min=7.0km az=225.0*

BKK ***30*** *12:17:29.6±2.0,22°N±25°×9°5E±1°8,h69km±193km, M5.2/7,mB5.4/3,mb5.5/4,MLv5.2/7,Mw(mB)4.8/3*

ISC 30 12:17:14.8±0.5,22°.81N±0°.03×94°.35E±0°.03,h92km±4km, n323,σ1ᵠ79/360,mb4.7/103,15C-4D,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRDH	Bariadhala	2.50	267	P	Pn	12 17 54.0	+0.4
	1.6nm,0.3s,baz=180,slow=20,SNR=19						
BRDH				S	Sn	12 18 23.5	-0.1
	22nm,0.3s,baz=180,slow=20,SNR=78						
BELO	BELONIA	2.71	280	eP	Pn	12 17 57.2	+0.8
BELO				eS	Sn	12 18 29.0	+0.5
KOHI	KOHIMA	2.90	356	eP	Pn	12 17 59.6	+0.4
KOHI				ex	Sn	12 18 39.0	+5.6
KOHI				IAML		12 18 44.7	
	comp=E,4μm,0.6s						
KOHI				IAML		12 18 48.7	
	comp=N,4μm,0.3s						
SIMRM	Sittwe	3.00	207		Pn	12 18 01.0	+0.7
SIMRM				Sn	Sn	12 18 37.4	+2.0
SHL	Shillong	3.55	321	P	Pn	12 18 07.8	-0.1
SHL						12 18 45.4	
SHL	Shillong	3.55	321	eP	Pn	12 18 07.4	-0.5
SHL				eS	Sn	12 18 45.1	-3.9
SHL	Shillong	3.55	321		Pn	12 18 07.8	-0.1
SHL				Sn	Sn	12 18 45.4	-3.5
GUWA	GUWAHATI	4.15	325 ⇓ *i*	P	Pn	12 18 14.8	-1.0
GUWA				eS	Sn	12 18 57.9	-5.2
GUWA				IAML		12 19 01.4	
	comp=E,2μm,0.3s						
GUWA				IAML		12 19 01.5	
	comp=N,3μm,0.1s						
LKP	Lekhapani	4.70	16	eP	Pn	12 18 23.6	+0.3
LKP				eS	Sn	12 19 14.3	-2.3
LKP				IAML		12 19 18.2	
	comp=N,1μm,0.3s						
LKP				IAML		12 19 18.3	
	comp=E,851nm,0.3s						
ZIRO	ZIRO	4.71	355	eP	Pn	12 18 23.6	-0.1
ZIRO				eS	Sn	12 19 13.5	-3.8
ZIRO				IAML		12 19 20.8	
	comp=E,3μm,0.2s						
ZIRO				IAML		12 19 24.5	
	comp=N,4μm,0.1s						
MHMT	Maesarieng	5.70	143	P	Pn	12 18 37.2	+0.2
CHTO	Chiang Mai	5.86	132	P	Pn	12 18 38.8	-0.3
CHTO						12 19 43.9	
CHTO	Chiang Mai	5.86	132		Pn	12 18 38.8	-0.3
CHTO				Sn	Sn	12 19 43.9	-1.0
CMMT	Chiang Mai	5.86	132	P	Pn	12 18 38.9	-0.3
CM31	Chiang Mai Arr	6.10	134		Pn	12 18 42.5	+0.1
CMAR	Chiang Mai Arr	6.10	134	P	Pn	12 18 42.2	-0.3
	comp=N,6.4nm,0.3s,baz=308,slow=14,SNR=66						
CMAR				S	Sn	12 19 49.0	-1.9
	comp=N,7.2nm,0.3s,baz=318,slow=20,SNR=3.9						
CMAR				ScP	ScP	12 28 58.7	-0.3
	comp=N,0.1nm,0.3s,baz=278,slow=1.8,SNR=4.8						
PAYA	Payao	6.19	123	P	Pn	12 18 43.7	0.0
LAMP	Lampang	6.53	130	P	Pn	12 18 48.6	+0.3
GTK	Tadong	6.88	312	ex	Pn	12 18 45.9	-7.2
GTK				eS	Sn	12 20 05.8	-4.1
GTK				IAML		12 20 10.4	
	comp=N,604nm,0.2s						
GTK				IAML		12 20 10.4	
	comp=E,785nm,0.2s						
PHRA	Phrae	6.98	127	P	Pn	12 18 54.8	+0.4
NANT	Nan	7.16	123	P	Pn	12 18 56.1	-0.7
LSA	Lhasa	7.43	338	P	Pn	12 19 02.0	+1.0
LSA				S	Sn	12 20 22.5	-1.5
LSA	Lhasa	7.43	338	P	Pn	12 19 01.7	+0.7
LSA	Lhasa	7.43	338		Pn	12 19 01.7	+0.7
BOK	Bokaro	7.84	279	eP	Pn	12 19 06.0	-0.1
BOK				*i* pP		12 19 14.2	
BOK				esP		12 19 22.3	
BOK				eS	Sn	12 20 26.8	-6.6
BOK				IAML		12 20 36.6	
	comp=E,117nm,0.2s						
KMI	Kunming	8.01	72	P	Pn	12 19 13.0	+4.4
KMI				sP		12 19 34.0	
KMI				S	Sn	12 20 44.8	+7.1
KMI				pmax	pmax		
	comp=E,320nm,1.1s						
KMI				pmax	pmax		
	comp=E,520nm,3.2s						
KMI				LR	LR		
	comp=E,510nm,7.9s						
KMI				LR	LR		
	comp=E,410nm,8.5s						
KMI				LR	LR		
	comp=E,350nm,6.8s						
KMI	Kunming	8.01	72	P	Pn	12 19 13.1	+4.4
KMI	Kunming	8.01	72		Pn	12 19 13.1	+4.5
BWNR	Bhubaneshwar	8.34	254	eP	Pn	12 19 10.5	-2.4
BWNR				IAmb	IAmb	12 19 16.6	
	comp=Z,672nm,0.1s						
BWNR				eS	Sn	12 20 37.6	-7.8
PBKT	Sadao Pong	8.80	134		Pn	12 19 19.5	+0.3
PBKT				Sn	Sn	12 20 58.3	+1.6
SLVN	Son La	8.98	98		Pn	12 19 22.1	+0.3
SLVN				Sn	Sn	12 21 02.6	+1.4
DGPR	DIGLIPUR	9.68	188	eP	Pn	12 19 29.9	-1.3
DGPR				eS	Sn	12 21 06.6	-12
CHLP	Challavanipeta	10.54	248	eP	Pn	12 19 39.3	-3.7
PBA	Port Blair	11.20	188	Pn	Pn	12 19 52.1	+0.2
CD2	Chengdu	11.64	44 ⇓ *i*	P	Pn	12 19 57.8	+0.1
CD2				S	Sn	12 22 07.3	+1.6
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,100nm,4.1s						
GYA	Guiyang	11.77	70	P	Pn	12 19 58.3	-1.4
GYA				sP		12 20 27.0	
GYA				S	Sn	12 22 09.3	+0.1
GYA				SS		12 22 26.5	
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=Z,270nm,10.8s						
GYA				LR	LR		
	comp=Z,260nm,11.4s						
GYA				LR	LR		
	comp=Z,310nm,11.0s						
UBPT	Khong Chiam	12.90	124		Pn	12 20 13.9	-0.8
PVM	Polavaram	13.18	247	eP	Pn	12 20 16.8	-1.5
PVM				e		12 22 30.8	
GGR	Gangavaram	14.17	252	eP	Pn	12 20 30.4	-0.9
MYLAV	Mylavaram	14.25	247	eP	Pn	12 20 32.9	+0.6
MYLAV				e		12 22 46.6	
NGP	Nagpur	14.29	266	eP	Pn	12 20 32.3	-0.6
NGP				IAmb	IAmb	12 20 35.9	
	comp=Z,15nm,0.5s						
NGP				ex	x	12 22 59.0	
RPR	Rampur	14.62	257	eP	Pn	12 20 38.3	+1.3
QIZ	Qiongzhong	14.96	102	P	P	12 20 47.1	+2.5
ADKI	Addanki	15.23	245	eP	Pn	12 20 44.0	-0.9
ADKI				e		12 23 17.5	
ENH	Enshi	15.44	58		Pn	12 20 45.6	-1.9
ENH				IAmb	IAmb	12 20 57.3	
	comp=Z,40nm,0.8s						
SRSP	Sriramsagar	15.45	258	eP	Pn	12 20 46.8	-0.8
SRSP				e		12 23 24.7	
NJS	Nagarjunasagar	15.47	249	eP	Pn	12 20 48.7	+0.8
NJS				e		12 23 30.8	
LZH	Lanzhou	15.59	30	eP	Pn	12 20 50.0	+0.6
LZH				pP	pP	12 21 05.8	-3.5
LZH				sP	sP	12 21 17.0	-4.1
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,50nm,4.3s						
LZH				LR	LR		
	comp=Z,220nm,11.0s						
LZH				LR	LR		
	comp=Z,270nm,11.5s						
LZH				LR	LR		
	comp=Z,380nm,12.1s						
BHPL	Bhopal	15.59	275	eP	Pn	12 20 49.6	+0.2
BHPL				ex	x	12 23 29.6	
HYB	Hyderabad	15.78	253	*i* P	Pn	12 20 50.5	-1.2
HYB				e		12 23 32.0	
HYB				eS	Sn	12 23 46.0	-0.2
HYBB	Hyderabad (bro	15.78	253	eP	Pn	12 20 51.3	-0.5
HYBB				e		12 23 32.1	
SRLM	Srisailam	16.03	248	eP	Pn	12 20 54.7	-0.2
XAN	Xi'an	16.99	46	P	Pn	12 21 04.8	-1.9
XAN				pP	pP	12 21 18.0	-6.7
XAN				S	Sn	12 24 04.5	-11
XAN				pmax	pmax		
	comp=Z,40nm,0.7s						
XAN				LR	LR		
	comp=Z,100nm,11.3s						
XAN				LR	LR		
	comp=Z,190nm,10.3s						
XAN				LR	LR		
	comp=Z,120nm,12.7s						
XAN	Xi'an	16.99	46	P	Pn	12 21 05.5	-1.2
XAN				pmax	pmax		
	comp=Z,31nm,0.6s						
XAN	Xi'an	16.99	46	P	Pn	12 21 05.5	-1.2
XAN				IAmb	IAmb	12 21 07.0	
	comp=Z,31nm,0.6s						
GTA	Gaotai	17.19	14	eP	P	12 21 10.0	+0.7
GTA				pP	pP	12 21 25.0	-2.0
GTA				sS	sS	12 24 42.5	-10
GTA				PcP	PcP	12 25 48.8	+0.9
GTA				ScP	ScP	12 29 13.8	-0.8
GTA				ScS	ScS	12 32 53.3	-1.2
GTA				pmax	pmax		
	comp=Z,90nm,4.4s						
KLRI	Killari	17.29	257	eP	P	12 21 11.3	+0.7
URV	Uravakonda	17.95	247	eP	Pn	12 21 19.8	+1.3
URV				e		12 24 26.4	
HKPS	Hong Kong Po S	18.29	88	P	P	12 21 20.7	-0.8
HKPS				IAmb	IAmb	12 21 25.7	
	comp=Z,34nm,0.9s						
KULM	Kulim	18.45	160	P	P	12 21 23.5	+0.2
MLSI	Meulaboh, Aceh	18.55	174	P	P	12 21 24.3	0.0
	comp=Z,112nm,1.0s						
IPM	Ipoh	19.34	160	P	P	12 21 32.7	-0.2
IPM	Ipoh	19.34	160	P	P	12 21 32.0	-1.0
WHN	Wuhan	19.44	62 ⇑ *i*	P	Pn	12 21 37.0	+1.0
WHN				pmax	pmax		
	comp=Z,140nm,1.2s						
TPTI		19.63	172	P	P	12 21 35.3	-0.8
PALK	Pallekele	20.28	222	P	P	12 21 43.1	-0.2
PALK				pmax	pmax		
	comp=Z,20nm,1.0s						
PALK	Pallekele	20.28	222	P	P	12 21 43.1	-0.2
PSI	Prapat	20.38	167	P	Pn	12 21 48.3	+1.0
PSI				pmax	pmax		
	comp=Z,21nm,1.0s						
PSI	Prapat	20.38	167	P	Pn	12 21 48.2	+1.0
	comp=Z,15nm,0.8s,baz=327,slow=11,SNR=4.8						
JRMM	Jerantut	20.39	156	P	P	12 21 44.0	-0.4
RPSI	Rantau Prapat	20.48	167	P	P	12 21 45.4	0.0
RPSI	Rantau Prapat	20.48	167	P	Pn	12 21 48.2	-0.1
CHCP	Chirah Chowk	21.45	305	P	P	12 21 56.4	+0.7
NIL	Nilore	21.46	305	P	P	12 21 56.7	+1.0
NIL				pmax	pmax		
	comp=Z,34nm,0.9s						
NIL	Nilore	21.46	305	P	P	12 21 56.7	+1.0
NIL				IAmb	IAmb	12 22 15.4	
	comp=Z,34nm,0.9s						
GSI	Gunungsitoli	21.61	171	P	P	12 21 56.6	-0.8
GSI				IAmb	IAmb	12 22 16.6	
	comp=Z,26nm,0.7s						
WMQ	Urumqi	21.66	347 *eP*	P	P	12 21 59.0	+1.2
WMQ				pP	pP	12 22 16.8	+0.7
WMQ				pmax	pmax		
	comp=Z,41nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.9s						
WMQ				LR	LR		
	comp=Z,94nm,9.7s						
WMQ				LR	LR		
	comp=Z,160nm,7.3s						
WMQ				LR	LR		
	comp=Z,64nm,13.7s						
WMQ	Urumqi	21.66	347	P	P	12 21 59.4	+1.6
WMQ				pmax	pmax		
	comp=Z,56nm,0.9s						
WMQ	Urumqi	21.66	347	P	P	12 21 59.4	+1.6
WMQ				IAmb	IAmb	12 22 04.5	
	comp=Z,56nm,0.9s						
KNMB	Chin-men Tao	22.08	81	P	P	12 22 01.0	-1.3
KNMB				IAmb	IAmb	12 22 04.2	
	comp=Z,26nm,0.8s						
QZH	Quanzhou	22.26	80 ⇑ *i*	P	P	12 22 03.5	-0.8
QZH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
THW	Thamme Wali	22.29	301	P	P	12 22 04.4	-0.2
CEP	Cherat	22.55	304	P	P	12 22 07.6	+0.2
CEP				S	S	12 26 10.0	+1.8
KSH	Kashi	22.83	321 ⇑ *i*	P	P	12 22 10.5	+0.3
KSH				pP	pP	12 22 31.5	+2.5
KSH				PP	sP	12 22 43.5	+2.9
KSH				S	S	12 26 08.0	-4.6
KSH				sS	sS	12 26 42.0	-4.0
KSH				SS	SnSn	12 26 58.8	+5.4
KSH				pmax	pmax		
	comp=Z,64nm,0.6s						
KSH				pmax	pmax		
	comp=Z,370nm,4.5s						
KSH				LR	LR		
	comp=Z,290nm,5.6s						
KSH				LR	LR		
	comp=Z,320nm,4.4s						
KSH				LR	LR		
	comp=Z,390nm,4.9s						
HHC	Hu-ho-hao-te	23.10	35 *eP*	P	P	12 22 11.0	-1.8
HHC				pmax	pmax		
	comp=Z,290nm,7.1s						
NJ2	Nanjing	23.57	62 ⇑ *i*	P	P	12 22 16.0	-1.1
NJ2				pP	pP	12 22 36.3	-0.3
NJ2				pmax	pmax		
	comp=Z,11nm,0.9s						
PRZ	Przheval'sk	23.70	330	P	P	12 22 21.7	+3.3
PRZ				pmax	pmax		
	comp=Z,43nm,0.8s						
PRZ	Przheval'sk	23.70	330	P	P	12 22 21.7	+3.3
PRZ				IAmb	IAmb	12 22 30.2	
	comp=Z,43nm,0.8s						
TIA	Tai'an	23.82	51	P	P	12 22 19.3	0.0
TIA				pmax	pmax		
	comp=Z,16nm,0.8s						
PDGK	Podgornoye	23.88	332	P	P	12 22 20.8	+0.9
KDJ	Kajisay	24.02	327	P	P	12 22 24.4	+3.2
KDJ				pmax	pmax		
	comp=Z,67nm,0.8s						
KDJ	Kajisay	24.02	327	P	P	12 22 24.4	+3.2
NRN	Naryn	24.12	325	P	P	12 22 24.2	+1.9
NRN				pmax	pmax		
	comp=Z,19nm,1.1s						
NRN	Naryn	24.12	325	P	P	12 22 24.2	+1.9
TPUB	Ta-pu	24.18	84	P	P	12 22 23.2	+0.5
TPUB				IAmb	IAmb	12 22 25.9	
	comp=Z,25nm,0.8s						
ULHL	Ulahol	24.58	326	P	P	12 22 29.3	+3.0
	SNR=5.9						
TWG	Pinlang	24.62	85	P	P	12 22 25.9	-0.8
YULB	Yu-li	24.78	83	P	P	12 22 27.8	-0.3
YULB				IAmb	IAmb	12 22 35.8	
	comp=Z,18nm,0.8s						
YHNB	Yeheng	24.79	80	P	P	12 22 28.3	0.0
TATO	Taipei	24.89	80	P	P	12 22 27.4	-1.7
NACB	Ninganchiao	25.01	81	P	P	12 22 28.5	-1.7
KBL	Kabul	25.02	303	P	P	12 22 32.0	+1.5
KBL				pmax	pmax		
	comp=Z,23nm,0.6s						
KBL	Kabul	25.02	303	P	P	12 22 32.0	+1.5
KBL				IAmb	IAmb	12 22 34.0	
	comp=Z,23nm,0.6s						
BJT	Baijiatuan	25.21	42	P	P	12 22 32.1	+0.3
BJT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BJT	Baijiatuan	25.21	42	P	P	12 22 32.1	+0.3
BJI	Beijing	25.23	42	P	P	12 22 31.8	-0.2
BJI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SSE	Sheshan	25.26	65	P	P	12 22 32.0	-0.4
SSE				IAmb	IAmb	12 22 34.0	
	comp=Z,41nm,0.8s						
UCH	Uchtor	25.47	324	P	P	12 22 37.5	+2.7
	SNR=20						
KBK	Karagaybulak	25.54	325	P	P	12 22 37.9	+2.8
	SNR=24						
AAK	Ala-Archa	25.77	325 *ceP*	P	P	12 22 36.8	-0.3
AAK				pmax	pmax		
	comp=Z,19nm,1.0s						
AAK	Ala-Archa	25.77	325	P	P	12 22 39.5	+2.5
	comp=Z,12nm,0.7s,baz=133,slow=6.7,SNR=28						
AAK				PcP	PcP	12 26 06.4	+1.7
	comp=Z,0.8nm,0.4s,baz=135,slow=8.6,SNR=4.3						
AAK	Ala-Archa	25.77	325	P	P	12 22 40.0	+2.9
	SNR=13						
AAK	Ala-Archa	25.77	325	P	P	12 22 39.6	+2.5
AAK				IAmb	IAmb	12 22 40.7	
	comp=Z,14nm,0.8s						
MK31	Makanchi Array	25.83	341	P	P	12 22 39.2	+1.8
MK31				pmax	pmax		
	comp=Z,19nm,0.8s						
MK31	Makanchi Array	25.83	341	P	P	12 22 39.2	+1.8
MK31				IAmb	IAmb	12 22 40.1	
	comp=Z,18nm,0.8s						
MKAR	Makanchi Array	25.83	341	P	P	12 22 39.2	+1.8
	comp=Z,22nm,0.7s,baz=148,slow=10,SNR=129						
MKAR				PcP	PcP	12 26 05.1	+0.6
	comp=Z,2.0nm,0.7s,baz=185,slow=3.4,SNR=5.2						
MKAR				ScP	ScP	12 29 35.6	-0.2
	comp=Z,0.7nm,0.6s,baz=128,slow=2.0,SNR=5.8						
MKAR	Makanchi Array	25.83	341	P	P	12 22 38.7	+1.3
AML	Almayashu	25.86	323	P	P	12 22 41.0	+2.9
	SNR=13						
MAKZ	Makanchi	25.94	340	P	P	12 22 40.3	+1.9
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAKZ	Makanchi	25.94	340	P	P	12 22 40.3	+1.9
EKS2	Erkin-Say	26.17	324	P	P	12 22 43.6	+2.9
	SNR=12						
USP	Ospenovka	26.20	326	P	P	12 22 43.0	+2.1
	SNR=6.3						
YOJ	Yonaguni jima	26.29	81	P	P	12 22 41.2	-0.6
YOJ				pmax	pmax		
	comp=Z,40nm,2.5s						
BTK	Batken	26.31	316	P	P	12 22 44.2	+2.3
BTK				pmax	pmax		
	comp=Z,22nm,0.7s						
BTK	Batken	26.31	316	P	P	12 22 44.2	+2.3
BTK				IAmb	IAmb	12 22 49.2	
	comp=Z,22nm,0.7s						
SONM	Songino Array	26.76	18	P	P	12 22 45.8	-0.1
SONM				S	S	12 27 15.4	+0.3
SONM				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	Songino Array	26.76	18	P	P	12 22 45.6	-0.3
	comp=Z,1.2nm,0.5s,baz=199,slow=9.2,SNR=17						
SONM				PcP	PcP	12 26 06.8	0.0
	comp=Z,0.6nm,0.4s,baz=202,slow=3.5

KK31	**Karatay Array**	**28.28**	**321**	P	**P**	**12 23 00.8**	**+1.4**
KK31				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KK31	**Karatay Array**	**28.28**	**321**	P	**P**	**12 23 00.8**	**+1.4**
KKAR	**Karatay Array**	**28.28**	**321**	P	**P**	**12 23 00.8**	**+1.4**
KKAR	**Karatay Array**	**28.28**	**321**	P	**P**	**12 23 00.8**	**+1.4**
ZAK	**Zakamensk**	**28.39**	**12**	*eP*	P	12 23 15.6	+15
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KURBB	**Kurchatov Arra**	**30.38**	**340**	P	**P**	**12 23 19.1**	**+1.2**
	comp=Z,7.2nm,0.6s,baz=154,slow=8.2,SNR=50						
KURK	**Kurchatov**	**30.44**	**340**	*ceP*	**P**	**12 23 18.5**	**+0.2**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURK	**Kurchatov**	**30.44**	**340**	P	**P**	**12 23 19.7**	**+1.3**
KURK				IAmb	IAmb	12 23 20.6	
	comp=Z,10nm,0.8s						
JOW	**Kunigami**	**30.99**	**76**	P	**P**	**12 23 22.9**	**-0.7**
	comp=Z,1.1nm,0.3s,baz=168,slow=10,SNR=8.4						
JOW	**Kunigami**	**30.99**	**76**	IAmb	IAmb	12 23 38.8	
	comp=Z,39nm,1.5s						
ZAA0	**Zalesovo Array**	**31.91**	**349**	P	**P**	**12 23 32.3**	**+1.0**
ZAA0				IAmb	IAmb	12 23 34.7	
	comp=Z,14nm,1.1s						
ZAA0				S	**S**	**12 28 37.4**	**+1.9**
ZALV	**Zalesovo Beam**	**31.91**	**349**	P	**P**	**12 23 32.4**	**+1.1**
	comp=Z,5.7nm,0.4s,baz=158,slow=9.2,SNR=28						
ZALV				PcP	**PcP**	**12 26 19.2**	**-0.4**
	comp=Z,2.9nm,0.4s,baz=177,slow=4.8,SNR=6.0						
ZALV				S	**S**	**12 28 37.0**	**+1.5**
	comp=Z,3.2nm,0.9s,baz=153,slow=13,SNR=6.2						
ZALV	**Zalesovo Beam**	**31.91**	**349**	P	**P**	**12 23 32.6**	**+1.4**
ZALV					**S**	**12 28 36.6**	**+1.2**
KSRS	**Korea Array**	**32.30**	**55**	P	**P**	**12 23 33.5**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=256,slow=8.2,SNR=6.8						
JNU	**Nakatsue**	**33.71**	**64**	P	**P**	**12 23 46.5**	**-0.8**
	comp=Z,8.3nm,0.7s,baz=37,slow=2.0,SNR=5.7						
GEYT	**Alibeck**	**34.46**	**304**	P	**P**	**12 23 55.0**	**+1.3**
	comp=Z,1.6nm,0.6s,baz=83,slow=12,SNR=4.1						
GEYT				ScP	**ScP**	**12 30 04.2**	**+0.1**
	comp=Z,1.9nm,0.6s,baz=151,slow=3.4,SNR=3.8						
GEYT	**Alibeck**	**34.46**	**304**	IAmb	IAmb	12 23 57.7	
	comp=Z,5.0nm,1.4s						
MRSI	**Marisa**	**34.82**	**126**	P	**P**	**12 23 59.0**	**+2.0**
	comp=Z,44nm,0.7s						
BRVK	**Borovoye**	**35.33**	**335**	P	**P**	**12 24 01.2**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**35.33**	**335**	P	**P**	**12 24 01.2**	**+0.3**
BRVK				IAmb	IAmb	12 24 07.6	
	comp=Z,4.3nm,0.6s						
MSHR	**Mys Shultsa**	**36.34**	**48**	*i* P	**P**	**12 24 06.4**	**-3.3**
VLA	**Vladivostok**	**37.03**	**48**	*i* P	**P**	**12 24 11.3**	**-4.3**
VLA				pmax	pmax		
	comp=Z,31nm,0.9s						
USRK	**Ussuriysk Ar.**	**37.50**	**46**	P	**P**	**12 24 18.2**	**-1.3**
	comp=Z,3.6nm,0.5s,baz=256,slow=9.3,SNR=7.7						
AB31	**Akbulak array**	**37.81**	**323**	*i* P	**P**	**12 24 23.8**	**+1.7**
ABKAR	**Akbulak array**	**37.81**	**323**	P	**P**	**12 24 23.8**	**+1.7**
ABKAR	**Akbulak array**	**37.81**	**323**	P	**P**	**12 24 24.1**	**+2.0**
ABKAR				IAmb	IAmb	12 24 24.9	
	comp=Z,13nm,1.1s						
AKTO	**Aktyubinsk**	**39.49**	**323**	P	**P**	**12 24 37.3**	**+1.1**
AKTO	**Aktyubinsk**	**39.49**	**323**	LR	LR	12 41 26.5	
	comp=Z,54nm,19.8s,baz=127,slow=37						
KLR	**Kul'dur**	**39.50**	**39**	*i* P	**P**	**12 24 32.5**	**-3.7**
KLR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MJB9	**Matsu-Tunnel**	**40.15**	**60**	P	**P**	**12 24 40.6**	**-1.2**
MAJO	**Matsushiro**	**40.15**	**60**	*i* P	**P**	**12 24 38.0**	**-3.8**
MAJO				pmax	pmax		
	comp=Z,15nm,0.9s						
MAJO	**Matsushiro**	**40.15**	**60**	P	**P**	**12 24 40.8**	**-1.0**
MAT	**Matsushiro**	**40.15**	**60**	P	**P**	**12 24 40.6**	**-1.2**
MJAR	**Matsushiro Arr**	**40.15**	**60**	P	**P**	**12 24 41.2**	**-0.7**
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MJAR	**Matsushiro Arr**	**40.15**	**60**	P	**P**	**12 24 41.1**	**-0.7**
	comp=Z,9.4nm,0.7s,baz=274,slow=9.8,SNR=25						
MJAR				LR	LR	12 42 30.9	
	comp=Z,44nm,18.8s,baz=255,slow=38						
MJAR	**Matsushiro Arr**	**40.15**	**60**	P	**P**	**12 24 41.2**	**-0.7**
SVE	**Sverdlovsk**	**41.93**	**333**	*eP*	**P**	**12 24 58.2**	**+2.1**
SVE				pmax	pmax		
	comp=Z,22nm,0.6s						
AAI	**Ambon**	**42.25**	**124**	P	**P**	**12 25 01.1**	**+1.8**
	comp=Z,74nm,0.6s						
ARU	**Arti**	**42.58**	**331**	*d* iP	**P**	**12 25 02.3**	**+0.9**
ARU						12 26 39.9	
ARU				S	**S**	**12 31 21.9**	**+4.9**
ARU				SS	**SS**	**12 34 25.6**	**-4.4**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ARU	**Arti**	**42.58**	**331**	P	**P**	**12 25 02.7**	**+1.4**
GRNR	**Gornyy**	**42.88**	**39**	⇑*i* P	**P**	**12 25 02.9**	**-1.0**
GRNR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GRNR				MLR	MLR		
	comp=Z,110nm,17.0s						
SOEI	**Soe**	**43.66**	**135**	P	**P**	**12 25 10.2**	**-0.5**
RAYN	**Ar Rayn**	**44.74**	**281**	P	**P**	**12 25 21.3**	**+2.0**
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RAYN	**Ar Rayn**	**44.74**	**281**	P	**P**	**12 25 21.3**	**+2.0**
YSS	**Yuzh-Sakhalins**	**45.53**	**46**	*i* P	**P**	**12 25 21.4**	**-3.7**
YSS				pmax	pmax		
	comp=Z,24nm,1.5s						
YAK	**Yakutsk**	**45.98**	**22**	*i* P	**P**	**12 25 26.7**	**-1.7**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZEI	**Tsey**	**46.10**	**308**	*eP*	**P**	**12 25 31.8**	**+1.9**
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NCK	**Nalchik**	**46.43**	**309**	*i* P	**P**	**12 25 34.1**	**+1.8**
NCK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KBZ	**Khabaz**	**46.97**	**309**	P	**P**	**12 25 38.6**	**+2.2**
	comp=Z,1.9nm,0.9s,baz=110,slow=12,SNR=4.1						
NEY	**Neytrino**	**47.02**	**308**	*i* P	**P**	**12 25 38.4**	**+1.3**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SHA1	**Shidzhatmaz**	**47.14**	**309**	*i* P	**P**	**12 25 39.6**	**+1.5**
KIV	**Kislovodsk**	**47.16**	**309**	*eP*	**P**	**12 25 39.6**	**+1.6**
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
VRH	**Novokhopyorsk**	**49.31**	**319**	*eP*	**P**	**12 25 54.9**	**+0.6**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PSA00	**Pilbara Seismi**	**50.63**	**149**		**S**	**12 33 14.7**	**+2.0**
VSR	**Storozhevoye**	**50.87**	**318**	*eP*	**P**	**12 26 05.5**	**-0.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KNRA	**Kununurra**	**50.97**	**136**	P	**P**	**12 26 07.5**	**+0.3**
PRGR	**Permogore**	**50.99**	**332**	*eP*	**P**	**12 26 06.8**	**0.0**
PRGR				*e**PP	**pP**	**12 26 28.4**	**-0.9**
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ANN	**Anapa**	**51.00**	**310**	*eP*	**P**	**12 26 02.9**	**-4.3**
TIXI	**Tiksi**	**52.66**	**13**	*ceP*	**P**	**12 26 15.8**	**-3.3**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TIXI	**Tiksi**	**52.66**	**13**	P	**P**	**12 26 17.6**	**-1.5**
KLMR	**Klimovskoe**	**53.39**	**330**	*eP*	**P**	**12 26 24.1**	**-0.5**
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KLMR	**Klimovskoe**	**53.39**	**330**	*eP*	**P**	**12 26 24.1**	**-0.5**
KLMR				AMP		12 26 27.6	
	comp=Z,7.0nm,0.6s						
BRTR	**Keskin Array B**	**53.59**	**303**	P	**P**	**12 26 28.1**	**+1.4**
	comp=Z,1.1nm,0.4s,baz=136,slow=11,SNR=9.9						
MA2	**Magadan**	**53.73**	**32**	*ceP*	**P**	**12 26 24.7**	**-2.4**
MA2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MA2	**Magadan**	**53.73**	**32**	P	**P**	**12 26 25.9**	**-1.2**
MA2				IAmb	IAmb	12 26 26.6	
	comp=Z,5.4nm,0.7s						
SEY	**Seymchan**	**55.51**	**28**	*i* P	**P**	**12 26 38.0**	**-1.9**
PETK	**Petropavlovsk-**	**56.14**	**40**	P	**P**	**12 26 43.3**	**-1.3**
	comp=Z,2.2nm,0.8s,baz=236,slow=2.3,SNR=6.1						
ELL	**Elmali**	**56.67**	**300**	P	**P**	**12 26 50.6**	**+1.7**
ELL				pmax	pmax		
	comp=Z,56nm,1.1s						
ELL	**Elmali**	**56.67**	**300**	P	**P**	**12 26 50.6**	**+1.7**
AKASG	**Malin Array Be**	**57.02**	**317**	P	**P**	**12 26 51.5**	**+0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKASG	**Malin Array Be**	**57.02**	**317**	P	**P**	**12 26 51.2**	**+0.3**
	comp=Z,2.5nm,0.4s,baz=82,slow=6.2,SNR=26						
AKASG				ScP	**ScP**	**12 31 35.6**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=72,slow=4.4,SNR=4.3						
AKASG				LR	LR	12 54 24.4	
	comp=Z,42nm,20.4s,baz=165,slow=39						
AKASG	**Malin Array Be**	**57.02**	**317**	P	**P**	**12 26 51.5**	**+0.6**
AKBB	**Malin Array Si**	**57.02**	**317**	P	**P**	**12 26 51.2**	**+0.3**
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKBB	**Malin Array Si**	**57.02**	**317**	P	**P**	**12 26 51.2**	**+0.3**
AKBB				IAmb	IAmb	12 26 52.1	
	comp=Z,6.9nm,0.8s						
WB0	**Warramunga Arr**	**57.61**	**134**	P	**P**	**12 26 55.5**	**+0.1**
WRA	**Warramunga Arr**	**57.70**	**134**	P	**P**	**12 26 55.8**	**-0.2**
WRA	**Warramunga Arr**	**57.70**	**134**	P	**P**	**12 26 56.1**	**0.0**
	comp=Z,12nm,0.6s,baz=319,slow=7.5,SNR=191						
WRA				PcP	**PcP**	**12 27 47.2**	**-0.8**
	comp=Z,1.6nm,0.4s,baz=335,slow=3.7,SNR=3.4						
WRA	**Warramunga Arr**	**57.70**	**134**	P	**P**	**12 26 55.8**	**-0.2**
WRAB	**Tennant Creek**	**57.70**	**134**	*ceP*	**P**	**12 26 55.2**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,36nm,2.5s						
WRAB	**Tennant Creek**	**57.70**	**134**	P	**P**	**12 26 56.3**	**+0.2**
WB2	**Warramunga Arr**	**57.71**	**134**	P	**P**	**12 26 56.0**	**-0.2**
WR0	**Warramunga Arr**	**57.84**	**134**	P	**P**	**12 26 56.8**	**-0.3**
MLR	**Muntele Rosu**	**59.14**	**310**	⇓P	**P**	**12 27 08.7**	**+2.7**
NWAO	**Narrogin (SRO)**	**59.58**	**158**	P	**P**	**12 27 08.5**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,27nm,1.2s						
NWAO	**Narrogin (SRO)**	**59.58**	**158**	P	**P**	**12 27 08.5**	**-0.3**
NWAO	**Narrogin (SRO)**	**59.58**	**158**	P	**P**	**12 27 08.5**	**-0.3**
BURAR	**Bucovina Array**	**59.59**	**313**	⇑P	**P**	**12 27 10.4**	**+1.4**
BURAR	**Bucovina Array**	**59.59**	**313**	P	**P**	**12 27 10.0**	**+1.0**
FINES	**FINESS Array B**	**59.85**	**329**	P	**P**	**12 27 11.2**	**+0.8**
FINES	**FINESS Array B**	**59.85**	**329**	P	**P**	**12 27 11.3**	**+0.9**
	comp=Z,1.1nm,0.3s,baz=84,slow=5.4,SNR=11						
FINES				LR	LR	12 56 27.1	
	comp=Z,63nm,18.2s,baz=62,slow=39						
FINES	**FINESS Array B**	**59.85**	**329**	P	**P**	**12 27 11.2**	**+0.8**
ASAR	**Alice Springs**	**60.10**	**138**	P	**P**	**12 27 13.1**	**+0.4**
	comp=Z,8.2nm,0.5s,baz=321,slow=7.0,SNR=208						
ASAR				PcP	**PcP**	**12 27 57.0**	**-0.6**
	comp=Z,1.6nm,0.4s,baz=320,slow=4.1,SNR=5.7						
ASAR	**Alice Springs**	**60.10**	**138**	P	**P**	**12 27 13.0**	**+0.4**
COEN	**Coen**	**60.17**	**123**	P	**P**	**12 27 13.6**	**+0.3**
SANT	**Santorini**	**60.28**	**300**	⇑P	**P**	**12 27 14.5**	**+0.7**
PMG	**Port Moresby**	**60.81**	**116**	*ceP*	**P**	**12 27 17.4**	**-0.2**
PMG				pmax	pmax		
	comp=Z,159nm,1.7s						
PMG	**Port Moresby**	**60.81**	**116**	P	**P**	**12 27 18.3**	**+0.7**
ARCES	**ARCESS Array B**	**61.45**	**338**	P	**P**	**12 27 22.1**	**+1.0**
	comp=Z,3.3nm,0.4s,baz=102,slow=7.0,SNR=37						
ARE0	**ARCESS Array S**	**61.45**	**338**	*eP*	**P**	**12 27 21.3**	**+0.2**
UZH	**Uzhgorod**	**61.51**	**314**	*eP*	P	12 27 26.8	+4.9
KTK1	**Kautokeino**	**62.15**	**337**	*eP*	**P**	**12 27 26.2**	**+0.5**
HAMF	**Hammerfest**	**62.27**	**339**	*eP*	**P**	**12 27 26.9**	**+0.4**
BILL	**Bilibino**	**62.30**	**24**	*ceP*	**P**	**12 27 24.9**	**-1.9**
BILL				*i*		12 29 40.1	
BILL				pmax	pmax		
	comp=Z,14nm,2.5s						
BILL				MLR	MLR		
	comp=Z,44nm,16.0s						
HOPEN	**Hopen**	**63.18**	**346**	*eP*	**P**	**12 27 33.0**	**+0.4**
LANS	**Liptovska Anna**	**63.34**	**315**	*eP*	**P**	**12 27 33.3**	**-0.8**
LANS	**Liptovska Anna**	**63.34**	**315**	*eP*	**P**	**12 27 33.3**	**-0.8**
TRO	**Tromso**	**63.74**	**338**	*eP*	**P**	**12 27 36.5**	**+0.2**
STEI	**Steigen**	**64.99**	**336**	*eP*	**P**	**12 27 45.1**	**+0.6**
VRAC	**Vranov**	**65.19**	**315**	LR	LR	12 58 14.1	
	comp=Z,53nm,18.1s,baz=74,slow=38						
MOR8	**Moi Rana**	**65.30**	**334**	*eP*	**P**	**12 27 46.0**	**-0.5**
SPA0	**Spitsbergen Ar**	**65.36**	**347**	*eP*	**P**	**12 27 47.4**	**+0.5**
SPA0	**Spitsbergen Ar**	**65.36**	**347**	P	**P**	**12 27 47.7**	**+0.9**
HSPB	**Hornsund (broa**	**65.42**	**346**	*eP*	**P**	**12 27 48.0**	**+0.9**
LOF	**Lofoten**	**65.63**	**336**	*eP*	**P**	**12 27 48.5**	**-0.1**
HFS	**Hagfors**	**65.88**	**327**	LR	LR	12 59 23.5	
	comp=Z,50nn,18.8s,baz=84,slow=38						
NSS	**Namsos**	**66.39**	**332**	*eP*	**P**	**12 27 53.1**	**-0.5**
NC602	**NORSAR Array S**	**66.89**	**328**	*eP*	**P**	**12 27 56.7**	**-0.1**
NOA	**NORSAR Array B**	**67.02**	**328**	P	**P**	**12 27 58.4**	**+0.7**
	comp=Z,2.1nm,0.7s,baz=86,slow=6.1,SNR=4.4						
NOA				LR	LR	13 00 33.1	
	comp=Z,30nn,20.2s,baz=100,slow=39						
GERES	**GERESS Array B**	**67.14**	**315**	P	**P**	**12 28 00.0**	**+1.2**
GERES	**GERESS Array B**	**67.14**	**315**	P	**P**	**12 27 60.0**	**+1.2**
	comp=Z,0.9nm,0.4s,baz=69,slow=6.1,SNR=7.9						
GERES	**GERESS Array B**	**67.14**	**315**	P	**P**	**12 27 59.3**	**+0.5**
NC204	**NORSAR Array S**	**67.21**	**329**	P	**P**	**12 27 59.5**	**+0.5**
BBOO	**Buckleboo**	**68.15**	**143**	P	**P**	**12 28 04.5**	**-0.6**
BBOO				IAmb	IAmb	12 28 05.6	
	comp=Z,11nm,0.7s						
NOR	**Nord**	**70.57**	**352**	*i* P	**P**	**12 28 19.4**	**0.0**
STKA	**Stephens Creek**	**70.71**	**139**	P	**P**	**12 28 20.9**	**0.0**
	comp=Z,5.0nm,0.8s,baz=307,slow=5.8,SNR=7.3						
GAMB	**Gambell**	**71.51**	**28**	P	**P**	**12 28 24.4**	**-0.8**
DAG	**Danmarks Havn**	**73.02**	**347**	*i* P	**P**	**12 28 33.3**	**-0.7**
DAG	**Danmarks Havn**	**73.02**	**347**	*i* P	**P**	**12 28 33.3**	**-0.7**
IMAR	**Indian Mountai**	**77.83**	**23**	P	**P**	**12 29 01.6**	**-0.1**
TOLK	**Toolik Lake Re**	**77.87**	**20**	P	**P**	**12 29 02.1**	**0.0**
MLY	**Manley**	**79.39**	**23**	P	**P**	**12 29 10.5**	**+0.1**
SVW2	**Sparrevohn**	**79.45**	**28**	P	**P**	**12 29 10.9**	**+0.2**
SUMG	**Summit**	**79.70**	**347**	P	**P**	**12 29 13.2**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,23nm,1.4s						
SUMG	**Summit**	**79.70**	**347**	*i* P	**P**	**12 29 12.7**	**+0.3**
SUMG	**Summit**	**79.70**	**347**	P	**P**	**12 29 13.2**	**+0.8**
SUMG				IAmb	IAmb	12 29 14.2	
	comp=Z,23nm,1.4s						
BPAW	**Bear Paw Mtn.**	**79.79**	**24**	P	**P**	**12 29 12.4**	**-0.2**
BPAW				IAmb	IAmb	12 29 13.3	
	comp=Z,5.3nm,0.6s						
PPLA	**Purkeypile**	**79.95**	**25**	P	**P**	**12 29 13.5**	**-0.1**
PPLA				IAmb	IAmb	12 29 13.6	
	comp=Z,13nm,1.4s						
BMAR	**Burnt Mountain**	**80.11**	**20**	P	**P**	**12 29 15.2**	**+1.0**
MDM	**Murphy Dome**	**80.33**	**23**	P	**P**	**12 29 15.4**	**0.0**
MDM				IAmb	IAmb	12 29 15.9	
	comp=Z,12nm,0.6s						
TULEG	**Thule**	**80.34**	**356**	P	**P**	**12 29 15.4**	**+0.2**
TRF	**Thorofare Moun**	**80.40**	**24**	P	**P**	**12 29 15.9**	**-0.1**
SKT	**Skwentna**	**80.69**	**26**	P	**P**	**12 29 16.5**	**-0.9**
SKT				IAmb	IAmb	12 29 17.0	
	comp=Z,7.2nm,0.8s						
IL31		**80.91**	**22**	P	**P**	**12 29 17.3**	**-1.2**
ILAR	**Eielson Array**	**80.91**	**22**	P	**P**	**12 29 17.0**	**-1.5**
	comp=Z,1.9nm,0.8s,baz=289,slow=4.9,SNR=27						
ILAR	**Eielson Array**	**80.91**	**22**	P	**P**	**12 29 16.6**	**-1.9**
PRP	**Porcupine Dome**	**80.94**	**21**	P	**P**	**12 29 19.1**	**+0.2**
RND	**Reindeer**	**80.96**	**24**	P	**P**	**12 29 17.6**	**-1.4**
RND	**Reindeer**	**80.96**	**24**	P	**P**	**12 29 17.6**	**-1.4**
RSO	**Redoubt South**	**80.97**	**28**	P	**P**	**12 29 17.4**	**-1.7**
SUA	**Susitna One**	**81.28**	**26**	P	**P**	**12 29 19.5**	**-1.2**
SUA				IAmb	IAmb	12 29 23.3	
	comp=Z,16nm,1.2s						
DHY	**Denali Highway**	**81.70**	**24**	P	**P**	**12 29 23.0**	**0.0**
PMR	**Palmer**	**81.86**	**26**	P	**P**	**12 29 22.6**	**-1.0**
PMR				pmax	pmax		
	comp=Z,12nm,1.3s						
PMR	**Palmer**	**81.86**	**26**	P	**P**	**12 29 22.6**	**-1.0**
PMR				IAmb	IAmb	12 29 38.0	
	comp=Z,12nm,1.3s						
LBTB	**Lobatse**	**81.88**	**239**	P	**P**	**12 29 24.9**	**+0.5**
LBTB	**Lobatse**	**81.88**	**239**		**P**	**12 29 25.3**	**+0.9**
LBTB	**Lobatse**	**81.88**	**239**	P	**P**	**12 29 24.9**	**+0.5**
SML	**Sawmill**	**82.06**	**25**	P	**P**	**12 29 24.4**	**-0.3**
SML				IAmb	IAmb	12 29 32.5	
	comp=Z,9.9nm,1.0s						
CNPM	**China Poot**	**82.11**	**28**	P	**P**	**12 29 23.5**	**-1.5**
CNPM				IAmb	IAmb	12 29 29.4	
	comp=Z,22nm,1.3s						
BRLK	**Bradley Lake**	**82.13**	**28**	P	**P**	**12 29 23.7**	**-1.4**
BRLK				IAmb	IAmb	12 29 41.9	
	comp=Z,22nm,1.2s						
RIDG	**Independent Ri**	**82.24**	**23**	P	**P**	**12 29 24.6**	**-1.1**
RIDG				IAmb	IAmb	12 29 25.2	
	comp=Z,8.3nm,1.0s						
OHAK	**Old Harbor**	**82.38**	**30**	P	**P**	**12 29 25.3**	**-1.1**
OHAK				IAmb	IAmb	12 29 33.3	
	comp=Z,24nm,1.3s						
SCRK	**Sand Creek**	**82.39**	**22**	P	**P**	**12 29 25.9**	**-0.6**
SCRK				IAmb	IAmb	12 29 26.3	
	comp=Z,4.5nm,0.6s						
KDAK	**Kodiak Island**	**82.42**	**30**	P	**P**	**12 29 25.6**	**-1.0**
KDAK				pmax	pmax		
	comp=Z,18nm,1.2s						
KDAK	**Kodiak Island**	**82.42**	**30**	P	**P**	**12 29 25.6**	**-1.0**
KDAK				IAmb	IAmb	12 29 37.5	
	comp=Z,18nm,1.2s						
SCM	**Sheep Creek Mo**	**82.44**	**25**	P	**P**	**12 29 28.0**	**+1.3**
SCM				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SCM	**Sheep Creek Mo**	**82.44**	**25**	P	**P**	**12 29 28.0**	**+1.3**
SCM				IAmb	IAmb	12 29 39.4	
	comp=Z,8.9nm,1.1s						
RES	**Resolute Bay**	**82.55**	**2**	P	**P**	**12 29 27.4**	**+0.4**
RES				pmax	pmax		
	comp=Z,13nm,1.1s						
RES	**Resolute Bay**	**82.55**	**2**	P	**P**	**12 29 27.4**	**+0.4**
RES				IAmb	IAmb	12 29 28.8	
	comp=Z,13nm,1.1s						
SEW	**Seward**	**82.55**	**27**	P	**P**	**12 29 25.9**	**-1.3**
SEW				IAmb	IAmb	12 29 27.9	
	comp=Z,23nm,1.5s						
INK	**Inuvik**	**82.66**	**16**	P	**P**	**12 29 27.3**	**-0.3**
INK				pmax	pmax		
	comp=Z,15nm,1.5s						
INK	**Inuvik**	**82.66**	**16**	P	**P**	**12 29 27.3**	**-0.3**
INK				IAmb	IAmb	12 29 29.9	
	comp=Z,15nm,1.5s						
EPYK	**Eagle Plains**	**83.16**	**18**	P	**P**	**12 29 29.6**	**-0.7**
EPYK				IAmb	IAmb	12 29 29.9	
	comp=Z,4.2nm,0.5s						
FID	**Port Fidalgo**	**83.40**	**26**	P	**P**	**12 29 31.2**	**-0.4**
BCAR	**Beaver Creek A**	**83.74**	**22**	P	**P**	**12 29 33.6**	**+0.2**
EYAK	**Cordova Ski Ar**	**83.81**	**26**	P	**P**	**12 29 33.6**	**-0.1**
EYAK				IAmb	IAmb	12 29 34.6	
	comp=Z,11nm,1.1s						
BOSA	**Boshof**	**83.93**	**236**	P	**P**	**12 29 36.1**	**+1.1**
BOSA				pmax	pmax		
	comp=Z,14nm,1.2s						
BOSA	**Boshof**	**83.93**	**236**	P	**P**	**12 29 36.1**	**+1.1**
	comp=Z,2.7nm,0.6s,baz=46,slow=3.9,SNR=5.8						
BOSA				LR	LR	13 03 14.0	
	comp=Z,22nm,21.3s,baz=196,slow=33						
BOSA	**Boshof**	**83.93**	**236**	IAmb	IAmb	12 29 36.8	
	comp=Z,14nm,1.1s						
GLB	**Gilahina Butte**	**84.02**	**24**	P	**P**	**12 29 34.4**	**-0.4**
GLB				IAmb	IAmb	12 29 35.9	
	comp=Z,7.3nm,1.1s						
C36M	**Paulatuk**	**84.03**	**13**	P	**P**	**12 29 33.9**	**-0.8**
VRDI	**Verde Repeater**	**84.29**	**24**	P	**P**	**12 29 35.9**	**-0.5**
VRDI				IAmb	IAmb	12 29 36.7	
	comp=Z,4.3nm,0.7s						
MCARA	**McCarthy VSAT**	**84.35**	**24**	P	**P**	**12 29 36.8**	**+0.3**
MCARA				IAmb	IAmb	12 29 38.2	
	comp=Z,12nm,1.0s						
TGL	**Tana Glacier**	**84.82**	**24**	P	**P**	**12 29 39.0**	**0.0**
BALM	**Baldy**	**84.83**	**24**	P	**P**	**12 29 39.4**	**+0.4**
BALM				IAmb	IAmb	12 29 39.7	
	comp=Z,5.8nm,0.7s						
BARN	**Barnard Glacie**	**85.07**	**24**	P	**P**	**12 29 41.1**	**+0.8**
BARN				IAmb	IAmb	12 29 41.6	
	comp=Z,8.1nm,0.6s						
TORD	**Torodi Ar. Bea**	**87.39**	**283**	P	**P**	**12 29 53.8**	**+1.5**
	comp=Z,2.1nm,0.7s,baz=63,slow=3.9,SNR=11						
TORD				PP	**PP**	**12 33 14.4**	**-3.5**
	comp=Z,0.8nm,1.0s,baz=85,slow=6.3,SNR=2.9						
YKA	**Yellowknife Ar**	**91.91**	**13**	P	**P**	**12 30 11.9**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=334,slow=5.2,SNR=14						
PDAR	**Pinedale Array**	**111.12**	**19**	PKiKP	**PKiKP**	**12 35 37.5**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=64,slow=2.1,SNR=3.8						
ANMO	**Albuquerque**	**119.26**	**20**	*c i* PKiKP	**PKiKP**	**12 35 54.1**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
TXAR	**Lajitas Array**	**125.33**	**19**	PKP	**PKPdf**	**12 36 05.5**	**0.0**
	comp=Z,0.9

comp=E,911μm,0.4s

PVO	**Paravola**	**0.84**	**75**	P	Pb	12 25 19.1	+0.4
PVO				AML	AML	12 25 38.3	
	comp=N,674μm,0.3s						
PVO				AML	AML	12 25 39.5	
	comp=E,789μm,0.3s						
RLS	**Riolos of Patr**	**0.85**	**114**	P	Pg	12 25 18.2	-0.4
ANX	**Ano Chora**	**1.14**	**80**	P	Pn	12 25 24.1	+0.1
LAKA	**Lakka**	**1.18**	**98**	P	Pn	12 25 24.4	-0.1
SERG	**Sergoula**	**1.23**	**89**	P	Pn	12 25 25.2	0.0
TRIZ	**Trizonia**	**1.25**	**92**	P	Pn	12 25 25.2	-0.2
KALE	**Kalithea**	**1.30**	**90**	P	Pb	12 25 26.4	-0.2
KLV	**Kalavryta, Ach**	**1.36**	**105**	P	Pn	12 25 27.1	+0.1
AGG	**Agios Georgios**	**1.56**	**66**	P	Pg	12 25 31.8	-0.6

*ATH **30** 12:34:21.7, 38°.41N×20°.51E, h9km±3km, ML3.2/8, Error ellipse: s-maj=3.6km s-min=0.8km az=289.0*
*THE **30** 12:34:22.1, 38°.42N×20°.50E, h5km±1km, ML3.5/15, Error ellipse: s-maj=1.3km s-min=0.3km az=76.0*
ISC 30 12:34:21.9±0.9,**38°.41N**±0'.02×**20°.53E**±0'.03,**h6**km±5km, **n51**,σ№**64**/78,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.03**	**90**	P	**Pg**	**12 34 23.2**	**0.0**
VSK1				S	**Sg**	**12 34 24.3**	**+0.3**
	183μm,0.2s						
FSK	**Fiskardo**	**0.06**	**25**	P	**Pg**	**12 34 23.5**	**0.0**
FSK				S	**Sg**	**12 34 24.6**	**+0.1**
	44μm,0.3s						
FSK	**Fiskardo**	**0.06**	**25**	P	**Pg**	**12 34 23.4**	**-0.1**
FSK				S	**Sg**	**12 34 24.7**	**+0.1**
KEF1	**Kardakata, Kep**	**0.14**	**200**	P	**Pg**	**12 34 24.8**	**0.0**
KEF4	**Livadi, Kephal**	**0.17**	**209**	P	**Pg**	**12 34 25.4**	**0.0**
LXR1	**Lixouri, Cepha**	**0.22**	**200**	P	**Pg**	**12 34 26.4**	**+0.1**
LXR1				S	**Sg**	**12 34 30.4**	**+1.2**
	52μm,0.2s						
ARG2	**Argostoli**	**0.23**	**189**	P	**Pg**	**12 34 26.5**	**0.0**
ARG2				S	**Sg**	**12 34 30.6**	**+1.0**
	44μm,0.4s						
EVGI	**Lefkada island**	**0.23**	**25**	P	**Pg**	**12 34 26.8**	**+0.3**
EVGI				S	**Sg**	**12 34 31.0**	**+1.4**
EVGI	**Lefkada island**	**0.23**	**25**	P	**Pg**	**12 34 26.8**	**+0.3**
EVGI				S	**Sg**	**12 34 30.6**	**+1.0**
VLS	**Valsamata**	**0.24**	**169**	P	**Pg**	**12 34 26.6**	**+0.1**
VLS				S	**Sg**	**12 34 30.6**	**+0.9**
	17μm,0.3s						
VLS	**Valsamata**	**0.24**	**169**	P	**Pg**	**12 34 26.6**	**+0.1**
VLS				S	**Sg**	**12 34 30.3**	**+0.6**
VLS				AML	AML	12 34 31.0	
	comp=E,29244μm,0.2s						
VLS				AML	AML	12 34 31.3	
	comp=N,38838μm,0.3s						
KEF2	**Argostoli. Kep**	**0.25**	**188**	P	**Pg**	**12 34 26.5**	**-0.2**
KEF3	**Kipouria, Keph**	**0.25**	**215**	P	**Pg**	**12 34 26.6**	**-0.2**
CHV1	**Chavriata, Kef**	**0.25**	**208**	P	**Pg**	**12 34 26.9**	**0.0**
CHV1				S	**Sg**	**12 34 30.5**	**+0.2**
KFL	**Anninata**	**0.36**	**146**	P	**Pg**	**12 34 29.0**	**+0.1**
KFL				S	**Sg**	**12 34 35.4**	**+1.7**
	comp=N,13μm,0.3s						
KFL	**Anninata**	**0.36**	**146**	P	**Pg**	**12 34 29.0**	**+0.1**
KFL				S	**Sg**	**12 34 34.8**	**+1.1**
KFL				AML	AML	12 34 36.2	
	comp=N,19887μm,0.2s						
KFL				AML	AML	12 34 38.9	
	comp=E,30771μm,0.3s						
LKD2	**Lefkada island**	**0.39**	**15**	P	**Pg**	**12 34 29.4**	**-0.2**
LKD2				S	**Sg**	**12 34 35.5**	**+0.8**
	comp=E,3μm,0.5s						
LKD2	**Lefkada island**	**0.39**	**15**	P	**Pg**	**12 34 29.3**	**-0.3**
LKD2				S	**Sg**	**12 34 35.5**	**+0.8**
LKD2				AML	AML	12 34 36.7	
	comp=N,6426μm,0.5s						
LKD2				AML	AML	12 34 38.3	
	comp=E,6105μm,0.3s						
TSLK	**Tsoukalades, L**	**0.43**	**13**	P	**Pg**	**12 34 30.1**	**-0.1**
TSLK				S	**Sg**	**12 34 36.6**	**+0.8**
	comp=E,5μm,0.8s						
TSLK	**Tsoukalades, L**	**0.43**	**13**	P	**Pg**	**12 34 30.0**	**-0.1**
TSLK				S	**Sg**	**12 34 36.4**	**+0.6**
TSLK				AML	AML	12 34 38.3	
	comp=N,9330μm,0.4s						
TSLK				AML	AML	12 34 38.5	
	comp=E,9222μm,0.6s						
AST1	**Astakos**	**0.46**	**73**	P	**Pg**	**12 34 31.2**	**+0.5**
AST1				S	**Sb**	**12 34 38.7**	**-0.7**
	comp=E,8μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.54**	**169**	P	**Pg**	**12 34 31.9**	**-0.5**
VLMS				S	**Sg**	**12 34 39.7**	**+0.3**
VLMS				AML	AML	12 34 46.4	
	comp=E,8938μm,0.4s						
VLMS				AML	AML	12 34 49.4	
	comp=N,14358μm,0.4s						
PDO	**Prodromos**	**0.55**	**69**	P	**Pg**	**12 34 32.6**	**+0.2**
PDO	**Prodromos**	**0.55**	**69**	P	**Pg**	**12 34 32.6**	**+0.2**
PDO				S	**Sg**	**12 34 40.8**	**+1.3**
PDO				AML	AML	12 34 47.2	
	comp=N,4337μm,0.7s						
PDO				AML	AML	12 34 48.2	
	comp=E,3999μm,0.6s						
ZAK2	**Zakynthos**	**0.69**	**155**	P	**Pg**	**12 34 35.5**	**+0.4**
ZAK2				S	**Sb**	**12 34 45.9**	**0.0**
	comp=E,15μm,0.5s						
KRI1	**kERI**	**0.78**	**163**	P	**Pg**	**12 34 36.2**	**-0.7**
KRI1				S	**Sb**	**12 34 48.6**	**0.0**
	comp=E,6μm,0.3s						
PVO	**Paravola**	**0.81**	**75**	P	**Pg**	**12 34 37.7**	**+0.3**
PVO				S	**Sb**	**12 34 49.8**	**+0.3**
	comp=E,1μm,0.4s						
PVO	**Paravola**	**0.81**	**75**	P	**Pg**	**12 34 37.6**	**+0.3**
PVO				S	**Sg**	**12 34 49.1**	**+1.2**
PVO				AML	AML	12 34 59.2	
	comp=E,2551μm,0.5s						
PVO				AML	AML	12 35 00.6	
	comp=N,2256μm,0.4s						
RLS	**Riolos of Patr**	**0.81**	**115**	P	**Pg**	**12 34 37.6**	**0.0**
RLS				S	**Sb**	**12 34 50.6**	**+0.9**
	comp=N,865nm,0.4s						
RLS	**Riolos of Patr**	**0.81**	**115**	P	**Pg**	**12 34 37.5**	**0.0**
RLS				S	**Sb**	**12 34 49.7**	**0.0**
RLS				AML	AML	12 34 56.8	
	comp=N,2049μm,0.4s						
RLS				AML	AML	12 34 57.0	
	comp=E,1414μm,0.4s						
DRO	**Drossia**	**1.03**	**116**	P	**Pg**	**12 34 41.6**	**-0.2**
DRO				S	**Sn**	**12 34 57.8**	**+0.1**
	comp=E,2μm,0.5s						
DRO	**Drossia**	**1.03**	**116**	P	**Pg**	**12 34 41.6**	**-0.2**
EFP	**Efpalio**	**1.08**	**89**	P	**Pg**	**12 34 41.7**	**-0.9**
EFP	**Efpalio**	**1.08**	**89**	P	**Pg**	**12 34 41.9**	**-0.8**
ANX	**Ano Chora**	**1.10**	**80**	P	**Pg**	**12 34 42.5**	**-0.6**
ANX	**Ano Chora**	**1.10**	**80**	P	**Pg**	**12 34 42.8**	**-0.3**
EVR	**Evrytania**	**1.12**	**63**	P	**Pg**	**12 34 42.7**	**-0.7**
LAKA	**Lakka**	**1.15**	**98**	P	**Pg**	**12 34 43.2**	**-0.8**
LAKA	**Lakka**	**1.15**	**98**	P	**Pg**	**12 34 43.0**	**-1.0**
SERG	**Sergoula**	**1.20**	**89**	P	**Pg**	**12 34 44.2**	**-0.7**
SERG	**Sergoula**	**1.20**	**89**	P	**Pg**	**12 34 43.9**	**-1.0**
ALIK	**Aliki, Aigiali**	**1.25**	**96**	P	**Pn**	**12 34 44.8**	**-1.1**
KALE	**Kalithea**	**1.26**	**90**	P	**Pn**	**12 34 44.9**	**-1.2**
KALE				S	**Sn**	**12 35 03.6**	**+0.1**
	comp=E,562nm,0.6s						
JAN	**Janina**	**1.27**	**11**	P	**Pg**	**12 34 46.7**	**+0.4**
AMT	**Artemida-Makis**	**1.28**	**133**	P	**Pg**	**12 34 47.0**	**+0.6**
AMT	**Artemida-Makis**	**1.28**	**133**	P	**Pn**	**12 34 46.4**	**+0.1**
KLV	**Kalavryta, Ach**	**1.33**	**105**	P	**Pn**	**12 34 46.1**	**-0.9**
KLV	**Kalavryta, Ach**	**1.33**	**105**	P	**Pn**	**12 34 46.1**	**-0.9**
MAKR	**Makrakomi, Fth**	**1.39**	**64**	P	**Pn**	**12 34 47.9**	**0.0**
AGG	**Agios Georgios**	**1.53**	**66**	P	**Pn**	**12 34 50.2**	**+0.4**
THL	**Klokotos Trika**	**1.63**	**45**	P	**Pb**	**12 34 51.9**	**-0.5**

*IDC **30** 12:50:01.1±1.2, 38°.50N×20°.51E, h0km, mb3.7/7, mb1 3.7/11, mb1mx3.5/51, mbtmp3.6/11, ML3.7/4, Error ellipse: s-maj=23.0km s-min=19.5km az=36.0*
*ATH **30** 12:50:01.3, 38°.38N×20°.37E, h11km±1km, ML3.7/26, Error ellipse: s-maj=1.3km s-min=0.7km az=280.0*
*THE **30** 12:50:02.7, 38°.37N×20°.46E, h5km±2km, ML3.8/8, Error ellipse: s-maj=2.0km s-min=0.3km az=31.0*
ISC 30 12:50:02.1±0.6,**38°.37N**±0'.02×**20°.46E**±0'.03,**h12**km±3km, **n79**,σ№**27**/119,**mb3.9**/7,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.09**	**66**	P	**Pg**	**12 50 04.4**	**-0.5**
VSK1				S	**Sg**	**12 50 06.0**	**-0.9**
KEF1	**Kardakata, Kep**	**0.09**	**173**	P	**Pb**	**12 50 04.5**	**-0.3**
KEF1				S	**Sb**	**12 50 06.8**	**0.0**
KEF4	**Livadi, Kephal**	**0.12**	**193**	P	**Pb**	**12 50 05.1**	**-1.2**
KEF4				S	**Sb**	**12 50 07.6**	**+0.3**
FSK	**Fiskardo**	**0.12**	**43**	P	**Pb**	**12 50 04.9**	**-1.5**
FSK				S	**Sg**	**12 50 07.0**	**-0.5**
	52μm,1.4s						
FSK	**Fiskardo**	**0.12**	**43**	P	**Pb**	**12 50 04.9**	**-1.5**
FSK				S	**Sb**	**12 50 07.8**	**+0.4**
LXR1	**Lixouri, Cepha**	**0.17**	**185**	P	**Pb**	**12 50 06.2**	**-1.0**
LXR1				S	**Sb**	**12 50 09.2**	**+0.6**
	181μm,0.2s						
KEF3	**Kipouria, Keph**	**0.19**	**207**	P	**Pg**	**12 50 04.8**	**-1.5**
KEF3				S	**Sg**	**12 50 07.5**	**-1.6**
ARG2	**Argostoli**	**0.19**	**173**	P	**Pb**	**12 50 06.4**	**-1.2**
ARG2				S	**Sb**	**12 50 09.4**	**+0.2**
	80μm,0.3s						
KEF2	**Argostoli. Kep**	**0.21**	**173**	P	**Pb**	**12 50 06.6**	**-1.3**
KEF2				S	**Sb**	**12 50 10.4**	**+0.8**
VLS	**Valsamata**	**0.22**	**152**	P	**Pb**	**12 50 06.7**	**-1.4**
VLS				S	**Sb**	**12 50 10.5**	**+0.5**
VLS				AML	AML	12 50 13.2	
	comp=E,50754μm,0.3s						
VLS				AML	AML	12 50 19.4	
	comp=N,54532μm,0.7s						
EVGI	**Lefkada island**	**0.29**	**32**	P	**Pb**	**12 50 08.2**	**-1.2**
EVGI				S	**Sb**	**12 50 12.9**	**-1.3**
EVGI	**Lefkada island**	**0.29**	**32**	P	**Pb**	**12 50 08.3**	**-1.1**
EVGI				S	**Sb**	**12 50 12.9**	**-1.3**
KFL	**Anninata**	**0.37**	**135**	P	**Pb**	**12 50 09.5**	**-1.2**
KFL				S	**Sb**	**12 50 15.4**	**-1.0**
	comp=N,23μm,0.4s						
KFL	**Anninata**	**0.37**	**135**	P	**Pb**	**12 50 09.4**	**-1.2**
KFL				S	**Sb**	**12 50 15.7**	**-0.7**
KFL				AML	AML	12 50 17.9	
	comp=N,45564μm,0.4s						
KFL				AML	AML	12 50 18.1	
	comp=E,46936μm,0.3s						
MGNA	**Meganis**	**0.39**	**43**	P	**Pb**	**12 50 09.7**	**-1.2**
MGNA				S	**Sb**	**12 50 16.5**	**-0.4**
MGNA				AML	AML	12 50 16.8	
	comp=N,28529μm,0.5s						
MGNA				AML	AML	12 50 17.1	
	comp=E,20729μm,0.2s						
LKD2	**Lefkada island**	**0.45**	**21**	P	**Pb**	**12 50 11.1**	**-0.9**
LKD2				S	**Sb**	**12 50 17.8**	**-0.8**
TSLK	**Tsoukalades, L**	**0.48**	**19**	P	**Pb**	**12 50 11.6**	**-0.9**
TSLK				S	**Sb**	**12 50 19.5**	**-0.1**
	comp=E,6μm,0.9s						
TSLK	**Tsoukalades, L**	**0.48**	**19**	P	**Pb**	**12 50 11.6**	**-0.9**
TSLK				S	**Sg**	**12 50 17.1**	**-0.8**
TSLK				AML	AML	12 50 22.1	
	comp=E,8884μm,0.6s						
TSLK				AML	AML	12 50 25.6	
	comp=N,10769μm,0.7s						
VLMS	**Volimes, Zakyn**	**0.52**	**162**	P	**Pb**	**12 50 12.1**	**-1.1**
VLMS				S	**Sb**	**12 50 19.0**	**-1.7**
VLMS				AML	AML	12 50 22.8	
	comp=E,22374μm,0.4s						
VLMS				AML	AML	12 50 22.9	
	comp=N,41942μm,0.6s						
AST1	**Astakos**	**0.53**	**71**	P	**Pb**	**12 50 12.6**	**-0.7**
AST1				S	**Sb**	**12 50 20.6**	**-0.2**
	comp=N,12μm,0.3s						
PDO	**Prodromos**	**0.61**	**68**	P	**Pb**	**12 50 14.0**	**-0.8**
PDO				S	**Sb**	**12 50 22.7**	**-0.7**
	comp=N,11μm,0.6s						
PDO	**Prodromos**	**0.61**	**68**	P	**Pn**	**12 50 14.3**	**-2.4**
PDO				S	**Sn**	**12 50 23.4**	**-3.2**
PDO				AML	AML	12 50 32.5	
	comp=N,17693μm,0.5s						
PDO				AML	AML	12 50 33.4	
	comp=E,12290μm,0.6s						
KRI1	**kERI**	**0.76**	**158**	P	**Pb**	**12 50 16.2**	**-1.2**
KRI1				S	**Sn**	**12 50 28.9**	**-1.3**
	comp=E,9μm,0.4s						
RLS	**Riolos of Patr**	**0.85**	**111**	P	**Pn**	**12 50 18.5**	**-1.5**
RLS				S	**Sn**	**12 50 31.8**	**-0.6**
RLS				AML	AML	12 50 42.9	
	comp=N,4918μm,0.4s						
RLS				AML	AML	12 50 45.8	
	comp=E,4668μm,0.9s						
PVO	**Paravola**	**0.87**	**73**	P	**Pn**	**12 50 19.0**	**-1.2**
PVO	**Paravola**	**0.87**	**73**	P	**Pn**	**12 50 19.1**	**-1.2**
PVO				S	**Sn**	**12 50 31.8**	**-1.1**
PVO				AML	AML	12 50 40.1	
	comp=E,14695μm,0.6s						
PVO				AML	AML	12 50 40.5	
	comp=N,14402μm,0.5s						
UPR	**University Cam**	**1.05**	**94**	P	**Pg**	**12 50 23.3**	**+1.0**
DRO	**Drossia**	**1.07**	**113**	P	**Pg**	**12 50 22.0**	**-0.8**
DRO	**Drossia**	**1.07**	**113**	P	**Pg**	**12 50 22.1**	**-0.7**
DRO				S	**Sn**	**12 50 38.7**	**+0.8**
DRO				AML	AML	12 50 56.6	
	comp=N,8746μm,0.8s						
DRO				AML	AML	12 50 58.6	
	comp=E,12399μm,0.6s						
EFP	**Efpalio**	**1.14**	**87**	P	**Pg**	**12 50 22.9**	**-1.2**
EFP				S	**Sn**	**12 50 40.8**	**+1.3**
EFP	**Efpalio**	**1.14**	**87**	P	**Pg**	**12 50 23.2**	**-0.9**
EFP				S	**Sn**	**12 50 41.3**	**+1.8**
EFP				AML	AML	12 50 49.2	
	comp=N,8064μm,0.6s						
EFP				AML	AML	12 50 50.1	
	comp=E,4671μm,0.6s						
ANX	**Ano Chora**	**1.17**	**79**	P	**Pg**	**12 50 23.7**	**-1.0**
ANX	**Ano Chora**	**1.17**	**79**	P	**Pg**	**12 50 24.0**	**-0.7**
ANX				AML	AML	12 50 51.6	
	comp=N,7895μm,0.8s						
ANX				AML	AML	12 50 54.1	
	comp=E,8412μm,0.8s						
EVR	**Evrytania**	**1.19**	**62**	P	**Pg**	**12 50 24.2**	**-0.8**
EVR				S	**Sg**	**12 50 41.5**	**+0.9**
EVR				AML	AML	12 50 52.2	
	comp=E,2420μm,0.6s						
EVR				AML	AML	12 50 52.2	
	comp=N,2013μm,0.6s						
LAKA	**Lakka**	**1.20**	**96**	P	**Pg**	**12 50 24.1**	**-1.2**
LAKA				S	**Sg**	**12 50 43.2**	**+2.2**
LAKA	**Lakka**	**1.20**	**96**	P	**Pg**	**12 50 24.4**	**-0.9**
LAKA				S	**Sg**	**12 50 43.1**	**+2.2**
LAKA				AML	AML	12 50 54.2	
	comp=E,3710μm,1.5s						
LAKA				AML	AML	12 50 57.0	
	comp=N,3256μm,2.1s						
SERG	**Sergoula**	**1.26**	**88**	P	**Pg**	**12 50 24.9**	**-1.4**
SERG	**Sergoula**	**1.26**	**88**	P	**Pg**	**12 50 25.6**	**-0.7**
SERG				AML	AML	12 50 51.1	
	comp=E,5352μm,0.9s						
SERG				AML	AML	12 50 51.9	
	comp=N,3319μm,0.9s						
TRIZ	**Trizonia**	**1.27**	**90**	P	**Pg**	**12 50 25.1**	**-1.4**
TRIZ	**Trizonia**	**1.27**	**90**	P	**Pg**	**12 50 25.3**	**-1.3**
TRIZ				S	**Sg**	**12 50 44.5**	**+1.4**
AMT	**Artemida-Makis**	**1.30**	**130**	P	**Pg**	**12 50 26.4**	**-0.6**
AMT	**Artemida-Makis**	**1.30**	**130**	P	**Pg**	**12 50 27.1**	**0.0**
AMT				S	**Sg**	**12 50 45.3**	**+1.4**
AMT				AML	AML	12 50 56.5	
	comp=E,12174μm,0.8s						
AMT				AML	AML	12 50 57.9	
	comp=N,8756μm,0.7s						
ALIK	**Aliki, Aigiali**	**1.31**	**94**	P	**Pg**	**12 50 26.2**	**-1.0**
KALE	**Kalithea**	**1.32**	**89**	P	**Pb**	**12 50 25.9**	**-1.1**
KALE	**Kalithea**	**1.32**	**89**	P	**Pg**	**12 50 26.3**	**-1.3**
KALE				S	**Sg**	**12 50 47.8**	**+3.0**
KALE				AML	AML	12 50 58.9	
	comp=N,4013μm,0.6s						
KALE				AML	AML	12 51 03.9	
	comp=E,3181μm,0.7s						
MAKR	**Makrakomi, Fth**	**1.46**	**63**	P	**Pg**	**12 50 29.0**	**-1.1**
MAKR	**Makrakomi, Fth**	**1.46**	**63**	P	**Pg**	**12 50 29.0**	**-1.1**
MAKR				S	**Sg**	**12 50 50.5**	**+1.4**
MAKR				AML	AML	12 51 00.6	
	comp=N,3377μm,0.6s						
MAKR				AML	AML	12 51 05.5	
	comp=E,4526μm,0.8s						
AGG	**Agios Georgios**	**1.60**	**66**	P	**Pg**	**12 50 33.4**	**+0.5**
AGG				AML	AML	12 51 05.8	
	comp=E,3705μm,1.4s						
AGG				AML	AML	12 51 08.7	
	comp=N,2329μm,0.9s						
ITM	**Ithomi**	**1.67**	**135**	P	**Pg**	**12 50 33.8**	**-0.2**
ITM				S	**Sg**	**12 50 56.9**	**+1.2**
ITM				AML	AML	12 51 03.3	
	comp=E,2150μm,0.9s						
ITM				AML	AML	12 51 10.1	
	comp=N,2900μm,0.8s						
THL	**Klokotos Trika**	**1.70**	**45**	P	**Pg**	**12 50 34.2**	**-0.6**
THL				S	**Sg**	**12 50 57.7**	**+0.8**
THL				AML	AML	12 51 06.8	
	comp=E,1809μm,0.8s						
THL				AML	AML	12 51 09.2	
	comp=N,1807μm,1.1s						
AXAR	**Agios Charalam**	**1.77**	**76**	P	**Pg**	**12 50 35.2**	**-0.9**
AXAR				S	**Sg**	**12 50 59.5**	**+0.4**
AXAR				AML	AML	12 51 15.2	
	comp=E,3887μm,0.8s						
AXAR				AML	AML	12 51 15.5	
	comp=N,8494μm,0.8s						
PYL	**PYLOS**	**1.79**	**145**	P	**Pb**	**12 50 33.9**	**-1.0**
PYL	**PYLOS**	**1.79**	**145**	P	**Pb**	**12 50 34.6**	**-0.4**
PYL				S	**Sg**	**12 50 59.8**	**0.0**
PYL				AML	AML	12 51 21.4	
	comp=E,1224μm,0.8s						
PYL				AML	AML	12 51 23.1	
	comp=N,1072μm,0.7s						
PROD	**Prodromos**	**1.93**	**93**	P	**Pb**	**12 50 36.2**	**-1.0**
PROD				S	**Sg**	**12 51 03.2**	**-0.8**
PROD				AML	AML	12 51 10.3	
	comp=N,1642μm,0.8s						
PROD				AML	AML	12 51 15.8	
	comp=E,2572μm,1.0s						
LTK	**Loutraki**	**2.01**	**99**	P	**Pb**	**12 50 38.1**	**-0.5**
LKR	**Lokris**	**2.01**	**81**	P	**Pg**	**12 50 38.6**	**-2.1**
LOUT	**Loutraki**	**2.02**	**100**	P	**Pb**	**12 50 38.5**	**-0.3**
VIL2	**Platees**	**2.22**	**93**	P	**Pb**	**12 50 42.1**	**0.0**
VIL2				AML	AML	12 51 29.9	
	comp=E,2020μm,1.1s						
VIL2				AML	AML	12 51 30.8	
	comp=N,1324μm,0.6s						
NEO	**Neokhori**	**2.35**	**66**	P	**Pb**	**12 50 43.0**	**-1.6**
DID	**Didima**	**2.36**	**111**	P	**Pb**	**12 50 42.5**	**-2.1**
DID	**Didima**	**2.36**	**111**	P	**Pb**	**12 50 43.5**	**-1.1**
DID				AML	AML	12 51 25.0	
	comp=E,1323μm,0.6s						
DID				AML	AML	12 51 28.0	
	comp=N,1734μm,0.9s						
MRKA	**Markates**	**2.48**	**81**	P	**Pb**	**12 50 44.8**	**-1.8**
VLY	**Voula,Athens**	**2.68**	**100**	P	**Pb**	**12 50 47.4**	**-2.7**
SG1	**Sgolgore (BA)**	**3.82**	**311**	*e*Pn	**Pn**	**12 51 02.3**	**+1.5**
IDI	**Anoyia**	**4.70**	**130**	Pn	**Pn**	**12 51 14.1**	**+1.1**
	comp=N,0.4nm,0.3s,baz=307,slow=15,SNR=3.4						
IDI				Sn	**Sn**	**12 52 08.2**	**+0.6**
	comp=N,1.3nm,0.3s,baz=304,slow=18,SNR=3.6						
MLR	**Muntele Rosu**	**8.20**	**28**	Pn	Pn	12 52 08.0	+6.9
	comp=N,0.3nm,0.3s,baz=86,slow=19,SNR=2.9						
SOKA	**Soboth**	**9.21**	**336**	*e*Pn	**Pn**	**12 52 15.0**	**+0.1**
	comp=N,2.1nm,0.3s						
OBKA	**Obir**	**9.23**	**334**	Pn	**Pn**	**12 52 16.6**	**+1.5**
	comp=N,4.1nm,0.6s						
OBKA				*i* Sn	**Sn**	**12 54 03.6**	**+4.8**
	comp=N,5.6nm,0.6s						
BRTR	**Keskin Array B**	**10.34**	**78**	Pn	Pn	12 52 35.9	+5.4
	comp=N,0.2nm,0.3s,baz=264,slow=14,SNR=5.3						
MOA	**Molln**	**10.49**	**336**	*i* Pn	**Pn**	**12 52 33.0**	**+0.7**
	comp=N,3.1nm,0.6s						
GERES	**GERESS Array B**	**11.55**	**337**	Pn	**Pn**	**12 52 46.4**	**-0.5**
	comp=N,0.2nm,0.3s,baz=156,slow=13,SNR=5.4						
ESDC	**Sonseca Array**	**19.01**	**282**	P	**Pn**	**12 54 25.3**	**+0.7**
	comp=N,0.3nm,0.3s,baz=90,slow=11,SNR=3.1						
HFS	**Hagfors**	**22.20**	**351**	P	**P**	**12 54 58.9**	**+0.8**
	comp=N,4.0nm,0.8s,baz=165,slow=13,SNR=7.5						
FINES	**FINESS Array B**	**23.36**	**7**	P	**P**	**12 55 09.7**	**-0.5**
	comp=N,3.5nm,0.9s,baz=184,slow=13,SNR=5.1						
NOA	**NORSAR Array B**	**23.42**	**349**	P	**P**	**12 55 10.3**	**-0.6**
	comp=N,0.8nm,0.6s,baz=162,slow=9.8,SNR=2.8						
TORD	**Torodi Ar. Bea**	**30.15**	**219**	P	**P**	**12 56 13.6**	**+1.5**
	comp=N,0.5nm,0.9s,baz=32,slow=8.5,SNR=2.7						
MKAR	**Makanchi Array**	**45.24**	**59**	P	**P**	**12 58 19.0**	**-0.2**
	comp=N,0.6nm,0.4s,baz=275,slow=7.2,SNR=19						
ZALV	**Zalesovo Beam**	**45.60**	**48**	P	**P**	**12 58 20.7**	**-1.3**
	comp=N,1.8nm,0.4s,baz=275,slow=9.8,SNR=8.5						
YKA	**Yellowknife Ar**	**73.19**	**340**	P	**P**	**13 01 33.1**	**+0.7**
	comp=N,0.1nm,0.5s,baz=36,slow=5.3,SNR=3.5						

*UPA **30** 13:00:13.8±2.1, 7°.62N×77°.12W, h8km±10km, MW3.8*
*RSNC **30** 13:00:14.4±0.8, 7°.62N×77°.09W, h7km±4km, ML3.2, Mw3.4*
*IDC **30** 13:00:23.4±3.5, 7°.51N×76°.72W, h107km±42km, mb2.9/4, mb1 3.3/6, mb1mx3.2/26, mbtmp3.4/6, Error ellipse: s-maj=34.8km s-min=21.4km az=99.0*
ISC 30 13:00:12.7±1.2,**7°.60N**±0'.02×**77°.10W**±0'.02,**h6**km±8km,**n41**, σ№**98**/73,**mb3.4**/4,**1D**,**Panama-Colombia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTAC	**Punta Ardita,**	**0.84**	**238**	*e*P	**Pg**	**13 00 29.7**	**+0.9**
PTAC				*e*S	**Sg**	**13 00 41.4**	**+1.8**
PTAC				*i*		13 00 43.7	
	comp=Z,12μm,0.2s						
PTAC	**Punta Ardita,**	**0.84**	**238**	*e*P	**Pg**	**13 00 29.8**	**+0.9**
PTAC				*e*S	**Sg**	**13 00 41.4**	**+1.8**
DBBC	**Dabeiba**	**1.05**	**123**	*e*P	**Pg**	**13 00 32.7**	**-0.1**
DBBC				*e*S	**Sb**	**13 00 47.8**	**+0.3**
DBBC				*i*		13 00 50.2	
	comp=Z,446nm,0.3s						
DBBC				*i*		13 00 50.6	
	comp=Z,534nm,0.5s						
DBBC	**Dabeiba**	**1.05**	**123**	*e*P	**Pg**	**13 00 32.9**	**0.0**
DBBC				*e*S	**Sb**	**13 00 47.5**	**+0.1**
UPD2	**Meteti**	**1.31**	**316**	*e*P

SJCC				*e*S		**Sn**	**13 01 32.6**	**-3.7**
SJCC				*i*			13 01 45.6	
	comp=Z,24nm,0.8s							
SJCC	**San Jacinto, C**	**2.97**	**40**	*e*S		**Sn**	**13 01 37.0**	**+0.7**
NORC	**Norcasia**	**3.00**	**132**	*e*P		**Pn**	**13 01 03.8**	**+3.0**
NORC				*e*S		**Sb**	**13 01 43.1**	**-0.3**
NORC				*i*			13 01 53.8	
	comp=Z,49nm,0.6s							
AZU	**Azuero**	**3.16**	**274**	*e*S		**Sn**	**13 01 39.1**	**-1.8**
SMLC	**San Martn de**	**3.22**	**68**	*e*P		**Pn**	**13 01 06.0**	**+2.1**
SMLC				*e*S		**Sn**	**13 01 42.0**	**-0.6**
SMLC				*i*			13 01 50.4	
	comp=Z,39nm,0.5s							
BRRC	**Barranca, Sant**	**3.39**	**98**	*e*P		**Pn**	**13 01 07.8**	**+1.6**
BRRC				*e*S		**Sn**	**13 01 45.5**	**-1.2**
BRRC				*i*			13 01 56.5	
	comp=Z,45nm,0.3s							
YOTC	**Yotoco, Valle**	**3.67**	**168**	⇓*e*P		**Pn**	**13 01 09.4**	**-0.7**
YOTC				*e*S		**Sn**	**13 01 48.0**	**-5.8**
YOTC				*i*			13 01 52.1	
	comp=Z,22nm,0.5s							
OCAC	**Ocana**	**3.79**	**80**	*e*P		**Pn**	**13 01 13.4**	**+1.6**
OCAC				*e*S		**Sn**	**13 01 56.4**	**-0.5**
OCAC				*i*			13 02 07.5	
	comp=Z,33nm,0.5s							
ROSC	**El Rosal**	**3.89**	**135**	P		**Pb**	**13 01 18.3**	**-3.6**
	comp=Z,6.6nm,0.3s,baz=240,slow=16,SNR=4.1							
ROSC				S		**Sn**	**13 01 59.1**	**-0.5**
	comp=Z,3.0nm,0.3s,baz=282,slow=19,SNR=2.9							
BARC	**Barichara**	**4.01**	**104**	*e*P		**Pn**	**13 01 16.1**	**+1.2**
BARC				*e*S		**Sn**	**13 02 02.2**	**-0.1**
BARC				*i*			13 02 07.6	
	comp=Z,110nm,0.5s							
BARC				*i*			13 02 07.9	
	comp=Z,122nm,0.4s							
CODC	**Agustn Codazz**	**4.29**	**57**	*e*P		**Pn**	**13 01 19.6**	**+1.0**
CODC				*e*S		**Sn**	**13 02 06.2**	**-2.7**
CODC				*i*			13 02 19.9	
	comp=Z,7.8nm,1.0s							
RUSC	**La Rusia**	**4.33**	**113**	*e*P		**Pn**	**13 01 21.7**	**+2.2**
RUSC				*e*S		**Sn**	**13 02 11.4**	**+0.8**
RUSC				*i*			13 02 29.9	
	comp=Z,48nm,0.8s							
PAMC	**Pamplona, Colo**	**4.37**	**93**	*e*P		**Pn**	**13 01 21.9**	**+1.9**
PAMC				*e*S		**Sn**	**13 02 10.8**	**-0.7**
PAMC				*i*			13 02 18.6	
	comp=Z,46nm,0.4s							
PAMC				*i*			13 02 19.2	
	comp=Z,41nm,0.3s							
PRAC	**Prado**	**4.44**	**150**	*e*P		**Pn**	**13 01 25.3**	**+4.6**
PRAC				*e*S		**Sb**	**13 02 20.5**	**-4.6**
PRAC				*i*			13 02 53.8	
	comp=Z,20nm,3.0s							
CHIC	**Chingaza**	**4.46**	**131**	*e*P		**Pn**	**13 01 25.8**	**+4.6**
CHIC				*e*S		**Sb**	**13 02 22.4**	**-3.5**
CHIC				*i*			13 02 38.3	
	comp=Z,29nm,1.1s							
SDV	**Santo Domingo**	**6.52**	**78**	P		**Pn**	**13 01 51.9**	**+2.5**
	comp=Z,1.9nm,0.3s,baz=270,slow=6.1,SNR=10							
SDV				S		**Sn**	**13 03 01.9**	**-2.3**
	comp=Z,2.1nm,0.3s,baz=334,slow=12,SNR=3.6							
TXAR	**Lajitas Array**	**33.05**	**314**	P		**P**	**13 06 50.8**	**+1.6**
	comp=Z,0.2nm,0.8s,baz=112,slow=6.9,SNR=2.5							
PDAR	**Pinedale Array**	**45.18**	**326**	P		**P**	**13 08 33.3**	**+2.5**
	comp=Z,0.2nm,0.5s,baz=116,slow=10,SNR=2.8							
YKA	**Yellowknife Ar**	**61.22**	**341**	P		**P**	**13 10 29.0**	**+0.9**
	comp=Z,0.5nm,0.6s,baz=132,slow=6.9,SNR=12							
ILAR	**Eielson Array**	**74.61**	**335**	P		**P**	**13 11 50.9**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=126,slow=5.3,SNR=3.5							
ASAR	**Alice Springs**	**146.26**	**238**	PKPbc		**PKPdf**	**13 19 52.4**	**-1.7**
	comp=Z,0.3nm,0.6s,baz=110,slow=3.9,SNR=5.3							

RSPR ***30*** *13:00:39.0, 19˚.42N×65˚.66W, h14km±7km, MD3.1/4*
NEIC ***30*** *13:00:38.2±0.6, 19˚.38N±0˚.04×65˚.61W±0˚.06, h32km±12km,*
Error ellipse: s-maj=8.5km s-min=5.0km az=126.0
ISC 30 13:00:38.1±3.1**, 19˚.4N**±0˚.1×**65˚.6W**±0˚.1**, h33**km±4km**, n19, σ0§52/29, 9D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**1.15**	**191**	⇓*e*P			**Pn**	**13 00 57.4**	**-0.4**
CBYP	**Canovanas**	**1.15**	**191**	⇓*e*P			**Pn**	**13 00 57.4**	**-0.4**
CBYP				*e*S			**Sn**	**13 01 12.2**	**-0.2**
CBYP	**Canovanas**	**1.15**	**191**				**Pn**	**13 00 57.4**	**-0.4**
CBYP							**Sn**	**13 01 12.2**	**-0.2**
HUMP	**Col San Antoni**	**1.27**	**190**	⇓*e*P			**Pn**	**13 00 59.3**	**-0.2**
HUMP	**Col San Antoni**	**1.27**	**190**	⇓*e*P			**Pn**	**13 00 59.3**	**-0.2**
HUMP				*e*S			**Sn**	**13 01 15.3**	**-0.1**
HUMP	**Col San Antoni**	**1.27**	**190**				**Pn**	**13 00 59.3**	**-0.2**
HUMP							**Sn**	**13 01 15.3**	**-0.1**
MTP	**Monte Pirata**	**1.30**	**177**	⇓*e*P			**Pn**	**13 01 00.1**	**+0.2**
MTP	**Monte Pirata**	**1.30**	**177**	⇓*e*P			**Pn**	**13 01 00.1**	**+0.2**
MTP				*e*S			**Sn**	**13 01 16.1**	**+0.1**
MTP	**Monte Pirata**	**1.30**	**177**				**Pn**	**13 01 00.1**	**+0.2**
MTP							**Sn**	**13 01 16.1**	**+0.1**
AOPR	**Arecibo Observ**	**1.50**	**226**	⇓*e*P			**Pn**	**13 01 02.3**	**-0.3**
AOPR	**Arecibo Observ**	**1.50**	**226**	⇓*e*P			**Pn**	**13 01 02.3**	**-0.3**
AOPR				*e*S			**Sn**	**13 01 20.5**	**-0.6**
AOPR	**Arecibo Observ**	**1.50**	**226**				**Pn**	**13 01 02.3**	**-0.3**
AOPR							**Sn**	**13 01 20.5**	**-0.6**
IGPR	**InterUniversit**	**1.50**	**198**	⇓*e*P			**Pn**	**13 01 02.6**	**-0.1**
IGPR	**InterUniversit**	**1.50**	**198**	*e*S			**Sn**	**13 01 21.1**	**+0.1**
OBIP	**Obispado Ponce**	**1.64**	**215**		Pn		**Pn**	**13 01 06.0**	**+1.4**
OBIP					Sn		**Sb**	**13 01 28.1**	**0.0**
AGPR	**Aguadilla, PR**	**1.69**	**237**		Pn		**Pb**	**13 01 08.5**	**-0.1**
MLPR	**Magueyes Islan**	**1.96**	**224**		Pn		**Pn**	**13 01 10.7**	**+1.7**
MLPR					Sn		**Sn**	**13 01 32.7**	**+0.3**
DR12	**Loma Pena Alta**	**3.61**	**261**		Pn		**Pn**	**13 01 31.4**	**-0.3**
SDDR	**Presa de Saban**	**5.37**	**266**		Pn		**Pn**	**13 01 56.2**	**+0.3**

JMA ***30*** *13:17:14.0±0.1, 23˚.47N×122˚.02E, h28km, M2.7*
TAP ***30*** *13:17:15.1, 23˚.47N×122˚.00E, h34km, ML3.4, D*
ISC 30 13:17:14.3±1.0**, 23˚.46N**±0˚.02×**122˚.00E**±0˚.02**, h27**km±10km**, n111, σ0§84/207, 17D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HGSD	**Ruisui**	**0.53**	**273**	*i* P			**Pb**	**13 17 25.3**	**+0.2**
	baz=273								
HGSD				S			**Sb**	**13 17 32.8**	**+0.3**
	baz=273								
EGFH	**Guangfu**	**0.57**	**291**	*i* P			**Pb**	**13 17 25.9**	**+0.2**
	baz=300								
EGFH				*e*S			**Sb**	**13 17 34.3**	**+0.8**
	baz=300								
ENLB	**Shoufeng**	**0.57**	**320**	*i* P			**Pb**	**13 17 25.0**	**-0.8**
	baz=329								
ENLB				S			**Sb**	**13 17 33.1**	**-0.5**
	baz=329								
EHY	**Hungye**	**0.63**	**274**	⇓*i* P			**Pb**	**13 17 27.1**	**+0.3**
	baz=274								
EHY				*e*S			**Sb**	**13 17 36.0**	**+0.8**
	baz=274								
ESL	**Shilin**	**0.63**	**304**	⇓*i* P			**Pb**	**13 17 26.5**	**-0.3**
	baz=297								
ESL				*e*S			**Sb**	**13 17 34.4**	**-0.9**
	baz=297								
HWA	**Hwalien**	**0.63**	**325**	*e*P			**Pb**	**13 17 26.0**	**-0.8**
	baz=332								
HWA				*e*S			**Sb**	**13 17 35.7**	**+0.5**
	baz=332								
YULB	**Yu-li**	**0.65**	**264**	P			**Pb**	**13 17 27.2**	**0.0**
	baz=259								
YULB				*e*S			**Sn**	**13 17 37.1**	**-0.1**
	baz=259								
TWF1	**Yuli**	**0.66**	**261**	⇓*i* P			**Pb**	**13 17 27.4**	**+0.2**
	baz=256								
TWF1				*e*S			**Sn**	**13 17 37.6**	**+0.3**
	baz=256								
CHKT	**Chengkung**	**0.69**	**238**	P			**Pb**	**13 17 27.4**	**-0.3**
	baz=232								
CHKT				*e*S			**Sb**	**13 17 36.2**	**-0.6**
	baz=232								
FULB	**Fuli**	**0.70**	**248**	*i* P			**Pn**	**13 17 27.6**	**-0.8**
	baz=238								
FULB				S			**Sb**	**13 17 36.8**	**-0.5**
	baz=238								
TWD	**Chiawan**	**0.72**	**329**	⇓*i* P			**Pn**	**13 17 27.9**	**-0.8**
	baz=329								
TWD				S			**Sb**	**13 17 37.1**	**-0.7**
	baz=329								
NACB	**Ninganchiao**	**0.80**	**332**	⇓*i* P			**Pn**	**13 17 29.1**	**-0.7**
	baz=332								
NACB				S			**Sb**	**13 17 39.3**	**-0.8**
	baz=332								
VWDT	**VWDT**	**0.84**	**290**	⇓*i* P			**Pn**	**13 17 30.5**	**+0.2**
	baz=290								
VWDT				*e*S			**Sn**	**13 17 40.8**	**-1.0**
	baz=290								
ETLH	**Xiulin Townshi**	**0.88**	**327**	⇓*i* P			**Pn**	**13 17 30.5**	**-0.5**
	baz=327								
ETLH				*e*S			**Sn**	**13 17 41.2**	**-1.8**
	baz=327								
TWH	**Lutao**	**0.89**	**213**	*i* P			**Pn**	**13 17 30.6**	**-0.4**
	baz=211								
TWH				*e*S			**Sn**	**13 17 41.4**	**-1.6**
	baz=211								
OWD	**Renai**	**0.90**	**303**	⇓*i* P			**Pn**	**13 17 31.1**	**-0.3**
	baz=303								
OWD				*e*S			**Sn**	**13 17 41.9**	**-1.7**
	baz=303								
ELDTW	**Lidau**	**0.95**	**253**	P			**Pn**	**13 17 31.4**	**-0.5**
	baz=243								
ELDTW				*e*S			**Sn**	**13 17 42.7**	**-1.8**
	baz=243								
WHF	**Hehuan Shan**	**0.96**	**315**	⇓*i* P			**Pn**	**13 17 31.9**	**-0.4**
	baz=315								
WHF				*e*S			**Sn**	**13 17 43.8**	**-1.6**
	baz=315								
CHGB	**Renai**	**0.96**	**308**	⇓*i* P			**Pn**	**13 17 32.3**	**0.0**
	baz=308								
CHGB				*e*S			**Sn**	**13 17 43.7**	**-1.5**
	baz=308								
NANB	**Nanao**	**0.99**	**347**	⇓*i* P			**Pn**	**13 17 32.2**	**-0.2**
	baz=346								
NANB				*e*S			**Sn**	**13 17 44.6**	**-0.9**
	baz=346								
ENA	**Nanau**	**0.99**	**346**	P			**Pn**	**13 17 32.2**	**-0.2**
	baz=346								
ENA				*e*S			**Sn**	**13 17 44.9**	**-0.6**
	baz=346								
SSLB	**Suanglung**	**1.01**	**289**	P			**Pn**	**13 17 32.7**	**0.0**
	baz=289								
SSLB				*e*S			**Sn**	**13 17 44.8**	**-1.3**
	baz=289								
TTN	**Taitung**	**1.06**	**228**	*e*S			**Sn**	**13 17 45.7**	**-1.5**
	baz=228								
TWGBT	**Beinan**	**1.06**	**233**	*e*P			**Pn**	**13 17 33.1**	**-0.3**
	baz=242								
TWGBT				*e*S			**Sn**	**13 17 45.7**	**-1.6**
	baz=242								
TWG	**Pinlang**	**1.07**	**233**	*e*P			**Pn**	**13 17 33.2**	**-0.3**
	baz=242								
TWG				*e*S			**Sn**	**13 17 45.7**	**-1.7**
	baz=242								
WHYT	**Xinyi Township**	**1.08**	**283**	⇓*i* P			**Pb**	**13 17 34.4**	**0.0**
	baz=277								
WHYT				*e*S			**Sn**	**13 17 48.1**	**+0.4**
	baz=277								
EOS1	**EOS1**	**1.09**	**6**	P			**Pb**	**13 17 34.4**	**-0.1**
	baz=15								
EOS1				*e*S			**Sb**	**13 17 48.8**	**+0.5**
	baz=15								
TWT	**Tachien**	**1.09**	**316**	P			**Pn**	**13 17 34.5**	**+0.5**
	baz=315								
TWT				*e*S			**Sn**	**13 17 47.7**	**-0.5**
	baz=315								
SMLT	**Sun Moon Lake**	**1.09**	**293**	P			**Pn**	**13 17 34.3**	**+0.4**
	baz=298								
SMLT				*e*S			**Sn**	**13 17 47.3**	**-0.9**
	baz=298								
ALS	**Alishan**	**1.10**	**273**	⇓*i* P			**Pb**	**13 17 35.0**	**+0.2**
	baz=273								
ALS				*e*S			**Sn**	**13 17 48.9**	**+0.2**
	baz=273								
TDCB	**Techi**	**1.10**	**316**	⇓*i* P			**Pn**	**13 17 34.5**	**+0.4**
	baz=315								
TDCB				*e*S			**Sn**	**13 17 47.5**	**-1.0**
	baz=315								
NNSB	**Datong**	**1.12**	**330**	P			**Pn**	**13 17 34.4**	**+0.1**
	baz=319								
NNSB				*e*S			**Sn**	**13 17 47.8**	**-1.1**
	baz=319								
NNSH	**Datong**	**1.12**	**330**	P			**Pn**	**13 17 34.3**	**0.0**
	baz=329								
NNSH				*e*S			**Sn**	**13 17 47.6**	**-1.3**
	baz=329								
NNS	**Nan Shan**	**1.13**	**330**	P			**Pn**	**13 17 34.5**	**+0.1**
	baz=320								
NNS				*e*S			**Sn**	**13 17 48.3**	**-0.9**
	baz=320								
DPDB	**Guoxing**	**1.14**	**300**	⇓*i* P			**Pn**	**13 17 35.1**	**+0.6**
	baz=308								
DPDB				*e*S			**Sn**	**13 17 47.1**	**-2.2**
	baz=308								
TYC	**Yuchr**	**1.14**	**293**	*e*P			**Pn**	**13 17 35.0**	**+0.6**
	baz=293								
TYC				*e*S			**Sb**	**13 17 50.1**	**+0.3**
	baz=293								
TWC	**Suao**	**1.15**	**353**	*e*P			**Pn**	**13 17 35.1**	**+0.5**
	baz=353								
TWC				*e*S			**Sn**	**13 17 49.6**	**+0.1**
	baz=353								
STYT	**Tauyuan**	**1.18**	**256**	*e*P			**Pn**	**13 17 35.6**	**+0.5**
	baz=249								
STYT				*e*S			**Sn**	**13 17 50.6**	**+0.3**
	baz=249								
NDT	**Datong Townshi**	**1.22**	**339**	*i* P			**Pn**	**13 17 36.0**	**+0.4**
	baz=338								
NDT				*e*S			**Sb**	**13 17 51.8**	**-0.4**
	baz=338								
CHN5	**Tsauling**	**1.22**	**277**	*i* P			**Pb**	**13 17 37.1**	**+0.2**
	baz=276								
CHN5				*e*S			**Sb**	**13 17 53.3**	**+1.1**
	baz=276								
WJS	**Zhushan**	**1.22**	**287**	*e*P			**Pb**	**13 17 37.3**	**+0.6**
	baz=287								
WJS				*e*S			**Sb**	**13 17 53.4**	**+1.2**
	baz=287								
ENTT	**Nioudou**	**1.24**	**341**	*i* P			**Pn**	**13 17 36.3**	**+0.4**
	baz=341								
ENTT				*e*S			**Sn**	**13 17 50.2**	**-1.5**
	baz=341								
WHP	**Taichung City**	**1.26**	**310**	⇓*i* P			**Pb**	**13 17 37.1**	**-0.4**
	baz=319								
WHP				*e*S			**Sn**	**13 17 52.9**	**+0.5**
	baz=319								
TPUB	**Ta-pu**	**1.27**	**263**	P			**Pb**	**13 17 37.5**	**-0.1**
	baz=268								
TPUB				*e*S			**Sb**	**13 17 53.7**	**+0.1**
	baz=268								
WNT	**Mingjian**	**1.28**	**289**	P			**Pb**	**13 17 38.3**	**+0.6**
	baz=289								
WNT				*e*S			**Sb**	**13 17 54.9**	**+1.2**
	baz=289								
TWE	**Neicheng**	**1.29**	**346**	*i* P			**Pb**	**13 17 37.3**	**-0.6**
	baz=341								
TWE				*e*S			**Sn**	**13 17 53.2**	**+0.3**
	baz=341								
ECL	**Taimali**	**1.29**	**228**	*e*P			**Pn**	**13 17 36.1**	**-0.5**
	baz=228								
ECL				*e*S			**Sn**	**13 17 50.6**	**-2.4**
	baz=228								
WTP	**Ta-pu**	**1.29**	**261**	P			**Pb**	**13 17 38.2**	**+0.2**
	baz=260								
WTP				*e*S			**Sb**	**13 17 54.9**	**+0.7**
	baz=260								
CHN4	**Tsaushan**	**1.30**	**265**	*i* P			**Pb**	**13 17 38.6**	**+0.5**
	baz=265								
CHN4				*e*S			**Sb**	**13 17 55.0**	**+0.7**
	baz=265								
JYNG	**Yonagunijimaku**	**1.31**	**41**	P			**Pn**	**13 17 37.3**	**+0.5**
JYNG							**Sn**	**13 17 53.6**	**+0.2**
ILA	**Ilan**	**1.32**	**350**	*e*S			**Sb**	**13 17 54.4**	**-0.5**
	baz=350								
SLBB	**Yuanshan**	**1.33**	**345**	P			**Pn**	**13 17 37.9**	**+0.7**
	baz=336								
SLBB				*e*S			**Sn**	**13 17 54.1**	**+0.1**
	baz=336								
SLGT	**Liugui**	**1.33**	**250**	*e*P			**Pb**	**13 17 38.5**	**-0.1**
	baz=245								
SLGT				*e*S			**Sn**	**13 17 54.6**	**+0.7**
	baz=245								
YHNB	**Yeheng**	**1.33**	**335**	*i* P			**Pn**	**13 17 37.8**	**+0.6**
	baz=334								
YHNB				*e*S			**Sn**	**13 17 53.4**	**-0.6**
	baz=334								
WGK	**Gukeng**	**1.34**	**280**	*e*P			**Pb**	**13 17 40.3**	**+1.5**
	baz=280								
NSK	**Sanguang**	**1.34**	**334**	P			**Pn**	**13 17 37.8**	**+0.5**
	baz=344								
YOJ	**Yonaguni jima**	**1.36**	**43**	*e*P			**Pn**	**13 17 37.9**	**+0.4**
	baz=54								
YOJ				*e*S			**Sn**	**13 17 54.8**	**+0.2**
	baz=54								
YOJ	**Yonaguni jima**	**1.36**	**43**	P			**Pn**	**13 17 37.8**	**+0.4**
YOJ				*e*S			**Sn**	**13 17 54.5**	**0.0**
SGST	**Jiashian**	**1.36**	**254**	P			**Pn**	**13 17 38.5**	**+1.0**
	baz=247								
SGST				*e*S			**Sb**	**13 17 55.7**	**-0.4**
	baz=247								
WDLH	**Douliu**	**1.36**	**280**	P			**Pb**	**13 17 39.2**	**+0.1**
	baz=280								
CHN1	**Nanshi**	**1.38**	**259**	*e*P			**Pb**	**13 17 39.8**	**+0.3**
	baz=259								
CHN1				*e*S			**Sb**	**13 17 58.9**	**+2.1**
	baz=259								
NWLT	**Wulai**	**1.39**	**341**	P			**Pb**	**13 17 38.5**	**+0.6**
	baz=329								
NWLT				*e*S			**Sn**	**13 17 53.9**	**-1.4**
	baz=329								
TCU	**Taichung**	**1.39**	**300**	*e*P			**Pb**	**13 17 39.8**	**+0.2**
	baz=300								
NTC	**Toucheng**	**1.40**	**354**	*e*P			**Pn**	**13 17 38.3**	**+0.3**
	baz=353								
NTC				*e*S			**Sb**	**13 17 56.4**	**-0.7**
	baz=353								
CHN2	**Minshiung**	**1.40**	**273**	*e*P			**Pb**	**13 17 40.3**	**+0.5**
	baz=273								
CHN2				*e*S			**Sb**	**13 17 59.6**	**+2.3**
	baz=273								
SNST	**Tainan City**	**1.40**	**260**	*e*P			**Pb**	**13 17 40.0**	**+0.2**
	baz=260								
SNST				*e*S			**Sb**	**13 17 59.0**	**+1.6**
	baz=260								
TWQ1	**Liyutan**	**1.43**	**308**	P			**Pb**	**13 17 40.6**	**+0.3**
	baz=318								
TWQ1				*e*S			**Sb**	**13 17 59.0**	**+0.9**
	baz=318								
SSD	**Sandimen**	**1.45**	**241**	*e*P			**Pn**	**13 17 39.7**	**+1.0**
	baz=237								
SSD				*e*S			**Sn**	**13 17 56.2**	**-0.6**
	baz=237								
CHY	**Chiayi**	**1.45**	**272**	*e*P			**Pb**	**13 17 41.2**	**+0.6**
	baz=272								
CHY				*e*S			**Sb**	**13 17 59.5**	**+0.9**
	baz=272								
WCHH	**Zhanghua**	**1.46**	**295**	P			**Pb**	**13 17 41.2**	**+0.4**
	baz=295								
WCHH				*e*S			**Sb**	**13 18 01.1**	**+2.1**
	baz=295								
LAY	**Lan-yu**	**1.48**	**196**	P			**Pn**	**13 17 38.5**	**-0.6**
	baz=196								
LAY				*e*S			**Sn**	**13 17 56.3**	**-1.3**
	baz=196								
NSTT	**Nanjuang**	**1.48**	**322**	*e*P			**Pb**	**13 17 40.7**	**-0.5**
	baz=322								
NSTT				*e*S			**Sb**	**13 17 59.2**	**-0.4**
	baz=322								
NSY	**Sanyi**	**1.48**	**310**	*e*P			**Pb**	**13 17 41.4**	**+0.2**
	baz=310								
NSY				*e*S			**Sn**	**13 17 58.3**	**+0.6**
	baz=310								
LIOB	**Emei**	**1.48**	**323**	P			**Pb**	**13 17 41.2**	**0.0**
	baz=323								
LIOB				*e*S			**Sb**	**13 17 59.2**	**-0.5**
	baz=323								
EAST	**Anshuo**	**1.51**	**225**	*e*P			**Pn**	**13 17 39.5**	**-0.1**
	baz=233								
EAST				*e*S			**Sn**	**13 17 56.6**	**-1.8**
	baz=233								
TIPB	**Shuangxi**	**1.51**	**354**	⇓*i* P			**Pb**	**13 17 41.0**	**-0.8**
	baz=7.0								
TIPB				*e*S			**Sb**	**13 17 59.5**	**-1.0**
	baz=7.0								
MASBT	**Mashibuluo**	**1.52**	**236**	P			**Pn**	**13 17 39.9**	**+0.3**
	baz=232								
MASBT				*e*S			**Sn**	**13 17 57.3**	**-1.2**
	baz=232								
WDJ	**Dajia District**	**1.53**	**306**	P			**Pb**	**13 17 41.8**	**-0.2**
	baz=321								
TWB1	**Santiao Chiao**	**1.54**	**360**	*e*P			**Pn**	**13 17 40.5**	**+0.6**
	baz=360								
TWB1				*e*S			**Sn**	**13 17 58.6**	**-0.4**
	baz=360								
PTSB	**Yuanli**	**1.54**	**310**	*e*P			**Pb**	**13 17 42.2**	**0.0**
	baz=310								
NMLH	**Miaoli**	**1.54**	**314**	*e*P			**Pb**	**13 17 41.7**	**-0.5**
	baz=314								
WLTB	**Daxi**	**1.54**	**334**	P			**Pb**	**13 17 41.8**	**-0.4**
	baz=344								
WLTB				*e*S			**Sb**	**13 18 01.8**	**+0.4**
	baz=344								
NHDH	**Xindian Distri**	**1.56**	**344**	P			**Pb**	**13 17 41.6**	**-0.9**
	baz=333								
NHDH				*e*S			**Sn**	**13 18 00.4**	**+0.9**
	baz=333								
TWA	**Mucha**	**1.56**	**346**	*e*P			**Pb**	**13 17 41.6**	**-0.9**
	baz=336								
TWA				*e*S			**Sn**	**13 18 00.5**	**+0.9**
	baz=336								
WLGB	**Puzi**	**1.56**	**271**	*e*S			**Sb**	**13 18 02.4**	**+0.4**
	baz=271								
RLNB	**Erlin**	**1.57**	**286**	*e*P			**Pb**	**13 17 42.4**	**-0.2**
	baz=276								
RLNB				*e*S			**Sb**	**13 18 03.1**	**+1.1**
	baz=276								
TATO	**Taipei**	**1.58**	**343**	P			**Pn**	**13 17 41.6**	**+1.2**
	baz=332								
TATO				*e*S			**Sn**	**13 18 00.6**	**+0.6**
	baz=332								
NWF	**Wu-fen Shan**	**1.61**	**353**	P			**Pb**	**13 17 43.1**	**-0.4**
	baz=353								
NWF				*e*S			**Sb**	**13 18 02.9**	**-0.6**
	baz=353								
WFSB	**Wu-fen Shan**	**1.61**	**353**	*e*P			**Pb**	**13 17 42.7**	**-0.7**
	baz=4.0								
WFSB				*e*S			**Sb**	**13 18 02.2**	**-1.2**
	baz=4.0								
SBCB	**Hsinchu**	**1.62**	**325**	*e*P			**Pn**	**13 17 42.0**	**+1.0**
	baz=326								
CHN8	**Yiju**	**1.65**	**266**	*e*P			**Pb**	**13 17 43.1**	**-0.9**

JTJ	**Tarama**	**2.73**	**64**	P	**Pn**	**13 17 57.1**	**+0.7**
JTJ				*e*S	**Sn**	**13 18 29.1**	**+0.6**
JIRB	**Irabujima**	**3.20**	**64**	P	**Pn**	**13 18 03.3**	**+0.5**
JIRB				*e*S	**Sn**	**13 18 39.2**	**-0.8**
JMJ2	**Miyako jima3**	**3.29**	**67**	P	**Pn**	**13 18 05.0**	**+0.9**
JMJ2				*e*S	**Sn**	**13 18 42.3**	**-0.1**
JIKM	**Ikemajima**	**3.30**	**63**	P	**Pn**	**13 18 05.2**	**+1.0**
JIKM				S	**Sn**	**13 18 41.7**	**-0.8**
JOGS	**Gusukube**	**3.37**	**67**	P	**Pn**	**13 18 06.6**	**+1.5**
JOGS				*e*S	**Sn**	**13 18 45.3**	**+1.1**

*IDC **30** 13:23:33.3±0.9, 9.˝33S×158.˝35E, h0km, mb3.9/7, mb1 4.2/9, mb1mx4.0/32, mbtmp4.1/9, ML4.0/2, MS3.4/5, Ms1 3.4/5, ms1mx3.0/30, Error ellipse: s-maj=23.8km s-min=17.4km az=165.0*
*NEIC **30** 13:23:37.3±1.6, 9.˝51S±0.˝09×158.˝32E±0.˝07, h33km±6km, mb4.1/4, Error ellipse: s-maj=13.3km s-min=8.9km az=196.0*
ISC 30 13:23:37.3±0.7, 9.˝5S±0.˝1×158.˝33E±0.˝08, h30km, n18, σ1§13/16, mb4.0/8, MS3.2/3, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.60**	**89**	Pn	**Pn**	**13 24 03.2**	**-0.3**
	18nm,0.3s,baz=213,slow=11,SNR=13						
HNR				Sn	**Sn**	**13 24 23.6**	**+0.4**
	73nm,0.3s,baz=198,slow=20,SNR=13						
RABL	**Rabaul**	**8.05**	**310**	Pn	**Pn**	**13 25 32.3**	**-0.1**
PMG	**Port Moresby**	**11.02**	**269**	LR	LR	13 30 03.1	
	comp=Z,179nm,19.3s,baz=90,slow=35						
DZM	**Mont Dzumac**	**14.77**	**149**	LR	LR	13 31 59.6	
	comp=Z,178nm,18.2s,baz=22,slow=34						
CTA	**Charters Tower**	**15.73**	**226**	Pn	**Pn**	**13 27 17.4**	**+0.4**
	0.1nm,0.3s,baz=55,slow=12,SNR=3.1						
EIDS	**Eidsvold**	**17.26**	**203**	Pn	**Pn**	**13 27 34.3**	**-1.9**
EIDS				IAmb	IAmb	13 27 39.0	
	comp=Z,39nm,1.4s						
JAY	**Jayapura**	**18.82**	**290**	P	**P**	**13 27 53.9**	**-1.0**
	comp=Z,1.5nm,0.3s,baz=166,slow=5.0,SNR=6.1						
WR0	**Warramunga Arr**	**25.23**	**243**	P	**P**	**13 29 00.3**	**-0.5**
WR0				IAmb	IAmb	13 29 14.4	
	comp=Z,3.2nm,0.8s						
WB0	**Warramunga Arr**	**25.29**	**243**	P	**P**	**13 28 59.1**	**-2.3**
WRAB	**Tennant Creek**	**25.39**	**243**	P	**P**	**13 29 02.7**	**+0.4**
WRA	**Warramunga Arr**	**25.40**	**243**	P	**P**	**13 29 03.6**	**+1.2**
	comp=Z,2.9nm,0.8s,baz=69,slow=9.6,SNR=8.3						
WRA				LR	LR	13 38 34.8	
	comp=Z,56nm,18.6s,baz=350,slow=35						
STKA	**Stephens Creek**	**27.17**	**212**	P	**P**	**13 29 20.1**	**+1.8**
	comp=Z,4.1nm,0.8s,baz=42,slow=15,SNR=4.8						
STKA				LR	LR	13 38 35.7	
	comp=Z,73nm,21.1s,baz=20,slow=33						
ASAR	**Alice Springs**	**27.28**	**236**	P	**P**	**13 29 20.2**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=65,slow=10,SNR=11						
PPT	**Papeete**	**51.16**	**105**	LR	LR	13 50 39.8	
	comp=Z,42nm,18.6s,baz=300,slow=32						
KSRS	**Korea Array**	**54.67**	**330**	P	**P**	**13 33 03.8**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=152,slow=8.0,SNR=3.1						
SONM	**Songino Array**	**73.19**	**326**	P	**P**	**13 35 05.9**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=138,slow=5.5,SNR=16						
ILAR	**Eielson Array**	**84.47**	**21**	P	**P**	**13 36 06.4**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=260,slow=5.1,SNR=3.5						
MKAR	**Makanchi Array**	**87.42**	**318**	P	**P**	**13 36 22.2**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=96,slow=5.9,SNR=8.4						

*ATH **30** 13:29:13.4, 38.˝37N×20.˝44E, h9km±1km, ML3.5/20, Error ellipse: s-maj=1.2km s-min=0.4km az=253.0*
*THE **30** 13:29:13.4, 38.˝37N×20.˝43E, h8km±1km, ML3.5/14, Error ellipse: s-maj=1.3km s-min=0.3km az=170.0*
*IDC **30** 13:29:14.4±1.3, 38.˝43N×20.˝65E, h0km, mb3.8/4, mb1 3.7/5, mb1mx3.4/27, mbtmp3.7/5, ML4.4/1, MS2.7/1, Ms1 2.8/1, ms1mx2.3/37, Error ellipse: s-maj=42.6km s-min=22.4km az=141.0*
ISC 30 13:29:14.3±0.9, 38.˝36N±0.˝01×20.˝50E±0.˝03, h3km±7km, n83, σ0§95/113, mb3.9/4, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.07**	**46**	P	**Pg**	**13 29 15.6**	**-0.2**
VSK1				S	**Sg**	**13 29 17.3**	**+0.5**
	102μm,0.2s						
KEF1	**Kardakata, Kep**	**0.09**	**196**	P	**Pg**	**13 29 15.0**	**-1.0**
KEF1				S	**Sg**	**13 29 17.6**	**+0.5**
FSK	**Fiskardo**	**0.11**	**26**	P	**Pg**	**13 29 16.2**	**-0.3**
FSK				S	**Sg**	**13 29 18.4**	**+0.5**
	21μm,0.5s						
FSK	**Fiskardo**	**0.11**	**26**	P	**Pg**	**13 29 16.2**	**-0.3**
FSK				S	**Sg**	**13 29 18.5**	**+0.5**
KEF4	**Livadi, Kephal**	**0.12**	**211**	P	**Pg**	**13 29 16.1**	**-0.5**
KEF4				S	**Sg**	**13 29 18.3**	**+0.1**
LXR1	**Lixouri, Cepha**	**0.17**	**197**	P	**Pg**	**13 29 17.2**	**-0.3**
LXR1				S	**Sg**	**13 29 20.3**	**+0.6**
	132μm,0.4s						
ARG2	**Argostoli**	**0.18**	**183**	P	**Pg**	**13 29 17.5**	**-0.3**
ARG2				S	**Sg**	**13 29 20.8**	**+0.6**
	77μm,0.2s						
KEF2	**Argostoli. Kep**	**0.20**	**183**	P	**Pg**	**13 29 17.5**	**-0.5**
KEF2				S	**Sg**	**13 29 20.6**	**0.0**
VLS	**Valsamata**	**0.20**	**159**	P	**Pg**	**13 29 17.7**	**-0.4**
VLS				S	**Sg**	**13 29 21.2**	**+0.5**
	22μm,0.3s						
VLS	**Valsamata**	**0.20**	**159**	P	**Pg**	**13 29 17.8**	**-0.4**
VLS				S	**Sg**	**13 29 21.4**	**+0.8**
VLS				AML	AML	13 29 21.7	
	comp=E,45754μm,0.3s						
VLS				AML	AML	13 29 21.7	
	comp=N,40844μm,0.4s						
KEF3	**Kipouria, Keph**	**0.20**	**217**	P	**Pg**	**13 29 17.4**	**-0.8**
KEF3				S	**Sg**	**13 29 19.5**	**-1.2**
EVGI	**Lefkada island**	**0.29**	**25**	P	**Pg**	**13 29 19.5**	**-0.3**
EVGI				S	**Sg**	**13 29 24.7**	**+1.1**
EVGI	**Lefkada island**	**0.29**	**25**	P	**Pg**	**13 29 19.5**	**-0.3**
EVGI				S	**Sg**	**13 29 24.7**	**+1.1**
KFL	**Anninata**	**0.34**	**138**	P	**Pg**	**13 29 20.5**	**-0.2**
KFL				S	**Sg**	**13 29 26.6**	**+1.4**
	comp=N,20μm,0.4s						
KFL	**Anninata**	**0.34**	**138**	P	**Pg**	**13 29 20.6**	**-0.2**
KFL				S	**Sg**	**13 29 27.1**	**+1.9**
KFL				AML	AML	13 29 27.5	
	comp=N,31194μm,0.4s						
KFL				AML	AML	13 29 30.9	
	comp=E,46940μm,0.4s						
MGNA	**Meganis**	**0.37**	**38**	P	**Pg**	**13 29 21.0**	**-0.4**
MGNA				S	**Sg**	**13 29 27.0**	**+0.7**
MGNA				AML	AML	13 29 28.3	
	comp=E,26679μm,0.3s						
MGNA				AML	AML	13 29 28.6	
	comp=N,22320μm,0.3s						
LKD2	**Lefkada island**	**0.45**	**16**	P	**Pg**	**13 29 22.0**	**-0.8**
LKD2				S	**Sg**	**13 29 28.2**	**-0.5**
	comp=N,3μm,0.6s						
LKD2	**Lefkada island**	**0.45**	**16**	P	**Pg**	**13 29 22.0**	**-0.8**
LKD2				S	**Sg**	**13 29 29.6**	**+0.9**
LKD2				AML	AML	13 29 36.7	
	comp=E,5757μm,0.5s						
LKD2				AML	AML	13 29 38.0	
	comp=N,5537μm,0.7s						
TSLK	**Tsoukalades, L**	**0.48**	**15**	P	**Pg**	**13 29 22.7**	**-0.8**
TSLK				S	**Sg**	**13 29 30.2**	**+0.5**
	comp=N,3μm,0.7s						
TSLK	**Tsoukalades, L**	**0.48**	**15**	P	**Pg**	**13 29 22.9**	**-0.6**
TSLK				S	**Sb**	**13 29 31.3**	**-1.5**
AST1	**Astakos**	**0.50**	**68**	P	**Pg**	**13 29 23.7**	**-0.1**
AST1				S	**Sb**	**13 29 31.9**	**-1.3**
	comp=N,12μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.50**	**165**	P	**Pg**	**13 29 23.2**	**-0.7**
VLMS				S	**Sg**	**13 29 31.8**	**+1.5**
VLMS				AML	AML	13 29 35.3	
	comp=N,35253μm,0.3s						
VLMS				AML	AML	13 29 36.2	
	comp=E,17215μm,0.5s						
PDO	**Prodromos**	**0.59**	**66**	P	**Pg**	**13 29 25.0**	**-0.5**
PDO				S	**Sb**	**13 29 34.8**	**-1.0**
	comp=E,6μm,0.4s						
PDO	**Prodromos**	**0.59**	**66**	P	**Pg**	**13 29 25.3**	**-0.2**
PDO				S	**Sb**	**13 29 34.8**	**-1.0**
PDO				AML	AML	13 29 40.2	
	comp=E,8108μm,0.4s						
PDO				AML	AML	13 29 45.8	
	comp=N,8960μm,0.4s						
KRI1	**kERI**	**0.74**	**160**	P	**Pg**	**13 29 27.4**	**-1.1**
KRI1				S	**Sg**	**13 29 39.2**	**+1.1**
	comp=N,7μm,0.3s						
RLS	**Riolos of Patr**	**0.82**	**111**	P	**Pg**	**13 29 29.5**	**-0.5**
RLS				S	**Sb**	**13 29 42.9**	**+0.4**
	comp=N,2μm,0.6s						
RLS	**Riolos of Patr**	**0.82**	**111**	P	**Pg**	**13 29 29.5**	**-0.5**
RLS				AML	AML	13 29 49.9	
	comp=E,3252μm,0.6s						
RLS				AML	AML	13 29 50.0	
	comp=N,3778μm,0.7s						
PVO	**Paravola**	**0.84**	**72**	P	**Pg**	**13 29 30.4**	**-0.1**
PVO				S	**Sb**	**13 29 43.4**	**+0.1**
	comp=N,3μm,0.5s						
PVO	**Paravola**	**0.84**	**72**	P	**Pg**	**13 29 30.4**	**-0.1**
DRO	**Drossia**	**1.04**	**113**	P	**Pg**	**13 29 33.5**	**-0.6**
DRO	**Drossia**	**1.04**	**113**	P	**Pg**	**13 29 33.5**	**-0.6**
DRO				S	**Sb**	**13 29 49.4**	**+0.5**
DRO				AML	AML	13 29 59.6	
	comp=N,8212μm,0.5s						
DRO				AML	AML	13 30 04.2	
	comp=E,6206μm,0.8s						
EFP	**Efpalio**	**1.11**	**86**	P	**Pg**	**13 29 34.3**	**-1.2**
EFP	**Efpalio**	**1.11**	**86**	P	**Pg**	**13 29 34.3**	**-1.2**
EFP				AML	AML	13 30 00.5	
	comp=N,4621μm,0.6s						
EFP				AML	AML	13 30 04.2	
	comp=E,4251μm,0.6s						
ANX	**Ano Chora**	**1.14**	**78**	P	**Pg**	**13 29 34.9**	**-1.2**
ANX	**Ano Chora**	**1.14**	**78**	P	**Pg**	**13 29 35.1**	**-1.0**
ANX				AML	AML	13 30 03.1	
	comp=E,6429μm,0.6s						
ANX				AML	AML	13 30 03.5	
	comp=N,5403μm,0.7s						
EVR	**Evrytania**	**1.17**	**61**	P	**Pg**	**13 29 35.3**	**-1.3**
EVR	**Evrytania**	**1.17**	**61**	P	**Pg**	**13 29 35.4**	**-1.3**
EVR				AML	AML	13 30 03.3	
	comp=N,2184μm,1.1s						
EVR				AML	AML	13 30 06.0	
	comp=E,1818μm,0.8s						
LAKA	**Lakka**	**1.17**	**95**	P	**Pg**	**13 29 35.3**	**-1.3**
LAKA				S	**Sn**	**13 29 53.5**	**-0.5**
	comp=E,965nm,1.0s						
LAKA	**Lakka**	**1.17**	**95**	P	**Pg**	**13 29 35.4**	**-1.3**
LAKA				S	**Sn**	**13 29 53.6**	**-0.4**
LAKA				AML	AML	13 30 00.9	
	comp=N,2146μm,0.7s						
LAKA				AML	AML	13 30 02.2	
	comp=E,2072μm,1.1s						
SERG	**Sergoula**	**1.22**	**87**	P	**Pg**	**13 29 36.0**	**-1.7**
SERG	**Sergoula**	**1.22**	**87**	P	**Pg**	**13 29 36.2**	**-1.5**
SERG				AML	AML	13 30 04.1	
	comp=N,3291μm,0.4s						
SERG				AML	AML	13 30 07.5	
	comp=E,2740μm,0.5s						
TRIZ	**Trizonia**	**1.23**	**89**	P	**Pg**	**13 29 36.3**	**-1.7**
AMT	**Artemida-Makis**	**1.26**	**131**	P	**Pg**	**13 29 38.0**	**-0.5**
AMT				AML	AML	13 30 06.8	
	comp=N,4166μm,0.7s						
AMT				AML	AML	13 30 07.6	
	comp=E,4192μm,0.6s						
KALE	**Kalithea**	**1.29**	**88**	P	**Pg**	**13 29 37.0**	**-2.0**
KALE	**Kalithea**	**1.29**	**88**	P	**Pg**	**13 29 37.3**	**-1.7**
KALE				AML	AML	13 30 09.4	
	comp=E,1749μm,0.6s						
KALE				AML	AML	13 30 19.1	
	comp=N,2524μm,0.6s						
JAN	**Janina**	**1.32**	**12**	P	**Pb**	**13 29 39.9**	**+0.1**
KLV	**Kalavryta, Ach**	**1.34**	**103**	P	**Pn**	**13 29 38.2**	**-1.7**
KLV				S	**Sn**	**13 29 58.0**	**-0.2**
KLV	**Kalavryta, Ach**	**1.34**	**103**	P	**Pn**	**13 29 38.3**	**-1.6**
KLV				AML	AML	13 30 09.5	
	comp=E,1091μm,0.7s						
KLV				AML	AML	13 30 15.8	
	comp=N,1092μm,0.9s						
MAKR	**Makrakomi, Fth**	**1.43**	**62**	P	**Pn**	**13 29 40.6**	**-0.6**
MAKR	**Makrakomi, Fth**	**1.43**	**62**	P	**Pn**	**13 29 40.8**	**-0.3**
KASA	**Kassiopi**	**1.45**	**343**	P	**Pb**	**13 29 41.3**	**-0.6**
AGG	**Agios Georgios**	**1.58**	**65**	P	**Pn**	**13 29 43.2**	**0.0**
ITM	**Ithomi**	**1.63**	**136**	P	**Pn**	**13 29 43.9**	**0.0**
ITM				AML	AML	13 30 14.0	
	comp=N,1343μm,0.7s						
ITM				AML	AML	13 30 14.3	
	comp=E,1601μm,0.7s						
THL	**Klokotos Trika**	**1.68**	**44**	P	**Pb**	**13 29 44.9**	**-1.0**
THL	**Klokotos Trika**	**1.68**	**44**	P	**Pb**	**13 29 45.9**	**0.0**
AXAR	**Agios Charalam**	**1.74**	**76**	P	**Pg**	**13 29 47.1**	**-0.5**
AXAR				AML	AML	13 30 24.9	
	comp=E,3749μm,1.1s						
AXAR				AML	AML	13 30 25.8	
	comp=N,3857μm,0.9s						
PYL	**PYLOS**	**1.76**	**146**	P	**Pn**	**13 29 45.4**	**-0.3**
VLX	**Vlachokerasia**	**1.79**	**123**	P	**Pb**	**13 29 47.7**	**0.0**
VLX				AML	AML	13 30 22.2	
	comp=E,2085μm,0.7s						
VLX				AML	AML	13 30 28.8	
	comp=N,1938μm,1.0s						
PROD	**Prodromos**	**1.89**	**92**	P	**Pb**	**13 29 48.8**	**-0.6**
LKR	**Lokris**	**1.98**	**81**	P	**Pb**	**13 29 50.1**	**-0.8**
LKR	**Lokris**	**1.98**	**81**	P	**Pb**	**13 29 50.9**	**-1.0**
LOUT	**Loutraki**	**1.98**	**100**	P	**Pb**	**13 29 51.0**	**0.0**
LOUT	**Loutraki**	**1.98**	**100**	P	**Pb**	**13 29 50.6**	**-0.4**
NEST	**Nestorio**	**2.10**	**12**	P	**Pb**	**13 29 51.6**	**-1.4**
DYR	**Agios Nikonas**	**2.16**	**137**	P	**Pb**	**13 29 53.1**	**-0.9**
KZN	**Kozani**	**2.18**	**26**	P	**Pn**	**13 29 52.4**	**+0.9**
VIL2	**Platees**	**2.18**	**93**	P	**Pb**	**13 29 53.9**	**-0.5**
VILL	**Villia**	**2.22**	**94**	P	**Pb**	**13 29 53.8**	**-1.3**
DID	**Didima**	**2.33**	**111**	P	**Pn**	**13 29 54.7**	**+1.3**
DID	**Didima**	**2.33**	**111**	P	**Pn**	**13 29 54.6**	**+1.1**
MRKA	**Markates**	**2.44**	**81**	P	**Pn**	**13 29 56.3**	**+1.2**
VLI	**Veliai**	**2.54**	**130**	P	**Pb**	**13 30 00.9**	**+0.5**
VLI	**Veliai**	**2.54**	**130**	P	**Pb**	**13 29 58.8**	**-1.6**
VLY	**Voula,Athens**	**2.65**	**100**	P	**Pn**	**13 29 57.9**	**+0.1**
VLY	**Voula,Athens**	**2.65**	**100**	P	**Pn**	**13 29 58.8**	**+1.0**
KTHA	**Kythira Island**	**2.93**	**135**	P	**Pn**	**13 30 02.6**	**+0.9**
STIP	**Stip**	**3.57**	**21**	*i* Pn	**Pn**	**13 30 13.4**	**+2.8**
ESDC	**Sonseca Array**	**19.05**	**282**	P	**Pn**	**13 33 39.0**	**+0.8**
	comp=N,0.2nm,0.3s,baz=83,slow=12,SNR=3.1						
FINES	**FINESS Array B**	**23.37**	**7**	P	**P**	**13 34 23.4**	**-0.2**
	comp=N,5.5nm,1.1s,baz=177,slow=9.3,SNR=4.1						
NOA	**NORSAR Array B**	**23.44**	**349**	LR	LR	13 43 45.9	
	comp=N,19nm,18.2s,baz=195,slow=37						
TORD	**Torodi Ar. Bea**	**30.16**	**219**	P	**P**	**13 35 27.5**	**+1.9**
	comp=N,0.3nm,0.7s,baz=36,slow=7.5,SNR=2.4						
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**	**13 37 31.9**	**-0.7**
	comp=N,0.4nm,0.5s,baz=278,slow=7.2,SNR=13						
ZALV	**Zalesovo Beam**	**45.58**	**48**	P	**P**	**13 37 34.6**	**-0.6**
	comp=N,1.5nm,0.5s,baz=271,slow=9.4,SNR=7.5						

*ATH **30** 13:39:05.3, 38.˝38N×20.˝45E, h15km, ML3.0/16, Error ellipse: s-maj=1.4km s-min=0.6km az=275.0*
*THE **30** 13:39:06.0, 38.˝37N×20.˝46E, h8km±1km, ML2.9/5, Error ellipse: s-maj=1.1km s-min=0.3km az=111.0*
ISC 30 13:39:06.0±0.9, 38.˝37N±0.˝02×20.˝50E±0.˝03, h9km±5km, n60, σ0§65/86, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.07**	**48**	P	**Pg**	**13 39 07.8**	**-0.3**
VSK1				S	**Sg**	**13 39 09.6**	**0.0**
KEF1	**Kardakata, Kep**	**0.09**	**196**	P	**Pg**	**13 39 08.1**	**-0.3**
KEF1				S	**Sg**	**13 39 10.2**	**+0.1**
FSK	**Fiskardo**	**0.10**	**27**	P	**Pg**	**13 39 08.5**	**-0.1**
FSK				S	**Sg**	**13 39 10.7**	**+0.2**
	13μm,0.4s						
FSK	**Fiskardo**	**0.10**	**27**	P	**Pg**	**13 39 08.4**	**-0.2**
FSK				S	**Sg**	**13 39 10.6**	**+0.2**
KEF4	**Livadi, Kephal**	**0.12**	**210**	P	**Pg**	**13 39 08.5**	**-0.3**
KEF4				S	**Sg**	**13 39 11.2**	**+0.4**
ARG2	**Argostoli**	**0.19**	**183**	P	**Pg**	**13 39 10.0**	**+0.1**
ARG2				S	**Sg**	**13 39 13.2**	**+0.6**
KEF2	**Argostoli. Kep**	**0.20**	**183**	P	**Pg**	**13 39 10.0**	**-0.1**
KEF2				S	**Sg**	**13 39 13.7**	**+0.8**
VLS	**Valsamata**	**0.20**	**160**	P	**Pg**	**13 39 10.1**	**0.0**
VLS				S	**Sg**	**13 39 14.0**	**+1.0**
	4μm,0.2s						
VLS	**Valsamata**	**0.20**	**160**	P	**Pg**	**13 39 10.2**	**0.0**
VLS				S	**Sg**	**13 39 13.9**	**+1.0**
VLS				AML	AML	13 39 15.5	
	comp=E,5647μm,0.1s						
VLS				AML	AML	13 39 16.5	
	comp=N,7480μm,0.3s						
KEF3	**Kipouria, Keph**	**0.20**	**217**	P	**Pg**	**13 39 09.7**	**-0.5**
KEF3				S	**Sg**	**13 39 13.5**	**+0.5**
CHV1	**Chavriata, Kef**	**0.20**	**208**	P	**Pg**	**13 39 10.1**	**-0.1**
CHV1				S	**Sg**	**13 39 13.5**	**+0.4**
EVGI	**Lefkada island**	**0.28**	**25**	P	**Pg**	**13 39 11.7**	**0.0**
EVGI				S	**Sg**	**13 39 16.6**	**+1.2**
EVGI	**Lefkada island**	**0.28**	**25**	P	**Pg**	**13 39 11.7**	**0.0**
EVGI				S	**Sg**	**13 39 16.7**	**+1.2**
KFL	**Anninata**	**0.34**	**139**	P	**Pg**	**13 39 12.8**	**+0.1**
KFL				S	**Sb**	**13 39 18.8**	**-0.9**
	comp=N,3μm,0.5s						
KFL	**Anninata**	**0.34**	**139**	P	**Pg**	**13 39 12.9**	**+0.1**
KFL				S	**Sb**	**13 39 18.9**	**-0.9**
KFL				AML	AML	13 39 20.9	
	comp=E,9884μm,0.3s						
KFL				AML	AML	13 39 21.0	
	comp=N,8310μm,0.4s						
MGNA	**Meganis**	**0.37**	**38**	P	**Pg**	**13 39 13.1**	**-0.1**
MGNA				S	**Sg**	**13 39 18.7**	**+0.5**
MGNA				AML	AML	13 39 19.7	
	comp=N,7784μm,0.2s						
MGNA				AML	AML	13 39 19.8	
	comp=E,8124μm,0.2s						
LKD2	**Lefkada island**	**0.44**	**16**	P	**Pg**	**13 39 14.3**	**-0.3**
LKD2				S	**Sg**	**13 39 21.3**	**+0.8**
	comp=E,1μm,0.4s						
LKD2	**Lefkada island**	**0.44**	**16**	P	**Pg**	**13 39 14.3**	**-0.3**
LKD2				S	**Sg**	**13 39 20.9**	**+0.5**
LKD2				AML	AML	13 39 23.4	
	comp=N,3112μm,0.3s						
LKD2				AML	AML	13 39 23.5	
	comp=E,3176μm,0.3s						
TSLK	**Tsoukalades, L**	**0.47**	**15**	P	**Pg**	**13 39 15.0**	**-0.3**
TSLK				S	**Sg**	**13 39 22.2**	**+0.7**
	comp=E,2μm,0.3s						
TSLK	**Tsoukalades, L**	**0.47**	**15**	P	**Pg**	**13 39 15.0**	**-0.3**
TSLK				S	**Sg**	**13 39 22.2**	**+0.7**
AST1	**Astakos**	**0.49**	**69**	P	**Pg**	**13 39 15.8**	**+0.2**
AST1				S	**Sb**	**13 39 24.2**	**+0.1**
VLMS	**Volimes, Zakyn**	**0.50**	**165**	P	**Pg**	**13 39 15.6**	**-0.2**
VLMS				S	**Sb**	**13 39 23.6**	**-0.8**
VLMS				AML	AML	13 39 24.8	
	comp=N,6792μm,0.5s						
VLMS				AML	AML	13 39 32.1	
	comp=E,3312μm,0.3s						
PDO	**Prodromos**	**0.58**	**66**	P	**Pg**	**13 39 17.3**	**0.0**
PDO	**Prodromos**	**0.58**	**66**	P	**Pg**	**13 39 17.3**	**0.0**
PDO				S	**Sb**	**13 39 26.3**	**-0.4**
PDO				AML	AML	13 39 31.5	
	comp=N,3222μm,0.2s						
PDO				AML	AML	13 39 31.9	
	comp=E,2511μm,0.5s						
RLS	**Riolos of Patr**	**0.82**	**112**	P	**Pg**	**13 39 21.4**	**-0.4**
PVO	**Paravola**	**0.84**	**72**	P	**Pg**	**13 39 22.4**	**+0.2**
PVO	**Paravola**	**0.84**	**72**	P	**Pg**	**13 39 22.1**	**-0.1**
PVO				S	**Sb**	**13 39 34.8**	**+0.6**
PVO				AML	AML	13 39 39.8	
	comp=E,1538μm,0.4s						
PVO				AML	AML	13 39 43.4	
	comp=N,1997μm,0.7s						
DRO	**Drossia**	**1.04**	**113**	P	**Pb**	**13 39 26.4**	**+0.3**
DRO	**Drossia**	**1.04**	**113**	P	**Pg**	**13 39 24.9**	**-1.0**
DRO				AML	AML	13 39 48.0	
	comp=N,2596μm,0.4s						
DRO				AML	AML	13 39 48.6	
	comp=E,2530μm,0.3s						
EFP	**Efpalio**	**1.10**	**86**	P	**Pg**	**13 39 26.2**	**-1.1**
EFP				AML	AML	13 39 49.5	
	comp=E,1702μm,1.0s						
EFP				AML	AML	13 39 50.0	
	comp=N,1257μm,0.5s						
ANX	**Ano Chora**	**1.14**	**78**	P	**Pg**	**13 39 27.3**	**-0.6**
ANX	**Ano Chora**	**1.14**	**78**	P	**Pg**	**13 39 27.3**	**-0.6**
ANX				AML	AML	13 39 50.7	
	comp=N,1784μm,0.5s						
ANX				AML	AML	13 39 52.7	
	comp=E,1664μm,0.5s						
EVR	**Evrytania**	**1.16**	**61**	P	**Pg**	**13 39 27.4**	**-0.9**
EVR	**Evrytania**	**1.16**	**61**	P	**Pg**	**13 39 27.5**	**-0.9**
EVR				AML	AML	13 39 53.9	
	comp=E,537μm,0.4s						
EVR				AML	AML	13 39 56.5	
	comp=N,489μm,0.9s						
LAKA	**Lakka**	**1.17**	**96**	P	**Pg**	**13 39 27.5**	**-1.0**
LAKA	**Lakka**	**1.17**	**96**	P	**Pg**	**13 39 27.4**	**-1.0**
LAKA				S	**Sn**	**13 39 44.4**	**-0.2**
SERG	**Sergoula**	**1.22**	**87**	P	**Pg**	**13 39 28.4**	**-1.1**
SERG	**Sergoula**	**1.22**	**87**	P	**Pg**	**13 39 28.2**	**-1.3**
SERG				AML	AML	13 39 52.6	
	comp=E,923μm,0.4s						
SERG				AML	AML	13 39 53.4	
	comp=N,1210μm,0.4s						
TRIZ	**Trizonia**	**1.23**	**90**	P	**Pb**	**13 39 28.4**	**-1.0**
TRIZ	**Trizonia**	**1.23**	**90**	P	**Pb**	**13 39 28.5**	**-1.0**
TRIZ				S	**Sn**	**13 39 47.1**	**+1.0**
AMT	**Artemida-Makis**	**1.27**	**131**	P	**Pg**	**13 39 30.5**	**+0.2**
AMT				AML	AML	13 39 59.7	
	comp=E,1196μm,0.7s						
AMT				AML	AML	13 40 01.4	
	comp=N,1058μm,0.7s						
KALE	**Kalithea**	**1.29**	**88**	P	**Pn**	**13 39 29.3**	**-0.9**
KALE	**Kalithea**	**1.29**	**88**	P	**Pn**	**13 39 29.3**	**-0.9**
KALE				AML	AML	13 39 57.5	
	comp=E,611μm,0.5s						
KALE				AML	AML	13 39 57.9	
	comp=N,833μm,0.4s						
**K

ellipse: s-maj=1.2km s-min=0.6km az=277.0
*THE **30** 13:43:33.0,38°.40N×20°.42E,h0km±2km,ML3.8/12,Error ellipse: s-maj=2.3km s-min=0.4km az=270.0*
ISC 30 13:43:33.3±0.8,38°.42N±0".02×20°.47E±0".02,h7km±5km, n141,σ1°39/188,mb3.7/8,MS2.8/4,7C-8D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.07**	**98**	P		**Pg**	**13 43 34.8**	**-0.4**
VSK1				S		**Sg**	**13 43 36.1**	**-0.5**
	268μm,0.1s							
FSK	**Fiskardo**	**0.08**	**61**	P		**Pg**	**13 43 35.2**	**-0.1**
FSK				S		**Sg**	**13 43 36.8**	**0.0**
	100μm,0.5s							
FSK	**Fiskardo**	**0.08**	**61**	P		**Pg**	**13 43 35.3**	**-0.1**
FSK				S		**Sg**	**13 43 36.8**	**0.0**
KEF1	**Kardakata, Kep**	**0.14**	**179**	P		**Pg**	**13 43 36.4**	**+0.1**
KEF1				S		**Sg**	**13 43 39.2**	**+1.0**
KEF4	**Livadi, Kephal**	**0.17**	**192**	P		**Pg**	**13 43 36.9**	**+0.2**
KEF4				S		**Sg**	**13 43 40.3**	**+1.3**
KEF3	**Kipouria, Keph**	**0.24**	**204**	P		**Pg**	**13 43 38.1**	**+0.1**
KEF3				S		**Sg**	**13 43 42.6**	**+1.5**
EVGI	**Lefkada island**	**0.25**	**36**	P		**Pg**	**13 43 38.5**	**+0.3**
EVGI				S		**Sg**	**13 43 43.1**	**+1.5**
EVGI	**Lefkada island**	**0.25**	**36**	P		**Pg**	**13 43 38.6**	**+0.3**
EVGI				S		**Sg**	**13 43 42.5**	**+1.0**
KEF2	**Argostoli. Kep**	**0.25**	**177**	P		**Pg**	**13 43 38.3**	**0.0**
KEF2				S		**Sg**	**13 43 42.9**	**+1.2**
VLS	**Valsamata**	**0.26**	**159**	P		**Pg**	**13 43 38.2**	**-0.2**
VLS				S		**Sg**	**13 43 42.5**	**+0.6**
	46μm,0.4s							
VLS	**Valsamata**	**0.26**	**159**	P		**Pg**	**13 43 38.3**	**-0.2**
VLS				S		**Sg**	**13 43 42.6**	**+0.7**
VLS				AML	AML		13 43 43.0	
VLS				AML	AML		13 43 45.7	
	comp=N,70196μm,0.3s							
MGNA	**Meganis**	**0.35**	**47**	P		**Pg**	**13 43 40.0**	**-0.1**
MGNA				S		**Sg**	**13 43 45.2**	**+0.6**
MGNA				AML	AML		13 43 47.2	
	comp=E,18768μm,0.1s							
MGNA				AML	AML		13 43 48.0	
	comp=N,29373μm,0.4s							
KFL	**Anninata**	**0.40**	**141**	P		**Pg**	**13 43 40.7**	**-0.3**
KFL				S		**Sg**	**13 43 47.3**	**+1.0**
	comp=N,24μm,0.4s							
KFL	**Anninata**	**0.40**	**141**	P		**Pg**	**13 43 40.8**	**-0.3**
KFL				S		**Sg**	**13 43 47.0**	**+0.7**
KFL				AML	AML		13 43 49.3	
	comp=N,39242μm,0.2s							
KFL				AML	AML		13 43 49.3	
	comp=E,62048μm,0.5s							
LKD2	**Lefkada island**	**0.40**	**22**	P		**Pg**	**13 43 41.1**	**+0.1**
LKD2				S		**Sb**	**13 43 47.9**	**-1.1**
	comp=E,8μm,0.6s							
LKD2	**Lefkada island**	**0.40**	**22**	P		**Pg**	**13 43 41.3**	**+0.2**
LKD2				S		**Sg**	**13 43 46.6**	**+0.3**
LKD2				AML	AML		13 43 53.5	
	comp=E,15007μm,0.6s							
LKD2				AML	AML		13 43 55.3	
	comp=N,19308μm,0.5s							
TSLK	**Tsoukalades, L**	**0.43**	**20**	P		**Pg**	**13 43 41.8**	**+0.1**
TSLK				S		**Sb**	**13 43 49.1**	**-0.8**
	comp=N,16μm,0.7s							
TSLK	**Tsoukalades, L**	**0.43**	**20**	P		**Pg**	**13 43 42.1**	**+0.5**
VLMS	**Volimes, Zakyn**	**0.56**	**164**	P		**Pg**	**13 43 43.8**	**-0.4**
VLMS				S		**Sg**	**13 43 52.3**	**+0.8**
VLMS				AML	AML		13 44 00.8	
	comp=E,21484μm,0.3s							
VLMS				AML	AML		13 44 00.8	
	comp=N,42048μm,0.4s							
PDO	**Prodromos**	**0.59**	**72**	P		**Pg**	**13 43 44.3**	**-0.3**
PDO				S		**Sb**	**13 43 54.6**	**+0.2**
	comp=N,10μm,0.4s							
PDO	**Prodromos**	**0.59**	**72**	P		**Pg**	**13 43 44.5**	**-0.1**
PDO				AML	AML		13 43 59.4	
	comp=N,15068μm,0.6s							
PDO				AML	AML		13 44 01.1	
	comp=E,13586μm,0.4s							
KRI1	**kERI**	**0.80**	**160**	P		**Pg**	**13 43 47.7**	**-1.0**
KRI1				S		**Sb**	**13 44 00.3**	**-0.3**
	comp=E,13μm,0.6s							
PVO	**Paravola**	**0.85**	**76**	P		**Pg**	**13 43 49.6**	**0.0**
PVO				S		**Sb**	**13 44 03.2**	**+1.2**
	comp=E,4μm,0.5s							
PVO	**Paravola**	**0.85**	**76**	P		**Pg**	**13 43 49.7**	**+0.1**
PVO				AML	AML		13 44 06.6	
	comp=N,8027μm,0.8s							
PVO				AML	AML		13 44 07.8	
	comp=E,9158μm,0.5s							
RLS	**Riolos of Patr**	**0.86**	**114**	P		**Pg**	**13 43 49.3**	**-0.6**
RLS				S		**Sb**	**13 44 02.8**	**+0.5**
	comp=E,2μm,0.5s							
RLS	**Riolos of Patr**	**0.86**	**114**	P		**Pg**	**13 43 49.3**	**-0.6**
DRO	**Drossia**	**1.08**	**115**	P		**Pg**	**13 43 52.9**	**-1.2**
DRO	**Drossia**	**1.08**	**115**	P		**Pg**	**13 43 53.1**	**-1.0**
DRO				AML	AML		13 44 23.1	
	comp=N,9420μm,0.5s							
DRO				AML	AML		13 44 24.5	
	comp=E,11799μm,0.4s							
EFP	**Efpalio**	**1.13**	**89**	P		**Pg**	**13 43 53.4**	**-1.5**
EFP				S		**Sn**	**13 44 12.3**	**+1.1**
	comp=E,4μm,0.7s							
EFP	**Efpalio**	**1.13**	**89**	P		**Pg**	**13 43 53.6**	**-1.3**
EFP				AML	AML		13 44 19.8	
	comp=N,8178μm,0.7s							
EFP				AML	AML		13 44 20.7	
	comp=E,8474μm,0.7s							
ANX	**Ano Chora**	**1.15**	**81**	P		**Pg**	**13 43 54.4**	**-0.9**
ANX	**Ano Chora**	**1.15**	**81**	P		**Pg**	**13 43 54.5**	**-0.9**
ANX				AML	AML		13 44 18.3	
	comp=N,7494μm,0.6s							
ANX				AML	AML		13 44 20.5	
	comp=E,8198μm,0.5s							
EVR	**Evrytania**	**1.16**	**64**	P		**Pg**	**13 43 54.8**	**-0.8**
EVR	**Evrytania**	**1.16**	**64**	P		**Pg**	**13 43 54.7**	**-0.8**
EVR				AML	AML		13 44 21.3	
	comp=N,3962μm,0.7s							
EVR				AML	AML		13 44 25.1	
	comp=E,2633μm,1.0s							
LAKA	**Lakka**	**1.20**	**98**	P		**Pb**	**13 43 54.9**	**-1.4**
LAKA				S		**Sn**	**13 44 14.4**	**+1.4**
	comp=E,780nm,0.8s							
LAKA	**Lakka**	**1.20**	**98**	P		**Pb**	**13 43 54.9**	**-1.4**
LAKA				AML	AML		13 44 19.0	
	comp=N,3248μm,0.9s							
LAKA				AML	AML		13 44 24.2	
	comp=E,3358μm,1.0s							
SERG	**Sergoula**	**1.25**	**90**	P		**Pn**	**13 43 55.5**	**-1.6**
SERG	**Sergoula**	**1.25**	**90**	P		**Pn**	**13 43 55.7**	**-1.4**
TRIZ	**Trizonia**	**1.26**	**92**	P		**Pn**	**13 43 55.7**	**-1.5**
TRIZ	**Trizonia**	**1.26**	**92**	P		**Pn**	**13 43 55.9**	**-1.4**
TRIZ				S		**Sg**	**13 44 14.4**	**+0.6**
JAN	**Janina**	**1.27**	**13**	P		**Pg**	**13 43 58.5**	**+0.8**
JAN				S		**Sn**	**13 44 19.2**	**+4.4**
JAN	**Janina**	**1.27**	**13**	P		**Pg**	**13 43 58.4**	**+0.8**
ALIK	**Aliki, Aigiali**	**1.30**	**96**	P		**Pn**	**13 43 56.4**	**-1.4**
KALE	**Kalithea**	**1.31**	**91**	P		**Pn**	**13 43 56.7**	**-1.3**
KALE				S		**Sn**	**13 44 17.8**	**+2.0**
KALE	**Kalithea**	**1.31**	**91**	P		**Pn**	**13 43 56.8**	**-1.2**
KALE				AML	AML		13 44 24.4	
	comp=N,6485μm,0.7s							
KALE				AML	AML		13 44 26.1	
	comp=E,2599μm,1.0s							
AMT	**Artemida-Makis**	**1.32**	**132**	P		**Pn**	**13 43 57.2**	**-0.9**
AMT	**Artemida-Makis**	**1.32**	**132**	P		**Pn**	**13 43 57.3**	**-0.8**
KLV	**Kalavryta, Ach**	**1.38**	**105**	P		**Pn**	**13 43 57.8**	**-1.1**
KLV				S		**Sg**	**13 44 20.0**	**+2.5**
KLV	**Kalavryta, Ach**	**1.38**	**105**	P		**Pn**	**13 43 58.0**	**-0.9**
KLV				S		**Sb**	**13 44 17.4**	**+0.3**
KLV				AML	AML		13 44 27.0	
	comp=E,1828μm,1.0s							
KLV				AML	AML		13 44 30.4	
	comp=N,1400μm,0.5s							
KASA	**Kassiopi**	**1.39**	**343**	P		**Pg**	**13 44 00.3**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.43**	**65**	P		**Pn**	**13 43 59.4**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.43**	**65**	P		**Pn**	**13 43 59.6**	**0.0**
MAKR				AML	AML		13 44 37.2	
	comp=N,3569μm,0.7s							
MAKR				AML	AML		13 44 38.1	
	comp=E,4366μm,0.8s							
SRN	**Sarande**	**1.50**	**346**	P		**Pb**	**13 44 01.5**	**0.0**
AGG	**Agios Georgios**	**1.57**	**67**	P		**Pn**	**13 44 01.9**	**+0.2**
DLFA	**Delphi**	**1.59**	**87**	P		**Pb**	**13 44 03.0**	**0.0**
THL	**Klokotos Trika**	**1.66**	**46**	P		**Pg**	**13 44 04.8**	**-0.3**
THL	**Klokotos Trika**	**1.66**	**46**	P		**Pb**	**13 44 04.1**	**0.0**
KPRO	**Kipourio**	**1.68**	**24**	P		**Pb**	**13 44 05.1**	**+0.5**
ITM	**Ithomi**	**1.69**	**137**	P		**Pn**	**13 44 03.7**	**+0.5**
AXAR	**Agios Charalam**	**1.75**	**78**	P		**Pn**	**13 44 04.9**	**+0.9**
AXAR				AML	AML		13 44 38.8	
	comp=N,5502μm,0.9s							
AXAR				AML	AML		13 44 39.2	
	comp=E,5314μm,0.9s							
PYL	**PYLOS**	**1.83**	**146**	P		**Pn**	**13 44 05.1**	**0.0**
VLX	**Vlachokerasia**	**1.84**	**124**	P		**Pn**	**13 44 06.3**	**+1.0**
PROD	**Prodromos**	**1.92**	**94**	P		**Pb**	**13 44 08.6**	**0.0**
PROD	**Prodromos**	**1.92**	**94**	P		**Pb**	**13 44 07.9**	**-0.7**
LKR	**Lokris**	**2.00**	**83**	P		**Pn**	**13 44 09.0**	**-0.9**
LTK	**Loutraki**	**2.01**	**101**	P		**Pn**	**13 44 08.1**	**+0.6**
LOUT	**Loutraki**	**2.02**	**102**	P		**Pn**	**13 44 09.2**	**+1.4**
NEST	**Nestorio**	**2.04**	**13**	P		**Pb**	**13 44 10.4**	**-0.3**
VIL2	**Platees**	**2.21**	**95**	P		**Pb**	**13 44 12.4**	**-1.2**
DYR	**Agios Nikonas**	**2.22**	**138**	P		**Pb**	**13 44 12.7**	**-1.0**
LIT	**Litokhoron**	**2.30**	**42**	P		**Pn**	**13 44 12.7**	**+1.1**
DID	**Didima**	**2.37**	**112**	P		**Pn**	**13 44 13.6**	**+1.1**
MRKA	**Markates**	**2.46**	**82**	P		**Pn**	**13 44 15.1**	**+1.3**
VLI	**Veliai**	**2.59**	**130**	P		**Pb**	**13 44 18.4**	**-1.7**
VLY	**Voula,Athens**	**2.68**	**101**	P		**Pn**	**13 44 17.5**	**+0.7**
OHR	**Ohrid**	**2.70**	**5**	*i* Pn		**Pn**	**13 44 19.4**	**+2.3**
KTHA	**Kythira Island**	**2.99**	**135**	P		**Pn**	**13 44 23.5**	**+2.5**
KARY	**Karystos**	**3.15**	**96**	P		**Pn**	**13 44 25.0**	**+1.8**
CGL1	**Ceglie Messapi**	**3.21**	**315**	*e*Pn		**Pn**	**13 44 25.5**	**+1.4**
VAY	**Valandovo**	**3.32**	**28**	*i* Pn		**Pn**	**13 44 25.7**	**+0.1**
MASS	**Massafra**	**3.39**	**312**	*e*Pn		**Pn**	**13 44 27.1**	**+0.5**
ANKY	**Antikythira Is**	**3.41**	**138**	P		**Pn**	**13 44 28.3**	**+1.6**
ULC	**Ulcinj**	**3.66**	**346**	*e*Pn		**Pn**	**13 44 30.1**	**-0.2**
ULC				*e*Sn		**Sn**	**13 45 14.1**	**+0.4**
MATE	**Matera**	**3.67**	**309**	⇓P		**Pb**	**13 44 35.1**	**-3.2**
MATE	**Matera**	**3.67**	**309**	⇑S		**Sb**	**13 45 20.5**	**-2.4**
SG1	**Sgolgore (BA)**	**3.80**	**311**	*e*Pn		**Pn**	**13 44 32.6**	**+0.5**
DRME	**Dracevica, Mon**	**3.89**	**346**	*e*Pn		**Pn**	**13 44 33.3**	**-0.1**
DRME				*e*Sn		**Sn**	**13 45 19.8**	**+0.5**
BUM	**Brajici-Budva**	**4.06**	**343**	*e*Pn		**Pn**	**13 44 35.5**	**-0.3**
BUM				*e*Sn		**Sn**	**13 45 23.8**	**+0.2**
PDG	**Podgorica**	**4.11**	**347**	⇑P		**Pn**	**13 44 37.4**	**+0.9**
PDG	**Podgorica**	**4.11**	**347**	⇑S		**Sn**	**13 45 24.0**	**-0.8**
TTG	**Podgorica**	**4.11**	**347**	*e*Pn		**Pn**	**13 44 36.3**	**-0.1**
TTG				*e*Sn		**Sn**	**13 45 25.2**	**+0.5**
PVY	**Plav**	**4.19**	**355**	*e*Pn		**Pn**	**13 44 37.8**	**+0.2**
PVY				*e*Sn		**Sn**	**13 45 27.8**	**+0.9**
APE	**Apeiranthos**	**4.23**	**107**	⇓P		**Pn**	**13 44 39.8**	**+1.7**
CEME	**Cevo**	**4.29**	**344**	*e*Pn		**Pn**	**13 44 38.5**	**-0.1**
CEME				*e*Sn		**Sn**	**13 45 29.1**	**-0.1**
HCY	**Herceg Novi**	**4.30**	**340**	*e*Pn		**Pn**	**13 44 38.5**	**-0.5**
HCY				*e*Sn		**Sn**	**13 45 29.3**	**0.0**
IVA	**Berane**	**4.47**	**355**	*e*Pn		**Pn**	**13 44 41.4**	**-0.1**
IVA				*e*Sn		**Sn**	**13 45 34.1**	**+0.4**
KOME	**Kolasin**	**4.49**	**351**	*e*Pn		**Pn**	**13 44 42.1**	**+0.4**
KOME				*e*Sn		**Sn**	**13 45 34.4**	**+0.3**
NKME	**Niksic**	**4.49**	**346**	*e*Pn		**Pn**	**13 44 41.6**	**-0.2**
NKME				*e*Sn		**Sn**	**13 45 34.3**	**0.0**
DBRK	**Dubrovnik**	**4.60**	**338**	*e*Pn		**Pn**	**13 44 42.7**	**-0.4**
VTS	**Vitosha**	**4.69**	**26**	⇓P		**Pn**	**13 44 43.7**	**-0.9**
VTS	**Vitosha**	**4.69**	**26**	⇓S		**Sn**	**13 45 35.4**	**-4.0**
IDI	**Anoyia**	**4.73**	**130**	Pn		**Pn**	**13 44 46.2**	**+1.2**
	comp=E,0.5nm,0.3s,baz=318,slow=12,SNR=4.1							
IDI				Sn		**Sn**	**13 45 42.9**	**+2.9**
	comp=E,4.3nm,0.3s,baz=20,slow=22,SNR=9.1							
STON	**Ston**	**4.92**	**336**	*i* Pn		**Pn**	**13 44 46.6**	**-0.9**
STON				Sn		**Sn**	**13 45 42.9**	**-1.8**
UPM	**Unac-Piva**	**4.92**	**347**	*e*Pn		**Pn**	**13 44 47.5**	**-0.3**
UPM				*e*Sn		**Sn**	**13 45 45.3**	**+0.2**
PLE	**Pljevlja**	**4.97**	**351**	⇓*i* Pn		**Pn**	**13 44 48.7**	**+0.3**
PLE				*e*Sn		**Sn**	**13 45 46.2**	**0.0**
BLKB	**Belogradchik**	**5.46**	**17**	⇑S		**Sn**	**13 45 54.4**	**-3.7**
MAKA	**Makarska**	**5.52**	**333**	*e*Pn		**Pn**	**13 44 56.1**	**+0.3**
MAKA				Sn		**Sn**	**13 45 58.2**	**-1.3**
KIJV	**Kijevo**	**6.37**	**333**	*e*Pn		**Pn**	**13 45 07.4**	**-0.1**
KIJV				Sn		**Sn**	**13 46 17.6**	**-2.7**
MORI	**Morici**	**6.52**	**328**	*e*Pn		**Pn**	**13 45 09.6**	**+0.1**
BLY	**Banja Luka**	**6.79**	**340**	⇑P		**Pn**	**13 45 15.2**	**+2.1**
BLY	**Banja Luka**	**6.79**	**340**	⇓S		**Sn**	**13 46 31.2**	**+0.6**
DUGI	**Dugi Otok**	**6.90**	**325**	*e*Pn		**Pn**	**13 45 15.6**	**+0.8**
UDBI	**Udbina**	**7.05**	**331**	*e*Pn		**Pn**	**13 45 18.2**	**+1.3**
GZR	**Gura Zlata**	**7.18**	**13**	⇓P		**Pn**	**13 45 17.1**	**-1.6**
BZS	**Buzias**	**7.24**	**6**	⇑P		**Pn**	**13 45 19.6**	**+0.1**
BZS	**Buzias**	**7.24**	**6**	⇓S		**Sn**	**13 46 39.2**	**-2.7**
NVLJ	**Novalja**	**7.44**	**327**	*i* Pn		**Pn**	**13 45 22.2**	**+0.2**
VOIR		**7.80**	**24**	⇑P		**Pn**	**13 45 25.5**	**-1.6**
MLR	**Muntele Rosu**	**8.16**	**28**	Pn		**Pn**	**13 45 33.5**	**+1.4**
	comp=E,0.2nm,0.3s,baz=140,slow=11,SNR=3.2							
SOKA	**Soboth**	**9.17**	**336**	*i* Pn		**Pn**	**13 45 45.6**	**-0.4**
	comp=E,2.5nm,0.2s							
OBKA	**Obir**	**9.19**	**334**	*i* Pn		**Pn**	**13 45 47.2**	**+0.9**
	comp=E,1.5nm,0.2s							
OBKA				*e*Sn		**Sn**	**13 47 26.8**	**-3.0**
	comp=E,13nm,0.6s							
VYHS	**Vyhne**	**10.14**	**354**	*e*PN		**Pn**	**13 46 01.2**	**+2.0**
VYHS				*e*SN		**Sn**	**13 47 48.1**	**-5.0**
BRTR	**Keskin Array B**	**10.32**	**79**	Pn		**Pn**	**13 46 06.0**	**+4.2**
	comp=E,0.1nm,0.3s,baz=262,slow=10,SNR=2.6							
BRTR				LR	LR		13 50 47.3	
	comp=E,48nm,20.8s,baz=212,slow=42							
MOA	**Molln**	**10.45**	**336**	*i* Pn		**Pn**	**13 46 04.5**	**+1.0**
	comp=E,4.0nm,0.6s							
WATA	**Waldralm**	**11.04**	**327**	*i* Pn		**Pn**	**13 46 14.6**	**+3.0**
	comp=E,5.9nm,0.6s							
WATA				*i* Sn		**Sn**	**13 48 15.7**	**+0.4**
	comp=E,2.0nm,0.3s							
VRAC	**Vranov**	**11.24**	**347**	LR	LR		13 51 52.6	
	comp=E,55nm,19.3s,baz=182,slow=45							
MOTA	**Moosalm**	**11.25**	**325**	*i* Pn		**Pn**	**13 46 16.6**	**+2.1**
	comp=E,1.9nm,0.3s							
DAVOX	**Davos/Dischmat**	**11.42**	**320**	Pn		**Pn**	**13 46 16.6**	**-0.3**
	comp=E,0.2nm,0.3s,baz=130,slow=18,SNR=1.9							
DAVOX				Sn		**Sn**	**13 48 25.7**	**+0.9**
	comp=E,0.6nm,0.3s,baz=319,slow=21,SNR=3.5							
GERES	**GERESS Array B**	**11.51**	**337**	Pn		**Pn**	**13 46 16.0**	**-2.0**
	comp=E,0.2nm,0.3s,baz=150,slow=14,SNR=6.3							
GERES				Sn		**Sn**	**13 48 19.5**	**-7.3**
	comp=E,0.2nm,0.3s,baz=153,slow=22,SNR=3.1							
GERES				LR	LR		13 52 02.0	
	comp=E,51nm,19.9s,baz=254,slow=45							
ESDC	**Sonseca Array**	**19.01**	**281**	P		**Pn**	**13 47 56.3**	**+0.1**
	comp=E,0.3nm,0.3s,baz=78,slow=12,SNR=4.8							
HFS	**Hagfors**	**22.16**	**351**	P		**P**	**13 48 29.6**	**+0.2**
	comp=E,2.9nm,0.7s,baz=160,slow=9.5,SNR=6.0							
EKA	**Eskdalemuir Ar**	**23.21**	**324**	P		**P**	**13 48 40.9**	**+0.4**
	comp=E,1.6nm,0.7s,baz=124,slow=11,SNR=3.0							
FINES	**FINESS Array B**	**23.31**	**7**	P		**P**	**13 48 41.4**	**-0.1**
	comp=E,2.2nm,0.7s,baz=173,slow=12,SNR=9.2							
FINES				LR	LR		14 00 35.8	
	comp=E,34nm,18.7s,baz=164,slow=44							
NOA	**NORSAR Array B**	**23.37**	**349**	P		**P**	**13 48 40.5**	**-1.6**
	comp=E,0.3nm,0.3s,baz=157,slow=9.8,SNR=2.8							
NOA				LR	LR		13 57 55.3	
	comp=E,26nm,19.7s,baz=305,slow=37							
AKTO	**Aktyubinsk**	**29.07**	**53**	LR	LR		14 02 05.9	
	comp=E,22nm,19.4s,baz=269,slow=38							
GEYT	**Alibeck**	**29.47**	**79**	LR	LR		14 03 00.4	
	comp=E,19nm,18.7s,baz=60,slow=40							
TORD	**Torodi Ar. Bea**	**30.19**	**219**	P		**P**	**13 49 44.7**	**+0.4**
	comp=E,0.6nm,0.7s,baz=30,slow=7.7,SNR=3.6							
MKAR	**Makanchi Array**	**45.21**	**59**	P		**P**	**13 51 50.0**	**-0.8**
	comp=E,0.5nm,0.4s,baz=281,slow=7.2,SNR=15							
ZALV	**Zalesovo Beam**	**45.56**	**48**	P		**P**	**13 51 52.8**	**-0.7**
	comp=E,2.0nm,0.4s,baz=278,slow=8.8,SNR=12							
YKA	**Yellowknife Ar**	**73.15**	**340**	P		**P**	**13 55 05.3**	**+1.3**
	comp=E,0.1nm,0.7s,baz=26,slow=4.3,SNR=3.2							
ASAR	**Alice Springs**	**122.24**	**96**	PKP		**PKPdf**	**14 02 28.2**	**-0.9**
	comp=E,0.4nm,0.8s,baz=316,slow=1.7,SNR=3.2							

*DDA **30** 13:53:52.4,39°.91N×40°.75E,h19km±1km,ML3.0*
*ISK **30** 13:53:52.3,39°.93N×40°.75E,h4km,ML2.8/7*
*ATA **30** 13:53:52.1±0.9,39°.94N×40°.72E,h18km±6km,MD3.8, ML2.4,MW3.1*
ISC 30 13:53:53.2±0.9,39°.93N±0".02×40°.76E±0".02,h20km±2km, n37,σ1°01/63,2C-1D,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
EMRE	**Erzurum,Aziziy**	**0.19**	**59**	*i* P		**Pb**	**13 53 57.5**	**-0.4**
EMRE				*i* S		**Sg**	**13 54 01.7**	**-0.4**
EMRE				IAML			13 54 06.0	
	comp=N,3μm,0.5s							
KOPT	**Kop Dagi**	**0.22**	**293**	⇑*i* P		**Pb**	**13 53 57.7**	**-0.8**
KOPT				*i* S		**Sb**	**13 54 02.3**	**+0.2**
KOPT				IAML			13 54 03.4	
	comp=Z,2μm,0.3s							
KOPT	**Kop Dagi**	**0.22**	**293**	*i* P		**Pb**	**13 53 57.7**	**-0.8**
KOPT				IAML			13 54 02.0	
	comp=E,3μm,0.2s							
KOPT				*i* S		**Sb**	**13 54 02.1**	**0.0**
KRIK	**Erzurum-spir**	**0.43**	**17**	*i* PA		**Pn**	**13 54 05.1**	**+0.6**
KRIK				*i* S		**Sn**	**13 54 12.0**	**+0.1**
KRIK	**Erzurum-spir**	**0.43**	**17**	*i* P		**Pn**	**13 54 05.1**	**+0.6**
KRIK				*i* S		**Sn**	**13 54 11.9**	**+0.1**
AKDA	**Akdag**	**0.49**	**69**	⇑*i* P		**Pb**	**13 54 02.8**	**-0.6**
AKDA				IAML			13 54 12.4	
AKDA	**Akdag**	**0.49**	**69**	*i* P		**Pg**	**13 54 02.7**	**-0.7**
AKDA				*i* S		**Sb**	**13 54 09.8**	**-0.5**
BAYB	**BAYBURT**	**0.51**	**310**	⇓*i* P		**Pb**	**13 54 02.9**	**-0.8**
BAYB				*e*S		**Sg**	**13 54 10.4**	**-0.2**
BAYB				IAML			13 54 13.0	
	comp=Z,287nm,0.4s							
BAYB	**BAYBURT**	**0.51**	**310**	*i* P		**Pb**	**13 54 02.9**	**-0.8**
BAYB				*i* S		**Sb**	**13 54 10.8**	**+0.1**
BAYB				IAML			13 54 12.0	
	comp=E,750nm,0.4s							
YEDI	**Yedisu-Bingol**	**0.52**	**199**	PG		**Pb**	**13 54 02.8**	**-1.0**
YEDI				SG		**Sb**	**13 54 10.6**	**-0.3**
KARO	**Karliova-Bingo**	**0.66**	**160**	PG		**Pg**	**13 54 05.9**	**-0.5**
KARO				SG		**Sn**	**13 54 16.3**	**-1.3**
BAYT	**Aydıntepe-Bayb**	**0.66**	**314**	PG		**Pb**	**13 54 05.8**	**-0.4**
BAYT				SG		**Sg**	**13 54 15.5**	**+0.1**
KOPR	**Koprukoy-ERZUR**	**0.84**	**85**	PG		**Pg**	**13 54 09.1**	**-0.7**
EUZM	**Uzumlu**	**0.85**	**255**	*e*P		**Pb**	**13 54 08.1**	**-1.3**
EUZM				IAML			13 54 24.9	
	comp=Z,44nm,0.4s							
EUZM	**Uzumlu**	**0.85**	**255**	*i* P		**Pb**	**13 54 08.1**	**-1.3**
EUZM				*i* S		**Sg**	**13 54 21.5**	**+0.3**
HOMI	**Horasan**	**0.89**	**82**	*e*P		**Pg**	**13 54 10.0**	**-0.7**
BNGB	**Bingl**	**0.94**	**184**	PG		**Pb**	**13 54 10.2**	**-0.7**
CHOM	**Cayeli-Rize**	**1.17**	**360**	PN		**Pg**	**13 54 15.1**	**-0.7**
CHOM				SN		**Sg**	**13 54 31.6**	**+0.4**
KELT	**Kelkit**	**1.18**	**281**	*i* PA		**Pb**	**13 54 14.6**	**-0.5**
KELT				*e*S		**Sn**	**13 54 30.8**	**+0.4**
KELT				IAML			13 54 35.4	
	comp=Z,61nm,0.4s							
KELT	**Kelkit**	**1.18**	**281**	*i* P		**Pn**	**13 54 14.2**	**-0.7**
KELT				*i* S		**Sn**	**13 54 30.9**	**+0.4**
DDEM	**Demirkent**	**1.22**	**38**	*i* P		**Pb**	**13 54 15.4**	**-0.3**
DDEM				*i* S		**Sg**	**13 54 37.4**	**+4.4**
TNCL	**Tunceli-Merkez**	**1.25**	**230**	*e*P		**Pn**	**13 54 15.4**	**-0.3**
TNCL				*i* Pn		**Pg**	**13 54 17.4**	**-0.1**
TNCL				*e*S		**Sg**	**13 54 34.4**	**+0.7**
TNCL				IAML			13 54 40.0	
	comp=Z,72nm,0.5s							
TNCL	**Tunceli-Merkez**	**1.25**	**230**	*i* P		**Pg**	**13 54 17.3**	**-0.1**
TNCL				*i* S		**Sg**	**13 54 37.5**	**+3.8**
MACK	**Trabzon**	**1.26**	**323**	*i* P		**Sb**	**13 54 16.6**	**+0.1**
MACK				*i* S		**Sg**	**13 54 35.3**	**+1.0**

comp=Z,2.0nm,0.9s,baz=131,slow=3.4,SNR=5.2
KHC Kasperske Hory 147.86 350 *e*PKP **PKPab 14 38 21.5 -0.3**
GERES GERESS Array B 148.11 350 PKPbc **PKiKP 14 38 21.1 -0.9**
comp=Z,0.3nm,0.5s,baz=347,slow=4.0,SNR=5.1

*SJA **30** 14:20:48.9±0.6, 19°.13S×71°.49W, h40km±15km, ML3.5, MW3.6*
*IDC **30** 14:20:54.4±1.0, 19°.45S×70°.67W, h0km, mb3.9/4, mb1 3.9/7, mb1mx3.8/33, mbtmp3.8/7, ML3.2/3, MS3.1/6, Ms1 3.1/6, ms1mx2.9/27, Error ellipse: s-maj=36.4km s-min=20.2km az=86.0*
*NEIC **30** 14:20:56.6±2.7, 19°.61S±0°.05×70°.95W±0°.08, h15km±4km, mb4.1/2, ML4.2(GUC), Error ellipse: s-maj=11.4km s-min=6.9km az=81.0*
*GUC **30** 14:20:57.9±0.6, 19°.67S×70°.92W, h36km±2km, ML4.2*
ISC 30 14:20:55.7±1.1, 19°.51S±0°.03×70°.92W±0°.05, h12km±7km, n60, σ2s05/74, mb4.1/4, 9C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PSGC	**Pisagua**	**0.76**	**96**	↓*i*P		**Pn**	**14 21 11.8**	**-0.5**
PSGC				*i* S		**Sn**	**14 21 23.2**	**-0.5**
PSGC				IAML			14 21 25.5	
	comp=N,10μm,0.6s							
PB11	**IPOC Station P**	**1.22**	**102**	↓*i*P		**Pg**	**14 21 19.3**	**+0.1**
PB11				*i* S		**Sn**	**14 21 35.5**	**+0.3**
PB11				IAML			14 21 38.5	
	comp=N,10μm,0.2s							
PB11	**IPOC Station P**	**1.22**	**102**			**Pg**	**14 21 19.6**	**+0.4**
PB11	**IPOC Station P**	**1.22**	**102**	*i* P		**Pg**	**14 21 19.7**	**+0.4**
TA01	**Diego Aracena**	**1.26**	**147**	↑*i*P		**Pn**	**14 21 18.4**	**-0.7**
TA01				*i* S		**Sb**	**14 21 33.4**	**-2.1**
AP01	**Chacalluta**	**1.26**	**26**	↓*i*P		**Pg**	**14 21 21.0**	**+1.0**
AP01				*i* S		**Sg**	**14 21 40.6**	**+4.2**
AP01				IAML			14 21 44.3	
	comp=E,16μm,0.5s							
MNMC	**Minye Minye**	**1.31**	**73**	↓*i*P		**Pg**	**14 21 21.8**	**+0.9**
MNMC				*i* S		**Sg**	**14 21 40.6**	**+2.6**
MNMC				IAML			14 21 50.7	
	comp=E,15μm,0.4s							
MNMC	**Minye Minye**	**1.31**	**73**			**Pg**	**14 21 21.9**	**+1.0**
MNMCX	**Minye Minye**	**1.31**	**73**	*i* Sg		**Sg**	**14 21 41.8**	**+3.8**
PATCX	**Punta Patache**	**1.49**	**151**	↑*i*P		**Pn**	**14 21 21.5**	**-0.9**
PATCX				*i* S		**Sn**	**14 21 39.4**	**-2.3**
GO01	**Chusmiza**	**1.64**	**96**	↑*i*P		**Pg**	**14 21 26.3**	**-0.9**
GO01				*e*S		**Sg**	**14 21 49.0**	**+0.5**
GO01				IAML			14 21 51.1	
	comp=N,12μm,0.3s							
GO01	**Chusmiza**	**1.64**	**96**			**Pg**	**14 21 26.5**	**-0.7**
PB08	**IPOC Station P**	**1.78**	**111**	↑*i*P		**Pb**	**14 21 27.6**	**-0.8**
PB08				*i* S		**Sb**	**14 21 50.7**	**-0.1**
PB08				IAML			14 21 56.5	
	comp=N,3μm,0.3s							
PB08	**IPOC Station P**	**1.78**	**111**	*i* P		**Pb**	**14 21 28.4**	**-0.1**
PB08				*i* Sg		**Sg**	**14 21 57.5**	**+4.4**
PB16	**IPOC Station P**	**1.78**	**49**	↑*i*P		**Pg**	**14 21 29.3**	**-0.7**
PB16				*i* S		**Sg**	**14 21 54.9**	**+1.8**
PB16				IAML			14 22 03.0	
	comp=E,2μm,0.8s							
PB16	**IPOC Station P**	**1.78**	**49**	*i* Sg		**Sn**	**14 21 48.6**	**-1.0**
PB01	**IPOC Station P**	**2.03**	**139**	↑*i*P		**Pn**	**14 21 29.9**	**+0.1**
PB01				*i* S		**Sn**	**14 21 53.8**	**-1.4**
PB01				IAML			14 22 06.1	
	comp=E,2μm,0.6s							
PB01	**IPOC Station P**	**2.03**	**139**			**Pn**	**14 21 29.9**	**+0.1**
PB02	**IPOC Station P**	**2.04**	**152**	↑*i*P		**Pn**	**14 21 29.4**	**-0.6**
PB02				*i* S		**Sn**	**14 21 53.2**	**-2.1**
PB02				IAML			14 22 01.0	
	comp=N,4μm,0.6s							
PB02	**IPOC Station P**	**2.04**	**152**	*i* P		**Pb**	**14 21 31.6**	**-1.2**
PB07	**IPOC Station P**	**2.41**	**156**	↑*i*P		**Pn**	**14 21 34.0**	**-1.1**
PB07	**IPOC Station P**	**2.41**	**156**	*i* P		**Pn**	**14 21 36.6**	**+1.5**
PB07				*i* Sg		**Sg**	**14 22 11.2**	**-1.9**
PB03	**IPOC Station P**	**2.75**	**157**	↑*i*P		**Pn**	**14 21 38.8**	**-1.0**
PB03				IAML			14 22 25.4	
	comp=E,834nm,0.5s							
PB03	**IPOC Station P**	**2.75**	**157**	*i* P		**Pn**	**14 21 40.7**	**+1.0**
PB09	**IPOC Station P**	**2.76**	**146**	*i* P		**Pn**	**14 21 41.9**	**+1.9**
PB09				*i* Sg		**Sb**	**14 22 21.1**	**+2.1**
PB04	**IPOC Station P**	**2.90**	**166**			**Pn**	**14 21 40.0**	**-1.8**
PB04	**IPOC Station P**	**2.90**	**166**	*i* P		**Pn**	**14 21 42.5**	**+0.7**
PB04				*i* Sg		**Sb**	**14 22 22.1**	**-0.8**
PB05	**IPOC Station P**	**3.39**	**169**	*i* P		**Pn**	**14 21 49.0**	**+0.5**
PB05				*i* Sg		**Sb**	**14 22 33.9**	**-3.2**
PB06	**IPOC Station P**	**3.42**	**159**	*i* P		**Pn**	**14 21 50.2**	**+1.3**
PB06				*i* Sg		**Sb**	**14 22 36.1**	**-1.7**
LVC	**Limon Verde**	**3.61**	**149**	Pn		**Pn**	**14 21 52.3**	**+0.5**
	comp=E,5.4nm,0.3s,baz=328,slow=11,SNR=41							
LVC				Sn		**Sn**	**14 22 34.0**	**-0.5**
	comp=E,29nm,0.3s,baz=334,slow=6.6,SNR=4.1							
LVC				LR		LR	14 22 36.7	
	comp=E,68nm,20.8s,baz=324,slow=29							
LVC				Lg		Lg	14 22 43.7	
	comp=E,33nm,0.3s,baz=276,slow=12,SNR=8.8							
LVC	**Limon Verde**	**3.61**	**149**			**Pn**	**14 21 52.6**	**+0.8**
LVC	**Limon Verde**	**3.61**	**149**	*i* P		**Pn**	**14 21 53.4**	**+1.6**
LVC				*i* Sg		**Sb**	**14 22 42.4**	**-1.2**
PB15	**IPOC Station P**	**3.92**	**160**	*i* P		**Pn**	**14 21 57.3**	**+1.4**
PB10	**IPOC Station P**	**3.99**	**175**			**Pn**	**14 21 54.1**	**-2.6**
PB10	**IPOC Station P**	**3.99**	**175**	*i* P		**Pn**	**14 21 56.9**	**+0.1**
PB10				*i* Sg		**Sn**	**14 22 47.1**	**+3.6**
LPAZ	**La Paz**	**4.17**	**40**	Pn		**Pb**	**14 22 04.9**	**-4.5**
	comp=E,1.5nm,0.3s,baz=159,slow=7.6,SNR=10							
LPAZ				LR		LR	14 23 06.8	
	comp=E,52nm,21.7s,baz=242,slow=33							
LPAZ	**La Paz**	**4.17**	**40**			**Pb**	**14 22 06.1**	**-3.2**
PB14	**IPOC Station P**	**5.11**	**175**	*i* P		**Pn**	**14 22 13.2**	**+0.8**
PB14				*i* Sg		**Sn**	**14 23 15.2**	**+3.7**
YJA	**Yavi**	**5.71**	**119**	*i* P		**Pn**	**14 22 23.9**	**+3.2**
YJA				IAML			14 22 34.0	
	comp=Z,13nm,0.7s							
YJA				*i* Sg		**Sb**	**14 23 36.6**	**-7.5**
GO02	**Mina Guanaco**	**5.75**	**168**			**Pn**	**14 22 19.6**	**-1.7**
SIV	**San Ignacio**	**10.02**	**71**	Pn		**Pn**	**14 23 16.6**	**-2.9**
	comp=Z,0.1nm,0.3s,baz=260,slow=19,SNR=2.6							
SIV				LR		LR	14 27 48.8	
	comp=Z,344nm,18.6s,baz=274,slow=42							
CFA	**Coronel Fontan**	**12.28**	**169**	Pn		**Pn**	**14 23 49.8**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=342,slow=19,SNR=1.9							
CFA				LR		LR	14 29 08.7	
	comp=Z,106nm,18.7s,baz=274,slow=40							
CPUP	**Villa Florida**	**14.24**	**121**	Pn		**Pn**	**14 24 20.5**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=306,slow=12,SNR=6.7							
ATAH	**Atahualpa**	**14.29**	**328**	LR		LR	14 30 22.2	
	comp=Z,115nm,20.1s,baz=61,slow=40							
OTAV	**Otavalo**	**20.97**	**339**	P		**P**	**14 25 39.4**	**0.0**
OTAV				IAmb		IAmb	14 25 55.8	
	comp=Z,4.4nm,1.1s							
PLCA	**Paso Flores**	**21.15**	**179**	P		**P**	**14 25 41.9**	**+1.1**
	comp=Z,1.3nm,0.7s							
MDP	**Montagnes des**	**30.36**	**38**	LR		LR	14 39 10.5	
	comp=Z,66nm,21.9s,baz=104,slow=36							
DR12	**Loma Pena Alta**	**38.09**	**2**	P		**P**	**14 28 15.5**	**+0.9**
QSPA	**South Pole Qui**	**70.67**	**180**	P		**P**	**14 32 12.2**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=105,slow=2.5,SNR=7.0							
QSPA	**South Pole Qui**	**70.67**	**180**	IAmb		IAmb	14 32 23.4	
	comp=Z,3.7nm,1.2s							
TORD	**Torodi Ar. Bea**	**78.49**	**72**	P		**P**	**14 32 56.4**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=255,slow=4.8,SNR=13							
YKA	**Yellowknife Ar**	**88.70**	**341**	P		**P**	**14 33 49.1**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=138,slow=4.6,SNR=12							
H11S2	**WAKE ISLAND Hy**	**25.73**	**279**	T		T	16 59 06.5	
	baz=101,slow=74,SNR=49							
H11S1	**WAKE ISLAND Hy**	**25.74**	**279**	T		T	16 59 07.1	
	baz=101,slow=74,SNR=31							
H11S3	**WAKE ISLAND Hy**	**25.75**	**279**	T		T	16 59 07.2	
	baz=101,slow=74,SNR=34							
H11N3	**WAKE ISLAND Hy**	**25.77**	**281**	T		T	16 59 16.2	
	baz=100,slow=74,SNR=6.4							
H11N2	**WAKE ISLAND Hy**	**25.78**	**281**	T		T	16 59 17.2	
	baz=100,slow=74,SNR=6.4							
H11N1	**WAKE ISLAND Hy**	**25.78**	**281**	T		T	16 59 20.2	
	baz=100,slow=74,SNR=3.8							
MKAR	**Makanchi Array**	**145.06**	**33**	PKP		**PKPdf**	**14 40 33.0**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=313,slow=3.7,SNR=12							
SONM	**Songino Array**	**151.67**	**4**	PKPbc		**PKiKP**	**14 40 50.2**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=347,slow=2.4,SNR=3.6							
SONM				PKPab		**pPKPab**	**14 40 59.5**	**-2.7**
	comp=Z,0.5nm,0.6s,baz=325,slow=1.0,SNR=5.1							

*MAN **30** 14:40:52.9, 8°.15N×126°.25E, h120km, mb5.0, ML3.9, MS4.1*
MAN Intensity II - Bislig City Surigao del Sur.
*NEIC **30** 14:40:52.1±1.9, 8°.24N±0°.10×126°.57E±0°.10, h103km±9km, mb4.3/14, Error ellipse: s-maj=15.4km s-min=12.8km az=223.0*
*IDC **30** 14:40:53.2±0.7, 8°.18N×126°.44E, h110km±5km, mb3.9/11, mb1 4.0/12, mb1mx3.6/48, mbtmp4.3/12, Error ellipse: s-maj=15.8km s-min=7.5km az=97.0*
ISC 30 14:40:53.4±0.5, 8°.16N±0°.04×126°.36E±0°.06, h111km±4km, n61, σ1s55/81, mb4.1/19, 4C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BIPH	**Bislig**	**0.03**	**4**	↓*i*P		**Pn**	**14 41 07.9**	**-0.8**
BIPH				*i* S		**Sn**	**14 41 18.5**	**-1.6**
BUTP	**Butuan**	**1.09**	**318**	*e*P		**Pn**	**14 41 15.8**	**+0.2**
BUTP				*e*S		**Sn**	**14 41 33.8**	**+1.4**
MATI	**Mati**	**1.21**	**185**	*e*P		**Pn**	**14 41 17.8**	**+0.8**
MATI				*e*S		**Sn**	**14 41 36.1**	**+1.3**
BUKP	**Musuan**	**1.31**	**258**	*e*P		**Pn**	**14 41 18.2**	**+0.1**
BUKP				*e*S		**Sn**	**14 41 37.6**	**+0.7**
DAV	**Davao City (W)**	**1.33**	**216**	P		**Pn**	**14 41 18.0**	**-0.3**
	196nm,0.3s,baz=262,slow=3.7,SNR=13							
DAV				S		**Sn**	**14 41 38.3**	**+1.1**
	225nm,0.3s,baz=211,slow=23,SNR=19							
DAV	**Davao City (W)**	**1.33**	**216**			**Pn**	**14 41 18.8**	**+0.5**
DAV						**Sn**	**14 41 41.6**	**+4.4**
DMPH	**Davao City--Mi**	**1.36**	**218**	↓*i*P		**Pn**	**14 41 19.6**	**+0.9**
DMPH				*i* S		**Sn**	**14 41 39.5**	**+1.7**
CGP	**Cagayan de Oro**	**1.67**	**280**	↑*i*P		**Pn**	**14 41 21.9**	**-0.4**
CGP				*i* S		**Sn**	**14 41 43.3**	**-1.2**
KCP	**Kidapawan**	**1.70**	**228**	↓*e*P		**Pn**	**14 41 21.8**	**-1.0**
KCP				*i* S		**Sn**	**14 41 44.5**	**-0.6**
DDMP	**Don Marcelino,**	**2.14**	**198**	*e*P		**Pn**	**14 41 28.2**	**-0.1**
DDMP				*e*S		**Sn**	**14 41 53.9**	**-1.0**
CTBH	**Cotabato--PC H**	**2.29**	**246**	↓*e*P		**Pn**	**14 41 29.9**	**-0.3**
CTBH				*i* S		**Sn**	**14 41 56.5**	**-1.9**
SKMP	**Bagumbayan, Su**	**2.43**	**228**	*e*P		**Pn**	**14 41 31.3**	**-0.6**
SKMP				*e*S		**Sn**	**14 41 58.9**	**-2.6**
MSLP	**Maasin**	**2.46**	**323**	*e*P		**Pn**	**14 41 31.9**	**-0.5**
MSLP				*e*S		**Sn**	**14 42 00.7**	**-1.6**
GSPH	**General Santos**	**2.49**	**214**	↑*i*P		**Pn**	**14 41 32.4**	**-0.5**
PAGZ	**Pagadian**	**2.96**	**264**	*e*P		**Pn**	**14 41 39.2**	**+0.3**
PAGZ				*e*S		**Sn**	**14 42 08.6**	**-5.5**
DCPH	**Dipolog City**	**3.01**	**278**	||*e*P		**Pn**	**14 41 39.8**	**+0.3**
LLP	**Lapu-Lapu**	**3.19**	**312**	||*e*P		**Pn**	**14 41 41.9**	**-0.1**
LLP				*e*S		**Sn**	**14 42 19.3**	**-0.2**
OCLP	**Ormoc**	**3.35**	**329**	*e*P		**Pn**	**14 41 44.4**	**+0.3**
OCLP				*e*S		**Sn**	**14 42 22.3**	**-1.1**
GUIM	**Jordan**	**4.46**	**304**	*e*P		**Pn**	**14 41 58.7**	**-0.2**
GUIM				*e*S		**Sn**	**14 42 48.3**	**-1.6**
RCP	**Roxas**	**4.91**	**314**	||*e*P		**Pn**	**14 42 05.5**	**+0.4**
LUWI	**Luwuk**	**9.81**	**202**			**Pn**	**14 43 14.1**	**+2.6**
SIJI	**Sorong**	**10.21**	**151**	P		**Pn**	**14 43 16.3**	**-0.7**
	1.9nm,0.3s,baz=211,slow=19,SNR=14							
SIJI				S		**Sn**	**14 45 02.6**	**-7.1**
	2.1nm,0.3s,baz=343,slow=19,SNR=6.4							
SBUM	**Sibu**	**15.17**	**249**			**Pn**	**14 44 21.8**	**-0.1**
JOW	**Kunigami**	**18.66**	**5**	P		**P**	**14 45 03.4**	**+0.7**
	0.1nm,0.3s,baz=188,slow=11,SNR=4.8							
MTN	**Manton Dam**	**21.40**	**167**	P		**P**	**14 45 33.7**	**+1.4**
KNRA	**Kunmurra**	**23.80**	**174**	P		**P**	**14 45 56.9**	**+0.8**
FITZ	**Fitzroy Crossi**	**26.10**	**182**	P		**P**	**14 46 16.6**	**-0.3**
	3.1nm,0.7s,baz=1.7,slow=11,SNR=4.8							
FITZ	**Fitzroy Crossi**	**26.10**	**182**	P		**P**	**14 46 17.2**	**+0.3**
FITZ				IAmb		IAmb	14 46 19.2	
	comp=Z,12nm,1.3s							
COEN	**Coen**	**27.59**	**143**	P		**P**	**14 46 31.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**28.53**	**294**	P		**P**	**14 46 43.4**	**+4.6**
	comp=Z,1.0nm,1.0s,baz=112,slow=9.2,SNR=7.8							
WB0	**Warramunga Arr**	**28.85**	**164**	P		**P**	**14 46 40.4**	**-1.2**
WB0				IAmb		IAmb	14 46 48.4	
	comp=Z,5.7nm,1.1s							
WRAB	**Tennant Creek**	**29.00**	**164**	P		**P**	**14 46 41.5**	**-1.3**
WRAB				IAmb		IAmb	14 46 43.9	
	comp=Z,13nm,1.4s							
WRA	**Warramunga Arr**	**29.01**	**164**	P		**P**	**14 46 42.2**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=346,slow=9.4,SNR=14							
WRA				PcP		**PcP**	**14 49 49.2**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=334,slow=2.8,SNR=3.6							
WRA	**Warramunga Arr**	**29.01**	**164**	IAmb		IAmb	14 46 45.5	
	comp=Z,0.1nm,0.8s							
WB2	**Warramunga Arr**	**29.01**	**164**	P		**P**	**14 46 42.5**	**-0.4**
WR0	**Warramunga Arr**	**29.08**	**164**	P		**P**	**14 46 43.1**	**-0.4**
ASAR	**Alice Springs**	**32.48**	**167**	P		**P**	**14 47 13.3**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=349,slow=7.2,SNR=55							
ASAR				pP		**pP**	**14 47 37.1**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=347,slow=7.2,SNR=1.7							
ASAR				PcP		**PcP**	**14 49 58.5**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=342,slow=2.3,SNR=11							
ASAR				ScP		**ScP**	**14 53 30.6**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=338,slow=2.3,SNR=4.9							
USRK	**Ussuriysk Ar.**	**36.24**	**7**	pP		pP	14 48 10.2	0.0
	comp=Z,1.7nm,0.6s,baz=189,slow=8.6,SNR=2.0							
H11N1	**WAKE ISLAND Hy**	**40.87**	**69**	T		T	15 32 18.8	
	baz=259,slow=74,SNR=27							
H11N2	**WAKE ISLAND Hy**	**40.88**	**69**	T		T	15 32 20.2	
	baz=259,slow=74,SNR=12							
H11N3	**WAKE ISLAND Hy**	**40.89**	**69**	T		T	15 32 20.7	
	baz=259,slow=74,SNR=19							
STKA	**Stephens Creek**	**42.39**	**161**	P		**P**	**14 48 37.0**	**+0.2**
	comp=Z,5.3nm,0.8s,baz=342,slow=7.6,SNR=8.1							
STKA	**Stephens Creek**	**42.39**	**161**	P		**P**	**14 48 37.5**	**+0.6**
SONM	**Songino Array**	**43.02**	**340**	P		**P**	**14 48 42.1**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=156,slow=9.3,SNR=8.0							
SONM				sP		**sP**	**14 49 20.5**	**+0.1**
	comp=Z,0.5nm,0.6s,baz=153,slow=7.6,SNR=3.6							
SONM	**Songino Array**	**43.02**	**340**	P		**P**	**14 48 43.1**	**+1.1**
MK31	**Makanchi Array**	**53.76**	**324**	P		**P**	**14 50 03.5**	**-0.9**
MK31				IAmb		IAmb	14 50 05.6	
	comp=Z,4.0nm,0.7s							
MKAR	**Makanchi Array**	**53.76**	**324**	P		**P**	**14 50 04.3**	**0.0**
	comp=Z,5.9nm,0.5s,baz=121,slow=7.5,SNR=122							
MKAR				sP		**sP**	**14 50 44.1**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=127,slow=9.2,SNR=2.4							
MKAR	**Makanchi Array**	**53.76**	**324**	P		**P**	**14 50 04.0**	**-0.3**
MAKZ	**Makanchi**	**53.95**	**324**	P		**P**	**14 50 05.2**	**-0.5**
ZAA0	**Zalesovo Array**	**56.52**	**332**	P		**P**	**14 50 23.7**	**-0.2**
ZAA0				IAmb		IAmb	14 50 23.9	
	comp=Z,2.1nm,0.8s							
ZALV	**Zalesovo Beam**	**56.52**	**332**	P		**P**	**14 50 23.7**	**-0.2**
	comp=Z,2.1nm,0.3s,baz=135,slow=6.6,SNR=9.6							
ZALV	**Zalesovo Beam**	**56.52**	**332**	P		**P**	**14 50 23.5**	**-0.4**
KURK	**Kurchatov**	**57.85**	**326**	P		**P**	**14 50 33.7**	**+0.3**
KURK				IAmb		IAmb	14 50 34.6	
	comp=Z,3.8nm,0.7s							
KURBB	**Kurchatov Arra**	**57.86**	**326**	P		**P**	**14 50 33.4**	**-0.1**
	comp=Z,1.4nm,0.3s,baz=127,slow=6.5,SNR=11							
BVAR	**Borovoye Array**	**63.45**	**326**	P		**P**	**14 51 11.3**	**0.0**
	comp=Z,0.9nm,0.4s,baz=114,slow=5.7,SNR=22							
BVAR				pP		**pP**	**14 51 36.7**	**-2.0**
	comp=Z,0.5nm,0.7s,baz=127,slow=9.5,SNR=2.3							
BVAR				sP		**sP**	**14 51 51.8**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=126,slow=6.8,SNR=3.5							
ABKAR	**Akbulak array**	**68.53**	**320**	P		**P**	**14 51 43.7**	**-0.3**
FINES	**FINESS Array B**	**87.78**	**332**	P		**P**	**14 53 29.3**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=82,slow=5.0,SNR=16							
VNDA	**Vanda**	**87.84**	**173**	P		**P**	**14 53 30.2**	**+0.5**
	comp=Z,4.3nm,0.6s,baz=321,slow=6.0,SNR=9.8							
YKA	**Yellowknife Ar**	**95.64**	**24**	pP		pP	14 54 33.0	-2.2
	comp=Z,0.2nm,0.5s,baz=303,slow=5.0,SNR=3.8							
TORD	**Torodi Ar. Bea**	**121.11**	**291**	PKP		**PKPdf**	**14 59 33.3**	**-0.8**
	comp=Z,0.5nm,0.5s,baz=50,slow=2.3,SNR=4.4							
PLCA	**Paso Flores**	**144.24**	**158**	PKP		**PKPdf**	**15 00 16.3**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=260,slow=5.3,SNR=4.1							

*NEIC **30** 15:01:29.8±1.9, 31°.6S±0°.1×179°.5W±0°.2, h289km±10km, mb4.1/14, Error ellipse: s-maj=22.0km s-min=17.0km az=100.0*
*IDC **30** 15:01:38.5±7.7, 31°.83S×179°.94E, h339km±88km, mb3.3/3, mb1 3.4/4, mb1mx3.3/19, mbtmp4.0/4, Error ellipse: s-maj=95.8km s-min=39.7km az=178.0*
*WEL **30** 15:01:43.0±0.5, 32°.5S±10°×18°.0W±2°.4, h291km±10km, M4.3/17, mB4.5/8, ML5.7/1, MLv4.9/17, Mw(mB)3.7/8*
ISC 30 15:01:39.8±0.8, 31°.92S±0°.07×179°.9E±0°.1, h363km, n82, σ2s31/86, mb3.9/10, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GLKZ	**Green Lake**	**3.25**	**36**	P		**Pn**	**15 02 39.7**	**-2.8**
GLKZ				S		**S**	**15 03 25.9**	**-7.1**

MXZ	**Matakaoa Point**	**5.78**	**193**	P		**Pn**	**15 03 10.4**	**+1.9**
MXZ				S		**S**	**15 04 17.9**	**-2.6**
MXZ	**Matakaoa Point**	**5.78**	**193**			**Pn**	**15 03 11.0**	**+2.5**
WMGZ	**Waiomatatini S**	**6.01**	**191**	P		**Pn**	**15 03 13.6**	**+2.5**
HAZ	**Te Kaha**	**6.08**	**196**	P		**Pn**	**15 03 11.9**	**+0.1**
HAZ				S		**S**	**15 04 25.4**	**-1.2**
PKGZ	**Pakihiroa**	**6.14**	**194**	P		**Pn**	**15 03 13.6**	**+1.0**
OUZ	**Omahuta**	**6.20**	**236**	Pn		**Pn**	**15 03 11.1**	**-2.2**
PUZ	**Puketiti**	**6.29**	**192**	P		**Pn**	**15 03 13.6**	**-0.7**
PUZ				S		**S**	**15 04 29.2**	**-1.7**
PUZ	**Puketiti**	**6.29**	**192**	P		**S**	**15 04 29.9**	**-1.1**
RUGZ	**Raukumara Rang**	**6.30**	**196**	P		**Pn**	**15 03 14.9**	**+0.4**
MWZ	**Matawai**	**6.69**	**196**	P		**S**	**15 04 37.2**	**-2.2**
URZ	**Urewera**	**6.72**	**199**	P		**Pn**	**15 03 19.9**	**+0.7**
	2.7nm,0.3s,baz=273,slow=6.1,SNR=64							
URZ				S		**S**	**15 04 37.6**	**-2.5**
	9.7nm,0.3s,baz=280,slow=23,SNR=17							
URZ	**Urewera**	**6.72**	**199**	P		**S**	**15 04 38.4**	**-1.8**
URZ	**Urewera**	**6.72**	**199**			Pn	15 03 12.1	-7.1
URZ						**S**	**15 04 37.5**	**-2.5**
RIGZ	**Rimuhau**	**6.99**	**194**	P		**Pn**	**15 03 23.7**	**+1.4**
MUGZ	**Murupara**	**7.02**	**200**	P		**Pn**	**15 03 23.4**	**+0.7**
MUGZ				S		**S**	**15 04 46.3**	**-0.2**
MUGZ	**Murupara**	**7.02**	**200**	P		**S**	**15 04 43.3**	**-3.2**
RTZ	**Ruatahuna**	**7.09**	**199**	P		**Pn**	**15 03 24.6**	**+1.1**
RTZ	**Ruatahuna**	**7.09**	**199**	P		**S**	**15 04 45.3**	**-2.8**
SNGZ	**Shannon Statio**	**7.16**	**196**	P		**Pn**	**15 03 25.2**	**+0.9**
SNGZ				S		**S**	**15 04 48.1**	**-1.3**
SNGZ	**Shannon Statio**	**7.16**	**196**	P		**S**	**15 04 45.5**	**-3.8**
KNZ	**Kokohu**	**7.32**	**194**	P		**Pn**	**15 03 27.2**	**+1.2**
KNZ	**Kokohu**	**7.32**	**194**	P		S	15 04 44.3	-8.3
RAHZ	**Arahi**	**7.35**	**197**	P		**Pn**	**15 03 27.8**	**+1.3**
RAHZ				S		**S**	**15 04 50.7**	**-2.7**
RAHZ	**Arahi**	**7.35**	**197**	P		**S**	**15 04 50.8**	**-2.6**
MTHZ	**Maungataniwha**	**7.35**	**199**	P		**S**	**15 04 49.1**	**-4.5**
MHGZ	**Mahia Peninsul**	**7.40**	**192**	P		**Pn**	**15 03 28.7**	**+1.7**
MHGZ	**Mahia Peninsul**	**7.40**	**192**	P		**S**	**15 04 49.2**	**-5.2**
WHHZ	**Waihua**	**7.46**	**196**	P		**P**	**15 03 30.0**	**+1.0**
WHHZ	**Waihua**	**7.46**	**196**	P		**S**	**15 04 48.9**	**-6.9**
NMHZ	**Naumai**	**7.59**	**198**	P		**Pn**	**15 03 30.8**	**+1.5**
NMHZ	**Naumai**	**7.59**	**198**	P		**S**	**15 04 58.6**	**-0.1**
ARHZ	**Aropaoanui**	**7.70**	**197**	P		**Pn**	**15 03 31.4**	**+0.9**
ARHZ	**Aropaoanui**	**7.70**	**197**	P		**S**	**15 04 55.3**	**-5.6**
BKZ	**Black Stump Fm**	**7.74**	**200**	P		**Pn**	**15 03 31.1**	**0.0**
**B

IBAF	**Bafgh**	**5.05**	**17**	*e*Pn	**Pn**	**15 03 37.1**	**-0.6**
ISAD	**Sadrabad**	**5.15**	**358**	*e*Pn	**Pn**	**15 03 40.3**	**+1.1**
SMDO	**Samad**	**5.29**	**133**	P	**Pn**	**15 03 41.8**	**+0.9**
	SNR=9.1						
SMDO				S	**Sn**	**15 04 41.6**	**+0.3**
WSAR	**Wadi Sarin**	**5.56**	**128**	Pn	**Pn**	**15 03 44.3**	**-0.3**
	0.9nm,0.3s,baz=309,slow=8.6,SNR=21						
WSAR				Sn	**Sn**	**15 04 45.7**	**-2.2**
	1.1nm,0.3s,baz=147,slow=22,SNR=7.5						
JMDO	**Jabal Madar**	**5.83**	**138**	P	**Pn**	**15 03 47.9**	**-0.4**
	SNR=11						
WBK	**Wadi Bani Khal**	**6.21**	**130**	P	**Pn**	**15 03 53.8**	**+0.2**
IZEF	**Zefreh**	**6.27**	**348**	*e*Pn	**Pn**	**15 03 53.8**	**-0.8**
ANAR	**Anarak**	**6.42**	**359**	*e*Pn	**Pn**	**15 03 58.6**	**+2.1**
DQM	**DQM**	**7.58**	**153**	P	**Pn**	**15 04 11.8**	**-0.6**
GEYT	**Alibeck**	**11.71**	**17**	LR	LR	15 10 44.5	
	comp=Z,43nm,21.4s,baz=180,slow=43						
KBZ	**Khabaz**	**19.13**	**335**	LR	LR	15 15 08.3	
	comp=Z,51nm,19.7s,baz=175,slow=40						
BRTR	**Keskin Array B**	**21.24**	**313**	P	**P**	**15 07 09.3**	**+1.5**
	0.5nm,0.7s,baz=127,slow=9.2,SNR=2.8						
BRTR				LR	LR	15 17 35.0	
	comp=Z,21nm,18.5s,baz=64,slow=43						
AKTO	**Aktyubinsk**	**23.87**	**7**	P	**P**	**15 07 34.9**	**+0.1**
	0.7nm,0.6s,baz=180,slow=11,SNR=2.9						
BVAR	**Borovoye Array**	**29.01**	**21**	P	**P**	**15 08 20.9**	**-0.2**
	1.5nm,1.0s,baz=193,slow=5.9,SNR=4.8						
ARU	**Arti**	**29.85**	**5**	LR	LR	15 21 04.8	
	comp=Z,32nm,18.1s,baz=167,slow=38						
MKAR	**Makanchi Array**	**30.06**	**41**	P	**P**	**15 08 29.8**	**-0.8**
	0.5nm,0.8s,baz=219,slow=6.7,SNR=4.4						
KURBB	**Kurchatov Array**	**30.38**	**32**	P	**P**	**15 08 33.2**	**-0.1**
	0.3nm,0.7s,baz=230,slow=6.1,SNR=3.2						
ZALV	**Zalesovo Beam**	**35.48**	**32**	P	**P**	**15 09 17.3**	**-0.5**
	2.0nm,0.8s,baz=224,slow=10,SNR=7.6						
FINES	**FINESS Array B**	**39.40**	**339**	P	**P**	**15 09 50.4**	**-0.5**
	1.2nm,0.7s,baz=142,slow=9.6,SNR=4.4						
CMAR	**Chiang Mai Arr**	**42.26**	**92**	P	**P**	**15 10 15.2**	**+0.1**
	0.3nm,0.6s,baz=278,slow=10.0,SNR=4.0						
CMAR				LR	LR	15 30 35.6	
	comp=Z,12nm,19.6s,baz=190,slow=40						
SONM	**Songino Array**	**45.79**	**48**	P	**P**	**15 10 42.9**	**-0.3**
	0.3nm,0.7s,baz=256,slow=6.0,SNR=4.1						
ARCES	**ARCESS Array B**	**45.91**	**347**	P	**P**	**15 10 43.4**	**-0.2**
	2.2nm,0.8s,baz=141,slow=8.4,SNR=6.9						
TORD	**Torodi Ar. Bea**	**50.54**	**265**	P	**P**	**15 11 19.8**	**-0.3**
	0.8nm,0.9s,baz=56,slow=7.9,SNR=3.2						
YKA	**Yellowknife Ar**	**90.59**	**355**	P	**P**	**15 15 22.7**	**-0.6**
	0.1nm,0.5s,baz=360,slow=4.5,SNR=3.6						

TAP 30 15:13:22.3,24.59N×121.35E,h7km±1km,ML0.8,1C,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YHNB	**Yeheng**	**0.09**	**14**	↑*i*P	Pg	15 13 24.4	-0.1
	baz=13						
YHNB				*i* S	Sg	15 13 25.7	-0.2
	baz=13						
NSK	**Sanguang**	**0.09**	**3**	*i* P	Pg	15 13 24.4	-0.1
	baz=7.0						
NSK				S	Sg	15 13 25.9	-0.1
	baz=7.0						
NDT	**Datong Townshi**	**0.15**	**84**	*e*P	Pg	15 13 25.4	0.0
	baz=83						
NDT				*e*S	Sg	15 13 27.5	0.0
	baz=83						
NNS	**Nan Shan**	**0.15**	**173**	*e*S	Sg	15 13 28.1	+0.5
	baz=170						
NNSB	**Datong**	**0.16**	**170**	P	Pg	15 13 25.6	-0.1
	baz=170						
NNSB				S	Sg	15 13 28.1	+0.2
	baz=170						
NNSH	**Datong**	**0.16**	**170**	P	Pg	15 13 25.7	+0.1
	baz=170						
NNSH				S	Sg	15 13 27.9	0.0
	baz=170						
NWLT	**Wulai**	**0.23**	**36**	*e*P	Pg	15 13 26.8	-0.2
	baz=35						
NWLT				S	Sg	15 13 30.7	+0.5
	baz=35						
LIOB	**Emei**	**0.31**	**281**	*e*S	Sg	15 13 33.2	+0.6
	baz=281						
TWE	**Neicheng**	**0.32**	**65**	*e*P	Pg	15 13 28.6	+0.1
	baz=66						
TWT	**Tachien**	**0.37**	**206**	*e*P	Pg	15 13 29.6	0.0
	baz=207						
TDCB	**Techi**	**0.38**	**208**	*e*P	Pg	15 13 29.5	-0.2
	baz=208						
TDCB				*e*S	Sg	15 13 34.1	-0.5
	baz=208						

JMA 30 15:14:21.9±0.1,24.90N×123.39E,h29km,M1.0, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.56**	**218**	P	Pb	15 14 32.8	-0.4
YOJ				*e*S	Sb	15 14 40.3	-0.6
JYNG	**Yonagunijimaku**	**0.60**	**222**	P	Pb	15 14 33.6	-0.4
JYNG				*e*S	Sb	15 14 41.8	-0.4
IRIF	**Iriomote-Funau**	**0.64**	**151**	P	Pb	15 14 34.1	-0.5
IRIF				S	Sb	15 14 43.2	-0.1
JKRS	**Kuro-shima**	**0.87**	**139**	P	Pn	15 14 38.0	-0.1
JKRS				S	Sb	15 14 49.5	-0.2
JIJ	**Ishigaki jima**	**0.87**	**128**	P	Pn	15 14 37.6	-0.6
JIJ				S	Sb	15 14 48.3	-1.4
JISG	**Ishigakijimahi**	**0.89**	**110**	P	Pn	15 14 38.4	-0.1
JISG				*e*S	Sb	15 14 49.7	-0.7

MAN 30 15:14:57.9,9.74N×123.75E,h5km,mb3.0,ML1.6,MS0.9, 2C-1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.62**	**20**	↓*e*P	Pn	15 15 18.1	+4.7
LLP				*e*S	Sn	15 15 25.4	+1.7
MSLP	**Maasin**	**1.16**	**70**	*e*P	Pg	15 15 19.5	-0.8
MSLP				*e*S	Sn	15 15 42.1	+5.0
DCPH	**Dipolog City**	**1.21**	**199**	↑*e*P	Pg	15 15 20.4	-0.7
GUIM	**Jordan**	**1.45**	**308**	*e*P	Pn	15 15 24.1	-0.7
GUIM				*e*S	Sg	15 15 46.8	+2.3
OCLP	**Ormoc**	**1.56**	**33**	*e*P	Pg	15 15 29.9	+2.1
OCLP				*e*S	Sg	15 15 55.9	+7.8
RCP	**Roxas**	**2.06**	**332**	↑*e*P	Pg	15 15 40.4	+2.9

MAN 30 15:15:38.3,9.70N×123.86E,h20km,mb4.5,ML3.3,MS3.2, 1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.62**	**10**	↓*e*P	Pb	15 15 50.1	-0.4
LLP				*i* S	Sn	15 16 00.5	-0.9
MSLP	**Maasin**	**1.08**	**66**	*e*P	Pb	15 15 56.8	-1.5
MSLP				*e*S	Sn	15 16 19.6	+7.0
OCLP	**Ormoc**	**1.53**	**29**	*e*P	Pn	15 16 05.2	+0.6
OCLP				*e*S	Sb	15 16 27.4	+2.4

*IDC **30** 15:16:46.0±0.9,15.32S×173.28W,h0km,mb3.7/8, mb1 3.9/9,mb1mx3.8/39,mbtmp3.7/9,ML4.2/1,MS3.5/1, Ms1 3.5/1,ms1mx2.7/28,Error ellipse: s-maj=52.8km s-min=17.9km az=140.0*

*NEIC **30** 15:16:47.1±2.2,15.32S±0.09×173.3W±0.1,h7km±5km, mb4.9/12,Error ellipse: s-maj=19.8km s-min=11.1km az=109.0*

ISC 30 15:16:49.3±0.6,15.38S±0.06×173.09W±0.09,h29km,n33, σ2s04/31,mb3.7/11,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.93**	**41**	Pn	**Pn**	**15 17 20.4**	**+0.1**
	91nm,0.3s,baz=228,slow=14,SNR=146						
AFI				Sn	**Sn**	**15 17 39.4**	**-4.2**
	59nm,0.3s,baz=81,slow=21,SNR=5.2						
NIUE	**Niue**	**4.76**	**141**		**Pn**	**15 18 00.0**	**+0.9**
NIUE					**Sn**	**15 18 48.0**	**-5.3**
URZ	**Urewera**	**24.38**	**199**	P	**P**	**15 22 05.9**	**+0.8**
	1.9nm,0.4s,baz=320,slow=7.9,SNR=4.1						
URZ	**Urewera**	**24.38**	**199**	P	**P**	**15 22 05.2**	**+0.2**
URZ				IAmb	IAmb	15 22 43.1	
	comp=Z,68nm,1.8s						
HIZ	**Hauiti**	**25.38**	**202**	P	**P**	**15 22 14.7**	**+0.6**
BKZ	**Black Stump Fm**	**25.41**	**199**	P	**P**	**15 22 15.9**	**+1.5**
BKZ				IAmb	IAmb	15 22 22.4	
	comp=Z,31nm,1.5s						
BFZ	**Birch Farm**	**26.87**	**198**	P	**P**	**15 22 29.0**	**+1.5**
BFZ				IAmb	IAmb	15 22 44.9	
	comp=Z,49nm,1.5s						
QRZ	**Quartz Range**	**28.27**	**203**	P	**P**	**15 22 42.1**	**+1.9**
TUWZ	**Tuamarina**	**28.29**	**201**	P	**P**	**15 22 41.0**	**+0.8**
THZ	**Tophouse**	**28.95**	**202**	P	**P**	**15 22 48.9**	**+2.7**
LTZ	**Lake Taylor**	**30.07**	**202**	P	**P**	**15 22 56.3**	**+0.2**
RPZ	**Rata Peaks**	**31.32**	**202**	LR	LR	15 35 14.7	
	comp=Z,93nm,20.7s,baz=206,slow=35						
PATS	**Pohnpei**	**35.92**	**306**	P	**P**	**15 23 43.8**	**-3.6**
H11S2	**WAKE ISLAND Hy**	**39.10**	**329**	T	T	16 04 39.6	
	baz=146,slow=75,SNR=7.1						
H11S3	**WAKE ISLAND Hy**	**39.11**	**329**	T	T	16 04 37.6	
	baz=146,slow=75,SNR=6.0						
H11S1	**WAKE ISLAND Hy**	**39.12**	**329**	T	T	16 04 41.4	
	baz=146,slow=75,SNR=5.0						
STKA	**Stephens Creek**	**44.31**	**240**	P	**P**	**15 24 55.5**	**-1.4**
	comp=Z,2.8nm,1.1s,baz=99,slow=9.6,SNR=3.5						
STKA	**Stephens Creek**	**44.31**	**240**	P	**P**	**15 24 56.2**	**-0.7**
WB2	**Warramunga Arr**	**50.13**	**257**	P	**P**	**15 25 42.0**	**-0.4**
WB2				IAmb	IAmb	15 25 50.1	
	comp=Z,21nm,1.6s						
WRA	**Warramunga Arr**	**50.15**	**257**	P	**P**	**15 25 42.5**	**0.0**
	comp=Z,0.4nm,0.6s,baz=95,slow=6.8,SNR=4.3						
ASAR	**Alice Springs**	**50.41**	**252**	P	**P**	**15 25 44.3**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=87,slow=7.8,SNR=20						
ASAR	**Alice Springs**	**50.41**	**252**	P	**P**	**15 25 44.7**	**+0.2**
TXAR	**Tajitas Array**	**80.35**	**56**	P	**P**	**15 29 01.1**	**+2.8**
	comp=Z,0.2nm,0.5s,baz=234,slow=5.5,SNR=3.9						
PDAR	**Pinedale Array**	**82.05**	**42**	P	**P**	**15 29 09.3**	**+2.1**
	comp=Z,0.2nm,0.5s,baz=239,slow=7.0,SNR=3.1						
PDAR	**Pinedale Array**	**82.05**	**42**	P	**P**	**15 29 09.1**	**+1.8**
YHL	**Hebgen Lake**	**82.07**	**39**	P	**P**	**15 29 10.6**	**+3.3**
ILAR	**Eielson Array**	**82.36**	**11**	P	**P**	**15 29 09.2**	**+1.1**
	comp=Z,0.2nm,0.8s,baz=228,slow=8.0,SNR=3.8						
ILAR	**Eielson Array**	**82.36**	**11**	P	**P**	**15 29 09.9**	**+1.8**
XAN	**Xi'an**	**88.86**	**306**	P	**P**	**15 29 39.6**	**-1.6**
YKA	**Yellowknife Ar**	**89.95**	**23**	P	**P**	**15 29 45.5**	**0.0**
	comp=Z,0.2nm,0.8s,baz=230,slow=5.4,SNR=4.1						
CLL	**Collm**	**143.82**	**354**	*e*PKPdf	**PKiKP**	**15 36 24.0**	**-1.1**
BRTR	**Keskin Array B**	**146.33**	**321**	PKPbc	**PKPab**	**15 36 29.6**	**+1.1**
	comp=Z,1.4nm,1.0s,baz=108,slow=4.0,SNR=3.6						
BRTR	**Keskin Array B**	**146.33**	**321**		**PKPab**	**15 36 29.0**	**+0.4**

IDC 30 15:25:05.4±1.5,28.35N×101.53E,h0km,mb3.4/3, mb1 3.7/3,mb1mx3.2/46,mbtmp3.4/3,Error ellipse: s-maj=50.9km s-min=25.5km az=71.0,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.13**	**194**	Pg	Pg	15 28 11.9	
	0.1nm,0.3s,baz=3.2,slow=18,SNR=7.2						
CMAR				Lg	Lg	15 30 26.2	
	0.0nm,0.3s,baz=9.6,slow=27,SNR=3.1						
MKAR	**Makanchi Array**	**23.80**	**326**	P	P	15 30 19.9	+0.1
	0.4nm,0.8s,baz=128,slow=9.8,SNR=4.6						
WRA	**Warramunga Arr**	**57.54**	**143**	P	P	15 34 56.9	0.0
	0.6nm,0.9s,baz=334,slow=7.6,SNR=4.7						
ASAR	**Alice Springs**	**60.40**	**146**	P	P	15 35 16.5	-0.2
	0.3nm,0.6s,baz=330,slow=6.9,SNR=5.1						

*IDC **30** 15:36:19.9±1.5,38.43N×20.54E,h0km,mb3.8/5, mb1 3.8/5,mb1mx3.4/39,mbtmp3.8/5,MS3.1/2,Ms1 3.3/2, ms1mx2.4/44,Error ellipse: s-maj=44.0km s-min=27.6km az=122.0*

*ATH **30** 15:36:21.6,38.42N×20.46E,h14km±1km,ML3.4/17,Error ellipse: s-maj=1.4km s-min=0.6km az=273.0*

*THE **30** 15:36:22.1,38.42N×20.47E,h5km±1km,ML3.6/18,Error ellipse: s-maj=1.9km s-min=0.4km az=91.0*

ISC 30 15:36:22.0±0.8,38.42N±0.02×20.51E±0.03,h9km±4km, n80,σ0s74/114,mb3.8/5,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSK1	**VASILIKIADES**	**0.05**	**99**	P	**Pg**	**15 36 23.8**	**0.0**
VSK1				S	**Sg**	**15 36 24.9**	**-0.3**
	290µm,0.2s						
FSK	**Fiskardo**	**0.06**	**46**	P	**Pg**	**15 36 24.0**	**0.0**
FSK				S	**Sg**	**15 36 25.2**	**-0.3**
	91µm,0.3s						
FSK	**Fiskardo**	**0.06**	**46**	P	**Pg**	**15 36 24.0**	**0.0**
FSK				S	**Sg**	**15 36 25.7**	**+0.2**
KEF1	**Kardakata, Kep**	**0.14**	**191**	P	**Pg**	**15 36 25.2**	**+0.1**
KEF1				S	**Sg**	**15 36 27.3**	**+0.1**
KEF4	**Livadi, Kephal**	**0.17**	**202**	P	**Pg**	**15 36 25.7**	**+0.1**
KEF4				S	**Sg**	**15 36 28.9**	**+0.8**
LXR1	**Lixouri, Cepha**	**0.22**	**194**	P	**Pg**	**15 36 26.7**	**+0.2**
LXR1				S	**Sg**	**15 36 30.4**	**+0.9**
	119µm,0.4s						
EVGI	**Lefkada island**	**0.24**	**30**	P	**Pg**	**15 36 27.1**	**+0.3**
EVGI				S	**Sg**	**15 36 31.2**	**+1.2**
EVGI	**Lefkada island**	**0.24**	**30**	P	**Pg**	**15 36 27.1**	**+0.3**
EVGI				S	**Sg**	**15 36 31.5**	**+1.4**
ARG2	**Argostoli**	**0.24**	**183**	P	**Pg**	**15 36 26.8**	**0.0**
ARG2				S	**Sg**	**15 36 30.8**	**+0.8**
	50µm,0.2s						
KEF3	**Kipouria, Keph**	**0.25**	**210**	P	**Pg**	**15 36 26.9**	**0.0**
KEF3				S	**Sg**	**15 36 31.0**	**+0.7**
VLS	**Valsamata**	**0.25**	**165**	P	**Pg**	**15 36 27.0**	**0.0**
VLS				S	**Sg**	**15 36 31.3**	**+0.9**
VLS	**Valsamata**	**0.25**	**165**	P	**Pg**	**15 36 27.1**	**0.0**
VLS				S	**Sg**	**15 36 31.3**	**+0.9**
KEF2	**Argostoli. Kep**	**0.25**	**183**	P	**Pg**	**15 36 27.0**	**0.0**
KEF2				S	**Sg**	**15 36 30.9**	**+0.4**
MGNA	**Meganis**	**0.33**	**43**	P	**Pg**	**15 36 28.6**	**+0.1**
MGNA				S	**Sg**	**15 36 32.9**	**+0.1**
MGNA				AML	AML	15 36 34.7	
	comp=N,58302µm,0.5s						
MGNA				AML	AML	15 36 34.9	
	comp=E,52028µm,0.5s						
KFL	**Anninata**	**0.38**	**144**	P	**Pg**	**15 36 29.5**	**+0.1**
KFL				S	**Sg**	**15 36 36.0**	**+1.5**
	comp=E,22µm,0.2s						
KFL	**Anninata**	**0.38**	**144**	P	**Pg**	**15 36 29.5**	**+0.1**
KFL				S	**Sg**	**15 36 35.9**	**+1.5**
KFL				AML	AML	15 36 36.7	
	comp=E,54781µm,0.3s						
KFL				AML	AML	15 36 38.7	
	comp=N,36751µm,0.2s						
LKD2	**Lefkada island**	**0.39**	**18**	P	**Pg**	**15 36 29.5**	**-0.1**
LKD2				S	**Sg**	**15 36 36.1**	**+1.2**
	comp=N,4µm,0.6s						
LKD2	**Lefkada island**	**0.39**	**18**	P	**Pg**	**15 36 29.6**	**-0.1**
LKD2				S	**Sg**	**15 36 35.8**	**+1.0**
LKD2				AML	AML	15 36 40.8	
	comp=E,8000µm,0.8s						
LKD2				AML	AML	15 36 46.8	
	comp=N,9615µm,0.7s						
TSLK	**Tsoukalades, L**	**0.42**	**16**	P	**Pg**	**15 36 30.3**	**0.0**
TSLK	**Tsoukalades, L**	**0.42**	**16**	P	**Pg**	**15 36 30.4**	**0.0**
TSLK				S	**Sg**	**15 36 36.5**	**+0.6**
AST1	**Astakos**	**0.47**	**75**	P	**Pg**	**15 36 31.6**	**+0.4**
AST1				S	**Sb**	**15 36 39.8**	**+0.2**
	comp=N,14µm,0.3s						
VLMS	**Volimes, Zakyn**	**0.55**	**167**	P	**Pg**	**15 36 32.4**	**-0.3**
VLMS				S	**Sb**	**15 36 41.3**	**-0.5**
VLMS				AML	AML	15 36 45.1	
	comp=N,18424µm,0.3s						
VLMS				AML	AML	15 36 47.1	
	comp=E,16101µm,0.4s						
PDO	**Prodromos**	**0.56**	**71**	P	**Pg**	**15 36 32.8**	**-0.1**
PDO				S	**Sb**	**15 36 41.7**	**-0.4**
	comp=E,9µm,0.4s						
PDO	**Prodromos**	**0.56**	**71**	P	**Pg**	**15 36 33.0**	**+0.2**
PDO				S	**Sb**	**15 36 42.1**	**0.0**
PDO				AML	AML	15 36 45.9	
	comp=E,14223µm,0.5s						
PDO				AML	AML	15 36 47.2	
	comp=N,12307µm,0.4s						
ZAK2	**Zakynthos**	**0.70**	**154**	P	**Pg**	**15 36 35.5**	**0.0**
ZAK2				S	**Sb**	**15 36 46.8**	**+0.8**
	comp=N,14µm,0.2s						
KRI1	**kERI**	**0.79**	**162**	P	**Pg**	**15 36 36.4**	**-0.8**
KRI1				S	**Sg**	**15 36 48.3**	**+0.8**
	comp=N,9µm,0.2s						
PVO	**Paravola**	**0.82**	**76**	P	**Pg**	**15 36 38.1**	**+0.3**
PVO				S	**Sb**	**15 36 51.2**	**+1.5**
	comp=N,4µm,0.6s						
PVO	**Paravola**	**0.82**	**76**	P	**Pg**	**15 36 38.2**	**+0.3**
PVO				AML	AML	15 36 57.6	
	comp=E,8056µm,0.5s						
PVO				AML	AML	15 36 58.5	
	comp=N,6791µm,0.6s						
RLS	**Riolos of Patr**	**0.84**	**115**	P	**Pg**	**15 36 37.9**	**-0.2**
RLS				S	**Sb**	**15 36 51.4**	**+1.4**
	comp=N,1µm,0.6s						
RLS	**Riolos of Patr**	**0.84**	**115**	P	**Pg**	**15 36 37.9**	**-0.2**
RLS				AML	AML	15 36 59.8	
	comp=E,2238µm,0.6s						
RLS				AML	AML	15 37 00.8	
	comp=N,3072µm,0.4s						
UPR	**University Cam**	**1.02**	**97**	P	**Pb**	**15 36 41.9**	**+0.2**
DRO	**Drossia**	**1.06**	**116**	P	**Pg**	**15 36 41.6**	**-0.7**
DRO				S	**Sn**	**15 36 57.9**	**+0.1**
	comp=N,3µm,0.4s						
DRO	**Drossia**	**1.06**	**116**	P	**Pg**	**15 36 41.6**	**-0.7**
DRO				AML	AML	15 37 10.7	
	comp=N,5158µm,0.4s						
DRO				AML	AML	15 37 11.0	
	comp=E,5365µm,0.4s						
EFP	**Efpalio**	**1.10**	**89**	P	**Pg**	**15 36 42.1**	**-1.0**
EFP				S	**Sn**	**15 36 59.8**	**+1.0**
	comp=E,2µm,0.5s						
EFP	**Efpalio**	**1.10**	**89**	P	**Pg**	**15 36 42.1**	**-1.0**
EFP				S	**Sn**	**15 36 59.3**	**+0.4**
EFP				AML	AML	15 37 04.9	
	comp=N,4453µm,0.4s						
EFP				AML	AML	15 37 06.9	
	comp=E,4108µm,0.6s						
ANX	**Ano Chora**	**1.12**	**81**	P	**Pg**	**15 36 43.0**	**-0.6**
ANX				S	**Sn**	**15 36 59.9**	**+0.3**
	comp=E,2µm,0.5s						
ANX	**Ano Chora**	**1.12**	**81**	P	**Pg**	**15 36 42.8**	**-0.8**
EVR	**Evrytania**	**1.14**	**64**	P	**Pg**	**15 36 43.1**	**-0.7**
EVR				S	**Sn**	**15 37 00.8**	**+0.9**
	comp=E,1µm,0.7s						
EVR	**Evrytania**	**1.14**	**64**	P	**Pg**	**15 36 43.1**	**-0.7**
EVR				S	**Sn**	**15 37 00.7**	**+0.8**
EVR				AML	AML	15 37 06.9	
	comp=E,1924µm,0.6s						
EVR				AML	AML	15 37 11.8	
	comp=N,2257µm,0.6s						
LAKA	**Lakka**	**1.17**	**98**	P	**Pb**	**15 36 43.4**	**-1.0**
LAKA	**Lakka**	**1.17**	**98**	P	**Pb**	**15 36 43.5**	**-0.9**
LAKA				S	**Sn**	**15 37 01.2**	**+0.6**
LAKA				AML	AML	15 37 09.5	
	comp=E,1551µm,0.7s						
LAKA				AML	AML	15 37 11.9	
	comp=N,1626µm,0.9s						
SERG	**Sergoula**	**1.22**	**90**	P	**Pn**	**15 36 44.4**	**-0.8**
SERG	**Sergoula**	**1.22**	**90**	P	**Pn**	**15 36 44.3**	**-0.8**
SERG				AML	AML	15 37 08.6	
	comp=E,3440µm,0.5s						
SERG				AML	AML	15 37 08.8	
	comp=N,2804µm,0.6s						
TRIZ	**Trizonia**	**1.23**	**92**	P	**Pn**	**15 36 44.4**	**-0.9**
TRIZ	**Trizonia**	**1.23**	**92**	P	**Pn**	**15 36 44.4**	**-0.9**
JAN	**Janina**	**1.27**	**12**	P	**Pn**	**15 36 45.7**	**-0.2**
JAN				S	**Sn**	**15 37 04.6**	**+1.6**
	comp=N,1µm,0.6s						
JAN	**Janina**	**1.27**	**12**	P	**Pb**	**15 36 46.2**	**+0.1**
ALIK	**Aliki, Aigiali**	**1.27**	**97**	P	**Pn**	**15 36 45.1**	**-0.8**
KALE	**Kalithea**	**1.28**	**91**	P	**Pn**	**15 36 45.2**	**-0.9**
KALE	**Kalithea**	**1.28**	**91**	P	**Pn**	**15 36 45.4**	**-0.7**
KALE				AML	AML	15 37 13.5	
	comp=N,2506µm,0.5s						
KALE				AML	AML	15 37 17.3	
	comp=E,1466µm,0.8s						
AMT	**Artemida-Makis**	**1.30**	**133**	P	**Pg**	**15 36 48.0**	**+1.1**
AMT	**Artemida-Makis**	**1.30**	**133**	P	**Pn**	**15 36 46.2**	**0.0**
AMT				AML	AML	15 37 14.9	
	comp=E,3098µm,0.6s						
AMT				AML	AML	15 37 23.4	
	comp=N,3004µm,0.6s						
KLV	**Kalavryta, Ach**	**1.35**	**106**	P	**Pn**	**15 36 46.3**	**-0.7**
KLV	**Kalavryta, Ach**	**1.35**	**106**	P	**Pn**	**15 36 46.5**	**-0.5**
KLV				AML	AML	15 37 09.4	
	comp=N,1253µm,0.4s						
KLV				AML	AML	15 37 19.6	
	comp=E,1050µm,0.5s						
MAKR	**Makrakomi, Fth**	**1.41**	**64**	P	**Pn**	**15 36 48.0**	**+0.2**
AGG	**Agios Georgios**	**1.55**	**66**	P	**Pn**	**15 36 50.1**	**+0.3**
AGG				S	**Sn**	**15 37 10.4**	**+0.4**
	comp=E,738nm,0.6s						
AGG	**Agios Georgios**	**1.55**	**66**	P	**Pb**	**15 36 50.8**	**0.0**
THL	**Klokotos Trika**	**1.64**	**45**	P	**Pb**	**15 36 52.8**	**+0.4**
THL	**Klokotos Trika**	**1.64**	**45**	P	**Pb**	**15 36 52.0**	**-0.3**
ITM	**Ithomi**	**1.67**	**137**	P	**Pb**	**15 36 52.8**	**-0.1**
ITM	**Ithomi**	**1.67**	**137**	P	**Pb**	**15 36 52.6**	**-0.3**
ITM				AML	AML	15 37 23.8	
	comp=E,1037µm,0.7s						
ITM				AML	AML	15 37 26.1	
	comp=N,1387µm,0.5s						
AXAR	**Agios Charalam**	**1.72**	**78**	P	**Pb**	**15 36 54.4**	**+0.7**
PYL	**PYLOS**	**1.81**	**147**	P	**Pn**	**15 36 53.7**	**+0.4**
VLX	**Vlachokerasia**	**1.81**	**125**	P	**Pg**	**15 36 56.9**	**+0.2**
VLX	**Vlachokerasia**	**1.81**	**125**	P	**Pb**	**15 36 55.6**	**+0.2**
PROD	**Prodromos**	**1.89**	**94**	P	**Pb**	**15 36 56.3**	**-0.3**
LKR	**Lokris**	**1.97**	**82**	P	**Pb**	**15 36 57.7**	**-0.3**
LTK	**Loutraki**	**1.98**	**101**	P	**Pb**	**15 36 57.4**	**-0.7**
LTK	**Loutraki**	**1.98**	**101**	P	**Pn**	**15 36 57.5**	**-0.7**
VIL2	**Platees**	**2.18**	**95**	P	**Pb**	**15 37 00.6**	**-1.0**
DID	**Didima**	**2.34**	**112**	P	**Pn**	**15 37 02.7**	**+2.0**
MRKA	**Markates**	**2.43**	**82**	P	**Pn**	**15 37 04.0**	**+2.1**

ZALV	**Zalesovo Beam**	**52.06**	**356**	P		**P**	**16 00 07.0**	**-1.0**
	1.0nm,0.4s,baz=174,slow=7.2,SNR=7.3							
ZALV	**Zalesovo Beam**	**52.06**	**356**	P		**P**	**16 00 06.7**	**-1.2**
ABKAR	**Akbulak array**	**53.80**	**336**	P		**P**	**16 00 20.8**	**-0.1**
ABKAR	**Akbulak array**	**53.80**	**336**	P		**P**	**16 00 21.5**	**+0.6**
ABKAR				IAmb		IAmb	16 00 21.8	
	comp=Z,1.9nm,0.8s							
GERES	**GERESS Array B**	**79.69**	**319**	P		**P**	**16 03 06.5**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=130,slow=5.9,SNR=4.6							
GERES	**GERESS Array B**	**79.69**	**319**	P		**P**	**16 03 07.5**	**+1.3**
TXAR	**Lajitas Array**	**146.22**	**22**	PKPbc		**PKPab**	**16 10 41.0**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=324,slow=1.7,SNR=4.7							

BJI ***30*** *16:01:41.1±0.0,24.97N×62.72E,h11km,mB4.8/17, mb4.4/28,Ms4.1/10,Ms7.3/9*
IDC ***30*** *16:01:42.2±0.6,24.97N×62.91E,h0km,mb4.1/27, mb1 4.2/29,mb1mx4.1/50,mbtmp4.1/29,ML3.6/2,MS3.5/10, Ms1 3.5/10,ms1mx3.2/44,Error ellipse: s-maj=15.0km s-min=12.7km az=166.0*
TEH ***30*** *16:01:42.6,25.12N×62.78E,h10km,ML4.6*
MOS ***30*** *16:01:45.1±1.4,25.17N×62.88E,h26km,mb4.6/34,Error ellipse: s-maj=8.1km s-min=5.3km az=85.9*
NEIC ***30*** *16:01:47.3±1.8,25.12N±0.06×62.76E±0.08,h31km±5km, mb4.6/64,Error ellipse: s-maj=13.0km s-min=2.9km az=129.0*
OMAN ***30*** *16:01:51.6±0.8,24.69N×62.50E,h50km,ml4.2/6,ms3.3/3, Error ellipse: s-maj=39.5km s-min=19.7km az=252.0*
DSN ***30*** *16:01:57.3±2.5,25.33N×61.86E,h14km,ML4.7/6,Error ellipse: s-maj=68.3km s-min=21.1km az=7.0*
ISC 30 16:01:45.6±0.4,**24.97N**±0.06×**62.79E**±0.04,**h28**km,**n286,** σ1s**79**/289,**mb4.5**/87,**MS3.6**/13,**2C-1D,Off coast of Pakistan**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WSAR	**Wadi Sarin**	**4.17**	**246**	Pn		**Pn**	**16 02 47.2**	**-0.2**
	7.7nm,0.3s,baz=109,slow=8.3,SNR=86							
WSAR				Sn		**Sn**	**16 03 31.0**	**-4.3**
	23nm,0.3s,baz=358,slow=21,SNR=15							
WSAR				LR		LR	16 05 08.3	
	comp=Z,656nm,18.1s,baz=105,slow=48							
WSAR	**Wadi Sarin**	**4.17**	**246**	P		**Pn**	**16 02 48.5**	**+1.0**
	SNR=162							
WSAR				S		**Sn**	**16 03 31.0**	**-4.3**
WBK	**Wadi Bani Khal**	**4.21**	**237**	P		**Pn**	**16 02 47.9**	**-0.1**
	SNR=208							
WBK				S		**Sn**	**16 03 32.7**	**-3.6**
BIDO	**Bidbid**	**4.49**	**252**	*e*Pn		**Pn**	**16 02 53.1**	**+1.3**
BIDO	**Bidbid**	**4.49**	**252**	P		**Pn**	**16 02 52.9**	**+1.0**
	SNR=10							
BIDO				S		**Sn**	**16 03 39.6**	**-3.5**
SMDO	**Samad**	**4.73**	**247**	P		**Pn**	**16 02 55.5**	**+0.3**
	SNR=26							
SMDO				S		**Sn**	**16 03 46.8**	**-2.4**
SZD1	**Zahaedan-tmp**	**4.81**	**340**	*e*Pn		**Pn**	**16 02 55.2**	**-1.1**
JMDO	**Jabal Madar**	**5.01**	**240**	P		**Pn**	**16 02 59.6**	**+0.6**
	SNR=120							
JMDO				S		**Sn**	**16 03 53.6**	**-2.5**
HOQ	**Hoqain**	**5.18**	**256**	P		**Pn**	**16 03 01.8**	**+0.4**
	SNR=23							
KHNJ	**Kahnooj**	**5.43**	**304**	*e*Pn		**Pn**	**16 03 04.5**	**-0.3**
MDH	**Madha**	**5.89**	**275**	*i* P		**Pn**	**16 03 10.7**	**-0.3**
	SNR=10							
MDH	**Madha**	**5.89**	**275**	*e*Pn		**Pn**	**16 03 11.9**	**+0.8**
MDH	**Madha**	**5.89**	**275**	P		**Pn**	**16 03 11.8**	**+0.8**
	SNR=6.0							
NIAN	**Nian**	**5.93**	**297**	*e*Pn		**Pn**	**16 03 14.0**	**+2.4**
NIAN				*e*			16 04 20.0	
UOSS	**Minazif**	**5.97**	**271**	*i* P		**Pn**	**16 03 12.2**	**0.0**
	SNR=14							
UOSS	**Minazif**	**5.97**	**271**	*e*Pn		**Pn**	**16 03 12.8**	**+0.6**
UOSS	**Minazif**	**5.97**	**271**			**Pn**	**16 03 11.7**	**-0.6**
UOSS				Sn		**Sn**	**16 04 13.2**	**-6.6**
MSFE	**Esma-Masafi**	**6.02**	**275**	P		**Pn**	**16 03 13.0**	**+0.2**
MSFE				S		**Sn**	**16 04 14.4**	**-6.4**
MSFE	**Esma-Masafi**	**6.02**	**275**	*e*Pn		**Pn**	**16 03 17.5**	**+4.7**
HATD	**Hatta, Dubai**	**6.04**	**270**	*i* P		**Pn**	**16 03 13.8**	**+0.6**
	SNR=16							
HATD	**Hatta, Dubai**	**6.04**	**270**	*e*Pn		**Pn**	**16 03 14.1**	**+0.9**
HATD	**Hatta, Dubai**	**6.04**	**270**	P		**Pn**	**16 03 14.1**	**+0.9**
	SNR=15							
SHME	**Shamm**	**6.10**	**282**	*i* P		**Pn**	**16 03 16.8**	**+2.9**
	SNR=23							
SHME	**Shamm**	**6.10**	**282**	*e*Pn		**Pn**	**16 03 17.0**	**+3.0**
GENO	**Geno**	**6.42**	**294**	*e*Pn		**Pn**	**16 03 19.5**	**+1.1**
GENO				*e*			16 04 29.4	
NAZ	**Nazwa, Dubai**	**6.47**	**272**	*i* P		**Pn**	**16 03 22.5**	**+3.6**
	SNR=9.8							
NAZ	**Nazwa, Dubai**	**6.47**	**272**	*e*Pn		**Pn**	**16 03 22.5**	**+3.6**
NAZ	**Nazwa, Dubai**	**6.47**	**272**	P		**Pn**	**16 03 22.5**	**+3.6**
	SNR=9.8							
NAZ				S		**Sn**	**16 04 31.4**	**-0.5**
ALNE	**Al Ain**	**6.47**	**263**	*i* P		**Pn**	**16 03 22.1**	**+3.0**
	SNR=14							
ALNE				*i* P		**Pn**	**16 03 22.1**	**+3.0**
	SNR=19							
ALNE	**Al Ain**	**6.47**	**263**	*e*Pn		**Pn**	**16 03 21.2**	**+2.1**
BHUJ	**Bhuj**	**6.50**	**104**	*e*P		**Pn**	**16 03 18.1**	**-1.4**
BHUJ				*e*S		**Sn**	**16 04 26.2**	**-6.5**
FAQ	**Al Faqa, Dubai**	**6.54**	**270**	*i* P		**Pn**	**16 03 23.1**	**+3.2**
	SNR=9.7							
FAQ	**Al Faqa, Dubai**	**6.54**	**270**	*e*Pn		**Pn**	**16 03 22.5**	**+2.5**
FAQ	**Al Faqa, Dubai**	**6.54**	**270**	P		**Pn**	**16 03 22.7**	**+2.7**
	SNR=9.7							
FAQ				S		**Sn**	**16 04 32.5**	**-1.1**
CHMN	**Cheshme madani**	**6.74**	**317**	*e*Pn		**Pn**	**16 03 22.8**	**-0.3**
ASUD	**Al Ashush, Dub**	**6.79**	**269**	*e*Pn		**Pn**	**16 03 26.3**	**+3.0**
ASUD	**Al Ashush, Dub**	**6.79**	**269**	P		**Pn**	**16 03 26.9**	**+3.5**
	SNR=5.0							
NHDN	**Nehbandan**	**6.84**	**340**	*e*Pn		**Pn**	**16 03 22.4**	**-1.8**
NHDN				*e*			16 03 24.7	
DQM	**DQM**	**6.98**	**225**	P		**Pn**	**16 03 25.9**	**-0.2**
	SNR=7.0							
NGRK	**Negar Kerman**	**7.12**	**312**	*e*Pn		**Pn**	**16 03 29.5**	**+1.2**
NGRK				*e*			16 04 52.6	
TVBK	**TV Kerman**	**7.32**	**314**	*e*Pn		**Pn**	**16 03 31.9**	**+0.9**
TVBK				*e*			16 03 37.9	
KHGB	**Koh Gabri**	**7.76**	**315**	*e*Pn		**Pn**	**16 03 37.2**	**+0.2**
IKOO	**Kooshah**	**8.13**	**337**	*e*Pn		**Pn**	**16 03 40.3**	**-1.8**
IDAH	**Dahanechah**	**8.15**	**342**	*e*Pn		**Pn**	**16 03 41.1**	**-1.2**
IMON	**Monand**	**8.63**	**342**	*e*Pn		**Pn**	**16 03 47.5**	**-1.4**
ITEG	**Tejag**	**8.65**	**337**	*e*Pn		**Pn**	**16 03 47.1**	**-2.0**
AFRZ	**Afriz**	**9.04**	**340**	*e*Pn		**Pn**	**16 03 52.0**	**-2.5**
IBAF	**Bafgh**	**9.16**	**318**	*e*Pn		**Pn**	**16 03 56.7**	**+0.6**
HRA	**Herat**	**9.39**	**357**	Pn		**Pn**	**16 03 54.7**	**-4.6**
TPRV	**Parvadeh(Tabas**	**9.64**	**328**	*e*Pn		**Pn**	**16 04 01.9**	**-0.7**
TKDS	**Koohdasht(Taba**	**9.93**	**331**	*e*Pn		**Pn**	**16 04 05.1**	**-1.4**
ICHK	**Chekchek**	**10.33**	**316**	*e*Pn		**Pn**	**16 04 12.9**	**+0.8**
TNSJ	**Nastanj**	**10.45**	**330**	*e*Pn		**Pn**	**16 04 13.3**	**-0.4**
ISAD	**Sadrabad**	**10.58**	**313**	*e*Pn		**Pn**	**16 04 15.7**	**+0.1**
RBK	**Rabkut**	**10.92**	**229**	P		**Pn**	**16 04 20.8**	**+0.7**
	SNR=9.4							
WHFO	**Wadi Hawf**	**10.94**	**232**	P		**Pn**	**16 04 20.1**	**-0.3**
	SNR=10							
KBL	**Kabul**	**10.97**	**28**	P		**Pn**	**16 04 19.8**	**-1.1**
KBL	**Kabul**	**10.97**	**28**	*e*Pn		**Pn**	**16 04 21.0**	**+0.1**
KBL	**Kabul**	**10.97**	**28**			**Pn**	**16 04 19.8**	**-1.1**
THW	**Thamme Wali**	**11.06**	**43**	P		**Pn**	**16 04 18.8**	**-3.1**
SARP	**Sargodha**	**11.11**	**49**	P		**Pn**	**16 04 19.1**	**-3.6**
CEP	**Cherat**	**11.87**	**40**	P		**Pn**	**16 04 31.1**	**-2.1**
IPAY	**Payeh**	**11.90**	**345**	*e*Pn		**Pn**	**16 04 32.9**	**-0.7**
IBRJ	**Brojen**	**12.27**	**307**	*e*Pn		**Pn**	**16 04 38.6**	**-0.1**
NIL	**Nilore**	**12.57**	**44**	P		**Pn**	**16 04 39.9**	**-2.7**
NIL	**Nilore**	**12.57**	**44**	*e*Pn		**Pn**	**16 04 40.1**	**-2.5**
NIL	**Nilore**	**12.57**	**44**			**Pn**	**16 04 39.9**	**-2.7**
CHCP	**Chirah Chowk**	**12.58**	**44**	P		**Pn**	**16 04 39.0**	**-3.8**
KUDL	**Kundal**	**12.66**	**73**	*ex*		x	16 04 29.6	
KUDL				*e*P		Pn	16 04 32.8	-11
KUDL				*ex*		x	16 06 40.6	
KUDL				*e*S		Sn	16 06 43.6	-20
IEMG	**Emamgholi**	**12.90**	**345**	*e*Pn		**Pn**	**16 04 45.3**	**-2.0**
GEYT	**Alibeck**	**13.52**	**344**	Pn		**Pn**	**16 04 56.1**	**+0.6**
	0.2nm,0.3s,baz=161,slow=14,SNR=2.9							
GEYT	**Alibeck**	**13.52**	**344**			**Pn**	**16 04 54.6**	**-0.9**
DHRM	**DHARAMSHALA**	**13.90**	**55**	*e*P		**Pn**	**16 04 59.1**	**-1.9**
DHRM				*ex*		x	16 07 21.3	
DHRM				*ex*		Sn	16 07 23.1	-11
SMLA	**Simla**	**14.10**	**61**	*e*P		**Pn**	**16 05 01.6**	**-1.8**
SMLA					IAmb	IAmb	16 05 03.9	
	comp=Z,35nm,0.7s							
SMLA				*e*S		Sn	16 07 25.2	-14
SMLA				*ex*		x	16 07 25.3	
SMLA				*ex*		x	16 07 25.4	
SOCY	**Socotra**	**15.20**	**215**	Pn		**Pn**	**16 05 17.3**	**-1.1**
SOCY					IAmb	IAmb	16 05 23.7	
	comp=Z,14nm,0.8s							
RAYN	**Ar Rayn**	**15.83**	**268**	P		**Pn**	**16 05 23.9**	**-2.8**
RAYN					pmax	pmax		
	comp=Z,14nm,1.3s							
RAYN	**Ar Rayn**	**15.83**	**268**			**Pn**	**16 05 23.9**	**-2.8**
JOSI	**Joshimath**	**15.85**	**66**	*e*P		**Pn**	**16 05 24.3**	**-2.7**
JOSI				*ex*		x	16 08 05.3	
JOSI				*ex*		x	16 08 10.8	
JOSI				*ex*		x	16 08 10.9	
JOSI					IAML		16 08 18.4	
	comp=N,41nm,0.7s							
JOSI					IAML		16 08 18.4	
	comp=E,44nm,1.0s							
BTK	**Batken**	**16.48**	**22**	P		**Pn**	**16 05 32.5**	**-2.4**
BTK					pmax	pmax		
	comp=Z,17nm,1.3s							
BTK	**Batken**	**16.48**	**22**			**Pn**	**16 05 32.5**	**-2.4**
KSH	**Kashi**	**18.26**	**34**	P		**Pn**	**16 05 50.0**	**-7.1**
KSH				PP		**sP**	**16 06 06.5**	**-1.7**
KSH				S		Sn	16 09 04.5	-16
KSH				SS		**S**	**16 09 25.3**	**+0.6**
KSH					pmax	pmax		
	comp=Z,47nm,0.8s							
KSH					pmax	pmax		
	comp=Z,360nm,4.5s							
KSH					LR	LR		
	comp=Z,380nm,5.6s							
KSH					LR	LR		
	comp=Z,430nm,6.7s							
KSH					LR	LR		
	comp=Z,660nm,11.8s							
KOLN	**Koldanda**	**18.86**	**77**	*e*P		**Pn**	**16 06 04.9**	**+0.4**
DANN	**Dangsing**	**19.04**	**75**	*e*P		**P**	**16 06 06.0**	**+0.1**
	comp=Z,35nm,0.8s							
KK31	**Karatay Array**	**19.17**	**17**	P		**P**	**16 06 05.6**	**-1.3**
KK31					pmax	pmax		
	comp=Z,10.0nm,0.7s							
KK31	**Karatay Array**	**19.17**	**17**	P		**P**	**16 06 05.6**	**-1.3**
KKAR	**Karatay Array**	**19.17**	**17**	P		**P**	**16 06 05.5**	**-1.4**
KKAR					pmax	pmax		
	comp=Z,10.0nm,0.7s							
KKAR	**Karatay Array**	**19.17**	**17**	P		**P**	**16 06 05.5**	**-1.4**
KKAR	**Karatay Array**	**19.17**	**17**	P		**P**	**16 06 05.9**	**-1.0**
KKAR					IAmb	IAmb	16 06 09.7	
	comp=Z,9.5nm,0.7s							
AML	**Almayashu**	**19.35**	**25**	P		**Pn**	**16 06 10.6**	**+0.1**
	SNR=29							
NRN	**Naryn**	**19.75**	**31**	P		**P**	**16 06 12.5**	**-1.1**
NRN					pmax	pmax		
	comp=Z,9.0nm,0.9s							
NRN	**Naryn**	**19.75**	**31**	P		**P**	**16 06 12.5**	**-1.1**
UCH	**Uchtor**	**19.75**	**27**	P		**Pn**	**16 06 15.8**	**+0.4**
	SNR=17							
GKN	**Gorkha**	**19.79**	**76**	*e*P		**Pn**	**16 06 14.9**	**-0.7**
EKS2	**Erkin-Say**	**19.84**	**24**	P		**Pn**	**16 06 15.2**	**-0.8**
	SNR=18							
AAK	**Ala-Archa**	**20.09**	**26**	P		**P**	**16 06 17.9**	**+0.8**
AAK					pmax	pmax		
	comp=Z,12nm,0.9s							
AAK	**Ala-Archa**	**20.09**	**26**	P		**P**	**16 06 17.8**	**+0.6**
	comp=Z,8.0nm,0.7s,baz=202,slow=8.2,SNR=38							
AAK					LR	LR	16 15 31.4	
	comp=Z,91nm,18.8s,baz=188,slow=41							
AAK	**Ala-Archa**	**20.09**	**26**	P		Pn	16 06 19.9	+0.8
	SNR=14							
AAK	**Ala-Archa**	**20.09**	**26**	P		**P**	**16 06 17.9**	**+0.8**
DMN	**Daman**	**20.18**	**78**	*e*P		Pn	16 06 20.2	-0.1
KBK	**Karagaybulak**	**20.29**	**27**	P		**P**	**16 06 20.3**	**+1.0**
	SNR=10.0							
FRU1	**Bishkek**	**20.29**	**26**	P		**P**	**16 06 19.8**	**+0.6**
FRU1					pmax	pmax		
	comp=Z,15nm,0.8s							
FRU1	**Bishkek**	**20.29**	**26**	P		**P**	**16 06 19.8**	**+0.6**
FRU1					IAmb	IAmb	16 06 22.2	
	comp=Z,14nm,0.8s							
KKN	**Kakani**	**20.34**	**77**	*e*P		Pn	16 06 21.5	-0.7
PKIN	**Phulchoki**	**20.44**	**78**	*e*P		Pn	16 06 22.6	-0.7
PKI	**Pulchoki**	**20.45**	**78**	*e*P		Pn	16 06 22.8	-0.7
CHMS	**Chumysh**	**20.50**	**26**	P		**P**	**16 06 21.9**	**+0.5**
	SNR=8.9							
ULHL	**Ulahol**	**20.51**	**30**	P		Pn	16 06 23.5	-0.5
	SNR=8.8							
USP	**Ospenovka**	**20.63**	**25**	P		**P**	**16 06 23.6**	**+0.8**
	SNR=27							
KDJ	**Kajisay**	**20.85**	**31**	P		**P**	**16 06 23.8**	**-1.5**
KDJ					pmax	pmax		
	comp=Z,18nm,0.8s							
KDJ	**Kajisay**	**20.85**	**31**	P		**P**	**16 06 23.8**	**-1.5**
KDJ					IAmb	IAmb	16 06 26.8	
	comp=Z,18nm,0.8s							
GUN	**Gumba**	**20.88**	**77**	*e*P		**P**	**16 06 26.4**	**+0.4**
	comp=Z,54nm,0.9s							
JIRN	**Jiri**	**21.14**	**78**	*e*P		**P**	**16 06 29.2**	**+0.3**
	comp=Z,51nm,0.8s							
GNI	**Garni**	**21.39**	**319**	P		**P**	**16 06 34.0**	**+2.8**
GNI					pmax	pmax		
	comp=Z,33nm,1.0s							
GNI	**Garni**	**21.39**	**319**	P		**P**	**16 06 34.0**	**+2.8**
GNI					IAmb	IAmb	16 06 56.3	
	comp=Z,33nm,1.0s							
PRZ	**Przheval'sk**	**21.70**	**33**	P		**P**	**16 06 35.2**	**+0.6**
PRZ					pmax	pmax		
	comp=Z,33nm,1.4s							
PRZ	**Przheval'sk**	**21.70**	**33**	P		**P**	**16 06 35.2**	**+0.6**
PRZ					IAmb	IAmb	16 06 52.7	
	comp=Z,33nm,1.4s							
ODAN	**Odare**	**22.20**	**80**	*e*P		**P**	**16 06 40.9**	**+0.8**
	comp=Z,37nm,0.8s							
TAPN	**Taplejung**	**22.49**	**79**	*e*P		**P**	**16 06 43.8**	**+0.6**
	comp=Z,22nm,0.8s							
AKH	**Akhalkalaki**	**22.93**	**320**	P		**P**	**16 06 48.8**	**+1.2**
AKH					pmax	pmax		
	comp=Z,13nm,0.9s							
AKH	**Akhalkalaki**	**22.93**	**320**	P		**P**	**16 06 48.8**	**+1.2**
AKH					IAmb	IAmb	16 06 51.4	
	comp=Z,12nm,0.9s							
ATD	**Arta Tunnel**	**23.14**	**238**	P		**P**	**16 06 52.5**	**+2.7**
	comp=Z,3.2nm,0.3s,baz=79,slow=18,SNR=2.1							
ATD					LR	LR	16 15 22.0	
	comp=Z,90nm,21.7s,baz=360,slow=35							
ATD	**Arta Tunnel**	**23.14**	**238**	P		**P**	**16 06 52.1**	**+2.3**
ATD					IAmb	IAmb	16 07 16.1	
	comp=Z,17nm,1.0s							
ZEI	**Tsey**	**23.61**	**323**	*e*P		**P**	**16 06 56.6**	**+2.2**
ZEI					pmax	pmax		
	comp=Z,10.0nm,0.6s							
ASF	**Jabal al Asfar**	**23.81**	**293**	P		**P**	**16 06 59.5**	**+3.2**
	comp=Z,1.6nm,0.8s,baz=295,slow=11,SNR=3.1							
NCK	**Nalchik**	**24.25**	**324**	*i* P		**P**	**16 07 01.7**	**+1.4**
NCK					pmax	pmax		
	comp=Z,10.0nm,0.8s							
ABKAR	**Akbulak array**	**24.34**	**355**	P		**P**	**16 07 00.9**	**-0.1**
ABKAR	**Akbulak array**	**24.34**	**355**	P		**P**	**16 07 01.2**	**+0.2**
ABKAR					IAmb	IAmb	16 07 05.0	
	comp=Z,22nm,1.1s							
KBZ	**Khabaz**	**24.78**	**324**	*i* P		**P**	**16 07 06.0**	**+1.0**
KBZ					pmax	pmax		
	comp=Z,17nm,0.9s							
KBZ	**Khabaz**	**24.78**	**324**	P		**P**	**16 07 07.8**	**+2.8**
	comp=Z,14nm,0.8s,baz=119,slow=7.4,SNR=18							
SHA1	**Shidzhatmaz**	**24.92**	**324**	*i* P		**P**	**16 07 08.1**	**+1.6**
GAZ	**Gaziantep**	**24.97**	**305**	P		**P**	**16 07 08.6**	**+1.6**
GAZ					IAmb	IAmb	16 07 12.1	
	comp=Z,25nm,0.8s							
KVAR	**Kislovodsk Arr**	**25.05**	**324**	P		**P**	**16 07 09.3**	**+1.7**
	comp=Z,5.8nm,0.7s,baz=90,slow=20,SNR=2.6							
KIV	**Kislovodsk**	**25.05**	**324**	*e*P		**P**	**16 07 08.2**	**+0.7**
KIV					pmax	pmax		
	comp=Z,100nm,1.0s							
KIV	**Kislovodsk**	**25.05**	**324**	P		**P**	**16 07 10.2**	**+2.7**
EIL	**Elat**	**25.14**	**287**	LR		LR	16 19 41.1	
	comp=Z,114nm,19.6s,baz=109,slow=43							
MMAI	**Mount Meron Ar**	**25.21**	**295**	P		**P**	**16 07 10.4**	**+1.4**
	comp=Z,0.5nm,0.4s,baz=106,slow=14,SNR=2.6							
MMAI					LR	LR	16 19 45.7	
	comp=Z,35nm,18.3s,baz=45,slow=43							
LSA	**Lhasa**	**25.60**	**73**	P		**P**	**16 07 12.6**	**-0.5**
LSA					pmax	pmax		
	comp=Z,4.0nm,1.2s							
LSA	**Lhasa**	**25.60**	**73**	P		**P**	**16 07 12.6**	**-0.5**
AKTO	**Aktyubinsk**	**25.69**	**353**	P		**P**	**16 07 14.1**	**+0.9**
	comp=Z,9.6nm,0.6s,baz=151,slow=13,SNR=59							
AKTO					LR	LR	16 19 26.4	
	comp=Z,183nm,18.3s,baz=190,slow=41							
MAKZ	**Makanchi**	**26.63**	**30**	P		**P**	**16 07 22.3**	**+0.5**
MAKZ					pmax	pmax		
	comp=Z,16nm,1.5s							
MAKZ	**Makanchi**	**26.63**	**30**	P		**P**	**16 07 22.3**	**+0.5**
MAKZ					IAmb	IAmb	16 07 35.3	
	comp=Z,16nm,1.4s							
MK31	**Makanchi Array**	**26.77**	**31**	P		**P**	**16 07 23.1**	**+0.1**
MK31					pmax	pmax		
	comp=Z,5.0nm,0.9s							
MK31	**Makanchi Array**	**26.77**	**31**	P		**P**	**16 07 23.1**	**+0.1**
MKAR	**Makanchi Array**	**26.77**	**31**	P		**P**	**16 07 23.8**	**+0.8**
	comp=Z,3.6nm,0.3s,baz=212,slow=9.8,SNR=2.2							
WMQ	**Urumqi**	**27.68**	**41**	*e*P		**P**	**16 07 33.5**	**+2.2**
WMQ	**Urumqi**	**27.68**	**41**	P		**P**	**16 07 31.8**	**+0.5**
WMQ					pmax	pmax		
	comp=Z,9.0nm,0.7s							
WMQ	**Urumqi**	**27.68**	**41**	P		**P**	**16 07 31.8**	**+0.5**
WMQ					IAmb	IAmb	16 07 33.5	
	comp=Z,8.5nm,0.7s							
KURBB	**Kurchatov Arra**	**28.35**	**21**	P		**P**	**16 07 37.4**	**+0.3**
	comp=Z,1.6nm,0.7s,baz=217,slow=8.7,SNR=16							
KURK	**Kurchatov**	**28.46**	**21**	P		**P**	**16 07 37.9**	**-0.1**
KURK					pmax	pmax		
	comp=Z,3.0nm,1.0s							
KURK	**Kurchatov**	**28.46**	**21**	P		**P**	**16 07 37.9**	**-0.1**
BRTR	**Keskin Array B**	**28.53**	**308**	P		**P**	**16 07 37.7**	**-1.3**
BRTR	**Keskin Array B**	**28.53**	**308**	P		**P**	**16 07 40.6**	**+1.6**
	comp=Z,0.8nm,0.9s,baz=99,slow=8.9,SNR=3.0							
BRTR	**Keskin Array B**	**28.53**	**308**	P		**P**	**16 07 37.7**	**-1.3**
BVAR	**Borovoye Array**	**28.60**	**10**	P		**P**	**16 07 40.3**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=178,slow=9.5,SNR=13							
BRVK	**Borovoye**	**28.61**	**9**	P		**P**	**16 07 39.5**	**+0.1**
BRVK					pmax	pmax		
	comp=Z,5.0nm,0.9s							
BRVK	**Borovoye**	**28.61**	**9**	P		**P**	**16 07 39.5**	**+0.1**
H08N2	**Diego Garcia H**	**32.12**	**165**	T		T	16 41 40.4	
	baz=346,slow=76,SNR=153							
H08N3	**Diego Garcia H**	**32.14**	**165**	T		T	16 41 45.3	
	baz=346,slow=76,SNR=155							
H08N1	**Diego Carcia H**	**32.14**	**164**	T		T	16 41 47.7	
	baz=346,slow=76,SNR=147							
ZAA0	**Zalesovo Array**	**33.28**	**24**	P		**P**	**16 08 19.7**	**-0.9**
ZAA0					IAmb	IAmb	16 08 22.0	
	comp=Z,3.5nm,0.6s							
ZALV	**Zalesovo Beam**	**33.28**	**24**	P		**P**	**16 08 20.7**	**+0.1**
	comp=Z,4.6nm,0.6s,baz=227,slow=10,SNR=25							
ZALV	**Zalesovo Beam**	**33.28**	**24**	P		**P**	**16 08 20.4**	**-0.2**
CM31	**Chiang Mai Arr**	**34.14**	**94**	P		**P**	**16 08 30.3**	**+1.9**
CM31					IAmb	IAmb	16 08 57.9	
	comp=Z,5.4nm,1.5s							
CMAR	**Chiang Mai Arr**	**34.14**	**94**	*ce*P		**P**	**16 08 31.6**	**+3.2**
CMAR	**Chiang Mai Arr**	**34.14**	**94**	P		**P**	**16 08 28.2**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=283,slow=11,SNR=5.4							
GTA	**Gaotai**	**34.23**	**56**	*e*P		**P**	**16 08 30.5**	**+1.4**
GTA					pP	pP	16 08 37.0	-0.4
GTA					sP	sP	16 08 40.0	-0.8
GTA					pmax	pmax		
	comp=Z,3.0nm,1.1s							
GTA					pmax	pmax		
	comp=Z,75nm,5.2s							
GTA					LR	LR		
	comp=Z,220nm,20.0s							
GTA					LR	LR		
	comp=Z,79nm,18.4s							
GTA					LR	LR		
	comp=Z,140nm,20.3s							
KIRV	**Kirov**	**34.90**	**348**	*i* P		**P**	**16 08 34.4**	**-0.1**
OBN	**Obninsk**	**35.76**	**334**	*ce*P		**P**	**16 08 43.4**	**+1.5**
OBN				*i*			16 08 54.4	
OBN					pmax	pmax		
	comp=Z,6.0nm,0.5s							
OBN					MLR	MLR		
	comp=Z,69nm,15.0s							
AKASG	**Malin Array Be**	**36.40**	**324**	P		**P**	**16 08 48.3**	**+0.8**
	comp=Z,7.5nm,0.5s,baz=124,slow=8.1,SNR=37							

FINES pmax pmax
comp=Z,1.0nm,0.5s
FINES FINESS Array B 44.13 336 P **P** **16 09 51.5 +0.3**
comp=Z,1.2nm,0.5s,baz=130,slow=8.7,SNR=7.8
FINES FINESS Array B 44.13 336 P **P** **16 09 51.0 -0.3**
TRI Trieste 44.23 311 P **P** **16 09 50.8 -1.5**
TRI pmax pmax
comp=Z,82nm,1.5s
TRI Trieste 44.23 311 P **P** **16 09 50.8 -1.5**
GEC2 GERESS Array S 44.94 315 P **P** **16 09 57.7 -0.4**
GEC2 IAmb IAmb 16 10 00.1
comp=Z,4.6nm,0.8s
GERES GERESS Array B 44.94 315 P **P** **16 09 58.8 +0.7**
GERES GERESS Array B 44.94 315 P **P** **16 09 59.1 +1.0**
comp=Z,2.9nm,0.7s,baz=108,slow=7.4,SNR=19
GERES GERESS Array B 44.94 315 P **P** **16 09 58.8 +0.7**
KHC Kasperske Hory 45.09 315 *i* P **P** **16 09 59.0 -0.2**
KHC pmax pmax
comp=Z,6.0nm,1.1s
KHC Kasperske Hory 45.09 315 *eP* P 16 09 52.5 -6.7
KHC *ex* **P** **16 09 59.5 +0.3**
KHC Kasperske Hory 45.09 315 P **P** **16 10 00.0 +0.8**
ABTA Abfaltersbach 45.28 312 *i* P **P** **16 10 02.1 +1.3**
comp=Z,4.3nm,0.6s
WHN Wuhan 45.65 71 P **P** **16 09 59.5 -4.4**
WTTA Wattenberg 45.96 312 *i* P **P** **16 10 07.2 +0.9**
comp=Z,6.1nm,0.6s
CLL Collm 46.00 318 *eP* **P** **16 10 08.0 +1.7**
CLL pmax pmax
comp=Z,11nm,1.0s
CLL Collm 46.00 318 *eP* **P** **16 10 08.0 +1.7**
comp=Z,11nm,1.0s
CLL Collm 46.00 318 P **P** **16 10 07.4 +1.0**
CLL IAmb IAmb 16 10 09.3
comp=Z,6.8nm,0.7s
SQTA Sankt Quirin 46.24 312 *i* P **P** **16 10 09.1 +0.6**
APA Apatity 46.27 345⇓ *i* P P 16 10 00.7 -7.6
APA pmax pmax
comp=Z,7.0nm,1.0s
MOTA Moosalm 46.33 312 *i* P **P** **16 10 09.6 +0.3**
comp=Z,3.4nm,0.5s
FETA Feichten 46.53 312 *i* P **P** **16 10 11.7 +0.9**
comp=Z,5.3nm,0.7s
RETA Reute 46.59 313 *i* P **P** **16 10 11.5 +0.4**
comp=Z,4.7nm,0.4s
FUORN Ofenpass-Fuorn 46.78 311 P **P** **16 10 13.7 +0.8**
FUORN IAmb IAmb 16 10 17.4
comp=Z,11nm,1.4s
BJT Baijiatuau 46.79 58 P **P** **16 10 13.7 +0.9**
BJT pmax pmax
comp=Z,12nm,1.6s
BJT Baijiatuau 46.79 58 P **P** **16 10 13.7 +0.9**
BJT IAmb IAmb 16 10 33.4
comp=Z,12nm,1.6s
DAVA Damuels 47.14 312 *i* P **P** **16 10 16.4 +0.8**
comp=Z,10nm,0.6s
SENIN Lac Senin/Sane 48.78 311 P **P** **16 10 29.9 +1.6**
SENIN IAmb IAmb 16 10 47.9
comp=Z,14nm,1.5s
BNI Bardonecchia 49.09 309 P **P** **16 10 30.7 0.0**
BNI Bardonecchia 49.09 309 P **P** **16 10 30.7 0.0**
NJ2 Nanjing 49.31 68 *eP* **P** **16 10 32.0 -0.3**
NJ2 pmax pmax
comp=Z,6.0nm,0.6s
ARCES ARCESS Array B 49.68 344 P **P** **16 10 35.4 +0.7**
ARCES ARCESS Array B 49.68 344 P **P** **16 10 35.0 +0.3**
comp=Z,2.1nm,0.7s,baz=156,slow=9.1,SNR=5.6
ARCES ARCESS Array B 49.68 344 P **P** **16 10 35.4 +0.7**
NC602 NORSAR Array S 49.85 330 P **P** **16 10 36.0 0.0**
NB2 NORSAR Subarra 50.11 330 P **P** **16 10 37.9 -0.1**
comp=Z,3.0nm,0.8s,baz=109,slow=7.9
NOA NORSAR Array B 50.11 330 P **P** **16 10 38.4 +0.4**
comp=Z,1.0nm,0.5s,baz=111,slow=7.5,SNR=3.3
NBO00 NORSAR Array S 50.30 330 P **P** **16 10 39.8 +0.3**
SSB Saint Sauveur 50.61 309 P **P** **16 10 41.0 -1.1**
SSB pmax pmax
comp=Z,20nm,1.5s
SSB Saint Sauveur 50.61 309 P **P** **16 10 41.0 -1.1**
SSB IAmb IAmb 16 11 02.0
comp=Z,20nm,1.5s
KSRS Korea Array 56.09 60 P **P** **16 11 22.2 -0.2**
comp=Z,1.6nm,0.6s,baz=278,slow=7.8,SNR=7.1
KSRS LR LR 16 39 08.6
comp=Z,72nm,19.3s,baz=121,slow=40
SPA0 Spitsbergen Ar 57.33 350 P **P** **16 11 31.5 +0.9**
KLR Kul'dur 57.95 46 *i* P **P** **16 11 33.4 -2.0**
KLR pmax pmax
comp=Z,3.0nm,0.9s
TOA0 Torodi Ar. Sit 58.52 270 P **P** **16 11 41.4 +1.5**
TOA0 IAmb IAmb 16 11 49.7
comp=Z,3.3nm,0.8s
TORD Torodi Ar. Bea 58.52 270 P **P** **16 11 41.3 +1.4**
comp=Z,1.8nm,0.8s,baz=70,slow=6.3,SNR=8.3
MJAR Matsushiro Arr 64.35 60 P **P** **16 12 21.8 +2.7**
MJAR pmax pmax
comp=Z,3.0nm,1.2s
MJAR Matsushiro Arr 64.35 60 P **P** **16 12 21.8 +2.7**
BOSA Boshof 64.36 216 P **P** **16 12 20.7 +1.6**
BOSA pmax pmax
comp=Z,8.0nm,1.2s
BOSA Boshof 64.36 216 P **P** **16 12 21.0 +1.9**
comp=Z,2.0nm,0.5s,baz=43,slow=6.9,SNR=7.5
BOSA Boshof 64.36 216 P **P** **16 12 20.7 +1.6**
BOSA IAmb IAmb 16 12 21.0
comp=Z,8.3nm,1.2s
MA2 Magadan 67.81 33 *i* P **P** **16 12 39.7 -1.1**
MA2 pmax pmax
comp=Z,3.0nm,1.0s
MA2 Magadan 67.81 33 LR LR 16 46 31.7
comp=Z,16nm,21.6s,baz=250,slow=40
SEY Seymchan 67.90 30 *i* P **P** **16 12 41.3 0.0**
WRA Warramunga Arr 82.66 116 P **P** **16 14 07.2 +0.3**
comp=Z,0.9nm,0.9s,baz=316,slow=4.6,SNR=3.2
TOLK Toolik Lake Re 83.70 11 P **P** **16 14 12.8 +1.2**
TOLK IAmb IAmb 16 14 38.6
comp=Z,8.7nm,1.5s
ASAR Alice Springs 84.16 119 P **P** **16 14 15.4 +0.8**
ASAR Alice Springs 84.16 119 P **P** **16 14 14.9 +0.3**
comp=Z,0.4nm,1.0s,baz=310,slow=4.6,SNR=2.7
ASAR Alice Springs 84.16 119 P **P** **16 14 15.4 +0.8**
IMAR Indian Mountai 85.15 14 P **P** **16 14 19.4 +0.6**
BMAR Burnt Mountain 85.63 10 P **P** **16 14 23.1 +1.8**
INK Inuvik 86.22 6 P **P** **16 14 25.1 +1.0**
INK pmax pmax
comp=Z,10.0nm,1.5s
INK Inuvik 86.22 6 P **P** **16 14 25.0 +0.9**
comp=Z,1.2nm,0.8s,baz=344,slow=6.3,SNR=4.7
INK Inuvik 86.22 6 P **P** **16 14 25.1 +1.0**
INK IAmb IAmb 16 14 37.0
comp=Z,9.9nm,1.5s
MLY Manley 86.62 14 P **P** **16 14 27.4 +1.2**
MLY IAmb IAmb 16 14 30.2
comp=Z,2.1nm,1.0s
MDM Murphy Dome 87.20 13 P **P** **16 14 29.1 0.0**
MDM IAmb IAmb 16 14 50.8
comp=Z,4.9nm,0.8s
PRP Porcupine Dome 87.21 11 P **P** **16 14 29.1 -0.1**
BPAW Bear Paw Mtn. 87.37 14 P **P** **16 14 30.9 +1.1**
BPAW IAmb IAmb 16 14 43.1
comp=Z,6.2nm,1.4s
ILAR Eielson Array 87.63 12 P **P** **16 14 31.2 +0.1**
ILAR Eielson Array 87.63 12 P **P** **16 14 31.0 -0.1**
comp=Z,0.6nm,0.6s,baz=318,slow=4.7,SNR=10
ILAR LR LR 16 59 06.4
comp=Z,32nm,18.4s,baz=62,slow=39
ILAR Eielson Array 87.63 12 P **P** **16 14 31.2 +0.1**
WRH Wood River Hil 87.66 13 P **P** **16 14 31.2 0.0**
WRH IAmb IAmb 16 14 55.1
comp=Z,4.4nm,1.4s
TRF Thorofare Moun 88.09 14 P **P** **16 14 33.3 -0.2**
MCK McKinley 88.14 14 P **P** **16 14 33.9 +0.3**
MCK pmax pmax
comp=Z,18nm,1.7s
MCK McKinley 88.14 14 P **P** **16 14 33.9 +0.3**
RND Reindeer 88.44 14 P **P** **16 14 35.1 0.0**
RND pmax pmax
comp=Z,14nm,1.6s
RND Reindeer 88.44 14 P **P** **16 14 35.1 0.0**
SCRK Sand Creek 88.89 11 P **P** **16 14 38.3 +1.1**
SCRK IAmb IAmb 16 15 00.2
comp=Z,6.9nm,1.4s
DOT Dot Lake 89.18 12 P **P** **16 14 39.3 +0.8**
DOT IAmb IAmb 16 14 48.5
comp=Z,7.4nm,1.6s
SUA Susitna One 89.72 15 P **P** **16 14 41.9 +0.8**

GHO Glory Hole Cre 89.87 14 P **P** **16 14 43.5 +1.7**
SML Sawmill 89.97 14 P **P** **16 14 43.2 +1.0**
SCM Sheep Creek Mo 90.17 14 P **P** **16 14 43.9 +0.7**
SCM pmax pmax
comp=Z,22nm,1.6s
SCM Sheep Creek Mo 90.17 14 P **P** **16 14 43.9 +0.7**
KNK Knik Glacier 90.29 14 P **P** **16 14 45.0 +1.4**
YKA Yellowknife Ar 92.81 359 P **P** **16 14 56.0 +0.7**
YKA Yellowknife Ar 92.81 359 P **P** **16 14 55.9 +0.7**
comp=Z,0.7nm,0.8s,baz=351,slow=5.1,SNR=9.2
YKA LR LR 17 01 37.5
comp=Z,37nm,18.5s,baz=0.0,slow=39

IDC 30 16:02:10.5±9.5, 4°69S×153°08E, h160km±63km, mb3.2/3, mb1 3.4/4, mb1mx3.0/36, mbtmp3.8/4, Error ellipse: s-maj=110.9km s-min=41.1km az=104.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.52**	**231**	P	Pn	16 03 57.5	0.0
	4.2nm,0.3s,baz=50,slow=9.3,SNR=16						
PMG				S	Sn	16 05 22.6	+0.9
	1.8nm,0.3s,baz=114,slow=20,SNR=4.6						
WRA	**Warramunga Arr**	**23.73**	**229**	P	P	16 07 08.8	+0.6
	1.3nm,0.7s,baz=53,slow=9.8,SNR=7.2						
ASAR	**Alice Springs**	**26.42**	**223**	P	P	16 07 31.9	-0.6
	0.8nm,0.9s,baz=56,slow=9.0,SNR=7.2						
MKAR	**Makanchi Array**	**80.43**	**319**	P	P	16 14 04.3	-0.2
	0.5nm,1.0s,baz=91,slow=6.1,SNR=3.1						
TORD	**Torodi Ar. Bea**	**150.54**	**288**	PKPbc	PKPbc	16 21 44.4	-0.1
	0.4nm,0.4s,baz=58,slow=6.0,SNR=2.7						

*FUNV **30** 16:02:27.7, 6°11N×73°06W, h95km, MW2.5*
*RSNC **30** 16:02:32.8±1.1, 6°82N×73°17W, h144km±5km, ML2.5*
ISC 30 16:02:30.7±1.3, 6°82N±0°04×73°13W±0°03, h155km±8km, n25, σ1s34/50, 1C-1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.24**	**193**	*eP*	**Pn**	**16 02 52.4**	**+0.4**
BARC				*eS*	**Sn**	**16 03 07.0**	**-1.3**
BARC				*i*		16 03 08.7	
	comp=Z,222nm,0.4s						
BRRC	**Barranca, Sant**	**0.64**	**296**⇓	*i* P	**Pn**	**16 02 54.1**	**+0.7**
BRRC				*eS*	**Sn**	**16 03 10.5**	**-0.3**
BRRC				*i*		16 03 15.1	
	comp=Z,80nm,0.5s						
PAMC	**Pamplona, Colo**	**0.67**	**40**	*eP*	**Pn**	**16 02 55.1**	**+1.0**
PAMC				*eS*	**Sn**	**16 03 12.1**	**+0.1**
PAMC				*i*		16 03 14.5	
	comp=Z,68nm,0.6s						
RUSC	**La Rusia**	**0.93**	**177**⇑	*eP*	**Pn**	**16 02 56.3**	**+0.2**
RUSC				*eS*	**Sn**	**16 03 14.7**	**-0.6**
RUSC				*i*		16 03 16.0	
	comp=Z,30nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.35**	**258**	*eP*	**Pn**	**16 02 59.2**	**0.0**
PTBC				*eS*	**Sn**	**16 03 19.6**	**-1.4**
PTBC				*i*		16 03 25.8	
	comp=Z,42nm,0.5s						
OCAC	**Ocana**	**1.42**	**352**	*eP*	**Pn**	**16 03 00.2**	**+0.1**
OCAC				*eS*	**Sn**	**16 03 22.5**	**-0.1**
OCAC				*i*		16 03 28.9	
	comp=Z,40nm,0.3s						
SPBC	**San Pablo de B**	**1.50**	**219**	*eP*	**Pn**	**16 03 01.1**	**+0.4**
SPBC				*eS*	**Sn**	**16 03 22.9**	**-0.9**
SPBC				*i*		16 03 28.2	
	comp=Z,54nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.84**	**291**	*eP*	**Pn**	**16 03 04.5**	**+0.1**
ZARC				*eS*	**Sn**	**16 03 29.2**	**-1.0**
ZARC				*i*		16 03 37.1	
	comp=Z,47nm,0.4s						
NORC	**Norcasia**	**2.14**	**234**	*eP*	**Pn**	**16 03 08.5**	**+0.7**
NORC				*eS*	**Sn**	**16 03 35.9**	**-0.5**
NORC				*i*		16 03 41.9	
	comp=Z,20nm,0.2s						
SMLC	**San Martn de**	**2.17**	**335**	*eP*	**Pn**	**16 03 08.7**	**+0.4**
SMLC				*eS*	**Sn**	**16 03 37.2**	**0.0**
SMLC				*i*		16 03 41.1	
	comp=Z,60nm,0.1s						
CHIC	**Chingaza**	**2.26**	**195**	*eP*	**Pn**	**16 03 10.6**	**+0.9**
CHIC				*eS*	**Sn**	**16 03 39.7**	**0.0**
CHIC				*i*		16 03 43.4	
	comp=Z,21nm,0.6s						
HELC	**Santa Helena**	**2.47**	**255**	*eP*	**Pn**	**16 03 14.2**	**+2.1**
HELC				*eS*	**Sn**	**16 03 43.7**	**-0.2**
HELC				*i*		16 03 51.6	
	comp=Z,14nm,0.2s						
UREC	**San Jos de Ur**	**2.56**	**291**	*eP*	**Pn**	**16 03 12.9**	**0.0**
UREC				*eS*	**Sn**	**16 03 45.0**	**-0.3**
UREC				*i*		16 03 50.0	
	comp=Z,23nm,0.1s						
VIGV	**El Vigia**	**2.66**	**41**	*eP*	**Pn**	**16 03 14.9**	**+0.8**
VIGV				*eS*	**Sn**	**16 03 51.1**	**+3.4**
SOCV	**Socops**	**2.68**	**57**	*eP*	**Pn**	**16 03 14.7**	**+0.4**
SOCV				*eS*	**Sn**	**16 03 47.1**	**-1.0**
GUY2C	**Guyana, Caldas**	**2.73**	**235**	*eP*	**Pn**	**16 03 16.9**	**+1.5**
GUY2C				*eS*	**Sn**	**16 03 49.6**	**-0.4**
GUY2C				*i*		16 03 56.6	
	comp=Z,12nm,0.3s						
CBOC	**Ciudad Bolivar**	**3.02**	**252**	*eP*	**Pn**	**16 03 20.6**	**+1.8**
CBOC				*eS*	**Sn**	**16 03 54.8**	**-1.1**
CBOC				*i*		16 04 02.5	
	comp=Z,3.6nm,0.1s						
CODC	**Agustn Codazz**	**3.11**	**354**	*eP*	**Pn**	**16 03 19.8**	**+0.1**
CODC				*eS*	**Sn**	**16 03 58.3**	**+0.7**
CODC				*i*		16 04 09.0	
	comp=Z,7.6nm,0.2s						
SDV	**Santo Domingo**	**3.21**	**50**	*eP*	**Pn**	**16 03 21.5**	**+0.4**
SDV				*eS*	**Sn**	**16 03 59.9**	**-0.4**
PRAC	**Prado**	**3.55**	**210**	*eP*	**Pn**	**16 03 26.0**	**+0.5**
PRAC				*eS*	**Sn**	**16 04 07.8**	**0.0**
PRAC				*i*		16 04 12.7	
	comp=Z,17nm,0.4s						
SJCC	**San Jacinto, C**	**3.67**	**327**	*eP*	**Pn**	**16 03 26.5**	**-0.4**
SJCC				*eS*	**Sn**	**16 04 07.1**	**-3.5**
SJCC				*i*		16 04 22.1	
	comp=Z,9.7nm,0.7s						
CURV	**Curarigua**	**4.46**	**44**	*eP*	**Pn**	**16 03 37.2**	**0.0**
CURV				*eS*	**Sn**	**16 04 31.0**	**+2.0**
TEPV	**Terepaima**	**4.99**	**51**	*eP*	**Pn**	**16 03 44.3**	**+0.1**
TEPV				*eS*	**Sn**	**16 04 42.5**	**+1.0**
SIQV	**Siquisique**	**5.02**	**41**	*eP*	**Pn**	**16 03 45.9**	**+1.3**
SIQV				*eS*	**Sn**	**16 04 43.6**	**+1.3**
BAUV	**El Baul**	**5.46**	**67**	*eP*	**Pn**	**16 03 48.8**	**-1.6**
BAUV				*eS*	**Sn**	**16 04 47.6**	**-5.0**

SJA 30 16:07:51.1±0.4, 31°22S×68°46W, h105km±2km, ML2.9, MW2.9, 1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RTLL	**Cerro Villicun**	**0.11**	**188**	*i* P	Pn	16 08 06.4	+0.6
RTLL				*eS*	Sn	16 08 17.5	+0.7
RTLL				IAML		16 08 17.8	
	comp=Z,232nm,0.3s						
RTLL	**Cerro Villicun**	**0.11**	**188**	*eP*	Pn	16 08 06.3	+0.5
AMOG	**MOGNA**	**0.28**	**354**	*i* P	Pn	16 08 07.2	+0.9
AMOG				*eS*	Sn	16 08 18.4	+0.7
AMOG	**MOGNA**	**0.28**	**354**	*eP*	Pn	16 08 07.1	+0.8
AMOG				*eS*	Sn	16 08 18.4	+0.7
ZON	**Zonda**	**0.38**	**210**	*i* P	Pn	16 08 07.5	+0.7
ZON				*eS*	Sn	16 08 19.3	+0.8
CFA	**Coronel Fontan**	**0.43**	**154**	*eP*	Pn	16 08 07.8	+0.8
CFA				*i* S	Sn	16 08 20.0	+1.0
CFA	**Coronel Fontan**	**0.43**	**154**	*eP*	Pn	16 08 07.6	+0.5
CFA				*eS*	Sn	16 08 20.0	+1.0
RTCV	**Cerro Valdivia**	**0.65**	**186**	*i* P	Pn	16 08 09.3	+0.7
RTCV				*eS*	Sn	16 08 22.8	+1.1
RTCV	**Cerro Valdivia**	**0.65**	**186**	*eP*	Pn	16 08 09.2	+0.5
RTLS	**Leoncito**	**0.92**	**231**	*eP*	Pn	16 08 12.7	+1.3
RTLS				*eS*	Sn	16 08 28.7	+2.0
RTLS				IAML		16 08 30.1	
	comp=Z,148nm,0.2s						
RTLS	**Leoncito**	**0.92**	**231**	*eP*	Pn	16 08 12.6	+1.2
RTLS				*eS*	Sn	16 08 28.6	+1.9
RTLS				IAML		16 08 30.2	
	comp=Z,148nm,0.2s						
ASAL	**Salagasta**	**1.41**	**193**	*i* P	Pn	16 08 17.8	+1.2
ASAL				*eS*	Sn	16 08 36.9	+1.0
ACAN	**Cantantal**	**1.51**	**135**	*i* P	Pn	16 08 19.1	+1.3
ACAN				*eS*	Sn	16 08 38.4	+0.3
ARCO	**CERRO ARCO**	**1.67**	**194**	*i* P	Pn	16 08 21.1	+1.2
ARCO				IAML		16 08 21.4	
	comp=Z,177nm,0.2s						
ARCO				*eS*	Sn	16 08 42.5	+0.7
AGUA	**GUANDACOL**	**1.73**	**359**	*eP*	Pn	16 08 21.6	+1.1
AGUA				*eS*	Sn	16 08 44.9	+2.1
AGUA	**GUANDACOL**	**1.73**	**359**	*eP*	Pn	16 08 21.6	+1.1
AAGR	**Agrelo**	**1.89**	**190**	*i* P	Pn	16 08 23.8	+1.2
AAGR				*eS*	Sn	16 08 47.4	+0.8
GO04	**Tololo Observa**	**2.27**	**297**	*eP*	Pn	16 08 28.4	+0.8
GO04				*eS*	Sn	16 08 56.7	+1.2
VCA	**Vinchina**	**2.48**	**5**	*i* P	Pn	16 08 31.6	+1.3
VCA				*eS*	Sn	16 09 01.3	+1.0
VCA				IAML		16 09 05.6	
	comp=Z,74nm,0.3s						
VCA	**Vinchina**	**2.48**	**5**	*eP*	Pn	16 08 31.4	+1.1
VCA				IAML		16 09 05.5	
	comp=Z,78nm,0.3s						
MRA	**San Martin**	**2.62**	**118**	*i* P	Pn	16 08 32.8	+0.7
MRA				*eS*	Sn	16 09 02.8	-0.7
MRA				IAML		16 09 03.8	
	comp=Z,69nm,0.3s						
PEL	**Peldehue**	**2.69**	**224**	*i* P	Pn	16 08 33.5	+0.5
PEL				*eS*	Sn	16 09 08.0	+2.8
ROC1	**El Roble**	**2.79**	**230**	*i* P	Pn	16 08 34.4	0.0
ROC1				*eS*	Sn	16 09 08.3	+0.6
TCA	**Tanti**	**3.31**	**93**	*i* P	Pn	16 08 41.4	+0.2
TCA				*i* S	Sn	16 09 18.5	-1.3
TCA				IAML		16 09 19.9	
	comp=Z,31nm,0.5s						
CYA	**Choya**	**3.60**	**40**	*eP*	Pn	16 08 44.5	-0.6
CYA				IAML		16 09 25.8	
	comp=Z,20nm,0.2s						
COIS	**El Sosneado**	**4.00**	**193**⇓	*i* P	Pn	16 08 49.9	-0.4

ROM 30 16:15:09.6±0.2, 43°435N±0°006×12°464E±0°007, h8km±1km, Md1.2/3, Error ellipse: s-maj=0.7km s-min=0.3km az=322.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.05**	**290**	P	Pg	16 15 11.5	+0.1
ATPI				S	Sg	16 15 12.6	0.0
ATPI				AML	AML		
	comp=E,108μm,1.6s						
ATPI				AML	AML		
	comp=N,93μm,1.6s						
ATPI				END			
ATVO	**AVT- Monte Val**	**0.07**	**218**	P	Pg	16 15 11.9	+0.4
ATVO				S	Sg	16 15 13.4	+0.5
PIEI	**Pieia**	**0.11**	**27**	P	Pg	16 15 12.7	+0.5
PIEI				S	Sg	16 15 15.0	+0.9
PIEI				AML	AML		
	comp=E,62μm,1.6s						
PIEI				AML	AML		
	comp=N,87μm,1.6s						
PIEI				END			
BADI	**Badiali**	**0.18**	**295**	P	Pg	16 15 13.7	+0.4
BADI				S	Sg	16 15 17.1	+1.3
BADI				END			
NARO	**Abbazia di Nar**	**0.20**	**26**	P	Pg	16 15 14.0	+0.4
FRON	**Frontone**	**0.21**	**66**	P	Pg	16 15 14.3	+0.5
ATTE	**AVT- Monte Tez**	**0.25**	**199**	S	Sg	16 15 16.0	-2.0

*GEN **30** 16:16:08.4, 44°75N×7°25E, h9km, 2km, Ml1.2*
*LDG **30** 16:16:08.7±0.1, 44°76N×7°25E, h9km, Md1.9/3, Ml2.1/7, Error ellipse: s-maj=2.8km s-min=1.8km az=72.0*
*STR **30** 16:16:08.1±0.9, 45°N±4°×±°, h0km, MLv1.7/5*
ROM 30 16:16:07.8±0.2, 44°739N±0°008×7°22E±0°03, h9km±1km, ML1.7/-1, Error ellipse: s-maj=2.3km s-min=0.3km az=97.0, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHB	**Bricherasio**	**0.11**	**17**	P	Pg	16 16 10.7	+0.3
BHB	**Bricherasio**	**0.11**	**17**	P	Pg	16 16 10.9	+0.5
BHB				S	Sg	16 16 12.2	-0.1
BHB				AML	AML		
	comp=N,405μm,0.7s						
BHB				AML	AML		
	comp=E,696μm,0.3s						
BHB	**Bricherasio**	**0.11**	**17**	P	Pg	16 16 10.9	+0.5
BHB				S	Sg	16 16 12.1	-0.1
PZZ	**Stroppo**	**0.24**	**198**	P	Pg	16 16 13.8	+1.1
PZZ				S	Sg	16 16 17.1	+1.1
PZZ	**Stroppo**	**0.24**	**198**	P	Pg	16 16 13.8	+1.1
PZZ				S	Sg	16 16 17.2	+1.1
MBDF	**Montbardon**	**0.32**	**268**	*e*Pg	Pb	16 16 15.3	-0.5
MBDF				*e*Sg	Sg	16 16 19.7	+1.2
	comp=E,14nm,0.2s						
RRL	**Rocca Remolon**	**0.36**	**301**	P	Pb	16 16 15.9	-0.5
RRL				S	Sg	16 16 20.6	+1.0
RSP	**Reno Superiore**	**0.41**	**4**	P	Pb	16 16 16.7	-0.6
RSP	**Reno Superiore**	**0.41**	**4**	P	Pb	16 16 16.7	-0.6
RSP				S	Sg	16 16 21.9	+0.6
RSP	**Reno Superiore**	**0.41**	**4**	P	Pb	16 16 16.7	-0.6
RSP				S	Sg	16 16 21.8	+0.5
STV	**Sant Anna di V**	**0.50**	**171**	P	Pb	16 16 18.2	-0.6
STV	**Sant Anna di V**	**0.50**	**171**	P	Pb	16 16 18.2	-0.6
STV				S	Sg	16 16 24.9	+0.9
STV	**Sant Anna di V**	**0.50**	**171**	P	Pg	16 16 18.0	+0.6
STV				S	Sg	16 16 24.4	+0.4
OGAG	**Argentiere**	**0.56**	**240**	Pg	Pg	16 16 18.9	+0.2
OGAG				Sg	Sg	16 16 24.9	-1.2
ISO	**Isola**	**0.57**	**192**	Pg	Pb	16 16 19.9	0.0
ISO				Sg	Sb	16 16 27.8	-0.4
LSD	**Lago del Serru**	**0.72**	**355**	P	Pb	16 16 22.4	-0.3
LSD	**Lago del Serru**	**0.72**	**355**	P	Pb	16 16 22.4	-0.4
LSD	**Lago del Serru**	**0.72**	**355**	P	Pb	16 16 22.3	-0.4
LSD				S	Sg	16 16 31.1	-0.1
TURF	**col de Turini**	**0.77**	**171**	Pg	Pg	16 16 22.9	+0.2
TURF				Sg	Sb	16 16 34.2	0.0
SAOF	**Saorge**	**0.79**	**162**	Pg	Pg	16 16 23.0	+0.1
SAOF				Sg	Sg	16 16 33.7	+0.4
LPG	**La Plagne**	**0.83**	**337**	*e*Pg	Pb	16 16 24.4	-0.1
LPG				*e*Sg	Sg	16 16 34.7	+0.1
	comp=E,2.8nm,0.2s						
LPL	**La Plagne**	**0.85**	**336**	*e*Pg	Pb	16 16 25.2	+0.3
LPL				*e*Sg	Sg	16 16 35.2	-0.1
	comp=E,3.9nm,0.3s						
RORO	**Rocca Rossa**	**0.87**	**136**	P	Pg	16 16 24.2	-0.3
RORO				S	Sg	16 16 35.2	-0.6
ORIF	**Oris-en-Rattie**	**0.97**	**281**	*e*Pg	Pn	16 16 27.8	+0.1
ORIF				*e*Sg	Sg	16 16 39.4	+0.3
	comp=E,2.8nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.97**	**281**	Pg	Pn	16 16 27.9	+0.2
ORIF				Sg	Sb	16 16 40.6	+0.8
CALF	**Calern**	**1.01**	**192**	Pg	Pn	16 16 28.1	-0.2
CALF				Sg	Sn	16 16 42.0	-0.7
FRF	**La Foret Royal**	**1.25**	**200**	*e*Pn	Pg	16 16 31.8	+0.1
FRF				*e*Sn	Sn	16 16 48.6	+0.2
	comp=E,5.9nm,0.2s						
SMRF	**Simiane la Rot**	**1.41**	**238**	*e*Pn	Pb	16 16 34.4	+0.2
SMRF				*e*Sn	Sn	16 16 52.5	+0.2
	comp=E,3.4nm,0.4s						
LMR	**La Mourre**	**1.50**	**200**	*e*Pn	Pb	16 16 35.5	-0.2
LMR				*e*Sn	Sn	16 16 54.4	0.0
	comp=E,5.0nm,0.2s						
VIVF	**Saint-Julien-l**	**1.82**	**275**	*e*Sg	Sg	16 17 06.0	-0.2
	comp=E,1.2nm,0.3s						
PGF	**Pioggiola**	**2.54**	**149**	*e*Pn	Pn	16 16 49.3	0.0
PGF				*e*Sn	Sn	16 17 19.4	-1.0
	comp=E,3.3nm,0.6s						

*IDC **30** 16:32:46.7±1.7, 35°26N×141°37E, h0km, mb3.4/4, mb1 3.6/8, mb1mx3.4/58, mbtmp3.7/8, ML3.5/3, Error ellipse: s-maj=45.9km s-min=19.1km az=75.0*
*JMA **30** 16:32:50.5±0.1, 35°22N×141°21E, h35km±2km, M3.0*
ISC 30 16:32:51.5±1.1, 35°24N±0°05×141°23E±0°09, h35km, n23, σ1s09/21, mb3.5/4, Near east coast of eastern Honshu

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JKUC	**kamogawauchiur**	**0.85**	**265**	P	**Pn**	**16 33 05.9**	**-1.0**
JKUC				S	**Sn**	**16 33 16.5**	**-1.6**
JCN	**Nagara**	**0.86**	**282**	P	**Pn**	**16 33 06.9**	**-0.2**
JYT	**Yasato**	**1.29**	**320**	P	**Pn**	**16 33 12.7**	**-0.4**
JHO	**Hitachi**	**1.47**	**339**	P	**Pn**	**16 33 16.0**	**+0.5**
JHJ	**Hachijo jima 2**	**2.43**	**210**	Pn	**Pn**	**16 33 28.7**	**-0.1**
	13nm,0.3s,baz=30,slow=14,SNR=3.9						
JHJ				Sn	**Sn**	**16 33 56.7**	**-0.5**
	26nm,0.3s,baz=90,slow=20,SNR=4.6						
MJAR	**Matsushiro Arr**	**2.77**	**299**	Pn	**Pn**	**16 33 35.0**	**+1.6**
	0.4nm,0.3s,baz=120,slow=12,SNR=24						
MAT	**Matsushiro**	**2.78**	**299**	P	**Pn**	**16 33 35.9**	**+2.4**
MAT				*e*S	**Sn**	**16 34 06.5**	**+0.7**
JCJ	**Chichijima**	**8.16**	**174**	Pn	**Pn**	**16 34 46.9**	**-0.6**
	3.4nm,0.3s,baz=90,slow=20,SNR=3.3						
ASAJ	**Asahikawa**	**8.93**	**6**	Pn	**Pn**	**16 34 57.5**	**-0.4**
	0.4nm,0.3s,baz=193,slow=15,SNR=7.4						
H11N2	**WAKE ISLAND Hy**	**27.41**	**118**	T	T	17 07 32.8	
	baz=310,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**27.41**	**118**	T	T	17 07 37.1	
	baz=310,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	**27.42**	**118**	T	T	17 07 31.6	
	baz=310,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**28.06**	**120**	T	T	17 08 22.4	
	baz=312,slow=76,SNR=95						
H11S3	**WAKE ISLAND Hy**	**28.06**	**120**	T	T	17 08 26.1	
	baz=312,slow=76,SNR=78						
H11S2	**WAKE ISLAND Hy**	**28.07**	**120**	T	T	17 08 20.7	
	baz=312,slow=76,SNR=62						
ZALV	**Zalesovo Beam**	**43.03**	**314**	P	**P**	**16 40 47.5**	**+0.1**
	0.4nm,0.4s,baz=96,slow=8.8,SNR=3.0						
MKAR	**Makanchi Array**	**44.96**	**304**	P	**P**	**16 41 03.4**	**+0.2**
	0.2nm,0.6s,baz=88,slow=9.5,SNR=4.3						
WRA	**Warramunga Arr**	**55.27**	**188**	P	**P**	**16 42 22.0**	**+0.6**
	0.4nm,0.4s,baz=7.0,slow=7.6,SNR=6.7						
ASAR	**Alice Springs**	**58.99**	**188**	P	**P**	**16 42 48.6**	**+0.9**
	0.3nm,0.8s,baz=6.8,slow=6.8,SNR=3.2						

*IDC **30** 16:35:34.2±1.6,35°.35N×141°.58E,h0km,mb3.5/4, mb1 3.7/8,mb1mx3.4/57,mbtmp3.7/8,ML2.8/3,MS3.6/1, Ms1 3.6/1,ms1mx2.3/33,Error ellipse: s-maj=44.9km s-min=18.8km az=75.0*

*JMA **30** 16:35:38.3±0.1,35°.22N×141°.23E,h39km±2km,M3.0*

ISC 30 16:35:37.1±1.0,35°.26N±0°.05×141°.30E±0°.08,h25km,n22, σ1s72/19,mb3.6/4,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
CHOJ	**Chosi**	**0.57**	**321**	P		**Pn**	**16 35 49.9**	**+0.3**
CHOJ				*e*S		**Sn**	**16 35 58.4**	**+0.2**
BSO1	**Boso 1**	**0.66**	**204**	P		**Pn**	**16 35 50.3**	**-0.1**
BSO3	**Boso 3**	**0.79**	**235**	P		**Pn**	**16 35 52.2**	**-0.2**
BSO4	**Boso 4**	**0.83**	**251**	P		**Pb**	**16 35 53.1**	**+0.3**
JKUC	**kamogawauchiur**	**0.91**	**264**	P		**Pb**	**16 35 54.0**	**-0.1**
JKUC				S		**Sb**	**16 36 05.6**	**-0.2**
JYT	**Yasato**	**1.32**	**317**	P		**Pb**	**16 36 00.8**	**-0.3**
JHJ	**Hachijo jima 2**	**2.48**	**211**	Pn		**Pb**	**16 36 18.5**	**-2.5**
	12nm,0.3s,baz=73,slow=19,SNR=6.0							
JHJ				Sn		**Sn**	**16 36 44.9**	**-0.4**
	19nm,0.3s,baz=253,slow=19,SNR=3.8							
MJAR	**Matsushiro Arr**	**2.81**	**298**	Pn		**Pb**	**16 36 22.8**	**-3.8**
	0.4nm,0.3s,baz=114,slow=12,SNR=12							
MAT	**Matsushiro**	**2.82**	**298**	P		**Pb**	**16 36 23.9**	**-2.8**
MAT				*e*S		**Sn**	**16 36 54.2**	**+0.5**
JCJ	**Chichijima**	**8.18**	**174**	Pn		**Pn**	**16 37 35.2**	**+1.0**
	2.6nm,0.3s,baz=300,slow=20,SNR=3.2							
ASAJ	**Asahikawa**	**8.90**	**6**	Pn		**Pn**	**16 37 42.1**	**-1.9**
	0.1nm,0.3s,baz=304,slow=15,SNR=3.4							
H11N2	**WAKE ISLAND Hy**	**27.36**	**118**	T		T	17 10 18.5	
	baz=310,slow=75,SNR=10							
H11N1	**WAKE ISLAND Hy**	**27.37**	**118**	T		T	17 10 26.1	
	baz=310,slow=75,SNR=11							
H11N3	**WAKE ISLAND Hy**	**27.38**	**118**	T		T	17 10 23.2	
	baz=310,slow=75,SNR=12							
H11S1	**WAKE ISLAND Hy**	**28.02**	**120**	T		T	17 11 09.5	
	baz=312,slow=76,SNR=81							
H11S3	**WAKE ISLAND Hy**	**28.02**	**120**	T		T	17 11 09.9	
	baz=312,slow=76,SNR=45							
H11S2	**WAKE ISLAND Hy**	**28.03**	**120**	T		T	17 11 11.1	
	baz=312,slow=76,SNR=45							
JAY	**Jayapura**	**37.58**	**181**	LR		LR	16 56 20.5	
	comp=Z,81nm,19.4s,baz=85,slow=33							
ZALV	**Zalesovo Beam**	**43.05**	**314**	P		**P**	**16 43 36.1**	**+1.5**
	0.4nm,0.3s,baz=102,slow=6.6,SNR=2.9							
MKAR	**Makanchi Array**	**45.00**	**304**	P		**P**	**16 43 52.5**	**+2.1**
	0.2nm,0.4s,baz=81,slow=9.6,SNR=6.8							
WRA	**Warramunga Arr**	**55.30**	**188**	P		**P**	**16 45 09.7**	**+1.1**
	0.9nm,0.8s,baz=1.6,slow=7.6,SNR=5.6							
ASAR	**Alice Springs**	**59.02**	**188**	P		**P**	**16 45 37.1**	**+2.3**
	0.4nm,1.0s,baz=8.9,slow=7.3,SNR=3.1							

*IDC **30** 16:45:25.5±4.0,23°.95S×179°.83W,h547km±47km, mb3.4/7, mb1 3.6/9,mb1mx3.2/34,mbtmp4.4/9,Error ellipse: s-maj=37.8km s-min=26.2km az=178.0*

*NEIC **30** 16:45:28.2±1.5,23°.8S±0°.2×179°.7W±0°.3,h612km±24km, mb4.7/23,Error ellipse: s-maj=39.2km s-min=24.4km az=110.0*

ISC 30 16:45:27.9±0.8,23°.9S±0°.1×179°.8W±0°.1,h600km,n37, σ1s38/38,mb4.7/16,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
NIUE	**Niue**	**10.39**	**64**	P		**P**	**16 47 50.8**	**+0.2**
AFI	**Afiamalu**	**12.52**	**39**	P		**P**	**16 48 09.3**	**-2.7**
DZM	**Mont Dzumac**	**12.78**	**276**	P		**P**	**16 48 12.5**	**-2.2**
	0.3nm,0.3s,baz=150,slow=20,SNR=3.0							
DZM	**Mont Dzumac**	**12.78**	**276**	P		**P**	**16 48 11.9**	**-2.8**
URZ	**Urewera**	**14.54**	**190**	P		**P**	**16 48 29.3**	**-2.4**
	0.7nm,0.3s,baz=267,slow=3.3,SNR=4.1							
URZ				S		**S**	**16 50 59.7**	**-2.1**
	0.2nm,0.3s,baz=0.0,slow=19,SNR=3.1							
URZ	**Urewera**	**14.54**	**190**	P		**P**	**16 48 29.8**	**-1.9**
BKZ	**Black Stump Fm**	**15.53**	**191**	P		**P**	**16 48 38.8**	**-2.0**
BKZ				IAmb		IAmb	16 48 41.5	
	comp=Z,29nm,1.4s							
BFZ	**Birch Farm**	**17.05**	**190**	P		**P**	**16 48 53.0**	**-1.6**
BFZ				IAmb		IAmb	16 49 22.8	
	comp=Z,83nm,1.5s							
SNZO	**South Karori**	**17.95**	**193**	P		**P**	**16 49 02.6**	**-0.2**
QRZ	**Quartz Range**	**18.05**	**199**	P		**P**	**16 49 04.9**	**+1.1**
NNZ	**Nelson**	**18.18**	**197**	P		**P**	**16 49 04.8**	**0.0**
FOZ	**Fox Glacier**	**21.35**	**201**	P		**P**	**16 49 33.0**	**-0.6**
EIDS	**Eidsvold**	**26.47**	**261**	P		**P**	**16 50 19.6**	**+0.4**
EIDS				IAmb		IAmb	16 50 31.4	
	comp=Z,32nm,1.5s							
CAN	**Canberra**	**29.28**	**240**	P		**P**	**16 50 45.1**	**+1.7**
CAN				IAmb		IAmb	16 51 15.8	
	comp=Z,64nm,1.8s							
CTA	**Charters Tower**	**31.64**	**270**	P		**P**	**16 51 04.2**	**+0.4**
	comp=Z,7.9nm,0.3s,baz=92,slow=13,SNR=41							
TOO	**Toolangi**	**32.58**	**237**	P		**P**	**16 51 13.1**	**+1.5**
TOO				IAmb		IAmb	16 51 50.8	
	comp=Z,40nm,1.8s							
TAU	**Tasmania Unive**	**33.05**	**227**	P		**P**	**16 51 17.1**	**+1.8**
TAU				IAmb		IAmb	16 51 38.5	
	comp=Z,40nm,1.4s							
STKA	**Stephens Creek**	**34.87**	**248**	P		**P**	**16 51 31.8**	**+1.1**
	comp=Z,2.1nm,0.6s,baz=95,slow=12,SNR=8.3							
STKA	**Stephens Creek**	**34.87**	**248**	P		**P**	**16 51 31.8**	**+1.1**
BBOO	**Buckleboo**	**39.59**	**247**	P		**P**	**16 52 09.7**	**+0.5**
BBOO				IAmb		IAmb	16 52 11.3	
	comp=Z,34nm,1.6s							
AS31	**Alice Springs**	**42.19**	**261**	P		**P**	**16 52 30.3**	**+0.4**
ASAR	**Alice Springs**	**42.19**	**261**	P		**P**	**16 52 30.6**	**+0.7**
	comp=Z,2.6nm,0.5s,baz=95,slow=7.4,SNR=88							
ASAR	**Alice Springs**	**42.19**	**261**	P		**P**	**16 52 30.2**	**+0.3**
WR0	**Warramunga Arr**	**42.38**	**266**	P		**P**	**16 52 31.2**	**-0.2**
WB2	**Warramunga Arr**	**42.56**	**266**	P		**P**	**16 52 32.8**	**+0.1**
WRAB	**Tennant Creek**	**42.56**	**266**	P		**P**	**16 52 32.7**	**-0.1**
WRAB				IAmb		IAmb	16 52 35.5	
	comp=Z,26nm,1.7s							
WB0	**Warramunga Arr**	**42.56**	**266**	P		**P**	**16 52 32.6**	**-0.2**
WB0				IAmb		IAmb	16 52 38.0	
	comp=Z,40nm,1.6s							
WRA	**Warramunga Arr**	**42.57**	**266**	P		**P**	**16 52 32.8**	**-0.1**
	comp=Z,4.0nm,0.5s,baz=102,slow=8.3,SNR=48							
WRA	**Warramunga Arr**	**42.57**	**266**	P		**P**	**16 52 31.8**	**-1.0**
FORT	**Forrest**	**46.46**	**250**	P		**P**	**16 53 02.9**	**+0.5**
FORT				IAmb		IAmb	16 53 03.6	
	comp=Z,17nm,0.6s							
MTN	**Manton Dam**	**47.62**	**274**	P		**P**	**16 53 10.8**	**-0.5**
KNRA	**Kununurra**	**48.85**	**270**	P		**P**	**16 53 21.1**	**+0.7**
KNRA				IAmb		IAmb	16 53 39.6	
	comp=Z,58nm,1.4s							
FITZ	**Fitzroy Crossi**	**50.99**	**266**	P		**P**	**16 53 37.6**	**+1.6**
	comp=Z,1.6nm,0.2s,baz=90,slow=5.2,SNR=8.3							
FITZ	**Fitzroy Crossi**	**50.99**	**266**	P		**P**	**16 53 35.6**	**-0.4**
NWAO	**Narrogin (SRO)**	**55.38**	**246**	P		**P**	**16 54 07.8**	**+1.0**
	comp=Z,6.1nm,1.0s,baz=135,slow=16,SNR=3.7							
NWAO	**Narrogin (SRO)**	**55.38**	**246**	P		**P**	**16 54 07.5**	**+0.7**
NWAO				IAmb		IAmb	16 54 24.6	
	comp=Z,56nm,1.6s							
TXAR	**Lajitas Array**	**90.30**	**58**	P		**P**	**16 57 28.7**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=211,slow=4.9,SNR=3.3							

RSPR 30 17:01:08.8,19°.19N×66°.62W,h28km±6km,MD2.9/10, 4C-10D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
EMPR	**Esperanza - Ma**	**0.72**	**174**	↓*e*P		Pb	17 01 21.1	-1.6
EMPR	**Esperanza - Ma**	**0.72**	**174**	*e*S		Sb	17 01 30.6	-1.7
EMPR	**Esperanza - Ma**	**0.72**	**174**			Pb	17 01 21.1	-1.6
EMPR						Sb	17 01 30.6	-1.7
AOPR	**Arecibo Observ**	**0.85**	**189**	↓*e*P		Pn	17 01 22.8	-2.2
AOPR	**Arecibo Observ**	**0.85**	**189**	*e*S		Sb	17 01 34.0	-2.1
AOPR	**Arecibo Observ**	**0.85**	**189**			Pn	17 01 22.8	-2.2
AOPR						Sb	17 01 34.0	-2.1
LSP	**Las Mesas**	**1.11**	**204**	↓*e*P		Pn	17 01 26.7	-1.8
LSP	**Las Mesas**	**1.11**	**204**	*e*S		Sn	17 01 40.6	-2.3
LSP	**Las Mesas**	**1.11**	**204**			Pn	17 01 26.7	-1.8
LSP						Sn	17 01 40.6	-2.3
CELP	**Cerrillos**	**1.11**	**178**	↑*e*P		Pn	17 01 26.6	-2.0
CELP				*e*S		Sn	17 01 40.6	-2.4
CELP	**Cerrillos**	**1.11**	**178**			Pn	17 01 26.6	-2.0
CELP						Sn	17 01 40.6	-2.4
IDE	**Isla Desecheo**	**1.14**	**226**	↑*e*P		Pn	17 01 27.0	-1.9
IDE	**Isla Desecheo**	**1.14**	**226**	*e*S		Sn	17 01 41.2	-2.5
IDE	**Isla Desecheo**	**1.14**	**226**			Pn	17 01 27.0	-1.9
IDE						Sn	17 01 41.2	-2.5
OBIP	**Obispado Ponce**	**1.15**	**180**	↓*e*P		Pn	17 01 27.1	-1.8
OBIP	**Obispado Ponce**	**1.15**	**180**	*e*S		Sn	17 01 41.4	-2.3
OBIP	**Obispado Ponce**	**1.15**	**180**			Pn	17 01 27.1	-1.8
OBIP						Sn	17 01 41.4	-2.3
CBYP	**Canovanas**	**1.17**	**142**	↓*e*P		Pn	17 01 27.4	-1.9
CBYP				*e*S		Sn	17 01 41.7	-2.6
CBYP	**Canovanas**	**1.17**	**142**	↓*e*P		Pn	17 01 27.4	-1.9
CBYP	**Canovanas**	**1.17**	**142**			Pn	17 01 27.4	-1.9
CBYP						Sn	17 01 41.9	-2.4
GBPR	**Guanica, Bosqu**	**1.24**	**192**	↓*e*P		Pn	17 01 28.3	-1.9
GBPR	**Guanica, Bosqu**	**1.24**	**192**	*e*S		Sn	17 01 43.5	-2.5
GBPR	**Guanica, Bosqu**	**1.24**	**192**			Pn	17 01 28.3	-1.9
GBPR						Sn	17 01 43.5	-2.5
CRPR	**Cabo Rojo, PR**	**1.27**	**202**	↑*e*P		Pn	17 01 28.8	-1.9
CRPR	**Cabo Rojo, PR**	**1.27**	**202**	*e*S		Sn	17 01 44.5	-2.3
CRPR	**Cabo Rojo, PR**	**1.27**	**202**			Pn	17 01 28.8	-1.9
CRPR						Sn	17 01 44.5	-2.3
HUMP	**Col San Antoni**	**1.27**	**145**	↓*e*P		Pn	17 01 28.9	-1.8
HUMP	**Col San Antoni**	**1.27**	**145**	*e*S		Sn	17 01 44.5	-2.4
HUMP	**Col San Antoni**	**1.27**	**145**			Pn	17 01 28.9	-1.8
HUMP						Sn	17 01 44.5	-2.4
MLPR	**Magueyes Islan**	**1.28**	**199**	↓*e*P		Pn	17 01 28.3	-2.6
MLPR	**Magueyes Islan**	**1.28**	**199**	*e*S		Sn	17 01 43.9	-3.3
MLPR	**Magueyes Islan**	**1.28**	**199**			Pn	17 01 28.3	-2.6
MLPR						Sn	17 01 43.9	-3.3
IGPR	**InterUniversit**	**1.31**	**158**	↑*e*P		Pn	17 01 29.7	-1.6
IGPR	**InterUniversit**	**1.31**	**158**	*e*S		Sn	17 01 45.3	-2.6
IGPR	**InterUniversit**	**1.31**	**158**			Sn	17 01 45.3	-2.6
MTP	**Monte Pirata**	**1.48**	**137**	↓*e*P		Pn	17 01 31.9	-1.7
MTP	**Monte Pirata**	**1.48**	**137**	*e*S		Sn	17 01 49.6	-2.5
MTP	**Monte Pirata**	**1.48**	**137**			Pn	17 01 31.9	-1.7
MTP						Sn	17 01 49.6	-2.5

MAN 30 17:04:54.9,8°.27N×126°.02E,h21km,mb3.9,ML2.7,MS2.4, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
BIPH	**Bislig**	**0.34**	**104**	↑*i*P		Pb	17 05 01.5	-0.8
BIPH				*i* S		Sn	17 05 10.1	-0.9
BUTP	**Butuan**	**0.80**	**330**	*e*P		Pb	17 05 10.1	-0.1
BUTP				*e*S		Sn	17 05 23.0	+0.7
BUKP	**Musuan**	**1.03**	**248**	*e*P		Pb	17 05 13.7	-0.4
BUKP				*e*S		Sn	17 05 28.0	+0.1
CGP	**Cagayan de Oro**	**1.33**	**278**	↑*e*P		Pn	17 05 17.8	-0.5
CGP				*e*S		Sb	17 05 38.8	+3.1

IDC 30 17:08:56.7±1.9,7°.91S×126°.70E,h0km,mb3.5/1, mb1 3.8/3,mb1mx3.4/29,mbtmp3.6/3,ML3.6/2,Error ellipse: s-maj=267.2km s-min=31.7km az=62.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
WRA	**Warramunga Arr**	**14.07**	**149**	Pn		Pn	17 12 15.7	-1.7
WRA				Sn		Sn	17 14 41.1	-13
	2.2nm,0.3s,baz=332,slow=22,SNR=12							
ASAR	**Alice Springs**	**17.13**	**157**	Pn		P	17 12 59.1	-0.4
	0.1nm,0.3s,baz=338,slow=11,SNR=15							
ASAR				Sn		Sn	17 15 59.5	-9.4
	0.6nm,0.3s,baz=343,slow=26,SNR=8.1							
MKAR	**Makanchi Array**	**67.23**	**329**	P		P	17 19 53.0	0.0
	0.4nm,0.9s,baz=125,slow=7.0,SNR=2.9							

*KRNET **30** 17:13:13.0±0.1,41°.07N×73°.85E,h11km,mb3.2*

*NNC **30** 17:13:13.9±0.7,41°.11N×73°.83E,h0km,mb3.7,mpv3.5, Error ellipse: s-maj=4.9km s-min=2.9km az=173.0*

*SOME **30** 17:13:13.8,41°.10N×73°.87E,h10km*

*KNET **30** 17:13:14.9±0.5,41°.17N×73°.86E,h8km±2km,ml2.7,Error ellipse: s-maj=2.9km s-min=2.4km az=99.0*

ISC 30 17:13:14.7±1.3,41°.15N±0°.04×73°.78E±0°.02,h1km±11km, n70,σ1s41/116,36C-22D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time	Res
							h m s	ISC
ARSB	**Arslanbob**	**0.62**	**287**	↑*e*P		**Pg**	**17 13 26.3**	**-0.4**
	baz=92							
ARSB				↑*i*S		**Sg**	**17 13 35.9**	**+1.1**
	baz=92							
ARLS	**Aral**	**0.82**	**30**	↓*i*P		**Pg**	**17 13 29.9**	**-0.6**
	baz=24							
ARLS				↓*i*S		**Sg**	**17 13 41.8**	**+0.6**
	baz=24							
AML	**Almayashu**	**0.99**	**356**	↓*i*P		**Pg**	**17 13 33.2**	**-0.5**
	baz=54							
AML				↓*i*S		**Sb**	**17 13 48.1**	**-0.4**
	baz=54							
AML	**Almayashu**	**0.99**	**356**	↓P		**Pg**	**17 13 33.4**	**-0.2**
	144nm,0.3s,SNR=111							
AML				↑S		**Sb**	**17 13 48.0**	**-0.6**
	140nm,0.2s							
ANR	**Andizhan**	**1.14**	**250**	P		**Pb**	**17 13 35.3**	**-2.0**
ANR				S		**Sb**	**17 13 52.0**	**-0.6**
UCH	**Uchtor**	**1.21**	**27**	↓*i*P		**Pb**	**17 13 37.0**	**-1.8**
	baz=23							
UCH				↓*i*S		**Sg**	**17 13 55.0**	**+1.2**
	baz=23							
UCH	**Uchtor**	**1.21**	**27**	↓P		**Pb**	**17 13 37.2**	**-1.6**
	16nm,0.1s,SNR=22							
UCH				↑S		**Sn**	**17 13 55.4**	**-1.2**
	104nm,0.4s							
ARK	**Arkit**	**1.51**	**296**	↑*i*P		**Pn**	**17 13 42.1**	**-0.9**
	baz=97							
ARK				↑*i*S		**Sg**	**17 14 05.6**	**+2.4**
	baz=97							
EKS2	**Erkin-Say**	**1.51**	**0**	↓*i*P		**Pn**	**17 13 42.8**	**-0.3**
	baz=58							
EKS2				↓*i*S		**Sg**	**17 14 04.5**	**+1.1**
	baz=58							
EKS2	**Erkin-Say**	**1.51**	**0**	↓P		**Pn**	**17 13 42.8**	**-0.3**
	13nm,0.1s,SNR=93							
EKS2				↓S		**Sg**	**17 14 04.7**	**+1.3**
	24nm,0.2s							
FRG	**Fergana**	**1.56**	**255**	P		**Pb**	**17 13 44.5**	**0.0**
FRG				S		**Sg**	**17 14 08.2**	**+3.2**
AAK	**Ala-Archa**	**1.58**	**20**	↑*i*P		**Pn**	**17 13 43.8**	**-0.3**
AAK	baz=17							
				↑*i*S		**Sg**	**17 14 06.1**	**+0.5**
	baz=17							
AAK	**Ala-Archa**	**1.58**	**20**	↓P		**Pn**	**17 13 44.0**	**-0.2**
	26nm,0.2s,SNR=83							
AAK				↓S		**Sg**	**17 14 06.5**	**+0.9**
	33nm,0.2s							
AAK	**Ala-Archa**	**1.58**	**20**	↑P		**Pn**	**17 13 43.9**	**-0.3**
	11nm,0.4s							
AAK				S		**Sb**	**17 14 05.3**	**-0.2**
	24nm,0.5s							
MRKS	**Merke**	**1.65**	**346**	↓*i*P		**Pn**	**17 13 45.0**	**+0.1**
	50nm,0.3s							
MRKS				*e*S		**Sg**	**17 14 08.1**	**+0.3**
	142nm,0.5s							
MRKS	**Merke**	**1.65**	**346**	P		**Pn**	**17 13 45.0**	**+0.1**
	50nm,0.3s							
MRKS				S		**Sg**	**17 14 08.1**	**+0.3**
	142nm,0.5s							
NRN	**Naryn**	**1.70**	**80**	↑*i*P		**Pn**	**17 13 43.8**	**-2.1**
	baz=77							
NRN				↑*i*S		**Sn**	**17 14 06.3**	**-2.1**
	baz=77							
KBK	**Karagaybulak**	**1.74**	**30**	↓*i*P		**Pn**	**17 13 46.4**	**+0.1**
	baz=27							
KBK				↓*i*S		**Sg**	**17 14 10.8**	**0.0**
	baz=27							
KBK	**Karagaybulak**	**1.74**	**30**	↓P		**Pb**	**17 13 47.0**	**-0.7**
	17nm,0.1s,SNR=25							
KBK				↑S		**Sg**	**17 14 11.4**	**+0.6**
	110nm,0.2s							
FRU1	**Bishkek**	**1.78**	**21**	↑*i*P		**Pn**	**17 13 47.0**	**+0.3**
	baz=18							
FRU1				↑*i*S		**Sg**	**17 14 11.9**	**0.0**
	baz=18							
CHMS	**Chumysh**	**1.99**	**21**	↓*i*P		**Pn**	**17 13 50.1**	**+0.5**
	baz=19							
CHMS				↓*i*S		**Sb**	**17 14 17.6**	**+0.6**
	baz=19							
CHMS	**Chumysh**	**1.99**	**21**	↑P		**Pb**	**17 13 51.2**	**-0.6**
	21nm,0.3s,SNR=25							
BOOM	**Boomskoye usch**	**2.10**	**50**	↑*i*P		**Pn**	**17 13 51.4**	**+0.2**
	baz=47							
BOOM				↑*i*S		**Sb**	**17 14 20.0**	**-0.4**
	baz=47							
ULHL	**Ulahol**	**2.15**	**58**	↑*e*P		**Pn**	**17 13 51.9**	**0.0**
	baz=56							
ULHL				↑*i*S		**Sb**	**17 14 20.3**	**-1.5**
	baz=56							
ULHL	**Ulahol**	**2.15**	**58**	↓P		**Pn**	**17 13 53.2**	**+1.3**
	7.3nm,0.1s,SNR=62							
ULHL				↓S		**Sb**	**17 14 21.5**	**-0.3**
	36nm,0.2s							
USP	**Ospenovka**	**2.19**	**14**	↑*i*P		**Pn**	**17 13 53.2**	**+0.9**
	baz=12							
USP				↑*i*S		**Sb**	**17 14 22.3**	**-0.4**
	baz=12							
USP	**Ospenovka**	**2.19**	**14**	↑P		**Pb**	**17 13 54.0**	**-1.2**
	52nm,0.4s,SNR=40							
KST	**Kastek**	**2.50**	**40**	*e*P		**Pb**	**17 14 00.0**	**-0.5**
	10nm,0.4s							
KST				↑*i*S		**Sb**	**17 14 32.8**	**+1.0**
	75nm,0.5s							
KST	**Kastek**	**2.50**	**40**	Pg		**Pb**	**17 14 00.0**	**-0.5**
	10nm,0.4s							
KST				Lg		Lg	17 14 32.8	
	75nm,0.5s							
DZA	**Taraz**	**2.52**	**315**	*e*P		**Pb**	**17 14 02.1**	**+1.3**
	95nm,0.1s							
DZA				*e*S		**Sg**	**17 14 35.9**	**+0.1**
	71nm,0.4s							
DGS	**Degeres**	**2.57**	**35**	*e*P		**Pb**	**17 14 01.0**	**-0.6**
	18nm,0.4s							
DGS				*e*S		**Sb**	**17 14 35.6**	**+1.8**
	58nm,0.5s							
DGS	**Degeres**	**2.57**	**35**	Pg		**Pb**	**17 14 01.0**	**-0.6**
	18nm,0.4s							
DGS				Lg		Lg	17 14 35.6	
	55nm,0.3s							
JBG	**Jabagly**	**2.73**	**299**	Pg		**Pb**	**17 14 05.5**	**+1.0**
	14nm,0.2s							
JBG				Lg		Lg	17 14 42.8	
	47nm,0.2s							
KDJ	**Kajisay**	**2.73**	**68**	↑*e*P		**Pn**	**17 13 59.7**	**-0.2**
	baz=66							
KDJ				↑*i*S		**Sn**	**17 14 33.7**	**0.0**
	baz=66							
IZV	**Izvestkoviy**	**2.83**	**47**	*e*P		**Pb**	**17 14 05.9**	**-0.3**
	5.6nm,0.3s							
IZV				*e*S		**Sb**	**17 14 43.9**	**+2.4**
	80nm,0.5s							
IZV	**Izvestkoviy**	**2.83**	**47**	Pg		**Pb

BTLS					*e*S		**Sg**	**17 15 17.4**	**-2.6**
	6.5nm,0.4s								
SATY	**Saty**	**3.94**	**59**	⇑	*i*P		**Pb**	**17 14 25.3**	**+0.3**
	6.9nm,0.2s								
SATY					*e*S		**Sb**	**17 15 16.9**	**+3.6**
	18nm,0.5s								
SATY	**Saty**	**3.94**	**59**		Pg		**Pb**	**17 14 25.3**	**+0.3**
	6.9nm,0.2s								
SATY					Lg	Lg		17 15 16.9	
	18nm,0.5s								
ZHN	**Zhinishke**	**4.01**	**58**		*e*P		**Pb**	**17 14 26.6**	**+0.4**
	2.1nm,0.1s								
ZHN					*e*S		**Sb**	**17 15 19.5**	**+4.3**
	7.6nm,0.2s								
ZHN	**Zhinishke**	**4.01**	**58**		Pg		**Pb**	**17 14 26.6**	**+0.4**
	2.1nm,0.1s								
ZHN					Lg	Lg		17 15 19.5	
	7.6nm,0.2s								
KURS	**Kuram**	**4.01**	**53**		*e*P		**Pb**	**17 14 26.7**	**+0.4**
	1.6nm,0.4s								
KURS					*e*S		**Sb**	**17 15 18.2**	**+3.0**
	7.2nm,0.4s								
KURS	**Kuram**	**4.01**	**53**		Pg		**Pb**	**17 14 26.7**	**+0.4**
	1.6nm,0.4s								
KURS					Lg	Lg		17 15 18.2	
	7.2nm,0.4s								
ARXS	**Arharly**	**4.28**	**43**		*e*P		**Pb**	**17 14 31.3**	**+0.5**
	4.0nm,0.4s								
ARXS					*e*S		**Sb**	**17 15 27.3**	**+4.3**
	22nm,0.3s								
ARXS	**Arharly**	**4.28**	**43**		Pg		**Pb**	**17 14 31.3**	**+0.5**
	4.0nm,0.4s								
ARXS					Lg	Lg		17 15 27.3	
	22nm,0.3s								
KPKS	**Kokpek**	**4.32**	**56**		*e*P		**Pb**	**17 14 32.0**	**+0.6**
	3.4nm,0.2s								
KPKS					*e*S		**Sb**	**17 15 27.7**	**+3.7**
	21nm,0.5s								
SHLS	**Shalkode**	**4.68**	**63**		*e*P		**Pg**	**17 14 43.5**	**-0.9**
	3.6nm,0.4s								
SHLS					*e*S		**Sg**	**17 15 47.9**	**+2.8**
	17nm,0.5s								
SHLS	**Shalkode**	**4.68**	**63**		Pg		**Pg**	**17 14 43.5**	**-0.9**
	3.6nm,0.4s								
SHLS					Lg	Lg		17 15 47.9	
	17nm,0.5s								
PDGK	**Podgornoye**	**4.77**	**61**		Pg		**Pb**	**17 14 39.8**	**+0.6**
	0.9nm,0.3s								
PDGK					Lg	Lg		17 15 41.4	
	4.8nm,0.4s								
PDGK	**Podgornoye**	**4.77**	**61**	⇑	Pg		**Pb**	**17 14 40.1**	**+0.9**
	3.4nm,1.0s								
PDGK				⇑	Lg	Lg		17 15 43.9	
	7.9nm,0.6s								
MK31	**Makanchi Array**	**8.34**	**45**	⇑	Pn		**Pn**	**17 15 14.9**	**-1.8**
	0.7nm,0.8s,baz=224,slow=13,SNR=7.8								
MK31				⇑	Lg	Lg		17 17 40.2	
	0.5nm,0.7s,baz=233,slow=28,SNR=2.7								

MAN 30 17:15:15.6, 9°.92N×123°.98E, h34km, mb3.8, ML2.6, MS2.1, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.40**	**358**	⇓ *i*P	Pn	17 15 26.4	+1.3
LLP				*i* S	Sn	17 15 33.1	+1.9
MSLP	**Maasin**	**0.89**	**76**	*e*P	Pb	17 15 32.3	-0.4
MSLP				*e*S	Sn	17 15 44.0	+0.4
OCLP	**Ormoc**	**1.28**	**29**	*e*P	Pn	17 15 37.8	+0.6
OCLP				*e*S	Sb	17 15 58.8	+3.3

MAN 30 17:19:57.6, 10°.10N×124°.18E, h0km, mb4.6, ML3.5, MS3.4, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.30**	**315**	*e*P	Pg	17 20 03.3	-0.1
LLP				*e*S	Sb	17 20 20.2	+8.8
MSLP	**Maasin**	**0.67**	**87**	*e*P	Pg	17 20 11.3	+0.8
MSLP				*e*S	Sn	17 20 24.7	-0.8
OCLP	**Ormoc**	**1.03**	**24**	*e*P	Pb	17 20 18.4	0.0
CGP	**Cagayan de Oro**	**1.71**	**163**	*e*P	Pg	17 20 35.1	+4.5
CNP	**Catarman**	**2.44**	**11**	*e*P	Pb	17 20 41.1	-1.3
CNP				*e*S	Sn	17 21 09.0	-0.3

MAN 30 17:20:04.2, 10°.27N×125°.25E, h27km, mb4.4, ML3.2, MS3.0, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**1.27**	**272**	⇓ *e*P	Pn	17 20 26.2	0.0
LLP				*e*S	Sb	17 20 43.0	-0.4
GUIM	**Jordan**	**2.65**	**278**	*e*P	Pn	17 20 45.0	-0.1
GUIM				*e*S	Sn	17 21 17.4	+1.0

*IDC **30** 17:21:01.4±2.2, 49°.84N×18°.75E, h0km, mb3.3/1, mb1 3.5/3, mb1mx3.1/33, mbtmp3.4/3, ML2.5/2, MS3.0/2, Ms1 3.0/2, ms1mx2.2/35, Error ellipse: s-maj=40.2km s-min=11.1km az=140.0*
*PRU **30** 17:21:02.6±0.0, 49°.95N×18°.59E, h0km*
*IPEC **30** 17:21:02.0±0.2, 50°.00N×18°.63E, h2km±2km, ML2.2/2, Error ellipse: s-maj=2.0km s-min=1.1km az=165.0*
*VIE **30** 17:21:04.0±1.2, 49°.75N×18°.48E, h0km, mb1.9/3, ml2.2/4, Error ellipse: s-maj=8.0km s-min=4.7km az=102.0 19 km ESE of Ostrava Suspected Mining induced.*

ISC 30 17:21:01.0±0.7, 49°.95N±0°.03×18°.59E±0°.02, h0km, n39, σ1°.09/62, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.31**	**249**	*e*PG	**Pb**	**17 21 09.3**	**0.0**
OKC				*e*SG	**Sb**	**17 21 13.5**	**-1.4**
	comp=Z,82nm,0.6s						
MORC	**Moravsky Berou**	**0.70**	**256**	*e*PG	**Pb**	**17 21 16.0**	**-0.1**
MORC	**Moravsky Berou**	**0.70**	**256**	*e*Pg	**Pb**	**17 21 16.0**	**-0.1**
	baz=72						
OJC	**Ojcow**	**0.83**	**70**	*e*Pg	**Pg**	**17 21 17.1**	**+0.3**
OJC				*e*Sg	**Sg**	**17 21 28.3**	**+0.8**
LANS	**Liptovska Anna**	**0.98**	**144**	*e*PG	**Pb**	**17 21 21.5**	**+0.6**
LANS				*e*SG	**Sn**	**17 21 36.3**	**-0.4**
LANS				*e*LG	Lg	17 21 39.9	
KRLC	**Kraliky**	**1.17**	**277**	*e*PG	**Pg**	**17 21 24.1**	**+0.7**
KRLC				*e*SG	**Sb**	**17 21 40.6**	**+0.7**
	comp=Z,48nm,0.8s						
NIE	**Niedzica**	**1.23**	**115**	*e*Pg	**Pn**	**17 21 25.8**	**+0.3**
NIE				*e*Sg	**Sn**	**17 21 44.0**	**+1.1**
JAVC	**Velka Javorina**	**1.24**	**209**	*e*PG	**Pn**	**17 21 26.8**	**+1.1**
JAVC	**Velka Javorina**	**1.24**	**209**	*e*Pg	**Pn**	**17 21 26.7**	**+1.1**
	baz=28						
VRAC	**Vranov**	**1.45**	**244**	Pn	**Pb**	**17 21 29.3**	**+0.5**
	3.9nm,0.3s,baz=63,slow=16,SNR=19						
VRAC				Lg	Lg	17 21 49.7	
	4.7nm,0.3s,baz=346,slow=23,SNR=11						
VRAC	**Vranov**	**1.45**	**244**	*e*PG	**Pb**	**17 21 29.3**	**+0.5**
VRAC				*e*SG	**Sn**	**17 21 48.8**	**+0.6**
VRAC	**Vranov**	**1.45**	**244**	*e*Pg	**Pb**	**17 21 29.3**	**+0.5**
	baz=62						
VRAC				*e*Sg	**Sn**	**17 21 48.7**	**+0.6**
	21nm,0.5s,baz=62						
VYHS	**Vyhne**	**1.47**	**174**	*e*PG	**Pb**	**17 21 29.5**	**+0.4**
DPC	**Dobruska-Polom**	**1.51**	**286**	*e*PG	**Pn**	**17 21 29.9**	**+0.5**
DPC				*e*SG	**Sn**	**17 21 51.2**	**+1.4**
	comp=Z,19nm,0.4s						
OSTC	**Ostas**	**1.64**	**293**	*e*PG	**Pb**	**17 21 32.3**	**+0.2**
OSTC				*e*SG	**Sg**	**17 21 55.9**	**+2.3**
	comp=Z,24nm,0.8s						
KRUC	**Moravsky**	**1.68**	**239**	*e*PN	**Pb**	**17 21 33.1**	**+0.3**
KRUC				*e*SG	**Sg**	**17 21 56.1**	**+1.1**
KRUC	**Moravsky**	**1.68**	**239**	*e*Pn	**Pb**	**17 21 33.1**	**+0.3**
	baz=56						
KRUC				*e*Sg	**Sg**	**17 21 56.1**	**+1.1**
	18nm,0.5s,baz=56						
KSP	**Ksiaz**	**1.72**	**302**	*e*Pg	**Pn**	**17 21 32.7**	**+0.5**
KSP				*e*Sg	**Sg**	**17 21 57.0**	**+0.8**
UPC	**Upice**	**1.75**	**290**	*e*PG	**Pb**	**17 21 34.1**	**+0.2**
UPC				*e*SG	**Sg**	**17 21 58.5**	**+1.4**
	comp=Z,15nm,0.8s						
CHVC	**Chvalec**	**1.75**	**292**	*e*PG	**Pb**	**17 21 34.0**	**+0.1**
CHVC				*e*SG	**Sg**	**17 21 59.6**	**+2.5**
	comp=Z,35nm,1.0s						
MODS	**Modra-Piesok**	**1.80**	**209**	*e*PG	**Pn**	**17 21 34.0**	**+0.8**
MODS				*e*SG	**Sn**	**17 21 56.1**	**-0.6**
STHS	**Stebnicka Huta**	**1.81**	**106**	*e*PN	**Pb**	**17 21 35.3**	**+0.4**
STHS				*e*SN	**Sg**	**17 22 00.9**	**+1.9**
STHS				*e*LG	Lg	17 22 08.6	
KECS	**Kecovo**	**1.92**	**139**	*e*PN	**Pn**	**17 21 35.5**	**+0.5**
KECS				*e*SN	**Sb**	**17 22 01.2**	**-0.3**
KECS				*e*LG	Lg	17 22 13.6	
CRVS	**Cervenica-Dubn**	**2.15**	**118**	*e*PN	**Pg**	**17 21 42.2**	**0.0**
GOPC	**GO Pecny, Ondr**	**2.46**	**271**	*e*PG	**Pb**	**17 21 46.5**	**+0.5**
GOPC				*e*SG	**Sg**	**17 22 20.5**	**+0.7**
	comp=Z,11nm,0.8s						
KOLS	**Kolonicke sedl**	**2.61**	**112**	*e*PG	**Pg**	**17 21 51.4**	**+0.4**
PRU	**Pruhonice**	**2.61**	**272**	*e*SG	**Sg**	**17 22 25.5**	**+0.6**
	comp=Z,8.7nm,0.7s						
PVCC	**Panska Ves**	**2.64**	**284**	*e*SG	**Sg**	**17 22 27.5**	**+1.6**
	comp=Z,16nm,0.4s						
CONA	**Conrad Observa**	**2.71**	**223**	*e*Pn	**Pn**	**17 21 46.1**	**+0.2**
	0.8nm,0.3s						
CONA				*i* Sg	**Sg**	**17 22 27.4**	**-0.5**
	3.4nm,0.4s						
PBCC	**Pribram**	**2.98**	**267**	*e*PG	**Pg**	**17 21 57.2**	**-1.0**
PBCC				*e*SG	**Sg**	**17 22 37.7**	**+0.8**
BRG	**Berggiesshubel**	**3.11**	**289**	PG	**Pg**	**17 21 59.8**	**-0.8**
BRG				SG	**Sg**	**17 22 39.9**	**-1.0**
	7.8nm,0.6s						
KHC	**Kasperske Hory**	**3.36**	**258**	*e*PN	**Pn**	**17 21 56.0**	**+1.2**
KHC				*e*PG	**Pb**	**17 22 03.9**	**+2.4**
KHC				*e*SG	**Sg**	**17 22 49.2**	**+0.2**
	comp=Z,6.5nm,0.5s						
GERES	**GERESS Array B**	**3.38**	**253**	Pn	**Pn**	**17 21 55.8**	**+0.7**
	0.2nm,0.3s,baz=72,slow=13,SNR=6.1						
GERES				Pg	**Pb**	**17 22 03.7**	**+2.0**
	1.4nm,0.3s,baz=67,slow=16,SNR=25						
GERES				Lg	Lg	17 22 51.3	
	1.0nm,0.3s,baz=72,slow=35,SNR=8.0						
MOA	**Molln**	**3.54**	**235**	Pg	**Pg**	**17 22 07.6**	**-1.2**
	0.4nm,0.1s						
MOA				Sg	**Sg**	**17 22 55.2**	**+0.5**
	5.7nm,0.6s						
NKC	**Novy Kostel**	**3.96**	**276**	*e*SG	**Sg**	**17 23 09.6**	**+1.3**
FINES	**FINESS Array B**	**12.26**	**17**	Pn	**Pn**	**17 23 52.9**	**-3.7**
	0.2nm,0.3s,baz=202,slow=10,SNR=5.9						
ARCES	**ARCESS Array B**	**19.93**	**7**	P	**P**	**17 25 34.1**	**+0.1**
	1.2nm,0.8s,baz=196,slow=13,SNR=3.4						
ARU	**Arti**	**24.53**	**59**	LR	LR	17 35 35.8	
	comp=Z,29nm,18.2s,baz=245,slow=36						
ZALV	**Zalesovo Beam**	**39.68**	**58**	LR	LR	17 45 21.7	
	comp=Z,17nm,18.1s,baz=70,slow=37						

*TAP **30** 17:40:39.8, 24°.87N×122°.26E, h9km, ML2.9, C*
*JMA **30** 17:40:41.0±0.1, 24°.80N×122°.26E, h22km±4km, M2.2*

ISC 30 17:40:40.6±1.0, 24°.84N±0°.02×122°.27E±0°.02, h9km±8km, n101, σ0°.64/177, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao**	**0.31**	**303**	*i* P	**Pg**	**17 40 46.1**	**-0.6**
	baz=298						
TWB1				*i* S	**Sg**	**17 40 50.4**	**-0.5**
	baz=298						
EOS1	**EOS1**	**0.32**	**205**	P	**Pg**	**17 40 47.9**	**+1.0**
	baz=217						
EOS1				S	**Sb**	**17 40 53.8**	**+0.3**
	baz=217						
NTC	**Toucheng**	**0.40**	**272**	*e*P	**Pg**	**17 40 48.2**	**-0.3**
	baz=277						
NTC				*e*S	**Sb**	**17 40 55.1**	**-1.0**
	baz=277						
TIPB	**Shuangxi**	**0.43**	**288**	*i* P	**Pg**	**17 40 48.7**	**-0.2**
	baz=284						
TIPB				*i* S	**Sg**	**17 40 55.0**	**+0.3**
	baz=284						
TWC	**Suao**	**0.45**	**239**	*i* P	**Pg**	**17 40 48.9**	**-0.4**
	baz=236						
TWC				S	**Sg**	**17 40 55.0**	**-0.3**
	baz=236						
ILA	**Ilan**	**0.48**	**261**	*e*S	**Sb**	**17 40 58.5**	**+0.1**
	baz=246						
NWF	**Wu-fen Shan**	**0.50**	**298**	*i* P	**Pg**	**17 40 51.1**	**+0.7**
	baz=293						
NWF				*i* S	**Sg**	**17 40 57.4**	**+0.3**
	baz=293						
WFSB	**Wu-fen Shan**	**0.50**	**298**	*i* P	**Pg**	**17 40 51.2**	**+0.8**
	baz=293						
WFSB				S	**Sg**	**17 40 57.2**	**+0.2**
	baz=293						
TWE	**Neicheng**	**0.56**	**258**	*i* P	**Pg**	**17 40 51.1**	**-0.4**
	baz=247						
TWE				S	**Sg**	**17 40 59.1**	**+0.2**
	baz=247						
SLBB	**Yuanshan**	**0.58**	**262**	*i* P	**Pg**	**17 40 52.3**	**+0.4**
	baz=259						
SLBB				*e*S	**Sg**	**17 41 00.4**	**+0.7**
	baz=259						
NANB	**Nanao**	**0.63**	**229**	*i* P	**Pg**	**17 40 52.2**	**-0.5**
	baz=228						
NANB				*e*S	**Sg**	**17 41 00.6**	**-0.3**
	baz=228						
ENA	**Nanau**	**0.63**	**230**	*i* P	**Pg**	**17 40 52.7**	**-0.2**
	baz=228						
ENA				*i* S	**Sg**	**17 41 00.8**	**-0.4**
	baz=228						
TWA	**Mucha**	**0.64**	**283**	*i* P	**Pg**	**17 40 53.6**	**+0.6**
	baz=279						
TWA				S	**Sb**	**17 41 02.5**	**-0.5**
	baz=279						
ENTT	**Nioudou**	**0.67**	**253**	*i* P	**Pg**	**17 40 53.5**	**-0.1**
	baz=250						
ENTT				S	**Sb**	**17 41 03.5**	**-0.4**
	baz=250						
NHDH	**Xindian Distri**	**0.69**	**281**	P	**Pg**	**17 40 54.3**	**+0.4**
	baz=277						
NHDH				S	**Sb**	**17 41 04.3**	**-0.1**
	baz=277						
NWLT	**Wulai**	**0.70**	**265**	P	**Pg**	**17 40 54.5**	**+0.4**
	baz=254						
NWLT				S	**Sb**	**17 41 04.8**	**0.0**
	baz=254						
YM01	**YM01**	**0.71**	**296**	P	**Pg**	**17 40 54.3**	**0.0**
	baz=292						
YM01				S	**Sg**	**17 41 04.4**	**+0.9**
	baz=292						
YM08	**YM08**	**0.71**	**299**	P	**Pg**	**17 40 54.0**	**-0.3**
	baz=296						
YM08				*e*S	**Sg**	**17 41 04.2**	**+0.6**
	baz=296						
YM11	**YM11**	**0.71**	**297**	P	**Pg**	**17 40 54.4**	**0.0**
	baz=294						
YM10	**YM10**	**0.72**	**296**	*e*P	**Pg**	**17 40 54.7**	**+0.2**
	baz=293						
JYNG	**Yonagunijimaku**	**0.72**	**122**	P	**Pg**	**17 40 54.5**	**-0.1**
JYNG				*e*S	**Sg**	**17 41 04.0**	**0.0**
TAP	**Taipei**	**0.72**	**286**	*e*S	**Sb**	**17 41 05.7**	**+0.3**
	baz=297						
TATO	**Taipei**	**0.72**	**281**	P	**Pg**	**17 40 55.0**	**+0.4**
	baz=278						
TATO				*e*S	**Sb**	**17 41 05.8**	**+0.4**
	baz=278						
NDT	**Datong Townshi**	**0.73**	**251**	P	**Pg**	**17 40 55.1**	**+0.4**
	baz=249						
NDT				S	**Sg**	**17 41 04.5**	**+0.3**
	baz=249						
YM03	**YM03**	**0.75**	**297**	*e*P	**Pb**	**17 40 55.9**	**+0.1**
	baz=294						
TWY	**Chenhua**	**0.75**	**306**	P	**Pg**	**17 40 55.2**	**+0.2**
	baz=289						
TWY				S	**Sg**	**17 41 05.1**	**+0.2**
	baz=289						
ANP	**Anpu**	**0.77**	**297**	P	**Pg**	**17 40 55.3**	**-0.1**
	baz=294						
ANP				*e*S	**Sb**	**17 41 06.4**	**-0.3**
	baz=294						
YOJ	**Yonaguni jima**	**0.77**	**119**	P	**Pg**	**17 40 55.6**	**+0.2**
	baz=122						
YOJ				S	**Sg**	**17 41 07.2**	**+1.7**
	baz=122						
YOJ	**Yonaguni jima**	**0.77**	**119**	P	**Pg**	**17 40 55.2**	**-0.2**
YOJ				S	**Sg**	**17 41 05.8**	**+0.3**
PCYT	**Pengchaiyu**	**0.81**	**347**	P	**Pg**	**17 40 55.2**	**-1.0**
	baz=345						
PCYT				S	**Sg**	**17 41 07.7**	**+1.0**
	baz=345						
NTST	**Danshui**	**0.81**	**294**	*e*P	**Pg**	**17 40 56.6**	**+0.3**
	baz=290						
TWS1	**Kuangyinshan**	**0.82**	**289**	P	**Pg**	**17 40 56.5**	**+0.1**
	baz=299						
TWS1				S	**Sb**	**17 41 08.6**	**+0.5**
	baz=299						
YHNB	**Yeheng**	**0.83**	**259**	P	**Pg**	**17 40 56.4**	**-0.2**
	baz=249						
YHNB				*e*S	**Sb**	**17 41 08.0**	**-0.6**
	baz=249						
NSK	**Sanguang**	**0.85**	**259**	P	**Pg**	**17 40 56.5**	**-0.4**
	baz=252						
NSK				*e*S	**Sb**	**17 41 08.7**	**-0.3**
	baz=252						
NACB	**Ninganchiao**	**0.91**	**223**	P	**Pg**	**17 40 57.4**	**-0.7**
	baz=223						
NACB				S	**Sg**	**17 41 09.3**	**-0.5**
	baz=223						
NNSB	**Datong**	**0.91**	**243**	P	**Pg**	**17 40 57.5**	**-0.6**
	baz=231						
NNSB				S	**Sb**	**17 41 11.0**	**+0.3**
	baz=231						
NNSH	**Datong**	**0.91**	**243**	P	**Pg**	**17 40 57.6**	**-0.5**
	baz=233						
NNSH				S	**Sb**	**17 41 10.7**	**0.0**
	baz=233						
NNS	**Nan Shan**	**0.91**	**244**	*i* P	**Pg**	**17 40 57.8**	**-0.3**
	baz=232						
NNS				S	**Sg**	**17 41 10.2**	**+0.2**
	baz=232						
WLTB	**Daxi**	**0.93**	**271**	*e*P	**Pg**	**17 40 58.2**	**-0.3**
	baz=269						
WLTB				*e*S	**Sg**	**17 41 10.6**	**+0.1**
	baz=269						
ETLH	**Xiulin Townshi**	**0.96**	**229**	P	**Pg**	**17 40 58.6**	**-0.4**
	baz=229						
ETLH				*e*S	**Sb**	**17 41 12.0**	**-0.2**
	baz=229						
TWD	**Chiawan**	**0.97**	**219**	*i* P	**Pg**	**17 40 58.8**	**-0.5**
	baz=227						
TWD				S	**Sb**	**17 41 12.6**	**0.0**
	baz=227						
NCU	**National Centr**	**0.99**	**278**	*e*S	**Sn**	**17 41 15.2**	**+0.3**
	baz=275						
NCUH	**Zhongli**	**1.00**	**278**	*e*P	**Pg**	**17 41 00.1**	**+0.4**
	baz=275						
NCUH				*e*S	**Sn**	**17 41 14.7**	**-0.2**
	baz=275						
HWA	**Hwalien**	**1.05**	**215**	*e*P	**Pn**	**17 41 01.6**	**+0.2**
	baz=217						
HWA				*e*S	**Sn**	**17 41 18.5**	**+2.3**
	baz=217						
ENLB	**Shoufeng**	**1.11**	**213**	*e*P	**Pb**	**17 41 02.1**	**+0.1**
	baz=196						
ENLB				S	**Sn**	**17 41 19.9**	**+2.1**
	baz=196						
WHF	**Hehuan Shan**	**1.15**	**233**	*i* P	**Pg**	**17 41 02.3**	**-0.4**
	baz=233						
WHF				*i* S	**Sg**	**17 41 17.7**	**+0.1**
	baz=233						
TWT	**Tachien**	**1.16**	**240**	P	**Pb**	**17 41 02.9**	**+0.1**
	baz=232						
TWT				S	**Sn**	**17 41 18.8**	**-0.3**
	baz=232						
LIOB	**Emei**	**1.16**	**261**	P	**Pb**	**17 41 02.1**	**-0.7**
	baz=259						
LIOB				S	**Sn**	**17 41 19.3**	**+0.4**
	baz=259						
SBCB	**Hsinchu**	**1.17**	**268**	*e*S	**Sb**	**17 41 17.8**	**-0.4**
	baz=284						
TDCB	**Techi**	**1.17**	**240**	P	**Pb**	**17 41 03.0**	**0.0**
	baz=233						
TDCB				S	**Sb**	**17 41 18.1**	**-0.2**
	baz=233						
NSTT	**Nanjuang**	**1.17**	**260**	P	**Pg**	**17 41 03.4**	**+0.3**
	baz=258						
NSTT				S	**Sn**	**17 41 19.5**	**+0.3**
	baz=258						
CHGB	**Renai**	**1.27**	**232**	P	**Pn**	**17 41 04.5**	**-0.2**
	baz=233						
CHGB				S	**Sn**	**17 41 21.8**	**-0.1**
	baz=233						
ESL	**Shilin**	**1.27**	**217**	*i* P	**Pn**	**17 41 04.5**	**-0.1**
	baz=237						
ESL				S	**Sn**	**17 41 23.1**	**+1.4**
	baz=237						
WHP	**Taichung City**	**1.33**	**245**	*i* P	**Pg**	**17 41 06.2**	**+0.1**
	baz=245						
WHP				S	**Sg**	**17 41 24.2**	**+0.7**
	baz=245						
OWD	**Renai**	**1.33**	**229**	*i* P	**Pn**	**17 41 05.5**	**0.0**
	baz=223						
OWD				S	**Sn**	**17 41 23.2**	**-0.2**
	baz=223						
NMLH	**Miaoli**	**1.38**	**258**	*e*P	**Pn**	**17 41 06.3**	**+0.3**
	baz=256						
NMLH				S	**Sg**	**17 41 26.1**	**+1.1**
	baz=256						
EGFH	**Guangfu**	**1.40**	**214**	P	**Pn**	**17 41 06.6**	**+0.4**
	baz=233						
EGFH				*e*S	**Sg**	**17 41 25.6**	**0.0**
	baz=233						
IRIF	**Iriomote-Funau**	**1.42**	**110**	P	**Pn**	**17 41 06.6**	**+0.1**
NSY	**Sanyi**	**1.44**	**253**	*e*P	**Pb**	**17 41 07.8**	**+0.3**
	baz=269						
NSY				S	**Sg**	**17 41 27.2**	**+0.3**
	baz=269						
TWQ1	**Liyutan**	**1.45**	**251**	*e*P	**Pb**	**17 41 08.0**	**+0.2**
	baz=267						
TWQ1				*e*S	**Sg**	**17 41 27.1**	**-0.2**
	baz=267						
DPDB	**Guoxing**	**1.47**	**237**	P	**Pb**	**17 41 08.1**	**+0.1**
	baz=238						
DPDB				S	**Sg**	**17 41 27.2**	**-0.6**
	baz=238						
PTSB	**Yuanli**	**1.48**	**255**	*e*S	**Sg**	**17 41 28.3**	**+0.2**
	baz=270						
VWDT	**VWDT**	**1.49**	**224**	P	**Pb**	**17 41 08.4**	**0.0**
	baz=225						
VWDT				S	**Sg**	**17 41 28.3**	**-0.4**
	baz=225						
HGSD	**Ruisui**	**1.55**	**210**	P	**Pn**	**17 41 08.5**	**+0.2**
	baz=198						
HGSD				*e*S	**Sb**	**17 41 29.1**	**+0.1**
	baz=198						
WDJ	**Dajia District**	**1.56**	**252**	*e*P	**Pb**	**17 41 09.6**	**-0.1**
	baz=267						
WDJ				*e*S	**Sg**	**17 41 30.2**	**-0.7**
	baz=267						
SMLT	**Sun Moon Lake**	**1.57**	**233**	P	**Pb**	**17 41 09.7**	**-0.2**
	baz=234						
SMLT				S	**Sg**	**17 41 31.4**	**+0.2**
	baz=234						
EHY	**Hungye**	**1.58**	**213**	P	**Pn**	**17 41 09.0**	**+0.2**
	baz=217						
EHY				*e*S	**Sn**	**17 41 29.8**	**+0.3**
	baz=217						
TYC	**Yuchr**	**1.59**	**235**	P	**Pb**	**17 41 10.5**	**+0.4**
	baz=235						
TYC				S	**Sg**	**17 41 31.7**	**-0.1**
	baz=235						
SSLB	**Suanglung**	**1.59**	**229**	P	**Pb**	**17 41 10.4**	**+0.2**
	baz=231						
SSLB				S	**Sb**	**17 41 30.6**	**+0.1**
	baz=231						
TCU	**Taichung**	**1.61**	**245**	*e*P	**Pb**	**17 41 10.9**	**+0.5**
	baz=262						
TCU				*e*S	**Sg**	**17 41 32.2**	**-0.2**
	baz=262						
JKRS	**Kuro-shima**	**1.69**	**110**	P	**Pn**	**17 41 09.1**	**-1.2**
YULB	**Yu-li**	**1.69**	**212**	P	**Pn**	**17 41 09.6**	**-0.8**
	baz=216						
YULB				*e*S	**Sn**	**17 41 32.6**	**+0.5**
	ba

FULB				*e*S		**Sb**	17 41 38.2	0.0
	baz=228							
JISG	**Ishigakijimahi**	**1.87**	**97**	P		**Pn**	17 41 12.6	-0.1
CHN5	**Tsauling**	**1.91**	**230**	P		**Pb**	17 41 15.9	+0.3
	baz=232							
CHN5				S		**Sg**	17 41 41.8	-0.2
	baz=232							
WGK	**Gukeng**	**1.94**	**234**	*e*S		**Sg**	17 41 41.8	-1.1
	baz=235							
WDLH	**Douliu**	**1.95**	**234**	S		**Sg**	17 41 42.7	-0.7
	baz=236							
RLNB	**Erlin**	**1.98**	**242**	*e*S		**Sb**	17 41 40.9	-0.7
	baz=242							
ELDTW	**Lidau**	**2.00**	**215**	P		**Pn**	17 41 15.2	+0.5
	baz=205							
ELDTW				*e*S		**Sn**	17 41 40.3	+0.4
	baz=205							
CHN4	**Tsaushan**	**2.13**	**226**	P		**Pb**	17 41 19.4	0.0
	baz=229							
CHN4				*i* S		**Sg**	17 41 48.7	-0.5
	baz=229							
TPUB	**Ta-pu**	**2.14**	**225**	P		**Pb**	17 41 18.6	-1.0
	baz=214							
TPUB				S		**Sb**	17 41 46.7	+0.4
	baz=214							
CHY	**Chiayi**	**2.15**	**232**	*e*S		**Sb**	17 41 46.9	+0.4
	baz=233							
WTP	**Ta-pu**	**2.19**	**224**	P		**Pb**	17 41 19.4	-1.1
	baz=212							
WTP				*e*S		**Sb**	17 41 48.9	+1.1
	baz=212							
TWK	**Hsinying**	**2.26**	**227**	P		**Pb**	17 41 21.0	-0.6
	baz=229							
TWK				S		**Sb**	17 41 51.4	+1.7
	baz=229							
TWG	**Pinlang**	**2.29**	**209**	*e*S		**Sn**	17 41 47.1	+0.3
	baz=201							
TWGBT	**Beinan**	**2.29**	**209**	*e*S		**Sn**	17 41 46.8	0.0
	baz=201							
CHN1	**Nanshi**	**2.29**	**224**	*e*P		**Pb**	17 41 20.7	-1.4
	baz=228							
CHN1				*e*S		**Sb**	17 41 51.4	+0.9
	baz=228							
SGST	**Jiashian**	**2.33**	**222**	*e*S		**Sb**	17 41 52.5	+0.7
	baz=212							
PTTC	**Pingtan**	**2.36**	**287**	*e*P		**Pn**	17 41 18.4	-1.1
	baz=282							
SLGT	**Liugui**	**2.36**	**219**	P		**Pb**	17 41 22.4	-1.0
	baz=224							
SLGT				S		**Sb**	17 41 53.1	+0.5
	baz=224							
SSD	**Sandimen**	**2.57**	**216**	*e*P		**Pn**	17 41 24.6	+2.2
	baz=208							
SSD				*e*S		**Sb**	17 41 57.4	-1.1
	baz=208							
VWUC	**VWUC**	**2.57**	**274**	*e*P		**Pn**	17 41 22.2	-0.1
	baz=270							
MASBT	**Mashibuluo**	**2.68**	**214**	P		**Pb**	17 41 26.6	-2.1
	baz=207							
MASBT				S		**Sb**	17 42 00.1	-1.5
	baz=207							
EAST	**Anshuo**	**2.77**	**208**	*e*S		**Sn**	17 41 57.5	-1.3
	baz=203							
XPSS	**Dashiqiu**	**2.80**	**318**	*e*P		**Pn**	17 41 25.5	0.0
	baz=311							
XPSS				*e*S		**Sn**	17 41 59.9	+0.4
	baz=311							
MHZQ	**Yeshan**	**3.19**	**294**	*e*S		**Sn**	17 42 08.9	-0.1
	baz=289							

TAP ***30*** *17:42:27.8, 24.°10N×122.°31E, h44km, ML3.2, D*
JMA ***30*** *17:42:27.2, 24.°03N×122.°28E, h44km±2km, M2.6*
ISC 30 17:42:26.9±1.1, 24.°04N±0.°02×122.°31E±0.°02, h26km±11km, n111, σ0.°64/212, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.53**	**342**	P	**Pn**	**17 42 38.6**	**-0.2**
	baz=334						
EOS1				S	**Sn**	**17 42 46.7**	**-0.2**
	baz=334						
NANB	**Nanao**	**0.64**	**307**	*i* P	**Pn**	**17 42 40.2**	**-0.1**
	baz=308						
NANB				S	**Sn**	**17 42 49.5**	**-0.1**
	baz=308						
ENA	**Nanau**	**0.65**	**306**	*i* P	**Pn**	**17 42 40.3**	**-0.1**
	baz=308						
ENA				*i* S	**Sn**	**17 42 49.8**	**0.0**
	baz=308						
HWA	**Hwalien**	**0.65**	**264**	P	**Pn**	**17 42 40.6**	**+0.2**
	baz=259						
HWA				S	**Sn**	**17 42 50.1**	**+0.3**
	baz=259						
TWD	**Chiawan**	**0.66**	**273**	*i* P	**Pb**	**17 42 40.2**	**+0.4**
	baz=259						
TWD				*i* S	**Sb**	**17 42 49.4**	**+0.8**
	baz=259						
ENLB	**Shoufeng**	**0.66**	**258**	*i* P	**Pb**	**17 42 39.9**	**0.0**
	baz=246						
ENLB				S	**Sn**	**17 42 50.2**	**0.0**
	baz=246						
NACB	**Ninganchiao**	**0.67**	**281**	P	**Pb**	**17 42 40.4**	**+0.4**
	baz=267						
NACB				S	**Sn**	**17 42 49.9**	**-0.4**
	baz=267						
TWC	**Suao**	**0.70**	**323**	*i* P	**Pb**	**17 42 40.6**	**0.0**
	baz=321						
TWC				S	**Sb**	**17 42 49.2**	**-0.7**
	baz=321						
JYNG	**Yonagunijimaku**	**0.71**	**55**	P	**Pn**	**17 42 41.3**	**+0.1**
JYNG				S	**Sn**	**17 42 51.4**	**+0.2**
YOJ	**Yonaguni jima**	**0.76**	**57**	P	**Pn**	**17 42 42.4**	**+0.4**
	baz=60						
YOJ				S	**Sn**	**17 42 53.0**	**+0.3**
	baz=60						
YOJ	**Yonaguni jima**	**0.76**	**57**	P	**Pn**	**17 42 42.1**	**+0.1**
YOJ				S	**Sn**	**17 42 52.4**	**-0.2**
ETLH	**Xiulin Townshi**	**0.78**	**282**	*i* P	**Pb**	**17 42 41.9**	**+0.1**
	baz=278						
ETLH				S	**Sb**	**17 42 52.6**	**+0.5**
	baz=278						
ESL	**Shilin**	**0.84**	**254**	*i* P	**Pb**	**17 42 42.6**	**-0.2**
	baz=242						
ESL				S	**Sb**	**17 42 54.0**	**+0.3**
	baz=242						
ILA	**Ilan**	**0.88**	**325**	*e*S	**Sn**	**17 42 56.6**	**+1.0**
	baz=322						
EGFH	**Guangfu**	**0.89**	**245**	*i* P	**Pb**	**17 42 43.8**	**+0.1**
	baz=242						
EGFH				S	**Sn**	**17 42 56.1**	**+0.3**
	baz=242						
TWE	**Neicheng**	**0.90**	**319**	*i* P	**Pb**	**17 42 44.0**	**+0.1**
	baz=317						
TWE				S	**Sb**	**17 42 55.2**	**-0.2**
	baz=317						
ENTT	**Nioudou**	**0.90**	**311**	*i* P	**Pb**	**17 42 44.1**	**+0.1**
	baz=299						
ENTT				S	**Sb**	**17 42 56.0**	**+0.4**
	baz=299						
NDT	**Datong Townshi**	**0.92**	**308**	*i* P	**Pb**	**17 42 44.2**	**0.0**
	baz=297						
NDT				S	**Sb**	**17 42 56.3**	**+0.3**
	baz=297						
NTC	**Toucheng**	**0.92**	**332**	P	**Pb**	**17 42 43.6**	**-0.6**
	baz=337						
NTC				S	**Sb**	**17 42 56.0**	**-0.1**
	baz=337						
NNSB	**Datong**	**0.93**	**295**	P	**Pb**	**17 42 44.3**	**-0.2**
	baz=291						
NNSB				S	**Sb**	**17 42 56.4**	**-0.1**
	baz=291						
NNSH	**Datong**	**0.93**	**295**	P	**Pb**	**17 42 44.3**	**-0.2**
	baz=291						
NNSH				*i* S	**Sb**	**17 42 56.6**	**+0.1**
	baz=291						
SLBB	**Yuanshan**	**0.94**	**319**	P	**Pn**	**17 42 45.4**	**+0.9**
	baz=316						
SLBB				S	**Sn**	**17 42 57.5**	**+0.4**
	baz=316						
NNS	**Nan Shan**	**0.94**	**295**	*i* P	**Pb**	**17 42 44.5**	**-0.2**
	baz=292						
NNS				S	**Sb**	**17 42 57.0**	**+0.1**
	baz=292						
WHF	**Hehuan Shan**	**0.96**	**276**	*i* P	**Pb**	**17 42 44.8**	**-0.4**
	baz=273						
WHF				S	**Sb**	**17 42 57.6**	**-0.1**
	baz=273						
HGSD	**Ruisui**	**0.98**	**236**	P	**Pn**	**17 42 45.4**	**+0.5**
	baz=226						
HGSD				S	**Sb**	**17 42 57.2**	**-0.6**
	baz=226						
TWB1	**Santiao Chiao**	**1.00**	**343**	P	**Pn**	**17 42 44.7**	**-0.6**
	baz=342						
TWB1				*e*S	**Sb**	**17 42 57.9**	**-0.6**
	baz=342						
TIPB	**Shuangxi**	**1.02**	**335**	P	**Pn**	**17 42 45.4**	**-0.2**
	baz=346						
TIPB				S	**Sb**	**17 42 58.2**	**-0.9**
	baz=346						
NWLT	**Wulai**	**1.04**	**315**	P	**Pn**	**17 42 46.2**	**+0.4**
	baz=300						
NWLT				S	**Sb**	**17 42 59.1**	**-0.4**
	baz=300						
CHGB	**Renai**	**1.04**	**271**	P	**Pn**	**17 42 46.2**	**+0.2**
	baz=268						
CHGB				S	**Sb**	**17 42 59.6**	**-0.2**
	baz=268						
OWD	**Renai**	**1.04**	**265**	*i* P	**Pn**	**17 42 46.0**	**+0.1**
	baz=262						
OWD				S	**Sb**	**17 42 58.7**	**-1.0**
	baz=262						
EHY	**Hungye**	**1.05**	**240**	*i* P	**Pn**	**17 42 46.0**	**0.0**
	baz=248						
EHY				*e*S	**Sn**	**17 43 00.1**	**+0.3**
	baz=248						
YHNB	**Yeheng**	**1.06**	**306**	P	**Pn**	**17 42 46.2**	**+0.1**
	baz=303						
YHNB				S	**Sb**	**17 42 59.3**	**-0.8**
	baz=303						
TWT	**Tachien**	**1.06**	**282**	*e*P	**Pb**	**17 42 47.0**	**+0.3**
	baz=269						
TWT				S	**Sb**	**17 43 00.5**	**+0.2**
	baz=269						
NSK	**Sanguang**	**1.07**	**306**	*i* P	**Pn**	**17 42 46.4**	**+0.1**
	baz=303						
NSK				S	**Sb**	**17 42 59.6**	**-1.0**
	baz=303						
TDCB	**Techi**	**1.07**	**281**	P	**Pn**	**17 42 46.7**	**+0.3**
	baz=269						
TDCB				S	**Sb**	**17 43 00.2**	**-0.4**
	baz=269						
VWDT	**VWDT**	**1.11**	**255**	P	**Pb**	**17 42 47.5**	**+0.1**
	baz=243						
VWDT				S	**Sb**	**17 43 01.4**	**-0.1**
	baz=243						
NWF	**Wu-fen Shan**	**1.13**	**335**	P	**Pn**	**17 42 47.0**	**-0.2**
	baz=345						
NWF				S	**Sb**	**17 43 00.5**	**-1.8**
	baz=345						
WFSB	**Wu-fen Shan**	**1.13**	**335**	P	**Pn**	**17 42 47.1**	**+0.1**
	baz=345						
WFSB				*e*S	**Sb**	**17 43 01.3**	**-0.9**
	baz=345						
YULB	**Yu-li**	**1.13**	**235**	P	**Pn**	**17 42 47.3**	**+0.2**
	baz=245						
YULB				*e*S	**Sb**	**17 43 01.6**	**-0.6**
	baz=245						
TWA	**Mucha**	**1.15**	**325**	*i* P	**Pn**	**17 42 47.6**	**+0.4**
	baz=323						
TWA				*i* S	**Sn**	**17 43 02.6**	**+0.5**
	baz=323						
TWF1	**Yuli**	**1.16**	**234**	*i* P	**Pn**	**17 42 47.7**	**+0.2**
	baz=244						
TWF1				S	**Sn**	**17 43 02.4**	**0.0**
	baz=244						
NHDH	**Xindian Distri**	**1.16**	**322**	P	**Pb**	**17 42 48.1**	**-0.2**
	baz=320						
NHDH				S	**Sn**	**17 43 02.9**	**+0.4**
	baz=320						
TAP	**Taipei**	**1.23**	**324**	*e*P	**Pn**	**17 42 48.9**	**+0.4**
	baz=322						
TAP				S	**Sn**	**17 43 04.6**	**+0.4**
	baz=322						
FULB	**Fuli**	**1.26**	**228**	P	**Pn**	**17 42 48.9**	**+0.1**
	baz=217						
FULB				S	**Sn**	**17 43 05.0**	**+0.1**
	baz=217						
WLTB	**Daxi**	**1.26**	**310**	P	**Pb**	**17 42 50.0**	**0.0**
	baz=298						
WLTB				S	**Sn**	**17 43 05.2**	**+0.4**
	baz=298						
DPDB	**Guoxing**	**1.27**	**270**	*i* P	**Pn**	**17 42 49.7**	**+0.7**
	baz=267						
DPDB				*e*S	**Sn**	**17 43 04.9**	**-0.3**
	baz=267						
SSLB	**Suanglung**	**1.27**	**259**	P	**Pn**	**17 42 49.5**	**+0.5**
	baz=256						
SSLB				S	**Sn**	**17 43 05.2**	**0.0**
	baz=256						
WHP	**Taichung City**	**1.27**	**281**	P	**Pb**	**17 42 50.1**	**-0.1**
	baz=270						
WHP				S	**Sb**	**17 43 06.2**	**0.0**
	baz=270						
CHKT	**Chengkung**	**1.28**	**223**	P	**Pb**	**17 42 49.9**	**-0.4**
	baz=213						
CHKT				S	**Sn**	**17 43 03.5**	**-1.9**
	baz=213						
YM01	**YM01**	**1.29**	**329**	P	**Pn**	**17 42 49.0**	**-0.3**
	baz=340						
YM01				*e*S	**Sn**	**17 43 04.9**	**-0.8**
	baz=340						
SMLT	**Sun Moon Lake**	**1.30**	**263**	P	**Pb**	**17 42 50.4**	**-0.4**
	baz=254						
SMLT				S	**Sn**	**17 43 06.2**	**+0.1**
	baz=254						
YM10	**YM10**	**1.30**	**328**	*e*P	**Pn**	**17 42 49.3**	**-0.2**
	baz=339						
YM10				S	**Sn**	**17 43 05.7**	**-0.4**
	baz=339						
YM11	**YM11**	**1.30**	**329**	P	**Pn**	**17 42 49.2**	**-0.3**
	baz=340						
YM11				*e*S	**Sn**	**17 43 05.9**	**-0.2**
	baz=340						
YM08	**YM08**	**1.31**	**330**	*e*P	**Pn**	**17 42 49.1**	**-0.5**
	baz=341						
LIOB	**Emei**	**1.32**	**297**	P	**Pb**	**17 42 51.1**	**-0.1**
	baz=294						
LIOB				S	**Sb**	**17 43 07.9**	**+0.1**
	baz=294						
IRIF	**Iriomote-Funau**	**1.33**	**77**	P	**Pn**	**17 42 50.4**	**+0.7**
IRIF				*e*S	**Sn**	**17 43 06.7**	**+0.1**
NSTT	**Nanjuang**	**1.33**	**296**	P	**Pb**	**17 42 51.0**	**-0.3**
	baz=294						
NSTT				S	**Sn**	**17 43 07.5**	**+0.9**
	baz=294						
TWS1	**Kuangyinshan**	**1.33**	**322**	P	**Pn**	**17 42 50.3**	**+0.5**
	baz=333						
TWS1				S	**Sn**	**17 43 07.4**	**+0.7**
	baz=333						
YM03	**YM03**	**1.33**	**328**	*e*P	**Pn**	**17 42 49.6**	**-0.3**
	baz=339						
YM03				*e*S	**Sn**	**17 43 06.0**	**-0.8**
	baz=339						
TYC	**Yuchr**	**1.34**	**264**	*i* P	**Pn**	**17 42 50.8**	**+0.9**
	baz=262						
TYC				*e*S	**Sn**	**17 43 07.3**	**+0.5**
	baz=262						
ANP	**Anpu**	**1.35**	**328**	*e*P	**Pn**	**17 42 49.5**	**-0.6**
	baz=338						
ANP				*e*S	**Sn**	**17 43 06.0**	**-1.2**
	baz=338						
YUS	**Yu-Shan**	**1.36**	**246**	*i* P	**Pn**	**17 42 51.5**	**+0.8**
	baz=244						
YUS				S	**Sn**	**17 43 08.0**	**-0.1**
	baz=244						
HATJ	**Hateruma jima**	**1.36**	**89**	P	**Pb**	**17 42 51.4**	**-0.4**
HATJ				*e*S	**Sb**	**17 43 09.2**	**+0.3**
NCU	**National Centr**	**1.38**	**312**	*e*P	**Pn**	**17 42 51.3**	**+0.9**
	baz=310						
NCU				*e*S	**Sn**	**17 43 08.5**	**+0.7**
	baz=310						
NCUH	**Zhongli**	**1.38**	**312**	*e*P	**Pb**	**17 42 51.8**	**-0.3**
	baz=310						
NCUH				S	**Sn**	**17 43 08.2**	**+0.3**
	baz=310						
WHYT	**Xinyi Township**	**1.38**	**256**	P	**Pb**	**17 42 51.9**	**-0.2**
	baz=245						
WHYT				S	**Sn**	**17 43 08.3**	**+0.3**
	baz=245						
TWY	**Chenhua**	**1.39**	**332**	*e*S	**Sn**	**17 43 07.4**	**-0.7**
	baz=343						
SBCB	**Hsinchu**	**1.42**	**302**	S	**Sb**	**17 43 10.7**	**+0.3**
	baz=299						
TWQ1	**Liyutan**	**1.44**	**283**	*i* P	**Pb**	**17 42 52.9**	**-0.2**
	baz=280						
TWQ1				S	**Sb**	**17 43 11.6**	**+0.7**
	baz=280						
HSN	**Hsinchu**	**1.44**	**302**	*e*S	**Sn**	**17 43 09.9**	**+0.6**
	baz=301						
ELDTW	**Lidau**	**1.46**	**235**	*i* P	**Pn**	**17 42 51.8**	**+0.1**
	baz=223						
ELDTW				*i* S	**Sn**	**17 43 09.5**	**-0.6**
	baz=223						
NSY	**Sanyi**	**1.46**	**285**	P	**Pb**	**17 42 53.3**	**-0.2**
	baz=282						
NSY				S	**Sn**	**17 43 11.1**	**+1.1**
	baz=282						
WJS	**Zhushan**	**1.47**	**262**	P	**Pb**	**17 42 53.7**	**+0.2**
	baz=259						
WJS				*e*S	**Sb**	**17 43 12.5**	**+0.8**
	baz=259						
NMLH	**Miaoli**	**1.47**	**290**	P	**Pb**	**17 42 53.4**	**-0.2**
	baz=287						
NMLH				S	**Sb**	**17 43 11.8**	**-0.1**
	baz=287						
TCU	**Taichung**	**1.50**	**274**	P	**Pb**	**17 42 53.9**	**-0.2**
	baz=271						
TCU				S	**Sb**	**17 43 13.5**	**+0.8**
	baz=271						
WNT	**Mingjian**	**1.50**	**264**	*i* P	**Pb**	**17 42 54.1**	**+0.1**
	baz=261						
WNT				S	**Sb**	**17 43 13.8**	**+1.2**
	baz=261						
PTSB	**Yuanli**	**1.52**	**286**	*e*P	**Pn**	**17 42 53.1**	**+0.7**
	baz=283						
PTSB				*e*S	**Sb**	**17 43 13.6**	**+0.3**
	baz=283						
TWH	**Lutao**	**1.53**	**210**	*i* P	**Pn**	**17 42 52.8**	**+0.2**
	baz=208						
TWH				S	**Sn**	**17 43 10.7**	**-0.9**
	baz=208						
WDJ	**Dajia District**	**1.56**	**282**	P	**Pb**	**17 42 54.5**	**-0.5**
	baz=279						
WDJ				S	**Sb**	**17 43 14.0**	**-0.3**
	baz=279						
CHN5	**Tsauling**	**1.56**	**254**	*i* P	**Pb**	**17 42 54.7**	**-0.5**
	baz=251						
CHN5				S	**Sb**	**17 43 14.7**	**+0.2**
	baz=251						
JKRS	**Kuro-shima**	**1.56**	**83**	P	**Pn**	**17 42 54.1**	**+1.1**
JKRS				*e*S	**Sn**	**17 43 13.3**	**+0.9**
WCHH	**Zhanghua**	**1.60**	**272**	P	**Pb**	**17 42 55.4**	**-0.4**
	baz=269						
WCHH				*e*S	**Sb**	**17 43 15.9**	**+0.2**
	baz=269						
WGK	**Gukeng**	**1.64**	**258**	*e*P	**Pb**	**17 42 56.3**	**-0.2**
	baz=255						
WGK				*e*S	**Sb**	**17 43 17.2**	**+0.4**
	baz=255						
WDLH	**Douliu**	**1.66**	**258**	P	**Pb**	**17 42 56.4**	**-0.4**
	baz=256						
WDLH				S	**Sb**	**17 43 17.6**	**+0.2**
	baz=256						
TWGBT	**Beinan**	**1.66**	**223**	P	**Pn**	**17 42 54.3**	**-0.1**
	baz=231						
TWGBT				S	**Sn**	**17 43 14.4**	**-0.5**
	baz=231						
TWG	**Pinlang**	**1.67**	**223**	P	**Pn**	**17 42 54.7**	**+0.3**
	baz=231						
TWG				S	**Sn**	**17 43 14.2**	**-0.8**
	baz=231						
STYT	**Tauyuan**	**1.67**	**239**	*e*P	**Pb**	**17 42 56.2**	**-0.9**
	baz=237						
STYT				S	**Sn**	**17 43 16.4**	**+1.2**
	baz=237						
JIJ	**Ishigaki jima**	**1.70**	**79**	P	**Pn**	**17 42 55.2**	**+0.3**
JIJ				*e*S	**Sn**	**17 43 15.2**	**-0.6**
TPUB	**Ta-pu**	**1.71**	**245**	P	**Pb**	**17 42 56.9**	**-0.9**
	baz=243						
TPUB				S	**Sn**	**17 43 17.4**	**+1.3**
	baz=243						
CHN4	**Tsaushan**	**1.72**	**247**	*i* P	**Pb**	**17 42 57.4**	**-0.5**
	baz=245						
CHN4				S	**Sb**	**17 43 18.7**	**-0.3**
	baz=245						
WTP	**Ta-pu**	**1.75**	**243**	*i* P	**Pb**	**17 42 57.7**	**-0.7**
	baz=241						
WTP				S	**Sb**	**17 43 19.3**	**-0.6**
	baz=241						
CHN2	**Minshiung**	**1.76**	**254**	*e*P	**Pb**	**17 42 58.5**	**0.0**
	baz=251						
CHN2				S	**Sb**	**17 43 20.2**	**+0.1**
	baz=251						
RLNB	**Erlin**	**1.79**	**266**	P	**Pb**	**17 42 57.9**	**-1.1**
	baz=274						
RLNB				S	**Sb**	**17 43 20.2**	**-0.9**
	baz=274						
CHY	**Chiayi**	**1.81**	**253**	P	**Pb**	**17 42 58.3**	**-1.1**
	baz=251						
CHY				S	**Sb**	**17 43 21.2**	**-0.5**
	baz=251						
TWK	**Hsinying**	**1.84**	**246**	P	**Pb**	**17 42 59.0**	**-1.0**
	baz=243						
TWK				S	**Sb**	**17 43 22.2**	**-0.4**
	baz=243						
CHN1	**Nanshi**	**1.84**	**243**	*i* P	**Pb**	**17 42 59.3**	**-0.7**
	baz=241						
CHN1				S	**Sb**	**17 43 22.3**	**-0.4**
	baz=241						
SLGT	**Liugui**	**1.85**	**236**	P	**Pb**	**17 42 59.1**	**-1.0**
	baz=227						
SLGT				S	**Sb**	**17 43 22.1**	**-0.8**
	baz=227						
SGST	**Jiashian**	**1.85**	**239**	*i* P	**Pn**	**17 42 58.6**	**+1.6**
	baz=238						
SGST				S	**Sb**	**17 43 21.7**	**-1.2**
	baz=238						
SNST	**Tainan City**	**1.85**	**244**	P	**Pb**	**17 42 59.6**	**-0.5**
	baz=242						
SNST				S	**Sb**	**17 43 22.8**	**-0.2**
	baz=242						
WTCT	**Ta-ch'eng**	**1.87**	**265**	*e*S	**Sb**	**17 43 22.1**	**-1.2**
	baz=275						
JISG	**Ishigakijimahi**	**1.90**	**73**	P	**Pn**	**17 42 57.8**	**+0.1**
JISG				*e*S	**Sn**	**17 43 19.7**	**-1.1**
ECL	**Taimali**	**1.91**	**221**	*e*P	Pn	17 42 57.0	-0.7
	baz=220						
ECL				*e*S	**Sn**	**17 43 19.5**	**-1.3**
	baz=220						
WLGB	**Puzi**	**1.93**	**253**	*e*P	**Pb**	**17 43 00.1**	**-1.3**
	baz=251						
WLGB				*e*S	**Sb**	**17 43 24.2**	**-0.8**
	baz=251						
WSF	**Szhu**	**1.96**	**259**	*e*P	**Pb**	**17 43 00.7**	**-1.1**
	baz=256						
WSF				*e*S	**Sb**	**17 43 25.2**	**-0.6**
	baz=256						
SSD	**Sandimen**	**2.01**	**230**	P	**Pn**	**17 43 01.1**	**+1.9**
	baz=225						
SSD				S	**Sn**	**17 43 25.4**	**+1.9**
	baz=225						
CHN8	**Yiju**	**2.05**	**251**	*e*P	**Pn**	**17 43 00.4**	**+0.7**
	baz=249						
CHN8				S	**Sb**	**17 43 26.9**	**-1.6**
	baz=249						
JTJ	**Tarama**	**2.26**	**74**	P	**Pn**	**17 43 03.4**	**+0.8**
JTJ				*e*S	**Sn**	**17 43 30.6**	**+1.0**
JIRB	**Irabujima**	**2.72**	**73**	P	**Pn**	**17 43 09.6**	**+0.7**
JIRB				S	**Sn**	**17 43 41.7**	**+0.7**
JIKM	**Ikemajima**	**2.81**	**71**	P	**Pn**	**17 43 11.0**	**+0.8**
JMJ2	**Miyako jima3**	**2.84**	**75**	P	**Pn**	**17 43 11.7**	**+1.2**
JOGS	**Gusukube**	**2.91**	**75**	P	**Pn**	**17 43 12.7**	**+1.2**

JMA 30 18:17:03.6±0.1, 24.°90N×123.°39E, h26km, M2.4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.56**	**218**	P	Pb	18 17 14.5	-0.3
YOJ				*e*S	Sb	18 17 22.0	-0.4
JYNG	**Yonagunijimaku**	**0.60**	**222**	P	Pb	18 17 15.3	-0.3
JYNG				S	Sb	18 17 23.3	-0.4
IRIF	**Iriomote-Funau**	**0.64**	**151**	P	Pb	18 17 15.9	-0.3
IRIF				S	Sb	18 17 24.8	0.0
JKRS	**Kuro-shima**	**0.87**	**139**	P	Pb	18 17 19.7	-0.3
JKRS				S	Sb	18 17 31.0	-0.2
JIJ	**Ishigaki jima**	**0.87**	**128**	P	Pb	18 17 19.3	-0.8
JIJ				S	Sb	18 17 30.1	-1.2
JISG	**Ishigakijimahi**	**0.89**	**110**	P	Pb	18 17 19.9	-0.6
JISG				*e*S	Sb	18 17 30.7	-1.3
HATJ	**Hateruma jima**	**0.92**	**156**	P	Pn	18 17 20.6	-0.3

HATJ				S	Sb	18 17 32.8	0.0
JTJ	**Tarama**	**1.22**	**102**	P	Pb	18 17 25.8	-0.2
JTJ				*e*S	Sn	18 17 40.5	-0.1

TAP 30 18:17:08.9,24.88N×122.26E,h9km,ML2.9,D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=298	**0.28**	**298**	*i* P	Pg	18 17 15.2	+0.7
TWB1				S	Sg	18 17 19.4	+1.0
EOS1	**EOS1** baz=216	**0.35**	**200**	P	Pb	18 17 16.9	-0.3
EOS1				S	Sb	18 17 22.7	-0.1
NTC	**Toucheng** baz=277	**0.39**	**267**	P	Pg	18 17 17.2	+0.6
TIPB	**Shuangxi** baz=284	**0.41**	**284**	*i* P	Pb	18 17 17.8	-0.5
TIPB				S	Sb	18 17 24.1	-0.5
TWC	**Suao** baz=236	**0.46**	**235**	*i* P	Pg	18 17 18.0	+0.1
TWC				S	Sg	18 17 24.3	+0.5
NWF	**Wu-fen Shan** baz=293	**0.48**	**294**	*i* P	Pb	18 17 20.1	+0.6
NWF				S	Sb	18 17 26.3	-0.5
WFSB	**Wu-fen Shan** baz=293	**0.48**	**294**	P	Pb	18 17 20.2	+0.7
WFSB				S	Sb	18 17 26.3	-0.3
ILA	**Ilan** baz=246	**0.48**	**257**	*e*S	Sb	18 17 27.8	+1.1
TWE	**Neicheng** baz=247	**0.56**	**254**	*i* P	Pg	18 17 20.2	+0.4
TWE				S	Sb	18 17 28.9	-0.1
SLBB	**Yuanshan** baz=248	**0.58**	**258**	P	Pb	18 17 21.6	+0.4
TWA	**Mucha** baz=279	**0.62**	**280**	*i* P	Pb	18 17 22.6	+0.6
TWA				*e*S	Sb	18 17 30.9	0.0
NANB	**Nanao** baz=226	**0.64**	**226**	*i* P	Pg	18 17 21.3	0.0
NANB				S	Sg	18 17 30.4	+0.6
ENA	**Nanau** baz=227	**0.65**	**227**	P	Pg	18 17 21.7	+0.2
ENA				S	Sg	18 17 30.2	+0.3
ENTT	**Nioudou** baz=250	**0.67**	**250**	*i* P	Pg	18 17 22.2	+0.3
ENTT				S	Sb	18 17 32.7	+0.4
NHDH	**Xindian Distri** baz=277	**0.67**	**278**	P	Pn	18 17 23.8	-0.9
NHDH				S	Sb	18 17 32.8	+0.5
YM01	**YM01** baz=292	**0.68**	**293**	P	Pb	18 17 23.5	+0.5
YM08	**YM08** baz=296	**0.68**	**297**	P	Pb	18 17 23.3	+0.3
YM11	**YM11** baz=294	**0.69**	**295**	P	Pb	18 17 23.6	+0.4
YM10	**YM10** baz=293	**0.69**	**294**	P	Pb	18 17 23.7	+0.5
NWLT	**Wulai** baz=254	**0.69**	**262**	P	Pb	18 17 23.6	+0.4
NWLT				S	Sb	18 17 33.8	+0.8
TAP	**Taipei** baz=297	**0.70**	**284**	*e*S	Sn	18 17 34.8	-1.3
TWY	**Chenhua** baz=289	**0.72**	**304**	*i* P	Pb	18 17 24.4	+0.7
TWY				S	Sb	18 17 34.3	+0.6
YM03	**YM03** baz=294	**0.72**	**295**	*e*P	Pb	18 17 23.9	+0.2
NDT	**Datong Townshi** baz=249	**0.73**	**248**	P	Pb	18 17 24.2	+0.3
NDT				S	Sb	18 17 34.1	+0.1
ANP	**Anpu** baz=294	**0.74**	**295**	P	Pb	18 17 24.2	+0.2
PCYT	**Pengchaiyu** baz=338	**0.77**	**347**	P	Pg	18 17 24.0	+0.2
PCYT				S	Sn	18 17 36.8	-0.9
TWS1	**Kuangyinshan** baz=299	**0.80**	**287**	P	Pb	18 17 25.5	+0.6
TWS1				S	Sn	18 17 37.4	-1.0
YHNB	**Yeheng** baz=249	**0.83**	**256**	P	Pg	18 17 25.2	+0.3
YHNB				S	Sb	18 17 36.4	-0.5
NSK	**Sanguang** baz=256	**0.84**	**257**	P	Pb	18 17 25.8	0.0
NNSB	**Datong** baz=231	**0.91**	**241**	P	Pg	18 17 26.5	-0.1
NNSB				S	Sb	18 17 40.3	+1.0
NNSH	**Datong** baz=233	**0.91**	**241**	P	Pg	18 17 26.7	+0.1
NNSH				S	Sb	18 17 39.6	+0.3
NNS	**Nan Shan** baz=232	**0.92**	**242**	P	Pb	18 17 26.9	-0.2
NNS				S	Sb	18 17 39.2	-0.2
WLTB	**Daxi** baz=269	**0.92**	**269**	*e*P	Pn	18 17 28.3	+0.3
WLTB				*e*S	Sb	18 17 39.8	+0.6
NACB	**Ninganchiao** baz=223	**0.92**	**221**	P	Pg	18 17 26.4	-0.3
NACB				S	Sg	18 17 38.7	0.0
ETLH	**Xiulin Townshi** baz=229	**0.97**	**227**	P	Pg	18 17 27.8	+0.1
ETLH				S	Sb	18 17 41.7	+0.7
NCU	**National Centr** baz=275	**0.98**	**276**	*e*S	Sn	18 17 43.9	+1.1
NCUH	**Zhongli** baz=275	**0.98**	**276**	*e*P	Pn	18 17 29.5	+0.6
NCUH				*e*S	Sn	18 17 44.0	+1.0
TWD	**Chiawan** baz=219	**1.00**	**218**	P	Pg	18 17 27.8	-0.3
TWD				S	Sb	18 17 42.2	+0.6
ENLB	**Shoufeng** baz=196	**1.14**	**212**	*e*S	Sn	18 17 48.3	+1.5
LIOB	**Emei** baz=259	**1.15**	**259**	P	Pg	18 17 31.1	0.0
LIOB				S	Sn	18 17 48.6	+1.4
SBCB	**Hsinchu** baz=284	**1.16**	**266**	*e*S	Sn	18 17 48.0	+0.6
WHF	**Hehuan Shan** baz=233	**1.16**	**231**	P	Pn	18 17 31.6	-0.2
WHF				S	Sb	18 17 46.9	+0.1
TWT	**Tachien** baz=232	**1.17**	**238**	P	Pn	18 17 32.1	+0.6
TWT				S	Sn	18 17 47.8	+0.1
NSTT	**Nanjuang** baz=258	**1.17**	**258**	P	Pg	18 17 31.4	0.0
NSTT				S	Sn	18 17 49.1	+1.5
TDCB	**Techi** baz=233	**1.18**	**239**	P	Pn	18 17 32.0	+0.2
TDCB				S	Sn	18 17 48.0	0.0
CHGB	**Renai** baz=233	**1.28**	**231**	P	Pg	18 17 33.8	+0.3
CHGB				S	Sn	18 17 51.0	+0.4
ESL	**Shilin** baz=225	**1.30**	**216**	P	Pn	18 17 33.4	+0.1
ESL				S	Sg	18 17 50.6	-0.1
WHP	**Taichung City** baz=245	**1.34**	**244**	P	Pg	18 17 35.2	+0.6
WHP				S	Sg	18 17 52.5	+0.6
OWD	**Renai** baz=222	**1.35**	**227**	P	Pb	18 17 34.5	+0.1
OWD				S	Sg	18 17 52.9	+0.6
NMLH	**Miaoli** baz=256	**1.38**	**256**	*e*P	Pg	18 17 36.1	+0.7
NMLH				*e*S	Sg	18 17 54.6	+1.4
EGFH	**Guangfu** baz=233	**1.42**	**212**	P	Pb	18 17 35.5	-0.1
EGFH				S	Sg	18 17 54.6	0.0
NSY	**Sanyi** baz=264	**1.44**	**252**	*e*P	Pg	18 17 37.5	+1.0
NSY				*e*S	Sg	18 17 57.6	+2.4
TWQ1	**Liyutan** baz=267	**1.45**	**249**	P	Pg	18 17 37.1	+0.3
TWQ1				S	Sg	18 17 56.1	+0.5
DPDB	**Guoxing** baz=238	**1.48**	**236**	P	Pg	18 17 37.9	+0.7
DPDB				*e*S	Sg	18 17 56.7	+0.2
PTSB	**Yuanli** baz=270	**1.48**	**254**	*e*S	Sg	18 17 56.9	+0.4
VWDT	**VWDT** baz=233	**1.51**	**223**	P	Pg	18 17 37.9	0.0
VWDT				S	Sg	18 17 58.3	+0.7
WDJ	**Dajia District** baz=268	**1.56**	**251**	*e*P	Pb	18 17 38.5	+0.4
WDJ				*e*S	Sg	18 17 59.0	-0.3
HGSD	**Ruisui** baz=198	**1.57**	**209**	P	Pb	18 17 38.1	-0.1
HGSD				S	Sb	18 17 58.7	+0.5
SMLT	**Sun Moon Lake** baz=234	**1.58**	**232**	P	Pg	18 17 39.7	+0.3
SMLT				S	Sg	18 18 00.7	+0.7
TYC	**Yuchr** baz=235	**1.60**	**233**	P	Pg	18 17 39.4	-0.3
TYC				S	Sg	18 18 00.3	-0.2
SSLB	**Suanglung** baz=231	**1.61**	**228**	P	Pg	18 17 39.4	-0.5
SSLB				S	Sg	18 18 00.1	-0.7
TCU	**Taichung** baz=262	**1.61**	**244**	*e*P	Pg	18 17 40.0	0.0
TCU				*e*S	Sg	18 18 01.1	+0.3
YULB	**Yu-li** baz=216	**1.72**	**211**	P	Pn	18 17 39.0	0.0
YULB				*e*S	Sn	18 18 00.8	-0.3
WHYT	**Xinyi Township** baz=242	**1.74**	**228**	P	Pg	18 17 42.1	-0.2
WHYT				*e*S	Sg	18 18 05.0	+0.1
WJS	**Zhushan** baz=235	**1.75**	**233**	*e*P	Pg	18 17 43.2	+0.7
WJS				S	Sg	18 18 07.6	+2.4
WNT	**Mingjian** baz=237	**1.75**	**236**	*e*S	Sg	18 18 05.8	+0.7
TWF1	**Yuli** baz=230	**1.75**	**210**	*e*P	Pb	18 17 40.8	-0.5
TWF1				*e*S	Sb	18 18 03.7	+0.3
YUS	**Yu-Shan** baz=225	**1.82**	**221**	*e*P	Pb	18 17 42.1	-0.6
YUS				*e*S	Sb	18 18 06.7	+0.8
FULB	**Fuli** baz=228	**1.89**	**208**	P	Pb	18 17 42.8	-0.9
FULB				S	Sg	18 18 08.8	-0.9
ALS	**Alishan** baz=228	**1.90**	**225**	*e*P	Pb	18 17 43.8	-0.2
ALS				S	Sg	18 18 09.9	-0.2
CHN5	**Tsauling** baz=231	**1.93**	**229**	P	Pb	18 17 44.5	+0.3
CHN5				*i* S	Sg	18 18 11.3	+0.5
WGK	**Gukeng** baz=235	**1.95**	**233**	*e*S	Sg	18 18 11.6	0.0
WDLH	**Douliu** baz=235	**1.97**	**233**	*e*P	Pb	18 17 44.9	0.0
WDLH				S	Sg	18 18 11.6	-0.6
ELDTW	**Lidau** baz=205	**2.03**	**214**	*e*P	Pn	18 17 44.3	+0.9
ELDTW				*e*S	Sn	18 18 09.9	+1.0
CHN4	**Tsaushan** baz=228	**2.15**	**225**	P	Pb	18 17 47.6	-0.5
CHN4				S	Sg	18 18 16.8	-1.2
TPUB	**Ta-pu** baz=213	**2.16**	**224**	P	Pb	18 17 47.7	-0.6
TPUB				S	Sb	18 18 16.5	+1.3
WTP	**Ta-pu** baz=212	**2.21**	**223**	P	Pb	18 17 48.0	-1.1
WTP				S	Sb	18 18 18.0	+1.3
TWK	**Hsinying** baz=229	**2.28**	**226**	P	Pb	18 17 49.7	-0.6
TWK				S	Sg	18 18 20.7	-1.5
CHN1	**Nanshi** baz=227	**2.31**	**224**	P	Pb	18 17 50.0	-0.8
CHN1				S	Sb	18 18 20.8	+1.4
TWGBT	**Beinan** baz=201	**2.32**	**208**	*e*S	Sn	18 18 16.9	+1.0
PTTC	**Pingtan** baz=282	**2.34**	**286**	*e*S	Sn	18 18 16.6	+0.2
SGST	**Jiashian** baz=212	**2.35**	**221**	*e*S	Sb	18 18 20.9	+0.1
SLGT	**Liugui** baz=224	**2.38**	**219**	*e*P	Pb	18 17 51.3	-0.7
SLGT				*e*S	Sb	18 18 22.0	+0.3
VWUC	**VWUC** baz=270	**2.55**	**273**	*e*P	Pn	18 17 51.1	+0.6
MASBT	**Mashibuluo** baz=207	**2.70**	**214**	*e*P	Pn	18 17 54.5	+1.9
MASBT				*e*S	Sb	18 18 29.0	-1.8
XPSS	**Dashiqiu** baz=311	**2.77**	**318**	*e*P	Pn	18 17 54.6	+1.2
XPSS				*e*S	Sn	18 18 29.0	+1.9
EAST	**Anshuo** baz=203	**2.80**	**208**	*e*P	Pn	18 17 54.6	+0.7
EAST				*e*S	Sn	18 18 27.0	-0.9

IDC 30 18:31:33.8±2.0,6.12N×122.90E,h0km,mb3.7/3, mb1 3.9/3,mb1mx3.3/40,mbtmp3.7/3,Error ellipse: s-maj=249.0km s-min=24.3km az=63.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.4nm,0.4s,baz=333,slow=11,SNR=5.2	**28.23**	**157**	P	P	18 37 28.3	-0.4
ASAR	**Alice Springs** 0.6nm,0.5s,baz=346,slow=7.1,SNR=14	**31.49**	**160**	P	P	18 37 57.9	+0.3
MKAR	**Makanchi Array** 0.5nm,0.5s,baz=118,slow=8.1,SNR=20	**53.45**	**326**	P	P	18 40 55.6	-0.1

*CNRM **30** 18:34:50.1±1.0,35.50N×4.85W,h142km±8km, Error ellipse: s-maj=8.8km s-min=5.3km az=84.0*
*IGIL **30** 18:34:54.4,35.56N×4.62W,h21km,ML2.6*

*INMG **30** 18:34:55.2±1.1,35.63N×4.55W,h111km±6km,ML2.4, Error ellipse: s-maj=4.6km s-min=3.3km az=139.0*
*SFS **30** 18:34:55.0,35.60N×4.50W,h112km,ML1.9,ALBORAN W.*
*MDD **30** 18:34:56.1±1.0,35.78N×4.69W,h106km±5km,mb2.0/14, Error ellipse: s-maj=7.0km s-min=3.8km az=164.0, PRXIMO*

ISC 30 18:34:52.3±1.3,35.54N±0.03×4.62W±0.03,h121km±7km, n65,σ1.28/119,4C,Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMIR	**Smir Dam**	**0.64**	**283**	P	**Pn**	**18 35 09.7**	**-1.6**
SMIR				S	**Sn**	**18 35 27.1**	**+1.5**
PALE	**Palemas**	**0.64**	**120**	P	**Pn**	**18 35 11.7**	**+0.3**
PALE				S	**Sn**	**18 35 29.4**	**+3.7**
CEU	**Ceuta**	**0.71**	**300**	*e*P	**Pn**	**18 35 12.3**	**+0.6**
CEU				*e*S	**Sn**	**18 35 25.4**	**-1.1**
CEU	**Ceuta**	**0.71**	**300**	P	**Pn**	**18 35 12.3**	**+0.6**
CEU				S	**Sn**	**18 35 25.4**	**-1.1**
ECEU	**Ceuta** 2.9nm,0.1s	**0.71**	**300**	P	**Pn**	**18 35 13.5**	**+1.6**
ECEU	13nm,0.5s,SNR=4.7			S	**Sn**	**18 35 25.8**	**-0.8**
CHEFC	**Chefchaouen**	**0.73**	**234**	P	**Pn**	**18 35 10.0**	**-2.2**
CHEFC				S	**Sn**	**18 35 29.1**	**+2.0**
EMIJ	**Mijas** 2.8nm,0.1s,SNR=16	**1.03**	**353**	P	**Pn**	**18 35 14.6**	**-0.1**
EMIJ	16nm,0.3s			S	**Sn**	**18 35 29.4**	**-2.3**
AKLM	**AKL**	**1.20**	**149**	P	**Pn**	**18 35 16.8**	**+0.2**
AKLM				S	**Sn**	**18 35 35.0**	**+0.1**
EMAL	**Malaga-Limoner**	**1.23**	**7**	*e*P	**Pn**	**18 35 17.0**	**+0.3**
EMAL				*e*S	**Sn**	**18 35 33.3**	**-1.9**
EMAL	**Malaga-Limoner**	**1.23**	**7**	P	**Pn**	**18 35 17.0**	**+0.3**
EMAL				S	**Sn**	**18 35 33.3**	**-1.9**
LIJA	**Lijar**	**1.50**	**335**	*e*P	**Pn**	**18 35 22.0**	**+2.1**
LIJA				*e*S	**Sn**	**18 35 43.0**	**+2.1**
EGOR	**Sierra Gorda,** 1.6nm,1.1s,SNR=7.9	**1.62**	**15**	P	**Pn**	**18 35 22.0**	**+0.8**
EGOR	12nm,0.5s,SNR=7.9			S	**Sn**	**18 35 41.6**	**-1.8**
ESPR	**Espera** 2.8nm,0.1s,SNR=5.0	**1.66**	**323**	P	**Pn**	**18 35 22.7**	**+1.0**
ESPR	7.0nm,0.2s,SNR=9.4			S	**Sn**	**18 35 42.2**	**-1.8**
LCRM	**LCR**	**1.86**	**186**	P	**Pn**	**18 35 24.4**	**+0.1**
LCRM				S	**Sn**	**18 35 48.8**	**+0.1**
EBER	**Berja** 0.8nm,1.5s,SNR=7.9	**1.94**	**45**	P	**Pn**	**18 35 26.0**	**+0.7**
EBER	3.9nm,4.7s,SNR=7.9			S	**Sn**	**18 35 50.5**	**0.0**
IFR	**Ifrane**	**2.06**	**192**	*e*P	**Pn**	**18 35 27.3**	**+0.5**
IFR				*e*S	**Sn**	**18 35 51.0**	**-2.2**
HORN	**Hornachuelos**	**2.36**	**348**	P	**Pn**	**18 35 30.8**	**+0.6**
HORN				S	**Sn**	**18 35 58.7**	**-0.7**
EQES	**Quesada** 0.6nm,0.1s,SNR=7.9	**2.58**	**28**	P	**Pn**	**18 35 33.6**	**+0.4**
EQES	1.2nm,0.3s,SNR=7.9			S	**Sn**	**18 36 03.8**	**-0.8**
ECAB	**El Cabril** 1.6nm,0.1s,SNR=24	**2.61**	**346**	P	**Pn**	**18 35 34.1**	**+0.6**
ECAB	5.7nm,0.4s			S	**Sn**	**18 36 03.3**	**-2.0**
EADA	**Adamuz** 2.3nm,0.1s,SNR=18	**2.62**	**1**	⇑P	**Pn**	**18 35 34.6**	**+0.9**
EADA	4.2nm,0.3s			S	**Sn**	**18 36 03.2**	**-2.3**
ZHG	**ZHG**	**2.68**	**219**	P	**Pn**	**18 35 33.4**	**-1.1**
ZHG				S	**Sn**	**18 36 06.0**	**-1.0**
MDT	**Midelt**	**2.72**	**180**	P	**Pn**	**18 35 34.0**	**-1.2**
MDT				S	**Sn**	**18 36 08.6**	**+0.5**
EMIN	**Mina Concepcio** 6.6nm,0.1s,SNR=18	**2.77**	**324**	⇑P	**Pn**	**18 35 36.7**	**+1.1**
EMIN	3.4nm,0.3s,SNR=11			S	**Sn**	**18 36 07.6**	**-1.3**
EGRO	**El Granado** 6.2nm,0.1s,SNR=18	**3.04**	**312**	⇑P	**Pn**	**18 35 40.4**	**+1.2**
EGRO	13nm,0.3s			S	**Sn**	**18 36 14.3**	**-1.0**
PVAQ	**Vaqueiros**	**3.11**	**308**	*e*P	**Pn**	**18 35 41.2**	**+1.1**
PVAQ				*e*S	**Sn**	**18 36 16.5**	**-0.4**
PVAQ				A	A	18 36 17.7	
PVAQ	**Vaqueiros** 20nm,0.1s	**3.11**	**308**	P	**Pn**	**18 35 41.2**	**+1.1**
PVAQ				S	**Sn**	**18 36 16.5**	**-0.4**
PBDV	**Barranco-do-Ve**	**3.17**	**303**	⇑*e*P	**Pn**	**18 35 42.1**	**+1.3**
PBDV				*e*S	**Sn**	**18 36 18.0**	**-0.2**
PBDV				A	A	18 36 18.8	
PBDV	**Barranco-do-Ve** 14nm,0.2s	**3.17**	**303**	P	**Pn**	**18 35 42.1**	**+1.3**
PBDV				S	**Sn**	**18 36 18.0**	**-0.2**
PBAR	**Barrancos** 14nm,0.2s	**3.27**	**324**	*e*P	**Pn**	**18 35 43.5**	**+1.4**
PBAR				*e*S	**Sn**	**18 36 19.6**	**-1.0**
PBAR	**Barrancos**	**3.27**	**324**	P	**Pn**	**18 35 43.5**	**+1.4**
PBAR				S	**Sn**	**18 36 19.6**	**-1.0**
PCVE	**Castro Verde** 5.4nm,0.8s	**3.45**	**308**	*e*P	**Pn**	**18 35 45.7**	**+1.1**
PCVE				*e*S	**Sn**	**18 36 24.4**	**-0.6**
PCVE				A	A	18 36 25.4	
PCVE	**Castro Verde** 5.4nm,0.8s	**3.45**	**308**	P	**Pn**	**18 35 45.7**	**+1.1**
PCVE				S	**Sn**	**18 36 24.4**	**-0.6**
PBEJ	**Beja** 5.0nm,0.3s	**3.60**	**314**	*e*P	**Pn**	**18 35 47.8**	**+1.3**
PBEJ				*e*S	**Sn**	**18 36 27.7**	**-0.7**
PBEJ				A	A	18 36 28.3	
PBEJ	**Beja** 2.5nm,0.3s	**3.60**	**314**	P	**Pn**	**18 35 47.8**	**+1.3**
PBEJ				S	**Sn**	**18 36 27.7**	**-0.7**
MORF	**Marmelete** comp=N,14nm,0.4s	**3.70**	**300**	*e*P	**Pn**	**18 35 48.8**	**+0.9**
MORF				*e*S	**Sn**	**18 36 28.5**	**-2.4**
MORF				AML	AML	18 36 31.2	
MORF	**Marmelete** comp=N,6.3nm,0.3s	**3.70**	**300**	*e*P	**Pn**	**18 35 49.0**	**+1.2**
MORF				*e*S	**Sn**	**18 36 30.6**	**-0.3**
MORF				A	A	18 36 31.6	
MORF	**Marmelete** comp=N,6.3nm,0.3s	**3.70**	**300**	P	**Pn**	**18 35 48.8**	**+0.9**
MORF				S	**Sn**	**18 36 30.6**	**-0.3**
EBAD	**Badajoz** comp=N,2.3nm,0.1s,SNR=10	**3.73**	**330**	P	**Pn**	**18 35 49.3**	**+1.0**
EBAD	comp=N,2.8nm,0.6s,SNR=6.8			S	**Sn**	**18 36 30.0**	**-1.7**
PFVI	**Vila Bisbo**	**3.75**	**296**	*e*P	**Pn**	**18 35 50.7**	**+2.2**
PFVI				*e*S	**Sn**	**18 36 31.6**	**-0.4**
PFVI	**Vila Bisbo** comp=N,1.3nm,0.1s,SNR=4.0	**3.75**	**296**	P	**Pn**	**18 35 49.9**	**+1.4**
PFVI	comp=N,7.5nm,0.1s,SNR=7.9			S	**Sn**	**18 36 32.4**	**+0.4**
PTEO	**Sao Teotonio**	**3.86**	**302**	*e*P	**Pn**	**18 35 51.7**	**+1.7**
PTEO				*e*S	**Sn**	**18 36 34.7**	**0.0**
PTEO				A	A	18 36 36.3	
PTEO	**Sao Teotonio** comp=N,10nm,0.8s	**3.86**	**302**	P	**Pn**	**18 35 51.7**	**+1.7**
PTEO				S	**Sn**	**18 36 34.7**	**0.0**
ETOB	**Tobarra** comp=N,4.7nm,7.3s,SNR=7.9	**3.95**	**38**	P	**Pn**	**18 35 52.3**	**+1.1**
PAB	**San Pablo** comp=N,0.5nm,0.2s,SNR=7.9	**4.00**	**3**	P	**Pn**	**18 35 52.0**	**+0.1**
PAB	comp=N,0.8nm,0.1s,SNR=7.9			S	**Sn**	**18 36 35.5**	**-2.6**
EVO	**Evora**	**4.03**	**319**	*e*P	**Pn**	**18 35 53.5**	**+1.2**
EVO				*e*S	**Sn**	**18 36 37.7**	**-1.1**
EVO				A	A	18 36 40.8	
EVO	**Evora** comp=N,7.0nm,0.1s	**4.03**	**319**	P	**Pn**	**18 35 53.5**	**+1.2**
EVO				S	**Sn**	**18 36 37.7**	**-1.1**
PNCL	**Nicolau / Gran**	**4.05**	**310**	*e*P	**Pn**	**18 35 53.6**	**+1.1**
PNCL				*e*S	**Sn**	**18 36 37.8**	**-1.4**
PNCL				A	A	18 36 39.6	
PNCL	**Nicolau / Gran** comp=N,3.5nm,0.9s	**4.05**	**310**	P	**Pn**	**18 35 53.6**	**+1.1**
PNCL				S	**Sn**	**18 36 37.8**	**-1.4**
PESTR	**Estremoz**	**4.08**	**325**	*e*P	**Pn**	**18 35 54.1**	**+1.2**
PESTR				*e*S	**Sn**	**18 36 39.2**	**-0.7**
PESTR				A	A	18 36 41.2	
	comp=N,3.5nm,0.5s						

ESDC	**Sonseca Array**	**4.16**	**7**	S		**Sn**	**18 36 41.3**	**-0.5**
	comp=N,0.4nm,0.3s,baz=190,slow=13,SNR=4.2							
PMRV	**Marv??o**	**4.46**	**331**	*e*P		**Pn**	**18 35 59.0**	**+1.0**
PMRV				*e*S		**Sn**	**18 36 47.1**	**-1.9**
PMRV				A		A	18 37 01.1	
	comp=N,3.6nm,0.6s							
PMRV	**Marv??o**	**4.46**	**331**	P		**Pn**	**18 35 59.0**	**+1.0**
PMRV				S		**Sn**	**18 36 47.1**	**-1.9**
	comp=N,3.6nm,0.6s							
PMTG	**Montargil**	**4.54**	**322**	*e*P		**Pn**	**18 36 00.2**	**+1.1**
PMTG				*e*S		**Sn**	**18 36 50.4**	**-0.6**
PMTG	**Montargil**	**4.54**	**322**	P		**Pn**	**18 36 00.2**	**+1.1**
PMTG				S		**Sn**	**18 36 50.4**	**-0.6**
EPLA	**Plasencia**	**4.66**	**346**	P		**Pn**	**18 36 01.4**	**+0.7**
	comp=N,0.6nm,0.1s,SNR=7.9							
EPLA				S		**Sn**	**18 36 52.6**	**-1.2**
	comp=N,0.7nm,0.2s,SNR=7.9							
PCBR	**Castelo Branco**	**4.85**	**333**	*e*P		**Pn**	**18 36 04.3**	**+1.1**
PCBR	**Castelo Branco**	**4.85**	**333**	P		**Pn**	**18 36 04.3**	**+1.1**
ETOR	**Torete**	**5.64**	**20**	P		**Pn**	**18 36 14.2**	**+0.3**
	comp=N,2.5nm,0.2s,SNR=7.9							
ETOR				S		**Sn**	**18 37 18.1**	**+0.5**
	comp=N,1.2nm,0.1s,SNR=7.9							
PVIS	**Viseu**	**5.77**	**334**	*e*P		**Pn**	**18 36 16.2**	**+0.5**
PVIS	**Viseu**	**5.77**	**334**	P		**Pn**	**18 36 16.2**	**+0.5**
EMOS	**Mosqueruela**	**5.82**	**33**	P		**Pn**	**18 36 17.0**	**+0.6**
	comp=N,1.9nm,4.8s,SNR=7.9							
MVO	**Moncorvo**	**5.92**	**342**	*e*P		**Pn**	**18 36 19.5**	**+1.8**
MVO	**Moncorvo**	**5.92**	**342**	P		**Pn**	**18 36 17.9**	**+0.2**
	comp=N,9.7nm,3.7s,SNR=7.9							
POLO	**Lamas de Olo**	**6.33**	**338**	*e*P		**Pn**	**18 36 25.3**	**+2.1**
POLO	**Lamas de Olo**	**6.33**	**338**	P		**Pn**	**18 36 25.3**	**+2.1**

DJA 30 18:38:37.5±1.0,**8°S**±5°×**10°7E**±°,**h10**km±6km,**M4.0**/12,
mb4.5/1,**MLv3.9**/12,**Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.70**	**40**	P	Pb	18 38 52.5	+0.6
CISI				S	Sb	18 39 01.7	0.0
CNJI	**Cibinong**	**0.82**	**344**	P	Pb	18 38 54.0	+0.2
CNJI				S	Sb	18 39 04.8	-0.1
CMJI	**Cimerak**	**1.12**	**74**	P	Pb	18 38 58.2	-0.8
CMJI				S	Sb	18 39 12.9	-0.8
LEM	**Lembang**	**1.29**	**11**	P	Pn	18 39 01.3	-0.5
LEM				S	Sb	18 39 18.7	0.0
SKJI	**Sukabumi**	**1.35**	**324**	P	Pn	18 39 01.7	-0.7
DBJI	**Dramaga**	**1.65**	**338**	P	Pn	18 39 06.5	-0.1
KPJI	**Karang Pucung**	**1.73**	**64**	P	Pn	18 39 08.0	+0.3
UGM	**Wanagama**	**3.14**	**87**	P	Pn	18 39 26.4	-0.7
WOJI	**Wonogiri, Jawa**	**3.54**	**86**	P	Pn	18 39 31.9	-0.7
PCJI	**Pacitan**	**3.78**	**92**	P	Pn	18 39 35.5	-0.4
KASI	**Kota Agung**	**3.83**	**312**	P	Pn	18 39 36.2	-0.3
KLSI		**4.28**	**322**	P	Pn	18 39 42.6	-0.1
LWLI	**Liwa**	**4.49**	**313**	P	Pn	18 39 45.1	-0.6
MDSI	**Maura Dua**	**4.78**	**318**	P	Pn	18 39 49.9	+0.2
JAGI	**Jajag, Banyuwa**	**6.73**	**94**	P	Pn	18 40 17.1	+0.6

*IDC **30** 18:57:43.9±1.4,7°.79S×130°.17E,h0km,mb3.9/2,*
mb1 4.0/6,mb1mx3.7/35,mbtmp3.9/6,ML3.8/4,MS3.0/2,
Ms1 3.0/2,ms1mx2.6/25,Error ellipse: s-maj=57.5km
s-min=21.2km az=78.0
ISC 30 18:57:43.6±0.9,**7°.82S**±0°.06×**130°.4E**±0°.2,**h10**km,**n7,**
σ2s90/10,**Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.96**	**7**	Pn	**Pn**	**18 59 26.0**	**+0.2**
	0.8nm,0.3s,baz=176,slow=19,SNR=8.6						
SIJI				Sn	**Sn**	**19 00 41.5**	**-3.7**
	0.2nm,0.3s,baz=334,slow=21,SNR=2.6						
KAPI	**Kappang**	**10.91**	**284**	LR	LR	19 04 58.3	
	comp=Z,53nm,19.2s,baz=277,slow=40						
FITZ	**Fitzroy Crossi**	**11.20**	**204**	Pn	**Pn**	**19 00 24.6**	**+0.6**
	0.8nm,0.3s,baz=30,slow=7.4,SNR=16						
FITZ				Sn	**Sn**	**19 02 26.1**	**-3.3**
	1.0nm,0.3s,baz=114,slow=21,SNR=6.0						
WRA	**Warramunga Arr**	**12.65**	**163**	Pn	**Pn**	**19 00 44.4**	**+0.6**
	0.5nm,0.3s,baz=344,slow=13,SNR=28						
WRA				Sn	**Sn**	**19 03 01.6**	**-3.2**
	1.1nm,0.3s,baz=335,slow=22,SNR=8.2						
ASAR	**Alice Springs**	**16.11**	**168**	Pn	**Pn**	**19 01 31.2**	**+0.8**
	0.4nm,0.3s,baz=340,slow=8.2,SNR=24						
ASAR				Sn	**Sn**	**19 04 27.0**	**-2.4**
	0.3nm,0.3s,baz=356,slow=28,SNR=8.0						
STKA	**Stephens Creek**	**26.12**	**158**	P	**P**	**19 03 21.8**	**+3.9**
	2.9nm,0.9s,baz=328,slow=10.0,SNR=5.5						
STKA				LR	LR	19 12 41.1	
	comp=Z,50nm,21.9s,baz=21,slow=34						
MKAR	**Makanchi Array**	**69.11**	**327**	P	**P**	**19 08 51.3**	**+1.2**
	0.4nm,0.4s,baz=114,slow=6.5,SNR=10						

IDC 30 19:01:23.4±8.8,**17°.43S**×**178°.81W**,**h599**km±111km,
mb3.0/5,**mb1 3.4**/5,**mb1mx3.0**/39,**mbtmp4.0**/5,**Error**
ellipse: s-maj=111.6km s-min=36.4km az=159.0,Fiji
Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.34**	**259**	P	P	19 08 42.1	-0.1
	0.6nm,0.4s,baz=92,slow=7.2,SNR=7.0						
ASAR	**Alice Springs**	**44.55**	**254**	P	P	19 08 43.6	-0.2
	2.7nm,0.5s,baz=86,slow=9.3,SNR=27						
ILAR	**Eielson Array**	**85.51**	**13**	P	P	19 12 58.4	-0.3
	0.4nm,0.4s,baz=219,slow=5.2,SNR=7.4						
TXAR	**Lajitas Array**	**86.06**	**58**	P	P	19 13 02.5	+0.3
	0.8nm,0.7s,baz=223,slow=5.5,SNR=9.5						
PDAR	**Pinedale Array**	**87.27**	**44**	P	P	19 13 07.3	-0.5
	0.5nm,0.6s,baz=220,slow=3.9,SNR=5.2						
MKAR	**Makanchi Array**	**108.53**	**314**	PKiKP	PKiKP	19 18 43.9	-1.1
	0.1nm,0.4s,baz=107,slow=0.1,SNR=4.0						
GERES	**GERESS Array B**	**147.05**	**345**	PKPbc	PKPbc	19 20 00.2	+0.1
	0.6nm,0.5s,baz=44,slow=4.1,SNR=4.6						

*ISK **30** 19:03:35.1,36°.41N×29°.69E,h28km,ML2.5/11*
*DDA **30** 19:03:36.1,36°.46N×29°.66E,h7km,7km,ML2.0*
*NIC **30** 19:03:36.1±0.0,36°.33N×29°.91E,h34km±20km,Ml2.7/2*
ISC 30 19:03:35.8±0.9,**36°.31N**±0°.03×**29°.76E**±0°.03,**h32**km±7km,
n30,σ1s33/46,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DEMR	**Demre-Antalya**	**0.14**	**123**	PG	**Pn**	**19 03 41.7**	**-0.1**
DEMR				SG	**Sb**	**19 03 47.2**	**+1.4**
AKAS	**Kas**	**0.15**	**236**	PG	**Pn**	**19 03 41.2**	**-0.7**
AKAS				SG	**Sb**	**19 03 46.4**	**+0.2**
AKAS	**Kas**	**0.15**	**236**	*i* P	**Pn**	**19 03 41.2**	**-0.7**
AKAS				*i* S	**Sb**	**19 03 46.3**	**+0.2**
AKAS				IAML		19 03 47.0	
	comp=N,200nm,0.4s						
ELL	**Elmali**	**0.45**	**16**	PG	**Pb**	**19 03 44.6**	**-1.1**
ELL	**Elmali**	**0.45**	**16**	P	**Pb**	**19 03 44.4**	**-1.3**
ELL				S	**Sb**	**19 03 53.0**	**+0.5**
AKUM	**Antalya-Kumluc**	**0.47**	**89**	*i* P	**Pb**	**19 03 46.5**	**+0.6**
AKUM				*i* S	**Sn**	**19 03 54.9**	**+1.3**
AKUM				IAML		19 03 57.0	
	comp=N,115nm,0.2s						
AKUM				IAML		19 03 57.0	
	comp=E,180nm,0.3s						
FETY	**Fethiye**	**0.63**	**301**	PG	**Pn**	**19 03 46.4**	**-2.1**
FETY				SG	**Sb**	**19 03 55.6**	**-1.5**
FETY	**Fethiye**	**0.63**	**301**	*i* P	**Pn**	**19 03 46.5**	**-2.1**
FETY				*i* S	**Sb**	**19 03 55.8**	**-1.3**
KORT	**Korkueli**	**0.83**	**35**	PG	**Pn**	**19 03 50.7**	**-0.8**
KORT	**Korkueli**	**0.83**	**35**	*i* P	**Pn**	**19 03 50.6**	**-0.8**
KORT				*i* S	**Sn**	**19 04 04.3**	**+1.6**
KORT				IAML		19 04 07.0	
	comp=N,50nm,0.6s						
KORT				IAML		19 04 07.0	
	comp=E,76nm,0.6s						
GOLH	**Golhisar**	**0.93**	**350**	*i* P	**Pn**	**19 03 51.8**	**-1.0**
GOLH				*i* S	**Sn**	**19 04 05.7**	**+0.6**
GOLH				IAML		19 04 09.0	
	comp=N,43nm,0.3s						
GOLH				IAML		19 04 23.0	
	comp=E,44nm,1.0s						
DALY	**Dalyan (Mula)**	**1.02**	**300**	PG	**Pn**	**19 03 52.4**	**-1.4**
DALY	**Dalyan (Mula)**	**1.02**	**300**	*i* P	**Pn**	**19 03 52.6**	**-1.2**
DALY				*i* S	**Sn**	**19 04 05.5**	**-1.6**
DALY				IAML		19 04 08.0	
	comp=N,136nm,0.3s						
DALY				IAML		19 04 08.0	
	comp=E,89nm,0.2s						
TURN	**Turunc**	**1.08**	**301**	PN	**Pb**	**19 03 57.4**	**+1.5**
TURN	**Turunc**	**1.08**	**301**	*i* P	**Pb**	**19 03 57.5**	**+1.5**
TURN				*i* S	**Sb**	**19 04 12.8**	**+3.0**
TURN				IAML		19 04 15.0	
	comp=N,66nm,0.3s						
TURN				IAML		19 04 16.0	
	comp=E,39nm,0.2s						
ARG	**Arkhangelos**	**1.32**	**266**	PN	**Pn**	**19 03 56.6**	**-1.4**
TAVA	**DENIZLI_Tavas**	**1.33**	**330**	*i* P	**Pn**	**19 03 58.3**	**0.0**
TAVA				*i* S	**Sn**	**19 04 14.2**	**-0.8**
TAVA				IAML		19 04 17.0	
	comp=E,27nm,0.4s						
TAVA				IAML		19 04 17.0	
	comp=N,44nm,0.6s						
BRDR	**BURDUR-Merkez**	**1.40**	**10**	*i* P	**Pn**	**19 03 59.8**	**+0.6**
BRDR				*i* S	**Sn**	**19 04 18.7**	**+2.1**
BRDR				IAML		19 04 19.0	
	comp=E,38nm,0.8s						
YER	**Yerkesik**	**1.44**	**305**	PN	**Pn**	**19 03 58.5**	**-1.2**
DAT	**Datca**	**1.80**	**284**	PN	**Pn**	**19 04 04.3**	**-0.4**
DAT	**Datca**	**1.80**	**284**	*i* P	**Pn**	**19 04 07.2**	**+2.5**
DAT				*i* S	**Sn**	**19 04 28.2**	**+1.7**
DAT				IAML		19 04 33.0	
	comp=N,19nm,0.2s						
DAT				IAML		19 04 34.0	
	comp=E,17nm,0.6s						
BODT	**Bodrum**	**2.10**	**292**	PN	**Pn**	**19 04 07.8**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**2.21**	**318**	PN	**Pn**	**19 04 09.2**	**-1.1**
KARP	**Karpathos**	**2.24**	**251**	PN	**Pn**	**19 04 10.4**	**-0.3**
SHUT	**Suhut-Afyon**	**2.32**	**16**	PN	**Pn**	**19 04 11.4**	**-0.5**
GCAM	**G?zelcaml?**	**2.45**	**305**	PN	**Pn**	**19 04 12.5**	**-1.0**
AKMS	**Akamas**	**2.47**	**121**	P	**Pn**	**19 04 13.0**	**-0.8**
AKMS				S	**Sn**	**19 04 41.6**	**-1.2**
AKMS				AML	AML	19 04 43.9	
	comp=E,0.1nm,0.8s						
AKMS				AML	AML	19 04 43.9	
	comp=E,0.1nm,0.8s						
AKMS				AML	AML	19 04 51.1	
	comp=E,0.1nm,0.8s						
AKMS				AML	AML	19 04 51.1	
	comp=E,0.1nm,0.8s						
ALFC	**Alefka**	**2.59**	**116**	P	**Pn**	**19 04 14.2**	**-1.2**
ALFC				AML	AML	19 04 51.4	
	comp=E,0.1nm,0.7s						
ALFC				AML	AML	19 05 00.1	
	comp=E,0.1nm,0.7s						
NATA	**Nata**	**2.76**	**123**	P	**Pn**	**19 04 17.2**	**-0.6**
SZAC	**Souni**	**2.99**	**120**	P	**Pn**	**19 04 19.7**	**-1.3**
SZAC				S	**Sn**	**19 04 54.3**	**-1.3**

*GUC **30** 19:22:13.7±0.6,21°.06S×68°.96W,h106km±3km,ML3.8*
*SJA **30** 19:22:14.0±0.3,21°.07S×68°.98W,h85km±2km,ML3.0*
ISC 30 19:22:15.1±1.4,**21°.06S**±0°.03×**69°.04W**±0°.06,
h100km±10km,**n28,σ0s65/48,11C-4D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.42**	**272**	⇑*i* P	**Pn**	**19 22 30.4**	**-0.2**
PB01				*i* S	**Sn**	**19 22 43.0**	**+1.0**
PB01				IAML		19 22 43.8	
	comp=E,5μm,0.2s						
PB01	**IPOC Station P**	**0.42**	**272**	*i* P	**Pn**	**19 22 30.0**	**-0.5**
PB01				*i* Sg	**Sn**	**19 22 41.9**	**-0.2**
PB09	**IPOC Station P**	**0.76**	**195**	⇑*i* P	**Pn**	**19 22 33.3**	**+1.0**
PB09				*i* S	**Sn**	**19 22 48.1**	**+1.1**
PB09				IAML		19 22 49.8	
	comp=E,2μm,0.3s						
PB09	**IPOC Station P**	**0.76**	**195**	*i* P	**Pn**	**19 22 31.9**	**-1.4**
PB02	**IPOC Station P**	**0.84**	**252**	⇑*i* P	**Pn**	**19 22 34.3**	**+0.2**
PB02				*i* S	**Sn**	**19 22 49.4**	**+1.0**
PB02				IAML		19 22 51.3	
	comp=E,6μm,0.2s						
PB02	**IPOC Station P**	**0.84**	**252**	*i* P	**Pn**	**19 22 33.2**	**-0.8**
PB02				*i* Sg	**Sn**	**19 22 47.4**	**-1.0**
PB08	**IPOC Station P**	**0.92**	**353**	⇑*i* P	**Pn**	**19 22 35.0**	**-0.1**
PB08				*i* S	**Sn**	**19 22 50.8**	**+0.6**
PB08				IAML		19 22 51.4	
	comp=E,4μm,0.3s						
PB08	**IPOC Station P**	**0.92**	**353**	*i* P	**Pn**	**19 22 34.4**	**-0.8**
PB08				*i* Sg	**Sn**	**19 22 49.0**	**-1.2**
PB07	**IPOC Station P**	**1.03**	**230**	⇑*i* P	**Pn**	**19 22 36.0**	**-0.1**
PB07				*i* S	**Sn**	**19 22 52.6**	**+0.6**
PB07				IAML		19 22 54.4	
	comp=N,1μm,0.1s						
PB07	**IPOC Station P**	**1.03**	**230**	*i* P	**Pn**	**19 22 35.5**	**-0.6**
PATCX	**Punta Patache**	**1.07**	**283**	⇑*i* P	**Pn**	**19 22 36.7**	**+0.2**
PATCX				*i* S	**Sn**	**19 22 54.1**	**+1.5**
PATCX				IAML		19 22 55.8	
	comp=E,3μm,0.3s						
TA01	**Diego Aracena**	**1.18**	**294**	⇑*i* P	**Pn**	**19 22 37.5**	**-0.1**
TA01				*i* S	**Sn**	**19 22 55.5**	**+1.0**
TA01				IAML		19 22 56.4	
	comp=E,1μm,0.3s						
PB03	**IPOC Station P**	**1.19**	**214**	⇑*i* P	**Pn**	**19 22 37.8**	**-0.1**
PB03				*i* S	**Sn**	**19 22 55.5**	**+0.5**
PB03				IAML		19 22 56.5	
	comp=N,2μm,0.3s						
GO01	**Chusmiza**	**1.39**	**354**	⇓*i* P	**Pn**	**19 22 40.4**	**-0.2**
GO01				*e*S	**Sn**	**19 23 00.2**	**+0.4**
GO01				IAML		19 23 01.7	
	comp=N,4μm,0.2s						
PB11	**IPOC Station P**	**1.42**	**336**	⇑*i* P	**Pn**	**19 22 40.2**	**-0.3**
PB11				*i* S	**Sn**	**19 23 00.2**	**+0.4**
PB11				IAML		19 23 01.7	
	comp=E,4μm,0.5s						
PB11	**IPOC Station P**	**1.42**	**336**	*i* P	**Pn**	**19 22 40.3**	**-0.3**
PB11				*i* Sg	**Sn**	**19 22 59.6**	**-0.2**
PB04	**IPOC Station P**	**1.64**	**219**	⇓*i* P	**Pn**	**19 22 43.0**	**-0.3**
PB04				*i* S	**Sn**	**19 23 04.7**	**0.0**
PB04				IAML		19 23 07.8	
	comp=E,811nm,0.2s						
PB04	**IPOC Station P**	**1.64**	**219**	*i* P	**Pn**	**19 22 43.2**	**-0.1**
PB06	**IPOC Station P**	**1.71**	**197**	⇓*i* P	**Pn**	**19 22 43.7**	**-0.5**
PB06				*i* S	**Sn**	**19 23 06.5**	**+0.2**
PB06				IAML		19 23 08.7	
	comp=E,854nm,0.3s						
PSGC	**Pisagua**	**1.78**	**325**	⇑*i* P	**Pn**	**19 22 44.1**	**-0.9**
PSGC				*i* S	**Sn**	**19 23 07.4**	**-0.3**
PSGC				IAML		19 23 09.0	
	comp=N,672nm,0.3s						
MNMC	**Minye Minye**	**1.99**	**345**	⇓*i* P	**Pn**	**19 22 47.9**	**0.0**
MNMC				*i* S	**Sn**	**19 23 13.2**	**+0.4**
MNMC				IAML		19 23 16.6	
	comp=N,1μm,0.1s						
PB05	**IPOC Station P**	**2.09**	**211**	⇑*i* P	**Pn**	**19 22 48.6**	**-0.4**
PB05				*i* S	**Sn**	**19 23 13.4**	**-1.4**
PB05				IAML		19 23 18.0	
	comp=E,334nm,0.4s						
PB15	**IPOC Station P**	**2.18**	**191**	*e*P	**Pn**	**19 22 49.9**	**-0.4**
PB15				*i* S	**Sn**	**19 23 17.4**	**+0.4**
PB15	**IPOC Station P**	**2.18**	**191**	*i* P	**Pn**	**19 22 50.3**	**+0.1**
PB16	**IPOC Station P**	**2.75**	**351**	*e*P	**Pn**	**19 22 58.2**	**+0.1**
YJA	**Yavi**	**3.46**	**109**	*i* P	**Pn**	**19 23 07.5**	**+0.1**
YJA				IAML		19 23 10.8	
	comp=Z,19nm,0.6s						
HJA	**Humahuaca**	**3.98**	**123**	*i* P	**Pn**	**19 23 14.6**	**+0.2**
HJA				IAML		19 23 15.7	
	comp=Z,28nm,0.4s						
AZAP	**Zapla**	**4.83**	**131**	*i* P	**Pn**	**19 23 25.6**	**-0.2**

*KRNET **30** 19:24:41.0±0.1,39°.25N×72°.68E,mb3.2*
*SOME **30** 19:24:41.9,39°.63N×72°.62E,h5km*
*NNC **30** 19:24:49.2±3.4,39°.77N×72°.98E,h0km,mb3.8,mpv3.4,*
Error ellipse: s-maj=26.3km s-min=14.9km az=179.0
ISC 30 19:24:38.9±1.7,**39°.44N**±0°.08×**72°.85E**±0°.03,**h10**km,**n40,**
σ1s67/64,25C-8D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANR	**Andizhan**	**1.37**	**344**	P	**Pg**	**19 25 07.2**	**+1.9**
ANR				S	**Sn**	**19 25 28.0**	**+5.6**
FRG	**Fergana**	**1.54**	**328**	P	**Pn**	**19 25 06.3**	**-0.1**
FRG				SM		19 25 22.2	
BTK	**Batken**	**1.69**	**292**	⇑*i* P	**Pb**	**19 25 10.9**	**+0.8**
	baz=0.0						
BTK				⇑*i* S	**Sg**	**19 25 32.7**	**-0.5**
	baz=0.0						
ARSB	**Arslanbob**	**1.89**	**3**	⇑*i* P	**Pg**	**19 25 17.1**	**+1.9**
	baz=6.0						
ARSB				⇑*i* S	**Sg**	**19 25 43.8**	**+4.1**
	baz=6.0						
ARK	**Arkit**	**2.46**	**344**	⇑*e*P	**Pb**	**19 25 23.9**	**+0.6**
	baz=48						
ARK				⇑*e*S	**Sg**	**19 25 55.6**	**-2.3**
	baz=48						
ARLS	**Aral**	**2.67**	**24**	⇑*i* P	**Pb**	**19 25 28.5**	**+1.6**
	baz=25						
ARLS				⇑*i* S	**Sg**	**19 26 03.3**	**-1.4**
	baz=25						
AML	**Almayashu**	**2.77**	**13**	⇑*i* P	**Pb**	**19 25 30.0**	**+1.2**
	baz=15						
AML				⇑*i* S	**Sg**	**19 26 05.6**	**-2.3**
	baz=15						
AML	**Almayashu**	**2.77**	**13**	P	**Pg**	**19 25 30.8**	**-1.3**
	SNR=63						
UCH	**Uchtor**	**3.06**	**24**	⇓*i* P	**Pb**	**19 25 34.0**	**+0.2**
	baz=25						
UCH				⇓*i* S	**Sb**	**19 26 13.1**	**+1.7**
	baz=25						
UCH	**Uchtor**	**3.06**	**24**	P	**Pb**	**19 25 34.8**	**+1.0**
	SNR=9.1						
CHRV	**Charvak**	**3.12**	**316**	*e*P	**Pg**	**19 25 37.5**	**-1.2**
CHRV				*e*S	**Sg**	**19 26 19.5**	**+0.3**
NRN	**Naryn**	**3.12**	**49**	⇑*i* P	**Pb**	**19 25 35.0**	**+0.2**
	baz=48						
NRN				⇑*i* S	**Sb**	**19 26 14.3**	**+1.3**
	baz=48						
EKS2	**Erkin-Say**	**3.30**	**12**	⇑*e*P	**Pb**	**19 25 36.9**	**-0.7**
	baz=13						
EKS2				⇑*i* S	**Sb**	**19 26 17.6**	**-0.3**
	baz=13						
EKS2	**Erkin-Say**	**3.30**	**12**	P	**Pg**	**19 25 40.3**	**-1.9**
	SNR=6.8						
MRKS	**Merke**	**3.32**	**5**	*e*P	**Pb**	**19 25 40.3**	**+2.3**
	16nm,0.3s						
MRKS				*e*S	**Sg**	**19 26 22.1**	**-3.4**
	13nm,0.4s						
MRKS	**Merke**	**3.32**	**5**	Pg	**Pg**	**19 25 40.9**	**-1.6**
	16nm,0.3s						
MRKS				Lg	Lg	19 26 22.1	
	13nm,0.4s						
AAK	**Ala-Archa**	**3.43**	**21**	⇑*e*P	**Pb**	**19 25 39.0**	**-0.9**
	baz=22						
AAK				⇑*i* S	**Sb**	**19 26 21.6**	**-0.1**
	baz=22						
AAK	**Ala-Archa**	**3.43**	**21**	P	**Pb**	**19 25 40.5**	**+0.6**
	SNR=7.8						
AAK	**Ala-Archa**	**3.43**	**21**	⇑Pn	**Pb**	**19 25 40.1**	**+0.2**
	5.5nm,0.6s						
AAK				⇑Lg	Lg	19 26 23.4	
	8.8nm,0.7s						
IUG	**Iuzhnay**	**3.45**	**323**	*e*P	**Pb**	**19 25 40.2**	**0.0**
	1.8nm,0.4s						
IUG				*e*S	**Sb**	**19 26 21.1**	**-1.2**
	20nm,0.3s						
IUG	**Iuzhnay**	**3.45**	**323**	Pg	**Pb**	**19 25 39.5**	**-0.8**
	1.8nm,0.4s						
IUG				Lg	Lg	19 26 21.1	
	20nm,0.3s						
JBG	**Jabagly**	**3.46**	**330**	Pg	**Pb**	**19 25 41.4**	**+1.0**
	11nm,0.3s						
JBG				Lg	Lg	19 26 23.3	
	25nm,0.4s						
KBK	**Karagaybulak**	**3.59**	**26**	⇓*i* P	**Pb**	**19 25 41.2**	**-1.4**
	baz=26						
KBK				⇓*i* S	**Sb**	**19 26 25.2**	**-1.0**
	baz=26						
KBK	**Karagaybulak**	**3.59**	**26**	P	**Pg**	**19 25 48.0**	**+0.3**
	SNR=11						
FRU1	**Bishkek**	**3.63**	**21**	⇑*i* P	**Pb**	**19 25 41.7**	**-1.5**
	baz=22						
FRU1				⇑*i* S	**Sb**	**19 26 26.2**	**-1.1**
	baz=22						
ULHL	**Ulahol**	**3.81**	**41**	⇑*i* P	**Pb**	**19 25 44.7**	**-1.6**
	baz=41						
ULHL				⇑*i* S	**Sb**	**19 26 31.2**	**-1.4**
	baz=41						
ULHL	**Ulahol**	**3.81**	**41**	P	**Pb**	**19 25 46.8**	**+0.5**
	SNR=12						
CHMS	**Chumysh**	**3.84**	**21**	⇑*i* P	**Pb**	**19 25 44.6**	**-2.2**
	baz=22						
CHMS				⇑*i* S	**Sb**	**19 26 31.1**	**-2.2**
	baz=22						
BOOM	**Boomskoye usch**	**3.84**	**36**	⇓*i* P	**Pb**	**19 25 44.7**	**-2.3**
	baz=36						
BOOM				⇓*i* S	**Sb**	**19 26 32.2**	**-1.4**
	baz=36						
KK31	**Karatay Array**	**4.07**	**335**	Pn	**Pb**	**19 25 48.1**	**-2.6**
	0.9nm,0.3s,baz=143,slow=13,SNR=36						
KK31				⇓Sn	**Sb**	**19 26 37.0**	**-2.9**
	7.0nm,0.4s,baz=145,slow=26,SNR=3.6						
KST	**Kastek**	**4.30**	**32**	*e*P	**Pg**	**19 26 00.8**	**-0.5**
	5.9nm,0.4s						
KST				*e*S	**Sg**	**19 26 57.6**	**+0.6**
	7.7nm,0.6s						
KST	**Kastek**	**4.30**	**32**	Pg	**Pg**	**19 26 03.3**	**+1.9**
	5.9nm,0.4s						
KST				Lg	Lg	19 27 01.0	
	7.7nm,0.6s						
TNSS	**Tian-Shan**	**4.74**	**39**	*e*P	**Pg**	**19 26 09.4**	**-0.3**
	6.3nm,0.3s						
TNSS				*e*S	**Sg**	**19 27 12.2**	**+1.0**
	5.9nm,0.5s						
TNSS	**Tian-Shan**	**4.74**	**39**	Pg	**Pg**	**19 26 09.4**	**-0.3**
	6.3nm,0.3s						
TNSS				Lg	Lg	19 27 12.2	
	5.9nm,0.5s						

Mw(mB)4.3/2
*NEIC **30** 19:49:37.1±2.0,5.97N±0.10×95.74E±0.07,h224km±8km, mb4.4/13,Error ellipse: s-maj=16.3km s-min=6.8km az=212.0*
ISC 30 19:49:35.8±0.6,6.02N±0.06×95.63E±0.08,h200km,n45, σ1§85/52,**Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LHMI	**Lhok Sumawe**	**1.53**	**121**	P	**Pn**	**19 50 12.3**	**+2.5**
LHMI				S	**Sn**	**19 50 40.4**	**+4.3**
LHMI	**Lhok Sumawe**	**1.53**	**121**		**Pn**	**19 50 12.5**	**+2.7**
MLSI	**Meulaboh, Aceh**	**1.90**	**156**	P	**Pn**	**19 50 16.3**	**+2.9**
MLSI				S	**Sn**	**19 50 45.8**	**+3.1**
CMBY	**CAMPBELL BAY**	**1.96**	**300**	*e*P	**Pn**	**19 50 16.9**	**+3.0**
CMBY				*e*S	**Sn**	**19 50 44.7**	**+1.2**
CMBY				IAML		19 50 48.7	
	comp=N,1μm,0.2s						
CMBY				IAML		19 50 48.9	
	comp=E,1μm,0.2s						
SNSI	**Sinabang, Aceh**	**3.65**	**169**	P	**Pn**	**19 50 34.7**	**+1.3**
PSI	**Prapat**	**4.58**	**134**	P	**Pn**	**19 50 47.0**	**+1.9**
	comp=E,2.3nm,0.3s,baz=296,slow=9.0,SNR=10						
PSI				S	**Sn**	**19 51 40.6**	**+1.1**
	comp=E,1.6nm,0.3s,baz=135,slow=24,SNR=10						
RPSI	**Rantau Prapat**	**4.66**	**135**		**Pn**	**19 50 47.0**	**+1.1**
GSI	**Gunungsitoli**	**5.07**	**157**	P	**Pn**	**19 50 52.1**	**+0.9**
	comp=E,0.6nmcomp=E,44nm,0.7s						
GSI	**Gunungsitoli**	**5.07**	**157**		**Pn**	**19 50 52.1**	**+0.9**
GSI				S	**Sn**	**19 51 44.5**	**-6.2**
IPM	**Ipoh**	**5.59**	**106**		**Pn**	**19 50 58.1**	**+0.2**
PBA	**Port Blair**	**6.29**	**333**	*e*P	Pn	19 51 05.8	-1.0
PBA				*e*S	Sn	19 52 14.1	-4.8
PBA				IAML		19 52 22.3	
	comp=E,35nm,0.5s						
PBA				IAML		19 52 22.7	
	comp=N,42nm,0.6s						
PBSI	**Pulau Batu**	**6.59**	**156**	P	**Pn**	**19 51 12.5**	**+1.7**
DGPR	**DIGLIPUR**	**7.59**	**340**	*e*P	**Pn**	**19 51 22.3**	**-1.6**
DGPR				*e*S	Sn	19 52 43.5	-6.3
DGPR				IAML		19 52 48.1	
	comp=N,34nm,0.5s						
DGPR				IAML		19 52 48.8	
	comp=E,26nm,0.3s						
SISI	**Saibi**	**8.07**	**155**	P	**Pn**	**19 51 30.3**	**+0.2**
	comp=E,9.8nm,0.8s						
PDSI	**Padang**	**8.41**	**145**	P	**Pn**	**19 51 34.5**	**0.0**
	comp=E,916nmcomp=E,29nm,0.4s						
CM31	**Chiang Mai Arr**	**12.78**	**14**	P	**P**	**19 52 35.3**	**+1.2**
CMAR	**Chiang Mai Arr**	**12.78**	**14**	P	**Pn**	**19 52 31.4**	**+0.8**
	comp=E,0.3nm,0.3s,baz=200,slow=11,SNR=39						
CHTO	**Chiang Mai**	**13.12**	**14**		**Pn**	**19 52 35.7**	**+0.8**
MDSI	**Maura Dua**	**13.48**	**141**	P	**Pn**	**19 52 38.7**	**-0.7**
	comp=E,6.1nm,0.9s						
KASI	**Kota Agung**	**14.48**	**142**	P	**Pn**	**19 52 51.0**	**-0.9**
	comp=E,17nm,0.4s						
KOHI	**KOHIMA**	**19.65**	**356**	*e*P	**P**	**19 53 48.7**	**-0.9**
KOHI				*e*S	**S**	**19 57 17.6**	**-2.8**
SHL	**Shillong**	**19.77**	**350**	P	**P**	**19 53 49.5**	**-1.4**
SHL				IAmb	IAmb	19 53 51.3	
	comp=Z,14nm,0.7s						
ZIRO	**ZIRO**	**21.46**	**356**	*e*P	**P**	**19 54 09.5**	**+0.6**
ZIRO				*e*S	**S**	**19 57 54.5**	**+0.4**
LSA	**Lhasa**	**23.93**	**350**	P	**P**	**19 54 33.1**	**+0.9**
LSA				IAmb	IAmb	19 54 35.3	
	comp=Z,4.8nm,0.6s						
LZH	**Lanzhou**	**30.86**	**13**	*e*P	**P**	**19 55 34.5**	**+0.9**
LZH				pP	pP	19 56 21.5	+7.2
LZH				sP	PP	19 56 46.3	-1.3
LZH				PP	sP	19 56 47.8	+11
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,78nm,4.9s						
NIL	**Nilore**	**34.45**	**326**	P	**P**	**19 56 03.2**	**-1.5**
NIL				IAmb	IAmb	19 56 05.1	
	comp=Z,3.8nm,0.6s						
HHC	**Hu-ho-hao-te**	**37.50**	**20**	*e*P	**P**	**19 56 31.8**	**+1.3**
HHC				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,58nm,4.1s						
KSH	**Kashi**	**37.77**	**335**	P	**P**	**19 56 33.0**	**+0.2**
KSH				pP	pwP	19 57 18.0	+0.5
KSH				S	**S**	**20 02 05.5**	**-3.0**
KSH				sS	ScP	20 02 22.8	+8.9
KSH				SS	SS	20 04 48.5	-15
KSH				pmax	pmax		
	comp=Z,150nm,5.5s						
KSH				LR	LR		
	comp=N,130nm,4.1s						
KSH				LR	LR		
	comp=E,130nm,4.9s						
KSH				LR	LR		
	comp=Z,170nm,6.2s						
WMQ	**Urumqi**	**38.29**	**351**	*e*P	**P**	**19 56 38.3**	**+1.3**
MK31	**Makanchi Array**	**42.22**	**346**	P	**P**	**19 57 07.6**	**-1.5**
MKAR	**Makanchi Array**	**42.22**	**346**	P	**P**	**19 57 08.5**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=156,slow=7.5,SNR=7.3						
MKAR	**Makanchi Array**	**42.22**	**346**	P	**P**	**19 57 08.1**	**-1.1**
MAKZ	**Makanchi**	**42.31**	**346**	P	**P**	**19 57 09.2**	**-0.7**
WB0	**Warramunga Arr**	**45.95**	**125**	P	**P**	**19 57 38.5**	**-0.6**
WRA	**Warramunga Arr**	**45.99**	**125**	P	**P**	**19 57 39.4**	**-0.1**
	comp=Z,0.7nm,0.3s,baz=302,slow=9.3,SNR=9.8						
WRA	**Warramunga Arr**	**45.99**	**125**	P	**P**	**19 57 36.9**	**-2.5**
WRAB	**Tennant Creek**	**45.99**	**125**	P	**P**	**19 57 37.1**	**-2.4**
WB2	**Warramunga Arr**	**46.00**	**125**	P	**P**	**19 57 39.3**	**-0.3**
WR0	**Warramunga Arr**	**46.16**	**125**	P	**P**	**19 57 40.8**	**0.0**
KURBB	**Kurchatov Arra**	**46.70**	**345**	P	**P**	**19 57 45.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=142,slow=6.4,SNR=4.5						
ASAR	**Alice Springs**	**47.60**	**130**	P	**P**	**19 57 51.9**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=303,slow=7.9,SNR=6.8						
MAJO	**Matsushiro**	**49.34**	**46**	P	**P**	**19 58 03.0**	**-2.0**
ABKAR	**Akbulak array**	**52.56**	**331**	P	**P**	**19 58 28.5**	**-0.2**
ABKAR	**Akbulak array**	**52.56**	**331**	P	**P**	**19 58 28.6**	**-0.1**
ABKAR				IAmb	IAmb	20 00 25.7	
	comp=Z,6.9nm,1.8s						
TORD	**Torodi Ar. Bea**	**92.46**	**283**	P	**P**	**20 02 25.7**	**+0.9**
	comp=Z,0.3nm,0.6s,baz=83,slow=4.8,SNR=2.4						

*DJA **30** 19:53:55.6±0.6,5°S±6°×15°4E±°,h82km±5km,M4.5/15, mb4.9/15,mB5.5/1,MLv4.3/1,Mw(mB)4.9/1*
*NEIC **30** 19:53:59.9±1.3,4.9S±0.1°×153.7E±0.1°,h106km±5km, mb4.7/34,Error ellipse: s-maj=19.7km s-min=14.7km az=114.0*
*BJI **30** 19:54:01.8±0.0,4.67S×153.84E,h130km,mB4.9/29, mb4.6/39*
*IDC **30** 19:54:01.9±3.8,4.96S×153.80E,h123km±33km,mb4.0/15, mb1 4.1/17,mb1mx3.9/43,mbtmp4.4/17,MS3.2/12, Ms1 3.2/12,ms1mx3.0/33,Error ellipse: s-maj=21.8km s-min=15.1km az=85.0*
ISC 30 19:53:59.8±0.5,4.92S±0.07°×153.79E±0.07,h105km,n100, σ1§10/96,**mb4.6**/48,**3C,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.58**	**127**	S	**Sn**	**19 57 12.3**	**+0.3**
	11nm,0.3s,baz=332,slow=22,SNR=3.1						
PMG	**Port Moresby**	**7.95**	**235**	P	**Pn**	**19 55 53.3**	**+0.7**
	15nm,0.3s,baz=48,slow=6.8,SNR=35						
PMG				S	**Sn**	**19 57 23.8**	**+2.8**
	4.6nm,0.3s,baz=330,slow=18,SNR=6.3						
PMG				LR	LR	19 59 01.8	
	comp=Z,125nm,21.8s,baz=32,slow=38						
PMG	**Port Moresby**	**7.95**	**235**		**Pn**	**19 55 53.0**	**+0.4**
JAY	**Jayapura**	**13.27**	**280**	LR	LR	20 02 24.1	
	comp=Z,32nm,18.1s,baz=168,slow=38						
SMPI	**Sarmi**	**15.33**	**280**	P	**Pn**	**19 57 28.9**	**-1.7**
	24nm,1.2s						
CTA	**Charters Tower**	**16.77**	**205**	P	**P**	**19 57 49.6**	**+0.7**
	0.1nm,0.3s,baz=24,slow=12,SNR=3.3						
GUMO	**Guam**	**20.41**	**334**	LR	LR	20 06 17.7	
	comp=Z,18nm,21.1s,baz=152,slow=36						
DZM	**Mont Dzumac**	**21.00**	**145**	LR	LR	20 05 11.4	
	comp=Z,115nm,19.1s,baz=207,slow=32						
SIJI	**Sorong**	**22.84**	**279**	P	**P**	**19 58 55.2**	**+0.8**
	7.2nm,0.6s,baz=51,slow=19,SNR=5.4						
WR0	**Warramunga Arr**	**23.97**	**230**	P	**P**	**19 59 05.2**	**+0.5**
WR0				IAmb	IAmb	19 59 07.1	
	comp=Z,24nm,1.0s						
WB0	**Warramunga Arr**	**23.97**	**230**	P	**P**	**19 59 02.9**	**-1.8**
WB0				IAmb	IAmb	19 59 06.6	
	comp=Z,18nm,0.7s						
WRAB	**Tennant Creek**	**24.10**	**230**	P	**P**	**19 59 05.1**	**-0.8**
WRAB				IAmb	IAmb	19 59 07.9	
	comp=Z,20nm,0.7s						
WB2	**Warramunga Arr**	**24.11**	**230**	P	**P**	**19 59 06.2**	**+0.2**
WB2				IAmb	IAmb	19 59 08.0	
	comp=Z,18nm,0.8s						
WRA	**Warramunga Arr**	**24.12**	**230**	P	**P**	**19 59 06.6**	**+0.6**
	comp=Z,16nm,0.7s,baz=54,slow=9.9,SNR=61						
WRA	**Warramunga Arr**	**24.12**	**230**	P	**P**	**19 59 06.2**	**+0.1**
ARMA	**Armidale**	**25.45**	**184**	P	**P**	**19 59 18.1**	**-0.1**
ARMA				IAmb	IAmb	19 59 58.8	
	comp=Z,37nm,1.8s						
AS31	**Alice Springs**	**26.74**	**224**	P	**P**	**19 59 29.6**	**-0.2**
ASAR	**Alice Springs**	**26.74**	**224**	P	**P**	**19 59 29.9**	**0.0**
	comp=Z,7.1nm,0.9s,baz=54,slow=8.8,SNR=44						
ASAR				LR	LR	20 10 34.7	
	comp=Z,54nm,19.6s,baz=82,slow=37						
ASAR	**Alice Springs**	**26.74**	**224**	P	**P**	**19 59 28.9**	**-0.9**
STKA	**Stephens Creek**	**29.16**	**202**	P	**P**	**19 59 50.4**	**-0.8**
	comp=Z,8.3nm,0.7s,baz=37,slow=14,SNR=22						
STKA				LR	LR	20 11 14.4	
	comp=Z,42nm,20.4s,baz=25,slow=36						
STKA	**Stephens Creek**	**29.16**	**202**	P	**P**	**19 59 50.5**	**-0.8**
FITZ	**Fitzroy Crossi**	**30.47**	**242**	LR	LR	20 12 50.9	
	comp=Z,49nm,20.9s,baz=66,slow=37						
FITZ	**Fitzroy Crossi**	**30.47**	**242**	P	**P**	**20 00 02.5**	**-0.5**
FITZ				IAmb	IAmb	20 00 32.6	
	comp=Z,25nm,1.3s						
BBOO	**Buckleboo**	**32.32**	**209**	P	**P**	**20 00 18.6**	**-0.4**
BBOO				IAmb	IAmb	20 00 19.6	
	comp=Z,18nm,0.9s						
FORT	**Forrest**	**35.33**	**220**	P	**P**	**20 00 44.8**	**-0.3**
PSA00	**Pilbara Seismi**	**36.82**	**240**	P	**P**	**20 00 57.2**	**-0.8**
RPZ	**Rata Peaks**	**41.54**	**161**	P	**P**	**20 01 37.5**	**+0.5**
	comp=Z,7.0nm,0.7s,baz=275,slow=0.5,SNR=5.6						
RPZ	**Rata Peaks**	**41.54**	**161**	P	**P**	**20 01 37.9**	**+1.0**
MORW	**Morawa**	**43.04**	**232**	P	**P**	**20 01 48.8**	**-0.6**
CISI	**Cisompet, Garu**	**45.76**	**264**	P	**P**	**20 02 10.5**	**-0.8**
CISI	**Cisompet, Garu**	**45.76**	**264**	P	**P**	**20 02 10.4**	**-0.9**
KASI	**Kota Agung**	**49.08**	**267**	P	**P**	**20 02 37.2**	**+0.2**
	comp=Z,18nm,1.1s						
MDSI	**Maura Dua**	**49.44**	**268**	P	**P**	**20 02 38.6**	**-1.1**
	comp=Z,9.6nm,1.3s						
NJ2	**Nanjing**	**49.56**	**320**	*e*P	**P**	**20 02 41.0**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
WHN	**Wuhan**	**51.62**	**316**	P	P	20 03 05.5	+10
PDSI	**Padang**	**53.39**	**273**	P	**P**	**20 03 08.0**	**-1.2**
	comp=Z,17nm,0.7s						
ENH	**Enshi**	**54.95**	**312**	P	**P**	**20 03 20.1**	**-0.2**
GSI	**Gunungsitoli**	**56.49**	**275**	P	**P**	**20 03 30.2**	**-1.4**
XAN	**Xi'an**	**57.38**	**316**	P	**P**	**20 03 37.5**	**-0.1**
XAN				pP	pwP	20 04 05.5	-1.9
XAN				sP	sP	20 04 20.5	+7.6
XAN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,67nm,3.9s						
XAN				LR	LR		
	comp=Z,140nm,16.3s						
XAN				LR	LR		
	comp=Z,200nm,19.5s						
XAN				LR	LR		
	comp=Z,180nm,17.4s						
XAN	**Xi'an**	**57.38**	**316**	P	**P**	**20 03 37.4**	**-0.2**
XAN				IAmb	IAmb	20 03 38.4	
	comp=Z,6.5nm,0.8s						
KMI	**Kunming**	**57.87**	**304**	P	**P**	**20 03 42.8**	**+1.5**
KMI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
PETK	**Petropavlovsk-**	**57.90**	**3**	P	**P**	**20 03 41.6**	**+0.9**
	comp=Z,4.5nm,0.9s,baz=164,slow=6.8,SNR=4.3						
PETK				LR	LR	20 24 58.5	
	comp=Z,11nm,21.2s,baz=237,slow=32						
MLSI	**Meulaboh, Aceh**	**58.04**	**278**	P	**P**	**20 03 41.2**	**-1.3**
	comp=Z,47nm,0.9s						
CMAR	**Chiang Mai Arr**	**58.82**	**295**	P	**P**	**20 03 49.1**	**+1.4**
	comp=Z,1.4nm,0.8s,baz=113,slow=5.1,SNR=15						
CHTO	**Chiang Mai**	**58.92**	**295**	P	**P**	**20 03 47.2**	**-1.3**
CHTO				IAmb	IAmb	20 03 50.3	
	comp=Z,6.1nm,1.4s						
CD2	**Chengdu**	**59.56**	**310**	P	**P**	**20 03 52.3**	**-0.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	**Hu-ho-hao-te**	**59.72**	**324**	*e*P	**P**	**20 03 55.8**	**+2.1**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,70nm,5.6s						
LZH	**Lanzhou**	**62.00**	**315**	⇑P	**P**	**20 04 10.3**	**+1.0**
LZH				pP	sP	20 04 43.8	-1.1
LZH				sP	PcP	20 05 00.3	+11
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,72nm,4.9s						
LZH				LR	LR		
	comp=Z,200nm,16.3s						
LZH				LR	LR		
	comp=Z,400nm,17.4s						
LZH				LR	LR		
	comp=Z,380nm,16.8s						
MA2	**Magadan**	**64.33**	**358**	P	**P**	**20 04 24.2**	**+0.2**
MA2				IAmb	IAmb	20 04 26.2	
	comp=Z,8.5nm,0.8s						
GTA	**Gaotai**	**66.41**	**317**	⇑P	**P**	**20 04 38.5**	**+0.4**
GTA				pP	PcP	20 05 07.5	+0.5
GTA				sP	sP	20 05 27.3	+13
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,41nm,5.1s						
GTA				LR	LR		
	comp=Z,100nm,17.1s						
GTA				LR	LR		
	comp=Z,100nm,16.5s						
GTA				LR	LR		
	comp=Z,150nm,17.5s						
ULN	**Ulaanbaatar**	**66.61**	**328**	P	**P**	**20 04 39.2**	**0.0**
SONM	**Songino Array**	**66.95**	**327**	P	**P**	**20 04 41.8**	**+0.5**
	comp=Z,1.5nm,0.8s,baz=140,slow=5.5,SNR=11						
SONM	**Songino Array**	**66.95**	**327**	P	**P**	**20 04 41.5**	**+0.2**
SHL	**Shillong**	**67.21**	**300**	P	**P**	**20 04 43.5**	**+0.1**
SEY	**Seymchan**	**67.67**	**359**	P	**P**	**20 04 45.6**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=151,slow=7.5,SNR=4.1						
LSA	**Lhasa**	**69.11**	**304**	P	**P**	**20 04 53.7**	**-2.0**
TAPN	**Taplejung**	**71.31**	**301**	*e*P	**P**	**20 05 08.9**	**0.0**
	comp=Z,30nm,1.0s						
ODAN	**Odare**	**71.45**	**300**	*e*P	**P**	**20 05 10.0**	**+0.3**
	comp=Z,42nm,0.7s						
RAMN	**Ramite**	**72.15**	**300**	*e*P	**P**	**20 05 14.6**	**+0.7**
JIRN	**Jiri**	**72.69**	**301**	*e*P	**P**	**20 05 17.8**	**+0.6**
	comp=Z,26nm,0.9s						
GUN	**Gumba**	**73.02**	**301**	*e*P	**P**	**20 05 19.7**	**+0.5**
	comp=Z,41nm,0.9s						
PKI	**Pulchoki**	**73.34**	**301**	*e*P	**P**	**20 05 20.8**	**-0.2**
PKIN	**Phulchoki**	**73.35**	**301**	*e*P	**P**	**20 05 20.9**	**-0.1**
KKN	**Kakani**	**73.50**	**301**	*e*P	**P**	**20 05 22.1**	**+0.3**
	comp=Z,22nm,0.8s						
DMN	**Daman**	**73.61**	**300**	*e*P	**P**	**20 05 23.0**	**+0.5**
	comp=Z,46nm,1.0s						
GKN	**Gorkha**	**74.11**	**301**	*e*P	**P**	**20 05 25.5**	**+0.2**
KOLN	**Koldanda**	**74.94**	**300**	*e*P	**P**	**20 05 30.2**	**0.0**
DANN	**Dangsing**	**74.94**	**301**	*e*P	**P**	**20 05 30.1**	**-0.2**
	comp=Z,24nm,0.9s						
WMQ	**Urumqi**	**76.49**	**317**	*e*P	**P**	**20 05 39.0**	**+0.5**
WMQ				pP	sP	20 06 12.8	-1.9
WMQ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,79nm,4.3s						
WMQ				LR	LR		
	comp=Z,72nm,23.9s						
WMQ				LR	LR		
	comp=Z,220nm,26.3s						
WMQ	**Urumqi**	**76.49**	**317**	P	**P**	**20 05 38.3**	**-0.2**
WMQ				IAmb	IAmb	20 05 40.2	
	comp=Z,14nm,1.5s						
IMAR	**Indian Mountai**	**80.17**	**19**	P	**P**	**20 05 58.0**	**-0.1**
MK31	**Makanchi Array**	**81.06**	**319**	P	**P**	**20 06 03.2**	**-0.2**
MKAR	**Makanchi Array**	**81.06**	**319**	P	**P**	**20 06 03.5**	**+0.1**
	comp=Z,3.0nm,1.0s,baz=94,slow=7.8,SNR=20						
MKAR	**Makanchi Array**	**81.06**	**319**	P	**P**	**20 06 02.8**	**-0.6**
MAKZ	**Makanchi**	**81.27**	**319**	P	**P**	**20 06 04.2**	**-0.3**
ZAA0	**Zalesovo Array**	**81.80**	**326**	P	**P**	**20 06 05.7**	**-1.4**
ZALV	**Zalesovo Beam**	**81.80**	**326**	P	**P**	**20 06 06.1**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=111,slow=5.8,SNR=7.2						
ZALV	**Zalesovo Beam**	**81.80**	**326**	P	**P**	**20 06 05.9**	**-1.1**
ILAR	**Eielson Array**	**81.90**	**22**	P	**P**	**20 06 06.2**	**-1.2**
	comp=Z,1.5nm,0.9s,baz=256,slow=5.4,SNR=4.7						
ILAR				LR	LR	20 35 36.0	
	comp=Z,25nm,21.6s,baz=312,slow=30						
KSH	**Kashi**	**83.76**	**310**	P	**P**	**20 06 20.3**	**+2.6**
KSH				pP	pwP	20 06 51.8	+2.4
KSH				PP	PP	**20 09 38.0**	**+5.8**
KSH				S	**S**	**20 16 31.0**	**-1.4**
KSH				sS	sS	20 17 29.5	+11
KSH				pmax	pmax		
	comp=Z,18nm,1.0s						
KSH				pmax	pmax		
	comp=Z,300nm,5.4s						
KSH				LR	LR		
	comp=Z,250nm,4.5s						
KSH				LR	LR		
	comp=Z,190nm,4.7s						
KSH				LR	LR		
	comp=Z,290nm,5.2s						
KURK	**Kurchatov**	**84.47**	**322**	P	**P**	**20 06 19.9**	**-1.0**
KURK				IAmb	IAmb	20 08 56.2	
	comp=Z,7.9nm,0.6s						
JIS	**Juneau Island**	**84.73**	**30**	P	**P**	**20 06 22.8**	**+0.9**
NIL	**Nilore**	**84.85**	**304**	P	**P**	**20 06 22.7**	**-0.6**
NIL				IAmb	IAmb	20 06 24.2	
	comp=Z,9.6nm,0.7s						
QSPA	**South Pole Qui**	**85.05**	**180**	P	**P**	**20 06 24.0**	**+0.4**
QSPA				IAmb	IAmb	20 09 23.6	
	comp=Z,22nm,1.9s						
AAK	**Ala-Archa**	**85.46**	**313**	P	**P**	**20 06 26.2**	**0.0**
MAW	**Mawson**	**85.84**	**203**	P	**P**	**20 06 27.5**	**+0.1**
	comp=Z,4.2nm,0.3s,baz=107,slow=5.7,SNR=4.8						
MAW	**Mawson**	**85.84**	**203**	P	**P**	**20 06 27.0**	**-0.4**
MAW				IAmb	IAmb	20 06 32.2	
	comp=Z,16nm,1.9s						
BBB	**Bella Bella**	**86.59**	**37**	LR	LR	20 39 46.3	
	comp=Z,16nm,18.8s,baz=145,slow=32						
YBH	**Yreka Blue Hor**	**88.40**	**48**	LR	LR	20 38 23.5	
	comp=Z,26nm,20.7s,baz=275,slow=30						
KKAR	**Karatay Array**	**88.42**	**313**	P	**P**	**20 06 40.3**	**-0.1**
BRVK	**Borovoye**	**89.99**	**323**	P	**P**	**20 06 46.7**	**-0.7**
BRVK				IAmb	IAmb	20 06 47.2	
	comp=Z,4.4nm,1.1s						
NVAR	**Mina Array Bea**	**91.38**	**52**	P	**P**	**20 06 55.8**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=240,slow=3.6,SNR=2.7						
SYO	**Syowa Base**	**93.89**	**199**	⇑P	**P**	**20 07 03.7**	**-1.5**
YKA	**Yellowknife Ar**	**95.07**	**28**	P	**P**	**20 07 11.4**	**+0.7**
	comp=Z,0.1nm,0.6s,baz=274,slow=4.9,SNR=3.5						
PDAR	**Pinedale Array**	**98.20**	**48**	LR	LR	20 46 08.3	
	comp=Z,22nm,19.4s,baz=278,slow=32						
TAM	**Tamanrasset**	**144.57**	**303**		**PKPab**	**20 13 23.6**	**-0.3**
BDFB	**Brasilia**	**150.28**	**134**	PKPbc	**PKPbc**	**20 13 38.9**	**-1.1**
	comp=Z,1.5nm,0.4s,baz=14,slow=4.2,SNR=3.5						
TOA0	**Torodi Ar. Sit**	**151.28**	**288**		**PKPbc**	**20 13 39.6**	**-2.6**
TORD	**Torodi Ar. Bea**	**151.28**	**288**	PKPbc	**PKPbc**	**20 13 41.3**	**-0.9**
	comp=Z,2.7nm,0.7s,baz=56,slow=2.1,SNR=14						
TORD				PKPab	**PKPab**	**20 13 50.1**	**-0.4**
	comp=Z,2.8nm,0.9s,baz=65,slow=4.5,SNR=7.6						
DBIC	**Dimbokro**	**158.68**	**276**	PKPab	**PKPab**	**20 14 21.4**	**-0.8**
	comp=Z,2.4nm,0.6s,baz=45,slow=4.8,SNR=4.8						

*THE **30** 19:59:07.9,38°19N×20°33E,h0km±2km,ML2.7/5,Error ellipse: s-maj=3.0km s-min=0.4km az=247.0*
*ATH **30** 19:59:07.3,38°20N×20°34E,h8km±1km,ML2.9/5,Error ellipse: s-maj=1.8km s-min=0.9km az=222.0*
ISC 30 19:59:08.1±1.4,38°20N±0°03×20°34E±0°06,h7km±5km, **n29,**σ0§45/48,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.01**	**74**	P	**Pg**	**19 59 09.3**	**-0.1**
KEF3				S	**Sg**	**19 59 10.1**	**-0.2**
KEF4	**Livadi, Kephal**	**0.09**	**50**	P	**Pg**	**19 59 10.2**	**0.0**
KEF4				S	**Sg**	**19 59 11.9**	**+0.2**
ARG2	**Argostoli**	**0.12**	**101**	P	**Pg**	**19 59 10.8**	**+0.1**
ARG2				S	**Sg**	**19 59 12.7**	**+0.2**
KEF2	**Argostoli. Kep**	**0.12**	**107**	P	**Pg**	**19 59 10.9**	**+0.1**
KEF2				S	**Sg**	**19 59 12.6**	**+0.1**
KEF1	**Kardakata, Kep**	**0.13**	**53**	P	**Pg**	**19 59 10.9**	**0.0**
KEF1				S	**Sg**	**19 59 12.5**	**-0.3**
VLS	**Valsamata**	**0.20**	**97**	P	**Pg**	**19 59 11.9**	**-0.2**
VLS				S	**Sg**	**19 59 15.0**	**+0.2**
	7μm,0.2s						
VLS	**Valsamata**	**0.20**	**97**	P	**Pg**	**19 59 12.0**	**-0.1**
VLS				S	**Sg**	**19 59 14.6**	**-0.2**
VLS				AML	AML	19 59 15.2	
	comp=N,19110μm,0.3s						
VLS				AML	AML	19 59 15.2	
	comp=E,8604μm,0.2s						
VSK1	**VASILIKIADES**	**0.27**	**40**	P	**Pg**	**19 59 13.6**	**+0.1**
VSK1				S	**Sg**	**19 59 17.9**	**+0.8**
	comp=E,3μm,0.2s						
FSK	**Fiskardo**	**0.31**	**34**	P	**Pg**	**19 59 14.4**	**+0.2**
FSK				S	**Sg**	**19 59 19.4**	**+1.0**
	comp=E,1μm,0.2s						
FSK	**Fiskardo**	**0.31**	**34**	P	**Pg**	**19 59 14.4**	**+0.2**
FSK				S	**Sg**	**19 59 19.1**	**+0.7**
KFL	**Anninata**	**0.36**	**104**	P	**Pg**	**19 59 15.1**	**-0.1**
KFL				S	**Sg**	**19 59 20.7**	**+0.7**
	comp=E,3μm,

SEY	**Seymchan**	**17.59**	**274**	P	**Pn**	**20 03 49.5**	**-0.2**
	0.3nm,0.3s,baz=74,slow=9.0,SNR=12						
TIXI	**Tiksi**	**21.80**	**310**	P	**P**	**20 04 34.9**	**-1.6**
	3.6nm,0.8s,baz=94,slow=11,SNR=5.2						
YKA	**Yellowknife Ar**	**21.82**	**79**	P	**P**	**20 04 38.2**	**+1.4**
	1.1nm,0.6s,baz=303,slow=9.9,SNR=8.5						
RES	**Resolute Bay**	**22.55**	**41**	P	**P**	**20 04 47.3**	**+2.9**
	1.6nm,0.9s,baz=279,slow=13,SNR=5.0						
RES				LR	LR	20 15 10.4	
	comp=Z,27nm,19.7s,baz=302,slow=41						
NVAR	**Mina Array Bea**	**39.45**	**113**	P	**P**	**20 07 16.8**	**+1.7**
	1.9nm,0.8s,baz=316,slow=7.6,SNR=9.9						
SONM	**Songino Array**	**45.92**	**290**	P	**P**	**20 08 07.3**	**-0.1**
	0.6nm,0.8s,baz=24,slow=7.8,SNR=4.4						
ZALV	**Zalesovo Beam**	**47.68**	**311**	P	**P**	**20 08 20.2**	**-0.7**
	2.5nm,0.7s,baz=32,slow=7.7,SNR=11						
FINES	**FINESS Array B**	**50.78**	**352**	P	**P**	**20 08 44.2**	**-0.2**
	3.7nm,1.0s,baz=26,slow=9.3,SNR=5.7						
BVAR	**Borovoye Array**	**52.35**	**320**	P	**P**	**20 08 56.1**	**-0.2**
	1.4nm,0.6s,baz=34,slow=8.3,SNR=7.9						
KURBB	**Kurchatov Arra**	**52.41**	**313**	P	**P**	**20 08 56.4**	**-0.4**
	3.4nm,0.6s,baz=28,slow=6.9,SNR=33						
TXAR	**Lajitas Array**	**52.91**	**103**	P	**P**	**20 09 02.1**	**+1.2**
	0.5nm,0.8s,baz=355,slow=8.1,SNR=4.9						
MKAR	**Makanchi Array**	**54.78**	**308**	P	**P**	**20 09 13.1**	**-1.2**
	0.9nm,0.7s,baz=38,slow=6.2,SNR=9.8						
AKASG	**Malin Array Be**	**61.29**	**349**	P	**P**	**20 09 59.9**	**+0.2**
	1.8nm,0.9s,baz=4.3,slow=6.8,SNR=4.8						
GERES	**GERESS Array B**	**63.73**	**360**	P	**P**	**20 10 17.7**	**+1.5**
	0.6nm,0.8s,baz=343,slow=4.2,SNR=5.6						
CMAR	**Chiang Mai Arr**	**74.84**	**281**	P	**P**	**20 11 24.0**	**-1.3**
	0.4nm,0.6s,baz=4.1,slow=6.4,SNR=7.5						
RAO	**Raoul Island**	**97.10**	**190**	LR	LR	20 57 02.9	
	comp=Z,267nm,18.9s,baz=46,slow=35						

*DJA **30** 20:06:02.9±2.4, 0.7°N±3.3°×12.5°E±.5°, h21km±24km, M4.3/19, mB4.7/1, mb4.3/8, MLv4.3/19, MLv4.4/3, Mw(mB)4.0/1*
*IDC **30** 20:06:04.2±2.8, 0.4°8N×125.4°42E, h75km±28km, mb3.5/10, mb1 3.7/12, mb1mx3.4/50, mbtmp3.9/12, Error ellipse: s-maj=23.7km s-min=15.0km az=57.0*
*NEIC **30** 20:06:04.9±1.4, 0.4°40N±0.7°10W×125.4°54E±0.7°07, h90km±10km, mb4.5/18, Error ellipse: s-maj=14.0km s-min=10.2km az=171.0*

ISC 30 20:06:04.0±0.5, 0.4°42N±0.7°05W×125.4°51E±0.7°05, h73km, n66, σ1§19/69, mb4.3/23, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.54**	**276**	P	**Pn**	**20 06 28.0**	**-1.6**
TNTI	**Ternate**	**1.89**	**79**	P	**Pn**	**20 06 34.0**	**-0.3**
TNTI	**Ternate**	**1.89**	**79**		**Pn**	**20 06 35.1**	**+0.8**
LBMI	**Labuha**	**2.25**	**118**	P	**Pn**	**20 06 39.0**	**-0.2**
SANI	**Sanana**	**2.50**	**169**	P	**Pn**	**20 06 40.6**	**-2.0**
LUWI	**Luwuk**	**3.10**	**242**	P	**Pn**	**20 06 50.9**	**+0.2**
LUWI	**Luwuk**	**3.10**	**242**	Pn	**Pn**	**20 06 51.5**	**+0.8**
MRSI	**Marisa**	**3.57**	**271**	P	**Pn**	**20 06 56.0**	**-1.1**
NLAI	**Namlea**	**3.97**	**156**	P	**Pn**	**20 07 01.1**	**-1.4**
APSI	**Ampana**	**4.08**	**251**	P	**Pn**	**20 07 04.6**	**+0.5**
AAI	**Ambon**	**4.89**	**147**	P	**Pn**	**20 07 15.2**	**+0.1**
MSAI	**Masohi**	**5.07**	**138**	P	**Pn**	**20 07 18.9**	**+1.3**
	0.1nm798nm36nm,0.5s						
MPSI	**Mapaga**	**5.61**	**269**	P	**Pn**	**20 07 26.1**	**+1.1**
SWI	**Sorong**	**5.89**	**103**	P	**Pn**	**20 07 30.7**	**+1.9**
	0.1nm18nm,0.7s						
SIJI	**Sorong**	**5.90**	**103**	P	**Pn**	**20 07 31.1**	**+2.3**
	3.0nm,0.3s,baz=275,slow=15,SNR=12						
SKMP	**Bagumbayan, Su**	**6.13**	**351**	*eP*	**Pn**	**20 07 31.7**	**-0.4**
SKMP				*eS*	**Sn**	**20 08 40.4**	**-0.5**
KCP	**Kidapawan**	**6.55**	**356**	*i* P	**Pn**	**20 07 41.1**	**+3.1**
BNDI	**Bandanaira**	**6.59**	**138**	P	**Pn**	**20 07 39.4**	**+1.1**
	1.2nm337nm,1.5s						
TTSI	**Tana Toraja**	**6.65**	**239**	P	**Pn**	**20 07 38.9**	**-0.3**
	0.2nm0.2nm46nm,0.7s						
SPSI	**Sidrap Palu**	**7.21**	**233**	P	**Pn**	**20 07 46.7**	**-0.1**
	0.1nm28nm,0.7s						
BNSI	**Bone**	**7.22**	**228**	P	**Pn**	**20 07 46.8**	**-0.2**
	0.2nm26nm,2.2s						
FAKI	**Fak Fak**	**7.51**	**116**	Pn	**Pn**	**20 07 50.8**	**-0.2**
BKSI	**Bulukumba**	**7.84**	**223**	P	**Pn**	**20 07 55.4**	**-0.1**
	0.2nm18nm,1.7s						
KAPI	**Kappang**	**7.89**	**227**	P	**Pn**	**20 07 56.8**	**+0.7**
	1.7nm,0.3s,baz=41,slow=3.3,SNR=5.2						
KAPI				S	**Sn**	**20 09 23.5**	**-0.5**
	0.7nm,0.3s,baz=221,slow=20,SNR=1.9						
KKM	**Kota Kinabalu**	**10.83**	**301**	Pn	**Pn**	**20 08 40.0**	**+3.7**
SBUM	**Sibu**	**13.44**	**279**	P	**P**	**20 09 21.3**	**+2.8**
MTN	**Manton Dam**	**14.31**	**157**	Pn	**Pn**	**20 09 22.7**	**-0.5**
KSM	**Kuching**	**15.23**	**274**	P	**P**	**20 09 39.8**	**+1.3**
KSM				IAmb	IAmb	20 09 43.8	
	comp=Z,21nm,1.0s						
CISI	**Cisompet, Garu**	**19.34**	**245**	P	**P**	**20 10 22.4**	**-1.5**
DLV	**T Lat**	**20.41**	**305**	P	**P**	**20 10 36.0**	**+0.4**
WB0	**Warramunga Arr**	**21.87**	**157**	P	**P**	**20 10 50.7**	**-0.3**
WRAB	**Tennant Creek**	**22.01**	**157**	P	**P**	**20 10 52.5**	**0.0**
WRA	**Warramunga Arr**	**22.01**	**157**	P	**P**	**20 10 52.0**	**-0.5**
	comp=Z,2.0nm,0.5s,baz=337,slow=11,SNR=20						
WRA	**Warramunga Arr**	**22.01**	**157**	P	**P**	**20 10 51.9**	**-0.7**
WB2	**Warramunga Arr**	**22.02**	**157**	P	**P**	**20 10 52.5**	**-0.1**
WB2				IAmb	IAmb	20 11 06.8	
	comp=Z,33nm,1.8s						
WR0	**Warramunga Arr**	**22.11**	**157**	P	**P**	**20 10 52.6**	**-0.9**
WR0				IAmb	IAmb	20 11 08.5	
	comp=Z,44nm,1.8s						
TPUB	**Ta-pu**	**23.23**	**349**	P	**P**	**20 11 02.4**	**-2.8**
TPUB				IAmb	IAmb	20 11 16.7	
	comp=Z,59nm,2.0s						
IPM	**Ipoh**	**24.79**	**280**	P	**P**	**20 11 18.3**	**-1.1**
AS31	**Alice Springs**	**25.30**	**162**	P	**P**	**20 11 25.1**	**+1.2**
ASAR	**Alice Springs**	**25.30**	**162**	P	**P**	**20 11 25.5**	**+1.5**
	comp=Z,1.8nm,0.5s,baz=338,slow=8.3,SNR=25						
ASAR				PcP	**PcP**	**20 14 57.0**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=346,slow=2.2,SNR=4.9						
ASAR	**Alice Springs**	**25.30**	**162**	P	**P**	**20 11 24.4**	**+0.4**
CMAR	**Chiang Mai Arr**	**31.65**	**306**	P	**P**	**20 12 20.1**	**-0.5**
	comp=Z,0.2nm,0.6s,baz=124,slow=7.7,SNR=3.6						
STKA	**Stephens Creek**	**35.55**	**156**	P	**P**	**20 12 53.9**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=318,slow=12,SNR=3.6						
STKA	**Stephens Creek**	**35.55**	**156**	P	**P**	**20 12 53.7**	**-0.6**
TAPN	**Taplejung**	**45.08**	**310**	*eP*	**P**	**20 14 13.3**	**-0.2**
	comp=Z,2.9nm,0.5s						
ODAN	**Odare**	**45.08**	**309**	*eP*	**P**	**20 14 14.2**	**+0.7**
	comp=Z,2.4nm,0.4s						
RAMN	**Ramite**	**45.74**	**308**	*eP*	**P**	**20 14 19.2**	**+0.5**
	comp=Z,6.1nm,0.6s						
JIRN	**Jiri**	**46.40**	**309**	*eP*	**P**	**20 14 24.1**	**+0.1**
	comp=Z,6.0nm,0.5s						
GUN	**Gumba**	**46.77**	**309**	*eP*	**P**	**20 14 26.8**	**0.0**
PKI	**Pulchoki**	**46.97**	**309**	*eP*	**P**	**20 14 28.1**	**-0.3**
GKN	**Gorkha**	**47.78**	**309**	*eP*	**P**	**20 14 34.6**	**+0.1**
KOLN	**Koldanda**	**48.48**	**308**	*eP*	**P**	**20 14 40.3**	**+0.3**
	comp=Z,10nm,0.6s						
DANN	**Dangsing**	**48.62**	**309**	*eP*	**P**	**20 14 41.2**	**+0.1**
	comp=Z,13nm,0.6s						
SONM	**Songino Array**	**50.06**	**343**	P	**P**	**20 14 50.5**	**-1.0**
	comp=Z,0.3nm,0.6s,baz=150,slow=6.3,SNR=3.1						
MK31	**Makanchi Array**	**59.60**	**327**	P	**P**	**20 15 59.8**	**-0.6**
MK31				IAmb	IAmb	20 17 56.3	
	comp=Z,7.1nm,1.9s						
MKAR	**Makanchi Array**	**59.60**	**327**	P	**P**	**20 15 59.8**	**-0.6**
	comp=Z,1.1nm,0.4s,baz=122,slow=8.2,SNR=34						
MKAR	**Makanchi Array**	**59.60**	**327**	P	**P**	**20 15 59.6**	**-0.8**
MAKZ	**Makanchi**	**59.78**	**327**	P	**P**	**20 16 00.8**	**-0.9**
MAKZ				IAmb	IAmb	20 16 03.9	
	comp=Z,4.6nm,1.4s						
ZALV	**Zalesovo Beam**	**62.99**	**334**	P	**P**	**20 16 22.1**	**-1.0**
	comp=Z,0.4nm,0.4s,baz=132,slow=4.2,SNR=3.9						
KURBB	**Kurchatov Arra**	**63.88**	**329**	P	**P**	**20 16 28.3**	**-0.7**
	comp=Z,1.2nm,0.4s,baz=134,slow=6.6,SNR=31						
KURK	**Kurchatov**	**63.89**	**329**	P	**P**	**20 16 28.6**	**-0.5**
KURK				IAmb	IAmb	20 16 31.1	
	comp=Z,4.2nm,0.5s						
BVAR	**Borovoye Array**	**69.44**	**328**	P	**P**	**20 17 03.9**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=151,slow=7.3,SNR=4.1						
BRVK	**Borovoye**	**69.51**	**328**	P	**P**	**20 17 02.8**	**-2.0**
BRVK				IAmb	IAmb	20 19 28.0	
	comp=Z,12nm,1.9s						
ABKAR	**Akbulak array**	**73.95**	**322**	P	**P**	**20 17 30.6**	**-0.9**
ABKAR	**Akbulak array**	**73.95**	**322**	P	**P**	**20 17 31.2**	**-0.3**
ABKAR				IAmb	IAmb	20 18 57.4	
	comp=Z,6.1nm,1.6s						
AKTO	**Aktyubinsk**	**75.50**	**322**	P	**P**	**20 17 38.6**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=101,slow=9.5,SNR=4.7						

*IDC **30** 20:12:31.6±0.7, 7.2°42N×59.2°62E, h0km, mb4.1/26, mb1 4.3/27, mb1mx4.1/54, mbtmp4.1/27, ML3.1/1, MS3.9/19, Ms1 3.9/19, ms1mx3.7/39, Error ellipse: s-maj=18.3km s-min=14.6km az=146.0*
*MOS **30** 20:12:32.1±1.1, 7.5°52N×59.5°50E, h10km, mb4.8/20, Error ellipse: s-maj=10.2km s-min=5.1km az=105.4*
*NEIC **30** 20:12:33.0±1.9, 7.4°4N±0.1°×59.7°E±0.1°, h10km±1km, mb4.6/34, Error ellipse: s-maj=18.1km s-min=17.3km az=220.0*
*GCMT **30** 20:12:35.0±0.2, 7.4°44N±0.03°×59.6°56E±0.02°, h12km, MW4.9/81, Moment Tensor Solution. s22,c27; s81,c128; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-1.97±.10; Mθθ-0.44±.09; Mφφ2.41±.08; Mrθ1.29±.34; Mφθ-1.59±.08; Mφr-0.26±.25; Best double couple: Mo3.00700×10^16 NP1:φs186.00000°, δ46.00000°, λ-42.00000°. NP2: φs308.00000°, δ61.00000°, λ-128.00000°. Principal axes: T 3.2380, Plg9.0000°, Azm64.0000°; N -0.4600, Plg32.0000°, Azm328.0000°; P -2.7750, Plg56.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 30 20:12:35.5±0.6, 7.6°36N±0.08°×59.6°63E±0.06°, h25km, n224, σ1§34/219, mb4.5/85, MS4.0/20, 20C-11D, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCY	**Socotra**	**7.34**	**311**	Pn	**Pn**	**20 14 23.6**	**+2.3**
WSAR	**Wadi Sarin**	**15.82**	**357**	Pn	**Pn**	**20 16 16.6**	**-0.1**
	0.1nm,0.3s,baz=192,slow=12,SNR=6.2						
WSAR				LR	LR	20 21 18.9	
	comp=Z,145nm,18.1s,baz=193,slow=34						
GOA	**Goa**	**16.08**	**59**	*eP*	**P**	**20 16 22.7**	**-0.5**
GOA				*i* x	x	20 19 51.1	
ALNE	**Al Ain**	**17.01**	**348**	*i* P	**P**	**20 16 33.5**	**-0.1**
	SNR=7.7						
ATD	**Arta Tunnel**	**17.06**	**285**	P	**P**	**20 16 37.6**	**+3.4**
	0.7nm,0.3s,baz=90,slow=21,SNR=3.9						
ATD				LR	LR	20 22 10.3	
	comp=Z,554nm,18.7s,baz=104,slow=34						
ATD	**Arta Tunnel**	**17.06**	**285**	P	**Pn**	**20 16 30.7**	**-1.9**
TRD	**Trivandrum**	**17.20**	**85**	*eP*	**P**	**20 16 41.1**	**+5.4**
ASUD	**Al Ashush, Dub**	**17.65**	**347**	P	**Pn**	**20 16 39.0**	**-0.9**
HATD	**Hatta, Dubai**	**17.69**	**349**	*i* P	**P**	**20 16 40.7**	**-0.3**
	SNR=6.1						
H08N2	**Diego Garcia H**	**17.71**	**140**	T	T	20 34 44.3	
	baz=320,slow=76,SNR=171						
H08N3	**Diego Garcia H**	**17.72**	**140**	T	T	20 34 43.4	
	baz=320,slow=76,SNR=198						
H08N1	**Diego Garcia H**	**17.73**	**140**	T	T	20 34 46.0	
	baz=320,slow=76,SNR=201						
POO	**Poona**	**17.74**	**50**	*ex*	**Pn**	**20 16 34.4**	**-6.6**
POO				*i* x	x	20 20 33.6	
UOSS	**Minazif**	**17.79**	**350**	P	**Pn**	**20 16 39.7**	**-1.9**
UOSS	**Minazif**	**17.79**	**350**		**Pn**	**20 16 40.2**	**-1.4**
NAZ	**Nazwa, Dubai**	**17.93**	**348**	P	**Pn**	**20 16 42.8**	**-0.5**
MSFE	**Esma-Masafi**	**18.20**	**350**	*i* P	**Pn**	**20 16 46.3**	**-0.3**
	SNR=8.4						
BHUJ	**Bhuj**	**18.51**	**30**	*eP*	**P**	**20 16 47.8**	**-2.3**
BHUJ				IAmb	IAmb	20 16 54.9	
	comp=Z,18nm,0.9s						
BHUJ				*eS*	**S**	**20 20 22.4**	**+2.5**
BHUJ				*i* x	x	20 21 13.9	
URV	**Uravakonda**	**18.86**	**65**	*eP*	**P**	**20 16 53.5**	**-0.5**
URV				IAmb	IAmb	20 16 54.8	
	comp=Z,13nm,1.1s						
URV				IVMs_BB	IVMs_BB	20 23 02.2	
	comp=Z,452nm,16.1s						
KLRI	**Killari**	**19.66**	**56**	*eP*	**P**	**20 17 02.8**	**-0.1**
KLRI				IAmb	IAmb	20 17 04.4	
	comp=Z,22nm,1.4s						
KLRI				IVMs_BB	IVMs_BB	20 22 51.9	
	comp=Z,268nm,16.0s						
SKHT	**Srikalahasti**	**20.73**	**71**	*eP*	**P**	**20 17 14.7**	**+0.3**
SKHT				IAmb	IAmb	20 17 16.2	
	comp=Z,28nm,1.9s						
SKHT				IVMs_BB	IVMs_BB	20 24 25.1	
	comp=Z,185nm,12.5s						
SRLM	**Srisailam**	**20.75**	**64**	*eP*	**P**	**20 17 14.9**	**+0.3**
SRLM				IAmb	IAmb	20 17 17.2	
	comp=Z,8.9nm,1.0s						
SRLM				IVMs_BB	IVMs_BB	20 24 19.5	
	comp=Z,262nm,14.7s						
HYB	**Hyderabad**	**20.99**	**60**	*i* P	**P**	**20 17 17.0**	**-0.3**
HYB	**Hyderabad**	**20.99**	**60**	*eP*	**P**	**20 17 18.2**	**+0.9**
HYB				IAmb	IAmb	20 17 20.2	
	comp=Z,20nm,1.0s						
HYB				*eS*	Sn	20 21 22.8	+6.1
HYB				*i* x	x	20 22 25.4	
HYBB	**Hyderabad (bro**	**20.99**	**60**	*eP*	**P**	**20 17 17.6**	**+0.4**
HYBB				IAmb	IAmb	20 17 19.7	
	comp=Z,12nm,1.0s						
HYBB				IVMs_BB	IVMs_BB	20 24 07.9	
	comp=Z,244nm,17.4s						
RAYN	**Ar Rayn**	**21.03**	**321**	P	**P**	**20 17 16.2**	**-1.5**
RAYN				pmax	pmax		
	comp=Z,29nm,1.0s						
RAYN	**Ar Rayn**	**21.03**	**321**	*i* P	**P**	**20 17 16.0**	**-1.6**
	SNR=32						
RAYN	**Ar Rayn**	**21.03**	**321**	P	**P**	**20 17 16.2**	**-1.5**
RAYN				IAmb	IAmb	20 17 17.2	
	comp=Z,29nm,1.0s						
NJS	**Nagarjunasagar**	**21.29**	**63**	*eP*	**P**	**20 17 20.8**	**+0.3**
NJS				IAmb	IAmb	20 17 23.9	
	comp=Z,13nm,1.4s						
NJS				IVMs_BB	IVMs_BB	20 24 10.5	
	comp=Z,262nm,17.4s						
SRSP	**Sriramsagar**	**21.52**	**56**	*eP*	**P**	**20 17 23.5**	**+0.5**
SRSP				IAmb	IAmb	20 17 24.6	
	comp=Z,11nm,1.2s						
SRSP				IVMs_BB	IVMs_BB	20 23 48.1	
	comp=Z,186nm,20.2s						
ADKI	**Addanki**	**21.62**	**65**	*eP*	**P**	**20 17 24.7**	**+0.7**
ADKI				IAmb	IAmb	20 17 25.8	
	comp=Z,12nm,1.0s						
ADKI				IVMs_BB	IVMs_BB	20 24 21.8	
	comp=Z,236nm,14.9s						
RPR	**Rampur**	**22.27**	**57**	*eP*	**P**	**20 17 31.4**	**+0.4**
RPR				IAmb	IAmb	20 17 32.5	
	comp=Z,18nm,1.1s						
MYLAV	**Mylavaram**	**22.54**	**64**	*eP*	**P**	**20 17 34.2**	**+0.3**
MYLAV				IAmb	IAmb	20 17 39.5	
	comp=Z,16nm,1.2s						
MYLAV				IVMs_BB	IVMs_BB	20 25 16.0	
	comp=Z,196nm,13.3s						
GGR	**Gangavaram**	**22.58**	**61**	*eP*	**P**	**20 17 33.8**	**-0.6**
GGR				IAmb	IAmb	20 17 39.9	
	comp=Z,23nm,1.0s						
GGR				IVMs_BB	IVMs_BB	20 24 37.5	
	comp=Z,209nm,19.9s						
BHPL	**Bhopal**	**23.28**	**45**	*eP*	**P**	**20 17 41.5**	**0.0**
BHPL				IAmb	IAmb	20 17 48.1	
	comp=Z,7.7nm,0.6s						
BHPL				*eS*	**S**	**20 21 58.1**	**+5.6**
PVM	**Polavaram**	**23.60**	**63**	*eP*	**P**	**20 17 45.5**	**+0.8**
PVM				IAmb	IAmb	20 17 47.5	
	comp=Z,51nm,2.2s						
PVM				IVMs_BB	IVMs_BB	20 25 10.7	
	comp=Z,193nm,22.1s						
KMBO	**Kilima Mbogo**	**23.86**	**250**	P	**P**	**20 17 47.9**	**+0.4**
KMBO				pmax	pmax		
	comp=Z,11nm,0.9s						
KMBO	**Kilima Mbogo**	**23.86**	**250**	P	**P**	**20 17 47.5**	**0.0**
	comp=Z,9.5nm,0.8s,baz=55,slow=13,SNR=22						
KMBO				LR	LR	20 26 06.3	
	comp=Z,685nm,21.8s,baz=92,slow=34						
KMBO	**Kilima Mbogo**	**23.86**	**250**	*i* P	**P**	**20 17 49.1**	**+1.6**
	SNR=11						
KMBO	**Kilima Mbogo**	**23.86**	**250**	P	**P**	**20 17 47.9**	**+0.4**
KMBO				IAmb	IAmb	20 17 51.8	
	comp=Z,11nm,0.9s						
HRA	**Herat**	**27.00**	**5**	P	**P**	**20 18 16.3**	**+0.5**
KBL	**Kabul**	**28.41**	**16**	P	**P**	**20 18 29.5**	**+1.1**
KBL				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KBL	**Kabul**	**28.41**	**16**	P	**P**	**20 18 29.5**	**+1.1**
OPO	**Ambohidratompo**	**28.54**	**205**	LR	LR	20 27 02.0	
	comp=Z,330nm,18.9s,baz=198,slow=30						
MBAR	**Mbarara**	**29.88**	**256**	LR	LR	20 31 58.5	
	comp=Z,334nm,18.2s,baz=82,slow=39						
GEYT	**Alibeck**	**30.46**	**358**	P	**P**	**20 18 46.7**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=191,slow=6.8,SNR=4.9						

GEYT				LR	LR	20 30 37.6	
	comp=Z,49nm,20.1s,baz=180,slow=36						
GEYT	**Alibeck**	**30.46**	**358**	P	**P**	**20 18 46.6**	**+0.2**
ASF	**Jabal al Asfar**	**32.51**	**322**	P	**P**	**20 19 05.5**	**+0.9**
ASF				pmax	pmax		
	comp=Z,7.0nm,1.5s						
BTK	**Batken**	**34.07**	**15**	P	**P**	**20 19 19.1**	**+1.1**
BTK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BTK	**Batken**	**34.07**	**15**	P	**P**	**20 19 19.1**	**+1.1**
BTK				IAmb	IAmb	20 19 29.2	
	comp=Z,5.6nm,0.9s						
KSH	**Kashi**	**35.22**	**22**	P	**P**	**20 19 31.5**	**+3.4**
KSH				pP	sP	20 19 37.5	+0.2
KSH				PP	**PP**	**20 20 48.8**	**+0.5**
KSH				S	**S**	**20 25 05.0**	**+4.7**
KSH				sS	sS	20 25 10.3	-0.6
KSH				SS	**SnSn**	**20 27 15.5**	**-3.3**
KSH	**Kashi**	**35.22**	**22**	ScS	ScS	20 29 41.0	-6.2
KSH				pmax	pmax		
	comp=Z,13nm,0.8s						
KSH				pmax	pmax		
	comp=Z,230nm,4.7s						
KSH				LR	LR		
	comp=N,240nm,4.7s						
KSH				LR	LR		
	comp=E,280nm,6.2s						
KSH				LR	LR		
	comp=Z,420nm,5.8s						
KK31	**Karatay Array**	**36.87**	**13**	P	**P**	**20 19 43.1**	**+1.1**
KK31				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KK31	**Karatay Array**	**36.87**	**13**	P	**P**	**20 19 43.1**	**+1.1**
KK31				IAmb	IAmb	20 19 53.2	
	comp=Z,7.4nm,1.1s						
KKAR	**Karatay Array**	**36.87**	**13**	P	**P**	**20 19 42.9**	**+1.0**
KKAR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KKAR	**Karatay Array**	**36.87**	**13**	P	**P**	**20 19 42.8**	**+0.8**
KKAR	**Karatay Array**	**36.87**	**13**	P	**P**	**20 19 42.9**	**+1.0**
KKAR				IAmb	IAmb	20 19 53.2	
	comp=Z,7.4nm,1.1s						
LSA	**Lhasa**	**37.02**	**49**	P	**P**	**20 19 44.8**	**+0.8**
LSA				pmax	pmax		
	comp=Z,35nm,1.0s						
LSA	**Lhasa**	**37.02**	**49**	P	**P**	**20 19 44.5**	**+0.5**
LSA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LSA	**Lhasa**	**37.02**	**49**	P	**P**	**20 19 44.3**	**+0.2**
LSA	**Lhasa**	**37.02**	**49**	P	**P**	**20 19 44.5**	**+0.5**
LSA				IAmb	IAmb	20 19 53.0	
	comp=Z,8.9nm,1.0s						
AAK	**Ala-Archa**	**37.50**	**18**	P	**P**	**20 19 48.6**	**+1.0**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AAK	**Ala-Archa**	**37.50**	**18**	P	**P**	**20 19 49.2**	**+1.6**
	comp=Z,3.6nm,1.0s,baz=195,slow=8.4,SNR=6.6						
AAK	**Ala-Archa**	**37.50**	**18**	P	**P**	**20 19 49.1**	**+1.5**
AAK	**Ala-Archa**	**37.50**	**18**	P	**P**	**20 19 48.6**	**+1.0**
FRU1	**Bishkek**	**37.70**	**18**	P	**P**	**20 19 47.7**	**-1.4**
FRU1				pmax	pmax		
	comp=Z,17nm,1.4s						
FRU1	**Bishkek**	**37.70**	**18**	P	**P**	**20 19 47.7**	**-1.4**
FRU1				IAmb	IAmb	20 19 58.6	
	comp=Z,17nm,1.4s						
LSZ	**Lusaka**	**38.43**	**234**	P	**P**	**20 19 56.8**	**+1.2**
	comp=Z,1.5nm,0.8s,baz=50,slow=9.1,SNR=3.2						
KBZ	**Khabaz**	**39.08**	**341**	*i* P	**P**	**20 20 00.1**	**-0.5**
KBZ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KBZ	**Khabaz**	**39.08**	**341**	P	**P**	**20 20 00.5**	**-0.1**
	comp=Z,6.5nm,1.0s,baz=161,slow=6.3,SNR=4.1						
KBZ				LR	LR	20 37 28.1	
	comp=Z,64nm,18.9s,baz=230,slow=38						
KIV	**Kislovodsk**	**39.35**	**341**	*eP*	**P**	**20 20 02.3**	**-0.7**
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
KIV				MLR	MLR		
	comp=Z,145nm,16.0s						
KIV	**Kislovodsk**	**39.35**	**341**	P	**P**	**20 20 03.8**	**+0.8**
BRTR	**Keskin Array B**	**39.77**	**328**	*ceP*	**P**	**20 20 06.6**	**0.0**
BRTR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRTR	**Keskin Array B**	**39.77**	**328**	P	**P**	**20 20 06.2**	**-0.4**
	comp=Z,6.1nm,1.0s,baz=159,slow=7.9,SNR=14						
BRTR	**Keskin Array B**	**39.77**	**328**	P	**P**	**20 20 05.2**	**-1.4**
BR131	**Keskin Array S**	**39.77**	**328**	P	**P**	**20 20 06.2**	**-0.4**
BR131				pmax	pmax		
	comp=Z,29nm,1.7s	

VTS	Vitosha	47.53 324	⇑P		P	20 21 08.9	-0.1
VTS	Vitosha	47.53 324	P		P	20 21 08.7	-0.4
VRI	Vrincioaia	47.70 329	⇓P		P	20 21 10.6	+0.4
VRI	Vrincioaia	47.70 329	⇓P		P	20 21 10.6	+0.4
HUMR	Humele	47.73 327	⇑P		P	20 21 10.5	+0.1
PLOR	Plostina	47.73 329	⇑P		P	20 21 11.2	+0.7
PLOR	Plostina	47.73 329	⇑P		P	20 21 11.2	+0.7
MLR	Muntele Rosu	47.85 328	P		P	20 21 11.3	-0.2
	comp=Z,10nm,0.9s,baz=145,slow=7.6,SNR=10						
MLR	Muntele Rosu	47.85 328	⇓P		P	20 21 11.9	+0.4
TESR	Tescani	48.19 330	⇓P		P	20 21 13.7	-0.3
VOIR		48.29 328	P		P	20 21 14.4	-0.4
VOIR			pmax	pmax			
	comp=Z,12nm,1.2s						
VOIR		48.29 328	⇓P		P	20 21 14.1	-0.7
DOPR	Dopca	48.46 328	⇓P		P	20 21 15.2	-0.8
ARR	Arges	48.47 327	⇑P		P	20 21 15.6	-0.5
SORM	Soroca	48.52 332	⇑P		P	20 21 15.0	-1.4
SORM	Soroca	48.52 332	⇑P		P	20 21 15.0	-1.4
BOSA	Boshof	48.77 221	LR		LR	20 40 33.4	
	comp=Z,213nm,19.4s,baz=40,slow=34						
ARU	Arti	48.95 359	*d* *i* P		P	20 21 18.8	-0.8
ARU						20 23 10.5	
ARU			S		S	20 28 24.3	+2.3
ARU			pmax	pmax			
	comp=Z,10.0nm,1.1s						
ARU	Arti	48.95 359	P		P	20 21 18.9	-0.6
	comp=Z,1.9nm,0.8s,baz=168,slow=3.1,SNR=8.0						
ARU	Arti	48.95 359	P		P	20 21 18.9	-0.6
ARU			IAmb		IAmb	20 21 32.4	
	comp=Z,7.3nm,0.9s						
LOT	Lotru	48.98 327	⇑P		P	20 21 19.0	-1.2
PRAR	RASCA	48.98 330	⇓P		P	20 21 20.1	0.0
GZR	Gura Zlata	49.49 326	⇓P		P	20 21 23.5	-0.5
GZR	Gura Zlata	49.49 326	⇓P		P	20 21 23.5	-0.5
BURAR	Bucovina Array	49.66 330	⇑P		P	20 21 25.5	+0.2
BURAR	Bucovina Array	49.66 330	⇑P		P	20 21 25.5	+0.2
BURAR	Bucovina Array	49.66 330	P		P	20 21 24.8	-0.5
BUR08	Bucovina Ar. S	49.68 330	P		P	20 21 25.3	-0.2
BUR08			IAmb		IAmb	20 21 44.2	
	comp=Z,24nm,1.7s						
ARCR	ARCALIA	49.74 329	⇑P		P	20 21 25.8	0.0
AKASG	Malin Array Be	50.04 335	P		P	20 21 26.5	-1.5
AKASG			pmax	pmax			
	comp=Z,2.0nm,1.1s						
AKASG	Malin Array Be	50.04 335	P		P	20 21 26.8	-1.2
	comp=Z,5.8nm,0.9s,baz=129,slow=6.6,SNR=24						
AKASG	Malin Array Be	50.04 335	P		P	20 21 26.5	-1.5
AKBB	Malin Array Si	50.04 335	P		P	20 21 27.1	-0.9
AKBB			pmax	pmax			
	comp=Z,16nm,1.0s						
AKBB	Malin Array Si	50.04 335	P		P	20 21 27.1	-0.9
BZS	Buzias	50.27 326	⇑P		P	20 21 28.4	-1.5
BZS	Buzias	50.27 326	⇑P		P	20 21 28.4	-1.5
ZAA0	Zalesovo Array	50.71 19	P		P	20 21 32.4	-0.6
ZAA0			IAmb		IAmb	20 21 36.4	
	comp=Z,7.2nm,1.2s						
ZALV	Zalesovo Beam	50.71 19	P		P	20 21 32.6	-0.4
	comp=Z,2.7nm,0.9s,baz=229,slow=8.6,SNR=11						
ZALV			LR		LR	20 44 05.0	
	comp=Z,96nm,18.2s,baz=207,slow=37						
ZALV	Zalesovo Beam	50.71 19	P		P	20 21 32.5	-0.6
OBN	Obninsk	51.06 343	⇑ *i* P		P	20 21 35.5	-0.1
OBN			*e*			20 23 32.6	
OBN			pmax	pmax			
	comp=Z,12nm,1.1s						
MOS	Moscow	51.31 344	*e*P		P	20 21 35.3	-2.2
MOS			pmax	pmax			
	comp=Z,52nm,1.3s						
TRPA	Tarpa	51.35 329	⇑P		P	20 21 37.7	-0.3
KIRV	Kirov	51.70 353	*i* P		P	20 21 39.5	-0.8
UZH	Uzhgorod	51.80 329	*e*P		P	20 21 41.1	-0.2
KOLS	Kolonicke sedl	52.00 329	*e*P		P	20 21 42.8	0.0
KOLS			pmax	pmax			
	comp=Z,16nm,1.2s						
KOLS	Kolonicke sedl	52.00 329	*e*P		P	20 21 42.8	0.0
KWP	Kalwaria Pacla	52.24 330	P		P	20 21 44.2	-0.4
KWP	Kalwaria Pacla	52.24 330	P		P	20 21 44.1	-0.4
CRVS	Cervenica-Dubn	52.40 329	*e*P		P	20 21 45.9	+0.1
CRVS			pmax	pmax			
	comp=Z,35nm,1.8s						
CRVS	Cervenica-Dubn	52.40 329	*e*P		P	20 21 45.9	+0.1
XAN	Xi'an	52.55 52	P		P	20 21 46.8	-0.4
XAN			pP		pwP	20 22 09.8	+11
XAN			PP		PP	20 23 55.8	+9.5
XAN			S		S	20 29 12.5	-0.4
XAN	Xi'an	52.55 52	SS		SS	20 32 49.5	-1.8
XAN			pmax	pmax			
	comp=Z,10.0nm,1.4s						
XAN			LR		LR		
	comp=N,170nm,22.8s						
XAN			LR		LR		
	comp=E,150nm,22.8s						
XAN			LR		LR		
	comp=Z,190nm,19.9s						
XAN	Xi'an	52.55 52	P		P	20 21 46.9	-0.3
XAN			pmax	pmax			
	comp=Z,14nm,1.2s						
XAN	Xi'an	52.55 52	P		P	20 21 46.9	-0.3
XAN			IAmb		IAmb	20 21 50.6	
	comp=Z,14nm,1.2s						
VYHS	Vyhne	53.52 327	*e*P		P	20 21 53.2	-0.9
VYHS			pmax	pmax			
	comp=Z,6.0nm,1.2s						
VYHS	Vyhne	53.52 327	*e*P		P	20 21 53.2	-0.9
LANS	Liptovska Anna	53.58 328	*e*P		P	20 21 54.5	0.0
LANS			pmax	pmax			
	comp=Z,6.0nm,1.3s						
LANS	Liptovska Anna	53.58 328	*e*P		P	20 21 54.5	0.0
KEST	Kesra	53.87 309	LR		LR	20 44 01.6	
	comp=Z,70nm,19.0s,baz=319,slow=35						
MODS	Modra-Piesok	54.30 326	*e*P		P	20 21 58.0	-1.7
MODS			pmax	pmax			
	comp=Z,8.0nm,0.9s						
MODS	Modra-Piesok	54.30 326	*e*P		P	20 21 58.0	-1.7
ARSA	Arzberg	54.66 324	*i* P		P	20 22 02.1	-0.3
	comp=Z,2.9nm,0.7s						
CONA	Conrad Observa	54.84 325	*i* P		P	20 22 03.0	-0.8
	comp=Z,3.1nm,0.7s						
MORC	Moravsky Berou	54.96 328	P		P	20 22 04.0	-0.6
MORC			pmax	pmax			
	comp=Z,15nm,1.2s						
MORC	Moravsky Berou	54.96 328	⇓P		P	20 22 03.7	-0.9
MORC	Moravsky Berou	54.96 328	*e*P		P	20 22 03.7	-0.9
MORC	Moravsky Berou	54.96 328	P		P	20 22 04.0	-0.6
MORC			IAmb		IAmb	20 22 04.7	
	comp=Z,15nm,1.2s						
PRGR	Permogore	55.15 352	*e*P		P	20 22 00.8	-4.8
PRGR			pmax	pmax			
	comp=Z,7.0nm,1.1s						
KRUC	Moravsky	55.17 327	*e*P		P	20 22 05.2	-0.8
VRAC	Vranov	55.20 327	P		P	20 22 04.8	-1.5
	comp=Z,4.6nm,1.0s,baz=159,slow=3.6,SNR=5.2						
VRAC	Vranov	55.20 327	*e*P		P	20 22 05.6	-0.7
KLMR	Klimovskoe	55.46 348	*e*P		P	20 22 05.9	-1.9
KLMR			pmax	pmax			
	comp=Z,31nm,1.3s						
KLMR	Klimovskoe	55.46 348	*e*P		P	20 22 06.0	-1.9
KLMR			AMP			20 22 08.3	
	comp=Z,31nm,1.3s						
MOA	Molln	55.70 325	*i* P		P	20 22 08.9	-1.0
	comp=Z,3.0nm,0.7s						
DPC	Dobruska-Polom	55.94 328	*e*P		P	20 22 10.8	-0.8
DPC	Dobruska-Polom	55.94 328	*e*P		P	20 22 10.8	-0.8
WHN	Wuhan	56.04 58	P		P	20 22 10.5	-2.1
WHN			S		S	20 30 11.5	+12
WHN			LR		LR		
	comp=Z,700nm,18.0s						
OSTC	Ostas	56.11 328	*e*P		P	20 22 12.1	-0.7
CHVC	Chvalec	56.21 328	*e*P		P	20 22 12.6	-0.9
CHVC			*ex*		x	20 22 18.8	
SONM	Songino Array	56.51 36	P		P	20 22 15.4	-0.5
SONM			pmax	pmax			
	comp=Z,2.0nm,1.2s						
SONM	Songino Array	56.51 36	P		P	20 22 16.1	+0.3
	comp=Z,0.6nm,0.7s,baz=234,slow=5.8,SNR=7.5						
SONM			LR		LR	20 47 33.8	
	comp=Z,89nm,20.2s,slow=37						
SONM	Songino Array	56.51 36	P		P	20 22 15.4	-0.5
GOPC	GO Pecny, Ondr	56.51 327	*e*P		P	20 22 14.4	-1.3
GOPC	GO Pecny, Ondr	56.51 327	*e*P		P	20 22 14.4	-1.3
GERES	GERESS Array B	56.54 325	P		P	20 22 15.0	-1.0
GERES	GERESS Array B	56.54 325	P		P	20 22 14.2	-1.8
	comp=Z,0.6nm,0.7s,baz=122,slow=7.4,SNR=4.0						
GERES	GERESS Array B	56.54 325	P		P	20 22 15.0	-1.0
PRU	Pruhonice	56.69 327	*e*P		P	20 22 15.5	-1.4
PRU	Pruhonice	56.69 327	*e*P		P	20 22 15.5	-1.4
KHC	Kasperske Hory	56.76 326	*i* P		P	20 22 15.7	-1.8
KHC			pmax	pmax			
	comp=Z,7.0nm,0.9s						
KHC	Kasperske Hory	56.76 326	*e*P		P	20 22 15.6	-1.9
WTTA	Wattenberg	56.95 323	P		P	20 22 17.7	-1.4
	comp=Z,0.9nm,0.2s						
SQTA	Sankt Quirin	57.19 323	*i* P		P	20 22 19.2	-1.5
	comp=Z,1.6nm,0.5s						
TORD	Torodi Ar. Bea	57.20 281	P		P	20 22 21.1	0.0
	comp=Z,1.5nm,0.9s,baz=76,slow=4.5,SNR=6.1						
TORD			LR		LR	20 46 49.4	
	comp=Z,218nm,20.6s,baz=65,slow=36						
MOTA	Moosalm	57.31 323	*i* P		P	20 22 19.8	-1.8
	comp=Z,3.4nm,0.7s						
DAVOX	Davos/Dischmat	57.80 322	P		P	20 22 23.7	-1.3
	comp=Z,7.9nm,1.1s,baz=151,slow=10,SNR=4.4						
DAVA	Damuels	58.02 322	*e*P		P	20 22 25.3	-1.3
	comp=Z,2.3nm,0.4s						
TMCR	Tamitsa	58.77 349	*e*P		P	20 22 30.2	-1.0
TMCR			pmax	pmax			
	comp=Z,41nm,1.0s						
SENIN	Lac Senin/Sane	59.23 320	P		P	20 22 34.0	-1.0
FINES	FINESS Array B	59.41 342	P		P	20 22 34.7	-1.1
	comp=Z,9.1nm,1.1s,baz=178,slow=9.7,SNR=3.6						
FINES			LR		LR	20 49 07.5	
	comp=Z,50nm,20.7s,baz=218,slow=37						
BFO	Black Forest	59.42 323	P		P	20 22 35.1	-1.0
BFO			pmax	pmax			
	comp=Z,51nm,1.8s						
BFO	Black Forest	59.42 323	P		P	20 22 35.1	-1.0
DBIC	Dimbokro	63.95 274	LR		LR	20 51 16.2	
	comp=Z,214nm,19.4s,baz=68,slow=36						
NOA	NORSAR Array B	64.43 336	P		P	20 23 08.4	-1.2
	comp=Z,2.1nm,0.9s,baz=120,slow=6.9,SNR=3.5						
NOA			LR		LR	20 52 27.6	
	comp=Z,29nm,21.1s,baz=115,slow=37						
ESDC	Sonseca Array	65.08 310	P		P	20 23 13.6	-0.6
	comp=Z,6.4nm,1.1s,baz=84,slow=5.6,SNR=11						
ESDC	Sonseca Array	65.08 310	P		P	20 23 13.2	-1.1
ARCES	ARCESS Array B	65.92 348	P		P	20 23 18.7	-0.4
ARCES	ARCESS Array B	65.92 348	P		P	20 23 17.9	-1.2
	comp=Z,3.7nm,0.8s,baz=170,slow=7.4,SNR=5.2						
ARCES	ARCESS Array B	65.92 348	P		P	20 23 18.7	-0.4
KSRS	Korea Array	68.35 53	P		P	20 23 34.7	-0.3
	comp=Z,1.0nm,0.7s,baz=258,slow=7.5,SNR=5.9						
JNU	Nakatsue	70.32 58	LR		LR	20 55 29.1	
	comp=Z,180nm,20.6s,baz=242,slow=37						
USRK	Ussuriysk Ar.	72.27 46	LR		LR	20 57 40.2	
	comp=Z,101nm,18.1s,baz=158,slow=38						
YAK	Yakutsk	74.23 27	*i* P		P	20 24 11.6	+1.5
YAK			pmax	pmax			
	comp=Z,5.0nm,1.0s						
TIXI	Tiksi	76.58 18	*ce*P		P	20 24 22.8	-0.6
TIXI			pmax	pmax			
	comp=Z,5.0nm,1.3s						
ASAR	Alice Springs	78.72 116	P		P	20 24 35.1	-1.3
	comp=Z,1.5nm,1.1s,baz=277,slow=4.8,SNR=5.1						
ASAJ	Asahikawa	79.88 47	LR		LR	21 01 20.0	
	comp=Z,150nm,19.0s,baz=120,slow=37						
NVL	N'lazarevskaya	84.22 194	*e*P		P	20 25 13.8	+9.4
NVL			pmax	pmax			
	comp=Z,9.0nm,0.8s						
BILL	Bilibino	89.36 21	*e*P		P	20 25 30.6	+0.9
BILL			pmax	pmax			
	comp=Z,8.0nm,1.4s						

DJA ***30*** *20:14:27.7±0.3,0.°N±3.°×12.°5E±.°, h10km, M4.2/15, mB4.4/1, mb4.3/7, MLv4.2/15, Mw(mB)3.6/1*
IDC ***30*** *20:14:30.1±3.1,0.°40N×125.°39E, h75km±33km, mb3.4/7, mb1 3.6/9, mb1mx3.3/38, mbtmp3.7/9, MS2.9/1, Ms1 2.9/1, ms1mx2.3/24, Error ellipse: s-maj=23.8km s-min=17.7km az=52.0*

ISC 30 20:14:29.9±0.8, 0.°37N±0.°06×125.°46E±0.°06, h73km, n27, σ1§26/29, mb3.7/7, 1D, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.50	278	P	Pn	20 14 53.6	-1.3
TNTI	Ternate	1.94	78	P	Pn	20 14 58.2	-2.7
LBMI	Labuha	2.27	116	P	Pn	20 15 04.9	-0.4
SANI	Sanana	2.46	168	P	Pn	20 15 06.1	-1.7
LUWI	Luwuk	3.03	242	P	Pn	20 15 16.3	+0.7
MRSI	Marisa	3.52	272	P	Pn	20 15 22.7	+0.4
NLAI	Namlea	3.94	155	P	Pn	20 15 27.1	-0.9
APSI	Ampana	4.02	252	P	Pn	20 15 30.3	+1.2
AAI	Ambon	4.87	146	P	Pn	20 15 41.4	+0.7
MSAI	Masohi	5.06	137	P	Pn	20 15 43.2	-0.1
	0.1nm387nm20nm,1.1s						
MPSI	Mapaga	5.56	270	P	Pn	20 15 52.8	+2.6
SIJI	Sorong	5.93	102	P	Pn	20 15 56.9	+1.7
	0.8nm,0.3s,baz=279,slow=19,SNR=4.1						
SKMP	Bagumbayan, Su	6.18	351	*e*P	Pn	20 15 58.5	0.0
SKMP				*e*S	Sn	20 17 07.9	+0.1
TTSI	Tana Toraja	6.58	239	P	Pn	20 16 04.5	+0.4
	0.2nm46nm,0.8s						
KCP	Kidapawan	6.61	357	⇓ *i* P	Pn	20 16 07.1	+2.6
SPSI	Sidrap Palu	7.13	233	P	Pn	20 16 12.8	+1.2
	0.1nm25nm,0.5s						
BNSI	Bone	7.15	228	P	Pn	20 16 12.9	+1.1
	0.2nm24nm,1.7s						
FAKI	Fak Fak	7.53	116	P	Pn	20 16 17.8	+0.7
	0.3nm41nm,1.1s						
BKSI	Bulukumba	7.77	223	P	Pn	20 16 21.0	+0.6
KAPI	Kappang	7.82	227	P	Pn	20 16 20.8	-0.2
	0.6nm,0.3s,baz=61,slow=10,SNR=2.5						
KAPI				S	Sn	20 17 47.6	-0.4
	0.6nm,0.3s,baz=198,slow=19,SNR=1.8						
KAPI				LR	LR	20 19 42.7	
	comp=Z,77nm,18.4s,baz=307,slow=40						
WRA	Warramunga Arr	21.98	157	P	P	20 19 17.5	-0.6
	1.7nm,0.5s,baz=337,slow=10,SNR=17						
ASAR	Alice Springs	25.26	162	P	P	20 19 51.0	+1.5
	2.1nm,0.8s,baz=338,slow=8.3,SNR=17						
CMAR	Chiang Mai Arr	31.64	306	P	P	20 20 46.9	+0.5
	0.3nm,0.6s,baz=121,slow=7.7,SNR=2.9						
SONM	Songino Array	50.09	343	P	P	20 23 17.0	-0.7
	0.3nm,0.8s,baz=158,slow=4.2,SNR=2.3						
MKAR	Manchi Array	59.62	327	P	P	20 24 25.2	-1.1
	0.8nm,0.4s,baz=122,slow=8.2,SNR=19						
ZALV	Zalesovo Beam	63.02	334	P	P	20 24 49.3	+0.2
	0.4nm,0.5s,baz=143,slow=5.0,SNR=2.9						
KURBB	Kurchatov Arra	63.90	329	P	P	20 24 54.0	-1.0
	0.7nm,0.5s,baz=133,slow=6.5,SNR=19						

IDC ***30*** *20:22:02.0±25.0, 37.°59N×19.°62E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.3/50, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=489.7km s-min=36.2km az=38.0*
THE ***30*** *20:22:12.7, 38.°42N×20.°47E, h8km±1km, ML3.0/9, Error ellipse: s-maj=1.1km s-min=0.3km az=101.0*
ATH ***30*** *20:22:12.4, 38.°44N×20.°48E, h11km±1km, ML3.0/19, Error ellipse: s-maj=1.3km s-min=0.6km az=281.0*

ISC 30 20:22:12.6±0.8, 38.°42N±0.°02×20.°50E±0.°03, h10km±4km, n71, σ0§74/106, mb3.6/3, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSK1	VASILIKIADES	0.05	106	P	Pg	20 22 14.5	-0.1
VSK1				S	Sg	20 22 15.8	-0.3
FSK	Fiskardo	0.06	56	P	Pg	20 22 14.7	0.0
FSK				S	Sg	20 22 16.4	+0.2
	21μm,0.3s						
FSK	Fiskardo	0.06	56	P	Pg	20 22 14.7	0.0
FSK				S	Sg	20 22 15.9	-0.3
KEF1	Kardakata, Kep	0.15	188	P	Pg	20 22 15.8	-0.1
KEF1				S	Sg	20 22 18.4	+0.2
KEF4	Livadi, Kephal	0.18	199	P	Pg	20 22 16.2	-0.1
KEF4				S	Sg	20 22 19.5	+0.6
LXR1	Lixouri, Cepha	0.23	192	P	Pg	20 22 17.4	+0.1
LXR1				S	Sg	20 22 21.3	+0.9
EVGI	Lefkada island	0.23	32	P	Pg	20 22 17.7	+0.3
EVGI				S	Sg	20 22 21.8	+1.2
EVGI	Lefkada island	0.23	32	P	Pg	20 22 17.7	+0.3
EVGI				S	Sg	20 22 21.5	+0.9
ARG2	Argostoli	0.25	182	P	Pg	20 22 17.5	-0.1
ARG2				S	Sg	20 22 21.1	+0.2
KEF3	Kipouria, Keph	0.25	208	P	Pg	20 22 17.5	-0.2
KEF3				S	Sg	20 22 21.5	+0.4
CHV1	Chavriata, Kef	0.26	201	P	Pg	20 22 17.7	-0.1
CHV1				S	Sg	20 22 22.1	+0.8
VLS	Valsamata	0.26	164	P	Pg	20 22 17.6	-0.2
VLS				S	Sg	20 22 21.7	+0.4
	7μm,0.2s						
VLS	Valsamata	0.26	164	P	Pg	20 22 17.7	-0.1
VLS				S	Sg	20 22 22.1	+0.7
VLS				AML	AML	20 22 22.2	
	comp=E,17408μm,0.1s						
VLS				AML	AML	20 22 22.8	
	comp=N,11001μm,0.2s						
KEF2	Argostoli. Kep	0.26	182	P	Pg	20 22 17.7	-0.2
KEF2				S	Sg	20 22 22.0	+0.6
MGNA	Meganis	0.33	45	P	Pg	20 22 19.2	+0.1
MGNA				S	Sg	20 22 23.5	0.0
MGNA				AML	AML	20 22 25.0	
	comp=N,11763μm,0.2s						
MGNA				AML	AML	20 22 25.3	
	comp=E,7008μm,0.2s						
LKD2	Lefkada island	0.39	19	P	Pg	20 22 20.1	-0.1
LKD2				S	Sg	20 22 26.3	+1.0
	comp=E,2μm,0.7s						
LKD2	Lefkada island	0.39	19	P	Pg	20 22 20.1	-0.1
LKD2				S	Sg	20 22 24.2	-1.1
LKD2				AML	AML	20 22 26.9	
	comp=E,3663μm,0.9s						
LKD2				AML	AML	20 22 27.3	
	comp=N,5063μm,0.6s						
KFL	Anninata	0.39	144	P	Pg	20 22 20.2	-0.1
KFL				S	Sg	20 22 26.6	+1.2
	comp=N,14μm,0.2s						
KFL	Anninata	0.39	144	P	Pg	20 22 20.2	-0.1
KFL				S	Sb	20 22 26.8	-0.9
KFL				AML	AML	20 22 27.4	
	comp=E,36584μm,0.3s						
KFL				AML	AML	20 22 28.0	
	comp=N,19350μm,0.2s						
TSLK	Tsoukalades, L	0.42	17	P	Pg	20 22 20.9	+0.1
TSLK				S	Sg	20 22 27.1	+0.7
	comp=N,3μm,0.7s						
TSLK	Tsoukalades, L	0.42	17	P	Pg	20 22 21.0	+0.1
TSLK				S	Sg	20 22 26.3	-0.1
AST1	Astakos	0.48	76	P	Pg	20 22 22.2	+0.3
AST1				S	Sb	20 22 30.3	+0.1
VLMS	Volimes, Zakyn	0.56	167	P	Pg	20 22 23.1	-0.4
VLMS				S	Sb	20 22 32.0	-0.6
VLMS				AML	AML	20 22 34.1	
	comp=E,6049μm,0.2s						
VLMS				AML	AML	20 22 35.7	
	comp=N,8336μm,0.3s						
PDO	Prodromos	0.56	72	P	Pg	20 22 23.7	+0.1
PDO				S	Sb	20 22 33.2	+0.4
PDO	Prodromos	0.56	72	P	Pg	20 22 23.7	+0.1
PDO				S	Sb	20 22 32.6	-0.2
PDO				AML	AML	20 22 35.1	
	comp=N,3925μm,0.3s						
PDO				AML	AML	20 22 40.1	
	comp=E,3789μm,0.3s						
ZAK2	Zakynthos	0.71	153	P	Pg	20 22 26.5	+0.2
ZAK2				S	Sb	20 22 37.3	+0.4
KRI1	kERI	0.80	162	P	Pg	20 22 27.2	-0.8
KRI1				S	Sb	20 22 40.0	+0.5
PVO	Paravola	0.83	76	P	Pg	20 22 28.7	+0.1
PVO				S	Sb	20 22 41.1	+0.8
	comp=E,1μm,0.5s						
PVO	Paravola	0.83	76	P	Pg	20 22 28.9	+0.3
PVO				S	Sg	20 22 40.4	+1.0
PVO				AML	AML	20 22 49.1	
	comp=E,3408μm,0.3s						
PVO				AML	AML	20 22 49.7	
	comp=N,2447μm,0.7s						
RLS	Riolos of Patr	0.85	115	P	Pg	20 22 28.5	-0.4
RLS				S	Sb	20 22 42.3	+1.5
	comp=N,510nm,0.5s						
RLS	Riolos of Patr	0.85	115	P	Pg	20 22 28.5	-0.4
RLS				S	Sg	20 22 40.0	+0.1
RLS				AML	AML	20 22 46.5	
	comp=N,1026μm,0.4s						
RLS				AML	AML	20 22 49.5	
	comp=E,1060μm,0.6s						
EFP	Efpalio	1.11	89	P	Pg	20 22 33.0	-0.9
EFP				S	Sn	20 22 50.1	+0.6
	comp=E,1μm,0.7s						
EFP	Efpalio	1.11	89	P	Pg	20 22 32.7	-1.1
EFP				AML	AML	20 22 56.6	
	comp=E,2668μm,0.6s						
EFP				AML	AML	20 22 59.7	
	comp=N,1764μm,0.7s						
ANX	Ano Chora	1.13	81	P	Pg	20 22 33.5	-0.8
ANX				S	Sn	20 22 51.5	+1.3
	comp=N,772nm,0.4s						
ANX	Ano Chora	1.13	81	P	Pg	20 22 33.6	-0.8
ANX				AML	AML	20 22 58.7	
	comp=E,1536μm,0.4s						
ANX				AML	AML	20 22 59.4	
	comp=N,1599μm,0.6s						
EVR	Evrytania	1.14	64	P	Pg	20 22 33.8	-0.7
EVR	Evrytania	1.14	64	P	Pg	20 22 33.8	-0.7
EVR				AML	AML	20 22 57.3	
	comp=E,538μm,0.8s						
EVR				AML	AML	20 22 57.3	
	comp=N,760μm,0.7s						
LAKA	Lakka	1.18	99	P	Pb	20 22 34.2	-0.9
LAKA				S	Sn	20 22 52.2	+0.8
LAKA	Lakka	1.18	99	P	Pb	20 22 34.2	-0.9
LAKA				S	Sn	20 22 52.0	+0.6
LAKA				AML	AML	20 23 00.3	
	comp=E,684μm,0.6s						
LAKA				AML	AML	20 23 04.6	
	comp=N,556μm,0.9s						
SERG	Sergoula	1.23	90	P	Pn	20 22 35.2	-0.7
SERG	Sergoula	1.23	90	P	Pn	20 22 35.2	-0.7
SERG				AML	AML	20 23 02.4	
	comp=N,1118μm,0.5s						
SERG				AML	AML	20 23 02.7	
	comp=E,974μm,0.4s						
TRIZ	Trizonia	1.24	92	P	Pn	20 22 35.3	-0.7
JAN	Janina	1.26	12	P	Pg	20 22 37.3	+0.5
KALE	Kalithea	1.29	91	P	Pn	20 22 36.0	-0.8
KALE	Kalithea	1.29	91	P	Pn	20 22 36.0	-0.8
KALE				AML	AML	20 23 05.3	
	comp=E,548μm,0.4s						
KALE				AML	AML	20 23 08.0	
	comp=N,1026μm,0.7s						
AMT	Artemida-Makis	1.31

MKAR	**Makanchi Array**	**45.19**	**59**	P		**P**	**20 30 27.8**	**-1.8**
	comp=E,0.1nm,0.5s,baz=272,slow=7.8,SNR=4.6							
ZALV	**Zalesovo Beam**	**45.54**	**48**	P		**P**	**20 30 32.9**	**+0.7**
	comp=E,0.3nm,0.4s,baz=265,slow=10.0,SNR=2.7							

DJA 30 20:26:40.4±1.7, 8°S±6°×10°9E±°, h27km±21km, M3.5/8, MLv3.5/8, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMJI	**Cimerak**	**0.97**	**311**	P	Pn	20 26 58.4	+0.1
CMJI				S	Sn	20 27 11.5	+0.2
KPJI	**Karang Pucung**	**1.12**	**347**	P	Pn	20 27 00.5	+0.2
KPJI				S	Sb	20 27 15.2	-0.1
UGM	**Wanagama**	**1.42**	**69**	P	Pn	20 27 03.9	-0.5
UGM				S	Sn	20 27 20.8	-1.4
CISI	**Cisompet, Garu**	**1.61**	**302**	P	Pn	20 27 07.1	-0.1
CISI				S	Sn	20 27 26.4	-0.8
WOJI	**Wonogiri, Jawa**	**1.81**	**71**	P	Pn	20 27 09.5	-0.4
SMRI	**Semarang**	**1.85**	**42**	P	Pn	20 27 10.3	-0.1
SMRI				S	Sn	20 27 33.6	+0.7
PCJI	**Pacitan**	**1.98**	**83**	P	Pn	20 27 12.4	+0.2
LEM	**Lembang**	**2.23**	**316**	P	Pn	20 27 15.0	-0.7
CNJI	**Cibinong**	**2.33**	**298**	P	Pn	20 27 17.2	+0.3

*NEIC **30** 20:27:15.3±1.1, 43°.80N±0°.03×105°.24W±0°.08, h0km±2km, ML3.3/57, Error ellipse: s-maj=10.4km s-min=3.0km az=65.0*

*IDC **30** 20:27:16.5±1.0, 44°.00N×105°.68W, h0km, mb1 3.6/5, mb1mx3.4/46, mbtmp3.3/5, ML3.1/4, Error ellipse: s-maj=22.1km s-min=8.8km az=149.0*

ISC 30 20:27:14.6±0.9, 43°.80N±0°.06×105°.22W±0°.07, h0km, n53, σ0s83/53, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHWY	**Pilot Hill**	**2.50**	**184**		**Pn**	**20 27 57.1**	**+0.3**
RWWY	**Rawlins**	**2.56**	**215**		**Pn**	**20 27 58.7**	**+1.0**
RWWY				IAML		20 28 33.7	
	198nm,0.6s						
RWWY				IAML		20 28 34.3	
	175nm,0.8s						
N23A	**Red Feather La**	**2.95**	**191**		**Pn**	**20 28 03.5**	**+0.6**
N23A				IAML		20 28 46.6	
	comp=N,130nm,0.6s						
N23A				IAML		20 28 50.0	
	comp=E,86nm,0.4s						
LAO	**LASA Array**	**2.98**	**347**		**Pn**	**20 28 03.7**	**+0.6**
LAO				IAML		20 29 01.8	
	comp=E,164nm,0.8s						
PD31	**Pinedale Array**	**3.33**	**253**		**Pn**	**20 28 07.8**	**-0.3**
PDAR	**Pinedale Array**	**3.33**	**253**	Pn	**Pn**	**20 28 08.7**	**+0.5**
	comp=E,6.8nm,0.3s,baz=68,slow=15,SNR=76						
PDAR				Lg	Lg	20 28 52.2	
	comp=E,11nm,0.3s,baz=69,slow=29,SNR=9.5						
PDAR	**Pinedale Array**	**3.33**	**253**		**Pn**	**20 28 08.4**	**+0.3**
YNE	**Yellowstone No**	**3.64**	**291**		**Pn**	**20 28 12.3**	**-0.1**
YMP	**Mirror Lake Pl**	**3.67**	**287**		**Pn**	**20 28 13.2**	**+0.3**
OGNE	**Ogallala**	**3.70**	**139**		**Pn**	**20 28 14.0**	**+1.2**
GCMT	**Greycliff**	**3.74**	**304**		**Pn**	**20 28 14.0**	**+0.3**
LKWY	**Lake**	**3.80**	**283**		**Pn**	**20 28 14.8**	**+0.1**
LKWY				IAML		20 29 36.6	
	comp=E,38nm,0.9s						
H17A	**Grant Village**	**3.90**	**281**		**Pn**	**20 28 17.8**	**+1.7**
FLWY	**Flagg Ranch**	**3.97**	**276**		**Pn**	**20 28 17.3**	**+0.4**
FLWY				IAML		20 29 25.4	
	comp=E,44nm,0.9s						
FLWY				IAML		20 29 26.5	
	comp=E,36nm,1.0s						
MOOW	**Moose Ponds**	**4.00**	**271**		**Pn**	**20 28 18.0**	**+0.6**
ISCO	**Idaho Springs**	**4.00**	**184**		**Pn**	**20 28 18.4**	**+1.0**
YNR	**Norris Junctio**	**4.03**	**285**		**Pn**	**20 28 18.6**	**+0.8**
YPP	**Pitchstone Pla**	**4.05**	**279**		**Pn**	**20 28 18.5**	**+0.3**
REDW	**Red Top Meadow**	**4.11**	**266**		**Pb**	**20 28 27.0**	**-1.0**
REDW				IAML		20 29 34.9	
	comp=E,37nm,0.7s						
REDW				IAML		20 29 35.3	
	comp=E,38nm,0.8s						
IMW	**Indian Meadow**	**4.14**	**273**		**Pn**	**20 28 20.1**	**+0.8**
IMW				IAML		20 29 30.2	
	comp=E,34nm,0.7s						
YHH	**Holmes Hill**	**4.16**	**286**		**Pn**	**20 28 21.0**	**+1.4**
TPAW	**Teton Pass**	**4.17**	**268**		**Pn**	**20 28 21.0**	**+1.2**
TPAW				IAML		20 29 36.8	
	comp=E,41nm,0.9s						
TPAW				IAML		20 29 40.6	
	comp=E,22nm,1.2s						
YMR	**Madison River**	**4.22**	**284**		**Pn**	**20 28 20.9**	**+0.5**
O20A	**White River Ci**	**4.29**	**213**		**Pn**	**20 28 22.1**	**+0.7**
O20A				IAML		20 29 33.0	
	comp=E,33nm,0.8s						
O20A				IAML		20 29 44.7	
	comp=N,40nm,1.1s						
YHB	**Horse Butte**	**4.39**	**285**		**Pn**	**20 28 23.0**	**+0.2**
YHL	**Hebgen Lake**	**4.41**	**286**		**Pn**	**20 28 23.0**	**0.0**
AHID	**Auburn Hatcher**	**4.41**	**259**		**Pn**	**20 28 23.5**	**+0.5**
AHID				IAML		20 29 36.8	
	comp=N,38nm,0.9s						
AHID				IAML		20 29 39.7	
	comp=E,32nm,0.8s						
RDMU	**Red Mountain**	**4.56**	**227**		**Pn**	**20 28 25.5**	**+0.4**
QLMT	**Earthquake Lak**	**4.57**	**285**		**Pn**	**20 28 25.1**	**-0.1**
DGMT	**Dagmar**	**4.73**	**8**		**Pn**	**20 28 27.9**	**+0.7**
SMCO	**Snowmass**	**4.80**	**197**		**Pn**	**20 28 28.2**	**-0.2**
SMCO				IAML		20 29 50.1	
	comp=E,18nm,0.7s						
SMCO				IAML		20 29 57.6	
	comp=E,20nm,0.8s						
KSCO	**Kaye Shedlock'**	**5.16**	**157**		**Pn**	**20 28 33.5**	**+0.3**
EGMT	**Eagleton**	**5.28**	**325**		**Pn**	**20 28 35.1**	**+0.3**
TCUT	**Toone Canyon**	**5.30**	**242**		**Pn**	**20 28 35.1**	**-0.2**
DLMT	**Dillon**	**5.50**	**289**		**Pn**	**20 28 38.1**	**+0.3**
LRM	**Limekiln Ridge**	**5.53**	**294**		**Pn**	**20 28 39.5**	**+1.2**
MCMT	**McKenzie Canyo**	**5.57**	**283**		**Pb**	**20 28 53.5**	**+0.7**
P17A	**Butcher Ranch,**	**5.98**	**226**		**Pn**	**20 28 44.6**	**+0.1**
SRU	**San Rafael Swe**	**6.14**	**222**		**Pn**	**20 28 46.7**	**-0.1**
ECSD	**EROS Data Cent**	**6.23**	**88**	Pn	**Pn**	**20 28 49.6**	**+1.8**
TMUT	**Trail Mountain**	**6.35**	**227**		**Pn**	**20 28 50.2**	**+0.4**
CBKS	**Cedar Bluff**	**6.47**	**138**	Pn	**Pn**	**20 28 51.4**	**+0.3**
Q16A	**Castle Valley**	**6.62**	**225**		**Pn**	**20 28 53.3**	**0.0**
T25A	**Trinidad**	**6.68**	**174**		**Pn**	**20 28 53.5**	**-0.7**
MSU	**Marysvale**	**7.44**	**227**		**Pn**	**20 29 05.1**	**+0.5**
ELK	**Elko**	**8.03**	**251**	Pn	**Pn**	**20 29 15.5**	**+2.8**
	comp=E,0.4nm,0.3s,baz=73,slow=9.3,SNR=8.2						
ELK				Lg	Lg	20 31 21.9	
	comp=E,0.0nm,0.3s,baz=209,slow=19,SNR=2.5						
ELK	**Elko**	**8.03**	**251**		**Pn**	**20 29 13.7**	**+1.0**
PSUT	**Pine Spring**	**8.37**	**234**		**Pn**	**20 29 18.2**	**+0.9**
ULM	**Lac du Bonnet**	**9.07**	**41**	Pn	**Pn**	**20 29 27.3**	**+0.5**
	comp=E,0.9nm,0.3s,baz=239,slow=13,SNR=9.5						
ULM				Pg		20 29 58.2	
	comp=E,0.7nm,0.3s,baz=218,slow=17,SNR=2.9						
ULM				Lg	Lg	20 31 51.2	
	comp=E,0.2nm,0.3s,baz=150,slow=20,SNR=1.9						
ULM	**Lac du Bonnet**	**9.07**	**41**		**Pn**	**20 29 27.2**	**+0.4**
FFC	**Flin Flon**	**11.14**	**10**		**Pn**	**20 29 54.3**	**-0.7**
TXAR	**Lajitas Array**	**14.49**	**175**	Pn	**P**	**20 30 47.2**	**-0.7**
	comp=E,0.1nm,0.3s,baz=347,slow=12,SNR=3.3						
TXAR				Lg	Lg	20 34 53.8	
	comp=E,0.0nm,0.3s,baz=353,slow=3.8,SNR=3.9						
YKA	**Yellowknife Ar**	**19.52**	**347**	P	**P**	**20 31 42.5**	**-0.7**
	comp=E,0.1nm,0.3s,baz=164,slow=13,SNR=4.1						

*IDC **30** 20:27:49.9±0.7, 1°.57S×148°.22E, h0km, mb4.3/16, mb1 4.5/17, mb1mx4.4/27, mbtmp4.3/17, ML3.4/1, MS3.8/16, Ms1 3.8/16, ms1mx3.7/29, Error ellipse: s-maj=23.2km s-min=14.7km az=103.0*

*BJI **30** 20:27:51.3±0.0, 1°.56S×148°.46E, h31km, mB5.1/39, mb4.8/59, Ms4.8/15, Ms7 4.6/6*

*NEIC **30** 20:27:51.6±1.3, 1°.57S±0°.08×148°.13E±0°.07, h10km±1km, mb4.8/73, Error ellipse: s-maj=14.9km s-min=8.9km az=146.0*

*GCMT **30** 20:27:56.6±0.3, 1°.32S±0°.02×148°.12E±0°.02, h28km±1km, MW5.0/78, Moment Tensor Solution. s18,c20; s78,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.25±.22; $M_{\theta\theta}$-1.79±.13; $M_{\phi\phi}$3.04±.15; $M_{r\theta}$-0.67±.23; $M_{\theta\phi}$-1.97±.13; $M_{\phi r}$-0.85±.25; Best double couple: $M_0$3.39800×10^{16} NP1:ϕ_s118.00000°,δ65.00000°,λ-164.00000°. NP2: ϕ_s21.00000°,δ75.00000°,λ-26.00000°. Principal axes: T 3.8100, Plg7.0000°, Azm71.0000°; N -0.8230, Plg61.0000°, Azm173.0000°; P -2.9870, Plg28.0000°, Azm338.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*DJA **30** 20:27:56.8±0.7, 2°S±5°×14°8E±°, h23km±4km, M4.7/7, mb4.7/7, mB5.6/2, Mw(mB)5.1/2*

ISC 30 20:27:51.3±0.5, 1°.64S±0°.07×148°.25E±0°.07, h10km, n161, σ1s51/139, mb4.8/64, MS3.9/22, 3C-1D, Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**0.97**	**245**		**Pg**	**20 28 08.9**	**-1.1**
JAY	**Jayapura**	**7.59**	**263**	Pn	**Pn**	**20 29 41.6**	**-0.5**
	0.6nm,0.3s,baz=107,slow=14,SNR=3.4						
JAY				LR	LR	20 32 17.6	
	comp=Z,1μm,19.8s,baz=56,slow=35						
PMG	**Port Moresby**	**7.79**	**188**	Pn	Pn	20 29 51.3	+6.4
	0.6nm,0.3s,baz=321,slow=17,SNR=2.8						
PMG				LR	LR	20 32 49.6	
	comp=Z,650nm,20.1s,baz=4.0,slow=38						
PMG	**Port Moresby**	**7.79**	**188**	Pn	**Pn**	**20 29 46.6**	**+1.7**
SMPI	**Sarmi**	**9.54**	**268**	P	**Pn**	**20 30 10.9**	**+2.0**
	78nm,1.2s						
PATS	**Pohnpei**	**13.11**	**50**	Pn	**Pn**	**20 30 59.3**	**+1.6**
SIJI	**Sorong**	**17.00**	**272**	Pn	**P**	**20 31 56.2**	**+5.0**
	0.3nm,0.3s,baz=62,slow=23,SNR=4.5						
CTA	**Charters Tower**	**18.44**	**186**	P	Pn	20 32 18.1	+11
	0.5nm,0.3s,baz=6.2,slow=10,SNR=7.1						
AAI	**Ambon**	**20.14**	**264**	P	**P**	**20 32 23.7**	**-2.1**
MTN	**Manton Dam**	**20.28**	**236**	P	**P**	**20 32 27.5**	**+0.1**
MTN				IAmb	IAmb	20 32 36.3	
	comp=Z,62nm,1.0s						
SANI	**Sanana**	**22.25**	**269**	P	**P**	**20 32 54.3**	**+5.6**
WB0	**Warramunga Arr**	**22.55**	**216**	P	**P**	**20 32 52.6**	**+0.8**
WB0				IAmb	IAmb	20 33 04.9	
	comp=Z,21nm,0.8s						
WR0	**Warramunga Arr**	**22.61**	**215**	P	**P**	**20 32 53.2**	**+0.7**
WRAB	**Tennant Creek**	**22.70**	**216**	P	**P**	**20 32 54.3**	**+0.9**
WRAB				IAmb	IAmb	20 33 06.5	
	comp=Z,30nm,0.8s						
WB2	**Warramunga Arr**	**22.71**	**216**	P	**P**	**20 32 54.2**	**+0.7**
WB2				IAmb	IAmb	20 33 07.1	
	comp=Z,71nm,1.4s						
WRA	**Warramunga Arr**	**22.72**	**216**	P	**P**	**20 32 54.3**	**+0.7**
	comp=Z,11nm,1.0s,baz=40,slow=11,SNR=24						
WRA				LR	LR	20 42 30.2	
	comp=Z,320nm,18.4s,baz=40,slow=39						
WRA	**Warramunga Arr**	**22.72**	**216**	P	**P**	**20 32 54.8**	**+1.3**
KNRA	**Kununurra**	**23.75**	**233**	P	**P**	**20 33 03.5**	**-0.5**
SOEI	**Soe**	**25.17**	**250**	P	**P**	**20 33 16.4**	**-0.9**
LUWI	**Luwuk**	**25.48**	**271**	P	**P**	**20 33 25.2**	**+5.2**
LUWI	**Luwuk**	**25.48**	**271**	P	**P**	**20 33 19.5**	**-0.5**
AS31	**Alice Springs**	**25.94**	**211**	P	**P**	**20 33 24.2**	**+0.2**
ASAR	**Alice Springs**	**25.94**	**211**	P	**P**	**20 33 25.5**	**+1.4**
	comp=Z,2.8nm,0.8s,baz=40,slow=8.0,SNR=21						
ASAR				LR	LR	20 44 43.5	
	comp=Z,381nm,18.9s,baz=28,slow=39						
ASAR	**Alice Springs**	**25.94**	**211**	P	**P**	**20 33 24.4**	**+0.3**
MRSI	**Marisa**	**26.39**	**274**	P	**P**	**20 33 32.4**	**+4.2**
DZM	**Mont Dzumac**	**26.94**	**140**	eLR	LR	20 40 24.9	
	comp=Z,434nm,23.6s						
DZM	**Mont Dzumac**	**26.94**	**140**	P	**P**	**20 33 34.1**	**+0.9**
	comp=Z,8.0nm,0.9s,baz=342,slow=19,SNR=2.8						
H11S3	**WAKE ISLAND Hy**	**27.00**	**41**	T	T	21 01 53.0	
	baz=224,slow=75						
H11S2	**WAKE ISLAND Hy**	**27.01**	**41**	T	T	21 01 46.0	
	baz=224,slow=75,SNR=5513						
H11S1	**WAKE ISLAND Hy**	**27.02**	**41**	T	T	21 01 56.6	
	baz=224,slow=75,SNR=7963						
FITZ	**Fitzroy Crossi**	**27.57**	**232**	P	**P**	**20 33 38.7**	**-0.1**
	comp=Z,8.7nm,1.0s,baz=49,slow=8.7,SNR=3.4						
FITZ				LR	LR	20 44 50.4	
	comp=Z,298nm,20.4s,baz=52,slow=37						
FITZ	**Fitzroy Crossi**	**27.57**	**232**	P	**P**	**20 33 38.5**	**-0.3**
FITZ				IAmb	IAmb	20 33 47.6	
	comp=Z,26nm,1.1s						
H11N1	**WAKE ISLAND Hy**	**28.02**	**40**	T	T	21 03 05.1	
	baz=222,slow=76,SNR=133						
H11N3	**WAKE ISLAND Hy**	**28.03**	**40**	T	T	21 03 09.7	
	baz=222,slow=76,SNR=202						
H11N2	**WAKE ISLAND Hy**	**28.03**	**40**	T	T	21 02 59.3	
	baz=222,slow=76,SNR=344						
BNSI	**Bone**	**28.23**	**264**	P	P	20 33 57.0	+12
JCJ	**Chichijima**	**29.16**	**349**	LR	LR	20 44 03.9	
	comp=Z,73nm,19.6s,baz=138,slow=34						
STKA	**Stephens Creek**	**30.73**	**191**	P	**P**	**20 34 06.2**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=332,slow=17,SNR=1.7						
STKA				LR	LR	20 46 41.2	
	comp=Z,181nm,19.4s,baz=359,slow=37						
STKA	**Stephens Creek**	**30.73**	**191**	P	**P**	**20 34 05.8**	**-0.9**
FORT	**Forrest**	**34.73**	**211**	P	**P**	**20 34 41.6**	**-0.1**
TWG	**Pinlang**	**35.95**	**314**	P	**P**	**20 34 50.1**	**-2.3**
YULB	**Yu-li**	**36.15**	**315**	P	**P**	**20 34 53.0**	**-1.2**
YULB				IAmb	IAmb	20 35 03.1	
	comp=Z,14nm,1.0s						
SBUM	**Sibu**	**36.25**	**276**	P	**P**	**20 34 54.7**	**-0.4**
NACB	**Ninganchiao**	**36.45**	**316**	P	**P**	**20 34 55.2**	**-1.4**
NACB				IAmb	IAmb	20 34 57.0	
	comp=Z,21nm,1.2s						
TPUB	**Ta-pu**	**36.57**	**314**	P	**P**	**20 34 56.3**	**-1.4**
TPUB				IAmb	IAmb	20 34 56.9	
	comp=Z,16nm,1.2s						
SSLB	**Suanglung**	**36.65**	**315**	P	**P**	**20 34 57.2**	**-1.2**
SSLB				IAmb	IAmb	20 35 11.8	
	comp=Z,24nm,1.6s						
YHNB	**Yeheng**	**36.92**	**317**	P	**P**	**20 34 59.3**	**-1.5**
JNU	**Nakatsue**	**38.26**	**336**	P	**P**	**20 35 09.9**	**-2.0**
AFI	**Afiamalu**	**41.35**	**109**	LR	LR	20 50 53.0	
	comp=Z,129nm,18.1s,baz=344,slow=33						
SSE	**Sheshan**	**41.49**	**324**	P	**P**	**20 35 35.7**	**-3.1**
SSE				IAmb	IAmb	20 36 07.3	
	comp=Z,42nm,1.8s						
KSRS	**Korea Array**	**43.22**	**336**	P	**P**	**20 35 51.8**	**-1.0**
	comp=Z,3.3nm,0.8s,baz=160,slow=8.3,SNR=7.7						
NJ2	**Nanjing**	**43.57**	**323**	eP	**P**	**20 35 55.5**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
URZ	**Urewera**	**45.04**	**148**	LR	LR	20 54 59.9	
	comp=Z,114nm,18.5s,baz=310,slow=36						
WHN	**Wuhan**	**45.46**	**318**	⇑P	**P**	**20 36 11.0**	**+0.2**
WHN				pmax	pmax		
	comp=Z,18nm,1.0s						
RPZ	**Rata Peaks**	**46.55**	**157**	LR	LR	20 55 09.6	
	comp=Z,183nm,19.5s,baz=336,slow=35						
USA0B	**Ussuriysk Arra**	**47.90**	**344**	P	**P**	**20 36 28.4**	**-1.3**
USRK	**Ussuriysk Ar.**	**47.90**	**344**	P	**P**	**20 36 29.8**	**+0.1**
	comp=Z,16nm,1.0s,baz=166,slow=8.7,SNR=13						
USRK	**Ussuriysk Ar.**	**47.90**	**344**	P	**P**	**20 36 28.9**	**-0.7**
ENH	**Enshi**	**48.69**	**314**	P	**P**	**20 36 34.8**	**-1.3**
ENH				IAmb	IAmb	20 36 36.5	
	comp=Z,15nm,1.1s						
MDJ	**Mudanjiang**	**48.97**	**342**	P	**P**	**20 36 37.8**	**-0.1**
SLVN	**Son La**	**48.99**	**300**	P	**P**	**20 36 39.4**	**+0.8**
CN2	**Changchun**	**49.64**	**338**	eP	**P**	**20 36 42.5**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.8s						
PBKT	**Sadao Pong**	**50.04**	**293**	P	**P**	**20 36 47.1**	**+0.6**
BJT	**Baijiatuan**	**50.78**	**328**	P	**P**	**20 36 50.7**	**-1.2**
XAN	**Xi'an**	**51.22**	**318**	P	**P**	**20 36 54.5**	**-0.9**
XAN				pP	pwP	20 37 00.0	+1.9
XAN				PP	**PP**	**20 38 47.5**	**-4.8**
XAN				S	S	20 44 01.5	-13
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
XAN				pmax	pmax		
	comp=Z,110nm,3.4s						
XAN				LR	LR		
	comp=Z,140nm,16.3s						
XAN				LR	LR		
	comp=Z,120nm,20.6s						
XAN	**Xi'an**	**51.22**	**318**	P	**P**	**20 36 54.4**	**-0.9**
XAN				IAmb	IAmb	20 36 55.4	
	comp=Z,12nm,1.1s						
KMI	**Kunming**	**51.46**	**304**	P	P	20 37 06.3	+8.8
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CM31	**Chiang Mai Arr**	**52.43**	**295**	P	**P**	**20 37 04.9**	**+0.3**
CM31				IAmb	IAmb	20 37 14.0	
	comp=Z,14nm,1.2s						
CMAR	**Chiang Mai Arr**	**52.43**	**295**	P	**P**	**20 37 05.2**	**+0.6**
	comp=Z,4.1nm,0.9s,baz=112,slow=5.6,SNR=28						
CMAR				LR	LR	20 58 29.1	
	comp=Z,42nm,19.8s,baz=123,slow=35						
CHTO	**Chiang Mai**	**52.53**	**295**	P	**P**	**20 37 04.7**	**-0.6**
CHTO				IAmb	IAmb	20 37 14.5	
	comp=Z,13nm,1.4s						
CD2	**Chengdu**	**53.25**	**311**	P	**P**	**20 37 09.0**	**-1.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**53.87**	**326**	eP	**P**	**20 37 14.8**	**-0.1**
HHC				pmax	pmax		
	comp=Z,4.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,62nm,4.9s						
PETK	**Petropavlovsk-**	**55.12**	**7**	P	**P**	**20 37 24.1**	**+0.5**
	comp=Z,3.9nm,0.5s,baz=169,slow=7.7,SNR=20						
PETK	**Petropavlovsk-**	**55.12**	**7**	P	**P**	**20 37 23.5**	**-0.2**
LZH	**Lanzhou**	**55.82**	**317**	⇑P	**P**	**20 37 29.8**	**+0.6**
LZH				pP	pwP	20 37 37.0	+5.0
LZH				sP	sP	20 37 42.5	+9.4
LZH				PP	**PP**	**20 39 31.3**	**-2.6**
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,60nm,4.9s						
LZH				LR	LR		
	comp=Z,150nm,15.6s						
LZH				LR	LR		
	comp=Z,170nm,15.5s						
LZH				LR	LR		
	comp=Z,250nm,18.3s						
HIA	**Hailar**	**56.36**	**338**	P	**P**	**20 37 32.6**	**-0.1**
HIA				IAmb	IAmb	20 37 33.5	
	comp=Z,13nm,1.0s						
GTA	**Gaotai**	**60.27**	**318**	⇑P	**P**	**20 38 00.8**	**+0.4**
GTA				pP	pwP	20 38 05.3	+2.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,50nm,5.7s						
GTA				LR	LR		
	comp=Z,50nm,18.7s						
GTA				LR	LR		
	comp=Z,110nm,20.0s						
SHL	**Shillong**	**60.80**	**301**	P	**P**	**20 38 03.6**	**-0.7**
ULN	**Ulaanbaatar**	**60.95**	**330**	P	**P**	**20 38 05.1**	**+0.2**
ULN				IAmb	IAmb	20 38 06.5	
	comp=Z,13nm,1.2s						
SONM	**Songino Array**	**61.27**	**329**	P	**P**	**20 38 07.2**	**+0.2**
	comp=Z,2.5nm,0.9s,baz=149,slow=5.9,SNR=17						
SONM				LR	LR	21 05 33.5	
	comp=Z,50nm,18.8s,slow=37						
SONM	**Songino Array**	**61.27**	**329**	P	**P**	**20 38 06.7**	**-0.3**
LSA	**Lhasa**	**62.71**	**305**	P	**P**	**20 38 16.8**	**-0.7**
LSA				pmax	pmax		
	comp=Z,21nm,1.0s						
LSA	**Lhasa**	**62.71**	**305**	P	**P**	**20 38 16.9**	**-0.6**
LSA				IAmb	IAmb	20 38 26.7	
	comp=Z,7.5nm,1.1s						
PPT	**Papeete**	**63.02**	**109**	LR	LR	21 02 54.6	
	comp=Z,53nm,18.3s,baz=208,slow=33						
PPT2	**Papeete2**	**63.03**	**109**	eLR	LR	20 57 15.4	
	comp=Z,284nm,32.0s						
TBI	**Tubuai**	**64.00**	**115**	eLR	LR	20 57 39.9	
	comp=Z,133nm,33.8s						
TAPN	**Taplejung**	**64.89**	**301**	eP	**P**	**20 38 31.5**	**-0.2**
	comp=Z,25nm,1.0s						
ODAN	**Odare**	**65.03**	**301**	eP	**P**	**20 38 32.5**	**0.0**
	comp=Z,25nm,0.9s						
TLY	**Talaya**	**65.11**	**331**	P	**P**	**20 38 32.5**	**+0.3**
JIRN	**Jiri**	**66.28**	**301**	eP	**P**	**20 38 40.8**	**+0.1**
	comp=Z,17nm,0.7s						
GUN	**Gumba**	**66.61**	**301**	eP	**P**	**20 38 42.9**	**+0.1**
	comp=Z,57nm,1.2s						
PKI	**Pulchoki**	**66.92**	**301**	eP	**P**	**20 38 44.0**	**-0.8**
PKIN	**Phulchoki**	**66.93**	**301**	eP	**P**	**20 38 44.3**	**-0.5**
KKN	**Kakani**	**67.09**	**301**	eP	**P**	**20 38 45.5**	**-0.2**
DMN	**Daman**	**67.19**	**301**	eP	**P**	**20 38 46.4**	**0.0**
	comp=Z,38nm,1.2s						
GKN	**Gorkha**	**67.69**	**301**	eP	**P**	**20 38 49.2**	**-0.3**
KOLN	**Koldanda**	**68.53**	**301**	eP	**P**	**20 38 54.5**	**-0.3**
DANN	**Dangsing**	**68.53**	**301**	eP	**P**	**20 38 54.4**	**-0.5**
	comp=Z,17nm,0.7s						
WMQ	**Urumqi**	**70.36**	**318**	eP	**P**	**20 39 06.0**	**+0.4**
WMQ				pP	pwP	20 39 15.0	+6.5
WMQ				sP	PcP	20 39 19.5	-7.7
WMQ				PcP	sP	20 39 27.8	+18
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ				LR	LR		
	comp=Z,280nm,28.8s						
WMQ				LR	LR		
	comp=Z,610nm,29.1s						
TAOE	**Nuku Hiva Isla**	**71.57**	**99**	eLR	LR	21 01 05.6	
	comp=Z,163nm,24.1s						
MK31	**Makanchi Array**	**74.98**	**319**	P	**P**	**20 39 32.4**	**-0.6**
MKAR	**Makanchi Array**	**74.98**	**319**	P	**P**	**20 39 32.4**	**-0.6**
	comp=Z,1.7nm,0.8s,baz=98,slow=7.4,SNR=17						
MKAR				LR	LR	21 11 05.8	
	comp=Z,40nm,21.7s,baz=90,slow=35						
MKAR	**Makanchi Array**	**74.98**	**319**	P	**P**	**20 39 32.1**	**-0.9**
MAKZ	**Makanchi**	**75.19**	**319**	P	**P**	**20 39 33.7**	**-0.5**
ZAA0	**Zalesovo Array**	**76.03**	**327**	P	**P**	**20 39 37.9**	**-1.0**
ZALV	**Zalesovo Beam**	**76.03**	**327**	P	**P**	**20 39 37.1**	**-1.7**
	comp=Z,3.1n

BALM					IAmb	IAmb	20 40 23.9	
	comp=Z,7.3nm,1.0s							
TOLK	**Toolik Lake Re**	**81.69**	**19**	P	**P**		**20 40 10.8**	**+1.1**
TOLK					IAmb	IAmb	20 40 24.1	
	comp=Z,8.0nm,1.2s							
DOT	**Dot Lake**	**81.72**	**25**	P	**P**		**20 40 10.8**	**+0.9**
DOT					IAmb	IAmb	20 40 19.8	
	comp=Z,11nm,1.0s							
SCRK	**Sand Creek**	**81.87**	**24**	P	**P**		**20 40 09.9**	**-0.9**
BARN	**Barnard Glacie**	**81.91**	**28**	P	**P**		**20 40 11.9**	**+0.7**
BARN					IAmb	IAmb	20 40 22.1	
	comp=Z,6.2nm,0.8s							
CTGM	**Chitina Glacie**	**82.03**	**28**	P	**P**		**20 40 12.5**	**+0.7**
CTGM					IAmb	IAmb	20 40 22.8	
	comp=Z,9.7nm,0.9s							
KK31	**Karatay Array**	**82.17**	**314**	P	**P**		**20 40 12.7**	**-0.1**
KKAR	**Karatay Array**	**82.17**	**314**	P	**P**		**20 40 12.6**	**-0.2**
KKAR	**Karatay Array**	**82.17**	**314**	P	**P**		**20 40 12.7**	**-0.1**
KKAR					IAmb	IAmb	20 40 21.5	
	comp=Z,4.2nm,1.1s							
BCAR	**Beaver Creek A**	**82.49**	**26**	P	**P**		**20 40 14.6**	**+0.6**
BMAR	**Burnt Mountain**	**82.90**	**21**	P	**P**		**20 40 17.1**	**+1.0**
EGAK	**Eagle**	**83.30**	**24**	P	**P**		**20 40 20.4**	**+2.3**
EGAK					IAmb	IAmb	20 40 33.3	
	comp=Z,6.4nm,1.1s							
BRVK	**Borovoye**	**84.08**	**324**	P	**P**		**20 40 22.0**	**-0.3**
H02N1	**VAN INLET T-PH** SNR=52	**84.85**	**36**	T	T		22 14 28.3	
H02S1	**DAWSON INLET T** SNR=1471	**84.88**	**36**	T	T		22 14 23.4	
INK	**Inuvik**	**87.16**	**21**	P	**P**		**20 40 37.9**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=284,slow=7.2,SNR=5.0							
INK	**Inuvik**	**87.16**	**21**	P	**P**		**20 40 37.5**	**+0.2**
INK					IAmb	IAmb	20 40 47.4	
	comp=Z,5.6nm,1.0s							
HRA	**Herat**	**87.61**	**304**	P	**P**		**20 40 40.1**	**-0.5**
HRA					IAmb	IAmb	20 40 41.1	
	comp=Z,6.5nm,0.9s							
GEYT	**Alibeck**	**91.10**	**308**	P	**P**		**20 40 56.0**	**-0.7**
	comp=Z,1.9nm,0.7s,baz=79,slow=7.9,SNR=5.7							
GEYT	**Alibeck**	**91.10**	**308**	P	**P**		**20 40 56.0**	**-0.7**
NVAR	**Mina Array Bea**	**93.71**	**52**	LR	LR		21 18 17.1	
	comp=Z,60nm,18.4s,baz=266,slow=3							
YKA	**Yellowknife Ar**	**94.75**	**28**	P	**P**		**20 41 13.5**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=272,slow=4.7,SNR=9.3							
SYO	**Syowa Base**	**95.09**	**200**	IjeX	**P**		**20 41 10.2**	**-4.1**
PDAR	**Pinedale Array**	**100.06**	**47**	P	**Pdif**		**20 41 38.1**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=300,slow=6.1,SNR=2.4							
H06S1	**SOCORRO T** SNR=7.4	**100.75**	**71**	T	T		22 33 56.7	
H06E1	**SOCORRO T-PHAS** SNR=8.5	**100.78**	**71**	T	T		22 34 09.9	
TORD	**Torodi Ar. Bea**	**144.97**	**291**	PKP	**PKPab**		**20 47 28.2**	**-1.0**
	comp=Z,1.1nm,0.9s,baz=90,slow=2.8,SNR=5.3							
SAML	**Samuel**	**146.96**	**109**			**PKPbc**	**20 47 36.2**	**+0.8**
DBIC	**Dimbokro**	**152.72**	**281**	PKPbc	**PKPbc**		**20 47 49.5**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=80,slow=11,SNR=2.4							

*NEIC **30** 20:45:32.8±1.8,4.9S±0.1°×153.9E±0.1°,h99km±6km, mb4.5/12, Error ellipse: s-maj=20.3km s-min=11.7km az=127.0*
*IDC **30** 20:45:34.7±1.2,5.00S×153.99E,h118km±5km,mb3.6/8, mb1 3.9/9,mb1mx3.6/34,mbtmp4.1/9, Error ellipse: s-maj=36.7km s-min=16.4km az=112.0*

ISC 30 20:45:34.2±0.9,**4.86S**±0.10×**153.8E**±0.1,**h105**km,**n26,** σ1§**49**/34,**mb4.2**/14,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.73**	**292**	Pn	**Pn**	**20 46 02.8**	**-0.7**
PMG	**Port Moresby**	**7.96**	**235**	P	**Pn**	**20 47 28.6**	**+1.3**
	15nm,0.3s,baz=57,slow=8.6,SNR=28						
PMG				S	**Sn**	**20 48 53.8**	**-1.9**
	baz=148,slow=15,SNR=1.6						
PMG	**Port Moresby**	**7.96**	**235**		**Pn**	**20 47 27.9**	**+0.6**
WB0	**Warramunga Arr**	**23.99**	**230**	P	**P**	**20 50 39.3**	**0.0**
WR0	**Warramunga Arr**	**23.99**	**230**	P	**P**	**20 50 39.4**	**0.0**
WR0				IAmb	IAmb	20 51 06.8	
	comp=Z,13nm,1.1s						
WRAB	**Tennant Creek**	**24.12**	**230**	P	**P**	**20 50 40.9**	**+0.4**
WRAB				IAmb	IAmb	20 51 08.4	
	comp=Z,9.3nm,0.9s						
WB2	**Warramunga Arr**	**24.13**	**230**	P	**P**	**20 50 40.8**	**+0.3**
WB2				IAmb	IAmb	20 51 32.3	
	comp=Z,19nm,1.4s						
WRA	**Warramunga Arr**	**24.14**	**230**	P	**P**	**20 50 40.6**	**0.0**
	comp=Z,4.3nm,0.6s,baz=54,slow=9.8,SNR=17						
WRA				pP	**pwP**	**20 51 07.1**	**+0.9**
	comp=Z,2.8nm,0.7s,baz=52,slow=11,SNR=4.0						
WRA	**Warramunga Arr**	**24.14**	**230**	P	**P**	**20 50 40.2**	**-0.4**
ASAR	**Alice Springs**	**26.77**	**224**	P	**P**	**20 51 03.5**	**-0.9**
	comp=Z,2.2nm,0.9s,baz=59,slow=8.2,SNR=8.9						
ASAR				pP	**pwP**	**20 51 28.9**	**-1.6**
	comp=Z,1.1nm,0.8s,baz=55,slow=10,SNR=4.1						
ASAR				sP	**sP**	**20 51 44.5**	**+5.9**
	comp=Z,1.0nm,0.7s,baz=41,slow=12,SNR=4.1						
STKA	**Stephens Creek**	**29.20**	**202**	P	**P**	**20 51 25.5**	**-0.5**
	comp=Z,3.6nm,0.6s,baz=35,slow=13,SNR=13						
STKA	**Stephens Creek**	**29.20**	**202**	P	**P**	**20 51 24.8**	**-1.2**
FITZ	**Fitzroy Crossi**	**30.48**	**242**	P	**P**	**20 51 36.8**	**-0.6**
	comp=Z,4.6nm,0.9s,baz=65,slow=7.1,SNR=7.8						
FITZ				pP	**pwP**	**20 52 03.2**	**+0.5**
	comp=Z,6.0nm,0.9s,baz=74,slow=7.4,SNR=3.0						
FITZ	**Fitzroy Crossi**	**30.48**	**242**	P	**P**	**20 51 36.6**	**-0.9**
FITZ				IAmb	IAmb	20 52 45.7	
	comp=Z,20nm,1.3s						
FORT	**Forrest**	**35.36**	**220**	P	**P**	**20 52 18.7**	**-1.1**
FORT				IAmb	IAmb	20 52 20.4	
	comp=Z,19nm,0.8s						
MORW	**Morawa**	**43.06**	**232**	P	**P**	**20 53 23.2**	**-0.8**
MORW				IAmb	IAmb	20 53 32.9	
	comp=Z,27nm,1.4s						
CISI	**Cisompet, Garu**	**45.74**	**264**	P	**P**	**20 53 45.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**58.77**	**295**	P	**P**	**20 55 23.1**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=114,slow=5.2,SNR=6.6						
CMAR				pP	**pwP**	**20 55 51.0**	**-0.6**
	comp=Z,0.6nm,0.6s,baz=112,slow=5.1,SNR=4.4						
SONM	**Songino Array**	**66.89**	**327**	P	**P**	**20 56 17.1**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=147,slow=7.4,SNR=2.8						
IMAR	**Indian Mountai**	**80.12**	**19**	P	**P**	**20 57 31.8**	**-0.5**
MKAR	**Makanchi Array**	**81.00**	**319**	P	**P**	**20 57 37.5**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=97,slow=6.4,SNR=5.9						
MKAR	**Makanchi Array**	**81.00**	**319**	P	**P**	**20 57 37.2**	**-0.3**
ILAR	**Eielson Array**	**81.85**	**22**	P	**P**	**20 57 40.4**	**-1.1**
	comp=Z,0.5nm,0.9s,baz=259,slow=3.3,SNR=3.4						
NIL	**Nilore**	**84.80**	**304**	P	**P**	**20 57 57.8**	**+0.5**
QSPA	**South Pole Qui**	**85.11**	**180**	P	**P**	**20 57 57.2**	**-1.1**
QSPA				IAmb	IAmb	20 59 34.9	
	comp=Z,7.6nm,1.5s						
TORD	**Torodi Ar. Bea**	**151.24**	**289**	PKPbc	**PKPbc**	**21 05 15.5**	**-1.0**
	comp=Z,1.0nm,0.8s,baz=74,slow=1.9,SNR=8.0						
TORD				pPKP	**pPKPdf**	**21 05 40.5**	**+2.6**
	comp=Z,0.6nm,0.7s,baz=39,slow=3.0,SNR=2.8						
TORD				pPKPbc	**sPKPdf**	**21 05 47.1**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=72,slow=2.4,SNR=5.2						

*IDC **30** 20:50:03.4±1.4,3.16S×148.02E,h0km,mb3.9/5, mb1 4.2/5,mb1mx3.7/31,mbtmp3.9/5, Error ellipse: s-maj=57.7km s-min=25.7km az=119.0*
*NEIC **30** 20:50:04.2±0.5,2.89S±0.08×147.7E±0.2,h10km±2km, mb4.4/7, Error ellipse: s-maj=30.4km s-min=8.7km az=67.0*

ISC 30 20:50:06.8±1.0,**2.9S**±0.1°×**147.8E**±0.2,**h22**km,**n20,** σ1§**46**/14,**mb4.0**/6,**Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**0.96**	**334**		**Pb**	**20 50 23.2**	**-1.6**
WB0	**Warramunga Arr**	**21.26**	**217**	P	**P**	**20 54 51.4**	**-0.4**
WR0	**Warramunga Arr**	**21.32**	**216**	P	**P**	**20 54 51.0**	**-1.4**
WRAB	**Tennant Creek**	**21.42**	**217**	P	**P**	**20 54 52.1**	**-1.4**
WB2	**Warramunga Arr**	**21.42**	**217**	P	**P**	**20 54 52.4**	**-1.2**
WB2				IAmb	IAmb	20 55 08.6	
	comp=Z,21nm,1.2s						
WRA	**Warramunga Arr**	**21.43**	**217**	P	**P**	**20 54 52.4**	**-1.2**
	comp=Z,4.2nm,0.8s,baz=41,slow=10,SNR=10						
WRA	**Warramunga Arr**	**21.43**	**217**	P	**P**	**20 54 52.4**	**-1.2**
KWAJ	**Kwajalein Atol**	**22.93**	**59**	P	**P**	**20 55 08.4**	**-1.2**
AS31	**Alice Springs**	**24.62**	**212**	P	**P**	**20 55 25.1**	**-0.8**
ASAR	**Alice Springs**	**24.62**	**212**	P	**P**	**20 55 24.9**	**-1.0**
	comp=Z,2.2nm,0.5s,baz=38,slow=7.4,SNR=31						
ASAR	**Alice Springs**	**24.62**	**212**	P	**P**	**20 55 24.8**	**-1.2**
H11S3	**WAKE ISLAND Hy** baz=218	**28.26**	**40**	T	T	21 25 37.4	
H11S2	**WAKE ISLAND Hy** baz=218	**28.27**	**41**	T	T	21 25 36.6	
H11S1	**WAKE ISLAND Hy** baz=218	**28.27**	**40**	T	T	21 25 37.9	
H11N1	**WAKE ISLAND Hy** baz=221	**29.28**	**39**	T	T	21 26 56.0	
H11N3	**WAKE ISLAND Hy** baz=221	**29.30**	**39**	T	T	21 26 54.3	
H11N2	**WAKE ISLAND Hy** baz=221	**29.30**	**39**	T	T	21 26 57.4	
CMAR	**Chiang Mai Arr**	**52.56**	**296**	P	**P**	**20 59 21.7**	**+2.6**
	comp=Z,0.4nm,0.3s,baz=121,slow=5.6,SNR=4.9						
ILAR	**Eielson Array**	**82.34**	**23**	P	**P**	**21 02 27.1**	**+0.4**
	comp=Z,0.5nm,0.8s,baz=261,slow=5.3,SNR=4.3						
YKA	**Yellowknife Ar**	**96.08**	**28**	P	**P**	**21 03 33.6**	**+1.1**
	comp=Z,0.6nm,0.8s,baz=273,slow=4.8,SNR=5.5						

*IDC **30** 20:50:17.6±1.1,3.17S×147.89E,h0km,mb4.1/8, mb1 4.4/8,mb1mx3.9/31,mbtmp4.1/8, Error ellipse: s-maj=46.0km s-min=19.0km az=115.0*
*NEIC **30** 20:50:17.6±0.9,2.95S±0.10×147.9E±0.2,h10km±2km, mb4.4/9, Error ellipse: s-maj=32.0km s-min=7.8km az=61.0*

ISC 30 20:50:20.6±0.8,**3.0S**±0.1°×**147.8E**±0.2,**h22**km,**n26,** σ1§**15**/20,**mb4.3**/11,**Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**1.05**	**335**		**Pn**	**20 50 38.1**	**-1.9**
WB0	**Warramunga Arr**	**21.19**	**217**	P	**P**	**20 55 05.1**	**+0.3**
WB0				IAmb	IAmb	20 55 15.4	
	comp=Z,22nm,1.4s						
WR0	**Warramunga Arr**	**21.25**	**217**	P	**P**	**20 55 05.8**	**+0.3**
WR0				IAmb	IAmb	20 55 09.7	
	comp=Z,10nm,0.7s						
WRAB	**Tennant Creek**	**21.35**	**217**	P	**P**	**20 55 05.9**	**-0.5**
WRAB				IAmb	IAmb	20 55 08.4	
	comp=Z,21nm,1.2s						
WB2	**Warramunga Arr**	**21.35**	**217**	P	**P**	**20 55 06.0**	**-0.6**
WRA	**Warramunga Arr**	**21.36**	**217**	P	**P**	**20 55 05.8**	**-0.8**
	comp=Z,8.8nm,0.8s,baz=42,slow=10,SNR=14						
WRA	**Warramunga Arr**	**21.36**	**217**	P	**P**	**20 55 06.8**	**+0.2**
AS31	**Alice Springs**	**24.55**	**212**	P	**P**	**20 55 39.2**	**+0.3**
ASAR	**Alice Springs**	**24.55**	**212**	P	**P**	**20 55 38.5**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=37,slow=13,SNR=8.7						
FITZ	**Fitzroy Crossi**	**26.40**	**234**	P	**P**	**20 55 54.9**	**-0.8**
	comp=Z,10nm,1.0s,baz=52,slow=7.6,SNR=5.6						
FITZ	**Fitzroy Crossi**	**26.40**	**234**	P	**P**	**20 55 55.0**	**-0.7**
FITZ				IAmb	IAmb	20 55 59.1	
	comp=Z,8.6nm,0.8s						
H11S3	**WAKE ISLAND Hy** baz=222,slow=75	**28.32**	**40**	T	T	21 25 50.8	
H11S2	**WAKE ISLAND Hy** baz=222,slow=75	**28.33**	**40**	T	T	21 25 51.2	
H11S1	**WAKE ISLAND Hy** baz=222,slow=75	**28.34**	**40**	T	T	21 25 50.3	
STKA	**Stephens Creek**	**29.31**	**191**	P	**P**	**20 56 21.7**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=17,slow=11,SNR=3.4						
STKA	**Stephens Creek**	**29.31**	**191**	P	**P**	**20 56 20.7**	**-0.9**
H11N1	**WAKE ISLAND Hy** baz=221,slow=76	**29.35**	**39**	T	T	21 27 08.2	
H11N3	**WAKE ISLAND Hy** baz=221,slow=76	**29.36**	**39**	T	T	21 27 09.9	
H11N2	**WAKE ISLAND Hy** baz=221,slow=76	**29.36**	**39**	T	T	21 27 09.4	
CMAR	**Chiang Mai Arr**	**52.61**	**296**	P	**P**	**20 59 35.5**	**+2.3**
	comp=Z,0.4nm,0.3s,baz=124,slow=6.1,SNR=6.2						
PETK	**Petropavlovsk-**	**56.52**	**7**	P	**P**	**21 00 03.2**	**+2.1**
	comp=Z,2.2nm,0.7s,baz=194,slow=10,SNR=2.9						
PETK	**Petropavlovsk-**	**56.52**	**7**	P	**P**	**21 00 00.7**	**-0.4**
ILAR	**Eielson Array**	**82.43**	**23**	P	**P**	**21 02 41.3**	**+0.4**
	comp=Z,0.8nm,0.9s,baz=244,slow=3.9,SNR=4.9						
GSC	**Goldstone, Bar**	**96.12**	**55**	P	**P**	**21 03 45.7**	**-1.5**
YKA	**Yellowknife Ar**	**96.16**	**28**	P	**P**	**21 03 47.8**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=272,slow=4.8,SNR=5.5						
TORD	**Torodi Ar. Bea**	**145.02**	**289**	PKPbc	**PKPdf**	**21 09 56.1**	**-1.2**
	comp=Z,0.7nm,0.9s,baz=44,slow=3.0,SNR=3.3						

*IDC **30** 20:52:48.9±1.2,3.14S×147.99E,h0km,mb3.8/9, mb1 4.1/9,mb1mx3.8/32,mbtmp3.8/9,MS3.4/4,Ms1 3.4/4, ms1mx3.0/29, Error ellipse: s-maj=44.5km s-min=20.8km az=109.0*
*NEIC **30** 20:52:50.4±1.5,2.90S±0.08×147.5E±0.2,h10km±2km, mb4.1/4, Error ellipse: s-maj=38.0km s-min=10.7km az=78.0*

ISC 30 20:52:52.5±1.0,**3.0S**±0.1°×**147.8E**±0.2,**h22**km,**n27,** σ1§**55**/17,**mb3.9**/12,**MS3.3**/4,**Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	**Manus Island**	**1.02**	**338**		**Pn**	**20 53 08.6**	**-3.0**
WR0	**Warramunga Arr**	**21.23**	**216**	P	**P**	**20 57 36.2**	**-0.9**
WR0				IAmb	IAmb	20 57 40.1	
	comp=Z,8.8nm,0.9s						
WRAB	**Tennant Creek**	**21.32**	**217**	P	**P**	**20 57 37.0**	**-1.1**
WRAB				IAmb	IAmb	20 58 31.5	
	comp=Z,14nm,1.4s						
WB2	**Warramunga Arr**	**21.33**	**217**	P	**P**	**20 57 36.8**	**-1.4**
WB2				IAmb	IAmb	20 58 16.1	
	comp=Z,4.1nm,0.9s						
WRA	**Warramunga Arr**	**21.34**	**217**	P	**P**	**20 57 37.2**	**-1.1**
	comp=Z,3.3nm,0.7s,baz=41,slow=10,SNR=12						
WRA	**Warramunga Arr**	**21.34**	**217**	P	**P**	**20 57 36.8**	**-1.5**
ASAR	**Alice Springs**	**24.53**	**212**	P	**P**	**20 58 10.2**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=34,slow=7.8,SNR=13						
ASAR	**Alice Springs**	**24.53**	**212**	P	**P**	**20 58 09.0**	**-1.7**
FITZ	**Fitzroy Crossi**	**26.36**	**234**	P	**P**	**20 58 29.1**	**+1.8**
	comp=Z,4.6nm,0.8s,baz=75,slow=13,SNR=3.7						
H11S3	**WAKE ISLAND Hy** baz=222,slow=75,SNR=168	**28.35**	**40**	T	T	21 28 21.2	
H11S2	**WAKE ISLAND Hy** baz=222,slow=75,SNR=98	**28.36**	**40**	T	T	21 28 21.3	
H11S1	**WAKE ISLAND Hy** baz=222,slow=75,SNR=115	**28.37**	**40**	T	T	21 28 22.9	
STKA	**Stephens Creek**	**29.31**	**191**	P	**P**	**20 58 52.5**	**-1.0**
	comp=Z,1.8nm,0.8s,baz=15,slow=16,SNR=3.4						
H11N1	**WAKE ISLAND Hy** baz=221,slow=76,SNR=17	**29.38**	**39**	T	T	21 29 38.7	
H11N3	**WAKE ISLAND Hy** baz=221,slow=76,SNR=28	**29.39**	**39**	T	T	21 29 39.1	
H11N2	**WAKE ISLAND Hy** baz=221,slow=76,SNR=42	**29.39**	**39**	T	T	21 29 39.3	
JNU	**Nakatsue**	**39.31**	**337**	LR	LR	21 14 21.5	
	comp=Z,39nm,20.4s,baz=135,slow=33						
MJAR	**Matsushiro Arr**	**40.33**	**348**	LR	LR	21 15 12.4	
	comp=Z,42nm,22.0s,baz=210,slow=33						
CMAR	**Chiang Mai Arr**	**52.56**	**296**	P	**P**	**21 02 07.3**	**+2.5**
	comp=Z,0.4nm,0.4s,baz=113,slow=6.2,SNR=4.4						
PETK	**Petropavlovsk-**	**56.52**	**7**	LR	LR	21 22 08.1	
	comp=Z,75nm,21.5s,baz=239,slow=31						
SONM	**Songino Array**	**62.18**	**330**	LR	LR	21 29 36.6	
	comp=Z,25nm,20.3s,slow=35						
MKAR	**Makanchi Array**	**75.69**	**320**	P	**P**	**21 04 37.3**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=108,slow=4.7,SNR=2.7						
ZALV	**Zalesovo Beam**	**76.90**	**327**	P	**P**	**21 04 44.0**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=134,slow=8.3,SNR=2.7						
ILAR	**Eielson Array**	**82.44**	**23**	P	**P**	**21 05 12.8**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=256,slow=4.9,SNR=3.7						
ILAR	**Eielson Array**	**82.44**	**23**	P	**P**	**21 05 12.9**	**+0.1**
YKA	**Yellowknife Ar**	**96.18**	**28**	P	**P**	**21 06 19.6**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=270,slow=4.6,SNR=5.4						
TORD	**Torodi Ar. Bea**	**144.96**	**289**	PKPbc	**PKPdf**	**21 12 28.1**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=77,slow=3.3,SNR=2.2						

*ATH **30** 21:27:03.5,38.22N×20.41E,h14km, ML3.0/7, Error ellipse: s-maj=1.6km s-min=1.0km az=261.0*
*THE **30** 21:27:03.9,38.21N×20.43E,h12km, ML3.2/4, Error ellipse: s-maj=0.9km s-min=0.5km az=260.0*

ISC 30 21:27:03.7±1.0,**38.22N**±0.02×**20.43E**±0.04,**h13**km±5km, **n48,** σ0§**35**/66,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LXR1	**Lixouri, Cepha**	**0.02**	**157**	P	**Pg**	**21 27 06.0**	**+0.1**
LXR1				S	**Sg**	**21 27 07.6**	**+0.1**
KEF4	**Livadi, Kephal**	**0.04**	**356**	P	**Pg**	**21 27 06.1**	**+0.1**
KEF4				S	**Sg**	**21 27 08.1**	**+0.4**
CHV1	**Chavriata, Kef**	**0.05**	**225**	P	**Pg**	**21 27 06.1**	**0.0**
CHV1				S	**Sg**	**21 27 08.1**	**+0.3**
ARG2	**Argostoli**	**0.06**	**131**	P	**Pg**	**21 27 06.2**	**0.0**
ARG2				S	**Sg**	**21 27 07.6**	**-0.4**
KEF3	**Kipouria, Keph**	**0.07**	**255**	P	**Pg**	**21 27 06.0**	**-0.2**
KEF3				S	**Sg**	**21 27 08.4**	**+0.3**
KEF1	**Kardakata, Kep**	**0.07**	**31**	P	**Pg**	**21 27 06.2**	**-0.1**
KEF1				S	**Sg**	**21 27 08.2**	**+0.1**
KEF2	**Argostoli. Kep**	**0.07**	**139**	P	**Pg**	**21 27 06.3**	**0.0**
KEF2				S	**Sg**	**21 27 08.1**	**-0.1**
VLS	**Valsamata**	**0.14**	**108**	P	**Pg**	**21 27 07.0**	**-0.1**
VLS				S	**Sg**	**21 27 09.6**	**0.0**
	13μm,0.1s						
VLS	**Valsamata**	**0.14**	**108**	P	**Pg**	**21 27 07.0**	**-0.1**
VLS				S	**Sg**	**21 27 09.6**	**0.0**
VLS				AML	AML	21 27 09.7	
	comp=N,27770μm,0.1s						
VLS				AML	AML	21 27 09.8	
	comp=E,22794μm,0.1s						
VSK1	**VASILIKIADES**	**0.22**	**30**	P	**Pg**	**21 27 08.6**	**+0.2**
VSK1				S	**Sg**	**21 27 12.4**	**+0.7**
	comp=E,11μm,0.2s						
FSK	**Fiskardo**	**0.26**	**24**	P	**Pg**	**21 27 09.2**	**0.0**
FSK				S	**Sg**	**21 27 13.4**	**+0.5**
	comp=E,6μm,0.2s						
FSK	**Fiskardo**	**0.26**	**24**	P	**Pg**	**21 27 09.3**	**0.0**
FSK				S	**Sg**	**21 27 13.3**	**+0.5**
FSK				AML	AML	21 27 13.9	
	comp=N,8982μm,0.2s						
FSK				AML	AML	21 27 14.0	
	comp=E,13729μm,0.1s						
KFL	**Anninata**	**0.30**	**111**	P	**Pg**	**21 27 09.9**	**-0.1**
KFL				S	**Sg**	**21 27 14.7**	**+0.5**
	comp=E,5μm,0.3s						
KFL	**Anninata**	**0.30**	**111**	P	**Pg**	**21 27 09.9**	**-0.1**
KFL				S	**Sg**	**21 27 14.8**	**+0.7**
KFL				AML	AML	21 27 15.5	
	comp=E,11280μm,0.3s						
KFL				AML	AML	21 27 15.9	
	comp=N,6560μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.39**	**151**	P	**Pg**	**21 27 11.4**	**-0.2**
VLMS				S	**Sg**	**21 27 17.3**	**+0.5**
VLMS				AML	AML	21 27 18.2	
	comp=E,11697μm,0.5s						
VLMS				AML	AML	21 27 22.4	
	comp=N,10374μm,0.6s						
EVGI	**Lefkada island**	**0.44**	**24**	P	**Pg**	**21 27 12.2**	**-0.2**
EVGI				S	**Sg**	**21 27 19.5**	**-0.4**
EVGI	**Lefkada island**	**0.44**	**24**	P	**Pg**	**21 27 12.2**	**-0.2**
EVGI				S	**Sg**	**21 27 18.6**	**+0.3**
MGNA	**Meganis**	**0.52**	**33**	P	**Pg**	**21 27 13.6**	**-0.4**
MGNA				S	**Sg**	**21 27 21.5**	**+0.6**
MGNA				AML	AML	21 27 22.4	
	comp=E,2441μm,0.1s						
MGNA				AML	AML	21 27 22.4	
	comp=N,2271μm,0.1s						
LKD2	**Lefkada island**	**0.60**	**18**	P	**Pg**	**21 27 15.2**	**-0.2**
LKD2	**Lefkada island**	**0.60**	**18**	P	**Pg**	**21 27 15.4**	**+0.1**
TSLK	**Tsoukalades, L**	**0.63**	**16**	P	**Pg**	**21 27 16.0**	**0.0**
TSLK	**Tsoukalades, L**	**0.63**	**16**	P	**Pg**	**21 27 15.9**	**-0.1**
KRI1	**kERI**	**0.64**	**151**	P	**Pg**	**21 27 15.5**	**-0.6**
PDO	**Prodromos**	**0.70**	**57**	P	**Pg**	**21 27 17.2**	**-0.2**
PDO	**Prodromos**	**0.70**	**57**	P	**Pg**	**21 27 17.2**	**-0.2**
PDO				AML	AML	21 27 28.6	
	comp=E,1007μm,0.4s						
PDO				AML	AML	21 27 31.1	
	comp=N,1067μm,0.2s						
RLS	**Riolos of Patr**	**0.83**	**101**	P	**Pg**	**21 27 19.9**	**+0.1**
PVO	**Paravola**	**0.95**	**65**	P	**Pb**	**21 27 21.8**	**-0.2**
PVO	**Paravola**	**0.95**	**65**	P	**Pb**	**21 27 21.9**	**-0.2**
PVO				AML	AML	21 27 42.2	
	comp=N,762μm,0.5s						
PVO				AML	AML	21 27 42.6	
	comp=E,1121μm,0.6s						
DRO	**Drossia**	**1.05**	**104**	P	**Pb**	**21 27 23.7**	**0.0**
DRO	**Drossia**	**1.05**	**104**	P	**Pg**	**21 27 24.0**	**+0.1**
EFP	**Efpalio**	**1.18**	**79**	P	**Pn**	**21 27 24.8**	**-1.1**
EFP	**Efpalio**	**1.18**	**79**	P	**Pn**	**21 27 25.8**	**-0.2**
LAKA	**Lakka**	**1.22**	**89**	P	**Pn**	**21 27 25.8**	**-0.7**
AMT	**Artemida-Makis**	**1.22**	**124**	P	**Pg**	**21 27 27.5**	**+0.3**
ANX	**Ano Chora**	**1.23**	**72**	P	**Pn**	**21 27 26.6**	**-0.2**
ANX	**Ano Chora**	**1.23**	**72**	P	**Pn**	**21 27 26.5**	**-0.2**
EVR	**Evrytania**	**1.29**	**57**	P	**Pg**	**21 27 28.4**	**-0.1**
SERG	**Sergoula**	**1.30**	**81**	P	**Pn**	**21 27 27.5**	**-0.1**
TRIZ	**Trizon

comp=Z,4.5nm,2.6s

AZAP	**Zapla**	**4.86**	**136**	*i* P	**Pn**	**21 36 50.6**	**-0.7**

*IDC **30** 21:41:42.7±1.6, 4°.74N×127°.67E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/32, mbtmp3.7/5, MS3.3/1, Ms1 3.3/1, ms1mx2.4/39, Error ellipse: s-maj=163.8km s-min=20.1km az=68.0*

*NEIC **30** 21:41:46.0±2.1, 4°.67N±0°.07×127°.88E±0°.09, h35km±2km, mb4.3/46, Error ellipse: s-maj=13.4km s-min=8.5km az=62.0*

ISC 30 21:41:46.1±0.5, **4°.68N**±0°.06×**127°.80E**±0°.09, **h35**km, **n61**, σ1°.**29**/58, **mb4.2**/25, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**3.24**	**317**	Pn	**Pn**	**21 42 36.0**	**+1.5**
LUWI	**Luwuk**	**7.59**	**222**	Pn	**Pn**	**21 43 35.4**	**+1.1**
FAKI	**Fak Fak**	**8.76**	**149**	Pn	Pn	21 43 47.2	-3.1
KKM	**Kota Kinabalu**	**11.62**	**277**		**Pn**	**21 44 29.3**	**-0.3**
SZP	**Santa**	**14.68**	**331**		**Sn**	**21 47 53.2**	**+0.5**
KSM	**Kuching**	**17.76**	**260**		**Pn**	**21 45 49.1**	**-1.5**
KSM				IAmb	IAmb	21 45 57.6	
	comp=Z,13nm,1.0s						
TWG	**Pinlang**	**19.17**	**341**	P	**P**	**21 46 06.0**	**-0.7**
TWG				IAmb	IAmb	21 46 24.5	
	comp=Z,56nm,1.1s						
YULB	**Yu-li**	**19.63**	**342**	P	**P**	**21 46 11.7**	**-0.1**
TPUB	**Ta-pu**	**19.76**	**340**	P	**P**	**21 46 12.4**	**-0.8**
YOJ	**Yonaguni jima**	**20.20**	**347**	P	**P**	**21 46 18.0**	**+0.1**
KNRA	**Kununurra**	**20.25**	**177**	P	**P**	**21 46 18.0**	**-0.5**
KNRA				IAmb	IAmb	21 46 30.8	
	comp=Z,21nm,1.1s						
FITZ	**Fitzroy Crossi**	**22.74**	**185**	P	**P**	**21 46 45.8**	**+0.6**
CISI	**Cisompet, Garu**	**23.36**	**239**	P	**P**	**21 46 52.8**	**+1.1**
PMG	**Port Moresby**	**23.83**	**126**	P	**P**	**21 46 55.6**	**-0.6**
PMG				IAmb	IAmb	21 47 09.9	
	comp=Z,19nm,0.9s						
COEN	**Coen**	**23.99**	**141**	P	**P**	**21 46 57.2**	**-0.5**
WB0	**Warramunga Arr**	**25.14**	**165**	P	**P**	**21 47 10.3**	**+2.2**
WB0				IAmb	IAmb	21 47 13.5	
	comp=Z,3.0nm,0.4s						
WRAB	**Tennant Creek**	**25.29**	**165**	P	**P**	**21 47 10.0**	**+0.6**
WRA	**Warramunga Arr**	**25.30**	**165**	P	**P**	**21 47 12.0**	**+2.5**
	comp=Z,0.4nm,0.3s,baz=344,slow=10,SNR=3.4						
WRA	**Warramunga Arr**	**25.30**	**165**	P	**P**	**21 47 06.3**	**-3.2**
WR0	**Warramunga Arr**	**25.37**	**165**	P	**P**	**21 47 11.6**	**+1.4**
PSAD1	**Pilbara Seismi**	**27.12**	**196**	P	**P**	**21 47 22.8**	**-3.2**
PSAD1				IAmb	IAmb	21 47 40.2	
	comp=Z,7.0nm,1.1s						
PSAC1	**Pilbara Seismi**	**27.20**	**196**	P	**P**	**21 47 26.8**	**+0.1**
PSAC1				IAmb	IAmb	21 47 40.0	
	comp=Z,8.7nm,1.1s						
PSAC2	**Pilbara Seismi**	**27.21**	**196**	P	**P**	**21 47 25.7**	**-1.0**
PSAC2				IAmb	IAmb	21 47 35.1	
	comp=Z,6.8nm,0.9s						
PSAA2	**Pilbara Seismi**	**27.22**	**196**	P	**P**	**21 47 27.2**	**+0.4**
PSAA2				IAmb	IAmb	21 47 39.5	
	comp=Z,8.3nm,1.1s						
PSA00	**Pilbara Seismi**	**27.23**	**196**	P	**P**	**21 47 27.2**	**+0.2**
PSA00				IAmb	IAmb	21 47 28.4	
	comp=Z,4.6nm,1.1s						
PSAB1	**Pilbara Seismi**	**27.24**	**196**	P	**P**	**21 47 23.1**	**-3.9**
PSAB1				IAmb	IAmb	21 47 30.1	
	comp=Z,7.4nm,1.1s						
ASAR	**Alice Springs**	**28.80**	**168**	P	**P**	**21 47 43.5**	**+2.5**
	comp=Z,0.2nm,0.4s,baz=356,slow=8.2,SNR=5.7						
XAN	**Xi'an**	**34.08**	**331**	P	**P**	**21 48 27.4**	**+0.1**
XAN				IAmb	IAmb	21 48 29.6	
	comp=Z,1.9nm,0.9s						
FORT	**Forrest**	**35.26**	**180**	P	**P**	**21 48 37.2**	**-0.3**
BBOO	**Buckleboo**	**38.10**	**169**	P	**P**	**21 49 02.2**	**+0.5**
BBOO				IAmb	IAmb	21 49 20.1	
	comp=Z,8.8nm,1.1s						
STKA	**Stephens Creek**	**38.66**	**161**	P	**P**	**21 49 08.6**	**+2.2**
	comp=Z,1.5nm,0.4s,baz=340,slow=11,SNR=5.4						
STKA				LR	LR	22 08 57.6	
	comp=Z,43nm,18.5s,baz=205,slow=42						
STKA	**Stephens Creek**	**38.66**	**161**	P	**P**	**21 49 07.8**	**+1.4**
USA0B	**Ussuriysk Arra**	**39.53**	**5**	P	**P**	**21 49 14.2**	**+0.6**
USA0B				IAmb	IAmb	21 49 30.0	
	comp=Z,2.8nm,0.8s						
SHL	**Shillong**	**40.20**	**305**	P	**P**	**21 49 19.9**	**+0.3**
DZM	**Mont Dzumac**	**46.22**	**127**	P	P	21 50 06.7	-1.5
SONM	**Songino Array**	**46.76**	**340**	P	**P**	**21 50 12.9**	**+0.9**
	comp=Z,0.2nm,0.6s,baz=157,slow=6.6,SNR=2.5						
SONM	**Songino Array**	**46.76**	**340**	P	**P**	**21 50 12.2**	**+0.1**
PEA0B	**Petropavlovsk-**	**54.15**	**22**	P	**P**	**21 51 07.5**	**-0.2**
PEA0B				IAmb	IAmb	21 51 22.1	
	comp=Z,8.3nm,0.9s						
MK31	**Makanchi Array**	**57.40**	**324**	P	**P**	**21 51 32.3**	**+1.1**
MK31				IAmb	IAmb	21 51 32.7	
	comp=Z,0.9nm,0.6s						
MKAR	**Makanchi Array**	**57.40**	**324**	P	**P**	**21 51 32.2**	**+1.1**
	comp=Z,1.2nm,0.4s,baz=115,slow=8.2,SNR=43						
MAKZ	**Makanchi**	**57.59**	**324**	P	**P**	**21 51 33.5**	**+1.0**
MAKZ				IAmb	IAmb	21 51 34.6	
	comp=Z,2.5nm,1.1s						
KDJ	**Kajisay**	**58.36**	**318**	P	**P**	**21 51 38.7**	**+0.5**
ARSB	**Arslanbob**	**60.93**	**315**	P	**P**	**21 51 55.5**	**-0.3**
ARSB				IAmb	IAmb	21 51 56.0	
	comp=Z,1.9nm,0.8s						
KURK	**Kurchatov**	**61.53**	**327**	P	**P**	**21 52 00.0**	**+0.5**
KURK				IAmb	IAmb	21 52 00.7	
	comp=Z,3.3nm,0.7s						
NNZ	**Nelson**	**61.77**	**142**	P	**P**	**21 51 59.8**	**-1.4**
THZ	**Tophouse**	**61.80**	**143**	P	**P**	**21 52 02.1**	**+0.5**
BTK	**Batken**	**62.05**	**313**	P	**P**	**21 52 03.9**	**+0.5**
BTK				IAmb	IAmb	21 52 14.1	
	comp=Z,2.3nm,1.1s						
NIKH	**Nikolski High**	**70.43**	**35**	P	**P**	**21 52 55.8**	**-0.9**
GEYT	**Alibeck**	**71.14**	**308**	P	**P**	**21 52 59.8**	**-1.6**
CASY	**Casey**	**71.89**	**187**	P	**P**	**21 53 05.4**	**+0.2**
ABKAR	**Akbulak array**	**72.10**	**320**	P	**P**	**21 53 06.5**	**-0.4**
STCH	**Steam Cracks**	**76.28**	**71**	P	P	21 53 27.8	-4.1
IMAR	**Indian Mountai**	**81.04**	**24**	P	**P**	**21 53 57.9**	**+0.7**
RAYN	**Ar Rayn**	**81.10**	**293**	P	**P**	**21 53 57.5**	**-0.9**
PPLA	**Purkeypile**	**81.30**	**27**	P	**P**	**21 53 59.1**	**+0.3**
PPLA				IAmb	IAmb	21 54 17.8	
	comp=Z,1.8nm,1.0s						
SKT	**Skwentna**	**81.50**	**28**	P	**P**	**21 53 59.3**	**-0.4**
SUA	**Susitna One**	**81.82**	**29**	P	**P**	**21 54 02.4**	**+0.9**
RC01	**Rabbit Creek A**	**82.28**	**29**	P	**P**	**21 54 04.8**	**+1.0**
RC01				IAmb	IAmb	21 54 19.4	
	comp=Z,6.5nm,1.1s						
BMAR	**Burnt Mountain**	**84.79**	**23**	P	**P**	**21 54 17.1**	**+0.5**
CTGM	**Chitina Glacie**	**86.36**	**29**	P	**P**	**21 54 23.5**	**-1.2**
CTGM				IAmb	IAmb	21 54 27.7	
	comp=Z,1.9nm,0.9s						
BURAR	**Bucovina Array**	**95.00**	**318**	P	**P**	**21 55 04.1**	**-1.2**

TAP 30 21:49:52.2, 24°.48N×121°.71E, h31km, ML2.4, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ENA	**Nanau**	**0.06**	**155**	*i* P	Pb	21 49 57.7	+0.2
	baz=151						
ENA				S	Sb	21 50 01.7	+0.6
	baz=151						
NANB	**Nanao**	**0.06**	**148**	*i* P	Pb	21 49 57.7	+0.2
	baz=151						
NANB				S	Sb	21 50 01.3	+0.2
	baz=151						
TWC	**Suao**	**0.18**	**44**	*i* P	Pn	21 49 58.6	-0.2
	baz=46						
TWC				S	Sn	21 50 02.9	0.0
	baz=46						
ENTT	**Nioudou**	**0.21**	**320**	*i* P	Pb	21 49 58.9	+0.1
	baz=318						
ENTT				S	Sb	21 50 03.2	+0.1
	baz=318						
NDT	**Datong Townshi**	**0.22**	**304**	*i* P	Pb	21 49 59.0	+0.2
	baz=302						
NDT				S	Sb	21 50 03.6	+0.3
	baz=302						
TWE	**Neicheng**	**0.24**	**350**	*i* P	Pb	21 49 59.3	+0.2
	baz=351						
TWE				S	Sn	21 50 04.4	-0.1
	baz=351						
SLBB	**Yuanshan**	**0.28**	**345**	P	Pb	21 49 59.8	+0.2
	baz=343						
SLBB				S	Sn	21 50 05.3	-0.2
	baz=343						
ILA	**Ilan**	**0.29**	**6**	*e*S	Sn	21 50 06.5	+0.9
	baz=5.0						
NNSB	**Datong**	**0.31**	**260**	P	Pb	21 50 00.1	+0.1
	baz=261						
NNSB				S	Sb	21 50 05.6	+0.4
	baz=261						
NNSH	**Datong**	**0.31**	**260**	P	Pb	21 50 00.1	+0.2
	baz=262						
NNSH				S	Sb	21 50 05.6	+0.4
	baz=262						
NNS	**Nan Shan**	**0.31**	**263**	*i* P	Pb	21 50 00.1	+0.1
	baz=263						
NNS				S	Sb	21 50 05.5	+0.1
	baz=263						
NACB	**Ninganchiao**	**0.32**	**200**	P	Pb	21 49 59.6	-0.5
	baz=207						
NACB				S	Sb	21 50 05.7	+0.3
	baz=207						
ETLH	**Xiulin Townshi**	**0.34**	**218**	P	Pb	21 50 00.4	-0.1
	baz=227						
ETLH				S	Sb	21 50 06.0	0.0
	baz=227						
NWLT	**Wulai**	**0.35**	**327**	P	Pb	21 50 00.7	+0.1
	baz=325						
NWLT				S	Sb	21 50 06.2	0.0
	baz=325						
YHNB	**Yeheng**	**0.36**	**302**	P	Pb	21 50 00.9	+0.2
	baz=300						
YHNB				S	Sb	21 50 06.6	+0.1
	baz=300						
NSK	**Sanguang**	**0.38**	**301**	*i* P	Pb	21 50 01.1	+0.1
	baz=300						
NSK				S	Sb	21 50 07.2	+0.3
	baz=300						
EOS1	**EOS1**	**0.38**	**80**	P	Pn	21 50 02.0	+0.4
	baz=78						
EOS1				*e*S	Sn	21 50 08.1	+0.2
	baz=78						
NTC	**Toucheng**	**0.39**	**16**	*e*P	Pn	21 50 01.6	-0.1
	baz=13						
NTC				S	Sn	21 50 07.9	-0.1
	baz=13						
TWD	**Chiawan**	**0.41**	**195**	P	Pb	21 50 00.8	-0.6
	baz=201						
TWD				S	Sb	21 50 08.0	+0.4
	baz=201						
TIPB	**Shuangxi**	**0.50**	**12**	*i* P	Pn	21 50 03.2	-0.1
	baz=3.0						
TIPB				*i* S	Sb	21 50 10.0	0.0
	baz=3.0						
NHDH	**Xindian Distri**	**0.51**	**340**	P	Pn	21 50 03.5	+0.1
	baz=338						
NHDH				S	Sn	21 50 11.1	0.0
	baz=338						
TWA	**Mucha**	**0.51**	**347**	*i* P	Pn	21 50 03.7	+0.3
	baz=343						
TWA				*i* S	Sn	21 50 10.7	-0.4
	baz=343						
WHF	**Hehuan Shan**	**0.53**	**231**	*i* P	Pb	21 50 03.3	-0.1
	baz=231						
WHF				S	Sb	21 50 11.2	0.0
	baz=231						
TATO	**Taipei**	**0.53**	**337**	P	Pn	21 50 03.8	+0.1
	baz=337						
TATO				S	Sn	21 50 11.4	-0.3
	baz=337						
TWT	**Tachien**	**0.54**	**245**	P	Pn	21 50 04.1	+0.1
	baz=241						
TWT				S	Sn	21 50 11.8	-0.3
	baz=241						
TDCB	**Techi**	**0.56**	**246**	P	Pb	21 50 03.9	+0.2
	baz=242						
TDCB				S	Sb	21 50 11.5	-0.1
	baz=242						
WLTB	**Daxi**	**0.56**	**312**	P	Pn	21 50 04.2	+0.2
	baz=303						
WLTB				S	Sn	21 50 12.7	+0.4
	baz=303						
TWB1	**Santiao Chiao**	**0.58**	**25**	P	Pn	21 50 04.7	+0.4
	baz=29						
TWB1				*i* S	Sn	21 50 12.7	-0.2
	baz=29						
NWF	**Wu-fen Shan**	**0.59**	**6**	P	Pn	21 50 05.0	+0.4
	baz=4.0						
NWF				S	Sn	21 50 13.2	-0.1
	baz=4.0						
WFSB	**Wu-fen Shan**	**0.59**	**6**	P	Pn	21 50 05.2	+0.6
	baz=6.0						
WFSB				S	Sn	21 50 13.4	+0.3
	baz=6.0						
CHGB	**Renai**	**0.65**	**230**	P	Pb	21 50 05.3	0.0
	baz=225						
CHGB				S	Sn	21 50 14.8	+0.1
	baz=225						
LIOB	**Emei**	**0.66**	**285**	P	Pn	21 50 06.3	+0.8
	baz=284						
LIOB				S	Sn	21 50 15.5	+0.8
	baz=284						
NSTT	**Nanjuang**	**0.67**	**283**	P	Pn	21 50 06.1	+0.6
	baz=283						
NSTT				S	Sn	21 50 15.6	+0.6
	baz=283						
TWS1	**Kuangyinshan**	**0.67**	**337**	P	Pn	21 50 06.0	+0.3
	baz=335						
TWS1				S	Sn	21 50 16.5	+1.4
	baz=335						
NCU	**National Centr**	**0.68**	**316**	S	Sn	21 50 17.2	+1.8
	baz=314						
NCUH	**Zhongli**	**0.68**	**315**	*e*P	Pn	21 50 06.4	+0.6
	baz=314						
NCUH				S	Sn	21 50 17.0	+1.6
	baz=314						
YM10	**YM10**	**0.69**	**348**	P	Pb	21 50 05.8	0.0
	baz=336						
YM10				S	Sn	21 50 15.9	+0.3
	baz=336						
YM11	**YM11**	**0.69**	**349**	*e*P	Pn	21 50 06.1	+0.1
	baz=337						
ESL	**Shilin**	**0.71**	**201**	P	Pn	21 50 05.1	-1.0
	baz=203						
ESL				*e*S	Sb	21 50 15.7	0.0
	baz=203						
YM03	**YM03**	**0.71**	**347**	*e*P	Pn	21 50 05.5	-0.7
	baz=337						
YM03				*e*S	Sb	21 50 15.4	-0.5
	baz=337						
YM08	**YM08**	**0.71**	**351**	P	Pb	21 50 06.7	+0.5
	baz=339						
OWD	**Renai**	**0.72**	**223**	P	Pn	21 50 06.2	-0.2
	baz=225						
OWD				S	Sb	21 50 16.2	+0.2
	baz=225						
ANP	**Anpu**	**0.72**	**346**	*e*P	Pb	21 50 07.0	+0.5
	baz=337						
ANP				*e*S	Sn	21 50 16.8	+0.3
	baz=337						
WHP	**Taichung City**	**0.73**	**254**	P	Pb	21 50 07.4	+0.8
	baz=249						
WHP				S	Sn	21 50 16.7	+0.1
	baz=249						
NMLH	**Miaoli**	**0.84**	**274**	*e*P	Pb	21 50 09.8	+1.4
	baz=273						
DPDB	**Guoxing**	**0.84**	**238**	P	Pb	21 50 09.0	+0.5
	baz=233						
DPDB				*e*S	Sb	21 50 19.7	+0.2
	baz=233						
EGFH	**Guangfu**	**0.85**	**198**	*e*P	Pn	21 50 07.4	-0.6
	baz=200						
EGFH				*e*S	Sn	21 50 18.3	-1.2
	baz=200						
TWQ1	**Liyutan**	**0.87**	**261**	P	Pb	21 50 10.4	+1.6
	baz=257						
TWQ1				S	Sb	21 50 21.9	+1.8
	baz=257						
VWDT	**VWDT**	**0.89**	**216**	P	Pb	21 50 09.1	-0.1
	baz=223						
VWDT				*e*S	Sb	21 50 20.8	0.0
	baz=223						
SMLT	**Sun Moon Lake**	**0.95**	**232**	*e*P	Pb	21 50 10.8	+0.6
	baz=228						
SMLT				*e*S	Sb	21 50 22.9	+0.3
	baz=228						
TYC	**Yuchr**	**0.97**	**234**	P	Pb	21 50 10.4	-0.1
	baz=231						
TYC				*e*S	Sb	21 50 23.5	+0.5
	baz=231						
SSLB	**Suanglung**	**0.98**	**225**	P	Pb	21 50 10.6	-0.1
	baz=232						
SSLB				*e*S	Sn	21 50 22.9	+0.3
	baz=232						
SSLB	**Suanglung**	**0.98**	**225**		Pb	21 50 10.3	-0.4
WDJ	**Dajia District**	**0.99**	**263**	*e*P	Pb	21 50 11.9	+1.0
	baz=263						
WDJ				S	Sb	21 50 26.0	+2.5
	baz=263						
HGSD	**Ruisui**	**1.02**	**195**	P	Pn	21 50 09.5	-0.8
	baz=198						
HGSD				*e*S	Sb	21 50 24.8	+0.4
	baz=198						
EHY	**Hungye**	**1.03**	**200**	P	Pn	21 50 09.9	-0.7
	baz=203						
EHY				*e*S	Sn	21 50 24.1	+0.1
	baz=203						
WHYT	**Xinyi Township**	**1.11**	**225**	P	Pb	21 50 13.3	+0.5
	baz=231						
WHYT				*e*S	Sb	21 50 27.4	+0.4
	baz=231						
WNT	**Mingjian**	**1.11**	**238**	P	Pb	21 50 14.3	+1.3
	baz=239						
WNT				S	Sb	21 50 30.4	+3.3
	baz=239						
YULB	**Yu-li**	**1.15**	**199**	P	Pn	21 50 11.2	-0.9
	baz=202						
YULB				*e*S	Sn	21 50 25.9	-0.9
	baz=202						
TWF1	**Yuli**	**1.19**	**199**	P	Pn	21 50 12.6	-0.1
	baz=201						
TWF1				*e*S	Sn	21 50 27.0	-0.7
	baz=201						
ALS	**Alishan**	**1.27**	**221**	*e*P	Pb	21 50 15.8	-0.1
	baz=211						
ALS				*e*S	Sb	21 50 33.5	+1.6
	baz=211						
CHN5	**Tsauling**	**1.29**	**227**	P	Pb	21 50 15.9	-0.1
	baz=230						
CHN5				S	Sb	21 50 34.9	+2.6
	baz=230						
FULB	**Fuli**	**1.33**	**197**	P	Pn	21 50 14.7	0.0
	baz=200						
FULB				S	Sn	21 50 31.7	+0.3
	baz=200						
ELDTW	**Lidau**	**1.44**	**207**	P	Pn	21 50 16.0	-0.2
	baz=200						
ELDTW				*e*S	Sn	21 50 33.9	-0.1
	baz=200						
CHN4	**Tsaushan**	**1.52**	**223**	P	Pb	21 50 19.9	0.0
	baz=225						
CHN4				S	Sb	21 50 41.1	+2.3
	baz=225						
TPUB	**Ta-pu**	**1.54**	**220**	P	Pb	21 50 19.8	-0.4
	baz=211						
TPUB				S	Sb	21 50 39.7	+0.4
	baz=211						
STYT	**Tauyuan**	**1.58**	**214**	*e*S	Sb	21 50 41.3	+0.9
	baz=207						
WTP	**Ta-pu**	**1.59**	**220**	*e*P	Pb	21 50 20.8	-0.2
	baz=209						
WTP				*e*S	Sb	21 50 41.7	+0.9
	baz=209						
CHN1	**Nanshi**	**1.69**	**220**	P	Pb	21 50 21.7	-1.0
	baz=212						
CHN1				S	Sb	21 50 44.9	+1.4
	baz=212						
SGST	**Jiashian**	**1.73**	**217**	*e*S	Sb	21 50 46.4	+1.5
	baz=209						
SLGT	**Liugui**	**1.77**	**214**	P	Pb	21 50 22.8	-1.3
	baz=206						
SLGT				*e*S	Sb	21 50 46.4	+0.4
	baz=206						
SSD	**Sandimen**	**1.99**	**210**	*e*S	Sb	21 50 51.5	-0.7
	baz=200						
MASBT	**Mashibuluo**	**2.11**	**208**	*e*P	Pb	21 50 27.7	-2.1
	baz=200						
MASBT				S	Sb	21 50 54.5	-1.1
	baz=200						

*ATH **30** 21:57:00.9, 38°.16N×20°.44E, h14km±1km, ML2.9/8, Error ellipse: s-maj=2.4km s-min=1.1km az=250.0*

*THE **30** 21:57:01.0, 38°.17N×20°.44E, h15km, ML3.3/6, Error ellipse: s-maj=0.6km s-min=0.4km az=254.0*

ISC 30 21:57:00.9±1.1, **38°.17N**±0°.03×**20°.44E**±0°.05, **h16**km±5km, **n42**, σ0°.**28**/57, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF2	**Argostoli. Kep**	**0.03**	**92**	P	**Pg**	**21 57 03.2**	**-0.4**
KEF2				S	**Sg**	**21 57 05.2**	**-0.3**
LXR1	**Lixouri, Cepha**	**0.04**	**352**	P	**Pg**	**21 57 03.7**	**0.0**
LXR1				S	**Sg**	**21 57 05.8**	**+0.3**
	42μm,0.3s						
ARG2	**Argostoli**	**0.04**	**71**	P	**Pg**	**21 57 03.4**	**-0.3**
ARG2				S	**Sg**	**21 57 05.6**	**+0.1**
	31μm,0.2s						
CHV1	**Chavriata, Kef**	**0.05**	**289**	P	**Pg**	**21 57 03.8**	**0.0**
CHV1				S	**Sg**	**21 57 06.0**	**+0.3**
KEF3	**Kipouria, Keph**	**0.08**	**296**	S	**Sg**	**21 57 06.0**	**-0.2**
KEF4	**Livadi, Kephal**	**0.09**	**350**	P	**Pg**	**21 57 04.1**	**-0.1**
KEF4				S	**Sg**	**21 57 06.3**	**0.0**
VLS	**Valsamata**	**0.12**	**85**	P	**Pg**	**21 57 04.4**	**0.0**
VLS				S	**Sg**	**21 57 07.1**	**+0.3**
	32μm,0.2s						
VLS	**Valsamata**	**0.12**	**85**	P	**Pg**	**21 57 04.5**	**0.0**
VLS				S	**Sg**	**21 57 07.1**	**+0.3**
VLS				AML	AML	21 57 07.2	
	comp=E,53446μm,0.2s						
VLS				AML	AML	21 57 07.2	
	comp=N,72350μm,0.2s						
VSK1	**VASILIKIADES**	**0.26**	**21**	P	**Pg**	**21 57 06.5**	**-0.1**
VSK1				S	**Sg**	**21 57 10.9**	**+0.5**
	comp=N,5μm,0.1s						
KFL	**Anninata**	**0.28**	**102**	P	**Pg**	**21 57 07.0**	**+0.2**
KFL				S	**Sb**	**21 57 11.8**	**-0.2**
	comp=N,9μm,0.3s						
KFL	**Anninata**	**0.28**	**102**	P	**Pg**	**21 57 07.1**	**+0.2**
KFL				S	**Sg**	**21 57 11.1**	**+0.2**
KFL				AML	AML	21 57 12.6	
	comp=N,18160μm,0.3s						
KFL				AML	AML	21 57 12.6	
	comp=E,19088μm,0.4s						
FSK	**Fiskardo**	**0.31**	**18**	P	**Pg**	**21 57 07.3**	**0.0**
FSK				S	**Sg**	**21 57 12.1**	**+0.3**
	comp=E,2μm,0.1s						
FSK	**Fiskardo**	**0.31**	**18**	P	**Pg**	**21 57 07.3**	**0.0**
FSK				S	**Sg**	**21 57 11.9**	**+0.1**
FSK				AML	AML	21 57 12.4	
	comp=N,2785μm,0.2s						
FSK				AML	AML	21 57 13.1	
	comp=E,5582μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.34**	**149**	P	**Pg**	**21 57 07.9**	**0.0**
VLMS				S	**Sg**	**21 57 12.7**	**+0.1**
VLMS				AML	AML	21 57 14.8	
	comp=E,9357μm,0.2s						
VLMS				AML	AML	21 57 17.0	
	comp=N,7519μm,0.2s						
EVGI	**Lefkada island**	**0.48**	**20**	P	**Pg**	**21 57 10.3**	**-0.2**
EVGI				S	**Sb**	**21 57 17.8**	**-0.1**
EVGI	**Lefkada island**	**0.48**	**20**	P	**Pg**	**21 57 10.3**	**-0.2**
EVGI				S	**Sg**	**21 57 17.3**	**+0.2**
MGNA	**Meganis**	**0.56**	**29**	P	**Pg**	**21 57 11.6**	**-0.3**
KRI1	**kERI**	**0.58**	**150**	P	**Pg**	**21 57 12.1**	**-0.3**
LKD2	**Lefkada island**	**0.64**	**15**	P	**Pg**	**21 57 13.4**	**-0.1**
LKD2	**Lefkada island**	**0.64**	**15**	P	**Pg**	**21 57 13.5**	**0.0**
LKD2				AML	AML	21 57 31.0	
	comp=N,1026μm,0.3s						
LKD2				AML	AML	21 57 33.0	
	comp=E,872μm,0.4s						
TSLK	**Tsoukalades, L**	**0.68**	**14**	P	**Pg**	**21 57 14.0**	**-0.2**
TSLK	**Tsoukalades, L**	**0.68**	**14**	P	**Pg**	**21 57 14.1**	**0.0**
PDO	**Prodromos**	**0.72**	**53**	P	**Pg**	**21 57 14.8**	**-0.2**
PDO	**Prodromos**	**0.72**	**53**	P	**Pg**	**21 57 14.8**	**-0.2**
PDO				AML	AML	21 57 32.3	
	comp=N,1980μm,0.3s						
PDO				AML	AML	21 57 34.4	
	comp=E,1478μm,0.2s						
RLS	**Riolos of Patr**	**0

DRO	**Drossia**	**1.02**	**102**	P		**Pb**	**21 57 20.6**	**+0.4**
EFP	**Efpalio**	**1.18**	**77**	P		**Pn**	**21 57 22.6**	**-0.1**
AMT	**Artemida-Makis**	**1.19**	**122**	P		**Pg**	**21 57 23.8**	**0.0**
AMT				AML	AML		21 57 54.4	
	comp=N,620μm,0.5s							
AMT				AML	AML		21 57 54.9	
	comp=E,697μm,0.9s							
LAKA	**Lakka**	**1.21**	**86**	P		**Pn**	**21 57 23.2**	**0.0**
LAKA	**Lakka**	**1.21**	**86**	P		**Pn**	**21 57 23.2**	**0.0**
ANX	**Ano Chora**	**1.24**	**69**	P		**Pg**	**21 57 24.7**	**0.0**
KLV	**Kalavryta, Ach**	**1.35**	**95**	P		**Pn**	**21 57 25.7**	**+0.6**
KALE	**Kalithea**	**1.35**	**80**	P		**Pb**	**21 57 25.9**	**0.0**
ITM	**Ithomi**	**1.53**	**129**	P		**Pb**	**21 57 29.2**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.57**	**57**	P		**Pg**	**21 57 31.6**	**+0.6**
AGG	**Agios Georgios**	**1.71**	**59**	P		**Pg**	**21 57 33.3**	**-0.4**
LTK	**Loutraki**	**2.00**	**93**	P		**Pb**	**21 57 36.5**	**-0.4**
LKR	**Lokris**	**2.06**	**76**	P		**Pb**	**21 57 37.4**	**-0.6**

*NEIC **30** 22:00:46.4±2.3,22.1°S±0.1°×177.6°W±0.1,h403km±7km, mb4.1/27,Error ellipse: s-maj=18.7km s-min=15.0km az=94.0*
*IDC **30** 22:00:52.1±7.9,21.40°S×178.13°W,h428km±72km,mb3.3/6, mb1 3.6/6,mb1mx3.2/40,mbtmp4.1/6,Error ellipse: s-maj=84.2km s-min=28.8km az=146.0*

ISC 30 22:00:45.9±0.5,22.08S±0.09×177.6W±0.1,h400km,n56, σ1s48/56,mb4.0/17,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**5.94**	**316**	Pn	**Pn**	**22 00 22.3**	**+4.4**
RAO	**Raoul Island**	**7.15**	**182**	Pn	**Pn**	**22 02 31.0**	**-0.1**
DZM	**Mont Dzumac**	**14.77**	**267**	P	**P**	**22 03 56.6**	**+0.5**
URZ	**Urewera**	**16.75**	**195**	P	**P**	**22 04 18.9**	**+1.8**
URZ				IAmb	IAmb	22 04 33.3	
	comp=Z,8.1nm,0.9s						
HIZ	**Hauiti**	**17.61**	**200**	P	**P**	**22 04 27.2**	**+1.1**
HIZ				IAmb	IAmb	22 04 38.1	
	comp=Z,21nm,1.2s						
BKZ	**Black Stump Fm**	**17.76**	**195**	P	**P**	**22 04 28.2**	**+0.4**
BKZ				IAmb	IAmb	22 04 41.0	
	comp=Z,6.5nm,1.0s						
KNTN	**Kanton**	**20.03**	**17**	P	**P**	**22 04 46.5**	**-4.2**
MSWZ	**Moikau Station**	**20.20**	**196**	P	**P**	**22 04 51.4**	**-0.5**
BHW	**Baring Head**	**20.29**	**196**	P	**P**	**22 04 54.9**	**+2.1**
PLWZ	**Palliser**	**20.34**	**196**	P	**P**	**22 04 53.6**	**+0.3**
CMWZ	**Cape Campbell**	**20.78**	**197**	P	**P**	**22 04 54.4**	**-2.9**
LBZ	**Lake Benmore**	**24.42**	**201**	P	**P**	**22 05 28.9**	**-1.3**
LBZ				IAmb	IAmb	22 05 47.7	
	comp=Z,5.7nm,1.0s						
COEN	**Coen**	**38.06**	**275**	P	**P**	**22 07 27.1**	**-1.2**
COEN				IAmb	IAmb	22 07 35.6	
	comp=Z,15nm,1.1s						
BBOO	**Buckleboo**	**42.18**	**245**	P	**P**	**22 08 00.1**	**-1.4**
ASAR	**Alice Springs**	**44.52**	**258**	P	**P**	**22 08 21.7**	**+1.6**
	comp=Z,2.5nm,0.9s,baz=84,slow=8.8,SNR=16						
ASAR				PcP	**PcP**	**22 09 56.8**	**+1.4**
	comp=Z,1.1nm,0.8s,baz=99,slow=4.8,SNR=4.9						
ASAR	**Alice Springs**	**44.52**	**258**	P	**P**	**22 08 20.6**	**+0.5**
WR0	**Warramunga Arr**	**44.56**	**264**	P	**P**	**22 08 21.2**	**+0.8**
WB0	**Warramunga Arr**	**44.74**	**264**	P	**P**	**22 08 22.6**	**+0.8**
WB0				IAmb	IAmb	22 08 25.0	
	comp=Z,9.9nm,1.1s						
WRA	**Warramunga Arr**	**44.75**	**264**	P	**P**	**22 08 22.3**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=94,slow=7.8,SNR=7.3						
WRA	**Warramunga Arr**	**44.75**	**264**	IAmb	IAmb	22 08 22.6	
	comp=Z,0.4nm,1.1s						
FORT	**Forrest**	**49.01**	**248**	P	**P**	**22 08 53.9**	**-0.4**
FORT				IAmb	IAmb	22 08 57.7	
	comp=Z,11nm,0.8s						
SBA	**Scott Base**	**56.33**	**184**	P	**P**	**22 09 46.9**	**+0.6**
SBA				IAmb	IAmb	22 09 56.3	
	comp=Z,7.4nm,1.0s						
SOEI	**Soe**	**56.91**	**273**	P	**P**	**22 09 50.5**	**-1.1**
MORW	**Morawa**	**59.57**	**248**	P	**P**	**22 10 07.0**	**-2.4**
MORW				IAmb	IAmb	22 10 21.7	
	comp=Z,7.1nm,1.1s						
ERM	**Erimo**	**73.36**	**331**	P	**P**	**22 11 33.1**	**-2.1**
WDC	**Whiskeytown Da**	**80.66**	**39**	P	**P**	**22 12 14.2**	**-1.3**
QIZ	**Qiongzhong**	**81.82**	**294**	P	**P**	**22 12 19.4**	**-2.6**
SVW2	**Sparrevohn**	**84.78**	**11**	P	**P**	**22 12 35.5**	**-0.4**
SVW2				IAmb	IAmb	22 12 41.2	
	comp=Z,3.4nm,1.1s						
SUA	**Susitna One**	**86.01**	**13**	P	**P**	**22 12 43.1**	**+1.1**
TRF	**Thorofare Moun**	**87.91**	**12**	P	**P**	**22 12 51.2**	**+0.1**
TRF				IAmb	IAmb	22 12 53.2	
	comp=Z,4.2nm,0.9s						
SEY	**Seymchan**	**87.98**	**347**	P	**P**	**22 12 50.4**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=156,slow=5.7,SNR=6.9						
RND	**Reindeer**	**88.15**	**13**	P	**P**	**22 12 52.4**	**+0.3**
RND				IAmb	IAmb	22 12 57.4	
	comp=Z,3.7nm,1.0s						
WRH	**Wood River Hil**	**89.26**	**12**	P	**P**	**22 12 57.1**	**0.0**
WRH				IAmb	IAmb	22 12 58.2	
	comp=Z,4.6nm,1.0s						
MLY	**Manley**	**89.27**	**11**	P	**P**	**22 12 57.3**	**0.0**
DLBC	**Dease Lake**	**89.36**	**23**	P	**P**	**22 12 55.6**	**-2.2**
CCB	**Clear Creek Bu**	**89.47**	**12**	P	**P**	**22 12 58.0**	**-0.1**
CCB				IAmb	IAmb	22 12 59.5	
	comp=Z,1.8nm,0.7s						
IMAR	**Indian Mountai**	**89.64**	**10**	P	**P**	**22 12 59.6**	**+0.7**
SCRK	**Sand Creek**	**89.70**	**14**	P	**P**	**22 12 59.9**	**+0.5**
IL31		**89.77**	**13**	P	**P**	**22 12 59.5**	**+0.1**
ILAR	**Eielson Array**	**89.77**	**13**	P	**P**	**22 12 59.6**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=218,slow=5.4,SNR=10.0						
ILAR	**Eielson Array**	**89.77**	**13**	P	**P**	**22 12 59.8**	**+0.3**
PDAR	**Pinedale Array**	**89.87**	**43**	P	**P**	**22 13 04.5**	**+3.7**
	comp=Z,0.2nm,0.5s,baz=229,slow=5.5,SNR=3.7						
CMAR	**Chiang Mai Arr**	**90.97**	**289**	P	**P**	**22 13 07.3**	**+1.2**
	comp=Z,1.8nm,0.9s,baz=114,slow=3.2,SNR=12						
WHTX	**Lake Whitney,**	**93.58**	**57**	P	**P**	**22 13 18.2**	**+0.3**
MKAR	**Makanchi Array**	**112.53**	**313**	PKiKP	**PKiKP**	**22 18 36.0**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=174,slow=1.2,SNR=6.2						
BVAR	**Borovoye Array**	**120.50**	**319**	PKP	**PKiKP**	**22 18 51.1**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=113,slow=2.7,SNR=7.4						
ARCES	**ARCESS Array B**	**130.53**	**350**	PKP	**PKiKP**	**22 19 10.3**	**+0.4**
	comp=Z,1.4nm,0.8s,baz=62,slow=4.2,SNR=5.2						
AKASG	**Malin Array Be**	**144.55**	**330**	PKP	PKPbc	22 19 34.2	-0.7
	comp=Z,1.9nm,0.4s,baz=44,slow=4.3,SNR=21						
EKA	**Eskdalemuir Ar**	**146.53**	**6**	PKPbc	**PKPbc**	**22 19 41.7**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=320,slow=1.9,SNR=3.2						
ASF	**Jabal al Asfar**	**147.79**	**296**	PKPbc	**PKiKP**	**22 19 46.5**	**0.0**
	comp=Z,2.5nm,0.8s,baz=147,slow=3.3,SNR=6.0						
BRTR	**Keskin Array B**	**148.14**	**311**	PKPbc	**PKPbc**	**22 19 45.5**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=102,slow=4.1,SNR=5.5						
MMAI	**Mount Meron Ar**	**148.88**	**298**	PKPbc	**PKiKP**	**22 19 49.1**	**+0.4**
	comp=Z,21nm,1.2s,baz=79,slow=4.3,SNR=7.5						
MMAI				PKPab	**PKPab**	**22 19 53.7**	**+0.6**
	comp=Z,0.7nm,0.4s,baz=54,slow=6.3,SNR=4.6						
CLL	**Collm**	**149.67**	**347**	*i* PKPbc	**PKiKP**	**22 19 49.9**	**+0.3**
	comp=Z,8.0nm,1.2s						
MLR	**Muntele Rosu**	**149.73**	**326**	PKPbc	**PKiKP**	**22 19 50.8**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=324,slow=8.2,SNR=4.1						
GERES	**GERESS Array B**	**151.81**	**344**	PKPbc	**PKiKP**	**22 19 55.9**	**+1.7**
	comp=Z,0.6nm,0.6s,baz=320,slow=3.5,SNR=5.0						
GERES	**GERESS Array B**	**151.81**	**344**	PKPdf	**PKPdf**	**22 19 48.0**	**+0.8**

*THE **30** 22:02:07.2,38.21N×20.40E,h10km,ML2.6/6,Error ellipse: s-maj=0.6km s-min=0.2km az=237.0*
*ATH **30** 22:02:07.3,38.23N×20.40E,h9km±1km,ML2.7/7,Error ellipse: s-maj=2.3km s-min=1.0km az=258.0*

ISC 30 22:02:06.9±1.1,38.22N±0.03×20.39E±0.04,h10km±5km, n39,σ0s45/62,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.03**	**192**	P	**Pg**	**22 02 09.1**	**+0.4**
CHV1				S	**Sg**	**22 02 10.6**	**+0.6**
KEF3	**Kipouria, Keph**	**0.04**	**249**	P	**Pg**	**22 02 08.9**	**+0.2**
KEF3				S	**Sg**	**22 02 10.3**	**+0.2**
LXR1	**Lixouri, Cepha**	**0.04**	**112**	P	**Pg**	**22 02 09.0**	**+0.2**
LXR1				S	**Sg**	**22 02 10.3**	**+0.2**
	67μm,0.4s						
KEF4	**Livadi, Kephal**	**0.05**	**33**	P	**Pg**	**22 02 09.0**	**+0.1**
KEF4				S	**Sg**	**22 02 10.1**	**-0.2**
ARG2	**Argostoli**	**0.09**	**116**	P	**Pg**	**22 02 09.6**	**+0.3**
ARG2				S	**Sg**	**22 02 11.3**	**+0.3**
KEF1	**Kardakata, Kep**	**0.09**	**46**	P	**Pg**	**22 02 09.3**	**0.0**
KEF1				S	**Sg**	**22 02 10.7**	**-0.4**
KEF2	**Argostoli. Kep**	**0.09**	**124**	P	**Pg**	**22 02 09.8**	**+0.5**
KEF2				S	**Sg**	**22 02 11.4**	**+0.3**
VLS	**Valsamata**	**0.16**	**104**	P	**Pg**	**22 02 10.6**	**+0.1**
VLS				S	**Sg**	**22 02 13.3**	**+0.4**
	11μm,0.1s						
VLS	**Valsamata**	**0.16**	**104**	P	**Pg**	**22 02 10.7**	**+0.3**
VLS				S	**Sg**	**22 02 13.3**	**+0.4**
VLS				AML	AML	22 02 13.4	
	comp=E,17365μm,0.1s						
VLS				AML	AML	22 02 13.4	
	comp=N,25634μm,0.2s						
VSK1	**VASILIKIADES**	**0.24**	**35**	P	**Pg**	**22 02 12.0**	**+0.2**
VSK1				S	**Sg**	**22 02 15.9**	**+0.9**
FSK	**Fiskardo**	**0.28**	**29**	P	**Pg**	**22 02 12.8**	**+0.3**
FSK				S	**Sg**	**22 02 17.3**	**+1.0**
	comp=N,1μm,0.1s						
FSK	**Fiskardo**	**0.28**	**29**	P	**Pg**	**22 02 12.9**	**+0.3**
FSK				S	**Sg**	**22 02 17.0**	**+0.7**
KFL	**Anninata**	**0.33**	**109**	P	**Pg**	**22 02 13.6**	**+0.1**
KFL				S	**Sg**	**22 02 18.5**	**+0.6**
	comp=N,1μm,0.5s						
KFL	**Anninata**	**0.33**	**109**	P	**Pg**	**22 02 13.8**	**+0.3**
KFL				S	**Sg**	**22 02 19.0**	**+1.1**
KFL				AML	AML	22 02 19.3	
	comp=N,2412μm,0.4s						
KFL				AML	AML	22 02 21.3	
	comp=E,2461μm,0.5s						
VLMS	**Volimes, Zakyn**	**0.40**	**148**	P	**Pg**	**22 02 15.4**	**+0.6**
VLMS				S	**Sb**	**22 02 21.9**	**-0.5**
VLMS				AML	AML	22 02 23.6	
	comp=N,1962μm,0.3s						
VLMS				AML	AML	22 02 26.7	
	comp=E,2468μm,0.3s						
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**22 02 16.1**	**+0.3**
EVGI				S	**Sg**	**22 02 22.9**	**+1.1**
EVGI	**Lefkada island**	**0.46**	**27**	P	**Pg**	**22 02 16.2**	**+0.4**
MGNA	**Meganis**	**0.54**	**35**	P	**Pg**	**22 02 17.4**	**0.0**
MGNA				S	**Sg**	**22 02 24.9**	**+0.4**
MGNA				AML	AML	22 02 26.0	
	comp=N,2519μm,0.3s						
MGNA				AML	AML	22 02 26.3	
	comp=E,2084μm,0.1s						
LKD2	**Lefkada island**	**0.61**	**20**	P	**Pg**	**22 02 18.7**	**0.0**
LKD2				S	**Sg**	**22 02 27.7**	**+0.9**
	comp=E,295nm,0.3s						
LKD2	**Lefkada island**	**0.61**	**20**	P	**Pg**	**22 02 18.8**	**+0.1**
LKD2				S	**Sg**	**22 02 27.5**	**+0.8**
AST1	**Astakos**	**0.64**	**59**	P	**Pg**	**22 02 19.1**	**0.0**
TSLK	**Tsoukalades, L**	**0.64**	**19**	P	**Pg**	**22 02 19.5**	**+0.1**
TSLK				S	**Sb**	**22 02 29.1**	**-0.2**
PDO	**Prodromos**	**0.73**	**58**	P	**Pg**	**22 02 20.9**	**-0.2**
PDO				S	**Sb**	**22 02 32.0**	**+0.2**
	comp=E,415nm,0.3s						
PDO	**Prodromos**	**0.73**	**58**	P	**Pg**	**22 02 20.8**	**-0.2**
PDO				AML	AML	22 02 33.5	
	comp=E,503μm,0.4s						
PDO				AML	AML	22 02 34.5	
	comp=N,647μm,0.3s						
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pg**	**22 02 23.3**	**-0.2**
RLS				S	**Sb**	**22 02 35.9**	**+0.2**
RLS	**Riolos of Patr**	**0.86**	**100**	P	**Pg**	**22 02 23.8**	**+0.3**
RLS				S	**Sb**	**22 02 35.8**	**+0.2**
PVO	**Paravola**	**0.98**	**66**	P	**Pg**	**22 02 25.7**	**0.0**
PVO	**Paravola**	**0.98**	**66**	P	**Pg**	**22 02 25.8**	**0.0**
DRO	**Drossia**	**1.07**	**104**	P	**Pg**	**22 02 27.5**	**-0.1**
DRO	**Drossia**	**1.07**	**104**	P	**Pg**	**22 02 27.7**	**+0.1**
DRO				AML	AML	22 02 49.4	
	comp=N,405μm,0.5s						
DRO				AML	AML	22 02 49.4	
	comp=E,360μm,0.3s						
EFP	**Efpalio**	**1.21**	**80**	P	**Pb**	**22 02 29.2**	**-0.7**
LAKA	**Lakka**	**1.25**	**88**	P	**Pn**	**22 02 29.9**	**-0.6**
LAKA	**Lakka**	**1.25**	**88**	P	**Pn**	**22 02 29.9**	**-0.6**
ANX	**Ano Chora**	**1.26**	**72**	P	**Pn**	**22 02 30.7**	**0.0**
SERG	**Sergoula**	**1.32**	**81**	P	**Pn**	**22 02 31.9**	**+0.4**
TRIZ	**Trizonia**	**1.33**	**83**	P	**Pn**	**22 02 31.2**	**-0.4**
KALE	**Kalithea**	**1.39**	**82**	P	**Pn**	**22 02 31.9**	**-0.5**
KALE	**Kalithea**	**1.39**	**82**	P	**Pn**	**22 02 32.2**	**-0.2**
KLV	**Kalavryta, Ach**	**1.40**	**97**	P	**Pn**	**22 02 32.8**	**+0.2**

*DDA **30** 22:08:42.8,36.04N×29.01E,h28km±1km,ML2.3*
*ISK **30** 22:08:42.5,36.04N×29.05E,h18km,ML2.6/10*
*NIC **30** 22:08:43.9±0.0,35.89N×29.13E,h30km±3km,MI3.0/2*
*ATH **30** 22:08:52.2,36.33N×27.94E,h24km±5km,ML1.4/1,Error ellipse: s-maj=9.4km s-min=1.9km az=127.0*

ISC 30 22:08:40.5±1.2,35.91N±0.03×29.03E±0.02,h12km±10km, n42,σ1s06/66,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.57**	**55**	PG	**Pb**	**22 08 53.1**	**+0.7**
AKAS	**Kas**	**0.57**	**55**	*i* P	**Pb**	**22 08 53.2**	**+0.7**
AKAS				*i* S	**Sb**	**22 09 02.2**	**+1.6**
AKAS				IAML		22 09 04.0	
	comp=E,281nm,0.3s						
AKAS				IAML		22 09 06.0	
	comp=N,238nm,0.3s						
FETY	**Fethiye**	**0.73**	**4**	PG	**Pb**	**22 08 54.8**	**-0.3**
FETY				SG	**Sb**	**22 09 04.0**	**-1.1**
FETY	**Fethiye**	**0.73**	**4**	*i* P	**Pb**	**22 08 54.7**	**-0.3**
FETY				*i* S	**Sb**	**22 09 03.8**	**-1.2**
FETY				IAML		22 09 05.0	
	comp=N,144nm,0.3s						
FETY				IAML		22 09 05.0	
	comp=E,156nm,0.7s						
DEMR	**Demre-Antalya**	**0.78**	**65**	PG	**Pb**	**22 08 56.9**	**+0.9**
DEMR				SG	**Sb**	**22 09 07.6**	**+1.0**
ARG	**Arkhangelos**	**0.79**	**293**	P	**Pn**	**22 08 57.5**	**0.0**
ARG				AML	AML	22 09 15.2	
	comp=N,182μm,0.3s						
ARG				AML	AML	22 09 17.0	
	comp=E,291μm,0.4s						
ARG	**Arkhangelos**	**0.79**	**293**	PG	**Pn**	**22 08 58.7**	**+1.2**
ARG	**Arkhangelos**	**0.79**	**293**	P	**Pn**	**22 08 59.1**	**+1.7**
ARG				S	**Sn**	**22 09 10.0**	**+2.8**
DALY	**Dalyan (Mula)**	**0.95**	**342**	PG	**Pb**	**22 08 58.7**	**-0.3**
DALY				SG	**Sb**	**22 09 11.5**	**-0.1**
DALY	**Dalyan (Mula)**	**0.95**	**342**	*i* P	**Pb**	**22 08 58.9**	**-0.1**
DALY				*i* S	**Sb**	**22 09 10.9**	**-0.7**
DALY				IAML		22 09 12.0	
	comp=E,87nm,1.2s						
DALY				IAML		22 09 13.0	
	comp=N,134nm,0.6s						
TURN	**Turunc**	**1.02**	**341**	PG	**Pn**	**22 09 01.7**	**+1.1**
TURN	**Turunc**	**1.02**	**341**	*i* P	**Pn**	**22 09 01.8**	**+1.2**
TURN				*i* S	**Sn**	**22 09 15.9**	**+1.0**
ELL	**Elmali**	**1.10**	**40**	PG	**Pn**	**22 09 01.9**	**+0.1**
ELL	**Elmali**	**1.10**	**40**	P	**Pn**	**22 09 01.9**	**+0.1**
ELL				S	**Sn**	**22 09 17.7**	**+0.6**
AKUM	**Antalya-Kumluc**	**1.14**	**68**	*i* P	**Pb**	**22 09 02.4**	**+0.2**
AKUM				*i* S	**Sg**	**22 09 15.6**	**-1.7**
AKUM				IAML		22 09 16.0	
	comp=N,51nm,0.9s						
AKUM				IAML		22 09 27.0	
	comp=E,52nm,0.7s						
YER	**Yerkesik**	**1.36**	**334**	PN	**Pg**	**22 09 06.1**	**-0.5**
GOLH	**Golhisar**	**1.39**	**18**	*i* P	**Pb**	**22 09 06.3**	**-0.3**
GOLH				*i* S	**Sg**	**22 09 25.1**	**-0.2**
GOLH				IAML		22 09 28.0	
	comp=N,60nm,1.0s						
DAT	**Datca**	**1.43**	**305**	PN	**Pg**	**22 09 08.1**	**+0.2**
DAT	**Datca**	**1.43**	**305**	*i* P	**Pg**	**22 09 07.9**	**0.0**
DAT				*i* S	**Sg**	**22 09 25.8**	**-0.6**
KORT	**Korkueli**	**1.52**	**44**	PN	**Pb**	**22 09 08.4**	**-0.4**
KORT	**Korkueli**	**1.52**	**44**	*i* P	**Pg**	**22 09 09.5**	**-0.3**
KORT				*i* S	**Sg**	**22 09 30.7**	**+1.1**
KORT				IAML		22 09 40.0	
	comp=N,30nm,1.0s						
KORT				IAML		22 09 42.0	
	comp=E,56nm,0.6s						
TAVA	**DENIZLI_Tavas**	**1.56**	**357**	*i* P	**Pn**	**22 09 08.4**	**+0.3**
TAVA				*i* S	**Sn**	**22 09 27.1**	**-1.1**
TAVA				IAML		22 09 28.0	
	comp=E,50nm,0.4s						
TAVA				IAML		22 09 28.0	
	comp=N,44nm,0.6s						
KARP	**Karpathos**	**1.56**	**257**	P	**Pg**	**22 09 11.5**	**+1.0**
KARP	**Karpathos**	**1.56**	**257**	PN	**Pg**	**22 09 10.6**	**+0.2**
KARP	**Karpathos**	**1.56**	**257**	P	**Pg**	**22 09 11.3**	**+0.9**
KARP				S	**Sg**	**22 09 31.8**	**+1.2**
BODT	**Bodrum**	**1.80**	**310**	PN	**Pn**	**22 09 12.1**	**+0.7**
BRDR	**BURDUR-Merkez**	**1.97**	**25**	*i* P	**Pb**	**22 09 16.3**	**0.0**
BRDR				*i* S	**Sb**	**22 09 41.1**	**+0.3**
BRDR				IAML		22 09 43.0	
	comp=E,18nm,0.5s						
AYDN	**Tasoluk**	**1.98**	**333**	*i* P	**Pb**	**22 09 15.9**	**-0.5**
AYDN				*i* S	**Sn**	**22 09 37.9**	**-0.7**
AYDN				IAML		22 09 43.0	
	comp=E,28nm,0.3s						
AYDN				IAML		22 09 45.0	
	comp=N,24nm,0.5s						
BASM	**Basmaki-Afyon**	**2.17**	**22**	PN	**Pn**	**22 09 16.7**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**2.23**	**336**	PN	**Pn**	**22 09 17.8**	**+0.4**
ZKR	**Zakros**	**2.42**	**252**	PN	**Pb**	**22 09 23.8**	**-0.2**
SMG	**Samos**	**2.51**	**316**	P	**Pn**	**22 09 21.6**	**+0.4**
KULA	**Kula-Manisa**	**2.62**	**354**	PN	**Pn**	**22 09 23.0**	**+0.3**
AKMS	**Akamas**	**2.84**	**107**	P	**Pn**	**22 09 24.9**	**-0.8**
AKMS				S	**Sn**	**22 09 57.3**	**-2.6**
AKMS				AML	AML	22 09 58.2	
	comp=N,0.2nm,0.4s						
AKMS				AML	AML	22 09 58.2	
	comp=N,0.2nm,0.4s						
AKMS				AML	AML	22 09 58.5	
	comp=N,0.1nm,0.3s						
AKMS				AML	AML	22 09 58.5	
	comp=N,0.1nm,0.3s						
NPS	**Neapolis**	**2.86**	**258**	P	**Pb**	**22 09 29.0**	**-2.4**
LAST	**Lasithi**	**2.99**	**257**	P	**Pb**	**22 09 31.4**	**-2.3**
ALFC	**Alefka**	**3.01**	**103**	P	**Pn**	**22 09 29.2**	**+1.2**
ALFC				S	**Sn**	**22 10 02.6**	**-1.5**
ALFC				AML	AML	22 10 03.5	
	comp=N,0.1nm,0.2s						
ALFC				AML	AML	22 10 03.5	
	comp=N,0.1nm,0.2s						
ALFC				AML	AML	22 10 04.1	
	comp=N,0.1nm,0.7s						
ALFC				AML	AML	22 10 04.1	
	comp=N,0.1nm,0.7s						
NATA	**Nata**	**3.11**	**110**	P	**Pn**	**22 09 30.2**	**+0.9**
NATA				S	**Sn**	**22 10 05.1**	**-1.4**
SZAC	**Souni**	**3.36**	**109**	P	**Pn**	**22 09 33.1**	**+0.3**
SZAC				S	**Sn**	**22 10 11.9**	**-0.6**
ASGA	**Asgata**	**3.63**	**107**	P	**Pn**	**22 09 38.4**	**+1.9**
ASGA				S	**Sn**	**22 10 18.7**	**-0.5**
CSS	**Mathiatis**	**3.64**	**104**	P	**Pn**	**22 09 37.1**	**+0.4**
CSS				S	**Sn**	**22 10 18.6**	**-1.0**
MVOU	**Mavrovouni**	**3.86**	**102**	P	**Pn**	**22 09 41.2**	**+1.5**
MVOU				S	**Sn**	**22 10 25.4**	**+0.4**

IDC 30 22:10:30.4±1.7,2.93S×147.28E,h0km,mb3.7/4, mb1 4.0/4,mb1mx3.5/41,mbtmp3.7/4,MS3.6/11, Ms1 3.6/11,ms1mx3.2/36,Error ellipse: s-maj=303.6km s-min=27.4km az=120.0,Admiralty Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.44**	**181**	LR	LR	22 14 34.3	
	comp=Z,406nm,21.9s,baz=255,slow=38						
JAY	**Jayapura**	**6.58**	**273**	LR	LR	22 14 41.2	
	comp=Z,474nm,21.5s,baz=70,slow=38						
HNR	**Honiara**	**14.15**	**118**	LR	LR	22 18 31.7	
	comp=Z,143nm,21.7s,baz=274,slow=34						
WRA	**Warramunga Arr**	**21.11**	**216**	P	P	22 15 17.1	+0.3
	1.1nm,0.7s,baz=42,slow=11,SNR=3.7						
WRA				LR	LR	22 24 56.8	
	comp=Z,98nm,19.1s,baz=50,slow=41						
DAV	**Davao City (W)**	**23.83**	**295**	LR	LR	22 25 05.3	
	comp=Z,204nm,18.4s,baz=297,slow=37						
ASAR	**Alice Springs**	**24.34**	**211**	P	P	22 15 50.0	-0.1
	0.8nm,0.5s,baz=40,slow=7.7,SNR=9.9						
ASAR				LR	LR	22 26 47.3	
	comp=Z,111nm,18.2s,baz=30,slow=40						
FITZ	**Fitzroy Crossi**	**26.02**	**233**	LR	LR	22 27 20.6	
	comp=Z,210nm,20.0s,baz=62,slow=39						
KAPI	**Kappang**	**27.54**	**265**	LR	LR	22 28 05.5	
	comp=Z,78nm,19.4s,baz=26,slow=38						
H11S3	**WAKE ISLAND Hy**	**28.61**	**41**	T	T	22 46 05.5	
	baz=222,slow=75,SNR=239						
H11S2	**WAKE ISLAND Hy**	**28.61**	**41**	T	T	22 45 59.6	
	baz=222,slow=75,SNR=240						
H11S1	**WAKE ISLAND Hy**	**28.62**	**41**	T	T	22 46 00.4	
	baz=222,slow=75,SNR=192						
STKA	**Stephens Creek**	**29.29**	**190**	LR	LR	22 28 48.1	
	comp=Z,188nm,19.9s,baz=8.7,slow=38						
H11N1	**WAKE ISLAND Hy**	**29.62**	**40**	T	T	22 47 20.6	
	baz=221,slow=76,SNR=38						
H11N3	**WAKE ISLAND Hy**	**29.64**	**40**	T	T	22 47 21.7	
	baz=221,slow=76,SNR=68						
H11N2	**WAKE ISLAND Hy**	**29.64**	**40**	T	T	22 47 21.8	
	baz=221,slow=76,S

ASAO	**Ashtian**	**3.01**	**244**	*e*Pn		**Pn**	**22 13 07.8**	**+2.1**
QABG	**Abgarm-Qazvin**	**3.03**	**267**	*e*Pn		**Pn**	**22 13 09.0**	**+3.0**
IZEF	**Zefreh**	**3.13**	**195**	*e*Pn		**Pn**	**22 13 08.5**	**+1.1**
TNSJ	**Nastanj**	**3.35**	**125**	*e*Pn		**Pn**	**22 13 12.0**	**+1.6**
KHMZ	**Khomeyn**	**3.51**	**232**	*e*Pn		**Pn**	**22 13 14.5**	**+1.9**
KHMZ	**Khomeyn**	**3.51**	**232**	*e*Pn		**Pn**	**22 13 14.5**	**+1.9**
HAGD	**Aghdareh**	**3.57**	**253**	*e*Pn		**Pn**	**22 13 15.1**	**+1.6**
YZKH	**Yazd**	**3.69**	**163**	*e*Pn		**Pn**	**22 13 17.1**	**+2.1**
YZKH	**Yazd**	**3.69**	**163**	*e*Pn		**Pn**	**22 13 17.1**	**+2.1**
YZKH					IAML		22 14 28.4	
	comp=N,196nm,0.5s							
YZKH					IAML		22 14 31.2	
	comp=E,234nm,0.6s							
ICHK	**Chekchek**	**3.79**	**166**	*e*Pn		**Pn**	**22 13 18.5**	**+2.0**
IPIR	**Pirpir**	**3.80**	**212**	*e*Pn		**Pn**	**22 13 20.3**	**+3.6**
TABS	**Tabas**	**3.88**	**125**	*e*Pn		**Pn**	**22 13 19.5**	**+1.9**
TABS	**Tabas**	**3.88**	**125**	*e*Pn		**Pn**	**22 13 19.5**	**+1.9**
TKDS	**Koohdasht(Taba**	**3.91**	**125**	*e*Pn		**Pn**	**22 13 19.9**	**+1.9**
ISFR	**Sfrayin**	**3.95**	**72**	*e*Pn		**Pn**	**22 13 21.6**	**+2.8**
ISFR				*e*			22 14 46.2	
ISAD	**Sadrabad**	**4.02**	**175**	*e*Pn		**Pn**	**22 13 22.4**	**+2.8**
TPRV	**Parvadeh(Tabas**	**4.03**	**135**	*e*Pn		**Pn**	**22 13 21.9**	**+2.3**
ROKH	**ROKH**	**4.04**	**208**	*e*Pn		**Pn**	**22 13 23.5**	**+3.7**
BDRS	**Dareh Seyedi**	**4.13**	**243**	*e*Pn		**Pn**	**22 13 25.5**	**+4.4**
HSRG	**Sareghieh**	**4.15**	**262**	*e*Pn		**Pn**	**22 13 25.3**	**+3.9**
IRAM	**Ramesheh**	**4.18**	**191**	*e*Pn		**Pn**	**22 13 23.9**	**+2.1**
HSAM	**Samen**	**4.21**	**247**	*e*Pn		**Pn**	**22 13 26.6**	**+4.3**
BMDN	**Meydan**	**4.31**	**240**	*e*Pn		**Pn**	**22 13 27.9**	**+4.3**
GEYT	**Alibeck**	**4.35**	**61**	Pn		**Pn**	**22 13 27.1**	**+3.1**
	comp=E,7.1nm,0.3s,baz=252,slow=14,SNR=70							
GEYT					Sn	**Sb**	**22 14 21.5**	**-5.3**
	comp=E,4.1nm,0.3s,baz=238,slow=18,SNR=4.7							
GEYT					Lg	Lg	22 14 42.1	
	baz=241,slow=32,SNR=3.7							
GEYT	**Alibeck**	**4.35**	**61**	Pn		**Pn**	**22 13 26.9**	**+2.9**
GYA0B	**ALIBECK ARRAY**	**4.35**	**61**	⇓P		**Pn**	**22 13 26.8**	**+2.8**
GYA0B				⇓S		**Sn**	**22 14 19.6**	**+5.2**
GYA0B	**ALIBECK ARRAY**	**4.35**	**61**			**Pn**	**22 13 27.1**	**+3.1**
IAKL	**Akhelmad**	**4.46**	**80**	*e*Pn		**Pn**	**22 13 28.1**	**+2.3**
ASHT	**Ashkhabad**	**4.54**	**62**	Pn		**Pn**	**22 13 26.7**	**0.0**
IEMG	**Emamgholi**	**4.55**	**60**	*e*Pn		**Pn**	**22 13 29.8**	**+2.8**
IMEH	**Mehriz**	**4.66**	**166**	*e*Pn		**Pn**	**22 13 30.7**	**+2.3**
IKMR	**Kamar-syah**	**4.71**	**241**	*e*Pn		**Pn**	**22 13 32.3**	**+3.5**
IDOB	**Doab**	**4.72**	**245**	*e*Pn		**Pn**	**22 13 33.7**	**+4.5**
IBAF	**Bafgh**	**4.72**	**156**	*e*Pn		**Pn**	**22 13 31.3**	**+2.1**
ISRB	**Sarab**	**4.89**	**294**	*e*Pn		**Pn**	**22 13 34.8**	**+3.2**
IKOM	**Komasi**	**5.06**	**251**	*e*Pn		**Pn**	**22 13 37.8**	**+4.0**
KLNJ	**Kolanjah**	**5.11**	**197**	*e*Pn		**Pn**	**22 13 37.4**	**+2.7**
AFRZ	**Afriz**	**5.33**	**116**	*e*Pn		**Pn**	**22 13 39.8**	**+2.2**
ITEG	**Tejag**	**5.43**	**122**	*e*Pn		**Pn**	**22 13 41.3**	**+2.4**
IHRS	**Heris**	**5.54**	**297**	*e*Pn		**Pn**	**22 13 44.5**	**+4.0**
JRKH	**Jarkhoshk**	**5.72**	**88**	*e*Pn		**Pn**	**22 13 45.3**	**+2.4**
IDHR	**Dehrash**	**5.78**	**260**	*e*Pn		**Pn**	**22 13 47.3**	**+3.5**
IKOO	**Kooshah**	**5.88**	**125**	*e*Pn		**Pn**	**22 13 47.3**	**+2.1**
IMON	**Monand**	**5.92**	**116**	*e*Pn		**Pn**	**22 13 48.6**	**+2.8**
KHGB	**Koh Gabri**	**6.15**	**153**	*e*Pn		**Pn**	**22 13 51.4**	**+2.5**
IKAZ	**Kazeroun**	**6.25**	**192**	*e*Pn		**Pn**	**22 13 53.1**	**+2.7**
IDAH	**Dahanechah**	**6.30**	**118**	*e*Pn		**Pn**	**22 13 53.3**	**+2.3**
TVBK	**TV Kerman**	**6.60**	**153**	*e*Pn		**Pn**	**22 13 56.7**	**+1.5**
CHMN	**Cheshme madani**	**7.02**	**148**	*e*Pn		**Pn**	**22 14 03.7**	**+2.7**
NHDN	**Nehbandan**	**7.22**	**127**	*e*Pn		**Pn**	**22 14 05.8**	**+2.3**
HRA	**Herat**	**7.49**	**99**	Pn		**Pn**	**22 14 07.8**	**+0.5**
GNI	**Garni**	**7.96**	**305**			**Pn**	**22 14 17.3**	**+3.7**
KBZ	**Khabaz**	**11.15**	**317**	Pn		**Pn**	**22 15 01.3**	**+4.1**
	comp=E,0.1nm,0.3s,baz=115,slow=19,SNR=3.2							
KBZ					Sn	**Sn**	**22 17 06.3**	**+4.7**
	comp=E,0.1nm,0.3s,baz=303,slow=17,SNR=2.4							
UOSS	**Minazif**	**11.23**	**166**	Pn		**Pn**	**22 14 59.1**	**+0.7**
KIV	**Kislovodsk**	**11.42**	**318**	Pn		**Pn**	**22 15 01.7**	**+0.7**
RAYN	**Ar Rayn**	**14.09**	**211**			**Pn**	**22 15 35.4**	**-2.0**
RAYN						**Sn**	**22 18 07.1**	**-6.5**
AB31	**Akbulak array**	**14.18**	**18**	⇓P		**Pn**	**22 15 37.5**	**-1.0**
	comp=E,0.7nm,0.4s,baz=201,slow=15,SNR=22							
AB31				⇓S		**Sn**	**22 18 11.7**	**-3.9**
	comp=E,2.7nm,0.6s,baz=198,slow=24,SNR=4.4							
ABKAR	**Akbulak array**	**14.18**	**18**			**Pn**	**22 15 39.1**	**+0.5**
ABKAR	**Akbulak array**	**14.18**	**18**	Pn		**Pn**	**22 15 38.5**	**0.0**
AKTO	**Aktyubinsk**	**14.90**	**12**	Pn		**Pn**	**22 15 47.3**	**-1.1**
	comp=E,0.2nm,0.3s,baz=195,slow=16,SNR=5.1							
AKTO					Sn	**Sn**	**22 18 25.4**	**-7.6**
	comp=E,0.4nm,0.3s,baz=69,slow=21,SNR=3.5							
AKTO					LR	LR	22 22 58.3	
	comp=E,30nm,18.5s,baz=223,slow=42							
AKTO	**Aktyubinsk**	**14.90**	**12**	⇑P		**Pn**	**22 15 47.7**	**-0.7**
AKTO				⇓S		**Sn**	**22 18 27.7**	**-5.3**
	comp=E,3.9nm,0.7s							
KKAR	**Karatay Array**	**15.08**	**56**	Pn		**Pn**	**22 15 50.5**	**-0.4**
BRTR	**Keskin Array B**	**15.98**	**290**	Pn		**P**	**22 16 05.1**	**-1.2**
	comp=E,0.0nm,0.3s,baz=101,slow=9.1,SNR=2.8							
EIL	**Elat**	**16.63**	**253**	LR		LR	22 23 51.6	
	comp=E,86nm,18.4s,baz=106,slow=42							
AAK	**Ala-Archa**	**17.70**	**61**	P		**P**	**22 16 26.6**	**+1.3**
	comp=E,0.2nm,0.3s,baz=187,slow=5.0,SNR=5.5							
AAK	**Ala-Archa**	**17.70**	**61**	P		**Pn**	**22 16 24.1**	**-0.4**
NRN	**Naryn**	**18.54**	**66**	P		**Pn**	**22 16 36.7**	**+1.8**
ARU	**Arti**	**20.82**	**8**	P		Pn	22 17 01.9	+0.4
	comp=E,1.2nm,0.6s,baz=209,slow=12,SNR=6.4							
ARU					S	**S**	**22 20 42.8**	**-7.9**
	comp=E,0.2nm,0.3s,baz=60,slow=20,SNR=2.2							
ARU					LR	LR	22 26 55.9	
	comp=E,54nm,18.9s,baz=188,slow=42							
ARU	**Arti**	**20.82**	**8**	P		**P**	**22 16 59.6**	**+0.6**
ARU					IAmb	IAmb	22 17 13.8	
	comp=Z,5.4nm,0.8s							
BRVK	**Borovoye**	**20.89**	**30**			**P**	**22 17 00.6**	**+0.7**
BRVK					IAmb	IAmb	22 17 06.1	
	comp=Z,9.9nm,1.2s							
BVAR	**Borovoye Array**	**20.91**	**30**	P		Pn	22 17 02.4	-0.3
	comp=Z,2.4nm,0.6s,baz=219,slow=9.4,SNR=20							
MLR	**Muntele Rosu**	**22.73**	**303**	P		**P**	**22 17 21.0**	**+1.2**
	comp=Z,2.3nm,0.7s,baz=164,slow=7.4,SNR=2.4							
AKASG	**Malin Array Be**	**22.77**	**318**	P		**P**	**22 17 22.2**	**+2.2**
	comp=Z,4.6nm,0.8s,baz=121,slow=12,SNR=9.1							
AKASG	**Malin Array Be**	**22.77**	**318**	P		**P**	**22 17 18.8**	**-1.2**
KIRV	**Kirov**	**22.81**	**355**	LR		LR	22 29 16.1	
	comp=Z,21nm,21.4s,baz=99,slow=44							
KURBB	**Kurchatov Arra**	**23.37**	**43**	P		**P**	**22 17 30.8**	**+4.6**
	comp=Z,0.7nm,0.2s,baz=241,slow=12,SNR=3.5							
KURK	**Kurchatov**	**23.46**	**43**	P		**P**	**22 17 26.5**	**-0.6**
KURK					IAmb	IAmb	22 17 43.4	
	comp=Z,3.3nm,0.8s							
SOCY	**Socotra**	**23.65**	**178**	P		**P**	**22 17 24.7**	**-4.5**
BURAR	**Bucovina Array**	**23.84**	**308**	P		**P**	**22 17 29.4**	**-1.5**
BUR08	**Bucovina Ar. S**	**23.86**	**308**	P		**P**	**22 17 30.0**	**-1.1**
BUR08					IAmb	IAmb	22 17 35.7	
	comp=Z,6.9nm,1.2s							
MAKZ	**Makanchi**	**23.98**	**54**	P		**P**	**22 17 31.9**	**-0.3**
MAKZ					IAmb	IAmb	22 17 37.8	
	comp=Z,3.6nm,1.3s							
MK31	**Makanchi Array**	**24.19**	**54**	P		**P**	**22 17 36.7**	**+2.5**
MKAR	**Makanchi Array**	**24.19**	**54**	P		**P**	**22 17 37.0**	**+2.8**
	comp=Z,0.3nm,0.5s,baz=248,slow=11,SNR=8.6							
MKAR	**Makanchi Array**	**24.19**	**54**	P		**P**	**22 17 35.4**	**+1.3**
AGG	**Agios Georgios**	**24.71**	**287**	P		**P**	**22 17 33.9**	**-5.1**
KOLS	**Kolonicke sedl**	**26.13**	**309**	*e*P		**P**	**22 17 55.5**	**+3.8**
OJC	**Ojcow**	**28.06**	**311**	P		**P**	**22 18 08.0**	**-1.0**
VYHS	**Vyhne**	**28.20**	**307**	*e*P		**P**	**22 18 09.7**	**-0.6**
ZAA0	**Zalesovo Array**	**28.34**	**41**	P		**P**	**22 18 08.7**	**-2.8**
ZAA0					IAmb	IAmb	22 18 15.8	
	comp=Z,3.9nm,1.5s							
ZALV	**Zalesovo Beam**	**28.34**	**41**	P		**P**	**22 18 14.4**	**+3.0**
	comp=Z,0.6nm,0.4s,baz=248,slow=11,SNR=4.3							
ZALV	**Zalesovo Beam**	**28.34**	**41**	P		**P**	**22 18 10.4**	**-1.0**
HFS	**Hagfors**	**35.04**	**326**	P		**P**	**22 19 14.7**	**+4.5**
	comp=Z,2.3nm,0.7s,baz=126,slow=7.4,SNR=3.0							
GTA	**Gaotai**	**36.67**	**70**	*e*P		**P**	**22 19 29.3**	**+4.6**
GTA				pP		sP	22 19 36.3	+3.9
GTA				sP		pP	22 19 39.5	+9.3
GTA					pmax	pmax		
	comp=Z,2.0nm,1.5s							
SONM	**Songino Array**	**40.53**	**56**	P		**P**	**22 20 00.0**	**+3.1**
	comp=Z,0.3nm,0.9s,baz=287,slow=7.1,SNR=2.7							
SONM	**Songino Array**	**40.53**	**56**	P		**P**	**22 19 56.6**	**-0.4**
EKA	**Eskdalemuir Ar**	**42.63**	**315**	P		**P**	**22 20 14.3**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=92,slow=8.6,SNR=2.5							
CMAR	**Chiang Mai Arr**	**43.75**	**101**	P		**P**	**22 20 22.8**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=297,slow=8.1,SNR=9.1							

*IDC **30** 22:18:19.1±2.5,5°.03N×94°.04E, h0km, mb3.8/5, mb1 3.8/6, mb1mx3.4/70, mbtmp3.8/6, ML4.0/1, Error ellipse: s-maj=98.2km s-min=25.8km az=57.0*
*NEIC **30** 22:18:21.3±2.0, 4°.83N±0°.07×94°.0E±0°.1, h29km±7km, mb4.0/10, Error ellipse: s-maj=18.4km s-min=3.1km az=55.0*

ISC 30 22:18:22.1±0.8, **4°.92N**±0°.08×**94°.10E**±0°.10, **h34**km, **n34, σ1**§**29**/31, **mb4.0**/11, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CMBY	**CAMPBELL BAY**	**2.09**	**355**	*e*P		**Pn**	**22 18 56.5**	**+1.8**
CMBY				*e*S		**Sn**	**22 19 17.3**	**-2.3**
LHMI	**Lhok Sumawe**	**2.85**	**84**	Pn		**Pn**	**22 19 05.4**	**+0.2**
GSI	**Gunungsitoli**	**4.99**	**136**	Pn		**Pn**	**22 19 34.8**	**0.0**
RPSI	**Rantau Prapat**	**5.29**	**114**	Pn		**Pn**	**22 19 36.8**	**-2.0**
KULM	**Kulim**	**6.53**	**86**	Pn		**Pn**	**22 19 56.0**	**+0.1**
IPM	**Ipoh**	**6.91**	**93**	Pn		**Pn**	**22 20 01.8**	**+0.7**
MYKOM	**Kota Tinggi**	**10.21**	**107**	Pn		**Pn**	**22 20 47.6**	**+1.2**
MNAI	**Manna**	**12.77**	**136**	Pn		**Pn**	**22 21 18.2**	**-3.2**
PBKT	**Sadao Pong**	**13.40**	**30**	Pn		**Pn**	**22 21 29.7**	**-0.2**
CM31	**Chiang Mai Arr**	**14.26**	**19**	Pn		**Pn**	**22 21 40.1**	**-1.8**
CMAR	**Chiang Mai Arr**	**14.26**	**19**	Pn		**Pn**	**22 21 42.5**	**+0.7**
	0.2nm,0.3s,baz=210,slow=15,SNR=3.8							
SBUM	**Sibu**	**18.24**	**97**	P		**P**	**22 22 31.9**	**-0.9**
H08S2	**Diego Garcia H**	**24.91**	**240**	T		T	22 49 07.9	
	baz=64							
H08S3	**Diego Garcia H**	**24.91**	**240**	T		T	22 49 10.7	
	baz=64							
H08S1	**Diego Carcia H**	**24.93**	**240**	T		T	22 49 09.4	
	baz=64							
KNRA	**Kununurra**	**39.95**	**121**	P		**P**	**22 25 54.3**	**+0.6**
KDJ	**Kajisay**	**40.01**	**340**	P		**P**	**22 25 54.1**	**+0.1**
KDJ					IAmb	IAmb	22 26 12.0	
	comp=Z,5.8nm,0.9s							
SOCY	**Socotra**	**40.28**	**283**	P		**P**	**22 25 56.5**	**0.0**
ARSB	**Arslanbob**	**40.88**	**336**	P		**P**	**22 26 00.5**	**-0.7**
ARSB					IAmb	IAmb	22 26 15.5	
	comp=Z,2.0nm,1.0s							
MK31	**Makanchi Array**	**42.95**	**348**	P		**P**	**22 26 18.5**	**+0.6**
MKAR	**Makanchi Array**	**42.95**	**348**	P		**P**	**22 26 18.9**	**+1.0**
	comp=Z,1.0nm,0.6s,baz=166,slow=9.0,SNR=19							
MAKZ	**Makanchi**	**43.03**	**348**	P		**P**	**22 26 19.3**	**+0.8**
MAKZ					IAmb	IAmb	22 26 19.7	
	comp=Z,1.1nm,0.7s							
KKAR	**Karatay Array**	**43.38**	**335**	P		**P**	**22 26 21.7**	**+0.2**
WB0	**Warramunga Arr**	**46.60**	**123**	P		**P**	**22 26 48.2**	**+0.9**
WB0					IAmb	IAmb	22 26 58.5	
	comp=Z,1.3nm,0.8s							
WRA	**Warramunga Arr**	**46.63**	**123**	P		**P**	**22 26 50.5**	**+2.9**
	comp=Z,0.6nm,0.5s,baz=302,slow=9.6,SNR=3.1							
KURBB	**Kurchatov Arra**	**47.39**	**347**	P		**P**	**22 26 54.3**	**+1.4**
	comp=Z,1.7nm,0.6s,baz=172,slow=7.0,SNR=8.9							
KURK	**Kurchatov**	**47.45**	**347**	P		**P**	**22 26 54.3**	**+0.8**
KURK	**Kurchatov**	**47.45**	**347**	IAmb		IAmb	22 26 57.5	
	comp=Z,1.7nm,0.7s							
ZAA0	**Zalesovo Array**	**49.46**	**353**	P		**P**	**22 27 08.8**	**-0.1**
ZAA0					IAmb	IAmb	22 27 10.8	
	comp=Z,2.5nm,0.9s							
ZALV	**Zalesovo Beam**	**49.46**	**353**	P		**P**	**22 27 08.7**	**-0.2**
	comp=Z,0.8nm,0.2s,baz=167,slow=7.3,SNR=4.9							
BVAR	**Borovoye Array**	**51.76**	**342**	P		**P**	**22 27 27.9**	**+1.6**
	comp=Z,0.2nm,0.3s,baz=149,slow=6.9,SNR=4.4							
ABKAR	**Akbulak array**	**52.80**	**332**	P		**P**	**22 27 34.6**	**+0.5**
SGRT	**San Giovanni R**	**78.06**	**311**	P		**P**	**22 30 17.4**	**-0.4**
ATKA	**Atka Island**	**87.20**	**38**	P		**P**	**22 31 04.6**	**-0.3**

*NIED **30** 22:20:00, 29°.70N×130°.70E, h62km, Mw4.2 Best double couple: M₀2.61000×10¹⁵ NP1:φ=214.00000°, δ=69.00000°, λ=104.00000°. NP2:φ=0.00000°, δ=25.00000°, λ=59.00000°.*
*JMA **30** 22:20:22.7, 29°.67N×130°.70E, h65km±1km, M3.9*
*IDC **30** 22:20:23.0±1.4, 29°.68N×130°.59E, h55km±11km, mb3.8/22, mb1 3.9/26, mb1mx3.7/65, mbtmp4.0/26, MS2.7/4, Ms1 2.7/4, ms1mx2.5/50, Error ellipse: s-maj=17.5km s-min=7.4km az=104.0*
*NEIC **30** 22:20:23.0±1.6, 29°.65N±0°.03×130°.65E±0°.09, h58km±7km, mb4.3/30, Error ellipse: s-maj=12.2km s-min=1.1km az=111.0*

ISC 30 22:20:23.1±0.7, **29°.66N**±0°.04×**130°.67E**±0°.05, **h58**km±6km, **n98, σ0§78**/114, **mb4.3**/42, **Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
JYAK	**Yakushimahirau**	**0.60**	**346**	P		**Pn**	**22 20 36.1**	**+0.1**
JYAK				S		**Sn**	**22 20 45.9**	**+0.5**
JNN	**Nakanoshima**	**0.72**	**285**	P		**Pn**	**22 20 37.8**	**+0.3**
JNN				S		**Sn**	**22 20 49.5**	**+1.5**
JMTN	**Minamitane**	**0.76**	**15**	P		**Pn**	**22 20 37.8**	**-0.2**
JMTN				S		**Sn**	**22 20 48.6**	**-0.4**
JKC	**Kuchinoerabu**	**0.90**	**333**	P		**Pn**	**22 20 39.8**	**0.0**
JKC				*e*S		**Sn**	**22 20 51.9**	**-0.2**
JTN	**Tanegashima 3**	**1.03**	**15**	P		**Pn**	**22 20 41.2**	**-0.3**
JTN				S		**Sn**	**22 20 55.2**	**+0.2**
JTAJ	**Takarajima**	**1.38**	**249**	P		**Pn**	**22 20 46.7**	**+0.6**
JTAJ				*e*S		**Sn**	**22 21 05.1**	**+1.8**
JZK	**Kikaishima**	**1.47**	**205**	P		**Pn**	**22 20 47.9**	**+0.5**
JZK				*e*S		**Sn**	**22 21 06.9**	**+1.3**
JTSR	**Tashiro 2**	**1.52**	**8**	P		**Pn**	**22 20 48.2**	**+0.2**
JTSR				S		**Sn**	**22 21 06.7**	**-0.1**
JAM	**Amami Oshima**	**1.56**	**217**	P		**Pn**	**22 20 48.5**	**0.0**
JAM				*e*S		**Sn**	**22 21 08.1**	**+0.5**
JSU	**Suzuyama**	**1.85**	**354**	P		**Pn**	**22 20 52.4**	**-0.1**
JSU				*e*S		**Sn**	**22 21 14.3**	**-0.6**
JAMN	**Amaminishikomi**	**1.93**	**223**	P		**Pn**	**22 20 53.4**	**-0.1**
JAMN				*e*S		**Sn**	**22 21 17.6**	**+1.0**
JNAR	**Kushima--Naru**	**1.93**	**15**	P		**Pn**	**22 20 54.4**	**+0.8**
JNAR				S		**Sn**	**22 21 17.8**	**+1.0**
JNKG	**Nichinankitago**	**2.09**	**17**	P		**Pn**	**22 20 56.4**	**+0.7**
JNKG				*e*S		**Sn**	**22 21 20.9**	**+0.3**
JNU	**Nakatsue**	**3.46**	**3**	P		**Pn**	**22 21 15.4**	**+0.9**
	9.1nm,0.3s,baz=192,slow=12,SNR=146							
JNU				S		**Sn**	**22 21 54.1**	**-0.1**
	29nm,0.3s,baz=71,slow=21,SNR=19							
JNU					LR	LR	22 22 26.9	
	comp=Z,70nm,18.2s,baz=170,slow=36							
JNU	**Nakatsue**	**3.46**	**3**			**Pn**	**22 21 15.3**	**+0.8**
JOW	**Kunigami**	**3.52**	**218**	P		**Pn**	**22 21 16.2**	**+0.8**
	0.8nm,0.3s,baz=99,slow=17,SNR=8.9							
JOW				S		**Sn**	**22 21 54.4**	**-1.3**
	2.9nm,0.3s,baz=219,slow=22,SNR=12							
JOW	**Kunigami**	**3.52**	**218**			**Pn**	**22 21 16.6**	**+1.3**
INU	**Inuyama**	**7.80**	**42**	Pn		**Pn**	**22 22 13.7**	**-0.2**
KSAR	**Wonju Array Be**	**8.11**	**344**	Pn		**Pn**	**22 22 18.3**	**+0.2**
KSRS	**Korea Array**	**8.11**	**344**	P		**Pn**	**22 22 18.8**	**+0.7**
	0.2nm,0.3s,baz=162,slow=15,SNR=6.9							
KSRS					LR	LR	22 24 39.5	
	comp=Z,24nm,20.9s,baz=160,slow=32							
KS19	**Wonju Array Si**	**8.17**	**344**	Pn		**Pn**	**22 22 18.0**	**-0.9**
SSE	**Sheshan**	**8.32**	**282**	Pn		**Pn**	**22 22 21.2**	**+0.2**
JHJ2	**Mitsune**	**8.54**	**64**	Pn		**Pn**	**22 22 24.4**	**+0.4**
MJAR	**Matsushiro Arr**	**9.33**	**41**	P		**Pn**	**22 22 36.1**	**+1.2**
	0.1nm,0.3s,baz=222,slow=16,SNR=4.3							
MJAR	**Matsushiro Arr**	**9.33**	**41**			**Pn**	**22 22 34.1**	**-0.7**
YHNB	**Yeheng**	**9.65**	**241**	Pn		**Pn**	**22 22 37.1**	**-2.3**
JCJ	**Chichijima**	**10.45**	**101**	LR		LR	22 26 23.7	
	comp=Z,62nm,21.4s,baz=64,slow=34							
USA0B	**Ussuriysk Arra**	**14.55**	**4**	Pn		**Pn**	**22 23 48.0**	**+2.4**
USRK	**Ussuriysk Ar.**	**14.55**	**4**	P		**P**	**22 23 52.2**	**+1.5**
	baz=177,slow=9.1,SNR=14							
USRK	**Ussuriysk Ar.**	**14.55**	**4**			**Pn**	**22 23 45.8**	**+0.1**
MDJ	**Mudanjiang**	**14.96**	**357**	Pn		**Pn**	**22 23 52.2**	**+1.3**
BJT	**Baijiatuau**	**15.75**	**315**	Pn		**Pn**	**22 24 01.2**	**0.0**
ENH	**Enshi**	**18.37**	**277**	P		**Pn**	**22 24 33.5**	**-0.2**
ENH					IAmb	IAmb	22 24 43.4	
	comp=Z,5.5nm,0.7s							
SARN	**Sarigan**	**18.93**	**130**	P		**P**	**22 24 39.1**	**-0.1**
XAN	**Xi'an**	**18.98**	**289**	P		**P**	**22 24 40.1**	**+0.3**
KLR	**Kudur**	**19.57**	**2**	P		**P**	**22 24 46.1**	**+0.1**
	comp=Z,0.8nm,0.3s,baz=200,slow=7.7,SNR=24							
KMI	**Kunming**	**25.18**	**266**	P		**P**	**22 25 42.8**	**-0.7**
ULN	**Ulaanbaatar**	**25.71**	**322**	P		**P**	**22 25 47.7**	**-0.2**
SONM	**Songino Array**	**26.05**	**321**	P		**P**	**22 25 49.6**	**-1.4**
	comp=Z,0.9nm,0.5s,baz=138,slow=10,SNR=18							
CMAR	**Chiang Mai Arr**	**30.95**	**256**	P		**P**	**22 26 35.2**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=58,slow=8.8,SNR=3.5							
FAKI	**Fak Fak**	**32.43**	**177**	P		**P**	**22 26 48.3**	**+0.6**
KSM	**Kuching**	**34.07**	**218**	P		**P**	**22 27 00.9**	**-1.1**
TAPN	**Taplejung**	**37.67**	**277**	*e*P		**P**	**22 27 33.5**	**+0.3**
	comp=Z,2.3nm,0.3s							
ODAN	**Odare**	**38.07**	**277**	*e*P		**P**	**22 27 36.2**	**-0.2**
	comp=Z,14nm,0.3s							
JIRN	**Jiri**	**38.91**	**278**	*e*P		**P**	**22 27 43.7**	**+0.1**
	comp=Z,14nm,0.4s							
GUN	**Gumba**	**39.12**	**279**	*e*P		**P**	**22 27 45.6**	**+0.2**
	comp=Z,50nm,0.7s							
PKI	**Pulchoki**	**39.60**	**278**	*e*P		**P**	**22 27 48.9**	**-0.5**
	comp=Z,17nm,0.7s							
PKIN	**Phulchoki**	**39.61**	**278**	*e*P		**P**	**22 27 49.3**	**-0.1**
	comp=Z,7.1nm,0.4s							
KKN	**Kakani**	**39.66**	**279**	*e*P		**P**	**22 27 50.0**	**+0.3**
	comp=Z,8.7nm,0.4s							
SOEI	**Soe**	**39.67**	**190**	P		**P**	**22 27 49.7**	**0.0**
DMN	**Daman**	**39.85**	**279**	*e*P		**P**	**22 27 51.8**	**+0.4**
	comp=Z,3.1nm,0.3s							
GKN	**Gorkha**	**40.16**	**279**	*e*P		**P**	**22 27 54.0**	**+0.2**
	comp=Z,4.2nm,0.3s							
DANN	**Dangsing**	**40.83**	**280**	*e*P		**P**	**22 27 59.4**	**-0.1**
ZALV	**Zalesovo Beam**	**40.94**	**320**	P		**P**	**22 27 59.3**	**-0.4**
	comp=Z,0.6nm,0.3s,baz=110,slow=8.4,SNR=3.2							
ZALV					PcP	**PcP**	**22 29 59.2**	**+0.2**
	comp=Z,0.5nm,0.6s,baz=116,slow=6.6,SNR=3.2							
ZALV					LR	LR	22 45 59.1	
	comp=Z,28nm,19.6s,baz=154,slow=38							
MKAR	**Makanchi Array**	**40.98**	**308**	P		**P**	**22 28 00.3**	**+0.1**
	comp=Z,2.0nm,0.7s,baz=95,slow=10,SNR=21							
MKAR					PcP	**PcP**	**22 29 59.6**	**+0.2**
	comp=Z,0.2nm,0.8s,baz=77,slow=2.1,SNR=3.8							
MKAR	**Makanchi Array**	**40.98**	**308**	P		**P**	**22 28 00.1**	**-0.1**
KOLN	**Koldanda**	**41.11**	**279**	*e*P		**P**	**22 28 01.9**	**+0.2**
MAKZ	**Makanchi**	**41.20**	**308**	P		**P**	**22 28 02.5**	**+0.5**
MAKZ					IAmb	IAmb	22 28 03.2	
	comp=

MTO3	**Montecristo**	**1.50**	**8**	⇓	*iP*	**Pn**	**22 26 24.5**	**+0.7**
MTO3					*eS*	**Sb**	**22 26 43.9**	**-0.2**
MTO3	**Montecristo**	**1.50**	**8**	⇓	*iP*	**Pn**	**22 26 24.5**	**+0.7**
MTO3					*eS*	**Sb**	**22 26 43.9**	**-0.2**
IXG	**Ixpaco**	**1.52**	**326**		*eP*	**Pn**	**22 26 24.4**	**+0.4**
IXG	**Ixpaco**	**1.52**	**326**		*eP*	**Pn**	**22 26 24.4**	**+0.4**
LCND	**La Caada**	**1.69**	**76**		*eP*	**Pn**	**22 26 26.9**	**+0.7**
LCND					*eS*	**Sn**	**22 26 47.5**	**+0.4**
LCND	**La Caada**	**1.69**	**76**		*eP*	**Pn**	**22 26 26.9**	**+0.7**
LCND					*eS*	**Sn**	**22 26 47.5**	**+0.4**

MAN 30 22:29:18.4, 10°35N×125°14E, h7km, mb4.3, ML3.1, MS2.9, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.35**	**231**	*eP*	Pb	22 29 26.4	-0.7
MSLP				*eS*	Sb	22 29 33.0	+0.3
OCLP	**Ormoc**	**0.86**	**323**	*eP*	Pg	22 29 35.0	-0.1
OCLP				*eS*	Sg	22 29 46.4	0.0
LLP	**Lapu-Lapu**	**1.15**	**268**	⇑	*eP*	Pg	22 29 39.7	-0.9
LLP					*eS*	Sn	22 29 57.2	+0.1

*GUC **30** 22:45:43.4±0.6, 23°.17S×68°.82W, h101km±2km, ML3.5*
*SJA **30** 22:45:43.4±0.6, 23°.28S×68°.82W, h91km±3km, ML3.5, MW3.6*

ISC 30 22:45:45.0±1.4, 23°.21S±0°.04×68°.83W±0°.05, h93km±10km, n28, σ0°.71/48, 5C-7D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	**IPOC Station P**	**0.59**	**270**	⇓	*iP*	**Pn**	**22 46 00.9**	**0.0**
PB15					*iS*	**Sn**	**22 46 14.2**	**+1.3**
PB15	**IPOC Station P**	**0.59**	**270**		*iP*	**Pn**	**22 46 00.0**	**-0.9**
PB15					*iSg*	**Sn**	**22 46 12.4**	**-0.4**
LVC	**Limon Verde**	**0.60**	**353**	⇓	*iP*	**Pn**	**22 46 00.6**	**-0.7**
LVC					*iS*	**Sn**	**22 46 13.4**	**+0.1**
LVC	**Limon Verde**	**0.60**	**353**		*iP*	**Pn**	**22 46 01.0**	**-0.3**
LVC					*iSg*	**Sn**	**22 46 13.9**	**+0.5**
PB06	**IPOC Station P**	**0.84**	**306**	⇑	*iP*	**Pn**	**22 46 03.2**	**-0.2**
PB06					*eS*	**Sn**	**22 46 17.6**	**+0.5**
PB06					IAML		22 46 19.3	
	comp=N,2μm,0.1s							
PB06	**IPOC Station P**	**0.84**	**306**		*iP*	**Pn**	**22 46 03.1**	**-0.3**
PB06					*iSg*	**Sn**	**22 46 17.4**	**+0.3**
PB06					IAML		22 46 19.2	
	comp=Z,1μm,0.1s							
PB05	**IPOC Station P**	**1.31**	**285**	⇑	*iP*	**Pn**	**22 46 08.2**	**-0.4**
PB05					*iS*	**Sn**	**22 46 27.2**	**+0.8**
PB05	**IPOC Station P**	**1.31**	**285**		*iP*	**Pn**	**22 46 08.2**	**-0.4**
PB05					*iSg*	**Sn**	**22 46 26.7**	**+0.3**
PB05					IAML		22 46 31.1	
	comp=Z,301nm,0.7s							
PB03	**IPOC Station P**	**1.43**	**324**	⇑	*iP*	**Pn**	**22 46 09.8**	**-0.4**
PB03					*iS*	**Sn**	**22 46 29.1**	**-0.2**
PB03					IAML		22 46 33.1	
	comp=E,918nm,0.2s							
PB03	**IPOC Station P**	**1.43**	**324**		*iP*	**Pn**	**22 46 10.3**	**+0.1**
PB03					*iSg*	**Sn**	**22 46 30.5**	**+1.3**
PB03					IAML		22 46 33.7	
	comp=Z,1μm,0.2s							
PB09	**IPOC Station P**	**1.46**	**345**	⇓	*iP*	**Pn**	**22 46 10.5**	**0.0**
PB09					*iS*	**Sn**	**22 46 30.6**	**+0.9**
PB09					IAML		22 46 31.9	
	comp=E,885nm,0.3s							
PB09	**IPOC Station P**	**1.46**	**345**		*iP*	**Pn**	**22 46 11.2**	**+0.7**
PB09					IAML		22 46 35.8	
	comp=Z,429nm,0.6s							
PB04	**IPOC Station P**	**1.49**	**305**	⇑	*iP*	**Pn**	**22 46 10.5**	**-0.4**
PB04					*iS*	**Sn**	**22 46 31.0**	**+0.4**
PB04					IAML		22 46 33.0	
	comp=N,1μm,0.1s							
PB04	**IPOC Station P**	**1.49**	**305**		*iP*	**Pn**	**22 46 10.6**	**-0.4**
PB04					*iSg*	**Sn**	**22 46 31.7**	**+1.1**
PB10	**IPOC Station P**	**1.61**	**259**	⇓	*iP*	**Pn**	**22 46 12.0**	**-0.2**
PB10					*iS*	**Sn**	**22 46 33.2**	**+0.3**
PB10					IAML		22 46 41.3	
	comp=N,540nm,0.4s							
PB10	**IPOC Station P**	**1.61**	**259**		*iP*	**Pn**	**22 46 12.0**	**-0.2**
PB10					IAML		22 46 39.5	
	comp=Z,293nm,0.4s							
PB07	**IPOC Station P**	**1.77**	**326**	⇑	*iP*	**Pn**	**22 46 14.1**	**-0.3**
PB07					*eS*	**Sn**	**22 46 36.7**	**-0.1**
PB07					IAML		22 46 42.2	
	comp=E,488nm,0.3s							
PB14	**IPOC Station P**	**2.01**	**225**		*eP*	**Pn**	**22 46 17.7**	**-0.1**
PB14					*iS*	**Sn**	**22 46 43.4**	**+0.7**
PB14					IAML		22 46 51.3	
	comp=N,239nm,0.6s							
PB14	**IPOC Station P**	**2.01**	**225**		*iP*	**Pn**	**22 46 17.4**	**-0.4**
PB14					IAML		22 46 50.4	
	comp=Z,287nm,0.5s							
GO02	**Mina Guanaco**	**2.06**	**199**		*iP*	**Pn**	**22 46 18.2**	**-0.2**
GO02					*eS*	**Sn**	**22 46 44.8**	**+0.9**
PB02	**IPOC Station P**	**2.12**	**332**	⇓	*iP*	**Pn**	**22 46 18.3**	**-0.7**
PB02					*iS*	**Sn**	**22 46 44.8**	**-0.1**
PB02	**IPOC Station P**	**2.12**	**332**		*iP*	**Pn**	**22 46 19.3**	**+0.3**
PB02					*iSg*	**Sn**	**22 46 46.5**	**+1.5**
PB02					IAML		22 46 53.0	
	comp=Z,717nm,0.2s							
PB01	**IPOC Station P**	**2.24**	**344**	⇓	*iP*	**Pn**	**22 46 19.6**	**-1.0**
PB01					*iS*	**Sn**	**22 46 47.1**	**-0.6**
PB01					IAML		22 46 52.2	
	comp=E,499nm,0.1s							
PB08	**IPOC Station P**	**3.07**	**354**	⇓	*iP*	**Pn**	**22 46 30.7**	**-1.2**
HJA	**Humahuaca**	**3.15**	**91**		*iP*	**Pn**	**22 46 33.3**	**+0.3**
AZAP	**Zapla**	**3.60**	**107**		*iP*	**Pn**	**22 46 38.7**	**-0.2**
AGUA	**GUANDACOL**	**6.26**	**177**		*iP*	**Pn**	**22 47 13.6**	**-1.2**
AMOG	**MOGNA**	**7.71**	**178**		*iP*	**Pn**	**22 47 32.7**	**-1.8**

IDC 30 23:02:55.5±3.9, 11°.20S×117°.77E, h0km, mb3.3/1, mb1 3.8/3, mb1mx3.3/30, mbtmp3.5/3, ML3.7/2, Error ellipse: s-maj=262.5km s-min=28.0km az=46.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.17**	**121**		P	Pn	23 07 09.1	-0.4
	0.3nm,0.3s,baz=294,slow=13,SNR=3.0							
ASAR	**Alice Springs**	**19.74**	**131**		P	P	23 07 27.6	+0.4
	0.2nm,0.3s,baz=302,slow=12,SNR=13							
ASAR					S	S	23 10 54.8	-16
	0.1nm,0.3s,baz=312,slow=25,SNR=3.3							
MKAR	**Makanchi Array**	**65.87**	**334**		P	P	23 13 43.0	-0.1
	0.1nm,0.4s,baz=147,slow=5.8,SNR=7.0							

*SNET **30** 23:09:28.9±0.7, 13°.69N×89°.02W, h8km±5km, ML3.2*
*GCG **30** 23:09:29.7±0.7, 13°.61N×88°.79W, h35km±999km, MD3.6*

ISC 30 23:09:29.9±1.0, 13°.69N±0°.08×89°.01W±0°.03, h5km±8km, n14, σ0°.87/22, 2C-3D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAVA	**Las Pavas**	**0.08**	**69**		*eS*	**Sg**	**23 09 33.8**	**+0.8**
AEIL	**Aeropuerto Ilo**	**0.10**	**276**		*eP*	**Pg**	**23 09 31.9**	**-0.2**
AEIL					*eS*	**Sg**	**23 09 34.6**	**+0.9**
AEIL					IAML		23 09 38.0	
	comp=Z,13μm,0.3s							
AEIL	**Aeropuerto Ilo**	**0.10**	**276**	⇓	*iP*	**Pg**	**23 09 32.0**	**-0.1**
AEIL				⇓	*eS*	**Sg**	**23 09 34.6**	**+0.9**
AEIL					IAML		23 09 38.1	
	comp=Z,13μm,0.3s							
LFU	**La Fuente**	**0.12**	**302**	⇑	*iP*	**Pg**	**23 09 32.0**	**-0.3**
LFU					*eS*	**Sg**	**23 09 32.7**	**-1.3**
COEG	**Centro de Oper**	**0.14**	**118**		*eP*	**Pg**	**23 09 32.9**	**+0.1**
COEG					*eS*	**Sg**	**23 09 35.7**	**+0.9**
COEG					IAML		23 09 36.8	
	comp=Z,6μm,0.3s							
CUSC	**Alcaldia de Cu**	**0.17**	**284**		*eP*	**Pg**	**23 09 33.1**	**-0.2**
CUSC					*eS*	**Sg**	**23 09 36.1**	**+0.5**
OPAM	**Oficina de Pla**	**0.18**	**278**		*eP*	**Pg**	**23 09 33.6**	**0.0**
SNET	**Serv Nac Est T**	**0.21**	**270**		*eP*	**Pg**	**23 09 33.7**	**-0.4**
SNET					*eS*	**Sg**	**23 09 37.3**	**+0.3**
SNET					IAML		23 09 38.2	
	comp=Z,3μm,0.3s							
UESV	**Universidad de**	**0.22**	**103**		*eP*	**Pg**	**23 09 34.2**	**-0.1**
CEVE	**Cerro Verde**	**0.61**	**283**	⇓	*iP*	**Pg**	**23 09 41.7**	**0.0**
BLLM	**Bellamira**	**0.79**	**108**	⇑	*iP*	**Pb**	**23 09 45.0**	**-1.1**
IXG	**Ixpaco**	**1.47**	**289**		*eP*	**Pb**	**23 09 56.9**	**-0.9**
IXG					*eS*	**Sg**	**23 10 19.4**	**+2.2**
MRL	**Marmol**	**1.53**	**335**		*eP*	**Pn**	**23 09 57.9**	**-0.2**
MRL					*eS*	**Sn**	**23 10 19.4**	**+0.9**
NBG	**Las Nubes**	**1.58**	**305**		*eP*	**Pb**	**23 09 59.4**	**-0.3**

*UCR **30** 23:26:36.4±0.9, 12°.95N×89°.56W, h25km±4km, ML4.0*
*SNET **30** 23:26:36.2±0.9, 12°.95N×89°.56W, h25km±3km, ML4.0*
*GCG **30** 23:26:36.0±0.8, 12°.94N×89°.76W, h2km±17km, MD4.0*
*IDC **30** 23:26:40.9±2.4, 13°.46N×89°.05W, h57km±22km, mb3.5/5, mb1 3.7/8, mb1mx3.5/34, mbtmp3.7/8, ML3.3/3, MS2.9/3, Ms1 2.9/3, ms1mx2.6/32, Error ellipse: s-maj=55.4km s-min=22.5km az=40.0*

ISC 30 23:26:39.0±1.5, 13°.1N±0°.1×89°.45W±0°.05, h54km±12km, n54, σ1°.32/63, mb3.9/4, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNET	**Serv Nac Est T**	**0.65**	**19**		*eP*	**Pn**	**23 26 51.4**	**-1.0**
SNET					*eS*	**Sn**	**23 27 03.4**	**+1.2**
SNET					IAML		23 27 09.5	
	comp=Z,4μm,0.4s							
SNET	**Serv Nac Est T**	**0.65**	**19**		*eP*	**Pn**	**23 26 51.4**	**-1.0**
SNET					*eS*	**Sn**	**23 27 03.4**	**+1.2**
SNET					IAML		23 27 09.5	
	comp=Z,4μm,0.4s							
LFRS	**El Faro**	**0.67**	**34**		*eP*	**Pn**	**23 26 52.0**	**-0.6**
UEES	**Universidad Ev**	**0.68**	**17**		*eS*	**Sn**	**23 27 04.0**	**+1.3**
UEES					IAML		23 27 04.8	
	comp=Z,7μm,0.3s							
UEES	**Universidad Ev**	**0.68**	**17**		*eS*	**Sn**	**23 27 04.0**	**+1.3**
UEES					IAML		23 27 04.8	
	comp=Z,7μm,0.3s							
BOQS	**Boqueron**	**0.69**	**14**		*eP*	**Pn**	**23 26 52.0**	**-1.0**
OPAM	**Oficina de Pla**	**0.69**	**21**		*eP*	**Pn**	**23 26 52.0**	**-0.8**
OPAM					*eS*	**Sn**	**23 27 04.2**	**+1.4**
OPAM					IAML		23 27 06.5	
	comp=Z,4μm,0.2s							
OPAM	**Oficina de Pla**	**0.69**	**21**		*eP*	**Pn**	**23 26 52.0**	**-0.8**
OPAM					*eS*	**Sn**	**23 27 04.2**	**+1.4**
OPAM					IAML		23 27 06.5	
	comp=Z,4μm,0.2s							
CUSC	**Alcaldia de Cu**	**0.71**	**21**		*eP*	**Pn**	**23 26 52.4**	**-0.7**
CUSC					*eS*	**Sn**	**23 27 04.4**	**+1.1**
CUSC	**Alcaldia de Cu**	**0.71**	**21**		*eP*	**Pn**	**23 26 52.4**	**-0.7**
CUSC					*eS*	**Sn**	**23 27 04.4**	**+1.1**
LFU	**La Fuente**	**0.75**	**25**		*eP*	**Pn**	**23 26 53.2**	**-0.5**
LFU	**La Fuente**	**0.75**	**25**		*eP*	**Pn**	**23 26 53.2**	**-0.5**
LBRS	**Las Brisas**	**0.78**	**30**		*eP*	**Pn**	**23 26 53.9**	**-0.1**
CEVE	**Cerro Verde**	**0.78**	**347**		*eP*	**Pn**	**23 26 52.8**	**-1.4**
CEVE					*eS*	**Sn**	**23 27 05.9**	**+0.6**
CEVE					IAML		23 27 08.9	
	comp=Z,19μm,0.4s							
CEVE	**Cerro Verde**	**0.78**	**347**		*eP*	**Pn**	**23 26 52.8**	**-1.4**
CEVE					*eS*	**Sn**	**23 27 05.9**	**+0.6**
CEVE					IAML		23 27 08.9	
	comp=Z,19μm,0.4s							
COEG	**Centro de Oper**	**0.78**	**45**		*eP*	**Pn**	**23 26 53.3**	**-0.7**
COEG					*eS*	Sn	23 27 07.0	+2.1
COEG					*eS*		23 27 07.1	
COEG					IAML		23 27 13.8	
	comp=Z,3μm,0.2s							
SBLS	**San Blas**	**0.79**	**347**		*eP*	**Pn**	**23 26 53.0**	**-1.3**
SBLS	**San Blas**	**0.79**	**347**		*eP*	**Pn**	**23 26 53.0**	**-1.3**
PAVA	**Las Pavas**	**0.81**	**37**		*eP*	**Pn**	**23 26 54.3**	**-0.2**
PAVA					*eS*	Sn	23 27 09.0	+3.2
PAVA					IAML		23 27 10.1	
	comp=Z,5μm,0.4s							
PAVA	**Las Pavas**	**0.81**	**37**		*eP*	**Pn**	**23 26 54.3**	**-0.2**
PAVA					*eS*	Sn	23 27 09.0	+3.2
PAVA					IAML		23 27 10.1	
	comp=Z,5μm,0.4s							
RTR	**El Retiro**	**0.85**	**347**		*eP*	**Pn**	**23 26 53.8**	**-1.3**
RTR	**El Retiro**	**0.85**	**347**		*eP*	**Pn**	**23 26 53.8**	**-1.3**
UESV	**Universidad de**	**0.86**	**48**		*eS*	Sn	23 27 08.7	+2.0
UESV					IAML		23 27 09.8	
	comp=Z,2μm,0.3s							
UESV	**Universidad de**	**0.86**	**48**		*eS*	Sn	23 27 08.7	+2.0
UESV					IAML		23 27 09.8	
	comp=Z,2μm,0.3s							
ALJI	**Alcalda de J**	**0.89**	**73**		*eS*	**Sn**	**23 27 08.3**	**+0.9**
UNIC	**Universidad Ca**	**0.92**	**354**		*eS*	**Sn**	**23 27 09.4**	**+1.3**
UNIC	**Universidad Ca**	**0.92**	**354**		*eS*	**Sn**	**23 27 09.4**	**+1.3**
TECA	**Tecapa**	**1.01**	**65**		*eP*	**Pn**	**23 26 56.8**	**-0.4**
TECA	**Tecapa**	**1.01**	**65**		*eP*	**Pn**	**23 26 56.8**	**-0.4**
JUCU	**Jucuarn**	**1.18**	**81**		*eP*	**Pn**	**23 26 59.5**	**+0.1**
BLLM	**Bellamira**	**1.23**	**72**		*eP*	**Pn**	**23 26 59.9**	**-0.1**
BLLM	**Bellamira**	**1.23**	**72**		*eP*	**Pn**	**23 26 59.9**	**-0.1**
MTO3	**Montecristo**	**1.33**	**4**		*eP*	**Pn**	**23 27 01.5**	**0.0**
MTO3					*eS*	Sn	23 27 21.3	+3.1
MTO3	**Montecristo**	**1.33**	**4**		*eP*	**Pn**	**23 27 01.5**	**0.0**
MTO3					*eS*	Sn	23 27 21.3	+3.1
FAGO	**Alcalda de S**	**1.45**	**64**		*eP*	Pn	23 27 03.0	+0.2
IXG	**Ixpaco**	**1.47**	**319**		*eP*	**Pn**	**23 27 01.8**	**-1.5**
CNCH	**Conchagua**	**1.58**	**82**		*eP*	**Pn**	**23 27 05.1**	**+0.3**
CNCH	**Conchagua**	**1.58**	**82**		*eP*	**Pn**	**23 27 05.1**	**+0.3**
PCG	**Pacaya**	**1.74**	**320**		*eP*	**Pn**	**23 27 07.5**	**+0.5**
PCG					*eS*	**Sn**	**23 27 30.8**	**+2.6**
NBG	**Las Nubes**	**1.75**	**330**		*eP*	**Pn**	**23 27 08.1**	**+0.9**
NBG					*eS*	**Sn**	**23 27 32.1**	**+3.6**
FUG	**Fuego 3**	**1.93**	**316**		*eP*	**Pn**	**23 27 08.2**	**-1.4**
FUG					*eS*	**Sn**	**23 27 33.8**	**+1.0**
APG	**El Apazote**	**2.17**	**333**		P	**Pn**	**23 27 12.5**	**-0.4**
	comp=Z,4.0nm,0.3s,baz=240,slow=23,SNR=13							
APG					S	**Sn**	**23 27 42.2**	**+3.5**
	comp=Z,22nm,0.3s,baz=70,slow=16,SNR=7.5							
STG3	**Santiaguito 3,**	**2.63**	**309**		*eP*	Pn	23 27 17.9	-1.3
STG3					*eS*	**Sn**	**23 27 50.6**	**+0.5**
JTS	**Las Juntas de**	**5.19**	**122**		P	**Pn**	**23 27 55.6**	**+1.4**
	comp=Z,1.3nm,0.3s,baz=4.9,slow=22,SNR=5.8							
JTS					S	**Sn**	**23 28 52.8**	**-0.1**
	comp=Z,1.0nm,0.3s,baz=300,slow=20,SNR=1.7							
CMIG	**Matias Romero**	**6.60**	**308**		P	**Pn**	**23 28 15.7**	**+2.2**
	comp=Z,0.9nm,0.3s,baz=123,slow=13,SNR=6.3							
CMIG					S	**Sn**	**23 29 26.7**	**-0.8**
	comp=Z,1.3nm,0.3s,baz=254,slow=18,SNR=2.9							
CMIG					LR	LR	23 31 14.9	
	comp=Z,104nm,19.3s,baz=76,slow=41							
TEIG	**Tepich**	**7.21**	**9**		P	Pn	23 28 24.1	+2.3
	comp=Z,1.8nm,0.3s,baz=137,slow=1.1,SNR=8.6							
TEIG					LR	LR	23 31 37.2	
	comp=Z,95nm,20.1s,baz=231,slow=44							
TXAR	**Lajitas Array**	**20.89**	**323**		P	**P**	**23 31 19.2**	**+2.3**
	comp=Z,1.0nm,0.5s,baz=144,slow=12,SNR=17							
PDAR	**Pinedale Array**	**34.33**	**333**		LR	LR	23 48 38.0	
	comp=Z,24nm,21.2s,baz=26,slow=39							
NVAR	**Mina Array Bea**	**35.97**	**320**		P	**P**	**23 33 37.2**	**+2.3**
	comp=Z,0.5nm,0.7s,baz=132,slow=8.1,SNR=4.3							
ULM	**Lac du Bonnet**	**37.45**	**353**		P	**P**	**23 33 45.2**	**-1.8**
	comp=Z,0.7nm,0.4s,baz=151,slow=13,SNR=2.7							
SCHQ	**Schefferville**	**45.28**	**18**		P	**P**	**23 34 49.2**	**-1.9**
	comp=Z,0.8nm,0.4s,baz=226,slow=14,SNR=5.1							
YKA	**Yellowknife Ar**	**52.52**	**346**		P	**P**	**23 35 45.2**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=145,slow=7.7,SNR=24							
MKAR	**Makanchi Array**	**119.96**	**7**		PKP	**PKPdf**	**23 45 22.0**	**-1.7**
	comp=Z,0.1nm,0.6s,baz=287,slow=2.4,SNR=3.0							
CMAR	**Chiang Mai Arr**	**147.60**	**345**		PKPbc	**PKPbc**	**23 46 18.9**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=347,slow=3.5,SNR=6.0							

UCR 30 23:45:20.8±1.6, 9°.53N×84°.09W, h35km±3km, MD3.8, MW3.9, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCR2	**La Lucha 2**	**0.22**	**22**		*eP*	Pn	23 45 27.9	-0.8
LCR2					*eS*	Sn	23 45 33.8	-1.0
EDDO	**Dominical**	**0.35**	**142**		*eP*	Pn	23 45 29.1	-0.2
SJS	**Escuela Geolog**	**0.41**	**5**		*eP*	Pn	23 45 30.2	0.0
HDC	**Heredia**	**0.47**	**357**		*eP*	Pn	23 45 30.9	-0.1
HDC					*eS*	Sn	23 45 38.8	+0.5
EDLM	**Las Mercedes**	**0.55**	**117**		*eP*	Pn	23 45 32.4	+0.1
CVTR	**Volcan Turrial**	**0.58**	**34**		*eP*	Pn	23 45 33.0	0.0
CVTR					*eS*	Sn	23 45 42.4	+0.9
SRA1	**San Ramn**	**0.67**	**325**		*eP*	Pn	23 45 33.0	-1.0
SRA1					*eS*	Sn	23 45 42.9	-0.4
EDPN	**Palmar Norte**	**0.84**	**132**		*eP*	Pn	23 45 36.5	+0.3
EDBA	**Buenos Aires**	**0.88**	**115**		*eP*	Pn	23 45 36.5	-0.2
EDBA					*eS*	Sn	23 45 49.0	+0.6
FORC	**Fortuna**	**1.09**	**328**		*iP*	Pn	23 45 39.5	-0.1
FORC					*iS*	Sn	23 45 55.3	+1.8
CASO	**Castillo**	**1.10**	**325**		*iP*	Pn	23 45 40.0	+0.3
ARE1	**Arenal 1**	**1.11**	**326**		*eP*	Pn	23 45 40.0	+0.1
JTS	**Las Juntas de**	**1.14**	**312**		*eP*	Pn	23 45 39.8	-0.4
AMAS	**Alto Masis**	**1.39**	**320**		*iP*	Pn	23 45 44.4	+0.5
ACAL	**Aguas Claras**	**1.44**	**320**		*iP*	Pn	23 45 44.5	+0.1
PTEN	**Parque Tenorio**	**1.47**	**323**		*iP*	Pn	23 45 45.3	+0.4
PLVR	**Palo Verde**	**1.48**	**303**		*eP*	Pn	23 45 45.0	-0.2
CUI	**Cuipilapa**	**1.54**	**317**		*iP*	Pn	23 45 46.0	+0.1
CUI					*iS*	Sn	23 46 05.8	+1.1
BRU2	**Volcan**	**1.56**	**118**		*eP*	Pn	23 45 46.4	+0.2
COLC	**Colonia**	**1.57**	**316**		*iP*	Pn	23 45 47.1	+0.8
LIM1	**Limonal**	**1.63**	**315**		*iP*	Pn	23 45 48.2	+1.1
NY14	**Universidad de**	**1.81**	**308**		*iP*	Pn	23 45 50.3	+0.9
GB1A	**Borinquen Arri**	**1.82**	**315**		*eP*	Pn	23 45 49.9	+0.3
ACON	**Acoyapa**	**2.65**	**336**		*eP*	Pn	23 46 01.0	0.0

*IDC **30** 23:48:13.8±0.7, 38°.34N×21°.93E, h0km, mb4.0/19, mb1 4.0/29, mb1mx3.9/56, mbtmp3.9/29, ML3.7/10, MS3.1/4, Ms1 3.2/4, ms1mx2.7/34, Error ellipse: s-maj=13.4km s-min=12.2km az=67.0*
*MOS **30** 23:48:14.7±1.1, 38°.39N×21°.89E, h12km, mb4.2/9, Error ellipse: s-maj=6.4km s-min=3.9km az=89.5*
*ATH **30** 23:48:14.6, 38°.39N×21°.87E, h16km, ML3.8/21, Error ellipse: s-maj=1.0km s-min=0.6km az=296.0*
*THE **30** 23:48:15.2, 38°.39N×21°.87E, h11km, ML3.7/22, Error ellipse: s-maj=0.7km s-min=0.3km az=90.0*
*SKO **30** 23:48:18.9, 38°.62N×22°.03E, h0km*
*NEIC **30** 23:48:18.1±2.2, 38°.38N±0°.04×21°.93E±0°.07, h25km±5km, Error ellipse: s-maj=7.7km s-min=5.2km az=103.0*

ISC 30 23:48:15.7±0.6, 38°.39N±0°.01×21°.88E±0°.02, h10km±3km, n361, σ1°.26/405, mb4.2/49, MS3.1/4, 9C-12D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFP	**Efpalio**	**0.04**	**28**		P	**Pg**	**23 48 17.0**	**-0.6**
EFP					S	**Sg**	**23 48 18.3**	**-0.7**
	337μm,0.3s							
EFP	**Efpalio**	**0.04**	**28**		P	**Pg**	**23 48 17.0**	**-0.6**
EFP					S	**Sg**	**23 48 18.4**	**-0.7**
EFP					AML	AML	23 48 18.7	
EFP					AML	AML	23 48 19.8	
UPR	**University Cam**	**0.13**	**215**		P	**Pg**	**23 48 18.1**	**-0.6**
UPR					S	**Sg**	**23 48 20.7**	**-0.1**
UPR	**University Cam**	**0.13**	**215**		P	**Pg**	**23 48 18.1**	**-0.6**
UPR					S	**Sg**	**23 48 20.6**	**-0.2**
SERG	**Sergoula**	**0.14**	**80**		P	**Pg**	**23 48 18.6**	**-0.3**
SERG					S	**Sg**	**23 48 21.5**	**+0.4**
	39μm,0.3s							
SERG	**Sergoula**	**0.14**	**80**		P	**Pg**	**23 48 18.6**	**-0.3**
SERG					S	**Sg**	**23 48 21.6**	**+0.4**
SERG					AML	AML	23 48 26.6	
	comp=N,98213μm,0.6s							
SERG					AML	AML	23 48 27.0	
	comp=E,82573μm,0.3s							
TRIZ	**Trizonia**	**0.15**	**98**		P	**Pg**	**23 48 18.9**	**-0.2**
TRIZ	**Trizonia**	**0.15**	**98**		P	**Pg**	**23 48 19.0**	**-0.1**
LAKA	**Lakka**	**0.17**	**152**		P	**Pg**	**23 48 18.9**	**-0.4**
LAKA					S	**Sg**	**23 48 21.5**	**-0.3**
LAKA	**Lakka**	**0.17**	**152**		P	**Pg**	**23 48 18.9**	**-0.4**
LAKA					S	**Sg**	**23 48 21.9**	**0.0**
LAKA					AML	AML	23 48 21.9	
	comp=E,32370μm,0.5s							
LAKA					AML	AML	23 48 23.6	
	comp=N,36055μm,0.4s							
KALE	**Kalithea**	**0.20**	**89**		P	**Pg**	**23 48 19.7**	**-0.3**
KALE					S	**Sg**	**23 48 23.4**	**+0.5**
	comp=N,25μm,0.2s							
KALE	**Kalithea**	**0.20**	**89**		P	**Pg**	**23 48 19.7**	**-0.3**
KALE					S	**Sg**	**23 48 22.8**	**-0.1**
KALE					AML	AML	23 48 28.2	
	comp=N,63192μm,0.2s							
KALE					AML	AML	23 48 29.1	
	comp=E,35241μm,0.3s							
ANX	**

PROD Prodromos 0.81 99 P **Pg** **23 48 30.4 -1.0**
PROD S **Sb** **23 48 43.2 +0.3**
PROD Prodromos 0.81 99 P **Pg** **23 48 30.4 -1.0**
PROD AML AML 23 48 46.8
comp=E,26849µm,0.6s
PROD AML AML 23 48 49.2
comp=N,16248µm,0.8s
AMT Artemida-Makis 0.86 189 P **Pg** **23 48 31.4 -0.9**
AMT S **Sg** **23 48 44.0 +0.4**
comp=N,5µm,0.9s
AMT Artemida-Makis 0.86 189 P **Pg** **23 48 31.5 -0.9**
LKR Lokris 0.92 73 P **Pg** **23 48 31.4 -1.9**
LKR Lokris 0.92 73 P **Pg** **23 48 31.8 -1.6**
LKR AML AML 23 48 49.9
comp=N,6652µm,0.4s
LKR AML AML 23 48 51.0
comp=E,8108µm,0.2s
LTK Loutraki 0.93 113 P **Pg** **23 48 32.7 -0.9**
LTK S **Sb** **23 48 46.8 +0.5**
comp=E,3µm,0.5s
LOUT Loutraki 0.95 115 P **Pg** **23 48 33.0 -1.0**
LOUT S **Sb** **23 48 47.2 +0.3**
comp=E,3µm,0.5s
LOUT Loutraki 0.95 115 P **Pg** **23 48 33.3 -0.7**
ZAK2 Zakynthos 0.98 233 P **Pg** **23 48 34.1 -0.4**
LKD2 Lefkada island 1.04 293 P **Pg** **23 48 34.3 -1.3**
LKD2 Lefkada island 1.04 293 P **Pg** **23 48 34.4 -1.2**
VLX Vlachokerasia 1.09 159 P **Pb** **23 48 34.9 -1.8**
VLX Vlachokerasia 1.09 159 P **Pb** **23 48 35.1 -1.6**
VLX AML AML 23 48 56.9
comp=E,8544µm,0.8s
VLX AML AML 23 49 07.6
comp=N,8886µm,0.6s
VIL2 Platees 1.11 99 P **Pg** **23 48 37.0 0.0**
KRI1 kERI 1.11 230 P **Pb** **23 48 35.0 -1.9**
VILL Villia 1.15 101 P **Pb** **23 48 36.8 -0.9**
VILL S **Sn** **23 48 54.2 +0.5**
comp=N,4µm,0.6s
THL Klokotos Trika 1.18 5 P **Pb** **23 48 36.9 -1.3**
THL S **Sb** **23 48 53.6 +0.1**
comp=N,3µm,0.8s
THL Klokotos Trika 1.18 5 P **Pb** **23 48 36.7 -1.4**
THL AML AML 23 48 57.8
comp=E,7075µm,1.1s
THL AML AML 23 48 58.2
comp=N,5159µm,0.5s
ITM Ithomi 1.21 178 P **Pn** **23 48 37.1 -1.5**
ITM Ithomi 1.21 178 P **Pn** **23 48 37.2 -1.4**
ITM Ithomi 1.21 178 Pn **Pn** **23 48 38.0 -0.6**
KLMT Kalamata 1.33 174 P **Pn** **23 48 39.7 -0.6**
LRSO Larissa Observ 1.34 17 P **Pn** **23 48 40.4 -0.1**
LRSO Larissa Observ 1.34 17 P **Pn** **23 48 40.3 -0.2**
MRKA Markates 1.38 76 P **Pn** **23 48 40.6 -0.4**
MRKA Markates 1.38 76 P **Pn** **23 48 40.7 -0.2**
DID Didima 1.39 129 P **Pn** **23 48 40.5 -0.6**
DID S **Sb** **23 48 59.0 -0.5**
comp=N,4µm,0.7s
DID Didima 1.39 129 P **Pn** **23 48 40.8 -0.4**
DID AML AML 23 49 03.4
comp=N,7867µm,0.4s
DID AML AML 23 49 06.4
comp=E,6034µm,0.9s
NEO Neokhori 1.39 48 P **Pn** **23 48 41.3 +0.1**
NEO S **Sb** **23 48 59.8 +0.1**
comp=E,2µm,0.5s
NEO Neokhori 1.39 48 P **Pn** **23 48 41.1 -0.1**
XOR Xorichti 1.42 46 P **Pn** **23 48 41.2 -0.3**
XOR Xorichti 1.42 46 P **Pn** **23 48 41.3 -0.2**
SKIA Skiathos 1.46 57 P **Pn** **23 48 42.0 -0.2**
SKIA Skiathos 1.46 57 P **Pn** **23 48 41.8 -0.4**
PYL PYLOS 1.49 184 P **Pn** **23 48 42.2 -0.4**
PYL PYLOS 1.49 184 P **Pn** **23 48 42.1 -0.4**
JAN Janina 1.50 328 P **Pn** **23 48 42.5 -0.2**
JAN Janina 1.50 328 P **Pb** **23 48 44.0 +0.4**
JAN Janina 1.50 328 P **Pn** **23 48 43.1 +0.4**
ATH Athens Observa 1.51 105 P **Pn** **23 48 42.7 0.0**
ATH S **Sn** **23 49 02.0 -0.4**
comp=E,2µm,0.4s
ATH Athens Observa 1.51 105 P **Pn** **23 48 42.9 +0.2**
ATH Athens Observa 1.51 105 P **Pn** **23 48 42.8 0.0**
ATHU Athens Univers 1.56 105 P **Pn** **23 48 43.6 +0.1**
ATHU S **Sn** **23 49 03.4 -0.3**
comp=E,672nm,0.4s
ATHU Athens Univers 1.56 105 P **Pn** **23 48 43.6 +0.1**
ATHU AML AML 23 49 07.0
comp=N,2018µm,0.4s
ATHU AML AML 23 49 14.9
comp=E,856µm,0.6s
PTL Penteli 1.60 102 P **Pn** **23 48 44.3 +0.2**
PTL S **Sn** **23 49 04.6 -0.2**
comp=E,1µm,0.5s
VLY Voula,Athens 1.60 109 P **Pn** **23 48 44.1 +0.1**
VLY Voula,Athens 1.60 109 P **Pn** **23 48 44.0 -0.1**
EREA Eretria 1.61 88 P **Pn** **23 48 44.4 +0.2**
EREA S **Sn** **23 49 05.0 -0.1**
comp=E,912nm,0.5s
EREA Eretria 1.61 88 P **Pn** **23 48 44.4 +0.2**
KPRO Kipourio 1.61 346 P **Pn** **23 48 44.2 -0.1**
KPRO Kipourio 1.61 346 P **Pb** **23 48 45.0 -0.6**
DYR Agios Nikonas 1.66 167 P **Pn** **23 48 45.0 +0.1**
DYR Agios Nikonas 1.66 167 P **Pn** **23 48 45.0 +0.1**
AOS Alonnisos 1.75 63 P **Pn** **23 48 45.2 -0.9**
AOS Alonnisos 1.75 63 P **Pn** **23 48 45.4 -0.6**
LIT Litokhoron 1.77 15 P **Pn** **23 48 46.3 -0.2**
LIT Litokhoron 1.77 15 P **Pn** **23 48 47.0 +0.5**
LIT Litokhoron 1.77 15 P **Pn** **23 48 46.2 -0.2**
LIT Litokhoron 1.77 15 P **Pn** **23 48 47.0 +0.5**
VLI Veliai 1.87 153 P **Pn** **23 48 47.4 -0.3**
VLI Veliai 1.87 153 P **Pn** **23 48 47.5 -0.2**
KZN Kozani 1.92 358 P **Pb** **23 48 49.7 -1.1**
KZN Kozani 1.92 358 P **Pb** **23 48 50.2 -0.6**
KZN Kozani 1.92 358 P **Pn** **23 48 49.6 +1.1**
KARY Karystos 2.04 99 P **Pn** **23 48 50.5 +0.4**
KARY S **Sn** **23 49 15.1 -0.6**
comp=E,615nm,0.7s
KARY Karystos 2.04 99 P **Pn** **23 48 50.7 +0.5**
PAIG Paliouri 2.08 42 P **Pn** **23 48 50.0 -0.6**
PAIG Paliouri 2.08 42 P **Pn** **23 48 50.0 -0.6**
SRN Sarande 2.09 316 P **Pb** **23 48 52.4 -1.2**
NEST Nestorio 2.12 343 P **Pb** **23 48 54.4 +0.1**
KTHR Kythira 2.31 157 P **Pn** **23 48 55.5 +1.8**
KTHA Kythira Island 2.33 156 P **Pn** **23 48 54.4 +0.4**
TPE Tepelena 2.39 323 P **Pb** **23 48 57.3 -1.6**
SERI Serifos 2.40 120 P **Pn** **23 48 54.9 -0.2**
SERI Serifos 2.40 120 P **Pn** **23 48 55.0 0.0**
FNA Florina 2.42 351 P **Pn** **23 48 56.8 +1.4**
FNA Florina 2.42 351 P **Pn** **23 48 57.3 +1.9**
FNA Florina 2.42 351 **23 48 57.3 +1.9**
OUR Ouranopolis 2.54 39 P **Pn** **23 48 56.5 0.0**
GRG Griva 2.60 9 P **Pn** **23 48 58.5 +0.7**
SOH Sokhos 2.68 25 P **Pn** **23 48 59.3 +0.3**
SOH Sokhos 2.68 25 P **Pn** **23 48 59.3 +0.3**
ANKY Antikythira Is 2.76 155 P **Pn** **23 49 00.3 +0.3**
OHR Ohrid 2.84 343 *i* Pn **Pb** **23 49 04.3 -2.3**
OHR *i* Sg **Sb** **23 49 41.9 +0.4**
OHR *e*Lg Lg 23 49 48.2
comp=N,163nm,0.7s
OHR *e*Lg Lg 23 49 49.4
comp=E,394nm,0.8s
VAY Valandovo 2.98 10 *i* Pn **Pn** **23 49 04.0 +1.1**
SRS Serrai 3.03 25 P **Pn** **23 49 03.4 -0.3**
SCTE Santa Cesarea 3.14 303 Pn **Pn** **23 49 05.3 +0.2**
IOSP Ios island 3.17 120 P **Pn** **23 49 05.8 +0.1**
APE Apeiranthos 3.18 113 P **Pn** **23 49 06.0 +0.3**
APE Apeiranthos 3.18 113 *i* P **Pn** **23 49 06.2 +0.4**
APE pmax pmax
comp=E,55nm,2.7s
APE Apeiranthos 3.18 113 ⇓P **Pn** **23 49 06.1 +0.3**
APE Apeiranthos 3.18 113 ⇓S **Sn** **23 49 42.7 -1.1**
RODP Rodopos 3.20 151 P **Pn** **23 49 07.0 +1.0**
CHOS Chios island 3.28 89 P **Pn** **23 49 07.9 +0.7**
STIP Stip 3.31 4 *i* Pn **Pn** **23 49 09.5 +2.0**
TIR Tirane 3.34 333 P **Pn** **23 49 10.9 +3.0**
TIR Tirane 3.34 333 **23 49 10.9 +3.0**
IMMV Iera Moni Meta 3.37 149 P **Pn** **23 49 08.4 0.0**
SANT Santorini 3.49 124 **Pn** **23 49 10.9 +0.8**
VAM Vamos 3.51 147 P **Pn** **23 49 10.1 -0.2**
AMGA Amorgos Island 3.55 115 P **Pn** **23 49 11.4 +0.6**
SKO Skopje 3.60 355 *i* Pn **Pn** **23 49 14.1 +2.6**
IDI Anoyia 3.92 141 Pn **Pn** **23 49 15.4 -0.7**
comp=Z,1.5nm,0.3s,baz=278,slow=20,SNR=23
IDI Sn **Sn** **23 50 01.2 -1.0**
comp=Z,4.9nm,0.3s,baz=328,slow=15,SNR=4.1
ALN Alexandroupoli 4.08 51 P **Pn** **23 49 18.0 -0.1**
ALN Alexandroupoli 4.08 51 Pn **Pn** **23 49 18.0 -0.1**
TIP Timpagrande 4.08 283 ⇑P **Pn** **23 49 19.8 +1.6**
TIP Timpagrande 4.08 283 ⇑S **Sn** **23 50 07.3 +1.3**
TIP Timpagrande 4.08 283 **Pn** **23 49 19.1 +0.9**
MASS Massafra 4.29 303 *e*Pn **Pn** **23 49 21.8 +0.7**
DRME Dracevica, Mon 4.32 332 *e*Pn **Pn** **23 49 22.8 +1.4**
NPS Neapolis 4.32 135 P **Pn** **23 49 22.4 +0.9**
LAST Lasithi 4.33 137 P **Pn** **23 49 21.2 -0.4**
VTS Vitosha 4.35 13 P **Pn** **23 49 22.3 +0.3**
VTS S **Sn** **23 50 13.8 +1.0**
VTS Vitosha 4.35 13 ⇑P **Pn** **23 49 22.6 +0.7**
VTS Vitosha 4.35 13 **Pn** **23 49 22.7 +0.7**
PDG Podgorica 4.51 334 *e*Pn **Pn** **23 49 25.8 +1.8**
PDG Podgorica 4.51 334 **Pn** **23 49 25.9 +2.0**
SG1 Sgolgore (BA) 4.70 303 ⇑ *i* Pn **Pn** **23 49 27.3 +0.6**
CEL Celeste 4.71 270 Pn **Pn** **23 49 28.6 +1.8**
BAI Bari 4.71 307 ⇑ *i* Pn **Pn** **23 49 27.2 +0.4**
KARP Karpathos 5.09 122 P **Pn** **23 49 33.8 +1.7**
KARP Karpathos 5.09 122 **Pn** **23 49 33.2 +1.1**
TREB Trebinje 5.09 329 *e*Pn **Pn** **23 49 31.2 -0.8**
ACER Acerenza 5.17 299 **Pn** **23 49 34.1 +0.9**
BLKB Belogradchik 5.26 6 ⇓P **Pn** **23 49 35.4 +0.9**
BLKB Belogradchik 5.26 6 ⇓S **Sn** **23 50 34.3 -0.9**
PLVB Pleven 5.41 22 ⇓P **Pn** **23 49 38.2 +1.8**
ELND Elena 5.46 33 ⇓P **Pn** **23 49 37.5 +0.4**
STON Ston 5.49 326 *e*Pn **Pn** **23 49 37.6 +0.1**
RUDO Rudo 5.56 341 *e*Pn **Pn** **23 49 39.3 +0.8**
BBLS Lazići 5.78 342 *e*Pn **Pn** **23 49 41.8 +0.2**
SGRT San Giovanni R 5.78 307 Pn **Pn** **23 49 42.0 +0.4**
DIVS Divibare 5.88 347 *e*Pn **Pn** **23 49 44.0 +1.1**
VAE Valguarnera 5.97 264 Pn **Pn** 23 49 50.3 +6.1
comp=Z,0.9nm,0.3s,baz=3.4,slow=17,SNR=3.0
VAE Sn **Sn** **23 50 58.2 +5.6**
comp=Z,1.3nm,0.3s,baz=120,slow=20,SNR=2.7
HAPS Han Pijesak,Bl 6.11 340 *e*Pn **Pn** **23 49 45.4 -0.7**
PAOL Paolisí 6.22 297 **Pn** **23 49 49.7 +2.0**
ELL Elmali 6.58 102 P **Pn** **23 49 56.6 +3.9**
ELL Elmali 6.58 102 **Pn** **23 49 56.6 +3.9**
ISP Isparta 6.84 92 P **Pn** **23 49 55.4 -0.7**
ISP Isparta 6.84 92 Pn **Pn** **23 49 55.4 -0.7**
CLTB Caltabellotta 6.89 266 Pn **Pn** **23 50 00.4 +3.6**
FRUS Fruska Gora 6.94 348 *e*Pn **Pn** **23 49 58.6 +1.2**
MGRS Mrkonjic Grad 7.02 331 *e*Pn **Pn** **23 49 59.2 +0.7**
GZR Gura Zlata 7.03 5 ⇓P **Pn** **23 50 01.3 +2.5**
INTR Introdacqua 7.10 303 **Pn** **23 50 01.7 +2.1**
BZS Buzias 7.23 359 ⇑P **Pn** **23 50 03.8 +2.5**
BLY Banja Luka 7.26 333 ⇓P **Pn** **23 50 02.8 +1.0**
BLY Banja Luka 7.26 333 *e*Pn **Pn** **23 50 02.8 +1.0**
BLY Banja Luka 7.26 333 **Pn** **23 50 02.9 +1.1**
ARR Arges 7.27 16 ⇓P **Pn** **23 50 02.8 +0.8**
VOIR 7.43 18 P **Pn** **23 50 05.4 +1.2**
VOIR 7.43 18 ⇑P **Pn** **23 50 05.4 +1.2**
MDUB Mudurnu 7.51 71 Pn **Pn** **23 50 05.5 +0.2**
AQU L'Aquila 7.59 304 P **Pn** **23 50 07.7 +1.3**
AQU L'Aquila 7.59 304 Pn **Pn** **23 50 07.7 +1.3**
MLR Muntele Rosu 7.72 22 Pn **Pn** **23 50 10.0 +1.9**
comp=Z,1.3nm,0.3s,baz=291,slow=6.6,SNR=21
MLR Muntele Rosu 7.72 22 ⇑P **Pn** **23 50 10.3 +2.2**
TIRR Tirgusor 7.80 37 P **Pn** **23 50 11.0 +1.8**
TIRR Tirgusor 7.80 37 Pn **Pn** **23 50 11.0 +1.8**
NRCA Norcia 8.01 306 **Pn** **23 50 13.7 +1.5**
MORH Mrgy, Hungar 8.18 344 *e*Pn **Pn** **23 50 13.4 -1.0**
PLOR Plostina 8.26 24 P **Pn** **23 50 17.7 +2.2**
PLOR Plostina 8.26 24 ⇓P **Pn** **23 50 17.7 +2.2**
VRI Vrincioaia 8.29 24 ⇓P **Pn** **23 50 18.3 +2.3**
BR231 Keskin MP Arra 8.59 77 Pn **Pn** **23 50 21.3 +1.1**
MURB Monte Urbino 8.60 307 Pn **Pn** **23 50 21.9 +1.6**
CRES Cresnjev 8.83 329 *e*Pn **Pn** **23 50 22.7 -0.6**
GBRS Gornja Briga 8.87 326 *e*Pn **Pn** **23 50 23.6 -0.2**
GBRS *e*Sn **Pg** **23 51 05.3 -0.1**
KNDS Knezji Dol 9.06 324 *i* Pn **Pn** **23 50 25.6 -1.0**
CEY Cerknica 9.20 325 *e*Pn **Pn** **23 50 26.6 -1.8**
BR131 Keskin Array S 9.25 78 P **Pn** **23 50 31.7 +2.5**
BR131 Keskin Array S 9.25 78 **Pn** **23 50 31.7 +2.5**
BRTR Keskin Array B 9.25 78 P **Pn** **23 50 32.0 +2.8**
BRTR Keskin Array B 9.25 78 Pn **Pn** **23 50 31.9 +2.8**
comp=Z,0.6nm,0.3s,baz=253,slow=12,SNR=20
BRTR Keskin Array B 9.25 78 **Pn** **23 50 30.9 +1.7**
TRI Trieste 9.48 323 P **Pn** **23 50 34.3 +2.1**
TRI Trieste 9.48 323 Pn **Pn** **23 50 34.3 +2.1**
OSSC Osservatorio P 9.54 306 Pn **Pn** **23 50 34.9 +1.9**
BURAR Bucovina Array 9.54 14 ⇑P **Pn** **23 50 35.1 +2.0**
BURAR Bucovina Array 9.54 14 Pn **Pn** **23 50 34.9 +1.8**
BUR08 Bucovina Ar. S 9.56 14 **Pn** **23 50 33.7 +0.2**
PSZ Piszkesteto 9.63 352 P **Pn** **23 50 36.7 +2.3**
PSZ Piszkesteto 9.63 352 ⇓P **Pn** **23 50 35.6 +1.2**
PSZ Piszkesteto 9.63 352 **Pn** **23 50 36.7 +2.3**
SOKA Soboth 9.70 331 *e*Pn **Pn** **23 50 35.0 -0.4**
comp=Z,3.5nm,0.5s
CSS Mathiatis 9.81 107 Pn **Pn** **23 50 39.2 +2.4**
ZCCA Zocca 10.13 309 Pn **Pn** **23 50 42.8 +1.6**
MYKA Terra Mystica 10.23 326 *i* Pn **Pn** **23 50 45.3 +2.7**
comp=Z,2.6nm,0.4s
TEOL Teolo 10.31 316 Pn **Pn** **23 50 43.1 -0.6**
VYHS Vyhne 10.34 349 *e*P **Pn** **23 50 46.2 +2.2**
VYHS *e* 23 52 39.0
VYHS Vyhne 10.34 349 *e*PN **Pn** **23 50 46.2 +2.2**
VYHS *e*SN **Sn** **23 52 39.0 -0.9**
KEST Kesra 10.36 259 Pn **Pn** **23 50 46.1 +1.7**
KOLS Kolonicke sedl 10.55 1 *e*P Pn 23 50 55.4 +8.6
KOLS Kolonicke sedl 10.55 1 *e*PN Pn 23 50 55.4 +8.6
CTI Castel Tesino 10.77 319 P **Pn** **23 50 50.6 +0.6**
CTI Castel Tesino 10.77 319 **Pn** **23 50 50.6 +0.6**
ABTA Abfaltersbach 10.83 323 *i* Pn **Pn** **23 50 52.9 +2.1**
comp=Z,5.7nm,0.9s
ABTA *i* Sn **Sn** **23 52 48.9 -3.2**
comp=Z,5.5nm,0.7s
MOA Molln 10.97 332 *e*Pn **Pn** **23 50 54.9 +2.3**
comp=Z,0.8nm,0.2s
MSSA Maissana 11.01 306 Pn **Pn** **23 50 55.0 +1.7**
SALO Salr 11.11 314 Pn **Pn** **23 50 53.7 -0.8**
LVV L'vov 11.53 7 *e*P **Pn** **23 51 01.5 +1.2**
VRAC Vranov 11.56 342 Pn **Pn** **23 51 04.3 +3.6**
comp=Z,0.3nm,0.3s,baz=78,slow=19,SNR=2.6
WTTA Wattenberg 11.62 323 *e*Pn **Pn** **23 51 02.7 +1.1**
comp=Z,1.3nm,0.2s
WTTA *i* Sn **Sn** **23 53 09.0 -2.5**
comp=Z,7.0nm,0.7s
WATA Walderalm 11.70 323 *e*Pn **Pn** **23 51 03.6 +0.8**
comp=Z,4.2nm,0.5s
WATA *e*Sn **Sn** **23 53 11.0 -2.4**
comp=Z,6.6nm,0.7s
SQTA Sankt Quirin 11.79 322 *e*Pn **Pn** **23 51 04.4 +0.4**
comp=Z,4.3nm,0.6s
SQTA *e*Sn **Sn** **23 53 11.4 -4.2**
comp=Z,2.8nm,0.4s
MORC Moravsky Berou 11.80 346 P **Pn** **23 51 05.3 +1.2**
MORC Moravsky Berou 11.80 346 Pn **Pn** **23 51 05.3 +1.2**
FUORN Ofenpass-Fuorn 11.87 318 Pn **Pn** **23 51 06.4 +1.3**
MOTA Moosalm 11.93 322 *e*Pn **Pn** **23 51 05.9 -0.1**
comp=Z,9.0nm,0.7s
MOTA *i* Sn **Sn** **23 53 19.1 0.0**
comp=Z,7.1nm,0.9s
GEC2 GERESS Array S 12.01 333 Pn **Pn** **23 51 08.1 +1.2**
GERES GERESS Array B 12.01 333 P **Pn** **23 51 07.9 +1.0**
GERES GERESS Array B 12.01 333 Pn **Pn** **23 51 09.6 +2.7**
comp=Z,0.1nm,0.3s,baz=157,slow=13,SNR=4.5
GERES LR LR 23 56 39.4
comp=Z,181nm,18.6s,baz=112,slow=42
GERES GERESS Array B 12.01 333 Pn **Pn** **23 51 07.9 +1.0**
DAVOX Davos/Dischmat 12.18 317 Pn **Pn** **23 51 11.0 +1.7**
comp=Z,0.4nm,0.3s,baz=132,slow=18,SNR=5.0
DAVOX Sn **Sn** **23 53 21.2 -3.9**
comp=Z,0.2nm,0.3s,baz=222,slow=15,SNR=2.6
MMAI Mount Meron Ar 12.23 112 Pn **Pn** **23 51 09.7 -0.2**
comp=Z,0.2nm,0.3s,baz=307,slow=15,SNR=3.2
KHC Kasperske Hory 12.29 334 *e*P **Pn** **23 51 11.4 +0.7**
KHC *e* 23 53 27.8
KHC Kasperske Hory 12.29 334 *e*PN **Pn** **23 51 11.4 +0.7**
KHC *e*SN **Sn** **23 53 27.8 +0.1**
AKASG Malin Array Be 13.37 21 Pn **Pn** **23 51 25.5 +0.2**
comp=Z,0.4nm,0.3s,baz=203,slow=12,SNR=2.8
EIL Elat 13.88 125 Sn **Sn** **23 54 04.0 -2.8**
comp=Z,0.3nm,0.3s,baz=86,slow=15,SNR=2.7
BFO Black Forest 13.98 320 P **Pn** **23 51 33.9 +0.2**
BFO Black Forest 13.98 320 Pn **Pn** **23 51 33.9 +0.2**
CLL Collm 14.36 337 *e*P **P** **23 51 44.0 -1.9**
KIV Kislovodsk 16.61 64 *e*P **Pn** **23 52 07.4 -1.2**
KIV pmax pmax
comp=Z,19nm,1.0s
KIV MLR MLR
comp=Z,40nm,13.0s
KBZ Khabaz 16.71 65 *i* P **Pn** **23 52 10.2 +0.4**
KBZ pmax pmax
comp=Z,13nm,1.4s
KBZ Khabaz 16.71 65 Pn **Pn** **23 52 10.1 +0.3**
comp=Z,0.1nm,0.3s,baz=284,slow=12,SNR=2.5
OBN Obninsk 19.45 26 *e*P **P** **23 52 42.5 +0.3**
OBN pmax pmax
comp=Z,15nm,1.5s
OBN MLR MLR
comp=Z,39nm,16.0s
OBN Obninsk 19.45 26 P **P** **23 52 42.2 0.0**
comp=Z,0.3nm,0.3s,baz=336,slow=12,SNR=2.8
OBN Obninsk 19.45 26 IAmb IAmb 23 52 44.5
comp=Z,4.9nm,0.6s
ESDC Sonseca Array 20.10 282 P **P** **23 52 50.2 +0.7**
comp=Z,1.6nm,0.7s,baz=75,slow=11,SNR=9.7
VSU Vasula 20.34 7 *i* P **P** **23 52 52.0 +0.2**
VSU pmax pmax
comp=Z,42nm,0.9s
PAB San Pablo 20.41 281 P **P** **23 52 53.2 +0.3**
PAB pmax pmax
comp=Z,9.0nm,1.2s
PAB San Pablo 20.41 281 P **P** **23 52 53.2 +0.3**
PAB IAmb IAmb 23 53 04.2
comp=Z,9.3nm,1.1s
MDT Midelt 22.21 264 P **P** **23 53 10.1 -2.3**
comp=Z,4.7nm,0.8s,baz=203,slow=3.3,SNR=4.5
HFS Hagfors 22.38 349 P **P** **23 53 12.9 -0.9**
comp=Z,2.8nm,0.5s,baz=266,slow=39,SNR=14
FINES FINESS Array B 23.23 5 *e*P **P** **23 53 21.5 -1.2**
FINES pmax pmax
comp=Z,1.0nm,0.3s
FINES FINESS Array B 23.23 5 P **P** **23 53 21.2 -1.4**
comp=Z,1.4nm,0.3s,baz=182,slow=8.2,SNR=14
FINES LR LR 00 03 22.9
comp=Z,49nm,19.9s,baz=237,slow=39
FINES FINESS Array B 23.23 5 P **P** **23 53 21.1 -1.5**
FIA1 FINESS Array S 23.23 5 P **P** **23 53 21.3 -1.4**
FIA1 IAmb IAmb 23 53 38.0
comp=Z,9.8nm,1.1s
NC602 NORSAR Array S 23.30 347 P **P** **23 53 22.4 -1.0**
NAO01 NORSAR Array S 23.52 346 P **P** **23 53 23.4 -2.2**
NC405 NORSAR Array S 23.62 348 P **P** **23 53 25.8 -0.8**
NB201 NORSAR Array S 23.63 347 P **P** **23 53 25.7 -1.1**
NB201 IAmb IAmb 23 53 32.3
comp=Z,11nm,0.9s
NB2 NORSAR Subarra 23.64 347 P **P** **23 53 25.9 -0.9**
comp=Z,1.1nm,0.5s,baz=160,slow=11
NOA NORSAR Array B 23.64 347 P **P** **23 53 25.7 -1.2**
comp=Z,0.4nm,0.4s,baz=181,slow=17,SNR=7.7
NOA LR LR 00 04 00.7
comp=Z,20nm,18.1s,baz=240,slow=40
NBO00 NORSAR Array S 23.71 347 P **P** **23 53 26.4 -1.1**
NC303 NORSAR Array S 23.79 347 P **P** **23 53 27.4 -0.8**
NC303 IAmb IAmb 23 53 39.8
comp=Z,5.3nm,0.8s
EKA Eskdalemuir Ar 23.89 323 P **P** **23 53 28.6 -0.6**
comp=Z,4.9nm,0.8s,baz=121,slow=10,SNR=9.8
ESK Eskdalemuir 23.90 323 P **P** **23 53 29.2 -0.2**
ESK pmax pmax
comp=Z,5.0nm,0.9s
ESK Eskdalemuir 23.90 323 P **P** **23 53 29.2 -0.2**
ESK IAmb IAmb 23 53 44.1
comp=Z,5.4nm,0.8s
NC204 NORSAR Array S 23.94 347 P **P** **23 53 29.1 -0.7**
NC204 IAmb IAmb 23 53 30.2
comp=Z,13nm,0.9s
RAYN Ar Rayn 25.00 120 P **P** **23 53 41.4 +1.6**
RAYN pmax pmax
comp=Z,2.0nm,1.1s
RAYN Ar Rayn 25.00 120 P **P** **23 53 41.4 +1.6**
KLMR Klimovskoe 25.06 20 *e*P **P** **23 53 38.9 -0.9**
KLMR pmax pmax
comp=Z,14nm,1.1s
KLMR Klimovskoe 25.06 20 *e*P **P** **23 53 39.0 -0.9**
KLMR AMP 23 53 40.8
comp=Z,14nm,1.1s
KIRV Kirov 26.90 32 P **P** **23 53 56.0 -0.6**
comp=Z,8.6nm,0.7s,baz=151,slow=6.2,SNR=3.7
AKTO Aktyubinsk 28.20 53 P **P** **23 54 08.2 -0.2**
comp=Z,0.6nm,0.4s,baz=180,slow=4.0,SNR=2.6
GEYT Alibeck 28.39 80 P **P** **23 54 10.3 +0.1**
ABKAR Akbulak array 29.24 56 P **P** **23 54 18.0 +0.4**
ABKAR Akbulak array 29.24 56 P **P** **23 54 18.1 +0.5**
ABKAR IAmb IAmb 23 54 30.1
comp=Z,0.6nm,1.1s
ARU Arti 30.19 41 *i* P **P** **23 54 28.9 +3.0**
ARU pmax pmax
comp=Z,2.0nm,1.0s
TOA0 Torodi Ar. Sit 30.88 221 P **P** **23 54 33.1 +0.8**
TORD Torodi Ar. Bea 30.88 221 P **P** **23 54 32.5 +0.2**
comp=Z,1.2nm,0.5s,baz=33,slow=9.0,SNR=17
TORD LR LR 00 08 01.2
comp=Z,46nm,19.0s,baz=310,slow=38
TORD Torodi Ar. Bea 30.88 221 P **P** **23 54 32.0 -0.3**
ARCES ARCESS Array B 31.27 2 *e*P **P** **23 54 34.7 -0.6**
ARCES pmax pmax
comp=Z,2.0nm,0.7s
ARCES ARCESS Array B 31.27 2 P **P** **23 54 34.6 -0.7**
comp=Z,1.8nm,0.7s,baz=194,slow=9.2,SNR=14
ARCES ARCESS Array B 31.27 2 P **P** **23 54 34.2 -1.1**
ARE0 ARCESS Array S 31.27 2 P **P** **23 54 33.5 -1.8**
UOSS Minazif 31.95 105 P **P** **23 54 41.8 0.0**
UOSS IAmb IAmb 23 54 42.9
comp=Z,4.8nm,0.9s
KKAR Karatay Array 36.73 67 P **P** **23 55 23.2 +0.2**
KKAR Karatay Array 36.73 67 P **P** **23 55 23.2 +0.2**
SOCY Socotra 38.69 124 P **P** **23 55 38.0 -1.9**
SOCY IAmb IAmb 23 55 48.0
comp=Z,6.9nm,1.1s
SCO Scoresbysund 39.38 338 P **P** **23 55 46.1 +1.2**
SCO pmax pmax
comp=Z,15nm,1.1s
SCO Scoresbysund 39.38 338 P **P** **23 55 46.1 +1.2**
AAK Ala-Archa 39.69 67 *i* P **P** **23 55 47.2 -1.0**
AAK pmax pmax
comp=Z,2.0nm,0.9s
DBIC Dimbokro 39.78 224 P **P** **23 55 51.5 +2.6**
DBIC pmax pmax
comp=Z,7.0nm,1.2s
DBIC Dimbokro 39.78 224 P **P** **23 55 51.5 +2.6**
DBIC IAmb IAmb 23 56 03.3
comp=Z,7.3nm,1.1s
SPA0 Spitsbergen Ar 39.97 358 P **P** **23 55 50.1 +0.3**
KBS Kingsbay 40.85 357 P **P** **23 55 59.7 +2.6**
KBS pmax pmax
comp=Z,21nm,1.1s
KBS Kingsbay 40.85 357 P **P** **23 55 59.7 +2.6**
NRN Naryn 41.06 68 P **P** **23 56 00.4 +0.7**
NRN pmax pmax
comp=Z,2.0nm,0.9s
NRN Naryn 41.06 68 P **P** **23 56 00.4 +0.7**
KURK Kurchatov 41.29 54 *i* P **P** **23 56 01.4 +0.3**
KURK pmax pmax
comp=Z,3.0nm,1.1s
KURK Kurchatov 41.29 54 P **P** **23 56 01.1 0.0**
KDJ Kajisay 41.75 67 P **P** **23 56 06.0 +0.8**
KDJ pmax pmax
comp=Z,6.0nm,1.1s
KDJ Kajisay 41.75 67 P **P** **23 56 06.0 +0.8**
KDJ IAmb IAmb 23 56 23.4
comp=Z,5.5nm,1.1s
MAKZ Makanchi 44.06 59 P **P** **23 56 23.6 -0.1**
MAKZ pmax pmax
comp=Z,2.0nm,1.1s
MAKZ Makanchi 44.06 59 P **P** **23 56 23.6 -0.1**
MK31 Makanchi Array 44.28 59 IAmb IAmb 23 56 33.1
comp=Z,2.2nm,0.6s
MKAR Makanchi Array 44.28 59 P **P** **23 56 25.2 -0.2**
comp=Z,3.6nm,0.4s,baz=276,slow=7.1,SNR=156
MKAR Makanchi Array 44.28 59 P **P** **23 56 25.7 +0.3**
ZAA0 Zalesovo Array 44.75 48 IAmb IAmb 23 56 39.9
comp=Z,2.8nm,1.1s
ZALV Zalesovo Beam 44.75 48 P **P** **23 56 28.6 -0.5**
comp=Z,2.3nm,0.4s,baz=272,slow=8.6,SNR=15
ZALV Zalesovo Beam 44.75 48 P **P** **23 56 28.2 -0.9**
WMQ Urumqi 48.72 61 *e*P **P** **23 57 02.3 +1.9**
WMQ pmax pmax
comp=Z,6.0nm,0.7s
WMQ LR LR
comp=N,380nm,25.1s
WMQ LR LR
comp=E,300nm,29.0s

WMQ					LR	LR			
	comp=Z,30nm,26.7s								
GTA	**Gaotai**	**58.78**	**62**	*eP*	**P**	**P**	**23 58 13.5**	**-0.7**	
GTA				pP	sP		23 58 20.5	+1.9	
GTA				sP	pP		23 58 23.5	+6.1	
GTA				pmax	pmax				
	comp=Z,2.0nm,1.0s								
SCHQ	**Schefferville**	**59.03**	**318**	P	**P**	**P**	**23 58 15.8**	**+0.3**	
	comp=Z,1.3nm,0.5s,baz=32,slow=6.3,SNR=5.9								
SCHQ	**Schefferville**	**59.03**	**318**	P	**P**		**23 58 15.5**	**0.0**	
TIXI	**Tiksi**	**59.08**	**21**	*i* P	**P**	**P**	**23 58 16.1**	**+0.6**	
TIXI				pmax	pmax				
	comp=Z,6.0nm,0.8s								
SONM	**Songino Array**	**59.50**	**51**	*eP*	**P**	**P**	**23 58 18.3**	**-0.7**	
SONM				pmax	pmax				
	comp=Z,1.0nm,0.6s								
SONM	**Songino Array**	**59.50**	**51**	P	**P**	**P**	**23 58 18.8**	**-0.2**	
	comp=Z,0.5nm,0.6s,baz=280,slow=7.5,SNR=9.8								
SONM	**Songino Array**	**59.50**	**51**	IAmb	IAmb		23 58 22.2		
	comp=Z,0.8nm,1.0s								
ULN	**Ulaanbaatar**	**59.88**	**51**	P	**P**	**P**	**23 58 21.4**	**-0.3**	
ULN				pmax	pmax				
	comp=Z,1.0nm,0.6s								
ULN	**Ulaanbaatar**	**59.88**	**51**	P	**P**	**P**	**23 58 21.4**	**-0.3**	
ULN				IAmb	IAmb		23 58 22.1		
	comp=Z,1.3nm,0.6s								
LZH	**Lanzhou**	**63.15**	**64**	*eP*	**P**	**P**	**23 58 45.0**	**+1.0**	
LZH				pP	sP		23 58 49.8	+1.4	
LZH				sP	pP		23 58 55.0	+7.8	
LZH				PP	PcP		23 59 06.5	-15	
LZH				pmax	pmax				
	comp=Z,14nm,1.3s								
LZH				pmax	pmax				
	comp=Z,78nm,4.9s								
LBTB	**Lobatse**	**63.16**	**176**	P	**P**	**P**	**23 58 43.4**	**-0.5**	
LBTB	**Lobatse**	**63.16**	**176**	P	**P**	**P**	**23 58 43.4**	**-0.5**	
E63A	**Oxbow**	**63.66**	**309**	P	**P**	**P**	**23 58 47.4**	**+0.5**	
E63A				IAmb	IAmb		23 58 55.4		
	comp=Z,2.6nm,0.9s								
YAK	**Yakutsk**	**64.40**	**30**	*i* P	**P**	**P**	**23 58 51.7**	**+0.2**	
HHC	**Hu-ho-hao-te**	**66.03**	**56**	*eP*	**P**	**P**	**23 59 02.8**	**+0.1**	
HHC				pmax	pmax				
	comp=Z,2.0nm,0.7s								
HHC				pmax	pmax				
	comp=Z,54nm,6.3s								
BOSA	**Boshof**	**66.73**	**177**	P	**P**	**P**	**23 59 06.3**	**-0.7**	
	comp=Z,1.3nm,0.6s,baz=0.0,slow=10,SNR=2.5								
BOSA	**Boshof**	**66.73**	**177**	IAmb	IAmb		23 59 09.3		
	comp=Z,2.6nm,1.0s								
BILL	**Bilibino**	**70.57**	**13**	*eP*	**P**	**P**	**23 59 29.5**	**-1.0**	
BILL				pmax	pmax				
	comp=Z,8.0nm,2.5s								
YKA	**Yellowknife Ar**	**73.55**	**341**	P	**P**	**P**	**23 59 47.9**	**-0.5**	
	comp=Z,0.3nm,0.6s,baz=25,slow=5.4,SNR=4.1								
ULM	**Lac du Bonnet**	**76.16**	**324**	*eP*	**P**	**P**	**00 00 06.2**	**+2.5**	
ULM				pmax	pmax				
	comp=Z,1.0nm,0.7s								
ULM	**Lac du Bonnet**	**76.16**	**324**	P	**P**	**P**	**00 00 03.5**	**-0.2**	
	comp=Z,1.3nm,0.7s,baz=132,slow=1.5,SNR=3.9								
ULM	**Lac du Bonnet**	**76.16**	**324**	IAmb	IAmb		00 00 07.0		
	comp=Z,2.3nm,1.1s								
ILAR	**Eielson Array**	**76.80**	**355**	*eP*	**P**	**P**	**00 00 10.0**	**+2.9**	
ILAR	**Eielson Array**	**76.80**	**355**	P	**P**	**P**	**00 00 07.6**	**+0.5**	
	comp=Z,0.2nm,0.5s,baz=359,slow=2.2,SNR=5.1								
SCRK	**Sand Creek**	**77.36**	**354**	P	**P**	**P**	**00 00 11.2**	**+0.8**	
RIDG	**Independent Ri**	**77.67**	**354**	P	**P**	**P**	**00 00 13.0**	**+0.9**	
RIDG				IAmb	IAmb		00 00 26.5		
	comp=Z,3.3nm,1.1s								
BPAW	**Bear Paw Mtn.**	**77.69**	**357**	P	**P**	**P**	**00 00 12.3**	**+0.2**	
BPAW				IAmb	IAmb		00 00 13.1		
	comp=Z,2.0nm,0.9s								
KSRS	**Korea Array**	**78.37**	**51**	*eP*	**P**	**P**	**00 00 15.3**	**-1.0**	
KSRS				pmax	pmax				
	comp=Z,1.0nm,0.5s								
KSRS	**Korea Array**	**78.37**	**51**	P	**P**	**P**	**00 00 15.9**	**-0.4**	
	comp=Z,0.8nm,0.5s,baz=311,slow=4.6,SNR=5.2								
TXAR	**Lajitas Array**	**95.60**	**314**	P	**P**	**P**	**00 01 41.7**	**+0.1**	
	comp=Z,0.3nm,1.0s,baz=79,slow=6.5,SNR=2.1								

IDC 30 23:56:59.6±8.5, 4°41'S×104°99'W, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.5/36, mbtmp3.4/4, MS3.2/7, Ms1 3.2/7, ms1mx3.1/19, Error ellipse: s-maj=339.1km s-min=181.3km az=67.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RPN	**Rapa Nui**	**22.97**	**190**	LR	LR	00 09 04.5	
	comp=Z,64nm,19.2s,baz=12,slow=32						
CMIG	**Matias Romero**	**23.58**	**25**	LR	LR	00 08 50.1	
	comp=Z,20nm,18.8s,baz=165,slow=30						
APG	**El Apazote**	**24.06**	**36**	LR	LR	00 09 58.8	
	comp=Z,99nm,18.1s,baz=102,slow=32						
JTS	**Las Juntas de**	**24.73**	**54**	LR	LR	00 09 50.0	
	comp=Z,148nm,19.9s,baz=112,slow=31						
LPIG	**La Paz**	**28.80**	**350**	LR	LR	00 11 23.0	
	comp=Z,55nm,21.4s,baz=194,slow=30						
TEIG	**Tepich**	**29.47**	**33**	LR	LR	00 12 01.5	
	comp=Z,29nm,20.8s,baz=52,slow=31						
NVAR	**Mina Array Bea**	**44.37**	**345**	P	P	00 05 11.9	-0.2
	0.1nm,0.3s,baz=158,slow=8.4,SNR=2.5						
NVAR				LR	LR	00 19 12.2	
	comp=Z,36nm,19.7s,baz=353,slow=30						
YKA	**Yellowknife Ar**	**67.12**	**355**	P	P	00 07 54.7	-0.1
	0.2nm,0.8s,baz=164,slow=6.0,SNR=3.5						
INK	**Inuvik**	**75.23**	**349**	P	P	00 08 44.3	+0.5
	0.5nm,0.7s,baz=191,slow=2.4,SNR=2.6						
ILAR	**Eielson Array**	**75.57**	**343**	P	P	00 08 45.7	-0.2
	0.4nm,0.8s,baz=161,slow=5.7,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**89.68**	**290**	T	T	01 48 30.1	
	baz=96,slow=74,SNR=10						
H11N2	**WAKE ISLAND Hy**	**89.70**	**290**	T	T	01 48 30.5	
	baz=96,slow=74,SNR=9.9						
H11N1	**WAKE ISLAND Hy**	**89.70**	**290**	T	T	01 48 24.7	
	baz=96,slow=74,SNR=8.4						
H11S2	**WAKE ISLAND Hy**	**89.78**	**288**	T	T	01 48 39.5	
	baz=92,slow=74						
H11S1	**WAKE ISLAND Hy**	**89.78**	**288**	T	T	01 48 38.5	
	baz=92,slow=74						
H11S3	**WAKE ISLAND Hy**	**89.79**	**288**	T	T	01 48 39.5	
	baz=92						

*IDC **31** 00:04:16.2±0.9, 10°.30S×161°.52E, h80km±7km, mb3.7/7, mb1 4.0/8, mb1mx3.8/29, mbtmp4.1/8, MS3.3/4, Ms1 3.3/4, ms1mx2.8/27, Error ellipse: s-maj=20.4km s-min=10.3km az=24.0*

*NEIC **31** 00:04:16.4±2.1, 10°.3S±0°.1×161°.45E±0°.10, h89km±8km, mb4.5/24, Error ellipse: s-maj=18.0km s-min=10.4km az=220.0*

ISC 31 00:04:15.7±0.5, 10°.33S±0°.07×161°.49E±0°.07, h80km, n52, σ1§13/48, mb4.4/19, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.76**	**300**	P	**Pn**	**00 04 44.8**	**+0.4**
	290nm,0.3s,baz=148,slow=9.5,SNR=30						
HNR				S	**Sn**	**00 05 07.5**	**+1.2**
	746nm,0.3s,baz=119,slow=22,SNR=8.7						
HNR				LR	LR	00 05 38.7	
	comp=Z,538nm,19.8s,baz=110,slow=46						
HNR	**Honiara**	**1.76**	**300**	*i* P	**Pn**	**00 04 45.0**	**+0.5**
HNR				*i* S	**Sn**	**00 05 09.0**	**+2.7**
HNR	**Honiara**	**1.76**	**300**		**Pn**	**00 04 45.0**	**+0.5**
SANVU	**Saraoutou**	**7.54**	**133**		**Pn**	**00 06 03.8**	**+0.8**
RABL	**Rabaul**	**11.08**	**303**	Pn	**Pn**	**00 06 52.0**	**+0.7**
NOUC	**Port Laguerre**	**12.58**	**159**		**Pn**	**00 07 13.6**	**+1.9**
DZM	**Mont Dzumac**	**12.60**	**158**	P	**Pn**	**00 07 13.8**	**+1.7**
	5.8nm,0.3s,baz=338,slow=8.6,SNR=75						
DZM				S	**Sn**	**00 09 30.6**	**0.0**
	1.9nm,0.3s,baz=316,slow=23,SNR=6.3						
DZM	**Mont Dzumac**	**12.60**	**158**		**Pn**	**00 07 13.9**	**+1.9**
PMG	**Port Moresby**	**14.15**	**272**	LR	LR	00 12 38.9	
	comp=Z,113nm,20.2s,baz=138,slow=35						
PATS	**Pohnpei**	**17.35**	**349**	P	**Pn**	**00 08 13.0**	**+0.2**
EIDS	**Eidsvold**	**17.92**	**212**	P	**P**	**00 08 17.3**	**-2.0**
COEN	**Coen**	**18.26**	**257**	P	**P**	**00 08 22.4**	**-0.6**
COEN					IAmb	00 08 33.0	
	comp=Z,20nm,1.1s						
AFI	**Afiamalu**	**26.37**	**100**	LR	LR	00 17 43.6	
	comp=Z,128nm,20.3s,baz=15,slow=31						
OUZ	**Omahuta**	**27.12**	**158**	P	**P**	**00 09 51.1**	**-0.1**
OUZ					IAmb	00 09 53.1	
	comp=Z,13nm,1.1s						

WR0	**Warramunga Arr**	**27.68**	**247**	P	**P**	**00 09 56.4**	**0.0**		
WB0	**Warramunga Arr**	**27.76**	**247**	P	**P**	**00 09 58.0**	**+0.9**		
WB0				IAmb	IAmb	00 10 16.5			
	comp=Z,7.4nm,1.1s								
WRA	**Warramunga Arr**	**27.85**	**247**	P	**P**	**00 09 58.5**	**+0.5**		
	comp=Z,1.0nm,0.3s,baz=75,slow=8.9,SNR=3.3								
WRA	**Warramunga Arr**	**27.85**	**247**	P	**P**	**00 09 56.3**	**-1.7**		
STKA	**Stephens Creek**	**28.25**	**218**	P	**P**	**00 10 01.3**	**-0.1**		
GUMO	**Guam**	**28.93**	**325**	LR	LR	00 20 44.9			
	comp=Z,37nm,20.4s,baz=124,slow=34								
GUMO	**Guam**	**28.93**	**325**	P	**P**	**00 10 06.4**	**-1.1**		
NIUE	**Niue**	**28.95**	**111**	P	**P**	**00 10 07.1**	**-0.6**		
H11S2	**WAKE ISLAND Hy**	**29.10**	**10**	T	T	00 39 26.2			
	baz=190								
H11S3	**WAKE ISLAND Hy**	**29.10**	**10**	T	T	00 39 03.4			
	baz=190,slow=74,SNR=16								
H11S1	**WAKE ISLAND Hy**	**29.12**	**10**	T	T	00 39 04.7			
	baz=190,slow=74,SNR=13								
ASAR	**Alice Springs**	**29.45**	**240**	P	**P**	**00 10 13.8**	**+1.6**		
	comp=Z,0.2nm,0.3s,baz=63,slow=10,SNR=3.9								
ASAR				LR	LR	00 20 50.6			
	comp=Z,46nm,20.3s,baz=80,slow=34								
FAKI	**Fak Fak**	**29.94**	**282**	P	**P**	**00 10 15.6**	**-1.0**		
H11N1	**WAKE ISLAND Hy**	**30.33**	**10**	T	T	00 40 35.0			
	baz=194,slow=76,SNR=19								
H11N3	**WAKE ISLAND Hy**	**30.34**	**10**	T	T	00 40 36.2			
	baz=194,slow=76,SNR=12								
H11N2	**WAKE ISLAND Hy**	**30.35**	**10**	T	T	00 40 40.6			
	baz=194,slow=76,SNR=16								
BKZ	**Black Stump Fm**	**31.68**	**157**	P	**P**	**00 10 32.3**	**+0.6**		
BKZ				IAmb	IAmb	00 10 43.0			
	comp=Z,10nm,1.1s								
KNRA	**Kununurra**	**32.30**	**257**	P	**P**	**00 10 37.4**	**+0.1**		
KNRA				IAmb	IAmb	00 10 47.1			
	comp=Z,17nm,0.9s								
BBOO	**Buckleboo**	**32.38**	**222**	P	**P**	**00 10 38.2**	**+0.3**		
BBOO				IAmb	IAmb	00 10 51.6			
	comp=Z,7.8nm,1.1s								
THZ	**Tophouse**	**32.88**	**164**	P	**P**	**00 10 41.5**	**-0.6**		
THZ				IAmb	IAmb	00 10 55.2			
	comp=Z,8.8nm,0.9s								
FITZ	**Fitzroy Crossi**	**35.55**	**253**	P	**P**	**00 11 05.4**	**0.0**		
FITZ				IAmb	IAmb	00 11 06.2			
	comp=Z,7.4nm,1.1s								
KKM	**Kota Kinabalu**	**47.93**	**288**	P	**P**	**00 12 45.4**	**-1.3**		
KKM				IAmb	IAmb	00 12 47.0			
	comp=Z,13nm,1.0s								
TPUB	**Ta-pu**	**52.11**	**310**	P	**P**	**00 13 16.3**	**-1.8**		
SSLB	**Suanglung**	**52.15**	**311**	P	**P**	**00 13 17.9**	**-0.5**		
SSLB				IAmb	IAmb	00 13 18.6			
	comp=Z,6.1nm,1.1s								
USRK	**Ussuriysk Ar.**	**60.52**	**336**	P	**P**	**00 14 17.7**	**+0.3**		
CMAR	**Chiang Mai Arr**	**68.00**	**295**	pP	pP	00 15 30.0	+2.5		
	comp=Z,0.9nm,0.8s,baz=106,slow=4.0,SNR=1.6								
ULN	**Ulaanbaatar**	**75.31**	**326**	P	**P**	**00 15 51.5**	**+1.1**		
ULN				IAmb	IAmb	00 15 51.7			
	comp=Z,3.1nm,0.6s								
SONM	**Songino Array**	**75.66**	**325**	P	**P**	**00 15 52.8**	**+0.4**		
	comp=Z,4.0nm,0.6s,baz=141,slow=5.8,SNR=36								
SONM	**Songino Array**	**75.66**	**325**	P	**P**	**00 15 52.8**	**+0.4**		
ILAR	**Eielson Array**	**84.22**	**20**	P	**P**	**00 16 38.5**	**+0.5**		
	comp=Z,0.3nm,0.4s,baz=253,slow=4.6,SNR=6.5								
ILAR				pP	**pP**	**00 16 59.0**	**-0.1**		
	comp=Z,0.6nm,0.7s,baz=247,slow=4.8,SNR=4.2								
SCRK	**Sand Creek**	**84.72**	**21**	P	**P**	**00 16 38.4**	**-2.4**		
SCRK				IAmb	IAmb	00 16 53.8			
	comp=Z,2.8nm,1.1s								
NVAR	**Mina Array Bea**	**88.79**	**51**	P	**P**	**00 17 03.4**	**+2.2**		
	comp=Z,0.5nm,0.7s,baz=235,slow=6.7,SNR=4.9								
NVAR	**Mina Array Bea**	**88.79**	**51**	P	**P**	**00 17 02.2**	**+1.0**		
MK31	**Makanchi Array**	**90.16**	**318**	P	**P**	**00 17 06.9**	**-0.3**		
MKAR	**Makanchi Array**	**90.16**	**318**	P	**P**	**00 17 06.5**	**-0.7**		
	comp=Z,0.4nm,0.5s,baz=91,slow=5.8,SNR=12								
MKAR				pP	**pP**	**00 17 29.5**	**+1.1**		
	comp=Z,0.7nm,0.7s,baz=104,slow=5.5,SNR=4.6								
INK	**Inuvik**	**90.62**	**20**	P	**P**	**00 17 07.4**	**-1.3**		
YKA	**Yellowknife Ar**	**96.28**	**28**	P	**P**	**00 17 34.9**	**0.0**		
	comp=Z,0.2nm,0.5s,baz=262,slow=4.8,SNR=5.7								
YKA				pP	**pP**	**00 17 57.0**	**+0.5**		
	comp=Z,0.2nm,0.6s,baz=266,slow=5.3,SNR=3.3								
ARCES	**ARCESS Array B**	**114.56**	**344**	PKP	**PKiKP**	**00 22 45.7**	**-0.4**		
	comp=Z,5.2nm,1.2s,baz=29,slow=2.8,SNR=5.4								

*GCMT **31** 00:22:38.0±0.4, 41°.48S±0°.02×86°.51W±0°.03, h19km±2km, MW4.8/72, Moment Tensor Solution. s9,c10; s72,c93; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-0.25±.13; Mθθ 0.51±.12; Mφφ -0.26±.11; Mrθ -0.99±.26; Mrφ -1.90±.08; Mθφ 0.34±.20; Best double couple: Mo 2.16700×10^16 NP1: φs 356.00000°, δ65.00000°, λ 5.00000°. NP2: φs 264.00000°, δ86.00000°, λ 155.00000°. Principal axes: T 2.4250, Plg20.0000°, Azm217.0000°; N -0.5160, Plg65.0000°, Azm75.0000°; P -1.9090, Plg14.0000°, Azm313.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Surface-wave location Triangular moment-rate function*

IDC 31 00:23:02.1±10.0, 38°52S×93°25W, h0km, mb3.6/3, mb1 4.1/3, mb1mx3.8/23, mbtmp3.6/3, MS3.8/5, Ms1 3.8/5, ms1mx3.4/18 Error ellipse: s-maj=322.2km s-min=136.9km az=23.0, West Chile Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**30.20**	**33**	LR	LR	00 37 49.8	
	comp=Z,170nm,19.6s,baz=192,slow=29						
LPAZ	**La Paz**	**31.24**	**52**	LR	LR	00 38 29.3	
	comp=Z,76nm,20.8s,baz=186,slow=30						
ROSC	**El Rosal**	**46.58**	**26**	LR	LR	00 48 26.4	
	comp=Z,301nm,19.9s,baz=192,slow=33						
TBI	**Tubuai**	**49.81**	**271**	*e*LR	LR	00 48 05.6	
	comp=Z,128nm,33.2s						
PPT2	**Papeete2**	**53.05**	**277**	*e*LR	LR	00 49 41.3	
	comp=Z,115nm,25.2s						
VNDA	**Vanda**	**55.84**	**195**	LR	LR	00 50 31.1	
	comp=Z,67nm,21.8s,baz=127,slow=30						
TXAR	**Lajitas Array**	**68.20**	**350**	P	P	00 34 04.5	+0.2
	0.4nm,0.7s,baz=161,slow=6.5,SNR=5.3						
NVAR	**Mina Array Bea**	**79.97**	**340**	P	P	00 35 13.8	+0.8
	0.4nm,0.8s,baz=174,slow=3.4,SNR=2.2						
PDAR	**Pinedale Array**	**82.26**	**348**	P	P	00 35 23.9	-1.2
	0.9nm,0.9s,baz=152,slow=6.6,SNR=6.6						
DZM	**Mont Dzumac**	**84.17**	**247**	*e*LR	LR	01 03 06.8	
	comp=Z,132nm,23.7s						
STKA	**Stephens Creek**	**93.34**	**224**	LR	LR	01 10 10.7	
	comp=Z,48nm,20.8s,baz=206,slow=30						
MKAR	**Makanchi Array**	**171.11**	**20**	PKPab	PKPab	00 44 31.2	0.0
	1.0nm,1.2s,baz=112,slow=2.0,SNR=3.7						

*IDC **31** 01:24:42.9±1.1, 38°.35N×20°.41E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.5/41, mbtmp3.7/10, ML3.2/3, MS3.3/4, Ms1 3.3/4, ms1mx2.6/51, Error ellipse: s-maj=20.2km s-min=18.3km az=67.0*

*MOS **31** 01:24:43.1±1.0, 38°.23N×20°.11E, h14km, mb4.2/8, Error ellipse: s-maj=12.0km s-min=7.3km az=71.5*

*PDG **31** 01:24:43.7±0.2, 38°.24N×20°.27E, h17km, ML4.1/13, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*

*ATH **31** 01:24:44.5, 38°.25N×20°.33E, h15km±1km, ML3.5/18, Error ellipse: s-maj=1.4km s-min=0.8km az=81.0*

*THE **31** 01:24:44.7, 38°.25N×20°.33E, h12km±1km, ML3.7/6, Error ellipse: s-maj=1.3km s-min=0.5km az=102.0*

*NEIC **31** 01:24:45.6±2.4, 38°.26N±0°.05×20°.30E±0°.06, h10km±3km, mb4.2/3, ML3.6(THE), Error ellipse: s-maj=8.5km s-min=5.8km az=212.0*

*SKO **31** 01:24:50.7, 38°.66N×20°.58E, h0km*

ISC 31 01:24:45.0±0.7, 38°28N±0°.02×20°35E±0°.03, h13km±4km, n189, σ1§79/251, mb3.9/13, MS3.3/5, 9C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.07**	**107**	P	**Pg**	**01 24 47.5**	**-0.1**
KEF4				S	**Sg**	**01 24 49.2**	**-0.2**
KEF3	**Kipouria, Keph**	**0.07**	**178**	P	**Pg**	**01 24 47.5**	**-0.2**
KEF3				S	**Sg**	**01 24 49.3**	**-0.3**
KEF1	**Kardakata, Kep**	**0.10**	**90**	P	**Pg**	**01 24 47.9**	**0.0**
KEF1				S	**Sg**	**01 24 50.1**	**0.0**
LXR1	**Lixouri, Cepha**	**0.11**	**136**	P	**Pg**	**01 24 47.8**	**-0.2**
LXR1				S	**Sg**	**01 24 50.1**	**-0.1**
ARG2	**Argostoli**	**0.15**	**131**	P	**Pg**	**01 24 48.3**	**-0.3**
ARG2				S	**Sg**	**01 24 50.9**	**-0.3**
KEF2	**Argostoli. Kep**	**0.16**	**135**	P	**Pg**	**01 24 48.5**	**-0.3**
KEF2				S	**Sg**	**01 24 50.8**	**-0.6**

VSK1	**VASILIKIADES**	**0.22**	**52**	P	**Pg**	**01 24 49.8**	**+0.1**		
VLS	**Valsamata**	**0.22**	**117**	P	**Pg**	**01 24 49.2**	**-0.5**		
VLS				S	**Sg**	**01 24 52.5**	**-0.4**		
	80μm,0.1s								
VLS	**Valsamata**	**0.22**	**117**	P	**Pg**	**01 24 49.2**	**-0.5**		
VLS				S	**Sg**	**01 24 52.5**	**-0.4**		
VLS	**Valsamata**	**0.22**	**117**	P	**Pg**	**01 24 49.2**	**-0.5**		
VLS				S	**Sg**	**01 24 52.6**	**-0.4**		
VLS				AML	AML	01 24 52.9			
VLS				AML	AML	01 24 52.9			
FSK	**Fiskardo**	**0.25**	**43**	P	**Pg**	**01 24 50.4**	**+0.1**		
FSK				S	**Sg**	**01 24 54.6**	**+0.7**		
FSK	**Fiskardo**	**0.25**	**43**	P	**Pg**	**01 24 50.5**	**+0.3**		
FSK				S	**Sb**	**01 24 55.0**	**-0.5**		
KFL	**Anninata**	**0.39**	**115**	P	**Pg**	**01 24 52.1**	**-0.6**		
KFL				S	**Sg**	**01 24 58.0**	**0.0**		
	19μm,0.5s								
KFL	**Anninata**	**0.39**	**115**	P	**Pg**	**01 24 52.1**	**-0.6**		
KFL				S	**Sg**	**01 24 57.7**	**-0.3**		
KFL				AML	AML	01 24 58.3			
	comp=E,39415μm,0.5s								
KFL				AML	AML	01 24 58.8			
	comp=N,38538μm,0.6s								
EVGI	**Lefkada island**	**0.42**	**35**	P	**Pg**	**01 24 53.4**	**+0.1**		
EVGI				S	**Sb**	**01 25 00.2**	**-0.3**		
EVGI	**Lefkada island**	**0.42**	**35**	P	**Pg**	**01 24 53.5**	**+0.1**		
EVGI				S	**Sb**	**01 24 59.9**	**-0.6**		
VLMS	**Volimes, Zakyn**	**0.47**	**148**	P	**Pg**	**01 24 53.6**	**-0.7**		
VLMS				S	**Sg**	**01 25 00.4**	**-0.2**		
VLMS				AML	AML	01 25 01.7			
	comp=N,50702μm,0.6s								
VLMS				AML	AML	01 25 01.7			
	comp=E,30434μm,0.1s								
MGNA	**Meganis**	**0.52**	**43**	P	**Pg**	**01 24 55.1**	**0.0**		
MGNA				S	**Sb**	**01 25 02.9**	**-0.3**		
MGNA				AML	AML	01 25 03.2			
	comp=N,10560μm,0.4s								
MGNA				AML	AML	01 25 04.3			
	comp=E,7886μm,0.3s								
LKD2	**Lefkada island**	**0.57**	**26**	P	**Pg**	**01 24 55.9**	**-0.2**		
LKD2				S	**Sb**	**01 25 04.2**	**-0.5**		
	comp=E,3μm,0.2s								
LKD2	**Lefkada island**	**0.57**	**26**	P	**Pg**	**01 24 56.0**	**-0.2**		
LKD2				S	**Sb**	**01 25 05.0**	**+0.2**		
LKD2				AML	AML	01 25 11.4			
	comp=E,6491μm,0.2s								
LKD2				AML	AML	01 25 11.7			
	comp=N,7093μm,0.2s								
TSLK	**Tsoukalades, L**	**0.60**	**24**	P	**Pg**	**01 24 56.4**	**-0.3**		
TSLK				S	**Sb**	**01 25 06.5**	**+0.9**		
	comp=N,6μm,0.4s								
TSLK	**Tsoukalades, L**	**0.60**	**24**	P	**Pg**	**01 24 56.8**	**+0.1**		
TSLK				S	**Sb**	**01 25 06.2**	**+0.6**		
AST1	**Astakos**	**0.64**	**65**	P	**Pg**	**01 24 57.2**	**-0.3**		
AST1				S	**Sb**	**01 25 06.8**	**0.0**		
KRI1	**kERI**	**0.72**	**149**	P	**Pg**	**01 24 57.4**	**-1.5**		
KRI1				S	**Sg**	**01 25 08.6**	**+0.2**		
PDO	**Prodromos**	**0.73**	**64**	P	**Pg**	**01 24 59.0**	**-0.2**		
PDO				S	**Sb**	**01 25 09.9**	**+0.4**		
	comp=N,9μm,0.5s								
PDO	**Prodromos**	**0.73**	**64**	P	**Pg**	**01 24 59.2**	**0.0**		
PDO				S	**Sb**	**01 25 09.8**	**+0.3**		
PDO				AML	AML	01 25 17.0			
	comp=E,10294μm,0.5s								
PDO				AML	AML	01 25 17.5			
	comp=N,15033μm,0.5s								
PVO	**Paravola**	**0.99**	**70**	P	**Pb**	**01 25 03.7**	**-0.2**		
PVO				S	**Sn**	**01 25 19.5**	**+1.2**		
	comp=N,4μm,0.4s								
PVO	**Paravola**	**0.99**	**70**	P	**Pg**	**01 25 03.9**	**-0.1**		
PVO				AML	AML	01 25 24.3			
	comp=N,7709μm,0.4s								
PVO				AML	AML	01 25 24.6			
	comp=E,9112μm,0.4s								
DRO	**Drossia**	**1.12**	**106**	P	**Pb**	**01 25 05.3**	**-0.9**		
DRO	**Drossia**	**1.12**	**106**	P	**Pb**	**01 25 04.9**	**-1.3**		
DRO				AML	AML	01 25 34.9			
	comp=N,4614μm,0.6s								
DRO				AML	AML	01 25 35.1			
	comp=E,6611μm,0.7s								
UPR	**University Cam**	**1.13**	**89**	P	**Pg**	**01 25 06.9**	**+0.1**		
EFP	**Efpalio**	**1.24**	**83**	P	**Pn**	**01 25 07.1**	**-0.8**		
EFP				AML	AML	01 25 32.3			
	comp

VAY	**Valandovo**	**3.49**	**29**	*e*P	**Pn**	**01 25 41.5 +2.6**
VAY	**Valandovo**	**3.49**	**29**	*i* Pn	**Pn**	**01 25 40.0 +1.1**
CEL	**Celeste**	**3.50**	**271**		**Pn**	**01 25 39.2 +0.1**
CEL					**Sn**	**01 26 20.2 -0.2**
STIP	**Stip**	**3.69**	**22**	*i* Pn	**Pn**	**01 25 45.4 +3.7**
ULC	**Ulcinj**	**3.78**	**347**	*e*Pn	**Pn**	**01 25 42.6 -0.3**
ULC				*e*Sn	**Sn**	**01 26 27.9 +0.7**
SG1	**Sgolgore (BA)**	**3.82**	**313**	*e*Pn	**Pn**	**01 25 44.8 +1.4**
SG1				Sn	**Sn**	**01 26 28.1 -0.1**
BAI	**Bari**	**3.89**	**318**	*e*Pn	**Pn**	**01 25 45.1 +0.7**
BAI				Sn	**Sn**	**01 26 30.3 +0.4**
DRME	**Dracevica, Mon**	**4.00**	**348**	*e*Pn	**Pn**	**01 25 46.4 +0.4**
DRME	**Dracevica, Mon**	**4.00**	**348**	*e*Pn	**Pn**	**01 25 46.0 0.0**
DRME				*e*Sn	**Sn**	**01 26 33.5 +0.8**
BUM	**Brajici-Budva**	**4.17**	**345**	*e*Pn	**Pn**	**01 25 48.4 +0.1**
BUM				*e*Sn	**Sn**	**01 26 37.5 +0.6**
MMB	**Musomiste**	**4.21**	**37**	*e*P	**Pn**	**01 25 51.7 +2.9**
ACER	**Acerenza**	**4.23**	**308**		**Pn**	**01 25 49.7 +0.6**
PDG	**Podgorica**	**4.23**	**349**	⇓P	**Pn**	**01 25 50.6 +1.5**
PDG	**Podgorica**	**4.23**	**349**	*e*Pn	**Pn**	**01 25 48.6 -0.5**
PDG	**Podgorica**	**4.23**	**349**		**Pn**	**01 25 50.3 +1.3**
TTG	**Podgorica**	**4.23**	**349**	*e*Pn	**Pn**	**01 25 49.3 +0.2**
TTG				*e*Sn	**Sn**	**01 26 38.7 +0.4**
APE	**Apeiranthos**	**4.29**	**105**	*i* P	**Pn**	**01 25 52.0 +2.1**
PVY	**Plav**	**4.32**	**356**	*e*Pn	**Pn**	**01 25 50.9 +0.4**
PVY				*e*Sn	**Sn**	**01 26 41.6 +0.8**
HCY	**Herceg Novi**	**4.40**	**342**	*e*Pn	**Pn**	**01 25 50.0 -1.4**
HCY	**Herceg Novi**	**4.40**	**342**	*e*Pn	**Pn**	**01 25 51.1 -0.3**
HCY				*e*Sn	**Sn**	**01 26 43.0 +0.5**
CEME	**Cevo**	**4.40**	**346**	*e*Pn	**Pn**	**01 25 51.1 -0.4**
CEME				*e*Sn	**Sn**	**01 26 43.4 +0.8**
IVA	**Berane**	**4.60**	**356**	*e*Pn	**Pn**	**01 25 55.0 +0.7**
IVA				Sn	**Sn**	**01 26 48.5 +0.9**
NKME	**Niksic**	**4.61**	**347**	*e*Pn	**Pn**	**01 25 54.3 0.0**
NKME				*e*Sn	**Sn**	**01 26 48.0 +0.3**
KOME	**Kolasin**	**4.61**	**352**	*e*Pn	**Pn**	**01 25 54.7 +0.3**
KOME				*e*Sn	**Sn**	**01 26 48.4 +0.6**
TREB	**Trebinje**	**4.69**	**342**	*e*Pn	**Pn**	**01 25 54.2 -1.2**
DBRK	**Dubrovnik**	**4.70**	**340**	*e*Pn	**Pn**	**01 25 55.1 -0.4**
DBRK				Sn	**Sn**	**01 26 47.1 -2.6**
IDI	**Anoyia**	**4.71**	**128**	Pn	**Pn**	**01 25 56.4 +0.6**
	comp=E,0.2nm,0.3s,baz=270,slow=9.4,SNR=7.9					
IDI				Sn	**Sn**	**01 26 52.7 +2.4**
	comp=E,2.9nm,0.3s,baz=341,slow=24,SNR=9.8					
VAE	**Valguarnera**	**4.76**	**262**	Pn	**Pn**	**01 25 59.1 +2.7**
	comp=E,0.9nm,0.3s,baz=6.4,slow=21,SNR=3.8					
VAE				Sn	**Sn**	**01 26 55.0 +3.5**
	comp=E,4.3nm,0.3s,baz=183,slow=4.8,SNR=4.5					
BRY	**Bratogost**	**4.82**	**344**	*e*Pn	**Pn**	**01 25 56.7 -0.6**
BRY	**Bratogost**	**4.82**	**344**	*e*Pn	**Pn**	**01 25 57.0 -0.3**
BRY				*e*Sn	**Sn**	**01 26 53.1 +0.1**
VTS	**Vitosha**	**4.86**	**26**	P	**Pn**	**01 26 00.2 +2.3**
VTS	**Vitosha**	**4.86**	**26**	⇑P	**Pn**	**01 26 01.1 +3.2**
VTS	**Vitosha**	**4.86**	**26**		**Pn**	**01 26 00.2 +2.3**
STON	**Ston**	**5.01**	**337**	*i* Pn	**Pn**	**01 25 59.3 -0.5**
STON				Sn	**Sn**	**01 26 53.9 -3.6**
STON	**Ston**	**5.01**	**337**	*e*Pn	**Pn**	**01 25 58.2 -1.6**
UPM	**Unac-Piva**	**5.04**	**348**	*e*Pn	**Pn**	**01 26 00.1 -0.3**
UPM				*e*Sn	**Sn**	**01 26 58.2 -0.3**
PLE	**Pljevlja**	**5.10**	**352**	*e*Pn	**Pn**	**01 26 01.3 +0.2**
PLE				*e*Sn	**Sn**	**01 26 59.8 -0.1**
PAOL	**Paolisi**	**5.24**	**303**		**Pn**	**01 26 04.8 +1.9**
RUDO	**Rudo**	**5.39**	**352**	*e*Pn	**Pn**	**01 26 02.9 -2.1**
MAKA	**Makarska**	**5.61**	**334**	*i* Pn	**Pn**	**01 26 08.1 +0.1**
MAKA				Sn	**Sn**	**01 27 09.5 -2.6**
BBLS	**Lazići**	**5.63**	**353**	*e*Pn	**Pn**	**01 26 08.5 +0.2**
DIVS	**Divibare**	**5.82**	**357**	*e*Pn	**Pn**	**01 26 10.2 -0.8**
HAPS	**Han Pijesak,Bl**	**5.90**	**350**	*e*Pn	**Pn**	**01 26 10.8 -1.3**
PLVB	**Pleven**	**6.05**	**31**	⇓P	**Pn**	**01 26 16.2 +2.2**
KARP	**Karpathos**	**6.10**	**114**	P	**Pn**	**01 26 17.2 +2.4**
BAIL	**Bailesti**	**6.17**	**21**	⇑P	**Pn**	**01 26 17.8 +2.1**
INTR	**Introdacqua**	**6.18**	**309**		**Pn**	**01 26 17.9 +1.9**
KIJV	**Kijevo**	**6.45**	**334**	*e*Pn	**Pn**	**01 26 20.0 +0.5**
KIJV				Sn	**Sn**	**01 27 30.5 -2.5**
MORI	**Morici**	**6.59**	**329**	*e*Pn	**Pn**	**01 26 22.0 +0.5**
MORI				Sn	**Sn**	**01 27 34.6 -1.8**
MGRS	**Mrkonjic Grad**	**6.61**	**339**	*e*Pn	**Pn**	**01 26 21.3 -0.4**
AQU	**L'Aquila**	**6.69**	**310**	*e*Pn	**Pn**	**01 26 22.4 -0.5**
BLY	**Banja Luka**	**6.89**	**341**	⇓P	**Pn**	**01 26 26.3 +0.8**
BLY	**Banja Luka**	**6.89**	**341**	*e*Pn	**Pn**	**01 26 24.8 -0.7**
FRGS	**Fruska Gora**	**6.89**	**357**	*e*Pn	**Pn**	**01 26 24.6 -1.0**
DUGI	**Dugi Otok**	**6.96**	**327**	*i* Pn	**Pn**	**01 26 26.9 +0.3**
NRCA	**Norcia**	**7.14**	**312**		**Pn**	**01 26 30.2 +1.1**
GZR	**Gura Zlata**	**7.34**	**14**	⇑P	**Pn**	**01 26 32.8 +1.0**
BZS	**Buzias**	**7.39**	**7**	⇑P	**Pn**	**01 26 32.8 +0.3**
NVLJ	**Novalja**	**7.51**	**329**	*e*Pn	**Pn**	**01 26 34.1 +0.1**
ARR	**Arges**	**7.77**	**23**	⇑P	**Pn**	**01 26 39.4 +1.6**
VOIR		**7.97**	**25**	P	**Pn**	**01 26 42.2 +1.8**
VOIR		**7.97**	**25**	⇑P	**Pn**	**01 26 42.3 +1.8**
MORH	**Mrgy, Hungar**	**8.03**	**352**	*e*Pn	**Pn**	**01 26 39.6 -1.6**
MORH	**Mrgy, Hungar**	**8.03**	**352**	*e*Pn	**Pn**	**01 26 39.7 -1.5**
BOJS	**Bojanci**	**8.16**	**334**	*i* Pn	**Pn**	**01 26 43.9 +0.9**
BOJS				*i* Sn	**Sn**	**01 28 11.5 -3.4**
OZLJ	**Ozalj**	**8.18**	**335**	*e*Pn	**Pn**	**01 26 43.9 +0.6**
MLR	**Muntele Rosu**	**8.33**	**28**	⇑P	**Pn**	**01 26 47.4 +2.0**
GBRS	**Gornja Briga**	**8.34**	**332**	*i* Pn	**Pn**	**01 26 46.3 +0.8**
GBRS				*i* Sn	**Sn**	**01 28 15.1 -4.4**
CRES	**Cresnjev**	**8.37**	**336**	*e*Pn	**Pn**	**01 26 45.7 -0.2**
VISS	**Visnje**	**8.56**	**333**	*i* Pn	**Pn**	**01 26 49.2 +0.7**
VISS				*i* Sn	**Sn**	**01 28 20.7 -4.2**
CEY	**Cerknica**	**8.66**	**331**	*e*Pn	**Pn**	**01 26 49.6 -0.3**
LJU	**Ljubljana**	**8.88**	**333**	*e*Pn	**Pn**	**01 26 52.9 0.0**
PLOR	**Plostina**	**8.90**	**30**	P	**Pn**	**01 26 56.1 +3.0**
PLOR	**Plostina**	**8.90**	**30**	⇑P	**Pn**	**01 26 56.2 +3.0**
VRI	**Vrincioaia**	**8.94**	**30**	⇑P	**Pn**	**01 26 56.3 +2.6**
SOKA	**Soboth**	**9.27**	**337**	*i* Pn	**Pn**	**01 26 57.7 -0.5**
	comp=E,4.7nm,0.3s,SNR=10					
SOKA				*i* Sn	**Sn**	**01 28 36.9 -5.4**
	comp=E,6.3nm,0.6s					
OBKA	**Obir**	**9.27**	**334**	*e*Pn	**Pn**	**01 26 59.1 +0.8**
	comp=E,2.1nm,0.2s					
OBKA				*i* Sn	**Sn**	**01 28 39.5 -3.1**
	comp=E,9.2nm,0.5s					
ARSA	**Arzberg**	**9.64**	**340**	*i* Pn	**Pn**	**01 27 03.8 +0.5**
	comp=E,1.7nm,0.3s					
MYKA	**Terra Mystica**	**9.70**	**331**	*e*Pn	**Pn**	**01 27 07.5 +3.3**
	comp=E,1.6nm,0.3s					
MYKA				*i* Sn	**Sn**	**01 28 49.2 -3.8**
	comp=E,2.7nm,0.4s					
KBA	**Koelnbreinsper**	**10.19**	**332**	Pn	**Pn**	**01 27 11.7 +0.8**
	comp=E,1.9nm,0.4s					
KBA				*i* Sn	**Sn**	**01 29 00.1 -5.0**
	comp=E,4.7nm,0.5s					
ABTA	**Abfaltersbach**	**10.24**	**328**	*e*Pn	**Pn**	**01 27 12.5 +0.8**
	comp=E,1.1nm,0.4s					
ABTA				*i* Sn	**Sn**	**01 29 03.6 -2.8**
	comp=E,13nm,0.6s					
VYHS	**Vyhne**	**10.27**	**354**	*e*SN	**Sn**	**01 29 00.4 -6.5**
MODS	**Modra-Piesok**	**10.34**	**349**	*e*SN	**Sn**	**01 29 00.9 -7.6**
MOA	**Molln**	**10.55**	**337**	*i* Pn	**Pn**	**01 27 16.4 +0.7**
	comp=E,2.4nm,0.3s,SNR=6.5					
MOA				*i* Sn	**Sn**	**01 29 10.5 -3.1**
	comp=E,3.6nm,0.3s					
WTTA	**Wattenberg**	**11.02**	**327**	Pn	**Pn**	**01 27 25.0 +2.6**
	comp=E,1.7nm,0.3s					
WTTA				*i* Sn	**Sn**	**01 29 24.0 -1.5**
	comp=E,13nm,0.6s					
WATA	**Walderalm**	**11.10**	**327**	*i* Pn	**Pn**	**01 27 26.1 +2.6**
	comp=E,1.3nm,0.2s					
SQTA	**Sankt Quirin**	**11.17**	**326**	*e*Pn	**Pn**	**01 27 27.0 +2.6**
	comp=E,1.2nm,0.2s					
SQTA				*i* Sn	**Sn**	**01 29 27.6 -1.6**
	comp=E,8.1nm,0.6s					
FETA	**Feichten**	**11.24**	**324**	*i* Sn	**Sn**	**01 29 29.2 -1.6**
	comp=E,2.1nm,0.6s					
MOTA	**Moosalm**	**11.31**	**326**	*i* Pn	**Pn**	**01 27 28.0 +1.6**
	comp=E,0.9nm,0.3s					
MOTA				*e*Sn	**Sn**	**01 29 31.5 -1.2**
	comp=E,6.2nm,0.5s					
RETA	**Reutte**	**11.57**	**326**	*e*Pn	**Pn**	**01 27 32.7 +2.9**
	comp=E,0.9nm,0.4s					
RETA				*e*Sn	**Sn**	**01 29 36.7 -2.1**
	comp=E,4.4nm,0.5s					
GERES	**GERESS Array B**	**11.61**	**338**	Pn	**Pn**	**01 27 29.8 -0.5**
	comp=E,0.4nm,0.3s,baz=159,slow=14,SNR=12					
GERES				Sn	**Sn**	**01 29 31.6 -8.1**
	comp=E,0.5nm,0.3s,baz=152,slow=23,SNR=6.8					
DAVA	**Damuels**	**11.83**	**323**	Pn	**Pn**	01 27 39.0 +5.6
	comp=E,1.5nm,0.5s					
DAVA				*e*Sn	**Sn**	**01 29 41.9 -3.3**
	comp=E,5.2nm,0.6s					
KHC	**Kasperske Hory**	**11.90**	**338**	*e*P	**Pn**	**01 27 35.1 +0.9**
KHC				*e*		01 29 39.8
KHC	**Kasperske Hory**	**11.90**	**338**	*e*PN	**Pn**	**01 27 35.1 +0.9**
KHC				*e*SN	**Sn**	**01 29 39.8 -6.9**
KIV	**Kislovodsk**	**17.74**	**64**	*e*P	**Pn**	**01 28 49.4 -2.3**
KIV				pmax	pmax	
	comp=Z,23nm,1.1s					
KIV				MLR	MLR	
	comp=Z,37nm,14.0s					
OBN	**Obninsk**	**20.10**	**28**	*e*P	**P**	**01 29 15.4 -2.7**
OBN				*e*PPP	PPP	01 29 39.4
OBN				*e*		01 33 35.0
OBN				pmax	pmax	
	comp=Z,15nm,1.3s					
OBN				MLR	MLR	
	comp=Z,50nm,16.0s					
HFS	**Hagfors**	**22.28**	**351**	P	**P**	**01 29 41.4 -0.2**
	comp=Z,2.9nm,0.6s,baz=179,slow=11,SNR=7.1					
FINES	**FINESS Array B**	**23.46**	**7**	*e*P	**P**	**01 29 52.4 -1.4**
FINES				pmax	pmax	
	comp=Z,3.0nm,0.9s					
FINES	**FINESS Array B**	**23.46**	**7**	P	**P**	**01 29 52.7 -1.1**
	comp=E,3.1nm,0.9s,baz=186,slow=11,SNR=6.2					
FINES				LR	LR	01 40 26.0
	comp=Z,58nm,19.9s,baz=217,slow=40					
NOA	**NORSAR Array B**	**23.49**	**349**	P	**P**	**01 29 55.0 +0.8**
	comp=Z,0.5nm,0.6s,baz=163,slow=9.0,SNR=4.4					
TORD	**Torodi Ar. Bea**	**30.02**	**219**	P	**P**	**01 30 53.5 -0.1**
	comp=Z,1.0nm,0.8s,baz=29,slow=8.8,SNR=5.5					
TORD	**Torodi Ar. Bea**	**30.02**	**219**	IAmb	IAmb	01 30 56.0
	comp=Z,1.3nm,1.1s					
ARU	**Arti**	**31.08**	**42**	*i* P	**P**	**01 31 03.2 +0.7**
ARU				pmax	pmax	
	comp=Z,2.0nm,1.1s					
ARCES	**ARCESS Array B**	**31.44**	**3**	P	**P**	**01 31 04.8 -0.8**
	comp=Z,1.9nm,0.8s,baz=190,slow=11,SNR=7.6					
KURK	**Kurchatov**	**42.33**	**53**	*i* P	**P**	**01 32 40.7 +2.4**
KURK				pmax	pmax	
	comp=Z,2.0nm,1.3s					
MK31	**Makanchi Array**	**45.37**	**58**	P	**P**	**01 33 03.5 +0.7**
MK31				pmax	pmax	
	comp=Z,7.0nm,2.0s					
MK31	**Makanchi Array**	**45.37**	**58**	P	**P**	**01 33 03.5 +0.7**
MK31				IAmb	IAmb	01 33 08.2
	comp=Z,7.4nm,2.0s					
MKAR	**Makanchi Array**	**45.37**	**58**	*e*P	**P**	**01 33 04.4 +1.6**
MKAR				pmax	pmax	
	comp=Z,1.0nm,0.4s					
MKAR	**Makanchi Array**	**45.37**	**58**	P	**P**	**01 33 02.1 -0.7**
	comp=Z,0.2nm,0.4s,baz=283,slow=7.4,SNR=8.0					
MKAR				LR	LR	01 57 38.3
	comp=Z,32nm,19.4s,baz=296,slow=44					
ZAA0	**Zalesovo Array**	**45.73**	**48**	P	**P**	**01 33 06.2 +0.7**
ZAA0				IAmb	IAmb	01 33 14.3
	comp=Z,3.2nm,1.2s					
ZALV	**Zalesovo Beam**	**45.73**	**48**	*e*P	**P**	**01 33 06.4 +0.9**
ZALV				pmax	pmax	
	comp=Z,1.0nm,0.4s					
ZALV	**Zalesovo Beam**	**45.73**	**48**	P	**P**	**01 33 04.3 -1.2**
	comp=Z,1.2nm,0.4s,baz=277,slow=8.7,SNR=7.0					
TIXI	**Tiksi**	**59.61**	**20**	*i* P	**P**	**01 34 49.9 +2.0**
TIXI				pmax	pmax	
	comp=Z,3.0nm,1.0s					
YAK	**Yakutsk**	**65.09**	**29**	LR	LR	02 05 58.4
	comp=Z,21nm,18.6s,baz=271,slow=38					
BILL	**Bilibino**	**70.95**	**13**	*e*P	**P**	**01 36 02.6 +1.1**
BILL				pmax	pmax	
	comp=Z,2.0nm,1.5s					
KLR	**Kul'dur**	**73.89**	**39**	LR	LR	02 14 43.9
	comp=Z,25nm,18.6s,baz=299,slow=41					

UCR ***31*** *01:24:50.6±2.0, 8.29N×82.81W, h13km±5km*
UPA ***31*** *01:24:50.8±1.3, 8.33N×82.80W, h15km±3km, MW4.4*
IDC ***31*** *01:24:53.2±12.0, 8.60N×82.59W, h38km±71km, mb3.3/5, mb1 3.7/7, mb1mx3.5/30, mbtmp3.6/7, ML3.7/2, MS2.9/2, Ms1 2.9/2, ms1mx2.5/21, Error ellipse: s-maj=140.3km s-min=84.6km az=12.0*

ISC 31 01:24:50.6±1.0, 8.29N±0.04×82.82W±0.03, h25km±6km, n45, σ1s26/66, mb3.5/5, 9C-5D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
SBAR3	**San Bartolo, C**	**0.07**	**298**	⇑*i*P	**Pb**	**01 24 54.6**	**-0.5**
BAGA3	**Bagala, Chiriq**	**0.34**	**58**	*e*P	**Pb**	**01 24 58.1**	**-0.2**
DVD	**David**	**0.40**	**68**	⇑*i*P	**Pb**	**01 24 58.5**	**-0.6**
DVD				*e*S	**Sb**	**01 25 04.2**	**-0.7**
DVD3	**San Pablo Viej**	**0.40**	**67**	*e*P	**Pb**	**01 24 58.7**	**-0.4**
DVD3				*e*S	**Sb**	**01 25 05.6**	**+0.7**
PEDE3	**Pedregal, Chir**	**0.41**	**76**	⇓*i*P	**Pb**	**01 24 58.7**	**-0.5**
PEDE3				*e*S	**Sb**	**01 25 04.8**	**-0.4**
CHIR3	**Chiriqui UPA,**	**0.50**	**77**	⇓*i*P	**Pb**	**01 25 00.1**	**-0.7**
PTAR3	**Potrerillos Ar**	**0.52**	**38**	*e*P	**Pb**	**01 25 00.7**	**-0.5**
BCO2	**Palmira**	**0.52**	**34**	*e*P	**Pb**	**01 25 00.6**	**-0.6**
BRU2	**Volcan**	**0.52**	**14**	*e*P	**Pb**	**01 25 00.5**	**-0.8**
BRU2				*e*S	**Sb**	**01 25 08.9**	**+0.3**
BRU2	**Volcan**	**0.52**	**14**	⇓*i*P	**Pb**	**01 25 00.6**	**-0.8**
BRU2				*e*S	**Sb**	**01 25 08.5**	**0.0**
EDSV	**San Vito**	**0.55**	**344**	*e*P	**Pb**	**01 25 01.4**	**-0.4**
EDSV				*e*S	**Sn**	**01 25 10.6**	**-0.9**
EDPN	**Palmar Norte**	**0.92**	**317**	⇑*e*P	**Pb**	**01 25 06.7**	**-1.2**
EDPN				*e*S	**Sn**	**01 25 20.1**	**-0.3**
CHGR2	**Aguacate**	**0.93**	**46**	⇓*i*P	**Pb**	**01 25 06.4**	**-1.7**
CHGR2				*e*S	**Sb**	**01 25 19.2**	**-0.9**
EDBA	**Buenos Aires**	**0.98**	**333**	*e*P	**Pb**	**01 25 08.2**	**-0.8**
EDBA				*e*S	**Sn**	**01 25 21.7**	**-0.2**
CNI2	**El Empalme, Bo**	**1.18**	**17**	⇓*i*P	**Pn**	**01 25 11.1**	**-0.4**
CNI2				*e*S	**Sn**	**01 25 27.8**	**+1.0**
EDLM	**Las Mercedes**	**1.25**	**322**	*e*P	**Pn**	**01 25 12.2**	**-0.3**
EDLM				*e*S	**Sb**	**01 25 29.0**	**-0.2**
RGM0	**Gandoca**	**1.31**	**9**	*e*P	**Pb**	**01 25 14.5**	**-0.1**
RGM0				*e*S	**Sb**	**01 25 36.0**	**+5.0**
EDDO	**Dominical**	**1.41**	**313**	*e*P	**Pn**	**01 25 15.1**	**+0.4**
EDDO				*e*S	**Sb**	**01 25 34.1**	**+0.3**
CNAZ3	**Canazas, Verag**	**1.60**	**88**	*e*P	**Pn**	**01 25 16.1**	**-1.1**
CNAZ3				*e*S	**Sn**	**01 25 37.5**	**+0.5**
GMAL	**Guarumal, Vera**	**1.66**	**108**	⇑*i*P	**Pn**	**01 25 16.9**	**-1.0**
GMAL				*e*S	**Sb**	**01 25 40.3**	**-0.5**
RSUS3	**Rio de Jesus,**	**1.67**	**100**	⇑*i*P	**Pn**	**01 25 18.1**	**-0.1**
RSUS3				*e*S	**Sb**	**01 25 42.2**	**+0.9**
SFRA3	**San Francisco,**	**1.83**	**91**	⇑*e*P	**Pn**	**01 25 20.1**	**-0.3**
STIA3	**Santiago, Vera**	**1.84**	**96**	⇑*i*P	**Pn**	**01 25 20.6**	**+0.1**
STIA3				⇑*e*S	**Sn**	**01 25 44.6**	**+1.6**
PONU3	**Ponuga, Veragu**	**1.87**	**102**	*e*P	**Pn**	**01 25 22.5**	**+1.6**
PONU3				*e*S	**Sb**	**01 25 46.0**	**-0.9**
CVTR	**Volcan Turrial**	**1.96**	**332**	*e*P	**Pn**	**01 25 23.1**	**+0.6**
SJS	**Escuela Geolog**	**2.05**	**324**	*e*P	**Pn**	**01 25 25.2**	**+1.7**
HDC	**Heredia**	**2.13**	**323**	*e*P	**Pn**	**01 25 26.4**	**+1.7**
HDC	**Heredia**	**2.13**	**323**	⇑*e*P	**Pn**	**01 25 26.4**	**+1.7**
HDC				*e*S	**Sb**	**01 25 48.7**	**+1.0**
CACAO	**El Cacao, Vera**	**2.15**	**116**	*e*P	**Pn**	**01 25 26.1**	**+1.3**
CACAO				*e*S	**Sb**	**01 25 54.3**	**-0.9**
PESE3	**Pese, Herrera**	**2.22**	**100**	*e*P	**Pb**	**01 25 30.1**	**+0.1**
AZU	**Azuero**	**2.57**	**101**	*e*P	**Pn**	**01 25 32.0**	**+1.5**
AZU	**Azuero**	**2.57**	**101**	*e*P	**Pn**	**01 25 31.4**	**+0.8**
AZU				*e*S	**Sn**	**01 26 03.6**	**+2.6**
ARE1	**Arenal 1**	**2.86**	**319**	*e*P	**Pn**	**01 25 36.6**	**+2.0**
JTS	**Las Juntas de**	**2.90**	**314**	Pn	**Pn**	**01 25 35.6**	**+0.4**
	12nm,0.3s,baz=174,slow=9.5,SNR=43						
JTS				Sn	**Sn**	**01 26 10.1**	**+0.9**
	46nm,0.3s,baz=174,slow=20,SNR=5.2						
JTS	**Las Juntas de**	**2.90**	**314**	*e*P	**Pn**	**01 25 36.3**	**+1.1**
JTS	**Las Juntas de**	**2.90**	**314**	*e*P	**Pn**	**01 25 38.3**	**+3.1**
CHOR3	**La Chorrera**	**3.08**	**78**	*i* P	**Pn**	**01 25 43.6**	**-1.1**
PLVR	**Palo Verde**	**3.23**	**310**	*e*P	**Pn**	**01 25 41.1**	**+1.2**
APG	**El Apazote**	**10.03**	**312**	Pn	**Pn**	**01 27 16.1**	**+2.8**
	0.7nm,0.3s,baz=110,slow=5.7,SNR=8.9						
SDV	**Santo Domingo**	**12.07**	**86**	LR	LR	01 33 35.5	
	comp=Z,79nm,18.5s,baz=190,slow=44						
PDAR	**Pinedale Array**	**41.61**	**330**	P	**P**	**01 32 36.5**	**-0.3**
	0.3nm,0.7s,baz=138,slow=8.4,SNR=3.0						
PDAR				LR	LR	01 52 23.1	
	comp=Z,11nm,19.0s,baz=157,slow=40						
ULM	**Lac du Bonnet**	**43.22**	**348**	P	**P**	**01 32 48.3**	**-1.3**
	1.9nm,0.8s,baz=147,slow=8.5,SNR=4.7						
NVAR	**Mina Array Bea**	**43.82**	**319**	P	**P**	**01 32 55.1**	**+0.2**
	0.4nm,0.6s,baz=128,slow=6.9,SNR=3.8						
YKA	**Yellowknife Ar**	**58.84**	**343**	P	**P**	**01 34 45.8**	**-1.0**
	0.2nm,0.6s,baz=143,slow=6.6,SNR=7.3						
ILAR	**Eielson Array**	**71.65**	**336**	P	**P**	**01 36 10.0**	**+0.2**
	0.4nm,0.8s,baz=108,slow=5.1,SNR=4.9						

WEL 31 02:11:11.7, 35°S±10°×17°9E±1°2, h207km±11km, M4.2/50,

ML4.8/2, MLv4.2/50, Error ellipse: s-maj=0.0km s-min=0.0km az=127.6, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.36**	**194**	P	**Pn**	**02 11 54.4**	**0.0**
MXZ	**Matakaoa Point**	**2.36**	**194**	P	**Pn**	**02 11 54.4**	**0.0**
MXZ				S	**S**	**02 12 27.4**	**-0.1**
WMGZ	**Waiomatatini S**	**2.59**	**190**	P	**Pn**	**02 11 57.7**	**+0.7**
WMGZ	**Waiomatatini S**	**2.59**	**190**	P	**Pn**	**02 11 57.8**	**+0.9**
HAZ	**Te Kaha**	**2.67**	**201**	P	**Pn**	**02 11 58.4**	**+0.5**
PKGZ	**Pakihiroa**	**2.72**	**196**	P	**Pn**	**02 11 58.9**	**+0.5**
PKGZ	**Pakihiroa**	**2.72**	**196**	P	**Pn**	**02 11 59.0**	**+0.6**
PUZ	**Puketiti**	**2.87**	**192**	P	**Pn**	**02 12 00.3**	**+0.3**
PUZ	**Puketiti**	**2.87**	**192**	P	**Pn**	**02 11 59.9**	**-0.1**
PUZ				S	**S**	**02 12 38.0**	**+0.4**
RUGZ	**Raukumara Rang**	**2.90**	**201**	P	**Pn**	**02 12 00.8**	**+0.3**
RUGZ	**Raukumara Rang**	**2.90**	**201**	P	**Pn**	**02 12 00.3**	**-0.3**
TWGZ	**Tauwhareparae**	**3.02**	**196**	P	**Pn**	**02 12 02.3**	**+0.4**
KUZ	**Kuaotunu**	**3.05**	**240**	P	**Pn**	**02 12 01.8**	**-0.3**
KUZ	**Kuaotunu**	**3.05**	**240**	P	**Pn**	**02 12 01.9**	**-0.3**
GRZ	**Great Barrier**	**3.05**	**250**	P	**Pn**	**02 12 01.3**	**-1.0**
CNGZ	**Carnagh Statio**	**3.27**	**191**	P	**Pn**	**02 12 05.7**	**+0.8**
MWZ	**Matawai**	**3.29**	**201**	P	**Pn**	**02 12 05.3**	**+0.3**
MWZ				S	**S**	**02 12 47.3**	**+0.9**
TKGZ	**Te Karaka**	**3.30**	**196**	P	**Pn**	**02 12 05.5**	**+0.4**
TKGZ	**Te Karaka**	**3.30**	**196**	P	**Pn**	**02 12 05.3**	**+0.2**
URZ	**Urewera**	**3.35**	**206**	P	**Pn**	**02 12 06.2**	**+0.4**
URZ	**Urewera**	**3.35**	**206**	S	**S**	**02 12 48.7**	**+0.9**
RAGZ	**Rawiri**	**3.47**	**201**	P	**Pn**	**02 12 08.2**	**+0.9**
WIAZ	**Waiheke Island**	**3.49**	**243**	P	**Pn**	**02 12 07.8**	**+0.3**
WIAZ	**Waiheke Island**	**3.49**	**243**	P	**Pn**	**02 12 07.4**	**0.0**
RIGZ	**Rimuhau**	**3.58**	**196**	P	**Pn**	**02 12 08.6**	**+0.1**
MBAZ	**Motutapu North**	**3.66**	**245**	P	**Pn**	**02 12 10.1**	**+0.7**
MUGZ	**Murupara**	**3.67**	**209**	P	**Pn**	**02 12 10.1**	**+0.5**
RTZ	**Ruatahuna**	**3.72**	**205**	P	**Pn**	**02 12 10.2**	**0.0**
TOZ	**Tahuroa Road**	**3.75**	**228**	P	**Pn**	**02 12 13.0**	**+2.5**
SNGZ	**Shannon Statio**	**3.75**	**200**	P	**Pn**	**02 12 11.2**	**+0.5**
SNGZ				S	**S**	**02 12 58.9**	**+2.3**
KNZ	**Kokohu**	**3.90**	**196**	P	**Pn**	**02 12 12.0**	**-0.4**
RAHZ	**Arahi**	**3.96**	**202**	P	**Pn**	**02 12 13.4**	**+

MACC				*i*			02 54 49.4	
	comp=Z,1μm,0.5s							
BARC	**Barichara**	**3.24**	**327**	*eP*	Pn		02 53 59.0	-1.5
BARC				*eS*	Sn		02 54 39.4	-0.4
BARC				*i*			02 55 01.7	
	comp=Z,1μm,1.4s							
BARC				*i*			02 55 04.1	
	comp=Z,868nm,0.6s							
PRAC	**Prado**	**3.47**	**268**	*eP*	Pn		02 54 02.9	-0.6
PRAC				*eS*	Sn		02 54 47.2	+1.8
PRAC				*i*			02 55 08.8	
	comp=Z,495nm,0.9s							
PAMC	**Pamplona, Colo**	**3.69**	**340**	*eP*	Pn		02 54 05.3	-1.6
PAMC				*eS*	Sn		02 54 47.8	-3.4
PAMC				*i*			02 55 08.7	
	comp=Z,332nm,0.3s							
PAMC				*i*			02 55 14.6	
	comp=Z,358nm,0.5s							
ORTC	**Ortega, Tolima**	**3.83**	**271**	*eP*	Pn		02 54 07.8	-0.6
ORTC				*eS*	Sn		02 54 56.1	+1.9
ORTC				*i*			02 55 16.2	
	comp=Z,573nm,0.5s							
NORC	**Norcasia**	**3.84**	**296**	*eP*	Pn		02 54 08.3	-0.4
NORC				*eS*	Sn		02 54 54.8	+0.3
NORC				*i*			02 55 17.1	
	comp=Z,114nm,0.7s							
BRRC	**Barranca, Sant**	**3.96**	**325**	*eP*	Pn		02 54 08.7	-1.5
BRRC				*eS*	Sn		02 54 56.5	-0.7
BRRC				*i*			02 55 34.7	
	comp=Z,156nm,1.3s							
PTBC	**PUERTO BERRIO,**	**4.04**	**311**	*eP*	Pn		02 54 09.1	-2.2
PTBC				*eS*	Sn		02 54 54.7	-4.6
PTBC				*i*			02 55 19.6	
	comp=Z,110nm,0.4s							
GUY2C	**Guyana, Caldas**	**4.17**	**289**	*eP*	Pn		02 54 13.1	-0.5
GUY2C				*eS*	Sn		02 55 00.0	-3.1
GUY2C				*i*			02 55 29.3	
	comp=Z,119nm,0.6s							
HELC	**Santa Helena**	**4.71**	**300**	*eP*	Pn		02 54 20.6	-0.3
HELC				*eS*	Sn		02 55 13.2	-3.2
HELC				*i*			02 55 47.3	
	comp=Z,44nm,0.7s							
FLOC	**Florencia**	**4.80**	**242**	*eP*	Pn		02 54 21.5	-0.4
FLOC				*eS*	Sn		02 55 19.8	+1.6
FLOC				*i*			02 55 48.9	
	comp=Z,531nm,0.9s							
YOTC	**Yotoco, Valle**	**4.93**	**272**	*eP*	Pn		02 54 22.1	-1.6
YOTC				*eS*	Sn		02 55 16.3	-5.0
YOTC				*i*			02 55 56.7	
	comp=Z,80nm,1.0s							
CBOC	**Ciudad Bolivar**	**5.00**	**294**	*eP*	Pn		02 54 24.4	-0.3
CBOC				*eS*	Sn		02 55 29.6	+6.3
CBOC				*i*			02 56 06.6	
	comp=Z,34nm,1.2s							
SMLC	**San Martn de**	**5.58**	**332**	*eP*	Pn		02 54 30.9	-1.6
SMLC				*eS*	Sn		02 55 30.8	-6.4
SMLC				*i*			02 56 15.6	
	comp=Z,44nm,0.5s							
SJCC	**San Jacinto, C**	**7.07**	**328**	*eP*	Pn		02 54 51.1	-2.0
SJCC				*eS*	Sn		02 56 10.2	-3.9
SJCC				*i*			02 56 17.7	
	comp=Z,25nm,0.5s							

AUST 31 03:03:25.4±0.1, 33°45S×117°59E, h6km, Error ellipse: s-maj=0.7km s-min=0.5km az=17.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**0.60**	**330**	P	Pg	03 03 36.2	-0.8
	baz=0.6,SNR=140						
NWAO				S	Sg	03 03 44.2	-0.5
	baz=0.6						
RKGY	**Rocky Gully**	**1.26**	**203**	P	Pg	03 03 47.9	-1.7
	baz=1.3,SNR=30						
RKGY				S	Sg	03 04 06.1	0.0
	baz=1.3						
KLBR	**Kellerberrin**	**1.86**	**4**	P	Pn	03 03 56.4	-1.4
	baz=1.9,SNR=96						
KLBR				S	Sn	03 04 19.4	-2.3
	baz=1.9						
MUN	**Mundaring**	**1.87**	**321**	P	Pn	03 03 56.9	-1.1
	baz=1.9,SNR=18						
MUN				S	Sn	03 04 21.5	-0.5
	baz=1.9						
BLDU	**Ballidu**	**2.92**	**345**	P	Pn	03 04 10.5	-2.0
	baz=2.9,SNR=8.3						
BLDU				S	Sn	03 04 44.9	-3.1
	baz=2.9						
KMBL	**Kambalda**	**4.19**	**61**	P	Pn	03 04 27.6	-2.2
	baz=4.2,SNR=7.2						
MORW	**Morawa**	**4.56**	**343**	P	Pn	03 04 33.0	-2.0
	baz=4.6						
MORW				S	Sn	03 05 24.1	-4.4
	baz=4.6						
MEEK	**Meekatharra**	**6.85**	**8**	P	Pn	03 05 04.0	-2.5
	baz=6.9						
MEEK				S	Sn	03 06 17.7	-7.1
	baz=6.9						
FORT	**Forrest**	**9.27**	**76**	P	Pn	03 05 36.0	-3.8
	baz=9.3,SNR=10						
WRKA	**Warakurna**	**12.55**	**51**	P	Pn	03 06 23.5	-1.2
	baz=13,SNR=4.9						
MULG	**Mulgathing**	**14.35**	**82**	P	Pn	03 06 44.0	-5.3
	baz=14,SNR=8.0						
MGCD	**Mangrove Creek**	**27.95**	**99**	P	P	03 09 12.1	-4.6
	baz=28,SNR=12						

IDC 31 03:22:16.7±8.8, 11°28S×166°07E, h56km±88km, mb3.8/4, mb1 3.9/5, mb1mx3.5/41, mbtmp4.0/5, ML3.6/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/26, Error ellipse: s-maj=84.7km s-min=33.9km az=150.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.73**	**178**	P	Pn	03 24 48.3	+0.4
	0.5nm,0.3s,baz=346,slow=19,SNR=5.7						
DZM				S	Sn	03 26 38.6	-8.0
	0.4nm,0.3s,baz=323,slow=22,SNR=2.7						
PMG	**Port Moresby**	**18.69**	**274**	LR	LR	03 32 56.9	
	comp=Z,80nm,18.7s,baz=24,slow=34						
H11S2	**WAKE ISLAND Hy**	**29.59**	**1**	T	T	03 59 21.4	
	baz=181,slow=76,SNR=2.3						
H11S3	**WAKE ISLAND Hy**	**29.59**	**1**	T	T	03 59 21.8	
	baz=181,slow=76,SNR=3.2						
H11S1	**WAKE ISLAND Hy**	**29.61**	**1**	T	T	03 59 20.9	
	baz=181,slow=76,SNR=6.0						
WRA	**Warramunga Arr**	**31.70**	**250**	P	P	03 28 34.8	-0.5
	0.5nm,0.5s,baz=83,slow=7.9,SNR=6.1						
ASAR	**Alice Springs**	**32.97**	**244**	P	P	03 28 46.3	-0.1
	1.9nm,0.8s,baz=74,slow=9.7,SNR=14						
ASAR				PcP	PcP	03 31 29.5	-0.1
	0.2nm,0.4s,baz=62,slow=2.7,SNR=5.6						
PETK	**Petropavlovsk-**	**64.53**	**354**	LR	LR	03 56 10.4	
	comp=Z,20nm,21.2s,baz=64,slow=32						
ILAR	**Eielson Array**	**83.64**	**18**	P	P	03 34 38.2	-0.6
	0.4nm,0.6s,baz=238,slow=5.2,SNR=6.0						
MKAR	**Makanchi Array**	**93.91**	**317**	P	P	03 35 29.1	+0.7
	1.0nm,0.6s,baz=85,slow=6.4,SNR=20						

*ATH **31** 03:27:31.4, 38°16N×20°38E, h17km±1km, ML2.6/6, Error ellipse: s-maj=2.1km s-min=1.1km az=259.0*
*THE **31** 03:27:32.1, 38°16N×20°42E, h14km, ML2.5/4, Error ellipse: s-maj=0.9km s-min=0.5km az=258.0*
ISC 31 03:27:31.7±1.2, 38°16N±0°03×20°40E±0°05, h15km±5km, n33, σ0°37/55, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.03**	**334**	P	**Pg**	**03 27 34.1**	**-0.3**
CHV1				S	**Sg**	**03 27 36.5**	**+0.3**
LXR1	**Lixouri, Cepha**	**0.05**	**39**	P	**Pg**	**03 27 34.7**	**+0.1**
LXR1				S	**Sg**	**03 27 36.8**	**+0.4**
KEF3	**Kipouria, Keph**	**0.06**	**319**	P	**Pg**	**03 27 33.8**	**-0.8**
KEF3				S	**Sg**	**03 27 36.7**	**+0.2**
KEF2	**Argostoli. Kep**	**0.07**	**86**	P	**Pg**	**03 27 34.7**	**-0.1**
ARG2	**Argostoli**	**0.07**	**76**	P	**Pg**	**03 27 34.7**	**0.0**
ARG2				S	**Sg**	**03 27 36.5**	**-0.2**
KEF4	**Livadi, Kephal**	**0.10**	**13**	P	**Pg**	**03 27 35.1**	**+0.1**
KEF4				S	**Sg**	**03 27 37.6**	**+0.4**
KEF1	**Kardakata, Kep**	**0.13**	**26**	P	**Pg**	**03 27 35.4**	**0.0**
KEF1				S	**Sg**	**03 27 37.9**	**+0.1**
VLS	**Valsamata**	**0.15**	**83**	P	**Pg**	**03 27 35.5**	**-0.2**
VLS				S	**Sg**	**03 27 38.1**	**-0.3**
VLS	**Valsamata**	**0.15**	**83**	P	**Pg**	**03 27 35.5**	**-0.2**
VSK1	**VASILIKIADES**	**0.28**	**28**	P	**Pg**	**03 27 37.8**	**+0.1**
VSK1				S	**Sg**	**03 27 42.0**	**+0.1**
KFL	**Anninata**	**0.31**	**99**	P	**Pg**	**03 27 38.1**	**-0.1**
KFL				S	**Sg**	**03 27 42.6**	**-0.1**
	3μm,0.3s						
KFL	**Anninata**	**0.31**	**99**	P	**Pg**	**03 27 38.1**	**-0.1**
KFL				S	**Sg**	**03 27 42.8**	**0.0**
KFL				AML	AML	03 27 43.6	
	comp=N,5464μm,0.3s						
KFL				AML	AML	03 27 43.8	
	comp=E,5027μm,0.2s						
FSK	**Fiskardo**	**0.33**	**24**	P	**Pg**	**03 27 38.5**	**0.0**
FSK				S	**Sg**	**03 27 43.4**	**+0.2**
	comp=E,1μm,0.3s						
FSK	**Fiskardo**	**0.33**	**24**	P	**Pg**	**03 27 38.5**	**0.0**
FSK				S	**Sg**	**03 27 43.4**	**+0.2**
FSK				AML	AML	03 27 43.6	
	comp=N,1643μm,0.2s						
FSK				AML	AML	03 27 44.1	
	comp=E,3427μm,0.1s						
VLMS	**Volimes, Zakyn**	**0.35**	**143**	P	**Pg**	**03 27 39.1**	**+0.2**
VLMS				S	**Sb**	**03 27 44.6**	**-0.4**
VLMS				AML	AML	03 27 45.7	
	comp=E,8104μm,0.2s						
VLMS				AML	AML	03 27 46.0	
	comp=N,4754μm,0.1s						
EVGI	**Lefkada island**	**0.50**	**24**	P	**Pg**	**03 27 41.5**	**-0.3**
EVGI				S	**Sb**	**03 27 49.0**	**-0.4**
EVGI	**Lefkada island**	**0.50**	**24**	P	**Pg**	**03 27 41.4**	**-0.3**
EVGI				S	**Sb**	**03 27 49.0**	**-0.4**
MGNA	**Meganis**	**0.58**	**32**	P	**Pg**	**03 27 42.9**	**-0.4**
KRI1	**kERI**	**0.60**	**146**	P	**Pg**	**03 27 43.0**	**-0.5**
KRI1				S	**Sb**	**03 27 53.0**	**+0.9**
LKD2	**Lefkada island**	**0.66**	**18**	P	**Pg**	**03 27 44.6**	**-0.1**
LKD2	**Lefkada island**	**0.66**	**18**	P	**Pg**	**03 27 44.5**	**-0.1**
AST1	**Astakos**	**0.67**	**55**	P	**Pg**	**03 27 44.0**	**-0.7**
AST1				S	**Sb**	**03 27 53.8**	**-0.2**
TSLK	**Tsoukalades, L**	**0.69**	**17**	P	**Pg**	**03 27 45.4**	**+0.1**
TSLK	**Tsoukalades, L**	**0.69**	**17**	P	**Pg**	**03 27 45.2**	**-0.1**
TSLK				S	**Sg**	**03 27 54.5**	**0.0**
PDO	**Prodromos**	**0.76**	**54**	P	**Pg**	**03 27 45.9**	**-0.5**
PDO				S	**Sb**	**03 27 57.6**	**+0.9**
PDO	**Prodromos**	**0.76**	**54**	P	**Pg**	**03 27 46.0**	**-0.5**
PDO				S	**Sb**	**03 27 56.8**	**+0.1**
PDO				AML	AML	03 28 04.9	
	comp=N,725μm,0.5s						
PDO				AML	AML	03 28 05.5	
	comp=E,514μm,0.5s						
RLS	**Riolos of Patr**	**0.85**	**97**	P	**Pb**	**03 27 47.7**	**-0.4**
RLS	**Riolos of Patr**	**0.85**	**97**	P	**Pb**	**03 27 47.6**	**-0.5**
PVO	**Paravola**	**1.00**	**62**	P	**Pb**	**03 27 50.6**	**-0.1**
PVO				S	**Sn**	**03 28 05.3**	**+0.4**
	comp=E,215nm,0.3s						
PVO	**Paravola**	**1.00**	**62**	P	**Pb**	**03 27 50.5**	**-0.1**
PVO				AML	AML	03 28 10.7	
	comp=E,375μm,0.4s						
PVO				AML	AML	03 28 12.3	
	comp=N,492μm,0.3s						
DRO	**Drossia**	**1.06**	**101**	P	**Pb**	**03 27 51.5**	**-0.1**
DRO				S	**Sn**	**03 28 07.3**	**+0.9**
	comp=N,158nm,0.3s						
DRO	**Drossia**	**1.06**	**101**	P	**Pb**	**03 27 51.6**	**-0.1**
DRO				AML	AML	03 28 14.0	
	comp=N,322μm,0.3s						
DRO				AML	AML	03 28 14.4	
	comp=E,301μm,0.3s						
ANX	**Ano Chora**	**1.27**	**70**	P	**Pb**	**03 27 55.3**	**-0.1**

WEL 31 03:31:53.0, 41°2S±0°7×174°8E±0°7, h32km, ML3.8/18, MLv3.6/63, Error ellipse: s-maj=0.0km s-min=0.0km az=125.2, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WEL	**Wellington**	**0.13**	**179**	P	Pb	03 31 59.3	+0.6
WEL				S	Sb	03 32 03.6	+0.8
CAW	**Cannon Point**	**0.23**	**77**	P	Pn	03 32 00.3	+0.1
BHW	**Baring Head**	**0.26**	**162**	P	Pn	03 32 00.5	-0.1
BHW				S	Sn	03 32 05.6	+0.1
KIW	**Kapiti Island**	**0.32**	**20**	P	Pn	03 32 01.3	-0.1
KIW				S	Sn	03 32 06.9	0.0
TCW	**Tory Channel**	**0.37**	**262**	P	Pn	03 32 02.0	-0.1
TCW				S	Sn	03 32 08.0	-0.3
MSWZ	**Moikau Station**	**0.45**	**125**	P	Pn	03 32 03.2	0.0
MSWZ				S	Sn	03 32 10.8	+0.6
OGWZ	**Otaki Gorge**	**0.46**	**42**	P	Pn	03 32 03.1	-0.2
OGWZ				S	Sn	03 32 10.2	-0.1
PAWZ	**Paruwai Farm**	**0.55**	**114**	P	Pn	03 32 04.5	-0.1
PAWZ				S	Sn	03 32 13.5	+0.8
PLWZ	**Palliser**	**0.55**	**138**	P	Pb	03 32 04.5	+0.1
PLWZ				S	Sn	03 32 13.5	+0.7
MTW	**Mount Morrison**	**0.56**	**90**	P	Pn	03 32 04.7	0.0
HOWZ	**Holdsworth Sta**	**0.62**	**66**	P	Pn	03 32 05.7	+0.1
TUWZ	**Tuamarina**	**0.68**	**246**	P	Pn	03 32 06.2	-0.1
CMWZ	**Cape Campbell**	**0.72**	**215**	P	Pb	03 32 08.1	+1.0
DUWZ	**D'Urville Isla**	**0.73**	**299**	P	Pb	03 32 07.6	+0.3
TRWZ	**Traveller**	**0.74**	**109**	P	Pn	03 32 06.9	-0.2
MPZ	**Mangatainoka R**	**0.79**	**51**	P	Pn	03 32 08.3	0.0
TMWZ	**Te Maipa**	**0.85**	**87**	P	Pn	03 32 08.6	-0.2
BSWZ	**Blackbirch Sta**	**0.87**	**230**	P	Pb	03 32 09.5	-0.1
TIWZ	**Tintock**	**0.93**	**66**	P	Pn	03 32 09.9	+0.1
OHWZ	**Ohakea**	**1.04**	**24**	P	Pb	03 32 13.1	+0.7
NNZ	**Nelson**	**1.05**	**266**	P	Pb	03 32 12.0	-0.5
POWZ	**Post Office Ro**	**1.08**	**45**	P	Pn	03 32 12.2	+0.4
PRWZ	**Pori Road**	**1.10**	**57**	P	Pn	03 32 12.3	+0.2
CPWZ	**Castlepoint**	**1.11**	**78**	P	Pn	03 32 12.8	+0.4
BFZ	**Birch Farm**	**1.22**	**68**	P	Pn	03 32 13.3	-0.5
DVHZ	**Dannevirke**	**1.37**	**52**	P	Pn	03 32 15.4	-0.4
WAZ	**Wanganui**	**1.41**	**7**	P	Pb	03 32 19.0	+0.3
TSZ	**Takapari Road**	**1.43**	**40**	P	Pn	03 32 16.8	+0.2
ANWZ	**Angora Road**	**1.47**	**62**	P	Pn	03 32 16.5	-0.7
THZ	**Tophouse**	**1.52**	**246**	P	Pn	03 32 18.4	+0.4
KHZ	**Kahutara**	**1.56**	**216**	P	Pn	03 32 18.2	-0.2
PNHZ	**Pukenui**	**1.66**	**42**	P	Pn	03 32 19.6	-0.2
QRZ	**Quartz Range**	**1.72**	**280**	P	Pn	03 32 22.0	+1.3
PREZ	**Palmer Road**	**1.87**	**345**	P	Pb	03 32 26.0	-0.5
MOVZ	**Moawhango**	**1.91**	**24**	P	Pn	03 32 23.9	+0.6
BHHZ	**Black Hill Sta**	**1.94**	**31**	P	Pn	03 32 24.2	+0.5
KHEZ	**Kahui Hut**	**1.95**	**343**	P	Pb	03 32 26.5	-1.4
KRHZ	**Kereru**	**1.95**	**40**	P	Pn	03 32 23.4	-0.5
TRVZ	**Turoa**	**1.95**	**18**	P	Pn	03 32 25.6	+1.5
PXZ	**Pawanui**	**1.96**	**55**	P	Pn	03 32 23.0	-0.8
WHVZ	**Whangaehu Hut**	**1.98**	**19**	P	Pn	03 32 26.0	+1.6
FWVZ	**Far West T-bar**	**2.00**	**18**	P	Pn	03 32 26.3	+1.7
TUVZ	**Tukino**	**2.01**	**20**	P	Pn	03 32 26.1	+1.3
NBEZ	**Newall Road No**	**2.01**	**340**	P	Pb	03 32 28.2	-0.6
VRZ	**Vera Road**	**2.03**	**360**	P	Pb	03 32 27.2	-2.0
PKE	**Pukeiti**	**2.05**	**343**	P	Pb	03 32 27.8	-1.7
NGZ	**Ngauruhoe**	**2.08**	**18**	P	Pb	03 32 29.4	-0.8
KAHZ	**Kahuranaki**	**2.11**	**50**	P	Pn	03 32 25.5	-0.6
WTVZ	**West Tongariro**	**2.14**	**17**	P	Pb	03 32 29.5	-1.6
KWHZ	**Kaweka Forest**	**2.15**	**37**	P	Pn	03 32 26.6	+0.1
TWVZ	**Taurewa**	**2.15**	**14**	P	Pb	03 32 29.4	-1.8
GVZ	**Greta Valley S**	**2.22**	**215**	P	Pn	03 32 26.8	-0.7
MCHZ	**McNeill Hill**	**2.26**	**41**	P	Pb	03 32 31.5	-1.7
KATZ	**Kakaramea**	**2.29**	**18**	P	Pb	03 32 32.5	-1.3
DSZ	**Denniston Nort**	**2.30**	**254**	P	Pn	03 32 29.5	+0.8
RITZ	**Rihia Road**	**2.33**	**21**	P	Pb	03 32 34.0	-0.4
BKZ	**Black Stump Fm**	**2.39**	**34**	P	Pn	03 32 30.4	+0.5
LTZ	**Lake Taylor**	**2.47**	**228**	P	Pn	03 32 30.5	-0.5
WATZ	**Wairara**	**2.56**	**17**	P	Pb	03 32 37.5	-0.7
NMHZ	**Naumai**	**2.59**	**38**	P	Pn	03 32 35.5	+2.8
HIZ	**Hauiti**	**2.64**	**2**	P	Pn	03 32 35.3	+1.9
MTHZ	**Maungataniwha**	**2.80**	**35**	P	Pb	03 32 43.0	+0.7
OKCZ	**Okains Bay**	**2.86**	**206**	P	Pn	03 32 34.7	-1.6
TLZ	**Tolley Road**	**2.89**	**12**	P	Pb	03 32 43.3	-0.5
INZ	**Inchbonnie**	**2.93**	**237**	P	Pn	03 32 37.0	-0.3
MQZ	**McQueen's Vall**	**2.99**	**211**	P	Pn	03 32 35.8	-2.3
AKCZ	**Akaroa Harbour**	**3.04**	**206**	P	Pn	03 32 37.1	-1.7
URZ	**Urewera**	**3.42**	**33**	P	Pn	03 32 45.2	+1.3
WVZ	**Waitaha Valley**	**3.56**	**236**	P	Pn	03 32 46.3	+0.4
RPZ	**Rata Peaks**	**3.75**	**226**	P	Pn	03 32 47.8	-0.8
MKAZ	**Moumakai**	**4.06**	**4**	P	Pn	03 32 56.2	+3.4
AWAZ	**Awhitu Peninsu**	**4.09**	**359**	P	Pn	03 32 55.2	+1.9
HAZ	**Te Kaha**	**4.12**	**35**	P	Pn	03 32 52.4	-1.3
WIAZ	**Waiheke Island**	**4.37**	**4**	P	Pn	03 33 00.2	+3.1
MBAZ	**Motutapu North**	**4.38**	**1**	P	Pn	03 33 00.5	+3.2
ODZ	**Otahua Downs**	**4.92**	**216**	P	Pn	03 33 02.5	-2.1
JCZ	**Jackson Bay**	**5.29**	**235**	P	Pn	03 33 09.1	-0.7
OUZ	**Omahuta**	**6.00**	**351**	P	Pn	03 33 22.4	+2.9
MLZ	**Mavora Lakes**	**6.42**	**227**	P	Pn	03 33 24.6	-0.7

*JMA **31** 04:32:19.7±0.1, 24°34N×122°41E, h73km±2km, M3.1*
*TAP **31** 04:32:20.6, 24°46N×122°44E, h65km, ML3.6, B*
ISC 31 04:32:20.7±1.2, 24°45N±0°03×122°45E±0°02, h68km±7km, n102, σ0°75/194, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	**0.31**	**289**	P	**Pn**	**04 32 32.2**	**+0.5**
	baz=288						
EOS1				*eS*	**Sn**	**04 32 41.4**	**+1.7**
	baz=288						
JYNG	**Yonagunijimaku**	**0.45**	**89**	P	**Pn**	**04 32 33.0**	**+0.1**
JYNG				S	**Sn**	**04 32 42.1**	**+0.3**
YOJ	**Yonaguni jima**	**0.51**	**88**	P	**Pn**	**04 32 33.4**	**-0.1**
	baz=88						
YOJ				S	**Sn**	**04 32 43.2**	**+0.4**
	baz=88						
YOJ	**Yonaguni jima**	**0.51**	**88**	P	**Pn**	**04 32 33.4**	**-0.1**
YOJ				S	**Sn**	**04 32 43.2**	**+0.4**
TWC	**Suao**	**0.57**	**287**	P	**Pn**	**04 32 33.9**	**-0.1**
	baz=285						
TWC				S	**Sn**	**04 32 43.8**	**0.0**
	baz=285						
NANB	**Nanao**	**0.64**	**268**	*eP*	**Pn**	**04 32 34.5**	**-0.2**
	baz=267						
NANB				*eS*	**Sn**	**04 32 45.3**	**+0.2**
	baz=267						
ENA	**Nanau**	**0.65**	**268**	P	**Pn**	**04 32 34.6**	**-0.2**
	baz=267						
ENA				*eS*	**Sn**	**04 32 45.6**	**+0.3**
	baz=267						
NTC	**Toucheng**	**0.69**	**306**	*eP*	**Pn**	**04 32 35.5**	**+0.2**
	baz=305						
NTC				*eS*	**Sn**	**04 32 46.1**	**-0.1**
	baz=305						
TWB1	**Santiao Chiao**	**0.70**	**323**	*eP*	**Pn**	**04 32 35.5**	**0.0**
	baz=323						
TWB1				*eS*	**Sn**	**04 32 46.6**	**+0.3**
	baz=323						
ILA	**Ilan**	**0.71**	**297**	*eS*	**Sn**	**04 32 47.4**	**+0.9**
	baz=296						
TWE	**Neicheng**	**0.76**	**291**	*eP*	**Pn**	**04 32 36.3**	**+0.2**
	baz=290						
TWE				*eS*	**Sn**	**04 32 47.8**	**+0.2**
	baz=290						
TIPB	**Shuangxi**	**0.77**	**313**	*eP*	**Pn**	**04 32 36.3**	**0.0**
	baz=312						
TIPB				*eS*	**Sn**	**04 32 47.8**	**-0.1**
	baz=312						
SLBB	**Yuanshan**	**0.80**	**293**	*eP*	**Pn**	**04 32 37.0**	**+0.3**
	baz=292						
SLBB				*eS*	**Sn**	**04 32 48.7**	**+0.2**
	baz=292						
NACB	**Ninganchiao**	**0.82**	**251**	*eP*	**Pn**	**04 32 36.1**	**-0.8**
	baz=249						
NACB				*eS*	**Sn**	**04 32 47.8**	**-1.2**
	baz=249						
ENTT	**Nioudou**	**0.83**	**284**	P	**Pn**	**04 32 37.3**	**+0.4**
	baz=282						
ENTT				*eS*	**Sn**	**04 32 49.7**	**+0.7**
	baz=282						
TWD	**Chiawan**	**0.86**	**245**	*eP*	**Pn**	**04 32 36.4**	**-0.9**
	baz=243						
TWD				*eS*	**Sn**	**04 32 48.6**	**-1.1**
	baz=243						
NDT	**Datong Townshi**	**0.87**	**280**	P	**Pn**	**04 32 37.9**	**+0.4**
	baz=279						
NDT				*eS*	**Sn**	**04 32 50.4**	**+0.5**
	baz=279						
NWF	**Wu-fen Shan**	**0.87**	**316**	*eP*	**Pn**	**04 32 37.6**	**0.0**
	baz=315						
NWF				*eS*	**Sn**	**04 32 50.2**	**+0.2**
	baz=315						
WFSB	**Wu-fen Shan**	**0.87**	**316**	P	**Pn**	**04 32 37.7**	**+0.3**
	baz=315						
WFSB				*eS*	**Sn**	**04 32 50.1**	**+0.3**
	baz=315						
HWA	**Hwalien**	**0.90**	**239**	*eS*	**Sn**	**04 32 50.6**	**0.0**
	baz=237						
ETLH	**Xiulin Townshi**	**0.91**	**255**	*eP*	**Pn**	**04 32 37.5**	**-0.7**
	baz=254						
ETLH				*eS*	**Sn**	**04 32 49.9**	**-1.1**
	baz=254						
NWLT	**Wulai**	**0.92**	**291**	*eP*	**Pn**	**04 32 38.8**	**+0.7**
	baz=290						
NWLT				*eS*	**Sn**	**04 32 51.9**	**+0.8**
	baz=290						
ENLB	**Shoufeng**	**0.94**	**235**	*eP*	**Pn**	**04 32 36.8**	**-1.6**
	baz=234						
ENLB				*eS*	**Sn**	**04 32 49.8**	**-1.7**
	baz=234						
TWA	**Mucha**	**0.95**	**304**	*eP*	**Pn**	**04 32 37.0**	**-1.5**
	baz=303						
TWA				*eS*	**Sn**	**04 32 51.4**	**-0.2**
	baz=303						
NNSH	**Datong**	**0.97**	**269**	*eP*	**Pn**	**04 32 38.5**	**-0.3**
	baz=268						
NNSH				*eS*	**Sn**	**04 32 51.5**	**-0.8**
	baz=268						
NNSB	**Datong**	**0.97**	**269**	*eP*	**Pn**	**04 32 38.4**	**-0.4**
	baz=268						
NNSB				*eS*	**Sn**	**04 32 51.8**	**-0.5**
	baz=268						
NNS	**Nan Shan**	**0.98**	**270**	*eP*	**Pn**	**04 32 39.1**	**+0.2**
	baz=268						
NNS				*eS*	**Sn**	**04 32 52.1**	**-0.4**
	baz=

IRIF	**Iriomote-Funau**	**1.17**	**95**	P	**Pn**	**04 32 40.9**	**-0.4**
IRIF				*e*S	**Sn**	**04 32 56.2**	**-0.5**
TDCB	**Techi**	**1.19**	**261**	P	**Pn**	**04 32 41.9**	**+0.2**
	baz=260						
TDCB				*e*S	**Sn**	**04 32 56.6**	**-0.8**
	baz=260						
CHGB	**Renai**	**1.23**	**252**	*e*P	**Pn**	**04 32 42.0**	**-0.2**
	baz=251						
CHGB				*e*S	**Sn**	**04 32 57.0**	**-1.2**
	baz=251						
NCU	**National Centr**	**1.26**	**295**	P	**Pn**	**04 32 42.8**	**+0.4**
	baz=294						
NCU				*e*S	**Sn**	**04 32 59.8**	**+1.1**
	baz=294						
NCUH	**Zhongli**	**1.26**	**295**	P	**Pn**	**04 32 42.9**	**+0.5**
	baz=294						
NCUH				*e*S	**Sn**	**04 32 59.4**	**+0.6**
	baz=294						
OWD	**Renai**	**1.26**	**247**	*e*P	**Pn**	**04 32 41.9**	**-0.7**
	baz=246						
OWD				*e*S	**Sn**	**04 32 57.2**	**-1.8**
	baz=246						
HATJ	**Hateruma jima**	**1.30**	**107**	P	**Pn**	**04 32 43.1**	**+0.2**
HATJ				*e*S	**Sn**	**04 32 59.6**	**0.0**
LIOB	**Emei**	**1.32**	**279**	P	**Pn**	**04 32 43.7**	**+0.5**
	baz=278						
LIOB				*e*S	**Sn**	**04 33 00.9**	**+0.8**
	baz=278						
NSTT	**Nanjuang**	**1.33**	**278**	P	**Pn**	**04 32 43.8**	**+0.4**
	baz=277						
NSTT				*e*S	**Sn**	**04 33 00.8**	**+0.4**
	baz=277						
HGSD	**Ruisui**	**1.34**	**225**	*e*P	**Pn**	**04 32 42.1**	**-1.3**
	baz=224						
HGSD				*e*S	**Sn**	**04 33 01.2**	**+0.8**
	baz=224						
SBCB	**Hsinchu**	**1.38**	**285**	*e*P	**Pn**	**04 32 44.5**	**+0.5**
	baz=284						
SBCB				*e*S	**Sn**	**04 33 01.8**	**+0.3**
	baz=284						
VWDT	**VWDT**	**1.38**	**240**	*e*P	**Pn**	**04 32 43.6**	**-0.4**
	baz=239						
VWDT				*e*S	**Sn**	**04 33 00.3**	**-1.2**
	baz=239						
WHP	**Taichung City**	**1.38**	**263**	P	**Pn**	**04 32 44.9**	**+0.8**
	baz=262						
WHP				*e*S	**Sn**	**04 33 02.0**	**+0.3**
	baz=262						
NHW	**Xinwu Township**	**1.39**	**294**	*e*P	**Pn**	**04 32 44.4**	**+0.3**
	baz=293						
NHW				*e*S	**Sn**	**04 33 02.2**	**+0.5**
	baz=293						
EHY	**Hungye**	**1.39**	**228**	*e*P	**Pn**	**04 32 42.6**	**-1.6**
	baz=226						
EHY				*e*S	**Sn**	**04 33 02.1**	**+0.3**
	baz=226						
JKRS	**Kuro-shima**	**1.44**	**98**	P	**Pn**	**04 32 44.9**	**+0.1**
JKRS				*e*S	**Sn**	**04 33 03.0**	**+0.1**
DPDB	**Guoxing**	**1.45**	**254**	*e*P	**Pn**	**04 32 45.1**	**+0.1**
	baz=253						
DPDB				*e*S	**Sn**	**04 33 03.6**	**+0.3**
	baz=253						
NMLH	**Miaoli**	**1.51**	**274**	P	**Pn**	**04 32 46.3**	**+0.5**
	baz=273						
NMLH				*e*S	**Sn**	**04 33 05.3**	**+0.7**
	baz=273						
SSLB	**Suanglung**	**1.52**	**245**	*e*P	**Pn**	**04 32 46.9**	**+1.0**
	baz=243						
SSLB				*e*S	**Sn**	**04 33 03.8**	**-1.0**
	baz=243						
SMLT	**Sun Moon Lake**	**1.52**	**249**	*e*P	**Pn**	**04 32 46.7**	**+0.7**
	baz=247						
SMLT				*e*S	**Sn**	**04 33 04.2**	**-0.9**
	baz=247						
TWQ1	**Liyutan**	**1.53**	**267**	*e*P	**Pn**	**04 32 46.7**	**+0.7**
	baz=265						
TWQ1				*e*S	**Sn**	**04 33 05.5**	**+0.4**
	baz=265						
NSY	**Sanyi**	**1.54**	**269**	P	**Pn**	**04 32 46.7**	**+0.6**
	baz=268						
NSY				*e*S	**Sn**	**04 33 06.1**	**+0.8**
	baz=268						
JIJ	**Ishigaki jima**	**1.55**	**93**	P	**Pn**	**04 32 45.7**	**-0.5**
JIJ				S	**Sn**	**04 33 04.4**	**-1.1**
TYC	**Yuchr**	**1.55**	**250**	*e*P	**Pn**	**04 32 46.6**	**+0.3**
	baz=249						
TYC				*e*S	**Sn**	**04 33 06.0**	**+0.4**
	baz=249						
PTSB	**Yuanli**	**1.59**	**270**	*e*P	**Pn**	**04 32 47.5**	**+0.7**
	baz=269						
PTSB				*e*S	**Sn**	**04 33 07.3**	**+0.8**
	baz=269						
FULB	**Fuli**	**1.63**	**221**	*e*P	**Pn**	**04 32 48.0**	**+0.6**
	baz=219						
WHYT	**Xinyi Township**	**1.64**	**243**	*e*P	**Pn**	**04 32 48.1**	**+0.6**
	baz=242						
WHYT				*e*S	**Sn**	**04 33 08.4**	**+0.6**
	baz=242						
TCU	**Taichung**	**1.65**	**260**	P	**Pn**	**04 32 48.2**	**+0.7**
	baz=259						
TCU				*e*S	**Sn**	**04 33 09.6**	**+1.8**
	baz=259						
WDJ	**Dajia District**	**1.65**	**267**	P	**Pn**	**04 32 47.9**	**+0.3**
	baz=266						
WDJ				*e*S	**Sn**	**04 33 08.4**	**+0.4**
	baz=266						
YUS	**Yu-Shan**	**1.67**	**235**	*e*P	**Pn**	**04 32 47.7**	**-0.6**
	baz=234						
YUS				*e*S	**Sn**	**04 33 07.2**	**-2.0**
	baz=234						
WJS	**Zhushan**	**1.69**	**249**	P	**Pn**	**04 32 48.9**	**+0.7**
	baz=247						
WJS				*e*S	**Sn**	**04 33 09.6**	**+0.7**
	baz=247						
JISG	**Ishigakijimahi**	**1.70**	**85**	P	**Pn**	**04 32 48.0**	**-0.3**
JISG				S	**Sn**	**04 33 08.9**	**-0.3**
WNT	**Mingjian**	**1.71**	**251**	*e*P	**Pn**	**04 32 49.1**	**+0.8**
	baz=250						
WNT				*e*S	**Sn**	**04 33 10.8**	**+1.4**
	baz=250						
WCHH	**Zhanghua**	**1.76**	**258**	*e*P	**Pn**	**04 32 49.2**	**+0.1**
	baz=257						
WCHH				*e*S	**Sn**	**04 33 11.2**	**+0.6**
	baz=257						
ALS	**Alishan**	**1.77**	**239**	*e*P	**Pn**	**04 32 49.5**	**+0.1**
	baz=237						
ALS				*e*S	**Sn**	**04 33 11.3**	**0.0**
	baz=237						
CHN5	**Tsauling**	**1.83**	**243**	*e*P	**Pn**	**04 32 50.6**	**+0.6**
	baz=242						
CHN5				*e*S	**Sn**	**04 33 12.9**	**+0.5**
	baz=242						
WGK	**Gukeng**	**1.88**	**247**	*e*P	**Pn**	**04 32 51.7**	**+1.0**
	baz=245						
WGK				*e*S	**Sn**	**04 33 15.1**	**+1.5**
	baz=245						
WDLH	**Douliu**	**1.90**	**247**	*e*P	**Pn**	**04 32 51.9**	**+0.9**
	baz=246						
WDLH				*e*S	**Sn**	**04 33 15.1**	**+1.0**
	baz=246						
RLNB	**Erlin**	**1.99**	**254**	*e*P	**Pn**	**04 32 53.1**	**+1.0**
	baz=253						
RLNB				*e*S	**Sn**	**04 33 16.8**	**+0.8**
	baz=253						
STYT	**Tauyuan**	**2.01**	**231**	*e*P	**Pn**	**04 32 52.8**	**+0.3**
	baz=229						
STYT				*e*S	**Sn**	**04 33 16.8**	**+0.2**
	baz=229						
CHN4	**Tsaushan**	**2.02**	**238**	*e*P	**Pn**	**04 32 53.3**	**+0.7**
	baz=236						
CHN4				*e*S	**Sn**	**04 33 17.7**	**+0.8**
	baz=236						
TPUB	**Ta-pu**	**2.02**	**236**	*e*P	**Pn**	**04 32 53.1**	**+0.5**
	baz=235						
TPUB				*e*S	**Sn**	**04 33 17.2**	**+0.3**
	baz=235						
JTJ	**Tarama**	**2.06**	**84**	P	**Pn**	**04 32 53.2**	**+0.1**
JTJ				S	**Sn**	**04 33 18.9**	**+1.1**
CHY	**Chiayi**	**2.08**	**243**	*e*P	**Pn**	**04 32 54.2**	**+0.9**
	baz=242						
CHY				*e*S	**Sn**	**04 33 19.0**	**+0.7**
	baz=242						
TWK	**Hsinying**	**2.15**	**237**	*e*P	**Pn**	**04 32 54.5**	**+0.1**
	baz=236						
TWK				*e*S	**Sn**	**04 33 20.2**	**+0.2**
	baz=236						
CHN1	**Nanshi**	**2.16**	**235**	*e*P	**Pn**	**04 32 55.4**	**+0.9**
	baz=234						
CHN1				*e*S	**Sn**	**04 33 22.2**	**+1.9**
	baz=234						
SNST	**Tainan City**	**2.17**	**236**	*e*P	**Pn**	**04 32 55.2**	**+0.7**
	baz=235						
SNST				*e*S	**Sn**	**04 33 21.3**	**+1.0**
	baz=235						
SGST	**Jiashian**	**2.18**	**232**	*e*P	**Pn**	**04 32 55.5**	**+0.7**
	baz=231						
SGST				*e*S	**Sn**	**04 33 21.7**	**+0.8**
	baz=231						
SLGT	**Liugui**	**2.20**	**229**	P	**Pn**	**04 32 55.6**	**+0.7**
	baz=228						
SLGT				S	**Sn**	**04 33 21.8**	**+0.6**
	baz=228						
SSD	**Sandimen**	**2.38**	**225**	P	**Pn**	**04 32 58.3**	**+0.9**
	baz=224						
SSD				*e*S	**Sn**	**04 33 26.6**	**+1.1**
	baz=224						
MASBT	**Mashibuluo**	**2.47**	**223**	*e*P	**Pn**	**04 32 59.8**	**+1.1**
	baz=222						
MASBT				*e*S	**Sn**	**04 33 28.3**	**+0.5**
	baz=222						
EAST	**Anshuo**	**2.53**	**216**	*e*P	**Pn**	**04 33 00.4**	**+0.9**
	baz=215						
JIKM	**Ikemajima**	**2.59**	**79**	P	**Pn**	**04 33 00.4**	**+0.1**
JIKM				*e*S	**Sn**	**04 33 30.9**	**+0.2**
SCZT	**Fangliau**	**2.66**	**219**	*e*P	**Pn**	**04 33 02.3**	**+1.0**
	baz=218						
PHUB	**P'eng-hu**	**2.79**	**251**	*e*P	**Pn**	**04 33 01.9**	**-1.1**
	baz=250						
PHUB				*e*S	**Sn**	**04 33 33.7**	**-1.9**
	baz=250						
PTMZ	**Houxiangcun**	**3.08**	**282**	*e*P	**Pn**	**04 33 06.2**	**-0.8**
	baz=280						
XPSS	**Dashiqiu**	**3.20**	**321**	*e*P	**Pn**	**04 33 07.8**	**-0.9**
	baz=320						
LYJJ	**Jianjiangzhen**	**3.21**	**311**	*e*P	**Pn**	**04 33 08.6**	**-0.1**
	baz=310						
MHZQ	**Yeshan**	**3.50**	**299**	*e*P	**Pn**	**04 33 12.0**	**-0.8**
	baz=297						
MHZQ				*e*S	**Sn**	**04 33 52.0**	**-1.0**
	baz=297						
AXDP	**Jialang**	**4.10**	**277**	*e*P	**Pn**	**04 33 20.1**	**-0.8**
	baz=276						
AXDP				*e*S	**Sn**	**04 34 05.4**	**-2.2**
	baz=276						

IGIL ***31*** *04:54:57.5, 37.˚28N× 13.˚28W, h0km, ML2.5*
MDD ***31*** *04:54:58.1±1.6, 37.˚05N× 13.˚56W, h60km, mb4.0/17, Error ellipse: s-maj=13.6km s-min=12.2km az=49.0, PRXIMO*
INMG ***31*** *04:54:59.3±1.1, 36.˚97N× 13.˚69W, h10km, ML2.5, Error ellipse: s-maj=4.9km s-min=2.2km az=126.0*

ISC 31 04:54:51.1±1.7, 37.˚03N±0.˚06× 13.˚60W±0.˚08, h10km, n66, σ3.˚24/127, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**3.82**	**87**	*e*Pn	**Pn**		**04 55 53.6**	**+3.7**
PFVI				*e*Sn	**Sn**		**04 56 33.5**	**-1.3**
PFVI				A	A		04 56 35.3	
	8.1nm,0.3s							
PFVI	**Vila Bisbo**	**3.82**	**87**	P	**Pn**		**04 55 53.2**	**+3.3**
	3.0nm,0.1s,SNR=7.9							
PFVI				S	**Sn**		**04 56 34.4**	**-0.4**
	12nm,0.1s,SNR=7.9							
PMAFR	**Mafra**	**3.91**	**59**	*e*Pn	**Pn**		**04 55 55.1**	**+3.9**
PMAFR				*e*Sn	**Sn**		**04 56 36.3**	**-0.9**
PMAFR				A	A		04 56 39.7	
	16nm,0.6s							
PMAFR	**Mafra**	**3.91**	**59**	P	**Pn**		**04 55 54.5**	**+3.2**
	1.9nm,0.1s,SNR=7.9							
PMAFR				S	**Sn**		**04 56 35.4**	**-1.8**
	12nm,0.2s,SNR=7.9							
PTEO	**Sao Teotonio**	**3.92**	**81**	*e*Pn	**Pn**		**04 55 54.9**	**+3.6**
PTEO				*e*Sn	**Sn**		**04 56 35.6**	**-1.8**
PTEO				A	A		04 56 40.0	
	7.5nm,0.5s							
PTEO	**Sao Teotonio**	**3.92**	**81**	P	**Pn**		**04 55 54.9**	**+3.6**
PTEO				S	**Sn**		**04 56 35.6**	**-1.8**
	3.8nm,0.5s							
MORF	**Marmelete**	**3.96**	**85**	*e*P	**Pn**		**04 55 53.9**	**+2.0**
MORF				*e*S	**Sn**		**04 56 35.3**	**-3.2**
MORF				AML	AML		04 56 40.4	
	comp=N,12nm,0.2s							
MORF	**Marmelete**	**3.96**	**85**	*e*Pn	**Pn**		**04 55 55.3**	**+3.4**
MORF				*e*Sn	**Sn**		**04 56 37.4**	**-1.1**
MORF				A	A		04 56 43.3	
	comp=N,10nm,0.2s							
MORF	**Marmelete**	**3.96**	**85**	P	**Pn**		**04 55 55.3**	**+3.4**
MORF				S	**Sn**		**04 56 37.4**	**-1.1**
	comp=N,10nm,0.2s							
PNCL	**Nicolau / Gran**	**4.17**	**73**	*e*Pn	**Pn**		**04 55 58.0**	**+3.3**
PNCL				*e*Sn	**Sn**		**04 56 41.7**	**-1.8**
PNCL				A	A		04 56 45.9	
	comp=N,4.5nm,0.3s							
PNCL	**Nicolau / Gran**	**4.17**	**73**	P	**Pn**		**04 55 58.0**	**+3.3**
PNCL				S	**Sn**		**04 56 41.7**	**-1.8**
	comp=N,4.5nm,0.3s							
PCVE	**Castro Verde**	**4.47**	**81**	*e*Pn	**Pn**		**04 56 02.3**	**+3.4**
PCVE				*e*Sn	**Sn**		**04 56 49.0**	**-2.0**
PCVE				A	A		04 56 57.1	
	comp=N,3.5nm,0.3s							
PCVE	**Castro Verde**	**4.47**	**81**	P	**Pn**		**04 56 02.3**	**+3.4**
PCVE				S	**Sn**		**04 56 49.0**	**-2.0**
	comp=N,3.5nm,0.3s							
PBDV	**Barranco-do-Ve**	**4.53**	**86**	*e*Pn	**Pn**		**04 56 03.5**	**+3.7**
PBDV				*e*Sn	**Sn**		**04 56 52.2**	**-0.4**
PBDV				A	A		04 57 07.9	
	comp=N,4.3nm,1.0s							
PBDV	**Barranco-do-Ve**	**4.53**	**86**	P	**Pn**		**04 56 03.5**	**+3.7**
PBDV				S	**Sn**		**04 56 52.2**	**-0.4**
	comp=N,4.3nm,1.0s							
PMPST	**Porto Santo, M**	**4.54**	**210**	*e*Sn	**Sn**		**04 56 46.3**	**-6.3**
PMPS	**Porto Santo**	**4.55**	**210**	*e*Sn	**Sn**		**04 56 47.1**	**-5.9**
PBEJ	**Beja**	**4.66**	**76**	*e*Pn	**Pn**		**04 56 05.1**	**+3.6**
PBEJ				*e*Sn	**Sn**		**04 56 53.7**	**-2.0**
PBEJ				A	A		04 56 58.0	
	comp=N,3.1nm,0.1s							
PBEJ	**Beja**	**4.66**	**76**	P	**Pn**		**04 56 05.1**	**+3.6**
PBEJ				S	**Sn**		**04 56 53.7**	**-2.0**
	comp=N,1.6nm,0.1s							
EVO	**Evora**	**4.67**	**70**	*e*Pn	**Pn**		**04 56 05.0**	**+3.4**
EVO				*e*Sn	**Sn**		**04 56 54.0**	**-1.9**
EVO				A	A		04 56 57.2	
	comp=N,6.3nm,0.1s							
EVO	**Evora**	**4.67**	**70**	P	**Pn**		**04 56 05.0**	**+3.4**
EVO				S	**Sn**		**04 56 54.0**	**-1.9**
	comp=N,6.3nm,0.1s							
PMTG	**Montargil**	**4.70**	**63**	*e*Pn	**Pn**		**04 56 05.4**	**+3.3**
PMTG				*e*Sn	**Sn**		**04 56 54.7**	**-2.0**
PMTG				A	A		04 56 57.6	
	comp=N,3.8nm,0.6s							
PMTG	**Montargil**	**4.70**	**63**	P	**Pn**		**04 56 05.4**	**+3.3**
PMTG				S	**Sn**		**04 56 54.7**	**-2.0**
	comp=N,3.8nm,0.6s							
PVAQ	**Vaqueiros**	**4.71**	**84**	*e*Pn	**Pn**		**04 56 06.0**	**+3.8**
PVAQ				*e*Sn	**Sn**		**04 56 54.3**	**-2.5**
PVAQ				A	A		04 57 00.0	
	comp=N,6.3nm,0.3s							
PVAQ	**Vaqueiros**	**4.71**	**84**	P	**Pn**		**04 56 06.0**	**+3.8**
PVAQ				S	**Sn**		**04 56 54.3**	**-2.5**
	comp=N,6.3nm,0.3s							
PTOM	**Tomar**	**4.83**	**56**	*e*Pn	**Pn**		**04 56 07.6**	**+3.8**
PTOM				*e*Sn	**Sn**		**04 56 58.8**	**-1.0**
PTOM				A	A		04 57 00.9	
	comp=N,4.8nm,0.4s							
PTOM	**Tomar**	**4.83**	**56**	P	**Pn**		**04 56 07.6**	**+3.8**
PTOM				S	**Sn**		**04 56 58.8**	**-1.0**
	comp=N,2.4nm,0.4s							
EGRO	**El Granado**	**4.90**	**82**	P	**Pn**		**04 56 08.3**	**+3.5**
	comp=N,6.0nm,0.8s,SNR=4.7							
EGRO				S	**Sn**		**04 56 58.1**	**-3.5**
	comp=N,3.2nm,0.1s							
PCAS	**Casmilo, Conde**	**5.01**	**51**	*e*Pn	**Pn**		**04 56 09.5**	**+3.2**
PCAS				*e*Sn	**Sn**		**04 57 03.5**	**-0.7**
PCAS	**Casmilo, Conde**	**5.01**	**51**	P	**Pn**		**04 56 09.5**	**+3.2**
PCAS				S	**Sn**		**04 57 03.5**	**-0.7**
PMAR	**Madeira**	**5.09**	**213**	*e*Sn	**Sn**		**04 57 00.3**	**-6.1**
PESTR	**Estremoz**	**5.09**	**67**	*e*Pn	**Pn**		**04 56 11.3**	**+3.9**
PESTR				*e*Sn	**Sn**		**04 57 04.6**	**-1.7**
PESTR				A	A		04 57 07.7	
	comp=N,3.3nm,0.4s							
PMRV	**Marv??o**	**5.44**	**62**	*e*Pn	**Pn**		**04 56 15.5**	**+3.3**
PMRV				*e*Sn	**Sn**		**04 57 12.7**	**-2.2**
PMRV				A	A		04 57 19.2	
	comp=N,2.5nm,0.7s							
PMRV	**Marv??o**	**5.44**	**62**	P	**Pn**		**04 56 15.5**	**+3.3**
PMRV				S	**Sn**		**04 57 12.7**	**-2.2**
	comp=N,2.5nm,0.7s							
EBAD	**Badajoz**	**5.49**	**70**	P	**Pn**		**04 56 15.6**	**+2.8**
	comp=N,4.7nm,0.9s,SNR=7.9							
EBAD				S	**Sn**		**04 57 12.4**	**-3.6**
	comp=N,1.9nm,0.1s,SNR=7.9							
EMIN	**Mina Concepcio**	**5.56**	**80**	P	**Pn**		**04 56 16.6**	**+2.7**
	comp=N,6.1nm,0.8s,SNR=7.9							
EMIN				S	**Sn**		**04 57 15.3**	**-2.6**
	comp=N,2.1nm,0.1s,SNR=7.9							
PCBR	**Castelo Branco**	**5.56**	**58**	*e*Pn	**Pn**		**04 56 17.3**	**+3.4**
PCBR				*e*Sn	**Sn**		**04 57 15.9**	**-2.0**
PCBR				A	A		04 57 21.6	
	comp=N,1.5nm,0.4s							
PCBR	**Castelo Branco**	**5.56**	**58**	P	**Pn**		**04 56 17.3**	**+3.4**
PCBR				S	**Sn**		**04 57 15.9**	**-2.0**
	comp=N,0.8nm,0.4s							
PVIS	**Viseu**	**5.77**	**49**	*e*Pn	**Pn**		**04 56 20.1**	**+3.3**
PVIS				*e*Sn	**Sn**		**04 57 21.2**	**-1.9**
PVIS				A	A		04 57 23.3	
	comp=N,2.0nm,0.2s							
PVIS	**Viseu**	**5.77**	**49**	P	**Pn**		**04 56 20.1**	**+3.3**
PVIS				S	**Sn**		**04 57 21.2**	**-1.9**
	comp=N,1.0nm,0.2s							
MTE	**Manteigas**	**5.81**	**53**	*e*Pn	**Pn**		**04 56 20.4**	**+3.1**
MTE				*e*Sn	**Sn**		**04 57 22.8**	**-1.2**
MTE	**Manteigas**	**5.81**	**53**	P	**Pn**		**04 56 20.4**	**+3.1**
MTE				S	**Sn**		**04 57 22.8**	**-1.2**
ESPR	**Espera**	**6.20**	**89**	P	**Pn**		**04 56 26.9**	**+4.2**
	comp=N,1.9nm,0.5s,SNR=4.0							
ESPR				S	**Sn**		**04 57 31.4**	**-2.2**
	comp=N,12nm,0.5s,SNR=7.9							
PVRL	**Vila Real**	**6.23**	**45**	*e*Pn	**Pn**		**04 56 25.6**	**+2.5**
PVRL				*e*Sn	**Sn**		**04 57 31.0**	**-3.4**
PVRL	**Vila Real**	**6.23**	**45**	P	**Pn**		**04 56 25.6**	**+2.5**
PVRL				S	**Sn**		**04 57 31.0**	**-3.4**
POLO	**Lamas de Olo**	**6.25**	**44**	*e*Pn	**Pn**		**04 56 26.5**	**+3.0**
POLO				*e*Sn	**Sn**		**04 57 32.3**	**-2.7**
POLO	**Lamas de Olo**	**6.25**	**44**	P	**Pn**		**04 56 26.5**	**+3.0**
POLO				S	**Sn**		**04 57 32.3**	**-2.7**
EZAM	**Zamans**	**6.36**	**35**	P	**Pn**		**04 56 27.5**	**+2.7**
	comp=N,24nm,1.0s,SNR=7.9							
EZAM				S	**Sn**		**04 57 33.9**	**-3.7**
	comp=N,13nm,4.2s,SNR=7.9							
PCAB	**Cabril**	**6.36**	**41**	*e*Pn	**Pn**		**04 56 28.2**	**+3.3**
PCAB				*e*Sn	**Sn**		**04 57 34.3**	**-3.3**
PCAB	**Cabril**	**6.36**	**41**	P	**Pn**		**04 56 28.2**	**+3.3**
PCAB				S	**Sn**		**04 57 34.3**	**-3.3**
ELOB	**Lobios**	**6.46**	**40**	P	**Pn**		**04 56 29.0**	**+2.8**
	comp=N,6.5nm,0.7s,SNR=7.9							
ELOB				S	**Sn**		**04 57 37.1**	**-2.9**
	comp=N,2.4nm,0.1s,SNR=7.9							
MVO	**Moncorvo**	**6.57**	**49**	*e*Pn	**Pn**		**04 56 30.5**	**+2.8**
MVO				*e*Sn	**Sn**		**04 57 39.3**	**-3.4**
MVO	**Moncorvo**	**6.57**	**49**	P	**Pn**		**04 56 30.3**	**+2.6**
	comp=N,2.1nm,0.5s,SNR=7.9							
MVO				S	**Sn**		**04 57 39.0**	**-3.7**
	comp=N,3.0nm,0.3s,SNR=7.9							
ECAB	**El Cabril**	**6.58**	**78**	P	**Pn**		**04 56 31.5**	**+3.6**
	comp=N,2.5nm,0.4s,SNR=7.9							
ECAB				S	**Sn**		**04 57 39.2**	**-3.9**
	comp=N,2.2nm,0.3s,SNR=7.9							
EPLA	**Plasencia**	**6.62**	**61**	P	**Pn**		**04 56 31.7**	**+3.2**
	comp=N,1.6nm,0.4s,SNR=7.9							
EPLA				S	**Sn**		**04 57 40.5**	**-3.6**
	comp=N,1.2nm,0.2s,SNR=7.9							
PBRG	**Braganca**	**7.13**	**46**	*e*Pn	**Pn**		**04 56 38.8**	**+3.3**
PBRG				*e*Sn	**Sn**		**04 57 53.2**	**-3.4**
PBRG	**Braganca**	**7.13**	**46**	P	**Pn**		**04 56 38.8**	**+3.3**
PBRG				S	**Sn**		**04 57 53.2**	**-3.4**
EAGO	**Agolada(Pontev**	**7.15**	**35**	P	**Pn**		**04 56 38.8**	**+3.1**
	comp=N,7.0nm,0.4s,SNR=7.9							
EAGO				S	**Sn**		**04 57 53.6**	**-3.3**
	comp=N,1.4nm,0.1s,SNR=7.9							
ECAL	**Calabor**	**7.22**	**45**	S	**Sn**		**04 57 54.8**	**-4.0**
	comp=N,1.3nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**7.25**	**78**	P	**Pn**		**04 56 40.6**	**+3.5**
	comp=N,2.3nm,0.6s,SNR=7.9							
EADA				S	**Sn**		**04 57 55.2**	**-4.3**
	comp=N,1.1nm,0.1s,SNR=7.9							
PAB	**San Pablo**	**7.70**	**68**	P	**Pn**		**04 56 46.1**	**+2.8**
	comp=N,0.9nm,0.3s,SNR=7.9							
PAB				S	**Sn**		**04 58 05.8**	**-4.7**
	comp=N,0.2nm,0.2s,SNR=7.9							
EPON	**Pontenova**	**7.99**	**36**	P	**Pn**		**04 56 51.3**	**+4.0**
	comp=N,8.9nm,0.9s,SNR=7.9							
EPON				S	**Sn**		**04 58 13.1**	**-4.5**
	comp=N,30nm,14.8s,SNR=7.9							
ESDC	**Sonseca Array**	**8.02**	**68**	P	**Pn**		**04 56 50.6**	**+3.0**
	comp=N,1.1nm,0.2s,baz=255,slow=13,SNR=10.0							
ESDC				S	**Sn**		**04 58 13.4**	**-5.0**
	SNR=7.9							
GUD	**Guadarrama**	**8.21**	**61**	P	**Pn**		**04 56 53.7**	**+3.4**
	comp=N,2.3nm,0.5s,SNR=7.9							
GUD				S	**Sn**		**04 58 18.6**	**-4.5**
	comp=N,6.7nm,10.5s,SNR=7.9							
EQES	**Quesada**	**8.41**	**82**	S	**Sn**		**04 58 22.9**	**-5.3**
	comp=N,0.5nm,0.2s,SNR=7.9							
ETOR	**Torete**	**9.76**	**64**	P	**Pn**		**04 57 14.9**	**+3.4**
	comp=N,3.3nm,0.2s,SNR=6.6							
ETOR				S	**Sn**		**04 58 54.1**	**-7.0**
	comp=N,1.0nm,0.2s,SNR=7.9							

IDC 31 05:02:05.9±2.0, 46.˚41N× 153.˚11E, h0km, mb3.6/8, mb1 3.7/8, mb1mx3.5/33, mbtmp3.6/8, Error ellipse: s-maj=55.9km s-min=23.7km az=165.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**20.69**	**253**	P	P	Pn	05 06 49.1	-0.6
	0.5nm,0.6s,baz=55,slow=11,SNR=3.3							
H11N2	**WAKE ISLAND Hy**	**28.92**	**152**	T	T		05 39 42.7	
	baz=340,slow

*THE **31** 05:33:27.6, 38°.24N × 20°.39E, h10km, ML2.7/5, Error ellipse: s-maj=0.8km s-min=0.3km az=237.0*

ISC 31 05:33:27.6±1.0, 38°.25N±0°.02×20°.40E±0°.04, h8km±5km, n39, σ0s58/59, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEF4	**Livadi, Kephal**	**0.02**	**69**	P	**Pg**	**05 33 28.7**	**-0.2**
KEF4				S	**Sg**	**05 33 29.4**	**-0.4**
LXR1	**Lixouri, Cepha**	**0.06**	**152**	P	**Pg**	**05 33 29.6**	**+0.3**
LXR1				S	**Sg**	**05 33 31.2**	**+0.7**
KEF1	**Kardakata, Kep**	**0.06**	**64**	P	**Pg**	**05 33 29.3**	**0.0**
KEF1				S	**Sg**	**05 33 30.3**	**-0.2**
KEF3	**Kipouria, Keph**	**0.07**	**222**	P	**Pg**	**05 33 29.7**	**+0.3**
KEF3				S	**Sg**	**05 33 31.3**	**+0.6**
CHV1	**Chavriata, Kef**	**0.07**	**194**	P	**Pg**	**05 33 29.8**	**+0.4**
CHV1				S	**Sg**	**05 33 31.4**	**+0.7**
ARG2	**Argostoli**	**0.10**	**138**	P	**Pg**	**05 33 30.3**	**+0.5**
ARG2				S	**Sg**	**05 33 32.1**	**+0.7**
KEF2	**Argostoli. Kep**	**0.11**	**142**	P	**Pg**	**05 33 30.4**	**+0.4**
KEF2				S	**Sg**	**05 33 32.4**	**+0.7**
VLS	**Valsamata**	**0.17**	**117**	P	**Pg**	**05 33 31.2**	**+0.3**
VLS				S	**Sg**	**05 33 33.9**	**+0.6**
	17μm,0.1s						
VLS	**Valsamata**	**0.17**	**117**	P	**Pg**	**05 33 31.3**	**+0.3**
VLS				S	**Sg**	**05 33 33.8**	**+0.5**
VLS				AML	AML	05 33 34.2	
	comp=N,35878μm,0.2s						
VLS				AML	AML	05 33 34.2	
	comp=E,29656μm,0.1s						
VSK1	**VASILIKIADES**	**0.20**	**39**	P	**Pg**	**05 33 32.1**	**+0.5**
VSK1				S	**Sg**	**05 33 35.5**	**+1.1**
FSK	**Fiskardo**	**0.24**	**31**	P	**Pg**	**05 33 32.7**	**+0.3**
FSK				S	**Sg**	**05 33 36.6**	**+0.9**
	comp=E,3μm,0.4s						
FSK	**Fiskardo**	**0.24**	**31**	P	**Pg**	**05 33 32.8**	**+0.4**
FSK				S	**Sg**	**05 33 36.5**	**+0.8**
KFL	**Anninata**	**0.34**	**115**	P	**Pg**	**05 33 34.4**	**+0.2**
KFL				S	**Sg**	**05 33 39.8**	**+1.2**
	comp=E,3μm,0.4s						
KFL	**Anninata**	**0.34**	**115**	P	**Pg**	**05 33 34.3**	**+0.2**
KFL				S	**Sg**	**05 33 39.6**	**+1.0**
KFL				AML	AML	05 33 41.2	
	comp=E,7355μm,0.3s						
KFL				AML	AML	05 33 42.9	
	comp=N,6306μm,0.5s						
EVGI	**Lefkada island**	**0.42**	**28**	P	**Pg**	**05 33 35.9**	**+0.2**
EVGI				S	**Sg**	**05 33 42.7**	**+1.5**
EVGI	**Lefkada island**	**0.42**	**28**	P	**Pg**	**05 33 36.0**	**+0.3**
EVGI				S	**Sg**	**05 33 42.6**	**+1.3**
VLMS	**Volimes, Zakyn**	**0.43**	**151**	P	**Pg**	**05 33 36.1**	**+0.2**
MGNA	**Meganis**	**0.51**	**37**	P	**Pg**	**05 33 37.3**	**0.0**
MGNA				S	**Sg**	**05 33 44.3**	**+0.3**
LKD2	**Lefkada island**	**0.57**	**20**	P	**Pg**	**05 33 38.5**	**-0.1**
LKD2				S	**Sb**	**05 33 47.8**	**-0.5**
	comp=N,608nm,0.3s						
LKD2	**Lefkada island**	**0.57**	**20**	P	**Pg**	**05 33 38.6**	**-0.1**
TSLK	**Tsoukalades, L**	**0.61**	**19**	P	**Pg**	**05 33 39.2**	**0.0**
TSLK				S	**Sb**	**05 33 48.9**	**-0.3**
	comp=N,562nm,0.4s						
TSLK	**Tsoukalades, L**	**0.61**	**19**	P	**Pg**	**05 33 39.3**	**0.0**
AST1	**Astakos**	**0.61**	**62**	P	**Pg**	**05 33 39.5**	**+0.1**
KRI1	**kERI**	**0.67**	**151**	P	**Pg**	**05 33 40.2**	**-0.3**
PDO	**Prodromos**	**0.70**	**60**	P	**Pg**	**05 33 41.1**	**0.0**
PDO	**Prodromos**	**0.70**	**60**	P	**Pg**	**05 33 41.2**	**+0.1**
PDO				S	**Sg**	**05 33 50.8**	**+0.5**
PDO				AML	AML	05 33 54.0	
	comp=E,1441μm,0.5s						
PDO				AML	AML	05 34 02.9	
	comp=N,1670μm,0.5s						
RLS	**Riolos of Patr**	**0.86**	**103**	P	**Pg**	**05 33 43.8**	**-0.3**
PVO	**Paravola**	**0.95**	**67**	P	**Pg**	**05 33 46.1**	**+0.2**
PVO	**Paravola**	**0.95**	**67**	P	**Pg**	**05 33 46.2**	**+0.3**
EFP	**Efpalio**	**1.20**	**81**	P	**Pb**	**05 33 49.5**	**-1.0**
ANX	**Ano Chora**	**1.24**	**74**	P	**Pn**	**05 33 50.6**	**-0.7**
ANX	**Ano Chora**	**1.24**	**74**	P	**Pn**	**05 33 50.7**	**-0.6**
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**05 33 50.7**	**-0.6**
LAKA	**Lakka**	**1.24**	**90**	P	**Pn**	**05 33 50.6**	**-0.6**
AMT	**Artemida-Makis**	**1.26**	**124**	P	**Pg**	**05 33 52.0**	**+0.3**
KALE	**Kalithea**	**1.37**	**84**	P	**Pn**	**05 33 52.5**	**-0.6**
KLV	**Kalavryta, Ach**	**1.39**	**98**	P	**Pn**	**05 33 53.3**	**-0.1**
KLV	**Kalavryta, Ach**	**1.39**	**98**	P	**Pn**	**05 33 53.6**	**+0.1**
THL	**Klokotos Trika**	**1.82**	**43**	P	**Pb**	**05 34 01.6**	**+0.5**

*NIED **31** 05:38:00, 37°.60N × 139°.10E, h200km, Mw4.0 Best double couple: M0 1.18000×10^15 NP1:φs 25.00000°, δ 83.00000°, λ -51.00000°. NP2:φs 123.00000°, δ 39.00000°, λ -170.00000°.*

*IDC **31** 05:38:41.6±0.6, 37°.61N × 139°.05E, h179km±6km, mb3.5/13, mb1 3.6/19, mb1mx3.5/44, mbtmp4.0/19, Error ellipse: s-maj=13.7km s-min=12.0km az=75.0*

*JMA **31** 05:38:41.9±0.1, 37°.55N × 139°.12E, h178km±2km, M3.6*

*NEIC **31** 05:38:41.2±2.2, 37°.57N±0°.06×139°.14E±0°.09, h178km±6km, mb4.3/27, Error ellipse: s-maj=10.7km s-min=7.7km az=126.0*

ISC 31 05:38:41.2±0.6, 37°.57N±0°.04×139°.07E±0°.05, h178km±5km, n97, σ1s38/119, mb4.1/28, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZZ	**Izumozaki**	**0.29**	**263**	P	**Pn**	**05 39 06.5**	**+1.4**
JIZZ				eS	**Sn**	**05 39 25.3**	**+2.0**
JNS	**Sasagawa**	**0.32**	**38**	P	**Pn**	**05 39 05.7**	**+0.6**
JNS				S	**Sn**	**05 39 23.7**	**+0.1**
JHK	**Hiroka**	**0.32**	**188**	P	**Pn**	**05 39 05.8**	**+0.6**
JHK				eS	**Sn**	**05 39 23.9**	**+0.3**
JFY	**Yanaizu**	**0.53**	**108**	P	**Pn**	**05 39 06.8**	**+0.9**
JSD	**Sado**	**0.80**	**306**	P	**Pn**	**05 39 07.9**	**+0.6**
JSD				S	**Sn**	**05 39 27.5**	**0.0**
JFT	**Otama**	**1.01**	**92**	P	**Pn**	**05 39 09.6**	**+0.8**
JFT				eS	**Sn**	**05 39 30.4**	**+0.4**
JAG	**Ashikaga**	**1.18**	**165**	P	**Pn**	**05 39 10.7**	**+0.5**
MJB9	**Matsu-Tunnel**	**1.23**	**215**		**Pn**	**05 39 11.8**	**+1.2**
MJB9				Sn	**Sn**	**05 39 34.1**	**+0.8**
MJAR	**Matsushiro Arr**	**1.23**	**214**	P	**Pn**	**05 39 11.8**	**+1.1**
	8.6nm,0.3s,baz=21,slow=8.2,SNR=208						
MJAR				S	**Sn**	**05 39 34.8**	**+1.4**
	2.2nm,0.3s,baz=4.3,slow=18,SNR=14						
MJAR	**Matsushiro Arr**	**1.23**	**214**		**Pn**	**05 39 11.7**	**+1.0**
MJAR					**Sn**	**05 39 34.5**	**+1.1**
MAJO	**Matsushiro**	**1.24**	**214**		**Pn**	**05 39 11.8**	**+1.1**
MAJO				Sn	**Sn**	**05 39 33.6**	**+0.2**
MAT	**Matsushiro**	**1.24**	**214**	P	**Pn**	**05 39 11.7**	**+1.0**
MAT				eS	**Sn**	**05 39 34.6**	**+1.2**
MAT	**Matsushiro**	**1.24**	**214**	P	**Pn**	**05 39 11.7**	**+1.0**
MAT				S	**Sn**	**05 39 34.5**	**+1.2**
JSZ	**Suzu**	**1.36**	**266**	P	**Pn**	**05 39 12.5**	**+0.8**
JSZ				eS	**Sn**	**05 39 35.9**	**+0.6**
JRY	**Ryogami san**	**1.55**	**185**	P	**Pn**	**05 39 14.3**	**+0.7**
JRY				eS	**Sn**	**05 39 39.5**	**+0.8**
JYK	**Kaneyama**	**1.69**	**37**	P	**Pn**	**05 39 15.6**	**+0.8**
JYK				eS	**Sn**	**05 39 41.2**	**+0.2**
JHG	**Hegura jima**	**1.73**	**280**	P	**Pn**	**05 39 15.9**	**+0.7**
JYN	**Shimob**	**2.11**	**192**	P	**Pn**	**05 39 19.8**	**+0.3**
JYN				eS	**Sn**	**05 39 49.2**	**+0.1**
JMK	**Ichinoseki**	**2.18**	**50**	P	**Pn**	**05 39 20.6**	**+0.5**
JOD2	**Odawara 2**	**2.30**	**180**	P	**Pn**	**05 39 21.1**	**-0.5**
JOD2				eS	**Sn**	**05 39 51.2**	**-1.6**
JKG	**Kaga**	**2.55**	**240**	P	**Pn**	**05 39 25.5**	**+1.2**
JOM	**Ohasama**	**2.58**	**42**	P	**Pn**	**05 39 25.2**	**+0.5**
INU	**Inuyama**	**2.77**	**217**		**Pn**	**05 39 28.1**	**+1.1**
JHJ	**Hachijo jima 2**	**4.48**	**172**	P	**Pn**	**05 39 47.6**	**-0.8**
	135nm,0.3s,baz=132,slow=22,SNR=14						
JHJ				S	**Sn**	**05 40 39.1**	**-1.9**
	27nm,0.3s,baz=331,slow=23,SNR=3.4						
JHJ2	**Mitsune**	**4.49**	**172**	Pn	**Pn**	**05 39 47.6**	**-0.9**
JHJ2					**Sn**	**05 40 38.0**	**-3.3**
ERM	**Erimo**	**5.44**	**34**		**Pn**	**05 40 01.2**	**+0.4**
ASAJ	**Asahikawa**	**7.07**	**21**	P	**Pn**	**05 40 20.6**	**-1.5**
	2.0nm,0.3s,baz=214,slow=9.4,SNR=7.5						
ASAJ				S	**Sn**	**05 41 37.6**	**-4.2**
	1.6nm,0.3s,baz=246,slow=29,SNR=4.9						
JKA	**Kamikawa-asahi**	**7.07**	**21**		**Pn**	**05 40 20.6**	**-1.5**
JKA					**Sn**	**05 41 37.6**	**-4.2**
JNU	**Nakatsue**	**8.03**	**239**	P	**Pn**	**05 40 36.0**	**+1.0**
	1.8nm,0.3s,baz=39,slow=1.7,SNR=11						
JNU	**Nakatsue**	**8.03**	**239**		**Pn**	**05 40 35.0**	**+0.1**
USA0B	**Ussuriysk Arra**	**8.52**	**323**		**Pn**	**05 40 41.7**	**+0.5**
USRK	**Ussuriysk Ar.**	**8.52**	**323**	P	**Pn**	**05 40 42.1**	**+0.8**
	baz=136,slow=12,SNR=35						
USRK	**Ussuriysk Ar.**	**8.52**	**323**		**Pn**	**05 40 41.0**	**-0.2**
KSRS	**Korea Array**	**8.86**	**273**	P	**Pn**	**05 40 47.8**	**+2.0**
	0.1nm,0.3s,baz=94,slow=13,SNR=7.1						
JCJ	**Chichijima**	**10.77**	**165**	P	**Pn**	**05 41 06.5**	**-4.3**
	18nm,0.3s,baz=281,slow=22,SNR=12						
CN2	**Changchun**	**12.06**	**305**	eP	**Pn**	**05 41 27.3**	**-0.1**
KLR	**Kul'dur**	**12.81**	**338**	P	**Pn**	**05 41 35.1**	**-1.7**
	1.1nm,0.3s,baz=150,slow=12,SNR=16						
BJT	**Baijiatuan**	**18.02**	**285**	P	**P**	**05 42 37.5**	**-1.0**
BJT				lAmb	lAmb	05 42 40.1	
	comp=Z,8.9nm,1.2s						
NACB	**Ninganchiao**	**20.04**	**233**	P	**P**	**05 42 59.2**	**-1.4**
NACB				lAmb	lAmb	05 43 07.1	
	comp=Z,10nm,1.0s						
HHC	**Hu-ho-hao-te**	**21.53**	**287**	eP	**P**	**05 43 16.5**	**+0.1**
HHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,39nm,5.7s						
WHN	**Wuhan**	**21.61**	**258**	P	**P**	**05 43 11.8**	**-5.4**
MA2	**Magadan**	**23.27**	**15**	P	**P**	**05 43 33.2**	**+0.6**
MA2				lAmb	lAmb	05 43 33.6	
	comp=Z,16nm,1.1s						
XAN	**Xi'an**	**24.66**	**271**	P	**P**	**05 43 45.8**	**+0.3**
XAN				pP	pP	05 44 24.0	+3.1
XAN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
XAN	**Xi'an**	**24.66**	**271**	P	**P**	**05 43 45.4**	**-0.1**
XAN				lAmb	lAmb	05 43 46.6	
	comp=Z,5.7nm,0.5s						
ULN	**Ulaanbaatar**	**25.51**	**304**	P	**P**	**05 43 53.7**	**+0.5**
ULN				lAmb	lAmb	05 43 54.9	
	comp=Z,7.7nm,0.7s						
SONM	**Songino Array**	**25.94**	**304**	P	**P**	**05 43 56.1**	**-0.9**
	comp=Z,9.6nm,0.6s,baz=107,slow=8.4,SNR=70						
SONM	**Songino Array**	**25.94**	**304**	P	**P**	**05 43 56.5**	**-0.5**
LZH	**Lanzhou**	**28.14**	**278**	eP	**P**	**05 44 21.0**	**+4.2**
LZH				pP	pP	05 44 54.5	+1.0
LZH				sP	sP	05 45 15.3	+1.3
LZH				PP	**PnPn**	**05 45 17.3**	**+2.4**
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,59nm,4.9s						
CD2	**Chengdu**	**29.82**	**268**	P	**P**	**05 44 30.5**	**-1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GTA	**Gaotai**	**30.62**	**286**	eP	**P**	**05 44 37.8**	**-0.9**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WMQ	**Urumqi**	**38.93**	**296**	eP	**P**	**05 45 52.3**	**+2.6**
WMQ				sP	sP	05 46 51.0	+3.8
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WMQ				LR	LR		
	comp=N,210nm,28.5s						
WMQ				LR	LR		
	comp=E,230nm,23.3s						
WMQ				LR	LR		
	comp=Z,10.0nm,22.1s						
MANU	**Manus Island**	**40.16**	**167**	P	**P**	**05 46 01.1**	**+1.2**
ZAA0	**Zalesovo Array**	**40.17**	**312**	P	**P**	**05 45 59.0**	**-0.6**
ZAA0				lAmb	lAmb	05 45 59.9	
	comp=Z,4.6nm,0.6s						
ZALV	**Zalesovo Beam**	**40.17**	**312**	P	**P**	**05 45 58.9**	**-0.8**
	comp=Z,4.2nm,0.4s,baz=102,slow=7.6,SNR=16						
ZALV				PcP	**PcP**	**05 47 60.0**	**-0.2**
	comp=Z,1.1nm,0.5s,baz=90,slow=1.6,SNR=5.2						
ZALV	**Zalesovo Beam**	**40.17**	**312**	P	**P**	**05 45 59.1**	**-0.6**
ZALV					**PcP**	**05 47 59.6**	**-0.6**
MK31	**Makanchi Array**	**42.25**	**301**	P	**P**	**05 46 16.3**	**-0.5**
MKAR	**Makanchi Array**	**42.25**	**301**	P	**P**	**05 46 16.6**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=82,slow=10.0,SNR=29						
MKAR	**Makanchi Array**	**42.25**	**301**	P	**P**	**05 46 16.8**	**+0.1**
MAKZ	**Makanchi**	**42.46**	**301**	P	**P**	**05 46 18.9**	**+0.5**
KURK	**Kurchatov**	**44.13**	**307**	P	**P**	**05 46 31.7**	**0.0**
KDJ	**Kajisay**	**46.83**	**296**	P	**P**	**05 46 54.2**	**+1.0**
KDJ				lAmb	lAmb	05 47 03.1	
	comp=Z,9.0nm,1.2s						
BOOM	**Boomskoye usch**	**47.61**	**297**	P	**P**	**05 47 01.0**	**+1.8**
BOOM				lAmb	lAmb	05 47 08.7	
	comp=Z,20nm,1.2s						
NRN	**Naryn**	**47.87**	**295**	P	**P**	**05 47 02.9**	**+1.4**
KSH	**Kashi**	**48.48**	**293**	P	P	05 47 11.5	+5.6
KSH				pP	pP	05 47 46.0	+1.0
KSH				pmax	pmax		
	comp=Z,340nm,4.0s						
AAK	**Ala-Archa**	**48.59**	**297**	P	**P**	**05 47 07.3**	**+0.5**
BRVK	**Bovovoye**	**48.88**	**312**	P	**P**	**05 47 09.5**	**+0.9**
KK31	**Karatay Array**	**51.24**	**299**	P	**P**	**05 47 26.7**	**+0.1**
KK31				lAmb	lAmb	05 47 28.7	
	comp=Z,2.6nm,0.6s						
KKAR	**Karatay Array**	**51.24**	**299**	P	**P**	**05 47 26.9**	**+0.3**
EPYK	**Eagle Plains**	**53.99**	**30**	P	**P**	**05 47 48.4**	**+2.1**
ARU	**Arti**	**54.72**	**318**	P	**P**	**05 47 51.9**	**+0.2**
ARU				lAmb	lAmb	05 47 52.1	
	comp=Z,5.3nm,0.6s						
ABKAR	**Akbulak array**	**56.16**	**309**	P	**P**	**05 48 02.1**	**-0.1**
WR0	**Warramunga Arr**	**57.38**	**185**	P	**P**	**05 48 11.3**	**+0.4**
SPA0	**Spitsbergen Ar**	**59.63**	**348**	P	**P**	**05 48 26.8**	**+1.0**
RES	**Resolute Bay**	**62.54**	**14**	P	**P**	**05 48 45.6**	**+0.2**
RES				lAmb	lAmb	05 48 45.7	
	comp=Z,6.4nm,1.5s						
ARCES	**ARCESS Array B**	**62.83**	**339**	P	**P**	**05 48 47.5**	**0.0**
	comp=Z,1.4nm,0.6s,baz=53,slow=8.8,SNR=6.9						
ARCES	**ARCESS Array B**	**62.83**	**339**	P	**P**	**05 48 47.8**	**+0.4**
YKA	**Yellowknife Ar**	**64.28**	**30**	P	**P**	**05 48 58.0**	**+1.1**
	comp=Z,0.2nm,0.8s,baz=310,slow=6.4,SNR=3.9						
FINES	**FINESS Array B**	**67.46**	**331**	P	**P**	**05 49 17.1**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=58,slow=6.5,SNR=11						
AKASG	**Malin Array Be**	**72.72**	**321**	P	**P**	**05 49 49.0**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=49,slow=6.3,SNR=6.6						
AKASG	**Malin Array Be**	**72.72**	**321**	P	**P**	**05 49 48.5**	**-1.0**
NC405	**NORSAR Array S**	**72.75**	**336**	P	**P**	**05 49 48.8**	**-0.7**
NC204	**NORSAR Array S**	**72.92**	**337**	P	**P**	**05 49 50.8**	**+0.2**
NB2	**NORSAR Subarra**	**72.96**	**336**	P	**P**	**05 49 50.6**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**72.96**	**336**	P	**P**	**05 49 50.7**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=41,slow=5.9,SNR=7.6						
NVAR	**Mina Array Bea**	**76.15**	**52**	P	**P**	**05 50 11.6**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=306,slow=5.4,SNR=3.4						
BURAR	**Bucovina Array**	**76.72**	**321**	P	**P**	**05 50 13.4**	**+0.7**
BRTR	**Keskin Array B**	**77.09**	**310**	P	**P**	**05 50 14.7**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=132,slow=51,SNR=2.7						
PDAR	**Pinedale Array**	**78.61**	**44**	P	**P**	**05 50 24.6**	**+1.2**
	comp=Z,0.4nm,0.6s,baz=217,slow=3.7,SNR=3.7						
PDAR	**Pinedale Array**	**78.61**	**44**	P	**P**	**05 50 25.1**	**+1.7**
VYHS	**Vyhne**	**79.21**	**324**	eP	**P**	**05 50 23.9**	**-2.4**
CLL	**Collm**	**79.69**	**329**	eP	**P**	**05 50 29.0**	**+0.2**
GERES	**GERESS Array B**	**81.26**	**327**	P	**P**	**05 50 37.3**	**0.0**
	comp=Z,0.4nm,0.4s,baz=69,slow=4.4,SNR=3.9						
GERES	**GERESS Array B**	**81.26**	**327**	P	**P**	**05 50 37.4**	**+0.1**
FUORN	**Ofenpass-Fuorn**	**84.46**	**327**	P	**P**	**05 50 54.4**	**+0.4**
FUORN				lAmb	lAmb	05 51 10.4	
	comp=Z,9.6nm,1.5s						
TXAR	**Lajitas Array**	**91.25**	**51**	P	**P**	**05 51 28.0**	**+1.4**
	comp=Z,0.1nm,0.6s,baz=270,slow=0.9,SNR=3.0						
TXAR	**Lajitas Array**	**91.25**	**51**	P	**P**	**05 51 27.8**	**+1.2**
OTAV	**Otavalo**	**128.88**	**51**	PKPpre	PKPpre	05 57 22.0	
OTAV					**PKPdf**	**05 57 27.4**	**-1.3**

TAP 31 05:42:35.4, 21°.42N × 121°.40E, h88km, ML2.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.64**	**13**	eP	Pn	05 42 51.2	+0.1
	baz=20						
LAY				eS	Sn	05 43 02.9	+0.1
	baz=20						
TWKBT	**Hengchun**	**0.75**	**314**	eP	Pn	05 42 52.8	+0.6
	baz=310						
TWKBT				eS	Sn	05 43 05.5	+0.7
	baz=310						
TWK1	**Hengchun**	**0.76**	**314**	eP	Pn	05 42 52.7	+0.4
	baz=310						
TWK1				eS	Sn	05 43 05.3	+0.4
	baz=310						
HEN	**Hengchun**	**0.85**	**314**	eP	Pn	05 42 55.4	+2.2
	baz=306						
HEN				eS	Sn	05 43 08.2	+1.6
	baz=306						
EAST	**Anshuo**	**1.09**	**332**	eP	Pn	05 42 56.4	+0.3
	baz=340						
EAST				eS	Sn	05 43 10.0	-1.5
	baz=340						
SCZT	**Fangliau**	**1.19**	**323**	eP	Pn	05 42 58.4	+1.1
	baz=323						
SCZT				eS	Sn	05 43 13.4	-0.2
	baz=323						
ECL	**Taimali**	**1.24**	**341**	eS	Sn	05 43 13.8	-1.0
	baz=347						
TWH	**Lutao**	**1.29**	**3**	eS	Sn	05 43 14.2	-1.5
	baz=8.0						
WLCH	**Liuqiu**	**1.33**	**315**	eP	Pn	05 43 00.9	+2.0
	baz=315						
WLCH				eS	Sn	05 43 20.4	+3.8
	baz=315						
MASBT	**Mashibuluo**	**1.39**	**329**	eP	Pn	05 43 00.2	+0.6
	baz=335						
MASBT				eS	Sn	05 43 18.8	+0.9
	baz=335						
TWGBT	**Beinan**	**1.43**	**348**	eS	Sn	05 43 19.2	+0.5
	baz=342						
TWG	**Pinlang**	**1.43**	**348**	eS	Sn	05 43 18.8	0.0
	baz=342						
SSD	**Sandimen**	**1.50**	**332**	eP	Pn	05 43 02.0	+0.9
	baz=337						
SSD				eS	Sn	05 43 20.9	+0.4
	baz=337						
SLGT	**Liugui**	**1.72**	**336**	eP	Pn	05 43 04.8	+0.9
	baz=336						
SLGT				eS	Sn	05 43 25.9	+0.5
	baz=336						
FULB	**Fuli**	**1.78**	**357**	eP	Pn	05 43 05.0	+0.3
	baz=349						
FULB				eS	Sn	05 43 29.1	+2.2
	baz=349						
CHN1	**Nanshi**	**1.94**	**336**	eP	Pn	05 43 07.7	+1.0
	baz=345						
CHN1				eS	Sn	05 43 31.1	+0.5
	baz=345						
WTP	**Ta-pu**	**1.96**	**338**	eP	Pn	05 43 08.5	+1.4
	baz=339						
WTP				eS	Sn	05 43 32.0	+0.8
	baz=339						
YULB	**Yu-li**	**1.97**	**357**	eP	Pn	05 43 09.1	+1.9
	baz=350						
YULB				eS	Sn	05 43 33.2	+1.8
	baz=350						
YULB	**Yu-li**	**1.97**	**357**	P	Pn	05 43 08.6	+1.4
YULB				lAmb	lAmb	05 43 22.5	
	comp=Z,7.6nm,1.0s						
SNST	**Tainan City**	**1.98**	**335**	eS	Sn	05 43 32.2	+0.6
	baz=345						
TPUB	**Ta-pu**	**2.00**	**339**	eP	Pn	05 43 08.6	+1.0
	baz=339						
TPUB				eS	Sn	05 43 32.7	+0.5
	baz=339						
TWK	**Hsinying**	**2.02**	**336**	eS	Sn	05 43 32.6	-0.1
	baz=336						
CHN4	**Tsaushan**	**2.06**	**339**	eP	Pn	05 43 09.7	+1.3
	baz=339						
CHN4				eS	Sn	05 43 34.0	+0.4
	baz=339						
HGSD	**Ruisui**	**2.06**	**1**	eP	Pn	05 43 11.6	+3.2
	baz=7.0						
HGSD				eS	Sn	05 43 34.9	+1.3
	baz=7.0						
YUS	**Yu-Shan**	**2.10**	**349**	eS	Sn	05 43 37.0	+1.8
	baz=349						
CHY	**Chiayi**	**2.26**	**337**	eS	Sn	05 43 38.5	+0.4
	baz=337						
CHN5	**Tsauling**	**2.27**	**343**	eS	Sn	05 43 39.9	+1.3
	baz=343						
VWDT	**VWDT**	**2.34**	**354**	eS	Sn	05 43 43.6	+3.6
	baz=343						
WSF	**Szhu**	**2.46**	**334**	eS	Sn	05 43 43.1	+0.1
	baz=342						
PHUB	**P'eng-hu**	**2.68**	**321**	eS	Sn	05 43 46.5	-1.9
	baz=321						
NACB	**Ninganchiao**	**2.75**	**4**	eS	Sn	05 43 49.7	-0.2
	baz=355						
WHP	**Taichung City**	**2.88**	**352**	eS	Sn	05 43 55.0	+1.9
	baz=344						

*SJA **31** 06:10:35.1±0.3, 30°.22S × 71°.97W, h18km±12km, ML3.4, MW3.4*

*GUC **31** 06:10:35.7±0.6, 30°.40S × 71°.89W, h38km±6km, ML3.8*

ISC 31 06:10:34.8±2.0, 30°.30S±0°.05×71°.99W±0°.09, h7km±13km, n23, σ2s32/32, 2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.76**	**59**	eP	**Pb**	**06 10 50.6**	**+0.4**
LSCH				*i* S	**Sn**	**06 11 01.8**	**-1.7**
GO04	**Tololo Observa**	**1.04**	**83**	eP	**Pg**	**06 10 54.5**	**-0.2**
GO04				*i* S	**Sn**	**06 11 08.9**	**-1.9**
GO04				IAML		06 11 12.5	
	comp=N,9μm,0.5s						
GO04	**Tololo Observa**	**1.04**	**83**	eP	**Pg**	**06 10 54.7**	**-0.1**
GO04				eS	**Sn**	**06 11 09.2**	**-1.7**
CO02	**Combarbal**	**1.24**	**137**	eP	**Pb**	**06 10 56.3**	**-2.3**
CO02				*i* S	**Sb**	**06 11 12.5**	**-2.2**
CO02				IAML		06 11 14.4	
	comp=N,4μm,0.3s						
VA03	**

TOSP	Speyside	1.59	75	*e*S		Sn	06 18 03.3 +0.1
ORIV	Oritupano	2.21	216	*e*P		Pn	06 17 51.3 +0.7
ORIV				eS		Sn	06 18 17.1 -0.4
SVB	Belmont	2.52	19	*e*P		Pn	06 17 57.2 +2.5
SVB				eS		Sn	06 18 24.6 -0.3
SVCV	St. Vincent, C	2.56	21	*e*P		Pn	06 17 56.6 +1.4
SVCV				eS		Sn	06 18 25.1 -0.7
PCRV	Puerto La Cruz	2.59	255	*e*P		Pn	06 17 56.7 +1.1
PCRV				eS		Sn	06 18 25.9 -0.7
RIOV	Rio Grande	2.80	174	eS		Sn	06 18 31.7 0.0
PRGV	PARIAGUAN	3.27	230	eS		Sn	06 18 42.8 -0.1
SLBI	Saint Lucia, B	3.31	19	eS		Sn	06 18 43.2 -0.7
CUPV	Cpira	3.72	258	*e*P		Pn	06 18 12.0 +1.1
CUPV				eS		Sn	06 18 53.7 0.0
MERV	Las Mercedes	4.44	249	*e*P		Pn	06 18 21.5 +1.0
MERV				eS		Sn	06 19 09.4 -1.7
LUEV	Luepa	5.04	173	*e*P		Pn	06 18 29.8 +0.9
LUEV				eS		Sn	06 19 23.9 -2.1
BAUV	El Baul	6.16	252	*e*P		Pn	06 18 43.1 -0.8
BAUV				eS		Sn	06 19 50.5 -2.5
MAPV	Macapo	6.34	261	*e*P		Pn	06 18 46.5 +0.1
PAYV	Puerto Ayacuch	7.72	226	*e*P		Pn	06 19 05.7 +0.5

IDC ***31*** *06:42:12.8±0.6, 12°.26N×143°.96E, h0km, mb4.5/18, mb1 4.6/18, mb1mx4.3/49, mbtmp4.4/18, MS3.7/18, Ms1 3.7/18, ms1mx3.5/47, Error ellipse: s-maj=19.7km s-min=13.6km az=101.0*

BJI ***31*** *06:42:16.5±0.0, 11°.81N×144°.04E, h46km, mB4.9/29, mb4.5/44, Ms4.6/11, Ms7 4.3/4*

GCMT ***31*** *06:42:17.4±0.3, 12°.15N±0°.03×143°.86E±0°.02, h21km, MW4.9/81, Moment Tensor Solution. s33,c35; s81,c97; Duration: 0 Moment tensor: Scale 10^16 Nm; Mrr-3.24±.18; Mθθ 0.74±.10; Mθφ 2.50±.12; Mrθ -0.20±.21; Mφφ -1.01±.10; Mrφ 0.64±.20; Best double couple: Mo 3.17100×10^16 NP1: φs 157.00000°, δ 51.00000°, λ -88.00000°. NP2: φs 334.00000°, δ 39.00000°, λ -92.00000°. Principal axes: T 3.0300, Plg 6.0000°, Azm 246.0000°; N 0.2810, Plg 1.0000°, Azm 336.0000°; P -3.3130, Plg 84.0000°, Azm 78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

NEIC ***31*** *06:42:18.4±1.8, 12°.25N±0°.06×144°.02E±0°.06, h36km±5km, mb4.8/74 Error ellipse: s-maj=11.3km s-min=4.5km az=222.0*

ISC 31 06:42:17.2±0.4,**12°.23N**±0°.05×**144°.09E**±0°.07,**h26**km,**n132**, σ1§**44**/108,**mb4.7**/62,**MS3.8**/21,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.55**	**29**	Pn	**Pn**	**06 42 43.2**	**0.0**
	653nm,0.3s,baz=300,slow=7.0,SNR=242						
GUMO				Sn	**Sb**	**06 43 04.1**	**-0.4**
	410nm,0.3s,baz=33,slow=22,SNR=20						
GUMO	**Guam**	**1.55**	**29**		**Pn**	**06 42 43.2**	**0.0**
GUMO				Sn	**Sn**	**06 43 02.5**	**+0.1**
ANA2	**Anatahan**	**4.38**	**21**	Pn	**Pn**	**06 43 24.1**	**+1.9**
SARN	**Sarigan**	**4.74**	**20**	Pn	**Pn**	**06 43 28.8**	**+0.9**
JCJ	**Chichijima**	**14.90**	**353**	LR	LR	06 49 38.7	
	comp=Z,144nm,19.4s,baz=148,slow=30						
PATS	**Pohnpei**	**15.01**	**110**	Pn	**Pn**	**06 45 46.7**	**-1.1**
SIJI	**Sorong**	**18.21**	**225**	LR	LR	06 51 55.5	
	comp=Z,308nm,20.4s,baz=186,slow=32						
H11S3	**WAKE ISLAND Hy**	**22.65**	**71**	T	T	07 10 55.9	
	baz=258,slow=75,SNR=23						
H11S1	**WAKE ISLAND Hy**	**22.66**	**71**	T	T	07 10 59.6	
	baz=258,slow=75,SNR=23						
H11S2	**WAKE ISLAND Hy**	**22.66**	**71**	T	T	07 10 57.5	
	baz=258,slow=75,SNR=30						
H11N1	**WAKE ISLAND Hy**	**23.13**	**68**	T	T	07 11 18.8	
	baz=255,slow=75,SNR=35						
H11N2	**WAKE ISLAND Hy**	**23.14**	**68**	T	T	07 11 19.3	
	baz=255,slow=75,SNR=39						
H11N3	**WAKE ISLAND Hy**	**23.15**	**68**	T	T	07 11 19.9	
	baz=255,slow=75,SNR=37						
JNU	**Nakatsue**	**24.06**	**332**	LR	LR	06 55 41.9	
	comp=Z,63nm,18.8s,baz=158,slow=34						
TWG	**Pinlang**	**24.31**	**299**	P	**P**	**06 47 34.4**	**+1.5**
MJAR	**Matsushiro Arr**	**24.78**	**349**	LR	LR	06 55 11.0	
	comp=Z,195nm,21.9s,baz=175,slow=32						
LUWI	**Luwuk**	**24.94**	**240**	P	**P**	**06 47 38.7**	**+0.1**
COEN	**Coen**	**26.03**	**182**	P	**P**	**06 47 48.6**	**+0.1**
COEN				IAmb	IAmb	06 47 48.8	
	comp=Z,21nm,1.1s						
NJ2	**Nanjing**	**30.45**	**314**	*e*P	**P**	**06 48 28.0**	**+0.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,430nm,15.2s						
NJ2				LR	LR		
	comp=Z,200nm,18.0s						
WB0	**Warramunga Arr**	**33.20**	**197**	P	**P**	**06 48 51.0**	**-1.1**
WR0	**Warramunga Arr**	**33.34**	**196**	P	**P**	**06 48 51.9**	**-1.5**
WR0				IAmb	IAmb	06 48 52.9	
	comp=Z,21nm,1.4s						
WRA	**Warramunga Arr**	**33.38**	**197**	P	**P**	**06 48 52.7**	**-1.0**
	comp=Z,7.5nm,0.4s,baz=20,slow=9.5,SNR=14						
WRA				LR	LR	07 03 21.5	
	comp=Z,186nm,18.2s,baz=10.0,slow=38						
WRA	**Warramunga Arr**	**33.38**	**197**	P	**P**	**06 48 52.5**	**-1.2**
CN2	**Changchun**	**35.33**	**336**	*e*P	**P**	**06 49 13.5**	**+3.2**
AS31	**Alice Springs**	**37.04**	**196**	P	**P**	**06 49 25.2**	**0.0**
ASAR	**Alice Springs**	**37.04**	**196**	P	**P**	**06 49 24.3**	**-0.9**
	comp=Z,2.6nm,0.6s,baz=21,slow=9.9,SNR=51						
ASAR				PcP	**PcP**	**06 51 46.2**	**+0.4**
	comp=Z,1.9nm,0.9s,baz=29,slow=3.2,SNR=5.6						
ASAR				LR	LR	07 05 08.4	
	comp=Z,145nm,20.8s,baz=8.5,slow=37						
ASAR	**Alice Springs**	**37.04**	**196**	P	**P**	**06 49 25.0**	**-0.2**
ASAR					**PcP**	**06 51 46.1**	**+0.4**
BJI	**Beijing**	**37.06**	**323**	*e*P	**P**	**06 49 25.0**	**-0.1**
BJI				pmax	pmax		
	comp=Z,8.0nm,1.5s						
EIDS	**Eidsvold**	**37.98**	**170**	P	**P**	**06 49 33.0**	**-0.2**
KLR	**Kul'dur**	**38.28**	**347**	P	**P**	**06 49 34.3**	**-1.1**
	comp=Z,2.3nm,0.9s,baz=144,slow=14,SNR=3.3						
KLR				PcP	**PcP**	**06 51 49.5**	**+0.3**
	comp=Z,2.3nm,0.6s,baz=4.9,slow=1.1,SNR=6.0						
KLR				LR	LR	07 04 25.1	
	comp=Z,100nm,19.9s,baz=149,slow=35						
XAN	**Xi'an**	**38.66**	**310**	P	P	06 49 44.3	+5.4
XAN				S	**S**	**06 55 29.5**	**-4.7**
XAN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
XAN				LR	LR		
	comp=Z,190nm,18.4s						
XAN				LR	LR		
	comp=Z,130nm,23.9s						
SLVN	**Son La**	**39.43**	**289**	P	**P**	**06 49 45.3**	**-0.2**
HHC	**Hu-ho-hao-te**	**40.33**	**321**	*e*P	**P**	**06 49 54.3**	**+1.6**
HHC				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,65nm,5.7s						
NOUC	**Port Laguerre**	**40.48**	**147**	P	**P**	**06 49 55.6**	**+1.5**
DZM	**Mont Dzumac**	**40.53**	**147**	P	**P**	**06 49 55.9**	**+1.3**
LEM	**Lembang**	**40.91**	**244**	LR	LR	07 08 50.3	
	comp=Z,61nm,19.4s,baz=94,slow=39						
CD2	**Chengdu**	**41.58**	**303**	P	**P**	**06 50 01.8**	**-1.3**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
PETK	**Petropavlovsk-**	**42.20**	**12**	LR	LR	07 05 29.2	
	comp=Z,66nm,19.4s,baz=231,slow=33						
ARMA	**Armidale**	**43.02**	**170**	P	**P**	**06 50 14.8**	**0.0**
ARMA				IAmb	IAmb	06 50 22.3	
	comp=Z,18nm,1.4s						
LZH	**Lanzhou**	**43.30**	**310**	*e*P	**P**	**06 50 19.8**	**+2.6**
LZH				pP	pwP	06 50 33.0	+3.4
LZH				PP	**PP**	**06 51 59.3**	**+1.2**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,68nm,6.0s						
LZH				LR	LR		
	comp=Z,200nm,16.3s						
LZH				LR	LR		
	comp=Z,400nm,17.4s						
LZH				LR	LR		
	comp=Z,380nm,16.8s						
CMAR	**Chiang Mai Arr**	**43.89**	**284**	P	**P**	**06 50 22.2**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=86,slow=6.2,SNR=10.0						
CMAR				LR	LR	07 07 39.4	
	comp=Z,70nm,21.0s,baz=108,slow=35						
STKA	**Stephens Creek**	**43.92**	**183**	P	**P**	**06 50 21.0**	**-0.9**
	comp=Z,3.7nm,0.7s,baz=342,slow=6.9,SNR=6.2						
STKA				LR	LR	07 08 50.7	
	comp=Z,83nm,20.4s,baz=6.7,slow=36						
STKA	**Stephens Creek**	**43.92**	**183**	P	**P**	**06 50 20.8**	**-1.2**
MSVF	**Nonsavu**	**44.84**	**131**	P	**P**	**06 50 31.6**	**+2.0**
BBOO	**Buckleboo**	**45.44**	**190**	P	**P**	**06 50 33.3**	**-0.7**
BBOO				IAmb	IAmb	06 50 33.7	
	comp=Z,10.0nm,0.6s						
FORT	**Forrest**	**45.45**	**199**	P	**P**	**06 50 34.2**	**0.0**
PSI	**Prapat**	**45.68**	**262**	LR	LR	07 11 09.9	
	comp=Z,50nm,21.3s,baz=48,slow=38						
SONM	**Songino Array**	**47.41**	**326**	P	**P**	**06 50 50.1**	**+0.5**
	comp=Z,1.2nm,0.7s,baz=144,slow=7.2,SNR=9.9						
SONM				PcP	**PcP**	**06 52 19.9**	**0.0**
	comp=Z,3.0nm,1.0s,baz=154,slow=5.2,SNR=6.9						
SONM				LR	LR	07 11 28.4	
	comp=Z,146nm,18.7s,baz=189,slow=37						
SONM	**Songino Array**	**47.41**	**326**	P	**P**	**06 50 50.6**	**+1.0**
GTA	**Gaotai**	**47.52**	**313**	*e*P	**P**	**06 50 49.5**	**-1.1**
GTA				pP	pwP	06 51 01.5	-1.5
GTA				sP	sP	06 51 05.0	+5.2
GTA				PcP	**PcP**	**06 52 20.8**	**+0.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,84nm,4.4s						
GTA				LR	LR		
	comp=Z,78nm,17.5s						
GTA				LR	LR		
	comp=Z,260nm,20.0s						
TOO	**Toolangi**	**49.55**	**179**	P	**P**	**06 51 07.1**	**+1.1**
TOO				IAmb	IAmb	06 51 07.4	
	comp=Z,10nm,1.0s						
WMQ	**Urumqi**	**57.53**	**314**	*e*P	**P**	**06 52 06.5**	**+1.9**
WMQ				pP	sP	06 52 13.5	-0.5
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,66nm,3.9s						
WMQ				LR	LR		
	comp=Z,270nm,29.5s						
WMQ				LR	LR		
	comp=Z,1μm,28.9s						
RPZ	**Rata Peaks**	**60.86**	**158**	P	**P**	**06 52 27.6**	**+0.1**
RPZ				IAmb	IAmb	06 52 38.2	
	comp=Z,8.7nm,1.0s						
MK31	**Makanchi Array**	**61.95**	**317**	P	**P**	**06 52 33.2**	**-1.8**
MKAR	**Makanchi Array**	**61.95**	**317**	P	**P**	**06 52 33.6**	**-1.3**
	comp=Z,2.3nm,0.7s,baz=93,slow=8.2,SNR=17						
MKAR	**Makanchi Array**	**61.95**	**317**	P	**P**	**06 52 34.0**	**-0.9**
MAKZ	**Makanchi**	**62.16**	**317**	P	**P**	**06 52 35.7**	**-0.6**
MAKZ				IAmb	IAmb	06 52 39.1	
	comp=Z,6.8nm,0.9s						
ZALV	**Zalesovo Beam**	**62.29**	**325**	PcP	**PcP**	**06 53 14.8**	**-1.9**
	comp=Z,2.1nm,0.5s,baz=116,slow=6.6,SNR=4.0						
KURK	**Kurchatov**	**65.14**	**320**	P	**P**	**06 52 54.9**	**-1.0**
KURBB	**Kurchatov Arra**	**65.17**	**320**	P	**P**	**06 52 55.3**	**-0.8**
	comp=Z,8.5nm,0.9s,baz=102,slow=6.7,SNR=21						
KSH	**Kashi**	**65.47**	**308**	P	**P**	**06 53 00.8**	**+2.4**
KSH				pP	pwP	06 53 14.3	+3.5
KSH				PP	**PP**	**06 55 28.0**	**+5.4**
KSH				S	**S**	**07 01 42.0**	**+0.1**
KSH				sS	sS	07 02 04.8	+12
KSH				SS	**SS**	**07 05 59.3**	**+3.8**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,420nm,5.4s						
KSH				LR	LR		
	comp=Z,79nm,4.4s						
KSH				LR	LR		
	comp=Z,100nm,5.4s						
KSH				LR	LR		
	comp=Z,380nm,5.1s						
KDAK	**Kodiak Island**	**65.62**	**32**	P	**P**	**06 52 59.1**	**+0.3**
KDAK				IAmb	IAmb	06 53 09.4	
	comp=Z,7.1nm,1.2s						
CNPM	**China Poot**	**66.78**	**30**	P	**P**	**06 53 06.5**	**+0.2**
CNPM				IAmb	IAmb	06 53 12.1	
	comp=Z,14nm,1.3s						
BRLK	**Bradley Lake**	**67.02**	**30**	P	**P**	**06 53 07.1**	**-0.7**
BRLK				IAmb	IAmb	06 53 19.0	
	comp=Z,10nm,1.2s						
IMAR	**Indian Mountai**	**67.74**	**23**	P	**P**	**06 53 14.8**	**+2.5**
BPAW	**Bear Paw Mtn.**	**68.22**	**25**	P	**P**	**06 53 17.2**	**+1.9**
BPAW				IAmb	IAmb	06 53 19.4	
	comp=Z,5.6nm,0.9s						
MLY	**Manley**	**68.60**	**24**	P	**P**	**06 53 17.7**	**0.0**
SML	**Sawmill**	**68.76**	**28**	P	**P**	**06 53 19.1**	**+0.3**
SML				IAmb	IAmb	06 53 24.6	
	comp=Z,9.0nm,0.8s						
SCM	**Sheep Creek Mo**	**69.23**	**28**	P	**P**	**06 53 20.3**	**-1.5**
SCM				IAmb	IAmb	06 53 26.1	
	comp=Z,9.7nm,0.9s						
WRH	**Wood River Hil**	**69.54**	**25**	P	**P**	**06 53 23.0**	**-0.5**
CCB	**Clear Creek Bu**	**69.70**	**25**	P	**P**	**06 53 24.0**	**-0.5**
CCB				IAmb	IAmb	06 53 27.7	
	comp=Z,9.4nm,1.4s						
KK31	**Karatay Array**	**69.78**	**312**	P	**P**	**06 53 23.8**	**-1.7**
KKAR	**Karatay Array**	**69.78**	**312**	P	**P**	**06 53 24.1**	**-1.3**
IL31		**70.11**	**25**	P	**P**	**06 53 26.9**	**0.0**
ILAR	**Eielson Array**	**70.11**	**25**	P	**P**	**06 53 25.6**	**-1.5**
	comp=Z,2.5nm,0.7s,baz=254,slow=5.2,SNR=22						
ILAR	**Eielson Array**	**70.11**	**25**	P	**P**	**06 53 24.8**	**-2.3**
PAX	**Paxson**	**70.32**	**27**	P	**P**	**06 53 28.8**	**+0.3**
BVAR	**Borovoye Array**	**70.52**	**322**	P	**P**	**06 53 28.4**	**-1.4**
	comp=Z,6.6nm,0.5s,baz=106,slow=7.6,SNR=38						
BRVK	**Borovoye**	**70.59**	**322**	P	**P**	**06 53 29.1**	**-1.1**
BRVK				IAmb	IAmb	06 53 32.7	
	comp=Z,7.2nm,0.7s						
DOT	**Dot Lake**	**71.08**	**27**	IAmb	IAmb	06 53 37.3	
	comp=Z,6.1nm,0.8s						
SCRK	**Sand Creek**	**71.17**	**26**	P	**P**	**06 53 33.4**	**-0.3**
FYU	**Fort Yukon**	**71.20**	**23**	IAmb	IAmb	06 53 37.1	
	comp=Z,14nm,1.4s						
BMAR	**Burnt Mountain**	**71.64**	**23**	P	**P**	**06 53 36.6**	**+0.3**
PPT	**Papeete**	**71.87**	**113**	LR	LR	07 17 18.5	
	comp=Z,80nm,19.6s,baz=222,slow=29						
CTGM	**Chitina Glacie**	**71.91**	**30**	P	**P**	**06 53 38.5**	**+0.3**
BCAR	**Beaver Creek A**	**71.99**	**27**	P	**P**	**06 53 36.3**	**-2.2**
EGAK	**Eagle**	**72.52**	**26**	P	**P**	**06 53 42.3**	**+0.7**
EPYK	**Eagle Plains**	**74.54**	**24**	IAmb	IAmb	06 53 59.1	
	comp=Z,19nm,1.5s						
WHY	**Whitehorse**	**75.03**	**30**	P	**P**	**06 53 56.7**	**+0.2**
ABKAR	**Akbulak array**	**77.04**	**318**	P	**P**	**06 54 05.8**	**-2.3**
ABKAR	**Akbulak array**	**77.04**	**318**	IAmb	IAmb	06 54 10.1	
	comp=Z,5.0nm,0.8s						
ARU	**Arti**	**77.45**	**325**	P	**P**	**06 54 08.8**	**-1.4**
	comp=Z,1.7nm,0.2s,baz=46,slow=2.2,SNR=10						
ARU	**Arti**	**77.45**	**325**	P	**P**	**06 54 08.6**	**-1.6**
AKTO	**Aktyubinsk**	**78.19**	**319**	P	**P**	**06 54 12.8**	**-1.7**
	comp=Z,1.6nm,0.7s,baz=85,slow=7.9,SNR=9.4						
GEYT	**Alibeck**	**79.45**	**307**	P	**P**	**06 54 20.1**	**-1.6**
	comp=Z,3.1nm,0.8s,baz=221,slow=1.6,SNR=5.6						
YBH	**Yreka Blue Hor**	**84.33**	**49**	IAmb	IAmb	06 54 49.3	
	comp=Z,6.8nm,1.1s						
YKA	**Yellowknife Ar**	**84.41**	**27**	P	**P**	**06 54 46.8**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=286,slow=5.3,SNR=41						
YKA				LR	LR	07 31 26.6	
	comp=Z,57nm,19.8s,baz=0.0,slow=35						
D08A	**Wollman Farm,**	**85.86**	**43**	IAmb	IAmb	06 54 56.8	
	comp=Z,9.9nm,1.3s						
RES	**Resolute Bay**	**86.04**	**13**	P	**P**	**06 54 55.0**	**-0.2**
MOD	**Modoc Plateau**	**86.06**	**48**	IAmb	IAmb	06 54 57.7	
	comp=Z,8.2nm,1.4s						
KLMR	**Klimovskoe**	**86.38**	**332**	*e*P	P	06 54 51.4	-5.7
KLMR				AMP		06 55 00.8	
	comp=Z,14nm,1.2s						
BEKR	**Beckworth**	**86.47**	**50**	IAmb	IAmb	06 55 03.9	
	comp=Z,6.6nm,1.0s						
J08A	**Circle Bar Ran**	**87.03**	**46**	IAmb	IAmb	06 55 03.5	
	comp=Z,9.0nm,1.3s						
WVOR	**Wild Horse Val**	**87.14**	**47**	IAmb	IAmb	06 55 03.4	
	comp=Z,5.4nm,1.3s						
BMO	**Blue Mountains**	**87.48**	**45**	P	**P**	**06 55 03.2**	**+0.3**
BMO				IAmb	IAmb	06 55 08.0	
	comp=Z,4.8nm,0.8s						
ARCES	**ARCESS Array B**	**88.14**	**342**	P	**P**	**06 55 04.8**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=70,slow=7.6,SNR=7.1						
ARCES	**ARCESS Array B**	**88.14**	**342**	P	**P**	**06 55 02.8**	**-2.7**
RYN	**Ryan**	**88.14**	**51**	IAmb	IAmb	06 55 12.5	
	comp=Z,4.9nm,0.9s						
NVAR	**Mina Array Bea**	**88.36**	**51**	P	**P**	**06 55 08.5**	**+1.1**
	comp=Z,5.0nm,0.6s,baz=267,slow=5.3,SNR=28						
NVAR	**Mina Array Bea**	**88.36**	**51**	P	**P**	**06 55 08.9**	**+1.5**
NV11	**Mina Array Sit**	**88.47**	**51**	IAmb	IAmb	06 55 13.6	
	comp=Z,4.1nm,0.8s						
MFID	**Camas Ranch**	**88.89**	**46**	IAmb	IAmb	06 55 15.6	
	comp=Z,6.5nm,1.1s						
ELK	**Elko**	**90.04**	**48**	P	**P**	**06 55 14.8**	**-0.4**
ELK				IAmb	IAmb	06 55 21.4	
	comp=Z,6.0nm,1.1s						
TPNV	**Topopah Spring**	**90.31**	**52**	IAmb	IAmb	06 55 22.2	
	comp=Z,5.0nm,0.9s						
R11A	**Troy Canyon, C**	**90.44**	**51**	IAmb	IAmb	06 55 23.4	
	comp=Z,5.0nm,1.4s						
FINES	**FINESS Array B**	**92.07**	**335**	P	**P**	**06 55 21.5**	**-2.4**
	comp=Z,5.4nm,0.7s,baz=74,slow=5.4,SNR=18						
FINES				LR	LR	07 37 37.7	
	comp=Z,34nm,22.0s,baz=77,slow=36						
FINES	**FINESS Array B**	**92.07**	**335**	P	**P**	**06 55 21.3**	**-2.6**
LKWY	**Lake**	**92.27**	**44**	IAmb	IAmb	06 55 38.5	
	comp=Z,5.4nm,1.1s						
FFC	**Flin Flon**	**93.36**	**32**	P	**P**	**06 55 29.4**	**-0.6**
FFC				IAmb	IAmb	06 55 34.6	
	comp=Z,4.2nm,1.0s						
PDAR	**Pinedale Array**	**93.45**	**45**	P	**P**	**06 55 32.5**	**+1.5**
	comp=Z,0.3nm,0.6s,baz=284,slow=3.6,SNR=3.7						
PDAR				LR	LR	07 30 59.3	
	comp=Z,29nm,21.1s,baz=326,slow=31						
PDAR	**Pinedale Array**	**93.45**	**45**	P	**P**	**06 55 31.1**	**0.0**
Y14A	**Wickenburg**	**93.70**	**54**	IAmb	IAmb	06 55 34.0	
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**98.04**	**339**	LR	LR	07 42 23.9	
	comp=Z,31nm,21.5s,baz=45,slow=37						
DBIC	**Dimbokro**	**143.87**	**300**	PKP	PKPbc	07 01 48.7	-0.3
	comp=Z,2.8nm,0.5s,baz=36,slow=4.5,SNR=5.6						
DBIC	**Dimbokro**	**143.87**	**300**		PKPab	07 01 48.3	0.0
KIC	**Kosan Boka**	**143.93**	**299**	*e*PKP1	**PKPdf**	**07 01 51.1**	**-0.3**
	comp=Z,6.9nm,0.7s						
TIC	**Toumodi**	**144.02**	**300**	*e*PKP1	**PKPdf**	**07 01 51.1**	**-0.5**
LIC	**Lamto**	**144.24**	**299**	*e*PKP1	**PKPdf**	**07 01 52.1**	**+0.1**
	comp=Z,35nm,0.9s						
PB11	**IPOC Station P**	**146.75**	**107**		**PKPbc**	**07 01 58.3**	**+0.2**
MNMC	**Minye Minye**	**146.89**	**106**		**PKPbc**	**07 01 57.8**	**-0.8**
LPAZ	**La Paz**	**148.53**	**101**	PKPbc	**PKPbc**	**07 02 03.8**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=313,slow=1.9,SNR=8.5						
LPAZ	**La Paz**	**148.53**	**101**		**PKPbc**	**07 02 03.4**	**-0.2**

TAP 31 06:47:28.3,23°.25N×120°.94E,h6km±1km,**ML1.5,5C,B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.09**	**129**	P	Pg	06 47 31.5	+1.0
	baz=127						
ELDTW				*e*S	Sg	06 47 33.0	+1.0
	baz=127						
STYT	**Tauyuan**	**0.19**	**244**	⇑*i*P	Pg	06 47 32.9	+0.8
	baz=241						
STYT				S	Sg	06 47 35.4	+0.8
	baz=241						
YUS	**Yu-Shan**	**0.24**	**3**	*i*P	Pg	06 47 34.3	+1.1
	baz=2.0						
YUS				S	Sg	06 47 38.0	+1.5
	baz=2.0						
TPUB	**Ta-pu**	**0.29**	**281**	*e*P	Pb	06 47 35.5	-0.4
	baz=280						
TPUB				*e*S	Sb	06 47 39.6	-1.5
	baz=280						
ALS	**Alishan**	**0.29**	**335**	P	Pg	06 47 34.9	+0.8
	baz=336						
ALS				*e*S	Sg	06 47 39.7	+1.7
	baz=336						
WTP	**Ta-pu**	**0.30**	**270**	*e*P	Pb	06 47 35.6	-0.6
	baz=269						
WTP				*e*S	Sb	06 47 40.4	-1.0
	baz=269						
FULB	**Fuli**	**0.33**	**98**	⇑*i*P	Pb	06 47 36.9	+0.2
	baz=98						
FULB				S	Sb	06 47 42.5	+0.3
	baz=98						
CHN4	**Tsaushan**	**0.34**	**288**	*i*P	Pb	06 47 36.6	-0.1
	baz=288						
CHN4				*e*S	Sb	06 47 41.7	-0.6
	baz=288						
TWF1	**Yuli**	**0.34**	**72**	⇑*i*P	Pb	06 47 36.5	-0.4
	baz=73						
TWF1				*e*S	Sg	06 47 41.0	+1.4
	baz=73						
YULB	**Yu-li**	**0.36**	**66**	⇑*i*P	Pb	06 47 36.6	-0.6
	baz=66						
YULB				*e*S	Sg	06 47 41.0	+0.9
	baz=66						
SGST	**Jiashian**	**0.37**	**243**	*e*P	Pg	06 47 35.8	+0.4
	baz=242						
SLGT	**Liugui**	**0.37**	**227**	⇑*i*P	Pb	06 47 36.7	-0.6
	baz=226						
SLGT				*e*S	Sg	06 47 41.8	+1.4
	baz=226						
CHN1	**Nanshi**	**0.38**	**261**	*e*P	Pb	06 47 37.4	-0.1
	baz=260						
CHN1				*e*S	Sb	06 47 43.8	0.0
	baz=260						
SNST	**Tainan City**	**0.41**	**266**	*e*S	Sb	06 47 45.3	+0.9
	baz=266						
TWK	**Hsinying**	**0.41**	**273**	*e*P	Pb	06 47 38.1	0.0
	baz=272						
TWK				*e*S	Sb	06 47 44.7	0.0
	baz=272						
CHN5	**Tasauling**	**0.42**	**326**	*e*S	Sb	06 47 44.5	-0.4
	baz=325						
EHY	**Hungye**	**0.44**	**54**	*e*S

*NEIC **31** 06:52:48.5±2.5,38°.51N±0°.05×20°.31E±0°.05,h10km±1km, Error ellipse: s-maj=9.5km s-min=6.8km az=198.0*
*SKO **31** 06:52:49.5,38°.66N×20°.20E,h0km*
*BGR **31** 06:52:49.4±0.9,38°.53N×20°.71E,h15km, Error ellipse: s-maj=28.9km s-min=11.1km az=59.0*
ISC 31 06:52:47.2±0.6,**38°.45N**±0°.02×**20°.43E**±0°.02,**h8**km±3km,
n370,σ1⁄3**76**/444,**mb4.4**/46,**MS3.7**/15,**18C-9D**,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.11**	**82**	**P**	**Pg**	**06 52 49.8**	**+0.1**
FSK				S	Sg	06 52 51.3	-0.1
	175μm,0.3s						
FSK	**Fiskardo**	**0.11**	**82**	P	**Pg**	**06 52 49.8**	**+0.1**
VSK1	**VASILIKIADES**	**0.12**	**108**	P	**Pg**	**06 52 49.7**	**-0.1**
VSK1				S	Sg	06 52 51.2	-0.4
KEF1	**Kardakata, Kep**	**0.17**	**168**	P	**Pg**	**06 52 51.0**	**+0.2**
KEF1				S	Sg	06 52 53.2	+0.1
KEF4	**Livadi, Kephal**	**0.19**	**180**	P	**Pg**	**06 52 51.5**	**+0.5**
KEF4				S	Sg	06 52 54.5	+0.9
LXR1	**Lixouri, Cepha**	**0.24**	**178**	P	**Pg**	**06 52 52.5**	**+0.4**
LXR1				S	Sg	06 52 56.6	+1.3
KEF3	**Kipouria, Keph**	**0.25**	**194**	P	**Pg**	**06 52 52.7**	**+0.6**
KEF3				S	Sg	06 52 56.7	+1.3
EVGI	**Lefkada island**	**0.25**	**46**	P	**Pg**	**06 52 52.9**	**+0.6**
EVGI				S	Sb	06 52 57.2	-1.5
EVGI	**Lefkada island**	**0.25**	**46**	P	**Pg**	**06 52 52.9**	**+0.6**
CHV1	**Chavriata, Kef**	**0.26**	**187**	P	**Pg**	**06 52 52.7**	**+0.3**
CHV1				S	Sg	06 52 57.2	+1.3
ARG2	**Argostoli**	**0.27**	**169**	P	**Pg**	**06 52 52.6**	**0.0**
ARG2				S	Sg	06 52 56.7	+0.5
KEF2	**Argostoli. Kep**	**0.28**	**170**	P	**Pg**	**06 52 52.8**	**0.0**
KEF2				S	Sg	06 52 57.2	+0.6
VLS	**Valsamata**	**0.30**	**154**	P	**Pg**	**06 52 52.8**	**-0.3**
VLS				S	Sg	06 52 57.0	0.0
	92μm,0.5s						
VLS	**Valsamata**	**0.30**	**154**	P	**Pg**	**06 52 52.8**	**-0.3**
VLS				S	Sg	06 52 57.0	0.0
VLS	**Valsamata**	**0.30**	**154**	P	**Pg**	**06 52 52.8**	**-0.3**
VLS				S	Sg	06 52 57.1	+0.1
VLS				AML	AML	06 52 58.0	
VLS				AML	AML	06 52 59.8	
MGNA	**Meganis**	**0.36**	**54**	P	**Pg**	**06 52 54.5**	**+0.3**
MGNA				S	Sg	06 52 59.8	+0.9
MGNA				AML	AML	06 53 00.5	
MGNA				AML	AML	06 53 01.1	
LKD2	**Lefkada island**	**0.39**	**28**	P	**Pg**	**06 52 55.2**	**+0.3**
LKD2				S	Sg	06 53 00.7	+0.7
	83μm,0.8s						
LKD2	**Lefkada island**	**0.39**	**28**	P	**Pg**	**06 52 55.4**	**+0.6**
LKD2				S	Sg	06 53 01.0	+1.0
LKD2				AML	AML	06 53 02.3	
LKD2				AML	AML	06 53 02.7	
TSLK	**Tsoukalades, L**	**0.42**	**25**	P	**Pb**	**06 52 56.1**	**-0.8**
TSLK				S	Sg	06 53 02.1	+1.1
	79μm,0.9s						
TSLK	**Tsoukalades, L**	**0.42**	**25**	P	**Pb**	**06 52 56.4**	**-0.6**
TSLK				S	Sg	06 53 01.9	+1.0
KFL	**Anninata**	**0.44**	**139**	P	**Pg**	**06 52 55.3**	**-0.5**
KFL				S	Sg	06 53 01.9	+0.4
	244μm,0.3s						
KFL	**Anninata**	**0.44**	**139**	P	**Pg**	**06 52 55.4**	**-0.3**
KFL				S	Sg	06 53 01.2	-0.3
KFL				AML	AML	06 53 02.6	
KFL				AML	AML	06 53 02.8	
AST1	**Astakos**	**0.53**	**79**	P	**Pg**	**06 52 57.4**	**-0.1**
AST1				S	Sg	06 53 05.2	+0.8
	98μm,0.4s						
VLMS	**Volimes, Zakyn**	**0.60**	**162**	P	**Pg**	**06 52 58.4**	**-0.3**
VLMS				S	Sg	06 53 06.2	-0.3
VLMS				AML	AML	06 53 08.1	
VLMS				AML	AML	06 53 17.6	
PDO	**Prodromos**	**0.61**	**75**	P	**Pg**	**06 52 58.9**	**-0.1**
PDO				S	Sg	06 53 07.5	+0.4
	68μm,0.5s						
PDO	**Prodromos**	**0.61**	**75**	P	**Pg**	**06 52 59.0**	**-0.1**
PDO				S	Sg	06 53 07.2	+0.1
PDO				AML	AML	06 53 13.3	
	comp=E,90547μm,0.6s						
PDO				AML	AML	06 53 13.6	
	comp=N,96936μm,0.4s						
ZAK2	**Zakynthos**	**0.76**	**150**	P	**Pg**	**06 53 01.4**	**-0.3**
ZAK2				S	Sg	06 53 12.3	+0.7
KRI1	**kERI**	**0.84**	**158**	P	**Pg**	**06 53 02.2**	**-1.2**
KRI1				S	Sg	06 53 14.7	+0.4
	comp=N,70μm,0.2s						
PVO	**Paravola**	**0.88**	**78**	P	**Pg**	**06 53 04.0**	**-0.2**
PVO				S	Sb	06 53 16.3	-0.4
	comp=N,34μm,0.5s						
PVO	**Paravola**	**0.88**	**78**	P	**Pg**	**06 53 04.0**	**-0.2**
PVO				AML	AML	06 53 22.5	
	comp=N,49843μm,0.5s						
PVO				AML	AML	06 53 24.5	
	comp=E,85320μm,0.4s						
RLS	**Riolos of Patr**	**0.91**	**115**	P	**Pg**	**06 53 03.4**	**-1.2**
RLS				S	Sg	06 53 16.6	+0.2
	comp=E,12μm,0.8s						
RLS	**Riolos of Patr**	**0.91**	**115**	P	**Pg**	**06 53 03.8**	**-0.8**
RLS				AML	AML	06 53 25.9	
	comp=E,26455μm,0.8s						
RLS				AML	AML	06 53 31.4	
	comp=N,23300μm,0.8s						
UPR	**University Cam**	**1.08**	**98**	P	**Pg**	**06 53 07.8**	**-0.2**
DRO	**Drossia**	**1.13**	**115**	P	**Pg**	**06 53 07.4**	**-1.4**
DRO				S	Sb	06 53 24.1	+0.3
	comp=N,30μm,0.4s						
DRO	**Drossia**	**1.13**	**115**	P	**Pg**	**06 53 07.9**	**-1.0**
DRO				AML	AML	06 53 30.3	
	comp=E,60838μm,0.5s						
DRO				AML	AML	06 53 33.9	
	comp=N,55116μm,0.4s						
EFP	**Efpalio**	**1.16**	**90**	P	**Pg**	**06 53 08.1**	**-1.4**
EFP				S	Sb	06 53 25.1	+0.3
	comp=N,41μm,0.6s						
EFP	**Efpalio**	**1.16**	**90**	P	**Pg**	**06 53 08.4**	**-1.1**
EFP				AML	AML	06 53 31.7	
	comp=N,63627μm,0.6s						
EFP				AML	AML	06 53 32.0	
	comp=E,94282μm,0.6s						
EVR	**Evrytania**	**1.18**	**66**	P	**Pg**	**06 53 09.0**	**-0.9**
EVR	**Evrytania**	**1.18**	**66**	P	**Pg**	**06 53 09.1**	**-0.9**
EVR				AML	AML	06 53 32.7	
	comp=E,20768μm,0.8s						
EVR				AML	AML	06 53 36.5	
	comp=N,26632μm,1.0s						
ANX	**Ano Chora**	**1.18**	**82**	P	**Pg**	**06 53 08.8**	**-1.1**
ANX				S	Sb	06 53 26.1	+0.6
	comp=N,17μm,0.5s						
ANX	**Ano Chora**	**1.18**	**82**	P	**Pg**	**06 53 09.1**	**-0.8**
ANX				AML	AML	06 53 33.3	
	comp=E,31048μm,0.5s						
ANX				AML	AML	06 53 36.6	
	comp=N,36198μm,0.4s						
LAKA	**Lakka**	**1.24**	**99**	P	**Pn**	**06 53 09.5**	**-1.4**
LAKA				S	Sb	06 53 26.9	-0.1
	comp=N,8μm,0.8s						
LAKA	**Lakka**	**1.24**	**99**	P	**Pn**	**06 53 09.8**	**-1.1**
LAKA				AML	AML	06 53 36.3	
	comp=E,16846μm,0.5s						
LAKA				AML	AML	06 53 40.0	
	comp=N,15662μm,1.0s						
JAN	**Janina**	**1.25**	**15**	P	**Pg**	**06 53 11.7**	**+0.4**
JAN	**Janina**	**1.25**	**15**	P	**Pg**	**06 53 11.7**	**+0.4**
SERG	**Sergoula**	**1.28**	**91**	P	**Pn**	**06 53 10.1**	**-1.4**
SERG	**Sergoula**	**1.28**	**91**	P	**Pn**	**06 53 10.7**	**-0.8**
SERG				AML	AML	06 53 34.2	
	comp=E,31785μm,0.5s						
SERG				AML	AML	06 53 34.5	
	comp=N,38951μm,0.5s						
TRIZ	**Trizonia**	**1.30**	**93**	P	**Pn**	**06 53 10.4**	**-1.3**
TRIZ	**Trizonia**	**1.30**	**93**	P	**Pn**	**06 53 10.8**	**-0.9**
KALE	**Kalithea**	**1.35**	**92**	P	**Pn**	**06 53 11.2**	**-1.2**
KALE				S	Sb	06 53 30.3	+0.1
	comp=N,10μm,0.8s						
KALE	**Kalithea**	**1.35**	**92**	P	**Pn**	**06 53 11.6**	**-0.8**
KALE				AML	AML	06 53 36.8	
	comp=E,12089μm,0.7s						
KALE				AML	AML	06 53 42.1	
	comp=N,28395μm,0.9s						
KASA	**Kassiopi**	**1.35**	**344**	P	**Pg**	**06 53 13.8**	**+0.5**
AMT	**Artemida-Makis**	**1.36**	**132**	P	**Pn**	**06 53 12.4**	**-0.2**
AMT	**Artemida-Makis**	**1.36**	**132**	P	**Pb**	**06 53 13.2**	**+0.2**
AMT				AML	AML	06 53 41.1	
	comp=E,33052μm,0.5s						
AMT				AML	AML	06 53 42.0	
	comp=N,27794μm,0.6s						
KLV	**Kalavryta, Ach**	**1.42**	**106**	P	**Pn**	**06 53 12.5**	**-0.9**
KLV	**Kalavryta, Ach**	**1.42**	**106**	P	**Pn**	**06 53 12.5**	**-0.9**
MAKR	**Makrakomi, Fth**	**1.45**	**66**	P	**Pn**	**06 53 13.7**	**-0.1**
AGG	**Agios Georgios**	**1.60**	**68**	P	**Pn**	**06 53 16.0**	**+0.1**
AGG	**Agios Georgios**	**1.60**	**68**	P	**Pb**	**06 53 16.5**	**-0.6**
AGG	**Agios Georgios**	**1.60**	**68**	P	**Pb**	**06 53 16.7**	**-0.4**
AGG	**Agios Georgios**	**1.60**	**68**			**06 53 16.4**	**-0.6**
THL	**Klokotos Trika**	**1.67**	**47**	P	**Pn**	**06 53 17.3**	**+0.5**
ITM	**Ithomi**	**1.73**	**136**			**06 53 18.4**	**+0.6**
SCTE	**Santa Cesarea**	**2.23**	**318**			**06 53 24.9**	**+0.5**
LIT	**Litokhoron**	**2.30**	**43**	*i* P	**Pn**	**06 53 25.1**	**-0.4**
LIT				*i* S	**Sb**	**06 53 55.9**	**-1.8**
LIT	**Litokhoron**	**2.30**	**43**		**Pb**	**06 53 27.7**	**-1.3**
FNA	**Florina**	**2.45**	**17**	P	**Pn**	**06 53 29.1**	**+1.5**
FNA				*i* S	**Sn**	**06 53 58.4**	**+0.6**
FNA	**Florina**	**2.45**	**17**		**Pn**	**06 53 29.1**	**+1.5**
OHR	**Ohrid**	**2.68**	**6**	*i* Pn	**Pb**	**06 53 33.2**	**-2.3**
OHR				*i* Sg	**Sb**	**06 54 07.7**	**-0.9**
OHR				*e*Lg	Lg	06 54 07.9	
	comp=N,2μm,1.3s						
OHR				*e*Lg	Lg	06 54 09.4	
	comp=E,3μm,1.1s						
TIR	**Tirane**	**2.93**	**352**	P	**Pn**	**06 53 35.3**	**+1.2**
TIR	**Tirane**	**2.93**	**352**	⇓P	**Pn**	**06 53 35.8**	**+1.6**
TIR	**Tirane**	**2.93**	**352**		**Pn**	**06 53 35.3**	**+1.2**
TIP	**Timpagrande**	**2.96**	**285**	⇑P	**Pn**	**06 53 35.6**	**+1.0**
TIP	**Timpagrande**	**2.96**	**285**	⇑S	**Sn**	**06 54 09.4**	**-0.9**
TIP	**Timpagrande**	**2.96**	**285**		**Pn**	**06 53 35.5**	**+1.0**
TAR1	**Taranto**	**3.20**	**312**	*e*Pn	**Pn**	**06 53 39.7**	**+1.9**
VAY	**Valandovo**	**3.31**	**29**	*e*P	**Pn**	**06 53 42.1**	**+2.7**
VAY	**Valandovo**	**3.31**	**29**	*i* Pn	**Pn**	**06 53 40.8**	**+1.4**
MASS	**Massafra**	**3.35**	**312**	*e*Pn	**Pn**	**06 53 42.3**	**+2.4**
STIP	**Stip**	**3.52**	**22**	*i* Pn	**Pn**	**06 53 45.2**	**+3.0**
CEL	**Celeste**	**3.57**	**268**		**Pn**	**06 53 43.3**	**+0.4**
MATE	**Matera**	**3.62**	**309**	⇑P	**Pn**	**06 53 44.3**	**+0.7**
MATE	**Matera**	**3.62**	**309**	⇑S	**Sn**	**06 54 23.9**	**-2.7**
ULC	**Ulcinj**	**3.63**	**346**	*e*Pn	**Pn**	**06 53 42.9**	**-0.9**
ULC				*e*Sn	**Sn**	**06 54 26.8**	**0.0**
SGO1	**Sgolgore (BA)**	**3.75**	**311**	⇓*i*Pn	**Pn**	**06 53 46.4**	**+0.9**
BAI	**Bari**	**3.81**	**315**	⇓*i*Pn	**Pn**	**06 53 47.5**	**+1.3**
DRME	**Dracevica, Mon**	**3.86**	**346**	*e*Pn	**Pn**	**06 53 47.2**	**+0.3**
DRME	**Dracevica, Mon**	**3.86**	**346**	*e*Pn	**Pn**	**06 53 46.7**	**-0.2**
DRME				*e*Sn	**Sn**	**06 54 32.2**	**-0.2**
KKB	**Krupnik**	**3.98**	**30**	*e*P	**Pn**	**06 53 50.6**	**+2.0**
BUM	**Brajici-Budva**	**4.03**	**344**	*e*Pn	**Pn**	**06 53 48.9**	**-0.4**
BUM				*e*Sn	**Sn**	**06 54 36.1**	**-0.5**
MMB	**Musomiste**	**4.04**	**38**	*e*P	**Pn**	**06 53 53.8**	**+4.4**
PDG	**Podgorica**	**4.08**	**348**	⇑P	**Pn**	**06 53 50.2**	**+0.2**
PDG	**Podgorica**	**4.08**	**348**	⇑S	**Sn**	**06 54 35.3**	**-2.6**
PDG	**Podgorica**	**4.08**	**348**	*e*Pn	**Pn**	**06 53 50.0**	**+0.1**
PDG	**Podgorica**	**4.08**	**348**		**Pn**	**06 53 49.9**	**0.0**
TTG	**Podgorica**	**4.08**	**348**	*e*Pn	**Pn**	**06 53 49.7**	**-0.2**
TTG				*e*Sn	**Sn**	**06 54 37.4**	**-0.5**
PVY	**Plav**	**4.16**	**355**	*e*Pn	**Pn**	**06 53 51.5**	**+0.3**
PVY				*e*Sn	**Sn**	**06 54 40.0**	**-0.1**
ACER	**Acerenza**	**4.18**	**305**		**Pn**	**06 53 50.8**	**-0.5**
CEME	**Cevo**	**4.26**	**345**	*e*Pn	**Pn**	**06 53 52.9**	**-0.4**
CEME				*e*Sn	**Sn**	**06 54 41.2**	**-1.1**
HCY	**Herceg Novi**	**4.26**	**340**	*e*Pn	**Pn**	**06 53 51.6**	**-0.8**
HCY	**Herceg Novi**	**4.26**	**340**	*e*Pn	**Pn**	**06 53 51.6**	**-0.8**
HCY				*e*Sn	**Sn**	**06 54 41.6**	**-0.8**
APE	**Apeiranthos**	**4.27**	**107**	*i* P	**Pn**	**06 53 53.3**	**+0.7**
APE	**Apeiranthos**	**4.27**	**107**	⇑P	**Pn**	**06 53 56.3**	**+3.7**
IVA	**Berane**	**4.44**	**355**	*e*Pn	**Pn**	**06 53 55.3**	**+0.3**
IVA				*e*Sn	**Sn**	**06 54 46.3**	**-0.6**
KOME	**Kolasin**	**4.46**	**351**	*e*Pn	**Pn**	**06 53 55.5**	**+0.3**
KOME				*e*Sn	**Sn**	**06 54 46.8**	**-0.5**
NKME	**Niksic**	**4.46**	**346**	*e*Pn	**Pn**	**06 53 54.9**	**-0.3**
NKME				*e*Sn	**Sn**	**06 54 46.4**	**-0.9**
SANT	**Santorini**	**4.51**	**116**	⇓P	Pb	06 54 01.9	-4.8
SANT	**Santorini**	**4.51**	**116**		**Pb**	**06 54 03.3**	**-3.4**
TREB	**Trebinje**	**4.55**	**340**	*e*Pn	**Pn**	**06 53 55.6**	**-0.8**
DBRK	**Dubrovnik**	**4.56**	**338**	*e*Pn	**Pn**	**06 53 55.9**	**-0.6**
DBRK				Sn	**Sn**	**06 54 47.3**	**-2.5**
RZN	**Rozhen**	**4.62**	**44**	*e*P	**Pn**	**06 54 00.2**	**+2.7**
BRY	**Bratogost**	**4.68**	**343**	*e*Pn	**Pn**	**06 53 57.6**	**-0.7**
BRY	**Bratogost**	**4.68**	**343**	*e*Pn	**Pn**	**06 53 57.9**	**-0.4**
BRY				*e*Sn	**Sn**	**06 54 51.9**	**-0.9**
VTS	**Vitosha**	**4.69**	**26**	P	**Pn**	**06 53 59.1**	**+0.7**
VTS	**Vitosha**	**4.69**	**26**	⇓P	**Pn**	**06 53 59.9**	**+1.5**
VTS	**Vitosha**	**4.69**	**26**	*e*P	**Pn**	**06 53 59.4**	**+1.0**
VTS	**Vitosha**	**4.69**	**26**		**Pn**	**06 53 59.1**	**+0.7**
IDI	**Anoyia**	**4.77**	**130**	Pn	**Pn**	**06 54 00.6**	**+1.2**
	comp=E,0.7nm,0.3s,baz=282,slow=11,SNR=12						
IDI				Sn	**Sn**	**06 54 55.7**	**+0.7**
	comp=E,6.0nm,0.3s,baz=329,slow=20,SNR=5.4						
IDI				LR	LR	06 56 23.6	
	comp=E,743nm,18.5s,baz=318,slow=45						
STON	**Ston**	**4.88**	**336**	*e*Pn	**Pn**	**06 54 00.1**	**-0.9**
STON				Sn	**Sn**	**06 54 54.9**	**-2.8**
STON	**Ston**	**4.88**	**336**	*e*Pn	**Pn**	**06 54 00.2**	**-0.7**
UPM	**Unac-Piva**	**4.89**	**347**	*e*Pn	**Pn**	**06 54 01.7**	**+0.4**
UPM	**Unac-Piva**	**4.89**	**347**	*e*Pn	**Pn**	**06 54 01.0**	**-0.3**
UPM				*e*Sn	**Sn**	**06 54 57.5**	**-0.7**
PLE	**Pljevlja**	**4.94**	**351**	*e*Pn	**Pn**	**06 54 01.5**	**-0.4**
PLE				*e*Sn	**Sn**	**06 54 58.9**	**-0.4**
ALN	**Alexandroupoli**	**4.98**	**59**	P	**Pn**	**06 54 03.9**	**+1.6**
ALN	**Alexandroupoli**	**4.98**	**59**		**Pn**	**06 54 03.9**	**+1.6**
PAOL	**Paolisi**	**5.20**	**302**		**Pn**	**06 54 07.9**	**+2.5**
RUDO	**Rudo**	**5.23**	**352**	*e*Pn	**Pn**	**06 54 05.2**	**-0.5**
WDD	**Wied Dalam**	**5.38**	**243**		**Pn**	**06 54 08.1**	**+0.2**
BBLS	**Lazići**	**5.47**	**352**	*e*Pn	**Pn**	**06 54 08.7**	**-0.4**
MAKA	**Makarska**	**5.48**	**333**	*e*Pn	**Pn**	**06 54 09.5**	**+0.4**
MPEP	**Mala Peshtene**	**5.51**	**26**	*e*P	**Pn**	**06 54 12.2**	**+2.6**
DIVS	**Divibare**	**5.66**	**357**	*e*Pn	**Pn**	**06 54 11.2**	**-0.5**
HAPS	**Han Pijesak,Bl**	**5.75**	**349**	*e*Pn	**Pn**	**06 54 11.8**	**-1.1**
PLVB	**Pleven**	**5.87**	**31**	⇓P	**Pn**	**06 54 15.4**	**+0.9**
ELND	**Elena**	**6.10**	**41**	⇑P	**Pn**	**06 54 19.0**	**+1.4**
KARP	**Karpathos**	**6.12**	**116**		**Pn**	**06 54 20.2**	**+2.2**
INTR	**Introdacqua**	**6.13**	**308**		**Pn**	**06 54 19.6**	**+1.4**
TEKS	**Tekeris**	**6.14**	**354**	*e*Pn	**Pn**	**06 54 17.2**	**-1.0**
KIJV	**Kijevo**	**6.33**	**333**	*i* Pn	**Pn**	**06 54 21.1**	**+0.3**
KIJV				Sn	**Sn**	**06 55 31.9**	**-1.3**
ZIRJ	**Zirje**	**6.33**	**327**	*e*Pn	**Pn**	**06 54 20.7**	**-0.2**
MANT	**Manisa**	**6.38**	**87**		**Pn**	**06 54 26.2**	**+4.4**
MGRS	**Mrkonjic Grad**	**6.47**	**338**	*e*Pn	**Pn**	**06 54 23.3**	**+0.5**
MORI	**Morici**	**6.48**	**328**	*e*Pn	**Pn**	**06 54 23.1**	**+0.2**
AQU	**L'Aquila**	**6.63**	**308**	P	**Pn**	**06 54 26.6**	**+1.6**
AQU	**L'Aquila**	**6.63**	**308**	Pn	**Pn**	**06 54 26.6**	**+1.6**
FRGS	**Fruska Gora**	**6.72**	**356**	*e*Pn	**Pn**	**06 54 23.6**	**-2.7**
BLY	**Banja Luka**	**6.75**	**340**	⇑P	**Pn**	**06 54 27.1**	**+0.5**
BLY	**Banja Luka**	**6.75**	**340**	*e*Pn	**Pn**	**06 54 26.1**	**-0.5**
BLY	**Banja Luka**	**6.75**	**340**		**Pn**	**06 54 28.8**	**-1.8**
DUGI	**Dugi Otok**	**6.86**	**326**	*e*Pn	**Pn**	**06 54 26.8**	**-1.3**
NRCA	**Norcia**	**7.08**	**311**		**Pn**	**06 54 32.8**	**+1.6**
GZR	**Gura Zlata**	**7.16**	**13**	⇑P	**Pn**	**06 54 32.3**	**0.0**
BZS	**Buzias**	**7.22**	**7**	⇑P	**Pn**	**06 54 33.3**	**+0.3**
NVLJ	**Novalja**	**7.40**	**327**	*i* Pn	**Pn**	**06 54 35.9**	**+0.5**
LOT	**Lotru**	**7.43**	**19**	⇑P	**Pn**	**06 54 36.9**	**+0.9**
MURB	**Monte Urbino**	**7.68**	**311**		**Pn**	**06 54 41.2**	**+1.8**
VOIR		**7.79**	**25**	P	**Pn**	**06 54 42.4**	**+1.5**
VOIR		**7.79**	**25**	⇓P	**Pn**	**06 54 42.5**	**+1.6**
MORH	**Mrgy, Hungar**	**7.88**	**351**	*e*Pn	**Pn**	**06 54 40.1**	**-1.9**
SLUM	**Salum**	**7.97**	**149**	P	**Pn**	**06 54 42.8**	**-0.6**
	baz=150						
BOJS	**Bojanci**	**8.04**	**333**	*i* Pn	**Pn**	**06 54 44.7**	**+0.5**
BOJS				*e*Sn	**Sn**	**06 56 11.9**	**-3.3**
OZLJ	**Ozalj**	**8.06**	**334**	*e*Pn	**Pn**	**06 54 44.7**	**+0.2**
MLR	**Muntele Rosu**	**8.15**	**29**	Pn	**Pn**	**06 54 48.2**	**+2.3**
	comp=E,0.2nm,0.3s,baz=205,slow=2.9,SNR=4.1						
MLR				LR	LR	06 57 56.2	
	comp=E,304nm,18.4s,baz=162,slow=38						
MLR	**Muntele Rosu**	**8.15**	**29**	⇓P	**Pn**	**06 54 47.4**	**+1.4**
RIY	**Rijeka**	**8.18**	**329**	*e*Pn	**Pn**	**06 54 46.0**	**-0.2**
GBRS	**Gornja Briga**	**8.22**	**331**	*e*Pn	**Pn**	**06 54 47.4**	**+0.6**
GBRS				*e*Sn	**Sn**	**06 56 15.6**	**-4.3**
CRES	**Cresnjev**	**8.25**	**335**	⇑*i*Pn	**Pn**	**06 54 46.5**	**-0.6**
DOPR	**Dopca**	**8.37**	**24**	⇑P	**Pn**	**06 54 50.0**	**+1.2**
VISS	**Visnje**	**8.44**	**332**	*e*Pn	**Pn**	**06 54 50.2**	**+0.4**
VISS				*e*Sn	**Sn**	**06 56 20.8**	**-4.4**
BISRR	**Bisoca**	**8.50**	**31**	⇑P	**Pn**	**06 54 52.9**	**+2.3**
CEY	**Cerknica**	**8.54**	**330**	⇑*i*Pn	**Pn**	**06 54 50.9**	**-0.3**
PLOR	**Plostina**	**8.72**	**30**	⇓P	**Pn**	**06 54 56.1**	**+2.4**
LJU	**Ljubljana**	**8.76**	**332**	*e*Pn	**Pn**	**06 54 53.5**	**-0.7**
VRI	**Vrincioaia**	**8.77**	**30**	P	**Pn**	**06 54 57.9**	**+3.6**
VRI	**Vrincioaia**	**8.77**	**30**	⇑P	**Pn**	**06 54 56.0**	**+1.7**
TRI	**Trieste**	**8.78**	**328**	P	**Pn**	**06 54 53.9**	**-0.6**
TRI	**Trieste**	**8.78**	**328**	Pn	**Pn**	**06 54 53.9**	**-0.6**
SOKA	**Soboth**	**9.14**	**336**	*e*Pn	**Pn**	**06 54 58.7**	**-0.7**
	comp=E,33nm,0.6s,SNR=16						
SOKA				*i* Sn	**Sn**	**06 56 37.1**	**-5.4**
	comp=E,29nm,0.7s						
OBKA	**Obir**	**9.15**	**334**	*e*Pn	**Pn**	**06 54 59.9**	**+0.2**
OBKA				*e*Sn	**Sn**	**06 56 37.6**	**-5.3**
OBKA	**Obir**	**9.15**	**334**	*i* Pn	**Pn**	**06 54 59.8**	**+0.2**
	comp=E,5.9nm,0.3s						
OBKA				*i* Sn	**Sn**	**06 56 39.2**	**-3.6**
	comp=E,31nm,0.6s						
KEST	**Kesra**	**9.26**	**256**	Pn	**Pn**	**06 55 01.8**	**+0.7**
	comp=E,0.7nm,0.3s,baz=36,slow=11,SNR=7.5						
KEST				Sn	**Sn**	**06 56 44.8**	**-0.6**
	comp=E,0.4nm,0.3s,baz=278,slow=20,SNR=3.7						
KEST				LR	LR	06 59 25.4	
	comp=E,143nm,21.4s,baz=12,slow=43						
KEST	**Kesra**	**9.26**	**256**	Pn	**Pn**	**06 55 01.3**	**+0.2**
PSZ	**Piszkesteto**	**9.48**	**358**	P	**Pn**	**06 55 03.3**	**-0.8**
PSZ	**Piszkesteto**	**9.48**	**358**		**Pn**	**06 55 03.3**	**-0.8**
TEOL	**Teolo**	**9.50**	**319**		**Pn**	**06 55 03.5**	**-0.9**
ARSA	**Arzberg**	**9.51**	**339**	*e*Pn	**Pn**	**06 55 03.5**	**-0.9**
ARSA				*e*Sn	**Sn**	**06 56 44.7**	**-6.8**
ARSA	**Arzberg**	**9.51**	**339**	Pn	**Pn**	**06 55 03.5**	**-0.9**
	comp=E,6.8nm,0.7s,SNR=7.0						
ARSA				*i* Sn	**Sn**	**06 56 47.1**	**-4.3**
	comp=E,13nm,1.2s						
MYKA	**Terra Mystica**	**9.59**	**331**	*i* Pn	**Pn**	**06 55 05.6**	**0.0**
	comp=E,0.3nm,0.1s						
MYKA				*i* Sn	**Sn**	**06 56 49.9**	**-3.6**
	comp=E,16nm,0.6s						
BURAR	**Bucovina Array**	**9.81**	**19**	⇑P	**Pn**	**06 55 09.9**	**+1.3**
CTI	**Castel Tesino**	**10.00**	**322**		**Pn**	**06 55 10.6**	**-0.6**
CTI					**Sn**	**06 56 58.8**	**-4.8**
ZST	**Bratislava**	**10.04**	**347**	*e*SN	**Sn**	**06 56 57.5**	**-7.0**
CONA	**Conrad Observa**	**10.04**	**342**	Pn	**Pn**	**06 55 11.7**	**-0.2**
	comp=E,2.9nm,0.6s						
KBA	**Koelnbreinsper**	**10.07**	**331**	*e*Pn	**Pn**	**06 55 12.0**	**-0.3**
KBA				*e*Sn	**Sn**	**06 57 00.4**	**-5.1**
KBA	**Koelnbreinsper**	**10.07**	**331**	*e*Pn	**Pn**	**06 55 12.4**	**+0.1**
	comp=E,9.2nm,0.8s,SNR=4.7						
KBA				*e*Sn	**Sn**	**06 57 00.2**	**-5.3**
	comp=E,20nm,0.8s						
SWA2		**10.08**	**154**	P	**Pn**	**06 55 10.2**	**-2.2**
	baz=155						
SWA2				S	Sn	06 56 52.2	-13
	baz=155						
VYHS	**Vyhne**	**10.11**	**354**	*e*P	**Pn**	**06 55 12.8**	**+0.1**
VYHS				*e*		06 57 02.3	
VYHS	**Vyhne**	**10.11**	**354**	*e*PN	**Pn**	**06 55 12.8**	**+0.1**
VYHS				*e*SN	**Sn**	**06 57 02.3**	**-4.0**
**ABT

comp=Z,100nm,19.6s
ANN Anapa 14.21 58 *e*P **Pn** 06 56 07.3 -1.4
ANN pmax pmax
comp=Z,134nm,1.4s
TNS Taunus Mts 14.54 328 *e*Pn **Pn** 06 56 12.7 -0.6
EIL Elat 14.87 122 LR LR 07 04 31.1
comp=Z,120nm,19.1s,baz=298,slow=47
WLF Walferdange 15.17 322 P **P** 06 56 24.9 -2.0
WLF pmax pmax
comp=Z,22nm,0.9s
WLF Walferdange 15.17 322 **P** 06 56 24.9 -2.0
WLF IAmb IAmb 06 56 30.8
comp=Z,22nm,0.9s
MEM Membach 15.89 325 Pn **Pn** 06 56 30.3 -0.8
MEM pP **sP** 06 56 37.1 +0.2
BSTI Sart Tilman 16.07 324 Pn **Pn** 06 56 32.9 -0.6
BSTI PnPn **pwP** 06 56 40.3 -1.0
DOU Dourbes 16.21 321 pP pP 06 56 41.0 +0.9
NACGM Naroch 17.02 13 *e* **Pn** 06 56 45.0 -0.5
NEY Neytrino 17.52 67 *i* P **P** 06 56 54.4 +1.2
NEY pmax pmax
comp=Z,2.0nm,1.0s
KIV Kislovodsk 17.61 65 *e*P **P** 06 56 55.1 +1.0
KIV pmax pmax
comp=Z,29nm,1.1s
VORD Divnogorie 18.28 41 *e*P **Pn** 06 57 00.6 -0.5
VORD pmax pmax
comp=Z,6.0nm,0.5s
VSR Storozhevoye 18.36 40 *e*P **Pn** 06 57 01.6 -0.5
VSR pmax pmax
comp=Z,10.0nm,1.4s
ESDC Sonseca Array 18.97 281 P **Pn** 06 57 09.8 +0.1
comp=Z,0.3nm,0.3s,baz=74,slow=11,SNR=7.8
ESDC Sonseca Array 18.97 281 P **Pn** 06 57 09.5 -0.1
OBN Obninsk 19.92 28 *e*P **P** 06 57 18.5 -0.7
OBN pmax pmax
comp=Z,4.0nm,0.8s
OBN Obninsk 19.92 28 LR LR 07 06 20.3
comp=Z,37nm,18.8s,baz=192,slow=41
TAM Tamanrasset 20.15 224 P Pn 06 57 23.7 -0.3
TAM pmax pmax
comp=Z,12nm,1.1s
TAM Tamanrasset 20.15 224 P Pn 06 57 23.7 -0.3
VSU Vasula 20.45 10 *i* P **P** 06 57 24.6 -0.3
MOS Moscow 20.79 28 *e*P **P** 06 57 27.1 -1.5
MDT Midelt 21.08 262 LR LR 07 06 50.7
comp=Z,87nm,18.1s,baz=164,slow=40
HFS Hagfors 22.12 351 P **P** 06 57 42.0 -1.0
HFS Hagfors 22.12 351 P **P** 06 57 42.0 -1.0
comp=Z,9.2nm,0.5s,baz=153,slow=13,SNR=25.5
HFS LR LR 07 08 41.9
comp=Z,163nm,18.5s,baz=170,slow=43
NC602 NORSAR Array S 23.00 349 P **P** 06 57 52.1 -0.1
NC602 IAmb IAmb 06 57 56.7
comp=Z,31nm,1.1s
EKA Eskdalemuir Ar 23.17 324 P **P** 06 57 53.8 -0.2
comp=Z,5.2nm,0.7s,baz=124,slow=9.8,SNR=11
NAO01 NORSAR Array S 23.21 348 P **P** 06 57 54.3 -0.1
FINES FINESS Array B 23.29 7 P **P** 06 57 53.6 -1.6
comp=Z,11nm,0.8s,baz=164,slow=11,SNR=4.0
FINES LR LR 07 07 59.7
comp=Z,243nm,20.3s,baz=190,slow=39
FIA1 FINESS Array S 23.29 7 P **P** 06 57 55.1 -0.1
FIA1 IAmb IAmb 06 57 57.9
comp=Z,34nm,1.2s
NC405 NORSAR Array S 23.34 349 P **P** 06 57 55.1 -0.6
NB201 NORSAR Array S 23.34 349 P **P** 06 57 55.9 +0.1
NB2 NORSAR Subarra 23.34 349 P **P** 06 57 55.2 -0.6
comp=Z,11nm,0.9s,baz=160,slow=10
NOA NORSAR Array B 23.34 349 P **P** 06 57 55.0 -0.8
comp=Z,4.5nm,0.8s,baz=157,slow=10,SNR=18
NOA LR LR 07 08 51.0
comp=Z,198nm,19.2s,baz=165,slow=42
NBO00 NORSAR Array S 23.40 348 P **P** 06 57 56.5 +0.1
NC303 NORSAR Array S 23.50 349 P **P** 06 57 57.2 -0.1
NC204 NORSAR Array S 23.64 348 P **P** 06 57 59.3 +0.5
KLMR Klimovskoe 25.42 22 *e*P **P** 06 58 14.4 -0.6
KLMR pmax pmax
comp=Z,30nm,1.2s
KLMR Klimovskoe 25.42 22 *e*P **P** 06 58 14.4 -0.6
KLMR AMP 06 58 19.2
comp=Z,30nm,1.2s
KLMR LQ LQ 07 05 56.8
KLMR LQ LQ 07 05 56.8
KLMR LR LR 07 07 59.3
KIRV Kirov 27.47 33 LR LR 07 10 03.7
comp=Z,192nm,18.9s,baz=210,slow=38
TMCR Tamitsa 27.81 17 *e*P **P** 06 58 35.6 -0.9
TMCR pmax pmax
comp=Z,12nm,0.7s
AKTO Aktyubinsk 29.08 53 LR LR 07 13 07.0
comp=Z,77nm,19.0s,baz=279,slow=42
GEYT Alibeck 29.50 79 LR LR 07 12 54.4
comp=Z,46nm,19.1s,baz=230,slow=41
TOA0 Torodi Ar. Sit 30.19 218 P **P** 06 58 56.8 -1.3
TOA0 IAmb IAmb 06 58 59.1
comp=Z,6.3nm,0.9s
TORD Torodi Ar. Bea 30.19 218 P **P** 06 58 58.3 +0.1
comp=Z,5.8nm,0.8s,baz=33,slow=8.9,SNR=30
TORD Torodi Ar. Bea 30.19 218 P **P** 06 58 57.0 -1.2
ARU Arti 30.91 42 *i* P **P** 06 59 00.9 -3.3
ARCES ARCESS Array B 31.27 3 P **P** 06 59 06.7 -0.5
ARCES ARCESS Array B 31.27 3 P **P** 06 59 06.3 -0.9
comp=Z,2.6nm,0.8s,baz=190,slow=11,SNR=10
ARCES LR LR 07 12 55.0
comp=Z,147nm,19.0s,baz=178,slow=39
ARCES ARCESS Array B 31.27 3 P **P** 06 59 06.7 -0.5
UOSS Minazif 33.07 103 P **P** 06 59 26.6 +3.2
UOSS IAmb IAmb 06 59 31.2
comp=Z,4.6nm,0.8s
BRVK Borovoye 36.94 50 P **P** 06 59 59.3 +2.7
KK31 Karatay Array 37.76 67 P **P** 07 00 03.8 +0.2
KK31 pmax pmax
comp=Z,5.0nm,0.8s
KK31 Karatay Array 37.76 67 P **P** 07 00 03.8 +0.2
KK31 IAmb IAmb 07 00 21.4
comp=Z,4.5nm,0.8s
KKAR Karatay Array 37.76 67 P **P** 07 00 03.6 0.0
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 37.76 67 P **P** 07 00 03.6 0.0
BTK Batken 38.63 71 P **P** 07 00 13.3 +2.1
BTK pmax pmax
comp=Z,9.0nm,1.2s
BTK Batken 38.63 71 P **P** 07 00 13.3 +2.1
BTK IAmb IAmb 07 00 21.1
comp=Z,9.1nm,1.2s
DBIC Dimbokro 39.04 222 P **P** 07 00 14.6 0.0
DBIC pmax pmax
comp=Z,7.0nm,0.7s
DBIC Dimbokro 39.04 222 P **P** 07 00 14.3 -0.3
comp=Z,6.3nm,0.7s,baz=18,slow=9.8,SNR=9.5
DBIC LR LR 07 17 24.5
comp=Z,112nm,18.8s,baz=10,slow=38
DBIC Dimbokro 39.04 222 P **P** 07 00 14.6 0.0
DBIC IAmb IAmb 07 00 15.4
comp=Z,6.6nm,0.7s
TIC Toumodi 39.15 223 *e*P **P** 07 00 15.3 -0.2
KIC Kosan Boka 39.24 222 *e*P **P** 07 00 15.8 -0.5
comp=Z,15nm,0.8s
LIC Lamto 39.50 222 *e*P **P** 07 00 18.1 -0.4
comp=Z,43nm,1.1s
AAK Ala-Archa 40.72 66 *i* P **P** 07 00 28.5 -0.1
AAK pmax pmax
comp=Z,1.0nm,0.7s
BOOM Boomskoye usch 41.79 66 P **P** 07 00 38.9 +1.5
BOOM pmax pmax
comp=Z,16nm,1.2s
BOOM Boomskoye usch 41.79 66 P **P** 07 00 38.9 +1.5
BOOM IAmb IAmb 07 00 55.7
comp=Z,16nm,1.2s
KURK Kurchatov 42.18 54 P **P** 07 00 41.2 +1.0
KURK pmax pmax
comp=Z,6.0nm,1.3s
KURK Kurchatov 42.18 54 P **P** 07 00 41.2 +1.0
KSH Kashi 42.60 70 P **P** 07 00 44.5 +0.5
KSH pmax pmax
comp=Z,240nm,5.6s
MK31 Makanchi Array 45.23 59 P **P** 07 01 03.8 -1.1
MK31 pmax pmax
comp=Z,2.0nm,0.8s
MK31 Makanchi Array 45.23 59 P **P** 07 01 03.8 -1.1
MKAR Makanchi Array 45.23 59 P **P** 07 01 03.8 -1.1
MKAR Makanchi Array 45.23 59 P **P** 07 01 03.7 -1.2
comp=Z,1.3nm,0.4s,baz=278,slow=7.3,SNR=28

MKAR Makanchi Array 45.23 59 P **P** 07 01 03.8 -1.1
ZAA0 Zalesovo Array 45.57 48 P **P** 07 01 07.2 -0.3
ZAA0 IAmb IAmb 07 01 09.5
comp=Z,7.3nm,1.0s
ZALV Zalesovo Beam 45.57 48 P **P** 07 01 06.8 -0.6
ZALV Zalesovo Beam 45.57 48 P **P** 07 01 06.2 -1.3
comp=Z,5.5nm,0.5s,baz=277,slow=9.0,SNR=17
ZALV Zalesovo Beam 45.57 48 P **P** 07 01 06.8 -0.6
WMQ Urumqi 49.70 61 *e*P **P** 07 01 43.0 +3.3
WMQ sP sP 07 01 49.3 +6.4
WMQ pmax pmax
comp=Z,6.0nm,0.7s
WMQ LR LR
comp=N,290nm,29.1s
WMQ LR LR
comp=E,1μm,29.1s
WMQ LR LR
comp=Z,45nm,21.5s
TLY Talaya 57.16 47 *e*P **P** 07 02 35.3 +0.9
TLY pmax pmax
comp=Z,16nm,1.4s
TLY MLR MLR
comp=Z,109nm,8.0s
TLY Talaya 57.16 47 LR LR 07 27 43.0
comp=Z,82nm,18.2s,baz=298,slow=37
SCHQ Schefferville 58.21 317 P **P** 07 02 42.0 +0.3
comp=Z,2.0nm,0.5s,baz=64,slow=6.8,SNR=12
SCHQ Schefferville 58.21 317 P **P** 07 02 42.1 +0.3
SCHQ IAmb IAmb 07 02 54.5
comp=Z,5.3nm,0.9s
GTA Gaotai 59.77 62 *e*P **P** 07 02 55.5 +2.6
GTA pP sP 07 02 59.5 +3.4
GTA sP pP 07 03 02.5 +7.4
GTA pmax pmax
comp=Z,3.0nm,1.2s
GTA pmax pmax
comp=Z,70nm,4.6s
GTA LR LR
comp=N,75nm,18.7s
GTA LR LR
comp=E,170nm,19.4s
GTA LR LR
comp=Z,54nm,17.5s
SONM Songino Array 60.35 51 P **P** 07 02 57.2 +0.4
SONM pmax pmax
comp=Z,4.0nm,1.3s
SONM Songino Array 60.35 51 P **P** 07 02 56.3 -0.5
comp=Z,3.3nm,1.2s,baz=282,slow=7.4,SNR=10
SONM Songino Array 60.35 51 P **P** 07 02 57.1 +0.4
ULN Ulaanbaatar 60.73 50 *i* P **P** 07 03 00.1 +0.7
ULN pmax pmax
comp=Z,2.0nm,1.1s
LZH Lanzhou 64.15 63 *e*P **P** 07 03 25.3 +2.8
LZH pP sP 07 03 29.3 +3.6
LZH sP pP 07 03 32.3 +7.5
LZH PP **PP** 07 05 39.8 -3.4
LZH pmax pmax
comp=Z,12nm,1.3s
LZH pmax pmax
comp=Z,59nm,4.9s
YAK Yakutsk 64.91 29 *i* P **P** 07 03 29.7 +2.9
CD2 Chengdu 66.74 68 *e*P **P** 07 03 39.0 -0.2
HHC Hu-ho-hao-te 66.95 56 *e*P **P** 07 03 41.3 +0.9
HHC pmax pmax
comp=Z,2.0nm,0.8s
HHC pmax pmax
comp=Z,31nm,7.6s
BILL Bilibino 70.77 13 *e*P **P** 07 04 05.0 +1.4
BILL *e* 07 04 23.3
BILL *e* 07 06 42.7
BILL pmax pmax
comp=Z,3.0nm,1.0s
INK Inuvik 71.79 350 P **P** 07 04 10.3 +0.6
INK pmax pmax
comp=Z,1.0nm,0.9s
INK Inuvik 71.79 350 P **P** 07 04 08.4 -1.3
comp=Z,0.3nm,0.5s,baz=9.8,slow=6.7,SNR=4.7
INK Inuvik 71.79 350 P **P** 07 04 10.3 +0.6
SEY Seymchan 71.91 21 *i* P **P** 07 04 12.5 +1.9
YKA Yellowknife Ar 73.11 340 P **P** 07 04 17.8 +0.1
comp=Z,0.3nm,0.5s,baz=35,slow=5.6,SNR=12
KLR Kul'dur 73.72 40 *i* P **P** 07 04 20.9 -0.6
KLR pmax pmax
comp=Z,5.0nm,1.0s
KLR Kul'dur 73.72 40 P **P** 07 04 21.2 -0.4
comp=Z,2.3nm,0.8s,baz=332,slow=7.1,SNR=7.1
ULM Lac du Bonnet 75.44 324 P **P** 07 04 32.3 +0.8
ULM pmax pmax
comp=Z,13nm,1.5s
ULM Lac du Bonnet 75.44 324 P **P** 07 04 32.5 +1.0
comp=Z,1.5nm,0.7s,baz=138,slow=3.7,SNR=4.7
ULM Lac du Bonnet 75.44 324 P **P** 07 04 32.3 +0.8
ULM IAmb IAmb 07 04 50.5
comp=Z,13nm,1.5s
IMAR Indian Mountai 75.80 358 P **P** 07 04 34.7 +1.4
MLY Manley 76.63 356 P **P** 07 04 38.7 +0.6
MLY IAmb IAmb 07 04 52.1
comp=Z,6.3nm,1.5s
ILAR Eielson Array 76.64 354 P **P** 07 04 39.0 +0.9
ILAR Eielson Array 76.64 354 P **P** 07 04 38.9 +0.9
comp=Z,0.4nm,0.7s,baz=345,slow=2.5,SNR=6.3
NJ2 Nanjing 76.75 60 *e*P **P** 07 04 39.0 -0.3
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
WRH Wood River Hil 77.02 355 P **P** 07 04 41.3 +1.0
USRK Ussuriysk Ar. 77.14 43 P **P** 07 04 40.9 -0.4
comp=Z,1.7nm,0.7s,baz=281,slow=3.1,SNR=4.4
USRK Ussuriysk Ar. 77.14 43 P **P** 07 04 40.5 -0.8
SCRK Sand Creek 77.17 353 P **P** 07 04 42.3 +1.0
BPAW Bear Paw Mtn. 77.57 356 P **P** 07 04 44.0 +0.6
BPAW IAmb IAmb 07 04 54.8
comp=Z,4.1nm,1.2s
DHY Denali Highway 78.35 354 P **P** 07 04 48.7 +0.8
DHY IAmb IAmb 07 05 06.6
comp=Z,3.5nm,1.1s
PPLA Purkeypile 78.83 357 P **P** 07 04 51.3 +0.7
KSAR Wonju Array Be 79.20 51 P **P** 07 04 54.9 +2.0
KSAR Wonju Array Be 79.20 51 P **P** 07 04 54.9 +2.0
KSRS Korea Array 79.22 51 P **P** 07 04 54.5 +1.6
comp=Z,1.1nm,0.8s,baz=305,slow=4.3,SNR=4.4
KSRS LR LR 07 41 03.2
comp=Z,44nm,18.1s,baz=322,slow=37
ECSD EROS Data Cent 80.34 319 P **P** 07 05 01.3 +2.4
ECSD IAmb IAmb 07 05 15.8
comp=Z,7.7nm,1.5s
CPUP Villa Florida 97.11 242 LR LR 07 53 06.1
comp=Z,72nm,18.4s,baz=160,slow=37
DAV Davao City (W) 97.36 75 LR LR 07 55 36.3
comp=Z,49nm,19.5s,baz=45,slow=39

*ATH **31** 06:59:42.7,38°.23N×20°.42E,h13km±1km,ML3.2/4, Error ellipse: s-maj=2.2km s-min=1.1km az=257.0*
*THE **31** 06:59:43.1,38°.23N×20°.45E,h1km,ML2.9/3, Error ellipse: s-maj=0.8km s-min=0.3km az=238.0*
ISC 31 06:59:42.5±1.0,38°.23N±0°.03×20°.44E±0°.04,h13km±5km, n29,σ0s35/47,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.03**	**344**	P	**Pg**	**06 59 45.0**	**+0.1**
KEF4				S	**Sg**	**06 59 46.4**	**-0.1**
LXR1	**Lixouri, Cepha**	**0.03**	**175**	P	**Pg**	**06 59 45.2**	**+0.4**
LXR1				S	**Sg**	**06 59 46.9**	**+0.4**
KEF1	**Kardakata, Kep**	**0.06**	**31**	P	**Pg**	**06 59 45.0**	**0.0**
KEF1				S	**Sg**	**06 59 46.6**	**-0.2**
CHV1	**Chavriata, Kef**	**0.06**	**222**	P	**Pg**	**06 59 45.3**	**+0.2**
CHV1				S	**Sg**	**06 59 47.2**	**+0.3**
ARG2	**Argostoli**	**0.07**	**141**	P	**Pg**	**06 59 45.3**	**+0.2**
ARG2				S	**Sg**	**06 59 46.9**	**-0.1**
KEF3	**Kipouria, Keph**	**0.07**	**248**	P	**Pg**	**06 59 45.4**	**+0.2**
KEF3				S	**Sg**	**06 59 47.2**	**+0.1**
KEF2	**Argostoli. Kep**	**0.08**	**148**	P	**Pg**	**06 59 45.5**	**+0.3**
KEF2				S	**Sg**	**06 59 47.2**	**0.0**
VLS	**Valsamata**	**0.13**	**113**	P	**Pg**	**06 59 46.1**	**+0.2**
VLS				S	**Sg**	**06 59 48.5**	**+0.1**
	16μm,0.1s						
VLS	**Valsamata**	**0.13**	**113**	P	**Pg**	**06 59 46.1**	**+0.2**
VLS				S	**Sg**	**06 59 48.5**	**+0.1**
VLS				AML	AML	06 59 48.8	
	comp=E,38950μm,0.1s						
VLS				AML	AML	06 59 48.8	
	comp=N,22222μm,0.1s						
VSK1	**VASILIKIADES**	**0.20**	**30**	P	**Pg**	**06 59 47.3**	**+0.2**
VSK1				S	**Sg**	**06 59 50.4**	**+0.2**
FSK	**Fiskardo**	**0.25**	**24**	P	**Pg**	**06 59 48.1**	**+0.4**
FSK				S	**Sg**	**06 59 52.0**	**+0.7**
	comp=N,2μm,0.3s						
FSK	**Fiskardo**	**0.25**	**24**	P	**Pg**	**06 59 48.2**	**+0.4**
FSK				S	**Sg**	**06 59 52.1**	**+0.7**
KFL	**Anninata**	**0.30**	**113**	P	**Pg**	**06 59 49.0**	**+0.3**
KFL				S	**Sg**	**06 59 53.6**	**+0.6**
	comp=N,7μm,0.3s						
KFL	**Anninata**	**0.30**	**113**	P	**Pg**	**06 59 49.0**	**+0.3**
KFL				S	**Sg**	**06 59 53.8**	**+0.9**
KFL				AML	AML	06 59 54.7	
	comp=E,20607μm,0.4s						
KFL				AML	AML	06 59 55.2	
	comp=N,7118μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.40**	**153**	P	**Pg**	**06 59 50.9**	**+0.5**
VLMS				S	**Sb**	**06 59 57.1**	**-0.2**
VLMS				AML	AML	06 59 58.6	
	comp=E,4350μm,0.2s						
VLMS				AML	AML	06 59 59.4	
	comp=N,4661μm,0.4s						
EVGI	**Lefkada island**	**0.43**	**24**	P	**Pg**	**06 59 51.2**	**+0.2**
EVGI				S	**Sb**	**06 59 58.0**	**-0.2**
EVGI	**Lefkada island**	**0.43**	**24**	P	**Pg**	**06 59 51.3**	**+0.2**
EVGI				S	**Sb**	**06 59 58.0**	**-0.2**
MGNA	**Meganis**	**0.51**	**33**	P	**Pg**	**06 59 52.6**	**+0.1**
MGNA				S	**Sg**	**07 00 00.2**	**+0.9**
PDO	**Prodromos**	**0.69**	**58**	P	**Pg**	**06 59 55.9**	**-0.1**
PDO	**Prodromos**	**0.69**	**58**	P	**Pg**	**06 59 55.8**	**-0.1**
RLS	**Riolos of Patr**	**0.83**	**102**	P	**Pg**	**06 59 58.4**	**-0.2**
PVO	**Paravola**	**0.94**	**65**	P	**Pg**	**07 00 00.8**	**+0.2**
PVO	**Paravola**	**0.94**	**65**	P	**Pg**	**07 00 00.9**	**+0.2**
EFP	**Efpalio**	**1.17**	**80**	P	**Pb**	**07 00 04.0**	**-0.6**
LAKA	**Lakka**	**1.22**	**89**	P	**Pn**	**07 00 05.0**	**-0.1**
LAKA	**Lakka**	**1.22**	**89**	P	**Pn**	**07 00 05.0**	**-0.1**
SERG	**Sergoula**	**1.29**	**81**	P	**Pn**	**07 00 06.1**	**-0.1**
KALE	**Kalithea**	**1.35**	**83**	P	**Pn**	**07 00 06.9**	**-0.1**
KLV	**Kalavryta, Ach**	**1.37**	**97**	P	**Pn**	**07 00 07.6**	**+0.4**

*NEIC **31** 07:05:24.5±2.8,11°.26S±0°.08×118°.20E±0°.07,h29km±3km, mb4.2/12, Error ellipse: s-maj=11.6km s-min=8.5km az=208.0*
*DJA **31** 07:05:26.0±1.2,11°S±3°×11°8E±°,h17km±10km,M4.7/11, mB5.4/1,mb4.9/7,MLv4.6/11,Mw(mB)4.9/1*
*IDC **31** 07:05:30.2±3.4,10°.93S×118°.42E,h67km±31km,mb3.9/6, mb1 3.9/8,mb1mx3.6/40,mbtmp4.2/8,ML4.1/2,MS3.0/4, Ms1 3.1/4,ms1mx2.7/47, Error ellipse: s-maj=37.5km s-min=14.7km az=77.0*
ISC 31 07:05:25.4±0.5,11°.18S±0°.06×118°.20E±0°.05,h35km,n53, σ1s94/60,mb4.3/10,South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLAI	**Plampang**	**2.37**	**350**	P	**Pn**	**07 06 02.3**	**+0.4**
WSI	**Waingapu**	**2.56**	**54**	P	**Pn**	**07 06 06.5**	**+2.1**
IGBI	**Denpasar**	**3.81**	**308**	P	**Pn**	**07 06 21.8**	**+0.1**
IGBI				S	**Sn**	**07 07 01.1**	**-4.2**
DNP	**Denpasar**	**3.85**	**310**	P	**Pn**	**07 06 22.3**	**+0.1**
DNP				S	**Sn**	**07 07 05.2**	**-1.1**
SRBI	**Singaraja**	**4.25**	**316**	P	**Pn**	**07 06 28.2**	**+0.4**
SRBI				S	**Sn**	**07 07 17.8**	**+1.6**
JAGI	**Jajag, Banyuwa**	**4.81**	**304**	P	**Pn**	**07 07 33.7**	**-1.7**
JAGI				S	**Sn**	**07 07 28.9**	**-1.0**
JAGI	**Jajag, Banyuwa**	**4.81**	**304**		**Pn**	**07 06 35.1**	**-0.3**
JAGI				Sn	**Sn**	**07 07 28.4**	**-1.5**
GMJI	**Gumukmas**	**5.50**	**301**	P	**Pn**	**07 06 44.3**	**-0.6**
	0.3nm47nm,2.0s						
GMJI				S	**Sn**	**07 07 47.2**	**+0.2**
	0.3nm47nm,2.0s						
BKSI	**Bulukumba**	**6.12**	**18**	P	**Pn**	**07 06 55.6**	**+2.1**
	1.0nm3μm238nm,0.5s						
BKSI				S	**Sn**	**07 08 00.1**	**-2.3**
	1.0nm3μm238nm,0.5s						
SOEI	**Soe**	**6.14**	**77**	P	**Pn**	**07 06 57.0**	**+3.2**
	0.4nm78nm,0.8s						
SOEI	**Soe**	**6.14**	**77**		**Pn**	**07 06 53.6**	**-0.2**
SOEI				Sn	**Sn**	**07 07 59.5**	**-3.3**
KAPI	**Kappang**	**6.32**	**14**	P	**Pn**	**07 06 58.1**	**+1.9**
	9.2nm,0.3s,baz=189,slow=6.3,SNR=48						
KAPI				S	**Sn**	**07 08 04.1**	**-3.0**
	14nm,0.3s,baz=167,slow=22,SNR=14						
KAPI	**Kappang**	**6.32**	**14**		**Pn**	**07 06 57.9**	**+1.8**
KAPI				Sn	**Sn**	**07 08 03.4**	**-3.7**
BNSI	**Bone**	**7.00**	**16**	P	Pn	07 07 15.4	+10
UGM	**Wanagama**	**8.23**	**293**		**Pn**	**07 07 23.8**	**+1.3**
UGM				Sn	**Sn**	**07 08 50.5**	**-3.9**
TTSI	**Tana Toraja**	**8.24**	**11**	P	Pn	07 07 27.8	+5.2
FITZ	**Fitzroy Crossi**	**9.96**	**135**	P	**Pn**	**07 07 43.6**	**-2.6**
	1.3nm,0.3s,baz=321,slow=10,SNR=14						
FITZ				S	Sn	07 09 26.8	-10
	2.7nm,0.3s,baz=167,slow=20,SNR=9.2						
FITZ				LR	LR	07 11 36.0	
	comp=Z,67nm,19.1s,baz=302,slow=37						
FITZ	**Fitzroy Crossi**	**9.96**	**135**		**Pn**	**07 07 42.7**	**-3.4**
PSA00	**Pilbara Seismi**	**10.46**	**172**		**Pn**	**07 07 50.4**	**-2.6**
PSA00	**Pilbara Seismi**	**10.46**	**172**		**Pn**	**07 07 50.6**	**-2.3**
KNRA	**Kununurra**	**11.21**	**115**	Pn	**Pn**	**07 08 02.2**	**-0.1**
GIRL	**Giralia**	**12.01**	**198**		**Pn**	**07 08 13.7**	**-0.5**
KKM	**Kota Kinabalu**	**17.22**	**353**		**P**	**07 09 28.0**	**+3.2**
KKM				IAmb	IAmb	07 09 32.1	
	comp=Z,53nm,1.5s						
WB0	**Warramunga Arr**	**17.78**	**121**	P	**Pn**	**07 09 29.7**	**-0.7**
WB0				IAmb	IAmb	07 09 29.9	
	comp=Z,9.7nm,1.4s						
WRA	**Warramunga Arr**	**17.82**	**121**	P	**Pn**	**07 09 29.5**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=303,slow=14,SNR=4.6						
WRA				LR	LR	07 16 04.3	
	comp=Z,53nm,19.4s,baz=100,slow=36						
WRA	**Warramunga Arr**	**17.82**	**121**	P	**P**	**07 09 31.3**	**+0.1**
WB2	**Warramunga Arr**	**17.82**	**121**	P	**Pn**	**07 09 28.3**	**-2.6**
WB2				IAmb	IAmb	07 09 34.1	
	comp=Z,9.0nm,1.1s						
MORW	**Morawa**	**17.91**	**186**	P	**Pn**	**07 09 30.3**	**-1.6**
WR0	**Warramunga Arr**	**17.99**	**121**	P	**Pn**	**07 09 31.6**	**-1.4**
AS31	**Alice Springs**	**19.44**	**132**	P	**Pn**	**07 09 49.9**	**-0.5**
ASAR	**Alice Springs**	**19.44**	**132**	P	**Pn**	**07 09 49.9**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=321,slow=13,SNR=17						
ASAR				S	S	07 13 09.9	-17
	comp=Z,0.1nm,0.3s,baz=311,slow=24,SNR=3.5						
ASAR	**Alice Springs**	**19.44**	**132**	P	**P**	**07 09 49.5**	**+0.3**
NWAO	**Narrogin (SRO)**	**21.66**	**182**	P	**P**	**07 10 18.5**	**+5.5**
	comp=Z,16nm,0.4s,baz=15,slow=11,SNR=40						
NWAO				S	S	07 14 01.1	-10
	comp=Z,8.1nm,0.5s,baz=79,slow=4.5,SNR=4.5						
COEN	**Coen**	**24.53**	**99**	P	**P**	**07 10 43.1**	**+1.0**
COEN				IAmb	IAmb	07 10 46.0	
	comp=Z,17nm,1.2s						
CTA	**Charters Tower**	**28.40**	**112**	P	**P**	**07 11 18.0**	**+1.1**
	comp=Z,6.1nm,1.0s,baz=286,slow=7.4,SNR=3.6						
CTA	**Charters Tower**	**28.40**	**112**	P	**P**	**07 11 18.0**	**+1.1**
CMAR	**Chiang Mai Arr**	**35.04**	**327**	LR	LR	07 26 22.6	
	comp=Z,18nm,18.4s,baz=300,slow=36						
KSRS	**Korea Array**	**49.23**	**10**	P	**P**	**07 14 10.2**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=201,slow=9.8,SNR=3.3						
SONM	**Songino Array**	**59.68**	**351**	P	**P**	**07 15 26.5**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=174,slow=6.3,SNR=3.8						
BOOM	**Boomskoye usch**	**65.95**	**327**	P	**P**	**07 16 09.1**	**+0.7**
MK31	**Makanchi Array**	**66.04**	**334**	P	**P**	**07 16 08.9**	**+0.2**
MK31				IAmb	IAmb	07 16 09.7	
	comp=Z,1.9nm,0.7s						
MKAR	**Makanchi Array**	**66.04**	**334**	P	**P**	**07 16 09.0**	**+0.4**
	comp=Z,2.8nm,0.5s,baz=153,slow=7.0,SNR=52						
MKAR	**Makanchi Array**	**66.04**	**334**	P	**P**	**07 16 08.9**	**+0.2**
KURK	**Kurchatov**	**70.60**	**335**	P	**P**	**07 16 37.3**	**+0.3**
KURK				IAmb	IAmb	07 16 46.4	
	comp=Z,3.1nm,1.1s						
ZAA0	**Zalesovo Array**	**70.79**	**340**	P	**P**	**07 16 37.8**	**-0.3**
ZAA0				IAmb	IAmb	07 16 38.1	
	comp=Z,1.6nm,0.7s						
ZALV	**Zalesovo Beam**	**70.79**	**340**	P	**P**	**07 16 37.4**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=148,slow=5.1,SNR=10						
ABKAR	**Akbulak array**	**78.88**	**325**	P	**P**	**07 17 25.8**	**+0.7**
ARU	**Arti**	**83.37**	**331**	LR	LR	08 01 11.2	
	comp=Z,15nm,18.6s,baz=146,slow=40						
YKA	**Yellowknife Ar**	**116.49**	**24**	PKP	**PKiKP**	**07 24 05.9**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=296,slow=1.9,SNR=3.0						
F64A	**Sherman**	**144.99**	**8**	PKPdf	**PKPdf**	**07 24 59.9**	**+0.8**
MEDO	**Medina**	**145.00**	**21**	PKPdf	**PKPdf**	**07 25 00.2**	**+0.9**
WCI	**Wyandotte Cave**	**145.28**	**35**		**PKiKP**	**07 25 01.1**	**-2.7**
NCB	**Newcomb**	**145.61**	**16**	PKPdf	**PKiKP**	**07 25 02.3**	**-2.1**

*THE **31** 07:18:57.5, 38˚.24N×20˚.37E, h13km, ML3.0/11, Error ellipse: s-maj=0.8km s-min=0.3km az=263.0*
*ATH **31** 07:18:57.4, 38˚.24N×20˚.38E, h15km±1km, ML2.8/7, Error ellipse: s-maj=2.0km s-min=1.0km az=259.0*
ISC 31 07:18:57.4±1.1, 38˚.24N±0˚.02×20˚.37E±0˚.05, h16km±5km, n32, σ0§36/58, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF3	**Kipouria, Keph**	**0.04**	**209**	P	**Pg**	**07 19 00.1**	**-0.1**
KEF3				S	**Sg**	**07 19 02.0**	**-0.1**
KEF4	**Livadi, Kephal**	**0.04**	**65**	P	**Pg**	**07 19 00.2**	**-0.1**
KEF4				S	**Sg**	**07 19 02.1**	**-0.1**
CHV1	**Chavriata, Kef**	**0.06**	**173**	P	**Pg**	**07 19 00.2**	**-0.1**
CHV1				S	**Sg**	**07 19 02.1**	**-0.1**
	43μm,0.1s						
LXR1	**Lixouri, Cepha**	**0.06**	**127**	P	**Pg**	**07 19 00.3**	**-0.1**
LXR1				S	**Sg**	**07 19 02.3**	**0.0**
	26μm,0.1s						
KEF1	**Kardakata, Kep**	**0.09**	**63**	P	**Pg**	**07 19 00.4**	**-0.2**
KEF1				S	**Sg**	**07 19 02.6**	**-0.1**
ARG2	**Argostoli**	**0.11**	**124**	P	**Pg**	**07 19 00.7**	**-0.2**
ARG2				S	**Sg**	**07 19 03.0**	**-0.1**
	30μm,0.1s						
KEF2	**Argostoli. Kep**	**0.12**	**130**	P	**Pg**	**07 19 00.8**	**-0.2**
KEF2				S	**Sg**	**07 19 03.0**	**-0.3**
VLS	**Valsamata**	**0.18**	**110**	P	**Pg**	**07 19 01.5**	**-0.3**
VLS				S	**Sg**	**07 19 04.7**	**-0.1**
	14μm,0.2s						
VLS	**Valsamata**	**0.18**	**110**	P	**Pg**	**07 19 01.6**	**-0.3**
VLS				S	**Sg**	**07 19 04.4**	**-0.4**
VLS				AML	AML	07 19 04.9	
	comp=E,25633μm,0.1s						
VLS				AML	AML	07 19 05.1	
	comp=N,28582μm,0.3s						
VSK1	**VASILIKIADES**	**0.23**	**41**	P	**Pg**	**07 19 02.3**	**-0.3**
VSK1				S	**Sg**	**07 19 06.1**	**+0.1**
	comp=N,7μm,0.1s						
FSK	**Fiskardo**	**0.27**	**34**	P	**Pg**	**07 19 03.0**	**-0.2**
FSK				S	**Sg**	**07 19 07.2**	**+0.1**
	comp=N,3μm,0.1s						
FSK	**Fiskardo**	**0.27**	**34**	P	**Pg**	**07 19 03.1**	**-0.1**
FSK				S	**Sg**	**07 19 07.2**	**+0.1**
KFL	**Anninata**	**0.35**	**111**	P	**Pg**	**07 19 04.3**	**-0.4**
KFL				S	**Sg**	**07 19 09.8**	**+0.2**
	comp=N,4μm,0.3s						
KFL	**Anninata**	**0.35**	**111**	P	**Pg**	**07 19 04.4**	**-0.2**
KFL				S	**Sg**	**07 19 09.2**	**-0.5**
KFL				AML	AML	07 19 10.2	
	comp=N,9059μm,0.5s						
KFL				AML	AML	07 19 10.4	
	comp=E,8081μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.43**	**148**	P	**Pg**	**07 19 05.5**	**-0.5**
VLMS				S	**Sg**	**07 19 12.3**	**+0.3**
VLMS				AML	AML	07 19 13.7	
	comp=E,4972μm,0.1s						
VLMS				AML	AML	07 19 14.4	
	comp=N,4230μm,0.2s						
EVGI	**Lefkada island**	**0.44**	**30**	P	**Pg**	**07 19 06.1**	**-0.2**
EVGI				S	**Sg**	**07 19 12.7**	**+0.4**
EVGI	**Lefkada island**	**0.44**	**30**	P	**Pg**	**07 19 06.1**	**-0.2**
EVGI				S	**Sb**	**07 19 13.1**	**-0.3**
MGNA	**Meganis**	**0.53**	**38**	P	**Pg**	**07 19 07.3**	**-0.7**
MGNA				S	**Sg**	**07 19 14.4**	**-0.7**
LKD2	**Lefkada island**	**0.59**	**22**	P	**Pg**	**07 19 09.2**	**+0.1**
LKD2				S	**Sb**	**07 19 17.9**	**+0.2**
	comp=N,422nm,0.3s						
LKD2	**Lefkada island**	**0.59**	**22**	P	**Pg**	**07 19 08.7**	**-0.4**
LKD2				S	**Sg**	**07 19 17.2**	**+0.1**
LKD2				AML	AML	07 19 22.9	
	comp=N,831μm,0.4s						
LKD2				AML	AML	07 19 24.8	
	comp=E,844μm,0.3s						
TSLK	**Tsoukalades, L**	**0.62**	**21**	P	**Pg**	**07 19 09.3**	**-0.4**
TSLK				S	**Sb**	**07 19 18.8**	**+0.2**
	comp=E,492nm,0.3s						
TSLK	**Tsoukalades, L**	**0.62**	**21**	P	**Pg**	**07 19 09.2**	**-0.5**
AST1	**Astakos**	**0.64**	**62**	P	**Pg**	**07 19 09.6**	**-0.4**
AST1				S	**Sb**	**07 19 19.6**	**+0.7**
KRI1	**kERI**	**0.67**	**149**	P	**Pg**	**07 19 09.9**	**-0.7**
KRI1				S	**Sb**	**07 19 20.8**	**+0.8**
	comp=E,1μm,0.3s						
PDO	**Prodromos**	**0.73**	**60**	P	**Pg**	**07 19 11.3**	**-0.4**
PDO				S	**Sb**	**07 19 22.6**	**+1.0**
RLS	**Riolos of Patr**	**0.88**	**102**	P	**Pb**	**07 19 14.4**	**0.0**
RLS				S	**Sn**	**07 19 27.3**	**-0.4**
RLS	**Riolos of Patr**	**0.88**	**102**	P	**Pb**	**07 19 14.4**	**0.0**
RLS				AML	AML	07 19 32.1	
	comp=E,478μm,0.6s						
RLS				AML	AML	07 19 33.8	
	comp=N,361μm,0.4s						
PVO	**Paravola**	**0.98**	**67**	P	**Pb**	**07 19 15.9**	**-0.2**
PVO				S	**Sn**	**07 19 30.1**	**-0.1**
	comp=N,278nm,0.4s						
PVO	**Paravola**	**0.98**	**67**	P	**Pb**	**07 19 15.9**	**-0.2**
PVO				AML	AML	07 19 36.2	
	comp=E,506μm,0.3s						
PVO				AML	AML	07 19 38.1	
	comp=N,600μm,0.4s						
ANX	**Ano Chora**	**1.27**	**73**	P	**Pn**	**07 19 20.9**	**+0.3**
SERG	**Sergoula**	**1.33**	**82**	P	**Pg**	**07 19 23.3**	**+0.1**
KLV	**Kalavryta, Ach**	**1.41**	**97**	P	**Pn**	**07 19 22.9**	**+0.3**

DJA 31 07:19:24.3±0.7, 3˚S±4˚×13˚8E±˚, h37km±18km, M4.2/6, mB4.9/1, mb4.4/1, MLv4.2/6, Mw(mB)4.2/1, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMPI	**Sarmi**	**0.72**	**27**	P	Pn	07 19 38.9	+0.9
SMPI				S	Sn	07 19 50.0	+2.1
GENI	**Genyem**	**1.79**	**89**	P	Pn	07 19 53.8	+1.2
GENI				S	Sn	07 20 15.3	+1.2
SRPI	**Serui, Papua**	**2.27**	**290**	P	Pn	07 19 59.3	0.0
SRPI				S	Sn	07 20 24.0	-2.0
JAY	**Jayapura**	**2.33**	**87**	P	Pn	07 19 59.8	-0.3
JAY				S	Sn	07 20 27.9	+0.5
BAKI	**Biak**	**2.69**	**302**	P	Pn	07 20 05.7	+0.7
FAKI	**Fak Fak**	**6.13**	**267**	P	Pn	07 20 51.6	-0.8
	0.2nm37nm,1.2s						

*SOME **31** 07:22:48.9, 42˚.15N×80˚.77E, h15km*
*NNC **31** 07:22:49.6±1.2, 42˚.13N×80˚.66E, h0km, mb3.5, mpv3.2, Error ellipse: s-maj=7.9km s-min=6.3km az=160.0*
*KRNET **31** 07:22:49.1±0.1, 42˚.15N×80˚.74E, h11km, mb3.2*
ISC 31 07:22:51.1±2.2, 42˚39N±0˚.07×80˚.85E±0˚.07, h14km±12km, n41, σ1§55/68, 14C-4D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.28**	**307**	*e*P	**Pn**	**07 23 11.6**	**-3.0**
	baz=28						
SHLS				*e*S	**Sb**	**07 23 28.1**	**-3.2**
	baz=28						
SHLS	**Shalkode**	**1.28**	**307**	*e*P	**Pn**	**07 23 11.6**	**-3.0**
	47nm,0.1s						
SHLS				*e*S	**Sb**	**07 23 28.1**	**-3.2**
	85nm,0.2s						
SHLS	**Shalkode**	**1.28**	**307**	P	**Pn**	**07 23 11.6**	**-3.0**
	47nm,0.1s						
SHLS				S	**Sb**	**07 23 28.1**	**-3.2**
	85nm,0.2s						
PDGK	**Podgornoye**	**1.37**	**314**	P	**Pn**	**07 23 16.3**	**+0.3**
	3.8nm,0.2s						
PDGK				S	**Sg**	**07 23 36.5**	**+1.1**
	9.9nm,0.2s						
PDGK	**Podgornoye**	**1.37**	**314**	⇑Pg	**Pn**	**07 23 16.1**	**+0.1**
	1.4nm,0.2s						
PDGK				⇓Lg	Lg	07 23 37.6	
	7.7nm,0.3s						
UZB	**Uzynbulak**	**1.54**	**300**	*e*P	**Pb**	**07 23 19.8**	**+0.2**
	baz=9.0						
UZB				*e*S	**Sg**	**07 23 42.4**	**+1.4**
	baz=9.0						
UZB	**Uzynbulak**	**1.54**	**300**	*e*P	**Pb**	**07 23 19.8**	**+0.2**
	7.7nm,0.2s						
UZB				*e*S	**Sg**	**07 23 42.3**	**+1.4**
	19nm,0.2s						
UZB	**Uzynbulak**	**1.54**	**300**	P	**Pb**	**07 23 19.7**	**+0.2**
	7.7nm,0.2s						
UZB				S	**Sg**	**07 23 42.3**	**+1.4**
	19nm,0.2s						
PRZ	**Przheval'sk**	**1.82**	**274**	⇑*i*P	**Pn**	**07 23 21.8**	**-0.3**
	baz=82						
PRZ				⇑*i*S	**Sb**	**07 23 46.0**	**-0.9**
	baz=82						
KPKS	**Kokpek**	**1.92**	**305**	*e*P	**Pb**	**07 23 26.2**	**+0.3**
	baz=11						
KPKS				*e*S	**Sg**	**07 23 53.0**	**+0.1**
	baz=11						
KPKS	**Kokpek**	**1.92**	**305**	*e*P	**Pb**	**07 23 26.2**	**+0.3**
	31nm,0.2s						
KPKS				*e*S	**Sg**	**07 23 53.0**	**+0.1**
	84nm,0.2s						
SATY	**Saty**	**1.92**	**291**	*e*P	**Pb**	**07 23 25.4**	**-0.6**
	37nm,0.4s						
SATY				*e*S	**Sg**	**07 23 52.1**	**-0.8**
	24nm,0.2s						
SATY	**Saty**	**1.92**	**291**	Pg	**Pb**	**07 23 25.4**	**-0.6**
	37nm,0.4s						
SATY				Lg	Lg	07 23 52.1	
	24nm,0.2s						
DJR	**Jarkent**	**2.09**	**339**	*e*P	**Pg**	**07 23 30.7**	**-0.5**
	0.6nm,0.2s						
DJR				*e*S	**Sg**	**07 24 00.8**	**+2.4**
	18nm,0.2s						
DJR	**Jarkent**	**2.09**	**339**	Pg	**Pg**	**07 23 30.7**	**-0.5**
	0.6nm,0.2s						
DJR				Lg	Lg	07 24 00.8	
	18nm,0.2s						
KURS	**Kuram**	**2.25**	**300**	*e*P	**Pb**	**07 23 31.1**	**-0.5**
	baz=6.0						
KURS				*e*S	**Sb**	**07 24 01.3**	**+1.9**
	baz=6.0						
KURS	**Kuram**	**2.25**	**300**	*e*P	**Pb**	**07 23 31.1**	**-0.5**
	8.0nm,0.5s						
KURS				*e*S	**Sb**	**07 24 01.2**	**+1.9**
	12nm,0.5s						
KURS	**Kuram**	**2.25**	**300**	Pg	**Pb**	**07 23 31.1**	**-0.5**
	8.0nm,0.5s						
KURS				Lg	Lg	07 24 01.3	
	12nm,0.5s						
ANVS	**Anan'yevo**	**2.38**	**281**	⇑*i*P	**Pn**	**07 23 31.0**	**+1.1**
	baz=87						
ANVS				⇑*i*S	**Sb**	**07 24 02.1**	**-1.1**
	baz=87						
KDJ	**Kajisay**	**2.74**	**266**	⇑*i*P	**Pn**	**07 23 35.2**	**+0.4**
	baz=71						
KDJ				⇑*i*S	**Sn**	**07 24 08.7**	**+1.0**
	baz=71						
ARXS	**Arharly**	**2.86**	**311**	*e*P	**Pb**	**07 23 42.3**	**+0.3**
	2.3nm,0.4s						
ARXS				*e*S	**Sg**	**07 24 20.6**	**-2.5**
	10nm,0.3s						
ARXS	**Arharly**	**2.86**	**311**	Pg	**Pb**	**07 23 42.3**	**+0.3**
	2.3nm,0.4s						
ARXS				Lg	Lg	07 24 20.6	
	10nm,0.3s						
KOTS	**Kotyrbulak**	**2.88**	**288**	*e*P	**Pb**	**07 23 41.5**	**-0.8**
	16nm,0.4s						
KOTS				*e*S	**Sb**	**07 24 19.2**	**+1.8**
	45nm,0.4s						
KOTS	**Kotyrbulak**	**2.88**	**288**	Pg	**Pb**	**07 23 41.5**	**-0.8**
	16nm,0.4s						
KOTS				Lg	Lg	07 24 19.9	
	45nm,0.4s						
MDOK	**Medeo**	**2.91**	**287**	*e*P	**Pb**	**07 23 41.5**	**-1.3**
	9.2nm,0.4s						
MDOK				*e*S	**Sb**	**07 24 19.1**	**+0.9**
	13nm,0.6s						
MDOK	**Medeo**	**2.91**	**287**	Pg	**Pb**	**07 23 41.0**	**-1.8**
	6.0nm,0.5s						
MDOK				Lg	Lg	07 24 19.4	
	11nm,0.6s						
MDOK	**Medeo**	**2.91**	**287**	Pg	**Pb**	**07 23 41.5**	**-1.3**
	9.2nm,0.4s						
MDOK				Lg	Lg	07 24 19.1	
	13nm,0.6s						
TNSS	**Tian-Shan**	**2.95**	**284**	*e*P	**Pb**	**07 23 42.1**	**-1.5**
	5.0nm,0.2s						
TNSS				*e*S	**Sb**	**07 24 20.7**	**+1.0**
	6.4nm,0.2s						
TNSS	**Tian-Shan**	**2.95**	**284**	Pg	**Pb**	**07 23 42.1**	**-1.5**
	5.0nm,0.2s						
TNSS				Lg	Lg	07 24 20.7	
	6.4nm,0.2s						
KAPS	**Kapalarasan**	**3.09**	**340**	*e*P	**Pb**	**07 23 48.1**	**+2.2**
	1.5nm,0.3s						
KAPS				*e*S	**Sg**	**07 24 30.5**	**+0.2**
	16nm,0.2s						
KAPS	**Kapalarasan**	**3.09**	**340**	Pg	**Pb**	**07 23 48.1**	**+2.2**
	1.5nm,0.3s						
KAPS				Lg	Lg	07 24 30.5	
	16nm,0.2s						
CHKK	**Chushkaly**	**3.19**	**299**	*e*P	**Pb**	**07 23 47.1**	**-0.3**
	2.2nm,0.2s						
CHKK				*e*S	**Sb**	**07 24 28.8**	**+2.7**
	7.8nm,0.3s						
CHKK	**Chushkaly**	**3.19**	**299**	Pg	**Pb**	**07 23 47.1**	**-0.3**
	2.2nm,0.2s						
CHKK				Lg	Lg	07 24 29.6	
	7.8nm,0.3s						
IZV	**Izvestkoviy**	**3.19**	**283**	*e*P	**Pb**	**07 23 45.9**	**-1.7**
	4.1nm,0.3s						
IZV				*e*S	**Sb**	**07 24 26.8**	**+0.4**
	13nm,0.4s						
IZV	**Izvestkoviy**	**3.19**	**283**	Pg	**Pb**	**07 23 45.9**	**-1.7**
	4.1nm,0.3s						
IZV				Lg	Lg	07 24 26.8	
	13nm,0.4s						
BOOM	**Boomskoye usch**	**3.64**	**273**	⇓*e*P	**Pn**	**07 23 48.2**	**+1.1**
	baz=77						
BOOM				⇓*i*S	**Sn**	**07 24 31.3**	**+1.4**
	baz=77						
KST	**Kastek**	**3.66**	**282**	*e*P	**Pb**	**07 23 54.2**	**-1.4**
	2.3nm,0.3s						
KST				*e*S	**Sb**	**07 24 41.4**	**+1.5**
	3.6nm,0.6s						
KST	**Kastek**	**3.66**	**282**	Pg	**Pb**	**07 23 54.3**	**-1.4**
	2.8nm,0.4s						
KST				Lg	Lg	07 24 41.6	
	3.7nm,0.4s						
NRN	**Naryn**	**3.75**	**257**	⇑*i*P	**Pn**	**07 23 49.5**	**+0.8**
	baz=60						
NRN				⇑*i*S	**Sn**	**07 24 33.0**	**+0.2**
	baz=60						
MK31	**Makanchi Array**	**4.52**	**13**	⇑Pn	Pn	07 24 04.9	+5.8
	0.1nm,0.2s,baz=99,slow=30,SNR=26						
MK31				⇑Pg	**Pg**	**07 24 17.5**	**-0.1**
	0.3nm,0.5s,baz=196,slow=16,SNR=4.5						
MK31				⇓Sn	**Sb**	**07 25 01.7**	**-2.8**
	0.7nm,0.6s,baz=186,slow=20,SNR=3.8						
MK31				⇑Lg	Lg	07 25 21.9	
	1.3nm,0.6s,baz=195,slow=27,SNR=5.9						
AAK	**Ala-Archa**	**4.71**	**275**	⇑Pg	**Pb**	**07 24 13.6**	**+0.1**
	1.5nm,0.7s						
AAK				⇑Lg	Lg	07 25 14.9	
	3.3nm,0.6s						

*IDC **31** 07:23:20.4±46.0, 15˚.47S×172˚.16W, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.7/46, mbtmp4.3/3, Error ellipse: s-maj=897.0km s-min=184.5km az=79.0*
*NEIC **31** 07:23:31.1±1.9, 12˚.90S±0˚.09×175˚.0W±0˚.1, h15km±5km, mb4.5/17, Error ellipse: s-maj=22.0km s-min=9.5km az=119.0*
ISC 31 07:23:31.6±3.3, 13˚.0S±0˚.4×175˚.0W±0˚.3, h10km, n22, σ1§86/21, mb4.5/12, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**7.77**	**142**	Pn	**Pn**	**07 25 24.8**	**+0.1**
RAO	**Raoul Island**	**16.41**	**189**	P	**Pn**	**07 27 23.7**	**+1.6**
OUZ	**Omahuta**	**24.43**	**203**	P	**P**	**07 28 51.6**	**+1.2**
OUZ				IAmb	IAmb	07 28 57.4	
	comp=Z,17nm,1.1s						
URZ	**Urewera**	**26.13**	**194**	P	**P**	**07 29 05.8**	**0.0**
URZ				IAmb	IAmb	07 29 13.0	
	comp=Z,12nm,1.1s						
QRZ	**Quartz Range**	**29.82**	**199**	P	**P**	**07 29 40.5**	**+1.7**
QRZ				IAmb	IAmb	07 29 51.0	
	comp=Z,6.3nm,0.9s						
THZ	**Tophouse**	**30.55**	**198**	P	**P**	**07 29 46.1**	**+0.7**
LTZ	**Lake Taylor**	**31.67**	**198**	P	**P**	**07 29 55.3**	**+0.1**
LTZ				IAmb	IAmb	07 30 08.8	
	comp=Z,8.9nm,1.2s						
FOZ	**Fox Glacier**	**33.13**	**200**	P	**P**	**07 30 06.1**	**-1.9**
WKZ	**Wanaka**	**34.55**	**200**	P	**P**	**07 30 18.3**	**-2.0**
MLZ	**Mavora Lakes**	**35.33**	**201**	P	**P**	**07 30 26.3**	**-0.7**
MLZ				IAmb	IAmb	07 30 28.2	
	comp=Z,6.2nm,1.0s						
ARMA	**Armidale**	**35.35**	**235**	P	**P**	**07 30 26.2**	**-1.3**
WHZ	**Wether Hill Ro**	**35.84**	**200**	P	**P**	**07 30 30.7**	**-0.7**
WHZ				IAmb	IAmb	07 30 31.2	
	comp=Z,4.1nm,0.7s						
TOO	**Toolangi**	**42.86**	**228**	P	**P**	**07 31 27.9**	**-2.3**
STKA	**Stephens Creek**	**43.97**	**237**	P	**P**	**07 31 38.8**	**-0.4**
	comp=Z,1.7nm,0.4s,baz=84,slow=9.2,SNR=8.6						
STKA	**Stephens Creek**	**43.97**	**237**	P	**P**	**07 31 39.0**	**-0.2**
BBOO	**Buckleboo**	**48.74**	**238**	P	**P**	**07 32 16.6**	**-0.2**
BBOO				IAmb	IAmb	07 32 17.1	
	comp=Z,7.1nm,0.9s						
WB2	**Warramunga Arr**	**48.93**	**255**	P	**P**	**07 32 19.1**	**+0.7**
WB2				IAmb	IAmb	07 32 23.5	
	comp=Z,5.0nm,1.0s						
WRA	**Warramunga Arr**	**48.94**	**255**	P	P	07 32 23.7	+5.2
	comp=Z,0.4nm,0.3s,baz=98,slow=7.3,SNR=4.8						
AS31	**Alice Springs**	**49.44**	**250**	P	**P**	**07 32 25.8**	**+3.6**
AS31				IAmb	IAmb	07 32 26.5	
	comp=Z,2.2nm,0.6s						
ASAR	**Alice Springs**	**49.44**	**250**	P	**P**	**07 32 25.9**	**+3.7**
	comp=Z,5.3nm,0.4s,baz=88,slow=8.0,SNR=97						
ASAR	**Alice Springs**	**49.44**	**250**	P	**P**	**07 32 25.6**	**+3.4**
FORT	**Forrest**	**55.17**	**242**	P	**P**	**07 33 03.6**	**-1.0**

MAN 31 07:43:29.3, 7˚.14N×123˚.55E, h33km, mb3.8, ML2.5, MS2.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.69**	**84**	*e*P	Pb	07 43 45.0	+2.0
CTBH				*i* S	Sb	07 43 50.4	-2.0
PAGZ	**Pagadian**	**0.72**	**346**	*e*P	Pn	07 43 43.2	0.0
PAGZ				*e*S	Sb	07 43 54.3	+1.1
SKMP	**Bagumbayan, Su**	**1.16**	**122**	*e*P	Pn	07 43 49.8	+0.5
SKMP				*e*S	Sn	07 44 03.7	-0.3
KCP	**Kidapawan**	**1.53**	**95**	⇓*i*P	Pb	07 44 01.1	+3.9
BUKP	**Musuan**	**1.66**	**64**	*e*P	Pn	07 43 57.0	+0.8
BUKP				*e*S	Sn	07 44 16.8	+0.3
CGP	**Cagayan de Oro**	**1.73**	**41**	⇑*e*P	Pb	07 43 58.8	-1.6
CGP				*e*S	Sn	07 44 15.5	-2.4

*THE **31** 07:54:25.1, 38˚.14N×20˚.41E, h7km, ML3.5/7, Error ellipse: s-maj=0.9km s-min=0.4km az=269.0*
*ATH **31** 07:54:25.5, 38˚.15N×20˚.45E, h6km±2km, ML3.4/4, Error ellipse: s-maj=2.5km s-min=0.8km az=265.0*
*PDG **31** 07:54:25.3±0.1, 38˚.15N×19˚.08E, h6km±11km, ML3.9/13, Error ellipse: s-maj=52.1km s-min=3.8km az=90.0*
ISC 31 07:54:24.8±0.9, 38˚.16N±0˚.03×20˚.39E±0˚.03, h11km±3km, n66, σ1§35/109, 2C-2D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.03**	**348**	P	**Pg**	**07 54 26.7**	**0.0**
CHV1				S	**Sg**	**07 54 28.3**	**+0.3**
KEF3	**Kipouria, Keph**	**0.06**	**325**	P	**Pg**	**07 54 27.7**	**+0.8**
KEF3				S	**Sg**	**07 54 29.3**	**+0.8**
LXR1	**Lixouri, Cepha**	**0.06**	**42**	P	**Pg**	**07 54 26.7**	**-0.2**
LXR1				S	**Sg**	**07 54 28.5**	**0.0**
KEF2	**Argostoli. Kep**	**0.08**	**84**	P	**Pg**	**07 54 26.5**	**-0.6**
KEF2				S	**Sg**	**07 54 27.7**	**-1.2**
ARG2	**Argostoli**	**0.08**	**75**	P	**Pg**	**07 54 26.7**	**-0.5**
ARG2				S	**Sg**	**07 54 28.2**	**-0.7**
KEF4	**Livadi, Kephal**	**0.10**	**16**	P	**Pb**	**07 54 27.8**	**-1.0**
KEF4				S	**Sb**	**07 54 30.3**	**+0.8**
KEF1	**Kardakata, Kep**	**0.14**	**28**	P	**Pb**	**07 54 28.6**	**-0.8**
KEF1				S	**Sg**	**07 54 30.5**	**+0.3**
VLS	**Valsamata**	**0.16**	**83**	P	**Pg**	**07 54 27.8**	**-0.5**
VLS				S	**Sg**	**07 54 30.2**	**-0.6**
	25μm,0.5s						
VLS	**Valsamata**	**0.16**	**83**	P	**Pg**	**07 54 27.9**	**-0.5**
VLS				S	**Sg**	**07 54 30.2**	**-0.6**
VLS				AML	AML	07 54 34.4	
	comp=N,61063μm,0.4s						
VLS				AML	AML	07 54 35.6	
	comp=E,29494μm,0.3s						
VSK1	**VASILIKIADES**	**0.29**	**29**	P	**Pb**	**07 54 31.0**	**-1.0**
VSK1				S	**Sg**	**07 54 35.3**	**+0.8**
KFL	**Anninata**	**0.32**	**99**	P	**Pg**	**07 54 30.9**	**-0.2**
KFL				S	**Sg**	**07 54 35.5**	**+0.1**
	comp=E,38μm,0.4s						
KFL	**Anninata**	**0.32**	**99**	P	**Pg**	**07 54 31.0**	**-0.2**
KFL				S	**Sg**	**07 54 35.6**	**+0.1**
KFL				AML	AML	07 54 36.6	
KFL				AML	AML	07 54 38.9	
	comp=N,44298μm,0.5s						
FSK	**Fiskardo**	**0.33**	**24**	P	**Pb**	**07 54 31.9**	**-0.8**
FSK				S	**Sb**	**07 54 36.8**	**-1.2**
	comp=N,14μm,0.3s						
FSK	**Fiskardo**	**0.33**	**24**	P	**Pb**	**07 54 32.0**	**-0.7**
FSK				S	**Sg**	**07 54 36.5**	**+0.7**
VLMS	**Volimes, Zakyn**	**0.35**	**142**	P	**Pb**	**07 54 32.0**	**-1.1**
VLMS				S	**Sg**	**07 54 36.8**	**+0.3**
VLMS				AML	AML	07 54 38.7	
	comp=E,26294μm,0.2s						
VLMS				AML	AML	07 54 46.8	
	comp=N,25385μm,0.4s						
EVGI	**Lefkada island**	**0.51**	**24**	P	**Pb**	**07 54 34.7**	**-1.0**
EVGI				S	**Sb**	**07 54 43.0**	**-0.2**
EVGI	**Lefkada island**	**0.51**	**24**	P	**Pb**	**07 54 35.1**	**-0.6**
EVGI				S	**Sb**	**07 54 43.1**	**-0.1**
MGNA	**Meganis**	**0.59**	**32**	P	**Pb**	**07 54 36.4**	**-0.7**
MGNA				S	**Sb**	**07 54 44.5**	**-1.0**
KRI1	**kERI**	**0.60**	**145**	P	**Pg**	**07 54 36.0**	**-0.4**
KRI1				S	**Sb**	**07 54 45.4**	**-0.4**
LKD2	**Lefkada island**	**0.66**	**18**	P	**Pb**	**07 54 37.6**	**-0.8**
LKD2				S	**Sb**	**07 54 47.3**	**-0.4**
	comp=N,2μm,0.5s						
LKD2	**Lefkada island**	**0.66**	**18**	P	**Pb**	**07 54 37.9**	**-0.5**
LKD2				S	**Sb**	**07 54 47.4**	**-0.4**
LKD2				AML	AML	07 54 56.0	
	comp=N,4033μm,0.4s						
LKD2				AML	AML	07 54 58.4	
	comp=E,6311μm,0.4s						
AST1	**Astakos**	**0.67**	**55**	P	**Pb**	**07 54 37.9**	**-0.6**
AST1				S	**Sb**	**07 54 48.5**	**+0.7**
PDO	**Prodromos**	**0.76**	**55**	P	**Pg**	**07 54 39.2**	**-0.3**
PDO				S	**Sb**	**07 54 50.9**	**+0.4**
PDO	**Prodromos**	**0.76**	**55**	P	**Pg**	**07 54 39.3**	**-0.2**
RLS	**Riolos of Patr**	**0.86**	**96**	P	**Pb**	**07 54 40.9**	**-0.8**
RLS				S	**Sn**	**07 54 54.0**	**-1.3**
RLS	**Riolos of Patr**	**0.86**	**96**	P	**Pb**	**

TTG	**Podgorica**	**4.36**	**349**	*e*Pn	**Pn**	07 55 32.7	**+1.8**
TTG				*e*Sn	**Sn**	07 56 23.3	**+1.7**
PVY	**Plav**	**4.44**	**356**	*i*Pn	**Pn**	07 55 35.3	**+3.1**
PVY				*e*Sn	**Sn**	07 56 28.2	**+4.2**
HCY	**Herceg Novi**	**4.52**	**342**	*e*Pn	**Pn**	07 55 33.0	**-0.2**
HCY				*e*Sn	**Sn**	07 56 24.2	**-1.6**
CEME	**Cevo**	**4.53**	**346**	*e*Pn	**Pn**	07 55 33.7	**+0.4**
CEME				*i* Sn	**Sn**	07 56 25.6	**-0.4**
IVA	**Berane**	**4.72**	**356**	*e*Pn	**Pn**	07 55 38.8	**+2.8**
IVA				*e*Sn	**Sn**	07 56 34.1	**+3.2**
NKME	**Niksic**	**4.73**	**347**	*i*Pn	**Pn**	07 55 36.8	**+0.7**
NKME				*e*Sn	**Sn**	07 56 31.6	**+0.6**
KOME	**Kolasin**	**4.74**	**352**	*i*Pn	**Pn**	07 55 38.7	**+2.5**
KOME				*e*Sn	**Sn**	07 56 33.8	**+2.7**
BRY	**Bratogost**	**4.94**	**344**	*i*Pn	**Pn**	07 55 39.0	**-0.1**
BRY				*e*Sn	**Sn**	07 56 34.9	**-1.5**
UPM	**Unac-Piva**	**5.17**	**348**	*e*Pn	**Pn**	07 55 42.9	**+0.7**
UPM				*e*Sn	**Sn**	07 56 41.7	**-0.2**
PLE	**Pljevlja**	**5.22**	**352**	*e*Pn	**Pn**	07 55 44.7	**+1.8**
PLE				*e*Sn	**Sn**	07 56 44.8	**+1.6**
SOKA	**Soboth**	**9.39**	**337**	*e*Pn	**Pn**	07 56 41.6	**+1.5**
	comp=E,1.1nm,0.2s						
SOKA				*e*Sn	**Sn**	07 58 21.2	**-4.5**
	comp=E,1.7nm,0.4s						
OBKA	**Obir**	**9.40**	**335**	*i* Pn	Pn	07 56 44.2	+4.0
	comp=E,1.5nm,0.3s						
OBKA				*i* Sn	**Sn**	07 58 23.3	**-2.5**
	comp=E,6.9nm,0.7s						
VYHS	**Vyhne**	**10.39**	**354**	*e*SN	**Sn**	07 58 45.4	**-4.8**
MOA	**Molln**	**10.67**	**337**	*i* Pn	**Pn**	07 57 00.4	**+2.9**
	comp=E,1.2nm,0.2s						

VLA ***31*** *08:00:55.0,52°.30N×35°.44E,M2.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 31 08:01:00.9±2.3, 52°.39N×35°.01E, h0km, mb3.2/1, mb1 3.6/3, mb1mx3.1/47, mbtmp3.5/3, ML2.8/3, Error ellipse: s-maj=28.3km s-min=11.7km az=121.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OBN	**Obninsk**	**2.88**	**18**	Sn	Sn	08 02 23.0	-0.3
	1.9nm,0.3s,baz=15,slow=23,SNR=6.3						
AKASG	**Malin Array Be**	**3.99**	**247**	Pn	Pn	08 02 01.6	-1.6
	0.7nm,0.3s,baz=58,slow=15,SNR=4.1						
AKASG				Pg	Pb	08 02 11.0	-0.9
	1.3nm,0.3s,baz=58,slow=16,SNR=6.0						
AKASG				Sn	Sn	08 02 48.8	-1.8
	1.4nm,0.3s,baz=61,slow=26,SNR=4.0						
AKASG				Lg	Lg	08 03 05.5	
	1.8nm,0.3s,baz=62,slow=28,SNR=4.4						
I43RU	**DUBNA INFRASON**	**4.53**	**16**	*i*		08 26 40.0	
	baz=198,slow=338,SNR=1.8						
FINES	**FINESS Array B**	**10.30**	**335**	Pn	Pn	08 03 25.0	-4.7
	0.1nm,0.3s,baz=147,slow=14,SNR=3.4						
FINES				Sn	Sn	08 05 15.6	-10
	0.1nm,0.3s,baz=155,slow=23,SNR=3.1						
I31KZ	**AKTYUBINSK INF**	**14.50**	**89**	*i*		09 26 00.0	
	baz=284,slow=338,SNR=1.6						
ARCES	**ARCESS Array B**	**17.77**	**349**	Pn	Pn	08 05 04.6	-4.7
	0.1nm,0.3s,baz=167,slow=13,SNR=4.0						
YKA	**Yellowknife Ar**	**62.98**	**345**	P	P	08 11 28.0	-0.7
	0.2nm,0.6s,baz=14,slow=6.9,SNR=5.5						

IDC ***31*** *08:01:17.7±0.7, 1°.48N×126°.18E, h0km, mb3.9/10, mb1 4.0/11, mb1mx3.8/45, mbtmp3.9/11, ML3.9/1, Error ellipse: s-maj=53.1km s-min=14.5km az=71.0*
DJA ***31*** *08:01:21.6±0.4, 2°.N±4°×12°.6E±°, h10km, M4.2/6, MLv4.2/6*
NEIC ***31*** *08:01:25.3±3.0, 1°.52N±0°.09×126°.56E±0°.08, h52km±7km, mb4.4/15, Error ellipse: s-maj=15.1km s-min=10.1km az=216.0*

ISC 31 08:01:19.8±0.5, 1°.64N±0°.04×126°.43E±0°.05, h10km, n46, σ1ᵖ37/54, mb4.3/16, 1D, Northern Moluca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.28**	**133**	P	**Pn**	**08 01 44.7**	**+0.9**
TNTI				S	**Sb**	**08 02 00.8**	**+0.3**
TNTI	**Ternate**	**1.28**	**133**		**Pn**	**08 01 44.7**	**+0.9**
LBMI	**Labuha**	**2.51**	**155**	P	**Pn**	**08 02 01.9**	**+1.2**
LBMI				S	**Sn**	**08 02 32.8**	**+1.4**
KMSI	**Cibinong**	**2.67**	**247**	P	**Pn**	**08 02 03.6**	**+0.7**
KMSI				S	**Sn**	**08 02 35.5**	**+0.2**
LUWI	**Luwuk**	**4.53**	**234**	P	**Pn**	**08 02 28.3**	**-0.2**
LUWI				S	**Sn**	**08 03 21.8**	**+0.6**
LUWI	**Luwuk**	**4.53**	**234**		**Pn**	**08 02 32.6**	**+4.1**
SKMP	**Bagumbayan, Su**	**5.20**	**339**	*e*P	**Pn**	**08 02 39.5**	**+1.8**
SKMP				*e*S	**Sn**	**08 03 37.0**	**-0.7**
KCP	**Kidapawan**	**5.49**	**346**	*i*P	**Pb**	**08 02 54.9**	**-1.0**
KKM	**Kota Kinabalu**	**11.09**	**294**	Pn	Pn	08 04 04.5	+5.8
MTN	**Manton Dam**	**15.13**	**162**	P	**Pn**	**08 04 56.7**	**+2.9**
KNRA	**Kununurra**	**17.36**	**172**	P	**Pn**	**08 05 22.2**	**-0.2**
KNRA				IAmb	IAmb	08 05 30.5	
	comp=Z,62nm,1.4s						
FITZ	**Fitzroy Crossi**	**19.63**	**182**	P	**P**	**08 05 46.0**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=358,slow=12,SNR=4.0						
FITZ	**Fitzroy Crossi**	**19.63**	**182**	P	**P**	**08 05 47.3**	**-1.5**
TPUB	**Ta-pu**	**22.25**	**346**	P	**P**	**08 06 19.8**	**+2.7**
WB0	**Warramunga Arr**	**22.67**	**160**	P	**P**	**08 06 20.3**	**-1.2**
WB0				IAmb	IAmb	08 06 25.6	
	comp=Z,7.5nm,0.7s						
WRAB	**Tennant Creek**	**22.81**	**160**	P	**P**	**08 06 23.3**	**+0.2**
WRAB				IAmb	IAmb	08 06 27.1	
	comp=Z,9.8nm,0.7s						
WRA	**Warramunga Arr**	**22.81**	**160**	P	**P**	**08 06 21.4**	**-1.7**
	comp=Z,8.0nm,0.7s,baz=338,slow=11,SNR=17						
WRA	**Warramunga Arr**	**22.81**	**160**	P	**P**	**08 06 22.3**	**-0.8**
WB2	**Warramunga Arr**	**22.82**	**160**	P	**P**	**08 06 21.6**	**-1.5**
WB2				IAmb	IAmb	08 06 27.2	
	comp=Z,12nm,0.8s						
WR0	**Warramunga Arr**	**22.90**	**160**	P	**P**	**08 06 23.4**	**-0.5**
WR0				IAmb	IAmb	08 06 28.9	
	comp=Z,20nm,1.4s						
PSA00	**Pilbara Seismi**	**23.95**	**195**	P	**P**	**08 06 33.0**	**-1.5**
PSA00				IAmb	IAmb	08 06 34.3	
	comp=Z,7.8nm,0.7s						
AS31	**Alice Springs**	**26.19**	**164**	P	**P**	**08 06 54.5**	**-0.3**
ASAR	**Alice Springs**	**26.19**	**164**	P	**P**	**08 06 53.6**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=344,slow=8.5,SNR=32						
ASAR				PcP	**PcP**	**08 10 21.7**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=349,slow=2.2,SNR=9.6						
ASAR	**Alice Springs**	**26.19**	**164**	P	**P**	**08 06 54.3**	**-0.6**
ASAR					**PcP**	**08 10 20.5**	**-1.5**
BBOO	**Buckleboo**	**35.46**	**166**	P	**P**	**08 08 16.8**	**+0.3**
NWAO	**Narrogin (SRO)**	**35.47**	**193**	P	**P**	**08 08 16.0**	**-0.6**
KSRS	**Korea Array**	**35.66**	**2**	P	**P**	**08 08 20.6**	**+2.4**
	comp=Z,0.4nm,0.4s,baz=180,slow=8.8,SNR=2.9						
STKA	**Stephens Creek**	**36.31**	**158**	P	**P**	**08 08 22.4**	**-1.4**
	comp=Z,2.5nm,0.7s,baz=313,slow=7.3,SNR=6.1						
STKA	**Stephens Creek**	**36.31**	**158**	P	**P**	**08 08 24.0**	**+0.1**
SONM	**Songino Array**	**49.17**	**342**	P	**P**	**08 10 07.8**	**-0.3**
	comp=Z,0.9nm,1.0s,baz=134,slow=8.2,SNR=3.0						
SONM				PcP	**PcP**	**08 11 31.6**	**+0.2**
	comp=Z,0.3nm,0.6s,baz=132,slow=2.1,SNR=4.0						
SONM	**Songino Array**	**49.17**	**342**	P	**P**	**08 10 08.4**	**+0.2**
SONM					**PcP**	**08 11 31.8**	**+0.4**
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**08 11 19.8**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=113,slow=8.3,SNR=8.4						
MKAR	**Makanchi Array**	**59.10**	**326**	P	**P**	**08 11 19.9**	**-0.6**
KURBB	**Kurchatov Arra**	**63.33**	**328**	P	**P**	**08 11 48.0**	**-1.0**
	comp=Z,1.7nm,0.6s,baz=128,slow=6.6,SNR=14						
KURK	**Kurchatov**	**63.33**	**328**	P	**P**	**08 11 48.1**	**-1.0**
KURK				IAmb	IAmb	08 11 51.6	
	comp=Z,3.0nm,0.6s						
BVAR	**Borovoye Array**	**68.90**	**328**	P	**P**	**08 12 24.7**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=119,slow=5.4,SNR=3.6						
ABKAR	**Akbulak array**	**73.57**	**321**	P	**P**	**08 12 52.9**	**-0.3**
AKTO	**Aktyubinsk**	**75.10**	**322**	P	**P**	**08 13 01.7**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=108,slow=9.6,SNR=3.3						
IMAR	**Indian Mountai**	**84.36**	**24**	P	**P**	**08 13 54.1**	**+2.1**
ILAR	**Eielson Array**	**87.11**	**25**	P	**P**	**08 14 05.0**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=244,slow=4.6,SNR=5.3						
ILAR	**Eielson Array**	**87.11**	**25**	P	**P**	**08 14 05.2**	**-0.5**
SCHQ	**Schefferville**	**122.66**	**9**	PKPdf	**PKPdf**	**08 20 15.9**	**0.0**
TXAR	**Lajitas Array**	**123.10**	**53**	PKP	**PKPdf**	**08 20 17.6**	**0.0**
	comp=Z,0.2nm,0.7s,baz=188,slow=1.8,SNR=2.6						
TORD	**Torodi Ar. Bea**	**123.25**	**287**	PKP	**PKPdf**	**08 20 17.2**	**-0.9**
	comp=Z,1.2nm,0.8s,baz=32,slow=2.3,SNR=5.4						
GO02	**Mina Guanaco**	**151.97**	**148**	PKPbc	**PKPbc**	**08 21 17.0**	**+0.5**
LGNH	**Logne**	**152.58**	**42**	PKPdf	**PKPdf**	**08 21 07.5**	**-3.2**

IDC ***31*** *08:20:07.5±2.7, 16°.50S×174°.36W, h0km, mb4.0/5, mb1 4.3/5, mb1mx3.8/29, mbtmp4.0/5, Error ellipse: s-maj=147.4km s-min=27.0km az=144.0*
NEIC ***31*** *08:20:29.9±2.7, 16°.7S±0°.1×174°.4W±0°.1, h206km±6km, mb4.4/7, Error ellipse: s-maj=16.3km s-min=14.5km az=92.0*

ISC 31 08:20:29.9±0.7, 16°.63S±0°.08×174°.43W±0°.08, h200km, n17, σ1ᵖ25/19, mb4.1/10, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.73**	**44**	Pn	**Pn**	**08 21 29.3**	**+0.8**
AFI				Sn	**Sn**	**08 22 10.3**	**-2.1**
NIUE	**Niue**	**4.93**	**120**	Pn	**Pn**	**08 21 45.0**	**+1.5**
NIUE				Sn	**Sn**	**08 22 40.0**	**-1.5**
HNR	**Honiara**	**25.95**	**283**	P	**P**	**08 25 44.0**	**-0.2**
MSWZ	**Moikau Station**	**26.25**	**198**	P	**P**	**08 25 44.2**	**-2.4**
ARMA	**Armidale**	**33.86**	**240**	P	**P**	**08 26 54.7**	**+0.9**
ARMA				IAmb	IAmb	08 27 08.9	
	comp=Z,13nm,1.4s						
STKA	**Stephens Creek**	**42.57**	**241**	P	**P**	**08 28 06.7**	**+0.4**
	comp=Z,1.6nm,0.6s,baz=105,slow=12,SNR=2.8						
STKA	**Stephens Creek**	**42.57**	**241**	P	**P**	**08 28 05.4**	**-0.9**
WB0	**Warramunga Arr**	**48.57**	**258**	P	**P**	**08 28 53.7**	**+0.2**
WB0				IAmb	IAmb	08 29 11.6	
	comp=Z,12nm,1.4s						
WRA	**Warramunga Arr**	**48.60**	**258**	P	**P**	**08 28 53.8**	**0.0**
	comp=Z,3.4nm,0.3s,baz=95,slow=7.1,SNR=11						
ASAR	**Alice Springs**	**48.79**	**253**	P	**P**	**08 28 55.4**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=87,slow=8.4,SNR=15						
GUMO	**Guam**	**50.18**	**304**	P	**P**	**08 29 05.0**	**-0.6**
GUMO				IAmb	IAmb	08 29 06.5	
	comp=Z,143nm,1.1s						
GLA	**Glamis**	**75.35**	**48**	P	**P**	**08 31 51.1**	**-0.5**
GLA				IAmb	IAmb	08 31 53.3	
	comp=Z,4.9nm,0.7s						
ILAR	**Eielson Array**	**83.84**	**11**	P	**P**	**08 32 38.0**	**+1.5**
	comp=Z,0.5nm,1.0s,baz=232,slow=5.5,SNR=5.5						
ILAR	**Eielson Array**	**83.84**	**11**	P	**P**	**08 32 38.0**	**+1.5**
PDAR	**Pinedale Array**	**83.84**	**42**	P	**P**	**08 32 38.4**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=201,slow=4.7,SNR=3.6						
PDAR	**Pinedale Array**	**83.84**	**42**	P	**P**	**08 32 38.7**	**+1.4**
PRP	**Porcupine Dome**	**84.77**	**12**	P	**P**	**08 32 40.8**	**-0.6**
PRP				IAmb	IAmb	08 32 41.5	
	comp=Z,4.1nm,1.2s						

MAN 31 08:24:01.6, 6°.81N×125°.66E, h45km, mb3.8, ML2.6, MS2.2, 1C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMPH	**Davao City--Mi**	**0.31**	**332**	*i*P	Pn	08 24 12.5	+2.1
KCP	**Kidapawan**	**0.60**	**290**	*i*P	Pn	08 24 12.9	-1.0
KCP				*i* S	Sn	08 24 26.7	+4.0
MATI	**Mati**	**0.61**	**77**	*e*P	Pn	08 24 14.8	+0.7
MATI				*e*S	Sn	08 24 26.7	+2.8
DDMP	**Don Marcelino,**	**0.70**	**175**	*e*P	Pn	08 24 17.1	+1.9
DDMP				*e*S	Sn	08 24 29.9	+4.9
BUKP	**Musuan**	**1.22**	**331**	*e*P	Pn	08 24 22.9	+0.6
BUKP				*e*S	Sn	08 24 38.7	+1.1
CTBH	**Cotabato--PC H**	**1.46**	**286**	*i*P	Pn	08 24 26.2	+0.7
CTBH				*i* S	Sn	08 24 43.9	+0.4
CGP	**Cagayan de Oro**	**1.90**	**330**	*i*P	Pn	08 24 32.5	+1.0
CGP				*e*S	Sn	08 24 55.8	+1.6

ATH ***31*** *08:26:36.4, 38°.42N×20°.45E, h14km±2km, ML3.4/12, Error ellipse: s-maj=3.0km s-min=0.7km az=264.0*
THE ***31*** *08:26:37.0, 38°.42N×20°.45E, h1km±1km, ML3.4/9, Error ellipse: s-maj=1.4km s-min=0.3km az=281.0*

ISC 31 08:26:36.8±0.9, 38°.42N±0°.02×20°.47E±0°.03, h7km±5km, n48, σ0ᵖ82/80, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.08**	**98**	P	**Pg**	**08 26 38.7**	**0.0**
VSK1				S	**Sg**	**08 26 40.3**	**+0.2**
FSK	**Fiskardo**	**0.09**	**62**	P	**Pg**	**08 26 38.8**	**0.0**
FSK				S	**Sg**	**08 26 40.5**	**+0.2**
	38μm,0.3s						
FSK	**Fiskardo**	**0.09**	**62**	P	**Pg**	**08 26 38.9**	**0.0**
KEF1	**Kardakata, Kep**	**0.14**	**179**	P	**Pg**	**08 26 39.8**	**+0.1**
KEF1				S	**Sg**	**08 26 42.4**	**+0.7**
KEF4	**Livadi, Kephal**	**0.16**	**192**	P	**Pg**	**08 26 40.3**	**+0.1**
KEF4				S	**Sg**	**08 26 43.1**	**+0.7**
LXR1	**Lixouri, Cepha**	**0.22**	**186**	P	**Pg**	**08 26 41.5**	**+0.4**
LXR1				S	**Sg**	**08 26 45.1**	**+1.0**
KEF3	**Kipouria, Keph**	**0.23**	**203**	P	**Pg**	**08 26 41.5**	**+0.1**
KEF3				S	**Sg**	**08 26 45.4**	**+0.8**
ARG2	**Argostoli**	**0.24**	**176**	P	**Pg**	**08 26 41.6**	**+0.1**
ARG2				S	**Sg**	**08 26 45.5**	**+0.7**
EVGI	**Lefkada island**	**0.25**	**36**	P	**Pg**	**08 26 42.2**	**+0.4**
EVGI				S	**Sg**	**08 26 46.2**	**+1.1**
EVGI	**Lefkada island**	**0.25**	**36**	P	**Pg**	**08 26 42.2**	**+0.4**
EVGI				S	**Sg**	**08 26 46.0**	**+0.9**
KEF2	**Argostoli. Kep**	**0.25**	**176**	P	**Pg**	**08 26 41.9**	**+0.1**
KEF2				S	**Sg**	**08 26 45.3**	**+0.1**
VLS	**Valsamata**	**0.26**	**158**	P	**Pg**	**08 26 42.0**	**0.0**
VLS				S	**Sg**	**08 26 46.1**	**+0.7**
	10μm,0.3s						
VLS	**Valsamata**	**0.26**	**158**	P	**Pg**	**08 26 41.9**	**0.0**
VLS				S	**Sg**	**08 26 46.0**	**+0.6**
VLS				AML	AML	08 26 48.0	
	comp=N,19270μm,0.2s						
VLS				AML	AML	08 26 48.9	
	comp=E,14990μm,0.2s						
MGNA	**Meganis**	**0.35**	**47**	P	**Pg**	**08 26 43.8**	**+0.2**
MGNA				AML	AML	08 26 50.5	
	comp=E,11098μm,0.2s						
MGNA				AML	AML	08 26 50.8	
	comp=N,23804μm,0.4s						
LKD2	**Lefkada island**	**0.40**	**22**	P	**Pg**	**08 26 44.5**	**-0.1**
LKD2				S	**Sg**	**08 26 50.7**	**+0.9**
	comp=N,5μm,0.6s						
LKD2	**Lefkada island**	**0.40**	**22**	P	**Pg**	**08 26 44.6**	**+0.1**
LKD2				S	**Sg**	**08 26 50.2**	**+0.3**
LKD2				AML	AML	08 26 52.0	
	comp=N,12473μm,0.6s						
LKD2				AML	AML	08 26 52.4	
	comp=E,9036μm,0.6s						
KFL	**Anninata**	**0.40**	**141**	P	**Pg**	**08 26 44.6**	**0.0**
KFL				S	**Sg**	**08 26 51.0**	**+1.2**
	comp=E,12μm,0.3s						
KFL	**Anninata**	**0.40**	**141**	P	**Pg**	**08 26 44.5**	**0.0**
KFL				S	**Sg**	**08 26 50.4**	**+0.6**
KFL				AML	AML	08 26 52.3	
	comp=N,19907μm,0.2s						
KFL				AML	AML	08 26 55.6	
	comp=E,29870μm,0.4s						
TSLK	**Tsoukalades, L**	**0.43**	**20**	P	**Pg**	**08 26 45.5**	**+0.3**
TSLK				S	**Sb**	**08 26 52.4**	**-1.0**
	comp=E,7μm,0.6s						
TSLK	**Tsoukalades, L**	**0.43**	**20**	P	**Pg**	**08 26 45.3**	**+0.1**
TSLK				S	**Sg**	**08 26 51.8**	**+0.9**
AST1	**Astakos**	**0.50**	**76**	P	**Pg**	**08 26 46.7**	**+0.2**
AST1				S	**Sb**	**08 26 55.2**	**+0.3**
VLMS	**Volimes, Zakyn**	**0.56**	**164**	P	**Pg**	**08 26 47.2**	**-0.4**
VLMS				S	**Sg**	**08 26 55.9**	**+0.9**
VLMS				AML	AML	08 26 59.1	
	comp=N,21596μm,0.2s						
VLMS				AML	AML	08 27 00.5	
	comp=E,14620μm,0.3s						
PDO	**Prodromos**	**0.59**	**72**	P	**Pg**	**08 26 48.0**	**-0.2**
PDO				S	**Sb**	**08 26 57.6**	**-0.4**
PDO	**Prodromos**	**0.59**	**72**	P	**Pg**	**08 26 48.2**	**0.0**
PDO				AML	AML	08 27 04.1	
	comp=E,5383μm,0.4s						
PDO				AML	AML	08 27 04.6	
	comp=N,7240μm,0.5s						
ZAK2	**Zakynthos**	**0.72**	**151**	P	**Pg**	**08 26 50.9**	**+0.3**
ZAK2				S	**Sb**	**08 27 02.0**	**+0.4**
KRI1	**kERI**	**0.81**	**160**	P	**Pg**	**08 26 51.6**	**-0.6**
KRI1				S	**Sb**	**08 27 03.7**	**-0.4**
PVO	**Paravola**	**0.85**	**76**	P	**Pg**	**08 26 53.3**	**+0.1**
PVO				S	**Sb**	**08 27 06.4**	**+0.8**
	comp=N,3μm,0.5s						
PVO	**Paravola**	**0.85**	**76**	P	**Pg**	**08 26 53.2**	**+0.1**
PVO				AML	AML	08 27 12.4	
	comp=N,4394μm,0.5s						
PVO				AML	AML	08 27 14.6	
	comp=E,4677μm,0.4s						

RLS	**Riolos of Patr**	**0.87**	**114**	P	**Pg**	**08 26 53.1**	**-0.3**
RLS				S	**Sb**	**08 27 07.1**	**+1.2**
RLS	**Riolos of Patr**	**0.87**	**114**	P	**Pg**	**08 26 53.0**	**-0.4**
RLS				AML	AML	08 27 11.5	
	comp=E,1984μm,0.6s						
RLS				AML	AML	08 27 13.5	
	comp=N,3098μm,0.6s						
UPR	**University Cam**	**1.05**	**97**	P	**Pg**	**08 26 57.1**	**+0.2**
DRO	**Drossia**	**1.08**	**115**	P	**Pg**	**08 26 56.8**	**-0.8**
EFP	**Efpalio**	**1.13**	**89**	P	**Pg**	**08 26 57.6**	**-0.8**
EFP				S	**Sn**	**08 27 15.7**	**+0.9**
	comp=N,3μm,0.6s						
EFP	**Efpalio**	**1.13**	**89**	P	**Pg**	**08 26 57.7**	**-0.8**
ANX	**Ano Chora**	**1.15**	**81**	P	**Pg**	**08 26 58.6**	**-0.3**
ANX				S	**Sn**	**08 27 15.2**	**-0.3**
	comp=N,2μm,0.5s						
ANX	**Ano Chora**	**1.15**	**81**	P	**Pg**	**08 26 58.4**	**-0.5**
EVR	**Evrytania**	**1.16**	**64**	P	**Pg**	**08 26 58.3**	**-0.8**
LAKA	**Lakka**	**1.20**	**98**	P	**Pb**	**08 26 59.0**	**-0.9**
LAKA				S	**Sn**	**08 27 17.7**	**+1.1**
LAKA	**Lakka**	**1.20**	**98**	P	**Pb**	**08 26 58.9**	**-1.0**
LAKA				S	**Sn**	**08 27 16.6**	**0.0**
LAKA				AML	AML	08 27 25.0	
	comp=N,2430μm,0.5s						
LAKA				AML	AML	08 27 25.1	
	comp=E,1854μm,0.5s						
SERG	**Sergoula**	**1.25**	**90**	P	**Pn**	**08 26 59.8**	**-0.9**
SERG				S	**Sn**	**08 27 18.8**	**+1.0**
SERG	**Sergoula**	**1.25**	**90**	P	**Pn**	**08 26 59.7**	**-1.0**
SERG				AML	AML	08 27 24.7	
	comp=N,4779μm,0.5s						
SERG				AML	AML	08 27 26.5	
	comp=E,4116μm,0.5s						
TRIZ	**Trizonia**	**1.26**	**92**	P	**Pn**	**08 27 00.1**	**-0.7**
KALE	**Kalithea**	**1.31**	**91**	P	**Pn**	**08 27 00.7**	**-0.9**
KALE				S	**Sn**	**08 27 21.8**	**+2.4**
	comp=E,1μm,0.7s						
KALE	**Kalithea**	**1.31**	**91**	P	**Pn**	**08 27 00.6**	**-0.9**
KALE				AML	AML	08 27 29.9	
	comp=E,2129μm,0.9s						
KALE				AML	AML	08 27 33.4	
	comp=N,3483μm,0.6s						
KLV	**Kalavryta, Ach**	**1.38**	**105**	P	**Pn**	**08 27 01.9**	**-0.6**
KLV				S	**Sg**	**08 27 23.3**	**+2.2**
OHR	**Ohrid**	**2.70**	**5**	*e*Pn	**Pb**	**08 27 23.6**	**-1.9**
VAY	**Valandovo**	**3.32**	**29**	*e*Pn	**Pn**	**08 27 31.8**	**+2.7**
STIP	**Stip**	**3.53**	**21**	*e*Pn	**Pn**	**08 27 31.2**	**-0.7**

IDC 31 08:40:44.1±9.8, 21°.14S×178°.78W, h692km±133km, mb2.6/6, mb1 3.0/6, mb1mx2.8/32, mbtmp3.6/6, Error ellipse: s-maj=72.3km s-min=40.6km az=179.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**43.66**	**257**	P	P	08 47 52.2	+0.1
	0.6nm,0.5s,baz=95,slow=7.7,SNR=7.9						
WRA	**Warramunga Arr**	**43.79**	**263**	P	P	08 47 52.7	-0.4
	0.4nm,0.3s,baz=97,slow=6.9,SNR=3.3						
KSRS	**Korea Array**	**76.89**	**319**	P	P	08 51 29.0	+0.7
	3.5nm,0.8s,baz=119,slow=38,SNR=5.3						
TXAR	**Lajitas Array**	**88.02**	**58**	P	P	08 52 24.9	+0.7
	0.2nm,0.8s,baz=225,slow=6.2,SNR=2.8						
ILAR	**Eielson Array**	**89.10**	**13**	P	P	08 52 27.1	-1.1
	0.2nm,0.4s,baz=215,slow=5.0,SNR=5.4						
PDAR	**Pinedale Array**	**89.93**	**44**	P	P	08 52 32.6	-0.3
	0.3nm,0.7s,baz=213,slow=6.5,SNR=3.4						
AKASG	**Malin Array Be**	**143.21**	**330**	PKP	PKPab	08 59 01.1	+0.3
	0.9nm,0.4s,baz=37,slow=4.1,SNR=7.5						

IDC ***31*** *08:41:13.4±1.8, 7°.81S×118°.88E, h0km, mb3.6/3, mb1 3.8/6, mb1mx3.5/42, mbtmp3.7/6, ML3.3/2, MS2.5/2, Ms1 2.6/2, ms1mx2.3/37, Error ellipse: s-maj=52.5km s-min=19.8km az=71.0*

ISC 31 08:41:18.0±1.5, 7°.86S±0°.08×118°.9E±0°.2, h35km, n7, σ1ᵖ34/8, mb3.6/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**2.95**	**17**	Pn	**Pn**	**08 42 00.4**	**-2.0**
	14nm,0.3s,baz=193,slow=6.9,SNR=23						
KAPI				Sn	**Sn**	**08 42 38.7**	**+2.0**
	32nm,0.3s,baz=67,slow=23,SNR=8.3						
KAPI				L

comp=Z,0.3nm,0.3s,baz=155,slow=13,SNR=31
ARCES Sn **Sn** **09 01 32.8 -2.9**
comp=Z,0.2nm,0.3s,baz=161,slow=25,SNR=3.9
ARCES Lg Lg 09 01 55.2
comp=Z,0.5nm,0.3s,baz=157,slow=28,SNR=7.8
I43RU DUBNA INFRASON 8.69 155 *i* 09 53 50.0
baz=348,slow=321,SNR=0.5

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*NNC **31** 09:09:50.6±2.9, 53.°47N×87.°72E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=25.2km s-min=14.0km az=62.0*
ASRS 31 09:09:44.6, 53.73N×87.°93E, M2.1, 6C-4D, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014), Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**1.86**	**278**	⇑P	Pg	09 10 21.9	+1.8
	3.8nm,0.5s						
ZAA0				⇑S	Sg	09 10 47.6	+3.4
	26nm,1.0s						
KURBB	**Kurchatov Arra**	**6.56**	**245**	⇑Pn	Pn	09 11 26.0	+3.7
	7.1nm,0.5s						
KURBB				⇓Sn	Sn	09 12 37.4	-0.4
	24nm,0.7s						
KURBB				⇑Lg	Lg	09 13 12.6	
	37nm,0.9s						
MK31	**Makanchi Array**	**7.83**	**210**	⇓Pn	Pn	09 11 43.7	+4.0
	1.1nm,0.6s,baz=30,slow=14,SNR=28						
MK31				⇓Sn	Sn	09 13 08.9	0.0
	1.1nm,0.5s,baz=24,slow=15,SNR=6.2						
MK31				⇓Lg	Lg	09 13 51.4	
	8.8nm,0.8s,baz=38,slow=32,SNR=3.0						
BRVK	**Borovoye**	**10.56**	**273**	⇑Pn	Pn	09 12 22.3	+5.2
	3.1nm,1.0s						
BRVK				⇑Sn	Sn	09 14 18.1	+2.1
	9.8nm,1.0s						

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*IDC **31** 09:22:50.3±2.0, 17.°90S×178.°59W, h536km±25km, mb3.4/9, mb1 3.7/11, mb1mx3.4/30, mbtmp4.3/11, Error ellipse: s-maj=31.1km s-min=13.3km az=148.0*
*NEIC **31** 09:22:51.4±1.4, 17.°9S±0.°2×178.°6W±0.°2, h552km±9km, mb4.2/37, Error ellipse: s-maj=25.7km s-min=16.0km az=138.0*
ISC 31 09:22:51.4±0.5, 17.°9S±0.°1×178.°6W±0.°1, h550km, n54, σ0s90/55, mb4.1/26, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.21**	**272**	P	**P**	**09 24 10.3**	**+2.4**
AFI	**Afiamalu**	**7.64**	**60**	P	**P**	**09 24 44.7**	**-1.1**
	3.8nm,0.3s,baz=108,slow=14,SNR=5.9						
AFI	**Afiamalu**	**7.64**	**60**	P	**P**	**09 24 45.1**	**-0.7**
AFI				S	**S**	**09 26 19.8**	**+0.3**
DZM	**Mont Dzumac**	**14.68**	**251**	P	**P**	**09 25 57.0**	**-0.7**
	0.3nm,0.3s,baz=75,slow=17,SNR=3.3						
URZ	**Urewera**	**20.65**	**190**	P	**P**	**09 26 51.7**	**-1.6**
	12nm,0.9s,baz=241,slow=1.6,SNR=6.6						
URZ	**Urewera**	**20.65**	**190**	P	**P**	**09 26 52.2**	**-1.0**
BKZ	**Black Stump Fm**	**21.64**	**190**	P	**P**	**09 27 01.4**	**-0.9**
BKZ				IAmb	IAmb	09 27 09.0	
	comp=Z,16nm,1.3s						
THZ	**Tophouse**	**24.90**	**195**	P	**P**	**09 27 30.6**	**-0.6**
THZ				IAmb	IAmb	09 27 32.6	
	comp=Z,20nm,1.2s						
LTZ	**Lake Taylor**	**26.02**	**195**	P	**P**	**09 27 39.5**	**-1.5**
LTZ				IAmb	IAmb	09 27 44.6	
	comp=Z,2.9nm,0.7s						
FOZ	**Fox Glacier**	**27.39**	**199**	P	**P**	**09 27 52.4**	**-0.6**
WKZ	**Wanaka**	**28.81**	**198**	P	**P**	**09 28 04.2**	**-1.2**
EIDS	**Eidsvold**	**29.12**	**250**	P	**P**	**09 28 07.8**	**-0.6**
MLZ	**Mavora Lakes**	**29.57**	**199**	P	**P**	**09 28 11.9**	**-0.1**
ARMA	**Armidale**	**29.81**	**240**	P	**P**	**09 28 13.9**	**-0.5**
ARMA				IAmb	IAmb	09 28 16.3	
	comp=Z,5.2nm,0.7s						
WHZ	**Wether Hill Ro**	**30.10**	**199**	P	**P**	**09 28 16.1**	**-0.4**
TOO	**Toolangi**	**37.06**	**231**	P	**P**	**09 29 16.8**	**+1.5**
STKA	**Stephens Creek**	**38.50**	**241**	P	**P**	**09 29 27.8**	**+0.7**
	comp=Z,3.1nm,0.4s,baz=20,slow=19,SNR=3.4						
STKA	**Stephens Creek**	**38.50**	**241**	P	**P**	**09 29 27.0**	**0.0**
BBOO	**Buckleboo**	**43.28**	**241**	P	**P**	**09 30 05.3**	**+0.3**
BBOO				IAmb	IAmb	09 30 06.0	
	comp=Z,9.9nm,0.8s						
WR0	**Warramunga Arr**	**44.28**	**260**	P	**P**	**09 30 12.3**	**-0.7**
WR0				IAmb	IAmb	09 30 29.0	
	comp=Z,21nm,1.5s						
WB0	**Warramunga Arr**	**44.44**	**260**	P	**P**	**09 30 13.3**	**-0.8**
WB0				IAmb	IAmb	09 30 16.5	
	comp=Z,8.2nm,1.2s						
WB2	**Warramunga Arr**	**44.46**	**260**	P	**P**	**09 30 13.4**	**-0.9**
WB2				IAmb	IAmb	09 30 28.8	
	comp=Z,14nm,1.5s						
WRAB	**Tennant Creek**	**44.47**	**260**	P	**P**	**09 30 13.4**	**-0.9**
WRAB				IAmb	IAmb	09 30 29.7	
	comp=Z,14nm,1.4s						
WRA	**Warramunga Arr**	**44.47**	**260**	P	**P**	**09 30 13.7**	**-0.7**
	comp=Z,1.6nm,0.7s,baz=93,slow=7.0,SNR=16						
WRA	**Warramunga Arr**	**44.47**	**260**	P	**P**	**09 30 13.6**	**-0.9**
AS31	**Alice Springs**	**44.64**	**254**	P	**P**	**09 30 15.4**	**-0.2**
AS31				IAmb	IAmb	09 30 16.1	
	comp=Z,5.0nm,0.6s						
ASAR	**Alice Springs**	**44.64**	**254**	P	**P**	**09 30 15.6**	**-0.1**
	comp=Z,17nm,0.6s,baz=88,slow=8.2,SNR=341						
ASAR	**Alice Springs**	**44.64**	**254**	P	**P**	**09 30 15.1**	**-0.5**
FORT	**Forrest**	**49.87**	**245**	P	**P**	**09 30 54.8**	**0.0**
KNRA	**Kununurra**	**50.33**	**264**	P	**P**	**09 30 56.6**	**-1.7**
PSA00	**Pilbara Seismi**	**57.76**	**255**	P	**P**	**09 31 50.4**	**-0.2**
PSA00				IAmb	IAmb	09 31 50.5	
	comp=Z,6.3nm,0.8s						
QSPA	**South Pole Qui**	**72.18**	**180**	P	**P**	**09 33 22.1**	**+1.5**
BEKR	**Beckworth**	**78.98**	**42**	P	**P**	**09 33 58.1**	**-0.7**
PNTR	**Pine Nut**	**79.03**	**43**	P	**P**	**09 33 59.6**	**+0.5**
PNTR				IAmb	IAmb	09 34 01.1	
	comp=Z,5.0nm,0.9s						
YERR	**Yerington**	**79.20**	**43**	P	**P**	**09 33 59.1**	**-0.9**
NVAR	**Mina Array Bea**	**79.52**	**44**	P	**P**	**09 34 01.9**	**+0.1**
	comp=Z,1.2nm,0.8s,baz=230,slow=8.2,SNR=9.3						
MOD	**Modoc Plateau**	**80.17**	**40**	P	**P**	**09 34 05.0**	**0.0**
K05A	**Summer Lake**	**80.28**	**39**	P	**P**	**09 34 06.6**	**+1.1**
K05A				IAmb	IAmb	09 34 07.1	
	comp=Z,3.6nm,0.8s						
I07A	**Izee**	**81.89**	**39**	P	**P**	**09 34 14.4**	**+0.7**
GHO	**Glory Hole Cre**	**82.82**	**14**	P	**P**	**09 34 17.9**	**0.0**
GHO				IAmb	IAmb	09 34 28.3	
	comp=Z,11nm,1.4s						
G08A	**Pilot Rock**	**82.89**	**38**	P	**P**	**09 34 19.8**	**+1.1**
GLB	**Gilahina Butte**	**83.78**	**16**	P	**P**	**09 34 22.5**	**-0.2**
BALM	**Baldy**	**83.84**	**17**	P	**P**	**09 34 22.9**	**-0.2**
BALM				IAmb	IAmb	09 34 32.1	
	comp=Z,2.9nm,1.1s						
TRF	**Thorofare Moun**	**84.02**	**12**	P	**P**	**09 34 23.1**	**-0.9**
TRF				IAmb	IAmb	09 34 35.7	
	comp=Z,7.7nm,1.4s						
RND	**Reindeer**	**84.28**	**13**	P	**P**	**09 34 24.9**	**-0.2**
RND				IAmb	IAmb	09 34 25.3	
	comp=Z,2.2nm,0.6s						
DHY	**Denali Highway**	**84.31**	**14**	P	**P**	**09 34 24.5**	**-0.9**
DHY				IAmb	IAmb	09 34 38.5	
	comp=Z,4.7nm,1.4s						
ILAR	**Eielson Array**	**85.89**	**13**	P	**P**	**09 34 31.8**	**-1.0**
	comp=Z,0.4nm,0.5s,baz=220,slow=5.4,SNR=11						
ILAR	**Eielson Array**	**85.89**	**13**	P	**P**	**09 34 32.7**	**-0.2**
TX31	**Lajitas Ar. Sí**	**86.12**	**58**	P	**P**	**09 34 34.9**	**+0.1**
TXAR	**Lajitas Array**	**86.12**	**58**	P	**P**	**09 34 36.7**	**+1.8**
	comp=Z,1.3nm,0.8s,baz=210,slow=5.2,SNR=18						
PDAR	**Pinedale Array**	**87.44**	**43**	P	**P**	**09 34 41.4**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=214,slow=3.3,SNR=8.5						
PDAR	**Pinedale Array**	**87.44**	**43**	P	**P**	**09 34 41.6**	**+0.6**
YKA	**Yellowknife Ar**	**94.37**	**25**	P	**P**	**09 35 11.4**	**-0.7**
	comp=Z,0.4nm,0.8s,baz=234,slow=4.3,SNR=6.8						
GERES	**GERESS Array B**	**147.54**	**345**	PKPbc	**PKPbc**	**09 41 34.2**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=46,slow=2.8,SNR=5.8						

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*BER **31** 09:28:44.9±1.4, 67.°57N×31.°05E, h0km, ML1.3, Suspected explosion*
HEL 31 09:28:44.3±0.4, 67.°59N×30.°40E, h0km, ML1.5, Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**0.34**	**298**	PG	Pg	09 28 51.0	+0.1
	baz=119						
VRF				SG	Sg	09 28 55.1	-0.2
SGF	**Sodankyl**	**1.50**	**266**	PG	Pn	09 29 11.8	-0.6
SGF				SG	Sg	09 29 31.1	-1.2
KU6	**Riekki**	**1.58**	**188**	PG	Pn	09 29 12.5	-1.1
KU6				MSG		09 29 31.7	
	comp=Z,3.6nm,0.2s						
KU6				SN	Sg	09 29 36.2	+1.2
MSF	**Maaselka**	**1.77**	**198**	PG	Pn	09 29 16.6	+0.5
MSF				SG	Sn	09 29 38.6	-0.7
RNF	**Rovaniemi**	**1.98**	**242**	PG	Pn	09 29 19.4	+0.4
RNF				SG	Sn	09 29 45.0	+0.6
KEV	**Kevo**	**2.51**	**332**	PB	Pn	09 29 27.2	+1.0
KEV				MSG		09 29 58.4	
	comp=Z,1.5nm,0.2s						
KEV				SG	Sb	09 30 00.2	-1.3
KEV	**Kevo**	**2.51**	**332**	*e*P	Pn	09 29 26.9	+0.6
KEV				*e*S	Sn	09 29 58.1	+0.7
ARE0	**ARCESS Array S**	**2.66**	**320**	PB	Pn	09 29 29.5	+1.2
	baz=138						
ARE0				SG	Sb	09 30 05.5	-0.3
ARE0	**ARCESS Array S**	**2.66**	**320**	*e*P	Pn	09 29 29.8	+1.5
ARE0				*e*S	Sn	09 30 01.9	+0.7
HEF	**Hetta**	**2.67**	**291**	MSG		09 30 02.8	
	comp=Z,1.4nm,0.2s						
HEF				SG	Sb	09 30 05.4	-0.8
HEF	**Hetta**	**2.67**	**291**	*e*P	Pb	09 29 31.1	-1.8
HEF				*e*S	Sb	09 30 04.9	-1.3
KTK1	**Kautokeino**	**3.02**	**302**	*e*S	Sn	09 30 12.2	+2.0
KTK1				IAML		09 30 17.3	
	comp=Z,2.1nm,0.7s						
LANU	**Lannavaara**	**3.23**	**282**	PN	Pn	09 29 36.0	-0.1
KIF	**Kilpisjarvi**	**3.84**	**296**	PN	Pn	09 29 45.2	+0.7
KIF	**Kilpisjarvi**	**3.84**	**296**	*e*P	Pn	09 29 45.3	+0.8
KIF				*e*S	Sn	09 30 31.5	+1.2

EST 31 09:29:31.9±0.2, 59.°24N×27.°74E, h0km, ML0.8 (HEL), Explosion, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VSU	**Vasula**	**0.94**	**214**	*e*P	Pg	09 29 48.8	-1.1
VJF	**Virojoki**	**1.30**	**356**	*e*P	Pg	09 29 55.1	-1.8
VJF				*e*S	Sg	09 30 11.6	-2.2
PVF	**Pernaja**	**1.61**	**325**	*e*PG	Pn	09 30 01.1	-0.5
PVF				*e*S	Sn	09 30 21.1	-2.0
PVF				MSG		09 30 22.5	
	comp=Z,0.5nm,0.1s						
NUR	**Nurmijrvi**	**2.01**	**311**	*e*	Pn	09 29 59.6	-7.5
NUR				*e*SG	Sn	09 30 33.6	+0.8
MTSE	**Matsula**	**2.10**	**257**	*e*SG	Sb	09 30 36.2	-1.1
FIA0	**FINESS Array S**	**2.36**	**340**	*e*P	Pn	09 30 11.8	0.0
FIA0				*e*SG	Sb	09 30 44.8	0.0
FIA0				MSG		09 30 45.7	
	comp=Z,0.2nm,0.1s						
FIA1	**FINESS Array S**	**2.36**	**340**	*e*P	Pn	09 30 11.8	0.0
FIA1				*e*SG	Sb	09 30 44.8	0.0
FIA1				MSG		09 30 45.7	
	comp=Z,0.3nm,0.1s						
KAF	**Kangasniemi**	**2.96**	**347**	*e*SB	Sb	09 31 01.4	-0.9

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*ATH **31** 09:36:31.7, 38.°23N×20.°43E, h8km±1km, ML2.8/12, Error ellipse: s-maj=2.2km s-min=0.9km az=257.0*
*THE **31** 09:36:31.8, 38.°23N×20.°42E, h9km, ML2.8/9, Error ellipse: s-maj=0.8km s-min=0.3km az=224.0*
ISC 31 09:36:31.3±1.0, 38.°23N±0.°02×20.°42E±0.°04, h9km±5km, n43, σ0s51/67, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.03**	**12**	P	**Pg**	**09 36 33.2**	**+0.2**
KEF4				S	**Sg**	**09 36 34.2**	**-0.1**
LXR1	**Lixouri, Cepha**	**0.03**	**148**	P	**Pg**	**09 36 33.3**	**+0.3**
CHV1	**Chavriata, Kef**	**0.05**	**212**	P	**Pg**	**09 36 33.5**	**+0.3**
KEF3	**Kipouria, Keph**	**0.06**	**245**	P	**Pg**	**09 36 33.7**	**+0.4**
KEF3				S	**Sg**	**09 36 34.7**	**0.0**
KEF1	**Kardakata, Kep**	**0.07**	**41**	P	**Pg**	**09 36 33.6**	**+0.2**
KEF1				S	**Sg**	**09 36 34.7**	**-0.1**
ARG2	**Argostoli**	**0.07**	**132**	P	**Pg**	**09 36 33.9**	**+0.4**
ARG2				S	**Sg**	**09 36 35.3**	**+0.3**
KEF2	**Argostoli. Kep**	**0.08**	**139**	P	**Pg**	**09 36 34.1**	**+0.5**
KEF2				S	**Sg**	**09 36 35.5**	**+0.2**
VLS	**Valsamata**	**0.15**	**110**	P	**Pg**	**09 36 34.8**	**+0.2**
VLS				S	**Sg**	**09 36 37.2**	**+0.4**
	12μm,0.2s						
VLS	**Valsamata**	**0.15**	**110**	P	**Pg**	**09 36 34.9**	**+0.4**
VLS				S	**Sg**	**09 36 36.9**	**+0.1**
VLS				AML	AML	09 36 37.8	
	comp=N,23798μm,0.1s						
VLS				AML	AML	09 36 37.8	
	comp=E,12137μm,0.1s						
VSK1	**VASILIKIADES**	**0.21**	**33**	P	**Pg**	**09 36 36.0**	**+0.2**
VSK1				S	**Sg**	**09 36 39.4**	**+0.6**
	comp=E,8μm,0.2s						
FSK	**Fiskardo**	**0.26**	**26**	P	**Pg**	**09 36 37.0**	**+0.5**
FSK				S	**Sg**	**09 36 41.0**	**+1.0**
	comp=E,2μm,0.1s						
FSK	**Fiskardo**	**0.26**	**26**	P	**Pg**	**09 36 37.0**	**+0.5**
FSK				S	**Sg**	**09 36 40.1**	**+0.1**
KFL	**Anninata**	**0.32**	**112**	P	**Pg**	**09 36 37.9**	**+0.3**
KFL				S	**Sg**	**09 36 43.0**	**+1.2**
	comp=E,4μm,0.3s						
KFL	**Anninata**	**0.32**	**112**	P	**Pg**	**09 36 38.1**	**+0.4**
KFL				S	**Sg**	**09 36 42.2**	**+0.4**
KFL				AML	AML	09 36 43.7	
	comp=E,9298μm,0.3s						
KFL				AML	AML	09 36 46.9	
	comp=N,6510μm,0.3s						
VLMS	**Volimes, Zakyn**	**0.40**	**151**	P	**Pg**	**09 36 39.8**	**+0.6**
VLMS				S	**Sg**	**09 36 45.9**	**+1.4**
VLMS				AML	AML	09 36 51.0	
	comp=E,2499μm,0.2s						
VLMS				AML	AML	09 36 52.5	
	comp=N,4549μm,0.3s						
EVGl	**Lefkada island**	**0.43**	**26**	P	**Pg**	**09 36 40.1**	**+0.2**
EVGl				S	**Sg**	**09 36 46.9**	**+1.3**
EVGl	**Lefkada island**	**0.43**	**26**	P	**Pg**	**09 36 40.2**	**+0.3**
EVGl				S	**Sg**	**09 36 46.8**	**+1.3**
MGNA	**Meganis**	**0.52**	**34**	P	**Pg**	**09 36 41.5**	**+0.1**
MGNA				S	**Sg**	**09 36 49.0**	**+0.8**
MGNA				AML	AML	09 36 50.4	
	comp=E,5561μm,0.1s						
MGNA				AML	AML	09 36 50.6	
	comp=N,2843μm,0.1s						
LKD2	**Lefkada island**	**0.59**	**19**	P	**Pg**	**09 36 42.8**	**0.0**
LKD2				S	**Sg**	**09 36 51.4**	**+0.8**
	comp=N,555nm,0.2s						
LKD2	**Lefkada island**	**0.59**	**19**	P	**Pg**	**09 36 42.8**	**0.0**
LKD2				S	**Sg**	**09 36 51.4**	**+0.8**
LKD2				AML	AML	09 36 54.1	
	comp=N,1136μm,0.2s						
LKD2				AML	AML	09 36 57.4	
	comp=E,1141μm,0.3s						
AST1	**Astakos**	**0.61**	**59**	P	**Pg**	**09 36 43.4**	**+0.2**
AST1				S	**Sg**	**09 36 52.2**	**+0.9**
	comp=E,2μm,0.3s						
TSLK	**Tsoukalades, L**	**0.62**	**17**	P	**Pg**	**09 36 43.5**	**+0.1**
TSLK				S	**Sb**	**09 36 53.2**	**-0.1**
	comp=E,630nm,0.4s						
TSLK	**Tsoukalades, L**	**0.62**	**17**	P	**Pg**	**09 36 43.5**	**+0.1**
TSLK				S	**Sg**	**09 36 51.5**	**-0.2**
PDO	**Prodromos**	**0.71**	**58**	P	**Pg**	**09 36 45.0**	**0.0**
PDO				S	**Sb**	**09 36 55.3**	**-0.3**
PDO	**Prodromos**	**0.71**	**58**	P	**Pg**	**09 36 45.1**	**+0.1**
PDO				AML	AML	09 36 58.5	
	comp=N,2292μm,0.3s						
PDO				AML	AML	09 37 02.4	
	comp=E,2006μm,0.3s						
RLS	**Riolos of Patr**	**0.84**	**101**	P	**Pg**	**09 36 47.6**	**0.0**
RLS	**Riolos of Patr**	**0.84**	**101**	P	**Pg**	**09 36 46.9**	**-0.7**
PVO	**Paravola**	**0.95**	**66**	P	**Pg**	**09 36 49.7**	**0.0**
PVO	**Paravola**	**0.95**	**66**	P	**Pg**	**09 36 50.0**	**+0.3**
PVO				AML	AML	09 37 11.3	
	comp=E,1576μm,0.6s						
PVO				AML	AML	09 37 13.8	
	comp=N,954μm,0.5s						
DRO	**Drossia**	**1.06**	**105**	P	**Pg**	**09 36 51.4**	**-0.2**
DRO				S	**Sn**	**09 37 06.9**	**-0.3**
	comp=N,768nm,0.4s						
DRO	**Drossia**	**1.06**	**105**	P	**Pg**	**09 36 51.4**	**-0.2**
DRO				AML	AML	09 37 17.3	
	comp=E,1816μm,0.4s						
DRO				AML	AML	09 37 20.2	
	comp=N,1242μm,0.5s						
EFP	**Efpalio**	**1.19**	**80**	P	**Pb**	**09 36 53.8**	**-0.2**
EFP	**Efpalio**	**1.19**	**80**	P	**Pb**	**09 36 53.5**	**-0.5**
LAKA	**Lakka**	**1.23**	**89**	P	**Pb**	**09 36 54.2**	**-0.5**
LAKA				S	**Sn**	**09 37 11.8**	**+0.3**
	comp=N,175nm,0.3s						
LAKA	**Lakka**	**1.23**	**89**	P	**Pb**	**09 36 54.3**	**-0.5**
LAKA				AML	AML	09 37 14.4	
	comp=E,331μm,0.3s						
LAKA				AML	AML	09 37 15.1	
	comp=N,393μm,0.3s						
ANX	**Ano Chora**	**1.24**	**72**	P	**Pb**	**09 36 54.5**	**-0.4**
ANX	**Ano Chora**	**1.24**	**72**	P	**Pb**	**09 36 54.4**	**-0.4**
SERG	**Sergoula**	**1.30**	**81**	P	**Pn**	**09 36 56.0**	**+0.3**
SERG				AML	AML	09 37 21.8	
	comp=E,476μm,0.3s						
SERG				AML	AML	09 37 22.8	
	comp=N,666μm,0.4s						
TRIZ	**Trizonia**	**1.31**	**83**	P	**Pn**	**09 36 55.1**	**-0.7**
TRIZ	**Trizonia**	**1.31**	**83**	P	**Pn**	**09 36 55.4**	**-0.3**
KALE	**Kalithea**	**1.36**	**83**	P	**Pn**	**09 36 56.3**	**-0.3**
KALE				AML	AML	09 37 25.3	
	comp=E,412μm,0.5s						
KALE				AML	AML	09 37 26.8	
	comp=N,453μm,0.5s						
KLV	**Kalavryta, Ach**	**1.38**	**97**	P	**Pn**	**09 36 56.4**	**-0.4**
KLV	**Kalavryta, Ach**	**1.38**	**97**	P	**Pn**	**09 36 56.9**	**+0.1**

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*SJA **31** 09:58:41.0±0.6, 32.°29S×72.°13W, h16km±8km, ML3.0, MW3.1*
*GUC **31** 09:58:44.3±0.7, 32.°03S×71.°81W, h59km±11km, ML3.1*
ISC 31 09:58:43.8±3.1, 32.°23S±0.°05×71.°88W±0.°10, h4km±18km, n18, σ1s40/33, 1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VA03	**San Esteban**	**1.24**	**116**	⇓*i*P	**Pn**	**09 59 06.5**	**-1.5**
VA03				*i* S	**Sb**	**09 59 23.4**	**-0.8**
VA03				IAML		09 59 25.5	
	comp=E,799nm,0.2s						
PEL	**Peldehue**	**1.36**	**133**	*i* P	**Pn**	**09 59 09.2**	**-0.3**
PEL				*i* S	**Sn**	**09 59 27.5**	**-0.5**
MT05	**Renca**	**1.50**	**141**	*e*P	**Sn**	**09 59 11.3**	**-0.3**
MT05				*e*S	**Sb**	**09 59 32.8**	**+1.1**
MT05				IAML		09 59 35.9	
	comp=E,268nm,0.5s						
RCDM	**Rinconada Maip**	**1.55**	**145**	*e*P	**Pb**	**09 59 12.9**	**-0.1**
CLCH	**Cerro Calan**	**1.62**	**136**	*e*P	**Pn**	**09 59 13.3**	**+0.1**
CLCH				*i* S	**Sn**	**09 59 34.6**	**0.0**
MT03	**Universidad Ad**	**1.71**	**138**	*e*P	**Pn**	**09 59 14.4**	**0.0**
MT03				IAML		09 59 39.4	
	comp=N,467nm,0.4s						
FCH	**Farellones**	**1.73**	**130**	*e*P	**Pn**	**09 59 14.5**	**-0.4**
FCH				*i* S	**Sn**	**09 59 37.9**	**+0.4**
FCH				IAML		09 59 42.1	
	comp=E,109nm,0.2s						
RTLS	**Leoncito**	**2.23**	**80**	*i* P	**Pb**	**09 59 22.9**	**-2.0**
RTLS				*i* S	**Sb**	**09 59 52.2**	**-0.7**
RTLS				IAML		09 59 54.3	
	comp=Z,51nm,0.3s						
ARCO	**CERRO ARCO**	**2.56**	**105**	*i* P	**Pb**	**09 59 29.1**	**-1.2**
ARCO				IAML		09 59 32.0	
	comp=Z,25nm,0.4s						
ARCO				*i* S	**Sb**	**10 00 01.5**	**-0.7**
ASAL	**Salagasta**	**2.60**	**99**	*i* P	**Pb**	**09 59 30.5**	**-0.5**
ASAL				*i* S	**Sb**	**10 00 05.1**	**+1.9**
AAGR	**Agrelo**	**2.71**	**109**	*i* P	**Pb**	**09 59 31.4**	**-1.4**
AAGR				*i* S	**Sg**	**10 00 12.8**	**+1.9**
BO02	**Sierra Bellavi**	**2.72**	**161**	*e*P	**Pn**	**09 59 28.2**	**0.0**
BO02				*i* S	**Sn**	**10 00 01.9**	**+0.4**
BO02				IAML		10 00 11.1	
	comp=E,72nm,0.3s						
RTLL	**Cerro Villicun**	**3.03**	**74**	*i* P	**Pn**	**09 59 33.3**	**+0.7**
RTLL				*i* S	**Sb**	**10 00 13.6**	**-2.1**
RTLL				IAML		10 00 30.1	
	comp=Z,179nm,0.6s						
CFA	**Coronel Fontan**	**3.16**	**80**	*i* P	**Pn**	**09 59 35.2**	**+0.9**
CFA				*i* S	**Sb**	**10 00 16.2**	**-3.0**
AMOG	**MOGNA**	**3.16**	**67**	*i* P	**Pn**	**09 59 34.9**	**+0.6**
AMOG				*i* S	**Sb**	**10 00 19.2**	**-0.2**
ACAN	**Cantantal**	**3.97**	**92**	*i* P	**Pn**	**09 59 47.7**	**+2.2**
AGUA	**GUANDACOL**	**3.99**	**48**	*i* P	**Pn**	**09 59 47.8**	**+2.0**
AGUA				*i* S	**Sb**	**10 00 42.1**	**-1.3**
AGUA				IAML		10 00 48.9	
	comp=Z,8.3nm,0.3s						
TCA	**Tanti**	**6.26**	**84**	*i* P	**Pn**	**10 00 16.1**	**-0.9**
TCA				*i* S	**Sn**	**10 01 32.0**	**+3.0**
TCA				IAML		10 01 52.4	
	comp=Z,3.3nm,0.6s						

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*SOME **31** 10:32:41.3, 42.°28N×80.°87E, h10km*
*NNC **31** 10:32:41.5±2.6, 42.°58N×80.°97E, h0km, mb2.7, mpv2.5, Error ellipse: s-maj=28.9km s-min=7.6km az=137.0*
ISC 31 10:32:39.0±2.6, 42.°3N±0.°1×80.°87E±0.°08, h10km, n8, σ1s79/14, 4C-2D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**1.36**	**311**	*e*P	**Pn**	**10 33 02.7**	**-1.5**
	3.3nm,0.3s						
SHLS				*e*S	**Sb**	**10 33 18.1**	**-4.1**
	9.2nm,0.4s						
PDGK	**Podgornoye**	**1.46**	**316**	⇓Pn	**Pg**	**10 33 07.3**	**+0.2**
	5.9nm,1.0s						
UZB	**Uzynbulak**	**1.61**	**303**	*e*P	**Pg**	**10 33 11.3**	**+1.3**
	4.1nm,0.6s						
UZB				*e*S	**Sg**	**10 33 32.8**	**+1.8**
	4.2nm,0.4s						
SATY	**Saty**	**1.98**

comp=Z,0.9nm,0.4s,baz=81,slow=10,SNR=4.5
STKA Stephens Creek 35.24 251 P P 11 00 33.0 +0.1
BBOO Buckleboo 39.91 249 P P 11 01 11.4 -0.1
BBOO IAmb IAmb 11 01 25.5
comp=Z,27nm,1.5s
AS31 Alice Springs 42.98 262 P P 11 01 35.9 -0.3
ASAR Alice Springs 42.98 262 P P 11 01 36.5 +0.3
comp=Z,1.5nm,0.5s,baz=93,slow=8.3,SNR=36
WR0 Warramunga Arr 43.34 268 P P 11 01 39.5 +0.4
WR0 IAmb IAmb 11 01 47.4
comp=Z,8.4nm,1.2s
WB2 Warramunga Arr 43.52 268 P P 11 01 40.8 +0.3
WRAB Tennant Creek 43.52 268 P P 11 01 40.9 +0.4
WRAB IAmb IAmb 11 01 54.3
comp=Z,22nm,1.4s
WRA Warramunga Arr 43.53 268 P P 11 01 40.6 0.0
comp=Z,1.2nm,0.4s,baz=103,slow=7.9,SNR=14
WRA Warramunga Arr 43.53 268 P P 11 01 40.6 0.0
WB0 Warramunga Arr 43.53 268 P P 11 01 40.9 +0.3
WB0 IAmb IAmb 11 01 56.1
comp=Z,9.8nm,1.2s
KNRA Kununurra 49.92 271 P P 11 02 30.8 +1.4
KNRA IAmb IAmb 11 02 40.5
comp=Z,65nm,1.4s
WUAZ Wupatki 88.00 49 P P 11 06 20.0 -0.4
ILAR Eielson Array 93.48 13 P P 11 06 44.5 -0.4
comp=Z,0.5nm,0.8s,baz=206,slow=6.2,SNR=7.3
ILAR Eielson Array 93.48 13 P 11 06 45.5 +0.7

NEIC ***31*** *11:04:26.6±2.1,4.7°S±0.7°×154.0°E±0.7°,d8,h85km±5km, mb4.1/12, Error ellipse: s-maj=12.9km s-min=9.1km az=132.0*
IDC ***31*** *11:04:28.5±3.8,4.8°S×153.1°E,h102km±28km,mb3.7/9, mb1 3.9/10,mb1mx3.6/47,mbtmp4.1/10,MS2.7/1, Ms1 2.7/1,ms1mx2.2/37,Error ellipse: s-maj=36.7km s-min=15.2km az=99.0*
ISC 31 11:04:28.7±0.7,**4.77S**±0.07°×**153.86E**±0.09,**h105**km,**n33,** σ0**90**/37,**mb4.0**/13,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.78**	**289**	Pn	**Pn**	**11 04 58.5**	**-0.3**
RABL				Sn	**Sn**	**11 05 21.4**	**-0.3**
KRVT	**Keravat (AS076**	**1.88**	**284**	P	**Pn**	**11 04 59.6**	**-0.4**
	67nm,0.3s,baz=114,slow=0.7,SNR=21						
KRVT				S	**Sn**	**11 05 22.8**	**-1.0**
	98nm,0.3s,baz=122,slow=22,SNR=18						
KRVT				LR	LR	11 05 54.6	
	comp=Z,166nm,18.8s,baz=143,slow=46						
HNR	**Honiara**	**7.62**	**128**	Pn	Pn	11 06 10.8	-6.3
PMG	**Port Moresby**	**8.09**	**235**	P	**Pn**	**11 06 23.9**	**+0.5**
	7.4nm,0.3s,baz=58,slow=8.0,SNR=26						
PMG				S	**Sn**	**11 07 53.5**	**+0.3**
	2.4nm,0.3s,baz=71,slow=13,SNR=4.9						
PMG				LR	LR	11 10 02.3	
	comp=Z,47nm,18.5s,baz=82,slow=42						
PMG	**Port Moresby**	**8.09**	**235**		**Pn**	**11 06 23.3**	**-0.1**
PMG				Sn	**Sn**	**11 07 53.2**	**0.0**
PATS	**Pohnpei**	**12.36**	**21**	Pn	**Pn**	**11 07 20.8**	**-0.4**
PATS				Sn	**Sn**	**11 09 35.1**	**-2.0**
WR0	**Warramunga Arr**	**24.12**	**230**	P	**P**	**11 09 35.5**	**+0.5**
WR0				IAmb	IAmb	11 09 36.5	
	comp=Z,6.6nm,0.9s						
WRAB	**Tennant Creek**	**24.25**	**230**	P	**P**	**11 09 36.2**	**+0.1**
WRAB				IAmb	IAmb	11 09 37.4	
	comp=Z,5.3nm,0.7s						
WB2	**Warramunga Arr**	**24.25**	**230**	P	**P**	**11 09 36.7**	**+0.5**
WB2				IAmb	IAmb	11 09 37.4	
	comp=Z,5.5nm,0.8s						
WRA	**Warramunga Arr**	**24.26**	**230**	P	**P**	**11 09 36.3**	**0.0**
	comp=Z,4.8nm,0.7s,baz=53,slow=9.8,SNR=17						
WRA	**Warramunga Arr**	**24.26**	**230**	P	**P**	**11 09 35.7**	**-0.6**
AS31	**Alice Springs**	**26.89**	**224**	P	**P**	**11 10 00.9**	**+0.8**
ASAR	**Alice Springs**	**26.89**	**224**	P	**P**	**11 09 59.5**	**-0.6**
	comp=Z,1.5nm,0.9s,baz=54,slow=9.3,SNR=13						
ASAR	**Alice Springs**	**26.89**	**224**	P	**P**	**11 09 59.1**	**-1.0**
STKA	**Stephens Creek**	**29.32**	**202**	P	**P**	**11 10 20.4**	**-1.1**
	comp=Z,2.3nm,0.7s,baz=28,slow=13,SNR=5.6						
STKA	**Stephens Creek**	**29.32**	**202**	P	**P**	**11 10 20.7**	**-0.8**
FITZ	**Fitzroy Crossi**	**30.60**	**242**	P	**P**	**11 10 31.8**	**-1.2**
	comp=Z,2.9nm,0.6s,baz=35,slow=8.4,SNR=5.6						
FITZ	**Fitzroy Crossi**	**30.60**	**242**	P	**P**	**11 10 32.0**	**-1.0**
FITZ				IAmb	IAmb	11 10 37.3	
	comp=Z,5.6nm,0.9s						
ENH	**Enshi**	**54.91**	**312**	P	**P**	**11 13 49.6**	**+0.7**
SONM	**Songino Array**	**66.86**	**327**	P	**P**	**11 15 11.4**	**+1.7**
	comp=Z,0.5nm,0.7s,baz=145,slow=5.1,SNR=3.9						
SONM	**Songino Array**	**66.86**	**327**	P	**P**	**11 15 11.4**	**+1.7**
LSA	**Lhasa**	**69.09**	**304**	P	**P**	**11 15 25.9**	**+1.5**
IMAR	**Indian Mountai**	**80.01**	**19**	P	**P**	**11 16 27.5**	**+1.3**
MKAR	**Makanchi Array**	**81.00**	**319**	P	**P**	**11 16 33.2**	**+1.3**
	comp=Z,0.6nm,0.8s,baz=99,slow=6.7,SNR=5.3						
MKAR	**Makanchi Array**	**81.00**	**319**	P	**P**	**11 16 32.5**	**+0.6**
ZALV	**Zalesovo Beam**	**81.71**	**326**	P	**P**	**11 16 34.6**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=120,slow=8.5,SNR=3.0						
ZALV	**Zalesovo Beam**	**81.71**	**326**	P	**P**	**11 16 35.5**	**0.0**
ILAR	**Eielson Array**	**81.74**	**22**	P	**P**	**11 16 35.8**	**+0.3**
	comp=Z,0.4nm,0.9s,baz=258,slow=4.5,SNR=3.0						
QSPA	**South Pole Qui**	**85.19**	**180**	P	**P**	**11 16 53.6**	**+0.3**
QSPA				IAmb	IAmb	11 17 10.3	
	comp=Z,3.8nm,1.4s						
MAW	**Mawson**	**86.00**	**203**	P	**P**	**11 16 56.2**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=73,slow=11,SNR=4.0						
MAW	**Mawson**	**86.00**	**203**	P	**P**	**11 16 56.5**	**-0.6**
MAW				IAmb	IAmb	11 17 08.3	
	comp=Z,3.4nm,1.4s						
TORD	**Torodi Ar. Bea**	**151.29**	**289**	PKPbc	**PKPbc**	**11 24 10.4**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=99,slow=2.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**151.29**	**289**		**PKPbc**	**11 24 11.2**	**+0.1**

IDC ***31*** *11:10:21.6±4.1,27.5°S×177.09W,h125km±42km,mb3.9/6, mb1 4.0/6,mb1mx3.7/42,mbtmp4.2/6,MS3.3/5,Ms1 3.3/5, ms1mx2.9/36,Error ellipse: s-maj=60.5km s-min=29.4km az=169.0*
NEIC ***31*** *11:10:21.9±1.5,27.4°S±0.08°×177.5W±0.2°,h112km±7km, mb4.5/17,Error ellipse: s-maj=24.5km s-min=11.7km az=91.0*
ISC 31 11:10:20.7±0.8,**27.46S**±0.06°×**177.5W**±0.1,**h100**km,**n52,** σ1**96**/48,**mb4.3**/12,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.83**	**193**	P	**Pn**	**11 10 52.0**	**+0.9**
	762nm,0.3s,baz=173,slow=2.1,SNR=12						
RAO				S	**Sn**	**11 11 19.0**	**+4.8**
	752nm,0.3s,baz=287,slow=23,SNR=16						
RAO	**Raoul Island**	**1.83**	**193**		**Pn**	**11 10 51.6**	**+0.6**
RAO				Sn	**Sn**	**11 11 17.3**	**+3.1**
MSVF	**Nonsavu**	**10.53**	**336**	Pn	**Pn**	**11 12 48.0**	**-0.7**
URZ	**Urewera**	**11.69**	**202**	P	Pn	11 12 56.9	-7.2
	0.2nm,0.3s,baz=265,slow=3.9,SNR=4.8						
URZ				S	**Sn**	**11 15 09.6**	**-3.1**
	2.0nm,0.3s,baz=176,slow=23,SNR=10						
URZ	**Urewera**	**11.69**	**202**		**Pn**	**11 13 04.7**	**+0.5**
URZ				Sn	**Sn**	**11 15 09.5**	**-3.1**
BKZ	**Black Stump Fm**	**12.71**	**202**	Pn	**Pn**	**11 13 16.1**	**-1.7**
BKZ				Sn	**Sn**	**11 15 32.6**	**-5.0**
DZM	**Mont Dzumac**	**15.57**	**287**	*e*P	P	11 14 05.3	+8.4
	55nm,0.9s						
DZM				*e*LR	LR	11 17 51.0	
	comp=Z,230nm,27.6s						
DZM	**Mont Dzumac**	**15.57**	**287**	P	**P**	**11 14 02.9**	**+6.1**
	1.2nm,0.3s,baz=104,slow=14,SNR=13						
DZM	**Mont Dzumac**	**15.57**	**287**	P			
DZM				IAmb	IAmb	11 14 03.8	
	comp=Z,17nm,1.2s						
NOUC	**Port Laguerre**	**15.67**	**286**	P	**P**	**11 13 57.7**	**-0.2**
NOUC				IAmb	IAmb	11 14 04.2	
	comp=Z,21nm,1.1s						
TBI	**Tubuai**	**25.60**	**87**	*e*LR	LR	11 21 38.5	
	comp=Z,113nm,31.0s						
TBI	**Tubuai**	**25.60**	**87**	*e*T	T	11 41 08.9	
	comp=Z,9.0nm,0.3s						
PAE	**Paea**	**27.48**	**75**	*e*T	T	11 43 31.3	
	comp=Z,4.3nm,0.3s						
PPT2	**Papeete2**	**27.52**	**75**	*e*LR	LR	11 22 40.4	
	comp=Z,134nm,28.2s						
PPT2	**Papeete2**	**27.52**	**75**	*e*T	T	11 43 34.9	
	comp=Z,3.0nm,0.3s						
PPT	**Papeete**	**27.52**	**75**	LR	LR	11 23 59.0	
	comp=Z,33nm,20.6s,baz=232,slow=30						
HNR	**Honiara**	**27.85**	**306**	LR	LR	11 26 04.9	
	comp=Z,38nm,18.7s,baz=166,slow=34						
EIDS	**Eidsvold**	**28.21**	**267**	P	**P**	**11 16 04.2**	**+0.1**
EIDS				IAmb	IAmb	11 16 09.1	
	comp=Z,26nm,1.4s						
CTA	**Charters Tower**	**33.91**	**275**	P	**P**	**11 16 55.8**	**+1.4**
	comp=Z,5.8nm,0.6s,baz=101,slow=9.9,SNR=17						
STKA	**Stephens Creek**	**35.69**	**253**	P	**P**	**11 17 10.9**	**+1.4**
	comp=Z,0.9nm,0.5s,baz=53,slow=8.2,SNR=3.2						
STKA				LR	LR	11 29 42.4	
	comp=Z,54nm,20.6s,baz=64,slow=32						
STKA	**Stephens Creek**	**35.69**	**253**	P	**P**	**11 17 09.6**	**0.0**
PMG	**Port Moresby**	**37.87**	**291**	P	**P**	**11 17 28.1**	**-0.1**
COEN	**Coen**	**39.02**	**282**	P	**P**	**11 17 37.9**	**+0.1**
COEN				IAmb	IAmb	11 17 44.2	
	comp=Z,20nm,1.4s						
AS31	**Alice Springs**	**43.82**	**264**	P	**P**	**11 18 17.2**	**+0.2**
ASAR	**Alice Springs**	**43.82**	**264**	P	**P**	**11 18 17.7**	**+0.7**
	comp=Z,1.1nm,0.5s,baz=89,slow=6.4,SNR=33						
ASAR	**Alice Springs**	**43.82**	**264**	P	**P**	**11 18 16.9**	**-0.2**
WR0	**Warramunga Arr**	**44.35**	**269**	P	**P**	**11 18 21.2**	**-0.1**
WB2	**Warramunga Arr**	**44.53**	**269**	P	**P**	**11 18 22.6**	**-0.1**
WB2				IAmb	IAmb	11 18 25.1	
	comp=Z,17nm,1.4s						
WRA	**Warramunga Arr**	**44.54**	**269**	P	**P**	**11 18 22.8**	**0.0**
	comp=Z,3.1nm,0.7s,baz=109,slow=7.5,SNR=13						
WRA				LR	LR	11 35 19.5	
	comp=Z,37nm,21.8s,baz=185,slow=33						
WRA	**Warramunga Arr**	**44.54**	**269**	P	**P**	**11 18 22.4**	**-0.4**
WB0	**Warramunga Arr**	**44.55**	**269**	P	**P**	**11 18 22.1**	**-0.7**
KNRA	**Kununurra**	**51.02**	**272**	P	**P**	**11 19 12.9**	**+0.1**
QSPA	**South Pole Qui**	**62.64**	**180**	P	**P**	**11 20 35.3**	**+0.9**
QSPA				IAmb	IAmb	11 20 37.3	
	comp=Z,2.6nm,0.7s						
MAW	**Mawson**	**75.21**	**200**	P	**P**	**11 21 51.4**	**-0.6**
MYKOM	**Kota Tinggi**	**80.79**	**277**	P	**P**	**11 22 22.8**	**-1.0**
SNAA	**Sanae**	**81.07**	**178**	P	**P**	**11 22 24.3**	**-0.1**
SNAA				IAmb	IAmb	11 22 29.0	
	comp=Z,7.6nm,1.4s						
KSRS	**Korea Array**	**82.43**	**319**	P	**P**	**11 22 32.3**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=132,slow=5.5,SNR=10.0						
KSAR	**Wonju Array Be**	**82.44**	**319**	P	**P**	**11 22 32.3**	**+0.4**
KDAK	**Kodiak Island**	**87.45**	**13**	LR	LR	11 56 53.2	
	comp=Z,42nm,19.9s,baz=322,slow=32						
ENH	**Enshi**	**90.34**	**304**	P	**P**	**11 23 10.8**	**0.0**
ENH				IAmb	IAmb	11 23 14.1	
	comp=Z,6.8nm,0.9s						
CMAR	**Chiang Mai Arr**	**92.88**	**289**	P	**P**	**11 23 22.1**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=98,slow=6.6,SNR=4.4						
MKAR	**Makanchi Array**	**116.22**	**311**	PKP	**PKPdf**	**11 28 49.5**	**-2.6**
	comp=Z,0.2nm,0.5s,baz=191,slow=1.6,SNR=4.2						
MKAR	**Makanchi Array**	**116.22**	**311**		**PKPdf**	**11 28 49.8**	**-2.4**
ARCES	**ARCESS Array B**	**135.82**	**349**	PKP	**PKPdf**	**11 29 27.2**	**-1.7**
	comp=Z,2.1nm,1.0s,baz=26,slow=3.1,SNR=4.9						
FINES	**FINESS Array B**	**142.54**	**342**	PKhKP	PKPpre	11 29 34.6	
	comp=Z,1.3nm,0.7s,baz=251,slow=5.8,SNR=6.6						
FINES	**FINESS Array B**	**142.54**	**342**		**PKPdf**	**11 29 42.2**	**+1.0**
NB2	**NORSAR Subarra1**	**145.92**	**352**	PKP	**PKPdf**	**11 29 46.0**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=8.0,slow=3.7						
NOA	**NORSAR Array B**	**145.92**	**352**	PKPbc	**PKPdf**	**11 29 45.5**	**-1.8**
	comp=Z,1.3nm,0.6s,baz=19,slow=2.7,SNR=5.5						
AKASG	**Malin Array Be**	**149.19**	**326**	PKPbc	**PKPdf**	**11 29 55.0**	**+2.1**
	comp=Z,2.1nm,0.6s,baz=44,slow=3.7,SNR=10						
AKASG	**Malin Array Be**	**149.19**	**326**		**PKPdf**	**11 29 55.2**	**+2.3**
BRTR	**Keskin Array B**	**151.50**	**303**	PKPbc	**PKPdf**	**11 30 00.7**	**+3.6**
	comp=Z,0.9nm,0.6s,baz=150,slow=5.3,SNR=4.4						
BRTR				PKPab	**PKPab**	**11 30 12.3**	**+0.3**
	comp=Z,2.0nm,0.8s,baz=82,slow=4.1,SNR=7.4						
BRTR	**Keskin Array B**	**151.50**	**303**		**PKPbc**	**11 30 01.9**	**-1.4**
BRTR					**PKPab**	**11 30 11.2**	**-0.9**

IDC 31 11:23:22.2±2.4,**3.03N**×**128.23E**,**h0**km,**mb3.5**/4, **mb1 3.7**/4,**mb1mx3.4**/39,**mbtmp3.6**/4,**Error ellipse: s-maj=204.8km s-min=24.2km az=66.0,North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.60**	**166**	P	P	11 28 35.9	+0.9
	0.3nm,0.3s,baz=344,slow=10,SNR=4.8						
ASAR	**Alice Springs**	**27.10**	**169**	P	P	11 29 07.0	0.0
	0.4nm,0.8s,baz=353,slow=6.9,SNR=10.0						
STKA	**Stephens Creek**	**36.96**	**161**	P	P	11 30 32.4	-1.0
	2.7nm,1.0s,baz=339,slow=14,SNR=2.9						
MKAR	**Makanchi Array**	**58.98**	**325**	P	P	11 33 23.9	+0.2
	0.2nm,0.3s,baz=113,slow=9.3,SNR=6.2						

IDC ***31*** *11:40:44.5±0.7,32.4°S×49.8°E,h0km,mb4.3/29, mb1 4.4/36,mb1mx4.3/57,mbtmp4.3/36,ML4.1/7,MS3.6/7, Ms1 3.6/7,ms1mx3.2/33,Error ellipse: s-maj=16.3km s-min=10.7km az=168.0*
BJI ***31*** *11:40:45.0±0.0,32.5°N×50.0°E,h10km,mB4.9/23, mb4.5/39,Ms4.4/7,Ms7 4.2/5*
MOS ***31*** *11:40:45.4±0.9,32.4°N×49.2°E,h21km,mb4.7/43,Error ellipse: s-maj=6.0km s-min=4.5km az=110.2*
NEIC ***31*** *11:40:45.7±1.2,32.4°N±0.0°×49.9°E±0.0°,d10, h10km±1km,Error ellipse: s-maj=8.9km s-min=2.9km az=184.0*
TEH ***31*** *11:40:46.4,32.5°N×50.0°E,h8km,ML4.5*
THR ***31*** *11:40:47.8±0.3,32.5°N×50.0°E,h14km±4km,ML4.4*
DSN ***31*** *11:40:52.9±1.9,32.2°N×50.6°E,h14km,mb4.4/2,ML4.4/5, Error ellipse: s-maj=29.3km s-min=10.4km az=87.0*
ISC 31 11:40:45.6±0.3,**32.43N**±0.03°×**49.96E**±0.02,**h11**km,**n394,** σ1**63**/397,**mb4.7**/105,**MS3.8**/11,**15C-12D,Western Iran**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHBN	**Jahan bin**	**0.63**	**108**	*e*Pg	**Pb**	**11 40 59.6**	**+0.8**
JHBN	**Jahan bin**	**0.63**	**108**	Pg	**Pb**	**11 40 59.6**	**+0.8**
IPIR	**Pirpir**	**0.83**	**72**	*e*Pg	**Pg**	**11 41 01.3**	**-0.3**
IPIR	**Pirpir**	**0.83**	**72**	Pg	**Pg**	**11 41 01.3**	**-0.3**
IPIR				Sg	**Sb**	**11 41 13.2**	**-0.3**
ROKH	**ROKH**	**0.91**	**95**	*e*Pg	**Pb**	**11 41 03.6**	**0.0**
ROKH	**ROKH**	**0.91**	**95**	Pg	**Pb**	**11 41 03.6**	**0.0**
ROKH					**Sn**	**11 41 18.9**	**+1.0**
SHGR	**Shooshtar-Gavs**	**1.03**	**252**	*e*Pn	**Pn**	**11 41 08.1**	**+2.0**
SHGR	**Shooshtar-Gavs**	**1.03**	**252**	*e*Pg	**Pn**	**11 41 08.1**	**+2.0**
SHGR				IAML		11 41 30.0	
	comp=N,9μm,0.5s						
IBRJ	**Brojen**	**1.22**	**115**	*e*Pg	**Pg**	**11 41 11.3**	**+2.1**
IBRJ	**Brojen**	**1.22**	**115**		**Pg**	**11 41 11.2**	**+2.1**
BMDN	**Meydan**	**1.56**	**323**	*e*Pn	**Pb**	**11 41 14.6**	**-0.1**
BMDN				*e*		11 41 41.1	
BMDN	**Meydan**	**1.56**	**323**		**Pb**	**11 41 14.9**	**+0.2**
IKLH	**Kolahrood**	**1.62**	**57**	*e*Pn	**Pb**	**11 41 14.7**	**-1.1**
IKLH				*e*		11 41 49.9	
IKLH	**Kolahrood**	**1.62**	**57**		**Pn**	**11 41 14.5**	**0.0**
IKMR	**Kamar-syah**	**1.71**	**310**	*e*Pn	**Pg**	**11 41 18.3**	**-0.2**
IKMR				*e*		11 41 45.1	
IKMR	**Kamar-syah**	**1.71**	**310**		**Pb**	**11 41 17.5**	**+0.3**
BDRS	**Dareh Seyedi**	**1.77**	**329**	*e*Pn	**Pb**	**11 41 17.8**	**-0.5**
BDRS				*e*		11 41 46.3	
BDRS	**Dareh Seyedi**	**1.77**	**329**		**Pb**	**11 41 17.7**	**-0.5**
QAM	**Ghamsar**	**1.82**	**43**	*e*Pn	**Pb**	**11 41 18.3**	**-0.7**
KLNJ	**Kolanjah**	**1.99**	**135**	*e*Pn	**Pg**	**11 41 24.0**	**+0.2**
KLNJ				*e*		11 42 00.3	
KLNJ	**Kolanjah**	**1.99**	**135**	Pn	**Pg**	**11 41 23.9**	**+0.2**
IDOB	**Doab**	**2.02**	**313**	*e*Pn	**Pb**	**11 41 22.1**	**-0.4**
IDOB				*e*		11 42 00.0	
IDOB	**Doab**	**2.02**	**313**		**Pb**	**11 41 22.1**	**-0.4**
IZEF	**Zefreh**	**2.05**	**76**	*e*Pn	**Pb**	**11 41 23.1**	**0.0**
IZEF				*e*		11 41 57.2	
IZEF	**Zefreh**	**2.05**	**76**	Pg	**Pb**	**11 41 23.2**	**+0.1**
IKFM	**Kafar-mosalman**	**2.08**	**302**	*e*Pn	**Pb**	**11 41 23.4**	**-0.1**
IKFM				*e*		11 42 02.4	
IKFM	**Kafar-mosalman**	**2.08**	**302**		**Pb**	**11 41 23.4**	**-0.1**
HSAM	**Samen**	**2.11**	**328**	*e*Pn	**Pb**	**11 41 23.9**	**-0.2**
HSAM				*e*		11 42 00.3	
HSAM	**Samen**	**2.11**	**328**	Pg	**Pb**	**11 41 23.8**	**-0.3**
ASAO	**Ashtian**	**2.11**	**1**	*e*Pn	**Pb**	**11 41 23.8**	**-0.3**
ASAO	**Ashtian**	**2.11**	**1**	*e*Pn	**Pb**	**11 41 23.8**	**-0.3**
ASAO				*e*Sg	**Sg**	**11 41 52.1**	**-1.5**
IRAM	**Ramesheh**	**2.15**	**106**	*e*Pn	**Pg**	**11 41 25.6**	**-1.2**
IRAM				*e*		11 42 12.0	
KRSH	**Karshahi**	**2.38**	**49**	*e*Pn	**Pb**	**11 41 28.5**	**-0.2**
KRSH				*e*		11 42 07.7	
HAGD	**Aghdareh**	**2.48**	**344**	*e*Pn	**Pb**	**11 41 29.8**	**-0.6**
HAGD				*e*		11 42 08.9	
IQOM	**Qom**	**2.58**	**21**	*e*Pn	**Pb**	**11 41 30.5**	**-1.5**
IQOM				*e*		11 42 10.6	
IBZA	**Bozab**	**2.69**	**320**	*e*Pn	**Pn**	**11 41 31.3**	**+2.2**
IKOM	**Komasi**	**2.69**	**311**	*e*Pn	**Pb**	**11 41 31.9**	**-2.0**
IKOM				*e*		11 42 32.7	
IVRN	**Varamin**	**2.95**	**29**	*e*Pn	**Pb**	**11 41 35.5**	**-2.8**
IVRN				*e*		11 41 43.6	
IRAZ	**Razeghan**	**2.97**	**360**	*e*Pn	**Pb**	**11 41 36.1**	**-2.5**
IRAZ				*e*		11 42 30.9	
KER	**Kermanshah**	**3.06**	**310**	*e*Pn	**Pn**	**11 41 36.4**	**+2.2**
IKAZ	**Kazeroun**	**3.10**	**148**	*e*Pn	**Pb**	**11 41 38.5**	**-2.4**
IKAZ				*e*		11 42 37.5	
HSRG	**Sareghieh**	**3.13**	**334**	*e*Pn	**Pn**	**11 41 38.0**	**+2.8**
IHSB	**Hasanabad**	**3.19**	**20**	*e*Pn	**Pb**	**11 41 38.9**	**-3.5**
IHSB				*e*		11 41 45.1	
ISAD	**Sadrabad**	**3.20**	**98**	*e*Pn	**Pb**	**11 41 39.8**	**-2.9**
ANAR	**Anarak**	**3.26**	**76**	*e*Pn	**Pb**	**11 41 41.0**	**-2.6**
QABG	**Abgarm-Qazvin**	**3.28**	**355**	*e*Pn	**Pn**	**11 41 39.9**	**+2.6**
IVIS	**Veis**	**3.33**	**310**	*e*Pn	**Pn**	**11 41 39.6**	**+1.7**
IVIS				*e*		11 42 47.5	
IGHG	**Ghaleghazi**	**3.41**	**305**	*e*Pn	**Pn**	**11 41 40.7**	**+1.7**
TEH	**Tehran**	**3.50**	**19**	*e*Pn	**Pb**	**11 41 44.7**	**-3.0**
ILIN	**Lien**	**3.52**	**316**	*e*Pn	**Pn**	**11 41 42.6**	**+2.1**
ILIN				*e*		11 42 55.2	
SHI	**Shiraz**	**3.54**	**141**	*e*Pn	**Pb**	**11 41 45.3**	**-3.1**
IDMV	**Damavand**	**3.58**	**28**	*e*Pn	**Pn**	**11 41 43.8**	**+2.4**
CHTH	**Charan**	**3.60**	**15**	*e*Pn	**Pn**	**11 41 44.2**	**+2.6**
CHTH	**Charan**	**3.60**	**15**	*e*Pn	**Pn**	**11 41 44.2**	**+2.6**
IDHR	**Dehrash**	**3.74**	**308**	*e*Pn	**Pn**	**11 41 45.1**	**+1.5**
ICHK	**Chekchek**	**3.77**	**92**	*e*Pn	**Pb**	**11 41 49.3**	**-3.0**
ILAS	**Lasjerd**	**3.86**	**39**	*e*Pn	**Pb**	**11 41 49.2**	**-4.7**
ILAS				*e*		11 43 11.7	
YZKH	**Yazd**	**3.92**	**89**	*e*Pn	**Pn**	**11 41 49.3**	**+3.5**
YZKH	**Yazd**	**3.92**	**89**	*e*Pn	**Pn**	**11 41 49.3**	**+3.5**
IGZV	**Ghazvin**	**3.95**	**3**	*e*Pn	**Pn**	**11 41 49.3**	**+2.9**
IFIR	**Firoozkooh**	**3.95**	**35**	*e*Pn	**Pn**	**11 41 50.3**	**+3.8**
QALM	**Alamut, Qazvin**	**4.03**	**8**	*e*Pn	**Pn**	**11 41 50.6**	**+3.1**
IMEH	**Mehriz**	**4.09**	**103**	*e*Pn	**Pn**	**11 41 52.5**	**+4.1**
IPRN	**Peran**	**4.28**	**27**	*e*Pn	**Pn**	**11 41 55.0**	**+4.1**
IALA	**Alasht**	**4.34**	**32**	*e*Pn	**Pn**	**11 41 56.0**	**+4.2**
ISHM	**Shahmirzad**	**4.36**	**38**	*e*Pn	**Pn**	**11 41 55.7**	**+3.7**
IANJ	**Anjilo**	**4.47**	**46**	*e*Pn	**Pn**	**11 41 56.4**	**+2.9**
IBAF	**Bafgh**	**4.84**	**98**	*e*Pn	**Pn**	**11 42 02.3**	**+3.8**
IGLO	**Ghaloghah**	**5.17**	**37**	*e*Pn	**Pn**	**11 42 07.2**	**+4.1**
MAHB	**Mahabad**	**5.57**	**322**	*e*Pn	**Pn**	**11 42 10.6**	**+2.0**
TPRV	**Parvadeh(Tabas**	**5.70**	**82**	*e*Pn	**Pn**	**11 42 13.7**	**+3.4**
ISRB	**Sarab**	**5.70**	**341**	*e*Pn	**Pn**	**11 42 12.0**	**+1.6**
TNSJ	**Nastanj**	**5.78**	**73**	*e*Pn	**Pn**	**11 42 14.6**	**+3.2**
KHGB	**Koh Gabri**	**5.94**	**108**	*e*Pn	**Pn**	**11 42 16.6**	**+2.9**
TKDS	**Koohdasht(Taba**	**6.13**	**77**	*e*Pn	**Pn**	**11 42 19.4**	**+3.1**
GENO	**Geno**	**7.36**	**131**	*e*Pn	**Pn**	**11 42 35.5**	**+2.2**
IKOO	**Kooshah**	**7.65**	**88**	*e*Pn	**Pn**	**11 42 41.1**	**+3.9**
AFRZ	**Afriz**	**7.68**	**80**	*e*Pn	**Pn**	**11 42 40.7**	**+3.2**
NIAN	**Nian**	**7.69**	**127**	*e*Pn	**Pn**	**11 42 39.7**	**+2.1**
IMON	**Monand**	**8.21**	**82**	*e*Pn	**Pn**	**11 42 48.6**	**+3.7**
IKRD	**Kardeh**	**8.28**	**56**	*e*Pn	Pb	11 42 59.6	-10
SHME	**Shamm**	**8.34**	**138**	P	**Pn**	**11 42 48.0**	**+1.4**
SHME	**Shamm**	**8.34**	**138**	*e*Pn	**Pn**	**11 42 50.1**	**+3.5**
IAKL	**Akhelmad**	**8.37**	**58**	*e*Pn	**Pn**	**11 42 50.4**	**+3.3**
GEYT	**Alibeck

AKTO Aktyubinsk 18.95 16 P **Pn** **11 45 08.0 +0.7**
AKTO Aktyubinsk 18.95 16 P **Pn** **11 45 08.0 +0.7**
comp=Z,0.4nm,0.3s,baz=208,slow=12,SNR=7.6
KARP Karpathos 19.15 286 P **P** **11 45 08.0 -1.1**
KARP IAmb IAmb 11 45 16.4
comp=Z,21nm,0.7s
KK31 Karatay Array 19.38 51 P **Pn** **11 45 12.3 -0.3**
KK31 pmax pmax
comp=Z,7.0nm,1.1s
KK31 Karatay Array 19.38 51 P **Pn** **11 45 12.3 -0.3**
KKAR Karatay Array 19.38 51 P **Pn** **11 45 11.8 -0.8**
KKAR pmax pmax
comp=Z,7.0nm,1.1s
KKAR Karatay Array 19.38 51 P **P** **11 45 11.3 -0.2**
KKAR Karatay Array 19.38 51 P **Pn** **11 45 11.8 -0.8**
KKAR IAmb IAmb 11 45 23.2
comp=Z,7.2nm,1.1s
NIL Nilore 19.56 80 P **Pn** **11 45 13.9 -0.9**
NIL pmax pmax
comp=Z,25nm,0.9s
NIL Nilore 19.56 80 P **Pn** **11 45 13.9 -0.9**
NIL IAmb IAmb 11 45 18.1
comp=Z,25nm,0.8s
CHCP Chirah Chowk 19.57 80 P **Pn** **11 45 15.2 +0.3**
VRH Novokhopyorsk 19.71 344 *eP* **P** **11 45 14.6 -0.3**
VRH pmax pmax
comp=Z,50nm,0.6s
VSR Storozhevoye 20.38 340 *eP* **P** **11 45 20.5 -1.7**
VSR pmax pmax
comp=Z,10.0nm,0.6s
SOCY Socotra 20.49 169 P **P** **11 45 20.9 -2.8**
SOCY IAmb IAmb 11 45 34.6
comp=Z,48nm,1.5s
MFTR Murfatlar 20.51 311 ⇑P Pn 11 45 25.1 -0.8
SANT Santorini 20.58 288 ⇓P **P** **11 45 25.3 +0.7**
SANT Santorini 20.58 288 P **P** **11 45 24.1 -0.5**
TIRR Tirgusor 20.64 312 ⇑P **P** **11 45 25.7 +0.6**
IDI Anoyia 21.00 285 P **P** **11 45 29.5 +0.3**
comp=Z,47nm,0.7s,baz=97,slow=12,SNR=31
HARR Harsova 21.06 312 ⇑P **P** **11 45 31.0 +1.4**
MILM Milestii Mici 21.68 318 ⇑P **P** **11 45 34.5 -1.9**
AAK Ala-Archa 21.89 55 *ceP* **P** **11 45 40.6 +1.8**
AAK pmax pmax
comp=Z,6.0nm,1.0s
AAK Ala-Archa 21.89 55 P **P** **11 45 39.6 +0.8**
comp=Z,2.1nm,0.7s,baz=196,slow=7.9,SNR=7.8
AAK Ala-Archa 21.89 55 P **P** **11 45 40.9 +2.1**
AAK Ala-Archa 21.89 55 P **P** **11 45 39.0 +0.2**
KSH Kashi 22.16 64 P **P** **11 45 40.5 -1.2**
KSH pP pP 11 45 45.3 -0.4
KSH PP **PnPn** **11 46 05.0 +1.2**
KSH S **S** **11 49 35.8 -10**
KSH sS pS 11 49 40.5 -11
KSH SS **SnSn** **11 50 13.5 +1.1**
KSH pmax pmax
comp=Z,31nm,1.0s
KSH pmax pmax
comp=Z,260nm,5.0s
KSH LR LR
comp=Z,230nm,6.4s
KSH LR LR
comp=Z,390nm,6.3s
KSH LR LR
comp=Z,320nm,6.0s
VRI Vrincioaia 22.36 314 P **P** **11 45 45.1 +1.4**
VRI Vrincioaia 22.36 314 ⇑P **P** **11 45 44.9 +1.2**
PLOR Plostina 22.40 313 P **P** **11 45 44.8 +0.7**
PLOR Plostina 22.40 313 ⇑P **P** **11 45 44.8 +0.7**
NRN Naryn 22.60 59 P **P** **11 45 46.9 +0.3**
NRN pmax pmax
comp=Z,21nm,1.3s
NRN Naryn 22.60 59 P **P** **11 45 46.9 +0.3**
NRN IAmb IAmb 11 45 56.3
comp=Z,21nm,1.3s
SORM Soroca 22.64 320 ⇓P **P** **11 45 45.7 -0.8**
MLR Muntele Rosu 22.67 312 P **P** **11 45 49.9 +2.7**
comp=Z,30nm,0.8s,baz=114,slow=1.8,SNR=29
TESR Tescani 22.73 315 ⇑P **P** **11 45 47.6 +0.1**
MTUR Matau 23.12 311 ⇑P **P** **11 45 53.3 +1.6**
VOIR 23.22 311 P **P** **11 45 54.2 +1.5**
VOIR pmax pmax
comp=Z,45nm,1.1s
VOIR 23.22 311 ⇑P **P** **11 45 53.8 +1.1**
AGG Agios Georgios 23.32 294 P **P** **11 45 53.4 -0.4**
AGG pmax pmax
comp=Z,15nm,0.6s
AGG Agios Georgios 23.32 294 P **P** **11 45 53.4 -0.4**
AGG IAmb IAmb 11 45 54.8
comp=Z,15nm,0.6s
VTS Vitosha 23.42 303 ⇓P **P** **11 45 56.0 +1.1**
ITM Ithomi 23.46 289 P **P** **11 45 54.4 -0.8**
KDJ Kajisay 23.64 58 P **P** **11 45 57.4 +0.3**
KDJ pmax pmax
comp=Z,7.0nm,1.0s
KDJ Kajisay 23.64 58 P **P** **11 45 57.4 +0.3**
AKASG Malin Array Be 23.82 326 *ceP* **P** **11 45 57.2 -1.3**
AKASG pmax pmax
comp=Z,5.0nm,0.5s
AKASG Malin Array Be 23.82 326 P **P** **11 45 57.3 -1.1**
comp=Z,5.2nm,0.5s,baz=133,slow=9.5,SNR=39
AKASG Malin Array Be 23.82 326 P **P** **11 45 56.8 -1.6**
AKBB Malin Array Si 23.82 326 P **P** **11 45 57.3 -1.2**
AKBB pmax pmax
comp=Z,10.0nm,0.7s
AKBB Malin Array Si 23.82 326 P **P** **11 45 57.3 -1.2**
AKBB IAmb IAmb 11 45 58.1
comp=Z,10nm,0.7s
LOT Lotru 24.04 310 ⇓P **P** **11 46 01.6 +0.8**
SRE Strehaia 24.11 308 ⇓P **P** **11 46 03.0 +1.7**
BURAR Bucovina Array 24.13 316 P **P** **11 46 02.2 +0.7**
BURAR Bucovina Array 24.13 316 ⇑P **P** **11 46 02.2 +0.7**
BURAR Bucovina Array 24.13 316 P **P** **11 46 01.7 +0.1**
BUR08 Bucovina Ar. S 24.15 316 P **P** **11 46 01.9 +0.1**
ARCR ARCALIA 24.39 314 ⇓P **P** **11 46 05.4 +1.6**
OBN Obninsk 24.57 341 *eP* **P** **11 46 05.4 +0.1**
OBN *e* 11 46 38.7
OBN pmax pmax
comp=Z,11nm,0.9s
OBN MLR MLR
comp=Z,83nm,17.0s
OBN Obninsk 24.57 341 P **P** **11 46 06.5 +1.2**
comp=Z,11nm,0.4s,baz=8.6,slow=2.1,SNR=3.7
OBN Obninsk 24.57 341 P **P** **11 46 05.2 -0.2**
GZR Gura Zlata 24.66 310 ⇓P **P** **11 46 07.6 +1.1**
ARU Arti 24.73 11 *iP* **P** **11 46 08.0 +1.2**
ARU pmax pmax
comp=Z,20nm,1.5s
ARU Arti 24.73 11 P **P** **11 46 08.3 +1.5**
comp=Z,1.0nm,0.3s,baz=197,slow=12,SNR=8.7
ARU Arti 24.73 11 P **P** **11 46 07.5 +0.7**
ARU IAmb IAmb 11 46 09.7
comp=Z,11nm,1.0s
MOS Moscow 24.85 343 *eP* **P** **11 46 08.6 +0.7**
DRGR 25.26 313 P **P** **11 46 13.2 +1.3**
DRGR pmax pmax
comp=Z,97nm,1.0s
DRGR 25.26 313 ⇓P **P** **11 46 13.4 +1.5**
BRVK Borovoye 25.29 29 P **P** **11 46 12.1 +0.2**
BRVK pmax pmax
comp=Z,15nm,1.0s
BRVK Borovoye 25.29 29 P **P** **11 46 12.1 +0.2**
BRVK IAmb IAmb 11 46 15.5
comp=Z,15nm,1.0s
BVAR Borovoye Array 25.30 30 P **P** **11 46 13.1 +1.0**
comp=Z,11nm,0.7s,baz=223,slow=7.9,SNR=51
SIRR Siria 25.72 311 ⇑P **P** **11 46 17.8 +1.9**
KIRV Kirov 26.16 359 P **P** **11 46 21.9 +2.2**
comp=Z,12nm,0.7s,baz=184,slow=15,SNR=3.7
KOLS Kolonicke sedl 26.49 317 *eP* **P** **11 46 24.7 +1.9**
KOLS pmax pmax
comp=Z,48nm,1.5s
KOLS Kolonicke sedl 26.49 317 *eP* **P** **11 46 24.7 +1.9**
KWP Kalwaria Pacla 26.58 318 P **P** **11 46 23.6 -0.1**
KWP pmax pmax
comp=Z,19nm,0.8s
KWP Kalwaria Pacla 26.58 318 *eP* **P** **11 46 24.9 +1.2**
KWP Kalwaria Pacla 26.58 318 P **P** **11 46 23.6 -0.1**
KWP IAmb IAmb 11 46 25.5
comp=Z,19nm,0.8s
CRVS Cervenica-Dubn 26.95 316 *eP* **P** **11 46 28.7 +1.7**
CRVS pmax pmax
comp=Z,34nm,1.1s
CRVS Cervenica-Dubn 26.95 316 *eP* **P** **11 46 28.7 +1.7**
KECS Kecovo 27.34 315 *eP* **P** **11 46 31.9 +1.4**
KECS pmax pmax
comp=Z,6.0nm,1.2s
KECS Kecovo 27.34 315 *eP* **P** **11 46 31.9 +1.4**
KURBB Kurchatov Arra 27.81 41 P **P** **11 46 36.5 +1.9**
comp=Z,3.4nm,0.8s,baz=242,slow=9.5,SNR=17
KURK Kurchatov 27.90 41 *ceP* **P** **11 46 36.9 +1.4**
KURK pmax pmax
comp=Z,7.0nm,1.3s
KURK Kurchatov 27.90 41 P **P** **11 46 36.0 +0.5**
KURK IAmb IAmb 11 46 38.4
comp=Z,6.4nm,0.9s
LANS Liptovska Anna 28.23 315 *eP* **P** **11 46 39.5 +0.9**
LANS pmax pmax
comp=Z,6.0nm,0.9s
LANS Liptovska Anna 28.23 315 *eP* **P** **11 46 39.5 +0.9**
VYHS Vyhne 28.35 314 *eP* **P** **11 46 39.9 +0.3**
VYHS Vyhne 28.35 314 *eP* **P** **11 46 39.9 +0.3**
MK31 Makanchi Array 28.51 50 P **P** **11 46 41.5 +0.5**
MK31 pmax pmax
comp=Z,3.0nm,0.8s
MK31 Makanchi Array 28.51 50 P **P** **11 46 41.5 +0.5**
MKAR Makanchi Array 28.51 50 P **P** **11 46 42.8 +1.8**
comp=Z,1.5nm,0.7s,baz=240,slow=8.0,SNR=11
MKAR LR LR 12 00 04.1
comp=Z,92nm,18.4s,baz=254,slow=41
MKAR Makanchi Array 28.51 50 P **P** **11 46 41.9 +0.9**
OJC Ojcow 28.51 317 P **P** **11 46 40.6 -0.4**
OJC pmax pmax
comp=Z,17nm,1.0s
OJC Ojcow 28.51 317 *eP* **P** **11 46 41.5 +0.6**
OJC Ojcow 28.51 317 P **P** **11 46 40.5 -0.4**
OJC IAmb IAmb 11 46 42.5
comp=Z,17nm,1.0s
JAVC Velka Javorina 29.20 314 *eP* P 11 46 54.3 +7.1
KLMR Klimovskoe 29.25 350 *eP* **P** **11 46 45.5 -1.8**
KLMR pmax pmax
comp=Z,25nm,1.5s
KLMR Klimovskoe 29.25 350 *eP* **P** **11 46 45.5 -1.8**
KLMR AMP 11 46 48.1
comp=Z,25nm,1.5s
MODS Modra-Piesok 29.27 313 *eP* **P** **11 46 47.6 -0.1**
MODS Modra-Piesok 29.27 313 *eP* **P** **11 46 47.6 -0.1**
DANN Dangsing 29.37 89 *eP* **P** **11 46 51.0 +1.9**
comp=Z,29nm,0.7s
MORC Moravsky Berou 29.64 315 P **P** **11 46 50.9 -0.1**
MORC pmax pmax
comp=Z,7.0nm,0.7s
MORC Moravsky Berou 29.64 315 ⇓P **P** **11 46 51.6 +0.6**
MORC Moravsky Berou 29.64 315 *eP* **P** **11 46 51.2 +0.2**
MORC Moravsky Berou 29.64 315 P **P** **11 46 50.9 -0.1**
MORC IAmb IAmb 11 46 52.2
comp=Z,7.5nm,0.7s
CONA Conrad Observa 30.01 311 P **P** **11 46 54.8 +0.4**
comp=Z,7.0nm,1.0s,SNR=4.5
ARSA Arzberg 30.02 310 *iP* **P** **11 46 55.2 +0.7**
comp=Z,7.3nm,0.9s
VRAC Vranov 30.03 314 P **P** **11 46 54.8 +0.3**
comp=Z,3.4nm,0.5s,baz=88,slow=12,SNR=4.7
VRAC Vranov 30.03 314 *eP* **P** **11 46 55.0 +0.5**
KRUC Moravsky 30.06 313 *eP* **P** **11 46 55.7 +1.0**
GKN Gorkha 30.21 89 *eP* **P** **11 46 57.9 +1.5**
DPC Dobruska-Polom 30.59 316 *eP* **P** **11 46 59.8 +0.4**
DPC Dobruska-Polom 30.59 316 *eP* **P** **11 46 59.8 +0.4**
DMN Daman 30.72 90 *eP* **P** **11 47 02.9 +1.8**
OSTC Ostas 30.73 316 *eP* **P** **11 47 01.0 +0.3**
KKN Kakani 30.81 89 *eP* **P** **11 47 03.5 +1.6**
comp=Z,17nm,0.6s
CHVC Chvalec 30.84 316 *eP* **P** **11 46 58.3 -3.3**
PKI Pulchoki 30.99 90 *eP* **P** **11 47 04.9 +1.4**
comp=Z,31nm,0.9s
MOA Molln 31.01 310 P **P** **11 47 03.8 +0.7**
comp=Z,5.2nm,0.5s,SNR=10
GUN Gumba 31.28 89 *eP* **P** **11 47 08.0 +1.8**
comp=Z,59nm,1.1s
KBA Koelnbreinsper 31.40 309 *iP* **P** **11 47 07.5 +0.6**
comp=Z,16nm,0.6s,SNR=16
WMQ Urumqi 31.53 58 *eP* **P** **11 47 09.8 +1.9**
WMQ sP sP 11 47 19.0 +5.4
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ LR LR
comp=Z,280nm,29.3s
WMQ LR LR
comp=Z,770nm,29.2s
WMQ Urumqi 31.53 58 P **P** **11 47 08.3 +0.5**
WMQ pmax pmax
comp=Z,10.0nm,1.4s
WMQ Urumqi 31.53 58 P **P** **11 47 08.3 +0.5**
WMQ IAmb IAmb 11 47 12.2
comp=Z,9.6nm,1.4s
JIRN Jiri 31.62 89 *eP* **P** **11 47 10.7 +1.5**
comp=Z,33nm,0.7s
GEC2 GERESS Array S 31.66 312 P **P** **11 47 08.7 -0.3**
GEC2 IAmb IAmb 11 47 09.3
comp=Z,3.7nm,0.5s
GERES GERESS Array B 31.66 312 P **P** **11 47 09.1 +0.1**
comp=Z,3.5nm,0.5s,baz=112,slow=7.9,SNR=24
GERES GERESS Array B 31.66 312 P **P** **11 47 08.6 -0.4**
KHC Kasperske Hory 31.83 312 P **P** **11 47 09.6 -0.8**
KHC pmax pmax
comp=Z,3.0nm,1.0s
KHC Kasperske Hory 31.83 312 *eP* **P** **11 47 09.1 -1.3**
KHC Kasperske Hory 31.83 312 P **P** **11 47 09.6 -0.8**
ABTA Abfaltersbach 31.88 308 *iP* **P** **11 47 11.6 +0.7**
comp=Z,15nm,0.9s
RAMN Ramite 32.19 90 *eP* **P** **11 47 15.2 +1.2**
comp=Z,24nm,0.7s
BRG Berggiesshubel 32.19 316 *eP* **P** **11 47 13.3 -0.1**
comp=Z,6.1nm,1.0s
BRG Berggiesshubel 32.19 316 *eP* **P** **11 47 13.3 -0.1**
BRG pmax pmax
comp=Z,6.0nm,1.0s
WTTA Wattenberg 32.58 308 P **P** **11 47 17.0 -0.1**
comp=Z,18nm,0.6s,SNR=13
WATA Walderalm 32.64 308 P **P** **11 47 17.3 -0.3**
comp=Z,28nm,1.1s,SNR=5.9
ZAA0 Zalesovo Array 32.79 39 P **P** **11 47 18.3 -0.3**
ZAA0 IAmb IAmb 11 47 20.5
comp=Z,6.5nm,1.1s
ZALV Zalesovo Beam 32.79 39 *iP* **P** **11 47 19.7 +1.1**
ZALV pmax pmax
comp=Z,2.0nm,0.4s
ZALV Zalesovo Beam 32.79 39 P **P** **11 47 19.2 +0.5**
comp=Z,2.1nm,0.5s,baz=252,slow=9.2,SNR=15
ZALV LR LR 12 01 58.3
comp=Z,49nm,21.3s,baz=236,slow=39
ZALV Zalesovo Beam 32.79 39 P **P** **11 47 18.6 -0.1**
SQTA Sankt Quirin 32.85 308 P **P** **11 47 19.3 -0.2**
comp=Z,31nm,0.6s,SNR=11
ODAN Odare 32.88 90 *eP* **P** **11 47 21.5 +1.4**
CLL Collm 32.90 316 ⇓*iP* **P** **11 47 20.1 +0.5**
CLL *e* 11 47 27.0
CLL pmax pmax
comp=Z,16nm,1.1s
CLL Collm 32.90 316 ⇓*iP* **P** **11 47 20.1 +0.5**
comp=Z,16nm,1.1s
CLL *e* 11 47 27.0
CLL Collm 32.90 316 IAmb IAmb 11 47 20.6
comp=Z,15nm,1.1s
FIA1 FINESS Array S 32.90 339 P **P** **11 47 19.7 +0.2**
FINES FINESS Array B 32.90 339 *iP* **P** **11 47 20.7 +1.2**
FINES pmax pmax
comp=Z,2.0nm,0.4s
FINES FINESS Array B 32.90 339 P **P** **11 47 19.2 -0.3**
comp=Z,1.8nm,0.4s,baz=142,slow=9.8,SNR=16
MOTA Moosalm 32.95 308 *iP* **P** **11 47 19.8 -0.5**
comp=Z,19nm,0.8s,SNR=5.3
TAPN Taplejung 33.00 89 *eP* **P** **11 47 22.9 +1.7**
FETA Feichten 33.13 308 P **P** **11 47 21.9 -0.1**
comp=Z,21nm,0.7s,SNR=20
RETA Reutte 33.21 308 *iP* **P** **11 47 21.8 -0.7**
comp=Z,11nm,0.9s
FUORN Ofenpass-Fuorn 33.37 307 P **P** **11 47 24.0 -0.1**
FUORN IAmb IAmb 11 47 35.5
comp=Z,7.8nm,0.7s
BSD Bornholm Skovb 33.42 323 *iP* **P** **11 47 23.5 -0.7**
BSD pmax pmax
comp=Z,10.0nm,0.4s
BSD Bornholm Skovb 33.42 323 *iP* **P** **11 47 23.5 -0.7**
comp=Z,10nm,0.4s
DAVA Damuels 33.75 308 *iP* **P** **11 47 27.0 -0.3**
comp=Z,28nm,0.6s,SNR=12
LSA Lhasa 35.23 83 P **P** **11 47 39.8 -1.0**
LSA pmax pmax
comp=Z,3.0nm,0.6s
LSA Lhasa 35.23 83 P **P** **11 47 39.8 -1.0**
APA Apatity 36.49 349 ⇓*iP* **P** **11 47 51.9 +1.4**
APA pmax pmax
comp=Z,5.0nm,1.1s
APA MLR MLR
comp=Z,300nm,17.0s
SHL Shillong 37.12 90 P **P** **11 47 57.0 +0.4**
SHL pmax pmax
comp=Z,10.0nm,1.0s
SHL Shillong 37.12 90 P **P** **11 47 57.0 +0.4**
SHL IAmb IAmb 11 47 57.4
comp=Z,10nm,1.0s
NB2 NORSAR Subarra 38.07 330 P **P** **11 48 03.7 -0.3**
comp=Z,0.7nm,0.5s,baz=122,slow=8.6
NOA NORSAR Array B 38.07 330 P **P** **11 48 03.4 -0.7**
comp=Z,1.1nm,0.6s,baz=125,slow=8.5,SNR=5.8
NOA LR LR 12 04 45.6
comp=Z,62nm,19.6s,baz=120,slow=38
ARCES ARCESS Array B 39.61 347 P **P** **11 48 16.4 -0.4**
ARCES ARCESS Array B 39.61 347 P **P** **11 48 16.1 -0.7**
comp=Z,2.9nm,0.8s,baz=164,slow=6.3,SNR=7.1
ARCES ARCESS Array B 39.61 347 P **P** **11 48 16.4 -0.4**
TAM Tamanrasset 40.29 268 P **P** **11 48 22.3 -0.9**
TAM pmax pmax
comp=Z,3.0nm,0.9s
TAM Tamanrasset 40.29 268 P **P** **11 48 22.3 -0.9**
GTA Gaotai 40.55 66 ⇑P **P** **11 48 27.0 +1.9**
GTA pP sP 11 48 32.0 +1.0
GTA sP pP 11 48 35.0 +5.6
GTA pmax pmax
comp=Z,13nm,0.8s
GTA pmax pmax
comp=Z,130nm,4.3s
GTA LR LR
comp=Z,67nm,15.9s
GTA LR LR
comp=Z,73nm,15.9s
TLY Talaya 43.16 47 *eP* P 11 48 41.0 -5.2
TLY pmax pmax
comp=Z,4.0nm,0.6s
TLY MLR MLR
comp=Z,106nm,7.0s
TLY Talaya 43.16 47 P **P** **11 48 45.9 -0.3**
ESDC Sonseca Array 43.64 295 P **P** **11 48 49.8 -0.4**
comp=Z,1.0nm,0.6s,baz=81,slow=7.5,SNR=7.0
ESDC Sonseca Array 43.64 295 P **P** **11 48 49.6 -0.7**
LZH Lanzhou 44.21 70 *eP* **P** **11 48 56.8 +1.7**
LZH pP sP 11 49 01.5 +0.5
LZH sP pP 11 49 04.3 +4.9
LZH PP **PcP** **11 50 40.3 +0.6**
LZH pmax pmax
comp=Z,16nm,1.3s
LZH pmax pmax
comp=Z,68nm,4.9s
LZH LR LR
comp=Z,200nm,16.3s
LZH LR LR
comp=Z,400nm,17.4s
LZH LR LR
comp=Z,380nm,16.8s
SONM Songino Array 44.81 53 P **P** **11 49 00.1 +0.4**
SONM pmax pmax
comp=Z,1.0nm,1.0s
SONM Songino Array 44.81 53 P **P** **11 49 00.4 +0.7**
comp=Z,0.8nm,0.8s,baz=267,slow=3.0,SNR=6.7
SONM Songino Array 44.81 53 P **P** **11 49 00.1 +0.4**
ULN Ulaanbaatar 45.26 53 *iP* **P** **11 49 03.4 +0.2**
ULN pmax pmax
comp=Z,4.0nm,1.0s
ULN Ulaanbaatar 45.26 53 P **P** **11 49 03.5 +0.3**
ULN IAmb IAmb 11 49 05.5
comp=Z,4.1nm,0.8s
CD2 Chengdu 45.40 77 P **P** **11 49 03.5 -1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CHTO Chiang Mai 45.83 95 P **P** **11 49 08.7 +0.8**
CHTO pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 45.83 95 P **P** **11 49 08.7 +0.8**
CHTO IAmb IAmb 11 49 09.8
comp=Z,8.4nm,0.8s
CM31 Chiang Mai Arr 45.99 95 P **P** **11 49 09.7 +0.5**
CM31 IAmb IAmb 11 49 11.0
comp=Z,4.7nm,0.7s
CMAR Chiang Mai Arr 45.99 95 P **P** **11 49 10.1 +0.9**
comp=Z,3.9nm,0.7s,baz=294,slow=8.3,SNR=31
PCBR Castelo Branco 46.29 296 *eP* **P** **11 49 12.1 +0.8**
PMRV Marv??o 46.30 296 *eP* **P** **11 49 11.2 -0.2**
PBEJ Beja 46.92 294 *eP* **P** **11 49 16.8 +0.5**
comp=Z,32nm,1.4s
PTOM Tomar 47.04 296 *eP* **P** **11 49 18.1 +0.9**
PNCL Nicolau / Gran 47.41 294 *eP* **P** **11 49 19.5 -0.6**
TOA0 Torodi Ar. Sit 48.01 258 P **P** **11 49 25.0 0.0**
TOA0 IAmb IAmb 11 49 27.9
comp=Z,4.6nm,0.8s
TORD Torodi Ar. Bea 48.01 258 P **P** **11 49 25.7 +0.7**
comp=Z,4.2nm,0.7s,baz=54,slow=8.0,SNR=24
TORD LR LR 12 11 49.5
comp=Z,65nm,18.5s,baz=10.0,slow=39
TORD Torodi Ar. Bea 48.01 258 P **P** **11 49 24.9 -0.1**
PBKT Sadao Pong 48.58 96 P **P** **11 49 30.1 +0.7**
XAN Xi'an 48.74 71 P P 11 49 36.0 +5.5
XAN pmax pmax
comp=Z,6.0nm,1.1s
XAN Xi'an 48.74 71 P **P** **11 49 31.0 +0.5**
XAN pmax pmax
comp=Z,5.0nm,0.9s
XAN Xi'an 48.74 71 P **P** **11 49 31.0 +0.5**
XAN IAmb IAmb 11 49 36.8
comp=Z,5.1nm,0.9s
SLVN Son La 48.92 89 P **P** **11 49 33.0 +0.9**
SLVN IAmb IAmb 11 49 39.2
comp=Z,3.8nm,1.0s
HHC Hu-ho-hao-te 49.24 62 *eP* **P** **11 49 34.5 +0.1**
HHC pmax pmax
comp=Z,2.0nm,1.0s
HHC pmax pmax
comp=Z,52nm,5.7s
BOD Bodaibo 49.54 39 *eP* **P** **11 49 36.7 +0.5**
BOD pmax pmax
comp=Z,5.0nm,2.6s
DAG Danmarks Havn 53.81 345 *iP* **P** **11 50 07.3 -0.6**
DAG Danmarks Havn 53.81 345 *iP* **P** **11 50 07.3 -0.6**
WHN Wuhan 54.18 74 P **P** **11 50 09.8 -1.4**
KULM Kulim 54.38 109 P **P** **11 50 13.1 +0.3**
NOR Nord 54.74 350 *iP* **P** **11 50 14.6 0.0**
IPM Ipoh 55.16 109 P **P** **11 50 18.2 -0.3**
TIXI Tiksi 56.10 22 P **P** **11 50 24.2 -0.2**
TIXI pmax pmax
comp=Z,4.0nm,0.8s
TIXI Tiksi 56.10 22 P **P** **11 50 24.2 -0.2**
TIXI IAmb IAmb 11 50 30.4
comp=Z,3.9nm,0.8s
DBIC Dimbokro 56.94 256 P **P** **11 50 31.1 -0.1**
DBIC pmax pmax
comp=Z,16nm,1.5s
DBIC Dimbokro 56.94 256 P **P** **11 50 32.0 +0.8**
comp=Z,1.7nm,0.5s,baz=18,slow=9.0,SNR=5.2
DBIC LR LR 12 18 17.4
comp=Z,114nm,18.2s,baz=40,slow=40
DBIC Dimbokro 56.94 256 P **P** **11 50 31.1 -0.1**
DBIC IAmb IAmb 11 50 34.4
comp=Z,16nm,1.5s
KIC Kosan Boka 57.02 255 *eP* **P** **11 50 32.3 +0.5**
comp=Z,7.3nm,0.7s
TIC Toumodi 57.08 256 *eP* **P** **11 50 31.4 -0.9**
NJ2 Nanjing 57.28 70 *eP* **P** **11 50 32.0 -1.5**
NJ2 pmax pmax
comp=Z,5.0nm,0.5s
LIC Lamto 57.33 255 *eP* **P** **11 50 33.9 -0.1**
comp=Z,18nm,1.1s
SUMG Summit 58.94 339 P **P** **11 50 45.3 +0.4**
SUMG pmax pmax
comp=Z,14nm,0.8s
SUMG Summit 58.94 339 *iP* **P** **11 50 45.7 +0.8**
comp=Z,31nm,0.7s
SUMG Summit 58.94 339 P **P** **11 50 45.3 +0.4**
KLR Kul'dur 61.17 48 P **P** **11 51 00.1 0.0**
comp=Z,1.1nm,0.9s,baz=261,slow=8.7,SNR=5.1
LBTB Lobatse 61.67 205 P **P** **11 51 05.3 +1.5**
LBTB pmax pmax
comp=Z,7.0nm,1.0s
LBTB Lobatse 61.67 205 P **P** **11 51 05.3 +1.5**
LBTB IAmb IAmb 11 51 13.7
comp=Z,7.1nm,0.9s

KSRS	**Korea Array**	**62.38**	**61**	P		**P**	**11 51 08.2**	**-0.2**
	comp=Z,2.6nm,0.8s,baz=281,slow=6.5,SNR=9.9							
BOSA	**Boshof**	**65.09**	**204**	P		**P**	**11 51 27.4**	**+1.0**
	comp=Z,2.1nm,0.6s,baz=7.7,slow=3.1,SNR=5.8							
BOSA				LR		LR	12 20 55.6	
	comp=Z,75nm,18.5s,baz=46,slow=37							
BOSA	**Boshof**	**65.09**	**204**	P		**P**	**11 51 27.4**	**+1.0**
SEY	**Seymchan**	**66.96**	**29**	P		**P**	**11 51 39.6**	**+1.7**
	comp=Z,4.5nm,0.7s,baz=272,slow=6.7,SNR=21							
BILL	**Bilibino**	**69.30**	**21**	*eP*		**P**	**11 51 52.8**	**+0.3**
BILL				*e*			11 52 14.9	
BILL				*e*			11 54 27.7	
BILL				pmax	pmax			
	comp=Z,2.0nm,0.9s							
MJAR	**Matsushiro Arr**	**70.29**	**59**	P		**P**	**11 51 59.6**	**+0.3**
MJAR				pmax	pmax			
	comp=Z,5.0nm,1.3s							
MJAR	**Matsushiro Arr**	**70.29**	**59**	P		**P**	**11 51 59.6**	**+0.3**
RES	**Resolute Bay**	**70.69**	**351**	P		**P**	**11 52 01.4**	**+0.5**
RES				pmax	pmax			
	comp=Z,2.0nm,1.0s							
RES	**Resolute Bay**	**70.69**	**351**	P		**P**	**11 52 01.4**	**+0.5**
SHEL	**Horse Pasture**	**71.79**	**237**	P		**P**	**11 52 08.7**	**+0.2**
SHEL				pmax	pmax			
	comp=Z,49nm,1.0s							
SHEL	**Horse Pasture**	**71.79**	**237**	P		**P**	**11 52 08.7**	**+0.2**
SCHQ	**Schefferville**	**77.60**	**328**	P		**P**	**11 52 41.5**	**-0.1**
	comp=Z,7.5nm,0.6s,baz=39,slow=4.9,SNR=28							
SCHQ	**Schefferville**	**77.60**	**328**	P		**P**	**11 52 41.3**	**-0.4**
SCHQ				IAmb		IAmb	11 52 42.2	
	comp=Z,6.9nm,0.8s							
TOLK	**Toolik Lake Re**	**78.19**	**7**	IAmb		IAmb	11 52 46.7	
	comp=Z,6.7nm,0.8s							
C36M	**Paulatuk**	**78.43**	**358**	P		**P**	**11 52 45.7**	**-0.3**
INK	**Inuvik**	**79.53**	**1**	P		**P**	**11 52 52.0**	**0.0**
INK				pmax	pmax			
	comp=Z,5.0nm,1.2s							
INK	**Inuvik**	**79.53**	**1**	P		**P**	**11 52 52.0**	**0.0**
INK				IAmb		IAmb	11 52 52.8	
	comp=Z,5.0nm,1.2s							
BMAR	**Burnt Mountain**	**79.84**	**6**	P		**P**	**11 52 54.5**	**+0.7**
IMAR	**Indian Mountai**	**80.21**	**10**	P		**P**	**11 52 55.9**	**+0.1**
IL31		**82.22**	**7**	P		**P**	**11 53 06.6**	**+0.1**
ILAR	**Eielson Array**	**82.22**	**7**	P		**P**	**11 53 06.4**	**-0.1**
	comp=Z,1.7nm,1.0s,baz=327,slow=4.0,SNR=13							
ILAR	**Eielson Array**	**82.22**	**7**	P		**P**	**11 53 06.2**	**-0.3**
BPAW	**Bear Paw Mtn.**	**82.38**	**9**	P		**P**	**11 53 07.6**	**+0.2**
BPAW				IAmb		IAmb	11 53 09.2	
	comp=Z,9.3nm,1.2s							
EGAK	**Eagle**	**82.72**	**5**	P		**P**	**11 53 09.6**	**+0.5**
EGAK				IAmb		IAmb	11 53 15.2	
	comp=Z,6.8nm,1.1s							
SCRK	**Sand Creek**	**83.28**	**6**	IAmb		IAmb	11 53 13.5	
	comp=Z,4.6nm,0.8s							
DOT	**Dot Lake**	**83.60**	**6**	IAmb		IAmb	11 53 15.2	
	comp=Z,5.0nm,0.9s							
FCC	**Fort Churchill**	**84.33**	**342**	P		**P**	**11 53 18.1**	**+0.6**
FCC				pmax	pmax			
	comp=Z,8.0nm,1.0s							
FCC	**Fort Churchill**	**84.33**	**342**	P		**P**	**11 53 18.1**	**+0.6**
BCAR	**Beaver Creek A**	**84.37**	**5**	P		**P**	**11 53 18.1**	**+0.4**
YKA	**Yellowknife Ar**	**84.59**	**353**	P		**P**	**11 53 18.6**	**-0.1**
	comp=Z,4.8nm,0.9s,baz=7.4,slow=5.1,SNR=63							
KDAK	**Kodiak Island**	**88.15**	**12**	P		**P**	**11 53 36.4**	**+0.1**
KDAK				pmax	pmax			
	comp=Z,11nm,1.2s							
KDAK	**Kodiak Island**	**88.15**	**12**	P		**P**	**11 53 36.6**	**+0.4**
	comp=Z,4.5nm,0.6s,baz=313,slow=2.7,SNR=8.0							
KDAK	**Kodiak Island**	**88.15**	**12**	P		**P**	**11 53 36.4**	**+0.1**
ULM	**Lac du Bonnet**	**92.29**	**339**	P		**P**	**11 53 55.1**	**-0.7**
ULM				pmax	pmax			
	comp=Z,4.0nm,1.0s							
ULM	**Lac du Bonnet**	**92.29**	**339**	P		**P**	**11 53 55.3**	**-0.5**
	comp=Z,4.0nm,0.9s,baz=19,slow=5.1,SNR=10.0							
ULM	**Lac du Bonnet**	**92.29**	**339**	P		**P**	**11 53 55.1**	**-0.7**
ULM				IAmb		IAmb	11 53 56.2	
	comp=Z,4.2nm,0.9s							

*IDC **31** 11:41:30.1±1.7,51°.33N×178°.17W,h0km,mb3.4/9, mb1 3.7/10,mb1mx3.6/49,mbtmp3.5/10,ML3.5/1,Error ellipse: s-maj=50.7km s-min=17.5km az=179.0*
*AEIC **31** 11:41:35.6±1.6,51°.21N±0°.05×178°.07W±0°.03,h32km±6km, ML3.2/17,mb3.8/20(NEIC),Error ellipse: s-maj=6.6km s-min=2.7km az=175.0*
*NEIC **31** 11:41:37.1±1.9,51°.33N±0°.08×178°.07W±0°.05,h50km±8km, Error ellipse: s-maj=11.3km s-min=3.2km az=194.0*
ISC 31 11:41:36.7±2.2,51°.3N±0°.2×178°.14W±0°.05,h52km±15km, n53,σ1°10/58,mb3.6/14,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TASE	**Tanaga Southea**	**0.55**	**7**		**Pn**	**11 41 48.5**	**-0.2**
GALAA	**Gareloi Lava P**	**0.62**	**321**		**Pn**	**11 41 49.1**	**-0.3**
TAFP	**Tanaga Falls P**	**0.62**	**9**		**Pn**	**11 41 49.3**	**-0.3**
TAFP					**Sn**	**11 41 58.8**	**0.0**
GAEA	**Gareloi East**	**0.62**	**323**		**Pn**	**11 41 49.2**	**-0.3**
KIMD	**Kanaga Island**	**0.74**	**50**		**Pn**	**11 41 49.7**	**-1.3**
KIWB	**Kanaga Island**	**0.84**	**47**		**Pn**	**11 41 51.5**	**-0.8**
KIWB				Sn	**Sn**	**11 42 04.1**	**+0.4**
KIKV	**Kanaga Island**	**0.85**	**45**		**Pn**	**11 41 51.6**	**-0.8**
ADK	**Adak**	**1.09**	**56**		**Pn**	**11 41 54.3**	**-1.3**
ADK				Sn	**Sn**	**11 42 10.2**	**+0.6**
ADAG	**Mount Adagdak**	**1.18**	**54**		**Pn**	**11 41 56.5**	**-0.4**
GSTD	**Great Sitkin T**	**1.46**	**58**		**Pn**	**11 42 00.1**	**-0.6**
GSTD					**Sn**	**11 42 20.8**	**+2.0**
GSMY	**Great Sitkin M**	**1.50**	**59**		**Pn**	**11 42 00.7**	**-0.6**
GSTR	**Great Sitkin T**	**1.53**	**57**		**Pn**	**11 41 01.8**	**+0.2**
GSTR					**Sn**	**11 42 22.8**	**+2.5**
ATKA	**Atka Island**	**2.62**	**68**		**Pn**	**11 42 15.8**	**-0.7**
ATKA				Sn	**Sn**	**11 42 47.4**	**+0.4**
KOKL	**Mount Kliuchef**	**2.66**	**66**		**Pn**	**11 42 17.8**	**+0.7**
KOFP	**Korovin Flat P**	**2.70**	**67**		**Pn**	**11 42 18.1**	**+0.5**
NIKH	**Nikolski High**	**5.96**	**70**	Pn	**Pn**	**11 43 03.0**	**+0.8**
UNV	**Unalaska Valle**	**7.54**	**60**	Pn	**Pn**	**11 43 24.1**	**+0.2**
SDPT	**Sand Point**	**11.31**	**62**	Pn	**Pn**	**11 44 15.1**	**-0.3**
CNBA	**Chernabura Isl**	**11.70**	**65**	Pn	**Pn**	**11 44 20.4**	**-0.4**
SII	**Sitkinak Islan**	**15.03**	**60**	Pn	**Pn**	**11 45 06.3**	**+0.8**
OHAK	**Old Harbor**	**15.64**	**58**	Pn	**Pn**	**11 45 10.6**	**-2.8**
SVW2	**Sparrevohn**	**15.85**	**43**	Pn	**Pn**	**11 45 15.3**	**-0.9**
KDAK	**Kodiak Island**	**16.13**	**56**	Pn	**Pn**	**11 45 16.1**	**-3.6**
	0.2nm,0.3s,baz=291,slow=14,SNR=4.0						
KDAK	**Kodiak Island**	**16.13**	**56**		**Pn**	**11 45 16.8**	**-2.8**
TTA	**Tatalina**	**16.63**	**37**	Pn	**Pn**	**11 45 26.7**	**+0.6**
RSO	**Redoubt South**	**16.84**	**47**	Pn	**Pn**	**11 45 27.8**	**-1.0**
CNPM	**China Poot**	**17.26**	**51**	Pn	**Pn**	**11 45 33.0**	**-0.7**
BRLK	**Bradley Lake**	**17.50**	**50**	Pn	**Pn**	**11 45 36.4**	**-0.3**
BRLK				IAmb	IAmb	11 45 42.2	
	comp=Z,12nm,1.1s						
SEW	**Seward**	**18.28**	**50**	P	**P**	**11 45 44.8**	**-1.1**
SEW				IAmb	IAmb	11 45 59.5	
	comp=Z,17nm,1.3s						
RC01	**Rabbit Creek A**	**18.45**	**47**	P	**P**	**11 45 47.7**	**0.0**
RC01				IAmb	IAmb	11 46 04.2	
	comp=Z,6.7nm,1.2s						
KTH	**Kantishna Hill**	**18.93**	**39**	P	**P**	**11 45 53.6**	**+0.6**
KTH				IAmb	IAmb	11 45 59.1	
	comp=Z,8.3nm,1.2s						
RND	**Reindeer**	**19.70**	**41**	P	**P**	**11 46 01.6**	**+0.2**
MLY	**Manley**	**19.73**	**35**	P	**P**	**11 46 02.2**	**+0.5**
MLY				IAmb	IAmb	11 46 08.4	
	comp=Z,2.2nm,0.8s						
EYAK	**Cordova Ski Ar**	**20.18**	**50**	P	**P**	**11 46 05.1**	**-1.4**
CCB	**Clear Creek Bu**	**20.65**	**38**	P	**P**	**11 46 12.5**	**+0.9**
ILAR	**Eielson Array**	**21.06**	**38**	P	**P**	**11 46 16.8**	**+0.8**
	comp=Z,0.4nm,1.0s,baz=226,slow=8.6,SNR=3.4						
ILAR	**Eielson Array**	**21.06**	**38**	P	**P**	**11 46 16.1**	**+0.1**
VRDI	**Verde Repeater**	**21.42**	**49**	P	**P**	**11 46 21.2**	**+1.0**
VRDI				IAmb	IAmb	11 46 27.3	
	comp=Z,3.0nm,1.0s						
RIDG	**Independent Ri**	**21.49**	**42**	P	**P**	**11 46 20.5**	**-0.2**
RIDG				IAmb	IAmb	11 46 26.8	
	comp=Z,8.7nm,1.3s						
DOT	**Dot Lake**	**21.79**	**42**	P	**P**	**11 46 23.0**	**-0.9**
DOT				IAmb	IAmb	11 46 28.4	
	comp=Z,3.5nm,1.0s						
SCRK	**Sand Creek**	**21.93**	**42**	P	**P**	**11 46 24.0**	**-1.5**
SCRK				IAmb	IAmb	11 46 38.7	
	comp=Z,3.5nm,1.3s						
EGAK	**Eagle**	**23.35**	**41**	P	**P**	**11 46 39.3**	**-0.7**
KLR	**Kul'dur**	**31.60**	**286**	P	**P**	**11 47 54.5**	**+0.3**
	comp=Z,1.2nm,0.5s,baz=66,slow=6.3,SNR=8.9						
YKA	**Yellowknife Ar**	**34.99**	**46**	P	**P**	**11 48 22.3**	**-1.3**
	comp=Z,0.1nm,0.4s,baz=265,slow=6.1,SNR=3.7						
NEW	**Newport**	**38.53**	**70**	P	**P**	**11 48 54.4**	**+0.6**
NEW				IAmb	IAmb	11 49 13.0	
	comp=Z,1.7nm,1.0s						
PDAR	**Pinedale Array**	**45.94**	**73**	P	**P**	**11 49 55.3**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=319,slow=4.1,SNR=8.0						
PDAR	**Pinedale Array**	**45.94**	**73**	P	**P**	**11 49 55.2**	**+0.8**
SONM	**Songino Array**	**47.05**	**297**	P	**P**	**11 50 02.2**	**-0.8**
	comp=Z,0.6nm,0.9s,baz=72,slow=9.3,SNR=2.7						
WHN	**Wuhan**	**53.07**	**274**	P	P	11 50 43.0	-5.5
ARCES	**ARCESS Array B**	**58.25**	**350**	P	**P**	**11 51 25.0**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=30,slow=7.4,SNR=3.7						
TXAR	**Lajitas Array**	**58.26**	**82**	P	**P**	**11 51 26.3**	**+0.4**
	comp=Z,0.3nm,0.8s,baz=258,slow=3.6,SNR=3.1						
MKAR	**Makanchi Array**	**60.41**	**309**	P	**P**	**11 51 40.9**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=49,slow=6.5,SNR=3.1						
AKASG	**Malin Array Be**	**75.76**	**342**	P	**P**	**11 53 17.2**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=22,slow=4.9,SNR=3.9						

*IDC **31** 11:46:56.3±3.2,4°.87S×153°.83E,h95km±23km,mb3.8/15, mb1 4.0/16,mb1mx3.9/35,mbtmp4.2/16,MS3.1/9, Ms1 3.1/9,ms1mx2.9/27,Error ellipse: s-maj=29.2km s-min=12.4km az=100.0*
*NEIC **31** 11:46:56.3±1.3,4°.83S±0°.07×153°.87E±0°.07,h100km±6km, mb4.5/34, Error ellipse: s-maj=10.7km s-min=10.5km az=94.0*
ISC 31 11:46:56.8±0.5,4°.81S±0°.05×153°.89E±0°.07,h105km,n88, σ1°21/89,mb4.4/41,1C,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.83**	**290**	Pn	**Pn**	**11 47 26.3**	**-1.1**
RABL				Sn	**Sn**	**11 47 50.6**	**-0.1**
KRVT	**Keravat (AS076**	**1.92**	**285**	P	**Pn**	**11 47 27.4**	**-1.3**
	122nm,0.3s,baz=148,slow=1.0,SNR=58						
KRVT				S	**Sn**	**11 47 50.8**	**-2.1**
	236nm,0.3s,baz=343,slow=21,SNR=28						
KRVT				LR	LR	11 48 22.7	
	comp=Z,706nm,18.6s,baz=104,slow=46						
HNR	**Honiara**	**7.56**	**128**	Pn	**Pn**	**11 48 43.6**	**-0.7**
PMG	**Port Moresby**	**8.09**	**235**	P	**Pn**	**11 48 51.6**	**+0.1**
	20nm,0.3s,baz=48,slow=8.0,SNR=37						
PMG				S	**Sn**	**11 50 20.7**	**-0.6**
	3.5nm,0.3s,baz=308,slow=19,SNR=5.2						
PMG				LR	LR	11 52 08.8	
	comp=Z,111nm,19.1s,baz=341,slow=39						
PMG	**Port Moresby**	**8.09**	**235**		**Pn**	**11 48 51.6**	**+0.1**
PMG				Sn	**Sn**	**11 50 21.3**	**0.0**
PATS	**Pohnpei**	**12.39**	**21**	Pn	**Pn**	**11 49 48.8**	**-0.7**
PATS				Sn	**Sn**	**11 52 00.2**	**-5.7**
JAY	**Jayapura**	**13.35**	**279**	LR	LR	11 53 59.2	
	comp=Z,124nm,18.7s,baz=292,slow=32						
COEN	**Coen**	**13.93**	**229**	Pn	**Pn**	**11 50 08.8**	**-1.0**
GUMO	**Guam**	**20.36**	**334**	LR	LR	11 58 37.0	
	comp=Z,13nm,22.0s,baz=153,slow=34						
EIDS	**Eidsvold**	**20.61**	**187**	P	**P**	**11 51 27.5**	**-0.3**
EIDS				IAmb	IAmb	11 51 42.4	
	comp=Z,25nm,1.2s						
DZM	**Mont Dzumac**	**21.03**	**146**	LR	LR	11 58 21.7	
	comp=Z,55nm,21.6s,baz=158,slow=33						
WB0	**Warramunga Arr**	**24.11**	**230**	P	**P**	**11 52 03.0**	**0.0**
WB0				IAmb	IAmb	11 52 04.8	
	comp=Z,17nm,1.1s						
WB2	**Warramunga Arr**	**24.25**	**230**	P	**P**	**11 52 04.2**	**0.0**
WB2				IAmb	IAmb	11 52 05.7	
	comp=Z,30nm,1.5s						
WRA	**Warramunga Arr**	**24.26**	**230**	P	**P**	**11 52 04.2**	**-0.1**
	comp=Z,4.8nm,0.7s,baz=54,slow=9.9,SNR=24						
WRA				LR	LR	12 02 01.1	
	comp=Z,44nm,18.3s,baz=350,slow=37						
WRA	**Warramunga Arr**	**24.26**	**230**	P	**P**	**11 52 03.6**	**-0.7**
ARMA	**Armidale**	**25.56**	**185**	P	**P**	**11 52 16.1**	**0.0**
ARMA				IAmb	IAmb	11 52 33.7	
	comp=Z,13nm,1.4s						
AS31	**Alice Springs**	**26.88**	**224**	P	**P**	**11 52 27.4**	**-0.7**
ASAR	**Alice Springs**	**26.88**	**224**	P	**P**	**11 52 27.4**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=55,slow=8.9,SNR=24						
ASAR				LR	LR	12 03 32.3	
	comp=Z,72nm,18.6s,baz=92,slow=37						
KNRA	**Kununurra**	**26.94**	**245**	P	**P**	**11 52 27.2**	**-1.4**
KNRA				IAmb	IAmb	11 52 31.3	
	comp=Z,33nm,1.5s						
STKA	**Stephens Creek**	**29.29**	**202**	P	**P**	**11 52 48.8**	**-0.6**
	comp=Z,2.7nm,0.6s,baz=35,slow=14,SNR=10						
STKA				LR	LR	12 04 11.6	
	comp=Z,46nm,18.6s,baz=33,slow=35						
STKA	**Stephens Creek**	**29.29**	**202**	P	**P**	**11 52 48.7**	**-0.6**
FITZ	**Fitzroy Crossi**	**30.61**	**242**	P	**P**	**11 53 00.5**	**-0.7**
	comp=Z,2.5nm,0.3s,baz=41,slow=8.6,SNR=9.5						
FITZ	**Fitzroy Crossi**	**30.61**	**242**	P	**P**	**11 53 00.6**	**-0.6**
FITZ				IAmb	IAmb	11 53 06.4	
	comp=Z,24nm,1.5s						
BBOO	**Buckleboo**	**32.45**	**209**	P	**P**	**11 53 16.2**	**-1.0**
BBOO				IAmb	IAmb	11 53 28.4	
	comp=Z,6.8nm,1.1s						
FORT	**Forrest**	**35.47**	**220**	P	**P**	**11 53 42.6**	**-0.7**
TAU	**Tasmania Unive**	**38.38**	**188**	P	**P**	**11 54 07.8**	**+0.1**
TAU				IAmb	IAmb	11 54 12.1	
	comp=Z,4.7nm,1.0s						
RPZ	**Rata Peaks**	**41.60**	**161**	P	**P**	**11 54 34.3**	**-0.1**
RPZ				IAmb	IAmb	11 54 43.7	
	comp=Z,6.6nm,1.1s						
MLZ	**Mavora Lakes**	**42.26**	**165**	P	**P**	**11 54 39.5**	**-0.3**
MLZ				IAmb	IAmb	11 54 40.0	
	comp=Z,17nm,1.1s						
MORW	**Morawa**	**43.19**	**232**	P	**P**	**11 54 46.8**	**-0.7**
JNU	**Nakatsue**	**43.58**	**332**	P	**P**	**11 54 49.9**	**-0.7**
	comp=Z,4.8nm,0.8s,baz=136,slow=3.5,SNR=4.5						
JNU	**Nakatsue**	**43.58**	**332**	P	**P**	**11 54 50.1**	**-0.5**
KSM	**Kuching**	**43.98**	**277**	P	**P**	**11 54 53.6**	**-0.5**
KSRS	**Korea Array**	**48.51**	**332**	P	**P**	**11 55 29.7**	**+0.5**
	comp=Z,0.5nm,0.7s,baz=144,slow=8.5,SNR=4.6						
NJ2	**Nanjing**	**49.55**	**320**	*eP*	**P**	**11 55 39.3**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**52.62**	**340**	P	**P**	**11 55 59.4**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=116,slow=8.6,SNR=3.9						
USRK	**Ussuriysk Ar.**	**52.62**	**340**	P	**P**	**11 56 00.4**	**+0.5**
BKNI	**Bangkinang**	**53.03**	**274**	P	**P**	**11 56 02.5**	**-1.0**
ENH	**Enshi**	**54.96**	**312**	P	**P**	**11 56 17.6**	**+0.2**
PPT	**Papeete**	**56.69**	**108**	LR	LR	12 17 34.0	
	comp=Z,24nm,19.4s,baz=179,slow=32						
KLR	**Kul'dur**	**57.17**	**343**	P	**P**	**11 56 33.9**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=120,slow=5.4,SNR=4.4						
XAN	**Xi'an**	**57.38**	**316**	P	**P**	**11 56 35.5**	**+1.0**
XAN				pP	pP	11 56 52.0	-6.8
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				LR	LR		
	comp=N,97nm,16.3s						
XAN				LR	LR		
	comp=E,120nm,16.3s						
XAN				LR	LR		
	comp=Z,120nm,15.2s						
XAN	**Xi'an**	**57.38**	**316**	P	**P**	**11 56 34.9**	**+0.4**
XAN				IAmb	IAmb	11 56 35.9	
	comp=Z,5.9nm,0.7s						
PETK	**Petropavlovsk-**	**57.80**	**3**	P	**P**	**11 56 39.1**	**+2.2**
	comp=Z,5.3nm,0.9s,baz=190,slow=10,SNR=4.2						
PETK	**Petropavlovsk-**	**57.80**	**3**	P	**P**	**11 56 38.4**	**+1.4**
CMAR	**Chiang Mai Arr**	**58.87**	**295**	P	**P**	**11 56 46.8**	**+1.7**
	comp=Z,1.6nm,0.8s,baz=116,slow=5.6,SNR=10						
CD2	**Chengdu**	**59.57**	**310**	P	**P**	**11 56 50.3**	**+0.5**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
HHC	**Hu-ho-hao-te**	**59.70**	**324**	*eP*	**P**	**11 56 53.3**	**+2.8**
HHC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,54nm,6.6s						
LZH	**Lanzhou**	**62.00**	**315**	*eP*	**P**	**11 57 09.0**	**+2.7**
LZH				pP	pP	11 57 33.0	+2.1
LZH				sP	PcP	11 57 47.0	+1.1
LZH				PP	PP	11 59 43.3	+19
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,73nm,5.0s						
LZH				LR	LR		
	comp=N,150nm,15.6s						
LZH				LR	LR		
	comp=E,170nm,15.5s						
LZH				LR	LR		
	comp=Z,250nm,18.3s						
MA2	**Magadan**	**64.24**	**358**	P	**P**	**11 57 21.0**	**+0.6**
MA2				IAmb	IAmb	11 57 23.4	
	comp=Z,7.5nm,0.7s						
GTA	**Gaotai**	**66.41**	**317**	⇑P	**P**	**11 57 36.0**	**+1.0**
GTA				pP	pP	11 58 00.8	+0.9
GTA				sP	sP	11 58 13.3	+2.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ULN	**Ulaanbaatar**	**66.58**	**328**	P	**P**	**11 57 36.3**	**+0.3**
SONM	**Songino Array**	**66.92**	**327**	P	**P**	**11 57 39.5**	**+1.4**
	comp=Z,1.6nm,0.7s,baz=146,slow=6.5,SNR=12						
SONM	**Songino Array**	**66.92**	**327**	P	**P**	**11 57 38.7**	**+0.7**
SHL	**Shillong**	**67.25**	**300**	P	**P**	**11 57 40.6**	**-0.1**
LSA	**Lhasa**	**69.14**	**304**	P	**P**	**11 57 52.5**	**-0.3**
LSA				IAmb	IAmb	11 57 54.6	
	comp=Z,10nm,1.4s						
TAPN	**Taplejung**	**71.34**	**301**	*eP*	**P**	**11 58 07.5**	**+1.4**
ODAN	**Odare**	**71.49**	**300**	*eP*	**P**	**11 58 08.0**	**+1.1**
	comp=Z,32nm,0.7s						
RAMN	**Ramite**	**72.19**	**300**	*eP*	**P**	**11 58 12.0**	**+0.9**
	comp=Z,6.1nm,0.6s						
JIRN	**Jiri**	**72.73**	**301**	*eP*	**P**	**11 58 15.4**	**+1.0**
	comp=Z,18nm,0.8s						
GUN	**Gumba**	**73.06**	**301**	*eP*	**P**	**11 58 17.4**	**+1.1**
	comp=Z,28nm,0.8s						
PKI	**Pulchoki**	**73.37**	**300**	*eP*	**P**	**11 58 18.8**	**+0.6**
KKN	**Kakani**	**73.54**	**301**	*eP*	**P**	**11 58 19.9**	**+0.9**
DMN	**Daman**	**73.64**	**300**	*eP*	**P**	**11 58 20.7**	**+1.0**
GKN	**Gorkha**	**74.14**	**301**	*eP*	**P**	**11 58 23.4**	**+0.9**
KOLN	**Koldanda**	**74.98**	**300**	*eP*	**P**	**11 58 27.8**	**+0.5**
DANN	**Dangsing**	**74.98**	**301**	*eP*	**P**	**11 58 27.9**	**+0.5**
	comp=Z,27nm,1.0s						
WMQ	**Urumqi**	**76.49**	**317**	*eP*	**P**	**11 58 36.8**	**+1.4**
WMQ				pP	pP	11 59 02.5	+1.6
WMQ				pmax	pmax		
	comp=Z,7.0nm,2.1s						
WMQ				pmax	pmax		
	comp=Z,33nm,3.7s						
WMQ				LR	LR		
	comp=N,480nm,28.9s						
WMQ				LR	LR		
	comp=E,600nm,29.1s						
WMQ				LR	LR		
	comp=Z,96nm,29.7s						
CNPM	**China Poot**	**77.26**	**25**	P	**P**	**11 58 40.4**	**+1.0**
CNPM				IAmb	IAmb	11 58 42.0	
	comp=Z,12nm,0.9s						
SUA	**Susitna One**	**78.53**	**24**	P	**P**	**11 58 46.5**	**+0.1**
SUA				IAmb	IAmb	11 58 52.5	
	comp=Z,3.7nm,0.8s						
IMAR	**Indian Mountai**	**80.04**	**19**	P	**P**	**11 58 55.4**	**+1.0**
MK31	**Makanchi Array**	**81.05**	**319**	P	**P**	**11 59 00.9**	**+0.6**
MKAR	**Makanchi Array**	**81.05**	**319**	P	**P**	**11 59 01.1**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=102,slow=6.3,SNR=14						
MKAR	**Makanchi Array**	**81.05**	**319**	P	**P**	**11 59 00.8**	**+0.5**
MAKZ	**Makanchi**	**81.26**	**319**	P	**P**	**11 59 01.7**	**+0.3**
ILAR	**Eielson Array**	**81.77**	**22**	P	**P**	**11 59 04.2**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=246,slow=4.7,SNR=9.9						
ILAR	**Eielson Array**	**81.77**	**22**	P	**P**	**11 59 04.0**	**+0.4**
ZAA0	**Zalesovo Array**	**81.77**	**326**	P	**P**	**11 59 03.8**	**-0.1**
ZALV	**Zalesovo Beam**	**81.77**	**326**	P	**P**	**11 59 03.9**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=109,slow=4.4,SNR=7.0						
ZALV	**Zalesovo Beam**	**81.77**	**326**	P	**P**	**11 59 03.8**	**-0.1**
KSH	**Kashi**	**83.77**	**310**	P	**P**	**11 59 17.8**	**+3.1**
KSH				pP	pwP	11 59 45.8	-0.6
KSH				PP	**PP**	**12 02 32.5**	**+3.2**
KSH				pmax	pmax		
	comp=Z,11nm,0.7s						
KSH				pmax	pmax		
	comp=Z,200nm,4.6s						
KURK	**Kurchatov**	**84.45**	**322**	P	**P**	**11 59 18.2**	**+0.5**
KURK				IAmb	IAmb	11 59 19.0	
	comp=Z,7.4nm,1.1s						
NIL	**Nilore**	**84.88**	**304**	P	**P**	**11 59 20.2**	**-0.1**
QSPA	**South Pole Qui**	**85.15**	**180**	P	**P**	**11 59 20.9**	**-0.2**
AAK	**Ala-Archa**	**85.47**	**313**	P	**P**	**11 59 22.5**	**-0.8**
MAW	**Mawson**	**85.97**	**203**	P	**P**	**11 59 24.3**	**-0.7**
YKA	**Yellowknife Ar**	**94.93**	**28**	P	**P**	**12 00 08.1**	**+

FSK				S	Sg	12 15 07.5	-0.1		
	8μm,0.3s								
FSK	**Fiskardo**	**0.07**	**58**	P	Pg	12 15 05.8	0.0		
FSK				S	Sg	12 15 07.4	-0.1		
FSK				AML	AML	12 15 07.8			
	comp=N,7219μm,0.2s								
FSK				AML	AML	12 15 07.9			
	comp=E,22560μm,0.1s								
KEF1	**Kardakata, Kep**	**0.14**	**185**	P	Pg	12 15 06.6	-0.2		
KEF1				S	Sg	12 15 09.2	+0.1		
KEF4	**Livadi, Kephal**	**0.17**	**196**	P	Pg	12 15 07.2	+0.1		
KEF4				S	Sg	12 15 10.5	+0.7		
EVGI	**Lefkada island**	**0.24**	**34**	P	Pg	12 15 08.8	+0.4		
EVGI	**Lefkada island**	**0.24**	**34**	P	Pg	12 15 08.8	+0.4		
EVGI				S	Sg	12 15 12.7	+0.9		
ARG2	**Argostoli**	**0.24**	**180**	P	Pg	12 15 08.6	+0.2		
ARG2				S	Sg	12 15 12.7	+0.9		
KEF3	**Kipouria, Keph**	**0.24**	**206**	P	Pg	12 15 08.5	0.0		
KEF3				S	Sg	12 15 12.8	+0.9		
KEF2	**Argostoli. Kep**	**0.26**	**180**	P	Pg	12 15 08.6	-0.1		
KEF2				S	Sg	12 15 12.9	+0.7		
VLS	**Valsamata**	**0.26**	**162**	P	Pg	12 15 08.8	+0.1		
VLS				S	Sg	12 15 13.3	+1.0		
	comp=E,1μm,0.1s								
VLS	**Valsamata**	**0.26**	**162**	P	Pg	12 15 08.5	-0.2		
VLS				S	Sg	12 15 12.9	+0.6		
VLS				AML	AML	12 15 14.5			
	comp=N,2008μm,0.1s								
VLS				AML	AML	12 15 14.9			
	comp=E,2673μm,0.1s								
MGNA	**Meganis**	**0.33**	**46**	P	Pg	12 15 10.1	0.0		
MGNA				AML	AML	12 15 16.5			
	comp=E,1229μm,0.2s								
MGNA				AML	AML	12 15 17.3			
	comp=N,1618μm,0.1s								
LKD2	**Lefkada island**	**0.39**	**20**	P	Pg	12 15 11.3	+0.1		
LKD2				S	Sb	12 15 17.6	-0.7		
	comp=N,318nm,0.4s								
LKD2	**Lefkada island**	**0.39**	**20**	P	Pg	12 15 11.1	0.0		
LKD2				S	Sg	12 15 17.3	+0.9		
KFL	**Anninata**	**0.39**	**143**	P	Pg	12 15 11.4	+0.2		
KFL				S	Sb	12 15 18.1	-0.2		
	comp=N,2μm,0.2s								
KFL	**Anninata**	**0.39**	**143**	P	Pg	12 15 11.4	+0.2		
KFL				S	Sg	12 15 17.4	+1.0		
KFL				AML	AML	12 15 18.9			
	comp=E,3815μm,0.3s								
KFL				AML	AML	12 15 19.3			
	comp=N,2390μm,0.2s								
AST1	**Astakos**	**0.49**	**76**	P	Pb	12 15 13.5	-0.5		
VLMS	**Volimes, Zakyn**	**0.56**	**166**	P	Pg	12 15 14.2	-0.2		
VLMS				S	Sb	12 15 22.9	-0.3		
PDO	**Prodromos**	**0.57**	**72**	P	Pg	12 15 14.9	+0.3		
PDO				AML	AML	12 15 27.1			
	comp=N,616μm,0.3s								
PDO				AML	AML	12 15 32.9			
	comp=E,763μm,0.6s								
KRI1	**kERI**	**0.80**	**161**	P	Pg	12 15 18.7	-0.2		
PVO	**Paravola**	**0.84**	**76**	P	Pb	12 15 20.0	+0.1		
PVO	**Paravola**	**0.84**	**76**	P	Pb	12 15 20.0	+0.1		
PVO				AML	AML	12 15 39.7			
	comp=E,402μm,0.3s								
PVO				AML	AML	12 15 40.0			
	comp=N,370μm,0.3s								
RLS	**Riolos of Patr**	**0.85**	**115**	P	Pg	12 15 20.0	+0.1		
RLS	**Riolos of Patr**	**0.85**	**115**	P	Pg	12 15 19.8	0.0		
EFP	**Efpalio**	**1.11**	**89**	P	Pb	12 15 24.3	-0.4		
EFP				AML	AML	12 15 47.5			
	comp=N,406μm,0.6s								
EFP				AML	AML	12 15 47.8			
	comp=E,451μm,0.7s								
ANX	**Ano Chora**	**1.14**	**81**	P	Pb	12 15 24.8	-0.4		
ANX				AML	AML	12 15 49.2			
	comp=N,288μm,0.5s								
ANX				AML	AML	12 15 52.8			
	comp=E,268μm,0.5s								
EVR	**Evrytania**	**1.15**	**64**	P	Pb	12 15 24.6	-0.7		
LAKA	**Lakka**	**1.19**	**98**	P	Pb	12 15 25.5	-0.4		
SERG	**Sergoula**	**1.23**	**90**	P	Pn	12 15 26.3	-0.2		
SERG				AML	AML	12 15 50.0			
	comp=E,279μm,0.5s								
SERG				AML	AML	12 15 50.4			
	comp=N,355μm,0.5s								
TRIZ	**Trizonia**	**1.25**	**92**	P	Pn	12 15 26.4	-0.3		
KALE	**Kalithea**	**1.30**	**91**	P	Pn	12 15 27.3	-0.2		
KLV	**Kalavryta, Ach**	**1.36**	**106**	P	Pn	12 15 28.6	+0.2		
KLV	**Kalavryta, Ach**	**1.36**	**106**	P	Pn	12 15 28.3	-0.1		
MAKR	**Makrakomi, Fth**	**1.42**	**65**	P	Pb	12 15 29.9	+0.1		
AGG	**Agios Georgios**	**1.56**	**67**	P	Pb	12 15 32.3	0.0		

*KOLA **31** 12:17:57.8, 67.63N×34.02E, h0km*
*HEL **31** 12:17:59.5±0.4, 67.67N×33.74E, h0km, ML2.4, Explosion*
*IDC **31** 12:18:00.3±2.8, 67.72N×33.75E, h0km, mb1 3.4/3, mb1mx3.1/37, mbtmp3.3/3, ML2.7/3, Error ellipse: s-maj=31.2km s-min=10.2km az=73.0*
ISC 31 12:17:55.6±1.8,**67.68N**±0.04×**34.15E**±0.09,**h0**km,**n35, σ1§38/63,Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.30**	**248**	P	Pg	12 18 02.1	+0.7
APA				S	Sg	12 18 05.3	-0.1
APZ9	**Apatity**	**0.30**	**248**	Pg	Pg	12 18 02.0	+0.6
APZ9				Lg	Lg	12 18 05.3	
APZ9	**Apatity**	**0.30**	**248**	Pg	Pg	12 18 02.0	+0.6
APZ9				Sg	Sg	12 18 05.3	-0.1
APA0	**Apatity Array**	**0.45**	**261**	Pg	Pg	12 18 04.7	+0.5
	baz=90,slow=16						
APA0				Lg	Lg	12 18 10.2	
	baz=84,slow=37						
APA0				Rg	Rg	12 18 13.2	
APA0	**Apatity Array**	**0.45**	**261**	P	Pg	12 18 04.8	+0.7
APA0				S	Sg	12 18 09.9	0.0
APA0	**Apatity Array**	**0.45**	**261**	Pg	Pg	12 18 04.7	+0.5
	baz=90,slow=16						
APA0				Sg	Sg	12 18 10.2	+0.3
	baz=84,slow=37						
APA0				Rg	Rg	12 18 13.2	
VRF	**Varrio**	**1.73**	**274**	PG	Pb	12 18 27.8	-0.5
VRF				MSG		12 18 46.7	
	comp=Z,38nm,0.2s						
VRF				SN	Sn	12 18 49.3	-0.4
KU6	**Riekki**	**2.37**	**227**	PB	Pb	12 18 37.7	-1.3
KU6				MSG		12 19 06.1	
	comp=Z,20nm,0.2s						
KU6				SG	Sb	12 19 08.3	-0.4
MSF	**Maaselka**	**2.69**	**231**	PB	Pb	12 18 44.3	-0.3
MSF				SG	Sb	12 19 18.1	0.0
SGF	**Sodankyl**	**2.93**	**269**	PN	Pn	12 18 45.1	+1.7
	baz=80						
SGF				SG	Sb	12 19 24.8	-0.2
KEV	**Kevo**	**3.33**	**312**	Pn	Pn	12 18 51.6	+2.7
KEV				Sn	Sn	12 19 30.3	+1.2
KEV	**Kevo**	**3.33**	**312**	PN	Pn	12 18 51.4	+2.5
	baz=126						
KEV				SN	Sn	12 19 30.6	+1.5
KEV				MSG		12 19 34.3	
	comp=Z,16nm,0.2s						
KEV	**Kevo**	**3.33**	**312**	eP	Pn	12 18 51.4	+2.5
KEV				eS	Sn	12 19 30.4	+1.2
RNF	**Rovaniemi**	**3.35**	**255**	PN	Pn	12 18 50.2	+1.1
RNF				SN	Sn	12 19 31.3	+1.7
ARA0	**ARCESS Array S**	**3.67**	**304**	Pn	Pn	12 18 55.3	+1.8
	baz=122,slow=16						
ARA0				Pg	Pg	12 19 04.4	-1.5
	baz=127,slow=16						
ARA0				Sn	Sn	12 19 37.2	-0.3
	baz=118,slow=28						
ARA0				Lg	Lg	12 19 48.7	
	baz=110,slow=28						
ARA0	**ARCESS Array S**	**3.67**	**304**	Pn	Pn	12 18 55.3	+1.8
	baz=122,slow=16						
ARA0				Pg	Pg	12 19 04.4	-1.5
	baz=127,slow=16						
ARA0				Sn	Sn	12 19 37.2	-0.3
	baz=118,slow=28						
ARCES	**ARCESS Array B**	**3.67**	**304**	Pn	Pn	12 18 55.2	+1.7
	comp=Z,5.0nm,0.3s,baz=120,slow=16,SNR=298						
ARCES				Pg	Pg	12 19 04.1	-1.8
	comp=Z,2.6nm,0.3s,baz=120,slow=15,SNR=14						
ARCES				Sn	Sn	12 19 38.0	+0.5
	comp=Z,3.2nm,0.3s,baz=118,slow=26,SNR=19						
ARCES				Lg	Lg	12 19 49.2	
	comp=Z,10.0nm,0.3s,baz=108,slow=27,SNR=15						
ARE0	**ARCESS Array S**	**3.67**	**304**	PN	Pn	12 18 55.1	+1.5
	baz=114						
ARE0				SN	Sn	12 19 38.0	+0.5
ARE0	**ARCESS Array S**	**3.67**	**304**	eP	Pn	12 18 55.6	+2.1
ARE0				eS	Sn	12 19 36.9	-0.6
HEF	**Hetta**	**4.00**	**285**	Pn	Pn	12 19 00.1	+2.0
HEF				Pg	Pg	12 19 10.5	-1.8
HEF				Sn	Sn	12 19 46.9	+1.2
HEF				Lg	Lg	12 19 58.4	
HEF	**Hetta**	**4.00**	**285**	PN	Pn	12 18 60.0	+1.8
	baz=101						
HEF				SN	Sn	12 19 46.6	+0.9
HEF	**Hetta**	**4.00**	**285**	eP	Pn	12 19 00.1	+2.0
HEF				eS	Sn	12 19 45.3	-0.4
TOF	**Tornio**	**4.19**	**252**	PN	Pn	12 19 02.1	+1.4
OUL	**Oulu**	**4.22**	**236**	PN	Pn	12 19 03.6	+2.6
KTK1	**Kautokeino**	**4.26**	**293**	eP	Pn	12 19 04.1	+2.5
KTK1				eS	Sn	12 19 50.9	-1.0
KTK1				IAML		12 20 19.7	
	comp=Z,9.2nm,0.4s						
LANU	**Lannavaara**	**4.61**	**280**	PN	Pn	12 19 07.5	+0.9
KALU	**Kalix**	**4.65**	**252**	PB	Pb	12 19 16.6	-1.2
KALU				SN	Sn	12 20 01.6	+0.2
KIF	**Kilpisjarvi**	**5.12**	**291**	eP	Pn	12 19 14.3	+0.9
KIF				eS	Sn	12 20 11.4	-1.6
FIA0	**FINESS Array S**	**7.16**	**213**	Pn	Pn	12 19 42.6	+1.3
	baz=24,slow=16						
FIA0				Sn	Sn	12 21 00.5	-2.8
	baz=36,slow=22						
FIA0				Lg	Lg	12 21 34.5	
	baz=27,slow=22						
FIA0	**FINESS Array S**	**7.16**	**213**	Pn	Pn	12 19 42.6	+1.3
	baz=24,slow=16						
FIA0				Sg	Sb	12 21 34.5	+8.2
	baz=27,slow=22						
FINES	**FINESS Array B**	**7.16**	**213**	Pn	Pn	12 19 42.5	+1.2
	comp=Z,0.1nm,0.3s,baz=22,slow=15,SNR=4.9						
FINES				Sn	Sn	12 21 02.9	-0.3
	comp=Z,0.4nm,0.3s,baz=25,slow=20,SNR=5.5						
FINES				Lg	Lg	12 21 33.3	
	comp=Z,0.7nm,0.3s,baz=12,slow=24,SNR=3.4						
I43RU	**DUBNA INFRASON**	**1.09**	**171**	*i*		13 31 00.0	
	baz=0.4,slow=312,SNR=1.7						
NOA	**NORSAR Array B**	**11.89**	**247**	Pn	Pn	12 20 45.1	-1.1
	comp=Z,0.0nm,0.3s,baz=40,slow=10,SNR=3.5						
NRA0	**NORESS Array S**	**11.99**	**245**	Pn	Pn	12 20 46.6	-0.9
	baz=49,slow=10						
NRA0	**NORESS Array S**	**11.99**	**245**	Pn	Pn	12 20 46.6	-0.9
	baz=49,slow=10						

*NIED **31** 12:31:00,29.20N×130.40E, h20km, Mw4.3 Best double couple: M03.72000×10^15 NP1:φs32.00000°, δ78.00000°, λ84.00000°. NP2:φs238.00000°, δ14.00000°, λ115.00000°.*
*JMA **31** 12:31:27.5,29.23N×130.42E, h58km±2km, M3.9*
*IDC **31** 12:31:29.1±1.5,29.30N×130.24E, h42km±13km, mb3.6/12, mb1 3.8/15, mb1mx3.6/50, mbtmp3.8/15, ML2.8/4, MS3.2/10, Ms1 3.3/10, ms1mx3.0/48, Error ellipse: s-maj=21.5km s-min=8.7km az=108.0*
*NEIC **31** 12:31:29.8±0.7, 29.36N±0.05×130.30E±0.09, h45km±7km, mb4.4/33, Error ellipse: s-maj=12.3km s-min=7.2km az=107.0*
ISC 31 12:31:29.0±1.0,**29.26N**±0.04×**130.38E**±0.07,**h44**km,9km, **n91,σ0§92/94,mb4.3/27,MS3.2/6,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.73**	**323**	P	Pn	12 31 42.7	-0.3
JNN				eS	Sn	12 31 54.3	+1.3
JYAK	**Yakushimahirau**	**0.98**	**6**	P	Pn	12 31 45.9	-0.5
JYAK				eS	Sn	12 31 59.0	-0.1
JZK	**Kikaishima**	**1.01**	**201**	P	Pn	12 31 45.8	-0.9
JTAJ	**Takarajima**	**1.04**	**264**	P	Pn	12 31 46.9	-0.2
JAM	**Amami Oshima**	**1.09**	**219**	P	Pn	12 31 46.6	-1.1
JAM				eS	Sn	12 32 00.5	-1.1
JKC	**Kuchinoerabu**	**1.21**	**352**	P	Pn	12 31 49.4	-0.1
JKC				eS	Sn	12 32 05.8	+1.1
JMTN	**Minamitane**	**1.22**	**21**	P	Pn	12 31 48.7	-0.9
JMTN				eS	Sn	12 32 04.8	-0.2
JAMN	**Amaminishikomi**	**1.47**	**227**	P	Pn	12 31 52.1	-0.8
JTN	**Tanegashima 3**	**1.48**	**20**	P	Pn	12 31 52.4	-0.8
JTN				eS	Sn	12 32 11.7	+0.3
JTK	**Tokunoshima**	**1.94**	**221**	P	Pn	12 31 58.5	-0.9
JTSR	**Tashiro 2**	**1.96**	**14**	P	Pn	12 31 59.6	-0.2
JSU	**Suzuyama**	**2.24**	**2**	P	Pn	12 32 03.2	-0.4
JNAR	**Kushima--Naru**	**2.39**	**19**	P	Pn	12 32 05.8	+0.2
JOKE	**Okinoerabujima**	**2.48**	**221**	P	Pn	12 32 05.8	-1.0
JOW	**Kunigami**	**3.05**	**218**	P	Pn	12 32 13.5	-1.2
	0.3nm,0.3s,baz=99,slow=18,SNR=21						
JOW				S	Sn	12 32 49.1	-0.9
	1.7nm,0.3s,baz=62,slow=29,SNR=3.6						
JOW	**Kunigami**	**3.05**	**218**		Pn	12 32 14.8	+0.1
JOW				Sn	Sn	12 32 51.1	+1.0
JNU	**Nakatsue**	**3.88**	**6**	P	Pn	12 32 26.6	+0.5
	3.8nm,0.3s,baz=194,slow=7.4,SNR=157						
JNU				S	Sn	12 33 11.3	+0.9
	3.2nm,0.3s,baz=68,slow=21,SNR=9.2						
JNU	**Nakatsue**	**3.88**	**6**		Pn	12 32 26.6	+0.5
JNU				Sn	Sn	12 33 08.8	-1.5
INU	**Inuyama**	**8.27**	**41**	Pn	Pn	12 33 27.1	+0.8
KSAR	**Wonju Array Be**	**8.43**	**346**	Pn	Pn	12 33 27.9	-0.5
KSRS	**Korea Array**	**8.43**	**347**	P	Pn	12 33 31.9	+3.5
	0.1nm,0.3s,baz=156,slow=14,SNR=7.2						
KSRS				LR	LR	12 37 01.8	
	comp=Z,198nm,19.9s,baz=162,slow=40						
JHJ2	**Mitsune**	**8.95**	**62**	Pn	Pn	12 33 35.8	+0.2
YHNB	**Yeheng**	**9.24**	**242**	Pn	Pn	12 33 41.3	+1.5
MAJO	**Matsushiro**	**9.79**	**40**	Pn	Pn	12 33 46.9	-0.3
MJAR	**Matsushiro Arr**	**9.79**	**40**	P	Pn	12 33 47.0	-0.2
	0.1nm,0.3s,baz=278,slow=11,SNR=4.1						
MJAR	**Matsushiro Arr**	**9.79**	**40**		Pn	12 33 48.0	+0.7
YULB	**Yu-li**	**10.03**	**236**	Pn	Pn	12 33 51.3	+0.8
TWG	**Pinlang**	**10.54**	**235**	Pn	Pn	12 33 58.6	+1.1
JCJ	**Chichijima**	**10.63**	**99**	LR	LR	12 37 27.1	
	comp=Z,90nm,20.7s,baz=91,slow=33						
USRK	**Ussuriysk Ar.**	**14.97**	**4**	Pn	Pn	12 34 56.9	-0.6
BJT	**Baijiatuau**	**15.86**	**316**	Pn	Pn	12 35 08.2	-0.9
ASAJ	**Asahikawa**	**17.74**	**30**	LR	LR	12 42 44.5	
	comp=Z,76nm,20.2s,baz=356,slow=38						
ENH	**Enshi**	**18.17**	**278**	P	P	12 35 37.7	-0.3
XAN	**Xi'an**	**18.88**	**290**	P	P	12 35 45.0	-0.7
KLR	**Kul'dur**	**19.97**	**3**	P	P	12 35 55.4	-2.0
	0.1nm,0.3s,baz=182,slow=5.7,SNR=9.2						
KLR				LR	LR	12 44 11.1	
	comp=Z,64nm,18.0s,baz=184,slow=38						
GUMO	**Guam**	**20.58**	**136**	LR	LR	12 42 51.0	
	comp=Z,37nm,19.0s,baz=191,slow=33						
KMI	**Kunming**	**24.91**	**267**	P	P	12 36 48.4	+0.2
KMI				IAmb	IAmb	12 36 49.7	
	comp=Z,9.0nm,0.7s						
ULN	**Ulaanbaatar**	**25.87**	**322**	P	P	12 36 56.3	-0.4
SONM	**Songino Array**	**26.21**	**322**	P	P	12 36 58.2	-1.4
	comp=Z,0.9nm,1.0s,baz=101,slow=4.6,SNR=4.2						
SONM				LR	LR	12 48 25.7	
	comp=Z,116nm,20.4s,baz=44,slow=39						
SONM	**Songino Array**	**26.21**	**322**	P	P	12 36 58.5	-1.1
CMAR	**Chiang Mai Arr**	**30.61**	**257**	LR	LR	12 50 55.0	
	comp=Z,53nm,20.2s,baz=80,slow=38						
MA2	**Magadan**	**33.34**	**19**	LR	LR	12 52 06.6	
	comp=Z,29nm,18.1s,baz=256,slow=37						
LSA	**Lhasa**	**34.05**	**281**	P	P	12 38 09.6	0.0
LSA				IAmb	IAmb	12 38 23.0	
	comp=Z,2.8nm,0.5s						
SHL	**Shillong**	**34.27**	**273**	P	P	12 38 10.2	-1.0
MK31	**Makanchi Array**	**41.03**	**309**	P	P	12 39 07.6	-0.4
MKAR	**Makanchi Array**	**41.03**	**309**	P	P	12 39 08.1	+0.1
	comp=Z,1.2nm,0.7s,baz=96,slow=9.8,SNR=15						
MKAR	**Makanchi Array**	**41.03**	**309**	P	P	12 39 07.5	-0.5
ZAA0	**Zalesovo Array**	**41.08**	**320**	P	P	12 39 07.3	-0.8
ZALV	**Zalesovo Beam**	**41.08**	**320**	P	P	12 39 07.5	-0.7
	comp=Z,0.6nm,0.3s,baz=117,slow=6.3,SNR=4.6						
PMG	**Port Moresby**	**41.70**	**155**	LR	LR	12 57 51.7	
	comp=Z,38nm,18.6s,baz=306,slow=38						
TIXI	**Tiksi**	**42.45**	**359**	LR	LR	12 59 23.3	
	comp=Z,47nm,18.4s,baz=166,slow=40						
KURK	**Kurchatov**	**44.02**	**314**	P	P	12 39 32.0	0.0
KURK				IAmb	IAmb	12 39 33.0	
	comp=Z,7.5nm,0.7s						
NIL	**Nilore**	**48.41**	**290**	P	P	12 40 06.5	-0.5
WB0	**Warramunga Arr**	**48.89**	**175**	P	P	12 40 12.6	+2.0
WRAB	**Tennant Creek**	**49.05**	**175**	P	P	12 40 13.5	+1.7
WRAB				IAmb	IAmb	12 40 25.8	
	comp=Z,6.6nm,1.0s						
WRA	**Warramunga Arr**	**49.06**	**175**	P	P	12 40 13.4	+1.5
	comp=Z,0.9nm,0.9s,baz=359,slow=8.4,SNR=3.4						
WRA	**Warramunga Arr**	**49.06**	**175**	P	P	12 40 13.3	+1.5
WB2	**Warramunga Arr**	**49.06**	**175**	P	P	12 40 13.6	+1.7
KK31	**Karatay Array**	**49.28**	**303**	P	P	12 40 13.3	-0.1
KK31				IAmb	IAmb	12 40 15.0	
	comp=Z,2.7nm,0.9s						
KKAR	**Karatay Array**	**49.28**	**303**	P	P	12 40 13.3	-0.2
KKAR				IAmb	IAmb	12 40 15.1	
	comp=Z,2.7nm,0.9s						
KKAR	**Karatay Array**	**49.28**	**303**	P	P	12 40 13.2	-0.2
BRVK	**Borovoye**	**49.41**	**316**	P	P	12 40 14.0	-0.3
KBL	**Kabul**	**51.66**	**293**	P	P	12 40 32.1	+0.4
KBL				IAmb	IAmb	12 40 42.8	
	comp=Z,2.8nm,0.7s						
AS31	**Alice Springs**	**52.73**	**176**	P	P	12 40 41.2	+1.8
ASAR	**Alice Springs**	**52.73**	**176**	P	P	12 40 40.6	+1.2
	comp=Z,0.3nm,0.6s,baz=8.2,slow=13,SNR=6.4						
ASAR	**Alice Springs**	**52.73**	**176**	P	P	12 40 41.0	+1.6
ABKAR	**Akbulak array**	**56.01**	**312**	P	P	12 41 03.1	0.0
ABKAR	**Akbulak array**	**56.01**	**312**	P	P	12 41 02.9	-0.2
ARU	**Arti**	**56.24**	**321**	P	P	12 41 04.3	-0.3
ARU				IAmb	IAmb	12 41 04.8	
	comp=Z,5.9nm,1.0s						
HRA	**Herat**	**57.15**	**294**	P	P	12 41 11.7	0.0
HRA				IAmb	IAmb	12 41 13.3	
	comp=Z,2.9nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**59.46**	**299**	P	P	12 41 27.9	+0.4
GYA0B				IAmb	IAmb	12 41 29.0	
	comp=Z,4.3nm,0.9s						
SUA	**Susitna One**	**59.50**	**33**	P	P	12 41 28.6	+1.1
BCAR	**Beaver Creek A**	**63.39**	**31**	P	P	12 41 54.1	+0.4
EPYK	**Eagle Plains**	**64.71**	**26**	P	P	12 42 02.7	+0.4
EPYK				IAmb	IAmb	12 42 18.9	
	comp=Z,3.8nm,1.1s						
INK	**Inuvik**	**65.36**	**24**	P	P	12 42 06.2	-0.1
	comp=Z,0.5nm,0.6s,baz=302,slow=7.0,SNR=6.2						
INK	**Inuvik**	**65.36**	**24**	P	P	12 42 06.3	0.0
INK				IAmb	IAmb	12 42 09.2	
	comp=Z,4.3nm,1.5s						
C36M	**Paulatuk**	**68.19**	**22**	P	P	12 42 24.6	+0.3
C36M				IAmb	IAmb	12 42 35.5	
	comp=Z,4.4nm,1.2s						
KBZ	**Khabaz**	**68.73**	**309**	P	P	12 42 28.3	+0.1
	comp=Z,3.5nm,1.1s,baz=132,slow=5.1,SNR=5.6						
FINES	**FINESS Array B**	**71.17**	**331**	P	P	12 42 42.9	0.0
	comp=Z,1.5nm,0.7s,baz=90,slow=6.9,SNR=3.0						
FINES	**FINESS Array B**	**71.17**	**331**	P	P	12 42 43.2	+0.3
RES	**Resolute Bay**	**72.22**	**11**	P	P	12 42 49.4	+0.5
RES				IAmb	IAmb	12 42 50.3	
	comp=Z,3.4nm,0.8s						
AKASG	**Malin Array Be**	**74.47**	**320**	P	P	12 43 00.9	-1.7
	comp=Z,1.4nm,0.5s,baz=58,slow=6.5,SNR=7.1						
AKBB	**Malin Array Si**	**74.47**	**320**	P	P	12 43 02.5	-0.1
AKBB				IAmb	IAmb	12 43 02.8	
	comp=Z,3.0nm,0.8s						
YKA	**Yellowknife Ar**	**74.98**	**26**	P	P	12 43 05.3	-0.1
	comp=Z,0.6nm,0.8s,baz=301,slow=6.0,SNR=8.9						
BR131	**Keskin Array S**	**76.68**	**308**	P	P	12 43 16.1	+0.4
BR131				IAmb	IAmb	12 43 28.9	
	comp=Z,8.0nm,1.4s						
BRTR	**Keskin Array B**	**76.68**	**308**	P	P	12 43 15.7	0.0
	comp=Z,2.1nm,0.7s,baz=98,slow=5.1,SNR=9.9						
BRTR	**Keskin Array B**	**76.68**	**308**	P	P	12 43 15.5	-0.2
BURAR	**Bucovina Array**	**78.27**	**318**	P	P	12 43 24.3	0.0
GERES	**GERESS Array B**	**83.92**	**324**	P	P	12 43 54.4	0.0
	comp=Z,0.3nm,0.5s,baz=55,slow=8.5,SNR=2.9						
GERES	**GERESS Array B**	**83.92**	**324**	P	P	12 43 54.1	-0.3
FCC	**Fort Churchill**	**84.83**	**22**	P	P	12 43 59.0	+0.3
FCC				IAmb	IAmb	12 43 59.6	
	comp=Z,3.5nm,0.9s						

*IDC **31** 12:36:41.8±1.5,27.85N×141.79E, h43km±19km, mb3.3/5, mb1 3.5/6, mb1mx3.2/56, mbtmp3.5/6, ML2.7/1, Error ellipse: s-maj=44.2km s-min=16.4km az=74.0*
ISC 31 12:36:41.5±0.8,**27.9N**±0.1×**141.6E**±0.3,**h35**km,**n7, σ1§14/8,mb3.5/5,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**0.91**	**147**	P	Pn	12 36 59.0	+1.3
	82nm,0.3s,baz=6.3,slow=22,SNR=162						
JCJ				S	Sn	12 37 08.7	-1.0
	173nm,0.3s,baz=270,slow=20,SNR=33						
MJAR	**Matsushiro Arr**	**9.12**	**342**	P	Pn	12 38 51.8	+1.1
	0.1nm,0.3s,baz=153,slow=4.8,SNR=4.9						
KLR	**Kul'dur**	**22.65**	**343**	P	P	12 41 39.9	+0.5
	0.4nm,0.3s,baz=189,slow=13,SNR=3.9						
WRA	**Warramunga Arr**	**48.05**	**189**	P	P	12 45 17.8	+0.3
	0.7nm,0.7s,baz=7.2,slow=8.6,SNR=8.7						
KURBB	**Kurchatov Array**	**52.15**	**314**	P	P	12 45 47.2	-1.1
	0

VLS				S	Sg	12 45 50.6	-0.2
	88µm,0.3s						
VLS	Valsamata	0.27	158	P	Pg	12 45 46.1	-0.9
VLS				S	Sg	12 45 50.6	-0.2
VLS	Valsamata	0.27	158	P	Pg	12 45 46.0	-0.9
VLS				S	Sg	12 45 50.4	-0.3
VLS				AML	AML	12 45 54.2	
VLS				AML	AML	12 45 54.7	
VLS	Valsamata	0.27	158		Pg	12 45 46.1	-0.9
VLS					Sg	12 45 50.6	-0.2
MGNA	Meganis	0.34	48	P	Pg	12 45 47.8	-0.6
MGNA				S	Sg	12 45 53.4	+0.4
MGNA				AML	AML	12 45 54.3	
MGNA				AML	AML	12 45 54.4	
	comp=E,91422µm,0.3s						
LKD2	Lefkada island	0.39	23	P	Pg	12 45 48.6	-0.6
LKD2				S	Sg	12 45 54.5	0.0
	comp=E,51µm,1.0s						
LKD2	Lefkada island	0.39	23	P	Pg	12 45 48.7	-0.6
LKD2				S	Sg	12 45 54.3	-0.2
LKD2				AML	AML	12 45 56.3	
	comp=N,92389µm,0.8s						
LKD2				AML	AML	12 45 56.6	
	comp=E,68676µm,0.5s						
LKD2	Lefkada island	0.39	23		Pg	12 45 48.6	-0.6
LKD2					Sg	12 45 54.5	0.0
KFL	Anninata	0.41	141	P	Pg	12 45 48.6	-0.9
KFL				S	Sg	12 45 55.3	+0.3
	comp=E,121µm,0.3s						
KFL	Anninata	0.41	141	P	Pg	12 45 48.6	-0.9
KFL				AML	AML	12 45 56.1	
KFL				AML	AML	12 45 56.7	
KFL	Anninata	0.41	141		Pg	12 45 48.6	-0.9
KFL					Sg	12 45 55.3	+0.3
TSLK	Tsoukalades, L	0.42	21	P	Pg	12 45 49.4	-0.4
TSLK				S	Sb	12 45 56.5	-0.6
	comp=E,83µm,0.9s						
TSLK	Tsoukalades, L	0.42	21	P	Pg	12 45 49.4	-0.4
TSLK				S	Sg	12 45 55.3	-0.2
TSLK	Tsoukalades, L	0.42	21		Pg	12 45 49.4	-0.4
TSLK					Sb	12 45 56.5	-0.6
AST1	Astakos	0.51	77	P	Pg	12 45 50.9	-0.4
AST1				S	Sb	12 45 59.1	-0.3
AST1	Astakos	0.51	77		Pg	12 45 50.9	-0.4
AST1					Sb	12 45 59.1	-0.3
VLMS	Volimes, Zakyn	0.57	164	P	Pg	12 45 51.5	-1.1
VLMS				S	Sg	12 46 00.3	+0.1
VLMS				AML	AML	12 46 03.6	
VLMS				AML	AML	12 46 06.0	
PDO	Prodromos	0.59	73	P	Pg	12 45 52.1	-0.8
PDO				S	Sb	12 46 01.7	-0.2
PDO	Prodromos	0.59	73	P	Pg	12 45 52.2	-0.7
PDO				AML	AML	12 46 07.3	
	comp=E,83746µm,0.6s						
PDO				AML	AML	12 46 07.4	
	comp=N,82543µm,0.4s						
PDO	Prodromos	0.59	73		Pg	12 45 52.1	-0.8
PDO					Sb	12 46 01.7	-0.2
ZAK2	Zakynthos	0.73	151	P	Pg	12 45 54.7	-0.7
ZAK2				S	Sb	12 46 06.2	+0.5
ZAK2	Zakynthos	0.73	151		Pg	12 45 54.7	-0.7
ZAK2					Sb	12 46 06.2	+0.5
KRI1	kERI	0.81	160	P	Pg	12 45 55.6	-1.5
KRI1				S	Sb	12 46 08.7	+0.4
KRI1	kERI	0.81	160		Pg	12 45 55.6	-1.5
KRI1					Sb	12 46 08.7	+0.4
PVO	Paravola	0.86	77	P	Pg	12 45 57.4	-0.5
PVO				S	Sn	12 46 10.7	-0.9
	comp=N,23µm,0.6s						
PVO	Paravola	0.86	77	P	Pg	12 45 57.5	-0.5
PVO				AML	AML	12 46 17.0	
	comp=E,55660µm,0.5s						
PVO				AML	AML	12 46 19.3	
	comp=N,41143µm,0.5s						
PVO	Paravola	0.86	77		Pg	12 45 57.4	-0.5
PVO					Sn	12 46 10.7	-0.9
RLS	Riolos of Patr	0.87	115	P	Pg	12 45 57.1	-1.1
RLS				S	Sn	12 46 11.3	-0.7
	comp=N,10µm,0.5s						
RLS	Riolos of Patr	0.87	115	P	Pg	12 45 57.2	-1.1
RLS				AML	AML	12 46 16.9	
	comp=N,17808µm,0.5s						
RLS				AML	AML	12 46 21.2	
	comp=E,20932µm,0.5s						
RLS	Riolos of Patr	0.87	115		Pg	12 45 57.1	-1.1
RLS					Sn	12 46 11.3	-0.7
UPR	University Cam	1.05	97	P	Pb	12 46 00.2	-1.2
DRO	Drossia	1.09	115	P	Pb	12 46 00.9	-1.3
DRO				S	Sn	12 46 17.3	-0.1
	comp=E,22µm,0.5s						
DRO	Drossia	1.09	115	P	Pb	12 46 00.9	-1.3
DRO				AML	AML	12 46 30.2	
	comp=E,34875µm,0.4s						
DRO				AML	AML	12 46 30.7	
	comp=N,50285µm,0.6s						
DRO	Drossia	1.09	115		Pb	12 46 00.9	-1.3
DRO					Sn	12 46 17.3	-0.1
EFP	Efpalio	1.14	90	P	Pb	12 46 01.4	-1.5
EFP	Efpalio	1.14	90	P	Pb	12 46 01.1	-1.8
EFP				AML	AML	12 46 25.2	
	comp=N,41055µm,0.8s						
EFP				AML	AML	12 46 25.7	
	comp=E,85772µm,0.6s						
EFP	Efpalio	1.14	90		Pb	12 46 01.4	-1.5
ANX	Ano Chora	1.16	81	P	Pb	12 46 02.1	-1.2
ANX				S	Sn	12 46 20.6	+1.4
	comp=E,16µm,0.5s						
ANX	Ano Chora	1.16	81	P	Pb	12 46 02.0	-1.4
ANX				AML	AML	12 46 27.1	
	comp=N,34552µm,0.5s						
ANX				AML	AML	12 46 30.1	
	comp=E,28993µm,0.6s						
ANX	Ano Chora	1.16	81		Pb	12 46 02.1	-1.2
ANX					Sn	12 46 20.6	+1.4
EVR	Evrytania	1.16	65	P	Pb	12 46 02.2	-1.2
EVR	Evrytania	1.16	65	P	Pb	12 46 02.5	-0.9
EVR				AML	AML	12 46 26.3	
	comp=E,26550µm,0.8s						
EVR				AML	AML	12 46 30.0	
	comp=N,26809µm,0.8s						
EVR	Evrytania	1.16	65		Pb	12 46 02.2	-1.2
LAKA	Lakka	1.21	98	P	Pn	12 46 02.8	-1.2
LAKA	Lakka	1.21	98	P	Pn	12 46 03.1	-0.9
LAKA				AML	AML	12 46 29.6	
	comp=E,14153µm,0.6s						
LAKA				AML	AML	12 46 32.0	
	comp=N,11091µm,0.6s						
LAKA	Lakka	1.21	98		Pn	12 46 02.8	-1.2
SERG	Sergoula	1.25	90	P	Pn	12 46 03.5	-1.2
SERG				AML	AML	12 46 28.0	
	comp=E,35089µm,1.1s						
SERG				AML	AML	12 46 28.3	
	comp=N,38013µm,0.4s						
JAN	Janina	1.27	14	P	Pg	12 46 05.4	-0.3
JAN	Janina	1.27	14	P	Pg	12 46 05.4	-0.3
JAN	Janina	1.27	14		Pg	12 46 05.4	-0.3
TRIZ	Trizonia	1.27	92	P	Pn	12 46 03.8	-1.0
KALE	Kalithea	1.32	91	P	Pn	12 46 04.6	-1.0
KALE				S	Sg	12 46 23.9	0.0
	comp=N,10µm,0.7s						
KALE	Kalithea	1.32	91	P	Pn	12 46 04.6	-1.0
KALE				AML	AML	12 46 31.2	
	comp=N,21702µm,0.7s						
KALE				AML	AML	12 46 32.9	
	comp=E,17948µm,0.8s						
KALE	Kalithea	1.32	91		Pn	12 46 04.6	-1.0
KALE					Sg	12 46 23.9	0.0
AMT	Artemida-Makis	1.33	132	P	Pn	12 46 05.1	-0.6
AMT	Artemida-Makis	1.33	132	P	Pn	12 46 05.5	-0.2
AMT				AML	AML	12 46 34.3	
	comp=E,27333µm,0.6s						
AMT				AML	AML	12 46 43.5	
	comp=N,18724µm,0.8s						
AMT	Artemida-Makis	1.33	132		Pn	12 46 05.1	-0.6
KLV	Kalavryta, Ach	1.38	106	P	Pn	12 46 05.8	-0.7
KLV	Kalavryta, Ach	1.38	106	P	Pn	12 46 05.6	-0.9
KLV				AML	AML	12 46 28.9	
	comp=N,8355µm,0.5s						
KLV				AML	AML	12 46 36.8	
	comp=E,5941µm,0.8s						
KLV	Kalavryta, Ach	1.38	106		Pn	12 46 05.8	-0.7
AGG	Agios Georgios	1.58	67	P	Pb	12 46 09.8	-0.6
AGG	Agios Georgios	1.58	67	P	Pb	12 46 09.9	-0.6

AGG	Agios Georgios	1.58	67		Pb	12 46 09.9	-0.6
ITM	Ithomi	1.70	137		Pb	12 46 12.0	-0.5
ITM				Sn	Sn	12 46 32.8	+0.3
KZN	Kozani	2.13	28	P	Pb	12 46 19.6	-0.4
SCTE	Santa Cesarea	2.26	317		Pn	12 46 18.6	+0.2
LIT	Litokhoron	2.30	43	P	Pb	12 46 21.0	-1.7
LIT	Litokhoron	2.30	43		Pb	12 46 21.0	-1.7
FNA	Florina	2.46	16	P	Pn	12 46 22.6	+1.3
FNA	Florina	2.46	16		Pn	12 46 22.6	+1.3
OHR	Ohrid	2.69	5	*e*Pn	Pn	12 46 26.7	+2.2
TIR	Tirane	2.95	351	P	Pn	12 46 28.4	+0.4
TIR				S	Sn	12 47 05.2	+1.9
TIP	Timpagrande	2.99	286		Pn	12 46 28.9	+0.3
TAR1	Taranto	3.23	311	*e*Pn	Pn	12 46 33.1	+1.3
VAY	Valandovo	3.31	29	*e*Pn	Pn	12 46 35.0	+2.1
MASS	Massafra	3.38	312	*e*Pn	Pn	12 46 34.1	+0.2
MASS				Sn	Sg	12 47 34.4	+4.5
STIP	Stip	3.52	22	*e*Pn	Pn	12 46 38.7	+2.9
CEL	Celeste	3.59	269		Pn	12 46 37.4	+0.6
SKO	Skopje	3.62	12	*e*Pn	Pn	12 46 38.5	+1.3
ULC	Ulcinj	3.65	346	*e*Pn	Pn	12 46 36.7	-1.0
ULC				*e*Sn	Sn	12 47 19.8	-0.8
MATE	Matera	3.66	309	⇓P	Sg	12 47 37.2	-1.5
SG1	Sgolgore (BA)	3.79	311	⇓*i*Pn	Pn	12 46 39.8	+0.3
BAI	Bari	3.84	315	*i* Pn	Pn	12 46 41.1	+0.9
DRME	Dracevica, Mon	3.88	346	*e*Pn	Pn	12 46 40.7	0.0
DRME	Dracevica, Mon	3.88	346	*e*Pn	Pn	12 46 40.2	-0.5
DRME				*e*Sn	Sn	12 47 25.9	-0.3
KKB	Krupnik	3.98	29	*e*P	Pn	12 46 45.5	+3.4
MMB	Musomiste	4.03	37	*e*P	Pb	12 46 47.6	-4.7
BUM	Brajici-Budva	4.05	343	*e*Pn	Pn	12 46 41.9	-1.2
BUM				*e*Sn	Sn	12 47 29.8	-0.7
PDG	Podgorica	4.10	347	⇓P	Sn	12 47 31.2	-0.5
PDG	Podgorica	4.10	347	*e*Pn	Pn	12 46 43.4	-0.4
PDG	Podgorica	4.10	347		Pn	12 46 43.9	+0.1
PDG				Sn	Sn	12 47 29.7	-1.9
TTG	Podgorica	4.10	347	*e*Pn	Pn	12 46 43.0	-0.8
TTG				*e*Sn	Sn	12 47 30.8	-0.9
PVY	Plav	4.18	355	*e*Pn	Pn	12 46 44.4	-0.6
PVY				*e*Sn	Sn	12 47 33.1	-0.7
ACER	Acerenza	4.21	305		Pn	12 46 46.0	+0.6
APE	Apeiranthos	4.24	107	*i* P	Pn	12 46 47.8	+2.0
APE	Apeiranthos	4.24	107	⇓P	Pb	12 46 51.4	-4.5
CEME	Cevo	4.28	345	*e*Pn	Pn	12 46 45.2	-1.1
CEME				*e*Sn	Sn	12 47 34.8	-1.3
HCY	Herceg Novi	4.29	340	*e*Pn	Pn	12 46 44.9	-1.4
HCY	Herceg Novi	4.29	340	*e*Pn	Pn	12 46 45.0	-1.3
HCY				*e*Sn	Sn	12 47 35.0	-1.2
IVA	Berane	4.46	355	*e*Pn	Pn	12 46 48.7	-0.1
IVA				*e*Sn	Sn	12 47 39.6	-1.0
KOME	Kolasin	4.48	351	*e*Pn	Pn	12 46 47.8	-1.2
KOME				*e*Sn	Sn	12 47 40.2	-0.8
SANT	Santorini	4.48	116	⇑P	Pb	12 46 58.0	-1.9
SANT	Santorini	4.48	116		Pn	12 46 50.1	+1.1
NKME	Niksic	4.49	346	*e*Pn	Pn	12 46 47.9	-1.2
NKME				*e*Sn	Sn	12 47 40.0	-1.2
NKY	Niksic	4.52	346	*e*Pn	Pn	12 46 48.7	-1.0
NKY				*e*Sn	Sn	12 47 40.7	-1.5
TREB	Trebinje	4.58	340	*e*Pn	Pn	12 46 49.0	-1.3
DBRK	Dubrovnik	4.59	338	*e*Pn	Pn	12 46 49.4	-1.1
DBRK				Sn	Sn	12 47 42.0	-1.7
RZN	Rozhen	4.61	44	*e*P	Pn	12 46 55.8	+4.8
VTS	Vitosha	4.69	26	P	Pn	12 46 53.3	+1.2
VTS	Vitosha	4.69	26	⇑P	Pn	12 46 54.6	+2.6
VTS	Vitosha	4.69	26	*e*P	Pn	12 46 53.2	+1.2
VTS	Vitosha	4.69	26		Pn	12 46 53.2	+1.2
BRY	Bratogost	4.70	343	*e*Pn	Pn	12 46 51.1	-1.1
BRY	Bratogost	4.70	343	*e*Pn	Pn	12 46 50.5	-1.7
BRY				*e*Sn	Sn	12 47 45.3	-1.4
IDI	Anoyia	4.74	130	Pn	Pn	12 46 55.6	+3.0
	comp=E,1.6nm,0.3s,baz=294,slow=16,SNR=9.1						
IDI				Sn	Sn	12 47 46.8	-0.6
	comp=E,7.1nm,0.3s,baz=4.0,slow=17,SNR=4.0						
IDI				LR	LR	12 49 17.5	
	comp=E,1µm,19.1s,baz=318,slow=46						
VAE	Valguarnera	4.87	261	Pn	Pn	12 46 58.8	+4.3
	comp=E,5.5nm,0.3s,baz=196,slow=7.4,SNR=4.4						
VAE				Sn	Sn	12 47 53.1	+2.4
	comp=E,13nm,0.3s,baz=16,slow=21,SNR=6.2						
STON	Ston	4.91	336	*e*Pn	Pn	12 46 53.9	-1.0
STON				Sn	Sn	12 47 49.4	-2.1
STON	Ston	4.91	336	*e*Pn	Pn	12 46 53.9	-1.0
SGRT	San Giovanni R	4.91	314		Pn	12 46 54.9	-0.2
SGRT				Sn	Sn	12 47 50.7	-1.0
UPM	Unac-Piva	4.92	347	*e*Pn	Pn	12 46 55.1	0.0
UPM	Unac-Piva	4.92	347	*e*Pn	Pn	12 46 54.4	-0.7
UPM				*e*Sn	Sn	12 47 50.8	-1.2
ALN	Alexandroupoli	4.96	58	P	Pn	12 46 56.7	+1.1
ALN	Alexandroupoli	4.96	58		Pn	12 46 56.7	+1.1
PLE	Pljevlja	4.96	351	*e*Pn	Pn	12 46 55.1	-0.7
PLE				*i* Sn	Sn	12 47 52.3	-0.8
PAOL	Paolisi	5.24	302		Pn	12 47 00.5	+1.1
RUDO	Rudo	5.25	351	*e*Pn	Pn	12 46 58.5	-1.1
WDD	Wied Dalam	5.40	243		Pn	12 47 01.4	-0.2
WDD					Sn	12 48 01.6	-2.0
BBLS	Lazići	5.49	352	*e*Pn	Pn	12 47 03.0	0.0
MAKA	Makarska	5.51	333	*e*Pn	Pn	12 47 02.3	-0.9
MAKA				Sn	Sn	12 48 03.2	-3.1
DIVS	Divibare	5.68	357	*e*Pn	Pn	12 47 04.8	-0.7
HAPS	Han Pijesak,BI	5.77	349	*e*Pn	Pn	12 47 05.1	-1.7
CLTB	Caltabellotta	5.78	264		Pn	12 47 07.8	+0.7
PLVB	Pleven	5.87	31	⇓P	Pn	12 47 10.0	+1.9
KARP	Karpathos	6.08	116		Pn	12 47 12.1	+1.1
KARP				Sn	Sn	12 48 22.0	+1.4
ELND	Elena	6.09	41	⇑P	Pn	12 47 12.5	+1.3
TEKS	Tekeris	6.16	354	*e*Pn	Pn	12 47 11.0	-1.0
INTR	Introdacqua	6.16	308		Pn	12 47 13.3	+1.1
MANT	Manisa	6.36	87	Pn	Pn	12 47 15.3	+0.3
KIJV	Kijevo	6.36	333	*e*Pn	Pn	12 47 14.3	-0.5
KIJV				Sn	Sn	12 48 24.4	-2.8
ZIRJ	Zirje	6.37	327	*i* Pn	Pn	12 47 13.7	-1.2
ZIRJ				Sn	Sn	12 48 22.0	-5.4
MDVR	Moldovita	6.42	8	⇑P	Pg	12 47 39.5	-4.7
MGRS	Mrkonjic Grad	6.50	338	*e*Pn	Pn	12 47 16.4	-0.4
MORI	Morici	6.51	328	*i* Pn	Pn	12 47 16.6	-0.2
MORI				Sn	Sn	12 48 27.7	-3.3
AQU	L'Aquila	6.66	308	P	Pn	12 47 18.9	-0.1
AQU	L'Aquila	6.66	308	*e*Pn	Pn	12 47 24.1	+5.1
AQU	L'Aquila	6.66	308		Pn	12 47 18.9	-0.1
FRGS	Fruska Gora	6.74	356	*e*Pn	Pn	12 47 17.4	-2.7
BLY	Banja Luka	6.78	340	*e*Pn	Pn	12 47 20.0	-0.5
BLY	Banja Luka	6.78	340		Pn	12 47 20.0	-0.5
BLY				Sn	Sn	12 48 36.1	-1.4
DUGI	Dugi Otok	6.89	325	*i* Pn	Pn	12 47 22.3	+0.2
HUMR	Humele	6.97	28	⇑P	Pn	12 47 26.9	+3.6
NRCA	Norcia	7.11	311		Pn	12 47 25.5	+0.3
NRCA				Sn	Sn	12 48 46.2	+0.3
GZR	Gura Zlata	7.17	13	⇓P	Pn	12 47 27.2	+1.2
GZR	Gura Zlata	7.17	13	⇓P	Pn	12 47 27.2	+1.2
BZS	Buzias	7.24	6	⇓P	Pb	12 47 44.9	-1.9
NVLJ	Novalja	7.43	327	*e*Pn	Pn	12 47 28.8	-0.6
ELL	Elmali	7.69	100	P	Pn	12 47 35.3	+2.1
ELL	Elmali	7.69	100	Pn	Pn	12 47 35.3	+2.1
MURB	Monte Urbino	7.71	311		Pn	12 47 34.3	+0.8
MURB				Sn	Sn	12 49 01.8	+1.1
VOIR		7.79	25	⇓P	Pn	12 47 37.1	+2.5
VOIR		7.79	25	⇓P	Pn	12 47 37.1	+2.5
MORH	Mrgy, Hungar	7.90	351	*e*Pn	Pn	12 47 34.1	-1.8
SLUM	Salum	7.94	149	P	Pn	12 47 36.4	-0.2
	baz=157						
SLUM				S	Sn	12 48 57.6	-8.7
	baz=157						
SLUM				AMP		12 49 00.0	
	baz=157						
BOJS	Bojanci	8.06	333	*e*Pn	Pn	12 47 38.0	-0.2
BOJS				*e*Sn	Sn	12 49 03.6	-5.6
OZLJ	Ozalj	8.09	334	*e*Pn	Pn	12 47 37.9	-0.6
MLR	Muntele Rosu	8.15	28	Pn	Pn	12 47 43.4	+3.9
	comp=E,1.1nm,0.3s,baz=149,slow=15,SNR=14						
MLR				LR	LR	12 50 50.0	
	comp=E,470nm,18.9s,baz=176,slow=38						
RIY	Rijeka	8.21	329	*e*Pn	Pn	12 47 39.4	-0.7
GBRS	Gornja Briga	8.25	331	*i* Pn	Pn	12 47 40.8	0.0
GBRS				*e*Sn	Sn	12 49 08.2	-5.6
CRES	Cresnjev	8.27	335	*e*Pn	Pn	12 47 39.8	-1.3
VISS	Visnje	8.47	332	*i* Pn	Pn	12 47 42.6	-1.2
VISS				*e*Sn	Sn	12 49 14.2	-5.0
CEY	Cerknica	8.57	330	*e*Pn	Pn	12 47 44.4	-0.8
OSSC	Osservatorio P	8.63	309	Pn	Pn	12 47 46.4	+0.4
PLOR	Plostina	8.72	30	⇑P	Pn	12 47 51.4	+4.1

PLOR	Plostina	8.72	30	⇑P	Pn	12 47 51.4	+4.1
VRI	Vrincioaia	8.77	30	⇑P	Pn	12 47 52.1	+4.3
VRI	Vrincioaia	8.77	30	⇑P	Pn	12 47 52.1	+4.3
LJU	Ljubljana	8.79	332	*e*Pn	Pn	12 47 47.6	-0.5
TRI	Trieste	8.81	328	P	Pn	12 47 47.6	-0.9
TRI	Trieste	8.81	328		Pn	12 47 47.6	-0.9
SOKA	Soboth	9.16	336	Pn	Pn	12 47 52.1	-1.2
	comp=E,55nm,0.6s,SNR=24						
SOKA				*i* Sn	Sn	12 49 29.9	-6.4
	comp=E,32nm,0.6s						
OBKA	Obir	9.18	334	*e*Pn	Pn	12 47 54.5	+0.9
OBKA				*e*Sn	Sn	12 49 32.3	-4.4
OBKA	Obir	9.18	334	*i* Pn	Pn	12 47 53.4	-0.2
	comp=E,8.0nm,0.2s,SNR=7.2						
OBKA				*i* Sn	Sn	12 49 32.7	-4.1
	comp=E,120nm,0.9s						
ZCCA	Zocca	9.26	313	Pn	Pn	12 47 54.9	+0.2
KEST	Kesra	9.28	257	Pn	Pn	12 47 54.0	-1.0
	comp=E,0.7nm,0.3s,baz=24,slow=6.7,SNR=6.3						
KEST				Sn	Sn	12 49 36.7	-2.6
	comp=E,0.2nm,0.3s,baz=255,slow=19,SNR=3.6						
KEST				LR	LR	12 52 29.8	
	comp=E,318nm,20.7s,baz=12,slow=44						
KEST	Kesra	9.28	257	Pn	Pn	12 47 54.6	-0.3
KEST					Sn	12 49 39.9	+0.6
PSZ	Piszkesteto	9.50	358	P	Pn	12 47 57.9	0.0
PSZ	Piszkesteto	9.50	358		Pn	12 47 57.9	0.0
ARSA	Arzberg	9.53	339	*e*Pn	Pn	12 47 57.5	-0.8
ARSA				*e*Sn	Sn	12 49 38.0	-7.3
ARSA	Arzberg	9.53	339	Pn	Pn	12 47 57.4	-1.0
	comp=E,6.8nm,0.5s,SNR=8.4						
ARSA				*i* Sn	Sn	12 49 39.9	-5.4
	comp=E,14nm,0.6s						
TEOL	Teolo	9.53	319		Pn	12 47 57.7	-0.6
MYKA	Terra Mystica	9.62	331	*i* Pn	Pn	12 47 58.8	-0.7
	comp=E,5.2nm,0.3s						
MYKA				*i* Sn	Sn	12 49 43.4	-4.1
	comp=E,25nm,0.5s						
BURAR	Bucovina Array	9.82	19	⇑P	Pn	12 48 05.9	+3.6
BURAR	Bucovina Array	9.82	19	⇑P	Pn	12 48 05.9	+3.6
BURAR	Bucovina Array	9.82	19	Pn	Pn	12 48 03.1	+0.7
BUR08	Bucovina Ar. S	9.84	19		Pn	12 48 03.7	+1.1
CTI	Castel Tesino	10.03	322	P	Pn	12 48 03.9	-1.3
CTI	Castel Tesino	10.03	322		Pn	12 48 03.9	-1.3
KECS	Kecovo	10.05	0	*e*SN	Sn	12 49 51.4	-6.6
SWA2		10.05	154	P	Pn	12 48 03.9	-1.6
	baz=160						
SWA2				S	Sn	12 49 45.5	-13
	baz=160						
ZST	Bratislava	10.06	347	*e*SN	Sn	12 49 49.4	-8.9
CONA	Conrad Observa	10.07	342	*i* Pn	Pn	12 48 05.3	-0.5
	comp=E,1.1nm,0.3s						
CONA				*i* Sn	Sn	12 49 54.4	-4.3
	comp=E,8.8nm,0.5s						
KBA	Koelnbreinsper	10.10	331	*e*Sn	Sn	12 49 55.3	-4.2
KBA	Koelnbreinsper	10.10	331	Pn	Pn	12 48 05.7	-0.5
	comp=E,8.9nm,0.3s,SNR=8.0						
KBA				*i* Sn	Sn	12 49 54.9	-4.6
	comp=E,23nm,0.7s						
MSSA	Maissana	10.11	309	Pn	Pn	12 48 07.3	+1.1
VYHS	Vyhne	10.13	354	*e*P	Pn	12 48 05.6	-0.9
VYHS				*e*		12 49 56.1	
VYHS	Vyhne	10.13	354	*e*PN	Pn	12 48 05.6	-0.9
VYHS				*e*SN	Sn	12 49 56.1	-3.9
ABTA	Abfaltersbach	10.17	327	Pn	Pn	12 48 06.4	-0.7
	comp=E,14nm,0.8s,SNR=6.2						
ABTA				*i* Sn	Sn	12 49 54.6	-6.4
	comp=E,73nm,0.7s						
MODS	Modra-Piesok	10.21	348	*e*P	Pn	12 48 06.4	-1.2
MODS				*e*		12 49 53.8	
MODS	Modra-Piesok	10.21	348	*e*PN	Pn	12 48 06.4	-1.2
MODS				*e*PG		12 48 52.4	
MODS				*e*SN	Sn	12 49 53.8	-8.1
BR131	Keskin Array S	10.33	79	P	Pn	12 48 12.3	+2.9
BR131	Keskin Array S	10.33	79	Pn	Pn	12 48 12.3	+2.9
BRTR	Keskin Array B	10.33	79	P	Pn	12 48 11.1	+1.7
BRTR	Keskin Array B	10.33	79	Pn	Pn	12 48 15.8	+6.5
	comp=E,0.4nm,0.3s,baz=261,slow=12,SNR=10						
BRTR				LR	LR	12 52 12.2	
	comp=E,352nm,20.9s,baz=242,slow=38						
BRTR	Keskin Array B	10.33	79	Pn	Pn	12 48 11.1	+1.7
MOA	Molln	10.44	336	*e*Pn	Pn	12 48 10.1	-0.7
MOA				*e*Sn	Sn	12 50 01.7	-6.0
MOA	Molln	10.44	336	Pn	Pn	12 48 10.1	-0.7
	comp=E,25nm,0.4s,SNR=23						
MOA				*i* Sn	Sn	12 50 02.5	-5.2
	comp=E,31nm,0.5s						
KOLS	Kolonicke sedl	10.58	7	*e*P	Pn	12 48 13.7	+1.0
KOLS	Kolonicke sedl	10.58	7	*e*PN	Pn	12 48 13.7	+1.0
JAVC	Velka Javorina	10.62	350	*e*PN	Pn	12 48 13.0	-0.3
RJOB	Jochberg	10.86	331	*e*Pn	Pn	12 48 16.5	0.0
RJOB				*e*Sn	Sn	12 50 14.3	-3.5
CSS	Mathiatis	10.89	105	Pn	Pn	12 48 17.2	+0.1
WTTA	Wattenberg	10.95	327	*e*Pn	Pn	12 48 17.3	-0.5
WTTA				*e*Sn	Sn	12 50 16.2	-4.0
WTTA	Wattenberg	10.95	327	*e*Pn	Pn	12 48 18.1	+0.2
	comp=E,4.1nm,0.2s,SNR=13						
WTTA				*i* Sn	Sn	12 50 15.1	-5.1
	comp=E,58nm,0.7s						
WATA	Walderalm	11.03	327	*i* Pn	Pn	12 48 19.7	+0.8
	comp=E,28nm,0.5s,SNR=7.0						
WATA				*i* Sn	Sn	12 50 19.0	-3.1
	comp=E,54nm,0.6s						
KRUC	Moravsky	11.03	346	*e*PN	Pn	12 48 17.3	-1.5
SQTA	Sankt Quirin	11.10	325	*i* Pn	Pn	12 48 20.3	+0.4
	comp=E,7.5nm,0.3s						
SQTA				*i* Sn	Sn	12 50 20.9	-2.9
	comp=E,35nm,0.5s						
FUORN	Ofenpass-Fuorn	11.11	321		Pn	12 48 20.1	-0.1
FETA	Feichten	11.17	323	*e*Pn	Pn	12 48 21.9	+1.0
	comp=E,3.5nm,0.4s						
FETA				*i* Sn	Sn	12 50 18.9	-6.8
	comp=E,20nm,0.8s						
VRAC	Vranov	11.23	347	Pn	Pn	12 48 20.9	-0.6
	comp=E,0.4nm,0.3s,baz=167,slow=13,SNR=4.5						
VRAC				LR	LR	12 53 35.5	
	comp=E,515nm,19.5s,baz=167,slow=42						
MOTA	Moosalm	11.24	325	*i* Pn	Pn	12 48 22.4	+0.6
	SNR=20						
MOTA				*i* Sn	Sn	12 50 23.3	-4.0
	comp=E,36nm,0.6s						
PART	Garmisch-Parte	11.35	326	*e*Pn	Pn	12 48 23.6	+0.3
PART				*e*Sn	Sn	12 50 24.9	-5.1
DAVOX	Davos/Dischmat	11.41	320	Pn	Pn	12 48 24.9	+0.6
	comp=E,1.8nm,0.3s,baz=131,slow=20,SNR=17						
DAVOX				Sn	Sn	12 50 27.7	-3.9
	comp=E,2.1nm,0.3s,baz=345,slow=13,SNR=5.5						
DAVOX				LR	LR	12 53 15.5	
	comp=E,368nm,20.6s,baz=179,slow=40						
RETA	Reutte	11.50	325	*i* Pn	Pn	12 48 26.0	+0.7
	comp=E,6.7nm,0.5s,SNR=7.0						
RETA				*i* Sn	Sn	12 50 30.0	-3.6
	comp=E,26nm,0.6s						
GERES	GERESS Array B	11.50	337	P	Pn	12 48 23.3	-2.0
GERES	GERESS Array B	11.50	337	Pn	Pn	12 48 23.0	-2.4
	comp=E,1.0nm,0.3s,baz=156,slow=14,SNR=27						
GERES				Sn	Sn	12 50 27.3	-6.4
	comp=E,1.8nm,0.3s,baz=154,slow=23,SNR=9.5						
GERES	GERESS Array B	11.50	337		Pn	12 48 23.3	-2.0
MORC	Moravsky Berou	11.54	351	*e*PN	Pn	12 48 24.6	-1.2
DAVA	Damuels	11.77	322	*e*Sn	Sn	12 50 35.1	-5.1
DAVA	Damuels	11.77	322	*i* Sn	Sn	12 50 34.6	-5.7
KHC	Kasperske Hory	11.79	337	*e*P	Pn	12 48 27.6	-1.7
KHC				*e*		12 50 33.6	
KHC	Kasperske Hory	11.79	337	*e*PN	Pn	12 48 27.6	-1.7
KHC				*e*x	x	12 48 41.5	
KHC				*e*SN	Sn	12 50 33.6	-7.1
KHC	Kasperske Hory	11.79	337		Pn	12 48 27.7	-1.6
OJC	Ojcow	11.80	358	P	Pn	12 48 29.8	+0.5
OJC	Ojcow	11.80	358	Pn	Pn	12 48 29.8	+0.5
WET	Wettzell	12.03	335	*e*Pn	Pn	12 48 31.6	-0.9
GOPC	GO Pecny, Ondr	12.18	342	*e*P	Pn	12 48 33.6	-0.9
GOPC	GO Pecny, Ondr	12.18	342	*e*PN	Pn	12 48 33.6	-0.9
DPC	Dobruska-Polom	12.28	347	*e*P	Pn	12 48 34.5	-1.4
DPC	Dobruska-Polom	12.28	347	*e*PN	Pn	12 48 34.5	-1.4
PRU	Pruhonice	12.31	342	*e*P	Pn	12 48 35.4	-0.9
PRU	Pruhonice	12.31	342	*e*PN	Pn	12 48 35.4	-0.9
NORI	Noerdlinger Ri	12.51	329	*e*Pn	Pn	12 48 36.6	-2.4
SENIN	Lac Senin/Sane	12.54	313		Pn	12 48 39.9	+0.2
HFRF	Wahat Farafira	13.03	147	P	Pn	12 48 43.8	-2.5
	baz=152						
HFRF				S	S	12 51 32.6	-4.0
	baz=152						
BFO	Black Forest	13.24	322	P	Pn	12 48 49.4	+0.3

BFO Black Forest 13.24 322 Pn 12 48 49.4 +0.3
BRG Berggiesshubel 13.27 342 *e*P **Pn 12 48 48.0 -1.4**
comp=E,4.4nm,0.8s
comp=N,428nm,14.3s
comp=E,1µm,15.3s
comp=Z,513nm,12.7s
BRG Berggiesshubel 13.27 342 *e*P **Pn 12 48 48.0 -1.4**
BRG pmax pmax
comp=Z,4.0nm,0.8s
BRG MLR MLR
comp=N,428nm,14.3s
BRG MLR MLR
comp=E,1µm,15.3s
BRG MLR MLR
comp=Z,513nm,12.7s
MMAI Mount Meron Ar 13.28 109 Pn **Pn 12 48 50.6 +0.9**
comp=Z,0.9nm,0.3s,baz=312,slow=14,SNR=3.1
MOX Moxa 13.73 336 *e*Pn **Pn 12 48 55.0 -0.8**
ECH Echery 13.75 320 P **Pn 12 48 55.8 -0.1**
ECH Echery 13.75 320 Pn 12 48 55.8 -0.1
AKASG Malin Array Be 13.76 24 Pn **Pn 12 48 55.8 -0.2**
comp=Z,1.4nm,0.3s,baz=210,slow=11,SNR=6.6
AKASG LR LR 12 55 31.9
comp=Z,263nm,20.8s,baz=205,slow=43
AKASG Malin Array Be 13.76 24 Pn 12 48 56.4 +0.4
AKBB Malin Array Si 13.76 24 P **Pn 12 48 56.5 +0.5**
AKBB Malin Array Si 13.76 24 Pn **Pn 12 48 56.5 +0.5**
CLL Collm 13.91 340 P **Pn 12 48 58.3 +0.2**
CLL Collm 13.91 340 *es*P **Pn 12 49 02.0 +3.9**
CLL *e*PP **P 12 49 07.0 +0.7**
comp=Z,10.0nm,1.0s
CLL *es*PP 12 49 10.0
CLL *e* 12 49 12.0
CLL Collm 13.91 340 Pn **Pn 12 48 58.3 +0.2**
TNS Taunus Mts 14.57 328 *e*Pn **Pn 12 49 07.6 +0.4**
ASF Jabal al Asfar 14.79 110 Pn **Pn 12 49 11.9 +1.5**
comp=Z,0.3nm,0.3s,baz=252,slow=3.2,SNR=2.8
EIL Elat 14.84 122 Pn **Pn 12 49 07.9 -3.0**
comp=Z,0.3nm,0.3s,baz=283,slow=2.0,SNR=6.5
EIL Sn Sn 12 51 43.2 -12
comp=Z,0.8nm,0.3s,baz=34,slow=4.6,SNR=6.6
EIL LR LR 12 56 53.6
comp=Z,204nm,20.0s,baz=302,slow=45
WLF Walferdange 15.20 322 P **Pn 12 49 17.6 +1.9**
WLF pmax pmax
comp=Z,35nm,1.0s
WLF Walferdange 15.20 322 PnPn **P 12 49 22.7 +2.0**
WLF Walferdange 15.20 322 Pn 12 49 17.6 +1.9
WLF IAmb IAmb 12 49 24.3
comp=Z,35nm,1.0s
SUW Suwalki 15.70 6 P **P 12 49 25.6 -0.6**
SUW pmax pmax
comp=Z,85nm,0.4s
SUW Suwalki 15.70 6 P 12 49 25.6 -0.6
MEM Membach 15.92 325 x **P 12 49 27.4 -1.2**
MEM x x 12 49 31.3
BSTI Sart Tilman 16.10 324 x **P 12 49 33.8 +3.1**
BSTI x x 12 49 37.8
DOU Dourbes 16.25 321 x **P 12 49 32.1 -0.2**
DOU x x 12 49 34.4
NACGM Naroch 17.03 13 *e* **Pn 12 49 37.0 -2.1**
NACGM *e*LQ LQ 12 54 50.0
NEY Neytrino 17.50 67 *i* P **P 12 49 49.0 +2.6**
NEY pmax pmax
comp=Z,1.0nm,0.9s
KIV Kislovodsk 17.60 65 *e*P **P 12 49 49.0 +1.6**
KIV *e*S **S 12 53 07.7 -2.2**
KIV pmax pmax
comp=Z,25nm,1.1s
KIV Kislovodsk 17.60 65 P 12 49 47.9 +0.5
KBZ Khabaz 17.71 65 P **P 12 49 50.1 +1.7**
comp=Z,0.1nm,0.3s,baz=302,slow=11,SNR=4.7
KBZ LR LR 12 57 43.5
comp=Z,148nm,18.3s,baz=232,slow=41
PYA1 Pyatigorsk 17.91 64 *i* P **P 12 49 53.7 +3.0**
VORD Divnogorie 18.27 41 *e*P **P 12 49 54.6 0.0**
VORD pmax pmax
comp=Z,5.0nm,0.7s
ZEI Tsey 18.30 69 *e*P **P 12 50 00.4 +5.1**
ZEI pmax pmax
comp=Z,6.0nm,0.9s
VSR Storozhevoye 18.36 40 *e*P **P 12 49 56.0 +0.4**
VSR pmax pmax
comp=Z,8.0nm,0.5s
VSR MLR MLR
comp=Z,650nm,12.0s
ESBB Sonseca Array 19.00 281 P **P 12 50 02.3 -0.5**
ESDC Sonseca Array 19.00 281 P **P 12 50 02.6 -0.2**
comp=Z,0.5nm,0.3s,baz=75,slow=11,SNR=7.2
ESDC Sonseca Array 19.00 281 P Pn 12 50 03.5 0.0
VRH Novokhopyorsk 19.68 43 *e*P **Pn 12 50 11.5 +0.1**
VRH pmax pmax
comp=Z,6.0nm,0.4s
VRH MLR MLR
comp=Z,410nm,12.0s
OBN Obninsk 19.93 28 *e*P **P 12 50 12.3 -0.4**
OBN pmax pmax
comp=Z,9.0nm,0.4s
OBN Obninsk 19.93 28 LR LR 12 59 12.9
comp=Z,70nm,18.1s,baz=189,slow=41
OBN Obninsk 19.93 28 P **P 12 50 12.1 -0.6**
TAM Tamanrasset 20.16 224 P **P 12 50 15.9 +0.2**
TAM pmax pmax
comp=Z,24nm,1.5s
TAM Tamanrasset 20.16 224 P **P 12 50 15.9 +0.2**
TAM IAmb IAmb 12 50 22.7
comp=Z,24nm,1.5s
MOS Moscow 20.79 28 *e*P **P 12 50 20.8 -1.3**
MOS *e*S Sn 12 54 17.6 -1.3
MOS pmax pmax
comp=Z,36nm,0.7s
PBRG Braganca 21.04 288 *e*P **P 12 50 26.7 +1.7**
MDT Midelt 21.10 262 P **P 12 50 26.4 +0.6**
comp=Z,7.0nm,1.1s,baz=111,slow=8.6,SNR=4.9
MVO Moncorvo 21.27 286 *e*P **P 12 50 29.0 +1.5**
comp=Z,38nm,1.8s
PMRV Marv??o 21.66 281 *e*P **P 12 50 34.1 +2.4**
PCBR Castelo Branco 21.69 283 *e*P **P 12 50 33.7 +1.8**
comp=Z,41nm,2.0s
PVIS Viseu 21.94 285 *e*P **P 12 50 37.8 +3.1**
HFS Hagfors 22.15 351 P **P 12 50 35.7 -0.9**
comp=Z,13nm,0.6s,baz=164,slow=12,SNR=40
HFS LR LR 13 01 35.3
comp=Z,248nm,19.0s,baz=171,slow=43
KONO Kongsberg 22.34 345 P **P 12 50 39.0 +0.3**
KONO pmax pmax
comp=Z,46nm,1.5s
KONO Kongsberg 22.34 345 P **P 12 50 39.0 +0.3**
KONO IAmb IAmb 12 50 48.3
comp=Z,46nm,1.4s
PMTG Montargil 22.35 281 *e*P **P 12 50 38.1 -0.9**
NC602 NORSAR Array S 23.02 349 P **P 12 50 45.6 -0.3**
NC602 IAmb IAmb 12 50 48.5
comp=Z,26nm,0.9s
EKA Eskdalemuir Ar 23.20 324 P **P 12 50 47.7 0.0**
comp=Z,9.0nm,0.6s,baz=124,slow=9.9,SNR=12
ESK Eskdalemuir 23.21 324 P **P 12 50 48.8 +0.9**
ESK pmax pmax
comp=Z,19nm,0.9s
ESK Eskdalemuir 23.21 324 P **P 12 50 48.8 +0.9**
ESK IAmb IAmb 12 50 50.4
comp=Z,19nm,0.8s
FINES FINES Array B 23.31 7 P **P 12 50 47.5 -1.3**
comp=Z,15nm,0.6s,baz=180,slow=9.9,SNR=42
FINES PcP **PcP 12 54 36.1 +0.5**
comp=Z,4.4nm,1.0s,baz=192,slow=3.5,SNR=3.5
FINES LR LR 13 00 53.0
comp=Z,323nm,20.7s,baz=196,slow=39
FINES FINES Array B 23.31 7 P P 12 50 47.2 -1.5
FIA1 FINES Array S 23.31 7 P P 12 50 47.8 -1.0
NB2 NORSAR Subarra 23.36 349 P **P 12 50 47.9 -1.5**
comp=Z,16nm,1.4s,baz=161,slow=11
NOA NORSAR Array B 23.36 349 P **P 12 50 49.3 -0.2**
comp=Z,4.8nm,0.7s,baz=150,slow=11,SNR=26
NOA LR LR 13 01 44.8
comp=Z,282nm,19.2s,baz=170,slow=41
NBO00 NORSAR Array S 23.43 348 P **P 12 50 50.0 0.0**
KLMR Klimovskoe 25.43 22 *e*P **P 12 51 06.9 -1.5**
KLMR pmax pmax
comp=Z,20nm,1.1s
KLMR Klimovskoe 25.43 22 *e*P **P 12 51 07.0 -1.5**
KLMR AMP 12 51 13.6
comp=Z,20nm,1.1s
KLMR LQ LQ 12 58 44.3
KLMR LQ LQ 12 58 44.3
KLMR LR LR 13 01 15.7
RAYN Ar Rayn 26.00 118 P **P 12 51 15.4 +1.3**
RAYN pmax pmax
comp=Z,4.0nm,1.0s
RAYN Ar Rayn 26.00 118 P **P 12 51 15.4 +1.3**
KIRV Kirov 27.47 33 P **P 12 51 26.3 -0.6**
comp=Z,9.1nm,0.6s,baz=227,slow=6.1,SNR=4.6
KIRV LR LR 13 02 57.6
comp=Z,243nm,18.6s,baz=250,slow=38
PRGR Permogore 27.96 26 *e*P **P 12 51 28.8 -2.5**
PRGR pmax pmax
comp=Z,10.0nm,0.6s
AKTO Aktyubinsk 29.07 53 P **P 12 51 41.0 -0.4**
AKTO Aktyubinsk 29.07 53 P **P 12 51 41.0 -0.4**
comp=Z,0.7nm,0.3s,baz=261,slow=7.0,SNR=4.3
GEYT Alibeck 29.47 79 P **P 12 51 45.6 +0.5**
comp=Z,2.5nm,0.5s,baz=280,slow=8.9,SNR=7.4
GEYT LR LR 13 05 48.7
comp=Z,100nm,20.2s,baz=180,slow=41
GEYT Alibeck 29.47 79 P **P 12 51 45.4 +0.3**
GYA0B ALIBECK ARRAY 29.47 79 P **P 12 51 45.3 +0.2**
GYA0B IAmb IAmb 12 52 03.1
comp=Z,5.6nm,0.8s
ABKAR Akbulak array 30.14 56 P **P 12 51 50.9 0.0**
ABKAR Akbulak array 30.14 56 P **P 12 51 50.6 -0.3**
ABKAR IAmb IAmb 12 52 10.1
comp=Z,1.2nm,0.8s
TOA0 Torodi Ar. Sit 30.20 219 P **P 12 51 51.6 +0.1**
TOA0 IAmb IAmb 12 51 53.0
comp=Z,4.0nm,0.7s
TORD Torodi Ar. Bea 30.20 219 P **P 12 51 51.3 -0.3**
comp=Z,4.4nm,0.7s,baz=30,slow=9.5,SNR=25
TORD Torodi Ar. Bea 30.20 219 P **P 12 51 51.5 0.0**
LVZ Lovozero 30.56 11 P **P 12 51 54.4 0.0**
ARU Arti 30.91 42 *i* P **P 12 51 58.8 +1.3**
ARU pmax pmax
comp=Z,2.0nm,0.4s
ARU Arti 30.91 42 P **P 12 51 58.1 +0.7**
ARU IAmb IAmb 12 52 15.3
comp=Z,4.3nm,1.1s
ARCES ARCESS Array B 31.29 3 P **P 12 51 59.6 -1.1**
comp=Z,4.0nm,0.8s,baz=189,slow=12,SNR=14
ARCES PcP **PcP 12 54 55.2 +0.6**
comp=Z,3.0nm,1.1s,baz=225,slow=1.5,SNR=3.6
ARCES LR LR 13 05 48.4
comp=Z,219nm,18.9s,baz=177,slow=39
ARCES ARCESS Array B 31.29 3 P **P 12 52 00.9 +0.2**
ARE0 ARCESS Array S 31.29 3 P **P 12 52 01.0 +0.3**
KEV Kevo 31.59 4 P **P 12 52 03.8 +0.5**
KEV pmax pmax
comp=Z,17nm,1.1s
KEV Kevo 31.59 4 P **P 12 52 03.8 +0.5**
UOSS Minazif 33.04 103 P **P 12 52 17.0 +0.4**
UOSS IAmb IAmb 12 52 28.9
comp=Z,9.4nm,1.2s
BRVK Borovoye 36.93 50 P **P 12 52 49.9 0.0**
BRVK pmax pmax
comp=Z,4.0nm,0.9s
BRVK Borovoye 36.93 50 P **P 12 52 49.9 0.0**
BVAR Borovoye Array 36.99 50 P **P 12 52 49.8 -0.6**
comp=Z,1.3nm,0.7s,baz=282,slow=6.9,SNR=7.3
DBIC Dimbokro 39.04 222 P **P 12 53 08.1 +0.1**
comp=Z,5.6nm,0.6s,baz=7.5,slow=9.9,SNR=16
DBIC LR LR 13 10 18.1
comp=Z,150nm,18.9s,baz=16,slow=38
DBIC Dimbokro 39.04 222 P **P 12 53 08.1 +0.1**
DBIC IAmb IAmb 12 53 09.3
comp=Z,6.7nm,0.6s
TIC Toumodi 39.15 223 *e*P **P 12 53 08.3 -0.7**
KIC Kosan Boka 39.24 222 *e*P **P 12 53 09.9 +0.2**
comp=Z,12nm,0.6s
LIC Lamto 39.51 222 *e*P **P 12 53 12.2 +0.3**
comp=Z,28nm,0.6s
SPA0 Spitsbergen Ar 39.90 359 P **P 12 53 15.8 +1.3**
SPITS Spitsbergen Ar 39.90 359 P **P 12 53 14.6 +0.1**
comp=Z,3.6nm,0.6s,baz=161,slow=16,SNR=8.9
AAK Ala-Archa 40.70 66 P **P 12 53 22.4 +0.6**
AAK pmax pmax
comp=Z,5.0nm,1.5s
AAK Ala-Archa 40.70 66 P **P 12 53 21.4 -0.4**
comp=Z,1.0nm,0.7s,baz=87,slow=1.5,SNR=4.3
AAK LR LR 13 13 04.7
comp=Z,60nm,18.3s,baz=248,slow=40
AAK Ala-Archa 40.70 66 P **P 12 53 22.4 +0.6**
DAG Danmarks Havn 42.04 347 *e*P **P 12 53 32.7 +0.6**
DAG Danmarks Havn 42.04 347 *i* P **P 12 53 32.7 +0.6**
KURBB Kurchatov Arra 42.12 54 P **P 12 53 32.2 -0.9**
comp=Z,1.8nm,0.8s,baz=281,slow=9.1,SNR=8.8
KURK Kurchatov 42.17 54 P **P 12 53 34.1 +0.6**
KURK pmax pmax
comp=Z,3.0nm,1.0s
KURK Kurchatov 42.17 54 P **P 12 53 34.1 +0.6**
NIL Nilore 42.48 80 P **P 12 53 37.0 +0.7**
NIL pmax pmax
comp=Z,12nm,1.4s
NIL Nilore 42.48 80 P **P 12 53 37.0 +0.7**
NIL IAmb IAmb 12 53 48.0
comp=Z,12nm,1.4s
KSH Kashi 42.58 70 P **P 12 53 39.0 +1.8**
KSH pmax pmax
comp=Z,380nm,5.8s
SUMG Summit 44.57 338 *i* P **P 12 53 54.0 +0.9**
SUMG Summit 44.57 338 *i* P **P 12 53 54.0 +0.9**
SUMG Summit 44.57 338 P **P 12 53 53.8 +0.7**
MK31 Makanchi Array 45.21 59 P **P 12 53 57.3 -0.8**
MK31 pmax pmax
comp=Z,4.0nm,1.4s
MK31 Makanchi Array 45.21 59 P **P 12 53 57.3 -0.8**
MKAR Makanchi Array 45.21 59 P **P 12 53 57.3 -0.8**
MKAR Makanchi Array 45.21 59 P **P 12 53 57.0 -1.2**
comp=Z,1.8nm,0.4s,baz=277,slow=7.5,SNR=31
MKAR LR LR 13 16 52.2
comp=Z,58nm,19.7s,baz=281,slow=42
MKAR Makanchi Array 45.21 59 P **P 12 53 57.3 -0.8**
ZAA0 Zalesovo Array 45.56 48 P **P 12 54 00.1 -0.7**
ZAA0 IAmb IAmb 12 54 00.9
comp=Z,5.9nm,0.6s
ZALV Zalesovo Beam 45.56 48 P **P 12 53 59.8 -0.9**
comp=Z,5.1nm,0.4s,baz=274,slow=8.8,SNR=32
ZALV LR LR 13 15 27.2
comp=Z,158nm,19.1s,baz=278,slow=39
WMQ Urumqi 49.68 61 *e*P **P 12 54 37.3 +4.3**
WMQ sP sP 12 54 43.8 +5.8
WMQ pmax pmax
comp=Z,5.0nm,1.1s
WMQ LR LR
comp=N,470nm,29.1s
WMQ LR LR
comp=E,560nm,29.2s
WMQ LR LR
comp=Z,140nm,29.0s
WMQ Urumqi 49.68 61 P **P 12 54 34.5 +1.5**
WMQ pmax pmax
comp=Z,6.0nm,1.3s
WMQ Urumqi 49.68 61 P **P 12 54 34.5 +1.5**
WMQ IAmb IAmb 12 54 45.6
comp=Z,6.4nm,1.3s
MSEY Mahe Island 53.77 135 P **P 12 55 04.3 +0.5**
MSEY pmax pmax
comp=Z,65nm,1.3s
MSEY Mahe Island 53.77 135 P **P 12 55 04.3 +0.5**
SCHQ Schefferville 58.24 317 P **P 12 55 35.5 +0.2**
comp=Z,2.4nm,0.5s,baz=67,slow=6.4,SNR=14
SCHQ LR LR 13 21 01.9
comp=Z,54nm,18.4s,baz=348,slow=36
SCHQ Schefferville 58.24 317 P **P 12 55 35.7 +0.4**
SCHQ IAmb IAmb 12 55 45.2
comp=Z,4.3nm,0.8s
TIXI Tiksi 59.43 20 P **P 12 55 43.6 +0.3**
comp=Z,0.8nm,0.3s,baz=206,slow=4.1,SNR=3.2
TIXI Tiksi 59.43 20 P **P 12 55 44.4 +1.2**
TIXI IAmb IAmb 12 55 46.2
comp=Z,3.6nm,1.1s
GTA Gaotai 59.75 62 *e*P **P 12 55 45.0 -1.1**
GTA pP pP 12 55 50.3 +0.1
GTA sP sP 12 55 53.0 +1.8
GTA pmax pmax
comp=Z,1.0nm,1.1s
GTA pmax pmax
comp=Z,120nm,5.6s
GTA LR LR
comp=N,95nm,16.8s
GTA LR LR
comp=E,91nm,17.8s
GTA LR LR
comp=Z,69nm,17.1s
SONM Songino Array 60.34 51 P **P 12 55 49.9 -0.1**
SONM pmax pmax
comp=Z,1.0nm,1.0s
SONM Songino Array 60.34 51 P **P 12 55 48.3 -1.7**
comp=Z,0.5nm,0.6s,baz=279,slow=7.7,SNR=6.1
SONM LR LR 13 24 22.1
comp=Z,75nm,18.9s,baz=316,slow=38
SONM Songino Array 60.34 51 P **P 12 55 49.9 -0.1**
LBTB Lobatse 63.29 175 P **P 12 56 11.4 +1.4**
LBTB pmax pmax
comp=Z,3.0nm,0.9s
LBTB Lobatse 63.29 175 P **P 12 56 11.4 +1.4**
LBTB IAmb IAmb 12 56 15.2
comp=Z,2.6nm,0.8s
LZH Lanzhou 64.13 63 *e*P **P 12 56 17.0 +1.3**
LZH pP sP 12 56 22.5 +1.7
LZH sP pP 12 56 27.0 +7.2
LZH PP PP 12 58 45.5 +9.0
LZH pmax pmax
comp=Z,12nm,1.1s
LZH pmax pmax
comp=Z,71nm,5.4s
LZH LR LR
comp=N,100nm,15.6s
LZH LR LR
comp=E,120nm,15.4s
LZH LR LR
comp=Z,180nm,18.2s
CD2 Chengdu 66.72 68 P **P 12 56 32.0 -0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
BOSA Boshof 66.84 175 P **P 12 56 33.9 +0.9**
BOSA pmax pmax
comp=Z,16nm,1.5s
BOSA Boshof 66.84 175 P **P 12 56 33.8 +0.7**
comp=Z,1.2nm,0.6s,baz=13,slow=8.7,SNR=3.3
BOSA LR LR 13 28 40.7
comp=Z,83nm,18.1s,baz=20,slow=39
BOSA Boshof 66.84 175 P **P 12 56 33.9 +0.9**
HHC Hu-ho-hao-te 66.93 56 *e*P **P 12 56 35.3 +1.6**
HHC pmax pmax
comp=Z,2.0nm,0.9s
HHC pmax pmax
comp=Z,81nm,6.6s
HIA Hailar 67.38 44 P **P 12 56 36.6 +0.3**
HIA pmax pmax
comp=Z,4.0nm,0.8s
HIA Hailar 67.38 44 P **P 12 56 36.5 +0.3**
HIA IAmb IAmb 12 56 37.2
comp=Z,4.1nm,0.8s
CMAR Chiang Mai Arr 69.90 82 P **P 12 56 52.7 +0.3**
comp=Z,0.7nm,0.6s,baz=304,slow=7.2,SNR=6.7
BILL Bilibino 70.78 13 *e*P **P 12 56 57.9 +0.9**
BILL *e* 12 57 02.8
BILL *e* 12 57 14.4
BILL *e* 12 59 37.0
BILL *e*PPP PPP 13 01 18.3
BILL pmax pmax
comp=Z,2.0nm,1.0s
INK Inuvik 71.81 350 P **P 12 57 03.5 +0.3**
INK pmax pmax
comp=Z,4.0nm,1.5s
INK Inuvik 71.81 350 P **P 12 57 02.6 -0.6**
comp=Z,0.5nm,0.5s,baz=14,slow=10,SNR=5.6
INK Inuvik 71.81 350 P **P 12 57 03.5 +0.3**
INK IAmb IAmb 12 57 06.9
comp=Z,4.2nm,1.5s
YKA Yellowknife Ar 73.14 340 P **P 12 57 11.5 +0.3**
comp=Z,0.5nm,0.5s,baz=35,slow=5.5,SNR=21
YKA LR LR 13 31 52.7
comp=Z,32nm,18.5s,baz=0.0,slow=38
BMAR Burnt Mountain 73.86 354 P **P 12 57 17.3 +1.8**
ULM Lac du Bonnet 75.47 324 P **P 12 57 24.6 -0.5**
comp=Z,1.3nm,0.6s,baz=31,slow=4.6,SNR=3.9
ULM LR LR 13 30 28.8
comp=Z,43nm,19.7s,baz=9.5,slow=36
ULM Lac du Bonnet 75.47 324 IAmb IAmb 12 57 32.5
comp=Z,5.2nm,1.4s
IMAR Indian Mountai 75.82 358 P **P 12 57 27.7 +0.9**
CBYP Canovanas 76.06 282 P **P 12 57 30.1 +1.1**
ILAR Eielson Array 76.66 354 P **P 12 57 32.2 +0.7**
comp=Z,0.6nm,0.6s,baz=353,slow=2.5,SNR=9.6
ILAR LR LR 13 33 03.2
comp=Z,50nm,19.4s,baz=12,slow=37
ILAR Eielson Array 76.66 354 P **P 12 57 32.0 +0.5**
NJ2 Nanjing 76.73 60 *e*P **P 12 57 33.0 +0.5**
NJ2 pmax pmax
comp=Z,6.0nm,0.5s
USA0B Ussuriysk Arra 77.13 43 P **P 12 57 35.5 +0.9**
USA0B pmax pmax
comp=Z,9.0nm,1.2s
USA0B Ussuriysk Arra 77.13 43 P **P 12 57 35.5 +0.9**
USA0B IAmb IAmb 12 57 43.1
comp=Z,8.7nm,1.2s
USRK Ussuriysk Ar. 77.13 43 P **P 12 57 34.3 -0.3**
USRK Ussuriysk Ar. 77.13 43 P **P 12 57 33.6 -0.9**
comp=Z,3.5nm,0.7s,baz=301,slow=5.4,SNR=11
USRK LR LR 13 34 07.7
comp=Z,94nm,19.4s,baz=319,slow=38
USRK Ussuriysk Ar. 77.13 43 P **P 12 57 34.3 -0.3**
TKL Tuckaleechee C 78.35 306 LR LR 13 31 01.4
comp=Z,39nm,18.9s,baz=58,slow=35
KSAR Wonju Array Be 79.19 51 P **P 12 57 46.6 +0.5**
KSAR Wonju Array Be 79.19 51 P **P 12 57 46.6 +0.5**
KSRS Korea Array 79.21 51 P **P 12 57 46.2 0.0**
comp=Z,1.3nm,0.8s,baz=314,slow=5.0,SNR=4.5
KSRS LR LR 13 36 19.7
comp=Z,48nm,18.2s,baz=318,slow=38
YSS Yuzh-Sakhalins 80.59 36 *e*P **P 12 57 55.2 +1.7**
YSS MLR MLR
comp=Z,500nm,17.0s
PETK Petropavlovsk- 81.59 24 LR LR 13 38 49.0
comp=Z,84nm,18.4s,baz=59,slow=39
MJAR Matsushiro Ar 85.85 46 P **P 12 58 21.0 +0.1**
MJAR pmax pmax
comp=Z,2.0nm,0.8s
MJAR Matsushiro Arr 85.85 46 P **P 12 58 20.3 -0.6**
comp=Z,2.1nm,0.7s,baz=340,slow=4.3,SNR=5.5
MJAR Matsushiro Arr 85.85 46 P **P 12 58 21.0 +0.1**
PDAR Pinedale Array 87.32 326 P **P 12 58 28.7 +0.4**
comp=Z,0.2nm,0.6s,baz=47,slow=7.0,SNR=3.7
PDAR LR LR 13 41 16.7
comp=Z,59nm,18.1s,slow=38
PDAR Pinedale Array 87.32 326 P **P 12 58 28.4 +0.2**
NVAR Mina Array Bea 94.63 329 LR LR 13 43 11.9
comp=Z,64nm,18.5s,baz=84,slow=36
TXAR Lajitas Array 94.77 314 P **P 12 59 03.9 +0.9**
TXAR Lajitas Array 94.77 314 P **P 12 59 03.7 +0.7**
comp=Z,0.1nm,0.7s,baz=78,slow=9.6,SNR=2.5
TXAR LR LR 13 40 37.3
comp=Z,25nm,21.2s,baz=0.0,slow=35
TXAR Lajitas Array 94.77 314 P **P 12 59 03.9 +0.9**
CPUP Villa Florida 97.12 242 LR LR 13 44 39.9
comp=Z,70nm,18.2s,baz=81,slow=36
LPAZ La Paz 98.86 256 LR LR 13 47 36.5
comp=Z,25nm,18.4s,baz=100,slow=38
ASAR Alice Springs 122.25 96 PKIKP **PKiKP 13 04 36.6 +0.1**
ASAR Alice Springs 122.25 96 PKP **PKPdf 13 04 35.9 -0.5**
comp=Z,0.2nm,0.3s,baz=312,slow=1.8,SNR=4.1
ASAR Alice Springs 122.25 96 PKiKP 13 04 36.6 +0.1

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*IDC **31** 12:49:51.2±1.0,4.0°S×151.2°E,h0km,mb3.5/4, mb1 3.8/4,mb1mx3.4/37,mbtmp3.5/4,MS2.9/3,Ms1 2.9/3, ms1mx2.5/27,Error ellipse: s-maj=28.6km s-min=10.0km az=16.0*

ISC 31 12:49:53.7±1.1,4.1°S±0.2°×151.4°E±0.1,h21km,n9,σ0s66/6, mb3.5/4,New Britain region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KRVT	**Keravat (AS076**	**0.68**	**108**	Pg		**Pb**		**12 50 06.7**	**-0.3**
	76nm,0.3s,baz=210,slow=0.5,SNR=37								
KRVT				Lg	Lg			12 50 17.4	
	192nm,0.3s,baz=194,slow=17,SNR=18								
HNR	**Honiara**	**10.03**	**122**	LR	LR			12 56 19.7	
	comp=Z,75nm,20.5s,baz=12,slow=38								
JAY	**Jayapura**	**10.77**	**278**	LR	LR			12 55 57.3	
	comp=Z,124nm,18.5s,baz=38,slow=34								
WRA	**Warramunga Arr**	**22.89**	**225**	P		**P**		**12 54 56.5**	**+0.2**
	0.6nm,0.7s,baz=50,slow=9.8,SNR=5.6								
ASAR	**Alice Springs**	**25.75**	**219**	P		**P**		**12 55 23.4**	**+0.3**
	0.8nm,0.9s,baz=54,slow=9.0,SNR=4.6								
KSRS	**Korea Array**	**46.74**	**334**	LR	LR			13 15 57.2	
	comp=Z,6.0nm,19.2s,baz=320,slow=34								

CMAR	**Chiang Mai Arr**	**56.29**	**295**	P		**P**		**12 59 32.5**	**-0.8**
	0.5nm,0.6s,baz=110,slow=5.4,SNR=4.3								
ILAR	**Eielson Array**	**82.04**	**22**	P		**P**		**13 02 12.7**	**+0.6**
	0.4nm,0.6s,baz=245,slow=5.5,SNR=8.2								
TORD	**Torodi Ar. Bea**	**148.74**	**289**	PKPbc		**PKiKP**		**13 09 42.3**	**+0.3**
	0.5nm,0.7s,baz=93,slow=2.9,SNR=3.9								

*IDC **31** 12:55:38.8±1.0,21°.49S×66°.67W,h209km±11km,mb3.6/5, mb1 3.7/10,mb1mx3.4/31,mbtmp4.1/10,Error ellipse: s-maj=20.1km s-min=11.5km az=105.0*
*SJA **31** 12:55:38.6±0.6,21°.48S×66°.82W,h235km±5km,ML4.0, MW3.9*
*NEIC **31** 12:55:38.6±1.5,21°.52S±0°.07×66°.65W±0°.06,h211km±7km, mb4.1/9,ML4.3(GUC),Error ellipse: s-maj=10.1km s-min=8.5km az=152.0*
*GUC **31** 12:55:41.0±0.6,21°.41S×67°.30W,h247km±11km,ML4.3*
*SCB **31** 12:55:42.3±1.8,21°.49S×66°.74W,h197km±18km,ML3.5/1, Error ellipse: s-maj=6.2km s-min=5.3km az=0.0*

ISC 31 12:55:39.0±0.7,21°.51S±0°.04×66°.74W±0°.04,h215km±6km, n95,σ1970/141,mb4.0/9,2C-7D,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HJA	**Humahuaca**	**2.10**	**144**	*i* P		**Pn**	**12 56 22.6**	**+2.6**
HJA				*i* S		**S**	**12 56 55.2**	**+3.4**
LVC	**Limon Verde**	**2.29**	**241**	P		**Pn**	**12 56 23.3**	**+1.3**
	6.9nm,0.3s,baz=55,slow=7.5,SNR=21							
LVC				S		**S**	**12 56 55.8**	**+0.5**
	42nm,0.3s,baz=238,slow=21,SNR=50							
LVC	**Limon Verde**	**2.29**	**241**			**Pn**	**12 56 22.8**	**+0.8**
LVC						**S**	**12 56 56.4**	**+1.1**
LVC	**Limon Verde**	**2.29**	**241**	*i* P		**Pn**	**12 56 23.2**	**+1.1**
LVC				*i* S		**S**	**12 56 55.7**	**+0.5**
PB09	**IPOC Station P**	**2.34**	**262**	*e*P		**Pn**	**12 56 23.1**	**+0.7**
PB09				*e*S		**S**	**12 56 56.4**	**+0.5**
PB09	**IPOC Station P**	**2.34**	**262**	*i* S		**S**	**12 56 57.6**	**+1.7**
PB01	**IPOC Station P**	**2.60**	**280**	*e*P		**Pn**	**12 56 25.9**	**+0.7**
PB01				*e*S		**S**	**12 57 00.2**	**-0.5**
PB01				IAML			12 57 01.5	
	comp=E,450nm,0.2s							
PB01	**IPOC Station P**	**2.60**	**280**	P		**Pn**	**12 56 25.6**	**+0.5**
PB01				S		**S**	**12 56 58.3**	**-2.4**
PB01	**IPOC Station P**	**2.60**	**280**			**Pn**	**12 56 25.4**	**+0.3**
PB01				S		**S**	**12 57 00.6**	**-0.2**
PB01	**IPOC Station P**	**2.60**	**280**	*i* P		**Pn**	**12 56 25.8**	**+0.7**
PB01				*i* S		**S**	**12 57 00.3**	**-0.5**
PB01				IAML			12 57 03.5	
	comp=Z,247nm,0.2s							
PB08	**IPOC Station P**	**2.63**	**301**	⇓*i* P		**Pn**	**12 56 26.8**	**+1.0**
PB08				*e*S		**S**	**12 57 01.8**	**-0.1**
PB08	**IPOC Station P**	**2.63**	**301**	P		**Pn**	**12 56 26.5**	**+0.7**
PB08	**IPOC Station P**	**2.63**	**301**	*i* P		**Pn**	**12 56 26.8**	**+1.0**
PB08				*i* S		**S**	**12 57 03.0**	**+1.1**
PB08				IAML			12 57 05.6	
	comp=Z,107nm,0.3s							
PB03	**IPOC Station P**	**2.85**	**259**	⇑*i* P		**Pn**	**12 56 28.7**	**+0.7**
PB03				*e*S		**S**	**12 57 04.4**	**-1.5**
PB03				IAML			12 57 06.0	
	comp=E,774nm,0.1s							
PB06	**IPOC Station P**	**2.88**	**245**	*e*P		**Pn**	**12 56 29.8**	**+1.5**
PB06				*e*S		**S**	**12 57 05.6**	**-0.9**
PB06				IAML			12 57 07.5	
	comp=E,440nm,0.2s							
PB06	**IPOC Station P**	**2.88**	**245**	P		**Pn**	**12 56 29.2**	**+0.9**
PB07	**IPOC Station P**	**2.93**	**265**	*e*P		**Pn**	**12 56 29.3**	**+0.4**
PB07				*e*S		**S**	**12 57 05.9**	**-1.6**
PB07				IAML			12 57 07.2	
	comp=N,683nm,0.1s							
PB07	**IPOC Station P**	**2.93**	**265**	*i* P		**Pn**	**12 56 29.5**	**+0.6**
PB07				*i* S		**S**	**12 57 06.1**	**-1.4**
PB07				IAML			12 57 10.0	
	comp=Z,302nm,0.3s							
GO01	**Chusmiza**	**2.94**	**308**	⇓*i* P		**Pn**	**12 56 29.7**	**+0.4**
GO01				*e*S		**S**	**12 57 09.0**	**+0.8**
GO01				IAML			12 57 16.5	
	comp=N,658nm,0.1s							
GO01	**Chusmiza**	**2.94**	**308**			**Pn**	**12 56 29.8**	**+0.6**
PB02	**IPOC Station P**	**2.94**	**273**	⇓*i* P		**Pn**	**12 56 29.3**	**+0.4**
PB02				*e*S		**S**	**12 57 05.7**	**-2.0**
PB02	**IPOC Station P**	**2.94**	**273**	P		**Pn**	**12 56 28.9**	**0.0**
PB02				S		**S**	**12 57 05.1**	**-2.6**
PB02	**IPOC Station P**	**2.94**	**273**	*i* P		**Pn**	**12 56 29.3**	**+0.4**
PB02				*i* S		**S**	**12 57 06.0**	**-1.6**
PB02				IAML			12 57 11.2	
	comp=Z,681nm,0.2s							
PB15	**IPOC Station P**	**3.04**	**236**	*e*P		**Pn**	**12 56 32.2**	**+2.1**
PB15				*e*S		**S**	**12 57 09.7**	**-0.1**
PB15	**IPOC Station P**	**3.04**	**236**	*i* P		**Pn**	**12 56 32.5**	**+2.3**
PB15				*i* S		**S**	**12 57 09.8**	**-0.1**
BS03	**Mojotorillo**	**3.11**	**46**	P		**Pn**	**12 56 31.6**	**+0.3**
BS03				S		**S**	**12 57 07.2**	**-4.6**
AZAP	**Zapla**	**3.12**	**151**	*i* P		**Pn**	**12 56 33.1**	**+2.1**
AZAP				*i* S		**S**	**12 57 13.9**	**+2.4**
ASTB	**Santa Barbara**	**3.22**	**139**	*i* P		**Pn**	**12 56 34.0**	**+1.8**
ASTB				*i* S		**S**	**12 57 14.9**	**+1.2**
PB11	**IPOC Station P**	**3.23**	**302**	⇓*i* P		**Pn**	**12 56 32.3**	**0.0**
PB11				*i* S		**S**	**12 57 11.9**	**-1.9**
PB11	**IPOC Station P**	**3.23**	**302**	P		**Pn**	**12 56 32.4**	**0.0**
PB11	**IPOC Station P**	**3.23**	**302**			**Pn**	**12 56 32.3**	**0.0**
PB11				S		**S**	**12 57 12.7**	**-1.1**
PB11	**IPOC Station P**	**3.23**	**302**	*i* P		**Pn**	**12 56 32.4**	**0.0**
PB11				*i* S		**S**	**12 57 11.8**	**-2.1**
PB11				IAML			12 57 14.6	
	comp=Z,340nm,0.1s							
PATCX	**Punta Patache**	**3.25**	**281**	⇓*i* P		**Pn**	**12 56 32.4**	**-0.1**
PATCX				*e*S		**S**	**12 57 11.7**	**-2.4**
PATCX				IAML			12 57 14.1	
	comp=E,662nm,0.3s							
PATCX	**Punta Patache**	**3.25**	**281**	*i* P		**Pn**	**12 56 32.5**	**-0.1**
PATCX				*i* S		**S**	**12 57 12.1**	**-2.0**
PATCX				IAML			12 57 13.8	
	comp=Z,199nm,0.3s							
PB04	**IPOC Station P**	**3.27**	**255**	*e*P		**Pn**	**12 56 33.1**	**+0.4**
PB04				*i* S		**S**	**12 57 12.2**	**-2.4**
PB04				IAML			12 57 14.8	
	comp=N,401nm,0.3s							
PB04	**IPOC Station P**	**3.27**	**255**	P		**Pn**	**12 56 33.0**	**+0.2**
PB04	**IPOC Station P**	**3.27**	**255**	Pn		**Pn**	**12 56 33.1**	**+0.4**
PB04				S		**S**	**12 57 12.5**	**-2.0**
BS06	**Camiri**	**3.35**	**65**	P		**Pn**	**12 56 34.8**	**+1.1**
SLA	**San Lorenzo**	**3.40**	**161**	P		**Pn**	**12 56 36.3**	**+2.0**
PB05	**IPOC Station P**	**3.47**	**247**	⇑*i* P		**Pn**	**12 56 35.7**	**+0.5**
PB05				*e*S		**S**	**12 57 16.0**	**-2.8**
PB05				IAML			12 57 19.7	
	comp=E,287nm,0.3s							
MNMC	**Minye Minye**	**3.57**	**311**	⇓*i* P		**Pn**	**12 56 37.0**	**+0.5**
MNMC				*e*S		**S**	**12 57 19.9**	**-1.4**
MNMC	**Minye Minye**	**3.57**	**311**	P		**Pn**	**12 56 37.5**	**+1.0**
MNMC				S		**S**	**12 57 18.4**	**-2.9**
MNMC	**Minye Minye**	**3.57**	**311**			**Pn**	**12 56 37.0**	**+0.5**
MNMCX	**Minye Minye**	**3.57**	**311**	*i* P		**Pn**	**12 56 37.1**	**+0.6**
MNMCX				*i* S		**S**	**12 57 20.7**	**-0.6**
MNMCX				IAML			12 57 22.7	
	comp=Z,386nm,0.2s							
PSGC	**Pisagua**	**3.69**	**300**	⇓*i* P		**Pn**	**12 56 36.6**	**-1.2**
PSGC				*i* S		**S**	**12 57 19.6**	**-4.0**
PSGC				IAML			12 57 22.4	
	comp=N,218nm,0.3s							
PSGC	**Pisagua**	**3.69**	**300**	P		**Pn**	**12 56 37.6**	**-0.2**
PSGC				S		**S**	**12 57 19.2**	**-4.4**
PSGCX	**Pisagua**	**3.69**	**300**	*i* P		**Pn**	**12 56 37.0**	**-0.8**
PSGCX				*i* S		**S**	**12 57 19.8**	**-3.8**
PSGCX				IAML			12 57 22.9	
	comp=Z,176nm,0.1s							
GO02	**Mina Guanaco**	**4.48**	**215**	Pn		**Pn**	**12 56 48.5**	**+0.8**
BBOJ	**La Paz, Jacaqu**	**4.71**	**343**	P		**Pn**	**12 56 53.2**	**+2.4**
BBOE	**La Paz, Chanca**	**4.81**	**346**	P		**Pn**	**12 56 54.2**	**+2.1**
BBOD	**La Paz, Gloria**	**5.15**	**340**	P		**Pn**	**12 56 58.1**	**+1.8**
LPAZ	**La Paz**	**5.36**	**346**	P		**Pn**	**12 56 59.9**	**+0.9**
	comp=Z,7.0nm,0.3s,baz=143,slow=7.9,SNR=74							
LPAZ				S		**S**	**12 58 01.9**	**0.0**
	comp=Z,0.5nm,0.3s,baz=339,slow=16,SNR=7.7							
LPAZ	**La Paz**	**5.36**	**346**	P		**Pn**	**12 57 00.6**	**+1.6**
LPAZ				S		**S**	**12 57 56.6**	**-5.3**
LPAZ				AML		AML	12 57 59.7	
	comp=Z,18nm,0.7s							
BBOB	**La Paz, Bander**	**5.50**	**346**	P		**Pn**	**12 57 01.6**	**+0.9**
GO03	**Copiap**	**6.84**	**207**			**Pn**	**12 57 16.2**	**-1.2**
SIV	**San Ignacio**	**7.68**	**45**	P		**Pn**	**12 57 27.2**	**-1.1**
	comp=Z,8.8nm,0.3s,baz=261,slow=8.5,SNR=211							

GO04	**Tololo Observa**	**9.37**	**202**	Pn		**Pn**		**12 57 48.7**	**-1.4**
GO04	**Tololo Observa**	**9.37**	**202**	*i* P		**Pn**		**12 57 48.2**	**-1.9**
GO04				*i* S		**S**		**12 59 30.3**	**-5.3**
AMOG	**MOGNA**	**9.52**	**189**	*i* P		**Pn**		**12 57 51.5**	**-0.5**
AMOG				*i* S		**S**		**12 59 32.6**	**-6.3**
RTLL	**Cerro Villicun**	**9.90**	**189**	*i* P		**Pn**		**12 57 56.5**	**-0.4**
RTLL				*i* S		**S**		**12 59 43.9**	**-4.0**
TCA	**Tanti**	**9.98**	**169**	*i* P		**Pn**		**12 57 57.7**	**-0.1**
TCA				*i* S		**S**		**12 59 45.3**	**-4.4**
CFA	**Coronel Fontan**	**10.15**	**187**	P		**Pn**		**12 57 59.2**	**-0.7**
	comp=Z,1.5nm,0.3s,baz=32,slow=16,SNR=26								
CFA	**Coronel Fontan**	**10.15**	**187**	*i* P		**Pn**		**12 57 59.0**	**-0.9**
RTLS	**Leocito**	**10.50**	**192**	*i* P		**Pn**		**12 58 04.7**	**0.0**
ACAN	**Cantantal**	**10.73**	**182**	*i* P		**Pn**		**12 58 06.6**	**-0.9**
ASAL	**Salagasta**	**11.20**	**189**	*i* P		**Pn**		**12 58 13.8**	**+0.4**
ARCO	**CERRO ARCO**	**11.46**	**189**	*i* P		**Pn**		**12 58 17.6**	**+0.8**
AAGR	**Agrelo**	**11.68**	**189**	*i* P		**Pn**		**12 58 19.9**	**+0.4**
ROC1	**El Roble**	**12.04**	**197**	Pn		**Pn**		**12 58 23.8**	**-0.4**
ROC1	**El Roble**	**12.04**	**197**	*i* P		**Pn**		**12 58 23.8**	**-0.4**
SAML	**Samuel**	**12.95**	**16**	Pn		**Pn**		**12 58 35.2**	**-0.3**
RFA	**San Rafael**	**13.30**	**186**	*i* P		**Pn**		**12 58 40.0**	**+0.2**
GO05	**Huala**	**14.20**	**198**			**Pn**		**12 58 50.6**	**-0.3**
PLCA	**Paso Flores**	**19.44**	**189**	P		**P**		**12 59 50.7**	**+1.3**
	comp=Z,0.1nm,0.3s,baz=39,slow=11,SNR=3.1								
PLCA	**Paso Flores**	**19.44**	**189**	P		**P**		**12 59 49.2**	**-0.2**
PLCA				IAmb		IAmb		12 59 57.4	
	comp=Z,5.4nm,1.2s								
RUSC	**La Rusia**	**27.93**	**346**	P		**P**		**13 01 09.8**	**-0.3**
SNAA	**Sanae**	**61.62**	**161**	P		**P**		**13 05 34.9**	**+1.3**
SNAA				IAmb		IAmb		13 05 43.0	
	comp=Z,3.7nm,1.3s								
CCM	**Cathedral Cave**	**63.56**	**339**	P		**P**		**13 05 46.4**	**-0.3**
CCM				IAmb		IAmb		13 05 59.9	
	comp=Z,5.5nm,1.2s								
DBIC	**Dimbokro**	**66.81**	**72**	P		**P**		**13 06 07.8**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=208,slow=8.1,SNR=3.6								
DBIC	**Dimbokro**	**66.81**	**72**	P		**P**		**13 06 07.0**	**-1.0**
QSPA	**South Pole Qui**	**68.69**	**180**	P		**P**		**13 06 20.9**	**+1.8**
QSPA				IAmb		IAmb		13 06 30.3	
	comp=Z,2.9nm,1.2s								
PDAR	**Pinedale Array**	**75.14**	**329**	P		**P**		**13 06 58.2**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=116,slow=8.2,SNR=4.4								
PDAR	**Pinedale Array**	**75.14**	**329**	P		**P**		**13 06 59.1**	**+1.3**
TOA0	**Torodi Ar. Sit**	**75.47**	**69**	P		**P**		**13 06 59.6**	**-0.4**
TOA0				IAmb		IAmb		13 07 00.4	
	comp=Z,3.5nm,0.6s								
TORD	**Torodi Ar. Bea**	**75.47**	**69**	P		**P**		**13 06 59.6**	**-0.3**
	comp=Z,2.7nm,0.5s,baz=258,slow=5.4,SNR=19								
TORD	**Torodi Ar. Bea**	**75.47**	**69**	P		**P**		**13 06 59.2**	**-0.7**
ULM	**Lac du Bonnet**	**75.95**	**341**	P		**P**		**13 07 01.9**	**-0.1**
	comp=Z,0.8nm,0.6s,baz=136,slow=5.1,SNR=3.2								
ULM	**Lac du Bonnet**	**75.95**	**341**	P		**P**		**13 07 01.7**	**-0.3**
YKA	**Yellowknife Ar**	**91.88**	**340**	P		**P**		**13 08 22.9**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=130,slow=4.5,SNR=16								
ASAR	**Alice Springs**	**130.80**	**205**	PKP		**PKiKP**		**13 14 25.9**	**-0.5**
	comp=Z,0.2nm,0.5s,baz=116,slow=2.2,SNR=2.7								
MAKZ	**Makanchi**	**144.25**	**38**			**PKPdf**		**13 14 49.1**	**-0.2**
MK31	**Makanchi Array**	**144.43**	**37**			**PKPdf**		**13 14 49.6**	**0.0**
MKAR	**Makanchi Array**	**144.43**	**37**	PKP		**PKPdf**		**13 14 49.6**	**0.0**
	comp=Z,1.5nm,0.6s,baz=316,slow=3.6,SNR=23								
SONM	**Songino Array**	**153.16**	**10**	PKPbc		**PKiKP**		**13 15 12.2**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=330,slow=1.0,SNR=9.0								
SONM	**Songino Array**	**153.16**	**10**	PKPdf		**PKPdf**		**13 15 02.7**	**-1.0**
SONM				PKPbc		**PKiKP**		**13 15 12.2**	**+0.8**
SONM				PKPab		**PKPab**		**13 15 24.7**	**+1.0**

*ATH **31** 12:55:41.6,38°.42N×20°.46E,h12km±1km,ML3.0/17,Error ellipse: s-maj=1.8km s-min=0.6km az=273.0*
*THE **31** 12:55:41.6,38°.42N×20°.42E,h0km±1km,ML3.2/9,Error ellipse: s-maj=1.5km s-min=0.3km az=276.0*

ISC 31 12:55:41.0±0.9,38°.40N±0°.02×20°.45E±0°.04,h16km±5km, n41,σ0°.46/66,Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VSK1	**VASILIKIADES**	**0.09**	**87**	P		**Pg**	**12 55 44.0**	**-0.3**
VSK1				S		**Sg**	**12 55 45.8**	**-0.6**
	35μm,0.2s							
FSK	**Fiskardo**	**0.10**	**57**	P		**Pb**	**12 55 44.1**	**-0.6**
FSK				S		**Sb**	**12 55 46.2**	**-0.9**
	20μm,0.3s							
FSK	**Fiskardo**	**0.10**	**57**	P		**Pb**	**12 55 44.2**	**-0.6**
FSK				S		**Sb**	**12 55 46.0**	**-1.2**
FSK				AML		AML	12 55 46.5	
	comp=E,53048μm,0.3s							
FSK				AML		AML	12 55 49.5	
	comp=N,24728μm,0.3s							
KEF1	**Kardakata, Kep**	**0.13**	**173**	P		**Pb**	**12 55 45.0**	**-0.1**
KEF1				S		**Sg**	**12 55 47.4**	**+0.4**
KEF4	**Livadi, Kephal**	**0.15**	**189**	P		**Pb**	**12 55 45.4**	**-0.1**
KEF4				S		**Sb**	**12 55 48.5**	**+0.1**
KEF3	**Kipouria, Keph**	**0.22**	**202**	P		**Pg**	**12 55 46.1**	**+0.1**
KEF3				S		**Sb**	**12 55 50.4**	**-0.1**
ARG2	**Argostoli**	**0.23**	**173**	P		**Pb**	**12 55 46.6**	**-0.2**
ARG2				S		**Sb**	**12 55 50.5**	**-0.2**
KEF2	**Argostoli. Kep**	**0.24**	**173**	P		**Pb**	**12 55 46.7**	**-0.4**
KEF2				S		**Sb**	**12 55 50.6**	**-0.4**
VLS	**Valsamata**	**0.25**	**154**	P		**Pb**	**12 55 46.9**	**-0.3**
VLS				S		**Sb**	**12 55 51.2**	**-0.2**
	comp=N,8μm,0.2s							
VLS	**Valsamata**	**0.25**	**154**	P		**Pb**	**12 55 47.0**	**-0.3**
VLS				S		**Sb**	**12 55 51.1**	**-0.3**
VLS				AML		AML	12 55 51.5	
	comp=E,20995μm,0.3s							
VLS				AML		AML	12 55 54.8	
	comp=N,12319μm,0.3s							
EVGI	**Lefkada island**	**0.27**	**36**	P		**Pg**	**12 55 47.2**	**+0.3**
EVGI				S		**Sg**	**12 55 51.3**	**+0.5**
EVGI	**Lefkada island**	**0.27**	**36**	P		**Pg**	**12 55 47.1**	**+0.3**
EVGI				S		**Sg**	**12 55 51.4**	**+0.5**
MGNA	**Meganis**	**0.37**	**46**	P		**Pg**	**12 55 48.4**	**-0.1**
MGNA				S		**Sg**	**12 55 54.2**	**+0.5**
MGNA				AML		AML	12 55 54.8	
	comp=N,7720μm,0.2s							
MGNA				AML		AML	12 55 55.2	
	comp=E,8736μm,0.1s							
KFL	**Anninata**	**0.40**	**138**	P		**Pb**	**12 55 49.6**	**-0.1**
KFL				S		**Sb**	**12 55 56.5**	**+0.9**
	comp=E,7μm,0.4s							
KFL	**Anninata**	**0.40**	**138**	P		**Pb**	**12 55 49.4**	**-0.3**
KFL				S		**Sb**	**12 55 55.2**	**-0.4**
KFL				AML		AML	12 55 56.8	
	comp=N,12602μm,0.4s							
KFL				AML		AML	12 55 58.5	
	comp=E,14435μm,0.3s							
LKD2	**Lefkada island**	**0.42**	**23**	P		**Pg**	**12 55 49.6**	**+0.1**
LKD2				S		**Sb**	**12 55 56.2**	**0.0**
	comp=E,2μm,0.5s							
LKD2	**Lefkada island**	**0.42**	**23**	P		**Pg**	**12 55 49.6**	**+0.1**
LKD2				S		**Sg**	**12 55 55.1**	**-0.1**
TSLK	**Tsoukalades, L**	**0.45**	**21**	P		**Pg**	**12 55 50.3**	**+0.2**
TSLK				S		**Sb**	**12 55 57.4**	**+0.3**
	comp=E,2μm,0.4s							
TSLK	**Tsoukalades, L**	**0.45**	**21**	P		**Pg**	**12 55 50.2**	**+0.1**
TSLK				S		**Sg**	**12 55 56.9**	**+0.7**
AST1	**Astakos**	**0.52**	**74**	P		**Pb**	**12 55 51.8**	**0.0**
AST1				S		**Sb**	**12 56 00.3**	**+1.2**
	comp=E,5μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.55**	**162**	P		**Pb**	**12 55 52.2**	**-0.2**
VLMS				S		**Sb**	**12 56 00.7**	**+0.6**
PDO	**Prodromos**	**0.60**	**71**	P		**Pb**	**12 55 53.4**	**+0.1**
PDO				S		**Sn**	**12 56 03.1**	**-1.4**
PDO	**Prodromos**	**0.60**	**71**	P		**Pb**	**12 55 53.3**	**0.0**
PDO				S		**Sb**	**12 56 02.0**	**+0.3**
PDO				AML		AML	12 56 09.9	
	comp=E,4368μm,0.4s							
PDO				AML		AML	12 56 10.3	
	comp=N,3925μm,0.3s							
KRI1	**kERI**	**0.80**	**159**	P		**Pg**	**12 55 56.7**	**+0.2**
KRI1				S		**Sn**	**12 56 09.4**	**+0.2**
	comp=N,4μm,0.2s							
PVO	**Paravola**	**0.87**	**76**	P		**Pn**	**12 55 58.5**	**-0.2**
PVO				S		**Sn**	**12 56 11.8**	**+0.8**
	comp=N,1μm,0.4s							
PVO	**Paravola**	**0.87**	**76**	P		**Pn**	**12 55 58.5**	**-0.2**
PVO				AML		AML	12 56 17.6	
	comp=N,2291μm,0.5s							
PVO				AML		AML	12 56 19.0	
	comp=E,1964μm,0.4s							
RLS	**Riolos of Patr**	**0.87**	**113**	P		**Pg**	**12 55 58.1**	**+0.2**
RLS				AML		AML	12 56 17.3	
	comp=N,934μm,0.5s							
RLS				AML		AML	12 56 23.5	
	comp=E,688μm,0.6s							
DRO	**Drossia**	**1.09**	**114**	P		**Pg**	**12 56 02.2**	**+0.1**
DRO	**Drossia**	**1.09**	**114**	P		**Pg**	**12 56 02.0**	**-0.1**
DRO				AML		AML	12 56 25.4	
	comp=E,2384μm,0.3s							
DRO				AML		AML	12 56 31.3	
	comp=N,2010μm,0.5s							
EFP	**Efpalio**	**1.14**	**88**	P		**Pb**	**12 56 02.7**	**+0.3**
EFP				AML		AML	12 56 26.5	
	comp=E,2204μm,0.5s							
EFP				AML		AML	12 56 28.9	
	comp=N,2157μm,0.7s							
ANX	**Ano Chora**	**1.17**	**80**	P		**Pg**	**12 56 03.6**	**0.0**
ANX				AML		AML	12 56 30.9	
	comp=N,2011μm,0.5s							
ANX				AML		AML	12 56 32.2	
	comp=E,1500μm,0.5s							
EVR	**Evrytania**	**1.18**	**64**	P		**Pg**	**12 56 03.7**	**-0.1**
EVR				AML		AML	12 56 30.9	
	comp=N,721μm,0.6s							
EVR				AML		AML	12 56 35.0	
	comp=E,705μm,0.6s							
LAKA	**Lakka**	**1.21**	**97**	P		**Pb**	**12 56 03.8**	**+0.2**
LAKA				AML		AML	12 56 30.6	
	comp=N,728μm,0.6s							
LAKA				AML		AML	12 56 30.6	
	comp=E,801μm,0.7s							
SERG	**Sergoula**	**1.26**	**89**	P		**Pg**	**12 56 05.7**	**+0.4**
SERG				AML		AML	12 56 32.4	
	comp=N,2009μm,0.5s							
SERG				AML		AML	12 56 32.7	
	comp=E,1107μm,0.6s							
TRIZ	**Trizonia**	**1.27**	**91**	P		**Pb**	**12 56 04.9**	**+0.2**
KALE	**Kalithea**	**1.33**	**90**	P		**Pb**	**12 56 05.8**	**+0.2**
KALE				AML		AML	12 56 33.6	
	comp=N,1399μm,0.8s							
KALE				AML		AML	12 56 33.9	
	comp=E,709μm,0.5s							
KLV	**Kalavryta, Ach**	**1.39**	**105**	P		**Pb**	**12 56 06.7**	**+0.1**
KLV				AML		AML	12 56 37.3	
	comp=E,336μm,0.7s							
KLV				AML		AML	12 56 39.4	
	comp=N,288μm,0.5s							
MAKR	**Makrakomi, Fth**	**1.45**	**65**	P		**Pb**	**12 56 08.4**	**+0.7**
MAKR				AML		AML	12 56 37.7	
	comp=E,912μm,0.9s							
MAKR				AML		AML	12 56 43.1	
	comp=N,750μm,0.6s							
AGG	**Agios Georgios**	**1.59**	**67**	P		**Pg**	**12 56 11.5**	**-0.1**
THL	**Klokotos Trika**	**1.68**	**46**	P		**Pg**	**12 56 12.9**	**-0.4**
THL				AML		AML	12 56 42.9	
	comp=E,378μm,0.5s							
THL				AML		AML	12 56 44.9	
	comp=N,345μm,0.8s							
VLX	**Vlachokerasia**	**1.84**	**124**	P		**Pg**	**12 56 16.3**	**-0.1**

IDC 31 13:07:36.3±1.8,1°.14N×126°.60E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.4/36,mbtmp3.6/4,MS3.1/1,Ms1 3.1/1, ms1mx2.3/30,Error ellipse: s-maj=190.2km s-min=20.9km az=66.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.28**	**160**	P		P	13 12 34.8	-0.6
	1.7nm,0.3s,baz=339,slow=11,SNR=20							
ASAR	**Alice Springs**	**25.66**	**164**	P		P	13 13 08.5	+0.4
	1.3nm,0.5s,baz=344,slow=12,SNR=14							
KRVT	**Keravat (AS076**	**25.98**	**102**	LR		LR	13 22 03.4	
	comp=Z,45nm,19.7s,baz=102,slow=33							
MKAR	**Makanchi Array**	**59.61**	**326**	P		P	13 17 42.2	0.0
	0.1nm,0.4s,baz=118,slow=7.9,SNR=5.4							
KURBB	**Kurchatov Arra**	**63.85**	**328**	P		P	13 18 10.5	-0.1
	0.2nm,0.4s,baz=129,slow=6.7,SNR=3.4							

*ATH **31** 13:19:48.1,38°.42N×20°.47E,h9km±2km,ML2.8/8,Error ellipse: s-maj=2.2km s-min=0.6km az=115.0*
*THE **31** 13:19:48.8,38°.42N×20

*NORS **31** 13:22:22.4±0.0,43°.30N×44°.17E,h12km,MPVA3.7*
ISC 31 13:22:23.8±0.8,**43°.32N**±0°.02×**44°.18E**±0°.02,**h14**km±5km,
n31,σ**0°.78**/57,**Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STDR	**Stavd-Durt**	**0.09**	**300**	*e*Pg	**Pg**	**13 22 26.1**	**-0.8**
STDR				*e*Sg	**Sg**	**13 22 29.8**	**+0.8**
ARNR	**Ardon**	**0.16**	**151**	*e*Pg	**Pg**	**13 22 26.7**	**-1.1**
ARNR				*e*Sg	**Sg**	**13 22 30.6**	**+0.1**
KORR	**Kora**	**0.25**	**199**	*e*Pg	**Pg**	**13 22 29.2**	**+0.1**
KORR				*e*Sg	**Sg**	**13 22 34.3**	**+1.5**
LSNR	**Lesken**	**0.26**	**260**	*e*Pg	**Pb**	**13 22 29.4**	**-0.8**
LSNR				*e*Sg	**Sb**	**13 22 35.5**	**+0.9**
PRTR	**Priterechnaya**	**0.44**	**10**	*e*Pg	**Pb**	**13 22 32.7**	**-0.6**
PRTR				*e*Sg	**Sb**	**13 22 41.0**	**+1.4**
NCK	**Nalchik**	**0.46**	**292**	*e*Pg	**Pb**	**13 22 34.1**	**+0.5**
VLKR	**Vladikavkaz**	**0.46**	**127**	*e*Pg	**Pb**	**13 22 33.8**	**+0.1**
VLKR				*e*Pg	**Pb**	**13 22 33.8**	**+0.1**
VLKR				*e*Sg	**Sb**	**13 22 40.8**	**+0.5**
VLKR				*e*Sg	**Sb**	**13 22 40.8**	**+0.5**
KMGR	**Komgaron**	**0.57**	**117**	*e*Pg	**Pg**	**13 22 34.5**	**-0.5**
KMGR				*e*Sg	**Sb**	**13 22 44.4**	**+0.9**
TRKR	**Terskaya**	**0.57**	**45**	*e*Pg	**Pb**	**13 22 35.2**	**-0.3**
TRKR				*e*Sg	**Sn**	**13 22 45.5**	**-1.2**
ZEI	**Tsey**	**0.57**	**201**	*e*Pg	**Pb**	**13 22 34.9**	**-0.8**
ZEI				*e*Sg	**Sb**	**13 22 43.7**	**0.0**
DIGR	**Digorskoe uzhe**	**0.61**	**226**	*e*Pg	**Pb**	**13 22 35.6**	**-0.7**
DIGR				*e*Sg	**Sb**	**13 22 44.8**	**0.0**
KBTC	**Kuba-Taba**	**0.74**	**312**	*e*Pg	**Pb**	**13 22 38.3**	**-0.2**
KBTC				*e*Sg	**Sn**	**13 22 50.9**	**-0.2**
GUDG	**Gudauri**	**0.89**	**165**	P	**Pg**	**13 22 40.1**	**-0.8**
GUDG				S	**Sn**	**13 22 54.0**	**-0.7**
GUDG	**Gudauri**	**0.89**	**165**	*e*Pg	**Pg**	**13 22 39.7**	**-1.3**
GUDG				*e*Sg	**Sn**	**13 22 54.0**	**-0.7**
ONI	**Oni**	**0.90**	**216**	P	**Pb**	**13 22 41.0**	**-0.2**
ONI				S	**Sn**	**13 22 54.4**	**-0.5**
ONI	**Oni**	**0.90**	**216**	*e*Pg	**Pb**	**13 22 41.0**	**-0.2**
ONI				*e*Sg	**Sn**	**13 22 54.9**	**0.0**
NEY	**Neytrino**	**1.06**	**267**	*e*Pg	**Pg**	**13 22 43.3**	**-1.0**
NEY				*e*Sg	**Sn**	**13 22 58.8**	**-0.3**
PYA1	**Pyatigorsk**	**1.08**	**314**	*i* Pg	**Pg**	**13 22 43.6**	**-1.0**
PYA1				*i* Sg	**Sn**	**13 22 59.3**	**+0.1**
SHA1	**Shidzhatmaz**	**1.18**	**291**	*e*Pg	**Pb**	**13 22 45.9**	**-0.1**
SHA1				*e*Sg	**Sn**	**13 23 02.8**	**+0.7**
GROC	**Groznyy**	**1.19**	**95**	*e*Pg	**Pg**	**13 22 46.0**	**-0.7**
GROC				*e*Sg	**Sn**	**13 23 04.0**	**+2.1**
BEYR	**Belyy Ugol+**	**1.20**	**305**	*i* Pg	**Pb**	**13 22 45.9**	**-0.4**
BEYR				*i* Sg	**Sn**	**13 23 02.8**	**+0.5**
KIV0	**Kislovodsk Arr**	**1.25**	**301**	*i* Pg	**Pn**	**13 22 46.7**	**-0.2**
KIV0				*i* Sg	**Sn**	**13 23 04.6**	**+1.1**
KIV	**Kislovodsk**	**1.25**	**301**	*e*Pg	**Pn**	**13 22 46.9**	**0.0**
BTLR	**Botlikh**	**1.64**	**113**	*e*Pg	**Pn**	**13 22 52.4**	**+0.2**
BTLR				*e*Sg	**Sb**	**13 23 14.6**	**+0.3**
TRLG	**Trialeti**	**1.78**	**182**	P	**Pb**	**13 22 56.5**	**+0.2**
TRLG	**Trialeti**	**1.78**	**182**	*e*Pg	**Pb**	**13 22 56.5**	**+0.2**
GOF	**Gofitskoye**	**1.92**	**335**	*e*Pg	**Pg**	**13 23 00.2**	**-0.3**
GOF				*e*Sg	**Sg**	**13 23 24.1**	**-1.4**
DBC	**Dubki**	**1.96**	**98**	*e*Pg	**Pb**	**13 22 58.5**	**-0.9**
DBC				*e*Sg	**Sb**	**13 23 24.4**	**+0.6**
ARXR	**Arkhyz**	**2.13**	**277**	*e*Pg	**Pn**	**13 23 00.0**	**+1.0**
GNBR	**Gunib**	**2.25**	**114**	*e*Pn	**Pb**	**13 23 02.9**	**-1.3**
MAK	**Makhachkala**	**2.46**	**97**	*e*Pn	**Pn**	**13 23 04.5**	**+1.0**

*IDC **31** 13:45:25.0±0.9,31°.51N×90°.89E,h0km,mb3.5/9,*
mb1 3.7/11,mb1mx3.5/62,mbtmp3.5/11,ML3.6/2, Error ellipse: s-maj=35.1km s-min=18.2km az=62.0
ISC 31 13:45:30.2±0.8,**31°.61N**×0°.1×**90°.9E**±0°.2,**h35**km,**n11,**
σ**1°.06**/11,**mb3.7**/8,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**14.96**	**149**	Pn	**Pn**	**13 48 58.7**	**-0.5**
	0.1nm,0.3s,baz=326,slow=14,SNR=2.7						
MKAR	**Makanchi Array**	**16.57**	**339**	Pn	**Pn**	**13 49 17.3**	**-2.5**
	0.1nm,0.3s,baz=151,slow=12,SNR=6.8						
SONM	**Songino Array**	**20.09**	**32**	P	**P**	**13 50 01.3**	**+0.5**
	0.4nm,0.5s,baz=225,slow=12,SNR=3.6						
KURBB	**Kurchatov Arra**	**21.12**	**338**	P	**P**	**13 50 11.4**	**-0.4**
	0.3nm,0.6s,baz=147,slow=11,SNR=4.0						
ZALV	**Zalesovo Beam**	**22.78**	**351**	P	**P**	**13 50 29.7**	**+0.3**
	2.0nm,0.7s,baz=175,slow=12,SNR=5.2						
GERES	**GERESS Array B**	**58.91**	**311**	P	**P**	**13 55 27.0**	**+1.2**
	0.8nm,0.8s,baz=114,slow=6.5,SNR=4.2						
WRA	**Warramunga Arr**	**66.04**	**135**	P	**P**	**13 56 13.2**	**-0.5**
	0.7nm,0.9s,baz=327,slow=6.0,SNR=3.5						
ASAR	**Alice Springs**	**68.65**	**138**	P	**P**	**13 56 30.0**	**-0.1**
	0.4nm,0.5s,baz=321,slow=6.3,SNR=6.7						
ILAR	**Eielson Array**	**74.00**	**22**	P	**P**	**13 57 02.5**	**+0.6**
	0.5nm,0.8s,baz=286,slow=4.7,SNR=6.0						
TORD	**Torodi Ar. Bea**	**82.55**	**281**	P	**P**	**13 57 50.1**	**+0.2**
	0.6nm,0.6s,baz=59,slow=4.1,SNR=3.3						
YKA	**Yellowknife Ar**	**84.04**	**12**	P	**P**	**13 57 57.1**	**+0.3**
	0.2nm,0.8s,baz=327,slow=5.2,SNR=3.6						

IDC 31 13:46:49.8±1.8,**7°.49S**×**130°.81E**,**h0**km,**mb3.8**/2,
mb1 3.7/4,**mb1mx3.3**/38,**mbtmp3.5**/4,**ML3.0**/2,**Error ellipse: s-maj=93.5km s-min=24.3km az=69.0,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**12.84**	**165**	Pn	Pn	13 49 53.9	0.0
	0.1nm,0.3s,baz=344,slow=14,SNR=10.0						
WRA				Sn	Sn	13 52 20.5	+2.9
	0.6nm,0.3s,baz=350,slow=26,SNR=7.9						
ASAR	**Alice Springs**	**16.36**	**170**	Pn	Pn	13 50 40.8	-0.3
	0.1nm,0.3s,baz=355,slow=14,SNR=5.4						
ASAR				Sn	Sn	13 53 46.2	+3.0
	0.1nm,0.3s,baz=359,slow=27,SNR=5.6						
STKA	**Stephens Creek**	**26.26**	**159**	P	P	13 52 26.6	-0.3
	2.7nm,1.1s,baz=333,slow=16,SNR=2.2						
MKAR	**Makanchi Array**	**69.07**	**327**	P	P	13 57 57.9	+0.2
	0.3nm,0.6s,baz=137,slow=7.8,SNR=3.9						

*NEIC **31** 13:48:21.9±1.6,17°.87S±0°.10×69°.7W±0°.2,h150km±8km,*
Error ellipse: s-maj=28.2km s-min=9.6km az=111.0
*IDC **31** 13:48:22.9±1.5,17°.89S×69°.24W,h139km±9km,mb3.7/4,*
mb1 3.9/6,mb1mx3.4/47,mbtmp4.3/6,Error ellipse: s-maj=32.9km s-min=9.6km az=103.0
*GUC **31** 13:48:23.1±0.4,18°.07S×69°.66W,h149km±4km,ML3.8*
ISC 31 13:48:21.7±0.9,**17°.82S**±0°.05×**69°.6W**±0°.1,**h142**km±7km,
n38,σ**1°.42**/50,**mb4.4**/7,**1C-9D**,**Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	**Minye Minye**	**1.30**	**180**	⇓*i*P	**Pn**	**13 48 49.5**	**+0.6**
MNMC				*i* S	**Sn**	**13 49 09.9**	**+0.2**
MNMC				IAML		13 49 13.8	
	comp=E,2μm,0.2s						
MNMC	**Minye Minye**	**1.30**	**180**		**Pn**	**13 48 49.7**	**+0.7**
MNMC				Sn	**Sn**	**13 49 10.3**	**+0.6**
PSGC	**Pisagua**	**1.84**	**196**	⇓*i*P	**Pn**	**13 48 54.6**	**0.0**
PSGC				*i* S	**Sn**	**13 49 18.7**	**-1.1**
GO01	**Chusmiza**	**1.88**	**169**	⇓*i*P	**Pn**	**13 48 56.5**	**+1.1**
GO01				*i* S	**Sn**	**13 49 22.4**	**+1.2**
GO01	**Chusmiza**	**1.88**	**169**		**Pn**	**13 48 56.5**	**+1.1**
PB11	**IPOC Station P**	**1.93**	**182**	⇓*i*P	**Pn**	**13 48 55.9**	**+0.2**
PB11				*i* S	**Sn**	**13 49 21.5**	**-0.3**
PB11	**IPOC Station P**	**1.93**	**182**		**Pn**	**13 48 56.0**	**+0.2**
PB11				Sn	**Sn**	**13 49 22.3**	**+0.5**
LPAZ	**La Paz**	**2.06**	**43**	⇓*i*P	**Pn**	**13 48 57.9**	**+0.2**
LPAZ				*i* S	**Sn**	**13 49 23.4**	**-1.9**
LPAZ	**La Paz**	**2.06**	**43**	P	**Pn**	**13 48 58.0**	**+0.2**
	comp=E,31nm,0.3s,baz=242,slow=6.7,SNR=352						
LPAZ				S	**Sn**	**13 49 23.3**	**-1.9**
	comp=E,8.9nm,0.3s,baz=91,slow=22,SNR=8.3						
LPAZ	**La Paz**	**2.06**	**43**	Pn	**Pn**	**13 48 58.0**	**+0.2**
PB08	**IPOC Station P**	**2.34**	**170**	⇓*i*P	**Pn**	**13 49 01.9**	**+1.0**
PB08				*i* S	**Sn**	**13 49 31.8**	**+0.7**
PB08				IAML		13 49 34.5	
	comp=E,428nm,0.2s						
PB01	**IPOC Station P**	**3.21**	**178**	⇓*i*P	**Pn**	**13 49 11.8**	**+0.2**
PB01				*i* S	**Sn**	**13 49 48.4**	**-1.7**
PB01				IAML		13 49 53.9	
	comp=N,294nm,0.2s						
PB01	**IPOC Station P**	**3.21**	**178**		**Pn**	**13 49 11.7**	**+0.2**
PB01				Sn	**Sn**	**13 49 48.5**	**-1.6**
PB07	**IPOC Station P**	**3.90**	**184**	⇓*i*P	**Pn**	**13 49 20.5**	**-0.1**
PB09	**IPOC Station P**	**3.97**	**175**	*e*P	**Pn**	**13 49 22.2**	**+0.7**
PB09				*i* S	**Sn**	**13 50 06.7**	**-1.2**
PB03	**IPOC Station P**	**4.21**	**182**	⇓*i*P	**Pn**	**13 49 24.5**	**-0.2**
PB04	**IPOC Station P**	**4.52**	**187**	*e*P	**Pn**	**13 49 28.4**	**-0.4**
PB04	**IPOC Station P**	**4.52**	**187**		**Pn**	**13 49 28.6**	**-0.3**
LVC	**Limon Verde**	**4.81**	**173**	P	**Pn**	**13 49 33.6**	**+0.8**
	comp=N,16nm,0.3s,baz=356,slow=7.7,SNR=42						
LVC				S	**Sn**	**13 50 25.9**	**-2.2**
	comp=N,12nm,0.3s,baz=54,slow=21,SNR=14						
PB06	**IPOC Station P**	**4.86**	**180**	⇓*i*P	**Pn**	**13 49 32.9**	**-0.4**
GO02	**Mina Guanaco**	**7.31**	**180**		**Pn**	**13 50 04.3**	**-1.8**
SIV	**San Ignacio**	**8.35**	**79**	P	**Pn**	**13 50 16.6**	**-3.3**
	comp=N,7.3nm,0.3s,baz=284,slow=9.4,SNR=82						
GO03	**Copiap**	**9.75**	**183**	Pn	Pn	13 50 33.5	-5.0
GO04	**Tololo Observa**	**12.35**	**185**	Pn	**Pn**	**13 51 09.5**	**-3.5**
BDFB	**Brasilia**	**20.77**	**87**	P	**P**	**13 52 53.5**	**+1.7**
	comp=N,7.9nm,0.4s,baz=262,slow=9.1,SNR=8.6						
BDFB	**Brasilia**	**20.77**	**87**	P	**P**	**13 52 52.9**	**+1.1**
BDFB				IAmb	IAmb	13 52 54.1	
	comp=Z,6.9nm,0.5s						
PLCA	**Paso Flores**	**22.85**	**182**	P	**P**	**13 53 15.2**	**+2.3**
	comp=Z,2.1nm,0.8s,baz=21,slow=13,SNR=5.9						
PLCA	**Paso Flores**	**22.85**	**182**	P	**P**	**13 53 10.0**	**-2.8**
GO09	**Cerro Castillo**	**33.45**	**183**	P	**P**	**13 54 45.6**	**-1.4**
RCBR	**Riachuelo**	**34.98**	**74**	P	**P**	**13 55 04.2**	**+3.5**
RCBR				IAmb	IAmb	13 55 22.9	
	comp=Z,7.3nm,1.0s						
LIC	**Lamto**	**68.03**	**75**	*e*P	**P**	**13 59 04.5**	**-1.9**
	comp=Z,3.5nm,0.4s						
TIC	**Toumodi**	**68.19**	**75**	*e*P	**P**	**13 59 06.8**	**-0.6**
KIC	**Kosan Boka**	**68.34**	**75**	*e*P	**P**	**13 59 07.8**	**-0.5**
	comp=Z,2.1nm,0.2s						
DBIC	**Dimbokro**	**68.35**	**75**	P	**P**	**13 59 08.1**	**-0.3**
	comp=Z,4.1nm,0.6s,baz=239,slow=8.0,SNR=8.6						
DBIC	**Dimbokro**	**68.35**	**75**	IAmb	IAmb	13 59 08.8	
	comp=Z,5.1nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.76**	**71**	P	**P**	**13 59 57.8**	**-0.3**
	comp=Z,2.5nm,0.5s,baz=253,slow=5.8,SNR=22						
YKA	**Yellowknife Ar**	**87.52**	**341**	P	**P**	**14 00 54.2**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=134,slow=4.8,SNR=10						
YKA				pP	**pP**	**14 01 30.5**	**0.0**
	comp=Z,0.5nm,0.9s,baz=136,slow=4.8,SNR=5.6						
SONM	**Songino Array**	**149.88**	**5**	PKPbc	**PKiKP**	**14 07 57.3**	**+1.0**
	comp=Z,0.1nm,0.4s,baz=323,slow=3.5,SNR=3.6						

*IDC **31** 13:54:30.9±1.1,5°.51S×147°.32E,h192km±11km,mb3.4/6,*
mb1 3.7/13,mb1mx3.4/42,mbtmp4.2/13,Error ellipse: s-maj=17.7km s-min=10.7km az=109.0
*NEIC **31** 13:54:32.6±2.3,5°.51S±0°.07×147°.3E±0°.1,h203km±9km,*
mb4.4/16,Error ellipse: s-maj=18.6km s-min=10.2km az=92.0
ISC 31 13:54:31.8±0.6,**5°.50S**±0°.06×**147°.31E**±0°.08,**h200**km,**n36,**
σ**1°.27**/39,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANU	**Manus Island**	**3.44**	**1**		**Pn**	**13 55 28.9**	**+2.2**
PMG	**Port Moresby**	**3.88**	**182**	P	**Pn**	**13 55 32.2**	**0.0**
	47nm,0.3s,baz=326,slow=6.8,SNR=195						
PMG				S	**Sn**	**13 56 16.1**	**-3.5**
	22nm,0.3s,baz=201,slow=21,SNR=8.5						
PMG	**Port Moresby**	**3.88**	**182**		**Pn**	**13 55 32.2**	**0.0**
PMG				Sn	**Sn**	**13 56 18.5**	**-1.1**
KRVT	**Keravat (AS076**	**4.85**	**76**	P	**Pn**	**13 55 42.8**	**-1.6**
	9.9nm,0.3s,baz=230,slow=4.5,SNR=5.9						
JAY	**Jayapura**	**7.23**	**294**	P	**Pn**	**13 56 14.0**	**-1.1**
	1.9nm,0.3s,baz=168,slow=4.1,SNR=28						
COEN	**Coen**	**9.34**	**206**	Pn	**Pn**	**13 56 44.5**	**+1.9**
HNR	**Honiara**	**13.12**	**108**	P	**Pn**	**13 57 32.0**	**+1.1**
	3.3nm,0.3s,baz=258,slow=14,SNR=3.7						
CTA	**Charters Tower**	**14.54**	**184**	P	**Pn**	**13 57 49.7**	**+1.2**
	0.6nm,0.3s,baz=354,slow=13,SNR=9.3						
SIJI	**Sorong**	**16.66**	**285**	P	**P**	**13 58 12.8**	**-0.4**
	0.7nm,0.3s,baz=233,slow=20,SNR=2.9						
MTN	**Manton Dam**	**17.55**	**244**	P	**P**	**13 58 23.2**	**+0.4**
WB0	**Warramunga Arr**	**18.95**	**220**	P	**P**	**13 58 38.5**	**+0.4**
WB0				IAmb	IAmb	13 58 42.7	
	comp=Z,5.7nm,0.7s						
WR0	**Warramunga Arr**	**18.99**	**220**	P	**P**	**13 58 39.1**	**+0.5**
WR0				IAmb	IAmb	13 58 40.3	
	comp=Z,9.7nm,1.1s						
WRAB	**Tennant Creek**	**19.10**	**220**	P	**P**	**13 58 40.1**	**+0.5**
WRAB				IAmb	IAmb	13 58 44.2	
	comp=Z,10nm,1.1s						
WB2	**Warramunga Arr**	**19.10**	**220**	P	**P**	**13 58 40.4**	**+0.6**
WB2				IAmb	IAmb	13 58 44.3	
	comp=Z,10.0nm,1.1s						
WRA	**Warramunga Arr**	**19.11**	**220**	P	**P**	**13 58 40.4**	**+0.5**
	comp=Z,1.7nm,0.3s,baz=48,slow=12,SNR=49						
WRA				S	**S**	**14 02 03.5**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=40,slow=21,SNR=5.1						
WRA	**Warramunga Arr**	**19.11**	**220**	P	**P**	**13 58 38.8**	**-1.0**
EIDS	**Eidsvold**	**20.08**	**170**	P	**P**	**13 58 51.8**	**+1.7**
EIDS				IAmb	IAmb	13 58 55.2	
	comp=Z,22nm,1.2s						
KNRA	**Kununurra**	**20.82**	**240**	P	**P**	**13 58 59.5**	**+1.4**
AS31	**Alice Springs**	**22.20**	**214**	P	**P**	**13 59 13.1**	**+1.0**
ASAR	**Alice Springs**	**22.20**	**214**	P	**P**	**13 59 12.8**	**+0.8**
	comp=Z,4.6nm,0.8s,baz=47,slow=8.6,SNR=43						
ASAR				S	**S**	**14 03 01.5**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=32,slow=16,SNR=4.9						
ASAR	**Alice Springs**	**22.20**	**214**	P	**P**	**13 59 12.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**24.59**	**238**	P	**P**	**13 59 34.6**	**+0.8**
	comp=Z,5.5nm,0.5s,baz=49,slow=12,SNR=19						
FITZ	**Fitzroy Crossi**	**24.59**	**238**	P	**P**	**13 59 35.8**	**+2.1**
FITZ				IAmb	IAmb	13 59 54.7	
	comp=Z,21nm,1.4s						
ARMA	**Armidale**	**25.12**	**171**	P	**P**	**13 59 40.4**	**+1.9**
STKA	**Stephens Creek**	**26.78**	**191**	P	**P**	**13 59 53.7**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=62,slow=8.1,SNR=3.9						
STKA	**Stephens Creek**	**26.78**	**191**	P	**P**	**13 59 52.7**	**-0.6**
BBOO	**Buckleboo**	**29.13**	**200**	P	**P**	**14 00 14.5**	**+0.3**
BBOO				IAmb	IAmb	14 00 28.6	
	comp=Z,15nm,1.4s						
CAN	**Canberra**	**29.71**	**177**	P	**P**	**14 00 19.1**	**-0.3**
CAN				IAmb	IAmb	14 00 32.6	
	comp=Z,21nm,1.5s						
FORT	**Forrest**	**30.98**	**213**	P	**P**	**14 00 31.1**	**+0.6**
SONM	**Songino Array**	**64.12**	**331**	P	**P**	**14 04 45.3**	**+0.4**
	comp=Z,0.2nm,0.4s,baz=92,slow=4.3,SNR=3.2						
SONM	**Songino Array**	**64.12**	**331**	IAmb	IAmb	14 04 47.2	
	comp=Z,0.9nm,1.1s						
ZALV	**Zalesovo Beam**	**78.76**	**328**	P	**P**	**14 06 10.4**	**-1.7**
	comp=Z,0.4nm,0.4s,baz=123,slow=5.3,SNR=2.3						
ILAR	**Eielson Array**	**84.91**	**23**	P	**P**	**14 06 43.8**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=224,slow=5.0,SNR=2.6						
SIV	**San Ignacio**	**144.71**	**128**	PKP	**PKPab**	**14 13 44.9**	**-0.2**
	comp=Z,0.4nm,0.4s,baz=258,slow=5.9,SNR=3.7						
TORD	**Torodi Ar. Bea**	**145.26**	**285**	PKPbc	**PKPbc**	**14 13 47.6**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=57,slow=5.3,SNR=3.2						
DBIC	**Dimbokro**	**152.30**	**274**	PKPbc	**PKPbc**	**14 14 03.9**	**-1.1**
	comp=Z,3.7nm,0.9s,baz=90,slow=1.0,SNR=3.3						

*NIED **31** 13:55:00,37°.40N×142°.10E,h17km,Mw3.5 Best double couple: M0 2.06000×10^14 NP1:φ=84.00000°,δ62.00000°, λ=-64.00000°. NP2:φ=217.00000°,δ38.00000°, λ=-130.00000°.*
*IDC **31** 13:55:19.8±1.6,37°.34N×142°.20E,h0km,mb3.6/7,*
mb1 3.7/10,mb1mx3.5/51,mbtmp3.6/10,ML3.6/2,MS2.6/2,
Ms1 2.6/2,ms1mx2.2/45,Error ellipse: s-maj=37.4km s-min=19.0km az=146.0
*JMA **31** 13:55:22.0±0.1,37°.37N×142°.11E,h33km±3km,M3.8*
ISC 31 13:55:19.8±1.9,**37°.39N**±0°.04×**142°.15E**±0°.06,**h2**km±10km,
n32,σ**1°.46**/40,**mb3.7**/7,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.02**	**269**	P	**Pg**	**13 55 39.8**	**+0.5**
JFK				S	**Sg**	**13 55 51.9**	**-0.6**
JMST	**Minamisoumatoc**	**1.06**	**289**	P	**Pg**	**13 55 40.4**	**+0.3**
JMST				S	**Sg**	**13 55 53.5**	**-0.3**
JIKH	**Ishinomakikobu**	**1.07**	**330**	P	**Pg**	**13 55 40.8**	**+0.5**
JIKH				*e*S	**Sg**	**13 55 54.2**	**0.0**
ONAJ	**Iwakimizuishiy**	**1.12**	**256**	P	**Pg**	**13 55 41.1**	**-0.1**
ONAJ				*e*S	**Sg**	**13 55 54.9**	**-0.8**
JMM	**Marumori**	**1.18**	**294**	P	**Pb**	**13 55 42.4**	**-0.5**
JMM				*e*S	**Sb**	**13 55 56.9**	**-1.7**
JIO	**Ouri**	**1.24**	**329**	P	**Pn**	**13 55 43.4**	**-0.7**
JIO				S	**Sb**	**13 55 59.1**	**-1.2**
JFT	**Otama**	**1.45**	**276**	P	**Pn**	**13 55 47.0**	**0.0**
JFT				S	**Sn**	**13 56 04.6**	**-2.0**
JOU	**Okura**	**1.53**	**310**	P	**Pn**	**13 55 48.2**	**+0.1**
JOU				*e*S	**Sn**	**13 56 07.1**	**-1.5**
JMK	**Ichinoseki**	**1.73**	**335**	P	**Pn**	**13 55 50.9**	**+0.1**
JMK				*e*S	**Sn**	**13 56 11.7**	**-1.7**
JYS	**Shirataka**	**1.85**	**297**	S	**Sn**	**13 56 16.9**	**+0.4**
JFY	**Yanaizu**	**1.95**	**271**	P	**Pn**	**13 55 54.4**	**+0.5**
JFY				*e*S	**Sn**	**13 56 18.1**	**-0.8**
JYK	**Kaneyama**	**2.08**	**318**	P	**Pn**	**13 55 56.0**	**+0.3**
JYK				*e*S	**Sn**	**13 56 20.5**	**-1.7**
JOM	**Ohasama**	**2.19**	**342**	P	**Pn**	**13 55 57.7**	**+0.5**
JOM				*e*S	**Sn**	**13 56 24.2**	**-0.6**
JYA	**Atsumi**	**2.27**	**303**	P	**Pn**	**13 55 59.1**	**+0.8**
MJAR	**Matsushiro Arr**	**3.27**	**256**	Pn	**Pn**	**13 56 14.2**	**+2.1**
	0.3nm,0.3s,baz=80,slow=16,SNR=18						
MJAR				Sn	**Sn**	**13 56 54.5**	**+2.9**
	0.6nm,0.3s,baz=85,slow=33,SNR=5.4						
MJAR				LR	LR	13 57 28.1	
	comp=Z,50nm,18.3s,baz=90,slow=39						
MAT	**Matsushiro**	**3.27**	**256**	P	**Pn**	**13 56 14.2**	**+2.1**
MAT				S	**Sn**	**13 56 54.4**	**+2.9**
JHJ	**Hachijo jima 2**	**4.68**	**205**	Pn	**Pn**	**13 56 30.6**	**-0.9**
	12nm,0.3s,baz=0.0,slow=20,SNR=6.0						
JHJ				Sn	**Sn**	**13 57 21.2**	**-5.0**
	18nm,0.3s,baz=73,slow=19,SNR=4.2						
ASAJ	**Asahikawa**	**6.73**	**3**	Pn	**Pn**	**13 57 00.9**	**+1.3**
	0.9nm,0.3s,baz=214,slow=12,SNR=17						
KLR	**Kul'dur**	**14.03**	**331**	LR	LR	14 04 18.1	
	comp=Z,38nm,18.5s,baz=250,slow=38						
SEY	**Seymchan**	**26.33**	**11**	P	**P**	**14 00 57.8**	**+1.1**
	0.7nm,0.5s,baz=188,slow=9.0,SNR=6.9						
H11N2	**WAKE ISLAND Hy**	**27.83**	**122**	T	T	14 30 21.6	
	baz=315,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	**27.84**	**122**	T	T	14 30 24.4	
	baz=315,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**27.85**	**122**	T	T	14 30 23.5	
	baz=315,slow=75,SNR=19						
SONM	**Songino Array**	**28.08**	**303**	P	**P**	**14 01 12.9**	**+0.1**
	1.3nm,1.0s,baz=103,slow=10.0,SNR=5.3						
H11S1	**WAKE ISLAND Hy**	**28.57**	**124**	T	T	14 31 16.4	
	baz=316,slow=76,SNR=18						
H11S3	**WAKE ISLAND Hy**	**28.57**	**124**	T	T	14 31 18.6	
	baz=316,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**28.58**	**124**	T	T	14 31 17.1	
	baz=316,slow=76,SNR=9.9						
ZALV	**Zalesovo Beam**	**42.11**	**312**	P	**P**	**14 03 13.3**	**+0.2**
	0.8nm,0.4s,baz=81,slow=7.1,SNR=3.7						
MKAR	**Makanchi Array**	**44.43**	**302**	P	**P**	**14 03 32.0**	**0.0**
	0.3nm,0.4s,baz=89,slow=9.8,SNR=4.1						
ILAR	**Eielson Array**	**48.88**	**33**	P	**P**	**14 04 07.0**	**+0.4**
	0.4nm,0.7s,baz=274,slow=5.6,SNR=5.1						
INK	**Inuvik**	**53.80**	**27**	P	**P**	**14 04 44.5**	**+1.1**
	0.5nm,0.6s,baz=293,slow=4.3,SNR=4.9						
YKA	**Yellowknife Ar**	**63.21**	**30**	P	**P**	**14 05 49.0**	**-0.1**
	0.3nm,0.7s,baz=301,slow=6.9,SNR=5.3						

ISC 31 14:12:03.8±1.9,**51°.42N**±0°.09×**16°.16E**±0°.

	baz=281							
NNS				*e*S	**Sb**	**14 14 10.0**	**+0.2**	
	baz=281							
HATJ	**Hateruma jima**	**1.17**	**84**	*e*S	**Sn**	**14 14 10.9**	**+0.8**	
WHF	**Hehuan Shan**	**1.17**	**281**	P	**Pn**	**14 13 54.7**	**-0.3**	
	baz=265							
WHF				*e*S	**Sb**	**14 14 10.0**	**-0.2**	
	baz=265							
TWB1	**Santiao Chiao**	**1.18**	**335**	*e*P	**Pn**	**14 13 54.7**	**0.0**	
	baz=349							
TWB1				*e*S	**Sn**	**14 14 10.4**	**+0.2**	
	baz=349							
EHY	**Hungye**	**1.18**	**249**	*e*P	**Pn**	**14 13 54.5**	**-0.3**	
	baz=247							
EHY				*e*S	**Sb**	**14 14 10.3**	**+0.2**	
	baz=247							
TIPB	**Shuangxi**	**1.22**	**328**	*e*P	**Pb**	**14 13 55.5**	**-0.1**	
	baz=326							
TIPB				*e*S	**Sn**	**14 14 11.6**	**+0.4**	
	baz=326							
OWD	**Renai**	**1.24**	**271**	*e*P	**Pn**	**14 13 55.7**	**0.0**	
	baz=268							
OWD				*e*S	**Sb**	**14 14 11.4**	**-0.3**	
	baz=268							
YULB	**Yu-li**	**1.25**	**245**	*e*P	**Pn**	**14 13 55.8**	**0.0**	
	baz=243							
YULB				*e*S	**Sb**	**14 14 11.5**	**-0.5**	
	baz=243							
NWLT	**Wulai**	**1.26**	**312**	*e*P	**Pn**	**14 13 56.1**	**+0.3**	
	baz=310							
TWF1	**Yuli**	**1.27**	**243**	*e*P	**Pn**	**14 13 55.9**	**-0.1**	
	baz=241							
TWF1				*e*S	**Sn**	**14 14 12.4**	**0.0**	
	baz=241							
TWT	**Tachien**	**1.28**	**285**	*e*S	**Sn**	**14 14 13.4**	**+0.4**	
	baz=269							
YHNB	**Yeheng**	**1.28**	**305**	*e*P	**Pn**	**14 13 56.4**	**+0.2**	
	baz=290							
YHNB				*e*S	**Sn**	**14 14 13.4**	**+0.5**	
	baz=290							
VWDT	**VWDT**	**1.28**	**262**	*e*P	**Pn**	**14 13 56.3**	**+0.2**	
	baz=260							
VWDT				*e*S	**Sn**	**14 14 12.5**	**-0.3**	
	baz=260							
TDCB	**Techi**	**1.29**	**285**	*e*P	**Pn**	**14 13 56.8**	**+0.4**	
	baz=269							
TDCB				*e*S	**Sn**	**14 14 13.3**	**+0.1**	
	baz=269							
NSK	**Sanguang**	**1.30**	**305**	*e*P	**Pn**	**14 13 56.5**	**+0.1**	
	baz=288							
NSK				*e*S	**Sb**	**14 14 14.3**	**+0.8**	
	baz=288							
NWF	**Wu-fen Shan**	**1.32**	**329**	*e*S	**Sb**	**14 14 14.0**	**-0.1**	
	baz=327							
WFSB	**Wu-fen Shan**	**1.32**	**329**	*e*S	**Sb**	**14 14 14.1**	**0.0**	
	baz=327							
FULB	**Fuli**	**1.35**	**237**	*e*P	**Pn**	**14 13 56.9**	**-0.2**	
	baz=224							
FULB				*e*S	**Sn**	**14 14 13.6**	**-0.8**	
	baz=224							
CHKT	**Chengkung**	**1.35**	**232**	*e*P	**Pn**	**14 13 56.6**	**-0.5**	
	baz=219							
TWA	**Mucha**	**1.35**	**321**	*e*P	**Pn**	**14 13 57.2**	**+0.1**	
	baz=318							
JKRS	**Kuro-shima**	**1.39**	**77**	P	**Pb**	**14 13 58.9**	**+0.3**	
JKRS				*e*S	**Sb**	**14 14 16.5**	**+0.6**	
TATO	**Taipei**	**1.41**	**318**	*e*P	**Pb**	**14 13 58.6**	**-0.2**	
	baz=316							
TATO				*e*S	**Sb**	**14 14 16.7**	**+0.2**	
	baz=316							
SSLB	**Suanglung**	**1.45**	**265**	*e*P	**Pn**	**14 13 59.1**	**+0.6**	
	baz=262							
SSLB				*e*S	**Sn**	**14 14 17.4**	**+0.4**	
	baz=262							
DPDB	**Guoxing**	**1.47**	**274**	*e*P	**Pn**	**14 13 59.3**	**+0.5**	
	baz=272							
WHP	**Taichung City**	**1.49**	**284**	*e*P	**Pb**	**14 14 00.4**	**+0.1**	
	baz=271							
YM04	**YM04**	**1.52**	**324**	*e*P	**Pn**	**14 13 59.4**	**+0.1**	
	baz=321							
TYC	**Yuchr**	**1.53**	**269**	*e*P	**Pn**	**14 14 00.2**	**+0.7**	
	baz=267							
TYC				*e*S	**Sn**	**14 14 19.2**	**+0.3**	
	baz=267							
JIJ	**Ishigaki jima**	**1.54**	**73**	P	**Pb**	**14 14 00.7**	**-0.4**	
JIJ				S	**Sb**	**14 14 20.7**	**+0.5**	
LIOB	**Emei**	**1.55**	**298**	*e*P	**Pb**	**14 14 01.3**	**-0.1**	
	baz=295							
WHYT	**Xinyi Township**	**1.55**	**262**	*e*P	**Pb**	**14 14 01.2**	**-0.2**	
	baz=260							
TWH	**Lutao**	**1.55**	**219**	*e*P	**Pn**	**14 13 59.5**	**-0.4**	
	baz=217							
TWH				*e*S	**Sn**	**14 14 18.2**	**-1.3**	
	baz=217							
NSTT	**Nanjuang**	**1.56**	**297**	*e*P	**Pb**	**14 14 01.4**	**-0.1**	
	baz=294							
NSTT				*e*S	**Sb**	**14 14 20.3**	**-0.5**	
	baz=294							
ELDTW	**Lidau**	**1.57**	**242**	*e*S	**Sn**	**14 14 19.5**	**-0.6**	
	baz=240							
ALS	**Alishan**	**1.63**	**255**	*e*P	**Pn**	**14 14 02.1**	**+0.9**	
	baz=253							
ALS				*e*S	**Sn**	**14 14 22.3**	**+0.4**	
	baz=253							
WJS	**Zhushan**	**1.65**	**267**	*e*P	**Pb**	**14 14 03.3**	**+0.2**	
	baz=264							
TWQ1	**Liyutan**	**1.66**	**285**	*e*P	**Pb**	**14 14 02.8**	**-0.4**	
	baz=282							
CHN5	**Tsauling**	**1.73**	**259**	*e*P	**Pn**	**14 14 03.5**	**+1.2**	
	baz=247							
CHN5				*e*S	**Sn**	**14 14 24.6**	**+0.7**	
	baz=247							
TWGBT	**Beinan**	**1.73**	**230**	*e*S	**Sn**	**14 14 23.7**	**-0.2**	
	baz=219							
TWG	**Pinlang**	**1.74**	**231**	*e*S	**Sn**	**14 14 23.6**	**-0.4**	
	baz=219							
JISG	**Ishigakijimahi**	**1.75**	**68**	P	**Pn**	**14 14 03.4**	**+0.8**	
STYT	**Tauyuan**	**1.80**	**245**	*e*S	**Sn**	**14 14 26.2**	**+0.6**	
	baz=234							
TPUB	**Ta-pu**	**1.85**	**251**	*e*P	**Pb**	**14 14 05.8**	**-0.7**	
	baz=239							
TPUB				*e*S	**Sb**	**14 14 29.2**	**-0.1**	
	baz=239							
CHN4	**Tsaushan**	**1.87**	**252**	*e*P	**Pb**	**14 14 05.9**	**-0.8**	
	baz=251							
WTP	**Ta-pu**	**1.89**	**249**	*e*P	**Pb**	**14 14 06.8**	**-0.3**	
	baz=237							
SGST	**Jiashian**	**1.98**	**245**	*e*S	**Sn**	**14 14 31.7**	**+1.7**	
	baz=234							
CHN1	**Nanshi**	**1.98**	**248**	*e*P	**Pb**	**14 14 08.3**	**-0.4**	
	baz=247							
CHN1				*e*S	**Sb**	**14 14 32.9**	**-0.1**	
	baz=247							
TWK	**Hsinying**	**1.99**	**251**	*e*P	**Pn**	**14 14 07.3**	**+1.4**	
	baz=249							
MASBT	**Mashibuluo**	**2.18**	**233**	*e*P	**Pn**	**14 14 09.4**	**+0.9**	
	baz=225							
MASBT				*e*S	**Sn**	**14 14 35.9**	**+0.9**	
	baz=225							

*ATH **31** 14:13:58.8, 38˚.20N×20˚.47E, h8km±1km, ML2.7/17, Error ellipse: s-maj=1.6km s-min=0.8km az=246.0*
*THE **31** 14:13:58.8, 38˚.18N×20˚.46E, h7km±1km, ML2.8/5, Error ellipse: s-maj=1.3km s-min=0.6km az=224.0*
ISC 31 14:13:58.4±0.9,**38˚19N**±0˚.03×**20˚47E**±0˚.03,**h8**km±5km, **n45**,σ**0**!**54**/64,**Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG2	**Argostoli**	**0.01**	**126**	P	**Pg**	**14 13 59.9**	**+0.1**
ARG2				S	**Sg**	**14 14 00.7**	**-0.1**
KEF2	**Argostoli. Kep**	**0.03**	**152**	P	**Pg**	**14 14 00.1**	**+0.2**
KEF2				S	**Sg**	**14 14 00.6**	**-0.3**
LXR1	**Lixouri, Cepha**	**0.03**	**297**	P	**Pg**	**14 14 00.1**	**+0.2**
LXR1				S	**Sg**	**14 14 01.3**	**+0.3**
CHV1	**Chavriata, Kef**	**0.07**	**267**	P	**Pg**	**14 14 00.8**	**+0.4**
CHV1				S	**Sg**	**14 14 02.3**	**+0.5**
KEF4	**Livadi, Kephal**	**0.08**	**332**	P	**Pg**	**14 14 00.7**	**+0.2**
KEF4				S	**Sg**	**14 14 02.2**	**+0.2**
KEF1	**Kardakata, Kep**	**0.09**	**359**	P	**Pg**	**14 14 00.7**	**+0.1**
KEF1				S	**Sg**	**14 14 02.3**	**+0.1**
VLS	**Valsamata**	**0.09**	**96**	P	**Pg**	**14 14 01.0**	**+0.3**
VLS				S	**Sg**	**14 14 03.0**	**+0.7**
	24µm,0.1s						
VLS	**Valsamata**	**0.09**	**96**	P	**Pg**	**14 14 01.1**	**+0.3**
VLS				S	**Sg**	**14 14 02.7**	**+0.4**
VLS	comp=N,48013µm,0.2s				AML	AML	14 14 03.1	
VLS					AML	AML	14 14 03.4	
	comp=E,43183µm,0.1s							
KEF3	**Kipouria, Keph**	**0.10**	**279**	P	**Pg**	**14 14 01.2**	**+0.4**
KEF3				S	**Sg**	**14 14 03.2**	**+0.8**
VSK1	**VASILIKIADES**	**0.23**	**18**	P	**Pg**	**14 14 03.5**	**+0.4**
KFL	**Anninata**	**0.26**	**107**	P	**Pg**	**14 14 04.3**	**+0.7**
KFL				S	**Sg**	**14 14 08.5**	**+1.4**
	comp=E,7µm,0.3s							
KFL	**Anninata**	**0.26**	**107**	P	**Pg**	**14 14 04.2**	**+0.5**
KFL				S	**Sg**	**14 14 08.0**	**+0.9**
KFL					AML	AML	14 14 10.4	
	comp=E,20779µm,0.4s							
KFL					AML	AML	14 14 10.4	
	comp=N,8198µm,0.4s							
FSK	**Fiskardo**	**0.28**	**15**	P	**Pg**	**14 14 04.2**	**+0.2**
FSK				S	**Sg**	**14 14 09.1**	**+1.3**
	comp=N,3µm,0.5s							
FSK	**Fiskardo**	**0.28**	**15**	P	**Pg**	**14 14 04.3**	**+0.3**
FSK				S	**Sg**	**14 14 08.6**	**+0.8**
FSK					AML	AML	14 14 10.4	
	comp=N,4661µm,0.4s							
FSK					AML	AML	14 14 12.8	
	comp=E,5676µm,0.6s							
VLMS	**Volimes, Zakyn**	**0.34**	**154**	P	**Pg**	**14 14 06.0**	**+0.8**
VLMS				S	**Sb**	**14 14 11.6**	**-0.8**
VLMS					AML	AML	14 14 13.6	
	comp=E,6899µm,0.1s							
VLMS					AML	AML	14 14 18.4	
	comp=N,7490µm,0.3s							
EVGI	**Lefkada island**	**0.46**	**18**	P	**Pg**	**14 14 07.4**	**+0.1**
EVGI				S	**Sb**	**14 14 15.2**	**-0.5**
EVGI	**Lefkada island**	**0.46**	**18**	P	**Pg**	**14 14 07.5**	**+0.1**
EVGI				S	**Sg**	**14 14 14.6**	**+1.2**
MGNA	**Meganis**	**0.53**	**28**	P	**Pg**	**14 14 08.6**	**-0.1**
MGNA					AML	AML	14 14 17.9	
	comp=E,1276µm,0.2s							
MGNA					AML	AML	14 14 21.3	
	comp=N,1628µm,0.3s							
AST1	**Astakos**	**0.60**	**54**	P	**Pg**	**14 14 10.4**	**+0.4**
LKD2	**Lefkada island**	**0.62**	**14**	P	**Pg**	**14 14 10.0**	**-0.4**
LKD2				S	**Sb**	**14 14 20.7**	**+0.3**
	comp=N,512nm,0.3s							
LKD2	**Lefkada island**	**0.62**	**14**	P	**Pg**	**14 14 10.1**	**-0.4**
LKD2				S	**Sg**	**14 14 19.4**	**+0.9**
LKD2					AML	AML	14 14 26.5	
	comp=E,1112µm,0.4s							
LKD2					AML	AML	14 14 28.8	
	comp=N,943µm,0.3s							
TSLK	**Tsoukalades, L**	**0.65**	**13**	P	**Pg**	**14 14 10.8**	**-0.3**
TSLK	**Tsoukalades, L**	**0.65**	**13**	P	**Pg**	**14 14 10.7**	**-0.3**
TSLK					AML	AML	14 14 29.9	
	comp=E,1099µm,0.3s							
TSLK					AML	AML	14 14 31.4	
	comp=N,1296µm,0.7s							
PDO	**Prodromos**	**0.69**	**53**	P	**Pg**	**14 14 12.0**	**+0.2**
PDO	**Prodromos**	**0.69**	**53**	P	**Pg**	**14 14 12.0**	**+0.2**
PDO					AML	AML	14 14 25.5	
	comp=E,1838µm,0.4s							
PDO					AML	AML	14 14 29.4	
	comp=N,2586µm,0.3s							
RLS	**Riolos of Patr**	**0.80**	**99**	P	**Pg**	**14 14 13.9**	**+0.2**
RLS				S	**Sn**	**14 14 28.1**	**+0.1**
	comp=N,305nm,0.4s							
RLS	**Riolos of Patr**	**0.80**	**99**	P	**Pg**	**14 14 13.9**	**+0.2**
RLS					AML	AML	14 14 33.5	
	comp=N,560µm,0.3s							
RLS					AML	AML	14 14 36.0	
	comp=E,650µm,0.5s							
PVO	**Paravola**	**0.93**	**62**	P	**Pg**	**14 14 16.7**	**+0.3**
PVO	**Paravola**	**0.93**	**62**	P	**Pg**	**14 14 16.6**	**+0.3**
PVO					AML	AML	14 14 34.4	
	comp=N,1880µm,0.5s							
PVO					AML	AML	14 14 34.8	
	comp=E,2907µm,0.4s							
DRO	**Drossia**	**1.00**	**103**	P	**Pb**	**14 14 18.0**	**-0.1**
DRO					AML	AML	14 14 42.6	
	comp=E,1394µm,0.3s							
DRO					AML	AML	14 14 45.3	
	comp=N,1176µm,0.5s							
EFP	**Efpalio**	**1.15**	**78**	P	**Pg**	**14 14 19.8**	**-0.8**
EFP					AML	AML	14 14 43.8	
	comp=E,534µm,0.5s							
EFP					AML	AML	14 14 46.7	
	comp=N,683µm,0.6s							
AMT	**Artemida-Makis**	**1.18**	**123**	P	**Pg**	**14 14 20.8**	**-0.2**
AMT					AML	AML	14 14 51.4	
	comp=N,749µm,0.8s							
AMT					AML	AML	14 14 53.9	
	comp=E,742µm,0.6s							
LAKA	**Lakka**	**1.19**	**87**	P	**Pg**	**14 14 20.6**	**-0.6**
LAKA					AML	AML	14 14 40.3	
	comp=N,519µm,0.4s							
LAKA					AML	AML	14 14 44.0	
	comp=E,497µm,0.4s							
ANX	**Ano Chora**	**1.21**	**70**	P	**Pg**	**14 14 21.4**	**-0.2**
ANX	**Ano Chora**	**1.21**	**70**	P	**Pg**	**14 14 21.1**	**-0.5**
ANX					AML	AML	14 14 47.3	
	comp=E,741µm,0.6s							
ANX					AML	AML	14 14 48.4	
	comp=N,1000µm,0.5s							
SERG	**Sergoula**	**1.27**	**79**	P	**Pn**	**14 14 21.7**	**-0.7**
TRIZ	**Trizonia**	**1.27**	**81**	P	**Pn**	**14 14 21.7**	**-0.7**
KALE	**Kalithea**	**1.33**	**81**	P	**Pn**	**14 14 22.8**	**-0.5**
KLV	**Kalavryta, Ach**	**1.33**	**96**	P	**Pn**	**14 14 23.6**	**+0.2**
KLV	**Kalavryta, Ach**	**1.33**	**96**	P	**Pn**	**14 14 23.5**	**+0.1**
KLV					AML	AML	14 14 52.7	
	comp=N,223µm,0.4s							
KLV					AML	AML	14 14 53.4	
	comp=E,222µm,0.5s							
MAKR	**Makrakomi, Fth**	**1.54**	**57**	P	**Pb**	**14 14 27.1**	**-0.1**
MAKR					AML	AML	14 14 59.9	
	comp=N,377µm,0.5s							
MAKR					AML	AML	14 15 01.1	
	comp=E,508µm,0.6s							
AGG	**Agios Georgios**	**1.68**	**60**	P	**Pb**	**14 14 30.0**	**+0.4**
AXAR	**Agios Charalam**	**1.81**	**71**	P	**Pg**	**14 14 32.8**	**-0.3**
LTK	**Loutraki**	**1.98**	**94**	P	**Pb**	**14 14 34.3**	**-0.3**
VIL2	**Platees**	**2.20**	**88**	P	**Pb**	**14 14 37.8**	**-0.8**

*IDC **31** 14:19:53.7±0.9,3˚.89N×126˚.67E, h0km, mb3.7/7, mb1 3.9/7, mb1mx3.6/35, mbtmp3.7/7, Error ellipse: s-maj=51.1km s-min=17.8km az=67.0*
*NEIC **31** 14:19:57.3±2.9,3˚.8N±0˚.1×126˚.4E±0˚.3, h31km±7km, mb4.2/13, Error ellipse: s-maj=42.9km s-min=16.9km az=70.0*
ISC 31 14:19:58.7±0.7,**3˚8N**±0˚.1×**126˚7E**±0˚.2,**h45**km,**n25**, σ**1**!**87**/24,**mb4.1**/13,**1C**,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKMP	**Bagumbayan, Su**	**3.46**	**322**	*e*P	**Pn**	**14 20 49.6**	**-0.5**
SKMP				*e*S	**Sn**	**14 21 30.6**	**+0.8**
KCP	**Kidapawan**	**3.58**	**334**	i/P	**Pn**	**14 20 52.9**	**+1.1**
TPUB	**Ta-pu**	**20.27**	**344**	P	**P**	**14 24 27.6**	**-3.0**
TPUB				IAmb	IAmb	14 24 36.6	
	comp=Z,15nm,1.3s						
FITZ	**Fitzroy Crossi**	**21.77**	**183**	P	**P**	**14 24 44.4**	**-2.3**
FITZ				IAmb	IAmb	14 25 02.9	
	comp=Z,9.0nm,1.2s						
WB0	**Warramunga Arr**	**24.60**	**162**	P	**P**	**14 25 17.9**	**+3.0**
WB0				IAmb	IAmb	14 25 28.1	
	comp=Z,18nm,1.4s						
WRAB	**Tennant Creek**	**24.74**	**163**	P	**P**	**14 25 18.5**	**+2.3**
WRAB				IAmb	IAmb	14 25 25.8	
	comp=Z,8.5nm,1.2s						
WRA	**Warramunga Arr**	**24.75**	**163**	P	**P**	**14 25 17.3**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=344,slow=10,SNR=8.1						
WRA	**Warramunga Arr**	**24.75**	**163**	P	**P**	**14 25 17.0**	**+0.7**
ASAR	**Alice Springs**	**28.18**	**166**	P	**P**	**14 25 49.0**	**+1.9**
	comp=Z,0.2nm,0.5s,baz=354,slow=8.4,SNR=2.6						
CMAR	**Chiang Mai Arr**	**30.81**	**300**	P	**P**	**14 26 12.9**	**+2.4**
	comp=Z,0.3nm,0.3s,baz=116,slow=6.3,SNR=4.3						
EIDS	**Eidsvold**	**37.42**	**142**	P	**P**	**14 27 04.8**	**-2.9**
BBOO	**Buckleboo**	**37.46**	**167**	P	**P**	**14 27 08.1**	**+0.1**
STKA	**Stephens Creek**	**38.19**	**159**	P	**P**	**14 27 16.8**	**+2.6**
	comp=Z,1.3nm,0.7s,baz=332,slow=12,SNR=2.9						
STKA	**Stephens Creek**	**38.19**	**159**	IAmb	IAmb	14 27 22.2	
	comp=Z,0.9nm,1.1s						
SONM	**Songino Array**	**47.23**	**341**	P	**P**	**14 28 27.5**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=174,slow=5.8,SNR=2.6						
SONM	**Songino Array**	**47.23**	**341**	IAmb	IAmb	14 28 31.2	
MK31	**Makanchi Array**	**57.49**	**325**	P	**P**	**14 29 42.5**	**-0.9**
MKAR	**Makanchi Array**	**57.49**	**325**	P	**P**	**14 29 42.5**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=119,slow=7.7,SNR=13						
KURK	**Kurchatov**	**61.67**	**328**	P	**P**	**14 30 11.5**	**-0.6**
KURK				IAmb	IAmb	14 30 18.3	
	comp=Z,2.4nm,0.8s						
ABKAR	**Akbulak array**	**72.08**	**321**	P	**P**	**14 31 17.5**	**-0.8**
ABKAR				IAmb	IAmb	14 31 19.2	
	comp=Z,2.9nm,1.1s						
ABKAR	**Akbulak array**	**72.08**	**321**	P	**P**	**14 31 16.6**	**-1.7**
IMAR	**Indian Mountai**	**82.31**	**24**	P	**P**	**14 32 14.8**	**-0.6**
IL31		**85.08**	**25**	P	**P**	**14 32 31.8**	**+2.4**
IL31				IAmb	IAmb	14 32 46.7	
	comp=Z,1.8nm,1.2s						
ILAR	**Eielson Array**	**85.08**	**25**	P	**P**	**14 32 31.6**	**+2.1**
	comp=Z,0.9nm,0.5s,baz=276,slow=6.0,SNR=24						
ILAR	**Eielson Array**	**85.08**	**25**	P	**P**	**14 32 30.6**	**+1.0**

*NEIC **31** 14:21:48.2±1.8, 0˚.21N±0˚.08×122˚.0E±0˚.1, h209km±6km, mb4.1/19, Error ellipse: s-maj=16.6km s-min=12.1km az=79.0*
*DJA **31** 14:21:49.1±0.6, 0˚N±4˚×12˚2E±˚, h180km±6km, M4.1/6, MLv4.1/6*
*IDC **31** 14:21:52.0±5.4, 0˚.19N×122˚.06E, h251km±58km, mb3.2/7, mb1 3.3/8, mb1mx3.1/34, mbtmp3.8/8, Error ellipse: s-maj=44.6km s-min=12.5km az=65.0*
ISC 31 14:21:47.8±0.5,**0˚21N**±0˚.06×**121˚92E**±0˚.06,**h202**km,**n38**, σ**1**!**20**/41,**mb4.0**/14,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.27**	**4**	P	**Pn**	**14 22 13.7**	**-0.8**
MRSI				S	**S**	**14 22 33.7**	**-1.7**
LUWI	**Luwuk**	**1.51**	**146**	P	**Pn**	**14 22 22.4**	**+0.7**
LUWI				S	**S**	**14 22 48.6**	**+0.8**
LUWI	**Luwuk**	**1.51**	**146**		**Pn**	**14 22 22.7**	**+1.0**
LUWI					**S**	**14 22 48.3**	**+0.5**
KMSI	**Cibinong**	**2.09**	**80**	P	**Pn**	**14 22 28.6**	**+1.2**
KMSI				S	**S**	**14 23 00.1**	**+2.5**
TTSI	**Tana Toraja**	**3.86**	**213**	P	**Pn**	**14 22 48.2**	**+0.3**
SPSI	**Sidrap Palu**	**4.67**	**207**	P	**Pn**	**14 22 58.2**	**+0.1**
BNSI	**Bone**	**4.93**	**202**	P	**Pn**	**14 23 02.7**	**+1.3**
TNTI	**Ternate**	**5.47**	**84**	Pn	**Pn**	**14 23 08.2**	**-0.1**
JAGI	**Jajag, Banyuwa**	**11.59**	**222**	P	**P**	**14 24 34.8**	**+2.0**
KSM	**Kuching**	**11.68**	**276**	P	**P**	**14 24 34.3**	**+0.5**
MTN	**Manton Dam**	**15.86**	**145**	P	**P**	**14 25 17.1**	**-3.1**
CISI	**Cisompet, Garu**	**16.05**	**241**	P	**Pn**	**14 25 22.1**	**-0.7**
KNRA	**Kununurra**	**17.17**	**157**	Pn	**Pn**	**14 25 36.4**	**+0.3**
KNRA				IAmb	IAmb	14 25 37.6	
	comp=Z,9.3nm,0.8s						
FITZ	**Fitzroy Crossi**	**18.56**	**169**	P	**P**	**14 25 49.5**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=343,slow=10,SNR=4.3						
FITZ	**Fitzroy Crossi**	**18.56**	**169**	IAmb	IAmb	14 25 56.1	
	comp=Z,3.3nm,1.0s						
TPUB	**Ta-pu**	**22.99**	**357**	P	**P**	**14 26 36.0**	**+1.0**
TPUB				IAmb	IAmb	14 26 50.3	
	comp=Z,8.7nm,1.0s						
YULB	**Yu-li**	**23.05**	**359**	P	**P**	**14 26 34.5**	**-1.0**
YULB				IAmb	IAmb	14 26 38.8	
	comp=Z,5.8nm,0.7s						
WB0	**Warramunga Arr**	**23.32**	**149**	P	**P**	**14 26 37.3**	**-0.7**
WB0				IAmb	IAmb	14 26 52.6	
	comp=Z,4.2nm,0.9s						
WRA	**Warramunga Arr**	**23.43**	**149**	P	**P**	**14 26 38.2**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=327,slow=11,SNR=13						
WRA	**Warramunga Arr**	**23.43**	**149**	P	**P**	**14 26 36.8**	**-2.3**
WB2	**Warramunga Arr**	**23.44**	**149**	P	**P**	**14 26 37.9**	**-1.2**
WB2				IAmb	IAmb	14 26 51.5	
	comp=Z,6.5nm,1.1s						
WR0	**Warramunga Arr**	**23.55**	**149**	P	**P**	**14 26 40.4**	**+0.2**
WR0				IAmb	IAmb	14 26 58.6	
	comp=Z,4.7nm,1.0s						
NACB	**Ninganchiao**	**23.82**	**359**	P	**P**	**14 26 41.8**	**-0.7**
YHNB	**Yeheng**	**24.32**	**359**	P	**P**	**14 26 47.0**	**-0.2**
YHNB				IAmb	IAmb	14 26 53.5	
	comp=Z,8.5nm,0.9s						
AS31	**Alice Springs**	**26.43**	**155**	P	**P**	**14 27 04.9**	**-1.2**
ASAR	**Alice Springs**	**26.43**	**155**	P	**P**	**14 27 05.6**	**-0.6**
	comp=Z,1.5nm,0.5s,baz=343,slow=14,SNR=23						
ASAR				PcP	**PcP**	**14 30 24.1**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=348,slow=2.4,SNR=4.2						
CMAR	**Chiang Mai Arr**	**28.95**	**310**	P	**P**	**14 27 30.6**	**+1.9**
	comp=Z,0.3nm,0.4s,baz=119,slow=7.3,SNR=4.3						
MORW	**Morawa**	**29.65**	**190**	P	**P**	**14 27 33.4**	**-1.2**
ENH	**Enshi**	**32.15**	**340**	P	**P**	**14 27 57.2**	**+0.7**
ENH				IAmb	IAmb	14 27 57.6	
	comp=Z,2.3nm,1.0s						
STKA	**Stephens Creek**	**36.95**	**152**	P	**P**	**14 28 37.5**	**-0.1**
	comp=Z,1.4nm,0.7s,baz=346,slow=10.0,SNR=3.0						
STKA	**Stephens Creek**	**36.95**	**152**	IAmb	IAmb	14 28 37.8	
	comp=Z,0.4nm,0.9s						
KSRS	**Korea Array**	**37.47**	**8**	P	**P**	**14 28 41.8**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=190,slow=9.6,SNR=4.3						
LSA	**Lhasa**	**41.47**	**318**	P	**P**	**14 29 16.0**	**+0.4**
SONM	**Songino Array**	**49.32**	**346**	P	**P**	**14 30 16.0**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=161,slow=8.9,SNR=5.9						
SONM	**Songino Array**	**49.32**	**346**	P	**P**	**14 30 16.6**	**+0.1**
MK31	**Makanchi Array**	**57.87**	**329**	P	**P**	**14 31 18.0**	**-0.5**
MKAR	**Makanchi Array**	**57.87**	**329**	P	**P**	**14 31 17.9**	**-0.7**
	comp=Z,0.7nm,0.5s,baz=128,slow=8.7,SNR=21						
MKAR	**Makanchi Array**	**57.87**	**329**	P	**P**	**14 31 18.1**	**-0.5**

*NEIC **31** 14:30:44.1±1.5, 0˚.02N±0˚.09×123˚.17E±0˚.06, h158km±7km, mb4.4/24, Error ellipse: s-maj=13.1km s-min=8.0km az=188.0*
*DJA **31** 14:30:44.8±0.3, 0˚S±4˚×12

comp=Z,7.4nm,0.7s
WRAB Tennant Creek 22.59 152 P **P** **14 35 31.8 0.0**
WRAB IAmb IAmb 14 35 33.3
comp=Z,13nm,0.6s
WRA Warramunga Arr 22.59 152 P **P** **14 35 31.9 +0.1**
comp=Z,6.3nm,0.5s,baz=329,slow=10,SNR=85
WRA Warramunga Arr 22.59 152 P **P** **14 35 31.4 -0.4**
WB2 Warramunga Arr 22.60 152 P **P** **14 35 31.8 0.0**
WR0 Warramunga Arr 22.71 151 P **P** **14 35 33.2 +0.4**
WR0 IAmb IAmb 14 35 34.9
comp=Z,11nm,0.8s
TPUB Ta-pu 23.34 354 P **P** **14 35 36.5 -2.0**
COEN Coen 24.14 126 P **P** **14 35 46.8 +0.9**
COEN IAmb IAmb 14 35 50.7
comp=Z,21nm,1.5s
AS31 Alice Springs 25.69 157 P **P** **14 36 00.7 +0.8**
ASAR Alice Springs 25.69 157 P **P** **14 36 00.5 +0.6**
comp=Z,1.2nm,0.7s,baz=331,slow=8.3,SNR=17
ASAR pP **pP** **14 36 34.6 +1.7**
comp=Z,1.0nm,0.8s,baz=325,slow=7.1,SNR=4.5
ASAR PcP **PcP** **14 39 26.2 +0.1**
comp=Z,1.1nm,0.5s,baz=347,slow=2.1,SNR=13
CMAR Chiang Mai Arr 30.09 309 P **P** **14 36 40.5 +1.4**
comp=Z,0.9nm,0.8s,baz=134,slow=7.2,SNR=9.0
CMAR PcP **PcP** **14 39 35.5 -1.5**
comp=Z,0.3nm,0.5s,baz=147,slow=2.2,SNR=4.4
FORT Forrest 30.92 172 P **P** **14 36 45.5 -0.7**
BBOO Buckleboo 34.78 161 P **P** **14 37 20.0 +0.2**
BBOO IAmb IAmb 14 37 22.4
comp=Z,12nm,1.2s
STKA Stephens Creek 36.14 153 P **P** **14 37 32.2 +0.8**
comp=Z,7.7nm,0.6s,baz=326,slow=9.3,SNR=28
STKA Stephens Creek 36.14 153 P **P** **14 37 32.4 +1.0**
EIDS Eidsvold 36.88 135 P **P** **14 37 37.6 -0.2**
ARMA Armidale 40.54 141 P **P** **14 38 09.0 +0.7**
CAN Canberra 42.56 148 P **P** **14 38 26.9 +2.2**
TOO Toolangi 42.65 154 P **P** **14 38 25.4 +0.2**
TOO IAmb IAmb 14 38 34.0
comp=Z,19nm,1.4s
GTA Gaotai 44.71 334 *eP* **P** **14 38 43.5 +1.7**
GTA pmax pmax
comp=Z,3.0nm,1.1s
SONM Songino Array 49.87 345 P **P** **14 39 21.5 -0.1**
comp=Z,0.8nm,0.7s,baz=162,slow=9.7,SNR=6.0
SONM Songino Array 49.87 345 IAmb IAmb 14 39 23.1
comp=Z,0.8nm,0.8s
KSH Kashi 58.33 318 *eP* **P** **14 40 24.8 +1.8**
KSH pP pP 14 41 04.3 +3.6
KSH pmax pmax
comp=Z,360nm,5.3s
MK31 Makanchi Array 58.75 328 P **P** **14 40 25.0 -0.6**
MKAR Makanchi Array 58.75 328 P **P** **14 40 24.9 -0.7**
comp=Z,0.4nm,0.4s,baz=127,slow=7.7,SNR=12
MKAR pP **pP** **14 41 03.5 0.0**
comp=Z,0.3nm,0.6s,baz=122,slow=9.2,SNR=4.3
BOOM Boomskoye usch 59.89 321 P **P** **14 40 31.9 -1.8**
KBL Kabul 61.11 310 P **P** **14 40 42.1 -0.1**
KBL IAmb IAmb 14 40 43.6
comp=Z,3.2nm,0.7s
TORD Torodi Ar. Bea 120.60 285 PKP **PKPdf** **14 49 17.2 -1.0**
comp=Z,0.3nm,0.3s,baz=43,slow=3.0,SNR=3.6

IDC 31 14:32:00.0±8.2, 1°27N×123°03E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.4/52, mbtmp3.8/3, Error ellipse: s-maj=225.4km s-min=130.0km az=62.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.82**	**153**	P	P	14 37 14.8	-0.2
	1.9nm,0.6s,baz=330,slow=10,SNR=6.3						
ASAR	**Alice Springs**	**26.95**	**158**	P	P	14 37 42.8	-0.6
	0.6nm,0.8s,baz=337,slow=9.2,SNR=2.6						
STKA	**Stephens Creek**	**37.37**	**153**	P	P	14 39 15.2	+0.6
	1.7nm,0.7s,baz=335,slow=16,SNR=2.9						

IDC 31 14:37:50.3±8.2, 0°09N×99°22E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.2/55, mbtmp3.3/3, ML3.4/1, Error ellipse: s-maj=178.3km s-min=131.7km az=111.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**18.25**	**359**	P	Pn	14 42 05.3	+0.1
	0.1nm,0.3s,baz=194,slow=11,SNR=3.6						
SONM	**Songino Array**	**47.96**	**7**	P	P	14 46 30.5	-0.4
	0.4nm,0.5s,baz=186,slow=9.7,SNR=3.6						
MKAR	**Makanchi Array**	**48.82**	**345**	P	P	14 46 37.4	0.0
	0.2nm,0.4s,baz=157,slow=9.6,SNR=6.3						

*THE **31** 14:41:41.3, 38°25N×20°36E, h9km±1km, ML2.9/4, Error ellipse: s-maj=1.3km s-min=0.4km az=224.0*
*ATH **31** 14:41:41.7, 38°27N×20°38E, h5km±2km, ML2.1/4, Error ellipse: s-maj=2.0km s-min=0.8km az=246.0*
ISC 31 14:41:41.5±1.5, 38°26N±0°02×20°38E±0°05, h8km±6km, n21, σ0946/39, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.03**	**86**	P	**Pg**	**14 41 42.9**	**0.0**
KEF4				S	**Sg**	**14 41 43.7**	**-0.3**
KEF3	**Kipouria, Keph**	**0.06**	**207**	P	**Pg**	**14 41 43.4**	**+0.2**
KEF3				S	**Sg**	**14 41 44.7**	**+0.3**
LXR1	**Lixouri, Cepha**	**0.07**	**141**	P	**Pg**	**14 41 43.4**	**+0.1**
LXR1				S	**Sg**	**14 41 44.9**	**+0.2**
22μm,0.3s							
CHV1	**Chavriata, Kef**	**0.07**	**180**	P	**Pg**	**14 41 43.5**	**+0.2**
CHV1				S	**Sg**	**14 41 44.7**	**0.0**
29μm,0.2s							
KEF1	**Kardakata, Kep**	**0.07**	**72**	P	**Pg**	**14 41 43.5**	**+0.2**
KEF1				S	**Sg**	**14 41 44.5**	**-0.3**
ARG2	**Argostoli**	**0.11**	**133**	P	**Pg**	**14 41 43.7**	**-0.3**
ARG2				S	**Sg**	**14 41 46.1**	**+0.4**
5μm,0.1s							
KEF2	**Argostoli. Kep**	**0.12**	**137**	P	**Pg**	**14 41 44.2**	**+0.1**
KEF2				S	**Sg**	**14 41 46.4**	**+0.4**
VLS	**Valsamata**	**0.18**	**115**	P	**Pg**	**14 41 45.1**	**0.0**
VLS				S	**Sg**	**14 41 48.1**	**+0.4**
4μm,0.1s							
VLS	**Valsamata**	**0.18**	**115**	P	**Pg**	**14 41 45.1**	**0.0**
VLS				S	**Sg**	**14 41 48.1**	**+0.4**
VLS				AML	AML	14 41 48.4	
comp=N,6157μm,0.1s							
VLS				AML	AML	14 41 48.4	
comp=E,8917μm,0.1s							
FSK	**Fiskardo**	**0.25**	**35**	P	**Pg**	**14 41 46.3**	**-0.1**
FSK				S	**Sg**	**14 41 50.6**	**+0.9**
FSK	**Fiskardo**	**0.25**	**35**	P	**Pg**	**14 41 45.7**	**-0.7**
FSK				S	**Sg**	**14 41 50.8**	**+1.1**
FSK				AML	AML	14 41 52.4	
comp=E,567μm,0.2s							
FSK				AML	AML	14 41 53.0	
comp=N,420μm,0.2s							
KFL	**Anninata**	**0.35**	**114**	P	**Pg**	**14 41 48.3**	**0.0**
KFL				S	**Sg**	**14 41 53.9**	**+0.9**
KFL	**Anninata**	**0.35**	**114**	P	**Pg**	**14 41 48.5**	**+0.1**
KFL				S	**Sg**	**14 41 52.8**	**-0.2**
KFL				AML	AML	14 41 54.2	
comp=N,984μm,0.4s							
KFL				AML	AML	14 41 56.1	
comp=E,805μm,0.3s							
EVGI	**Lefkada island**	**0.42**	**30**	P	**Pg**	**14 41 49.6**	**-0.1**
EVGI				S	**Sg**	**14 41 56.3**	**+1.0**
EVGI	**Lefkada island**	**0.42**	**30**	P	**Pg**	**14 41 49.1**	**-0.6**
EVGI				S	**Sg**	**14 41 56.0**	**+0.7**
VLMS	**Volimes, Zakyn**	**0.44**	**150**	P	**Pg**	**14 41 50.2**	**+0.2**
VLMS				S	**Sb**	**14 41 57.3**	**-1.0**
VLMS				AML	AML	14 41 59.0	
comp=N,857μm,0.2s							
VLMS				AML	AML	14 41 59.1	
comp=E,740μm,0.2s							
MGNA	**Meganis**	**0.51**	**39**	P	**Pg**	**14 41 51.5**	**+0.2**
LKD2	**Lefkada island**	**0.57**	**22**	P	**Pg**	**14 41 52.7**	**+0.1**
LKD2				S	**Sg**	**14 42 00.0**	**-0.1**
PDO	**Prodromos**	**0.72**	**61**	P	**Pg**	**14 41 55.4**	**+0.2**
PDO				S	**Sg**	**14 42 04.5**	**-0.1**
PVO	**Paravola**	**0.97**	**68**	P	**Pg**	**14 42 00.2**	**+0.1**
DRO	**Drossia**	**1.09**	**106**	P	**Pg**	**14 42 02.5**	**+0.1**

*PDG **31** 14:44:32.0±0.2, 38°38N×20°53E, h4km, ML3.9/14, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*
*IDC **31** 14:44:34.8±1.1, 38°46N×20°57E, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.6/39, mbtmp3.7/11, ML4.1/2, MS2.9/6, Ms1 2.9/6, ms1mx2.5/51, Error ellipse: s-maj=22.6km s-min=17.9km az=55.0*
*ATH **31** 14:44:36.8, 38°42N×20°48E, h12km±2km, ML3.7/12, Error ellipse: s-maj=2.7km s-min=0.8km az=269.0*
*THE **31** 14:44:37.7, 38°42N×20°50E, h6km±1km, ML3.8/14, Error ellipse: s-maj=1.5km s-min=0.4km az=103.0*
ISC 31 14:44:36.5±0.7, 38°44N±0°02×20°45E±0°03, h13km±3km, n104, σ1933/150, mb3.8/8, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.09**	**75**	P	**Pg**	**14 44 39.1**	**-0.3**
FSK				S	**Sg**	**14 44 40.5**	**-1.0**
70μm,0.7s							
FSK	**Fiskardo**	**0.09**	**75**	P	**Pg**	**14 44 38.9**	**-0.5**
FSK				S	**Sg**	**14 44 40.9**	**-0.6**
FSK				AML	AML	14 44 41.2	
FSK				AML	AML	14 44 45.0	
VSK1	**VASILIKIADES**	**0.10**	**106**	P	**Pg**	**14 44 38.9**	**-0.6**
VSK1				S	**Sg**	**14 44 40.4**	**-1.1**
220μm,0.3s							
KEF1	**Kardakata, Kep**	**0.16**	**174**	P	**Pb**	**14 44 39.8**	**-1.4**
KEF1				S	**Sb**	**14 44 42.8**	**-1.6**
KEF4	**Livadi, Kephal**	**0.18**	**186**	P	**Pb**	**14 44 40.4**	**-1.1**
KEF4				S	**Sb**	**14 44 42.9**	**-2.1**
LXR1	**Lixouri, Cepha**	**0.23**	**182**	P	**Pb**	**14 44 41.6**	**-0.9**
LXR1				S	**Sb**	**14 44 45.4**	**-1.2**
212μm,0.3s							
EVGI	**Lefkada island**	**0.25**	**41**	P	**Pb**	**14 44 41.1**	**-1.7**
EVGI				S	**Sg**	**14 44 46.5**	**+1.2**
EVGI	**Lefkada island**	**0.25**	**41**	P	**Pb**	**14 44 40.9**	**-1.9**
KEF3	**Kipouria, Keph**	**0.25**	**199**	P	**Pb**	**14 44 41.6**	**-1.1**
KEF3				S	**Sb**	**14 44 46.0**	**-0.9**
CHV1	**Chavriata, Kef**	**0.26**	**192**	P	**Pg**	**14 44 43.3**	**+1.4**
CHV1				S	**Sb**	**14 44 46.1**	**-1.1**
140μm,0.3s							
ARG2	**Argostoli**	**0.26**	**173**	P	**Pg**	**14 44 43.2**	**+1.3**
ARG2				S	**Sb**	**14 44 45.7**	**-1.6**
181μm,0.4s							
KEF2	**Argostoli. Kep**	**0.27**	**174**	P	**Pg**	**14 44 42.3**	**+0.2**
KEF2				S	**Sb**	**14 44 46.2**	**-1.5**
VLS	**Valsamata**	**0.28**	**157**	P	**Pb**	**14 44 43.3**	**-0.1**
VLS				S	**Sb**	**14 44 46.2**	**-1.8**
26μm,0.5s							
MGNA	**Meganis**	**0.35**	**51**	P	**Pg**	**14 44 43.7**	**+0.2**
MGNA				S	**Sb**	**14 44 49.1**	**-0.8**
MGNA				AML	AML	14 44 50.3	
comp=E,26005μm,0.4s							
MGNA				AML	AML	14 44 50.5	
comp=N,30203μm,0.3s							
LKD2	**Lefkada island**	**0.39**	**25**	P	**Pb**	**14 44 45.3**	**+0.1**
LKD2				S	**Sb**	**14 44 51.4**	**+0.3**
comp=N,15μm,0.5s							
LKD2	**Lefkada island**	**0.39**	**25**	P	**Pg**	**14 44 44.9**	**+0.6**
LKD2				S	**Sb**	**14 44 51.2**	**+0.1**
LKD2				AML	AML	14 44 51.9	
comp=N,35605μm,0.6s							
LKD2				AML	AML	14 44 52.1	
comp=E,23540μm,0.4s							
KFL	**Anninata**	**0.42**	**141**	P	**Pg**	**14 44 44.6**	**-0.3**
KFL				S	**Sg**	**14 44 51.1**	**+0.6**
comp=E,22μm,0.5s							
KFL	**Anninata**	**0.42**	**141**	P	**Pg**	**14 44 44.6**	**-0.3**
KFL				S	**Sg**	**14 44 51.1**	**+0.6**
KFL				AML	AML	14 44 51.7	
comp=E,52412μm,0.4s							
KFL				AML	AML	14 44 56.0	
comp=N,32855μm,0.6s							
TSLK	**Tsoukalades, L**	**0.42**	**23**	P	**Pg**	**14 44 45.3**	**+0.4**
TSLK				S	**Sb**	**14 44 52.2**	**+0.1**
comp=N,16μm,0.8s							
TSLK	**Tsoukalades, L**	**0.42**	**23**	P	**Pb**	**14 44 45.6**	**-0.2**
TSLK				S	**Sb**	**14 44 52.1**	**+0.1**
AST1	**Astakos**	**0.51**	**78**	P	**Pg**	**14 44 46.7**	**+0.1**
AST1				S	**Sg**	**14 44 53.5**	**+0.1**
comp=N,17μm,0.4s							
VLMS	**Volimes, Zakyn**	**0.58**	**163**	P	**Pb**	**14 44 47.4**	**-1.1**
VLMS				AML	AML	14 44 57.3	
comp=N,51085μm,0.4s							
VLMS				AML	AML	14 44 59.1	
comp=E,31673μm,0.4s							
PDO	**Prodromos**	**0.60**	**74**	P	**Pb**	**14 44 48.2**	**-0.6**
PDO	**Prodromos**	**0.60**	**74**	P	**Pb**	**14 44 47.6**	**-1.1**
PDO				AML	AML	14 45 02.1	
comp=E,11801μm,0.6s							
PDO				AML	AML	14 45 08.8	
comp=N,15396μm,0.4s							
KRI1	**kERI**	**0.83**	**159**	P	**Pb**	**14 44 51.8**	**-0.8**
KRI1				S	**Sb**	**14 45 03.3**	**-0.3**
comp=N,14μm,0.6s							
PVO	**Paravola**	**0.86**	**78**	P	**Pg**	**14 44 53.5**	**+0.3**
PVO				S	**Sn**	**14 45 05.2**	**-1.5**
comp=N,5μm,0.8s							
PVO	**Paravola**	**0.86**	**78**	P	**Pg**	**14 44 53.2**	**0.0**
PVO				AML	AML	14 45 12.9	
comp=E,8343μm,0.5s							
PVO				AML	AML	14 45 14.4	
comp=N,8937μm,0.8s							
RLS	**Riolos of Patr**	**0.89**	**115**	P	**Pg**	**14 44 53.7**	**+0.1**
DRO	**Drossia**	**1.10**	**116**	P	**Pg**	**14 44 58.2**	**+0.4**
DRO				S	**Sg**	**14 45 12.6**	**+0.4**
comp=N,5μm,0.5s							
EFP	**Efpalio**	**1.15**	**90**	P	**Pb**	**14 44 57.8**	**-0.3**
EFP	**Efpalio**	**1.15**	**90**	P	**Pn**	**14 44 57.3**	**-0.9**
EFP				AML	AML	14 45 24.0	
comp=E,10749μm,0.8s							
EFP				AML	AML	14 45 25.0	
comp=N,10832μm,0.6s							
ANX	**Ano Chora**	**1.17**	**82**	P	**Pg**	**14 44 59.3**	**+0.4**
ANX				S	**Sg**	**14 45 15.9**	**+1.8**
comp=N,4μm,0.6s							
LAKA	**Lakka**	**1.22**	**99**	P	**Pg**	**14 45 00.4**	**+0.5**
LAKA	**Lakka**	**1.22**	**99**	P	**Pb**	**14 44 58.9**	**-0.4**
LAKA				AML	AML	14 45 23.8	
comp=N,2974μm,0.5s							
LAKA				AML	AML	14 45 25.5	
comp=E,3012μm,0.6s							
SERG	**Sergoula**	**1.26**	**91**	P	**Pg**	**14 45 01.3**	**+0.5**
SERG	**Sergoula**	**1.26**	**91**	P	**Pb**	**14 44 59.8**	**-0.3**
SERG				AML	AML	14 45 27.1	
comp=E,5416μm,0.5s							
SERG				AML	AML	14 45 27.2	
comp=N,6798μm,0.4s							
TRIZ	**Trizonia**	**1.28**	**93**	P	**Pb**	**14 44 59.9**	**-0.5**
KALE	**Kalithea**	**1.33**	**91**	P	**Pg**	**14 45 01.8**	**-0.2**
KALE	**Kalithea**	**1.33**	**91**	P	**Pg**	**14 45 01.9**	**-0.2**
KALE				AML	AML	14 45 27.6	
comp=N,4509μm,0.6s							
KALE				AML	AML	14 45 30.2	
comp=E,2614μm,1.1s							
KLV	**Kalavryta, Ach**	**1.40**	**106**	P	**Pb**	**14 45 02.5**	**+0.1**
KLV				S	**Sg**	**14 45 21.3**	**-0.2**
KLV	**Kalavryta, Ach**	**1.40**	**106**	P	**Pb**	**14 45 02.2**	**-0.2**
KLV				AML	AML	14 45 24.9	
comp=N,1483μm,0.5s							
KLV				AML	AML	14 45 30.0	
comp=E,1866μm,0.5s							
OHR	**Ohrid**	**2.69**	**6**	*e*Pn	**Pb**	**14 45 22.8**	**-1.6**
VAY	**Valandovo**	**3.31**	**29**	*e*Pn	**Pn**	**14 45 29.7**	**+1.8**
ULC	**Ulcinj**	**3.64**	**346**	*e*Pn	**Pn**	**14 45 31.5**	**-1.0**
ULC				*e*Sn	**Sn**	**14 46 16.6**	**+1.3**
DRME	**Dracevica, Mon**	**3.87**	**346**	*e*Pn	**Pn**	**14 45 36.3**	**+0.7**
DRME	**Dracevica, Mon**	**3.87**	**346**	*e*Pn	**Pn**	**14 45 34.5**	**-1.1**
DRME				*e*Sn	**Sn**	**14 46 21.6**	**+0.7**
BUM	**Brajici-Budva**	**4.04**	**343**	*e*Pn	**Pn**	**14 45 37.1**	**-0.9**
BUM				*e*Sn	**Sn**	**14 46 26.1**	**+0.9**
PDG	**Podgorica**	**4.09**	**348**	*e*Pn	**Pn**	**14 45 39.2**	**+0.5**
TTG	**Podgorica**	**4.09**	**348**	*e*Pn	**Pn**	**14 45 37.6**	**-1.1**
TTG				*e*Sn	**Sn**	**14 46 27.4**	**+1.0**
PVY	**Plav**	**4.17**	**355**	*e*Pn	**Pn**	**14 45 38.9**	**-1.0**
PVY				*e*Sn	**Sn**	**14 46 29.2**	**+0.7**
CEME	**Cevo**	**4.27**	**345**	*e*Pn	**Pn**	**14 45 40.6**	**-0.6**
CEME				*e*Sn	**Sn**	**14 46 31.5**	**+0.7**
HCY	**Herceg Novi**	**4.28**	**340**	*e*Pn	**Pn**	**14 45 41.1**	**-0.1**
HCY	**Herceg Novi**	**4.28**	**340**	*e*Pn	**Pn**	**14 45 40.4**	**-0.8**
HCY				*e*Sn	**Sn**	**14 46 31.9**	**+1.0**
IVA	**Berane**	**4.45**	**355**	*e*Pn	**Pn**	**14 45 42.9**	**-0.8**
IVA				*e*Sn	**Sn**	**14 46 36.1**	**+0.7**
KOME	**Kolasin**	**4.47**	**351**	*e*Pn	**Pn**	**14 45 42.6**	**-1.3**
KOME				*e*Sn	**Sn**	**14 46 36.7**	**+0.9**
NKME	**Niksic**	**4.47**	**346**	*e*Pn	**Pn**	**14 45 43.6**	**-0.4**
NKME				*e*Sn	**Sn**	**14 46 36.3**	**+0.4**
NKY	**Niksic**	**4.51**	**346**	*e*Pn	**Pn**	**14 45 43.2**	**-1.3**
NKY				*e*Sn	**Sn**	**14 46 37.4**	**+0.5**
TREB	**Trebinje**	**4.56**	**340**	*e*Pn	**Pn**	**14 45 44.9**	**-0.3**
BRY	**Bratogost**	**4.69**	**343**	*e*Pn	**Pn**	**14 45 46.4**	**-0.6**
BRY	**Bratogost**	**4.69**	**343**	*e*Pn	**Pn**	**14 45 46.0**	**-1.0**
BRY				*e*Sn	**Sn**	**14 46 41.7**	**+0.3**
IDI	**Anoyia**	**4.75**	**130**	Pn	**Pn**	**14 45 46.9**	**-0.9**
comp=E,0.2nm,0.3s,baz=330,slow=16,SNR=2.7							
IDI				Sn	**Sn**	**14 46 41.1**	**-1.6**
comp=E,0.8nm,0.3s,baz=202,slow=19,SNR=4.1							
STON	**Ston**	**4.90**	**336**	*e*Pn	**Pn**	**14 45 48.8**	**-0.9**
UPM	**Unac-Piva**	**4.90**	**347**	*e*Pn	**Pn**	**14 45 50.8**	**+0.8**
UPM	**Unac-Piva**	**4.90**	**347**	*e*Pn	**Pn**	**14 45 49.1**	**-0.9**
UPM				*e*Sn	**Sn**	**14 46 46.9**	**+0.2**
PLE	**Pljevlja**	**4.96**	**351**	*e*Pn	**Pn**	**14 45 49.3**	**-1.3**
PLE				*e*Sn	**Sn**	**14 46 48.2**	**+0.4**
RUDO	**Rudo**	**5.24**	**351**	*e*Pn	**Pn**	**14 45 52.4**	**-2.1**
BBLS	**Lazići**	**5.48**	**352**	*e*Pn	**Pn**	**14 46 01.4**	**+3.6**
DIVS	**Divibare**	**5.67**	**357**	*e*Pn	**Pn**	**14 45 59.9**	**-0.5**
HAPS	**Han Pijesak,BI**	**5.76**	**349**	*e*Pn	**Pn**	**14 46 00.6**	**-1.0**
MGRS	**Mrkonjic Grad**	**6.49**	**338**	*e*Pn	**Pn**	**14 46 10.6**	**-1.0**
BLY	**Banja Luka**	**6.76**	**340**	*e*Pn	**Pn**	**14 46 14.5**	**-0.9**
MORH	**Mrgy, Hungar**	**7.89**	**351**	*e*Pn	**Pn**	**14 46 29.8**	**-1.0**
BOJS	**Bojanci**	**8.05**	**333**	*i* Pn	**Pn**	**14 46 33.8**	**+0.8**
BOJS				*e*Sn	**Sn**	**14 48 00.5**	**-3.4**
GBRS	**Gornja Briga**	**8.24**	**331**	*i* Pn	**Pn**	**14 46 36.6**	**+1.0**
GBRS				*e*Sn	**Sn**	**14 48 06.7**	**-1.8**
CRES	**Cresnjev**	**8.26**	**335**	*e*Pn	**Pn**	**14 46 35.4**	**-0.5**
VISS	**Visnje**	**8.46**	**332**	*e*Pn	**Pn**	**14 46 39.3**	**+0.7**
VISS				*e*Sn	**Sn**	**14 48 10.5**	**-3.3**
CEY	**Cerknica**	**8.56**	**330**	*e*Pn	**Pn**	**14 46 40.1**	**+0.1**
LJU	**Ljubljana**	**8.78**	**332**	*e*Pn	**Pn**	**14 46 41.7**	**-1.3**
SOKA	**Soboth**	**9.15**	**336**	*e*Pn	**Pn**	**14 46 47.6**	**-0.6**
comp=E,4.4nm,0.4s							
SOKA				*e*Sn	**Sn**	**14 48 26.4**	**-4.6**
comp=E,2.6nm,0.5s							
OBKA	**Obir**	**9.17**	**334**	*e*Pn	**Pn**	**14 46 49.4**	**+1.0**
comp=E,1.2nm,0.2s							
OBKA				*e*Sn	**Sn**	**14 48 28.9**	**-2.5**
comp=E,3.9nm,0.3s							
MYKA	**Terra Mystica**	**9.60**	**331**	*e*Sn	**Sn**	**14 48 38.8**	**-3.3**
comp=E,1.5nm,0.3s							
KBA	**Koelnbreinsper**	**10.09**	**331**	*i* Pn	**Pn**	**14 47 02.1**	**+1.0**
comp=E,1.0nm,0.3s							
KBA				*e*Sn	**Sn**	**14 48 49.3**	**-4.9**
comp=E,2.2nm,0.5s							
ABTA	**Abfaltersbach**	**10.15**	**327**	*e*Pn	**Pn**	**14 47 02.0**	**+0.1**
comp=E,2.2nm,0.4s							
ABTA				Sn	**Sn**	**14 48 51.2**	**-4.5**
comp=E,5.7nm,0.6s							
MOA	**Molln**	**10.43**	**336**	*e*Pn	**Pn**	**14 47 06.2**	**+0.5**
comp=E,2.4nm,0.3s							
MOA				*e*Sn	**Sn**	**14 49 01.8**	**-0.6**
comp=E,1.5nm,0.3s							
WTTA	**Wattenberg**	**10.93**	**327**	*e*Pn	**Pn**	**14 47 14.1**	**+1.5**
comp=E,1.3nm,0.3s							
WTTA				*e*Sn	**Sn**	**14 49 13.9**	**-0.9**
comp=E,3.8nm,0.5s							
WATA	**Walderalm**	**11.01**	**327**	*e*Pn	**Pn**	**14 47 14.6**	**+0.9**
comp=E,3.6nm,0.5s							
FETA	**Feichten**	**11.16**	**323**	*e*Pn	**Pn**	**14 47 14.4**	**-1.3**
comp=E,1.1nm,0.5s							
FETA				*e*Sn	**Sn**	**14 49 18.4**	**-2.0**
comp=E,1.6nm,0.5s							
VRAC	**Vranov**	**11.22**	**347**	LR	LR	14 52 55.4	
comp=E,79nm,19.8s,baz=147,slow=45							
MOTA	**Mooslm**	**11.23**	**325**	*e*Pn	**Pn**	**14 47 17.9**	**+1.2**
comp=E,2.3nm,0.4s							
MOTA				*i* Sn	**Sn**	**14 49 20.0**	**-2.1**
comp=E,3.0nm,0.5s							
DAVOX	**Davos/Dischmat**	**11.40**	**320**	LR	LR	14 52 57.6	
comp=E,69nm,19.1s,baz=69,slow=44							
GERES	**GERESS Array B**	**11.49**	**337**	Pn	**Pn**	**14 47 19.4**	**-0.7**
comp=E,0.3nm,0.3s,baz=155,slow=14,SNR=6.2							
KHC	**Kasperske Hory**	**11.78**	**337**	*e*PN	Pn	14 47 18.0	-6.1
KHC				*e*SN	**Sn**	**14 49 31.5**	**-3.9**
MMAI	**Mount Meron Ar**	**13.29**	**109**	LR	LR	14 54 27.0	
comp=E,25nm,20.0s,baz=200,slow=45							
EIL	**Elat**	**14.85**	**122**	LR	LR	14 56 07.1	
comp=E,28nm,18.0s,baz=278,slow=47							
ESDC	**Sonseca Array**	**18.99**	**281**	P	**Pn**	**14 48 60.0**	**+1.6**
comp=E,0.3nm,0.3s,baz=76,slow=13,SNR=3.0							
HFS	**Hagfors**	**22.14**	**351**	P	**P**	**14 49 32.4**	**+0.9**
comp=E,2.8nm,0.5s,baz=160,slow=10,SNR=10							
EKA	**Eskdalemuir Ar**	**23.18**	**324**	P	**P**	**14 49 43.4**	**+0.8**
comp=E,2.7nm,0.9s,baz=113,slow=8.6,SNR=3.8							
FINES	**FINESS Array B**	**23.30**	**7**	P	**P**	**14 49 44.3**	**+0.7**
comp=E,3.3nm,0.8s,baz=172,slow=10.0,SNR=8.3							
NOA	**NORSAR Array B**	**23.35**	**349**	P	**P**	**14 49 45.2**	**+0.8**
comp=E,0.9nm,0.8s,baz=159,slow=9.8,SNR=3.5							
NOA				LR	LR	15 00 59.2	
comp=E,22nm,20.1s,baz=155,slow=42							
TORD	**Torodi Ar. Bea**	**30.20**	**219**	P	**P**	**14 50 47.3**	**+0.8**
comp=E,1.3nm,0.8s,baz=31,slow=9.1,SNR=5.4							
MKAR	**Makanchi Array**	**45.22**	**59**	P	**P**	**14 52 52.8**	**-0.3**
comp=E,0.4nm,0.4s,baz=278,slow=7.3,SNR=11							
ZALV	**Zalesovo Beam**	**45.56**	**48**	P	**P**	**14 52 55.2**	**-0.5**
comp=E,1.2nm,0.5s,baz=277,slow=7.9,SNR=7.2							
TIXI	**Tiksi**	**59.43**	**20**	LR	LR	15 22 14.6	
comp=E,16nm,18.3s,baz=346,slow=38							
YKA	**Yellowknife Ar**	**73.13**	**340**	P	**P**	**14 56 07.1**	**+0.9**

KTK1					*e*S	**Sn**	**15 02 50.9**	**+0.5**
KTK1					IAML		15 03 10.0	
	comp=Z,6.6nm,0.3s							
KIF	**Kilpisjarvi**	**5.20**	**292**	*e*P	**Pn**	**15 02 12.6**	**+1.1**
KIF				*e*S	**Sn**	**15 03 09.7**	**-1.7**
FINES	**FINESS Array B**	**7.10**	**214**	Pn	**Pn**	**15 02 40.6**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=33,slow=12,SNR=6.0							
FINES				Sn	**Sn**	**15 03 54.5**	**-3.6**
	comp=Z,0.1nm,0.3s,baz=36,slow=24,SNR=1.2							
FINES				Lg	Lg	15 04 28.0		
	comp=Z,0.2nm,0.3s,baz=32,slow=26,SNR=1.9							
I43RU	**DUBNA INFRASON**	**0.99**	**171**	*i*		16 10 40.0		
	baz=0.1,slow=342,SNR=1.6							
SPITS	**Spitsbergen Ar**	**11.78**	**342**	Pn	**Pn**	**15 03 40.6**	**-1.0**
	baz=152,slow=19,SNR=1.2							
NOA	**NORSAR Array B**	**11.90**	**248**	Pn	**Pn**	**15 03 43.6**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=47,slow=16,SNR=2.6							

*ATH **31** 15:05:17.6,38.˚17N×20.˚43E,h7km±2km,ML2.8/4,Error ellipse: s-maj=2.7km s-min=1.0km az=224.0*
*THE **31** 15:05:17.4,38.˚15N×20.˚41E,h7km,ML2.7/4,Error ellipse: s-maj=1.1km s-min=0.6km az=231.0*

ISC 31 15:05:17.2±1.1,38.˚16N±0.˚03×20.˚42E±0.˚04,h8km±5km, n30,σ0s52/47,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHV1	**Chavriata, Kef**	**0.04**	**301**	P	**Pg**	**15 05 19.0**	**+0.2**
CHV1				S	**Sg**	**15 05 20.3**	**+0.4**
LXR1	**Lixouri, Cepha**	**0.04**	**17**	P	**Pg**	**15 05 18.9**	**+0.1**
LXR1				S	**Sg**	**15 05 20.2**	**+0.3**
KEF2	**Argostoli. Kep**	**0.05**	**88**	P	**Pg**	**15 05 19.0**	**+0.1**
KEF2				S	**Sg**	**15 05 20.0**	**-0.2**
ARG2	**Argostoli**	**0.05**	**74**	P	**Pg**	**15 05 19.0**	**+0.1**
ARG2				S	**Sg**	**15 05 20.5**	**+0.3**
KEF3	**Kipouria, Keph**	**0.07**	**304**	P	**Pg**	**15 05 19.6**	**+0.4**
KEF3				S	**Sg**	**15 05 20.9**	**+0.3**
KEF1	**Kardakata, Kep**	**0.12**	**18**	P	**Pg**	**15 05 20.3**	**+0.4**
KEF1				S	**Sg**	**15 05 22.1**	**+0.3**
VLS	**Valsamata**	**0.13**	**84**	P	**Pg**	**15 05 20.2**	**+0.1**
VLS				S	**Sg**	**15 05 22.4**	**+0.3**
	5μm,0.2s						
VLS	**Valsamata**	**0.13**	**84**	P	**Pg**	**15 05 20.2**	**+0.1**
VLS				S	**Sg**	**15 05 21.9**	**-0.2**
VLS				AML	AML	15 05 25.8	
	comp=E,13480μm,0.3s						
VLS				AML	AML	15 05 26.1	
	comp=N,12659μm,0.3s						
KFL	**Anninata**	**0.29**	**101**	P	**Pg**	**15 05 23.3**	**+0.3**
KFL				S	**Sg**	**15 05 28.2**	**+1.3**
	comp=N,5μm,0.3s						
KFL	**Anninata**	**0.29**	**101**	P	**Pg**	**15 05 23.2**	**+0.2**
KFL				S	**Sg**	**15 05 27.5**	**+0.6**
KFL				AML	AML	15 05 28.7	
	comp=E,16662μm,0.3s						
KFL				AML	AML	15 05 31.4	
	comp=N,5156μm,0.5s						
FSK	**Fiskardo**	**0.32**	**20**	P	**Pg**	**15 05 23.7**	**+0.3**
FSK				S	**Sg**	**15 05 28.9**	**+1.3**
	comp=N,3μm,0.2s						
FSK	**Fiskardo**	**0.32**	**20**	P	**Pg**	**15 05 24.1**	**+0.6**
FSK				S	**Sg**	**15 05 28.1**	**+0.5**
FSK				AML	AML	15 05 29.9	
	comp=N,6021μm,0.2s						
FSK				AML	AML	15 05 29.9	
	comp=E,5187μm,0.2s						
VLMS	**Volimes, Zakyn**	**0.34**	**147**	P	**Pg**	**15 05 24.6**	**+0.6**
EVGI	**Lefkada island**	**0.49**	**22**	P	**Pg**	**15 05 27.0**	**+0.3**
EVGI				S	**Sb**	**15 05 35.1**	**-0.4**
EVGI	**Lefkada island**	**0.49**	**22**	P	**Pg**	**15 05 26.7**	**0.0**
EVGI				S	**Sg**	**15 05 33.9**	**+0.7**
MGNA	**Meganis**	**0.57**	**30**	P	**Pg**	**15 05 28.4**	**+0.2**
MGNA				S	**Sg**	**15 05 35.9**	**+0.2**
MGNA				AML	AML	15 05 37.9	
	comp=N,1899μm,0.2s						
MGNA				AML	AML	15 05 38.8	
	comp=E,1750μm,0.2s						
LKD2	**Lefkada island**	**0.65**	**16**	P	**Pg**	**15 05 29.4**	**-0.4**
LKD2				S	**Sg**	**15 05 39.5**	**+1.2**
	comp=E,468nm,0.3s						
LKD2	**Lefkada island**	**0.65**	**16**	P	**Pg**	**15 05 29.4**	**-0.4**
TSLK	**Tsoukalades, L**	**0.69**	**15**	P	**Pg**	**15 05 30.2**	**-0.2**
TSLK	**Tsoukalades, L**	**0.69**	**15**	P	**Pg**	**15 05 30.2**	**-0.2**
TSLK				S	**Sg**	**15 05 39.3**	**0.0**
PDO	**Prodromos**	**0.74**	**54**	P	**Pg**	**15 05 31.5**	**+0.1**
RLS	**Riolos of Patr**	**0.83**	**97**	P	**Pg**	**15 05 33.4**	**+0.2**
RLS	**Riolos of Patr**	**0.83**	**97**	P	**Pg**	**15 05 33.7**	**+0.5**
PVO	**Paravola**	**0.98**	**62**	P	**Pg**	**15 05 36.0**	**0.0**
DRO	**Drossia**	**1.04**	**101**	P	**Pg**	**15 05 36.6**	**-0.5**
LAKA	**Lakka**	**1.23**	**86**	P	**Pb**	**15 05 40.1**	**-0.6**
ANX	**Ano Chora**	**1.25**	**70**	P	**Pg**	**15 05 42.4**	**+1.1**
SERG	**Sergoula**	**1.31**	**79**	P	**Pn**	**15 05 41.2**	**-0.6**
KLV	**Kalavryta, Ach**	**1.37**	**94**	P	**Pn**	**15 05 42.2**	**-0.4**
MAKR	**Makrakomi, Fth**	**1.58**	**57**	P	**Pb**	**15 05 47.1**	**+0.4**

MAN 31 15:08:46.7,14.˚08N×120.˚35E,h100km,mb4.3,ML3.1, MS2.9,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.35**	**197**	*e*P	Pn	15 09 03.4	+1.8
LUBP				*e*S	Sn	15 09 15.1	+2.4
LQP	**Lukban**	**1.15**	**88**	*e*P	Pn	15 09 09.5	+0.5
LQP				*e*S	Sn	15 09 26.1	+0.3
SCZP	**Santa Cruz**	**1.74**	**346**	*e*P	Pn	15 09 17.1	+1.1
SCZP				*e*S	Sn	15 09 39.0	+0.7
SJMP	**San Jose**	**1.77**	**155**	*e*P	Pn	15 09 17.4	+1.1
SJMP				*e*S	Sn	15 09 39.3	+0.5
SMPP	**San Manuel, Pa**	**2.09**	**9**	*e*P	Pn	15 09 20.2	-0.2
SMPP				*e*S	Sn	15 09 44.9	-1.3
ENPP	**El Nido**	**2.99**	**198**	*e*P	Pn	15 09 33.0	+0.6
ENPP				*e*S	Sn	15 10 08.4	+0.9

*TUL **31** 15:52:56.6±3.1,36.˚65N±0.˚04×98.˚21W±0.˚04,h9km±6km, ML3.1,Error ellipse: s-maj=0.0km s-min=0.0km az=72.0*
*NEIC **31** 15:52:58.2±1.6,36.˚52N±0.˚04×98.˚19W±0.˚05,h5km±1km, Error ellipse: s-maj=8.1km s-min=5.8km az=226.0*
*ANF **31** 15:52:58.1±0.3,36.˚52N×98.˚20W,h0km,ML3.6/5,Error ellipse: s-maj=3.4km s-min=2.8km az=103.0*

ISC 31 15:52:57.2±1.4,36.˚55N±0.˚04×98.˚20W±0.˚03,h7km±14km, n34,σ1s27/41,Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
U32A	**Winter Ranch,**	**0.67**	**256**	Sg	**Sg**	**15 53 19.0**	**+0.2**
ADOK	**Arcadia Dam**	**1.12**	**143**		**Pn**	**15 53 18.7**	**-0.5**
OKCFA	**Oklahoma City**	**1.28**	**152**		**Pg**	**15 53 21.6**	**-0.1**
OKCSW	**OKLAHOMA CITY**	**1.30**	**151**		**Pg**	**15 53 22.0**	**0.0**
OKCSW					**Sg**	**15 53 40.9**	**+2.1**
FNO	**Franklin**	**1.44**	**153**		**Pg**	**15 53 25.0**	**+0.2**
FNO					**Sb**	**15 53 42.4**	**-0.5**
W35A	**Tecumseh**	**1.76**	**142**		**Pb**	**15 53 29.4**	**-0.3**
WMOK	**Wichita Mounta**	**1.87**	**195**		**Pb**	**15 53 30.9**	**-0.8**
WMOK				Sn	**Sb**	**15 53 54.5**	**-0.6**
WMOK	**Wichita Mounta**	**1.87**	**195**	P	**Pb**	**15 53 31.0**	**-0.6**
	baz=15						
WMOK				S	**Sg**	**15 53 57.0**	**-0.2**
	baz=15						
X34A	**Smith Ranch, M**	**1.96**	**171**		**Pb**	**15 53 33.6**	**+0.3**
TUL1	**Leonard**	**2.05**	**107**		**Pb**	**15 53 33.6**	**-1.0**
TUL1	**Leonard**	**2.05**	**107**	P	**Pb**	**15 53 33.8**	**-0.8**
	baz=289						
TUL1				S	**Sb**	**15 53 59.9**	**-0.4**
	baz=289						
CBKS	**Cedar Bluff**	**2.57**	**332**		**Pn**	**15 53 40.9**	**+1.6**
CBKS	**Cedar Bluff**	**2.57**	**332**	P	**Pn**	**15 53 41.2**	**+2.0**
	baz=151						
CBKS				S	**Sb**	**15 54 14.7**	**-0.8**
	baz=151						
KSU1	**Kansas State U**	**2.84**	**26**	Pn	**Pn**	**15 53 44.4**	**+1.4**
KSU1	**Kansas State U**	**2.84**	**26**	S	**Sb**	**15 54 22.4**	**-0.8**
	baz=206						
X37A	**Clayton**	**3.02**	**129**		**Pn**	**15 53 46.9**	**+1.5**
AMTX	**Amarillo**	**3.29**	**241**		**Pn**	**15 53 51.6**	**+2.5**
AMTX	**Amarillo**	**3.29**	**241**	Pb	**Pb**	**15 53 56.4**	**+0.6**
	baz=59						
AMTX				Sb	**Sg**	**15 54 40.1**	**-2.6**
	baz=59						
HHAR	**Hobbs**	**3.44**	**93**		**Pn**	**15 53 52.8**	**+1.6**
W39A	**Magazine**	**3.83**	**109**		**Pn**	**15 53 57.7**	**+1.2**
MIAR	**Mount Ida**	**4.26**	**117**	Pn	**Pn**	**15 54 03.3**	**+0.8**
KSCO	**Kaye Shedlock'**	**4.29**	**306**		**Pn**	**15 54 03.0**	**+0.1**
U40A	**Yellville**	**4.31**	**91**		**Pn**	**15 54 05.7**	**+2.6**
MSTX	**Muleshoe**	**4.54**	**237**		**Pn**	**15 54 07.8**	**+1.4**
MGMO	**Mountain Grove**	**4.79**	**81**	Pn	**Pn**	**15 54 11.2**	**+1.4**
X40A	**Basin Creek Fa**	**4.83**	**114**		**Pn**	**15 54 12.1**	**+1.8**
BGNE	**Belgrade**	**4.85**	**0**	Pn	**Pn**	**15 54 10.4**	**-0.2**
WHAR	**Wooly Hollow**	**4.96**	**103**		**Pn**	**15 54 12.2**	**+0.1**
T25A	**Trinidad**	**5.02**	**279**	Pn	**Pn**	**15 54 15.4**	**+2.3**
S44A	**Carbondale**	**7.24**	**78**	Pn	**Pn**	**15 54 43.1**	**-0.1**
SMCO	**Snowmass**	**7.42**	**293**	Pn	**Pn**	**15 54 45.3**	**-0.9**
TX31	**Lajitas Ar. Si**	**8.54**	**214**	Pn	**Pn**	**15 55 02.0**	**+0.8**
TX32	**Lajitas Array**	**8.54**	**214**	Pn	**Pn**	**15 55 00.6**	**-0.7**
TXAR	**Lajitas Array**	**8.54**	**214**	Pn	**Pn**	**15 55 01.5**	**+0.2**

ROM 31 15:59:03.0±0.1,43.˚446N±0.˚004×12.˚442E±0.˚005, h8km,Md1.1/5,Error ellipse: s-maj=0.4km s-min=0.3km az=126.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.03**	**279**	P	Pg	15 59 04.5	0.0
ATPI				S	Sg	15 59 05.4	-0.2
ATPI				END			
ATVO	**AVT- Monte Val**	**0.07**	**202**	P	Pg	15 59 05.2	+0.3
ATVO				S	Sg	15 59 06.8	+0.5
ATVO				AML	AML		
	comp=E,720μm,0.3s						
ATVO				AML	AML		
	comp=N,339μm,0.8s						
ATVO				AML	AML		
	comp=E,6610μm,0.3s						
ATVO				AML	AML		
	comp=N,3405μm,0.1s						
ATVO				END			
PIEI	**Pieia**	**0.11**	**37**	*e*P	Pg	15 59 06.1	+0.5
PIEI				S	Sg	15 59 08.6	+1.2
PIEI				AML	AML		
	comp=E,264μm,0.2s						
PIEI				AML	AML		
	comp=N,250μm,0.3s						
PIEI				AML	AML		
	comp=E,2460μm,1.2s						
PIEI				AML	AML		
	comp=N,1990μm,0.5s						
PIEI				END			
ATFO	**Monte Foce - G**	**0.12**	**130**	*e*P	Pg	15 59 06.1	+0.4
ATFO				S	Sg	15 59 08.6	+0.9
ATFO				AML	AML		
	comp=E,1405μm,0.5s						
ATFO				AML	AML		
	comp=N,1345μm,0.6s						
ATFO				END			
BADI	**Badiali**	**0.16**	**294**	P	Pg	15 59 06.9	+0.6
BADI				S	Sg	15 59 09.9	+1.4
BADI				AML	AML		
	comp=E,1605μm,0.4s						
BADI				AML	AML		
	comp=N,1895μm,0.2s						
MURB	**Monte Urbino**	**0.19**	**162**	*e*P	Pg	15 59 07.6	+0.7
MURB				S	Sg	15 59 11.2	+1.6
MURB				AML	AML		
	comp=E,304μm,0.6s						
MURB				AML	AML		
	comp=N,287μm,0.4s						
MURB				AML	AML		
	comp=E,3135μm,1.2s						
MURB				AML	AML		
	comp=N,2885μm,0.4s						
MURB				AML	AML		
	comp=E,3105μm,1.2s						
MURB				AML	AML		
	comp=N,2895μm,0.2s						
NARO	**Abbazia di Nar**	**0.19**	**31**	*e*P	Pg	15 59 07.4	+0.5
NARO				S	Sg	15 59 11.0	+1.4
NARO				AML	AML		
	comp=E,705μm,0.6s						
NARO				AML	AML		
	comp=N,802μm,0.9s						
NARO				END			
FRON	**Frontone**	**0.22**	**71**	*e*P	Pg	15 59 07.8	+0.5
FRON				S	Sg	15 59 11.6	+1.3
FRON				AML	AML		
	comp=E,460μm,0.9s						
FRON				AML	AML		
	comp=N,738μm,0.3s						
MPAG	**Monte Paganucc**	**0.29**	**51**	*e*P	Pg	15 59 09.3	+0.5
MPAG				S	Sb	15 59 14.4	-1.3
MPAG				AML	AML		
	comp=E,318μm,0.2s						
MPAG				AML	AML		
	comp=N,415μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.30**	**151**	*e*P	Pg	15 59 09.5	+0.7
ATCC				S	Sb	15 59 14.8	-0.9
ATCC				AML	AML		
	comp=E,1935μm,1.0s						
ATCC				AML	AML		
	comp=N,908μm,0.3s						
FSSB	**Fossombrone**	**0.35**	**45**	*e*P	Pg	15 59 10.4	+0.6
FSSB				S	Sb	15 59 16.7	-0.4
FSSB				AML	AML		
	comp=E,722μm,0.2s						
FSSB				AML	AML		
	comp=N,688μm,1.2s						

ROM 31 15:59:59.9±0.1,43.˚444N±0.˚003×12.˚444E±0.˚004, h8km,ML2.1/24,Error ellipse: s-maj=0.3km s-min=0.1km az=351.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATPI	**Pietralunga -**	**0.03**	**282**	*e*P	Pg	16 00 01.4	-0.1
ATPI				S	Sg	16 00 02.2	-0.5
ATPI				AML	AML		
	comp=E,12350μm,0.6s						
ATPI				AML	AML		
	comp=N,9765μm,0.5s						
ATPI				AML	AML		
	comp=N,9800μm,0.5s						
ATPI				AML	AML		
	comp=N,9760μm,0.5s						
ATPI				AML	AML		
	comp=E,12300μm,0.6s						
ATVO	**AVT- Monte Val**	**0.07**	**204**	P	Pg	16 00 02.1	+0.3
ATVO				S	Sg	16 00 03.7	+0.4
ATVO				AML	AML		
	comp=N,3405μm,0.1s						
ATVO				AML	AML		
	comp=E,6610μm,0.3s						
PIEI	**Pieia**	**0.11**	**36**	P	Pg	16 00 03.0	+0.5
PIEI				S	Sg	16 00 05.6	+1.2
PIEI				AML	AML		
	comp=N,1990μm,0.5s						
PIEI				AML	AML		
	comp=E,2460μm,1.2s						
ATFO	**Monte Foce - G**	**0.12**	**130**	P	Pg	16 00 03.1	+0.4
ATFO				S	Sg	16 00 05.6	+1.0
ATFO				AML	AML		
	comp=N,1345μm,0.6s						
ATFO				AML	AML		
	comp=E,1405μm,0.5s						
CDCA	**Citt' di Caste**	**0.15**	**275**	P	Pg	16 00 03.9	+0.8
CDCA				S	Sg	16 00 06.7	+1.3
CDCA				AML	AML		
	comp=E,1149μm,0.6s						
CDCA				AML	AML		
	comp=N,1330μm,0.5s						
CDCA				AML	AML		
	comp=N,1324μm,0.5s						
CDCA				AML	AML		
	comp=E,1150μm,0.6s						
BADI	**Badiali**	**0.16**	**294**	P	Pg	16 00 03.9	+0.6
BADI				S	Sg	16 00 06.8	+1.3
BADI				AML	AML		
	comp=E,1610μm,0.4s						
BADI				AML	AML		
	comp=N,1890μm,0.2s						
BADI				AML	AML		
	comp=N,1895μm,0.2s						
BADI				AML	AML		
	comp=E,1605μm,0.4s						
MURB	**Monte Urbino**	**0.19**	**162**	*e*P	Pg	16 00 04.5	+0.8
MURB				S	Sg	16 00 08.2	+1.8
MURB				AML	AML		
	comp=E,3135μm,1.2s						
MURB				AML	AML		
	comp=N,2885μm,0.5s						
MURB				AML	AML		
	comp=N,2890μm,0.4s						
MURB				AML	AML		
	comp=N,2885μm,0.4s						
MURB				AML	AML		
	comp=N,2895μm,0.2s						
MURB				AML	AML		
	comp=E,3105μm,1.2s						
MURB				AML	AML		
	comp=N,2890μm,0.2s						
NARO	**Abbazia di Nar**	**0.19**	**31**	P	Pg	16 00 04.3	+0.4
NARO				S	Sg	16 00 07.8	+1.3
NARO				AML	AML		
	comp=E,705μm,0.6s						
NARO				AML	AML		
	comp=N,802μm,0.9s						
NARO				AML	AML		
	comp=E,704μm,0.6s						
FRON	**Frontone**	**0.22**	**70**	P	Pg	16 00 04.8	+0.5
FRON				S	Sg	16 00 08.6	+1.3
FRON				AML	AML		
	comp=E,460μm,0.9s						
FRON				AML	AML		
	comp=N,738μm,0.3s						
FRON				AML	AML		
	comp=E,460μm,0.9s						
SSFR	**Montelago di S**	**0.25**	**92**	P	Pg	16 00 05.4	+0.5
SSFR				S	Sg	16 00 10.3	+2.1
SSFR				AML	AML		
	comp=E,1245μm,0.9s						
SSFR				AML	AML		
	comp=N,1240μm,0.2s						
SSFR				AML	AML		
	comp=E,1400μm,0.8s						
SSFR				AML	AML		
	comp=N,954μm,0.2s						
PE3	**Peglio**	**0.25**	**9**	P	Pg	16 00 05.8	+0.8
PE3				S	Sb	16 00 10.6	-0.7
PE3				AML	AML		
	comp=E,840μm,1.2s						
PE3				AML	AML		
	comp=N,1170μm,0.5s						
ATTE	**AVT- Monte Tez**	**0.26**	**195**	P	Pg	16 00 05.5	+0.5
ATTE				S	Sg	16 00 09.6	+1.2
ATTE				AML	AML		
	comp=N,348μm,0.9s						
ATTE				AML	AML		
	comp=E,602μm,0.3s						
SSP9	**Sansepolcro**	**0.26**	**300**	*e*P	Pg	16 00 05.8	+0.7
SSP9				S	Sb	16 00 10.2	-1.2
FOSV	**Fossato di Vic**	**0.28**	**123**	P	Pg	16 00 05.9	+0.5
FOSV				S	Sb	16 00 11.0	-0.9
FOSV				AML	AML		
	comp=N,222μm,1.6s						
FOSV				AML	AML		
	comp=N,223μm,1.6s						
FOSV				AML	AML		
	comp=E,216μm,0.3s						
MPAG	**Monte Paganucc**	**0.29**	**51**	P	Pg	16 00 06.3	+0.5
MPAG				S	Sb	16 00 11.3	-1.2
MPAG				AML	AML		
	comp=E,318μm,0.2s						
MPAG				AML	AML		
	comp=N,414μm,0.7s						
MPAG				AML	AML		
	comp=E,318μm,0.2s						
MPAG				AML	AML		
	comp=N,415μm,0.7s						
ATCC	**AVT- Casa Cast**	**0.30**	**151**	P	Pg	16 00 06.5	+0.8
ATCC				S	Sb	16 00 12.0	-0.5
ATCC				AML	AML		
	comp=E,1940μm,1.0s						
ATCC				AML	AML		
	comp=E,1935μm,1.0s						
ATCC				AML	AML		
	comp=N,908μm,0.3s						
ATCC				AML	AML		
	comp=N,908μm,0.3s						
FSSB	**Fossombrone**	**0.35**	**44**	P	Pg	16 00 07.2	+0.5
FSSB				S	Sb	16 00 13.6	-0.3
FSSB				AML	AML		
	comp=E,722μm,0.2s						
FSSB				AML	AML		
	comp=N,687μm,1.2s						
FSSB				AML	AML		
	comp=E,722μm,0.2s						
FSSB				AML	AML		
	comp=N,688μm,1.2s						
ARVD	**Arcevia**	**0.37**	**81**	P	Pg	16 00 07.6	+0.6
ARVD				S	Sb	16 00 13.7	-0.8
ARVD				AML	AML		
	comp=E,238μm,0.5s						
ARVD				AML	AML		
	comp=N,230μm,1.4s						
CAFI	**Castiglion Fio**	**0.37**	**252**	P	Pg	16 00 07.6	+0.6
CAFI				S	Sb	16 00 14.1	-0.3
CAFI				AML	AML		
	comp=E,276μm,1.2s						
CAFI				AML	AML		
	comp=N,245μm,0.2s						
CPGN	**Carpegna, Ital**	**0.37**	**346**	AML	AML		
	comp=E,316μm,0.9s						
CPGN				AML	AML		
	comp=N,235μm,1.1s						
CPGN				AML	AML		
	comp=N,300μm,0.9s						
CPGN				AML	AML		
	comp=E,270μm,1.0s						
CRE	**Caprese Michel**	**0.40**	**296**	P	Pg	16 00 08.3	+0.6
CRE				S	Sb	16 00 14.8	-0.7
CRE				AML	AML		
	comp=N,178μm,0.2s						
CRE				AML	AML		
	comp=E,196μm,0.2s						
SNTG	**Esanatoglia**	**0.41**	**117**	AML	AML		
	comp=E,198μm,0.7s						
SNTG				AML	AML		
	comp=N,385μm,0.2s						
ASSB	**Assisi San Ben**	**0.43**	**159**	AML	AML		
	comp=E,240μm,0.9s						
ASSB				AML	AML		
	comp=N,205μm,0.8s						
CESI	**CESI - Serrava**	**0.55**	**142**	AML	AML		
	comp=N,71μm,0.3s						
CESI				AML	AML		
	comp=E,25μm,1.5s						
CESI				AML	AML		
	comp=E,25μm,1.5s						
MGAB	**Montegabbione**	**0.58**	**205**	AML	AML		
	comp=E,464μm,0.5s						
MGAB				AML	AML		
	comp=E,392μm,0.5s						
MGAB				AML	AML		
	comp=N,495μm,0.3s						
MGAB				AML	AML		
	comp=E,464μm,0.5s						
MGAB				AML	AML		
	comp=N,480μm,0.3s						
MGAB				AML	AML		
	comp=E,392μm,0.5s						
MGAB				AML	AML		
	comp=N,496μm,0.3s						
MOMA	**Monte Martano**	**0.65**	**172**	AML	AML		
	comp=E,159μm,1.0s						
MOMA				AML	AML		
	comp=N,143μm,0.9s						

MAN 31 16:01:55.5,10.˚03N×126.˚16E,h15km,mb4.0,ML2.8, MS2.5,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.18**	**207**	*e*P	Pn	16 02 16.3	-1.2
BUTP				*e*S	Sg	16 02 33.8	-0.1
CGP	**Cagayan de Oro**	**2.13**	**223**	*e*P	Pn	16 02 31.5	+0.9
CGP				*e*S	Sn	16 02 57.5	+0.6
BUKP	**Musuan**	**2.40**	**207**	*e*P	Pn	16 02 34.1	-0.3
BUKP				*e*S	Sn	16 03 05.0	+1.5

*NEIC **31** 16:04:04.6±1.8,16.˚78N±0.˚06×94.˚93W±0.˚06,h98km±6km,*

Error ellipse: s-maj=8.7km s-min=7.1km az=142.0
*MEX **31** 16:04:05.6±1.0, 16°.72N×94°.91W, h99km±7km, MD4.0*
ISC 31 16:04:04.0±1.0, 16.71N±0.07×94.90W±0.04, h100km, n18, σ1§02/26, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.38**	**2**	*i* P	**Pn**	**16 04 19.4**	**+0.3**
CMIG				eS	**Sn**	**16 04 29.8**	**-0.6**
CMIG	**Matias Romero**	**0.38**	**2**		**Pn**	**16 04 19.4**	**+0.3**
CMIG					**Sn**	**16 04 29.8**	**-0.6**
HUIG	**Huatulco**	**1.49**	**231**	*e*P	**Pn**	**16 04 30.0**	**-0.1**
HUIG				eS	**Sn**	**16 04 50.6**	**+0.6**
HUIG	**Huatulco**	**1.49**	**231**		**Pn**	**16 04 30.0**	**-0.1**
HUIG					**Sn**	**16 04 50.6**	**+0.6**
VHO	**Vista Hermosa**	**1.79**	**282**	*i* P	**Pn**	**16 04 34.5**	**+0.4**
VHO				*i* S	**Sn**	**16 04 57.5**	**+0.5**
CCIG	**Comitan**	**2.69**	**99**	Pn	**Pn**	**16 04 47.9**	**+2.1**
CCIG				Sn	**Sn**	**16 05 16.0**	**-1.9**
PNIG	**Pinotepa**	**3.11**	**265**	*e*P	**Pn**	**16 04 51.3**	**0.0**
PNIG				*i* S	**Sn**	**16 05 28.7**	**+0.9**
PNIG	**Pinotepa**	**3.11**	**265**		**Pn**	**16 04 51.0**	**-0.3**
PNIG					**Sn**	**16 05 25.0**	**-2.8**
TLIG	**Tlapa**	**3.61**	**284**	Pn	**Pn**	**16 04 59.7**	**+1.6**
TEIG	**Tepich**	**7.20**	**60**	Pn	**Pn**	**16 05 46.1**	**-0.4**
TXAR	**Lajitas Array**	**14.93**	**329**	Pn	**Pn**	**16 07 30.2**	**+0.3**
TX32	**Lajitas Array**	**14.93**	**329**	Pn	**Pn**	**16 07 30.7**	**+0.7**
ETX02	**Prairie Street**	**15.14**	**2**	Pn	**Pn**	**16 07 32.9**	**+0.3**
WHTX	**Lake Whitney,**	**15.39**	**352**	Pn	**Pn**	**16 07 35.8**	**+0.1**
WHTX				IAmb	IAmb	16 07 45.6	
	comp=Z,5.0nm,0.8s						
BRAL	**Brewton**	**16.08**	**25**	Pn	**Pn**	**16 07 43.6**	**-0.7**
AMTX	**Amarillo**	**19.09**	**343**	P	**P**	**16 08 19.0**	**+0.1**
AMTX				IAmb	IAmb	16 08 21.7	
	comp=Z,12nm,1.4s						
LCAR	**Lake Charles**	**19.57**	**9**	P	**P**	**16 08 24.0**	**0.0**
U40A	**Yellville**	**19.66**	**5**	P	**P**	**16 08 23.8**	**-1.2**
U40A				IAmb	IAmb	16 08 34.6	
	comp=Z,15nm,0.8s						

*MAN **31** 16:05:30.9, 11°.29N×124°.48E, h3km, mb4.7, ML3.6, MS3.6*
*IDC **31** 16:05:31.2±1.9, 11°.46N×125°.44E, h0km, mb3.3/4,*
mb1 3.5/4, mb1mx3.3/44, mbtmp3.3/4, MS2.8/8, Ms1 2.8/8,
ms1mx2.6/30, Error ellipse: s-maj=192.4km s-min=23.3km az=69.0
ISC 31 16:05:32.0±0.8, 11°.25N±0°.04×124°.43E±0°.04, h10km, n21, σ1§97/19, mb3.3/4, MS2.7/6, 2C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.27**	**138**	*e*P	**Pg**	**16 05 36.6**	**-0.9**
OCLP				eS	**Sg**	**16 05 41.6**	**+0.5**
LLP	**Lapu-Lapu**	**1.03**	**206**↑	*e*P	**Pn**	**16 05 52.4**	**-0.2**
LLP				*i* S	**Sn**	**16 06 08.1**	**+1.0**
MSLP	**Maasin**	**1.19**	**159**	*e*P	**Pg**	**16 05 54.6**	**-0.3**
MSLP				eS	**Sn**	**16 06 12.3**	**+1.4**
CNP	**Catarman**	**1.27**	**10**	*e*P	**Pn**	**16 05 53.3**	**-2.6**
CNP				eS	**Sg**	**16 06 12.3**	**-0.8**
RCP	**Roxas**	**1.68**	**281**↑	*e*P	**Pb**	**16 06 01.8**	**-1.2**
RCP				eS	**Sg**	**16 06 26.7**	**+0.7**
GUIM	**Jordan**	**1.91**	**251**	*e*P	**Pb**	**16 06 04.9**	**-2.1**
GUIM				eS	**Sg**	**16 06 31.3**	**-2.1**
CGP	**Cagayan de Oro**	**2.79**	**175**↓	*e*P	Pg	16 06 31.0	+5.4
BUKP	**Musuan**	**3.41**	**169**	*e*P	**Pn**	**16 06 26.8**	**+1.4**
BUKP				eS	**Sb**	**16 07 10.0**	**-4.2**
KCP	**Kidapawan**	**4.26**	**171**↓	*e*P	**Pb**	**16 06 45.3**	**-1.9**
TGY	**Tagaytay City**	**4.43**	**310**	LR	LR	16 08 28.6	
	comp=Z,176nm,18.1s,baz=192,slow=35						
KAPI	**Kappang**	**16.81**	**196**	LR	LR	16 16 47.7	
	comp=Z,28nm,21.9s,baz=114,slow=39						
GUMO	**Guam**	**20.10**	**81**	LR	LR	16 16 27.7	
	comp=Z,11nm,20.2s,baz=172,slow=34						
JAY	**Jayapura**	**21.19**	**129**	LR	LR	16 17 50.1	
	comp=Z,36nm,21.1s,baz=309,slow=36						
CMAR	**Chiang Mai Arr**	**25.63**	**289**	LR	LR	16 22 05.7	
	comp=Z,17nm,18.9s,baz=135,slow=38						
KSRS	**Korea Array**	**25.28**	**6**	LR	LR	16 20 58.3	
	comp=Z,24nm,21.9s,baz=205,slow=36						
PSI	**Prapat**	**26.64**	**254**	LR	LR	16 22 27.8	
	comp=Z,24nm,19.9s,baz=183,slow=37						
WRA	**Warramunga Arr**	**32.50**	**162**	P	**P**	**16 12 03.4**	**+0.3**
	0.3nm,0.6s,baz=346,slow=8.7,SNR=1.6						
ASAR	**Alice Springs**	**35.92**	**165**	P	**P**	**16 12 32.8**	**0.0**
	0.4nm,0.6s,baz=349,slow=7.3,SNR=9.7						
ASAJ	**Asahikawa**	**36.31**	**22**	LR	LR	16 27 01.3	
	comp=Z,21nm,20.4s,baz=136,slow=36						
SONM	**Songino Array**	**39.49**	**341**	P	**P**	**16 13 05.3**	**+2.4**
	0.3nm,0.7s,baz=136,slow=6.0,SNR=3.5						
MKAR	**Makanchi Array**	**50.16**	**323**	P	**P**	**16 14 31.1**	**+3.3**
	0.2nm,0.7s,baz=137,slow=7.9,SNR=2.5						

IDC 31 16:11:45.6±34.0, 22°.56S×178°.47W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/42, mbtmp4.0/4, Error ellipse: s-maj=643.5km s-min=151.9km az=90.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.54**	**247**	P	P	16 18 52.3	-0.8
	0.9nm,0.5s,baz=98,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**43.66**	**259**	P	P	16 19 52.1	-0.3
	0.7nm,0.3s,baz=95,slow=6.9,SNR=37						
WRA	**Warramunga Arr**	**43.92**	**264**	P	P	16 19 55.0	+0.4
	1.7nm,0.3s,baz=97,slow=8.4,SNR=22						
FITZ	**Fitzroy Crossi**	**52.35**	**264**	P	P	16 21 00.0	+0.2
	2.3nm,0.8s,baz=100,slow=5.9,SNR=2.0						

*IDC **31** 16:16:13.4±3.2, 10°.32S×78°.63W, h67km±25km, mb3.2/3,*
mb1 3.5/6, mb1mx3.3/31, mbtmp3.6/6, MS3.1/1, Ms1 3.1/1,
ms1mx2.6/7, Error ellipse: s-maj=53.2km s-min=7.9km az=68.0
ISC 31 16:16:10.6±1.2, 10°.4S±0°.1×78°.9W±0°.2, h35km, n7, σ1§83/10, mb3.6/3, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**2.53**	**128**	P	**Pn**	**16 16 51.0**	**+1.7**
	25nm,0.3s,baz=298,slow=8.4,SNR=18						
NNA				S	**Sn**	**16 17 19.9**	**+1.0**
	98nm,0.3s,baz=350,slow=23,SNR=14						
ATAH	**Atahualpa**	**3.29**	**8**	P	**Pn**	**16 17 01.3**	**+1.3**
	25nm,0.3s,baz=120,slow=4.0,SNR=107						
ATAH				S	**Sn**	**16 17 38.8**	**+0.6**
	48nm,0.3s,baz=87,slow=3.6,SNR=12						
ROSC	**El Rosal**	**15.81**	**17**	LR	LR	16 26 47.4	
	comp=Z,64nm,18.3s,baz=131,slow=40						
SIV	**San Ignacio**	**18.18**	**110**	P	**Pn**	**16 20 18.5**	**-2.0**
	0.2nm,0.3s,baz=307,slow=14,SNR=3.6						
PDAR	**Pinedale Array**	**59.90**	**334**	P	**P**	**16 26 12.6**	**-0.7**
	0.1nm,0.5s,baz=123,slow=6.6,SNR=1.6						
PDAR				pP	**pP**	**16 26 25.1**	**+1.2**
	0.4nm,0.8s,baz=134,slow=8.5,SNR=3.3						
YKA	**Yellowknife Ar**	**77.78**	**344**	P	**P**	**16 28 02.8**	**-1.0**
	0.2nm,0.4s,baz=143,slow=5.9,SNR=6.2						
YKA				pP	**pP**	**16 28 17.2**	**+2.5**
	0.3nm,0.7s,baz=144,slow=6.0,SNR=4.0						
TORD	**Torodi Ar. Bea**	**83.31**	**75**	P	**P**	**16 28 32.5**	**-2.0**
	0.6nm,0.6s,baz=262,slow=5.4,SNR=2.4						

UCR 31 16:18:37.0±1.6, 9°.40N×84°.65W, h14km±21km, MD3.8, MW3.4, Costa Rica

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LCR2	**La Lucha 2**	**0.72**	**62**	*e*P	Pg	16 18 49.8	-1.4
EDDO	**Dominical**	**0.79**	**100**	*e*P	Pg	16 18 51.7	-0.6
EDDO				eS	Sb	16 19 03.3	+0.3
HDC	**Heredia**	**0.80**	**41**	*e*P	Pg	16 18 51.3	-1.3
HDC				eS	Sb	16 19 03.9	+0.3
JTS	**Las Juntas de**	**0.94**	**341**	*e*P	Pb	16 18 53.5	-1.6
JTS				eS	Sb	16 19 06.6	-0.8
ARE1	**Arenal 1**	**1.06**	**356**	*e*P	Pb	16 18 56.1	-1.1
ARE1				eS	Sn	16 19 12.1	-0.1
FORC	**Fortuna**	**1.06**	**359**	*i* P	Pb	16 18 55.9	-1.4
FORC				*i* S	Sb	16 19 10.3	-0.8
CVTR	**Volcan Turrial**	**1.07**	**55**	*e*P	Pb	16 18 56.5	-1.1
PLVR	**Palo Verde**	**1.17**	**324**	*e*P	Pb	16 18 57.5	-1.7
PLVR				eS	Sg	16 19 14.9	-0.1
AMAS	**Alto Masis**	**1.25**	**344**	*i* P	Pn	16 18 59.2	-1.1
ACAL	**Aguas Claras**	**1.29**	**343**	*i* P	Pn	16 19 00.0	-0.7
ACAL				*i* S	Sb	16 19 17.1	-0.5
NY14	**Universidad de**	**1.52**	**325**	*i* P	Pn	16 19 02.9	-0.9

*BJI **31** 16:39:02.5±0.0, 54°.61N×159°.76E, h170km, mB5.0/62,*
mb4.9/77
*KRSC **31** 16:39:04.1±0.7, 54°.56N×160°.03E, h177km±9km, ML5.7,*
FELT [IV] at GMS Kronoki; [III] at Ust-Kamchatsk; [II] at
Paujetka.
*MOS **31** 16:39:05.4±0.9, 54°.68N×159°.56E, h172km, mb4.8/32,*
Error ellipse: s-maj=6.7km s-min=3.2km az=79.2
*NEIC **31** 16:39:07.0±1.9, 54°.67N±0°.07×159°.6E±0°.1, h169km±5km,*
mb5.1/259, Error ellipse: s-maj=11.9km s-min=9.8km
az=129.0
*IDC **31** 16:39:06.8±0.3, 54°.74N×159°.51E, h166km±2km, mb4.5/34,*
mb1 4.7/37, mb1mx4.7/40, mbtmp5.0/37, MS4.1/23,
Ms1 4.1/23, ms1mx3.9/48, Error ellipse: s-maj=8.2km
s-min=5.4km az=141.0
*GCMT **31** 16:39:07.0±0.1, 54°.63N±0°.01×160°.02E±0°.01,*
h171km, MW5.5/151, Moment Tensor Solution.
s133,c232; s151,c302; Duration: 1§3 Moment tensor:
Scale 10^17Nm; Mrr-0.97±.02; Mθθ 1.75±.02; Mϕϕ-0.78±.02;
Mrθ 0.71±.02; Mθϕ 0.34±.02; Mϕr-0.98±.02; Best double
couple: M=1.97000×10^17 NP1:ϕs49.00000°, δ47.00000°,
λ-150.00000°. NP2:ϕs297.00000°, δ69.00000°,
λ-47.00000°. Principal axes: T 1.9280, Plg13.0000°,
Azm358.0000°; N 0.0810, Plg39.0000°, Azm99.0000°; P
-2.0120, Plg48.0000°, Azm253.0000°; nsta1 refers to
body waves, cutoff=40s. nsta2 refers to surface waves,
cutoff=50s. Triangular moment-rate function
*BGR **31** 16:39:09.2±0.0, 54°.30N×158°.89E, h177km±2km, mb4.7*
ISC 31 16:39:06.5±0.2, 54°.63N±0°.03×159°.69E±0°.03, h168km±1km, h167km:pP-P, n1184, σ1§27/1370, mb5.0/284, 21C-23D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZV	**Kizimen**	**0.60**	**36**	PN	**Pn**	**16 39 29.8**	**-0.7**
KZV	**Kizimen**	**0.60**	**36**	*e*P	**Pn**	**16 39 29.8**	**-0.7**
KII	**Karymskiy**	**0.61**	**193**	PN	**Pn**	**16 39 30.5**	**0.0**
KII	**Karymskiy**	**0.61**	**193**	*i* P	**Pn**	**16 39 30.5**	**0.0**
TUMD	**Tumrok D**	**0.71**	**35**	*e*P	**Pn**	**16 39 30.2**	**-0.7**
TUMD				eS	**Sn**	**16 39 47.9**	**-1.8**
TUMR	**Tumrok**	**0.71**	**22**	PN	**Pn**	**16 39 30.2**	**-0.8**
TUMR				S	**Sn**	**16 39 47.9**	**-2.1**
TUMR	**Tumrok**	**0.71**	**22**	*i* P	**Pn**	**16 39 31.1**	**+0.1**
KMNR	**Kamenistaya**	**1.17**	**15**	PN	**Pn**	**16 39 34.5**	**+0.1**
KMNR	**Kamenistaya**	**1.17**	**15**	*i* P	**Pn**	**16 39 34.5**	**+0.1**
MKZ	**Mys Kozlova**	**1.19**	**93**	PN	**Pn**	**16 39 32.2**	**-2.2**
MKZ	**Mys Kozlova**	**1.19**	**93**	*i* P	**Pn**	**16 39 32.2**	**-2.2**
KPT	**Kopyto**	**1.37**	**13**	PN	**Pn**	**16 39 36.0**	**-0.2**
KPT	**Kopyto**	**1.37**	**13**	*e*P	**Pn**	**16 39 36.0**	**-0.2**
KIRR	**Kirishev**	**1.38**	**15**	PN	**Pn**	**16 39 35.7**	**-0.6**
KIRR				S	**Sn**	**16 39 59.4**	**-0.1**
KIRR	**Kirishev**	**1.38**	**15**	*e*P	**Pn**	**16 39 35.7**	**-0.6**
KIRR				eS	**Sn**	**16 39 59.4**	**-0.1**
KRX	**Arik**	**1.41**	**206**	PN	**Pn**	**16 39 37.3**	**+0.6**
KRX	**Arik**	**1.41**	**206**	*e*P	**Pn**	**16 39 37.3**	**+0.6**
ESO	**Esso**	**1.42**	**337**	PN	**Pn**	**16 39 37.4**	**+0.9**
ESO				S	**Sn**	**16 40 01.2**	**+1.3**
ESO	**Esso**	**1.42**	**337**	*i* P	**Pn**	**16 39 37.4**	**+0.9**
ESO				eS	**Sn**	**16 40 01.2**	**+1.3**
BZGR	**Bezymyannyi-Gr**	**1.44**	**23**	PN	**Pn**	**16 39 36.4**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**1.44**	**23**	*e*P	**Pn**	**16 39 36.4**	**-0.4**
SDLR	**Sedlovina**	**1.44**	**200**	PN	**Pn**	**16 39 36.9**	**0.0**
SDLR	**Sedlovina**	**1.44**	**200**	*i* P	**Pn**	**16 39 36.9**	**0.0**
KOZ	**Kozyrevsk**	**1.44**	**4**	PN	**Pn**	**16 39 36.8**	**+0.1**
KOZ	**Kozyrevsk**	**1.44**	**4**	*e*P	**Pn**	**16 39 36.8**	**+0.1**
KRER	**Koryakskii**	**1.44**	**203**	PN	**Pn**	**16 39 37.6**	**+0.6**
KRER	**Koryakskii**	**1.44**	**203**	*i* P	**Pn**	**16 39 37.6**	**+0.6**
SMAR	**Somma**	**1.47**	**201**	PN	**Pn**	**16 39 37.3**	**0.0**
SMAR	**Somma**	**1.47**	**201**	*e*P	**Pn**	**16 39 37.3**	**0.0**
NLC	**Nalytchevo**	**1.48**	**188**	PN	**Pn**	**16 39 36.4**	**-0.7**
NLC				S	**Sn**	**16 39 59.5**	**-1.2**
NLC	**Nalytchevo**	**1.48**	**188**	*e*P	**Pn**	**16 39 36.4**	**-0.7**
NLC				eS	**Sn**	**16 39 59.5**	**-1.2**
KOK	**Koryaka**	**1.48**	**205**	PN	**Pn**	**16 39 37.8**	**+0.5**
KOK	**Koryaka**	**1.48**	**205**	*i* P	**Pn**	**16 39 37.8**	**+0.5**
AVH	**Avacha**	**1.48**	**203**	PN	**Pn**	**16 39 37.7**	**+0.4**
AVH				S	**Sn**	**16 40 02.2**	**+1.3**
AVH	**Avacha**	**1.48**	**203**	*i* P	**Pn**	**16 39 37.7**	**+0.4**
AVH				eS	**Sn**	**16 40 02.2**	**+1.3**
UGLR	**Uglovaya**	**1.51**	**200**	PN	**Pn**	**16 39 37.8**	**+0.2**
UGLR	**Uglovaya**	**1.51**	**200**	*i* P	**Pn**	**16 39 37.8**	**+0.2**
ZLN	**Zelenaya**	**1.53**	**24**	PN	**Pn**	**16 39 38.1**	**+0.4**
ZLN	**Zelenaya**	**1.53**	**24**	*e*P	**Pn**	**16 39 38.1**	**+0.4**
SPN	**Mys Shipunski**	**1.55**	**173**	PN	**Pn**	**16 39 36.1**	**-1.7**
SPN				S	**Sn**	**16 39 58.6**	**-3.4**
SPN	**Mys Shipunski**	**1.55**	**173**	*i* P	**Pn**	**16 39 36.1**	**-1.7**
SPN				eS	**Sn**	**16 39 58.6**	**-3.4**
LGNR	**Loginova**	**1.56**	**21**	PN	**Pn**	**16 39 38.6**	**+0.3**
LGNR	**Loginova**	**1.56**	**21**	*e*P	**Pn**	**16 39 38.6**	**+0.3**
CIRR	**Tsirk**	**1.61**	**22**	PN	**Pn**	**16 39 38.3**	**-0.3**
CIRR	**Tsirk**	**1.61**	**22**	*e*P	**Pn**	**16 39 38.3**	**-0.3**
KRSR	**Krestovskiy**	**1.67**	**17**	PN	**Pn**	**16 39 38.8**	**-0.3**
KRSR	**Krestovskiy**	**1.67**	**17**	*i* P	**Pn**	**16 39 38.8**	**-0.3**
SRDR	**Sredinnyy**	**1.69**	**1**	PN	**Pn**	**16 39 39.6**	**+0.3**
SRDR	**Sredinnyy**	**1.69**	**1**	*e*P	**Pn**	**16 39 39.6**	**+0.3**
DALK	**Dalny**	**1.69**	**199**	PN	**Pn**	**16 39 39.0**	**-0.3**
DALK				S	**Sn**	**16 40 04.2**	**-0.5**
DALK	**Dalny**	**1.69**	**199**	*i* P	**Pn**	**16 39 39.0**	**-0.3**
DALK				eS	**Sn**	**16 40 04.2**	**-0.5**
PET	**Petropavlovsk**	**1.72**	**201**	PN	**Pn**	**16 39 39.5**	**-0.1**
PET	**Petropavlovsk**	**1.72**	**201**		**Pn**	**16 39 39.5**	**-0.1**
KLY	**Klyuchi**	**1.77**	**18**	PN	**Pn**	**16 39 40.2**	**+0.1**
KLY				S	**Sn**	**16 40 07.7**	**+1.4**
KLY	**Klyuchi**	**1.77**	**18**	*e*P	**Pn**	**16 39 40.2**	**+0.1**
KLY				eS	**Sn**	**16 40 07.7**	**+1.4**
PEA0B	**Petropavlovsk-**	**1.93**	**219**	PN	**Pn**	**16 39 42.4**	**+0.5**
PEA0B	**Petropavlovsk-**	**1.93**	**219**		**Pn**	**16 39 42.4**	**+0.5**
PETK	**Petropavlovsk-**	**1.93**	**219**	P	**Pn**	**16 39 42.3**	**+0.4**
	508nm,0.3s,baz=65,slow=17,SNR=2290						
PETK				S	**Sn**	**16 40 10.4**	**+1.3**
	92nm,0.3s,baz=82,slow=12,SNR=2.4						
PETK	**Petropavlovsk-**	**1.93**	**219**		**Pn**	**16 39 41.6**	**-0.2**
KRMR	**Karymshinskiy**	**2.03**	**208**	PN	**Pn**	**16 39 42.9**	**0.0**
KRMR				S	**Sn**	**16 40 11.6**	**+0.5**
KRMR	**Karymshinskiy**	**2.03**	**208**	*i* P	**Pn**	**16 39 42.9**	**0.0**
KRMR				eS	**Sn**	**16 40 11.6**	**+0.5**
BDR	**Baidarnaya**	**2.13**	**23**	PN	**Pn**	**16 39 44.2**	**+0.1**
BDR	**Baidarnaya**	**2.13**	**23**	*e*P	**Pn**	**16 39 44.2**	**+0.1**
SRKR	**Sorokina**	**2.20**	**22**	PN	**Pn**	**16 39 45.0**	**+0.1**
SRKR	**Sorokina**	**2.20**	**22**	*e*P	**Pn**	**16 39 45.0**	**+0.1**
SMKR	**Semkarok**	**2.20**	**27**	PN	**Pn**	**16 39 45.1**	**+0.1**
SMKR	**Semkarok**	**2.20**	**27**	*e*P	**Pn**	**16 39 45.1**	**+0.1**
APC	**Apacha**	**2.27**	**222**	PN	**Pn**	**16 39 46.9**	**+1.1**
APC				S	**Sn**	**16 40 18.3**	**+2.2**
APC	**Apacha**	**2.27**	**222**	*i* P	**Pn**	**16 39 46.9**	**+1.1**
APC				eS	**Sn**	**16 40 18.3**	**+2.2**
GRL	**Gorelyy**	**2.29**	**205**	PN	**Pn**	**16 39 46.5**	**+0.4**
GRL				S	**Sn**	**16 40 18.4**	**+1.6**
GRL	**Gorelyy**	**2.29**	**205**	*i* P	**Pn**	**16 39 46.5**	**+0.4**
GRL				eS	**Sn**	**16 40 18.4**	**+1.6**
RUS	**Russkaya**	**2.31**	**198**	PN	**Pn**	**16 39 45.1**	**-1.1**
RUS				S	**Sn**	**16 40 15.4**	**-1.5**
RUS	**Russkaya**	**2.31**	**198**	*e*P	**Pn**	**16 39 45.1**	**-1.1**
RUS				eS	**Sn**	**16 40 15.4**	**-1.5**
MTVR	**Mutnovka**	**2.33**	**203**	PN	**Pn**	**16 39 46.7**	**+0.1**
MTVR	**Mutnovka**	**2.33**	**203**	*i* P	**Pn**	**16 39 46.7**	**+0.1**
KBG	**Krutoberegovo**	**2.37**	**45**	PN	**Pn**	**16 39 45.5**	**-1.3**
KBG				S	**Sn**	**16 40 15.1**	**-3.0**
KBG	**Krutoberegovo**	**2.37**	**45**	*e*P	**Pn**	**16 39 45.5**	**-1.3**
KBG				eS	**Sn**	**16 40 15.1**	**-3.0**
KBTR	**Krutoberegovo**	**2.38**	**47**	PN	**Pn**	**16 39 45.5**	**-1.5**
KBTR	**Krutoberegovo**	**2.38**	**47**	*e*P	**Pn**	**16 39 45.5**	**-1.5**
ASAK	**Asacha**	**2.49**	**206**	PN	**Pn**	**16 39 48.6**	**+0.2**
ASAK	**Asacha**	**2.49**	**206**	*e*P	**Pn**	**16 39 48.6**	**+0.2**
KDTR	**Khodutka, Kamc**	**2.99**	**200**	PN	**Pn**	**16 39 53.0**	**-1.3**
KDTR				S	**Sn**	**16 40 28.7**	**-2.8**
KDTR	**Khodutka, Kamc**	**2.99**	**200**	*e*P	**Pn**	**16 39 53.0**	**-1.3**
KDTR				eS	**Sn**	**16 40 28.7**	**-2.8**
PAU	**Pauzhetka**	**3.61**	**210**	PN	**Pn**	**16 40 02.2**	**0.0**
PAU				S	**Sn**	**16 40 44.9**	**-0.7**
PAU	**Pauzhetka**	**3.61**	**210**	*i* P	**Pn**	**16 40 02.2**	**0.0**
PAU				eS	**Sn**	**16 40 44.9**	**-0.7**
BKI	**Bering**	**3.67**	**78**	PN	**Pn**	**16 40 00.5**	**-2.4**
BKI	**Bering**	**3.67**	**78**	*e*P	**Pn**	**16 40 00.5**	**-2.4**
BKI				*e*S	**Sn**	**16 40 40.8**	**-6.0**
PALN	**Palana**	**4.47**	**2**	PN	**Pn**	**16 40 13.0**	**-0.1**
PALN				S	**Sn**	**16 41 04.7**	**-0.7**
PALN	**Palana**	**4.47**	**2**	*e*P	**Pn**	**16 40 13.0**	**-0.1**
PALN				*e*S	**Sn**	**16 41 04.7**	**-0.7**
SKR	**Severo-Kuril's**	**4.51**	**210**	*e*PN	**Pn**	**16 40 12.6**	**-1.1**
SKR				*e*S	**Sn**	**16 41 04.4**	**-1.9**
SKR				pmax	pmax		
	comp=Z,2μm,1.7s						
SKR				pmax	pmax		
	comp=Z,1μm,0.9s						
SKR				smax	smax		
	comp=E,4μm,0.6s						
SKR				smax	smax		
	comp=N,3μm,0.5s						
SKR				MLR	MLR		
	comp=Z,2μm,16.0s						
SKR	**Severo-Kuril's**	**4.51**	**210**	*e*P	**Pn**	**16 40 13.3**	**-0.4**
SKR				*e*S	**Sn**	**16 41 05.1**	**-1.2**
OSSR	**Ossora**	**4.99**	**20**	PN	**Pn**	**16 40 19.5**	**-0.3**
OSSR				S	**Sn**	**16 41 16.1**	**-1.2**
OSSR	**Ossora**	**4.99**	**20**	*e*P	**Pn**	**16 40 19.5**	**-0.3**
OSSR				*e*S	**Sn**	**16 41 16.1**	**-1.2**
TILK	**Tilichiki**	**6.79**	**28**	PN	**Pn**	**16 40 43.4**	**-0.1**
TILK				S	**Sn**	**16 41 56.3**	**-3.6**
TILK	**Tilichiki**	**6.79**	**28**	*e*P	**Pn**	**16 40 43.4**	**-0.1**
TILK				*e*S	**Sn**	**16 41 56.3**	**-3.6**
MA2	**Magadan**	**6.94**	**319**	*c i*PN	**Pn**	**16 40 47.2**	**+1.6**
MA2	**Magadan**	**6.94**	**319**	P	**Pn**	**16 40 46.9**	**+1.3**
	comp=Z,8.2nm,0.3s,baz=130,slow=12,SNR=60						
MA2	**Magadan**	**6.94**	**319**		**Pn**	**16 40 47.0**	**+1.5**
KMSK	**Kamenskaya**	**8.56**	**21**	PN	**Pn**	**16 41 07.6**	**+0.6**
KMSK				S	**Sn**	**16 42 38.1**	**-4.2**
KMSK	**Kamenskaya**	**8.56**	**21**	*e*P	**Pn**	**16 41 07.6**	**+0.6**
KMSK				*e*S	**Sn**	**16 42 38.1**	**-4.2**
SMY	**Shemya**	**8.77**	**97**	PN	**Pn**	**16 41 09.1**	**-0.7**
SMY	**Shemya**	**8.77**	**97**		**Pn**	**16 41 09.1**	**-0.7**
SEY	**Seymchan**	**9.14**	**339**↑	*i*PN	**Pn**	**16 41 16.8**	**+2.1**
SEY	**Seymchan**	**9.14**	**339**	P	**Pn**	**16 41 16.6**	**+2.0**
	comp=Z,3.6nm,0.3s,baz=142,slow=12,SNR=241						
OKH	**Okha**	**9.91**	**271**	*d i*PN	**Pn**	**16 41 28.3**	**+3.5**
OKH				pmax	pmax		
	comp=Z,1μm,6.4s						
OKH				MLR	MLR		
	comp=E,900nm,13.0s						
OKH				MLR	MLR		
	comp=Z,800nm,9.0s						
OKH				MLR	MLR		
	comp=N,2μm,13.0s						
TYV	**Tymovskoe**	**10.99**	**257**	*e*PN	**Pn**	**16 41 42.1**	**+3.2**
TYV				pmax	pmax		
	comp=Z,3μm,3.0s						
TYV				pmax	pmax		
	comp=Z,333nm,1.4s						
NKL	**Nikolayevsk**	**11.31**	**270**	*e*PN	**Pn**	**16 41 44.5**	**+1.4**
NKL				pmax	pmax		
	comp=E,103nm,1.4s						
NKL				pmax	pmax		
	comp=N,10.0nm,0.8s						
NKL				MLR	MLR		
	comp=Z,498nm,13.0s						
NKL				MLR	MLR		
	comp=E,60nm,14.0s						
NKL				MLR	MLR		
	comp=N,115nm,12.0s						
KUR	**Kuril'sk**	**12.09**	**224**	*d i*PN	**Pn**	**16 41 53.2**	**0.0**
KUR				*e*S	**Sn**	**16 44 06.7**	**-0.3**
KUR				pmax	pmax		
	comp=Z,108nm,0.7s						
KUR				smax	smax		
	comp=N,89nm,0.7s						
KUR				smax	smax		
	comp=E,55nm,0.4s						
UGL	**Uglegorsk**	**12.22**

YAK ScP **ScP** **16 50 49.6 +1.4**
comp=E,0.1nm,0.3s,baz=328,slow=0.9,SNR=4.9
YAK Yakutsk 17.28 307 P **P** **16 42 56.5 +0.3**
TEY Ternei 17.64 247⇑*e*P **Pn** **16 43 01.9 +0.1**
TEY *e*S **S** **16 46 14.4 -0.4**
TEY pmax pmax
comp=E,100nm,1.4s
TEY pmax pmax
comp=Z,140nm,1.5s
TEY pmax pmax
comp=N,60nm,1.3s
TEY smax smax
comp=N,60nm,1.1s
TEY smax smax
comp=E,50nm,1.4s
KLR Kul'dur 17.99 264*d iP* **Pn** **16 43 05.7 -0.2**
KLR pmax pmax
comp=Z,346nm,1.5s
KLR Kul'dur 17.99 264 P **Pn** **16 43 05.5 -0.4**
comp=Z,6.9nm,0.3s,baz=66,slow=9.4,SNR=165
KLR PcP **PcP** **16 47 32.0 +1.2**
comp=Z,1.0nm,0.3s,baz=97,slow=2.2,SNR=7.3
KLR ScP **ScP** **16 50 51.7 +1.7**
comp=Z,0.5nm,0.3s,baz=87,slow=2.3,SNR=8.4
ZEA Zeya 18.92 281 *e*P **P** **16 43 13.2 -1.0**
ZEA *e*S **S** **16 46 36.0 -4.0**
ZEA pmax pmax
comp=N,29nm,1.2s
ZEA pmax pmax
comp=E,110nm,1.4s
ZEA pmax pmax
comp=Z,150nm,1.4s
ZEA pmax pmax
comp=Z,700nm,10.0s
ZEA smax smax
comp=N,2μm,10.0s
ZEA MLR MLR
comp=E,200nm,14.0s
ZEA MLR MLR
comp=Z,600nm,14.0s
ZEA MLR MLR
comp=N,400nm,15.0s
UNV Unalaska Vale 19.67 78 P **P** **16 43 23.3 +1.1**
UNV IAmb IAmb 16 43 30.6
comp=Z,85nm,0.9s
AKUT Akutan 20.01 77 P **P** **16 43 26.9 +1.1**
ANM Nome 20.01 46 P **P** **16 43 27.3 +1.5**
ANM pmax pmax
comp=Z,51nm,0.6s
ANM Nome 20.01 46 P **P** **16 43 27.3 +1.5**
ANM IAmb IAmb 16 43 32.5
comp=Z,51nm,0.6s
USA0B Ussuriysk Arra 20.69 251 P **P** **16 43 33.4 +0.2**
USA0B pmax pmax
comp=Z,171nm,1.5s
USA0B Ussuriysk Arra 20.69 251 P **P** **16 43 33.4 +0.2**
USA0B IAmb IAmb 16 44 28.0
comp=Z,171nm,1.5s
USRK Ussuriysk Ar. 20.69 251 P **P** **16 43 33.7 +0.5**
USRK 16 47 37.2
USRK Ussuriysk Ar. 20.69 251 P **P** **16 43 32.6 -0.6**
comp=Z,11nm,0.5s,baz=47,slow=12,SNR=45
USRK PcP **PcP** **16 47 37.1 +1.4**
comp=Z,3.7nm,0.6s,baz=59,slow=2.2,SNR=5.4
USRK Ussuriysk Ar. 20.69 251 P **P** **16 43 33.7 +0.5**
VLA Vladivostok 21.45 249 *i* P **P** **16 43 39.6 -1.8**
VLA pmax pmax
comp=Z,79nm,1.7s
TIXI Tiksi 21.59 334*d iP* **P** **16 43 41.7 -0.8**
TIXI pmax pmax
comp=Z,25nm,0.6s
TIXI Tiksi 21.59 334 P **P** **16 43 41.9 -0.6**
comp=Z,30nm,0.5s,baz=119,slow=12,SNR=114
TIXI PcP **PcP** **16 47 37.2 +0.2**
comp=Z,16nm,0.6s,baz=112,slow=2.2,SNR=9.1
TIXI ScP **ScP** **16 50 58.8 +0.8**
comp=Z,10.0nm,0.8s,baz=59,slow=0.9,SNR=12
TIXI PKiKP **PKiKP** **16 55 21.8 -1.0**
comp=Z,1.4nm,0.6s,baz=200,slow=1.4,SNR=4.1
TIXI Tiksi 21.59 334 P **P** **16 43 42.2 -0.3**
MDJ Mudanjiang 21.76 255 P **P** **16 43 41.0 -3.6**
MDJ pmax pmax
comp=Z,19nm,1.3s
MDJ pmax pmax
comp=Z,870nm,5.1s
MDJ LR LR
comp=Z,2μm,17.4s
MDJ LR LR
comp=Z,1μm,16.4s
MDJ LR LR
comp=Z,1μm,16.0s
MDJ Mudanjiang 21.76 255 P **P** **16 43 43.0 -1.6**
RDOG Red Dog Mine 21.95 38 P **P** **16 43 45.9 -0.4**
MJB9 Matsu-Tunnel 23.36 228 P **P** **16 44 01.3 +1.6**
MAJO Matsushiro 23.36 228*d iP* **P** **16 43 59.9 +0.2**
MAJO pmax pmax
comp=Z,190nm,0.6s
MAJO Matsushiro 23.36 228 P **P** **16 44 01.4 +1.6**
MAT Matsushiro 23.36 228 P **P** **16 43 58.9 -0.8**
MAT S **S** **16 47 59.2 -0.6**
MJAR Matsushiro Arr 23.36 228 P **P** **16 44 01.0 +1.3**
MJAR pmax pmax
comp=Z,59nm,0.6s
MJAR Matsushiro Arr 23.36 228 P **P** **16 43 59.8 +0.1**
comp=Z,60nm,0.5s,baz=23,slow=11,SNR=181
MJAR pP **pP** **16 44 34.9 +3.5**
comp=Z,15nm,0.5s,baz=30,slow=9.7,SNR=1.7
MJAR PcP **PcP** **16 47 41.8 +0.5**
comp=Z,8.5nm,0.5s,baz=159,slow=1.0,SNR=12
MJAR Matsushiro Arr 23.36 228 P **P** **16 44 01.0 +1.3**
SVW2 Sparrevohn 24.25 56 P **P** **16 44 08.4 +0.8**
SVW2 IAmb IAmb 16 44 16.8
comp=Z,24nm,0.6s
CN2 Changchun 24.61 258 *e*P **P** **16 44 09.3 -1.7**
CN2 *e*pP pP 16 44 47.0 +2.2
CN2 *es*P sP 16 45 03.0 -2.1
CN2 *e*PcP **PcP** **16 47 43.3 -0.5**
CN2 pmax pmax
comp=Z,40nm,0.6s
CN2 pmax pmax
comp=Z,390nm,4.0s
INU Inuyama 24.88 228 P **P** **16 44 14.7 +1.2**
HIA Hailar 24.94 274 P **P** **16 44 12.9 -1.1**
HIA pmax pmax
comp=Z,40nm,0.5s
HIA Hailar 24.94 274 P **P** **16 44 12.9 -1.1**
HIA IAmb IAmb 16 44 15.0
comp=Z,40nm,0.5s
IMAR Indian Mountai 25.05 45 P **P** **16 44 14.7 0.0**
BOD Bodaibo 25.22 296 *e*P **P** **16 44 15.1 -1.3**
BOD *e* 16 44 53.1
BOD pmax pmax
comp=Z,36nm,1.7s
RSO Redoubt South 25.70 57 P **P** **16 44 22.6 +1.7**
PPLA Purkeypile 25.71 52 P **P** **16 44 21.7 +0.8**
OHAK Old Harbor 26.07 65 P **P** **16 44 23.1 -0.9**
OHAK IAmb IAmb 16 45 22.3
comp=Z,92nm,1.6s
SKT Skwentna 26.09 54 P **P** **16 44 23.9 -0.3**
BPAW Bear Paw Mtn. 26.19 49 P **P** **16 44 25.0 0.0**
BPAW IAmb IAmb 16 45 02.4
comp=Z,124nm,1.7s
KTH Kantishna Hill 26.24 50 P **P** **16 44 25.9 +0.3**
MLY Manley 26.27 47 P **P** **16 44 26.6 +0.7**
MLY IAmb IAmb 16 45 04.5
comp=Z,73nm,1.5s
KDAK Kodiak Island 26.30 63 P **P** **16 44 25.7 -0.3**
comp=Z,11nm,0.4s,baz=314,slow=2.1,SNR=34
KDAK PcP **PcP** **16 47 48.7 +1.3**
comp=Z,11nm,0.7s,baz=175,slow=8.3,SNR=5.3
KDAK ScP **ScP** **16 51 11.8 +0.7**
comp=Z,3.3nm,0.6s,baz=242,slow=4.6,SNR=4.7
KDAK LR LR 16 55 16.3
comp=Z,481nm,18.4s,baz=252,slow=37
KDAK Kodiak Island 26.30 63 P **P** **16 44 26.0 -0.1**
SUA Susitna One 26.53 55 P **P** **16 44 27.9 -0.3**
SUA IAmb IAmb 16 45 05.6
comp=Z,28nm,0.9s
TRF Thorofare Moun 26.53 50 P **P** **16 44 28.5 +0.2**
TRF IAmb IAmb 16 45 04.2
comp=Z,32nm,0.9s
COLD Coldfoot 26.55 42 P **P** **16 44 27.9 -0.3**
CNPM China Poot 26.61 59 P **P** **16 44 28.4 -0.4**
CNPM IAmb IAmb 16 45 05.0
comp=Z,20nm,0.7s

BRLK Bradley Lake 26.73 59 P **P** **16 44 29.4 -0.6**
BRLK IAmb IAmb 16 45 06.5
comp=Z,89nm,1.8s
BWN Browne 26.85 49 P **P** **16 44 31.8 +0.8**
TOLK Toolik Lake Re 26.90 39 P **P** **16 44 31.6 +0.2**
TOLK Toolik Lake Re 26.90 39 P **P** **16 44 31.4 0.0**
baz=264,SNR=42
SNY Shenyang 26.92 257⇓P **P** **16 44 27.5 -4.3**
SNY S **S** **16 48 49.8 -6.3**
SNY pmax pmax
comp=Z,39nm,1.7s
SNY LR LR
comp=Z,700nm,8.4s
SNY LR LR
comp=Z,690nm,13.5s
SNY LR LR
comp=Z,690nm,17.5s
NEA Nenana 27.00 48 P **P** **16 44 32.2 -0.1**
NEA IAmb IAmb 16 44 37.6
comp=Z,20nm,0.6s
RC01 Rabbit Creek A 27.06 56 P **P** **16 44 33.7 +0.8**
RC01 IAmb IAmb 16 45 29.7
comp=Z,77nm,2.0s
MCK McKinley 27.11 50 P **P** **16 44 33.7 +0.3**
MCK pmax pmax
comp=Z,101nm,1.8s
MCK McKinley 27.11 50 P **P** **16 44 33.7 +0.3**
MCK IAmb IAmb 16 44 35.8
comp=Z,101nm,1.8s
RND Reindeer 27.18 50 P **P** **16 44 33.6 -0.4**
RND pmax pmax
comp=Z,112nm,1.8s
RND Reindeer 27.18 50 P **P** **16 44 33.6 -0.4**
RND IAmb IAmb 16 44 34.9
comp=Z,112nm,1.8s
PMR Palmer 27.27 54 P **P** **16 44 35.4 +0.7**
PMR pmax pmax
comp=Z,7.0nm,0.7s
PMR Palmer 27.27 54 P **P** **16 44 35.4 +0.7**
MDM Murphy Dome 27.34 47 P **P** **16 44 36.6 +1.2**
GHO Glory Hole Cre 27.34 54 P **P** **16 44 35.5 0.0**
SEW Seward 27.38 58 P **P** **16 44 35.5 -0.2**
SEW IAmb IAmb 16 45 10.6
comp=Z,114nm,1.6s
WRH Wood River Hil 27.43 48 P **P** **16 44 36.5 +0.4**
WRH IAmb IAmb 16 44 38.7
comp=Z,47nm,1.0s
TCOL CIGO, UAF Yank 27.50 47 P **P** **16 44 36.3 -0.4**
baz=274
CCB Clear Creek Bu 27.54 48 P **P** **16 44 37.0 -0.1**
CCB IAmb IAmb 16 44 42.5
comp=Z,32nm,0.6s
KS19 Wonju Array Si 27.61 245 P **P** **16 44 40.2 +2.2**
KS19 IAmb IAmb 16 44 40.7
comp=Z,90nm,1.6s
KSRS Korea Array 27.62 245 P **P** **16 44 37.5 -0.5**
comp=Z,13nm,0.8s,baz=38,slow=9.2,SNR=52
KSRS pP **pP** **16 45 16.0 +3.2**
comp=Z,22nm,1.0s,baz=41,slow=10,SNR=5.8
KSRS PcP **PcP** **16 47 52.2 +1.3**
comp=Z,16nm,0.8s,baz=356,slow=2.7,SNR=35
KSRS ScP **ScP** **16 51 17.4 +2.0**
comp=Z,1.3nm,1.0s,baz=25,slow=6.9,SNR=4.2
KSRS PKiKP **PKiKP** **16 55 26.2 -0.7**
comp=Z,0.4nm,0.5s,baz=343,slow=0.9,SNR=5.2
KNK Knik Glacier 27.62 55 P **P** **16 44 37.9 +0.1**
KNK IAmb IAmb 16 44 46.2
comp=Z,71nm,1.4s
KSAR Wonju Array Be 27.64 245 P **P** **16 44 39.2 +0.9**
KSAR Wonju Array Be 27.64 245 P **P** **16 44 39.2 +0.9**
POKR Poker Flat Res 27.67 47 P **P** **16 44 38.2 0.0**
baz=273,SNR=13
DHY Denali Highway 27.88 51 P **P** **16 44 40.0 -0.3**
DHY IAmb IAmb 16 44 41.7
comp=Z,23nm,0.6s
IL31 27.93 47 P **P** **16 44 40.5 0.0**
IL31 IAmb IAmb 16 44 43.4
comp=Z,18nm,0.6s
ILAR Eielson Array 27.93 47 P **P** **16 44 39.8 -0.7**
comp=Z,10nm,0.6s,baz=265,slow=8.0,SNR=174
ILAR pP **pP** **16 45 15.2 -0.1**
comp=Z,7.9nm,0.8s,baz=262,slow=8.6,SNR=3.6
ILAR PcP **PcP** **16 47 50.5 -0.7**
comp=Z,3.2nm,0.7s,baz=278,slow=3.7,SNR=6.0
ILAR ScP **ScP** **16 51 15.2 -0.7**
comp=Z,0.9nm,0.6s,baz=284,slow=3.9,SNR=4.9
ILAR PKiKP **PKiKP** **16 55 25.1 -1.3**
comp=Z,0.4nm,0.6s,baz=297,slow=2.9,SNR=6.1
ILAR P3KPbc 17 17 02.1
comp=Z,0.7nm,0.9s,baz=128,slow=3.3,SNR=5.1
ILAR Eielson Array 27.93 47 P **P** **16 44 40.0 -0.5**
HDA Harding Lake 27.93 48 P **P** **16 44 40.6 +0.1**
HDA IAmb IAmb 16 44 42.9
comp=Z,24nm,0.7s
HDA Harding Lake 27.93 48 P **P** **16 44 40.0 -0.5**
baz=275,SNR=39
SCM Sheep Creek Mo 28.08 54 P **P** **16 44 42.2 +0.2**
SCM pmax pmax
comp=Z,34nm,0.6s
SCM Sheep Creek Mo 28.08 54 P **P** **16 44 42.2 +0.2**
SCM IAmb IAmb 16 44 43.7
comp=Z,34nm,0.6s
GLI Glacier Island 28.37 56 P **P** **16 44 44.5 +0.1**
GLI IAmb IAmb 16 44 52.3
comp=Z,16nm,0.6s
PRP Porcupine Dome 28.44 46 P **P** **16 44 45.5 +0.2**
PRP IAmb IAmb 16 44 48.0
comp=Z,29nm,0.9s
FYU Fort Yukon 28.50 43 P **P** **16 44 45.9 +0.4**
TJN Taejon 28.72 244*ce*P **P** **16 44 49.0 +1.2**
BMAR Burnt Mountain 28.73 42 P **P** **16 44 48.2 +0.5**
PAX Paxson 28.76 51 P **P** **16 44 47.7 -0.3**
PAX pmax pmax
comp=Z,18nm,1.1s
PAX Paxson 28.76 51 P **P** **16 44 47.7 -0.3**
RIDG Independent Ri 28.92 49 P **P** **16 44 48.8 -0.7**
RIDG IAmb IAmb 16 45 50.8
comp=Z,80nm,1.7s
EYAK Cordova Ski Ar 29.09 56 P **P** **16 44 50.0 -0.7**
SCRK Sand Creek 29.27 49 P **P** **16 44 52.0 -0.6**
SCRK IAmb IAmb 16 44 54.0
comp=Z,34nm,0.6s
DOT Dot Lake 29.28 49 P **P** **16 44 51.7 -0.9**
DOT IAmb IAmb 16 44 54.3
comp=Z,21nm,0.7s
JNU Nakatsue 29.54 235 P **P** **16 44 55.3 +0.2**
comp=Z,16nm,0.6s,baz=51,slow=1.5,SNR=31
JNU PcP **PcP** **16 47 56.1 +0.2**
comp=Z,4.5nm,0.6s,baz=343,slow=11,SNR=4.4
JNU Nakatsue 29.54 235 P **P** **16 44 55.9 +0.8**
JNU IAmb IAmb 16 45 01.4
comp=Z,29nm,0.7s
MENT Mentasta 29.55 51 P **P** **16 44 55.4 +0.5**
RAGM Ragged Mountai 29.64 56 P **P** **16 44 56.2 +0.4**
RAGM IAmb IAmb 16 46 00.2
comp=Z,42nm,1.1s
GLB Gilahina Butte 29.81 54 P **P** **16 44 57.5 +0.3**
GLB **PcP** **16 47 58.5 +2.5**
DL2 Dalian 29.99 254 P **P** **16 44 57.5 -1.5**
DL2 sP **sP** **16 45 52.8 -0.8**
DL2 *e*S **S** **16 49 42.0 -2.3**
DL2 pmax pmax
comp=Z,55nm,0.6s
DL2 pmax pmax
comp=Z,140nm,6.9s
VRDI Verde Repeater 30.02 54 P **P** **16 44 59.7 +0.4**
VRDI IAmb IAmb 16 45 34.9
comp=Z,60nm,1.8s
VRDI **PcP** **16 47 58.3 +1.5**
MCARA McCarthy VSAT 30.19 54 P **P** **16 45 01.9 +1.4**
MCARA IAmb IAmb 16 45 29.5
comp=Z,75nm,1.8s
CRQM Cirque 30.29 55 P **P** **16 45 02.5 +0.9**
CRQM IAmb IAmb 16 46 03.5
comp=Z,26nm,0.9s
JCJ Chichijima 30.35 212 P **P** **16 45 03.5 +1.3**
comp=Z,143nm,0.7s,baz=310,slow=16,SNR=15
JCJ PcP **PcP** **16 47 57.5 -0.4**
comp=Z,74nm,0.5s,baz=258,slow=1.9,SNR=8.5
EGAK Eagle 30.36 47 P **P** **16 45 01.3 -0.7**
EGAK IAmb IAmb 16 45 03.7
comp=Z,27nm,0.7s
BCAR Beaver Creek A 30.39 50 P **P** **16 45 03.0 +0.7**
TGL Tana Glacier 30.43 55 P **P** **16 45 02.8 0.0**
WAX Waxell Ridge 30.50 55 P **P** **16 45 04.5 +1.2**

WAX IAmb IAmb 16 45 40.3
comp=Z,36nm,1.3s
BALM Baldy 30.59 54 P **P** **16 45 04.7 +0.5**
BARN Barnard Glacie 30.91 54 P **P** **16 45 08.0 +0.9**
MESA MESA 31.01 56 P **P** **16 45 08.9 +1.0**
MESA IAmb IAmb 16 45 45.1
comp=Z,22nm,0.8s
CTGM Chitina Glacie 31.09 54 P **P** **16 45 09.2 +0.6**
PCA Pinnacle 31.84 55 P **P** **16 45 15.6 +0.4**
PCA IAmb IAmb 16 45 32.5
comp=Z,26nm,0.6s
EPYK Eagle Plains 31.92 43 P **P** **16 45 16.2 +0.5**
EPYK Eagle Plains 31.92 43 P **P** **16 45 16.0 +0.3**
baz=280,SNR=19
BJI Beijing 32.32 261⇑*iP* **P** **16 45 18.5 -0.9**
BJI PcP **PcP** **16 48 04.0 +0.9**
BJI S **S** **16 50 24.5 +3.9**
BJI sS **sS** **16 51 23.0 +0.1**
BJI ScS **ScS** **16 55 29.8 -0.3**
BJI pmax pmax
comp=Z,8.0nm,0.5s
BJI LR LR
comp=Z,510nm,15.1s
BJT Baijiatuau 32.34 261 P **P** **16 45 18.1 -1.5**
BJT 16 48 03.0
BJT pmax pmax
comp=Z,60nm,2.0s
BJT Baijiatuau 32.34 261 P **P** **16 45 18.1 -1.5**
BJT IAmb IAmb 16 45 24.7
comp=Z,60nm,2.0s
BJT **PcP** **16 48 03.0 -0.1**
IRK Irkutsk 32.38 289 *e*P **P** **16 45 16.6 -3.2**
IRK pmax pmax
comp=Z,51nm,3.6s
INK Inuvik 32.81 39 P **P** **16 45 23.7 +0.4**
comp=Z,30nm,0.7s,baz=298,slow=7.6,SNR=128
INK pP **pP** **16 45 58.7 +0.1**
comp=Z,5.3nm,0.6s,baz=272,slow=13,SNR=1.4
INK Inuvik 32.81 39 P **P** **16 45 23.7 +0.4**
INK IAmb IAmb 16 45 25.7
comp=Z,31nm,0.7s
ULN Ulaanbaatar 32.95 280*ce*P **P** **16 45 24.3 -0.8**
ULN pmax pmax
comp=Z,4.0nm,0.7s
ULN Ulaanbaatar 32.95 280 P **P** **16 45 24.1 -1.0**
TLY Talaya 32.98 288*d iP* **P** **16 45 23.7 -1.4**
TLY *e* 16 46 47.0
TLY *e* 16 48 06.0
TLY *e*S **S** **16 50 28.8 -1.8**
TLY pmax pmax
comp=Z,75nm,1.1s
TLY MLR MLR
comp=Z,658nm,16.0s
TLY Talaya 32.98 288 P **P** **16 45 25.1 +0.1**
TLY **PcP** **16 48 06.2 +1.4**
SONM Songino Array 33.35 281 P **P** **16 45 27.6 -0.8**
comp=Z,4.8nm,0.6s,baz=54,slow=8.7,SNR=54
SONM PcP **PcP** **16 48 06.3 +0.3**
comp=Z,31nm,0.5s,baz=67,slow=1.5,SNR=58
SONM ScP **ScP** **16 51 35.4 +1.1**
comp=Z,5.2nm,0.7s,baz=59,slow=3.2,SNR=13
SONM PKiKP **PKiKP** **16 55 30.5 -0.3**
comp=Z,0.5nm,0.6s,baz=198,slow=1.8,SNR=4.3
SONM Songino Array 33.35 281 P **P** **16 45 27.8 -0.6**
SONM **PcP** **16 48 06.6 +0.5**
ZAK Zakamensk 33.80 287 *e*P **P** **16 45 31.8 -0.5**
ZAK *e* 16 46 57.8
ZAK pmax pmax
comp=Z,12nm,1.4s
ZAK pmax pmax
comp=Z,10.0nm,1.3s
WHY Whitehorse 34.19 53 P **P** **16 45 37.0 +1.4**
SKAG Skagway 34.41 55 P **P** **16 45 38.9 +1.7**
TIA Tai'an 34.42 255 P **P** **16 45 36.3 -1.4**
TIA pmax pmax
comp=Z,13nm,0.6s
MOY Mondy 34.44 290 *e*P **P** **16 45 37.6 -0.2**
MOY pmax pmax
comp=Z,65nm,2.9s
HHC Hu-ho-hao-te 34.46 267 *e*P **P** **16 45 36.0 -2.1**
HHC pP pP 16 46 17.0 +3.2
HHC PP **PP** **16 47 01.5 +2.0**
HHC pmax pmax
comp=Z,14nm,1.5s
HHC pmax pmax
comp=Z,92nm,5.8s
HHC LR LR
comp=Z,320nm,20.8s
HHC LR LR
comp=Z,240nm,17.1s
HHC LR LR
comp=Z,250nm,14.2s
BESE Bessie Mountai 34.96 56 P **P** **16 45 43.5 +1.3**
H11N2 WAKE ISLAND Hy 35.27 168 T T 17 23 07.7
baz=355,slow=76,SNR=98
H11N3 WAKE ISLAND Hy 35.28 168 T T 17 23 24.4
baz=355,slow=76,SNR=102
H11N1 WAKE ISLAND Hy 35.29 168 T T 17 23 17.6
baz=355,slow=76,SNR=105
JIS Juneau Island 35.31 57 P **P** **16 45 46.6 +1.7**
SIT Sitka 35.34 59 P **P** **16 45 44.9 -0.3**
SIT pmax pmax
comp=Z,23nm,1.0s
SIT Sitka 35.34 59 P **P** **16 45 44.9 -0.3**
C36M Paulatuk 35.93 36 P **P** **16 45 50.6 +0.4**
JOW Kunigami 36.03 232 P **P** **16 45 53.8 +2.2**
H11S1 WAKE ISLAND Hy 36.45 169 T T 17 23 39.4
baz=351,slow=76,SNR=17
H11S3 WAKE ISLAND Hy 36.47 169 T T 17 23 39.4
baz=351,slow=76,SNR=34
H11S2 WAKE ISLAND Hy 36.47 169 T T 17 23 39.4
baz=351,slow=76,SNR=22
NJ2 Nanjing 36.56 249⇑*iP* **P** **16 45 55.0 -0.9**
NJ2 sP **sP** **16 46 50.5 -0.4**
NJ2 PP **PnPn** **16 47 27.0 +2.4**
NJ2 PcP **PcP** **16 48 16.0 +0.5**
NJ2 S **S** **16 51 27.3 +1.6**
NJ2 sS **sS** **16 52 29.3 +0.5**
NJ2 pmax pmax
comp=Z,31nm,0.8s
NJ2 pmax pmax
comp=Z,130nm,4.8s
NJ2 LR LR
comp=Z,940nm,14.7s
NJ2 LR LR
comp=Z,570nm,13.0s
NJ2 LR LR
comp=Z,510nm,16.1s
DLBC Dease Lake 37.33 55 P **P** **16 46 03.8 +1.5**
comp=Z,12nm,0.6s,baz=281,slow=8.8,SNR=17
DLBC pP **pP** **16 46 39.4 +1.3**
comp=Z,15nm,0.8s,baz=283,slow=11,SNR=4.6
DLBC Dease Lake 37.33 55 P **P** **16 46 04.2 +1.9**
WHN Wuhan 40.18 252⇑*iP* **P** **16 46 24.3 -1.8**
WHN sP **sP** **16 47 19.0 -2.6**
WHN PP **PP** **16 48 04.0 +2.0**
WHN PcP **PcP** **16 48 27.8 +1.0**
WHN S **S** **16 52 17.3 -2.8**
WHN pmax pmax
comp=Z,42nm,0.7s
WHN pmax pmax
comp=Z,520nm,3.7s
WHN LR LR
comp=Z,710nm,12.7s
WHN LR LR
comp=Z,1μm,15.5s
WHN LR LR
comp=Z,870nm,14.8s
XAN Xi'an 40.65 261 P **P** **16 46 27.5 -2.5**
XAN PP **PP** **16 48 09.5 +2.5**
XAN S **S** **16 52 23.8 -3.4**
XAN sS sS 16 53 25.8 -5.3
XAN ScS **ScS** **16 56 14.8 -2.2**
XAN pmax pmax
comp=Z,13nm,1.4s
XAN pmax pmax
comp=Z,260nm,7.3s
XAN LR LR
comp=Z,400nm,20.6s
XAN LR LR
comp=Z,310nm,16.3s
XAN LR LR
comp=Z,340nm,16.3s
XAN Xi'an 40.65 261 P **P** **16 46 28.6 -1.4**
XAN **PcP** **16 48 28.9 +0.5**

ZAA0 **Zalesovo Array** 41.76 301 P **P** 16 46 37.1 -1.7
ZALV **Zalesovo Beam** 41.76 301 P **P** 16 46 37.0 -1.8
comp=Z,8.1nm,0.7s,baz=54,slow=6.8,SNR=30
ZALV PP **PP** 16 48 14.9 -3.6
comp=Z,2.6nm,0.6s,baz=57,slow=7.4,SNR=3.9
ZALV PcP **PcP** 16 48 31.7 +0.1
comp=Z,7.6nm,0.5s,baz=32,slow=3.9,SNR=9.8
ZALV PKiKP **PKiKP** 16 55 36.4 -0.8
comp=Z,2.5nm,0.6s,baz=243,slow=0.7,SNR=12
ZALV LR LR 17 05 28.4
comp=Z,337nm,19.0s,baz=52,slow=38
ZALV P4KPbc 17 24 35.5
comp=Z,0.6nm,0.3s,baz=268,slow=5.4,SNR=6.0
ZALV **Zalesovo Beam** 41.76 301 P **P** 16 46 37.6 -1.1
RES **Resolute Bay** 41.99 23 P **P** 16 46 40.1 -0.2
RES pmax pmax
comp=Z,18nm,0.6s
RES **Resolute Bay** 41.99 23 P **P** 16 46 40.3 0.0
comp=Z,14nm,0.5s,baz=294,slow=7.7,SNR=76
RES PP **PP** 16 48 20.5 -0.1
comp=Z,2.0nm,0.6s,baz=318,slow=8.6,SNR=3.6
RES PcP **PcP** 16 48 32.8 +0.7
comp=Z,14nm,0.7s,baz=306,slow=4.4,SNR=8.7
RES **Resolute Bay** 41.99 23 P **P** 16 46 40.1 -0.2
SSLB **Suanglung** 42.12 239 P **P** 16 46 43.1 +1.1
LZH **Lanzhou** 42.14 268 ⇓P **P** 16 46 41.3 -1.0
LZH pP pP 16 47 20.8 +1.8
LZH sP sP 16 47 38.8 +0.9
LZH PP **PP** **16 48 23.5 +0.4**
LZH sS sS 16 53 54.0 +0.5
LZH pmax pmax
comp=Z,21nm,1.3s
LZH pmax pmax
comp=Z,130nm,6.5s
LZH LR LR
comp=Z,400nm,14.1s
LZH LR LR
comp=Z,360nm,14.1s
LZH LR LR
comp=Z,450nm,13.6s
YKA **Yellowknife Ar** 42.20 44 P **P** 16 46 42.4 +0.2
comp=Z,13nm,0.6s,baz=301,slow=8.2,SNR=84
YKA pP **pP** 16 47 20.1 +1.3
comp=Z,7.1nm,0.7s,baz=299,slow=8.5,SNR=2.8
YKA PcP **PcP** 16 48 33.5 +0.6
comp=Z,7.2nm,0.6s,baz=305,slow=3.7,SNR=13
YKA ScP **ScP** 16 52 07.6 +0.3
comp=Z,4.9nm,0.6s,baz=300,slow=3.9,SNR=24
YKA PKiKP **PKiKP** 16 55 36.3 -1.1
comp=Z,0.4nm,0.6s,baz=314,slow=1.6,SNR=4.6
YKA PKPPKP P'P'df 17 18 24.4 -21
comp=Z,0.2nm,0.7s,baz=163,slow=2.8,SNR=5.0
GTA **Gaotai** 42.22 274 ⇓P **P** 16 46 41.5 -1.4
GTA pP pP 16 47 23.0 +3.4
GTA sP sP 16 47 38.8 +0.3
GTA PP **PP** **16 48 25.3 +1.4**
GTA PcP **PcP** **16 48 34.5 +0.9**
GTA ScP **ScP** **16 52 10.0 +2.0**
GTA PcS **PcS** **16 52 24.3 -1.5**
GTA S **S** **16 52 48.0 -2.4**
GTA sS sS 16 53 56.5 +1.9
GTA ScS **ScS** **16 56 24.5 -2.1**
GTA pmax pmax
comp=Z,36nm,1.3s
GTA pmax pmax
comp=Z,260nm,5.6s
GTA LR LR
comp=Z,340nm,17.8s
GTA LR LR
comp=Z,380nm,18.1s
GTA LR LR
comp=Z,340nm,17.1s
YULB **Yu-li** 42.28 238 P **P** 16 46 43.3 0.0
QZH **Quanzhou** 42.35 242 P **P** 16 46 40.0 -3.9
QZH *e*S **S** 16 52 51.5 -0.8
QZH pmax pmax
comp=Z,250nm,5.8s
TPUB **Ta-pu** 42.68 239 P **P** 16 46 46.2 -0.4
TPUB lAmb lAmb 16 46 51.2
comp=Z,62nm,1.4s
TPUB **PcP** **16 48 36.6 +1.4**
TWG **Pinlang** 42.87 238 P **P** 16 46 49.2 +1.1
ENH **Enshi** 43.11 257 P **P** 16 46 48.3 -1.7
LLLB **Lillooet** 45.46 61 P **P** 16 47 09.8 +1.4
LLLB lAmb lAmb 16 47 47.9
comp=Z,166nm,1.9s
TULEG **Thule** 45.52 14 P **P** 16 47 08.8 +0.4
SPITS **Spitsbergen Ar** 45.58 350 P **P** 16 47 08.3 -0.6
comp=Z,9.4nm,0.5s,baz=92,slow=6.7,SNR=32
CD2 **Chengdu** 45.91 262 ⇓*i*P **P** 16 47 10.5 -1.7
CD2 PP **PP** **16 49 02.0 -0.7**
CD2 S **S** **16 53 40.5 -3.2**
CD2 sS sS 16 54 49.0 +0.3
CD2 ScS **ScS** **16 56 44.5 -5.5**
CD2 pmax pmax
comp=Z,40nm,1.1s
CD2 pmax pmax
comp=Z,510nm,5.5s
CD2 LR LR
comp=Z,760nm,12.9s
CD2 LR LR
comp=Z,640nm,13.4s
CD2 LR LR
comp=Z,610nm,14.2s
WMQ **Urumqi** 46.25 288 *e*P **P** 16 47 14.3 -0.4
WMQ pP pP 16 47 51.0 -1.1
WMQ sP sP 16 48 10.8 0.0
WMQ PcP **PcP** **16 48 47.5 +0.2**
WMQ ScP **ScP** **16 52 25.5 +1.1**
WMQ S **S** **16 53 51.0 +2.6**
WMQ pmax pmax
comp=Z,34nm,0.9s
WMQ pmax pmax
comp=Z,190nm,3.7s
WMQ LR LR
comp=Z,640nm,26.9s
WMQ LR LR
comp=Z,1μm,29.1s
WMQ LR LR
comp=Z,270nm,26.9s
WMQ **Urumqi** 46.25 288 P **P** 16 47 14.9 +0.2
WMQ pmax pmax
comp=Z,53nm,0.7s
WMQ **Urumqi** 46.25 288 P **P** 16 47 14.9 +0.2
WMQ lAmb lAmb 16 47 16.3
comp=Z,53nm,0.7s
D03D **Eldon** 46.73 65 P **P** 16 47 18.4 +0.2
baz=309
KURK **Kurchatov** 46.73 300 *i*P **P** 16 47 16.4 -1.8
KURK pmax pmax
comp=Z,61nm,2.0s
KURK **Kurchatov** 46.73 300 P **P** 16 47 16.9 -1.3
B05A **Bryant** 46.79 64 P **P** 16 47 19.6 +0.8
baz=309
MK31 **Makanchi Array** 47.29 294 P **P** 16 47 21.2 -1.5
MK31 pmax pmax
comp=Z,22nm,0.6s
MK31 **Makanchi Array** 47.29 294 P **P** 16 47 21.2 -1.5
MK31 lAmb lAmb 16 47 22.7
comp=Z,22nm,0.6s
MKAR **Makanchi Array** 47.29 294 P **P** 16 47 21.3 -1.4
MKAR **Makanchi Array** 47.29 294 P **P** 16 47 21.0 -1.6
comp=Z,24nm,0.6s,baz=58,slow=7.4,SNR=293
MKAR ScP **ScP** **16 52 29.1 +0.4**
comp=Z,1.0nm,0.6s,baz=53,slow=4.9,SNR=4.0
MKAR PKiKP **PKiKP** 16 55 41.9 -0.9
comp=Z,0.6nm,0.6s,baz=173,slow=0.4,SNR=3.6
MKAR **Makanchi Array** 47.29 294 P **P** 16 47 21.3 -1.4
MAKZ **Makanchi** 47.45 294 P **P** 16 47 22.1 -1.8
MAKZ pmax pmax
comp=Z,16nm,0.7s
MAKZ **Makanchi** 47.45 294 P **P** 16 47 22.1 -1.8
GYA **Guiyang** 47.62 256 P **P** 16 47 24.8 -0.8
GYA S **S** **16 54 02.3 -5.9**
GYA pmax pmax
comp=Z,20nm,0.9s
GYA pmax pmax
comp=Z,120nm,5.2s
E04D **Cinebar** 47.62 66 P **P** 16 47 26.1 +0.9
baz=310
C06D **Leavenworth** 47.63 63 P **P** 16 47 25.7 +0.4
baz=310
SZP **Santa** 47.66 235 P **P** 16 47 27.0 +1.3
G03D **McMinnville, O** 48.12 68 P **P** 16 47 29.6 +0.6
baz=311

F05D **White Salmon** 48.64 66 P **P** 16 47 33.0 -0.1
baz=311
KULLO **Kullorsuaq** 48.74 12 *i*P **P** 16 47 32.7 -0.6
KULLO pmax pmax
comp=Z,35nm,0.8s
KULLO **Kullorsuaq** 48.74 12 *i*P **P** 16 47 32.7 -0.6
comp=Z,35nm,0.8s
H04D **Lebanon** 48.85 68 P **P** 16 47 35.2 +0.6
baz=311
DAG **Danmarks Havn** 48.86 359 *i*P **P** 16 47 33.0 -1.3
DAG **Danmarks Havn** 48.86 359 *i*P **P** 16 47 33.0 -1.3
I03D **Drain, OR** 49.06 69 P **P** 16 47 36.4 +0.2
baz=312
J01E **Myrtle Point** 49.10 70 P **P** 16 47 36.7 +0.2
baz=312
G05D **Wamic, OR** 49.14 66 P **P** 16 47 37.6 +0.7
baz=311
BRVK **Borovoye** 49.28 307 P **P** 16 47 36.6 -1.2
BRVK pmax pmax
comp=Z,16nm,0.7s
BRVK **Borovoye** 49.28 307 P **P** 16 47 36.6 -1.2
NEW **Newport** 49.35 61 P **P** 16 47 39.0 +0.5
comp=Z,9.5nm,1.0s,baz=302,slow=9.2,SNR=7.1
NEW PcP **PcP** 16 48 59.2 +0.9
comp=Z,8.1nm,0.7s,baz=132,slow=13,SNR=6.1
I04A **Tendick Farm,** 49.51 69 P **P** 16 47 40.4 +0.7
baz=312
K02D **Willamette Mer** 49.56 70 P **P** 16 47 40.4 +0.3
baz=312
I05D **Terrebonne, OR** 49.72 67 P **P** 16 47 41.7 +0.3
baz=312
L02E **Cave Junction** 49.95 71 P **P** 16 47 44.2 +1.2
baz=313
E09A **Wood Farm, Sta** 49.97 63 P **P** 16 47 43.4 +0.3
E09A lAmb lAmb 16 48 21.9
comp=Z,106nm,1.7s
HUMO **Hull Mountain** 50.00 70 P **P** 16 47 44.0 +0.6
J04D **Umpqua Nationa** 50.04 69 P **P** 16 47 44.7 +0.8
baz=312
PINE **Pine Mountain** 50.30 68 P **P** 16 47 48.0 +2.2
PINE lAmb lAmb 16 48 25.4
comp=Z,31nm,0.9s
G08A **Pilot Rock** 50.36 65 P **P** 16 47 45.8 -0.4
TGY **Tagaytay City** 50.44 232 LR LR 17 10 57.2
comp=Z,45nm,20.1s,baz=112,slow=38
J05D **Fort Rock, OR** 50.48 68 P **P** 16 47 48.4 +1.2
baz=312,SNR=13
L04D **Klamath Falls** 50.62 70 P **P** 16 47 49.6 +1.4
baz=313,SNR=7.7
YBH **Yreka Blue Hor** 50.73 71 P **P** 16 47 50.8 +1.8
YBH pmax pmax
comp=Z,143nm,2.0s
YBH **Yreka Blue Hor** 50.73 71 P **P** 16 47 50.8 +1.8
YBH lAmb lAmb 16 48 27.8
comp=Z,143nm,1.9s
F10A **Beach Ranch, E** 50.81 63 P **P** 16 47 50.6 +1.1
KMI **Kunming** 50.88 258 P **P** 16 47 48.3 -2.1
KMI sP sP 16 48 43.0 -4.0
KMI PcP **PcP** **16 49 04.8 +0.3**
KMI pmax pmax
comp=Z,13nm,2.0s
KMI LR LR
comp=Z,300nm,13.3s
KMI LR LR
comp=Z,300nm,17.5s
KMI LR LR
comp=Z,270nm,20.5s
KMI **Kunming** 50.88 258 P **P** 16 47 49.9 -0.5
KMI 16 49 04.8
KMI pmax pmax
comp=Z,13nm,0.6s
KMI **Kunming** 50.88 258 P **P** 16 47 49.9 -0.5
KMI **PcP** **16 49 04.8 +0.3**
M02C **Callahan** 50.88 71 P **P** 16 47 51.2 +1.1
baz=313
SVE **Sverdlovsk** 51.00 316 *e*P **P** 16 47 50.4 -0.2
K05A **Summer Lake** 51.05 69 P **P** 16 47 53.2 +1.8
K05A lAmb lAmb 16 48 31.3
comp=Z,52nm,1.3s
JTMT **Jette** 51.13 60 P **P** 16 47 53.1 +1.1
M04C **Macdoel** 51.17 70 P **P** 16 47 53.6 +1.3
baz=313,SNR=7.3
LVZ **Lovozero** 51.19 337 *i*P **P** 16 47 51.4 -0.5
LVZ pmax pmax
comp=Z,12nm,1.0s
N02D **Trinity Center** 51.25 71 P **P** 16 47 54.4 +1.6
baz=314,SNR=5.6
BMO **Blue Mountains** 51.52 64 P **P** 16 47 55.5 +0.7
BMO pmax pmax
comp=Z,24nm,1.1s
BMO **Blue Mountains** 51.52 64 P **P** 16 47 55.5 +0.7
WDC **Whiskeytown Da** 51.61 72 P **P** 16 47 56.6 +1.2
WDC pmax pmax
comp=Z,21nm,1.0s
WDC **Whiskeytown Da** 51.61 72 P **P** 16 47 56.6 +1.2
APA **Apatity** 51.74 337 ⇓*i*P P 16 48 02.6 +6.7
APA pmax pmax
comp=Z,9.0nm,0.8s
ARCES **ARCESS Array B** 51.75 341 P **P** 16 47 55.3 -0.7
ARCES 16 49 07.0
ARCES **ARCESS Array B** 51.75 341 P **P** 16 47 55.0 -1.0
comp=Z,2.5nm,0.5s,baz=42,slow=8.5,SNR=20
ARCES PcP **PcP** 16 49 06.0 -0.8
comp=Z,5.2nm,0.5s,baz=31,slow=3.6,SNR=16
ARCES ScP **ScP** 16 52 48.3 +1.0
comp=Z,3.6nm,0.7s,baz=45,slow=5.3,SNR=6.5
ARCES PKiKP **PKiKP** 16 55 46.5 -0.4
comp=Z,0.7nm,0.5s,baz=333,slow=1.4,SNR=5.5
ARCES LR LR 17 12 28.8
comp=Z,287nm,21.2s,baz=20,slow=39
ARCES **ARCESS Array B** 51.75 341 P **P** 16 47 55.3 -0.7
ARCES **PcP** **16 49 07.0 +0.2**
QIZ **Qiongzhong** 51.80 247 P **P** 16 47 58.0 +1.0
QIZ sP **sP** **16 48 50.8 -2.8**
QIZ S **S** **16 55 09.8 +3.7**
QIZ sS **sS** **16 56 09.3 -3.2**
QIZ pmax pmax
comp=Z,16nm,1.4s
QIZ pmax pmax
comp=Z,150nm,6.2s
QIZ LR LR
comp=Z,340nm,21.0s
QIZ LR LR
comp=Z,390nm,16.5s
QIZ LR LR
comp=Z,210nm,18.4s
J08A **Circle Bar Ran** 51.92 67 P **P** 16 47 59.5 +1.7
MSO **Missoula** 51.92 61 P **P** 16 47 58.2 +0.5
MSO lAmb lAmb 16 48 37.7
comp=Z,61nm,1.5s
MSO **PcP** **16 49 08.8 +0.8**
MSO **Missoula** 51.92 61 P **P** 16 47 58.0 +0.2
baz=313,SNR=8.4
MOD **Modoc Plateau** 51.93 69 P **P** 16 48 00.0 +2.1
MOD lAmb lAmb 16 48 37.6
comp=Z,36nm,1.1s
ARU **Arti** 52.11 316 *d*/*i*P **P** 16 47 57.3 -1.6
ARU pmax pmax
comp=Z,13nm,0.7s
ARU **Arti** 52.11 316 P **P** 16 47 57.7 -1.1
FFC **Flin Flon** 52.13 47 P **P** 16 47 59.7 +0.6
FFC **Flin Flon** 52.13 47 P **P** 16 47 59.7 +0.6
O03E **Paynes Creek** 52.22 72 P **P** 16 48 01.2 +1.2
baz=314,SNR=6.6
FCC **Fort Churchill** 52.43 39 P **P** 16 48 01.2 0.0
FCC pmax pmax
comp=Z,32nm,1.4s
FCC **Fort Churchill** 52.43 39 P **P** 16 48 01.2 0.0
SUMG **Summit** 52.46 7 P **P** 16 48 01.3 -0.4
SUMG pmax pmax
comp=Z,53nm,1.0s
SUMG **Summit** 52.46 7 *i*P **P** 16 48 01.9 +0.2
comp=Z,95nm,0.8s
SUMG **Summit** 52.46 7 P **P** 16 48 01.3 -0.4
SUMG lAmb lAmb 16 48 04.1
comp=Z,54nm,1.0s
WVOR **Wild Horse Val** 52.46 67 P **P** 16 48 03.0 +1.2
WVOR pmax pmax
comp=Z,25nm,1.1s
WVOR **Wild Horse Val** 52.46 67 P **P** 16 48 03.0 +1.2
ORV **Oroville** 52.90 72 P **P** 16 48 05.7 +0.8
ORV pmax pmax
comp=Z,18nm,1.0s
ORV **Oroville** 52.90 72 P **P** 16 48 05.7 +0.8
PRGR **Permogore** 53.02 327 *e*P **P** 16 48 04.2 -1.2

PRGR *e**PP **pP** 16 48 44.8 +1.3
PRGR pmax pmax
comp=Z,20nm,0.8s
EGMT **Eagleton** 53.19 57 P **P** 16 48 07.3 +0.3
baz=314
SLVN **Son La** 53.20 254 P **P** 16 48 06.9 -0.5
TMCR **Tamitsa** 53.30 332 *e*P **P** 16 48 07.5 +0.1
TMCR pmax pmax
comp=Z,12nm,0.8s
BEKR **Beckworth** 53.31 71 P **P** 16 48 09.4 +1.2
BEKR lAmb lAmb 16 48 47.7
comp=Z,43nm,1.3s
AFDM **Forest Hills D** 53.61 72 P **P** 16 48 11.1 +1.0
USP **Ospenovka** 53.75 296 P **P** 16 48 10.4 -0.8
SNR=13
CHMS **Chumysh** 53.81 295 P **P** 16 48 10.3 -1.3
SNR=6.3
MCMT **McKenzie Canyo** 53.85 62 P **P** 16 48 12.6 +0.6
KBK **Karagaybulak** 53.94 295 P **P** 16 48 11.2 -1.5
SNR=16
PAHR **Pah Rah Range** 53.95 70 P **P** 16 48 13.9 +1.1
PAHR lAmb lAmb 16 48 52.6
comp=Z,51nm,1.2s
LSA **Lhasa** 54.12 272 Pn **P** 16 48 13.5 -0.9
LSA smax smax
comp=N,14nm,1.4s
LSA smax smax
comp=E,19nm,1.2s
LSA **Lhasa** 54.12 272 P **P** 16 48 13.6 -0.9
LSA pmax pmax
comp=Z,28nm,0.6s
LSA **Lhasa** 54.12 272 P **P** 16 48 13.6 -0.9
LSA lAmb lAmb 16 48 16.0
comp=Z,28nm,0.6s
AAK **Ala-Archa** 54.20 295 P **P** 16 48 13.5 -1.0
AAK pmax pmax
comp=Z,41nm,1.3s
AAK **Ala-Archa** 54.20 295 P **P** 16 48 13.4 -1.0
SNR=14
AAK **Ala-Archa** 54.20 295 P **P** 16 48 13.5 -1.0
AAK lAmb lAmb 16 48 57.0
comp=Z,41nm,1.3s
PNTR **Pine Nut** 54.27 71 P **P** 16 48 17.6 +2.4
YERR **Yerington** 54.54 71 P **P** 16 48 18.8 +1.7
YERR lAmb lAmb 16 48 57.3
comp=Z,67nm,1.2s
EKS2 **Erkin-Say** 54.56 295 P **P** 16 48 15.7 -1.4
SNR=13
QLMT **Earthquake Lak** 54.57 61 P **P** 16 48 17.9 +0.7
YHL **Hebgen Lake** 54.68 61 P **P** 16 48 19.4 +1.3
YHB **Horse Butte** 54.74 61 P **P** 16 48 19.7 +1.2
YHH **Holmes Hill** 54.89 61 P **P** 16 48 20.8 +1.1
AML **Almayashu** 54.97 295 P **P** 16 48 19.7 -0.7
SNR=8.5
KCP **Kidapawan** 54.99 223 ⇓*i*P **P** 16 48 21.8 +1.4
KVN **Kaiserville** 55.12 70 P **P** 16 48 23.1 +1.9
KVN pmax pmax
comp=Z,47nm,1.1s
KVN **Kaiserville** 55.12 70 P **P** 16 48 23.1 +1.9
KVN lAmb lAmb 16 49 01.6
comp=Z,47nm,1.1s
YNE **Yellowstone No** 55.16 60 P **P** 16 48 22.6 +1.1
RYN **Ryan** 55.19 71 P **P** 16 48 23.5 +1.8
RYN lAmb lAmb 16 49 02.0
comp=Z,38nm,1.0s
YPP **Pitchstone Pla** 55.28 61 P **P** 16 48 25.4 +2.9
H17A **Grant Village** 55.31 61 P **P** 16 48 25.2 +2.6
H17A lAmb lAmb 16 49 04.9
comp=Z,49nm,1.3s
H17A **Grant Village** 55.31 61 P **P** 16 48 25.0 +2.4
baz=315,SNR=23
KOHI **KOHIMA** 55.39 266 *e*P **P** 16 48 22.2 -1.1
KOHI lAmb lAmb 16 48 23.7
comp=Z,20nm,0.5s
NVAR **Mina Array Bea** 55.45 71 P **P** 16 48 25.4 +1.7
comp=Z,14nm,0.7s,baz=296,slow=7.3,SNR=73
NVAR pP **pP** **16 49 02.0 -0.2**
comp=Z,21nm,0.7s,baz=298,slow=7.2,SNR=13
NVAR LR LR 17 11 36.3
comp=Z,164nm,19.0s,baz=302,slow=35
NVAR **Mina Array Bea** 55.45 71 P **P** 16 48 25.7 +2.0
RLMT **Red Lodge** 55.45 59 P **P** 16 48 25.0 +1.5
RLMT lAmb lAmb 16 49 04.7
comp=Z,39nm,0.9s
RLMT **Red Lodge** 55.45 59 P **P** 16 48 24.8 +1.3
baz=315,SNR=31
ELK **Elko** 55.47 67 P **P** 16 48 25.5 +1.7
ELK pmax pmax
comp=Z,122nm,2.0s
ELK **Elko** 55.47 67 LR LR 17 09 28.2
comp=Z,183nm,21.8s,baz=334,slow=33
ELK **Elko** 55.47 67 P **P** 16 48 25.4 +1.7
FLWY **Flagg Ranch** 55.47 61 P **P** 16 48 25.9 +2.2
TEZP **TEZPUR** 55.47 268 *e*P **P** 16 48 21.8 -1.8
TEZP lAmb lAmb 16 48 24.6
comp=Z,24nm,0.2s
IMW **Indian Meadow** 55.48 61 P **P** 16 48 25.0 +1.1
IMW lAmb lAmb 16 49 05.2
comp=Z,23nm,1.1s
KLMR **Klimovskoe** 55.50 329 *e*P **P** 16 48 21.4 -2.0
KLMR *e**PP **pP** **16 48 59.8 -2.0**
KLMR pmax pmax
comp=Z,17nm,0.8s
KLMR **Klimovskoe** 55.50 329 *e*P **P** 16 48 21.4 -2.0
KLMR AMP 16 48 24.5
comp=Z,17nm,0.8s
KLMR *e*pP **pP** **16 48 59.8 -2.0**
DGMT **Dagmar** 55.53 53 P **P** 16 48 24.4 +0.6
baz=316
KSH **Kashi** 55.61 291 P **P** 16 48 27.0 +2.4
KSH pP pP 16 49 09.5 +6.3
KSH PP **PP** **16 50 35.5 +5.3**
KSH S **S** **16 55 57.5 +0.3**
KSH sS sS 16 57 04.8 +1.0
KSH SS **SS** **16 59 48.0 +3.8**
KSH pmax pmax
comp=Z,390nm,4.4s
KSH LR LR
comp=Z,160nm,4.8s
KSH LR LR
comp=Z,150nm,4.9s
KSH LR LR
comp=Z,300nm,8.0s
MOOW **Moose Ponds** 55.68 61 P **P** 16 48 26.6 +1.4
MOOW lAmb lAmb 16 49 05.8
comp=Z,46nm,1.6s
TPAW **Teton Pass** 55.76 62 P **P** 16 48 26.9 +1.1
TPAW lAmb lAmb 16 49 04.7
comp=Z,99nm,1.9s
LAO **LASA Array** 55.84 56 P **P** 16 48 27.5 +1.5
LAO **LASA Array** 55.84 56 P **P** 16 48 26.9 +0.8
baz=316
REDW **Red Top Meadow** 55.90 62 P **P** 16 48 27.9 +1.1
REDW lAmb lAmb 16 49 07.5
comp=Z,57nm,1.6s
ARSB **Arslanbob** 55.92 295 P **P** 16 48 26.4 -0.5
KK31 **Karatay Array** 55.94 298 *i*P **P** 16 48 25.0 -1.8
KKAR **Karatay Array** 55.94 298 P **P** 16 48 25.0 -1.8
KKAR **Karatay Array** 55.94 298 P **P** 16 48 25.0 -1.8
JOF **Joensuu** 56.07 334 P **P** 16 48 26.8 -0.6
JOF pmax pmax
comp=Z,16nm,0.7s
AHID **Auburn Hatcher** 56.20 62 P **P** 16 48 30.4 +1.5
AHID lAmb lAmb 16 49 09.2
comp=Z,39nm,1.4s
TIN **Tinemaha, Big** 56.48 72 P **P** 16 48 32.5 +1.7
baz=316
BGU **Big Grassy Mou** 56.51 65 P **P** 16 48 32.5 +1.4
SPUT **South Promonto** 56.54 64 P **P** 16 48 32.9 +1.6
ABKAR **Akbulak array** 56.62 309 P **P** 16 48 29.9 -1.6
ABKAR **Akbulak array** 56.62 309 P **P** 16 48 30.3 -1.2
ABKAR lAmb lAmb 16 49 13.8
comp=Z,58nm,1.4s
SMMC **Simmler** 56.76 75 P **P** 16 48 34.7 +2.0
baz=317,SNR=5.3
VES **Vestal, Richgr** 56.88 73 P **P** 16 48 34.3 +0.8
baz=317
PD31 **Pinedale Array** 56.99 61 P **P** 16 48 35.7 +1.2
PDAR **Pinedale Array** 56.99 61 P **P** 16 48 35.4 +0.9
comp=Z,12nm,0.4s,baz=358,slow=3.6,SNR=189
PDAR pP **pP** **16 49 12.8 -0.6**
comp=Z,5.1nm,0.6s,baz=327,slow=2.5,SNR=3.3
PDAR PcP **PcP** **16 49 27.8 +0.1**
comp=Z,6.3nm,0.7s,baz=342,slow=1.2,SNR=5.1
PDAR LR LR 17 12 27.2

comp=Z,116nm,21.6s,baz=335,slow=35
PDAR PKPPKP **P'P'df** 17 18 18.4 -6.8
comp=Z,0.3nm,0.5s,baz=132,slow=2.2,SNR=3.8
PDAR Pinedale Array 56.99 61 P **P** 16 48 35.8 +1.2
R11A Troy Canyon, C 56.99 69 P **P** 16 48 35.4 +0.9
R11A IAmb IAmb 16 49 15.0
comp=Z,64nm,1.6s
R11A Troy Canyon, C 56.99 69 P **P** 16 48 35.8 +1.2
baz=317,SNR=16
GRAC Grapevine Rang 57.00 71 P **P** 16 48 36.3 +1.9
baz=317,SNR=12
CWC Cottonwood Cre 57.01 72 P **P** 16 48 35.9 +1.3
baz=317
DUG Dugway, Tooele 57.15 66 P **P** 16 48 37.4 +1.9
DUG pmax pmax
comp=Z,39nm,1.1s
DUG Dugway, Tooele 57.15 66 P **P** 16 48 37.4 +1.9
DUG IAmb IAmb 16 49 16.3
comp=Z,39nm,1.1s
DUG Dugway, Tooele 57.15 66 P **P** 16 48 37.2 +1.7
baz=316,SNR=23
PKM Mcpherson Peak 57.17 75 P **P** 16 48 37.0 +1.1
baz=317
TCUT Toone Canyon 57.22 64 P **P** 16 48 38.1 +2.0
UBPT Khong Chiam 57.24 249 P **P** 16 48 36.3 +0.1
UBPT **PcP** 16 49 29.7 +1.1
ISA Isabella, Lake 57.35 73 P **P** 16 48 37.7 +0.8
ISA pmax pmax
comp=Z,19nm,1.2s
ISA Isabella, Lake 57.35 73 P **P** 16 48 37.7 +0.8
ISA Isabella, Lake 57.35 73 P **P** 16 48 37.7 +0.8
baz=317,SNR=6.2
MANU Manus Island 57.39 195 P **P** 16 48 36.7 -0.6
MPMC Manual Prospec 57.61 72 P **P** 16 48 40.3 +1.4
baz=317,SNR=16
TPNV Topopah Spring 57.65 71 P **P** 16 48 40.4 +1.3
TPNV pmax pmax
comp=Z,63nm,1.4s
TPNV Topopah Spring 57.65 71 P **P** 16 48 40.4 +1.3
TPNV IAmb IAmb 16 49 18.7
comp=Z,63nm,1.4s
TPNV Topopah Spring 57.65 71 P **P** 16 48 40.7 +1.6
baz=317,SNR=19
FURC Furnace Creek, 57.66 71 P **P** 16 48 40.7 +1.8
baz=317,SNR=20
TAPN Taplejung 57.87 273 *e*P **P** 16 48 39.1 -1.8
comp=Z,49nm,0.5s
LRMC Laurel Mtn Rad 57.93 73 P **P** 16 48 41.8 +0.8
baz=317
ULM Lac du Bonnet 57.95 47 P **P** 16 48 41.1 +0.3
ULM pmax pmax
comp=Z,120nm,1.7s
ULM Lac du Bonnet 57.95 47 P **P** 16 48 40.9 +0.1
comp=Z,10nm,0.5s,baz=319,slow=6.9,SNR=38
ULM pP **pP** 16 49 20.4 +0.7
comp=Z,11nm,0.5s,baz=320,slow=7.5,SNR=4.5
ULM PcP **PcP** 16 49 31.1 +0.1
comp=Z,8.5nm,0.7s,baz=323,slow=4.1,SNR=5.7
ULM LR LR 17 15 26.0
comp=Z,272nm,18.0s,baz=328,slow=38
ULM Lac du Bonnet 57.95 47 P **P** 16 48 41.1 +0.3
BTK Batken 57.97 295 P **P** 16 48 40.9 -0.4
BTK pmax pmax
comp=Z,57nm,1.5s
BTK Batken 57.97 295 P **P** 16 48 40.9 -0.4
BTK IAmb IAmb 16 49 23.6
comp=Z,57nm,1.4s
OSI Osito Audit: C 57.98 74 P **P** 16 48 42.7 +1.4
baz=318
CHTO Chiang Mai 58.00 257 P **P** 16 48 41.0 -0.5
CHTO pmax pmax
comp=Z,15nm,0.6s
CHTO Chiang Mai 58.00 257 P **P** 16 48 41.0 -0.5
CHTO IAmb IAmb 16 48 42.3
comp=Z,15nm,0.6s
MDND Maddock 58.09 51 P **P** 16 48 42.9 +1.0
baz=318
BLG Laguna Peak, P 58.16 75 P **P** 16 48 43.7 +1.1
baz=318
EDW2 Edwards Air Fo 58.19 73 P **P** 16 48 44.0 +1.2
baz=318,SNR=14
CM31 Chiang Mai Arr 58.28 257 P **P** 16 48 43.6 +0.1
CM31 IAmb IAmb 16 48 45.8
comp=Z,14nm,0.6s
CMAR Chiang Mai Arr 58.28 257 P **P** 16 48 43.4 -0.1
comp=Z,6.2nm,0.5s,baz=24,slow=7.3,SNR=76
CMAR PcP **PcP** 16 49 32.9 +0.1
comp=Z,8.1nm,0.6s,baz=9.7,slow=3.5,SNR=18
CMAR ScP **ScP** 16 53 18.2 +1.5
comp=Z,2.0nm,1.0s,baz=19,slow=4.9,SNR=4.7
CMAR PKPPKP P'P'df 17 18 32.2 +10
comp=Z,0.2nm,0.6s,baz=229,slow=4.3,SNR=5.8
SHOC Shoshone, Teco 58.40 71 P **P** 16 48 45.2 +1.0
baz=318
ODAN Odare 58.43 273 *e*P **P** 16 48 43.1 -1.6
comp=Z,26nm,0.5s
DECC Green Verdugo 58.46 74 P **P** 16 48 45.2 +0.5
baz=318
GUN Gumba 58.51 275 *e*P **P** 16 48 43.4 -2.0
comp=Z,36nm,0.5s
JIRN Jiri 58.52 274 *e*P **P** 16 48 43.6 -1.9
comp=Z,27nm,0.4s
GSC Goldstone, Bar 58.54 72 P **P** 16 48 45.6 +0.3
baz=318,SNR=11
K22A Casper 58.61 60 P **P** 16 48 46.5 +0.8
K22A Casper 58.61 60 P **P** 16 48 46.8 +1.1
baz=317,SNR=6.2
FINES FINESS Array B 58.62 336 P **P** 16 48 44.7 -0.5
comp=Z,12nm,0.6s,baz=36,slow=8.2,SNR=58
FINES pP **pP** 16 49 24.4 +0.4
comp=Z,8.5nm,0.8s,baz=338,slow=2.1,SNR=2.8
FINES ScP **ScP** 16 53 17.8 +0.2
comp=Z,1.3nm,0.6s,baz=11,slow=3.9,SNR=3.4
FINES PKPPKP P'P'df 17 18 03.2 -19
comp=Z,4.0nm,0.8s,baz=116,slow=4.4,SNR=3.8
FINES LR LR 17 18 33.6
comp=Z,216nm,19.4s,baz=42,slow=40
FINES FINESS Array B 58.62 336 P **P** 16 48 45.3 +0.1
TMUT Trail Mountain 58.65 65 P **P** 16 48 47.8 +1.5
PBKT Sadao Pong 58.66 254 P **P** 16 48 45.9 -0.2
PBKT IAmb IAmb 16 48 48.3
comp=Z,35nm,1.6s
MSU Marysvale 58.71 67 P **P** 16 48 48.3 +1.8
MSU Marysvale 58.71 67 P **P** 16 48 48.3 +1.8
RSSD Black Hills 58.76 57 P **P** 16 48 47.6 +0.8
RSSD pmax pmax
comp=Z,49nm,0.9s
RSSD Black Hills 58.76 57 P **P** 16 48 47.6 +0.8
RSSD Black Hills 58.76 57 P **P** 16 48 47.3 +0.5
baz=318
CCUT Cedar City 58.78 68 P **P** 16 48 48.8 +1.8
RAMN Ramite 58.82 273 *e*P **P** 16 48 45.5 -1.9
comp=Z,63nm,0.4s
BFSC Mount Baldy Ra 58.85 74 P **P** 16 48 48.7 +1.3
baz=318,SNR=7.2
TUQ Turquoise Moun 58.93 72 P **P** 16 48 48.8 +0.8
baz=318
Q16A Castle Valley 58.95 66 P **P** 16 48 49.5 +1.4
KKN Kakani 58.95 275 *e*P **P** 16 48 46.6 -1.7
comp=Z,45nm,0.5s
RWWY Rawlins 58.97 61 P **P** 16 48 48.6 +0.3
RWWY IAmb IAmb 16 49 29.3
comp=Z,62nm,1.5s
SMPI Sarmi 59.03 205 P **P** 16 48 50.6 +2.0
comp=Z,73nm,1.7s
PKI Pulchoki 59.04 275 *e*P **P** 16 48 47.0 -2.1
PKIN Phulchoki 59.04 275 *e*P **P** 16 48 46.8 -2.2
comp=Z,22nm,0.5s
CIS Catalina Islan 59.05 75 P **P** 16 48 49.4 +0.7
baz=318
MTPU Mount Pierson 59.05 67 P **P** 16 48 51.0 +2.0
SRU San Rafael Swe 59.15 65 P **P** 16 48 51.1 +1.6
SRU pmax pmax
comp=Z,40nm,0.7s
SRU San Rafael Swe 59.15 65 P **P** 16 48 51.0 +1.6
HEC Hector,Ludlow 59.15 72 P **P** 16 48 50.6 +1.1
baz=318
GKN Gorkha 59.16 276 *e*P **P** 16 48 47.8 -1.9
DMN Daman 59.19 275 *e*P **P** 16 48 48.3 -1.7
BBRC Big Bear Solar 59.25 73 P **P** 16 48 50.7 +0.4
baz=318
DANN Dangsing 59.41 277 *e*P **P** 16 48 49.7 -1.8
AGMN Agassiz Nation 59.42 49 P **P** 16 48 51.3 +0.3
baz=319
KNB Kanab 59.46 68 P **P** 16 48 53.4 +1.7
KNB pmax pmax
comp=Z,73nm,1.5s
KNB Kanab 59.46 68 P **P** 16 48 53.4 +1.7
GMRC Granite Mounta 59.56 72 P **P** 16 48 53.6 +1.3
baz=318,SNR=13
MURC Murrieta 59.58 74 P **P** 16 48 53.5 +1.1
baz=318
O20A White River Ci 59.59 63 P **P** 16 48 54.0 +1.5
O20A White River Ci 59.59 63 P **P** 16 48 53.8 +1.3
baz=318,SNR=17
KKM Kota Kinabalu 59.69 232 P **P** 16 48 54.8 +1.5
TNTI Ternate 59.85 218 P **P** 16 48 54.3 0.0
comp=Z,53nm,1.6s
KOLN Koldanda 59.94 276 *e*P **P** 16 48 53.2 -1.9
comp=Z,25nm,0.5s
BELC Belle Mtn. Jos 59.95 73 P **P** 16 48 55.8 +0.8
baz=318,SNR=5.6
PFO Pinyon Flats O 59.98 73 P **P** 16 48 56.1 +0.9
PFO pmax pmax
comp=Z,9.0nm,0.8s
PFO Pinyon Flats O 59.98 73 LR LR 17 12 20.3
comp=Z,123nm,18.3s,baz=346,slow=33
PFO Pinyon Flats O 59.98 73 P **P** 16 48 56.1 +0.9
PFO Pinyon Flats O 59.98 73 P **P** 16 48 55.9 +0.7
baz=318
XPFO Pion Flat 59.99 73 P **P** 16 48 56.1 +0.9
SWI Sorong 60.06 213 P **P** 16 48 56.8 +1.1
comp=Z,3μmcomp=Z,165nm,1.8s
SIJI Sorong 60.06 213 LR LR 17 14 08.5
comp=Z,40nm,18.6s,baz=21,slow=35
109C Camp Elliot, M 60.16 74 P **P** 16 48 57.3 +1.1
baz=318
N23A Red Feather La 60.20 61 P **P** 16 48 58.3 +1.6
N23A IAmb IAmb 16 49 38.4
comp=Z,24nm,0.8s
N23A Red Feather La 60.20 61 P **P** 16 48 58.1 +1.4
baz=318,SNR=18
MOS Moscow 60.24 326 *e*P **P** 16 48 54.5 -1.9
MOS *e**PP **pP** 16 49 36.2 +0.8
MOS *e*S **S** 16 56 52.6 -4.0
IRM Iron Mountain 60.31 72 P **P** 16 48 58.8 +1.5
baz=318,SNR=14
BC3 Big Chuckawall 60.51 73 P **P** 16 48 59.8 +1.1
baz=318,SNR=9.3
DHRM DHARAMSHALA 60.74 285 *e*P **P** 16 48 58.5 -2.0
PDMCI Parker Dam,Lak 60.75 71 P **P** 16 49 01.6 +1.4
baz=319,SNR=12
WAMI Wamena 60.86 204 P **P** 16 49 03.8 +2.7
comp=Z,1μmcomp=Z,42nm,0.6s
IKP In-Ko-Pah, Jac 60.90 74 P **P** 16 49 02.3 +1.0
baz=319
SUSD Miller 60.94 53 P **P** 16 49 01.8 +0.4
baz=320
Y12C Blythe 60.95 72 P **P** 16 49 02.6 +1.0
baz=319
VSU Vasula 61.06 334 *i* P **P** 16 49 02.6 +0.7
VSU pmax pmax
comp=Z,16nm,0.5s
SMLA Simla 61.09 284 *e*P **P** 16 49 00.1 -2.4
SMLA IAmb IAmb 16 49 02.0
comp=Z,31nm,0.6s
SMLA *i* pP **pP** 16 49 42.4 +0.7
OBN Obninsk 61.09 327 *e*P **P** 16 49 01.2 -1.0
OBN *e**PP **pP** 16 49 41.8 +0.6
OBN *e* 16 51 21.4
OBN *e*S **S** 16 57 05.9 -1.5
OBN *e*SS **SS** 17 01 11.5 +2.4
OBN pmax pmax
comp=Z,14nm,0.7s
LBMI Labuha 61.12 217 P **P** 16 49 01.2 -1.6
ISCO Idaho Springs 61.18 61 P **P** 16 49 04.7 +1.2
ISCO pmax pmax
comp=Z,44nm,1.4s
ISCO Idaho Springs 61.18 61 P **P** 16 49 04.7 +1.2
ISCO IAmb IAmb 16 49 46.5
comp=Z,44nm,1.4s
ISCO Idaho Springs 61.18 61 P **P** 16 49 05.3 +1.8
baz=319,SNR=21
KMSI Cibinong 61.30 222 P **P** 16 49 04.9 +0.8
comp=Z,1μmcomp=Z,97nm,0.6s
GLA Glamis 61.31 73 P **P** 16 49 05.2 +1.1
GLA pmax pmax
comp=Z,27nm,0.7s
GLA Glamis 61.31 73 P **P** 16 49 05.2 +1.1
GLA IAmb IAmb 16 49 06.5
comp=Z,27nm,0.7s
GLA Glamis 61.31 73 P **P** 16 49 05.6 +1.5
baz=319,SNR=11
WUAZ Wupatki 61.36 68 P **P** 16 49 06.4 +1.9
baz=319,SNR=7.1
NIL Nilore 61.39 288 P **P** 16 49 04.4 -0.2
NIL pmax pmax
comp=Z,88nm,1.5s
NIL Nilore 61.39 288 P **P** 16 49 04.4 -0.2
EYMN Ely 61.56 46 P **P** 16 49 05.7 +0.1
EYMN Ely 61.56 46 P **P** 16 49 05.5 0.0
baz=321,SNR=13
MVCO Mesa Verde 61.63 65 P **P** 16 49 06.6 +0.2
MVCO Mesa Verde 61.63 65 P **P** 16 49 07.4 +1.0
baz=319,SNR=10
BOK Bokaro 61.64 272 *e*P **P** 16 49 05.4 -1.0
BOK *i* x x 16 49 46.8
FAKI Fak Fak 61.69 212 P **P** 16 49 07.5 +0.8
comp=Z,1μmcomp=Z,97nm,1.5s
FAKI Fak Fak 61.69 212 P **P** 16 49 06.7 0.0
NC405 NORSAR Array S 61.84 343 P **P** 16 49 06.6 -0.6
NC204 NORSAR Array S 61.85 344 P **P** 16 49 06.6 -0.6
NB201 NORSAR Array S 61.98 343 P **P** 16 49 07.6 -0.4
NB2 NORSAR Subarra 62.00 343 P **P** 16 49 07.3 -0.9
comp=Z,12nm,0.8s,baz=21,slow=6.9
NOA NORSAR Array B 62.00 343 P **P** 16 49 07.4 -0.8
comp=Z,3.5nm,0.7s,baz=20,slow=6.1,SNR=34
NOA PcP **PcP** 16 49 46.5 -0.6
comp=Z,6.4nm,0.7s,baz=24,slow=3.3,SNR=8.8
Q24A Divide 62.05 62 P **P** 16 49 10.6 +1.4
baz=319,SNR=5.2
S22A 4UR Ranch, Cre 62.10 64 P **P** 16 49 11.6 +2.0
S22A IAmb IAmb 16 49 51.1
comp=Z,56nm,1.8s
S22A 4UR Ranch, Cre 62.10 64 P **P** 16 49 11.0 +1.4
baz=319,SNR=13
X16A Lo Mia Camp, P 62.15 69 P **P** 16 49 12.1 +2.3
X16A IAmb IAmb 16 49 12.7
comp=Z,17nm,0.8s
MRSI Marisa 62.19 224 P **P** 16 49 10.8 +0.8
comp=Z,3μmcomp=Z,177nm,1.7s
W18A Petrified Fore 62.54 67 P **P** 16 49 13.8 +1.3
W18A IAmb IAmb 16 49 15.1
comp=Z,17nm,0.8s
W18A Petrified Fore 62.54 67 P **P** 16 49 13.9 +1.4
baz=319,SNR=9.4
VRH Novokhopyorsk 62.56 321 *e*P **P** 16 49 10.5 -1.5
VRH *e**PP **pP** 16 49 51.6 +0.3
VRH pmax pmax
comp=Z,10.0nm,0.6s
ECSD EROS Data Cent 62.57 53 P **P** 16 49 12.3 0.0
ECSD IAmb IAmb 16 49 54.5
comp=Z,68nm,1.7s
ECSD EROS Data Cent 62.57 53 P **P** 16 49 12.2 0.0
baz=321,SNR=16
SDCO Great Sand Dun 62.79 63 P **P** 16 49 15.4 +1.3
baz=320,SNR=5.6
NRS Narsarsuaq 62.85 13 P **P** 16 49 13.0 -0.8
NRS pmax pmax
comp=Z,232nm,2.0s
NRS Narsarsuaq 62.85 13 P **P** 16 49 13.0 -0.8
SANI Sanana 62.97 219 P **P** 16 49 15.4 +0.3
comp=Z,2μmcomp=Z,129nm,1.3s
KBL Kabul 63.01 292 P **P** 16 49 13.8 -1.8
KBL pmax pmax
comp=Z,12nm,0.8s
KBL Kabul 63.01 292 P **P** 16 49 13.8 -1.8
SPMN Marine on St. 63.13 49 P **P** 16 49 16.1 +0.2
baz=322
MSAI Masohi 63.15 215 P **P** 16 49 19.2 +2.8
comp=Z,444nmcomp=Z,30nm,0.5s
MPSI Mapaga 63.16 226 P **P** 16 49 16.9 +0.5
comp=Z,1μmcomp=Z,82nm,1.8s
LUWI Luwuk 63.25 222 P **P** 16 49 16.8 -0.2
comp=Z,1μmcomp=Z,77nm,1.2s
LUWI Luwuk 63.25 222 P **P** 16 49 16.3 -0.7
214A Organ Pipe Nat 63.25 72 P **P** 16 49 18.2 +1.3
baz=320
KSCO Kaye Shedlock' 63.29 60 P **P** 16 49 17.6 +0.3
baz=320
VSR Storozhevoye 63.46 323 *e*P **P** 16 49 16.2 -1.8
VSR *PP **pP** 16 49 58.0 +0.6
VSR pmax pmax
comp=Z,10.0nm,0.7s
VORD Divnogorie 63.62 322 *e*P **P** 16 49 17.1 -1.9
VORD *e**PP **pP** 16 49 59.1 +0.6
VORD pmax pmax
comp=Z,10.0nm,0.8s
BGNE Belgrade 63.64 55 P **P** 16 49 19.8 +0.4
baz=321
NLAI Namlea 63.67 217 P **P** 16 49 21.7 +1.9
comp=Z,55nm,1.4s
AAI Ambon 63.72 216 P **P** 16 49 21.1 +1.0
comp=Z,3μmcomp=Z,235nm,1.4s
T25A Trinidad 63.81 62 P **P** 16 49 21.6 +0.8
baz=320
TUC Tucson 64.10 70 P **P** 16 49 23.7 +1.2
baz=320
SCHQ Schefferville 64.40 28 P **P** 16 49 23.5 -0.6
comp=Z,23nm,0.5s,baz=338,slow=4.8,SNR=86
SCHQ pP **pP** 16 50 03.1 -0.6
comp=Z,6.0nm,0.6s,baz=344,slow=7.1,SNR=1.8
SCHQ PKPPKP **P'P'df** 17 18 14.1 +0.7
comp=Z,4.5nm,0.6s,baz=128,slow=3.9,SNR=8.4
SCHQ Schefferville 64.40 28 P **P** 16 49 23.6 -0.4
SCHQ IAmb IAmb 16 49 25.9
comp=Z,28nm,0.9s
ANMO Albuquerque 64.42 65 LR LR 17 17 12.1
comp=Z,109nm,18.1s,baz=322,slow=35
ANMO Albuquerque 64.42 65 P **P** 16 49 25.8 +1.0
baz=320
PMG Port Moresby 64.66 194 P **P** 16 49 26.9 +0.7
PMG pmax pmax
comp=Z,274nm,2.0s
PMG Port Moresby 64.66 194 P **P** 16 49 26.9 +0.7
E43A Lone Tree Farm 64.68 45 P **P** 16 49 24.9 -1.1
SBUM Sibu 64.71 235 P **P** 16 49 28.3 +1.8
CBKS Cedar Bluff 64.88 58 P **P** 16 49 27.5 0.0
baz=321
E44A Grand Marais A 64.92 44 P **P** 16 49 27.3 -0.2
baz=324
SMKI Samarinda 65.01 228 P **P** 16 49 30.5 +2.0
comp=Z,3μmcomp=Z,159nm,1.5s
MATQ Matagami 65.44 37 P **P** 16 49 30.6 -0.2
baz=328
121A Cookes Peak, D 65.56 68 P **P** 16 49 33.4 +1.3
121A IAmb IAmb 16 50 15.0
comp=Z,61nm,1.6s
121A Cookes Peak, D 65.56 68 P **P** 16 49 34.0 +1.9
baz=321,SNR=8.6
SCIA State Center 65.56 52 P **P** 16 49 32.6 +0.8
SCIA State Center 65.56 52 P **P** 16 49 32.2 +0.5
baz=323,SNR=6.9
319A Douglas 65.63 70 P **P** 16 49 33.6 +1.1
319A IAmb IAmb 16 49 35.2
comp=Z,30nm,0.8s
D47A Chapleau 65.67 42 P **P** 16 49 31.3 -1.1
baz=326
E46A Sault Ste Mari 65.77 43 P **P** 16 49 31.5 -1.5
F45A CMU Biological 65.84 44 P **P** 16 49 32.8 -0.7
baz=325
BKB Balikpapan 65.87 228 P **P** 16 49 35.3 +1.3
comp=Z,4μmcomp=Z,361nm,1.3s
KDI Kendari 65.98 221 P **P** 16 49 35.3 +0.6
comp=Z,24μmcomp=Z,51nm,1.5s
GEYT Alibeck 66.06 302 P **P** 16 49 34.3 -0.8
comp=Z,13nm,0.7s,baz=26,slow=3.8,SNR=46
GEYT pP **pP** 16 50 15.3 +0.6
comp=Z,16nm,1.1s,baz=347,slow=2.0,SNR=4.0
GEYT LR LR 17 21 30.0
comp=Z,244nm,18.6s,baz=55,slow=39
GEYT Alibeck 66.06 302 P **P** 16 49 34.6 -0.5
GYA0B ALIBECK ARRAY 66.06 302 P **P** 16 49 34.1 -1.0
GYA0B IAmb IAmb 16 50 18.0
comp=Z,79nm,1.6s
D48A Paudash Townsh 66.08 41 P **P** 16 49 34.1 -0.9
baz=326
JFWS Jewell Farm 66.08 49 P **P** 16 49 35.0 -0.1
baz=324
E47A Iron Bridge 66.10 42 P **P** 16 49 34.3 -0.8
baz=326,SNR=5.4
KSU1 Kansas State U 66.18 56 P **P** 16 49 35.6 -0.2
baz=322
TTSI Tana Toraja 66.25 224 P **P** 16 49 35.6 -0.8
comp=Z,31nm,1.3s
LSQQ Lebel-sur-Quev 66.26 37 P **P** 16 49 35.4 -0.7
baz=328
KSM Kuching 66.47 236 P **P** 16 49 39.1 +1.3
KSM Kuching 66.47 236 P **P** 16 49 39.0 +1.1
E48A Lockeyer 66.51 42 P **P** 16 49 36.9 -0.8
baz=325
BSD Bornholm Skovb 66.86 339 *i* P **P** 16 49 40.8 +1.1
BSD Bornholm Skovb 66.86 339 *i* P **P** 16 49 40.8 +1.1
VLDQ Val d'Or 66.89 38 P **P** 16 49 38.4 -1.7
VLDQ IAmb IAmb 16 50 19.6
comp=Z,82nm,1.5s
H46A Fife Lake 66.91 45 P **P** 16 49 39.8 -0.4
baz=325
GLMI Grayling 66.91 44 P **P** 16 49 40.4 +0.1
baz=325
G47A Hillman 66.93 43 P **P** 16 49 40.0 -0.4
baz=326
AMTX Amarillo 66.95 62 P **P** 16 49 41.2 +0.3
baz=322
BHPL Bhopal 66.97 278 *e*P **P** 16 49 38.6 -2.4
BHPL IAmb IAmb 16 49 41.0
comp=Z,8.6nm,0.8s
D51A Lot 18 Range I 67.06 40 P **P** 16 49 40.2 -1.0
baz=327
MSTX Muleshoe 67.10 63 P **P** 16 49 42.4 +0.5
baz=322,SNR=6.0
SPSI Sidrap Palu 67.11 224 P **P** 16 49 42.3 +0.5
comp=Z,2μmcomp=Z,191nm,0.7s
F49A Sandfield 67.16 42 P **P** 16 49 40.7 -1.1
baz=326
AKASG Malin Array Be 67.17 328 P **P** 16 49 41.1 -0.8
comp=Z,1.8nm,0.3s,baz=29,slow=6.6,SNR=18
AKASG pP **pP** 16 50 21.9 +0.2
comp=Z,3.6nm,0.6s,baz=31,slow=6.6,SNR=1.6
AKASG LR LR 17 23 13.1
comp=Z,554nm,18.0s,baz=25,slow=40
I46A Reed City 67.30 45 P **P** 16 49 42.9 +0.1
baz=325
BNSI Bone 67.37 223 P **P** 16 49 44.3 +0.8
comp=Z,2μmcomp=Z,102nm,1.5s
E51A G1948 Merrick 67.48 40 P **P** 16 49 42.7 -1.2
baz=327
MNTX Cornudas Mount 67.49 67 P **P** 16 49 46.0 +1.8
MNTX IAmb IAmb 16 49 46.6
comp=Z,19nm,0.8s
MNTX Cornudas Mount 67.49 67 P **P** 16 49 45.3 +1.1
baz=321,SNR=34
H48A Harrisville 67.53 43 P **P** 16 49 43.8 -0.4
baz=326
L44A Lake County Fo 67.69 48 P **P** 16 49 45.3 0.0
baz=325
J46A Howard City 67.70 46 P **P** 16 49 45.5 +0.2
baz=325
F51A Arnstein 67.83 41 P **P** 16 49 45.0 -1.0
baz=327
D54A Lac Fusel, La 67.99 38 P **P** 16 49 46.4 -0.7
baz=329,SNR=5.2
E52A Mattawa 68.00 40 P **P** 16 49 46.1 -1.1
baz=328
KBKI Kotabaru 68.01 228 P **P** 16 49 48.4 +0.9
comp=Z,590nmcomp=Z,54nm,0.8s
AKT Akhty 68.07 311 *e*P **P** 16 49 46.5 -1.3
AKT *e* 16 50 12.4
AKT *e**PP **pP** 16 50 27.3 -0.4
AKT pmax pmax
comp=Z,43nm,1.3s
J47A Sunmer 68.13 45 P **P** 16 49 47.9 0.0
baz=326
KULM Kulim 68.14 247 P **P** 16 49 48.6 +0.2
KULM IAmb IAmb 16 49 51.1
comp=Z,79nm,1.4s
KULM Kulim 68.14 247 P **P** 16 49 49.0 +0.7
KIV Kislovodsk 68.16 316 *e*P **P** 16 49 47.7 -0.5
KIV *e**PP **pP** 16 50 28.8 +0.7
KIV *e*S **S** 16 58 34.3 -0.2
KIV *e*SS **SS** 17 03 01.4 +2.0
KIV pmax pmax
comp=Z,31nm,1.0s
KIV MLR MLR
comp=Z,447nm,17.0s
KIV Kislovodsk 68.16 316 ⇑P **P** 16 49 47.5 -0.7
KIV Kislovodsk 68.16 316 P **P** 16 49 48.2 -0.1
KIV IAmb IAmb 16 50 33.4
comp=Z,50nm,1.5s

K46A Dorr 68.19 46 P P 16 49 47.7 -0.6
baz=325
BKSI Bulukumba 68.20 223 P P 16 49 49.4 +0.7
comp=Z,1µmcomp=Z,103nm,1.0s
KBZ Khabaz 68.26 316 P P 16 49 48.0 -0.7
comp=Z,13nm,1.0s,baz=54,slow=3.5,SNR=14
KBZ LR LR 17 23 58.3
comp=Z,276nm,18.1s,baz=20,slow=40
E53A Dumoine, Ponti 68.29 39 P P 16 49 48.4 -0.5
baz=328
JRMM Jerantut 68.35 244 P P 16 49 50.0 +0.3
I49A Point Hope 68.36 44 P P 16 49 49.0 -0.4
baz=326
HDIL Hopedale 68.41 50 P P 16 49 49.3 -0.4
baz=324
E54A Lac Daplat, Po 68.42 39 P P 16 49 48.7 -1.0
baz=329
ALGO Algonquin Park 68.51 39 P P 16 49 49.6 -0.7
baz=328
J48A Bridge Port 68.51 45 P P 16 49 50.5 +0.2
baz=326
D55A Sainte-Anne-du 68.53 37 P P 16 49 49.6 -0.8
baz=329
K47A Vermontville 68.53 46 P P 16 49 50.3 -0.1
baz=326
WMOK Wichita Mounta 68.55 60 P P 16 49 51.1 +0.4
WMOK pmax pmax
comp=Z,22nm,0.9s
WMOK Wichita Mounta 68.55 60 P P 16 49 51.1 +0.4
WMOK IAmb IAmb 16 49 52.2
comp=Z,22nm,0.8s
WMOK Wichita Mounta 68.55 60 P P 16 49 51.2 +0.5
baz=322,SNR=26
IPM Ipoh 68.62 246 P P 16 49 51.0 -0.3
ZEI Tsey 68.63 315 *eP* P 16 49 48.5 -2.8
ZEI pmax pmax
comp=Z,6.0nm,0.8s
J49A Marlette 68.72 44 P P 16 49 50.9 -0.7
baz=326
D56A ZEC Mazanza, M 68.75 37 P P 16 49 51.6 -0.2
baz=330,SNR=5.1
K48A Perry 68.78 45 P P 16 49 51.7 -0.3
baz=326,SNR=6.3
E55A Montcerf-Lytto 68.81 38 P P 16 49 51.6 -0.5
baz=329
H52A Wyevale 68.93 41 P P 16 49 52.5 -0.3
baz=325
G54A Lake Saint Pet 68.97 40 P P 16 49 52.3 -0.8
baz=328
G53A Haliburton 69.00 40 P P 16 49 52.5 -0.8
baz=328
L47A Sherwood 69.02 46 P P 16 49 52.9 -0.6
baz=326,SNR=5.9
K49A Clarkson 69.07 45 P P 16 49 53.9 +0.1
baz=326
D57A Chemin Vers le 69.08 36 P P 16 49 53.3 -0.5
baz=330,SNR=8.4
E56A St. Veronique 69.09 37 P P 16 49 53.3 -0.5
baz=330
TUL1 Leonard 69.10 57 P P 16 49 54.3 +0.2
baz=323
SADO Sadowa 69.11 41 LR LR 17 20 45.7
comp=Z,118nm,20.5s,baz=349,slow=36
LATQ La Tuque 69.14 35 P P 16 49 53.7 -0.4
baz=331
I51A Listowel 69.19 42 P P 16 49 54.0 -0.6
baz=327,SNR=5.1
PVM Polavaram 69.23 271 *eP* P 16 49 54.6 -0.4
RPR Rampur 69.31 274 *eP* P 16 49 53.8 -1.8
M47A Cromwell 69.35 47 P P 16 49 55.6 +0.1
baz=326
D58A Chemin du LacG 69.35 35 P P 16 49 55.1 -0.3
baz=331
L48A N Adams 69.36 46 P P 16 49 55.3 -0.3
baz=326,SNR=6.3
K50A Casco 69.42 44 P P 16 49 56.0 +0.1
baz=327
MYKOM Kota Tinggi 69.42 242 P P 16 49 56.5 +0.3
MYKOM IAmb IAmb 16 49 59.2
comp=Z,63nm,1.4s
MYKOM Kota Tinggi 69.42 242 P P 16 49 58.0 +1.8
L49A Milan 69.50 45 P P 16 49 56.2 -0.2
baz=326
E57A Chemin Saint G 69.51 37 P P 16 49 56.2 -0.3
baz=330
SFIN Lafayette 69.52 49 P P 16 49 56.0 -0.5
baz=325
CCM Cathedral Cave 69.54 53 P P 16 49 56.5 -0.3
baz=324
G55A Calabogie 69.59 39 P P 16 49 56.1 -0.9
baz=329,SNR=5.5
GGR Gangavaram 69.60 272 *eP* P 16 49 55.0 -2.5
M48A Edgerton 69.62 46 P P 16 49 56.8 -0.5
baz=326
SOC Sochi 69.65 318 *eP* P 16 49 51.8 -5.5
SOC *ePPP* PPP 16 54 10.1
SOC *eS* **S** **16 58 45.2 -6.6**
SOC *eSSS* SSS 17 06 28.9
HHAR Hobbs 69.70 56 P P 16 49 57.5 -0.3
HHAR IAmb IAmb 16 49 58.5
comp=Z,34nm,0.8s
SORM Soroca 69.71 328 ⇓P P 16 49 57.1 -0.5
N47A Urbana 69.71 47 P P 16 49 56.8 -1.0
baz=326,SNR=5.5
COEN Coen 69.74 197 P P 16 49 58.9 +0.8
ABTX Abilene, Hawle 69.78 62 P P 16 49 58.1 -0.2
baz=323,SNR=5.6
MGMO Mountain Grove 69.80 54 P P 16 49 58.0 -0.4
MGMO IAmb IAmb 16 50 39.5
comp=Z,23nm,0.8s
SRSP Sriramsagar 69.81 274 *eP* P 16 49 56.0 -2.7
E58A La Victoria 69.85 36 P P 16 49 58.0 -0.5
baz=330
J52A Paris 69.88 42 P P 16 49 58.2 -0.5
baz=328
K51A Iona Station 69.91 43 P P 16 49 58.5 -0.4
baz=327
AKH Akhalkalaki 69.94 314 ⇑P P 16 49 59.0 -0.4
M49A Liberty Center 69.94 46 P P 16 49 58.8 -0.3
baz=326
L50A Kingsville 69.95 45 P P 16 49 59.1 -0.1
baz=327
N48A Decatur 70.01 47 P P 16 49 58.8 -0.8
baz=326,SNR=8.2
KWP Kalwaria Pacla 70.02 332 *eP* P 16 50 00.1 +0.6
KWP *e*PP* pP 16 50 41.4 +1.8
KWP Kalwaria Pacla 70.02 332 *eP* P 16 50 00.1 +0.6
KWP *epP* pP 16 50 41.4 +1.8
H55A Tweed 70.03 40 P P 16 49 59.0 -0.6
baz=329
SANVU Saraoutou 70.09 172 P P 16 50 00.2 +0.1
D61A St Aubert, Com 70.15 34 P P 16 50 00.8 +0.5
baz=332
D60A Saint Jean D'O 70.16 34 P P 16 50 00.3 0.0
baz=332
U40A Yellville 70.16 55 P P 16 50 00.3 -0.3
U40A IAmb IAmb 16 50 01.8
comp=Z,36nm,0.8s
U40A Yellville 70.16 55 P P 16 50 00.2 -0.4
baz=324,SNR=9.0
MYLAV Mylavaram 70.20 271 *eP* P 16 49 59.2 -1.8
OJC Ojcow 70.25 334 *eP* P 16 50 00.8 -0.1
OJC *e*PP* pP 16 50 42.8 +1.8
OJC Ojcow 70.25 334 *eP* P 16 50 00.8 -0.1
OJC *epP* pP 16 50 42.8 +1.8
TX31 Lajitas Ar. Si 70.26 67 P P 16 50 02.7 +1.3
TX31 IAmb IAmb 16 50 03.5
comp=Z,26nm,0.7s
TX32 Lajitas Array 70.26 67 IAmb IAmb 16 50 03.5
comp=Z,28nm,0.7s
TXAR Lajitas Array 70.26 67 P P 16 50 02.5 +1.1
comp=Z,29nm,0.6s,baz=300,slow=4.7,SNR=323
TXAR pP pP 16 50 41.2 -0.5
comp=Z,6.8nm,0.6s,baz=297,slow=4.6,SNR=3.2
TXAR LR LR 17 22 46.6
comp=Z,33nm,18.1s,baz=0.0,slow=37
TXAR Lajitas Array 70.26 67 P P 16 50 02.7 +1.3
N49A Columbus Grove 70.32 46 P P 16 50 00.9 -0.6
baz=326,SNR=6.0
G57A Newington 70.35 38 P P 16 50 01.0 -0.6
baz=330
M50A Fremont 70.39 45 P P 16 50 01.5 -0.3
baz=327
O48A Farmland 70.45 47 P P 16 50 01.7 -0.6
baz=326,SNR=8.6
E60A Ste Agathe de 70.47 35 P P 16 50 02.2 -0.1
baz=331
F59A Saint Guilaume 70.47 36 P P 16 50 02.0 -0.2
baz=331
KSP Ksiaz 70.53 336 *eP* P 16 50 02.6 0.0
KSP Ksiaz 70.53 336 *eP* P 16 50 02.6 0.0
D62A Allapoint, All 70.62 33 P P 16 50 03.3 +0.1
D62A IAmb IAmb 16 50 04.8
comp=Z,33nm,1.2s
D62A Allapoint, All 70.62 33 P P 16 50 02.9 -0.2
baz=332,SNR=5.3
G58A Ormstown 70.64 37 P P 16 50 02.4 -0.9
baz=330
F60A Warwick 70.65 35 P P 16 50 03.4 +0.1
baz=331
W39A Magazine 70.65 56 P P 16 50 03.7 +0.1
baz=324,SNR=7.3
LPIG La Paz 70.71 76 LR LR 17 18 30.7
comp=Z,65nm,18.2s,baz=328,slow=33
E61A Lac Etchemin 70.73 34 P P 16 50 03.9 0.0
baz=332
H57A Richville 70.76 38 P P 16 50 03.0 -1.0
baz=330
KOLS Kolonicke sedl 70.77 332 *eP* P 16 50 04.1 0.0
KOLS Kolonicke sedl 70.77 332 *eP* P 16 50 04.1 0.0
M51A Elyria 70.80 45 P P 16 50 04.1 -0.2
baz=327
CLL Collm 70.83 339 ⇑ *iP* P 16 50 04.3 -0.1
CLL *i* *PP pP 16 50 45.9 +1.4
CLL *eS* S 16 59 04.0 -1.3
CLL pmax pmax
comp=Z,19nm,1.0s
CLL Collm 70.83 339 ⇑ *iP* P 16 50 04.3 -0.1
comp=Z,19nm,1.0s
CLL *i* pP pP 16 50 45.9 +1.4
CLL *es*P sP 16 51 04.0 +1.5
CLL *eS* S 16 59 04.0 -1.3
comp=N,300nm,18.2s
CLL *eS* S 16 59 04.0 -1.3
comp=E,200nm,25.3s
CLL *e*SKSac SKSac 16 59 50.0 -0.2
CLL *eSS* SS 17 03 48.0 +8.2
CLL *eSSS* SSS 17 07 12.0
CLL *e* 17 08 06.0
CLL Lm MLR 17 22 00.0
comp=Z,100nm,21.8s
CLL Collm 70.83 339 *eP* P 16 50 04.6 +0.2
comp=Z,9.2nm,0.9s,baz=19,slow=5.9
CLL *ep*P pP 16 50 46.7 +2.1
CLZ Clausthal 70.86 340 *eP* P 16 50 05.6 +1.0
comp=Z,11nm,0.9s,baz=19,slow=5.9
O49A Covington 70.86 47 P P 16 50 03.4 -1.3
baz=327
N50A Nevada 70.87 46 P P 16 50 04.3 -0.6
baz=327
HYBB Hyderabad (bro 70.88 273 *eP* P 16 50 03.5 -1.7
HYB Hyderabad 70.88 273 *iP* P 16 50 03.5 -1.7
HYB *eP*cP PcP 16 50 24.0 -0.7
J55A Hilton 70.89 41 P P 16 50 04.1 -0.7
baz=329
LONY Lake Ozonia 70.91 38 P P 16 49 54.4 -11
baz=330,SNR=15
UPC Upice 70.91 336 *eP* P 16 50 05.5 +0.6
UPC Upice 70.91 336 *eP* P 16 50 05.5 +0.6
D63A Stockholm 70.95 32 P P 16 50 04.9 -0.3
baz=333
M52A Chesterland 70.96 44 P P 16 50 05.5 +0.1
M52A IAmb IAmb 16 50 45.8
comp=Z,20nm,0.8s
M52A Chesterland 70.96 44 P P 16 50 05.3 0.0
baz=328
F61A St Evariste 70.97 35 P P 16 50 04.9 -0.4
baz=332
DPC Dobruska-Polom 70.99 336 *eP* P 16 50 05.8 +0.4
DPC Dobruska-Polom 70.99 336 *eP* P 16 50 05.8 +0.4
DPC *ex* x 16 50 13.6
P48A Milroy 71.00 48 P P 16 50 05.2 -0.4
P48A IAmb IAmb 16 50 45.4
comp=Z,37nm,0.7s
P48A Milroy 71.00 48 P P 16 50 04.9 -0.7
baz=326,SNR=5.8
G59A Clarenceville 71.00 37 P P 16 50 05.4 -0.1
baz=331
ERPA Erie 71.02 43 P P 16 50 05.0 -0.7
baz=328,SNR=5.0
BRG Berggiesshubel 71.04 338 *eP* P 16 50 05.7 +0.1
comp=Z,13nm,1.5s
BRG *e* 16 50 13.4
comp=Z,7.3nm,1.3s
BRG Berggiesshubel 71.04 338 *eP* P 16 50 05.7 +0.1
BRG pmax pmax
comp=Z,13nm,1.5s
BRG Berggiesshubel 71.04 338 *eP* P 16 50 05.7 +0.1
comp=Z,7.5nm,1.2s,baz=19,slow=5.9
UZH Uzhgorod 71.04 332 *eP* P 16 50 05.4 -0.3
L53A Girard 71.05 43 P P 16 50 05.3 -0.6
baz=328,SNR=8.8
N51A Ashland 71.07 45 P P 16 50 05.8 -0.2
baz=327
BUR08 Bucovina Ar. S 71.10 329 P P 16 50 06.9 +0.6
K54A Basiliko Farm, 71.11 42 P P 16 50 05.8 -0.4
baz=329
I57A Carthage 71.11 39 P P 16 50 06.5 +0.3
baz=330
NJS Nagarjunasagar 71.12 272 *eP* P 16 50 05.7 -0.9
BURAR Bucovina Array 71.12 329 ⇓P P 16 50 06.5 +0.1
PSI Prapat 71.15 247 P P 16 50 06.6 -0.3
PSI pmax pmax
comp=Z,28nm,0.6s
L54A Sinclairville 71.19 42 P P 16 50 06.2 -0.5
baz=328
O50A Cable 71.20 46 P P 16 50 07.0 +0.2
baz=327
H59A Cadyville 71.20 37 P P 16 50 06.0 -0.7
baz=331
MORC Moravsky Berou 71.23 335 P P 16 50 07.5 +0.6
MORC pmax pmax
comp=Z,7.0nm,1.1s
MORC Moravsky Berou 71.23 335 ⇑P P 16 50 07.4 +0.5
MORC Moravsky Berou 71.23 335 *eP* P 16 50 07.2 +0.3
H58A Gabriels 71.23 38 P P 16 50 06.3 -0.6
baz=330
RPSI Rantau Prapat 71.24 247 P P 16 50 06.6 -0.7
RPSI IAmb IAmb 16 50 08.9
comp=Z,28nm,0.6s
J56A Wolcott 71.24 40 P P 16 50 06.3 -0.6
baz=329
P49A Miami Univ. Ec 71.24 47 P P 16 50 06.8 -0.3
baz=327
K55A Perry 71.25 41 P P 16 50 06.4 -0.7
baz=329
MIAR Mount Ida 71.27 57 P P 16 50 08.1 +0.8
MIAR pmax pmax
comp=Z,18nm,0.7s
MIAR Mount Ida 71.27 57 P P 16 50 08.1 +0.8
MIAR IAmb IAmb 16 50 08.7
comp=Z,18nm,0.7s
MIAR Mount Ida 71.27 57 P P 16 50 07.3 0.0
baz=324,SNR=12
G60A Masonville 71.28 36 P P 16 50 06.9 -0.3
baz=331
ADKI Addanki 71.30 271 *eP* P 16 50 07.2 -0.4
Q48A North Vernon 71.31 48 P P 16 50 07.2 -0.3
baz=326
LANS Liptovska Anna 71.32 334 *eP* P 16 50 08.6 +1.2
LANS pmax pmax
comp=Z,7.0nm,1.1s
LANS Liptovska Anna 71.32 334 *eP* P 16 50 08.6 +1.2
M53A Wi Miller and 71.32 44 P P 16 50 07.1 -0.5
baz=328,SNR=7.9
ACSO Alum Creek Sta 71.39 46 P P 16 50 07.7 -0.2
baz=327,SNR=6.4
G61A St-Isidore-de- 71.39 35 P P 16 50 07.8 -0.1
baz=332
JCT Junction City 71.39 64 P P 16 50 08.0 -0.2
JCT pmax pmax
comp=Z,26nm,0.8s
JCT Junction City 71.39 64 P P 16 50 08.0 -0.2
JCT IAmb IAmb 16 50 10.0
comp=Z,26nm,0.8s
JCT Junction City 71.39 64 P P 16 50 08.2 +0.1
baz=323,SNR=12
WHTX Lake Whitney, 71.40 61 P P 16 50 08.3 +0.3
baz=324
E63A Oxbow 71.40 33 P P 16 50 07.5 -0.4
baz=333
W41B Gary Mavity, V 71.41 55 P P 16 50 07.8 -0.2
baz=324,SNR=8.5
TRPA Tarpa 71.43 331 ⇓P P 16 50 08.7 +0.7
TPI Tanjungpandan 71.43 236 P P 16 50 08.8 +0.4
comp=Z,675nmcomp=Z,39nm,1.2s
MTN Manton Dam 71.43 209 P P 16 50 09.2 +0.9
N52A McGinn's Farm, 71.44 45 P P 16 50 07.8 -0.5
baz=328
J57A Williamstown 71.44 39 P P 16 50 08.2 0.0
baz=330
KLRI Killari 71.50 275 *eP* P 16 50 07.5 -1.4
K56A Middlesex 71.56 41 P P 16 50 08.2 -0.7
baz=329
P50A Jamestown 71.57 47 P P 16 50 08.7 -0.3
baz=327
L55A Hinsdale 71.57 42 P P 16 50 08.6 -0.4
baz=329
E64A Bridgewater 71.59 33 P P 16 50 08.0 -1.0
baz=333
O51A Pataskala 71.62 46 P P 16 50 08.4 -1.0
baz=327,SNR=6.2
H60A Morristown 71.63 37 P P 16 50 09.0 -0.3
baz=331
WCI Wyandotte Cave 71.64 49 P P 16 50 09.2 -0.2
baz=326
M54A Oil Creek Stat 71.67 43 P P 16 50 08.9 -0.7
baz=328,SNR=5.8
X40A Basin Creek Fa 71.68 56 P P 16 50 09.5 -0.2
baz=324,SNR=9.1
TESR Tescani 71.68 328 ⇑P P 16 50 08.9 -0.6
SRLM Srisailam 71.72 272 *eP* P 16 50 09.1 -1.2
PRU Pruhonice 71.73 337 *eP* P 16 50 09.9 +0.1
PRU Pruhonice 71.73 337 *eP* P 16 50 09.9 +0.1
PRU *ex* x 16 50 16.3
J58A Remsen 71.75 39 P P 16 50 09.5 -0.6
baz=330
MOX Moxa 71.75 339 P P 16 50 10.6 +0.7
MOX Moxa 71.75 339 *eP* P 16 50 10.4 +0.5
comp=Z,4.0nm,0.8s,baz=19,slow=5.9
GOPC GO Pecny, Ondr 71.75 337 *eP* P 16 50 10.5 +0.6
GOPC GO Pecny, Ondr 71.75 337 *eP* P 16 50 10.5 +0.6
G62A West of Eustis 71.78 35 P P 16 50 10.6 +0.4
baz=332
TANN Tannenbergstha 71.79 339 *eP* P 16 50 10.5 +0.3
comp=Z,16nm,1.2s,baz=19,slow=5.9
N53A Lisbon 71.79 44 P P 16 50 10.0 -0.4
baz=328
BUG Bochum--Univer 71.82 342 *eP* P 16 50 09.7 -0.6
comp=Z,14nm,1.0s,baz=19,slow=5.9
F63A Nahmakanta, Br 71.82 34 P P 16 50 10.6 +0.1
baz=333
GUNZ Gunzen 71.86 339 *eP* P 16 50 11.3 +0.6
comp=Z,3.5nm,0.8s,baz=19,slow=5.9
GUNZ *ep*P pP 16 50 53.4 +2.5
I59A Olmsteadville 71.88 38 P P 16 50 10.3 -0.5
baz=331
VRAC Vranov 71.89 336 *eP* P 16 50 11.5 +0.7
VRAC *ep*P pP 16 50 53.2 +2.1
H61A Lyndonville 71.92 36 P P 16 50 11.2 +0.2
baz=332
F64A Sherman 71.92 33 P P 16 50 10.9 -0.1
baz=333
WERN Wernitzgruen 71.93 339 *eP* P 16 50 11.7 +0.7
comp=Z,4.9nm,0.8s,baz=19,slow=5.9
J59A Piesco 71.94 38 P P 16 50 10.7 -0.5
baz=330
L56A Greenwood 71.95 41 P P 16 50 10.9 -0.4
L56A IAmb IAmb 16 50 52.4
comp=Z,36nm,1.1s
L56A Greenwood 71.95 41 P P 16 50 10.9 -0.4
baz=329
O52A Adamsville 71.97 45 P P 16 50 11.2 -0.2
baz=328
P51A Williamsport 71.99 46 P P 16 50 11.3 -0.2
baz=327
N54A Moraine State 72.00 43 P P 16 50 11.0 -0.6
baz=328
I60A Shoreham 72.04 37 P P 16 50 11.5 -0.2
baz=331
M55A Ridgway 72.06 42 P P 16 50 11.3 -0.6
baz=329,SNR=5.6
R49A Shelbyville 72.08 48 P P 16 50 12.3 +0.2
baz=327
VYHS Vyhne 72.09 334 *eP* P 16 50 12.1 +0.1
VYHS Vyhne 72.09 334 *eP* P 16 50 12.1 +0.1
O53A New Philadelph 72.11 45 P P 16 50 11.8 -0.5
baz=328
K58A Earlville 72.13 40 P P 16 50 12.2 -0.1
baz=330
Q50A Georgetown 72.14 47 P P 16 50 12.4 +0.1
baz=327
H62A Milan 72.14 36 P P 16 50 12.5 +0.2
baz=332
PKME Peaks-Kenny Pk 72.15 34 P P 16 50 12.4 +0.1
baz=333
KRUC Moravsky 72.17 336 *eP* P 16 50 13.0 +0.6
KRUC *ep*P pP 16 50 54.8 +2.1
LBNH Lisbon 72.17 36 P P 16 50 13.2 +0.6
baz=332
G63A Kingsbury 72.18 34 P P 16 50 12.7 +0.2
baz=333
P52A Corning 72.25 46 P P 16 50 12.6 -0.4
baz=328
Q51A Peebles 72.25 47 P P 16 50 12.7 -0.4
baz=327
M56A Emporium 72.27 42 P P 16 50 13.3 +0.1
M56A Emporium 72.27 42 P P 16 50 12.4 -0.8
baz=329
MANZ Manzenberg 72.27 339 *eP* P 16 50 13.3 +0.3
comp=Z,4.6nm,1.1s,baz=19,slow=5.9
G64A Maxfield 72.33 34 P P 16 50 12.7 -0.7
baz=333
L57A Andrews Acres 72.34 41 P P 16 50 13.4 -0.2
baz=330
I61A Oroboro, Fairl 72.35 37 P P 16 50 13.6 +0.1
baz=332
K59A Cooperstown 72.41 39 P P 16 50 13.7 -0.4
baz=330
S49A Springfield 72.45 49 P P 16 50 14.3 0.0
baz=327,SNR=8.6
R50A Paris 72.45 48 P P 16 50 14.2 -0.1
baz=327,SNR=6.8
ROTZ Rotzenmuhle 72.46 339 *eP* P 16 50 14.6 +0.5
comp=Z,7.0nm,1.1s,baz=19,slow=5.9
BINY Binghamton 72.49 40 P P 16 50 14.0 -0.5
baz=330
O54A Avella 72.51 44 P P 16 50 14.2 -0.4
baz=328
J60A Lant Hill Farm 72.52 38 P P 16 50 14.3 -0.3
baz=331
N55A Marion Center 72.55 43 P P 16 50 14.6 -0.3
baz=329,SNR=5.5
X43A Marvell 72.59 55 P P 16 50 16.0 +0.8
baz=325
L58A Harry Jones Me 72.68 40 P P 16 50 15.1 -0.4
baz=330
P53A Whipple 72.68 45 P P 16 50 15.8 +0.1
baz=328
WVT Waverly 72.69 52 P P 16 50 16.1 +0.4
baz=326
N56A West Decatur 72.71 42 P P 16 50 15.8 0.0
baz=329
H64A Troy 72.73 34 P P 16 50 16.3 +0.5
baz=333
GRF Grafenberg Arr 72.73 339 *eP* P 16 50 16.7 +0.9
comp=Z,13nm,1.0s,baz=19,slow=5.9
GRF *epP* pP 16 50 59.6 +3.5
J61A Chester 72.74 37 P P 16 50 15.9 0.0
baz=331
KHC Kasperske Hory 72.76 337 *eP* P 16 50 16.4 +0.4
KHC Kasperske Hory 72.76 337 *eP* P 16 50 16.4 +0.4
KHC *ex* x 16 50 25.2
R51A Hillsboro 72.76 47 P P 16 50 16.0 -0.1
baz=327,SNR=6.7
Q52A Bidwell 72.76 46 P P 16 50 15.8 -0.3
baz=328
G65A Princeton 72.76 33 P P 16 50 16.2 +0.2
baz=334
TNS Taunus Mts 72.78 341 *eP* P 16 50 16.6 +0.6
comp=Z,4.2nm,0.7s,baz=19,slow=5.9
I63A Otisfield 72.80 35 P P 16 50 16.8 +0.6
baz=332
M57A Sunshine Farm, 72.80 41 P P 16 50 15.9 -0.4
baz=330,SNR=5.1
MEM Membach 72.84 343 P P 16 50 16.4 0.0
comp=Z,23nm,1.2s
L59A Walton 72.85 39 P P 16 50 16.1 -0.6
L59A Walton 72.85 39 P P 16 50 15.8 -0.8
baz=330

WET Wettzell 72.90 338 *e*P P 16 50 17.5 +0.7
comp=Z,4.6nm,0.9s,baz=19,slow=5.9

T49A Edmonton 72.91 49 P P 16 50 16.8 -0.2
baz=327,SNR=5.3

O55A Ligonier 72.92 43 P P 16 50 16.5 -0.5
baz=329

S50A Richmond 72.93 48 P P 16 50 17.0 -0.1
baz=327

P54A Burton 72.96 45 P P 16 50 17.0 -0.2
baz=328

GEC2 GERESS Array S 73.00 337 *e*P P 16 50 17.5 0.0
comp=Z,2.8nm,0.8s,baz=19,slow=5.9

GERES GERESS Array B 73.00 337 P P 16 50 17.4 -0.1
comp=Z,1.3nm,0.5s,baz=28,slow=6.0,SNR=11

GERES LR LR 17 27 51.2
comp=Z,341nm,18.1s,baz=46,slow=40

M58A Price's Panora 73.03 41 P P 16 50 16.8 -0.9
baz=330

K61A Williamstown 73.08 38 P P 16 50 17.7 -0.2
baz=331

J62A Henniker 73.10 37 P P 16 50 17.9 -0.1
baz=332

SSPA Standing Stone 73.11 42 P P 16 50 17.8 -0.4

SSPA IAmb IAmb 16 50 58.5
comp=Z,56nm,1.6s

SSPA Standing Stone 73.11 42 P P 16 50 17.3 -0.8
baz=329

GSI Gunungsitoli 73.12 247 P P 16 50 18.4 -0.1

R52A Catlettsburg 73.13 47 P P 16 50 18.0 -0.3
baz=328,SNR=5.5

VOIR 73.14 328 P P 16 50 18.8 +0.5

VOIR pmax pmax
comp=Z,11nm,0.8s

VOIR 73.14 328 ⇑P P 16 50 18.6 +0.3

N57A Milroy 73.14 42 P P 16 50 17.7 -0.6
baz=329,SNR=7.7

Q53A Leroy 73.16 46 P P 16 50 18.2 -0.3
baz=328,SNR=11

O56A Blue Knob Stat 73.16 43 P P 16 50 18.4 0.0

O56A Blue Knob Stat 73.16 43 P P 16 50 17.8 -0.7
baz=329

MCWV Mont Chateau 73.17 44 P P 16 50 18.8 +0.3
baz=329

H66A Whiting 73.21 33 P P 16 50 18.9 +0.3
baz=334

M59A Waymart 73.27 40 P P 16 50 17.8 -1.2
baz=330

T50A Nancy 73.28 49 P P 16 50 18.8 -0.4
baz=327,SNR=7.3

OXF Oxford 73.29 54 P P 16 50 19.1 -0.2
baz=326,SNR=6.4

U49A Red Boiling Sp 73.29 50 P P 16 50 19.0 -0.2
baz=327

P55A Reedsville 73.30 44 P P 16 50 19.3 0.0
baz=329,SNR=5.7

S51A Beattyville 73.31 48 P P 16 50 19.0 -0.4
baz=327

ARR Arges 73.33 329 ⇑P P 16 50 19.2 -0.2

L60A Shokan 73.33 39 P P 16 50 18.9 -0.4
baz=331

Q54A Coxs Mills 73.34 45 P P 16 50 19.4 0.0

Q54A IAmb IAmb 16 51 00.3
comp=Z,92nm,1.7s

Q54A Coxs Mills 73.34 45 P P 16 50 19.3 -0.2
baz=328

CONA Conrad Observa 73.36 336 *i* P P 16 50 20.3 +0.8
comp=Z,4.0nm,1.0s

SIRR Siria 73.38 331 ⇑P P 16 50 19.7 +0.1

N58A Sunbury 73.39 41 P P 16 50 19.1 -0.6
baz=330

L61A Hillsdale 1, H 73.39 38 P P 16 50 19.4 -0.3
baz=331

R53A Hurricane 73.42 46 P P 16 50 18.9 -1.1

R53A IAmb IAmb 16 50 21.6
comp=Z,41nm,0.9s

R53A Hurricane 73.42 46 P P 16 50 19.8 -0.3
baz=328,SNR=7.0

ICOR Ion Corvin 73.45 326 ⇓P P 16 50 19.4 -0.7

S52A Salyersville 73.50 47 P P 16 50 20.6 +0.2
baz=328

PLAL Pickwick Lake 73.52 52 P P 16 50 19.0 -1.6

PLAL IAmb IAmb 16 50 22.1
comp=Z,36nm,0.8s

O57A Amberson 73.57 42 P P 16 50 21.0 +0.1
baz=330,SNR=5.7

URV Uravakonda 73.59 273 *e*P P 16 50 20.3 -0.9

Q55A Buckhannon 73.64 45 P P 16 50 21.2 -0.1
baz=329,SNR=5.1

K63A Dunstable 73.67 37 P P 16 50 21.0 -0.3
baz=332

N59A State Game Lan 73.68 41 P P 16 50 21.0 -0.5
baz=330

P56A Dayton Farm, R 73.70 43 P P 16 50 21.3 -0.3
baz=329,SNR=7.3

T51A Gray 73.72 48 P P 16 50 21.7 0.0
baz=327

M60A Port Jervis 73.75 40 P P 16 50 21.4 -0.5
baz=331

U50A Jamestown 73.79 49 P P 16 50 22.3 +0.1
baz=327,SNR=6.6

MOA Molln 73.81 337 *e*P P 16 50 22.6 +0.5
comp=Z,5.6nm,1.2s

HRV Adam Dziewonsk 73.83 37 P P 16 50 22.4 +0.1
baz=332

GZR Gura Zlata 73.85 330 ⇓P P 16 50 22.7 +0.2

V49A McMinnville 73.86 50 P P 16 50 22.3 -0.3
baz=327

O58A Lewisberry 73.93 42 P P 16 50 22.6 -0.3
baz=330

KRJI Kerinci 73.95 242 P P 16 50 23.6 +0.2
comp=Z,3μcomp=Z,238nm,0.6s

R54A Victor 73.95 46 P P 16 50 23.1 0.0
baz=328,SNR=8.2

Q56A Snyder Ridge, 73.96 44 P P 16 50 23.1 0.0
baz=329

N60A Cedar Hill Far 73.97 40 P P 16 50 23.0 -0.2
baz=331

BZS Buzias 73.98 331 ⇑P P 16 50 22.9 -0.2

T52A Hallie 74.02 48 P P 16 50 23.8 +0.3
baz=328

O59A Robesonia 74.05 41 P P 16 50 23.2 -0.4
baz=330

P57A Homestead Farm 74.05 43 P P 16 50 23.4 -0.2
baz=329

ARSA Arzberg 74.07 335 *e*P P 16 50 24.4 +0.7
comp=Z,2.0nm,0.6s

M61A Granite Spring 74.08 39 P P 16 50 23.6 -0.2
baz=331

S54A Dingess, Beckl 74.14 46 P P 16 50 23.9 -0.3
baz=328

U51A La Follette 74.18 49 P P 16 50 24.1 -0.4
baz=327

R55A Marlinton 74.23 45 P P 16 50 23.3 -1.5

R55A Marlinton 74.23 45 P P 16 50 25.0 +0.2
baz=329,SNR=7.1

W49A Belvidere 74.23 51 P P 16 50 24.7 -0.1
baz=327

TZTN Tazewell 74.25 48 P P 16 50 25.7 +0.9

TZTN Tazewell 74.25 48 P P 16 50 25.2 +0.3
baz=328

Q57A Strasburg 74.28 43 P P 16 50 24.8 -0.1
baz=329

V50A Pikeville 74.30 50 P P 16 50 24.9 -0.2
baz=327

PAL Palisades 74.30 39 P P 16 50 24.5 -0.5
baz=331

SWET Sewanee 74.30 51 P P 16 50 25.2 0.0

SWET IAmb IAmb 16 50 26.4
comp=Z,33nm,0.8s

T53A Wise 74.31 47 P P 16 50 25.2 -0.1
baz=328,SNR=8.7

P58A Pank, Wackersv 74.33 42 P P 16 50 25.1 -0.1
baz=330

R56A Bull Pasture M 74.41 44 P P 16 50 25.6 -0.3
baz=329

U52A Thorn Hill 74.45 48 P P 16 50 26.0 -0.1
baz=328,SNR=6.4

S55A Lewisburg 74.50 46 P P 16 50 25.6 -0.7
baz=329

V51A Loudon 74.52 49 P P 16 50 26.5 +0.1
baz=327,SNR=5.6

KLSI 74.53 238 P P 16 50 25.5 -1.2
comp=Z,522nmcomp=Z,30nm,0.6s

SISI Saibi 74.53 245 P P 16 50 26.4 -0.3
comp=Z,1μcomp=Z,80nm,1.4s

P59A Jarrettsville 74.56 42 P P 16 50 26.0 -0.6
baz=330

L64A Middleborough 74.58 37 P P 16 50 26.9 +0.3
baz=332

W50A Signal Mountai 74.59 50 P P 16 50 27.0 +0.1
baz=327

BFO Black Forest 74.61 341 *e*P P 16 50 27.2 +0.5
comp=Z,4.5nm,0.9s,baz=19,slow=5.9

M63A Gales Ferry 74.62 38 P P 16 50 27.1 +0.2
baz=332

MDSI Maura Dua 74.63 238 P P 16 50 25.4 -1.8
comp=Z,26nm,1.4s

Q58A Fox Den Farm, 74.65 43 P P 16 50 26.7 -0.4
baz=330,SNR=7.7

T54A Tazewell 74.66 47 P P 16 50 27.1 -0.2
baz=328,SNR=5.7

P60A Greenville 74.69 41 P P 16 50 27.4 +0.1
baz=330

SOKA Soboth 74.72 336 *e*P P 16 50 28.1 +0.6
comp=Z,6.3nm,0.5s

KBA Koelnbreinsper 74.74 337 *e*P P 16 50 29.0 +1.2
comp=Z,16nm,1.0s

KNRA Kununurra 74.81 211 P P 16 50 28.8 +0.7

V52A Sevierville 74.82 49 P P 16 50 28.1 0.0
baz=328

U53A Fall Branch 74.82 48 P P 16 50 28.2 0.0
baz=328,SNR=6.5

R57A Stanardsville 74.86 44 P P 16 50 28.2 -0.1
baz=329,SNR=6.4

BLSI Bandar Lampung 74.87 237 P P 16 50 26.6 -2.0
comp=Z,2μcomp=Z,53nm,0.5s

W51A Cleveland 74.88 50 P P 16 50 28.4 -0.1
baz=327

UBR Ueberruh 74.88 339 *e*P P 16 50 28.1 -0.2
comp=Z,7.7nm,1.0s,baz=19,slow=5.9

TKL Tuckaleechee C 74.89 49 LR LR 17 25 19.0
comp=Z,116nm,19.1s,baz=340,slow=37

WATA Walderalm 74.89 338 *e*P P 16 50 29.3 +0.8
comp=Z,8.8nm,1.1s

RETA Reutte 74.92 339 *e*P P 16 50 29.1 +0.5
comp=Z,8.6nm,1.2s

T55A Pulaski 74.94 46 P P 16 50 28.7 -0.2
baz=329

WTTA Wattenberg 74.95 338 *e*P P 16 50 29.9 +1.0
comp=Z,11nm,1.2s

S56A Natural Bridge 74.97 45 P P 16 50 28.8 -0.2
baz=329

MOTA Moosalm 74.99 338 *e*P P 16 50 29.4 +0.3
comp=Z,15nm,1.2s

OBKA Obir 75.00 336 *e*P P 16 50 29.8 +0.7
comp=Z,17nm,1.0s

U54A Nelsons Funny 75.01 47 P P 16 50 29.4 +0.1
baz=328

FPAL Fort Paine 75.01 51 P P 16 50 29.5 +0.2

BLA Blacksburg 75.01 46 P P 16 50 29.1 -0.2
baz=329

R58A Rapidan 75.07 43 P P 16 50 29.2 -0.3
baz=330,SNR=5.7

SQTA Sankt Quirin 75.08 338 *e*P P 16 50 30.0 +0.4
comp=Z,11nm,0.9s

MYKA Terra Mystica 75.10 337 *i* P P 16 50 28.8 -0.8
comp=Z,8.4nm,1.0s

LWLI Liwa 75.15 238 P P 16 50 28.0 -2.3
comp=Z,19μcomp=Z,51nm,0.5s

S57A Dark Hollow, R 75.15 44 P P 16 50 30.1 +0.1
baz=329,SNR=5.9

Y49A Blount Mountai 75.22 52 P P 16 50 30.4 -0.1

Y49A IAmb IAmb 16 50 31.2
comp=Z,25nm,0.8s

ABTA Abfaltersbach 75.25 337 *e*P P 16 50 30.7 +0.2
comp=Z,19nm,1.3s

BRTR Keskin Array B 75.29 320 P P 16 50 30.6 -0.4
comp=Z,2.6nm,0.7s,baz=32,slow=3.5,SNR=15

BRTR pP pP 16 51 11.8 +0.3
comp=Z,3.2nm,0.8s,baz=48,slow=3.8,SNR=3.1

BRTR LR LR 17 29 27.5
comp=Z,77nm,18.9s,baz=352,slow=40

DAVA Damuels 75.30 339 *e*P P 16 50 31.0 +0.1
comp=Z,14nm,1.3s

CTA Charters Tower 75.30 193 P P 16 50 31.9 +1.0

CTA pmax pmax
comp=Z,90nm,2.0s

W52A Murphy 75.30 49 P P 16 50 31.0 +0.1
baz=328

V53A Saluda 75.30 48 P P 16 50 31.0 +0.1
baz=328

X51A Calhoun 75.33 50 P P 16 50 31.2 +0.2
baz=327

U55A TA2, Sparta 75.35 47 P P 16 50 31.6 +0.3
baz=329

FETA Feichten 75.37 339 *e*P P 16 50 32.0 +0.7
comp=Z,9.9nm,1.0s

R58B Mineral 75.41 44 P P 16 50 31.4 0.0
baz=330

R59A King George, V 75.51 43 P P 16 50 32.4 +0.4
baz=330

W53A Cullowhee 75.57 49 P P 16 50 32.7 +0.1
baz=328

V54A Nebo 75.59 48 P P 16 50 32.7 +0.2
baz=328,SNR=6.5

Q61A Milford 75.62 41 P P 16 50 33.4 +0.8
baz=331

S58A Poland Farm, P 75.64 44 P P 16 50 32.7 0.0
baz=330

T57A Hurt 75.68 45 P P 16 50 32.9 -0.1
baz=329

X52A Dahlonega 75.73 50 P P 16 50 33.2 -0.2
baz=328

U56A King 75.77 46 P P 16 50 33.7 +0.2
baz=329

Y51A Rockmart 75.80 51 P P 16 50 33.2 -0.5
baz=327,SNR=12

S59A Mechanicsville 75.82 43 P P 16 50 33.9 +0.2
baz=330,SNR=6.8

BG3 Lake Jocassee 75.82 49 P P 16 50 34.1 +0.2

BG3 IAmb IAmb 16 51 15.9
comp=Z,86nm,2.0s

V55A Taylorsville 75.84 47 P P 16 50 33.9 0.0
baz=329

Z50A Ashland 75.94 52 IAmb IAmb 16 50 35.9
comp=Z,45nm,0.8s

Z50A Ashland 75.94 52 P P 16 50 34.3 -0.3
baz=327,SNR=26

T58A Grand View Acr 76.02 45 P P 16 50 34.9 0.0
baz=330

W54A Cherokee Point 76.07 48 P P 16 50 35.2 -0.1
baz=328

X53A Estanollee 76.07 49 P P 16 50 35.3 0.0
baz=328,SNR=5.1

S60A Water View 76.12 43 P P 16 50 35.9 +0.4
baz=330

U57A Blanch 76.13 45 P P 16 50 35.7 +0.1
baz=329

V56A Mocksville 76.18 47 P P 16 50 35.7 -0.1
baz=329

Y52A Lilburn 76.28 50 P P 16 50 36.6 +0.2
baz=328

T59A Double "B" Far 76.39 44 P P 16 50 37.5 +0.4
baz=330

V57A Coltrane Farms 76.41 46 P P 16 50 37.2 0.0
baz=329

X54A Belton 76.44 49 P P 16 50 37.5 +0.2
baz=328

U58A Oxford 76.49 45 P P 16 50 37.7 +0.1
baz=330

Y53A Monroe 76.50 50 P P 16 50 38.0 +0.4
baz=328,SNR=5.2

T60A Surry 76.58 43 P P 16 50 38.0 0.0
baz=330

DZM Mont Dzumac 76.61 174 *e*P P 16 50 40.5 +2.2
comp=Z,153nm,1.4s

DZM *e*S S 17 00 18.7 +8.1
comp=Z,200nm,24.4s

DZM Mont Dzumac 76.61 174 P P 16 50 38.9 +0.6

DZM IAmb IAmb 16 50 42.5
comp=Z,85nm,1.4s

NOUC Port Laguerre 76.63 174 IAmb IAmb 16 50 41.7
comp=Z,36nm,0.6s

Z52A Williamson 76.68 51 P P 16 50 38.9 +0.2
baz=328,SNR=5.3

SSF Saint Saulge 76.70 344 *e*P P 16 50 38.7 +0.1

SSF pmax pmax
comp=Z,10.0nm,0.9s

V58A Windy Hill, Pi 76.77 46 P P 16 50 39.4 +0.2
baz=330

X55A Gracelyn & Ava 76.83 48 P P 16 50 39.8 +0.3
baz=329

U59A Littleton 76.83 44 P P 16 50 39.7 +0.2
baz=330

Y54A Tignall 76.89 49 P P 16 50 40.0 +0.2
baz=328,SNR=16

GOGA Godfrey 76.92 50 P P 16 50 40.2 +0.1
baz=328

W57A Gilead 76.95 47 IAmb IAmb 16 51 22.0
comp=Z,86nm,1.6s

W57A Gilead 76.95 47 P P 16 50 40.6 +0.4
baz=329

152A Waverly Hall 76.98 51 P P 16 50 40.2 -0.2
baz=328

U60A Pendleton 76.98 44 P P 16 50 40.6 +0.2
baz=330

Z53A Monticello 76.99 50 P P 16 50 40.5 0.0
baz=328,SNR=5.4

V59A Middlesex 77.16 45 P P 16 50 41.6 +0.3
baz=330,SNR=5.9

Y55A Saluda 77.19 49 P P 16 50 41.7 +0.2
baz=329

Z54A Sparta 77.35 50 P P 16 50 42.6 +0.2
baz=328,SNR=8.1

WRAB Tennant Creek 77.37 204 P P 16 50 43.0 +0.5

WRAB pmax pmax
comp=Z,131nm,1.2s

WRAB Tennant Creek 77.37 204 P P 16 50 43.0 +0.5

WB2 Warramunga Arr 77.38 204 P P 16 50 43.2 +0.6

WRA Warramunga Arr 77.38 204 *i* P P 16 50 42.7 +0.1

WRA pmax pmax
comp=Z,57nm,0.5s

WRA Warramunga Arr 77.38 204 P P 16 50 42.8 +0.3
comp=Z,57nm,0.5s,baz=19,slow=5.9,SNR=438

WRA pP pP 16 51 23.0 -0.5
comp=Z,2.1nm,0.4s,baz=59,slow=42,SNR=2.0

WRA PKKPbc PKKPbc 17 09 46.4 +1.3
comp=Z,0.4nm,0.3s,baz=194,slow=6.7,SNR=5.2

WRA Warramunga Arr 77.38 204 P P 16 50 42.9 +0.3

W58A Raeford 77.38 46 P P 16 50 42.7 +0.1
baz=330,SNR=5.3

UOSS Minazif 77.40 295 P P 16 50 41.1 -1.8

X57A Johnson Farm, 77.50 47 P P 16 50 43.4 +0.2
baz=329

252A Lumpkin 77.54 52 P P 16 50 43.7 +0.2
baz=328

V60A Jim Taylor Roa 77.55 44 P P 16 50 43.8 +0.2
baz=330

W59A Clinton 77.59 45 P P 16 50 44.3 +0.6
baz=330

LPL La Plagne 77.62 341 *e*P P 16 50 44.6 +0.6

LPL pmax pmax
comp=Z,22nm,0.9s

X58A Rowland 77.74 46 P P 16 50 45.0 +0.4
baz=330

154A Montrose 77.76 50 P P 16 50 45.4 +0.7
baz=328

352A Blakely 77.89 52 P P 16 50 46.0 +0.5
baz=328

Z56A Williston 77.92 49 P P 16 50 45.9 +0.3
baz=329

W60A Pink Hill 77.98 45 P P 16 50 46.3 +0.4
baz=330

X59A McDuffie Farm, 78.03 46 P P 16 50 46.3 +0.2
baz=330

155A Kite 78.03 50 P P 16 50 46.5 +0.2
baz=328

FITZ Fitzroy Crossi 78.05 213 P P 16 50 47.0 +0.7

Y58A Scranton 78.16 47 P P 16 50 47.1 +0.2
baz=330

Z57A Bowman 78.23 48 P P 16 50 47.5 +0.2
baz=329

254A Abbeville 78.24 51 P P 16 50 48.0 +0.6
baz=328

X60A Albert Glenn T 78.29 45 P P 16 50 47.9 +0.3
baz=330

Y59A Loris 78.42 46 P P 16 50 48.8 +0.5
baz=330

156A Sylvania 78.44 49 P P 16 50 49.1 +0.7
baz=329

TIGA Tifton 78.53 51 P P 16 50 49.5 +0.5
baz=328

Z58A St. Stephen 78.58 47 P P 16 50 49.4 +0.2
baz=330

255A Hazlehurst 78.62 50 P P 16 50 49.8 +0.4
baz=329

NHSC New Hope 78.62 48 P P 16 50 49.9 +0.4
baz=329

LFF La Frestale 79.20 345 *e*P P 16 50 55.3 +2.9

LFF pmax pmax
comp=Z,11nm,0.7s

EIDS Eidsvold 80.01 188 P P 16 50 58.1 +1.3

EIDS IAmb IAmb 16 50 58.7
comp=Z,38nm,0.6s

ASF Jabal al Asfar 80.56 314 PKKPbc PKKPbc 17 09 37.2 +0.9
comp=Z,1.5nm,0.9s,baz=304,slow=5.1,SNR=3.0

AS31 Alice Springs 81.06 204 P P 16 51 03.5 +1.0

AS31 IAmb IAmb 16 51 04.4
comp=Z,20nm,0.6s

ASAR Alice Springs 81.07 204 P P 16 51 03.2 +0.7
comp=Z,41nm,0.5s,baz=16,slow=5.0,SNR=1154

ASAR pP pP 16 51 43.3 -0.6
comp=Z,7.8nm,0.7s,baz=12,slow=4.7,SNR=2.3

ASAR PKKPbc PKKPbc 17 09 38.2 +1.2
comp=Z,1.4nm,0.5s,baz=199,slow=2.3,SNR=32

ASAR PKPPKP P'P'df 17 17 48.0 +7.3
comp=Z,0.6nm,1.0s,baz=173,slow=1.5,SNR=4.1

ASAR Alice Springs 81.07 204 P P 16 51 03.5 +1.0

PMOR Pomariorio Ree 82.33 129 *e*T T 18 20 51.5
comp=Z,11nm,0.2s

PSA00 Pilbara Seismi 83.22 217 P P 16 51 13.6 -0.1

PSA00 IAmb IAmb 16 51 14.9
comp=Z,52nm,1.1s

PBRG Braganca 83.24 350 *e*P P 16 51 14.8 +1.0

PBRG *e*pP pP 16 52 00.0 +4.8

POLO Lamas de Olo 83.77 351 *e*P P 16 51 17.7 +1.1

PPT Papeete 83.86 132 LR LR 17 26 40.2
comp=Z,56nm,18.4s,baz=350,slow=34

PVRL Vila Real 83.86 350 *e*P P 16 51 18.1 +1.1
comp=Z,63nm,0.9s

PPT2 Papeete2 83.88 132 *e*S S 17 01 30.3 +3.8
comp=Z,79nm,24.8s

PPT2 Papeete2 83.88 132 *e*LR LR 17 17 11.0
comp=Z,244nm,31.8s

MVO Moncorvo 83.90 350 *e*P P 16 51 18.1 +0.9
comp=Z,53nm,1.1s

RAYN Ar Rayn 84.02 303 P P 16 51 17.1 -1.0

RAYN pmax pmax
comp=Z,36nm,1.3s

RAYN Ar Rayn 84.02 303 P P 16 51 17.1 -1.0

RAYN IAmb IAmb 16 51 18.1
comp=Z,36nm,1.2s

PVIS Viseu 84.43 351 *e*P P 16 51 20.5 +0.6
comp=Z,46nm,1.3s

MTE Manteigas 84.71 350 *e*P P 16 51 21.9 +0.6
comp=Z,70nm,1.2s

ARMA Armidale 84.98 187 P P 16 51 24.3 +1.8

ARMA IAmb IAmb 16 51 24.8
comp=Z,21nm,0.9s

ESDC Sonseca Array 85.03 347 P P 16 51 23.6 +0.7
comp=Z,9.2nm,0.7s,baz=4.8,slow=5.3,SNR=41

ESDC pP pP 16 52 04.8 +0.4
comp=Z,4.7nm,0.6s,baz=1.9,slow=4.7,SNR=6.6

ESDC PKKPbc PKKPbc 17 09 28.1 +1.9
comp=Z,0.2nm,0.3s,baz=217,slow=1.1,SNR=4.7

PCAS Casmilo, Conde 85.15 351 *e*P P 16 51 23.8 +0.4

PCAS *e*pP pP 16 52 07.3 +2.3

PCBR Castelo Branco 85.26 350 *e*P P 16 51 24.5 +0.5
comp=Z,35nm,1.2s

PCBR *e*pP pP 16 52 08.1 +2.6

PTOM Tomar 85.57 351 *e*P P 16 51 27.9 +2.4

PMTG Montargil 86.10 351 *e*P P 16 51 28.0 -0.1

PESTR Estremoz 86.23 350 *e*P P 16 51 29.1 +0.3
comp=Z,25nm,1.9s

KEST Kesra 86.45 336 P P 16 51 30.2 +0.2
comp=Z,19nm,0.9s,baz=11,slow=1.9,SNR=10.0

KEST LR LR 17 35 06.0
comp=Z,126nm,20.7s,baz=195,slow=39

EVO Evora 86.61 350 *e*P P 16 51 30.8 +0.2

PBEJ Beja 87.09 350 *e*P P 16 51 33.6 +0.6
comp=Z,28nm,1.8s

PCVE Castro Verde 87.50 350 *e*P P 16 51 35.0 +0.1

STKA Stephens Creek 87.56 195 P P 16 51 35.7 +0.8

STKA pmax pmax
comp=Z,10.0nm,1.4s

STKA Stephens Creek 87.56 195 P P 16 51 35.8 +0.8
comp=Z,4.7nm,0.4s,baz=351,slow=7.2,SNR=22

STKA Stephens Creek 87.56 195 P P 16 51 35.7 +0.8

PVAQ Vaqueiros 87.70 350 *e*P P 16 51 36.1 +0.3

PBDV Barranco-do-Ve 87.88 350 *e*P P 16 51 37.1 +0.4

TBI Tubuai 89.04 135 *e*S S 17 02 19.7 +3.7
comp=Z,139nm,30.2s

TBI	**Tubuai**		**89.04**	**135**	*e*LR		LR	17 20 24.5	
	comp=Z,117nm,25.8s								
FORT	**Forrest**		**89.32**	**207**	P		**P**	**16 51 43.6**	**+0.3**
MORW	**Morawa**		**91.43**	**217**	P		**P**	**16 51 52.6**	**-0.5**
TORD	**Torodi Ar. Bea**		**109.95**	**337**	PKiKP		**PKiKP**	**16 57 17.8**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=0.7,slow=2.3,SNR=11								
TORD					PKKPbc		**PKKPbc**	**17 08 19.6**	**+1.5**
	comp=Z,1.8nm,0.6s,baz=166,slow=3.1,SNR=10.0								
DBIC	**Dimbokro**		**117.57**	**343**	PKP		**PKPdf**	**16 57 32.4**	**-0.1**
	comp=Z,9.5nm,0.6s,baz=1.0,slow=2.3,SNR=21								
DBIC					PKKPbc		**PKKPbc**	**17 07 54.1**	**+1.6**
	comp=Z,2.0nm,0.6s,baz=150,slow=3.3,SNR=4.5								
TIC	**Toumodi**		**117.62**	**343**	*e*PKiKP		**PKPdf**	**16 57 32.5**	**-0.1**
	comp=Z,7.0nm,0.3s								
KIC	**Kosan Boka**		**117.85**	**342**	*e*PKiKP		**PKPdf**	**16 57 32.9**	**-0.1**
	comp=Z,23nm,0.8s								
LIC	**Lamto**		**118.03**	**343**	*e*PKiKP		**PKPdf**	**16 57 33.2**	**-0.2**
	comp=Z,25nm,0.7s								
LPAZ	**La Paz**		**126.99**	**63**	PKP		**PKiKP**	**16 57 51.4**	**-0.2**
	comp=Z,5.8nm,0.7s,baz=298,slow=3.3,SNR=16								
RCBR	**Riachuelo**		**129.74**	**20**	PKP		**PKiKP**	**16 57 56.3**	**-0.3**
	comp=Z,8.5nm,0.7s,baz=359,slow=3.2,SNR=5.1								
MATP	**Matopo**		**129.90**	**293**	SKPbc		SKPab	17 01 02.5	+0.1
	comp=Z,2.8nm,0.6s,baz=86,slow=4.7,SNR=6.9								
SIV	**San Ignacio**		**130.27**	**55**	PKP		**PKPdf**	**16 57 57.0**	**+0.3**
	comp=Z,8.3nm,0.8s,baz=52,slow=0.5,SNR=41								
SIV					SKPbc		**SKPab**	**17 01 03.4**	**-0.5**
	comp=Z,6.2nm,0.7s,baz=305,slow=3.0,SNR=14								
LVC	**Limon Verde**		**131.78**	**68**	PKP		**PKiKP**	**16 58 00.9**	**+0.1**
	comp=Z,1.3nm,0.4s,baz=305,slow=3.5,SNR=3.3								
LVC					SKPbc		**SKPbc**	**17 01 10.0**	**+0.3**
	comp=Z,2.9nm,0.8s,baz=269,slow=1.2,SNR=8.2								
VNDA	**Vanda**		**131.89**	**179**	PKP		**PKiKP**	**16 57 59.0**	**+0.1**
	comp=Z,6.1nm,0.7s,baz=318,slow=4.5,SNR=11								
TSUM	**Tsumeb**		**134.40**	**306**	SKPbc		**SKPbc**	**17 01 18.3**	**0.0**
	comp=Z,2.4nm,0.6s,baz=126,slow=20,SNR=5.3								
LBTB	**Lobatse**		**135.17**	**292**	PKP		**PKiKP**	**16 58 06.8**	**-0.5**
	comp=Z,10nm,0.6s								
LBTB					SKPbc		**SKPbc**	**17 01 22.1**	**+1.5**
	comp=Z,10nm,0.7s,baz=43,slow=2.0,SNR=12								
BDFB	**Brasilia**		**135.56**	**40**	PKP		**PKiKP**	**16 58 07.6**	**-0.7**
	comp=Z,5.4nm,0.7s,baz=227,slow=3.8,SNR=6.8								
BOSA	**Boshof**		**138.20**	**290**	PKhKP		PKPpre	16 58 02.8	
	comp=Z,2.1nm,0.5s,baz=19,slow=3.0,SNR=11								
BOSA					PKP		**PKPdf**	**16 58 11.2**	**0.0**
	comp=Z,6.9nm,0.5s,baz=45,slow=3.1,SNR=14								
BOSA					SKPbc		**SKPbc**	**17 01 31.1**	**+1.5**
	comp=Z,3.8nm,0.7s,baz=16,slow=2.5,SNR=6.2								
CFA	**Coronel Fontan**		**139.18**	**76**	PKhKP		PKPpre	16 58 03.5	
	comp=Z,4.0nm,0.5s,baz=272,slow=1.3,SNR=11								
CFA					PKP		**PKPdf**	**16 58 12.1**	**-0.8**
	comp=Z,6.4nm,0.6s,baz=268,slow=2.4,SNR=8.2								
CPUP	**Villa Florida**		**140.86**	**59**	PKP		**PKPdf**	**16 58 16.2**	**+0.3**
	comp=Z,4.3nm,0.7s,baz=170,slow=2.2,SNR=6.2								
MAW	**Mawson**		**141.07**	**217**	PKhKP		PKPpre	16 58 09.1	
	comp=Z,6.5nm,0.6s,baz=152,slow=6.0,SNR=12								
SUR	**Sutherland**		**143.53**	**291**	PKP		PKPbc	16 58 19.2	+0.5
	comp=Z,14nm,0.7s,baz=127,slow=3.8,SNR=28								
PLCA	**Paso Flores**		**144.24**	**88**	PKiKP		**PKPdf**	**16 58 21.5**	**-0.2**
PLCA	**Paso Flores**		**144.24**	**88**	PKP		**PKPab**	**16 58 20.2**	**+0.2**
	comp=Z,8.7nm,0.7s,baz=327,slow=4.4,SNR=19								
PLCA	**Paso Flores**		**144.24**	**88**			**PKPdf**	**16 58 21.5**	**-0.2**
QSPA	**South Pole Qui**		**144.38**	**180**	PKP		**PKPab**	**16 58 19.6**	**-0.2**
	comp=Z,106nm,0.5s,baz=305,slow=0.6,SNR=25								
SYO	**Syowa Base**		**149.77**	**218**	‖P		**PKPbc**	**16 58 33.6**	**-1.2**
SYO	**Syowa Base**		**149.77**	**218**	‖P		**PKPab**	**16 58 39.8**	**-1.1**
PMSA	**Palmer Station**		**156.22**	**133**	PKPbc		PKPbc	16 58 49.5	
	comp=Z,8.6nm,0.6s,baz=198,slow=3.1,SNR=4.6								
PMSA					PKPab		**PKPab**	**16 59 09.0**	**+0.7**
	comp=Z,11nm,0.6s,baz=122,slow=4.2,SNR=4.6								
SNAA	**Sanae**		**161.31**	**197**	PKPab		**PKPab**	**16 59 30.1**	**-0.3**
	comp=Z,5.7nm,0.5s,baz=126,slow=3.3,SNR=10								

*IDC **31** 16:54:18.0±1.3, 55.79S×27.39W, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.8/31, mbtmp4.2/4, Error ellipse: s-maj=65.7km s-min=31.4km az=86.0*

ISC 31 16:54:19.3±1.4, 55.8S±0.2×27.5W±0.4, h10km, n10, σ1§25/10, mb4.2/3, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**17.06**	**158**	P	**P**	**16 58 20.4**	**+1.1**
VNA3	**Neumayer Olymp**	**17.25**	**161**	P	**P**	**16 58 21.7**	**+0.2**
VNA2	**Neumayer--Watz**	**17.46**	**158**	P	**P**	**16 58 22.5**	**-1.2**
	baz=320,slow=15						
SNAA	**Sanae**	**19.01**	**156**	P	**P**	**16 58 38.8**	**-2.0**
MAW	**Mawson**	**40.42**	**144**	P	**P**	**17 01 57.5**	**+0.5**
	1.5nm,0.3s,baz=150,slow=9.4,SNR=6.7						
VNDA	**Vanda**	**46.80**	**183**	P	**P**	**17 02 48.9**	**+0.7**
	5.8nm,1.1s,baz=201,slow=6.2,SNR=1.4						
TORD	**Torodi Ar. Bea**	**72.93**	**30**	P	**P**	**17 05 49.3**	**+0.8**
	0.9nm,0.5s,baz=205,slow=6.1,SNR=4.4						
ASAR	**Alice Springs**	**99.25**	**163**	P	**Pdif**	**17 08 01.6**	**+0.3**
	0.2nm,0.7s,baz=194,slow=4.8,SNR=1.6						
ILAR	**Eielson Array**	**149.85**	**312**	PKPbc	**PKiKP**	**17 14 08.1**	**-0.8**
	0.5nm,0.8s,baz=105,slow=0.4,SNR=5.2						
SONM	**Songino Array**	**150.66**	**86**	PKPbc	**PKPbc**	**17 14 09.8**	**-1.4**
	0.6nm,0.5s,baz=236,slow=4.3,SNR=5.2						

*AEIC **31** 17:11:06.0±1.6, 53.16N±0.04×166.04W±0.05, h26km±7km, ML3.1/18, Error ellipse: s-maj=6.5km s-min=3.8km az=152.0*

*NEIC **31** 17:11:06.5±1.6, 53.19N±0.05×166.02W±0.07, h42km±38km, Error ellipse: s-maj=8.1km s-min=5.7km az=153.0*

*IDC **31** 17:12:05.5±6.9, 53.29N×152.74W, h0km, mb3.1/3, mb1 3.5/5, mb1mx3.2/48, mbtmp3.1/5, ML2.5/2, Error ellipse: s-maj=133.2km s-min=28.0km az=70.0*

ISC 31 17:11:05.6±2.9, 53.16N±0.09×165.96W±0.07, h25km±22km, n34, σ1§56/38, mb3.1/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UNV	**Unalaska Valle**	**0.76**	**335**		**Pn**	**17 11 19.7**	**-1.0**
UNV					**Sb**	**17 11 30.5**	**+0.4**
MREP	**Makushin Rep't**	**0.81**	**325**		**Pn**	**17 11 20.7**	**-0.7**
MSW	**Makushin Switc**	**0.90**	**327**		**Pn**	**17 11 22.2**	**-0.6**
MSW					**Sn**	**17 11 33.8**	**-1.2**
MTBL	**Makushin Table**	**0.92**	**333**		**Pn**	**17 11 22.7**	**-0.4**
AKMO	**Akutan Morgan**	**0.94**	**358**		**Pn**	**17 11 22.6**	**-0.7**
AKMO					**Sn**	**17 11 34.5**	**-1.3**
MCIR	**Makushin Cirqu**	**0.97**	**325**		**Pn**	**17 11 23.5**	**-0.2**
AKRB	**Akutan Reef Bi**	**0.98**	**356**		**Pn**	**17 11 23.3**	**-0.5**
AKRB					**Sn**	**17 11 35.8**	**-1.0**
AKUT	**Akutan**	**0.99**	**6**		**Pn**	**17 11 23.2**	**-0.7**
OKFG	**Magazine Ridge**	**1.20**	**283**		**Pn**	**17 11 26.0**	**-0.8**
OKFG					**Sn**	**17 11 40.2**	**-2.1**
OKSP	**Okmok Steeple**	**1.40**	**275**		**Pn**	**17 11 28.3**	**-1.4**
WEBT	**Westdahl Beart**	**1.60**	**26**		**Pn**	**17 11 33.2**	**+0.8**
NIKH	**Nikolski High**	**1.76**	**265**		**Pn**	**17 11 34.8**	**+0.3**
SSBA	**Shishaldin**	**1.95**	**33**		**Pn**	**17 11 38.1**	**+0.9**
FALS	**False Pass**	**2.27**	**40**		**Pn**	**17 11 41.4**	**-0.1**
SDPT	**Sand Point**	**3.90**	**53**	Pn	**Pn**	**17 12 04.6**	**+0.8**
CNBA	**Chernabura Isl**	**4.11**	**64**	Pn	**Pn**	**17 12 04.8**	**-2.0**
GSTR	**Great Sitkin T**	**6.24**	**264**	Pn	**Pn**	**17 12 37.4**	**+1.3**
CHIR	**Chirikof Islan**	**6.59**	**62**	Pn	**Pn**	**17 12 40.4**	**-0.4**
ADK	**Adak**	**6.67**	**263**	Pn	**Pn**	**17 12 45.1**	**+3.2**
SII	**Sitkinak Islan**	**7.60**	**59**	Pn	**Pn**	**17 12 55.3**	**+0.6**
OHAK	**Old Harbor**	**8.31**	**56**	Pn	**Pn**	**17 13 04.0**	**-0.4**
KDAK	**Kodiak Island**	**8.89**	**53**	Pn	**Pn**	**17 13 11.6**	**-0.8**
	0.3nm,0.3s,baz=188,slow=3.7,SNR=11						
KDAK	**Kodiak Island**	**8.89**	**53**	Pn	**Pn**	**17 13 12.9**	**+0.5**
SVW2	**Sparrevohn**	**9.74**	**31**	Pn	**Pn**	**17 13 22.3**	**-1.7**
RSO	**Redoubt South**	**10.28**	**39**	Pn	**Pn**	**17 13 28.8**	**-2.8**
CNPM	**China Poot**	**10.35**	**46**	Pn	**Pn**	**17 13 32.2**	**-0.2**
BRLK	**Bradley Lake**	**10.63**	**46**	Pn	**Pn**	**17 13 35.2**	**-1.0**
SEW	**Seward**	**11.43**	**46**	Pn	**Pn**	**17 13 44.0**	**-3.0**
SUA	**Susitna One**	**11.67**	**39**	Pn	**Pn**	**17 13 49.8**	**-0.7**
HIN	**Hinchinbrook I**	**12.86**	**48**	Pn	**Pn**	**17 14 04.9**	**-1.8**
ILAR	**Eielson Array**	**15.15**	**32**	Pn	P	17 14 50.8	+8.1
	0.0nm,0.3s,baz=214,slow=10,SNR=4.1						
YKA	**Yellowknife Ar**	**28.15**	**50**	P	**P**	**17 16 59.5**	**+4.1**
	0.1nm,0.3s,baz=270,slow=9.4,SNR=4.3						
NVAR	**Mina Array Bea**	**35.64**	**95**	P	**P**	**17 17 59.1**	**-2.5**
	0.2nm,0.7s,baz=299,slow=9.2,SNR=1.9						
TXAR	**Lajitas Array**	**50.69**	**92**	P	**P**	**17 20 03.8**	**+0.7**
	0.4nm,0.5s,baz=314,slow=5.3,SNR=6.9						

*TRN **31** 17:30:17.4, 11.48N×61.78W, h77km, MD3.2*
*FUNV **31** 17:30:18.6, 11.39N×61.65W, h29km, MW3.3*

ISC 31 17:30:16.0±1.3, 11.44N±0.03×61.71W±0.04, h91km±9km, n34, σ1§52/58, 1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRGR	**Grenville**	**0.69**	**5**	*e*P	**Pn**	**17 30 32.2**	**-0.4**
GRGR				*e*S	**Sn**	**17 30 44.4**	**-0.5**
GRGR	**Grenville**	**0.69**	**5**	‖*e*P	**Pn**	**17 30 32.2**	**-0.4**
GRGR				*e*S	**Sn**	**17 30 43.5**	**-1.4**
GRHS	**Sauteurs**	**0.78**	**5**	*e*P	**Pn**	**17 30 33.2**	**-0.3**
GRHS				*e*S	**Sn**	**17 30 45.4**	**-1.1**
TRN	**Trinidad (W)**	**0.84**	**159**	*e*P	**Pn**	**17 30 35.5**	**+1.4**
TRN				*e*S	**Sn**	**17 30 48.2**	**+0.6**
TRN	**Trinidad (W)**	**0.84**	**159**	*e*P	**Pn**	**17 30 35.0**	**+0.9**
TRN				*e*S	**Sn**	**17 30 45.8**	**-1.8**
GRSS	**Sisters**	**0.86**	**7**	*e*P	**Pn**	**17 30 34.3**	**0.0**
GRSS				*e*S	**Sn**	**17 30 47.0**	**-0.8**
GUIV	**Guiria**	**0.94**	**212**	*e*P	**Pn**	**17 30 35.3**	**+0.2**
GUIV				*e*S	**Sn**	**17 30 48.6**	**-0.8**
GUIV	**Guiria**	**0.94**	**212**	*e*P	**Pn**	**17 30 35.1**	**+0.1**
GUIV				*e*S	**Sn**	**17 30 48.1**	**-1.3**
TBH	**Brigand Hill**	**1.14**	**146**	*e*P	**Pn**	**17 30 39.6**	**+2.1**
TBH				*e*S	**Sn**	**17 30 55.2**	**+1.5**
TPP	**Pointe-a-Pierr**	**1.15**	**167**	*e*P	**Pn**	**17 30 38.5**	**+1.0**
TPP				*e*S	**Sn**	**17 30 54.4**	**+0.7**
TOSP	**Speyside**	**1.16**	**97**	*e*P	**Pn**	**17 30 38.9**	**+1.2**
TOSP				*e*S	**Sn**	**17 30 55.8**	**+1.8**
TOSP	**Speyside**	**1.16**	**97**	*e*P	**Pn**	**17 30 38.0**	**+0.3**
TOSP				*e*S	**Sn**	**17 30 51.9**	**-2.1**
CRUV	**Carupano**	**1.68**	**243**	*e*P	**Pn**	**17 30 44.9**	**+0.8**
CRUV				*e*S	**Sn**	**17 31 06.0**	**+0.6**
GUNV	**Guanoco**	**1.75**	**224**	*e*P	**Pn**	**17 30 46.6**	**+1.5**
GUNV				*e*S	**Sn**	**17 31 07.6**	**+0.4**
SVB	**Belmont**	**1.88**	**14**	*e*P	**Pn**	**17 30 47.0**	**+0.3**
SVB				*e*S	**Sn**	**17 31 10.6**	**+0.6**
SVCV	**St. Vincent, C**	**1.90**	**17**	*e*P	**Pn**	**17 30 47.6**	**+0.6**
SVCV				*e*S	**Sn**	**17 31 10.4**	**-0.2**
SLBI	**Saint Lucia, B**	**2.67**	**16**	*e*P	**Pn**	**17 30 57.8**	**+0.7**
SLBI				*e*S	**Sn**	**17 31 27.7**	**-0.9**
ORIV	**Oritupano**	**2.89**	**215**	*e*P	**Pn**	**17 31 02.0**	**+1.9**
ORIV				*e*S	**Sn**	**17 31 34.1**	**+0.1**
ORIV	**Oritupano**	**2.89**	**215**	*e*P	**Pn**	**17 31 01.1**	**+1.1**
ORIV				*e*S	**Sn**	**17 31 33.8**	**-0.2**
BIM	**Bigot**	**3.12**	**11**	*e*P	**Pn**	**17 31 04.5**	**+1.2**
PCRV	**Puerto La Cruz**	**3.13**	**247**	*e*P	**Pn**	**17 31 05.1**	**+1.6**
PCRV				*e*S	**Sn**	**17 31 39.9**	**-0.2**
TRMF	**Trois Ilets**	**3.14**	**12**	*e*P	**Pn**	**17 31 04.6**	**+1.1**
ZAM	**Aeronautique**	**3.18**	**12**	*e*P	**Pn**	**17 31 05.0**	**+1.0**
MVM	**Montagne Vaucl**	**3.20**	**14**	*e*P	**Pn**	**17 31 05.5**	**+1.2**
LPMF	**Morne Lapointe**	**3.20**	**13**	*e*P	**Pn**	**17 31 05.2**	**+0.9**
FDF	**Fort de France**	**3.32**	**9**	*e*P	**Pn**	**17 31 07.4**	**+1.4**
FDF				*e*S	**Sn**	**17 31 42.7**	**-1.8**
RIOV	**Rio Grande**	**3.35**	**182**	*e*P	**Pn**	**17 31 07.3**	**+0.9**
RIOV				*e*S	**Sn**	**17 31 42.2**	**-2.8**
PMM	**Morne Lenard**	**3.36**	**9**	*e*P	**Pn**	**17 31 08.1**	**+1.6**
GBMF	**Grand Be**	**3.38**	**9**	*e*P	**Pn**	**17 31 08.3**	**+1.5**
PCM	**Pelee Case Pet**	**3.39**	**8**	*e*P	**Pn**	**17 31 07.9**	**+1.1**
BAMF	**Morne Balai**	**3.40**	**9**	*e*P	**Pn**	**17 31 09.1**	**+2.1**
PRGV	**PARIAGUAN**	**3.93**	**228**	*e*S	**Sn**	**17 31 58.3**	**-0.9**
LUEV	**Luepa**	**5.57**	**177**	*e*P	**Pn**	**17 31 36.0**	**-0.6**
LUEV				*e*S	**Sn**	**17 32 33.4**	**-6.0**
MAPV	**Macapo**	**6.82**	**257**	*e*P	**Pn**	**17 31 55.4**	**+1.9**
MAPV				*e*S	**Sn**	**17 33 06.5**	**-3.2**

*TIR **31** 17:31:10.2, 41.96N×20.17E, h13km, Md3.0/6*
*BEO **31** 17:31:10.7±0.7, 40.95N×20.14E, h17km±3km, ML2.7/11*
*ATH **31** 17:31:10.6, 40.97N×20.10E, h33km±4km, ML2.7/6, Error ellipse: s-maj=4.8km s-min=1.4km az=14.0*
*PDG **31** 17:31:11.3±0.3, 41.02N×20.10E, h24km, ML2.9/14, Error ellipse: s-maj=0.8km s-min=1.0km az=0.0*
*THE **31** 17:31:11.4, 40.98N×20.13E, h10km±1km, ML2.6/3, Error ellipse: s-maj=1.9km s-min=1.0km az=341.0*

ISC 31 17:31:10.4±1.1, 40.97N±0.02×20.08E±0.02, h18km±6km, n86, σ0§87/131, 7C-4D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.41**	**337**	P	**Pb**	**17 31 19.8**	**+0.6**
TIR	**Tirane**	**0.41**	**337**	*e*Pg	**Pb**	**17 31 19.9**	**+0.8**
TIR				*e*Sg	**Sn**	**17 31 28.0**	**-0.6**
TIR	**Tirane**	**0.41**	**337**	*i* PG	**Pb**	**17 31 19.5**	**+0.4**
TIR				*i* SG	**Sb**	**17 31 26.2**	**+1.2**
TIR	**Tirane**	**0.41**	**337**	P	**Pb**	**17 31 19.6**	**+0.5**
TIR				S	**Sn**	**17 31 27.6**	**-1.0**
TIR				AML	AML	17 31 30.4	
	comp=N,6636μm,0.6s						
TIR				AML	AML	17 31 31.1	
	comp=E,4133μm,0.6s						
TIR	**Tirane**	**0.41**	**337**	⇑P	**Pb**	**17 31 19.7**	**+0.6**
TIR				⇓S	**Sn**	**17 31 27.7**	**-0.9**
OHR	**Ohrid**	**0.56**	**75**	*i* Pg	**Pb**	**17 31 21.6**	**+0.1**
OHR				*e*Sg	**Sb**	**17 31 30.3**	**+0.9**
VLO	**Vlora**	**0.67**	**222**	P	**Pn**	**17 31 25.0**	**0.0**
TPE	**Tepelena**	**0.68**	**185**	P	**Pg**	**17 31 24.3**	**+0.6**
PHP	**Peshkopia**	**0.76**	**21**	P	**Pg**	**17 31 25.1**	**-0.2**
PHP	**Peshkopia**	**0.76**	**21**	*i* PG	**Pb**	**17 31 25.0**	**-0.2**
PHP				*i* SG	**Sn**	**17 31 36.3**	**-1.1**
NEST	**Nestorio**	**0.92**	**127**	P	**Pb**	**17 31 27.8**	**-0.1**
NEST				S	**Sn**	**17 31 42.2**	**+0.8**
	comp=E,252nm,0.5s						
NEST	**Nestorio**	**0.92**	**127**	P	**Pb**	**17 31 27.6**	**-0.3**
NEST				S	**Sn**	**17 31 41.1**	**-0.3**
NEST				AML	AML	17 31 46.3	
	comp=E,508μm,0.5s						
NEST				AML	AML	17 31 47.3	
	comp=N,457μm,0.5s						
FNA	**Florina**	**1.00**	**100**	P	**Pb**	**17 31 29.1**	**-0.1**
FNA				S	**Sn**	**17 31 44.0**	**+0.7**
	comp=N,618nm,0.6s						
FNA	**Florina**	**1.00**	**100**	*i* PG	**Pb**	**17 31 28.9**	**-0.3**
FNA				*i* SG	**Sg**	**17 31 42.3**	**-0.6**
FNA	**Florina**	**1.00**	**100**	P	**Pb**	**17 31 29.1**	**-0.1**
FNA				S	**Sn**	**17 31 42.8**	**-0.5**
FNA				AML	AML	17 31 44.7	
	comp=N,1421μm,0.5s						
FNA				AML	AML	17 31 47.4	
	comp=E,1010μm,0.5s						
PUK	**Puka**	**1.08**	**353**	*i* PG	**Pg**	**17 31 31.4**	**+0.1**
PUK				*i* SG	**Sg**	**17 31 47.5**	**+2.0**
SRN	**Sarande**	**1.09**	**183**	P	**Pg**	**17 31 31.4**	**-0.1**
SRN	**Sarande**	**1.09**	**183**	*i* SG	**Pg**	**17 31 31.4**	**-0.1**
PENT	**Pentalofos**	**1.12**	**134**	P	**Pg**	**17 31 31.8**	**-0.3**
PENT	**Pentalofos**	**1.12**	**134**	P	**Pn**	**17 31 31.4**	**+0.1**
ULC	**Ulcinj**	**1.17**	**328**	*e*Pg	**Pb**	**17 31 32.6**	**+0.5**
ULC				*e*Sg	**Sg**	**17 31 50.0**	**+1.6**
KASA	**Kassiopi**	**1.23**	**185**	P	**Pg**	**17 31 34.0**	**-0.2**
KASA				S	**Sn**	**17 31 49.1**	**+0.3**
DRME	**Dracevica, Mon**	**1.39**	**331**	*e*Pg	**Pb**	**17 31 35.7**	**-0.1**
DRME				*e*Sg	**Sg**	**17 31 55.1**	**-0.1**
BCI	**Bajram Curri**	**1.39**	**360**	*i* PN	**Pg**	**17 31 36.9**	**-0.4**
BCI				*i* SN	**Sg**	**17 31 57.5**	**+2.1**
KPRO	**Kipourio**	**1.41**	**136**	P	**Pb**	**17 31 36.5**	**+0.3**
KPRO	**Kipourio**	**1.41**	**136**	P	**Pb**	**17 31 36.3**	**+0.1**
KPRO				S	**Sb**	**17 31 54.3**	**+0.4**
KPRO				AML	AML	17 31 59.5	
	comp=N,315μm,0.6s						
KPRO				AML	AML	17 32 04.0	
	comp=E,350μm,0.4s						
SKO	**Skopje**	**1.43**	**45**	*e*Pn	**Pb**	**17 31 36.8**	**+0.3**
SKO				*e*Sg	**Sg**	**17 31 55.1**	**-1.4**
JAN	**Janina**	**1.44**	**156**	P	**Pb**	**17 31 37.1**	**+0.4**
JAN				AML	AML	17 32 05.1	
	comp=N,427μm,0.6s						
JAN				AML	AML	17 32 12.8	
	comp=E,479μm,0.7s						
KZN	**Kozani**	**1.45**	**117**	P	**Pb**	**17 31 37.2**	**+0.3**
KZN				S	**Sg**	**17 31 56.0**	**-1.2**
	comp=E,160nm,0.5s						
KZN	**Kozani**	**1.45**	**117**	P	**Pb**	**17 31 37.2**	**+0.3**
KZN				AML	AML	17 32 00.5	
	comp=N,294μm,0.5s						
KZN				AML	AML	17 32 04.2	
	comp=E,454μm,0.5s						
PDG	**Podgorica**	**1.58**	**337**	*e*Pg	**Pb**	**17 31 38.5**	**-0.6**
PDG				*e*Sg	**Sg**	**17 32 02.5**	**+1.1**
PDG	**Podgorica**	**1.58**	**337**	‖P	**Pb**	**17 31 38.7**	**-0.4**
PDG	**Podgorica**	**1.58**	**337**	‖S	**Sg**	**17 32 02.5**	**+1.1**
TTG	**Podgorica**	**1.58**	**337**	*e*Pg	**Pn**	**17 31 38.1**	**+0.6**
TTG				*e*Sg	**Sb**	**17 31 59.7**	**+1.0**
BUM	**Brajici-Budva**	**1.60**	**327**	*e*Pg	**Pn**	**17 31 38.4**	**+0.6**
BUM				*e*Sg	**Sb**	**17 32 00.3**	**+1.0**
PVY	**Plav**	**1.62**	**357**	*e*Pn	**Pn**	**17 31 38.6**	**+0.4**
PVY				*e*Sn	**Sb**	**17 32 00.5**	**+0.4**
STIP	**Stip**	**1.74**	**65**	*e*Pn	**Pg**	**17 31 42.8**	**-1.1**
GRG	**Griva**	**1.76**	**90**	P	**Pn**	**17 31 40.2**	**+0.3**
CEME	**Cevo**	**1.80**	**331**	*e*Pn	**Pn**	**17 31 40.9**	**+0.3**
CEME				*e*Sn	**Sb**	**17 32 04.5**	**-0.5**
HCY	**Herceg Novi**	**1.89**	**322**	*e*Pn	**Pn**	**17 31 41.6**	**-0.2**
HCY				*e*Sn	**Sb**	**17 32 08.1**	**+0.4**
IVA	**Berane**	**1.90**	**356**	*e*Pn	**Pn**	**17 31 43.1**	**+1.1**
IVA				*e*Sn	**Sb**	**17 32 07.2**	**-0.9**
VAY	**Valandovo**	**1.91**	**79**	*e*Pn	**Pb**	**17 31 43.2**	**-1.5**
VAY				*e*Sg	**Sb**	**17 32 09.3**	**+1.1**
VAY	**Valandovo**	**1.91**	**79**	*e*Pn	**Pn**	**17 31 42.3**	**+0.3**
KOME	**Kolasin**	**1.92**	**348**	*e*Pn	**Pn**	**17 31 43.1**	**+0.8**
KOME				*e*Sn	**Sb**	**17 32 07.8**	**-0.9**
NKME	**Niksic**	**1.98**	**335**	*e*Pn	**Pn**	**17 31 43.7**	**+0.6**
NKME				*e*Sn	**Sb**	**17 32 09.3**	**-1.0**
NKY	**Niksic**	**2.01**	**337**	*e*Pn	**Pn**	**17 31 44.3**	**+0.8**
NKY				*e*Sn	**Sb**	**17 32 09.9**	**-1.3**
LIT	**Litokhoron**	**2.03**	**115**	P	**Pn**	**17 31 44.6**	**+0.9**
THL	**Klokotos Trika**	**2.04**	**133**	P	**Pn**	**17 31 44.9**	**+1.1**
KNT	**Kendrikon**	**2.14**	**84**	P	**Pn**	**17 31 45.3**	**+0.1**
TREB	**Trebinje**	**2.17**	**324**	*e*Pn	**Pn**	**17 31 45.7**	**+0.1**
TREB				*e*Sn	**Sn**	**17 32 14.0**	**+1.9**
TSLK	**Tsoukalades, L**	**2.19**	**168**	P	**Pn**	**17 31 46.0**	**+0.1**
LKD2	**Lefkada island**	**2.23**	**168**	P	**Pn**	**17 31 46.4**	**0.0**
DBRK	**Dubrovnik**	**2.23**	**320**	*e*Pn	**Pn**	**17 31 45.6**	**-0.8**
DBRK				Sn	**Sg**	**17 32 20.8**	**-1.2**
BRY	**Bratogost**	**2.24**	**330**	*e*Pn	**Pn**	**17 31 47.5**	**+0.7**
BRY				*e*Sn	**Sn**	**17 32 15.9**	**+1.8**
BARS	**Barje**	**2.25**	**35**	*e*Pn	**Pg**	**17 32 02.9**	**+8.6**
SJES	**Sjenica**	**2.29**	**358**	*e*Pn	**Pn**	**17 31 48.4**	**+1.0**
SJES				*e*Sn	**Sn**	**17 32 16.7**	**+1.6**
BOSS	**Bosilegrad**	**2.35**	**49**	*e*Pn	**Pn**	**17 31 48.8**	**+0.6**
BOSS				*e*Sn	**Sn**	**17 32 17.4**	**+0.8**
SELS	**Selova**	**2.37**	**19**	*e*Pn	**Pn**	**17 31 49.1**	**+0.6**
SELS				*e*Sn	**Sn**	**17 32 17.7**	**+0.6**
UPM	**Unac-Piva**	**2.39**	**339**	*e*Pn	**Pn**	**17 31 49.6**	**+0.7**
UPM				*e*Sn

ASAR	**Alice Springs**	**32.80**	**188**	P	**P**	**18 11 53.8**	**-0.4**
CMAR	**Chiang Mai Arr**	**39.41**	**288**	P	**P**	**18 12 49.2**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=86,slow=7.5,SNR=4.5						
CMAR				LR	LR	18 27 11.0	
	comp=Z,12nm,21.5s,baz=245,slow=33						
BBOO	**Buckleboo**	**41.67**	**183**	P	**P**	**18 13 09.3**	**-0.1**
BBOO				IAmb	IAmb	18 13 15.8	
	comp=Z,30nm,1.6s						
ULN	**Ulaanbaatar**	**46.91**	**331**	P	**P**	**18 13 51.6**	**+0.3**
ULN				IAmb	IAmb	18 13 52.9	
	comp=Z,2.1nm,0.9s						
SONM	**Songino Array**	**47.20**	**331**	P	**P**	**18 13 54.2**	**+0.7**
	comp=Z,1.0nm,0.9s,baz=145,slow=7.3,SNR=6.9						
SONM	**Songino Array**	**47.20**	**331**	P	**P**	**18 13 53.9**	**+0.3**
MK31	**Makanchi Array**	**60.56**	**319**	P	**P**	**18 15 31.4**	**+0.3**
MK31				IAmb	IAmb	18 15 32.2	
	comp=Z,1.5nm,0.9s						
MKAR	**Makanchi Array**	**60.56**	**319**	P	**P**	**18 15 30.8**	**-0.3**
	comp=Z,1.4nm,0.8s,baz=105,slow=9.0,SNR=16						
MKAR	**Makanchi Array**	**60.56**	**319**	P	**P**	**18 15 31.4**	**+0.3**
NIL	**Nilore**	**64.41**	**303**	P	**P**	**18 15 56.8**	**-0.3**
NIL				IAmb	IAmb	18 15 58.0	
	comp=Z,4.6nm,0.8s						
ILAR	**Eielson Array**	**75.36**	**25**	P	**P**	**18 17 04.0**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=242,slow=6.3,SNR=4.7						
ILAR	**Eielson Array**	**75.36**	**25**	P	**P**	**18 17 03.7**	**0.0**

*NEIC **31** 18:15:33.9±1.9, 11°.87S±0°.09×166°.7E±0°.1, h145km±6km, mb4.8/32, Error ellipse: s-maj=16.5km s-min=12.4km az=82.0*

*IDC **31** 18:15:37.0±5.6, 11°.96S×166°.54E, h170km±51km, mb3.4/8, mb1 3.6/9, mb1mx3.4/34, mbtmp3.9/9, Error ellipse: s-maj=31.5km s-min=28.8km az=169.0*

ISC 31 18:15:34.4±0.6, **11°.88S**±0°.07×**166°.7E**±0°.1, **h150**km, **n53**, σ0§**92**/58, **mb4.7**/23, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SANVU	**Saraoutou**	**3.59**	**171**		**Pn**	**18 16 30.2**	**+0.8**
SANVU				Sn	**Sn**	**18 17 12.2**	**+0.2**
DZM	**Mont Dzumac**	**10.14**	**181**	P	**Pn**	**18 17 58.3**	**+1.9**
	2.8nm,0.3s,baz=319,slow=12,SNR=44						
DZM				S	Sn	18 19 39.2	-10
	0.3nm,0.3s,baz=357,slow=19,SNR=1.1						
DZM	**Mont Dzumac**	**10.14**	**181**		**Pn**	**18 17 58.5**	**+2.1**
DZM					**Sn**	**18 19 47.4**	**-1.3**
NOUC	**Port Laguerre**	**10.18**	**182**	Pn	**Pn**	**18 17 59.2**	**+2.5**
NOUC				Sn	**Sn**	**18 19 47.6**	**-1.8**
EIDS	**Eidsvold**	**19.92**	**225**	P	**P**	**18 19 53.5**	**-1.0**
EIDS				IAmb	IAmb	18 20 18.0	
	comp=Z,55nm,1.8s						
ARMA	**Armidale**	**23.12**	**215**	P	**P**	**18 20 27.8**	**+0.3**
KNTN	**Kanton**	**23.26**	**69**	P	**P**	**18 20 29.1**	**+0.4**
KNTN				IAmb	IAmb	18 20 36.0	
	comp=Z,51nm,1.1s						
URZ	**Urewera**	**27.89**	**162**	P	**P**	**18 21 08.2**	**-1.9**
URZ				IAmb	IAmb	18 21 27.9	
	comp=Z,39nm,1.3s						
BKZ	**Black Stump Fm**	**28.55**	**164**	P	**P**	**18 21 16.5**	**+0.3**
BKZ				IAmb	IAmb	18 21 36.1	
	comp=Z,33nm,1.3s						
QRZ	**Quartz Range**	**29.30**	**171**	P	**P**	**18 21 23.6**	**+0.9**
NNZ	**Nelson**	**29.82**	**170**	P	**P**	**18 21 27.6**	**+0.4**
BFZ	**Birch Farm**	**29.91**	**165**	P	**P**	**18 21 27.7**	**-0.4**
TUWZ	**Tuamarina**	**30.13**	**169**	P	**P**	**18 21 29.4**	**-0.5**
THZ	**Tophouse**	**30.27**	**171**	P	**P**	**18 21 32.4**	**+1.0**
THZ				IAmb	IAmb	18 21 40.7	
	comp=Z,46nm,1.8s						
MSWZ	**Moikau Station**	**30.38**	**167**	P	**P**	**18 21 32.3**	**+0.1**
BSWZ	**Blackbirch Sta**	**30.39**	**169**	P	**P**	**18 21 31.6**	**-0.7**
STKA	**Stephens Creek**	**30.47**	**225**	P	**P**	**18 21 33.0**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=62,slow=10,SNR=3.1						
STKA	**Stephens Creek**	**30.47**	**225**	P	**P**	**18 21 32.9**	**-0.3**
PLWZ	**Palliser**	**30.53**	**167**	P	**P**	**18 21 32.8**	**-0.7**
KHZ	**Kahutara**	**31.01**	**170**	P	**P**	**18 21 38.3**	**+0.5**
LTZ	**Lake Taylor**	**31.18**	**172**	P	**P**	**18 21 39.4**	**+0.1**
LTZ				IAmb	IAmb	18 21 55.7	
	comp=Z,35nm,1.5s						
FOZ	**Fox Glacier**	**31.66**	**176**	P	**P**	**18 21 43.6**	**+0.2**
FOZ				IAmb	IAmb	18 21 45.7	
	comp=Z,25nm,1.2s						
TOO	**Toolangi**	**31.84**	**213**	P	**P**	**18 21 44.4**	**-0.8**
WR0	**Warramunga Arr**	**31.86**	**251**	P	**P**	**18 21 44.5**	**-1.1**
WR0				IAmb	IAmb	18 22 07.3	
	comp=Z,22nm,1.6s						
RPZ	**Rata Peaks**	**31.95**	**174**	P	**P**	**18 21 46.4**	**+0.3**
	comp=Z,2.8nm,0.5s,baz=347,slow=5.9,SNR=1.7						
RPZ	**Rata Peaks**	**31.95**	**174**	P	**P**	**18 21 47.3**	**+1.3**
RPZ				IAmb	IAmb	18 21 49.9	
	comp=Z,34nm,1.8s						
WB0	**Warramunga Arr**	**31.97**	**252**	P	**P**	**18 21 45.3**	**-1.2**
WRA	**Warramunga Arr**	**32.05**	**251**	P	**P**	**18 21 45.9**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=85,slow=8.7,SNR=1.9						
MQZ	**McQueen's Vall**	**32.14**	**172**	P	**P**	**18 21 48.3**	**+0.7**
MQZ				IAmb	IAmb	18 21 49.5	
	comp=Z,9.4nm,0.8s						
LBZ	**Lake Benmore**	**32.54**	**175**	P	**P**	**18 21 50.6**	**-0.5**
LBZ				IAmb	IAmb	18 22 10.5	
	comp=Z,44nm,1.7s						
ASAR	**Alice Springs**	**33.23**	**245**	P	**P**	**18 21 56.1**	**-1.3**
	comp=Z,1.2nm,0.8s,baz=67,slow=10,SNR=19						
ASAR				PcP	**PcP**	**18 24 36.5**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=87,slow=2.4,SNR=9.5						
ASAR	**Alice Springs**	**33.23**	**245**	P	**P**	**18 21 56.9**	**-0.5**
ASAR					**PcP**	**18 24 36.1**	**-0.5**
ODZ	**Otahua Downs**	**33.23**	**175**	P	**P**	**18 21 58.2**	**+1.1**
ODZ				IAmb	IAmb	18 22 00.6	
	comp=Z,29nm,1.3s						
BBOO	**Buckleboo**	**34.93**	**228**	P	**P**	**18 22 11.9**	**-0.1**
FAKI	**Fak Fak**	**35.22**	**282**	P	**P**	**18 22 15.5**	**+0.9**
FITZ	**Fitzroy Crossi**	**40.03**	**256**	P	**P**	**18 22 55.0**	**-0.1**
FITZ				IAmb	IAmb	18 23 22.8	
	comp=Z,22nm,1.4s						
FORT	**Forrest**	**40.31**	**236**	P	**P**	**18 22 57.2**	**0.0**
FORT				IAmb	IAmb	18 23 22.2	
	comp=Z,16nm,0.9s						
PSAC2	**Pilbara Seismi**	**45.65**	**251**	P	**P**	**18 23 39.9**	**-0.4**
PSAC2				IAmb	IAmb	18 23 53.5	
	comp=Z,29nm,1.4s						
PSAD1	**Pilbara Seismi**	**45.71**	**252**	P	**P**	**18 23 40.6**	**-0.2**
PSAD1				IAmb	IAmb	18 24 02.2	
	comp=Z,25nm,1.4s						
PSAA1	**Pilbara Seismi**	**45.71**	**251**	P	**P**	**18 23 40.3**	**-0.5**
PSAD3	**Pilbara Seismi**	**45.77**	**251**	P	**P**	**18 23 40.5**	**-0.7**
PSAD3				IAmb	IAmb	18 24 08.3	
	comp=Z,33nm,1.6s						
HMH	**Humu'ula Sheep**	**48.67**	**50**	P	**P**	**18 24 03.2**	**-0.9**
SDHHI	**Sand Hill**	**48.69**	**51**	P	**P**	**18 24 02.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**73.25**	**293**	P	**P**	**18 26 50.7**	**+0.9**
	comp=Z,0.8nm,0.8s,baz=120,slow=4.3,SNR=6.5						
QSPA	**South Pole Qui**	**78.14**	**180**	P	**P**	**18 27 17.2**	**+0.4**
SONM	**Songino Array**	**79.86**	**324**	P	**P**	**18 27 27.5**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=142,slow=6.3,SNR=6.5						
SONM	**Songino Array**	**79.86**	**324**	P	**P**	**18 27 27.1**	**+0.6**
ILAR	**Eielson Array**	**84.02**	**18**	P	**P**	**18 27 46.9**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=230,slow=6.9,SNR=2.2						
MKAR	**Makanchi Array**	**94.73**	**317**	P	**P**	**18 28 39.2**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=88,slow=7.1,SNR=18						
MKAR	**Makanchi Array**	**94.73**	**317**	P	**P**	**18 28 38.9**	**0.0**
ARCES	**ARCESS Array B**	**117.35**	**346**	PKP	**PKiKP**	**18 34 01.6**	**+0.1**
	comp=Z,4.6nm,1.0s,baz=76,slow=2.2,SNR=9.4						
ARCES	**ARCESS Array B**	**117.35**	**346**		**PKiKP**	**18 34 01.8**	**+0.2**
FINES	**FINESS Array B**	**122.86**	**339**	PKP	**PKiKP**	**18 34 12.0**	**-0.5**
	comp=Z,3.8nm,1.0s,baz=215,slow=9.0,SNR=3.6						

*DJA **31** 18:36:10.9±0.3, 2°.1N±4°.4×12°.6E±°, h10km, M4.4/11, mB4.6/1, mb4.5/4, MLv4.3/11, Mw(mB)3.8/1*

*NEIC **31** 18:36:11.8±2.0, 1°.53N±0°.07×126°.32E±0°.06, h36km±7km, mb4.5/54, Error ellipse: s-maj=10.1km s-min=8.2km az=183.0*

*IDC **31** 18:36:13.1±2.8, 1°.50N×126°.24E, h43km±28km, mb4.0/14, mb1 4.1/17, mb1mx3.9/44, mbtmp4.3/17, ML3.8/3, MS3.4/8, Ms1 3.4/8, ms1mx3.0/39, Error ellipse: s-maj=26.8km s-min=13.0km az=77.0*

*MAN **31** 18:36:48.0, 3°.97N×124°.78E, h26km, mb5.0, ML3.9, MS4.0*

ISC 31 18:36:13.1±0.4, **1°.50N**±0°.04×**126°.30E**±0°.06, **h47**km, **n118**, σ1§**47**/118, **mb4.5**/42, **MS3.3**/8, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.29**	**124**	P	**Pn**	**18 36 33.6**	**-1.2**
TNTI	**Ternate**	**1.29**	**124**		**Pn**	**18 36 33.4**	**-1.4**
LBMI	**Labuha**	**2.44**	**150**	P	**Pn**	**18 36 52.0**	**+1.5**
KMSI	**Cibinong**	**2.49**	**248**	P	**Pn**	**18 36 52.5**	**+1.3**
KMSI				S	**Sn**	**18 37 23.2**	**+2.8**
SANI	**Sanana**	**3.54**	**185**	P	**Pn**	**18 37 06.2**	**+0.6**
LUWI	**Luwuk**	**4.34**	**234**	P	**Pn**	**18 37 18.7**	**+2.2**
LUWI	**Luwuk**	**4.34**	**234**		**Pn**	**18 37 18.2**	**+1.7**
MRSI	**Marisa**	**4.47**	**257**	P	**Pn**	**18 37 18.1**	**-0.3**
DDMP	**Don Marcelino,**	**4.61**	**353**	*eP*	Pn	18 37 14.1	-6.2
DDMP				*eS*	**Sn**	**18 38 12.2**	**-0.4**
GSPH	**General Santos**	**4.75**	**344**	*eP*	**Pn**	**18 37 23.4**	**+1.0**
SKMP	**Bagumbayan, Su**	**5.28**	**341**	*eP*	**Pn**	**18 37 28.4**	**-1.2**
MATI	**Mati**	**5.41**	**360**	*eP*	**Pn**	**18 37 32.8**	**+1.5**
MATI				*eS*	Sn	18 38 21.7	-11
SIJI	**Sorong**	**5.50**	**115**	P	**Pn**	**18 37 33.5**	**+0.9**
	0.9nm,0.3s,baz=206,slow=16,SNR=5.0						
SIJI				LR	LR	18 40 05.5	
	comp=Z,640nm,18.4s,baz=300,slow=42						
BUKP	**Musuan**	**6.45**	**349**	*eP*	**Pn**	**18 37 47.5**	**+1.8**
BUKP				*eS*	**Sn**	**18 39 02.3**	**+4.2**
MPSI	**Mapaga**	**6.50**	**260**	P	**Pn**	**18 37 45.3**	**-1.0**
	0.1nm18nm,0.8s						
PAGZ	**Pagadian**	**6.94**	**335**	*eP*	**Pn**	**18 37 50.5**	**-1.8**
FAKI	**Fak Fak**	**7.39**	**126**	Pn	**Pn**	**18 38 00.3**	**+1.8**
TTSI	**Tana Toraja**	**7.89**	**235**	P	**Pn**	**18 38 07.9**	**+2.5**
	0.1nm30nm,0.7s						
SPSI	**Sidrap Palu**	**8.49**	**230**	P	**Pn**	**18 38 16.6**	**+3.1**
KAPI	**Kappang**	**9.20**	**225**	P	**Pn**	**18 38 24.7**	**+1.4**
	1.3nm,0.3s,baz=74,slow=7.4,SNR=1.8						
KAPI	**Kappang**	**9.20**	**225**	Pn	**Pn**	**18 38 22.9**	**-0.4**
BKB	**Balikpapan**	**9.79**	**254**	Pn	**Pn**	**18 38 27.6**	**-3.8**
KKM	**Kota Kinabalu**	**11.02**	**294**	Pn	**Pn**	**18 38 50.7**	**+2.3**
SOEI	**Soe**	**11.36**	**190**	Pn	**Pn**	**18 38 54.1**	**+1.0**
SBUM	**Sibu**	**14.10**	**274**		**P**	**18 39 35.7**	**-1.1**
MTN	**Manton Dam**	**15.04**	**162**	P	**Pn**	**18 39 44.8**	**+2.1**
MTN				IAmb	IAmb	18 39 56.7	
	comp=Z,72nm,1.4s						
JAGI	**Jajag, Banyuwa**	**15.64**	**231**		**P**	**18 39 54.4**	**+0.4**
JAGI				IAmb	IAmb	18 40 02.0	
	comp=Z,45nm,1.1s						
KSM	**Kuching**	**15.98**	**270**		**P**	**18 39 58.4**	**+0.7**
KNRA	**Kununurra**	**17.24**	**172**	P	**Pn**	**18 40 10.4**	**-0.2**
KNRA				IAmb	IAmb	18 40 17.6	
	comp=Z,74nm,1.6s						
FITZ	**Fitzroy Crossi**	**19.49**	**182**	P	**P**	**18 40 35.8**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=18,slow=7.6,SNR=9.0						
FITZ	**Fitzroy Crossi**	**19.49**	**182**	P	**P**	**18 40 35.3**	**-1.0**
DLV	**T Lat**	**20.48**	**301**	P	**P**	**18 40 46.3**	**-1.2**
DLV				IAmb	IAmb	18 40 47.6	
	comp=Z,40nm,1.5s						
CISI	**Cisompet, Garu**	**20.52**	**244**	P	**P**	**18 40 43.9**	**-3.7**
CISI				IAmb	IAmb	18 40 53.0	
	comp=Z,32nm,1.0s						
TWG	**Pinlang**	**21.79**	**347**	P	**P**	**18 41 00.6**	**-0.7**
GUMO	**Guam**	**21.95**	**56**	LR	LR	18 49 14.2	
	comp=Z,26nm,19.6s,baz=222,slow=36						
YULB	**Yu-li**	**22.30**	**348**	P	**P**	**18 41 03.2**	**-3.4**
YULB				IAmb	IAmb	18 41 09.5	
	comp=Z,22nm,1.5s						
TPUB	**Ta-pu**	**22.36**	**346**	P	**P**	**18 41 04.9**	**-2.5**
MYKOM	**Kota Tinggi**	**22.44**	**271**	P	**P**	**18 41 10.1**	**+1.8**
COEN	**Coen**	**22.71**	**133**	P	**P**	**18 41 10.0**	**-1.2**
COEN				IAmb	IAmb	18 41 35.2	
	comp=Z,27nm,1.4s						
WRAB	**Tennant Creek**	**22.72**	**160**	P	**P**	**18 41 11.1**	**-0.1**
WRAB				IAmb	IAmb	18 41 18.5	
	comp=Z,34nm,1.2s						
WRA	**Warramunga Arr**	**22.72**	**160**	P	**P**	**18 41 10.8**	**-0.4**
	comp=Z,11nm,0.5s,baz=341,slow=11,SNR=47						
WRA				PcP	**PcP**	**18 45 03.4**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=320,slow=2.2,SNR=1.7						
WRA	**Warramunga Arr**	**22.72**	**160**	P	**P**	**18 41 10.5**	**-0.8**
WB2	**Warramunga Arr**	**22.73**	**160**	P	**P**	**18 41 10.8**	**-0.5**
WB2				IAmb	IAmb	18 41 18.6	
	comp=Z,42nm,1.2s						
SSLB	**Suanglung**	**22.75**	**347**	P	**P**	**18 41 09.7**	**-1.8**
SSLB				IAmb	IAmb	18 41 34.0	
	comp=Z,19nm,1.3s						
WR0	**Warramunga Arr**	**22.81**	**160**	P	**P**	**18 41 11.8**	**-0.3**
NACB	**Ninganchiao**	**22.99**	**349**	P	**P**	**18 41 10.5**	**-3.5**
NACB				IAmb	IAmb	18 41 21.2	
	comp=Z,17nm,1.2s						
PMG	**Port Moresby**	**23.44**	**118**	LR	LR	18 52 56.3	
	comp=Z,86nm,20.0s,baz=340,slow=43						
YHNB	**Yeheng**	**23.52**	**349**	P	**P**	**18 41 15.3**	**-3.8**
YHNB				IAmb	IAmb	18 41 35.4	
	comp=Z,25nm,1.1s						
QIZ	**Qiongzhong**	**23.74**	**318**	P	**P**	**18 41 20.8**	**-0.4**
PSA00	**Pilbara Seismi**	**23.78**	**195**	P	**P**	**18 41 21.2**	**-0.4**
PSA00				IAmb	IAmb	18 41 30.7	
	comp=Z,20nm,1.2s						
TATO	**Taipei**	**23.80**	**349**	P	**P**	**18 41 18.0**	**-3.6**
MNAI	**Manna**	**24.04**	**256**	P	**P**	**18 41 24.7**	**+0.6**
KNMB	**Chin-men Tao**	**24.07**	**342**	P	**P**	**18 41 23.1**	**-1.2**
KNMB				IAmb	IAmb	18 41 41.9	
	comp=Z,33nm,1.3s						
UBPT	**Khong Chiam**	**24.70**	**305**	P	**P**	**18 41 30.8**	**+0.8**
IPM	**Ipoh**	**25.41**	**277**	P	**P**	**18 41 38.3**	**+1.7**
IPM				IAmb	IAmb	18 42 01.4	
	comp=Z,14nm,1.3s						
AS31	**Alice Springs**	**26.09**	**164**	P	**P**	**18 41 43.2**	**+0.5**
ASAR	**Alice Springs**	**26.09**	**164**	P	**P**	**18 41 43.0**	**+0.4**
	comp=Z,2.7nm,0.5s,baz=344,slow=7.8,SNR=110						
ASAR				PcP	**PcP**	**18 45 10.6**	**+1.0**
	comp=Z,1.3nm,0.4s,baz=347,slow=2.2,SNR=12						
ASAR	**Alice Springs**	**26.09**	**164**	P	**P**	**18 41 42.8**	**+0.1**
KRVT	**Keravat (AS076**	**26.35**	**103**	LR	LR	18 50 46.0	
	comp=Z,119nm,18.0s,baz=254,slow=33						
GIRL	**Giralia**	**26.73**	**205**	P	**P**	**18 41 48.0**	**-0.4**
GSI	**Gunungsitoli**	**28.71**	**270**	P	**P**	**18 42 06.3**	**+0.1**
GSI				IAmb	IAmb	18 42 23.9	
	comp=Z,8.6nm,0.9s						
PBKT	**Sadao Pong**	**29.09**	**302**	P	**P**	**18 42 09.1**	**-0.4**
NJ2	**Nanjing**	**31.19**	**348**	*eP*	**P**	**18 42 27.8**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**31.68**	**304**	LR	LR	18 56 34.3	
	comp=Z,48nm,18.3s,baz=158,slow=39						
CHTO	**Chiang Mai**	**31.86**	**304**	P	**P**	**18 42 34.4**	**+0.4**
MORW	**Morawa**	**31.94**	**197**	P	**P**	**18 42 35.6**	**+1.0**
MORW				IAmb	IAmb	18 42 36.3	
	comp=Z,21nm,1.5s						
FORT	**Forrest**	**32.15**	**177**	P	**P**	**18 42 36.6**	**+0.3**
KMI	**Kunming**	**32.69**	**318**	P	**P**	**18 42 40.3**	**-1.1**
KMI				IAmb	IAmb	18 42 46.9	
	comp=Z,9.4nm,1.4s						
ENH	**Enshi**	**32.76**	**332**	P	**P**	**18 42 40.9**	**-1.0**
ENH				IAmb	IAmb	18 42 45.9	
	comp=Z,4.8nm,0.8s						
HNR	**Honiara**	**35.23**	**109**	LR	LR	18 57 15.4	
	comp=Z,43nm,18.6s,baz=138,slow=36						
NWAO	**Narrogin (SRO)**	**35.30**	**193**	P	**P**	**18 43 03.8**	**+0.1**
	comp=Z,5.9nm,0.6s,baz=37,slow=7.7,SNR=6.7						
NWAO	**Narrogin (SRO)**	**35.30**	**193**	P	**P**	**18 43 02.9**	**-0.8**
NWAO	**Narrogin (SRO)**	**35.30**	**193**	P	**P**	**18 43 02.7**	**-1.1**
NWAO				IAmb	IAmb	18 43 11.4	
	comp=Z,35nm,1.4s						
BBOO	**Buckleboo**	**35.35**	**166**	P	**P**	**18 43 02.9**	**-1.3**
KSRS	**Korea Array**	**35.81**	**2**	P	**P**	**18 43 08.3**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=178,slow=10.0,SNR=8.5						
CD2	**Chengdu**	**36.21**	**326**	P	**P**	**18 43 11.8**	**+0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	**Xi'an**	**36.22**	**335**	P	**P**	**18 43 11.0**	**-0.7**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,190nm,5.5s						
XAN	**Xi'an**	**36.22**	**335**	P	**P**	**18 43 11.1**	**-0.7**
XAN				IAmb	IAmb	18 43 14.8	
	comp=Z,4.4nm,0.9s						
STKA	**Stephens Creek**	**36.23**	**158**	P	**P**	**18 43 11.6**	**-0.1**
	comp=Z,3.1nm,0.7s,baz=341,slow=8.2,SNR=7.6						
STKA	**Stephens Creek**	**36.23**	**158**	P	**P**	**18 43 10.7**	**-1.0**
BJI	**Beijing**	**39.45**	**348**	*eP*	**P**	**18 43 39.8**	**+1.0**
BJI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARMA	**Armidale**	**39.88**	**145**	P	**P**	**18 43 43.5**	**+0.9**
ARMA				IAmb	IAmb	18 44 11.1	
	comp=Z,9.4nm,1.1s						
LZH	**Lanzhou**	**40.22**	**331**	*eP*	**P**	**18 43 47.3**	**+1.9**
LZH				pP	pwP	18 44 00.5	+0.8
LZH				sP	sP	18 44 04.8	+1.9
LZH				PP	**PnPn**	**18 45 23.5**	**+0.9**
LZH				pmax	pmax		
	comp=Z,15nm,1.3s						
LZH				pmax	pmax		
	comp=Z,81nm,5.4s						
HHC	**Hu-ho-hao-te**	**41.38**	**343**	*eP*	**P**	**18 43 56.3**	**+1.4**
HHC				pmax	pmax		
	comp=Z,1.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,54nm,6.6s						
CAN	**Canberra**	**42.34**	**152**	P	**P**	**18 44 02.0**	**-0.8**
LSA	**Lhasa**	**43.61**	**313**	P	**P**	**18 44 12.9**	**-0.7**
GTA	**Gaotai**	**44.80**	**331**	*eP*	**P**	**18 44 22.3**	**-0.2**
GTA				pP	pP	18 44 31.5	-3.4
GTA				sP	pwP	18 44 35.8	-1.2
GTA				PcP	**PP**	**18 46 06.5**	**-1.4**
GTA				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SONM	**Songino Array**	**49.27**	**342**	P	**P**	**18 44 57.7**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=168,slow=8.3,SNR=7.6						
SONM	**Songino Array**	**49.27**	**342**	P	**P**	**18 44 56.7**	**-0.6**
WMQ	**Urumqi**	**54.31**	**326**	*eP*	**P**	**18 45 36.3**	**+1.4**
WMQ				pP	pP	18 45 47.5	0.0
WMQ				sP	sP	18 45 55.0	+2.3
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ				LR	LR		
	comp=N,580nm,28.3s						
WMQ				LR	LR		
	comp=E,1μm,29.1s						
WMQ				LR	LR		
	comp=Z,45nm,25.1s						
PETK	**Petropavlovsk-**	**57.65**	**22**	P	**P**	**18 45 59.6**	**+1.2**
	comp=Z,2.8nm,0.7s,baz=159,slow=6.7,SNR=6.4						
PETK	**Petropavlovsk-**	**57.65**	**22**	P	**P**	**18 46 00.3**	**+1.8**
MK31	**Makanchi Array**	**59.14**	**326**	P	**P**	**18 46 08.8**	**-0.3**
MK31				IAmb	IAmb	18 46 17.4	
	comp=Z,3.7nm,1.2s						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**18 46 08.8**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=120,slow=8.1,SNR=64						
MKAR				LR	LR	19 13 48.0	
	comp=Z,46nm,18.6s,baz=100,slow=38						
MKAR	**Makanchi Array**	**59.14**	**326**	P	**P**	**18 46 08.7**	**-0.4**
KSH	**Kashi**	**59.32**	**316**	*eP*	**P**	**18 46 14.5**	**+3.9**
KSH				pmax	pmax		
	comp=Z,330nm,5.3s						
MAKZ	**Makanchi**	**59.32**	**326**	P	**P**	**18 46 10.2**	**-0.1**
MAKZ				IAmb	IAmb	18 46 20.4	
	comp=Z,5.8nm,1.2s						
KDJ	**Kajisay**	**59.73**	**319**	P	**P**	**18 46 14.3**	**+0.8**
TUWZ	**Tuamarina**	**60.71**	**140**	P	**P**	**18 46 19.9**	**0.0**
BKZ	**Black Stump Fm**	**61.24**	**137**	P	**P**	**18 46 23.3**	**-0.3**
ZALV	**Zalesovo Beam**	**62.37**	**334**	P	**P**	**18 46 30.0**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=111,slow=4.4,SNR=4.0						
ZALV	**Zalesovo Beam**	**62.37**	**334**	P	**P**	**18 46 30.1**	**-0.9**
KURBB	**Kurchatov Arra**	**63.38**	**328**	P	**P**	**18 46 36.5**	**-1.1**
	comp=Z,2.2nm,0.6s,baz=127,slow=6.4,SNR=17						
KURK	**Kurchatov**	**63.39**	**328**	P	**P**	**18 46 37.2**	**-0.4**
KURK				IAmb	IAmb	18 46 42.3	
	comp=Z,6.7nm,0.9s						
BVAR	**Borovoye Array**	**68.95**	**328**	P	**P**	**18 47 14.2**	**+0.9**
	comp=Z,0.7nm,0.4s,baz=58,slow=6.5,SNR=14						
BRVK	**Borovoye**	**69.02**	**328**	P	**P**	**18 47 13.8**	**0.0**
TIXI	**Tiksi**	**70.06**	**1**	LR	LR	19 18 10.4	
	comp=Z,19nm,21.0s,baz=165,slow=36						
TIXI	**Tiksi**	**70.06**	**1**	P	**P**	**18 47 20.1**	**+0.3**
TIXI				IAmb	IAmb	18 47 22.0	
	comp=Z,7.4nm,1.2s						
ABKAR	**Akbulak array**	**73.60**	**321**	P	**P**	**18 47 41.3**	**-0.2**
XMAS	**Kiritimati**	**76.22**	**88**	P	**P**	**18 47 54.9**	**-2.4**
ARU	**Arti**	**76.58**	**328**	P	**P**	**18 47 58.0**	**-0.5**
ARU				IAmb	IAmb	18 48 11.4	
	comp=Z,7.4nm,1.4s						
ILAR	**

	comp=N,6808μm,0.2s							
PDO	**Prodromos**	**0.62**	**67**	P	**Pg**	**18 37 56.2**	**-0.1**	
PDO	**Prodromos**	**0.62**	**67**	P	**Pg**	18 37 56.2	-0.1	
PDO				S	**Sg**	**18 38 04.5**	**0.0**	
KRI1	**kERI**	**0.76**	**157**	P	**Pg**	18 37 58.2	-0.5	
RLS	**Riolos of Patr**	**0.86**	**110**	P	**Pg**	**18 38 00.3**	**-0.3**	
RLS				S	**Sn**	**18 38 14.1**	**+0.1**	
	comp=N,200nm,0.5s							
RLS	**Riolos of Patr**	**0.86**	**110**	P	**Pg**	**18 38 00.0**	**-0.6**	
PVO	**Paravola**	**0.88**	**73**	P	**Pg**	**18 38 01.4**	**+0.3**	
PVO	**Paravola**	**0.88**	**73**	P	**Pg**	**18 38 01.4**	**+0.3**	
PVO				S	**Sg**	**18 38 13.1**	**+0.4**	
PVO				AML	AML	18 38 17.1		
	comp=N,1254μm,0.3s							
PVO				AML	AML	18 38 18.1		
	comp=E,1531μm,0.3s							
DRO	**Drossia**	**1.07**	**112**	P	**Pb**	**18 38 04.2**	**-0.2**	
DRO				S	**Sg**	**18 38 19.4**	**+0.6**	
DRO				AML	AML	18 38 27.0		
	comp=N,1467μm,0.4s							
DRO				AML	AML	18 38 27.8		
	comp=E,946μm,0.2s							
EFP	**Efpalio**	**1.15**	**86**	P	**Pb**	**18 38 05.0**	**-0.7**	
EFP				AML	AML	18 38 26.8		
	comp=N,518μm,0.4s							
EFP				AML	AML	18 38 31.6		
	comp=E,478μm,0.4s							
ANX	**Ano Chora**	**1.18**	**78**	P	**Pb**	**18 38 05.8**	**-0.4**	
ANX				AML	AML	18 38 29.6		
	comp=E,659μm,0.5s							
ANX				AML	AML	18 38 29.9		
	comp=N,702μm,0.5s							
EVR	**Evrytania**	**1.20**	**62**	P	**Pn**	**18 38 06.4**	**-0.1**	
LAKA	**Lakka**	**1.21**	**95**	P	**Pn**	**18 38 06.5**	**0.0**	
SERG	**Sergoula**	**1.26**	**87**	P	**Pn**	**18 38 07.1**	**-0.2**	
SERG				AML	AML	18 38 32.0		
	comp=N,400μm,0.3s							
SERG				AML	AML	18 38 32.4		
	comp=E,508μm,0.3s							
TRIZ	**Trizonia**	**1.28**	**89**	P	**Pn**	**18 38 07.4**	**-0.1**	
AMT	**Artemida-Makis**	**1.29**	**129**	P	**Pn**	**18 38 08.1**	**+0.4**	
KALE	**Kalithea**	**1.33**	**88**	P	**Pn**	**18 38 08.1**	**-0.1**	
KLV	**Kalavryta, Ach**	**1.38**	**103**	P	**Pn**	**18 38 09.1**	**+0.2**	
KLV	**Kalavryta, Ach**	**1.38**	**103**	P	**Pn**	**18 38 09.1**	**+0.2**	
KLV				AML	AML	18 38 31.6		
	comp=E,255μm,0.3s							
KLV				AML	AML	18 38 33.2		
	comp=N,243μm,0.4s							
MAKR	**Makrakomi, Fth**	**1.47**	**63**	P	**Pg**	**18 38 12.6**	**+0.3**	
AGG	**Agios Georgios**	**1.61**	**65**	P	**Pb**	**18 38 14.1**	**+0.5**	
ITM	**Ithomi**	**1.66**	**135**	P	**Pb**	**18 38 15.0**	**+0.6**	
PYL	**PYLOS**	**1.79**	**145**	P	**Pn**	**18 38 15.9**	**+1.4**	
VIL2	**Platees**	**2.22**	**93**	P	**Pn**	**18 38 22.3**	**+1.8**	
DID	**Didima**	**2.36**	**110**	P	**Pb**	**18 38 25.5**	**-0.9**	
STON	**Ston**	**4.97**	**336**	*i* Pn	**Pn**	**18 38 58.6**	**+0.4**	
STON				Sn	**Sn**	**18 39 53.3**	**-2.0**	
KIJV	**Kijevo**	**6.41**	**333**	*i* Pn	**Pn**	**18 39 18.1**	**+0.1**	
KIJV				Sn	**Sn**	**18 40 29.5**	**-1.5**	
MORI	**Morici**	**6.56**	**328**	*e*Pn	**Pn**	**18 39 20.7**	**+0.6**	

*THE **31** 18:52:37.3, 38°.22N×20°.41E, h14km, ML2.7/4, Error ellipse: s-maj=0.9km s-min=0.4km az=236.0*
*ATH **31** 18:52:37.2, 38°.22N×20°.40E, h14km±1km, ML2.8/5, Error ellipse: s-maj=1.9km s-min=0.9km az=255.0*
ISC 31 18:52:37.2±1.2, 38°.22N±0°.03×20°.41E±0°.05, h14km±6km, n33, σ0s26/51, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.04**	**21**	P		**Pg**	**18 52 39.8**	**0.0**
KEF4				S		**Sg**	**18 52 41.8**	**+0.1**
CHV1	**Chavriata, Kef**	**0.04**	**207**	P		**Pg**	**18 52 39.8**	**-0.1**
CHV1				S		**Sg**	**18 52 41.8**	**+0.2**
KEF3	**Kipouria, Keph**	**0.05**	**248**	P		**Pg**	**18 52 39.8**	**-0.1**
KEF3				S		**Sg**	**18 52 41.8**	**+0.1**
KEF1	**Kardakata, Kep**	**0.07**	**42**	P		**Pg**	**18 52 40.0**	**-0.2**
ARG2	**Argostoli**	**0.08**	**124**	P		**Pg**	**18 52 40.1**	**-0.1**
ARG2				S		**Sg**	**18 52 42.1**	**0.0**
KEF2	**Argostoli. Kep**	**0.09**	**132**	P		**Pg**	**18 52 40.1**	**-0.1**
KEF2				S		**Sg**	**18 52 42.1**	**-0.2**
VLS	**Valsamata**	**0.15**	**107**	P		**Pg**	**18 52 40.9**	**-0.2**
VLS				S		**Sg**	**18 52 43.6**	**-0.1**
	10μm,0.1s							
VLS	**Valsamata**	**0.15**	**107**	P		**Pg**	**18 52 40.8**	**-0.2**
VLS				S		**Sg**	**18 52 43.6**	**-0.1**
VLS				AML	AML	18 52 44.1		
	comp=E,19394μm,0.1s							
VLS				AML	AML	18 52 44.1		
	comp=N,16602μm,0.2s							
VSK1	**VASILIKIADES**	**0.22**	**33**	P		**Pg**	**18 52 42.1**	**-0.1**
VSK1				S		**Sg**	**18 52 46.0**	**+0.4**
FSK	**Fiskardo**	**0.27**	**27**	P		**Pg**	**18 52 42.8**	**-0.1**
FSK				S		**Sg**	**18 52 47.2**	**+0.4**
	comp=N,3μm,0.2s							
FSK	**Fiskardo**	**0.27**	**27**	P		**Pg**	**18 52 42.8**	**-0.1**
FSK				S		**Sg**	**18 52 47.0**	**+0.2**
FSK				AML	AML	18 52 47.5		
	comp=N,5692μm,0.2s							
FSK				AML	AML	18 52 47.7		
	comp=E,6249μm,0.1s							
KFL	**Anninata**	**0.32**	**110**	P		**Pg**	**18 52 43.7**	**-0.1**
KFL				S		**Sg**	**18 52 48.8**	**+0.4**
	comp=E,2μm,0.3s							
KFL	**Anninata**	**0.32**	**110**	P		**Pg**	**18 52 43.7**	**-0.1**
KFL				S		**Sg**	**18 52 48.6**	**+0.2**
KFL				AML	AML	18 52 49.3		
	comp=E,3520μm,0.4s							
KFL				AML	AML	18 52 49.6		
	comp=N,3814μm,0.3s							
VLMS	**Volimes, Zakyn**	**0.40**	**150**	P		**Pg**	**18 52 44.9**	**-0.4**
VLMS				S		**Sb**	**18 52 51.5**	**-0.5**
VLMS				AML	AML	18 52 51.9		
	comp=E,6700μm,0.2s							
VLMS				AML	AML	18 52 53.1		
	comp=N,5182μm,0.2s							
EVGI	**Lefkada island**	**0.44**	**26**	P		**Pg**	**18 52 45.8**	**-0.3**
EVGI				S		**Sb**	**18 52 53.0**	**-0.3**
EVGI	**Lefkada island**	**0.44**	**26**	P		**Pg**	**18 52 45.8**	**-0.3**
MGNA	**Meganis**	**0.53**	**35**	P		**Pg**	**18 52 47.2**	**-0.4**
MGNA				S		**Sg**	**18 52 54.6**	**-0.1**
MGNA				AML	AML	18 52 58.0		
	comp=E,690μm,0.2s							
MGNA				AML	AML	18 52 58.0		
	comp=N,938μm,0.2s							
LKD2	**Lefkada island**	**0.60**	**19**	P		**Pg**	**18 52 48.6**	**-0.4**
LKD2	**Lefkada island**	**0.60**	**19**	P		**Pg**	**18 52 48.9**	**-0.1**
LKD2				S		**Sb**	**18 52 57.6**	**-0.2**
TSLK	**Tsoukalades, L**	**0.63**	**18**	P		**Pg**	**18 52 49.7**	**0.0**
TSLK				S		**Sb**	**18 52 59.3**	**+0.6**
	comp=N,340nm,0.7s							
TSLK	**Tsoukalades, L**	**0.63**	**18**	P		**Pg**	**18 52 49.6**	**0.0**
TSLK				S		**Sb**	**18 52 58.7**	**0.0**
PDO	**Prodromos**	**0.72**	**58**	P		**Pg**	**18 52 50.7**	**-0.5**
PDO	**Prodromos**	**0.72**	**58**	P		**Pg**	**18 52 50.8**	**-0.4**
RLS	**Riolos of Patr**	**0.85**	**101**	P		**Pg**	**18 52 53.7**	**0.0**
PVO	**Paravola**	**0.96**	**66**	P		**Pb**	**18 52 55.6**	**-0.1**
PVO	**Paravola**	**0.96**	**66**	P		**Pb**	**18 52 55.5**	**-0.1**
DRO	**Drossia**	**1.06**	**104**	P		**Pb**	**18 52 57.5**	**+0.1**
EFP	**Efpalio**	**1.20**	**80**	P		**Pg**	**18 53 00.3**	**0.0**
LAKA	**Lakka**	**1.24**	**89**	P		**Pb**	**18 53 00.7**	**+0.3**
AMT	**Artemida-Makis**	**1.24**	**123**	P		**Pg**	**18 53 01.5**	**+0.5**
ANX	**Ano Chora**	**1.25**	**72**	P		**Pg**	**18 53 01.1**	**-0.2**
SERG	**Sergoula**	**1.31**	**81**	P		**Pg**	**18 53 02.6**	**+0.1**
KLV	**Kalavryta, Ach**	**1.39**	**97**	P		**Pb**	**18 53 02.9**	**0.0**

*IDC **31** 19:19:42.1±1.4, 2°.50N×95°.78E, h0km, mb3.8/9, mb1 3.9/11, mb1mx3.7/33, mbtmp3.8/11, ML3.7/2, MS2.5/2, Ms1 2.6/2, ms1mx2.4/36, Error ellipse: s-maj=41.1km s-min=19.7km az=47.0*
*NEIC **31** 19:19:46.3±1.0, 2°.50N±0°.08×95°.7E±0°.1, h29km±6km, mb4.3/17, Error ellipse: s-maj=18.6km s-min=8.9km az=64.0*
ISC 31 19:19:45.7±0.8, 2°.52N±0°.09×95°.8E±0°.1, h25km, n54, σ1s07/49, mb4.1/23, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GSI	**Gunungsitoli**	**2.18**	**124**			**Pn**	**19 20 20.7**	**+0.3**
LHMI	**Lhok Sumawe**	**2.94**	**24**			**Pn**	**19 20 32.8**	**+1.9**
RPSI	**Rantau Prapat**	**3.17**	**87**			**Pn**	**19 20 35.1**	**+1.1**
RPSI	**Rantau Prapat**	**3.17**	**87**			**Pn**	**19 20 34.8**	**+0.8**
PSI	**Prapat**	**3.18**	**85**	Pn		**Pn**	**19 20 34.8**	**+0.6**
	1.7nm,0.3s,baz=284,slow=6.6,SNR=8.9							
PSI				LR		LR	19 21 14.3	
	comp=Z,31nm,22.0s,baz=304,slow=29							
KULM	**Kulim**	**5.61**	**60**			**Pn**	**19 21 08.1**	**+0.6**
IPM	**Ipoh**	**5.61**	**70**			**Pn**	**19 21 08.2**	**+0.7**
MNAI	**Manna**	**9.92**	**134**	Pn		**Pn**	**19 22 07.7**	**+0.9**
PBKT	**Sadao Pong**	**14.88**	**20**			**Pn**	**19 23 14.9**	**+0.4**
UBPT	**Khong Chiam**	**15.89**	**36**	P		**Pn**	**19 23 26.4**	**-1.5**
CMAR	**Chiang Mai Arr**	**16.15**	**11**	Pn		**Pn**	**19 23 29.8**	**-1.4**
	0.3nm,0.3s,baz=201,slow=11,SNR=18							
CMAR				LR		LR	19 28 58.3	
	comp=Z,38nm,18.4s,baz=220,slow=34							
SLVN	**Son La**	**20.32**	**22**	P		**P**	**19 24 20.4**	**+0.3**
KKM	**Kota Kinabalu**	**20.70**	**80**	P		**P**	**19 24 25.3**	**+0.9**
KKM				IAmb		IAmb	19 24 38.9	
	comp=Z,20nm,1.1s							
H08S2	**Diego Garcia H**	**25.31**	**246**	T		T	19 51 25.4	
	baz=67,slow=76,SNR=42							
H08S3	**Diego Garcia H**	**25.31**	**246**	T		T	19 51 28.1	
	baz=67,slow=76,SNR=49							
H08S1	**Diego Carcia H**	**25.33**	**246**	T		T	19 51 27.0	
	baz=67,slow=76,SNR=21							
CD2	**Chengdu**	**29.24**	**14**	P		**P**	**19 25 47.3**	**+1.5**
CD2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
XAN	**Xi'an**	**33.69**	**20**	P		**P**	**19 26 23.5**	**-1.4**
XAN				pP		PP	19 27 28.8	-13
XAN				pmax		pmax		
	comp=Z,3.0nm,1.0s							
LZH	**Lanzhou**	**34.23**	**12**	*e*P		**P**	**19 26 29.5**	**-0.2**
LZH				pP		sP	19 26 43.0	+2.7
LZH				sP		pP	19 26 46.0	+8.8
LZH				PP		**PnPn**	**19 27 40.5**	**-3.7**
LZH				pmax		pmax		
	comp=Z,14nm,1.3s							
LZH				pmax		pmax		
	comp=Z,87nm,5.4s							
GTA	**Gaotai**	**36.91**	**5**	*e*P		**P**	**19 26 52.5**	**-0.1**
GTA				pP		pP	19 26 56.3	-3.9
GTA				sP		sP	19 26 59.5	-3.7
GTA				pmax		pmax		
	comp=Z,3.0nm,1.0s							
HHC	**Hu-ho-hao-te**	**40.74**	**18**	*e*P		**P**	**19 27 27.5**	**+2.7**
HHC				pmax		pmax		
	comp=Z,1.0nm,0.9s							
HHC				pmax		pmax		
	comp=Z,97nm,6.6s							
KSH	**Kashi**	**40.99**	**336**	P		**P**	**19 27 28.5**	**+1.7**
KSH				pmax		pmax		
	comp=Z,480nm,5.5s							
H01W3	**Cape Leeuwin H**	**41.01**	**157**	T		T	20 11 05.1	
	baz=333,slow=76,SNR=56							
H01W2	**Cape Leeuwin H**	**41.02**	**157**	T		T	20 11 06.1	
	baz=333,slow=76,SNR=56							
H01W1	**Cape Leeuwin H**	**41.02**	**157**	T		T	20 11 06.4	
	baz=333,slow=76,SNR=49							
WMQ	**Urumqi**	**41.75**	**351**	*e*P		**P**	**19 27 34.0**	**+1.1**
WMQ				sP		sP	19 27 46.3	+2.9
WMQ				pmax		pmax		
	comp=Z,7.0nm,1.1s							
WMQ				LR		LR		
	comp=N,640nm,28.9s							
WMQ				LR		LR		
	comp=E,1μm,29.0s							
WMQ				LR		LR		
	comp=Z,160nm,29.7s							
WRA	**Warramunga Arr**	**43.95**	**122**	P		**P**	**19 27 50.9**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=299,slow=9.2,SNR=1.9							
WRAB	**Tennant Creek**	**43.96**	**122**			**P**	**19 27 51.1**	**0.0**
WRAB				IAmb		IAmb	19 28 03.9	
	comp=Z,18nm,1.4s							
WB2	**Warramunga Arr**	**43.96**	**122**	P		**P**	**19 27 51.3**	**+0.1**
WB2				IAmb		IAmb	19 28 04.0	
	comp=Z,13nm,1.4s							
WR0	**Warramunga Arr**	**44.13**	**122**	P		**P**	**19 27 53.1**	**+0.6**
WR0				IAmb		IAmb	19 28 09.8	
	comp=Z,15nm,1.4s							
ASAR	**Alice Springs**	**45.33**	**127**	P		**P**	**19 28 01.8**	**-0.4**
	comp=Z,0.2nm,0.5s,baz=301,slow=8.1,SNR=5.9							
KSAR	**Wonju Array Be**	**45.59**	**36**	P		**P**	**19 28 03.0**	**-0.9**
KS19	**Wonju Array Si**	**45.62**	**36**	P		**P**	**19 28 04.2**	**+0.1**
KSRS	**Korea Array**	**45.62**	**36**	P		**P**	**19 28 02.9**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=214,slow=9.0,SNR=4.4							
MK31	**Makanchi Array**	**45.63**	**347**	P		**P**	**19 28 04.9**	**+0.8**
MKAR	**Makanchi Array**	**45.63**	**347**	P		**P**	**19 28 04.5**	**+0.4**
	comp=Z,1.1nm,0.5s,baz=156,slow=8.5,SNR=32							
MAKZ	**Makanchi**	**45.72**	**347**	P		**P**	**19 28 05.5**	**+0.7**
MAKZ				IAmb		IAmb	19 28 13.0	
	comp=Z,1.7nm,0.6s							
SONM	**Songino Array**	**46.07**	**10**	P		**P**	**19 28 07.9**	**+0.3**
	comp=Z,1.2nm,0.6s,baz=189,slow=9.6,SNR=14							
SONM	**Songino Array**	**46.07**	**10**	P		**P**	**19 28 08.0**	**+0.3**
ULN	**Ulaanbaatar**	**46.22**	**11**	P		**P**	**19 28 08.0**	**-0.8**
ULN				IAmb		IAmb	19 28 15.9	
	comp=Z,2.1nm,1.1s							
KK31	**Karatay Array**	**46.25**	**334**	P		**P**	**19 28 09.1**	**+0.1**
KK31				IAmb		IAmb	19 28 48.2	
	comp=Z,2.8nm,1.3s							
KKAR	**Karatay Array**	**46.25**	**334**	P		**P**	**19 28 09.8**	**+0.8**
KKAR	**Karatay Array**	**46.25**	**334**	P		**P**	**19 28 09.1**	**+0.1**
KKAR				IAmb		IAmb	19 28 48.2	
	comp=Z,2.8nm,1.3s							
GEYT	**Alibeck**	**49.29**	**320**	P		**P**	**19 28 33.1**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=170,slow=9.0,SNR=4.0							
GEYT	**Alibeck**	**49.29**	**320**	P		**P**	**19 28 33.1**	**+0.4**
ZAA0	**Zalesovo Array**	**52.05**	**352**	P		**P**	**19 28 53.3**	**+0.2**
ZAA0				IAmb		IAmb	19 29 01.6	
	comp=Z,2.0nm,0.8s							
ZALV	**Zalesovo Beam**	**52.05**	**352**	P		**P**	**19 28 53.9**	**+0.8**
	comp=Z,1.3nm,0.5s,baz=172,slow=7.4,SNR=7.0							
ZALV	**Zalesovo Beam**	**52.05**	**352**	P		**P**	**19 28 53.4**	**+0.2**
ABKAR	**Akbulak array**	**55.68**	**332**	P		**P**	**19 29 20.1**	**+0.2**
TIR	**Tirane**	**77.76**	**312**	P		**P**	**19 31 39.7**	**-1.2**
FIA1	**FINESS Array S**	**78.17**	**333**	P		**P**	**19 31 42.4**	**-0.3**
FINES	**FINESS Array B**	**78.17**	**333**	P		**P**	**19 31 43.1**	**+0.4**
	comp=Z,3.3nm,1.0s,baz=177,slow=7.3,SNR=1.2							
ARCES	**ARCESS Array B**	**80.82**	**340**	P		**P**	**19 31 58.1**	**+1.1**
	comp=Z,1.5nm,0.9s,baz=70,slow=7.0,SNR=4.2							
ARCES	**ARCESS Array B**	**80.82**	**340**	P		**P**	**19 31 58.0**	**+1.0**

*THE **31** 19:49:00.9, 38°.28N×20°.38E, h14km, ML2.9/8, Error ellipse: s-maj=0.7km s-min=0.3km az=266.0*
*ATH **31** 19:49:01.0, 38°.28N×20°.39E, h13km±2km, ML2.8/3, Error ellipse: s-maj=2.5km s-min=0.9km az=253.0*
ISC 31 19:49:00.3±0.9, 38°.28N±0°.02×20°.35E±0°.04, h18km±4km, n42, σ0s71/70, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.06**	**106**	P		**Pg**	**19 49 03.4**	**-0.1**
KEF4				S		**Sg**	**19 49 04.9**	**-0.8**
KEF3	**Kipouria, Keph**	**0.07**	**181**	P		**Pg**	**19 49 03.7**	**+0.1**
KEF3				S		**Sg**	**19 49 05.3**	**-0.6**
CHV1	**Chavriata, Kef**	**0.09**	**165**	P		**Pg**	**19 49 04.0**	**+0.2**
CHV1				S		**Sg**	**19 49 06.2**	**+0.1**
KEF1	**Kardakata, Kep**	**0.10**	**88**	P		**Pg**	**19 49 03.6**	**-0.2**
KEF1				S		**Sg**	**19 49 05.1**	**-1.1**
LXR1	**Lixouri, Cepha**	**0.10**	**137**	P		**Pg**	**19 49 04.0**	**+0.1**
LXR1				S		**Sg**	**19 49 06.3**	**0.0**
ARG2	**Argostoli**	**0.14**	**131**	P		**Pg**	**19 49 04.5**	**+0.1**
ARG2				S		**Sg**	**19 49 07.0**	**-0.1**
KEF2	**Argostoli. Kep**	**0.15**	**135**	P		**Pg**	**19 49 04.6**	**+0.1**
KEF2				S		**Sg**	**19 49 07.1**	**-0.3**
VLS	**Valsamata**	**0.21**	**117**	P		**Pg**	**19 49 05.4**	**0.0**
VLS				S		**Sg**	**19 49 08.8**	**0.0**
	61μm,0.1s							
VLS	**Valsamata**	**0.21**	**117**	P		**Pg**	**19 49 05.3**	**-0.1**
VLS				S		**Sg**	**19 49 08.4**	**-0.4**
VSK1	**VASILIKIADES**	**0.21**	**51**	P		**Pg**	**19 49 05.4**	**0.0**
VSK1				S		**Sg**	**19 49 08.7**	**-0.2**
FSK	**Fiskardo**	**0.25**	**42**	P		**Pg**	**19 49 06.1**	**+0.2**
FSK				S		**Sg**	**19 49 09.9**	**+0.1**
FSK	**Fiskardo**	**0.25**	**42**	P		**Pg**	**19 49 06.1**	**+0.2**
KFL	**Anninata**	**0.38**	**115**	P		**Pg**	**19 49 08.3**	**+0.1**
KFL				S		**Sb**	**19 49 14.3**	**+0.1**
	7μm,0.3s							
EVGI	**Lefkada island**	**0.42**	**35**	P		**Pg**	**19 49 09.0**	**+0.1**
EVGI				S		**Sg**	**19 49 15.0**	**+0.3**
EVGI	**Lefkada island**	**0.42**	**35**	P		**Pg**	**19 49 09.0**	**+0.1**
EVGI				S		**Sg**	**19 49 14.1**	**-0.6**
VLMS	**Volimes, Zakyn**	**0.47**	**148**	P		**Pg**	**19 49 10.1**	**+0.4**
VLMS				S		**Sg**	**19 49 16.4**	**+0.3**
VLMS				AML	AML	19 49 18.9		
	comp=E,11390μm,0.2s							
VLMS				AML	AML	19 49 20.5		
	comp=N,8035μm,0.3s							
MGNA	**Meganis**	**0.52**	**42**	P		**Pg**	**19 49 10.2**	**-0.4**
MGNA				S		**Sg**	**19 49 17.7**	**+0.2**
LKD2	**Lefkada island**	**0.57**	**25**	P		**Pg**	**19 49 11.7**	**+0.1**
LKD2				S		**Sg**	**19 49 19.5**	**+0.3**
	comp=N,770nm,0.3s							
LKD2	**Lefkada island**	**0.57**	**25**	P		**Pg**	**19 49 11.4**	**-0.2**
LKD2				S		**Sg**	**19 49 19.6**	**+0.4**
LKD2				AML	AML	19 49 27.2		
	comp=E,1806μm,0.3s							
LKD2				AML	AML	19 49 27.7		
	comp=N,1362μm,0.2s							
TSLK	**Tsoukalades, L**	**0.60**	**23**	P		**Pg**	**19 49 12.2**	**+0.1**
TSLK				S		**Sb**	**19 49 21.2**	**+0.8**
	comp=N,932nm,0.3s							
TSLK	**Tsoukalades, L**	**0.60**	**23**	P		**Pg**	**19 49 12.3**	**+0.1**
TSLK				S		**Sg**	**19 49 20.0**	**-0.2**
TSLK				AML	AML	19 49 26.7		
	comp=N,1826μm,0.4s							
TSLK				AML	AML	19 49 27.8		
	comp=E,1861μm,0.3s							
AST1	**Astakos**	**0.64**	**65**	P		**Pg**	**19 49 12.8**	**-0.1**
AST1				S		**Sb**	**19 49 21.6**	**+0.1**
KRI1	**kERI**	**0.71**	**149**	P		**Pg**	**19 49 14.0**	**-0.3**
KRI1				S		**Sb**	**19 49 24.3**	**+0.6**
PDO	**Prodromos**	**0.73**	**63**	P		**Pg**	**19 49 14.4**	**-0.2**
PDO				S		**Sb**	**19 49 25.1**	**+0.9**
	comp=E,1μm,0.3s							
PDO	**Prodromos**	**0.73**	**63**	P		**Pg**	**19 49 14.3**	**-0.3**
RLS	**Riolos of Patr**	**0.91**	**103**	P		**Pg**	**19 49 17.1**	**-0.8**
PVO	**Paravola**	**0.98**	**69**	P		**Pb**	**19 49 19.4**	**+0.6**
PVO				S		**Sg**	**19 49 32.7**	**+0.4**
	comp=E,920nm,0.4s							
PVO	**Paravola**	**0.98**	**69**	P		**Pb**	**19 49 19.4**	**+0.6**
DRO	**Drossia**	**1.12**	**106**	P		**Pb**	**19 49 21.4**	**+0.3**
DRO				S		**Sb**	**19 49 35.5**	**+0.1**
	comp=E,670nm,0.4s							
EFP	**Efpalio**	**1.23**	**82**	P		**Pn**	**19 49 22.9**	**+0.3**
EFP				S		**Sg**	**19 49 40.0**	**-0.2**
	comp=E,502nm,0.5s							
ANX	**Ano Chora**	**1.27**	**75**	P		**Pn**	**19 49 23.8**	**+0.5**
SERG	**Sergoula**	**1.35**	**84**	P		**Pn**	**19 49 24.8**	**+0.5**
TRIZ	**Trizonia**	**1.36**	**86**	P		**Pn**	**19 49 24.5**	**+0.2**
KALE	**Kalithea**	**1.41**	**85**	P		**Pn**	**19 49 25.6**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.58**	**62**	P		**Pn**	**19 49 27.3**	**-0.1**
DBRK	**Dubrovnik**	**4.70**	**340**	*e*Pn		**Pn**	**19 50 10.6**	**+0.3**
DBRK				Sn		**Sn**	**19 51 02.3**	**-2.0**
STON	**Ston**	**5.02**	**337**	*i* Pn		**Pn**	**19 50 14.9**	**+0.3**
KIJV	**Kijevo**	**6.45**	**334**	*e*Pn		**Pn**	**19 50 35.3**	**+0.9**
NVLJ	**Novalja**	**7.51**	**329**	*e*Pn		**Pn**	**19 50 48.6**	**-0.3**
BOJS	**Bojanci**	**8.16**	**334**	*i* Pn		**Pn**	**19 50 59.3**	**+1.5**
GBRS	**Gornja Briga**	**8.34**	**332**	*i* Pn		**Pn**	**19 51 01.9**	**+1.6**
GBRS				*i* Sn		**Sn**	**19 52 30.9**	**-3.2**
VISS	**Visnje**	**8.56**	**333**	*i* Pn		**Pn**	**19 51 05.5**	**+2.1**

*IDC **31** 20:00:10.4±1.6, 33°.48S×72°.57W, h0km, mb4.0/4, mb1 4.1/6, mb1mx3.8/42, mbtmp4.1/6, ML4.2/3, MS3.0/4, Ms1 3.1/4, ms1mx2.8/23, Error ellipse: s-maj=49.2km s-min=22.8km az=105.0*
*GUC **31** 20:00:16.1±0.8, 33°.66S×71°.98W, h25km±205km, ML4.0*
*NEIC **31** 20:00:16.5±1.4, 33°.52S±0°.03×72°.0W±0°.1, h30km±5km, Error ellipse: s-maj=12.5km s-min=2.4km az=104.0*
ISC 31 20:00:15.3±1.5, 33°.61S±0°.04×72°.04W±0°.07, h24km±11km, n48, σ1s01/57, mb4.5/5, 2C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VA01	**Torpederas**	**0.67**	**29**	*e*P		**Pb**	**20 00 28.9**	**+0.4**
VA01				*e*S		**Sb**	**20 00 38.5**	**+1.1**
VA01				IAML			20 00 39.5	
	comp=E,9μm,0.4s							
MT01	**Popeta**	**0.70**	**111**	⇓*i*P		**Pb**	**20 00 28.7**	**-0.2**
MT01				*e*S		**Sb**	**20 00 37.6**	**-0.6**
MT01				IAML			20 00 38.5	
	comp=N,19μm,0.3s							
ROC1	**El Roble**	**1.06**	**54**			**Pn**	**20 00 35.0**	**0.0**
ROCH	**El Roble**	**1.07**	**54**	⇑*i*P		**Pn**	**20 00 35.0**	**0.0**
ROCH				*e*S		**Sb**	**20 00 48.9**	**-0.1**
ROC

X34A	Smith Ranch, M	72.04	338			PcP	20 11 54.3	-1.2
DBIC	Dimbokro	75.05	71	P		P	20 11 55.5	+0.2
	comp=Z,1.3nm,0.6s,baz=217,slow=10,SNR=1.4							
DBIC	Dimbokro	75.05	71	P		P	20 11 55.5	+0.2
DBIC				IAmb		IAmb	20 12 29.9	
	comp=Z,14nm,1.5s							
I42A	Draeger Farm,	78.66	348			pP	20 12 23.7	+1.1
TORD	Torodi Ar. Bea	84.08	70	P		P	20 12 44.6	+0.1
	comp=Z,2.2nm,0.7s,baz=262,slow=4.3,SNR=11							
TORD	Torodi Ar. Bea	84.08	70	P		P	20 12 44.5	+0.1
H11S2	WAKE ISLAND Hyl	25.78	269	T		T	22 38 09.5	
	baz=118,slow=75,SNR=5.2							
H11S1	WAKE ISLAND Hyl	25.79	269	T		T	22 38 09.7	
	baz=118,slow=75,SNR=21							
H11S3	WAKE ISLAND Hyl	25.80	269	T		T	22 38 09.6	
	baz=118,slow=75,SNR=14							
ZALV	Zalesovo Beam	153.90	32	PKPbc		PKPbc	20 20 11.7	-0.3
	comp=Z,1.2nm,0.5s,baz=290,slow=2.9,SNR=7.2							
ZALV	Zalesovo Beam	153.90	32			PKPbc	20 20 12.3	+0.3
MKAR	Makanchi Array	156.51	48	PKPab		PKPab	20 20 36.9	+0.2
	comp=Z,0.4nm,0.6s,baz=315,slow=1.8,SNR=5.5							
MKAR	Makanchi Array	156.51	48	PKPdf		PKPdf	20 20 07.6	-0.3
MKAR				PKPab		PKPab	20 20 36.5	-0.2

*IDC **31** 20:03:26.3±1.1,65.˚14S×178.˚95E,h0km,mb4.1/4, mb1 4.3/5,mb1mx4.1/20,mbtmp4.2/5,ML4.0/1,MS3.9/8, Ms1 3.9/8,ms1mx3.7/14,Error ellipse: s-maj=47.0km s-min=23.9km az=67.0*

*NEIC **31** 20:03:27.6±1.4,65.˚1S±0.˚1×178.˚9E±0.˚3,h10km±5km, mb4.8/14,Error ellipse: s-maj=21.5km s-min=16.3km az=57.0*

*GCMT **31** 20:03:29.6±0.3,65.˚23S±0.˚02×178.˚90E±0.˚05,h24km±2km, MW5.0/86,Moment Tensor Solution. s26,c27; s86,c114; Duration: 0 Moment tensor: Scale 10^16^Nm; Mrr0.10±.19; Mθθ2.68±.15; Mφφ-2.78±.15; Mrθ-2.99±.36; Mθφ-0.73±.10; Mφr-0.31±.20; Best double couple: Mo3.91200×10^16^ NP1:φs330.00000°,δ50.00000°,λ10.00000°. NP2: φs234.00000°,δ82.00000°,λ140.00000°. Principal axes: T 4.6740, Plg33.0000°, Azm184.0000°; N -1.5190, Plg49.0000°, Azm45.0000°; P -3.1500, Plg21.0000°, Azm288.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

ISC 31 20:03:27.8±0.8,65.˚13S±0.˚09×179.˚0E±0.˚2,h10km,n49, σ0s81/31,mb4.8/8,MS4.1/10,Balleny Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBA	Scott Base	13.30	191	Pn	Pn	20 06 35.3	-1.0
VNDA	Vanda	13.49	196	Pn	Pn	20 06 39.1	+0.2
	0.7nm,0.3s,baz=52,slow=18,SNR=15						
VNDA				LR	LR	20 10 41.4	
	comp=Z,602nm,19.9s,baz=355,slow=32						
VNDA	Vanda	13.49	196	Pn	Pn	20 06 38.7	-0.2
PYZ	Puysegur Point	20.17	335	P	P	20 08 01.5	-0.5
WHZ	Wether Hill Ro	20.21	337	P	P	20 08 03.2	+0.7
WHZ				IAmb	IAmb	20 08 14.1	
	comp=Z,99nm,1.7s						
MLZ	Mavora Lakes	20.70	338	P	P	20 08 06.1	-1.7
MLZ				IAmb	IAmb	20 08 23.8	
	comp=Z,87nm,1.9s						
DCZ	Deep Cove	20.76	336	P	P	20 08 08.3	-0.1
DCZ				IAmb	IAmb	20 08 15.6	
	comp=Z,63nm,1.5s						
WKZ	Wanaka	21.09	340	P	P	20 08 13.2	+1.2
LBZ	Lake Benmore	21.36	342	P	P	20 08 14.6	-0.3
LBZ				IAmb	IAmb	20 08 22.3	
	comp=Z,102nm,1.9s						
MQZ	McQueen's Vall	21.76	348	P	P	20 08 18.4	-0.7
MQZ				IAmb	IAmb	20 08 58.4	
	comp=Z,84nm,1.9s						
LTZ	Lake Taylor	22.72	347	P	P	20 08 29.6	+0.2
QSPA	South Pole Qui	24.95	180	P	P	20 08 51.6	+0.6
	comp=Z,18nm,1.1s,baz=39,slow=6.4,SNR=24						
QSPA	South Pole Qui	24.95	180	P	P	20 08 51.8	+0.8
QSPA				IAmb	IAmb	20 08 54.0	
	comp=Z,23nm,1.1s						
MAW	Mawson	40.03	212	LR	LR	20 27 28.9	
	comp=Z,750nm,19.4s,baz=122,slow=36						
STKA	Stephens Creek	40.36	307	P	P	20 11 05.8	+0.4
	comp=Z,3.2nm,1.1s,baz=150,slow=10,SNR=2.8						
STKA				LR	LR	20 25 42.5	
	comp=Z,97nm,19.9s,baz=196,slow=33						
STKA	Stephens Creek	40.36	307	P	P	20 11 06.2	+0.9
SNAA	Sanae	43.45	179	P	P	20 11 30.2	0.0
DZM	Mont Dzumac	43.83	343	eLR	LR	20 23 02.6	
	comp=Z,542nm,23.5s						
TBI	Tubuai	46.50	42	eLQ	LQ	20 22 32.1	
	comp=Z,420nm,29.0s						
TBI				eLR	LR	20 24 26.3	
	comp=Z,402nm,29.2s,baz=200						
TBI	Tubuai	46.50	42	eT	T	21 01 14.7	
	comp=Z,20nm,0.3s						
H01W1	Cape Leeuwin H	48.41	276	T	T	21 04 37.7	
	baz=148,slow=76,SNR=21						
H01W2	Cape Leeuwin H	48.41	276	T	T	21 04 38.2	
	baz=148,slow=76,SNR=22						
H01W3	Cape Leeuwin H	48.42	276	T	T	21 04 38.9	
	baz=148,slow=76,SNR=26						
ASAR	Alice Springs	50.55	303	P	P	20 12 26.4	+0.2
	comp=Z,0.8nm,0.5s,baz=155,slow=7.4,SNR=19						
ASAR				LR	LR	20 32 03.0	
	comp=Z,55nm,18.5s,baz=141,slow=34						
ASAR	Alice Springs	50.55	303	P	P	20 12 25.5	-0.7
TVO	Taravao	51.85	40	eT	T	21 07 52.5	
	comp=Z,2.8nm,0.3s						
PPT2	Papeete2	51.95	39	eS	S	20 19 29.9	-30
	comp=Z,97nm,25.5s						
PPT2				eLR	LR	20 26 55.7	
	comp=Z,412nm,29.0s						
PPT	Papeete	51.97	39	LR	LR	20 28 16.7	
	comp=Z,104nm,19.0s,baz=180,slow=29						
WR0	Warramunga Arr	53.74	305	P	P	20 12 49.3	-0.6
WR0				IAmb	IAmb	20 14 29.3	
	comp=Z,25nm,1.5s						
WB2	Warramunga Arr	53.82	305	P	P	20 12 49.5	-1.0
WRA	Warramunga Arr	53.83	305	P	P	20 12 50.2	-0.3
	comp=Z,2.0nm,1.0s,baz=159,slow=6.3,SNR=5.3						
WRA				LR	LR	20 33 55.3	
	comp=Z,150nm,18.4s,baz=145,slow=34						
WB0	Warramunga Arr	53.97	305	P	P	20 12 51.0	-0.5
WB0				IAmb	IAmb	20 14 51.8	
	comp=Z,12nm,1.3s						
VAH	Vaihoa	54.72	41	eT	T	21 11 29.2	
	comp=Z,35nm,0.2s						
BOSA	Boshof	84.36	203	LR	LR	20 51 52.7	
	comp=Z,86nm,18.3s,baz=130,slow=34						
LPAZ	La Paz	84.56	117	LR	LR	20 45 24.5	
	comp=Z,37nm,20.7s,baz=178,slow=30						
H08S2	Diego Garcia H	89.96	252	T	T	21 56 53.7	
	baz=148,slow=76,SNR=14						
H08S1	Diego Garcia H	89.97	252	T	T	21 56 49.8	
H08S3	Diego Garcia H	89.98	252	T	T	21 56 50.8	
	baz=156,slow=76,SNR=16						
H02S1	DAWSON INLET T	123.74	33	T	T	22 38 16.8	
	SNR=33						
H02N1	VAN INLET T-PH	123.77	33	T	T	22 38 20.4	
	SNR=22						
SONM	Songino Array	125.77	308	PKP	PKiKP	20 22 29.0	+0.1
	comp=Z,0.7nm,1.1s,baz=113,slow=2.2,SNR=3.0						
ILAR	Eielson Array	131.97	19	PKP	PKPdf	20 22 39.7	+0.2
	comp=Z,0.8nm,1.0s,baz=230,slow=3.4,SNR=6.1						
ILAR	Eielson Array	131.97	19		PKiKP	20 22 40.1	-0.4
YKA	Yellowknife Ar	136.39	38	PKP	PKPdf	20 22 46.6	-1.2
	comp=Z,0.1nm,0.5s,baz=217,slow=2.9,SNR=2.6						
KARP	Karpathos	145.94	229		PKPdf	20 23 05.6	-0.4
BRTR	Keskin Array B	147.69	235	PKPbc	PKPdf	20 23 09.2	+0.3
	comp=Z,0.7nm,0.8s,baz=135,slow=3.6,SNR=4.6						
BRTR	Keskin Array B	147.69	235		PKPdf	20 23 08.7	-0.2
RES	Resolute Bay	150.00	32	PKPbc	PKiKP	20 23 16.7	-0.5
	comp=Z,2.7nm,1.0s,baz=245,slow=6.9,SNR=5.6						
RES	Resolute Bay	150.00	32		PKPdf	20 23 13.6	+2.2

*IDC **31** 20:06:44.4±1.5,43.˚58N×105.˚37W,h0km,mb3.9/3, mb1 3.8/9,mb1mx3.5/39,mbtmp3.6/9,ML3.4/6,Error ellipse: s-maj=35.0km s-min=8.5km az=150.0*

*NEIC **31** 20:06:45.8±2.0,43.˚76N±0.˚05×105.˚30W±0.˚07,h0km±2km, ML3.4/73,Error ellipse: s-maj=9.5km s-min=7.0km az=319.0*

ISC 31 20:06:44.6±0.8,43.˚78N±0.˚07×105.˚25W±0.˚06,h0km,n84, σ1s21/78,mb4.0/3,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.94	68		Pb	20 07 04.2	+0.2
K22A	Casper	1.46	220		Pn	20 07 11.3	-1.1
K22A				IAML		20 07 34.6	
	comp=E,392nm,0.3s						
K22A				IAML		20 07 36.4	
	comp=N,466nm,0.5s						
PHWY	Pilot Hill	2.48	184		Pn	20 07 27.7	+1.2
RWWY	Rawlins	2.54	215		Pn	20 07 28.9	+1.6
RWWY				IAML		20 08 04.1	
	comp=N,184nm,1.6s						
RWWY				IAML		20 08 05.9	
	comp=N,232nm,0.5s						
N23A	Red Feather La	2.93	190		Pn	20 07 34.1	+1.4
N23A				IAML		20 08 20.8	
	comp=E,87nm,0.5s						
N23A				IAML		20 08 22.4	
	comp=N,112nm,0.6s						
LAO	LASA Array	2.99	347		Pn	20 07 34.1	+0.8
LAO				IAML		20 08 20.0	
	comp=N,200nm,0.8s						
RLMT	Red Lodge	3.17	296		Pn	20 07 36.7	+0.7
RLMT				IAML		20 08 30.8	
	comp=N,91nm,0.4s						
RLMT				IAML		20 08 34.2	
	comp=N,85nm,0.4s						
PD31	Pinedale Array	3.30	254		Pn	20 07 38.1	+0.3
PDAR	Pinedale Array	3.30	254	Pn	Pn	20 07 38.8	+1.0
	comp=N,5.7nm,0.3s,baz=68,slow=16,SNR=101						
PDAR				Lg	Lg	20 08 22.5	
	comp=N,15nm,0.3s,baz=211,slow=45,SNR=2.4						
YNE	Yellowstone No	3.62	291		Pn	20 07 42.2	0.0
YMP	Mirror Lake Pl	3.65	287		Pn	20 07 43.3	+0.7
GCMT	Greyclift	3.73	304		Pn	20 07 45.1	+1.5
LKWY	Lake	3.79	284		Pn	20 07 45.6	+1.2
LKWY				IAML		20 08 12.3	
	comp=N,62nm,0.5s						
LKWY				IAML		20 08 51.5	
	comp=N,39nm,1.4s						
H17A	Grant Village	3.88	281		Pn	20 07 47.8	+1.9
H17A				IAML		20 08 49.7	
	comp=N,40nm,0.7s						
H17A				IAML		20 08 52.5	
	comp=E,37nm,1.8s						
YUF	Upper Falls	3.89	286		Pn	20 07 46.1	+0.2
FLWY	Flagg Ranch	3.95	276		Pn	20 07 47.4	+0.8
FLWY				IAML		20 09 03.2	
	comp=E,70nm,1.7s						
MOOW	Moose Ponds	3.98	271		Pn	20 07 49.0	+1.9
ISCO	Idaho Springs	3.98	184		Pn	20 07 49.0	+1.7
SNOW	Snow King Moun	4.01	267		Pn	20 07 49.1	+1.6
SNOW				IAML		20 09 04.1	
	comp=E,65nm,1.7s						
SNOW				IAML		20 09 21.9	
	comp=E,60nm,1.6s						
YNR	Norris Junctio	4.01	285		Pn	20 07 48.6	+1.1
YPP	Pitchstone Pla	4.03	279		Pn	20 07 48.6	+0.7
REDW	Red Top Meadow	4.09	266		Pn	20 07 50.0	+1.3
REDW				IAML		20 08 57.6	
	comp=E,60nm,1.3s						
REDW				IAML		20 09 01.1	
	comp=E,67nm,1.6s						
IMW	Indian Meadow	4.12	274		Pn	20 07 49.6	+0.6
IMW				IAML		20 08 20.2	
	comp=E,70nm,0.5s						
YHH	Holmes Hill	4.14	286		Pn	20 07 50.0	+0.5
TPAW	Teton Pass	4.15	268		Pn	20 07 49.6	+0.2
TPAW				IAML		20 09 06.6	
	comp=E,50nm,1.0s						
TPAW				IAML		20 09 15.6	
	comp=E,33nm,1.3s						
FXWY	Fox Creek	4.19	270		Pn	20 07 51.3	+1.3
YMR	Madison River	4.20	284		Pn	20 07 52.0	+1.9
O20A	White River Ci	4.27	212		Pn	20 07 51.3	+0.3
O20A				IAML		20 09 43.9	
	comp=E,51nm,2.1s						
YHB	Horse Butte	4.38	285		Pn	20 07 52.9	+0.3
AHID	Auburn Hatcher	4.39	259		Pn	20 07 54.2	+1.5
AHID				IAML		20 09 08.0	
	comp=N,66nm,2.0s						
AHID				IAML		20 09 22.9	
	comp=E,45nm,1.4s						
YHL	Hebgen Lake	4.39	286		Pn	20 07 53.6	+0.8
RDMU	Red Mountain	4.53	226		Pn	20 07 56.2	+1.5
QLMT	Earthquake Lak	4.56	285		Pn	20 07 55.2	+0.2
SUSD	Miller	4.58	79	Pn	Pb	20 08 03.5	-2.5
DGMT	Dagmar	4.75	9		Pn	20 07 59.5	+2.0
SMCO	Snowmass	4.78	196		Pn	20 07 59.6	+1.4
SMCO				IAML		20 09 25.4	
	comp=E,28nm,1.2s						
Q24A	Divide	4.81	179		Pn	20 07 59.8	+1.2
Q24A				IAML		20 09 19.6	
	comp=E,22nm,0.4s						
HWUT	Hardware Ranch	5.13	247		Pn	20 08 04.0	+1.1
HWUT				IAML		20 09 40.8	
	comp=E,39nm,1.2s						
KSCO	Kaye Shedlock'	5.16	157		Pn	20 08 03.6	+0.5
TCUT	Toone Canyon	5.27	242		Pn	20 08 05.0	+0.1
EGMT	Eagleton	5.28	325		Pn	20 08 06.0	+1.1
DLMT	Dillon	5.48	289		Pn	20 08 01.6	-6.0
LRM	Limekiln Ridge	5.51	294		Pn	20 08 09.1	+0.9
MCMT	McKenzie Canyo	5.55	284		Pn	20 08 09.8	+1.1
JLU	Jordanelle	5.59	238		Pn	20 08 10.0	+0.7
MDND	Maddock	5.67	42		Pn	20 08 10.8	+0.7
CTU	Camp Tracy	5.72	240		Pn	20 08 09.4	-1.6
BGNE	Belgrade	5.75	112		Pn	20 08 15.7	+4.4
SPUT	South Promonto	5.86	248		Pn	20 08 13.4	+0.5
P17A	Butcher Ranch,	5.95	226		Pn	20 08 08.0	-6.1
SRU	San Rafael Swe	6.12	222		Pn	20 08 15.7	-0.7
ECSD	EROS Data Cent	6.26	87	Pn	Pn	20 08 20.2	+2.0
TMUT	Trail Mountain	6.33	227		Pn	20 08 19.7	+0.3
NLU	North Lily Min	6.37	235		Pn	20 08 11.1	-8.8
BGU	Big Grassy Mou	6.43	246		Pn	20 08 20.2	-0.5
CBKS	Cedar Bluff	6.47	138		Pn	20 08 21.2	+0.1
Q16A	Castle Valley	6.59	225		Pn	20 08 23.6	+0.7
T25A	Trinidad	6.66	174		Pn	20 08 23.0	-0.9
DUG	Dugway, Tooele	6.67	240		Pn	20 08 23.6	-0.5
MSO	Missoula	6.84	299	Pn	Pn	20 08 26.4	0.0
MVCO	Mesa Verde	7.01	202		Pn	20 08 31.0	+2.2
MSU	Marysvale	7.41	227		Pn	20 08 34.1	-0.1
MTPU	Mount Pierson	7.77	225	Pn	Pn	20 08 38.5	-0.8
MTPU					LR	20 10 51.2	
AGMN	Agassiz Nation	7.94	52		Pn	20 08 43.5	+2.2
ELK	Elko	8.00	251	Pn	Pn	20 08 43.3	+1.0
	comp=E,0.2nm,0.3s,baz=117,slow=10,SNR=3.0						
ELK	Elko	8.00	251		Pn	20 08 42.9	+0.5
PKCU	Pink Cliffs	8.29	223		Sb	20 10 46.4	-2.3
PSUT	Pine Spring	8.34	234		Pn	20 08 48.3	+1.4
CCUT	Cedar City	8.75	227		Pn	20 08 53.8	+1.2
I10CA	LAC DU BONNET	9.00	41	*i*		21 02 20.0	
	baz=216,slow=327,SNR=1.3						
ULM	Lac du Bonnet	9.10	41	Pn	Pn	20 08 58.3	+1.1
	comp=E,1.0nm,0.3s,baz=233,slow=12,SNR=12						
ULM				Pg		20 09 28.2	
	comp=E,0.6nm,0.3s,baz=218,slow=15,SNR=3.4						
ULM				Lg	Lg	20 11 31.4	
	comp=E,0.6nm,0.3s,baz=134,slow=22,SNR=2.4						
ULM	Lac du Bonnet	9.10	41		Pn	20 08 57.7	+0.6
U15A	North Rim	9.11	219	Pn	Pn	20 08 56.9	-0.7
NEW	Newport	9.39	303	Pn	Pn	20 09 01.8	+0.6
	comp=E,0.3nm,0.3s,baz=87,slow=16,SNR=1.5						
NEW	Newport	9.39	303		Pn	20 09 00.6	-0.7
FFC	Flin Flon	11.16	10		Pn	20 09 25.0	-0.3
NVAR	Mina Array Bea	11.20	246	Pn	Pn	20 09 27.3	+1.1
	comp=E,0.3nm,0.3s,baz=46,slow=13,SNR=2.9						
TXAR	Lajitas Array	14.47	174	Pg	P	20 11 14.2	+56
	comp=E,0.0nm,0.3s,baz=0.0,slow=13,SNR=2.7						
WCI	Wyandotte Cave	15.34	105		S	20 13 30.1	+0.4
T49A	Edmonton	16.41	107		S	20 13 50.6	-0.9
YKA	Yellowknife Ar	19.53	347	P	P	20 11 13.4	+0.1
	comp=E,0.1nm,0.3s,baz=166,slow=13,SNR=5.6						
ARCES	ARCESS Array B	61.38	18	P	P	20 17 01.7	-0.1
	comp=E,2.0nm,0.7s,baz=327,slow=6.2,SNR=4.2						
ZALV	Zalesovo Beam	82.27	354	P	P	20 19 07.2	-0.3
	comp=E,0.5nm,0.5s,baz=0.4,slow=6.5,SNR=3.0						
MKAR	Makanchi Array	89.56	355	P	P	20 19 43.8	0.0
	comp=E,0.3nm,0.6s,baz=10,slow=4.1,SNR=5.7						

MAN 31 20:14:34.1,9.˚82N×123.˚82E,h22km,mb3.6,ML2.3,MS1.8, 1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.51	16	⇓eP	Pb	20 14 45.0	+0.5
LLP				*i* S	Sb	20 14 52.2	+0.7
MSLP	Maasin	1.07	73	eP	Pn	20 14 53.5	-0.3
MSLP				eS	Sn	20 15 07.7	-0.1

*TAP **31** 20:34:39.0,24.˚64N×122.˚28E,h10km,ML3.0,C*

*JMA **31** 20:34:39.9,24.˚59N×122.˚22E,h30km±5km,M2.5*

ISC 31 20:34:38.5±1.1,24.˚69N±0.˚02×122.˚33E±0.˚02,h7km±8km, n99,σ0s94/177,1C-2D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.23	232	eP	Pg	20 34 43.5	+0.4
	baz=236						
EOS1				eS	Sg	20 34 46.8	+0.6
	baz=236						
TWB1	Santiao Chiao	0.44	316	P	Pb	20 34 48.4	-0.3
	baz=324						
TWB1				eS	Sb	20 34 55.4	-0.1
	baz=324						
TWC	Suao	0.44	260	⇓P	Pg	20 34 46.3	-0.8
	baz=264						
TWC				S	Sg	20 34 53.3	+0.3
	baz=264						
ILA	Ilan	0.53	278	eP	Pg	20 34 49.3	+0.4
	baz=272						
ILA				eS	Sg	20 34 57.0	+1.2
	baz=272						
TIPB	Shuangxi	0.54	302	P	Pb	20 34 49.7	-0.6
	baz=300						
TIPB				eS	Sb	20 34 58.9	+0.7
	baz=300						
NANB	Nanao	0.59	244	⇓P	Pg	20 34 48.9	-1.0
	baz=253						
NANB				S	Sg	20 34 56.3	-1.2
	baz=253						
ENA	Nanau	0.59	244	P	Pg	20 34 49.0	-1.0
	baz=253						
ENA				S	Sg	20 34 57.3	-0.5
	baz=253						
TWE	Neicheng	0.60	273	⇑P	Pg	20 34 49.7	-0.5
	baz=277						
TWE				S	Sg	20 34 57.9	-0.2
	baz=277						
JYNG	Yonagunijimaku	0.61	113	P	Pb	20 34 52.6	+1.1
JYNG				S	Sn	20 35 02.3	-1.3
NWF	Wu-fen Shan	0.62	308	P	Pn	20 34 53.0	-0.9
	baz=305						
NWF				S	Sn	20 35 01.8	-2.3
	baz=305						
WFSB	Wu-fen Shan	0.62	308	eP	Pn	20 34 52.7	-1.1
	baz=305						
WFSB				eS	Sn	20 35 01.8	-2.2
	baz=305						
SLBB	Yuanshan	0.63	276	P	Pg	20 34 50.7	-0.1
	baz=280						
SLBB				S	Sg	20 34 59.9	+0.8
	baz=280						
YOJ	Yonaguni jima	0.66	110	eP	Pn	20 34 53.7	-0.6
	baz=96						
YOJ	Yonaguni jima	0.66	110	P	Pn	20 34 53.6	-0.7
YOJ				S	Sn	20 35 04.4	-0.5
ENTT	Nioudou	0.69	266	P	Pg	20 34 51.6	-0.3
	baz=259						
ENTT				eS	Sg	20 35 00.0	-0.9
	baz=259						
TWA	Mucha	0.73	293	P	Pb	20 34 53.3	-0.4
	baz=289						
TWA				eS	Sg	20 35 02.4	+0.1
	baz=289						
NDT	Datong Townshi	0.75	263	P	Pg	20 34 52.9	0.0
	baz=266						
NDT				eS	Sg	20 35 01.3	-1.3
	baz=266						
NWLT	Wulai	0.76	277	P	Pb	20 34 54.2	+0.2
	baz=280						
NWLT				eS	Sg	20 35 02.2	-0.7
	baz=280						
NHDH	Xindian Distri	0.78	291	P	Pb	20 34 54.9	+0.5
	baz=286						
NHDH				S	Sg	20 35 04.0	+0.3
	baz=286						
TATO	Taipei	0.81	291	eP	Pb	20 34 54.8	-0.2
	baz=286						
TATO				eS	Sg	20 35 04.2	-0.6
	baz=286						
TAP	Taipei	0.82	295	eP	Pn	20 34 55.7	-0.9
	baz=291						
TAP				eS	Sg	20 35 05.5	+0.4
	baz=291						
YM01	YM01	0.82	304	P	Pn	20 34 55.9	-0.7
	baz=307						
YM01				S	Sb	20 35 06.8	+0.3
	baz=307						
YM11	YM11	0.83	305	P	Pn	20 34 56.0	-0.7
	baz=309						
YM11				S	Sn	20 35 08.7	-0.6
	baz=309						
YM08	YM08	0.83	307	P	Pn	20 34 55.8	-0.9
	baz=311						
YM08				S	Sb	20 35 07.1	+0.3
	baz=311						
YM10	YM10	0.84	304	P	Pn	20 34 56.2	-0.6
	baz=308						
YM10				S	Sn	20 35 08.1	-1.3
	baz=308						
YM05	YM05	0.84	304	eP	Pn	20 34 56.0	-0.8
	baz=308						
YM05				eS	Sn	20 35 08.3	-1.1
	baz=308						
NACB	Ninganchiao	0.84	233	eP	Pg	20 34 53.4	-1.3
	baz=233						
YM04	YM04	0.85	303	eP	Pn	20 34 56.4	-0.6
	baz=307						
YM04				eS	Sb	20 35 07.8	+0.4
	baz=307						
YM03	YM03	0.86	304	eP	Pn	20 34 56.9	-0.3
	baz=308						
YM03				eS	Sn	20 35 09.5	-0.6
	baz=308						
YHNB	Yeheng	0.87	269	eP	Pg	20 34 54.9	-0.3
	baz=271						
YHNB				eS	Sg	20 35 04.8	-1.6
	baz=271						
TWY	Chenhua	0.88	312	P	Pn	20 34 57.5	+0.2
	baz=316						
TWY				S	Sn	20 35 09.3	-1.1
	baz=316						
NSK	Sanguang	0.88	269	P	Pg	20 34 55.5	0.0
	baz=271						
NSK				eS	Sg	20 35 05.5	-1.5
	baz=271						
NNSB	Datong	0.90	253	eP	Pg	20 34 54.7	-1.1
	baz=254						
NNSB				eS	Sg	20 35 06.0	-1.5
	baz=254						
NNSH	Datong	0.90	253	eP	Pg	20 34 54.8	-1.1
	baz=255						
NNSH				eS	Sg	20 35 06.2	-1.4
	baz=255						
TWD	Chiawan	0.90	228	eP	Pg	20 34 54.9	-0.9
	baz=236						
TWD				eS

	baz=198								
ENLB				*e*S		**Sn**	**20 35 14.3**	**+0.4**	
	baz=198								
NCU	**National Centr**	**1.07 285**		*e*P		**Pn**	**20 35 01.1**	**+1.2**	
	baz=287								
NCU				*e*S		**Sn**	**20 35 15.1**	**0.0**	
	baz=287								
NCUH	**Zhongli**	**1.07 285**		*e*P		**Pn**	**20 35 01.1**	**+1.1**	
	baz=287								
NCUH				*e*S		**Sn**	**20 35 15.2**	**0.0**	
	baz=287								
WHF	**Hehuan Shan**	**1.11 241**		P		**Pb**	**20 34 58.8**	**-1.5**	
	baz=240								
WHF				*e*S		**Sg**	**20 35 12.9**	**-1.4**	
	baz=240								
TDCB	**Techi**	**1.15 248**		*e*P		**Pb**	**20 35 00.3**	**-0.5**	
	baz=248								
TDCB				*e*S		**Sb**	**20 35 13.9**	**-2.2**	
	baz=248								
ESL	**Shilin**	**1.19 223**		P		**Pn**	**20 35 01.2**	**-0.4**	
	baz=210								
ESL				*e*S		**Sg**	**20 35 18.6**	**+1.6**	
	baz=210								
LIOB	**Emei**	**1.19 268**		P		**Pg**	**20 35 02.2**	**+0.8**	
	baz=261								
LIOB				*e*S		**Sg**	**20 35 17.7**	**+0.7**	
	baz=261								
NSTT	**Nanjuang**	**1.21 268**		P		**Pg**	**20 35 02.3**	**+0.5**	
	baz=260								
NSTT				S		**Sb**	**20 35 17.6**	**+0.1**	
	baz=260								
CHGB	**Renai**	**1.22 239**		*e*P		**Pn**	**20 35 01.1**	**-1.1**	
	baz=248								
CHGB				*e*S		**Sb**	**20 35 16.4**	**-1.8**	
	baz=248								
SBCB	**Hsinchu**	**1.23 275**		*e*P		**Pg**	**20 35 03.2**	**+1.1**	
	baz=297								
SBCB				*e*S		**Sn**	**20 35 19.5**	**+0.7**	
	baz=297								
EGFH	**Guangfu**	**1.31 219**		*e*P		**Pn**	**20 35 03.9**	**+0.7**	
	baz=199								
EGFH				*e*S		**Sb**	**20 35 20.8**	**+0.4**	
	baz=199								
WHP	**Taichung City**	**1.32 252**		*e*P		**Pb**	**20 35 04.4**	**+0.6**	
	baz=252								
WHP				*e*S		**Sb**	**20 35 20.6**	**-0.4**	
	baz=252								
IRIF	**Iriomote-Funau**	**1.32 105**		P		**Pn**	**20 35 03.6**	**+0.2**	
IRIF				*e*S		**Sg**	**20 35 21.8**	**+0.6**	
NMLH	**Miaoli**	**1.41 264**		*e*P		**Pg**	**20 35 05.9**	**+0.3**	
	baz=257								
NMLH				*e*S		**Sg**	**20 35 25.6**	**+1.8**	
	baz=257								
VWDT	**VWDT**	**1.43 230**		*e*P		**Pn**	**20 35 05.6**	**+0.7**	
	baz=234								
VWDT				*e*S		**Sb**	**20 35 24.9**	**+1.1**	
	baz=234								
DPDB	**Guoxing**	**1.44 243**		P		**Pn**	**20 35 05.5**	**+0.5**	
	baz=242								
DPDB				S		**Sn**	**20 35 24.4**	**+0.3**	
	baz=242								
NSY	**Sanyi**	**1.45 260**		*e*P		**Pg**	**20 35 07.3**	**+0.9**	
	baz=259								
NSY				S		**Sg**	**20 35 26.8**	**+1.5**	
	baz=259								
TWQ1	**Liyutan**	**1.46 257**		*e*P		**Pg**	**20 35 07.7**	**+1.2**	
	baz=264								
TWQ1				S		**Sg**	**20 35 26.1**	**+0.7**	
	baz=264								
EHY	**Hungye**	**1.49 218**		*e*P		**Pn**	**20 35 04.9**	**-0.9**	
	baz=215								
EHY				*e*S		**Sn**	**20 35 26.2**	**+0.7**	
	baz=215								
PTSB	**Yuanli**	**1.50 261**		*e*S		**Sg**	**20 35 27.5**	**+0.8**	
	baz=260								
SSLB	**Suanglung**	**1.54 235**		*e*P		**Pn**	**20 35 06.6**	**+0.2**	
	baz=241								
SSLB				*e*S		**Sb**	**20 35 27.7**	**+0.5**	
	baz=241								
TYC	**Yuchr**	**1.55 240**		P		**Pb**	**20 35 07.9**	**+0.3**	
	baz=245								
TYC				*e*S		**Sb**	**20 35 27.9**	**+0.4**	
	baz=245								
WDJ	**Dajia District**	**1.57 258**		*e*S		**Sg**	**20 35 30.2**	**+1.0**	
	baz=249								
JKRS	**Kuro-shima**	**1.60 106**		P		**Pn**	**20 35 07.9**	**+0.7**	
JKRS				S		**Sn**	**20 35 28.3**	**+0.3**	
YULB	**Yu-li**	**1.60 216**		*e*P		**Pn**	**20 35 05.9**	**-1.3**	
	baz=213								
YULB				*e*S		**Sn**	**20 35 26.3**	**-1.8**	
	baz=213								
TWF1	**Yuli**	**1.63 215**		*e*P		**Pn**	**20 35 06.9**	**-0.8**	
	baz=201								
WHYT	**Xinyi Township**	**1.67 234**		*e*P		**Pb**	**20 35 10.1**	**+0.5**	
	baz=218								
JIJ	**Ishigaki jima**	**1.69 101**		P		**Pb**	**20 35 09.3**	**-0.5**	
JIJ				S		**Sn**	**20 35 29.4**	**-0.8**	
WNT	**Mingjian**	**1.70 242**		*e*P		**Pb**	**20 35 10.9**	**+0.8**	
	baz=220								
WNT				*e*S		**Sg**	**20 35 34.4**	**+1.1**	
	baz=220								
YUS	**Yu-Shan**	**1.73 227**		*e*P		**Pn**	**20 35 10.2**	**+0.6**	
	baz=226								
FULB	**Fuli**	**1.76 213**		*e*P		**Pn**	**20 35 08.7**	**-0.7**	
	baz=195								
FULB				*e*S		**Sn**	**20 35 31.4**	**-0.7**	
	baz=195								
JISG	**Ishigakijimahi**	**1.81 93**		P		**Pn**	**20 35 10.8**	**+0.7**	
JISG				S		**Sb**	**20 35 34.8**	**0.0**	
ALS	**Alishan**	**1.82 230**		*e*P		**Pb**	**20 35 12.0**	**-0.3**	
	baz=213								
CHN5	**Tsauling**	**1.86 235**		*e*P		**Pb**	**20 35 13.3**	**+0.5**	
	baz=216								
WGK	**Gukeng**	**1.90 239**		*e*P		**Pb**	**20 35 14.1**	**+0.6**	
	baz=216								
WGK				*e*S		**Sg**	**20 35 40.1**	**+0.6**	
	baz=216								
ELDTW	**Lidau**	**1.92 219**		*e*P		**Pn**	**20 35 11.7**	**0.0**	
	baz=202								
ELDTW				*e*S		**Sn**	**20 35 34.3**	**-1.8**	
	baz=202								
RLNB	**Erlin**	**1.96 247**		*e*S		**Sb**	**20 35 39.7**	**+0.4**	
	baz=262								
CHN4	**Tsaushan**	**2.07 230**		*e*P		**Pb**	**20 35 16.2**	**-0.3**	
	baz=211								
CHN4				*e*S		**Sb**	**20 35 43.9**	**+1.5**	
	baz=211								
TPUB	**Ta-pu**	**2.08 229**		*e*P		**Pn**	**20 35 15.7**	**+1.9**	
	baz=209								
TPUB				*e*S		**Sn**	**20 35 41.7**	**+1.7**	
	baz=209								
TWH	**Lutao**	**2.12 202**		*e*P		**Pn**	**20 35 13.8**	**-0.5**	
	baz=198								
TWH				*e*S		**Sn**	**20 35 38.5**	**-2.5**	
	baz=198								
WTP	**Ta-pu**	**2.13 228**		*e*P		**Pb**	**20 35 16.6**	**-0.8**	
	baz=207								
WTP				*e*S		**Sb**	**20 35 43.8**	**-0.3**	
	baz=207								
TWGBT	**Beinan**	**2.19 212**		*e*P		**Pn**	**20 35 15.3**	**+0.1**	
	baz=209								
TWGBT				*e*S		**Sn**	**20 35 41.4**	**-1.2**	
	baz=209								
TWG	**Pinlang**	**2.19 212**		*e*P		**Pn**	**20 35 15.2**	**-0.1**	
	baz=209								
TWG				*e*S		**Sn**	**20 35 41.2**	**-1.4**	
	baz=209								
WSF	**Szhu**	**2.19 242**		*e*S		**Sb**	**20 35 46.4**	**+0.6**	
	baz=238								
TWK	**Hsinying**	**2.20 230**		*e*P		**Pb**	**20 35 17.9**	**-0.7**	
	baz=209								
TWK				*e*S		**Sb**	**20 35 46.8**	**+0.6**	
	baz=209								
CHN1	**Nanshi**	**2.23 228**		P		**Pb**	**20 35 18.2**	**-0.9**	
	baz=207								
CHN1				*e*S		**Sb**	**20 35 47.0**	**+0.2**	
	baz=207								
SGST	**Jiashian**	**2.26 225**		*e*P		**Pn**	**20 35 17.1**	**+0.8**	
	baz=207								
SGST				*e*S		**Sb**	**20 35 47.3**	**-0.5**	
	baz=207								
PTTC	**Pingtan**	**2.46 290**		*e*P		**Pn**	**20 35 20.0**	**+1.1**	
	baz=291								
SSD	**Sandimen**	**2.48 219**		*e*P		**Pn**	**20 35 21.8**	**+2.5**	
	baz=205								
SSD				*e*S		**Sn**	**20 35 50.5**	**+0.6**	
	baz=205								
MASBT	**Mashibuluo**	**2.59 217**		*e*P		**Pn**	**20 35 21.9**	**+1.1**	
	baz=202								
MASBT				*e*S		**Sn**	**20 35 53.4**	**+0.9**	
	baz=202								
PNG	**Penghu**	**2.77 247**		*e*P		**Pn**	**20 35 24.1**	**+0.9**	
	baz=246								
PHUB	**P'eng-hu**	**2.78 246**		*e*P		**Pn**	**20 35 23.8**	**+0.4**	
	baz=241								
PHUB				*e*S		**Sn**	**20 35 57.4**	**+0.2**	
	baz=241								
SCZT	**Fangliau**	**2.79 215**		*e*P		**Pn**	**20 35 25.2**	**+1.6**	
	baz=200								
WDGT	**Dungji**	**2.83 240**		*e*P		**Pn**	**20 35 25.3**	**+1.2**	
	baz=240								
PTMZ	**Houxiangcun**	**2.93 277**		*e*P		**Pn**	**20 35 26.3**	**+0.8**	
	baz=279								
KNMB	**Chin-men Tao**	**3.59 267**		*e*P		**Pn**	**20 35 34.3**	**-0.3**	
	baz=269								
AXDP	**Jialang**	**3.97 274**		*e*P		**Pn**	**20 35 40.3**	**+0.6**	
	baz=275								
ZZJH	**Jiuhuzhen**	**4.28 268**		*e*P		**Pn**	**20 35 45.8**	**+1.7**	
	baz=269								

*IDC **31** 20:40:48.8±1.1,38.56N×20.40E,h0km,mb3.7/5, mb1 3.6/10,mb1mx3.4/57,mbtmp3.5/10,ML3.9/2,MS2.8/1, Ms1 2.9/1,ms1mx2.2/58,Error ellipse: s-maj=21.6km s-min=18.4km az=164.0*
*PDG **31** 20:40:50.2±0.7,38.52N×20.33E,h14km±2km,ML3.6/13, Error ellipse: s-maj=2.4km s-min=1.9km az=90.0*
*THE **31** 20:40:50.9,38.42N×20.46E,h9km±1km,ML3.3/9,Error ellipse: s-maj=1.0km s-min=0.3km az=128.0*
*ATH **31** 20:40:50.7,38.42N×20.51E,h11km±1km,ML3.3/25,Error ellipse: s-maj=1.6km s-min=0.6km az=279.0*

ISC 31 20:40:50.2±0.7,38.44N±0.02×20.44E±0.03,h13km±4km, n113,σ1§30/166,mb3.7/5,5C-8D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FSK	**Fiskardo**	**0.10**	**76**	P	**Pg**	**20 40 52.8**	**-0.3**
FSK				S	**Sg**	**20 40 54.5**	**-0.7**
	28μm,0.3s						
FSK	**Fiskardo**	**0.10**	**76**	P	**Pg**	**20 40 52.8**	**-0.3**
FSK				S	**Sg**	**20 40 54.9**	**-0.3**
FSK				AML	AML	20 40 55.3	
	comp=E,64062μm,0.3s						
FSK				AML	AML	20 40 58.3	
	comp=N,47957μm,0.4s						
VSK1	**VASILIKIADES**	**0.10**	**105**	P	**Pg**	**20 40 52.7**	**-0.5**
VSK1				S	**Sg**	**20 40 54.7**	**-0.6**
KEF1	**Kardakata, Kep**	**0.16**	**172**	P	**Pg**	**20 40 53.9**	**-0.1**
KEF1				S	**Sg**	**20 40 56.6**	**+0.1**
KEF4	**Livadi, Kephal**	**0.18**	**185**	P	**Pg**	**20 40 54.4**	**+0.1**
KEF4				S	**Sg**	**20 40 57.5**	**+0.4**
LXR1	**Lixouri, Cepha**	**0.23**	**181**	P	**Pg**	**20 40 55.5**	**+0.3**
LXR1				S	**Sg**	**20 40 59.1**	**+0.5**
KEF3	**Kipouria, Keph**	**0.24**	**198**	P	**Pg**	**20 40 55.4**	**+0.1**
KEF3				S	**Sg**	**20 40 59.4**	**+0.5**
EVGl	**Lefkada island**	**0.25**	**42**	P	**Pg**	**20 40 55.8**	**+0.3**
EVGl				S	**Sg**	**20 40 59.8**	**+0.7**
EVGl	**Lefkada island**	**0.25**	**42**	P	**Pg**	**20 40 55.8**	**+0.3**
EVGl				S	**Sg**	**20 40 59.4**	**+0.3**
CHV1	**Chavriata, Kef**	**0.26**	**191**	P	**Pg**	**20 40 55.8**	**+0.2**
CHV1				S	**Sg**	**20 41 00.2**	**+1.0**
ARG2	**Argostoli**	**0.26**	**172**	P	**Pg**	**20 40 55.6**	**0.0**
ARG2				S	**Sg**	**20 40 59.7**	**+0.4**
KEF2	**Argostoli. Kep**	**0.27**	**173**	P	**Pg**	**20 40 56.0**	**+0.2**
KEF2				S	**Sg**	**20 40 59.9**	**+0.3**
VLS	**Valsamata**	**0.28**	**156**	P	**Pg**	**20 40 56.0**	**-0.1**
VLS				S	**Sg**	**20 41 00.3**	**+0.3**
	comp=N,10μm,0.3s						
VLS	**Valsamata**	**0.28**	**156**	P	**Pg**	**20 40 56.0**	**-0.1**
VLS				S	**Sg**	**20 40 59.8**	**-0.2**
VLS				AML	AML	20 41 00.6	
	comp=E,16134μm,0.3s						
VLS				AML	AML	20 41 04.4	
	comp=N,22218μm,0.4s						
MGNA	**Meganis**	**0.35**	**51**	P	**Pg**	**20 40 57.4**	**+0.1**
MGNA				S	**Sg**	**20 41 02.0**	**-0.1**
MGNA				AML	AML	20 41 03.3	
	comp=N,10904μm,0.2s						
MGNA				AML	AML	20 41 04.0	
	comp=E,11923μm,0.1s						
LKD2	**Lefkada island**	**0.39**	**25**	P	**Pg**	**20 40 58.2**	**+0.2**
LKD2				S	**Sb**	**20 41 04.7**	**-0.3**
	comp=E,6μm,0.7s						
LKD2	**Lefkada island**	**0.39**	**25**	P	**Pg**	**20 40 58.3**	**+0.2**
LKD2				S	**Sg**	**20 41 04.0**	**+0.7**
LKD2				AML	AML	20 41 05.2	
	comp=E,10665μm,0.7s						
LKD2				AML	AML	20 41 05.4	
	comp=N,13073μm,0.8s						
TSLK	**Tsoukalades, L**	**0.42**	**23**	P	**Pg**	**20 40 59.0**	**+0.4**
TSLK				S	**Sb**	**20 41 06.2**	**+0.3**
	comp=N,7μm,0.5s						
TSLK	**Tsoukalades, L**	**0.42**	**23**	P	**Pg**	**20 40 59.0**	**+0.4**
TSLK				S	**Sb**	**20 41 05.2**	**-0.6**
AST1	**Astakos**	**0.52**	**78**	P	**Pg**	**20 41 00.6**	**+0.2**
AST1				S	**Sb**	**20 41 08.9**	**+0.4**
VLMS	**Volimes, Zakyn**	**0.58**	**163**	P	**Pg**	**20 41 01.3**	**-0.3**
VLMS				S	**Sg**	**20 41 09.5**	**+0.1**
VLMS				AML	AML	20 41 11.0	
	comp=N,22078μm,0.4s						
VLMS				AML	AML	20 41 14.7	
	comp=E,16658μm,0.5s						
PDO	**Prodromos**	**0.60**	**74**	P	**Pg**	**20 41 02.0**	**0.0**
PDO				S	**Sb**	**20 41 11.1**	**+0.1**
	comp=E,5μm,0.4s						
PDO	**Prodromos**	**0.60**	**74**	P	**Pg**	**20 41 01.9**	**-0.1**
PDO				AML	AML	20 41 15.7	
	comp=E,6130μm,0.3s						
PDO				AML	AML	20 41 16.6	
	comp=N,8150μm,0.4s						
KRI1	**kERI**	**0.83**	**159**	P	**Pg**	**20 41 05.4**	**-0.8**
KRI1				S	**Sb**	**20 41 17.4**	**0.0**
PVO	**Paravola**	**0.87**	**78**	P	**Pb**	**20 41 07.2**	**+0.1**
PVO				S	**Sb**	**20 41 19.3**	**+0.6**
	comp=N,3μm,0.6s						
PVO	**Paravola**	**0.87**	**78**	P	**Pb**	**20 41 07.2**	**+0.1**
PVO				AML	AML	20 41 27.3	
	comp=N,5430μm,0.6s						
PVO				AML	AML	20 41 27.8	
	comp=E,5650μm,0.5s						
RLS	**Riolos of Patr**	**0.89**	**115**	P	**Pg**	**20 41 07.0**	**-0.4**
RLS				S	**Sn**	**20 41 20.2**	**-0.9**
	comp=E,1μm,0.4s						
RLS	**Riolos of Patr**	**0.89**	**115**	P	**Pg**	**20 41 06.5**	**-0.8**
RLS				AML	AML	20 41 27.9	
	comp=N,2109μm,0.4s						
RLS				AML	AML	20 41 34.5	
	comp=E,2041μm,0.5s						
DRO	**Drossia**	**1.11**	**115**	P	**Pb**	**20 41 10.4**	**-0.8**
DRO	**Drossia**	**1.11**	**115**	P	**Pb**	**20 41 10.8**	**-0.5**
DRO				AML	AML	20 41 35.9	
	comp=E,4281μm,0.6s						
DRO				AML	AML	20 41 36.3	
	comp=N,4671μm,0.4s						
EFP	**Efpalio**	**1.15**	**90**	P	**Pb**	**20 41 11.3**	**-0.6**
EFP	**Efpalio**	**1.15**	**90**	P	**Pb**	**20 41 11.3**	**-0.6**
EFP				AML	AML	20 41 34.3	
	comp=E,6280μm,0.7s						
EFP				AML	AML	20 41 39.0	
	comp=N,4106μm,0.7s						
ANX	**Ano Chora**	**1.17**	**82**	P	**Pb**	**20 41 11.2**	**-1.1**
ANX	**Ano Chora**	**1.17**	**82**	P	**Pb**	**20 41 11.7**	**-0.6**
ANX				AML	AML	20 41 39.0	
	comp=N,4276μm,0.7s						
ANX				AML	AML	20 41 42.6	
	comp=E,2654μm,0.5s						
EVR	**Evrytania**	**1.17**	**65**	P	**Pb**	**20 41 12.1**	**-0.3**
EVR	**Evrytania**	**1.17**	**65**	P	**Pb**	**20 41 11.8**	**-0.6**
EVR				AML	AML	20 41 35.6	
	comp=E,1642μm,0.8s						
EVR				AML	AML	20 41 39.4	
	comp=N,2118μm,0.7s						
LAKA	**Lakka**	**1.22**	**99**	P	**Pn**	**20 41 12.7**	**-0.3**
LAKA				AML	AML	20 41 39.5	
	comp=E,1784μm,0.8s						
LAKA				AML	AML	20 41 42.0	
	comp=N,1139μm,0.7s						
JAN	**Janina**	**1.26**	**14**	P	**Pb**	**20 41 14.1**	**+0.3**
JAN	**Janina**	**1.26**	**14**	P	**Pg**	**20 41 15.4**	**+0.9**
JAN				AML	AML	20 41 36.3	
	comp=N,1910μm,0.4s						
JAN				AML	AML	20 41 36.4	
	comp=E,3196μm,0.4s						
SERG	**Sergoula**	**1.27**	**90**	P	**Pn**	**20 41 13.6**	**0.0**
SERG	**Sergoula**	**1.27**	**90**	P	**Pn**	**20 41 13.5**	**-0.2**
SERG				AML	AML	20 41 40.9	
	comp=N,3251μm,0.6s						
SERG				AML	AML	20 41 41.1	
	comp=E,3176μm,1.0s						
TRIZ	**Trizonia**	**1.28**	**93**	P	**Pn**	**20 41 12.8**	**-1.0**
TRIZ	**Trizonia**	**1.28**	**93**	P	**Pn**	**20 41 13.6**	**-0.2**
ALIK	**Aliki, Aigiali**	**1.32**	**97**	P	**Pn**	**20 41 14.6**	**+0.3**
KALE	**Kalithea**	**1.33**	**91**	P	**Pn**	**20 41 14.4**	**-0.2**
KALE				S	**Sg**	**20 41 33.5**	**+0.3**
	comp=E,1μm,0.7s						
KALE	**Kalithea**	**1.33**	**91**	P	**Pn**	**20 41 14.4**	**-0.2**
KALE				AML	AML	20 41 42.9	
	comp=E,1992μm,1.2s						
KALE				AML	AML	20 41 45.3	
	comp=N,3484μm,1.2s						
AMT	**Artemida-Makis**	**1.35**	**132**	P	**Pn**	**20 41 13.9**	**-0.8**
AMT	**Artemida-Makis**	**1.35**	**132**	P	**Pb**	**20 41 15.3**	**0.0**
AMT				AML	AML	20 41 44.9	
	comp=N,2711μm,0.6s						
AMT				AML	AML	20 41 52.8	
	comp=E,3577μm,0.8s						
KASA	**Kassiopi**	**1.37**	**343**	P	**Pg**	**20 41 16.7**	**+0.2**
KLV	**Kalavryta, Ach**	**1.40**	**106**	P	**Pn**	**20 41 15.4**	**-0.1**
KLV	**Kalavryta, Ach**	**1.40**	**106**	P	**Pn**	**20 41 15.5**	**+0.1**
KLV				AML	AML	20 41 46.1	
	comp=E,1069μm,1.1s						
KLV				AML	AML	20 41 48.6	
	comp=N,701μm,1.2s						
MAKR	**Makrakomi, Fth**	**1.44**	**66**	P	**Pn**	**20 41 16.2**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.44**	**66**	P	**Pb**	**20 41 16.9**	**0.0**
MAKR				AML	AML	20 41 50.5	
	comp=E,1974μm,0.7s						
MAKR				AML	AML	20 41 52.1	
	comp=N,1980μm,0.8s						
AGG	**Agios Georgios**	**1.59**	**68**	P	**Pn**	**20 41 17.8**	**-0.2**
AGG				S	**Sb**	**20 41 39.6**	**+0.2**
	comp=N,540nm,0.6s						
AGG	**Agios Georgios**	**1.59**	**68**	P	**Pb**	**20 41 19.7**	**+0.2**
AGG				AML	AML	20 41 51.0	
	comp=N,1278μm,0.5s						
AGG				AML	AML	20 41 51.5	
	comp=E,823μm,0.6s						
THL	**Klokotos Trika**	**1.67**	**47**	P	**Pn**	**20 41 19.2**	**+0.1**
THL	**Klokotos Trika**	**1.67**	**47**	P	**Pb**	**20 41 21.3**	**+0.6**
THL				AML	AML	20 41 53.1	
	comp=E,1498μm,0.7s						
THL				AML	AML	20 41 53.5	
	comp=N,1289μm,0.7s						
KPRO	**Kipourio**	**1.68**	**25**	P	**Pn**	**20 41 20.0**	**+0.7**
ITM	**Ithomi**	**1.72**	**136**	P	**Pn**	**20 41 21.0**	**-0.6**
ITM	**Ithomi**	**1.72**	**136**	P	**Pg**	**20 41 22.7**	**-0.5**
AXAR	**Agios Charalam**	**1.77**	**79**	P	**Pb**	**20 41 23.2**	**+0.7**
AXAR				AML	AML	20 42 05.7	
	comp=N,2726μm,0.9s						
AXAR				AML	AML	20 42 06.9	
	comp=E,1356μm,0.5s						
PYL	**PYLOS**	**1.85**	**146**	P	**Pb**	**20 41 23.8**	**-0.1**
LKR	**Lokris**	**2.02**	**83**	AML	AML	20 42 08.5	
	comp=N,415μm,1.1s						
LKR				AML	AML	20 42 09.2	
	comp=E,348μm,0.7s						
KZN	**Kozani**	**2.13**	**28**	P	**Pb**	**20 41 28.9**	**+0.2**
KZN				AML	AML	20 42 01.1	
	comp=N,391μm,0.6s						
KZN				AML	AML	20 42 06.6	
	comp=E,532μm,0.6s						
VIL2	**Platees**	**2.23**	**95**	P	**Pb**	**20 41 30.0**	**-0.4**
VIL2				AML	AML	20 42 21.6	
	comp=E,1043μm,0.9s						
VIL2				AML	AML	20 42 22.3	
	comp=N,482μm,0.8s						
MRKA	**Markates**	**2.48**	**83**	P	**Pb**	**20 41 32.8**	**-1.8**
OHR	**Ohrid**	**2.69**	**6**	*i* Pn	**Pn**	**20 41 35.7**	**+2.5**
STIP	**Stip**	**3.52**	**22**	*i* Pn	**Pb**	**20 41 50.1**	**-2.2**
SKO	**Skopje**	**3.61**	**12**	*i* Pn	**Pn**	**20 41 46.4**	**+0.5**
ULC	**Ulcinj**	**3.64**	**346**	↑*i* Pn	**Pn**	**20 41 46.1**	**-0.2**
ULC				*i* Sn	**Sn**	**20 42 28.5**	**-0.6**
DRME	**Dracevica, Mon**	**3.87**	**346**	↑*i* Pn	**Pn**	**20 41 49.5**	**+0.1**
DRME				*i* Sn	**Sn**	**20 42 34.0**	**-0.7**
BUM	**Brajici-Budva**	**4.04**	**343**	↑*i* Pn	**Pn**	**20 41 51.0**	**-0.8**
BUM				*e*Sn	**Sn**	**20 42 38.0**	**-1.0**
TTG	**Podgorica**	**4.09**	**348**	↓*i* Pn	**Pn**	**20 41 52.7**	**+0.3**
TTG				*e*Sn	**Sn**	**20 42 39.4**	**-0.7**
PVY	**Plav**	**4.17**	**355**	↓*i* Pn	**Pn**	**20 41 54.4**	**+0.8**
PVY				*i* Sn	**Sn**	**20 42 42.1**	**-0.2**
CEME	**Cevo**	**4.27**	**345**	↓*i* Pn	**Pn**	**20 41 55.0**	**+0.1**
CEME				*e*Sn	**Sn**	**20 42 43.2**	**-1.4**
HCY	**Herceg Novi**	**4.27**	**340**	↓*i* Pn	**Pn**	**20 41 54.3**	**-0.6**
HCY				*i* Sn	**Sn**	**20 42 43.6**	**-1.1**
IVA	**Berane**	**4.45**	**355**	↓*i* Pn	**Pn**	**20 41 56.9**	**-0.6**
IVA				*i* Sn	**Sn**	**20 42 48.1**	**-1.1**
KOME	**Kolasin**	**4.47**	**351**	↑*i* Pn	**Pn**	**20 41 58.3**	**+0.6**
KOME				*e*Sn	**Sn**	**20 42 49.2**	**-0.3**
NKME	**Niksic**	**4.47**	**346**	↓*i* Pn	**Pn**	**20 41 57.2**	**-0.5**
NKME				*i* Sn	**Sn**	**20 42 49.1**	**-0.5**
NKY	**Niksic**	**4.51**	**346**	↓*i* Pn	**Pn**	**20 41 57.9**	**-0.4**
NKY				*i* Sn	**Sn**	**20 42 49.2**	**-1.4**
DBRK	**Dubrovnik**	**4.58**	**338**	*e*Pn	**Pn**	**20 41 59.0**	**-0.1**
DBRK				Sn	**Sn**	**20 42 51.0**	**-1.1**
BRY	**Bratogost**	**4.69**	**343**	↑*i* Pn	**Pn**	**20 42 00.3**	**-0.5**
BRY				*i* Sn	**Sn**	**20 42 54.2**	**-0.9**
IDI	**Anoyia**	**4.75**	**130**	Pn	**Pn**	**20 42 04.2**	**+2.6**
	comp=N,0.1nm,0.3s,baz=100,slow=20,SNR=1.5						
IDI				Sn	**Sn**	**20 42 57.5**	**+0.9**
	comp=N,1.4nm,0.3s,baz=300,slow=20,SNR=8.3						
VAE	**Valguarnera**	**4.86**	**261**	Pn	**Pn**	**20 42 05.3**	**+2.3**
	comp=N,0.6nm,0.3s,baz=338,slow=22,SNR=1.0						
VAE				Sn	**Sn**	**20 43 00.5**	**+1.2**
	comp=N,0.8nm,0.3s,baz=232,slow=7.3,SNR=1.5						
STON	**Ston**	**4.90**	**336**	*i* Pn	**Pn**	**20 42 03.0**	**-0.5**
STON				Sn	**Sn**	**20 42 56.7**	**-3.3**
UPM	**Unac-Piva**	**4.90**	**347**	*e*Pn	**Pn**	**20 42 03.5**	**-0.3**
UPM				*e*Sn	**Sn**	**20 42 58.8**	**-1.7**
PLE	**Pljevlja**	**4.96**	**351

HFS	**Hagfors**	**22.14**	**351**	P		**P**	**20 45 44.3**	**-1.0**
	comp=N,5.0nm,1.0s,baz=160,slow=9.0,SNR=6.6							
FINES	**FINESS Array B**	**23.30**	**7**	P		**P**	**20 45 57.4**	**-0.1**
	comp=N,1.9nm,0.8s,baz=206,slow=13,SNR=5.5							
NOA	**NORSAR Array B**	**23.35**	**349**	LR		LR	20 57 20.6	
	comp=N,24nm,18.5s,baz=260,slow=43							
TORD	**Torodi Ar. Bea**	**30.19**	**219**	P		**P**	**20 47 00.7**	**+0.4**
	comp=N,0.6nm,0.7s,baz=35,slow=8.5,SNR=4.3							
MKAR	**Makanchi Array**	**45.22**	**59**	P		**P**	**20 49 06.6**	**-0.3**
	comp=N,0.1nm,0.4s,baz=280,slow=7.8,SNR=8.2							
ZALV	**Zalesovo Beam**	**45.56**	**48**	P		**P**	**20 49 09.9**	**+0.4**
	comp=N,1.0nm,0.5s,baz=287,slow=9.5,SNR=5.9							

JMA 31 20:44:30.5±0.2, 38°28N×144°51E, h44km, M4.0, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.36**	**291**	P	Pn	20 45 08.1	+1.3
JIKH	**Ishinomakikobu**	**2.40**	**272**	S	Sn	20 45 36.2	+0.9
JKMT	**Kesennumamotoy**	**2.44**	**283**	P	Pn	20 45 09.0	+1.2
JKMT				S	Sn	20 45 38.1	+1.7
MIYJ	**Miyakonagasawa**	**2.47**	**303**	P	Pn	20 45 09.3	+1.1
MIYJ				S	Sn	20 45 38.2	+1.1
JIO	**Ouri**	**2.49**	**275**	P	Pn	20 45 09.9	+1.4
JIO				S	Sn	20 45 39.1	+1.4
JMK	**Ichinoseki**	**2.66**	**286**	P	Pn	20 45 12.6	+1.7
JOM	**Ohasama**	**2.78**	**296**	P	Pn	20 45 14.2	+1.7
JANG	**Nango**	**3.12**	**313**	*e*S	Sn	20 45 55.2	+1.9
JYK	**Kaneyama**	**3.31**	**282**	P	Pn	20 45 22.3	+2.5
JYK				S	Sn	20 46 00.8	+2.8
JFT	**Otama**	**3.39**	**258**	P	Pn	20 45 22.9	+2.0
JFT				S	Sn	20 46 02.0	+2.2
JCH	**Churui**	**4.42**	**349**	P	Pn	20 45 34.2	-0.8
JCH				*e*S	Sn	20 46 23.6	-1.5
JKB	**Kayabe**	**4.48**	**325**	*e*S	Sn	20 46 28.4	+1.7
JRY	**Ryogami san**	**5.02**	**245**	P	Pn	20 45 44.3	+1.0
JRY				S	Sn	20 46 39.3	-0.7
NEM2	**Nemuro 2**	**5.17**	**10**	P	Pn	20 45 42.5	-2.7
JOD2	**Odawara 2**	**5.29**	**237**	P	Pn	20 45 48.0	+1.0
JTKR	**Abashiri--Toko**	**5.70**	**356**	P	Pn	20 45 52.0	-0.6
JTKR				*e*S	Sn	20 46 52.9	-3.8

IDC 31 20:47:32.0±3.2, 7°67S×128°61E, h129km±42km, mb2.7/1, mb1 3.4/5, mb1mx3.0/34, mbtmp3.7/5, Error ellipse: s-maj=64.9km s-min=22.2km az=91.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**7.26**	**22**	P	Pn	20 49 16.1	+0.5
	1.4nm,0.3s,baz=41,slow=23,SNR=4.2						
FITZ	**Fitzroy Crossi**	**10.76**	**195**	P	Pn	20 50 01.6	-1.0
	0.3nm,0.3s,baz=13,slow=9.5,SNR=10						
FITZ				S	Sn	20 51 54.8	-6.5
	1.1nm,0.3s,baz=313,slow=23,SNR=9.6						
WRA	**Warramunga Arr**	**13.40**	**156**	P	Pn	20 50 36.4	-0.9
	0.3nm,0.3s,baz=342,slow=12,SNR=11						
WRA				S	Sn	20 52 55.8	-9.5
	0.7nm,0.3s,baz=324,slow=22,SNR=7.2						
ASAR	**Alice Springs**	**16.70**	**163**	P	P	20 51 20.3	+1.7
	0.4nm,0.3s,baz=339,slow=11,SNR=18						
MKAR	**Makanchi Array**	**68.04**	**328**	P	P	20 58 17.6	0.0
	0.1nm,0.5s,baz=126,slow=6.7,SNR=3.6						

*IDC **31** 21:13:53.4±1.0, 16°.20S×178°.17E, h0km, mb4.2/14, mb1 4.5/14, mb1mx4.2/51, mbtmp4.2/14, MS3.9/8, Ms1 3.9/8, ms1mx3.7/29, Error ellipse: s-maj=46.7km s-min=18.1km az=153.0*

*NEIC **31** 21:13:58.9±2.9, 16°.21S±0°.06×178°.2E±0°.1, h31km±5km, mb4.5/44, Error ellipse: s-maj=17.3km s-min=8.4km az=98.0*

ISC 31 21:13:58.8±0.5, 16°.3S±0°.1×178°.3E±0°.1, h35km, n67, σ1§47/52, mb4.4/26, MS4.1/9, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**1.47**	**190**		**Pn**	**21 14 23.4**	**+0.6**
AFI	**Afiamalu**	**9.86**	**77**	LR	LR	21 19 18.2	
	comp=Z,706nm,20.6s,baz=259,slow=32						
SANVU	**Saraoutou**	**10.72**	**273**		Pn	21 16 34.9	+5.0
DZM	**Mont Dzumac**	**12.61**	**241**	*e*P	P	21 17 11.3	+4.5
	73nm,1.5s						
DZM				*e*LQ	LQ	21 19 37.7	
	1μm,22.9s						
DZM				*e*LR	LR	21 20 10.8	
	comp=Z,209nm,23.6s						
RAR	**Rarotonga**	**21.32**	**107**	LR	LR	21 25 16.8	
	comp=Z,289nm,19.1s,baz=276,slow=32						
URZ	**Urewera**	**21.92**	**183**	LR	LR	21 25 47.9	
	comp=Z,287nm,18.6s,baz=5.0,slow=32						
KRVT	**Keravat (AS076**	**28.42**	**292**	LR	LR	21 30 21.9	
	comp=Z,529nm,20.6s,baz=121,slow=35						
CTA	**Charters Tower**	**30.67**	**258**	LR	LR	21 32 11.2	
	comp=Z,412nm,19.1s,baz=28,slow=36						
PPT2	**Papeete2**	**30.73**	**97**	*e*S	**S**	**21 25 07.8**	**-4.0**
	66nm,24.8s						
PPT2				*e*LQ	LQ	21 26 46.4	
	622nm,27.5s						
PPT2				*e*LR	LR	21 28 01.9	
	comp=Z,720nm,31.5s						
PPT	**Papeete**	**30.73**	**97**	LR	LR	21 29 34.4	
	comp=Z,58nm,18.7s,baz=278,slow=30						
TBI	**Tubuai**	**31.07**	**108**	*e*S	**S**	**21 25 14.7**	**-2.3**
	123nm,26.2s						
TBI				*e*LQ	LQ	21 26 55.7	
	530nm,23.8s						
TBI				*e*LR	LR	21 28 14.0	
	comp=Z,886nm,30.8s,baz=283						
STKA	**Stephens Creek**	**36.74**	**238**	P	**P**	**21 21 00.2**	**-2.7**
	1.5nm,0.7s,baz=81,slow=11,SNR=2.0						
WRA	**Warramunga Arr**	**41.87**	**258**	P	**P**	**21 21 45.0**	**-0.9**
	3.5nm,0.9s,baz=91,slow=8.5,SNR=5.4						
AS31	**Alice Springs**	**42.25**	**253**	P	**P**	**21 21 49.9**	**+0.8**
ASAR	**Alice Springs**	**42.25**	**253**	P	**P**	**21 21 49.2**	**+0.2**
	2.9nm,0.8s,baz=81,slow=8.7,SNR=20						
MJAR	**Matsushiro Arr**	**64.76**	**325**	P	**P**	**21 24 33.6**	**-0.2**
	2.0nm,0.9s,baz=116,slow=5.5,SNR=4.1						
MJAR				LR	LR	21 46 43.0	
	comp=Z,109nm,21.5s,baz=150,slow=30						
USRK	**Ussuriysk Ar.**	**73.53**	**327**	LR	LR	21 54 13.3	
	comp=Z,120nm,19.7s,baz=137,slow=33						
QSPA	**South Pole Qui**	**73.76**	**180**	P	**P**	**21 25 30.8**	**+1.5**
WDC	**Whiskeytown Da**	**78.78**	**42**		**PcP**	**21 26 10.9**	**+4.3**
AFDM	**Forest Hills D**	**78.93**	**44**	P	**P**	**21 25 59.9**	**+1.0**
AFDM				IAmb	IAmb	21 26 00.7	
	comp=Z,5.1nm,1.1s						
OMMB	**Old Mammoth Mi**	**79.59**	**46**	P	**P**	**21 26 04.4**	**+1.5**
OMMB				IAmb	IAmb	21 26 09.8	
	comp=Z,5.9nm,1.1s						
NVAR	**Mina Array Bea**	**80.47**	**45**	P	**P**	**21 26 07.6**	**+0.1**
	comp=Z,4.6nm,1.1s,baz=224,slow=6.3,SNR=14						
NV11	**Mina Array Sit**	**80.58**	**45**	P	**P**	**21 26 08.1**	**+0.1**
MOD	**Modoc Plateau**	**80.91**	**42**	P	**P**	**21 26 10.5**	**+0.8**
KVN	**Kaiserville**	**80.92**	**45**	P	**P**	**21 26 11.0**	**+1.2**
KVN				IAmb	IAmb	21 26 11.8	
	comp=Z,4.9nm,1.1s						
KVN					**pP**	**21 26 18.5**	**-1.9**
TPNV	**Topopah Spring**	**81.19**	**48**	P	**P**	**21 26 13.2**	**+1.8**
TPNV				IAmb	IAmb	21 26 17.2	
	comp=Z,6.1nm,1.1s						
SEY	**Seymchan**	**81.52**	**348**	P	**P**	**21 26 10.8**	**-1.4**
	comp=Z,2.3nm,0.9s,baz=126,slow=8.1,SNR=5.8						
SHPR	**Sheep Range**	**81.77**	**48**	P	**P**	**21 26 16.6**	**+2.2**
SHPR				IAmb	IAmb	21 26 16.8	
	comp=Z,5.2nm,1.1s						
WVOR	**Wild Horse Val**	**82.24**	**42**	P	**P**	**21 26 18.6**	**+1.9**
WVOR				IAmb	IAmb	21 26 33.5	
	comp=Z,5.6nm,1.1s						
R11A	**Troy Canyon, C**	**82.31**	**46**		pP	21 26 25.9	-1.9
I07A	**Izee**	**82.54**	**40**	IAmb	IAmb	21 26 30.8	
	comp=Z,4.8nm,1.1s						
XAN	**Xi'an**	**82.79**	**308**	P	**P**	**21 26 20.4**	**+0.8**
XAN				IAmb	IAmb	21 26 27.8	
	comp=Z,5.1nm,1.2s						
LCMT	**Little Creek M**	**83.37**	**49**	P	**P**	**21 26 24.7**	**+2.0**
G08A	**Pilot Rock**	**83.49**	**39**	P	**P**	**21 26 22.6**	**-0.5**
G08A				IAmb	IAmb	21 26 25.0	
	comp=Z,6.6nm,1.2s						
X16A	**Lo Mia Camp, P**	**83.59**	**52**	IAmb	IAmb	21 26 26.7	
	comp=Z,7.6nm,1.1s						
ELK	**Elko**	**83.66**	**44**	P	**P**	**21 26 23.7**	**-0.6**
	comp=Z,2.2nm,0.9s,baz=236,slow=5.9,SNR=7.3						
ELK	**Elko**	**83.66**	**44**	IAmb	IAmb	21 26 26.3	
	comp=Z,6.0nm,1.1s						
U15A	**North Rim**	**83.81**	**49**	P	**P**	**21 26 24.9**	**-0.2**
MTPU	**Mount Pierson**	**84.57**	**48**	P	**P**	**21 26 28.6**	**-0.5**
F10A	**Beach Ranch, E**	**84.89**	**39**	P	**P**	**21 26 29.8**	**-0.3**
ILAR	**Eielson Array**	**85.05**	**14**	P	**P**	**21 26 30.1**	**-0.3**
	comp=Z,4.7nm,1.0s,baz=226,slow=6.2,SNR=4.8						
CMAR	**Chiang Mai Arr**	**85.38**	**291**	P	**P**	**21 26 31.8**	**-1.4**
	comp=Z,1.9nm,1.1s,baz=114,slow=3.2,SNR=12						
CHTO	**Chiang Mai**	**85.50**	**291**	P	**P**	**21 26 34.2**	**+0.5**
ANMO	**Albuquerque**	**87.58**	**53**	P	**P**	**21 26 44.7**	**+0.9**
	comp=Z,1.1nm,0.4s,baz=221,slow=9.3,SNR=5.1						
ANMO	**Albuquerque**	**87.58**	**53**	IAmb	IAmb	21 26 46.2	
	comp=Z,2.2nm,0.9s						
FXWY	**Fox Creek**	**87.74**	**43**	IAmb	IAmb	21 26 48.8	
	comp=Z,3.3nm,1.1s						
TXAR	**Lajitas Array**	**87.81**	**59**	P	**P**	**21 26 46.9**	**+2.0**
	comp=Z,1.7nm,1.0s,baz=224,slow=5.2,SNR=7.7						
IMW	**Indian Meadow**	**87.91**	**43**	P	**P**	**21 26 43.5**	**-1.8**
MOOW	**Moose Ponds**	**87.98**	**43**	IAmb	IAmb	21 27 06.4	
	comp=Z,2.8nm,1.1s						
PDAR	**Pinedale Array**	**88.36**	**45**	P	**P**	**21 26 48.3**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=222,slow=6.0,SNR=11						
SONM	**Songino Array**	**90.29**	**320**	P	**P**	**21 26 55.4**	**-0.7**
	comp=Z,0.4nm,0.7s,baz=90,slow=4.3,SNR=3.1						
SNAA	**Sanae**	**92.27**	**180**	P	**P**	**21 27 06.9**	**+1.9**
YKA	**Yellowknife Ar**	**94.19**	**25**	P	**P**	**21 27 14.6**	**+1.0**
	comp=Z,0.5nm,0.9s,baz=259,slow=5.0,SNR=2.7						
GERES	**GERESS Array B**	**145.17**	**342**	PKPbc	**PKPbc**	**21 33 31.4**	**-0.9**
	comp=Z,0.8nm,0.8s,baz=18,slow=3.5,SNR=3.6						
CONA	**Conrad Observa**	**145.29**	**339**	*e*PKPdf	**PKPab**	**21 33 32.7**	**-0.2**
	comp=Z,10nm,1.5s						
MOA	**Molln**	**145.88**	**341**	PKPab	**PKPdf**	**21 33 34.1**	**+0.2**
	comp=Z,13nm,1.3s						
ARSA	**Arzberg**	**145.99**	**339**	*e*PKiKP	**PKPab**	**21 33 35.9**	**+0.4**
	comp=Z,10nm,1.3s						
SOKA	**Soboth**	**146.65**	**339**	*e*PKPab	**PKPbc**	**21 33 36.3**	**-0.6**
	comp=Z,7.2nm,1.4s						
KBA	**Koenbreinsper**	**146.86**	**341**	*e*PKPbc	**PKPdf**	**21 33 36.2**	**+0.4**
	comp=Z,5.8nm,0.8s						
OBKA	**Obir**	**146.97**	**339**	*e*PKPbc	**PKPdf**	**21 33 36.7**	**+0.8**
	comp=Z,16nm,1.5s						
WATA	**Walderalm**	**147.14**	**343**	*e*PKPbc	**PKPdf**	**21 33 36.9**	**+0.6**
	comp=Z,12nm,1.4s						
MYKA	**Terra Mystica**	**147.16**	**340**	*e*PKPab	**PKPbc**	**21 33 38.2**	**-0.2**
	comp=Z,15nm,1.1s						
MOTA	**Moosalm**	**147.26**	**344**	*e*PKPbc	**PKPbc**	**21 33 37.7**	**-1.1**
	comp=Z,8.1nm,1.3s						
SQTA	**Sankt Quirin**	**147.35**	**344**	*e*PKPab	**PKPbc**	**21 33 38.3**	**-0.6**
	comp=Z,6.9nm,1.2s						
ABTA	**Abfaltersbach**	**147.41**	**342**	*e*PKPbc	**PKPdf**	**21 33 37.6**	**+1.0**
	comp=Z,13nm,1.8s						
FETA	**Feichten**	**147.66**	**344**	*e*PKPbc	**PKPbc**	**21 33 38.6**	**-1.3**
	comp=Z,8.0nm,1.3s						
TORD	**Torodi Ar. Bea**	**175.49**	**227**	PKP	**PKPdf**	**21 34 04.2**	**-1.8**
	comp=Z,1.8nm,1.1s,baz=180,slow=0.1,SNR=4.1						

IDC 31 21:15:50.5±1.4, 15°.96S×178°.34E, h0km, mb3.9/6, mb1 4.2/6, mb1mx3.8/48, mbtmp3.9/6, Error ellipse: s-maj=86.9km s-min=24.3km az=149.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.92**	**238**	P	P	21 23 01.7	+0.3
	3.7nm,0.9s,baz=66,slow=9.9,SNR=4.0						
ASAR	**Alice Springs**	**42.36**	**252**	P	P	21 23 45.6	-1.2
	1.5nm,0.8s,baz=84,slow=8.3,SNR=4.5						
NVAR	**Mina Array Bea**	**80.24**	**45**	P	P	21 28 02.4	-1.1
	0.3nm,0.4s,baz=218,slow=9.9,SNR=3.4						
ILAR	**Eielson Array**	**84.74**	**14**	P	P	21 28 26.3	+0.1
	1.4nm,1.1s,baz=238,slow=5.1,SNR=4.4						
CMAR	**Chiang Mai Arr**	**85.29**	**291**	P	P	21 28 30.7	+0.7
	0.5nm,0.9s,baz=160,slow=2.9,SNR=3.8						
TXAR	**Lajitas Array**	**87.62**	**59**	P	P	21 28 42.4	+1.0
	0.5nm,0.9s,baz=235,slow=6.4,SNR=3.5						

*BJI **31** 21:20:27.4±0.0, 4°.44S×154°.06E, h94km, mB5.1/25, mb5.0/38*

*IDC **31** 21:20:27.7±1.2, 4°.90S×153°.81E, h91km±9km, mb4.3/22, mb1 4.4/23, mb1mx4.3/42, mbtmp4.6/23, MS3.8/11, Ms1 3.8/11, ms1mx3.6/22, Error ellipse: s-maj=12.3km s-min=9.1km az=51.0*

*NEIC **31** 21:20:29.4±1.6, 4°.90S±0°.05×153°.75E±0°.04, h105km±5km, mb4.7/128, Error ellipse: s-maj=8.5km s-min=2.3km az=143.0*

*GCMT **31** 21:20:29.4±0.1, 5°.01S±0°.01×153°.72E±0°.01, h87km±1km, MW5.1/118, Moment Tensor Solution. s91,c112; s118,c173; Duration: 0 Moment: Scale 10¹⁶Nm; Mrr4.52±.12; Mθθ-1.38±.14; Mϕϕ-3.14±.14; Mrθ-2.03±.09; Mθϕ2.21±.13; Mϕr2.92±.09; Best double couple: M₀5.79800×10¹⁶ NP1:ϕs146.00000°, δ26.00000°, λ91.00000°. NP2:ϕs325.00000°, δ64.00000°, λ90.00000°. Principal axes: T 5.7390, Plg71.0000°, Azm235.0000°; N 0.1190, Plg0.0000°, Azm326.0000°; P -5.8570, Plg19.0000°, Azm56.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Triangular moment-rate function*

*MOS **31** 21:20:29.7±0.9, 4°.89S×153°.79E, h124km, mb4.6/11 Error ellipse: s-maj=9.2km s-min=6.9km az=99.7*

*DJA **31** 21:20:33.0±0.5, 5°.5S±.5°×15°.4E±°, h136km±6km, M5.0/18, mb4.9/18, mB5.4/4, MLv5.1/3, Mw(mB)4.8/4, Mwp4.5/1*

ISC 31 21:20:29.4±0.3, 4°.86S±0°.05×153°.79E±0°.04, h105km, n240, σ1§18/233, mb4.7/103, 5C-1D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.75**	**292**	Pn	**Pn**	**21 20 59.4**	**+0.4**
RABL				Sn	**Sn**	**21 21 21.4**	**-0.2**
KRVT	**Keravat (AS076**	**1.84**	**287**	P	**Pn**	**21 20 59.5**	**-0.7**
	265nm,0.3s,baz=134,slow=0.8,SNR=133						
KRVT				S	**Sn**	**21 21 21.9**	**-1.7**
	401nm,0.3s,baz=343,slow=19,SNR=23						
KRVT				LR	LR	21 21 55.3	
	comp=Z,4μm,18.4s,baz=92,slow=47						
MANU	**Manus Island**	**6.99**	**293**		**Pn**	**21 22 12.1**	**+2.8**
HNR	**Honiara**	**7.61**	**127**	P	**Pn**	**21 22 19.7**	**+2.0**
HNR						21 23 42.6	
HNR	**Honiara**	**7.61**	**127**	P	**Pn**	**21 22 16.2**	**-1.5**
	4.2nm,0.3s,baz=169,slow=5.2,SNR=2.9						
HNR				S	**Sn**	**21 23 40.0**	**-2.4**
	25nm,0.3s,baz=317,slow=18,SNR=11						
HNR				LR	LR	21 24 47.0	
	comp=Z,885nm,21.9s,baz=305,slow=34						
HNR	**Honiara**	**7.61**	**127**	P	**Pn**	**21 22 21.0**	**+3.3**
HNR				S	**Sn**	**21 23 43.0**	**+0.6**
HNR	**Honiara**	**7.61**	**127**		**Pn**	**21 22 19.7**	**+2.0**
HNR					**Sn**	**21 23 42.6**	**+0.2**
PMG	**Port Moresby**	**7.97**	**235**	P	**Pn**	**21 22 24.0**	**+1.4**
PMG	**Port Moresby**	**7.97**	**235**	P	**Pn**	**21 22 23.9**	**+1.3**
	63nm,0.3s,baz=56,slow=6.0,SNR=90						
PMG				S	**Sn**	**21 23 52.8**	**+1.6**
	24nm,0.3s,baz=348,slow=20,SNR=8.0						
PMG				LR	LR	21 25 41.3	
	comp=Z,747nm,18.8s,baz=100,slow=39						
PMG	**Port Moresby**	**7.97**	**235**		**Pn**	**21 22 24.0**	**+1.4**
PATS	**Pohnpei**	**12.47**	**21**	Pn	**Pn**	**21 23 22.4**	**-0.9**
JAY	**Jayapura**	**13.26**	**280**	P	**P**	**21 23 39.5**	**-0.1**
	3.8nm,0.3s,baz=87,slow=3.9,SNR=14						
JAY				LR	LR	21 27 33.4	
	comp=Z,680nm,21.6s,baz=51,slow=32						
COEN	**Coen**	**13.82**	**228**	P	**Pn**	**21 23 43.0**	**+2.1**
CTA	**Charters Tower**	**16.82**	**205**	P	**P**	**21 24 20.0**	**+1.0**
	0.4nm,0.3s,baz=26,slow=12,SNR=6.8						
KWAJ	**Kwajalein Atol**	**19.35**	**45**	P	**Pn**	**21 24 48.1**	**-0.8**
KWAJ				pmax	pmax		
	comp=Z,150nm,0.8s						
KWAJ	**Kwajalein Atol**	**19.35**	**45**	P	**Pn**	**21 24 48.1**	**-0.8**
TARA	**Tarawa**	**20.09**	**73**	P	**P**	**21 24 53.3**	**-1.6**
GUMO	**Guam**	**20.36**	**334**	P	**P**	**21 24 58.6**	**+0.9**
GUMO				pmax	pmax		
	comp=Z,143nm,1.2s						
GUMO	**Guam**	**20.36**	**334**	P	**P**	**21 24 58.6**	**+0.9**
EIDS	**Eidsvold**	**20.55**	**187**	P	**P**	**21 25 00.3**	**+0.6**
EIDS				IAmb	IAmb	21 25 03.8	
	comp=Z,44nm,0.9s						
NOUC	**Port Laguerre**	**20.99**	**146**	P	**P**	**21 25 05.9**	**+1.4**
DZM	**Mont Dzumac**	**21.05**	**146**	*e*P	**P**	**21 25 07.2**	**+2.0**
	comp=Z,78nm,0.9s						
DZM				*e*LR	LR	21 29 51.8	
	comp=Z,779nm,31.2s						
DZM	**Mont Dzumac**	**21.05**	**146**	P	**P**	**21 25 04.9**	**-0.3**
	comp=Z,6.0nm,0.5s,baz=316,slow=14,SNR=12						
DZM				LR	LR	21 30 59.3	
	comp=Z,194nm,19.3s,baz=22,slow=30						
DZM	**Mont Dzumac**	**21.05**	**146**	P	**P**	**21 25 05.1**	**-0.1**
FAKI	**Fak Fak**	**21.57**	**274**	P	**P**	**21 25 10.1**	**-0.7**
FAKI				IAmb	IAmb	21 25 21.8	
	comp=Z,37nm,1.0s						
SIJI	**Sorong**	**22.84**	**279**	P	**P**	**21 25 23.4**	**-0.4**
	comp=Z,13nm,0.5s,baz=47,slow=17,SNR=9.2						
MTN	**Manton Dam**	**23.73**	**249**	P	**P**	**21 25 32.6**	**+0.4**
MTN				IAmb	IAmb	21 25 47.9	
	comp=Z,30nm,1.0s						
WR0	**Warramunga Arr**	**24.00**	**230**	P	**P**	**21 25 34.5**	**-0.1**
WR0				IAmb	IAmb	21 25 36.4	
	comp=Z,48nm,0.9s						
WB0	**Warramunga Arr**	**24.00**	**230**	P	**P**	**21 25 35.0**	**+0.4**
WB0				IAmb	IAmb	21 25 36.3	
	comp=Z,41nm,0.8s						
WRAB	**Tennant Creek**	**24.13**	**230**	*ce*P	**P**	**21 25 35.3**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,67nm,1.3s						
WRAB	**Tennant Creek**	**24.13**	**230**	P	**P**	**21 25 36.2**	**+0.4**
WRAB				IAmb	IAmb	21 25 37.6	
	comp=Z,42nm,0.8s						
WB2	**Warramunga Arr**	**24.14**	**230**	P	**P**	**21 25 36.2**	**+0.4**
WB2				IAmb	IAmb	21 25 37.7	
	comp=Z,32nm,0.8s						
WRA	**Warramunga Arr**	**24.15**	**230**	*i* P	**P**	**21 25 35.7**	**-0.2**
WRA				pmax	pmax		
	comp=Z,25nm,0.7s						
WRA	**Warramunga Arr**	**24.15**	**230**	P	**P**	**21 25 35.8**	**-0.1**
	comp=Z,24nm,0.7s,baz=54,slow=9.8,SNR=62						
WRA	**Warramunga Arr**	**24.15**	**230**	P	**P**	**21 25 35.1**	**-0.8**
ARMA	**Armidale**	**25.50**	**184**	P	**P**	**21 25 48.5**	**+0.3**
ARMA				IAmb	IAmb	21 25 49.7	
	comp=Z,21nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**26.47**	**28**	T	T	21 54 37.3	
	baz=208,slow=76,SNR=21						
H11S2	**WAKE ISLAND Hy**	**26.47**	**28**	T	T	21 54 28.2	
	baz=208,slow=76,SNR=20						
H11S1	**WAKE ISLAND Hy**	**26.48**	**28**	T	T	21 54 44.6	
	baz=208,slow=76,SNR=6.6						
ASAR	**Alice Springs**	**26.77**	**224**	P	**P**	**21 25 59.5**	**-0.1**
	comp=Z,12nm,0.9s,baz=54,slow=8.9,SNR=43						
ASAR				ScP	**ScP**	**21 32 54.2**	**+3.1**
	comp=Z,1.1nm,0.8s,baz=64,slow=2.9,SNR=6.0						
KNRA	**Kununurra**	**26.83**	**245**	P	**P**	**21 25 59.9**	**-0.3**
KNRA				IAmb	IAmb	21 26 09.5	
	comp=Z,24nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**27.62**	**27**	T	T	21 55 48.6	
	baz=207						
H11N3	**WAKE ISLAND Hy**	**27.63**	**27**	T	T	21 55 43.1	
	baz=207						
H11N2	**WAKE ISLAND Hy**	**27.64**	**27**	T	T	21 55 55.5	
	baz=207						
STKA	**Stephens Creek**	**29.20**	**202**	P	**P**	**21 26 20.5**	**-0.7**
	comp=Z,14nm,0.7s,baz=13,slow=8.9,SNR=35						
FITZ	**Fitzroy Crossi**	**30.49**	**242**	P	**P**	**21 26 32.2**	**-0.5**
	comp=Z,18nm,0.7s,baz=49,slow=7.3,SNR=30						
FITZ				LR	LR	21 39 29.6	
	comp=Z,150nm,19.9s,baz=87,slow=37						
FITZ	**Fitzroy Crossi**	**30.49**	**242**	P	**P**	**21 26 32.2**	**-0.5**
FITZ				IAmb	IAmb	21 26 32.8	
	comp=Z,18nm,0.7s						
DAV	**Davao City (W)**	**30.55**	**293**	LR	LR	21 39 05.3	
	comp=Z,135nm,19.9s,baz=82,slow=36						
CAN	**Canberra**	**30.63**	**188**	P	**P**	**21 26 33.8**	**0.0**
CAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CAN	**Canberra**	**30.63**	**188**	P	**P**	**21 26 33.8**	**0.0**
CAN				IAmb	IAmb	21 26 35.6	
	comp=Z,8.2nm,0.8s						
BBOO	**Buckleboo**	**32.36**	**209**	IAmb	IAmb	21 26 49.4	
	comp=Z,26nm,0.9s						
TOO	**Toolangi**	**33.43**	**192**	P	**P**	**21 26 56.8**	**-1.4**
TOO				pmax	pmax		
	comp=Z,11nm,1.0s						
TOO	**Toolangi**	**33.43**	**192**	P	**P**	**21 26 56.8**	**-1.4**
TOO				IAmb	IAmb	21 27 00.2	
	comp=Z,11nm,0.9s						
FORT	**Forrest**	**35.37**	**220**	P	**P**	**21 27 14.5**	**-0.5**
PSAD2	**Pilbara Seismi**	**36.76**	**240**	P	**P**	**21 27 25.5**	**-1.6**
PSAC2	**Pilbara Seismi**	**36.80**	**240**	P	**P**	**21 27 26.0**	**-1.3**
PSAD1	**Pilbara Seismi**	**36.82**	**240**	P	**P**	**21 27 26.5**	**-1.0**
PSAB2	**Pilbara Seismi**	**36.83**	**240**		**P**	**21 27 26.4**	**-1.2**
PSAA3	**Pilbara Seismi**	**36.84**	**240**	P	**P**	**21 27 26.4**	**-

MORW	**Morawa**	**43.07**	**232**	P		**P**	**21 28 18.9**	**-0.3**
YHNB	**Yeheng**	**43.08**	**314**	P		**P**	**21 28 20.8**	**+1.4**
YHNB				IAmb		IAmb	21 28 25.4	
	comp=Z,19nm,1.0s							
UGM	**Wanagama**	**43.09**	**264**	P		**P**	**21 28 19.4**	**-0.2**
JNU	**Nakatsue**	**43.58**	**332**	P		**P**	**21 28 23.3**	**+0.1**
JNU				IAmb		IAmb	21 28 32.2	
	comp=Z,12nm,1.1s							
KSM	**Kuching**	**43.89**	**277**	P		**P**	**21 28 25.9**	**-0.1**
KSM				IAmb		IAmb	21 28 26.9	
	comp=Z,16nm,0.9s							
NWAO	**Narrogin (SRO)**	**44.05**	**226**	P		**P**	**21 28 26.1**	**-0.9**
NWAO				pmax		pmax		
	comp=Z,14nm,1.0s							
NWAO	**Narrogin (SRO)**	**44.05**	**226**	P		**P**	**21 28 25.9**	**-1.0**
	comp=Z,8.0nm,0.8s,baz=78,slow=8.0,SNR=3.8							
NWAO	**Narrogin (SRO)**	**44.05**	**226**	P		**P**	**21 28 26.1**	**-0.9**
NWAO				IAmb		IAmb	21 28 26.7	
	comp=Z,14nm,0.9s							
NWAO	**Narrogin (SRO)**	**44.05**	**226**	IAmb		IAmb	21 28 26.8	
	comp=Z,11nm,0.9s							
KNMB	**Chin-men Tao**	**45.13**	**312**	P		**P**	**21 28 35.9**	**+0.3**
KNMB				IAmb		IAmb	21 28 39.3	
	comp=Z,8.2nm,1.1s							
CISI	**Cisompet, Garu**	**45.76**	**264**	P		**P**	**21 28 39.0**	**-1.9**
LEM	**Lembang**	**45.96**	**265**	P		**P**	**21 28 42.5**	**-0.1**
	comp=Z,29nm,0.7s,baz=95,slow=4.3,SNR=6.5							
RAR	**Rarotonga**	**47.86**	**114**	P		**P**	**21 28 56.2**	**-0.8**
RAR				pmax		pmax		
	comp=Z,22nm,1.2s							
RAR	**Rarotonga**	**47.86**	**114**	P		**P**	**21 28 56.2**	**-0.8**
RAR				IAmb		IAmb	21 29 02.0	
	comp=Z,22nm,1.1s							
TJN	**Taejon**	**47.90**	**331**	*ce*P		**P**	**21 28 56.7**	**-0.4**
DLV	**T Lat**	**48.04**	**291**	P		**P**	**21 28 59.1**	**+0.3**
KSRS	**Korea Array**	**48.51**	**332**	P		**P**	**21 29 01.8**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=149,slow=8.7,SNR=9.5							
KSAR	**Wonju Array Be**	**48.51**	**332**	P		**P**	**21 29 00.0**	**-1.8**
KSAR	**Wonju Array Be**	**48.51**	**332**	P		**P**	**21 29 00.0**	**-1.8**
USRK	**Ussuriysk Ar.**	**52.63**	**340**	P		**P**	**21 29 33.3**	**+0.7**
	comp=Z,1.0nm,0.4s,baz=141,slow=4.6,SNR=5.9							
KULM	**Kulim**	**54.02**	**280**	P		**P**	**21 29 42.6**	**-0.8**
PBKT	**Sadao Pong**	**56.38**	**293**	IAmb		IAmb	21 30 02.0	
	comp=Z,6.3nm,1.0s							
GSI	**Gunungsitoli**	**56.49**	**275**	P		**P**	**21 29 59.3**	**-1.8**
PPT	**Papeete**	**56.77**	**108**	LR		LR	21 49 46.4	
	comp=Z,35nm,21.1s,baz=239,slow=31							
PPT2	**Papeete2**	**56.77**	**108**	*e*S		**S**	**21 37 53.5**	**+5.0**
	comp=Z,70nm,23.0s							
PPT2				*e*LR		LR	21 46 18.0	
	comp=Z,267nm,32.8s							
KLR	**Kul'dur**	**57.19**	**343**	*i* P		**P**	**21 30 05.1**	**-0.3**
KLR				pmax		pmax		
	comp=Z,2.0nm,0.6s							
XAN	**Xi'an**	**57.35**	**316**	P		**P**	**21 30 07.0**	**+0.1**
XAN				pP		pwP	21 30 34.8	-1.7
XAN				pmax		pmax		
	comp=Z,15nm,1.1s							
XAN	**Xi'an**	**57.35**	**316**	P		**P**	**21 30 07.2**	**+0.3**
XAN				pmax		pmax		
	comp=Z,11nm,0.7s							
XAN	**Xi'an**	**57.35**	**316**	P		**P**	**21 30 07.2**	**+0.3**
XAN				IAmb		IAmb	21 30 07.6	
	comp=Z,11nm,0.7s							
TBI	**Tubuai**	**57.64**	**114**	*e*LR		LR	21 46 43.7	
	comp=Z,221nm,38.0s							
KMI	**Kunming**	**57.84**	**304**	P		**P**	**21 30 12.3**	**+1.6**
KMI				pP		pwP	21 30 39.8	-0.7
KMI				pmax		pmax		
	comp=Z,9.0nm,1.7s							
PEA0B	**Petropavlovsk-**	**57.85**	**3**	P		**P**	**21 30 10.3**	**+0.4**
PEA0B				pmax		pmax		
	comp=Z,22nm,1.1s							
PEA0B	**Petropavlovsk-**	**57.85**	**3**	P		**P**	**21 30 10.3**	**+0.4**
PETK	**Petropavlovsk-**	**57.85**	**3**	P		**P**	**21 30 11.1**	**+1.2**
	comp=Z,10nm,0.9s,baz=169,slow=8.1,SNR=6.9							
CM31	**Chiang Mai Arr**	**58.79**	**295**	P		**P**	**21 30 17.4**	**+0.2**
CM31				IAmb		IAmb	21 30 19.1	
	comp=Z,8.3nm,1.0s							
CMAR	**Chiang Mai Arr**	**58.79**	**295**	P		**P**	**21 30 18.5**	**+1.3**
	comp=Z,3.1nm,0.9s,baz=116,slow=5.2,SNR=23							
CHTO	**Chiang Mai**	**58.90**	**295**	P		**P**	**21 30 18.3**	**+0.4**
CHTO				pmax		pmax		
	comp=Z,3.0nm,1.2s							
CHTO	**Chiang Mai**	**58.90**	**295**	P		**P**	**21 30 18.3**	**+0.4**
LZH	**Lanzhou**	**61.96**	**315**	*e*P		**P**	**21 30 40.5**	**+1.8**
LZH				pmax		pmax		
	comp=Z,35nm,1.3s							
MA2	**Magadan**	**64.28**	**358**	*ce*P		**P**	**21 30 53.6**	**+0.3**
MA2				pmax		pmax		
	comp=Z,11nm,0.7s							
MA2	**Magadan**	**64.28**	**358**	P		**P**	**21 30 54.1**	**+0.8**
MA2				IAmb		IAmb	21 30 55.1	
	comp=Z,13nm,0.8s							
GTA	**Gaotai**	**66.37**	**317**	⇑P		**P**	**21 31 08.5**	**+1.1**
GTA				pP		PcP	21 31 36.8	+0.4
GTA				pmax		pmax		
	comp=Z,15nm,1.1s							
ULN	**Ulaanbaatar**	**66.57**	**328**	*ce*P		**P**	**21 31 09.3**	**+0.8**
ULN				pmax		pmax		
	comp=Z,7.0nm,1.0s							
ULN	**Ulaanbaatar**	**66.57**	**328**	P		**P**	**21 31 09.5**	**+1.0**
ULN				IAmb		IAmb	21 31 11.4	
	comp=Z,5.9nm,0.9s							
SONM	**Songino Array**	**66.91**	**327**	P		**P**	**21 31 10.5**	**-0.1**
SONM				pmax		pmax		
	comp=Z,4.0nm,1.0s							
SONM	**Songino Array**	**66.91**	**327**	P		**P**	**21 31 11.2**	**+0.6**
	comp=Z,4.8nm,1.1s,baz=138,slow=5.8,SNR=12							
SONM	**Songino Array**	**66.91**	**327**	P		**P**	**21 31 10.5**	**-0.1**
SHL	**Shillong**	**67.19**	**300**	P		**P**	**21 31 12.7**	**-0.2**
SHL				pmax		pmax		
	comp=Z,20nm,1.0s							
SHL	**Shillong**	**67.19**	**300**	P		**P**	**21 31 12.7**	**-0.2**
SHL				IAmb		IAmb	21 31 14.4	
	comp=Z,20nm,1.0s							
SEY	**Seymchan**	**67.62**	**359**	P		**P**	**21 31 14.9**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=155,slow=4.1,SNR=9.8							
LSA	**Lhasa**	**69.08**	**304**	P		**P**	**21 31 26.5**	**+1.5**
LSA				pmax		pmax		
	comp=Z,36nm,0.9s							
LSA	**Lhasa**	**69.08**	**304**	IAmb		IAmb	21 31 26.9	
	comp=Z,7.1nm,0.9s							
YAK	**Yakutsk**	**69.23**	**348**	*e*P		**P**	**21 31 25.2**	**+0.5**
YAK				pmax		pmax		
	comp=Z,11nm,1.1s							
YAK				pmax		pmax		
	comp=N,4.0nm,1.0s							
YAK				pmax		pmax		
	comp=E,2.0nm,1.0s							
YAK	**Yakutsk**	**69.23**	**348**	P		**P**	**21 31 24.9**	**+0.2**
YAK				IAmb		IAmb	21 31 27.6	
	comp=Z,8.0nm,0.7s							
ZAK	**Zakamensk**	**70.06**	**328**	*e*P		**P**	**21 31 29.9**	**-0.3**
ZAK				pmax		pmax		
	comp=Z,8.0nm,1.1s							
TLY	**Talaya**	**70.63**	**330**	*e*P		**P**	**21 31 33.6**	**+0.1**
TLY				pmax		pmax		
	comp=Z,9.0nm,1.3s							
TLY				MLR		MLR		
	comp=Z,191nm,13.0s							
TAPN	**Taplejung**	**71.28**	**301**	*e*P		**P**	**21 31 38.8**	**+0.5**
	comp=Z,58nm,1.0s							
ODAN	**Odare**	**71.42**	**300**	*e*P		**P**	**21 31 39.5**	**+0.4**
	comp=Z,77nm,0.7s							
MOY	**Mondy**	**71.98**	**329**	*e*P		**P**	**21 31 43.2**	**+1.5**
RAMN	**Ramite**	**72.13**	**300**	*e*P		**P**	**21 31 43.4**	**+0.1**
	comp=Z,14nm,0.7s							
JIRN	**Jiri**	**72.66**	**301**	*e*P		**P**	**21 31 47.0**	**+0.4**
	comp=Z,41nm,0.8s							
GUN	**Gumba**	**73.00**	**301**	*e*P		**P**	**21 31 48.9**	**+0.3**
	comp=Z,60nm,0.8s							
BILL	**Bilibino**	**73.27**	**5**	*e*P		**P**	**21 31 49.3**	**+0.4**
BILL				*e*			21 32 00.1	
BILL				*e**PP		**pwP**	**21 32 18.0**	**-1.6**
BILL				pmax		pmax		
	comp=Z,12nm,1.0s							
BILL	**Bilibino**	**73.27**	**5**	P		**P**	**21 31 49.7**	**+0.8**
BILL				IAmb		IAmb	21 31 50.9	
	comp=Z,11nm,1.0s							
PKI	**Pulchoki**	**73.31**	**301**	*e*P		**P**	**21 31 50.2**	**-0.2**
PKIN	**Phulchoki**	**73.32**	**301**	*e*P		**P**	**21 31 50.2**	**-0.2**
KKN	**Kakani**	**73.48**	**301**	*e*P		**P**	**21 31 51.7**	**+0.5**
DMN	**Daman**	**73.58**	**300**	*e*P		**P**	**21 31 52.6**	**+0.7**
GKN	**Gorkha**	**74.08**	**301**	*e*P		**P**	**21 31 55.2**	**+0.5**
SII	**Sitkinak Islan**	**74.38**	**27**	P		**P**	**21 31 57.2**	**+1.6**
KOLN	**Koldanda**	**74.92**	**300**	*e*P		**P**	**21 31 59.8**	**+0.2**
	comp=Z,78nm,1.0s							
DANN	**Dangsing**	**74.92**	**301**	*e*P		**P**	**21 31 59.6**	**-0.1**
	comp=Z,49nm,1.0s							
OHAK	**Old Harbor**	**75.16**	**27**	P		**P**	**21 32 00.8**	**+0.7**
OHAK				IAmb		IAmb	21 32 02.3	
	comp=Z,8.2nm,0.9s							
ANM	**Nome**	**75.55**	**17**	P		**P**	**21 32 03.0**	**+0.8**
ANM				pmax		pmax		
	comp=Z,5.0nm,0.8s							
ANM	**Nome**	**75.55**	**17**	P		**P**	**21 32 03.0**	**+0.8**
WMQ	**Urumqi**	**76.46**	**317**	P		**P**	**21 32 07.9**	**0.0**
WMQ				pmax		pmax		
	comp=Z,17nm,1.2s							
WMQ	**Urumqi**	**76.46**	**317**	P		**P**	**21 32 07.9**	**0.0**
WMQ				IAmb		IAmb	21 32 09.4	
	comp=Z,16nm,1.2s							
WMQ	**Urumqi**	**76.46**	**317**	sP		P	21 32 08.0	+0.1
SVW2	**Sparrevohn**	**76.50**	**23**	P		**P**	**21 32 08.3**	**+0.7**
CNPM	**China Poot**	**77.35**	**25**	IAmb		IAmb	21 32 15.1	
	comp=Z,15nm,0.8s							
HYB	**Hyderabad**	**77.44**	**289**	*i* P		**P**	**21 32 13.0**	**-0.9**
TIXI	**Tiksi**	**78.09**	**352**	P		**P**	**21 32 17.0**	**+0.7**
TIXI				pmax		pmax		
	comp=Z,5.0nm,1.1s							
TIXI	**Tiksi**	**78.09**	**352**	P		**P**	**21 32 17.0**	**+0.7**
SEW	**Seward**	**78.42**	**25**	P		**P**	**21 32 18.2**	**-0.1**
SEW				IAmb		IAmb	21 32 26.5	
	comp=Z,14nm,1.0s							
SKT	**Skwentna**	**78.59**	**23**	P		**P**	**21 32 19.0**	**-0.2**
RC01	**Rabbit Creek A**	**78.83**	**24**	P		**P**	**21 32 20.9**	**+0.3**
SML	**Sawmill**	**79.78**	**24**	P		**P**	**21 32 26.2**	**+0.4**
SML				IAmb		IAmb	21 32 27.4	
	comp=Z,15nm,1.1s							
TRF	**Thorofare Moun**	**79.88**	**22**	P		**P**	**21 32 26.9**	**+0.4**
TRF				IAmb		IAmb	21 32 27.4	
	comp=Z,7.8nm,1.1s							
BPAW	**Bear Paw Mtn.**	**79.98**	**21**	P		**P**	**21 32 26.7**	**-0.1**
IMAR	**Indian Mountai**	**80.12**	**19**	P		**P**	**21 32 27.4**	**-0.1**
MCK	**McKinley**	**80.55**	**22**	IAmb		IAmb	21 32 31.0	
	comp=Z,13nm,0.9s							
MK31	**Makanchi Array**	**81.02**	**319**	P		**P**	**21 32 32.8**	**0.0**
MK31				pmax		pmax		
	comp=Z,5.0nm,0.9s							
MK31	**Makanchi Array**	**81.02**	**319**	P		**P**	**21 32 32.8**	**0.0**
MKAR	**Makanchi Array**	**81.02**	**319**	*i* P		**P**	**21 32 33.0**	**+0.3**
MKAR				pmax		pmax		
	comp=Z,8.0nm,1.0s							
MKAR	**Makanchi Array**	**81.02**	**319**	P		**P**	**21 32 32.9**	**+0.1**
	comp=Z,7.7nm,1.0s,baz=106,slow=5.9,SNR=22							
MKAR	**Makanchi Array**	**81.02**	**319**	P		**P**	**21 32 33.1**	**+0.3**
MAKZ	**Makanchi**	**81.23**	**319**	P		**P**	**21 32 34.5**	**+0.7**
MAKZ				pmax		pmax		
	comp=Z,9.0nm,1.0s							
MAKZ	**Makanchi**	**81.23**	**319**	P		**P**	**21 32 34.5**	**+0.7**
MAKZ				IAmb		IAmb	21 32 34.8	
	comp=Z,9.1nm,1.0s							
VRDI	**Verde Repeater**	**81.55**	**26**	P		**P**	**21 32 36.2**	**+0.7**
ZALV	**Zalesovo Beam**	**81.75**	**326**	P		**P**	**21 32 35.8**	**-0.6**
	comp=Z,3.0nm,0.8s,baz=100,slow=4.6,SNR=10							
ILAR	**Eielson Array**	**81.85**	**22**	P		**P**	**21 32 35.5**	**-1.2**
	comp=Z,2.7nm,0.8s,baz=253,slow=5.2,SNR=22							
ILAR				LR		LR	22 04 54.3	
	comp=Z,47nm,19.8s,baz=236,slow=33							
ILAR	**Eielson Array**	**81.85**	**22**	P		**P**	**21 32 34.7**	**-2.0**
BALM	**Baldy**	**81.95**	**26**	P		**P**	**21 32 37.0**	**-0.4**
CTGM	**Chitina Glacie**	**82.37**	**26**	P		**P**	**21 32 39.6**	**-0.1**
DOT	**Dot Lake**	**82.39**	**23**	IAmb		IAmb	21 32 41.1	
	comp=Z,7.3nm,1.0s							
KSH	**Kashi**	**83.72**	**310**	P		**P**	**21 32 50.0**	**+2.9**
KSH				pP		pP	21 33 15.8	+2.9
KSH				PP		**PP**	**21 36 05.8**	**+4.3**
KSH				S		**S**	**21 43 00.8**	**-0.8**
KSH				sS		sS	21 43 48.0	0.0
KSH				SS		**SS**	**21 48 37.0**	**+6.0**
KSH				pmax		pmax		
	comp=Z,120nm,1.6s							
KSH				pmax		pmax		
	comp=Z,280nm,4.4s							
KSH				LR		LR		
	comp=Z,220nm,4.4s							
KSH				LR		LR		
	comp=Z,150nm,4.9s							
KSH				LR		LR		
	comp=Z,410nm,5.8s							
BMAR	**Burnt Mountain**	**83.97**	**20**	P		**P**	**21 32 48.3**	**+0.6**
NRN	**Naryn**	**84.09**	**312**	P		**P**	**21 32 49.4**	**+0.2**
NRN				pmax		pmax		
	comp=Z,7.0nm,1.1s							
NRN	**Naryn**	**84.09**	**312**	P		**P**	**21 32 49.4**	**+0.2**
NRN				IAmb		IAmb	21 32 50.6	
	comp=Z,6.9nm,1.1s							
BOOM	**Boomskoye usch**	**84.35**	**313**	P		**P**	**21 32 50.7**	**+0.4**
BOOM				pmax		pmax		
	comp=Z,14nm,1.0s							
BOOM	**Boomskoye usch**	**84.35**	**313**	P		**P**	**21 32 50.7**	**+0.4**
BOOM				IAmb		IAmb	21 32 51.9	
	comp=Z,14nm,0.9s							
KURK	**Kurchatov**	**84.42**	**322**	P		**P**	**21 32 50.3**	**+0.1**
KURK				pmax		pmax		
	comp=Z,16nm,1.1s							
KURK	**Kurchatov**	**84.42**	**322**	P		**P**	**21 32 50.3**	**+0.1**
KURK				IAmb		IAmb	21 32 51.2	
	comp=Z,16nm,1.1s							
NIL	**Nilore**	**84.82**	**304**	P		**P**	**21 32 52.9**	**+0.2**
NIL				pmax		pmax		
	comp=Z,25nm,0.9s							
NIL	**Nilore**	**84.82**	**304**	P		**P**	**21 32 52.9**	**+0.2**
QSPA	**South Pole Qui**	**85.10**	**180**	P		**P**	**21 32 53.6**	**+0.2**
QSPA				IAmb		IAmb	21 32 55.5	
	comp=Z,7.7nm,0.9s							
AAK	**Ala-Archa**	**85.42**	**313**	P		**P**	**21 32 56.4**	**+0.7**
AAK				pmax		pmax		
	comp=Z,7.0nm,1.0s							
AAK	**Ala-Archa**	**85.42**	**313**	P		**P**	**21 32 56.4**	**+0.7**
AAK				IAmb		IAmb	21 32 56.9	
	comp=Z,6.8nm,1.0s							
MAW	**Mawson**	**85.89**	**203**	P		**P**	**21 32 57.2**	**0.0**
MAW				pmax		pmax		
	comp=Z,6.0nm,0.9s							
MAW	**Mawson**	**85.89**	**203**	P		**P**	**21 32 56.6**	**-0.6**
	comp=Z,21nm,0.7s,baz=98,slow=6.2,SNR=28							
MAW				LR		LR	22 11 34.0	
	comp=Z,79nm,18.0s,baz=68,slow=36							
MAW	**Mawson**	**85.89**	**203**	P		**P**	**21 32 57.2**	**0.0**
MAW				IAmb		IAmb	21 32 57.9	
	comp=Z,5.9nm,0.8s							
INK	**Inuvik**	**88.16**	**21**	P		**P**	**21 33 07.6**	**-0.5**
	comp=Z,2.3nm,0.9s,baz=243,slow=1.7,SNR=5.8							
KK31	**Karatay Array**	**88.39**	**313**	P		**P**	**21 33 08.8**	**-1.0**
KK31				pmax		pmax		
	comp=Z,4.0nm,1.1s							
KK31	**Karatay Array**	**88.39**	**313**	P		**P**	**21 33 08.8**	**-1.0**
KKAR	**Karatay Array**	**88.39**	**313**	P		**P**	**21 33 09.3**	**-0.5**
KKAR	**Karatay Array**	**88.39**	**313**	P		**P**	**21 33 09.3**	**-0.5**
KBL	**Kabul**	**88.41**	**305**	P		**P**	**21 33 07.4**	**-2.9**
KBL				pmax		pmax		
	comp=Z,3.0nm,1.0s							
KBL	**Kabul**	**88.41**	**305**	P		**P**	**21 33 07.4**	**-2.9**
BRVK	**Borovoye**	**89.95**	**323**	P		**P**	**21 33 16.2**	**-0.6**
BRVK				pmax		pmax		
	comp=Z,8.0nm,0.9s							
BRVK	**Borovoye**	**89.95**	**323**	P		**P**	**21 33 16.2**	**-0.6**
BRVK				IAmb		IAmb	21 33 16.9	
	comp=Z,7.7nm,0.9s							
NVAR	**Mina Array Bea**	**91.35**	**52**	P		**P**	**21 33 25.3**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=258,slow=4.5,SNR=3.6							
NVAR				LR		LR	22 06 42.7	
	comp=Z,67nm,21.3s,baz=281,slow=30							
NVAR	**Mina Array Bea**	**91.35**	**52**	P		**P**	**21 33 23.0**	**-1.0**
SYO	**Syowa Base**	**93.93**	**199**	*ie*P		**P**	**21 33 32.4**	**-2.6**
HRA	**Herat**	**93.99**	**304**	IAmb		IAmb	21 33 36.0	
	comp=Z,3.7nm,0.9s							
YKA	**Yellowknife Ar**	**95.03**	**28**	P		**P**	**21 33 40.0**	**-0.1**
YKA	**Yellowknife Ar**	**95.03**	**28**	P		**P**	**21 33 40.0**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=268,slow=4.7,SNR=13							
YKA				LR		LR	22 12 32.7	
	comp=Z,47nm,20.4s,baz=0.0,slow=33							
ARU	**Arti**	**96.92**	**326**	*i* P		**P**	**21 33 45.9**	**-2.9**
ARU				pmax		pmax		
	comp=Z,2.0nm,1.0s							
GERES	**GERESS Array B**	**124.62**	**329**	PKP		**PKPdf**	**21 39 15.7**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=20,slow=3.1,SNR=3.7							
BDFB	**Brasilia**	**150.32**	**134**	PKPbc		**PKPbc**	**21 40 08.2**	**-1.4**
	comp=Z,4.9nm,0.8s,baz=267,slow=3.3,SNR=7.1							
TORD	**Torodi Ar. Bea**	**151.26**	**289**	PKPbc		**PKPbc**	**21 40 10.5**	**-1.2**
	comp=Z,5.1nm,0.6s,baz=91,slow=1.9,SNR=26							
DBIC	**Dimbokro**	**158.68**	**276**	PKPab		**PKPab**	**21 40 52.1**	**+0.3**
	comp=Z,6.2nm,0.8s,baz=80,slow=3.3,SNR=5.1							

NEIC ***31*** *21:20:54.6±2.6,58.˚14N±0.˚02×151.˚80W±0.˚06,h38km±5km, Error ellipse: s-maj=5.3km s-min=1.4km az=59.0,Moment Tensor Solution. Moment tensor: Scale 10¹⁵Nm; Mrr-0.28; Mθθ-1.51; Mϕϕ1.80; Mrθ1.23; Mθϕ1.02; Mϕr0.35; Fault plane solution: Mo2.34000×10¹⁵ NP1: ϕs333.62000˚,δ57.56000˚,λ-170.66000˚. NP2: ϕs238.58000˚,δ82.13000˚,λ-32.79000˚. Principal axes: T 2.2813, Plg16.0000˚, Azm290.0000˚; N 0.1082, Plg56.0000˚, Azm47.0000˚; P -2.3895, Plg28.0000˚, Azm191.0000˚;*

IDC ***31*** *21:20:54.8±0.4,58.˚28N×152.˚30W,h34km±3km, mb3.8/20, mb1 4.0/21,mb1mx3.8/54,mbtmp4.0/21,ML3.9/1,MS3.3/7, Ms1 3.3/7,ms1mx2.9/52 Error ellipse: s-maj=11.3km s-min=6.3km az=107.0*

AEIC ***31*** *21:20:54.7±2.5,58.˚10N±0.˚03×151.˚72W±0.˚08,h46km±5km, ML4.1/73,mb4.4/17(NEIC),Mwr4.2/43(NEIC),Error ellipse: s-maj=7.4km s-min=2.1km az=126.0*

ISC 31 21:20:54.5±0.5,58.17N±0.04×151.77W±0.04,h41km±4km, n177,σ1§29/167,mb4.2/29,MS3.5/6,Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**0.58**	**229**	Pg	**Pn**		**21 21 06.0**	**-0.3**
	565nm,0.3s,baz=40,slow=12							
KDAK				Lg	Lg		21 21 14.2	
	1μm,0.3s,baz=287,slow=19,SNR=191							
KDAK				LR	LR		21 21 32.0	
	comp=Z,712nm,18.5s,baz=68,slow=72							
KDAK	**Kodiak Island**	**0.58**	**229**		**Pn**		**21 21 05.6**	**-0.7**
KDAK					**Sn**		**21 21 14.0**	**-0.6**
OHAK	**Old Harbor**	**1.25**	**221**		**Pn**		**21 21 14.7**	**-0.7**
OHAK					**Sn**		**21 21 30.0**	**-1.0**
CNPM	**China Poot**	**1.39**	**11**		**Pn**		**21 21 17.9**	**+0.5**
CNPM					**Sn**		**21 21 34.8**	**+0.3**
AUP	**Augustine Pinn**	**1.48**	**325**		**Pn**		**21 21 19.3**	**+0.7**
AUH	**Augustine H**	**1.48**	**325**		**Pn**		**21 21 19.3**	**+0.6**
AUL	**Augustine Lava**	**1.50**	**325**		**Pn**		**21 21 19.3**	**+0.5**
AUL					**Sn**		**21 21 39.0**	**+1.9**
AUW	**Augustine West**	**1.50**	**324**		**Pn**		**21 21 19.5**	**+0.7**
HOM	**Homer**	**1.50**	**2**		**Pn**		**21 21 20.0**	**+1.1**
HOM					**Sn**		**21 21 38.8**	**+1.7**
BRLK	**Bradley Lake**	**1.67**	**16**		**Pn**		**21 21 21.5**	**+0.3**
BRLK					**Sn**		**21 21 41.3**	**0.0**
BRSE	**Bradley Lake S**	**1.67**	**18**		**Pn**		**21 21 21.5**	**+0.3**
BRSE					**Sn**		**21 21 40.9**	**-0.4**
KCG	**Knife Ck. Glac**	**1.77**	**276**		**Pn**		**21 21 22.7**	**0.0**
ILS	**Iliamna Low So**	**1.92**	**340**		**Pn**		**21 21 25.3**	**+0.6**
IVE	**Iliamna Volcan**	**1.96**	**341**		**Pn**		**21 21 25.8**	**+0.5**
ANCK	**Angle Creek**	**1.97**	**272**		**Pn**		**21 21 25.9**	**+0.5**
SII	**Sitkinak Islan**	**2.08**	**220**		**Pn**		**21 21 26.3**	**-0.5**
SII					**Sn**		**21 21 49.0**	**-2.5**
SEW	**Seward**	**2.28**	**31**		**Pn**		**21 21 29.4**	**-0.1**
RSO	**Redoubt South**	**2.36**	**348**		**Pn**		**21 21 31.3**	**+0.5**
RDWB	**Redoubt West**	**2.39**	**347**		**Pn**		**21 21 31.6**	**+0.4**
DFR	**Drift River**	**2.48**	**349**		**Pn**		**21 21 32.5**	**+0.2**
SLKM	**Skilak Lake**	**2.48**	**18**		**Pn**		**21 21 32.5**	**+0.2**
RDJH	**Redoubt Jeurge**	**2.49**	**348**		**Pn**		**21 21 33.1**	**+0.5**
CAPN	**Captain Cook N**	**2.63**	**7**		**Pn**		**21 21 34.6**	**+0.3**
SPCR	**Spurr Chakacha**	**3.05**	**356**		**Pn**		**21 21 40.1**	**-0.1**
CKL	**Chakachamna La**	**3.05**	**355**		**Pn**		**21 21 40.5**	**+0.2**
FIS	**Fire Island**	**3.09**	**14**		**Pn**		**21 21 41.3**	**+0.7**
MID	**Middleton Isla**	**3.10**	**64**	Pn	**Pn**		**21 21 41.3**	**+0.6**
MID					**Sn**		**21 22 14.9**	**-1.5**
RC01	**Rabbit Creek A**	**3.11**	**19**		**Pn**		**21 21 41.9**	**+0.9**
SPBG	**Spurr Blockage**	**3.12**	**355**		**Pn**		**21 21 41.5**	**+0.4**
SPCG	**Spurr Capps Gl**	**3.14**	**358**		**Pn**		**21 21 41.6**	**+0.2**
CHIR	**Chirikof Islan**	**3.16**	**223**		**Pn**		**21 21 40.5**	**-1.2**
PWL	**Port Wells**	**3.22**	**32**		**Pn**		**21 21 42.5**	**+0.1**
SUA	**Susitna One**	**3.35**	**8**		**Pn**		**21 21 44.3**	**0.0**
HIN	**Hinchinbrook I**	**3.51**	**48**		**Pn**		**21 21 46.1**	**-0.3**
SVW2	**Sparrevohn**	**3.52**	**328**		**Pn**		**21 21 46.1**	**-0.5**
GLI	**Glacier Island**	**3

0.2nm,0.3s,baz=233,slow=15,SNR=8.9
INK LR LR 21 29 23.9
comp=Z,107nm,18.7s,baz=18,slow=39
INK Inuvik 13.00 31 Pn Pn 21 23 56.9 +0.6
ATKA Atka Island 14.10 255 Pn **Pn 21 24 08.2 -3.1**
BBB Bella Bella 14.74 104 LR LR 21 29 20.9
comp=Z,76nm,18.3s,baz=348,slow=34
GSTR Great Sitkin T 15.11 257 Pn **Pn 21 24 25.3 +0.4**
ADK Adak 15.55 257 Pn **Pn 21 24 29.6 -0.9**
YKA Yellowknife Ar 18.71 61 P **Pn 21 25 10.9 +1.1**
0.4nm,0.3s,baz=270,slow=11,SNR=95
LLLB Lillooet 18.85 101 P **P 21 25 09.6 -1.2**
BILL Bilibino 20.94 315 P **P 21 25 31.9 -1.4**
BILL IAmb IAmb 21 25 35.7
comp=Z,8.6nm,0.5s
NEW Newport 22.74 101 P **P 21 25 55.9 +3.1**
comp=Z,1.0nm,0.5s,baz=300,slow=8.1,SNR=3.5
NEW LR LR 21 34 03.5
comp=Z,72nm,19.8s,baz=318,slow=34
I07A Izee 24.38 111 pP 21 26 20.0 +0.3
YBH Yreka Blue Hor 24.62 119 LR LR 21 33 52.8
comp=Z,49nm,19.3s,baz=320,slow=31
RES Resolute Bay 26.56 30 pP 21 26 41.1 +2.1
DLMT Dillon 26.99 101 pP 21 26 44.5 +1.2
PNTR Pine Nut 28.16 119 pP 21 26 58.6 +4.6
PETK Petropavlovsk- 28.40 282 P **P 21 26 43.0 -1.7**
comp=Z,3.1nm,0.5s,baz=77,slow=13,SNR=11
YNE Yellowstone No 28.58 99 pP 21 26 57.9 +0.1
H17A Grant Village 28.70 101 IAmb IAmb 21 26 51.4
comp=Z,4.4nm,1.1s
RLMT Red Lodge 28.89 98 P **P 21 26 47.6 -1.7**
RLMT IAmb IAmb 21 27 09.2
comp=Z,8.1nm,0.9s
MA2 Magadan 28.95 298 LR LR 21 38 47.1
comp=Z,67nm,18.2s,baz=114,slow=37
NVAR Mina Array Bea 29.29 118 P **P 21 26 56.3 +3.3**
comp=Z,0.2nm,0.5s,baz=9.7,slow=6.4,SNR=2.1
NVAR pP **sP 21 27 08.1 -0.8**
comp=Z,1.3nm,0.6s,baz=313,slow=8.5,SNR=4.8
ULM Lac du Bonnet 32.76 79 P **P 21 27 25.2 +2.1**
comp=Z,1.0nm,0.4s,baz=300,slow=8.1,SNR=2.8
ULM pP **pP 21 27 36.1 +1.9**
comp=Z,1.4nm,0.6s,baz=319,slow=11,SNR=5.0
ULM Lac du Bonnet 32.76 79 IAmb IAmb 21 27 38.2
comp=Z,4.0nm,0.8s
TIXI Tiksi 33.35 326 P **P 21 27 26.5 -1.6**
comp=Z,1.9nm,0.3s,baz=69,slow=4.5,SNR=6.6
TIXI Tiksi 33.35 326 P **P 21 27 26.7 -1.3**
TIXI IAmb IAmb 21 27 28.1
comp=Z,2.5nm,0.7s
GLA Glamis 35.31 119 pP 21 27 54.8 -1.8
DAG Danmarks Havn 42.12 15 *i* P **P 21 28 42.0 +0.1**
comp=Z,7.3nm,0.5s
TX31 Lajitas Ar. Si 43.75 110 sP 21 29 10.6 -1.5
TX32 Lajitas Array 43.75 110 sP 21 29 10.5 -1.5
TXAR Lajitas Array 43.75 110 P **P 21 28 59.2 +3.4**
comp=Z,0.3nm,0.8s,baz=333,slow=15,SNR=3.0
TXAR pP **pP 21 29 09.7 +2.5**
comp=Z,1.2nm,0.7s,baz=325,slow=5.6,SNR=12
JCT Junction City 44.77 105 sP 21 29 17.9 -2.2
R50A Paris 46.91 84 pP 21 29 34.5 +2.4
USRK Uusuriysk Ar. 47.17 288 P **P 21 29 20.5 -2.0**
comp=Z,1.3nm,0.7s,baz=70,slow=9.5,SNR=5.1
PLAL Pickwick Lake 47.40 90 pP 21 29 38.0 +2.0
S51A Beattyville 47.77 84 P **P 21 29 25.7 -1.6**
X48A Hartselle 48.35 90 pP 21 29 44.8 +1.4
SWET Sewanee 48.36 88 pP 21 29 44.8 +1.3
SSPA Standing Stone 48.54 77 sP 21 29 47.6 -1.9
V53A Saluda 49.67 86 pP 21 29 53.7 +0.2
ARCES ARCESS Array B 52.58 1 P **P 21 30 02.7 -0.6**
comp=Z,1.3nm,0.6s,baz=15,slow=7.5,SNR=13
Y58A Scranton 52.68 84 P **P 21 30 02.5 -1.9**
KSRS Korea Array 54.23 285 P **P 21 30 15.4 -0.4**
comp=Z,1.3nm,0.6s,baz=37,slow=7.4,SNR=12
SONM Songino Array 56.40 308 P **P 21 30 31.0 -0.4**
comp=Z,3.3nm,0.7s,baz=43,slow=7.1,SNR=33
ZAA0 Zalesovo Array 59.24 325 P **P 21 30 50.6 -0.4**
ZAA0 IAmb IAmb 21 30 51.2
comp=Z,4.6nm,0.8s
ZALV Zalesovo Beam 59.24 325 P **P 21 30 50.2 -0.8**
comp=Z,2.6nm,0.4s,baz=26,slow=6.6,SNR=20
HHC Hu-ho-hao-te 59.61 299 *e*P **P 21 30 56.5 +2.5**
HHC pmax pmax
comp=Z,5.0nm,0.6s
HHC pmax pmax
comp=Z,79nm,7.6s
NOA NORSAR Array B 60.39 9 P **P 21 30 59.4 +0.5**
comp=Z,1.0nm,0.9s,baz=350,slow=6.9,SNR=2.3
NOA pP **pP 21 31 10.4 -0.4**
comp=Z,1.3nm,0.8s,baz=350,slow=6.8,SNR=2.7
FINES FINESS Array B 60.71 1 P **P 21 31 00.9 -0.1**
comp=Z,0.9nm,0.5s,baz=4.3,slow=8.2,SNR=12
KURK Kurchatov 63.91 327 P **P 21 31 21.6 -1.0**
MK31 Makanchi Array 66.27 323 IAmb IAmb 21 32 34.3
comp=Z,4.8nm,0.9s
MKAR Makanchi Array 66.27 323 P **P 21 31 36.8 -1.2**
comp=Z,1.0nm,0.5s,baz=35,slow=6.9,SNR=42
MKAR pP **pP 21 31 48.6 -1.4**
comp=Z,0.8nm,0.5s,baz=37,slow=6.8,SNR=6.4
LZH Lanzhou 67.01 302 *e*P **P 21 31 43.0 -0.1**
LZH pP pP 21 31 57.5 +2.4
LZH sP sP 21 32 02.5 +2.7
LZH PP **PP 21 34 08.3 -2.2**
LZH pmax pmax
comp=Z,13nm,1.1s
LZH pmax pmax
comp=Z,66nm,4.3s
WMQ Urumqi 67.03 317 *e*P **P 21 31 44.0 +1.0**
WMQ pmax pmax
comp=Z,5.0nm,1.7s
WMQ LR LR
comp=N,340nm,29.3s
WMQ LR LR
comp=E,870nm,28.7s
WMQ LR LR
comp=Z,87nm,28.7s
TAOE Nuku Hiva Isla 67.46 168 *e*LR LR 21 32 49.2
comp=Z,318nm,25.4s
ABKAR Akbulak array 69.80 338 IAmb IAmb 21 32 11.9
comp=Z,3.1nm,0.7s
PVCC Panska Ves 71.09 9 *e*pP pP 21 32 20.6 +0.6
CHVC Chvalec 71.15 8 *e*pP pP 21 32 21.1 +0.7
DPC Dobruska-Polom 71.40 8 *e*pP pP 21 32 22.7 +0.7
AKASG Malin Array Be 71.49 359 P **P 21 32 10.0 -0.4**
comp=Z,1.5nm,0.4s,baz=4.1,slow=6.1,SNR=11
AKASG pP **pP 21 32 21.9 -0.6**
comp=Z,1.9nm,0.6s,baz=4.4,slow=6.1,SNR=7.4
KHC Kasperske Hory 72.39 10 *e*pP pP 21 32 28.8 +0.9
GERES GERESS Array B 72.68 10 P **P 21 32 20.1 +2.4**
comp=Z,0.1nm,0.3s,baz=32,slow=5.8,SNR=2.2
GERES pP **pP 21 32 29.9 +0.1**
comp=Z,1.1nm,0.6s,baz=336,slow=4.6,SNR=6.2
LANS Liptovska Anna 72.80 6 *e*P pP 21 32 31.7 +1.3
KOLS Kolonicke sedl 73.15 4 *e*P pP 21 32 30.3 -2.2
VYHS Vyhne 73.42 7 *e*P pP 21 32 34.6 +0.5
KBZ Khabaz 77.73 349 P **P 21 32 47.5 +0.8**
comp=Z,1.8nm,0.8s,baz=5.8,slow=12,SNR=4.2
SLVN Son La 79.37 293 P **P 21 32 56.0 -0.1**
SLVN IAmb IAmb 21 32 56.9
comp=Z,5.3nm,0.9s
GEYT Alibeck 81.04 336 P **P 21 33 05.0 +0.2**
comp=Z,1.2nm,0.7s,baz=320,slow=3.8,SNR=4.1
GEYT pP **pP 21 33 16.3 -0.9**
comp=Z,0.8nm,0.6s,baz=350,slow=4.8,SNR=2.8
BRTR Keskin Array B 82.36 356 P **P 21 33 13.9 +2.0**
comp=Z,1.0nm,0.6s,baz=13,slow=2.4,SNR=5.5
BRTR pP **pP 21 33 24.5 +0.3**
comp=Z,1.0nm,0.8s,baz=6.2,slow=4.1,SNR=3.6
PMG Port Moresby 83.38 240 LR LR 22 03 56.9
comp=Z,30nm,19.8s,baz=230,slow=31
CMAR Chiang Mai Arr 84.22 296 P **P 21 33 21.3 -0.3**
comp=Z,2.1nm,0.8s,baz=18,slow=5.4,SNR=15

*IDC **31** 21:50:18.4±1.1,56°.77N×34°.20W,h0km,mb3.6/5,*
mb1 3.9/6,mb1mx3.4/53,mbtmp3.7/6,ML2.6/1,MS3.4/5,
Ms1 3.4/5,ms1mx2.8/60,Error ellipse: s-maj=34.3km
s-min=23.5km az=6.0
ISC 31 21:50:20.3±1.0,56°.8N±0°.2×34°.3W±0°.1,h13km,n12,
σ0s90/7,mb3.8/5,MS3.4/5,Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**18.33**	**278**	P	**Pn**	**21 54 33.4**	**-0.6**
	0.2nm,0.3s,baz=78,slow=11,SNR=2.8						
NOA	**NORSAR Array B**	**23.49**	**61**	LR	LR	22 03 11.6	
	comp=Z,38nm,19.5s,baz=275,slow=33						
DAVOX	**Davos/Dischmat**	**28.59**	**91**	LR	LR	22 07 08.4	
	comp=Z,87nm,19.0s,baz=268,slow=35						
ILAR	**Eielson Array**	**48.45**	**328**	P	**P**	**21 59 01.6**	**-0.2**
	1.4nm,1.1s,baz=46,slow=5.9,SNR=9.1						
TORD	**Torodi Ar. Bea**	**51.46**	**133**	P	**P**	**21 59 25.0**	**-0.2**
	0.7nm,0.9s,baz=329,slow=5.4,SNR=2.7						
TEIG	**Tepich**	**53.80**	**250**	LR	LR	22 19 36.3	
	comp=Z,35nm,21.1s,baz=48,slow=33						
BVAR	**Borovoye Array**	**54.47**	**46**	P	**P**	**21 59 46.3**	**-0.7**
	0.7nm,0.7s,baz=304,slow=10,SNR=4.0						
TXAR	**Lajitas Array**	**54.84**	**271**	P	**P**	**21 59 51.0**	**+0.8**
	0.5nm,0.9s,baz=67,slow=7.0,SNR=3.4						
YBH	**Yreka Blue Hor**	**55.63**	**295**	LR	LR	22 22 01.9	
	comp=Z,64nm,18.0s,baz=12,slow=34						
MA2	**Magadan**	**63.94**	**357**	LR	LR	22 30 52.5	
	comp=Z,35nm,18.1s,baz=129,slow=38						
MKAR	**Makanchi Array**	**64.06**	**43**	P	**P**	**22 00 54.6**	**+1.1**
	0.9nm,1.0s,baz=311,slow=5.7,SNR=5.8						
ASAR	**Alice Springs**	**145.83**	**20**	PKPbc	**PKPdf**	**22 09 57.8**	**-0.6**
	0.6nm,0.9s,baz=354,slow=4.7,SNR=3.1						

*IDC **31** 21:53:32.2±1.5,38°.35N×20°.41E,h0km,mb3.7/5,*
mb1 3.8/5,mb1mx3.3/48,mbtmp3.7/5,MS3.4/1,Ms1 3.4/1,
ms1mx2.3/61,Error ellipse: s-maj=54.6km s-min=27.8km
az=128.0
*THE **31** 21:53:34.4,38°.26N×20°.42E,h11km,ML3.1/8,Error*
ellipse: s-maj=0.7km s-min=0.2km az=253.0
*ATH **31** 21:53:34.1,38°.27N×20°.42E,h11km,ML3.2/20,Error*
ellipse: s-maj=1.6km s-min=0.8km az=267.0
ISC 31 21:53:33.5±0.7,38°.28N±0°.02×20°.39E±0°.03,h13km±4km,
n76,σ0s85/103,mb3.6/5,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEF4	**Livadi, Kephal**	**0.04**	**130**	P	**Pg**	**21 53 35.8**	**0.0**
KEF4				S	**Sg**	**21 53 37.3**	**-0.1**
KEF1	**Kardakata, Kep**	**0.07**	**94**	P	**Pg**	**21 53 36.0**	**-0.1**
KEF1				S	**Sg**	**21 53 37.4**	**-0.5**
KEF3	**Kipouria, Keph**	**0.09**	**201**	P	**Pg**	**21 53 36.6**	**+0.3**
KEF3				S	**Sg**	**21 53 38.3**	**+0.1**
LXR1	**Lixouri, Cepha**	**0.09**	**154**	P	**Pg**	**21 53 36.5**	**+0.2**
LXR1				S	**Sg**	**21 53 38.3**	**0.0**
CHV1	**Chavriata, Kef**	**0.10**	**183**	P	**Pg**	**21 53 36.7**	**+0.3**
CHV1				S	**Sg**	**21 53 38.6**	**+0.1**
ARG2	**Argostoli**	**0.13**	**143**	P	**Pg**	**21 53 37.0**	**+0.2**
ARG2				S	**Sg**	**21 53 39.1**	**-0.1**
KEF2	**Argostoli. Kep**	**0.14**	**146**	P	**Pg**	**21 53 37.1**	**+0.1**
KEF2				S	**Sg**	**21 53 39.0**	**-0.4**
VSK1	**VASILIKIADES**	**0.19**	**48**	P	**Pg**	**21 53 38.4**	**+0.6**
VSK1				S	**Sg**	**21 53 41.1**	**+0.4**
VLS	**Valsamata**	**0.19**	**123**	P	**Pg**	**21 53 37.8**	**0.0**
VLS				S	**Sg**	**21 53 40.8**	**+0.1**
	18μm,0.1s						
VLS	**Valsamata**	**0.19**	**123**	P	**Pg**	**21 53 37.9**	**+0.1**
VLS				S	**Sg**	**21 53 40.5**	**-0.2**
VLS				AML	AML	21 53 40.9	
	comp=N,33182μm,0.2s						
VLS				AML	AML	21 53 41.1	
	comp=E,38688μm,0.1s						
FSK	**Fiskardo**	**0.22**	**38**	P	**Pg**	**21 53 39.0**	**+0.7**
FSK				S	**Sb**	**21 53 43.2**	**-0.3**
	comp=E,10μm,0.3s						
EVGI	**Lefkada island**	**0.40**	**32**	P	**Pb**	**21 53 42.2**	**-0.3**
EVGI				S	**Sb**	**21 53 48.8**	**+0.3**
EVGI	**Lefkada island**	**0.40**	**32**	P	**Pb**	**21 53 42.3**	**-0.2**
EVGI				S	**Sg**	**21 53 47.9**	**+1.0**
VLMS	**Volimes, Zakyn**	**0.46**	**152**	P	**Pg**	**21 53 42.9**	**+0.3**
VLMS				S	**Sg**	**21 53 48.9**	**+0.1**
VLMS				AML	AML	21 53 51.1	
	comp=N,26238μm,0.6s						
VLMS				AML	AML	21 53 59.7	
	comp=E,7076μm,0.5s						
MGNA	**Meganis**	**0.49**	**40**	P	**Pg**	**21 53 43.6**	**+0.5**
MGNA				S	**Sb**	**21 53 50.7**	**-0.4**
MGNA				AML	AML	21 53 52.0	
	comp=E,5570μm,0.3s						
MGNA				AML	AML	21 53 53.1	
	comp=N,5872μm,0.5s						
LKD2	**Lefkada island**	**0.55**	**23**	P	**Pb**	**21 53 44.9**	**-0.2**
LKD2				S	**Sb**	**21 53 52.7**	**-0.2**
	comp=N,2μm,0.7s						
LKD2	**Lefkada island**	**0.55**	**23**	P	**Pg**	**21 53 44.7**	**+0.4**
LKD2				S	**Sg**	**21 53 52.2**	**+0.6**
LKD2				AML	AML	21 54 00.9	
	comp=E,3294μm,0.7s						
LKD2				AML	AML	21 54 02.4	
	comp=N,3908μm,0.8s						
TSLK	**Tsoukalades, L**	**0.58**	**21**	P	**Pb**	**21 53 45.5**	**-0.1**
TSLK				S	**Sb**	**21 53 54.5**	**+0.7**
	comp=N,2μm,0.6s						
TSLK	**Tsoukalades, L**	**0.58**	**21**	P	**Pb**	**21 53 45.6**	**+0.1**
AST1	**Astakos**	**0.61**	**65**	P	**Pg**	**21 53 45.8**	**+0.4**
AST1				S	**Sb**	**21 53 54.5**	**0.0**
PDO	**Prodromos**	**0.70**	**63**	P	**Pg**	**21 53 47.3**	**+0.2**
PDO				S	**Sb**	**21 53 57.3**	**+0.1**
	comp=N,5μm,0.5s						
PDO	**Prodromos**	**0.70**	**63**	P	**Pg**	**21 53 47.3**	**+0.2**
PDO				AML	AML	21 54 02.0	
	comp=E,8249μm,0.4s						
PDO				AML	AML	21 54 05.9	
	comp=N,5646μm,0.4s						
KRI1	**kERI**	**0.71**	**151**	P	**Pg**	**21 53 47.2**	**0.0**
KRI1				S	**Sb**	**21 53 57.3**	**0.0**
RLS	**Riolos of Patr**	**0.88**	**104**	P	**Pg**	**21 53 50.4**	**-0.1**
RLS				S	**Sb**	**21 54 02.9**	**+0.6**
	comp=N,785nm,0.4s						
RLS	**Riolos of Patr**	**0.88**	**104**	P	**Pg**	**21 53 50.4**	**-0.1**
PVO	**Paravola**	**0.95**	**69**	P	**Pg**	**21 53 52.2**	**+0.3**
PVO				S	**Sb**	**21 54 05.1**	**+0.6**
	comp=N,2μm,0.6s						
PVO	**Paravola**	**0.95**	**69**	P	**Pg**	**21 53 52.3**	**+0.3**
PVO				AML	AML	21 54 09.4	
	comp=E,4317μm,0.4s						
PVO				AML	AML	21 54 12.4	
	comp=N,3908μm,0.8s						
DRO	**Drossia**	**1.09**	**107**	P	**Pb**	**21 53 54.2**	**-0.1**
DRO	**Drossia**	**1.09**	**107**	P	**Pb**	**21 53 54.5**	**+0.1**
DRO				AML	AML	21 54 19.5	
	comp=E,3842μm,0.6s						
DRO				AML	AML	21 54 20.0	
	comp=N,3497μm,0.5s						
EFP	**Efpalio**	**1.20**	**83**	P	**Pn**	**21 53 55.8**	**-0.2**
EFP	**Efpalio**	**1.20**	**83**	P	**Pn**	**21 53 55.9**	**-0.2**
EFP				AML	AML	21 54 20.9	
	comp=N,1899μm,0.5s						
EFP				AML	AML	21 54 21.0	
	comp=E,3202μm,0.4s						
ANX	**Ano Chora**	**1.24**	**75**	P	**Pb**	**21 53 57.0**	**+0.1**
ANX	**Ano Chora**	**1.24**	**75**	P	**Pb**	**21 53 57.1**	**+0.2**
ANX				AML	AML	21 54 22.3	
	comp=E,5430μm,0.6s						
ANX				AML	AML	21 54 24.3	
	comp=N,6487μm,0.6s						
LAKA	**Lakka**	**1.25**	**91**	P	**Pn**	**21 53 57.0**	**+0.2**
LAKA	**Lakka**	**1.25**	**91**	P	**Pn**	**21 53 56.9**	**+0.2**
LAKA				AML	AML	21 54 22.3	
	comp=E,1120μm,0.7s						
LAKA				AML	AML	21 54 23.2	
	comp=N,1345μm,1.0s						
EVR	**Evrytania**	**1.28**	**60**	P	**Pn**	**21 53 57.2**	**-0.1**
EVR	**Evrytania**	**1.28**	**60**	P	**Pb**	**21 53 58.0**	**+0.4**
EVR				AML	AML	21 54 23.6	
	comp=E,1007μm,0.6s						
EVR				AML	AML	21 54 28.0	
	comp=N,1115μm,0.6s						
AMT	**Artemida-Makis**	**1.29**	**125**	P	**Pg**	**21 53 58.0**	**-0.2**
AMT				AML	AML	21 54 29.1	
	comp=E,2205μm,0.7s						
AMT				AML	AML	21 54 32.4	
	comp=N,1920μm,0.6s						
SERG	**Sergoula**	**1.32**	**84**	P	**Pn**	**21 53 56.8**	**-0.9**
SERG	**Sergoula**	**1.32**	**84**	P	**Pn**	**21 53 58.0**	**+0.3**
SERG				AML	AML	21 54 25.5	
	comp=E,1631μm,0.5s						
SERG				AML	AML	21 54 28.5	
	comp=N,1794μm,0.4s						
TRIZ	**Trizonia**	**1.33**	**86**	P	**Pn**	**21 53 57.9**	**+0.1**
TRIZ	**Trizonia**	**1.33**	**86**	P	**Pb**	**21 53 58.6**	**+0.3**
ALIK	**Aliki, Aigiali**	**1.36**	**90**	P	**Pn**	**21 53 57.7**	**-0.5**
KALE	**Kalithea**	**1.38**	**85**	P	**Pn**	**21 53 58.5**	**-0.1**
KALE	**Kalithea**	**1.38**	**85**	P	**Pb**	**21 53 59.2**	**0.0**
KALE				AML	AML	21 54 25.0	
	comp=N,1641μm,0.6s						
KALE				AML	AML	21 54 27.8	
	comp=E,2011μm,0.5s						
KLV	**Kalavryta, Ach**	**1.41**	**99**	P	**Pn**	**21 53 59.3**	**+0.3**
KLV				S	**Sn**	**21 54 17.2**	**-0.3**
	comp=E,368nm,0.8s						
KLV	**Kalavryta, Ach**	**1.41**	**99**	P	**Pb**	**21 53 59.9**	**+0.2**
KLV				AML	AML	21 54 26.8	
	comp=N,682μm,0.7s						
KLV				AML	AML	21 54 29.5	
	comp=E,886μm,1.0s						
JAN	**Janina**	**1.42**	**15**	P	**Pg**	**21 54 01.4**	**+0.6**
MAKR	**Makrakomi, Fth**	**1.55**	**61**	P	**Pg**	**21 54 03.2**	**-0.1**
MAKR				AML	AML	21 54 30.9	
	comp=N,1906μm,0.9s						
MAKR				AML	AML	21 54 35.8	
	comp=E,2710μm,0.7s						
ITM	**Ithomi**	**1.64**	**132**	P	**Pg**	**21 54 05.2**	**+0.2**
AGG	**Agios Georgios**	**1.69**	**63**	P	**Pb**	**21 54 05.0**	**+0.5**
AGG				AML	AML	21 54 37.0	
	comp=E,950μm,0.6s						
AGG				AML	AML	21 54 38.1	
	comp=N,1034μm,0.8s						
PYL	**PYLOS**	**1.75**	**142**	P	**Pb**	**21 54 06.1**	**+0.6**
THL	**Klokotos Trika**	**1.80**	**44**	P	**Pb**	**21 54 07.3**	**+0.9**
THL				AML	AML	21 54 37.8	
	comp=E,1089μm,0.6s						
THL				AML	AML	21 54 38.2	
	comp=N,1056μm,0.7s						
AXAR	**Agios Charalam**	**1.85**	**74**	P	**Pb**	**21 54 07.8**	**+0.7**
AXAR				AML	AML	21 54 46.4	
	comp=N,1735μm,0.6s						
AXAR				AML	AML	21 54 50.2	
	comp=E,1701μm,1.0s						
LTK	**Loutraki**	**2.05**	**96**	P	**Pb**	**21 54 10.2**	**-0.5**
LKR	**Lokris**	**2.08**	**79**	P	**Pb**	**21 54 11.2**	**0.0**
LKR				AML	AML	21 54 40.1	
	comp=N,426μm,0.4s						
LKR				AML	AML	21 54 40.4	
	comp=E,388μm,0.3s						
VIL2	**Platees**	**2.27**	**91**	P	**Pb**	**21 54 14.1**	**-0.2**
DID	**Didima**	**2.38**	**108**	P	**Pb**	**21 54 15.5**	**-0.8**
NEO	**Neokhori**	**2.44**	**64**	P	**Pb**	**21 54 15.7**	**-1.6**
VLY	**Voula,Athens**	**2.72**	**98**	P	**Pn**	**21 54 19.2**	**+2.2**
OHR	**Ohrid**	**2.84**	**6**	*e*Pn	**Pn**	**21 54 18.2**	**-0.5**
VAY	**Valandovo**	**3.47**	**28**	*e*Pn	**Pb**	**21 54 34.1**	**-0.7**
STIP	**Stip**	**3.68**	**22**	*e*Pn	**Pb**	**21 54 36.1**	**-2.2**
DBRK	**Dubrovnik**	**4.70**	**339**	*e*Pn	**Pn**	**21 54 44.3**	**+0.1**
DBRK				Sn	**Sn**	**21 55 37.0**	**-1.6**
STON	**Ston**	**5.02**	**337**	*e*Pn	**Pn**	**21 54 48.9**	**+0.3**
MAKA	**Makarska**	**5.62**	**334**	*e*Pn	**Pn**	**21 54 57.7**	**+1.0**
MAKA				Sn	**Sn**	**21 55 59.0**	**-2.0**
KIJV	**Kijevo**	**6.46**	**334**	*e*Pn	**Pn**	**21 55 09.6**	**+1.2**
MORI	**Morici**	**6.60**	**329**	*e*Pn	**Pn**	**21 55 11.5**	**+1.2**
MORI				Sn	**Sn**	**21 56 23.5**	**-1.9**
NVLJ	**Novalja**	**7.52**	**328**	*e*Pn	**Pn**	**21 55 23.7**	**+0.9**
GBRS	**Gornja Briga**	**8.35**	**332**	*i* Pn	**Pn**	**21 55 35.7**	**+1.4**
GBRS				*i* Sn	**Sn**	**21 57 03.1**	**-5.3**
FINES	**FINESS Array B**	**23.46**	**7**	P	**P**	**21 58 42.3**	**-0.1**
	comp=E,2.2nm,0.8s,baz=203,slow=14,SNR=4.2						
TORD	**Torodi Ar. Bea**	**30.05**	**219**	P	**P**	**21 59 43.6**	**+1.2**
	comp=E,1.0nm,1.1s,baz=32,slow=8.5,SNR=3.1						
ARU	**Arti**	**31.05**	**42**	LR	LR	22 13 11.5	
	comp=E,75nm,19.8s,baz=76,slow=38						
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**22 01 51.3**	**0.0**
	comp=E,0.3nm,0.5s,baz=273,slow=7.7,SNR=11						
ZALV	**Zalesovo Beam**	**45.70**	**48**	P	**P**	**22 01 54.2**	**+0.3**
	comp=E,1.3nm,0.5s,baz=275,slow=8.6,SNR=6.7						
CMAR	**Chiang Mai Arr**	**69.98**	**82**	P	**P**	**22 04 45.8**	**+0.7**
	comp=E,0.4nm,0.8s,baz=311,slow=6.8,SNR=4.1						

*IDC **31** 21:56:42.5±3.6,4°.87S×153°.81E,h94km±26km,mb3.5/9,*
mb1 3.7/10,mb1mx3.5/30,mbtmp3.9/10,MS2.5/1,
Ms1 2.5/1,ms1mx2.3/24,Error ellipse: s-maj=33.6km
s-min=14.9km az=103.0
*NEIC **31** 21:56:44.3±1.6,4°.9S±0°.1×153°.8E±0°.2,h113km±9km,*
mb4.3/6,Error ellipse: s-maj=23.7km s-min=15.6km
az=94.0
ISC 31 21:56:43.7±0.9,4°.83S±0°.09×153°.8E±0°.1,h105km,n22,
σ0s95/21,mb3.8/12,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.75**	**291**	Pn	**Pn**	**21 57 14.9**	**+1.5**
KRVT	**Keravat (AS076**	**1.85**	**286**	P	**Pn**	**21 57 13.7**	**-0.8**
	32nm,0.3s,baz=47,slow=1.4,SNR=8.6						
KRVT				S	**Sn**	**21 57 36.5**	**-1.5**
	40nm,0.3s,baz=0.0,slow=20,SNR=13						
PMG	**Port Moresby**	**8.01**	**235**	P	**Pn**	**21 58 37.9**	**+0.7**
	5.0nm,0.3s,baz=22,slow=8.8,SNR=16						
PMG				S	**Sn**	**22 00 07.0**	**+0.8**
	1.9nm,0.3s,baz=41,slow=20,SNR=3.0						
PMG	**Port Moresby**	**8.01**	**235**		**Pn**	**21 58 38.5**	**+1.2**
SARN	**Sarigan**	**22.82**	**340**	P	**P**	**22 01 37.8**	**-0.1**
SARN				IAmb	IAmb	22 01 40.6	
	comp=Z,52nm,1.0s						
WR0	**Warramunga Arr**	**24.04**	**230**	P	**P**	**22 01 49.4**	**+0.2**
WR0				IAmb	IAmb	22 01 50.8	
	comp=Z,6.6nm,0.9s						
WB0	**Warramunga Arr**	**24.04**	**230**	P	**P**	**22 01 49.3**	**+0.1**
WB0				IAmb	IAmb	22 02 05.6	
	comp=Z,6.8nm,1.1s						
WRA	**Warramunga Arr**	**24.18**	**230**	P	**P**	**22 01 50.9**	**+0.4**
	comp=Z,2.4nm,0.5s,baz=52,slow=9.4,SNR=7.0						
ASAR	**Alice Springs**	**26.81**	**224**	P	**P**	**22 02 13.8**	**-0.4**
	comp=Z,1.2nm,1.0s,baz=55,slow=8.4,SNR=6.4						
STKA	**Stephens Creek**	**29.24**	**202**	P	**P**	**22 02 34.9**	**-0.9**
	comp=Z,2.1nm,0.8s,baz=46,slow=15,SNR=5.4						
STKA	**Stephens Creek**	**29.24**	**202**	IAmb	IAmb	22 02 35.6	
	comp=Z,0.7nm,0.9s						
FITZ	**Fitzroy Crossi**	**30.52**	**242**	P	**P**	**22 02 45.9**	**-1.4**
	comp=Z,1.3nm,0.6s,baz=24,slow=10.0,SNR=4.4						
DAV	**Davao City (W)**	**30.55**	**293**	LR	LR	22 15 12.2	
	comp=Z,8.1nm,19.5s,baz=98,slow=36						
FORT	**Forrest**	**35.40**	**220**	P	**P**	**22 03 29.2**	**-0.4**
PETK	**Petropavlovsk-**	**57.82**	**3**	P	**P**	**22 06 24.6**	**+0.7**
	comp=Z,6.5nm,1.0s,baz=177,slow=7.2,SNR=2.9						
CMAR	**Chiang Mai Arr**	**58.80**	**295**	P	**P**	**22 06 32.6**	**+1.1**
	comp=Z,0.4nm,0.5s,baz=101,slow=4.8,SNR=4.9						
SONM	**Songino Array**	**66.89**	**327**	P	**P**	**22 07 25.8**	**+1.1**
	comp=Z,0.4nm,0.7s,baz=129,slow=3.2,SNR=4.0						
SONM	**Songino Array**	**66.89**	**327**	IAmb	IAmb	22 07 27.4	
	comp=Z,0.5nm,0.8s						
MKAR	**Makanchi

ATKA	Atka Island	2.71	66			Pn	22 20 25.8	+1.0
ATKA	Atka Island	2.71	66			Sn	22 20 56.4	+0.1
KOKL	Mount Kliuchef	2.75	63			Pn	22 20 26.9	+1.4
KOFP	Korovin Flat P	2.79	65			Pn	22 20 26.6	+0.7
SMY	Shemya	5.01	291		Pn	Pn	22 20 54.8	-1.6
NIKH	Nikolski High	6.05	69		Pn	Pn	22 21 12.3	+1.6
UNV	Unalaska Valle	7.63	65		Pn	Pn	22 21 33.4	+1.0
AKUT	Akutan	8.13	64		Pn	Pn	22 21 40.5	+1.4
FALS	False Pass	9.65	62		Pn	Pn	22 22 00.4	+0.4
SDPT	Sand Point	11.41	62		Pn	Pn	22 22 24.7	+0.6
CNBA	Chernabura Isl	11.80	65		Pn	Pn	22 22 28.3	-1.1
GAMB	Gambell	13.12	13		Pn	Pn	22 22 45.5	-1.8
CHIR	Chirikof Islan	14.21	62		Pn	Pn	22 23 02.1	-0.1
PEA0B	Petropavlovsk-	14.91	287		Pn	Pn	22 23 08.4	-3.3
PETK	Petropavlovsk-	14.91	287		LR	LR	22 29 02.1	
	comp=Z,59nm,19.1s,baz=61,slow=38							
ANM	Nome	15.03	22		Pn	Pn	22 23 14.5	+1.3
SII	Sitkinak Islan	15.13	60		Pn	Pn	22 23 13.3	-1.3
SII					IAmb	IAmb	22 23 22.7	
	comp=Z,18nm,0.8s							
OHAK	Old Harbor	15.74	58			Pn	22 23 19.9	-2.7
OHAK					IAmb	IAmb	22 23 30.1	
	comp=Z,14nm,0.5s							
SVW2	Sparrevohn	15.98	43			Pn	22 23 26.6	+0.9
KDAK	Kodiak Island	16.24	56		Pn	Pn	22 23 25.3	-3.6
	comp=Z,14nm,0.3s,baz=211,slow=4.7,SNR=14							
KDAK	Kodiak Island	16.24	56			Pn	22 23 26.1	-2.8
KDAK					IAmb	IAmb	22 23 36.1	
	comp=Z,16nm,0.5s							
RSO	Redoubt South	16.96	47		Pn	Pn	22 23 37.7	-0.6
CNPM	China Poot	17.37	51			P	22 23 43.8	-0.5
CNPM					IAmb	IAmb	22 23 49.4	
	comp=Z,11nm,0.6s							
BRLK	Bradley Lake	17.61	50			P	22 23 46.7	-0.2
BRLK					IAmb	IAmb	22 23 55.0	
	comp=Z,12nm,1.0s							
SKT	Skwentna	18.11	43		P	P	22 23 54.1	+1.7
SKT					IAmb	IAmb	22 24 01.9	
	comp=Z,14nm,1.0s							
PPLA	Purkeypile	18.24	40			P	22 23 56.1	+2.2
PPLA					IAmb	IAmb	22 24 09.8	
	comp=Z,15nm,1.2s							
SUA	Susitna One	18.25	45		P	P	22 23 54.6	+0.6
SEW	Seward	18.40	50		P	P	22 23 54.6	-0.9
SEW					IAmb	IAmb	22 24 05.3	
	comp=Z,12nm,0.8s							
CAST	Castle Rocks	18.54	39		P	P	22 23 56.6	-0.4
BILL	Bilibino	18.56	342		P	P	22 23 56.3	-0.9
RC01	Rabbit Creek A	18.57	47		P	Pn	22 23 58.2	+0.3
KTH	Kantishna Hill	19.06	39		P	Pn	22 24 04.1	+0.3
KTH					IAmb	IAmb	22 24 08.9	
	comp=Z,13nm,0.7s							
GHO	Glory Hole Cre	19.17	45		P	P	22 24 04.1	0.0
KNK	Knik Glacier	19.26	46		P	Pn	22 24 06.7	+0.5
KNK					IAmb	IAmb	22 24 11.4	
	comp=Z,13nm,0.6s							
TRF	Thorofare Moun	19.26	40		P	P	22 24 05.5	+0.3
TRF					IAmb	IAmb	22 24 12.4	
	comp=Z,17nm,0.9s							
BPAW	Bear Paw Mtn.	19.30	37		IAmb	IAmb	22 24 12.0	
	comp=Z,6.3nm,0.6s							
SML	Sawmill	19.45	45		P	Pn	22 24 09.2	+0.7
SML					IAmb	IAmb	22 24 22.4	
	comp=Z,7.5nm,0.8s							
SEY	Seymchan	19.66	318		P	Pn	22 24 12.7	+1.8
	comp=Z,0.1nm,0.3s,baz=104,slow=7.8,SNR=4.7							
GLI	Glacier Island	19.73	48		P	P	22 24 10.6	+0.5
GLI					IAmb	IAmb	22 24 22.8	
	comp=Z,14nm,1.1s							
RND	Reindeer	19.83	41		IAmb	IAmb	22 24 11.9	
	comp=Z,8.4nm,0.4s							
MLY	Manley	19.86	35		IAmb	IAmb	22 24 17.8	
	comp=Z,9.0nm,0.7s							
HIN	Hinchinbrook I	19.90	50		P	Pn	22 24 13.7	-0.1
HIN					IAmb	IAmb	22 24 28.1	
	comp=Z,27nm,1.2s							
SCM	Sheep Creek Mo	19.91	46		P	P	22 24 11.7	-0.4
SCM					IAmb	IAmb	22 24 19.8	
	comp=Z,13nm,0.7s							
FID	Port Fidalgo	19.99	49		P	P	22 24 12.8	-0.2
FID					IAmb	IAmb	22 24 28.8	
	comp=Z,7.9nm,0.6s							
DHY	Denali Highway	20.31	42		P	P	22 24 16.6	0.0
DHY					IAmb	IAmb	22 24 17.7	
	comp=Z,13nm,0.6s							
WRH	Wood River Hil	20.59	38		P	P	22 24 19.4	+0.1
MDM	Murphy Dome	20.75	37		P	P	22 24 21.2	0.0
MDM					IAmb	IAmb	22 24 36.5	
	comp=Z,9.3nm,0.8s							
CCB	Clear Creek Bu	20.77	38		P	P	22 24 21.1	-0.3
RAGM	Ragged Mountai	20.78	51		P	Pn	22 24 23.0	-1.1
RAGM					IAmb	IAmb	22 24 39.9	
	comp=Z,21nm,1.1s							
HMT	Hamilton	20.97	51		P	Pn	22 24 25.5	-0.9
HMT					IAmb	IAmb	22 24 32.2	
	comp=Z,11nm,0.9s							
HDA	Harding Lake	21.01	39		P	P	22 24 26.1	+2.1
PAX	Paxson	21.09	43		IAmb	IAmb	22 24 30.2	
	comp=Z,8.3nm,1.2s							
SUCK	Suckling Hills	21.16	52		P	P	22 24 28.3	+2.7
SUCK					IAmb	IAmb	22 24 36.0	
	comp=Z,12nm,1.0s							
IL31		21.18	38		P	P	22 24 26.3	+0.6
ILAR	Eielson Array	21.18	38		P	P	22 24 26.1	+0.2
	comp=Z,0.4nm,0.5s,baz=230,slow=8.2,SNR=10							
ILAR					LR	LR	22 33 38.6	
	comp=Z,39nm,18.1s,baz=150,slow=40							
ILAR	Eielson Array	21.18	38		P	P	22 24 28.5	+2.7
GLB	Gilahina Butte	21.42	48		P	P	22 24 30.0	+1.6
GLB					IAmb	IAmb	22 24 35.9	
	comp=Z,5.5nm,0.7s							
VRDI	Verde Repeater	21.54	49		P	P	22 24 32.0	+2.1
CRQM	Cirque	21.60	50		P	P	22 24 31.9	+1.4
CRQM					IAmb	IAmb	22 24 49.9	
	comp=Z,7.0nm,0.8s							
RIDG	Independent Ri	21.61	42		IAmb	IAmb	22 24 45.3	
	comp=Z,6.6nm,0.8s							
WAX	Waxell Ridge	21.68	51		P	P	22 24 33.1	+1.8
WAX					IAmb	IAmb	22 24 46.0	
	comp=Z,10.0nm,1.1s							
TGL	Tana Glacier	21.75	50		P	P	22 24 34.5	+2.5
MCARA	McCarthy VSAT	21.77	48		P	P	22 24 34.9	+2.7
MENT	Mentasta	21.84	44		P	P	22 24 33.3	+0.4
MENT					IAmb	IAmb	22 24 44.3	
	comp=Z,3.4nm,0.4s							
DOT	Dot Lake	21.91	42		IAmb	IAmb	22 24 39.7	
	comp=Z,4.6nm,0.7s							
PRP	Porcupine Dome	22.02	37		P	P	22 24 35.3	+0.4
BALM	Baldy	22.03	49		P	P	22 24 35.1	+0.1
BARN	Barnard Glacie	22.36	50		P	P	22 24 39.0	+0.4
CTGM	Chitina Glacie	22.50	50		P	P	22 24 40.8	+0.7
CTGM					IAmb	IAmb	22 24 52.0	
	comp=Z,5.2nm,0.7s							
FYU	Fort Yukon	22.59	35		P	P	22 24 41.7	+0.9
FYU					IAmb	IAmb	22 24 45.8	
	comp=Z,7.1nm,0.8s							
BMAR	Burnt Mountain	23.22	33		P	P	22 24 47.7	+0.3
SKAG	Skagway	25.37	54		P	P	22 25 07.3	0.0
SKAG					IAmb	IAmb	22 25 09.8	
	comp=Z,5.1nm,0.8s							
INK	Inuvik	27.43	35		P	P	22 25 26.2	+0.4
	comp=Z,0.4nm,0.3s,baz=259,slow=5.2,SNR=2.4							
DIB	Dawson Inlet,	27.75	68		P	P	22 25 29.7	+0.8
DIB					IAmb	IAmb	22 25 42.5	
	comp=Z,9.2nm,1.2s							
TIXI	Tiksi	31.01	331		P	P	22 25 58.2	+0.7
	comp=Z,0.5nm,0.4s,baz=86,slow=10.0,SNR=5.5							
H11N2	WAKE ISLAND Hy	33.49	206		T	T	23 02 04.2	
	baz=17,slow=76							
H11N3	WAKE ISLAND Hy	33.50	206		T	T	23 02 11.0	
	baz=17,slow=76							
H11N1	WAKE ISLAND Hy	33.51	206		T	T	23 02 06.2	
	baz=17,slow=76							
USRK	Ussuriysk Ar.	33.69	278		P	P	22 26 20.8	-0.5
	comp=Z,0.9nm,0.6s,baz=58,slow=10,SNR=5.0							
USRK	Ussuriysk Ar.	33.69	278		P	P	22 26 20.0	-1.3
PGC	Sidney	34.67	72		P	P	22 26 30.4	+0.7
PGC					IAmb	IAmb	22 26 35.7	
	comp=Z,6.9nm,1.1s							
H11S1	WAKE ISLAND Hy	34.71	206		T	T	23 03 42.8	
	baz=19							
H11S2	WAKE ISLAND Hy	34.73	206		T	T	23 03 43.8	
	baz=19							
H11S3	WAKE ISLAND Hy	34.73	206		T	T	23 03 41.8	
	baz=19							

YKA	Yellowknife Ar	35.11	46		P	P	22 26 32.2	-1.2
	comp=Z,0.4nm,0.6s,baz=286,slow=7.4,SNR=5.5							
LON	Longmire	36.52	74		P	P	22 26 47.4	+1.7
LON					IAmb	IAmb	22 27 05.8	
	comp=Z,4.6nm,1.1s							
F04A	Amboy	36.54	76		P	P	22 26 46.0	+0.2
LTY	Liberty	36.97	73		P	P	22 26 50.2	+0.7
LTY					IAmb	IAmb	22 27 04.7	
	comp=Z,1.9nm,0.7s							
B08A	Colville Reser	37.26	71		P	P	22 26 53.1	+1.1
B08A					IAmb	IAmb	22 26 55.8	
	comp=Z,2.6nm,1.0s							
E07A	Sunnyside	37.79	73		P	P	22 26 57.4	+1.0
E07A					IAmb	IAmb	22 27 10.7	
	comp=Z,5.0nm,1.1s							
HAWA	Hanford	38.07	74		P	P	22 27 00.0	+1.3
YBH	Yreka Blue Hor	38.54	82		P	P	22 27 03.9	+1.0
	comp=Z,0.6nm,0.3s,baz=233,slow=5.1,SNR=2.7							
YBH	Yreka Blue Hor	38.54	82		IAmb	IAmb	22 27 12.7	
	comp=Z,2.6nm,1.1s							
NEW	Newport	38.61	70		P	P	22 27 04.2	+0.8
	comp=Z,2.3nm,0.5s,baz=298,slow=7.6,SNR=6.5							
NEW	Newport	38.61	70		P	P	22 27 04.2	+0.8
NEW					IAmb	IAmb	22 27 05.0	
	comp=Z,2.6nm,0.6s							
K05A	Summer Lake	39.13	79		P	P	22 27 08.2	+0.3
K05A					IAmb	IAmb	22 27 16.4	
	comp=Z,9.4nm,1.2s							
I07A	Izee	39.26	77		P	P	22 27 09.9	+0.9
I07A					IAmb	IAmb	22 27 11.2	
	comp=Z,2.4nm,0.7s							
HOPS	Hopland Field	39.88	86		P	P	22 27 15.7	+1.7
BMO	Blue Mountains	40.20	74		P	P	22 27 18.1	+1.4
MSO	Missoula	41.19	70		P	P	22 27 24.4	-0.5
MCMT	McKenzie Canyo	42.89	72		P	P	22 27 39.5	+0.6
ELK	Elko	43.74	78		P	P	22 27 46.2	+0.4
	comp=Z,0.7nm,0.7s,baz=283,slow=11,SNR=4.1							
H17A	Grant Village	44.49	71		P	P	22 27 52.4	+0.7
H17A					IAmb	IAmb	22 27 54.8	
	comp=Z,2.8nm,0.9s							
LKWY	Lake	44.50	71		P	P	22 27 51.7	-0.2
LKWY					IAmb	IAmb	22 27 54.4	
	comp=Z,3.6nm,0.7s							
RLMT	Red Lodge	44.86	69		P	P	22 27 54.8	+0.1
RLMT					IAmb	IAmb	22 27 57.2	
	comp=Z,2.5nm,0.7s							
R11A	Troy Canyon, C	44.95	81		P	P	22 27 55.8	+0.3
SPUT	South Promonto	45.12	76		P	P	22 27 57.8	+1.1
TPNV	Topopah Spring	45.40	83		P	P	22 27 60.0	+0.9
TPNV					IAmb	IAmb	22 28 11.0	
	comp=Z,3.1nm,0.8s							
DUG	Dugway, Tooele	45.55	77		P	P	22 28 01.6	+1.4
DUG					IAmb	IAmb	22 28 08.4	
	comp=Z,2.3nm,0.8s							
PD31	Pinedale Array	46.02	72		IAmb	IAmb	22 28 05.5	
	comp=Z,3.9nm,0.8s							
PDAR	Pinedale Array	46.02	72		P	P	22 28 04.6	+0.7
	comp=Z,3.7nm,0.7s,baz=298,slow=4.0,SNR=24							
ULN	Ulaanbaatar	46.69	297		P	P	22 28 09.4	+0.3
ULN					IAmb	IAmb	22 28 11.3	
	comp=Z,2.6nm,0.8s							
JOW	Kunigami	46.90	260		P	P	22 28 07.4	-3.3
MSU	Marysvale	46.97	79		P	P	22 28 12.1	+0.7
SONM	Songino Array	47.08	297		P	P	22 28 13.5	+1.5
	comp=Z,1.7nm,0.8s,baz=58,slow=9.1,SNR=14							
SONM					PcP	PcP	22 29 43.9	+0.4
	comp=Z,0.4nm,0.6s,baz=67,slow=3.9,SNR=2.3							
SONM					LR	LR	22 48 52.6	
	comp=Z,44nm,18.7s,baz=236,slow=37							
RDMU	Red Mountain	47.31	75		P	P	22 28 14.8	+0.7
SRU	San Rafael Swe	47.62	77		P	P	22 28 17.4	+1.0
HHC	Hu-ho-hao-te	48.11	286		eP	P	22 28 20.0	-0.1
HHC					pmax	pmax		
	comp=Z,1.0nm,0.9s							
HHC					pmax	pmax		
	comp=Z,38nm,5.7s							
N23A	Red Feather La	49.30	72		P	P	22 28 29.8	+0.3
N23A					IAmb	IAmb	22 28 33.5	
	comp=Z,3.6nm,1.1s							
ULM	Lac du Bonnet	49.49	57		P	P	22 28 30.0	-0.4
ULM					IAmb	IAmb	22 28 38.0	
	comp=Z,4.0nm,1.1s							
SPITS	Spitsbergen Ar	50.62	356		P	P	22 28 38.0	-0.6
	comp=Z,10nm,1.1s,baz=60,slow=8.5,SNR=9.3							
ZALV	Zalesovo Beam	54.45	314		PcP	PcP	22 30 11.7	+1.2
	comp=Z,1.3nm,0.6s,baz=41,slow=4.1,SNR=7.8							
LZH	Lanzhou	55.80	287		eP	P	22 29 15.5	-2.0
LZH					pP	pP	22 29 25.5	-1.5
LZH					sP	pwP	22 29 29.8	-0.3
LZH					PP	PP	22 31 20.5	-1.4
LZH					pmax	pmax		
	comp=Z,13nm,1.3s							
LZH					pmax	pmax		
	comp=Z,190nm,5.4s							
TXAR	Lajitas Array	58.32	81		P	P	22 29 35.1	-0.2
	comp=Z,0.3nm,0.5s,baz=306,slow=5.2,SNR=7.0							
ARCES	ARCESS Array B	58.37	350		P	P	22 29 33.9	-1.1
	comp=Z,2.6nm,0.9s,baz=22,slow=7.0,SNR=8.6							
WMQ	Urumqi	59.77	303		eP	P	22 29 47.5	+2.4
WMQ					LR	LR		
	comp=N,170nm,26.7s							
WMQ					LR	LR		
	comp=E,1μm,28.1s							
WMQ					LR	LR		
	comp=Z,99nm,24.9s							
W39A	Magazine	60.27	70		P	P	22 29 50.7	+2.1
MK31	Makanchi Array	60.46	309		P	P	22 29 50.5	+0.7
MKAR	Makanchi Array	60.46	309		P	P	22 29 48.9	-0.8
	comp=Z,0.6nm,0.5s,baz=48,slow=5.9,SNR=21							
P48A	Milroy	62.09	61		P	P	22 30 00.9	0.0
V51A	Loudon	65.29	63		P	P	22 30 21.9	-0.1
CPCT	Cooper Cave	65.45	64		P	P	22 30 23.2	+0.2
FPAL	Fort Paine	65.49	65		P	P	22 30 23.3	-0.1
G62A	West of Eustis	65.52	48		P	P	22 30 23.0	-0.3
E63A	Oxbow	65.58	46		P	P	22 30 22.8	-0.9
L59A	Walton	65.59	53		P	P	22 30 23.7	-0.2
V52A	Sevierville	65.69	63		P	P	22 30 24.8	+0.2
TKL	Tuckaleechee C	65.72	63		P	P	22 30 25.3	+0.5
	comp=Z,2.0nm,0.6s,baz=288,slow=3.2,SNR=4.3							
TKL	Tuckaleechee C	65.72	63		IAmb	IAmb	22 30 38.8	
	comp=Z,4.6nm,1.1s							
F63A	Nahmakanta, Br	65.81	47		P	P	22 30 25.9	+0.6
R55A	Marlinton	65.82	59		P	P	22 30 24.9	-0.6
F64A	Sherman	66.03	46		P	P	22 30 25.9	-0.7
FINES	FINESS Array B	66.08	348		P	P	22 30 26.3	-0.4
	comp=Z,2.5nm,0.9s,baz=344,slow=4.5,SNR=6.4							
N59A	State Game Lan	66.17	54		P	P	22 30 28.0	+0.4
U54A	Nelsons Funny	66.18	61		P	P	22 30 28.8	+1.0
V53A	Saluda	66.25	62		P	P	22 30 28.7	+0.4
BLA	Blacksburg	66.44	60		P	P	22 30 30.1	+0.6
BG3	Lake Jocassee	66.67	63		P	P	22 30 31.1	+0.2
V55A	Taylorsville	67.00	61		P	P	22 30 33.2	+0.3
KMSC	Kings Mountain	67.46	62		P	P	22 30 36.1	+0.3
GOGA	Godfrey	67.53	64		P	P	22 30 36.3	0.0
HODGE	Hodges	67.61	63		P	P	22 30 37.6	+0.8
NC204	NORSAR Array S	67.69	355		P	P	22 30 35.7	-1.2
LSA	Lhasa	67.86	290		P	P	22 30 41.0	+1.9
LSA					IAmb	IAmb	22 30 43.4	
	comp=Z,3.3nm,0.8s							
NOA	NORSAR Array B	67.90	355		P	P	22 30 38.6	+0.3
	comp=Z,0.4nm,0.6s,baz=358,slow=4.0,SNR=3.2							
JSC	Jenkinsville	68.13	62		P	P	22 30 40.9	+0.8
ABKAR	Akbulak array	68.34	323		P	P	22 30 41.7	+0.6
KKAR	Karatay Array	68.81	313		P	P	22 30 44.5	+0.2
KONO	Kongsberg	69.37	356		P	P	22 30 48.2	+0.8
TAPN	Taplejung	71.63	291		eP	P	22 31 04.9	+2.8
GUN	Gumba	72.28	292		eP	P	22 31 07.7	+1.6
	comp=Z,20nm,0.4s							
JIRN	Jiri	72.29	292		eP	P	22 31 08.3	+2.2
RAMN	Ramite	72.58	291		eP	P	22 31 09.3	+1.6
	comp=Z,13nm,0.6s							
PKI	Pulchoki	72.81	293		eP	P	22 31 10.7	+1.5
PKIN	Phulchoki	72.81	293		eP	P	22 31 10.8	+1.7
DANN	Dangsing	73.18	294		eP	P	22 31 12.6	+1.3
	comp=Z,28nm,1.0s							
NIL	Nilore	74.84	305		P	P	22 31 21.5	+0.9
NIL					IAmb	IAmb	22 31 23.2	
	comp=Z,3.2nm,0.6s							
AKASG	Malin Array Be	75.87	342		P	P	22 31 26.5	+0.3
	comp=Z,1.2nm,0.5s,baz=19,slow=6.4,SNR=4.6							
KBZ	Khabaz	78.98	331		P	P	22 31 44.4	+0.7
	comp=Z,1.5nm,0.9s,baz=50,slow=9.8,SNR=3.8							
VYHS	Vyhne	79.66	349		eP	P	22 31 47.7	+0.4
WRA	Warramunga Arr	82.11	224		P	P	22 32 00.5	-0.1
	comp=Z,0.5nm,0.5s,baz=33,slow=6.1,SNR=5.0							
WRA	Warramunga Arr	82.11	224		IAmb	IAmb	22 32 07.2	
	comp=Z,0.1nm,0.8s							
BRTR	Keskin Array B	85.30	336		P	P	22 32 17.4	+0.4
	comp=Z,1.1nm,0.8s,baz=32,slow=3.1,SNR=5.3							
ASAR	Alice Springs	85.58	223		P	P	22 32 18.4	+0.1
	comp=Z,1.1nm,0.8s,baz=26,slow=5.8,SNR=7.9							
STKA	Stephens Creek	89.94	213		P	P	22 32 40.0	+1.0
	comp=Z,0.5nm,0.5s,baz=22,slow=4.8,SNR=3.9							
TSUM	Tsumeb	145.75	333		PKPbc	PKPab	22 39 19.9	+0.3
	baz=13,slow=3.6							
BOSA	Boshof	151.40	313		PKPbc	PKiKP	22 39 34.4	+0.2
	comp=Z,1.8nm,0.6s,baz=83,slow=3.7,SNR=6.0							

SJA ***31*** *22:37:16.6±0.6, 22.°46S×68.°05W, h162km±13km, ML3.0, MW3.2*

GUC ***31*** *22:37:19.8±0.7, 22.°45S×68.°30W, h151km±7km, ML3.2*

ISC 31 22:37:17.5±1.6, 22.°52S±0.°05×68.°09W±0.°06, h158km±17km, n29, σ0.89/43, 5C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.29	304	⇓*iP*		Pn	22 37 46.7	+0.9
PB09				*eS*		Sn	22 38 07.1	-0.3
PB09	IPOC Station P	1.29	304	*i* P		Pn	22 37 45.8	-0.1
PB09				*i* Sg		Sn	22 38 07.2	-0.3
PB09				IAML			22 38 09.0	
	comp=Z,131nm,0.8s							
PB06	IPOC Station P	1.39	262	*eP*		Pn	22 37 47.8	+1.1
PB06	IPOC Station P	1.39	262	*i* P		Pn	22 37 47.1	+0.4
PB06				IAML			22 38 12.6	
	comp=Z,214nm,0.2s							
PB15	IPOC Station P	1.45	242	⇑*iP*		Pn	22 37 48.4	+1.0
PB15	IPOC Station P	1.45	242	*i* P		Pn	22 37 48.1	+0.8
PB03	IPOC Station P	1.61	287	⇑*iP*		Pn	22 37 49.8	+0.8
PB03				*eS*		Sn	22 38 12.7	-0.6
PB03				IAML			22 38 13.8	
	comp=E,399nm,0.1s							
PB07	IPOC Station P	1.85	295	⇓*iP*		Pn	22 37 52.6	+1.0
PB07				*eS*		Sn	22 38 17.3	-0.5
PB04	IPOC Station P	1.92	275	*eP*		Pn	22 37 53.4	+1.0
PB04				*eS*		Sn	22 38 16.5	-2.7
PB04				IAML			22 38 22.1	
	comp=E,282nm,0.2s							
PB01	IPOC Station P	1.96	318	*eP*		Pn	22 37 53.7	+0.8
PB01				*eS*		Sn	22 38 19.5	-0.5
PB01				IAML			22 38 23.0	
	comp=E,134nm,0.2s							
PB05	IPOC Station P	1.98	260	⇓*iP*		Pn	22 37 54.1	+1.1
PB05	IPOC Station P	1.98	260	*i* P		Pn	22 37 53.7	+0.7
PB05				IAML			22 38 28.3	
	comp=Z,58nm,0.2s							
PB02	IPOC Station P	2.06	305	*i* P		Pn	22 37 54.8	+0.9
PB02				*eS*		Sn	22 38 21.1	-0.9
PB02				IAML			22 38 22.6	
	comp=E,294nm,0.3s							
YJA	Yavi	2.41	82	*i* P		Pn	22 37 58.6	+0.3
PB10	IPOC Station P	2.48	246	⇓*iP*		Pn	22 37 59.6	+0.9
PB10				*eS*		Sn	22 38 29.9	-0.8
PB10				IAML			22 38 31.2	
	comp=E,58nm,0.3s							
PB10	IPOC Station P	2.48	246	*i* P		Pn	22 37 59.6	+0.9
PB10				IAML			22 38 33.2	
	comp=Z,33nm,0.6s							
PATCX	Punta Patache	2.56	311	*eP*		Pn	22 38 00.2	+0.3
HJA	Humahuaca	2.56	106	*i* P		Pn	22 38 00.9	+0.7
PB08	IPOC Station P	2.57	337	⇓*iP*		Pn	22 38 01.7	+1.4
PB08				*i* S		Sn	22 38 33.6	+0.4
PB08				IAML			22 38 36.4	
	comp=E,44nm,0.2s							
TA01	Diego Aracena	2.75	315	*eP*		Pn	22 38 02.7	+0.5
TA01				*eS*		Sn	22 38 35.7	-0.9
TA01				IAML			22 38 38.4	
	comp=E,76nm,0.4s							
GO02	Mina Guanaco	2.97	207	⇑*iP*		Pn	22 38 06.0	+0.9
GO02				*eS*		Sn	22 38 41.6	-0.4
PB14	IPOC Station P	2.99	225	*i* P		Pn	22 38 06.4	+1.1
PB14				IAML			22 38 55.2	
	comp=Z,29nm,0.2s							
GO01	Chusmiza	3.02	340	⇑*iP*		Pn	22 38 06.9	+1.0
GO01				*eS*		Sn	22 38 43.7	+0.3
PB11	IPOC Station P	3.11	332	⇓*iP*		Pn	22 38 07.0	+0.2
PB11				*i* S		Sn	22 38 43.9	-1.0
PB11				IAML			22 38 45.7	
	comp=N,70nm,0.2s							
AZAP	Zapla	3.25	122	*i* P		Pn	22 38 08.8	+0.2
PSGC	Pisagua	3.48	326	⇑*iP*		Pn	22 38 10.4

comp=Z,27nm,0.9s
BKZ Black Stump Fm 16.00 187 P **P** **22 53 09.7 +0.9**
BKZ IAmb IAmb 22 53 21.5
comp=Z,7.6nm,0.9s
BFZ Birch Farm 17.52 187 P **P** **22 53 25.5 +1.3**
QRZ Quartz Range 18.36 196 P **P** **22 53 34.5 +2.7**
SNZO South Karori 18.36 191 P **P** **22 53 33.2 +1.4**
MSWZ Moikau Station 18.38 189 P **P** **22 53 32.6 +0.6**
BHW Baring Head 18.43 190 P **P** **22 53 33.5 +1.0**
NNZ Nelson 18.53 194 P **P** **22 53 35.1 +1.8**
NNZ IAmb IAmb 22 53 38.6
comp=Z,12nm,0.7s
PLWZ Palliser 18.53 189 P **P** **22 53 34.6 +1.2**
TUWZ Tuamarina 18.61 192 P **P** **22 53 35.5 +1.4**
CMWZ Cape Campbell 18.87 191 P **P** **22 53 37.8 +1.2**
BSWZ Blackbird Sta 18.90 192 P **P** **22 53 38.3 +1.5**
THZ Tophouse 19.15 194 P **P** **22 53 41.2 +2.1**
THZ IAmb IAmb 22 53 49.8
comp=Z,16nm,0.9s
KHZ Kahutara 19.64 192 P **P** **22 53 45.2 +1.7**
KHZ IAmb IAmb 22 53 46.8
comp=Z,10nm,0.8s
LTZ Lake Taylor 20.27 195 P **P** **22 53 52.7 +3.4**
OXZ Oxford 20.84 195 P **P** **22 53 56.5 +2.1**
OXZ IAmb IAmb 22 54 11.3
comp=Z,17nm,1.1s
MQZ McQueen's Vall 21.06 193 P **P** **22 53 57.6 +1.2**
MQZ IAmb IAmb 22 54 01.3
comp=Z,14nm,1.2s
RPZ Rata Peaks 21.44 196 P **P** **22 54 01.1 +1.2**
RPZ IAmb IAmb 22 54 07.5
comp=Z,4.2nm,0.6s
FOZ Fox Glacier 21.61 199 P **P** **22 54 01.8 +0.4**
LBZ Lake Benmore 22.30 197 P **P** **22 54 08.1 +0.5**
ODZ Otahua Downs 22.79 196 P **P** **22 54 12.6 +0.6**
ODZ IAmb IAmb 22 54 31.2
comp=Z,11nm,1.1s
WKZ Wanaka 23.03 199 P **P** **22 54 14.9 +0.8**
WKZ IAmb IAmb 22 54 15.7
comp=Z,6.2nm,0.6s
MLZ Mavora Lakes 23.79 199 P **P** **22 54 22.4 +1.4**
MLZ IAmb IAmb 22 54 24.1
comp=Z,7.4nm,0.8s
DCZ Deep Cove 24.18 201 P **P** **22 54 26.2 +1.9**
WHZ Wether Hill Ro 24.31 199 P **P** **22 54 27.6 +2.0**
WHZ IAmb IAmb 22 54 29.9
comp=Z,14nm,0.8s
ARMA Armidale 25.48 248 P **P** **22 54 38.4 +2.1**
ARMA IAmb IAmb 22 54 39.5
comp=Z,6.0nm,0.6s
EIDS Eidsvold 25.60 260 P **P** **22 54 37.6 +0.3**
CAN Canberra 28.75 238 P **P** **22 55 06.8 +1.9**
CAN IAmb IAmb 22 55 07.9
comp=Z,9.1nm,0.9s
TOO Toolangi 32.10 236 P **P** **22 55 35.5 +1.7**
TOO IAmb IAmb 22 55 35.7
comp=Z,8.5nm,1.0s
TAU Tasmania Unive 32.77 226 P **P** **22 55 40.2 +0.9**
TAU IAmb IAmb 22 55 41.7
comp=Z,12nm,0.9s
STKA Stephens Creek 34.20 247 P **P** **22 55 53.0 +1.4**
comp=Z,2.4nm,0.4s,baz=96,slow=9.8,SNR=14
STKA Stephens Creek 34.20 247 IAmb IAmb 22 55 53.6
comp=Z,0.8nm,0.6s
COEN Coen 35.20 279 **P** **22 55 58.0 -2.1**
COEN IAmb IAmb 22 56 03.6
comp=Z,11nm,1.1s
BBOO Buckleboo 38.93 246 P **P** **22 56 31.0 +0.3**
BBOO IAmb IAmb 22 56 31.3
comp=Z,4.1nm,0.4s
AS31 Alice Springs 41.32 260 P **P** **22 56 50.2 +0.2**
ASAR Alice Springs 41.32 260 P **P** **22 56 50.2 +0.1**
comp=Z,2.9nm,0.6s,baz=91,slow=8.1,SNR=28
WR0 Warramunga Arr 41.44 266 P **P** **22 56 50.0 -1.0**
WB0 Warramunga Arr 41.62 266 P **P** **22 56 51.5 -0.9**
WB0 IAmb IAmb 22 56 52.2
comp=Z,5.3nm,0.3s
WRAB Tennant Creek 41.62 266 P **P** **22 56 51.6 -0.9**
WRAB IAmb IAmb 22 56 53.0
comp=Z,14nm,1.1s
WRA Warramunga Arr 41.62 266 P **P** **22 56 51.1 -1.4**
comp=Z,1.2nm,0.3s,baz=103,slow=8.6,SNR=11
WRA Warramunga Arr 41.62 266 IAmb IAmb 22 56 52.2
comp=Z,0.3nm,0.8s
FORT Forrest 45.76 249 P **P** **22 57 23.6 -0.8**
PTCN Pitcairn Islan 46.17 103 P **P** **22 57 27.0 -0.7**
KNRA Kununurra 47.86 270 P **P** **22 57 39.9 -0.7**
KNRA IAmb IAmb 22 57 43.0
comp=Z,16nm,1.0s
PUH Pauahi 49.24 33 P **P** **22 57 48.2 -2.7**
FITZ Fitzroy Crossi 50.05 265 P **P** **22 57 56.3 -0.5**
NWAO Narrogin (SRO) 54.74 245 P **P** **22 58 29.9 -0.5**
MORW Morawa 56.31 250 P **P** **22 58 40.4 -1.0**
QSPA South Pole Qui 66.81 180 P **P** **22 59 50.3 +0.7**
SKT Skwentna 88.16 13 P **P** **23 01 45.7 +0.7**
FID Port Fidalgo 88.26 16 P **P** **23 01 47.2 +1.7**
PAX Paxson 90.41 15 pP 23 03 46.7 +0.7
MENT Mentasta 90.82 16 pwP 23 03 54.0 +1.5
TORD Torodi Ar. Bea 169.63 194 PKPab **PKPab** **23 10 13.6 -2.2**
comp=Z,0.6nm,0.8s,baz=186,slow=3.7,SNR=4.7

*IDC **31** 22:54:32.4±3.3,28.06S×177.76W,h91km±29km,mb3.8/3, mb1 4.0/3,mb1mx3.6/20,mbtmp4.1/3,Error ellipse: s-maj=46.3km s-min=30.2km az=3.0*
*NEIC **31** 22:54:33.0±2.3,28.18S±0.07×177.9W±0.1,h96km±5km, mb4.3/18,Error ellipse: s-maj=14.4km s-min=9.8km az=98.0*

ISC 31 22:54:33.0±0.5,28.17S±0.07×177.88W±0.08,h100km, n49,σ1°31/46,mb4.4/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.08**	**182**	P	**Pn**	**22 54 54.6**	**+0.3**
	721nm,0.3s,baz=56,slow=6.6,SNR=22						
RAO				S	**Sn**	**22 55 11.1**	**+0.8**
	2μm,0.3s,baz=87,slow=21,SNR=21						
RAO	**Raoul Island**	**1.08**	**182**		**Pn**	**22 54 54.8**	**+0.5**
MXZ	**Matakaoa Point**	**9.90**	**198**	Pn	**Pn**	**22 56 53.0**	**+0.8**
OUZ	**Omahuta**	**10.10**	**224**	Pn	**Pn**	**22 56 54.4**	**-0.6**
URZ	**Urewera**	**10.90**	**201**	P	Pn	22 56 57.5	-8.3
	0.1nm,0.3s,baz=135,slow=16,SNR=4.2						
URZ				S	Sn	22 58 55.0	-11
	1.4nm,0.3s,baz=36,slow=17,SNR=9.3						
MSVF	**Nonsavu**	**11.04**	**339**	Pn	**Pn**	**22 57 07.0**	**-1.1**
NIUE	**Niue**	**11.62**	**41**	Pn	**Pn**	**22 57 16.0**	**+0.3**
BKZ	**Black Stump Fm**	**11.92**	**202**	Pn	**Pn**	**22 57 17.1**	**-2.5**
HIZ	**Hauiti**	**11.96**	**209**	Pn	**Pn**	**22 57 16.9**	**-3.2**
MSWZ	**Moikau Station**	**14.36**	**201**	Pn	**Pn**	**22 57 51.8**	**+0.3**
BHW	**Baring Head**	**14.48**	**202**	Pn	**Pn**	**22 57 52.2**	**-0.7**
PLWZ	**Palliser**	**14.50**	**201**	Pn	**Pn**	**22 57 52.9**	**-0.3**
TUWZ	**Tuamarina**	**14.82**	**205**	Pn	**Pn**	**22 57 55.1**	**-2.3**
NNZ	**Nelson**	**14.85**	**207**	Pn	**Pn**	**22 57 57.6**	**-0.2**
QRZ	**Quartz Range**	**14.88**	**209**	Pn	**Pn**	**22 57 57.7**	**-0.4**
DZM	**Mont Dzumac**	**15.44**	**290**	Pn	**Pn**	**22 58 05.3**	**-0.1**
THZ	**Tophouse**	**15.51**	**207**	Pn	**Pn**	**22 58 06.5**	**+0.4**
THZ				IAmb	IAmb	22 58 23.4	
	comp=Z,10nm,1.1s						
KHZ	**Kahutara**	**15.83**	**204**	Pn	**Pn**	**22 58 05.4**	**-4.6**
RAR	**Rarotonga**	**17.84**	**71**	P	**Pn**	**22 58 35.2**	**+0.3**
RAR				IAmb	IAmb	22 58 37.3	
	comp=Z,14nm,0.8s						
RPZ	**Rata Peaks**	**17.88**	**207**	P	**P**	**22 58 34.4**	**-0.2**
RPZ				IAmb	IAmb	22 58 44.8	
	comp=Z,13nm,1.2s						
MLZ	**Mavora Lakes**	**20.45**	**209**	P	**P**	**22 59 03.0**	**+0.5**
MLZ				IAmb	IAmb	22 59 12.8	
	comp=Z,10nm,1.1s						
PPT	**Papeete**	**28.07**	**74**	P	**P**	**23 00 14.5**	**-0.7**
STKA	**Stephens Creek**	**35.14**	**254**	P	**P**	**23 01 19.4**	**+2.2**
	comp=Z,0.8nm,0.4s,baz=101,slow=12,SNR=4.0						
STKA	**Stephens Creek**	**35.14**	**254**	P	**P**	**23 01 18.4**	**+1.3**
COEN	**Coen**	**38.81**	**283**	P	**P**	**23 01 49.7**	**+1.3**
COEN				IAmb	IAmb	23 02 08.4	
	comp=Z,8.1nm,1.1s						
BBOO	**Buckleboo**	**39.72**	**252**	P	**P**	**23 01 55.5**	**-0.2**
BBOO				IAmb	IAmb	23 01 59.5	
	comp=Z,4.6nm,0.9s						
ASAR	**Alice Springs**	**43.38**	**265**	P	**P**	**23 02 27.2**	**+1.4**
	comp=Z,1.1nm,0.5s,baz=97,slow=7.1,SNR=21						
ASAR				PcP	**PcP**	**23 04 12.0**	**-0.7**
	comp=Z,0.4nm,0.4s,baz=102,slow=4.2,SNR=3.4						
ASAR	**Alice Springs**	**43.38**	**265**	P	**P**	**23 02 25.4**	**-0.4**
WR0	**Warramunga Arr**	**43.98**	**270**	P	**P**	**23 02 32.0**	**+1.4**
WR0				IAmb	IAmb	23 02 41.7	
	comp=Z,7.9nm,1.1s						
WRA	**Warramunga Arr**	**44.16**	**270**	P	**P**	**23 02 32.8**	**+0.7**
	comp=Z,3.2nm,0.5s,baz=109,slow=7.7,SNR=12						
WRA	**Warramunga Arr**	**44.16**	**270**	IAmb	IAmb	23 02 34.5	
	comp=Z,0.2nm,0.8s						
WB0	**Warramunga Arr**	**44.17**	**270**	P	**P**	**23 02 32.8**	**+0.7**
WB0				IAmb	IAmb	23 02 34.1	
	comp=Z,4.8nm,0.6s						
FORT	**Forrest**	**46.75**	**253**	P	**P**	**23 02 51.4**	**-1.0**
KNRA	**Kununurra**	**50.68**	**272**	P	**P**	**23 03 23.1**	**+0.6**
HPAH	**Hawaii Prepara**	**52.50**	**27**		**PcP**	**23 04 44.7**	**-0.6**
CASY	**Casey**	**57.16**	**207**	P	**P**	**23 04 07.3**	**-1.7**
MORW	**Morawa**	**57.29**	**252**	P	**P**	**23 04 09.4**	**-1.2**
QSPA	**South Pole Qui**	**61.93**	**180**	P	**P**	**23 04 42.6**	**+0.6**
MOD	**Modoc Plateau**	**87.66**	**39**	P	**P**	**23 07 11.9**	**+1.6**
MOD				IAmb	IAmb	23 07 18.5	
	comp=Z,3.6nm,0.7s						
PSUT	**Pine Spring**	**89.32**	**45**		pP	23 07 38.8	-5.5
YNR	**Norris Junctio**	**94.90**	**41**		pP	23 08 04.6	-5.6
MKAR	**Makanchi Array**	**116.41**	**311**	PKP	**PKPdf**	**23 13 03.9**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=84,slow=1.2,SNR=6.7						
FINES	**FINESS Array B**	**143.09**	**341**	PKhKP	PKPab	23 13 51.5	+1.4
	comp=Z,6.7nm,1.1s,baz=53,slow=4.3,SNR=10						
NB2	**NORSAR Subarra1**	**146.57**	**352**	PKP	**PKPbc**	**23 14 02.2**	**-0.1**
	comp=Z,0.7nm,0.5s,baz=34,slow=3.7						
NOA	**NORSAR Array B**	**146.57**	**352**	PKPbc	**PKPab**	**23 14 02.9**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=52,slow=1.1,SNR=6.3						
AKASG	**Malin Array Be**	**149.57**	**325**	PKPbc	**PKPbc**	**23 14 10.1**	**-0.3**
	comp=Z,1.6nm,0.5s,baz=45,slow=3.2,SNR=13						
AKASG	**Malin Array Be**	**149.57**	**325**		**PKiKP**	**23 14 11.1**	**-0.4**
BRTR	**Keskin Array B**	**151.57**	**302**	PKPbc	**PKiKP**	**23 14 16.3**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=145,slow=5.1,SNR=5.0						
TORD	**Torodi Ar. Bea**	**165.05**	**178**	PKPab	**PKPab**	**23 15 24.3**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=199,slow=4.4,SNR=6.0						

*IDC **31** 23:08:01.9±4.2,4.83S×153.88E,h92km±31km,mb3.5/8, mb1 3.8/9,mb1mx3.6/32,mbtmp4.0/9,MS2.9/2,Ms1 2.9/2, ms1mx2.5/20,Error ellipse: s-maj=38.9km s-min=15.5km az=94.0*
*NEIC **31** 23:08:03.7±1.2,4.98S±0.07×153.95E±0.09,h110km±6km, mb4.2/19,Error ellipse: s-maj=13.0km s-min=10.4km az=113.0*

ISC 31 23:08:02.7±0.7,4.87S±0.08×153.90E±0.08,h105km,n38, σ1°17/37,mb4.0/16,New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.86**	**291**	Pn	**Pn**	**23 08 35.5**	**+1.8**
KRVT	**Keravat (AS076**	**1.95**	**286**	P	**Pn**	**23 08 34.2**	**-0.6**
	59nm,0.3s,baz=152,slow=0.7,SNR=28						
KRVT				S	**Sn**	**23 08 57.2**	**-2.1**
	108nm,0.3s,baz=4.6,slow=23,SNR=19						
KRVT				LR	LR	23 09 29.2	
	comp=Z,193nm,18.8s,baz=66,slow=45						
HNR	**Honiara**	**7.52**	**127**	Pn	**Pn**	**23 09 49.1**	**-0.6**
PMG	**Port Moresby**	**8.07**	**236**	P	**Pn**	**23 09 58.5**	**+1.4**
	16nm,0.3s,baz=41,slow=8.0,SNR=22						
PMG				S	**Sn**	**23 11 27.4**	**+0.7**
	5.3nm,0.3s,baz=344,slow=20,SNR=4.9						
PMG	**Port Moresby**	**8.07**	**236**		**Pn**	**23 09 59.1**	**+2.0**
COEN	**Coen**	**13.90**	**229**	Pn	**Pn**	**23 11 15.2**	**-0.1**
EIDS	**Eidsvold**	**20.57**	**187**	P	**P**	**23 12 32.6**	**-0.5**
EIDS				IAmb	IAmb	23 12 39.4	
	comp=Z,12nm,1.1s						
WR0	**Warramunga Arr**	**24.09**	**230**	P	**P**	**23 13 09.1**	**+0.5**
WR0				IAmb	IAmb	23 13 09.6	
	comp=Z,6.8nm,1.1s						
WB0	**Warramunga Arr**	**24.09**	**230**	P	**P**	**23 13 09.7**	**+1.0**
WB0				IAmb	IAmb	23 13 17.0	
	comp=Z,6.8nm,1.1s						
WRAB	**Tennant Creek**	**24.22**	**230**	P	**P**	**23 13 09.3**	**-0.5**
WRAB				IAmb	IAmb	23 13 11.5	
	comp=Z,5.7nm,0.8s						
WRA	**Warramunga Arr**	**24.23**	**230**	P	**P**	**23 13 10.8**	**+0.9**
	comp=Z,3.3nm,0.5s,baz=54,slow=10.0,SNR=8.8						
WRA				LR	LR	23 23 23.6	
	comp=Z,25nm,18.7s,baz=135,slow=38						
ARMA	**Armidale**	**25.51**	**185**	P	**P**	**23 13 21.9**	**+0.4**
ARMA				IAmb	IAmb	23 13 28.7	
	comp=Z,7.3nm,1.1s						
AS31	**Alice Springs**	**26.85**	**224**	P	**P**	**23 13 33.8**	**+0.2**
ASAR	**Alice Springs**	**26.85**	**224**	P	**P**	**23 13 34.0**	**+0.4**
	comp=Z,1.2nm,0.8s,baz=54,slow=8.9,SNR=17						
ASAR				LR	LR	23 24 07.2	
	comp=Z,28nm,19.0s,baz=82,slow=36						
KNRA	**Kununurra**	**26.93**	**245**	P	**P**	**23 13 34.9**	**+0.6**
KNRA				IAmb	IAmb	23 13 43.1	
	comp=Z,15nm,1.1s						
STKA	**Stephens Creek**	**29.24**	**202**	P	**P**	**23 13 54.9**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=4.9,slow=5.9,SNR=7.4						
STKA	**Stephens Creek**	**29.24**	**202**	IAmb	IAmb	23 13 57.1	
	comp=Z,0.5nm,0.7s						
FITZ	**Fitzroy Crossi**	**30.59**	**242**	P	**P**	**23 14 06.6**	**-0.3**
FITZ				IAmb	IAmb	23 14 20.8	
	comp=Z,4.7nm,1.1s						
BBOO	**Buckleboo**	**32.41**	**209**	P	**P**	**23 14 20.1**	**-2.6**
BBOO				IAmb	IAmb	23 14 23.1	
	comp=Z,3.4nm,0.8s						
FORT	**Forrest**	**35.44**	**220**	P	**P**	**23 14 48.6**	**-0.3**
MSWZ	**Moikau Station**	**41.10**	**155**		P	23 15 30.3	-6.0
MORW	**Morawa**	**43.16**	**232**	P	**P**	**23 15 53.0**	**-0.2**
MORW				IAmb	IAmb	23 15 53.7	
	comp=Z,7.0nm,0.6s						
KSRS	**Korea Array**	**48.56**	**332**	P	**P**	**23 16 37.1**	**+1.7**
	comp=Z,0.6nm,0.8s,baz=144,slow=6.1,SNR=3.1						
USA0B	**Ussuriysk Arra**	**52.67**	**340**	P	**P**	**23 17 08.1**	**+1.9**
USRK	**Ussuriysk Ar.**	**52.67**	**340**	P	**P**	**23 17 07.6**	**+1.4**
KULM	**Kulim**	**54.13**	**280**	P	**P**	**23 17 16.5**	**-0.9**
SONM	**Songino Array**	**66.97**	**327**	P	**P**	**23 18 45.4**	**+1.1**
	comp=Z,0.6nm,0.6s,baz=143,slow=6.2,SNR=7.0						
SONM	**Songino Array**	**66.97**	**327**	IAmb	IAmb	23 18 47.6	
	comp=Z,0.7nm,0.7s						
IMAR	**Indian Mountai**	**80.08**	**19**	P	**P**	**23 20 02.0**	**+1.5**
MK31	**Makanchi Array**	**81.10**	**319**	P	**P**	**23 20 06.0**	**-0.4**
MKAR	**Makanchi Array**	**81.10**	**319**	P	**P**	**23 20 07.4**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=98,slow=7.4,SNR=9.1						
MKAR	**Makanchi Array**	**81.10**	**319**	P	**P**	**23 20 07.1**	**+0.7**
ILAR	**Eielson Array**	**81.81**	**22**	P	**P**	**23 20 09.4**	**-0.4**
	comp=Z,0.3nm,0.7s,baz=243,slow=4.9,SNR=5.3						
ZALV	**Zalesovo Beam**	**81.82**	**326**	P	**P**	**23 20 09.5**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=116,slow=6.6,SNR=2.4						
ZALV	**Zalesovo Beam**	**81.82**	**326**	P	**P**	**23 20 08.1**	**-1.9**
DHAK	**Deception Hill**	**83.02**	**29**	P	**P**	**23 20 14.7**	**-1.5**
QSPA	**South Pole Qui**	**85.09**	**180**	P	**P**	**23 20 26.7**	**0.0**
TORD	**Torodi Ar. Bea**	**151.37**	**289**	PKPbc	**PKPbc**	**23 27 45.5**	**+0.3**
	comp=Z,0.9nm,0.6s,baz=25,slow=3.4,SNR=8.8						

*SOF **31** 23:15:13.9,40.63N×22.05E,h11km,MD3.1*
*PDG **31** 23:15:15.2±0.2,40.69N×22.12E,h6km,ML3.3/11,Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*SKO **31** 23:15:15.1,40.69N×22.10E,h15km*
*ATH **31** 23:15:15.5,40.68N×22.09E,h27km,ML3.0/15,Error ellipse: s-maj=1.7km s-min=0.9km az=328.0*
*THE **31** 23:15:16.0,40.69N×22.06E,h13km±1km,ML2.9/9,Error ellipse: s-maj=1.1km s-min=0.3km az=272.0*

ISC 31 23:15:15.6±1.1,40.69N±0.02×22.07E±0.02,h3km±10km, n84,σ1°36/115,15C-6D,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.45**	**211**	P	**Pg**	**23 15 24.3**	**+0.1**
KZN				S	**Sg**	**23 15 31.0**	**+1.0**
	2μm,0.5s						
KZN	**Kozani**	**0.45**	**211**	P	**Pg**	**23 15 24.4**	**+0.2**
KZN				S	**Sb**	**23 15 32.0**	**-1.2**
KZN				AML	AML	23 15 34.9	
	comp=E,4356μm,0.4s						
KZN				AML	AML	23 15 35.2	
	comp=N,3109μm,0.6s						
FNA	**Florina**	**0.54**	**280**	P	**Pg**	**23 15 26.3**	**+0.4**
FNA				S	**Sg**	**23 15 33.8**	**+0.9**
	comp=N,2μm,0.4s						
FNA	**Florina**	**0.54**	**280**	P	**Pg**	**23 15 26.3**	**+0.4**
FNA				S	**Sb**	**23 15 35.1**	**-0.7**
FNA				AML	AML	23 15 36.6	
	comp=E,3155μm,0.3s						
FNA				AML	AML	23 15 37.6	
	comp=N,2169μm,0.3s						
LIT	**Litokhoron**	**0.67**	**152**	P	**Pg**	**23 15 28.5**	**+0.1**
LIT				S	**Sb**	**23 15 39.1**	**-0.4**
	comp=N,4μm,0.2s						
LIT	**Litokhoron**	**0.67**	**152**	P	**Pg**	**23 15 28.5**	**+0.1**
LIT				S	**Sb**	**23 15 38.5**	**-1.0**
LIT				AML	AML	23 15 40.0	
	comp=E,8750μm,0.2s						
LIT				AML	AML	23 15 42.2	
	comp=N,6251μm,0.3s						
THE	**Thessaloniki**	**0.68**	**95**	P	**Pg**	**23 15 28.8**	**+0.2**
THE				S	**Sb**	**23 15 39.3**	**-0.5**
	comp=N,452nm,0.4s						
THE	**Thessaloniki**	**0.68**	**95**	P	**Pg**	**23 15 28.9**	**+0.3**
VAY	**Valandovo**	**0.73**	**31**	↑*i*Pg	**Pg**	**23 15 29.9**	**+0.2**
VAY				*i* Sg	**Sg**	**23 15 40.1**	**+0.9**
VAY				*e*Lg	Lg	23 15 43.1	
	comp=E,746nm,0.7s						
VAY				*e*Lg	Lg	23 15 43.8	
	comp=N,1μm,0.8s						
KNT	**Kendrikon**	**0.78**	**53**	P	**Pg**	**23 15 30.8**	**+0.2**
KNT				S	**Sb**	**23 15 42.5**	**-0.3**
	comp=N,770nm,0.4s						
KNT	**Kendrikon**	**0.78**	**53**	P	**Pg**	**23 15 30.9**	**+0.3**
KNT				S	**Sb**	**23 15 41.9**	**-0.8**
KNT				AML	AML	23 15 44.5	
	comp=E,1262μm,0.2s						
KNT				AML	AML	23 15 45.1	
	comp=N,1596μm,0.3s						
HORT	**Hortiatis**	**0.79**	**96**	P	**Pg**	**23 15 30.9**	**+0.3**
HORT				S	**Sb**	**23 15 42.6**	**-0.4**
	comp=N,550nm,0.5s						
HORT	**Hortiatis**	**0.79**	**96**	P	**Pg**	**23 15 31.0**	**+0.3**
HORT				AML	AML	23 15 46.6	
	comp=N,1259μm,0.4s						
HORT				AML	AML	23 15 47.1	
	comp=E,987μm,0.5s						
NEST	**Nestorio**	**0.83**	**251**	P	**Pg**	**23 15 32.0**	**+0.5**
NEST	**Nestorio**	**0.83**	**251**	P	**Pg**	**23 15 32.0**	**+0.5**
PENT	**Pentalofos**	**0.87**	**236**	P	**Pg**	**23 15 32.5**	**+0.2**
KPRO	**Kipourio**	**0.91**	**217**	P	**Pg**	**23 15 33.0**	**-0.1**
KPRO	**Kipourio**	**0.91**	**217**	P	**Pg**	**23 15 33.1**	**-0.1**
KPRO				AML	AML	23 15 51.8	
	comp=E,1488μm,0.6s						
KPRO				AML	AML	23 15 55.0	
	comp=N,1795μm,0.5s						
SOH	**Sokhos**	**0.98**	**82**	P	**Pb**	**23 15 34.4**	**-0.8**
SOH				S	**Sn**	**23 15 49.0**	**-1.6**
	comp=N,828nm,0.5s						
SOH	**Sokhos**	**0.98**	**82**	P	**Pb**	**23 15 34.6**	**-0.6**
SOH				AML	AML	23 15 51.5	
	comp=E,1647μm,0.4s						
SOH				AML	AML	23 15 51.6	
	comp=N,1614μm,0.5s						
STIP	**Stip**	**1.01**	**5**	*i* Pg	**Pn**	**23 15 36.2**	**-0.4**
STIP				*i* Sg	**Sn**	**23 15 52.0**	**+0.8**
OHR	**Ohrid**	**1.05**	**294**	*i* Pg	**Pn**	**23 15 36.0**	**-0.4**
OHR				*i* Sg	**Sn**	**23 15 52.1**	**-0.4**
OHR				*e*Lg	Lg	23 15 54.0	
	comp=N,1μm,1.3s						
OHR				*e*Lg	Lg	23 15 54.8	
	comp=E,451nm,0.5s						
PLG	**Polygyros**	**1.09**	**106**	P	**Pb**	**23 15 36.0**	**-1.1**
PLG				S	**Sg**	**23 15 51.6**	**+0.9**
	comp=E,618nm,0.5s						
PLG	**Polygyros**	**1.09**	**106**	P	**Pb**	**23 15 36.0**	**-1.1**
PLG				AML	AML	23 15 53.3	
	comp=N,1594μm,0.7s						
PLG				AML	AML	23 15 55.2	
	comp=E,929μm,0.3s						
THL	**Klokotos Trika**	**1.13**	**182**	P	**Pb**	**23 15 36.7**	**-0.9**
THL				S	**Sn**	**23 15 52.8**	**-1.3**
	comp=E,862nm,0.5s						
THL	**Klokotos Trika**	**1.13**	**182**	P	**Pb**	**23 15 36.8**	**-0.9**
THL				AML	AML	23 15 55.5	
	comp=E,2246μm,0.5s						
THL				AML	AML	23 15 58.6	
	comp=N,1268μm,0.5s						
SRS	**Serrai**	**1.23**	**69**	P	**Pn**	**23 15 38.3**	**-1.3**
SRS	**Serrai**	**1.23**	**69**	P	**Pn**	**23 15 38.2**	**-1.3**
SKO	**Skopje**	**1.37**	**340**	*i* Pg	**Pn**	**23 15 41.0**	**-0.5**
SKO				*i* Sg	**Sg**	**23 15 59.5**	**+0.1**
KKB	**Krupnik**	**1.40**	**33**	P	**Pn**	**23 15 41.5**	**-0.5**
PAIG	**Paliouri**	**1.45**	**121**	P	**Pn**	**23 15 41.5**	**-1.0**
OUR	**Ouranopolis**	**1.50**	**103**	P	**Pn**	**23 15 42.9**	**-0.3**
OUR				AML	AML	23 16 06.0	
	comp=E,1039μm,0.3s						
OUR				AML	AML	23 16 06.6	
	comp=N,1237μm,0.4s						
NVR	**Nevrokopi**	**1.50**	**63**	P	**Pn**	**23 15 42.6**	**-0.8**
NVR				AML	AML	23 16 12.9	
	comp=N,236μm,0.5s						
NVR				AML	AML	23 16 13.0	
	comp=E,272μm,0.6s						
MMB	**Musomiste**	**1.54**	**54**	P	**Pn**	**23 15 43.2**	**-0.7**
XOR	**Xorichti**	**1.58**	**147**	P	**Pn**	**23 15 43.1**	**-1.3**
NEO	**Neokhori**	**1.64**	**147**	P	**Pn**	**23 15 44.1**	**-1.1**
NEO				AML	AML	23 16 12.7	
	comp=N,1517μm,0.4s						
NEO				AML	AML	23 16 14.0	
	comp=E,1302μm,0.4s						
MAKR	**Makrakomi, Fth**	**1.68**	**178**	P	**Pn**	**23 15 45.6**	**-0.2**
MAKR				AML	AML	23 16 18.5	
	comp=E,2892μm,0.5s						
MAKR				AML	AML	23 16 20.3	
	comp=N,2181μm,0.5s						
AGG	**Agios Georgios**	**1.68**	**173**	P	**Pn**	**23 15 45.2**	**-0.6**
AGG				AML	AML	23 16 19.7	
	comp=N,898μm,0.8s						
AGG				AML	AML	23 16 20.4	
	comp=E,928μm,1.1s						
EVR	**Evrytania**	**1.78**	**187**	P	**Pn**	**23 15 46.9**	**-0.4**
TIR	**Tirane**	**1.79**	**292**	↑P	**Pg**	**23 15 49.7**	**-0.3**
SKIA	**Skiathos**	**1.86**	**144**	P	**Pn**	**23 15 46.9**	**-1.4**
KAVA	**Kavala**	**1.88**	**80**	P	**Pn**	**23 15 47.5**	**-1.0**
AOS	**Alonnisos**	**2.06**	**137**	P	**Pn**	**23 15 49.4**	**-1.5**
ANX	**Ano Chora**	**2.10**	**183**	P	**Pn**	**23 15 51.9**	**+0.2**
ANX				AML	AML	23 16

GZR	**Gura Zlata**	**4.73**	**6**	⇑P		**Pn**	**23 16 27.5**	**-0.2**
BZS	**Buzias**	**4.94**	**356**	⇑P		**Pn**	**23 16 30.5**	**0.0**
ARR	**Arges**	**5.04**	**21**	⇑P		**Pn**	**23 16 31.9**	**-0.1**
VOIR		**5.22**	**24**	⇑P		**Pn**	**23 16 34.9**	**+0.3**
KIJV	**Kijevo**	**5.35**	**310**	*e*Pn		**Pn**	**23 16 36.6**	**+0.4**
MLR	**Muntele Rosu**	**5.57**	**29**	⇑P		**Pn**	**23 16 39.9**	**+0.5**
MORI	**Morici**	**5.69**	**306**	*e*Pn		**Pn**	**23 16 40.7**	**-0.1**
VYHS	**Vyhne**	**8.14**	**345**	*e*PN		**Pn**	**23 17 15.9**	**+1.4**
NB2	**NORSAR Subarra**	**21.44**	**345**	P		**P**	**23 20 09.3**	**+4.7**
	comp=Z,2.1nm,0.8s,baz=157,slow=11							

*INET **31** 23:22:57.7, 11.51N×85.55W, h204km, ML2.4*
UCR 31 23:22:59.4±1.1, 11.44N×85.73W, h189km±5km, MD4.1, Nicaragua

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
BUAI	**Buenos Aires**	**0.68**	**145**	*i* P		Pn	23 23 26.8	+0.7
BUAI				*i* S		Sn	23 23 48.2	+1.4
GBS3	**Finca Las Img**	**0.71**	**158**	*i* P		Pn	23 23 26.5	+0.2
GBS3				*i* S		Sn	23 23 47.0	0.0
ACON	**Acoyapa**	**0.75**	**46**	*e*P		Pn	23 23 26.0	-0.4
GPS1	**Guardaparques**	**0.76**	**151**	*i* P		Pn	23 23 27.3	+0.6
GPS1				*i* S		Sn	23 23 48.2	+0.5
MESS	**Mesas**	**0.87**	**143**	*i* P		Pn	23 23 27.8	+0.5
LIM1	**Limonal**	**0.87**	**148**	*i* P		Pn	23 23 27.9	+0.6
HORNC	**Hornillas**	**0.90**	**143**	*i* P		Pn	23 23 27.9	+0.4
PTEN	**Parque Tenorio**	**1.02**	**135**	*i* P		Pn	23 23 28.9	+0.6
ACAL	**Aguas Claras**	**1.05**	**140**	*i* P		Pn	23 23 29.4	+0.9
ACAL				*i* S		Sn	23 23 52.3	+1.3
AMAS	**Alto Masis**	**1.09**	**139**	*i* P		Pn	23 23 29.4	+0.5
PLVR	**Palo Verde**	**1.15**	**161**	*e*P		Pn	23 23 29.6	+0.2
JTS	**Las Juntas de**	**1.37**	**146**	*e*P		Pn	23 23 31.1	+0.1
ARE1	**Arenal 1**	**1.39**	**134**	*e*P		Pn	23 23 32.1	+0.9
MATN	**Matagalpa**	**1.49**	**353**	*e*P		Pn	23 23 31.9	-0.3
SRA1	**San Ramn**	**1.82**	**138**	*e*P		Pn	23 23 36.0	+0.6
LCR2	**La Lucha 2**	**2.39**	**135**	*e*P		Pn	23 23 42.5	+0.8
CVTR	**Volcan Turrial**	**2.39**	**126**	*e*P		Pn	23 23 41.6	-0.2
BRU2	**Volcan**	**3.98**	**131**	*e*P		Pn	23 24 01.4	+0.7

*TRN **31** 23:31:46.3, 10.77N×61.93W, h50km, MD3.4*
*FUNV **31** 23:31:47.1, 10.78N×61.83W, h56km, MW3.1*
ISC 31 23:31:44.9±1.3, 10.74N±0.03×61.87W±0.04, h76km±11km, n28, σ1s60/51, 1D, Trinidad

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TRN	**Trinidad (W)**	**0.47**	**101**	*e*P		**Pn**	**23 31 58.4**	**+0.5**
TRN				*e*S		**Sn**	**23 32 06.4**	**-1.2**
TRN	**Trinidad (W)**	**0.47**	**101**	*e*P		**Pn**	**23 31 58.1**	**+0.2**
TRN				*e*S		**Sn**	**23 32 06.2**	**-1.4**
GUNV	**Guanoco**	**1.20**	**241**	*e*P		**Pn**	**23 32 07.8**	**+1.6**
GUNV				*e*S		**Sn**	**23 32 23.4**	**+1.2**
CRUV	**Carupano**	**1.34**	**267**	*e*P		**Pn**	**23 32 08.4**	**+0.4**
CRUV				*e*S		**Sn**	**23 32 25.2**	**-0.2**
GRGR	**Grenville**	**1.40**	**9**	*e*P		**Pn**	**23 32 08.8**	**0.0**
GRGR				*e*S		**Sn**	**23 32 25.8**	**-0.8**
GRGR	**Grenville**	**1.40**	**9**	⇓*e*P		**Pn**	**23 32 08.7**	**0.0**
GRGR				*e*S		**Sn**	**23 32 25.9**	**-0.8**
TOSP	**Speyside**	**1.42**	**67**	*e*P		**Pn**	**23 32 10.6**	**+1.6**
TOSP				*e*S		**Sn**	**23 32 28.2**	**+1.0**
TOSP	**Speyside**	**1.42**	**67**	*e*P		**Pn**	**23 32 09.9**	**+0.9**
TOSP				*e*S		**Sn**	**23 32 26.2**	**-1.0**
GRHS	**Sauteurs**	**1.49**	**9**	*e*P		**Pn**	**23 32 11.3**	**+1.3**
GRHS				*e*S		**Sn**	**23 32 28.9**	**+0.1**
GRSS	**Sisters**	**1.57**	**9**	*e*P		**Pn**	**23 32 12.5**	**+1.6**
ORIV	**Oritupano**	**2.25**	**223**	*e*P		**Pn**	**23 32 21.4**	**+1.4**
ORIV				*e*S		**Sn**	**23 32 47.4**	**+0.5**
ORIV	**Oritupano**	**2.25**	**223**	*e*P		**Pn**	**23 32 22.1**	**+2.1**
ORIV				*e*S		**Sn**	**23 32 48.0**	**+1.1**
SVB	**Belmont**	**2.59**	**13**	*e*P		**Pn**	**23 32 26.4**	**+1.8**
SVB				*e*S		**Sn**	**23 32 55.2**	**+0.2**
SVCV	**St. Vincent, C**	**2.61**	**16**	*e*P		**Pn**	**23 32 26.3**	**+1.3**
SVCV				*e*S		**Sn**	**23 32 56.1**	**+0.4**
RIOV	**Rio Grande**	**2.66**	**179**	*e*P		**Pn**	**23 32 27.6**	**+2.0**
RIOV				*e*S		**Sn**	**23 32 56.8**	**0.0**
PCRV	**Puerto La Cruz**	**2.78**	**259**	*e*P		**Pn**	**23 32 28.7**	**+1.5**
PCRV				*e*S		**Sn**	**23 32 59.2**	**-0.6**
PRGV	**PARIAGUAN**	**3.37**	**234**	*e*P		**Pn**	**23 32 36.6**	**+1.4**
PRGV				*e*S		**Sn**	**23 33 13.9**	**-0.2**
SLBI	**Saint Lucia, B**	**3.38**	**15**	*e*P		**Pn**	**23 32 36.7**	**+1.4**
SLBI				*e*S		**Sn**	**23 33 14.3**	**0.0**
CUPV	**Cpira**	**3.91**	**260**	*e*P		**Pn**	**23 32 44.0**	**+1.3**
CUPV				*e*S		**Sn**	**23 33 26.4**	**-1.1**
FDF	**Fort de France**	**4.03**	**10**	*e*P		**Pn**	**23 32 45.9**	**+1.6**
FDF				*e*S		**Sn**	**23 33 30.2**	**0.0**
MERV	**Las Mercedes**	**4.61**	**252**	*e*P		**Pn**	**23 32 53.4**	**+1.3**
MERV				*e*S		**Sn**	**23 33 42.6**	**-1.7**
LUEV	**Luepa**	**4.88**	**175**	*e*P		**Pn**	**23 32 56.6**	**+0.6**
LUEV				*e*S		**Sn**	**23 33 48.6**	**-2.8**
TURV	**Turiamo**	**5.88**	**268**	*e*P		**Pn**	**23 33 10.2**	**+0.8**
BAUV	**El Baul**	**6.34**	**254**	*e*P		**Pn**	**23 33 17.2**	**+1.4**
BAUV	**El Baul**	**6.34**	**254**	*e*S		**Sn**	**23 34 23.2**	**-3.6**
BAUV	**El Baul**	**6.34**	**254**	*e*P		**Pn**	**23 33 16.3**	**+0.6**
BAUV				*e*S		**Sn**	**23 34 22.5**	**-4.3**
MAPV	**Macapo**	**6.55**	**263**	*e*P		**Pn**	**23 33 19.7**	**+1.1**
PAYV	**Puerto Ayacuch**	**7.79**	**228**	*e*P		**Pn**	**23 33 36.5**	**+0.8**
PAYV				*e*S		**Sn**	**23 34 57.6**	**-4.9**

*NIED **31** 23:45:00, 38.30N×144.50E, h5km, Mw3.5 Best double couple: M0 1.99000×10^14 NP1:φs198.00000°, δ61.00000°, λ-80.00000°. NP2:φs358.00000°, δ31.00000°, λ-108.00000°.*
*IDC **31** 23:45:31.2±2.6, 38.13N×145.00E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.4/37, mbtmp3.6/5, ML2.4/1, MS3.0/1, Ms1 3.2/1, ms1mx2.2/33, Error ellipse: s-maj=68.7km s-min=29.1km az=66.0*
*JMA **31** 23:45:37.0±0.1, 38.31N×144.48E, h32km, M3.8*
ISC 31 23:45:37.1±1.3, 38.33N±0.06×144.66E±0.09, h35km, n22, σ1s84/36, mb3.5/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.46**	**289**	P		**Pn**	**23 46 14.6**	**-0.1**
OFUJ				*e*S		**Sn**	**23 46 42.5**	**-1.0**
JIKH	**Ishinomakikobu**	**2.51**	**271**	P		**Pn**	**23 46 15.1**	**-0.3**
JIKH				S		**Sn**	**23 46 42.6**	**-2.2**
MIYJ	**Miyakonagasawa**	**2.54**	**300**	P		**Pn**	**23 46 15.8**	**0.0**
MIYJ				S		**Sn**	**23 46 44.7**	**-0.8**
JKMT	**Kesennumamotoy**	**2.54**	**282**	P		**Pn**	**23 46 15.5**	**-0.3**
JKMT				S		**Sn**	**23 46 44.3**	**-1.3**
JIO	**Ouri**	**2.61**	**274**	P		**Pn**	**23 46 16.3**	**-0.4**
JIO				S		**Sn**	**23 46 45.5**	**-1.6**
JMK	**Ichinoseki**	**2.77**	**284**	P		**Pn**	**23 46 19.2**	**+0.3**
JMK				*e*S		**Sn**	**23 46 50.5**	**-0.5**
JOM	**Ohasama**	**2.87**	**295**	P		**Pn**	**23 46 20.7**	**+0.4**
JOM				*e*S		**Sn**	**23 46 53.5**	**0.0**
JANG	**Nango**	**3.18**	**311**	P		**Pn**	**23 46 25.3**	**+0.7**
JANG				*e*S		**Sn**	**23 47 00.8**	**-0.5**
JYK	**Kaneyama**	**3.42**	**281**	P		**Pn**	**23 46 28.9**	**+1.0**
JYK				*e*S		**Sn**	**23 47 07.2**	**0.0**
JFT	**Otama**	**3.51**	**258**	P		**Pn**	**23 46 29.4**	**+0.2**
JFT				S		**Sn**	**23 47 08.4**	**-1.2**
JCH	**Churui**	**4.39**	**347**	P		**Pn**	**23 46 41.6**	**+0.3**
JCH				*e*S		**Sn**	**23 47 30.3**	**-0.9**
NEM2	**Nemuro 2**	**5.10**	**9**	P		**Pn**	**23 46 49.4**	**-1.5**
NEM2				*e*S		**Sn**	**23 47 43.1**	**-5.4**
JRY	**Ryogami san**	**5.15**	**245**	P		**Pn**	**23 46 50.8**	**-0.9**
JRY				*e*S		**Sn**	**23 47 45.7**	**-4.1**
JOD2	**Odawara 2**	**5.42**	**237**	*e*S		**Sn**	**23 47 51.7**	**-4.8**
MJAR	**Matsushiro Arr**	**5.44**	**253**	Pn		**Pn**	**23 46 56.0**	**+0.4**
	0.1nm,0.3s,baz=75,slow=16,SNR=13							
MAT	**Matsushiro**	**5.44**	**253**	P		**Pn**	**23 46 56.7**	**+1.1**
MAT				*e*S		**Sn**	**23 47 58.1**	**+1.1**
JTKR	**Abashiri--Toko**	**5.67**	**354**	P		**Pn**	**23 46 58.4**	**-0.3**
JTKR				S		**Sn**	**23 47 59.5**	**-3.0**
SONM	**Songino Array**	**29.26**	**301**	P		**P**	**23 51 37.5**	**+1.7**
	0.3nm,0.9s,baz=99,slow=8.9,SNR=2.8							
CMAR	**Chiang Mai Arr**	**44.31**	**257**	LR		LR	00 12 37.9	
	comp=Z,17nm,21.4s,baz=95,slow=36							
MKAR	**Makanchi Array**	**45.62**	**302**	P		**P**	**23 53 55.9**	**+2.0**
	0.5nm,0.7s,baz=86,slow=6.6,SNR=5.7							
KURBB	**Kurchatov Arra**	**47.25**	**308**	P		**P**	**23 54 08.3**	**+1.8**
	0.3nm,0.5s,baz=80,slow=8.0,SNR=11							
WRA	**Warramunga Arr**	**58.77**	**191**	P		**P**	**23 55 30.0**	**-1.6**
	0.4nm,0.2s,baz=9.7,slow=6.8,SNR=3.4							

*NNC **31** 23:54:52.9±2.0, 39.36N×73.99E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=14.8km s-min=10.2km az=164.0*
ISC 31 23:54:52.8±4.3, 39.3N±0.3×73.9E±0.1, h10km, n11, σ1s67/12, 3C-1D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.85**	**356**	P		**Pg**	**23 55 46.7**	**-0.8**
	SNR=5.8							
UCH	**Uchtor**	**2.98**	**8**	P		**Pg**	**23 55 50.1**	**+0.2**
	SNR=9.3							
EKS2	**Erkin-Say**	**3.38**	**358**	P		**Pg**	**23 55 54.4**	**-3.2**
	SNR=15							
AAK	**Ala-Archa**	**3.38**	**7**	P		**Pg**	**23 55 55.8**	**-1.8**
	SNR=5.7							
AAK	**Ala-Archa**	**3.38**	**7**	⇑Pg		**Pb**	**23 55 53.0**	**+0.1**
	1.7nm,0.3s							
AAK				⇑Lg		Lg	23 56 38.0	
	9.4nm,0.9s							
ULHL	**Ulahol**	**3.44**	**30**	P		**Pg**	**23 55 57.3**	**-1.5**
	SNR=11							
MRKS	**Merke**	**3.50**	**351**	Pg		**Pb**	**23 55 54.6**	**-0.4**
	7.7nm,0.2s							
MRKS				Lg		Lg	23 56 41.5	
	5.4nm,0.5s							
CHMS	**Chumysh**	**3.77**	**9**	P		**Pb**	**23 56 00.2**	**+0.8**
	SNR=5.1							
KST	**Kastek**	**4.06**	**22**	Pg		**Pb**	**23 56 05.7**	**+1.2**
	3.7nm,0.2s							
KST				Lg		Lg	23 57 00.3	
	8.9nm,0.9s							
IUG	**Iuzhnay**	**4.12**	**315**	Pg		**Pn**	**23 55 55.5**	**-0.4**
	0.6nm,0.1s							
IUG				Lg		Lg	23 56 42.9	
	14nm,0.3s							
KK31	**Karatay Array**	**4.61**	**327**	⇓Pn		**Pn**	**23 56 03.5**	**+1.0**
	1.2nm,0.3s,baz=1.7,slow=4.0,SNR=26							
KK31				⇑Sn		**Sn**	**23 56 58.4**	**+2.3**
	2.9nm,0.5s,baz=150,slow=23,SNR=8.0							

ISC Computed Locations for January 2014

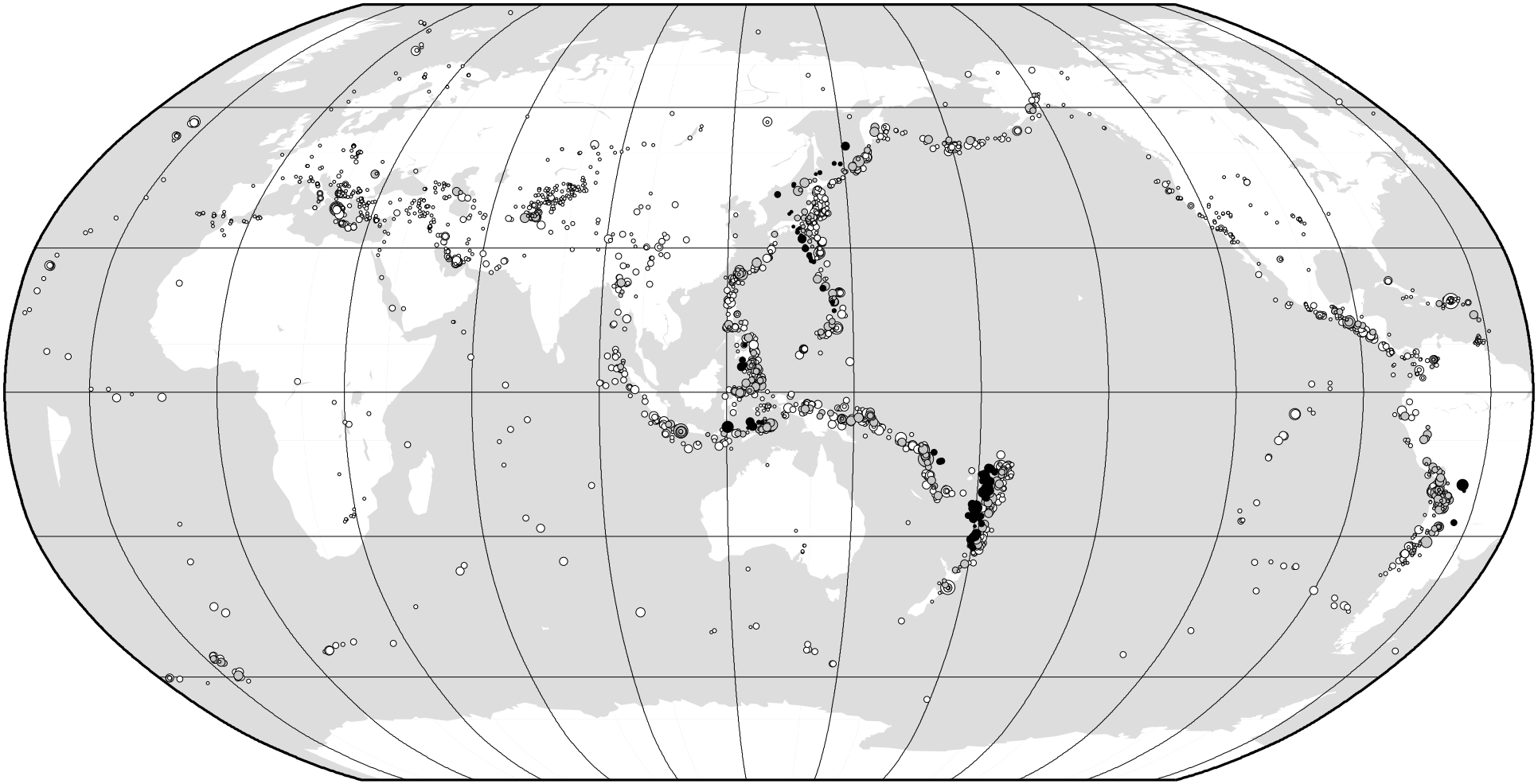

Depth (km)	0-70	70-300	>300
M=8	○	○	●
M=6.5	○	○	●
M=4	○	○	●

Robinson Projection, centred on 0˚N,130˚E

3103 Events